1215633

0600X-CA-N0060/12-AMRP-0090

618-10 BURIAL GROUND RAD INVENTORY

FOR ADMINISTRATIVE RECORD-

0600X-CA-N0060

SECTION

4 OF 4

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.48775E+00 0.0007
tfc   14       1       1       1       1       1       1       1       1
     512000  8.53697E+00  4.56725E-03  3.27323E+04
    1024000  8.51237E+00  2.40201E-03  5.93183E+04
    1536000  8.48746E+00  1.65782E-03  8.29784E+04
    2048000  8.48154E+00  1.28892E-03  1.02976E+05
    2560000  8.48282E+00  1.15555E-03  1.02369E+05
    3072000  8.48130E+00  9.94216E-04  1.15092E+05
    3584000  8.48132E+00  8.84324E-04  1.24636E+05
    4096000  8.48129E+00  7.96231E-04  1.34401E+05
    4608000  8.48132E+00  7.29795E-04  1.42106E+05
    5120000  8.49050E+00  8.14866E-04  1.02531E+05
    5632000  8.49077E+00  7.73255E-04  1.03507E+05
    6144000  8.48832E+00  7.16453E-04  1.10513E+05
    6656000  8.48596E+00  6.68200E-04  1.17269E+05
    6975440  8.48775E+00  7.05931E-04  1.00254E+05
mcnp       5     11/03/10 04:21:44     2     6909308      188127007
```

Case 39

```
 Case 39
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.81142E+03 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  1.81708E+03  2.36499E-03  1.20469E+05
    1024000  1.81653E+03  1.41135E-03  1.69268E+05
    1536000  1.81294E+03  1.03288E-03  2.10626E+05
    2048000  1.81173E+03  8.37669E-04  2.40085E+05
    2560000  1.81136E+03  7.13084E-04  2.65236E+05
    3072000  1.81122E+03  6.46629E-04  2.68846E+05
    3584000  1.81101E+03  5.80816E-04  2.85652E+05
```

```
    4096000  1.81120E+03  5.32164E-04  2.97727E+05
    4608000  1.81128E+03  4.90308E-04  3.11740E+05
    5120000  1.81186E+03  4.57561E-04  3.22113E+05
    5632000  1.81193E+03  4.31230E-04  3.29709E+05
    6144000  1.81170E+03  4.10250E-04  3.34027E+05
    6656000  1.81130E+03  3.88714E-04  3.43491E+05
    6909308  1.81142E+03  3.83751E-04  3.39489E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.47372E+02 0.0004
tfc   14       1       1       1       1       1       1       1
     512000  7.48181E+02  1.11008E-03  5.46791E+05
    1024000  7.48689E+02  1.09385E-03  2.81792E+05
    1536000  7.47309E+02  8.12418E-04  3.40452E+05
    2048000  7.47471E+02  8.11861E-04  2.55592E+05
    2560000  7.47292E+02  6.83811E-04  2.88430E+05
    3072000  7.47307E+02  6.54788E-04  2.62187E+05
    3584000  7.47200E+02  5.82235E-04  2.84261E+05
    4096000  7.47239E+02  5.30134E-04  3.00011E+05
    4608000  7.47308E+02  4.87084E-04  3.15881E+05
    5120000  7.47646E+02  4.63537E-04  3.13861E+05
    5632000  7.47610E+02  4.32779E-04  3.27352E+05
    6144000  7.47510E+02  4.06884E-04  3.39576E+05
    6656000  7.47379E+02  3.85045E-04  3.50068E+05
    6909308  7.47372E+02  3.75240E-04  3.55064E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.14812E+02 0.0004
tfc   14       1       1       1       1       1       1       1
     512000  3.15529E+02  1.60217E-03  2.62491E+05
    1024000  3.15304E+02  9.57718E-04  3.67595E+05
    1536000  3.14705E+02  7.24825E-04  4.27709E+05
    2048000  3.14643E+02  6.24423E-04  4.32069E+05
    2560000  3.14659E+02  5.51681E-04  4.43135E+05
```

```
    3072000  3.14648E+02  4.97889E-04  4.53470E+05
    3584000  3.14754E+02  5.24618E-04  3.50128E+05
    4096000  3.14767E+02  4.84271E-04  3.59528E+05
    4608000  3.14803E+02  4.49412E-04  3.71058E+05
    5120000  3.14915E+02  4.28643E-04  3.67041E+05
    5632000  3.14915E+02  4.02812E-04  3.77872E+05
    6144000  3.14876E+02  3.79865E-04  3.89601E+05
    6656000  3.14821E+02  3.60084E-04  4.00283E+05
    6909308  3.14812E+02  3.51247E-04  4.05228E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.08253E+02 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  1.08389E+02  1.16809E-03  4.93830E+05
    1024000  1.08360E+02  7.80237E-04  5.53851E+05
    1536000  1.08191E+02  6.45297E-04  5.39630E+05
    2048000  1.08187E+02  6.03557E-04  4.62460E+05
    2560000  1.08202E+02  5.46595E-04  4.51421E+05
    3072000  1.08190E+02  4.88149E-04  4.71747E+05
    3584000  1.08197E+02  4.57914E-04  4.59564E+05
    4096000  1.08210E+02  4.34711E-04  4.46177E+05
    4608000  1.08225E+02  4.11023E-04  4.43606E+05
    5120000  1.08245E+02  3.84834E-04  4.55365E+05
    5632000  1.08247E+02  3.64008E-04  4.62729E+05
    6144000  1.08235E+02  3.46861E-04  4.67269E+05
    6656000  1.08224E+02  3.31097E-04  4.73440E+05
    6909308  1.08253E+02  3.71284E-04  3.62671E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.23343E+01 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  3.23956E+01  1.45888E-03  3.16589E+05
    1024000  3.23841E+01  9.17108E-04  4.00871E+05
    1536000  3.23341E+01  7.26497E-04  4.25742E+05
```

```
    2048000  3.23217E+01  6.06118E-04  4.58561E+05
    2560000  3.23213E+01  5.38218E-04  4.65583E+05
    3072000  3.23228E+01  5.09656E-04  4.32771E+05
    3584000  3.23230E+01  4.67553E-04  4.40811E+05
    4096000  3.23211E+01  4.30533E-04  4.54880E+05
    4608000  3.23211E+01  4.00493E-04  4.67240E+05
    5120000  3.23315E+01  3.90069E-04  4.43225E+05
    5632000  3.23376E+01  3.85721E-04  4.12100E+05
    6144000  3.23333E+01  3.63900E-04  4.24537E+05
    6656000  3.23301E+01  3.47285E-04  4.30331E+05
    6909308  3.23343E+01  3.55643E-04  3.95271E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.52849E+01 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  1.52902E+01  1.08571E-03  5.71614E+05
    1024000  1.52985E+01  8.05206E-04  5.20034E+05
    1536000  1.52729E+01  6.41372E-04  5.46254E+05
    2048000  1.52699E+01  5.54034E-04  5.48830E+05
    2560000  1.52728E+01  5.00907E-04  5.37525E+05
    3072000  1.52711E+01  4.57807E-04  5.36351E+05
    3584000  1.52725E+01  4.29640E-04  5.22040E+05
    4096000  1.52747E+01  4.16410E-04  4.86258E+05
    4608000  1.52751E+01  3.90584E-04  4.91249E+05
    5120000  1.52841E+01  4.09962E-04  4.01253E+05
    5632000  1.52846E+01  3.91847E-04  3.99316E+05
    6144000  1.52842E+01  3.73822E-04  4.02300E+05
    6656000  1.52828E+01  3.57286E-04  4.06577E+05
    6909308  1.52849E+01  3.82283E-04  3.42101E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.87289E+00 0.0005
tfc   14       1       1       1       1       1       1       1       1
     512000  8.88452E+00  1.81302E-03  2.04987E+05
```

```
    1024000  8.90661E+00  1.97283E-03  8.66293E+04
    1536000  8.87934E+00  1.36847E-03  1.19990E+05
    2048000  8.87095E+00  1.06279E-03  1.49148E+05
    2560000  8.86917E+00  8.86976E-04  1.71431E+05
    3072000  8.86854E+00  7.81637E-04  1.83994E+05
    3584000  8.86910E+00  7.03240E-04  1.94853E+05
    4096000  8.87005E+00  6.42252E-04  2.04408E+05
    4608000  8.87002E+00  5.92807E-04  2.13258E+05
    5120000  8.87455E+00  5.99210E-04  1.87823E+05
    5632000  8.87396E+00  5.59821E-04  1.95637E+05
    6144000  8.87257E+00  5.23501E-04  2.05137E+05
    6656000  8.87135E+00  4.93822E-04  2.12831E+05
    6909308  8.87289E+00  5.35650E-04  1.74246E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.78630E+00 0.0008
tfc   14       1       1       1       1       1       1       1       1
     512000  5.81167E+00  4.26046E-03  3.71209E+04
    1024000  5.80086E+00  2.24230E-03  6.70592E+04
    1536000  5.78389E+00  1.54621E-03  9.39886E+04
    2048000  5.77992E+00  1.20205E-03  1.16591E+05
    2560000  5.78051E+00  1.07917E-03  1.15806E+05
    3072000  5.77921E+00  9.29882E-04  1.30004E+05
    3584000  5.78439E+00  1.29007E-03  5.79015E+04
    4096000  5.78365E+00  1.14338E-03  6.44953E+04
    4608000  5.78307E+00  1.03014E-03  7.06217E+04
    5120000  5.78867E+00  1.03150E-03  6.33822E+04
    5632000  5.78757E+00  9.47309E-04  6.83228E+04
    6144000  5.78603E+00  8.73913E-04  7.36110E+04
    6656000  5.78478E+00  8.14531E-04  7.82277E+04
    6909308  5.78630E+00  8.40929E-04  7.06979E+04
mcnp       5      11/03/10 04:41:49      2      6933073      188778881
```

Case 40

```
 Case 40
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  2.50198E+04 0.0004
tfc   14        1        1        1        1        1        1        1        1
     512000  2.50976E+04  2.36489E-03  1.20437E+05
    1024000  2.50898E+04  1.41130E-03  1.68599E+05
    1536000  2.50403E+04  1.03284E-03  2.10151E+05
    2048000  2.50236E+04  8.37634E-04  2.39633E+05
    2560000  2.50185E+04  7.13053E-04  2.65007E+05
    3072000  2.50165E+04  6.46601E-04  2.68814E+05
    3584000  2.50136E+04  5.80790E-04  2.85892E+05
    4096000  2.50162E+04  5.32141E-04  2.98192E+05
    4608000  2.50174E+04  4.90286E-04  3.12414E+05
    5120000  2.50255E+04  4.57540E-04  3.22896E+05
    5632000  2.50264E+04  4.31210E-04  3.30558E+05
    6144000  2.50233E+04  4.10231E-04  3.34867E+05
    6656000  2.50178E+04  3.88695E-04  3.44436E+05
    6933073  2.50198E+04  3.82825E-04  3.40911E+05
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.03229E+04 0.0004
tfc   14        1        1        1        1        1        1        1        1
     512000  1.03339E+04  1.11002E-03  5.46661E+05
    1024000  1.03409E+04  1.09381E-03  2.80681E+05
    1536000  1.03218E+04  8.12381E-04  3.39688E+05
    2048000  1.03241E+04  8.11826E-04  2.55110E+05
    2560000  1.03216E+04  6.83781E-04  2.88182E+05
    3072000  1.03218E+04  6.54760E-04  2.62157E+05
    3584000  1.03203E+04  5.82209E-04  2.84500E+05
    4096000  1.03208E+04  5.30111E-04  3.00480E+05
    4608000  1.03218E+04  4.87062E-04  3.16564E+05
    5120000  1.03265E+04  4.63515E-04  3.14625E+05
    5632000  1.03260E+04  4.32759E-04  3.28195E+05
    6144000  1.03246E+04  4.06865E-04  3.40431E+05
    6656000  1.03228E+04  3.85027E-04  3.51032E+05
    6933073  1.03229E+04  3.74299E-04  3.56619E+05
tally  135     2     1
f         1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.34826E+03 0.0004
tfc   14        1        1        1        1        1        1        1        1
     512000  4.35809E+03  1.60210E-03  2.62423E+05
    1024000  4.35497E+03  9.57676E-04  3.66149E+05
    1536000  4.34671E+03  7.24789E-04  4.26752E+05
    2048000  4.34585E+03  6.24392E-04  4.31260E+05
    2560000  4.34607E+03  5.51654E-04  4.42760E+05
    3072000  4.34592E+03  4.97863E-04  4.53424E+05
    3584000  4.34738E+03  5.24593E-04  3.50425E+05
    4096000  4.34755E+03  4.84248E-04  3.60092E+05
    4608000  4.34806E+03  4.49390E-04  3.71863E+05
    5120000  4.34961E+03  4.28622E-04  3.67936E+05
    5632000  4.34961E+03  4.02792E-04  3.78846E+05
    6144000  4.34907E+03  3.79846E-04  3.90584E+05
    6656000  4.34832E+03  3.60066E-04  4.01387E+05
    6933073  4.34826E+03  3.50399E-04  4.06928E+05
tally  145     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.49523E+03 0.0004
tfc   14        1        1        1        1        1        1        1        1
     512000  1.49707E+03  1.16803E-03  4.93712E+05
    1024000  1.49667E+03  7.80197E-04  5.51679E+05
    1536000  1.49433E+03  6.45262E-04  5.38428E+05
    2048000  1.49428E+03  6.03526E-04  4.61596E+05
    2560000  1.49449E+03  5.46567E-04  4.51039E+05
    3072000  1.49432E+03  4.88123E-04  4.71700E+05
    3584000  1.49442E+03  4.57890E-04  4.59959E+05
    4096000  1.49459E+03  4.34689E-04  4.46880E+05
    4608000  1.49480E+03  4.11003E-04  4.44571E+05
    5120000  1.49509E+03  3.84813E-04  4.56479E+05
    5632000  1.49510E+03  3.63989E-04  4.63926E+05
    6144000  1.49494E+03  3.46843E-04  4.68450E+05
    6656000  1.49480E+03  3.31079E-04  4.74748E+05
    6933073  1.49523E+03  3.70705E-04  3.63567E+05
```

```
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.46618E+02 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  4.47448E+02  1.45881E-03  3.16509E+05
    1024000  4.47288E+02  9.17066E-04  3.99295E+05
    1536000  4.46599E+02  7.26461E-04  4.24790E+05
    2048000  4.46428E+02  6.06087E-04  4.57704E+05
    2560000  4.46422E+02  5.38190E-04  4.65190E+05
    3072000  4.46442E+02  5.09630E-04  4.32727E+05
    3584000  4.46446E+02  4.67528E-04  4.41189E+05
    4096000  4.46418E+02  4.30511E-04  4.55596E+05
    4608000  4.46419E+02  4.00473E-04  4.68257E+05
    5120000  4.46563E+02  3.90048E-04  4.44309E+05
    5632000  4.46647E+02  3.85701E-04  4.13164E+05
    6144000  4.46588E+02  3.63881E-04  4.25609E+05
    6656000  4.46545E+02  3.47267E-04  4.31520E+05
    6933073  4.46618E+02  3.55674E-04  3.94947E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.11116E+02 0.0004
tfc   14       1       1       1       1       1       1       1       1
     512000  2.11187E+02  1.08565E-03  5.71481E+05
    1024000  2.11302E+02  8.05165E-04  5.17994E+05
    1536000  2.10949E+02  6.41337E-04  5.45038E+05
    2048000  2.10908E+02  5.54004E-04  5.47808E+05
    2560000  2.10947E+02  5.00880E-04  5.37074E+05
    3072000  2.10925E+02  4.57781E-04  5.36300E+05
    3584000  2.10944E+02  4.29617E-04  5.22491E+05
    4096000  2.10974E+02  4.16389E-04  4.87025E+05
    4608000  2.10980E+02  3.90563E-04  4.92319E+05
    5120000  2.11104E+02  4.09941E-04  4.02234E+05
    5632000  2.11112E+02  3.91825E-04  4.00352E+05
    6144000  2.11106E+02  3.73800E-04  4.03320E+05
```

```
    6656000  2.11086E+02  3.57266E-04  4.07703E+05
    6933073  2.11116E+02  3.81315E-04  3.43617E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.22553E+02 0.0005
tfc   14       1       1       1       1       1       1       1       1
     512000  1.22713E+02  1.81294E-03  2.04933E+05
    1024000  1.23018E+02  1.97277E-03  8.62867E+04
    1536000  1.22642E+02  1.36842E-03  1.19719E+05
    2048000  1.22526E+02  1.06274E-03  1.48866E+05
    2560000  1.22501E+02  8.86940E-04  1.71283E+05
    3072000  1.22492E+02  7.81604E-04  1.83972E+05
    3584000  1.22500E+02  7.03210E-04  1.95016E+05
    4096000  1.22513E+02  6.42226E-04  2.04726E+05
    4608000  1.22513E+02  5.92782E-04  2.13718E+05
    5120000  1.22575E+02  5.99184E-04  1.88279E+05
    5632000  1.22567E+02  5.59801E-04  1.96136E+05
    6144000  1.22548E+02  5.23481E-04  2.05649E+05
    6656000  1.22531E+02  4.93803E-04  2.13412E+05
    6933073  1.22553E+02  5.34057E-04  1.75173E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.99206E+01 0.0008
tfc   14       1       1       1       1       1       1       1       1
     512000  8.02707E+01  4.26032E-03  3.71105E+04
    1024000  8.01212E+01  2.24223E-03  6.67938E+04
    1536000  7.98871E+01  1.54615E-03  9.37764E+04
    2048000  7.98323E+01  1.20201E-03  1.16370E+05
    2560000  7.98404E+01  1.07913E-03  1.15705E+05
    3072000  7.98225E+01  9.29845E-04  1.29988E+05
    3584000  7.98940E+01  1.29002E-03  5.79494E+04
    4096000  7.98837E+01  1.14334E-03  6.45950E+04
    4608000  7.98757E+01  1.03010E-03  7.07732E+04
    5120000  7.99532E+01  1.03146E-03  6.35353E+04
```

```
    5632000  7.99380E+01  9.47274E-04  6.84974E+04
    6144000  7.99168E+01  8.73880E-04  7.37948E+04
    6656000  7.98996E+01  8.14500E-04  7.84415E+04
    6933073  7.99206E+01  8.38187E-04  7.11148E+04
mcnp       5     11/03/10 05:01:55     2    12232061      225534302
```

Case 41

```
 Case 41
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.40597E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  5.39625E+01  1.42695E-03  2.95267E+05
    2048000  5.39687E+01  9.80071E-04  3.13034E+05
    3072000  5.40324E+01  8.76131E-04  2.60931E+05
    4096000  5.40450E+01  7.43863E-04  2.71191E+05
    5120000  5.40578E+01  6.60192E-04  2.75030E+05
    6144000  5.40418E+01  5.94982E-04  2.82021E+05
    7168000  5.40386E+01  5.56548E-04  2.75924E+05
    8192000  5.40518E+01  5.18808E-04  2.77645E+05
    9216000  5.40554E+01  5.54910E-04  2.15634E+05
   10240000  5.40643E+01  5.23783E-04  2.17717E+05
   11264000  5.40537E+01  4.92646E-04  2.23680E+05
   12232061  5.40597E+01  4.71794E-04  2.24521E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.34746E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.34510E+01  1.39902E-03  3.07176E+05
    2048000  3.34292E+01  8.91863E-04  3.78016E+05
    3072000  3.34477E+01  7.02683E-04  4.05644E+05
```

```
    4096000  3.34530E+01  6.13373E-04  3.98852E+05
    5120000  3.34586E+01  5.39667E-04  4.11593E+05
    6144000  3.34566E+01  4.87216E-04  4.20577E+05
    7168000  3.34572E+01  4.50472E-04  4.21172E+05
    8192000  3.34648E+01  4.22985E-04  4.17689E+05
    9216000  3.34633E+01  4.05599E-04  4.03616E+05
   10240000  3.34686E+01  3.81986E-04  4.09355E+05
   11264000  3.34669E+01  3.77092E-04  3.81770E+05
   12232061  3.34746E+01  3.85197E-04  3.36819E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.89457E+01 0.0011
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.91957E+01  1.20237E-02  4.15869E+03
    2048000  1.90575E+01  6.13188E-03  7.99684E+03
    3072000  1.90099E+01  4.11068E-03  1.18532E+04
    4096000  1.89806E+01  3.09735E-03  1.56416E+04
    5120000  1.89697E+01  2.48755E-03  1.93721E+04
    6144000  1.89601E+01  2.08033E-03  2.30688E+04
    7168000  1.89559E+01  1.79596E-03  2.64973E+04
    8192000  1.89535E+01  1.57682E-03  3.00565E+04
    9216000  1.89484E+01  1.41157E-03  3.33243E+04
   10240000  1.89489E+01  1.27540E-03  3.67198E+04
   11264000  1.89475E+01  1.17563E-03  3.92785E+04
   12232061  1.89457E+01  1.08580E-03  4.23901E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.31611E+00 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  8.31064E+00  9.75195E-04  6.32196E+05
    2048000  8.31046E+00  1.18409E-03  2.14457E+05
    3072000  8.31760E+00  9.64216E-04  2.15434E+05
    4096000  8.31647E+00  7.82081E-04  2.45334E+05
    5120000  8.31885E+00  7.02105E-04  2.43173E+05
```

```
    6144000  8.31749E+00  6.05358E-04  2.72435E+05
    7168000  8.31652E+00  5.37170E-04  2.96191E+05
    8192000  8.31977E+00  5.76729E-04  2.24678E+05
    9216000  8.31820E+00  5.26765E-04  2.39292E+05
   10240000  8.31800E+00  4.83006E-04  2.56029E+05
   11264000  8.31681E+00  4.49752E-04  2.68380E+05
   12232061  8.31611E+00  4.20639E-04  2.82450E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.93428E+00 0.0008
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.93264E+00  1.01269E-03  5.86247E+05
    2048000  2.93079E+00  7.13586E-04  5.90491E+05
    3072000  2.93132E+00  5.81404E-04  5.92527E+05
    4096000  2.93085E+00  4.91670E-04  6.20745E+05
    5120000  2.93202E+00  5.70185E-04  3.68713E+05
    6144000  2.93282E+00  5.69020E-04  3.08342E+05
    7168000  2.93295E+00  5.14266E-04  3.23161E+05
    8192000  2.93312E+00  4.81824E-04  3.21904E+05
    9216000  2.93269E+00  4.42861E-04  3.38555E+05
   10240000  2.93274E+00  4.09444E-04  3.56291E+05
   11264000  2.93219E+00  3.82150E-04  3.71730E+05
   12232061  2.93428E+00  7.82204E-04  8.16810E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.47903E+00 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.47800E+00  1.01304E-03  5.85848E+05
    2048000  1.47906E+00  9.81480E-04  3.12136E+05
    3072000  1.47905E+00  7.45551E-04  3.60337E+05
    4096000  1.47916E+00  6.68409E-04  3.35874E+05
    5120000  1.47901E+00  5.66048E-04  3.74122E+05
    6144000  1.47876E+00  4.98809E-04  4.01254E+05
    7168000  1.47842E+00  4.45418E-04  4.30783E+05
```

```
    8192000  1.47827E+00  4.04966E-04  4.55686E+05
    9216000  1.47897E+00  7.13014E-04  1.30607E+05
   10240000  1.47893E+00  6.49286E-04  1.41685E+05
   11264000  1.47888E+00  6.00055E-04  1.50770E+05
   12232061  1.47903E+00  5.65649E-04  1.56195E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.87385E-01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  8.87644E-01  1.12611E-03  4.74105E+05
    2048000  8.87117E-01  7.62957E-04  5.16543E+05
    3072000  8.87183E-01  5.99953E-04  5.56454E+05
    4096000  8.87356E-01  5.67578E-04  4.65811E+05
    5120000  8.87320E-01  4.91599E-04  4.96019E+05
    6144000  8.87196E-01  4.41310E-04  5.12625E+05
    7168000  8.87047E-01  4.01099E-04  5.31240E+05
    8192000  8.87155E-01  3.74743E-04  5.32152E+05
    9216000  8.87089E-01  3.52379E-04  5.34741E+05
   10240000  8.87206E-01  3.62431E-04  4.54720E+05
   11264000  8.87464E-01  4.17127E-04  3.12005E+05
   12232061  8.87385E-01  3.90485E-04  3.27757E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.91540E-01 0.0007
tfc   12       1       1       1       1       1       1       1       1
    1024000  5.92701E-01  2.64552E-03  8.59035E+04
    2048000  5.91011E-01  1.42220E-03  1.48658E+05
    3072000  5.91828E-01  2.00613E-03  4.97677E+04
    4096000  5.91681E-01  1.59553E-03  5.89458E+04
    5120000  5.91777E-01  1.40374E-03  6.08344E+04
    6144000  5.91464E-01  1.18122E-03  7.15533E+04
    7168000  5.91286E-01  1.02621E-03  8.11559E+04
    8192000  5.91378E-01  9.11516E-04  8.99445E+04
    9216000  5.91472E-01  8.80797E-04  8.55876E+04
```

```
   10240000  5.91393E-01  8.03172E-04  9.25930E+04
   11264000  5.91461E-01  7.54559E-04  9.53477E+04
   12232061  5.91540E-01  7.34943E-04  9.25238E+04
mcnp       5     11/03/10 05:21:59     2    12165398      247589064
```

Case 42

```
 Case 42
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.34856E+02 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.34687E+02  1.69659E-03  2.06544E+05
    2048000  6.33750E+02  1.15100E-03  2.24277E+05
    3072000  6.34342E+02  9.31718E-04  2.27849E+05
    4096000  6.34603E+02  8.08522E-04  2.26960E+05
    5120000  6.34911E+02  7.29597E-04  2.22938E+05
    6144000  6.34824E+02  6.61428E-04  2.26065E+05
    7168000  6.34852E+02  6.09838E-04  2.27936E+05
    8192000  6.34997E+02  5.69087E-04  2.28926E+05
    9216000  6.34810E+02  5.37880E-04  2.27756E+05
   10240000  6.34962E+02  5.14558E-04  2.24015E+05
   11264000  6.34811E+02  4.92287E-04  2.22575E+05
   12165398  6.34856E+02  4.79933E-04  2.16922E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.93082E+02 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.93039E+02  1.70612E-03  2.04244E+05
    2048000  3.92549E+02  1.20490E-03  2.04660E+05
    3072000  3.92829E+02  9.19066E-04  2.34165E+05
    4096000  3.92896E+02  7.70049E-04  2.50205E+05
```

```
    5120000  3.93003E+02  6.71458E-04  2.63216E+05
    6144000  3.93029E+02  6.03211E-04  2.71806E+05
    7168000  3.93055E+02  5.50425E-04  2.79800E+05
    8192000  3.93123E+02  5.09181E-04  2.85961E+05
    9216000  3.93073E+02  4.87080E-04  2.77742E+05
   10240000  3.93181E+02  4.58785E-04  2.81790E+05
   11264000  3.93084E+02  4.34561E-04  2.85635E+05
   12165398  3.93082E+02  4.17224E-04  2.87029E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.22364E+02 0.0013
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.25286E+02  1.48557E-02  2.69388E+03
    2048000  2.23533E+02  7.58389E-03  5.16595E+03
    3072000  2.23125E+02  5.08641E-03  7.64528E+03
    4096000  2.22904E+02  3.84487E-03  1.00362E+04
    5120000  2.22754E+02  3.08701E-03  1.24530E+04
    6144000  2.22643E+02  2.58134E-03  1.48424E+04
    7168000  2.22565E+02  2.21992E-03  1.72016E+04
    8192000  2.22537E+02  1.94887E-03  1.95202E+04
    9216000  2.22452E+02  1.74462E-03  2.16492E+04
   10240000  2.22485E+02  1.57614E-03  2.38758E+04
   11264000  2.22404E+02  1.43797E-03  2.60861E+04
   12165398  2.22364E+02  1.33494E-03  2.80377E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.74864E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  9.74634E+01  1.18895E-03  4.20571E+05
    2048000  9.72675E+01  8.23289E-04  4.38358E+05
    3072000  9.75121E+01  1.15329E-03  1.48710E+05
    4096000  9.75005E+01  9.29113E-04  1.71869E+05
    5120000  9.75301E+01  8.38155E-04  1.68928E+05
    6144000  9.75288E+01  7.27443E-04  1.86896E+05
```

```
    7168000  9.75201E+01  6.46373E-04  2.02897E+05
    8192000  9.75369E+01  5.88044E-04  2.14403E+05
    9216000  9.75135E+01  5.42328E-04  2.24036E+05
   10240000  9.75222E+01  5.01255E-04  2.36063E+05
   11264000  9.74973E+01  4.68590E-04  2.45656E+05
   12165398  9.74864E+01  4.42845E-04  2.54778E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.43507E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.43483E+01  1.17920E-03  4.27553E+05
    2048000  3.42946E+01  8.62948E-04  3.98993E+05
    3072000  3.43149E+01  7.04975E-04  3.97987E+05
    4096000  3.43166E+01  5.98694E-04  4.13927E+05
    5120000  3.43375E+01  7.10250E-04  2.35249E+05
    6144000  3.43472E+01  7.07997E-04  1.97303E+05
    7168000  3.43485E+01  6.36464E-04  2.09264E+05
    8192000  3.43541E+01  5.98466E-04  2.07001E+05
    9216000  3.43449E+01  5.48488E-04  2.19032E+05
   10240000  3.43486E+01  5.06526E-04  2.31175E+05
   11264000  3.43394E+01  4.72589E-04  2.41515E+05
   12165398  3.43507E+01  5.84612E-04  1.46194E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.73044E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.73096E+01  1.25887E-03  3.75152E+05
    2048000  1.73142E+01  1.25660E-03  1.88166E+05
    3072000  1.73186E+01  9.42222E-04  2.22797E+05
    4096000  1.73218E+01  8.43316E-04  2.08618E+05
    5120000  1.73200E+01  7.12490E-04  2.33771E+05
    6144000  1.73136E+01  6.18219E-04  2.58769E+05
    7168000  1.73088E+01  5.50623E-04  2.79598E+05
    8192000  1.73072E+01  5.00684E-04  2.95750E+05
```

```
    9216000  1.73024E+01  4.62230E-04  3.08408E+05
   10240000  1.73051E+01  4.33445E-04  3.15701E+05
   11264000  1.73022E+01  4.08582E-04  3.23112E+05
   12165398  1.73044E+01  3.95418E-04  3.19560E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.03890E+01 0.0005
tfc   12       1       1       1       1       1       1       1
    1024000  1.04003E+01  1.43080E-03  2.90406E+05
    2048000  1.03798E+01  9.60322E-04  3.22181E+05
    3072000  1.03834E+01  7.47077E-04  3.54393E+05
    4096000  1.03874E+01  7.06522E-04  2.97223E+05
    5120000  1.03867E+01  6.05744E-04  3.23424E+05
    6144000  1.03838E+01  5.35478E-04  3.44917E+05
    7168000  1.03833E+01  4.97375E-04  3.42669E+05
    8192000  1.03855E+01  4.65950E-04  3.41487E+05
    9216000  1.03830E+01  4.33518E-04  3.50612E+05
   10240000  1.03862E+01  4.49554E-04  2.93482E+05
   11264000  1.03900E+01  5.29291E-04  1.92541E+05
   12165398  1.03890E+01  4.97808E-04  2.01624E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.92203E+00 0.0009
tfc   12       1       1       1       1       1       1       1
    1024000  6.91302E+00  1.25837E-03  3.75448E+05
    2048000  6.89802E+00  9.03897E-04  3.63661E+05
    3072000  6.91912E+00  2.34460E-03  3.59814E+04
    4096000  6.92092E+00  1.88355E-03  4.18196E+04
    5120000  6.92464E+00  1.67925E-03  4.20844E+04
    6144000  6.92113E+00  1.41507E-03  4.93900E+04
    7168000  6.92169E+00  1.29796E-03  5.03178E+04
    8192000  6.92162E+00  1.14870E-03  5.61873E+04
    9216000  6.92251E+00  1.11114E-03  5.33710E+04
   10240000  6.92225E+00  1.01271E-03  5.78323E+04
```

```
   11264000  6.92098E+00  9.34262E-04  6.17981E+04
   12165398  6.92203E+00  9.13659E-04  5.98544E+04
mcnp       5     11/02/10 15:44:19     2    12177165      243133502
```

Case 43

```
 Case 43
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.31993E+02 0.0005
tfc   12       1       1       1       1       1       1       1
    1024000  4.31634E+02  1.62051E-03  2.27449E+05
    2048000  4.31073E+02  1.10463E-03  2.44522E+05
    3072000  4.31429E+02  8.96014E-04  2.47593E+05
    4096000  4.31637E+02  7.79281E-04  2.45431E+05
    5120000  4.31868E+02  7.02128E-04  2.41814E+05
    6144000  4.31843E+02  6.37973E-04  2.43966E+05
    7168000  4.31847E+02  5.91033E-04  2.43553E+05
    8192000  4.31993E+02  5.54413E-04  2.42078E+05
    9216000  4.31982E+02  6.13145E-04  1.75919E+05
   10240000  4.32065E+02  5.77062E-04  1.78609E+05
   11264000  4.31961E+02  5.45451E-04  1.81717E+05
   12177165  4.31993E+02  5.24731E-04  1.81521E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.67389E+02 0.0004
tfc   12       1       1       1       1       1       1       1
    1024000  2.67406E+02  1.62503E-03  2.26185E+05
    2048000  2.67053E+02  1.14751E-03  2.26591E+05
    3072000  2.67208E+02  8.79909E-04  2.56740E+05
    4096000  2.67239E+02  7.36957E-04  2.74431E+05
    5120000  2.67327E+02  6.42691E-04  2.88608E+05
```

```
    6144000  2.67355E+02  5.77464E-04  2.97772E+05
    7168000  2.67358E+02  5.28866E-04  3.04177E+05
    8192000  2.67417E+02  4.88922E-04  3.11274E+05
    9216000  2.67380E+02  4.69153E-04  3.00476E+05
   10240000  2.67444E+02  4.41441E-04  3.05213E+05
   11264000  2.67380E+02  4.18206E-04  3.09120E+05
   12177165  2.67389E+02  4.01143E-04  3.10601E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.51239E+02 0.0013
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.53217E+02  1.39894E-02  3.05201E+03
    2048000  1.52039E+02  7.14150E-03  5.85024E+03
    3072000  1.51698E+02  4.78641E-03  8.67658E+03
    4096000  1.51505E+02  3.60567E-03  1.14642E+04
    5120000  1.51435E+02  2.89469E-03  1.42268E+04
    6144000  1.51392E+02  2.42070E-03  1.69454E+04
    7168000  1.51334E+02  2.08194E-03  1.96283E+04
    8192000  1.51331E+02  1.82772E-03  2.22742E+04
    9216000  1.51278E+02  1.63635E-03  2.46994E+04
   10240000  1.51301E+02  1.47844E-03  2.72108E+04
   11264000  1.51257E+02  1.34954E-03  2.96848E+04
   12177165  1.51239E+02  1.25166E-03  3.19028E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.63466E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.63184E+01  1.11697E-03  4.78748E+05
    2048000  6.62616E+01  1.40194E-03  1.51807E+05
    3072000  6.63773E+01  1.33058E-03  1.12276E+05
    4096000  6.63568E+01  1.04925E-03  1.35382E+05
    5120000  6.63822E+01  9.16547E-04  1.41907E+05
    6144000  6.63785E+01  7.85715E-04  1.60844E+05
    7168000  6.63654E+01  6.92615E-04  1.77351E+05
```

```
    8192000  6.63781E+01  6.24787E-04  1.90615E+05
    9216000  6.63605E+01  5.72080E-04  2.02081E+05
   10240000  6.63672E+01  5.26327E-04  2.14702E+05
   11264000  6.63505E+01  4.89486E-04  2.25646E+05
   12177165  6.63466E+01  4.60764E-04  2.35420E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.33859E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.33853E+01  1.13305E-03  4.65250E+05
    2048000  2.33455E+01  8.22628E-04  4.40906E+05
    3072000  2.33564E+01  6.73606E-04  4.38084E+05
    4096000  2.33564E+01  5.69085E-04  4.60219E+05
    5120000  2.33731E+01  6.74182E-04  2.62276E+05
    6144000  2.33822E+01  6.73680E-04  2.18790E+05
    7168000  2.33832E+01  6.08778E-04  2.29562E+05
    8192000  2.33877E+01  5.71335E-04  2.27951E+05
    9216000  2.33813E+01  5.24258E-04  2.40630E+05
   10240000  2.33840E+01  4.84403E-04  2.53475E+05
   11264000  2.33791E+01  4.55625E-04  2.60432E+05
   12177165  2.33859E+01  5.56764E-04  1.61234E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.17900E+01 0.0007
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.17849E+01  1.19039E-03  4.21511E+05
    2048000  1.17853E+01  1.18337E-03  2.13066E+05
    3072000  1.17858E+01  8.88077E-04  2.52039E+05
    4096000  1.17890E+01  7.96240E-04  2.35088E+05
    5120000  1.17895E+01  6.75079E-04  2.61580E+05
    6144000  1.17883E+01  5.95444E-04  2.80061E+05
    7168000  1.17846E+01  5.29950E-04  3.02934E+05
    8192000  1.17842E+01  4.81528E-04  3.20908E+05
    9216000  1.17894E+01  8.53876E-04  9.07089E+04
```

```
   10240000  1.17901E+01  7.77051E-04  9.85029E+04
   11264000  1.17880E+01  7.16402E-04  1.05340E+05
   12177165  1.17900E+01  6.78247E-04  1.08649E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.07327E+00 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  7.07834E+00  1.32841E-03  3.38475E+05
    2048000  7.06535E+00  8.97444E-04  3.70457E+05
    3072000  7.06647E+00  7.00156E-04  4.05489E+05
    4096000  7.06951E+00  6.63911E-04  3.38141E+05
    5120000  7.07031E+00  5.72334E-04  3.63927E+05
    6144000  7.06943E+00  5.06529E-04  3.87014E+05
    7168000  7.06858E+00  4.69711E-04  3.85618E+05
    8192000  7.07044E+00  4.39735E-04  3.84804E+05
    9216000  7.06949E+00  4.14354E-04  3.85210E+05
   10240000  7.07150E+00  4.28083E-04  3.24558E+05
   11264000  7.07367E+00  4.95937E-04  2.19814E+05
   12177165  7.07327E+00  4.66098E-04  2.30062E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.71513E+00 0.0009
tfc   12       1       1       1       1       1       1       1       1
    1024000  4.72390E+00  2.91191E-03  7.04423E+04
    2048000  4.70563E+00  1.58687E-03  1.18487E+05
    3072000  4.71546E+00  2.37802E-03  3.51510E+04
    4096000  4.71523E+00  1.89312E-03  4.15873E+04
    5120000  4.71686E+00  1.66679E-03  4.29091E+04
    6144000  4.71451E+00  1.40224E-03  5.04995E+04
    7168000  4.71417E+00  1.27853E-03  5.20467E+04
    8192000  4.71451E+00  1.13135E-03  5.81342E+04
    9216000  4.71495E+00  1.08751E-03  5.59206E+04
   10240000  4.71492E+00  9.92594E-04  6.03677E+04
   11264000  4.71428E+00  9.17383E-04  6.42401E+04
```

```
   12177165  4.71513E+00  8.94684E-04  6.24398E+04
mcnp       5     11/02/10 16:04:26     2    12165838      242902739
```

Case 44

```
 Case 44
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.96661E+03 0.0005
tfc   12        1        1        1        1        1        1        1
    1024000  5.96172E+03  1.62046E-03  2.26301E+05
    2048000  5.95400E+03  1.10460E-03  2.43610E+05
    3072000  5.95889E+03  8.95984E-04  2.46284E+05
    4096000  5.96175E+03  7.79257E-04  2.44214E+05
    5120000  5.96496E+03  7.02106E-04  2.40797E+05
    6144000  5.96461E+03  6.37952E-04  2.43033E+05
    7168000  5.96467E+03  5.91014E-04  2.42703E+05
    8192000  5.96670E+03  5.54396E-04  2.41312E+05
    9216000  5.96656E+03  6.13125E-04  1.75402E+05
   10240000  5.96770E+03  5.77044E-04  1.78253E+05
   11264000  5.96626E+03  5.45434E-04  1.81414E+05
   12165838  5.96661E+03  5.25054E-04  1.81265E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.69311E+03 0.0004
tfc   12        1        1        1        1        1        1        1
    1024000  3.69341E+03  1.62499E-03  2.25043E+05
    2048000  3.68855E+03  1.14747E-03  2.25746E+05
    3072000  3.69068E+03  8.79879E-04  2.55383E+05
    4096000  3.69109E+03  7.36934E-04  2.73071E+05
    5120000  3.69231E+03  6.42670E-04  2.87397E+05
    6144000  3.69271E+03  5.77444E-04  2.96635E+05
```

```
    7168000  3.69275E+03  5.28848E-04  3.03117E+05
    8192000  3.69357E+03  4.88905E-04  3.10292E+05
    9216000  3.69305E+03  4.69137E-04  2.99594E+05
   10240000  3.69394E+03  4.41426E-04  3.04606E+05
   11264000  3.69306E+03  4.18193E-04  3.08606E+05
   12165838  3.69311E+03  4.01359E-04  3.10209E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.08888E+03 0.0013
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.11623E+03  1.39890E-02  3.03662E+03
    2048000  2.09996E+03  7.14125E-03  5.82847E+03
    3072000  2.09525E+03  4.78625E-03  8.63071E+03
    4096000  2.09258E+03  3.60556E-03  1.14074E+04
    5120000  2.09162E+03  2.89460E-03  1.41671E+04
    6144000  2.09102E+03  2.42062E-03  1.68807E+04
    7168000  2.09022E+03  2.08186E-03  1.95599E+04
    8192000  2.09019E+03  1.82766E-03  2.22039E+04
    9216000  2.08946E+03  1.63629E-03  2.46269E+04
   10240000  2.08978E+03  1.47838E-03  2.71569E+04
   11264000  2.08917E+03  1.34950E-03  2.96356E+04
   12165838  2.08888E+03  1.25276E-03  3.18407E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.16363E+02 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  9.15987E+02  1.11693E-03  4.76333E+05
    2048000  9.15207E+02  1.40189E-03  1.51242E+05
    3072000  9.16803E+02  1.33053E-03  1.11683E+05
    4096000  9.16517E+02  1.04922E-03  1.34711E+05
    5120000  9.16872E+02  9.16515E-04  1.41312E+05
    6144000  9.16820E+02  7.85687E-04  1.60230E+05
    7168000  9.16640E+02  6.92589E-04  1.76734E+05
    8192000  9.16816E+02  6.24764E-04  1.90015E+05
```

```
    9216000  9.16572E+02  5.72058E-04  2.01489E+05
   10240000  9.16666E+02  5.26307E-04  2.14277E+05
   11264000  9.16434E+02  4.89468E-04  2.25272E+05
   12165838  9.16363E+02  4.61100E-04  2.35034E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.23001E+02 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.22997E+02  1.13302E-03  4.62905E+05
    2048000  3.22449E+02  8.22597E-04  4.39266E+05
    3072000  3.22598E+02  6.73580E-04  4.35772E+05
    4096000  3.22597E+02  5.69063E-04  4.57943E+05
    5120000  3.22829E+02  6.74158E-04  2.61176E+05
    6144000  3.22955E+02  6.73655E-04  2.17955E+05
    7168000  3.22968E+02  6.08755E-04  2.28763E+05
    8192000  3.23031E+02  5.71313E-04  2.27233E+05
    9216000  3.22943E+02  5.24238E-04  2.39925E+05
   10240000  3.22980E+02  4.84384E-04  2.52973E+05
   11264000  3.22912E+02  4.55607E-04  2.60001E+05
   12165838  3.23001E+02  5.57211E-04  1.60947E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.62841E+02 0.0007
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.62773E+02  1.19035E-03  4.19387E+05
    2048000  1.62778E+02  1.18332E-03  2.12273E+05
    3072000  1.62786E+02  8.88044E-04  2.50708E+05
    4096000  1.62829E+02  7.96212E-04  2.33924E+05
    5120000  1.62836E+02  6.75054E-04  2.60483E+05
    6144000  1.62819E+02  5.95421E-04  2.78993E+05
    7168000  1.62769E+02  5.29930E-04  3.01881E+05
    8192000  1.62764E+02  4.81508E-04  3.19898E+05
    9216000  1.62835E+02  8.53844E-04  9.04429E+04
   10240000  1.62845E+02  7.77022E-04  9.83077E+04
```

```
   11264000  1.62816E+02  7.16376E-04  1.05166E+05
   12165838  1.62841E+02  6.78816E-04  1.08447E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.76945E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  9.77657E+01  1.32836E-03  3.36769E+05
    2048000  9.75867E+01  8.97410E-04  3.69080E+05
    3072000  9.76020E+01  7.00128E-04  4.03350E+05
    4096000  9.76439E+01  6.63886E-04  3.36469E+05
    5120000  9.76551E+01  5.72312E-04  3.62402E+05
    6144000  9.76430E+01  5.06508E-04  3.85540E+05
    7168000  9.76312E+01  4.69691E-04  3.84279E+05
    8192000  9.76570E+01  4.39717E-04  3.83594E+05
    9216000  9.76439E+01  4.14336E-04  3.84084E+05
   10240000  9.76717E+01  4.28066E-04  3.23916E+05
   11264000  9.77016E+01  4.95918E-04  2.19450E+05
   12165838  9.76945E+01  4.66449E-04  2.29674E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.51245E+01 0.0009
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.52463E+01  2.91181E-03  7.00870E+04
    2048000  6.49942E+01  1.58681E-03  1.18046E+05
    3072000  6.51299E+01  2.37794E-03  3.49652E+04
    4096000  6.51265E+01  1.89306E-03  4.13812E+04
    5120000  6.51492E+01  1.66674E-03  4.27290E+04
    6144000  6.51169E+01  1.40220E-03  5.03066E+04
    7168000  6.51121E+01  1.27849E-03  5.18654E+04
    8192000  6.51169E+01  1.13131E-03  5.79509E+04
    9216000  6.51230E+01  1.08747E-03  5.57566E+04
   10240000  6.51225E+01  9.92557E-04  6.02480E+04
   11264000  6.51137E+01  9.17350E-04  6.41336E+04
   12165838  6.51245E+01  8.95461E-04  6.23201E+04
```

```
mcnp        5      11/02/10 16:24:32      2     21482354       490395228
```

Case 45

```
 Case 45
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.26699E-05 0.0016
tfc   11        1        1        1        1        1        1        1        1
    2048000  4.24621E-05  5.51918E-03  1.72805E+04
    4096000  4.26644E-05  3.71807E-03  1.90232E+04
    6144000  4.27629E-05  2.97812E-03  1.97392E+04
    8192000  4.27258E-05  2.54700E-03  2.02516E+04
   10240000  4.27223E-05  2.26715E-03  2.04413E+04
   12288000  4.27567E-05  2.08859E-03  2.00690E+04
   14336000  4.27405E-05  1.91665E-03  2.04349E+04
   16384000  4.27060E-05  1.80685E-03  2.00949E+04
   18432000  4.26940E-05  1.69512E-03  2.02898E+04
   20480000  4.26926E-05  1.61496E-03  2.01072E+04
   21482354  4.26699E-05  1.57322E-03  2.01950E+04
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.60315E-05 0.0014
tfc   11        1        1        1        1        1        1        1        1
    2048000  2.58258E-05  3.92905E-03  3.40982E+04
    4096000  2.59533E-05  3.00239E-03  2.91732E+04
    6144000  2.60291E-05  2.45012E-03  2.91635E+04
    8192000  2.60130E-05  2.09087E-03  3.00512E+04
   10240000  2.60252E-05  1.86201E-03  3.03043E+04
   12288000  2.60580E-05  1.79925E-03  2.70428E+04
   14336000  2.60548E-05  1.64447E-03  2.77594E+04
   16384000  2.60379E-05  1.51851E-03  2.84509E+04
```

```
   18432000  2.60272E-05  1.41843E-03  2.89775E+04
   20480000  2.60361E-05  1.34585E-03  2.89522E+04
   21482354  2.60315E-05  1.35010E-03  2.74217E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.42196E-05 0.0012
tfc   11       1       1       1       1       1       1       1       1
    2048000  1.41128E-05  3.58232E-03  4.10183E+04
    4096000  1.41657E-05  2.53105E-03  4.10504E+04
    6144000  1.41927E-05  2.06976E-03  4.08671E+04
    8192000  1.41909E-05  1.77737E-03  4.15875E+04
   10240000  1.42048E-05  1.60232E-03  4.09230E+04
   12288000  1.42149E-05  1.48295E-03  3.98086E+04
   14336000  1.42148E-05  1.37290E-03  3.98274E+04
   16384000  1.42158E-05  1.29523E-03  3.91054E+04
   18432000  1.42144E-05  1.23240E-03  3.83858E+04
   20480000  1.42225E-05  1.18957E-03  3.70594E+04
   21482354  1.42196E-05  1.17282E-03  3.63379E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.92403E-06 0.0012
tfc   11       1       1       1       1       1       1       1       1
    2048000  5.87756E-06  3.29300E-03  4.85426E+04
    4096000  5.90116E-06  2.40185E-03  4.55854E+04
    6144000  5.91077E-06  1.95364E-03  4.58695E+04
    8192000  5.90892E-06  1.67197E-03  4.69958E+04
   10240000  5.92553E-06  1.79038E-03  3.27776E+04
   12288000  5.92474E-06  1.59227E-03  3.45304E+04
   14336000  5.92529E-06  1.45691E-03  3.53666E+04
   16384000  5.92774E-06  1.41288E-03  3.28639E+04
   18432000  5.92527E-06  1.30949E-03  3.39995E+04
   20480000  5.92692E-06  1.24033E-03  3.40880E+04
   21482354  5.92403E-06  1.20263E-03  3.45591E+04
tally  155    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.98396E-06 0.0011
tfc   11        1        1        1        1        1        1        1        1
    2048000  1.97168E-06  3.34096E-03  4.71590E+04
    4096000  1.97850E-06  2.31830E-03  4.89306E+04
    6144000  1.98121E-06  1.92929E-03  4.70346E+04
    8192000  1.98055E-06  1.68917E-03  4.60439E+04
   10240000  1.98274E-06  1.51154E-03  4.59866E+04
   12288000  1.98362E-06  1.44409E-03  4.19799E+04
   14336000  1.98414E-06  1.33346E-03  4.22182E+04
   16384000  1.98502E-06  1.24420E-03  4.23791E+04
   18432000  1.98469E-06  1.16835E-03  4.27098E+04
   20480000  1.98480E-06  1.10093E-03  4.32668E+04
   21482354  1.98396E-06  1.07178E-03  4.35121E+04
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  9.79610E-07 0.0012
tfc   11        1        1        1        1        1        1        1        1
    2048000  9.76721E-07  4.13271E-03  3.08202E+04
    4096000  9.78622E-07  2.66157E-03  3.71230E+04
    6144000  9.78760E-07  2.08152E-03  4.04066E+04
    8192000  9.78644E-07  1.90358E-03  3.62555E+04
   10240000  9.79332E-07  1.66781E-03  3.77723E+04
   12288000  9.79671E-07  1.52522E-03  3.76327E+04
   14336000  9.79831E-07  1.41568E-03  3.74565E+04
   16384000  9.79916E-07  1.31875E-03  3.77232E+04
   18432000  9.79860E-07  1.24234E-03  3.77743E+04
   20480000  9.80131E-07  1.18538E-03  3.73218E+04
   21482354  9.79610E-07  1.15074E-03  3.77457E+04
tally  175     2     1
f         1
d         1
u         0
s         0
```

```
m         1
c         0
e         0
t         0
vals
  5.82258E-07 0.0026
tfc   11        1        1        1        1        1        1        1        1
    2048000  5.77417E-07  3.48218E-03  4.34114E+04
    4096000  5.80850E-07  3.18527E-03  2.59195E+04
    6144000  5.81418E-07  2.44468E-03  2.92934E+04
    8192000  5.80614E-07  2.04706E-03  3.13513E+04
   10240000  5.80878E-07  1.77205E-03  3.34593E+04
   12288000  5.81420E-07  2.00039E-03  2.18778E+04
   14336000  5.81367E-07  1.79690E-03  2.32493E+04
   16384000  5.83155E-07  3.38456E-03  5.72700E+03
   18432000  5.82857E-07  3.03710E-03  6.32059E+03
   20480000  5.82605E-07  2.75673E-03  6.90065E+03
   21482354  5.82258E-07  2.63908E-03  7.17658E+03
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.83851E-07 0.0017
tfc   11        1        1        1        1        1        1        1        1
    2048000  3.80696E-07  3.48292E-03  4.33929E+04
    4096000  3.82254E-07  2.49427E-03  4.22700E+04
    6144000  3.83566E-07  2.44752E-03  2.92255E+04
    8192000  3.83174E-07  2.05404E-03  3.11387E+04
   10240000  3.83369E-07  1.78663E-03  3.29153E+04
   12288000  3.83908E-07  2.32441E-03  1.62034E+04
   14336000  3.83781E-07  2.05932E-03  1.77016E+04
   16384000  3.84038E-07  1.97946E-03  1.67431E+04
   18432000  3.83980E-07  1.82586E-03  1.74880E+04
   20480000  3.83848E-07  1.67964E-03  1.85885E+04
   21482354  3.83851E-07  1.69028E-03  1.74947E+04
mcnp        5      11/02/10 16:44:39      2      3282441       299925000
```

Case 46

```
 Case 46
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f         1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.58281E+01 0.0024
tfc   13        1        1        1        1        1        1        1        1
     256000  6.69640E+01  2.51736E-02  1.01348E+03
     512000  6.61672E+01  1.28681E-02  1.93670E+03
     768000  6.59710E+01  8.67421E-03  2.84336E+03
    1024000  6.59842E+01  6.56612E-03  3.72336E+03
    1280000  6.58789E+01  5.41095E-03  4.38998E+03
    1536000  6.57942E+01  4.54933E-03  5.17689E+03
    1792000  6.58072E+01  3.94508E-03  5.89779E+03
    2048000  6.57922E+01  3.48328E-03  6.62064E+03
    2304000  6.57697E+01  3.12167E-03  7.32786E+03
    2560000  6.57676E+01  2.82990E-03  8.02618E+03
    2816000  6.57663E+01  2.59500E-03  8.66081E+03
    3072000  6.57731E+01  2.39882E-03  9.27806E+03
    3282441  6.58281E+01  2.37544E-03  8.85579E+03
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.75779E+01 0.0016
tfc   13        1        1        1        1        1        1        1        1
     256000  3.73228E+01  2.79533E-03  8.21934E+04
     512000  3.77083E+01  7.89545E-03  5.14444E+03
     768000  3.76601E+01  5.42182E-03  7.27781E+03
    1024000  3.76668E+01  4.16049E-03  9.27391E+03
    1280000  3.76053E+01  3.38567E-03  1.12129E+04
    1536000  3.75797E+01  2.88784E-03  1.28475E+04
    1792000  3.75932E+01  2.61081E-03  1.34664E+04
    2048000  3.75728E+01  2.31229E-03  1.50241E+04
    2304000  3.75597E+01  2.07989E-03  1.65071E+04
    2560000  3.75477E+01  1.89079E-03  1.79790E+04
    2816000  3.75513E+01  1.74370E-03  1.91820E+04
    3072000  3.75560E+01  1.61955E-03  2.03546E+04
    3282441  3.75779E+01  1.62585E-03  1.89040E+04
tally  135     2     1
f         1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.94545E+01 0.0017
tfc   13        1        1        1        1        1        1        1        1
     256000  1.93390E+01  3.07881E-03  6.77543E+04
     512000  1.94752E+01  4.66566E-03  1.47321E+04
     768000  1.94824E+01  3.65630E-03  1.60032E+04
    1024000  1.95477E+01  4.60864E-03  7.55800E+03
    1280000  1.95005E+01  3.73268E-03  9.22501E+03
    1536000  1.94854E+01  3.16094E-03  1.07233E+04
    1792000  1.94800E+01  2.74407E-03  1.21902E+04
    2048000  1.94630E+01  2.42127E-03  1.37022E+04
    2304000  1.94508E+01  2.17028E-03  1.51607E+04
    2560000  1.94464E+01  1.97115E-03  1.65429E+04
    2816000  1.94629E+01  1.89287E-03  1.62778E+04
    3072000  1.94559E+01  1.74736E-03  1.74859E+04
    3282441  1.94545E+01  1.65253E-03  1.82985E+04
tally  145     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.74044E+00 0.0011
tfc   13        1        1        1        1        1        1        1        1
     256000  7.70754E+00  2.59315E-03  9.55096E+04
     512000  7.72815E+00  2.28057E-03  6.16601E+04
     768000  7.72891E+00  1.77479E-03  6.79197E+04
    1024000  7.73541E+00  1.59665E-03  6.29696E+04
    1280000  7.73217E+00  1.67266E-03  4.59401E+04
    1536000  7.72920E+00  1.46210E-03  5.01194E+04
    1792000  7.73400E+00  1.36904E-03  4.89742E+04
    2048000  7.73692E+00  1.34083E-03  4.46813E+04
    2304000  7.73601E+00  1.24246E-03  4.62582E+04
    2560000  7.73671E+00  1.15879E-03  4.78674E+04
    2816000  7.73913E+00  1.08793E-03  4.92759E+04
    3072000  7.73759E+00  1.01444E-03  5.18799E+04
    3282441  7.74044E+00  1.06615E-03  4.39624E+04
tally  155     2     1
f        1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.51352E+00 0.0009
tfc   13        1        1        1        1        1        1        1        1
     256000  2.50480E+00  2.27048E-03  1.24585E+05
     512000  2.50700E+00  1.54268E-03  1.34754E+05
     768000  2.51027E+00  1.42621E-03  1.05178E+05
    1024000  2.51207E+00  1.25228E-03  1.02364E+05
    1280000  2.51047E+00  1.13578E-03  9.96375E+04
    1536000  2.51022E+00  1.01820E-03  1.03348E+05
    1792000  2.51075E+00  9.29563E-04  1.06229E+05
    2048000  2.51058E+00  8.58090E-04  1.09096E+05
    2304000  2.51236E+00  1.13963E-03  5.49827E+04
    2560000  2.51285E+00  1.05521E-03  5.77262E+04
    2816000  2.51375E+00  9.87667E-04  5.97880E+04
    3072000  2.51359E+00  9.23848E-04  6.25533E+04
    3282441  2.51352E+00  8.85350E-04  6.37508E+04
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.22572E+00 0.0010
tfc   13        1        1        1        1        1        1        1        1
     256000  1.22400E+00  3.52961E-03  5.15523E+04
     512000  1.22352E+00  2.10799E-03  7.21694E+04
     768000  1.22366E+00  1.62374E-03  8.11447E+04
    1024000  1.22480E+00  1.49227E-03  7.20873E+04
    1280000  1.22482E+00  1.42696E-03  6.31226E+04
    1536000  1.22481E+00  1.30034E-03  6.33650E+04
    1792000  1.22469E+00  1.15952E-03  6.82723E+04
    2048000  1.22427E+00  1.07069E-03  7.00720E+04
    2304000  1.22449E+00  1.03991E-03  6.60329E+04
    2560000  1.22501E+00  1.02964E-03  6.06286E+04
    2816000  1.22524E+00  9.64438E-04  6.27027E+04
    3072000  1.22561E+00  1.01686E-03  5.16334E+04
    3282441  1.22572E+00  9.98894E-04  5.00815E+04
tally  175     2     1
f         1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.21207E-01 0.0010
tfc   13       1       1       1       1       1       1       1       1
     256000  7.19361E-01  4.11739E-03  3.78842E+04
     512000  7.19176E-01  2.32042E-03  5.95606E+04
     768000  7.19154E-01  1.71890E-03  7.24082E+04
    1024000  7.20111E-01  1.54856E-03  6.69418E+04
    1280000  7.19874E-01  1.41962E-03  6.37773E+04
    1536000  7.19993E-01  1.28049E-03  6.53445E+04
    1792000  7.19964E-01  1.14788E-03  6.96638E+04
    2048000  7.20045E-01  1.06376E-03  7.09891E+04
    2304000  7.20411E-01  1.06452E-03  6.30148E+04
    2560000  7.20602E-01  1.00213E-03  6.40037E+04
    2816000  7.20789E-01  9.50545E-04  6.45490E+04
    3072000  7.21049E-01  9.77924E-04  5.58265E+04
    3282441  7.21207E-01  9.68871E-04  5.32333E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.74418E-01 0.0015
tfc   13       1       1       1       1       1       1       1       1
     256000  4.72298E-01  4.09697E-03  3.82628E+04
     512000  4.73024E-01  2.55680E-03  4.90566E+04
     768000  4.73343E-01  2.11265E-03  4.79331E+04
    1024000  4.73508E-01  1.75977E-03  5.18372E+04
    1280000  4.73374E-01  1.53828E-03  5.43176E+04
    1536000  4.73426E-01  1.38335E-03  5.59887E+04
    1792000  4.73296E-01  1.23396E-03  6.02836E+04
    2048000  4.73220E-01  1.12401E-03  6.35819E+04
    2304000  4.73414E-01  1.16704E-03  5.24299E+04
    2560000  4.74185E-01  1.75207E-03  2.09386E+04
    2816000  4.74338E-01  1.64327E-03  2.15982E+04
    3072000  4.74372E-01  1.53841E-03  2.25582E+04
    3282441  4.74418E-01  1.46570E-03  2.32608E+04
mcnp       5     11/02/10 17:04:47     2     3638522      308663828
```

Case 47

```
 Case 47
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.56140E+02 0.0028
tfc   15        1        1        1        1        1        1        1        1
     256000  7.73993E+02  3.25346E-02  6.71435E+02
     512000  7.62334E+02  1.66626E-02  1.28039E+03
     768000  7.57291E+02  1.12522E-02  1.87112E+03
    1024000  7.57390E+02  8.50420E-03  2.45578E+03
    1280000  7.57541E+02  7.05748E-03  2.85308E+03
    1536000  7.56222E+02  5.93428E-03  3.36405E+03
    1792000  7.56587E+02  5.16962E-03  3.79900E+03
    2048000  7.55984E+02  4.56075E-03  4.27144E+03
    2304000  7.55570E+02  4.08488E-03  4.73294E+03
    2560000  7.55188E+02  3.69876E-03  5.19431E+03
    2816000  7.55333E+02  3.40236E-03  5.57991E+03
    3072000  7.55467E+02  3.13729E-03  6.01487E+03
    3328000  7.56273E+02  3.05941E-03  5.83745E+03
    3584000  7.56121E+02  2.85751E-03  6.21181E+03
    3638522  7.56140E+02  2.81812E-03  6.29081E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.31630E+02 0.0019
tfc   15        1        1        1        1        1        1        1        1
     256000  4.28496E+02  3.11491E-03  7.32498E+04
     512000  4.34107E+02  1.02023E-02  3.41532E+03
     768000  4.32709E+02  7.00626E-03  4.82617E+03
    1024000  4.32499E+02  5.34980E-03  6.20556E+03
    1280000  4.31926E+02  4.36255E-03  7.46678E+03
    1536000  4.31290E+02  3.68003E-03  8.74773E+03
```

```
    1792000  4.31420E+02  3.33047E-03  9.15323E+03
    2048000  4.31099E+02  2.94312E-03  1.02572E+04
    2304000  4.30869E+02  2.64171E-03  1.13167E+04
    2560000  4.30798E+02  2.40143E-03  1.23225E+04
    2816000  4.30868E+02  2.21582E-03  1.31558E+04
    3072000  4.31141E+02  2.06701E-03  1.38564E+04
    3328000  4.31563E+02  2.05349E-03  1.29573E+04
    3584000  4.31676E+02  1.93405E-03  1.35600E+04
    3638522  4.31630E+02  1.90789E-03  1.37252E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.23193E+02 0.0014
tfc   15       1       1       1       1       1       1       1       1
     256000  2.22957E+02  4.07774E-03  4.27423E+04
     512000  2.24339E+02  5.93326E-03  1.00981E+04
     768000  2.23760E+02  4.19570E-03  1.34576E+04
    1024000  2.23596E+02  3.26664E-03  1.66438E+04
    1280000  2.23217E+02  2.70512E-03  1.94196E+04
    1536000  2.22980E+02  2.30949E-03  2.22109E+04
    1792000  2.22944E+02  2.04895E-03  2.41838E+04
    2048000  2.22775E+02  1.82947E-03  2.65459E+04
    2304000  2.22701E+02  1.66580E-03  2.84607E+04
    2560000  2.22748E+02  1.55080E-03  2.95480E+04
    2816000  2.23005E+02  1.61483E-03  2.47703E+04
    3072000  2.23029E+02  1.51408E-03  2.58249E+04
    3328000  2.23073E+02  1.42642E-03  2.68539E+04
    3584000  2.23135E+02  1.36496E-03  2.72243E+04
    3638522  2.23193E+02  1.37581E-03  2.63942E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.87492E+01 0.0011
tfc   15       1       1       1       1       1       1       1       1
     256000  8.86522E+01  3.21248E-03  6.88675E+04
     512000  8.86341E+01  2.35825E-03  6.39217E+04
```

```
     768000  8.85653E+01  1.95352E-03  6.20782E+04
    1024000  8.86673E+01  1.74173E-03  5.85453E+04
    1280000  8.86730E+01  1.97594E-03  3.63970E+04
    1536000  8.86179E+01  1.71788E-03  4.01431E+04
    1792000  8.86201E+01  1.56713E-03  4.13406E+04
    2048000  8.86849E+01  1.57795E-03  3.56827E+04
    2304000  8.86813E+01  1.46997E-03  3.65488E+04
    2560000  8.86769E+01  1.35301E-03  3.88183E+04
    2816000  8.87145E+01  1.27876E-03  3.95009E+04
    3072000  8.87049E+01  1.19387E-03  4.15352E+04
    3328000  8.87239E+01  1.13838E-03  4.21627E+04
    3584000  8.87543E+01  1.09543E-03  4.22695E+04
    3638522  8.87492E+01  1.08281E-03  4.26113E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.88795E+01 0.0013
tfc   15       1       1       1       1       1       1       1       1
     256000  2.87897E+01  2.86472E-03  8.66031E+04
     512000  2.89196E+01  5.14754E-03  1.34162E+04
     768000  2.88372E+01  3.55931E-03  1.87001E+04
    1024000  2.88675E+01  2.80039E-03  2.26473E+04
    1280000  2.88343E+01  2.33292E-03  2.61103E+04
    1536000  2.88303E+01  2.01997E-03  2.90343E+04
    1792000  2.88307E+01  1.78278E-03  3.19441E+04
    2048000  2.88367E+01  1.63123E-03  3.33900E+04
    2304000  2.88618E+01  1.82161E-03  2.38002E+04
    2560000  2.88704E+01  1.67988E-03  2.51817E+04
    2816000  2.88694E+01  1.55078E-03  2.68588E+04
    3072000  2.88651E+01  1.43970E-03  2.85621E+04
    3328000  2.88770E+01  1.39073E-03  2.82496E+04
    3584000  2.88818E+01  1.31393E-03  2.93798E+04
    3638522  2.88795E+01  1.29784E-03  2.96608E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.40600E+01 0.0012
tfc   15       1       1       1       1       1       1       1       1
     256000  1.40655E+01  4.38621E-03  3.69417E+04
     512000  1.40536E+01  2.65159E-03  5.05609E+04
     768000  1.40266E+01  2.01530E-03  5.83303E+04
    1024000  1.40404E+01  1.73550E-03  5.89667E+04
    1280000  1.40365E+01  1.63422E-03  5.32098E+04
    1536000  1.40503E+01  1.84183E-03  3.49222E+04
    1792000  1.40439E+01  1.62514E-03  3.84421E+04
    2048000  1.40401E+01  1.48913E-03  4.00667E+04
    2304000  1.40452E+01  1.43191E-03  3.85176E+04
    2560000  1.40458E+01  1.33880E-03  3.96469E+04
    2816000  1.40435E+01  1.24128E-03  4.19228E+04
    3072000  1.40429E+01  1.16835E-03  4.33696E+04
    3328000  1.40501E+01  1.15251E-03  4.11346E+04
    3584000  1.40525E+01  1.09242E-03  4.25030E+04
    3638522  1.40600E+01  1.24915E-03  3.20183E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.26525E+00 0.0010
tfc   15       1       1       1       1       1       1       1       1
     256000  8.26536E+00  5.21869E-03  2.60959E+04
     512000  8.25997E+00  2.94593E-03  4.09622E+04
     768000  8.24146E+00  2.14457E-03  5.15104E+04
    1024000  8.26230E+00  1.93812E-03  4.72820E+04
    1280000  8.25535E+00  1.70435E-03  4.89213E+04
    1536000  8.25778E+00  1.57023E-03  4.80477E+04
    1792000  8.25289E+00  1.39522E-03  5.21556E+04
    2048000  8.25424E+00  1.29927E-03  5.26320E+04
    2304000  8.25859E+00  1.31192E-03  4.58853E+04
    2560000  8.25893E+00  1.21417E-03  4.82041E+04
    2816000  8.25806E+00  1.14607E-03  4.91773E+04
    3072000  8.25828E+00  1.08064E-03  5.06957E+04
    3328000  8.26453E+00  1.09093E-03  4.59101E+04
    3584000  8.26635E+00  1.03803E-03  4.70732E+04
    3638522  8.26525E+00  1.02591E-03  4.74685E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  5.43387E+00 0.0012
tfc   15        1        1        1        1        1        1        1        1
     256000  5.44105E+00  5.61613E-03  2.25332E+04
     512000  5.43900E+00  3.22368E-03  3.42076E+04
     768000  5.42227E+00  2.31289E-03  4.42858E+04
    1024000  5.43005E+00  1.96466E-03  4.60130E+04
    1280000  5.42850E+00  1.74759E-03  4.65301E+04
    1536000  5.42725E+00  1.58827E-03  4.69622E+04
    1792000  5.42351E+00  1.41343E-03  5.08207E+04
    2048000  5.42257E+00  1.29695E-03  5.28205E+04
    2304000  5.42516E+00  1.39091E-03  4.08220E+04
    2560000  5.42522E+00  1.28142E-03  4.32773E+04
    2816000  5.42640E+00  1.26731E-03  4.02182E+04
    3072000  5.42798E+00  1.21448E-03  4.01380E+04
    3328000  5.43278E+00  1.20731E-03  3.74852E+04
    3584000  5.43361E+00  1.14742E-03  3.85258E+04
    3638522  5.43387E+00  1.15482E-03  3.74624E+04
mcnp        5      11/02/10 17:24:52      2      3540392       306532341
```

Case 48

```
 Case 48
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.17348E+02 0.0027
tfc   14        1        1        1        1        1        1        1        1
     256000  5.28870E+02  3.04917E-02  7.41902E+02
     512000  5.21557E+02  1.56037E-02  1.41666E+03
     768000  5.18668E+02  1.05305E-02  2.07567E+03
    1024000  5.18688E+02  7.96400E-03  2.72314E+03
    1280000  5.17860E+02  6.56026E-03  3.21267E+03
    1536000  5.17567E+02  5.58184E-03  3.69922E+03
    1792000  5.17541E+02  4.85238E-03  4.19626E+03
    2048000  5.17157E+02  4.27837E-03  4.72425E+03
    2304000  5.16970E+02  3.83115E-03  5.23588E+03
    2560000  5.16768E+02  3.46966E-03  5.74606E+03
```

```
    2816000  5.16731E+02  3.17907E-03  6.21969E+03
    3072000  5.16763E+02  2.93185E-03  6.70437E+03
    3328000  5.17363E+02  2.86187E-03  6.49462E+03
    3540392  5.17348E+02  2.70627E-03  6.82644E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.95553E+02 0.0019
tfc   14       1       1       1       1       1       1       1       1
     256000  2.93361E+02  3.03663E-03  7.48042E+04
     512000  2.97082E+02  9.56250E-03  3.77204E+03
     768000  2.96271E+02  6.56674E-03  5.33775E+03
    1024000  2.96081E+02  5.01864E-03  6.85743E+03
    1280000  2.95438E+02  4.07406E-03  8.33017E+03
    1536000  2.95300E+02  3.47586E-03  9.53984E+03
    1792000  2.95431E+02  3.15534E-03  9.92382E+03
    2048000  2.95309E+02  2.81234E-03  1.09334E+04
    2304000  2.95135E+02  2.52451E-03  1.20585E+04
    2560000  2.95047E+02  2.29415E-03  1.31432E+04
    2816000  2.95087E+02  2.11706E-03  1.40249E+04
    3072000  2.95195E+02  1.97277E-03  1.48077E+04
    3328000  2.95404E+02  1.95077E-03  1.39780E+04
    3540392  2.95553E+02  1.87968E-03  1.41504E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.52630E+02 0.0013
tfc   14       1       1       1       1       1       1       1       1
     256000  1.52108E+02  3.57643E-03  5.39275E+04
     512000  1.53410E+02  5.70096E-03  1.06126E+04
     768000  1.53191E+02  4.02372E-03  1.42168E+04
    1024000  1.53057E+02  3.13213E-03  1.76057E+04
    1280000  1.52724E+02  2.58337E-03  2.07175E+04
    1536000  1.52593E+02  2.20743E-03  2.36534E+04
    1792000  1.52560E+02  1.95725E-03  2.57917E+04
    2048000  1.52450E+02  1.74761E-03  2.83139E+04
```

```
    2304000  1.52385E+02  1.58363E-03  3.06438E+04
    2560000  1.52407E+02  1.47327E-03  3.18697E+04
    2816000  1.52560E+02  1.52860E-03  2.69017E+04
    3072000  1.52564E+02  1.43294E-03  2.80665E+04
    3328000  1.52590E+02  1.34970E-03  2.91997E+04
    3540392  1.52630E+02  1.30448E-03  2.93805E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.07663E+01 0.0011
tfc   14       1       1       1       1       1       1       1       1
     256000  6.06289E+01  3.03544E-03  7.48630E+04
     512000  6.06326E+01  2.21613E-03  7.02312E+04
     768000  6.06513E+01  1.84689E-03  6.74797E+04
    1024000  6.07635E+01  1.82322E-03  5.19585E+04
    1280000  6.07419E+01  1.97162E-03  3.55684E+04
    1536000  6.07078E+01  1.71055E-03  3.93907E+04
    1792000  6.07120E+01  1.57448E-03  3.98564E+04
    2048000  6.07543E+01  1.57619E-03  3.48073E+04
    2304000  6.07404E+01  1.45945E-03  3.60804E+04
    2560000  6.07289E+01  1.34112E-03  3.84598E+04
    2816000  6.07378E+01  1.26122E-03  3.95175E+04
    3072000  6.07263E+01  1.17598E-03  4.16721E+04
    3328000  6.07397E+01  1.12011E-03  4.23969E+04
    3540392  6.07663E+01  1.12366E-03  3.95976E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.97406E+01 0.0010
tfc   14       1       1       1       1       1       1       1       1
     256000  1.97028E+01  2.68105E-03  9.59625E+04
     512000  1.97021E+01  1.81358E-03  1.04868E+05
     768000  1.96961E+01  1.50189E-03  1.02042E+05
    1024000  1.97179E+01  1.35386E-03  9.42299E+04
    1280000  1.97024E+01  1.24541E-03  8.91421E+04
    1536000  1.97123E+01  1.19032E-03  8.13458E+04
```

```
    1792000  1.97080E+01  1.08420E-03  8.40525E+04
    2048000  1.97079E+01  1.00555E-03  8.55232E+04
    2304000  1.97264E+01  1.36555E-03  4.12128E+04
    2560000  1.97306E+01  1.27310E-03  4.26798E+04
    2816000  1.97319E+01  1.18479E-03  4.47802E+04
    3072000  1.97279E+01  1.10418E-03  4.72674E+04
    3328000  1.97363E+01  1.08922E-03  4.48359E+04
    3540392  1.97406E+01  1.04713E-03  4.55973E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.62622E+00 0.0012
tfc   14       1       1       1       1       1       1       1       1
     256000  9.62030E+00  4.09311E-03  4.11722E+04
     512000  9.61373E+00  2.45856E-03  5.70635E+04
     768000  9.61718E+00  2.23702E-03  4.59955E+04
    1024000  9.61594E+00  1.83581E-03  5.12480E+04
    1280000  9.61733E+00  1.75609E-03  4.48348E+04
    1536000  9.63685E+00  2.19911E-03  2.38326E+04
    1792000  9.62917E+00  1.92168E-03  2.67554E+04
    2048000  9.62455E+00  1.73455E-03  2.87418E+04
    2304000  9.62632E+00  1.62509E-03  2.90999E+04
    2560000  9.62454E+00  1.50192E-03  3.06657E+04
    2816000  9.62288E+00  1.38638E-03  3.27044E+04
    3072000  9.62066E+00  1.29492E-03  3.43683E+04
    3328000  9.62421E+00  1.25591E-03  3.37239E+04
    3540392  9.62622E+00  1.20239E-03  3.45818E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.66079E+00 0.0011
tfc   14       1       1       1       1       1       1       1       1
     256000  5.65668E+00  4.90249E-03  2.86996E+04
     512000  5.65218E+00  2.77247E-03  4.48731E+04
     768000  5.64629E+00  2.03366E-03  5.56546E+04
    1024000  5.65527E+00  1.84008E-03  5.10106E+04
```

```
    1280000  5.65408E+00  1.70717E-03  4.74412E+04
    1536000  5.66114E+00  1.84359E-03  3.39109E+04
    1792000  5.65666E+00  1.62006E-03  3.76453E+04
    2048000  5.65612E+00  1.47992E-03  3.94830E+04
    2304000  5.65863E+00  1.44073E-03  3.70240E+04
    2560000  5.65730E+00  1.32314E-03  3.95122E+04
    2816000  5.65707E+00  1.24052E-03  4.08471E+04
    3072000  5.65624E+00  1.16154E-03  4.27147E+04
    3328000  5.66010E+00  1.15568E-03  3.98268E+04
    3540392  5.66079E+00  1.10495E-03  4.09494E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.72005E+00 0.0011
tfc   14       1       1       1       1       1       1       1
     256000  3.71688E+00  4.98061E-03  2.78064E+04
     512000  3.72127E+00  3.11516E-03  3.55434E+04
     768000  3.71410E+00  2.23374E-03  4.61310E+04
    1024000  3.71708E+00  1.91599E-03  4.70488E+04
    1280000  3.71670E+00  1.71408E-03  4.70593E+04
    1536000  3.71858E+00  1.66493E-03  4.15789E+04
    1792000  3.71548E+00  1.47326E-03  4.55215E+04
    2048000  3.71474E+00  1.35906E-03  4.68177E+04
    2304000  3.71636E+00  1.41257E-03  3.85146E+04
    2560000  3.71578E+00  1.30027E-03  4.09145E+04
    2816000  3.71680E+00  1.27442E-03  3.87027E+04
    3072000  3.71715E+00  1.21388E-03  3.91101E+04
    3328000  3.71990E+00  1.19801E-03  3.70623E+04
    3540392  3.72005E+00  1.14641E-03  3.80412E+04
mcnp       5     11/02/10 17:44:56     2     3537237      306274198
```

Case 49

```
 Case 49
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  7.14579E+03 0.0027
tfc   14       1       1       1       1       1       1       1       1
     256000  7.30460E+03  3.04913E-02  7.42721E+02
     512000  7.20376E+03  1.56031E-02  1.41842E+03
     768000  7.16391E+03  1.05300E-02  2.07660E+03
    1024000  7.16424E+03  7.96361E-03  2.72365E+03
    1280000  7.15308E+03  6.55977E-03  3.21431E+03
    1536000  7.14895E+03  5.58150E-03  3.68949E+03
    1792000  7.14852E+03  4.85212E-03  4.18637E+03
    2048000  7.14317E+03  4.27817E-03  4.71428E+03
    2304000  7.14058E+03  3.83098E-03  5.22652E+03
    2560000  7.13776E+03  3.46952E-03  5.73610E+03
    2816000  7.13731E+03  3.17893E-03  6.21302E+03
    3072000  7.13774E+03  2.93173E-03  6.69800E+03
    3328000  7.14598E+03  2.86176E-03  6.48875E+03
    3537237  7.14579E+03  2.70842E-03  6.81507E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.08244E+03 0.0019
tfc   14       1       1       1       1       1       1       1       1
     256000  4.05182E+03  3.03657E-03  7.48879E+04
     512000  4.10333E+03  9.56210E-03  3.77676E+03
     768000  4.09235E+03  6.56631E-03  5.34036E+03
    1024000  4.08968E+03  5.01836E-03  6.85880E+03
    1280000  4.08087E+03  4.07380E-03  8.33424E+03
    1536000  4.07890E+03  3.47568E-03  9.51456E+03
    1792000  4.08070E+03  3.15519E-03  9.90035E+03
    2048000  4.07898E+03  2.81221E-03  1.09103E+04
    2304000  4.07656E+03  2.52440E-03  1.20369E+04
    2560000  4.07552E+03  2.29454E-03  1.31148E+04
    2816000  4.07605E+03  2.11742E-03  1.40039E+04
    3072000  4.07752E+03  1.97310E-03  1.47875E+04
    3328000  4.08038E+03  1.95103E-03  1.39604E+04
    3537237  4.08244E+03  1.88145E-03  1.41226E+04
tally  135    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  2.10816E+03 0.0013
tfc   14        1        1        1        1        1        1        1        1
     256000  2.10088E+03  3.57636E-03  5.39879E+04
     512000  2.11891E+03  5.70074E-03  1.06259E+04
     768000  2.11589E+03  4.02354E-03  1.42232E+04
    1024000  2.11405E+03  3.13200E-03  1.76088E+04
    1280000  2.10947E+03  2.58323E-03  2.07270E+04
    1536000  2.10764E+03  2.20732E-03  2.35904E+04
    1792000  2.10720E+03  1.95717E-03  2.57304E+04
    2048000  2.10567E+03  1.74754E-03  2.82538E+04
    2304000  2.10477E+03  1.58357E-03  3.05886E+04
    2560000  2.10507E+03  1.47323E-03  3.18138E+04
    2816000  2.10718E+03  1.52855E-03  2.68722E+04
    3072000  2.10723E+03  1.43289E-03  2.80392E+04
    3328000  2.10760E+03  1.34966E-03  2.91730E+04
    3537237  2.10816E+03  1.30544E-03  2.93349E+04
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.39307E+02 0.0011
tfc   14        1        1        1        1        1        1        1        1
     256000  8.37391E+02  3.03537E-03  7.49470E+04
     512000  8.37460E+02  2.21603E-03  7.03195E+04
     768000  8.37719E+02  1.84681E-03  6.75098E+04
    1024000  8.39269E+02  1.82316E-03  5.19667E+04
    1280000  8.38977E+02  1.97153E-03  3.55843E+04
    1536000  8.38503E+02  1.71048E-03  3.92855E+04
    1792000  8.38560E+02  1.57442E-03  3.97614E+04
    2048000  8.39146E+02  1.57613E-03  3.47333E+04
    2304000  8.38954E+02  1.45939E-03  3.60154E+04
    2560000  8.38790E+02  1.34108E-03  3.83924E+04
    2816000  8.38913E+02  1.26118E-03  3.94740E+04
    3072000  8.38753E+02  1.17594E-03  4.16315E+04
    3328000  8.38938E+02  1.12007E-03  4.23580E+04
    3537237  8.39307E+02  1.12446E-03  3.95376E+04
tally  155    2    1
f         1
d         1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.72658E+02 0.0010
tfc   14       1       1       1       1       1       1       1       1
     256000  2.72130E+02  2.68098E-03  9.60704E+04
     512000  2.72126E+02  1.81350E-03  1.05001E+05
     768000  2.72043E+02  1.50183E-03  1.02088E+05
    1024000  2.72343E+02  1.35381E-03  9.42444E+04
    1280000  2.72132E+02  1.24536E-03  8.91814E+04
    1536000  2.72268E+02  1.19027E-03  8.11286E+04
    1792000  2.72208E+02  1.08416E-03  8.38520E+04
    2048000  2.72207E+02  1.00551E-03  8.53406E+04
    2304000  2.72462E+02  1.36550E-03  4.11384E+04
    2560000  2.72519E+02  1.27305E-03  4.26051E+04
    2816000  2.72536E+02  1.18475E-03  4.47309E+04
    3072000  2.72481E+02  1.10415E-03  4.72214E+04
    3328000  2.72598E+02  1.08918E-03  4.47947E+04
    3537237  2.72658E+02  1.04787E-03  4.55286E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.32958E+02 0.0012
tfc   14       1       1       1       1       1       1       1       1
     256000  1.32873E+02  4.09303E-03  4.12182E+04
     512000  1.32785E+02  2.45845E-03  5.71350E+04
     768000  1.32833E+02  2.23694E-03  4.60156E+04
    1024000  1.32815E+02  1.83575E-03  5.12560E+04
    1280000  1.32837E+02  1.75601E-03  4.48548E+04
    1536000  1.33106E+02  2.19901E-03  2.37691E+04
    1792000  1.33000E+02  1.92159E-03  2.66918E+04
    2048000  1.32936E+02  1.73448E-03  2.86808E+04
    2304000  1.32960E+02  1.62503E-03  2.90475E+04
    2560000  1.32935E+02  1.50186E-03  3.06122E+04
    2816000  1.32912E+02  1.38633E-03  3.26686E+04
    3072000  1.32881E+02  1.29487E-03  3.43350E+04
    3328000  1.32930E+02  1.25587E-03  3.36930E+04
    3537237  1.32958E+02  1.20328E-03  3.45278E+04
tally  175    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  7.81875E+01 0.0011
tfc   14        1        1        1        1        1        1        1        1
     256000  7.81286E+01  4.90241E-03  2.87316E+04
     512000  7.80680E+01  2.77236E-03  4.49292E+04
     768000  7.79867E+01  2.03358E-03  5.56792E+04
    1024000  7.81106E+01  1.84002E-03  5.10186E+04
    1280000  7.80960E+01  1.70711E-03  4.74618E+04
    1536000  7.81930E+01  1.84351E-03  3.38203E+04
    1792000  7.81313E+01  1.62000E-03  3.75553E+04
    2048000  7.81236E+01  1.47988E-03  3.93987E+04
    2304000  7.81581E+01  1.44068E-03  3.69571E+04
    2560000  7.81393E+01  1.32310E-03  3.94428E+04
    2816000  7.81359E+01  1.24048E-03  4.08020E+04
    3072000  7.81244E+01  1.16150E-03  4.26729E+04
    3328000  7.81780E+01  1.15565E-03  3.97899E+04
    3537237  7.81875E+01  1.10576E-03  4.08866E+04
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.13819E+01 0.0011
tfc   14        1        1        1        1        1        1        1        1
     256000  5.13365E+01  4.98053E-03  2.78373E+04
     512000  5.13982E+01  3.11504E-03  3.55877E+04
     768000  5.12992E+01  2.23365E-03  4.61511E+04
    1024000  5.13402E+01  1.91592E-03  4.70562E+04
    1280000  5.13358E+01  1.71401E-03  4.70803E+04
    1536000  5.13615E+01  1.66486E-03  4.14680E+04
    1792000  5.13190E+01  1.47321E-03  4.54121E+04
    2048000  5.13086E+01  1.35903E-03  4.67172E+04
    2304000  5.13310E+01  1.41253E-03  3.84448E+04
    2560000  5.13227E+01  1.30023E-03  4.08425E+04
    2816000  5.13366E+01  1.27439E-03  3.86599E+04
    3072000  5.13414E+01  1.21385E-03  3.90719E+04
    3328000  5.13797E+01  1.19798E-03  3.70278E+04
```

```
    3537237  5.13819E+01  1.14727E-03  3.79817E+04
mcnp       5     11/02/10 18:05:02     2    10775589     1492148904
```

Case 50

```
 Case 50
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.69929E+01 0.0029
tfc   11       1       1       1       1       1       1       1       1
    1024000  3.69137E+01  7.42020E-03  3.18766E+03
    2048000  3.68425E+01  5.00877E-03  3.49514E+03
    3072000  3.67437E+01  4.15014E-03  3.39458E+03
    4096000  3.68320E+01  3.69863E-03  3.20618E+03
    5120000  3.68755E+01  3.38459E-03  3.05976E+03
    6144000  3.68710E+01  3.09542E-03  3.04916E+03
    7168000  3.69042E+01  3.21463E-03  2.42402E+03
    8192000  3.69742E+01  3.07263E-03  2.32220E+03
    9216000  3.69888E+01  3.04570E-03  2.10147E+03
   10240000  3.70227E+01  2.99626E-03  1.95370E+03
   10775589  3.69929E+01  2.88575E-03  2.00112E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.48176E+01 0.0029
tfc   11       1       1       1       1       1       1       1       1
    1024000  1.46178E+01  5.45857E-03  5.89042E+03
    2048000  1.46663E+01  4.67386E-03  4.01399E+03
    3072000  1.46293E+01  3.98047E-03  3.69014E+03
    4096000  1.47104E+01  4.01890E-03  2.71553E+03
    5120000  1.47792E+01  3.78898E-03  2.44148E+03
    6144000  1.47876E+01  3.54919E-03  2.31932E+03
    7168000  1.47538E+01  3.18478E-03  2.46967E+03
```

```
    8192000  1.48058E+01  3.15944E-03  2.19634E+03
    9216000  1.47977E+01  3.05262E-03  2.09196E+03
   10240000  1.48225E+01  3.01271E-03  1.93243E+03
   10775589  1.48176E+01  2.90647E-03  1.97270E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.10997E+00 0.0028
tfc   11       1       1       1       1       1       1       1       1
    1024000  6.05216E+00  6.41344E-03  4.26699E+03
    2048000  6.09626E+00  5.60972E-03  2.78641E+03
    3072000  6.07218E+00  4.40268E-03  3.01631E+03
    4096000  6.10225E+00  4.65962E-03  2.02008E+03
    5120000  6.13487E+00  4.40004E-03  1.81045E+03
    6144000  6.13912E+00  4.02132E-03  1.80669E+03
    7168000  6.11329E+00  3.54974E-03  1.98795E+03
    8192000  6.11822E+00  3.27662E-03  2.04206E+03
    9216000  6.11175E+00  3.00455E-03  2.15943E+03
   10240000  6.11383E+00  2.88453E-03  2.10799E+03
   10775589  6.10997E+00  2.77180E-03  2.16904E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.06918E+00 0.0028
tfc   11       1       1       1       1       1       1       1       1
    1024000  2.06347E+00  7.48772E-03  3.13044E+03
    2048000  2.06842E+00  5.84992E-03  2.56228E+03
    3072000  2.06188E+00  4.56819E-03  2.80171E+03
    4096000  2.06577E+00  4.01390E-03  2.72231E+03
    5120000  2.07223E+00  3.72745E-03  2.52275E+03
    6144000  2.07601E+00  3.49775E-03  2.38804E+03
    7168000  2.06666E+00  3.08146E-03  2.63807E+03
    8192000  2.07006E+00  3.13981E-03  2.22389E+03
    9216000  2.07060E+00  3.11488E-03  2.00917E+03
   10240000  2.07088E+00  2.90770E-03  2.07453E+03
   10775589  2.06918E+00  2.78546E-03  2.14782E+03
```

```
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.10609E-01 0.0023
tfc   11       1       1       1       1       1       1       1       1
    1024000  6.14410E-01  9.53530E-03  1.93034E+03
    2048000  6.12176E-01  6.01341E-03  2.42485E+03
    3072000  6.10036E-01  4.60777E-03  2.75378E+03
    4096000  6.10102E-01  3.84124E-03  2.97253E+03
    5120000  6.11532E-01  3.54168E-03  2.79435E+03
    6144000  6.12269E-01  3.25748E-03  2.75331E+03
    7168000  6.10250E-01  2.91760E-03  2.94271E+03
    8192000  6.10880E-01  2.71622E-03  2.97160E+03
    9216000  6.10412E-01  2.52800E-03  3.05031E+03
   10240000  6.10619E-01  2.39532E-03  3.05696E+03
   10775589  6.10609E-01  2.33827E-03  3.04791E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.87525E-01 0.0024
tfc   11       1       1       1       1       1       1       1       1
    1024000  2.90265E-01  1.06833E-02  1.53779E+03
    2048000  2.89187E-01  6.88477E-03  1.84990E+03
    3072000  2.87699E-01  5.14278E-03  2.21063E+03
    4096000  2.87548E-01  4.17411E-03  2.51734E+03
    5120000  2.88087E-01  3.76593E-03  2.47147E+03
    6144000  2.88176E-01  3.36359E-03  2.58234E+03
    7168000  2.87311E-01  3.01401E-03  2.75746E+03
    8192000  2.87495E-01  2.76694E-03  2.86366E+03
    9216000  2.87317E-01  2.55730E-03  2.98081E+03
   10240000  2.87463E-01  2.44439E-03  2.93548E+03
   10775589  2.87525E-01  2.39420E-03  2.90717E+03
tally  175    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  1.66424E-01 0.0024
tfc   11       1       1       1       1       1       1       1       1
    1024000  1.68357E-01  1.11095E-02  1.42206E+03
    2048000  1.67508E-01  6.95740E-03  1.81147E+03
    3072000  1.66499E-01  5.12861E-03  2.22286E+03
    4096000  1.66409E-01  4.15382E-03  2.54199E+03
    5120000  1.66733E-01  3.76183E-03  2.47685E+03
    6144000  1.66756E-01  3.34038E-03  2.61835E+03
    7168000  1.66291E-01  3.00438E-03  2.77516E+03
    8192000  1.66367E-01  2.75448E-03  2.88962E+03
    9216000  1.66222E-01  2.53682E-03  3.02913E+03
   10240000  1.66340E-01  2.44596E-03  2.93170E+03
   10775589  1.66424E-01  2.40912E-03  2.87129E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.08275E-01 0.0024
tfc   11       1       1       1       1       1       1       1       1
    1024000  1.09314E-01  1.09714E-02  1.45808E+03
    2048000  1.08846E-01  6.80762E-03  1.89206E+03
    3072000  1.08239E-01  4.99251E-03  2.34571E+03
    4096000  1.08238E-01  4.07241E-03  2.64464E+03
    5120000  1.08450E-01  3.70967E-03  2.54699E+03
    6144000  1.08444E-01  3.28916E-03  2.70055E+03
    7168000  1.08160E-01  2.96749E-03  2.84458E+03
    8192000  1.08287E-01  2.78947E-03  2.81760E+03
    9216000  1.08177E-01  2.56436E-03  2.96441E+03
   10240000  1.08230E-01  2.45681E-03  2.90586E+03
   10775589  1.08275E-01  2.41787E-03  2.85053E+03
mcnp       5     11/02/10 19:05:17     2    12964812     1527330034
```

Case 51

```
 Case 51
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.69114E+02 0.0035
tfc   13        1        1        1        1        1        1        1        1
    1024000  3.67610E+02  8.56055E-03  2.87926E+03
    2048000  3.65838E+02  5.73002E-03  3.21420E+03
    3072000  3.65974E+02  5.05287E-03  2.75467E+03
    4096000  3.67229E+02  4.60708E-03  2.48496E+03
    5120000  3.68508E+02  4.47642E-03  2.10447E+03
    6144000  3.68168E+02  4.00968E-03  2.18542E+03
    7168000  3.68716E+02  4.32144E-03  1.61266E+03
    8192000  3.68763E+02  3.95425E-03  1.68468E+03
    9216000  3.69601E+02  4.10865E-03  1.38734E+03
   10240000  3.69996E+02  4.07185E-03  1.27171E+03
   11264000  3.69053E+02  3.76368E-03  1.35358E+03
   12288000  3.69164E+02  3.58480E-03  1.36809E+03
   12964812  3.69114E+02  3.45897E-03  1.39286E+03
tally  125     2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.47246E+02 0.0029
tfc   13        1        1        1        1        1        1        1        1
    1024000  1.44810E+02  5.42144E-03  7.17884E+03
    2048000  1.45956E+02  5.96658E-03  2.96438E+03
    3072000  1.46366E+02  5.37593E-03  2.43355E+03
    4096000  1.47136E+02  5.42580E-03  1.79160E+03
    5120000  1.47735E+02  4.95409E-03  1.71821E+03
    6144000  1.47569E+02  4.42551E-03  1.79402E+03
    7168000  1.47272E+02  3.97677E-03  1.90432E+03
    8192000  1.47463E+02  3.68392E-03  1.94100E+03
    9216000  1.47502E+02  3.62686E-03  1.78041E+03
   10240000  1.47494E+02  3.40885E-03  1.81449E+03
   11264000  1.47441E+02  3.24792E-03  1.81759E+03
   12288000  1.47304E+02  3.02392E-03  1.92267E+03
   12964812  1.47246E+02  2.90436E-03  1.97560E+03
tally  135     2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.07062E+01 0.0028
tfc   13        1        1        1        1        1        1        1        1
    1024000  6.01595E+01  7.43539E-03  3.81660E+03
    2048000  6.06610E+01  6.87067E-03  2.23556E+03
    3072000  6.07350E+01  5.65973E-03  2.19561E+03
    4096000  6.08130E+01  5.53127E-03  1.72393E+03
    5120000  6.11069E+01  5.10655E-03  1.61715E+03
    6144000  6.10780E+01  4.58630E-03  1.67044E+03
    7168000  6.08499E+01  4.04834E-03  1.83758E+03
    8192000  6.08551E+01  3.73170E-03  1.89161E+03
    9216000  6.08200E+01  3.44299E-03  1.97566E+03
   10240000  6.08055E+01  3.23484E-03  2.01495E+03
   11264000  6.06964E+01  3.00233E-03  2.12711E+03
   12288000  6.07367E+01  2.90848E-03  2.07832E+03
   12964812  6.07062E+01  2.79169E-03  2.13829E+03
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.06341E+01 0.0031
tfc   13        1        1        1        1        1        1        1        1
    1024000  2.05524E+01  9.05563E-03  2.57304E+03
    2048000  2.06021E+01  7.23101E-03  2.01831E+03
    3072000  2.05782E+01  5.53855E-03  2.29274E+03
    4096000  2.05839E+01  4.75231E-03  2.33540E+03
    5120000  2.06437E+01  4.36329E-03  2.21501E+03
    6144000  2.06704E+01  4.09822E-03  2.09201E+03
    7168000  2.06064E+01  3.66605E-03  2.24081E+03
    8192000  2.06351E+01  3.92790E-03  1.70736E+03
    9216000  2.06215E+01  3.72149E-03  1.69102E+03
   10240000  2.06245E+01  3.47261E-03  1.74847E+03
   11264000  2.05867E+01  3.20971E-03  1.86113E+03
   12288000  2.06136E+01  3.12713E-03  1.79784E+03
   12964812  2.06341E+01  3.08667E-03  1.74912E+03
tally  155    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.09639E+00 0.0027
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.11036E+00  1.04116E-02  1.94649E+03
    2048000  6.07228E+00  6.32616E-03  2.63697E+03
    3072000  6.06301E+00  4.80914E-03  3.04097E+03
    4096000  6.07244E+00  4.18655E-03  3.00924E+03
    5120000  6.08491E+00  3.96003E-03  2.68909E+03
    6144000  6.09304E+00  3.70294E-03  2.56249E+03
    7168000  6.08440E+00  3.44256E-03  2.54119E+03
    8192000  6.08569E+00  3.22525E-03  2.53232E+03
    9216000  6.07932E+00  2.98648E-03  2.62582E+03
   10240000  6.07902E+00  2.81164E-03  2.66718E+03
   11264000  6.08041E+00  2.78996E-03  2.46327E+03
   12288000  6.08939E+00  2.74183E-03  2.33863E+03
   12964812  6.09639E+00  2.70322E-03  2.28054E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.86844E+00 0.0026
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.88389E+00  1.07338E-02  1.83136E+03
    2048000  2.86341E+00  6.54284E-03  2.46520E+03
    3072000  2.85602E+00  4.83981E-03  3.00255E+03
    4096000  2.86109E+00  4.16384E-03  3.04217E+03
    5120000  2.86482E+00  3.91095E-03  2.75702E+03
    6144000  2.86736E+00  3.58848E-03  2.72856E+03
    7168000  2.86439E+00  3.39246E-03  2.61681E+03
    8192000  2.86373E+00  3.13428E-03  2.68144E+03
    9216000  2.86124E+00  2.91533E-03  2.75554E+03
   10240000  2.86155E+00  2.75905E-03  2.76982E+03
   11264000  2.86216E+00  2.72484E-03  2.58242E+03
   12288000  2.86571E+00  2.65967E-03  2.48534E+03
   12964812  2.86844E+00  2.60899E-03  2.44825E+03
tally  175    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.66020E+00 0.0026
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.67667E+00  1.13214E-02  1.64620E+03
    2048000  1.66018E+00  6.70566E-03  2.34694E+03
    3072000  1.65426E+00  4.90964E-03  2.91775E+03
    4096000  1.65611E+00  4.18434E-03  3.01242E+03
    5120000  1.65799E+00  3.91812E-03  2.74693E+03
    6144000  1.65882E+00  3.56263E-03  2.76830E+03
    7168000  1.65765E+00  3.39342E-03  2.61532E+03
    8192000  1.65693E+00  3.12117E-03  2.70403E+03
    9216000  1.65529E+00  2.89183E-03  2.80050E+03
   10240000  1.65593E+00  2.75495E-03  2.77807E+03
   11264000  1.65672E+00  2.68284E-03  2.66391E+03
   12288000  1.65870E+00  2.62691E-03  2.54772E+03
   12964812  1.66020E+00  2.57802E-03  2.50744E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.07959E+00 0.0026
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.09119E+00  1.13503E-02  1.63784E+03
    2048000  1.07943E+00  6.68407E-03  2.36213E+03
    3072000  1.07604E+00  4.89880E-03  2.93068E+03
    4096000  1.07747E+00  4.17606E-03  3.02438E+03
    5120000  1.07883E+00  3.92847E-03  2.73248E+03
    6144000  1.07911E+00  3.56239E-03  2.76868E+03
    7168000  1.07850E+00  3.40736E-03  2.59397E+03
    8192000  1.07838E+00  3.15312E-03  2.64951E+03
    9216000  1.07701E+00  2.91554E-03  2.75514E+03
   10240000  1.07724E+00  2.77302E-03  2.74199E+03
   11264000  1.07750E+00  2.67288E-03  2.68381E+03
   12288000  1.07852E+00  2.59923E-03  2.60228E+03
   12964812  1.07959E+00  2.55649E-03  2.54985E+03
mcnp       5     11/02/10 20:05:26     2    12436479     1525147665
```

Case 52

```
 Case 52
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.58098E+02 0.0032
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.57202E+02  8.66258E-03  2.68284E+03
    2048000  2.56080E+02  5.65288E-03  3.14850E+03
    3072000  2.56157E+02  4.91227E-03  2.78238E+03
    4096000  2.57008E+02  4.44645E-03  2.54915E+03
    5120000  2.58043E+02  4.34385E-03  2.13812E+03
    6144000  2.57913E+02  3.88316E-03  2.23053E+03
    7168000  2.58153E+02  4.09910E-03  1.71657E+03
    8192000  2.58319E+02  3.77028E-03  1.77530E+03
    9216000  2.58488E+02  3.69247E-03  1.64650E+03
   10240000  2.58669E+02  3.63842E-03  1.52697E+03
   11264000  2.58043E+02  3.36804E-03  1.62094E+03
   12288000  2.58090E+02  3.23188E-03  1.61440E+03
   12436479  2.58098E+02  3.20917E-03  1.61793E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.03419E+02 0.0031
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.01444E+02  5.45055E-03  6.77655E+03
    2048000  1.02178E+02  5.66719E-03  3.13262E+03
    3072000  1.02314E+02  5.06002E-03  2.62226E+03
    4096000  1.02894E+02  5.07544E-03  1.95648E+03
    5120000  1.03502E+02  4.81261E-03  1.74189E+03
    6144000  1.03342E+02  4.27129E-03  1.84358E+03
    7168000  1.03152E+02  3.84371E-03  1.95226E+03
```

```
    8192000  1.03428E+02  3.63705E-03  1.90774E+03
    9216000  1.03444E+02  3.56278E-03  1.76855E+03
   10240000  1.03594E+02  3.52235E-03  1.62927E+03
   11264000  1.03541E+02  3.33466E-03  1.65355E+03
   12288000  1.03455E+02  3.12015E-03  1.73210E+03
   12436479  1.03419E+02  3.08915E-03  1.74610E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.26469E+01 0.0029
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.22186E+01  7.33743E-03  3.73940E+03
    2048000  4.25869E+01  6.78323E-03  2.18661E+03
    3072000  4.25258E+01  5.47276E-03  2.24165E+03
    4096000  4.26228E+01  5.30157E-03  1.79313E+03
    5120000  4.28466E+01  5.01112E-03  1.60661E+03
    6144000  4.28253E+01  4.47121E-03  1.68240E+03
    7168000  4.26453E+01  3.93620E-03  1.86160E+03
    8192000  4.26876E+01  3.63830E-03  1.90643E+03
    9216000  4.26546E+01  3.34936E-03  2.00111E+03
   10240000  4.26655E+01  3.15383E-03  2.03226E+03
   11264000  4.26119E+01  2.96775E-03  2.08769E+03
   12288000  4.26538E+01  2.87802E-03  2.03580E+03
   12436479  4.26469E+01  2.85343E-03  2.04650E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.44641E+01 0.0032
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.44198E+01  8.76958E-03  2.61777E+03
    2048000  1.44478E+01  6.89425E-03  2.11675E+03
    3072000  1.44113E+01  5.29049E-03  2.39877E+03
    4096000  1.44226E+01  4.59240E-03  2.38969E+03
    5120000  1.44607E+01  4.21625E-03  2.26949E+03
    6144000  1.44824E+01  3.94652E-03  2.15949E+03
    7168000  1.44247E+01  3.50149E-03  2.35252E+03
```

```
    8192000  1.44543E+01  3.71802E-03  1.82555E+03
    9216000  1.44382E+01  3.50988E-03  1.82227E+03
   10240000  1.44471E+01  3.28225E-03  1.87635E+03
   11264000  1.44223E+01  3.04391E-03  1.98453E+03
   12288000  1.44553E+01  3.15121E-03  1.69812E+03
   12436479  1.44641E+01  3.18305E-03  1.64459E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.26756E+00 0.0027
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.28705E+00  1.08639E-02  1.70575E+03
    2048000  4.26623E+00  6.72321E-03  2.22582E+03
    3072000  4.25186E+00  5.04206E-03  2.64097E+03
    4096000  4.25440E+00  4.26731E-03  2.76766E+03
    5120000  4.26128E+00  3.94426E-03  2.59328E+03
    6144000  4.26715E+00  3.64690E-03  2.52891E+03
    7168000  4.25692E+00  3.31968E-03  2.61726E+03
    8192000  4.26063E+00  3.10373E-03  2.61969E+03
    9216000  4.25491E+00  2.86587E-03  2.73326E+03
   10240000  4.25915E+00  2.75073E-03  2.67153E+03
   11264000  4.25848E+00  2.70569E-03  2.51168E+03
   12288000  4.26551E+00  2.65950E-03  2.38410E+03
   12436479  4.26756E+00  2.66503E-03  2.34609E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.00726E+00 0.0026
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.02429E+00  1.19976E-02  1.39863E+03
    2048000  2.01291E+00  7.33946E-03  1.86773E+03
    3072000  2.00248E+00  5.30763E-03  2.38330E+03
    4096000  2.00411E+00  4.41165E-03  2.58953E+03
    5120000  2.00600E+00  4.01230E-03  2.50607E+03
    6144000  2.00743E+00  3.62445E-03  2.56032E+03
    7168000  2.00345E+00  3.32401E-03  2.61044E+03
```

```
    8192000  2.00453E+00  3.06558E-03  2.68531E+03
    9216000  2.00183E+00  2.83077E-03  2.80148E+03
   10240000  2.00417E+00  2.71651E-03  2.73927E+03
   11264000  2.00363E+00  2.65495E-03  2.60862E+03
   12288000  2.00638E+00  2.58304E-03  2.52731E+03
   12436479  2.00726E+00  2.58341E-03  2.49666E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.16180E+00 0.0025
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.17553E+00  1.23610E-02  1.31759E+03
    2048000  1.16613E+00  7.37942E-03  1.84756E+03
    3072000  1.15900E+00  5.30616E-03  2.38463E+03
    4096000  1.15988E+00  4.40069E-03  2.60244E+03
    5120000  1.16057E+00  3.99698E-03  2.52532E+03
    6144000  1.16127E+00  3.58899E-03  2.61116E+03
    7168000  1.15931E+00  3.30488E-03  2.64076E+03
    8192000  1.15970E+00  3.03883E-03  2.73279E+03
    9216000  1.15839E+00  2.80933E-03  2.84440E+03
   10240000  1.15993E+00  2.70150E-03  2.76979E+03
   11264000  1.15982E+00  2.60672E-03  2.70603E+03
   12288000  1.16128E+00  2.54172E-03  2.61015E+03
   12436479  1.16180E+00  2.54372E-03  2.57518E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.55349E-01 0.0025
tfc   13       1       1       1       1       1       1       1       1
    1024000  7.64190E-01  1.19989E-02  1.39833E+03
    2048000  7.57865E-01  7.17220E-03  1.95586E+03
    3072000  7.53647E-01  5.17993E-03  2.50227E+03
    4096000  7.54373E-01  4.31978E-03  2.70084E+03
    5120000  7.54939E-01  3.95249E-03  2.58249E+03
    6144000  7.55187E-01  3.54320E-03  2.67909E+03
    7168000  7.54050E-01  3.27445E-03  2.69006E+03
```

```
    8192000  7.54463E-01  3.02974E-03  2.74922E+03
    9216000  7.53588E-01  2.80086E-03  2.86163E+03
   10240000  7.54472E-01  2.68690E-03  2.79997E+03
   11264000  7.54186E-01  2.56986E-03  2.78420E+03
   12288000  7.54968E-01  2.49242E-03  2.71444E+03
   12436479  7.55349E-01  2.49867E-03  2.66888E+03
mcnp       5     11/02/10 21:05:38     2    12415576     1522640699
```

Case 53

```
 Case 53
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.56437E+03 0.0032
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.55255E+03  8.66219E-03  2.69424E+03
    2048000  3.53700E+03  5.65267E-03  3.16258E+03
    3072000  3.53803E+03  4.91213E-03  2.79123E+03
    4096000  3.54978E+03  4.44633E-03  2.55465E+03
    5120000  3.56407E+03  4.34373E-03  2.14069E+03
    6144000  3.56229E+03  3.88305E-03  2.23220E+03
    7168000  3.56559E+03  4.09899E-03  1.71709E+03
    8192000  3.56788E+03  3.77019E-03  1.77546E+03
    9216000  3.57020E+03  3.69238E-03  1.64611E+03
   10240000  3.57270E+03  3.63833E-03  1.52617E+03
   11264000  3.56406E+03  3.36795E-03  1.61940E+03
   12288000  3.56470E+03  3.23180E-03  1.61223E+03
   12415576  3.56437E+03  3.20798E-03  1.61949E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.42850E+03 0.0031
tfc   13       1       1       1       1       1       1       1       1
```

```
    1024000  1.40117E+03  5.45036E-03  6.80521E+03
    2048000  1.41129E+03  5.66698E-03  3.14662E+03
    3072000  1.41316E+03  5.05988E-03  2.63060E+03
    4096000  1.42116E+03  5.07530E-03  1.96070E+03
    5120000  1.42957E+03  4.81247E-03  1.74398E+03
    6144000  1.42736E+03  4.27116E-03  1.84496E+03
    7168000  1.42472E+03  3.84361E-03  1.95285E+03
    8192000  1.42854E+03  3.63696E-03  1.90792E+03
    9216000  1.42876E+03  3.56269E-03  1.76813E+03
   10240000  1.43082E+03  3.52227E-03  1.62840E+03
   11264000  1.43009E+03  3.33458E-03  1.65198E+03
   12288000  1.42891E+03  3.12006E-03  1.72977E+03
   12415576  1.42850E+03  3.09374E-03  1.74130E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.89069E+02 0.0029
tfc   13       1       1       1       1       1       1       1
    1024000  5.83130E+02  7.33713E-03  3.75526E+03
    2048000  5.88213E+02  6.78297E-03  2.19638E+03
    3072000  5.87363E+02  5.47261E-03  2.24878E+03
    4096000  5.88702E+02  5.30144E-03  1.79700E+03
    5120000  5.91793E+02  5.01098E-03  1.60854E+03
    6144000  5.91499E+02  4.47108E-03  1.68366E+03
    7168000  5.89013E+02  3.93609E-03  1.86216E+03
    8192000  5.89596E+02  3.63821E-03  1.90661E+03
    9216000  5.89140E+02  3.34928E-03  2.00063E+03
   10240000  5.89291E+02  3.15376E-03  2.03119E+03
   11264000  5.88551E+02  2.96768E-03  2.08570E+03
   12288000  5.89129E+02  2.87795E-03  2.03305E+03
   12415576  5.89069E+02  2.85761E-03  2.04096E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.99786E+02 0.0032
tfc   13       1       1       1       1       1       1       1       1
```

```
    1024000  1.99167E+02  8.76929E-03  2.62883E+03
    2048000  1.99552E+02  6.89403E-03  2.12619E+03
    3072000  1.99047E+02  5.29036E-03  2.40638E+03
    4096000  1.99203E+02  4.59230E-03  2.39483E+03
    5120000  1.99730E+02  4.21615E-03  2.27220E+03
    6144000  2.00030E+02  3.94642E-03  2.16110E+03
    7168000  1.99232E+02  3.50140E-03  2.35322E+03
    8192000  1.99640E+02  3.71794E-03  1.82571E+03
    9216000  1.99418E+02  3.50980E-03  1.82183E+03
   10240000  1.99541E+02  3.28218E-03  1.87535E+03
   11264000  1.99199E+02  3.04383E-03  1.98264E+03
   12288000  1.99655E+02  3.15113E-03  1.69583E+03
   12415576  1.99786E+02  3.18757E-03  1.64029E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.89424E+01 0.0027
tfc   13       1       1       1       1       1       1       1       1
    1024000  5.92126E+01  1.08636E-02  1.71296E+03
    2048000  5.89251E+01  6.72299E-03  2.23575E+03
    3072000  5.87261E+01  5.04194E-03  2.64935E+03
    4096000  5.87612E+01  4.26721E-03  2.77361E+03
    5120000  5.88562E+01  3.94417E-03  2.59638E+03
    6144000  5.89375E+01  3.64680E-03  2.53079E+03
    7168000  5.87960E+01  3.31960E-03  2.61804E+03
    8192000  5.88472E+01  3.10366E-03  2.61992E+03
    9216000  5.87681E+01  2.86581E-03  2.73260E+03
   10240000  5.88267E+01  2.75067E-03  2.67011E+03
   11264000  5.88178E+01  2.70562E-03  2.50929E+03
   12288000  5.89149E+01  2.65942E-03  2.38089E+03
   12415576  5.89424E+01  2.66686E-03  2.34337E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.77221E+01 0.0026
tfc   13       1       1       1       1       1       1       1       1
```

```
    1024000  2.79594E+01  1.19972E-02  1.40453E+03
    2048000  2.78022E+01  7.33922E-03  1.87606E+03
    3072000  2.76580E+01  5.30750E-03  2.39086E+03
    4096000  2.76805E+01  4.41154E-03  2.59510E+03
    5120000  2.77066E+01  4.01221E-03  2.50906E+03
    6144000  2.77264E+01  3.62436E-03  2.56222E+03
    7168000  2.76714E+01  3.32393E-03  2.61121E+03
    8192000  2.76863E+01  3.06551E-03  2.68554E+03
    9216000  2.76490E+01  2.83070E-03  2.80081E+03
   10240000  2.76813E+01  2.71645E-03  2.73781E+03
   11264000  2.76741E+01  2.65488E-03  2.60614E+03
   12288000  2.77121E+01  2.58297E-03  2.52391E+03
   12415576  2.77221E+01  2.58163E-03  2.50065E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.60449E+01 0.0025
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.62364E+01  1.23606E-02  1.32316E+03
    2048000  1.61066E+01  7.37918E-03  1.85580E+03
    3072000  1.60079E+01  5.30603E-03  2.39219E+03
    4096000  1.60201E+01  4.40059E-03  2.60803E+03
    5120000  1.60297E+01  3.99688E-03  2.52834E+03
    6144000  1.60393E+01  3.58890E-03  2.61311E+03
    7168000  1.60123E+01  3.30479E-03  2.64154E+03
    8192000  1.60177E+01  3.03876E-03  2.73303E+03
    9216000  1.59996E+01  2.80926E-03  2.84372E+03
   10240000  1.60208E+01  2.70144E-03  2.76832E+03
   11264000  1.60194E+01  2.60666E-03  2.70345E+03
   12288000  1.60396E+01  2.54166E-03  2.60664E+03
   12415576  1.60449E+01  2.53791E-03  2.58756E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.04310E+01 0.0025
tfc   13       1       1       1       1       1       1       1       1
```

