JEFF-3.1 TI-48
resonance total cross section

Cross section (barns)

Energy (MeV)
JEFF-3.1 TI-48
resonance total cross section

Energy (MeV)

Cross section (barns)
JEFF-3.1 TI-48
resonance total cross section
JEFF-3.1 TI-48
resonance total cross section
JEFF-3.1 TI-48
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
JEFF-3.1 TI-48
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
JEFF-3.1 TI-48
resonance absorption cross sections

Capture cross section as a function of energy (MeV). The cross section is plotted on a logarithmic scale, with values ranging from $10^{-3}$ to $10^0$. The energy range is from $10^{-1}$ to $10^0$ MeV.
JEFF-3.1 TI-48
resonance absorption cross sections
JEFF-3.1 TI-48
Heating

![Graph showing Heating (MeV/reaction) vs. Energy (MeV). The graph has a logarithmic scale on both axes, with Heating on the y-axis ranging from $10^{-6}$ to $10^0$, and Energy on the x-axis ranging from $10^{-11}$ to $10^1$. The line graph shows a curve that starts at $10^{-5}$ at low energy, drops to $10^{-6}$, then rises steeply to $10^0$ at high energy.](image-url)
JEFF-3.1 TI-48
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
JEFF-3.1 TI-48
Principal cross sections

- Total
- Absorption
- Elastic
- Gamma production
JEFF-3.1 TI-48
Heating

Energy (MeV)

Heating (MeV/reaction)

0.0
0.2
0.4
0.6
0.8
1.0
1.2

0 5 10 15 20

heating
JEFF-3.1 TI-48 Damage

![Graph showing damage (MeV-barns) vs energy (MeV). The graph has a peak around 6 MeV and a plateau at higher energies.]
JEFF-3.1 TI-48
Non-threshold reactions

Energy (MeV)

Cross section (barns)

$10^{-3}$

$(n,gma)$

Energy (MeV)
JEFF-3.1 TI-48
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)
JEFF-3.1 TI-48 Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,2n)
- (n,n*)a
- (n,n*)p
- (n,n*c)
- (n,p)
JEFF-3.1 TI-48
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,d)
- (n,t)
- (n,he3)
- (n,a)
- (n,2p)
JEFF-3.1 TI-48
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,p*0)
(n,p*1)
(n,p*2)
(n,p*3)
(n,p*4)
JEFF-3.1 TI-48
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,t*c)
- (n,he3*0)
- (n,he3*1)
- (n,he3*2)
- (n,he3*3)
JEFF-3.1 TI-48
angular distribution for elastic
JEFF-3.1 TI-48
angular distribution for (n,n*1)
JEFF-3.1 TI-48
angular distribution for (n,n*2)
JEFF-3.1 TI-48
angular distribution for (n,n*3)
JEFF-3.1 TI-48
angular distribution for (n,n*4)
JEFF-3.1 TI-48
angular distribution for (n,n*5)
JEFF-3.1 TI-48
angular distribution for (n,n*6)
JEFF-3.1 TI-48
angular distribution for \((n,n^*7)\)
JEFF-3.1 TI-48
angular distribution for \((n,n^*8)\)
JEFF-3.1 TI-48
angular distribution for \((n,n^*9)\)
JEFF-3.1 TI-48
angular distribution for \((n,n^*10)\)
JEFF-3.1 TI-48
angular distribution for (n,n*11)
JEFF-3.1 TI-48
angular distribution for \( (n,n^{*12}) \)
JEFF-3.1 TI-48
angular distribution for (n,n*13)
JEFF-3.1 TI-48
angular distribution for (n,n*14)
JEFF-3.1 TI-48
angular distribution for (n,n*15)
JEFF-3.1 TI-48
angular distribution for \((n,n^*16)\)
JEFF-3.1 TI-48
angular distribution for (n,n*17)
JEFF-3.1 TI-48
angular distribution for \((n,n^*18)\)
JEFF-3.1 TI-48
angular distribution for (n,n*19)
JEFF-3.1 TI-48
angular distribution for (n,n^*20)
JEFF-3.1 TI-48
Neutron emission for (n,2n)
JEFF-3.1 TI-48
Neutron emission for \((n,n^*)a\)
JEFF-3.1 TI-48
Neutron emission for \((n,n^*)p\)
JEFF-3.1 TI-48
Neutron emission for \((n,n^*c)\)
JEFF-3.1 TI-48
Photon emission for (n,2n)
JEFF-3.1 TI-48
Photon emission for (n,n*)a
JEFF-3.1 TI-48
Photon emission for (n,n*)p

