ENDF/B-VII.1 V-50
Principal cross sections

Energy (MeV)
Cross section (barns)

- total
- absorption
- elastic
- gamma production
ENDF/B-VII.1 V-50
resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VII.1 V-50
resonance total cross section
E\(\text{NDF/B-VII.1 V-50}
\)
resonance total cross section

![Graph showing resonance total cross section]

- **Vertical Axis**: Cross section (barns)
- **Horizontal Axis**: Energy (MeV)

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*Note: The graph illustrates the total cross section as a function of energy, with a peak in the resonance region.*
ENDF/B-VII.1 V-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII.1 V-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII.1 V-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3}

10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3}

capture
ENDF/B-VII.1 V-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-2} 10^{-3} 10^{-4}

10^{-1} 10^{0}
ENDF/B-VII.1 V-50
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 V-50
Heating

Graph showing Heating (MeV/reaction) vs Energy (MeV) on a logarithmic scale.

- Heating axis range: $10^{-4}$ to $10^{0}$
- Energy axis range: $10^{-11}$ to $10^{1}$
ENDF/B-VII.1 V-50 Damage

Damage

Energy (MeV) vs. Damage (MeV-barns)
ENDF/B-VII.1 V-50
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)

(n,p)

(n,xp)
ENDF/B-VII.1 V-50
Non-threshold reactions

- (n,gma)
- (n,p)
- (n,xp)
ENDF/B-VII.1 V-50
Threshold reactions

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 V-50
Threshold reactions

![Graph showing the cross-section for (n,2p) and (n,pa) threshold reactions as a function of energy. The x-axis represents energy in MeV, ranging from 6 to 20, and the y-axis represents cross section in barns, ranging from 0 to 1200.*10^-6. The graph includes two curves: one for (n,2p) in black and one for (n,pa) in red. The cross-section for (n,pa) rapidly increases with energy, while the (n,2p) remains nearly constant.]
ENDF/B-VII.1 V-50
angular distribution for elastic
ENDF/B-VII.1 V-50
angular distribution for (n,n*1)
ENDF/B-VII.1 V-50
angular distribution for (n,n*2)
ENDF/B-VII.1 V-50
angular distribution for (n,n*3)
ENDF/B-VII.1 V-50
angular distribution for (n,n*4)
ENDF/B-VII.1 V-50
angular distribution for (n,n*6)
ENDF/B-VII.1 V-50
angular distribution for (n,n*7)
ENDF/B-VII.1 V-50
angular distribution for (n,n*8)
ENDF/B-VII.1 V-50 V-50
angular distribution for (n,n*9)
ENDF/B-VII.1 V-50
angular distribution for $(n,n^{*10})$
ENDF/B-VII.1 V-50
angular distribution for (n,n*11)
ENDF/B-VII.1 V-50
angular distribution for (n,n*12)
ENDF/B-VII.1 V-50
angular distribution for (n,n*13)
ENDF/B-VII.1 V-50
angular distribution for (n,n*14)
ENDF/B-VII.1 V-50
angular distribution for (n,n*15)
ENDF/B-VII.1 V-50
angular distribution for (n,n*16)
ENDF/B-VII.1 V-50
angular distribution for (n,n^*17)
ENDF/B-VII.1 V-50
angular distribution for (n,n*18)
ENDF/B-VII.1 V-50
angular distribution for (n,n*19)
ENDF/B-VII.1 V-50
angular distribution for (n,n*20)
ENDF/B-VII.1 V-50
angular distribution for (n,n\*21)
ENDF/B-VII.1 V-50
angular distribution for (n,n*22)
ENDF/B-VII.1 V-50
angular distribution for (n,n*23)
ENDF/B-VII.1 V-50
angular distribution for (n,n*24)
ENDF/B-VII.1 V-50
angular distribution for (n,n*25)
ENDF/B-VII.1 V-50
angular distribution for \((n,n^*26)\)
ENDF/B-VII.1 V-50
angular distribution for (n,n*27)
ENDF/B-VII.1 V-50
angular distribution for (n,n*28)
ENDF/B-VII.1 V-50
angular distribution for (n,n^*29)
ENDF/B-VII.1 V-50
angular distribution for (n,n*30)
ENDF/B-VII.1 V-50
angular distribution for (n,n*31)
ENDF/B-VII.1 V-50
angular distribution for (n,n*32)
ENDF/B-VII.1 V-50
angular distribution for (n,n*33)
ENDF/B-VII.1 V-50
angular distribution for (n,n*34)
ENDF/B-VII.1 V-50
angular distribution for (n,n*35)
ENDF/B-VII.1 V-50
angular distribution for (n,n*36)
ENDF/B-VII.1 V-50
angular distribution for (n,n*37)
ENDF/B-VII.1 V-50
angular distribution for (n,n*38)
ENDF/B-VII.1 V-50
angular distribution for (n,n*39)
ENDF/B-VII.1 V-50
angular distribution for (n,n*40)
ENDF/B-VII.1 V-50
Neutron emission for (n,2n)
ENDF/B-VII.1 V-50
Neutron emission for \( (n,n^*)a \)
ENDF/B-VII.1 V-50
Neutron emission for (n,n*)p
ENDF/B-VII.1 V-50
Neutron emission for \((n,n^*)d\)
ENDF/B-VII.1 V-50
Neutron emission for (n,2np)
ENDF/B-VII.1 V-50
Neutron emission for \((n,n*c)\)
ENDF/B-VII.1 V-50
Photon emission for (n,2n)
ENDF/B-VII.1 V-50
Photon emission for (n,n*)a
ENDF/B-VII.1 V-50
Photon emission for (n,n*)d
ENDF/B-VII.1 V-50
Photon emission for (n,2np)
ENDF/B-VII.1 V-50
Photon emission for (n,n*1)
Photon emission for (n,n^2)
ENDF/B-VII.1 V-50
Photon emission for (n,n*3)
ENDF/B-VII.1 V-50
Photon emission for (n,n*5)
ENDF/B-VII.1 V-50
Photon emission for (n,n^\ast6)
ENDF/B-VII.1 V-50
Photon emission for (n,n*7)
ENDF/B-VII.1 V-50
Photon emission for (n,n*8)
ENDF/B-VII.1 V-50
Photon emission for (n,n*9)

