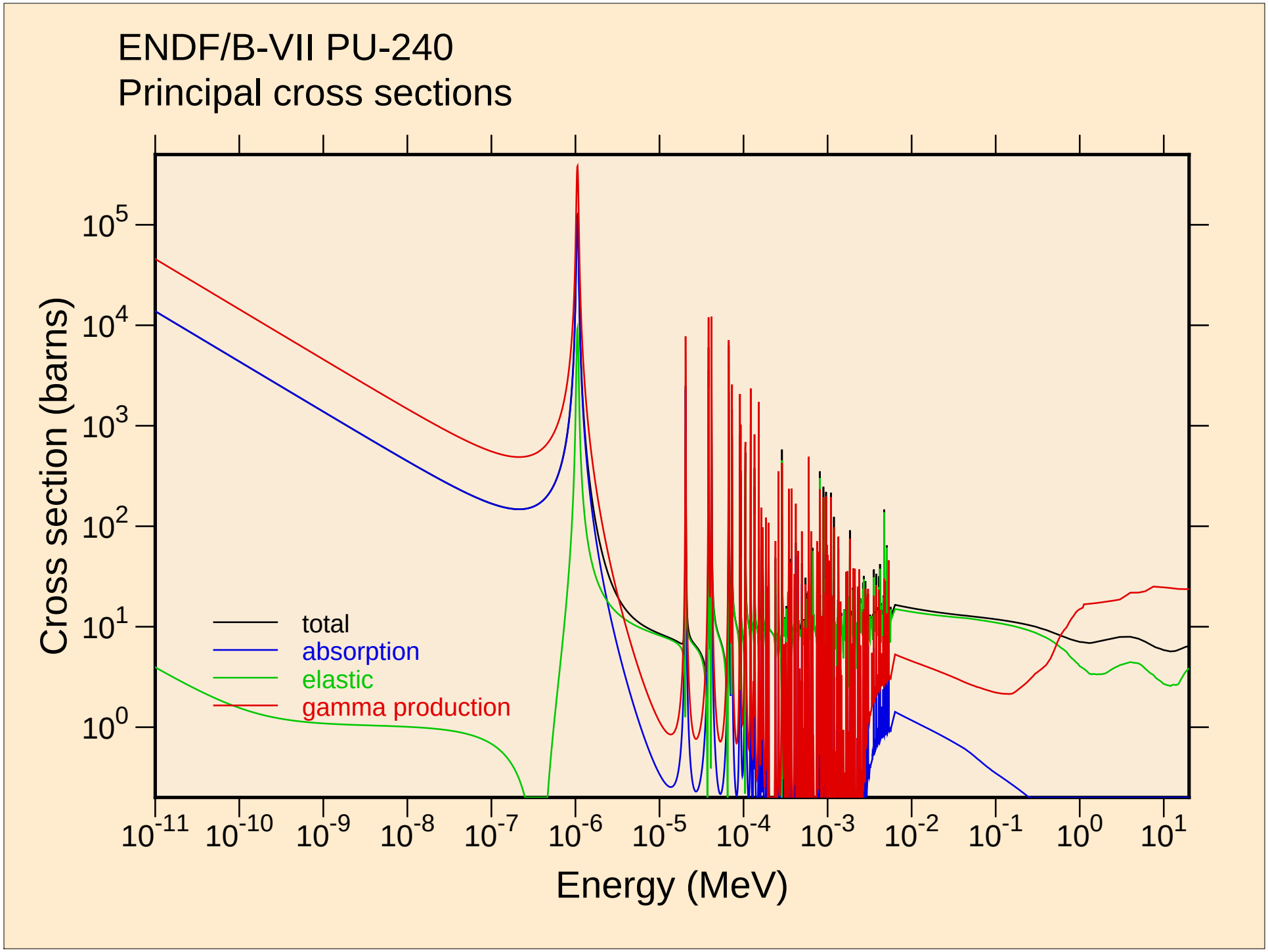
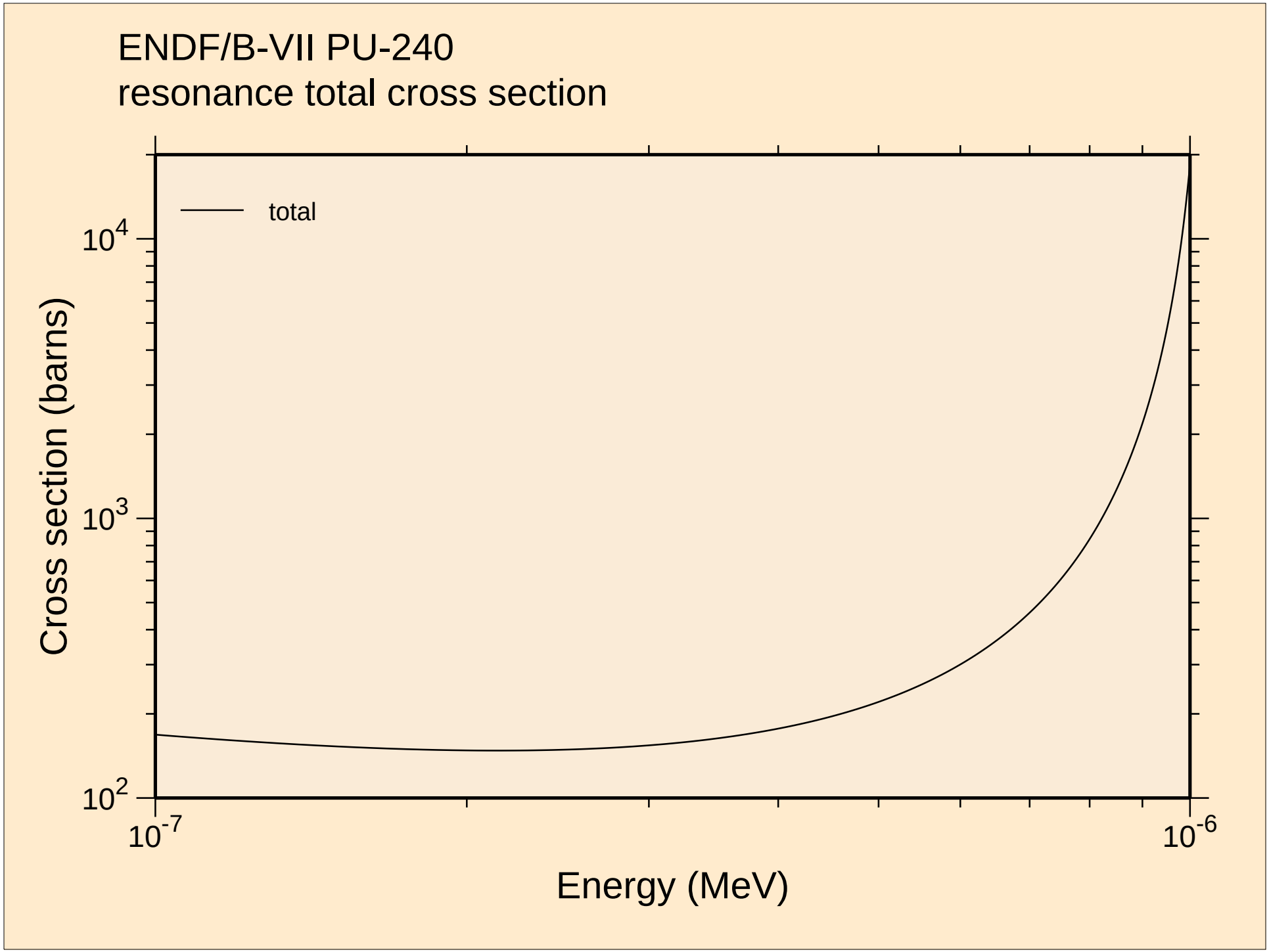
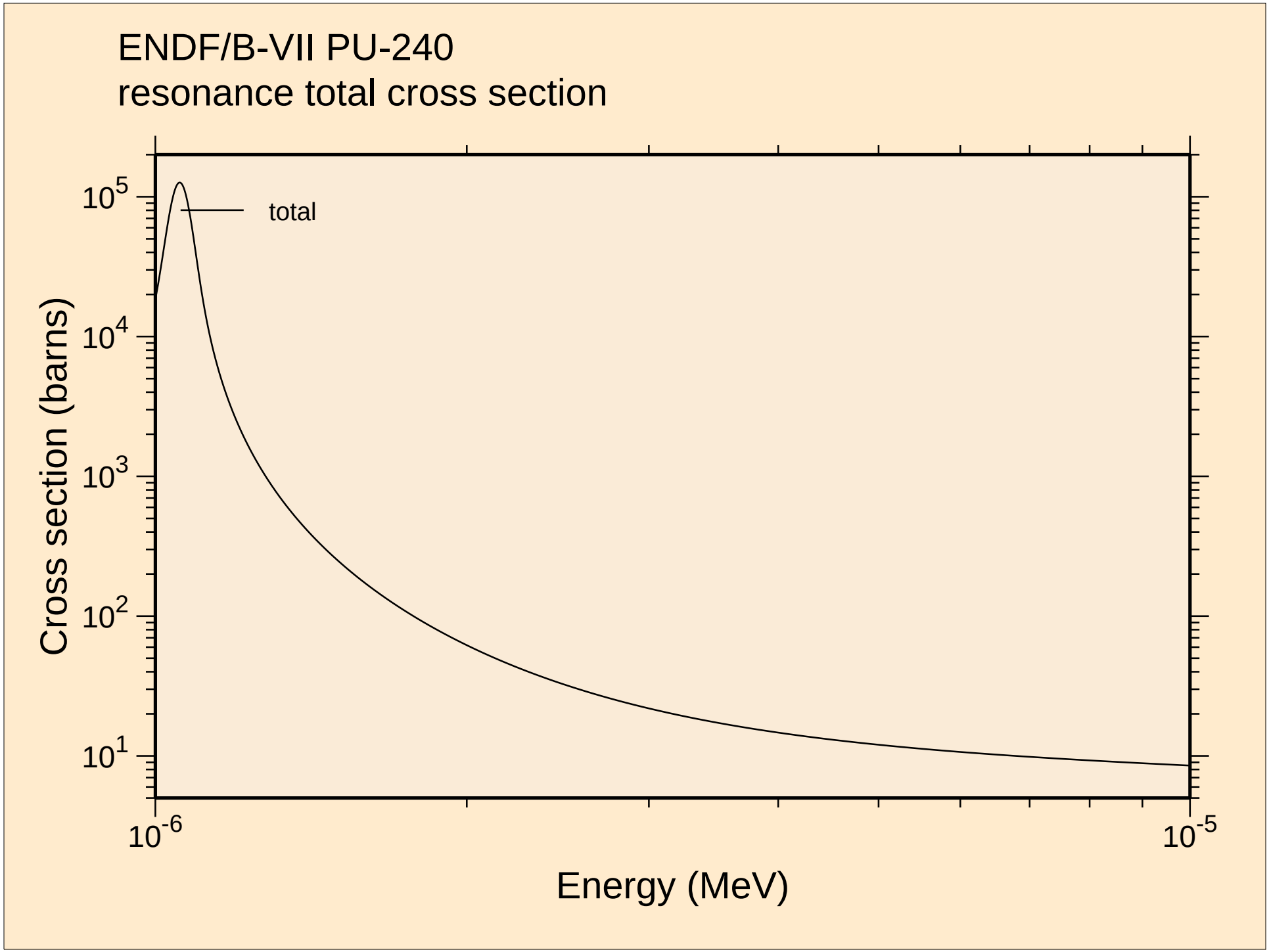
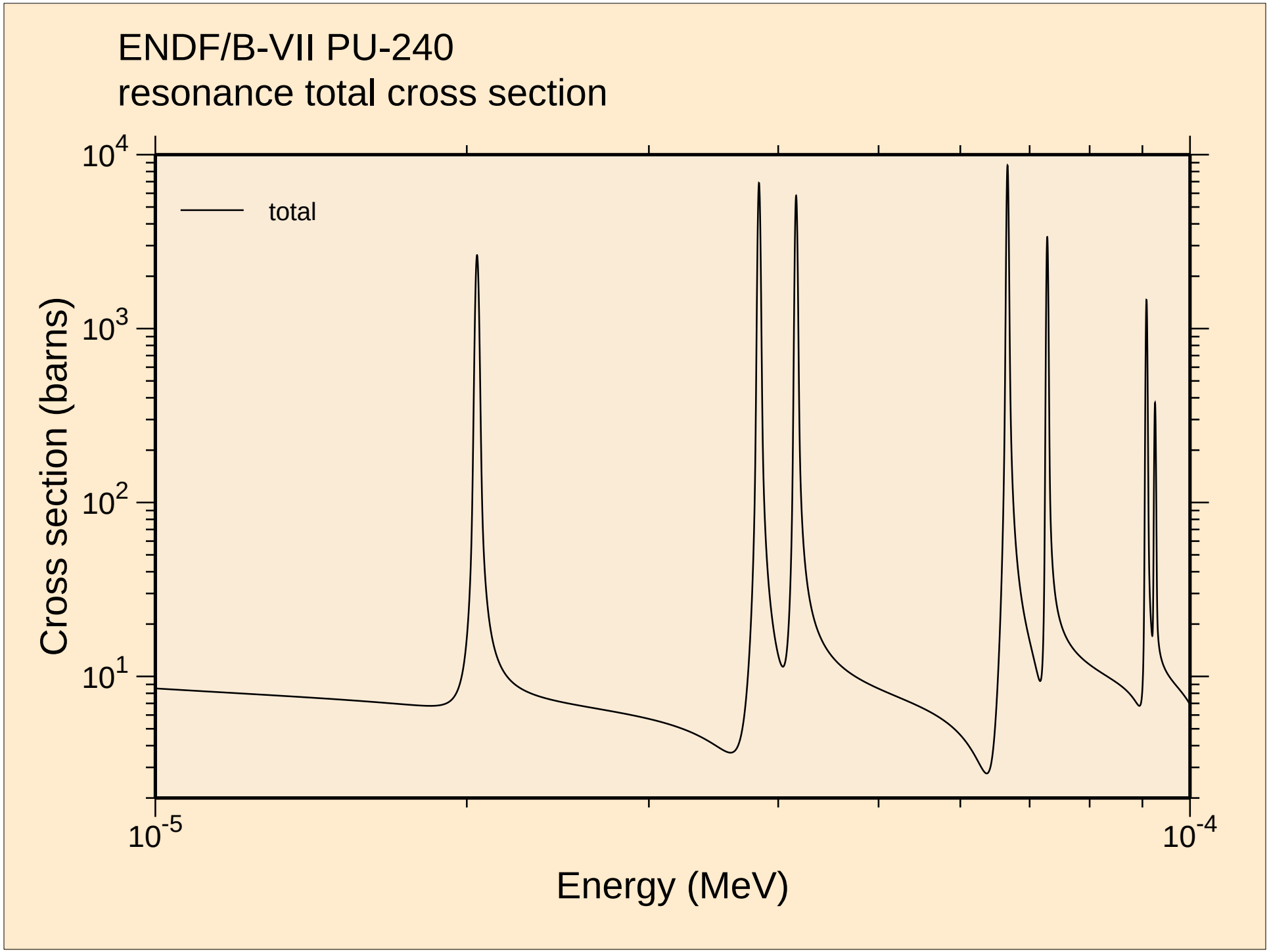
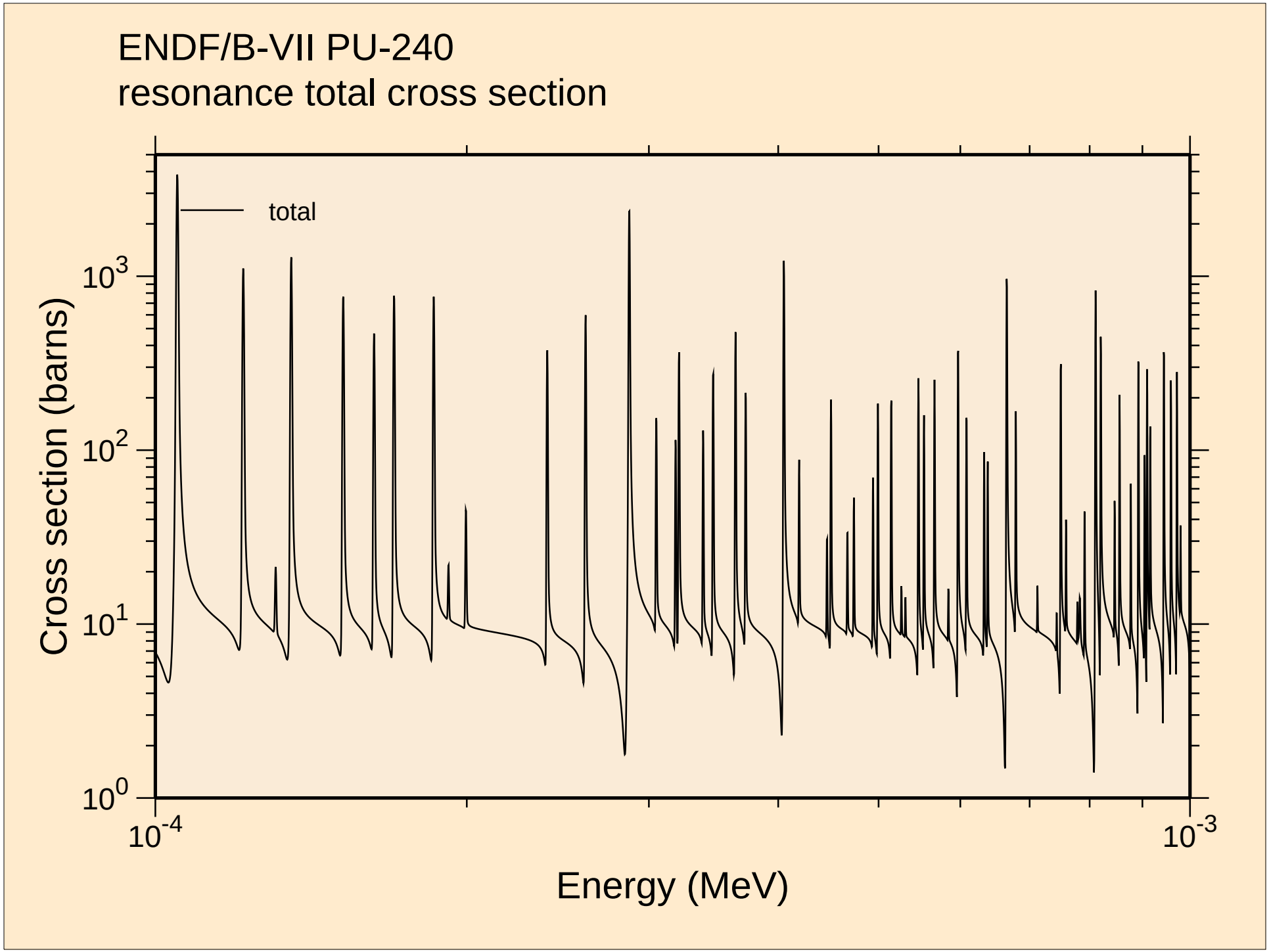
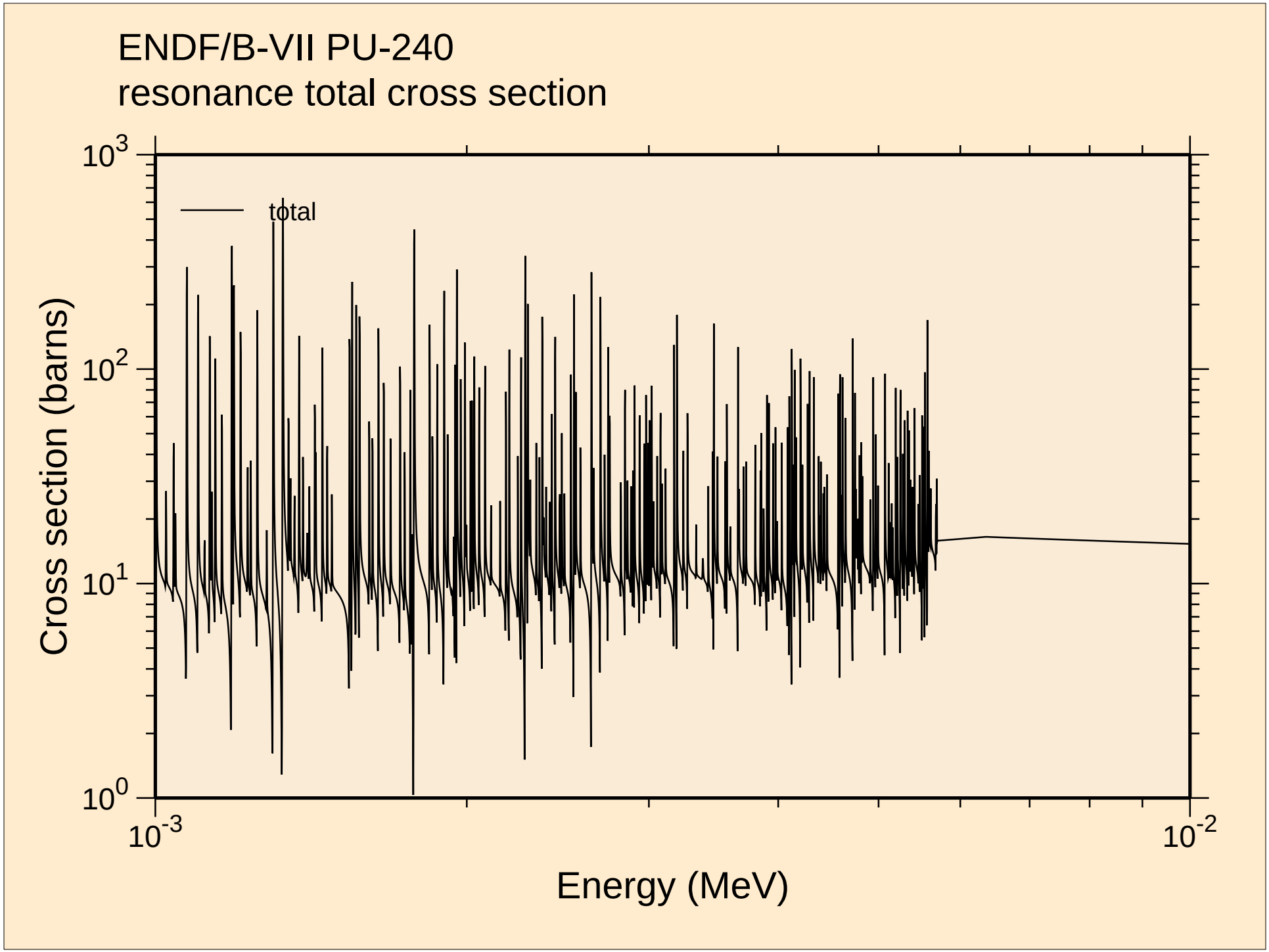

