ENDF/B-VII.1 TH-229
Principal cross sections

![Graph showing the cross sections as a function of energy.](image)

- **Total Cross Section**
- **Absorption Cross Section**
- **Elastic Cross Section**
- **Gamma Production Cross Section**

**Y-axis:** Cross section (barns)

**X-axis:** Energy (MeV)
ENDF/B-VII.1 TH-229
resonance total cross section

Energy (MeV)

Cross section (barns)

10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6}

10^{-7} 10^{-6}
ENDF/B-VII.1 TH-229
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 TH-229
resonance absorption cross sections

Cross section (barns)

Energy (MeV)

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capture

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fission
ENDF/B-VII.1 TH-229
resonance absorption cross sections

![Graph showing resonance absorption cross sections for capture and fission events. The x-axis represents energy in MeV, ranging from $10^{-6}$ to $10^{-5}$, and the y-axis represents cross section in barns, ranging from $10^{-5}$ to $10^3$. The graph features multiple peaks and valleys indicative of resonance features.]
ENDF/B-VII.1 TH-229
UR total cross section

Energy (MeV) vs Cross section (barns)
ENDF/B-VII.1 TH-229
UR elastic cross section

Energy (MeV)

Cross section (barns)

Inf. Dil.
100 b
1 b
ENDF/B-VII.1 TH-229
UR fission cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 TH-229
UR capture cross section

Energy (MeV)

Cross section (barns)

Inf. Dil.
100 b
1 b
ENDF/B-VII.1 TH-229
Damage

Energy (MeV) vs. Damage (MeV-barns)

The graph shows the relationship between energy in MeV and damage in MeV-barns for TH-229. The x-axis represents energy in MeV, with values ranging from $10^{-11}$ to $10^1$. The y-axis represents damage in MeV-barns, with values ranging from $10^{-2}$ to $10^1$. The damage values are plotted on a logarithmic scale.

The damage peaks at specific energy values, indicating regions of high damage sensitivity. The graph highlights the impact of energy on damage, with a significant drop in damage as energy decreases below $10^{-8}$ MeV.

The damage is typically expressed in MeV-barns, a unit that combines the energy absorbed by a material with the cross-sectional area of interaction. This unit is commonly used in nuclear physics to measure the effects of neutron interactions.
ENDF/B-VII.1 TH-229
Non-threshold reactions

Energy (MeV)

Cross section (barns)

-2
-1
0
1
2
3
4
5
6
7
8
9
10

10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

fission
(n,gma)
Principal cross sections

Energy (MeV)

Cross section (barns)

total
absorption
elastic
gamma production

ENDF/B-VII.1 TH-229

Energy (MeV)
ENDF/B-VII.1 TH-229
Heating

Energy (MeV)

Heating (MeV/reaction)

Energy (MeV)
ENDF/B-VII.1 TH-229
Non-threshold reactions

Cross section (barns)

Energy (MeV)
ENDF/B-VII.1 TH-229
Inelastic levels

Cross section (barns) vs. Energy (MeV)

- (n,n*6)
- (n,n*7)
- (n,n*8)
- (n,n*9)
- (n,n*10)
ENDF/B-VII.1 TH-229
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

Energy (MeV)
ENDF/B-VII.1 TH-229
Inelastic levels

![Graph showing inelastic levels for TH-229 with cross section in barns vs energy in MeV. The graph includes curves for (n,n*21), (n,n*22), (n,n*23), (n,n*24), and (n,n*25).]
ENDF/B-VII.1 TH-229
Threshold reactions

**Cross section (barns)**

- (n,2n)
- (n,3n)
- (n,4n)
- (n,n*c)
ENDF/B-VII.1 TH-229
angular distribution for elastic
ENDF/B-VII.1 TH-229
Total fission nubar

Energy (MeV)

Fission nubar

Energy (MeV)
ENDF/B-VII.1 TH-229
Photon emission for fission
ENDF/B-VII.1 TH-229
Photon emission for (n,4n)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*1)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*2)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*3)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*4)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*5)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*6)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*7)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*8)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*9)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*10)

![Graph showing photon emission for (n,n*10)]
ENDF/B-VII.1 TH-229
Photon emission for (n,n*11)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*12)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*13)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*14)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^*15)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^{*17})
ENDF/B-VII.1 TH-229
Photon emission for (n,n*18)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^*19)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*20)
ENDF/B-VII.1 TH-229
Photon emission for \((n,n^{*21})\)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^*22)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^23)
Photon emission for (n,n*24)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*26)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*27)
ENDF/B-VII.1 TH-229
Photon emission for (n,n^*28)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*29)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*30)
ENDF/B-VII.1 TH-229
Photon emission for (n,n*c)
ENDF/B-VII.1 TH-229
Photon emission for (n,gma)
ENDF/B-VII.1 TH-229
thermal capture photon spectrum
ENDF/B-VII.1 TH-229
14 MeV photon spectrum