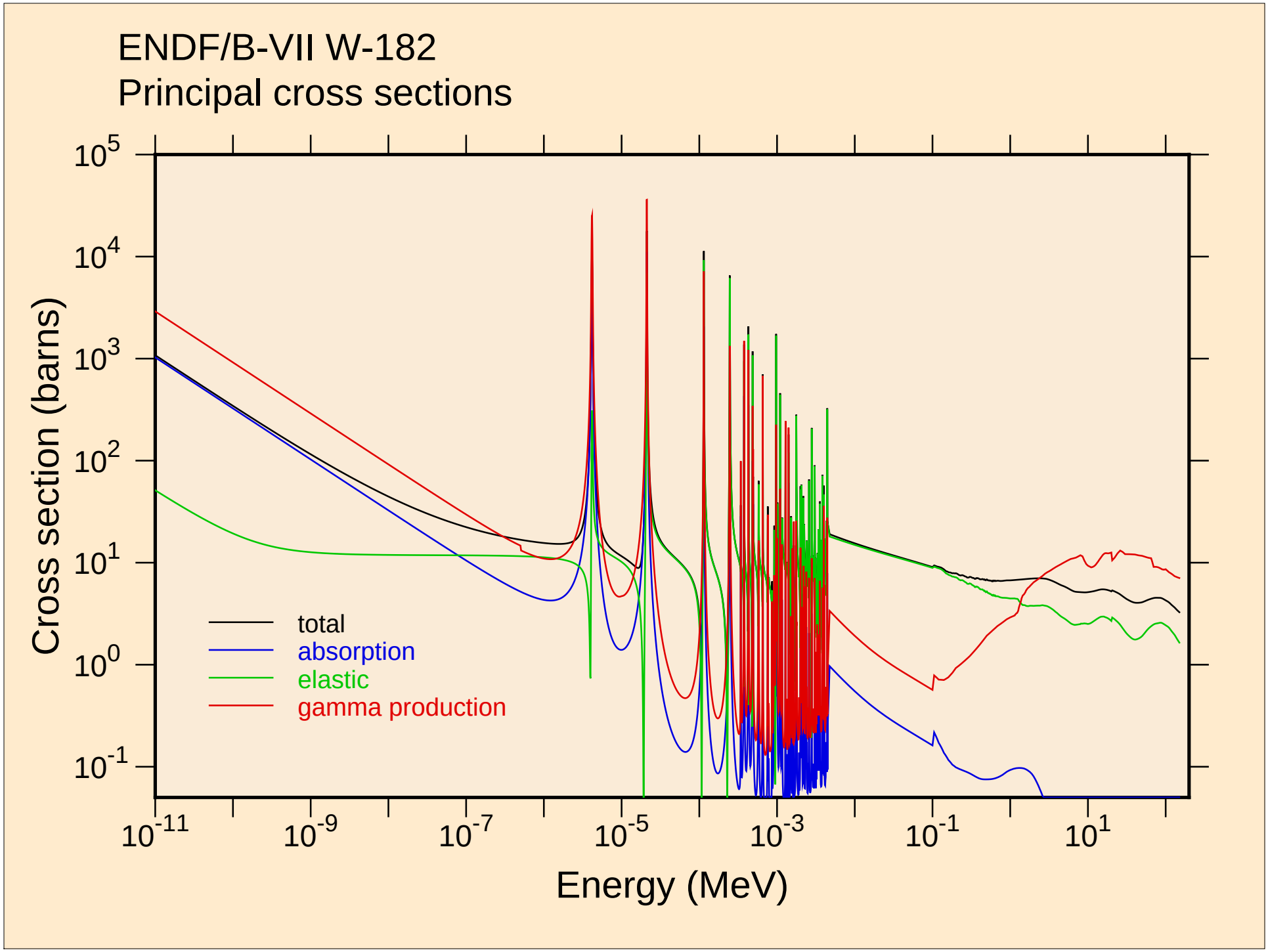
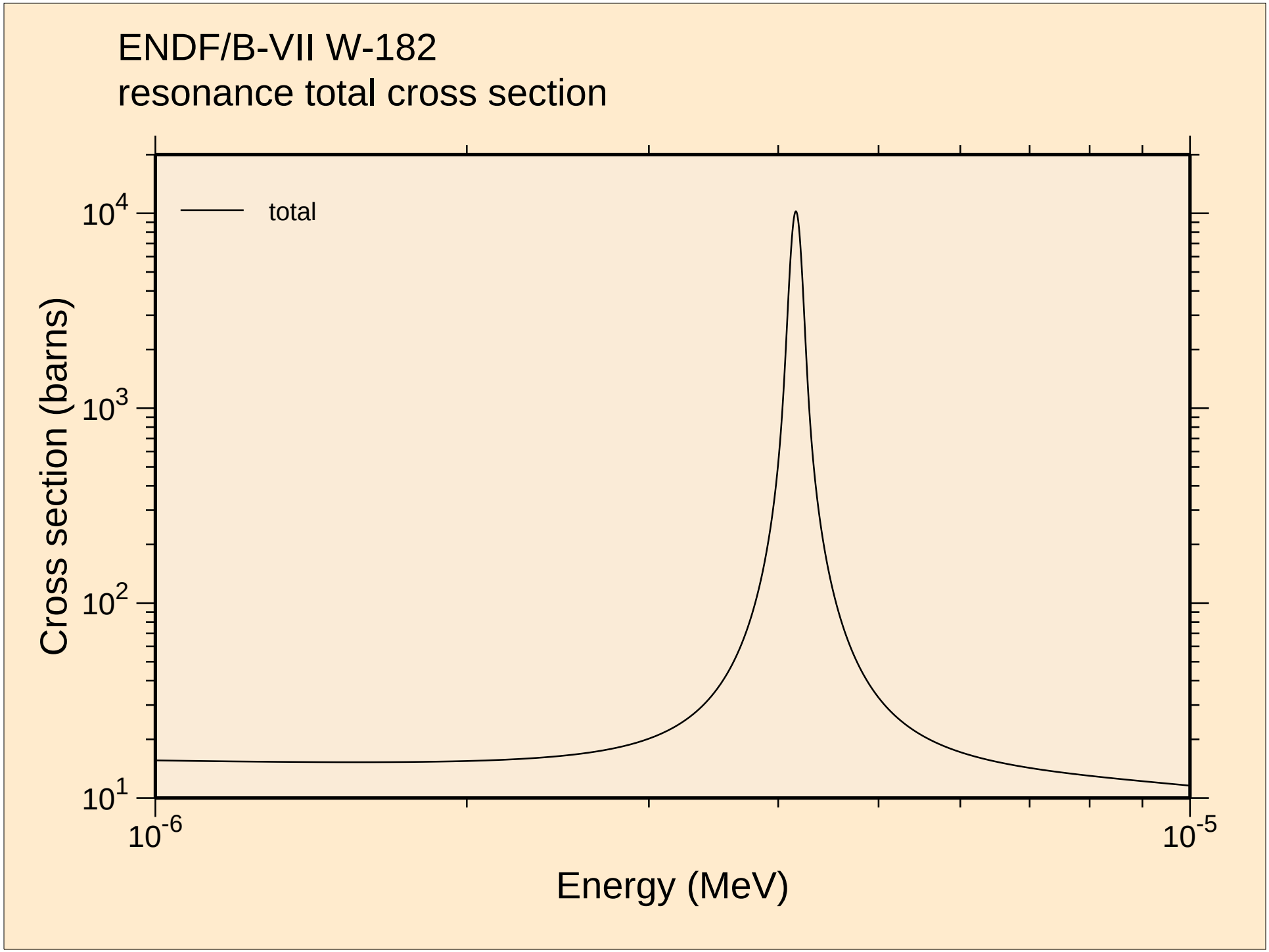
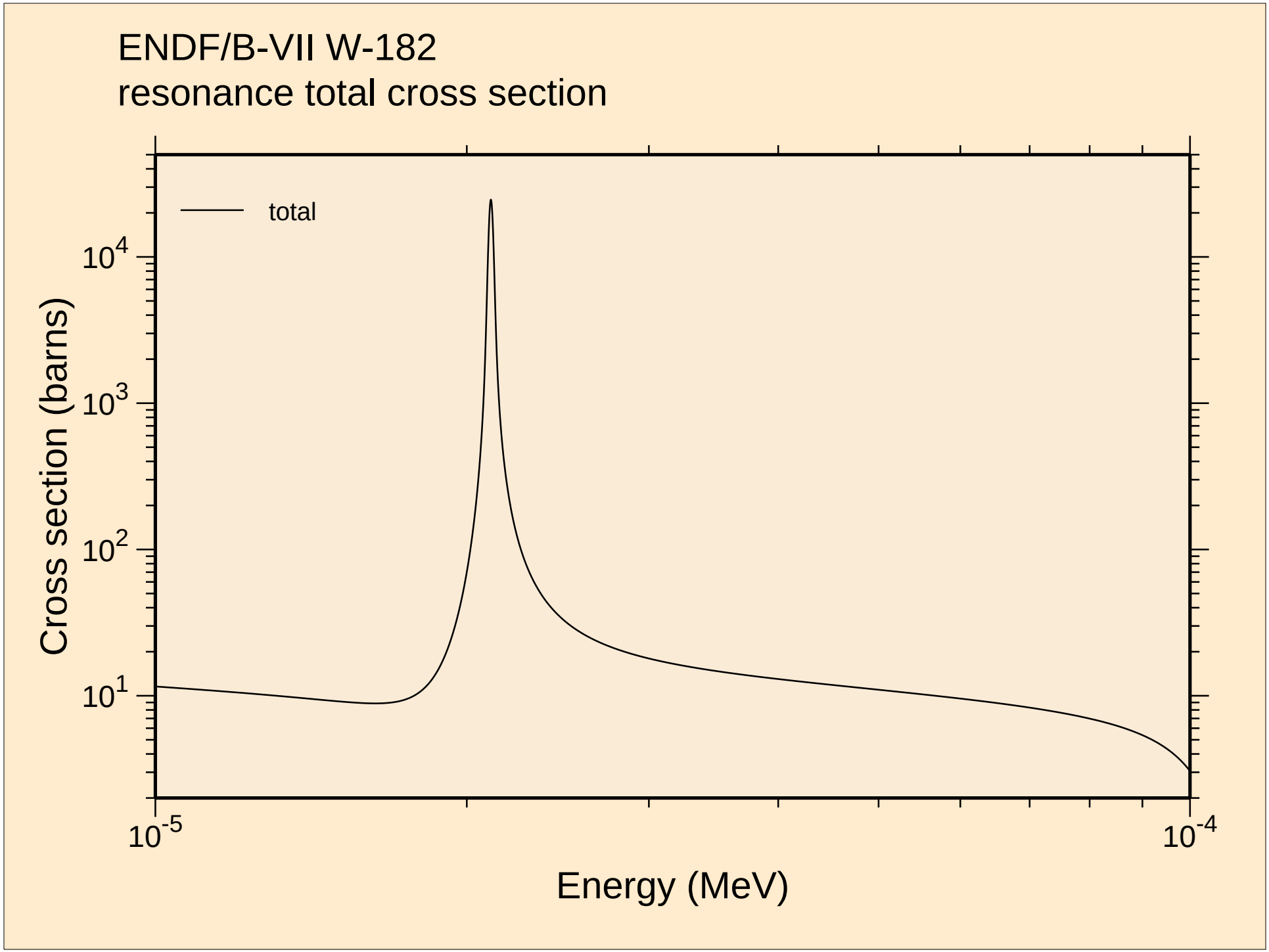
