ENDF/B-VI PD-105E
Principal cross sections

Energy (MeV)
10^{-11} 10^{-9} 10^{-7} 10^{-5} 10^{-3} 10^{-1} 10^{1}

Cross section (barns)
10^{4} 10^{3} 10^{2} 10^{1} 10^{0} 10^{-1} 10^{-2}

colors:
- total
- absorption
- elastic
- gamma production

Legend:
ENDF/B-VI PD-105E
resonance total cross section

Energy (MeV)

Cross section (barns)
ENDF/B-VI PD-105E
resonance total cross section

Energy (MeV)

Cross section (barns)

10^{-3}

10^{-2}

10^{-1}

10^0

10^1

10^2

10^3
ENDF/B-VI PD-105E
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VI PD-105E
resonance absorption cross sections

Cross section (barns)

Energy (MeV)
ENDF/B-VI PD-105E Damage

Energy (MeV)

Damage (MeV-barns)
ENDF/B-VI PD-105E
Non-threshold reactions

Energy (MeV)

Cross section (barns)

- (n,gma)
- (n,a)
- (n,xa)
ENDF/B-VI PD-105E
Principal cross sections

Cross section (barns)

Energy (MeV)

- total
- absorption
- elastic
- gamma production
ENDF/B-VI PD-105E
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
(n,a)
(n,xa)
ENDF/B-VI PD-105E
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
ENDF/B-VI PD-105E
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n*21)

(n,n*22)

(n,n*23)

(n,n*24)
ENDF/B-VI PD-105E
Threshold reactions

Energy (MeV)

Cross section (barns)

(n,2n)
(n,3n)
(n,n*)a
(n,2n)a
(n,n*)p
ENDF/B-VI PD-105E
Threshold reactions

Energy (MeV) vs Cross section (barns) for different (n,p) reactions.

- (n,p*5)
- (n,p*6)
- (n,p*7)
- (n,p*8)
- (n,p*9)
ENDF/B-VI PD-105E
angular distribution for elastic
ENDF/B-VI PD-105E
angular distribution for (n,n*1)
ENDF/B-VI PD-105E
angular distribution for (n,n*2)
ENDF/B-VI PD-105E
angular distribution for (n,n*3)
ENDF/B-VI PD-105E
angular distribution for (n,n*4)
ENDF/B-VI PD-105E
angular distribution for (n,n*5)
ENDF/B-VI PD-105E
angular distribution for (n,n*6)
ENDF/B-VI PD-105E
angular distribution for (n,n*7)
ENDF/B-VI PD-105E
angular distribution for (n,n*8)
ENDF/B-VI PD-105E
angular distribution for (n,n*9)
ENDF/B-VI PD-105E
angular distribution for (n,n*10)
ENDF/B-VI PD-105E
angular distribution for (n,n*11)
ENDF/B-VI PD-105E
angular distribution for (n,n*12)
ENDF/B-VI PD-105E
angular distribution for (n,n*13)
ENDF/B-VI PD-105E
angular distribution for (n,n*14)
ENDF/B-VI PD-105E
angular distribution for (n,n*15)
ENDF/B-VI PD-105E
angular distribution for (n,n*16)
ENDF/B-VI PD-105E
angular distribution for (n,n^*17)
ENDF/B-VI PD-105E
angular distribution for \((n,n^{*18})\)
ENDF/B-VI PD-105E
angular distribution for (n,n*19)
ENDF/B-VI PD-105E
angular distribution for (n,n^*21)
ENDF/B-VI PD-105E
angular distribution for (n,n*23)
ENDF/B-VI PD-105E
angular distribution for (n,n*24)
ENDF/B-VI PD-105E
Neutron emission for (n,2n)
ENDF/B-VI PD-105E
Neutron emission for (n,3n)
ENDF/B-VI PD-105E

