ENDF/B-VII FE-56
resonance total cross section
ENDF/B-VII FE-56
resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VII FE-56
resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VII FE-56
resonance total cross section

Energy (MeV)

Cross section (barns)

10^0

10^1

10^0

10^1
ENDF/B-VII FE-56
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII FE-56
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII FE-56
resonance absorption cross sections

Energy (MeV)

Cross section (barns)
ENDF/B-VII FE-56
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VII FE-56
Non-threshold reactions

Energy (MeV)

Cross section (barns)

$(n,gma)$
## ENDF/B-VII FE-56

### Principal cross sections

<table>
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<th>Energy (MeV)</th>
<th>Total</th>
<th>Absorption</th>
<th>Elastic</th>
<th>Gamma Production</th>
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</table>

- **Total**: Cross section (barns) for total reaction.
- **Absorption**: Cross section (barns) for absorption.
- **Elastic**: Cross section (barns) for elastic scattering.
- **Gamma Production**: Cross section (barns) for gamma production.

The graph shows the variation of cross sections with energy, indicating the dominant mechanisms at different energy levels.
ENDF/B-VII FE-56
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
ENDF/B-VII FE-56
Inelastic levels

Cross section (barns)

Energy (MeV)
ENDF/B-VII FE-56
Inelastic levels

Cross section (barns) vs. Energy (MeV)

- (n,n*16)
- (n,n*17)
- (n,n*18)
- (n,n*19)
- (n,n*20)
ENDF/B-VII FE-56

Inelastic levels

Cross section (barns) vs. Energy (MeV) for different reactions:
- (n,n*21)
- (n,n*22)
- (n,n*23)
- (n,n*24)
- (n,n*25)

The graph shows the cross section (in barns) as a function of energy (in MeV) for various inelastic levels.
ENDF/B-VII FE-56

Threshold reactions

Cross section (barns)

Energy (MeV)
ENDF/B-VII FE-56
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,xp)
(n,xd)
(n,xt)
(n,xhe3)
(n,xa)
ENDF/B-VII FE-56
angular distribution for elastic
ENDF/B-VII FE-56
angular distribution for elastic
ENFD/B-VII FE-56
angular distribution for (n,n*1)
ENDF/B-VII FE-56
angular distribution for \((n,n^*2)\)
ENDF/B-VII FE-56
angular distribution for (n,n*4)
ENDF/B-VII FE-56

angular distribution for (n,n*5)

Energy (MeV)

Cosine

Prob/Cos

Prob/Cos
ENDF/B-VII FE-56
angular distribution for (n,n*6)
ENDF/B-VII FE-56
angular distribution for $(n,n^*7)$
ENDF/B-VII FE-56
angular distribution for (n,n*8)
ENDF/B-VII FE-56
angular distribution for (n,n^*9)
ENDF/B-VII FE-56
angular distribution for (n,n*10)
ENDF/B-VII FE-56
angular distribution for (n,n*11)
ENDF/B-VII FE-56
angular distribution for (n,n*12)
ENDF/B-VII FE-56
angular distribution for \((n,n\*13)\)
ENDF/B-VII FE-56
angular distribution for (n,n*14)
ENDF/B-VII FE-56
angular distribution for (n,n*15)
ENDF/B-VII FE-56
angular distribution for (n,n*16)
ENDF/B-VII FE-56
angular distribution for (n,n*18)
ENDF/B-VII FE-56
angular distribution for (n,n*19)
ENDF/B-VII FE-56
angular distribution for (n,n*20)
ENDF/B-VII FE-56
angular distribution for (n,n*21)
angular distribution for (n,n*)22
ENDF/B-VII FE-56
angular distribution for \((n,n^{*23})\)
ENDF/B-VII FE-56
angular distribution for (n,n*24)
ENDF/B-VII FE-56
angular distribution for (n,n^*25)
ENDF/B-VII FE-56
Neutron emission for \((n,x)\)
ENDF/B-VII FE-56
Neutron emission for (n,2n)
ENDF/B-VII FE-56
Neutron emission for \((n,n^*)a\)
ENDF/B-VII FE-56
Neutron emission for (n,n*)p

Energy (MeV)

Sec. Energy

Prob./MeV

10^{-1} 10^{0} 10^{1} 10^{2}
ENDF/B-VII FE-56
Neutron emission for \((n,n^*c)\)
ENDF/B-VII FE-56
Photon emission for (n,gma)
ENDF/B-VII FE-56
Photon emission for (n,x)
ENDF/B-VII FE-56
Photon emission for (n,2n)
ENDF/B-VII FE-56
Photon emission for \((n,n^*)a\)
ENDF/B-VII FE-56
Photon emission for \((n,n^*)p\)
ENDF/B-VII FE-56
Photon emission for (n,n*c)
ENDF/B-VII FE-56
Photon emission for (n,p)
ENDF/B-VII FE-56
Photon emission for (n,a)
ENDF/B-VII FE-56
thermal capture photon spectrum
ENDF/B-VII FE-56
14 MeV photon spectrum
ENDF/B-VII FE-56
Particle heating contributions

Energy (MeV)

MeV/collision

- protons
- deuterons
- tritons
- alphas

Energy (MeV)
ENDF/B-VII FE-56
Particle production cross sections

Cross section (barns)

Energy (MeV)

protons
deuterons
tritons
alphas
ENDF/B-VII FE-56
protons from (n,x)

Energy (MeV)
ENDF/B-VII FE-56 protons from \((n, n^*)_p\)
ENDF/B-VII FE-56
protons from (n,p)
ENDF/B-VII FE-56
deuterons from (n,x)
ENDF/B-VII FE-56
tritons from (n,x)
ENDF/B-VII FE-56 alphas from (n,x)
ENDF/B-VII FE-56
alphas from (n,n\*)a
ENDF/B-VII FE-56
alphas from \( (n,a) \)