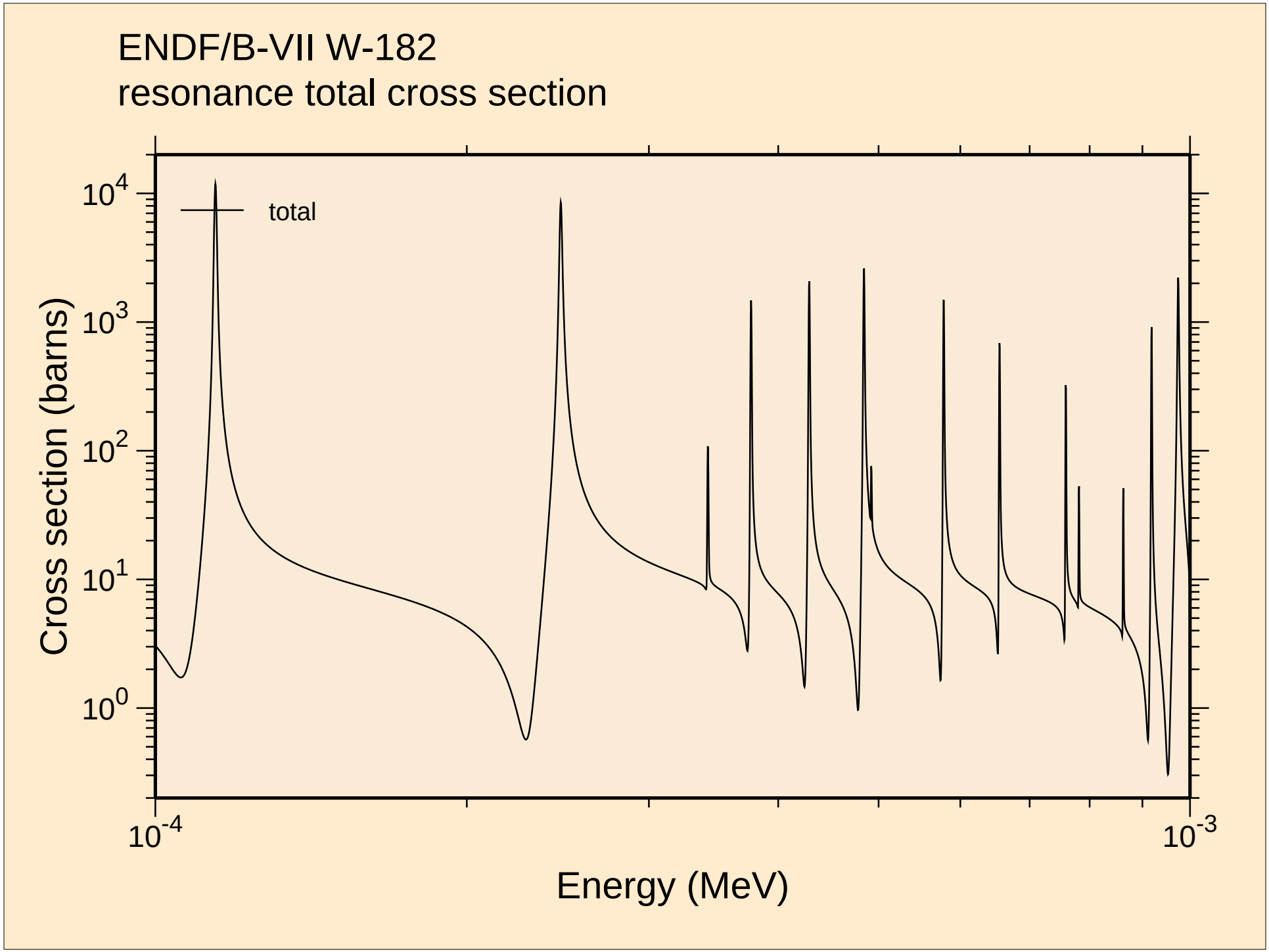
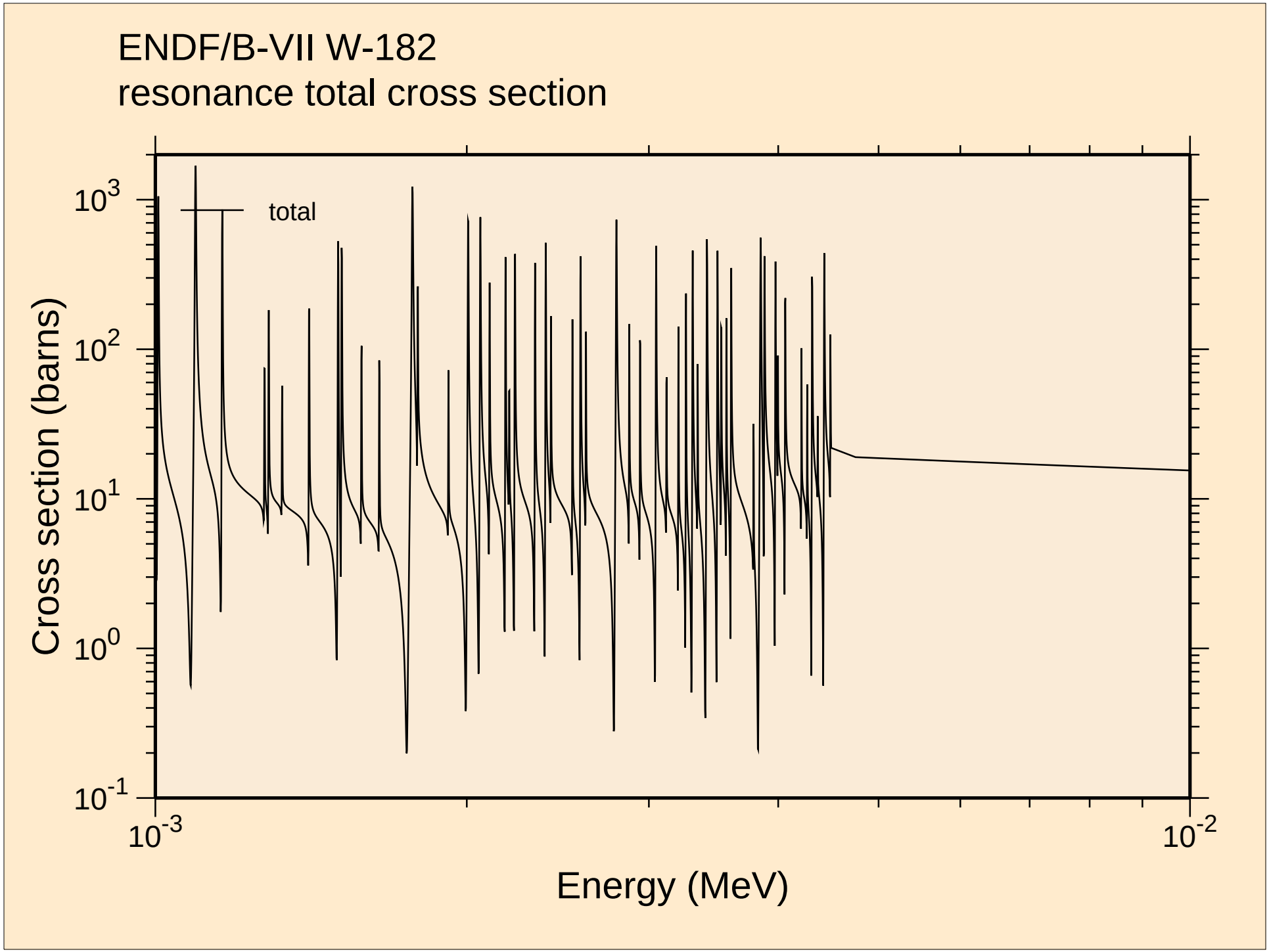
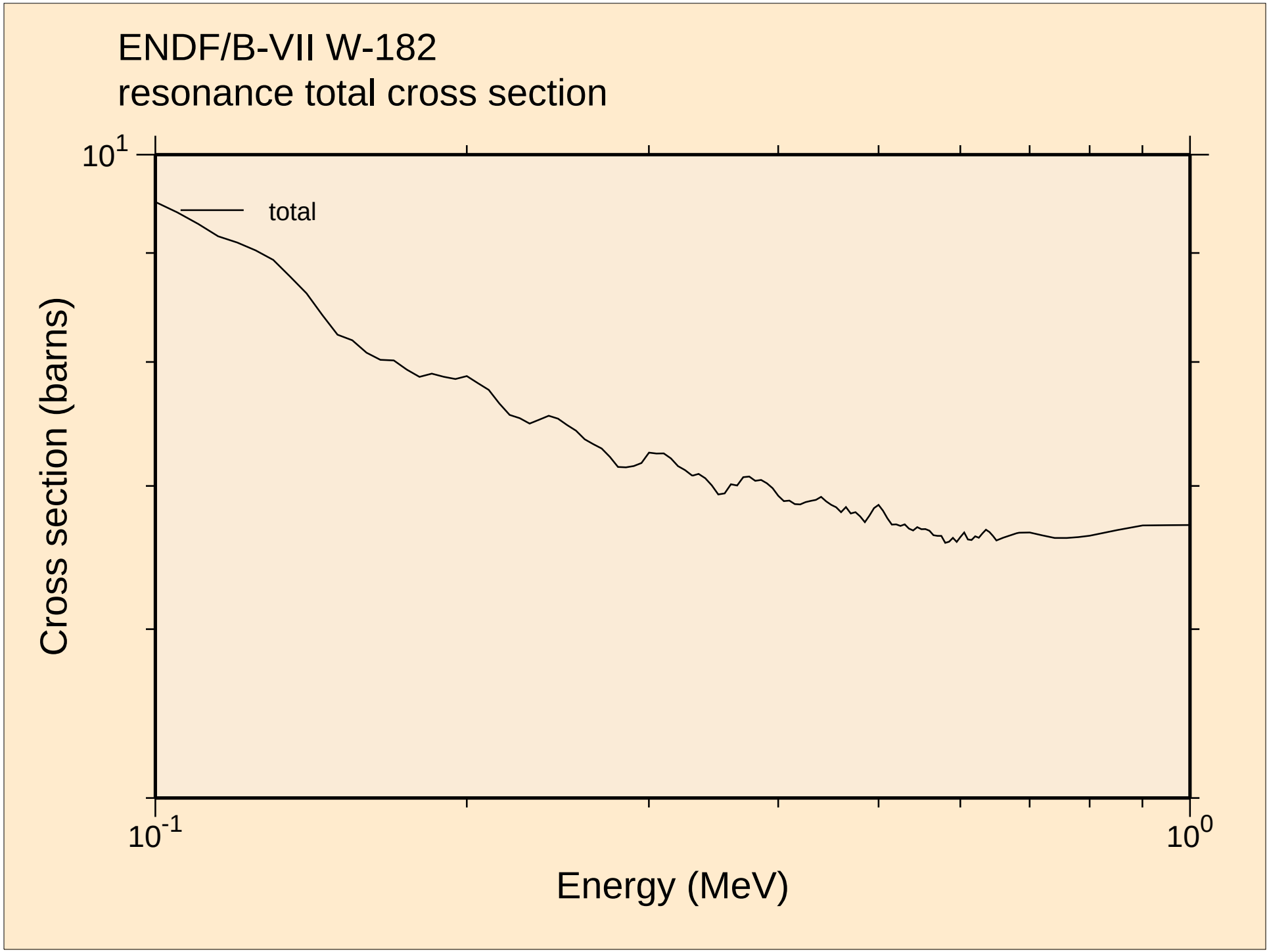