ENDF/B-VII PU-240
Principal cross sections
Cross section (barns)
10^5
10^4
10^3
10^2
10^1
10^0
total
absorption
elastic
gamma production
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1
Energy (MeV)

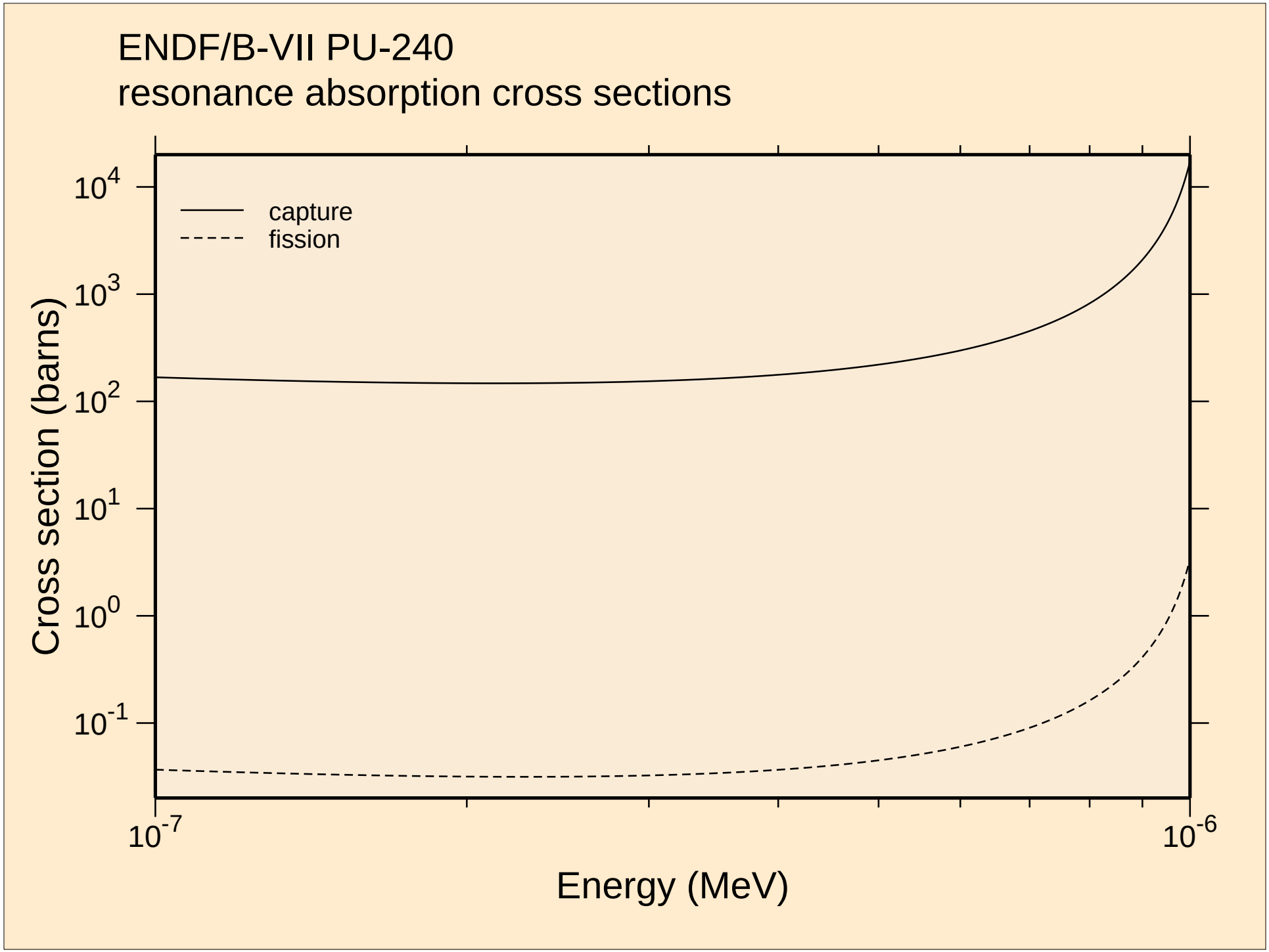

ENDF/B-VII PU-240
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^{-7}
10^{-6}
Energy (MeV)

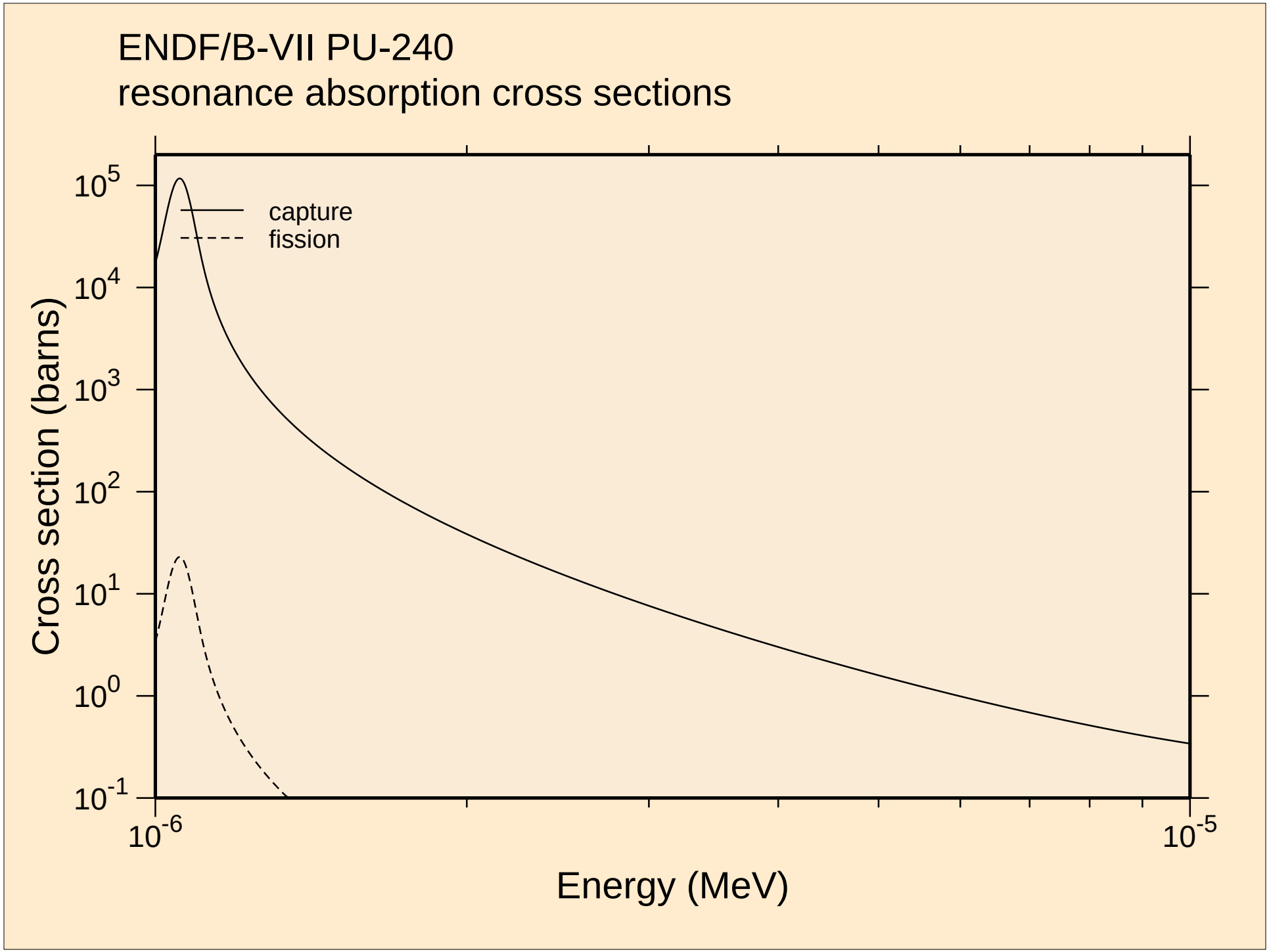

ENDF/B-VII PU-240
resonance total cross section
total
Cross section (barns)
10^5
10^4
10^3
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)

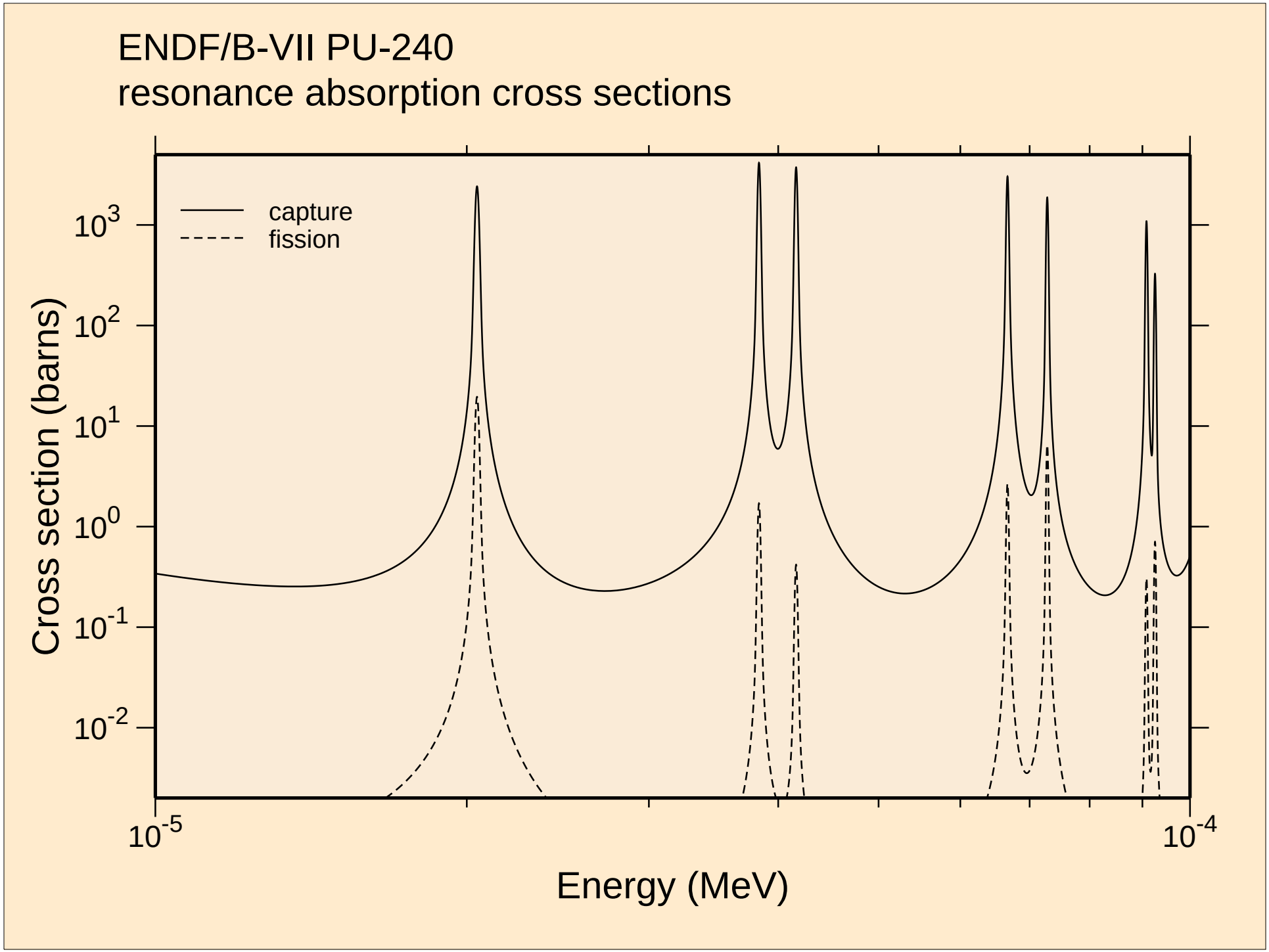

ENDF/B-VII PU-240
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^{-5}
10^{-4}
Energy (MeV)

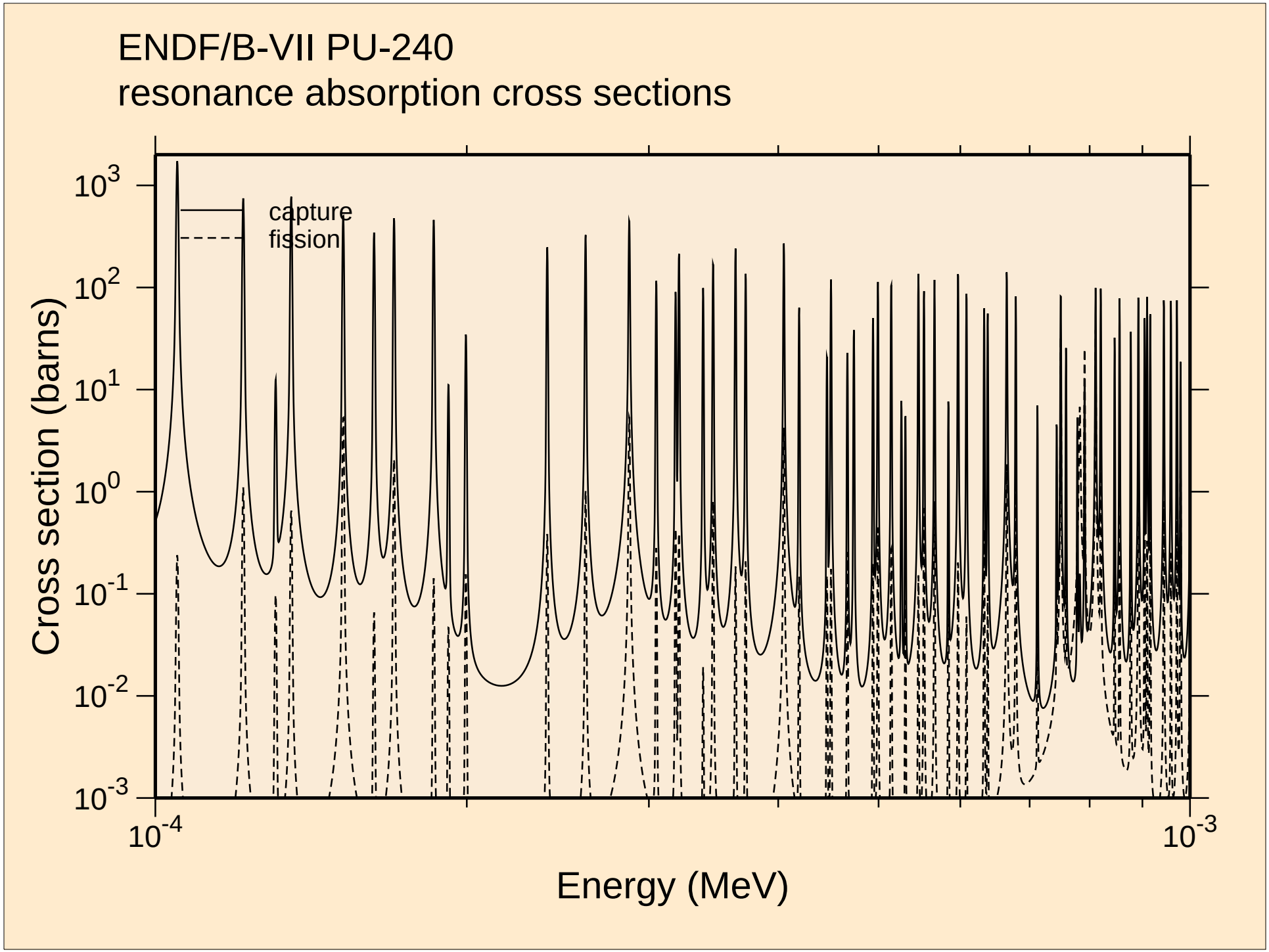

ENDF/B-VII PU-240
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^0
10^{-4}
10^{-3}
Energy (MeV)