```
    1024000  1.05550E+01  1.19985E-02  1.40423E+03
    2048000  1.04676E+01  7.17197E-03  1.96459E+03
    3072000  1.04093E+01  5.17980E-03  2.51020E+03
    4096000  1.04193E+01  4.31968E-03  2.70665E+03
    5120000  1.04271E+01  3.95239E-03  2.58558E+03
    6144000  1.04306E+01  3.54310E-03  2.68109E+03
    7168000  1.04148E+01  3.27437E-03  2.69087E+03
    8192000  1.04206E+01  3.02966E-03  2.74947E+03
    9216000  1.04085E+01  2.80079E-03  2.86095E+03
   10240000  1.04207E+01  2.68684E-03  2.79848E+03
   11264000  1.04169E+01  2.56980E-03  2.78154E+03
   12288000  1.04277E+01  2.49236E-03  2.71078E+03
   12415576  1.04310E+01  2.48889E-03  2.69049E+03
mcnp       5     11/02/10 22:05:48     2    44791739     1778440199
```

Case 54

```
 Case 54
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.11293E+04 0.0056
tfc   11       1       1       1       1       1       1       1       1
    4096000  1.10237E+04  9.13733E-03  2.18256E+03
    8192000  1.10232E+04  7.70816E-03  1.53317E+03
   12288000  1.10475E+04  6.26459E-03  1.54703E+03
   16384000  1.10657E+04  5.16624E-03  1.70551E+03
   20480000  1.10343E+04  4.38108E-03  1.89831E+03
   24576000  1.10215E+04  4.22664E-03  1.69972E+03
   28672000  1.10440E+04  4.03663E-03  1.59715E+03
   32768000  1.10693E+04  4.51280E-03  1.11845E+03
   36864000  1.11171E+04  5.06540E-03  7.89067E+02
   40960000  1.11364E+04  6.05059E-03  4.97764E+02
   44791739  1.11293E+04  5.58987E-03  5.33367E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  4.42952E+03 0.0043
tfc   11       1       1       1       1       1       1       1       1
    4096000  4.36487E+03  7.00190E-03  3.71684E+03
    8192000  4.35391E+03  4.62403E-03  4.26041E+03
   12288000  4.40102E+03  6.64074E-03  1.37674E+03
   16384000  4.41637E+03  5.61233E-03  1.44517E+03
   20480000  4.42155E+03  5.39994E-03  1.24954E+03
   24576000  4.41522E+03  4.84967E-03  1.29105E+03
   28672000  4.41625E+03  4.45935E-03  1.30870E+03
   32768000  4.42549E+03  5.02553E-03  9.01873E+02
   36864000  4.42241E+03  4.58071E-03  9.64885E+02
   40960000  4.42152E+03  4.26992E-03  9.99494E+02
   44791739  4.42952E+03  4.30321E-03  9.00005E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.83292E+03 0.0062
tfc   11       1       1       1       1       1       1       1       1
    4096000  1.80805E+03  9.32565E-03  2.09530E+03
    8192000  1.80880E+03  7.17885E-03  1.76760E+03
   12288000  1.83216E+03  1.63699E-02  2.26564E+02
   16384000  1.84520E+03  1.33368E-02  2.55917E+02
   20480000  1.84133E+03  1.11755E-02  2.91736E+02
   24576000  1.84051E+03  9.64532E-03  3.26388E+02
   28672000  1.83792E+03  8.55893E-03  3.55259E+02
   32768000  1.83522E+03  7.59807E-03  3.94551E+02
   36864000  1.83305E+03  6.87370E-03  4.28510E+02
   40960000  1.83076E+03  6.26824E-03  4.63797E+02
   44791739  1.83292E+03  6.22367E-03  4.30266E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.18716E+02 0.0049
```

```
tfc   11        1        1        1        1        1        1        1        1
    4096000  6.29339E+02  2.18310E-02  3.82347E+02
    8192000  6.31775E+02  2.05147E-02  2.16452E+02
   12288000  6.24466E+02  1.41347E-02  3.03886E+02
   16384000  6.25015E+02  1.10598E-02  3.72140E+02
   20480000  6.22942E+02  9.08060E-03  4.41875E+02
   24576000  6.23680E+02  8.22962E-03  4.48341E+02
   28672000  6.22198E+02  7.19765E-03  5.02344E+02
   32768000  6.20902E+02  6.44145E-03  5.48962E+02
   36864000  6.20170E+02  5.80793E-03  6.00204E+02
   40960000  6.19577E+02  5.33736E-03  6.39685E+02
   44791739  6.18716E+02  4.94129E-03  6.82572E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.82497E+02 0.0034
tfc   11        1        1        1        1        1        1        1        1
    4096000  1.83425E+02  1.30544E-02  1.06928E+03
    8192000  1.84552E+02  1.08283E-02  7.76908E+02
   12288000  1.82988E+02  7.55870E-03  1.06265E+03
   16384000  1.83785E+02  6.63635E-03  1.03359E+03
   20480000  1.83665E+02  5.85047E-03  1.06450E+03
   24576000  1.83784E+02  5.36987E-03  1.05303E+03
   28672000  1.83455E+02  4.73941E-03  1.15860E+03
   32768000  1.83093E+02  4.25888E-03  1.25580E+03
   36864000  1.82903E+02  3.87198E-03  1.35044E+03
   40960000  1.82813E+02  3.66043E-03  1.36005E+03
   44791739  1.82497E+02  3.39104E-03  1.44932E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.61690E+01 0.0040
tfc   11        1        1        1        1        1        1        1        1
    4096000  8.61824E+01  1.07976E-02  1.56296E+03
    8192000  8.72537E+01  1.28768E-02  5.49387E+02
   12288000  8.64911E+01  8.92844E-03  7.61611E+02
```

```
   16384000  8.71421E+01  8.45904E-03  6.36154E+02
   20480000  8.69956E+01  7.17164E-03  7.08419E+02
   24576000  8.69664E+01  6.41879E-03  7.36989E+02
   28672000  8.67287E+01  5.61656E-03  8.24978E+02
   32768000  8.65549E+01  5.08254E-03  8.81756E+02
   36864000  8.64280E+01  4.59516E-03  9.58827E+02
   40960000  8.63494E+01  4.28322E-03  9.93294E+02
   44791739  8.61690E+01  3.95491E-03  1.06551E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.98896E+01 0.0042
tfc   11       1       1       1       1       1       1       1       1
    4096000  4.99497E+01  1.02852E-02  1.72259E+03
    8192000  5.06751E+01  1.45418E-02  4.30778E+02
   12288000  5.01905E+01  1.00822E-02  5.97277E+02
   16384000  5.04684E+01  8.99686E-03  5.62371E+02
   20480000  5.02989E+01  7.49611E-03  6.48419E+02
   24576000  5.03162E+01  6.73468E-03  6.69475E+02
   28672000  5.01926E+01  5.89014E-03  7.50121E+02
   32768000  5.01181E+01  5.41775E-03  7.76018E+02
   36864000  5.00371E+01  4.89178E-03  8.46073E+02
   40960000  4.99972E+01  4.53902E-03  8.84494E+02
   44791739  4.98896E+01  4.18720E-03  9.50565E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.25044E+01 0.0044
tfc   11       1       1       1       1       1       1       1       1
    4096000  3.23978E+01  9.77939E-03  1.90538E+03
    8192000  3.28576E+01  1.47829E-02  4.16845E+02
   12288000  3.25479E+01  1.01559E-02  5.88642E+02
   16384000  3.27523E+01  8.86967E-03  5.78616E+02
   20480000  3.26408E+01  7.37794E-03  6.69356E+02
   24576000  3.26774E+01  6.69905E-03  6.76615E+02
   28672000  3.26595E+01  6.07319E-03  7.05585E+02
```

```
   32768000  3.26377E+01  5.67469E-03  7.07336E+02
   36864000  3.25819E+01  5.11975E-03  7.72404E+02
   40960000  3.25760E+01  4.78311E-03  7.96522E+02
   44791739  3.25044E+01  4.41131E-03  8.56434E+02
mcnp       5     11/02/10 23:05:57     2     6091952     1464857432
```

Case 55

```
 Case 55
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.23004E+00 0.0106
tfc   12       1       1       1       1       1       1       1       1
     512000  2.21343E+00  1.93994E-02  5.21953E+02
    1024000  2.21127E+00  1.33434E-02  5.53822E+02
    1536000  2.21840E+00  1.66528E-02  2.37538E+02
    2048000  2.22966E+00  1.46668E-02  2.30015E+02
    2560000  2.27459E+00  2.24618E-02  7.85265E+01
    3072000  2.25480E+00  1.91720E-02  8.98460E+01
    3584000  2.25366E+00  1.67640E-02  1.00758E+02
    4096000  2.24898E+00  1.50301E-02  1.09681E+02
    4608000  2.24747E+00  1.35661E-02  1.19650E+02
    5120000  2.23949E+00  1.23722E-02  1.29492E+02
    5632000  2.23557E+00  1.13595E-02  1.39663E+02
    6091952  2.23004E+00  1.05859E-02  1.48700E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.88937E-01 0.0057
tfc   12       1       1       1       1       1       1       1       1
     512000  1.00188E+00  2.38104E-02  3.46477E+02
    1024000  1.00228E+00  1.64747E-02  3.63301E+02
    1536000  9.92892E-01  1.25147E-02  4.20599E+02
```

```
    2048000  9.98348E-01  1.12337E-02  3.92086E+02
    2560000  9.96765E-01  9.57568E-03  4.32081E+02
    3072000  9.90588E-01  8.54243E-03  4.52554E+02
    3584000  9.93825E-01  8.01435E-03  4.40859E+02
    4096000  9.89641E-01  7.19374E-03  4.78789E+02
    4608000  9.93819E-01  6.89758E-03  4.62837E+02
    5120000  9.91662E-01  6.43777E-03  4.78262E+02
    5632000  9.90760E-01  6.00995E-03  4.98954E+02
    6091952  9.88937E-01  5.66847E-03  5.18599E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.41410E-01 0.0064
tfc   12       1       1       1       1       1       1       1       1
     512000  4.37150E-01  1.68885E-02  6.88690E+02
    1024000  4.39883E-01  1.18125E-02  7.06678E+02
    1536000  4.38250E-01  9.43607E-03  7.39819E+02
    2048000  4.39922E-01  9.04206E-03  6.05187E+02
    2560000  4.39289E-01  7.80938E-03  6.49637E+02
    3072000  4.36768E-01  6.81573E-03  7.10900E+02
    3584000  4.39524E-01  7.61734E-03  4.88011E+02
    4096000  4.39328E-01  6.92585E-03  5.16543E+02
    4608000  4.42270E-01  7.83058E-03  3.59116E+02
    5120000  4.41206E-01  7.22535E-03  3.79681E+02
    5632000  4.41407E-01  6.75577E-03  3.94869E+02
    6091952  4.41410E-01  6.41807E-03  4.04534E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.58376E-01 0.0059
tfc   12       1       1       1       1       1       1       1       1
     512000  1.54142E-01  1.28738E-02  1.18520E+03
    1024000  1.59973E-01  1.51274E-02  4.30894E+02
    1536000  1.58942E-01  1.20443E-02  4.54089E+02
    2048000  1.58539E-01  9.85697E-03  5.09258E+02
    2560000  1.57950E-01  8.25684E-03  5.81135E+02
```

```
    3072000  1.57043E-01  7.17459E-03  6.41563E+02
    3584000  1.57599E-01  7.27685E-03  5.34748E+02
    4096000  1.57530E-01  6.68051E-03  5.55180E+02
    4608000  1.58092E-01  6.32165E-03  5.51013E+02
    5120000  1.57682E-01  5.84264E-03  5.80654E+02
    5632000  1.58265E-01  6.11448E-03  4.82041E+02
    6091952  1.58376E-01  5.85871E-03  4.85467E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.84986E-02 0.0053
tfc   12       1       1       1       1       1       1       1       1
     512000  4.73418E-02  1.21379E-02  1.33328E+03
    1024000  4.87293E-02  1.31808E-02  5.67572E+02
    1536000  4.83951E-02  1.01964E-02  6.33596E+02
    2048000  4.83635E-02  8.37907E-03  7.04746E+02
    2560000  4.82536E-02  7.12800E-03  7.79775E+02
    3072000  4.81393E-02  6.70583E-03  7.34392E+02
    3584000  4.82273E-02  6.50310E-03  6.69570E+02
    4096000  4.82306E-02  6.00859E-03  6.86290E+02
    4608000  4.84616E-02  5.97487E-03  6.16829E+02
    5120000  4.83185E-02  5.51185E-03  6.52441E+02
    5632000  4.83980E-02  5.21473E-03  6.62733E+02
    6091952  4.84986E-02  5.32865E-03  5.86854E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.30974E-02 0.0048
tfc   12       1       1       1       1       1       1       1       1
     512000  2.28336E-02  2.00303E-02  4.89588E+02
    1024000  2.32737E-02  1.38107E-02  5.16979E+02
    1536000  2.31124E-02  1.03326E-02  6.16998E+02
    2048000  2.31198E-02  8.60867E-03  6.67656E+02
    2560000  2.30623E-02  7.26477E-03  7.50690E+02
    3072000  2.29800E-02  6.62888E-03  7.51542E+02
    3584000  2.30345E-02  6.48079E-03  6.74187E+02
```

```
    4096000  2.30373E-02  5.99748E-03  6.88834E+02
    4608000  2.31328E-02  5.79537E-03  6.55631E+02
    5120000  2.30631E-02  5.34600E-03  6.93551E+02
    5632000  2.30982E-02  5.05045E-03  7.06551E+02
    6091952  2.30974E-02  4.80651E-03  7.21281E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.34471E-02 0.0045
tfc   12       1       1       1       1       1       1       1       1
     512000  1.31481E-02  1.12205E-02  1.56022E+03
    1024000  1.34663E-02  1.07714E-02  8.49886E+02
    1536000  1.34150E-02  8.49001E-03  9.13883E+02
    2048000  1.34425E-02  7.47511E-03  8.85502E+02
    2560000  1.34258E-02  6.42258E-03  9.60472E+02
    3072000  1.33697E-02  5.78339E-03  9.87345E+02
    3584000  1.34091E-02  5.91792E-03  8.08534E+02
    4096000  1.34103E-02  5.50734E-03  8.16900E+02
    4608000  1.34625E-02  5.28528E-03  7.88291E+02
    5120000  1.34247E-02  4.89730E-03  8.26461E+02
    5632000  1.34481E-02  4.67144E-03  8.25850E+02
    6091952  1.34471E-02  4.46001E-03  8.37707E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.79417E-03 0.0045
tfc   12       1       1       1       1       1       1       1       1
     512000  8.59116E-03  1.12115E-02  1.56271E+03
    1024000  8.79898E-03  1.06792E-02  8.64611E+02
    1536000  8.76855E-03  8.41475E-03  9.30304E+02
    2048000  8.79253E-03  7.51800E-03  8.75427E+02
    2560000  8.78566E-03  6.49895E-03  9.38034E+02
    3072000  8.74997E-03  5.79076E-03  9.84832E+02
    3584000  8.77295E-03  5.96167E-03  7.96710E+02
    4096000  8.77299E-03  5.54008E-03  8.07275E+02
    4608000  8.80619E-03  5.28852E-03  7.87325E+02
```

```
    5120000  8.78511E-03  4.91011E-03  8.22156E+02
    5632000  8.79662E-03  4.67207E-03  8.25629E+02
    6091952  8.79417E-03  4.45910E-03  8.38048E+02
mcnp       5     11/03/10 00:06:47     2     7983729     1484167605
```

Case 56

```
 Case 56
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.34271E+01 0.0083
tfc   16       1       1       1       1       1       1       1       1
     512000  2.26827E+01  2.08428E-02  5.99400E+02
    1024000  2.28065E+01  1.46980E-02  6.01186E+02
    1536000  2.32120E+01  2.22620E-02  1.74766E+02
    2048000  2.31976E+01  1.76295E-02  2.09033E+02
    2560000  2.32443E+01  1.50167E-02  2.30425E+02
    3072000  2.33765E+01  1.43285E-02  2.10867E+02
    3584000  2.35163E+01  1.30370E-02  2.18327E+02
    4096000  2.34986E+01  1.19138E-02  2.28718E+02
    4608000  2.34364E+01  1.09119E-02  2.42374E+02
    5120000  2.33570E+01  1.00872E-02  2.55257E+02
    5632000  2.34356E+01  9.61478E-03  2.55432E+02
    6144000  2.33862E+01  9.07861E-03  2.62631E+02
    6656000  2.33705E+01  9.09292E-03  2.41658E+02
    7168000  2.33961E+01  8.86160E-03  2.36229E+02
    7680000  2.34319E+01  8.55969E-03  2.36422E+02
    7983729  2.34271E+01  8.30608E-03  2.41558E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.04590E+01 0.0078
tfc   16       1       1       1       1       1       1       1       1
```

```
     512000  1.05602E+01  3.29554E-02  2.39758E+02
    1024000  1.03488E+01  1.90803E-02  3.56741E+02
    1536000  1.02683E+01  1.45558E-02  4.08799E+02
    2048000  1.03901E+01  1.36577E-02  3.48287E+02
    2560000  1.03892E+01  1.15438E-02  3.89920E+02
    3072000  1.04789E+01  1.31571E-02  2.50087E+02
    3584000  1.05515E+01  1.23240E-02  2.44318E+02
    4096000  1.05178E+01  1.10741E-02  2.64718E+02
    4608000  1.05221E+01  1.02589E-02  2.74207E+02
    5120000  1.05010E+01  9.58379E-03  2.82775E+02
    5632000  1.04925E+01  9.17584E-03  2.80455E+02
    6144000  1.04676E+01  8.58940E-03  2.93399E+02
    6656000  1.04781E+01  8.79551E-03  2.58277E+02
    7168000  1.04627E+01  8.31440E-03  2.68347E+02
    7680000  1.04678E+01  8.02660E-03  2.68869E+02
    7983729  1.04590E+01  7.75261E-03  2.77279E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.60457E+00 0.0063
tfc   16       1       1       1       1       1       1       1       1
     512000  4.58307E+00  2.10401E-02  5.88209E+02
    1024000  4.54465E+00  1.30467E-02  7.62996E+02
    1536000  4.53510E+00  1.07240E-02  7.53125E+02
    2048000  4.57847E+00  1.10460E-02  5.32453E+02
    2560000  4.57157E+00  9.42382E-03  5.85088E+02
    3072000  4.59722E+00  9.40439E-03  4.89498E+02
    3584000  4.65035E+00  1.06221E-02  3.28882E+02
    4096000  4.63693E+00  9.52257E-03  3.58008E+02
    4608000  4.63968E+00  8.89095E-03  3.65080E+02
    5120000  4.62820E+00  8.25897E-03  3.80771E+02
    5632000  4.62098E+00  7.71602E-03  3.96614E+02
    6144000  4.62221E+00  7.31364E-03  4.04685E+02
    6656000  4.61053E+00  7.04738E-03  4.02302E+02
    7168000  4.60168E+00  6.65440E-03  4.18929E+02
    7680000  4.60638E+00  6.49687E-03  4.10389E+02
    7983729  4.60457E+00  6.28669E-03  4.21666E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  1.65449E+00 0.0061
tfc   16       1       1       1       1       1       1       1       1
     512000  1.63015E+00  1.85718E-02  7.54950E+02
    1024000  1.66038E+00  1.88112E-02  3.67022E+02
    1536000  1.65603E+00  1.49847E-02  3.85732E+02
    2048000  1.65979E+00  1.24464E-02  4.19377E+02
    2560000  1.65006E+00  1.03290E-02  4.87035E+02
    3072000  1.65278E+00  9.30948E-03  4.99530E+02
    3584000  1.66947E+00  1.01214E-02  3.62227E+02
    4096000  1.66678E+00  9.15825E-03  3.87058E+02
    4608000  1.66474E+00  8.39582E-03  4.09409E+02
    5120000  1.65810E+00  7.74501E-03  4.32984E+02
    5632000  1.65706E+00  7.21564E-03  4.53528E+02
    6144000  1.65770E+00  6.92441E-03  4.51461E+02
    6656000  1.65216E+00  6.56418E-03  4.63710E+02
    7168000  1.64982E+00  6.21950E-03  4.79565E+02
    7680000  1.65420E+00  6.33175E-03  4.32073E+02
    7983729  1.65449E+00  6.13060E-03  4.43411E+02
tally  155     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.06542E-01 0.0057
tfc   16       1       1       1       1       1       1       1       1
     512000  4.99195E-01  1.57931E-02  1.04398E+03
    1024000  5.04127E-01  1.33540E-02  7.28286E+02
    1536000  5.06307E-01  1.32098E-02  4.96356E+02
    2048000  5.07498E-01  1.08037E-02  5.56601E+02
    2560000  5.04639E-01  8.99870E-03  6.41675E+02
    3072000  5.05565E-01  8.11670E-03  6.57134E+02
    3584000  5.10127E-01  8.88800E-03  4.69736E+02
    4096000  5.10026E-01  8.15808E-03  4.87782E+02
    4608000  5.09151E-01  7.48043E-03  5.15739E+02
    5120000  5.07413E-01  7.03244E-03  5.25175E+02
    5632000  5.07238E-01  6.54944E-03  5.50486E+02
    6144000  5.08098E-01  6.73922E-03  4.76613E+02
    6656000  5.06563E-01  6.37106E-03  4.92248E+02
    7168000  5.06158E-01  6.13269E-03  4.93238E+02
    7680000  5.06282E-01  5.86126E-03  5.04222E+02
    7983729  5.06542E-01  5.68363E-03  5.15895E+02
```

```
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.41701E-01 0.0055
tfc   16       1       1       1       1       1       1       1       1
     512000  2.42416E-01  2.78723E-02  3.35183E+02
    1024000  2.41926E-01  1.69418E-02  4.52487E+02
    1536000  2.42365E-01  1.43356E-02  4.21457E+02
    2048000  2.43094E-01  1.17351E-02  4.71759E+02
    2560000  2.41744E-01  9.74684E-03  5.46950E+02
    3072000  2.41805E-01  8.60754E-03  5.84325E+02
    3584000  2.43683E-01  9.03078E-03  4.55001E+02
    4096000  2.43764E-01  8.31376E-03  4.69685E+02
    4608000  2.43279E-01  7.60004E-03  4.99634E+02
    5120000  2.42719E-01  7.36184E-03  4.79229E+02
    5632000  2.42581E-01  6.84059E-03  5.04623E+02
    6144000  2.42280E-01  6.41083E-03  5.26692E+02
    6656000  2.41642E-01  6.07090E-03  5.42128E+02
    7168000  2.41577E-01  5.91112E-03  5.30908E+02
    7680000  2.41592E-01  5.65365E-03  5.41935E+02
    7983729  2.41701E-01  5.48480E-03  5.53976E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.40788E-01 0.0053
tfc   16       1       1       1       1       1       1       1       1
     512000  1.38480E-01  1.47435E-02  1.19792E+03
    1024000  1.39322E-01  1.16975E-02  9.49157E+02
    1536000  1.40070E-01  1.13949E-02  6.67053E+02
    2048000  1.40968E-01  9.91499E-03  6.60858E+02
    2560000  1.40390E-01  8.35152E-03  7.44979E+02
    3072000  1.40508E-01  7.47420E-03  7.74967E+02
    3584000  1.41644E-01  8.22335E-03  5.48738E+02
    4096000  1.41772E-01  7.62188E-03  5.58827E+02
    4608000  1.41508E-01  6.99934E-03  5.89073E+02
    5120000  1.41307E-01  7.03217E-03  5.25215E+02
```

```
    5632000  1.41275E-01  6.56265E-03  5.48272E+02
    6144000  1.41088E-01  6.15259E-03  5.71832E+02
    6656000  1.40734E-01  5.83707E-03  5.86433E+02
    7168000  1.40706E-01  5.66155E-03  5.78746E+02
    7680000  1.40737E-01  5.44524E-03  5.84212E+02
    7983729  1.40788E-01  5.28112E-03  5.97531E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.20669E-02 0.0053
tfc   16       1       1       1       1       1       1       1       1
     512000  9.02586E-02  1.44256E-02  1.25129E+03
    1024000  9.08714E-02  1.14277E-02  9.94501E+02
    1536000  9.13010E-02  1.08993E-02  7.29104E+02
    2048000  9.20021E-02  9.73229E-03  6.85902E+02
    2560000  9.17577E-02  8.26622E-03  7.60434E+02
    3072000  9.18336E-02  7.38838E-03  7.93074E+02
    3584000  9.25824E-02  8.14196E-03  5.59763E+02
    4096000  9.26973E-02  7.56083E-03  5.67888E+02
    4608000  9.25587E-02  6.99346E-03  5.90064E+02
    5120000  9.24747E-02  7.11344E-03  5.13282E+02
    5632000  9.24015E-02  6.62745E-03  5.37603E+02
    6144000  9.22632E-02  6.20976E-03  5.61352E+02
    6656000  9.20220E-02  5.88637E-03  5.76650E+02
    7168000  9.19813E-02  5.67099E-03  5.76820E+02
    7680000  9.20418E-02  5.49355E-03  5.73983E+02
    7983729  9.20669E-02  5.32460E-03  5.87813E+02
mcnp       5     11/03/10 01:06:58     2     7477319     1471792288
```

Case 57

```
 Case 57
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  1.61170E+01 0.0185
tfc   15        1        1        1        1        1        1        1        1
     512000  1.55209E+01  2.20682E-02  4.97566E+02
    1024000  1.54305E+01  1.43880E-02  5.84359E+02
    1536000  1.56530E+01  2.11490E-02  1.80525E+02
    2048000  1.56526E+01  1.67958E-02  2.14968E+02
    2560000  1.65087E+01  4.96846E-02  1.96449E+01
    3072000  1.63828E+01  4.19454E-02  2.29531E+01
    3584000  1.63669E+01  3.62125E-02  2.64036E+01
    4096000  1.62917E+01  3.19838E-02  2.96209E+01
    4608000  1.62209E+01  2.86639E-02  3.27666E+01
    5120000  1.61404E+01  2.60068E-02  3.58433E+01
    5632000  1.61725E+01  2.37719E-02  3.90384E+01
    6144000  1.61112E+01  2.19203E-02  4.21255E+01
    6656000  1.61166E+01  2.05486E-02  4.42899E+01
    7168000  1.61169E+01  1.92508E-02  4.68898E+01
    7477319  1.61170E+01  1.84973E-02  4.87044E+01
tally  125     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.11206E+00 0.0073
tfc   15        1        1        1        1        1        1        1        1
     512000  6.99543E+00  1.69796E-02  8.40482E+02
    1024000  6.98297E+00  1.83604E-02  3.58856E+02
    1536000  6.97310E+00  1.40744E-02  4.07624E+02
    2048000  7.07056E+00  1.32471E-02  3.45571E+02
    2560000  7.12093E+00  1.20540E-02  3.33757E+02
    3072000  7.11258E+00  1.10447E-02  3.31056E+02
    3584000  7.15373E+00  1.04552E-02  3.16749E+02
    4096000  7.12913E+00  9.41312E-03  3.41973E+02
    4608000  7.14194E+00  8.85217E-03  3.43560E+02
    5120000  7.12689E+00  8.30751E-03  3.51269E+02
    5632000  7.12180E+00  8.02624E-03  3.42449E+02
    6144000  7.10146E+00  7.51634E-03  3.58283E+02
    6656000  7.11382E+00  7.82465E-03  3.05449E+02
    7168000  7.10995E+00  7.51173E-03  3.07961E+02
    7477319  7.11206E+00  7.31265E-03  3.11627E+02
tally  135     2     1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.12286E+00 0.0060
tfc   15        1        1        1        1        1        1        1        1
     512000  3.09686E+00  1.72041E-02  8.18692E+02
    1024000  3.08338E+00  1.16999E-02  8.83729E+02
    1536000  3.10190E+00  1.08727E-02  6.83034E+02
    2048000  3.12947E+00  1.08882E-02  5.11518E+02
    2560000  3.12978E+00  9.36572E-03  5.52855E+02
    3072000  3.12344E+00  8.33332E-03  5.81533E+02
    3584000  3.15342E+00  9.66751E-03  3.70468E+02
    4096000  3.14570E+00  8.69799E-03  4.00517E+02
    4608000  3.15005E+00  8.18227E-03  4.02119E+02
    5120000  3.13951E+00  7.58210E-03  4.21699E+02
    5632000  3.13659E+00  7.09740E-03  4.37947E+02
    6144000  3.13890E+00  6.77327E-03  4.41206E+02
    6656000  3.13217E+00  6.54592E-03  4.36442E+02
    7168000  3.12328E+00  6.17322E-03  4.55988E+02
    7477319  3.12286E+00  5.98973E-03  4.64483E+02
tally  145     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.12513E+00 0.0072
tfc   15        1        1        1        1        1        1        1        1
     512000  1.11314E+00  1.70072E-02  8.37757E+02
    1024000  1.12869E+00  1.76918E-02  3.86490E+02
    1536000  1.15262E+00  2.49660E-02  1.29545E+02
    2048000  1.14898E+00  1.94374E-02  1.60509E+02
    2560000  1.13845E+00  1.58663E-02  1.92638E+02
    3072000  1.13129E+00  1.34890E-02  2.21949E+02
    3584000  1.13919E+00  1.28929E-02  2.08296E+02
    4096000  1.13557E+00  1.14970E-02  2.29240E+02
    4608000  1.13470E+00  1.04291E-02  2.47521E+02
    5120000  1.13091E+00  9.60258E-03  2.62909E+02
    5632000  1.12989E+00  8.86175E-03  2.80919E+02
    6144000  1.13035E+00  8.38201E-03  2.88099E+02
    6656000  1.12711E+00  7.90357E-03  2.99379E+02
    7168000  1.12460E+00  7.43906E-03  3.14007E+02
    7477319  1.12513E+00  7.23681E-03  3.18193E+02
tally  155     2     1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.47000E-01 0.0091
tfc   15        1        1        1        1        1        1        1        1
     512000  3.47954E-01  2.41977E-02  4.13842E+02
    1024000  3.46251E-01  1.58084E-02  4.84071E+02
    1536000  3.60482E-01  3.54199E-02  6.43610E+01
    2048000  3.57340E-01  2.70784E-02  8.27049E+01
    2560000  3.53347E-01  2.20716E-02  9.95461E+01
    3072000  3.50550E-01  1.86826E-02  1.15701E+02
    3584000  3.52282E-01  1.67733E-02  1.23068E+02
    4096000  3.51142E-01  1.48794E-02  1.36864E+02
    4608000  3.50566E-01  1.34454E-02  1.48921E+02
    5120000  3.49046E-01  1.23036E-02  1.60147E+02
    5632000  3.48510E-01  1.12788E-02  1.73417E+02
    6144000  3.48934E-01  1.07435E-02  1.75367E+02
    6656000  3.47851E-01  1.00434E-02  1.85398E+02
    7168000  3.47183E-01  9.46514E-03  1.93965E+02
    7477319  3.47000E-01  9.11707E-03  2.00481E+02
tally  165    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.66433E-01 0.0104
tfc   15        1        1        1        1        1        1        1        1
     512000  1.83810E-01  9.96071E-02  2.44232E+01
    1024000  1.73767E-01  5.33659E-02  4.24771E+01
    1536000  1.76108E-01  4.28866E-02  4.39009E+01
    2048000  1.73846E-01  3.28538E-02  5.61831E+01
    2560000  1.71505E-01  2.68299E-02  6.73683E+01
    3072000  1.69711E-01  2.26984E-02  7.83826E+01
    3584000  1.70123E-01  2.00191E-02  8.63952E+01
    4096000  1.69453E-01  1.77348E-02  9.63399E+01
    4608000  1.68943E-01  1.59434E-02  1.05911E+02
    5120000  1.68222E-01  1.46242E-02  1.13354E+02
    5632000  1.67764E-01  1.33866E-02  1.23106E+02
    6144000  1.67414E-01  1.23719E-02  1.32242E+02
```

```
    6656000  1.66864E-01  1.15368E-02  1.40506E+02
    7168000  1.66558E-01  1.08613E-02  1.47304E+02
    7477319  1.66433E-01  1.04479E-02  1.52660E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.64804E-02 0.0074
tfc   15       1       1       1       1       1       1       1       1
     512000  9.94358E-02  4.65444E-02  1.11854E+02
    1024000  9.73205E-02  2.52521E-02  1.89710E+02
    1536000  9.94845E-02  2.67345E-02  1.12973E+02
    2048000  9.90886E-02  2.06444E-02  1.42289E+02
    2560000  9.83013E-02  1.70608E-02  1.66608E+02
    3072000  9.75003E-02  1.44826E-02  1.92537E+02
    3584000  9.79465E-02  1.32882E-02  1.96086E+02
    4096000  9.77164E-02  1.18734E-02  2.14934E+02
    4608000  9.75329E-02  1.07566E-02  2.32675E+02
    5120000  9.72565E-02  1.01309E-02  2.36201E+02
    5632000  9.70810E-02  9.31758E-03  2.54105E+02
    6144000  9.69287E-02  8.66090E-03  2.69844E+02
    6656000  9.66644E-02  8.12926E-03  2.82987E+02
    7168000  9.65224E-02  7.71457E-03  2.91980E+02
    7477319  9.64804E-02  7.44095E-03  3.00973E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.29743E-02 0.0067
tfc   15       1       1       1       1       1       1       1       1
     512000  6.35997E-02  2.92230E-02  2.83749E+02
    1024000  6.29048E-02  1.70296E-02  4.17134E+02
    1536000  6.43028E-02  2.19355E-02  1.67811E+02
    2048000  6.42194E-02  1.71496E-02  2.06191E+02
    2560000  6.38855E-02  1.44345E-02  2.32751E+02
    3072000  6.34663E-02  1.22923E-02  2.67265E+02
    3584000  6.37885E-02  1.15542E-02  2.59359E+02
    4096000  6.36803E-02  1.03856E-02  2.80931E+02
```

```
    4608000  6.36211E-02  9.47700E-03  2.99751E+02
    5120000  6.34939E-02  9.08809E-03  2.93519E+02
    5632000  6.33617E-02  8.37022E-03  3.14881E+02
    6144000  6.32615E-02  7.80486E-03  3.32283E+02
    6656000  6.30939E-02  7.34675E-03  3.46480E+02
    7168000  6.29887E-02  6.97734E-03  3.56941E+02
    7477319  6.29743E-02  6.74338E-03  3.66462E+02
mcnp       5     11/03/10 02:07:14     2     7531834     1482533698
```

Case 58

```
 Case 58
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.22472E+02 0.0184
tfc   15       1       1       1       1       1       1       1       1
     512000  2.14369E+02  2.20680E-02  5.02074E+02
    1024000  2.13128E+02  1.43875E-02  5.89963E+02
    1536000  2.16222E+02  2.11464E-02  1.82345E+02
    2048000  2.16209E+02  1.67943E-02  2.16928E+02
    2560000  2.28028E+02  4.96807E-02  1.98298E+01
    3072000  2.26290E+02  4.19421E-02  2.31918E+01
    3584000  2.26065E+02  3.62105E-02  2.66773E+01
    4096000  2.25027E+02  3.19819E-02  2.99363E+01
    4608000  2.24044E+02  2.86628E-02  3.31220E+01
    5120000  2.22932E+02  2.60058E-02  3.62126E+01
    5632000  2.23376E+02  2.37710E-02  3.94035E+01
    6144000  2.22527E+02  2.19196E-02  4.24821E+01
    6656000  2.22601E+02  2.05480E-02  4.46283E+01
    7168000  2.22606E+02  1.92503E-02  4.72323E+01
    7531834  2.22472E+02  1.83754E-02  4.93468E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  9.81779E+01 0.0073
tfc   15        1        1        1        1        1        1        1        1
     512000  9.66184E+01  1.69794E-02  8.48098E+02
    1024000  9.64494E+01  1.83597E-02  3.62296E+02
    1536000  9.63205E+01  1.40730E-02  4.11708E+02
    2048000  9.76633E+01  1.32461E-02  3.48709E+02
    2560000  9.83580E+01  1.20533E-02  3.36887E+02
    3072000  9.82426E+01  1.10440E-02  3.34488E+02
    3584000  9.88087E+01  1.04548E-02  3.20025E+02
    4096000  9.84694E+01  9.41267E-03  3.45605E+02
    4608000  9.86446E+01  8.85189E-03  3.47280E+02
    5120000  9.84367E+01  8.30725E-03  3.54882E+02
    5632000  9.83663E+01  8.02600E-03  3.45647E+02
    6144000  9.80847E+01  7.51615E-03  3.61312E+02
    6656000  9.82552E+01  7.82447E-03  3.07779E+02
    7168000  9.82017E+01  7.51156E-03  3.10207E+02
    7531834  9.81779E+01  7.26599E-03  3.15603E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.31299E+01 0.0060
tfc   15        1        1        1        1        1        1        1        1
     512000  4.27728E+01  1.72039E-02  8.26111E+02
    1024000  4.25878E+01  1.16995E-02  8.92197E+02
    1536000  4.28464E+01  1.08719E-02  6.89849E+02
    2048000  4.32260E+01  1.08876E-02  5.16154E+02
    2560000  4.32299E+01  9.36521E-03  5.58032E+02
    3072000  4.31422E+01  8.33287E-03  5.87552E+02
    3584000  4.35555E+01  9.66712E-03  3.74298E+02
    4096000  4.34491E+01  8.69759E-03  4.04769E+02
    4608000  4.35085E+01  8.18202E-03  4.06472E+02
    5120000  4.33629E+01  7.58187E-03  4.26036E+02
    5632000  4.33224E+01  7.09719E-03  4.42036E+02
    6144000  4.33542E+01  6.77311E-03  4.44935E+02
    6656000  4.32610E+01  6.54578E-03  4.39770E+02
    7168000  4.31383E+01  6.17309E-03  4.59312E+02
    7531834  4.31299E+01  5.95948E-03  4.69151E+02
tally  145    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  1.55413E+01 0.0072
tfc   15        1        1        1        1        1        1        1        1
     512000  1.53744E+01  1.70070E-02  8.45350E+02
    1024000  1.55895E+01  1.76912E-02  3.90194E+02
    1536000  1.59209E+01  2.49637E-02  1.30842E+02
    2048000  1.58703E+01  1.94361E-02  1.61966E+02
    2560000  1.57247E+01  1.58654E-02  1.94443E+02
    3072000  1.56258E+01  1.34882E-02  2.24248E+02
    3584000  1.57346E+01  1.28924E-02  2.10449E+02
    4096000  1.56847E+01  1.14965E-02  2.31674E+02
    4608000  1.56725E+01  1.04287E-02  2.50201E+02
    5120000  1.56201E+01  9.60228E-03  2.65614E+02
    5632000  1.56060E+01  8.86148E-03  2.83542E+02
    6144000  1.56122E+01  8.38182E-03  2.90534E+02
    6656000  1.55674E+01  7.90341E-03  3.01661E+02
    7168000  1.55327E+01  7.43891E-03  3.16296E+02
    7531834  1.55413E+01  7.20458E-03  3.21005E+02
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.79093E+00 0.0091
tfc   15        1        1        1        1        1        1        1        1
     512000  4.80584E+00  2.41974E-02  4.17594E+02
    1024000  4.78243E+00  1.58078E-02  4.88708E+02
    1536000  4.97925E+00  3.54168E-02  6.50049E+01
    2048000  4.93574E+00  2.70766E-02  8.34549E+01
    2560000  4.88053E+00  2.20705E-02  1.00478E+02
    3072000  4.84189E+00  1.86816E-02  1.16899E+02
    3584000  4.86574E+00  1.67726E-02  1.24339E+02
    4096000  4.85002E+00  1.48787E-02  1.38316E+02
    4608000  4.84200E+00  1.34450E-02  1.50533E+02
    5120000  4.82100E+00  1.23032E-02  1.61794E+02
    5632000  4.81360E+00  1.12785E-02  1.75036E+02
    6144000  4.81939E+00  1.07433E-02  1.76846E+02
    6656000  4.80443E+00  1.00433E-02  1.86809E+02
    7168000  4.79520E+00  9.46500E-03  1.95376E+02
    7531834  4.79093E+00  9.05760E-03  2.03097E+02
tally  165     2     1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.29769E+00 0.0104
tfc   15        1        1        1        1        1        1        1        1
     512000  2.53873E+00  9.96058E-02  2.46447E+01
    1024000  2.40007E+00  5.33640E-02  4.28841E+01
    1536000  2.43252E+00  4.28830E-02  4.43399E+01
    2048000  2.40123E+00  3.28517E-02  5.66925E+01
    2560000  2.36888E+00  2.68285E-02  6.79988E+01
    3072000  2.34409E+00  2.26972E-02  7.91935E+01
    3584000  2.34975E+00  2.00184E-02  8.72880E+01
    4096000  2.34051E+00  1.77340E-02  9.73622E+01
    4608000  2.33343E+00  1.59429E-02  1.07058E+02
    5120000  2.32346E+00  1.46238E-02  1.14520E+02
    5632000  2.31715E+00  1.33862E-02  1.24256E+02
    6144000  2.31229E+00  1.23716E-02  1.33358E+02
    6656000  2.30469E+00  1.15366E-02  1.41577E+02
    7168000  2.30046E+00  1.08611E-02  1.48377E+02
    7531834  2.29769E+00  1.03789E-02  1.54679E+02
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.33198E+00 0.0074
tfc   15        1        1        1        1        1        1        1        1
     512000  1.37339E+00  4.65432E-02  1.12870E+02
    1024000  1.34420E+00  2.52510E-02  1.91530E+02
    1536000  1.37415E+00  2.67322E-02  1.14103E+02
    2048000  1.36866E+00  2.06431E-02  1.43580E+02
    2560000  1.35777E+00  1.70599E-02  1.68168E+02
    3072000  1.34670E+00  1.44819E-02  1.94530E+02
    3584000  1.35285E+00  1.32877E-02  1.98113E+02
    4096000  1.34967E+00  1.18729E-02  2.17216E+02
    4608000  1.34712E+00  1.07563E-02  2.35194E+02
    5120000  1.34330E+00  1.01306E-02  2.38630E+02
    5632000  1.34088E+00  9.31730E-03  2.56478E+02
    6144000  1.33876E+00  8.66072E-03  2.72123E+02
```

```
    6656000  1.33511E+00  8.12911E-03  2.85143E+02
    7168000  1.33315E+00  7.71442E-03  2.94107E+02
    7531834  1.33198E+00  7.39276E-03  3.04871E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.69400E-01 0.0067
tfc   15       1       1       1       1       1       1       1       1
     512000  8.78468E-01  2.92211E-02  2.86352E+02
    1024000  8.68867E-01  1.70285E-02  4.21152E+02
    1536000  8.88209E-01  2.19335E-02  1.69493E+02
    2048000  8.87036E-01  1.71483E-02  2.08065E+02
    2560000  8.82412E-01  1.44336E-02  2.34933E+02
    3072000  8.76619E-01  1.22916E-02  2.70033E+02
    3584000  8.81057E-01  1.15537E-02  2.62042E+02
    4096000  8.79566E-01  1.03851E-02  2.83915E+02
    4608000  8.78736E-01  9.47667E-03  3.02998E+02
    5120000  8.76979E-01  9.08778E-03  2.96540E+02
    5632000  8.75153E-01  8.36994E-03  3.17823E+02
    6144000  8.73761E-01  7.80467E-03  3.35092E+02
    6656000  8.71443E-01  7.34658E-03  3.49122E+02
    7168000  8.69990E-01  6.97719E-03  3.59543E+02
    7531834  8.69400E-01  6.70011E-03  3.71164E+02
mcnp       5     11/03/10 03:07:26     2    35933872     1680538547
```

Case 59

```
 Case 59
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38568E+03 0.0110
tfc   18       1       1       1       1       1       1       1       1
    2048000  1.30573E+03  1.56503E-02  1.19432E+03
```

```
    4096000  1.39011E+03  3.71901E-02  1.05393E+02
    6144000  1.38876E+03  2.64265E-02  1.39015E+02
    8192000  1.39146E+03  2.41865E-02  1.24469E+02
   10240000  1.38046E+03  1.98389E-02  1.48166E+02
   12288000  1.38136E+03  1.76314E-02  1.56442E+02
   14336000  1.37479E+03  1.53852E-02  1.76198E+02
   16384000  1.37245E+03  1.36665E-02  1.95477E+02
   18432000  1.38911E+03  1.75972E-02  1.04852E+02
   20480000  1.38738E+03  1.61926E-02  1.11470E+02
   22528000  1.38597E+03  1.50198E-02  1.17768E+02
   24576000  1.38003E+03  1.38821E-02  1.26370E+02
   26624000  1.38081E+03  1.29891E-02  1.33275E+02
   28672000  1.38457E+03  1.24422E-02  1.34896E+02
   30720000  1.38047E+03  1.16930E-02  1.42575E+02
   32768000  1.38478E+03  1.17761E-02  1.31798E+02
   34816000  1.38568E+03  1.13000E-02  1.34714E+02
   35933872  1.38568E+03  1.10192E-02  1.37260E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.19165E+02 0.0103
tfc   18       1       1       1       1       1       1       1       1
    2048000  6.00235E+02  3.26001E-02  2.75250E+02
    4096000  6.16061E+02  2.56845E-02  2.20965E+02
    6144000  6.28260E+02  2.50690E-02  1.54479E+02
    8192000  6.28947E+02  2.48646E-02  1.17773E+02
   10240000  6.24542E+02  2.05352E-02  1.38288E+02
   12288000  6.20525E+02  1.74485E-02  1.59739E+02
   14336000  6.17313E+02  1.52175E-02  1.80104E+02
   16384000  6.16013E+02  1.34660E-02  2.01340E+02
   18432000  6.13872E+02  1.21352E-02  2.20479E+02
   20480000  6.12163E+02  1.10971E-02  2.37339E+02
   22528000  6.15271E+02  1.18439E-02  1.89397E+02
   24576000  6.14016E+02  1.09990E-02  2.01302E+02
   26624000  6.18742E+02  1.21094E-02  1.53342E+02
   28672000  6.16327E+02  1.13324E-02  1.62611E+02
   30720000  6.17630E+02  1.13681E-02  1.50841E+02
   32768000  6.16847E+02  1.08292E-02  1.55853E+02
   34816000  6.16941E+02  1.02662E-02  1.63213E+02
   35933872  6.19165E+02  1.03175E-02  1.56567E+02
tally  135    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.73671E+02 0.0080
tfc   18        1        1        1        1        1        1        1        1
    2048000  2.64328E+02  1.71111E-02  9.99107E+02
    4096000  2.75050E+02  2.49348E-02  2.34453E+02
    6144000  2.75776E+02  1.82858E-02  2.90345E+02
    8192000  2.73485E+02  1.49223E-02  3.26990E+02
   10240000  2.75242E+02  1.70095E-02  2.01558E+02
   12288000  2.73232E+02  1.44299E-02  2.33562E+02
   14336000  2.72970E+02  1.30886E-02  2.43455E+02
   16384000  2.74140E+02  1.18358E-02  2.60623E+02
   18432000  2.73350E+02  1.07038E-02  2.83391E+02
   20480000  2.72419E+02  9.77746E-03  3.05731E+02
   22528000  2.73046E+02  9.35664E-03  3.03472E+02
   24576000  2.72755E+02  8.76523E-03  3.16975E+02
   26624000  2.73354E+02  8.71399E-03  2.96125E+02
   28672000  2.72329E+02  8.16737E-03  3.13061E+02
   30720000  2.72825E+02  7.97616E-03  3.06412E+02
   32768000  2.72234E+02  7.54064E-03  3.21434E+02
   34816000  2.73201E+02  8.06741E-03  2.64304E+02
   35933872  2.73671E+02  7.98316E-03  2.61516E+02
tally  145     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.84804E+01 0.0093
tfc   18        1        1        1        1        1        1        1        1
    2048000  9.55955E+01  1.66861E-02  1.05065E+03
    4096000  1.03513E+02  5.53631E-02  4.75582E+01
    6144000  1.01736E+02  3.79824E-02  6.72938E+01
    8192000  1.00967E+02  3.05324E-02  7.81062E+01
   10240000  1.00800E+02  2.51751E-02  9.20113E+01
   12288000  9.96922E+01  2.12927E-02  1.07267E+02
   14336000  9.89819E+01  1.84860E-02  1.22045E+02
   16384000  9.93187E+01  1.63661E-02  1.36307E+02
   18432000  9.90520E+01  1.47448E-02  1.49342E+02
   20480000  9.86651E+01  1.34050E-02  1.62653E+02
   22528000  9.92370E+01  1.36368E-02  1.42867E+02
```

```
   24576000  9.93973E+01  1.29201E-02  1.45888E+02
   26624000  9.91424E+01  1.20282E-02  1.55419E+02
   28672000  9.87241E+01  1.12477E-02  1.65069E+02
   30720000  9.86733E+01  1.05901E-02  1.73819E+02
   32768000  9.84068E+01  9.98609E-03  1.83281E+02
   34816000  9.83940E+01  9.47451E-03  1.91628E+02
   35933872  9.84804E+01  9.26674E-03  1.94086E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.00959E+01 0.0070
tfc   18       1       1       1       1       1       1       1       1
    2048000  2.94638E+01  1.93281E-02  7.83048E+02
    4096000  3.04080E+01  2.38645E-02  2.55955E+02
    6144000  3.02823E+01  1.67569E-02  3.45745E+02
    8192000  3.00989E+01  1.34044E-02  4.05243E+02
   10240000  3.04085E+01  1.63667E-02  2.17700E+02
   12288000  3.02018E+01  1.39092E-02  2.51376E+02
   14336000  3.01001E+01  1.23028E-02  2.75551E+02
   16384000  3.02248E+01  1.10325E-02  2.99960E+02
   18432000  3.02113E+01  1.02420E-02  3.09519E+02
   20480000  3.01471E+01  9.41629E-03  3.29634E+02
   22528000  3.02802E+01  9.71020E-03  2.81775E+02
   24576000  3.03309E+01  9.38814E-03  2.76308E+02
   26624000  3.02479E+01  8.75373E-03  2.93442E+02
   28672000  3.01459E+01  8.20794E-03  3.09975E+02
   30720000  3.01120E+01  7.73615E-03  3.25720E+02
   32768000  3.00437E+01  7.30758E-03  3.42263E+02
   34816000  3.00418E+01  6.96851E-03  3.54236E+02
   35933872  3.00959E+01  6.96593E-03  3.43470E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.43894E+01 0.0066
tfc   18       1       1       1       1       1       1       1       1
    2048000  1.41002E+01  2.26347E-02  5.70976E+02
```

```
    4096000  1.44197E+01  1.95538E-02  3.81246E+02
    6144000  1.43938E+01  1.39775E-02  4.96913E+02
    8192000  1.43077E+01  1.13022E-02  5.70006E+02
   10240000  1.44422E+01  1.34751E-02  3.21159E+02
   12288000  1.43691E+01  1.16155E-02  3.60455E+02
   14336000  1.43416E+01  1.04980E-02  3.78441E+02
   16384000  1.44280E+01  9.66358E-03  3.90962E+02
   18432000  1.44570E+01  9.66194E-03  3.47802E+02
   20480000  1.44188E+01  8.87693E-03  3.70908E+02
   22528000  1.44871E+01  9.27955E-03  3.08535E+02
   24576000  1.44906E+01  8.79305E-03  3.14972E+02
   26624000  1.44495E+01  8.20315E-03  3.34155E+02
   28672000  1.44020E+01  7.69926E-03  3.52287E+02
   30720000  1.43841E+01  7.26428E-03  3.69410E+02
   32768000  1.43524E+01  6.86428E-03  3.87898E+02
   34816000  1.43576E+01  6.57888E-03  3.97438E+02
   35933872  1.43894E+01  6.63639E-03  3.78428E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.39211E+00 0.0070
tfc   18       1       1       1       1       1       1       1       1
    2048000  8.23295E+00  2.43393E-02  4.93798E+02
    4096000  8.38549E+00  1.83595E-02  4.32457E+02
    6144000  8.39579E+00  1.33608E-02  5.43845E+02
    8192000  8.34102E+00  1.08601E-02  6.17358E+02
   10240000  8.39835E+00  1.14891E-02  4.41784E+02
   12288000  8.37536E+00  1.02131E-02  4.66247E+02
   14336000  8.35866E+00  9.23663E-03  4.88856E+02
   16384000  8.40188E+00  8.59115E-03  4.94661E+02
   18432000  8.43609E+00  9.42940E-03  3.65168E+02
   20480000  8.41285E+00  8.65957E-03  3.89762E+02
   22528000  8.46747E+00  1.00379E-02  2.63679E+02
   24576000  8.46602E+00  9.45002E-03  2.72701E+02
   26624000  8.43991E+00  8.80620E-03  2.89956E+02
   28672000  8.41018E+00  8.25676E-03  3.06320E+02
   30720000  8.39879E+00  7.78166E-03  3.21921E+02
   32768000  8.37924E+00  7.34790E-03  3.38517E+02
   34816000  8.37716E+00  7.00412E-03  3.50644E+02
   35933872  8.39211E+00  7.04650E-03  3.35661E+02
tally  185    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.50236E+00 0.0075
tfc   18        1        1        1        1        1        1        1        1
    2048000  5.38703E+00  2.51995E-02  4.60661E+02
    4096000  5.47809E+00  1.79112E-02  4.54378E+02
    6144000  5.47849E+00  1.29756E-02  5.76613E+02
    8192000  5.44644E+00  1.05947E-02  6.48684E+02
   10240000  5.49301E+00  1.12175E-02  4.63437E+02
   12288000  5.49866E+00  1.08234E-02  4.15150E+02
   14336000  5.48351E+00  9.69058E-03  4.44129E+02
   16384000  5.50969E+00  8.93429E-03  4.57394E+02
   18432000  5.52489E+00  9.43071E-03  3.65066E+02
   20480000  5.50729E+00  8.65388E-03  3.90275E+02
   22528000  5.55698E+00  1.07458E-02  2.30080E+02
   24576000  5.55383E+00  1.00870E-02  2.39349E+02
   26624000  5.53525E+00  9.39334E-03  2.54841E+02
   28672000  5.51421E+00  8.80320E-03  2.69471E+02
   30720000  5.50631E+00  8.29083E-03  2.83594E+02
   32768000  5.49244E+00  7.82569E-03  2.98444E+02
   34816000  5.49285E+00  7.46908E-03  3.08346E+02
   35933872  5.50236E+00  7.49569E-03  2.96636E+02
mcnp        5      11/03/10 04:07:34      2      7494717      1461947257
```

Case 60

```
 Case 60
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.97243E-01 0.0118
tfc   15        1        1        1        1        1        1        1        1
     512000  3.99124E-01  3.66452E-02  1.81917E+02
    1024000  3.86815E-01  2.16300E-02  2.60304E+02
    1536000  3.92224E-01  1.99584E-02  2.03845E+02
    2048000  3.93994E-01  1.67985E-02  2.15854E+02
```

```
    2560000  3.96642E-01  1.60086E-02  1.90133E+02
    3072000  3.95974E-01  1.41325E-02  2.03283E+02
    3584000  3.99889E-01  1.73831E-02  1.15194E+02
    4096000  4.00013E-01  1.69154E-02  1.06470E+02
    4608000  3.99724E-01  1.62191E-02  1.02904E+02
    5120000  3.98143E-01  1.48170E-02  1.10986E+02
    5632000  3.96537E-01  1.36577E-02  1.18760E+02
    6144000  3.96222E-01  1.28982E-02  1.22097E+02
    6656000  3.97195E-01  1.28937E-02  1.12811E+02
    7168000  3.98235E-01  1.22890E-02  1.15356E+02
    7494717  3.97243E-01  1.18350E-02  1.18977E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.49474E-01 0.0089
tfc   15       1       1       1       1       1       1       1       1
     512000  2.64918E-01  7.04459E-02  4.92261E+01
    1024000  2.58811E-01  4.03309E-02  7.48719E+01
    1536000  2.56392E-01  2.82878E-02  1.01474E+02
    2048000  2.55707E-01  2.23299E-02  1.22160E+02
    2560000  2.54939E-01  1.86184E-02  1.40564E+02
    3072000  2.54626E-01  1.70601E-02  1.39500E+02
    3584000  2.52589E-01  1.48876E-02  1.57049E+02
    4096000  2.50802E-01  1.33135E-02  1.71874E+02
    4608000  2.50201E-01  1.21872E-02  1.82256E+02
    5120000  2.49468E-01  1.12971E-02  1.90920E+02
    5632000  2.48593E-01  1.04036E-02  2.04674E+02
    6144000  2.47952E-01  9.65945E-03  2.17699E+02
    6656000  2.47671E-01  9.16097E-03  2.23471E+02
    7168000  2.49399E-01  9.12928E-03  2.09027E+02
    7494717  2.49474E-01  8.89855E-03  2.10454E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.41334E-01 0.0067
tfc   15       1       1       1       1       1       1       1       1
```

```
     512000  1.48502E-01  3.35078E-02  2.17578E+02
    1024000  1.42401E-01  1.90613E-02  3.35189E+02
    1536000  1.42250E-01  1.46042E-02  3.80712E+02
    2048000  1.43309E-01  1.30212E-02  3.59253E+02
    2560000  1.43427E-01  1.15429E-02  3.65705E+02
    3072000  1.43260E-01  1.08568E-02  3.44458E+02
    3584000  1.43051E-01  9.79350E-03  3.62919E+02
    4096000  1.41974E-01  8.78182E-03  3.95024E+02
    4608000  1.41817E-01  8.06448E-03  4.16230E+02
    5120000  1.41315E-01  7.40785E-03  4.44019E+02
    5632000  1.41144E-01  6.94355E-03  4.59478E+02
    6144000  1.41253E-01  6.83570E-03  4.34706E+02
    6656000  1.41181E-01  6.75181E-03  4.11399E+02
    7168000  1.41438E-01  6.96231E-03  3.59393E+02
    7494717  1.41334E-01  6.72637E-03  3.68328E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.07678E-02 0.0070
tfc   15       1       1       1       1       1       1       1       1
     512000  6.29408E-02  2.62136E-02  3.55512E+02
    1024000  6.16398E-02  1.74343E-02  4.00666E+02
    1536000  6.15216E-02  1.40795E-02  4.09619E+02
    2048000  6.14963E-02  1.23909E-02  3.96729E+02
    2560000  6.09951E-02  1.05167E-02  4.40553E+02
    3072000  6.07075E-02  9.26776E-03  4.72701E+02
    3584000  6.05840E-02  8.31074E-03  5.03971E+02
    4096000  6.02402E-02  7.50596E-03  5.40728E+02
    4608000  6.05512E-02  7.22376E-03  5.18752E+02
    5120000  6.05249E-02  6.96043E-03  5.02937E+02
    5632000  6.08449E-02  7.16148E-03  4.31938E+02
    6144000  6.07523E-02  6.85808E-03  4.31873E+02
    6656000  6.06199E-02  6.64636E-03  4.24557E+02
    7168000  6.07937E-02  7.20998E-03  3.35126E+02
    7494717  6.07678E-02  7.02126E-03  3.38038E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  2.04732E-02 0.0071
tfc   15       1       1       1       1       1       1       1       1
     512000  2.11430E-02  3.04412E-02  2.63622E+02
    1024000  2.07966E-02  1.87756E-02  3.45467E+02
    1536000  2.07862E-02  1.68388E-02  2.86373E+02
    2048000  2.07893E-02  1.35955E-02  3.29542E+02
    2560000  2.08525E-02  1.41809E-02  2.42300E+02
    3072000  2.07979E-02  1.31772E-02  2.33826E+02
    3584000  2.07800E-02  1.16533E-02  2.56322E+02
    4096000  2.06737E-02  1.05006E-02  2.76287E+02
    4608000  2.06316E-02  9.53153E-03  2.97963E+02
    5120000  2.05875E-02  8.78007E-03  3.16075E+02
    5632000  2.05815E-02  8.75933E-03  2.88726E+02
    6144000  2.05600E-02  8.26551E-03  2.97319E+02
    6656000  2.05223E-02  7.81252E-03  3.07271E+02
    7168000  2.04965E-02  7.36419E-03  3.21238E+02
    7494717  2.04732E-02  7.12939E-03  3.27862E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.00658E-02 0.0068
tfc   15       1       1       1       1       1       1       1       1
     512000  1.02254E-02  2.99545E-02  2.72259E+02
    1024000  1.01664E-02  1.98117E-02  3.10277E+02
    1536000  1.00332E-02  1.42458E-02  4.00112E+02
    2048000  1.01525E-02  1.28686E-02  3.67822E+02
    2560000  1.01206E-02  1.13008E-02  3.81544E+02
    3072000  1.01139E-02  1.13947E-02  3.12700E+02
    3584000  1.01759E-02  1.10624E-02  2.84439E+02
    4096000  1.01329E-02  9.95981E-03  3.07107E+02
    4608000  1.01479E-02  9.27393E-03  3.14745E+02
    5120000  1.01304E-02  8.57170E-03  3.31629E+02
    5632000  1.00832E-02  7.91766E-03  3.53374E+02
    6144000  1.00820E-02  7.50875E-03  3.60269E+02
    6656000  1.00617E-02  7.14478E-03  3.67388E+02
    7168000  1.00652E-02  6.86856E-03  3.69271E+02
    7494717  1.00658E-02  6.79038E-03  3.61416E+02
tally  175    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  5.94214E-03 0.0075
tfc   15       1       1       1       1       1       1       1       1
     512000  6.01840E-03  3.09040E-02  2.55787E+02
    1024000  6.03480E-03  2.24758E-02  2.41082E+02
    1536000  5.94892E-03  1.59272E-02  3.20092E+02
    2048000  5.98654E-03  1.40863E-02  3.06979E+02
    2560000  5.95491E-03  1.19351E-02  3.42068E+02
    3072000  5.94177E-03  1.11487E-02  3.26653E+02
    3584000  5.98646E-03  1.13329E-02  2.71019E+02
    4096000  5.96174E-03  1.02316E-02  2.91010E+02
    4608000  5.96692E-03  9.55038E-03  2.96787E+02
    5120000  5.96367E-03  8.98163E-03  3.02048E+02
    5632000  5.93960E-03  8.28557E-03  3.22688E+02
    6144000  5.95028E-03  8.38159E-03  2.89141E+02
    6656000  5.93824E-03  7.98445E-03  2.94180E+02
    7168000  5.94458E-03  7.71327E-03  2.92819E+02
    7494717  5.94214E-03  7.47614E-03  2.98154E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.88764E-03 0.0068
tfc   15       1       1       1       1       1       1       1       1
     512000  3.89969E-03  2.45257E-02  4.06127E+02
    1024000  3.89896E-03  1.72280E-02  4.10319E+02
    1536000  3.87817E-03  1.35640E-02  4.41347E+02
    2048000  3.88912E-03  1.14798E-02  4.62204E+02
    2560000  3.86553E-03  9.71842E-03  5.15904E+02
    3072000  3.86366E-03  9.20008E-03  4.79681E+02
    3584000  3.88180E-03  9.08155E-03  4.22051E+02
    4096000  3.88434E-03  8.80470E-03  3.92973E+02
    4608000  3.88151E-03  8.06626E-03  4.16046E+02
    5120000  3.89284E-03  8.17215E-03  3.64849E+02
    5632000  3.88092E-03  7.56539E-03  3.87048E+02
    6144000  3.88441E-03  7.29852E-03  3.81322E+02
    6656000  3.88044E-03  7.05960E-03  3.76307E+02
    7168000  3.89018E-03  7.02549E-03  3.52958E+02
    7494717  3.88764E-03  6.77395E-03  3.63172E+02
```

```
mcnp        5      11/03/10 05:07:44      2      9322145      1487805065
```

Case 61

```
 Case 61
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.76071E+00 0.0134
tfc   19       1       1       1       1       1       1       1       1
     512000  4.46612E+00  2.62263E-02  4.40324E+02
    1024000  4.50668E+00  1.93049E-02  4.05549E+02
    1536000  4.53073E+00  1.60348E-02  3.92094E+02
    2048000  4.57762E+00  1.41853E-02  3.75752E+02
    2560000  4.58093E+00  1.23138E-02  3.98847E+02
    3072000  4.70546E+00  2.37956E-02  8.89697E+01
    3584000  4.68698E+00  2.07303E-02  1.00472E+02
    4096000  4.72589E+00  1.99435E-02  9.49828E+01
    4608000  4.71018E+00  1.80084E-02  1.03519E+02
    5120000  4.71030E+00  1.67801E-02  1.07332E+02
    5632000  4.70667E+00  1.54986E-02  1.14433E+02
    6144000  4.68530E+00  1.44034E-02  1.21552E+02
    6656000  4.68700E+00  1.36571E-02  1.24880E+02
    7168000  4.70070E+00  1.30977E-02  1.26145E+02
    7680000  4.68924E+00  1.23702E-02  1.32056E+02
    8192000  4.71142E+00  1.20086E-02  1.31410E+02
    8704000  4.70676E+00  1.14436E-02  1.36235E+02
    9216000  4.76567E+00  1.34891E-02  9.26353E+01
    9322145  4.76071E+00  1.33559E-02  9.34151E+01
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.95545E+00 0.0089
tfc   19       1       1       1       1       1       1       1       1
```

```
     512000  2.87580E+00  2.15493E-02  6.52198E+02
    1024000  2.87016E+00  1.71814E-02  5.11988E+02
    1536000  2.89981E+00  1.50924E-02  4.42591E+02
    2048000  2.93856E+00  1.35108E-02  4.14209E+02
    2560000  2.96045E+00  1.25903E-02  3.81524E+02
    3072000  2.94869E+00  1.15757E-02  3.75959E+02
    3584000  2.94334E+00  1.03992E-02  3.99260E+02
    4096000  2.93863E+00  9.56742E-03  4.12724E+02
    4608000  2.93102E+00  9.00865E-03  4.13667E+02
    5120000  2.91880E+00  8.42228E-03  4.26050E+02
    5632000  2.91612E+00  7.87955E-03  4.42726E+02
    6144000  2.91501E+00  7.51661E-03  4.46323E+02
    6656000  2.91408E+00  7.25644E-03  4.42345E+02
    7168000  2.94048E+00  8.90131E-03  2.73121E+02
    7680000  2.93859E+00  8.63800E-03  2.70824E+02
    8192000  2.93940E+00  8.40493E-03  2.68254E+02
    8704000  2.94743E+00  8.45031E-03  2.49842E+02
    9216000  2.95818E+00  8.96458E-03  2.09742E+02
    9322145  2.95545E+00  8.87677E-03  2.11473E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.67065E+00 0.0079
tfc   19       1       1       1       1       1       1       1       1
     512000  1.62124E+00  2.11189E-02  6.79056E+02
    1024000  1.61243E+00  1.44930E-02  7.19551E+02
    1536000  1.62131E+00  1.23816E-02  6.57604E+02
    2048000  1.64320E+00  1.19916E-02  5.25801E+02
    2560000  1.66009E+00  1.14433E-02  4.61834E+02
    3072000  1.66346E+00  1.23161E-02  3.32112E+02
    3584000  1.67611E+00  1.16101E-02  3.20323E+02
    4096000  1.68322E+00  1.28378E-02  2.29230E+02
    4608000  1.67910E+00  1.18250E-02  2.40085E+02
    5120000  1.67498E+00  1.09083E-02  2.53983E+02
    5632000  1.67868E+00  1.04886E-02  2.49862E+02
    6144000  1.68494E+00  1.03577E-02  2.35053E+02
    6656000  1.67589E+00  9.68183E-03  2.48481E+02
    7168000  1.67338E+00  9.12613E-03  2.59830E+02
    7680000  1.67284E+00  8.98744E-03  2.50174E+02
    8192000  1.67253E+00  8.56690E-03  2.58207E+02
    8704000  1.67245E+00  8.23642E-03  2.62987E+02
    9216000  1.66972E+00  7.85038E-03  2.73504E+02
    9322145  1.67065E+00  7.86197E-03  2.69590E+02
```

```
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.18729E-01 0.0080
tfc   19       1       1       1       1       1       1       1       1
     512000  7.32904E-01  2.96317E-02  3.44932E+02
    1024000  7.27448E-01  2.36494E-02  2.70232E+02
    1536000  7.21532E-01  1.85221E-02  2.93861E+02
    2048000  7.24751E-01  1.62406E-02  2.86666E+02
    2560000  7.19451E-01  1.36211E-02  3.25963E+02
    3072000  7.12277E-01  1.16730E-02  3.69719E+02
    3584000  7.15778E-01  1.05012E-02  3.91543E+02
    4096000  7.15248E-01  9.97899E-03  3.79382E+02
    4608000  7.20040E-01  1.04213E-02  3.09121E+02
    5120000  7.18537E-01  9.85194E-03  3.11369E+02
    5632000  7.21643E-01  9.72978E-03  2.90357E+02
    6144000  7.21793E-01  9.28323E-03  2.92614E+02
    6656000  7.20646E-01  9.20365E-03  2.74972E+02
    7168000  7.22681E-01  9.71946E-03  2.29075E+02
    7680000  7.20868E-01  9.21165E-03  2.38144E+02
    8192000  7.19899E-01  8.74631E-03  2.47722E+02
    8704000  7.18766E-01  8.35757E-03  2.55418E+02
    9216000  7.18060E-01  7.99592E-03  2.63638E+02
    9322145  7.18729E-01  7.98638E-03  2.61256E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.40843E-01 0.0068
tfc   19       1       1       1       1       1       1       1       1
     512000  2.52768E-01  4.25308E-02  1.67432E+02
    1024000  2.46828E-01  2.69266E-02  2.08456E+02
    1536000  2.44044E-01  2.06630E-02  2.36120E+02
    2048000  2.44094E-01  1.74302E-02  2.48872E+02
    2560000  2.45117E-01  1.64162E-02  2.24413E+02
    3072000  2.43400E-01  1.41528E-02  2.51506E+02
    3584000  2.44627E-01  1.26852E-02  2.68325E+02
```

```
    4096000  2.44439E-01  1.19450E-02  2.64777E+02
    4608000  2.43503E-01  1.09226E-02  2.81397E+02
    5120000  2.42548E-01  1.00420E-02  2.99697E+02
    5632000  2.41981E-01  9.29982E-03  3.17825E+02
    6144000  2.41888E-01  8.78732E-03  3.26574E+02
    6656000  2.41617E-01  8.41098E-03  3.29242E+02
    7168000  2.41153E-01  7.94309E-03  3.42991E+02
    7680000  2.40725E-01  7.56566E-03  3.53037E+02
    8192000  2.40468E-01  7.19909E-03  3.65645E+02
    8704000  2.40193E-01  6.98251E-03  3.65921E+02
    9216000  2.40847E-01  6.84692E-03  3.59547E+02
    9322145  2.40843E-01  6.78469E-03  3.61997E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.18110E-01 0.0071
tfc   19       1       1       1       1       1       1       1       1
     512000  1.21593E-01  4.53844E-02  1.47039E+02
    1024000  1.18630E-01  2.57637E-02  2.27699E+02
    1536000  1.16899E-01  1.80962E-02  3.07853E+02
    2048000  1.17955E-01  1.50418E-02  3.34177E+02
    2560000  1.17547E-01  1.26432E-02  3.78335E+02
    3072000  1.17071E-01  1.09597E-02  4.19410E+02
    3584000  1.18463E-01  1.14092E-02  3.31703E+02
    4096000  1.18738E-01  1.10163E-02  3.11298E+02
    4608000  1.18381E-01  1.00969E-02  3.29299E+02
    5120000  1.18242E-01  9.44241E-03  3.38964E+02
    5632000  1.18124E-01  8.86133E-03  3.50058E+02
    6144000  1.18066E-01  8.38234E-03  3.58892E+02
    6656000  1.18002E-01  8.12260E-03  3.53036E+02
    7168000  1.17791E-01  7.67567E-03  3.67307E+02
    7680000  1.17905E-01  7.67410E-03  3.43130E+02
    8192000  1.17892E-01  7.35869E-03  3.49956E+02
    8704000  1.17681E-01  7.04766E-03  3.59187E+02
    9216000  1.18075E-01  7.14254E-03  3.30399E+02
    9322145  1.18110E-01  7.08050E-03  3.32383E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e         0
t         0
vals
  6.98170E-02 0.0081
tfc   19       1       1       1       1       1       1       1       1
     512000  7.28748E-02  5.80750E-02  8.97983E+01
    1024000  7.04612E-02  3.20779E-02  1.46881E+02
    1536000  6.93679E-02  2.22954E-02  2.02811E+02
    2048000  6.94628E-02  1.74101E-02  2.49444E+02
    2560000  6.91391E-02  1.43838E-02  2.92312E+02
    3072000  6.88865E-02  1.23750E-02  3.28959E+02
    3584000  6.99606E-02  1.24640E-02  2.77936E+02
    4096000  7.00417E-02  1.18374E-02  2.69611E+02
    4608000  6.99592E-02  1.09448E-02  2.80256E+02
    5120000  6.97815E-02  1.00553E-02  2.98901E+02
    5632000  6.97202E-02  9.43767E-03  3.08609E+02
    6144000  6.96647E-02  8.95808E-03  3.14242E+02
    6656000  6.94407E-02  8.48128E-03  3.23806E+02
    7168000  6.94379E-02  8.13735E-03  3.26811E+02
    7680000  6.94327E-02  7.82695E-03  3.29859E+02
    8192000  6.94207E-02  7.56359E-03  3.31252E+02
    8704000  6.92578E-02  7.19844E-03  3.44297E+02
    9216000  6.98007E-02  8.16007E-03  2.53138E+02
    9322145  6.98170E-02  8.07967E-03  2.55257E+02
tally  185    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.58455E-02 0.0084
tfc   19       1       1       1       1       1       1       1       1
     512000  4.66419E-02  4.03054E-02  1.86432E+02
    1024000  4.56846E-02  2.37552E-02  2.67831E+02
    1536000  4.51511E-02  1.68522E-02  3.54984E+02
    2048000  4.52125E-02  1.33592E-02  4.23662E+02
    2560000  4.49847E-02  1.11132E-02  4.89681E+02
    3072000  4.49313E-02  9.77248E-03  5.27502E+02
    3584000  4.57488E-02  1.05896E-02  3.85036E+02
    4096000  4.58282E-02  1.03614E-02  3.51894E+02
    4608000  4.57198E-02  9.53799E-03  3.69025E+02
    5120000  4.56647E-02  8.94266E-03  3.77908E+02
    5632000  4.55942E-02  8.38137E-03  3.91298E+02
    6144000  4.55338E-02  7.93050E-03  4.00953E+02
    6656000  4.53488E-02  7.46660E-03  4.17794E+02
    7168000  4.55205E-02  8.03868E-03  3.34883E+02
```

```
    7680000  4.55117E-02  7.66054E-03  3.44346E+02
    8192000  4.55471E-02  7.55816E-03  3.31728E+02
    8704000  4.54210E-02  7.17531E-03  3.46520E+02
    9216000  4.58411E-02  8.44882E-03  2.36131E+02
    9322145  4.58455E-02  8.36206E-03  2.38308E+02
mcnp       5     11/03/10 17:05:29     2    15041913     1451858095
```

Case 62

```
 Case 62
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.00541E+00 0.0190
tfc   15       1       1       1       1       1       1       1       1
    1024000  1.83134E+00  2.30593E-02  4.59686E+02
    2048000  1.86297E+00  3.12976E-02  1.24939E+02
    3072000  1.85178E+00  2.26080E-02  1.59665E+02
    4096000  1.90279E+00  2.46756E-02  1.00516E+02
    5120000  1.91574E+00  2.50506E-02  7.80082E+01
    6144000  1.91528E+00  2.18640E-02  8.53350E+01
    7168000  1.92328E+00  1.99391E-02  8.79426E+01
    8192000  1.92572E+00  1.80208E-02  9.41851E+01
    9216000  1.97067E+00  1.97820E-02  6.94737E+01
   10240000  1.97533E+00  1.82108E-02  7.37818E+01
   11264000  1.98474E+00  1.75783E-02  7.19876E+01
   12288000  2.01628E+00  2.13535E-02  4.47223E+01
   13312000  2.01234E+00  2.09548E-02  4.28730E+01
   14336000  2.00740E+00  1.96664E-02  4.52016E+01
   15041913  2.00541E+00  1.89509E-02  4.63961E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.23062E+00 0.0135
```

```
tfc   15        1        1        1        1        1        1        1        1
    1024000  1.22420E+00  3.88198E-02  1.62199E+02
    2048000  1.19460E+00  2.33214E-02  2.25015E+02
    3072000  1.19936E+00  1.82530E-02  2.44945E+02
    4096000  1.21080E+00  1.58737E-02  2.42894E+02
    5120000  1.19886E+00  1.34605E-02  2.70180E+02
    6144000  1.19347E+00  1.17739E-02  2.94271E+02
    7168000  1.19442E+00  1.09590E-02  2.91119E+02
    8192000  1.19240E+00  9.99880E-03  3.05938E+02
    9216000  1.20000E+00  9.25900E-03  3.17127E+02
   10240000  1.20267E+00  8.76068E-03  3.18811E+02
   11264000  1.20949E+00  8.58875E-03  3.01543E+02
   12288000  1.22416E+00  1.06721E-02  1.79047E+02
   13312000  1.21807E+00  1.00389E-02  1.86800E+02
   14336000  1.23249E+00  1.40330E-02  8.87771E+01
   15041913  1.23062E+00  1.34595E-02  9.19783E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.15504E-01 0.0168
tfc   15        1        1        1        1        1        1        1        1
    1024000  6.85088E-01  2.24224E-02  4.86173E+02
    2048000  6.77956E-01  1.63095E-02  4.60084E+02
    3072000  6.81898E-01  1.33456E-02  4.58203E+02
    4096000  6.92438E-01  1.25329E-02  3.89647E+02
    5120000  6.90319E-01  1.16303E-02  3.61907E+02
    6144000  6.97153E-01  1.26363E-02  2.55472E+02
    7168000  6.91619E-01  1.11746E-02  2.79992E+02
    8192000  6.90541E-01  1.01951E-02  2.94270E+02
    9216000  6.94508E-01  9.49442E-03  3.01595E+02
   10240000  6.99798E-01  1.01253E-02  2.38666E+02
   11264000  7.03672E-01  9.82744E-03  2.30319E+02
   12288000  7.08585E-01  1.03666E-02  1.89753E+02
   13312000  7.06918E-01  9.91406E-03  1.91534E+02
   14336000  7.17031E-01  1.75139E-02  5.69949E+01
   15041913  7.15504E-01  1.67715E-02  5.92376E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  2.97675E-01 0.0071
tfc   15       1       1       1       1       1       1       1       1
    1024000  2.97854E-01  2.97880E-02  2.75468E+02
    2048000  2.93740E-01  1.83043E-02  3.65269E+02
    3072000  2.94056E-01  1.47618E-02  3.74505E+02
    4096000  2.95621E-01  1.20784E-02  4.19525E+02
    5120000  2.93247E-01  1.03115E-02  4.60395E+02
    6144000  2.92691E-01  9.45504E-03  4.56308E+02
    7168000  2.92214E-01  9.12656E-03  4.19755E+02
    8192000  2.92452E-01  8.57094E-03  4.16362E+02
    9216000  2.94132E-01  8.13481E-03  4.10834E+02
   10240000  2.94733E-01  7.65092E-03  4.18004E+02
   11264000  2.95967E-01  7.34055E-03  4.12813E+02
   12288000  2.95969E-01  7.08618E-03  4.06105E+02
   13312000  2.96671E-01  7.30681E-03  3.52610E+02
   14336000  2.97492E-01  7.22901E-03  3.34537E+02
   15041913  2.97675E-01  7.08807E-03  3.31656E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.01722E-01 0.0085
tfc   15       1       1       1       1       1       1       1       1
    1024000  1.06462E-01  4.33406E-02  1.30127E+02
    2048000  1.04672E-01  2.91808E-02  1.43723E+02
    3072000  1.02276E-01  2.07740E-02  1.89101E+02
    4096000  1.01855E-01  1.63073E-02  2.30148E+02
    5120000  1.00791E-01  1.36380E-02  2.63193E+02
    6144000  1.01296E-01  1.44927E-02  1.94217E+02
    7168000  1.00980E-01  1.29249E-02  2.09295E+02
    8192000  1.00883E-01  1.19318E-02  2.14842E+02
    9216000  1.01157E-01  1.10659E-02  2.22018E+02
   10240000  1.01023E-01  1.01810E-02  2.36062E+02
   11264000  1.01585E-01  1.00235E-02  2.21398E+02
   12288000  1.01642E-01  9.55792E-03  2.23221E+02
   13312000  1.01395E-01  9.01076E-03  2.31861E+02
   14336000  1.01692E-01  8.74420E-03  2.28645E+02
   15041913  1.01722E-01  8.47737E-03  2.31858E+02
tally  165    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.94846E-02 0.0080
tfc   15       1       1       1       1       1       1       1       1
    1024000  5.04021E-02  3.72109E-02  1.76529E+02
    2048000  5.04777E-02  2.42075E-02  2.08843E+02
    3072000  4.96859E-02  1.76226E-02  2.62781E+02
    4096000  4.95169E-02  1.40659E-02  3.09342E+02
    5120000  4.90604E-02  1.19214E-02  3.44448E+02
    6144000  4.89648E-02  1.05964E-02  3.63303E+02
    7168000  4.88793E-02  9.95620E-03  3.52714E+02
    8192000  4.87684E-02  9.01078E-03  3.76707E+02
    9216000  4.88317E-02  8.31170E-03  3.93533E+02
   10240000  4.87552E-02  7.69571E-03  4.13153E+02
   11264000  4.90676E-02  7.85724E-03  3.60305E+02
   12288000  4.92743E-02  7.97472E-03  3.20650E+02
   13312000  4.91404E-02  7.51921E-03  3.32970E+02
   14336000  4.93654E-02  8.07633E-03  2.68024E+02
   15041913  4.94846E-02  8.02994E-03  2.58416E+02
tally  175    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.89075E-02 0.0070
tfc   15       1       1       1       1       1       1       1       1
    1024000  2.87336E-02  2.14399E-02  5.31755E+02
    2048000  2.88793E-02  1.67503E-02  4.36190E+02
    3072000  2.87844E-02  1.33515E-02  4.57801E+02
    4096000  2.88032E-02  1.10133E-02  5.04591E+02
    5120000  2.86538E-02  9.90882E-03  4.98578E+02
    6144000  2.86396E-02  9.06982E-03  4.95893E+02
    7168000  2.85718E-02  8.40548E-03  4.94863E+02
    8192000  2.85223E-02  7.65537E-03  5.21911E+02
    9216000  2.86533E-02  8.02646E-03  4.22001E+02
   10240000  2.86958E-02  8.00282E-03  3.82052E+02
   11264000  2.88280E-02  7.81368E-03  3.64333E+02
   12288000  2.89190E-02  7.84770E-03  3.31114E+02
   13312000  2.88425E-02  7.39039E-03  3.44679E+02
   14336000  2.88753E-02  7.17207E-03  3.39870E+02
```

```
   15041913  2.89075E-02  6.98176E-03  3.41832E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.89966E-02 0.0079
tfc   15       1       1       1       1       1       1       1       1
    1024000  1.87504E-02  1.86973E-02  6.99192E+02
    2048000  1.88057E-02  1.47861E-02  5.59773E+02
    3072000  1.87426E-02  1.18007E-02  5.86029E+02
    4096000  1.88012E-02  9.87299E-03  6.27878E+02
    5120000  1.87305E-02  8.77056E-03  6.36388E+02
    6144000  1.87306E-02  8.32256E-03  5.88939E+02
    7168000  1.87013E-02  7.80575E-03  5.73827E+02
    8192000  1.86799E-02  7.20950E-03  5.88462E+02
    9216000  1.87799E-02  7.60616E-03  4.69927E+02
   10240000  1.88305E-02  7.91059E-03  3.91012E+02
   11264000  1.89187E-02  7.77178E-03  3.68272E+02
   12288000  1.90221E-02  9.07477E-03  2.47623E+02
   13312000  1.89712E-02  8.50591E-03  2.60201E+02
   14336000  1.89872E-02  8.16252E-03  2.62394E+02
   15041913  1.89966E-02  7.87503E-03  2.68682E+02
mcnp       5     11/03/10 18:05:34     2     8866492     1489188319
```

Case 63

```
 Case 63
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.12573E+00 0.0115
tfc   18       1       1       1       1       1       1       1       1
     512000  2.96703E+00  2.51873E-02  4.55043E+02
    1024000  2.99402E+00  1.84832E-02  4.22600E+02
    1536000  3.05230E+00  1.96443E-02  2.49469E+02
```

```
    2048000  3.08182E+00  1.73577E-02  2.39618E+02
    2560000  3.05917E+00  1.45724E-02  2.71964E+02
    3072000  3.08010E+00  1.40936E-02  2.42230E+02
    3584000  3.11274E+00  1.87954E-02  1.16740E+02
    4096000  3.12960E+00  1.82928E-02  1.07840E+02
    4608000  3.11114E+00  1.65191E-02  1.17501E+02
    5120000  3.09503E+00  1.50940E-02  1.26667E+02
    5632000  3.09513E+00  1.39591E-02  1.34621E+02
    6144000  3.08633E+00  1.29636E-02  1.43080E+02
    6656000  3.09090E+00  1.23476E-02  1.45584E+02
    7168000  3.10594E+00  1.19602E-02  1.44098E+02
    7680000  3.10379E+00  1.13524E-02  1.49285E+02
    8192000  3.10785E+00  1.08163E-02  1.54174E+02
    8704000  3.10640E+00  1.03204E-02  1.59378E+02
    8866492  3.12573E+00  1.14934E-02  1.26156E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.96695E+00 0.0104
tfc   18       1       1       1       1       1       1       1       1
     512000  1.95167E+00  2.27488E-02  5.57823E+02
    1024000  1.93287E+00  1.71675E-02  4.89858E+02
    1536000  1.93511E+00  1.46170E-02  4.50582E+02
    2048000  1.95762E+00  1.34391E-02  3.99726E+02
    2560000  1.96392E+00  1.23297E-02  3.79902E+02
    3072000  1.95573E+00  1.13071E-02  3.76334E+02
    3584000  1.94907E+00  1.01708E-02  3.98667E+02
    4096000  1.94562E+00  9.42809E-03  4.05966E+02
    4608000  1.94040E+00  8.84971E-03  4.09410E+02
    5120000  1.93196E+00  8.24882E-03  4.24118E+02
    5632000  1.93106E+00  7.71546E-03  4.40658E+02
    6144000  1.93036E+00  7.24709E-03  4.57827E+02
    6656000  1.92966E+00  6.99156E-03  4.54083E+02
    7168000  1.94395E+00  7.45175E-03  3.71210E+02
    7680000  1.94398E+00  7.32973E-03  3.58108E+02
    8192000  1.95792E+00  1.08676E-02  1.52722E+02
    8704000  1.96568E+00  1.05734E-02  1.51842E+02
    8866492  1.96695E+00  1.04039E-02  1.53960E+02
tally  135    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  1.10579E+00 0.0069
tfc   18        1        1        1        1        1        1        1        1
     512000  1.08918E+00  2.10246E-02  6.53066E+02
    1024000  1.08150E+00  1.41751E-02  7.18506E+02
    1536000  1.08469E+00  1.20828E-02  6.59404E+02
    2048000  1.09882E+00  1.17572E-02  5.22266E+02
    2560000  1.10183E+00  1.08825E-02  4.87659E+02
    3072000  1.10356E+00  1.17818E-02  3.46617E+02
    3584000  1.10822E+00  1.10064E-02  3.40435E+02
    4096000  1.10690E+00  1.00582E-02  3.56692E+02
    4608000  1.10431E+00  9.29616E-03  3.71029E+02
    5120000  1.10253E+00  8.64210E-03  3.86396E+02
    5632000  1.10508E+00  8.51118E-03  3.62114E+02
    6144000  1.10958E+00  8.60822E-03  3.24491E+02
    6656000  1.10496E+00  8.05741E-03  3.41894E+02
    7168000  1.10466E+00  7.62612E-03  3.54430E+02
    7680000  1.10567E+00  7.63708E-03  3.29864E+02
    8192000  1.10509E+00  7.29786E-03  3.38670E+02
    8704000  1.10589E+00  7.04858E-03  3.41677E+02
    8866492  1.10579E+00  6.94716E-03  3.45295E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.79094E-01 0.0078
tfc   18        1        1        1        1        1        1        1        1
     512000  4.98036E-01  3.39726E-02  2.50125E+02
    1024000  4.88886E-01  2.35539E-02  2.60229E+02
    1536000  4.90824E-01  2.22259E-02  1.94881E+02
    2048000  4.90330E-01  1.84503E-02  2.12078E+02
    2560000  4.84496E-01  1.53598E-02  2.44795E+02
    3072000  4.79352E-01  1.31889E-02  2.76605E+02
    3584000  4.78983E-01  1.17035E-02  3.01083E+02
    4096000  4.78012E-01  1.08638E-02  3.05754E+02
    4608000  4.79402E-01  1.04332E-02  2.94567E+02
    5120000  4.79314E-01  9.87218E-03  2.96104E+02
    5632000  4.80760E-01  9.46559E-03  2.92773E+02
    6144000  4.80234E-01  8.84989E-03  3.07011E+02
    6656000  4.78209E-01  8.42649E-03  3.12600E+02
```

```
    7168000  4.79625E-01  9.01643E-03  2.53552E+02
    7680000  4.79357E-01  8.62691E-03  2.58511E+02
    8192000  4.78673E-01  8.19541E-03  2.68550E+02
    8704000  4.78992E-01  7.92851E-03  2.70045E+02
    8866492  4.79094E-01  7.82647E-03  2.72065E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.59425E-01 0.0065
tfc   18       1       1       1       1       1       1       1       1
     512000  1.65393E-01  3.19448E-02  2.82887E+02
    1024000  1.62813E-01  2.22619E-02  2.91311E+02
    1536000  1.60572E-01  1.76893E-02  3.07657E+02
    2048000  1.60135E-01  1.39937E-02  3.68666E+02
    2560000  1.60452E-01  1.39022E-02  2.98821E+02
    3072000  1.59513E-01  1.20365E-02  3.32102E+02
    3584000  1.60608E-01  1.10086E-02  3.40298E+02
    4096000  1.60440E-01  1.05063E-02  3.26918E+02
    4608000  1.60211E-01  9.65927E-03  3.43659E+02
    5120000  1.60002E-01  8.91862E-03  3.62807E+02
    5632000  1.59710E-01  8.26049E-03  3.84427E+02
    6144000  1.59644E-01  7.77764E-03  3.97497E+02
    6656000  1.59561E-01  7.48558E-03  3.96124E+02
    7168000  1.59427E-01  7.11979E-03  4.06633E+02
    7680000  1.59030E-01  6.73769E-03  4.23807E+02
    8192000  1.59144E-01  6.48459E-03  4.28946E+02
    8704000  1.59311E-01  6.51763E-03  3.99614E+02
    8866492  1.59425E-01  6.48610E-03  3.96131E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.85932E-02 0.0084
tfc   18       1       1       1       1       1       1       1       1
     512000  7.71141E-02  2.22607E-02  5.82556E+02
    1024000  7.77040E-02  1.89431E-02  4.02327E+02
    1536000  7.66624E-02  1.35278E-02  5.26062E+02
```

```
    2048000  7.76265E-02  1.19012E-02  5.09705E+02
    2560000  7.74779E-02  1.02343E-02  5.51393E+02
    3072000  7.72449E-02  9.04036E-03  5.88712E+02
    3584000  7.81592E-02  1.00657E-02  4.07036E+02
    4096000  7.83690E-02  9.90137E-03  3.68083E+02
    4608000  7.83467E-02  9.13493E-03  3.84242E+02
    5120000  7.83111E-02  8.51116E-03  3.98376E+02
    5632000  7.81242E-02  7.88373E-03  4.22049E+02
    6144000  7.80633E-02  7.42890E-03  4.35693E+02
    6656000  7.80921E-02  7.25736E-03  4.21430E+02
    7168000  7.81005E-02  6.98478E-03  4.22504E+02
    7680000  7.81219E-02  6.97411E-03  3.95560E+02
    8192000  7.82066E-02  6.73079E-03  3.98140E+02
    8704000  7.84766E-02  8.22299E-03  2.51050E+02
    8866492  7.85932E-02  8.35158E-03  2.38928E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.63291E-02 0.0080
tfc   18       1       1       1       1       1       1       1       1
     512000  4.58521E-02  2.88360E-02  3.47171E+02
    1024000  4.59648E-02  2.09389E-02  3.29287E+02
    1536000  4.53945E-02  1.48843E-02  4.34541E+02
    2048000  4.56525E-02  1.20482E-02  4.97348E+02
    2560000  4.54827E-02  1.01392E-02  5.61782E+02
    3072000  4.54314E-02  9.04451E-03  5.88172E+02
    3584000  4.60504E-02  9.98640E-03  4.13526E+02
    4096000  4.61938E-02  9.96778E-03  3.63195E+02
    4608000  4.62852E-02  9.32481E-03  3.68753E+02
    5120000  4.62291E-02  8.59794E-03  3.90375E+02
    5632000  4.61229E-02  7.96079E-03  4.13917E+02
    6144000  4.61384E-02  7.63606E-03  4.12373E+02
    6656000  4.60523E-02  7.28102E-03  4.18695E+02
    7168000  4.61081E-02  7.04562E-03  4.15239E+02
    7680000  4.60877E-02  6.80273E-03  4.15742E+02
    8192000  4.61170E-02  6.63065E-03  4.10257E+02
    8704000  4.61940E-02  7.40574E-03  3.09516E+02
    8866492  4.63291E-02  8.02591E-03  2.58712E+02
tally  185    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.04424E-02 0.0080
tfc   18        1        1        1        1        1        1        1        1
     512000  3.01104E-02  2.58785E-02  4.31059E+02
    1024000  3.00172E-02  1.76400E-02  4.63962E+02
    1536000  2.96709E-02  1.27923E-02  5.88289E+02
    2048000  2.98336E-02  1.04705E-02  6.58515E+02
    2560000  2.97053E-02  8.83000E-03  7.40719E+02
    3072000  2.97516E-02  8.10635E-03  7.32190E+02
    3584000  3.01786E-02  9.21184E-03  4.85991E+02
    4096000  3.03492E-02  9.88242E-03  3.69496E+02
    4608000  3.03543E-02  9.08562E-03  3.88425E+02
    5120000  3.03747E-02  8.53548E-03  3.96109E+02
    5632000  3.02838E-02  7.88705E-03  4.21693E+02
    6144000  3.02781E-02  7.50258E-03  4.27177E+02
    6656000  3.02094E-02  7.12903E-03  4.36739E+02
    7168000  3.03265E-02  7.27700E-03  3.89253E+02
    7680000  3.03001E-02  6.91414E-03  4.02452E+02
    8192000  3.03419E-02  6.87957E-03  3.81106E+02
    8704000  3.03310E-02  6.98214E-03  3.48211E+02
    8866492  3.04424E-02  7.97449E-03  2.62060E+02
mcnp       5     11/03/10 19:05:40     2    14153020     1434121385
```

Case 64

```
 Case 64
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.28070E+00 0.0201
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.16282E+00  2.21290E-02  4.69784E+02
    2048000  1.15101E+00  1.68371E-02  4.06078E+02
    3072000  1.19324E+00  2.99011E-02  8.58298E+01
    4096000  1.21575E+00  2.85116E-02  7.08021E+01
    5120000  1.22443E+00  2.74431E-02  6.11268E+01
    6144000  1.21854E+00  2.34300E-02  6.98798E+01
```

```
    7168000  1.22630E+00  2.11853E-02  7.32686E+01
    8192000  1.22494E+00  1.88932E-02  8.06151E+01
    9216000  1.25050E+00  2.04383E-02  6.12412E+01
   10240000  1.25284E+00  1.87559E-02  6.54510E+01
   11264000  1.26032E+00  1.80071E-02  6.45551E+01
   12288000  1.28292E+00  2.16817E-02  4.08177E+01
   13312000  1.28282E+00  2.12262E-02  3.93154E+01
   14153020  1.28070E+00  2.01295E-02  4.11256E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.97013E-01 0.0146
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.97038E-01  4.07417E-02  1.38594E+02
    2048000  7.68775E-01  2.41261E-02  1.97774E+02
    3072000  7.72328E-01  1.86252E-02  2.21214E+02
    4096000  7.82130E-01  1.77322E-02  1.83046E+02
    5120000  7.73596E-01  1.48161E-02  2.09714E+02
    6144000  7.71367E-01  1.27752E-02  2.35052E+02
    7168000  7.75438E-01  1.32111E-02  1.88412E+02
    8192000  7.77274E-01  1.22750E-02  1.90978E+02
    9216000  7.78518E-01  1.11681E-02  2.05103E+02
   10240000  7.79717E-01  1.03813E-02  2.13643E+02
   11264000  7.82783E-01  9.83189E-03  2.16544E+02
   12288000  7.92068E-01  1.14599E-02  1.46108E+02
   13312000  7.88972E-01  1.07508E-02  1.53258E+02
   14153020  7.97013E-01  1.45516E-02  7.86966E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.63900E-01 0.0179
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.46516E-01  2.53507E-02  3.57968E+02
    2048000  4.37472E-01  1.72449E-02  3.87099E+02
    3072000  4.42773E-01  1.42278E-02  3.79088E+02
    4096000  4.45676E-01  1.17278E-02  4.18460E+02
```

```
    5120000  4.49677E-01  1.60901E-02  1.77819E+02
    6144000  4.55871E-01  1.60700E-02  1.48547E+02
    7168000  4.53339E-01  1.47803E-02  1.50529E+02
    8192000  4.51991E-01  1.32677E-02  1.63468E+02
    9216000  4.52727E-01  1.21127E-02  1.74362E+02
   10240000  4.55852E-01  1.21691E-02  1.55480E+02
   11264000  4.57877E-01  1.15265E-02  1.57552E+02
   12288000  4.59043E-01  1.10460E-02  1.57263E+02
   13312000  4.58120E-01  1.05100E-02  1.60362E+02
   14153020  4.63900E-01  1.78666E-02  5.22032E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.92720E-01 0.0071
tfc   14       1       1       1       1       1       1       1
    1024000  1.95399E-01  3.60089E-02  1.77420E+02
    2048000  1.90266E-01  2.11796E-02  2.56631E+02
    3072000  1.90715E-01  1.61514E-02  2.94167E+02
    4096000  1.90607E-01  1.28372E-02  3.49261E+02
    5120000  1.90025E-01  1.11773E-02  3.68486E+02
    6144000  1.90396E-01  1.01802E-02  3.70158E+02
    7168000  1.90057E-01  9.65801E-03  3.52544E+02
    8192000  1.90289E-01  9.10637E-03  3.47004E+02
    9216000  1.91372E-01  8.97119E-03  3.17858E+02
   10240000  1.92097E-01  8.49557E-03  3.19011E+02
   11264000  1.92588E-01  8.02284E-03  3.25210E+02
   12288000  1.92526E-01  7.62484E-03  3.30045E+02
   13312000  1.92664E-01  7.36276E-03  3.26758E+02
   14153020  1.92720E-01  7.13587E-03  3.27254E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.57230E-02 0.0083
tfc   14       1       1       1       1       1       1       1
    1024000  6.55733E-02  2.62149E-02  3.34754E+02
    2048000  6.59358E-02  2.33988E-02  2.10260E+02
```

```
    3072000  6.48995E-02  1.68117E-02  2.71512E+02
    4096000  6.51933E-02  1.39705E-02  2.94894E+02
    5120000  6.48096E-02  1.20278E-02  3.18216E+02
    6144000  6.52179E-02  1.33724E-02  2.14524E+02
    7168000  6.50765E-02  1.19635E-02  2.29758E+02
    8192000  6.50382E-02  1.11090E-02  2.33171E+02
    9216000  6.50451E-02  1.03124E-02  2.40556E+02
   10240000  6.51779E-02  9.61985E-03  2.48802E+02
   11264000  6.55447E-02  9.48466E-03  2.32690E+02
   12288000  6.57041E-02  9.08340E-03  2.32561E+02
   13312000  6.56844E-02  8.57227E-03  2.41055E+02
   14153020  6.57230E-02  8.33987E-03  2.39585E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.21787E-02 0.0090
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.15340E-02  2.39814E-02  4.00012E+02
    2048000  3.22819E-02  2.00791E-02  2.85533E+02
    3072000  3.19597E-02  1.50559E-02  3.38530E+02
    4096000  3.20740E-02  1.33175E-02  3.24523E+02
    5120000  3.18612E-02  1.15548E-02  3.44802E+02
    6144000  3.18025E-02  1.01468E-02  3.72599E+02
    7168000  3.18127E-02  9.81890E-03  3.41085E+02
    8192000  3.17030E-02  8.87060E-03  3.65695E+02
    9216000  3.16705E-02  8.19439E-03  3.80978E+02
   10240000  3.17034E-02  7.73469E-03  3.84862E+02
   11264000  3.18854E-02  7.80094E-03  3.43975E+02
   12288000  3.20013E-02  7.58648E-03  3.33391E+02
   13312000  3.20951E-02  8.63903E-03  2.37344E+02
   14153020  3.21787E-02  9.02770E-03  2.04468E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.87927E-02 0.0076
tfc   14       1       1       1       1       1       1       1       1
```

```
    1024000  1.84540E-02  2.37915E-02  4.06425E+02
    2048000  1.86453E-02  1.74529E-02  3.77927E+02
    3072000  1.86283E-02  1.38100E-02  4.02370E+02
    4096000  1.87124E-02  1.19453E-02  4.03362E+02
    5120000  1.87234E-02  1.27985E-02  2.81046E+02
    6144000  1.87193E-02  1.12815E-02  3.01412E+02
    7168000  1.86723E-02  1.02162E-02  3.15071E+02
    8192000  1.86057E-02  9.16852E-03  3.42316E+02
    9216000  1.86580E-02  9.20844E-03  3.01690E+02
   10240000  1.86884E-02  8.94771E-03  2.87585E+02
   11264000  1.87582E-02  8.56855E-03  2.85106E+02
   12288000  1.88220E-02  8.34680E-03  2.75419E+02
   13312000  1.88068E-02  7.88392E-03  2.84986E+02
   14153020  1.87927E-02  7.64194E-03  2.85346E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.23589E-02 0.0088
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.20781E-02  1.91355E-02  6.28263E+02
    2048000  1.21369E-02  1.47650E-02  5.28055E+02
    3072000  1.21370E-02  1.19662E-02  5.35926E+02
    4096000  1.21761E-02  1.01276E-02  5.61146E+02
    5120000  1.21801E-02  9.81753E-03  4.77631E+02
    6144000  1.22055E-02  9.17285E-03  4.55920E+02
    7168000  1.21765E-02  8.39479E-03  4.66626E+02
    8192000  1.21453E-02  7.65164E-03  4.91493E+02
    9216000  1.21977E-02  7.96571E-03  4.03166E+02
   10240000  1.22189E-02  8.07990E-03  3.52678E+02
   11264000  1.22729E-02  7.89369E-03  3.35939E+02
   12288000  1.23876E-02  9.76342E-03  2.01294E+02
   13312000  1.23724E-02  9.13290E-03  2.12369E+02
   14153020  1.23589E-02  8.79193E-03  2.15581E+02
mcnp       5     11/03/10 20:05:45     2     6645840     1400339239
```

Case 65

```
 Case 65
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.75589E-02 0.0417
tfc   13       1       1       1       1       1       1       1       1
     512000  4.43918E-02  1.31047E-01  1.26136E+01
    1024000  3.87274E-02  7.65604E-02  1.84771E+01
    1536000  3.80918E-02  5.74531E-02  2.18626E+01
    2048000  3.68741E-02  4.49412E-02  2.67960E+01
    2560000  3.71581E-02  3.75787E-02  3.06500E+01
    3072000  3.67748E-02  3.40285E-02  3.11405E+01
    3584000  3.70350E-02  3.10513E-02  3.20507E+01
    4096000  3.90409E-02  6.41893E-02  6.56366E+00
    4608000  3.83884E-02  5.80964E-02  7.12219E+00
    5120000  3.82058E-02  5.27934E-02  7.76177E+00
    5632000  3.80139E-02  4.84365E-02  8.38081E+00
    6144000  3.77346E-02  4.47928E-02  8.98324E+00
    6645840  3.75589E-02  4.17077E-02  9.57897E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.97983E-02 0.0129
tfc   13       1       1       1       1       1       1       1       1
     512000  1.96949E-02  3.01583E-02  2.38168E+02
    1024000  1.88215E-02  1.88551E-02  3.04639E+02
    1536000  1.92794E-02  2.03864E-02  1.73639E+02
    2048000  1.96610E-02  1.90045E-02  1.49848E+02
    2560000  1.97765E-02  1.68374E-02  1.52673E+02
    3072000  1.95231E-02  1.48489E-02  1.63540E+02
    3584000  1.98818E-02  2.03664E-02  7.45023E+01
    4096000  1.97898E-02  1.83132E-02  8.06386E+01
    4608000  1.97245E-02  1.65751E-02  8.74985E+01
    5120000  1.97372E-02  1.54514E-02  9.06116E+01
    5632000  1.99025E-02  1.48370E-02  8.93185E+01
    6144000  1.98640E-02  1.37941E-02  9.47243E+01
    6645840  1.97983E-02  1.29357E-02  9.95800E+01
tally  135    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.04009E-02 0.0128
tfc   13       1       1       1       1       1       1       1       1
     512000  1.04853E-02  4.37663E-02  1.13088E+02
    1024000  9.99153E-03  2.55225E-02  1.66262E+02
    1536000  1.00559E-02  2.04853E-02  1.71967E+02
    2048000  1.00721E-02  1.67068E-02  1.93897E+02
    2560000  1.01654E-02  1.46497E-02  2.01679E+02
    3072000  1.00978E-02  1.30791E-02  2.10793E+02
    3584000  1.02177E-02  1.28595E-02  1.86873E+02
    4096000  1.03015E-02  1.58854E-02  1.07170E+02
    4608000  1.03344E-02  1.51759E-02  1.04377E+02
    5120000  1.03993E-02  1.55226E-02  8.97830E+01
    5632000  1.04243E-02  1.44709E-02  9.38946E+01
    6144000  1.04151E-02  1.34917E-02  9.90181E+01
    6645840  1.04009E-02  1.27634E-02  1.02286E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.27704E-03 0.0207
tfc   13       1       1       1       1       1       1       1       1
     512000  5.23796E-03  1.66715E-01  7.79374E+00
    1024000  4.51116E-03  9.71153E-02  1.14833E+01
    1536000  4.42651E-03  6.78216E-02  1.56889E+01
    2048000  4.32822E-03  5.22774E-02  1.98030E+01
    2560000  4.29917E-03  4.25955E-02  2.38555E+01
    3072000  4.24420E-03  3.61841E-02  2.75407E+01
    3584000  4.22959E-03  3.14831E-02  3.11775E+01
    4096000  4.21949E-03  2.80740E-02  3.43133E+01
    4608000  4.22608E-03  2.52337E-02  3.77528E+01
    5120000  4.24794E-03  2.38558E-02  3.80129E+01
    5632000  4.29879E-03  2.36980E-02  3.50113E+01
    6144000  4.27519E-03  2.18943E-02  3.76000E+01
    6645840  4.27704E-03  2.06703E-02  3.89992E+01
tally  155    2    1
f         1
d         1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38144E-03 0.0117
tfc   13       1       1       1       1       1       1       1       1
     512000  1.43646E-03  4.12318E-02  1.27418E+02
    1024000  1.36635E-03  2.57003E-02  1.63971E+02
    1536000  1.39770E-03  2.88204E-02  8.68822E+01
    2048000  1.39015E-03  2.33700E-02  9.90930E+01
    2560000  1.37547E-03  1.92646E-02  1.16625E+02
    3072000  1.37349E-03  1.86857E-02  1.03274E+02
    3584000  1.37317E-03  1.65285E-02  1.13118E+02
    4096000  1.37795E-03  1.57797E-02  1.08610E+02
    4608000  1.38146E-03  1.44241E-02  1.15540E+02
    5120000  1.37959E-03  1.31849E-02  1.24441E+02
    5632000  1.38622E-03  1.32278E-02  1.12372E+02
    6144000  1.38323E-03  1.22752E-02  1.19616E+02
    6645840  1.38144E-03  1.16864E-02  1.22009E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.84253E-04 0.0163
tfc   13       1       1       1       1       1       1       1       1
     512000  6.84538E-04  3.23912E-02  2.06463E+02
    1024000  6.73581E-04  2.86696E-02  1.31765E+02
    1536000  6.97057E-04  4.08590E-02  4.32269E+01
    2048000  6.87956E-04  3.15352E-02  5.44215E+01
    2560000  6.79301E-04  2.58017E-02  6.50159E+01
    3072000  6.81541E-04  2.60385E-02  5.31838E+01
    3584000  6.79385E-04  2.26408E-02  6.02855E+01
    4096000  6.84682E-04  2.25603E-02  5.31352E+01
    4608000  6.83710E-04  2.03233E-02  5.82001E+01
    5120000  6.82736E-04  1.84465E-02  6.35757E+01
    5632000  6.87435E-04  1.87836E-02  5.57283E+01
    6144000  6.86442E-04  1.74102E-02  5.94625E+01
    6645840  6.84253E-04  1.62917E-02  6.27797E+01
tally  175    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.04355E-04 0.0165
tfc   13        1        1        1        1        1        1        1        1
     512000  4.00683E-04  3.10720E-02  2.24367E+02
    1024000  3.96326E-04  2.36022E-02  1.94419E+02
    1536000  4.12710E-04  4.22563E-02  4.04154E+01
    2048000  4.06609E-04  3.25915E-02  5.09508E+01
    2560000  4.01727E-04  2.66776E-02  6.08166E+01
    3072000  4.02319E-04  2.59613E-02  5.35006E+01
    3584000  4.00408E-04  2.25647E-02  6.06930E+01
    4096000  4.02377E-04  2.08647E-02  6.21219E+01
    4608000  4.01808E-04  1.88437E-02  6.76986E+01
    5120000  4.01519E-04  1.71190E-02  7.38182E+01
    5632000  4.05916E-04  1.89266E-02  5.48893E+01
    6144000  4.05780E-04  1.76501E-02  5.78566E+01
    6645840  4.04355E-04  1.65042E-02  6.11735E+01
tally  185    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.65191E-04 0.0158
tfc   13        1        1        1        1        1        1        1        1
     512000  2.62230E-04  3.19783E-02  2.11830E+02
    1024000  2.59761E-04  2.31040E-02  2.02893E+02
    1536000  2.68056E-04  3.74292E-02  5.15121E+01
    2048000  2.64991E-04  2.89089E-02  6.47585E+01
    2560000  2.62502E-04  2.37536E-02  7.67110E+01
    3072000  2.62742E-04  2.28299E-02  6.91835E+01
    3584000  2.61705E-04  1.98785E-02  7.82041E+01
    4096000  2.62540E-04  1.82802E-02  8.09302E+01
    4608000  2.62623E-04  1.65918E-02  8.73228E+01
    5120000  2.62628E-04  1.51190E-02  9.46398E+01
    5632000  2.65691E-04  1.79805E-02  6.08175E+01
    6144000  2.65994E-04  1.68710E-02  6.33242E+01
    6645840  2.65191E-04  1.57831E-02  6.68904E+01
mcnp       5     11/03/10 21:05:51     2     8344922     1432294027
```

Case 66

```
 Case 66
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.94636E-01 0.0204
tfc   17        1        1        1        1        1        1        1        1
     512000  6.65075E-01  9.74094E-02  2.86207E+01
    1024000  5.96384E-01  5.86052E-02  3.95362E+01
    1536000  6.13625E-01  4.79760E-02  3.93605E+01
    2048000  6.12753E-01  4.04422E-02  4.15606E+01
    2560000  6.26734E-01  3.55464E-02  4.30353E+01
    3072000  6.20889E-01  3.25151E-02  4.28468E+01
    3584000  6.16386E-01  2.88452E-02  4.66591E+01
    4096000  6.11960E-01  2.66833E-02  4.77141E+01
    4608000  6.04218E-01  2.44569E-02  5.04810E+01
    5120000  6.03274E-01  2.29554E-02  5.15622E+01
    5632000  6.00079E-01  2.16710E-02  5.25820E+01
    6144000  5.97687E-01  2.03076E-02  5.48933E+01
    6656000  5.94196E-01  1.93387E-02  5.58763E+01
    7168000  5.92574E-01  1.84854E-02  5.67810E+01
    7680000  5.89176E-01  1.75945E-02  5.84986E+01
    8192000  5.88589E-01  1.67773E-02  6.03113E+01
    8344922  5.94636E-01  2.03888E-02  4.00913E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.25649E-01 0.0134
tfc   17        1        1        1        1        1        1        1        1
     512000  3.30211E-01  4.21875E-02  1.52586E+02
    1024000  3.12500E-01  2.91113E-02  1.60230E+02
    1536000  3.17472E-01  2.59310E-02  1.34732E+02
    2048000  3.25586E-01  2.51503E-02  1.07464E+02
```

```
    2560000  3.35554E-01  2.42344E-02  9.25873E+01
    3072000  3.31473E-01  2.15951E-02  9.71354E+01
    3584000  3.35504E-01  2.35134E-02  7.02185E+01
    4096000  3.33975E-01  2.13451E-02  7.45641E+01
    4608000  3.31028E-01  1.95662E-02  7.88710E+01
    5120000  3.30264E-01  1.83734E-02  8.04863E+01
    5632000  3.30080E-01  1.73535E-02  8.20016E+01
    6144000  3.29347E-01  1.63410E-02  8.47776E+01
    6656000  3.27409E-01  1.55074E-02  8.68962E+01
    7168000  3.26065E-01  1.46872E-02  8.99461E+01
    7680000  3.25178E-01  1.40190E-02  9.21445E+01
    8192000  3.24833E-01  1.33998E-02  9.45469E+01
    8344922  3.25649E-01  1.34412E-02  9.22485E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.67760E-01 0.0112
tfc   17       1       1       1       1       1       1       1       1
     512000  1.75581E-01  4.81409E-02  1.17180E+02
    1024000  1.66252E-01  3.11081E-02  1.40320E+02
    1536000  1.67188E-01  2.58904E-02  1.35154E+02
    2048000  1.66937E-01  2.13433E-02  1.49221E+02
    2560000  1.70848E-01  2.01790E-02  1.33542E+02
    3072000  1.69236E-01  1.79419E-02  1.40720E+02
    3584000  1.70775E-01  1.67091E-02  1.39052E+02
    4096000  1.70091E-01  1.55904E-02  1.39768E+02
    4608000  1.69117E-01  1.44569E-02  1.44471E+02
    5120000  1.69651E-01  1.49609E-02  1.21391E+02
    5632000  1.69652E-01  1.42031E-02  1.22413E+02
    6144000  1.69375E-01  1.34533E-02  1.25077E+02
    6656000  1.68616E-01  1.28589E-02  1.26378E+02
    7168000  1.68089E-01  1.22426E-02  1.29453E+02
    7680000  1.67784E-01  1.16980E-02  1.32337E+02
    8192000  1.67679E-01  1.12856E-02  1.33288E+02
    8344922  1.67760E-01  1.11769E-02  1.33411E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  7.01477E-02 0.0263
tfc   17       1       1       1       1       1       1       1       1
     512000  8.50199E-02  1.54922E-01  1.13150E+01
    1024000  7.44000E-02  8.99721E-02  1.67746E+01
    1536000  7.19290E-02  6.34757E-02  2.24850E+01
    2048000  7.05349E-02  4.91225E-02  2.81702E+01
    2560000  7.58292E-02  7.51215E-02  9.63579E+00
    3072000  7.43325E-02  6.41254E-02  1.10161E+01
    3584000  7.40408E-02  5.55492E-02  1.25813E+01
    4096000  7.30573E-02  4.95264E-02  1.38501E+01
    4608000  7.24430E-02  4.45981E-02  1.51809E+01
    5120000  7.18569E-02  4.06367E-02  1.64537E+01
    5632000  7.16702E-02  3.73503E-02  1.77013E+01
    6144000  7.11837E-02  3.45837E-02  1.89275E+01
    6656000  7.07813E-02  3.22400E-02  2.01044E+01
    7168000  7.03335E-02  3.02031E-02  2.12696E+01
    7680000  7.01278E-02  2.83683E-02  2.25026E+01
    8192000  7.01297E-02  2.68050E-02  2.36271E+01
    8344922  7.01477E-02  2.63424E-02  2.40173E+01
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.25578E-02 0.0145
tfc   17       1       1       1       1       1       1       1       1
     512000  2.36925E-02  4.62032E-02  1.27215E+02
    1024000  2.22633E-02  2.97231E-02  1.53701E+02
    1536000  2.22388E-02  2.35121E-02  1.63880E+02
    2048000  2.23992E-02  2.06658E-02  1.59165E+02
    2560000  2.27576E-02  2.05016E-02  1.29371E+02
    3072000  2.26893E-02  1.94447E-02  1.19808E+02
    3584000  2.27430E-02  1.73409E-02  1.29104E+02
    4096000  2.25510E-02  1.57263E-02  1.37365E+02
    4608000  2.24509E-02  1.44727E-02  1.44156E+02
    5120000  2.23708E-02  1.34479E-02  1.50243E+02
    5632000  2.24835E-02  1.34576E-02  1.36351E+02
    6144000  2.24408E-02  1.26893E-02  1.40591E+02
    6656000  2.23464E-02  1.20852E-02  1.43078E+02
    7168000  2.22924E-02  1.15384E-02  1.45737E+02
    7680000  2.25116E-02  1.52696E-02  7.76683E+01
    8192000  2.25377E-02  1.46779E-02  7.87974E+01
    8344922  2.25578E-02  1.44695E-02  7.96021E+01
```