ENDF/B-VII W-182
Principal cross sections
Cross section (barns)
10^{5}
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
total
absorption
elastic
gamma production
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)

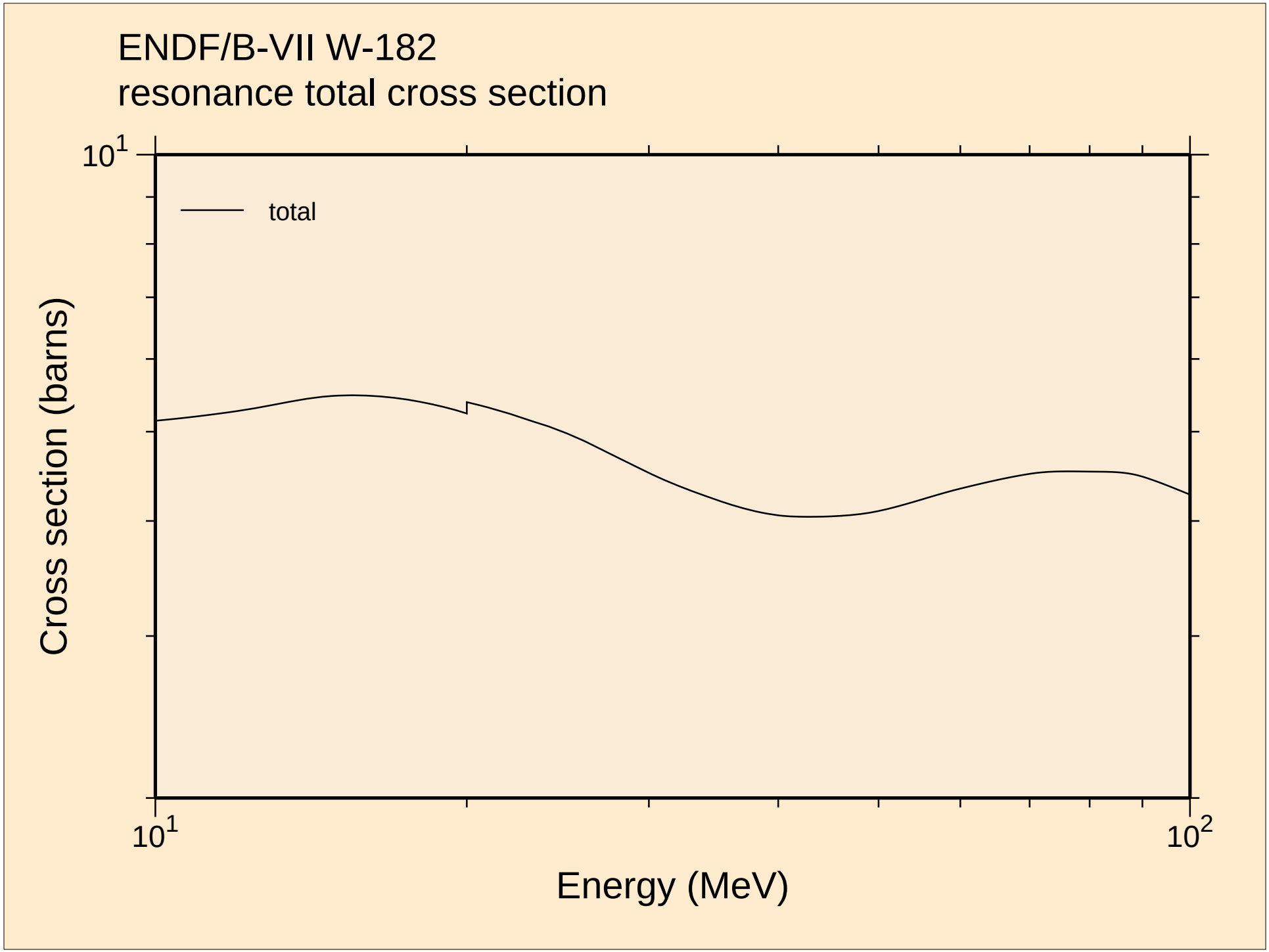

ENDF/B-VII W-182
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)

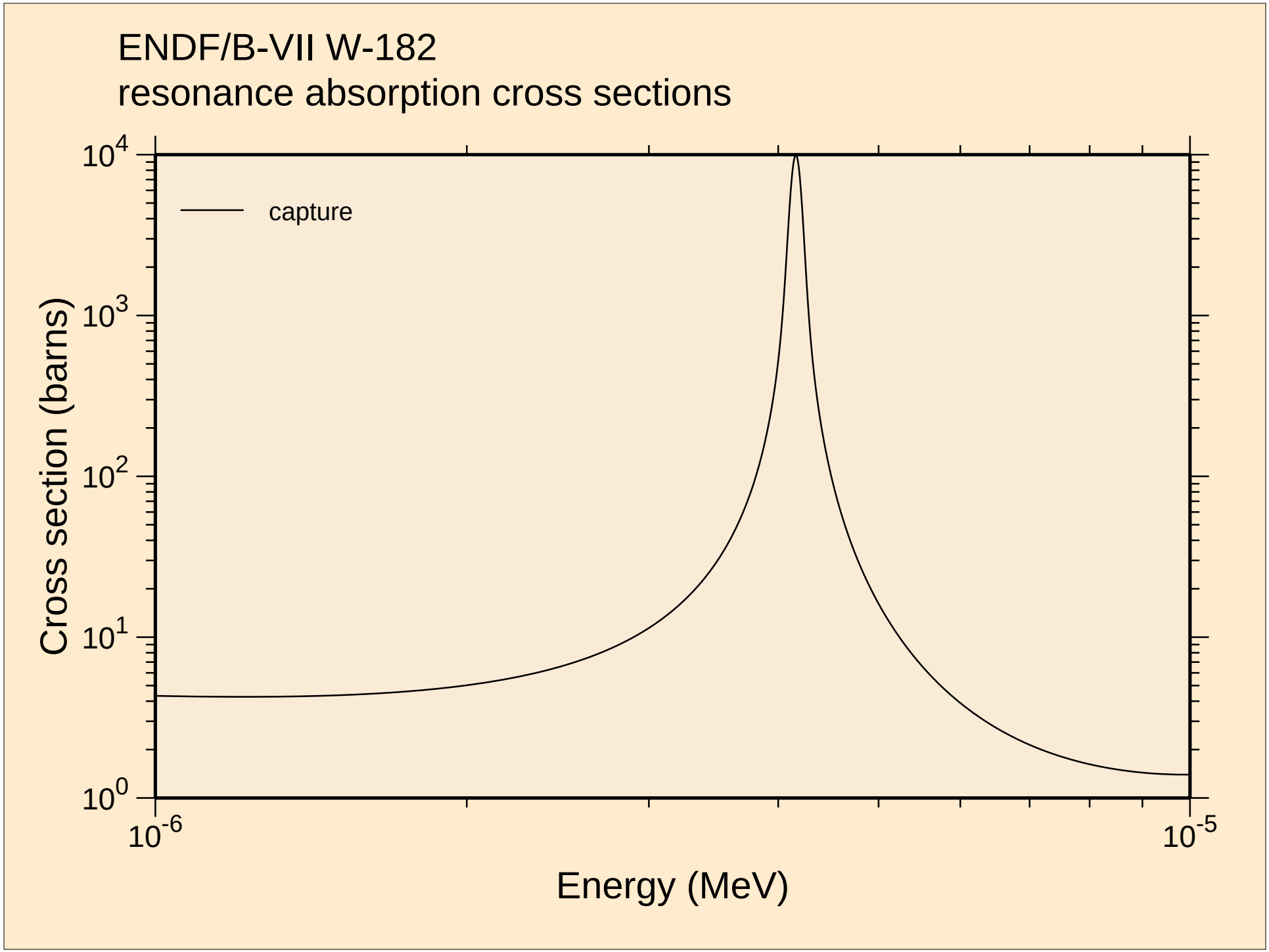

ENDF/B-VII W-182
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^{-5}
10^{-4}
Energy (MeV)

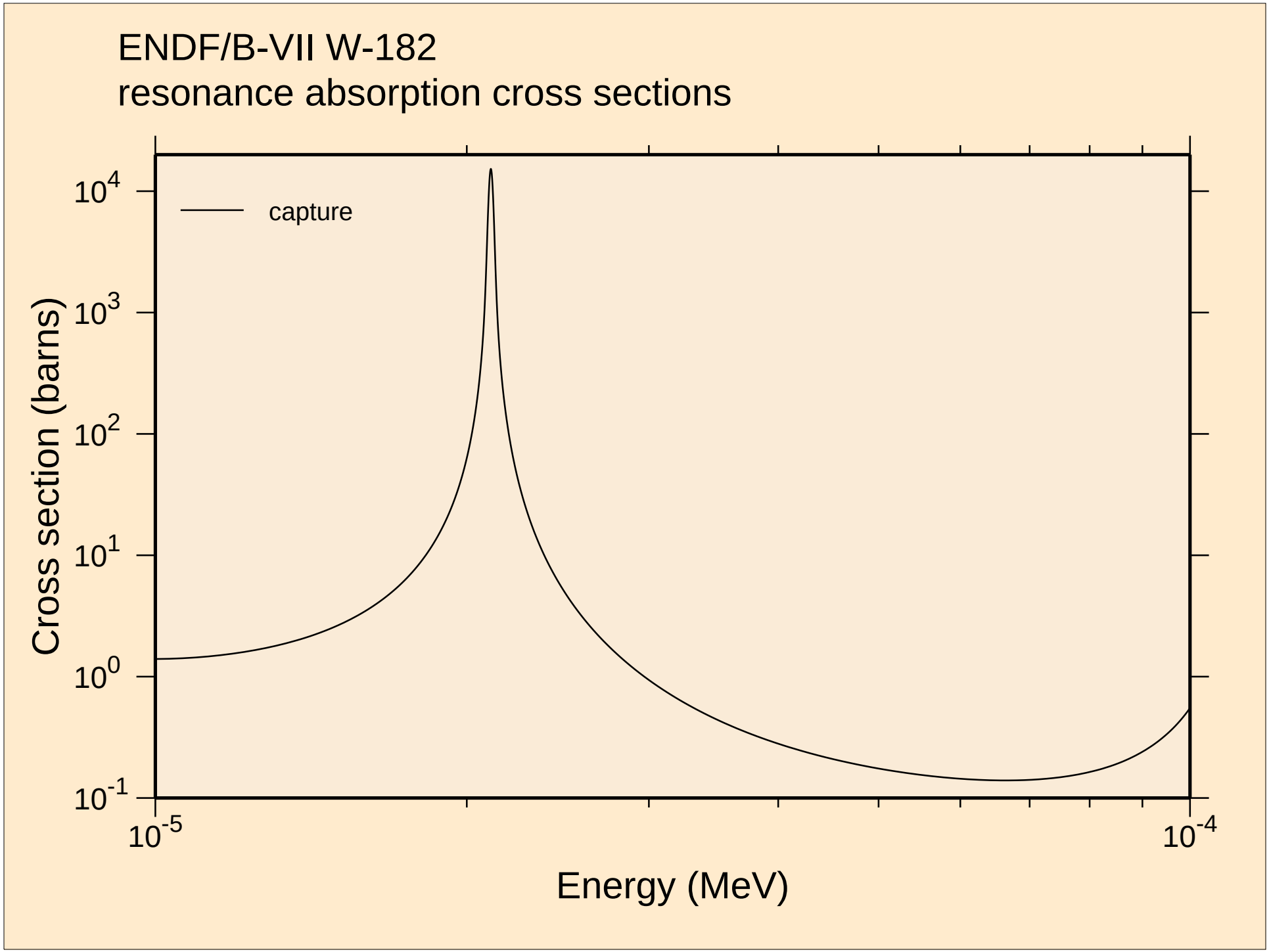

ENDF/B-VII W-182
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^0
10^{-4}
10^{-3}
Energy (MeV)

