ENDF/B-VII.1 PB-207
resonance total cross section

Energy (MeV) vs. Cross section (barns)
ENDF/B-VII.1 PB-207
resonance total cross section

[Graph showing the total cross section as a function of energy in MeV, with tick marks at 10^{-2} to 10^{-1} and 10^1 to 10^2 on the y-axis labeled as Cross section (barns), and 10^{-2} to 10^{-1} on the x-axis labeled as Energy (MeV).]
ENDF/B-VII.1 PB-207
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 PB-207
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

- Capture
ENDF/B-VII.1 PB-207
resonance absorption cross sections

capture
ENDF/B-VII.1 PB-207
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII.1 PB-207
resonance absorption cross sections

![Graph](image-url)

- Cross section (barns)
- Energy (MeV)
ENDF/B-VII.1 PB-207

Heating

![Graph showing heating against energy. The y-axis represents heating in MeV/reaction, ranging from $10^{-11}$ to $10^1$. The x-axis represents energy in MeV, ranging from $10^{-11}$ to $10^1$. The graph shows a significant increase in heating with energy.]
ENDF/B-VII.1 PB-207
Damage

Damage (MeV-barns) vs Energy (MeV)

- Energy (MeV) range: $10^{-11}$ to $10^1$
- Damage (MeV-barns) range: $10^{-7}$ to $10^{-1}$

The graph shows the damage as a function of energy, with a sharp increase in damage at higher energies.
ENDF/B-VII.1 PB-207
Non-threshold reactions

[Graph showing cross-sections for (n,gma), (n,a), and (n,xa)]

Cross section (barns) vs. Energy (MeV)
ENDF/B-VII.1 PB-207
Heating

Energy (MeV)

Heating (MeV/reaction)

heating
ENDF/B-VII.1 PB-207
Inelastic levels

![Graph showing inelastic levels with energy on the x-axis and cross section (barns) on the y-axis. There are curves labeled (n,n*6), (n,n*7), (n,n*8), (n,n*9), and (n,n*10).]
ENDF/B-VII.1 PB-207
Threshold reactions

- \((n,x)\)
- \((n,2n)\)
- \((n,3n)\)
- \((n,n^*)\)
- \((n,2n)a\)

Cross section (barns) vs. Energy (MeV)
ENDF/B-VII.1 PB-207
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,p)
- (n,d)
- (n,t)
- (n,xp)
- (n,xd)
Threshold reactions

Cross section (barns) vs Energy (MeV)

- (n,xt)
- (n,xhe3)
- (n,p*0)
- (n,p*1)
- (n,p*2)
ENDF/B-VII.1 PB-207
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,p*3)
- (n,p*4)
- (n,p*5)
- (n,p*6)
- (n,p*7)
ENDF/B-VII.1 PB-207
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,p^8)
- (n,p^9)
- (n,p^10)
- (n,p^c)
- (n,d^0)

Energy (MeV)
ENDF/B-VII.1 PB-207
Threshold reactions

Energy (MeV)

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 PB-207
Threshold reactions

Cross section (barns)

Energy (MeV)
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,t^4)
- (n,t^5)
- (n,t^c)

ENDF/B-VII.1 PB-207
ENDF/B-VII.1 PB-207
angular distribution for elastic
ENDF/B-VII.1 PB-207
angular distribution for elastic
ENDF/B-VII.1 PB-207
angular distribution for (n,n*1)
ENDF/B-VII.1 PB-207
angular distribution for \((n,n^*2)\)
ENDF/B-VII.1 PB-207
angular distribution for \( (n,n^*3) \)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*4)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*5)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*6)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*7)
<table>
<thead>
<tr>
<th>Energy (MeV)</th>
<th>Angular Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

$P(J)/\cos^{-1}(\sin\theta)$
ENDF/B-VII.1 PB-207
angular distribution for (n,n*10)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*11)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*12)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*13)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*14)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*15)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*16)
ENDF/B-VII.1 PB-207
angular distribution for \((n,n^*17)\)
ENDF/B-VII.1 PB-207
angular distribution for (n,n^*18)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*19)
ENDF/B-VII.1 PB-207
angular distribution for (n,n*20)
ENDF/B-VII.1 PB-207
Neutron emission for (n,x)
ENDF/B-VII.1 PB-207
Neutron emission for (n,2n)
ENDF/B-VII.1 PB-207
Neutron emission for \((n,3n)\)
ENDF/B-VII.1 PB-207
Neutron emission for \((n,n^*)a\)
ENDF/B-VII.1 PB-207
Neutron emission for (n,2n)a
ENDF/B-VII.1 PB-207
Neutron emission for (n,n*)p
ENDF/B-VII.1 PB-207
Neutron emission for (n,n*)d
ENDF/B-VII.1 PB-207
Neutron emission for \((n,n^*)t\)
ENDF/B-VII.1 PB-207
Neutron emission for (n,2np)
ENDF/B-VII.1 PB-207
Neutron emission for (n,n*c)
ENDF/B-VII.1 PB-207
Photon emission for (n,x)
ENDF/B-VII.1 PB-207
Photon emission for (n,3n)
ENDF/B-VII.1 PB-207
Photon emission for (n,2n)a
ENDF/B-VII.1 PB-207
Photon emission for \((n,n^*)p\)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*)d

\[ P_{\gamma}(E_{\gamma}) \times 10^{2} \]