```
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.11200E-02 0.0147
tfc   17       1       1       1       1       1       1       1       1
     512000  1.12809E-02  3.71084E-02  1.97214E+02
    1024000  1.09428E-02  3.15335E-02  1.36560E+02
    1536000  1.09109E-02  2.42333E-02  1.54271E+02
    2048000  1.10056E-02  2.13643E-02  1.48928E+02
    2560000  1.11685E-02  2.01160E-02  1.34380E+02
    3072000  1.11867E-02  2.16246E-02  9.68707E+01
    3584000  1.11992E-02  1.91135E-02  1.06268E+02
    4096000  1.11163E-02  1.72420E-02  1.14274E+02
    4608000  1.10479E-02  1.57778E-02  1.21293E+02
    5120000  1.10164E-02  1.45841E-02  1.27744E+02
    5632000  1.11167E-02  1.58092E-02  9.88038E+01
    6144000  1.10937E-02  1.48089E-02  1.03227E+02
    6656000  1.10432E-02  1.40091E-02  1.06478E+02
    7168000  1.10290E-02  1.33857E-02  1.08287E+02
    7680000  1.11045E-02  1.55323E-02  7.50636E+01
    8192000  1.11143E-02  1.48768E-02  7.67052E+01
    8344922  1.11200E-02  1.46760E-02  7.73786E+01
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.56347E-03 0.0138
tfc   17       1       1       1       1       1       1       1       1
     512000  6.51477E-03  3.33883E-02  2.43610E+02
    1024000  6.40477E-03  3.26899E-02  1.27069E+02
    1536000  6.42539E-03  2.51686E-02  1.43018E+02
    2048000  6.50622E-03  2.36722E-02  1.21304E+02
    2560000  6.63781E-03  2.41596E-02  9.31618E+01
    3072000  6.63788E-03  2.37330E-02  8.04239E+01
    3584000  6.63450E-03  2.08559E-02  8.92533E+01
    4096000  6.60005E-03  1.88327E-02  9.57862E+01
    4608000  6.55461E-03  1.71821E-02  1.02277E+02
```

```
    5120000  6.53223E-03  1.58238E-02  1.08512E+02
    5632000  6.59351E-03  1.76018E-02  7.97046E+01
    6144000  6.57587E-03  1.64252E-02  8.39099E+01
    6656000  6.54693E-03  1.54850E-02  8.71485E+01
    7168000  6.53003E-03  1.46476E-02  9.04337E+01
    7680000  6.53883E-03  1.44404E-02  8.68451E+01
    8192000  6.55305E-03  1.39091E-02  8.77497E+01
    8344922  6.56347E-03  1.37887E-02  8.76575E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.31625E-03 0.0136
tfc   17       1       1       1       1       1       1       1       1
     512000  4.27127E-03  3.34814E-02  2.42256E+02
    1024000  4.22221E-03  3.61757E-02  1.03761E+02
    1536000  4.21835E-03  2.68533E-02  1.25636E+02
    2048000  4.28613E-03  2.58903E-02  1.01409E+02
    2560000  4.36097E-03  2.41192E-02  9.34736E+01
    3072000  4.35664E-03  2.28219E-02  8.69731E+01
    3584000  4.35533E-03  2.00772E-02  9.63109E+01
    4096000  4.33465E-03  1.82403E-02  1.02109E+02
    4608000  4.30831E-03  1.66698E-02  1.08659E+02
    5120000  4.29439E-03  1.53803E-02  1.14860E+02
    5632000  4.33867E-03  1.77163E-02  7.86772E+01
    6144000  4.32751E-03  1.65269E-02  8.28806E+01
    6656000  4.31004E-03  1.55823E-02  8.60630E+01
    7168000  4.29996E-03  1.47304E-02  8.94196E+01
    7680000  4.29912E-03  1.41781E-02  9.00880E+01
    8192000  4.30824E-03  1.36583E-02  9.10014E+01
    8344922  4.31625E-03  1.36206E-02  8.98346E+01
mcnp       5     11/03/10 22:05:56     2    13323097     1376467542
```

Case 67

```
 Case 67
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  2.85951E-01 0.0276
tfc   14        1        1        1        1        1        1        1        1
    1024000  2.65751E-01  7.41349E-02  3.94764E+01
    2048000  2.70273E-01  4.78361E-02  4.74337E+01
    3072000  2.77887E-01  3.87570E-02  4.81759E+01
    4096000  2.82828E-01  3.21794E-02  5.24192E+01
    5120000  2.84743E-01  3.02555E-02  4.74195E+01
    6144000  2.82482E-01  2.67135E-02  5.06623E+01
    7168000  2.79652E-01  2.40894E-02  5.33909E+01
    8192000  2.78555E-01  2.20720E-02  5.56438E+01
    9216000  2.78540E-01  2.03820E-02  5.80017E+01
   10240000  2.80573E-01  1.91491E-02  5.91332E+01
   11264000  2.82092E-01  1.86886E-02  5.64417E+01
   12288000  2.87784E-01  2.94666E-02  2.08128E+01
   13312000  2.85909E-01  2.76289E-02  2.18458E+01
   13323097  2.85951E-01  2.76058E-02  2.18642E+01
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.56419E-01 0.0153
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.48799E-01  4.23164E-02  1.21162E+02
    2048000  1.49464E-01  3.02681E-02  1.18476E+02
    3072000  1.53735E-01  2.66951E-02  1.01547E+02
    4096000  1.60386E-01  3.37579E-02  4.76317E+01
    5120000  1.57885E-01  2.86022E-02  5.30597E+01
    6144000  1.58046E-01  2.50317E-02  5.76987E+01
    7168000  1.56886E-01  2.25621E-02  6.08642E+01
    8192000  1.55899E-01  2.04850E-02  6.45993E+01
    9216000  1.55475E-01  1.87542E-02  6.85073E+01
   10240000  1.56055E-01  1.74266E-02  7.14009E+01
   11264000  1.56609E-01  1.64281E-02  7.30436E+01
   12288000  1.56934E-01  1.61720E-02  6.90975E+01
   13312000  1.56372E-01  1.53472E-02  7.08010E+01
   13323097  1.56419E-01  1.53369E-02  7.08370E+01
tally  135     2     1
f         1
d         1
u         0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  8.04250E-02 0.0126
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.90301E-02  4.81797E-02  9.34661E+01
    2048000  7.93969E-02  3.36524E-02  9.58441E+01
    3072000  8.13224E-02  2.99929E-02  8.04441E+01
    4096000  8.21182E-02  2.48812E-02  8.76811E+01
    5120000  8.06709E-02  2.13535E-02  9.51980E+01
    6144000  8.10911E-02  1.91347E-02  9.87423E+01
    7168000  8.00960E-02  1.72828E-02  1.03726E+02
    8192000  7.97078E-02  1.59220E-02  1.06931E+02
    9216000  7.94224E-02  1.46880E-02  1.11688E+02
   10240000  8.00047E-02  1.40401E-02  1.09999E+02
   11264000  8.07269E-02  1.38896E-02  1.02182E+02
   12288000  8.05370E-02  1.32047E-02  1.03642E+02
   13312000  8.03913E-02  1.25914E-02  1.05183E+02
   13323097  8.04250E-02  1.25846E-02  1.05209E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.28808E-02 0.0195
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.74228E-02  1.66926E-01  7.78638E+00
    2048000  3.50109E-02  9.16585E-02  1.29197E+01
    3072000  3.41010E-02  6.38821E-02  1.77326E+01
    4096000  3.41017E-02  4.92772E-02  2.23540E+01
    5120000  3.34093E-02  4.11529E-02  2.56309E+01
    6144000  3.34030E-02  3.49469E-02  2.96024E+01
    7168000  3.29820E-02  3.07434E-02  3.27805E+01
    8192000  3.27812E-02  2.74545E-02  3.59643E+01
    9216000  3.26272E-02  2.47733E-02  3.92617E+01
   10240000  3.28447E-02  2.30806E-02  4.07039E+01
   11264000  3.28626E-02  2.12487E-02  4.36608E+01
   12288000  3.29237E-02  2.07881E-02  4.18176E+01
   13312000  3.28646E-02  1.95538E-02  4.36148E+01
   13323097  3.28808E-02  1.95338E-02  4.36675E+01
tally  155    2    1
f        1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.05534E-02 0.0113
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.03806E-02  3.69824E-02  1.58633E+02
    2048000  1.04959E-02  2.70890E-02  1.47914E+02
    3072000  1.04702E-02  2.15698E-02  1.55539E+02
    4096000  1.07218E-02  2.07941E-02  1.25536E+02
    5120000  1.05571E-02  1.79552E-02  1.34643E+02
    6144000  1.06641E-02  1.67388E-02  1.29032E+02
    7168000  1.05422E-02  1.52190E-02  1.33767E+02
    8192000  1.05112E-02  1.40841E-02  1.36659E+02
    9216000  1.05017E-02  1.30434E-02  1.41629E+02
   10240000  1.05715E-02  1.31026E-02  1.26303E+02
   11264000  1.05987E-02  1.23536E-02  1.29173E+02
   12288000  1.05805E-02  1.18578E-02  1.28524E+02
   13312000  1.05475E-02  1.12637E-02  1.31443E+02
   13323097  1.05534E-02  1.12593E-02  1.31436E+02
tally  165    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.18487E-03 0.0114
tfc   14        1        1        1        1        1        1        1        1
    1024000  5.11029E-03  3.60165E-02  1.67255E+02
    2048000  5.10380E-03  2.58348E-02  1.62625E+02
    3072000  5.09933E-03  2.07257E-02  1.68467E+02
    4096000  5.25749E-03  2.06092E-02  1.27799E+02
    5120000  5.19149E-03  1.78956E-02  1.35542E+02
    6144000  5.25507E-03  1.74893E-02  1.18195E+02
    7168000  5.19190E-03  1.58529E-02  1.23282E+02
    8192000  5.18175E-03  1.45903E-02  1.27342E+02
    9216000  5.17136E-03  1.34468E-02  1.33260E+02
   10240000  5.19348E-03  1.32208E-02  1.24055E+02
   11264000  5.21439E-03  1.25331E-02  1.25498E+02
   12288000  5.19973E-03  1.19844E-02  1.25822E+02
   13312000  5.18202E-03  1.13686E-02  1.29028E+02
   13323097  5.18487E-03  1.13639E-02  1.29027E+02
```

```
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.06267E-03 0.0120
tfc   14        1        1        1        1        1        1        1
    1024000  2.99050E-03  3.39498E-02  1.88238E+02
    2048000  2.99135E-03  2.49642E-02  1.74166E+02
    3072000  2.99725E-03  2.01753E-02  1.77783E+02
    4096000  3.10096E-03  2.11419E-02  1.21439E+02
    5120000  3.05964E-03  1.82121E-02  1.30872E+02
    6144000  3.10978E-03  1.95042E-02  9.50358E+01
    7168000  3.07373E-03  1.75522E-02  1.00568E+02
    8192000  3.06885E-03  1.60470E-02  1.05272E+02
    9216000  3.06173E-03  1.47101E-02  1.11353E+02
   10240000  3.07146E-03  1.41821E-02  1.07808E+02
   11264000  3.08387E-03  1.33377E-02  1.10813E+02
   12288000  3.07236E-03  1.26471E-02  1.12981E+02
   13312000  3.06099E-03  1.19635E-02  1.16514E+02
   13323097  3.06267E-03  1.19575E-02  1.16535E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.02113E-03 0.0130
tfc   14        1        1        1        1        1        1        1
    1024000  1.95742E-03  3.34547E-02  1.93852E+02
    2048000  1.96283E-03  2.47272E-02  1.77520E+02
    3072000  1.97130E-03  2.00338E-02  1.80303E+02
    4096000  2.04569E-03  2.29657E-02  1.02917E+02
    5120000  2.01488E-03  1.95646E-02  1.13402E+02
    6144000  2.05603E-03  2.24365E-02  7.18180E+01
    7168000  2.03192E-03  2.00321E-02  7.72087E+01
    8192000  2.02685E-03  1.81093E-02  8.26598E+01
    9216000  2.02155E-03  1.65145E-02  8.83499E+01
   10240000  2.02640E-03  1.56601E-02  8.84179E+01
   11264000  2.03770E-03  1.46883E-02  9.13720E+01
   12288000  2.02803E-03  1.38266E-02  9.45281E+01
```

```
   13312000  2.02003E-03  1.30345E-02  9.81535E+01
   13323097  2.02113E-03  1.30261E-02  9.81984E+01
mcnp       5     11/03/10 23:06:07     2     7872368     1421766833
```

Case 68

```
 Case 68
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.67672E-01 0.0436
tfc   16       1       1       1       1       1       1       1
     512000  4.24518E-01  1.11849E-01  2.04811E+01
    1024000  3.68169E-01  6.70232E-02  2.85325E+01
    1536000  3.65696E-01  4.95156E-02  3.48835E+01
    2048000  3.60491E-01  4.00439E-02  4.00023E+01
    2560000  3.68593E-01  3.50640E-02  4.17213E+01
    3072000  3.63784E-01  3.09830E-02  4.45096E+01
    3584000  3.60611E-01  2.75467E-02  4.82488E+01
    4096000  3.61486E-01  2.56651E-02  4.86311E+01
    4608000  3.56912E-01  2.35202E-02  5.14720E+01
    5120000  3.58409E-01  2.23391E-02  5.13471E+01
    5632000  3.56865E-01  2.10086E-02  5.27704E+01
    6144000  3.55220E-01  1.96379E-02  5.53620E+01
    6656000  3.53239E-01  1.85911E-02  5.70213E+01
    7168000  3.52890E-01  1.75808E-02  5.92106E+01
    7680000  3.68059E-01  4.46119E-02  8.58222E+00
    7872368  3.67672E-01  4.36064E-02  8.76236E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.95074E-01 0.0119
tfc   16       1       1       1       1       1       1       1
     512000  2.08830E-01  4.79227E-02  1.11566E+02
```

```
    1024000  1.92406E-01  3.08407E-02  1.34753E+02
    1536000  1.94708E-01  2.80193E-02  1.08941E+02
    2048000  1.95743E-01  2.42481E-02  1.09094E+02
    2560000  2.01050E-01  2.33334E-02  9.42164E+01
    3072000  1.99181E-01  2.11114E-02  9.58666E+01
    3584000  1.97848E-01  1.88110E-02  1.03467E+02
    4096000  1.98279E-01  1.73913E-02  1.05910E+02
    4608000  1.96611E-01  1.60724E-02  1.10228E+02
    5120000  1.97135E-01  1.54273E-02  1.07663E+02
    5632000  1.96993E-01  1.46209E-02  1.08953E+02
    6144000  1.96372E-01  1.38186E-02  1.11809E+02
    6656000  1.95625E-01  1.32163E-02  1.12830E+02
    7168000  1.95767E-01  1.26496E-02  1.14372E+02
    7680000  1.95305E-01  1.21227E-02  1.16225E+02
    7872368  1.95074E-01  1.18983E-02  1.17694E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.01733E-01 0.0126
tfc   16       1       1       1       1       1       1       1       1
     512000  1.04769E-01  4.32330E-02  1.37084E+02
    1024000  1.01446E-01  3.92581E-02  8.31631E+01
    1536000  1.00227E-01  2.96006E-02  9.76121E+01
    2048000  9.99414E-02  2.38807E-02  1.12477E+02
    2560000  1.01277E-01  2.07337E-02  1.19325E+02
    3072000  1.00472E-01  1.83738E-02  1.26562E+02
    3584000  1.01725E-01  1.76892E-02  1.17006E+02
    4096000  1.01813E-01  1.64676E-02  1.18124E+02
    4608000  1.01327E-01  1.52714E-02  1.22094E+02
    5120000  1.02155E-01  1.57769E-02  1.02944E+02
    5632000  1.02139E-01  1.48253E-02  1.05969E+02
    6144000  1.01695E-01  1.39045E-02  1.10432E+02
    6656000  1.01616E-01  1.33262E-02  1.10977E+02
    7168000  1.02131E-01  1.34560E-02  1.01074E+02
    7680000  1.01939E-01  1.28054E-02  1.04163E+02
    7872368  1.01733E-01  1.25563E-02  1.05681E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  4.06692E-02 0.0113
tfc   16       1       1       1       1       1       1       1       1
     512000  4.40755E-02  6.77887E-02  5.57573E+01
    1024000  4.09100E-02  3.99167E-02  8.04416E+01
    1536000  4.03551E-02  3.05371E-02  9.17167E+01
    2048000  4.01735E-02  2.42734E-02  1.08867E+02
    2560000  4.05813E-02  2.09276E-02  1.17123E+02
    3072000  4.03545E-02  1.84927E-02  1.24940E+02
    3584000  4.05983E-02  1.70642E-02  1.25735E+02
    4096000  4.07181E-02  1.60822E-02  1.23854E+02
    4608000  4.05466E-02  1.48237E-02  1.29581E+02
    5120000  4.06867E-02  1.40327E-02  1.30125E+02
    5632000  4.07380E-02  1.36205E-02  1.25546E+02
    6144000  4.05924E-02  1.27684E-02  1.30957E+02
    6656000  4.05837E-02  1.21912E-02  1.32604E+02
    7168000  4.06505E-02  1.17543E-02  1.32458E+02
    7680000  4.07451E-02  1.14680E-02  1.29876E+02
    7872368  4.06692E-02  1.12503E-02  1.31641E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.35818E-02 0.0155
tfc   16       1       1       1       1       1       1       1       1
     512000  1.40305E-02  4.25883E-02  1.41266E+02
    1024000  1.32493E-02  2.80340E-02  1.63087E+02
    1536000  1.31931E-02  2.26726E-02  1.66380E+02
    2048000  1.33711E-02  2.04904E-02  1.52777E+02
    2560000  1.33963E-02  1.76568E-02  1.64534E+02
    3072000  1.32769E-02  1.56075E-02  1.75403E+02
    3584000  1.33628E-02  1.45581E-02  1.72749E+02
    4096000  1.34754E-02  1.48610E-02  1.45046E+02
    4608000  1.34219E-02  1.37649E-02  1.50283E+02
    5120000  1.34663E-02  1.37344E-02  1.35839E+02
    5632000  1.35289E-02  1.37509E-02  1.23176E+02
    6144000  1.34998E-02  1.29132E-02  1.28037E+02
    6656000  1.34647E-02  1.22733E-02  1.30836E+02
    7168000  1.34649E-02  1.17204E-02  1.33227E+02
    7680000  1.36121E-02  1.58293E-02  6.81675E+01
    7872368  1.35818E-02  1.55068E-02  6.92909E+01
tally  165    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.69477E-03 0.0159
tfc   16       1       1       1       1       1       1       1       1
     512000  6.81940E-03  3.80279E-02  1.77179E+02
    1024000  6.56872E-03  3.11406E-02  1.32171E+02
    1536000  6.50126E-03  2.40485E-02  1.47886E+02
    2048000  6.59123E-03  2.16575E-02  1.36754E+02
    2560000  6.59539E-03  1.84945E-02  1.49968E+02
    3072000  6.53101E-03  1.62809E-02  1.61192E+02
    3584000  6.56273E-03  1.50665E-02  1.61287E+02
    4096000  6.64996E-03  1.75029E-02  1.04563E+02
    4608000  6.61318E-03  1.60476E-02  1.10569E+02
    5120000  6.62987E-03  1.52703E-02  1.09888E+02
    5632000  6.69099E-03  1.65605E-02  8.49258E+01
    6144000  6.67548E-03  1.54547E-02  8.93885E+01
    6656000  6.65668E-03  1.45845E-02  9.26541E+01
    7168000  6.66078E-03  1.39317E-02  9.42897E+01
    7680000  6.71202E-03  1.62434E-02  6.47358E+01
    7872368  6.69477E-03  1.59125E-02  6.58025E+01
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.93648E-03 0.0136
tfc   16       1       1       1       1       1       1       1       1
     512000  4.11457E-03  4.73815E-02  1.14130E+02
    1024000  3.90980E-03  3.02088E-02  1.40450E+02
    1536000  3.86910E-03  2.38688E-02  1.50122E+02
    2048000  3.93412E-03  2.36829E-02  1.14364E+02
    2560000  3.93282E-03  2.00771E-02  1.27256E+02
    3072000  3.89072E-03  1.75959E-02  1.37999E+02
    3584000  3.89903E-03  1.60702E-02  1.41770E+02
    4096000  3.93467E-03  1.60149E-02  1.24896E+02
    4608000  3.91320E-03  1.47855E-02  1.30252E+02
    5120000  3.91631E-03  1.38725E-02  1.33148E+02
    5632000  3.95564E-03  1.65880E-02  8.46449E+01
```

```
    6144000  3.94541E-03  1.54768E-02  8.91332E+01
    6656000  3.93587E-03  1.46167E-02  9.22463E+01
    7168000  3.93830E-03  1.39561E-02  9.39601E+01
    7680000  3.94617E-03  1.39046E-02  8.83458E+01
    7872368  3.93648E-03  1.36280E-02  8.97133E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.59189E-03 0.0137
tfc   16       1       1       1       1       1       1       1       1
     512000  2.72052E-03  5.00585E-02  1.02249E+02
    1024000  2.57454E-03  3.10894E-02  1.32606E+02
    1536000  2.53715E-03  2.39171E-02  1.49516E+02
    2048000  2.59323E-03  2.53331E-02  9.99500E+01
    2560000  2.59707E-03  2.14825E-02  1.11151E+02
    3072000  2.57118E-03  1.87686E-02  1.21294E+02
    3584000  2.57392E-03  1.69878E-02  1.26868E+02
    4096000  2.58944E-03  1.62179E-02  1.21790E+02
    4608000  2.57736E-03  1.49780E-02  1.26924E+02
    5120000  2.57755E-03  1.39612E-02  1.31463E+02
    5632000  2.60446E-03  1.71389E-02  7.92906E+01
    6144000  2.59788E-03  1.59781E-02  8.36285E+01
    6656000  2.59296E-03  1.50862E-02  8.65942E+01
    7168000  2.59734E-03  1.44937E-02  8.71200E+01
    7680000  2.59829E-03  1.39904E-02  8.72644E+01
    7872368  2.59189E-03  1.37120E-02  8.86175E+01
mcnp       5     11/04/10 00:06:13     2    12535151     1356819023
```

Case 69

```
 Case 69
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.62852E-01 0.0202
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.75300E-01  1.26405E-01  1.27745E+01
    2048000  1.58896E-01  7.25894E-02  1.93721E+01
    3072000  1.65536E-01  5.37125E-02  2.35852E+01
    4096000  1.66180E-01  4.29128E-02  2.77172E+01
    5120000  1.63167E-01  3.62921E-02  3.09961E+01
    6144000  1.62912E-01  3.18333E-02  3.35601E+01
    7168000  1.61121E-01  2.84037E-02  3.61250E+01
    8192000  1.61875E-01  2.57554E-02  3.84423E+01
    9216000  1.61466E-01  2.36253E-02  4.06121E+01
   10240000  1.62012E-01  2.19376E-02  4.23856E+01
   11264000  1.63252E-01  2.16036E-02  3.97343E+01
   12288000  1.62929E-01  2.04855E-02  4.05084E+01
   12535151  1.62852E-01  2.02129E-02  4.07880E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.12203E-02 0.0177
tfc   13       1       1       1       1       1       1       1       1
    1024000  9.83123E-02  1.18885E-01  1.44418E+01
    2048000  9.12320E-02  6.68115E-02  2.28676E+01
    3072000  9.32444E-02  4.86395E-02  2.87616E+01
    4096000  9.40347E-02  3.90315E-02  3.35037E+01
    5120000  9.22291E-02  3.27690E-02  3.80194E+01
    6144000  9.25621E-02  2.87370E-02  4.11818E+01
    7168000  9.20287E-02  2.61295E-02  4.26869E+01
    8192000  9.17569E-02  2.38106E-02  4.49786E+01
    9216000  9.10674E-02  2.17053E-02  4.81149E+01
   10240000  9.11290E-02  1.99738E-02  5.11303E+01
   11264000  9.13840E-02  1.89342E-02  5.17278E+01
   12288000  9.12126E-02  1.79517E-02  5.27505E+01
   12535151  9.12203E-02  1.76895E-02  5.32554E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  4.70053E-02 0.0141
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.66884E-02  4.50980E-02  1.00359E+02
    2048000  4.51319E-02  2.94716E-02  1.17522E+02
    3072000  4.64104E-02  2.67473E-02  9.51112E+01
    4096000  4.77055E-02  2.69043E-02  7.05148E+01
    5120000  4.69326E-02  2.28996E-02  7.78530E+01
    6144000  4.74683E-02  2.12466E-02  7.53368E+01
    7168000  4.68373E-02  1.91913E-02  7.91310E+01
    8192000  4.69530E-02  1.82658E-02  7.64307E+01
    9216000  4.67671E-02  1.68314E-02  8.00145E+01
   10240000  4.69870E-02  1.58537E-02  8.11594E+01
   11264000  4.71157E-02  1.51147E-02  8.11739E+01
   12288000  4.69694E-02  1.42734E-02  8.34415E+01
   12535151  4.70053E-02  1.40876E-02  8.39693E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.87612E-02 0.0133
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.83667E-02  3.61882E-02  1.55861E+02
    2048000  1.82828E-02  2.87698E-02  1.23325E+02
    3072000  1.84870E-02  2.43908E-02  1.14377E+02
    4096000  1.89058E-02  2.47071E-02  8.36141E+01
    5120000  1.86989E-02  2.13843E-02  8.92772E+01
    6144000  1.88259E-02  1.92628E-02  9.16531E+01
    7168000  1.86339E-02  1.75210E-02  9.49375E+01
    8192000  1.86354E-02  1.61292E-02  9.80216E+01
    9216000  1.85909E-02  1.48459E-02  1.02848E+02
   10240000  1.87403E-02  1.49580E-02  9.11699E+01
   11264000  1.87852E-02  1.42246E-02  9.16518E+01
   12288000  1.87576E-02  1.34316E-02  9.42286E+01
   12535151  1.87612E-02  1.32552E-02  9.48464E+01
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  6.19817E-03 0.0134
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.10199E-03  3.72698E-02  1.46946E+02
    2048000  6.10138E-03  2.79129E-02  1.31013E+02
    3072000  6.15169E-03  2.45249E-02  1.13129E+02
    4096000  6.31394E-03  2.56755E-02  7.74258E+01
    5120000  6.21369E-03  2.19738E-02  8.45514E+01
    6144000  6.28374E-03  2.03437E-02  8.21727E+01
    7168000  6.19537E-03  1.83369E-02  8.66770E+01
    8192000  6.18831E-03  1.68448E-02  8.98700E+01
    9216000  6.16936E-03  1.54691E-02  9.47280E+01
   10240000  6.20168E-03  1.51732E-02  8.86023E+01
   11264000  6.21133E-03  1.43346E-02  9.02504E+01
   12288000  6.20349E-03  1.35804E-02  9.21739E+01
   12535151  6.19817E-03  1.33863E-02  9.29970E+01
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.04274E-03 0.0135
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.99531E-03  3.55235E-02  1.61749E+02
    2048000  2.97053E-03  2.71444E-02  1.38537E+02
    3072000  2.97739E-03  2.25820E-02  1.33434E+02
    4096000  3.08928E-03  2.59103E-02  7.60289E+01
    5120000  3.04951E-03  2.22563E-02  8.24188E+01
    6144000  3.09495E-03  2.11122E-02  7.62993E+01
    7168000  3.05201E-03  1.90206E-02  8.05580E+01
    8192000  3.03916E-03  1.72003E-02  8.61933E+01
    9216000  3.02595E-03  1.57515E-02  9.13620E+01
   10240000  3.03926E-03  1.52255E-02  8.79943E+01
   11264000  3.04488E-03  1.43584E-02  8.99507E+01
   12288000  3.04441E-03  1.36757E-02  9.08947E+01
   12535151  3.04274E-03  1.34853E-02  9.16365E+01
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.79132E-03 0.0138
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.74818E-03  3.32565E-02  1.84553E+02
    2048000  1.72863E-03  2.37310E-02  1.81256E+02
    3072000  1.74531E-03  2.08628E-02  1.56332E+02
    4096000  1.80359E-03  2.43027E-02  8.64197E+01
    5120000  1.78138E-03  2.09394E-02  9.31117E+01
    6144000  1.81916E-03  2.19749E-02  7.04260E+01
    7168000  1.79874E-03  1.98787E-02  7.37532E+01
    8192000  1.79106E-03  1.79451E-02  7.91870E+01
    9216000  1.78308E-03  1.64043E-02  8.42349E+01
   10240000  1.78954E-03  1.57005E-02  8.27511E+01
   11264000  1.79433E-03  1.47750E-02  8.49498E+01
   12288000  1.79208E-03  1.39866E-02  8.68988E+01
   12535151  1.79132E-03  1.37872E-02  8.76684E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.18069E-03 0.0148
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.14518E-03  3.32062E-02  1.85113E+02
    2048000  1.13414E-03  2.35011E-02  1.84819E+02
    3072000  1.14463E-03  2.04761E-02  1.62292E+02
    4096000  1.18157E-03  2.39298E-02  8.91340E+01
    5120000  1.16648E-03  2.06144E-02  9.60700E+01
    6144000  1.19785E-03  2.40952E-02  5.85768E+01
    7168000  1.18728E-03  2.19667E-02  6.03987E+01
    8192000  1.18132E-03  1.97143E-02  6.56122E+01
    9216000  1.17580E-03  1.79632E-02  7.02493E+01
   10240000  1.17932E-03  1.69832E-02  7.07229E+01
   11264000  1.18376E-03  1.59517E-02  7.28789E+01
   12288000  1.18123E-03  1.50052E-02  7.55008E+01
   12535151  1.18069E-03  1.47816E-02  7.62697E+01
mcnp       5     11/04/10 01:06:19     5    22415664     4988429347
```

Case 70

```
 Case 70
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.66020E-05 0.0287
tfc   11        1        1        1        1        1        1        1        1
    2048000  7.68490E-05  6.23328E-02  1.17407E+01
    4096000  8.38178E-05  4.76781E-02  1.00298E+01
    6144000  8.42846E-05  3.90217E-02  9.97930E+00
    8192000  8.41283E-05  3.39453E-02  9.89232E+00
   10240000  8.45531E-05  3.00899E-02  1.00724E+01
   12288000  8.72433E-05  4.00422E-02  4.74007E+00
   14336000  8.77380E-05  3.54165E-02  5.19373E+00
   16384000  8.60990E-05  3.20697E-02  5.54231E+00
   18432000  8.66348E-05  2.95605E-02  5.79870E+00
   20480000  8.74015E-05  3.06489E-02  4.85497E+00
   22415664  8.66020E-05  2.87353E-02  5.04604E+00
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.06247E-05 0.0354
tfc   11        1        1        1        1        1        1        1        1
    2048000  5.25235E-05  5.77460E-02  1.36799E+01
    4096000  5.80510E-05  4.89700E-02  9.50757E+00
    6144000  5.78591E-05  3.92146E-02  9.88138E+00
    8192000  5.69978E-05  3.27596E-02  1.06214E+01
   10240000  5.74854E-05  2.90398E-02  1.08139E+01
   12288000  6.01417E-05  4.40974E-02  3.90836E+00
   14336000  6.07632E-05  3.92443E-02  4.22997E+00
   16384000  6.03833E-05  3.61263E-02  4.36751E+00
   18432000  6.07568E-05  3.34749E-02  4.52184E+00
   20480000  6.14744E-05  3.80468E-02  3.15050E+00
   22415664  6.06247E-05  3.54105E-02  3.32292E+00
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e        0
t        0
vals
  3.67216E-05 0.0365
tfc   11       1       1       1       1       1       1       1       1
    2048000  3.11920E-05  5.49579E-02  1.51032E+01
    4096000  3.45976E-05  6.31471E-02  5.71771E+00
    6144000  3.89705E-05  8.60928E-02  2.05012E+00
    8192000  3.73680E-05  6.82578E-02  2.44654E+00
   10240000  3.91738E-05  6.65323E-02  2.06019E+00
   12288000  3.87403E-05  5.74829E-02  2.30008E+00
   14336000  3.83944E-05  5.10487E-02  2.49990E+00
   16384000  3.75448E-05  4.59479E-02  2.69991E+00
   18432000  3.74970E-05  4.16450E-02  2.92166E+00
   20480000  3.72484E-05  3.91606E-02  2.97384E+00
   22415664  3.67216E-05  3.64732E-02  3.13210E+00
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.57461E-05 0.0272
tfc   11       1       1       1       1       1       1       1       1
    2048000  1.57902E-05  9.71558E-02  4.83271E+00
    4096000  1.61382E-05  6.22216E-02  5.88907E+00
    6144000  1.61539E-05  5.35025E-02  5.30840E+00
    8192000  1.59366E-05  4.38778E-02  5.92062E+00
   10240000  1.65057E-05  5.17781E-02  3.40157E+00
   12288000  1.62343E-05  4.43873E-02  3.85748E+00
   14336000  1.61075E-05  3.88313E-02  4.32043E+00
   16384000  1.58569E-05  3.47891E-02  4.70970E+00
   18432000  1.60261E-05  3.16214E-02  5.06748E+00
   20480000  1.59004E-05  2.92341E-02  5.33625E+00
   22415664  1.57461E-05  2.71684E-02  5.64489E+00
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.48196E-06 0.0204
```

```
tfc   11        1        1        1        1        1        1        1        1
    2048000  5.73520E-06  8.42620E-02  6.42487E+00
    4096000  5.65962E-06  5.14749E-02  8.60476E+00
    6144000  5.60358E-06  3.99267E-02  9.53202E+00
    8192000  5.51825E-06  3.31418E-02  1.03778E+01
   10240000  5.58715E-06  3.07602E-02  9.63816E+00
   12288000  5.52438E-06  2.68116E-02  1.05724E+01
   14336000  5.58977E-06  2.85026E-02  8.01901E+00
   16384000  5.52573E-06  2.56438E-02  8.66793E+00
   18432000  5.53799E-06  2.31652E-02  9.44237E+00
   20480000  5.48744E-06  2.13564E-02  9.99911E+00
   22415664  5.48196E-06  2.03722E-02  1.00394E+01
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.77389E-06 0.0249
tfc   11        1        1        1        1        1        1        1        1
    2048000  2.96957E-06  9.88378E-02  4.66962E+00
    4096000  2.83462E-06  5.51593E-02  7.49363E+00
    6144000  2.81256E-06  4.16124E-02  8.77539E+00
    8192000  2.79166E-06  3.53462E-02  9.12374E+00
   10240000  2.81087E-06  3.06376E-02  9.71544E+00
   12288000  2.77550E-06  2.65060E-02  1.08176E+01
   14336000  2.84779E-06  3.62891E-02  4.94696E+00
   16384000  2.81074E-06  3.24434E-02  5.41535E+00
   18432000  2.81039E-06  2.91167E-02  5.97681E+00
   20480000  2.78525E-06  2.67154E-02  6.38987E+00
   22415664  2.77389E-06  2.48516E-02  6.74643E+00
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.65467E-06 0.0222
tfc   11        1        1        1        1        1        1        1        1
    2048000  1.80048E-06  1.24522E-01  2.94195E+00
    4096000  1.70423E-06  6.81599E-02  4.90763E+00
    6144000  1.67540E-06  4.92202E-02  6.27229E+00
```

```
    8192000  1.67094E-06  4.11371E-02  6.73580E+00
   10240000  1.66925E-06  3.42591E-02  7.76998E+00
   12288000  1.66511E-06  3.08054E-02  8.00881E+00
   14336000  1.69097E-06  3.20202E-02  6.35394E+00
   16384000  1.66938E-06  2.87102E-02  6.91526E+00
   18432000  1.67182E-06  2.57936E-02  7.61604E+00
   20480000  1.66015E-06  2.37256E-02  8.10179E+00
   22415664  1.65467E-06  2.21540E-02  8.48945E+00
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.08793E-06 0.0204
tfc   11       1       1       1       1       1       1       1       1
    2048000  1.18609E-06  1.23693E-01  2.98151E+00
    4096000  1.12816E-06  6.74997E-02  5.00411E+00
    6144000  1.10793E-06  4.86413E-02  6.42245E+00
    8192000  1.10527E-06  4.07663E-02  6.85891E+00
   10240000  1.10175E-06  3.38173E-02  7.97434E+00
   12288000  1.09127E-06  2.91422E-02  8.94901E+00
   14336000  1.10441E-06  2.92210E-02  7.62957E+00
   16384000  1.09333E-06  2.63667E-02  8.19914E+00
   18432000  1.09672E-06  2.37120E-02  9.01190E+00
   20480000  1.09021E-06  2.18142E-02  9.58379E+00
   22415664  1.08793E-06  2.04291E-02  9.98355E+00
mcnp       5     11/04/10 15:50:23     5    28170962     5261945274
```

Case 71

```
 Case 71
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.99757E-03 0.0234
tfc   14       1       1       1       1       1       1       1       1
```

```
    2048000  6.69194E-03  8.03314E-02  8.87155E+00
    4096000  7.22471E-03  5.94544E-02  8.08501E+00
    6144000  6.99455E-03  4.79707E-02  8.28196E+00
    8192000  7.06657E-03  4.14576E-02  8.32035E+00
   10240000  7.00644E-03  3.57482E-02  8.94606E+00
   12288000  6.98984E-03  3.30618E-02  8.71649E+00
   14336000  6.91992E-03  3.05050E-02  8.78131E+00
   16384000  6.85928E-03  2.82724E-02  8.94648E+00
   18432000  6.85272E-03  2.63487E-02  9.16190E+00
   20480000  6.74682E-03  2.48719E-02  9.25814E+00
   22528000  6.74738E-03  2.43272E-02  8.80005E+00
   24576000  6.79336E-03  2.33153E-02  8.78372E+00
   26624000  6.98541E-03  2.42079E-02  7.52136E+00
   28170962  6.99757E-03  2.34368E-02  7.58564E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.49498E-03 0.0197
tfc   14       1       1       1       1       1       1       1       1
    2048000  4.21403E-03  6.46343E-02  1.37039E+01
    4096000  4.45215E-03  4.50872E-02  1.40586E+01
    6144000  4.41379E-03  3.91523E-02  1.24329E+01
    8192000  4.42083E-03  3.35028E-02  1.27405E+01
   10240000  4.42492E-03  2.90236E-02  1.35718E+01
   12288000  4.44080E-03  2.68073E-02  1.32583E+01
   14336000  4.39309E-03  2.46299E-02  1.34702E+01
   16384000  4.37010E-03  2.29691E-02  1.35547E+01
   18432000  4.37438E-03  2.15190E-02  1.37360E+01
   20480000  4.37559E-03  2.23413E-02  1.14743E+01
   22528000  4.37750E-03  2.13887E-02  1.13842E+01
   24576000  4.41526E-03  2.05384E-02  1.13194E+01
   26624000  4.48930E-03  2.02901E-02  1.07064E+01
   28170962  4.49498E-03  1.96510E-02  1.07899E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  2.59487E-03 0.0183
tfc   14        1        1        1        1        1        1        1        1
    2048000  2.48843E-03  5.95591E-02  1.61389E+01
    4096000  2.74928E-03  5.78287E-02  8.54597E+00
    6144000  2.64785E-03  4.46701E-02  9.55110E+00
    8192000  2.63024E-03  3.65871E-02  1.06830E+01
   10240000  2.69270E-03  3.62739E-02  8.68867E+00
   12288000  2.66346E-03  3.17536E-02  9.44950E+00
   14336000  2.61750E-03  2.85054E-02  1.00564E+01
   16384000  2.59242E-03  2.59463E-02  1.06224E+01
   18432000  2.58732E-03  2.38599E-02  1.11729E+01
   20480000  2.57289E-03  2.23014E-02  1.15154E+01
   22528000  2.56344E-03  2.10498E-02  1.17537E+01
   24576000  2.57567E-03  1.99730E-02  1.19694E+01
   26624000  2.59387E-03  1.89499E-02  1.22743E+01
   28170962  2.59487E-03  1.83224E-02  1.24114E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.17677E-03 0.0286
tfc   14        1        1        1        1        1        1        1        1
    2048000  1.09690E-03  5.08015E-02  2.21829E+01
    4096000  1.14472E-03  3.75902E-02  2.02255E+01
    6144000  1.11142E-03  3.05392E-02  2.04348E+01
    8192000  1.15126E-03  3.77698E-02  1.00244E+01
   10240000  1.15645E-03  3.20826E-02  1.11071E+01
   12288000  1.14693E-03  2.79487E-02  1.21975E+01
   14336000  1.13397E-03  2.51070E-02  1.29631E+01
   16384000  1.14024E-03  2.51475E-02  1.13080E+01
   18432000  1.14134E-03  2.30265E-02  1.19963E+01
   20480000  1.13975E-03  2.17538E-02  1.21024E+01
   22528000  1.16821E-03  3.48544E-02  4.28701E+00
   24576000  1.17132E-03  3.22366E-02  4.59474E+00
   26624000  1.17842E-03  3.00137E-02  4.89297E+00
   28170962  1.17677E-03  2.86079E-02  5.09115E+00
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  4.03874E-04 0.0138
tfc   14        1        1        1        1        1        1        1        1
    2048000  3.88268E-04  4.69604E-02  2.59601E+01
    4096000  4.04943E-04  3.47488E-02  2.36684E+01
    6144000  3.95952E-04  2.88083E-02  2.29642E+01
    8192000  4.01421E-04  2.55253E-02  2.19487E+01
   10240000  4.06103E-04  2.27307E-02  2.21266E+01
   12288000  4.05658E-04  2.05127E-02  2.26438E+01
   14336000  4.03719E-04  1.91192E-02  2.23543E+01
   16384000  4.00333E-04  1.76528E-02  2.29482E+01
   18432000  4.03371E-04  1.70513E-02  2.18771E+01
   20480000  4.01622E-04  1.61630E-02  2.19229E+01
   22528000  4.00808E-04  1.54456E-02  2.18304E+01
   24576000  4.02350E-04  1.47881E-02  2.18341E+01
   26624000  4.03958E-04  1.41760E-02  2.19333E+01
   28170962  4.03874E-04  1.37787E-02  2.19468E+01
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.07779E-04 0.0179
tfc   14        1        1        1        1        1        1        1        1
    2048000  1.95356E-04  4.61035E-02  2.69341E+01
    4096000  2.02668E-04  3.28376E-02  2.65036E+01
    6144000  1.97264E-04  2.69165E-02  2.63056E+01
    8192000  1.99915E-04  2.36296E-02  2.56116E+01
   10240000  2.07719E-04  3.12080E-02  1.17384E+01
   12288000  2.06923E-04  2.73513E-02  1.27361E+01
   14336000  2.09179E-04  2.74422E-02  1.08508E+01
   16384000  2.06617E-04  2.48060E-02  1.16215E+01
   18432000  2.07845E-04  2.31774E-02  1.18407E+01
   20480000  2.08185E-04  2.25535E-02  1.12594E+01
   22528000  2.07466E-04  2.11049E-02  1.16924E+01
   24576000  2.07845E-04  1.98260E-02  1.21476E+01
   26624000  2.08143E-04  1.86638E-02  1.26535E+01
   28170962  2.07779E-04  1.79238E-02  1.29697E+01
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  1.23116E-04 0.0160
tfc   14        1        1        1        1        1        1        1        1
    2048000  1.17243E-04  4.58119E-02  2.72781E+01
    4096000  1.20966E-04  3.21375E-02  2.76709E+01
    6144000  1.17658E-04  2.63044E-02  2.75441E+01
    8192000  1.19121E-04  2.30546E-02  2.69050E+01
   10240000  1.22353E-04  2.39430E-02  1.99427E+01
   12288000  1.22055E-04  2.13373E-02  2.09274E+01
   14336000  1.22791E-04  2.20581E-02  1.67943E+01
   16384000  1.21628E-04  2.01105E-02  1.76821E+01
   18432000  1.22862E-04  1.97878E-02  1.62447E+01
   20480000  1.23180E-04  1.97665E-02  1.46583E+01
   22528000  1.22669E-04  1.85443E-02  1.51443E+01
   24576000  1.22973E-04  1.75469E-02  1.55082E+01
   26624000  1.23257E-04  1.65953E-02  1.60044E+01
   28170962  1.23116E-04  1.59859E-02  1.63047E+01
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.15804E-05 0.0158
tfc   14        1        1        1        1        1        1        1        1
    2048000  7.78998E-05  4.57968E-02  2.72961E+01
    4096000  8.02473E-05  3.18953E-02  2.80928E+01
    6144000  7.80542E-05  2.60660E-02  2.80503E+01
    8192000  7.89403E-05  2.27694E-02  2.75834E+01
   10240000  8.05575E-05  2.13930E-02  2.49803E+01
   12288000  8.03536E-05  1.92415E-02  2.57345E+01
   14336000  8.05202E-05  1.88675E-02  2.29547E+01
   16384000  7.99945E-05  1.75418E-02  2.32395E+01
   18432000  8.11442E-05  1.85867E-02  1.84120E+01
   20480000  8.13652E-05  1.92546E-02  1.54479E+01
   22528000  8.10390E-05  1.80786E-02  1.59345E+01
   24576000  8.12619E-05  1.71356E-02  1.62616E+01
   26624000  8.14674E-05  1.62165E-02  1.67609E+01
   28170962  8.15804E-05  1.57527E-02  1.67911E+01
mcnp       5      11/04/10 19:51:11      5     45156320      5058679484
```

```
 Case 72
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.98242E-03 0.0234
tfc   12        1        1        1        1        1        1        1        1
    4096000  3.78663E-03  8.06581E-02  7.05659E+00
    8192000  3.80539E-03  5.71633E-02  7.02229E+00
   12288000  3.88141E-03  4.46151E-02  7.68529E+00
   16384000  3.82232E-03  3.81421E-02  7.89129E+00
   20480000  3.85221E-03  3.29243E-02  8.47799E+00
   24576000  3.90289E-03  3.03417E-02  8.32248E+00
   28672000  3.92556E-03  2.87538E-02  7.93890E+00
   32768000  3.96746E-03  2.68049E-02  7.99092E+00
   36864000  4.00060E-03  2.53997E-02  7.90949E+00
   40960000  3.99015E-03  2.41351E-02  7.88392E+00
   45056000  3.98676E-03  2.34677E-02  7.58253E+00
   45156320  3.98242E-03  2.34439E-02  7.58098E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.52462E-03 0.0205
tfc   12        1        1        1        1        1        1        1        1
    4096000  2.48657E-03  6.23546E-02  1.18074E+01
    8192000  2.45434E-03  4.46884E-02  1.14901E+01
   12288000  2.51338E-03  3.59869E-02  1.18123E+01
   16384000  2.47777E-03  3.14770E-02  1.15870E+01
   20480000  2.55568E-03  3.26691E-02  8.61096E+00
   24576000  2.56526E-03  2.93365E-02  8.90259E+00
   28672000  2.54829E-03  2.68420E-02  9.11004E+00
   32768000  2.56099E-03  2.46441E-02  9.45364E+00
   36864000  2.56866E-03  2.29518E-02  9.68663E+00
   40960000  2.55650E-03  2.16552E-02  9.79301E+00
   45056000  2.52658E-03  2.05224E-02  9.91515E+00
```

```
   45156320  2.52462E-03  2.04971E-02  9.91753E+00
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.44778E-03 0.0171
tfc   12       1       1       1       1       1       1       1       1
    4096000  1.53435E-03  6.31225E-02  1.15219E+01
    8192000  1.47005E-03  4.32909E-02  1.22439E+01
   12288000  1.48960E-03  3.40457E-02  1.31977E+01
   16384000  1.45078E-03  2.86837E-02  1.39536E+01
   20480000  1.46001E-03  2.52028E-02  1.44687E+01
   24576000  1.46346E-03  2.32165E-02  1.42147E+01
   28672000  1.45448E-03  2.15349E-02  1.41536E+01
   32768000  1.46350E-03  2.00715E-02  1.42517E+01
   36864000  1.46274E-03  1.87189E-02  1.45628E+01
   40960000  1.46620E-03  1.80002E-02  1.41737E+01
   45056000  1.44853E-03  1.70793E-02  1.43158E+01
   45156320  1.44778E-03  1.70560E-02  1.43230E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.83064E-04 0.0486
tfc   12       1       1       1       1       1       1       1       1
    4096000  6.75322E-04  5.76462E-02  1.38150E+01
    8192000  6.50012E-04  3.95281E-02  1.46859E+01
   12288000  6.68811E-04  3.29925E-02  1.40538E+01
   16384000  6.51952E-04  2.77313E-02  1.49285E+01
   20480000  6.52862E-04  2.39949E-02  1.59621E+01
   24576000  6.54194E-04  2.22664E-02  1.54537E+01
   28672000  6.46699E-04  2.02901E-02  1.59435E+01
   32768000  6.48721E-04  1.87538E-02  1.63248E+01
   36864000  6.50461E-04  1.77372E-02  1.62195E+01
   40960000  6.90392E-04  5.24507E-02  1.66932E+00
   45056000  6.83399E-04  4.86907E-02  1.76142E+00
   45156320  6.83064E-04  4.86082E-02  1.76347E+00
tally  155    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.39444E-04 0.0324
tfc   12        1        1        1        1        1        1        1        1
    4096000  2.64939E-04  1.32997E-01  2.59542E+00
    8192000  2.42006E-04  7.59162E-02  3.98148E+00
   12288000  2.42028E-04  5.34678E-02  5.35104E+00
   16384000  2.44645E-04  5.80546E-02  3.40630E+00
   20480000  2.41806E-04  4.76878E-02  4.04121E+00
   24576000  2.40587E-04  4.09076E-02  4.57853E+00
   28672000  2.36612E-04  3.60751E-02  5.04355E+00
   32768000  2.42981E-04  4.21352E-02  3.23397E+00
   36864000  2.42252E-04  3.81918E-02  3.49837E+00
   40960000  2.42498E-04  3.50130E-02  3.74613E+00
   45056000  2.39532E-04  3.25005E-02  3.95345E+00
   45156320  2.39444E-04  3.24429E-02  3.95864E+00
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.21729E-04 0.0472
tfc   12        1        1        1        1        1        1        1        1
    4096000  1.72795E-04  3.28669E-01  4.24985E-01
    8192000  1.41092E-04  2.02036E-01  5.62153E-01
   12288000  1.33710E-04  1.42735E-01  7.50861E-01
   16384000  1.27587E-04  1.12623E-01  9.05114E-01
   20480000  1.25413E-04  9.20198E-02  1.08534E+00
   24576000  1.23513E-04  7.81940E-02  1.25310E+00
   28672000  1.21075E-04  6.85713E-02  1.39594E+00
   32768000  1.21751E-04  6.06417E-02  1.56129E+00
   36864000  1.21730E-04  5.45376E-02  1.71559E+00
   40960000  1.21191E-04  4.95196E-02  1.87278E+00
   45056000  1.21770E-04  4.72438E-02  1.87096E+00
   45156320  1.21729E-04  4.71567E-02  1.87370E+00
tally  175    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.51602E-05 0.0802
tfc   12       1       1       1       1       1       1       1       1
    4096000  1.35178E-04  4.81540E-01  1.97983E-01
    8192000  1.00126E-04  3.25381E-01  2.16735E-01
   12288000  9.05419E-05  2.40164E-01  2.65221E-01
   16384000  8.41542E-05  1.93976E-01  3.05113E-01
   20480000  8.14772E-05  1.60484E-01  3.56832E-01
   24576000  7.93050E-05  1.37561E-01  4.04892E-01
   28672000  7.71954E-05  1.21248E-01  4.46475E-01
   32768000  7.66635E-05  1.07056E-01  5.00960E-01
   36864000  7.64337E-05  9.59238E-02  5.54566E-01
   40960000  7.57519E-05  8.72141E-02  6.03764E-01
   45056000  7.51880E-05  8.03755E-02  6.46410E-01
   45156320  7.51602E-05  8.02276E-02  6.47350E-01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.97009E-05 0.0786
tfc   12       1       1       1       1       1       1       1       1
    4096000  8.95425E-05  4.71977E-01  2.06087E-01
    8192000  6.63936E-05  3.18596E-01  2.26065E-01
   12288000  6.00487E-05  2.35125E-01  2.76710E-01
   16384000  5.57268E-05  1.90184E-01  3.17400E-01
   20480000  5.41403E-05  1.56893E-01  3.73353E-01
   24576000  5.26810E-05  1.34527E-01  4.23365E-01
   28672000  5.12658E-05  1.18607E-01  4.66586E-01
   32768000  5.09062E-05  1.04733E-01  5.23432E-01
   36864000  5.08375E-05  9.38458E-02  5.79397E-01
   40960000  5.04067E-05  8.52901E-02  6.31312E-01
   45056000  4.97181E-05  7.87610E-02  6.73182E-01
   45156320  4.97009E-05  7.86144E-02  6.74191E-01
mcnp       5     11/04/10 23:52:47     5    26674004     5209439414
```

Case 73

```
 Case 73
```

```
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.49531E-03 0.0269
tfc   14        1        1        1        1        1        1        1        1
    2048000  3.48060E-03  9.54836E-02  5.96580E+00
    4096000  3.37535E-03  6.07472E-02  7.37006E+00
    6144000  3.43718E-03  5.47318E-02  6.04786E+00
    8192000  3.37607E-03  4.71946E-02  6.10120E+00
   10240000  3.59330E-03  4.46239E-02  5.46154E+00
   12288000  3.58275E-03  4.00488E-02  5.65216E+00
   14336000  3.54434E-03  3.62750E-02  5.90459E+00
   16384000  3.46070E-03  3.35104E-02  6.05238E+00
   18432000  3.48141E-03  3.11527E-02  6.22314E+00
   20480000  3.42436E-03  2.92196E-02  6.36669E+00
   22528000  3.41025E-03  2.89423E-02  5.89746E+00
   24576000  3.46787E-03  2.80023E-02  5.77229E+00
   26624000  3.49209E-03  2.69817E-02  5.73414E+00
   26674004  3.49531E-03  2.69320E-02  5.74435E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.27977E-03 0.0317
tfc   14        1        1        1        1        1        1        1        1
    2048000  2.15625E-03  7.75770E-02  9.03776E+00
    4096000  2.45978E-03  1.29895E-01  1.61191E+00
    6144000  2.40739E-03  9.47424E-02  2.01833E+00
    8192000  2.30721E-03  7.62925E-02  2.33472E+00
   10240000  2.35976E-03  6.18248E-02  2.84527E+00
   12288000  2.39924E-03  5.64032E-02  2.84961E+00
   14336000  2.35386E-03  5.00074E-02  3.10696E+00
   16384000  2.29834E-03  4.53013E-02  3.31180E+00
   18432000  2.31564E-03  4.23127E-02  3.37334E+00
   20480000  2.28336E-03  3.90647E-02  3.56198E+00
```

```
   22528000  2.25865E-03  3.63057E-02  3.74783E+00
   24576000  2.27810E-03  3.37933E-02  3.96346E+00
   26624000  2.27787E-03  3.17637E-02  4.13757E+00
   26674004  2.27977E-03  3.16932E-02  4.14807E+00
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.30260E-03 0.0253
tfc   14       1       1       1       1       1       1       1       1
    2048000  1.21257E-03  6.69931E-02  1.21190E+01
    4096000  1.50754E-03  1.05603E-01  2.43879E+00
    6144000  1.41914E-03  7.86707E-02  2.92722E+00
    8192000  1.34276E-03  6.35356E-02  3.36640E+00
   10240000  1.36388E-03  5.21307E-02  4.00186E+00
   12288000  1.35482E-03  4.49338E-02  4.49002E+00
   14336000  1.33296E-03  3.99541E-02  4.86722E+00
   16384000  1.30702E-03  3.61575E-02  5.19861E+00
   18432000  1.30151E-03  3.28964E-02  5.58089E+00
   20480000  1.29287E-03  3.04908E-02  5.84687E+00
   22528000  1.28947E-03  2.84459E-02  6.10510E+00
   24576000  1.30014E-03  2.67011E-02  6.34857E+00
   26624000  1.30139E-03  2.53339E-02  6.50432E+00
   26674004  1.30260E-03  2.52832E-02  6.51799E+00
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.64773E-04 0.0182
tfc   14       1       1       1       1       1       1       1       1
    2048000  5.51857E-04  6.55845E-02  1.26452E+01
    4096000  5.73324E-04  4.75596E-02  1.20240E+01
    6144000  5.60009E-04  3.81307E-02  1.24604E+01
    8192000  5.45017E-04  3.18007E-02  1.34378E+01
   10240000  5.59731E-04  2.88431E-02  1.30727E+01
   12288000  5.64918E-04  2.68409E-02  1.25834E+01
   14336000  5.61247E-04  2.44009E-02  1.30495E+01
   16384000  5.54366E-04  2.23812E-02  1.35680E+01
```

```
   18432000  5.53805E-04  2.06838E-02  1.41169E+01
   20480000  5.54583E-04  2.02624E-02  1.32397E+01
   22528000  5.55597E-04  1.95590E-02  1.29133E+01
   24576000  5.62552E-04  1.89509E-02  1.26030E+01
   26624000  5.64140E-04  1.82709E-02  1.25051E+01
   26674004  5.64773E-04  1.82490E-02  1.25113E+01
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.98579E-04 0.0181
tfc   14       1       1       1       1       1       1       1       1
    2048000  2.17665E-04  1.13347E-01  4.23357E+00
    4096000  2.08457E-04  6.35367E-02  6.73712E+00
    6144000  2.00897E-04  4.72076E-02  8.12937E+00
    8192000  1.95845E-04  3.82163E-02  9.30469E+00
   10240000  1.99387E-04  3.23374E-02  1.04001E+01
   12288000  1.99399E-04  2.84509E-02  1.11995E+01
   14336000  1.97470E-04  2.55073E-02  1.19420E+01
   16384000  1.95347E-04  2.32673E-02  1.25543E+01
   18432000  1.96182E-04  2.16618E-02  1.28710E+01
   20480000  1.95491E-04  2.02603E-02  1.32425E+01
   22528000  1.95299E-04  1.91014E-02  1.35394E+01
   24576000  1.97037E-04  1.82143E-02  1.36429E+01
   26624000  1.98345E-04  1.81064E-02  1.27334E+01
   26674004  1.98579E-04  1.80838E-02  1.27409E+01
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.01354E-04 0.0303
tfc   14       1       1       1       1       1       1       1       1
    2048000  1.30699E-04  2.65780E-01  7.69982E-01
    4096000  1.16125E-04  1.51080E-01  1.19155E+00
    6144000  1.08636E-04  1.08833E-01  1.52955E+00
    8192000  1.04219E-04  8.57937E-02  1.84624E+00
   10240000  1.04747E-04  6.91916E-02  2.27166E+00
   12288000  1.03982E-04  5.86976E-02  2.63119E+00
```

```
   14336000  1.02494E-04  5.14263E-02  2.93788E+00
   16384000  1.00936E-04  4.59894E-02  3.21343E+00
   18432000  1.00710E-04  4.12787E-02  3.54444E+00
   20480000  1.00901E-04  3.83309E-02  3.69967E+00
   22528000  1.00717E-04  3.52579E-02  3.97391E+00
   24576000  1.01236E-04  3.25436E-02  4.27369E+00
   26624000  1.01238E-04  3.03411E-02  4.53465E+00
   26674004  1.01354E-04  3.02683E-02  4.54780E+00
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.23681E-05 0.0507
tfc   14       1       1       1       1       1       1       1       1
    2048000  9.66226E-05  4.08611E-01  3.25766E-01
    4096000  8.07966E-05  2.46341E-01  4.48179E-01
    6144000  7.26339E-05  1.83264E-01  5.39421E-01
    8192000  6.82381E-05  1.46672E-01  6.31693E-01
   10240000  6.71798E-05  1.19564E-01  7.60759E-01
   12288000  6.60600E-05  1.01645E-01  8.77449E-01
   14336000  6.46336E-05  8.92411E-02  9.75607E-01
   16384000  6.32920E-05  7.98944E-02  1.06476E+00
   18432000  6.28333E-05  7.16968E-02  1.17490E+00
   20480000  6.25312E-05  6.51855E-02  1.27926E+00
   22528000  6.23063E-05  5.96860E-02  1.38671E+00
   24576000  6.24772E-05  5.47778E-02  1.50843E+00
   26624000  6.23025E-05  5.08608E-02  1.61377E+00
   26674004  6.23681E-05  5.07224E-02  1.61949E+00
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.18400E-05 0.0505
tfc   14       1       1       1       1       1       1       1       1
    2048000  6.36544E-05  4.01058E-01  3.38153E-01
    4096000  5.54483E-05  2.39684E-01  4.73418E-01
    6144000  4.94600E-05  1.79716E-01  5.60929E-01
    8192000  4.63503E-05  1.44245E-01  6.53125E-01
```

```
   10240000  4.54379E-05  1.18087E-01  7.79913E-01
   12288000  4.45760E-05  1.00625E-01  8.95322E-01
   14336000  4.35421E-05  8.84864E-02  9.92320E-01
   16384000  4.25904E-05  7.93070E-02  1.08059E+00
   18432000  4.22257E-05  7.12628E-02  1.18925E+00
   20480000  4.20041E-05  6.47855E-02  1.29511E+00
   22528000  4.18485E-05  5.93497E-02  1.40247E+00
   24576000  4.19538E-05  5.44862E-02  1.52462E+00
   26624000  4.17972E-05  5.06307E-02  1.62847E+00
   26674004  4.18400E-05  5.04943E-02  1.63416E+00
mcnp       5     11/04/10 15:50:13     5    41988995     4893399487
```

Case 74

```
 Case 74
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.92293E-03 0.0267
tfc   11       1       1       1       1       1       1       1       1
    4096000  1.89707E-03  7.67158E-02  7.21536E+00
    8192000  1.79896E-03  5.63419E-02  6.69493E+00
   12288000  1.92881E-03  5.07934E-02  5.50231E+00
   16384000  1.90727E-03  4.30876E-02  5.73295E+00
   20480000  1.89651E-03  3.76602E-02  6.00664E+00
   24576000  1.93429E-03  3.43761E-02  6.01141E+00
   28672000  1.94293E-03  3.27478E-02  5.68230E+00
   32768000  1.94040E-03  3.04143E-02  5.76740E+00
   36864000  1.95733E-03  2.87083E-02  5.75510E+00
   40960000  1.92505E-03  2.70490E-02  5.83656E+00
   41988995  1.92293E-03  2.66884E-02  5.84946E+00
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.24541E-03 0.0248
tfc   11        1        1        1        1        1        1        1        1
    4096000  1.24900E-03  6.61614E-02  9.70107E+00
    8192000  1.19343E-03  5.53866E-02  6.92787E+00
   12288000  1.23586E-03  4.43930E-02  7.20329E+00
   16384000  1.22274E-03  3.75659E-02  7.54215E+00
   20480000  1.22157E-03  3.32145E-02  7.72222E+00
   24576000  1.25239E-03  3.07791E-02  7.49853E+00
   28672000  1.25943E-03  3.13002E-02  6.22003E+00
   32768000  1.26507E-03  2.90099E-02  6.33932E+00
   36864000  1.26839E-03  2.68657E-02  6.57163E+00
   40960000  1.24807E-03  2.51872E-02  6.73133E+00
   41988995  1.24541E-03  2.48388E-02  6.75302E+00
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.10121E-04 0.0204
tfc   11        1        1        1        1        1        1        1        1
    4096000  7.36361E-04  6.26869E-02  1.08062E+01
    8192000  7.04684E-04  5.00406E-02  8.48720E+00
   12288000  7.13924E-04  3.91638E-02  9.25530E+00
   16384000  7.08572E-04  3.41762E-02  9.11245E+00
   20480000  7.04200E-04  2.94595E-02  9.81626E+00
   24576000  7.22071E-04  2.72362E-02  9.57629E+00
   28672000  7.14783E-04  2.49908E-02  9.75728E+00
   32768000  7.16535E-04  2.31172E-02  9.98310E+00
   36864000  7.18384E-04  2.16939E-02  1.00784E+01
   40960000  7.11018E-04  2.05878E-02  1.00748E+01
   41988995  7.10121E-04  2.04166E-02  9.99518E+00
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.23754E-04 0.0252
tfc   11        1        1        1        1        1        1        1        1
    4096000  3.35059E-04  6.14025E-02  1.12630E+01
    8192000  3.08800E-04  4.21410E-02  1.19674E+01
```

```
   12288000  3.19214E-04  3.63265E-02  1.07575E+01
   16384000  3.17366E-04  3.24453E-02  1.01106E+01
   20480000  3.15996E-04  2.78473E-02  1.09857E+01
   24576000  3.22331E-04  2.62866E-02  1.02806E+01
   28672000  3.19383E-04  2.40673E-02  1.05204E+01
   32768000  3.19192E-04  2.21414E-02  1.08824E+01
   36864000  3.22942E-04  2.31527E-02  8.84842E+00
   40960000  3.23647E-04  2.53732E-02  6.63299E+00
   41988995  3.23754E-04  2.51650E-02  6.57909E+00
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.20479E-04 0.0658
tfc   11       1       1       1       1       1       1       1
    4096000  1.16296E-04  5.42934E-02  1.44057E+01
    8192000  1.08399E-04  3.99684E-02  1.33038E+01
   12288000  1.15853E-04  4.48864E-02  7.04579E+00
   16384000  1.14592E-04  3.70422E-02  7.75692E+00
   20480000  1.13708E-04  3.12094E-02  8.74634E+00
   24576000  1.14504E-04  2.73681E-02  9.48416E+00
   28672000  1.13164E-04  2.46104E-02  1.00612E+01
   32768000  1.12882E-04  2.24898E-02  1.05479E+01
   36864000  1.21518E-04  7.37173E-02  8.72830E-01
   40960000  1.20669E-04  6.71881E-02  9.45965E-01
   41988995  1.20479E-04  6.58010E-02  9.62266E-01
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.86975E-05 0.0439
tfc   11       1       1       1       1       1       1       1
    4096000  5.71583E-05  4.90563E-02  1.76457E+01
    8192000  5.34401E-05  3.51822E-02  1.71697E+01
   12288000  5.58501E-05  3.18033E-02  1.40351E+01
   16384000  5.62266E-05  2.97177E-02  1.20519E+01
   20480000  5.62508E-05  2.56419E-02  1.29568E+01
   24576000  5.68225E-05  2.29956E-02  1.34338E+01
```

```
   28672000  5.61384E-05  2.08484E-02  1.40198E+01
   32768000  5.61179E-05  1.92932E-02  1.43327E+01
   36864000  5.89797E-05  4.89314E-02  1.98104E+00
   40960000  5.87282E-05  4.47750E-02  2.13004E+00
   41988995  5.86975E-05  4.39445E-02  2.15749E+00
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.44430E-05 0.0308
tfc   11       1       1       1       1       1       1       1       1
    4096000  3.39613E-05  4.76262E-02  1.87213E+01
    8192000  3.18028E-05  3.38896E-02  1.85044E+01
   12288000  3.27614E-05  2.79592E-02  1.81597E+01
   16384000  3.31221E-05  2.65696E-02  1.50769E+01
   20480000  3.33348E-05  2.35177E-02  1.54031E+01
   24576000  3.37571E-05  2.13852E-02  1.55332E+01
   28672000  3.33786E-05  1.94655E-02  1.60827E+01
   32768000  3.33977E-05  1.81478E-02  1.61991E+01
   36864000  3.46876E-05  3.39981E-02  4.10354E+00
   40960000  3.44424E-05  3.12258E-02  4.37957E+00
   41988995  3.44430E-05  3.08333E-02  4.38248E+00
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.25937E-05 0.0251
tfc   11       1       1       1       1       1       1       1       1
    4096000  2.26897E-05  4.77344E-02  1.86365E+01
    8192000  2.12373E-05  3.39883E-02  1.83972E+01
   12288000  2.17685E-05  2.76191E-02  1.86097E+01
   16384000  2.18470E-05  2.46632E-02  1.74979E+01
   20480000  2.20605E-05  2.22896E-02  1.71472E+01
   24576000  2.24021E-05  2.05934E-02  1.67508E+01
   28672000  2.21590E-05  1.87898E-02  1.72601E+01
   32768000  2.21504E-05  1.75109E-02  1.73987E+01
   36864000  2.27368E-05  2.72682E-02  6.37904E+00
   40960000  2.25776E-05  2.51534E-02  6.74945E+00
```

```
   41988995  2.25937E-05  2.50947E-02  6.61601E+00
mcnp       5     11/04/10 19:51:04     2    12232206      254635296
```

Case 75

```
 Case 75
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.58734E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.59077E+01  2.19663E-03  1.24134E+05
    2048000  3.58721E+01  1.47345E-03  1.37923E+05
    3072000  3.58672E+01  1.19291E-03  1.40282E+05
    4096000  3.58580E+01  9.78888E-04  1.56180E+05
    5120000  3.58816E+01  8.45622E-04  1.67229E+05
    6144000  3.58683E+01  7.55705E-04  1.74409E+05
    7168000  3.58774E+01  6.86774E-04  1.80914E+05
    8192000  3.58899E+01  6.43825E-04  1.80040E+05
    9216000  3.58915E+01  6.08005E-04  1.79441E+05
   10240000  3.58794E+01  5.71344E-04  1.82907E+05
   11264000  3.58746E+01  5.39164E-04  1.86758E+05
   12232206  3.58734E+01  5.20089E-04  1.84807E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.39025E+01 0.0010
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.38711E+01  1.31699E-03  3.45337E+05
    2048000  2.38631E+01  9.70670E-04  3.17807E+05
    3072000  2.38674E+01  8.60869E-04  2.69366E+05
    4096000  2.38737E+01  7.74392E-04  2.49557E+05
    5120000  2.38839E+01  6.69343E-04  2.66911E+05
    6144000  2.38793E+01  6.04901E-04  2.72210E+05
```

```
    7168000  2.38807E+01  5.49723E-04  2.82365E+05
    8192000  2.38854E+01  5.06439E-04  2.90971E+05
    9216000  2.38877E+01  4.87364E-04  2.79272E+05
   10240000  2.39118E+01  1.21459E-03  4.04734E+04
   11264000  2.39077E+01  1.11114E-03  4.39728E+04
   12232206  2.39025E+01  1.02846E-03  4.72605E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.46351E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.46273E+01  1.20895E-03  4.09814E+05
    2048000  1.46268E+01  1.09640E-03  2.49100E+05
    3072000  1.46316E+01  9.10214E-04  2.40951E+05
    4096000  1.46321E+01  7.77285E-04  2.47703E+05
    5120000  1.46364E+01  6.59505E-04  2.74933E+05
    6144000  1.46332E+01  5.85772E-04  2.90279E+05
    7168000  1.46311E+01  5.24654E-04  3.09994E+05
    8192000  1.46338E+01  4.79924E-04  3.24010E+05
    9216000  1.46374E+01  4.85679E-04  2.81214E+05
   10240000  1.46361E+01  4.59811E-04  2.82401E+05
   11264000  1.46375E+01  4.44738E-04  2.74481E+05
   12232206  1.46351E+01  4.18560E-04  2.85337E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.03722E+00 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  7.04109E+00  1.35550E-03  3.25990E+05
    2048000  7.03494E+00  8.53994E-04  4.10581E+05
    3072000  7.03397E+00  6.56564E-04  4.63087E+05
    4096000  7.03383E+00  5.55552E-04  4.84889E+05
    5120000  7.03586E+00  4.89564E-04  4.98935E+05
    6144000  7.03486E+00  4.41472E-04  5.11053E+05
    7168000  7.03504E+00  4.16990E-04  4.90737E+05
    8192000  7.03632E+00  3.85239E-04  5.02856E+05
```

```
    9216000  7.03601E+00  3.60869E-04  5.09374E+05
   10240000  7.03524E+00  3.43264E-04  5.06722E+05
   11264000  7.03801E+00  4.76556E-04  2.39053E+05
   12232206  7.03722E+00  4.45854E-04  2.51471E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.67397E+00 0.0005
tfc   12       1       1       1       1       1       1       1
    1024000  2.67289E+00  1.07949E-03  5.14008E+05
    2048000  2.67219E+00  7.71563E-04  5.02996E+05
    3072000  2.67122E+00  5.92376E-04  5.68881E+05
    4096000  2.67478E+00  1.09479E-03  1.24861E+05
    5120000  2.67549E+00  9.31474E-04  1.37823E+05
    6144000  2.67638E+00  8.74890E-04  1.30127E+05
    7168000  2.67597E+00  8.00819E-04  1.33055E+05
    8192000  2.67589E+00  7.17695E-04  1.44885E+05
    9216000  2.67532E+00  6.46126E-04  1.58891E+05
   10240000  2.67482E+00  5.92742E-04  1.69939E+05
   11264000  2.67425E+00  5.46851E-04  1.81544E+05
   12232206  2.67397E+00  5.09699E-04  1.92418E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.39026E+00 0.0006
tfc   12       1       1       1       1       1       1       1
    1024000  1.38799E+00  8.84138E-04  7.66240E+05
    2048000  1.38843E+00  6.52925E-04  7.02395E+05
    3072000  1.38847E+00  5.39047E-04  6.87010E+05
    4096000  1.38974E+00  7.21274E-04  2.87667E+05
    5120000  1.38976E+00  6.05074E-04  3.26623E+05
    6144000  1.38975E+00  5.46206E-04  3.33856E+05
    7168000  1.38941E+00  4.89549E-04  3.56047E+05
    8192000  1.38968E+00  4.84333E-04  3.18139E+05
    9216000  1.38948E+00  4.43184E-04  3.37728E+05
   10240000  1.38939E+00  4.13519E-04  3.49168E+05
```

```
   11264000  1.39007E+00  6.81820E-04  1.16784E+05
   12232206  1.39026E+00  6.44022E-04  1.20524E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.47783E-01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  8.48124E-01  1.20354E-03  4.13511E+05
    2048000  8.47819E-01  7.71315E-04  5.03320E+05
    3072000  8.47779E-01  6.10411E-04  5.35762E+05
    4096000  8.47972E-01  6.37758E-04  3.67942E+05
    5120000  8.48083E-01  5.56295E-04  3.86415E+05
    6144000  8.47788E-01  4.89642E-04  4.15447E+05
    7168000  8.47526E-01  4.39271E-04  4.42215E+05
    8192000  8.47740E-01  4.09066E-04  4.45982E+05
    9216000  8.47760E-01  3.84772E-04  4.48053E+05
   10240000  8.47618E-01  3.61113E-04  4.57868E+05
   11264000  8.47775E-01  4.31309E-04  2.91840E+05
   12232206  8.47783E-01  4.06228E-04  3.02924E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.70383E-01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  5.71426E-01  1.95300E-03  1.57036E+05
    2048000  5.70601E-01  1.10225E-03  2.46460E+05
    3072000  5.71354E-01  1.14043E-03  1.53490E+05
    4096000  5.70894E-01  8.99398E-04  1.85007E+05
    5120000  5.70831E-01  7.48802E-04  2.13270E+05
    6144000  5.70472E-01  6.41928E-04  2.41713E+05
    7168000  5.70259E-01  5.65970E-04  2.66387E+05
    8192000  5.70418E-01  5.30254E-04  2.65421E+05
    9216000  5.70470E-01  4.97108E-04  2.68432E+05
   10240000  5.70439E-01  4.92398E-04  2.46260E+05
   11264000  5.70433E-01  4.75986E-04  2.39626E+05
   12232206  5.70383E-01  4.46581E-04  2.50653E+05
```

```
mcnp        5      11/04/10 20:11:11      2     12287285       279207032
```

Case 76

```
 Case 76
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.19996E+02 0.0006
tfc   12        1        1        1        1        1        1        1        1
    1024000  4.20949E+02  2.69456E-03  8.26244E+04
    2048000  4.19540E+02  1.63583E-03  1.12154E+05
    3072000  4.19582E+02  1.36068E-03  1.08051E+05
    4096000  4.19759E+02  1.11932E-03  1.19766E+05
    5120000  4.20196E+02  9.70642E-04  1.27397E+05
    6144000  4.19862E+02  8.68098E-04  1.32694E+05
    7168000  4.19987E+02  7.89104E-04  1.37674E+05
    8192000  4.20133E+02  7.43380E-04  1.35708E+05
    9216000  4.20161E+02  7.04752E-04  1.34231E+05
   10240000  4.20055E+02  6.61918E-04  1.36933E+05
   11264000  4.19961E+02  6.24560E-04  1.39760E+05
   12287285  4.19996E+02  6.02707E-04  1.37537E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.79971E+02 0.0008
tfc   12        1        1        1        1        1        1        1        1
    1024000  2.79784E+02  1.56284E-03  2.45613E+05
    2048000  2.79234E+02  1.09824E-03  2.48825E+05
    3072000  2.79313E+02  1.00789E-03  1.96933E+05
    4096000  2.79730E+02  1.02512E-03  1.42790E+05
    5120000  2.79912E+02  8.79285E-04  1.55245E+05
    6144000  2.79825E+02  8.15659E-04  1.50304E+05
    7168000  2.79837E+02  7.37136E-04  1.57771E+05
```

```
    8192000  2.79860E+02  6.71462E-04  1.66335E+05
    9216000  2.79925E+02  6.69975E-04  1.48527E+05
   10240000  2.80067E+02  8.92534E-04  7.53126E+04
   11264000  2.80024E+02  8.32706E-04  7.86224E+04
   12287285  2.79971E+02  7.73325E-04  8.35424E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.71353E+02 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.71460E+02  1.46292E-03  2.80310E+05
    2048000  1.71099E+02  9.93958E-04  3.03777E+05
    3072000  1.71198E+02  9.43923E-04  2.24528E+05
    4096000  1.71311E+02  8.38277E-04  2.13535E+05
    5120000  1.71412E+02  7.22833E-04  2.29721E+05
    6144000  1.71324E+02  6.40250E-04  2.43943E+05
    7168000  1.71297E+02  5.78436E-04  2.56219E+05
    8192000  1.71328E+02  5.32984E-04  2.63997E+05
    9216000  1.71351E+02  5.13443E-04  2.52894E+05
   10240000  1.71347E+02  4.88611E-04  2.51299E+05
   11264000  1.71358E+02  4.81339E-04  2.35303E+05
   12287285  1.71353E+02  4.55789E-04  2.40494E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.23428E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  8.23868E+01  1.18817E-03  4.24941E+05
    2048000  8.22425E+01  8.42703E-04  4.22612E+05
    3072000  8.22590E+01  6.90389E-04  4.19715E+05
    4096000  8.23147E+01  6.07010E-04  4.07241E+05
    5120000  8.23581E+01  5.43521E-04  4.06297E+05
    6144000  8.23364E+01  4.96573E-04  4.05529E+05
    7168000  8.23326E+01  4.67194E-04  3.92759E+05
    8192000  8.23470E+01  4.35589E-04  3.95251E+05
    9216000  8.23434E+01  4.10446E-04  3.95741E+05
```

```
   10240000  8.23378E+01  3.89545E-04  3.95369E+05
   11264000  8.23356E+01  3.84503E-04  3.68749E+05
   12287285  8.23428E+01  3.68533E-04  3.67856E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.13008E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.13557E+01  2.02695E-03  1.46015E+05
    2048000  3.12698E+01  1.19517E-03  2.10101E+05
    3072000  3.12704E+01  9.53806E-04  2.19899E+05
    4096000  3.13373E+01  1.46490E-03  6.99239E+04
    5120000  3.13470E+01  1.21253E-03  8.16384E+04
    6144000  3.13516E+01  1.12712E-03  7.87127E+04
    7168000  3.13331E+01  9.81012E-04  8.90784E+04
    8192000  3.13272E+01  8.70593E-04  9.89458E+04
    9216000  3.13173E+01  7.84005E-04  1.08464E+05
   10240000  3.13117E+01  7.19419E-04  1.15919E+05
   11264000  3.13030E+01  6.64258E-04  1.23554E+05
   12287285  3.13008E+01  6.16059E-04  1.31640E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.62719E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.62515E+01  1.08655E-03  5.08143E+05
    2048000  1.62372E+01  8.09138E-04  4.58401E+05
    3072000  1.62424E+01  6.75105E-04  4.38935E+05
    4096000  1.62695E+01  9.09963E-04  1.81216E+05
    5120000  1.62708E+01  7.64860E-04  2.05169E+05
    6144000  1.62727E+01  7.84728E-04  1.62387E+05
    7168000  1.62649E+01  6.91216E-04  1.79429E+05
    8192000  1.62732E+01  7.72550E-04  1.25653E+05
    9216000  1.62682E+01  6.98406E-04  1.36681E+05
   10240000  1.62683E+01  6.43119E-04  1.45056E+05
   11264000  1.62646E+01  6.03654E-04  1.49608E+05
```

```
   12287285  1.62719E+01  6.29569E-04  1.26050E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.91954E+00 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  9.93788E+00  1.56690E-03  2.44345E+05
    2048000  9.91517E+00  9.73257E-04  3.16837E+05
    3072000  9.91700E+00  7.67465E-04  3.39646E+05
    4096000  9.92618E+00  8.30793E-04  2.17399E+05
    5120000  9.92792E+00  7.10710E-04  2.37625E+05
    6144000  9.92231E+00  6.19526E-04  2.60537E+05
    7168000  9.91826E+00  5.55449E-04  2.77865E+05
    8192000  9.92090E+00  5.21704E-04  2.75536E+05
    9216000  9.92086E+00  4.90416E-04  2.77201E+05
   10240000  9.92032E+00  4.60303E-04  2.83158E+05
   11264000  9.91806E+00  4.31551E-04  2.92729E+05
   12287285  9.91954E+00  4.11743E-04  2.94699E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.67479E+00 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.67667E+00  1.39730E-03  3.07260E+05
    2048000  6.66603E+00  9.71234E-04  3.18158E+05
    3072000  6.67918E+00  1.26265E-03  1.25480E+05
    4096000  6.68066E+00  1.08540E-03  1.27370E+05
    5120000  6.68060E+00  9.05769E-04  1.46299E+05
    6144000  6.67633E+00  7.86102E-04  1.61820E+05
    7168000  6.67382E+00  7.14355E-04  1.67994E+05
    8192000  6.67513E+00  6.66306E-04  1.68919E+05
    9216000  6.67538E+00  6.23239E-04  1.71638E+05
   10240000  6.67555E+00  6.18051E-04  1.57061E+05
   11264000  6.67488E+00  5.86531E-04  1.58471E+05
   12287285  6.67479E+00  5.48607E-04  1.66000E+05
mcnp       5     11/04/10 20:31:17     2    12198648      272968415
```

Case 77

```
 Case 77
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.85979E+02 0.0006
tfc   12        1        1        1        1        1        1        1        1
    1024000  2.86518E+02  2.54101E-03  9.24498E+04
    2048000  2.85675E+02  1.55881E-03  1.22754E+05
    3072000  2.85679E+02  1.29736E-03  1.18143E+05
    4096000  2.85744E+02  1.06850E-03  1.30592E+05
    5120000  2.86049E+02  9.27595E-04  1.38586E+05
    6144000  2.85883E+02  8.30684E-04  1.43901E+05
    7168000  2.85971E+02  7.56205E-04  1.48864E+05
    8192000  2.86074E+02  7.12475E-04  1.46657E+05
    9216000  2.86093E+02  6.75342E-04  1.45078E+05
   10240000  2.86027E+02  6.34811E-04  1.47726E+05
   11264000  2.85960E+02  5.99202E-04  1.50750E+05
   12198648  2.85979E+02  5.80625E-04  1.48199E+05
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.90501E+02 0.0007
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.90452E+02  1.49663E-03  2.66495E+05
    2048000  1.90171E+02  1.07129E-03  2.59897E+05
    3072000  1.90201E+02  9.71276E-04  2.10786E+05
    4096000  1.90331E+02  8.73215E-04  1.95536E+05
    5120000  1.90453E+02  7.55062E-04  2.09156E+05
    6144000  1.90378E+02  6.80149E-04  2.14648E+05
    7168000  1.90412E+02  6.24789E-04  2.18073E+05
    8192000  1.90446E+02  5.75440E-04  2.24823E+05
```

```
    9216000  1.90463E+02  5.55783E-04  2.14210E+05
   10240000  1.90565E+02  7.96658E-04  9.37996E+04
   11264000  1.90524E+02  7.37324E-04  9.95603E+04
   12198648  1.90501E+02  6.90401E-04  1.04817E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.16670E+02 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.16728E+02  1.39599E-03  3.06303E+05
    2048000  1.16549E+02  1.00577E-03  2.94864E+05
    3072000  1.16598E+02  9.25473E-04  2.32166E+05
    4096000  1.16651E+02  8.14240E-04  2.24887E+05
    5120000  1.16707E+02  6.98466E-04  2.44424E+05
    6144000  1.16662E+02  6.18712E-04  2.59393E+05
    7168000  1.16643E+02  5.58613E-04  2.72801E+05
    8192000  1.16670E+02  5.14390E-04  2.81356E+05
    9216000  1.16681E+02  4.94303E-04  2.70808E+05
   10240000  1.16676E+02  4.70570E-04  2.68841E+05
   11264000  1.16679E+02  4.62613E-04  2.52911E+05
   12198648  1.16670E+02  4.38564E-04  2.59759E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.61019E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  5.61029E+01  1.13907E-03  4.60059E+05
    2048000  5.60141E+01  8.09112E-04  4.55618E+05
    3072000  5.60236E+01  6.63221E-04  4.52075E+05
    4096000  5.60552E+01  5.83455E-04  4.37981E+05
    5120000  5.60788E+01  5.20673E-04  4.39850E+05
    6144000  5.60702E+01  4.76657E-04  4.37041E+05
    7168000  5.60667E+01  4.47807E-04  4.24509E+05
    8192000  5.60808E+01  4.18236E-04  4.25598E+05
    9216000  5.60779E+01  3.93792E-04  4.26693E+05
   10240000  5.60755E+01  3.77483E-04  4.17782E+05
```

```
   11264000  5.60719E+01  3.71433E-04  3.92322E+05
   12198648  5.61019E+01  6.02518E-04  1.37625E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.13149E+01 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.13035E+01  1.10769E-03  4.86495E+05
    2048000  2.12745E+01  8.21286E-04  4.42210E+05
    3072000  2.12947E+01  1.02869E-03  1.87912E+05
    4096000  2.13422E+01  1.47633E-03  6.84078E+04
    5120000  2.13479E+01  1.21912E-03  8.02311E+04
    6144000  2.13496E+01  1.11832E-03  7.93964E+04
    7168000  2.13377E+01  9.71277E-04  9.02364E+04
    8192000  2.13348E+01  8.61359E-04  1.00340E+05
    9216000  2.13284E+01  7.75054E-04  1.10150E+05
   10240000  2.13242E+01  7.10118E-04  1.18055E+05
   11264000  2.13166E+01  6.52990E-04  1.26938E+05
   12198648  2.13149E+01  6.09140E-04  1.34649E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.10753E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.10643E+01  1.02385E-03  5.69438E+05
    2048000  1.10552E+01  7.60080E-04  5.16296E+05
    3072000  1.10580E+01  6.34951E-04  4.93226E+05
    4096000  1.10735E+01  8.50439E-04  2.06150E+05
    5120000  1.10763E+01  7.16614E-04  2.32201E+05
    6144000  1.10790E+01  7.39771E-04  1.81443E+05
    7168000  1.10753E+01  6.56442E-04  1.97549E+05
    8192000  1.10768E+01  5.93740E-04  2.11178E+05
    9216000  1.10742E+01  5.41317E-04  2.25811E+05
   10240000  1.10759E+01  5.17902E-04  2.21947E+05
   11264000  1.10735E+01  4.91869E-04  2.23720E+05
   12198648  1.10753E+01  4.82590E-04  2.14526E+05
```

```
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.75509E+00 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.76677E+00  1.53860E-03  2.52154E+05
    2048000  6.75545E+00  1.05689E-03  2.67028E+05
    3072000  6.75445E+00  8.02100E-04  3.09079E+05
    4096000  6.75950E+00  8.10338E-04  2.27058E+05
    5120000  6.76034E+00  6.88169E-04  2.51794E+05
    6144000  6.75766E+00  6.03271E-04  2.72841E+05
    7168000  6.75519E+00  5.40623E-04  2.91258E+05
    8192000  6.75698E+00  4.98227E-04  2.99907E+05
    9216000  6.75708E+00  4.68269E-04  3.01757E+05
   10240000  6.75642E+00  4.38964E-04  3.08948E+05
   11264000  6.75486E+00  4.11946E-04  3.18950E+05
   12198648  6.75509E+00  3.92074E-04  3.25012E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.54473E+00 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  4.54521E+00  1.22368E-03  3.98640E+05
    2048000  4.53845E+00  8.68152E-04  3.95755E+05
    3072000  4.55050E+00  1.38821E-03  1.03184E+05
    4096000  4.54853E+00  1.08882E-03  1.25764E+05
    5120000  4.54915E+00  9.06861E-04  1.44995E+05
    6144000  4.54627E+00  7.77315E-04  1.64339E+05
    7168000  4.54394E+00  6.84148E-04  1.81873E+05
    8192000  4.54521E+00  6.36542E-04  1.83733E+05
    9216000  4.54551E+00  5.94708E-04  1.87086E+05
   10240000  4.54578E+00  5.89308E-04  1.71419E+05
   11264000  4.54488E+00  5.55037E-04  1.75695E+05
   12198648  4.54473E+00  5.21929E-04  1.83406E+05
mcnp       5     11/04/10 20:51:23     2    12166146      272243692
```

Case 78

```
 Case 78
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.95012E+03 0.0006
tfc   12        1        1        1        1        1        1        1        1
    1024000  3.95738E+03  2.54094E-03  9.23686E+04
    2048000  3.94576E+03  1.55876E-03  1.22741E+05
    3072000  3.94581E+03  1.29732E-03  1.18150E+05
    4096000  3.94671E+03  1.06847E-03  1.30641E+05
    5120000  3.95092E+03  9.27566E-04  1.38603E+05
    6144000  3.94862E+03  8.30658E-04  1.43502E+05
    7168000  3.94985E+03  7.56182E-04  1.48127E+05
    8192000  3.95126E+03  7.12454E-04  1.46062E+05
    9216000  3.95152E+03  6.75322E-04  1.44601E+05
   10240000  3.95061E+03  6.34792E-04  1.47337E+05
   11264000  3.94968E+03  5.99184E-04  1.50394E+05
   12166146  3.95012E+03  5.81595E-04  1.47799E+05
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.63129E+03 0.0007
tfc   12        1        1        1        1        1        1        1        1
    1024000  2.63051E+03  1.49659E-03  2.66260E+05
    2048000  2.62664E+03  1.07126E-03  2.59871E+05
    3072000  2.62705E+03  9.71246E-04  2.10799E+05
    4096000  2.62886E+03  8.73187E-04  1.95609E+05
    5120000  2.63054E+03  7.55037E-04  2.09182E+05
    6144000  2.62951E+03  6.80127E-04  2.14053E+05
    7168000  2.62998E+03  6.24769E-04  2.16995E+05
    8192000  2.63044E+03  5.75422E-04  2.23913E+05
    9216000  2.63067E+03  5.55765E-04  2.13506E+05
```

```
   10240000  2.63209E+03  7.96630E-04  9.35537E+04
   11264000  2.63151E+03  7.37299E-04  9.93263E+04
   12166146  2.63129E+03  6.91900E-04  1.04430E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.61149E+03 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.61224E+03  1.39595E-03  3.06036E+05
    2048000  1.60977E+03  1.00574E-03  2.94838E+05
    3072000  1.61045E+03  9.25442E-04  2.32182E+05
    4096000  1.61119E+03  8.14212E-04  2.24972E+05
    5120000  1.61196E+03  6.98442E-04  2.44456E+05
    6144000  1.61134E+03  6.18691E-04  2.58675E+05
    7168000  1.61108E+03  5.58594E-04  2.71453E+05
    8192000  1.61145E+03  5.14373E-04  2.80217E+05
    9216000  1.61161E+03  4.94287E-04  2.69919E+05
   10240000  1.61152E+03  4.70554E-04  2.68136E+05
   11264000  1.61157E+03  4.62597E-04  2.52317E+05
   12166146  1.61149E+03  4.39355E-04  2.58990E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.74891E+02 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  7.74891E+02  1.13903E-03  4.59662E+05
    2048000  7.73666E+02  8.09083E-04  4.55580E+05
    3072000  7.73796E+02  6.63196E-04  4.52109E+05
    4096000  7.74234E+02  5.83435E-04  4.38147E+05
    5120000  7.74561E+02  5.20655E-04  4.39908E+05
    6144000  7.74443E+02  4.76641E-04  4.35831E+05
    7168000  7.74394E+02  4.47791E-04  4.22414E+05
    8192000  7.74589E+02  4.18221E-04  4.23877E+05
    9216000  7.74548E+02  3.93778E-04  4.25294E+05
   10240000  7.74514E+02  3.77469E-04  4.16689E+05
   11264000  7.74465E+02  3.71419E-04  3.91401E+05
```

```
   12166146  7.74891E+02  6.03889E-04  1.37088E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.94404E+02 0.0006
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.94244E+02  1.10765E-03  4.86079E+05
    2048000  2.93843E+02  8.21242E-04  4.42189E+05
    3072000  2.94120E+02  1.02865E-03  1.87926E+05
    4096000  2.94778E+02  1.47628E-03  6.84336E+04
    5120000  2.94856E+02  1.21908E-03  8.02417E+04
    6144000  2.94880E+02  1.11828E-03  7.91768E+04
    7168000  2.94716E+02  9.71243E-04  8.97909E+04
    8192000  2.94676E+02  8.61328E-04  9.99342E+04
    9216000  2.94588E+02  7.75026E-04  1.09789E+05
   10240000  2.94530E+02  7.10093E-04  1.17745E+05
   11264000  2.94424E+02  6.52967E-04  1.26640E+05
   12166146  2.94404E+02  6.10534E-04  1.34120E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.52974E+02 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.52819E+02  1.02381E-03  5.68954E+05
    2048000  1.52694E+02  7.60031E-04  5.16282E+05
    3072000  1.52733E+02  6.34915E-04  4.93282E+05
    4096000  1.52946E+02  8.50406E-04  2.06230E+05
    5120000  1.52985E+02  7.16585E-04  2.32234E+05
    6144000  1.53023E+02  7.39743E-04  1.80942E+05
    7168000  1.52972E+02  6.56417E-04  1.96575E+05
    8192000  1.52993E+02  5.93717E-04  2.10326E+05
    9216000  1.52956E+02  5.41297E-04  2.25072E+05
   10240000  1.52980E+02  5.17883E-04  2.21367E+05
   11264000  1.52948E+02  4.91851E-04  2.23195E+05
   12166146  1.52974E+02  4.83641E-04  2.13731E+05
tally  175    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.33016E+01 0.0004
tfc   12       1       1       1       1       1       1       1       1
    1024000  9.34626E+01  1.53854E-03  2.51937E+05
    2048000  9.33060E+01  1.05685E-03  2.67008E+05
    3072000  9.32921E+01  8.02067E-04  3.09105E+05
    4096000  9.33620E+01  8.10308E-04  2.27146E+05
    5120000  9.33739E+01  6.88143E-04  2.51829E+05
    6144000  9.33368E+01  6.03248E-04  2.72087E+05
    7168000  9.33027E+01  5.40603E-04  2.89822E+05
    8192000  9.33265E+01  4.98137E-04  2.98781E+05
    9216000  9.33281E+01  4.68191E-04  3.00847E+05
   10240000  9.33189E+01  4.38896E-04  3.08214E+05
   11264000  9.32974E+01  4.11885E-04  3.18274E+05
   12166146  9.33016E+01  3.92767E-04  3.24073E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.27727E+01 0.0005
tfc   12       1       1       1       1       1       1       1       1
    1024000  6.27784E+01  1.22363E-03  3.98300E+05
    2048000  6.26850E+01  8.68115E-04  3.95727E+05
    3072000  6.28513E+01  1.38817E-03  1.03191E+05
    4096000  6.28242E+01  1.08878E-03  1.25812E+05
    5120000  6.28329E+01  9.06828E-04  1.45015E+05
    6144000  6.27931E+01  7.77287E-04  1.63885E+05
    7168000  6.27609E+01  6.84123E-04  1.80976E+05
    8192000  6.27783E+01  6.36515E-04  1.82993E+05
    9216000  6.27824E+01  5.94684E-04  1.86475E+05
   10240000  6.27861E+01  5.89285E-04  1.70972E+05
   11264000  6.27738E+01  5.55015E-04  1.75284E+05
   12166146  6.27727E+01  5.23100E-04  1.82702E+05
mcnp       5     11/04/10 21:11:30     2    13903027      311491399
```

```
 Case 79
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.82773E-04 0.0008
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.82762E-04  3.43160E-03  5.78174E+04
    2048000  1.82467E-04  2.14349E-03  7.41131E+04
    3072000  1.82648E-04  1.90366E-03  6.25926E+04
    4096000  1.82875E-04  1.56169E-03  6.97207E+04
    5120000  1.83027E-04  1.35117E-03  7.44965E+04
    6144000  1.82821E-04  1.20251E-03  7.83746E+04
    7168000  1.82832E-04  1.08895E-03  8.19087E+04
    8192000  1.82892E-04  1.00352E-03  8.43747E+04
    9216000  1.82874E-04  9.48008E-04  8.40413E+04
   10240000  1.82887E-04  9.09377E-04  8.21825E+04
   11264000  1.82845E-04  8.70231E-04  8.15778E+04
   12288000  1.82854E-04  8.35156E-04  8.11565E+04
   13312000  1.82828E-04  7.94285E-04  8.28150E+04
   13903027  1.82773E-04  7.72925E-04  8.36897E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.21542E-04 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.21384E-04  2.11333E-03  1.52447E+05
    2048000  1.21401E-04  1.67431E-03  1.21469E+05
    3072000  1.21420E-04  1.36856E-03  1.21108E+05
    4096000  1.21571E-04  1.15557E-03  1.27338E+05
    5120000  1.21663E-04  1.01752E-03  1.31363E+05
    6144000  1.21572E-04  9.20199E-04  1.33840E+05
    7168000  1.21561E-04  8.42848E-04  1.36726E+05
    8192000  1.21608E-04  7.85477E-04  1.37719E+05
```

```
    9216000  1.21596E-04  7.37254E-04  1.38958E+05
   10240000  1.21589E-04  6.97767E-04  1.39588E+05
   11264000  1.21579E-04  6.90002E-04  1.29760E+05
   12288000  1.21581E-04  6.55963E-04  1.31553E+05
   13312000  1.21564E-04  6.26015E-04  1.33319E+05
   13903027  1.21542E-04  6.11096E-04  1.33884E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.44317E-05 0.0005
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.43690E-05  1.97950E-03  1.73756E+05
    2048000  7.43699E-05  1.51990E-03  1.47403E+05
    3072000  7.43821E-05  1.21455E-03  1.53769E+05
    4096000  7.44647E-05  1.02739E-03  1.61093E+05
    5120000  7.45095E-05  9.07921E-04  1.64992E+05
    6144000  7.44450E-05  8.15107E-04  1.70577E+05
    7168000  7.44374E-05  7.54013E-04  1.70841E+05
    8192000  7.44615E-05  7.03122E-04  1.71870E+05
    9216000  7.44739E-05  6.83143E-04  1.61843E+05
   10240000  7.44643E-05  6.42122E-04  1.64828E+05
   11264000  7.44499E-05  6.12517E-04  1.64666E+05
   12288000  7.44526E-05  5.81987E-04  1.67121E+05
   13312000  7.44432E-05  5.55582E-04  1.69264E+05
   13903027  7.44317E-05  5.42372E-04  1.69963E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.57705E-05 0.0005
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.57269E-05  1.81151E-03  2.07478E+05
    2048000  3.57071E-05  1.26280E-03  2.13535E+05
    3072000  3.57236E-05  1.07571E-03  1.96026E+05
    4096000  3.57680E-05  9.16118E-04  2.02603E+05
    5120000  3.57816E-05  8.07230E-04  2.08720E+05
    6144000  3.57626E-05  7.32693E-04  2.11108E+05
```

```
    7168000  3.57603E-05  6.83808E-04  2.07721E+05
    8192000  3.57731E-05  6.37510E-04  2.09067E+05
    9216000  3.57698E-05  5.99490E-04  2.10161E+05
   10240000  3.57718E-05  5.66993E-04  2.11403E+05
   11264000  3.57643E-05  5.39462E-04  2.12285E+05
   12288000  3.57732E-05  5.24119E-04  2.06062E+05
   13312000  3.57738E-05  5.02229E-04  2.07137E+05
   13903027  3.57705E-05  4.91171E-04  2.07244E+05
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.35881E-05 0.0007
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.35575E-05  1.71802E-03  2.30673E+05
    2048000  1.35508E-05  1.19788E-03  2.37306E+05
    3072000  1.35545E-05  9.67307E-04  2.42422E+05
    4096000  1.35948E-05  1.66353E-03  6.14454E+04
    5120000  1.36050E-05  1.44179E-03  6.54270E+04
    6144000  1.36004E-05  1.26627E-03  7.06801E+04
    7168000  1.35946E-05  1.11075E-03  7.87261E+04
    8192000  1.35943E-05  9.93896E-04  8.60157E+04
    9216000  1.35908E-05  9.02832E-04  9.26624E+04
   10240000  1.35910E-05  8.30887E-04  9.84428E+04
   11264000  1.35866E-05  7.69974E-04  1.04205E+05
   12288000  1.35883E-05  7.19652E-04  1.09298E+05
   13312000  1.35892E-05  6.83365E-04  1.11881E+05
   13903027  1.35881E-05  6.61578E-04  1.14231E+05
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.07168E-06 0.0013
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.03600E-06  1.57819E-03  2.73360E+05
    2048000  7.04254E-06  1.17940E-03  2.44803E+05
    3072000  7.04746E-06  9.67361E-04  2.42394E+05
    4096000  7.08566E-06  3.85745E-03  1.14274E+04
```

```
    5120000  7.08403E-06  3.10868E-03  1.40736E+04
    6144000  7.07913E-06  2.61061E-03  1.66290E+04
    7168000  7.07572E-06  2.26153E-03  1.89909E+04
    8192000  7.07438E-06  1.98972E-03  2.14623E+04
    9216000  7.07199E-06  1.77949E-03  2.38520E+04
   10240000  7.07095E-06  1.61042E-03  2.62054E+04
   11264000  7.06785E-06  1.47163E-03  2.85263E+04
   12288000  7.07001E-06  1.36498E-03  3.03813E+04
   13312000  7.06986E-06  1.26764E-03  3.25139E+04
   13903027  7.07168E-06  1.26986E-03  3.10052E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.31161E-06 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.29661E-06  1.63300E-03  2.55318E+05
    2048000  4.29732E-06  1.15641E-03  2.54635E+05
    3072000  4.30353E-06  1.06783E-03  1.98927E+05
    4096000  4.31031E-06  1.00341E-03  1.68885E+05
    5120000  4.31207E-06  8.83502E-04  1.74238E+05
    6144000  4.31039E-06  7.92309E-04  1.80534E+05
    7168000  4.30890E-06  7.22356E-04  1.86143E+05
    8192000  4.30895E-06  6.64801E-04  1.92255E+05
    9216000  4.30828E-06  6.22193E-04  1.95104E+05
   10240000  4.30880E-06  5.90659E-04  1.94802E+05
   11264000  4.30767E-06  5.57147E-04  1.99022E+05
   12288000  4.30957E-06  5.56796E-04  1.82586E+05
   13312000  4.31101E-06  5.58003E-04  1.67799E+05
   13903027  4.31161E-06  5.75244E-04  1.51093E+05
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.90035E-06 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.88895E-06  1.66579E-03  2.45365E+05
    2048000  2.88955E-06  1.20376E-03  2.34993E+05
```

```
    3072000  2.89531E-06  1.32566E-03  1.29073E+05
    4096000  2.89908E-06  1.14510E-03  1.29678E+05
    5120000  2.90003E-06  9.92119E-04  1.38175E+05
    6144000  2.89895E-06  8.81684E-04  1.45788E+05
    7168000  2.89842E-06  8.04586E-04  1.50039E+05
    8192000  2.89898E-06  7.42142E-04  1.54272E+05
    9216000  2.89905E-06  7.04953E-04  1.51984E+05
   10240000  2.90031E-06  7.21086E-04  1.30705E+05
   11264000  2.89908E-06  6.71895E-04  1.36848E+05
   12288000  2.89973E-06  6.41456E-04  1.37570E+05
   13312000  2.89966E-06  6.07084E-04  1.41763E+05
   13903027  2.90035E-06  6.35608E-04  1.23757E+05
mcnp       5     11/04/10 21:31:34     2    12646088      282841735
```

Case 80

```
 Case 80
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.38152E+01 0.0007
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.37651E+01  1.82044E-03  1.85544E+05
    2048000  3.37859E+01  1.29834E-03  1.82650E+05
    3072000  3.37920E+01  1.20543E-03  1.41109E+05
    4096000  3.37849E+01  1.02656E-03  1.45883E+05
    5120000  3.38026E+01  9.03268E-04  1.51033E+05
    6144000  3.38090E+01  8.15429E-04  1.54530E+05
    7168000  3.37989E+01  7.46467E-04  1.58147E+05
    8192000  3.37941E+01  6.92494E-04  1.60801E+05
    9216000  3.37874E+01  6.53632E-04  1.60463E+05
   10240000  3.37912E+01  6.15823E-04  1.62720E+05
   11264000  3.37878E+01  5.83861E-04  1.64599E+05
   12288000  3.38172E+01  7.26006E-04  9.75726E+04
   12646088  3.38152E+01  7.12915E-04  9.83233E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  2.11648E+01 0.0008
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.11337E+01  1.60423E-03  2.38926E+05
    2048000  2.11420E+01  1.15632E-03  2.30272E+05
    3072000  2.11414E+01  1.08646E-03  1.73706E+05
    4096000  2.11308E+01  9.09582E-04  1.85819E+05
    5120000  2.11419E+01  8.54650E-04  1.68706E+05
    6144000  2.11717E+01  1.41477E-03  5.13348E+04
    7168000  2.11657E+01  1.23885E-03  5.74182E+04
    8192000  2.11641E+01  1.10757E-03  6.28600E+04
    9216000  2.11665E+01  1.09745E-03  5.69205E+04
   10240000  2.11644E+01  9.99787E-04  6.17358E+04
   11264000  2.11631E+01  9.20519E-04  6.62187E+04
   12288000  2.11674E+01  8.54019E-04  7.05136E+04
   12646088  2.11648E+01  8.33166E-04  7.19896E+04
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.21536E+01 0.0004
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.21473E+01  1.40732E-03  3.10463E+05
    2048000  1.21667E+01  1.35835E-03  1.66866E+05
    3072000  1.21557E+01  1.01791E-03  1.97888E+05
    4096000  1.21463E+01  8.41613E-04  2.17045E+05
    5120000  1.21497E+01  7.48917E-04  2.19705E+05
    6144000  1.21536E+01  6.73430E-04  2.26569E+05
    7168000  1.21536E+01  6.26141E-04  2.24771E+05
    8192000  1.21540E+01  5.78419E-04  2.30481E+05
    9216000  1.21498E+01  5.36114E-04  2.38522E+05
   10240000  1.21504E+01  5.03689E-04  2.43236E+05
   11264000  1.21510E+01  4.75044E-04  2.48645E+05
   12288000  1.21546E+01  4.53068E-04  2.50542E+05
   12646088  1.21536E+01  4.45093E-04  2.52250E+05
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
```

```
c         0
e         0
t         0
vals
  5.51313E+00 0.0008
tfc   13        1        1        1        1        1        1        1        1
    1024000  5.51921E+00  2.09988E-03  1.39447E+05
    2048000  5.51287E+00  1.22622E-03  2.04766E+05
    3072000  5.51078E+00  9.74884E-04  2.15742E+05
    4096000  5.50568E+00  7.95762E-04  2.42777E+05
    5120000  5.50562E+00  6.87088E-04  2.61024E+05
    6144000  5.50850E+00  6.19625E-04  2.67625E+05
    7168000  5.51637E+00  1.29331E-03  5.26839E+04
    8192000  5.51564E+00  1.14696E-03  5.86168E+04
    9216000  5.51315E+00  1.02892E-03  6.47556E+04
   10240000  5.51297E+00  9.37222E-04  7.02533E+04
   11264000  5.51281E+00  8.59550E-04  7.59459E+04
   12288000  5.51369E+00  7.94981E-04  8.13756E+04
   12646088  5.51313E+00  7.74777E-04  8.32490E+04
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.98065E+00 0.0010
tfc   13        1        1        1        1        1        1        1        1
    1024000  1.98207E+00  2.77291E-03  7.99698E+04
    2048000  1.97986E+00  1.56785E-03  1.25252E+05
    3072000  1.97795E+00  1.11531E-03  1.64833E+05
    4096000  1.97673E+00  9.06258E-04  1.87185E+05
    5120000  1.97695E+00  7.79669E-04  2.02715E+05
    6144000  1.97742E+00  6.77750E-04  2.23689E+05
    7168000  1.97966E+00  8.26635E-04  1.28960E+05
    8192000  1.97974E+00  7.52017E-04  1.36353E+05
    9216000  1.97930E+00  7.01008E-04  1.39507E+05
   10240000  1.97897E+00  6.41528E-04  1.49941E+05
   11264000  1.97892E+00  5.93324E-04  1.59391E+05
   12288000  1.98084E+00  1.03473E-03  4.80347E+04
   12646088  1.98065E+00  1.00723E-03  4.92578E+04
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
```

```
c         0
e         0
t         0
vals
  1.05008E+00 0.0009
tfc   13        1        1        1        1        1        1        1        1
    1024000  1.05693E+00  8.82348E-03  7.89803E+03
    2048000  1.05255E+00  4.48190E-03  1.53275E+04
    3072000  1.05146E+00  3.05453E-03  2.19761E+04
    4096000  1.05070E+00  2.32597E-03  2.84162E+04
    5120000  1.05025E+00  1.88172E-03  3.48014E+04
    6144000  1.05079E+00  1.59994E-03  4.01403E+04
    7168000  1.05037E+00  1.38162E-03  4.61642E+04
    8192000  1.05078E+00  1.37805E-03  4.06061E+04
    9216000  1.05027E+00  1.23441E-03  4.49909E+04
   10240000  1.05010E+00  1.12081E-03  4.91231E+04
   11264000  1.05003E+00  1.02556E-03  5.33483E+04
   12288000  1.05017E+00  9.49905E-04  5.69965E+04
   12646088  1.05008E+00  9.24928E-04  5.84140E+04
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.48347E-01 0.0113
tfc   13        1        1        1        1        1        1        1        1
    1024000  6.40641E-01  2.34289E-03  1.12020E+05
    2048000  6.85020E-01  6.55871E-02  7.15746E+01
    3072000  6.70023E-01  4.47063E-02  1.02589E+02
    4096000  6.62093E-01  3.39327E-02  1.33517E+02
    5120000  6.57594E-01  2.73335E-02  1.64936E+02
    6144000  6.55096E-01  2.28680E-02  1.96485E+02
    7168000  6.52784E-01  1.96713E-02  2.27729E+02
    8192000  6.51073E-01  1.72582E-02  2.58897E+02
    9216000  6.49920E-01  1.53745E-02  2.90030E+02
   10240000  6.50012E-01  1.39383E-02  3.17639E+02
   11264000  6.49135E-01  1.26890E-02  3.48493E+02
   12288000  6.48600E-01  1.16432E-02  3.79372E+02
   12646088  6.48347E-01  1.13181E-02  3.90106E+02
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
```

```
c        0
e        0
t        0
vals
  4.30840E-01 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.30678E-01  1.74373E-03  2.02227E+05
    2048000  4.30597E-01  1.26212E-03  1.93283E+05
    3072000  4.31405E-01  1.58414E-03  8.17058E+04
    4096000  4.30796E-01  1.22910E-03  1.01765E+05
    5120000  4.30773E-01  1.03635E-03  1.14734E+05
    6144000  4.30875E-01  9.01910E-04  1.26316E+05
    7168000  4.30865E-01  8.19326E-04  1.31271E+05
    8192000  4.30842E-01  7.39605E-04  1.40968E+05
    9216000  4.30726E-01  6.78716E-04  1.48822E+05
   10240000  4.30684E-01  6.25100E-04  1.57926E+05
   11264000  4.30694E-01  5.82113E-04  1.65589E+05
   12288000  4.30843E-01  5.62334E-04  1.62637E+05
   12646088  4.30840E-01  5.53140E-04  1.63328E+05
mcnp       5     11/04/10 21:51:45     2    12744532      309613933
```

Case 81

```
 Case 81
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.96543E+02 0.0008
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.95664E+02  2.07833E-03  1.44224E+05
    2048000  3.95763E+02  1.47773E-03  1.42712E+05
    3072000  3.95838E+02  1.20714E-03  1.42460E+05
    4096000  3.95981E+02  1.06786E-03  1.36577E+05
    5120000  3.96271E+02  9.54510E-04  1.36625E+05
    6144000  3.96340E+02  8.73227E-04  1.36013E+05
    7168000  3.96241E+02  8.05772E-04  1.36967E+05
    8192000  3.96226E+02  7.51308E-04  1.37839E+05
    9216000  3.96115E+02  7.15017E-04  1.35265E+05
   10240000  3.96241E+02  6.76061E-04  1.36170E+05
   11264000  3.96163E+02  6.43039E-04  1.36845E+05
   12288000  3.96535E+02  8.55066E-04  7.09109E+04
```

```
   12744532  3.96543E+02  8.32068E-04  7.21995E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.47885E+02 0.0007
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.47434E+02  1.79294E-03  1.93793E+05
    2048000  2.47504E+02  1.32393E-03  1.77796E+05
    3072000  2.47627E+02  1.28804E-03  1.25126E+05
    4096000  2.47619E+02  1.10084E-03  1.28518E+05
    5120000  2.47775E+02  1.03610E-03  1.15954E+05
    6144000  2.47807E+02  9.15035E-04  1.23869E+05
    7168000  2.47768E+02  8.29865E-04  1.29129E+05
    8192000  2.47784E+02  7.74169E-04  1.29819E+05
    9216000  2.47831E+02  9.21400E-04  8.14560E+04
   10240000  2.47864E+02  8.48027E-04  8.65433E+04
   11264000  2.47832E+02  7.88592E-04  9.09912E+04
   12288000  2.47885E+02  7.38982E-04  9.49391E+04
   12744532  2.47885E+02  7.18881E-04  9.67247E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.42213E+02 0.0005
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.42096E+02  1.61887E-03  2.37708E+05
    2048000  1.42417E+02  1.74192E-03  1.02705E+05
    3072000  1.42278E+02  1.28098E-03  1.26509E+05
    4096000  1.42199E+02  1.04653E-03  1.42201E+05
    5120000  1.42245E+02  9.28381E-04  1.44423E+05
    6144000  1.42251E+02  8.18633E-04  1.54760E+05
    7168000  1.42246E+02  7.47202E-04  1.59280E+05
    8192000  1.42239E+02  6.87459E-04  1.64633E+05
    9216000  1.42166E+02  6.36418E-04  1.70740E+05
   10240000  1.42189E+02  5.95961E-04  1.75234E+05
   11264000  1.42182E+02  5.61637E-04  1.79388E+05
   12288000  1.42211E+02  5.33265E-04  1.82316E+05
```