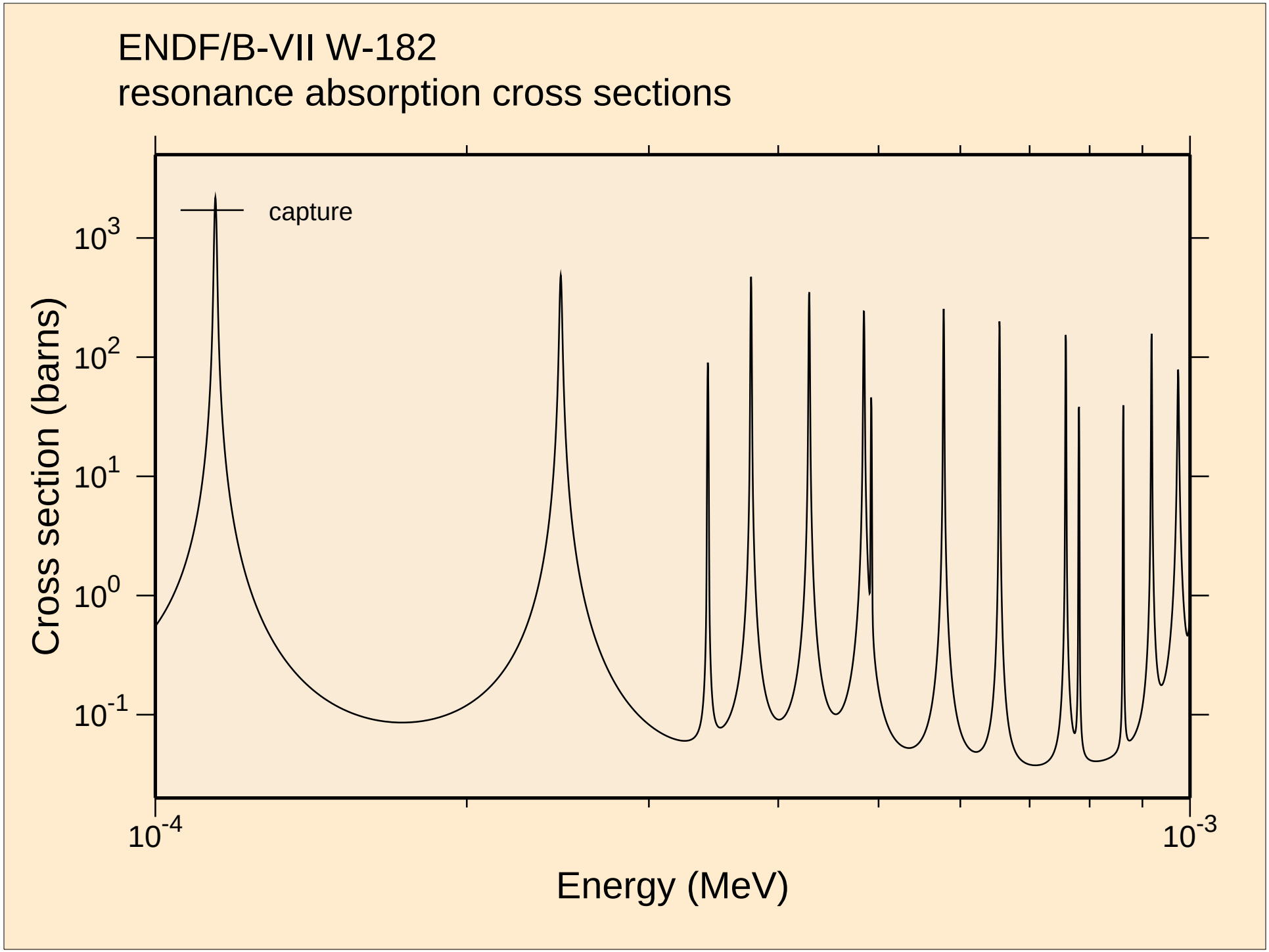

ENDF/B-VII W-182
resonance total cross section
total
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-3}
10^{-2}
Energy (MeV)

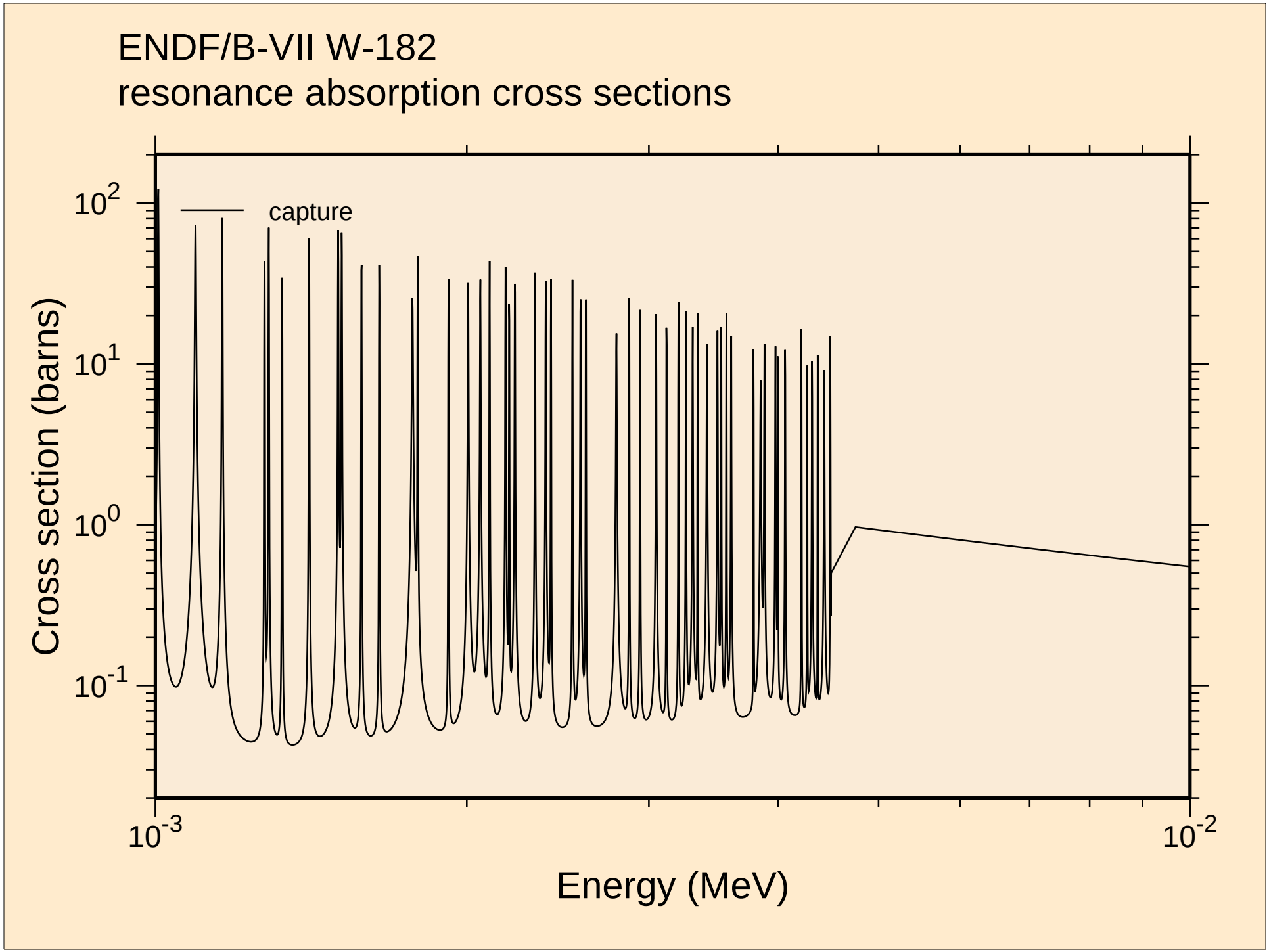

ENDF/B-VII W-182
resonance total cross section
10^{1}
total
Cross section (barns)
10^{-1}
10^{0}
Energy (MeV)


ENDF/B-VII W-182
resonance total cross section
10^1
total
Cross section (barns)
10^1
10^2
Energy (MeV)

