ENDF/B-VII.1 V-51
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

Energy (MeV)
ENDF/B-VII.1 V-51
resonance total cross section

Energy (MeV) vs. Cross section (barns) plot.

- Energy axis ranges from $10^{-3}$ to $10^{-2}$ MeV.
- Cross section axis ranges from $10^{-2}$ to $10^{2}$ barns.

The graph shows a plot of total cross section against energy, with distinct resonance peaks at certain energy levels.
ENDF/B-VII.1 V-51 resonance total cross section

Cross section (barns)

Energy (MeV)

- Log scale for the cross section on the y-axis from $10^{-2}$ to $10^2$
- Log scale for the energy on the x-axis from $10^{-2}$ to $10^{-1}$
ENDF/B-VII.1 V-51
resonance total cross section

Energy (MeV)

Cross section (barns)

10^0

10^{-1}

10^1
ENDF/B-VII.1 V-51
resonance total cross section

Energy (MeV) vs Cross section (barns)
ENDF/B-VII.1 V-51
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII.1 V-51
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII.1 V-51 resonance absorption cross sections

- Energy (MeV) vs. Cross section (barns)
- Capture cross section as a function of energy
ENDF/B-VII.1 V-51
Non-threshold reactions

Energy (MeV)

Cross section (barns)

10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1

(n,gma)
ENDF/B-VII.1 V-51
Principal cross sections

Energy (MeV)

Cross section (barns)

total
absorption
elastic
gamma production

Energy (MeV)
ENDF/B-VII.1 V-51 Damage

![Graph showing the relationship between energy (MeV) and damage (MeV-barns).](image)
ENDF/B-VII.1 V-51
Inelastic levels

Cross section (barns)

Energy (MeV)

(n,n*1)  (n,n*2)  (n,n*3)  (n,n*4)  (n,n*5)
ENDF/B-VII.1 V-51

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.1 V-51
Inelastic levels

Energy (MeV)

Cross section (barns)

Cross sections for various inelastic levels:
- (n,n*21)
- (n,n*22)
- (n,n*23)
- (n,n*24)
- (n,n*25)
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,p)
- (n,d)
- (n,t)
- (n,he3)
- (n,a)
ENDF/B-VII.1 V-51
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,xp)
- (n,xd)
- (n,xt)
- (n,xhe3)
- (n,xa)
ENDF/B-VII.1 V-51
angular distribution for elastic
ENDF/B-VII.1 V-51
angular distribution for (n,n*1)
ENDF/B-VII.1 V-51
angular distribution for (n,n*2)
ENDF/B-VII.1 V-51
angular distribution for (n,n*3)
ENDF/B-VII.1 V-51
angular distribution for (n,n*4)
ENDF/B-VII.1 V-51
angular distribution for (n,n*5)
ENDF/B-VII.1 V-51
angular distribution for (n,n*6)
ENDF/B-VII.1 V-51
angular distribution for (n,n*7)
ENDF/B-VII.1 V-51
angular distribution for (n,n*8)
ENDF/B-VII.1 V-51 angular distribution for (n,n*9)
ENDF/B-VII.1 V-51
angular distribution for (n,n*10)
ENDF/B-VII.1 V-51
angular distribution for (n,n*11)
ENDF/B-VII.1 V-51
angular distribution for (n,n*12)
ENDF/B-VII.1 V-51
angular distribution for (n,n*13)
ENDF/B-VII.1 V-51
angular distribution for (n,n*15)
ENDF/B-VII.1 V-51
angular distribution for (n,n*16)
ENDF/B-VII.1 V-51
angular distribution for (n,n*17)
ENDF/B-VII.1 V-51
angular distribution for (n,n*18)
ENDF/B-VII.1 V-51
angular distribution for (n,n*19)
ENDF/B-VII.1 V-51
angular distribution for (n,n*20)
ENDF/B-VII.1 V-51
angular distribution for \((n,n^{*21})\)
ENDF/B-VII.1 V-51
angular distribution for \((n,n^*22)\)
ENDF/B-VII.1 V-51
angular distribution for (n,n*23)
ENDF/B-VII.1 V-51
angular distribution for (n,n*24)
ENDF/B-VII.1 V-51
angular distribution for (n,n*25)
ENDF/B-VII.1 V-51
angular distribution for (n,n*26)
ENDF/B-VII.1 V-51
angular distribution for (n,n*27)
ENDF/B-VII.1 V-51
angular distribution for \( (n, n^{*29}) \)
ENDF/B-VII.1 V-51
Neutron emission for (n,2n)
ENDF/B-VII.1 V-51
Neutron emission for \((n,n^*)p\)
ENDF/B-VII.1 V-51
Neutron emission for (n,n^*c)
ENDF/B-VII.1 V-51
Photon emission for (n,2n)
ENDF/B-VII.1 V-51
Photon emission for (n,n*)a
ENDF/B-VII.1 V-51
Photon emission for \((n,n^*)p\)
ENDF/B-VII.1 V-51
Photon emission for \((n,n^*)d\)
ENDF/B-VII.1 V-51
Photon emission for (n,n*c)
ENDF/B-VII.1 V-51
Photon emission for (n,gma)
ENDF/B-VII.1 V-51
thermal capture photon spectrum
ENDF/B-VII.1 V-51
14 MeV photon spectrum
ENDF/B-VII.1 V-51
Recoil Heating

![Graph showing recoil heating as a function of energy.](image-url)
ENDF/B-VII.1 V-51
Particle production cross sections

Cross section (barns) vs Energy (MeV)

- Protons
- Deuterons
- Alphas
ENDF/B-VII.1 V-51
protons from \((n,n^*)p\)
ENDF/B-VII.1 V-51
deuterons from \((n,n^*)d\)
ENDF/B-VII.1 V-51
alphas from (n,n*)a