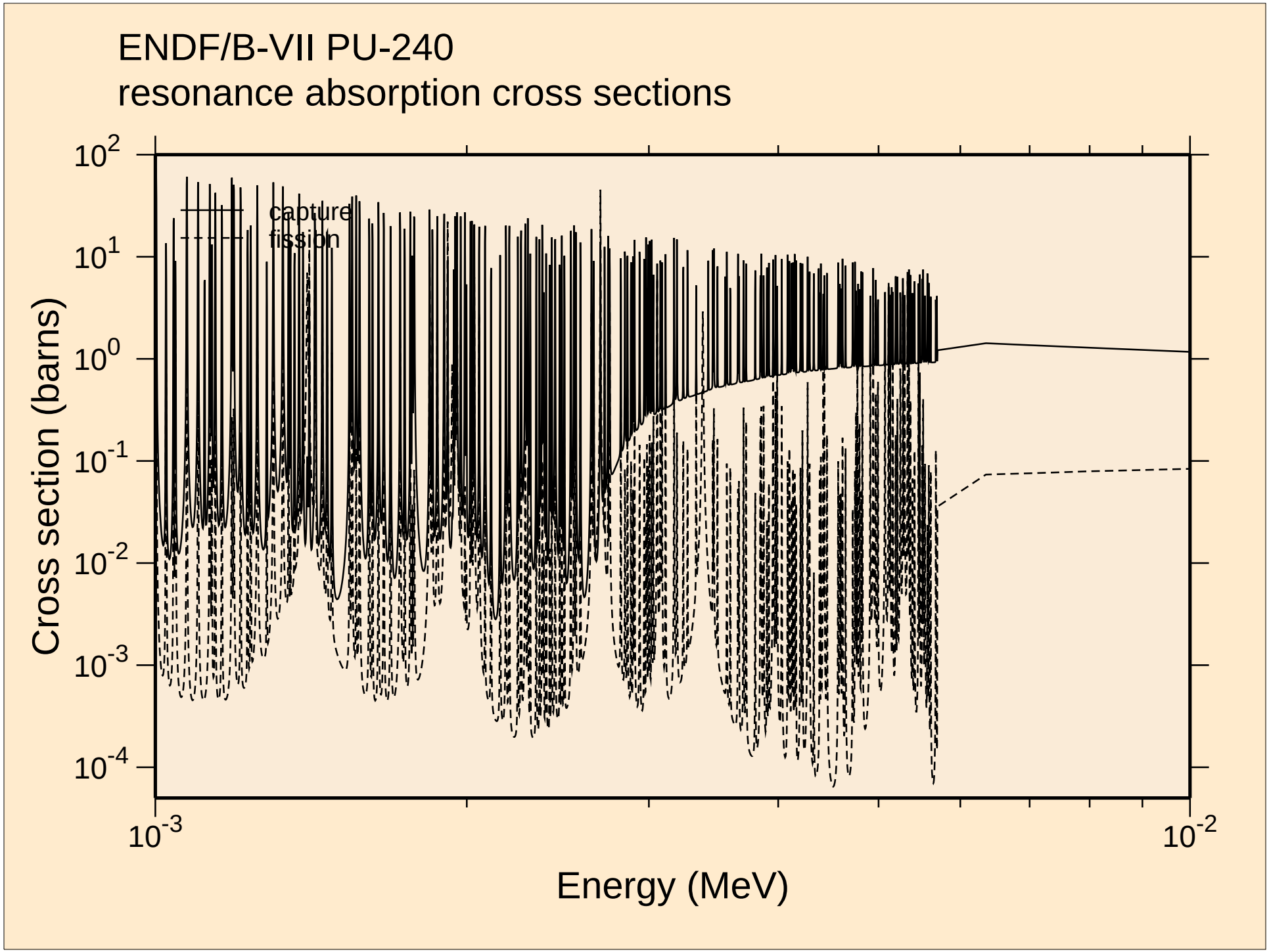

ENDF/B-VII PU-240
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^0
10^{-3}
10^{-2}
Energy (MeV)

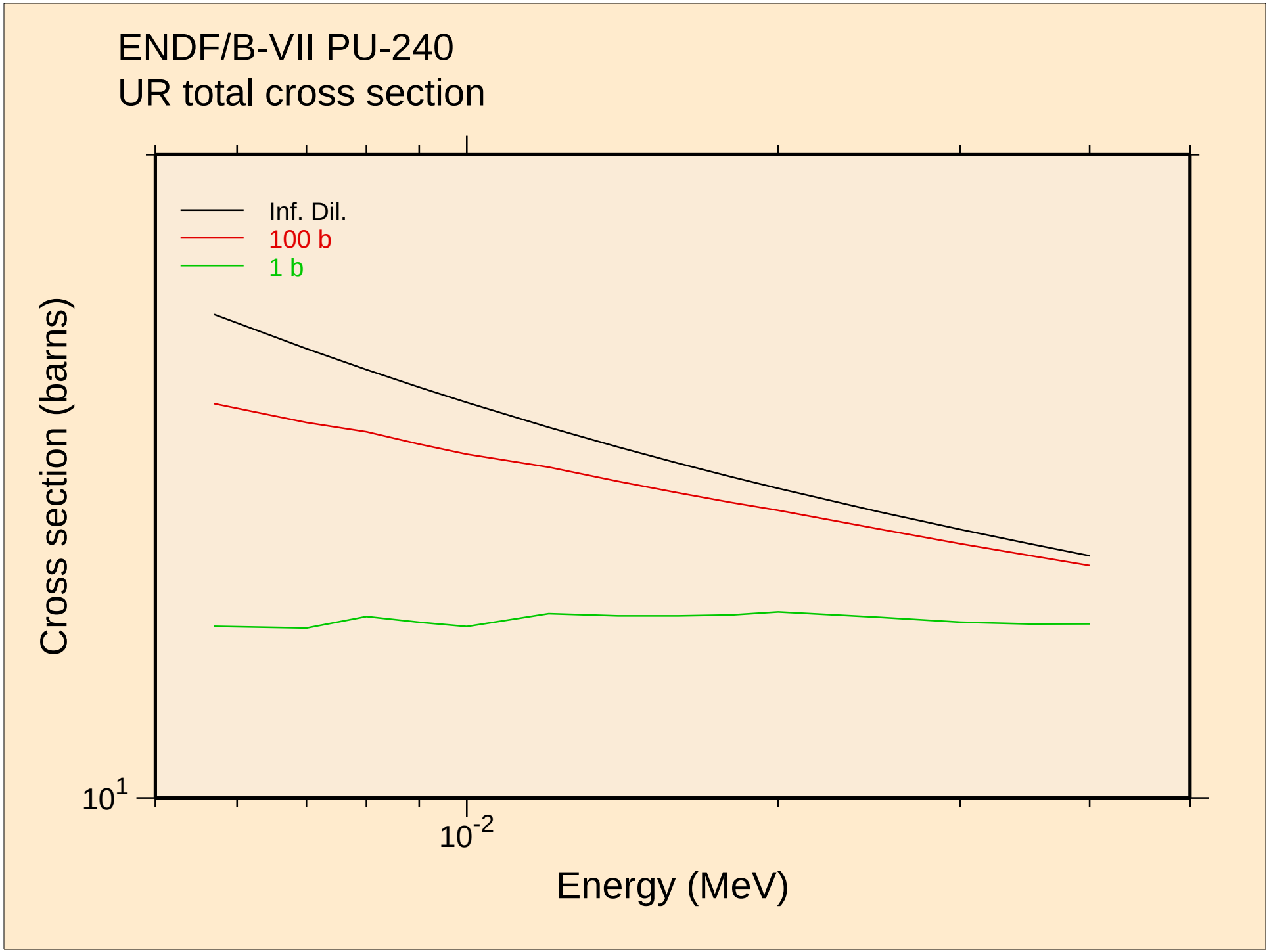

ENDF/B-VII PU-240
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-7}
10^{-6}
Energy (MeV)

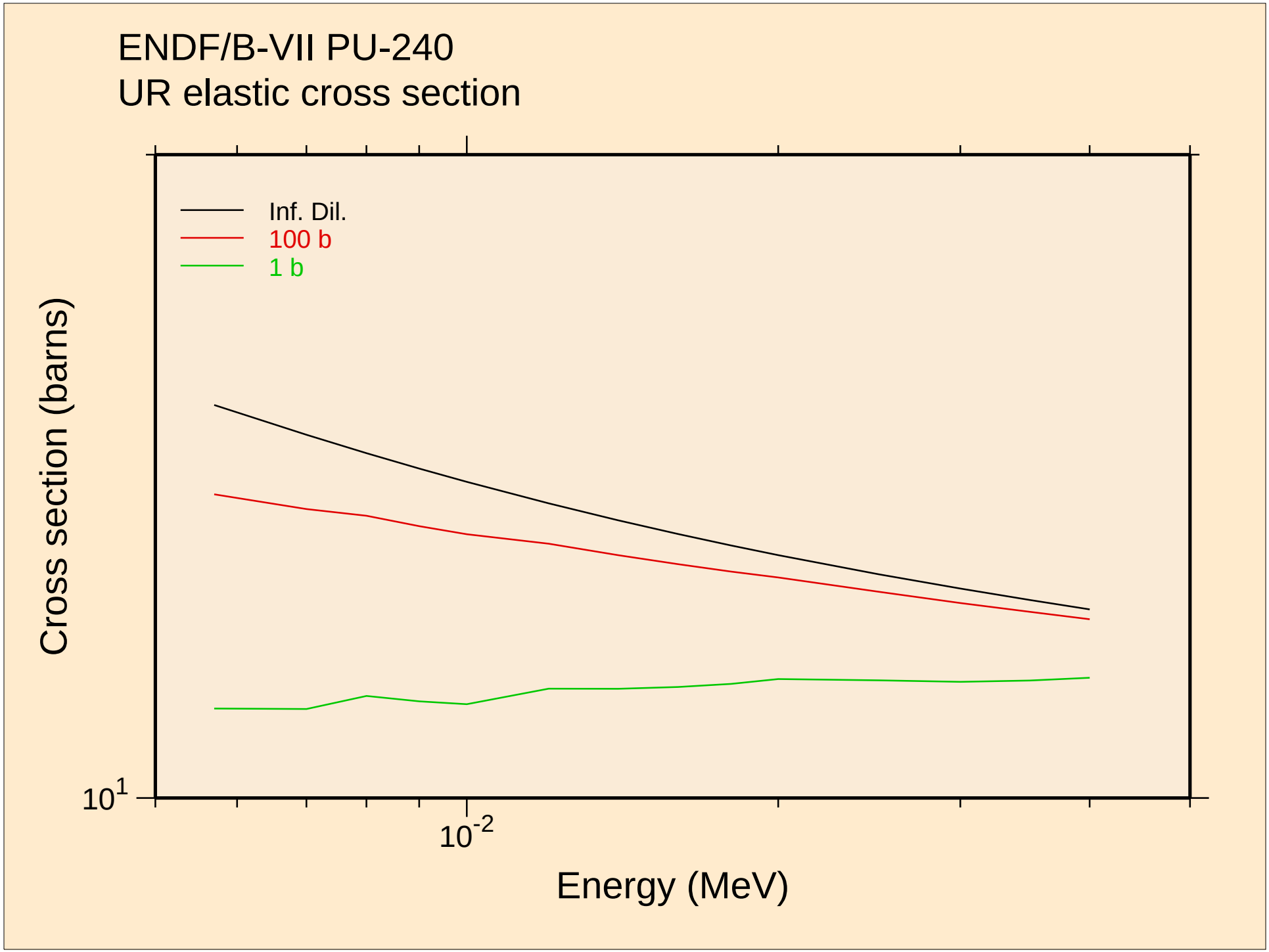

ENDF/B-VII PU-240
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{5}
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-6}
10^{-5}
Energy (MeV)

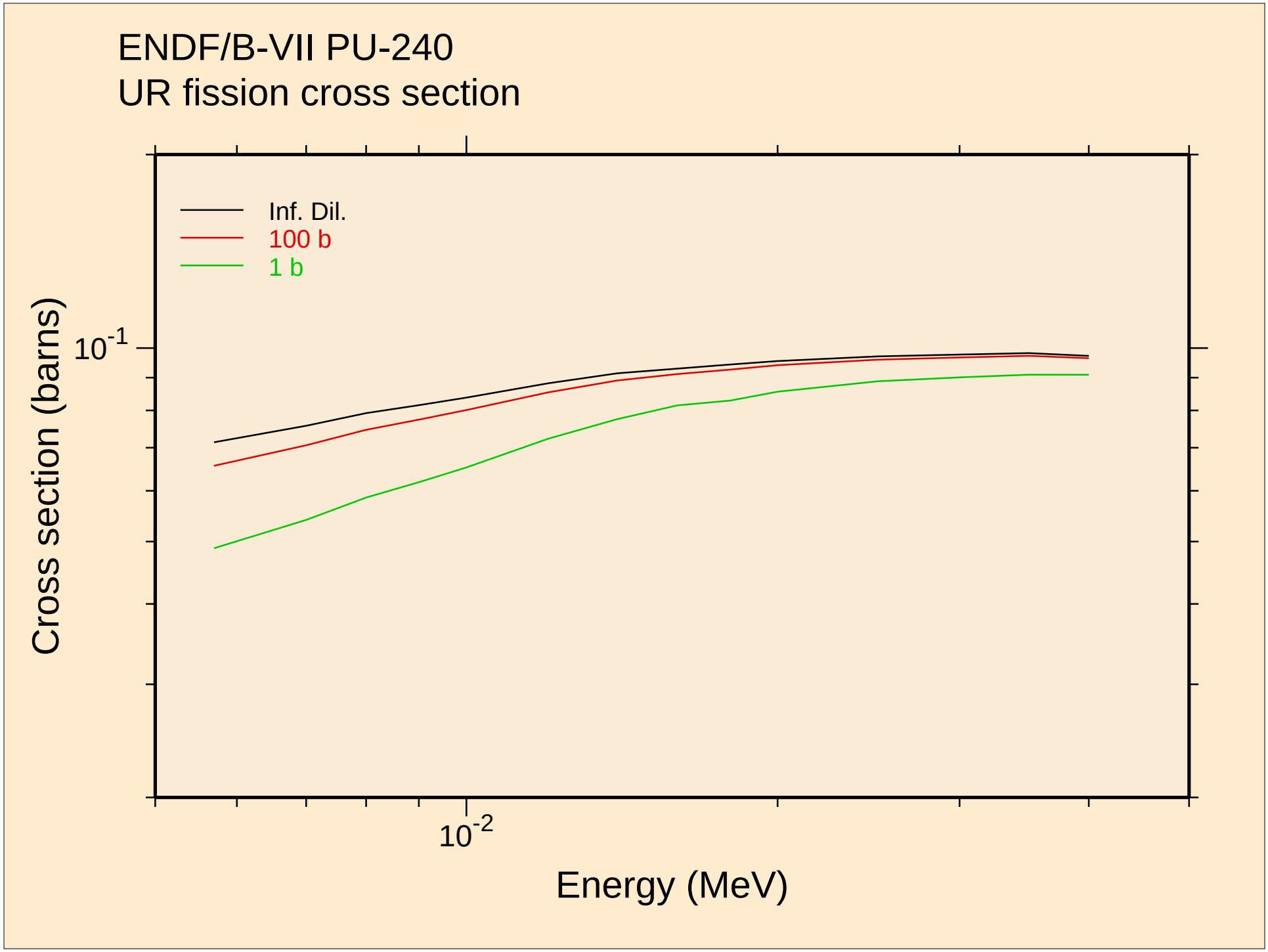

ENDF/B-VII PU-240
resonance absorption cross sections
capture
fission
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-5
10^-4
Energy (MeV)


ENDF/B-VII PU-240
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-3}
Energy (MeV)

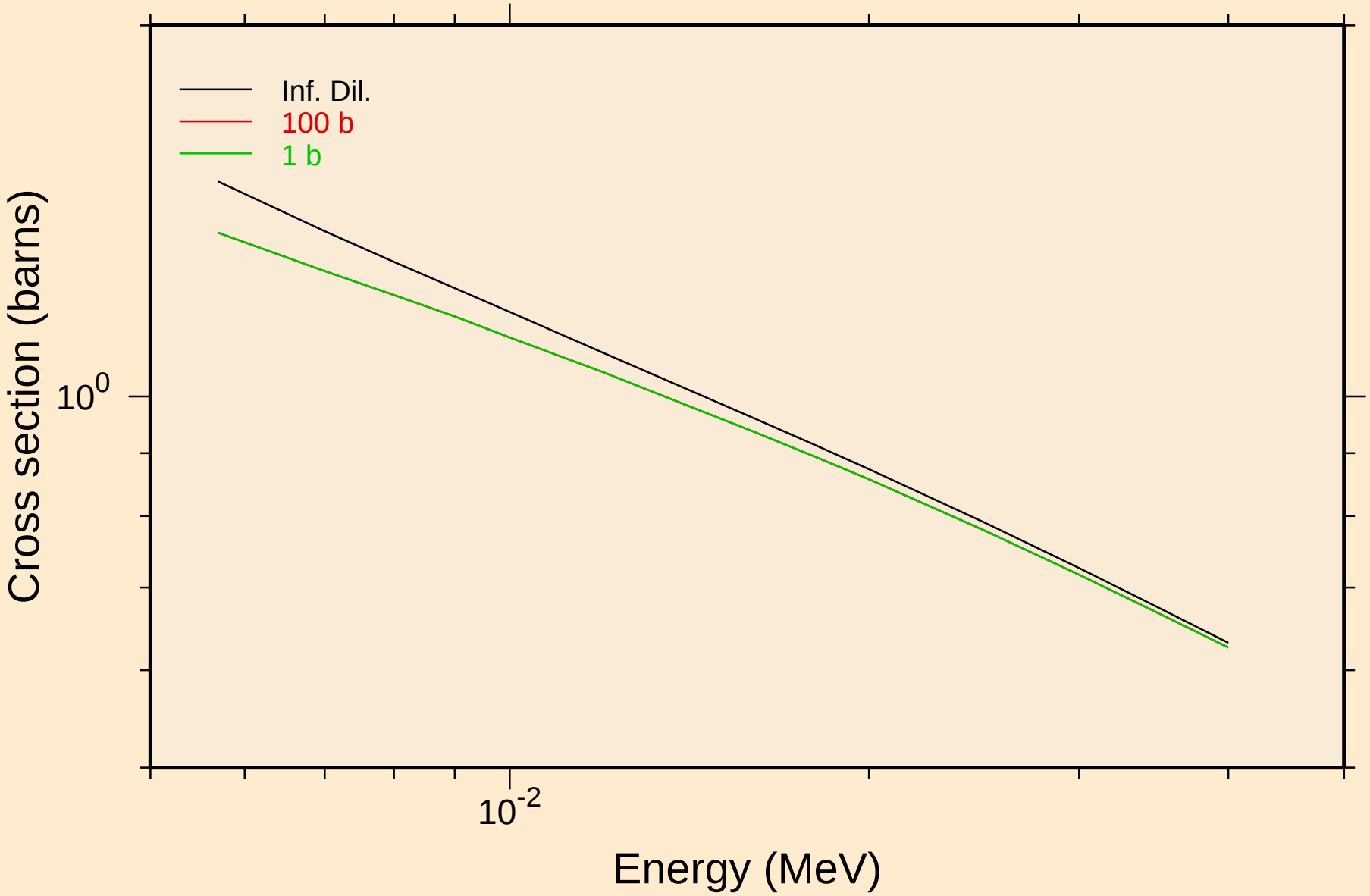

ENDF/B-VII PU-240
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-3}
10^{-2}
Energy (MeV)

