Principal cross sections

Cross section (barns)

Energy (MeV)

- total
- absorption
- elastic
- gamma production
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Cross section (barns)

Energy (MeV)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)

total

Energy (MeV)
Energy (MeV) vs. Cross section (barns) for 50-SN-116, calculated by NJOY2016.60+.

The graph shows a slight increase in cross section with energy, indicating a weak dependence on energy within the plotted range.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)

total
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

![Graph showing energy vs. cross section](image-url)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

The graph shows the cross section (barns) as a function of energy (MeV). The cross section values are plotted on a logarithmic scale, ranging from $10^{-5}$ to $10^1$ barns, and the energy is shown on a logarithmic scale from $10^{-2}$ to $10^{-1}$ MeV.

The graph indicates the capture cross section with a sharp increase in cross section values at low energies, followed by a gradual decrease at higher energies.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture

Cross section (barns)

Energy (MeV)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

Capture cross section as a function of energy (MeV) on a log-log scale.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
UR total cross section

Energy (MeV)

Cross section (barns)

Inf. Dil.

100 b

1 b

10^{-1}

10^{1}
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
UR elastic cross section
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
UR capture cross section

Energy (MeV) vs. Cross section (barns)

- Inf. Dil.
- 100 b
- 1 b
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
(n,a)
(n,xa)
Principal cross sections for 50-SN-116.

- Total cross section
- Absorption cross section
- Elastic cross section
- Gamma production cross section

Energy (MeV) vs. Cross section (barns) graph.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Heating

![Graph showing heating vs. energy](image-url)

- Energy (MeV) range: 0 to 200
- Heating (MeV/reaction) range: 0 to 50

Heating curve is shown as a line graph.
Non-threshold reactions

Cross section (barns)

Energy (MeV)

(n,gma)
(n,a)
(n,xa)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ Inelastic levels

Energy (MeV)

Cross section (barns)

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

Energy (MeV)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60
Inelastic levels

![Graph showing cross section vs energy for inelastic levels (n,n*11) to (n,n*15).]
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

Energy (MeV)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing cross-sections for different inelastic levels](image_url)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing cross section versus energy for different inelastic levels](image-url)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Inelastic levels

![Graph showing inelastic levels for different energy levels. The x-axis represents Energy (MeV) ranging from 2 to 20, and the y-axis represents Cross section (barns) ranging from 0 to 4 * 10^-3. The graph shows various curves for different inelastic levels, denoted as (n,n*31), (n,n*32), (n,n*33), (n,n*34), and (n,n*35).]
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

Energy (MeV)

Cross section (barns)

(n,n*36)
(n,n*37)
(n,n*38)
(n,n*39)
(n,n*40)
Threshold reactions

Cross section (barns)

Energy (MeV)

- \((n,x)\)
- \((n,2n)\)
- \((n,3n)\)
- \((n,n^*)_a\)
- \((n,n^*)_p\)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

![Graph showing cross sections for different reactions as a function of energy (MeV).]
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*1)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*2)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*3)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*4)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*5)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*6)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*7)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*8)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \( (n,n^*9) \)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*10)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*11)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*12)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*13)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*14)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*15)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*16)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*17)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*18)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*19)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*20)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*21)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*22)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
n angular distribution for (n,n*23)

![Diagram showing angular distribution for (n,n*23)]
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \( (n,n*24) \)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*25)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*26)\)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*27)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*28)
angular distribution for (n,n*29)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*30)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*31)
The diagram illustrates the angular distribution for the reaction (n,n*33) with the energy and cosine angle on the axes. The data is based on the FENDL-3.2 library and analyzed using the NJOY2016.60+ code.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n\ast34)\)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*35)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*36)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \( (n, n^{*37}) \)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*38)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*39)
angular distribution for \((n,n^*40)\)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,2n)

![Graph showing neutron emission probabilities for different energy ranges.](image)

- **Energy (MeV)**: The x-axis represents the energy in MeV, ranging from 10 to 20, marked at intervals of 2 (12, 14, 16, 18, 20).
- **Secondary Energy**: The y-axis represents the secondary energy, marked at intervals of 5 (5, 10, 15, 20).
- **Probability**: The z-axis represents the probability, marked on a logarithmic scale ranging from 10^-1 to 10^0.
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,3n)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)a
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*c)
Photon emission for (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,2n)
Photon emission for (n,3n)
Photon emission for \((n,n^*)a\)
Photon emission for (n,n*)p
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*1)
Photon emission for \((n,n^2)\)
Photon emission for (n,n*3)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*4)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*5)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for \((n,n^*6)\)
Photon emission for (n,n*7)
Photon emission for (n,n*8)
Photon emission for (n,n*9)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*10)
Photon emission for (n,n*11)
Photon emission for $(n,n*12)$
 Photon emission for (n,n*13)
Photon emission for (n,n*14)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for $(n,n*15)$
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*16)
Photon emission for (n,n*17)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for \((n,n*18)\)
Photon emission for (n,n*19)
Photon emission for (n,n*20)
Photon emission for (n,n*21)
Photon emission for \((n, n^{*22})\)
Photon emission for \((n,n^{*23})\)
Photon emission for (n,n*24)
Photon emission for (n,n*25)
Photon emission for (n,n*26)
Photon emission for (n,n*27)
Photon emission for (n,n*28)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*29)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*30)
Photon emission for (n,n*31)
Photon emission for \((n,n^{*32})\)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*33)
Photon emission for (n,n*34)
Photon emission for $(n,n^{*}35)$
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for \((n,n^*36)\)
Photon emission for (n,n*38)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*39)
Photon emission for (n,n*40)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,gma)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
50-SN-116 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

Energy (MeV)

Cross section (barns)

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

50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from \( (n,n^*)p \)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ tritons from (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,x)
50-SN-116 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,n*)a