ENDF/B-VII.1 PA-231
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production
ENDF/B-VII.1 PA-231
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 PA-231
resonance total cross section

Energy (MeV)

Cross section (barns)

$10^{-6}$

$10^{1}$

$10^{2}$

$10^{3}$

$10^{-5}$
ENDF/B-VII.1 PA-231
resonance total cross section
ENDF/B-VII.1 PA-231
resonance total cross section

Energy (MeV)

Cross section (barns)

10^2
10^1
10^{-4}
10^{-3}

total
ENDF/B-VII.1 PA-231
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture

fission
ENDF/B-VII.1 PA-231
resonance absorption cross sections

Capture
Fission
ENDF/B-VII.1 PA-231
UR total cross section

Energy (MeV)

Cross section (barns)

- Inf. Dil.
- 100 b
- 1 b

Energy (MeV)
ENDF/B-VII.1 PA-231
UR elastic cross section

Energy (MeV) vs. Cross section (barns)

- Inf. Dil.
- 100 b
- 1 b
ENDF/B-VII.1 PA-231
UR fission cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 PA-231
UR capture cross section

Cross section (barns)

Energy (MeV)

Inf. Dil.
100 b
1 b
ENDF/B-VII.1 PA-231 Heating

Energy (MeV) vs Heating (MeV/reaction) plot for ENDF/B-VII.1 PA-231.
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

ENDF/B-VII.1 PA-231
ENDF/B-VII.1 PA-231

Heating

Heating (MeV/reaction) vs Energy (MeV)
ENDF/B-VII.1 PA-231
Damage

Energy (MeV) vs. Damage (MeV-barns)

- Energy (MeV) range: 0 to 60
- Damage (MeV-barns) range: 0 to 0.6
ENDF/B-VII.1 PA-231
Non-threshold reactions

Cross section (barns) vs. Energy (MeV) graph showing the fission and (n,gma) reactions.
ENDF/B-VII.1 PA-231
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

Energy (MeV)
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,xp)
- (n,p^0)
- (n,p^1)
- (n,p^2)
- (n,p^3)
ENDF/B-VII.1 PA-231
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,p\textsuperscript{34})
(n,p\textsuperscript{35})
(n,p\textsuperscript{36})
(n,p\textsuperscript{37})
(n,p\textsuperscript{c})
ENDF/B-VII.1 PA-231
angular distribution for elastic
ENDF/B-VII.1 PA-231
angular distribution for elastic
ENDF/B-VII.1 PA-231
Delayed nubar

Energy (MeV)

Delayed nubar

*10^{-3}
ENDF/B-VII.1 PA-231
Delayed neutron spectra

Energy (MeV)

Probability

10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0}

group 1 frac 0.0826 decay/shake 1.240E-10

group 2 frac 0.2230 decay/shake 3.340E-10

group 3 frac 0.1608 decay/shake 1.210E-09

group 4 frac 0.3885 decay/shake 3.210E-09

group 5 frac 0.1050 decay/shake 1.210E-08

group 6 frac 0.0401 decay/shake 3.290E-08
ENDF/B-VII.1 PA-231
Photon emission for (n,2n)
ENDF/B-VII.1 PA-231
Photon emission for (n,3n)
ENDF/B-VII.1 PA-231
Photon emission for fission
ENDF/B-VII.1 PA-231
Photon emission for (n,n*)p

![Graph showing photon emission for (n,n*)p](image)
ENDF/B-VII.1 PA-231
Photon emission for (n,2np)
ENDF/B-VII.1 PA-231
Photon emission for (n,n*c)
ENDF/B-VII.1 PA-231
Photon emission for (n,gma)
ENDF/B-VII.1 PA-231
Photon emission for (n,p* c)
ENDF/B-VII.1 PA-231
14 MeV photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
ENDF/B-VII.1 PA-231
Recoil Heating

Graph showing the relationship between energy (MeV) and heating (MeV/reaction). The graph indicates that the heating increases with energy, reaching a peak and then decreasing slightly at higher energies. The x-axis represents energy in MeV, ranging from 0 to 60, while the y-axis represents heating in MeV/reaction, ranging from 0 to 100.
ENDF/B-VII.1 PA-231
Particle production cross sections

Energy (MeV)

Cross section (barns)

protons
ENDF/B-VII.1 PA-231
protons from (n,x)
ENDF/B-VII.1 PA-231
protons from \((n,n^*)p\)
ENDF/B-VII.1 PA-231
protons from (n,2np)
ENDF/B-VII.1 PA-231
angular distribution for (n,p*0) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*0) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*1) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*2) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*2) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^3)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*3) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^4)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*4) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^5)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*5) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*6) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*6) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*7) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*7) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*8) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*8) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*9) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*9) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*10) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*10) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^*11)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*11) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*12) proton

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VII.1 PA-231
angular distribution for (n,p*12) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*13) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*13) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*14) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*14) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*15) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*15) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*16) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*16) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^*17)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*17) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*18) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*18) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*19) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*19) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*20) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*20) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*21) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*21) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p^*22) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*22) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*23) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*23) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*24) proton
ENDF/B-VII.1 PA-231
angular distribution for \((n,p^*24)\) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*25) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*25) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p^26) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*26) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*27) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*27) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*28) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*28) proton
Endf/B-VII.1 PA-231
angular distribution for (n,p*29) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*29) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*30) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*30) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*31) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*31) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*32) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*32) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*33) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*33) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*34) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*34) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*35) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*35) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*36) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*36) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*37) proton
ENDF/B-VII.1 PA-231
angular distribution for (n,p*37) proton
ENDF/B-VII.1 PA-231
protons from (n,p*c)