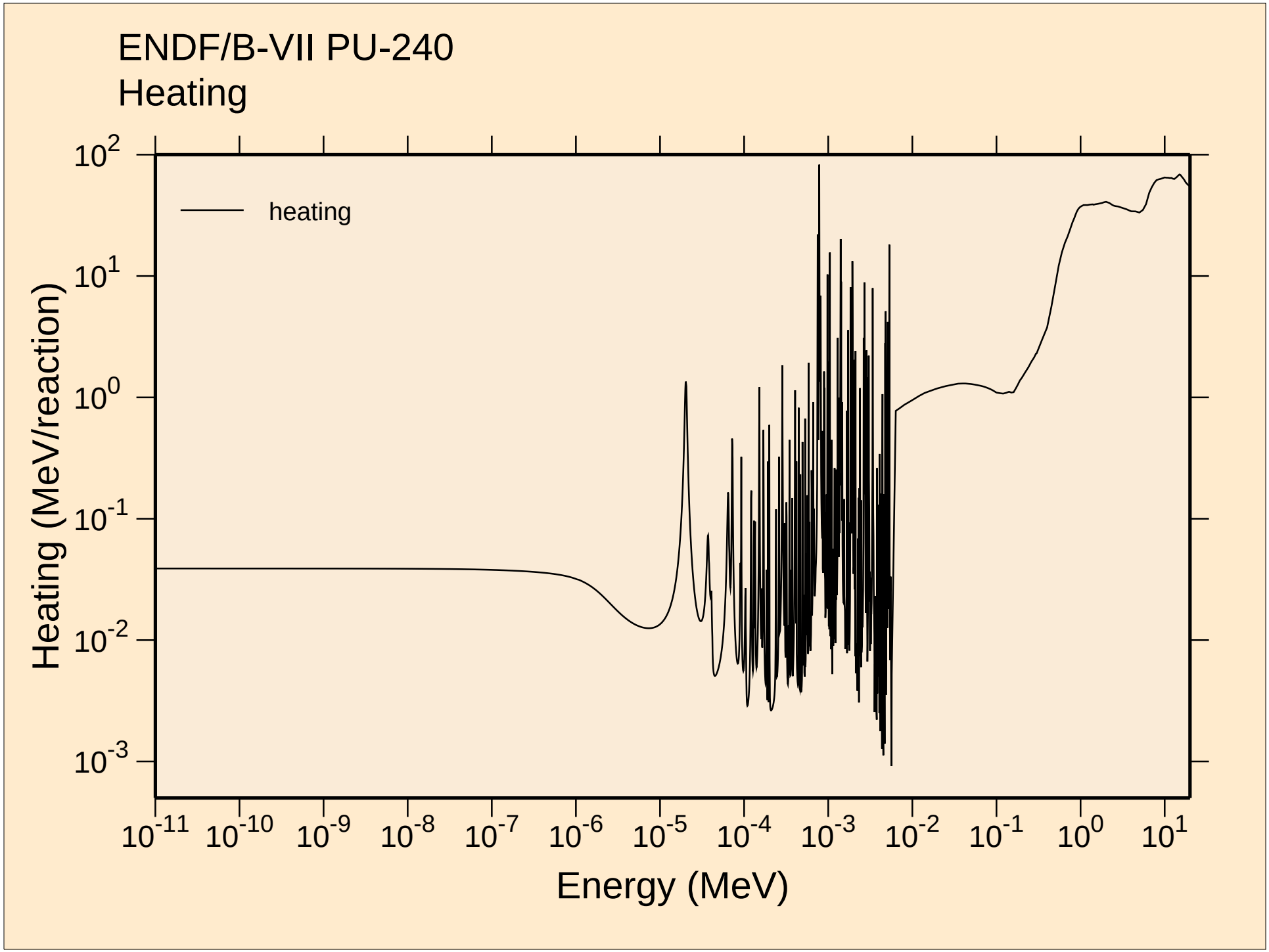

ENDF/B-VII PU-240
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^-2
Energy (MeV)

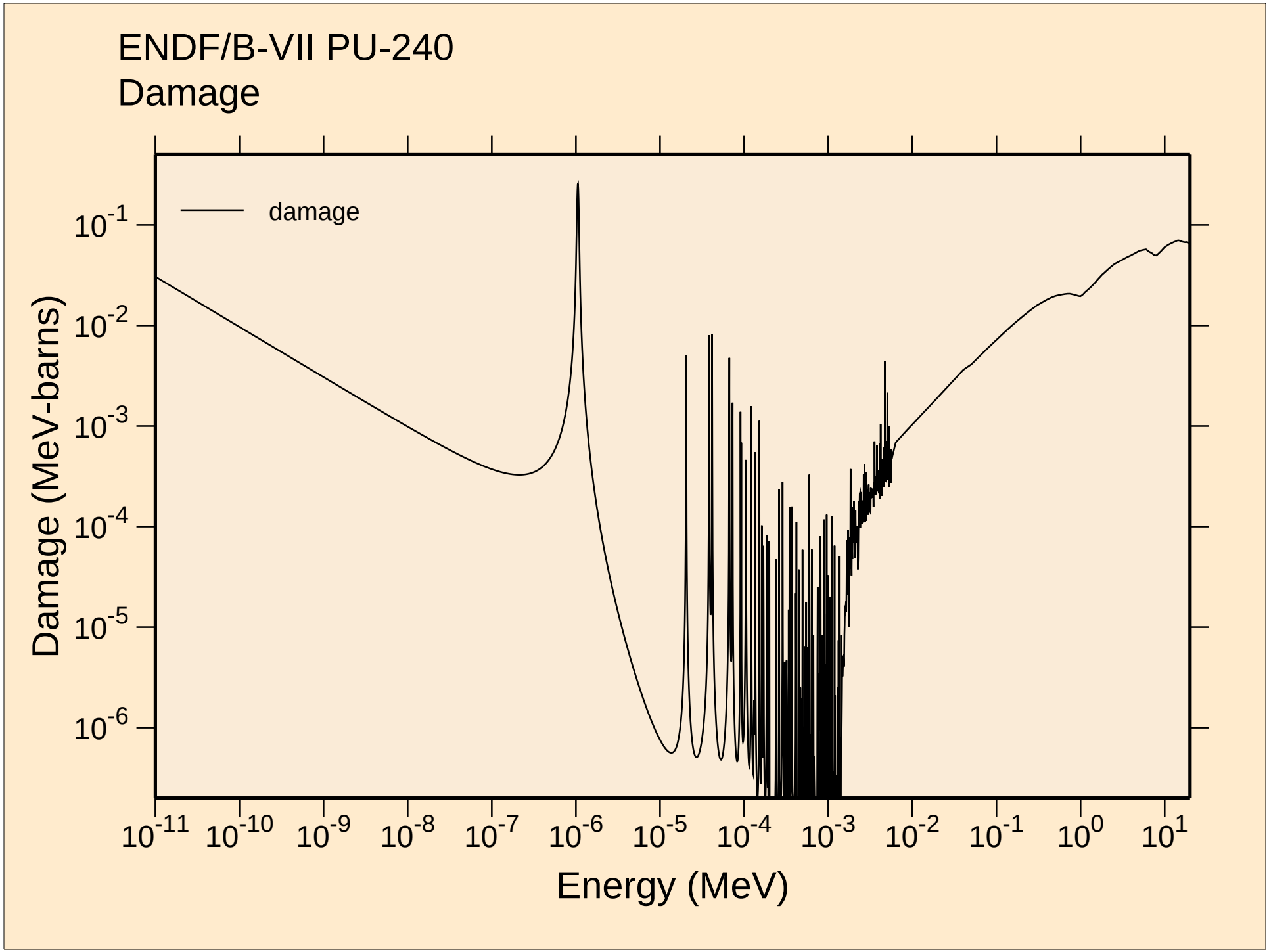

ENDF/B-VII PU-240
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{1}
10^{-2}
Energy (MeV)

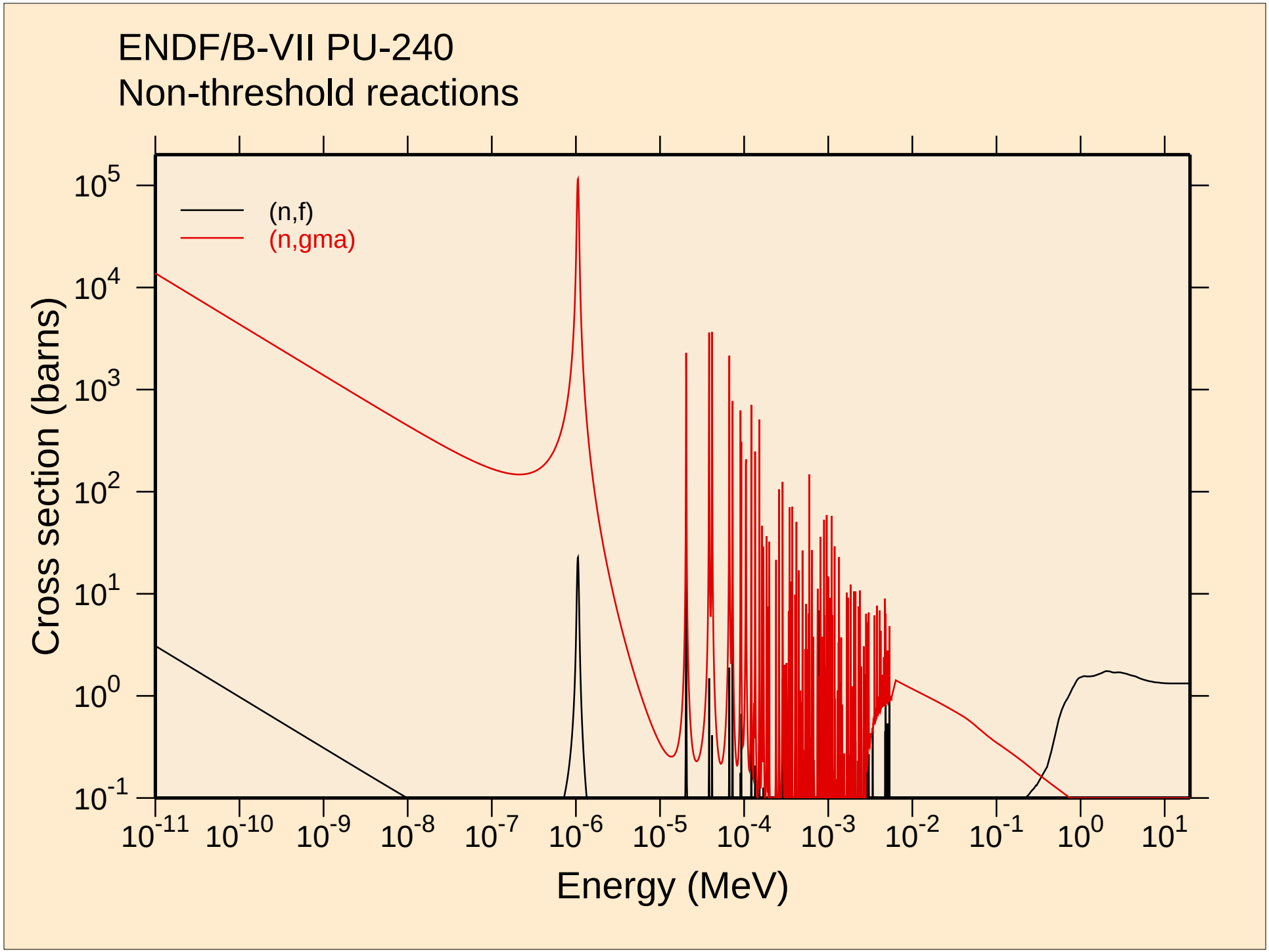

ENDF/B-VII PU-240
UR fission cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10-1
10-2
Energy (MeV)

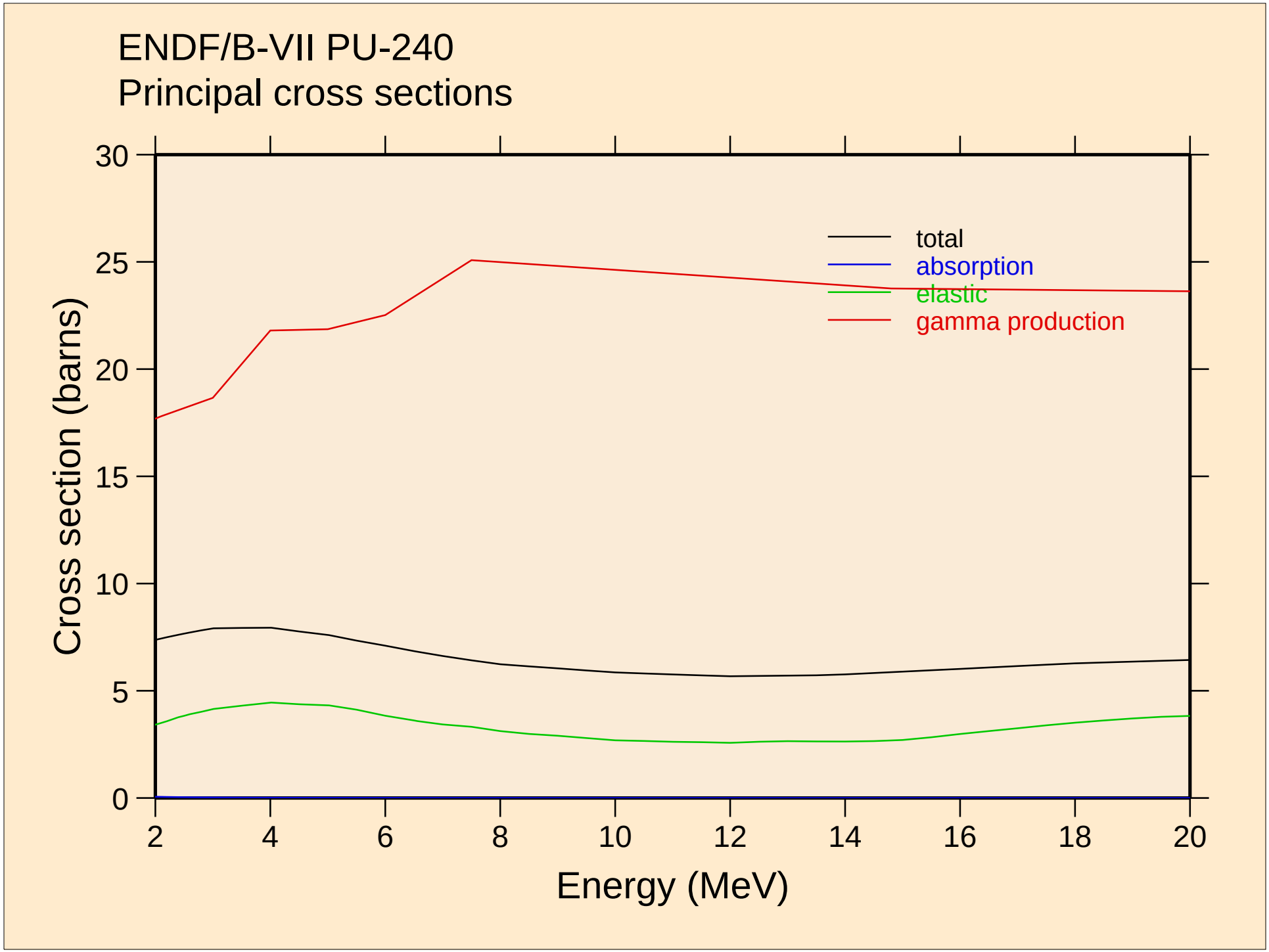
ENDF/B-VII PU-240
UR capture cross section

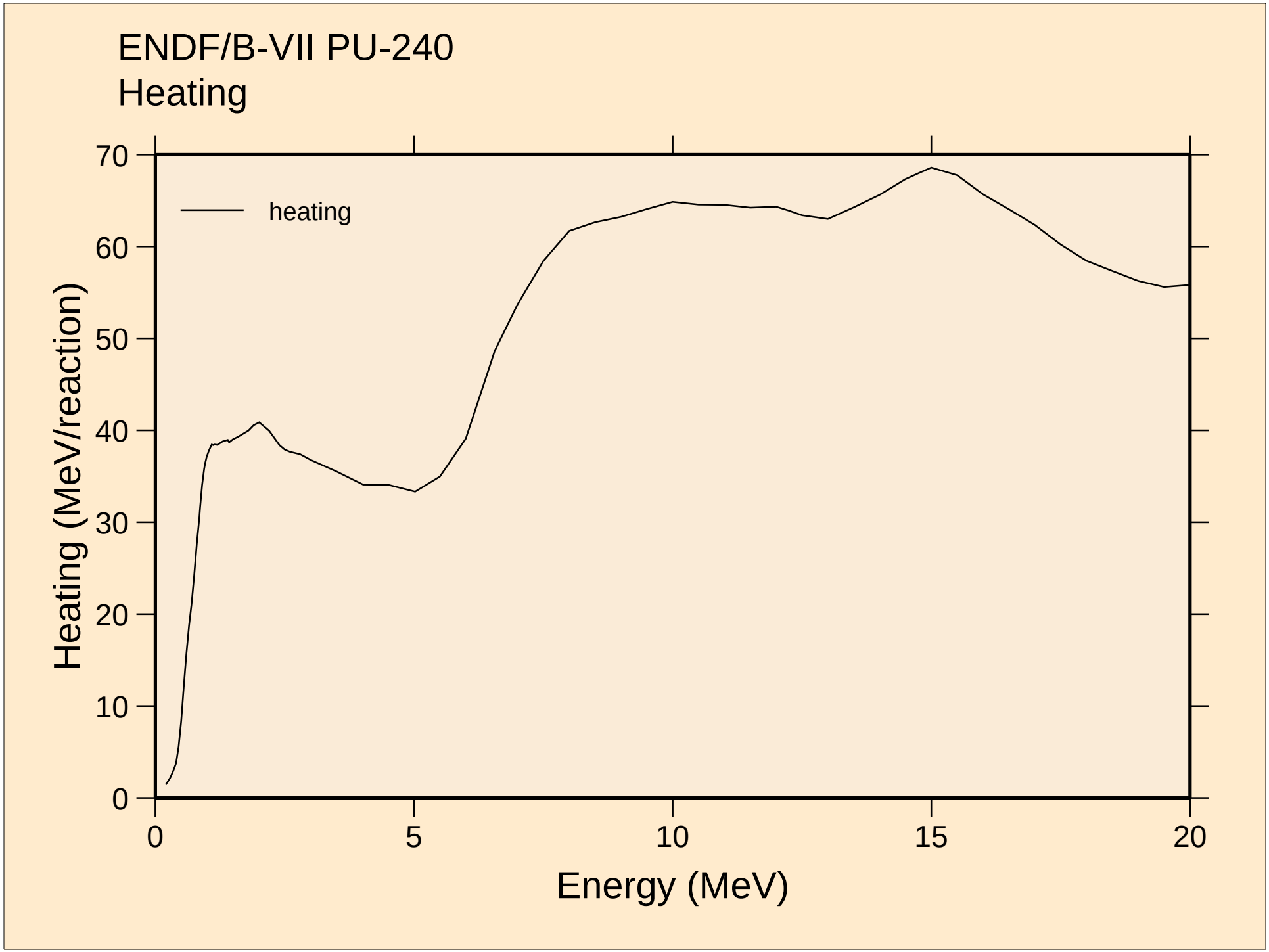


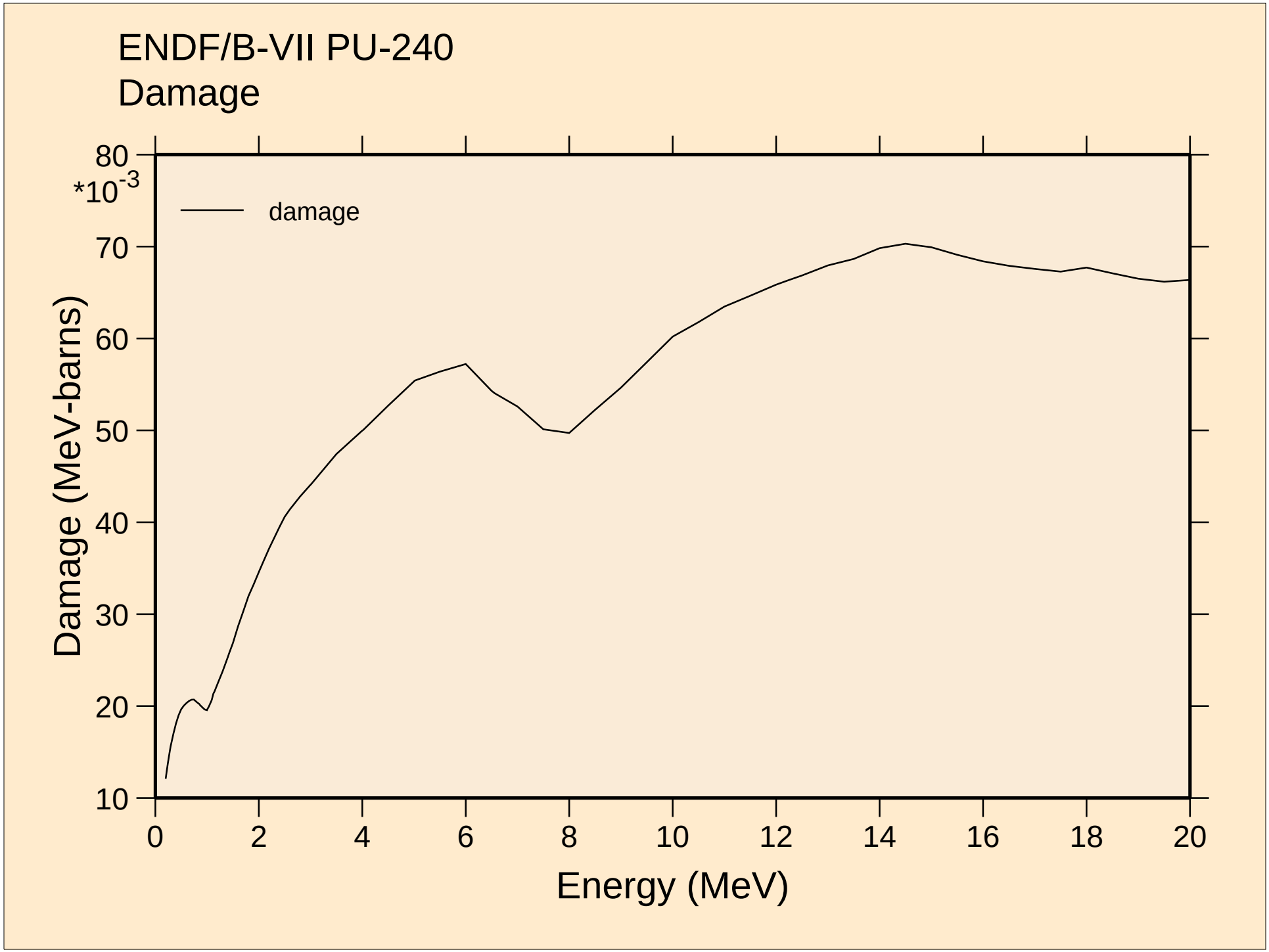

ENDF/B-VII PU-240
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-11 10^-10 10^-9 10^-8 10^-7 10^-6 10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1

