Principal cross sections

Cross section (barns)

Energy (MeV)

- total
- absorption
- elastic
- gamma production
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

![Graph showing total cross section vs. energy (MeV). The x-axis represents energy in MeV, ranging from 10^{-1} to 10^{0}, and the y-axis represents cross section in barns, ranging from 10^{-1} to 10^{1}. The graph shows a decreasing trend in cross section with increasing energy.](image-url)
Energy (MeV) vs. Cross section (barns) for the 58-CE-140 resonance total cross section from FENDL-3.2 by NJOY 2016.60+.
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

![Graph of cross section vs. energy](image)
Energy (MeV) vs. Cross section (barns) for non-threshold reactions.
Principal cross sections

- Total
- Absorption
- Elastic
- Gamma production
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Heating

Heating (MeV/reaction)

Energy (MeV)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Damage

Damage (MeV-barns) vs Energy (MeV)

- Damage curve showing an increase in damage with increasing energy.
Non-threshold reactions

Cross section (barns)

Energy (MeV)
Inelastic levels

Cross section (barns) vs. Energy (MeV) for (n,n*1) to (n,n*5) reactions.
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing energy levels and cross-sections for inelastic scattering.](image-url)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)
Energy (MeV)

Cross section (barns)

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58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

- *(n,n*21)*
- *(n,n*22)*
- *(n,n*23)*
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Cross section (barns)

Energy (MeV)

(n,x)
(n,2n)
(n,3n)
(n,n*)\alpha
(n,n*)p
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,n*)d
(n,n*c)
(n,p)
(n,d)
(n,t)

Energy (MeV)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

![Graph showing the cross section (barns) as a function of energy (MeV). The reaction (n,a) is indicated.
}
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Cross section (barns)

Energy (MeV)

- (n,xp)
- (n,xd)
- (n,xt)
- (n,xhe3)
- (n,xa)
angular distribution for elastic
angular distribution for elastic
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*1)
angular distribution for \((n,n^*2)\)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*4)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*5)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*6)
angular distribution for (n,n*7)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*8)\)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*9)
angular distribution for \((n,n^*11)\)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*12)
angular distribution for \((n,n^*13)\)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*14)\)
angular distribution for (n,n*15)
angular distribution for (n,n*16)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*17)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*18)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*19)
angular distribution for (n,n*20)

Energy (MeV)

Cosine
angular distribution for (n,n'*21)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*22)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*23)
angular distribution for (n,n*c)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for $(n,x)$

![Graph showing neutron emission for $(n,x)$]
Neutron emission for (n,2n)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,3n)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)a
Neutron emission for \((n,n^*)p\)
Neutron emission for (n,n*)d
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*c)
Photon emission for (n,x)
Particle production cross sections

Energy (MeV) vs. Cross section (barns) for protons, deuterons, tritons, he-3, and alphas.
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from (n,x)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ tritons from (n,x)
58-CE-140 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+he3s from (n,x)
Prob/MeV

Sec. Energy 100 200 0

Energy (MeV) 0 50 100 150 200

10^{-1}

10^{-3}