12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Principal cross sections

Cross section (barns)

Energy (MeV)

- Total
- Absorption
- Elastic
- Gamma production
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance total cross section

Cross section (barns)

Energy (MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)

10^0

10^1

10^2

10^3

10^4

10^5

10^6

10^7

10^8

10^9

10^10

10^11

Energy (MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance absorption cross sections

Energy (MeV) vs. Cross section (barns)

- Capture cross section plot with clear resonance peaks.

Energy (MeV) range: $10^{-2}$ to $10^{-1}$

Cross section range: $10^{0}$ to $10^{-4}$
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance absorption cross sections

Cross section (barns)

Energy (MeV)

capture
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture

Cross section (barns)

Energy (MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Heating

![Graph showing heating as a function of energy (MeV)]
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Damage

Damage (MeV-barns)

Energy (MeV)

-11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11

10^{-11} 10^{-9} 10^{-7} 10^{-5} 10^{-3} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8} 10^{9} 10^{10} 10^{11}
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

\[ \text{(n,gma)} \]
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Damage

Energy (MeV)

Damage (MeV-barns)

- damage
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

Cross section (barns)

Energy (MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Cross section (barns) vs Energy (MeV)

- (n,n*6)
- (n,n*7)
- (n,n*8)
- (n,n*9)
- (n,n*10)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Cross section (barns)

Energy (MeV)
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,x)
- (n,2n)
- (n,n^*)a
- (n,n^*)p
- (n,n^*c)

0.0  0.2  0.4  0.6  0.8  1.0
0.0  20  40  60  80  100  120  140  160

12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

![Graph showing cross section vs energy for (n,p) and (n,a) reactions.](image)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Energy (MeV)

Cross section (barns)

Energy (MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,2n)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*)a
angular distribution for (n,n*)p
angular distribution for (n,n*1)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*2)\)
angular distribution for (n,n*3)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*4)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*5)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*6)\)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*7)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*8)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*9)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*10)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*11)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*c)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,2n)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)a
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)p
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*c)
Photon emission for (n,2n)
Photon emission for \((n,n^*)a\)
Photon emission for \((n,n^*)p\)
Photon emission for \((n,n^*c)\)
Photon emission for (n,gma)
Photon emission for (n,p)
Photon emission for (n,a)
Photon emission for (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
14 MeV photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
Particle heating contributions

- protons
- deuterons
- tritons
- he-3
- alphas

Energy (MeV) vs. MeV/collision
Particle production cross sections

Energy (MeV) vs. Cross section (barns)

- Protons
- Deuterons
- Tritons
- He-3
- Alphas

The graph shows the variation of cross sections with energy for different types of particles.
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ protons from (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ deuterons from (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
tritons from (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+he3s from (n,x)
12-MG-24 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,x)