Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

Energy (MeV)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)

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

total
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

graph showing cross section (barns) vs. energy (MeV)

- Energy (MeV) range: $10^{-3}$ to $10^{-2}$
- Cross section (barns) range: $10^{-3}$ to $10^3$
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

![Graph showing total cross section vs. energy in MeV. The x-axis represents energy in MeV ranging from 10^1 to 10^2, and the y-axis represents cross section in barns ranging from 10^1 to 10^2. The line is labeled 'total.'](image-url)
Resonance absorption cross sections for 68-ER-166 from FENDL-3.2 by NJOY2016.60.
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-3}

10^{1}

10^{2}

10^{3}

10^{4}

10^{5}

10^{6}

10^{7}

10^{8}

10^{9}

10^{10}

capture
Heating

![Graph showing heating vs. energy in MeV]
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Damage

![Graph showing damage as a function of energy (MeV). The y-axis represents damage in units of MeV-barns, ranging from $10^{-6}$ to $10^{-1}$, and the x-axis represents energy in MeV, ranging from $10^{-11}$ to $10^1$. The graph includes a smooth curve and a series of peaks and valleys, indicating variations in damage across different energy values.](image-url)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60
Damage

Damage (MeV-barns)

Energy (MeV)

0.0
0.1
0.2
0.3
0.4
0.5

0
50
100
150
200
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

Cross section (barns)

Energy (MeV)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY 2016.60
Inelastic levels

Cross section (barns) vs Energy (MeV)

- (n,n^6)
- (n,n^7)
- (n,n^8)
- (n,n^9)
- (n,n^10)
Inelastic levels

Cross section (barns)

Energy (MeV)

- (n,n\textsuperscript*21)
- (n,n\textsuperscript*22)
- (n,n\textsuperscript*23)
- (n,n\textsuperscript*24)
Threshold reactions

Cross section (barns)

Energy (MeV)

- $(n,x)$
- $(n,2n)$
- $(n,3n)$
- $(n,n^*)a$
- $(n,n^*)p$
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Cross section (barns)

Energy (MeV)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,a)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Energy (MeV)

Cross section (barns)

0.0 0.5 1.0 1.5 2.0 2.5

0 20 40 60 80 100 120 140 160 180 200

Energy (MeV)

(n,xp)
(n,xd)
(n,xt)
(n,xhe3)
(n,xa)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*1)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*2)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*3)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*4)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*5)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*6)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*7)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*8)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*9)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*10)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*11)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*12)
angular distribution for (n,n*13)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*14)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*15)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*16)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^{*}17)\)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*18)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*19)\)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*20)

PROB/COS

10^0

Energy (MeV)

Cosine
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^{*}21)\)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n^*22)
angular distribution for $(n,n^{*}23)$
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*24)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*c)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,x)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,2n)
Neutron emission for (n,3n)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)a
Neutron emission for (n,n*)p
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)d
Neutron emission for (n,n*c)
Photon emission for (n,2n)
Photon emission for (n,3n)
Photon emission for \((n,n^*)a\)
Photon emission for (n,n*)p
Photon emission for \((n,n^*c)\)
Photon emission for (n,γ)
Photon emission for (n,p)
Photon emission for \((n,d)\)
Photon emission for (n,a)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
14 MeV photon spectrum
Particle heating contributions

MeV/collision vs. Energy (MeV)

- Protons
- Deuterons
- Tritons
- He-3
- Alphas
Particle production cross sections

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

Energy (MeV) vs. Cross section (barns)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from (n,x)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from (n,x)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
tritons from (n,x)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
he3s from (n,x)
68-ER-166 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,x)