Prob/MeV

10^2

10^1

10^0

10^-1

10^-2

Eγ (MeV)

2 4 6 10 12

E_n (MeV)

14 16 18 20
JEFF-3.1 TI-48
Photon emission for (n,n*1)
JEFF-3.1 TI-48
Photon emission for (n,n*2)
JEFF-3.1 TI-48
Photon emission for (n,n*3)
JEFF-3.1 TI-48
Photon emission for (n,n*4)
JEFF-3.1 TI-48
Photon emission for (n,n^*5)
JEFF-3.1 TI-48
Photon emission for (n,n*6)
JEFF-3.1 TI-48
Photon emission for (n,n*7)
JEFF-3.1 TI-48
Photon emission for \((n,n^*8)\)
JEFF-3.1 TI-48
Photon emission for (n,n*9)
JEFF-3.1 TI-48
Photon emission for $(n, n^{*}10)$
JEFF-3.1 TI-48
Photon emission for \((n,n^{*11})\)
JEFF-3.1 TI-48
Photon emission for (n,n*12)
JEFF-3.1 TI-48
Photon emission for \((n,n^*13)\)
JEFF-3.1 TI-48
Photon emission for (n,n*14)
JEFF-3.1 TI-48
Photon emission for (n,n*15)
JEFF-3.1 TI-48
Photon emission for \((n,n^*16)\)
JEFF-3.1 TI-48
Photon emission for (n,n*17)
JEFF-3.1 TI-48
Photon emission for (n,n*18)
JEFF-3.1 TI-48
Photon emission for \( (n,n^*19) \)
JEFF-3.1 TI-48
Photon emission for \((n,n^{*20})\)
JEFF-3.1 TI-48
Photon emission for (n,n*c)
JEFF-3.1 TI-48
Photon emission for (n,gma)
JEFF-3.1 TI-48
Photon emission for (n,2p)
JEFF-3.1 TI-48
Photon emission for (n,p*1)
JEFF-3.1 TI-48
Photon emission for (n,p*2)
Jeff-3.1 TI-48
Photon emission for (n,p*3)
JEFF-3.1 TI-48
Photon emission for (n,p*4)
JEFF-3.1 TI-48
Photon emission for (n,p*5)
JEFF-3.1 TI-48
Photon emission for (n,p*6)
JEFF-3.1 TI-48
Photon emission for \((n,p^7)\)
JEFF-3.1 TI-48
Photon emission for (n,p*8)
JEFF-3.1 TI-48
Photon emission for \((n,p^9)\)
JEFF-3.1 TI-48
Photon emission for (n,p*10)
JEFF-3.1 TI-48
Photon emission for \((n,p^*c)\)
JEFF-3.1 TI-48
Photon emission for (n,d*1)
JEFF-3.1 TI-48
Photon emission for (n,d*2)
JEFF-3.1 TI-48
Photon emission for (n,d*3)
JEFF-3.1 TI-48
Photon emission for (n,d*4)
JEFF-3.1 TI-48
Photon emission for \((n,d^*5)\)
JEFF-3.1 TI-48
Photon emission for (n,d*c)
JEFF-3.1 TI-48
Photon emission for (n,t*1)
JEFF-3.1 TI-48
Photon emission for (n,t*3)
JEFF-3.1 TI-48
Photon emission for (n,t*4)
JEFF-3.1 TI-48
Photon emission for (n,t*5)
JEFF-3.1 TI-48
Photon emission for \((n,t^c)\)
JEFF-3.1 TI-48
Photon emission for (n,he3*1)
JEFF-3.1 TI-48
Photon emission for (n,he3*2)
JEFF-3.1 TI-48
Photon emission for (n,he3*3)
JEFF-3.1 TI-48
Photon emission for (n,he3*4)
JEFF-3.1 TI-48
Photon emission for (n,he3*5)
JEFF-3.1 TI-48
Photon emission for \((n, \text{he}3^*c)\)
JEFF-3.1 TI-48
Photon emission for (n,a*1)
JEFF-3.1 TI-48
Photon emission for (n,a*2)
JEFF-3.1 TI-48
Photon emission for ($n,a^*3$)
JEFF-3.1 TI-48
Photon emission for \((n,a^*4)\)
JEFF-3.1 TI-48
Photon emission for \((n,a^*5)\)
JEFF-3.1 TI-48
Photon emission for (n,a*6)
JEFF-3.1 TI-48
Photon emission for (n,a*7)
JEFF-3.1 TI-48
Photon emission for (n,a*8)
JEFF-3.1 TI-48
Photon emission for (n,a*9)
JEFF-3.1 TI-48
Photon emission for (n,a*10)
JEFF-3.1 TI-48
Photon emission for (n,a*c)
JEFF-3.1 TI-48
thermal capture photon spectrum
JEFF-3.1 TI-48
14 MeV photon spectrum
JEFF-3.1 TI-48
Particle production cross sections