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

\[ E_{n} (\text{MeV}) \]
ENDF/B-VII.1 PB-207
Photon emission for (n,n*)t
Photon emission for (n,2np)
Photon emission for \((n,n^*1)\)

\[
E_\gamma (\text{MeV}) = \begin{cases} 
0.6 \\
0.7 
\end{cases}
\]

\[
E_n (\text{MeV}) = \begin{cases} 
60 \\
80 \\
100 \\
120 \\
140 \\
160 \\
180 \\
200 
\end{cases}
\]

\[
\text{Prob/MeV} = \begin{cases} 
10^{-2} \\
10^{-1} \\
10^0 \\
10^1 \\
10^2 \\
10^3 \\
10^4 \\
10^5 \\
10^6 \\
10^7 \\
10^8 \\
10^9 \\
10^{10} \\
10^{11} \\
10^{12} \\
10^{13} \\
10^{14} \\
10^{15} \\
10^{16} \\
10^{17} \\
10^{18} \\
10^{19} \\
10^{20} 
\end{cases}
\]
ENDF/B-VII.1 PB-207
Photon emission for (n,n*2)
ENDF/B-VII.1 PB-207
Photon emission for \((n,n^*3)\)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*4)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*6)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*7)
Photon emission for (n,n*8)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*9)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*10)
Photon emission for (n,n*11)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*12)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*13)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*14)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*15)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*16)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*17)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*19)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*20)
ENDF/B-VII.1 PB-207
Photon emission for (n,n*c)
Photon emission for (n,gma)
ENDF/B-VII.1 PB-207
Photon emission for \((n,p^*1)\)

\[
\frac{\text{Prob}}{\text{MeV}} \quad \text{vs. } E_n (\text{MeV}) \quad \text{vs. } E_\gamma (\text{MeV})
\]

- Probabilities are measured in units of \(10^{-2}\) and \(10^{-3}\).
- Energy ranges are specified in MeV for both emitted and incident particles.

ENDF/B-VII.1 PB-207
Photon emission for (n,p*3)
Photon emission for (n,p*4)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*5)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*6)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*8)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*9)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*10)
ENDF/B-VII.1 PB-207
Photon emission for (n,p*c)
ENDF/B-VII.1 PB-207
Photon emission for (n,d*1)
ENDF/B-VII.1 PB-207
Photon emission for (n,d^2)
ENDF/B-VII.1 PB-207
Photon emission for (n,d*3)
ENDF/B-VII.1 PB-207
Photon emission for (n,d*4)
ENDF/B-VII.1 PB-207
Photon emission for (n,d*5)
ENDF/B-VII.1 PB-207
Photon emission for (n,t*1)
ENDF/B-VII.1 PB-207
Photon emission for (n,t*2)
ENDF/B-VII.1 PB-207
Photon emission for (n,t*3)
ENDF/B-VII.1 PB-207
Photon emission for (n,t*4)
ENDF/B-VII.1 PB-207
Photon emission for \((n,t^*5)\)
ENDF/B-VII.1 PB-207
Photon emission for (n,t*c)
ENDF/B-VII.1 PB-207
Photon emission for (n,a*1)
ENDF/B-VII.1 PB-207
Photon emission for \((n,a^*2)\)
ENDF/B-VII.1 PB-207
Photon emission for (n,a*3)
ENDF/B-VII.1 PB-207
Photon emission for (n,a*4)
ENDF/B-VII.1 PB-207
Photon emission for (n,a*5)
ENDF/B-VII.1 PB-207
Photon emission for (n,a*7)
Photon emission for (n,a*8)
ENDF/B-VII.1 PB-207
Photon emission for (n,a^9)

\begin{align*}
\text{Prob}/\text{MeV} & \quad 10^{-2} \quad 10^0 \\
E_\gamma (\text{MeV}) & \quad 0 \quad 2 \quad 1
\end{align*}

\begin{align*}
E_n (\text{MeV}) & \quad 50 \quad 100 \quad 150 \quad 200
\end{align*}
ENDF/B-VII.1 PB-207
Photon emission for (n,a*10)
ENDF/B-VII.1 PB-207
Photon emission for \((n,a^*c)\)
ENDF/B-VII.1 PB-207
14 MeV photon spectrum
Particle heating contributions

ENDF/B-VII.1 PB-207

Energy (MeV) vs. MeV/collision

- Protons
- Deuterons
- Tritons
- He-3
- Alphas
Recoil Heating

Energy (MeV) vs Heating (MeV/reaction)

- Heating increases with energy up to approximately 100 MeV.
- There is a sharp increase in heating around 100 MeV.
- Beyond 100 MeV, the heating continues to rise but at a slower rate.

