ENDF/B-VII PD-102
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII PD-102
resonance absorption cross sections

![Graph showing resonance absorption cross sections. The x-axis represents energy in MeV, ranging from $10^{-4}$ to $10^{-3}$, and the y-axis represents cross section in barns, ranging from $10^{-3}$ to $10^3$. The graph includes peaks at specific energies, indicating resonances.](image-url)
ENDF/B-VII PD-102 Heating

Energy (MeV) vs. Heating (MeV/reaction)
ENDF/B-VII PD-102
Non-threshold reactions

Energy (MeV)

Cross section (barns)

- (n,gma)
- (n,a)
- (n,xa)
ENDF/B-VII PD-102
Damage

Energy (MeV)

Damage (MeV-barns)

*10^-3
ENDF/B-VII PD-102
Inelastic levels

Cross section (barns) vs. Energy (MeV)
ENDF/B-VII PD-102

Inelastic levels

Energy (MeV)

Cross section (barns)

- (n,n*16)
- (n,n*17)
- (n,n*18)
- (n,n*19)
ENDF/B-VII PD-102
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,d)
(n,2p)
ENDF/B-VII PD-102
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,d*16)
- (n,d*17)
- (n,d*18)
- (n,d*19)
- (n,d*c)

Cross section values are in units of 10^-3 barns.
angular distribution for elastic

\[ P_{\text{prob/cos}} \]

\[ \text{Energy (MeV)} \]

\[ \text{Cosine} \]
ENDF/B-VII PD-102
angular distribution for \((n,n^*1)\)
ENDF/B-VII PD-102
angular distribution for \((n,n^*2)\)
ENDF/B-VII PD-102
angular distribution for (n,n*3)
ENDF/B-VII PD-102
angular distribution for (n,n'4)

Energy (MeV)

Cosine

Prob/Cos

1.0 0.5 0.0 -0.5 -1.0

0

1.0 10 100 1000 10000

0.5

0.0

-0.5

-1.0
ENDF/B-VII PD-102 angular distribution for (n,n*5)
ENDF/B-VII PD-102
angular distribution for (n,n*6)
ENDF/B-VII PD-102
angular distribution for (n,n*7)
ENDF/B-VII PD-102
angular distribution for (n,n*8)
ENDF/B-VII PD-102
angular distribution for (n,n*9)
ENDF/B-VII PD-102
angular distribution for \((n,n^{*10})\)
ENDF/B-VII PD-102
angular distribution for (n,n*11)
ENDF/B-VII PD-102
angular distribution for (n,n*12)
angular distribution for (n,n*13)
ENDF/B-VII PD-102
angular distribution for (n,n*14)
ENDF/B-VII PD-102 angular distribution for (n,n*15)
angular distribution for (n,n*17)
ENDF/B-VII PD-102
angular distribution for (n,n*18)
ENDF/B-VII PD-102
angular distribution for (n,n*19)
ENDF/B-VII PD-102
Neutron emission for (n,3n)
ENDF/B-VII PD-102
Neutron emission for \( (n, n^*) a \)
ENDF/B-VII PD-102
Neutron emission for \( (n,n^*)p \)
ENDF/B-VII PD-102
Neutron emission for \((n,n^*)d\)
ENDF/B-VII PD-102
Neutron emission for \((n,2np)\)
ENDF/B-VII PD-102
Neutron emission for (n,n2p)
ENDF/B-VII PD-102
Neutron emission for (n,n*c)
ENDF/B-VII PD-102
Photon emission for (n,gma)
ENDF/B-VII PD-102
Photon emission for (n,2n)
ENDF/B-VII PD-102
Photon emission for \((n,n^*)a\)
ENDF/B-VII PD-102
Photon emission for (n,2n)a
ENDF/B-VII PD-102
Photon emission for (n,n*)p
ENDF/B-VII PD-102
Photon emission for (n,n*)d

