ENDF/B-VII AS-75
resonance total cross section
ENDF/B-VII AS-75
resonance total cross section

Energy (MeV)

Cross section (barns)

total
ENDF/B-VII AS-75
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII AS-75
resonance absorption cross sections

capture
ENDF/B-VII AS-75
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII AS-75
resonance absorption cross sections
ENDF/B-VII AS-75
UR total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII AS-75
UR elastic cross section

Energy (MeV)

Cross section (barns)

Inf. Dil.
100 b
ENDF/B-VII AS-75
UR capture cross section

Energy (MeV)

Cross section (barns)

Inf. Dil.
100 b
ENDF/B-VII AS-75
Damage

Energy (MeV)

Damage (MeV-barns)
ENDF/B-VII AS-75
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n, gma)
ENDF/B-VII AS-75
Damage

Energy (MeV)

*10^-3

100

200

300

400

Damage (MeV-barns)

damage

Energy (MeV)
ENDF/B-VII AS-75
Non-threshold reactions

Cross section (barns)

Energy (MeV)
ENDF/B-VII AS-75
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 AS-75
Inelastic levels

Cross section (barns) vs. Energy (MeV) for various inelastic levels:
- (n,n*6)
- (n,n*7)
- (n,n*8)
- (n,n*9)
- (n,n*10)
ENDF/B-VII AS-75
Inelastic levels

Energy (MeV)

Cross section (barns)

0

10

20

30

40

50

*10^{-3}

0

2

4

6

8

10

12

14

16

18

20

(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)
ENDF/B-VII AS-75
Threshold reactions

Cross section (barns) vs. Energy (MeV) for different threshold reactions:
- (n,p*16)
- (n,p*17)
- (n,p*18)
- (n,p*19)
- (n,p*20)
ENDF/B-VII AS-75
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,p*36)
- (n,p*37)
- (n,p*38)
- (n,p*39)
- (n,p*c)

Energy (MeV) range: 2 to 20
Cross section (barns) range: 0 to 25 * 10^-3
ENDF/B-VII AS-75
Threshold reactions

Energy (MeV) vs. Cross section (barns)

- (n,a*10)
- (n,a*11)
- (n,a*12)
- (n,a*13)
- (n,a*14)
ENDF/B-VII AS-75
Threshold reactions

Cross section (barns) vs Energy (MeV) for different threshold reactions:
- (n,a*15)
- (n,a*16)
- (n,a*17)
- (n,a*18)
- (n,a*19)
ENDF/B-VII AS-75
Threshold reactions

Cross section (barns) vs. Energy (MeV)

(n,a*c)
ENDF/B-VII AS-75
angular distribution for elastic
ENDF/B-VII AS-75
angular distribution for (n,n*1)
ENDF/B-VII AS-75
angular distribution for (n,n*2)

Energy (MeV)

Prob/Cos

Cosine

-1.0 0.0 0.5 1.0

Prob/Cos

-1.0 0.0 0.5 1.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0

0 1.0 1.5 2.0
ENDF/B-VII AS-75
angular distribution for (n,n*3)
ENDF/B-VII AS-75
angular distribution for \((n,n^*4)\)
ENDF/B-VII AS-75 angular distribution for (n,n*5)
ENDF/B-VII AS-75
angular distribution for (n,n*6)
ENDF/B-VII AS-75
angular distribution for (n,n*7)
ENDF/B-VII AS-75
angular distribution for (n,n*8)
ENDF/B-VII AS-75
angular distribution for (n,n*9)
ENDF/B-VII AS-75
angular distribution for (n,n*10)
ENDF/B-VII AS-75
angular distribution for (n,n*11)
ENDF/B-VII AS-75
angular distribution for (n,n*12)
ENDF/B-VII AS-75
angular distribution for (n,n*14)
ENDF/B-VII AS-75
angular distribution for (n,n*16)
ENDF/B-VII AS-75
angular distribution for (n,n*18)
ENDF/B-VII AS-75
angular distribution for (n,n*19)
ENDF/B-VII AS-75
angular distribution for (n,n*20)

Energy (MeV)

Cosine

Prob/Cos

0 0.5 1.0 -0.5 -1.0

0 0.5 1.0 -0.5 -1.0
ENDF/B-VII AS-75
angular distribution for (n,n*21)
ENDF/B-VII AS-75
angular distribution for (n,n^22)
ENDF/B-VII AS-75
angular distribution for (n,n*23)
ENDF/B-VII AS-75
angular distribution for (n,n*24)
ENDF/B-VII AS-75
angular distribution for (n,n*25)
ENDF/B-VII AS-75
angular distribution for (n,n*26)
ENDF/B-VII AS-75
angular distribution for (n,n*27)
ENFD/B-VII AS-75
angular distribution for (n,n*28)
ENDF/B-VII AS-75
angular distribution for (n,n*/30)
ENDF/B-VII AS-75

