JEFF-3.1 F-19
resonance total cross section

Energy (MeV)

Cross section (barns)
JEFF-3.1 F-19
resonance total cross section

Cross section (barns)

Energy (MeV)
JEFF-3.1 F-19
resonance total cross section

Energy (MeV)

Cross section (barns)
JEFF-3.1 F-19
resonance absorption cross sections
JEFF-3.1 F-19
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
JEFF-3.1 F-19
resonance absorption cross sections

![Graph showing resonance absorption cross sections for F-19. The x-axis represents energy in MeV, and the y-axis represents cross section in barns. The graph exhibits multiple peaks representing resonances.]
JEFF-3.1 F-19
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
JEFF-3.1 F-19
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-4}

capture

10^0  10^1

Energy (MeV)
JEFF-3.1 F-19
Damage

Energy (MeV) vs. Damage (MeV-barns) graph.
JEFF-3.1 F-19
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
JEFF-3.1 F-19
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
JEFF-3.1 F-19
Inelastic levels

![Graph showing the cross sections of inelastic levels for different reactions against energy (MeV). The graph plots energy on the x-axis (0 to 20 MeV) and cross section in barns on the y-axis (0 to 6 barns). Different reactions are represented by lines of different colors: (n,n*1) in black, (n,n*2) in red, (n,n*3) in green, (n,n*4) in blue, and (n,n*5) in pink.]
JEFF-3.1 F-19
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*21)
JEFF-3.1 F-19
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,d)
(n,t)
(n,a)
JEFF-3.1 F-19
angular distribution for elastic

Probl/Cos

10^1

10^0

10^{-1}

1.0 0.5 0.0 -0.5 -1.0

Cosine

1.0 15 20

Energy (MeV)
JEFF-3.1 F-19
angular distribution for (n,n*1)
JEFF-3.1 F-19
angular distribution for \((n,n^*2)\)
JEFF-3.1 F-19
angular distribution for (n,n*3)
JEFF-3.1 F-19 angular distribution for (n,n*4)
JEFF-3.1 F-19
angular distribution for (n,n*5)
JEFF-3.1 F-19
angular distribution for (n,n*6)
JEFF-3.1 F-19
angular distribution for (n,n^*7)
JEFF-3.1 F-19
angular distribution for (n,n*8)
JEFF-3.1 F-19
angular distribution for (n,n*9)
JEFF-3.1 F-19
angular distribution for (n,n*10)
JEFF-3.1 F-19
angular distribution for (n,n*11)
JEFF-3.1 F-19
angular distribution for (n,n*12)
JEFF-3.1 F-19
angular distribution for (n,n*13)
JEFF-3.1 F-19
angular distribution for (n,n*14)
JEFF-3.1 F-19
angular distribution for (n,n*15)
JEFF-3.1 F-19
angular distribution for (n,n*16)
JEFF-3.1 F-19
angular distribution for \((n,n'17)\)
JEFF-3.1 F-19
angular distribution for (n,n*18)
JEFF-3.1 F-19
angular distribution for (n,n*19)
JEFF-3.1 F-19
angular distribution for (n, n*20)
JEFF-3.1 F-19 angular distribution for (n,n*21)
JEFF-3.1 F-19
Neutron emission for (n,2n)
JEFF-3.1 F-19
Neutron emission for (n,2n)
JEFF-3.1 F-19
Neutron emission for (n,n*)a
JEFF-3.1 F-19
Neutron emission for \((n,n^*)p\)
JEFF-3.1 F-19
Neutron emission for (n,n^c)
JEFF-3.1 F-19
Photon emission for (n,gma)
JEFF-3.1 F-19
Photon emission for (n,2n)
JEFF-3.1 F-19
Photon emission for \((n,n^*)a\)
JEFF-3.1 F-19
Photon emission for (n,n*)p
JEFF-3.1 F-19
Photon emission for \((n,n^*c)\)
JEFF-3.1 F-19
Photon emission for (n,p)
JEFF-3.1 F-19
Photon emission for (n,a)
JEFF-3.1 F-19
thermal capture photon spectrum
JEFF-3.1 F-19
14 MeV photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
JEFF-3.1 F-19
Recoil Heating

![Graph showing recoil heating vs. energy (MeV)].

- Heating (MeV/reaction)
- Energy (MeV)

The graph illustrates the recoil heating as a function of energy in MeV.
JEFF-3.1 F-19
Particle production cross sections

Energy (MeV)

Cross section (barns)

protons
alphas
JEFF-3.1 F-19
protons from (n,n*)p
JEFF-3.1 F-19
protons from (n,p)
JEFF-3.1 F-19
alphas from \((n,n^*)a\)
JEFF-3.1 F-19
alphas from (n,a)