$E_{\gamma}$ (MeV) - 0 5 10 15 20 25 30

$E_{n}$ (MeV) - 0 5 10 15 20 25 30

$P_{\text{Prob/MeV}}$ - 10^{-1} 10 10^{3} 10^{4}

Diagram showing the photon emission for (n,n*)d reactions.
ENDF/B-VII PD-102
Photon emission for (n,2np)
ENDF/B-VII PD-102
Photon emission for (n,n2p)
ENDF/B-VII PD-102
Photon emission for (n,n*1)
ENDF/B-VII PD-102
Photon emission for (n,n*2)
Photon emission for (n,n*4)

ENDF/B-VII PD-102
Photon emission for (n,n*4)
ENDF/B-VII PD-102
Photon emission for (n,n*6)
Photon emission for (n,n*7)
Photon emission for (n,n*9)
Photon emission for (n,n*10)

ENDF/B-VII PD-102

Photon emission for (n,n*10)
ENDF/B-VII PD-102
Photon emission for (n,n*12)
Photon emission for (n,n*13)
Photon emission for \((n,n^{*}14)\)
ENDF/B-VII PD-102
Photon emission for (n,n*15)
ENDF/B-VII PD-102
Photon emission for (n,n*17)
ENFD/B-VII PD-102
Photon emission for (n,n*18)
Photon emission for (n,n'19)
ENDF/B-VII PD-102
Photon emission for \( (n,n^*c) \)
ENDF/B-VII PD-102
Photon emission for (n,2p)
ENDF/B-VII PD-102
Photon emission for (n,p*2)
ENDF/B-VII PD-102
Photon emission for (n,p*3)
ENDF/B-VII PD-102
Photon emission for (n,p*4)
ENDF/B-VII PD-102
Photon emission for (n,p*)
Photon emission for (n,p)
ENDF/B-VII PD-102
Photon emission for (n,d*1)
ENDF/B-VII PD-102
Photon emission for (n,d*2)

\[ P_{\gamma}/M(\text{MeV}) \]

\[ E_{\gamma} (\text{MeV}) \]

\[ E_{\text{mv}} (\text{MeV}) \]

\[ E_{\text{mv}} (\text{MeV}) \]
Photon emission for (n,d*4)
Photon emission for (n,d*5)
Photon emission for (n,d*6)

$E_\gamma (\text{MeV})$ vs $E_n (\text{MeV})$ vs $P_{\text{pred}}/\text{MeV}$
Photon emission for (n,d*7)
Photon emission for \((n,d^*8)\)
Photon emission for (n,d*9)
ENDF/B-VII PD-102
Photon emission for (n,d*10)
ENDF/B-VII PD-102
Photon emission for (n,d*11)
Photon emission for (n,d*12)
ENDF/B-VII PD-102
Photon emission for (n,d*14)
ENDF/B-VII PD-102
Photon emission for (n,d*15)
Photon emission for (n,d*16)
ENDF/B-VII PD-102
Photon emission for (n,d*17)
ENDF/B-VII PD-102
Photon emission for \((n,d^{*}18)\)
Photon emission for (n,d*19)

Endf/B-VII PD-102
Photon emission for (n,d*19)
Photon emission for (n,d*c)
Photon emission for (n,a*1)
ENDF/B-VII PD-102
Photon emission for (n,a*2)
ENDF/B-VII PD-102
Photon emission for (n,a*3)
Photon emission for \((n,a^4)\)
Photon emission for (n,a*5)
Photon emission for (n,a*6)
Photon emission for (n,a*9)
ENDF/B-VII PD-102
Photon emission for (n,a*10)
ENDF/B-VII PD-102
Photon emission for (n,a*11)
ENDF/B-VII PD-102
Photon emission for (n,a*12)
Photon emission for (n,α*13)

\[ P \frac{\text{MeV}}{M_eV} \]

\[ E_\gamma (\text{MeV}) \]

\[ E_n (\text{MeV}) \]
Photon emission for (n,a*14)