Neutron emission for (n,2n)
ENDF/B-VII AS-75
Neutron emission for \((n,n^*)a\)
ENDF/B-VII AS-75
Neutron emission for (n,2n)
ENDF/B-VII AS-75
Neutron emission for (n,2np)
ENDF/B-VII AS-75
Neutron emission for \((n,n^{*}c)\)
ENDF/B-VII AS-75
Photon emission for (n,2n)
ENDF/B-VII AS-75
Photon emission for (n,3n)
ENDF/B-VII AS-75
Photon emission for \((n,n^*)a\)
ENDF/B-VII AS-75
Photon emission for (n,2n)a
ENDF/B-VII AS-75
Photon emission for \((n,n^*)p\)
ENDF/B-VII AS-75
Photon emission for (n,2np)
ENDF/B-VII AS-75
Photon emission for \( (n,\gamma) \)
ENDF/B-VII AS-75
Photon emission for (n,p*c)
ENDF/B-VII AS-75
Photon emission for (n,a*c)
ENDF/B-VII AS-75
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
ENDF/B-VII AS-75
14 MeV photon spectrum

Gamma Prod (barns/MeV) vs. Gamma Energy (MeV)
ENDF/B-VII AS-75
Particle heating contributions

Energy (MeV)

MeV/collision

protons

alphas

Energy (MeV)
ENDF/B-VII AS-75
Recoil Heating

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

- Recoil heating

The graph shows the relationship between heating (in MeV per reaction) and energy (in MeV) for ENDF/B-VII AS-75. The heating increases with energy, demonstrating the recoil heating effect in the specified energy range.
ENDF/B-VII AS-75
Particle production cross sections

![Graph showing particle production cross sections vs. energy (MeV). The graph plots cross section (in barns) against energy (in MeV). There are two curves: one for protons and one for alphas. The proton curve starts at a low value, increases sharply around 10 MeV, and then continues to rise. The alpha curve starts at a lower value and increases gradually.]
ENDF/B-VII AS-75
protons from (n,n*)p
ENDF/B-VII AS-75 protons from (n,2np)
ENDF/B-VII AS-75 angular distribution for (n,p*0) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^{*1})\) proton

-\(P_{\text{ro/Cos}}-1.0\)
-\(P_{\text{ro/Cos}}-0.5\)
-\(P_{\text{ro/Cos}}-0.0\)
-\(P_{\text{ro/Cos}}+0.5\)
-\(P_{\text{ro/Cos}}+1.0\)

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

\(\text{Prob/Cos}\)
ENDF/B-VII AS-75
angular distribution for (n,p*2) proton
ENDF/B-VII AS-75
angular distribution for \( (n,p^3) \) proton
ENDF/B-VII AS-75 angular distribution for (n,p*4) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^5)\) proton
ENDF/B-VII AS-75
angular distribution for (n,p\*6) proton

Energy (MeV)

0 8 10 12 14 16 18 20

Cosine

0 0.5 1.0

Prob/Cos

10^-1, 10^0
ENDF/B-VII AS-75
angular distribution for (n,p*7) proton
ENDF/B-VII AS-75
angular distribution for (n,p*8) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^*9)\) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^{*10})\) proton
ENDF/B-VII AS-75
angular distribution for (n,p*12) proton
ENDF/B-VII AS-75
angular distribution for (n,p*14) proton
ENDF/B-VII AS-75
angular distribution for (n,p*15) proton
ENDF/B-VII AS-75
angular distribution for (n,p*16) proton
ENDF/B-VII AS-75
angular distribution for (n,p*17) proton
ENDF/B-VII AS-75
angular distribution for (n,p*18) proton
ENDF/B-VII AS-75
angular distribution for (n,p*19) proton

Prob/Cos

Energy (MeV)

Cosine

1.0 0.5 0.0 -0.5 -1.0 0 4 6 8 10 12 14 16 18 20

10^0 10^-1 10^-2 10^-3 10^-4 10^-5 10^-6 10^-7 10^-8 10^-9 10^-10 10^-11 10^-12 10^-13 10^-14 10^-15 10^-16 10^-17 10^-18 10^-19 10^-20
ENDF/B-VII AS-75
angular distribution for (n,p*20) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^*21)\) proton

[Diagram showing angular distribution with axes labeled as follows:
- Y-axis: \(\text{Prob/Cos} \times 10^x\)
- X-axis: Cosine
- Z-axis: Energy (MeV)
]
ENDF/B-VII AS-75
angular distribution for (n,p^22) proton
ENDF/B-VII AS-75
angular distribution for (n,p*23) proton
ENDF/B-VII AS-75
angular distribution for (n,p*24) proton
ENDF/B-VII AS-75 angular distribution for (n,p*25) proton
ENDF/B-VII AS-75
angular distribution for \((n,p^*26)\) proton

\[ \begin{array}{cccc}
1.0 & 0.5 & 0.0 & -0.5 & -1.0 \\
2 & 4 & 6 & 8 & 10 & 12 & 14 & 16 & 18 & 20 \\
\end{array} \]

\[ \begin{array}{cccc}
1.0 & 1.0 & 1.0 & 1.0 \\
0 & 0 & 0 & 0 \\
\end{array} \]
ENDF/B-VII AS-75
angular distribution for \( (n,p^*27) \) proton
ENDF/B-VII AS-75
angular distribution for (n, p*28) proton