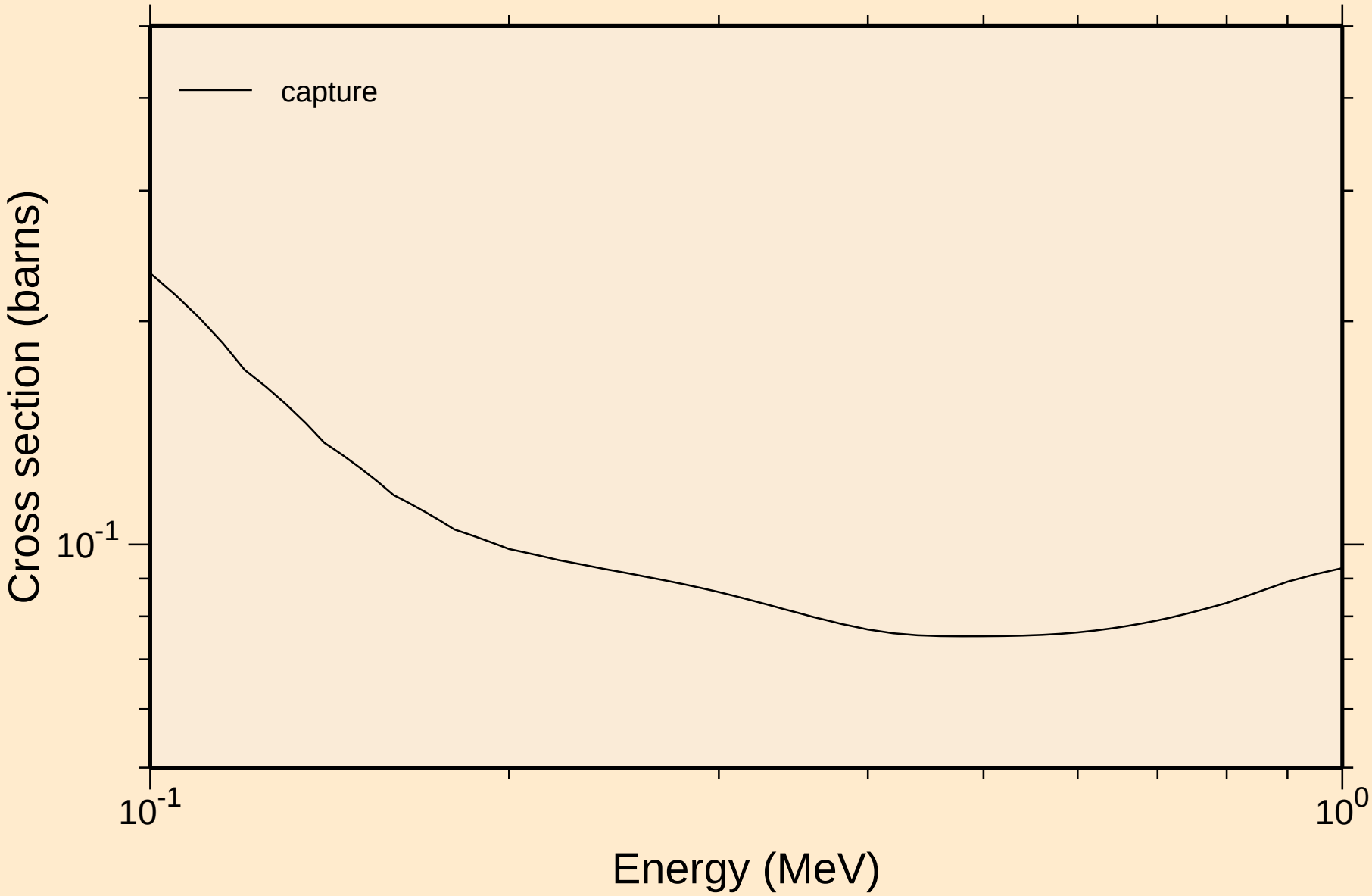

ENDF/B-VII W-182
resonance absorption cross sections
capture
Cross section (barns)
10^4
10^3
10^2
10^1
10^0
10^{-6}
10^{-5}
Energy (MeV)


ENDF/B-VII W-182
resonance absorption cross sections
capture
Cross section (barns)
10^4
10^3
10^2
10^1
10^0
10^-1
10^-5
10^-4
Energy (MeV)

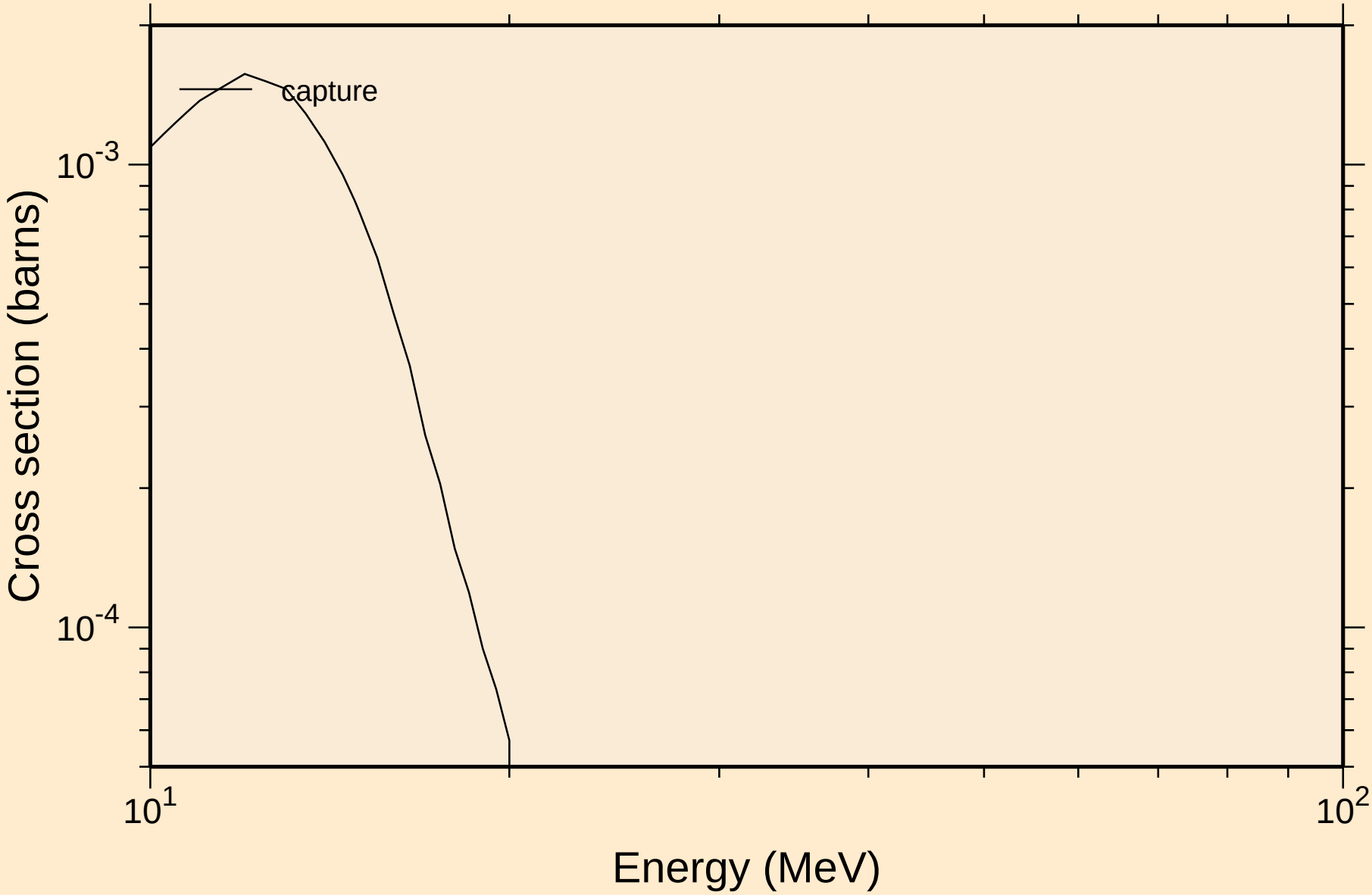

ENDF/B-VII W-182
resonance absorption cross sections
capture
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-4
10^-3
Energy (MeV)

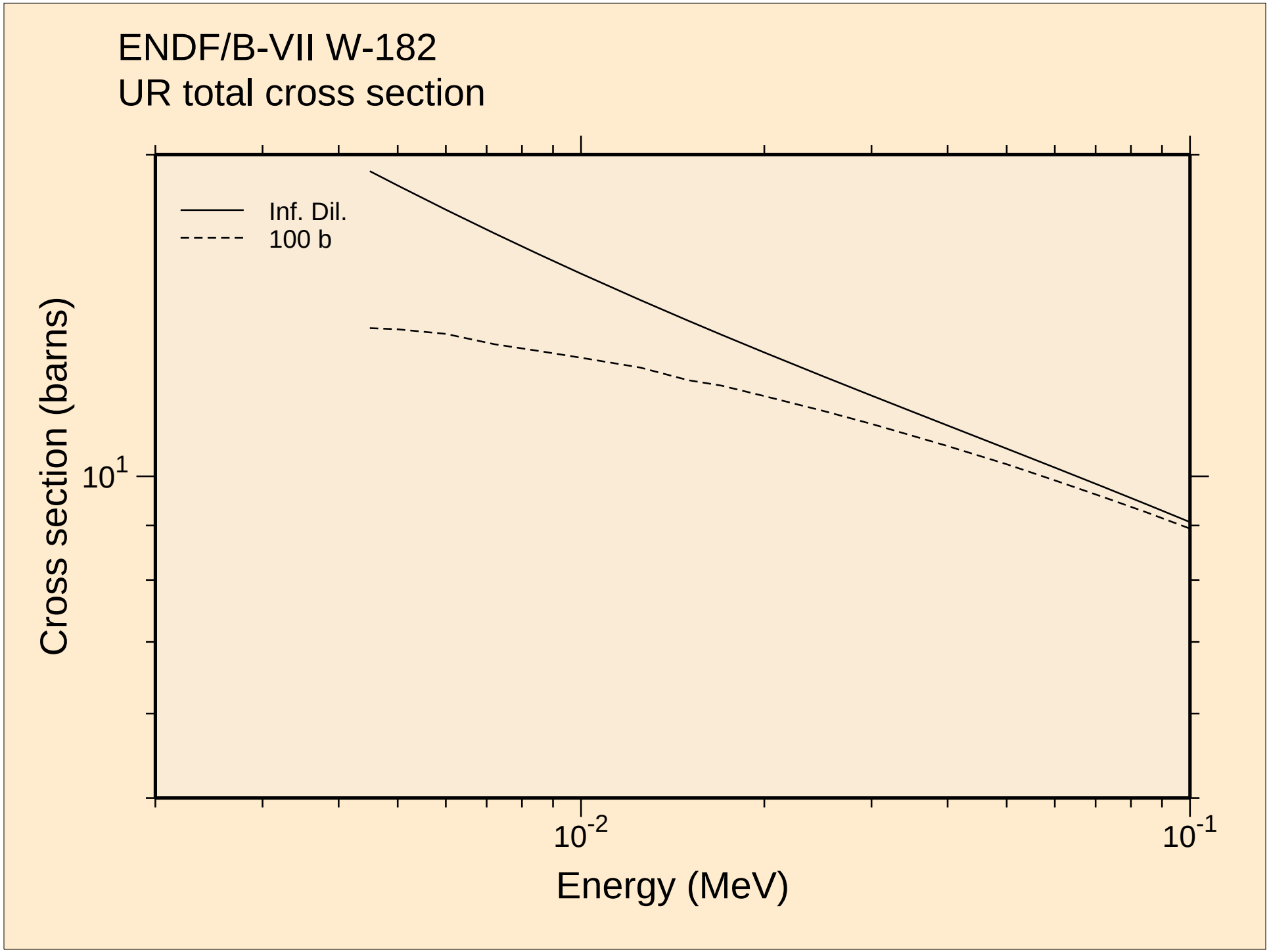

ENDF/B-VII W-182
resonance absorption cross sections
capture
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-3}
10^{-2}
Energy (MeV)

