ENDF/B-VI F-19H
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

Energy (MeV)
ENDF/B-VI F-19H
resonance total cross section

Energy (MeV)

Cross section (barns)

total
ENDF/B-VI F-19H
resonance total cross section

Energy (MeV)

Cross section (barns)

- total
ENDF/B-VI F-19H
resonance total cross section

Energy (MeV)

Cross section (barns)

10^0 10^1

10^1 10^0

total
ENDF/B-VI F-19H resonance absorption cross sections
ENDF/B-VI F-19H
resonance absorption cross sections
ENDF/B-VI F-19H
resonance absorption cross sections

Capture process shown with oscillations and a linear decay at higher energies.
ENDF/B-VI F-19H Heating

Energy (MeV)

Heating (MeV/reaction)
ENDF/B-VI F-19H
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
ENDF/B-VI F-19H
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
ENDF/B-VI F-19H
Inelastic levels

Energy (MeV)

Cross section (barns)

*10^{-3}
ENDF/B-VI F-19H
Inelastic levels

Energy (MeV) vs. Cross section (barns)

- (n,n*16)
- (n,n*17)
- (n,n*18)
- (n,n*19)
- (n,n*20)
ENDF/B-VI F-19H
Inelastic levels

Cross section (barns) vs. Energy (MeV)

- Maximum cross section at around 8 MeV
- Cross section decreases as energy increases
ENDF/B-VI F-19H
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,xp)
(n,xd)
(n,xt)
(n,xa)
ENDF/B-VI F-19H
angular distribution for elastic
ENDF/B-VI F-19H
angular distribution for (n,n*1)
ENDF/B-VI F-19H
angular distribution for (n,n*2)
ENDF/B-VI F-19H
angular distribution for (n,n*3)
ENDF/B-VI F-19H
angular distribution for (n,n\*4)
ENDF/B-VI F-19H
angular distribution for \((n,n^*5)\)
ENDF/B-VI F-19H
angular distribution for \((n,n^*6)\)
ENDF/B-VI F-19H
angular distribution for (n,n*7)
ENDF/B-VI F-19H
angular distribution for (n,n*8)
ENDF/B-VI F-19H
angular distribution for (n,n^9)
ENDF/B-VI F-19H
angular distribution for (n,n*10)
ENDF/B-VI F-19H
angular distribution for (n,n*11)
ENDF/B-VI F-19H
angular distribution for (n,n*12)
ENDF/B-VI F-19H
angular distribution for \((n,n^{*13})\)
ENDF/B-VI F-19H
angular distribution for (n,n*14)
ENDF/B-VI F-19H
angular distribution for \((n,n^*15)\)
ENDF/B-VI F-19H
angular distribution for (n,n*16)
ENDF/B-VI F-19H
angular distribution for (n,n*17)
ENDF/B-VI F-19H
angular distribution for (n,n*18)
ENDF/B-VI F-19H
angular distribution for (n,n*19)
ENDF/B-VI F-19H
angular distribution for (n,n*20)
ENDF/B-VI F-19H
angular distribution for (n,n*21)
ENDF/B-VI F-19H
Neutron emission for (n,2n)
ENDF/B-VI F-19H
Neutron emission for (n,2n)
ENDF/B-VI F-19H
Neutron emission for \((n,n^*)a\)
ENDF/B-VI F-19H
Neutron emission for (n,n*)p
ENDF/B-VI F-19H
Neutron emission for (n,n*c)
ENDF/B-VI F-19H
Photon emission for (n,gma)
ENDF/B-VI F-19H
Photon emission for (n,2n)
ENDF/B-VI F-19H
Photon emission for (n,n*)a
ENDF/B-VI F-19H
Photon emission for (n,n*)p
ENDF/B-VI F-19H
Photon emission for (n,n*c)
ENDF/B-VI F-19H
Photon emission for (n,p)
ENDF/B-VI F-19H
Photon emission for (n,a)
ENDF/B-VI F-19H
thermal capture photon spectrum
ENDF/B-VI F-19H
14 MeV photon spectrum
ENDF/B-VI F-19H
Particle heating contributions

Energy (MeV)

0.0 0.2 0.4 0.6 0.8 1.0

protons
alphas

MeV/collision

0.0 0.2 0.4 0.6 0.8 1.0

Energy (MeV)

0 2 4 6 8 10 12 14 16 18 20
ENDF/B-VI F-19H Recoil Heating

- Energy (MeV)
- Heating (MeV/reaction)

The graph shows a linear increase in heating with increasing energy.
ENDF/B-VI F-19H
Particle production cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VI F-19H
protons from \((n,n^*)p\)
ENDF/B-VI F-19H
protons from (n,p)
ENDF/B-VI F-19H
alphas from (n,n*)a
ENDF/B-VI F-19H
alphas from (n,a)