ENDF/B-VII NB-93
resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VII NB-93
resonance total cross section

Energy (MeV)

Cross section (barns)

10^{-3}
ENDF/B-VII NB-93
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII NB-93
resonance total cross section

Energy (MeV)

Cross section (barns)

10^{-2} 10^{-1} 10^{0} 10^{1}

10^{-2} 10^{-1} 10^{0} 10^{1}

total
ENDF/B-VII NB-93
resonance absorption cross sections

Capture cross section vs. energy (MeV)
ENDF/B-VII NB-93
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VII NB-93
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII NB-93
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII NB-93

Heating

Energy (MeV) vs Heating (MeV/reaction)

- The graph shows the heating (in MeV/reaction) as a function of energy (in MeV).
- The x-axis represents the energy range from $10^{-11}$ to $10^1$ MeV.
- The y-axis represents the heating range from $10^{-4}$ to $10^1$ MeV/reaction.
- The data points are plotted on a logarithmic scale, with the heating values increasing sharply at higher energies.
ENDF/B-VII NB-93
Damage

Damage (MeV-barns)

Energy (MeV)
ENDF/B-VII NB-93
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
(n,p)
(n,a)
(n,xp)
(n,xa)
ENDF/B-VII NB-93
Principal cross sections

Energy (MeV)

Cross section (barns)

0
2
4
6
8
10
12
14
16

0
20
40
60
80
100
120
140
160

total
absorption
elastic
gamma production

Energy (MeV)
ENDF/B-VII NB-93
Non-threshold reactions

![Graph showing cross-sections as a function of energy for different reactions. The y-axis represents the cross-section in barns (b), and the x-axis represents energy in MeV. The graph includes lines for (n,gma), (n,p), (n,a), (n,xp), and (n,xa) reactions.]
ENDF/B-VII NB-93
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
ENDF/B-VII NB-93
Inelastic levels

Cross section (barns) vs. Energy (MeV)

- %(n,n*6)
- %(n,n*7)
- %(n,n*8)
- %(n,n*9)
- %(n,n*10)
ENDF/B-VII NB-93
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)
ENDF/B-VII NB-93
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,x)
(n,2n)
(n,3n)
(n,n*)a
(n,n*)p

0 20 40 60 80 100 120 140 160
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8

0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8

0 20 40 60 80 100 120 140 160
angular distribution for elastic

ENDF/B-VII NB-93
ENDF/B-VII NB-93
angular distribution for elastic
ENDF/B-VII NB-93
angular distribution for \((n,3n)\)
ENDF/B-VII NB-93

angular distribution for (n,n*)a

Energy (MeV)
ENDF/B-VII NB-93
angular distribution for (n,n*)p

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VII NB-93
angular distribution for (n,n*)d
ENDF/B-VII NB-93
angular distribution for \((n,n^*)t\)
ENDF/B-VII NB-93
angular distribution for (n,n*1)
ENDF/B-VII NB-93
angular distribution for (n,n*2)

Energy (MeV)

0.0 0.5 1.0

Cosine

Prob/Cos

0 1.0 1.0 1.0 1.0

0 0.5 0.0 -0.5 -1.0

0 1.0 1.0 1.0 1.0

0 1.0 1.0 1.0 1.0
ENDF/B-VII NB-93
angular distribution for (n,n\*3)
ENDF/B-VII NB-93
angular distribution for (n,n*4)
ENDF/B-VII NB-93 angular distribution for (n,n*5)
ENDF/B-VII NB-93
angular distribution for (n,n*6)
ENDF/B-VII NB-93
angular distribution for (n,n*7)
ENDF/B-VII NB-93
angular distribution for (n,n*8)
ENDF/B-VII NB-93
angular distribution for (n,n*9)
ENDF/B-VII NB-93
angular distribution for (n,n*10)
ENDF/B-VII NB-93
angular distribution for \((n,n^*11)\)
ENDF/B-VII NB-93
angular distribution for (n,n*12)
ENDF/B-VII NB-93
angular distribution for (n,n*13)
ENDF/B-VII NB-93
angular distribution for (n,n*14)
ENDF/B-VII NB-93
angular distribution for (n,n*15)
ENDF/B-VII NB-93
angular distribution for (n,n*16)

Energy (MeV)

Cosine

Prob/Cos

1.0 0.5 0.0 -0.5 -1.0

0 20 40 60 80 100 120 140 160
ENDF/B-VII NB-93
angular distribution for (n,n*17)
ENDF/B-VII NB-93
angular distribution for (n,n*18)
ENDF/B-VII NB-93
angular distribution for (n,n*19)
ENDF/B-VII NB-93
angular distribution for \((n,n^{*}20)\)
ENDF/B-VII NB-93

Angular distribution for (n,n*21)
ENDF/B-VII NB-93
angular distribution for (n,n*22)
ENDF/B-VII NB-93
angular distribution for (n,n*23)
ENDF/B-VII NB-93
angular distribution for (n,n*c)
ENDF/B-VII NB-93
Neutron emission for \((n,x)\)
ENDF/B-VII NB-93
Neutron emission for (n,3n)
ENDF/B-VII NB-93
Neutron emission for (n,n^*)a
ENDF/B-VII NB-93
Neutron emission for (n,n*)d

Energy (MeV)

Sec. Energy

Prob./MeV

10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4}
ENDF/B-VII NB-93
Neutron emission for (n,n*)t
ENDF/B-VII NB-93
Photon emission for nonelastic
ENDF/B-VII NB-93
Photon emission for (n,x)
ENDF/B-VII NB-93
thermal capture photon spectrum

Gamma Prod (barns/MeV)

Gamma Energy (MeV)
ENDF/B-VII NB-93
14 MeV photon spectrum

Gamma Energy (MeV) vs. Gamma Prod (barns/MeV)
ENDF/B-VII NB-93
Recoil Heating

Heating (MeV/reaction)

Energy (MeV)
ENDF/B-VII NB-93
Particle production cross sections

Cross section (barns)

Energy (MeV)

- protons
- deuterons
- tritons
- alphas
ENDF/B-VII NB-93
protons from (n,x)
ENDF/B-VII NB-93
deuterons from (n,x)
ENDF/B-VII NB-93 tritons from (n,x)
ENDF/B-VII NB-93
alphas from (n,x)

Energy (MeV)

0 20 40

0 20 40

10 100

Prob/MeV

Sec. Energy

100 200