ENDF/B-VII W-182
resonance absorption cross sections

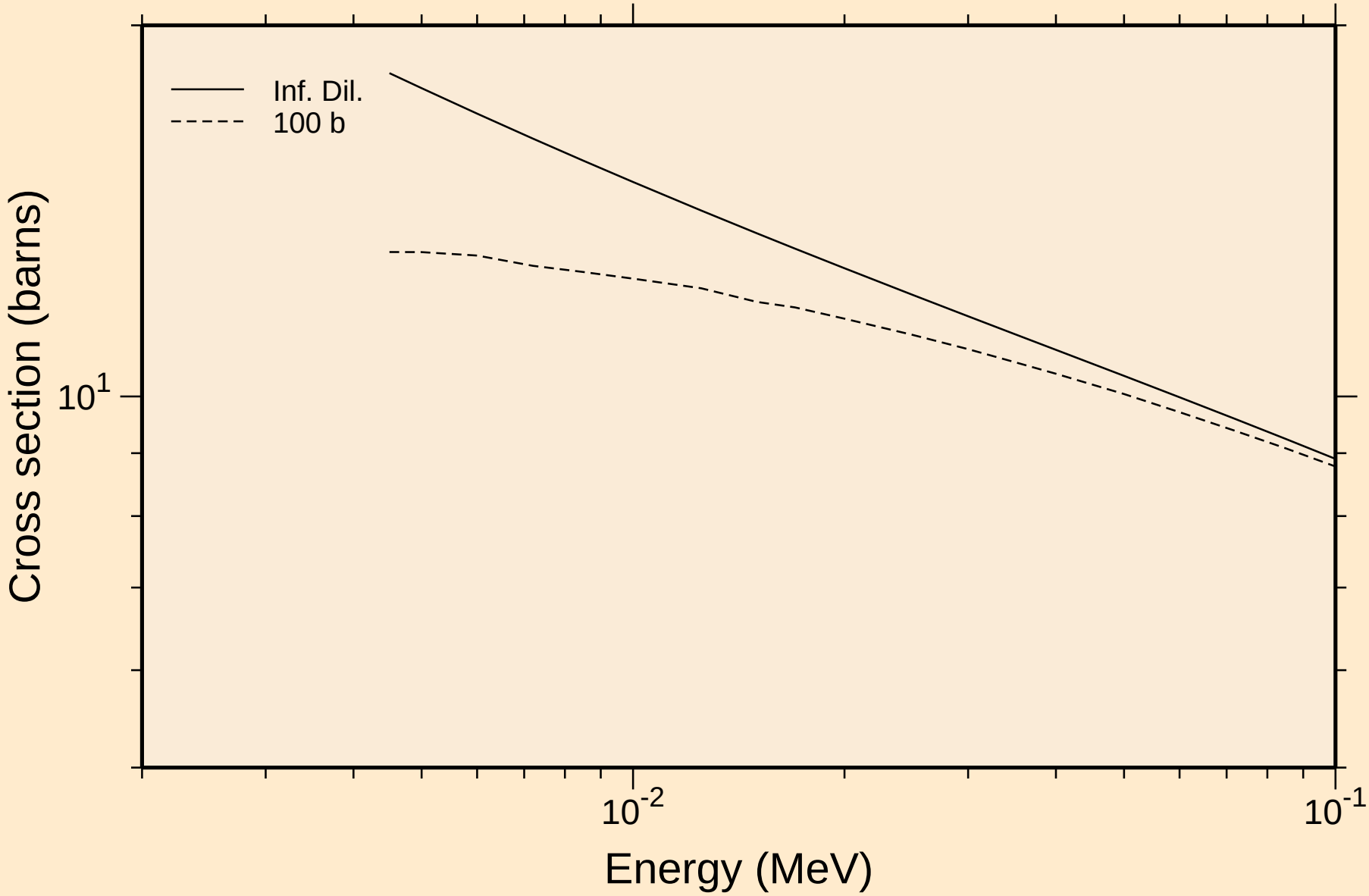


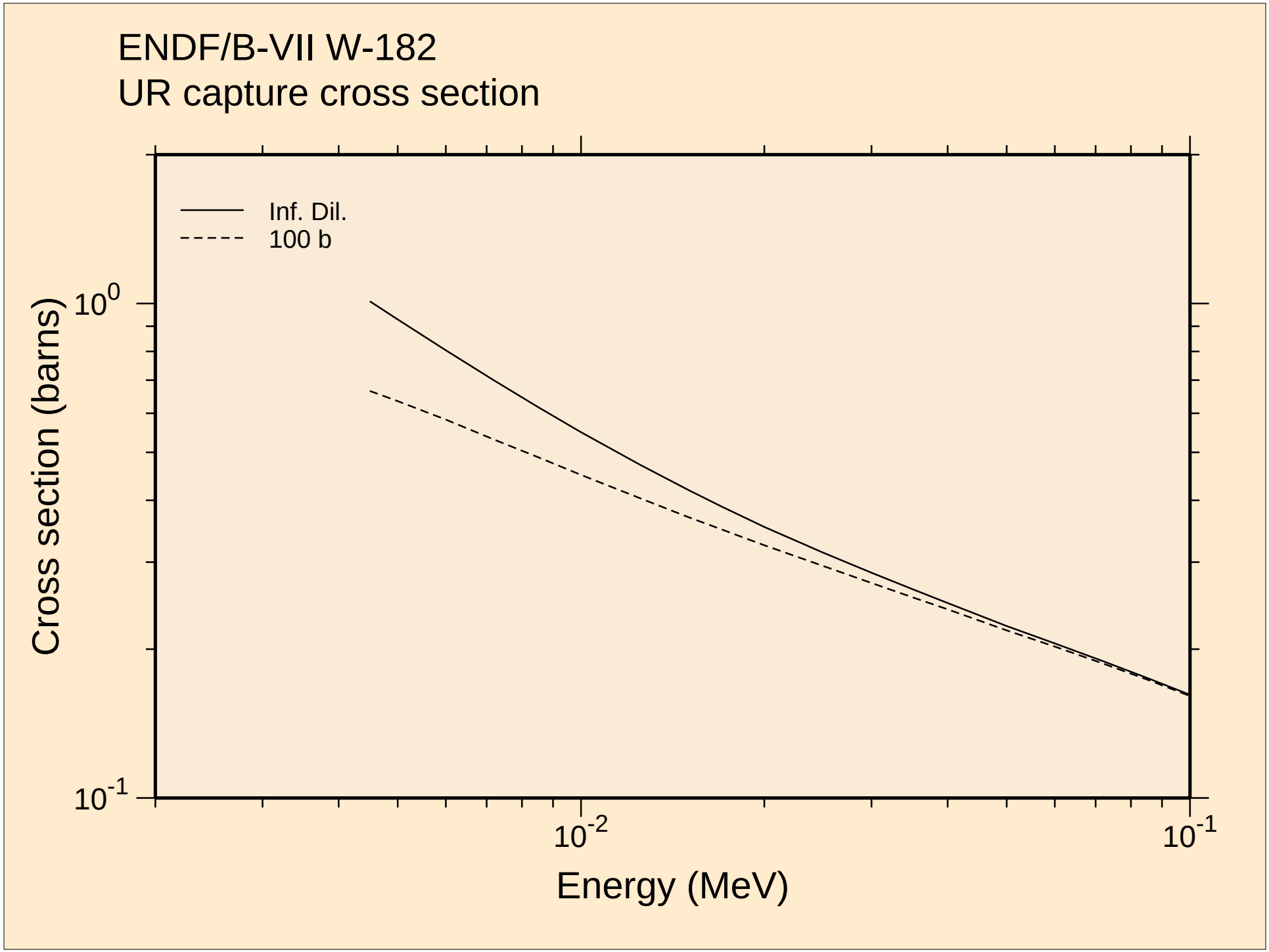
ENDF/B-VII W-182
resonance absorption cross sections