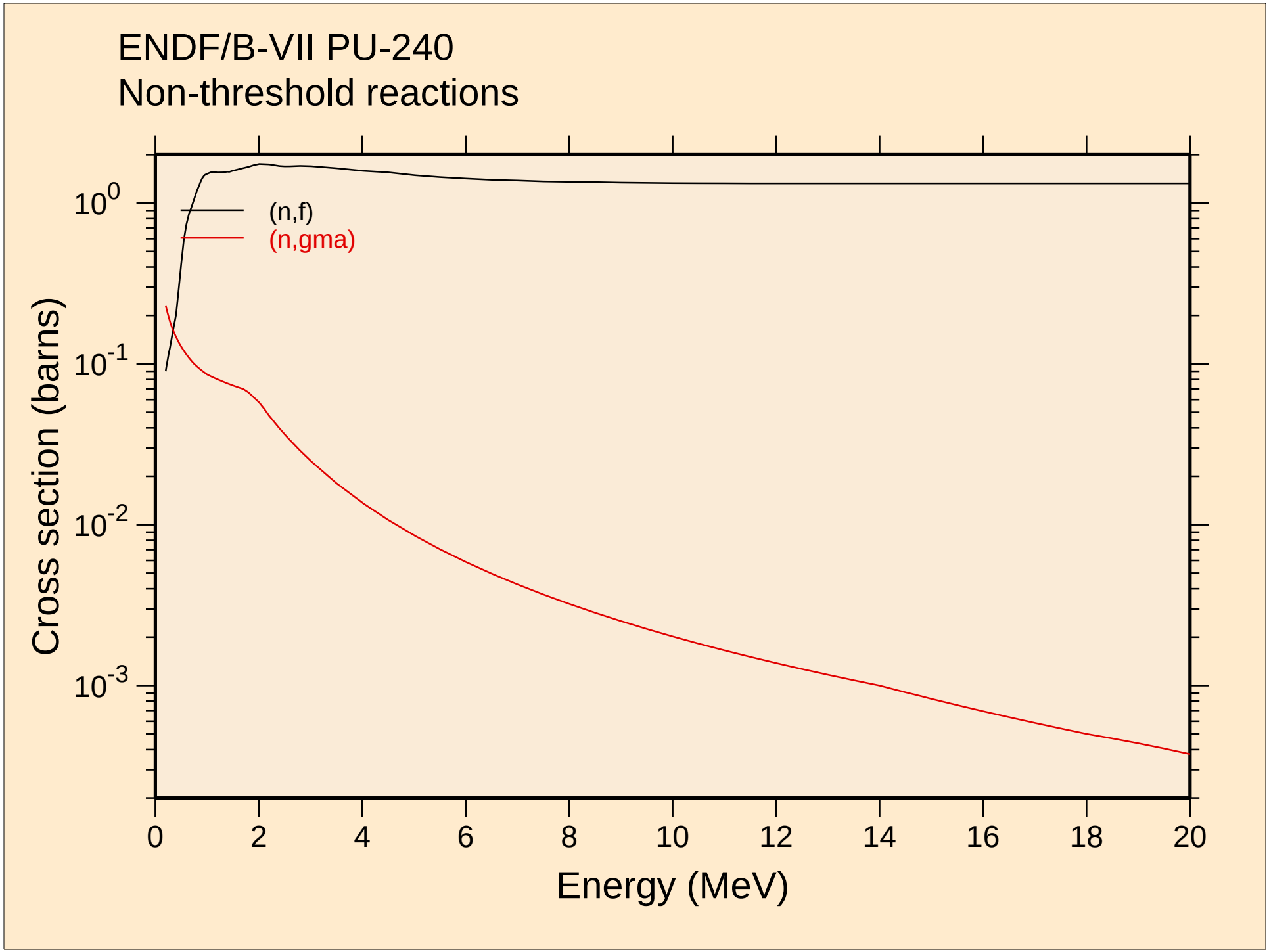

ENDF/B-VII PU-240
Damage
damage
Damage (MeV-barns)
10-1
10-2
10-3
10-4
10-5
10-6
10-11 10-10 10-9 10-8 10-7 10-6 10-5 10-4 10-3 10-2 10-1 100 101
Energy (MeV)

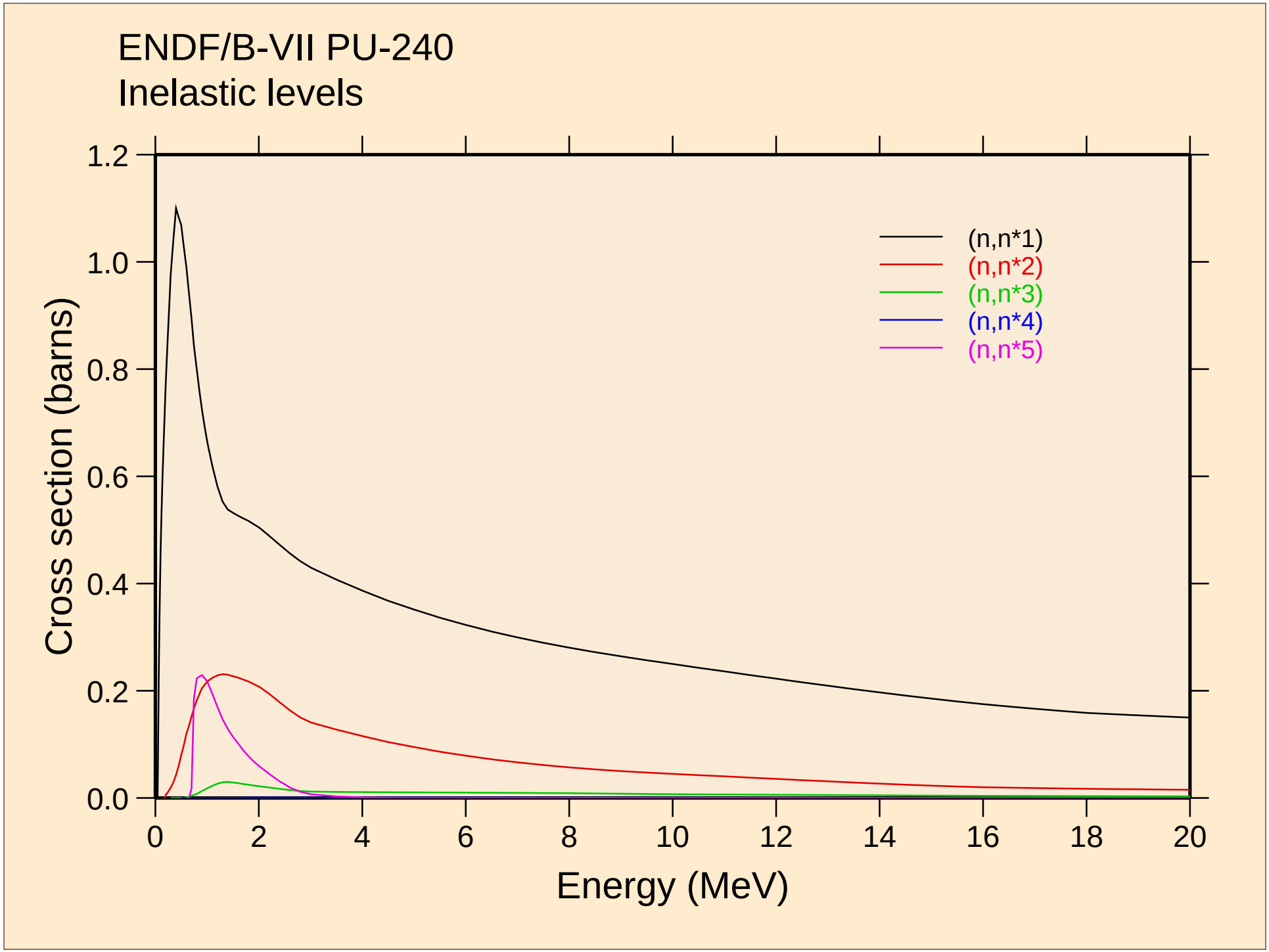

ENDF/B-VII PU-240
Non-threshold reactions
(n,f)
(n,gma)
Cross section (barns)
Energy (MeV)
10^5
10^4
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

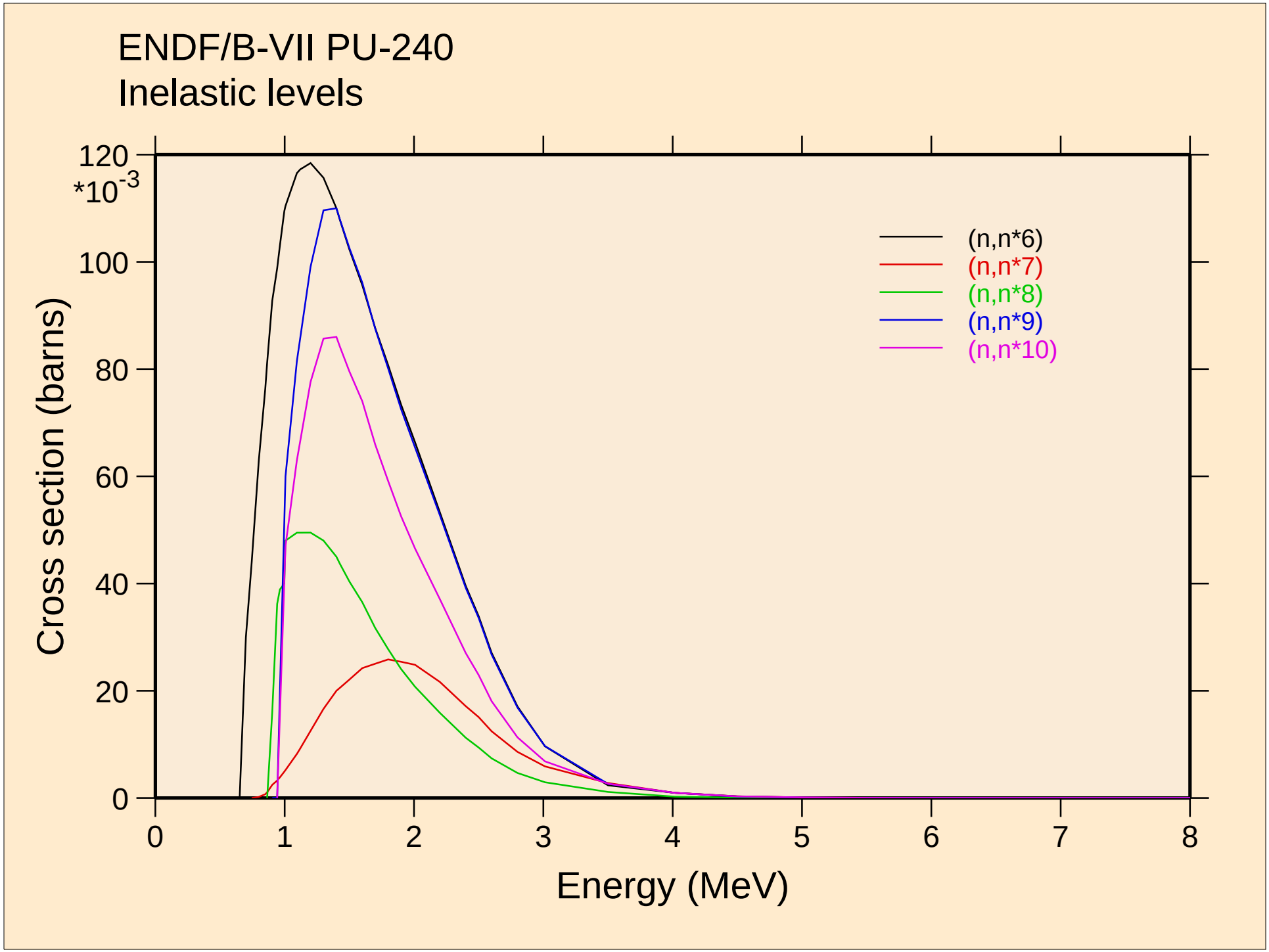

ENDF/B-VII PU-240
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
5
10
15
20
25
30
2
4
6
8
10
12
14
16
18
20

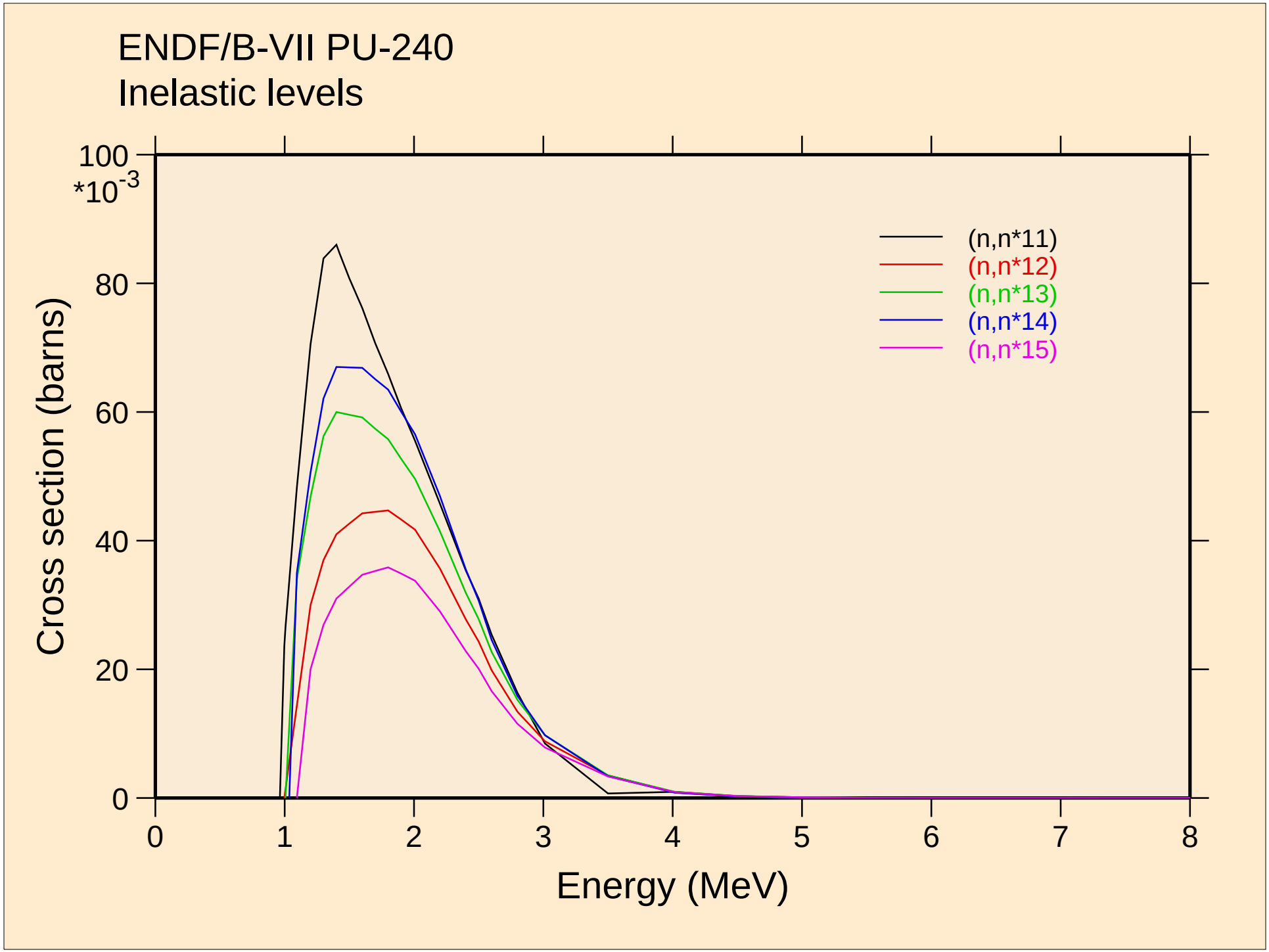

ENDF/B-VII PU-240
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
10
20
30
40
50
60
70
0
5
10
15
20

