JEFF-3.1 P-31
resonance total cross section

Energy (MeV)

Cross section (barns)

total
JEFF-3.1 P-31
resonance total cross section

Cross section (barns)

Energy (MeV)

10^{-1} to 10^{0}

Total
JEFF-3.1 P-31
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
JEFF-3.1 P-31
Heating

Energy (MeV) vs Heating (MeV/reaction)

- Energy (MeV) range from $10^{-11}$ to $10^{1}$
- Heating (MeV/reaction) range from $10^{-5}$ to $10^{0}$
JEFF-3.1 P-31
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
JEFF-3.1 P-31
Principal cross sections

Cross section (barns)

Energy (MeV)

0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5

total
absorption
elastic
gamma production
JEFF-3.1 P-31
Heating

Energy (MeV)

Heating (MeV/reaction)

Energy (MeV)
JEFF-3.1 P-31
Damage

![Graph showing the damage in MeV-barns as a function of energy in MeV. The graph has a y-axis labeled "Damage (MeV-barns)" ranging from 0 to 250 *10^-3 and an x-axis labeled "Energy (MeV)" ranging from 0 to 20. The line graph indicates an increase in damage with increasing energy, reaching a plateau at high energies.]
JEFF-3.1 P-31
Non-threshold reactions

Energy (MeV)

Cross section (barns)
JEFF-3.1 P-31
Inelastic levels

Cross section (barns) vs. Energy (MeV)

*(n,n*6)*
JEFF-3.1 P-31
Threshold reactions

Energy (MeV) vs. Cross section (barns)

(n,a)
JEFF-3.1 P-31
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,xp)
- (n,xa)
JEFF-3.1 P-31
angular distribution for elastic

Prob/Cos

Energy (MeV)

Cosine
JEFF-3.1 P-31
angular distribution for (n,n^*1)
JEFF-3.1 P-31
angular distribution for (n,n*2)
JEFF-3.1 P-31
angular distribution for (n,n*3)
JEFF-3.1 P-31
angular distribution for \((n,n^*4)\)
JEFF-3.1 P-31
angular distribution for (n,n*5)
JEFF-3.1 P-31
angular distribution for \( (n,n^*6) \)
JEFF-3.1 P-31
angular distribution for (n,n*c)
JEFF-3.1 P-31
Neutron emission for (n,2n)
JEFF-3.1 P-31
Neutron emission for \((n,n^*)a\)
JEFF-3.1 P-31
Neutron emission for \((n,n^*)p\)
JEFF-3.1 P-31
Neutron emission for (n,n*c)
JEFF-3.1 P-31
Photon emission for (n,gma)
JEFF-3.1 P-31
Photon emission for (n,p)
JEFF-3.1 P-31
Photon emission for (n,a)
JEFF-3.1 P-31
Photon emission for nonelastic
JEFF-3.1 P-31
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
JEFF-3.1 P-31
14 MeV photon spectrum

Gamma Prod (barns/MeV)

Gamma Energy (MeV)