ENDF/B-VII CR-50
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production

Energy (MeV)
ENDF/B-VII CR-50
resonance total cross section

Cross section (barns)

Energy (MeV)
ENDF/B-VII CR-50
resonance total cross section
ENDF/B-VII CR-50

resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VII CR-50
resonance total cross section

Energy (MeV)

Cross section (barns)

total
ENDF/B-VII CR-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-3}          10^{-2}
ENDF/B-VII CR-50
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

capture
ENDF/B-VII CR-50
resonance absorption cross sections

![Graph showing resonance absorption cross sections.](image)
ENDF/B-VII CR-50
Damage

Energy (MeV)

Damage (MeV-barns)
ENDF/B-VII CR-50
Non-threshold reactions

Energy (MeV)

Cross section (barns)

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

$10^{-3}$ $10^{-2}$ $10^{-1}$ $10^{0}$ $10^{1}$

$10^{0}$ $10^{1}$

(n,gma)
ENDF/B-VII CR-50
Principal cross sections

Energy (MeV)

Cross section (barns)

total
absorption
elastic
gamma production
ENDF/B-VII CR-50
Heating

Heating (MeV/reaction) vs. Energy (MeV)
ENDF/B-VII CR-50
Damage

Energy (MeV)

Damage (MeV-barns)

*10^{-3}

0 20 40 60 80 100 120 140 160

0 50 100 150 200 250 300 350
ENDF/B-VII CR-50
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
ENDF/B-VII CR-50
Inelastic levels

Cross section (barns) vs Energy (MeV)
ENDF/B-VII CR-50
Inelastic levels

Cross section (barns) vs. Energy (MeV)

Cross section peaks at around 6 MeV with a value of approximately 70 barns.
ENDF/B-VII CR-50
Threshold reactions

- $(n,x)$
- $(n,2n)$
- $(n,n^*)_a$
- $(n,n^*)_p$
- $(n,n^*)_c$

Cross section (barns) vs. Energy (MeV)
ENDF/B-VII CR-50
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,p)
- (n,d)
- (n,a)
ENDF/B-VII CR-50
Threshold reactions

Cross section (barns)

Energy (MeV)
ENDF/B-VII CR-50
angular distribution for elastic
angular distribution for elastic scattering

ENDF/B-VII CR-50
ENDF/B-VII CR-50
Neutron emission for (n,x)
ENDF/B-VII CR-50
Neutron emission for (n,2n)
ENDF/B-VII CR-50
Neutron emission for (n,n*)a
ENDF/B-VII CR-50
Neutron emission for (n,n*)p
ENDF/B-VII CR-50
Neutron emission for \((n,n^*c)\)
ENDF/B-VII CR-50
Photon emission for (n,gma)
ENDF/B-VII CR-50
Photon emission for (n,x)
ENDF/B-VII CR-50
Photon emission for (n,2n)
ENDF/B-VII CR-50
Photon emission for (n,n*)a
ENDF/B-VII CR-50
Photon emission for (n,n*c)
Photon emission for (n,p)
ENDF/B-VII CR-50
Photon emission for (n,a)
ENDF/B-VII CR-50
thermal capture photon spectrum

Gamma Prod (barns/MeV)

Gamma Energy (MeV)
ENDF/B-VII CR-50
14 MeV photon spectrum
ENDF/B-VII CR-50
Particle heating contributions

Energy (MeV)

MeV/collision

Protons
Deuterons
Tritons
Alphas
ENDF/B-VII CR-50
Recoil Heating

Heating (MeV/reaction) vs. Energy (MeV)
ENDF/B-VII CR-50
protons from (n,x)
ENDF/B-VII CR-50
protons from \((n,n^\ast)p\)
ENDF/B-VII CR-50
protons from (n,p)

Energy (MeV)
ENDF/B-VII CR-50 deuterons from (n,x)

Energy (MeV)

Prob/MeV

Sec. Energy

Primary
ENDF/B-VII CR-50
alphas from (n,x)
ENDF/B-VII CR-50
alphas from \((n,n^*)a\)
ENDF/B-VII CR-50
alphas from (n,a)