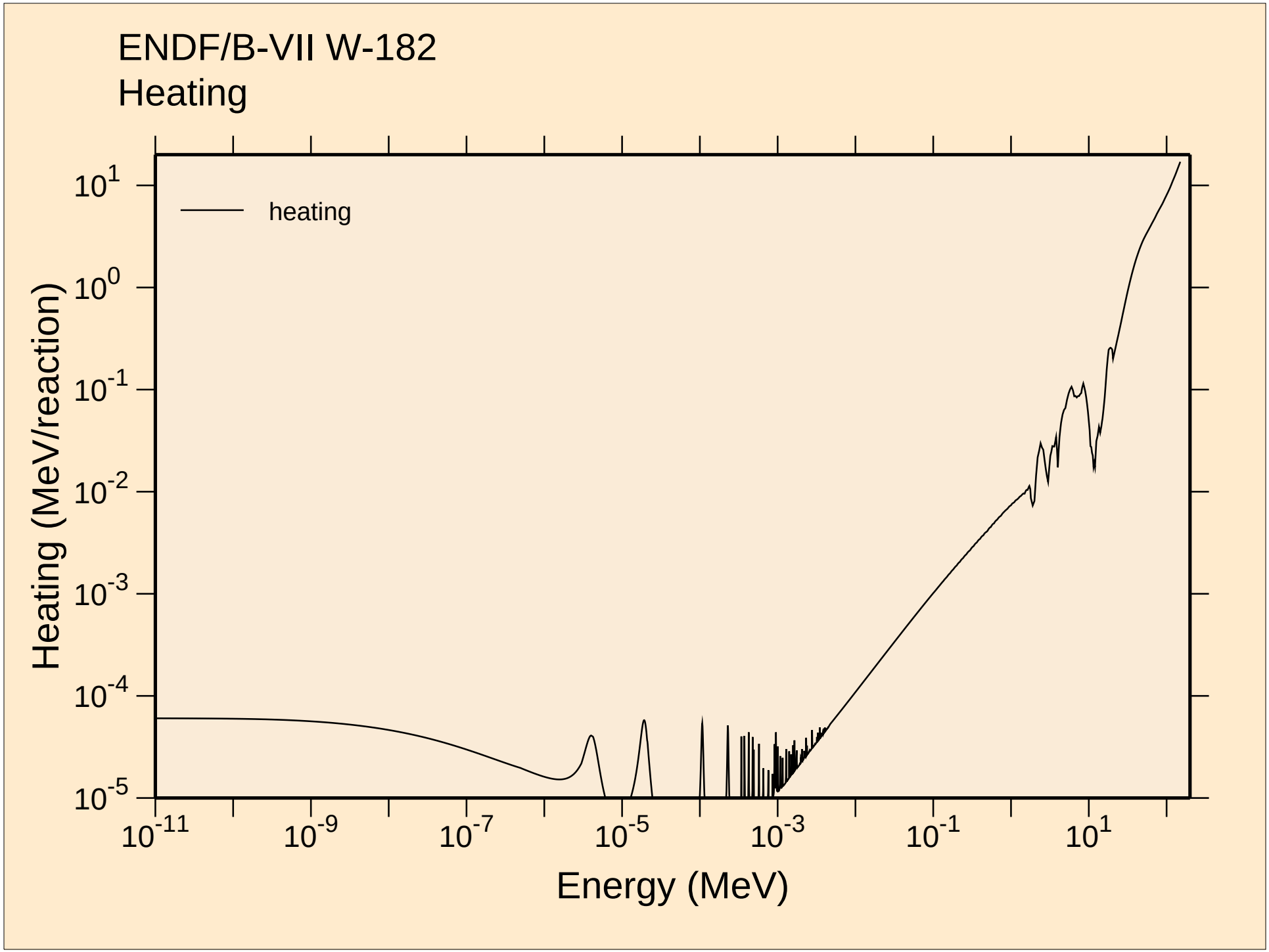


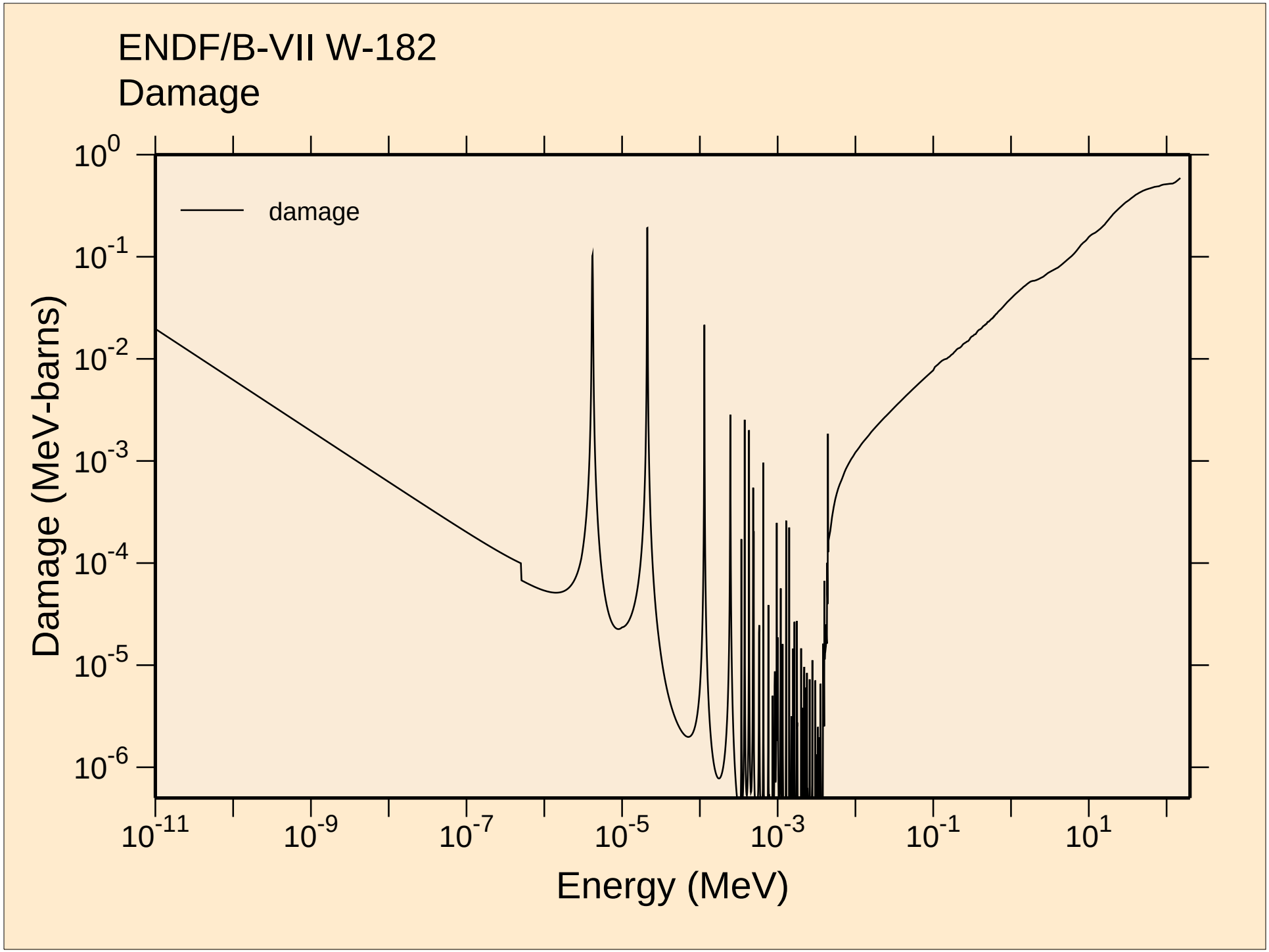

ENDF/B-VII W-182
UR total cross section
Inf. Dil.
100 b
Cross section (barns)
10^1
10^-2
10^-1
Energy (MeV)

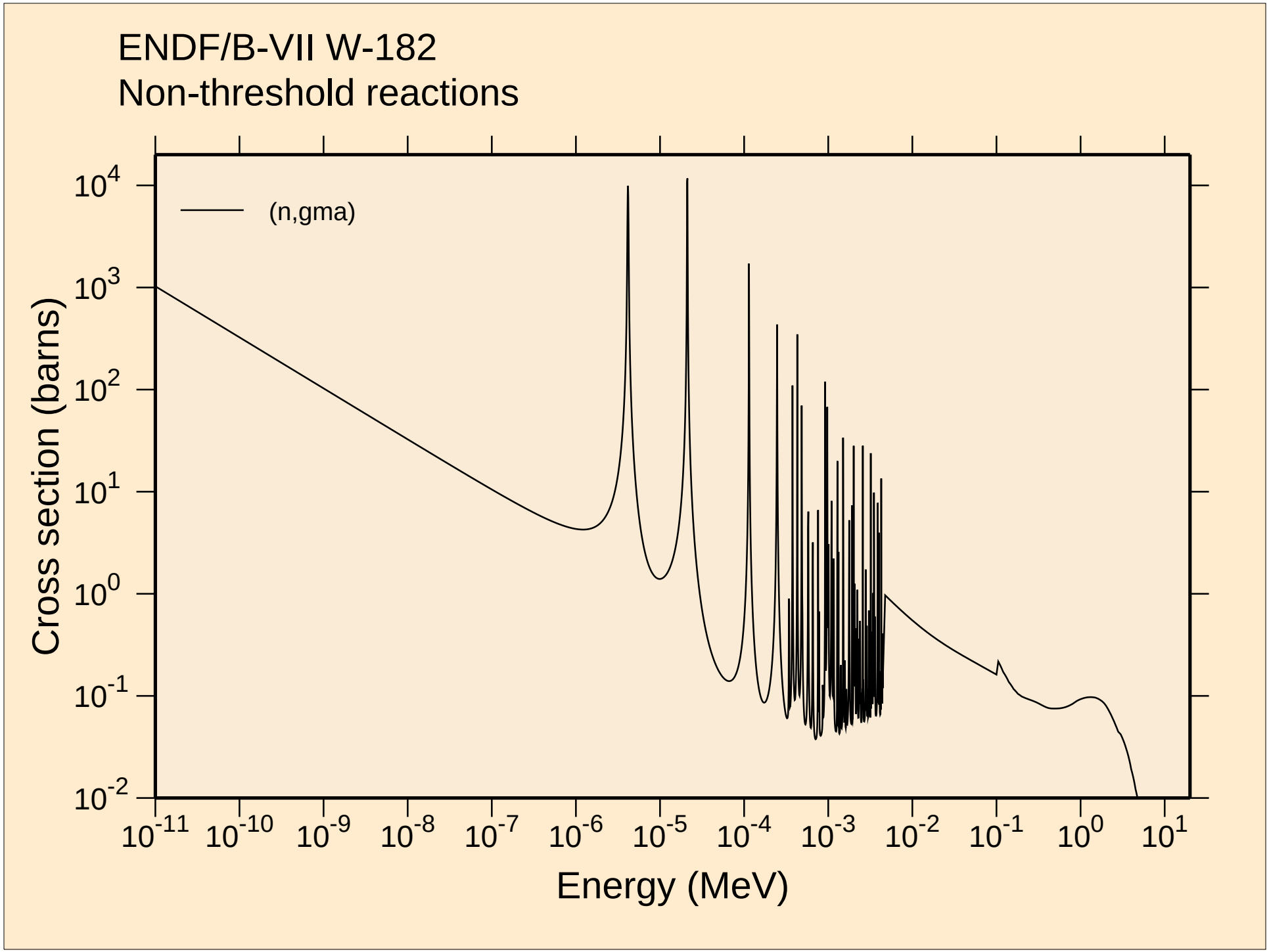
ENDF/B-VII W-182
UR elastic cross section