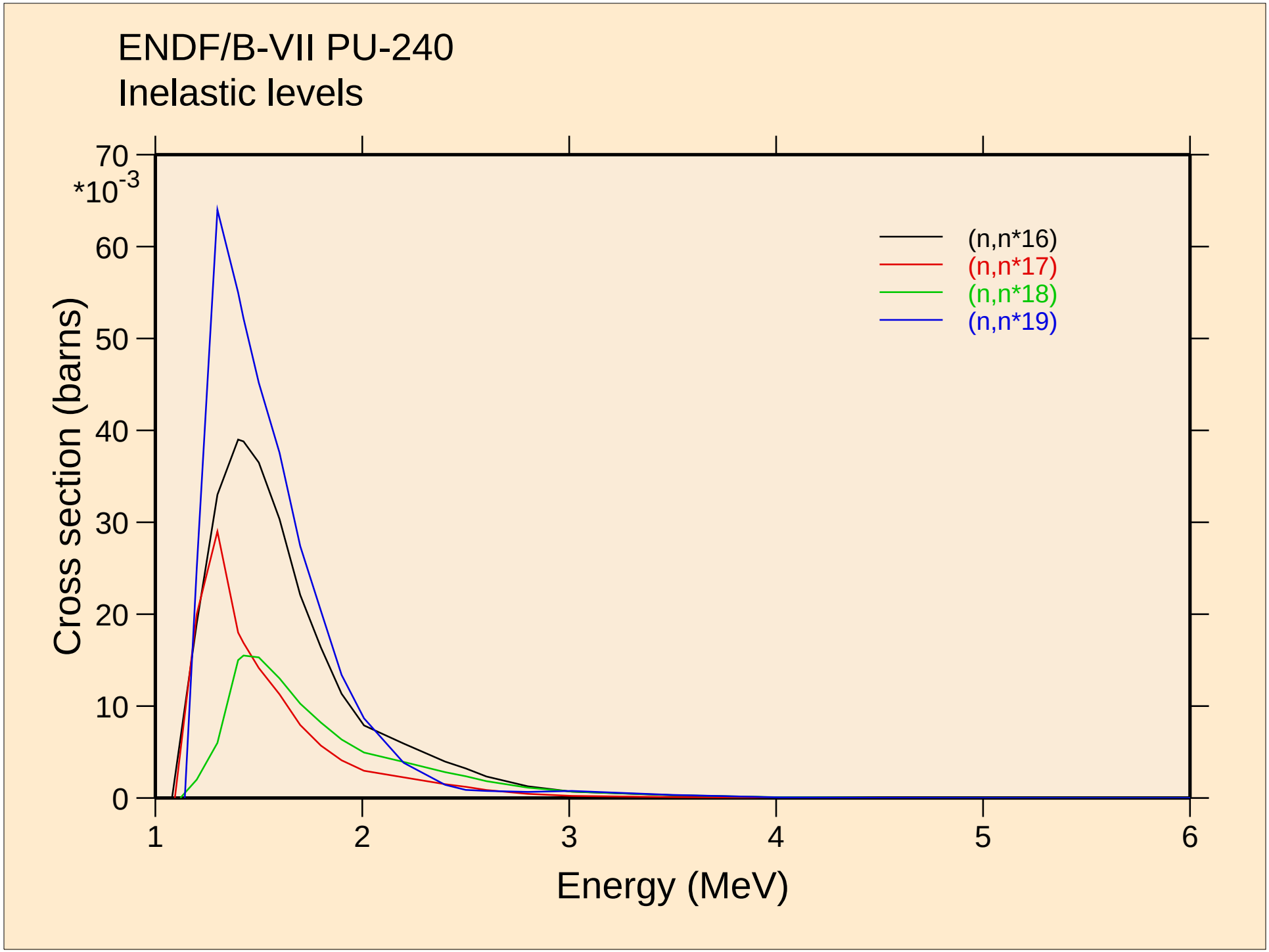

ENDF/B-VII PU-240
Damage
*10-3
damage
Damage (MeV-barns)
80
70
60
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

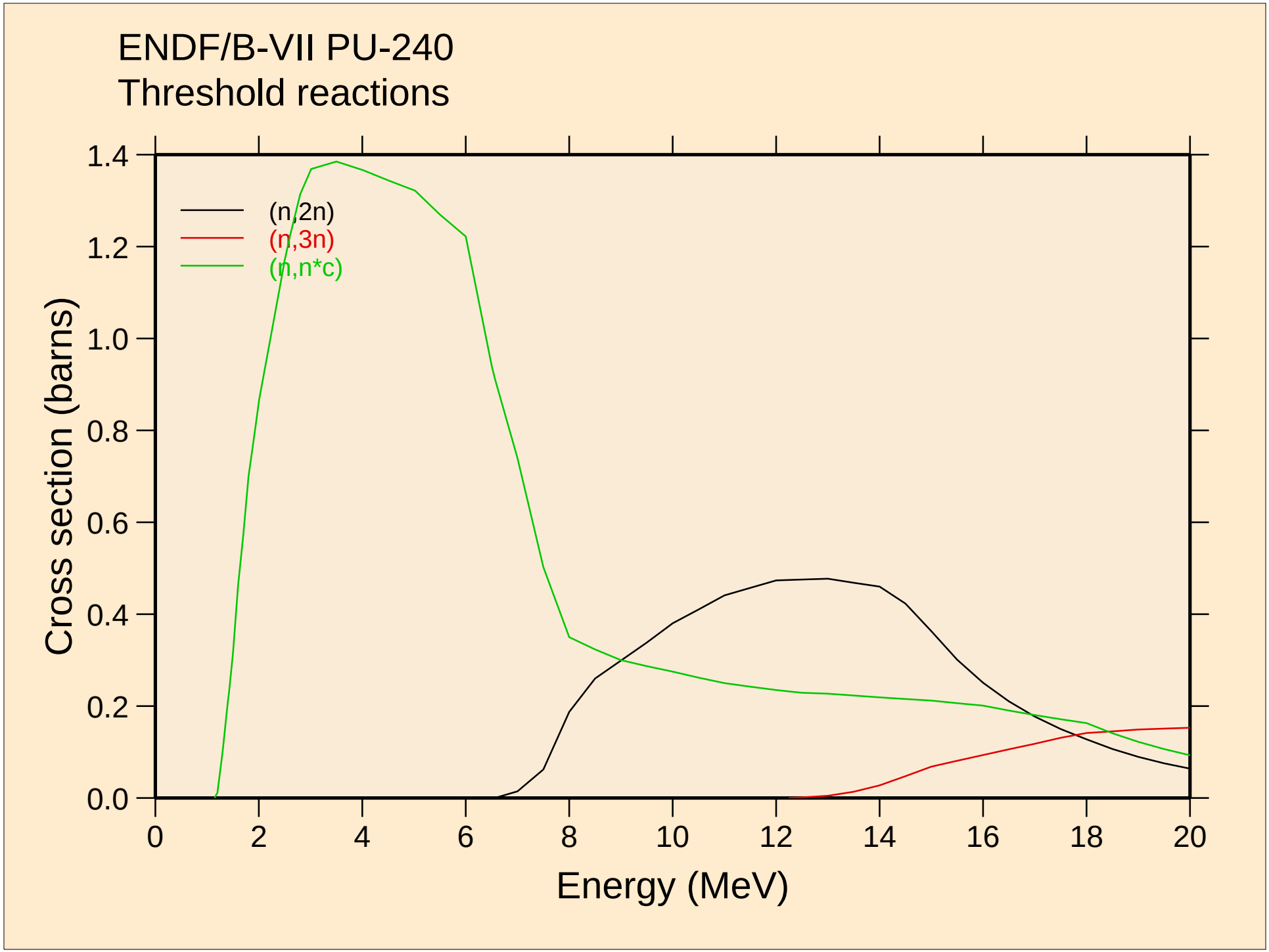

ENDF/B-VII PU-240
Non-threshold reactions
(n,f)
(n,gma)
Cross section (barns)
10^0
10^-1
10^-2
10^-3
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

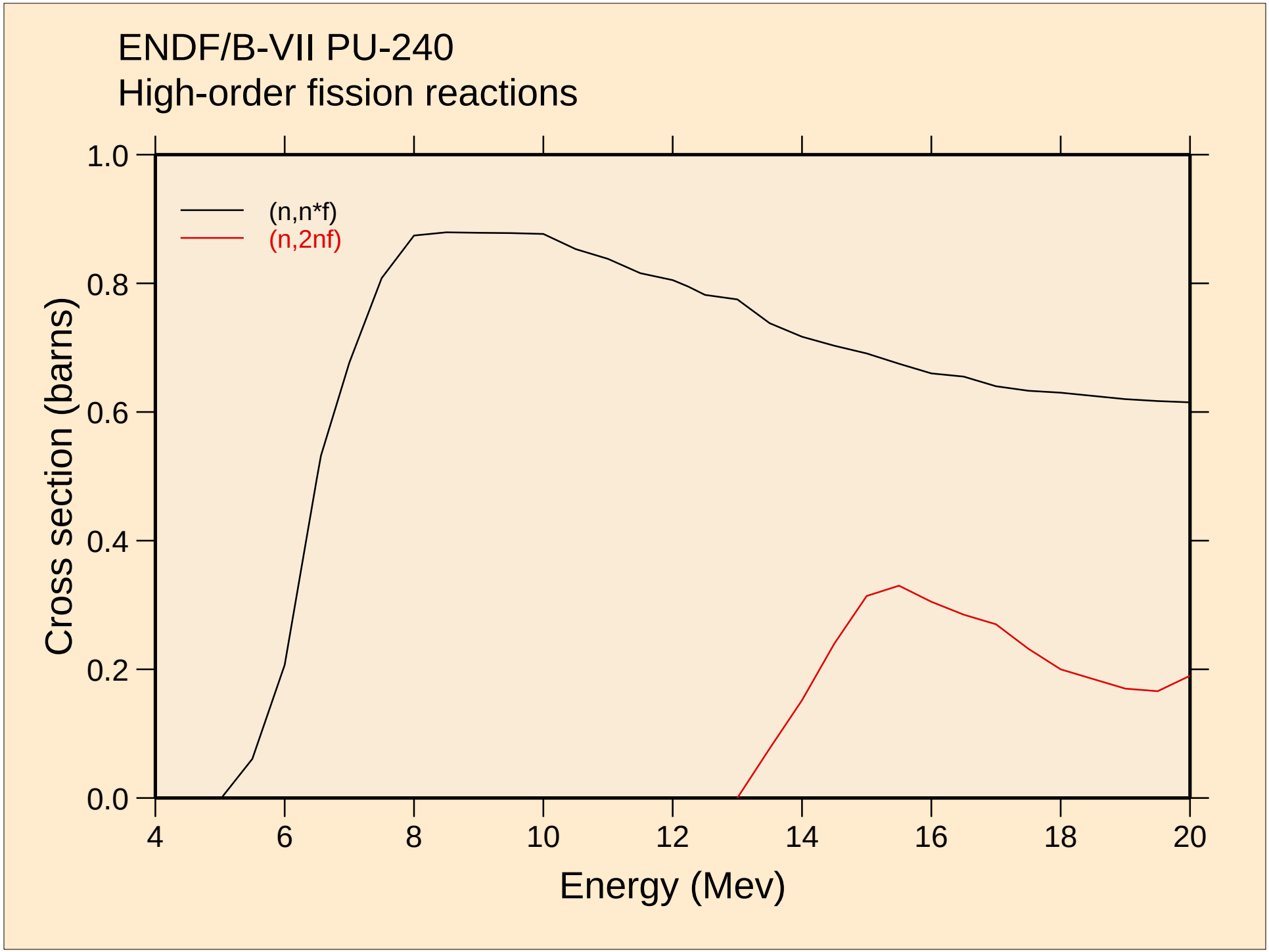

ENDF/B-VII PU-240
Inelastic levels
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

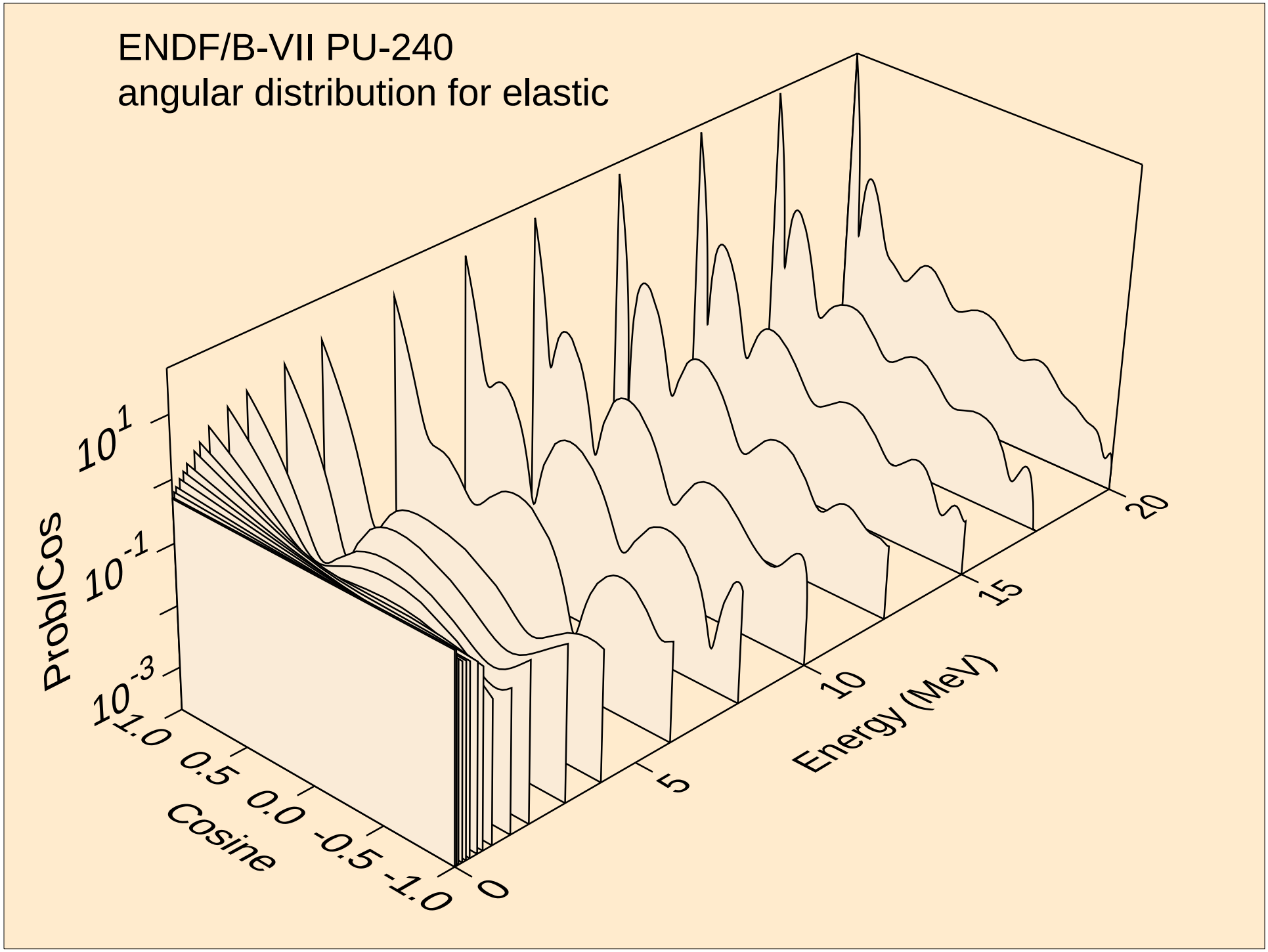

ENDF/B-VII PU-240
Inelastic levels
120
*10-3
100
80
60
40
20
0
Cross section (barns)
0
1
2
3
4
5
6
7
8
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

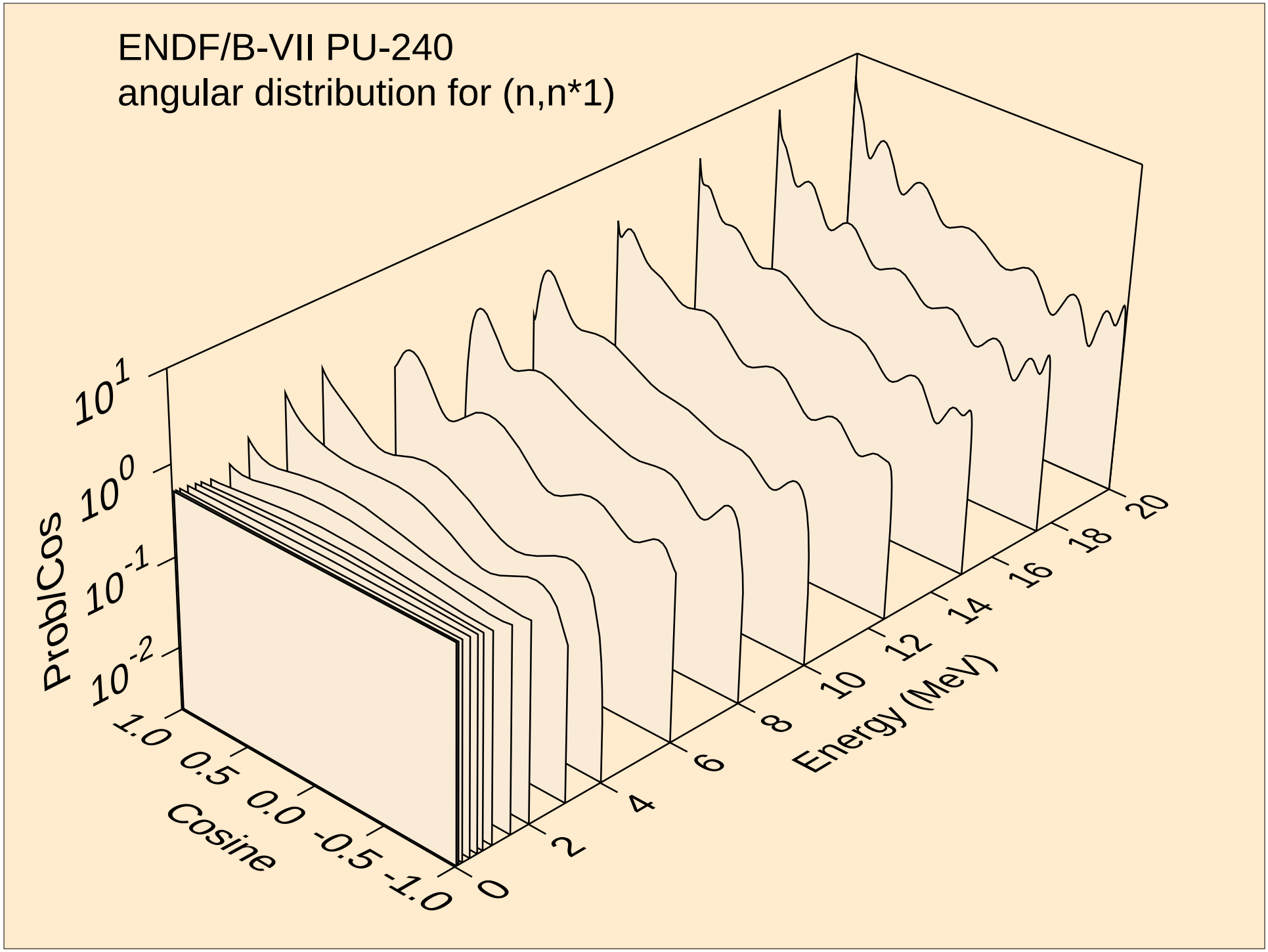

ENDF/B-VII PU-240
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
0
1
2
3
4
5
6
7
8
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