$\text{ENDF/B-VII PD-102}$

$\text{Photon emission for (n,a*14)}$
ENDF/B-VII PD-102
Photon emission for (n,a*15)
ENDF/B-VII PD-102
Photon emission for (n,a*16)
ENDF/B-VII PD-102
Photon emission for (n,a*17)
Photon emission for \( (n,a^{*18}) \)
ENDF/B-VII PD-102
Photon emission for (n,a*20)
ENDF/B-VII PD-102
Photon emission for (n,a*21)
ENDF/B-VII PD-102
Photon emission for (n,a*22)
Photon emission for (n, a*23)
ENDF/B-VII PD-102
Photon emission for (n,a*24)
Photon emission for (n, a*c)
ENDF/B-VII PD-102
thermal capture photon spectrum
ENDF/B-VII PD-102
14 MeV photon spectrum
ENDF/B-VII PD-102
Particle production cross sections

Cross section (barns)

Energy (MeV)

protons
deuterons
alphas

Energy (MeV)

Cross section (barns)
ENDF/B-VII PD-102
protons from (n,n*)p
ENDF/B-VII PD-102
protons from (n,n2p)
ENDF/B-VII PD-102
protons from (n,2p)
ENDF/B-VII PD-102
angular distribution for (n,p^0) proton
ENDF/B-VII PD-102
angular distribution for (n,p*1) proton
ENDF/B-VII PD-102
angular distribution for (n,p*2) proton
ENDF/B-VII PD-102
angular distribution for (n,p*3) proton
ENDF/B-VII PD-102
angular distribution for (n,p*4) proton
ENDF/B-VII PD-102
deuterons from (n,n*)d
angular distribution for (n,d*0) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*1) deuteron

Prob/Cos

Energy (MeV)

Cosine
angular distribution for (n,d*2) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*3) deuteron
angular distribution for (n,d*) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*5) deuteron
ENDF/B-VII PD-102
angular distribution for \((n,d^*6)\) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*7) deuteron
ENDF/B-VII PD-102
angular distribution for \((n,d^*8)\) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*9) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*10) deuteron
ENDF/B-VII PD-102
angular distribution for \((n,d^{*11})\) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*12) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*14) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*15) deuteron
angular distribution for (n,d\*16) deuteron
angular distribution for (n,d*17) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*18) deuteron
ENDF/B-VII PD-102
angular distribution for (n,d*19) deuteron
ENDF/B-VII PD-102
deuterons from \((n,d^*c)\)
ENDF/B-VII PD-102
alphas from (n,n*)a
ENDF/B-VII PD-102
alphas from (n,2n)a
angular distribution for \((n,a^0)\) alpha

ENERGY (MeV)

0.4

0

0.5

1

1.5

2

2.5

3

Energy (MeV)

PROB/COS

-1.0

-0.5

0

0.5

1

1.0

Cosine

ENDF/B-VII PD-102
ENDF/B-VII PD-102
angular distribution for (n,a*1) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*3) alpha
ENDF/B-VII PD-102
angular distribution for (n,a^4) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*5) alpha
angular distribution for (n,a*6) alpha
angular distribution for (n,a*8) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*9) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*10) alpha
angular distribution for (n,a*11) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*12) alpha

Energy (MeV)

Cosine

Prob/Cos

10^0 10^-1 1.0 0.5 0.0 -0.5 -1.0

0 10 20 30
ENDF/B-VII PD-102
angular distribution for (n,a*13) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*14) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*15) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*16) alpha
angular distribution for \( (n,a*17) \) alpha
ENDF/B-VII PD-102
angular distribution for (n,a^*18) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*19) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*20) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*21) alpha
angular distribution for (n,a*) alpha
ENDF/B-VII PD-102
angular distribution for \((n,a^*23)\) alpha
ENDF/B-VII PD-102
angular distribution for (n,a*24) alpha