ENDF/B-VII U-239
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

10^{-11} 10^{-9} 10^{-7} 10^{-5} 10^{-3} 10^{-1} 10^0 10^1

10^{-11} 10^{-9} 10^{-7} 10^{-5} 10^{-3} 10^{-1} 10^0 10^1
ENDF/B-VII U-239
resonance total cross section
ENDF/B-VII U-239
resonance total cross section

Energy (MeV) vs. Cross section (barns)
ENDF/B-VII U-239 resonance absorption cross sections

Capture and fission cross sections as a function of energy (MeV). The graph shows the variation of cross section (in barns) with energy, highlighting the resonance behavior at certain energies.
ENDF/B-VII U-239
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VII U-239
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VII U-239
UR elastic cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII U-239
UR fission cross section

Cross section (barns)

Energy (MeV)

Inf. Dil.

100 b
ENDF/B-VII U-239
UR capture cross section

![Graph showing U-239 capture cross section as a function of energy. The graph displays two curves: one for infinite dilution labeled 'Inf. Dil.' and another for cross section of 100 barns (b). The x-axis represents energy in MeV, ranging from $10^{-4}$ to $10^{-2}$, and the y-axis represents the cross section in barns (b), ranging from $10^0$ to $10^1$. The curves decrease as energy increases, indicating a decrease in capture cross section.]
ENDF/B-VII U-239
Damage

![Graph showing the damage as a function of energy.](image)
ENDF/B-VII U-239
Non-threshold reactions

Energy (MeV)
Cross section (barns)

fission
(n,gma)
ENDF/B-VII U-239
Non-threshold reactions

Energy (MeV)

Cross section (barns)

fission
(n,gma)
ENDF/B-VII U-239
Inelastic levels

Cross section (barns) vs. Energy (MeV)

- (n,n\text{*1})
- (n,n\text{*2})
- (n,n\text{*3})
- (n,n\text{*4})
- (n,n\text{*5})
ENDF/B-VII U-239
Inelastic levels

Energy (MeV)

Cross section (barns)

- (n,n*6)
- (n,n*7)
- (n,n*8)
- (n,n*9)
- (n,n*10)
ENDF/B-VII U-239
Inelastic levels

Cross section (barns)

Energy (MeV)
ENDF/B-VII U-239
Inelastic levels

![Graph showing cross sections for different inelastic levels of U-239.](image_url)
ENDF/B-VII U-239
Inelastic levels

Cross section (barns)

Energy (MeV)
ENDF/B-VII U-239
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,2n)  (n,3n)  (n,4n)  (n,n*o)
ENDF/B-VII U-239 angular distribution for elastic scattering
ENDF/B-VII U-239
angular distribution for (n,n*2)

Prob/Cos

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VII U-239
angular distribution for (n,n*3)
ENDF/B-VII U-239 angular distribution for (n,n'4)
ENDF/B-VII U-239 angular distribution for (n,n*6)

Energy (MeV) 0

Cosine 0 0.5 1.0

Prob/Cos 0 0.5 1.0
ENDF/B-VII U-239 angular distribution for (n,n^7)
ENDF/B-VII U-239
angular distribution for (n,n^*8)
ENDF/B-VII U-239 angular distribution for (n,n'9)

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VII U-239 angular distribution for (n,n*10)
ENDF/B-VII U-239
angular distribution for (n,n*11)
ENDF/B-VII U-239 angular distribution for (n,n*12)
ENDF/B-VII U-239
angular distribution for (n,n*14)
ENGF/B-VII U-239
angular distribution for (n,n*15)
ENDF/B-VII U-239 angular distribution for (n,n*16)
ENDF/B-VII U-239 angular distribution for (n,n*17)
ENDF/B-VII U-239
angular distribution for (n,n*18)
ENDF/B-VII U-239
angular distribution for (n,n*19)
ENDF/B-VII U-239
angular distribution for (n,n*20)
ENDF/B-VII U-239
angular distribution for (n,n*21)
ENDF/B-VII U-239 angular distribution for (n,n^{*22})
ENDF/B-VII U-239 angular distribution for (n,n*23)
ENDF/B-VII U-239
angular distribution for (n,n*24)
ENDF/B-VII U-239
angular distribution for (n,n*25)
ENDF/B-VII U-239
angular distribution for (n,n*26)
ENDF/B-VII U-239
angular distribution for (n,n*27)
ENDF/B-VII U-239
angular distribution for (n,n*28)
ENDF/B-VII U-239 angular distribution for (n,n*29)
ENDF/B-VII U-239
angular distribution for (n,n*30)
ENDF/B-VII U-239 angular distribution for (n,n*31)
ENDF/B-VII U-239
angular distribution for (n,n*32)
ENDF/B-VII U-239
angular distribution for (n,n*33)
ENDF/B-VII U-239
angular distribution for (n,n*34)
ENDF/B-VII U-239
angular distribution for \((n,n'35)\)
ENDF/B-VII U-239
angular distribution for (n,n*36)
ENDF/B-VII U-239
Neutron emission for (n,3n)
ENDF/B-VII U-239
Neutron emission for (n,4n)
ENDF/B-VII U-239
Neutron emission for (n,n*c)
ENDF/B-VII U-239
Delayed neutron spectra

<table>
<thead>
<tr>
<th>Group</th>
<th>Fraction</th>
<th>Decay/Shake</th>
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<tbody>
<tr>
<td>Group 1</td>
<td>0.0152</td>
<td>1.250E-10</td>
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<td>Group 2</td>
<td>0.1769</td>
<td>3.038E-10</td>
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<td>Group 3</td>
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<td>Group 4</td>
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<td>Group 5</td>
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<tr>
<td>Group 6</td>
<td>0.0369</td>
<td>9.544E-08</td>
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</tbody>
</table>
ENDF/B-VII U-239
Photon emission for fission

![Graph showing photon emission for fission in U-239. The graph displays the probability of photon emission as a function of the energy of the emitted photon and the energy of the incident neutron. The x-axis represents the energy of the incident neutron (E_n, MeV) ranging from 0 to 30, and the y-axis represents the probability per MeV (Prob/MeV) ranging from 10^-4 to 10^0. The z-axis shows the energy of the emitted photon (E_y, MeV) ranging from 0 to 25. The graph includes a shaded area indicating the distribution of photon emission.]
ENDF/B-VII U-239
Photon emission for (n,gma)
Photon emission for nonelastic

ENDF/B-VII U-239

Prob/MeV

E\gamma\text{(MeV)}

E_{\text{fn}}\text{(MeV)}
ENDF/B-VII U-239
thermal capture photon spectrum
ENDF/B-VII U-239
14 MeV photon spectrum