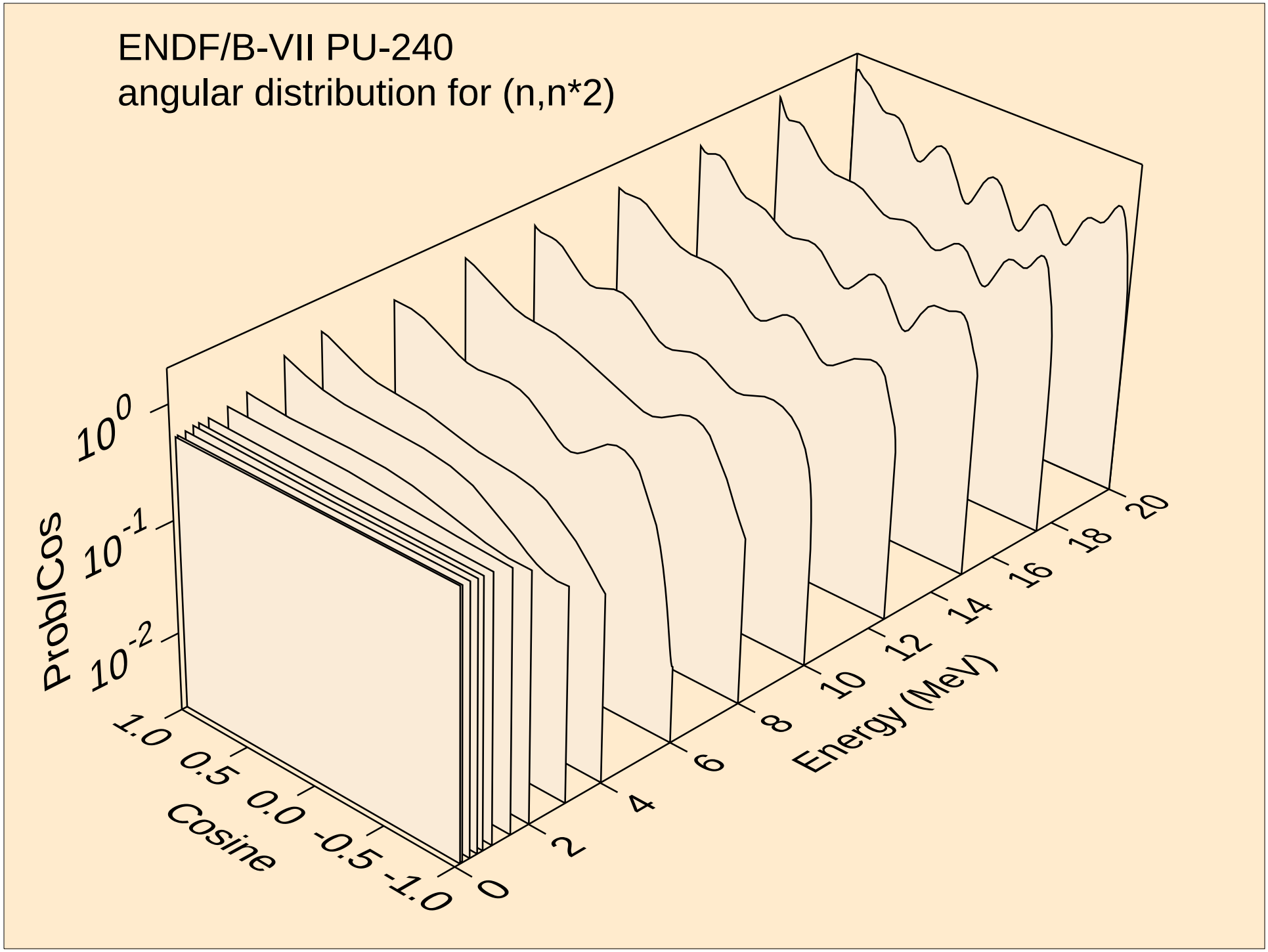

ENDF/B-VII PU-240
Inelastic levels
Cross section (barns)
*10-3
70
60
50
40
30
20
10
0
1
2
3
4
5
6
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)

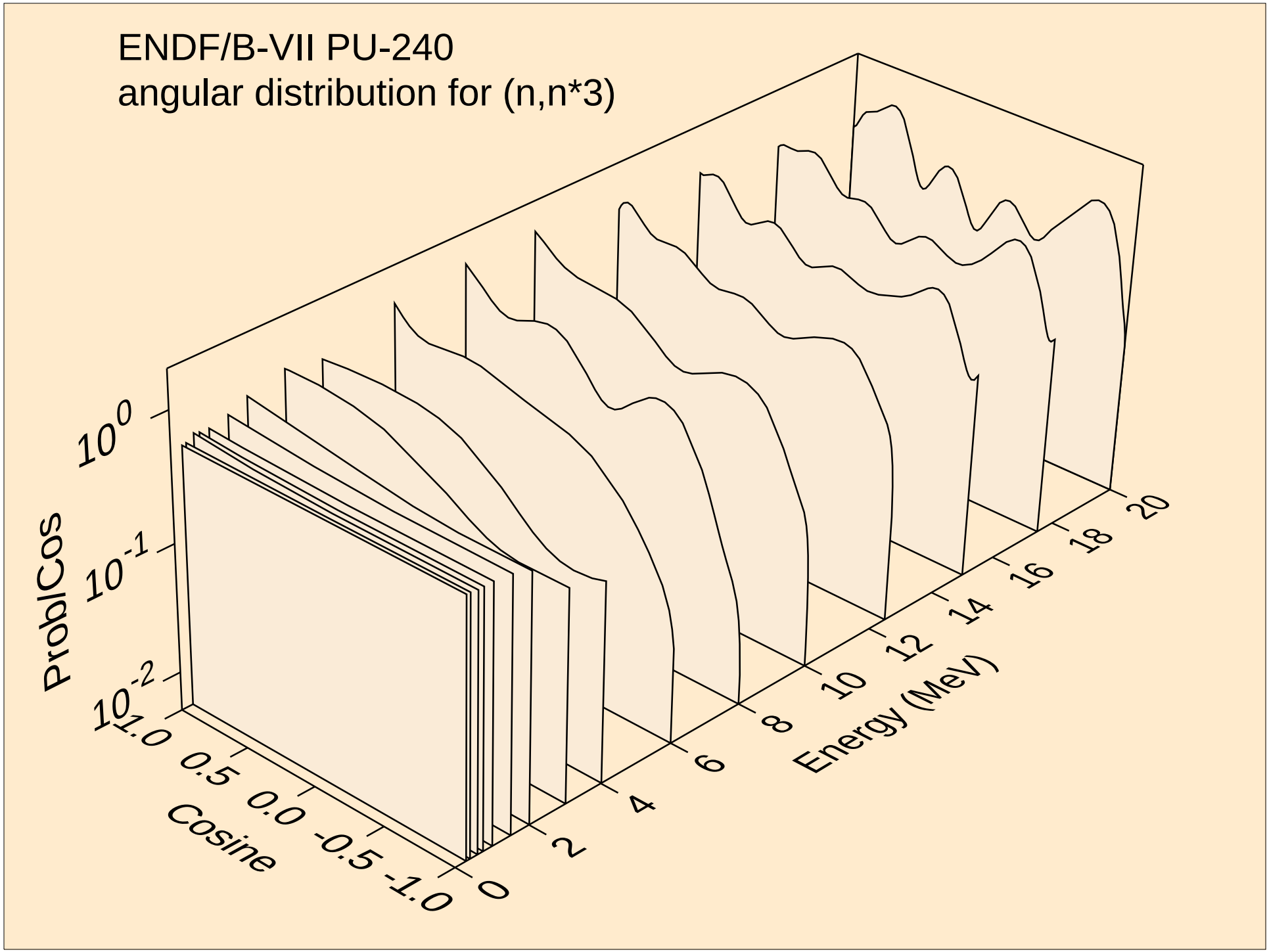

ENDF/B-VII PU-240
Threshold reactions
(n,2n)
(n,3n)
(n,n*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
2
4
6
8
10
12
14
16
18
20

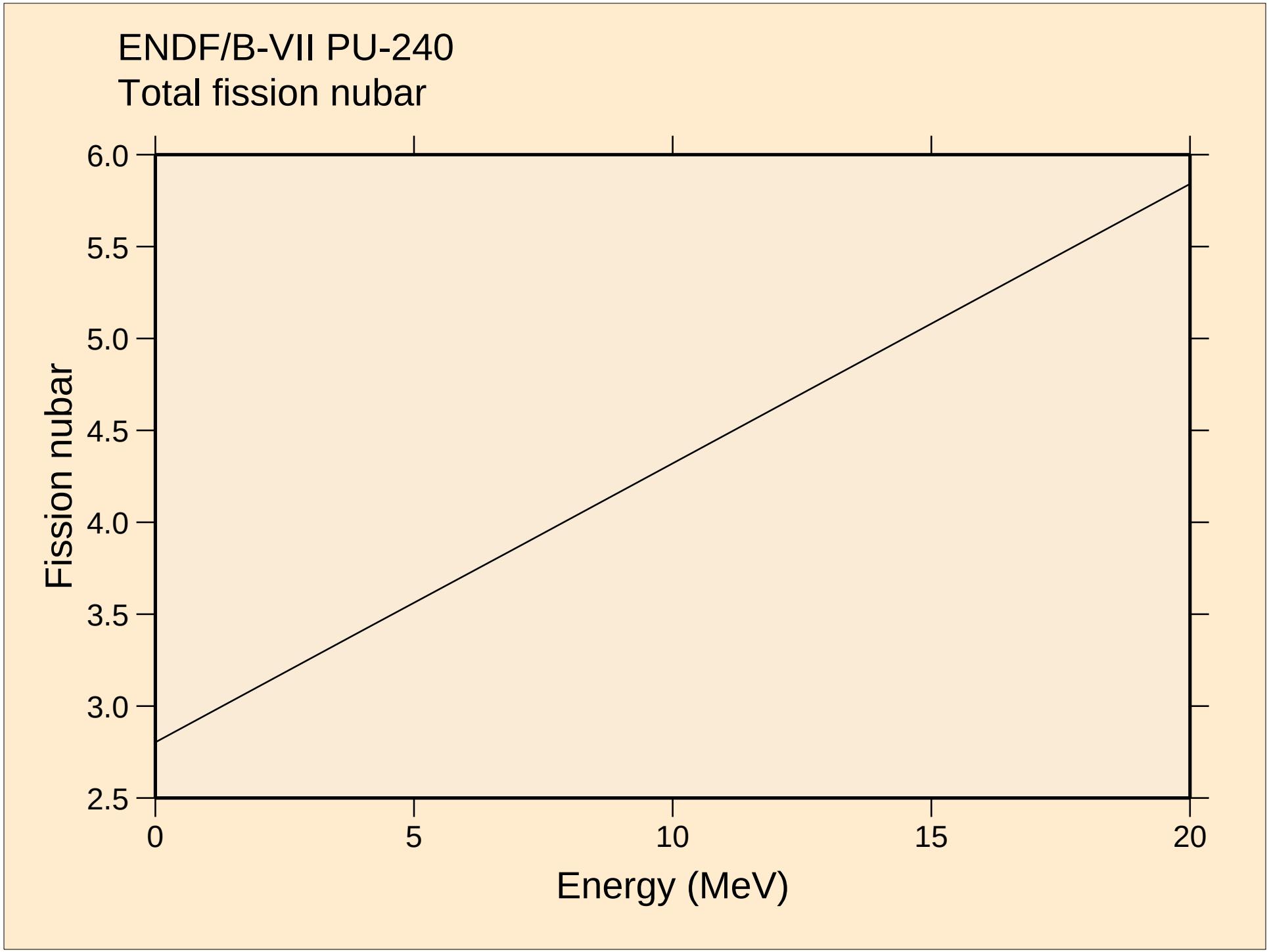

ENDF/B-VII PU-240
High-order fission reactions
(n,n*f)
(n,2nf)
Cross section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
4
6
8
10
12
14
16
18
20
Energy (Mev)

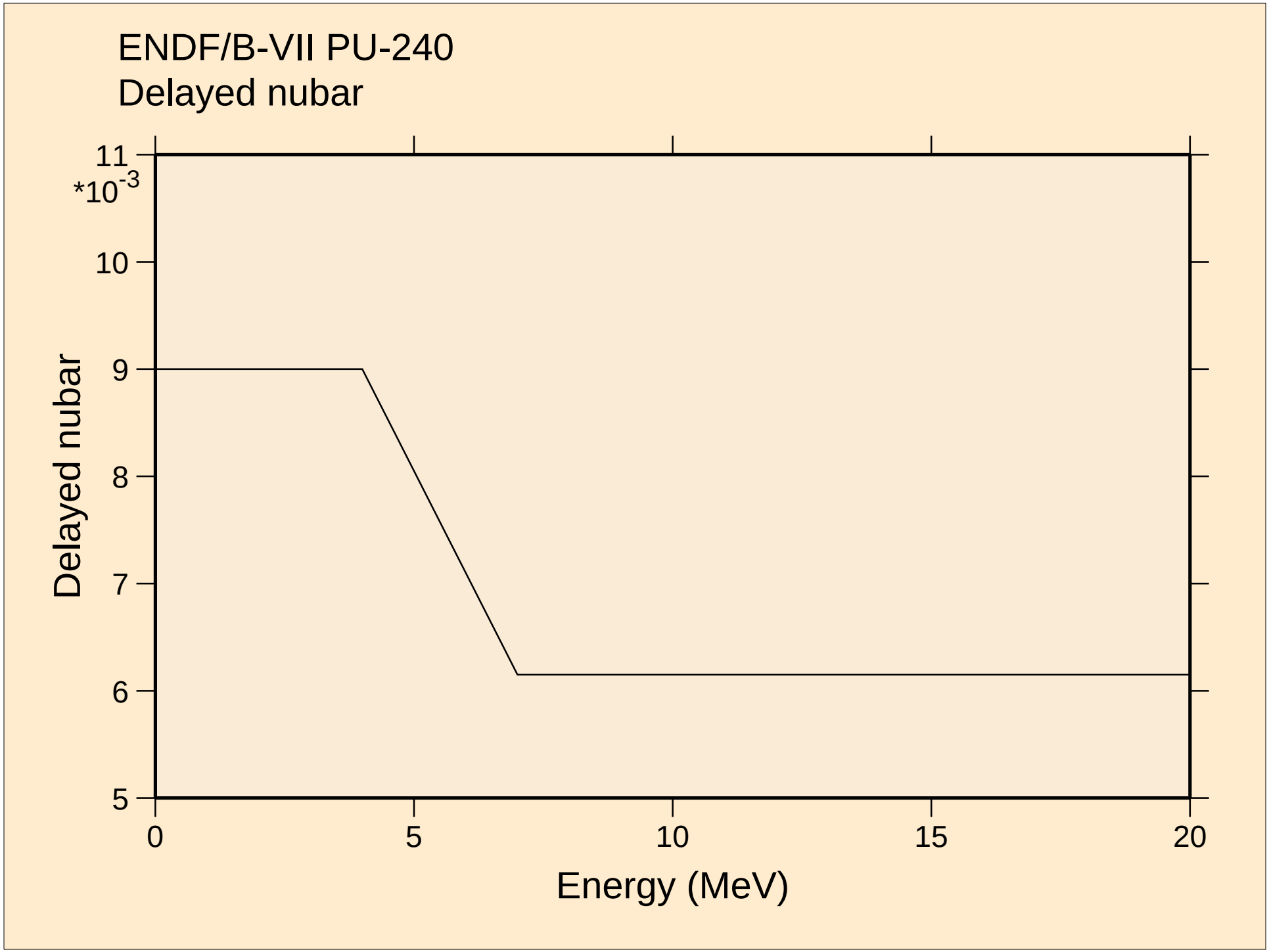

ENDF/B-VII PU-240
angular distribution for elastic
ProbICos
10^{1}
10^{-1}
10^{-3}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

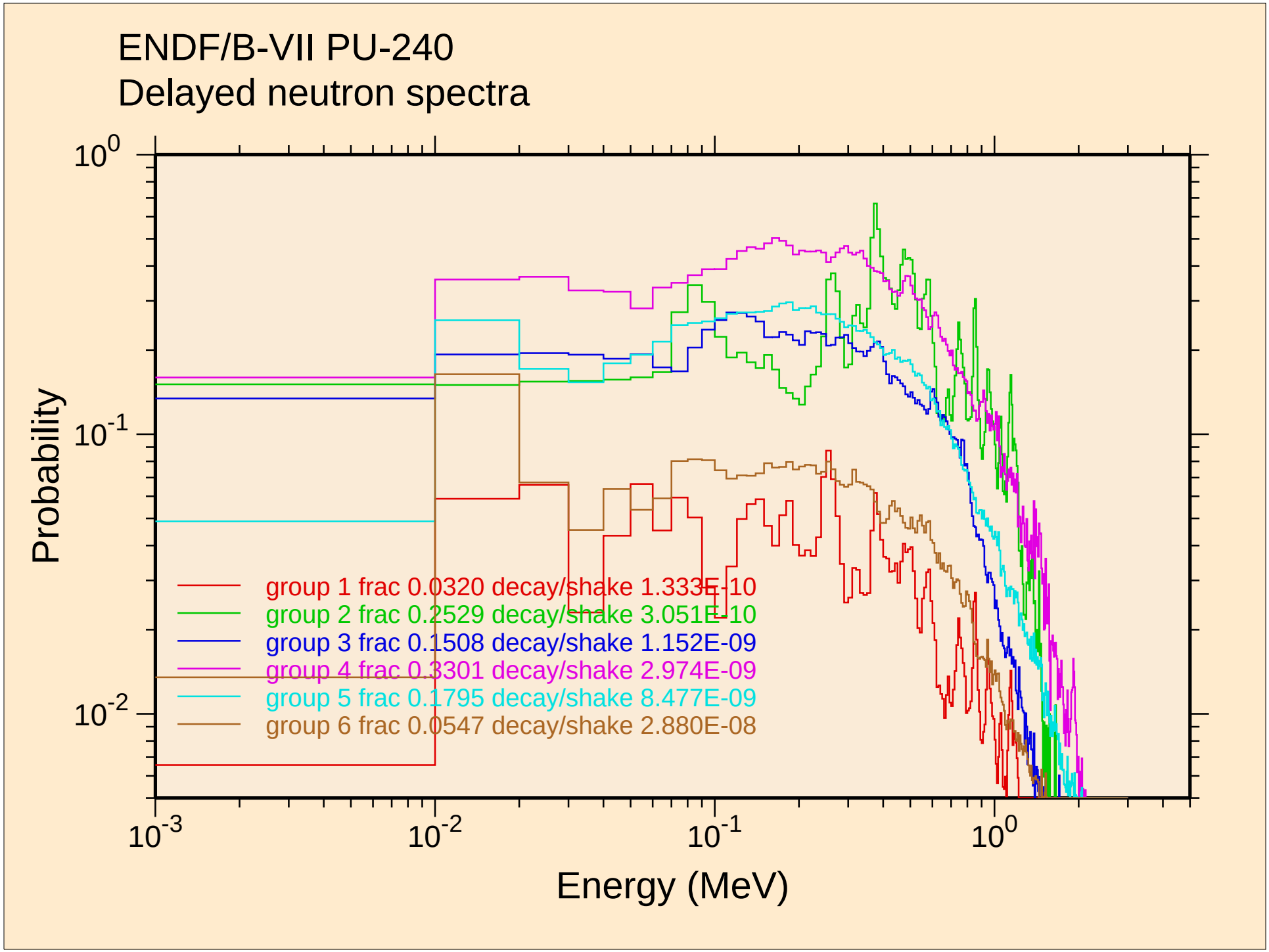

ENDF/B-VII PU-240
angular distribution for (n,n*1)
Prob\Cos
10^{1}
10^{0}
10^{-1}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