Energy (MeV)

Cosine

Prob/Cos

10^0 10^-1 1.0 0.5 0.0 -0.5 -1.0
ENDF/B-VII AS-75
angular distribution for \((n,p^{*29})\) proton
ENDF/B-VII AS-75
angular distribution for (n,p*30) proton
ENDF/B-VII AS-75
angular distribution for (n,p*31) proton
ENDF/B-VII AS-75
angular distribution for (n,p*32) proton
ENDF/B-VII AS-75
angular distribution for (n,p*33) proton
ENDF/B-VII AS-75

angular distribution for (n,p*34) proton
ENDF/B-VII AS-75
angular distribution for (n,p*35) proton

[Diagram of angular distribution with axes labeled as follows:
- Y-axis: Probl/Cos
- X-axis: Cosine
- Z-axis: Energy (MeV)
- Energy levels: 4, 6, 8, 10, 12, 14, 16, 18, 20 MeV]
ENDF/B-VII AS-75
angular distribution for (n,p*36) proton
ENDF/B-VII AS-75
angular distribution for (n,p*37) proton
ENDF/B-VII AS-75
angular distribution for (n, p*38) proton
ENDF/B-VII AS-75
angular distribution for (n,p*39) proton
ENDF/B-VII AS-75
protons from (n,p\*c)
ENDF/B-VII AS-75
alphas from (n,n*)a

Prob/MeV

10^{-1}
10^{-3}
10^{-5}
10^{-7}

Sec. Energy

10
20
4
6
8
10
12
14
16
18
20

Energy (MeV)
ENDF/B-VII AS-75 angular distribution for \((n,a^0)\) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*1) alpha

Probcos

Cosine

Energy (MeV)
ENDF/B-VII AS-75
angular distribution for (n,a*2) alpha
ENDF/B-VII AS-75

angular distribution for (n,a*3) alpha

Energy (MeV)

Cosine

Prob/Cos

1.0 0.5 0.0 -0.5 -1.0

0

-5

-10

-15

-20
ENDF/B-VII AS-75
angular distribution for (n,a*4) alpha

Energy (MeV)

Cosine

Prob/Cos

1.0 0.5 0.0 -0.5 -1.0

0 0.5 1.0 10^{-1} 10^{0} 10^{1}
ENDF/B-VII AS-75
angular distribution for (n,a^*5) alpha
ENDF/B-VII AS-75
angular distribution for \((n,a^*6)\) alpha
ENDF/B-VII AS-75
angular distribution for \((n,a^*7)\) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*8) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*9) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*10) alpha

Energy (MeV)

Cosine

Prob/Cos

10^-1 1.0 0.5 0.0 -0.5 -1.0

0 5 10 15 20

0 0.5 1.0 1.5 2.0
ENDF/B-VII AS-75
angular distribution for (n,a*11) alpha
ENDF/B-VII AS-75
angular distribution for \( (n,a^*12) \) alpha
ENDF/B-VII AS-75 angular distribution for (n,a*13) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*14) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*16) alpha
ENDF/B-VII AS-75
angular distribution for \((n, a^{*17})\) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*18) alpha

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VII AS-75
angular distribution for (n,a*19) alpha

Energy (MeV)

Cosine

Prob/Cos

0

0.5

1.0

5

10

15

20
ENDF/B-VII AS-75
angular distribution for (n,a*20) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*21) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*23) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*24) alpha

Energy (MeV)

Cosine

Prob/Cos

10^1

10^-1

1.0 0.5 0.0 -0.5 -1.0

0

5

10

20
ENDF/B-VII AS-75
angular distribution for (n,α*25) alpha

Energy (MeV)

Cosine

Prob/Cos

-1.0

0.5

0.0

-0.5

-1.0

0.5

0.0

-0.5

-1.0
ENDF/B-VII AS-75
angular distribution for (n,a*26) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*27) alpha
ENDF/B-VII AS-75 angular distribution for (n,a*28) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*29) alpha

Energy (MeV)

Cosine

Prob/Cos

Prob/Cos

Prob/Cos
ENDF/B-VII AS-75
angular distribution for (n,a*30) alpha
ENDF/B-VII AS-75
angular distribution for \((n,a^* 31)\) alpha

Energy (MeV)

Cosine

Prob/Cos

10^{-1} 1.0 0.5 0.0 -0.5 -1.0

5 10 15 20
ENDF/B-VII AS-75
angular distribution for $(n,a^*32)$ alpha
ENDF/B-VII AS-75
angular distribution for (n,a*34) alpha
ENDF/B-VII AS-75
angular distribution for (n, a^35) alpha
ENDF/B-VII AS-75
angular distribution for (n,a*37) alpha
ENDF/B-VII AS-75 angular distribution for \((n,a^*38)\) alpha
ENDF/B-VII AS-75
angular distribution for (n, a*39) alpha

Energy (MeV)

Cosine

Prob/Cos

Prob/Cos

Prob/Cos

Prob/Cos

ENDF/B-VII AS-75
alphas from (n,a*c)