```
   12744532  1.42213E+02  5.21621E-04  1.83713E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.45376E+01 0.0019
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.45091E+01  2.62262E-03  9.05725E+04
    2048000  6.43593E+01  1.50882E-03  1.36890E+05
    3072000  6.47468E+01  6.15239E-03  5.48428E+03
    4096000  6.46158E+01  4.64021E-03  7.23324E+03
    5120000  6.45507E+01  3.72821E-03  8.95549E+03
    6144000  6.45328E+01  3.11849E-03  1.06647E+04
    7168000  6.46114E+01  3.06062E-03  9.49336E+03
    8192000  6.45690E+01  2.68657E-03  1.07798E+04
    9216000  6.45136E+01  2.39574E-03  1.20487E+04
   10240000  6.45106E+01  2.16328E-03  1.32993E+04
   11264000  6.45528E+01  2.18340E-03  1.18697E+04
   12288000  6.45462E+01  2.00555E-03  1.28898E+04
   12744532  6.45376E+01  1.93556E-03  1.33425E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.30875E+01 0.0012
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.31032E+01  2.92472E-03  7.28282E+04
    2048000  2.30620E+01  1.70063E-03  1.07753E+05
    3072000  2.30502E+01  1.23981E-03  1.35051E+05
    4096000  2.30482E+01  1.06941E-03  1.36183E+05
    5120000  2.30540E+01  9.33392E-04  1.42877E+05
    6144000  2.30561E+01  8.11566E-04  1.57466E+05
    7168000  2.30767E+01  9.48282E-04  9.88926E+04
    8192000  2.30749E+01  8.55671E-04  1.06266E+05
    9216000  2.30642E+01  7.78331E-04  1.14154E+05
   10240000  2.30638E+01  7.13634E-04  1.22209E+05
   11264000  2.30618E+01  6.61851E-04  1.29177E+05
   12288000  2.30895E+01  1.28283E-03  3.15045E+04
```

```
   12744532  2.30875E+01  1.23934E-03  3.25437E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.22238E+01 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.22117E+01  1.49460E-03  2.78879E+05
    2048000  1.22054E+01  1.13107E-03  2.43598E+05
    3072000  1.22267E+01  1.48707E-03  9.38738E+04
    4096000  1.22226E+01  1.21681E-03  1.05187E+05
    5120000  1.22248E+01  1.06722E-03  1.09290E+05
    6144000  1.22313E+01  9.68593E-04  1.10549E+05
    7168000  1.22261E+01  8.52172E-04  1.22457E+05
    8192000  1.22235E+01  7.68637E-04  1.31694E+05
    9216000  1.22181E+01  7.08001E-04  1.37960E+05
   10240000  1.22208E+01  6.66260E-04  1.40206E+05
   11264000  1.22208E+01  6.39615E-04  1.38315E+05
   12288000  1.22235E+01  6.08606E-04  1.39972E+05
   12744532  1.22238E+01  5.95486E-04  1.40964E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.45589E+00 0.0008
tfc   13       1       1       1       1       1       1       1       1
    1024000  7.43809E+00  1.40515E-03  3.15516E+05
    2048000  7.43755E+00  1.02946E-03  2.94056E+05
    3072000  7.45947E+00  2.08542E-03  4.77332E+04
    4096000  7.45400E+00  1.63717E-03  5.81060E+04
    5120000  7.45486E+00  1.37167E-03  6.61591E+04
    6144000  7.45808E+00  1.23875E-03  6.75884E+04
    7168000  7.45451E+00  1.08037E-03  7.61888E+04
    8192000  7.45296E+00  9.69483E-04  8.27806E+04
    9216000  7.45326E+00  1.04101E-03  6.38127E+04
   10240000  7.45367E+00  9.53936E-04  6.83934E+04
   11264000  7.45313E+00  8.82593E-04  7.26413E+04
   12288000  7.45609E+00  8.54285E-04  7.10406E+04
```

```
   12744532  7.45589E+00  8.27601E-04  7.29809E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.01664E+00 0.0009
tfc   13       1       1       1       1       1       1       1       1
    1024000  5.00640E+00  1.73564E-03  2.06799E+05
    2048000  5.00563E+00  1.43536E-03  1.51261E+05
    3072000  5.03226E+00  3.12688E-03  2.12317E+04
    4096000  5.02408E+00  2.39913E-03  2.70582E+04
    5120000  5.02253E+00  1.95979E-03  3.24095E+04
    6144000  5.02208E+00  1.66590E-03  3.73714E+04
    7168000  5.01979E+00  1.46396E-03  4.14936E+04
    8192000  5.01984E+00  1.30851E-03  4.54415E+04
    9216000  5.01636E+00  1.17768E-03  4.98612E+04
   10240000  5.01586E+00  1.07006E-03  5.43549E+04
   11264000  5.01512E+00  9.85178E-04  5.83009E+04
   12288000  5.01681E+00  9.26596E-04  6.03853E+04
   12744532  5.01664E+00  8.97264E-04  6.20885E+04
mcnp       5     11/04/10 22:11:49     2    12646106      303057477
```

Case 82

```
 Case 82
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.70039E+02 0.0010
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.69632E+02  2.01192E-03  1.53084E+05
    2048000  2.69664E+02  1.43177E-03  1.51149E+05
    3072000  2.69683E+02  1.35866E-03  1.11900E+05
    4096000  2.69685E+02  1.17048E-03  1.13037E+05
    5120000  2.69858E+02  1.02299E-03  1.18335E+05
```

```
    6144000  2.70180E+02  1.44046E-03  4.96834E+04
    7168000  2.70087E+02  1.27949E-03  5.39458E+04
    8192000  2.70016E+02  1.14754E-03  5.86557E+04
    9216000  2.69913E+02  1.04973E-03  6.22865E+04
   10240000  2.69955E+02  9.65854E-04  6.61978E+04
   11264000  2.69860E+02  8.97159E-04  6.97232E+04
   12288000  2.70070E+02  1.00821E-03  5.05959E+04
   12646106  2.70039E+02  9.84502E-04  5.15597E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.68697E+02 0.0007
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.68682E+02  1.80138E-03  1.90959E+05
    2048000  1.68682E+02  1.30061E-03  1.83172E+05
    3072000  1.68659E+02  1.24358E-03  1.33569E+05
    4096000  1.68547E+02  1.03357E-03  1.44967E+05
    5120000  1.68660E+02  9.76683E-04  1.29823E+05
    6144000  1.68685E+02  8.64791E-04  1.37846E+05
    7168000  1.68663E+02  7.94899E-04  1.39768E+05
    8192000  1.68674E+02  7.41479E-04  1.40490E+05
    9216000  1.68703E+02  8.76635E-04  8.93118E+04
   10240000  1.68715E+02  8.07391E-04  9.47323E+04
   11264000  1.68683E+02  7.51196E-04  9.94510E+04
   12288000  1.68714E+02  7.04438E-04  1.03640E+05
   12646106  1.68697E+02  6.89400E-04  1.05148E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.68244E+01 0.0005
tfc   13       1       1       1       1       1       1       1       1
    1024000  9.68443E+01  1.56635E-03  2.52564E+05
    2048000  9.70448E+01  1.65350E-03  1.13330E+05
    3072000  9.69142E+01  1.21930E-03  1.38942E+05
    4096000  9.68265E+01  9.97166E-04  1.55745E+05
    5120000  9.68611E+01  8.85137E-04  1.58065E+05
```

```
    6144000  9.68672E+01  7.81357E-04  1.68857E+05
    7168000  9.68571E+01  7.13590E-04  1.73434E+05
    8192000  9.68572E+01  6.56866E-04  1.79015E+05
    9216000  9.68093E+01  6.08558E-04  1.85329E+05
   10240000  9.68201E+01  5.70224E-04  1.89922E+05
   11264000  9.68094E+01  5.37311E-04  1.94386E+05
   12288000  9.68319E+01  5.12877E-04  1.95519E+05
   12646106  9.68244E+01  5.03769E-04  1.96916E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.39226E+01 0.0017
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.39498E+01  2.45702E-03  1.02644E+05
    2048000  4.38726E+01  1.42428E-03  1.52744E+05
    3072000  4.41087E+01  5.78326E-03  6.17600E+03
    4096000  4.40121E+01  4.36312E-03  8.13494E+03
    5120000  4.39708E+01  3.50580E-03  1.00759E+04
    6144000  4.39605E+01  2.93277E-03  1.19857E+04
    7168000  4.40092E+01  2.87855E-03  1.06582E+04
    8192000  4.39831E+01  2.52674E-03  1.20983E+04
    9216000  4.39454E+01  2.25316E-03  1.35196E+04
   10240000  4.39432E+01  2.03489E-03  1.49136E+04
   11264000  4.39291E+01  1.85495E-03  1.63100E+04
   12288000  4.39286E+01  1.70476E-03  1.76964E+04
   12646106  4.39226E+01  1.65803E-03  1.81786E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.57350E+01 0.0012
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.57481E+01  2.75447E-03  8.16722E+04
    2048000  1.57297E+01  1.62376E-03  1.17520E+05
    3072000  1.57133E+01  1.17752E-03  1.48975E+05
    4096000  1.57049E+01  9.96688E-04  1.55895E+05
    5120000  1.57079E+01  8.63795E-04  1.65972E+05
```

```
    6144000  1.57108E+01  7.55070E-04  1.80818E+05
    7168000  1.57251E+01  8.87577E-04  1.12104E+05
    8192000  1.57271E+01  8.13431E-04  1.16735E+05
    9216000  1.57220E+01  7.65029E-04  1.17271E+05
   10240000  1.57215E+01  7.01157E-04  1.25613E+05
   11264000  1.57194E+01  6.49694E-04  1.32953E+05
   12288000  1.57369E+01  1.21746E-03  3.46979E+04
   12646106  1.57350E+01  1.18473E-03  3.56046E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.33081E+00 0.0005
tfc   13       1       1       1       1       1       1       1
    1024000  8.32516E+00  1.39363E-03  3.19045E+05
    2048000  8.32397E+00  1.06770E-03  2.71802E+05
    3072000  8.32902E+00  1.02862E-03  1.95226E+05
    4096000  8.32645E+00  8.83147E-04  1.98556E+05
    5120000  8.32674E+00  7.75811E-04  2.05753E+05
    6144000  8.33350E+00  7.52452E-04  1.82079E+05
    7168000  8.33259E+00  6.84863E-04  1.88289E+05
    8192000  8.33196E+00  6.25543E-04  1.97392E+05
    9216000  8.32818E+00  5.82781E-04  2.02086E+05
   10240000  8.32965E+00  5.55927E-04  1.99816E+05
   11264000  8.32979E+00  5.42427E-04  1.90737E+05
   12288000  8.33157E+00  5.21087E-04  1.89406E+05
   12646106  8.33081E+00  5.09930E-04  1.92186E+05
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.15164E+00 0.0136
tfc   13       1       1       1       1       1       1       1
    1024000  5.08002E+00  1.76836E-03  1.98156E+05
    2048000  5.50847E+00  7.82103E-02  5.06555E+01
    3072000  5.36850E+00  5.35039E-02  7.21573E+01
    4096000  5.29217E+00  4.07081E-02  9.34517E+01
    5120000  5.24960E+00  3.28325E-02  1.14882E+02
```

```
    6144000  5.22425E+00  2.74968E-02  1.36349E+02
    7168000  5.20294E+00  2.36662E-02  1.57680E+02
    8192000  5.18730E+00  2.07713E-02  1.79026E+02
    9216000  5.17605E+00  1.85115E-02  2.00292E+02
   10240000  5.16669E+00  1.66914E-02  2.21658E+02
   11264000  5.15855E+00  1.51987E-02  2.42943E+02
   12288000  5.15398E+00  1.39468E-02  2.64400E+02
   12646106  5.15164E+00  1.35582E-02  2.71856E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.41862E+00 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.41642E+00  1.66501E-03  2.23521E+05
    2048000  3.41660E+00  1.36652E-03  1.65929E+05
    3072000  3.42438E+00  1.83697E-03  6.12137E+04
    4096000  3.41908E+00  1.42447E-03  7.63205E+04
    5120000  3.41869E+00  1.19570E-03  8.66193E+04
    6144000  3.41928E+00  1.04464E-03  9.44676E+04
    7168000  3.41933E+00  9.58161E-04  9.61954E+04
    8192000  3.41984E+00  8.74152E-04  1.01081E+05
    9216000  3.41809E+00  7.96907E-04  1.08076E+05
   10240000  3.41801E+00  7.31063E-04  1.15546E+05
   11264000  3.41751E+00  6.79514E-04  1.21540E+05
   12288000  3.41872E+00  6.54003E-04  1.20242E+05
   12646106  3.41862E+00  6.39464E-04  1.22211E+05
mcnp       5      11/04/10 22:31:58      2     12527965       300220071
```

Case 83

```
 Case 83
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  3.72956E+03 0.0010
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.72416E+03  2.01186E-03  1.51286E+05
    2048000  3.72457E+03  1.43172E-03  1.49544E+05
    3072000  3.72484E+03  1.35862E-03  1.10716E+05
    4096000  3.72486E+03  1.17045E-03  1.11826E+05
    5120000  3.72727E+03  1.02296E-03  1.16999E+05
    6144000  3.73171E+03  1.44042E-03  4.91208E+04
    7168000  3.73044E+03  1.27945E-03  5.33710E+04
    8192000  3.72944E+03  1.14750E-03  5.80636E+04
    9216000  3.72802E+03  1.04969E-03  6.16730E+04
   10240000  3.72862E+03  9.65823E-04  6.55297E+04
   11264000  3.72729E+03  8.97132E-04  6.90773E+04
   12288000  3.73020E+03  1.00817E-03  5.01199E+04
   12527965  3.72956E+03  9.92151E-04  5.07678E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.32994E+03 0.0007
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.32984E+03  1.80132E-03  1.88717E+05
    2048000  2.32982E+03  1.30056E-03  1.81228E+05
    3072000  2.32950E+03  1.24353E-03  1.32157E+05
    4096000  2.32796E+03  1.03354E-03  1.43415E+05
    5120000  2.32952E+03  9.76651E-04  1.28357E+05
    6144000  2.32987E+03  8.64762E-04  1.36286E+05
    7168000  2.32957E+03  7.94873E-04  1.38279E+05
    8192000  2.32971E+03  7.41456E-04  1.39072E+05
    9216000  2.33013E+03  8.76607E-04  8.84323E+04
   10240000  2.33029E+03  8.07365E-04  9.37763E+04
   11264000  2.32984E+03  7.51173E-04  9.85299E+04
   12288000  2.33027E+03  7.04416E-04  1.02665E+05
   12527965  2.32994E+03  6.94266E-04  1.03679E+05
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.33729E+03 0.0005
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.33761E+03  1.56630E-03  2.49600E+05
    2048000  1.34037E+03  1.65344E-03  1.12126E+05
    3072000  1.33857E+03  1.21925E-03  1.37473E+05
    4096000  1.33736E+03  9.97133E-04  1.54078E+05
    5120000  1.33784E+03  8.85107E-04  1.56282E+05
    6144000  1.33793E+03  7.81330E-04  1.66945E+05
    7168000  1.33779E+03  7.13567E-04  1.71586E+05
    8192000  1.33779E+03  6.56845E-04  1.77209E+05
    9216000  1.33713E+03  6.08538E-04  1.83504E+05
   10240000  1.33728E+03  5.70205E-04  1.88006E+05
   11264000  1.33713E+03  5.37294E-04  1.92586E+05
   12288000  1.33744E+03  5.12860E-04  1.93679E+05
   12527965  1.33729E+03  5.06697E-04  1.94647E+05
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.06653E+02 0.0017
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.07034E+02  2.45693E-03  1.01440E+05
    2048000  6.05966E+02  1.42423E-03  1.51121E+05
    3072000  6.09228E+02  5.78307E-03  6.11065E+03
    4096000  6.07891E+02  4.36300E-03  8.04776E+03
    5120000  6.07322E+02  3.50569E-03  9.96216E+03
    6144000  6.07181E+02  2.93267E-03  1.18500E+04
    7168000  6.07854E+02  2.87846E-03  1.05446E+04
    8192000  6.07493E+02  2.52666E-03  1.19762E+04
    9216000  6.06973E+02  2.25308E-03  1.33865E+04
   10240000  6.06942E+02  2.03483E-03  1.47631E+04
   11264000  6.06747E+02  1.85489E-03  1.61589E+04
   12288000  6.06741E+02  1.70471E-03  1.75299E+04
   12527965  6.06653E+02  1.67317E-03  1.78511E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  2.17330E+02 0.0012
tfc   13        1        1        1        1        1        1        1        1
    1024000  2.17513E+02  2.75437E-03  8.07141E+04
    2048000  2.17258E+02  1.62370E-03  1.16271E+05
    3072000  2.17031E+02  1.17748E-03  1.47400E+05
    4096000  2.16915E+02  9.96657E-04  1.54225E+05
    5120000  2.16957E+02  8.63768E-04  1.64099E+05
    6144000  2.16997E+02  7.55045E-04  1.78771E+05
    7168000  2.17195E+02  8.87548E-04  1.10910E+05
    8192000  2.17222E+02  8.13404E-04  1.15558E+05
    9216000  2.17152E+02  7.65004E-04  1.16117E+05
   10240000  2.17145E+02  7.01133E-04  1.24346E+05
   11264000  2.17116E+02  6.49672E-04  1.31722E+05
   12288000  2.17357E+02  1.21742E-03  3.43715E+04
   12527965  2.17330E+02  1.19530E-03  3.49777E+04
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.15066E+02 0.0005
tfc   13        1        1        1        1        1        1        1        1
    1024000  1.14987E+02  1.39358E-03  3.15304E+05
    2048000  1.14971E+02  1.06766E-03  2.68917E+05
    3072000  1.15040E+02  1.02859E-03  1.93163E+05
    4096000  1.15004E+02  8.83117E-04  1.96431E+05
    5120000  1.15009E+02  7.75786E-04  2.03431E+05
    6144000  1.15102E+02  7.52426E-04  1.80018E+05
    7168000  1.15090E+02  6.84840E-04  1.86284E+05
    8192000  1.15081E+02  6.25524E-04  1.95399E+05
    9216000  1.15029E+02  5.82764E-04  2.00095E+05
   10240000  1.15049E+02  5.55910E-04  1.97799E+05
   11264000  1.15051E+02  5.42410E-04  1.88970E+05
   12288000  1.15076E+02  5.21070E-04  1.87624E+05
   12527965  1.15066E+02  5.13561E-04  1.89478E+05
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  7.11634E+01 0.0137
tfc   13       1       1       1       1       1       1       1       1
    1024000  7.01654E+01  1.76829E-03  1.95833E+05
    2048000  7.60828E+01  7.82079E-02  5.01168E+01
    3072000  7.41495E+01  5.35023E-02  7.13937E+01
    4096000  7.30950E+01  4.07070E-02  9.24503E+01
    5120000  7.25073E+01  3.28314E-02  1.13585E+02
    6144000  7.21572E+01  2.74959E-02  1.34806E+02
    7168000  7.18629E+01  2.36654E-02  1.56000E+02
    8192000  7.16470E+01  2.07706E-02  1.77221E+02
    9216000  7.14916E+01  1.85108E-02  1.98321E+02
   10240000  7.13622E+01  1.66908E-02  2.19421E+02
   11264000  7.12497E+01  1.51982E-02  2.40693E+02
   12288000  7.11866E+01  1.39464E-02  2.61913E+02
   12527965  7.11634E+01  1.36838E-02  2.66888E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.72170E+01 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.71877E+01  1.66494E-03  2.20900E+05
    2048000  4.71901E+01  1.36647E-03  1.64167E+05
    3072000  4.72976E+01  1.83690E-03  6.05664E+04
    4096000  4.72242E+01  1.42443E-03  7.55031E+04
    5120000  4.72189E+01  1.19566E-03  8.56417E+04
    6144000  4.72271E+01  1.04461E-03  9.33983E+04
    7168000  4.72278E+01  9.58129E-04  9.51710E+04
    8192000  4.72349E+01  8.74122E-04  1.00062E+05
    9216000  4.72107E+01  7.96880E-04  1.07013E+05
   10240000  4.72097E+01  7.31040E-04  1.14380E+05
   11264000  4.72026E+01  6.79493E-04  1.20414E+05
   12288000  4.72193E+01  6.53982E-04  1.19110E+05
   12527965  4.72170E+01  6.43940E-04  1.20518E+05
mcnp       5     11/04/10 22:52:03     2     1498237     1131831568
```

Case 84

```
 Case 84
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.07171E+02 0.0045
tfc   12       1       1       1       1       1       1       1       1
     128000  1.05776E+02  1.20278E-02  1.32698E+03
     256000  1.05891E+02  8.42917E-03  1.35348E+03
     384000  1.06004E+02  6.85768E-03  1.37100E+03
     512000  1.07285E+02  9.92411E-03  4.91920E+02
     640000  1.07407E+02  8.30596E-03  5.62745E+02
     768000  1.07692E+02  7.28186E-03  6.10912E+02
     896000  1.07284E+02  6.48389E-03  6.60934E+02
    1024000  1.07127E+02  5.87352E-03  7.04917E+02
    1152000  1.07044E+02  5.45149E-03  7.28136E+02
    1280000  1.07113E+02  5.05709E-03  7.62095E+02
    1408000  1.07160E+02  4.72607E-03  7.93571E+02
    1498237  1.07171E+02  4.52142E-03  8.15096E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.36771E+01 0.0031
tfc   12       1       1       1       1       1       1       1       1
     128000  6.31900E+01  1.05018E-02  1.74065E+03
     256000  6.32960E+01  7.36444E-03  1.77313E+03
     384000  6.33952E+01  5.99383E-03  1.79466E+03
     512000  6.35812E+01  5.24505E-03  1.76107E+03
     640000  6.36616E+01  4.69489E-03  1.76133E+03
     768000  6.38463E+01  4.32414E-03  1.73246E+03
     896000  6.37045E+01  4.01022E-03  1.72780E+03
    1024000  6.36147E+01  3.74166E-03  1.73703E+03
    1152000  6.35163E+01  3.52118E-03  1.74528E+03
    1280000  6.36022E+01  3.36587E-03  1.72034E+03
    1408000  6.36389E+01  3.20521E-03  1.72533E+03
    1498237  6.36771E+01  3.10260E-03  1.73104E+03
tally  135    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.47895E+01 0.0040
tfc   12        1        1        1        1        1        1        1        1
     128000  3.44618E+01  9.69406E-03  2.04279E+03
     256000  3.45101E+01  6.74346E-03  2.11473E+03
     384000  3.45617E+01  5.48993E-03  2.13923E+03
     512000  3.46216E+01  4.80455E-03  2.09880E+03
     640000  3.48386E+01  6.91260E-03  8.12471E+02
     768000  3.48975E+01  5.97373E-03  9.07762E+02
     896000  3.48993E+01  5.89668E-03  7.99125E+02
    1024000  3.48190E+01  5.30017E-03  8.65675E+02
    1152000  3.47643E+01  4.86344E-03  9.14862E+02
    1280000  3.47705E+01  4.48178E-03  9.70306E+02
    1408000  3.47733E+01  4.16286E-03  1.02283E+03
    1498237  3.47895E+01  3.96894E-03  1.05781E+03
tally  145     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.47469E+01 0.0033
tfc   12        1        1        1        1        1        1        1        1
     128000  1.46977E+01  1.04693E-02  1.75146E+03
     256000  1.47022E+01  6.84638E-03  2.05163E+03
     384000  1.46989E+01  5.41626E-03  2.19782E+03
     512000  1.47576E+01  6.59799E-03  1.11289E+03
     640000  1.47860E+01  5.83428E-03  1.14056E+03
     768000  1.48054E+01  5.07629E-03  1.25710E+03
     896000  1.47865E+01  4.71443E-03  1.25018E+03
    1024000  1.47551E+01  4.27262E-03  1.33213E+03
    1152000  1.47341E+01  3.95580E-03  1.38285E+03
    1280000  1.47315E+01  3.66699E-03  1.44941E+03
    1408000  1.47312E+01  3.42609E-03  1.51004E+03
    1498237  1.47469E+01  3.33440E-03  1.49873E+03
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e         0
t         0
vals
  5.06344E+00 0.0028
tfc   12        1        1        1        1        1        1        1        1
     128000  5.06477E+00  1.02487E-02  1.82766E+03
     256000  5.06827E+00  6.74195E-03  2.11568E+03
     384000  5.06405E+00  5.28533E-03  2.30806E+03
     512000  5.06263E+00  4.54564E-03  2.34470E+03
     640000  5.06318E+00  3.99856E-03  2.42820E+03
     768000  5.07370E+00  3.61488E-03  2.47899E+03
     896000  5.06616E+00  3.34378E-03  2.48516E+03
    1024000  5.05884E+00  3.11391E-03  2.50798E+03
    1152000  5.05110E+00  2.91822E-03  2.54101E+03
    1280000  5.05224E+00  2.76314E-03  2.55272E+03
    1408000  5.06114E+00  2.91555E-03  2.08518E+03
    1498237  5.06344E+00  2.80319E-03  2.12057E+03
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.52625E+00 0.0026
tfc   12        1        1        1        1        1        1        1        1
     128000  2.52931E+00  1.00535E-02  1.89932E+03
     256000  2.53728E+00  7.56456E-03  1.68056E+03
     384000  2.53512E+00  5.82073E-03  1.90299E+03
     512000  2.53105E+00  4.83158E-03  2.07539E+03
     640000  2.53063E+00  4.19858E-03  2.20235E+03
     768000  2.53598E+00  3.79124E-03  2.25372E+03
     896000  2.53293E+00  3.49558E-03  2.27401E+03
    1024000  2.52851E+00  3.23199E-03  2.32807E+03
    1152000  2.52404E+00  3.01191E-03  2.38539E+03
    1280000  2.52449E+00  2.83804E-03  2.41977E+03
    1408000  2.52526E+00  2.68467E-03  2.45927E+03
    1498237  2.52625E+00  2.58837E-03  2.48716E+03
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
```

```
vals
  1.51016E+00 0.0030
tfc   12       1       1       1       1       1       1       1       1
     128000  1.50959E+00  1.03354E-02  1.79714E+03
     256000  1.51179E+00  7.00505E-03  1.95974E+03
     384000  1.50926E+00  5.40008E-03  2.21101E+03
     512000  1.50780E+00  4.53928E-03  2.35127E+03
     640000  1.51326E+00  5.14231E-03  1.46816E+03
     768000  1.51555E+00  4.50901E-03  1.59331E+03
     896000  1.51499E+00  4.22312E-03  1.55799E+03
    1024000  1.51166E+00  3.83776E-03  1.65112E+03
    1152000  1.50917E+00  3.54014E-03  1.72665E+03
    1280000  1.50930E+00  3.30205E-03  1.78748E+03
    1408000  1.50962E+00  3.09076E-03  1.85548E+03
    1498237  1.51016E+00  2.96117E-03  1.90034E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.00168E+00 0.0034
tfc   12       1       1       1       1       1       1       1       1
     128000  1.00136E+00  9.97795E-03  1.92821E+03
     256000  1.00070E+00  6.55508E-03  2.23802E+03
     384000  9.99162E-01  5.12604E-03  2.45373E+03
     512000  1.00027E+00  4.59063E-03  2.29896E+03
     640000  1.00036E+00  4.01251E-03  2.41135E+03
     768000  1.00342E+00  3.86741E-03  2.16582E+03
     896000  1.00499E+00  5.06389E-03  1.08358E+03
    1024000  1.00309E+00  4.56737E-03  1.16574E+03
    1152000  1.00108E+00  4.16257E-03  1.24888E+03
    1280000  1.00134E+00  3.86084E-03  1.30751E+03
    1408000  1.00155E+00  3.58671E-03  1.37782E+03
    1498237  1.00168E+00  3.41803E-03  1.42629E+03
mcnp       5     11/04/10 23:52:22     2     1438723     1134894651
```

Case 85

```
 Case 85
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  7.32842E+01 0.0037
tfc   12       1       1       1       1       1       1       1       1
     128000  7.25330E+01  1.16186E-02  1.38729E+03
     256000  7.25887E+01  8.20124E-03  1.38963E+03
     384000  7.27718E+01  6.75154E-03  1.36855E+03
     512000  7.31581E+01  6.21126E-03  1.21300E+03
     640000  7.31988E+01  5.49851E-03  1.23833E+03
     768000  7.34806E+01  5.11547E-03  1.19246E+03
     896000  7.33296E+01  4.69076E-03  1.21532E+03
    1024000  7.32049E+01  4.35702E-03  1.23204E+03
    1152000  7.32255E+01  4.24491E-03  1.15461E+03
    1280000  7.32822E+01  3.99928E-03  1.17097E+03
    1408000  7.32908E+01  3.79694E-03  1.18086E+03
    1438723  7.32842E+01  3.74911E-03  1.18550E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.35773E+01 0.0031
tfc   12       1       1       1       1       1       1       1       1
     128000  4.32960E+01  1.00742E-02  1.84523E+03
     256000  4.33578E+01  7.14774E-03  1.82945E+03
     384000  4.34452E+01  5.81376E-03  1.84567E+03
     512000  4.35488E+01  5.04846E-03  1.83613E+03
     640000  4.35573E+01  4.51531E-03  1.83634E+03
     768000  4.37096E+01  4.17563E-03  1.78966E+03
     896000  4.36585E+01  3.87448E-03  1.78136E+03
    1024000  4.36071E+01  3.62427E-03  1.78058E+03
    1152000  4.35533E+01  3.41534E-03  1.78362E+03
    1280000  4.35896E+01  3.24671E-03  1.77673E+03
    1408000  4.35821E+01  3.08835E-03  1.78488E+03
    1438723  4.35773E+01  3.05302E-03  1.78771E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  2.37649E+01 0.0032
tfc   12       1       1       1       1       1       1       1       1
     128000  2.36307E+01  9.30197E-03  2.16432E+03
     256000  2.36663E+01  6.73809E-03  2.05866E+03
     384000  2.37047E+01  5.42566E-03  2.11915E+03
     512000  2.37479E+01  4.68937E-03  2.12810E+03
     640000  2.37475E+01  4.17446E-03  2.14846E+03
     768000  2.38097E+01  3.81461E-03  2.14444E+03
     896000  2.38367E+01  4.27776E-03  1.46132E+03
    1024000  2.38030E+01  3.92548E-03  1.51781E+03
    1152000  2.37684E+01  3.63725E-03  1.57263E+03
    1280000  2.37717E+01  3.39965E-03  1.62047E+03
    1408000  2.37684E+01  3.20009E-03  1.66242E+03
    1438723  2.37649E+01  3.15659E-03  1.67232E+03
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.00845E+01 0.0031
tfc   12       1       1       1       1       1       1       1       1
     128000  1.00491E+01  9.51905E-03  2.06673E+03
     256000  1.00407E+01  6.38482E-03  2.29277E+03
     384000  1.00555E+01  5.10690E-03  2.39195E+03
     512000  1.01109E+01  6.21363E-03  1.21208E+03
     640000  1.01083E+01  5.26632E-03  1.34994E+03
     768000  1.01249E+01  4.61020E-03  1.46816E+03
     896000  1.01214E+01  4.30904E-03  1.44018E+03
    1024000  1.01049E+01  3.92398E-03  1.51897E+03
    1152000  1.00900E+01  3.61584E-03  1.59131E+03
    1280000  1.00888E+01  3.36324E-03  1.65574E+03
    1408000  1.00868E+01  3.15292E-03  1.71253E+03
    1438723  1.00845E+01  3.10725E-03  1.72586E+03
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
```

```
t         0
vals
  3.46625E+00 0.0025
tfc   12        1        1        1        1        1        1        1        1
     128000  3.45778E+00  8.83259E-03  2.40046E+03
     256000  3.45999E+00  6.13261E-03  2.48523E+03
     384000  3.46311E+00  4.89274E-03  2.60594E+03
     512000  3.46596E+00  4.21884E-03  2.62927E+03
     640000  3.46574E+00  3.73685E-03  2.68111E+03
     768000  3.47650E+00  3.47232E-03  2.58806E+03
     896000  3.47354E+00  3.21128E-03  2.59310E+03
    1024000  3.46984E+00  2.99942E-03  2.59974E+03
    1152000  3.46639E+00  2.81791E-03  2.62010E+03
    1280000  3.46622E+00  2.66680E-03  2.63346E+03
    1408000  3.46704E+00  2.53887E-03  2.64108E+03
    1438723  3.46625E+00  2.50872E-03  2.64759E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.73184E+00 0.0027
tfc   12        1        1        1        1        1        1        1        1
     128000  1.72776E+00  8.63775E-03  2.50998E+03
     256000  1.73157E+00  6.92108E-03  1.95124E+03
     384000  1.73360E+00  5.40128E-03  2.13833E+03
     512000  1.73405E+00  4.52407E-03  2.28645E+03
     640000  1.73322E+00  3.94805E-03  2.40195E+03
     768000  1.73676E+00  3.55572E-03  2.46808E+03
     896000  1.73497E+00  3.26557E-03  2.50760E+03
    1024000  1.73489E+00  3.27636E-03  2.17882E+03
    1152000  1.73265E+00  3.04605E-03  2.24232E+03
    1280000  1.73198E+00  2.85307E-03  2.30082E+03
    1408000  1.73216E+00  2.69308E-03  2.34727E+03
    1438723  1.73184E+00  2.65780E-03  2.35891E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.03270E+00 0.0025
tfc   12       1       1       1       1       1       1       1       1
     128000  1.03255E+00  9.05186E-03  2.28558E+03
     256000  1.03275E+00  6.42695E-03  2.26281E+03
     384000  1.03304E+00  5.00994E-03  2.48543E+03
     512000  1.03337E+00  4.24039E-03  2.60261E+03
     640000  1.03340E+00  3.75053E-03  2.66160E+03
     768000  1.03601E+00  3.45190E-03  2.61877E+03
     896000  1.03513E+00  3.17674E-03  2.64980E+03
    1024000  1.03387E+00  2.95660E-03  2.67558E+03
    1152000  1.03282E+00  2.77622E-03  2.69939E+03
    1280000  1.03251E+00  2.61797E-03  2.73261E+03
    1408000  1.03277E+00  2.48554E-03  2.75563E+03
    1438723  1.03270E+00  2.46275E-03  2.74735E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.84449E-01 0.0025
tfc   12       1       1       1       1       1       1       1       1
     128000  6.84426E-01  8.81705E-03  2.40893E+03
     256000  6.83349E-01  6.03664E-03  2.56489E+03
     384000  6.83450E-01  4.76385E-03  2.74886E+03
     512000  6.84017E-01  4.07374E-03  2.81990E+03
     640000  6.83994E-01  3.60816E-03  2.87578E+03
     768000  6.85931E-01  3.35666E-03  2.76949E+03
     896000  6.85955E-01  3.27316E-03  2.49598E+03
    1024000  6.85108E-01  3.03305E-03  2.54240E+03
    1152000  6.84301E-01  2.83115E-03  2.59565E+03
    1280000  6.84308E-01  2.67489E-03  2.61755E+03
    1408000  6.84648E-01  2.53596E-03  2.64715E+03
    1438723  6.84449E-01  2.50382E-03  2.65797E+03
mcnp       5     11/05/10 00:52:34     2     1449406     1143369534
```

Case 86

```
 Case 86
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  1.01208E+03 0.0037
tfc   12       1       1       1       1       1       1       1       1
     128000  1.00162E+03  1.16338E-02  1.39508E+03
     256000  1.00227E+03  8.20589E-03  1.39851E+03
     384000  1.00491E+03  6.75515E-03  1.37732E+03
     512000  1.01057E+03  6.21328E-03  1.22126E+03
     640000  1.01093E+03  5.49978E-03  1.24706E+03
     768000  1.01469E+03  5.11665E-03  1.20073E+03
     896000  1.01262E+03  4.69177E-03  1.22400E+03
    1024000  1.01091E+03  4.35818E-03  1.24072E+03
    1152000  1.01117E+03  4.24633E-03  1.16260E+03
    1280000  1.01201E+03  4.00050E-03  1.17909E+03
    1408000  1.01216E+03  3.79798E-03  1.18904E+03
    1449406  1.01208E+03  3.73419E-03  1.19500E+03
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.01822E+02 0.0030
tfc   12       1       1       1       1       1       1       1       1
     128000  5.98079E+02  1.00927E-02  1.85365E+03
     256000  5.98839E+02  7.15185E-03  1.84111E+03
     384000  5.99989E+02  5.81704E-03  1.85738E+03
     512000  6.01614E+02  5.05081E-03  1.84811E+03
     640000  6.01571E+02  4.51704E-03  1.84872E+03
     768000  6.03603E+02  4.17692E-03  1.80179E+03
     896000  6.02897E+02  3.87559E-03  1.79382E+03
    1024000  6.02185E+02  3.62534E-03  1.79303E+03
    1152000  6.01432E+02  3.41637E-03  1.79609E+03
    1280000  6.01960E+02  3.24771E-03  1.78904E+03
    1408000  6.01874E+02  3.08921E-03  1.79725E+03
    1449406  6.01822E+02  3.04239E-03  1.80023E+03
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e        0
t        0
vals
  3.28240E+02 0.0031
tfc   12       1       1       1       1       1       1       1       1
     128000  3.26869E+02  9.38108E-03  2.14555E+03
     256000  3.27186E+02  6.76671E-03  2.05665E+03
     384000  3.27589E+02  5.44242E-03  2.12188E+03
     512000  3.28218E+02  4.70046E-03  2.13388E+03
     640000  3.28101E+02  4.18263E-03  2.15616E+03
     768000  3.28922E+02  3.82072E-03  2.15340E+03
     896000  3.29272E+02  4.28155E-03  1.46978E+03
    1024000  3.28806E+02  3.92876E-03  1.52677E+03
    1152000  3.28312E+02  3.64011E-03  1.58208E+03
    1280000  3.28357E+02  3.40214E-03  1.63031E+03
    1408000  3.28313E+02  3.20227E-03  1.67258E+03
    1449406  3.28240E+02  3.14409E-03  1.68566E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.39267E+02 0.0031
tfc   12       1       1       1       1       1       1       1       1
     128000  1.38761E+02  9.50707E-03  2.08906E+03
     256000  1.38673E+02  6.37987E-03  2.31362E+03
     384000  1.38875E+02  5.10451E-03  2.41210E+03
     512000  1.39673E+02  6.21213E-03  1.22171E+03
     640000  1.39611E+02  5.26572E-03  1.36039E+03
     768000  1.39835E+02  4.60975E-03  1.47932E+03
     896000  1.39782E+02  4.30874E-03  1.45129E+03
    1024000  1.39569E+02  3.92424E-03  1.53029E+03
    1152000  1.39359E+02  3.61604E-03  1.60321E+03
    1280000  1.39343E+02  3.36338E-03  1.66811E+03
    1408000  1.39317E+02  3.15303E-03  1.72523E+03
    1449406  1.39267E+02  3.09197E-03  1.74297E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  4.78714E+01 0.0025
tfc   12        1        1        1        1        1        1        1        1
     128000  4.77640E+01  8.83879E-03  2.41690E+03
     256000  4.77985E+01  6.13438E-03  2.50250E+03
     384000  4.78388E+01  4.89420E-03  2.62386E+03
     512000  4.78870E+01  4.22018E-03  2.64722E+03
     640000  4.78750E+01  3.73802E-03  2.69958E+03
     768000  4.80211E+01  3.47307E-03  2.60609E+03
     896000  4.79789E+01  3.21180E-03  2.61191E+03
    1024000  4.79281E+01  2.99989E-03  2.61863E+03
    1152000  4.78783E+01  2.81826E-03  2.63935E+03
    1280000  4.78764E+01  2.66706E-03  2.65284E+03
    1408000  4.78879E+01  2.53909E-03  2.66040E+03
    1449406  4.78714E+01  2.49880E-03  2.66868E+03
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.39188E+01 0.0026
tfc   12        1        1        1        1        1        1        1        1
     128000  2.38696E+01  8.65394E-03  2.52126E+03
     256000  2.39207E+01  6.92276E-03  1.96498E+03
     384000  2.39495E+01  5.40577E-03  2.15074E+03
     512000  2.39583E+01  4.52723E-03  2.30031E+03
     640000  2.39424E+01  3.95069E-03  2.41676E+03
     768000  2.39899E+01  3.55769E-03  2.48360E+03
     896000  2.39647E+01  3.26711E-03  2.52422E+03
    1024000  2.39638E+01  3.27752E-03  2.19378E+03
    1152000  2.39319E+01  3.04701E-03  2.25793E+03
    1280000  2.39231E+01  2.85384E-03  2.31694E+03
    1408000  2.39259E+01  2.69375E-03  2.36367E+03
    1449406  2.39188E+01  2.64644E-03  2.37923E+03
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.42617E+01 0.0025
```

```
tfc   12       1       1       1       1       1       1       1       1
     128000  1.42522E+01  9.00898E-03  2.32644E+03
     256000  1.42605E+01  6.40931E-03  2.29242E+03
     384000  1.42666E+01  5.00367E-03  2.51031E+03
     512000  1.42736E+01  4.23617E-03  2.62727E+03
     640000  1.42723E+01  3.74769E-03  2.68566E+03
     768000  1.43081E+01  3.44969E-03  2.64153E+03
     896000  1.42961E+01  3.17496E-03  2.67288E+03
    1024000  1.42790E+01  2.95515E-03  2.69852E+03
    1152000  1.42641E+01  2.77492E-03  2.72243E+03
    1280000  1.42604E+01  2.61680E-03  2.75572E+03
    1408000  1.42642E+01  2.48452E-03  2.77853E+03
    1449406  1.42617E+01  2.45153E-03  2.77259E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.45321E+00 0.0025
tfc   12       1       1       1       1       1       1       1       1
     128000  9.45784E+00  8.84199E-03  2.41515E+03
     256000  9.44191E+00  6.04404E-03  2.57787E+03
     384000  9.44248E+00  4.77037E-03  2.76185E+03
     512000  9.45082E+00  4.07792E-03  2.83513E+03
     640000  9.44859E+00  3.61129E-03  2.89238E+03
     768000  9.47468E+00  3.35891E-03  2.78625E+03
     896000  9.47491E+00  3.27483E-03  2.51234E+03
    1024000  9.46323E+00  3.03447E-03  2.55928E+03
    1152000  9.45165E+00  2.83232E-03  2.61320E+03
    1280000  9.45311E+00  2.67829E-03  2.63063E+03
    1408000  9.45707E+00  2.53771E-03  2.66328E+03
    1449406  9.45321E+00  2.49467E-03  2.67752E+03
mcnp       5     11/05/10 01:52:48     2     1895096     1391715439
```

Case 87

```
 Case 87
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  2.84724E+02 0.0017
tfc   15       1       1       1       1       1       1       1       1
     128000  2.84559E+02  6.51875E-03  5.80793E+03
     256000  2.84372E+02  4.59807E-03  5.82062E+03
     384000  2.84797E+02  3.74949E-03  5.83646E+03
     512000  2.84968E+02  3.24168E-03  5.85728E+03
     640000  2.84457E+02  2.89896E-03  5.86614E+03
     768000  2.84203E+02  2.64553E-03  5.87298E+03
     896000  2.84382E+02  2.45271E-03  5.85627E+03
    1024000  2.84581E+02  2.29518E-03  5.85030E+03
    1152000  2.84965E+02  2.16546E-03  5.84058E+03
    1280000  2.84773E+02  2.05847E-03  5.81874E+03
    1408000  2.84584E+02  1.96543E-03  5.80396E+03
    1536000  2.84570E+02  1.91072E-03  5.63086E+03
    1664000  2.84565E+02  1.83315E-03  5.64816E+03
    1792000  2.84788E+02  1.76556E-03  5.65366E+03
    1895096  2.84724E+02  1.71464E-03  5.66860E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.69783E+02 0.0019
tfc   15       1       1       1       1       1       1       1       1
     128000  1.69417E+02  6.16189E-03  6.50012E+03
     256000  1.69298E+02  4.34538E-03  6.51726E+03
     384000  1.69654E+02  3.56199E-03  6.46709E+03
     512000  1.69767E+02  3.07693E-03  6.50133E+03
     640000  1.69511E+02  2.78477E-03  6.35710E+03
     768000  1.69336E+02  2.53445E-03  6.39903E+03
     896000  1.69704E+02  2.80300E-03  4.48403E+03
    1024000  1.69794E+02  2.56901E-03  4.66961E+03
    1152000  1.69971E+02  2.38293E-03  4.82316E+03
    1280000  1.69817E+02  2.23075E-03  4.95470E+03
    1408000  1.69680E+02  2.10496E-03  5.06002E+03
    1536000  1.69729E+02  2.11083E-03  4.61384E+03
    1664000  1.69716E+02  2.01612E-03  4.66952E+03
    1792000  1.69829E+02  1.92341E-03  4.76380E+03
    1895096  1.69783E+02  1.85630E-03  4.83647E+03
tally  135    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.37747E+01 0.0016
tfc   15       1       1       1       1       1       1       1       1
     128000  9.37721E+01  5.87316E-03  7.15494E+03
     256000  9.35942E+01  4.13903E-03  7.18331E+03
     384000  9.38201E+01  3.43321E-03  6.96136E+03
     512000  9.38951E+01  2.96374E-03  7.00739E+03
     640000  9.37240E+01  2.64637E-03  7.03942E+03
     768000  9.36387E+01  2.41155E-03  7.06791E+03
     896000  9.37924E+01  2.47830E-03  5.73596E+03
    1024000  9.38507E+01  2.28826E-03  5.88574E+03
    1152000  9.39382E+01  2.13607E-03  6.00242E+03
    1280000  9.38602E+01  2.00944E-03  6.10619E+03
    1408000  9.37794E+01  1.90279E-03  6.19240E+03
    1536000  9.37555E+01  1.82638E-03  6.16290E+03
    1664000  9.37227E+01  1.74486E-03  6.23420E+03
    1792000  9.37954E+01  1.67615E-03  6.27294E+03
    1895096  9.37747E+01  1.62431E-03  6.31660E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.08898E+01 0.0016
tfc   15       1       1       1       1       1       1       1       1
     128000  4.08130E+01  5.58995E-03  7.89831E+03
     256000  4.09275E+01  5.75100E-03  3.72079E+03
     384000  4.09700E+01  4.28358E-03  4.47178E+03
     512000  4.09691E+01  3.50212E-03  5.01851E+03
     640000  4.09104E+01  3.04921E-03  5.30230E+03
     768000  4.08522E+01  2.70587E-03  5.61396E+03
     896000  4.08655E+01  2.45314E-03  5.85422E+03
    1024000  4.08984E+01  2.25959E-03  6.03609E+03
    1152000  4.09420E+01  2.12897E-03  6.04250E+03
    1280000  4.09085E+01  1.99709E-03  6.18192E+03
    1408000  4.08805E+01  1.89156E-03  6.26616E+03
    1536000  4.08811E+01  1.84262E-03  6.05478E+03
    1664000  4.08714E+01  1.75920E-03  6.13298E+03
```

```
    1792000  4.08969E+01  1.68348E-03  6.21844E+03
    1895096  4.08898E+01  1.62855E-03  6.28376E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.44412E+01 0.0015
tfc   15       1       1       1       1       1       1       1
     128000  1.44460E+01  5.45406E-03  8.29678E+03
     256000  1.44255E+01  3.85027E-03  8.30116E+03
     384000  1.44581E+01  3.20620E-03  7.98205E+03
     512000  1.44614E+01  2.75538E-03  8.10727E+03
     640000  1.44353E+01  2.45656E-03  8.16929E+03
     768000  1.44216E+01  2.23777E-03  8.20826E+03
     896000  1.44289E+01  2.06685E-03  8.24701E+03
    1024000  1.44409E+01  1.93104E-03  8.26475E+03
    1152000  1.44667E+01  2.01900E-03  6.71866E+03
    1280000  1.44580E+01  1.90491E-03  6.79474E+03
    1408000  1.44469E+01  1.80054E-03  6.91567E+03
    1536000  1.44396E+01  1.71255E-03  7.00940E+03
    1664000  1.44350E+01  1.63522E-03  7.09822E+03
    1792000  1.44445E+01  1.57016E-03  7.14837E+03
    1895096  1.44412E+01  1.52084E-03  7.20538E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.30375E+00 0.0015
tfc   15       1       1       1       1       1       1       1
     128000  7.29763E+00  5.36342E-03  8.57959E+03
     256000  7.28628E+00  3.78302E-03  8.59893E+03
     384000  7.30026E+00  3.09566E-03  8.56223E+03
     512000  7.30367E+00  2.67386E-03  8.60911E+03
     640000  7.29082E+00  2.38858E-03  8.64091E+03
     768000  7.28715E+00  2.18812E-03  8.58498E+03
     896000  7.29310E+00  2.02785E-03  8.56724E+03
    1024000  7.30010E+00  1.89945E-03  8.54196E+03
    1152000  7.30838E+00  1.80182E-03  8.43587E+03
```

```
    1280000  7.30778E+00  1.78761E-03  7.71572E+03
    1408000  7.30397E+00  1.70227E-03  7.73716E+03
    1536000  7.30012E+00  1.62301E-03  7.80417E+03
    1664000  7.29833E+00  1.55450E-03  7.85453E+03
    1792000  7.30571E+00  1.53198E-03  7.50909E+03
    1895096  7.30375E+00  1.48441E-03  7.56332E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.39263E+00 0.0017
tfc   15       1       1       1       1       1       1       1
     128000  4.38741E+00  5.31495E-03  8.73677E+03
     256000  4.38139E+00  3.76373E-03  8.68726E+03
     384000  4.38858E+00  3.07699E-03  8.66646E+03
     512000  4.39061E+00  2.65939E-03  8.70305E+03
     640000  4.38458E+00  2.38876E-03  8.63960E+03
     768000  4.38889E+00  2.90055E-03  4.88562E+03
     896000  4.39109E+00  2.60506E-03  5.19133E+03
    1024000  4.39386E+00  2.37402E-03  5.46818E+03
    1152000  4.39818E+00  2.19623E-03  5.67807E+03
    1280000  4.39797E+00  2.17165E-03  5.22805E+03
    1408000  4.39442E+00  2.03374E-03  5.42063E+03
    1536000  4.39136E+00  1.91641E-03  5.59744E+03
    1664000  4.38986E+00  1.81864E-03  5.73865E+03
    1792000  4.39409E+00  1.77632E-03  5.58536E+03
    1895096  4.39263E+00  1.71031E-03  5.69736E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.92304E+00 0.0015
tfc   15       1       1       1       1       1       1       1
     128000  2.92870E+00  5.57459E-03  7.94188E+03
     256000  2.92161E+00  3.84996E-03  8.30250E+03
     384000  2.92513E+00  3.12496E-03  8.40246E+03
     512000  2.92522E+00  2.68425E-03  8.54263E+03
     640000  2.92165E+00  2.42186E-03  8.40502E+03
```

```
     768000  2.91835E+00  2.20010E-03  8.49179E+03
     896000  2.92036E+00  2.03594E-03  8.49925E+03
    1024000  2.92237E+00  1.89913E-03  8.54480E+03
    1152000  2.92557E+00  1.79407E-03  8.50891E+03
    1280000  2.92512E+00  1.81827E-03  7.45766E+03
    1408000  2.92364E+00  1.72764E-03  7.51164E+03
    1536000  2.92201E+00  1.64561E-03  7.59125E+03
    1664000  2.92092E+00  1.57357E-03  7.66532E+03
    1792000  2.92410E+00  1.56279E-03  7.21592E+03
    1895096  2.92304E+00  1.51197E-03  7.29013E+03
mcnp       5     11/05/10 02:52:58     2     1841567     1411538805
```

Case 88

```
 Case 88
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.93368E+02 0.0017
tfc   15       1       1       1       1       1       1       1       1
     128000  1.92989E+02  6.30513E-03  6.03439E+03
     256000  1.93094E+02  4.45448E-03  6.02637E+03
     384000  1.93466E+02  3.64192E-03  6.01576E+03
     512000  1.93569E+02  3.14982E-03  6.03593E+03
     640000  1.93275E+02  2.81829E-03  6.03651E+03
     768000  1.93115E+02  2.57056E-03  6.04514E+03
     896000  1.93182E+02  2.37920E-03  6.04894E+03
    1024000  1.93251E+02  2.22580E-03  6.04578E+03
    1152000  1.93471E+02  2.10008E-03  6.03403E+03
    1280000  1.93406E+02  1.99711E-03  6.00924E+03
    1408000  1.93275E+02  1.90673E-03  5.99477E+03
    1536000  1.93246E+02  1.85233E-03  5.82208E+03
    1664000  1.93283E+02  1.77900E-03  5.82623E+03
    1792000  1.93417E+02  1.71238E-03  5.83882E+03
    1841567  1.93368E+02  1.68865E-03  5.84343E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  1.15391E+02 0.0018
tfc   15        1        1        1        1        1        1        1        1
     128000  1.15003E+02  5.97462E-03  6.72049E+03
     256000  1.15040E+02  4.21366E-03  6.73490E+03
     384000  1.15477E+02  3.78976E-03  5.55557E+03
     512000  1.15492E+02  3.20372E-03  5.83455E+03
     640000  1.15326E+02  2.85624E-03  5.87717E+03
     768000  1.15195E+02  2.57516E-03  6.02356E+03
     896000  1.15406E+02  2.77220E-03  4.45544E+03
    1024000  1.15421E+02  2.53623E-03  4.65633E+03
    1152000  1.15502E+02  2.34860E-03  4.82461E+03
    1280000  1.15434E+02  2.19702E-03  4.96543E+03
    1408000  1.15331E+02  2.07061E-03  5.08340E+03
    1536000  1.15363E+02  2.07139E-03  4.65581E+03
    1664000  1.15347E+02  1.96634E-03  4.76897E+03
    1792000  1.15423E+02  1.87595E-03  4.86497E+03
    1841567  1.15391E+02  1.84388E-03  4.90099E+03
tally  135     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.37672E+01 0.0016
tfc   15        1        1        1        1        1        1        1        1
     128000  6.36232E+01  5.65209E-03  7.50937E+03
     256000  6.35826E+01  3.99422E-03  7.49524E+03
     384000  6.37685E+01  3.33294E-03  7.18286E+03
     512000  6.38214E+01  2.87617E-03  7.23915E+03
     640000  6.37208E+01  2.56458E-03  7.28999E+03
     768000  6.36795E+01  2.33731E-03  7.31191E+03
     896000  6.38006E+01  2.39963E-03  5.94635E+03
    1024000  6.38281E+01  2.21712E-03  6.09320E+03
    1152000  6.38685E+01  2.06911E-03  6.21602E+03
    1280000  6.38290E+01  1.94683E-03  6.32367E+03
    1408000  6.37681E+01  1.84340E-03  6.41378E+03
    1536000  6.37498E+01  1.77040E-03  6.37347E+03
    1664000  6.37357E+01  1.69157E-03  6.44413E+03
    1792000  6.37813E+01  1.62459E-03  6.48686E+03
    1841567  6.37672E+01  1.60033E-03  6.50618E+03
tally  145     2     1
f         1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.77936E+01 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  2.77093E+01  5.38669E-03  8.26755E+03
     256000  2.77062E+01  3.81375E-03  8.22138E+03
     384000  2.77692E+01  3.13792E-03  8.10340E+03
     512000  2.77903E+01  2.71099E-03  8.14822E+03
     640000  2.77654E+01  2.44863E-03  7.99669E+03
     768000  2.77468E+01  2.23323E-03  8.00932E+03
     896000  2.77686E+01  2.06793E-03  8.00694E+03
    1024000  2.78010E+01  1.97153E-03  7.70576E+03
    1152000  2.78250E+01  1.87889E-03  7.53839E+03
    1280000  2.78071E+01  1.77550E-03  7.60300E+03
    1408000  2.77868E+01  1.69282E-03  7.60557E+03
    1536000  2.77861E+01  1.66277E-03  7.22527E+03
    1664000  2.77819E+01  1.59281E-03  7.26802E+03
    1792000  2.77987E+01  1.52999E-03  7.31381E+03
    1841567  2.77936E+01  1.50766E-03  7.33058E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.83079E+00 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  9.81886E+00  5.23880E-03  8.74093E+03
     256000  9.81082E+00  3.70013E-03  8.73405E+03
     384000  9.84075E+00  3.15336E-03  8.02426E+03
     512000  9.84205E+00  2.69615E-03  8.23813E+03
     640000  9.82753E+00  2.39594E-03  8.35228E+03
     768000  9.82196E+00  2.19273E-03  8.30793E+03
     896000  9.82747E+00  2.02225E-03  8.37280E+03
    1024000  9.83519E+00  1.89642E-03  8.32827E+03
    1152000  9.84868E+00  1.96297E-03  6.90644E+03
    1280000  9.84275E+00  1.84948E-03  7.00687E+03
    1408000  9.83414E+00  1.74744E-03  7.13749E+03
    1536000  9.82857E+00  1.66161E-03  7.23532E+03
    1664000  9.82595E+00  1.58598E-03  7.33075E+03
```

```
    1792000  9.83256E+00  1.52252E-03  7.38581E+03
    1841567  9.83079E+00  1.49924E-03  7.41322E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.97332E+00 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  4.96591E+00  5.19842E-03  8.87724E+03
     256000  4.95978E+00  3.65396E-03  8.95617E+03
     384000  4.97234E+00  3.06858E-03  8.47376E+03
     512000  4.97421E+00  2.63183E-03  8.64570E+03
     640000  4.96744E+00  2.34260E-03  8.73700E+03
     768000  4.96707E+00  2.16264E-03  8.54076E+03
     896000  4.97087E+00  1.99878E-03  8.57058E+03
    1024000  4.97485E+00  1.87751E-03  8.49690E+03
    1152000  4.97822E+00  1.77320E-03  8.46377E+03
    1280000  4.97698E+00  1.74708E-03  7.85234E+03
    1408000  4.97390E+00  1.66862E-03  7.82780E+03
    1536000  4.97086E+00  1.58987E-03  7.90305E+03
    1664000  4.96991E+00  1.52138E-03  7.96645E+03
    1792000  4.97460E+00  1.49515E-03  7.65863E+03
    1841567  4.97332E+00  1.47198E-03  7.69029E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.99126E+00 0.0017
tfc   15       1       1       1       1       1       1       1       1
     128000  2.98325E+00  5.10326E-03  9.21142E+03
     256000  2.98030E+00  3.62816E-03  9.08400E+03
     384000  2.98744E+00  3.01396E-03  8.78370E+03
     512000  2.98916E+00  2.59396E-03  8.89999E+03
     640000  2.98615E+00  2.32262E-03  8.88796E+03
     768000  2.99045E+00  2.79797E-03  5.10244E+03
     896000  2.99200E+00  2.51288E-03  5.42248E+03
    1024000  2.99375E+00  2.29385E-03  5.69235E+03
    1152000  2.99562E+00  2.12038E-03  5.91905E+03
```

```
    1280000  2.99491E+00  2.08845E-03  5.49514E+03
    1408000  2.99214E+00  1.95601E-03  5.69654E+03
    1536000  2.99001E+00  1.84505E-03  5.86812E+03
    1664000  2.98908E+00  1.75093E-03  6.01460E+03
    1792000  2.99208E+00  1.70897E-03  5.86211E+03
    1841567  2.99126E+00  1.67782E-03  5.91914E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.99070E+00 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  1.99094E+00  5.33468E-03  8.42955E+03
     256000  1.98836E+00  3.74521E-03  8.52507E+03
     384000  1.99137E+00  3.05192E-03  8.56654E+03
     512000  1.99142E+00  2.61249E-03  8.77418E+03
     640000  1.98991E+00  2.34975E-03  8.68388E+03
     768000  1.98882E+00  2.16202E-03  8.54564E+03
     896000  1.99005E+00  1.99457E-03  8.60678E+03
    1024000  1.99122E+00  1.85900E-03  8.66692E+03
    1152000  1.99250E+00  1.74981E-03  8.69162E+03
    1280000  1.99191E+00  1.76173E-03  7.72231E+03
    1408000  1.99076E+00  1.67376E-03  7.77973E+03
    1536000  1.98967E+00  1.59648E-03  7.83774E+03
    1664000  1.98903E+00  1.52609E-03  7.91740E+03
    1792000  1.99124E+00  1.51299E-03  7.47915E+03
    1841567  1.99070E+00  1.48876E-03  7.51797E+03
mcnp       5     11/05/10 03:53:15     2     1844224     1413781095
```

Case 89

```
 Case 89
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  2.67112E+03 0.0017
tfc   15       1       1       1       1       1       1       1       1
     128000  2.66670E+03  6.30439E-03  6.02865E+03
     256000  2.66737E+03  4.45394E-03  6.03516E+03
     384000  2.67229E+03  3.64149E-03  6.02343E+03
     512000  2.67377E+03  3.14944E-03  6.04411E+03
     640000  2.66955E+03  2.81816E-03  6.04448E+03
     768000  2.66736E+03  2.57043E-03  6.05284E+03
     896000  2.66826E+03  2.37898E-03  6.05868E+03
    1024000  2.66923E+03  2.22572E-03  6.05516E+03
    1152000  2.67219E+03  2.09999E-03  6.04491E+03
    1280000  2.67129E+03  1.99701E-03  6.01993E+03
    1408000  2.66948E+03  1.90663E-03  6.00479E+03
    1536000  2.66912E+03  1.85224E-03  5.83307E+03
    1664000  2.66969E+03  1.77889E-03  5.83694E+03
    1792000  2.67150E+03  1.71227E-03  5.84949E+03
    1844224  2.67112E+03  1.68719E-03  5.85443E+03
tally  125     2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.59395E+03 0.0018
tfc   15       1       1       1       1       1       1       1       1
     128000  1.58892E+03  5.97328E-03  6.71553E+03
     256000  1.58907E+03  4.21228E-03  6.74752E+03
     384000  1.59509E+03  3.78852E-03  5.56499E+03
     512000  1.59529E+03  3.20276E-03  5.84454E+03
     640000  1.59294E+03  2.85571E-03  5.88658E+03
     768000  1.59110E+03  2.57471E-03  6.03270E+03
     896000  1.59399E+03  2.77173E-03  4.46331E+03
    1024000  1.59419E+03  2.53588E-03  4.66455E+03
    1152000  1.59528E+03  2.34830E-03  4.83413E+03
    1280000  1.59434E+03  2.19673E-03  4.97507E+03
    1408000  1.59294E+03  2.07035E-03  5.09262E+03
    1536000  1.59340E+03  2.07117E-03  4.66512E+03
    1664000  1.59321E+03  1.96610E-03  4.77830E+03
    1792000  1.59424E+03  1.87573E-03  4.87440E+03
    1844224  1.59395E+03  1.84184E-03  4.91257E+03
tally  135     2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  8.80829E+02 0.0016
tfc   15        1        1        1        1        1        1        1        1
     128000  8.78909E+02  5.65108E-03  7.50313E+03
     256000  8.78532E+02  4.00112E-03  7.47850E+03
     384000  8.80959E+02  3.33411E-03  7.18527E+03
     512000  8.81654E+02  2.87672E-03  7.24441E+03
     640000  8.80192E+02  2.56518E-03  7.29550E+03
     768000  8.79618E+02  2.33771E-03  7.31796E+03
     896000  8.81271E+02  2.39972E-03  5.95442E+03
    1024000  8.81638E+02  2.21721E-03  6.10176E+03
    1152000  8.82186E+02  2.06917E-03  6.22633E+03
    1280000  8.81634E+02  1.94685E-03  6.33412E+03
    1408000  8.80790E+02  1.84341E-03  6.42374E+03
    1536000  8.80556E+02  1.77043E-03  6.38461E+03
    1664000  8.80380E+02  1.69157E-03  6.45517E+03
    1792000  8.80955E+02  1.62393E-03  6.50324E+03
    1844224  8.80829E+02  1.59829E-03  6.52385E+03
tally  145     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.83925E+02 0.0015
tfc   15        1        1        1        1        1        1        1        1
     128000  3.82845E+02  5.38793E-03  8.25397E+03
     256000  3.82722E+02  3.81146E-03  8.24129E+03
     384000  3.83610E+02  3.13645E-03  8.11946E+03
     512000  3.83892E+02  2.70975E-03  8.16468E+03
     640000  3.83516E+02  2.44784E-03  8.01171E+03
     768000  3.83265E+02  2.23262E-03  8.02303E+03
     896000  3.83561E+02  2.06733E-03  8.02302E+03
    1024000  3.84002E+02  1.97104E-03  7.72107E+03
    1152000  3.84331E+02  1.87846E-03  7.55479E+03
    1280000  3.84080E+02  1.77509E-03  7.61926E+03
    1408000  3.83796E+02  1.69245E-03  7.62077E+03
    1536000  3.83795E+02  1.66250E-03  7.24053E+03
    1664000  3.83745E+02  1.59255E-03  7.28285E+03
    1792000  3.83970E+02  1.52975E-03  7.32864E+03
    1844224  3.83925E+02  1.50613E-03  7.34662E+03
tally  155     2     1
f         1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.35801E+02 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  1.35643E+02  5.24674E-03  8.70416E+03
     256000  1.35534E+02  3.70357E-03  8.72846E+03
     384000  1.35947E+02  3.15518E-03  8.02334E+03
     512000  1.35959E+02  2.69710E-03  8.24150E+03
     640000  1.35746E+02  2.39665E-03  8.35759E+03
     768000  1.35672E+02  2.19326E-03  8.31362E+03
     896000  1.35746E+02  2.02259E-03  8.38196E+03
    1024000  1.35855E+02  1.89679E-03  8.33734E+03
    1152000  1.36040E+02  1.96319E-03  6.91667E+03
    1280000  1.35958E+02  1.84963E-03  7.01753E+03
    1408000  1.35836E+02  1.74756E-03  7.14771E+03
    1536000  1.35762E+02  1.66178E-03  7.24683E+03
    1664000  1.35728E+02  1.58610E-03  7.34217E+03
    1792000  1.35817E+02  1.52261E-03  7.39752E+03
    1844224  1.35801E+02  1.49798E-03  7.42686E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.87019E+01 0.0015
tfc   15       1       1       1       1       1       1       1       1
     128000  6.86244E+01  5.20978E-03  8.82812E+03
     256000  6.85323E+01  3.65929E-03  8.94096E+03
     384000  6.87014E+01  3.07132E-03  8.46747E+03
     512000  6.87224E+01  2.63334E-03  8.64539E+03
     640000  6.86189E+01  2.34361E-03  8.74017E+03
     768000  6.86148E+01  2.16338E-03  8.54487E+03
     896000  6.86657E+01  1.99930E-03  8.57836E+03
    1024000  6.87202E+01  1.87795E-03  8.50551E+03
    1152000  6.87666E+01  1.77354E-03  8.47505E+03
    1280000  6.87483E+01  1.74729E-03  7.86366E+03
    1408000  6.87048E+01  1.66877E-03  7.83857E+03
    1536000  6.86643E+01  1.59008E-03  7.91506E+03
    1664000  6.86522E+01  1.52155E-03  7.97830E+03
```

```
    1792000  6.87157E+01  1.49528E-03  7.67037E+03
    1844224  6.87019E+01  1.47078E-03  7.70402E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.13215E+01 0.0017
tfc   15       1       1       1       1       1       1       1
     128000  4.12280E+01  5.11759E-03  9.14902E+03
     256000  4.11816E+01  3.63409E-03  9.06542E+03
     384000  4.12801E+01  3.01763E-03  8.77147E+03
     512000  4.13010E+01  2.59612E-03  8.89504E+03
     640000  4.12525E+01  2.32390E-03  8.88908E+03
     768000  4.13117E+01  2.79844E-03  5.10666E+03
     896000  4.13325E+01  2.51323E-03  5.42869E+03
    1024000  4.13565E+01  2.29416E-03  5.69929E+03
    1152000  4.13814E+01  2.12064E-03  5.92776E+03
    1280000  4.13707E+01  2.08859E-03  5.50361E+03
    1408000  4.13319E+01  1.95613E-03  5.70473E+03
    1536000  4.13031E+01  1.84522E-03  5.87752E+03
    1664000  4.12908E+01  1.75106E-03  6.02397E+03
    1792000  4.13307E+01  1.70898E-03  5.87202E+03
    1844224  4.13215E+01  1.67607E-03  5.93238E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.75010E+01 0.0015
tfc   15       1       1       1       1       1       1       1
     128000  2.75157E+01  5.35086E-03  8.36872E+03
     256000  2.74831E+01  3.75982E-03  8.46923E+03
     384000  2.75186E+01  3.05986E-03  8.53097E+03
     512000  2.75163E+01  2.61757E-03  8.74987E+03
     640000  2.74914E+01  2.35316E-03  8.66934E+03
     768000  2.74763E+01  2.16458E-03  8.53538E+03
     896000  2.74930E+01  1.99653E-03  8.60218E+03
    1024000  2.75086E+01  1.86063E-03  8.66455E+03
    1152000  2.75256E+01  1.75116E-03  8.69308E+03
```

```
    1280000  2.75167E+01  1.76271E-03  7.72661E+03
    1408000  2.75004E+01  1.67461E-03  7.78405E+03
    1536000  2.74857E+01  1.59730E-03  7.84371E+03
    1664000  2.74771E+01  1.52680E-03  7.92353E+03
    1792000  2.75070E+01  1.51358E-03  7.48606E+03
    1844224  2.75010E+01  1.48793E-03  7.52746E+03
mcnp       5     11/05/10 04:53:20     2      985116     1080503909
```

Case 90

```
 Case 90
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.84874E+00 0.0057
tfc   16       1       1       1       1       1       1       1       1
      64000  8.82362E+00  1.24558E-02  1.64905E+03
     128000  8.75185E+00  8.91480E-03  1.61372E+03
     192000  8.78612E+00  7.22469E-03  1.63774E+03
     256000  8.80715E+00  6.23572E-03  1.64819E+03
     320000  8.85550E+00  6.81044E-03  1.10513E+03
     384000  8.82185E+00  6.03305E-03  1.17394E+03
     448000  8.83065E+00  5.46667E-03  1.22584E+03
     512000  8.82123E+00  5.02633E-03  1.26861E+03
     576000  8.83099E+00  4.67909E-03  1.30125E+03
     640000  8.81816E+00  4.38413E-03  1.33426E+03
     704000  8.81674E+00  4.14061E-03  1.35981E+03
     768000  8.85645E+00  6.33184E-03  5.32922E+02
     832000  8.86191E+00  5.98474E-03  5.50845E+02
     896000  8.87079E+00  6.18998E-03  4.78152E+02
     960000  8.85272E+00  5.84131E-03  5.01213E+02
     985116  8.84874E+00  5.71607E-03  5.10097E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  6.12273E+00 0.0032
tfc   16       1       1       1       1       1       1       1       1
      64000  6.15275E+00  1.00952E-02  2.51044E+03
     128000  6.17449E+00  1.51023E-02  5.62293E+02
     192000  6.15673E+00  1.05947E-02  7.61560E+02
     256000  6.15700E+00  8.29864E-03  9.30610E+02
     320000  6.16125E+00  6.93114E-03  1.06697E+03
     384000  6.13785E+00  6.00117E-03  1.18645E+03
     448000  6.13546E+00  5.32729E-03  1.29082E+03
     512000  6.12673E+00  4.81919E-03  1.38001E+03
     576000  6.13399E+00  4.44099E-03  1.44452E+03
     640000  6.12677E+00  4.11346E-03  1.51563E+03
     704000  6.13421E+00  4.08136E-03  1.39959E+03
     768000  6.13401E+00  3.82630E-03  1.45937E+03
     832000  6.13476E+00  3.63323E-03  1.49463E+03
     896000  6.12978E+00  3.44627E-03  1.54257E+03
     960000  6.12249E+00  3.28110E-03  1.58857E+03
     985116  6.12273E+00  3.23909E-03  1.58855E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.86354E+00 0.0022
tfc   16       1       1       1       1       1       1       1       1
      64000  3.89489E+00  8.50062E-03  3.54061E+03
     128000  3.85740E+00  6.00277E-03  3.55915E+03
     192000  3.86009E+00  4.86104E-03  3.61762E+03
     256000  3.87009E+00  4.17925E-03  3.66931E+03
     320000  3.87574E+00  3.73102E-03  3.68220E+03
     384000  3.86714E+00  3.38959E-03  3.71901E+03
     448000  3.86573E+00  3.12904E-03  3.74159E+03
     512000  3.86199E+00  2.92287E-03  3.75156E+03
     576000  3.86974E+00  2.92972E-03  3.31919E+03
     640000  3.86600E+00  2.75903E-03  3.36895E+03
     704000  3.86837E+00  2.63897E-03  3.34764E+03
     768000  3.86993E+00  2.51228E-03  3.38523E+03
     832000  3.86852E+00  2.40409E-03  3.41364E+03
     896000  3.86716E+00  2.31030E-03  3.43247E+03
     960000  3.86449E+00  2.22356E-03  3.45895E+03
     985116  3.86354E+00  2.19179E-03  3.46935E+03
tally  145    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.90145E+00 0.0019
tfc   16       1       1       1       1       1       1       1       1
      64000  1.91401E+00  7.42566E-03  4.63991E+03
     128000  1.89652E+00  5.15454E-03  4.82693E+03
     192000  1.89696E+00  4.25805E-03  4.71476E+03
     256000  1.90196E+00  3.66677E-03  4.76666E+03
     320000  1.90490E+00  3.26125E-03  4.81942E+03
     384000  1.90160E+00  2.96297E-03  4.86707E+03
     448000  1.90068E+00  2.73324E-03  4.90368E+03
     512000  1.89902E+00  2.55042E-03  4.92728E+03
     576000  1.90036E+00  2.40671E-03  4.91853E+03
     640000  1.89984E+00  2.31521E-03  4.78441E+03
     704000  1.90005E+00  2.19862E-03  4.82292E+03
     768000  1.90122E+00  2.10036E-03  4.84325E+03
     832000  1.90079E+00  2.01967E-03  4.83680E+03
     896000  1.90111E+00  1.96254E-03  4.75673E+03
     960000  1.90172E+00  1.97428E-03  4.38757E+03
     985116  1.90145E+00  1.94545E-03  4.40359E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.28951E-01 0.0019
tfc   16       1       1       1       1       1       1       1       1
      64000  7.30141E-01  6.41387E-03  6.21927E+03
     128000  7.25343E-01  4.59441E-03  6.07562E+03
     192000  7.25687E-01  4.06231E-03  5.18006E+03
     256000  7.27668E-01  3.57279E-03  5.02073E+03
     320000  7.28511E-01  3.13191E-03  5.22568E+03
     384000  7.27732E-01  2.84603E-03  5.27524E+03
     448000  7.27740E-01  2.61813E-03  5.34436E+03
     512000  7.27137E-01  2.43293E-03  5.41466E+03
     576000  7.27595E-01  2.28304E-03  5.46581E+03
     640000  7.27872E-01  2.20503E-03  5.27449E+03
     704000  7.28839E-01  2.33205E-03  4.28680E+03
     768000  7.29020E-01  2.20170E-03  4.40763E+03
     832000  7.28816E-01  2.09753E-03  4.48439E+03
```

```
     896000  7.29322E-01  2.05662E-03  4.33147E+03
     960000  7.29068E-01  1.96721E-03  4.41920E+03
     985116  7.28951E-01  1.93439E-03  4.45411E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.79304E-01 0.0022
tfc   16       1       1       1       1       1       1       1
      64000  3.82256E-01  7.92400E-03  4.07466E+03
     128000  3.78632E-01  5.22450E-03  4.69851E+03
     192000  3.77714E-01  4.04031E-03  5.23663E+03
     256000  3.78117E-01  3.38967E-03  5.57784E+03
     320000  3.78521E-01  2.97736E-03  5.78230E+03
     384000  3.78071E-01  2.70255E-03  5.85026E+03
     448000  3.78050E-01  2.47720E-03  5.96974E+03
     512000  3.77759E-01  2.30295E-03  6.04312E+03
     576000  3.77989E-01  2.16264E-03  6.09137E+03
     640000  3.77881E-01  2.04856E-03  6.11097E+03
     704000  3.79104E-01  2.54720E-03  3.59320E+03
     768000  3.79236E-01  2.38987E-03  3.74087E+03
     832000  3.79038E-01  2.26086E-03  3.85986E+03
     896000  3.79360E-01  2.29490E-03  3.47870E+03
     960000  3.79344E-01  2.20068E-03  3.53127E+03
     985116  3.79304E-01  2.16077E-03  3.56970E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.31064E-01 0.0017
tfc   16       1       1       1       1       1       1       1
      64000  2.31884E-01  6.22993E-03  6.59194E+03
     128000  2.30046E-01  4.38269E-03  6.67682E+03
     192000  2.30049E-01  3.63804E-03  6.45873E+03
     256000  2.30285E-01  3.11160E-03  6.61932E+03
     320000  2.30722E-01  2.82452E-03  6.42498E+03
     384000  2.30464E-01  2.56537E-03  6.49263E+03
     448000  2.30558E-01  2.37520E-03  6.49348E+03
```

```
     512000  2.30442E-01  2.22166E-03  6.49345E+03
     576000  2.30618E-01  2.10802E-03  6.41113E+03
     640000  2.30525E-01  1.99595E-03  6.43738E+03
     704000  2.30834E-01  1.95793E-03  6.08157E+03
     768000  2.30941E-01  1.86440E-03  6.14674E+03
     832000  2.31007E-01  1.86880E-03  5.64927E+03
     896000  2.31109E-01  1.83701E-03  5.42899E+03
     960000  2.31064E-01  1.77411E-03  5.43352E+03
     985116  2.31064E-01  1.74814E-03  5.45376E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.55075E-01 0.0017
tfc   16       1       1       1       1       1       1       1       1
      64000  1.55654E-01  6.04976E-03  6.99043E+03
     128000  1.54410E-01  4.29050E-03  6.96683E+03
     192000  1.54674E-01  3.73079E-03  6.14159E+03
     256000  1.54762E-01  3.16414E-03  6.40134E+03
     320000  1.54903E-01  2.80089E-03  6.53385E+03
     384000  1.54688E-01  2.53472E-03  6.65059E+03
     448000  1.54719E-01  2.33906E-03  6.69572E+03
     512000  1.54680E-01  2.21934E-03  6.50706E+03
     576000  1.54854E-01  2.16988E-03  6.05078E+03
     640000  1.54795E-01  2.04929E-03  6.10664E+03
     704000  1.54912E-01  1.95442E-03  6.10340E+03
     768000  1.54995E-01  1.86147E-03  6.16609E+03
     832000  1.54994E-01  1.81623E-03  5.98107E+03
     896000  1.55065E-01  1.76473E-03  5.88287E+03
     960000  1.55079E-01  1.71870E-03  5.78953E+03
     985116  1.55075E-01  1.69449E-03  5.80454E+03
mcnp       5     11/05/10 05:53:24     2     1136510     1040110378
```

Case 91

```
 Case 91
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  1.00064E+02 0.0070
tfc   18        1        1        1        1        1        1        1        1
      64000  1.01263E+02  1.42366E-02  1.45204E+03
     128000  9.97531E+01  9.99680E-03  1.47736E+03
     192000  9.98554E+01  8.16105E-03  1.47766E+03
     256000  9.98727E+01  7.15010E-03  1.44354E+03
     320000  9.98610E+01  6.39054E-03  1.44589E+03
     384000  9.91677E+01  5.77876E-03  1.47588E+03
     448000  9.93673E+01  5.38758E-03  1.45536E+03
     512000  9.95596E+01  5.06177E-03  1.44319E+03
     576000  9.96162E+01  4.77124E-03  1.44417E+03
     640000  9.95892E+01  4.51818E-03  1.44971E+03
     704000  9.94357E+01  4.29037E-03  1.46166E+03
     768000  1.00249E+02  9.21646E-03  2.90241E+02
     832000  1.00194E+02  8.58186E-03  3.09088E+02
     896000  1.00015E+02  8.04728E-03  3.26382E+02
     960000  1.00354E+02  8.10360E-03  3.00452E+02
    1024000  1.00251E+02  7.65572E-03  3.15514E+02
    1088000  1.00176E+02  7.25576E-03  3.30609E+02
    1136510  1.00064E+02  6.98624E-03  3.41421E+02
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.93533E+01 0.0039
tfc   18        1        1        1        1        1        1        1        1
      64000  7.01352E+01  1.12722E-02  2.31615E+03
     128000  7.02286E+01  1.49008E-02  6.64951E+02
     192000  6.99906E+01  1.06509E-02  8.67541E+02
     256000  6.98455E+01  8.51149E-03  1.01869E+03
     320000  6.97965E+01  7.20772E-03  1.13662E+03
     384000  6.94088E+01  6.29204E-03  1.24491E+03
     448000  6.93471E+01  5.62476E-03  1.33521E+03
     512000  6.93932E+01  5.11981E-03  1.41066E+03
     576000  6.93936E+01  4.73713E-03  1.46504E+03
     640000  6.93443E+01  4.40733E-03  1.52355E+03
     704000  6.92681E+01  4.12954E-03  1.57774E+03
     768000  6.93085E+01  3.90717E-03  1.61496E+03
     832000  6.92888E+01  3.71133E-03  1.65267E+03
     896000  6.92149E+01  3.54087E-03  1.68579E+03
```

```
     960000  6.94393E+01  4.47745E-03  9.84168E+02
    1024000  6.94146E+01  4.25731E-03  1.02028E+03
    1088000  6.93804E+01  4.06205E-03  1.05485E+03
    1136510  6.93533E+01  3.93230E-03  1.07766E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.38052E+01 0.0029
tfc   18       1       1       1       1       1       1       1       1
      64000  4.42635E+01  9.55419E-03  3.22403E+03
     128000  4.38916E+01  6.94663E-03  3.05956E+03
     192000  4.39121E+01  5.75173E-03  2.97488E+03
     256000  4.38542E+01  4.93042E-03  3.03588E+03
     320000  4.38606E+01  4.39011E-03  3.06380E+03
     384000  4.37070E+01  3.97751E-03  3.11529E+03
     448000  4.37034E+01  3.68422E-03  3.11220E+03
     512000  4.37244E+01  3.43699E-03  3.13021E+03
     576000  4.37482E+01  3.25605E-03  3.10098E+03
     640000  4.37271E+01  3.08336E-03  3.11285E+03
     704000  4.37177E+01  2.93179E-03  3.13020E+03
     768000  4.37563E+01  2.80393E-03  3.13584E+03
     832000  4.37379E+01  2.69282E-03  3.13928E+03
     896000  4.37041E+01  2.59291E-03  3.14377E+03
     960000  4.38125E+01  3.21057E-03  1.91410E+03
    1024000  4.38155E+01  3.07062E-03  1.96127E+03
    1088000  4.38016E+01  2.94604E-03  2.00540E+03
    1136510  4.38052E+01  2.87292E-03  2.01897E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.15709E+01 0.0025
tfc   18       1       1       1       1       1       1       1       1
      64000  2.17335E+01  8.34304E-03  4.22803E+03
     128000  2.15479E+01  5.95570E-03  4.16238E+03
     192000  2.15583E+01  4.94037E-03  4.03224E+03
     256000  2.15424E+01  4.24408E-03  4.09718E+03
```

```
     320000  2.15871E+01  4.21989E-03  3.31595E+03
     384000  2.15308E+01  3.79097E-03  3.42942E+03
     448000  2.15211E+01  3.46232E-03  3.52390E+03
     512000  2.15178E+01  3.20217E-03  3.60612E+03
     576000  2.15266E+01  3.01614E-03  3.61391E+03
     640000  2.15645E+01  3.29201E-03  2.73077E+03
     704000  2.15634E+01  3.09912E-03  2.80131E+03
     768000  2.15738E+01  2.92341E-03  2.88474E+03
     832000  2.15590E+01  2.77922E-03  2.94712E+03
     896000  2.15424E+01  2.64882E-03  3.01244E+03
     960000  2.15720E+01  2.79888E-03  2.51861E+03
    1024000  2.15718E+01  2.67955E-03  2.57553E+03
    1088000  2.15631E+01  2.57252E-03  2.63004E+03
    1136510  2.15709E+01  2.52166E-03  2.62062E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.26680E+00 0.0030
tfc   18       1       1       1       1       1       1       1       1
      64000  8.33092E+00  7.78407E-03  4.85707E+03
     128000  8.31001E+00  7.52613E-03  2.60654E+03
     192000  8.29082E+00  5.66064E-03  3.07139E+03
     256000  8.35343E+00  1.02107E-02  7.07849E+02
     320000  8.33020E+00  8.32879E-03  8.51231E+02
     384000  8.29964E+00  7.08272E-03  9.82475E+02
     448000  8.29400E+00  6.18529E-03  1.10417E+03
     512000  8.28664E+00  5.50070E-03  1.22206E+03
     576000  8.28123E+00  4.96754E-03  1.33229E+03
     640000  8.27149E+00  4.53972E-03  1.43598E+03
     704000  8.27100E+00  4.18745E-03  1.53440E+03
     768000  8.27290E+00  3.88857E-03  1.63044E+03
     832000  8.26327E+00  3.64085E-03  1.71727E+03
     896000  8.25794E+00  3.42602E-03  1.80071E+03
     960000  8.26551E+00  3.33379E-03  1.77522E+03
    1024000  8.26369E+00  3.16249E-03  1.84898E+03
    1088000  8.26074E+00  3.01380E-03  1.91625E+03
    1136510  8.26680E+00  3.00871E-03  1.84084E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  4.28701E+00 0.0020
tfc   18        1        1        1        1        1        1        1        1
      64000  4.32916E+00  8.56362E-03  4.01303E+03
     128000  4.32030E+00  6.93476E-03  3.07004E+03
     192000  4.30971E+00  5.26457E-03  3.55092E+03
     256000  4.30057E+00  4.34821E-03  3.90329E+03
     320000  4.29732E+00  3.77849E-03  4.13594E+03
     384000  4.28800E+00  3.39472E-03  4.27674E+03
     448000  4.29063E+00  3.15037E-03  4.25631E+03
     512000  4.28842E+00  2.90797E-03  4.37271E+03
     576000  4.28891E+00  2.74988E-03  4.34763E+03
     640000  4.28498E+00  2.58176E-03  4.43992E+03
     704000  4.28538E+00  2.43959E-03  4.52067E+03
     768000  4.28755E+00  2.31871E-03  4.58556E+03
     832000  4.28471E+00  2.24289E-03  4.52509E+03
     896000  4.28282E+00  2.14843E-03  4.57911E+03
     960000  4.28785E+00  2.19350E-03  4.10066E+03
    1024000  4.28781E+00  2.11168E-03  4.14700E+03
    1088000  4.28648E+00  2.03833E-03  4.18921E+03
    1136510  4.28701E+00  1.98502E-03  4.22911E+03
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.61931E+00 0.0023
tfc   18        1        1        1        1        1        1        1        1
      64000  2.65476E+00  1.01679E-02  2.84659E+03
     128000  2.65772E+00  1.22601E-02  9.82251E+02
     192000  2.64340E+00  8.57392E-03  1.33878E+03
     256000  2.63263E+00  6.69027E-03  1.64879E+03
     320000  2.62895E+00  5.55514E-03  1.91346E+03
     384000  2.62257E+00  4.81017E-03  2.13010E+03
     448000  2.62161E+00  4.26249E-03  2.32504E+03
     512000  2.61948E+00  3.84230E-03  2.50465E+03
     576000  2.61849E+00  3.51888E-03  2.65504E+03
     640000  2.61682E+00  3.26157E-03  2.78198E+03
     704000  2.61719E+00  3.03778E-03  2.91557E+03
     768000  2.62013E+00  2.95563E-03  2.82220E+03
     832000  2.61784E+00  2.80458E-03  2.89407E+03
     896000  2.61696E+00  2.66238E-03  2.98185E+03
```

```
     960000  2.61966E+00  2.62458E-03  2.86425E+03
    1024000  2.61952E+00  2.51446E-03  2.92483E+03
    1088000  2.61857E+00  2.41133E-03  2.99343E+03
    1136510  2.61931E+00  2.34658E-03  3.02626E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.75515E+00 0.0019
tfc   18       1       1       1       1       1       1       1       1
      64000  1.77423E+00  8.22334E-03  4.35202E+03
     128000  1.76641E+00  6.57400E-03  3.41624E+03
     192000  1.76200E+00  5.02495E-03  3.89765E+03
     256000  1.75751E+00  4.15843E-03  4.26770E+03
     320000  1.75655E+00  3.62046E-03  4.50489E+03
     384000  1.75446E+00  3.29703E-03  4.53394E+03
     448000  1.75474E+00  3.01765E-03  4.63896E+03
     512000  1.75424E+00  2.79354E-03  4.73827E+03
     576000  1.75383E+00  2.61384E-03  4.81197E+03
     640000  1.75310E+00  2.47064E-03  4.84827E+03
     704000  1.75380E+00  2.34105E-03  4.90924E+03
     768000  1.75511E+00  2.23049E-03  4.95547E+03
     832000  1.75361E+00  2.14238E-03  4.95965E+03
     896000  1.75326E+00  2.06055E-03  4.97803E+03
     960000  1.75543E+00  2.11567E-03  4.40794E+03
    1024000  1.75514E+00  2.03477E-03  4.46641E+03
    1088000  1.75453E+00  1.96444E-03  4.51028E+03
    1136510  1.75515E+00  1.92009E-03  4.51996E+03
mcnp       5     11/05/10 14:42:00     2     1325264     1025820427
```

Case 92

```
 Case 92
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  6.70402E+01 0.0038
tfc   11        1        1        1        1        1        1        1        1
     128000  6.69909E+01  1.28455E-02  1.04321E+03
     256000  6.76295E+01  8.82646E-03  1.10525E+03
     384000  6.70528E+01  7.12998E-03  1.13109E+03
     512000  6.72723E+01  6.15955E-03  1.13556E+03
     640000  6.71025E+01  5.47851E-03  1.14889E+03
     768000  6.70591E+01  4.97489E-03  1.16094E+03
     896000  6.71678E+01  4.63079E-03  1.14885E+03
    1024000  6.70558E+01  4.34211E-03  1.14345E+03
    1152000  6.70916E+01  4.08970E-03  1.14574E+03
    1280000  6.70397E+01  3.87843E-03  1.14706E+03
    1325264  6.70402E+01  3.81036E-03  1.14791E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.67690E+01 0.0032
tfc   11        1        1        1        1        1        1        1        1
     128000  4.64979E+01  9.99213E-03  1.72407E+03
     256000  4.69812E+01  7.06501E-03  1.72508E+03
     384000  4.69131E+01  6.20415E-03  1.49385E+03
     512000  4.69310E+01  5.29872E-03  1.53450E+03
     640000  4.68149E+01  4.64573E-03  1.59769E+03
     768000  4.68125E+01  4.19592E-03  1.63200E+03
     896000  4.68253E+01  3.85086E-03  1.66134E+03
    1024000  4.67886E+01  3.58973E-03  1.67300E+03
    1152000  4.67930E+01  3.37082E-03  1.68655E+03
    1280000  4.67804E+01  3.29488E-03  1.58934E+03
    1325264  4.67690E+01  3.22966E-03  1.59782E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.22047E+01 0.0777
tfc   11        1        1        1        1        1        1        1        1
     128000  2.96898E+01  9.64484E-03  1.85046E+03
```

```
     256000  3.00125E+01  9.92160E-03  8.74725E+02
     384000  2.98351E+01  7.19128E-03  1.11188E+03
     512000  2.97831E+01  5.78224E-03  1.28859E+03
     640000  2.97257E+01  4.93155E-03  1.41786E+03
     768000  2.97094E+01  4.32643E-03  1.53503E+03
     896000  2.97058E+01  3.90668E-03  1.61421E+03
    1024000  3.29430E+01  9.83379E-02  2.22934E+00
    1152000  3.26397E+01  8.82442E-02  2.46092E+00
    1280000  3.23032E+01  8.02509E-02  2.67914E+00
    1325264  3.22047E+01  7.77482E-02  2.75715E+00
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.45644E+01 0.0030
tfc   11       1       1       1       1       1       1       1       1
     128000  1.45245E+01  7.70113E-03  2.90243E+03
     256000  1.45489E+01  5.26038E-03  3.11173E+03
     384000  1.45542E+01  4.82980E-03  2.46498E+03
     512000  1.45451E+01  4.04147E-03  2.63772E+03
     640000  1.45275E+01  3.55504E-03  2.72844E+03
     768000  1.45658E+01  3.76482E-03  2.02716E+03
     896000  1.45556E+01  3.38803E-03  2.14624E+03
    1024000  1.45638E+01  3.13751E-03  2.19002E+03
    1152000  1.45896E+01  3.26167E-03  1.80131E+03
    1280000  1.45682E+01  3.04146E-03  1.86522E+03
    1325264  1.45644E+01  2.96952E-03  1.89003E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.53766E+00 0.0028
tfc   11       1       1       1       1       1       1       1       1
     128000  5.51392E+00  6.62992E-03  3.91610E+03
     256000  5.53543E+00  4.69197E-03  3.91133E+03
     384000  5.56492E+00  7.68553E-03  9.73474E+02
     512000  5.55900E+00  6.00320E-03  1.19548E+03
     640000  5.54902E+00  4.99155E-03  1.38398E+03
```

```
     768000  5.54883E+00  4.30312E-03  1.55170E+03
     896000  5.54417E+00  3.80876E-03  1.69827E+03
    1024000  5.54675E+00  3.44352E-03  1.81808E+03
    1152000  5.54778E+00  3.15607E-03  1.92388E+03
    1280000  5.53904E+00  2.91899E-03  2.02502E+03
    1325264  5.53766E+00  2.84583E-03  2.05790E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.87409E+00 0.0021
tfc   11       1       1       1       1       1       1       1       1
     128000  2.87216E+00  6.75719E-03  3.76998E+03
     256000  2.88039E+00  4.85657E-03  3.65069E+03
     384000  2.87618E+00  3.91576E-03  3.75008E+03
     512000  2.87586E+00  3.35598E-03  3.82532E+03
     640000  2.87163E+00  2.98145E-03  3.87925E+03
     768000  2.87513E+00  2.77926E-03  3.71979E+03
     896000  2.87457E+00  2.56747E-03  3.73734E+03
    1024000  2.87599E+00  2.40383E-03  3.73086E+03
    1152000  2.87802E+00  2.28573E-03  3.66792E+03
    1280000  2.87423E+00  2.15867E-03  3.70274E+03
    1325264  2.87409E+00  2.13502E-03  3.65625E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.74993E+00 0.0022
tfc   11       1       1       1       1       1       1       1       1
     128000  1.74714E+00  6.53551E-03  4.03006E+03
     256000  1.75417E+00  4.93796E-03  3.53135E+03
     384000  1.75563E+00  4.36006E-03  3.02473E+03
     512000  1.75374E+00  3.63355E-03  3.26322E+03
     640000  1.75057E+00  3.17706E-03  3.41627E+03
     768000  1.75206E+00  2.90705E-03  3.39993E+03
     896000  1.75265E+00  2.71909E-03  3.33218E+03
    1024000  1.75257E+00  2.51595E-03  3.40576E+03
    1152000  1.75310E+00  2.37382E-03  3.40076E+03
```

```
    1280000  1.75032E+00  2.22919E-03  3.47217E+03
    1325264  1.74993E+00  2.18760E-03  3.48262E+03
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.17306E+00 0.0021
tfc   11        1        1        1        1        1        1        1        1
     128000  1.16970E+00  6.32760E-03  4.29925E+03
     256000  1.17587E+00  5.01959E-03  3.41743E+03
     384000  1.17568E+00  4.06231E-03  3.48438E+03
     512000  1.17522E+00  3.43145E-03  3.65891E+03
     640000  1.17356E+00  3.03304E-03  3.74841E+03
     768000  1.17451E+00  2.75758E-03  3.77851E+03
     896000  1.17497E+00  2.62342E-03  3.57963E+03
    1024000  1.17510E+00  2.43488E-03  3.63634E+03
    1152000  1.17529E+00  2.28133E-03  3.68210E+03
    1280000  1.17343E+00  2.14753E-03  3.74125E+03
    1325264  1.17306E+00  2.10597E-03  3.75784E+03
mcnp       5      11/05/10 15:42:11      2      7314232      1058671655
```

Case 93

```
 Case 93
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.12492E+00 0.0045
tfc   15        1        1        1        1        1        1        1        1
     512000  9.24238E+00  1.53772E-02  1.00768E+03
    1024000  9.15737E+00  1.07331E-02  1.03478E+03
    1536000  9.14267E+00  8.65462E-03  1.06283E+03
    2048000  9.04952E+00  7.45841E-03  1.07356E+03
    2560000  9.05614E+00  6.75634E-03  1.04766E+03
    3072000  9.09182E+00  7.04350E-03  8.02620E+02
```

```
    3584000  9.11766E+00  6.45422E-03  8.19100E+02
    4096000  9.11740E+00  5.91731E-03  8.51519E+02
    4608000  9.12585E+00  5.50933E-03  8.72935E+02
    5120000  9.14380E+00  5.16815E-03  8.92750E+02
    5632000  9.11954E+00  4.86907E-03  9.14278E+02
    6144000  9.10478E+00  4.66467E-03  9.12551E+02
    6656000  9.11376E+00  4.73637E-03  8.16620E+02
    7168000  9.12055E+00  4.51372E-03  8.34526E+02
    7314232  9.12492E+00  4.46782E-03  8.34822E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.44650E+00 0.0039
tfc   15       1       1       1       1       1       1       1       1
     512000  6.46732E+00  1.14109E-02  1.82992E+03
    1024000  6.43927E+00  8.32275E-03  1.72094E+03
    1536000  6.43515E+00  7.24513E-03  1.51659E+03
    2048000  6.41798E+00  6.82205E-03  1.28319E+03
    2560000  6.44506E+00  8.11637E-03  7.25970E+02
    3072000  6.43430E+00  7.11129E-03  7.87393E+02
    3584000  6.44493E+00  6.33899E-03  8.49151E+02
    4096000  6.45076E+00  5.73106E-03  9.07764E+02
    4608000  6.46460E+00  5.36787E-03  9.19548E+02
    5120000  6.47552E+00  5.00538E-03  9.51758E+02
    5632000  6.45970E+00  4.67565E-03  9.91486E+02
    6144000  6.44980E+00  4.40674E-03  1.02250E+03
    6656000  6.44382E+00  4.16943E-03  1.05380E+03
    7168000  6.44590E+00  3.95745E-03  1.08562E+03
    7314232  6.44650E+00  3.90210E-03  1.09443E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.10584E+00 0.0031
tfc   15       1       1       1       1       1       1       1       1
     512000  4.12838E+00  1.05663E-02  2.13415E+03
    1024000  4.10361E+00  7.33811E-03  2.21377E+03
```

```
    1536000  4.12320E+00  8.26932E-03  1.16418E+03
    2048000  4.09727E+00  6.71100E-03  1.32601E+03
    2560000  4.09515E+00  5.81747E-03  1.41310E+03
    3072000  4.09474E+00  5.32503E-03  1.40425E+03
    3584000  4.10214E+00  4.80234E-03  1.47951E+03
    4096000  4.10832E+00  4.38807E-03  1.54844E+03
    4608000  4.11426E+00  4.11299E-03  1.56626E+03
    5120000  4.11729E+00  3.83073E-03  1.62494E+03
    5632000  4.11167E+00  3.65675E-03  1.62099E+03
    6144000  4.10304E+00  3.44889E-03  1.66933E+03
    6656000  4.10183E+00  3.27740E-03  1.70550E+03
    7168000  4.10606E+00  3.14674E-03  1.71707E+03
    7314232  4.10584E+00  3.10554E-03  1.72787E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.01563E+00 0.0030
tfc   15       1       1       1       1       1       1       1
     512000  2.03177E+00  9.80873E-03  2.47656E+03
    1024000  2.02307E+00  7.65112E-03  2.03634E+03
    1536000  2.01772E+00  6.17427E-03  2.08828E+03
    2048000  2.01664E+00  7.08024E-03  1.19131E+03
    2560000  2.01391E+00  5.93541E-03  1.35750E+03
    3072000  2.00912E+00  5.18241E-03  1.48260E+03
    3584000  2.01190E+00  4.65255E-03  1.57631E+03
    4096000  2.01595E+00  4.25009E-03  1.65061E+03
    4608000  2.02154E+00  4.10537E-03  1.57208E+03
    5120000  2.02331E+00  3.86965E-03  1.59241E+03
    5632000  2.01948E+00  3.61688E-03  1.65692E+03
    6144000  2.01536E+00  3.39196E-03  1.72583E+03
    6656000  2.01493E+00  3.22152E-03  1.76518E+03
    7168000  2.01613E+00  3.09195E-03  1.77846E+03
    7314232  2.01563E+00  3.04740E-03  1.79443E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  7.69385E-01 0.0041
tfc   15        1        1        1        1        1        1        1        1
     512000  7.66217E-01  8.35405E-03  3.41412E+03
    1024000  7.64043E-01  6.74462E-03  2.62051E+03
    1536000  7.61127E-01  5.31774E-03  2.81518E+03
    2048000  7.65257E-01  9.02082E-03  7.33885E+02
    2560000  7.70124E-01  8.85937E-03  6.09308E+02
    3072000  7.66884E-01  7.52550E-03  7.03100E+02
    3584000  7.69685E-01  7.14072E-03  6.69175E+02
    4096000  7.70645E-01  6.39742E-03  7.28505E+02
    4608000  7.71565E-01  5.89929E-03  7.61342E+02
    5120000  7.71507E-01  5.39386E-03  8.19598E+02
    5632000  7.70065E-01  4.97524E-03  8.75672E+02
    6144000  7.68933E-01  4.63732E-03  9.23348E+02
    6656000  7.69223E-01  4.38169E-03  9.54174E+02
    7168000  7.69606E-01  4.15092E-03  9.86781E+02
    7314232  7.69385E-01  4.08115E-03  1.00051E+03
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.97851E-01 0.0040
tfc   15        1        1        1        1        1        1        1        1
     512000  3.96159E-01  8.25775E-03  3.49422E+03
    1024000  3.93633E-01  5.71839E-03  3.64546E+03
    1536000  3.92562E-01  4.70488E-03  3.59636E+03
    2048000  3.92919E-01  4.57476E-03  2.85354E+03
    2560000  3.96043E-01  7.35480E-03  8.84099E+02
    3072000  3.94910E-01  6.28776E-03  1.00715E+03
    3584000  3.95165E-01  5.51201E-03  1.12306E+03
    4096000  3.95926E-01  5.00194E-03  1.19169E+03
    4608000  3.96592E-01  4.63829E-03  1.23158E+03
    5120000  3.97413E-01  4.62792E-03  1.11334E+03
    5632000  3.96629E-01  4.27128E-03  1.18811E+03
    6144000  3.96866E-01  4.19235E-03  1.12976E+03
    6656000  3.97821E-01  4.33093E-03  9.76672E+02
    7168000  3.97840E-01  4.08930E-03  1.01674E+03
    7314232  3.97851E-01  4.03416E-03  1.02395E+03
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  2.40753E-01 0.0031
tfc   15       1       1       1       1       1       1       1       1
     512000  2.41462E-01  8.60247E-03  3.21979E+03
    1024000  2.39376E-01  5.78223E-03  3.56540E+03
    1536000  2.38613E-01  4.69546E-03  3.61080E+03
    2048000  2.38608E-01  4.20278E-03  3.38101E+03
    2560000  2.39224E-01  4.21956E-03  2.68602E+03
    3072000  2.38889E-01  3.82363E-03  2.72355E+03
    3584000  2.39327E-01  3.52801E-03  2.74135E+03
    4096000  2.39958E-01  3.35488E-03  2.64904E+03
    4608000  2.40116E-01  3.11920E-03  2.72327E+03
    5120000  2.40422E-01  3.00715E-03  2.63687E+03
    5632000  2.40138E-01  2.84020E-03  2.68703E+03
    6144000  2.40235E-01  2.99201E-03  2.21806E+03
    6656000  2.40638E-01  3.27531E-03  1.70767E+03
    7168000  2.40716E-01  3.11262E-03  1.75492E+03
    7314232  2.40753E-01  3.11300E-03  1.71959E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.60883E-01 0.0028
tfc   15       1       1       1       1       1       1       1       1
     512000  1.61605E-01  8.60392E-03  3.21870E+03
    1024000  1.60161E-01  5.75699E-03  3.59674E+03
    1536000  1.59707E-01  4.67348E-03  3.64484E+03
    2048000  1.59748E-01  4.15242E-03  3.46351E+03
    2560000  1.59942E-01  3.78698E-03  3.33471E+03
    3072000  1.59695E-01  3.43244E-03  3.37972E+03
    3584000  1.60025E-01  3.24652E-03  3.23733E+03
    4096000  1.60391E-01  3.09629E-03  3.10999E+03
    4608000  1.60502E-01  2.89543E-03  3.16049E+03
    5120000  1.60647E-01  2.75098E-03  3.15084E+03
    5632000  1.60573E-01  2.68645E-03  3.00340E+03
    6144000  1.60620E-01  2.73061E-03  2.66305E+03
    6656000  1.60873E-01  3.00174E-03  2.03313E+03
    7168000  1.60929E-01  2.85954E-03  2.07930E+03
    7314232  1.60883E-01  2.82033E-03  2.09500E+03
mcnp       5     11/05/10 16:42:24     2     1264391     1023687961
```

Case 94

```
 Case 94
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.59295E+01 0.0038
tfc   20        1        1        1        1        1        1        1        1
      64000  4.62424E+01  1.62842E-02  1.23917E+03
     128000  4.56864E+01  1.20822E-02  1.13034E+03
     192000  4.62187E+01  9.81798E-03  1.14110E+03
     256000  4.60684E+01  8.38908E-03  1.17263E+03
     320000  4.61283E+01  7.44986E-03  1.18928E+03
     384000  4.58805E+01  6.86310E-03  1.16825E+03
     448000  4.60048E+01  6.50486E-03  1.11262E+03
     512000  4.61693E+01  6.06627E-03  1.11979E+03
     576000  4.61592E+01  5.72141E-03  1.11883E+03
     640000  4.60912E+01  5.40302E-03  1.12708E+03
     704000  4.61104E+01  5.12664E-03  1.13720E+03
     768000  4.61056E+01  4.88566E-03  1.14725E+03
     832000  4.60588E+01  4.68716E-03  1.15051E+03
     896000  4.60543E+01  4.52758E-03  1.14478E+03
     960000  4.60492E+01  4.37961E-03  1.14237E+03
    1024000  4.60346E+01  4.23736E-03  1.14406E+03
    1088000  4.60381E+01  4.10976E-03  1.14469E+03
    1152000  4.60186E+01  4.00972E-03  1.13631E+03
    1216000  4.60001E+01  3.89403E-03  1.14201E+03
    1264391  4.59295E+01  3.80747E-03  1.14948E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.21197E+01 0.0033
tfc   20        1        1        1        1        1        1        1        1
      64000  3.24870E+01  1.44430E-02  1.57524E+03
```

```
     128000  3.19912E+01  1.01251E-02  1.60951E+03
     192000  3.22400E+01  8.14514E-03  1.65795E+03
     256000  3.21574E+01  6.93827E-03  1.71430E+03
     320000  3.22797E+01  6.20059E-03  1.71678E+03
     384000  3.21044E+01  5.61632E-03  1.74450E+03
     448000  3.21001E+01  5.15598E-03  1.77092E+03
     512000  3.22073E+01  4.86171E-03  1.74342E+03
     576000  3.21685E+01  4.56070E-03  1.76079E+03
     640000  3.21317E+01  4.30509E-03  1.77526E+03
     704000  3.21359E+01  4.08246E-03  1.79333E+03
     768000  3.21525E+01  3.89360E-03  1.80636E+03
     832000  3.21206E+01  3.73424E-03  1.81260E+03
     896000  3.21716E+01  3.98750E-03  1.47589E+03
     960000  3.21829E+01  3.86094E-03  1.46991E+03
    1024000  3.21731E+01  3.71175E-03  1.49101E+03
    1088000  3.21721E+01  3.58418E-03  1.50502E+03
    1152000  3.21567E+01  3.47139E-03  1.51606E+03
    1216000  3.21365E+01  3.35916E-03  1.53464E+03
    1264391  3.21197E+01  3.32133E-03  1.51059E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.03079E+01 0.0027
tfc   20       1       1       1       1       1       1       1
      64000  2.04889E+01  1.13136E-02  2.56722E+03
     128000  2.04084E+01  1.03841E-02  1.53026E+03
     192000  2.04359E+01  7.88459E-03  1.76934E+03
     256000  2.03667E+01  6.51357E-03  1.94514E+03
     320000  2.04278E+01  5.66085E-03  2.05976E+03
     384000  2.03467E+01  5.11445E-03  2.10367E+03
     448000  2.03422E+01  4.65573E-03  2.17193E+03
     512000  2.03601E+01  4.30423E-03  2.22428E+03
     576000  2.03380E+01  4.02945E-03  2.25569E+03
     640000  2.03275E+01  3.79570E-03  2.28372E+03
     704000  2.03354E+01  3.59114E-03  2.31760E+03
     768000  2.03535E+01  3.42266E-03  2.33764E+03
     832000  2.03473E+01  3.30617E-03  2.31237E+03
     896000  2.03415E+01  3.17189E-03  2.33248E+03
     960000  2.03337E+01  3.05489E-03  2.34794E+03
    1024000  2.03438E+01  2.98860E-03  2.29986E+03
    1088000  2.03446E+01  2.89547E-03  2.30612E+03
    1152000  2.03366E+01  2.80552E-03  2.32111E+03
    1216000  2.03257E+01  2.72103E-03  2.33884E+03
```

```
    1264391  2.03079E+01  2.66138E-03  2.35265E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.99397E+00 0.0025
tfc   20       1       1       1       1       1       1       1       1
      64000  1.00668E+01  1.08149E-02  2.80945E+03
     128000  9.97286E+00  7.47150E-03  2.95584E+03
     192000  9.98917E+00  5.97256E-03  3.08353E+03
     256000  9.96813E+00  5.07794E-03  3.20047E+03
     320000  1.00255E+01  4.99408E-03  2.64648E+03
     384000  9.99093E+00  4.47718E-03  2.74515E+03
     448000  1.00011E+01  4.16761E-03  2.71050E+03
     512000  1.00042E+01  3.84447E-03  2.78810E+03
     576000  9.99137E+00  3.58761E-03  2.84551E+03
     640000  9.98611E+00  3.37605E-03  2.88676E+03
     704000  1.00011E+01  3.33087E-03  2.69394E+03
     768000  1.00124E+01  3.20440E-03  2.66694E+03
     832000  1.00004E+01  3.05182E-03  2.71387E+03
     896000  9.99798E+00  2.92256E-03  2.74744E+03
     960000  1.00038E+01  2.92027E-03  2.56940E+03
    1024000  1.00067E+01  2.83324E-03  2.55900E+03
    1088000  1.00038E+01  2.73210E-03  2.59018E+03
    1152000  1.00047E+01  2.69237E-03  2.52032E+03
    1216000  9.99917E+00  2.60321E-03  2.55535E+03
    1264391  9.99397E+00  2.54641E-03  2.56990E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.80973E+00 0.0026
tfc   20       1       1       1       1       1       1       1       1
      64000  3.82442E+00  8.98260E-03  4.07250E+03
     128000  3.79754E+00  6.48586E-03  3.92249E+03
     192000  3.84099E+00  1.11434E-02  8.85789E+02
     256000  3.82648E+00  8.66458E-03  1.09924E+03
     320000  3.83770E+00  7.18095E-03  1.28002E+03
```

```
     384000  3.82472E+00  6.18280E-03  1.43948E+03
     448000  3.82466E+00  5.45110E-03  1.58436E+03
     512000  3.82285E+00  4.89972E-03  1.71648E+03
     576000  3.81762E+00  4.47331E-03  1.83026E+03
     640000  3.81520E+00  4.13074E-03  1.92829E+03
     704000  3.81735E+00  3.84359E-03  2.02315E+03
     768000  3.81875E+00  3.60528E-03  2.10682E+03
     832000  3.81589E+00  3.42362E-03  2.15643E+03
     896000  3.81568E+00  3.25141E-03  2.21979E+03
     960000  3.81527E+00  3.09467E-03  2.28797E+03
    1024000  3.81536E+00  2.95623E-03  2.35050E+03
    1088000  3.81550E+00  2.84205E-03  2.39364E+03
    1152000  3.81383E+00  2.73137E-03  2.44885E+03
    1216000  3.81232E+00  2.63931E-03  2.48593E+03
    1264391  3.80973E+00  2.57021E-03  2.52251E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.97933E+00 0.0026
tfc   20       1       1       1       1       1       1       1       1
      64000  1.99457E+00  9.22560E-03  3.86079E+03
     128000  1.97683E+00  6.62077E-03  3.76427E+03
     192000  1.98364E+00  5.81552E-03  3.25231E+03
     256000  1.97953E+00  4.86319E-03  3.48937E+03
     320000  1.98596E+00  4.28511E-03  3.59464E+03
     384000  1.98059E+00  3.85696E-03  3.69901E+03
     448000  1.98833E+00  5.11403E-03  1.80010E+03
     512000  1.98932E+00  4.78959E-03  1.79632E+03
     576000  1.98566E+00  4.37172E-03  1.91631E+03
     640000  1.98534E+00  4.14891E-03  1.91143E+03
     704000  1.98640E+00  3.86182E-03  2.00410E+03
     768000  1.98663E+00  3.61616E-03  2.09416E+03
     832000  1.98386E+00  3.40688E-03  2.17767E+03
     896000  1.98326E+00  3.22757E-03  2.25270E+03
     960000  1.98317E+00  3.08579E-03  2.30115E+03
    1024000  1.98310E+00  2.95615E-03  2.35064E+03
    1088000  1.98302E+00  2.84391E-03  2.39051E+03
    1152000  1.98192E+00  2.72945E-03  2.45230E+03
    1216000  1.98096E+00  2.63089E-03  2.50185E+03
    1264391  1.97933E+00  2.55967E-03  2.54333E+03
tally  175    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.20294E+00 0.0021
tfc   20       1       1       1       1       1       1       1       1
      64000  1.20929E+00  8.60493E-03  4.43783E+03
     128000  1.20096E+00  6.27598E-03  4.18923E+03
     192000  1.20503E+00  5.26681E-03  3.96527E+03
     256000  1.20393E+00  4.51164E-03  4.05434E+03
     320000  1.20769E+00  4.00685E-03  4.11125E+03
     384000  1.20553E+00  3.70835E-03  4.00142E+03
     448000  1.20567E+00  3.40411E-03  4.06270E+03
     512000  1.20616E+00  3.21141E-03  3.99568E+03
     576000  1.20473E+00  3.01854E-03  4.01955E+03
     640000  1.20510E+00  2.93870E-03  3.80992E+03
     704000  1.20580E+00  2.78512E-03  3.85313E+03
     768000  1.20624E+00  2.65648E-03  3.88054E+03
     832000  1.20489E+00  2.53988E-03  3.91814E+03
     896000  1.20480E+00  2.44121E-03  3.93771E+03
     960000  1.20457E+00  2.35002E-03  3.96766E+03
    1024000  1.20486E+00  2.27978E-03  3.95232E+03
    1088000  1.20500E+00  2.24617E-03  3.83208E+03
    1152000  1.20440E+00  2.17386E-03  3.86600E+03
    1216000  1.20381E+00  2.11033E-03  3.88838E+03
    1264391  1.20294E+00  2.06514E-03  3.90727E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.07418E-01 0.0021
tfc   20       1       1       1       1       1       1       1       1
      64000  8.10710E-01  8.45868E-03  4.59261E+03
     128000  8.05512E-01  6.22408E-03  4.25938E+03
     192000  8.08286E-01  5.19655E-03  4.07323E+03
     256000  8.08390E-01  4.48858E-03  4.09610E+03
     320000  8.10807E-01  3.99712E-03  4.13128E+03
     384000  8.09093E-01  3.63118E-03  4.17330E+03
     448000  8.09599E-01  3.35610E-03  4.17978E+03
     512000  8.09298E-01  3.12753E-03  4.21288E+03
     576000  8.08322E-01  2.96900E-03  4.15482E+03
```