ENDF/B-VII.1 PB-207

recoil heating
ENDF/B-VII.1 PB-207
Particle production cross sections

Cross section (barns) vs. Energy (MeV)

- Protons
- Deuterons
- Tritons
- He-3
- Alphas
ENDF/B-VII.1 PB-207
protons from (n,x)
ENDF/B-VII.1 PB-207
protons from \((n, n^*)p\)
ENDF/B-VII.1 PB-207
protons from (n,2np)
ENDF/B-VII.1 PB-207
angular distribution for (n,p*0) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*1) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*2) proton
ENDF/B-VII.1 PB-207
angular distribution for \((n,p^*4)\) proton

\begin{align*}
\text{Cosine} & \quad 1.0 \quad 0.5 \quad 0.0 \quad -0.5 \quad -1.0 \\
\text{Energy (MeV)} & \quad 4 \quad 6 \quad 8 \quad 10 \quad 12 \quad 14 \quad 16 \quad 18 \quad 20 \\
\text{Prob/Cos} & \quad 10^0
\end{align*}
ENDF/B-VII.1 PB-207
angular distribution for (n,p*5) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*6) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*8) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*9) proton
ENDF/B-VII.1 PB-207
angular distribution for (n,p*10) proton
ENDF/B-VII.1 PB-207
protons from (n,p\textsuperscript{c})
ENDF/B-VII.1 PB-207
deuterons from (n,x)
ENDF/B-VII.1 PB-207 deuterons from \((n,n^*)d\)
ENDF/B-VII.1 PB-207
angular distribution for (n,d*0) deuteron
ENDF/B-VII.1 PB-207
angular distribution for (n,d*1) deuteron
ENDF/B-VII.1 PB-207
angular distribution for (n,d*2) deuteron
ENDF/B-VII.1 PB-207
angular distribution for (n,d*3) deuteron
ENDF/B-VII.1 PB-207
angular distribution for (n,d*4) deuteron
ENDF/B-VII.1 PB-207
angular distribution for \((n,d^*5)\) deuteron
ENDF/B-VII.1 PB-207
deuterons from (n,d*\textit{c})
ENDF/B-VII.1 PB-207
tritons from \((n,n^*)t\)
ENDF/B-VII.1 PB-207
angular distribution for (n,t*0) triton
ENDF/B-VII.1 PB-207
angular distribution for (n,t*1) triton
ENDF/B-VII.1 PB-207
angular distribution for (n,t*2) triton
ENDF/B-VII.1 PB-207
angular distribution for (n,t*3) triton
ENDF/B-VII.1 PB-207
angular distribution for \((n,t^4)\) triton
ENDF/B-VII.1 PB-207
angular distribution for (n,t*5) triton
ENDF/B-VII.1 PB-207
tritons from (n,t^*c)
ENDF/B-VII.1 PB-207
he3s from (n,x)
ENDF/B-VII.1 PB-207
alphas from (n,x)
ENDF/B-VII.1 PB-207
alphas from (n,n*)a
ENDF/B-VII.1 PB-207
alphas from (n,2n)a
ENDF/B-VII.1 PB-207
angular distribution for \((n,a^*0)\) alpha

\[
\text{Prob/Cos} \quad 10^0
\]

\[
\begin{array}{cccccc}
\text{Cosine} & 1.0 & 0.5 & 0.0 & -0.5 & -1.0 & 0 \\
1.0 & & & & & & \\
0.5 & & & & & & \\
0.0 & & & & & & \\
-0.5 & & & & & & \\
-1.0 & & & & & & \\
0 & & & & & & \\
\end{array}
\]

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

\[
\begin{array}{cccccc}
1.0 & 5 & 10 & 15 & 20 & \\
1.0 & & & & & \\
0.5 & & & & & \\
0.0 & & & & & \\
-0.5 & & & & & \\
-1.0 & & & & & \\
0 & & & & & \\
\end{array}
\]
ENDF/B-VII.1 PB-207
angular distribution for (n,a*1) alpha
ENDF/B-VII.1 PB-207
angular distribution for \((n,a^*2)\) alpha
ENDF/B-VII.1 PB-207
angular distribution for \((n,a^*3)\) alpha
ENDF/B-VII.1 PB-207
angular distribution for \( (n,a^*4) \) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a^5) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a*6) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a*7) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a*8) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a*9) alpha
ENDF/B-VII.1 PB-207
angular distribution for (n,a*10) alpha
ENDF/B-VII.1 PB-207
alphas from \((n,a^c)\)