![Graph showing photon emission spectrum for (n,n*9)]
ENDF/B-VII.1 V-50
Photon emission for (n,n*10)
ENDF/B-VII.1 V-50
Photon emission for \((n,n^*11)\)
ENDF/B-VII.1 V-50
Photon emission for (n,n*12)
ENDF/B-VII.1 V-50
Photon emission for \((n,n')_{13}\)
ENDF/B-VII.1 V-50
Photon emission for (n,n*14)
ENDF/B-VII.1 V-50
Photon emission for (n,n*15)
Photon emission for (n,n*16)
ENDF/B-VII.1 V-50
Photon emission for (n,n*19)
ENDF/B-VII.1 V-50
Photon emission for (n,n*20)
ENDF/B-VII.1 V-50
Photon emission for (n,n*21)
ENDF/B-VII.1 V-50
Photon emission for (n,n*22)
ENDF/B-VII.1 V-50
Photon emission for \((n,n^*23)\)
ENDF/B-VII.1 V-50
Photon emission for (n,n*24)
Photon emission for (n,n*25)
ENDF/B-VII.1 V-50
Photon emission for (n,n*26)
ENDF/B-VII.1 V-50
Photon emission for (n,n*27)
ENDF/B-VII.1 V-50
Photon emission for (n,n\*28)
ENDF/B-VII.1 V-50
Photon emission for (n,n*29)
ENDF/B-VII.1 V-50
Photon emission for (n,n*30)
ENDF/B-VII.1 V-50
Photon emission for (n, n^*31)
ENDF/B-VII.1 V-50
Photon emission for (n,n^*32)
ENDF/B-VII.1 V-50
Photon emission for (n,n*33)
ENDF/B-VII.1 V-50
Photon emission for \((n,n^*34)\)
Photon emission for \((n,n^*35)\)
ENDF/B-VII.1 V-50
Photon emission for (n,n*36)
ENDF/B-VII.1 V-50
Photon emission for (n,n*37)
Photon emission for (n,n*38)
ENDF/B-VII.1 V-50
Photon emission for (n,n^*39)
Photon emission for \((n,n^*40)\)
ENDF/B-VII.1 V-50
Photon emission for (n,n*c)
ENDF/B-VII.1 V-50
Photon emission for (n,gma)
ENDF/B-VII.1 V-50
thermal capture photon spectrum
ENDF/B-VII.1 V-50
14 MeV photon spectrum
ENDF/B-VII.1 V-50
Particle heating contributions

Energy (MeV)

protons
deuterons
alphas

MeV/collision

Energy (MeV)
Recoil Heating

Heating (MeV/reaction) vs. Energy (MeV)

- recoil heating
ENDF/B-VII.1 V-50
Particle production cross sections

Energy (MeV)

Cross section (barns)

- protons
- deuterons
- alphas

Energy (MeV)
ENDF/B-VII.1 V-50 protons from (n,n*)p
ENDF/B-VII.1 V-50
protons from (n,2np)
ENDF/B-VII.1 V-50
deuterons from \((n,n^*)d\)
ENDF/B-VII.1 V-50
alphas from (n,n*)a