```
     640000  8.08616E-01  2.93865E-03  3.81006E+03
     704000  8.09024E-01  2.78347E-03  3.85770E+03
     768000  8.09672E-01  2.69671E-03  3.76562E+03
     832000  8.08701E-01  2.57380E-03  3.81556E+03
     896000  8.08575E-01  2.47187E-03  3.84064E+03
     960000  8.08526E-01  2.37959E-03  3.86966E+03
    1024000  8.08697E-01  2.30684E-03  3.86016E+03
    1088000  8.08718E-01  2.25121E-03  3.81496E+03
    1152000  8.08360E-01  2.17879E-03  3.84851E+03
    1216000  8.08053E-01  2.11732E-03  3.86272E+03
    1264391  8.07418E-01  2.07040E-03  3.88745E+03
mcnp       5     11/05/10 17:42:39     2     1272480     1030328412
```

Case 95

```
 Case 95
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.34564E+02 0.0038
tfc   20       1       1       1       1       1       1       1       1
      64000  6.38014E+02  1.62802E-02  1.24010E+03
     128000  6.29661E+02  1.20723E-02  1.13277E+03
     192000  6.37608E+02  9.80346E-03  1.14744E+03
     256000  6.35537E+02  8.37393E-03  1.18050E+03
     320000  6.37010E+02  7.43971E-03  1.19652E+03
     384000  6.33465E+02  6.85745E-03  1.17418E+03
     448000  6.35239E+02  6.50221E-03  1.11758E+03
     512000  6.37656E+02  6.06518E-03  1.12461E+03
     576000  6.37556E+02  5.71917E-03  1.12501E+03
     640000  6.36794E+02  5.40174E-03  1.13515E+03
     704000  6.37046E+02  5.12585E-03  1.14533E+03
     768000  6.37025E+02  4.88663E-03  1.15528E+03
     832000  6.36393E+02  4.68803E-03  1.15884E+03
     896000  6.36322E+02  4.52781E-03  1.15386E+03
     960000  6.36219E+02  4.37945E-03  1.15135E+03
    1024000  6.35962E+02  4.23731E-03  1.15268E+03
    1088000  6.35947E+02  4.10855E-03  1.15345E+03
    1152000  6.35712E+02  4.00914E-03  1.14439E+03
    1216000  6.35480E+02  3.89350E-03  1.14982E+03
    1272480  6.34564E+02  3.79469E-03  1.15728E+03
```

```
tally  125     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.43719E+02 0.0033
tfc   20        1        1        1        1        1        1        1        1
      64000  4.48535E+02  1.45346E-02  1.55586E+03
     128000  4.41434E+02  1.01771E-02  1.59394E+03
     192000  4.44958E+02  8.16471E-03  1.65428E+03
     256000  4.43882E+02  6.94823E-03  1.71466E+03
     320000  4.45834E+02  6.20677E-03  1.71909E+03
     384000  4.43269E+02  5.62218E-03  1.74683E+03
     448000  4.43252E+02  5.16106E-03  1.77388E+03
     512000  4.44774E+02  4.86585E-03  1.74732E+03
     576000  4.44294E+02  4.56391E-03  1.76664E+03
     640000  4.43946E+02  4.31081E-03  1.78239E+03
     704000  4.44070E+02  4.08945E-03  1.79943E+03
     768000  4.44267E+02  3.90059E-03  1.81320E+03
     832000  4.43824E+02  3.74021E-03  1.82060E+03
     896000  4.44519E+02  3.99208E-03  1.48432E+03
     960000  4.44649E+02  3.86487E-03  1.47835E+03
    1024000  4.44510E+02  3.71590E-03  1.49886E+03
    1088000  4.44457E+02  3.58746E-03  1.51287E+03
    1152000  4.44240E+02  3.47440E-03  1.52375E+03
    1216000  4.43977E+02  3.36197E-03  1.54213E+03
    1272480  4.43719E+02  3.31167E-03  1.51949E+03
tally  135     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.80486E+02 0.0027
tfc   20        1        1        1        1        1        1        1        1
      64000  2.82699E+02  1.13855E-02  2.53554E+03
     128000  2.81456E+02  1.04093E-02  1.52364E+03
     192000  2.82084E+02  7.89672E-03  1.76847E+03
     256000  2.81174E+02  6.52069E-03  1.94688E+03
     320000  2.82148E+02  5.66491E-03  2.06369E+03
     384000  2.80942E+02  5.11857E-03  2.10748E+03
```

```
     448000  2.80893E+02  4.65906E-03  2.17673E+03
     512000  2.81177E+02  4.30759E-03  2.22957E+03
     576000  2.80913E+02  4.03223E-03  2.26325E+03
     640000  2.80818E+02  3.79860E-03  2.29548E+03
     704000  2.80949E+02  3.59350E-03  2.33039E+03
     768000  2.81162E+02  3.42530E-03  2.35132E+03
     832000  2.81078E+02  3.30826E-03  2.32705E+03
     896000  2.81009E+02  3.17390E-03  2.34823E+03
     960000  2.80900E+02  3.05662E-03  2.36355E+03
    1024000  2.81029E+02  2.99045E-03  2.31428E+03
    1088000  2.81023E+02  2.89685E-03  2.32019E+03
    1152000  2.80916E+02  2.80688E-03  2.33469E+03
    1216000  2.80760E+02  2.72223E-03  2.35211E+03
    1272480  2.80486E+02  2.65374E-03  2.36632E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38013E+02 0.0025
tfc   20       1       1       1       1       1       1       1       1
      64000  1.38971E+02  1.08462E-02  2.79397E+03
     128000  1.37572E+02  7.47507E-03  2.95454E+03
     192000  1.37917E+02  5.97961E-03  3.08421E+03
     256000  1.37637E+02  5.08278E-03  3.20423E+03
     320000  1.38489E+02  4.99629E-03  2.65299E+03
     384000  1.37969E+02  4.47973E-03  2.75141E+03
     448000  1.38108E+02  4.16960E-03  2.71777E+03
     512000  1.38150E+02  3.84595E-03  2.79693E+03
     576000  1.37983E+02  3.58866E-03  2.85731E+03
     640000  1.37932E+02  3.37692E-03  2.90454E+03
     704000  1.38146E+02  3.33135E-03  2.71158E+03
     768000  1.38281E+02  3.20525E-03  2.68525E+03
     832000  1.38121E+02  3.05261E-03  2.73315E+03
     896000  1.38096E+02  2.92327E-03  2.76816E+03
     960000  1.38179E+02  2.92087E-03  2.58834E+03
    1024000  1.38217E+02  2.83383E-03  2.57716E+03
    1088000  1.38170E+02  2.73252E-03  2.60764E+03
    1152000  1.38184E+02  2.69253E-03  2.53720E+03
    1216000  1.38105E+02  2.60334E-03  2.57186E+03
    1272480  1.38013E+02  2.53706E-03  2.58898E+03
tally  155    2    1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  5.26070E+01 0.0026
tfc   20        1        1        1        1        1        1        1        1
      64000  5.27486E+01  8.92379E-03  4.12741E+03
     128000  5.23616E+01  6.45759E-03  3.95895E+03
     192000  5.30646E+01  1.11771E-02  8.82737E+02
     256000  5.28583E+01  8.69006E-03  1.09617E+03
     320000  5.30317E+01  7.19858E-03  1.27802E+03
     384000  5.28335E+01  6.19884E-03  1.43694E+03
     448000  5.28295E+01  5.46467E-03  1.58224E+03
     512000  5.28020E+01  4.91130E-03  1.71513E+03
     576000  5.27339E+01  4.48320E-03  1.83082E+03
     640000  5.27042E+01  4.13919E-03  1.93326E+03
     704000  5.27328E+01  3.85079E-03  2.02938E+03
     768000  5.27446E+01  3.61231E-03  2.11415E+03
     832000  5.27042E+01  3.42963E-03  2.16527E+03
     896000  5.27040E+01  3.25678E-03  2.23024E+03
     960000  5.26982E+01  3.09946E-03  2.29866E+03
    1024000  5.27001E+01  2.96063E-03  2.36114E+03
    1088000  5.26907E+01  2.84084E-03  2.41258E+03
    1152000  5.26697E+01  2.73027E-03  2.46754E+03
    1216000  5.26490E+01  2.63826E-03  2.50422E+03
    1272480  5.26070E+01  2.55846E-03  2.54585E+03
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.73302E+01 0.0025
tfc   20        1        1        1        1        1        1        1        1
      64000  2.75527E+01  9.27698E-03  3.81912E+03
     128000  2.72769E+01  6.63273E-03  3.75264E+03
     192000  2.73916E+01  5.83118E-03  3.24322E+03
     256000  2.73343E+01  4.87423E-03  3.48429E+03
     320000  2.74350E+01  4.29236E-03  3.59450E+03
     384000  2.73543E+01  3.86319E-03  3.69971E+03
     448000  2.74605E+01  5.11762E-03  1.80412E+03
     512000  2.74740E+01  4.79273E-03  1.80104E+03
     576000  2.74268E+01  4.37428E-03  1.92313E+03
     640000  2.74243E+01  4.15087E-03  1.92239E+03
```

```
     704000  2.74382E+01  3.86322E-03  2.01634E+03
     768000  2.74384E+01  3.61799E-03  2.10753E+03
     832000  2.74007E+01  3.40838E-03  2.19234E+03
     896000  2.73939E+01  3.22881E-03  2.26903E+03
     960000  2.73924E+01  3.08677E-03  2.31760E+03
    1024000  2.73918E+01  2.95701E-03  2.36691E+03
    1088000  2.73828E+01  2.83492E-03  2.42266E+03
    1152000  2.73688E+01  2.72110E-03  2.48421E+03
    1216000  2.73557E+01  2.62310E-03  2.53326E+03
    1272480  2.73302E+01  2.54134E-03  2.58026E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.66196E+01 0.0022
tfc   20       1       1       1       1       1       1       1
      64000  1.67049E+01  8.69192E-03  4.35056E+03
     128000  1.65738E+01  6.30224E-03  4.15653E+03
     192000  1.66420E+01  5.28749E-03  3.94449E+03
     256000  1.66256E+01  4.52578E-03  4.04146E+03
     320000  1.66847E+01  4.01653E-03  4.10515E+03
     384000  1.66507E+01  3.71589E-03  3.99883E+03
     448000  1.66521E+01  3.41013E-03  4.06312E+03
     512000  1.66589E+01  3.21659E-03  3.99852E+03
     576000  1.66673E+01  3.42494E-03  3.13701E+03
     640000  1.66709E+01  3.27938E-03  3.07990E+03
     704000  1.66774E+01  3.08253E-03  3.16701E+03
     768000  1.66796E+01  2.91972E-03  3.23613E+03
     832000  1.66597E+01  2.77558E-03  3.30596E+03
     896000  1.66582E+01  2.65329E-03  3.36014E+03
     960000  1.66534E+01  2.54217E-03  3.41694E+03
    1024000  1.66567E+01  2.45422E-03  3.43608E+03
    1088000  1.66505E+01  2.36919E-03  3.46878E+03
    1152000  1.66423E+01  2.28754E-03  3.51511E+03
    1216000  1.66335E+01  2.21565E-03  3.55063E+03
    1272480  1.66196E+01  2.15720E-03  3.58103E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  1.11500E+01 0.0021
tfc   20       1       1       1       1       1       1       1       1
      64000  1.12040E+01  8.64950E-03  4.39334E+03
     128000  1.11190E+01  6.28400E-03  4.18070E+03
     192000  1.11645E+01  5.23398E-03  4.02555E+03
     256000  1.11647E+01  4.51355E-03  4.06339E+03
     320000  1.12029E+01  4.01454E-03  4.10922E+03
     384000  1.11757E+01  3.64428E-03  4.15754E+03
     448000  1.11830E+01  3.36809E-03  4.16517E+03
     512000  1.11786E+01  3.13754E-03  4.20253E+03
     576000  1.11685E+01  2.98746E-03  4.12306E+03
     640000  1.11725E+01  2.95323E-03  3.79775E+03
     704000  1.11770E+01  2.79515E-03  3.85171E+03
     768000  1.11847E+01  2.70726E-03  3.76398E+03
     832000  1.11716E+01  2.58307E-03  3.81709E+03
     896000  1.11702E+01  2.48012E-03  3.84575E+03
     960000  1.11691E+01  2.38657E-03  3.87702E+03
    1024000  1.11715E+01  2.31313E-03  3.86803E+03
    1088000  1.11685E+01  2.24160E-03  3.87488E+03
    1152000  1.11638E+01  2.16997E-03  3.90634E+03
    1216000  1.11594E+01  2.10915E-03  3.91826E+03
    1272480  1.11500E+01  2.05605E-03  3.94207E+03
mcnp       5     11/05/10 18:42:51     2     6563072     1020200907
```

Case 96

```
 Case 96
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.65257E+03 0.0062
tfc   13       1       1       1       1       1       1       1       1
     512000  1.65160E+03  2.16022E-02  4.57919E+02
    1024000  1.60727E+03  1.48625E-02  4.85409E+02
    1536000  1.62133E+03  1.23463E-02  4.68759E+02
    2048000  1.64397E+03  1.09219E-02  4.49083E+02
    2560000  1.64406E+03  9.73242E-03  4.52582E+02
    3072000  1.65160E+03  8.90647E-03  4.50289E+02
    3584000  1.65482E+03  8.28425E-03  4.45608E+02
```

```
    4096000  1.65401E+03  7.73411E-03  4.47003E+02
    4608000  1.65442E+03  7.29039E-03  4.47183E+02
    5120000  1.65523E+03  6.98970E-03  4.37550E+02
    5632000  1.65418E+03  6.67493E-03  4.35770E+02
    6144000  1.65218E+03  6.39976E-03  4.34608E+02
    6563072  1.65257E+03  6.24046E-03  4.27922E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.15863E+03 0.0052
tfc   13       1       1       1       1       1       1       1       1
     512000  1.15774E+03  1.75519E-02  6.93642E+02
    1024000  1.12889E+03  1.21518E-02  7.26116E+02
    1536000  1.13810E+03  1.01598E-02  6.92231E+02
    2048000  1.15205E+03  8.92521E-03  6.72487E+02
    2560000  1.15369E+03  7.96794E-03  6.75223E+02
    3072000  1.15744E+03  7.29918E-03  6.70432E+02
    3584000  1.15948E+03  6.77970E-03  6.65332E+02
    4096000  1.16130E+03  6.60919E-03  6.12117E+02
    4608000  1.16108E+03  6.19297E-03  6.19711E+02
    5120000  1.16039E+03  5.85326E-03  6.23949E+02
    5632000  1.16014E+03  5.56420E-03  6.27113E+02
    6144000  1.15902E+03  5.31765E-03  6.29484E+02
    6563072  1.15863E+03  5.19750E-03  6.16891E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.33391E+02 0.0045
tfc   13       1       1       1       1       1       1       1       1
     512000  7.31684E+02  1.52585E-02  9.17823E+02
    1024000  7.16780E+02  1.06576E-02  9.43991E+02
    1536000  7.21464E+02  8.89267E-03  9.03569E+02
    2048000  7.28511E+02  7.83569E-03  8.72503E+02
    2560000  7.30869E+02  7.07323E-03  8.56848E+02
    3072000  7.32788E+02  6.45287E-03  8.57821E+02
    3584000  7.33629E+02  5.96021E-03  8.60867E+02
```

```
    4096000  7.33628E+02  5.55754E-03  8.65698E+02
    4608000  7.34720E+02  5.39448E-03  8.16747E+02
    5120000  7.34420E+02  5.09412E-03  8.23770E+02
    5632000  7.34792E+02  4.84136E-03  8.28354E+02
    6144000  7.34345E+02  4.62542E-03  8.32000E+02
    6563072  7.33391E+02  4.46970E-03  8.34143E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.60770E+02 0.0041
tfc   13       1       1       1       1       1       1       1       1
     512000  3.66202E+02  2.08220E-02  4.92879E+02
    1024000  3.56123E+02  1.24773E-02  6.88734E+02
    1536000  3.56868E+02  9.52034E-03  7.88353E+02
    2048000  3.58958E+02  7.96591E-03  8.44209E+02
    2560000  3.59627E+02  6.95337E-03  8.86644E+02
    3072000  3.60453E+02  6.25312E-03  9.13500E+02
    3584000  3.60770E+02  5.71141E-03  9.37503E+02
    4096000  3.60808E+02  5.29342E-03  9.54242E+02
    4608000  3.60972E+02  4.95255E-03  9.69012E+02
    5120000  3.61059E+02  4.67184E-03  9.79421E+02
    5632000  3.61380E+02  4.43124E-03  9.88783E+02
    6144000  3.61268E+02  4.22685E-03  9.96303E+02
    6563072  3.60770E+02  4.07462E-03  1.00375E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38151E+02 0.0042
tfc   13       1       1       1       1       1       1       1       1
     512000  1.37649E+02  1.27859E-02  1.30714E+03
    1024000  1.35284E+02  8.90647E-03  1.35170E+03
    1536000  1.36054E+02  7.33692E-03  1.32739E+03
    2048000  1.36793E+02  6.42107E-03  1.29929E+03
    2560000  1.37131E+02  5.75867E-03  1.29269E+03
    3072000  1.37422E+02  5.25307E-03  1.29442E+03
    3584000  1.37729E+02  4.89992E-03  1.27374E+03
```

```
    4096000  1.37684E+02  4.57423E-03  1.27790E+03
    4608000  1.37769E+02  4.30906E-03  1.28003E+03
    5120000  1.37810E+02  4.08122E-03  1.28341E+03
    5632000  1.38273E+02  4.53054E-03  9.45913E+02
    6144000  1.38328E+02  4.38736E-03  9.24736E+02
    6563072  1.38151E+02  4.20656E-03  9.41766E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.15843E+01 0.0036
tfc   13       1       1       1       1       1       1       1       1
     512000  7.16136E+01  1.25257E-02  1.36201E+03
    1024000  7.03882E+01  8.74188E-03  1.40308E+03
    1536000  7.08494E+01  7.40522E-03  1.30302E+03
    2048000  7.10952E+01  6.40308E-03  1.30660E+03
    2560000  7.12764E+01  5.71034E-03  1.31467E+03
    3072000  7.13677E+01  5.18559E-03  1.32833E+03
    3584000  7.15206E+01  4.81666E-03  1.31815E+03
    4096000  7.14904E+01  4.49244E-03  1.32485E+03
    4608000  7.15720E+01  4.27609E-03  1.29985E+03
    5120000  7.16020E+01  4.04853E-03  1.30422E+03
    5632000  7.16661E+01  3.85232E-03  1.30830E+03
    6144000  7.16286E+01  3.68516E-03  1.31073E+03
    6563072  7.15843E+01  3.57089E-03  1.30691E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.36820E+01 0.0038
tfc   13       1       1       1       1       1       1       1       1
     512000  4.35457E+01  1.22717E-02  1.41898E+03
    1024000  4.31201E+01  9.46945E-03  1.19575E+03
    1536000  4.34033E+01  8.04902E-03  1.10291E+03
    2048000  4.34793E+01  6.80865E-03  1.15558E+03
    2560000  4.35804E+01  6.02460E-03  1.18109E+03
    3072000  4.36099E+01  5.42157E-03  1.21521E+03
    3584000  4.36761E+01  5.01052E-03  1.21813E+03
```

```
    4096000  4.36479E+01  4.64511E-03  1.23919E+03
    4608000  4.36692E+01  4.38723E-03  1.23483E+03
    5120000  4.37333E+01  4.32543E-03  1.14258E+03
    5632000  4.37541E+01  4.08806E-03  1.16176E+03
    6144000  4.37149E+01  3.88747E-03  1.17785E+03
    6563072  4.36820E+01  3.75310E-03  1.18309E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.95503E+01 0.0082
tfc   13       1       1       1       1       1       1       1       1
     512000  2.92207E+01  1.21717E-02  1.44239E+03
    1024000  2.91842E+01  1.63510E-02  4.01051E+02
    1536000  2.92544E+01  1.17823E-02  5.14710E+02
    2048000  2.92867E+01  9.38862E-03  6.07740E+02
    2560000  2.93225E+01  7.92350E-03  6.82818E+02
    3072000  2.93501E+01  6.92073E-03  7.45760E+02
    3584000  2.93928E+01  6.28107E-03  7.75160E+02
    4096000  2.96953E+01  1.26353E-02  1.67479E+02
    4608000  2.96503E+01  1.13298E-02  1.85158E+02
    5120000  2.96196E+01  1.02787E-02  2.02333E+02
    5632000  2.96293E+01  9.42303E-03  2.18660E+02
    6144000  2.95896E+01  8.70956E-03  2.34656E+02
    6563072  2.95503E+01  8.21172E-03  2.47133E+02
mcnp       5     11/05/10 19:43:02     2     1496395     1133951573
```

Case 97

```
 Case 97
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.06771E+02 0.0066
tfc   12       1       1       1       1       1       1       1       1
```

```
     128000  1.05845E+02  1.21770E-02  1.30893E+03
     256000  1.05571E+02  8.67517E-03  1.29185E+03
     384000  1.05664E+02  7.07791E-03  1.29632E+03
     512000  1.05795E+02  6.10223E-03  1.30540E+03
     640000  1.05973E+02  5.46797E-03  1.30100E+03
     768000  1.05818E+02  5.12573E-03  1.23456E+03
     896000  1.05686E+02  4.71136E-03  1.25296E+03
    1024000  1.05868E+02  4.39046E-03  1.26261E+03
    1152000  1.06154E+02  4.15346E-03  1.25413E+03
    1280000  1.06379E+02  3.96778E-03  1.23692E+03
    1408000  1.06886E+02  6.92119E-03  3.69657E+02
    1496395  1.06771E+02  6.57546E-03  3.85439E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.32335E+01 0.0032
tfc   12       1       1       1       1       1       1       1       1
     128000  6.29727E+01  1.04909E-02  1.76349E+03
     256000  6.28477E+01  7.50948E-03  1.72404E+03
     384000  6.28521E+01  6.09688E-03  1.74706E+03
     512000  6.30261E+01  5.27782E-03  1.74506E+03
     640000  6.32679E+01  4.97053E-03  1.57444E+03
     768000  6.32186E+01  4.70342E-03  1.46621E+03
     896000  6.31672E+01  4.29365E-03  1.50861E+03
    1024000  6.32447E+01  3.97451E-03  1.54072E+03
    1152000  6.33610E+01  3.73458E-03  1.55124E+03
    1280000  6.33906E+01  3.52659E-03  1.56577E+03
    1408000  6.33004E+01  3.35156E-03  1.57640E+03
    1496395  6.32335E+01  3.24164E-03  1.58591E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.44261E+01 0.0032
tfc   12       1       1       1       1       1       1       1       1
     128000  3.42913E+01  9.60943E-03  2.10184E+03
     256000  3.42388E+01  7.00665E-03  1.98037E+03
```

```
     384000  3.42240E+01  5.62402E-03  2.05319E+03
     512000  3.43411E+01  4.87495E-03  2.04541E+03
     640000  3.45285E+01  5.57876E-03  1.24984E+03
     768000  3.44361E+01  4.93163E-03  1.33365E+03
     896000  3.44204E+01  4.44488E-03  1.40771E+03
    1024000  3.44672E+01  4.07038E-03  1.46899E+03
    1152000  3.45114E+01  3.77068E-03  1.52168E+03
    1280000  3.45195E+01  3.52806E-03  1.56447E+03
    1408000  3.44666E+01  3.33135E-03  1.59558E+03
    1496395  3.44261E+01  3.20809E-03  1.61925E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.45878E+01 0.0027
tfc   12       1       1       1       1       1       1       1       1
     128000  1.45406E+01  8.85214E-03  2.47685E+03
     256000  1.45237E+01  6.33276E-03  2.42427E+03
     384000  1.45294E+01  5.16519E-03  2.43417E+03
     512000  1.45760E+01  4.49454E-03  2.40630E+03
     640000  1.45961E+01  4.06407E-03  2.35509E+03
     768000  1.45708E+01  3.73167E-03  2.32925E+03
     896000  1.45671E+01  3.43007E-03  2.36388E+03
    1024000  1.45896E+01  3.19609E-03  2.38261E+03
    1152000  1.46209E+01  3.05034E-03  2.32523E+03
    1280000  1.46253E+01  2.89570E-03  2.32236E+03
    1408000  1.46053E+01  2.75791E-03  2.32808E+03
    1496395  1.45878E+01  2.66962E-03  2.33835E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.01572E+00 0.0027
tfc   12       1       1       1       1       1       1       1       1
     128000  5.00308E+00  8.73666E-03  2.54275E+03
     256000  4.98982E+00  6.06048E-03  2.64700E+03
     384000  4.99223E+00  4.89541E-03  2.70985E+03
     512000  5.00567E+00  4.23962E-03  2.70437E+03
```

```
     640000  5.01801E+00  3.87809E-03  2.58640E+03
     768000  5.00727E+00  3.52824E-03  2.60560E+03
     896000  5.00750E+00  3.24820E-03  2.63600E+03
    1024000  5.01415E+00  3.02336E-03  2.66262E+03
    1152000  5.02220E+00  2.84571E-03  2.67166E+03
    1280000  5.02142E+00  2.69521E-03  2.68072E+03
    1408000  5.01492E+00  2.56442E-03  2.69266E+03
    1496395  5.01572E+00  2.72046E-03  2.25176E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.50054E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  2.49718E+00  8.57634E-03  2.63871E+03
     256000  2.49139E+00  5.99422E-03  2.70583E+03
     384000  2.49397E+00  4.86832E-03  2.74009E+03
     512000  2.49965E+00  4.20085E-03  2.75452E+03
     640000  2.50327E+00  3.76507E-03  2.74400E+03
     768000  2.49878E+00  3.44950E-03  2.72591E+03
     896000  2.49954E+00  3.18122E-03  2.74817E+03
    1024000  2.50292E+00  2.96264E-03  2.77289E+03
    1152000  2.50724E+00  2.79021E-03  2.77900E+03
    1280000  2.50637E+00  2.64115E-03  2.79158E+03
    1408000  2.50268E+00  2.51128E-03  2.80782E+03
    1496395  2.50054E+00  2.43658E-03  2.80703E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.49223E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  1.48927E+00  8.39576E-03  2.75344E+03
     256000  1.48565E+00  5.86841E-03  2.82310E+03
     384000  1.48646E+00  4.74148E-03  2.88865E+03
     512000  1.49046E+00  4.10730E-03  2.88142E+03
     640000  1.49190E+00  3.66514E-03  2.89567E+03
     768000  1.48916E+00  3.36482E-03  2.86484E+03
```

```
     896000  1.49007E+00  3.11352E-03  2.86899E+03
    1024000  1.49266E+00  2.91396E-03  2.86632E+03
    1152000  1.49603E+00  2.78154E-03  2.79636E+03
    1280000  1.49549E+00  2.63134E-03  2.81243E+03
    1408000  1.49325E+00  2.50078E-03  2.83145E+03
    1496395  1.49223E+00  2.42609E-03  2.83136E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.88957E-01 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  9.89062E-01  8.33970E-03  2.79058E+03
     256000  9.86575E-01  5.91031E-03  2.78321E+03
     384000  9.86210E-01  4.75149E-03  2.87650E+03
     512000  9.88418E-01  4.10262E-03  2.88801E+03
     640000  9.89616E-01  3.70153E-03  2.83902E+03
     768000  9.87665E-01  3.38812E-03  2.82557E+03
     896000  9.88183E-01  3.12792E-03  2.84263E+03
    1024000  9.89746E-01  2.91599E-03  2.86233E+03
    1152000  9.91202E-01  2.74130E-03  2.87905E+03
    1280000  9.90979E-01  2.59719E-03  2.88689E+03
    1408000  9.89515E-01  2.47032E-03  2.90170E+03
    1496395  9.88957E-01  2.40663E-03  2.87732E+03
mcnp       5     11/05/10 20:43:16     2     1436258     1136463068
```

Case 98

```
 Case 98
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.32330E+01 0.0064
tfc   12       1       1       1       1       1       1       1       1
     128000  7.29776E+01  1.18358E-02  1.33345E+03
```

```
     256000  7.25772E+01  8.37934E-03  1.33089E+03
     384000  7.26335E+01  6.81855E-03  1.34118E+03
     512000  7.25816E+01  5.88698E-03  1.34913E+03
     640000  7.26989E+01  5.28201E-03  1.34180E+03
     768000  7.26054E+01  4.86585E-03  1.31741E+03
     896000  7.25562E+01  4.47957E-03  1.33271E+03
    1024000  7.26465E+01  4.23079E-03  1.30701E+03
    1152000  7.28375E+01  4.00245E-03  1.29733E+03
    1280000  7.29059E+01  3.81063E-03  1.28805E+03
    1408000  7.32605E+01  6.52042E-03  3.99853E+02
    1436258  7.32330E+01  6.41243E-03  4.05308E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.33853E+01 0.0032
tfc   12       1       1       1       1       1       1       1
     128000  4.33562E+01  1.01457E-02  1.81472E+03
     256000  4.31608E+01  7.19183E-03  1.80669E+03
     384000  4.31804E+01  5.84689E-03  1.82398E+03
     512000  4.32629E+01  5.09081E-03  1.80412E+03
     640000  4.33881E+01  4.88676E-03  1.56763E+03
     768000  4.33429E+01  4.43302E-03  1.58722E+03
     896000  4.33255E+01  4.05392E-03  1.62726E+03
    1024000  4.33307E+01  3.76304E-03  1.65213E+03
    1152000  4.34090E+01  3.54446E-03  1.65426E+03
    1280000  4.34322E+01  3.36237E-03  1.65439E+03
    1408000  4.34016E+01  3.19881E-03  1.66141E+03
    1436258  4.33853E+01  3.16425E-03  1.66452E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.36092E+01 0.0029
tfc   12       1       1       1       1       1       1       1
     128000  2.35806E+01  9.17884E-03  2.21715E+03
     256000  2.35180E+01  6.54310E-03  2.18271E+03
     384000  2.35798E+01  5.83621E-03  1.83066E+03
```

```
     512000  2.36048E+01  4.95226E-03  1.90648E+03
     640000  2.36315E+01  4.42279E-03  1.91378E+03
     768000  2.35993E+01  4.00208E-03  1.94745E+03
     896000  2.35997E+01  3.66823E-03  1.98744E+03
    1024000  2.36039E+01  3.40684E-03  2.01567E+03
    1152000  2.36371E+01  3.19963E-03  2.03004E+03
    1280000  2.36344E+01  3.02626E-03  2.04228E+03
    1408000  2.36171E+01  2.88439E-03  2.04336E+03
    1436258  2.36092E+01  2.85399E-03  2.04610E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.00154E+01 0.0026
tfc   12       1       1       1       1       1       1       1       1
     128000  9.99457E+00  8.48844E-03  2.59248E+03
     256000  9.97365E+00  6.04107E-03  2.56056E+03
     384000  9.98744E+00  4.92951E-03  2.56603E+03
     512000  1.00007E+01  4.26592E-03  2.56929E+03
     640000  9.99970E+00  3.81353E-03  2.57413E+03
     768000  9.99489E+00  3.51527E-03  2.52418E+03
     896000  9.99857E+00  3.24254E-03  2.54352E+03
    1024000  1.00043E+01  3.02549E-03  2.55583E+03
    1152000  1.00257E+01  2.88795E-03  2.49187E+03
    1280000  1.00253E+01  2.73850E-03  2.49403E+03
    1408000  1.00195E+01  2.61545E-03  2.48518E+03
    1436258  1.00154E+01  2.58843E-03  2.48747E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.44289E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  3.43107E+00  8.01089E-03  2.91078E+03
     256000  3.43049E+00  5.69399E-03  2.88224E+03
     384000  3.43294E+00  4.63178E-03  2.90653E+03
     512000  3.43919E+00  4.03084E-03  2.87773E+03
     640000  3.44152E+00  3.64655E-03  2.81528E+03
```

```
     768000  3.43732E+00  3.32567E-03  2.82020E+03
     896000  3.43928E+00  3.06982E-03  2.83779E+03
    1024000  3.44149E+00  2.86460E-03  2.85099E+03
    1152000  3.44653E+00  2.70336E-03  2.84378E+03
    1280000  3.44633E+00  2.56672E-03  2.83904E+03
    1408000  3.44427E+00  2.44901E-03  2.83447E+03
    1436258  3.44289E+00  2.42408E-03  2.83620E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.71929E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  1.71047E+00  7.82834E-03  3.04812E+03
     256000  1.71108E+00  5.57521E-03  3.00636E+03
     384000  1.71398E+00  4.58896E-03  2.96102E+03
     512000  1.71639E+00  3.96788E-03  2.96977E+03
     640000  1.71789E+00  3.57954E-03  2.92168E+03
     768000  1.71693E+00  3.30091E-03  2.86266E+03
     896000  1.71762E+00  3.04078E-03  2.89226E+03
    1024000  1.71910E+00  2.84019E-03  2.90019E+03
    1152000  1.72170E+00  2.67828E-03  2.89729E+03
    1280000  1.72126E+00  2.53756E-03  2.90465E+03
    1408000  1.71987E+00  2.41711E-03  2.90977E+03
    1436258  1.71929E+00  2.39248E-03  2.91160E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.02671E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  1.02099E+00  7.79135E-03  3.07713E+03
     256000  1.02055E+00  5.49836E-03  3.09099E+03
     384000  1.02307E+00  4.58719E-03  2.96331E+03
     512000  1.02489E+00  3.95766E-03  2.98513E+03
     640000  1.02519E+00  3.55320E-03  2.96515E+03
     768000  1.02422E+00  3.25831E-03  2.93801E+03
     896000  1.02467E+00  3.00379E-03  2.96394E+03
```

```
    1024000  1.02575E+00  2.81248E-03  2.95763E+03
    1152000  1.02785E+00  2.70546E-03  2.83937E+03
    1280000  1.02752E+00  2.55934E-03  2.85544E+03
    1408000  1.02698E+00  2.44264E-03  2.84926E+03
    1436258  1.02671E+00  2.41822E-03  2.84996E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.80066E-01 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  6.78103E-01  7.84696E-03  3.03367E+03
     256000  6.77018E-01  5.50120E-03  3.08780E+03
     384000  6.78236E-01  4.54756E-03  3.01518E+03
     512000  6.79314E-01  3.92173E-03  3.04007E+03
     640000  6.79438E-01  3.52560E-03  3.01176E+03
     768000  6.78743E-01  3.22472E-03  2.99953E+03
     896000  6.79063E-01  2.97318E-03  3.02527E+03
    1024000  6.79849E-01  2.79963E-03  2.98484E+03
    1152000  6.80770E-01  2.63793E-03  2.98661E+03
    1280000  6.80693E-01  2.50851E-03  2.97232E+03
    1408000  6.80244E-01  2.38726E-03  2.98300E+03
    1436258  6.80066E-01  2.36377E-03  2.98277E+03
mcnp       5     11/05/10 21:43:27     2     1441600     1140677474
```

Case 99

```
 Case 99
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.01146E+03 0.0064
tfc   12       1       1       1       1       1       1       1       1
     128000  1.00654E+03  1.17747E-02  1.35490E+03
     256000  1.00196E+03  8.36905E-03  1.34142E+03
```

```
     384000  1.00260E+03  6.81395E-03  1.35051E+03
     512000  1.00190E+03  5.88227E-03  1.35832E+03
     640000  1.00344E+03  5.27232E-03  1.35159E+03
     768000  1.00254E+03  4.85899E-03  1.32548E+03
     896000  1.00200E+03  4.47505E-03  1.33921E+03
    1024000  1.00318E+03  4.22747E-03  1.31264E+03
    1152000  1.00581E+03  3.99992E-03  1.30325E+03
    1280000  1.00684E+03  3.80841E-03  1.29443E+03
    1408000  1.01184E+03  6.51919E-03  4.01473E+02
    1441600  1.01146E+03  6.39110E-03  4.08035E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.99151E+02 0.0032
tfc   12       1       1       1       1       1       1       1       1
     128000  5.98392E+02  1.01115E-02  1.83730E+03
     256000  5.95944E+02  7.18674E-03  1.81908E+03
     384000  5.96068E+02  5.84424E-03  1.83586E+03
     512000  5.97050E+02  5.07974E-03  1.82142E+03
     640000  5.98959E+02  4.87937E-03  1.57806E+03
     768000  5.98465E+02  4.42748E-03  1.59644E+03
     896000  5.98265E+02  4.04974E-03  1.63528E+03
    1024000  5.98310E+02  3.75972E-03  1.65958E+03
    1152000  5.99381E+02  3.54180E-03  1.66219E+03
    1280000  5.99746E+02  3.35995E-03  1.66304E+03
    1408000  5.99378E+02  3.19667E-03  1.66974E+03
    1441600  5.99151E+02  3.15578E-03  1.67354E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.26030E+02 0.0028
tfc   12       1       1       1       1       1       1       1       1
     128000  3.25521E+02  9.15188E-03  2.24278E+03
     256000  3.24701E+02  6.53738E-03  2.19841E+03
     384000  3.25491E+02  5.83438E-03  1.84207E+03
     512000  3.25806E+02  4.94992E-03  1.91822E+03
```

```
     640000  3.26241E+02  4.42085E-03  1.92238E+03
     768000  3.25845E+02  4.00088E-03  1.95503E+03
     896000  3.25866E+02  3.66740E-03  1.99402E+03
    1024000  3.25917E+02  3.40621E-03  2.02194E+03
    1152000  3.26368E+02  3.19918E-03  2.03728E+03
    1280000  3.26362E+02  3.02573E-03  2.05072E+03
    1408000  3.26148E+02  2.88396E-03  2.05148E+03
    1441600  3.26030E+02  2.84784E-03  2.05503E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38321E+02 0.0026
tfc   12       1       1       1       1       1       1       1
     128000  1.38009E+02  8.46989E-03  2.61850E+03
     256000  1.37730E+02  6.03452E-03  2.58006E+03
     384000  1.37879E+02  4.92590E-03  2.58419E+03
     512000  1.38063E+02  4.26353E-03  2.58556E+03
     640000  1.38096E+02  3.81820E-03  2.57712E+03
     768000  1.38039E+02  3.51922E-03  2.52681E+03
     896000  1.38090E+02  3.24584E-03  2.54560E+03
    1024000  1.38164E+02  3.02821E-03  2.55821E+03
    1152000  1.38453E+02  2.89026E-03  2.49606E+03
    1280000  1.38456E+02  2.74038E-03  2.50004E+03
    1408000  1.38382E+02  2.61717E-03  2.49104E+03
    1441600  1.38321E+02  2.58511E-03  2.49396E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.75456E+01 0.0024
tfc   12       1       1       1       1       1       1       1
     128000  4.74133E+01  8.02215E-03  2.91895E+03
     256000  4.73825E+01  5.69138E-03  2.90055E+03
     384000  4.73986E+01  4.63008E-03  2.92495E+03
     512000  4.74878E+01  4.03334E-03  2.88911E+03
     640000  4.75259E+01  3.64831E-03  2.82271E+03
     768000  4.74716E+01  3.32739E-03  2.82656E+03
```

```
     896000  4.74997E+01  3.07135E-03  2.84306E+03
    1024000  4.75282E+01  2.86582E-03  2.85635E+03
    1152000  4.75957E+01  2.70442E-03  2.85090E+03
    1280000  4.75899E+01  2.56475E-03  2.85415E+03
    1408000  4.75644E+01  2.44743E-03  2.84856E+03
    1441600  4.75456E+01  2.41833E-03  2.84983E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.37406E+01 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  2.36299E+01  7.81807E-03  3.07333E+03
     256000  2.36182E+01  5.54815E-03  3.05225E+03
     384000  2.36561E+01  4.57404E-03  2.99706E+03
     512000  2.36892E+01  3.95820E-03  2.99984E+03
     640000  2.37139E+01  3.57267E-03  2.94351E+03
     768000  2.37037E+01  3.29617E-03  2.88035E+03
     896000  2.37148E+01  3.03708E-03  2.90759E+03
    1024000  2.37362E+01  2.83716E-03  2.91435E+03
    1152000  2.37713E+01  2.67577E-03  2.91227E+03
    1280000  2.37665E+01  2.53531E-03  2.92082E+03
    1408000  2.37490E+01  2.41532E-03  2.92480E+03
    1441600  2.37406E+01  2.38620E-03  2.92709E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.41778E+01 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  1.41040E+01  7.77953E-03  3.10386E+03
     256000  1.40908E+01  5.48577E-03  3.12206E+03
     384000  1.41233E+01  4.58035E-03  2.98881E+03
     512000  1.41464E+01  3.95303E-03  3.00768E+03
     640000  1.41528E+01  3.54999E-03  2.98124E+03
     768000  1.41413E+01  3.25641E-03  2.95112E+03
     896000  1.41481E+01  3.00228E-03  2.97539E+03
    1024000  1.41637E+01  2.81156E-03  2.96766E+03
```

```
    1152000  1.41920E+01  2.70476E-03  2.85018E+03
    1280000  1.41886E+01  2.55873E-03  2.86761E+03
    1408000  1.41820E+01  2.44226E-03  2.86061E+03
    1441600  1.41778E+01  2.41302E-03  2.86239E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.39110E+00 0.0024
tfc   12       1       1       1       1       1       1       1       1
     128000  9.36905E+00  7.84184E-03  3.05472E+03
     256000  9.34828E+00  5.49443E-03  3.11223E+03
     384000  9.36305E+00  4.54356E-03  3.03741E+03
     512000  9.37639E+00  3.91907E-03  3.06005E+03
     640000  9.37991E+00  3.52447E-03  3.02456E+03
     768000  9.37146E+00  3.22429E-03  3.01021E+03
     896000  9.37612E+00  2.97274E-03  3.03481E+03
    1024000  9.38721E+00  2.79937E-03  2.99356E+03
    1152000  9.39954E+00  2.63773E-03  2.99688E+03
    1280000  9.39929E+00  2.50834E-03  2.98398E+03
    1408000  9.39392E+00  2.38730E-03  2.99385E+03
    1441600  9.39110E+00  2.35919E-03  2.99450E+03
mcnp       5     11/05/10 22:43:32     2     5602318     1325959577
```

Case 100

```
 Case 100
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.54728E+00 0.0065
tfc   11       1       1       1       1       1       1       1       1
     512000  8.54247E+00  1.91471E-02  4.96082E+02
    1024000  8.56772E+00  1.47380E-02  4.20336E+02
    1536000  8.47772E+00  1.17349E-02  4.41944E+02
```

```
    2048000  8.52755E+00  1.09809E-02  3.78003E+02
    2560000  8.52164E+00  9.67332E-03  3.90167E+02
    3072000  8.52688E+00  9.32494E-03  3.49668E+02
    3584000  8.53163E+00  8.40812E-03  3.68751E+02
    4096000  8.55409E+00  7.81783E-03  3.73357E+02
    4608000  8.53123E+00  7.25368E-03  3.85429E+02
    5120000  8.54955E+00  6.90302E-03  3.82882E+02
    5602318  8.54728E+00  6.53044E-03  3.90732E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.01419E+00 0.0071
tfc   11       1       1       1       1       1       1       1       1
     512000  5.01927E+00  1.85493E-02  5.28574E+02
    1024000  5.11654E+00  1.88669E-02  2.56491E+02
    1536000  5.09599E+00  1.87140E-02  1.73776E+02
    2048000  5.06195E+00  1.47560E-02  2.09330E+02
    2560000  5.04502E+00  1.24249E-02  2.36492E+02
    3072000  5.03093E+00  1.10115E-02  2.50761E+02
    3584000  5.03150E+00  9.78925E-03  2.72040E+02
    4096000  5.03726E+00  8.86751E-03  2.90197E+02
    4608000  5.02204E+00  8.09135E-03  3.09756E+02
    5120000  5.02399E+00  7.56571E-03  3.18745E+02
    5602318  5.01419E+00  7.06791E-03  3.33566E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.69985E+00 0.0057
tfc   11       1       1       1       1       1       1       1       1
     512000  2.73276E+00  1.86622E-02  5.22198E+02
    1024000  2.72108E+00  1.28689E-02  5.51300E+02
    1536000  2.69442E+00  1.04122E-02  5.61359E+02
    2048000  2.68543E+00  8.61104E-03  6.14696E+02
    2560000  2.68855E+00  7.98787E-03  5.72189E+02
    3072000  2.68182E+00  7.16868E-03  5.91656E+02
    3584000  2.69150E+00  6.90260E-03  5.47150E+02
```

```
    4096000  2.70027E+00  6.49967E-03  5.40149E+02
    4608000  2.69539E+00  5.99518E-03  5.64230E+02
    5120000  2.70445E+00  6.03713E-03  5.00589E+02
    5602318  2.69985E+00  5.67554E-03  5.17308E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.15237E+00 0.0071
tfc   11       1       1       1       1       1       1       1       1
     512000  1.17378E+00  1.90229E-02  5.02583E+02
    1024000  1.16123E+00  1.25634E-02  5.78439E+02
    1536000  1.15376E+00  1.19699E-02  4.24760E+02
    2048000  1.15015E+00  1.00041E-02  4.55420E+02
    2560000  1.14591E+00  8.51395E-03  5.03663E+02
    3072000  1.14330E+00  7.55477E-03  5.32729E+02
    3584000  1.14522E+00  6.88256E-03  5.50340E+02
    4096000  1.14691E+00  6.32681E-03  5.70068E+02
    4608000  1.15305E+00  8.20492E-03  3.01240E+02
    5120000  1.15472E+00  7.68559E-03  3.08879E+02
    5602318  1.15237E+00  7.14051E-03  3.26817E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.99285E-01 0.0055
tfc   11       1       1       1       1       1       1       1       1
     512000  4.05326E-01  1.68138E-02  6.43322E+02
    1024000  4.05435E-01  1.49851E-02  4.06589E+02
    1536000  3.99952E-01  1.11057E-02  4.93433E+02
    2048000  3.98610E-01  9.02904E-03  5.59099E+02
    2560000  3.98325E-01  8.49287E-03  5.06166E+02
    3072000  3.97172E-01  7.45939E-03  5.46439E+02
    3584000  3.97993E-01  6.91515E-03  5.45166E+02
    4096000  3.98900E-01  6.48967E-03  5.41816E+02
    4608000  3.99204E-01  6.08291E-03  5.48072E+02
    5120000  3.99899E-01  5.91616E-03  5.21270E+02
    5602318  3.99285E-01  5.54589E-03  5.41779E+02
```

```
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.01091E-01 0.0070
tfc   11       1       1       1       1       1       1       1       1
     512000  2.03085E-01  1.62417E-02  6.89441E+02
    1024000  2.04119E-01  1.66537E-02  3.29193E+02
    1536000  2.00852E-01  1.19782E-02  4.24171E+02
    2048000  2.00129E-01  9.70324E-03  4.84103E+02
    2560000  2.01066E-01  1.20622E-02  2.50926E+02
    3072000  2.00424E-01  1.03553E-02  2.83547E+02
    3584000  2.00878E-01  9.36540E-03  2.97220E+02
    4096000  2.01410E-01  8.84398E-03  2.91743E+02
    4608000  2.01397E-01  8.07030E-03  3.11374E+02
    5120000  2.01452E-01  7.55884E-03  3.19325E+02
    5602318  2.01091E-01  7.02012E-03  3.38123E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.20739E-01 0.0086
tfc   11       1       1       1       1       1       1       1       1
     512000  1.21512E-01  1.60832E-02  7.03099E+02
    1024000  1.23959E-01  2.73230E-02  1.22297E+02
    1536000  1.21295E-01  1.89979E-02  1.68620E+02
    2048000  1.20613E-01  1.48971E-02  2.05384E+02
    2560000  1.21353E-01  1.67653E-02  1.29892E+02
    3072000  1.20794E-01  1.42387E-02  1.49971E+02
    3584000  1.20918E-01  1.25294E-02  1.66062E+02
    4096000  1.21067E-01  1.12345E-02  1.80795E+02
    4608000  1.21002E-01  1.01527E-02  1.96741E+02
    5120000  1.20989E-01  9.35060E-03  2.08672E+02
    5602318  1.20739E-01  8.64201E-03  2.23118E+02
tally  185    2    1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  8.03812E-02 0.0096
tfc   11        1        1        1        1        1        1        1        1
     512000  8.09063E-02  1.62445E-02  6.89208E+02
    1024000  8.33113E-02  3.79117E-02  6.35221E+01
    1536000  8.12290E-02  2.61881E-02  8.87387E+01
    2048000  8.06864E-02  2.03124E-02  1.10471E+02
    2560000  8.09284E-02  1.90634E-02  1.00462E+02
    3072000  8.06015E-02  1.61628E-02  1.16390E+02
    3584000  8.06623E-02  1.41637E-02  1.29951E+02
    4096000  8.06764E-02  1.25752E-02  1.44299E+02
    4608000  8.06304E-02  1.13437E-02  1.57597E+02
    5120000  8.05340E-02  1.03785E-02  1.69384E+02
    5602318  8.03812E-02  9.58244E-03  1.81473E+02
mcnp        5     11/05/10 23:44:11     2     5230419     1314798100
```

Case 101

```
 Case 101
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.94397E+00 0.0065
tfc   11        1        1        1        1        1        1        1        1
     512000  5.91646E+00  1.69890E-02  5.86953E+02
    1024000  5.93090E+00  1.35498E-02  4.62914E+02
    1536000  5.87588E+00  1.10283E-02  4.65667E+02
    2048000  5.90463E+00  1.03353E-02  3.97710E+02
    2560000  5.91370E+00  9.15719E-03  4.05787E+02
    3072000  5.90409E+00  8.76726E-03  3.68733E+02
    3584000  5.91818E+00  8.02448E-03  3.77486E+02
    4096000  5.93851E+00  7.36474E-03  3.92222E+02
    4608000  5.92022E+00  6.83976E-03  4.04587E+02
    5120000  5.94502E+00  6.57131E-03  3.94328E+02
    5230419  5.94397E+00  6.48728E-03  3.96025E+02
tally  125    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.47841E+00 0.0070
tfc   11        1        1        1        1        1        1        1        1
     512000  3.45378E+00  1.49317E-02  7.59833E+02
    1024000  3.52721E+00  1.73473E-02  2.82424E+02
    1536000  3.51692E+00  1.74239E-02  1.86555E+02
    2048000  3.49652E+00  1.37550E-02  2.24539E+02
    2560000  3.49338E+00  1.16057E-02  2.52628E+02
    3072000  3.47020E+00  1.00271E-02  2.81897E+02
    3584000  3.48122E+00  9.23928E-03  2.84746E+02
    4096000  3.48610E+00  8.31229E-03  3.07897E+02
    4608000  3.47672E+00  7.60804E-03  3.27000E+02
    5120000  3.48048E+00  7.11334E-03  3.36522E+02
    5230419  3.47841E+00  7.00193E-03  3.39949E+02
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.89612E+00 0.0134
tfc   11        1        1        1        1        1        1        1        1
     512000  1.88116E+00  1.52836E-02  7.25248E+02
    1024000  1.98823E+00  6.00268E-02  2.35872E+01
    1536000  1.93860E+00  4.14795E-02  3.29176E+01
    2048000  1.91385E+00  3.16845E-02  4.23173E+01
    2560000  1.91022E+00  2.57015E-02  5.15117E+01
    3072000  1.89384E+00  2.17143E-02  6.01103E+01
    3584000  1.89804E+00  1.88990E-02  6.80547E+01
    4096000  1.90067E+00  1.66550E-02  7.66937E+01
    4608000  1.89428E+00  1.49526E-02  8.46564E+01
    5120000  1.89760E+00  1.36690E-02  9.11363E+01
    5230419  1.89612E+00  1.34067E-02  9.27266E+01
tally  145    2    1
f         1
d         1
u         0
s         0
```

```
m         1
c         0
e         0
t         0
vals
  8.09664E-01 0.0144
tfc   11        1        1        1        1        1        1        1        1
     512000  8.01329E-01  1.42523E-02  8.34004E+02
    1024000  7.98806E-01  1.16715E-02  6.23900E+02
    1536000  8.37368E-01  4.37458E-02  2.95953E+01
    2048000  8.25067E-01  3.35371E-02  3.77711E+01
    2560000  8.23004E-01  2.77278E-02  4.42579E+01
    3072000  8.15120E-01  2.34351E-02  5.16066E+01
    3584000  8.12895E-01  2.02612E-02  5.92113E+01
    4096000  8.12471E-01  1.78324E-02  6.69001E+01
    4608000  8.10715E-01  1.61305E-02  7.27442E+01
    5120000  8.10510E-01  1.46586E-02  7.92461E+01
    5230419  8.09664E-01  1.43753E-02  8.06518E+01
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.76900E-01 0.0068
tfc   11        1        1        1        1        1        1        1        1
     512000  2.77483E-01  1.34248E-02  9.39979E+02
    1024000  2.77925E-01  1.39657E-02  4.35751E+02
    1536000  2.76217E-01  1.19404E-02  3.97242E+02
    2048000  2.75157E-01  9.59045E-03  4.61884E+02
    2560000  2.75445E-01  8.64121E-03  4.55694E+02
    3072000  2.74128E-01  7.50752E-03  5.02860E+02
    3584000  2.74701E-01  6.90720E-03  5.09484E+02
    4096000  2.76631E-01  7.49683E-03  3.78522E+02
    4608000  2.76013E-01  6.81980E-03  4.06959E+02
    5120000  2.77091E-01  6.90646E-03  3.56986E+02
    5230419  2.76900E-01  6.78734E-03  3.61784E+02
tally  165    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
```

```
vals
  1.38440E-01 0.0064
tfc   11        1        1        1        1        1        1        1        1
     512000  1.39589E-01  1.34845E-02  9.31687E+02
    1024000  1.38754E-01  1.20147E-02  5.88761E+02
    1536000  1.37411E-01  9.39605E-03  6.41511E+02
    2048000  1.37338E-01  8.07398E-03  6.51681E+02
    2560000  1.37253E-01  7.02585E-03  6.89326E+02
    3072000  1.36827E-01  6.23234E-03  7.29690E+02
    3584000  1.37278E-01  6.05584E-03  6.62805E+02
    4096000  1.38464E-01  7.40647E-03  3.87815E+02
    4608000  1.38228E-01  6.73889E-03  4.16790E+02
    5120000  1.38524E-01  6.49862E-03  4.03198E+02
    5230419  1.38440E-01  6.38837E-03  4.08384E+02
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.26872E-02 0.0055
tfc   11        1        1        1        1        1        1        1        1
     512000  8.35164E-02  1.33511E-02  9.50389E+02
    1024000  8.31084E-02  1.17636E-02  6.14165E+02
    1536000  8.21706E-02  9.02964E-03  6.94631E+02
    2048000  8.22097E-02  8.16603E-03  6.37073E+02
    2560000  8.21045E-02  7.02563E-03  6.89369E+02
    3072000  8.18653E-02  6.25748E-03  7.23838E+02
    3584000  8.21484E-02  6.02579E-03  6.69432E+02
    4096000  8.26844E-02  6.32688E-03  5.31456E+02
    4608000  8.25981E-02  5.82896E-03  5.57074E+02
    5120000  8.27292E-02  5.61025E-03  5.40999E+02
    5230419  8.26872E-02  5.52224E-03  5.46535E+02
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.48869E-02 0.0053
tfc   11        1        1        1        1        1        1        1        1
     512000  5.56116E-02  1.34829E-02  9.31902E+02
```

```
    1024000  5.51464E-02  1.14438E-02  6.48968E+02
    1536000  5.45367E-02  8.80284E-03  7.30886E+02
    2048000  5.46129E-02  8.31465E-03  6.14501E+02
    2560000  5.45362E-02  7.12215E-03  6.70811E+02
    3072000  5.44311E-02  6.40399E-03  6.91097E+02
    3584000  5.46122E-02  6.17835E-03  6.36779E+02
    4096000  5.49010E-02  6.08809E-03  5.73965E+02
    4608000  5.48668E-02  5.66690E-03  5.89389E+02
    5120000  5.49122E-02  5.41157E-03  5.81453E+02
    5230419  5.48869E-02  5.32898E-03  5.86896E+02
mcnp       5     11/06/10 00:44:23     2     5230415     1314923852
```

Case 102

```
 Case 102
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.20909E+01 0.0065
tfc   11       1       1       1       1       1       1       1       1
     512000  8.19686E+01  1.69585E-02  5.88989E+02
    1024000  8.20380E+01  1.35494E-02  4.63170E+02
    1536000  8.12013E+01  1.10288E-02  4.65818E+02
    2048000  8.15855E+01  1.03341E-02  3.97887E+02
    2560000  8.16940E+01  9.15993E-03  4.05605E+02
    3072000  8.15609E+01  8.76919E-03  3.68573E+02
    3584000  8.17458E+01  8.02653E-03  3.77300E+02
    4096000  8.20250E+01  7.36634E-03  3.92036E+02
    4608000  8.17773E+01  6.84098E-03  4.04443E+02
    5120000  8.21061E+01  6.57290E-03  3.94129E+02
    5230415  8.20909E+01  6.48886E-03  3.95812E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  4.80516E+01 0.0070
tfc   11       1       1       1       1       1       1       1       1
     512000  4.79565E+01  1.50432E-02  7.48510E+02
    1024000  4.88432E+01  1.73483E-02  2.82529E+02
    1536000  4.86377E+01  1.74190E-02  1.86736E+02
    2048000  4.83418E+01  1.37532E-02  2.24645E+02
    2560000  4.82847E+01  1.16074E-02  2.52591E+02
    3072000  4.79573E+01  1.00296E-02  2.81756E+02
    3584000  4.81020E+01  9.24183E-03  2.84595E+02
    4096000  4.81666E+01  8.31465E-03  3.07710E+02
    4608000  4.80378E+01  7.61003E-03  3.26829E+02
    5120000  4.80801E+01  7.11595E-03  3.36268E+02
    5230415  4.80516E+01  7.00445E-03  3.39687E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.61849E+01 0.0134
tfc   11       1       1       1       1       1       1       1       1
     512000  2.60483E+01  1.51861E-02  7.34490E+02
    1024000  2.74907E+01  5.99590E-02  2.36520E+01
    1536000  2.67767E+01  4.14738E-02  3.29403E+01
    2048000  2.64368E+01  3.16778E-02  4.23446E+01
    2560000  2.63857E+01  2.56973E-02  5.15362E+01
    3072000  2.61576E+01  2.17123E-02  6.01218E+01
    3584000  2.62138E+01  1.88984E-02  6.80599E+01
    4096000  2.62502E+01  1.66545E-02  7.66954E+01
    4608000  2.61632E+01  1.49515E-02  8.46688E+01
    5120000  2.62051E+01  1.36699E-02  9.11214E+01
    5230415  2.61849E+01  1.34075E-02  9.27106E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.11824E+01 0.0144
tfc   11       1       1       1       1       1       1       1       1
     512000  1.10906E+01  1.41794E-02  8.42492E+02
    1024000  1.10431E+01  1.16557E-02  6.25897E+02
```

```
    1536000  1.15669E+01  4.37388E-02  2.96170E+01
    2048000  1.13987E+01  3.35270E-02  3.78023E+01
    2560000  1.13697E+01  2.77207E-02  4.42871E+01
    3072000  1.12597E+01  2.34313E-02  5.16237E+01
    3584000  1.12282E+01  2.02592E-02  5.92241E+01
    4096000  1.12222E+01  1.78309E-02  6.69090E+01
    4608000  1.11983E+01  1.61288E-02  7.27599E+01
    5120000  1.11940E+01  1.46588E-02  7.92418E+01
    5230415  1.11824E+01  1.43754E-02  8.06468E+01
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.82421E+00 0.0068
tfc   11       1       1       1       1       1       1       1       1
     512000  3.83383E+00  1.33669E-02  9.48024E+02
    1024000  3.83875E+00  1.39588E-02  4.36399E+02
    1536000  3.81371E+00  1.19386E-02  3.97528E+02
    2048000  3.80109E+00  9.59081E-03  4.61951E+02
    2560000  3.80501E+00  8.64148E-03  4.55734E+02
    3072000  3.78657E+00  7.50802E-03  5.02796E+02
    3584000  3.79428E+00  6.90778E-03  5.09408E+02
    4096000  3.82087E+00  7.49713E-03  3.78478E+02
    4608000  3.81242E+00  6.82001E-03  4.06934E+02
    5120000  3.82679E+00  6.90724E-03  3.56897E+02
    5230415  3.82421E+00  6.78801E-03  3.61694E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.91205E+00 0.0064
tfc   11       1       1       1       1       1       1       1       1
     512000  1.92587E+00  1.33520E-02  9.50138E+02
    1024000  1.91541E+00  1.19886E-02  5.91613E+02
    1536000  1.89641E+00  9.38001E-03  6.43973E+02
    2048000  1.89736E+00  8.09091E-03  6.49101E+02
    2560000  1.89614E+00  7.03856E-03  6.86942E+02
    3072000  1.89011E+00  6.24249E-03  7.27323E+02
```

```
    3584000  1.89623E+00  6.06350E-03  6.61144E+02
    4096000  1.91255E+00  7.41090E-03  3.87336E+02
    4608000  1.90934E+00  6.74269E-03  4.16321E+02
    5120000  1.91317E+00  6.50237E-03  4.02725E+02
    5230415  1.91205E+00  6.39193E-03  4.07908E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.14223E+00 0.0055
tfc   11       1       1       1       1       1       1       1       1
     512000  1.15201E+00  1.31995E-02  9.72221E+02
    1024000  1.14747E+00  1.17317E-02  6.17809E+02
    1536000  1.13423E+00  9.00971E-03  6.97995E+02
    2048000  1.13613E+00  8.20299E-03  6.31484E+02
    2560000  1.13460E+00  7.05380E-03  6.83977E+02
    3072000  1.13115E+00  6.27980E-03  7.18705E+02
    3584000  1.13494E+00  6.04271E-03  6.65701E+02
    4096000  1.14228E+00  6.33869E-03  5.29457E+02
    4608000  1.14109E+00  5.83912E-03  5.55136E+02
    5120000  1.14279E+00  5.61908E-03  5.39289E+02
    5230415  1.14223E+00  5.53077E-03  5.44822E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.58324E-01 0.0053
tfc   11       1       1       1       1       1       1       1       1
     512000  7.68204E-01  1.34050E-02  9.42643E+02
    1024000  7.61936E-01  1.14289E-02  6.50983E+02
    1536000  7.53226E-01  8.79394E-03  7.32669E+02
    2048000  7.55103E-01  8.36193E-03  6.07706E+02
    2560000  7.53923E-01  7.15865E-03  6.64087E+02
    3072000  7.52312E-01  6.43262E-03  6.84963E+02
    3584000  7.54705E-01  6.19989E-03  6.32375E+02
    4096000  7.58637E-01  6.10429E-03  5.70900E+02
    4608000  7.58149E-01  5.68070E-03  5.86530E+02
    5120000  7.58667E-01  5.42354E-03  5.78877E+02
```

```
    5230415  7.58324E-01  5.34057E-03  5.84319E+02
mcnp       5     11/06/10 01:44:34     2     7742325     1952082120
```

Case 103

```
 Case 103
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.43748E+02 0.0013
tfc   16       1       1       1       1       1       1       1       1
     512000  2.43517E+02  3.10728E-03  2.59791E+04
    1024000  2.43451E+02  2.19515E-03  2.60484E+04
    1536000  2.43234E+02  1.79316E-03  2.60514E+04
    2048000  2.43431E+02  1.55427E-03  2.60280E+04
    2560000  2.43321E+02  1.39335E-03  2.59129E+04
    3072000  2.43404E+02  1.27736E-03  2.56945E+04
    3584000  2.43375E+02  1.18710E-03  2.55284E+04
    4096000  2.43268E+02  1.10910E-03  2.55882E+04
    4608000  2.43435E+02  1.04550E-03  2.56013E+04
    5120000  2.43485E+02  1.00322E-03  2.50127E+04
    5632000  2.43560E+02  9.57675E-04  2.49424E+04
    6144000  2.43581E+02  9.14825E-04  2.50574E+04
    6656000  2.43922E+02  1.49195E-03  8.70073E+03
    7168000  2.43850E+02  1.40381E-03  9.13163E+03
    7680000  2.43793E+02  1.32685E-03  9.53990E+03
    7742325  2.43748E+02  1.31824E-03  9.58803E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.46280E+02 0.0008
tfc   16       1       1       1       1       1       1       1       1
     512000  1.46331E+02  2.99039E-03  2.80496E+04
    1024000  1.46263E+02  2.10608E-03  2.82983E+04
```

```
    1536000  1.46125E+02  1.72074E-03  2.82901E+04
    2048000  1.46223E+02  1.48893E-03  2.83626E+04
    2560000  1.46151E+02  1.33765E-03  2.81159E+04
    3072000  1.46212E+02  1.23738E-03  2.73818E+04
    3584000  1.46210E+02  1.15522E-03  2.69568E+04
    4096000  1.46148E+02  1.08064E-03  2.69535E+04
    4608000  1.46237E+02  1.01698E-03  2.70572E+04
    5120000  1.46259E+02  9.66245E-04  2.69637E+04
    5632000  1.46306E+02  9.21795E-04  2.69218E+04
    6144000  1.46328E+02  8.80414E-04  2.70544E+04
    6656000  1.46364E+02  8.53180E-04  2.66062E+04
    7168000  1.46326E+02  8.20546E-04  2.67277E+04
    7680000  1.46304E+02  7.91341E-04  2.68199E+04
    7742325  1.46280E+02  7.87955E-04  2.68360E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.19617E+01 0.0008
tfc   16       1       1       1       1       1       1       1       1
     512000  8.20173E+01  2.87770E-03  3.02897E+04
    1024000  8.19934E+01  2.03352E-03  3.03537E+04
    1536000  8.19020E+01  1.65966E-03  3.04111E+04
    2048000  8.19558E+01  1.43765E-03  3.04223E+04
    2560000  8.19059E+01  1.29482E-03  3.00065E+04
    3072000  8.19375E+01  1.20842E-03  2.87102E+04
    3584000  8.19372E+01  1.12251E-03  2.85504E+04
    4096000  8.18955E+01  1.04564E-03  2.87884E+04
    4608000  8.19436E+01  9.83722E-04  2.89176E+04
    5120000  8.19692E+01  9.52453E-04  2.77502E+04
    5632000  8.19885E+01  9.05821E-04  2.78797E+04
    6144000  8.19977E+01  8.63327E-04  2.81360E+04
    6656000  8.20018E+01  8.26856E-04  2.83272E+04
    7168000  8.19812E+01  7.94489E-04  2.85096E+04
    7680000  8.19740E+01  7.69189E-04  2.83869E+04
    7742325  8.19617E+01  7.65879E-04  2.84053E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t         0
vals
  3.63960E+01 0.0007
tfc   16        1        1        1        1        1        1        1        1
     512000  3.64179E+01  2.74933E-03  3.31843E+04
    1024000  3.64154E+01  1.94560E-03  3.31592E+04
    1536000  3.63805E+01  1.59882E-03  3.27692E+04
    2048000  3.63973E+01  1.38165E-03  3.29380E+04
    2560000  3.63708E+01  1.24761E-03  3.23203E+04
    3072000  3.63848E+01  1.16673E-03  3.07982E+04
    3584000  3.63919E+01  1.09118E-03  3.02138E+04
    4096000  3.63747E+01  1.01976E-03  3.02679E+04
    4608000  3.63930E+01  9.56688E-04  3.05750E+04
    5120000  3.63986E+01  9.07025E-04  3.05995E+04
    5632000  3.64083E+01  8.64449E-04  3.06122E+04
    6144000  3.64143E+01  8.24216E-04  3.08695E+04
    6656000  3.64153E+01  7.89369E-04  3.10816E+04
    7168000  3.64065E+01  7.58743E-04  3.12592E+04
    7680000  3.64012E+01  7.31263E-04  3.14078E+04
    7742325  3.63960E+01  7.28244E-04  3.14172E+04
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.31264E+01 0.0007
tfc   16        1        1        1        1        1        1        1        1
     512000  1.31264E+01  2.65167E-03  3.56735E+04
    1024000  1.31455E+01  2.06590E-03  2.94097E+04
    1536000  1.31306E+01  1.65203E-03  3.06924E+04
    2048000  1.31365E+01  1.41505E-03  3.14016E+04
    2560000  1.31239E+01  1.26847E-03  3.12663E+04
    3072000  1.31288E+01  1.16876E-03  3.06916E+04
    3584000  1.31298E+01  1.08843E-03  3.03663E+04
    4096000  1.31214E+01  1.00821E-03  3.09654E+04
    4608000  1.31267E+01  9.43369E-04  3.14445E+04
    5120000  1.31287E+01  8.91881E-04  3.16475E+04
    5632000  1.31330E+01  8.69925E-04  3.02280E+04
    6144000  1.31343E+01  8.27208E-04  3.06466E+04
    6656000  1.31339E+01  7.90047E-04  3.10283E+04
    7168000  1.31304E+01  7.57569E-04  3.13562E+04
    7680000  1.31284E+01  7.29503E-04  3.15595E+04
    7742325  1.31264E+01  7.26245E-04  3.15904E+04
tally  165     2     1
f         1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.69682E+00 0.0007
tfc   16        1        1        1        1        1        1        1        1
     512000  6.69777E+00  2.63284E-03  3.61856E+04
    1024000  6.70241E+00  1.91804E-03  3.41189E+04
    1536000  6.69544E+00  1.56217E-03  3.43250E+04
    2048000  6.69907E+00  1.34730E-03  3.46390E+04
    2560000  6.69369E+00  1.22200E-03  3.36897E+04
    3072000  6.69604E+00  1.11666E-03  3.36225E+04
    3584000  6.69630E+00  1.04122E-03  3.31824E+04
    4096000  6.69242E+00  9.69588E-04  3.34814E+04
    4608000  6.69502E+00  9.09487E-04  3.38309E+04
    5120000  6.69624E+00  8.61036E-04  3.39555E+04
    5632000  6.69894E+00  8.73001E-04  3.00154E+04
    6144000  6.70010E+00  8.29020E-04  3.05128E+04
    6656000  6.69981E+00  7.91224E-04  3.09360E+04
    7168000  6.69854E+00  7.58551E-04  3.12750E+04
    7680000  6.69791E+00  7.29818E-04  3.15323E+04
    7742325  6.69682E+00  7.26439E-04  3.15735E+04
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.04642E+00 0.0007
tfc   16        1        1        1        1        1        1        1        1
     512000  4.04499E+00  2.58939E-03  3.74100E+04
    1024000  4.04965E+00  1.89997E-03  3.47709E+04
    1536000  4.04609E+00  1.55665E-03  3.45690E+04
    2048000  4.04701E+00  1.33766E-03  3.51401E+04
    2560000  4.04423E+00  1.22184E-03  3.36980E+04
    3072000  4.04620E+00  1.12562E-03  3.30892E+04
    3584000  4.04626E+00  1.05281E-03  3.24559E+04
    4096000  4.04378E+00  9.77734E-04  3.29258E+04
    4608000  4.04571E+00  9.18283E-04  3.31859E+04
    5120000  4.04632E+00  8.67419E-04  3.34576E+04
    5632000  4.04849E+00  9.08056E-04  2.77427E+04
    6144000  4.04908E+00  8.59864E-04  2.83630E+04
```

```
    6656000  4.04894E+00  8.19167E-04  2.88614E+04
    7168000  4.04789E+00  7.83253E-04  2.93335E+04
    7680000  4.04712E+00  7.51704E-04  2.97229E+04
    7742325  4.04642E+00  7.48020E-04  2.97779E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.70364E+00 0.0008
tfc   16       1       1       1       1       1       1       1       1
     512000  2.70280E+00  2.60633E-03  3.69254E+04
    1024000  2.70484E+00  1.88613E-03  3.52831E+04
    1536000  2.70262E+00  1.55269E-03  3.47455E+04
    2048000  2.70367E+00  1.33670E-03  3.51905E+04
    2560000  2.70132E+00  1.21456E-03  3.41037E+04
    3072000  2.70236E+00  1.10901E-03  3.40876E+04
    3584000  2.70326E+00  1.05547E-03  3.22924E+04
    4096000  2.70184E+00  9.84667E-04  3.24638E+04
    4608000  2.70305E+00  9.23734E-04  3.27954E+04
    5120000  2.70335E+00  8.71231E-04  3.31655E+04
    5632000  2.70479E+00  9.36113E-04  2.61046E+04
    6144000  2.70533E+00  8.86783E-04  2.66672E+04
    6656000  2.70537E+00  8.43843E-04  2.71982E+04
    7168000  2.70465E+00  8.05595E-04  2.77290E+04
    7680000  2.70412E+00  7.72239E-04  2.81631E+04
    7742325  2.70364E+00  7.68308E-04  2.82261E+04
mcnp       5      11/06/10 02:44:42      2      7310100      1947732333
```

Case 104

```
 Case 104
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.65750E+02 0.0013
```

```
tfc   15        1        1        1        1        1        1        1        1
     512000  1.65501E+02  3.00460E-03  2.60830E+04
    1024000  1.65607E+02  2.12443E-03  2.61010E+04
    1536000  1.65441E+02  1.73555E-03  2.61709E+04
    2048000  1.65542E+02  1.50567E-03  2.61588E+04
    2560000  1.65525E+02  1.35298E-03  2.59609E+04
    3072000  1.65519E+02  1.23878E-03  2.58209E+04
    3584000  1.65465E+02  1.15089E-03  2.56605E+04
    4096000  1.65391E+02  1.07568E-03  2.56909E+04
    4608000  1.65510E+02  1.01384E-03  2.57104E+04
    5120000  1.65529E+02  9.72629E-04  2.51399E+04
    5632000  1.65572E+02  9.28103E-04  2.50859E+04
    6144000  1.65602E+02  8.86387E-04  2.52093E+04
    6656000  1.65809E+02  1.41921E-03  9.08196E+03
    7168000  1.65761E+02  1.33598E-03  9.52197E+03
    7310100  1.65750E+02  1.31468E-03  9.64220E+03
tally  125     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.95286E+01 0.0008
tfc   15        1        1        1        1        1        1        1        1
     512000  9.95175E+01  2.88423E-03  2.83056E+04
    1024000  9.95662E+01  2.03551E-03  2.84312E+04
    1536000  9.94499E+01  1.66234E-03  2.85271E+04
    2048000  9.94941E+01  1.43974E-03  2.86096E+04
    2560000  9.94795E+01  1.29167E-03  2.84838E+04
    3072000  9.94845E+01  1.19439E-03  2.77758E+04
    3584000  9.94619E+01  1.11454E-03  2.73615E+04
    4096000  9.94243E+01  1.04383E-03  2.72822E+04
    4608000  9.94902E+01  9.82704E-04  2.73654E+04
    5120000  9.95012E+01  9.36971E-04  2.70898E+04
    5632000  9.95231E+01  8.92451E-04  2.71302E+04
    6144000  9.95466E+01  8.52252E-04  2.72691E+04
    6656000  9.95564E+01  8.23818E-04  2.69533E+04
    7168000  9.95315E+01  7.92247E-04  2.70773E+04
    7310100  9.95286E+01  7.84154E-04  2.71027E+04
tally  135     2     1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  5.57970E+01 0.0008
tfc   15       1       1       1       1       1       1       1       1
     512000  5.58176E+01  2.78437E-03  3.03723E+04
    1024000  5.58561E+01  1.96957E-03  3.03667E+04
    1536000  5.57820E+01  1.60498E-03  3.06024E+04
    2048000  5.58018E+01  1.39053E-03  3.06701E+04
    2560000  5.57839E+01  1.24457E-03  3.06805E+04
    3072000  5.57853E+01  1.16152E-03  2.93703E+04
    3584000  5.57679E+01  1.07150E-03  2.96039E+04
    4096000  5.57430E+01  1.00057E-03  2.96927E+04
    4608000  5.57778E+01  9.42453E-04  2.97528E+04
    5120000  5.57879E+01  9.12548E-04  2.85592E+04
    5632000  5.57975E+01  8.67525E-04  2.87116E+04
    6144000  5.58099E+01  8.27430E-04  2.89297E+04
    6656000  5.58121E+01  7.95647E-04  2.88958E+04
    7168000  5.57982E+01  7.64811E-04  2.90548E+04
    7310100  5.57970E+01  7.56915E-04  2.90884E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.47938E+01 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  2.47903E+01  2.64324E-03  3.37021E+04
    1024000  2.48208E+01  1.88339E-03  3.32092E+04
    1536000  2.47906E+01  1.54351E-03  3.30883E+04
    2048000  2.47964E+01  1.33443E-03  3.33034E+04
    2560000  2.47847E+01  1.19110E-03  3.34970E+04
    3072000  2.47852E+01  1.11457E-03  3.18970E+04
    3584000  2.47831E+01  1.03866E-03  3.15055E+04
    4096000  2.47720E+01  9.72421E-04  3.14365E+04
    4608000  2.47859E+01  9.13715E-04  3.16538E+04
    5120000  2.47870E+01  8.67131E-04  3.16293E+04
    5632000  2.47929E+01  8.26978E-04  3.15961E+04
    6144000  2.48005E+01  7.89502E-04  3.17761E+04
    6656000  2.48000E+01  7.56624E-04  3.19533E+04
    7168000  2.47944E+01  7.27855E-04  3.20802E+04
    7310100  2.47938E+01  7.20218E-04  3.21282E+04
tally  155    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.94732E+00 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  8.94126E+00  2.55287E-03  3.61305E+04
    1024000  8.96438E+00  1.99875E-03  2.94866E+04
    1536000  8.95105E+00  1.59081E-03  3.11500E+04
    2048000  8.95419E+00  1.36362E-03  3.18925E+04
    2560000  8.94792E+00  1.20558E-03  3.26971E+04
    3072000  8.94798E+00  1.11193E-03  3.20485E+04
    3584000  8.94630E+00  1.02538E-03  3.23267E+04
    4096000  8.94081E+00  9.52498E-04  3.27653E+04
    4608000  8.94456E+00  8.92838E-04  3.31514E+04
    5120000  8.94528E+00  8.46331E-04  3.32030E+04
    5632000  8.94787E+00  8.26117E-04  3.16621E+04
    6144000  8.95011E+00  7.86499E-04  3.20193E+04
    6656000  8.94963E+00  7.52036E-04  3.23444E+04
    7168000  8.94716E+00  7.21656E-04  3.26337E+04
    7310100  8.94732E+00  7.14661E-04  3.26298E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.56616E+00 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  4.56411E+00  2.53451E-03  3.66557E+04
    1024000  4.57392E+00  1.87035E-03  3.36741E+04
    1536000  4.56743E+00  1.51339E-03  3.44186E+04
    2048000  4.56903E+00  1.30442E-03  3.48533E+04
    2560000  4.56642E+00  1.16374E-03  3.50907E+04
    3072000  4.56614E+00  1.06453E-03  3.49660E+04
    3584000  4.56542E+00  9.91282E-04  3.45888E+04
    4096000  4.56257E+00  9.23852E-04  3.48288E+04
    4608000  4.56438E+00  8.67789E-04  3.50929E+04
    5120000  4.56466E+00  8.22370E-04  3.51660E+04
    5632000  4.56617E+00  8.32686E-04  3.11644E+04
    6144000  4.56748E+00  7.91387E-04  3.16249E+04
    6656000  4.56721E+00  7.56117E-04  3.19961E+04
    7168000  4.56617E+00  7.25018E-04  3.23318E+04
```

```
    7310100  4.56616E+00  7.16843E-04  3.24315E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.76023E+00 0.0007
tfc   15       1       1       1       1       1       1       1
     512000  2.75659E+00  2.49213E-03  3.79131E+04
    1024000  2.76406E+00  1.86074E-03  3.40228E+04
    1536000  2.76041E+00  1.51080E-03  3.45366E+04
    2048000  2.76073E+00  1.29777E-03  3.52113E+04
    2560000  2.75949E+00  1.16759E-03  3.48594E+04
    3072000  2.75969E+00  1.07521E-03  3.42748E+04
    3584000  2.75956E+00  1.00830E-03  3.34309E+04
    4096000  2.75794E+00  9.37761E-04  3.38032E+04
    4608000  2.75923E+00  8.81228E-04  3.40307E+04
    5120000  2.75927E+00  8.32796E-04  3.42911E+04
    5632000  2.76058E+00  8.68732E-04  2.86319E+04
    6144000  2.76126E+00  8.23081E-04  2.92363E+04
    6656000  2.76110E+00  7.84849E-04  2.96964E+04
    7168000  2.76033E+00  7.50659E-04  3.01607E+04
    7310100  2.76023E+00  7.41603E-04  3.03021E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.84429E+00 0.0008
tfc   15       1       1       1       1       1       1       1
     512000  1.84227E+00  2.50709E-03  3.74620E+04
    1024000  1.84621E+00  1.84153E-03  3.47363E+04
    1536000  1.84408E+00  1.50443E-03  3.48297E+04
    2048000  1.84470E+00  1.29588E-03  3.53141E+04
    2560000  1.84347E+00  1.15732E-03  3.54809E+04
    3072000  1.84354E+00  1.05878E-03  3.53472E+04
    3584000  1.84348E+00  9.96665E-04  3.42162E+04
    4096000  1.84260E+00  9.33306E-04  3.41267E+04
    4608000  1.84351E+00  8.77145E-04  3.43483E+04
    5120000  1.84352E+00  8.28509E-04  3.46468E+04
```

```
    5632000  1.84438E+00  8.88482E-04  2.73731E+04
    6144000  1.84493E+00  8.42379E-04  2.79121E+04
    6656000  1.84490E+00  8.02566E-04  2.83997E+04
    7168000  1.84434E+00  7.66380E-04  2.89360E+04
    7310100  1.84429E+00  7.56887E-04  2.90906E+04
mcnp       5     11/06/10 03:44:54     2     7322571     1951133737
```

Case 105

```
 Case 105
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.28943E+03 0.0013
tfc   15       1       1       1       1       1       1       1       1
     512000  2.28591E+03  3.00447E-03  2.64009E+04
    1024000  2.28730E+03  2.12437E-03  2.63955E+04
    1536000  2.28504E+03  1.73550E-03  2.63740E+04
    2048000  2.28643E+03  1.50564E-03  2.63070E+04
    2560000  2.28620E+03  1.35296E-03  2.60783E+04
    3072000  2.28613E+03  1.23876E-03  2.59151E+04
    3584000  2.28539E+03  1.15086E-03  2.57438E+04
    4096000  2.28436E+03  1.07566E-03  2.57654E+04
    4608000  2.28600E+03  1.01382E-03  2.57748E+04
    5120000  2.28626E+03  9.72610E-04  2.51964E+04
    5632000  2.28686E+03  9.28084E-04  2.51425E+04
    6144000  2.28727E+03  8.86358E-04  2.52675E+04
    6656000  2.29014E+03  1.41917E-03  9.10109E+03
    7168000  2.28948E+03  1.33594E-03  9.53974E+03
    7322571  2.28943E+03  1.31280E-03  9.67001E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.37474E+03 0.0008
```

```
tfc   15        1        1        1        1        1        1        1        1
     512000  1.37454E+03  2.88410E-03  2.86506E+04
    1024000  1.37517E+03  2.03546E-03  2.87519E+04
    1536000  1.37358E+03  1.66229E-03  2.87482E+04
    2048000  1.37418E+03  1.43971E-03  2.87714E+04
    2560000  1.37399E+03  1.29166E-03  2.86123E+04
    3072000  1.37407E+03  1.19437E-03  2.78769E+04
    3584000  1.37376E+03  1.11452E-03  2.74501E+04
    4096000  1.37324E+03  1.04382E-03  2.73612E+04
    4608000  1.37414E+03  9.82689E-04  2.74339E+04
    5120000  1.37429E+03  9.36955E-04  2.71506E+04
    5632000  1.37460E+03  8.92433E-04  2.71914E+04
    6144000  1.37492E+03  8.52226E-04  2.73320E+04
    6656000  1.37506E+03  8.23793E-04  2.70102E+04
    7168000  1.37472E+03  7.92223E-04  2.71279E+04
    7322571  1.37474E+03  7.83464E-04  2.71512E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.70694E+02 0.0008
tfc   15        1        1        1        1        1        1        1        1
     512000  7.70958E+02  2.78425E-03  3.07424E+04
    1024000  7.71462E+02  1.96952E-03  3.07093E+04
    1536000  7.70445E+02  1.60493E-03  3.08397E+04
    2048000  7.70713E+02  1.39051E-03  3.08436E+04
    2560000  7.70470E+02  1.24456E-03  3.08190E+04
    3072000  7.70498E+02  1.16150E-03  2.94771E+04
    3584000  7.70259E+02  1.07148E-03  2.96998E+04
    4096000  7.69913E+02  1.00055E-03  2.97786E+04
    4608000  7.70392E+02  9.42439E-04  2.98272E+04
    5120000  7.70532E+02  9.12533E-04  2.86233E+04
    5632000  7.70664E+02  8.67507E-04  2.87764E+04
    6144000  7.70836E+02  8.27406E-04  2.89963E+04
    6656000  7.70869E+02  7.95623E-04  2.89567E+04
    7168000  7.70676E+02  7.64789E-04  2.91091E+04
    7322571  7.70694E+02  7.56235E-04  2.91415E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e         0
t         0
vals
  3.42463E+02 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  3.42409E+02  2.64324E-03  3.41101E+04
    1024000  3.42817E+02  1.88338E-03  3.35827E+04
    1536000  3.42402E+02  1.54348E-03  3.33442E+04
    2048000  3.42477E+02  1.33441E-03  3.34914E+04
    2560000  3.42318E+02  1.19109E-03  3.36478E+04
    3072000  3.42329E+02  1.11456E-03  3.20127E+04
    3584000  3.42300E+02  1.03864E-03  3.16073E+04
    4096000  3.42146E+02  9.72411E-04  3.15272E+04
    4608000  3.42337E+02  9.13704E-04  3.17328E+04
    5120000  3.42354E+02  8.67118E-04  3.17001E+04
    5632000  3.42435E+02  8.26963E-04  3.16673E+04
    6144000  3.42540E+02  7.89481E-04  3.18491E+04
    6656000  3.42534E+02  7.56603E-04  3.20205E+04
    7168000  3.42456E+02  7.27835E-04  3.21400E+04
    7322571  3.42463E+02  7.19580E-04  3.21861E+04
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.23584E+02 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  1.23496E+02  2.55279E-03  3.65701E+04
    1024000  1.23812E+02  1.99870E-03  2.98192E+04
    1536000  1.23628E+02  1.59075E-03  3.13919E+04
    2048000  1.23670E+02  1.36358E-03  3.20740E+04
    2560000  1.23584E+02  1.20555E-03  3.28457E+04
    3072000  1.23587E+02  1.11190E-03  3.21658E+04
    3584000  1.23564E+02  1.02535E-03  3.24319E+04
    4096000  1.23488E+02  9.52476E-04  3.28607E+04
    4608000  1.23540E+02  8.92816E-04  3.32350E+04
    5120000  1.23550E+02  8.46309E-04  3.32781E+04
    5632000  1.23586E+02  8.26094E-04  3.17340E+04
    6144000  1.23617E+02  7.86472E-04  3.20933E+04
    6656000  1.23610E+02  7.52010E-04  3.24128E+04
    7168000  1.23576E+02  7.21632E-04  3.26949E+04
    7322571  1.23584E+02  7.13982E-04  3.26928E+04
tally  165    2    1
f         1
d         1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.30693E+01 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  6.30391E+01  2.53444E-03  3.71015E+04
    1024000  6.31727E+01  1.87029E-03  3.40544E+04
    1536000  6.30836E+01  1.51332E-03  3.46867E+04
    2048000  6.31044E+01  1.30431E-03  3.50549E+04
    2560000  6.30691E+01  1.16367E-03  3.52526E+04
    3072000  6.30658E+01  1.06447E-03  3.50960E+04
    3584000  6.30561E+01  9.91233E-04  3.47031E+04
    4096000  6.30167E+01  9.23811E-04  3.49316E+04
    4608000  6.30418E+01  8.67752E-04  3.51826E+04
    5120000  6.30458E+01  8.22336E-04  3.52467E+04
    5632000  6.30666E+01  8.32653E-04  3.12360E+04
    6144000  6.30849E+01  7.91351E-04  3.16987E+04
    6656000  6.30814E+01  7.56083E-04  3.20645E+04
    7168000  6.30669E+01  7.24986E-04  3.23931E+04
    7322571  6.30693E+01  7.16125E-04  3.24973E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.81249E+01 0.0007
tfc   15       1       1       1       1       1       1       1       1
     512000  3.80735E+01  2.49203E-03  3.83748E+04
    1024000  3.81758E+01  1.86067E-03  3.44074E+04
    1536000  3.81256E+01  1.51073E-03  3.48058E+04
    2048000  3.81290E+01  1.29760E-03  3.54185E+04
    2560000  3.81125E+01  1.16747E-03  3.50230E+04
    3072000  3.81156E+01  1.07512E-03  3.44045E+04
    3584000  3.81140E+01  1.00823E-03  3.35431E+04
    4096000  3.80916E+01  9.37698E-04  3.39046E+04
    4608000  3.81095E+01  8.81174E-04  3.41190E+04
    5120000  3.81101E+01  8.32746E-04  3.43709E+04
    5632000  3.81283E+01  8.68687E-04  2.86983E+04
    6144000  3.81377E+01  8.23036E-04  2.93051E+04
    6656000  3.81356E+01  7.84806E-04  2.97604E+04
    7168000  3.81250E+01  7.50619E-04  3.02185E+04
```

```
    7322571  3.81249E+01  7.40805E-04  3.03682E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.54739E+01 0.0008
tfc   15       1       1       1       1       1       1       1       1
     512000  2.54450E+01  2.50699E-03  3.79183E+04
    1024000  2.54988E+01  1.84146E-03  3.51290E+04
    1536000  2.54696E+01  1.50436E-03  3.51012E+04
    2048000  2.54776E+01  1.29567E-03  3.55242E+04
    2560000  2.54609E+01  1.15717E-03  3.56494E+04
    3072000  2.54621E+01  1.05866E-03  3.54825E+04
    3584000  2.54614E+01  9.96571E-04  3.43323E+04
    4096000  2.54493E+01  9.33230E-04  3.42301E+04
    4608000  2.54619E+01  8.77075E-04  3.44386E+04
    5120000  2.54621E+01  8.28447E-04  3.47286E+04
    5632000  2.54740E+01  8.88429E-04  2.74371E+04
    6144000  2.54816E+01  8.42326E-04  2.79782E+04
    6656000  2.54812E+01  8.02517E-04  2.84614E+04
    7168000  2.54736E+01  7.66334E-04  2.89918E+04
    7322571  2.54739E+01  7.56048E-04  2.91560E+04
mcnp       5     11/06/10 04:45:03     2     4869408     1123201249
```

Case 106

```
 Case 106
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.33096E+00 0.0059
tfc   20       1       1       1       1       1       1       1       1
     256000  5.28707E+00  2.50680E-02  5.02938E+02
     512000  5.20066E+00  1.66853E-02  5.68554E+02
     768000  5.22548E+00  1.38545E-02  5.50220E+02
```

```
    1024000  5.25810E+00  1.19907E-02  5.50513E+02
    1280000  5.30250E+00  1.08968E-02  5.33223E+02
    1536000  5.32041E+00  1.03199E-02  4.95230E+02
    1792000  5.30476E+00  9.50820E-03  5.00355E+02
    2048000  5.32926E+00  8.97275E-03  4.91684E+02
    2304000  5.32206E+00  8.44515E-03  4.93844E+02
    2560000  5.31286E+00  7.96416E-03  4.99940E+02
    2816000  5.31236E+00  7.59270E-03  4.99643E+02
    3072000  5.32773E+00  7.53371E-03  4.64984E+02
    3328000  5.31737E+00  7.18171E-03  4.72305E+02
    3584000  5.33684E+00  6.94947E-03  4.68388E+02
    3840000  5.35867E+00  6.78587E-03  4.58435E+02
    4096000  5.34830E+00  6.56145E-03  4.59972E+02
    4352000  5.33792E+00  6.32560E-03  4.65804E+02
    4608000  5.33252E+00  6.12959E-03  4.68599E+02
    4864000  5.33255E+00  5.94183E-03  4.72523E+02
    4869408  5.33096E+00  5.93772E-03  4.72652E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.73565E+00 0.0055
tfc   20       1       1       1       1       1       1       1       1
     256000  3.72583E+00  2.14428E-02  6.87373E+02
     512000  3.66165E+00  1.42319E-02  7.81472E+02
     768000  3.67423E+00  1.18385E-02  7.53573E+02
    1024000  3.68879E+00  1.01900E-02  7.62272E+02
    1280000  3.72197E+00  9.86272E-03  6.50900E+02
    1536000  3.73882E+00  9.31670E-03  6.07622E+02
    1792000  3.75118E+00  1.08060E-02  3.87383E+02
    2048000  3.75767E+00  9.80640E-03  4.11640E+02
    2304000  3.75011E+00  9.01879E-03  4.33020E+02
    2560000  3.74115E+00  8.36316E-03  4.53375E+02
    2816000  3.73780E+00  7.83862E-03  4.68785E+02
    3072000  3.73666E+00  7.41478E-03  4.80021E+02
    3328000  3.73180E+00  7.03502E-03  4.92207E+02
    3584000  3.74639E+00  6.72105E-03  5.00765E+02
    3840000  3.75725E+00  6.44395E-03  5.08376E+02
    4096000  3.75138E+00  6.19643E-03  5.15761E+02
    4352000  3.74448E+00  5.94797E-03  5.26830E+02
    4608000  3.74042E+00  5.73700E-03  5.34926E+02
    4864000  3.73642E+00  5.52269E-03  5.46968E+02
    4869408  3.73565E+00  5.51834E-03  5.47223E+02
tally  135    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.36531E+00 0.0056
tfc   20       1       1       1       1       1       1       1       1
     256000  2.32550E+00  1.80548E-02  9.69552E+02
     512000  2.30189E+00  1.22574E-02  1.05352E+03
     768000  2.31412E+00  1.08583E-02  8.95766E+02
    1024000  2.32159E+00  9.24172E-03  9.26723E+02
    1280000  2.33301E+00  8.32088E-03  9.14470E+02
    1536000  2.34366E+00  7.62526E-03  9.07086E+02
    1792000  2.34704E+00  7.76769E-03  7.49706E+02
    2048000  2.37180E+00  1.00004E-02  3.95821E+02
    2304000  2.36925E+00  9.15560E-03  4.20176E+02
    2560000  2.36575E+00  8.43923E-03  4.45238E+02
    2816000  2.36331E+00  7.84212E-03  4.68366E+02
    3072000  2.36715E+00  7.53435E-03  4.64905E+02
    3328000  2.36217E+00  7.08699E-03  4.85015E+02
    3584000  2.37573E+00  6.95652E-03  4.67438E+02
    3840000  2.37839E+00  6.60788E-03  4.83465E+02
    4096000  2.37399E+00  6.30576E-03  4.98031E+02
    4352000  2.36962E+00  6.02543E-03  5.13371E+02
    4608000  2.36834E+00  5.80025E-03  5.23323E+02
    4864000  2.36560E+00  5.56238E-03  5.39190E+02
    4869408  2.36531E+00  5.55753E-03  5.39531E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.15605E+00 0.0046
tfc   20       1       1       1       1       1       1       1       1
     256000  1.17083E+00  3.14265E-02  3.20010E+02
     512000  1.16572E+00  2.00799E-02  3.92571E+02
     768000  1.15911E+00  1.46312E-02  4.93357E+02
    1024000  1.15315E+00  1.15965E-02  5.88576E+02
    1280000  1.15217E+00  9.75617E-03  6.65195E+02
    1536000  1.15472E+00  8.57931E-03  7.16562E+02
    1792000  1.15517E+00  8.08000E-03  6.92870E+02
```

```
    2048000  1.15716E+00  7.35056E-03  7.32649E+02
    2304000  1.15544E+00  6.78016E-03  7.66171E+02
    2560000  1.15442E+00  6.30877E-03  7.96724E+02
    2816000  1.15351E+00  5.90063E-03  8.27286E+02
    3072000  1.15731E+00  6.25903E-03  6.73661E+02
    3328000  1.15551E+00  5.90207E-03  6.99311E+02
    3584000  1.15922E+00  5.61885E-03  7.16496E+02
    3840000  1.16081E+00  5.40503E-03  7.22592E+02
    4096000  1.16003E+00  5.23664E-03  7.22148E+02
    4352000  1.15836E+00  5.01100E-03  7.42263E+02
    4608000  1.15749E+00  4.82074E-03  7.57592E+02
    4864000  1.15613E+00  4.63670E-03  7.75971E+02
    4869408  1.15605E+00  4.63265E-03  7.76465E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.41420E-01 0.0042
tfc   20       1       1       1       1       1       1       1       1
     256000  4.35214E-01  1.57003E-02  1.28215E+03
     512000  4.33953E-01  1.11111E-02  1.28212E+03
     768000  4.36085E-01  9.01099E-03  1.30069E+03
    1024000  4.36420E-01  7.92564E-03  1.26005E+03
    1280000  4.37488E-01  7.03936E-03  1.27774E+03
    1536000  4.38707E-01  6.53182E-03  1.23620E+03
    1792000  4.40426E-01  6.88984E-03  9.52920E+02
    2048000  4.41205E-01  6.38042E-03  9.72385E+02
    2304000  4.40689E-01  5.91285E-03  1.00742E+03
    2560000  4.40855E-01  5.56816E-03  1.02276E+03
    2816000  4.40495E-01  5.25044E-03  1.04487E+03
    3072000  4.40488E-01  4.99903E-03  1.05605E+03
    3328000  4.40480E-01  4.80291E-03  1.05602E+03
    3584000  4.41631E-01  4.58605E-03  1.07555E+03
    3840000  4.41852E-01  4.39218E-03  1.09428E+03
    4096000  4.41458E-01  4.28043E-03  1.08083E+03
    4352000  4.41984E-01  4.49830E-03  9.21107E+02
    4608000  4.41822E-01  4.34233E-03  9.33724E+02
    4864000  4.41445E-01  4.24142E-03  9.27347E+02
    4869408  4.41420E-01  4.23773E-03  9.27930E+02
tally  165    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  2.28436E-01 0.0037
tfc   20       1       1       1       1       1       1       1       1
     256000  2.26462E-01  1.55287E-02  1.31065E+03
     512000  2.25150E-01  1.04961E-02  1.43675E+03
     768000  2.26292E-01  8.72817E-03  1.38635E+03
    1024000  2.26459E-01  7.49468E-03  1.40912E+03
    1280000  2.26887E-01  6.64984E-03  1.43181E+03
    1536000  2.27390E-01  6.04665E-03  1.44254E+03
    1792000  2.28207E-01  6.17855E-03  1.18495E+03
    2048000  2.29007E-01  5.90147E-03  1.13662E+03
    2304000  2.28866E-01  5.50638E-03  1.16164E+03
    2560000  2.28669E-01  5.14538E-03  1.19774E+03
    2816000  2.28437E-01  4.84663E-03  1.22623E+03
    3072000  2.28342E-01  4.61514E-03  1.23904E+03
    3328000  2.28228E-01  4.44760E-03  1.23148E+03
    3584000  2.28889E-01  4.26842E-03  1.24158E+03
    3840000  2.28891E-01  4.08483E-03  1.26515E+03
    4096000  2.28631E-01  3.93681E-03  1.27774E+03
    4352000  2.28525E-01  3.82401E-03  1.27459E+03
    4608000  2.28506E-01  3.70945E-03  1.27951E+03
    4864000  2.28447E-01  3.67140E-03  1.23765E+03
    4869408  2.28436E-01  3.66838E-03  1.23832E+03
tally  175    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.38864E-01 0.0035
tfc   20       1       1       1       1       1       1       1       1
     256000  1.37816E-01  1.50119E-02  1.40244E+03
     512000  1.36921E-01  1.01914E-02  1.52397E+03
     768000  1.37880E-01  8.87618E-03  1.34050E+03
    1024000  1.37927E-01  7.65856E-03  1.34946E+03
    1280000  1.37960E-01  6.67085E-03  1.42281E+03
    1536000  1.38297E-01  6.05861E-03  1.43685E+03
    1792000  1.38509E-01  5.89123E-03  1.30336E+03
    2048000  1.38845E-01  5.49356E-03  1.31168E+03
    2304000  1.38851E-01  5.15505E-03  1.32538E+03
    2560000  1.38744E-01  4.83469E-03  1.35663E+03
    2816000  1.38669E-01  4.57631E-03  1.37538E+03
```

```
    3072000  1.38624E-01  4.37373E-03  1.37960E+03
    3328000  1.38569E-01  4.20161E-03  1.37990E+03
    3584000  1.39122E-01  4.12358E-03  1.33033E+03
    3840000  1.39164E-01  3.95400E-03  1.35025E+03
    4096000  1.39069E-01  3.82144E-03  1.35605E+03
    4352000  1.39014E-01  3.69793E-03  1.36298E+03
    4608000  1.39001E-01  3.59167E-03  1.36481E+03
    4864000  1.38870E-01  3.48234E-03  1.37570E+03
    4869408  1.38864E-01  3.47954E-03  1.37638E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.33608E-02 0.0038
tfc   20       1       1       1       1       1       1       1       1
     256000  9.21978E-02  1.39905E-02  1.61470E+03
     512000  9.18864E-02  9.91593E-03  1.60981E+03
     768000  9.26656E-02  9.01977E-03  1.29816E+03
    1024000  9.28602E-02  8.38972E-03  1.12450E+03
    1280000  9.28414E-02  7.20986E-03  1.21802E+03
    1536000  9.29992E-02  6.45716E-03  1.26496E+03
    1792000  9.31595E-02  6.13960E-03  1.20003E+03
    2048000  9.32989E-02  5.66555E-03  1.23326E+03
    2304000  9.33170E-02  5.31476E-03  1.24692E+03
    2560000  9.32586E-02  4.98536E-03  1.27586E+03
    2816000  9.31793E-02  4.70203E-03  1.30281E+03
    3072000  9.31433E-02  4.49378E-03  1.30687E+03
    3328000  9.31027E-02  4.29631E-03  1.31973E+03
    3584000  9.34924E-02  4.36211E-03  1.18882E+03
    3840000  9.34976E-02  4.16764E-03  1.21537E+03
    4096000  9.34171E-02  4.01321E-03  1.22955E+03
    4352000  9.34591E-02  4.02131E-03  1.15258E+03
    4608000  9.34497E-02  3.89562E-03  1.16014E+03
    4864000  9.33651E-02  3.76601E-03  1.17625E+03
    4869408  9.33608E-02  3.76284E-03  1.17693E+03
mcnp       5     11/06/10 05:45:08     2     4512384     1108812840
```

Case 107

```
 Case 107
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.68760E+00 0.0061
tfc   18       1       1       1       1       1       1       1       1
     256000  3.62444E+00  2.59159E-02  4.36011E+02
     512000  3.66225E+00  1.68075E-02  5.18272E+02
     768000  3.69856E+00  1.50408E-02  4.31824E+02
    1024000  3.72398E+00  1.32052E-02  4.20033E+02
    1280000  3.72318E+00  1.13929E-02  4.51338E+02
    1536000  3.71842E+00  1.05423E-02  4.39421E+02
    1792000  3.69434E+00  9.62140E-03  4.52297E+02
    2048000  3.68912E+00  8.91518E-03  4.61498E+02
    2304000  3.68795E+00  8.34052E-03  4.69079E+02
    2560000  3.69520E+00  8.27147E-03  4.28978E+02
    2816000  3.68938E+00  7.82427E-03  4.35826E+02
    3072000  3.68300E+00  7.45262E-03  4.40602E+02
    3328000  3.67758E+00  7.08506E-03  4.49945E+02
    3584000  3.68479E+00  6.85562E-03  4.45946E+02
    3840000  3.70261E+00  6.66342E-03  4.40747E+02
    4096000  3.69791E+00  6.47349E-03  4.38056E+02
    4352000  3.68726E+00  6.22271E-03  4.46268E+02
    4512384  3.68760E+00  6.09250E-03  4.49003E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.57875E+00 0.0057
tfc   18       1       1       1       1       1       1       1       1
     256000  2.55043E+00  2.09252E-02  6.68793E+02
     512000  2.56160E+00  1.37838E-02  7.70596E+02
     768000  2.56099E+00  1.11915E-02  7.79959E+02
    1024000  2.57654E+00  9.84035E-03  7.56406E+02
    1280000  2.59598E+00  9.53729E-03  6.44053E+02
    1536000  2.59281E+00  8.90640E-03  6.15664E+02
    1792000  2.57853E+00  8.10347E-03  6.37615E+02
    2048000  2.57385E+00  7.48684E-03  6.54385E+02
    2304000  2.57182E+00  6.98368E-03  6.69058E+02
    2560000  2.57281E+00  6.60881E-03  6.71977E+02
```

```
    2816000  2.58008E+00  7.73159E-03  4.46337E+02
    3072000  2.57438E+00  7.29176E-03  4.60256E+02
    3328000  2.57424E+00  6.91770E-03  4.71979E+02
    3584000  2.58166E+00  6.60818E-03  4.79967E+02
    3840000  2.58938E+00  6.31009E-03  4.91487E+02
    4096000  2.58509E+00  6.06239E-03  4.99481E+02
    4352000  2.57883E+00  5.80364E-03  5.13043E+02
    4512384  2.57875E+00  5.67053E-03  5.18314E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.62995E+00 0.0049
tfc   18       1       1       1       1       1       1       1       1
     256000  1.58830E+00  1.66467E-02  1.05675E+03
     512000  1.60644E+00  1.18796E-02  1.03745E+03
     768000  1.61372E+00  1.03472E-02  9.12437E+02
    1024000  1.62332E+00  8.97033E-03  9.10247E+02
    1280000  1.62774E+00  7.85646E-03  9.49114E+02
    1536000  1.63007E+00  7.88275E-03  7.85946E+02
    1792000  1.62932E+00  7.79722E-03  6.88686E+02
    2048000  1.63137E+00  7.42676E-03  6.65016E+02
    2304000  1.63283E+00  7.21838E-03  6.26257E+02
    2560000  1.63074E+00  6.71005E-03  6.51852E+02
    2816000  1.62803E+00  6.29459E-03  6.73389E+02
    3072000  1.62631E+00  5.98575E-03  6.83009E+02
    3328000  1.62526E+00  5.66947E-03  7.02687E+02
    3584000  1.63294E+00  5.68528E-03  6.48442E+02
    3840000  1.63642E+00  5.47644E-03  6.52511E+02
    4096000  1.63402E+00  5.25796E-03  6.64008E+02
    4352000  1.63014E+00  5.03265E-03  6.82276E+02
    4512384  1.62995E+00  4.92816E-03  6.86229E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.96911E-01 0.0044
tfc   18       1       1       1       1       1       1       1       1
```

```
     256000  7.79455E-01  1.47202E-02  1.35145E+03
     512000  7.91825E-01  1.12158E-02  1.16388E+03
     768000  7.93906E-01  9.25170E-03  1.14132E+03
    1024000  7.96148E-01  8.22408E-03  1.08293E+03
    1280000  7.96813E-01  7.12729E-03  1.15325E+03
    1536000  7.95121E-01  6.42895E-03  1.18159E+03
    1792000  7.94974E-01  6.31052E-03  1.05141E+03
    2048000  7.94848E-01  5.96233E-03  1.03181E+03
    2304000  7.94475E-01  5.54890E-03  1.05979E+03
    2560000  7.93817E-01  5.20805E-03  1.08206E+03
    2816000  7.93816E-01  5.11004E-03  1.02177E+03
    3072000  7.95601E-01  5.57770E-03  7.86599E+02
    3328000  7.95534E-01  5.28734E-03  8.07926E+02
    3584000  7.97602E-01  5.05235E-03  8.21086E+02
    3840000  7.98695E-01  4.82329E-03  8.41196E+02
    4096000  7.98090E-01  4.68977E-03  8.34650E+02
    4352000  7.97145E-01  4.50509E-03  8.51426E+02
    4512384  7.96911E-01  4.40660E-03  8.58284E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.05466E-01 0.0045
tfc   18       1       1       1       1       1       1       1       1
     256000  2.96196E-01  1.33789E-02  1.63603E+03
     512000  2.99376E-01  9.59917E-03  1.58891E+03
     768000  3.02117E-01  9.16359E-03  1.16337E+03
    1024000  3.03434E-01  8.11296E-03  1.11280E+03
    1280000  3.03910E-01  7.00520E-03  1.19380E+03
    1536000  3.04692E-01  6.97379E-03  1.00418E+03
    1792000  3.05270E-01  7.02794E-03  8.47705E+02
    2048000  3.05190E-01  6.67279E-03  8.23787E+02
    2304000  3.04798E-01  6.12835E-03  8.68851E+02
    2560000  3.04425E-01  5.69695E-03  9.04308E+02
    2816000  3.04286E-01  5.39955E-03  9.15136E+02
    3072000  3.03809E-01  5.11471E-03  9.35452E+02
    3328000  3.03950E-01  4.90802E-03  9.37635E+02
    3584000  3.05486E-01  4.90081E-03  8.72648E+02
    3840000  3.05660E-01  4.66388E-03  8.99682E+02
    4096000  3.05305E-01  4.51187E-03  9.01765E+02
    4352000  3.05504E-01  4.62957E-03  8.06256E+02
    4512384  3.05466E-01  4.53634E-03  8.09895E+02
tally  165    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.58025E-01 0.0040
tfc   18       1       1       1       1       1       1       1       1
     256000  1.53688E-01  1.32952E-02  1.65668E+03
     512000  1.55864E-01  9.85433E-03  1.50769E+03
     768000  1.57004E-01  8.55869E-03  1.33363E+03
    1024000  1.57265E-01  7.30848E-03  1.37127E+03
    1280000  1.57554E-01  6.38210E-03  1.43828E+03
    1536000  1.57692E-01  6.53460E-03  1.14370E+03
    1792000  1.57985E-01  6.40284E-03  1.02130E+03
    2048000  1.58026E-01  5.92939E-03  1.04330E+03
    2304000  1.57832E-01  5.47558E-03  1.08836E+03
    2560000  1.57634E-01  5.09850E-03  1.12906E+03
    2816000  1.57485E-01  4.80259E-03  1.15678E+03
    3072000  1.57389E-01  4.73255E-03  1.09263E+03
    3328000  1.57444E-01  4.51422E-03  1.10836E+03
    3584000  1.58190E-01  4.66218E-03  9.64266E+02
    3840000  1.58263E-01  4.43611E-03  9.94440E+02
    4096000  1.58045E-01  4.25207E-03  1.01533E+03
    4352000  1.58043E-01  4.11683E-03  1.01960E+03
    4512384  1.58025E-01  4.02377E-03  1.02937E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.61351E-02 0.0038
tfc   18       1       1       1       1       1       1       1       1
     256000  9.39072E-02  1.38600E-02  1.52442E+03
     512000  9.52689E-02  1.05664E-02  1.31133E+03
     768000  9.60379E-02  9.54939E-03  1.07127E+03
    1024000  9.59436E-02  7.85698E-03  1.18649E+03
    1280000  9.60728E-02  6.75248E-03  1.28483E+03
    1536000  9.60880E-02  6.85443E-03  1.03946E+03
    1792000  9.60970E-02  6.42478E-03  1.01434E+03
    2048000  9.61685E-02  5.99479E-03  1.02066E+03
    2304000  9.60342E-02  5.52277E-03  1.06984E+03
    2560000  9.59582E-02  5.14123E-03  1.11037E+03
```

```
    2816000  9.58468E-02  4.82848E-03  1.14440E+03
    3072000  9.57360E-02  4.61751E-03  1.14775E+03
    3328000  9.57789E-02  4.39799E-03  1.16772E+03
    3584000  9.62196E-02  4.33649E-03  1.11454E+03
    3840000  9.62585E-02  4.13624E-03  1.14386E+03
    4096000  9.61467E-02  3.98017E-03  1.15878E+03
    4352000  9.61384E-02  3.84476E-03  1.16900E+03
    4512384  9.61351E-02  3.77057E-03  1.17226E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.45218E-02 0.0037
tfc   18       1       1       1       1       1       1       1       1
     256000  6.31870E-02  1.33611E-02  1.64039E+03
     512000  6.39566E-02  9.96219E-03  1.47522E+03
     768000  6.43596E-02  8.44731E-03  1.36903E+03
    1024000  6.43463E-02  7.10749E-03  1.44992E+03
    1280000  6.44134E-02  6.18998E-03  1.52895E+03
    1536000  6.43415E-02  5.90807E-03  1.39913E+03
    1792000  6.44111E-02  5.67111E-03  1.30186E+03
    2048000  6.44403E-02  5.32643E-03  1.29288E+03
    2304000  6.43722E-02  4.95121E-03  1.33109E+03
    2560000  6.43585E-02  4.66156E-03  1.35064E+03
    2816000  6.42600E-02  4.39482E-03  1.38140E+03
    3072000  6.41849E-02  4.21252E-03  1.37905E+03
    3328000  6.42074E-02  4.03130E-03  1.38981E+03
    3584000  6.45118E-02  4.11756E-03  1.23622E+03
    3840000  6.45361E-02  3.93516E-03  1.26374E+03
    4096000  6.44761E-02  3.80563E-03  1.26751E+03
    4352000  6.45147E-02  3.81234E-03  1.18897E+03
    4512384  6.45218E-02  3.74706E-03  1.18702E+03
mcnp       5     11/06/10 06:45:19     2     4534555     1114699449
```

Case 108

```
 Case 108
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  5.09550E+01 0.0060
tfc   18        1        1        1        1        1        1        1        1
     256000  5.09854E+01  2.75965E-02  3.85640E+02
     512000  5.08244E+01  1.73611E-02  4.88169E+02
     768000  5.08808E+01  1.38378E-02  5.12569E+02
    1024000  5.14008E+01  1.24697E-02  4.73113E+02
    1280000  5.14209E+01  1.08617E-02  4.98685E+02
    1536000  5.13682E+01  1.01779E-02  4.73397E+02
    1792000  5.10371E+01  9.32591E-03  4.83586E+02
    2048000  5.09807E+01  8.67120E-03  4.89850E+02
    2304000  5.09738E+01  8.13401E-03  4.95220E+02
    2560000  5.10870E+01  8.10178E-03  4.48986E+02
    2816000  5.10101E+01  7.67883E-03  4.54437E+02
    3072000  5.09166E+01  7.32509E-03  4.58050E+02
    3328000  5.08383E+01  6.97160E-03  4.66731E+02
    3584000  5.09382E+01  6.75395E-03  4.61794E+02
    3840000  5.11764E+01  6.57093E-03  4.55550E+02
    4096000  5.11116E+01  6.38946E-03  4.51838E+02
    4352000  5.09631E+01  6.14461E-03  4.59883E+02
    4534555  5.09550E+01  6.00345E-03  4.62360E+02
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.56454E+01 0.0057
tfc   18        1        1        1        1        1        1        1        1
     256000  3.52720E+01  2.04841E-02  6.99934E+02
     512000  3.53299E+01  1.36244E-02  7.92664E+02
     768000  3.53835E+01  1.11478E-02  7.89789E+02
    1024000  3.56489E+01  9.84367E-03  7.59213E+02
    1280000  3.59121E+01  9.54310E-03  6.46019E+02
    1536000  3.58687E+01  8.92384E-03  6.15798E+02
    1792000  3.56600E+01  8.11920E-03  6.38012E+02
    2048000  3.55995E+01  7.49913E-03  6.54938E+02
    2304000  3.55711E+01  6.99419E-03  6.69781E+02
    2560000  3.55927E+01  6.61722E-03  6.73042E+02
    2816000  3.56892E+01  7.73507E-03  4.47853E+02
    3072000  3.56071E+01  7.29581E-03  4.61734E+02
    3328000  3.56019E+01  6.92215E-03  4.73422E+02
```

```
    3584000  3.57042E+01  6.61174E-03  4.81873E+02
    3840000  3.57976E+01  6.30900E-03  4.94161E+02
    4096000  3.57383E+01  6.06128E-03  5.02090E+02
    4352000  3.56503E+01  5.80257E-03  5.15698E+02
    4534555  3.56454E+01  5.65212E-03  5.21627E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.25663E+01 0.0050
tfc   18       1       1       1       1       1       1       1       1
     256000  2.20922E+01  1.73269E-02  9.78240E+02
     512000  2.21491E+01  1.16669E-02  1.08096E+03
     768000  2.23453E+01  1.05820E-02  8.76503E+02
    1024000  2.24876E+01  9.14514E-03  8.79623E+02
    1280000  2.25365E+01  7.98767E-03  9.22112E+02
    1536000  2.25777E+01  8.02969E-03  7.60579E+02
    1792000  2.25543E+01  7.90516E-03  6.73030E+02
    2048000  2.25817E+01  7.51094E-03  6.52880E+02
    2304000  2.25987E+01  7.28565E-03  6.17263E+02
    2560000  2.25735E+01  6.76928E-03  6.43144E+02
    2816000  2.25315E+01  6.34855E-03  6.64837E+02
    3072000  2.25033E+01  6.03398E-03  6.75044E+02
    3328000  2.24868E+01  5.71356E-03  6.94892E+02
    3584000  2.25922E+01  5.72215E-03  6.43348E+02
    3840000  2.26366E+01  5.50833E-03  6.48261E+02
    4096000  2.26028E+01  5.28747E-03  6.59803E+02
    4352000  2.25480E+01  5.06022E-03  6.78107E+02
    4534555  2.25663E+01  5.03846E-03  6.56428E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.10237E+01 0.0044
tfc   18       1       1       1       1       1       1       1       1
     256000  1.08803E+01  1.61256E-02  1.12943E+03
     512000  1.09813E+01  1.16707E-02  1.08026E+03
     768000  1.10046E+01  9.49258E-03  1.08923E+03
```