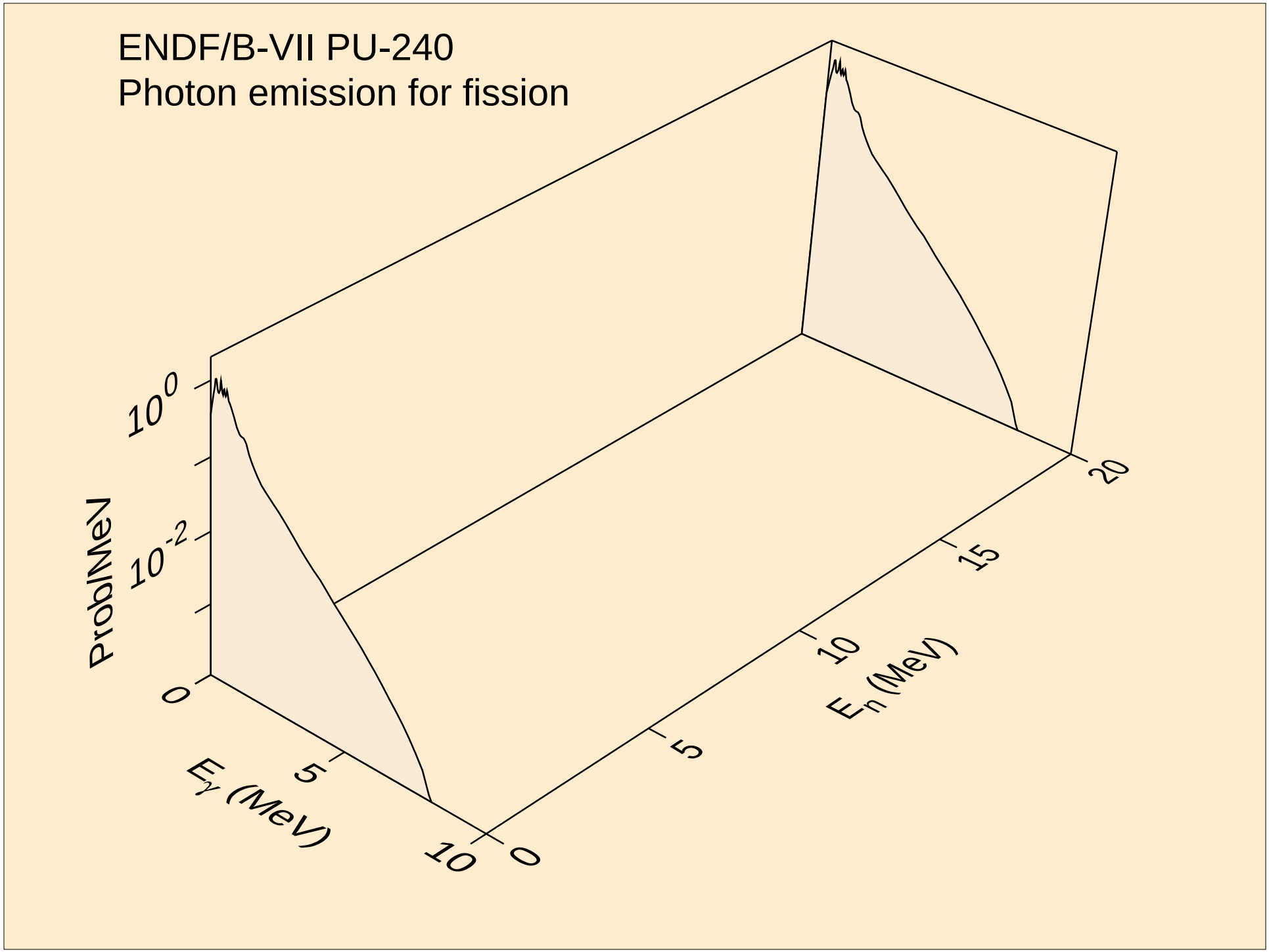

ENDF/B-VII PU-240
angular distribution for (n,n*2)
Prob\Cos
10^{0}
10^{-1}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

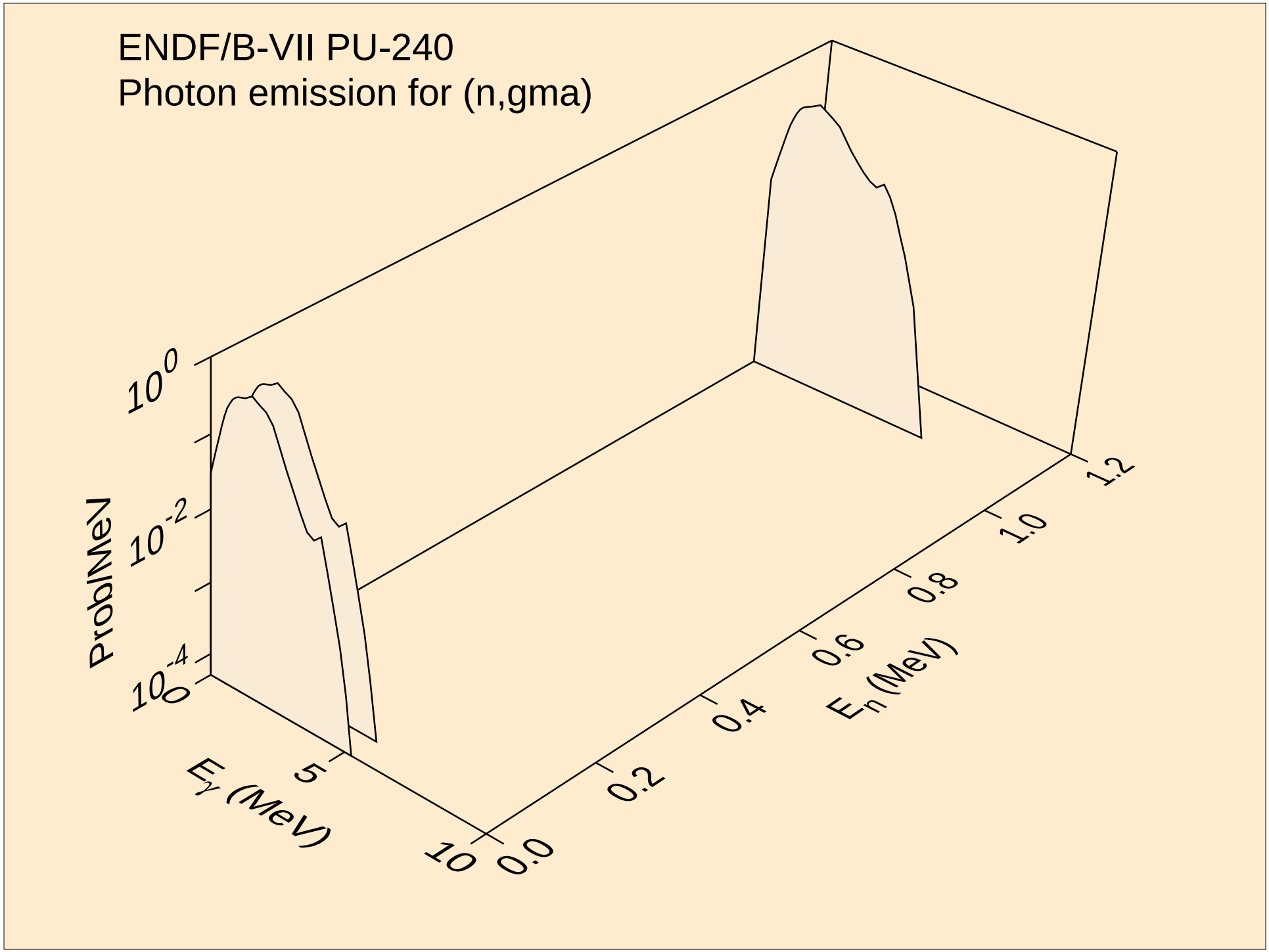

ENDF/B-VII PU-240
angular distribution for (n,n*3)
Prob\Cos
10^{0}
10^{-1}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

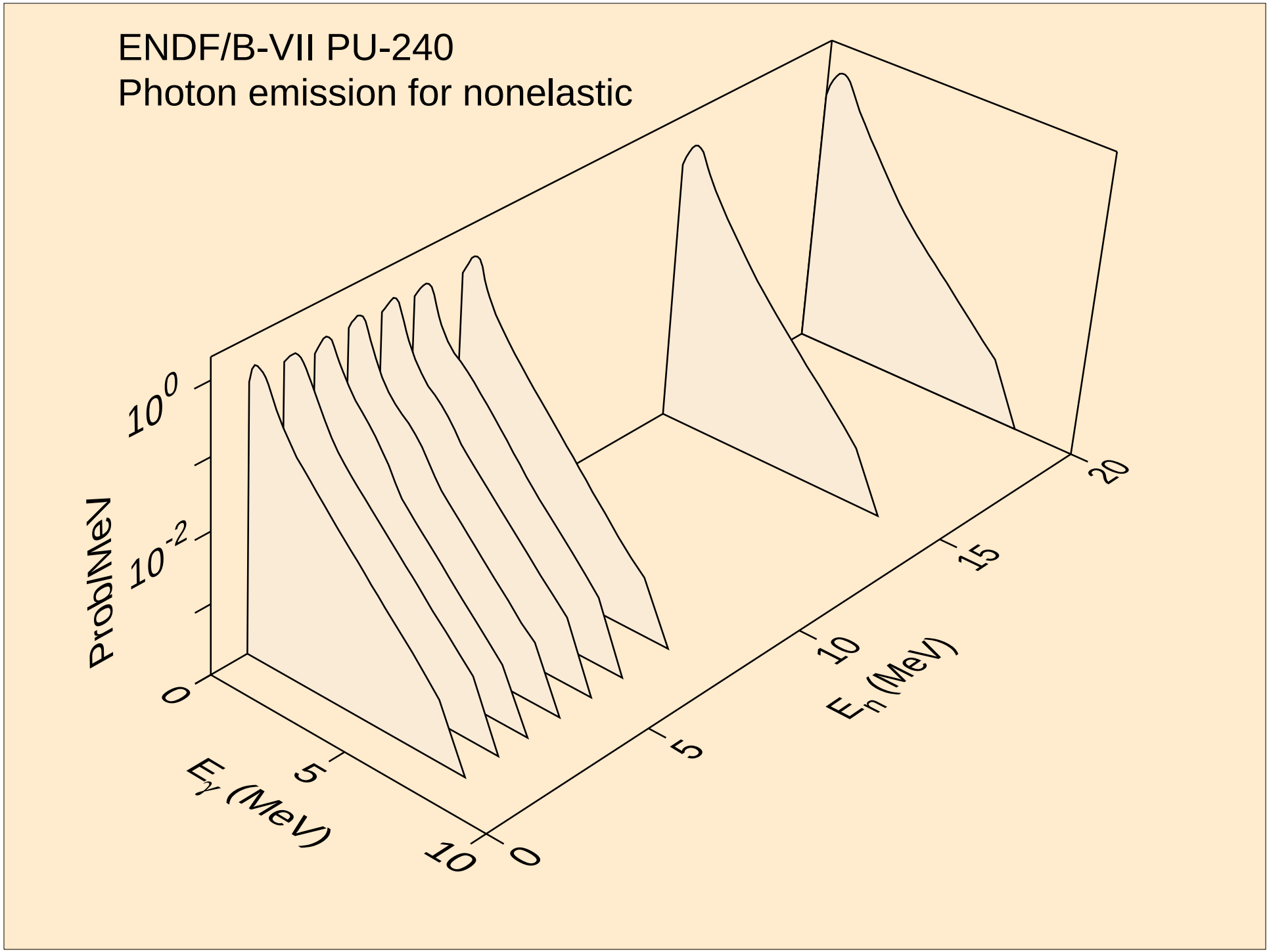

ENDF/B-VII PU-240
Total fission nubar
Fission nubar
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
0
5
10
15
20
Energy (MeV)

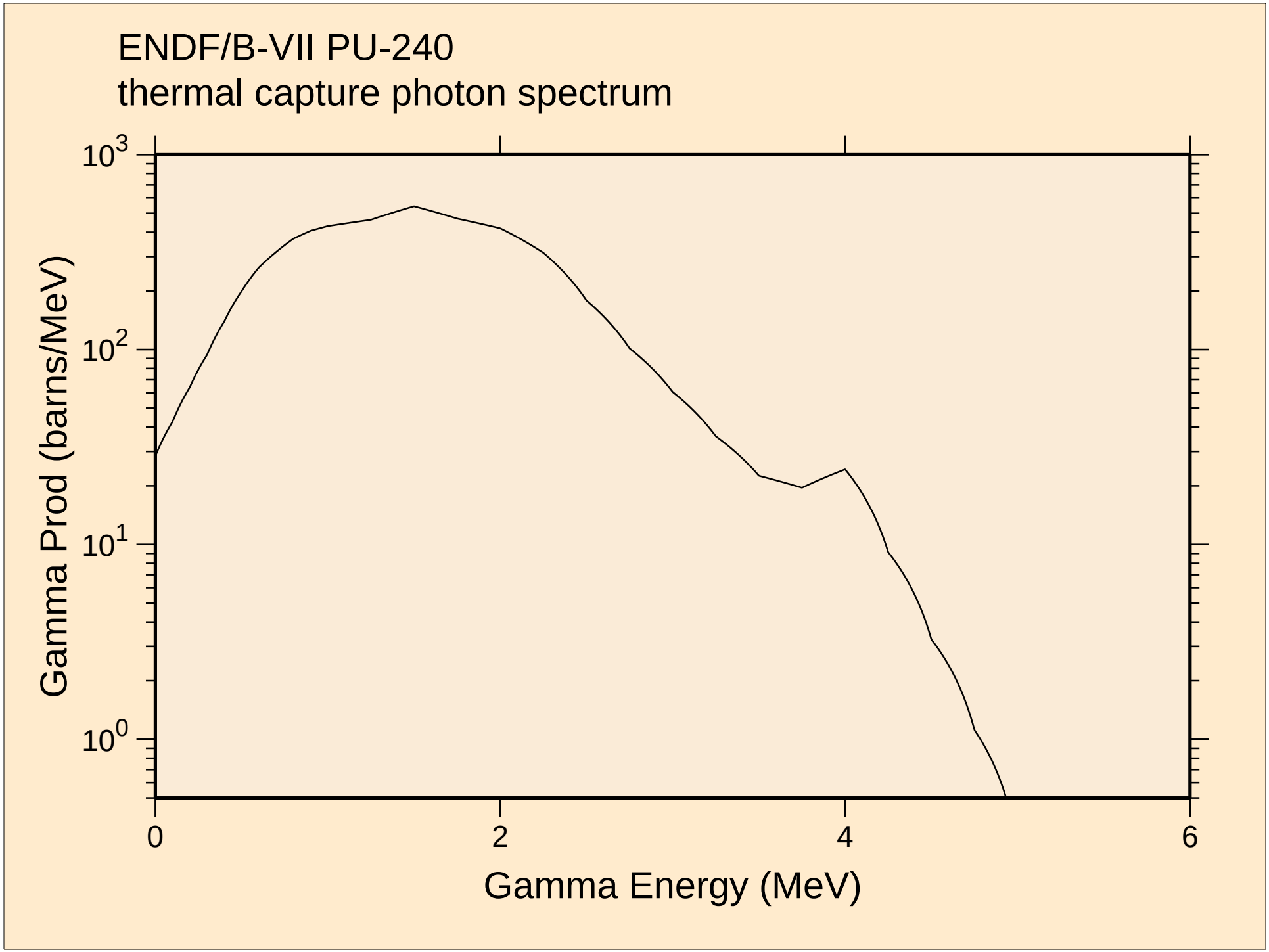

ENDF/B-VII PU-240
Delayed nubar
11
*10-3
10
9
8
7
6
5
Delayed nubar
0
5
10
15
20
Energy (MeV)

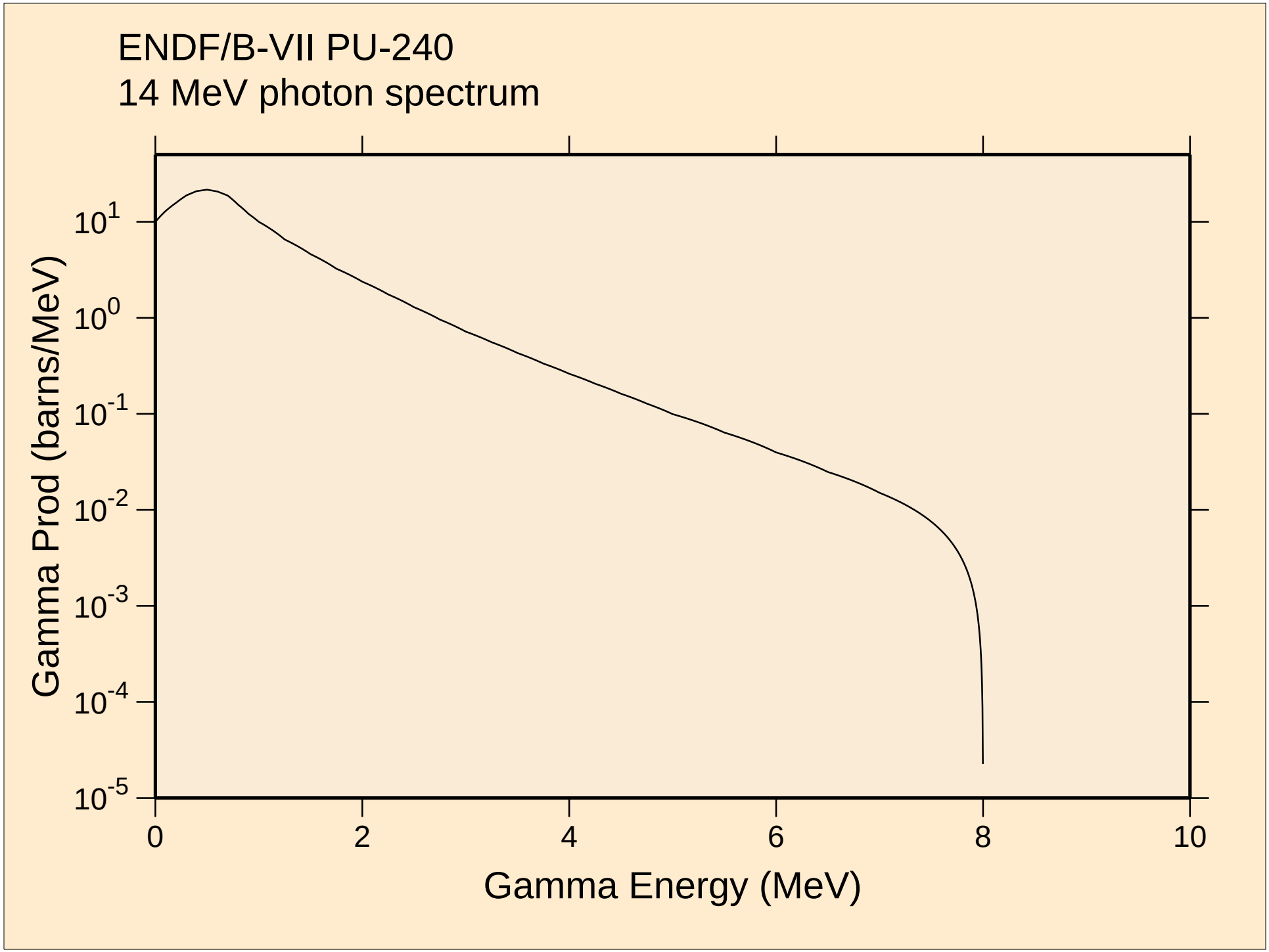

ENDF/B-VII PU-240
Delayed neutron spectra
Probability
Energy (MeV)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-2}
10^{-1}
10^{0}
group 1 frac 0.0320 decay/shake 1.333E-10
group 2 frac 0.2529 decay/shake 3.051E-10
group 3 frac 0.1508 decay/shake 1.152E-09
group 4 frac 0.3301 decay/shake 2.974E-09
group 5 frac 0.1795 decay/shake 8.477E-09
group 6 frac 0.0547 decay/shake 2.880E-08


ENDF/B-VII PU-240
Photon emission for fission
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
5
10
0
5
10
15
20
E_n (MeV)


ENDF/B-VII PU-240
Photon emission for (n,gma)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
E_γ (MeV)
0
5
10
E_n (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2


ENDF/B-VII PU-240
Photon emission for nonelastic
Prob/MeV
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
0
5
10
15
20
E_n (MeV)


ENDF/B-VII PU-240
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^3
10^2
10^1
10^0
0
2
4
6
Gamma Energy (MeV)


ENDF/B-VII PU-240
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
0
2
4
6
8
10
Gamma Energy (MeV)