30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance total cross section
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Energy (MeV)

Cross section (barns)

- total
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

![Graph showing total cross section over energy range](image-url)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture

Energy (MeV)

Cross section (barns)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

Capture cross section as a function of energy (MeV).
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

capture
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

![Graph showing the cross section of capture versus energy in MeV. The cross section is plotted on a logarithmic scale with the energy on a linear scale. The graph shows a decrease in cross section with increasing energy.]
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ UR total cross section
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ UR elastic cross section

![Graph showing cross section vs. energy](image)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ UR capture cross section

![Graph showing cross section vs. energy in barns on a logarithmic scale. The graph includes lines for Inf. Dil., 100 b, and 1 b, with the energy on a logarithmic scale ranging from 10^{-1} to 10^0. The cross section decreases as energy increases.](image)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Damage

Energy (MeV) vs. Damage (MeV-barns) graph with a line labeled 'damage'.
Non-threshold reactions

Energy (MeV) vs. Cross section (barns)

(n,gma)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Principal cross sections

Energy (MeV)

Cross section (barns)

- **Total**
- **Absorption**
- **Elastic**
- **Gamma production**

Energy (MeV)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Heating

```
heating
```

![Graph showing the relationship between Energy (MeV) and Heating (MeV/reaction). The Heating increases exponentially with Energy.]
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

Cross section (barns)

Energy (MeV)

\[(n,g\alpha)\]
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

Energy (MeV)
30-ZN-68 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)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ Inelastic levels

![Graph showing cross sections vs. energy for inelastic levels (n,n*16) to (n,n*20).]
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV) vs. Cross section (barns)

- (n,n*21)
- (n,n*22)
- (n,n*23)
- (n,n*24)
- (n,n*25)

Energy (MeV):
- 2
- 4
- 6
- 8
- 10
- 12
- 14
- 16
- 18
- 20

Cross section (barns):
- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50

*10^{-3}
30-ZN-68 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)

- Black line: (n,n\*26)
- Red line: (n,n\*27)
- Green line: (n,n\*28)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

- $(n,x)$
- $(n,2n)$
- $(n,3n)$
- $(n,n^*)a$
- $(n,n^*)p$

Cross section (barns)

Energy (MeV)
Threshold reactions

Cross section (barns)

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

![Graph showing cross section vs energy for different reactions.](image)

- (n,he3)
- (n,a)
- (n,2p)
Threshold reactions

30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Energy (MeV)

Cross section (barns)

(n,xp)

(n,xd)

(n,xt)

(n,xhe3)

(n,xa)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n1)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*2)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*3)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*4)\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*6)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*8)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*9)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*10)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*11)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*12)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*13)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*14)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*15)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*16)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*17)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*18)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*19)\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*20)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*22)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*23)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*24)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n*25)\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*26)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*27)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^{*28})\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for \((n,x)\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,2n)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,3n)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for \((n,n^*)a\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)p
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*c)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,x)
Photon emission for \((n,2n)\)
Photon emission for (n,3n)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*)a
Photon emission for \((n,n^*)p\)
Photon emission for (n,n*)d
Photon emission for \((n,n^*1)\)
Photon emission for (n,n*2)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*3)
Photon emission for (n,n*4)
30-ZN-68 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)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*9)
Photon emission for (n,n*10)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*11)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*12)
Photon emission for (n,n*13)

30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*14)
Photon emission for (n,n*15)
Photon emission for \((n,n^*16)\)
Photon emission for (n,n*17)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*18)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*19)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*20)
Photon emission for (n,n*22)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*23)
Photon emission for (n,n*24)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for \((n,n*25)\)
Photon emission for (n,n*26)
Photon emission for (n,n*27)
Photon emission for (n,n*28)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*c)
Photon emission for (n,gma)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
thermal capture photon spectrum
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
14 MeV photon spectrum
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Recoil Heating

![Graph showing recoil heating as a function of energy (MeV) with peaks at certain energy levels.](image-url)
Particle production cross sections

Energy (MeV)

Cross section (barns)

protons

deuterons

tritons

alphas

30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from (n,x)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60
protons from \((n,n^*)p\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from \((n,n^*)d\)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
tritons from (n,x)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,x)
30-ZN-68 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,n*)a