```
    1024000  1.10308E+01  8.39221E-03  1.04454E+03
    1280000  1.10314E+01  7.25467E-03  1.11786E+03
    1536000  1.10075E+01  6.54644E-03  1.14428E+03
    1792000  1.09985E+01  6.39680E-03  1.02785E+03
    2048000  1.09976E+01  6.03054E-03  1.01277E+03
    2304000  1.09909E+01  5.60712E-03  1.04214E+03
    2560000  1.09839E+01  5.26073E-03  1.06488E+03
    2816000  1.09824E+01  5.15503E-03  1.00833E+03
    3072000  1.10055E+01  5.61048E-03  7.80797E+02
    3328000  1.10038E+01  5.31727E-03  8.02330E+02
    3584000  1.10324E+01  5.07933E-03  8.16491E+02
    3840000  1.10464E+01  4.84742E-03  8.37083E+02
    4096000  1.10377E+01  4.71181E-03  8.30874E+02
    4352000  1.10241E+01  4.52553E-03  8.47807E+02
    4534555  1.10237E+01  4.41350E-03  8.55493E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.22436E+00 0.0045
tfc   18       1       1       1       1       1       1       1       1
     256000  4.10635E+00  1.36752E-02  1.57043E+03
     512000  4.13985E+00  9.70887E-03  1.56094E+03
     768000  4.18254E+00  9.25358E-03  1.14622E+03
    1024000  4.19708E+00  8.17302E-03  1.10132E+03
    1280000  4.20134E+00  7.05157E-03  1.18318E+03
    1536000  4.21219E+00  7.00879E-03  9.98287E+02
    1792000  4.21823E+00  7.05153E-03  8.45843E+02
    2048000  4.21814E+00  6.69026E-03  8.22878E+02
    2304000  4.21274E+00  6.14350E-03  8.68110E+02
    2560000  4.20867E+00  5.71259E-03  9.03082E+02
    2816000  4.20680E+00  5.41456E-03  9.13982E+02
    3072000  4.20082E+00  5.13693E-03  9.31391E+02
    3328000  4.20260E+00  4.92800E-03  9.34093E+02
    3584000  4.22392E+00  4.91806E-03  8.70916E+02
    3840000  4.22595E+00  4.67968E-03  8.98166E+02
    4096000  4.22095E+00  4.52644E-03  9.00322E+02
    4352000  4.22350E+00  4.64181E-03  8.05865E+02
    4534555  4.22436E+00  4.53322E-03  8.10905E+02
tally  165    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  2.18537E+00 0.0040
tfc   18       1       1       1       1       1       1       1       1
     256000  2.12060E+00  1.28897E-02  1.76769E+03
     512000  2.15039E+00  9.73177E-03  1.55360E+03
     768000  2.17322E+00  8.65836E-03  1.30923E+03
    1024000  2.17325E+00  7.31191E-03  1.37599E+03
    1280000  2.17607E+00  6.38400E-03  1.44357E+03
    1536000  2.17867E+00  6.54146E-03  1.14602E+03
    1792000  2.18178E+00  6.40593E-03  1.02492E+03
    2048000  2.18296E+00  5.92933E-03  1.04764E+03
    2304000  2.18041E+00  5.47557E-03  1.09282E+03
    2560000  2.17830E+00  5.10179E-03  1.13227E+03
    2816000  2.17665E+00  4.80952E-03  1.15841E+03
    3072000  2.17548E+00  4.74502E-03  1.09160E+03
    3328000  2.17621E+00  4.52572E-03  1.10753E+03
    3584000  2.18667E+00  4.67220E-03  9.64987E+02
    3840000  2.18754E+00  4.44542E-03  9.95324E+02
    4096000  2.18453E+00  4.26091E-03  1.01603E+03
    4352000  2.18440E+00  4.12503E-03  1.02043E+03
    4534555  2.18537E+00  4.03495E-03  1.02355E+03
tally  175    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.32906E+00 0.0038
tfc   18       1       1       1       1       1       1       1       1
     256000  1.29261E+00  1.27123E-02  1.81735E+03
     512000  1.31227E+00  1.02148E-02  1.41015E+03
     768000  1.32882E+00  9.62491E-03  1.05949E+03
    1024000  1.32608E+00  7.91161E-03  1.17530E+03
    1280000  1.32763E+00  6.79689E-03  1.27351E+03
    1536000  1.32802E+00  6.88711E-03  1.03387E+03
    1792000  1.32746E+00  6.44789E-03  1.01163E+03
    2048000  1.32867E+00  6.01041E-03  1.01956E+03
    2304000  1.32686E+00  5.53632E-03  1.06897E+03
    2560000  1.32615E+00  5.15636E-03  1.10843E+03
    2816000  1.32485E+00  4.84485E-03  1.14157E+03
    3072000  1.32327E+00  4.63299E-03  1.14503E+03
    3328000  1.32386E+00  4.41222E-03  1.16524E+03
```

```
    3584000  1.33003E+00  4.34877E-03  1.11386E+03
    3840000  1.33048E+00  4.14760E-03  1.14339E+03
    4096000  1.32894E+00  3.99087E-03  1.15818E+03
    4352000  1.32875E+00  3.85466E-03  1.16860E+03
    4534555  1.32906E+00  3.76957E-03  1.17273E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.91895E-01 0.0038
tfc   18       1       1       1       1       1       1       1       1
     256000  8.69622E-01  1.27589E-02  1.80411E+03
     512000  8.80604E-01  9.78001E-03  1.53831E+03
     768000  8.89396E-01  8.61286E-03  1.32310E+03
    1024000  8.88719E-01  7.22556E-03  1.40908E+03
    1280000  8.89461E-01  6.27767E-03  1.49289E+03
    1536000  8.88631E-01  5.97523E-03  1.37351E+03
    1792000  8.89287E-01  5.71955E-03  1.28568E+03
    2048000  8.89992E-01  5.36380E-03  1.28020E+03
    2304000  8.89123E-01  4.98321E-03  1.31944E+03
    2560000  8.89189E-01  4.69302E-03  1.33810E+03
    2816000  8.88009E-01  4.42689E-03  1.36730E+03
    3072000  8.86942E-01  4.24106E-03  1.36644E+03
    3328000  8.87300E-01  4.05725E-03  1.37806E+03
    3584000  8.91559E-01  4.13899E-03  1.22963E+03
    3840000  8.91862E-01  3.95486E-03  1.25755E+03
    4096000  8.91048E-01  3.82388E-03  1.26155E+03
    4352000  8.91557E-01  3.82845E-03  1.18465E+03
    4534555  8.91895E-01  3.75101E-03  1.18437E+03
mcnp       5     11/06/10 07:45:25     2     5525147     1311697694
```

Case 109

```
 Case 109
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  8.67851E+00 0.0098
tfc   11       1       1       1       1       1       1       1       1
     512000  8.46892E+00  3.15514E-02  1.80708E+02
    1024000  8.44102E+00  1.83932E-02  2.66262E+02
    1536000  8.51925E+00  1.51742E-02  2.61241E+02
    2048000  8.45664E+00  1.24018E-02  2.93335E+02
    2560000  8.38949E+00  1.07031E-02  3.15024E+02
    3072000  8.42216E+00  9.98691E-03  3.01281E+02
    3584000  8.46859E+00  9.53372E-03  2.83403E+02
    4096000  8.54158E+00  1.13366E-02  1.75324E+02
    4608000  8.59015E+00  1.08257E-02  1.70737E+02
    5120000  8.64760E+00  1.04648E-02  1.64324E+02
    5525147  8.67851E+00  9.82392E-03  1.72683E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.03351E+00 0.0091
tfc   11       1       1       1       1       1       1       1       1
     512000  5.11526E+00  5.77566E-02  5.39276E+01
    1024000  5.01820E+00  3.07461E-02  9.52895E+01
    1536000  4.99010E+00  2.12935E-02  1.32665E+02
    2048000  4.94539E+00  1.66817E-02  1.62126E+02
    2560000  4.95184E+00  1.53984E-02  1.52200E+02
    3072000  4.96563E+00  1.32754E-02  1.70507E+02
    3584000  4.98196E+00  1.17599E-02  1.86260E+02
    4096000  4.97212E+00  1.05459E-02  2.02599E+02
    4608000  4.98034E+00  9.63761E-03  2.15429E+02
    5120000  5.01208E+00  9.60562E-03  1.95035E+02
    5525147  5.03351E+00  9.09196E-03  2.01606E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.69559E+00 0.0072
tfc   11       1       1       1       1       1       1       1       1
```

```
     512000  2.67830E+00  2.27431E-02  3.47788E+02
    1024000  2.68065E+00  1.57175E-02  3.64638E+02
    1536000  2.67411E+00  1.15824E-02  4.48387E+02
    2048000  2.65641E+00  9.70990E-03  4.78526E+02
    2560000  2.66296E+00  1.20929E-02  2.46777E+02
    3072000  2.67374E+00  1.07576E-02  2.59660E+02
    3584000  2.68112E+00  9.64233E-03  2.77055E+02
    4096000  2.67769E+00  8.73614E-03  2.95235E+02
    4608000  2.67882E+00  7.94558E-03  3.16951E+02
    5120000  2.68922E+00  7.62362E-03  3.09628E+02
    5525147  2.69559E+00  7.17741E-03  3.23506E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.15093E+00 0.0083
tfc   11       1       1       1       1       1       1       1       1
     512000  1.14762E+00  2.45169E-02  2.99283E+02
    1024000  1.14969E+00  1.78015E-02  2.84257E+02
    1536000  1.14565E+00  1.28283E-02  3.65522E+02
    2048000  1.13562E+00  1.02705E-02  4.27715E+02
    2560000  1.13316E+00  9.59026E-03  3.92377E+02
    3072000  1.13663E+00  8.55887E-03  4.10206E+02
    3584000  1.13959E+00  7.95453E-03  4.07099E+02
    4096000  1.14591E+00  1.05321E-02  2.03133E+02
    4608000  1.14596E+00  9.54379E-03  2.19685E+02
    5120000  1.14869E+00  8.81860E-03  2.31400E+02
    5525147  1.15093E+00  8.29274E-03  2.42339E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.97504E-01 0.0058
tfc   11       1       1       1       1       1       1       1       1
     512000  3.98154E-01  2.22693E-02  3.62745E+02
    1024000  3.94945E-01  1.37845E-02  4.74070E+02
    1536000  3.98543E-01  1.31977E-02  3.45348E+02
    2048000  3.95475E-01  1.05589E-02  4.04665E+02
```

```
    2560000  3.94137E-01  9.24660E-03  4.22086E+02
    3072000  3.95424E-01  8.39529E-03  4.26347E+02
    3584000  3.95310E-01  7.46708E-03  4.61985E+02
    4096000  3.94968E-01  6.88464E-03  4.75384E+02
    4608000  3.96360E-01  6.62373E-03  4.56076E+02
    5120000  3.96776E-01  6.14471E-03  4.76607E+02
    5525147  3.97504E-01  5.81054E-03  4.93612E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.99749E-01 0.0065
tfc   11       1       1       1       1       1       1       1       1
     512000  2.04819E-01  4.23536E-02  1.00285E+02
    1024000  2.00581E-01  2.28225E-02  1.72942E+02
    1536000  2.00627E-01  1.63890E-02  2.23948E+02
    2048000  1.99103E-01  1.28734E-02  2.72239E+02
    2560000  1.98340E-01  1.09525E-02  3.00841E+02
    3072000  1.99255E-01  9.97790E-03  3.01826E+02
    3584000  1.99008E-01  8.76777E-03  3.35082E+02
    4096000  1.98513E-01  7.92197E-03  3.59039E+02
    4608000  1.99188E-01  7.41928E-03  3.63512E+02
    5120000  1.99374E-01  6.86890E-03  3.81407E+02
    5525147  1.99749E-01  6.46017E-03  3.99329E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.19671E-01 0.0060
tfc   11       1       1       1       1       1       1       1       1
     512000  1.20483E-01  2.86960E-02  2.18459E+02
    1024000  1.19124E-01  1.63650E-02  3.36351E+02
    1536000  1.19481E-01  1.25282E-02  3.83245E+02
    2048000  1.18796E-01  1.00885E-02  4.43286E+02
    2560000  1.18341E-01  8.88955E-03  4.56674E+02
    3072000  1.18974E-01  8.37051E-03  4.28875E+02
    3584000  1.18867E-01  7.41454E-03  4.68555E+02
    4096000  1.18566E-01  6.76063E-03  4.92985E+02
```

```
    4608000  1.19054E-01  6.46923E-03  4.78120E+02
    5120000  1.19268E-01  6.11256E-03  4.81634E+02
    5525147  1.19671E-01  6.01968E-03  4.59908E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.93365E-02 0.0056
tfc   11       1       1       1       1       1       1       1       1
     512000  7.93697E-02  2.23912E-02  3.58805E+02
    1024000  7.88357E-02  1.38244E-02  4.71341E+02
    1536000  7.92610E-02  1.17532E-02  4.35451E+02
    2048000  7.88367E-02  9.53808E-03  4.95922E+02
    2560000  7.85180E-02  8.51050E-03  4.98259E+02
    3072000  7.88358E-02  7.80666E-03  4.93064E+02
    3584000  7.88265E-02  6.95804E-03  5.32053E+02
    4096000  7.86604E-02  6.36658E-03  5.55898E+02
    4608000  7.90333E-02  6.23039E-03  5.15480E+02
    5120000  7.92103E-02  5.94525E-03  5.09124E+02
    5525147  7.93365E-02  5.61108E-03  5.29329E+02
mcnp       5     11/06/10 08:45:36     2     5176043     1306774117
```

Case 110

```
 Case 110
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.99941E+00 0.0097
tfc   11       1       1       1       1       1       1       1       1
     512000  5.86643E+00  3.07674E-02  1.77658E+02
    1024000  5.88917E+00  1.86445E-02  2.42108E+02
    1536000  5.96049E+00  1.50866E-02  2.46474E+02
    2048000  5.94046E+00  1.22354E-02  2.81269E+02
    2560000  5.87867E+00  1.05048E-02  3.05206E+02
```

```
    3072000  5.90624E+00  9.73985E-03  2.95971E+02
    3584000  5.93272E+00  9.31561E-03  2.77269E+02
    4096000  5.97088E+00  1.07788E-02  1.81296E+02
    4608000  5.97335E+00  9.85962E-03  1.92548E+02
    5120000  5.97613E+00  9.11945E-03  2.02583E+02
    5176043  5.99941E+00  9.71004E-03  1.76739E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.46375E+00 0.0089
tfc   11       1       1       1       1       1       1       1       1
     512000  3.52780E+00  5.36099E-02  5.85165E+01
    1024000  3.47349E+00  2.85762E-02  1.03063E+02
    1536000  3.46351E+00  1.97862E-02  1.43294E+02
    2048000  3.44691E+00  1.53940E-02  1.77688E+02
    2560000  3.44150E+00  1.42286E-02  1.66358E+02
    3072000  3.45084E+00  1.22645E-02  1.86660E+02
    3584000  3.45002E+00  1.08156E-02  2.05695E+02
    4096000  3.44064E+00  9.70510E-03  2.23630E+02
    4608000  3.44403E+00  8.87351E-03  2.37722E+02
    5120000  3.45908E+00  8.85863E-03  2.14688E+02
    5176043  3.46375E+00  8.85414E-03  2.12560E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.87302E+00 0.0100
tfc   11       1       1       1       1       1       1       1       1
     512000  2.02612E+00  7.61894E-02  2.89720E+01
    1024000  1.93942E+00  4.09629E-02  5.01566E+01
    1536000  1.90913E+00  2.81057E-02  7.10169E+01
    2048000  1.90412E+00  2.22962E-02  8.47028E+01
    2560000  1.88051E+00  1.82738E-02  1.00857E+02
    3072000  1.88346E+00  1.56215E-02  1.15056E+02
    3584000  1.87949E+00  1.35859E-02  1.30361E+02
    4096000  1.87393E+00  1.21049E-02  1.43750E+02
    4608000  1.87136E+00  1.08866E-02  1.57934E+02
```

```
    5120000  1.87290E+00  1.00969E-02  1.65260E+02
    5176043  1.87302E+00  9.99814E-03  1.66700E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.91758E-01 0.0071
tfc   11       1       1       1       1       1       1       1       1
     512000  7.94379E-01  2.28291E-02  3.22695E+02
    1024000  7.95412E-01  1.66434E-02  3.03827E+02
    1536000  7.92680E-01  1.20015E-02  3.89475E+02
    2048000  7.90092E-01  9.64248E-03  4.52880E+02
    2560000  7.89433E-01  9.99688E-03  3.37005E+02
    3072000  7.90509E-01  8.74540E-03  3.67108E+02
    3584000  7.89621E-01  7.73989E-03  4.01655E+02
    4096000  7.88131E-01  7.06444E-03  4.22061E+02
    4608000  7.88238E-01  6.51240E-03  4.41344E+02
    5120000  7.91782E-01  7.13480E-03  3.30962E+02
    5176043  7.91758E-01  7.06941E-03  3.33432E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.72948E-01 0.0054
tfc   11       1       1       1       1       1       1       1       1
     512000  2.74210E-01  2.01472E-02  4.14324E+02
    1024000  2.72815E-01  1.26795E-02  5.23486E+02
    1536000  2.75064E-01  1.22244E-02  3.75400E+02
    2048000  2.73969E-01  9.71643E-03  4.46012E+02
    2560000  2.72492E-01  8.41344E-03  4.75793E+02
    3072000  2.73077E-01  7.44983E-03  5.05895E+02
    3584000  2.72920E-01  6.67524E-03  5.39994E+02
    4096000  2.72265E-01  6.05828E-03  5.73894E+02
    4608000  2.72853E-01  5.80920E-03  5.54661E+02
    5120000  2.72906E-01  5.41317E-03  5.74961E+02
    5176043  2.72948E-01  5.36904E-03  5.78070E+02
tally  165    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.37104E-01 0.0061
tfc   11       1       1       1       1       1       1       1       1
     512000  1.40253E-01  3.88701E-02  1.11311E+02
    1024000  1.38138E-01  2.09799E-02  1.91206E+02
    1536000  1.38509E-01  1.51793E-02  2.43472E+02
    2048000  1.37861E-01  1.18510E-02  2.99815E+02
    2560000  1.37188E-01  1.00875E-02  3.30976E+02
    3072000  1.37693E-01  8.99093E-03  3.47331E+02
    3584000  1.37431E-01  7.91284E-03  3.84289E+02
    4096000  1.36922E-01  7.08890E-03  4.19154E+02
    4608000  1.37080E-01  6.57224E-03  4.33344E+02
    5120000  1.37085E-01  6.10734E-03  4.51686E+02
    5176043  1.37104E-01  6.05482E-03  4.54539E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.20258E-02 0.0055
tfc   11       1       1       1       1       1       1       1       1
     512000  8.26407E-02  2.60090E-02  2.48612E+02
    1024000  8.21180E-02  1.50906E-02  3.69568E+02
    1536000  8.25137E-02  1.17995E-02  4.02922E+02
    2048000  8.22447E-02  9.40879E-03  4.75656E+02
    2560000  8.18523E-02  8.28647E-03  4.90485E+02
    3072000  8.23100E-02  7.75783E-03  4.66522E+02
    3584000  8.21586E-02  6.87388E-03  5.09237E+02
    4096000  8.18447E-02  6.19117E-03  5.49521E+02
    4608000  8.19526E-02  5.80882E-03  5.54732E+02
    5120000  8.20059E-02  5.51041E-03  5.54848E+02
    5176043  8.20258E-02  5.46739E-03  5.57460E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  5.44865E-02 0.0054
tfc   11        1        1        1        1        1        1        1        1
     512000  5.44829E-02  2.02496E-02  4.10143E+02
    1024000  5.43901E-02  1.29186E-02  5.04287E+02
    1536000  5.47970E-02  1.12592E-02  4.42526E+02
    2048000  5.46241E-02  9.01326E-03  5.18318E+02
    2560000  5.43509E-02  8.02211E-03  5.23345E+02
    3072000  5.45991E-02  7.40049E-03  5.12663E+02
    3584000  5.45327E-02  6.58677E-03  5.54598E+02
    4096000  5.43356E-02  5.94435E-03  5.96104E+02
    4608000  5.44218E-02  5.66851E-03  5.82535E+02
    5120000  5.44716E-02  5.42491E-03  5.72474E+02
    5176043  5.44865E-02  5.38374E-03  5.74917E+02
mcnp        5      11/06/10 09:45:42      2      5161557      1302536934
```

Case 111

```
 Case 111
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.26736E+01 0.0097
tfc   11        1        1        1        1        1        1        1        1
     512000  8.08030E+01  3.08353E-02  1.76986E+02
    1024000  8.09517E+01  1.86744E-02  2.41290E+02
    1536000  8.20471E+01  1.50996E-02  2.45960E+02
    2048000  8.17726E+01  1.22445E-02  2.80674E+02
    2560000  8.09057E+01  1.05133E-02  3.04192E+02
    3072000  8.12910E+01  9.74741E-03  2.94889E+02
    3584000  8.16398E+01  9.32370E-03  2.76149E+02
    4096000  8.21809E+01  1.08009E-02  1.80117E+02
    4608000  8.22861E+01  9.87481E-03  1.91459E+02
    5120000  8.23329E+01  9.13263E-03  2.01446E+02
    5161557  8.26736E+01  9.74760E-03  1.75390E+02
tally  125    2    1
f         1
d         1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.77475E+01 0.0089
tfc   11       1       1       1       1       1       1       1       1
     512000  4.85603E+01  5.37618E-02  5.82221E+01
    1024000  4.77928E+01  2.86361E-02  1.02614E+02
    1536000  4.77001E+01  1.98032E-02  1.42995E+02
    2048000  4.74699E+01  1.54053E-02  1.77315E+02
    2560000  4.73836E+01  1.42475E-02  1.65634E+02
    3072000  4.75215E+01  1.22775E-02  1.85872E+02
    3584000  4.75109E+01  1.08253E-02  2.04851E+02
    4096000  4.73788E+01  9.71537E-03  2.22617E+02
    4608000  4.74595E+01  8.87968E-03  2.36776E+02
    5120000  4.76743E+01  8.86602E-03  2.13743E+02
    5161557  4.77475E+01  8.88260E-03  2.11213E+02
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.56232E+01 0.0064
tfc   11       1       1       1       1       1       1       1       1
     512000  2.59126E+01  2.63249E-02  2.42829E+02
    1024000  2.57116E+01  1.66721E-02  3.02727E+02
    1536000  2.56581E+01  1.20618E-02  3.85452E+02
    2048000  2.57385E+01  1.15666E-02  3.14538E+02
    2560000  2.54984E+01  9.74938E-03  3.53728E+02
    3072000  2.56089E+01  8.86808E-03  3.56268E+02
    3584000  2.56085E+01  7.90030E-03  3.84621E+02
    4096000  2.55591E+01  7.24019E-03  4.00845E+02
    4608000  2.55679E+01  6.62513E-03  4.25348E+02
    5120000  2.56171E+01  6.45281E-03  4.03508E+02
    5161557  2.56232E+01  6.41400E-03  4.05082E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e        0
t        0
vals
  1.09163E+01 0.0071
tfc   11       1       1       1       1       1       1       1       1
     512000  1.09301E+01  2.28299E-02  3.22869E+02
    1024000  1.09631E+01  1.66599E-02  3.03170E+02
    1536000  1.09309E+01  1.19987E-02  3.89514E+02
    2048000  1.08869E+01  9.63707E-03  4.53100E+02
    2560000  1.08775E+01  1.00047E-02  3.35901E+02
    3072000  1.08937E+01  8.74918E-03  3.66018E+02
    3584000  1.08843E+01  7.74230E-03  4.00479E+02
    4096000  1.08578E+01  7.06299E-03  4.21210E+02
    4608000  1.08642E+01  6.50800E-03  4.40796E+02
    5120000  1.09158E+01  7.13448E-03  3.30085E+02
    5161557  1.09163E+01  7.08579E-03  3.31913E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.76001E+00 0.0054
tfc   11       1       1       1       1       1       1       1       1
     512000  3.77188E+00  2.01516E-02  4.14394E+02
    1024000  3.75697E+00  1.26905E-02  5.22491E+02
    1536000  3.79098E+00  1.22319E-02  3.74806E+02
    2048000  3.77467E+00  9.71947E-03  4.45450E+02
    2560000  3.75403E+00  8.41669E-03  4.74614E+02
    3072000  3.76242E+00  7.44887E-03  5.04958E+02
    3584000  3.75794E+00  6.63598E-03  5.45141E+02
    4096000  3.74788E+00  6.02421E-03  5.78996E+02
    4608000  3.75815E+00  5.78227E-03  5.58388E+02
    5120000  3.75938E+00  5.38839E-03  5.78670E+02
    5161557  3.76001E+00  5.35610E-03  5.80903E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.89585E+00 0.0068
```

```
tfc   11        1        1        1        1        1        1        1        1
     512000  1.93045E+00  3.89771E-02  1.10768E+02
    1024000  1.90276E+00  2.10255E-02  1.90344E+02
    1536000  1.90906E+00  1.52004E-02  2.42707E+02
    2048000  1.89981E+00  1.18660E-02  2.98866E+02
    2560000  1.89036E+00  1.01006E-02  3.29555E+02
    3072000  1.89743E+00  8.99928E-03  3.45956E+02
    3584000  1.89390E+00  7.91797E-03  3.82906E+02
    4096000  1.88624E+00  7.09382E-03  4.17557E+02
    4608000  1.89597E+00  7.42097E-03  3.39009E+02
    5120000  1.89562E+00  6.84999E-03  3.58072E+02
    5161557  1.89585E+00  6.80426E-03  3.59949E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.13091E+00 0.0055
tfc   11        1        1        1        1        1        1        1        1
     512000  1.13791E+00  2.60528E-02  2.47929E+02
    1024000  1.13094E+00  1.51129E-02  3.68417E+02
    1536000  1.13719E+00  1.18067E-02  4.02285E+02
    2048000  1.13341E+00  9.41305E-03  4.74923E+02
    2560000  1.12813E+00  8.29388E-03  4.88774E+02
    3072000  1.13449E+00  7.76226E-03  4.65008E+02
    3584000  1.13252E+00  6.87496E-03  5.07901E+02
    4096000  1.12779E+00  6.19207E-03  5.48029E+02
    4608000  1.12977E+00  5.81010E-03  5.53052E+02
    5120000  1.13063E+00  5.51123E-03  5.53163E+02
    5161557  1.13091E+00  5.48038E-03  5.54856E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.51221E-01 0.0054
tfc   11        1        1        1        1        1        1        1        1
     512000  7.50289E-01  2.02649E-02  4.09776E+02
    1024000  7.48828E-01  1.29136E-02  5.04588E+02
    1536000  7.55349E-01  1.12636E-02  4.42018E+02
```

```
    2048000  7.52834E-01  9.01528E-03  5.17757E+02
    2560000  7.48954E-01  8.02604E-03  5.21940E+02
    3072000  7.52375E-01  7.40281E-03  5.11261E+02
    3584000  7.51694E-01  6.58721E-03  5.53244E+02
    4096000  7.48719E-01  5.94452E-03  5.94624E+02
    4608000  7.50209E-01  5.66969E-03  5.80783E+02
    5120000  7.51010E-01  5.42574E-03  5.70731E+02
    5161557  7.51221E-01  5.39650E-03  5.72239E+02
mcnp       5     11/06/10 10:45:50     2    14074255     1885536740
```

Case 112

```
 Case 112
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.40198E+00 0.0104
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.43347E+00  5.22370E-02  8.36261E+01
    2048000  1.40603E+00  3.05322E-02  1.22731E+02
    3072000  1.40974E+00  2.32619E-02  1.41113E+02
    4096000  1.40792E+00  2.04027E-02  1.37761E+02
    5120000  1.39448E+00  1.73741E-02  1.51929E+02
    6144000  1.41093E+00  1.57245E-02  1.54486E+02
    7168000  1.40446E+00  1.42516E-02  1.61245E+02
    8192000  1.41579E+00  1.34838E-02  1.57558E+02
    9216000  1.41811E+00  1.25068E-02  1.62781E+02
   10240000  1.40950E+00  1.17929E-02  1.64759E+02
   11264000  1.40370E+00  1.10553E-02  1.70414E+02
   12288000  1.40091E+00  1.04947E-02  1.73368E+02
   13312000  1.40304E+00  1.08220E-02  1.50451E+02
   14074255  1.40198E+00  1.04270E-02  1.53292E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  8.29700E-01 0.0148
tfc   14        1        1        1        1        1        1        1        1
    1024000  8.17346E-01  3.18209E-02  2.25358E+02
    2048000  8.16140E-01  2.13474E-02  2.51062E+02
    3072000  8.12466E-01  1.65373E-02  2.79209E+02
    4096000  8.08359E-01  1.41164E-02  2.87778E+02
    5120000  8.04590E-01  1.24603E-02  2.95382E+02
    6144000  8.13883E-01  1.17727E-02  2.75607E+02
    7168000  8.10103E-01  1.08114E-02  2.80188E+02
    8192000  8.17903E-01  1.05124E-02  2.59215E+02
    9216000  8.34103E-01  1.92165E-02  6.89520E+01
   10240000  8.34430E-01  1.79224E-02  7.13341E+01
   11264000  8.29583E-01  1.65195E-02  7.63218E+01
   12288000  8.34060E-01  1.66372E-02  6.89847E+01
   13312000  8.31015E-01  1.55274E-02  7.30824E+01
   14074255  8.29700E-01  1.48154E-02  7.59297E+01
tally  135     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.47621E-01 0.0096
tfc   14        1        1        1        1        1        1        1        1
    1024000  4.31517E-01  2.59102E-02  3.39904E+02
    2048000  4.36461E-01  1.77354E-02  3.63737E+02
    3072000  4.36482E-01  1.42883E-02  3.74024E+02
    4096000  4.38392E-01  1.29269E-02  3.43174E+02
    5120000  4.37075E-01  1.15231E-02  3.45387E+02
    6144000  4.46568E-01  1.35974E-02  2.06600E+02
    7168000  4.44401E-01  1.23636E-02  2.14251E+02
    8192000  4.47230E-01  1.17189E-02  2.08591E+02
    9216000  4.48289E-01  1.07996E-02  2.18311E+02
   10240000  4.50369E-01  1.16639E-02  1.68424E+02
   11264000  4.49092E-01  1.08998E-02  1.75309E+02
   12288000  4.48751E-01  1.04484E-02  1.74910E+02
   13312000  4.48172E-01  1.00191E-02  1.75531E+02
   14074255  4.47621E-01  9.61151E-03  1.80407E+02
tally  145     2     1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  1.91786E-01 0.0108
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.87247E-01  3.78844E-02  1.58993E+02
    2048000  1.99627E-01  4.60186E-02  5.40261E+01
    3072000  1.94948E-01  3.22430E-02  7.34492E+01
    4096000  1.95539E-01  2.67648E-02  8.00522E+01
    5120000  1.93799E-01  2.21319E-02  9.36283E+01
    6144000  1.93213E-01  1.89320E-02  1.06572E+02
    7168000  1.93255E-01  1.82647E-02  9.81713E+01
    8192000  1.93282E-01  1.62959E-02  1.07872E+02
    9216000  1.93759E-01  1.47792E-02  1.16571E+02
   10240000  1.93317E-01  1.36407E-02  1.23145E+02
   11264000  1.92840E-01  1.27372E-02  1.28380E+02
   12288000  1.92369E-01  1.18922E-02  1.35018E+02
   13312000  1.92013E-01  1.12079E-02  1.40271E+02
   14074255  1.91786E-01  1.07542E-02  1.44106E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.72266E-02 0.0110
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.58903E-02  3.48020E-02  1.88404E+02
    2048000  6.84507E-02  3.82305E-02  7.82800E+01
    3072000  6.74299E-02  2.73913E-02  1.01773E+02
    4096000  6.78610E-02  2.38327E-02  1.00962E+02
    5120000  6.80285E-02  2.14954E-02  9.92556E+01
    6144000  6.75234E-02  1.83575E-02  1.13348E+02
    7168000  6.75026E-02  1.71867E-02  1.10873E+02
    8192000  6.75571E-02  1.54282E-02  1.20348E+02
    9216000  6.81128E-02  1.48809E-02  1.14984E+02
   10240000  6.78640E-02  1.37389E-02  1.21391E+02
   11264000  6.77809E-02  1.30440E-02  1.22412E+02
   12288000  6.75546E-02  1.21525E-02  1.29294E+02
   13312000  6.74771E-02  1.14891E-02  1.33488E+02
   14074255  6.72266E-02  1.09661E-02  1.38591E+02
tally  165    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.39642E-02 0.0126
tfc   14        1        1        1        1        1        1        1        1
    1024000  3.23847E-02  2.40163E-02  3.95626E+02
    2048000  3.39476E-02  3.37821E-02  1.00253E+02
    3072000  3.37578E-02  2.52960E-02  1.19332E+02
    4096000  3.37904E-02  2.11282E-02  1.28463E+02
    5120000  3.43347E-02  2.59448E-02  6.81310E+01
    6144000  3.40248E-02  2.20530E-02  7.85426E+01
    7168000  3.40378E-02  1.99726E-02  8.20996E+01
    8192000  3.40423E-02  1.79950E-02  8.84636E+01
    9216000  3.43339E-02  1.70461E-02  8.76283E+01
   10240000  3.42918E-02  1.57826E-02  9.19880E+01
   11264000  3.42513E-02  1.50445E-02  9.20218E+01
   12288000  3.41405E-02  1.39860E-02  9.76168E+01
   13312000  3.41046E-02  1.32564E-02  1.00268E+02
   14074255  3.39642E-02  1.26373E-02  1.04359E+02
tally  175    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.02454E-02 0.0111
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.92316E-02  2.14800E-02  4.94574E+02
    2048000  2.00437E-02  2.54367E-02  1.76827E+02
    3072000  2.00601E-02  2.06842E-02  1.78477E+02
    4096000  2.00448E-02  1.74250E-02  1.88869E+02
    5120000  2.02726E-02  1.94724E-02  1.20950E+02
    6144000  2.01409E-02  1.66609E-02  1.37607E+02
    7168000  2.01888E-02  1.58296E-02  1.30699E+02
    8192000  2.02132E-02  1.44842E-02  1.36545E+02
    9216000  2.03611E-02  1.37412E-02  1.34848E+02
   10240000  2.04051E-02  1.33198E-02  1.29151E+02
   11264000  2.03723E-02  1.27026E-02  1.29079E+02
   12288000  2.03085E-02  1.18513E-02  1.35950E+02
   13312000  2.03256E-02  1.16773E-02  1.29219E+02
   14074255  2.02454E-02  1.11411E-02  1.34270E+02
tally  185    2    1
f         1
d         1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.34476E-02 0.0110
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.28301E-02  2.19516E-02  4.73550E+02
    2048000  1.33039E-02  2.24237E-02  2.27540E+02
    3072000  1.33075E-02  1.88189E-02  2.15611E+02
    4096000  1.32844E-02  1.58525E-02  2.28195E+02
    5120000  1.34134E-02  1.67658E-02  1.63154E+02
    6144000  1.33371E-02  1.44418E-02  1.83145E+02
    7168000  1.33671E-02  1.41574E-02  1.63396E+02
    8192000  1.33858E-02  1.29495E-02  1.70829E+02
    9216000  1.34736E-02  1.22787E-02  1.68885E+02
   10240000  1.35354E-02  1.26921E-02  1.42241E+02
   11264000  1.34985E-02  1.18874E-02  1.47391E+02
   12288000  1.34666E-02  1.11275E-02  1.54212E+02
   13312000  1.34983E-02  1.15548E-02  1.31973E+02
   14074255  1.34476E-02  1.10289E-02  1.37016E+02
mcnp       5      11/06/10 11:45:59      2     13442636      1864628267
```

Case 113

```
 Case 113
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  9.31443E-01 0.0101
tfc   14        1        1        1        1        1        1        1        1
    1024000  9.48656E-01  5.00864E-02  8.68979E+01
    2048000  9.23301E-01  2.88880E-02  1.31014E+02
    3072000  9.30957E-01  2.23531E-02  1.45749E+02
    4096000  9.36283E-01  1.94205E-02  1.44868E+02
    5120000  9.27470E-01  1.65484E-02  1.59382E+02
    6144000  9.37002E-01  1.49221E-02  1.63195E+02
    7168000  9.34022E-01  1.34562E-02  1.72098E+02
    8192000  9.42838E-01  1.27862E-02  1.66749E+02
```

```
    9216000  9.43073E-01  1.18708E-02  1.72066E+02
   10240000  9.37480E-01  1.12005E-02  1.74066E+02
   11264000  9.33089E-01  1.04780E-02  1.80874E+02
   12288000  9.29012E-01  9.85981E-03  1.87368E+02
   13312000  9.30972E-01  1.02194E-02  1.61089E+02
   13442636  9.31443E-01  1.01475E-02  1.61823E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.49059E-01 0.0136
tfc   14       1       1       1       1       1       1       1       1
    1024000  5.45556E-01  3.05922E-02  2.32931E+02
    2048000  5.38273E-01  1.99674E-02  2.74225E+02
    3072000  5.37873E-01  1.59815E-02  2.85132E+02
    4096000  5.40689E-01  1.37421E-02  2.89326E+02
    5120000  5.39029E-01  1.24797E-02  2.80248E+02
    6144000  5.44486E-01  1.16210E-02  2.69078E+02
    7168000  5.42505E-01  1.06033E-02  2.77164E+02
    8192000  5.45918E-01  9.94691E-03  2.75531E+02
    9216000  5.55436E-01  1.84486E-02  7.12402E+01
   10240000  5.55383E-01  1.72115E-02  7.37151E+01
   11264000  5.51722E-01  1.58563E-02  7.89820E+01
   12288000  5.49739E-01  1.47186E-02  8.40816E+01
   13312000  5.48868E-01  1.37474E-02  8.90180E+01
   13442636  5.49059E-01  1.36254E-02  8.97559E+01
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.98205E-01 0.0101
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.87805E-01  2.42531E-02  3.70609E+02
    2048000  2.88441E-01  1.63318E-02  4.09907E+02
    3072000  2.87996E-01  1.32960E-02  4.11944E+02
    4096000  2.96073E-01  1.86634E-02  1.56860E+02
    5120000  2.93807E-01  1.57168E-02  1.76695E+02
    6144000  2.99293E-01  1.57134E-02  1.47173E+02
```

```
    7168000  2.98178E-01  1.40401E-02  1.58082E+02
    8192000  2.98926E-01  1.27454E-02  1.67819E+02
    9216000  2.99028E-01  1.16538E-02  1.78532E+02
   10240000  2.99978E-01  1.21755E-02  1.47305E+02
   11264000  2.98902E-01  1.13264E-02  1.54790E+02
   12288000  2.97581E-01  1.05744E-02  1.62900E+02
   13312000  2.97925E-01  1.01915E-02  1.61973E+02
   13442636  2.98205E-01  1.01189E-02  1.62739E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.27997E-01 0.0114
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.24806E-01  3.61795E-02  1.66542E+02
    2048000  1.34660E-01  4.95340E-02  4.45600E+01
    3072000  1.30713E-01  3.49099E-02  5.97562E+01
    4096000  1.31781E-01  2.83876E-02  6.78008E+01
    5120000  1.30060E-01  2.34421E-02  7.94256E+01
    6144000  1.29618E-01  1.99824E-02  9.10064E+01
    7168000  1.29888E-01  1.89202E-02  8.70504E+01
    8192000  1.29779E-01  1.68526E-02  9.59872E+01
    9216000  1.29871E-01  1.53042E-02  1.03521E+02
   10240000  1.29321E-01  1.40951E-02  1.09915E+02
   11264000  1.28786E-01  1.31236E-02  1.15298E+02
   12288000  1.28269E-01  1.22302E-02  1.21776E+02
   13312000  1.27981E-01  1.14796E-02  1.27663E+02
   13442636  1.27997E-01  1.13796E-02  1.28678E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.45496E-02 0.0103
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.41665E-02  3.38220E-02  1.90569E+02
    2048000  4.40815E-02  2.06358E-02  2.56749E+02
    3072000  4.34714E-02  1.58915E-02  2.88372E+02
    4096000  4.44472E-02  1.71363E-02  1.86063E+02
```

```
    5120000  4.43561E-02  1.63178E-02  1.63919E+02
    6144000  4.42063E-02  1.40470E-02  1.84162E+02
    7168000  4.44586E-02  1.38565E-02  1.62299E+02
    8192000  4.45932E-02  1.26355E-02  1.70751E+02
    9216000  4.48930E-02  1.25798E-02  1.53216E+02
   10240000  4.47199E-02  1.16953E-02  1.59651E+02
   11264000  4.46373E-02  1.12295E-02  1.57474E+02
   12288000  4.46249E-02  1.10705E-02  1.48629E+02
   13312000  4.45560E-02  1.04304E-02  1.54640E+02
   13442636  4.45496E-02  1.03405E-02  1.55838E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.24479E-02 0.0125
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.17046E-02  2.36849E-02  3.88601E+02
    2048000  2.19029E-02  1.65844E-02  3.97516E+02
    3072000  2.16935E-02  1.41893E-02  3.61710E+02
    4096000  2.20661E-02  1.44046E-02  2.63325E+02
    5120000  2.23014E-02  2.20109E-02  9.00903E+01
    6144000  2.22024E-02  1.86992E-02  1.03925E+02
    7168000  2.22983E-02  1.71187E-02  1.06336E+02
    8192000  2.23497E-02  1.55515E-02  1.12720E+02
    9216000  2.24976E-02  1.49689E-02  1.08211E+02
   10240000  2.24707E-02  1.39392E-02  1.12387E+02
   11264000  2.24390E-02  1.34077E-02  1.10464E+02
   12288000  2.24751E-02  1.33780E-02  1.01777E+02
   13312000  2.24553E-02  1.26174E-02  1.05677E+02
   13442636  2.24479E-02  1.25060E-02  1.06542E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.32986E-02 0.0101
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.28785E-02  2.12835E-02  4.81243E+02
    2048000  1.30659E-02  1.59793E-02  4.28193E+02
```

```
    3072000  1.29844E-02  1.43946E-02  3.51466E+02
    4096000  1.31334E-02  1.34003E-02  3.04273E+02
    5120000  1.31947E-02  1.60312E-02  1.69833E+02
    6144000  1.31574E-02  1.37670E-02  1.91728E+02
    7168000  1.32289E-02  1.33520E-02  1.74795E+02
    8192000  1.32674E-02  1.23888E-02  1.77618E+02
    9216000  1.33335E-02  1.18934E-02  1.71412E+02
   10240000  1.33598E-02  1.17440E-02  1.58329E+02
   11264000  1.33357E-02  1.13000E-02  1.55516E+02
   12288000  1.33332E-02  1.08979E-02  1.53372E+02
   13312000  1.33024E-02  1.02087E-02  1.61428E+02
   13442636  1.32986E-02  1.01209E-02  1.62677E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.80598E-03 0.0094
tfc   14       1       1       1       1       1       1       1       1
    1024000  8.57372E-03  2.16184E-02  4.66448E+02
    2048000  8.70573E-03  1.63669E-02  4.08149E+02
    3072000  8.64648E-03  1.47091E-02  3.36596E+02
    4096000  8.72317E-03  1.31141E-02  3.17700E+02
    5120000  8.73890E-03  1.35036E-02  2.39361E+02
    6144000  8.71846E-03  1.17282E-02  2.64183E+02
    7168000  8.75994E-03  1.17816E-02  2.24500E+02
    8192000  8.78421E-03  1.09379E-02  2.27865E+02
    9216000  8.82016E-03  1.04614E-02  2.21550E+02
   10240000  8.85784E-03  1.12216E-02  1.73413E+02
   11264000  8.83147E-03  1.05572E-02  1.78170E+02
   12288000  8.82741E-03  1.00634E-02  1.79865E+02
   13312000  8.80877E-03  9.44442E-03  1.88612E+02
   13442636  8.80598E-03  9.36457E-03  1.90014E+02
mcnp       5     11/06/10 12:46:16     2    13491838     1871539906
```

Case 114

```
 Case 114
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  1.28616E+01 0.0101
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.31630E+01  5.01973E-02  8.68893E+01
    2048000  1.27725E+01  2.89919E-02  1.30593E+02
    3072000  1.28798E+01  2.24045E-02  1.45886E+02
    4096000  1.29438E+01  1.94566E-02  1.45120E+02
    5120000  1.28209E+01  1.65793E-02  1.59798E+02
    6144000  1.29494E+01  1.49464E-02  1.63791E+02
    7168000  1.29064E+01  1.34771E-02  1.72731E+02
    8192000  1.30271E+01  1.28033E-02  1.67418E+02
    9216000  1.30325E+01  1.18840E-02  1.72709E+02
   10240000  1.29550E+01  1.12118E-02  1.74591E+02
   11264000  1.28933E+01  1.04884E-02  1.81343E+02
   12288000  1.28362E+01  9.86957E-03  1.87769E+02
   13312000  1.28624E+01  1.02272E-02  1.61450E+02
   13491838  1.28616E+01  1.01303E-02  1.62392E+02
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  7.57964E+00 0.0136
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.54010E+00  3.06592E-02  2.32919E+02
    2048000  7.43074E+00  2.00018E-02  2.74369E+02
    3072000  7.43183E+00  1.59958E-02  2.86203E+02
    4096000  7.46924E+00  1.37504E-02  2.90558E+02
    5120000  7.44544E+00  1.24874E-02  2.81680E+02
    6144000  7.52008E+00  1.16270E-02  2.70662E+02
    7168000  7.49250E+00  1.06084E-02  2.78783E+02
    8192000  7.53950E+00  9.95194E-03  2.77095E+02
    9216000  7.67240E+00  1.84488E-02  7.16653E+01
   10240000  7.67202E+00  1.72107E-02  7.40922E+01
   11264000  7.62112E+00  1.58561E-02  7.93454E+01
   12288000  7.59337E+00  1.47191E-02  8.44224E+01
   13312000  7.58096E+00  1.37485E-02  8.93393E+01
   13491838  7.57964E+00  1.35874E-02  9.02677E+01
tally  135    2    1
f         1
d         1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.11621E+00 0.0101
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.97134E+00  2.43219E-02  3.70110E+02
    2048000  3.97886E+00  1.63584E-02  4.10195E+02
    3072000  3.97717E+00  1.33080E-02  4.13483E+02
    4096000  4.08869E+00  1.86683E-02  1.57635E+02
    5120000  4.05708E+00  1.57220E-02  1.77699E+02
    6144000  4.13207E+00  1.57188E-02  1.48090E+02
    7168000  4.11700E+00  1.40438E-02  1.59071E+02
    8192000  4.12741E+00  1.27489E-02  1.68849E+02
    9216000  4.12972E+00  1.16557E-02  1.79542E+02
   10240000  4.14311E+00  1.21765E-02  1.48022E+02
   11264000  4.12815E+00  1.13274E-02  1.55472E+02
   12288000  4.10972E+00  1.05758E-02  1.63530E+02
   13312000  4.11430E+00  1.01932E-02  1.62531E+02
   13491838  4.11621E+00  1.00923E-02  1.63615E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.76720E+00 0.0113
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.72307E+00  3.62329E-02  1.66771E+02
    2048000  1.85826E+00  4.95800E-02  4.46541E+01
    3072000  1.80558E+00  3.49099E-02  6.00881E+01
    4096000  1.82017E+00  2.83888E-02  6.81658E+01
    5120000  1.79626E+00  2.34447E-02  7.99117E+01
    6144000  1.79032E+00  1.99830E-02  9.16315E+01
    7168000  1.79415E+00  1.89194E-02  8.76490E+01
    8192000  1.79259E+00  1.68525E-02  9.66309E+01
    9216000  1.79414E+00  1.53024E-02  1.04166E+02
   10240000  1.78659E+00  1.40930E-02  1.10500E+02
   11264000  1.77910E+00  1.31222E-02  1.15852E+02
   12288000  1.77183E+00  1.22297E-02  1.22289E+02
   13312000  1.76776E+00  1.14797E-02  1.28142E+02
   13491838  1.76720E+00  1.13463E-02  1.29450E+02
tally  155    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.15059E-01 0.0103
tfc   14        1        1        1        1        1        1        1        1
    1024000  6.09575E-01  3.38829E-02  1.90706E+02
    2048000  6.08115E-01  2.06671E-02  2.56988E+02
    3072000  6.00201E-01  1.59038E-02  2.89524E+02
    4096000  6.13518E-01  1.71455E-02  1.86879E+02
    5120000  6.12289E-01  1.63259E-02  1.64795E+02
    6144000  6.10398E-01  1.40509E-02  1.85334E+02
    7168000  6.13970E-01  1.38584E-02  1.63357E+02
    8192000  6.15829E-01  1.26372E-02  1.71847E+02
    9216000  6.20067E-01  1.25802E-02  1.54122E+02
   10240000  6.17700E-01  1.16952E-02  1.60456E+02
   11264000  6.16537E-01  1.12296E-02  1.58192E+02
   12288000  6.16326E-01  1.10712E-02  1.49222E+02
   13312000  6.15348E-01  1.04314E-02  1.55191E+02
   13491838  6.15059E-01  1.03108E-02  1.56755E+02
tally  165    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.09953E-01 0.0125
tfc   14        1        1        1        1        1        1        1        1
    1024000  2.99429E-01  2.37465E-02  3.88265E+02
    2048000  3.02084E-01  1.66096E-02  3.97882E+02
    3072000  2.99421E-01  1.42001E-02  3.63166E+02
    4096000  3.04539E-01  1.44129E-02  2.64459E+02
    5120000  3.07812E-01  2.20243E-02  9.05518E+01
    6144000  3.06587E-01  1.87052E-02  1.04578E+02
    7168000  3.07953E-01  1.71218E-02  1.07021E+02
    8192000  3.08665E-01  1.55540E-02  1.13438E+02
    9216000  3.10753E-01  1.49695E-02  1.08850E+02
   10240000  3.10391E-01  1.39392E-02  1.12951E+02
   11264000  3.09940E-01  1.34081E-02  1.10964E+02
   12288000  3.10418E-01  1.33790E-02  1.02182E+02
   13312000  3.10131E-01  1.26188E-02  1.06052E+02
```

```
   13491838  3.09953E-01  1.24684E-02  1.07198E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.83640E-01 0.0101
tfc   14       1       1       1       1       1       1       1
    1024000  1.77623E-01  2.13315E-02  4.81154E+02
    2048000  1.80179E-01  1.59998E-02  4.28789E+02
    3072000  1.79172E-01  1.44030E-02  3.53005E+02
    4096000  1.81245E-01  1.34065E-02  3.05652E+02
    5120000  1.82110E-01  1.60398E-02  1.70727E+02
    6144000  1.81703E-01  1.37744E-02  1.92851E+02
    7168000  1.82714E-01  1.33562E-02  1.75872E+02
    8192000  1.83244E-01  1.23924E-02  1.78704E+02
    9216000  1.84184E-01  1.18954E-02  1.72380E+02
   10240000  1.84551E-01  1.17451E-02  1.59095E+02
   11264000  1.84209E-01  1.13012E-02  1.56196E+02
   12288000  1.84161E-01  1.08995E-02  1.53958E+02
   13312000  1.83727E-01  1.02106E-02  1.61975E+02
   13491838  1.83640E-01  1.00922E-02  1.63621E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.21593E-01 0.0093
tfc   14       1       1       1       1       1       1       1
    1024000  1.18227E-01  2.16586E-02  4.66728E+02
    2048000  1.20033E-01  1.63868E-02  4.08775E+02
    3072000  1.19283E-01  1.47159E-02  3.38150E+02
    4096000  1.20365E-01  1.31188E-02  3.19208E+02
    5120000  1.20599E-01  1.35095E-02  2.40669E+02
    6144000  1.20397E-01  1.17374E-02  2.65596E+02
    7168000  1.20987E-01  1.17872E-02  2.25809E+02
    8192000  1.21322E-01  1.09426E-02  2.29193E+02
    9216000  1.21840E-01  1.04646E-02  2.22741E+02
   10240000  1.22354E-01  1.12238E-02  1.74217E+02
   11264000  1.21985E-01  1.05593E-02  1.78913E+02
```

```
   12288000  1.21920E-01  1.00659E-02  1.80516E+02
   13312000  1.21657E-01  9.44712E-03  1.89215E+02
   13491838  1.21593E-01  9.33941E-03  1.91059E+02
mcnp        5     11/06/10 13:46:29     2    13798664     2125803426
```

Case 115

```
 Case 115
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.43067E+02 0.0009
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.42759E+02  2.19738E-03  4.58638E+04
    2048000  2.42743E+02  1.55685E-03  4.60057E+04
    3072000  2.42718E+02  1.27918E-03  4.54889E+04
    4096000  2.42592E+02  1.11060E-03  4.52141E+04
    5120000  2.42818E+02  1.00470E-03  4.42435E+04
    6144000  2.42923E+02  9.16140E-04  4.43937E+04
    7168000  2.43190E+02  1.40697E-03  1.61545E+04
    8192000  2.43132E+02  1.26167E-03  1.75910E+04
    9216000  2.43106E+02  1.19577E-03  1.74215E+04
   10240000  2.43133E+02  1.09853E-03  1.85878E+04
   11264000  2.43064E+02  1.01961E-03  1.96215E+04
   12288000  2.43102E+02  9.53789E-04  2.05605E+04
   13312000  2.43102E+02  9.00110E-04  2.13211E+04
   13798664  2.43067E+02  8.75869E-04  2.17255E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.45775E+02 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.45732E+02  2.10948E-03  4.97659E+04
    2048000  1.45689E+02  1.49154E-03  5.01232E+04
```

```
    3072000  1.45658E+02  1.22825E-03  4.93394E+04
    4096000  1.45604E+02  1.07495E-03  4.82633E+04
    5120000  1.45720E+02  9.62433E-04  4.82150E+04
    6144000  1.45796E+02  8.77695E-04  4.83680E+04
    7168000  1.45796E+02  8.18665E-04  4.77147E+04
    8192000  1.45787E+02  7.63515E-04  4.80336E+04
    9216000  1.45740E+02  7.21918E-04  4.77973E+04
   10240000  1.45765E+02  6.82913E-04  4.80974E+04
   11264000  1.45748E+02  6.55987E-04  4.74032E+04
   12288000  1.45776E+02  6.26923E-04  4.75894E+04
   13312000  1.45792E+02  6.07383E-04  4.68248E+04
   13798664  1.45775E+02  5.95842E-04  4.69445E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.16168E+01 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  8.16279E+01  2.03734E-03  5.33527E+04
    2048000  8.15808E+01  1.43760E-03  5.39550E+04
    3072000  8.15678E+01  1.20931E-03  5.08968E+04
    4096000  8.15213E+01  1.03953E-03  5.16079E+04
    5120000  8.15969E+01  9.48422E-04  4.96501E+04
    6144000  8.16315E+01  8.60586E-04  5.03103E+04
    7168000  8.16166E+01  7.92532E-04  5.09132E+04
    8192000  8.16205E+01  7.41805E-04  5.08862E+04
    9216000  8.15877E+01  6.96933E-04  5.12857E+04
   10240000  8.16056E+01  6.59799E-04  5.15264E+04
   11264000  8.15906E+01  6.27523E-04  5.18011E+04
   12288000  8.16053E+01  5.99614E-04  5.20230E+04
   13312000  8.16231E+01  6.06624E-04  4.69421E+04
   13798664  8.16168E+01  5.94617E-04  4.71381E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.62101E+01 0.0005
tfc   14       1       1       1       1       1       1       1       1
```

```
    1024000  3.62208E+01  1.94722E-03  5.84050E+04
    2048000  3.62023E+01  1.38396E-03  5.82180E+04
    3072000  3.61927E+01  1.16920E-03  5.44486E+04
    4096000  3.61829E+01  1.02094E-03  5.35042E+04
    5120000  3.62065E+01  9.08129E-04  5.41538E+04
    6144000  3.62239E+01  8.25425E-04  5.46877E+04
    7168000  3.62175E+01  7.60436E-04  5.53018E+04
    8192000  3.62162E+01  7.08511E-04  5.57811E+04
    9216000  3.62001E+01  6.65753E-04  5.62021E+04
   10240000  3.62057E+01  6.29689E-04  5.65718E+04
   11264000  3.62000E+01  5.98918E-04  5.68675E+04
   12288000  3.62072E+01  5.72944E-04  5.69788E+04
   13312000  3.62103E+01  5.51891E-04  5.67147E+04
   13798664  3.62101E+01  5.45756E-04  5.59564E+04
tally  155     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.30565E+01 0.0007
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.30626E+01  2.03193E-03  5.36370E+04
    2048000  1.30558E+01  1.40478E-03  5.65054E+04
    3072000  1.30474E+01  1.15060E-03  5.62238E+04
    4096000  1.30415E+01  9.96977E-04  5.61073E+04
    5120000  1.30491E+01  8.84161E-04  5.71296E+04
    6144000  1.30561E+01  8.23239E-04  5.49786E+04
    7168000  1.30526E+01  7.54726E-04  5.61417E+04
    8192000  1.30516E+01  7.01603E-04  5.68849E+04
    9216000  1.30459E+01  6.58265E-04  5.74880E+04
   10240000  1.30480E+01  6.22306E-04  5.79222E+04
   11264000  1.30467E+01  5.95061E-04  5.76070E+04
   12288000  1.30567E+01  7.89784E-04  2.99862E+04
   13312000  1.30558E+01  7.43658E-04  3.12359E+04
   13798664  1.30565E+01  7.35365E-04  3.08206E+04
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  6.65778E+00 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.65880E+00  1.89452E-03  6.16997E+04
    2048000  6.65631E+00  1.34145E-03  6.19666E+04
    3072000  6.65347E+00  1.11141E-03  6.02587E+04
    4096000  6.65036E+00  9.66766E-04  5.96687E+04
    5120000  6.65424E+00  8.59332E-04  6.04786E+04
    6144000  6.65843E+00  8.28755E-04  5.42491E+04
    7168000  6.65695E+00  7.58617E-04  5.55673E+04
    8192000  6.65685E+00  7.03839E-04  5.65240E+04
    9216000  6.65388E+00  6.58320E-04  5.74784E+04
   10240000  6.65551E+00  6.26885E-04  5.70791E+04
   11264000  6.65524E+00  6.09425E-04  5.49235E+04
   12288000  6.65782E+00  5.91713E-04  5.34215E+04
   13312000  6.65759E+00  5.64806E-04  5.41507E+04
   13798664  6.65778E+00  5.61044E-04  5.29485E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.02185E+00 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.02304E+00  1.89522E-03  6.16542E+04
    2048000  4.02064E+00  1.33815E-03  6.22723E+04
    3072000  4.02007E+00  1.12648E-03  5.86572E+04
    4096000  4.01786E+00  9.78957E-04  5.81919E+04
    5120000  4.02025E+00  8.67984E-04  5.92790E+04
    6144000  4.02323E+00  8.61523E-04  5.02009E+04
    7168000  4.02211E+00  7.84887E-04  5.19098E+04
    8192000  4.02156E+00  7.24696E-04  5.33173E+04
    9216000  4.01993E+00  6.75727E-04  5.45553E+04
   10240000  4.02107E+00  6.54719E-04  5.23291E+04
   11264000  4.02067E+00  6.24187E-04  5.23562E+04
   12288000  4.02196E+00  5.98152E-04  5.22776E+04
   13312000  4.02197E+00  5.73691E-04  5.24862E+04
   13798664  4.02185E+00  5.65467E-04  5.21234E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  2.68685E+00 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.68684E+00  1.88770E-03  6.21467E+04
    2048000  2.68580E+00  1.33966E-03  6.21318E+04
    3072000  2.68461E+00  1.11104E-03  6.02981E+04
    4096000  2.68420E+00  9.86846E-04  5.72652E+04
    5120000  2.68556E+00  8.71257E-04  5.88344E+04
    6144000  2.68776E+00  8.88744E-04  4.71728E+04
    7168000  2.68712E+00  8.07494E-04  4.90440E+04
    8192000  2.68676E+00  7.43634E-04  5.06362E+04
    9216000  2.68580E+00  6.93299E-04  5.18248E+04
   10240000  2.68667E+00  6.77577E-04  4.88580E+04
   11264000  2.68665E+00  6.44740E-04  4.90714E+04
   12288000  2.68728E+00  6.13730E-04  4.96573E+04
   13312000  2.68699E+00  5.84159E-04  5.06220E+04
   13798664  2.68685E+00  5.73780E-04  5.06240E+04
mcnp       5     11/06/10 14:46:43     2    13382604     2127424925
```

Case 116

```
 Case 116
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.65253E+02 0.0009
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.65127E+02  2.12820E-03  4.79649E+04
    2048000  1.65096E+02  1.50870E-03  4.78468E+04
    3072000  1.65077E+02  1.24391E-03  4.69336E+04
    4096000  1.64939E+02  1.07904E-03  4.67112E+04
    5120000  1.65067E+02  9.74862E-04  4.57919E+04
    6144000  1.65143E+02  8.88309E-04  4.59636E+04
    7168000  1.65303E+02  1.33926E-03  1.73382E+04
    8192000  1.65272E+02  1.20191E-03  1.88332E+04
    9216000  1.65256E+02  1.13882E-03  1.86524E+04
   10240000  1.65273E+02  1.04681E-03  1.98704E+04
   11264000  1.65223E+02  9.72204E-04  2.09403E+04
   12288000  1.65254E+02  9.09107E-04  2.19519E+04
   13312000  1.65248E+02  8.58151E-04  2.27461E+04
```

```
   13382604  1.65253E+02  8.54692E-04  2.28099E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.91822E+01 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  9.91872E+01  2.03939E-03  5.22330E+04
    2048000  9.91398E+01  1.44277E-03  5.23199E+04
    3072000  9.91341E+01  1.20069E-03  5.03736E+04
    4096000  9.90700E+01  1.04868E-03  4.94546E+04
    5120000  9.91440E+01  9.40804E-04  4.91674E+04
    6144000  9.91919E+01  8.55528E-04  4.95534E+04
    7168000  9.91784E+01  7.95300E-04  4.91668E+04
    8192000  9.91742E+01  7.41463E-04  4.94869E+04
    9216000  9.91440E+01  7.00675E-04  4.92737E+04
   10240000  9.91615E+01  6.62936E-04  4.95451E+04
   11264000  9.91457E+01  6.36345E-04  4.88779E+04
   12288000  9.91729E+01  6.08996E-04  4.89187E+04
   13312000  9.91797E+01  5.89401E-04  4.82185E+04
   13382604  9.91822E+01  5.87715E-04  4.82403E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.55595E+01 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  5.55976E+01  1.97339E-03  5.57856E+04
    2048000  5.55576E+01  1.39368E-03  5.60709E+04
    3072000  5.55436E+01  1.17060E-03  5.29965E+04
    4096000  5.54979E+01  1.00712E-03  5.36208E+04
    5120000  5.55416E+01  9.17745E-04  5.16692E+04
    6144000  5.55647E+01  8.31779E-04  5.24236E+04
    7168000  5.55543E+01  7.68968E-04  5.25918E+04
    8192000  5.55530E+01  7.16309E-04  5.30235E+04
    9216000  5.55322E+01  6.73162E-04  5.33837E+04
   10240000  5.55480E+01  6.40348E-04  5.31021E+04
   11264000  5.55367E+01  6.09068E-04  5.33539E+04
```

```
   12288000  5.55491E+01  5.82049E-04  5.35531E+04
   13312000  5.55580E+01  5.86812E-04  4.86449E+04
   13382604  5.55595E+01  5.85052E-04  4.86805E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.46631E+01 0.0005
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.46872E+01  1.89122E-03  6.07384E+04
    2048000  2.46681E+01  1.33938E-03  6.07093E+04
    3072000  2.46583E+01  1.12904E-03  5.69701E+04
    4096000  2.46428E+01  9.82491E-04  5.63428E+04
    5120000  2.46569E+01  8.74769E-04  5.68707E+04
    6144000  2.46700E+01  7.95292E-04  5.73441E+04
    7168000  2.46638E+01  7.32933E-04  5.78903E+04
    8192000  2.46638E+01  6.83152E-04  5.82954E+04
    9216000  2.46545E+01  6.42352E-04  5.86275E+04
   10240000  2.46598E+01  6.09243E-04  5.86627E+04
   11264000  2.46550E+01  5.79578E-04  5.89215E+04
   12288000  2.46604E+01  5.54421E-04  5.90232E+04
   13312000  2.46623E+01  5.34751E-04  5.85777E+04
   13382604  2.46631E+01  5.33298E-04  5.85873E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.89653E+00 0.0007
tfc   14       1       1       1       1       1       1       1       1
    1024000  8.90900E+00  2.00659E-03  5.39547E+04
    2048000  8.90173E+00  1.36946E-03  5.80713E+04
    3072000  8.89607E+00  1.12951E-03  5.69221E+04
    4096000  8.88794E+00  9.64659E-04  5.84451E+04
    5120000  8.89227E+00  8.55893E-04  5.94069E+04
    6144000  8.89707E+00  7.94236E-04  5.74966E+04
    7168000  8.89417E+00  7.28594E-04  5.85818E+04
    8192000  8.89374E+00  6.77348E-04  5.92986E+04
    9216000  8.89015E+00  6.35614E-04  5.98771E+04
```

```
   10240000  8.89184E+00  6.01265E-04  6.02298E+04
   11264000  8.89056E+00  5.74799E-04  5.99054E+04
   12288000  8.89701E+00  7.52834E-04  3.20114E+04
   13312000  8.89635E+00  7.09438E-04  3.32817E+04
   13382604  8.89653E+00  7.06626E-04  3.33706E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.53788E+00 0.0005
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.54375E+00  1.87561E-03  6.17534E+04
    2048000  4.54044E+00  1.31053E-03  6.34114E+04
    3072000  4.53805E+00  1.08342E-03  6.18689E+04
    4096000  4.53398E+00  9.36717E-04  6.19839E+04
    5120000  4.53590E+00  8.32102E-04  6.28525E+04
    6144000  4.53880E+00  7.99372E-04  5.67602E+04
    7168000  4.53758E+00  7.32126E-04  5.80180E+04
    8192000  4.53766E+00  6.79386E-04  5.89435E+04
    9216000  4.53576E+00  6.35574E-04  5.98847E+04
   10240000  4.53675E+00  6.04751E-04  5.95375E+04
   11264000  4.53644E+00  5.87321E-04  5.73782E+04
   12288000  4.53805E+00  5.69516E-04  5.59359E+04
   13312000  4.53777E+00  5.43715E-04  5.66620E+04
   13382604  4.53788E+00  5.42030E-04  5.67147E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.74225E+00 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.74507E+00  1.86095E-03  6.27306E+04
    2048000  2.74295E+00  1.30193E-03  6.42523E+04
    3072000  2.74220E+00  1.09308E-03  6.07795E+04
    4096000  2.74013E+00  9.49968E-04  6.02667E+04
    5120000  2.74134E+00  8.42097E-04  6.13693E+04
    6144000  2.74333E+00  8.30770E-04  5.25509E+04
    7168000  2.74246E+00  7.57453E-04  5.42030E+04
```

```
    8192000  2.74209E+00  6.99311E-04  5.56324E+04
    9216000  2.74103E+00  6.52121E-04  5.68842E+04
   10240000  2.74196E+00  6.38847E-04  5.33519E+04
   11264000  2.74153E+00  6.08241E-04  5.34992E+04
   12288000  2.74225E+00  5.81704E-04  5.36165E+04
   13312000  2.74217E+00  5.57417E-04  5.39107E+04
   13382604  2.74225E+00  5.55758E-04  5.39476E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.83220E+00 0.0006
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.83354E+00  1.84669E-03  6.37029E+04
    2048000  1.83267E+00  1.30101E-03  6.43428E+04
    3072000  1.83172E+00  1.07727E-03  6.25771E+04
    4096000  1.83069E+00  9.47547E-04  6.05751E+04
    5120000  1.83156E+00  8.40122E-04  6.16581E+04
    6144000  1.83300E+00  8.51939E-04  4.99718E+04
    7168000  1.83243E+00  7.74743E-04  5.18107E+04
    8192000  1.83221E+00  7.13709E-04  5.34105E+04
    9216000  1.83159E+00  6.65761E-04  5.45772E+04
   10240000  1.83218E+00  6.50976E-04  5.13823E+04
   11264000  1.83204E+00  6.19423E-04  5.15850E+04
   12288000  1.83239E+00  5.89413E-04  5.22232E+04
   13312000  1.83217E+00  5.61214E-04  5.31837E+04
   13382604  1.83220E+00  5.59352E-04  5.32564E+04
mcnp       5      11/06/10 15:46:55      2     13280224      2111241382
```

Case 117

```
 Case 117
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  2.28251E+03 0.0009
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.28077E+03  2.12811E-03  4.79987E+04
    2048000  2.28033E+03  1.50865E-03  4.78108E+04
    3072000  2.28006E+03  1.24387E-03  4.68497E+04
    4096000  2.27813E+03  1.07901E-03  4.65583E+04
    5120000  2.27990E+03  9.74835E-04  4.56321E+04
    6144000  2.28094E+03  8.88274E-04  4.57568E+04
    7168000  2.28314E+03  1.33922E-03  1.72584E+04
    8192000  2.28273E+03  1.20187E-03  1.87372E+04
    9216000  2.28252E+03  1.13879E-03  1.85434E+04
   10240000  2.28275E+03  1.04678E-03  1.97317E+04
   11264000  2.28205E+03  9.72170E-04  2.07866E+04
   12288000  2.28249E+03  9.09073E-04  2.17959E+04
   13280224  2.28251E+03  8.59680E-04  2.25502E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.36992E+03 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.37000E+03  2.03931E-03  5.22697E+04
    2048000  1.36933E+03  1.44272E-03  5.22804E+04
    3072000  1.36925E+03  1.20065E-03  5.02834E+04
    4096000  1.36835E+03  1.04865E-03  4.92927E+04
    5120000  1.36937E+03  9.40778E-04  4.89958E+04
    6144000  1.37003E+03  8.55496E-04  4.93302E+04
    7168000  1.36984E+03  7.95271E-04  4.89410E+04
    8192000  1.36979E+03  7.41439E-04  4.92347E+04
    9216000  1.36938E+03  7.00654E-04  4.89855E+04
   10240000  1.36962E+03  6.62918E-04  4.91988E+04
   11264000  1.36940E+03  6.36323E-04  4.85191E+04
   12288000  1.36978E+03  6.08974E-04  4.85708E+04
   13280224  1.36992E+03  5.90155E-04  4.78512E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  7.67397E+02 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  7.67929E+02  1.97331E-03  5.58248E+04
    2048000  7.67371E+02  1.39363E-03  5.60285E+04
    3072000  7.67175E+02  1.17056E-03  5.29017E+04
    4096000  7.66535E+02  1.00709E-03  5.34452E+04
    5120000  7.67139E+02  9.17719E-04  5.14889E+04
    6144000  7.67455E+02  8.31748E-04  5.21873E+04
    7168000  7.67311E+02  7.68940E-04  5.23501E+04
    8192000  7.67296E+02  7.16287E-04  5.27532E+04
    9216000  7.67010E+02  6.73143E-04  5.30714E+04
   10240000  7.67230E+02  6.40331E-04  5.27309E+04
   11264000  7.67074E+02  6.09050E-04  5.29619E+04
   12288000  7.67247E+02  5.82030E-04  5.31718E+04
   13280224  7.67397E+02  5.87605E-04  4.82673E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.40647E+02 0.0005
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.40991E+02  1.89117E-03  6.07797E+04
    2048000  3.40722E+02  1.33934E-03  6.06626E+04
    3072000  3.40584E+02  1.12901E-03  5.68678E+04
    4096000  3.40367E+02  9.82465E-04  5.61581E+04
    5120000  3.40561E+02  8.74747E-04  5.66719E+04
    6144000  3.40741E+02  7.95265E-04  5.70854E+04
    7168000  3.40655E+02  7.32909E-04  5.76240E+04
    8192000  3.40657E+02  6.83133E-04  5.79979E+04
    9216000  3.40528E+02  6.42336E-04  5.82842E+04
   10240000  3.40602E+02  6.09228E-04  5.82523E+04
   11264000  3.40537E+02  5.79563E-04  5.84881E+04
   12288000  3.40612E+02  5.54406E-04  5.86025E+04
   13280224  3.40647E+02  5.35416E-04  5.81355E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.22880E+02 0.0007
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.23054E+02  2.00651E-03  5.39928E+04
    2048000  1.22952E+02  1.36941E-03  5.80276E+04
    3072000  1.22873E+02  1.12948E-03  5.68204E+04
    4096000  1.22760E+02  9.64630E-04  5.82538E+04
    5120000  1.22820E+02  8.55868E-04  5.91996E+04
    6144000  1.22886E+02  7.94209E-04  5.72373E+04
    7168000  1.22846E+02  7.28569E-04  5.83124E+04
    8192000  1.22840E+02  6.77328E-04  5.89962E+04
    9216000  1.22791E+02  6.35597E-04  5.95267E+04
   10240000  1.22814E+02  6.01249E-04  5.98087E+04
   11264000  1.22797E+02  5.74784E-04  5.94647E+04
   12288000  1.22886E+02  7.52809E-04  3.17836E+04
   13280224  1.22880E+02  7.10689E-04  3.29963E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.26772E+01 0.0005
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.27593E+01  1.87554E-03  6.17968E+04
    2048000  6.27132E+01  1.31049E-03  6.33634E+04
    3072000  6.26797E+01  1.08339E-03  6.17582E+04
    4096000  6.26231E+01  9.36689E-04  6.17811E+04
    5120000  6.26498E+01  8.32080E-04  6.26329E+04
    6144000  6.26895E+01  7.99346E-04  5.65040E+04
    7168000  6.26727E+01  7.32102E-04  5.77511E+04
    8192000  6.26740E+01  6.79366E-04  5.86428E+04
    9216000  6.26479E+01  6.35556E-04  5.95344E+04
   10240000  6.26616E+01  6.04734E-04  5.91214E+04
   11264000  6.26574E+01  5.87304E-04  5.69565E+04
   12288000  6.26795E+01  5.69485E-04  5.55402E+04
   13280224  6.26772E+01  5.44456E-04  5.62210E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  3.78761E+01 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.79156E+01  1.86087E-03  6.27747E+04
    2048000  3.78860E+01  1.30188E-03  6.42038E+04
    3072000  3.78754E+01  1.09305E-03  6.06709E+04
    4096000  3.78465E+01  9.49939E-04  6.00696E+04
    5120000  3.78635E+01  8.42076E-04  6.11548E+04
    6144000  3.78908E+01  8.30744E-04  5.23136E+04
    7168000  3.78788E+01  7.57429E-04  5.39535E+04
    8192000  3.78737E+01  6.99291E-04  5.53485E+04
    9216000  3.78591E+01  6.52103E-04  5.65514E+04
   10240000  3.78720E+01  6.38829E-04  5.29791E+04
   11264000  3.78661E+01  6.08223E-04  5.31059E+04
   12288000  3.78761E+01  5.81687E-04  5.32346E+04
   13280224  3.78761E+01  5.58234E-04  5.34801E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.53068E+01 0.0006
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.53253E+01  1.84661E-03  6.37484E+04
    2048000  2.53131E+01  1.30096E-03  6.42946E+04
    3072000  2.52998E+01  1.07724E-03  6.24654E+04
    4096000  2.52854E+01  9.47518E-04  6.03770E+04
    5120000  2.52975E+01  8.40097E-04  6.14432E+04
    6144000  2.53172E+01  8.51909E-04  4.97464E+04
    7168000  2.53094E+01  7.74716E-04  5.15724E+04
    8192000  2.53063E+01  7.13686E-04  5.31383E+04
    9216000  2.52979E+01  6.65740E-04  5.42583E+04
   10240000  2.53060E+01  6.50956E-04  5.10236E+04
   11264000  2.53042E+01  6.19404E-04  5.12060E+04
   12288000  2.53090E+01  5.89394E-04  5.18515E+04
   13280224  2.53068E+01  5.62047E-04  5.27569E+04
mcnp       5     11/06/10 16:47:13     2    11891423     1569049895
```

Case 118

```
 Case 118
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
```

```
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.13473E-01 0.0105
tfc   12       1       1       1       1       1       1       1       1
    1024000  8.16647E-01  3.50300E-02  1.57450E+02
    2048000  8.07014E-01  2.46688E-02  1.58901E+02
    3072000  8.20790E-01  2.53846E-02  1.00061E+02
    4096000  8.21644E-01  2.02610E-02  1.17695E+02
    5120000  8.10657E-01  1.71821E-02  1.30989E+02
    6144000  8.05824E-01  1.54065E-02  1.35807E+02
    7168000  8.04820E-01  1.38350E-02  1.44451E+02
    8192000  8.05125E-01  1.28878E-02  1.45671E+02
    9216000  8.06705E-01  1.19206E-02  1.51347E+02
   10240000  8.14423E-01  1.14510E-02  1.47582E+02
   11264000  8.15120E-01  1.08575E-02  1.49249E+02
   11891423  8.13473E-01  1.05018E-02  1.51093E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.78101E-01 0.0119
tfc   12       1       1       1       1       1       1       1       1
    1024000  5.68649E-01  2.70763E-02  2.63539E+02
    2048000  5.64004E-01  1.86770E-02  2.77207E+02
    3072000  5.97373E-01  3.65209E-02  4.83417E+01
    4096000  5.94064E-01  2.81529E-02  6.09582E+01
    5120000  5.83137E-01  2.32939E-02  7.12693E+01
    6144000  5.79862E-01  2.01652E-02  7.92734E+01
    7168000  5.76354E-01  1.76917E-02  8.83357E+01
    8192000  5.74383E-01  1.58526E-02  9.62784E+01
    9216000  5.75610E-01  1.44715E-02  1.02695E+02
   10240000  5.79725E-01  1.34496E-02  1.06979E+02
   11264000  5.80013E-01  1.24693E-02  1.13158E+02
   11891423  5.78101E-01  1.19327E-02  1.17030E+02
tally  135    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.62304E-01 0.0069
tfc   12       1       1       1       1       1       1       1       1
    1024000  3.61447E-01  2.29193E-02  3.67810E+02
    2048000  3.60589E-01  1.65421E-02  3.53379E+02
    3072000  3.60857E-01  1.32355E-02  3.68068E+02
    4096000  3.65607E-01  1.23325E-02  3.17671E+02
    5120000  3.62159E-01  1.06509E-02  3.40891E+02
    6144000  3.61467E-01  1.02160E-02  3.08867E+02
    7168000  3.60673E-01  9.28064E-03  3.21011E+02
    8192000  3.60129E-01  8.53663E-03  3.32014E+02
    9216000  3.60018E-01  7.90574E-03  3.44103E+02
   10240000  3.62320E-01  7.55454E-03  3.39081E+02
   11264000  3.62891E-01  7.18889E-03  3.40446E+02
   11891423  3.62304E-01  6.94960E-03  3.45028E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.80591E-01 0.0070
tfc   12       1       1       1       1       1       1       1       1
    1024000  1.79728E-01  2.34003E-02  3.52842E+02
    2048000  1.78904E-01  1.58989E-02  3.82550E+02
    3072000  1.78952E-01  1.26651E-02  4.01968E+02
    4096000  1.81357E-01  1.23491E-02  3.16819E+02
    5120000  1.79992E-01  1.05692E-02  3.46182E+02
    6144000  1.80605E-01  1.05678E-02  2.88642E+02
    7168000  1.79731E-01  9.45845E-03  3.09055E+02
    8192000  1.79295E-01  8.60289E-03  3.26919E+02
    9216000  1.79316E-01  7.95125E-03  3.40176E+02
   10240000  1.80532E-01  7.71659E-03  3.24989E+02
   11264000  1.80801E-01  7.26250E-03  3.33579E+02
   11891423  1.80591E-01  7.01682E-03  3.38448E+02
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e         0
t         0
vals
  6.93062E-02 0.0065
tfc   12        1        1        1        1        1        1        1        1
    1024000  6.82011E-02  1.71941E-02  6.53526E+02
    2048000  6.93325E-02  2.12510E-02  2.14123E+02
    3072000  6.89095E-02  1.54142E-02  2.71371E+02
    4096000  6.95455E-02  1.26112E-02  3.03785E+02
    5120000  6.93036E-02  1.08876E-02  3.26228E+02
    6144000  6.93610E-02  1.00204E-02  3.21040E+02
    7168000  6.91335E-02  8.97579E-03  3.43187E+02
    8192000  6.91212E-02  8.27728E-03  3.53146E+02
    9216000  6.91103E-02  7.68765E-03  3.63904E+02
   10240000  6.93505E-02  7.16970E-03  3.76459E+02
   11264000  6.94802E-02  6.75756E-03  3.85294E+02
   11891423  6.93062E-02  6.49311E-03  3.95247E+02
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.62921E-02 0.0073
tfc   12        1        1        1        1        1        1        1        1
    1024000  3.53884E-02  1.62822E-02  7.28786E+02
    2048000  3.57962E-02  1.36863E-02  5.16234E+02
    3072000  3.56670E-02  1.07967E-02  5.53128E+02
    4096000  3.60135E-02  9.52446E-03  5.32596E+02
    5120000  3.60680E-02  1.03195E-02  3.63137E+02
    6144000  3.61588E-02  1.00142E-02  3.21440E+02
    7168000  3.59894E-02  8.92532E-03  3.47079E+02
    8192000  3.61536E-02  8.99096E-03  2.99307E+02
    9216000  3.63087E-02  8.78447E-03  2.78704E+02
   10240000  3.63510E-02  8.09478E-03  2.95331E+02
   11264000  3.63695E-02  7.55364E-03  3.08360E+02
   11891423  3.62921E-02  7.27698E-03  3.14681E+02
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
```

```
vals
  2.21080E-02 0.0075
tfc   12        1        1        1        1        1        1        1        1
    1024000  2.16205E-02  1.63294E-02  7.24578E+02
    2048000  2.17442E-02  1.29164E-02  5.79612E+02
    3072000  2.17711E-02  1.08746E-02  5.45225E+02
    4096000  2.18989E-02  9.19273E-03  5.71729E+02
    5120000  2.18905E-02  8.86589E-03  4.91974E+02
    6144000  2.19485E-02  8.50956E-03  4.45161E+02
    7168000  2.18557E-02  7.67909E-03  4.68874E+02
    8192000  2.19538E-02  8.38395E-03  3.44217E+02
    9216000  2.20988E-02  8.94925E-03  2.68535E+02
   10240000  2.21329E-02  8.24177E-03  2.84891E+02
   11264000  2.21320E-02  7.66995E-03  2.99079E+02
   11891423  2.21080E-02  7.50496E-03  2.95853E+02
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.48070E-02 0.0071
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.45458E-02  1.74840E-02  6.32040E+02
    2048000  1.46325E-02  1.38398E-02  5.04852E+02
    3072000  1.46063E-02  1.08442E-02  5.48294E+02
    4096000  1.47123E-02  9.22593E-03  5.67621E+02
    5120000  1.46638E-02  8.37346E-03  5.51539E+02
    6144000  1.46743E-02  7.71482E-03  5.41603E+02
    7168000  1.46254E-02  7.04199E-03  5.57551E+02
    8192000  1.46868E-02  7.59313E-03  4.19651E+02
    9216000  1.47592E-02  8.03948E-03  3.32750E+02
   10240000  1.47969E-02  7.49495E-03  3.44494E+02
   11264000  1.48043E-02  7.02314E-03  3.56704E+02
   11891423  1.48070E-02  7.09895E-03  3.30662E+02
mcnp       5      11/06/10 17:47:20      2     11339576      1553563158
```

Case 119

```
 Case 119
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  5.45549E-01 0.0192
tfc   12        1        1        1        1        1        1        1        1
    1024000  6.30265E-01  1.57541E-01  7.44558E+00
    2048000  5.80884E-01  8.68478E-02  1.22512E+01
    3072000  5.78925E-01  6.12892E-02  1.63974E+01
    4096000  5.65927E-01  4.74029E-02  2.05708E+01
    5120000  5.51189E-01  3.91795E-02  2.40870E+01
    6144000  5.49265E-01  3.33459E-02  2.76880E+01
    7168000  5.46456E-01  2.89761E-02  3.14259E+01
    8192000  5.43468E-01  2.57889E-02  3.47132E+01
    9216000  5.43049E-01  2.31247E-02  3.83565E+01
   10240000  5.46266E-01  2.10583E-02  4.16169E+01
   11264000  5.45916E-01  1.93542E-02  4.47880E+01
   11339576  5.45549E-01  1.92447E-02  4.49988E+01
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.82940E-01 0.0121
tfc   12        1        1        1        1        1        1        1        1
    1024000  3.76679E-01  2.37638E-02  3.27230E+02
    2048000  3.74128E-01  1.72527E-02  3.10444E+02
    3072000  3.96817E-01  3.51038E-02  4.99845E+01
    4096000  3.90284E-01  2.72662E-02  6.21746E+01
    5120000  3.82244E-01  2.25787E-02  7.25274E+01
    6144000  3.82906E-01  1.97210E-02  7.91627E+01
    7168000  3.81330E-01  1.73207E-02  8.79504E+01
    8192000  3.79405E-01  1.54898E-02  9.62205E+01
    9216000  3.80488E-01  1.41210E-02  1.02863E+02
   10240000  3.82120E-01  1.30535E-02  1.08309E+02
   11264000  3.83179E-01  1.21248E-02  1.14121E+02
   11339576  3.82940E-01  1.20589E-02  1.14606E+02
tally  135     2     1
f         1
d         1
u         0
s         0
m         1
```

```
c         0
e         0
t         0
vals
  2.39259E-01 0.0066
tfc   12        1        1        1        1        1        1        1        1
    1024000  2.41827E-01  2.38505E-02  3.24857E+02
    2048000  2.39691E-01  1.60476E-02  3.58820E+02
    3072000  2.40326E-01  1.28043E-02  3.75690E+02
    4096000  2.40798E-01  1.18544E-02  3.28926E+02
    5120000  2.38223E-01  1.03085E-02  3.47944E+02
    6144000  2.38030E-01  9.15843E-03  3.67059E+02
    7168000  2.37632E-01  8.35190E-03  3.78265E+02
    8192000  2.37215E-01  7.79038E-03  3.80400E+02
    9216000  2.37550E-01  7.24698E-03  3.90550E+02
   10240000  2.38269E-01  6.83461E-03  3.95083E+02
   11264000  2.39230E-01  6.59353E-03  3.85901E+02
   11339576  2.39259E-01  6.58911E-03  3.83856E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.18831E-01 0.0075
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.19781E-01  2.22091E-02  3.74650E+02
    2048000  1.21226E-01  3.02751E-02  1.00816E+02
    3072000  1.20623E-01  2.13273E-02  1.35416E+02
    4096000  1.19787E-01  1.66331E-02  1.67076E+02
    5120000  1.18620E-01  1.38679E-02  1.92256E+02
    6144000  1.18691E-01  1.19034E-02  2.17289E+02
    7168000  1.18383E-01  1.05281E-02  2.38049E+02
    8192000  1.18069E-01  9.49335E-03  2.56164E+02
    9216000  1.18114E-01  8.64981E-03  2.74143E+02
   10240000  1.18541E-01  8.03217E-03  2.86055E+02
   11264000  1.18882E-01  7.49493E-03  2.98660E+02
   11339576  1.18831E-01  7.45688E-03  2.99715E+02
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
```

```
t        0
vals
  4.58829E-02 0.0066
tfc   12       1       1       1       1       1       1       1       1
    1024000  4.56592E-02  1.99221E-02  4.65604E+02
    2048000  4.60492E-02  2.09643E-02  2.10249E+02
    3072000  4.60122E-02  1.54586E-02  2.57751E+02
    4096000  4.58784E-02  1.24503E-02  2.98197E+02
    5120000  4.55080E-02  1.05854E-02  3.29977E+02
    6144000  4.56591E-02  9.56443E-03  3.36558E+02
    7168000  4.57006E-02  9.01977E-03  3.24321E+02
    8192000  4.56466E-02  8.30222E-03  3.34942E+02
    9216000  4.56713E-02  7.60036E-03  3.55077E+02
   10240000  4.57715E-02  7.04864E-03  3.71454E+02
   11264000  4.58915E-02  6.60069E-03  3.85065E+02
   11339576  4.58829E-02  6.57206E-03  3.85851E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.38319E-02 0.0063
tfc   12       1       1       1       1       1       1       1       1
    1024000  2.35202E-02  1.54106E-02  7.78123E+02
    2048000  2.35468E-02  1.19005E-02  6.52479E+02
    3072000  2.36132E-02  9.87946E-03  6.31069E+02
    4096000  2.36468E-02  8.80460E-03  5.96268E+02
    5120000  2.35280E-02  7.86084E-03  5.98358E+02
    6144000  2.36580E-02  8.13669E-03  4.65031E+02
    7168000  2.36102E-02  7.36054E-03  4.87021E+02
    8192000  2.36909E-02  7.70070E-03  3.89312E+02
    9216000  2.37542E-02  7.26584E-03  3.88525E+02
   10240000  2.37834E-02  6.72844E-03  4.07649E+02
   11264000  2.38350E-02  6.30817E-03  4.21605E+02
   11339576  2.38319E-02  6.28718E-03  4.21610E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.44818E-02 0.0062
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.43843E-02  1.56060E-02  7.58755E+02
    2048000  1.43164E-02  1.11533E-02  7.42836E+02
    3072000  1.43463E-02  9.32782E-03  7.07918E+02
    4096000  1.43347E-02  8.07015E-03  7.09737E+02
    5120000  1.43270E-02  7.94600E-03  5.85601E+02
    6144000  1.43842E-02  7.56798E-03  5.37549E+02
    7168000  1.43470E-02  6.84348E-03  5.63395E+02
    8192000  1.44050E-02  7.74126E-03  3.85243E+02
    9216000  1.44342E-02  7.17604E-03  3.98310E+02
   10240000  1.44579E-02  6.65344E-03  4.16891E+02
   11264000  1.44820E-02  6.22667E-03  4.32714E+02
   11339576  1.44818E-02  6.21127E-03  4.31977E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.71878E-03 0.0060
tfc   12        1        1        1        1        1        1        1        1
    1024000  9.58789E-03  1.49579E-02  8.25928E+02
    2048000  9.57615E-03  1.08290E-02  7.87990E+02
    3072000  9.62586E-03  9.38034E-03  7.00013E+02
    4096000  9.63706E-03  8.42847E-03  6.50674E+02
    5120000  9.63549E-03  7.95640E-03  5.84072E+02
    6144000  9.65324E-03  7.20007E-03  5.93887E+02
    7168000  9.62294E-03  6.53603E-03  6.17644E+02
    8192000  9.65849E-03  7.16806E-03  4.49319E+02
    9216000  9.69033E-03  6.93428E-03  4.26567E+02
   10240000  9.69968E-03  6.42471E-03  4.47104E+02
   11264000  9.71851E-03  6.02930E-03  4.61506E+02
   11339576  9.71878E-03  6.01909E-03  4.60003E+02
mcnp       5     11/06/10 18:47:26     2    11273392     1544546926
```

Case 120

```
 Case 120
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  7.53936E+00 0.0193
tfc   12        1        1        1        1        1        1        1        1
    1024000  8.70319E+00  1.57576E-01  7.39387E+00
    2048000  8.02225E+00  8.68517E-02  1.21856E+01
    3072000  7.98893E+00  6.13348E-02  1.62521E+01
    4096000  7.81013E+00  4.74352E-02  2.04157E+01
    5120000  7.60884E+00  3.91954E-02  2.39276E+01
    6144000  7.58380E+00  3.33531E-02  2.75243E+01
    7168000  7.54474E+00  2.89829E-02  3.12361E+01
    8192000  7.50362E+00  2.57945E-02  3.44916E+01
    9216000  7.50046E+00  2.31225E-02  3.81253E+01
   10240000  7.54548E+00  2.10544E-02  4.13792E+01
   11264000  7.53968E+00  1.93528E-02  4.45303E+01
   11273392  7.53936E+00  1.93385E-02  4.45594E+01
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  5.29257E+00 0.0121
tfc   12        1        1        1        1        1        1        1        1
    1024000  5.20052E+00  2.37811E-02  3.24631E+02
    2048000  5.16972E+00  1.72629E-02  3.08443E+02
    3072000  5.47696E+00  3.51224E-02  4.95627E+01
    4096000  5.38645E+00  2.72813E-02  6.17215E+01
    5120000  5.27723E+00  2.25843E-02  7.20705E+01
    6144000  5.28676E+00  1.97239E-02  7.87049E+01
    7168000  5.26529E+00  1.73223E-02  8.74442E+01
    8192000  5.23886E+00  1.54908E-02  9.56352E+01
    9216000  5.25554E+00  1.41185E-02  1.02260E+02
   10240000  5.27826E+00  1.30506E-02  1.07698E+02
   11264000  5.29279E+00  1.21225E-02  1.13491E+02
   11273392  5.29257E+00  1.21141E-02  1.13554E+02
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e         0
t         0
vals
  3.30416E+00 0.0066
tfc   12        1        1        1        1        1        1        1        1
    1024000  3.33554E+00  2.38622E-02  3.22428E+02
    2048000  3.31208E+00  1.60553E-02  3.56591E+02
    3072000  3.31861E+00  1.28023E-02  3.73034E+02
    4096000  3.32272E+00  1.18438E-02  3.27479E+02
    5120000  3.28857E+00  1.02992E-02  3.46547E+02
    6144000  3.28607E+00  9.14943E-03  3.65764E+02
    7168000  3.28081E+00  8.34447E-03  3.76829E+02
    8192000  3.27526E+00  7.78413E-03  3.78746E+02
    9216000  3.28098E+00  7.24103E-03  3.88760E+02
   10240000  3.29093E+00  6.82928E-03  3.93294E+02
   11264000  3.30433E+00  6.58919E-03  3.84130E+02
   11273392  3.30416E+00  6.58565E-03  3.84228E+02
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.64244E+00 0.0075
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.65457E+00  2.22429E-02  3.71082E+02
    2048000  1.67530E+00  3.02676E-02  1.00334E+02
    3072000  1.66638E+00  2.13245E-02  1.34452E+02
    4096000  1.65428E+00  1.66340E-02  1.66024E+02
    5120000  1.63866E+00  1.38663E-02  1.91182E+02
    6144000  1.63948E+00  1.19020E-02  2.16148E+02
    7168000  1.63520E+00  1.05271E-02  2.36770E+02
    8192000  1.63098E+00  9.49190E-03  2.54719E+02
    9216000  1.63196E+00  8.64744E-03  2.72589E+02
   10240000  1.63777E+00  8.03019E-03  2.84456E+02
   11264000  1.64256E+00  7.49320E-03  2.97036E+02
   11273392  1.64244E+00  7.48841E-03  2.97172E+02
tally  155    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
```

```
vals
  6.34099E-01 0.0066
tfc   12        1        1        1        1        1        1        1        1
    1024000  6.30924E-01  2.01321E-02  4.52975E+02
    2048000  6.36636E-01  2.10050E-02  2.08334E+02
    3072000  6.35937E-01  1.54793E-02  2.55166E+02
    4096000  6.33855E-01  1.24662E-02  2.95596E+02
    5120000  6.28889E-01  1.05975E-02  3.27313E+02
    6144000  6.30854E-01  9.57324E-03  3.34096E+02
    7168000  6.31378E-01  9.02648E-03  3.22036E+02
    8192000  6.30662E-01  8.30738E-03  3.32537E+02
    9216000  6.31121E-01  7.60398E-03  3.52534E+02
   10240000  6.32466E-01  7.05195E-03  3.68848E+02
   11264000  6.34165E-01  6.60363E-03  3.82453E+02
   11273392  6.34099E-01  6.59953E-03  3.82614E+02
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.29332E-01 0.0063
tfc   12        1        1        1        1        1        1        1        1
    1024000  3.24539E-01  1.54562E-02  7.68507E+02
    2048000  3.25345E-01  1.19367E-02  6.45117E+02
    3072000  3.26203E-01  9.88850E-03  6.25262E+02
    4096000  3.26596E-01  8.80924E-03  5.91956E+02
    5120000  3.25071E-01  7.86570E-03  5.94147E+02
    6144000  3.26810E-01  8.13844E-03  4.62281E+02
    7168000  3.26130E-01  7.36183E-03  4.84139E+02
    8192000  3.27267E-01  7.70103E-03  3.86964E+02
    9216000  3.28208E-01  7.26516E-03  3.86182E+02
   10240000  3.28602E-01  6.72798E-03  4.05226E+02
   11264000  3.29360E-01  6.30801E-03  4.19139E+02
   11273392  3.29332E-01  6.30403E-03  4.19324E+02
tally  175     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.00146E-01 0.0062
```

```
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.98820E-01  1.56758E-02  7.47129E+02
    2048000  1.98061E-01  1.12253E-02  7.29474E+02
    3072000  1.98347E-01  9.35441E-03  6.98700E+02
    4096000  1.98103E-01  8.08627E-03  7.02539E+02
    5120000  1.98041E-01  7.95715E-03  5.80569E+02
    6144000  1.98780E-01  7.57437E-03  5.33698E+02
    7168000  1.98243E-01  6.84854E-03  5.59429E+02
    8192000  1.99051E-01  7.74322E-03  3.82759E+02
    9216000  1.99488E-01  7.17685E-03  3.95745E+02
   10240000  1.99801E-01  6.65436E-03  4.14242E+02
   11264000  2.00160E-01  6.22791E-03  4.29989E+02
   11273392  2.00146E-01  6.22395E-03  4.30183E+02
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.34344E-01 0.0060
tfc   12        1        1        1        1        1        1        1        1
    1024000  1.32491E-01  1.50189E-02  8.13909E+02
    2048000  1.32517E-01  1.09364E-02  7.68514E+02
    3072000  1.33107E-01  9.42251E-03  6.88636E+02
    4096000  1.33189E-01  8.45318E-03  6.42875E+02
    5120000  1.33194E-01  7.97392E-03  5.78130E+02
    6144000  1.33404E-01  7.21207E-03  5.88666E+02
    7168000  1.33012E-01  6.55105E-03  6.11391E+02
    8192000  1.33516E-01  7.17705E-03  4.45529E+02
    9216000  1.33972E-01  6.94040E-03  4.23169E+02
   10240000  1.34086E-01  6.43037E-03  4.43603E+02
   11264000  1.34355E-01  6.03462E-03  4.57977E+02
   11273392  1.34344E-01  6.03080E-03  4.58180E+02
mcnp        5      11/06/10 19:47:39      2     13810550      1852379643
```

Case 121

```
 Case 121
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  1.39577E+00 0.0146
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.32544E+00  3.43774E-02  1.90964E+02
    2048000  1.40373E+00  7.27383E-02  2.13314E+01
    3072000  1.37583E+00  5.07869E-02  2.91647E+01
    4096000  1.39687E+00  3.91235E-02  3.68229E+01
    5120000  1.40304E+00  3.25343E-02  4.25542E+01
    6144000  1.40649E+00  2.75697E-02  4.93861E+01
    7168000  1.40818E+00  2.41657E-02  5.50604E+01
    8192000  1.40837E+00  2.15352E-02  6.06606E+01
    9216000  1.40647E+00  1.94490E-02  6.60783E+01
   10240000  1.40023E+00  1.78461E-02  7.05831E+01
   11264000  1.39690E+00  1.67654E-02  7.26652E+01
   12288000  1.39802E+00  1.59088E-02  7.39875E+01
   13312000  1.39962E+00  1.50410E-02  7.64129E+01
   13810550  1.39577E+00  1.45998E-02  7.81740E+01
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.08730E-01 0.0094
tfc   14       1       1       1       1       1       1       1       1
    1024000  7.86449E-01  3.43307E-02  1.91484E+02
    2048000  7.76093E-01  2.22065E-02  2.28868E+02
    3072000  7.78038E-01  1.77863E-02  2.37788E+02
    4096000  7.84954E-01  1.54852E-02  2.35050E+02
    5120000  7.92500E-01  1.44992E-02  2.14258E+02
    6144000  8.00609E-01  1.32319E-02  2.14398E+02
    7168000  8.06958E-01  1.28391E-02  1.95060E+02
    8192000  8.13136E-01  1.27477E-02  1.73118E+02
    9216000  8.12520E-01  1.16954E-02  1.82735E+02
   10240000  8.09873E-01  1.08691E-02  1.90283E+02
   11264000  8.06964E-01  1.01884E-02  1.96761E+02
   12288000  8.07451E-01  9.75208E-03  1.96896E+02
   13312000  8.08452E-01  9.42965E-03  1.94416E+02
   13810550  8.08730E-01  9.38557E-03  1.89163E+02
tally  135    2    1
f         1
d         1
u         0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  4.42239E-01 0.0129
tfc   14        1        1        1        1        1        1        1        1
    1024000  4.25466E-01  2.67556E-02  3.15260E+02
    2048000  4.19377E-01  1.73340E-02  3.75620E+02
    3072000  4.21772E-01  1.48397E-02  3.41593E+02
    4096000  4.26603E-01  1.48974E-02  2.53963E+02
    5120000  4.29660E-01  1.32295E-02  2.57358E+02
    6144000  4.31611E-01  1.17975E-02  2.69704E+02
    7168000  4.36689E-01  1.35272E-02  1.75721E+02
    8192000  4.40326E-01  1.31803E-02  1.61939E+02
    9216000  4.40510E-01  1.20236E-02  1.72895E+02
   10240000  4.39484E-01  1.12072E-02  1.78976E+02
   11264000  4.38777E-01  1.05097E-02  1.84914E+02
   12288000  4.41859E-01  1.40325E-02  9.50964E+01
   13312000  4.42708E-01  1.33017E-02  9.77032E+01
   13810550  4.42239E-01  1.29203E-02  9.98190E+01
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.87235E-01 0.0093
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.82974E-01  2.46147E-02  3.72486E+02
    2048000  1.84047E-01  2.94599E-02  1.30042E+02
    3072000  1.82729E-01  2.10262E-02  1.70153E+02
    4096000  1.82846E-01  1.68649E-02  1.98165E+02
    5120000  1.84274E-01  1.47745E-02  2.06349E+02
    6144000  1.84502E-01  1.28328E-02  2.27942E+02
    7168000  1.86583E-01  1.40378E-02  1.63171E+02
    8192000  1.87591E-01  1.29280E-02  1.68324E+02
    9216000  1.88116E-01  1.18508E-02  1.77974E+02
   10240000  1.87486E-01  1.09402E-02  1.87816E+02
   11264000  1.87416E-01  1.02888E-02  1.92942E+02
   12288000  1.87539E-01  1.01857E-02  1.80487E+02
   13312000  1.87327E-01  9.58602E-03  1.88125E+02
   13810550  1.87235E-01  9.33096E-03  1.91383E+02
tally  155    2    1
f         1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.52676E-02 0.0100
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.75466E-02  7.65831E-02  3.84799E+01
    2048000  6.53118E-02  4.30774E-02  6.08200E+01
    3072000  6.43839E-02  2.98341E-02  8.45152E+01
    4096000  6.42213E-02  2.30793E-02  1.05815E+02
    5120000  6.43449E-02  1.89999E-02  1.24774E+02
    6144000  6.43149E-02  1.62011E-02  1.43014E+02
    7168000  6.50822E-02  1.60209E-02  1.25275E+02
    8192000  6.54039E-02  1.45105E-02  1.33610E+02
    9216000  6.54763E-02  1.31598E-02  1.44329E+02
   10240000  6.52183E-02  1.20876E-02  1.53854E+02
   11264000  6.53647E-02  1.15756E-02  1.52428E+02
   12288000  6.53043E-02  1.08647E-02  1.58633E+02
   13312000  6.52740E-02  1.02156E-02  1.65650E+02
   13810550  6.52676E-02  9.95094E-03  1.68278E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.29134E-02 0.0104
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.36105E-02  6.11256E-02  6.04022E+01
    2048000  3.31320E-02  4.34222E-02  5.98579E+01
    3072000  3.26608E-02  3.01576E-02  8.27120E+01
    4096000  3.25061E-02  2.33539E-02  1.03341E+02
    5120000  3.25416E-02  1.91988E-02  1.22202E+02
    6144000  3.25968E-02  1.69401E-02  1.30809E+02
    7168000  3.27973E-02  1.53624E-02  1.36246E+02
    8192000  3.29103E-02  1.39205E-02  1.45177E+02
    9216000  3.29428E-02  1.26485E-02  1.56233E+02
   10240000  3.29622E-02  1.28993E-02  1.35098E+02
   11264000  3.29866E-02  1.21271E-02  1.38879E+02
   12288000  3.29698E-02  1.13770E-02  1.44670E+02
   13312000  3.29057E-02  1.06438E-02  1.52592E+02
   13810550  3.29134E-02  1.04015E-02  1.54015E+02
```

```
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.99075E-02 0.0155
tfc   14       1       1       1       1       1       1       1
    1024000  1.97633E-02  3.76421E-02  1.59277E+02
    2048000  1.98277E-02  4.01697E-02  6.99437E+01
    3072000  1.95919E-02  2.81067E-02  9.52227E+01
    4096000  1.95145E-02  2.18645E-02  1.17900E+02
    5120000  1.95412E-02  1.80734E-02  1.37894E+02
    6144000  1.96542E-02  1.73251E-02  1.25060E+02
    7168000  1.97463E-02  1.54697E-02  1.34362E+02
    8192000  1.97758E-02  1.39272E-02  1.45037E+02
    9216000  1.97888E-02  1.26464E-02  1.56285E+02
   10240000  2.00169E-02  2.00595E-02  5.58654E+01
   11264000  1.99879E-02  1.84510E-02  5.99944E+01
   12288000  1.99693E-02  1.71208E-02  6.38830E+01
   13312000  1.99056E-02  1.59262E-02  6.81547E+01
   13810550  1.99075E-02  1.54712E-02  6.96161E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.32218E-02 0.0163
tfc   14       1       1       1       1       1       1       1
    1024000  1.28461E-02  2.89489E-02  2.69300E+02
    2048000  1.29379E-02  3.27752E-02  1.05064E+02
    3072000  1.28641E-02  2.33460E-02  1.38018E+02
    4096000  1.28668E-02  1.84029E-02  1.66426E+02
    5120000  1.29233E-02  1.55355E-02  1.86627E+02
    6144000  1.29636E-02  1.41614E-02  1.87178E+02
    7168000  1.30534E-02  1.30102E-02  1.89964E+02
    8192000  1.30758E-02  1.18047E-02  2.01880E+02
    9216000  1.30980E-02  1.08304E-02  2.13092E+02
   10240000  1.32844E-02  2.12278E-02  4.98857E+01
   11264000  1.32614E-02  1.94840E-02  5.38017E+01
   12288000  1.32581E-02  1.80743E-02  5.73201E+01
```

```
   13312000  1.32185E-02  1.68018E-02  6.12364E+01
   13810550  1.32218E-02  1.63232E-02  6.25382E+01
mcnp       5     11/06/10 20:47:49     2    13193090     1832325646
```

Case 122

```
 Case 122
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.32205E-01 0.0144
tfc   13       1       1       1       1       1       1       1       1
    1024000  8.90267E-01  3.30283E-02  1.97572E+02
    2048000  9.50521E-01  6.88470E-02  2.27651E+01
    3072000  9.32496E-01  4.79762E-02  3.12384E+01
    4096000  9.40785E-01  3.70724E-02  3.92017E+01
    5120000  9.38771E-01  3.09518E-02  4.49356E+01
    6144000  9.39614E-01  2.62111E-02  5.21908E+01
    7168000  9.43403E-01  2.29542E-02  5.83285E+01
    8192000  9.43900E-01  2.06861E-02  6.28490E+01
    9216000  9.39604E-01  1.86959E-02  6.83719E+01
   10240000  9.36515E-01  1.71533E-02  7.30894E+01
   11264000  9.30963E-01  1.59660E-02  7.66505E+01
   12288000  9.31347E-01  1.51365E-02  7.81214E+01
   13193090  9.32205E-01  1.43856E-02  8.05175E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.36355E-01 0.0085
tfc   13       1       1       1       1       1       1       1       1
    1024000  5.22205E-01  3.26755E-02  2.01861E+02
    2048000  5.24740E-01  2.12682E-02  2.38549E+02
    3072000  5.25888E-01  1.69184E-02  2.51202E+02
    4096000  5.27126E-01  1.45282E-02  2.55261E+02
```

```
    5120000  5.29584E-01  1.36137E-02  2.32279E+02
    6144000  5.34214E-01  1.23139E-02  2.36467E+02
    7168000  5.38809E-01  1.20614E-02  2.11257E+02
    8192000  5.40438E-01  1.13012E-02  2.10575E+02
    9216000  5.38792E-01  1.03748E-02  2.22030E+02
   10240000  5.37581E-01  9.68906E-03  2.29079E+02
   11264000  5.35473E-01  9.11185E-03  2.35339E+02
   12288000  5.35832E-01  8.76070E-03  2.33208E+02
   13193090  5.36355E-01  8.46537E-03  2.32517E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.95686E-01 0.0134
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.85537E-01  2.63055E-02  3.11461E+02
    2048000  2.89315E-01  2.44575E-02  1.80392E+02
    3072000  2.88444E-01  1.85125E-02  2.09804E+02
    4096000  2.89128E-01  1.65775E-02  1.96051E+02
    5120000  2.89383E-01  1.43251E-02  2.09780E+02
    6144000  2.90055E-01  1.24932E-02  2.29731E+02
    7168000  2.92843E-01  1.37165E-02  1.63350E+02
    8192000  2.94692E-01  1.32105E-02  1.54105E+02
    9216000  2.93892E-01  1.20068E-02  1.65775E+02
   10240000  2.92985E-01  1.11546E-02  1.72839E+02
   11264000  2.92149E-01  1.04255E-02  1.79767E+02
   12288000  2.94192E-01  1.36937E-02  9.54514E+01
   13193090  2.95686E-01  1.33902E-02  9.29331E+01
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.24873E-01 0.0104
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.22115E-01  2.35430E-02  3.88843E+02
    2048000  1.24689E-01  2.89419E-02  1.28821E+02
    3072000  1.23575E-01  2.07577E-02  1.66872E+02
    4096000  1.24801E-01  2.29320E-02  1.02453E+02
```

```
    5120000  1.24776E-01  1.92314E-02  1.16396E+02
    6144000  1.24679E-01  1.63830E-02  1.33591E+02
    7168000  1.25498E-01  1.62760E-02  1.16013E+02
    8192000  1.25921E-01  1.47403E-02  1.23777E+02
    9216000  1.25844E-01  1.33874E-02  1.33346E+02
   10240000  1.25351E-01  1.22635E-02  1.42994E+02
   11264000  1.25062E-01  1.13845E-02  1.50756E+02
   12288000  1.25008E-01  1.10607E-02  1.46305E+02
   13193090  1.24873E-01  1.04347E-02  1.53034E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.32374E-02 0.0098
tfc   13       1       1       1       1       1       1       1       1
    1024000  4.49717E-02  7.36772E-02  3.97037E+01
    2048000  4.36503E-02  4.03417E-02  6.63028E+01
    3072000  4.30991E-02  2.79538E-02  9.20152E+01
    4096000  4.28966E-02  2.18915E-02  1.12423E+02
    5120000  4.28400E-02  1.80518E-02  1.32106E+02
    6144000  4.28500E-02  1.53612E-02  1.51956E+02
    7168000  4.32004E-02  1.52195E-02  1.32680E+02
    8192000  4.33646E-02  1.37852E-02  1.41523E+02
    9216000  4.33429E-02  1.25036E-02  1.52862E+02
   10240000  4.32057E-02  1.14775E-02  1.63251E+02
   11264000  4.32916E-02  1.10004E-02  1.61468E+02
   12288000  4.32229E-02  1.03068E-02  1.68489E+02
   13193090  4.32374E-02  9.82737E-03  1.72533E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.17198E-02 0.0096
tfc   13       1       1       1       1       1       1       1       1
    1024000  2.23597E-02  5.90395E-02  6.18317E+01
    2048000  2.16197E-02  3.21608E-02  1.04325E+02
    3072000  2.14887E-02  2.25713E-02  1.41133E+02
    4096000  2.13903E-02  1.76985E-02  1.72001E+02
```

```
    5120000  2.13947E-02  1.47514E-02  1.97831E+02
    6144000  2.14782E-02  1.33814E-02  2.00247E+02
    7168000  2.15655E-02  1.24356E-02  1.98734E+02
    8192000  2.16369E-02  1.14035E-02  2.06813E+02
    9216000  2.16481E-02  1.04387E-02  2.19322E+02
   10240000  2.16915E-02  1.10819E-02  1.75115E+02
   11264000  2.17359E-02  1.05287E-02  1.76261E+02
   12288000  2.17069E-02  9.85953E-03  1.84123E+02
   13193090  2.17198E-02  9.58185E-03  1.81488E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.31168E-02 0.0148
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.31669E-02  3.69048E-02  1.58246E+02
    2048000  1.28813E-02  2.15307E-02  2.32768E+02
    3072000  1.28493E-02  1.60994E-02  2.77410E+02
    4096000  1.27945E-02  1.30439E-02  3.16661E+02
    5120000  1.28023E-02  1.12368E-02  3.40938E+02
    6144000  1.29010E-02  1.25400E-02  2.28020E+02
    7168000  1.29387E-02  1.15051E-02  2.32179E+02
    8192000  1.29641E-02  1.05078E-02  2.43572E+02
    9216000  1.29718E-02  9.66500E-03  2.55840E+02
   10240000  1.31383E-02  1.83309E-02  6.40001E+01
   11264000  1.31399E-02  1.68786E-02  6.85858E+01
   12288000  1.31187E-02  1.56367E-02  7.32035E+01
   13193090  1.31168E-02  1.48418E-02  7.56442E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.70504E-03 0.0160
tfc   13       1       1       1       1       1       1       1       1
    1024000  8.56764E-03  2.90894E-02  2.54698E+02
    2048000  8.43270E-03  1.76034E-02  3.48216E+02
    3072000  8.45494E-03  1.39658E-02  3.68644E+02
    4096000  8.44627E-03  1.15865E-02  4.01328E+02
```

```
    5120000  8.47427E-03  1.03382E-02  4.02780E+02
    6144000  8.51530E-03  1.02016E-02  3.44530E+02
    7168000  8.55629E-03  9.75912E-03  3.22689E+02
    8192000  8.57246E-03  8.98608E-03  3.33053E+02
    9216000  8.58649E-03  8.40860E-03  3.38006E+02
   10240000  8.71996E-03  1.99054E-02  5.42759E+01
   11264000  8.71661E-03  1.82688E-02  5.85443E+01
   12288000  8.70703E-03  1.69239E-02  6.24912E+01
   13193090  8.70504E-03  1.59813E-02  6.52410E+01
mcnp       5     11/06/10 21:48:02     2    13212593     1834995186
```

Case 123