Neutron emission for (n,n*)a
ENDF/B-VI PD-105E
Neutron emission for (n,2n)a
ENDF/B-VI PD-105E
Neutron emission for \((n,n^*)p\)
ENDF/B-VI PD-105E
Neutron emission for (n,n*)d
ENDF/B-VI PD-105E
Neutron emission for (n,4n)
ENDF/B-VI PD-105E
Neutron emission for \((n,n^*c)\)
ENDF/B-VI PD-105E
Photon emission for (n,gma)
ENDF/B-VI PD-105E
Photon emission for (n,2n)
ENDF/B-VI PD-105E
Photon emission for (n,3n)
ENDF/B-VI PD-105E
Photon emission for (n,n*)a
ENDF/B-VI PD-105E
Photon emission for (n,2n)a
ENDF/B-VI PD-105E
Photon emission for \((n,n^*)p\)
ENDF/B-VI PD-105E
Photon emission for (n,n*)d
ENDF/B-VI PD-105E
Photon emission for \((n,4n)\)
ENDF/B-VI PD-105E
Photon emission for (n,2np)
Photon emission for (n,n*1)
ENDF/B-VI PD-105E
Photon emission for (n,n*2)
ENDF/B-VI PD-105E
Photon emission for (n,n*3)
ENDF/B-VI PD-105E
Photon emission for \( (n,n^4) \)
ENDF/B-VI PD-105E
Photon emission for (n,n*5)
ENDF/B-VI PD-105E
Photon emission for (n,n*6)
ENDF/B-VI PD-105E
Photon emission for \((n,n^*7)\)
ENDF/B-VI PD-105E
Photon emission for (n,n*8)
ENDF/B-VI PD-105E
Photon emission for (n,n*9)
ENDF/B-VI PD-105E
Photon emission for \((n,n^*10)\)
ENDF/B-VI PD-105E
Photon emission for (n,n*11)
ENDF/B-VI PD-105E
Photon emission for \((n,n^*12)\)
ENDF/B-VI PD-105E
Photon emission for (n,n*13)
ENDF/B-VI PD-105E
Photon emission for (n,n*14)
ENDF/B-VI PD-105E
Photon emission for (n,n*15)
ENDF/B-VI PD-105E
Photon emission for \((n,n^*16)\)
ENDF/B-VI PD-105E
Photon emission for (n,n*17)
ENDF/B-VI PD-105E
Photon emission for (n,n*18)
ENDF/B-VI PD-105E
Photon emission for (n,n*19)
ENDF/B-VI PD-105E
Photon emission for (n,n*20)
ENDF/B-VI PD-105E
Photon emission for (n,n^*21)
ENDF/B-VI PD-105E
Photon emission for (n,n*22)
ENDF/B-VI PD-105E
Photon emission for (n,n*23)
ENDF/B-VI PD-105E
Photon emission for (n,n*24)
ENDF/B-VI PD-105E
Photon emission for \((n,n^\ast c)\)
Photon emission for \((n,p^*1)\)
ENDF/B-VI PD-105E
Photon emission for (n,p*2)
ENDF/B-VI PD-105E
Photon emission for (n,p*3)
ENDF/B-VI PD-105E
Photon emission for (n,p*4)
ENDF/B-VI PD-105E
Photon emission for (n,p*5)
ENDF/B-VI PD-105E
Photon emission for (n,p*7)
ENDF/B-VI PD-105E
Photon emission for (n,p*8)
ENDF/B-VI PD-105E
Photon emission for (n,p*9)
ENDF/B-VI PD-105E
Photon emission for (n,p*10)
ENDF/B-VI PD-105E
Photon emission for (n,p*11)
ENDF/B-VI PD-105E
Photon emission for (n,p*12)
ENDF/B-VI PD-105E
Photon emission for (n,p*13)
ENDF/B-VI PD-105E
Photon emission for \((n,p^*14)\)
ENDF/B-VI PD-105E
Photon emission for (n,p*15)
ENDF/B-VI PD-105E
Photon emission for (n,p*16)
ENDF/B-VI PD-105E
Photon emission for (n,p*17)
ENDF/B-VI PD-105E
Photon emission for \( (n,p^{*18}) \)
ENDF/B-VI PD-105E
Photon emission for (n,p*19)
ENDF/B-VI PD-105E
Photon emission for (n,p*c)
ENDF/B-VI PD-105E
Photon emission for (n,d*1)
ENDF/B-VI PD-105E
Photon emission for (n,d*2)
ENDF/B-VI PD-105E
Photon emission for (n,d*3)
ENDF/B-VI PD-105E
Photon emission for (n,d*4)
ENDF/B-VI PD-105E
Photon emission for (n,d*5)
ENDF/B-VI PD-105E
Photon emission for (n,d*6)
ENDF/B-VI PD-105E
Photon emission for (n,d*7)
ENDF/B-VI PD-105E
Photon emission for (n,d*8)
Photon emission for \((n,d^*9)\)

\[ E_{\gamma} (\text{MeV}) \]

\[ E_n (\text{MeV}) \]

\[ \text{Prob/MeV} \]