Cross section (barns)

Energy (MeV)

- protons
- deuterons
- tritons
- he-3
- alphas
JEFF-3.1 TI-48
protons from (n,n*)p
JEFF-3.1 TI-48
protons from (n,2p)
JEFF-3.1 TI-48
angular distribution for (n,p*0) proton
JEFF-3.1 TI-48
angular distribution for \((n,p^*1)\) proton
JEFF-3.1 TI-48
angular distribution for (n,p*2) proton
JEFF-3.1 TI-48
angular distribution for (n,p*3) proton
JEFF-3.1 TI-48
angular distribution for (n,p*4) proton
JEFF-3.1 TI-48
angular distribution for (n,p*5) proton
JEFF-3.1 TI-48
angular distribution for (n,p*6) proton
JEFF-3.1 TI-48
angular distribution for (n,p*7) proton
JEFF-3.1 TI-48
angular distribution for (n,p*8) proton
JEFF-3.1 TI-48
angular distribution for (n,p*9) proton
JEFF-3.1 TI-48
angular distribution for (n,p*10) proton
JEFF-3.1 TI-48
protons from \((n,p^*c)\)
JEFF-3.1 TI-48
angular distribution for (n,d*0) deuteron
JEFF-3.1 TI-48
angular distribution for (n,d*1) deuteron
JEFF-3.1 TI-48
angular distribution for (n,d*2) deuteron

![Graph showing angular distribution for (n,d*2) deuteron. The graph has axes labeled 'Probes', 'Cosine', and 'Energy (MeV)'. There are peaks and valleys indicating the distribution pattern.]
JEFF-3.1 TI-48
angular distribution for (n,d*3) deuteron
JEFF-3.1 TI-48
angular distribution for (n,d*4) deuteron
JEFF-3.1 TI-48
angular distribution for (n,d*5) deuteron
JEFF-3.1 TI-48
deuterons from (n,d*c)
JEFF-3.1 TI-48
angular distribution for (n,t*0) triton
JEFF-3.1 TI-48
general angular distribution for \((n,t^*1)\) triton
JEFF-3.1 TI-48
angular distribution for (n,t^*2) triton
JEFF-3.1 TI-48
angular distribution for (n,t*3) triton
JEFF-3.1 TI-48
angular distribution for (n,t*4) triton
JEFF-3.1 TI-48
angular distribution for (n,t*5) triton
JEFF-3.1 TI-48
angular distribution for (n,he3*1) 3he

Energy (MeV)

Prob\(\cdot\)Cos

Cosine

10^0

1.0 0.5 0.0 -0.5 -1.0 13 14 15 16 17 18 19 20
JEFF-3.1 TI-48
angular distribution for (n,he3*2) 3he
JEFF-3.1 TI-48
angular distribution for (n,he3*3) 3he
JEFF-3.1 TI-48
angular distribution for (n,he3*4) 3he
JEFF-3.1 TI-48
angular distribution for (n,he3*5) 3he
JEFF-3.1 TI-48
he3s from (n,he3*c)
JEFF-3.1 TI-48
alphas from \((n,n^\ast)\)a
JEFF-3.1 TI-48
angular distribution for (n,a*0) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*1) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*2) alpha

Energy (MeV)

Cosine

Prob/Cos
JEFF-3.1 TI-48
angular distribution for (n,a^3) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*4) alpha
JEFF-3.1 TI-48
angular distribution for (n,a^5) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*6) alpha

Prob/Cos

Cosine  1.0  0.5  0.0  -0.5  -1.0  -2  -1  0  1  2
Energy (MeV)  10  12  14  16  18  20

10^0
JEFF-3.1 TI-48
angular distribution for (n,a^7) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*8) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*9) alpha
JEFF-3.1 TI-48
angular distribution for (n,a*10) alpha
JEFF-3.1 TI-48
alphas from (n,a*c)