```
 Case 123
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.28703E+01 0.0144
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.22961E+01  3.30280E-02  1.93120E+02
    2048000  1.31267E+01  6.88546E-02  2.24329E+01
    3072000  1.28718E+01  4.80027E-02  3.09157E+01
    4096000  1.29752E+01  3.71167E-02  3.88475E+01
    5120000  1.29494E+01  3.09847E-02  4.46355E+01
    6144000  1.29663E+01  2.62285E-02  5.19512E+01
    7168000  1.30212E+01  2.29651E-02  5.81372E+01
    8192000  1.30295E+01  2.06938E-02  6.26760E+01
    9216000  1.29711E+01  1.87017E-02  6.82403E+01
   10240000  1.29283E+01  1.71588E-02  7.29888E+01
   11264000  1.28512E+01  1.59717E-02  7.65897E+01
   12288000  1.28575E+01  1.51409E-02  7.81504E+01
   13212593  1.28703E+01  1.43728E-02  8.06800E+01
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  7.40636E+00 0.0085
tfc   13        1        1        1        1        1        1        1        1
    1024000  7.21251E+00  3.26752E-02  1.97313E+02
    2048000  7.24705E+00  2.12693E-02  2.35096E+02
    3072000  7.25958E+00  1.69241E-02  2.48715E+02
    4096000  7.27263E+00  1.45300E-02  2.53495E+02
    5120000  7.30711E+00  1.36180E-02  2.31071E+02
    6144000  7.37397E+00  1.23146E-02  2.35666E+02
    7168000  7.43870E+00  1.20617E-02  2.10755E+02
    8192000  7.46195E+00  1.13012E-02  2.10154E+02
    9216000  7.43958E+00  1.03745E-02  2.21755E+02
   10240000  7.42278E+00  9.68894E-03  2.28916E+02
   11264000  7.39315E+00  9.11220E-03  2.35302E+02
   12288000  7.39854E+00  8.76081E-03  2.33425E+02
   13212593  7.40636E+00  8.45894E-03  2.32925E+02
tally  135     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.08336E+00 0.0134
tfc   13        1        1        1        1        1        1        1        1
    1024000  3.94374E+00  2.63053E-02  3.04444E+02
    2048000  3.99581E+00  2.44579E-02  1.77793E+02
    3072000  3.98229E+00  1.85178E-02  2.07745E+02
    4096000  3.98978E+00  1.65841E-02  1.94590E+02
    5120000  3.99339E+00  1.43315E-02  2.08638E+02
    6144000  4.00460E+00  1.24940E-02  2.28950E+02
    7168000  4.04371E+00  1.37171E-02  1.62955E+02
    8192000  4.06959E+00  1.32108E-02  1.53789E+02
    9216000  4.05867E+00  1.20067E-02  1.65561E+02
   10240000  4.04609E+00  1.11547E-02  1.72708E+02
   11264000  4.03422E+00  1.04263E-02  1.79727E+02
   12288000  4.06261E+00  1.36949E-02  9.55248E+01
   13212593  4.08336E+00  1.33745E-02  9.31741E+01
tally  145     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  1.72469E+00 0.0104
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.68661E+00  2.35427E-02  3.80083E+02
    2048000  1.72212E+00  2.89423E-02  1.26966E+02
    3072000  1.70661E+00  2.07612E-02  1.65275E+02
    4096000  1.72272E+00  2.29425E-02  1.01677E+02
    5120000  1.72223E+00  1.92418E-02  1.15740E+02
    6144000  1.72182E+00  1.63849E-02  1.33122E+02
    7168000  1.73333E+00  1.62761E-02  1.15742E+02
    8192000  1.73928E+00  1.47400E-02  1.23534E+02
    9216000  1.73823E+00  1.33869E-02  1.33182E+02
   10240000  1.73138E+00  1.22634E-02  1.42892E+02
   11264000  1.72722E+00  1.13852E-02  1.50727E+02
   12288000  1.72652E+00  1.10610E-02  1.46436E+02
   13212593  1.72469E+00  1.04226E-02  1.53424E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.97189E-01 0.0098
tfc   13       1       1       1       1       1       1       1       1
    1024000  6.21135E-01  7.36764E-02  3.88093E+01
    2048000  6.02868E-01  4.03423E-02  6.53478E+01
    3072000  5.95106E-01  2.79609E-02  9.11187E+01
    4096000  5.92067E-01  2.19033E-02  1.11554E+02
    5120000  5.91243E-01  1.80627E-02  1.31343E+02
    6144000  5.91814E-01  1.53653E-02  1.51377E+02
    7168000  5.96719E-01  1.52210E-02  1.32344E+02
    8192000  5.99014E-01  1.37864E-02  1.41216E+02
    9216000  5.98718E-01  1.25045E-02  1.52642E+02
   10240000  5.96807E-01  1.14785E-02  1.63101E+02
   11264000  5.97923E-01  1.10021E-02  1.61408E+02
   12288000  5.96987E-01  1.03081E-02  1.68609E+02
   13212593  5.97189E-01  9.81682E-03  1.72945E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  3.00006E-01 0.0096
tfc   13       1       1       1       1       1       1       1       1
    1024000  3.08825E-01  5.90388E-02  6.04390E+01
    2048000  2.98595E-01  3.21614E-02  1.02821E+02
    3072000  2.96696E-01  2.25781E-02  1.39744E+02
    4096000  2.95226E-01  1.77075E-02  1.70683E+02
    5120000  2.95262E-01  1.47600E-02  1.96699E+02
    6144000  2.96669E-01  1.33891E-02  1.99359E+02
    7168000  2.97904E-01  1.24405E-02  1.98114E+02
    8192000  2.98900E-01  1.14077E-02  2.06245E+02
    9216000  2.99054E-01  1.04422E-02  2.18887E+02
   10240000  2.99645E-01  1.10843E-02  1.74910E+02
   11264000  3.00227E-01  1.05314E-02  1.76156E+02
   12288000  2.99830E-01  9.86181E-03  1.84214E+02
   13212593  3.00006E-01  9.57249E-03  1.81886E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.81180E-01 0.0148
tfc   13       1       1       1       1       1       1       1       1
    1024000  1.81858E-01  3.69043E-02  1.54681E+02
    2048000  1.77907E-01  2.15311E-02  2.29414E+02
    3072000  1.77394E-01  1.61052E-02  2.74648E+02
    4096000  1.76577E-01  1.30491E-02  3.14298E+02
    5120000  1.76676E-01  1.12422E-02  3.39054E+02
    6144000  1.78208E-01  1.25520E-02  2.26838E+02
    7168000  1.78745E-01  1.15137E-02  2.31295E+02
    8192000  1.79099E-01  1.05153E-02  2.42740E+02
    9216000  1.79205E-01  9.67128E-03  2.55175E+02
   10240000  1.81500E-01  1.83305E-02  6.39555E+01
   11264000  1.81503E-01  1.68797E-02  6.85711E+01
   12288000  1.81212E-01  1.56375E-02  7.32656E+01
   13212593  1.81180E-01  1.48227E-02  7.58569E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  1.20243E-01 0.0160
tfc   13        1        1        1        1        1        1        1        1
    1024000  1.18334E-01  2.90890E-02  2.48962E+02
    2048000  1.16466E-01  1.76037E-02  3.43198E+02
    3072000  1.16724E-01  1.39709E-02  3.64972E+02
    4096000  1.16564E-01  1.15902E-02  3.98399E+02
    5120000  1.16945E-01  1.03428E-02  4.00591E+02
    6144000  1.17629E-01  1.02220E-02  3.42036E+02
    7168000  1.18206E-01  9.77365E-03  3.20980E+02
    8192000  1.18432E-01  8.99862E-03  3.31460E+02
    9216000  1.18625E-01  8.41900E-03  3.36732E+02
   10240000  1.20465E-01  1.99048E-02  5.42391E+01
   11264000  1.20407E-01  1.82699E-02  5.85327E+01
   12288000  1.20275E-01  1.69247E-02  6.25450E+01
   13212593  1.20243E-01  1.59605E-02  6.54269E+01
mcnp        5      11/06/10 22:48:15      2      5118359       755736134
```

Case 124

```
 Case 124
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.05955E+01 0.0066
tfc   20        1        1        1        1        1        1        1        1
     256000  1.03189E+01  2.78096E-02  4.29187E+02
     512000  1.03169E+01  2.03641E-02  4.00319E+02
     768000  1.03143E+01  1.71664E-02  3.75918E+02
    1024000  1.05551E+01  1.52051E-02  3.59977E+02
    1280000  1.05457E+01  1.34828E-02  3.66369E+02
    1536000  1.06364E+01  1.23291E-02  3.65252E+02
    1792000  1.06177E+01  1.13068E-02  3.71711E+02
    2048000  1.05591E+01  1.05693E-02  3.72357E+02
    2304000  1.05549E+01  9.93341E-03  3.74893E+02
    2560000  1.06219E+01  9.43550E-03  3.74048E+02
    2816000  1.05894E+01  9.04253E-03  3.70434E+02
    3072000  1.05864E+01  8.63273E-03  3.72510E+02
    3328000  1.05703E+01  8.25877E-03  3.75780E+02
    3584000  1.05908E+01  7.91712E-03  3.79811E+02
    3840000  1.05994E+01  7.61968E-03  3.82716E+02
```

```
    4096000  1.05902E+01  7.35752E-03  3.84783E+02
    4352000  1.06137E+01  7.12943E-03  3.85501E+02
    4608000  1.06158E+01  6.93444E-03  3.84856E+02
    4864000  1.06079E+01  6.73243E-03  3.86859E+02
    5118359  1.05955E+01  6.56622E-03  3.86504E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.81634E+00 0.0101
tfc   20       1       1       1       1       1       1       1       1
     256000  8.60055E+00  2.06809E-02  7.76059E+02
     512000  8.61149E+00  1.53642E-02  7.03260E+02
     768000  9.09824E+00  5.93221E-02  3.14788E+01
    1024000  9.10715E+00  4.48506E-02  4.13731E+01
    1280000  9.03557E+00  3.63929E-02  5.02858E+01
    1536000  9.03248E+00  3.05491E-02  5.94922E+01
    1792000  8.98750E+00  2.64703E-02  6.78217E+01
    2048000  8.92117E+00  2.34645E-02  7.55496E+01
    2304000  8.90043E+00  2.10295E-02  8.36461E+01
    2560000  8.92342E+00  1.90005E-02  9.22414E+01
    2816000  8.89247E+00  1.74242E-02  9.97660E+01
    3072000  8.87865E+00  1.60831E-02  1.07323E+02
    3328000  8.85272E+00  1.49652E-02  1.14446E+02
    3584000  8.86198E+00  1.39583E-02  1.22190E+02
    3840000  8.86123E+00  1.31014E-02  1.29454E+02
    4096000  8.84062E+00  1.23706E-02  1.36112E+02
    4352000  8.84534E+00  1.17010E-02  1.43116E+02
    4608000  8.84352E+00  1.11128E-02  1.49856E+02
    4864000  8.82895E+00  1.05959E-02  1.56180E+02
    5118359  8.81634E+00  1.01347E-02  1.62242E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.73326E+00 0.0039
tfc   20       1       1       1       1       1       1       1       1
     256000  6.76816E+00  2.43398E-02  5.60274E+02
```

```
     512000  6.76108E+00  1.76973E-02  5.30059E+02
     768000  6.69553E+00  1.31360E-02  6.41985E+02
    1024000  6.73139E+00  1.06806E-02  7.29564E+02
    1280000  6.73320E+00  9.16023E-03  7.93718E+02
    1536000  6.75580E+00  8.10534E-03  8.45113E+02
    1792000  6.75443E+00  7.31982E-03  8.86924E+02
    2048000  6.73679E+00  6.74258E-03  9.14960E+02
    2304000  6.73591E+00  6.25934E-03  9.44164E+02
    2560000  6.75532E+00  5.85259E-03  9.72211E+02
    2816000  6.75324E+00  5.54429E-03  9.85369E+02
    3072000  6.75323E+00  5.26277E-03  1.00232E+03
    3328000  6.74228E+00  5.01011E-03  1.02111E+03
    3584000  6.76053E+00  4.88682E-03  9.96894E+02
    3840000  6.76033E+00  4.68291E-03  1.01326E+03
    4096000  6.74875E+00  4.50307E-03  1.02721E+03
    4352000  6.75029E+00  4.33875E-03  1.04089E+03
    4608000  6.75104E+00  4.19397E-03  1.05214E+03
    4864000  6.74287E+00  4.06957E-03  1.05877E+03
    5118359  6.73326E+00  3.94941E-03  1.06836E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.32475E+00 0.0031
tfc   20       1       1       1       1       1       1       1
     256000  4.27312E+00  1.25980E-02  2.09138E+03
     512000  4.30257E+00  9.24975E-03  1.94034E+03
     768000  4.27701E+00  7.46807E-03  1.98626E+03
    1024000  4.30002E+00  6.76819E-03  1.81681E+03
    1280000  4.30463E+00  5.96952E-03  1.86896E+03
    1536000  4.31622E+00  5.40533E-03  1.90026E+03
    1792000  4.31912E+00  4.96108E-03  1.93079E+03
    2048000  4.31801E+00  4.68146E-03  1.89798E+03
    2304000  4.31965E+00  4.38649E-03  1.92251E+03
    2560000  4.32843E+00  4.13784E-03  1.94496E+03
    2816000  4.32836E+00  3.93005E-03  1.96108E+03
    3072000  4.32891E+00  3.74881E-03  1.97537E+03
    3328000  4.32566E+00  3.59338E-03  1.98499E+03
    3584000  4.33280E+00  3.45484E-03  1.99456E+03
    3840000  4.33226E+00  3.33245E-03  2.00088E+03
    4096000  4.32917E+00  3.25263E-03  1.96884E+03
    4352000  4.33544E+00  3.43657E-03  1.65915E+03
    4608000  4.33609E+00  3.31921E-03  1.67978E+03
    4864000  4.33080E+00  3.20869E-03  1.70311E+03
```

```
    5118359  4.32475E+00  3.11936E-03  1.71259E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.21384E+00 0.0025
tfc   20       1       1       1       1       1       1       1
     256000  2.18557E+00  1.05034E-02  3.00869E+03
     512000  2.20221E+00  7.49942E-03  2.95176E+03
     768000  2.20072E+00  6.69090E-03  2.47448E+03
    1024000  2.20285E+00  5.64324E-03  2.61335E+03
    1280000  2.20675E+00  4.96533E-03  2.70136E+03
    1536000  2.20850E+00  4.47594E-03  2.77133E+03
    1792000  2.21828E+00  4.89124E-03  1.98632E+03
    2048000  2.21762E+00  4.46534E-03  2.08615E+03
    2304000  2.21797E+00  4.12772E-03  2.17113E+03
    2560000  2.22041E+00  3.85519E-03  2.24061E+03
    2816000  2.22126E+00  3.64464E-03  2.28024E+03
    3072000  2.22000E+00  3.44805E-03  2.33500E+03
    3328000  2.21868E+00  3.28929E-03  2.36897E+03
    3584000  2.22063E+00  3.13921E-03  2.41581E+03
    3840000  2.21968E+00  3.01121E-03  2.45057E+03
    4096000  2.21865E+00  2.90342E-03  2.47092E+03
    4352000  2.21869E+00  2.79573E-03  2.50694E+03
    4608000  2.21910E+00  2.70732E-03  2.52490E+03
    4864000  2.21754E+00  2.61909E-03  2.55622E+03
    5118359  2.21384E+00  2.54308E-03  2.57671E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.32180E+00 0.0023
tfc   20       1       1       1       1       1       1       1
     256000  1.30057E+00  9.59209E-03  3.60752E+03
     512000  1.31556E+00  7.22285E-03  3.18214E+03
     768000  1.31734E+00  6.83877E-03  2.36863E+03
    1024000  1.31822E+00  5.69170E-03  2.56904E+03
    1280000  1.32053E+00  4.96219E-03  2.70479E+03
```

```
    1536000  1.32073E+00  4.43720E-03  2.81994E+03
    1792000  1.32233E+00  4.06888E-03  2.87036E+03
    2048000  1.32276E+00  3.75444E-03  2.95096E+03
    2304000  1.32304E+00  3.50041E-03  3.01903E+03
    2560000  1.32430E+00  3.29873E-03  3.06030E+03
    2816000  1.32506E+00  3.13965E-03  3.07277E+03
    3072000  1.32477E+00  3.00348E-03  3.07740E+03
    3328000  1.32426E+00  2.89436E-03  3.05956E+03
    3584000  1.32516E+00  2.77141E-03  3.09956E+03
    3840000  1.32461E+00  2.66577E-03  3.12683E+03
    4096000  1.32419E+00  2.57661E-03  3.13748E+03
    4352000  1.32449E+00  2.48960E-03  3.16137E+03
    4608000  1.32505E+00  2.44157E-03  3.10444E+03
    4864000  1.32448E+00  2.36747E-03  3.12844E+03
    5118359  1.32180E+00  2.29892E-03  3.15310E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.65770E-01 0.0023
tfc   20       1       1       1       1       1       1       1       1
     256000  8.53782E-01  1.03239E-02  3.11418E+03
     512000  8.62601E-01  7.72047E-03  2.78515E+03
     768000  8.61019E-01  6.03414E-03  3.04244E+03
    1024000  8.61830E-01  5.15221E-03  3.13521E+03
    1280000  8.63275E-01  4.50629E-03  3.27975E+03
    1536000  8.63368E-01  4.06952E-03  3.35252E+03
    1792000  8.65185E-01  3.99755E-03  2.97372E+03
    2048000  8.65812E-01  3.70272E-03  3.03397E+03
    2304000  8.65852E-01  3.44443E-03  3.11795E+03
    2560000  8.66446E-01  3.24005E-03  3.17215E+03
    2816000  8.66793E-01  3.06950E-03  3.21482E+03
    3072000  8.66549E-01  2.92986E-03  3.23400E+03
    3328000  8.66517E-01  2.91596E-03  3.01439E+03
    3584000  8.67171E-01  2.78936E-03  3.05981E+03
    3840000  8.67169E-01  2.70088E-03  3.04607E+03
    4096000  8.67394E-01  2.63150E-03  3.00796E+03
    4352000  8.67660E-01  2.54518E-03  3.02480E+03
    4608000  8.67844E-01  2.46636E-03  3.04234E+03
    4864000  8.67640E-01  2.39108E-03  3.06696E+03
    5118359  8.65770E-01  2.31784E-03  3.10184E+03
tally  185    2    1
f        1
d        1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.06034E-01 0.0026
tfc   20        1        1        1        1        1        1        1        1
     256000  6.03782E-01  1.84702E-02  9.72957E+02
     512000  6.05729E-01  1.05212E-02  1.49969E+03
     768000  6.05379E-01  8.21340E-03  1.64213E+03
    1024000  6.06500E-01  6.97129E-03  1.71249E+03
    1280000  6.06636E-01  5.86222E-03  1.93800E+03
    1536000  6.06041E-01  5.12389E-03  2.11474E+03
    1792000  6.06179E-01  4.58915E-03  2.25643E+03
    2048000  6.06615E-01  4.23161E-03  2.32296E+03
    2304000  6.06551E-01  3.90661E-03  2.42385E+03
    2560000  6.06620E-01  3.63387E-03  2.52184E+03
    2816000  6.06546E-01  3.40608E-03  2.61084E+03
    3072000  6.06210E-01  3.21924E-03  2.67871E+03
    3328000  6.06592E-01  3.28020E-03  2.38212E+03
    3584000  6.07722E-01  3.23991E-03  2.26796E+03
    3840000  6.07396E-01  3.09623E-03  2.31784E+03
    4096000  6.07359E-01  2.99005E-03  2.32982E+03
    4352000  6.07330E-01  2.86912E-03  2.38033E+03
    4608000  6.07596E-01  2.77992E-03  2.39474E+03
    4864000  6.07369E-01  2.67856E-03  2.44395E+03
    5118359  6.06034E-01  2.58695E-03  2.49005E+03
mcnp       5      11/06/10 23:48:58      2      4940832       754670326
```

Case 125

```
 Case 125
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  7.22803E+00 0.0065
tfc   20        1        1        1        1        1        1        1        1
     256000  7.02469E+00  2.70949E-02  4.36689E+02
     512000  7.05968E+00  2.00417E-02  3.98418E+02
```

```
     768000  7.05071E+00  1.68842E-02  3.74583E+02
    1024000  7.22000E+00  1.49702E-02  3.57914E+02
    1280000  7.21754E+00  1.32588E-02  3.65220E+02
    1536000  7.27295E+00  1.20847E-02  3.66559E+02
    1792000  7.26238E+00  1.11040E-02  3.72171E+02
    2048000  7.23348E+00  1.03677E-02  3.73679E+02
    2304000  7.22601E+00  9.73156E-03  3.77125E+02
    2560000  7.26707E+00  9.22889E-03  3.77543E+02
    2816000  7.23612E+00  8.75085E-03  3.81894E+02
    3072000  7.23012E+00  8.34723E-03  3.84538E+02
    3328000  7.21453E+00  7.98559E-03  3.87922E+02
    3584000  7.22846E+00  7.65767E-03  3.91773E+02
    3840000  7.23381E+00  7.37609E-03  3.94108E+02
    4096000  7.22589E+00  7.12215E-03  3.96254E+02
    4352000  7.23660E+00  6.90358E-03  3.96875E+02
    4608000  7.23780E+00  6.71295E-03  3.96447E+02
    4864000  7.22953E+00  6.51625E-03  3.98625E+02
    4940832  7.22803E+00  6.47428E-03  3.97538E+02
tally  125     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.01874E+00 0.0099
tfc   20       1       1       1       1       1       1       1       1
     256000  5.86457E+00  2.01421E-02  7.90203E+02
     512000  5.89063E+00  1.49463E-02  7.16379E+02
     768000  6.19439E+00  5.58711E-02  3.42087E+01
    1024000  6.20867E+00  4.22160E-02  4.50067E+01
    1280000  6.16436E+00  3.42481E-02  5.47383E+01
    1536000  6.16185E+00  2.87627E-02  6.47072E+01
    1792000  6.13480E+00  2.49227E-02  7.38768E+01
    2048000  6.09633E+00  2.20790E-02  8.23959E+01
    2304000  6.07888E+00  1.98041E-02  9.10623E+01
    2560000  6.09307E+00  1.79039E-02  1.00316E+02
    2816000  6.07392E+00  1.64200E-02  1.08467E+02
    3072000  6.06423E+00  1.51622E-02  1.16547E+02
    3328000  6.04381E+00  1.41170E-02  1.24129E+02
    3584000  6.05228E+00  1.31703E-02  1.32445E+02
    3840000  6.05162E+00  1.23669E-02  1.40198E+02
    4096000  6.03578E+00  1.16830E-02  1.47260E+02
    4352000  6.03534E+00  1.10592E-02  1.54653E+02
    4608000  6.03433E+00  1.05061E-02  1.61855E+02
    4864000  6.02333E+00  1.00203E-02  1.68576E+02
    4940832  6.01874E+00  9.88864E-03  1.70408E+02
```

```
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.60504E+00 0.0041
tfc   20       1       1       1       1       1       1       1       1
     256000  4.72596E+00  3.47532E-02  2.65434E+02
     512000  4.68097E+00  2.13149E-02  3.52245E+02
     768000  4.61495E+00  1.53739E-02  4.51799E+02
    1024000  4.63225E+00  1.22093E-02  5.38082E+02
    1280000  4.62595E+00  1.02887E-02  6.06522E+02
    1536000  4.63353E+00  8.96699E-03  6.65762E+02
    1792000  4.63126E+00  8.01262E-03  7.14743E+02
    2048000  4.62149E+00  7.33300E-03  7.46966E+02
    2304000  4.61604E+00  6.75015E-03  7.83831E+02
    2560000  4.62681E+00  6.26438E-03  8.19423E+02
    2816000  4.62534E+00  5.89284E-03  8.42158E+02
    3072000  4.62419E+00  5.56319E-03  8.65718E+02
    3328000  4.61435E+00  5.27240E-03  8.89902E+02
    3584000  4.62629E+00  5.09858E-03  8.83750E+02
    3840000  4.62574E+00  4.87060E-03  9.03862E+02
    4096000  4.61578E+00  4.66925E-03  9.21939E+02
    4352000  4.61491E+00  4.48712E-03  9.39438E+02
    4608000  4.61534E+00  4.32642E-03  9.54453E+02
    4864000  4.60900E+00  4.18572E-03  9.66097E+02
    4940832  4.60504E+00  4.14624E-03  9.69287E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.95519E+00 0.0031
tfc   20       1       1       1       1       1       1       1       1
     256000  2.91538E+00  1.20967E-02  2.19084E+03
     512000  2.94520E+00  8.95248E-03  1.99675E+03
     768000  2.92504E+00  7.23943E-03  2.03752E+03
    1024000  2.94364E+00  6.55970E-03  1.86408E+03
    1280000  2.94502E+00  5.78777E-03  1.91665E+03
    1536000  2.95081E+00  5.24053E-03  1.94922E+03
```

```
    1792000  2.95355E+00  4.81387E-03  1.98021E+03
    2048000  2.95247E+00  4.53933E-03  1.94931E+03
    2304000  2.95171E+00  4.25173E-03  1.97569E+03
    2560000  2.95717E+00  4.01040E-03  1.99935E+03
    2816000  2.95745E+00  3.81030E-03  2.01430E+03
    3072000  2.95806E+00  3.63926E-03  2.02301E+03
    3328000  2.95544E+00  3.48876E-03  2.03243E+03
    3584000  2.96070E+00  3.35471E-03  2.04135E+03
    3840000  2.96040E+00  3.23620E-03  2.04737E+03
    4096000  2.95704E+00  3.15423E-03  2.02027E+03
    4352000  2.96028E+00  3.31547E-03  1.72073E+03
    4608000  2.96088E+00  3.20384E-03  1.74048E+03
    4864000  2.95734E+00  3.09817E-03  1.76339E+03
    4940832  2.95519E+00  3.07633E-03  1.76074E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.51328E+00 0.0025
tfc   20       1       1       1       1       1       1       1       1
     256000  1.49465E+00  9.98287E-03  3.21689E+03
     512000  1.50802E+00  7.21577E-03  3.07358E+03
     768000  1.50540E+00  6.39781E-03  2.60885E+03
    1024000  1.50752E+00  5.41777E-03  2.73269E+03
    1280000  1.50998E+00  4.81792E-03  2.76595E+03
    1536000  1.51019E+00  4.34634E-03  2.83378E+03
    1792000  1.51642E+00  4.68738E-03  2.08852E+03
    2048000  1.51572E+00  4.28361E-03  2.18899E+03
    2304000  1.51543E+00  3.96425E-03  2.27263E+03
    2560000  1.51706E+00  3.70493E-03  2.34263E+03
    2816000  1.51772E+00  3.50469E-03  2.38092E+03
    3072000  1.51683E+00  3.32173E-03  2.42827E+03
    3328000  1.51581E+00  3.17423E-03  2.45517E+03
    3584000  1.51732E+00  3.02979E-03  2.50266E+03
    3840000  1.51686E+00  2.90805E-03  2.53549E+03
    4096000  1.51605E+00  2.80663E-03  2.55167E+03
    4352000  1.51563E+00  2.70328E-03  2.58834E+03
    4608000  1.51591E+00  2.61881E-03  2.60497E+03
    4864000  1.51462E+00  2.53343E-03  2.63720E+03
    4940832  1.51328E+00  2.51078E-03  2.64330E+03
tally  165    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  9.04177E-01 0.0023
tfc   20       1       1       1       1       1       1       1       1
     256000  8.90593E-01  9.29136E-03  3.71354E+03
     512000  8.99989E-01  6.95226E-03  3.31099E+03
     768000  9.01973E-01  6.60697E-03  2.44629E+03
    1024000  9.01964E-01  5.48125E-03  2.66976E+03
    1280000  9.03290E-01  4.79071E-03  2.79747E+03
    1536000  9.03365E-01  4.30498E-03  2.88849E+03
    1792000  9.04542E-01  3.94625E-03  2.94667E+03
    2048000  9.04602E-01  3.64168E-03  3.02874E+03
    2304000  9.04382E-01  3.39621E-03  3.09643E+03
    2560000  9.05178E-01  3.19951E-03  3.14121E+03
    2816000  9.05848E-01  3.04821E-03  3.14742E+03
    3072000  9.05287E-01  2.90432E-03  3.17640E+03
    3328000  9.04847E-01  2.80592E-03  3.14201E+03
    3584000  9.05679E-01  2.68964E-03  3.17571E+03
    3840000  9.05383E-01  2.58838E-03  3.20045E+03
    4096000  9.05150E-01  2.50921E-03  3.19244E+03
    4352000  9.05120E-01  2.42733E-03  3.21031E+03
    4608000  9.05468E-01  2.37974E-03  3.15466E+03
    4864000  9.05063E-01  2.31489E-03  3.15864E+03
    4940832  9.04177E-01  2.29404E-03  3.16636E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.93701E-01 0.0029
tfc   20       1       1       1       1       1       1       1       1
     256000  5.81883E-01  8.91675E-03  4.03212E+03
     512000  5.88659E-01  7.09209E-03  3.18172E+03
     768000  5.91599E-01  8.20622E-03  1.58571E+03
    1024000  5.91521E-01  6.60011E-03  1.84132E+03
    1280000  5.91871E-01  5.56706E-03  2.07163E+03
    1536000  5.91841E-01  4.92037E-03  2.21115E+03
    1792000  5.92901E-01  4.60641E-03  2.16259E+03
    2048000  5.93085E-01  4.20104E-03  2.27589E+03
    2304000  5.92806E-01  3.86373E-03  2.39242E+03
    2560000  5.93073E-01  3.59450E-03  2.48878E+03
```

```
    2816000  5.93445E-01  3.38127E-03  2.55790E+03
    3072000  5.93082E-01  3.19967E-03  2.61707E+03
    3328000  5.93355E-01  3.39680E-03  2.14397E+03
    3584000  5.93802E-01  3.21943E-03  2.21651E+03
    3840000  5.93701E-01  3.08378E-03  2.25476E+03
    4096000  5.93796E-01  2.97723E-03  2.26762E+03
    4352000  5.93634E-01  2.85339E-03  2.32317E+03
    4608000  5.93703E-01  2.74826E-03  2.36536E+03
    4864000  5.94305E-01  2.94407E-03  1.95283E+03
    4940832  5.93701E-01  2.91067E-03  1.96687E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.15382E-01 0.0030
tfc   20       1       1       1       1       1       1       1       1
     256000  4.12706E-01  1.74543E-02  1.05231E+03
     512000  4.13475E-01  9.91607E-03  1.62754E+03
     768000  4.14087E-01  7.88301E-03  1.71841E+03
    1024000  4.14838E-01  6.68122E-03  1.79688E+03
    1280000  4.14850E-01  5.62821E-03  2.02686E+03
    1536000  4.14415E-01  4.92875E-03  2.20363E+03
    1792000  4.14514E-01  4.41733E-03  2.35169E+03
    2048000  4.15400E-01  4.41804E-03  2.05780E+03
    2304000  4.15196E-01  4.05939E-03  2.16735E+03
    2560000  4.15185E-01  3.76143E-03  2.27278E+03
    2816000  4.15219E-01  3.51743E-03  2.36370E+03
    3072000  4.14855E-01  3.31364E-03  2.44014E+03
    3328000  4.15406E-01  3.83799E-03  1.67939E+03
    3584000  4.16178E-01  3.71220E-03  1.66711E+03
    3840000  4.15919E-01  3.52591E-03  1.72475E+03
    4096000  4.15846E-01  3.38136E-03  1.75797E+03
    4352000  4.15651E-01  3.22860E-03  1.81457E+03
    4608000  4.15915E-01  3.12394E-03  1.83066E+03
    4864000  4.15758E-01  3.00270E-03  1.87731E+03
    4940832  4.15382E-01  2.96918E-03  1.89012E+03
mcnp       5     11/07/10 00:49:12     2    13711805      524560345
```

Case 126

```
 Case 126
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.37294E+03 0.0015
tfc   14        1        1        1        1        1        1        1        1
    1024000  4.36604E+03  4.12617E-03  3.94105E+04
    2048000  4.35489E+03  2.66466E-03  4.72614E+04
    3072000  4.35408E+03  2.07931E-03  5.16464E+04
    4096000  4.36490E+03  2.29983E-03  3.15930E+04
    5120000  4.37250E+03  2.11456E-03  2.98994E+04
    6144000  4.37108E+03  1.90940E-03  3.05693E+04
    7168000  4.36567E+03  1.68449E-03  3.36775E+04
    8192000  4.37029E+03  1.92923E-03  2.24692E+04
    9216000  4.37136E+03  1.88228E-03  2.09863E+04
   10240000  4.36942E+03  1.73737E-03  2.21711E+04
   11264000  4.36851E+03  1.60548E-03  2.36052E+04
   12288000  4.37115E+03  1.56108E-03  2.28841E+04
   13312000  4.37259E+03  1.52942E-03  2.20112E+04
   13711805  4.37294E+03  1.50753E-03  2.19942E+04
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.61013E+03 0.0019
tfc   14        1        1        1        1        1        1        1        1
    1024000  1.60432E+03  4.11251E-03  3.96729E+04
    2048000  1.60494E+03  3.16061E-03  3.35931E+04
    3072000  1.60872E+03  3.08379E-03  2.34807E+04
    4096000  1.61419E+03  3.58077E-03  1.30325E+04
    5120000  1.61461E+03  3.06595E-03  1.42223E+04
    6144000  1.61312E+03  2.77904E-03  1.44308E+04
    7168000  1.61112E+03  2.50960E-03  1.51730E+04
    8192000  1.61098E+03  2.30554E-03  1.57331E+04
    9216000  1.61237E+03  2.47943E-03  1.20948E+04
   10240000  1.61055E+03  2.26292E-03  1.30687E+04
   11264000  1.61177E+03  2.28892E-03  1.16134E+04
   12288000  1.61146E+03  2.14182E-03  1.21567E+04
   13312000  1.61029E+03  1.99481E-03  1.29388E+04
```

```
   13711805  1.61013E+03  1.94662E-03  1.31910E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.32926E+02 0.0016
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.41112E+02  9.98302E-03  6.73261E+03
    2048000  6.38581E+02  6.86923E-03  7.11174E+03
    3072000  6.36126E+02  4.71128E-03  1.00601E+04
    4096000  6.35511E+02  3.75612E-03  1.18441E+04
    5120000  6.34929E+02  3.07447E-03  1.41436E+04
    6144000  6.33893E+02  2.62204E-03  1.62107E+04
    7168000  6.33469E+02  2.37033E-03  1.70083E+04
    8192000  6.33467E+02  2.17303E-03  1.77103E+04
    9216000  6.33685E+02  2.08142E-03  1.71626E+04
   10240000  6.33093E+02  1.89200E-03  1.86951E+04
   11264000  6.33138E+02  1.76327E-03  1.95695E+04
   12288000  6.33113E+02  1.68391E-03  1.96674E+04
   13312000  6.33015E+02  1.59451E-03  2.02509E+04
   13711805  6.32926E+02  1.55271E-03  2.07328E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.07632E+02 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.08280E+02  4.60555E-03  3.16333E+04
    2048000  2.07702E+02  3.18268E-03  3.31288E+04
    3072000  2.07620E+02  2.48166E-03  3.62572E+04
    4096000  2.07856E+02  2.52216E-03  2.62686E+04
    5120000  2.08100E+02  2.37188E-03  2.37637E+04
    6144000  2.07779E+02  2.02674E-03  2.71320E+04
    7168000  2.07575E+02  1.81057E-03  2.91505E+04
    8192000  2.07622E+02  1.69457E-03  2.91230E+04
    9216000  2.07593E+02  1.56747E-03  3.02625E+04
   10240000  2.07584E+02  1.48333E-03  3.04157E+04
   11264000  2.07617E+02  1.44108E-03  2.92984E+04
```

```
   12288000  2.07628E+02  1.46022E-03  2.61547E+04
   13312000  2.07622E+02  1.42605E-03  2.53178E+04
   13711805  2.07632E+02  1.40361E-03  2.53717E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.02840E+01 0.0012
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.03320E+01  3.80275E-03  4.63994E+04
    2048000  6.02348E+01  2.80513E-03  4.26468E+04
    3072000  6.03265E+01  2.57098E-03  3.37816E+04
    4096000  6.03152E+01  2.14951E-03  3.61661E+04
    5120000  6.04101E+01  2.03656E-03  3.22333E+04
    6144000  6.03390E+01  1.77320E-03  3.54455E+04
    7168000  6.02798E+01  1.63885E-03  3.55794E+04
    8192000  6.02808E+01  1.53334E-03  3.55699E+04
    9216000  6.02849E+01  1.44433E-03  3.56426E+04
   10240000  6.03038E+01  1.41959E-03  3.32080E+04
   11264000  6.02986E+01  1.34429E-03  3.36691E+04
   12288000  6.02829E+01  1.28225E-03  3.39184E+04
   13312000  6.02845E+01  1.26799E-03  3.20233E+04
   13711805  6.02840E+01  1.24231E-03  3.23877E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.82226E+01 0.0013
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.82442E+01  3.84785E-03  4.53180E+04
    2048000  2.82439E+01  3.11428E-03  3.46000E+04
    3072000  2.83084E+01  3.13104E-03  2.27773E+04
    4096000  2.83078E+01  2.61066E-03  2.45178E+04
    5120000  2.83247E+01  2.36760E-03  2.38497E+04
    6144000  2.82785E+01  2.02778E-03  2.71042E+04
    7168000  2.82496E+01  1.95406E-03  2.50266E+04
    8192000  2.82405E+01  1.76797E-03  2.67552E+04
    9216000  2.82395E+01  1.63741E-03  2.77324E+04
```

```
   10240000  2.82441E+01  1.57056E-03  2.71306E+04
   11264000  2.82353E+01  1.46839E-03  2.82188E+04
   12288000  2.82244E+01  1.38047E-03  2.92636E+04
   13312000  2.82232E+01  1.36791E-03  2.75159E+04
   13711805  2.82226E+01  1.33779E-03  2.79297E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.62877E+01 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.62983E+01  3.90842E-03  4.39244E+04
    2048000  1.62974E+01  3.40767E-03  2.88986E+04
    3072000  1.63344E+01  3.51572E-03  1.80655E+04
    4096000  1.63249E+01  2.83091E-03  2.08511E+04
    5120000  1.63375E+01  2.56105E-03  2.03828E+04
    6144000  1.63084E+01  2.18168E-03  2.34152E+04
    7168000  1.63102E+01  2.30862E-03  1.79298E+04
    8192000  1.63054E+01  2.06533E-03  1.96056E+04
    9216000  1.63063E+01  1.90173E-03  2.05592E+04
   10240000  1.63046E+01  1.78417E-03  2.10233E+04
   11264000  1.62973E+01  1.65705E-03  2.21589E+04
   12288000  1.62900E+01  1.54607E-03  2.33306E+04
   13312000  1.62862E+01  1.49229E-03  2.31203E+04
   13711805  1.62877E+01  1.45997E-03  2.34506E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.06208E+01 0.0026
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.05978E+01  4.07919E-03  4.03236E+04
    2048000  1.05972E+01  3.77268E-03  2.35771E+04
    3072000  1.06298E+01  3.92222E-03  1.45149E+04
    4096000  1.06672E+01  5.95215E-03  4.71665E+03
    5120000  1.06637E+01  4.92827E-03  5.50443E+03
    6144000  1.06512E+01  4.37960E-03  5.81047E+03
    7168000  1.06408E+01  3.98579E-03  6.01519E+03
```

```
    8192000  1.06359E+01  3.52538E-03  6.72894E+03
    9216000  1.06308E+01  3.17334E-03  7.38363E+03
   10240000  1.06457E+01  3.42249E-03  5.71329E+03
   11264000  1.06377E+01  3.13839E-03  6.17741E+03
   12288000  1.06294E+01  2.89311E-03  6.66273E+03
   13312000  1.06222E+01  2.70041E-03  7.06052E+03
   13711805  1.06208E+01  2.62709E-03  7.24252E+03
mcnp       5     11/07/10 01:09:19     2    14036852      524646863
```

Case 127

```
 Case 127
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.81550E+03 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.81274E+03  4.16788E-03  3.96086E+04
    2048000  1.80739E+03  2.63373E-03  4.95738E+04
    3072000  1.80803E+03  2.07763E-03  5.30786E+04
    4096000  1.81292E+03  2.34257E-03  3.13034E+04
    5120000  1.81632E+03  2.16107E-03  2.94020E+04
    6144000  1.81535E+03  1.92949E-03  3.07307E+04
    7168000  1.81351E+03  1.71070E-03  3.35108E+04
    8192000  1.81336E+03  1.60741E-03  3.31979E+04
    9216000  1.81414E+03  1.63932E-03  2.83698E+04
   10240000  1.81368E+03  1.53412E-03  2.91257E+04
   11264000  1.81345E+03  1.42563E-03  3.06421E+04
   12288000  1.81452E+03  1.40612E-03  2.88685E+04
   13312000  1.81553E+03  1.40232E-03  2.67971E+04
   14036852  1.81550E+03  1.36962E-03  2.66426E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  6.69023E+02 0.0020
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.66862E+02  4.25570E-03  3.79907E+04
    2048000  6.67129E+02  3.28345E-03  3.18958E+04
    3072000  6.68828E+02  3.19355E-03  2.24652E+04
    4096000  6.71224E+02  3.71730E-03  1.24314E+04
    5120000  6.71148E+02  3.16026E-03  1.37490E+04
    6144000  6.70462E+02  2.86609E-03  1.39276E+04
    7168000  6.69651E+02  2.58835E-03  1.46382E+04
    8192000  6.69463E+02  2.37432E-03  1.52154E+04
    9216000  6.70064E+02  2.55774E-03  1.16539E+04
   10240000  6.69234E+02  2.33322E-03  1.25917E+04
   11264000  6.69745E+02  2.36193E-03  1.11635E+04
   12288000  6.69626E+02  2.21023E-03  1.16842E+04
   13312000  6.69221E+02  2.05843E-03  1.24368E+04
   14036852  6.69023E+02  1.96972E-03  1.28816E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.62939E+02 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.66602E+02  1.03324E-02  6.44494E+03
    2048000  2.65482E+02  7.11454E-03  6.79363E+03
    3072000  2.64404E+02  4.87409E-03  9.64427E+03
    4096000  2.64287E+02  3.94417E-03  1.10425E+04
    5120000  2.64014E+02  3.22607E-03  1.31938E+04
    6144000  2.63537E+02  2.74967E-03  1.51320E+04
    7168000  2.63375E+02  2.48231E-03  1.59156E+04
    8192000  2.63295E+02  2.26776E-03  1.66790E+04
    9216000  2.63387E+02  2.16960E-03  1.61967E+04
   10240000  2.63110E+02  1.97086E-03  1.76476E+04
   11264000  2.63127E+02  1.83624E-03  1.84703E+04
   12288000  2.63011E+02  1.70551E-03  1.96230E+04
   13312000  2.63005E+02  1.61653E-03  2.01658E+04
   14036852  2.62939E+02  1.54389E-03  2.09674E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  8.62614E+01 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  8.65756E+01  4.76087E-03  3.03561E+04
    2048000  8.63009E+01  3.28601E-03  3.18462E+04
    3072000  8.62721E+01  2.56040E-03  3.49496E+04
    4096000  8.63909E+01  2.61882E-03  2.50476E+04
    5120000  8.64865E+01  2.45577E-03  2.27689E+04
    6144000  8.63487E+01  2.09827E-03  2.59858E+04
    7168000  8.62744E+01  1.87422E-03  2.79184E+04
    8192000  8.62692E+01  1.74254E-03  2.82487E+04
    9216000  8.62596E+01  1.61209E-03  2.93363E+04
   10240000  8.62359E+01  1.51260E-03  2.99606E+04
   11264000  8.62526E+01  1.47277E-03  2.87122E+04
   12288000  8.62607E+01  1.49601E-03  2.55035E+04
   13312000  8.62659E+01  1.46238E-03  2.46414E+04
   14036852  8.62614E+01  1.41330E-03  2.50214E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.50442E+01 0.0012
tfc   14       1       1       1       1       1       1       1       1
    1024000  2.50738E+01  3.91917E-03  4.47952E+04
    2048000  2.50236E+01  2.88197E-03  4.14016E+04
    3072000  2.50622E+01  2.64310E-03  3.27966E+04
    4096000  2.50599E+01  2.21502E-03  3.50123E+04
    5120000  2.51010E+01  2.09577E-03  3.12630E+04
    6144000  2.50706E+01  1.82476E-03  3.43596E+04
    7168000  2.50498E+01  1.68782E-03  3.44254E+04
    8192000  2.50427E+01  1.56508E-03  3.50180E+04
    9216000  2.50450E+01  1.47542E-03  3.50230E+04
   10240000  2.50457E+01  1.42550E-03  3.37333E+04
   11264000  2.50446E+01  1.35417E-03  3.39618E+04
   12288000  2.50391E+01  1.29442E-03  3.40659E+04
   13312000  2.50430E+01  1.28420E-03  3.19532E+04
   14036852  2.50442E+01  1.24790E-03  3.20937E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  1.17240E+01 0.0013
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.17377E+01  3.96012E-03  4.38736E+04
    2048000  1.17342E+01  3.20053E-03  3.35701E+04
    3072000  1.17631E+01  3.22961E-03  2.19663E+04
    4096000  1.17618E+01  2.69107E-03  2.37206E+04
    5120000  1.17699E+01  2.43965E-03  2.30706E+04
    6144000  1.17494E+01  2.08823E-03  2.62362E+04
    7168000  1.17393E+01  2.01460E-03  2.41633E+04
    8192000  1.17313E+01  1.80968E-03  2.61916E+04
    9216000  1.17316E+01  1.67682E-03  2.71152E+04
   10240000  1.17302E+01  1.58724E-03  2.72089E+04
   11264000  1.17272E+01  1.48707E-03  2.81626E+04
   12288000  1.17233E+01  1.39958E-03  2.91390E+04
   13312000  1.17236E+01  1.39044E-03  2.72570E+04
   14036852  1.17240E+01  1.34943E-03  2.74459E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.76748E+00 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  6.77396E+00  4.02112E-03  4.25524E+04
    2048000  6.77129E+00  3.50455E-03  2.79981E+04
    3072000  6.78793E+00  3.62872E-03  1.74000E+04
    4096000  6.78270E+00  2.91511E-03  2.02147E+04
    5120000  6.78903E+00  2.63820E-03  1.97289E+04
    6144000  6.77641E+00  2.24653E-03  2.26690E+04
    7168000  6.77851E+00  2.38191E-03  1.72854E+04
    8192000  6.77420E+00  2.12012E-03  1.90828E+04
    9216000  6.77481E+00  1.95256E-03  1.99975E+04
   10240000  6.77234E+00  1.81475E-03  2.08142E+04
   11264000  6.76961E+00  1.68783E-03  2.18614E+04
   12288000  6.76687E+00  1.57567E-03  2.29901E+04
   13312000  6.76587E+00  1.52273E-03  2.27268E+04
   14036852  6.76748E+00  1.47824E-03  2.28710E+04
tally  185    2    1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  4.41333E+00 0.0027
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.40397E+00  4.19476E-03  3.91025E+04
    2048000  4.40271E+00  3.88339E-03  2.28020E+04
    3072000  4.41858E+00  4.05710E-03  1.39196E+04
    4096000  4.43343E+00  6.15745E-03  4.53079E+03
    5120000  4.43251E+00  5.09717E-03  5.28516E+03
    6144000  4.42704E+00  4.52990E-03  5.57546E+03
    7168000  4.42335E+00  4.12268E-03  5.76997E+03
    8192000  4.41974E+00  3.64096E-03  6.47042E+03
    9216000  4.41778E+00  3.27721E-03  7.09867E+03
   10240000  4.42297E+00  3.52961E-03  5.50227E+03
   11264000  4.42031E+00  3.23902E-03  5.93620E+03
   12288000  4.41691E+00  2.98596E-03  6.40182E+03
   13312000  4.41393E+00  2.78688E-03  6.78493E+03
   14036852  4.41333E+00  2.66109E-03  7.05763E+03
mcnp       5     11/07/10 01:29:27     2    13629821      524342219
```

Case 128

```
 Case 128
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.07557E+03 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.07173E+03  4.07264E-03  4.00823E+04
    2048000  3.06236E+03  2.61731E-03  4.85920E+04
    3072000  3.06183E+03  2.04095E-03  5.32746E+04
    4096000  3.06990E+03  2.25782E-03  3.26402E+04
    5120000  3.07491E+03  2.07327E-03  3.09490E+04
    6144000  3.07355E+03  1.87081E-03  3.16733E+04
    7168000  3.07273E+03  1.85490E-03  2.76199E+04
    8192000  3.07555E+03  2.02621E-03  2.02520E+04
    9216000  3.07581E+03  1.95322E-03  1.93744E+04
```

```
   10240000  3.07419E+03  1.79794E-03  2.05776E+04
   11264000  3.07332E+03  1.65871E-03  2.19801E+04
   12288000  3.07475E+03  1.59912E-03  2.16726E+04
   13312000  3.07491E+03  1.55252E-03  2.12263E+04
   13629821  3.07557E+03  1.54225E-03  2.10079E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.13256E+03 0.0019
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.13030E+03  4.19462E-03  3.77849E+04
    2048000  1.12919E+03  3.13318E-03  3.39083E+04
    3072000  1.13161E+03  3.03239E-03  2.41333E+04
    4096000  1.13515E+03  3.50389E-03  1.35529E+04
    5120000  1.13524E+03  2.99892E-03  1.47921E+04
    6144000  1.13441E+03  2.73075E-03  1.48659E+04
    7168000  1.13326E+03  2.46759E-03  1.56069E+04
    8192000  1.13332E+03  2.27184E-03  1.61096E+04
    9216000  1.13421E+03  2.43531E-03  1.24629E+04
   10240000  1.13290E+03  2.22238E-03  1.34681E+04
   11264000  1.13368E+03  2.24493E-03  1.19996E+04
   12288000  1.13348E+03  2.10037E-03  1.25626E+04
   13312000  1.13262E+03  1.95613E-03  1.33706E+04
   13629821  1.13256E+03  1.91961E-03  1.35602E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.45309E+02 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.51379E+02  9.78588E-03  6.94231E+03
    2048000  4.49832E+02  6.80501E-03  7.18816E+03
    3072000  4.47919E+02  4.66786E-03  1.01847E+04
    4096000  4.47285E+02  3.71506E-03  1.20559E+04
    5120000  4.46751E+02  3.03954E-03  1.43994E+04
    6144000  4.45963E+02  2.59122E-03  1.65099E+04
    7168000  4.45771E+02  2.34696E-03  1.72525E+04
```

```
    8192000  4.45752E+02  2.14931E-03  1.79986E+04
    9216000  4.45866E+02  2.05495E-03  1.75035E+04
   10240000  4.45430E+02  1.86769E-03  1.90693E+04
   11264000  4.45434E+02  1.73975E-03  1.99801E+04
   12288000  4.45441E+02  1.66099E-03  2.00881E+04
   13312000  4.45356E+02  1.57207E-03  2.07014E+04
   13629821  4.45309E+02  1.53931E-03  2.10883E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.46074E+02 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.46575E+02  4.54155E-03  3.22326E+04
    2048000  1.46264E+02  3.24586E-03  3.15949E+04
    3072000  1.46152E+02  2.50462E-03  3.53755E+04
    4096000  1.46264E+02  2.50588E-03  2.64980E+04
    5120000  1.46409E+02  2.34489E-03  2.41944E+04
    6144000  1.46167E+02  2.00269E-03  2.76392E+04
    7168000  1.46044E+02  1.78911E-03  2.96887E+04
    8192000  1.46071E+02  1.67194E-03  2.97438E+04
    9216000  1.46041E+02  1.54551E-03  3.09445E+04
   10240000  1.46028E+02  1.46113E-03  3.11578E+04
   11264000  1.46048E+02  1.41793E-03  3.00788E+04
   12288000  1.46075E+02  1.43796E-03  2.68029E+04
   13312000  1.46067E+02  1.40292E-03  2.59946E+04
   13629821  1.46074E+02  1.38786E-03  2.59420E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.23986E+01 0.0012
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.24527E+01  3.74389E-03  4.74305E+04
    2048000  4.23915E+01  2.78260E-03  4.29907E+04
    3072000  4.24471E+01  2.53232E-03  3.46057E+04
    4096000  4.24294E+01  2.11302E-03  3.72670E+04
    5120000  4.24770E+01  1.97518E-03  3.40995E+04
```

```
    6144000  4.24262E+01  1.72069E-03  3.74410E+04
    7168000  4.23934E+01  1.59276E-03  3.74596E+04
    8192000  4.23945E+01  1.49096E-03  3.74031E+04
    9216000  4.23961E+01  1.40533E-03  3.74257E+04
   10240000  4.24071E+01  1.38168E-03  3.48439E+04
   11264000  4.24048E+01  1.30891E-03  3.52982E+04
   12288000  4.23986E+01  1.25071E-03  3.54290E+04
   13312000  4.23992E+01  1.23679E-03  3.34467E+04
   13629821  4.23986E+01  1.21679E-03  3.37491E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.98496E+01 0.0013
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.98679E+01  3.77598E-03  4.66277E+04
    2048000  1.98702E+01  3.06378E-03  3.54619E+04
    3072000  1.99119E+01  3.06626E-03  2.36030E+04
    4096000  1.99071E+01  2.55394E-03  2.55101E+04
    5120000  1.99184E+01  2.31520E-03  2.48188E+04
    6144000  1.98853E+01  1.98281E-03  2.81962E+04
    7168000  1.98684E+01  1.91035E-03  2.60398E+04
    8192000  1.98620E+01  1.72830E-03  2.78356E+04
    9216000  1.98599E+01  1.60034E-03  2.88604E+04
   10240000  1.98621E+01  1.53451E-03  2.82491E+04
   11264000  1.98564E+01  1.43480E-03  2.93757E+04
   12288000  1.98506E+01  1.35018E-03  3.04012E+04
   13312000  1.98495E+01  1.33740E-03  2.86039E+04
   13629821  1.98496E+01  1.31352E-03  2.89614E+04
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.14544E+01 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.14657E+01  3.83602E-03  4.51795E+04
    2048000  1.14646E+01  3.34466E-03  2.97558E+04
    3072000  1.14882E+01  3.43850E-03  1.87692E+04
```

```
    4096000  1.14799E+01  2.76741E-03  2.17263E+04
    5120000  1.14880E+01  2.50252E-03  2.12424E+04
    6144000  1.14673E+01  2.13180E-03  2.43927E+04
    7168000  1.14698E+01  2.25475E-03  1.86926E+04
    8192000  1.14666E+01  2.01717E-03  2.04341E+04
    9216000  1.14671E+01  1.85772E-03  2.14175E+04
   10240000  1.14654E+01  1.74257E-03  2.19061E+04
   11264000  1.14605E+01  1.61853E-03  2.30849E+04
   12288000  1.14563E+01  1.51102E-03  2.42734E+04
   13312000  1.14536E+01  1.45822E-03  2.40604E+04
   13629821  1.14544E+01  1.43246E-03  2.43516E+04
tally  185     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.46836E+00 0.0026
tfc   14        1        1        1        1        1        1        1        1
    1024000  7.45533E+00  3.99862E-03  4.15799E+04
    2048000  7.45439E+00  3.69543E-03  2.43751E+04
    3072000  7.47548E+00  3.83256E-03  1.51080E+04
    4096000  7.50007E+00  5.80762E-03  4.93328E+03
    5120000  7.49731E+00  4.80871E-03  5.75310E+03
    6144000  7.48846E+00  4.27324E-03  6.07069E+03
    7168000  7.48175E+00  3.88851E-03  6.28488E+03
    8192000  7.47853E+00  3.43934E-03  7.02892E+03
    9216000  7.47486E+00  3.09617E-03  7.71045E+03
   10240000  7.48484E+00  3.33892E-03  5.96668E+03
   11264000  7.47966E+00  3.06209E-03  6.44964E+03
   12288000  7.47462E+00  2.82309E-03  6.95384E+03
   13312000  7.46929E+00  2.63487E-03  7.36932E+03
   13629821  7.46836E+00  2.57715E-03  7.52341E+03
mcnp       5      11/07/10 01:49:33      2     13629796       515548416
```

Case 129

```
 Case 129
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f        1
d        1
u        0
s        0
m        1
```

```
c        0
e        0
t        0
vals
  1.25380E+03 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.25275E+03  3.96925E-03  4.24769E+04
    2048000  1.24924E+03  2.55985E-03  5.11037E+04
    3072000  1.24954E+03  2.00934E-03  5.52481E+04
    4096000  1.25232E+03  2.20940E-03  3.40954E+04
    5120000  1.25456E+03  2.03507E-03  3.21063E+04
    6144000  1.25377E+03  1.82794E-03  3.31563E+04
    7168000  1.25335E+03  1.81524E-03  2.88194E+04
    8192000  1.25315E+03  1.67981E-03  2.94519E+04
    9216000  1.25346E+03  1.66859E-03  2.65428E+04
   10240000  1.25281E+03  1.54255E-03  2.79500E+04
   11264000  1.25288E+03  1.45215E-03  2.86728E+04
   12288000  1.25324E+03  1.41086E-03  2.78380E+04
   13312000  1.25348E+03  1.38612E-03  2.66254E+04
   13629796  1.25380E+03  1.38197E-03  2.61621E+04
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.62044E+02 0.0019
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.60909E+02  4.06644E-03  4.04708E+04
    2048000  4.60466E+02  2.93376E-03  3.89074E+04
    3072000  4.61592E+02  2.91679E-03  2.62189E+04
    4096000  4.63075E+02  3.41879E-03  1.42397E+04
    5120000  4.63151E+02  2.92971E-03  1.54918E+04
    6144000  4.62839E+02  2.67060E-03  1.55336E+04
    7168000  4.62316E+02  2.41406E-03  1.62950E+04
    8192000  4.62274E+02  2.22112E-03  1.68457E+04
    9216000  4.62660E+02  2.38667E-03  1.29736E+04
   10240000  4.62163E+02  2.17827E-03  1.40165E+04
   11264000  4.62505E+02  2.20258E-03  1.24633E+04
   12288000  4.62364E+02  2.05829E-03  1.30795E+04
   13312000  4.62051E+02  1.91741E-03  1.39145E+04
   13629796  4.62044E+02  1.88181E-03  1.41097E+04
tally  135    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  1.81732E+02 0.0015
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.84147E+02  9.63704E-03  7.20582E+03
    2048000  1.83484E+02  6.69710E-03  7.46634E+03
    3072000  1.82735E+02  4.59075E-03  1.05842E+04
    4096000  1.82483E+02  3.65401E-03  1.24654E+04
    5120000  1.82262E+02  2.98884E-03  1.48848E+04
    6144000  1.81968E+02  2.54823E-03  1.70613E+04
    7168000  1.81882E+02  2.32347E-03  1.75905E+04
    8192000  1.81847E+02  2.12215E-03  1.84536E+04
    9216000  1.81899E+02  2.02738E-03  1.79794E+04
   10240000  1.81736E+02  1.84271E-03  1.95862E+04
   11264000  1.81766E+02  1.71983E-03  2.04421E+04
   12288000  1.81773E+02  1.64254E-03  2.05388E+04
   13312000  1.81738E+02  1.55337E-03  2.12006E+04
   13629796  1.81732E+02  1.52277E-03  2.15478E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.96149E+01 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  5.98235E+01  4.47658E-03  3.33948E+04
    2048000  5.96748E+01  3.18154E-03  3.30831E+04
    3072000  5.96467E+01  2.47075E-03  3.65397E+04
    4096000  5.96868E+01  2.46980E-03  2.72849E+04
    5120000  5.97207E+01  2.27148E-03  2.57710E+04
    6144000  5.96326E+01  1.94195E-03  2.93774E+04
    7168000  5.95832E+01  1.74120E-03  3.13225E+04
    8192000  5.95864E+01  1.62052E-03  3.16466E+04
    9216000  5.95809E+01  1.50180E-03  3.27659E+04
   10240000  5.95798E+01  1.42210E-03  3.28852E+04
   11264000  5.96003E+01  1.39034E-03  3.12791E+04
   12288000  5.96137E+01  1.41333E-03  2.77405E+04
   13312000  5.96120E+01  1.37976E-03  2.68716E+04
   13629796  5.96149E+01  1.36495E-03  2.68188E+04
tally  155    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.73060E+01 0.0012
tfc   14       1       1       1       1       1       1       1       1
    1024000  1.73266E+01  3.69609E-03  4.89874E+04
    2048000  1.73000E+01  2.74748E-03  4.43623E+04
    3072000  1.73220E+01  2.49631E-03  3.57954E+04
    4096000  1.73144E+01  2.08246E-03  3.83789E+04
    5120000  1.73302E+01  1.93157E-03  3.56391E+04
    6144000  1.73112E+01  1.68357E-03  3.90866E+04
    7168000  1.72970E+01  1.56084E-03  3.89794E+04
    8192000  1.72946E+01  1.44995E-03  3.95302E+04
    9216000  1.72978E+01  1.37527E-03  3.90725E+04
   10240000  1.73044E+01  1.35688E-03  3.61229E+04
   11264000  1.73067E+01  1.29209E-03  3.62167E+04
   12288000  1.73043E+01  1.23504E-03  3.63282E+04
   13312000  1.73062E+01  1.22349E-03  3.41745E+04
   13629796  1.73060E+01  1.20357E-03  3.44927E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.10315E+00 0.0013
tfc   14       1       1       1       1       1       1       1       1
    1024000  8.10883E+00  3.72721E-03  4.81729E+04
    2048000  8.11015E+00  3.03517E-03  3.63510E+04
    3072000  8.12503E+00  3.01796E-03  2.44905E+04
    4096000  8.12328E+00  2.51444E-03  2.63248E+04
    5120000  8.12722E+00  2.27437E-03  2.57056E+04
    6144000  8.11449E+00  1.94752E-03  2.92096E+04
    7168000  8.10719E+00  1.87794E-03  2.69269E+04
    8192000  8.10378E+00  1.69138E-03  2.90504E+04
    9216000  8.10438E+00  1.57378E-03  2.98371E+04
   10240000  8.10638E+00  1.51377E-03  2.90232E+04
   11264000  8.10550E+00  1.42232E-03  2.98884E+04
   12288000  8.10311E+00  1.33859E-03  3.09249E+04
   13312000  8.10314E+00  1.32796E-03  2.90089E+04
   13629796  8.10315E+00  1.30409E-03  2.93803E+04
```

```
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.67568E+00 0.0014
tfc   14       1       1       1       1       1       1       1       1
    1024000  4.67930E+00  3.78504E-03  4.67122E+04
    2048000  4.67920E+00  3.31385E-03  3.04941E+04
    3072000  4.68723E+00  3.37968E-03  1.95286E+04
    4096000  4.68427E+00  2.72106E-03  2.24786E+04
    5120000  4.68737E+00  2.45850E-03  2.19992E+04
    6144000  4.67941E+00  2.09368E-03  2.52736E+04
    7168000  4.68019E+00  2.21704E-03  1.93199E+04
    8192000  4.67802E+00  1.97440E-03  2.13188E+04
    9216000  4.67883E+00  1.82415E-03  2.22087E+04
   10240000  4.67881E+00  1.71571E-03  2.25930E+04
   11264000  4.67784E+00  1.60102E-03  2.35886E+04
   12288000  4.67599E+00  1.49450E-03  2.48090E+04
   13312000  4.67533E+00  1.44496E-03  2.45011E+04
   13629796  4.67568E+00  1.41930E-03  2.48040E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.04662E+00 0.0025
tfc   14       1       1       1       1       1       1       1       1
    1024000  3.04258E+00  3.94421E-03  4.30180E+04
    2048000  3.04236E+00  3.65812E-03  2.50245E+04
    3072000  3.04998E+00  3.76707E-03  1.57187E+04
    4096000  3.06006E+00  5.71822E-03  5.09008E+03
    5120000  3.05895E+00  4.73357E-03  5.93434E+03
    6144000  3.05133E+00  3.97580E-03  7.00874E+03
    7168000  3.04920E+00  3.64227E-03  7.15826E+03
    8192000  3.04777E+00  3.21935E-03  8.01857E+03
    9216000  3.04700E+00  2.90431E-03  8.76109E+03
   10240000  3.05172E+00  3.18355E-03  6.56206E+03
   11264000  3.05052E+00  2.92492E-03  7.06754E+03
   12288000  3.04872E+00  2.69755E-03  7.61492E+03
```

```
   13312000  3.04695E+00  2.52083E-03  8.05032E+03
   13629796  3.04662E+00  2.46574E-03  8.21818E+03
mcnp       5     11/07/10 01:09:41     2     4686060      491489182
```

Case 130

```
 Case 130
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.66631E+01 0.0115
tfc   19       1       1       1       1       1       1       1       1
     256000  3.61819E+01  3.67383E-02  6.76591E+02
     512000  3.61208E+01  2.26101E-02  8.95719E+02
     768000  3.65426E+01  2.16175E-02  6.54179E+02
    1024000  3.60876E+01  1.74094E-02  7.56173E+02
    1280000  3.71951E+01  2.83223E-02  2.28763E+02
    1536000  3.71773E+01  2.50204E-02  2.44344E+02
    1792000  3.68439E+01  2.20264E-02  2.70104E+02
    2048000  3.68116E+01  1.94862E-02  3.02005E+02
    2304000  3.66932E+01  1.75560E-02  3.30599E+02
    2560000  3.66830E+01  1.60296E-02  3.56809E+02
    2816000  3.64414E+01  1.48272E-02  3.78871E+02
    3072000  3.64491E+01  1.39476E-02  3.92355E+02
    3328000  3.64335E+01  1.30366E-02  4.14495E+02
    3584000  3.64241E+01  1.22824E-02  4.33271E+02
    3840000  3.64525E+01  1.16089E-02  4.52753E+02
    4096000  3.65074E+01  1.10037E-02  4.72399E+02
    4352000  3.63645E+01  1.04576E-02  4.92184E+02
    4608000  3.67108E+01  1.16887E-02  3.72049E+02
    4686060  3.66631E+01  1.15285E-02  3.76062E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  1.66669E+01 0.0087
tfc   19       1       1       1       1       1       1       1       1
     256000  1.75797E+01  7.23830E-02  1.74298E+02
     512000  1.73046E+01  4.04438E-02  2.79944E+02
     768000  1.71610E+01  3.03396E-02  3.32114E+02
    1024000  1.68212E+01  2.39142E-02  4.00752E+02
    1280000  1.69929E+01  2.15394E-02  3.95529E+02
    1536000  1.68280E+01  1.85156E-02  4.46181E+02
    1792000  1.67178E+01  1.66972E-02  4.70037E+02
    2048000  1.67555E+01  1.51117E-02  5.02161E+02
    2304000  1.67603E+01  1.38875E-02  5.28328E+02
    2560000  1.67786E+01  1.35621E-02  4.98456E+02
    2816000  1.66550E+01  1.25642E-02  5.27645E+02
    3072000  1.66417E+01  1.17610E-02  5.51809E+02
    3328000  1.66722E+01  1.12161E-02  5.59966E+02
    3584000  1.66407E+01  1.05609E-02  5.86028E+02
    3840000  1.66271E+01  9.98688E-03  6.11767E+02
    4096000  1.66828E+01  9.65179E-03  6.14007E+02
    4352000  1.66341E+01  9.19658E-03  6.36413E+02
    4608000  1.66858E+01  8.83078E-03  6.51828E+02
    4686060  1.66669E+01  8.71746E-03  6.57698E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.41084E+00 0.0082
tfc   19       1       1       1       1       1       1       1       1
     256000  7.30861E+00  2.96762E-02  1.03692E+03
     512000  7.45399E+00  3.04572E-02  4.93623E+02
     768000  7.40463E+00  2.24649E-02  6.05755E+02
    1024000  7.31198E+00  1.77747E-02  7.25405E+02
    1280000  7.42089E+00  1.85406E-02  5.33824E+02
    1536000  7.39659E+00  1.61479E-02  5.86617E+02
    1792000  7.35218E+00  1.48000E-02  5.98268E+02
    2048000  7.37269E+00  1.32955E-02  6.48726E+02
    2304000  7.39196E+00  1.23181E-02  6.71528E+02
    2560000  7.37819E+00  1.12989E-02  7.18138E+02
    2816000  7.33056E+00  1.04809E-02  7.58251E+02
    3072000  7.33900E+00  1.00322E-02  7.58371E+02
    3328000  7.33650E+00  9.42929E-03  7.92299E+02
    3584000  7.34141E+00  8.93967E-03  8.17862E+02
    3840000  7.35307E+00  8.75147E-03  7.96680E+02
    4096000  7.39531E+00  8.82046E-03  7.35200E+02
    4352000  7.38957E+00  8.47114E-03  7.50081E+02
```

```
    4608000  7.40916E+00  8.14033E-03  7.67092E+02
    4686060  7.41084E+00  8.18219E-03  7.46565E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.74320E+00 0.0133
tfc   19       1       1       1       1       1       1       1       1
     256000  2.67344E+00  3.24247E-02  8.68585E+02
     512000  2.83397E+00  6.73151E-02  1.01054E+02
     768000  2.84927E+00  5.04560E-02  1.20083E+02
    1024000  2.78781E+00  3.92000E-02  1.49147E+02
    1280000  2.77002E+00  3.22299E-02  1.76655E+02
    1536000  2.74766E+00  2.75497E-02  2.01537E+02
    1792000  2.71575E+00  2.42161E-02  2.23466E+02
    2048000  2.71667E+00  2.13945E-02  2.50531E+02
    2304000  2.72328E+00  1.96145E-02  2.64848E+02
    2560000  2.71588E+00  1.78443E-02  2.87929E+02
    2816000  2.69553E+00  1.64294E-02  3.08579E+02
    3072000  2.70318E+00  1.57803E-02  3.06509E+02
    3328000  2.69647E+00  1.46996E-02  3.26013E+02
    3584000  2.70252E+00  1.39905E-02  3.33932E+02
    3840000  2.71100E+00  1.40372E-02  3.09661E+02
    4096000  2.72951E+00  1.37472E-02  3.02664E+02
    4352000  2.72871E+00  1.31456E-02  3.11482E+02
    4608000  2.74705E+00  1.34737E-02  2.80001E+02
    4686060  2.74320E+00  1.32789E-02  2.83452E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.56684E-01 0.0221
tfc   19       1       1       1       1       1       1       1       1
     256000  8.19954E-01  2.85442E-02  1.12081E+03
     512000  9.74617E-01  1.52092E-01  1.97954E+01
     768000  9.51964E-01  1.08396E-01  2.60182E+01
    1024000  9.16655E-01  8.46855E-02  3.19572E+01
    1280000  8.98283E-01  6.93648E-02  3.81388E+01
```

```
    1536000  8.87215E-01  5.91814E-02  4.36735E+01
    1792000  8.70674E-01  5.17704E-02  4.88940E+01
    2048000  8.67735E-01  4.55698E-02  5.52223E+01
    2304000  8.66352E-01  4.10738E-02  6.03978E+01
    2560000  8.61627E-01  3.72360E-02  6.61237E+01
    2816000  8.53686E-01  3.42095E-02  7.11733E+01
    3072000  8.51573E-01  3.15546E-02  7.66570E+01
    3328000  8.50677E-01  2.93885E-02  8.15631E+01
    3584000  8.49436E-01  2.73984E-02  8.70708E+01
    3840000  8.49883E-01  2.57757E-02  9.18388E+01
    4096000  8.55762E-01  2.46727E-02  9.39628E+01
    4352000  8.53544E-01  2.33315E-02  9.88798E+01
    4608000  8.58193E-01  2.23827E-02  1.01463E+02
    4686060  8.56684E-01  2.20535E-02  1.02766E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.13126E-01 0.0290
tfc   19       1       1       1       1       1       1       1       1
     256000  3.95983E-01  3.38830E-02  7.95430E+02
     512000  4.99779E-01  1.96404E-01  1.18707E+01
     768000  4.85694E-01  1.42509E-01  1.50529E+01
    1024000  4.60840E-01  1.12800E-01  1.80122E+01
    1280000  4.47007E-01  9.31502E-02  2.11484E+01
    1536000  4.37203E-01  7.95400E-02  2.41778E+01
    1792000  4.27582E-01  6.97657E-02  2.69237E+01
    2048000  4.24354E-01  6.15773E-02  3.02431E+01
    2304000  4.24080E-01  5.54461E-02  3.31444E+01
    2560000  4.20761E-01  5.03421E-02  3.61760E+01
    2816000  4.16462E-01  4.62770E-02  3.88939E+01
    3072000  4.14488E-01  4.27086E-02  4.18452E+01
    3328000  4.12095E-01  3.96788E-02  4.47436E+01
    3584000  4.10933E-01  3.69886E-02  4.77736E+01
    3840000  4.10580E-01  3.46735E-02  5.07517E+01
    4096000  4.13084E-01  3.28085E-02  5.31393E+01
    4352000  4.12043E-01  3.10108E-02  5.59715E+01
    4608000  4.13897E-01  2.94383E-02  5.86549E+01
    4686060  4.13126E-01  2.90056E-02  5.94077E+01
tally  175    2    1
f        1
d        1
u        0
s        0
```

```
m        1
c        0
e        0
t        0
vals
  2.41978E-01 0.0330
tfc   19       1       1       1       1       1       1       1       1
     256000  2.30027E-01  3.36945E-02  8.04356E+02
     512000  3.01322E-01  2.19905E-01  9.46909E+00
     768000  2.92799E-01  1.60118E-01  1.19242E+01
    1024000  2.75765E-01  1.27627E-01  1.40702E+01
    1280000  2.66181E-01  1.05867E-01  1.63729E+01
    1536000  2.59477E-01  9.06080E-02  1.86318E+01
    1792000  2.53411E-01  7.95721E-02  2.06966E+01
    2048000  2.51160E-01  7.03096E-02  2.31974E+01
    2304000  2.50540E-01  6.32863E-02  2.54409E+01
    2560000  2.48304E-01  5.75120E-02  2.77183E+01
    2816000  2.45565E-01  5.29047E-02  2.97593E+01
    3072000  2.44175E-01  4.88527E-02  3.19816E+01
    3328000  2.42572E-01  4.54153E-02  3.41541E+01
    3584000  2.41700E-01  4.23547E-02  3.64351E+01
    3840000  2.41263E-01  3.96865E-02  3.87401E+01
    4096000  2.42172E-01  3.74636E-02  4.07540E+01
    4352000  2.41513E-01  3.54185E-02  4.29075E+01
    4608000  2.42441E-01  3.35384E-02  4.51905E+01
    4686060  2.41978E-01  3.30459E-02  4.57689E+01
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.59113E-01 0.0353
tfc   19       1       1       1       1       1       1       1       1
     256000  1.49989E-01  3.15660E-02  9.16486E+02
     512000  2.02115E-01  2.30353E-01  8.62959E+00
     768000  1.95407E-01  1.68410E-01  1.07788E+01
    1024000  1.83224E-01  1.34813E-01  1.26103E+01
    1280000  1.76393E-01  1.12107E-01  1.46010E+01
    1536000  1.71587E-01  9.61254E-02  1.65543E+01
    1792000  1.67378E-01  8.45112E-02  1.83481E+01
    2048000  1.65737E-01  7.47406E-02  2.05284E+01
    2304000  1.65123E-01  6.73204E-02  2.24832E+01
    2560000  1.63555E-01  6.12090E-02  2.44711E+01
    2816000  1.61683E-01  5.63269E-02  2.62530E+01
    3072000  1.60683E-01  5.20340E-02  2.81905E+01
```

```
    3328000  1.59527E-01  4.84003E-02  3.00713E+01
    3584000  1.58866E-01  4.51575E-02  3.20526E+01
    3840000  1.58509E-01  4.23108E-02  3.40834E+01
    4096000  1.58954E-01  3.98988E-02  3.59309E+01
    4352000  1.58506E-01  3.77296E-02  3.78118E+01
    4608000  1.59415E-01  3.58388E-02  3.95752E+01
    4686060  1.59113E-01  3.53118E-02  4.00835E+01
mcnp       5     11/07/10 01:29:51     2     4824929      489705210
```

Case 131

```
 Case 131
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.46852E+01 0.0143
tfc   19       1       1       1       1       1       1       1       1
     256000  1.44593E+01  3.94712E-02  6.03807E+02
     512000  1.44573E+01  2.46636E-02  7.71447E+02
     768000  1.44745E+01  1.98620E-02  7.95767E+02
    1024000  1.43238E+01  1.63378E-02  8.80154E+02
    1280000  1.46530E+01  2.93264E-02  2.18483E+02
    1536000  1.46847E+01  2.59803E-02  2.31820E+02
    1792000  1.45696E+01  2.28478E-02  2.56996E+02
    2048000  1.45516E+01  2.02176E-02  2.87224E+02
    2304000  1.45174E+01  1.82034E-02  3.15186E+02
    2560000  1.44915E+01  1.66037E-02  3.40639E+02
    2816000  1.44472E+01  1.55180E-02  3.54550E+02
    3072000  1.46486E+01  1.88146E-02  2.21018E+02
    3328000  1.46232E+01  1.75197E-02  2.35379E+02
    3584000  1.45836E+01  1.64377E-02  2.48467E+02
    3840000  1.45999E+01  1.54627E-02  2.62225E+02
    4096000  1.46161E+01  1.45849E-02  2.76438E+02
    4352000  1.45582E+01  1.38351E-02  2.89268E+02
    4608000  1.47166E+01  1.47269E-02  2.41201E+02
    4824929  1.46852E+01  1.42808E-02  2.45003E+02
tally  125    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  6.78066E+00 0.0305
tfc   19       1       1       1       1       1       1       1       1
     256000  7.13769E+00  7.85804E-02  1.52346E+02
     512000  6.87716E+00  4.29914E-02  2.53896E+02
     768000  6.75098E+00  3.13490E-02  3.19437E+02
    1024000  6.63839E+00  2.47027E-02  3.84996E+02
    1280000  6.66190E+00  2.16038E-02  4.02603E+02
    1536000  6.61577E+00  1.85934E-02  4.52608E+02
    1792000  6.58451E+00  1.68454E-02  4.72771E+02
    2048000  6.60230E+00  1.53131E-02  5.00669E+02
    2304000  6.61246E+00  1.41121E-02  5.24434E+02
    2560000  6.61706E+00  1.38916E-02  4.86631E+02
    2816000  6.57822E+00  1.29000E-02  5.13066E+02
    3072000  6.89076E+00  4.67189E-02  3.58454E+01
    3328000  6.88133E+00  4.32864E-02  3.85582E+01
    3584000  6.83967E+00  4.04699E-02  4.09908E+01
    3840000  6.82572E+00  3.78875E-02  4.36772E+01
    4096000  6.84093E+00  3.55395E-02  4.65566E+01
    4352000  6.80621E+00  3.36407E-02  4.89255E+01
    4608000  6.81340E+00  3.17865E-02  5.17745E+01
    4824929  6.78066E+00  3.05215E-02  5.36371E+01
tally  135     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.95432E+00 0.0126
tfc   19       1       1       1       1       1       1       1       1
     256000  3.05255E+00  6.82156E-02  2.02158E+02
     512000  2.96499E+00  3.64466E-02  3.53268E+02
     768000  2.92696E+00  2.62596E-02  4.55257E+02
    1024000  2.89449E+00  2.05433E-02  5.56681E+02
    1280000  2.92368E+00  2.01165E-02  4.64335E+02
    1536000  2.91830E+00  1.74906E-02  5.11481E+02
    1792000  2.90468E+00  1.60066E-02  5.23625E+02
    2048000  2.91017E+00  1.43708E-02  5.68482E+02
    2304000  2.91659E+00  1.32081E-02  5.98678E+02
    2560000  2.90944E+00  1.20829E-02  6.43227E+02
    2816000  2.89312E+00  1.12004E-02  6.80591E+02
    3072000  2.94380E+00  1.81701E-02  2.36975E+02
```

```
    3328000  2.94028E+00  1.68915E-02  2.53212E+02
    3584000  2.93442E+00  1.57988E-02  2.68969E+02
    3840000  2.94377E+00  1.50153E-02  2.78084E+02
    4096000  2.96154E+00  1.44435E-02  2.81876E+02
    4352000  2.95511E+00  1.37094E-02  2.94599E+02
    4608000  2.96145E+00  1.30277E-02  3.08220E+02
    4824929  2.95432E+00  1.26161E-02  3.13925E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.07977E+00 0.0121
tfc   19       1       1       1       1       1       1       1       1
     256000  1.08287E+00  4.14985E-02  5.46253E+02
     512000  1.06374E+00  2.37508E-02  8.31885E+02
     768000  1.07698E+00  2.80031E-02  4.00333E+02
    1024000  1.06530E+00  2.20176E-02  4.84625E+02
    1280000  1.06197E+00  1.85990E-02  5.43197E+02
    1536000  1.05949E+00  1.65158E-02  5.73638E+02
    1792000  1.05172E+00  1.49058E-02  6.03814E+02
    2048000  1.05326E+00  1.34438E-02  6.49578E+02
    2304000  1.05451E+00  1.25891E-02  6.58995E+02
    2560000  1.05323E+00  1.15880E-02  6.99331E+02
    2816000  1.04804E+00  1.07438E-02  7.39670E+02
    3072000  1.06117E+00  1.30782E-02  4.57428E+02
    3328000  1.05960E+00  1.22282E-02  4.83164E+02
    3584000  1.05971E+00  1.15531E-02  5.02980E+02
    3840000  1.06577E+00  1.21894E-02  4.21970E+02
    4096000  1.07495E+00  1.22427E-02  3.92331E+02
    4352000  1.07430E+00  1.17602E-02  4.00349E+02
    4608000  1.08224E+00  1.25016E-02  3.34712E+02
    4824929  1.07977E+00  1.21466E-02  3.38661E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.30739E-01 0.0107
tfc   19       1       1       1       1       1       1       1       1
```

```
     256000  3.29184E-01  3.25583E-02  8.87431E+02
     512000  3.30303E-01  2.56860E-02  7.11257E+02
     768000  3.28641E-01  2.12805E-02  6.93219E+02
    1024000  3.27317E-01  1.73335E-02  7.81942E+02
    1280000  3.26065E-01  1.50299E-02  8.31810E+02
    1536000  3.27146E-01  1.61605E-02  5.99143E+02
    1792000  3.24265E-01  1.43482E-02  6.51663E+02
    2048000  3.25325E-01  1.31824E-02  6.75600E+02
    2304000  3.24792E-01  1.21906E-02  7.02785E+02
    2560000  3.24852E-01  1.13162E-02  7.33336E+02
    2816000  3.23409E-01  1.05111E-02  7.72780E+02
    3072000  3.25599E-01  1.10131E-02  6.45056E+02
    3328000  3.25295E-01  1.03418E-02  6.75507E+02
    3584000  3.25496E-01  9.83692E-03  6.93797E+02
    3840000  3.26914E-01  9.89461E-03  6.40396E+02
    4096000  3.30287E-01  1.11783E-02  4.70600E+02
    4352000  3.29908E-01  1.06532E-02  4.87869E+02
    4608000  3.32164E-01  1.11609E-02  4.19952E+02
    4824929  3.30739E-01  1.07377E-02  4.33366E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.58232E-01 0.0106
tfc   19       1       1       1       1       1       1       1
     256000  1.58864E-01  3.72801E-02  6.76867E+02
     512000  1.60425E-01  3.17994E-02  4.64068E+02
     768000  1.58597E-01  2.42829E-02  5.32392E+02
    1024000  1.57173E-01  1.92341E-02  6.35044E+02
    1280000  1.56187E-01  1.61765E-02  7.18068E+02
    1536000  1.56041E-01  1.49404E-02  7.00992E+02
    1792000  1.54779E-01  1.33039E-02  7.57985E+02
    2048000  1.55440E-01  1.24177E-02  7.61371E+02
    2304000  1.55534E-01  1.22766E-02  6.92972E+02
    2560000  1.55611E-01  1.14571E-02  7.15407E+02
    2816000  1.55023E-01  1.06761E-02  7.49081E+02
    3072000  1.55856E-01  1.09272E-02  6.55239E+02
    3328000  1.55707E-01  1.02742E-02  6.84421E+02
    3584000  1.55976E-01  9.97645E-03  6.74525E+02
    3840000  1.56496E-01  9.85363E-03  6.45734E+02
    4096000  1.57996E-01  1.11599E-02  4.72154E+02
    4352000  1.57961E-01  1.06957E-02  4.83999E+02
    4608000  1.58935E-01  1.09682E-02  4.34840E+02
    4824929  1.58232E-01  1.05500E-02  4.48921E+02
```

```
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.22583E-02 0.0104
tfc   19       1        1        1        1        1        1        1
     256000  9.22052E-02  3.68372E-02  6.93242E+02
     512000  9.37859E-02  3.17038E-02  4.66870E+02
     768000  9.28353E-02  2.41631E-02  5.37684E+02
    1024000  9.18409E-02  1.91264E-02  6.42214E+02
    1280000  9.11897E-02  1.60225E-02  7.31936E+02
    1536000  9.10568E-02  1.44581E-02  7.48540E+02
    1792000  9.03929E-02  1.29091E-02  8.05056E+02
    2048000  9.09559E-02  1.21823E-02  7.91077E+02
    2304000  9.08476E-02  1.15934E-02  7.77050E+02
    2560000  9.09171E-02  1.09355E-02  7.85281E+02
    2816000  9.05728E-02  1.02421E-02  8.13907E+02
    3072000  9.10132E-02  1.05142E-02  7.07729E+02
    3328000  9.09377E-02  9.90915E-03  7.35778E+02
    3584000  9.12114E-02  1.00767E-02  6.61174E+02
    3840000  9.14422E-02  9.83690E-03  6.47933E+02
    4096000  9.21479E-02  1.10208E-02  4.84146E+02
    4352000  9.21473E-02  1.06327E-02  4.89753E+02
    4608000  9.26710E-02  1.07951E-02  4.48899E+02
    4824929  9.22583E-02  1.03829E-02  4.63488E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.05692E-02 0.0115
tfc   19       1        1        1        1        1        1        1
     256000  6.00824E-02  3.44515E-02  7.92576E+02
     512000  6.21641E-02  3.62861E-02  3.56400E+02
     768000  6.12471E-02  2.69853E-02  4.31101E+02
    1024000  6.04321E-02  2.12135E-02  5.22061E+02
    1280000  5.99501E-02  1.76524E-02  6.03014E+02
    1536000  5.97878E-02  1.56252E-02  6.40895E+02
    1792000  5.93336E-02  1.38976E-02  6.94599E+02
```

```
    2048000  5.97508E-02  1.30701E-02  6.87255E+02
    2304000  5.95840E-02  1.21253E-02  7.10377E+02
    2560000  5.96408E-02  1.14506E-02  7.16226E+02
    2816000  5.94084E-02  1.07236E-02  7.42455E+02
    3072000  5.96718E-02  1.08804E-02  6.60887E+02
    3328000  5.96004E-02  1.02479E-02  6.87938E+02
    3584000  5.98417E-02  1.08934E-02  5.65744E+02
    3840000  5.99596E-02  1.05130E-02  5.67275E+02
    4096000  6.03694E-02  1.14332E-02  4.49854E+02
    4352000  6.03712E-02  1.10706E-02  4.51780E+02
    4608000  6.08483E-02  1.19589E-02  3.65776E+02
    4824929  6.05692E-02  1.14983E-02  3.77927E+02
mcnp       5      11/07/10 01:50:02      2      4608000       491906173
```

Case 132

```
 Case 132
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.65626E+01 0.0112
tfc   18        1        1        1        1        1        1        1        1
     256000  2.58931E+01  3.50431E-02  7.30776E+02
     512000  2.61510E+01  2.16480E-02  9.59036E+02
     768000  2.61557E+01  1.74478E-02  9.85465E+02
    1024000  2.59441E+01  1.45060E-02  1.06811E+03
    1280000  2.67905E+01  2.62157E-02  2.61423E+02
    1536000  2.68425E+01  2.33537E-02  2.74471E+02
    1792000  2.66412E+01  2.05687E-02  3.03398E+02
    2048000  2.65973E+01  1.82284E-02  3.38074E+02
    2304000  2.64930E+01  1.64454E-02  3.69357E+02
    2560000  2.65185E+01  1.50256E-02  3.98235E+02
    2816000  2.63685E+01  1.38977E-02  4.23340E+02
    3072000  2.63750E+01  1.30867E-02  4.37696E+02
    3328000  2.63657E+01  1.22435E-02  4.61645E+02
    3584000  2.63149E+01  1.15054E-02  4.85488E+02
    3840000  2.63943E+01  1.11158E-02  4.85400E+02
    4096000  2.64425E+01  1.05439E-02  5.05839E+02
    4352000  2.63516E+01  1.00150E-02  5.27719E+02
    4608000  2.65626E+01  1.11567E-02  4.01627E+02
tally  125    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.20779E+01 0.0086
tfc   18       1       1       1       1       1       1       1       1
     256000  1.25522E+01  6.91783E-02  1.87521E+02
     512000  1.24196E+01  3.84168E-02  3.04529E+02
     768000  1.22576E+01  2.79723E-02  3.83410E+02
    1024000  1.20830E+01  2.20981E-02  4.60265E+02
    1280000  1.22602E+01  2.00761E-02  4.45768E+02
    1536000  1.22264E+01  1.84582E-02  4.39371E+02
    1792000  1.21496E+01  1.65946E-02  4.66118E+02
    2048000  1.21560E+01  1.50008E-02  4.99206E+02
    2304000  1.21470E+01  1.37737E-02  5.26541E+02
    2560000  1.21699E+01  1.33684E-02  5.03086E+02
    2816000  1.20814E+01  1.23764E-02  5.33811E+02
    3072000  1.20673E+01  1.15747E-02  5.59521E+02
    3328000  1.20880E+01  1.10200E-02  5.69838E+02
    3584000  1.20607E+01  1.03757E-02  5.96953E+02
    3840000  1.20432E+01  9.79841E-03  6.24699E+02
    4096000  1.20872E+01  9.45823E-03  6.28626E+02
    4352000  1.20571E+01  9.00444E-03  6.52818E+02
    4608000  1.20779E+01  8.62777E-03  6.71574E+02
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.37857E+00 0.0081
tfc   18       1       1       1       1       1       1       1       1
     256000  5.24930E+00  2.78223E-02  1.15932E+03
     512000  5.41087E+00  2.98070E-02  5.05864E+02
     768000  5.37401E+00  2.19113E-02  6.24866E+02
    1024000  5.31222E+00  1.73378E-02  7.47701E+02
    1280000  5.41308E+00  1.79967E-02  5.54726E+02
    1536000  5.43797E+00  1.80499E-02  4.59474E+02
    1792000  5.40461E+00  1.63124E-02  4.82384E+02
    2048000  5.40016E+00  1.45737E-02  5.28894E+02
    2304000  5.40116E+00  1.33873E-02  5.57378E+02
```

```
    2560000  5.39040E+00  1.22450E-02  5.99634E+02
    2816000  5.35143E+00  1.13302E-02  6.36943E+02
    3072000  5.34535E+00  1.05715E-02  6.70752E+02
    3328000  5.34294E+00  9.91012E-03  7.04625E+02
    3584000  5.34501E+00  9.36817E-03  7.32267E+02
    3840000  5.33964E+00  8.85466E-03  7.64958E+02
    4096000  5.37198E+00  8.85175E-03  7.17718E+02
    4352000  5.36906E+00  8.48663E-03  7.34911E+02
    4608000  5.37857E+00  8.14367E-03  7.53791E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.98287E+00 0.0121
tfc   18       1       1       1       1       1       1       1       1
     256000  1.92063E+00  3.04154E-02  9.70070E+02
     512000  2.03938E+00  6.41156E-02  1.09331E+02
     768000  2.05277E+00  4.80214E-02  1.30093E+02
    1024000  2.01301E+00  3.72491E-02  1.61989E+02
    1280000  2.00977E+00  3.05734E-02  1.92211E+02
    1536000  2.00269E+00  2.64597E-02  2.13816E+02
    1792000  1.98262E+00  2.32550E-02  2.37353E+02
    2048000  1.97800E+00  2.05802E-02  2.65221E+02
    2304000  1.97684E+00  1.88517E-02  2.81083E+02
    2560000  1.97243E+00  1.71481E-02  3.05751E+02
    2816000  1.95672E+00  1.57915E-02  3.27890E+02
    3072000  1.95567E+00  1.46706E-02  3.48285E+02
    3328000  1.95250E+00  1.36712E-02  3.70259E+02
    3584000  1.95860E+00  1.30487E-02  3.77435E+02
    3840000  1.95435E+00  1.22694E-02  3.98414E+02
    4096000  1.97069E+00  1.21374E-02  3.81736E+02
    4352000  1.97113E+00  1.16327E-02  3.91149E+02
    4608000  1.98287E+00  1.20755E-02  3.42830E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.22126E-01 0.0213
```

```
tfc   18        1        1        1        1        1        1        1        1
     256000  5.88783E-01  2.67529E-02  1.25385E+03
     512000  6.96803E-01  1.45854E-01  2.11268E+01
     768000  6.82736E-01  1.03632E-01  2.79341E+01
    1024000  6.59166E-01  8.07554E-02  3.44646E+01
    1280000  6.48695E-01  6.58835E-02  4.13916E+01
    1536000  6.42830E-01  5.60892E-02  4.75830E+01
    1792000  6.32407E-01  4.89646E-02  5.35382E+01
    2048000  6.29221E-01  4.31703E-02  6.02752E+01
    2304000  6.26826E-01  3.89889E-02  6.57136E+01
    2560000  6.24065E-01  3.53153E-02  7.20902E+01
    2816000  6.18122E-01  3.24537E-02  7.76329E+01
    3072000  6.16224E-01  2.99419E-02  8.36127E+01
    3328000  6.16494E-01  2.78763E-02  8.90526E+01
    3584000  6.17726E-01  2.60758E-02  9.45153E+01
    3840000  6.16270E-01  2.44766E-02  1.00111E+02
    4096000  6.21116E-01  2.34129E-02  1.02589E+02
    4352000  6.19637E-01  2.21371E-02  1.08010E+02
    4608000  6.22126E-01  2.12554E-02  1.10650E+02
tally  165     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.00276E-01 0.0280
tfc   18        1        1        1        1        1        1        1        1
     256000  2.83919E-01  3.19888E-02  8.76989E+02
     512000  3.56125E-01  1.88987E-01  1.25837E+01
     768000  3.47261E-01  1.36669E-01  1.60614E+01
    1024000  3.30541E-01  1.07839E-01  1.93269E+01
    1280000  3.22024E-01  8.86731E-02  2.28498E+01
    1536000  3.16173E-01  7.54617E-02  2.62879E+01
    1792000  3.10065E-01  6.60235E-02  2.94463E+01
    2048000  3.07365E-01  5.83430E-02  3.30012E+01
    2304000  3.06525E-01  5.26404E-02  3.60494E+01
    2560000  3.04456E-01  4.77475E-02  3.94368E+01
    2816000  3.01272E-01  4.39016E-02  4.24243E+01
    3072000  2.99751E-01  4.05268E-02  4.56401E+01
    3328000  2.98462E-01  3.76120E-02  4.89174E+01
    3584000  2.99027E-01  3.51032E-02  5.21538E+01
    3840000  2.98155E-01  3.29306E-02  5.53073E+01
    4096000  3.00153E-01  3.11430E-02  5.79819E+01
    4352000  2.99425E-01  2.94346E-02  6.10929E+01
    4608000  3.00276E-01  2.79712E-02  6.38953E+01
tally  175     2     1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.75983E-01 0.0318
tfc   18        1        1        1        1        1        1        1        1
     256000  1.65010E-01  3.18118E-02  8.86774E+02
     512000  2.14597E-01  2.11717E-01  1.00267E+01
     768000  2.09188E-01  1.53673E-01  1.27036E+01
    1024000  1.97811E-01  1.22007E-01  1.50990E+01
    1280000  1.91751E-01  1.00780E-01  1.76894E+01
    1536000  1.87619E-01  8.59604E-02  2.02588E+01
    1792000  1.83691E-01  7.53132E-02  2.26300E+01
    2048000  1.81880E-01  6.66137E-02  2.53152E+01
    2304000  1.81067E-01  6.00782E-02  2.76760E+01
    2560000  1.79624E-01  5.45477E-02  3.02168E+01
    2816000  1.77604E-01  5.01879E-02  3.24621E+01
    3072000  1.76556E-01  4.63543E-02  3.48861E+01
    3328000  1.75623E-01  4.30464E-02  3.73459E+01
    3584000  1.75821E-01  4.01080E-02  3.99500E+01
    3840000  1.75205E-01  3.76204E-02  4.23774E+01
    4096000  1.76073E-01  3.54791E-02  4.46753E+01
    4352000  1.75603E-01  3.35412E-02  4.70489E+01
    4608000  1.75983E-01  3.17948E-02  4.94515E+01
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.15503E-01 0.0340
tfc   18        1        1        1        1        1        1        1        1
     256000  1.07622E-01  2.97563E-02  1.01351E+03
     512000  1.42055E-01  2.24363E-01  8.92831E+00
     768000  1.38345E-01  1.62872E-01  1.13091E+01
    1024000  1.30420E-01  1.29685E-01  1.33639E+01
    1280000  1.26255E-01  1.07252E-01  1.56190E+01
    1536000  1.23380E-01  9.15645E-02  1.78548E+01
    1792000  1.20729E-01  8.02616E-02  1.99256E+01
    2048000  1.19504E-01  7.10088E-02  2.22784E+01
    2304000  1.18878E-01  6.40578E-02  2.43440E+01
```

```
    2560000  1.17897E-01  5.81726E-02  2.65684E+01
    2816000  1.16553E-01  5.35299E-02  2.85353E+01
    3072000  1.15838E-01  4.94472E-02  3.06583E+01
    3328000  1.15169E-01  4.59355E-02  3.27959E+01
    3584000  1.15242E-01  4.27705E-02  3.51310E+01
    3840000  1.14827E-01  4.01110E-02  3.72783E+01
    4096000  1.15328E-01  3.77766E-02  3.94065E+01
    4352000  1.15022E-01  3.57178E-02  4.14893E+01
    4608000  1.15503E-01  3.39596E-02  4.33476E+01
mcnp       5     11/07/10 02:10:08     2     4568999      487354076
```

Case 133

```
 Case 133
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.82689E+00 0.0121
tfc   18       1       1       1       1       1       1       1       1
     256000  9.69212E+00  3.76141E-02  6.30899E+02
     512000  9.72579E+00  2.24129E-02  8.88143E+02
     768000  9.71169E+00  1.82798E-02  8.90703E+02
    1024000  9.66017E+00  1.53784E-02  9.43526E+02
    1280000  9.98322E+00  2.82395E-02  2.23974E+02
    1536000  9.97267E+00  2.50097E-02  2.37972E+02
    1792000  9.85893E+00  2.20182E-02  2.63227E+02
    2048000  9.85874E+00  1.94815E-02  2.94217E+02
    2304000  9.81904E+00  1.75516E-02  3.22231E+02
    2560000  9.80051E+00  1.60107E-02  3.48475E+02
    2816000  9.77467E+00  1.49457E-02  3.63605E+02
    3072000  9.78046E+00  1.40568E-02  3.76734E+02
    3328000  9.77456E+00  1.31342E-02  3.98337E+02
    3584000  9.74760E+00  1.24117E-02  4.13721E+02
    3840000  9.78535E+00  1.19830E-02  4.14241E+02
    4096000  9.78648E+00  1.13452E-02  4.33286E+02
    4352000  9.74511E+00  1.07708E-02  4.52458E+02
    4568999  9.82689E+00  1.21103E-02  3.40910E+02
tally  125    2    1
f        1
d        1
u        0
```

```
s         0
m         1
c         0
e         0
t         0
vals
  4.46228E+00 0.0092
tfc   18        1        1        1        1        1        1        1        1
     256000  4.67015E+00  7.37945E-02  1.63913E+02
     512000  4.62095E+00  3.99236E-02  2.79911E+02
     768000  4.59669E+00  3.19737E-02  2.91131E+02
    1024000  4.53990E+00  2.53076E-02  3.48397E+02
    1280000  4.57532E+00  2.26358E-02  3.48596E+02
    1536000  4.52646E+00  1.94220E-02  3.94601E+02
    1792000  4.49235E+00  1.75534E-02  4.14162E+02
    2048000  4.50336E+00  1.58619E-02  4.43815E+02
    2304000  4.49765E+00  1.45349E-02  4.69870E+02
    2560000  4.49607E+00  1.41336E-02  4.47186E+02
    2816000  4.47063E+00  1.30961E-02  4.73562E+02
    3072000  4.46735E+00  1.22359E-02  4.97209E+02
    3328000  4.47438E+00  1.16519E-02  5.06136E+02
    3584000  4.45555E+00  1.09703E-02  5.29578E+02
    3840000  4.45350E+00  1.03634E-02  5.53835E+02
    4096000  4.46795E+00  1.00216E-02  5.55301E+02
    4352000  4.45144E+00  9.52843E-03  5.78140E+02
    4568999  4.46228E+00  9.23784E-03  5.85885E+02
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.97114E+00 0.0077
tfc   18        1        1        1        1        1        1        1        1
     256000  1.92320E+00  2.27639E-02  1.72254E+03
     512000  1.95855E+00  1.71277E-02  1.52083E+03
     768000  1.94760E+00  1.45721E-02  1.40161E+03
    1024000  1.95276E+00  1.50065E-02  9.90877E+02
    1280000  1.98312E+00  1.71841E-02  6.04864E+02
    1536000  1.97819E+00  1.50660E-02  6.55766E+02
    1792000  1.96405E+00  1.39613E-02  6.54702E+02
    2048000  1.97127E+00  1.26069E-02  7.02581E+02
    2304000  1.97203E+00  1.16458E-02  7.31919E+02
    2560000  1.96669E+00  1.06870E-02  7.82131E+02
    2816000  1.95654E+00  9.92225E-03  8.24979E+02
    3072000  1.96042E+00  9.55842E-03  8.14771E+02
```

```
    3328000  1.95998E+00  8.99478E-03  8.49334E+02
    3584000  1.95770E+00  8.54696E-03  8.72456E+02
    3840000  1.95918E+00  8.13119E-03  8.99649E+02
    4096000  1.97215E+00  8.35867E-03  7.98229E+02
    4352000  1.96886E+00  8.01506E-03  8.17076E+02
    4568999  1.97114E+00  7.74466E-03  8.33582E+02
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.21222E-01 0.0095
tfc   18       1       1       1       1       1       1       1       1
     256000  7.09116E-01  3.11218E-02  9.21576E+02
     512000  7.09915E-01  1.87109E-02  1.27435E+03
     768000  7.20038E-01  2.54251E-02  4.60416E+02
    1024000  7.20137E-01  2.14146E-02  4.86583E+02
    1280000  7.20409E-01  1.83992E-02  5.27613E+02
    1536000  7.18049E-01  1.62551E-02  5.63335E+02
    1792000  7.11244E-01  1.46472E-02  5.94824E+02
    2048000  7.15111E-01  1.33014E-02  6.31123E+02
    2304000  7.15466E-01  1.24920E-02  6.36113E+02
    2560000  7.14084E-01  1.14858E-02  6.77128E+02
    2816000  7.10235E-01  1.06337E-02  7.18276E+02
    3072000  7.13419E-01  1.09295E-02  6.23172E+02
    3328000  7.12566E-01  1.02496E-02  6.54103E+02
    3584000  7.13707E-01  1.00561E-02  6.30238E+02
    3840000  7.13719E-01  9.50665E-03  6.58152E+02
    4096000  7.20349E-01  9.93534E-03  5.64985E+02
    4352000  7.19893E-01  9.61505E-03  5.67770E+02
    4568999  7.21222E-01  9.52934E-03  5.50589E+02
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.22822E-01 0.0104
tfc   18       1       1       1       1       1       1       1       1
     256000  2.17833E-01  2.81168E-02  1.12910E+03
     512000  2.21569E-01  2.35848E-02  8.02074E+02
```

```
     768000  2.20484E-01  1.98064E-02  7.58687E+02
    1024000  2.20419E-01  1.67095E-02  7.99186E+02
    1280000  2.20184E-01  1.46849E-02  8.28268E+02
    1536000  2.20787E-01  1.55952E-02  6.12013E+02
    1792000  2.18544E-01  1.38551E-02  6.64780E+02
    2048000  2.20197E-01  1.28800E-02  6.73102E+02
    2304000  2.19600E-01  1.19069E-02  7.00165E+02
    2560000  2.19726E-01  1.11636E-02  7.16779E+02
    2816000  2.18661E-01  1.03551E-02  7.57446E+02
    3072000  2.18987E-01  9.92354E-03  7.55917E+02
    3328000  2.19632E-01  9.96969E-03  6.91346E+02
    3584000  2.19676E-01  9.51044E-03  7.04637E+02
    3840000  2.19945E-01  9.15903E-03  7.09059E+02
    4096000  2.22106E-01  1.04562E-02  5.10099E+02
    4352000  2.21798E-01  9.96903E-03  5.28164E+02
    4568999  2.22822E-01  1.04317E-02  4.59456E+02
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.06521E-01 0.0103
tfc   18       1       1       1       1       1       1       1       1
     256000  1.05314E-01  3.41183E-02  7.66808E+02
     512000  1.07751E-01  2.99536E-02  4.97258E+02
     768000  1.06399E-01  2.29264E-02  5.66245E+02
    1024000  1.05890E-01  1.85129E-02  6.51071E+02
    1280000  1.05640E-01  1.57719E-02  7.18038E+02
    1536000  1.05480E-01  1.44818E-02  7.09744E+02
    1792000  1.04451E-01  1.29012E-02  7.66715E+02
    2048000  1.05178E-01  1.20965E-02  7.63113E+02
    2304000  1.05091E-01  1.19052E-02  7.00367E+02
    2560000  1.05269E-01  1.14897E-02  6.76674E+02
    2816000  1.04818E-01  1.06831E-02  7.11657E+02
    3072000  1.04914E-01  1.02444E-02  7.09304E+02
    3328000  1.04859E-01  9.65150E-03  7.37683E+02
    3584000  1.04982E-01  9.39629E-03  7.21862E+02
    3840000  1.05135E-01  9.11129E-03  7.16509E+02
    4096000  1.06136E-01  1.04361E-02  5.12067E+02
    4352000  1.06079E-01  1.00079E-02  5.24067E+02
    4568999  1.06521E-01  1.03034E-02  4.70966E+02
tally  175    2    1
f        1
d        1
u        0
```

```
s        0
m        1
c        0
e        0
t        0
vals
  6.20818E-02 0.0103
tfc   18       1       1       1       1       1       1       1       1
     256000  6.12052E-02  3.39782E-02  7.73142E+02
     512000  6.30649E-02  2.99751E-02  4.96545E+02
     768000  6.22880E-02  2.28537E-02  5.69850E+02
    1024000  6.18541E-02  1.83604E-02  6.61927E+02
    1280000  6.15762E-02  1.55049E-02  7.42978E+02
    1536000  6.14764E-02  1.39391E-02  7.66078E+02
    1792000  6.09285E-02  1.24530E-02  8.22901E+02
    2048000  6.14271E-02  1.17722E-02  8.05741E+02
    2304000  6.12779E-02  1.11791E-02  7.94298E+02
    2560000  6.14512E-02  1.12660E-02  7.03806E+02
    2816000  6.11937E-02  1.05097E-02  7.35328E+02
    3072000  6.12470E-02  1.01380E-02  7.24272E+02
    3328000  6.12178E-02  9.57106E-03  7.50135E+02
    3584000  6.13593E-02  9.71794E-03  6.74867E+02
    3840000  6.14287E-02  9.36103E-03  6.78788E+02
    4096000  6.18802E-02  1.04989E-02  5.05956E+02
    4352000  6.18584E-02  1.01283E-02  5.11682E+02
    4568999  6.20818E-02  1.02826E-02  4.72875E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.07512E-02 0.0115
tfc   18       1       1       1       1       1       1       1       1
     256000  3.99049E-02  3.17492E-02  8.85514E+02
     512000  4.17630E-02  3.44325E-02  3.76307E+02
     768000  4.10532E-02  2.55803E-02  4.54845E+02
    1024000  4.06602E-02  2.02931E-02  5.41850E+02
    1280000  4.04302E-02  1.69776E-02  6.19669E+02
    1536000  4.03277E-02  1.49946E-02  6.62022E+02
    1792000  3.99577E-02  1.33491E-02  7.16128E+02
    2048000  4.02987E-02  1.25559E-02  7.08298E+02
    2304000  4.01453E-02  1.16367E-02  7.33061E+02
    2560000  4.02916E-02  1.19685E-02  6.23611E+02
    2816000  4.01220E-02  1.11576E-02  6.52415E+02
    3072000  4.01495E-02  1.07329E-02  6.46214E+02
```

```
    3328000  4.01189E-02  1.01193E-02  6.71055E+02
    3584000  4.02492E-02  1.06719E-02  5.59602E+02
    3840000  4.02799E-02  1.02013E-02  5.71570E+02
    4096000  4.05388E-02  1.10479E-02  4.56919E+02
    4352000  4.05271E-02  1.06888E-02  4.59430E+02
    4568999  4.07512E-02  1.15237E-02  3.76502E+02
mcnp       5     11/07/10 02:30:13     2     2553948      799645750
```

Case 134

```
 Case 134
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.47725E+02 0.0022
tfc   20       1       1       1       1       1       1       1       1
     128000  7.49955E+02  1.28105E-02  2.02694E+03
     256000  7.47157E+02  7.27672E-03  3.13900E+03
     384000  7.49789E+02  5.64097E-03  3.48133E+03
     512000  7.53173E+02  5.51733E-03  2.73144E+03
     640000  7.51528E+02  4.74384E-03  2.95377E+03
     768000  7.52579E+02  4.45929E-03  2.78482E+03
     896000  7.50722E+02  4.00568E-03  2.95866E+03
    1024000  7.50655E+02  3.61731E-03  3.17341E+03
    1152000  7.49542E+02  3.32316E-03  3.34188E+03
    1280000  7.48527E+02  3.13156E-03  3.39045E+03
    1408000  7.48109E+02  2.94796E-03  3.47787E+03
    1536000  7.47430E+02  2.76436E-03  3.62545E+03
    1664000  7.47598E+02  2.79394E-03  3.27585E+03
    1792000  7.47636E+02  2.66075E-03  3.35534E+03
    1920000  7.48449E+02  2.58482E-03  3.31778E+03
    2048000  7.48265E+02  2.47235E-03  3.39986E+03
    2176000  7.48176E+02  2.43108E-03  3.30984E+03
    2304000  7.47868E+02  2.32961E-03  3.40431E+03
    2432000  7.47987E+02  2.23953E-03  3.48854E+03
    2553948  7.47725E+02  2.16274E-03  3.56256E+03
tally  125    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  3.91944E+02 0.0035
tfc   20        1        1        1        1        1        1        1        1
     128000  3.95016E+02  1.86985E-02  9.51396E+02
     256000  3.92300E+02  9.94643E-03  1.68007E+03
     384000  3.92375E+02  7.04981E-03  2.22894E+03
     512000  3.94377E+02  6.99296E-03  1.70031E+03
     640000  3.96193E+02  1.03857E-02  6.16256E+02
     768000  3.95500E+02  8.76300E-03  7.21145E+02
     896000  3.94246E+02  7.60462E-03  8.20903E+02
    1024000  3.94090E+02  6.74171E-03  9.13603E+02
    1152000  3.93183E+02  6.05005E-03  1.00827E+03
    1280000  3.92732E+02  5.57581E-03  1.06946E+03
    1408000  3.93009E+02  5.38998E-03  1.04035E+03
    1536000  3.92465E+02  4.97512E-03  1.11930E+03
    1664000  3.92449E+02  4.86068E-03  1.08234E+03
    1792000  3.92824E+02  4.73539E-03  1.05933E+03
    1920000  3.92895E+02  4.44975E-03  1.11954E+03
    2048000  3.92584E+02  4.19514E-03  1.18083E+03
    2176000  3.92428E+02  3.99287E-03  1.22697E+03
    2304000  3.92141E+02  3.78988E-03  1.28631E+03
    2432000  3.92095E+02  3.60878E-03  1.34350E+03
    2553948  3.91944E+02  3.45823E-03  1.39335E+03
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.94333E+02 0.0023
tfc   20        1        1        1        1        1        1        1        1
     128000  1.95291E+02  1.32326E-02  1.89971E+03
     256000  1.94981E+02  7.57098E-03  2.89974E+03
     384000  1.95115E+02  5.61237E-03  3.51689E+03
     512000  1.95423E+02  4.83905E-03  3.55083E+03
     640000  1.95092E+02  4.41158E-03  3.41545E+03
     768000  1.94919E+02  3.83698E-03  3.76139E+03
     896000  1.94547E+02  3.41749E-03  4.06475E+03
    1024000  1.94742E+02  3.19486E-03  4.06813E+03
    1152000  1.94488E+02  2.94015E-03  4.26926E+03
    1280000  1.94446E+02  2.88185E-03  4.00346E+03
    1408000  1.94797E+02  3.58344E-03  2.35373E+03
```

```
    1536000  1.94608E+02  3.32797E-03  2.50146E+03
    1664000  1.94363E+02  3.12150E-03  2.62441E+03
    1792000  1.94351E+02  2.93755E-03  2.75279E+03
    1920000  1.94413E+02  2.77623E-03  2.87605E+03
    2048000  1.94466E+02  2.69558E-03  2.86007E+03
    2176000  1.94383E+02  2.58186E-03  2.93454E+03
    2304000  1.94279E+02  2.46206E-03  3.04790E+03
    2432000  1.94336E+02  2.36439E-03  3.12982E+03
    2553948  1.94333E+02  2.28916E-03  3.17993E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.67679E+01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     128000  7.72367E+01  1.22859E-02  2.20375E+03
     256000  7.73669E+01  7.71268E-03  2.79417E+03
     384000  7.72860E+01  5.59800E-03  3.53498E+03
     512000  7.72207E+01  4.51979E-03  4.07017E+03
     640000  7.70424E+01  3.87109E-03  4.43578E+03
     768000  7.69421E+01  3.37143E-03  4.87191E+03
     896000  7.68321E+01  3.01855E-03  5.21016E+03
    1024000  7.69156E+01  2.82180E-03  5.21489E+03
    1152000  7.69011E+01  2.74948E-03  4.88193E+03
    1280000  7.69447E+01  2.81037E-03  4.20970E+03
    1408000  7.69446E+01  2.71916E-03  4.08778E+03
    1536000  7.68819E+01  2.54092E-03  4.29110E+03
    1664000  7.67848E+01  2.39298E-03  4.46559E+03
    1792000  7.67754E+01  2.26831E-03  4.61679E+03
    1920000  7.67981E+01  2.15642E-03  4.76696E+03
    2048000  7.68177E+01  2.12599E-03  4.59790E+03
    2176000  7.67707E+01  2.03349E-03  4.73064E+03
    2304000  7.67367E+01  1.94851E-03  4.86622E+03
    2432000  7.67568E+01  1.88237E-03  4.93793E+03
    2553948  7.67679E+01  1.83714E-03  4.93724E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  2.52430E+01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     128000  2.51541E+01  8.90054E-03  4.19896E+03
     256000  2.53251E+01  6.03210E-03  4.56799E+03
     384000  2.53282E+01  4.46795E-03  5.54928E+03
     512000  2.53083E+01  3.66095E-03  6.20384E+03
     640000  2.52740E+01  3.27163E-03  6.21024E+03
     768000  2.52453E+01  2.88024E-03  6.67532E+03
     896000  2.52551E+01  2.95076E-03  5.45229E+03
    1024000  2.52813E+01  2.78466E-03  5.35492E+03
    1152000  2.52688E+01  2.65818E-03  5.22305E+03
    1280000  2.52767E+01  2.73309E-03  4.45113E+03
    1408000  2.52828E+01  2.61998E-03  4.40313E+03
    1536000  2.52623E+01  2.44582E-03  4.63131E+03
    1664000  2.52383E+01  2.30765E-03  4.80194E+03
    1792000  2.52389E+01  2.19324E-03  4.93822E+03
    1920000  2.52438E+01  2.08613E-03  5.09360E+03
    2048000  2.52413E+01  1.99792E-03  5.20624E+03
    2176000  2.52292E+01  1.91480E-03  5.33527E+03
    2304000  2.52213E+01  1.83850E-03  5.46600E+03
    2432000  2.52303E+01  1.78973E-03  5.46237E+03
    2553948  2.52430E+01  1.77630E-03  5.28125E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.23937E+01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     128000  1.23304E+01  8.05469E-03  5.12716E+03
     256000  1.24201E+01  5.74599E-03  5.03423E+03
     384000  1.24262E+01  4.31310E-03  5.95488E+03
     512000  1.24210E+01  3.54807E-03  6.60486E+03
     640000  1.24072E+01  3.24112E-03  6.32772E+03
     768000  1.23943E+01  2.85491E-03  6.79431E+03
     896000  1.23837E+01  2.61916E-03  6.92027E+03
    1024000  1.23960E+01  2.50052E-03  6.64105E+03
    1152000  1.23868E+01  2.37267E-03  6.55572E+03
    1280000  1.23939E+01  2.55151E-03  5.10722E+03
    1408000  1.24044E+01  2.58268E-03  4.53123E+03
    1536000  1.23946E+01  2.41195E-03  4.76227E+03
    1664000  1.23846E+01  2.28136E-03  4.91324E+03
    1792000  1.23850E+01  2.17149E-03  5.03768E+03
    1920000  1.23902E+01  2.06965E-03  5.17506E+03
```