ENDF/B-VI PD-105E

Photon emission for \((n,d^*9)\)
ENDF/B-VI PD-105E
Photon emission for \( (n,d^{*11}) \)
ENDF/B-VI PD-105E
Photon emission for (n,d*12)
ENDF/B-VI PD-105E
Photon emission for (n,d*13)
ENDF/B-VI PD-105E
Photon emission for (n,d*14)
ENDF/B-VI PD-105E
Photon emission for (n,a*1)
ENDF/B-VI PD-105E
Photon emission for (n,a^2)
ENDF/B-VI PD-105E
Photon emission for (n,a*3)
ENDF/B-VI PD-105E
Photon emission for (n,a*4)
ENDF/B-VI PD-105E
Photon emission for (n,a*5)
ENDF/B-VI PD-105E
Photon emission for (n,a*6)
ENDF/B-VI PD-105E
Photon emission for \((n,a^*7)\)
ENDF/B-VI PD-105E
Photon emission for \((n,a^8)\)
ENDF/B-VI PD-105E
Photon emission for (n,a*9)
ENDF/B-VI PD-105E
Photon emission for (n,a*10)
ENDF/B-VI PD-105E
Photon emission for (n,a*11)
ENDF/B-VI PD-105E
Photon emission for (n,a*12)
ENDF/B-VI PD-105E
Photon emission for (n,a*13)
ENDF/B-VI PD-105E
Photon emission for (n,a*14)
ENDF/B-VI PD-105E
Photon emission for (n,a*16)
ENDF/B-VI PD-105E
Photon emission for \((n,a^*17)\)
ENDF/B-VI PD-105E
Photon emission for (n,a*18)
ENDF/B-VI PD-105E
Photon emission for (n,a*19)
ENDF/B-VI PD-105E
Photon emission for (n,a*c)
ENDF/B-VI PD-105E
thermal capture photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
ENDF/B-VI PD-105E
14 MeV photon spectrum

Gamma Energy (MeV)

Gamma Prod (barns/MeV)
ENDF/B-VI PD-105E
Particle production cross sections

Energy (MeV)

Cross section (barns)

protons
deuterons
alphas
ENDF/B-VI PD-105E
protons from (n,n*)p
ENDF/B-VI PD-105E
protons from (n,2np)
ENDF/B-VI PD-105E
angular distribution for (n,p^0) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*1) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*2) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*3) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*4) proton
ENDF/B-VI PD-105E
angular distribution for (n,p^*5) proton

Probl/Cos
10^0
10^-1
1
10
Cosine
-1.0
-0.5
0.0
0.5
1.0
5
10
15
20
25
30
Energy (MeV)
ENDF/B-VI PD-105E
angular distribution for (n,p*6) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*7) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*8) proton

Energy (MeV)

Prob/Cos

Cosine -1.0 -0.5 0.0 0.5 1.0

10^{-1} 10^{0}
ENDF/B-VI PD-105E
angular distribution for (n,p*9) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*10) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*11) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*12) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*13) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*14) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*16) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*17) proton
ENDF/B-VI PD-105E
angular distribution for (n,p*18) proton
ENDF/B-VI PD-105E
protons from (n,p*c)
ENDF/B-VI PD-105E
deuterons from (n,n*)d
ENDF/B-VI PD-105E
angular distribution for (n,d*0) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d^*1) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*2) deuteron

Prob/Cos

Cosine

Energy (MeV)

10.0  15.0  20.0  25.0  30.0

1.0  10.0  100.0
ENDF/B-VI PD-105E
angular distribution for (n,d*3) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*4) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*5) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d^6) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*7) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*8) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*9) deuteron

Prob/Cos

Cosine

10^{-1}

10^{0}

Energy (MeV)

10

15

20

25

30
ENDF/B-VI PD-105E
angular distribution for (n,d*10) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*11) deuteron
ENDF/B-VI PD-105E
angular distribution for (n,d*12) deuteron

Energy (MeV)
ENDF/B-VI PD-105E
angular distribution for (n,d*13) deuteron
ENDF/B-VI PD-105E
angular distribution for \((n,d^*14)\) deuteron
ENDF/B-VI PD-105E
deuterons from \((n,d^*c)\)
ENDF/B-VI PD-105E
alphas from (n,n*)a
ENDF/B-VI PD-105E
alphas from (n,2n)a
ENDF/B-VI PD-105E
angular distribution for \((n,a^*0)\) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*1) alpha

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VI PD-105E
angular distribution for (n,a^2) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*3) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*5) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*7) alpha

ProB/Cos

0 1.0 0.5 0.0 -0.5 -1.0

Energy (MeV)

5 10 15 20 25 30

Cosine

0 1.0 0.5 0.0 -0.5 -1.0

Prob/Cos

10^-1 10^0 10^1 10^2
ENDF/B-VI PD-105E
angular distribution for \((n,a^8)\) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*9) alpha

Energy (MeV)

Cosine

Prob/Cos
ENDF/B-VI PD-105E
angular distribution for \((n,a^{*}10)\) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*11) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*12) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*13) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*14) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*15) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*16) alpha
ENDF/B-VI PD-105E
angular distribution for (n, a*17) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*18) alpha
ENDF/B-VI PD-105E
angular distribution for (n,a*19) alpha