```
    2048000  1.23894E+01  1.98207E-03  5.28986E+03
    2176000  1.23838E+01  1.90464E-03  5.39235E+03
    2304000  1.23792E+01  1.82893E-03  5.52336E+03
    2432000  1.23850E+01  1.78834E-03  5.47089E+03
    2553948  1.23937E+01  1.80151E-03  5.13450E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.34801E+00 0.0024
tfc   20       1       1       1       1       1       1       1       1
     128000  7.50490E+00  2.91091E-02  3.92571E+02
     256000  7.46976E+00  1.52878E-02  7.11165E+02
     384000  7.42987E+00  1.04235E-02  1.01959E+03
     512000  7.40867E+00  8.00040E-03  1.29905E+03
     640000  7.38680E+00  6.61807E-03  1.51766E+03
     768000  7.37062E+00  5.60114E-03  1.76513E+03
     896000  7.36160E+00  4.90715E-03  1.97146E+03
    1024000  7.36334E+00  4.40044E-03  2.14439E+03
    1152000  7.35479E+00  3.99081E-03  2.31724E+03
    1280000  7.35623E+00  3.86445E-03  2.22640E+03
    1408000  7.36380E+00  3.80778E-03  2.08455E+03
    1536000  7.35664E+00  3.52460E-03  2.23015E+03
    1664000  7.34798E+00  3.29460E-03  2.35588E+03
    1792000  7.34834E+00  3.10336E-03  2.46650E+03
    1920000  7.35021E+00  2.92844E-03  2.58486E+03
    2048000  7.34775E+00  2.77258E-03  2.70341E+03
    2176000  7.34414E+00  2.64169E-03  2.80312E+03
    2304000  7.34025E+00  2.51776E-03  2.91453E+03
    2432000  7.34366E+00  2.43001E-03  2.96307E+03
    2553948  7.34801E+00  2.39363E-03  2.90840E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.83784E+00 0.0020
tfc   20       1       1       1       1       1       1       1       1
     128000  4.80999E+00  7.53902E-03  5.85255E+03
```

```
     256000  4.85185E+00  5.71082E-03  5.09643E+03
     384000  4.85352E+00  4.32574E-03  5.92014E+03
     512000  4.84696E+00  3.53711E-03  6.64586E+03
     640000  4.84060E+00  3.29010E-03  6.14069E+03
     768000  4.83504E+00  2.89262E-03  6.61830E+03
     896000  4.83093E+00  2.65774E-03  6.72080E+03
    1024000  4.83486E+00  2.51314E-03  6.57454E+03
    1152000  4.83088E+00  2.35681E-03  6.64420E+03
    1280000  4.83357E+00  2.56907E-03  5.03765E+03
    1408000  4.84175E+00  2.93948E-03  3.49798E+03
    1536000  4.83858E+00  2.73988E-03  3.69052E+03
    1664000  4.83475E+00  2.58628E-03  3.82303E+03
    1792000  4.83516E+00  2.45222E-03  3.95025E+03
    1920000  4.83680E+00  2.32885E-03  4.08721E+03
    2048000  4.83565E+00  2.21572E-03  4.23303E+03
    2176000  4.83404E+00  2.12815E-03  4.31915E+03
    2304000  4.83217E+00  2.03801E-03  4.44819E+03
    2432000  4.83487E+00  1.98834E-03  4.42565E+03
    2553948  4.83784E+00  1.99753E-03  4.17621E+03
mcnp        5      11/07/10 03:30:23      2      2633100       795160562
```

Case 135

```
 Case 135
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.10010E+02 0.0021
tfc   11       1       1       1       1       1       1       1       1
     256000  3.10613E+02  7.51557E-03  3.04139E+03
     512000  3.11034E+02  4.93946E-03  3.51863E+03
     768000  3.10948E+02  3.94602E-03  3.67260E+03
    1024000  3.10275E+02  3.23168E-03  4.10476E+03
    1280000  3.09831E+02  2.86180E-03  4.18938E+03
    1536000  3.09477E+02  2.55196E-03  4.39055E+03
    1792000  3.09532E+02  2.50564E-03  3.90397E+03
    2048000  3.09867E+02  2.35539E-03  3.86476E+03
    2304000  3.09878E+02  2.24160E-03  3.79351E+03
    2560000  3.10011E+02  2.08070E-03  3.95967E+03
    2633100  3.10010E+02  2.05149E-03  3.95992E+03
tally  125    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.62315E+02 0.0033
tfc   11        1        1        1        1        1        1        1        1
     256000  1.63015E+02  1.02524E-02  1.63433E+03
     512000  1.63060E+02  7.11669E-03  1.69502E+03
     768000  1.63660E+02  9.04832E-03  6.98483E+02
    1024000  1.63151E+02  6.94848E-03  8.87901E+02
    1280000  1.62757E+02  5.74247E-03  1.04047E+03
    1536000  1.62623E+02  5.11852E-03  1.09139E+03
    1792000  1.62558E+02  4.67836E-03  1.11984E+03
    2048000  1.62484E+02  4.14827E-03  1.24598E+03
    2304000  1.62339E+02  3.73515E-03  1.36629E+03
    2560000  1.62341E+02  3.39798E-03  1.48470E+03
    2633100  1.62315E+02  3.31451E-03  1.51700E+03
tally  135    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  8.06482E+01 0.0023
tfc   11        1        1        1        1        1        1        1        1
     256000  8.11015E+01  7.82586E-03  2.80499E+03
     512000  8.09921E+01  4.97345E-03  3.47070E+03
     768000  8.07908E+01  3.93625E-03  3.69085E+03
    1024000  8.07046E+01  3.26668E-03  4.01728E+03
    1280000  8.06437E+01  2.95070E-03  3.94075E+03
    1536000  8.07157E+01  3.42588E-03  2.43627E+03
    1792000  8.06023E+01  3.02100E-03  2.68560E+03
    2048000  8.06141E+01  2.76651E-03  2.80144E+03
    2304000  8.05716E+01  2.53191E-03  2.97344E+03
    2560000  8.06416E+01  2.35382E-03  3.09408E+03
    2633100  8.06482E+01  2.31673E-03  3.10510E+03
tally  145    2    1
f         1
d         1
u         0
s         0
```

```
m         1
c         0
e         0
t         0
vals
  3.18913E+01 0.0020
tfc   11        1        1        1        1        1        1        1        1
     256000  3.21938E+01  8.05037E-03  2.65072E+03
     512000  3.20170E+01  4.68477E-03  3.91162E+03
     768000  3.19167E+01  3.49847E-03  4.67235E+03
    1024000  3.18907E+01  2.91805E-03  5.03453E+03
    1280000  3.19537E+01  3.13830E-03  3.48368E+03
    1536000  3.19214E+01  2.80531E-03  3.63335E+03
    1792000  3.18699E+01  2.48921E-03  3.95567E+03
    2048000  3.18744E+01  2.31420E-03  4.00357E+03
    2304000  3.18547E+01  2.11954E-03  4.24303E+03
    2560000  3.18803E+01  1.99652E-03  4.30065E+03
    2633100  3.18913E+01  2.01467E-03  4.10598E+03
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.04918E+01 0.0026
tfc   11        1        1        1        1        1        1        1        1
     256000  1.05287E+01  6.25737E-03  4.38744E+03
     512000  1.04962E+01  3.81507E-03  5.89831E+03
     768000  1.04776E+01  3.01420E-03  6.29431E+03
    1024000  1.04716E+01  2.61551E-03  6.26659E+03
    1280000  1.05179E+01  4.69069E-03  1.55939E+03
    1536000  1.05049E+01  4.01721E-03  1.77182E+03
    1792000  1.04910E+01  3.50848E-03  1.99115E+03
    2048000  1.04851E+01  3.12149E-03  2.20052E+03
    2304000  1.04788E+01  2.82324E-03  2.39145E+03
    2560000  1.04888E+01  2.60810E-03  2.52017E+03
    2633100  1.04918E+01  2.56481E-03  2.53345E+03
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
```

```
vals
  5.15440E+00 0.0029
tfc   11        1        1        1        1        1        1        1        1
     256000  5.16364E+00  6.01326E-03  4.75090E+03
     512000  5.14911E+00  3.67013E-03  6.37339E+03
     768000  5.14227E+00  2.98560E-03  6.41546E+03
    1024000  5.13864E+00  2.58910E-03  6.39508E+03
    1280000  5.16402E+00  5.43108E-03  1.16320E+03
    1536000  5.15990E+00  4.67765E-03  1.30681E+03
    1792000  5.15331E+00  4.06947E-03  1.48002E+03
    2048000  5.15090E+00  3.60579E-03  1.64910E+03
    2304000  5.14729E+00  3.25162E-03  1.80285E+03
    2560000  5.15304E+00  2.99519E-03  1.91086E+03
    2633100  5.15440E+00  2.93847E-03  1.93011E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.04883E+00 0.0027
tfc   11        1        1        1        1        1        1        1        1
     256000  3.05329E+00  5.94129E-03  4.86670E+03
     512000  3.04384E+00  3.60761E-03  6.59618E+03
     768000  3.03997E+00  2.97499E-03  6.46133E+03
    1024000  3.03860E+00  2.57963E-03  6.44212E+03
    1280000  3.05140E+00  4.77699E-03  1.50355E+03
    1536000  3.05134E+00  4.24638E-03  1.58573E+03
    1792000  3.04762E+00  3.70613E-03  1.78443E+03
    2048000  3.04564E+00  3.28991E-03  1.98098E+03
    2304000  3.04405E+00  2.98055E-03  2.14568E+03
    2560000  3.04789E+00  2.76314E-03  2.24530E+03
    2633100  3.04883E+00  2.72123E-03  2.25058E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.01214E+00 0.0028
tfc   11        1        1        1        1        1        1        1        1
     256000  2.01452E+00  5.96941E-03  4.82095E+03
```

```
     512000  2.00735E+00  3.61705E-03  6.56182E+03
     768000  2.00449E+00  2.99402E-03  6.37944E+03
    1024000  2.00334E+00  2.58170E-03  6.43181E+03
    1280000  2.01087E+00  4.33319E-03  1.82731E+03
    1536000  2.01147E+00  4.00685E-03  1.78099E+03
    1792000  2.00945E+00  3.50865E-03  1.99096E+03
    2048000  2.00800E+00  3.11958E-03  2.20321E+03
    2304000  2.00919E+00  3.03348E-03  2.07145E+03
    2560000  2.01150E+00  2.81368E-03  2.16537E+03
    2633100  2.01214E+00  2.77556E-03  2.16333E+03
mcnp       5     11/07/10 04:30:35     2     2517977      802853611
```

Case 136

```
 Case 136
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.26924E+02 0.0021
tfc   20       1       1       1       1       1       1       1       1
     128000  5.28143E+02  1.25195E-02  2.10025E+03
     256000  5.26854E+02  7.14193E-03  3.21917E+03
     384000  5.28023E+02  5.47853E-03  3.64758E+03
     512000  5.30529E+02  5.46482E-03  2.74971E+03
     640000  5.28903E+02  4.69303E-03  2.98015E+03
     768000  5.28993E+02  4.23054E-03  3.05573E+03
     896000  5.27924E+02  3.81567E-03  3.22194E+03
    1024000  5.27957E+02  3.46686E-03  3.41461E+03
    1152000  5.27317E+02  3.18930E-03  3.58224E+03
    1280000  5.26819E+02  3.01606E-03  3.60765E+03
    1408000  5.26547E+02  2.83872E-03  3.70214E+03
    1536000  5.26300E+02  2.66576E-03  3.84695E+03
    1664000  5.26313E+02  2.69813E-03  3.46637E+03
    1792000  5.26298E+02  2.56788E-03  3.55422E+03
    1920000  5.26849E+02  2.49440E-03  3.51537E+03
    2048000  5.26901E+02  2.39328E-03  3.57923E+03
    2176000  5.26829E+02  2.35575E-03  3.47637E+03
    2304000  5.26831E+02  2.26077E-03  3.56496E+03
    2432000  5.27103E+02  2.18322E-03  3.61955E+03
    2517977  5.26924E+02  2.12997E-03  3.67314E+03
tally  125    2    1
```

```
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.75880E+02 0.0033
tfc   20        1        1        1        1        1        1        1        1
     128000  2.77847E+02  1.81830E-02  9.95666E+02
     256000  2.76526E+02  9.67850E-03  1.75291E+03
     384000  2.76485E+02  6.85089E-03  2.33259E+03
     512000  2.77792E+02  6.85912E-03  1.74543E+03
     640000  2.78864E+02  1.01433E-02  6.37945E+02
     768000  2.78116E+02  8.55292E-03  7.47616E+02
     896000  2.77355E+02  7.42705E-03  8.50406E+02
    1024000  2.77274E+02  6.59240E-03  9.44335E+02
    1152000  2.76603E+02  5.91190E-03  1.04253E+03
    1280000  2.76488E+02  5.47622E-03  1.09432E+03
    1408000  2.76601E+02  5.28255E-03  1.06908E+03
    1536000  2.76447E+02  4.88720E-03  1.14456E+03
    1664000  2.76405E+02  4.77024E-03  1.10897E+03
    1792000  2.76272E+02  4.45683E-03  1.17989E+03
    1920000  2.76338E+02  4.19026E-03  1.24572E+03
    2048000  2.76186E+02  3.95164E-03  1.31287E+03
    2176000  2.76011E+02  3.74705E-03  1.37405E+03
    2304000  2.75903E+02  3.55744E-03  1.43977E+03
    2432000  2.75957E+02  3.38984E-03  1.50138E+03
    2517977  2.75880E+02  3.29686E-03  1.53315E+03
tally  135     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.37060E+02 0.0023
tfc   20        1        1        1        1        1        1        1        1
     128000  1.37642E+02  1.29778E-02  1.95453E+03
     256000  1.37565E+02  7.42564E-03  2.97788E+03
     384000  1.37725E+02  5.51739E-03  3.59639E+03
     512000  1.37924E+02  4.82394E-03  3.52887E+03
     640000  1.37568E+02  4.37855E-03  3.42362E+03
     768000  1.37358E+02  3.80009E-03  3.78722E+03
     896000  1.37049E+02  3.38346E-03  4.09767E+03
```

```
    1024000  1.37120E+02  3.15542E-03  4.12190E+03
    1152000  1.36906E+02  2.87973E-03  4.39381E+03
    1280000  1.37028E+02  2.98822E-03  3.67519E+03
    1408000  1.37288E+02  3.61177E-03  2.28696E+03
    1536000  1.37214E+02  3.36106E-03  2.41996E+03
    1664000  1.37044E+02  3.15030E-03  2.54270E+03
    1792000  1.37044E+02  2.96586E-03  2.66434E+03
    1920000  1.37081E+02  2.80191E-03  2.78608E+03
    2048000  1.37088E+02  2.70823E-03  2.79515E+03
    2176000  1.37031E+02  2.59295E-03  2.86942E+03
    2304000  1.37010E+02  2.47834E-03  2.96651E+03
    2432000  1.37053E+02  2.37870E-03  3.04909E+03
    2517977  1.37060E+02  2.33567E-03  3.05467E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.41135E+01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     128000  5.42012E+01  1.16404E-02  2.42947E+03
     256000  5.44711E+01  7.38906E-03  3.00744E+03
     384000  5.45187E+01  5.43728E-03  3.70314E+03
     512000  5.44769E+01  4.45000E-03  4.14685E+03
     640000  5.43280E+01  3.81644E-03  4.50638E+03
     768000  5.42401E+01  3.32367E-03  4.95076E+03
     896000  5.41384E+01  2.97547E-03  5.29843E+03
    1024000  5.41572E+01  2.76441E-03  5.37041E+03
    1152000  5.40974E+01  2.53934E-03  5.65072E+03
    1280000  5.41649E+01  2.68589E-03  4.54914E+03
    1408000  5.41781E+01  2.60668E-03  4.39058E+03
    1536000  5.41513E+01  2.44001E-03  4.59175E+03
    1664000  5.40943E+01  2.30201E-03  4.76197E+03
    1792000  5.40927E+01  2.18404E-03  4.91326E+03
    1920000  5.41071E+01  2.07763E-03  5.06719E+03
    2048000  5.41227E+01  2.05035E-03  4.87665E+03
    2176000  5.40942E+01  1.96311E-03  5.00602E+03
    2304000  5.40893E+01  1.88460E-03  5.13015E+03
    2432000  5.41075E+01  1.82115E-03  5.20183E+03
    2517977  5.41135E+01  1.79136E-03  5.19304E+03
tally  155    2    1
f        1
d        1
u        0
s        0
```

```
m        1
c        0
e        0
t        0
vals
  1.77866E+01 0.0017
tfc   20       1       1       1       1       1       1       1       1
     128000  1.77135E+01  8.70704E-03  4.34216E+03
     256000  1.78565E+01  5.90647E-03  4.70673E+03
     384000  1.78765E+01  4.44875E-03  5.53168E+03
     512000  1.78676E+01  3.69934E-03  6.00052E+03
     640000  1.78329E+01  3.28872E-03  6.06864E+03
     768000  1.78085E+01  2.89449E-03  6.52776E+03
     896000  1.78077E+01  2.93952E-03  5.42885E+03
    1024000  1.78114E+01  2.73299E-03  5.49462E+03
    1152000  1.77911E+01  2.51224E-03  5.77328E+03
    1280000  1.78012E+01  2.61897E-03  4.78458E+03
    1408000  1.78082E+01  2.51577E-03  4.71363E+03
    1536000  1.77985E+01  2.35264E-03  4.93911E+03
    1664000  1.77824E+01  2.22121E-03  5.11469E+03
    1792000  1.77854E+01  2.11281E-03  5.25014E+03
    1920000  1.77878E+01  2.01094E-03  5.40885E+03
    2048000  1.77854E+01  1.92616E-03  5.52579E+03
    2176000  1.77782E+01  1.84749E-03  5.65221E+03
    2304000  1.77777E+01  1.77616E-03  5.77568E+03
    2432000  1.77821E+01  1.72444E-03  5.80167E+03
    2517977  1.77866E+01  1.70856E-03  5.70854E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.72840E+00 0.0017
tfc   20       1       1       1       1       1       1       1       1
     128000  8.68523E+00  7.88871E-03  5.28974E+03
     256000  8.75407E+00  5.66661E-03  5.11362E+03
     384000  8.77261E+00  4.31321E-03  5.88480E+03
     512000  8.76316E+00  3.56193E-03  6.47243E+03
     640000  8.74849E+00  3.23403E-03  6.27562E+03
     768000  8.73644E+00  2.84582E-03  6.75291E+03
     896000  8.72632E+00  2.60688E-03  6.90269E+03
    1024000  8.72915E+00  2.44525E-03  6.86385E+03
    1152000  8.71951E+00  2.25739E-03  7.15044E+03
    1280000  8.72698E+00  2.45564E-03  5.44222E+03
    1408000  8.73512E+00  2.48707E-03  4.82308E+03
```

```
    1536000  8.73012E+00  2.32566E-03  5.05439E+03
    1664000  8.72290E+00  2.20091E-03  5.20950E+03
    1792000  8.72488E+00  2.09622E-03  5.33356E+03
    1920000  8.72661E+00  1.99665E-03  5.48654E+03
    2048000  8.72625E+00  1.91231E-03  5.60611E+03
    2176000  8.72316E+00  1.83899E-03  5.70459E+03
    2304000  8.72204E+00  1.76767E-03  5.83128E+03
    2432000  8.72480E+00  1.72002E-03  5.83149E+03
    2517977  8.72840E+00  1.72174E-03  5.62152E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.17468E+00 0.0023
tfc   20       1       1       1       1       1       1       1       1
     128000  5.27269E+00  2.83997E-02  4.08151E+02
     256000  5.25853E+00  1.48820E-02  7.41401E+02
     384000  5.24005E+00  1.01566E-02  1.06130E+03
     512000  5.22591E+00  7.80780E-03  1.34704E+03
     640000  5.20787E+00  6.46128E-03  1.57220E+03
     768000  5.19606E+00  5.47151E-03  1.82681E+03
     896000  5.18791E+00  4.79254E-03  2.04234E+03
    1024000  5.18530E+00  4.27838E-03  2.24210E+03
    1152000  5.17760E+00  3.85536E-03  2.45140E+03
    1280000  5.17948E+00  3.74169E-03  2.34406E+03
    1408000  5.18503E+00  3.68416E-03  2.19797E+03
    1536000  5.18095E+00  3.41092E-03  2.34972E+03
    1664000  5.17508E+00  3.18858E-03  2.48201E+03
    1792000  5.17606E+00  2.99921E-03  2.60543E+03
    1920000  5.17604E+00  2.82802E-03  2.73488E+03
    2048000  5.17429E+00  2.67744E-03  2.85982E+03
    2176000  5.17223E+00  2.55209E-03  2.96203E+03
    2304000  5.17168E+00  2.43614E-03  3.07017E+03
    2432000  5.17293E+00  2.34262E-03  3.14373E+03
    2517977  5.17468E+00  2.31222E-03  3.11693E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
```

```
vals
  3.40877E+00 0.0019
tfc   20       1       1       1       1       1       1       1       1
     128000  3.38508E+00  7.36318E-03  6.07177E+03
     256000  3.41804E+00  5.56177E-03  5.30822E+03
     384000  3.42215E+00  4.22280E-03  6.13948E+03
     512000  3.41937E+00  3.50100E-03  6.69969E+03
     640000  3.41418E+00  3.25040E-03  6.21260E+03
     768000  3.40952E+00  2.86091E-03  6.68187E+03
     896000  3.40601E+00  2.63003E-03  6.78171E+03
    1024000  3.40569E+00  2.44335E-03  6.87453E+03
    1152000  3.40303E+00  2.26127E-03  7.12588E+03
    1280000  3.40544E+00  2.48217E-03  5.32651E+03
    1408000  3.41085E+00  2.82110E-03  3.74855E+03
    1536000  3.40856E+00  2.62809E-03  3.95803E+03
    1664000  3.40616E+00  2.48289E-03  4.09341E+03
    1792000  3.40780E+00  2.36172E-03  4.20179E+03
    1920000  3.40836E+00  2.24274E-03  4.34856E+03
    2048000  3.40740E+00  2.13386E-03  4.50241E+03
    2176000  3.40645E+00  2.05085E-03  4.58683E+03
    2304000  3.40620E+00  1.96558E-03  4.71612E+03
    2432000  3.40753E+00  1.90712E-03  4.74346E+03
    2517977  3.40877E+00  1.90762E-03  4.57932E+03
mcnp       5     11/07/10 05:30:46     2     2464832      794911042
```

Case 137

```
 Case 137
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.14540E+02 0.0020
tfc   20       1       1       1       1       1       1       1       1
     128000  2.15535E+02  1.22748E-02  2.15783E+03
     256000  2.15143E+02  6.98654E-03  3.32332E+03
     384000  2.15688E+02  5.37290E-03  3.74375E+03
     512000  2.16048E+02  4.76860E-03  3.56204E+03
     640000  2.15462E+02  4.16936E-03  3.71976E+03
     768000  2.15333E+02  3.67506E-03  3.98582E+03
     896000  2.14814E+02  3.35845E-03  4.09219E+03
    1024000  2.14836E+02  3.06623E-03  4.29465E+03
```

```
    1152000  2.14699E+02  2.85695E-03  4.39415E+03
    1280000  2.14455E+02  2.72597E-03  4.34517E+03
    1408000  2.14380E+02  2.57818E-03  4.40935E+03
    1536000  2.14370E+02  2.43904E-03  4.50978E+03
    1664000  2.14381E+02  2.50165E-03  3.95348E+03
    1792000  2.14328E+02  2.38826E-03  4.02651E+03
    1920000  2.14490E+02  2.29629E-03  4.06114E+03
    2048000  2.14554E+02  2.21094E-03  4.10563E+03
    2176000  2.14545E+02  2.18933E-03  3.93796E+03
    2304000  2.14586E+02  2.10356E-03  4.02620E+03
    2432000  2.14585E+02  2.02742E-03  4.10863E+03
    2464832  2.14540E+02  2.00810E-03  4.13235E+03
tally  125     2     1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.12565E+02 0.0036
tfc   20       1       1       1       1       1       1       1       1
     128000  1.13503E+02  1.79149E-02  1.01301E+03
     256000  1.12835E+02  9.52175E-03  1.78922E+03
     384000  1.12806E+02  6.73774E-03  2.38065E+03
     512000  1.13245E+02  6.73207E-03  1.78724E+03
     640000  1.13684E+02  9.98915E-03  6.48033E+02
     768000  1.13438E+02  8.42195E-03  7.58965E+02
     896000  1.13051E+02  7.31276E-03  8.63120E+02
    1024000  1.13381E+02  7.42626E-03  7.32144E+02
    1152000  1.13097E+02  6.65164E-03  8.10628E+02
    1280000  1.12997E+02  6.12312E-03  8.61195E+02
    1408000  1.13046E+02  5.83076E-03  8.62086E+02
    1536000  1.12955E+02  5.38074E-03  9.26634E+02
    1664000  1.12905E+02  5.19680E-03  9.16141E+02
    1792000  1.12799E+02  4.85177E-03  9.75640E+02
    1920000  1.12803E+02  4.55386E-03  1.03262E+03
    2048000  1.12747E+02  4.29050E-03  1.09023E+03
    2176000  1.12662E+02  4.06361E-03  1.14306E+03
    2304000  1.12628E+02  3.85430E-03  1.19926E+03
    2432000  1.12596E+02  3.66912E-03  1.25446E+03
    2464832  1.12565E+02  3.62451E-03  1.26845E+03
tally  135     2     1
f        1
d        1
u        0
s        0
m        1
```

```
c         0
e         0
t         0
vals
  5.58799E+01 0.0024
tfc   20        1        1        1        1        1        1        1        1
     128000  5.62788E+01  1.27717E-02  1.99318E+03
     256000  5.61858E+01  7.31057E-03  3.03524E+03
     384000  5.62752E+01  5.51071E-03  3.55885E+03
     512000  5.62919E+01  4.78686E-03  3.53491E+03
     640000  5.61235E+01  4.33693E-03  3.43788E+03
     768000  5.60331E+01  3.75267E-03  3.82266E+03
     896000  5.59001E+01  3.36689E-03  4.07171E+03
    1024000  5.59649E+01  3.20757E-03  3.92450E+03
    1152000  5.58764E+01  2.92407E-03  4.19473E+03
    1280000  5.59095E+01  3.00962E-03  3.56470E+03
    1408000  5.60590E+01  3.67203E-03  2.17364E+03
    1536000  5.60298E+01  3.41476E-03  2.30076E+03
    1664000  5.59489E+01  3.19766E-03  2.41974E+03
    1792000  5.59188E+01  3.00289E-03  2.54689E+03
    1920000  5.59202E+01  2.83246E-03  2.66915E+03
    2048000  5.59252E+01  2.73317E-03  2.68658E+03
    2176000  5.58927E+01  2.61456E-03  2.76119E+03
    2304000  5.58804E+01  2.49095E-03  2.87127E+03
    2432000  5.58928E+01  2.39406E-03  2.94654E+03
    2464832  5.58799E+01  2.36711E-03  2.97393E+03
tally  145    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.20463E+01 0.0018
tfc   20        1        1        1        1        1        1        1        1
     128000  2.21722E+01  1.14614E-02  2.47499E+03
     256000  2.22740E+01  7.36319E-03  2.99202E+03
     384000  2.22576E+01  5.38232E-03  3.73066E+03
     512000  2.22184E+01  4.37302E-03  4.23562E+03
     640000  2.21485E+01  3.74680E-03  4.60609E+03
     768000  2.21119E+01  3.25486E-03  5.08140E+03
     896000  2.20753E+01  2.96125E-03  5.26363E+03
    1024000  2.20824E+01  2.74722E-03  5.34996E+03
    1152000  2.20560E+01  2.52088E-03  5.64383E+03
    1280000  2.20832E+01  2.67714E-03  4.50511E+03
    1408000  2.20918E+01  2.59441E-03  4.35436E+03
    1536000  2.20835E+01  2.42811E-03  4.55047E+03
```

```
    1664000  2.20595E+01  2.29519E-03  4.69674E+03
    1792000  2.20497E+01  2.17298E-03  4.86381E+03
    1920000  2.20541E+01  2.06487E-03  5.02244E+03
    2048000  2.20600E+01  2.03568E-03  4.84298E+03
    2176000  2.20458E+01  1.94796E-03  4.97429E+03
    2304000  2.20450E+01  1.86752E-03  5.10828E+03
    2432000  2.20506E+01  1.80802E-03  5.16628E+03
    2464832  2.20463E+01  1.78956E-03  5.20326E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.24148E+00 0.0017
tfc   20       1       1       1       1       1       1       1       1
     128000  7.25027E+00  8.59382E-03  4.40222E+03
     256000  7.30363E+00  5.84131E-03  4.75418E+03
     384000  7.31800E+00  5.22923E-03  3.95229E+03
     512000  7.30199E+00  4.19702E-03  4.59829E+03
     640000  7.27960E+00  3.64152E-03  4.87628E+03
     768000  7.26752E+00  3.16242E-03  5.38279E+03
     896000  7.25401E+00  2.85917E-03  5.64616E+03
    1024000  7.25618E+00  2.66028E-03  5.70536E+03
    1152000  7.24900E+00  2.44606E-03  5.99439E+03
    1280000  7.25154E+00  2.55486E-03  4.94666E+03
    1408000  7.25477E+00  2.45351E-03  4.86882E+03
    1536000  7.25192E+00  2.29555E-03  5.09117E+03
    1664000  7.24325E+00  2.16440E-03  5.28151E+03
    1792000  7.24225E+00  2.05712E-03  5.42713E+03
    1920000  7.24361E+00  1.95718E-03  5.59033E+03
    2048000  7.24449E+00  1.87963E-03  5.68050E+03
    2176000  7.24081E+00  1.80064E-03  5.82156E+03
    2304000  7.24139E+00  1.73086E-03  5.94676E+03
    2432000  7.24250E+00  1.68273E-03  5.96422E+03
    2464832  7.24148E+00  1.66610E-03  6.00297E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
```

```
  3.55350E+00 0.0017
tfc   20       1       1       1       1       1       1       1       1
     128000  3.55469E+00  7.78558E-03  5.36368E+03
     256000  3.57925E+00  5.55374E-03  5.25926E+03
     384000  3.58360E+00  4.30957E-03  5.81910E+03
     512000  3.57718E+00  3.54319E-03  6.45196E+03
     640000  3.56808E+00  3.20498E-03  6.29512E+03
     768000  3.56269E+00  2.81149E-03  6.81043E+03
     896000  3.55673E+00  2.58815E-03  6.89059E+03
    1024000  3.55734E+00  2.41832E-03  6.90415E+03
    1152000  3.55337E+00  2.23009E-03  7.21168E+03
    1280000  3.55566E+00  2.42314E-03  5.49909E+03
    1408000  3.55882E+00  2.44970E-03  4.88398E+03
    1536000  3.55712E+00  2.29079E-03  5.11237E+03
    1664000  3.55353E+00  2.16494E-03  5.27889E+03
    1792000  3.55325E+00  2.05892E-03  5.41764E+03
    1920000  3.55383E+00  1.96005E-03  5.57399E+03
    2048000  3.55447E+00  1.88295E-03  5.66050E+03
    2176000  3.55268E+00  1.80424E-03  5.79832E+03
    2304000  3.55330E+00  1.73551E-03  5.91489E+03
    2432000  3.55391E+00  1.68977E-03  5.91465E+03
    2464832  3.55350E+00  1.67299E-03  5.95364E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.10427E+00 0.0018
tfc   20       1       1       1       1       1       1       1       1
     128000  2.09905E+00  7.42696E-03  5.89417E+03
     256000  2.12088E+00  5.69434E-03  5.00275E+03
     384000  2.12056E+00  4.30069E-03  5.84317E+03
     512000  2.11829E+00  3.60779E-03  6.22296E+03
     640000  2.11288E+00  3.29071E-03  5.97138E+03
     768000  2.10966E+00  2.88029E-03  6.48896E+03
     896000  2.10636E+00  2.65748E-03  6.53571E+03
    1024000  2.10632E+00  2.46439E-03  6.64842E+03
    1152000  2.10404E+00  2.27035E-03  6.95817E+03
    1280000  2.10527E+00  2.46729E-03  5.30402E+03
    1408000  2.10808E+00  2.64183E-03  4.19942E+03
    1536000  2.10709E+00  2.46565E-03  4.41296E+03
    1664000  2.10450E+00  2.32457E-03  4.57878E+03
    1792000  2.10418E+00  2.20487E-03  4.72415E+03
    1920000  2.10451E+00  2.09487E-03  4.87962E+03
    2048000  2.10482E+00  2.00507E-03  4.99199E+03
```

```
    2176000  2.10381E+00  1.91929E-03  5.12405E+03
    2304000  2.10410E+00  1.84221E-03  5.24958E+03
    2432000  2.10451E+00  1.79037E-03  5.26862E+03
    2464832  2.10427E+00  1.77200E-03  5.30691E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.38808E+00 0.0019
tfc   20       1       1       1       1       1       1       1       1
     128000  1.38722E+00  7.36138E-03  5.99965E+03
     256000  1.40001E+00  5.77298E-03  4.86739E+03
     384000  1.39934E+00  4.33281E-03  5.75685E+03
     512000  1.39638E+00  3.54492E-03  6.44566E+03
     640000  1.39269E+00  3.25997E-03  6.08453E+03
     768000  1.39082E+00  2.85637E-03  6.59807E+03
     896000  1.38860E+00  2.63422E-03  6.65167E+03
    1024000  1.38855E+00  2.44152E-03  6.77355E+03
    1152000  1.38709E+00  2.25070E-03  7.08016E+03
    1280000  1.38779E+00  2.46036E-03  5.33395E+03
    1408000  1.39010E+00  2.78821E-03  3.77007E+03
    1536000  1.38933E+00  2.59721E-03  3.97720E+03
    1664000  1.38797E+00  2.44972E-03  4.12287E+03
    1792000  1.38780E+00  2.32109E-03  4.26290E+03
    1920000  1.38818E+00  2.20373E-03  4.40944E+03
    2048000  1.38819E+00  2.10360E-03  4.53528E+03
    2176000  1.38768E+00  2.01307E-03  4.65775E+03
    2304000  1.38782E+00  1.92913E-03  4.78719E+03
    2432000  1.38823E+00  1.87259E-03  4.81610E+03
    2464832  1.38808E+00  1.85291E-03  4.85355E+03
mcnp       5     11/07/10 06:31:02     2     9997272      780323935
```

Case 138

```
 Case 138
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
```

```
e        0
t        0
vals
  4.75206E+00 0.0021
tfc   20       1       1       1       1       1       1       1       1
     512000  4.75077E+00  9.81488E-03  3.37272E+03
    1024000  4.76042E+00  5.62099E-03  5.14308E+03
    1536000  4.77966E+00  9.30304E-03  1.25308E+03
    2048000  4.77440E+00  7.10950E-03  1.60784E+03
    2560000  4.77115E+00  5.79173E-03  1.93758E+03
    3072000  4.76555E+00  4.97716E-03  2.18722E+03
    3584000  4.75931E+00  4.34289E-03  2.46346E+03
    4096000  4.75858E+00  3.86257E-03  2.72409E+03
    4608000  4.76216E+00  3.68016E-03  2.66653E+03
    5120000  4.76320E+00  3.36043E-03  2.87755E+03
    5632000  4.76005E+00  3.09573E-03  3.08166E+03
    6144000  4.76425E+00  3.22413E-03  2.60500E+03
    6656000  4.76038E+00  3.00752E-03  2.76358E+03
    7168000  4.75964E+00  2.82176E-03  2.91602E+03
    7680000  4.75715E+00  2.66052E-03  3.06213E+03
    8192000  4.75589E+00  2.51684E-03  3.20836E+03
    8704000  4.75305E+00  2.39233E-03  3.34310E+03
    9216000  4.75356E+00  2.28019E-03  3.47606E+03
    9728000  4.75264E+00  2.17870E-03  3.60739E+03
    9997272  4.75206E+00  2.12962E-03  3.67414E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.97690E+00 0.0011
tfc   20       1       1       1       1       1       1       1       1
     512000  3.96232E+00  4.99631E-03  1.30152E+04
    1024000  3.97691E+00  3.33452E-03  1.46145E+04
    1536000  3.96387E+00  2.64650E-03  1.54842E+04
    2048000  3.97019E+00  2.23524E-03  1.62656E+04
    2560000  3.97261E+00  1.96584E-03  1.68182E+04
    3072000  3.97260E+00  1.85792E-03  1.56965E+04
    3584000  3.97225E+00  1.70522E-03  1.59787E+04
    4096000  3.97242E+00  1.58235E-03  1.62318E+04
    4608000  3.97282E+00  1.47955E-03  1.64976E+04
    5120000  3.97623E+00  1.45069E-03  1.54405E+04
    5632000  3.97555E+00  1.37074E-03  1.57181E+04
    6144000  3.97489E+00  1.30301E-03  1.59492E+04
    6656000  3.97343E+00  1.24414E-03  1.61491E+04
```

```
    7168000  3.97549E+00  1.25501E-03  1.47413E+04
    7680000  3.97578E+00  1.20865E-03  1.48374E+04
    8192000  3.97680E+00  1.16747E-03  1.49108E+04
    8704000  3.97608E+00  1.14233E-03  1.46626E+04
    9216000  3.97667E+00  1.10381E-03  1.48334E+04
    9728000  3.97661E+00  1.06788E-03  1.50155E+04
    9997272  3.97690E+00  1.05153E-03  1.50701E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.11590E+00 0.0010
tfc   20       1       1       1       1       1       1       1       1
     512000  3.09499E+00  3.54853E-03  2.58020E+04
    1024000  3.11178E+00  2.98048E-03  1.82927E+04
    1536000  3.10124E+00  2.28214E-03  2.08230E+04
    2048000  3.10613E+00  1.90337E-03  2.24323E+04
    2560000  3.11257E+00  1.97801E-03  1.66120E+04
    3072000  3.11308E+00  1.81128E-03  1.65152E+04
    3584000  3.11296E+00  1.63533E-03  1.73738E+04
    4096000  3.11180E+00  1.49251E-03  1.82448E+04
    4608000  3.11221E+00  1.37925E-03  1.89843E+04
    5120000  3.11449E+00  1.36120E-03  1.75374E+04
    5632000  3.11541E+00  1.28649E-03  1.78442E+04
    6144000  3.11507E+00  1.21195E-03  1.84359E+04
    6656000  3.11484E+00  1.17245E-03  1.81844E+04
    7168000  3.11491E+00  1.11812E-03  1.85718E+04
    7680000  3.11464E+00  1.06786E-03  1.90074E+04
    8192000  3.11508E+00  1.02269E-03  1.94314E+04
    8704000  3.11370E+00  9.87066E-04  1.96380E+04
    9216000  3.11542E+00  1.04924E-03  1.64165E+04
    9728000  3.11564E+00  1.01077E-03  1.67606E+04
    9997272  3.11590E+00  9.92100E-04  1.69297E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.01143E+00 0.0007
```

```
tfc   20       1       1       1       1       1       1       1       1
     512000  2.00198E+00  2.93611E-03  3.76883E+04
    1024000  2.00765E+00  2.02886E-03  3.94772E+04
    1536000  2.00383E+00  1.67050E-03  3.88633E+04
    2048000  2.00694E+00  1.43355E-03  3.95455E+04
    2560000  2.00811E+00  1.28846E-03  3.91504E+04
    3072000  2.00952E+00  1.25521E-03  3.43892E+04
    3584000  2.00954E+00  1.15531E-03  3.48105E+04
    4096000  2.00931E+00  1.10922E-03  3.30323E+04
    4608000  2.01060E+00  1.07152E-03  3.14542E+04
    5120000  2.01026E+00  1.00723E-03  3.20302E+04
    5632000  2.01074E+00  9.50745E-04  3.26726E+04
    6144000  2.01135E+00  9.09469E-04  3.27384E+04
    6656000  2.01094E+00  8.66974E-04  3.32566E+04
    7168000  2.01098E+00  8.32703E-04  3.34851E+04
    7680000  2.01115E+00  8.00792E-04  3.37999E+04
    8192000  2.01163E+00  7.71627E-04  3.41333E+04
    8704000  2.01090E+00  7.48490E-04  3.41522E+04
    9216000  2.01085E+00  7.23696E-04  3.45078E+04
    9728000  2.01124E+00  7.04568E-04  3.44940E+04
    9997272  2.01143E+00  6.94472E-04  3.45502E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.95969E-01 0.0011
tfc   20       1       1       1       1       1       1       1       1
     512000  9.92842E-01  2.90341E-03  3.85419E+04
    1024000  9.95835E-01  2.42693E-03  2.75888E+04
    1536000  9.94790E-01  2.09847E-03  2.46276E+04
    2048000  9.98834E-01  3.83209E-03  5.53413E+03
    2560000  9.97745E-01  3.12702E-03  6.64685E+03
    3072000  9.97112E-01  2.64084E-03  7.76913E+03
    3584000  9.97441E-01  2.44260E-03  7.78749E+03
    4096000  9.96672E-01  2.16608E-03  8.66210E+03
    4608000  9.96550E-01  1.94560E-03  9.54050E+03
    5120000  9.95968E-01  1.76977E-03  1.03748E+04
    5632000  9.96122E-01  1.62584E-03  1.11727E+04
    6144000  9.96585E-01  1.52000E-03  1.17205E+04
    6656000  9.96130E-01  1.41671E-03  1.24546E+04
    7168000  9.95999E-01  1.32853E-03  1.31549E+04
    7680000  9.95915E-01  1.25273E-03  1.38115E+04
    8192000  9.96048E-01  1.18769E-03  1.44073E+04
    8704000  9.95919E-01  1.17696E-03  1.38123E+04
```

```
    9216000  9.95818E-01  1.12124E-03  1.43758E+04
    9728000  9.95824E-01  1.07040E-03  1.49450E+04
    9997272  9.95969E-01  1.05286E-03  1.50320E+04
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.80050E-01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     512000  5.76091E-01  2.47326E-03  5.31144E+04
    1024000  5.77893E-01  1.99720E-03  4.07385E+04
    1536000  5.77524E-01  1.72596E-03  3.64058E+04
    2048000  5.78132E-01  1.44034E-03  3.91731E+04
    2560000  5.78209E-01  1.38664E-03  3.38026E+04
    3072000  5.78197E-01  1.23338E-03  3.56177E+04
    3584000  5.80011E-01  2.90958E-03  5.48836E+03
    4096000  5.81155E-01  3.81734E-03  2.78902E+03
    4608000  5.80884E-01  3.40523E-03  3.11449E+03
    5120000  5.80556E-01  3.08017E-03  3.42502E+03
    5632000  5.81031E-01  2.97090E-03  3.34606E+03
    6144000  5.80925E-01  2.73411E-03  3.62245E+03
    6656000  5.80529E-01  2.53215E-03  3.89861E+03
    7168000  5.80337E-01  2.35830E-03  4.17479E+03
    7680000  5.80286E-01  2.21535E-03  4.41643E+03
    8192000  5.80565E-01  2.13238E-03  4.46957E+03
    8704000  5.80310E-01  2.02407E-03  4.67026E+03
    9216000  5.80184E-01  1.91724E-03  4.91673E+03
    9728000  5.80111E-01  1.82129E-03  5.16213E+03
    9997272  5.80050E-01  1.77465E-03  5.29094E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.75010E-01 0.0013
tfc   20       1       1       1       1       1       1       1       1
     512000  3.73277E-01  2.59262E-03  4.83363E+04
    1024000  3.74253E-01  2.00559E-03  4.03984E+04
    1536000  3.73702E-01  1.64793E-03  3.99346E+04
```

```
    2048000  3.74369E-01  1.42547E-03  3.99947E+04
    2560000  3.74209E-01  1.30225E-03  3.83255E+04
    3072000  3.74190E-01  1.16653E-03  3.98167E+04
    3584000  3.74363E-01  1.19844E-03  3.23495E+04
    4096000  3.74384E-01  1.14606E-03  3.09425E+04
    4608000  3.74404E-01  1.05232E-03  3.26122E+04
    5120000  3.74489E-01  1.16292E-03  2.40279E+04
    5632000  3.74560E-01  1.07960E-03  2.53388E+04
    6144000  3.74623E-01  1.01982E-03  2.60366E+04
    6656000  3.74484E-01  9.61447E-04  2.70420E+04
    7168000  3.74767E-01  1.14327E-03  1.77637E+04
    7680000  3.74740E-01  1.08038E-03  1.85698E+04
    8192000  3.74857E-01  1.03526E-03  1.89625E+04
    8704000  3.74684E-01  9.84984E-04  1.97211E+04
    9216000  3.74703E-01  9.44014E-04  2.02802E+04
    9728000  3.75053E-01  1.31437E-03  9.91180E+03
    9997272  3.75010E-01  1.28201E-03  1.01386E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.61479E-01 0.0018
tfc   20       1       1       1       1       1       1       1       1
     512000  2.64928E-01  1.76175E-02  1.04680E+03
    1024000  2.63087E-01  9.02653E-03  1.99438E+03
    1536000  2.61830E-01  6.10525E-03  2.90953E+03
    2048000  2.61726E-01  4.61907E-03  3.80900E+03
    2560000  2.61552E-01  3.77039E-03  4.57197E+03
    3072000  2.61541E-01  3.19709E-03  5.30087E+03
    3584000  2.61392E-01  2.77694E-03  6.02521E+03
    4096000  2.61249E-01  2.45441E-03  6.74652E+03
    4608000  2.61217E-01  2.19855E-03  7.47147E+03
    5120000  2.61118E-01  1.99762E-03  8.14305E+03
    5632000  2.61177E-01  1.83241E-03  8.79557E+03
    6144000  2.61780E-01  2.87301E-03  3.28065E+03
    6656000  2.61631E-01  2.66026E-03  3.53217E+03
    7168000  2.61627E-01  2.47928E-03  3.77730E+03
    7680000  2.61622E-01  2.32398E-03  4.01319E+03
    8192000  2.61678E-01  2.18826E-03  4.24419E+03
    8704000  2.61537E-01  2.06625E-03  4.48153E+03
    9216000  2.61500E-01  1.95687E-03  4.71960E+03
    9728000  2.61525E-01  1.86529E-03  4.92150E+03
    9997272  2.61479E-01  1.81728E-03  5.04564E+03
mcnp       5      11/07/10 07:31:13      2     10816753       788567324
```

Case 139

```
 Case 139
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.52040E+01 0.0027
tfc   11        1        1        1        1        1        1        1        1
    1024000  5.51142E+01  4.36351E-03  9.23688E+03
    2048000  5.54078E+01  8.56148E-03  1.20066E+03
    3072000  5.52925E+01  5.95637E-03  1.65373E+03
    4096000  5.53082E+01  4.59867E-03  2.08257E+03
    5120000  5.53870E+01  4.02169E-03  2.17751E+03
    6144000  5.52825E+01  3.43288E-03  2.48879E+03
    7168000  5.52493E+01  3.00978E-03  2.77535E+03
    8192000  5.52132E+01  2.69234E-03  3.03538E+03
    9216000  5.52789E+01  3.06898E-03  2.07676E+03
   10240000  5.52355E+01  2.79701E-03  2.24988E+03
   10816753  5.52040E+01  2.66620E-03  2.34429E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.62131E+01 0.0011
tfc   11        1        1        1        1        1        1        1        1
    1024000  4.62598E+01  3.68661E-03  1.29403E+04
    2048000  4.61717E+01  2.51750E-03  1.38860E+04
    3072000  4.61722E+01  1.99932E-03  1.46779E+04
    4096000  4.62319E+01  1.72290E-03  1.48369E+04
    5120000  4.62699E+01  1.60578E-03  1.36586E+04
    6144000  4.62389E+01  1.44925E-03  1.39643E+04
    7168000  4.62302E+01  1.33066E-03  1.41988E+04
    8192000  4.62414E+01  1.24206E-03  1.42623E+04
    9216000  4.62320E+01  1.18551E-03  1.39175E+04
```

```
   10240000  4.62260E+01  1.11702E-03  1.41068E+04
   10816753  4.62131E+01  1.08307E-03  1.42064E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.62522E+01 0.0011
tfc   11       1       1       1       1       1       1       1       1
    1024000  3.61212E+01  2.70867E-03  2.39709E+04
    2048000  3.60909E+01  1.91049E-03  2.41116E+04
    3072000  3.62103E+01  2.03550E-03  1.41607E+04
    4096000  3.62601E+01  1.77177E-03  1.40297E+04
    5120000  3.62698E+01  1.60594E-03  1.36559E+04
    6144000  3.62639E+01  1.41784E-03  1.45898E+04
    7168000  3.62649E+01  1.30663E-03  1.47258E+04
    8192000  3.62666E+01  1.19203E-03  1.54845E+04
    9216000  3.62422E+01  1.10588E-03  1.59940E+04
   10240000  3.62420E+01  1.03227E-03  1.65181E+04
   10816753  3.62522E+01  1.07142E-03  1.45170E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.34146E+01 0.0008
tfc   11       1       1       1       1       1       1       1       1
    1024000  2.33487E+01  2.33161E-03  3.23509E+04
    2048000  2.33468E+01  1.65029E-03  3.23142E+04
    3072000  2.33901E+01  1.48274E-03  2.66871E+04
    4096000  2.34068E+01  1.30502E-03  2.58600E+04
    5120000  2.34076E+01  1.19116E-03  2.48219E+04
    6144000  2.34113E+01  1.06447E-03  2.58844E+04
    7168000  2.34075E+01  9.76075E-04  2.63888E+04
    8192000  2.34159E+01  9.01223E-04  2.70900E+04
    9216000  2.34037E+01  8.48883E-04  2.71442E+04
   10240000  2.34178E+01  8.42705E-04  2.47855E+04
   10816753  2.34146E+01  8.14651E-04  2.51104E+04
tally  155    2    1
f        1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.15753E+01 0.0009
tfc   11        1        1        1        1        1        1        1        1
    1024000  1.15560E+01  2.19815E-03  3.63983E+04
    2048000  1.15735E+01  2.18823E-03  1.83794E+04
    3072000  1.15732E+01  1.65629E-03  2.13872E+04
    4096000  1.15790E+01  1.48100E-03  2.00796E+04
    5120000  1.15702E+01  1.26220E-03  2.21066E+04
    6144000  1.15749E+01  1.12103E-03  2.33383E+04
    7168000  1.15689E+01  1.00799E-03  2.47444E+04
    8192000  1.15728E+01  9.27415E-04  2.55814E+04
    9216000  1.15708E+01  9.49453E-04  2.16983E+04
   10240000  1.15754E+01  8.94889E-04  2.19791E+04
   10816753  1.15753E+01  8.69749E-04  2.20298E+04
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.75547E+00 0.0022
tfc   11        1        1        1        1        1        1        1        1
    1024000  6.72628E+00  2.92321E-03  2.05816E+04
    2048000  6.76292E+00  6.44587E-03  2.11813E+03
    3072000  6.75008E+00  4.36684E-03  3.07677E+03
    4096000  6.78358E+00  5.25245E-03  1.59639E+03
    5120000  6.77141E+00  4.23839E-03  1.96054E+03
    6144000  6.77185E+00  3.72842E-03  2.10988E+03
    7168000  6.76364E+00  3.22188E-03  2.42196E+03
    8192000  6.76462E+00  2.88433E-03  2.64475E+03
    9216000  6.75560E+00  2.57667E-03  2.94617E+03
   10240000  6.75616E+00  2.34215E-03  3.20862E+03
   10816753  6.75547E+00  2.22687E-03  3.36054E+03
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
```

```
c         0
e         0
t         0
vals
  4.35165E+00 0.0009
tfc   11        1        1        1        1        1        1        1        1
    1024000  4.35398E+00  2.79825E-03  2.24609E+04
    2048000  4.34825E+00  1.84898E-03  2.57425E+04
    3072000  4.34999E+00  1.45054E-03  2.78850E+04
    4096000  4.35350E+00  1.32145E-03  2.52211E+04
    5120000  4.35307E+00  1.19549E-03  2.46424E+04
    6144000  4.35374E+00  1.06447E-03  2.58844E+04
    7168000  4.35499E+00  1.31102E-03  1.46275E+04
    8192000  4.35526E+00  1.17569E-03  1.59180E+04
    9216000  4.35162E+00  1.06705E-03  1.71791E+04
   10240000  4.35202E+00  9.81649E-04  1.82657E+04
   10816753  4.35165E+00  9.41232E-04  1.88107E+04
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.04157E+00 0.0027
tfc   11        1        1        1        1        1        1        1        1
    1024000  3.02714E+00  2.55836E-03  2.68705E+04
    2048000  3.02255E+00  1.63321E-03  3.29938E+04
    3072000  3.02621E+00  1.44428E-03  2.81270E+04
    4096000  3.03008E+00  1.49263E-03  1.97679E+04
    5120000  3.03106E+00  1.51356E-03  1.53738E+04
    6144000  3.04135E+00  3.28699E-03  2.71461E+03
    7168000  3.03843E+00  2.83776E-03  3.12203E+03
    8192000  3.03842E+00  2.50269E-03  3.51286E+03
    9216000  3.03562E+00  2.23806E-03  3.90508E+03
   10240000  3.03579E+00  2.03057E-03  4.26885E+03
   10816753  3.04157E+00  2.67752E-03  2.32452E+03
mcnp        5      11/07/10 08:31:23      2     10675718       793398707
```

Case 140

```
 Case 140
ntal      8
  115  125  135  145  155  165  175  185
tally  115     2     1
f         1
d         1
```

```
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.76698E+01 0.0026
tfc   11        1        1        1        1        1        1        1        1
    1024000  3.76161E+01  4.24728E-03  9.63246E+03
    2048000  3.77696E+01  8.07646E-03  1.33303E+03
    3072000  3.76863E+01  5.62828E-03  1.82993E+03
    4096000  3.76944E+01  4.35349E-03  2.29433E+03
    5120000  3.77597E+01  3.81801E-03  2.38537E+03
    6144000  3.76937E+01  3.26197E-03  2.72282E+03
    7168000  3.76880E+01  2.87240E-03  3.00846E+03
    8192000  3.76687E+01  2.57098E-03  3.28535E+03
    9216000  3.77142E+01  2.91519E-03  2.27154E+03
   10240000  3.76865E+01  2.65819E-03  2.45848E+03
   10675718  3.76698E+01  2.56346E-03  2.53592E+03
tally  125     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  3.15200E+01 0.0011
tfc   11        1        1        1        1        1        1        1        1
    1024000  3.15480E+01  3.50662E-03  1.41313E+04
    2048000  3.14631E+01  2.41078E-03  1.49613E+04
    3072000  3.14673E+01  1.92846E-03  1.55871E+04
    4096000  3.15050E+01  1.66225E-03  1.57375E+04
    5120000  3.15386E+01  1.54753E-03  1.45194E+04
    6144000  3.15163E+01  1.39633E-03  1.48594E+04
    7168000  3.15223E+01  1.30655E-03  1.45406E+04
    8192000  3.15335E+01  1.21727E-03  1.46557E+04
    9216000  3.15287E+01  1.16120E-03  1.43165E+04
   10240000  3.15273E+01  1.09370E-03  1.45226E+04
   10675718  3.15200E+01  1.06776E-03  1.46164E+04
tally  135     2     1
f         1
d         1
u         0
s         0
m         1
c         0
```

```
e        0
t        0
vals
  2.47165E+01 0.0010
tfc   11       1       1       1       1       1       1       1       1
    1024000  2.46601E+01  2.62584E-03  2.52013E+04
    2048000  2.46034E+01  1.84817E-03  2.54566E+04
    3072000  2.46756E+01  1.94591E-03  1.53088E+04
    4096000  2.47066E+01  1.69379E-03  1.51570E+04
    5120000  2.47245E+01  1.54897E-03  1.44924E+04
    6144000  2.47175E+01  1.36727E-03  1.54979E+04
    7168000  2.47263E+01  1.28593E-03  1.50108E+04
    8192000  2.47301E+01  1.17242E-03  1.57984E+04
    9216000  2.47153E+01  1.08826E-03  1.63000E+04
   10240000  2.47202E+01  1.01697E-03  1.67967E+04
   10675718  2.47165E+01  9.91316E-04  1.69576E+04
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.59680E+01 0.0008
tfc   11       1       1       1       1       1       1       1       1
    1024000  1.59435E+01  2.26232E-03  3.39508E+04
    2048000  1.59204E+01  1.61829E-03  3.32024E+04
    3072000  1.59453E+01  1.43666E-03  2.80850E+04
    4096000  1.59563E+01  1.26599E-03  2.71311E+04
    5120000  1.59582E+01  1.14818E-03  2.63759E+04
    6144000  1.59610E+01  1.02817E-03  2.74059E+04
    7168000  1.59620E+01  9.55409E-04  2.71930E+04
    8192000  1.59684E+01  8.81685E-04  2.79353E+04
    9216000  1.59606E+01  8.26674E-04  2.82479E+04
   10240000  1.59708E+01  8.17175E-04  2.60141E+04
   10675718  1.59680E+01  7.96267E-04  2.62828E+04
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.89244E+00 0.0009
```

```
tfc   11        1        1        1        1        1        1        1        1
    1024000  7.88912E+00  2.11548E-03  3.88278E+04
    2048000  7.88391E+00  1.75674E-03  2.81753E+04
    3072000  7.88393E+00  1.38918E-03  3.00378E+04
    4096000  7.89221E+00  1.46867E-03  2.01596E+04
    5120000  7.88998E+00  1.26241E-03  2.18186E+04
    6144000  7.89259E+00  1.11688E-03  2.32254E+04
    7168000  7.88839E+00  9.98553E-04  2.48939E+04
    8192000  7.89160E+00  9.16163E-04  2.58723E+04
    9216000  7.88963E+00  9.27450E-04  2.24426E+04
   10240000  7.89281E+00  8.70772E-04  2.29103E+04
   10675718  7.89244E+00  8.53633E-04  2.28689E+04
tally  165     2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.60475E+00 0.0023
tfc   11        1        1        1        1        1        1        1        1
    1024000  4.59693E+00  2.85063E-03  2.13835E+04
    2048000  4.61128E+00  6.04350E-03  2.38070E+03
    3072000  4.60041E+00  4.09513E-03  3.45661E+03
    4096000  4.62755E+00  5.40381E-03  1.48912E+03
    5120000  4.62010E+00  4.36282E-03  1.82681E+03
    6144000  4.61955E+00  3.80598E-03  2.00007E+03
    7168000  4.61220E+00  3.27936E-03  2.30812E+03
    8192000  4.61322E+00  2.93146E-03  2.52704E+03
    9216000  4.60722E+00  2.61774E-03  2.81710E+03
   10240000  4.60627E+00  2.36737E-03  3.09960E+03
   10675718  4.60475E+00  2.27519E-03  3.21924E+03
tally  175     2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.96958E+00 0.0010
tfc   11        1        1        1        1        1        1        1        1
    1024000  2.97479E+00  2.46668E-03  2.85584E+04
    2048000  2.96728E+00  1.68857E-03  3.04962E+04
    3072000  2.96569E+00  1.31400E-03  3.35731E+04
```

```
    4096000  2.96830E+00  1.27802E-03  2.66230E+04
    5120000  2.96913E+00  1.33530E-03  1.95017E+04
    6144000  2.97001E+00  1.17907E-03  2.08400E+04
    7168000  2.97033E+00  1.33856E-03  1.38534E+04
    8192000  2.97078E+00  1.19772E-03  1.51381E+04
    9216000  2.96875E+00  1.08948E-03  1.62637E+04
   10240000  2.97015E+00  1.06389E-03  1.53477E+04
   10675718  2.96958E+00  1.02830E-03  1.57597E+04
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.07186E+00 0.0021
tfc   11       1       1       1       1       1       1       1       1
    1024000  2.09248E+00  1.08663E-02  1.47161E+03
    2048000  2.07490E+00  5.56221E-03  2.81053E+03
    3072000  2.07206E+00  3.81915E-03  3.97421E+03
    4096000  2.07075E+00  2.92407E-03  5.08574E+03
    5120000  2.06895E+00  2.37690E-03  6.15468E+03
    6144000  2.07565E+00  3.46956E-03  2.40674E+03
    7168000  2.07360E+00  2.99190E-03  2.77294E+03
    8192000  2.07351E+00  2.63303E-03  3.13234E+03
    9216000  2.07172E+00  2.35412E-03  3.48335E+03
   10240000  2.07197E+00  2.13564E-03  3.80875E+03
   10675718  2.07186E+00  2.06516E-03  3.90733E+03
mcnp       5     11/05/10 14:42:47     2     5196479      752229805
```

Case 141

```
 Case 141
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.07416E+01 0.0053
tfc   11       1       1       1       1       1       1       1       1
```

```
     512000  1.05649E+01  1.60359E-02  6.58886E+02
    1024000  1.07336E+01  1.24279E-02  5.48319E+02
    1536000  1.07263E+01  9.85510E-03  5.81451E+02
    2048000  1.07824E+01  9.04862E-03  5.16341E+02
    2560000  1.08033E+01  7.87956E-03  5.44836E+02
    3072000  1.07472E+01  7.06471E-03  5.64730E+02
    3584000  1.07363E+01  6.46702E-03  5.77774E+02
    4096000  1.07382E+01  5.98588E-03  5.90218E+02
    4608000  1.07554E+01  5.64023E-03  5.90845E+02
    5120000  1.07459E+01  5.31731E-03  5.98151E+02
    5196479  1.07416E+01  5.27252E-03  5.99380E+02
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  9.43602E+00 0.0037
tfc   11       1       1       1       1       1       1       1       1
     512000  9.42858E+00  1.44186E-02  8.14981E+02
    1024000  9.44023E+00  9.31586E-03  9.75853E+02
    1536000  9.44787E+00  7.45366E-03  1.01647E+03
    2048000  9.44490E+00  6.21714E-03  1.09376E+03
    2560000  9.46530E+00  5.41707E-03  1.15277E+03
    3072000  9.44042E+00  4.85672E-03  1.19493E+03
    3584000  9.43655E+00  4.45207E-03  1.21911E+03
    4096000  9.44686E+00  4.26901E-03  1.16041E+03
    4608000  9.44862E+00  3.98610E-03  1.18296E+03
    5120000  9.43699E+00  3.75296E-03  1.20073E+03
    5196479  9.43602E+00  3.72097E-03  1.20345E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  7.70161E+00 0.0029
tfc   11       1       1       1       1       1       1       1       1
     512000  7.67393E+00  9.84932E-03  1.74655E+03
    1024000  7.67203E+00  6.49271E-03  2.00899E+03
    1536000  7.67540E+00  5.17169E-03  2.11140E+03
    2048000  7.68078E+00  4.38005E-03  2.20366E+03
```

```
    2560000  7.72395E+00  4.62262E-03  1.58305E+03
    3072000  7.71491E+00  4.09052E-03  1.68451E+03
    3584000  7.71251E+00  3.69508E-03  1.76978E+03
    4096000  7.71114E+00  3.39302E-03  1.83694E+03
    4608000  7.71287E+00  3.15283E-03  1.89089E+03
    5120000  7.70107E+00  2.95261E-03  1.93991E+03
    5196479  7.70161E+00  2.92542E-03  1.94699E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.13549E+00 0.0024
tfc   11       1       1       1       1       1       1       1       1
     512000  5.13653E+00  9.45591E-03  1.89491E+03
    1024000  5.13500E+00  6.38267E-03  2.07886E+03
    1536000  5.12967E+00  4.96437E-03  2.29143E+03
    2048000  5.13088E+00  4.07950E-03  2.54032E+03
    2560000  5.13802E+00  3.56338E-03  2.66407E+03
    3072000  5.13584E+00  3.20791E-03  2.73895E+03
    3584000  5.13897E+00  2.91463E-03  2.84446E+03
    4096000  5.13500E+00  2.67691E-03  2.95122E+03
    4608000  5.14299E+00  2.59197E-03  2.79773E+03
    5120000  5.13483E+00  2.42143E-03  2.88437E+03
    5196479  5.13549E+00  2.39778E-03  2.89815E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.48588E+00 0.0023
tfc   11       1       1       1       1       1       1       1       1
     512000  2.47727E+00  6.03176E-03  4.65700E+03
    1024000  2.47532E+00  4.16253E-03  4.88783E+03
    1536000  2.47397E+00  3.38961E-03  4.91514E+03
    2048000  2.47857E+00  2.95161E-03  4.85269E+03
    2560000  2.48050E+00  2.62494E-03  4.90945E+03
    3072000  2.48033E+00  2.39906E-03  4.89721E+03
    3584000  2.48772E+00  3.00844E-03  2.66983E+03
    4096000  2.48656E+00  2.73056E-03  2.83638E+03
```

```
    4608000  2.48793E+00  2.51576E-03  2.96982E+03
    5120000  2.48554E+00  2.33993E-03  3.08880E+03
    5196479  2.48588E+00  2.31486E-03  3.10949E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.40532E+00 0.0053
tfc   11       1       1       1       1       1       1       1
     512000  1.39208E+00  6.27595E-03  4.30166E+03
    1024000  1.39162E+00  4.36044E-03  4.45419E+03
    1536000  1.39533E+00  4.49173E-03  2.79903E+03
    2048000  1.40011E+00  4.62266E-03  1.97842E+03
    2560000  1.39927E+00  3.86784E-03  2.26117E+03
    3072000  1.39817E+00  3.35539E-03  2.50347E+03
    3584000  1.40897E+00  7.46673E-03  4.33417E+02
    4096000  1.40830E+00  6.66142E-03  4.76578E+02
    4608000  1.40786E+00  5.97065E-03  5.27259E+02
    5120000  1.40532E+00  5.41258E-03  5.77278E+02
    5196479  1.40532E+00  5.33669E-03  5.85052E+02
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  8.76085E-01 0.0021
tfc   11       1       1       1       1       1       1       1
     512000  8.73590E-01  6.65456E-03  3.82610E+03
    1024000  8.74155E-01  4.46434E-03  4.24928E+03
    1536000  8.73164E-01  3.51121E-03  4.58059E+03
    2048000  8.74891E-01  3.00831E-03  4.67150E+03
    2560000  8.75515E-01  2.68273E-03  4.70020E+03
    3072000  8.75334E-01  2.41373E-03  4.83785E+03
    3584000  8.77316E-01  2.65699E-03  3.42284E+03
    4096000  8.76999E-01  2.43148E-03  3.57707E+03
    4608000  8.77077E-01  2.24387E-03  3.73312E+03
    5120000  8.75957E-01  2.09131E-03  3.86686E+03
    5196479  8.76085E-01  2.07055E-03  3.88660E+03
tally  185    2    1
```

```
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.96477E-01 0.0021
tfc   11       1       1       1       1       1       1       1       1
     512000  5.95799E-01  7.07352E-03  3.38629E+03
    1024000  5.96310E-01  5.46686E-03  2.83370E+03
    1536000  5.95317E-01  4.25141E-03  3.12441E+03
    2048000  5.96309E-01  3.62574E-03  3.21595E+03
    2560000  5.96178E-01  3.10626E-03  3.50587E+03
    3072000  5.95899E-01  2.74639E-03  3.73686E+03
    3584000  5.96759E-01  2.60275E-03  3.56697E+03
    4096000  5.96989E-01  2.48008E-03  3.43825E+03
    4608000  5.97190E-01  2.30795E-03  3.52869E+03
    5120000  5.96393E-01  2.15137E-03  3.65395E+03
    5196479  5.96477E-01  2.12965E-03  3.67385E+03
mcnp       5     11/05/10 15:42:58     2    10568720      785494295
```

Case 142

```
 Case 142
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.20415E+02 0.0026
tfc   11       1       1       1       1       1       1       1       1
    1024000  5.19554E+02  4.24709E-03  9.59166E+03
    2048000  5.21659E+02  8.07637E-03  1.32705E+03
    3072000  5.20525E+02  5.62806E-03  1.82256E+03
    4096000  5.20633E+02  4.35335E-03  2.28171E+03
    5120000  5.21531E+02  3.81791E-03  2.36812E+03
    6144000  5.20620E+02  3.26189E-03  2.70068E+03
    7168000  5.20540E+02  2.87234E-03  2.98315E+03
    8192000  5.20277E+02  2.57091E-03  3.25695E+03
    9216000  5.20906E+02  2.91512E-03  2.24979E+03
```

```
   10240000  5.20523E+02  2.65812E-03  2.43454E+03
   10568720  5.20415E+02  2.58553E-03  2.49294E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  4.35421E+02 0.0011
tfc   11       1       1       1       1       1       1       1       1
    1024000  4.35747E+02  3.50639E-03  1.40720E+04
    2048000  4.34563E+02  2.41068E-03  1.48950E+04
    3072000  4.34632E+02  1.92839E-03  1.55241E+04
    4096000  4.35148E+02  1.66221E-03  1.56509E+04
    5120000  4.35610E+02  1.54748E-03  1.44147E+04
    6144000  4.35300E+02  1.39629E-03  1.47388E+04
    7168000  4.35382E+02  1.30651E-03  1.44184E+04
    8192000  4.35539E+02  1.21724E-03  1.45290E+04
    9216000  4.35472E+02  1.16118E-03  1.41794E+04
   10240000  4.35453E+02  1.09367E-03  1.43812E+04
   10568720  4.35421E+02  1.07380E-03  1.44533E+04
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.41429E+02 0.0010
tfc   11       1       1       1       1       1       1       1       1
    1024000  3.40604E+02  2.62557E-03  2.50974E+04
    2048000  3.39817E+02  1.84805E-03  2.53450E+04
    3072000  3.40822E+02  1.94583E-03  1.52472E+04
    4096000  3.41246E+02  1.69373E-03  1.50737E+04
    5120000  3.41494E+02  1.54892E-03  1.43879E+04
    6144000  3.41395E+02  1.36722E-03  1.53721E+04
    7168000  3.41516E+02  1.28589E-03  1.48847E+04
    8192000  3.41571E+02  1.17239E-03  1.56619E+04
    9216000  3.41366E+02  1.08823E-03  1.61440E+04
   10240000  3.41434E+02  1.01694E-03  1.66332E+04
   10568720  3.41429E+02  9.97838E-04  1.67375E+04
tally  145    2    1
f        1
```

```
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  2.20570E+02 0.0008
tfc   11        1        1        1        1        1        1        1        1
    1024000  2.20210E+02  2.26206E-03  3.38118E+04
    2048000  2.19890E+02  1.61817E-03  3.30575E+04
    3072000  2.20237E+02  1.43660E-03  2.79721E+04
    4096000  2.20385E+02  1.26591E-03  2.69836E+04
    5120000  2.20412E+02  1.14812E-03  2.61869E+04
    6144000  2.20450E+02  1.02812E-03  2.71846E+04
    7168000  2.20464E+02  9.55361E-04  2.69656E+04
    8192000  2.20554E+02  8.81647E-04  2.76946E+04
    9216000  2.20445E+02  8.26638E-04  2.79783E+04
   10240000  2.20585E+02  8.17102E-04  2.57640E+04
   10568720  2.20570E+02  8.01222E-04  2.59601E+04
tally  155     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.09018E+02 0.0009
tfc   11        1        1        1        1        1        1        1        1
    1024000  1.08966E+02  2.11527E-03  3.86673E+04
    2048000  1.08892E+02  1.75664E-03  2.80515E+04
    3072000  1.08893E+02  1.38913E-03  2.99167E+04
    4096000  1.09004E+02  1.46837E-03  2.00557E+04
    5120000  1.08974E+02  1.26218E-03  2.16677E+04
    6144000  1.09010E+02  1.11669E-03  2.30432E+04
    7168000  1.08952E+02  9.98395E-04  2.46911E+04
    8192000  1.08997E+02  9.16031E-04  2.56546E+04
    9216000  1.08970E+02  9.27341E-04  2.22318E+04
   10240000  1.09015E+02  8.70678E-04  2.26908E+04
   10568720  1.09018E+02  8.59677E-04  2.25497E+04
tally  165     2     1
f         1
d         1
u         0
s         0
m         1
```

```
c         0
e         0
t         0
vals
  6.36066E+01 0.0023
tfc   11        1        1        1        1        1        1        1        1
    1024000  6.34961E+01  2.85053E-03  2.12924E+04
    2048000  6.36917E+01  6.04324E-03  2.37018E+03
    3072000  6.35419E+01  4.09494E-03  3.44274E+03
    4096000  6.39150E+01  5.40366E-03  1.48092E+03
    5120000  6.38125E+01  4.36268E-03  1.81363E+03
    6144000  6.38049E+01  3.80585E-03  1.98384E+03
    7168000  6.37033E+01  3.27925E-03  2.28874E+03
    8192000  6.37176E+01  2.93136E-03  2.50523E+03
    9216000  6.36348E+01  2.61765E-03  2.79017E+03
   10240000  6.36216E+01  2.36729E-03  3.06947E+03
   10568720  6.36066E+01  2.29676E-03  3.15923E+03
tally  175     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.10182E+01 0.0010
tfc   11        1        1        1        1        1        1        1        1
    1024000  4.10898E+01  2.46658E-03  2.84371E+04
    2048000  4.09843E+01  1.68851E-03  3.03607E+04
    3072000  4.09625E+01  1.31399E-03  3.34358E+04
    4096000  4.09977E+01  1.27793E-03  2.64787E+04
    5120000  4.10094E+01  1.33523E-03  1.93618E+04
    6144000  4.10215E+01  1.17901E-03  2.06717E+04
    7168000  4.10260E+01  1.33851E-03  1.37373E+04
    8192000  4.10322E+01  1.19767E-03  1.50076E+04
    9216000  4.10043E+01  1.08943E-03  1.61085E+04
   10240000  4.10237E+01  1.06385E-03  1.51987E+04
   10568720  4.10182E+01  1.03626E-03  1.55194E+04
tally  185     2     1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
```

```
  2.86198E+01 0.0021
tfc   11        1        1        1        1        1        1        1        1
    1024000  2.89025E+01  1.08655E-02  1.46546E+03
    2048000  2.86586E+01  5.56200E-03  2.79807E+03
    3072000  2.86197E+01  3.81899E-03  3.95823E+03
    4096000  2.86010E+01  2.92398E-03  5.05778E+03
    5120000  2.85763E+01  2.37682E-03  6.11029E+03
    6144000  2.86688E+01  3.46945E-03  2.38721E+03
    7168000  2.86404E+01  2.99181E-03  2.74965E+03
    8192000  2.86392E+01  2.63294E-03  3.10529E+03
    9216000  2.86145E+01  2.35404E-03  3.45004E+03
   10240000  2.86181E+01  2.13557E-03  3.77171E+03
   10568720  2.86198E+01  2.08500E-03  3.83352E+03
mcnp        5      11/05/10 16:43:09      2     52060030       804067831
```

Case 143

```
 Case 143
ntal      1
    4
tally     4     2     0
f         1
    103
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.70871E+04 0.0005
tfc   13        1        1        1        1        1        1        1        1
    4096000  4.70772E+04  1.95660E-03  1.67904E+05
    8192000  4.70819E+04  1.38356E-03  1.67573E+05
   12288000  4.70960E+04  1.12938E-03  1.67423E+05
   16384000  4.71051E+04  9.78297E-04  1.67080E+05
   20480000  4.71128E+04  8.74875E-04  1.66948E+05
   24576000  4.71152E+04  7.98593E-04  1.66837E+05
   28672000  4.71045E+04  7.39200E-04  1.66744E+05
   32768000  4.70943E+04  6.91559E-04  1.66637E+05
   36864000  4.70948E+04  6.51870E-04  1.66633E+05
   40960000  4.70845E+04  6.18398E-04  1.66585E+05
   45056000  4.70852E+04  5.89609E-04  1.66498E+05
   49152000  4.70882E+04  5.64450E-04  1.66396E+05
   52060030  4.70871E+04  5.48528E-04  1.66162E+05
mcnp        5      11/05/10 17:03:15      2     54288213       818212593
```

Case 144

```
 Case 144
ntal      1
    4
tally     4     2     0
f         1
    103
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.62786E+04 0.0010
tfc   14        1        1        1        1        1        1        1        1
    4096000  1.62143E+04  3.58137E-03  5.23769E+04
    8192000  1.62456E+04  2.52767E-03  5.24453E+04
   12288000  1.62596E+04  2.06096E-03  5.24206E+04
   16384000  1.62645E+04  1.78385E-03  5.23962E+04
   20480000  1.62757E+04  1.59367E-03  5.24672E+04
   24576000  1.62877E+04  1.45440E-03  5.23504E+04
   28672000  1.62815E+04  1.34681E-03  5.22040E+04
   32768000  1.62737E+04  1.26025E-03  5.21726E+04
   36864000  1.62786E+04  1.18771E-03  5.21996E+04
   40960000  1.62720E+04  1.12683E-03  5.21873E+04
   45056000  1.62723E+04  1.07444E-03  5.21914E+04
   49152000  1.62723E+04  1.02852E-03  5.22079E+04
   53248000  1.62756E+04  9.88590E-04  5.21495E+04
   54288213  1.62786E+04  9.78994E-04  5.21538E+04
mcnp       5      11/05/10 17:23:22      2     55513695       830673759
```

Case 145

```
 Case 145
ntal      1
    4
tally     4     2     0
f         1
    103
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  6.36074E+03 0.0016
tfc   14        1        1        1        1        1        1        1        1
```

```
    4096000  6.32695E+03  5.92849E-03  1.92081E+04
    8192000  6.33489E+03  4.19246E-03  1.92655E+04
   12288000  6.35982E+03  3.41447E-03  1.94033E+04
   16384000  6.36663E+03  2.95706E-03  1.94193E+04
   20480000  6.37470E+03  2.63958E-03  1.94907E+04
   24576000  6.37530E+03  2.41112E-03  1.94291E+04
   28672000  6.37302E+03  2.23280E-03  1.93978E+04
   32768000  6.36598E+03  2.09080E-03  1.93679E+04
   36864000  6.36827E+03  1.97049E-03  1.93878E+04
   40960000  6.36220E+03  1.87094E-03  1.93579E+04
   45056000  6.35991E+03  1.78413E-03  1.93532E+04
   49152000  6.35779E+03  1.70797E-03  1.93586E+04
   53248000  6.36042E+03  1.64123E-03  1.93525E+04
   55513695  6.36074E+03  1.60745E-03  1.93356E+04
mcnp       5     11/05/10 17:43:29     2    56098094      837153165
```

Case 146

```
 Case 146
ntal     1
    4
tally    4    2    0
f        1
    103
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.11066E+03 0.0029
tfc   14       1       1       1       1       1       1       1       1
    4096000  2.07948E+03  1.06082E-02  6.13617E+03
    8192000  2.08612E+03  7.47500E-03  6.16580E+03
   12288000  2.10902E+03  6.07483E-03  6.21596E+03
   16384000  2.10657E+03  5.26625E-03  6.19846E+03
   20480000  2.10782E+03  4.70002E-03  6.22210E+03
   24576000  2.10334E+03  4.30296E-03  6.18386E+03
   28672000  2.10296E+03  3.98345E-03  6.18085E+03
   32768000  2.10419E+03  3.73166E-03  6.16106E+03
   36864000  2.10765E+03  3.51328E-03  6.17637E+03
   40960000  2.10963E+03  3.33238E-03  6.17717E+03
   45056000  2.10723E+03  3.17891E-03  6.16970E+03
   49152000  2.10619E+03  3.04344E-03  6.16620E+03
   53248000  2.10817E+03  2.92394E-03  6.16022E+03
   56098094  2.11066E+03  2.85198E-03  6.14206E+03
mcnp       5     11/05/10 18:03:35     2   167897382     2503307114
```

Case 147

```
 Case 147
ntal     1
    4
tally    4    2    0
f        1
    103
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  6.16423E+02 0.0031
tfc   11       1       1       1       1       1       1       1       1
   16384000  6.18240E+02  9.94574E-03  1.74105E+03
   32768000  6.13325E+02  7.02906E-03  1.73748E+03
   49152000  6.11224E+02  5.73347E-03  1.73981E+03
   65536000  6.12900E+02  4.95835E-03  1.74361E+03
   81920000  6.14473E+02  4.42667E-03  1.74748E+03
   98304000  6.16685E+02  4.04043E-03  1.74722E+03
  114688000  6.18334E+02  3.73481E-03  1.75123E+03
  131072000  6.17227E+02  3.49734E-03  1.74758E+03
  147456000  6.16916E+02  3.29599E-03  1.74879E+03
  163840000  6.16649E+02  3.12723E-03  1.74687E+03
  167897382  6.16423E+02  3.09032E-03  1.74492E+03
mcnp       5     11/05/10 19:03:50     2   168617451     2513597039
```

Case 148

```
 Case 148
ntal     1
    4
tally    4    2    0
f        1
    103
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.89729E+02 0.0045
tfc   11       1       1       1       1       1       1       1       1
   16384000  2.88042E+02  1.46194E-02  8.07494E+02
```

```
   32768000  2.90337E+02  1.02475E-02  8.18552E+02
   49152000  2.88034E+02  8.36144E-03  8.19262E+02
   65536000  2.88055E+02  7.22825E-03  8.21756E+02
   81920000  2.88565E+02  6.45240E-03  8.23837E+02
   98304000  2.90122E+02  5.88933E-03  8.23838E+02
  114688000  2.90994E+02  5.44873E-03  8.24634E+02
  131072000  2.90494E+02  5.10838E-03  8.21278E+02
  147456000  2.90199E+02  4.81895E-03  8.20549E+02
  163840000  2.90166E+02  4.57694E-03  8.18810E+02
  168617451  2.89729E+02  4.51811E-03  8.16458E+02
mcnp       5     11/05/10 20:03:59     2   168665840     2514161208
```

Case 149

```
 Case 149
ntal      1
    4
tally     4     2     0
f         1
    103
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.69087E+02 0.0059
tfc   11        1        1        1        1        1        1        1
   16384000  1.65126E+02  1.95976E-02  4.48776E+02
   32768000  1.68015E+02  1.36164E-02  4.64115E+02
   49152000  1.67951E+02  1.10265E-02  4.71713E+02
   65536000  1.67700E+02  9.53039E-03  4.73486E+02
   81920000  1.68218E+02  8.49611E-03  4.76031E+02
   98304000  1.68795E+02  7.77454E-03  4.73550E+02
  114688000  1.69281E+02  7.18831E-03  4.74545E+02
  131072000  1.69435E+02  6.72676E-03  4.74165E+02
  147456000  1.69047E+02  6.35271E-03  4.72486E+02
  163840000  1.69224E+02  6.03428E-03  4.71237E+02
  168665840  1.69087E+02  5.94780E-03  4.71117E+02
mcnp       5     11/05/10 21:04:09     2   167611374     2498378233
```

Case 150

```
 Case 150
ntal      1
    4
tally     4     2     0
f         1
```

```
    103
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.10363E+02 0.0074
tfc   11        1        1        1        1        1        1        1        1
   16384000  1.08070E+02  2.40444E-02  2.99880E+02
   32768000  1.09233E+02  1.68664E-02  3.03561E+02
   49152000  1.09267E+02  1.36709E-02  3.07689E+02
   65536000  1.08806E+02  1.18491E-02  3.06827E+02
   81920000  1.09047E+02  1.05610E-02  3.08301E+02
   98304000  1.09462E+02  9.66905E-03  3.06230E+02
  114688000  1.09824E+02  8.93544E-03  3.06763E+02
  131072000  1.10004E+02  8.36530E-03  3.05617E+02
  147456000  1.09933E+02  7.89084E-03  3.04680E+02
  163840000  1.10355E+02  7.47767E-03  3.04972E+02
  167611374  1.10363E+02  7.39128E-03  3.05010E+02
mcnp        5      11/05/10 22:04:24      5      6236229     70900985569
```

Case 151

```
 Case 151
ntal      1
    8
tally     8     4     0
f         1
    103
d         1
u         0
s         0
m         0
c         0
e         0
t         0
vals
  1.64611E+08 0.0449
tfc   13        1        1        1        1        1        1        1        1
     512000  1.65847E+08  1.32609E-01  2.88505E+00
    1024000  1.50246E+08  1.15387E-01  1.90501E+00
    1536000  1.51957E+08  8.53139E-02  2.32380E+00
    2048000  1.44400E+08  7.08481E-02  2.52874E+00
    2560000  1.50246E+08  6.15491E-02  2.68191E+00
    3072000  1.51365E+08  5.46008E-02  2.83876E+00
    3584000  1.59969E+08  6.46333E-02  1.73633E+00
    4096000  1.64495E+08  5.89443E-02  1.82653E+00
```

```
    4608000  1.60611E+08  5.50356E-02  1.86228E+00
    5120000  1.61228E+08  5.07442E-02  1.97103E+00
    5632000  1.61658E+08  4.73720E-02  2.05617E+00
    6144000  1.63892E+08  4.55640E-02  2.03710E+00
    6236229  1.64611E+08  4.49006E-02  2.06665E+00
mcnp       5      11/09/10 15:56:36      7      9361488    106448784285
```

Case 152

```
 Case 152
ntal      1
    8
tally     8     4     0
f         1
    103
d         1
u         0
s         0
m         0
c         0
e         0
t         0
vals
  4.30068E+07 0.0704
tfc   19        1        1        1        1        1        1        1
     512000  2.45359E+07  2.13023E-01  1.11628E+00
    1024000  3.43039E+07  2.78084E-01  3.27245E-01
    1536000  3.96747E+07  1.84900E-01  4.93654E-01
    2048000  3.64836E+07  1.56192E-01  5.19261E-01
    2560000  3.87812E+07  1.32643E-01  5.76332E-01
    3072000  3.90106E+07  1.16438E-01  6.23384E-01
    3584000  4.43960E+07  1.35475E-01  3.94905E-01
    4096000  4.36081E+07  1.23115E-01  4.18494E-01
    4608000  4.33792E+07  1.14166E-01  4.32662E-01
    5120000  4.32962E+07  1.06912E-01  4.44094E-01
    5632000  4.35134E+07  9.85097E-02  4.75622E-01
    6144000  4.33786E+07  9.37448E-02  4.81452E-01
    6656000  4.34631E+07  8.76431E-02  5.08546E-01
    7168000  4.31941E+07  8.31243E-02  5.24946E-01
    7680000  4.19836E+07  8.03505E-02  5.24434E-01
    8192000  4.17385E+07  7.85163E-02  5.14907E-01
    8704000  4.32492E+07  7.40471E-02  5.44852E-01
    9216000  4.27918E+07  7.14045E-02  5.53405E-01
    9361488  4.30068E+07  7.03697E-02  5.60930E-01
mcnp       5      11/09/10 21:57:30      9     12480685    141937639458
```

Case 153

```
 Case 153
ntal      1
```

```
    8
tally    8    4    0
f        1
    103
d        1
u        0
s        0
m        0
c        0
e        0
t        0
vals
  1.30487E+07 0.0886
tfc   13       1       1       1       1       1       1       1       1
    1024000  9.66605E+06  3.10497E-01  2.63327E-01
    2048000  1.24991E+07  2.97442E-01  1.43379E-01
    3072000  1.23459E+07  2.48267E-01  1.37193E-01
    4096000  1.17222E+07  2.04139E-01  1.52069E-01
    5120000  1.20258E+07  1.68762E-01  1.77882E-01
    6144000  1.19115E+07  1.46106E-01  1.97820E-01
    7168000  1.29527E+07  1.28043E-01  2.20907E-01
    8192000  1.30266E+07  1.15939E-01  2.35875E-01
    9216000  1.28220E+07  1.07566E-01  2.43673E-01
   10240000  1.25097E+07  1.01032E-01  2.48647E-01
   11264000  1.29967E+07  9.37048E-02  2.62832E-01
   12288000  1.31397E+07  8.92727E-02  2.65488E-01
   12480685  1.30487E+07  8.86301E-02  2.65212E-01
mcnp       5     11/09/10 15:54:25    11    15553104   176890488565
```

Case 154

```
 Case 154
ntal     1
    8
tally    8    4    0
f        1
    103
d        1
u        0
s        0
m        0
c        0
e        0
t        0
vals
  2.42519E+06 0.1356
tfc   16       1       1       1       1       1       1       1       1
    1024000  2.49184E+06  5.14365E-01  9.56558E-02
    2048000  1.32581E+06  4.86121E-01  5.35306E-02
    3072000  3.36827E+06  3.08238E-01  8.88201E-02
```

```
    4096000  3.05252E+06  2.67760E-01  8.83149E-02
    5120000  2.68554E+06  2.49306E-01  8.15303E-02
    6144000  2.68843E+06  2.16663E-01  8.98520E-02
    7168000  2.67351E+06  1.95623E-01  9.44209E-02
    8192000  2.60347E+06  1.87021E-01  9.04223E-02
    9216000  2.41686E+06  1.81745E-01  8.51298E-02
   10240000  2.44420E+06  1.67532E-01  9.01854E-02
   11264000  2.32399E+06  1.63203E-01  8.64025E-02
   12288000  2.59303E+06  1.51211E-01  9.22734E-02
   13312000  2.53248E+06  1.45409E-01  9.21102E-02
   14336000  2.49258E+06  1.40947E-01  9.10066E-02
   15360000  2.44358E+06  1.36208E-01  9.09628E-02
   15553104  2.42519E+06  1.35590E-01  9.06552E-02
mcnp       5     11/12/10 15:53:27    69   106277882  1208808010346
```

Case 155

```
 Case 155
ntal     1
    8
tally    8    4    0
f        1
    103
d        1
u        0
s        0
m        0
c        0
e        0
t        0
vals
  6.02526E+05 0.1815
tfc   13       1       1       1       1       1       1       1       1
    8192000  8.47353E+05  5.20269E-01  1.17432E-02
   16384000  6.57226E+05  3.78194E-01  1.11142E-02
   24576000  5.35208E+05  3.55572E-01  8.38283E-03
   32768000  5.41572E+05  2.77729E-01  1.03060E-02
   40960000  7.03165E+05  3.40835E-01  5.47413E-03
   49152000  6.51559E+05  3.08893E-01  5.55457E-03
   57344000  5.86575E+05  2.95250E-01  5.21147E-03
   65536000  5.79200E+05  2.64081E-01  5.70021E-03
   73728000  5.39219E+05  2.53128E-01  5.51505E-03
   81920000  5.22714E+05  2.37019E-01  5.66054E-03
   90112000  5.21519E+05  2.19761E-01  5.98601E-03
   98304000  5.80932E+05  1.95190E-01  6.95570E-03
  106277882  6.02526E+05  1.81504E-01  7.43989E-03
mcnp       5     11/12/10 10:47:14    68   103969114  1182551541663
```

Case 156

```
 Case 156
ntal      1
    8
tally     8     4     0
f         1
    103
d         1
u         0
s         0
m         0
c         0
e         0
t         0
vals
  1.71957E+05 0.3504
tfc   13        1        1        1        1        1        1        1        1
    8192000  1.52838E+04  1.00000E+00  3.18081E-03
   16384000  9.06103E+04  6.30178E-01  3.98715E-03
   24576000  1.19410E+05  5.88035E-01  3.04941E-03
   32768000  1.05908E+05  5.10454E-01  3.03352E-03
   40960000  2.70414E+05  5.24958E-01  2.29339E-03
   49152000  2.58724E+05  4.63114E-01  2.45487E-03
   57344000  2.30879E+05  4.45820E-01  2.27038E-03
   65536000  2.16252E+05  4.19136E-01  2.24760E-03
   73728000  1.92300E+05  4.18972E-01  1.99913E-03
   81920000  1.75514E+05  4.13258E-01  1.84904E-03
   90112000  1.93343E+05  3.59242E-01  2.22394E-03
   98304000  1.80213E+05  3.53502E-01  2.10524E-03
  103969114  1.71957E+05  3.50406E-01  2.02596E-03
mcnp       5      11/07/10 01:09:57      7      9358457    106416681421
```

Case 157

```
 Case 157
ntal      1
    8
tally     8     4     0
f         1
    103
d         1
u         0
s         0
m         0
c         0
e         0
t         0
vals
  5.03686E+03 1.0000
tfc   19        1        1        1        1        1        1        1        1
     512000  9.20649E+04  9.99999E-01  5.05284E-02
```

```
    1024000  4.60324E+04  1.00000E+00  2.52338E-02
    1536000  3.06883E+04  1.00000E+00  1.68468E-02
    2048000  2.30162E+04  1.00000E+00  1.26573E-02
    2560000  1.84130E+04  1.00000E+00  1.01294E-02
    3072000  1.53441E+04  1.00000E+00  8.44205E-03
    3584000  1.31521E+04  1.00000E+00  7.23878E-03
    4096000  1.15081E+04  1.00000E+00  6.33690E-03
    4608000  1.02294E+04  1.00000E+00  5.63480E-03
    5120000  9.20649E+03  1.00000E+00  5.07246E-03
    5632000  8.36953E+03  1.00000E+00  4.61302E-03
    6144000  7.67207E+03  1.00000E+00  4.22948E-03
    6656000  7.08191E+03  1.00000E+00  3.90525E-03
    7168000  6.57606E+03  1.00000E+00  3.62642E-03
    7680000  6.13766E+03  1.00000E+00  3.38521E-03
    8192000  5.75405E+03  1.00000E+00  3.17396E-03
    8704000  5.41558E+03  1.00000E+00  2.98696E-03
    9216000  5.11471E+03  1.00000E+00  2.82068E-03
    9358457  5.03686E+03  1.00000E+00  2.77766E-03
mcnp       5      11/07/10 07:10:32      7      9366684    106509942017
```

Case 158

```
 Case 158
ntal      1
    8
tally     8     4     0
f         1
    103
d         1
u         0
s         0
m         0
c         0
e         0
t         0
vals
  1.75035E-06 0.4390
tfc   19        1        1        1        1        1        1        1        1
     512000  1.39332E-06  9.99999E-01  5.07367E-02
    1024000  6.96659E-07  1.00000E+00  2.53610E-02
    1536000  4.64439E-07  1.00000E+00  1.68966E-02
    2048000  3.48330E-07  1.00000E+00  1.26773E-02
    2560000  2.78664E-07  1.00000E+00  1.01422E-02
    3072000  2.10047E-06  8.96288E-01  1.05116E-02
    3584000  1.88126E-06  8.58841E-01  9.81397E-03
    4096000  1.64610E-06  8.58841E-01  8.59205E-03
    4608000  2.02123E-06  6.54159E-01  1.31715E-02
    5120000  1.81911E-06  6.54159E-01  1.18577E-02
    5632000  2.17514E-06  5.52104E-01  1.51385E-02
    6144000  1.99387E-06  5.52104E-01  1.38799E-02
```

```
    6656000  1.84050E-06  5.52104E-01  1.28163E-02
    7168000  1.85949E-06  5.13841E-01  1.37402E-02
    7680000  1.73553E-06  5.13841E-01  1.28263E-02
    8192000  1.62706E-06  5.13841E-01  1.20261E-02
    8704000  1.53135E-06  5.13841E-01  1.13195E-02
    9216000  1.77897E-06  4.39046E-01  1.46453E-02
    9366684  1.75035E-06  4.39046E-01  1.44102E-02
mcnp       5     12/21/10 08:05:01     2    32498016     1033637981
```

Case 159

```
 Case 159
ntal     8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.88794E-06 0.0035
tfc   16       1       1       1       1       1       1       1       1
    2048000  2.87701E-06  1.27565E-02  1.62922E+03
    4096000  2.92097E-06  1.10717E-02  1.07897E+03
    6144000  2.91241E-06  8.53900E-03  1.21057E+03
    8192000  2.90718E-06  7.39289E-03  1.21195E+03
   10240000  2.89916E-06  6.44991E-03  1.27370E+03
   12288000  2.90807E-06  5.88793E-03  1.27304E+03
   14336000  2.89893E-06  5.41898E-03  1.28425E+03
   16384000  2.89589E-06  4.99307E-03  1.32404E+03
   18432000  2.90133E-06  4.73102E-03  1.31140E+03
   20480000  2.89735E-06  4.44043E-03  1.34034E+03
   22528000  2.89631E-06  4.32148E-03  1.28694E+03
   24576000  2.89521E-06  4.10366E-03  1.30821E+03
   26624000  2.89165E-06  3.93655E-03  1.31221E+03
   28672000  2.89157E-06  3.80665E-03  1.30347E+03
   30720000  2.89150E-06  3.65777E-03  1.31760E+03
   32498016  2.88794E-06  3.53111E-03  1.33664E+03
tally  125    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
```

```
t        0
vals
  2.42495E-06 0.0026
tfc   16       1        1        1        1        1        1        1
    2048000  2.41798E-06  1.03585E-02  2.47088E+03
    4096000  2.43555E-06  7.36255E-03  2.43996E+03
    6144000  2.43704E-06  5.83876E-03  2.58917E+03
    8192000  2.43529E-06  5.15954E-03  2.48823E+03
   10240000  2.43475E-06  4.59126E-03  2.51367E+03
   12288000  2.44057E-06  4.29921E-03  2.38775E+03
   14336000  2.43203E-06  3.89820E-03  2.48174E+03
   16384000  2.43206E-06  3.61637E-03  2.52400E+03
   18432000  2.43401E-06  3.38154E-03  2.56696E+03
   20480000  2.43173E-06  3.18516E-03  2.60497E+03
   22528000  2.43141E-06  3.21696E-03  2.32237E+03
   24576000  2.42991E-06  3.04784E-03  2.37156E+03
   26624000  2.42633E-06  2.90453E-03  2.41036E+03
   28672000  2.42592E-06  2.82890E-03  2.36022E+03
   30720000  2.42620E-06  2.71167E-03  2.39741E+03
   32498016  2.42495E-06  2.62200E-03  2.42420E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.89319E-06 0.0020
tfc   16       1        1        1        1        1        1        1
    2048000  1.87848E-06  7.53815E-03  4.66567E+03
    4096000  1.89154E-06  5.54666E-03  4.29908E+03
    6144000  1.89892E-06  4.52501E-03  4.31085E+03
    8192000  1.89948E-06  4.28884E-03  3.60109E+03
   10240000  1.90048E-06  3.76239E-03  3.74323E+03
   12288000  1.90206E-06  3.40235E-03  3.81250E+03
   14336000  1.89696E-06  3.08598E-03  3.96003E+03
   16384000  1.89757E-06  2.87163E-03  4.00294E+03
   18432000  1.89937E-06  2.69024E-03  4.05570E+03
   20480000  1.89839E-06  2.53453E-03  4.11405E+03
   22528000  1.89715E-06  2.40664E-03  4.14953E+03
   24576000  1.89660E-06  2.29327E-03  4.18897E+03
   26624000  1.89474E-06  2.19573E-03  4.21771E+03
   28672000  1.89392E-06  2.11171E-03  4.23564E+03
   30720000  1.89421E-06  2.03379E-03  4.26188E+03
   32498016  1.89319E-06  1.97382E-03  4.27778E+03
tally  145    2    1
f        1
```

```
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.21347E-06 0.0017
tfc   16       1       1       1       1       1       1       1       1
    2048000  1.20028E-06  6.26558E-03  6.75337E+03
    4096000  1.20533E-06  4.40805E-03  6.80684E+03
    6144000  1.21046E-06  3.62591E-03  6.71379E+03
    8192000  1.21114E-06  3.22918E-03  6.35228E+03
   10240000  1.21318E-06  2.86808E-03  6.44157E+03
   12288000  1.21614E-06  2.97674E-03  4.98063E+03
   14336000  1.21480E-06  2.72820E-03  5.06679E+03
   16384000  1.21511E-06  2.53459E-03  5.13831E+03
   18432000  1.21644E-06  2.37096E-03  5.22155E+03
   20480000  1.21627E-06  2.22938E-03  5.31738E+03
   22528000  1.21562E-06  2.11114E-03  5.39248E+03
   24576000  1.21592E-06  2.04957E-03  5.24436E+03
   26624000  1.21497E-06  1.95468E-03  5.32210E+03
   28672000  1.21452E-06  1.87116E-03  5.39469E+03
   30720000  1.21440E-06  1.79818E-03  5.45191E+03
   32498016  1.21347E-06  1.73831E-03  5.51544E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.88349E-07 0.0017
tfc   16       1       1       1       1       1       1       1       1
    2048000  5.79719E-07  5.60374E-03  8.44280E+03
    4096000  5.84170E-07  4.35277E-03  6.98083E+03
    6144000  5.87559E-07  3.87085E-03  5.89100E+03
    8192000  5.87316E-07  3.24663E-03  6.28415E+03
   10240000  5.88277E-07  2.83389E-03  6.59790E+03
   12288000  5.88416E-07  2.55576E-03  6.75659E+03
   14336000  5.88177E-07  2.35095E-03  6.82334E+03
   16384000  5.88035E-07  2.17650E-03  6.96816E+03
   18432000  5.89037E-07  2.08533E-03  6.74988E+03
   20480000  5.89166E-07  1.98308E-03  6.72021E+03
   22528000  5.88924E-07  1.87865E-03  6.80977E+03
   24576000  5.88822E-07  1.78493E-03  6.91477E+03
```

```
   26624000  5.88609E-07  1.71331E-03  6.92732E+03
   28672000  5.88426E-07  1.64771E-03  6.95709E+03
   30720000  5.88202E-07  1.58343E-03  7.03104E+03
   32498016  5.88349E-07  1.73687E-03  5.52458E+03
tally  165    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.38316E-07 0.0038
tfc   16       1       1       1       1       1       1       1
    2048000  3.32442E-07  5.61979E-03  8.39465E+03
    4096000  3.34441E-07  4.11895E-03  7.79591E+03
    6144000  3.41509E-07  1.79364E-02  2.74367E+02
    8192000  3.39972E-07  1.35821E-02  3.59072E+02
   10240000  3.39921E-07  1.09269E-02  4.43791E+02
   12288000  3.40344E-07  9.28533E-03  5.11885E+02
   14336000  3.39913E-07  8.01851E-03  5.86541E+02
   16384000  3.39933E-07  7.20063E-03  6.36640E+02
   18432000  3.40097E-07  6.43295E-03  7.09295E+02
   20480000  3.39788E-07  5.82604E-03  7.78606E+02
   22528000  3.39459E-07  5.33002E-03  8.45988E+02
   24576000  3.39271E-07  4.91451E-03  9.12132E+02
   26624000  3.39035E-07  4.56486E-03  9.75845E+02
   28672000  3.38774E-07  4.26087E-03  1.04038E+03
   30720000  3.38525E-07  3.99760E-03  1.10310E+03
   32498016  3.38316E-07  3.81008E-03  1.14807E+03
tally  175    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  2.16658E-07 0.0045
tfc   16       1       1       1       1       1       1       1
    2048000  2.12625E-07  5.70825E-03  8.13648E+03
    4096000  2.13842E-07  4.04239E-03  8.09399E+03
    6144000  2.14726E-07  3.39515E-03  7.65747E+03
    8192000  2.14844E-07  2.94921E-03  7.61555E+03
   10240000  2.15327E-07  2.61366E-03  7.75664E+03
   12288000  2.15683E-07  2.46810E-03  7.24502E+03
```

```
   14336000  2.17733E-07  9.77279E-03  3.94865E+02
   16384000  2.17420E-07  8.59198E-03  4.47146E+02
   18432000  2.17552E-07  7.66492E-03  4.99611E+02
   20480000  2.17392E-07  6.94054E-03  5.48630E+02
   22528000  2.17330E-07  6.34567E-03  5.96852E+02
   24576000  2.17328E-07  5.86178E-03  6.41150E+02
   26624000  2.17126E-07  5.43254E-03  6.89016E+02
   28672000  2.16959E-07  5.06420E-03  7.36488E+02
   30720000  2.16888E-07  4.75769E-03  7.78796E+02
   32498016  2.16658E-07  4.51405E-03  8.17905E+02
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.49316E-07 0.0020
tfc   16       1       1       1       1       1       1       1       1
    2048000  1.46695E-07  5.68664E-03  8.19845E+03
    4096000  1.47628E-07  4.05629E-03  8.03862E+03
    6144000  1.48137E-07  3.43662E-03  7.47378E+03
    8192000  1.48452E-07  3.48432E-03  5.45603E+03
   10240000  1.48888E-07  3.15754E-03  5.31467E+03
   12288000  1.49134E-07  2.92303E-03  5.16535E+03
   14336000  1.49141E-07  2.70924E-03  5.13794E+03
   16384000  1.49412E-07  3.30029E-03  3.03062E+03
   18432000  1.49592E-07  3.01901E-03  3.22047E+03
   20480000  1.49528E-07  2.78113E-03  3.41682E+03
   22528000  1.49494E-07  2.59646E-03  3.56500E+03
   24576000  1.49434E-07  2.42926E-03  3.73312E+03
   26624000  1.49449E-07  2.30956E-03  3.81222E+03
   28672000  1.49392E-07  2.18572E-03  3.95366E+03
   30720000  1.49410E-07  2.10505E-03  3.97825E+03
   32498016  1.49316E-07  2.02879E-03  4.04913E+03
mcnp       5     12/29/10 10:20:33     2     1103300     1055607533
```

Case 160

```
 Case 160
ntal      8
  115  125  135  145  155  165  175  185
tally  115    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  6.88755E+01 0.0054
tfc   18        1        1        1        1        1        1        1        1
      64000  6.86802E+01  1.35308E-02  1.56347E+03
     128000  6.79843E+01  9.87799E-03  1.46894E+03
     192000  6.88297E+01  9.87926E-03  9.79421E+02
     256000  6.86175E+01  8.15692E-03  1.07846E+03
     320000  6.88313E+01  7.08311E-03  1.14465E+03
     384000  6.84559E+01  6.31036E-03  1.20278E+03
     448000  6.84290E+01  5.76061E-03  1.23688E+03
     512000  6.85823E+01  5.33030E-03  1.26424E+03
     576000  6.87258E+01  5.04140E-03  1.25590E+03
     640000  6.86667E+01  4.73509E-03  1.28094E+03
     704000  6.86516E+01  4.47217E-03  1.30529E+03
     768000  6.85310E+01  4.25055E-03  1.32423E+03
     832000  6.84531E+01  4.06578E-03  1.33661E+03
     896000  6.87059E+01  5.60963E-03  6.52115E+02
     960000  6.89164E+01  5.99037E-03  5.33829E+02
    1024000  6.88917E+01  5.70198E-03  5.52284E+02
    1088000  6.88894E+01  5.45819E-03  5.67266E+02
    1103300  6.88755E+01  5.39792E-03  5.71986E+02
tally  125    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  4.77002E+01 0.0037
tfc   18        1        1        1        1        1        1        1        1
      64000  4.77415E+01  1.07856E-02  2.46065E+03
     128000  4.72631E+01  7.67094E-03  2.43582E+03
     192000  4.74577E+01  6.33340E-03  2.38311E+03
     256000  4.74874E+01  5.51139E-03  2.36229E+03
     320000  4.76384E+01  4.91775E-03  2.37458E+03
     384000  4.75828E+01  4.92751E-03  1.97259E+03
     448000  4.75193E+01  4.49664E-03  2.02996E+03
     512000  4.75557E+01  4.16317E-03  2.07246E+03
     576000  4.75910E+01  3.89568E-03  2.10325E+03
     640000  4.75638E+01  3.67007E-03  2.13225E+03
     704000  4.75935E+01  3.47593E-03  2.16073E+03
     768000  4.75773E+01  3.32487E-03  2.16424E+03
     832000  4.75426E+01  3.18956E-03  2.17186E+03
```

```
     896000  4.75088E+01  3.05863E-03  2.19351E+03
     960000  4.76705E+01  4.04343E-03  1.17168E+03
    1024000  4.76872E+01  3.88001E-03  1.19275E+03
    1088000  4.77081E+01  3.74316E-03  1.20617E+03
    1103300  4.77002E+01  3.70480E-03  1.21425E+03
tally  135    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  3.00811E+01 0.0028
tfc   18       1       1       1       1       1       1       1       1
      64000  3.01437E+01  9.09822E-03  3.45802E+03
     128000  2.99630E+01  6.76767E-03  3.12942E+03
     192000  3.00042E+01  5.47724E-03  3.18636E+03
     256000  3.00326E+01  4.72611E-03  3.21253E+03
     320000  3.01168E+01  4.20974E-03  3.24047E+03
     384000  3.00349E+01  3.82376E-03  3.27575E+03
     448000  3.00076E+01  3.53273E-03  3.28885E+03
     512000  3.00433E+01  3.40933E-03  3.09027E+03
     576000  3.00642E+01  3.21829E-03  3.08183E+03
     640000  3.00505E+01  3.04083E-03  3.10602E+03
     704000  3.00789E+01  2.88431E-03  3.13805E+03
     768000  3.00629E+01  2.74961E-03  3.16455E+03
     832000  3.00378E+01  2.63633E-03  3.17903E+03
     896000  3.00297E+01  2.53846E-03  3.18457E+03
     960000  3.00875E+01  3.08130E-03  2.01764E+03
    1024000  3.00884E+01  2.95381E-03  2.05802E+03
    1088000  3.00857E+01  2.83449E-03  2.10346E+03
    1103300  3.00811E+01  2.80740E-03  2.11460E+03
tally  145    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.48249E+01 0.0026
tfc   18       1       1       1       1       1       1       1       1
      64000  1.50158E+01  1.58393E-02  1.14096E+03
     128000  1.48941E+01  1.05434E-02  1.28939E+03
     192000  1.48546E+01  7.55333E-03  1.67549E+03
```

```
     256000  1.48396E+01  6.00966E-03  1.98680E+03
     320000  1.48642E+01  5.07068E-03  2.23351E+03
     384000  1.48229E+01  4.43675E-03  2.43311E+03
     448000  1.48036E+01  3.96914E-03  2.60538E+03
     512000  1.48100E+01  3.67415E-03  2.66085E+03
     576000  1.48108E+01  3.38896E-03  2.77924E+03
     640000  1.48059E+01  3.19652E-03  2.81082E+03
     704000  1.48316E+01  3.19389E-03  2.55918E+03
     768000  1.48310E+01  3.04726E-03  2.57652E+03
     832000  1.48227E+01  2.90517E-03  2.61788E+03
     896000  1.48188E+01  2.75920E-03  2.69542E+03
     960000  1.48338E+01  2.85268E-03  2.35399E+03
    1024000  1.48333E+01  2.72588E-03  2.41657E+03
    1088000  1.48279E+01  2.61181E-03  2.47743E+03
    1103300  1.48249E+01  2.58559E-03  2.49297E+03
tally  155    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  5.67376E+00 0.0027
tfc   18       1       1       1       1       1       1       1       1
      64000  5.69745E+00  7.73218E-03  4.78781E+03
     128000  5.64966E+00  5.52150E-03  4.70141E+03
     192000  5.65226E+00  4.45281E-03  4.82115E+03
     256000  5.65538E+00  3.79861E-03  4.97286E+03
     320000  5.70162E+00  7.00504E-03  1.17030E+03
     384000  5.69036E+00  6.08637E-03  1.29293E+03
     448000  5.68357E+00  5.32912E-03  1.44528E+03
     512000  5.67970E+00  4.75722E-03  1.58718E+03
     576000  5.68048E+00  4.31054E-03  1.71789E+03
     640000  5.67945E+00  4.02729E-03  1.77077E+03
     704000  5.68550E+00  3.72801E-03  1.87840E+03
     768000  5.68247E+00  3.47104E-03  1.98580E+03
     832000  5.67601E+00  3.25604E-03  2.08409E+03
     896000  5.67423E+00  3.06955E-03  2.17792E+03
     960000  5.67811E+00  2.99826E-03  2.13094E+03
    1024000  5.67751E+00  2.85105E-03  2.20904E+03
    1088000  5.67468E+00  2.71932E-03  2.28542E+03
    1103300  5.67376E+00  2.68964E-03  2.30383E+03
tally  165    2    1
f        1
d        1
u        0
s        0
```

```
m         1
c         0
e         0
t         0
vals
  2.95069E+00 0.0026
tfc   18        1        1        1        1        1        1        1        1
      64000  2.97403E+00  1.04653E-02  2.61356E+03
     128000  2.94367E+00  6.40486E-03  3.49400E+03
     192000  2.97074E+00  1.01045E-02  9.36249E+02
     256000  2.96588E+00  7.79351E-03  1.18138E+03
     320000  2.96972E+00  6.43097E-03  1.38857E+03
     384000  2.95945E+00  5.50054E-03  1.58300E+03
     448000  2.95606E+00  4.82613E-03  1.76224E+03
     512000  2.95340E+00  4.31809E-03  1.92641E+03
     576000  2.95393E+00  3.92757E-03  2.06924E+03
     640000  2.95049E+00  3.60588E-03  2.20883E+03
     704000  2.95299E+00  3.34109E-03  2.33866E+03
     768000  2.95518E+00  3.32796E-03  2.16022E+03
     832000  2.95267E+00  3.12878E-03  2.25707E+03
     896000  2.95178E+00  2.95101E-03  2.35641E+03
     960000  2.95348E+00  2.86624E-03  2.33176E+03
    1024000  2.95277E+00  2.72706E-03  2.41449E+03
    1088000  2.95116E+00  2.60182E-03  2.49650E+03
    1103300  2.95069E+00  2.57357E-03  2.51631E+03
tally  175    2    1
f         1
d         1
u         0
s         0
m         1
c         0
e         0
t         0
vals
  1.80069E+00 0.0024
tfc   18        1        1        1        1        1        1        1        1
      64000  1.80354E+00  7.23081E-03  5.47479E+03
     128000  1.78892E+00  5.06279E-03  5.59193E+03
     192000  1.79004E+00  4.12082E-03  5.62927E+03
     256000  1.80041E+00  4.68357E-03  3.27116E+03
     320000  1.80358E+00  4.01379E-03  3.56460E+03
     384000  1.79881E+00  3.54686E-03  3.80719E+03
     448000  1.79790E+00  3.20751E-03  3.98959E+03
     512000  1.79646E+00  2.93752E-03  4.16267E+03
     576000  1.79753E+00  2.75928E-03  4.19243E+03
     640000  1.79559E+00  2.57652E-03  4.32633E+03
     704000  1.79753E+00  2.42697E-03  4.43215E+03
     768000  1.79851E+00  2.42973E-03  4.05264E+03
     832000  1.79794E+00  2.37805E-03  3.90707E+03
```

```
     896000  1.79726E+00  2.26403E-03  4.00340E+03
     960000  1.80176E+00  2.61398E-03  2.80353E+03
    1024000  1.80165E+00  2.49714E-03  2.87957E+03
    1088000  1.80099E+00  2.39579E-03  2.94433E+03
    1103300  1.80069E+00  2.37077E-03  2.96523E+03
tally  185    2    1
f        1
d        1
u        0
s        0
m        1
c        0
e        0
t        0
vals
  1.20660E+00 0.0020
tfc   18       1       1       1       1       1       1       1       1
      64000  1.20971E+00  6.99239E-03  5.85450E+03
     128000  1.19956E+00  4.91628E-03  5.93019E+03
     192000  1.20059E+00  4.02369E-03  5.90430E+03
     256000  1.20218E+00  3.49803E-03  5.86421E+03
     320000  1.20519E+00  3.12335E-03  5.88680E+03
     384000  1.20277E+00  2.84860E-03  5.90240E+03
     448000  1.20288E+00  2.64342E-03  5.87399E+03
     512000  1.20275E+00  2.47377E-03  5.86969E+03
     576000  1.20503E+00  2.42548E-03  5.42577E+03
     640000  1.20404E+00  2.29076E-03  5.47304E+03
     704000  1.20577E+00  2.19890E-03  5.39923E+03
     768000  1.20594E+00  2.12189E-03  5.31382E+03
     832000  1.20515E+00  2.03461E-03  5.33742E+03
     896000  1.20497E+00  1.95641E-03  5.36135E+03
     960000  1.20690E+00  2.16580E-03  4.08388E+03
    1024000  1.20668E+00  2.07986E-03  4.15092E+03
    1088000  1.20667E+00  2.05127E-03  4.01643E+03
    1103300  1.20660E+00  2.03341E-03  4.03075E+03
```

Calculation Brief Distribution Sheet

WE 01/19/2011

(Calculation Number 0600X-CA-~~V~~N0060)

Radiological Inventory in te 618-10 Burial Ground Trenches
COA: S618DTY000

TITLE	NAME	MSIN	COPIES
Originator	W. Josephson	N/A	Electronic
Checker	A. Savino	N/A	None
Reviewer	B. E. Vonderfecht	H4-21	Electronic
Approver	J. D. Ludowise	L6-06	Electronic
Document Control		H4-11	
Calc. Brief Files	J. D. Ludowise	L6-06	**Original**
Other:			