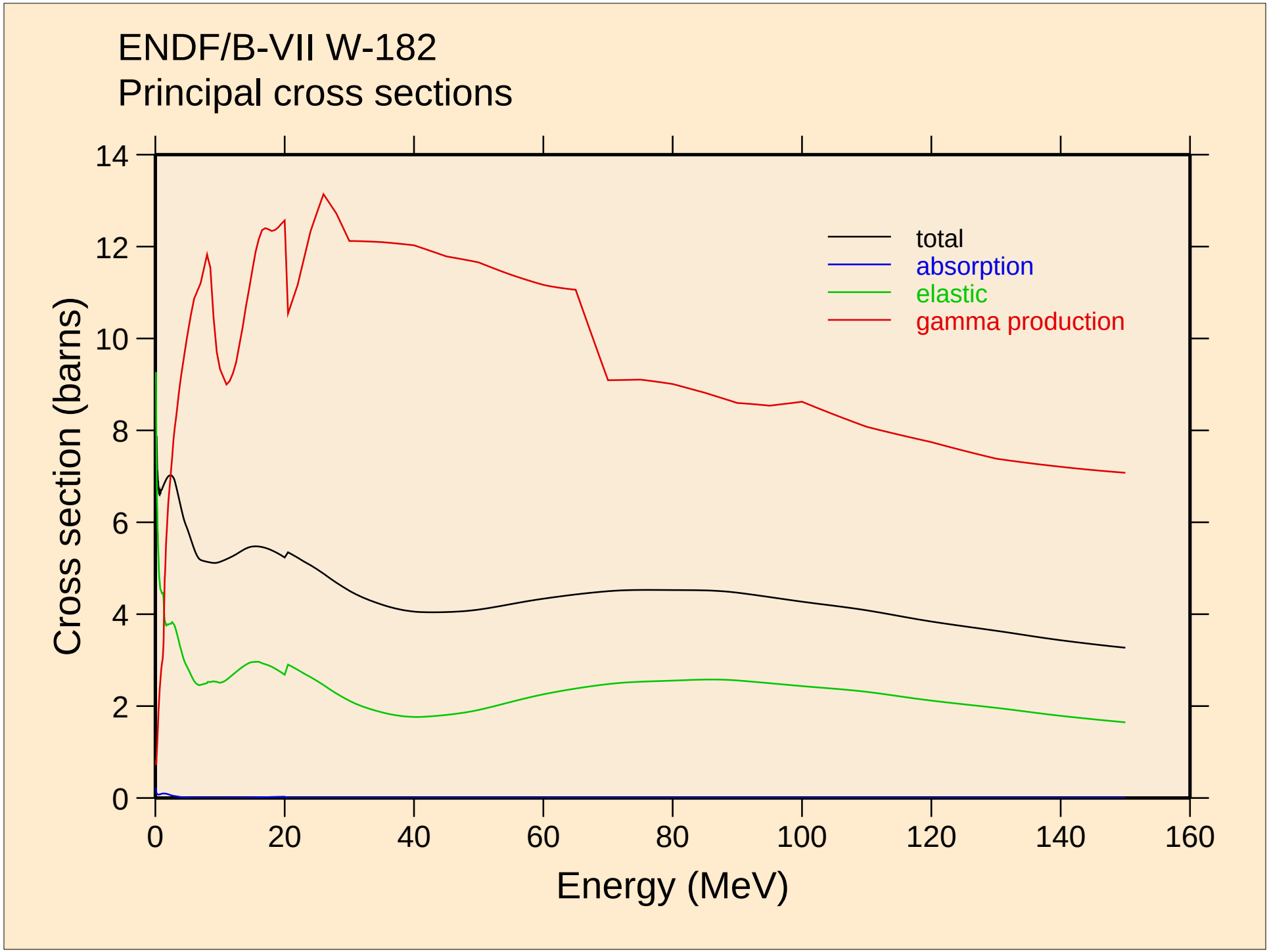


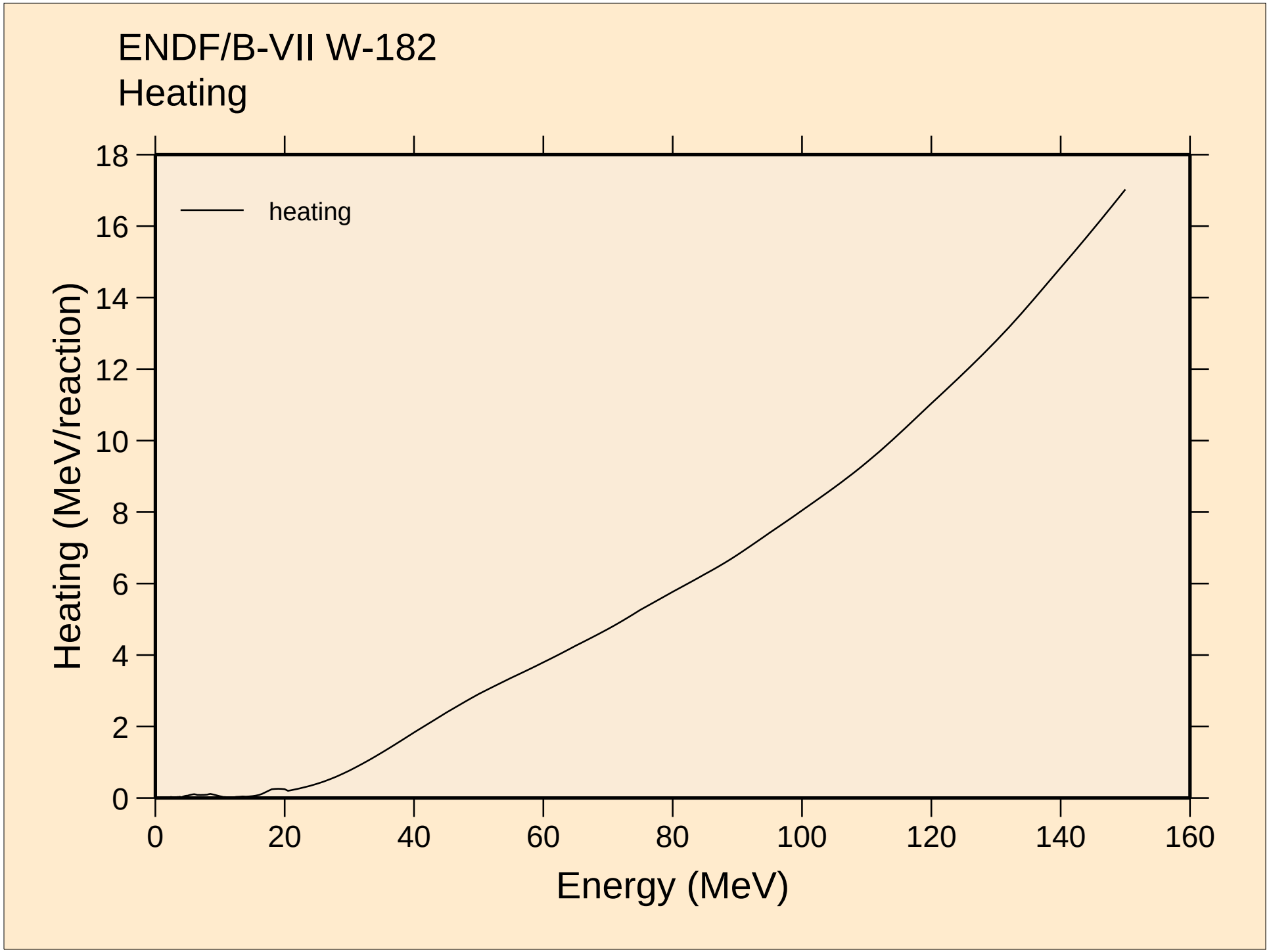

ENDF/B-VII W-182
UR capture cross section
Inf. Dil.
100 b
Cross section (barns)
10^0
10^-1
10^-2
10^-1
Energy (MeV)

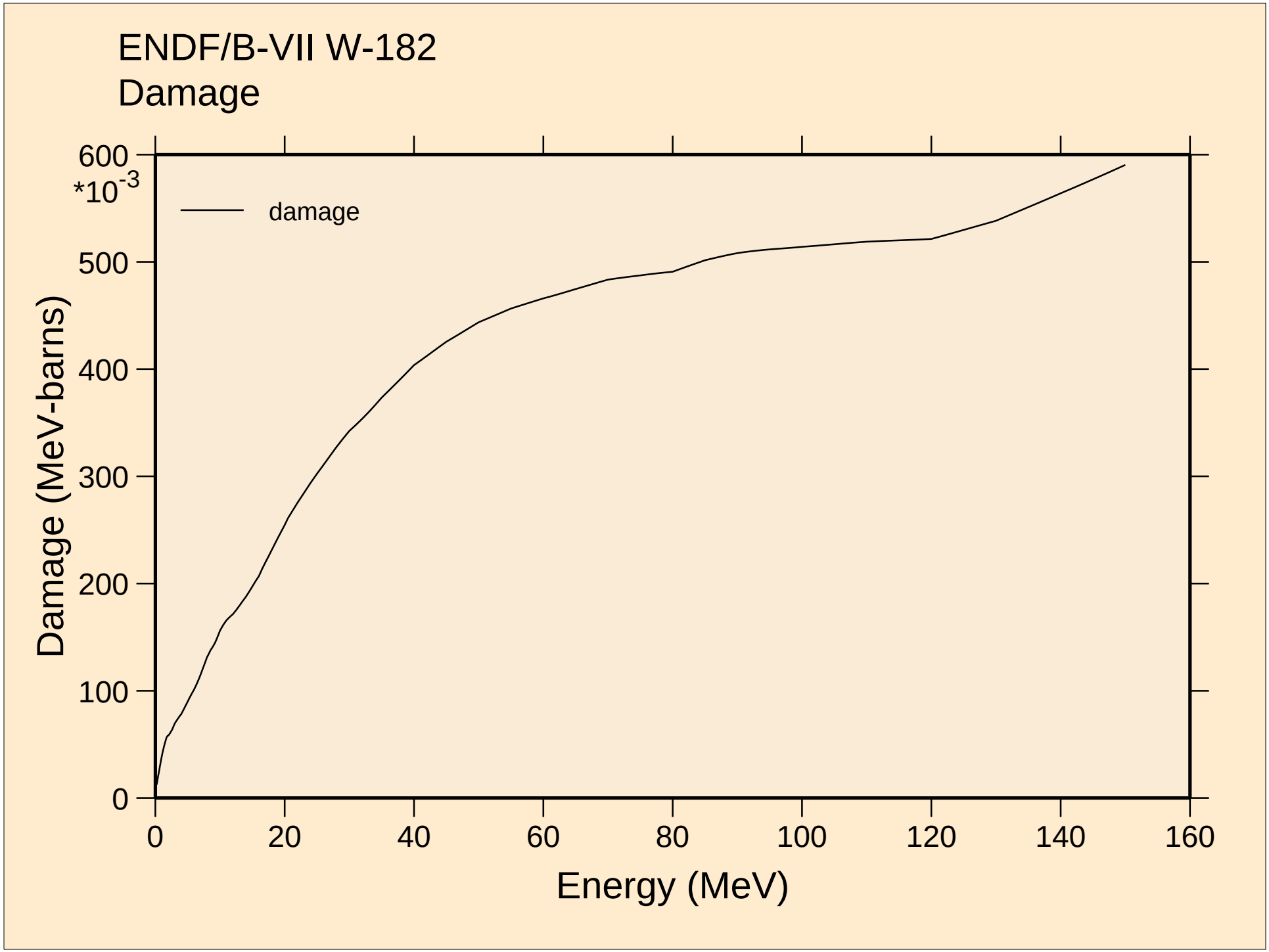

ENDF/B-VII W-182
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

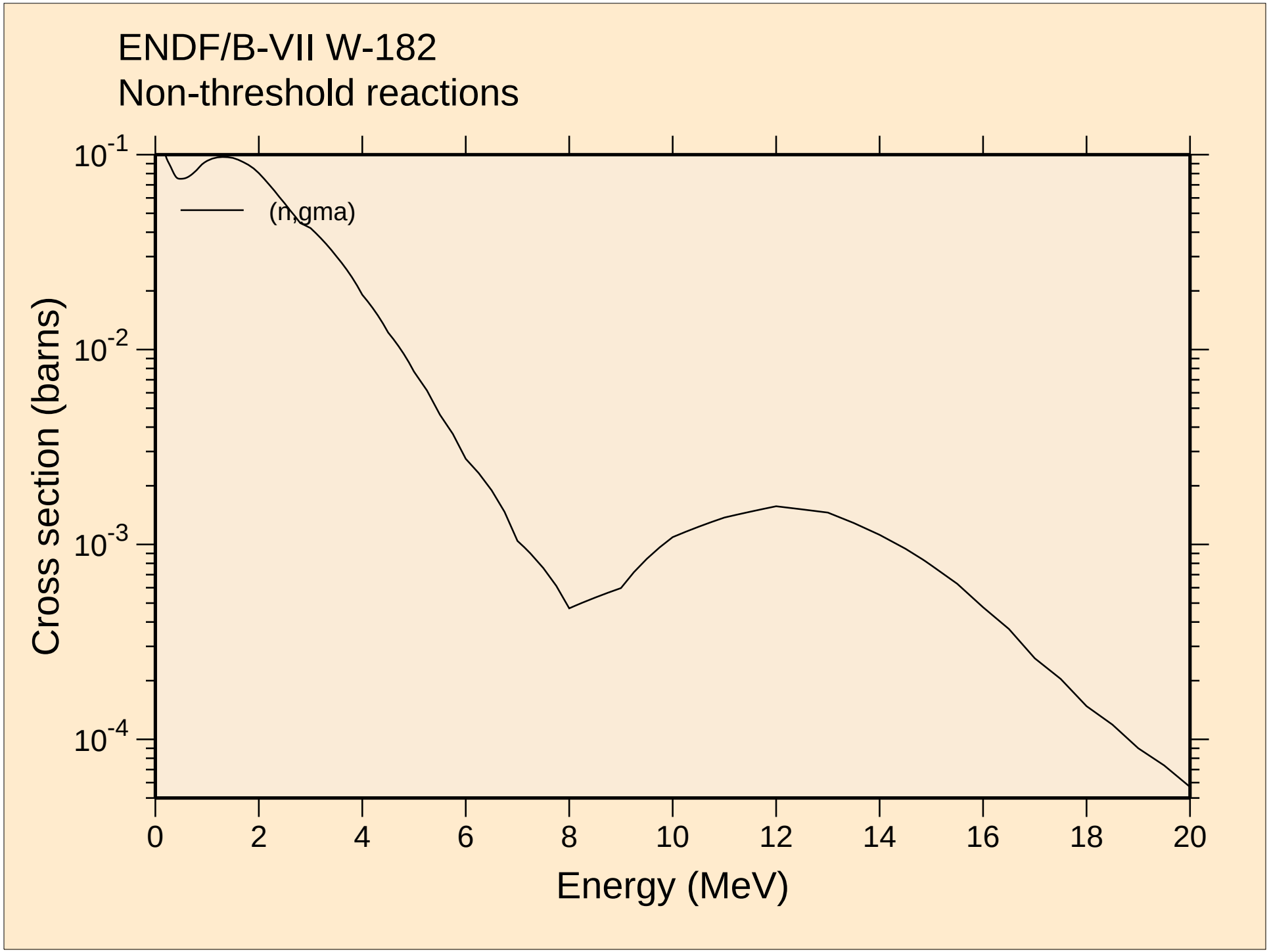

ENDF/B-VII W-182
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

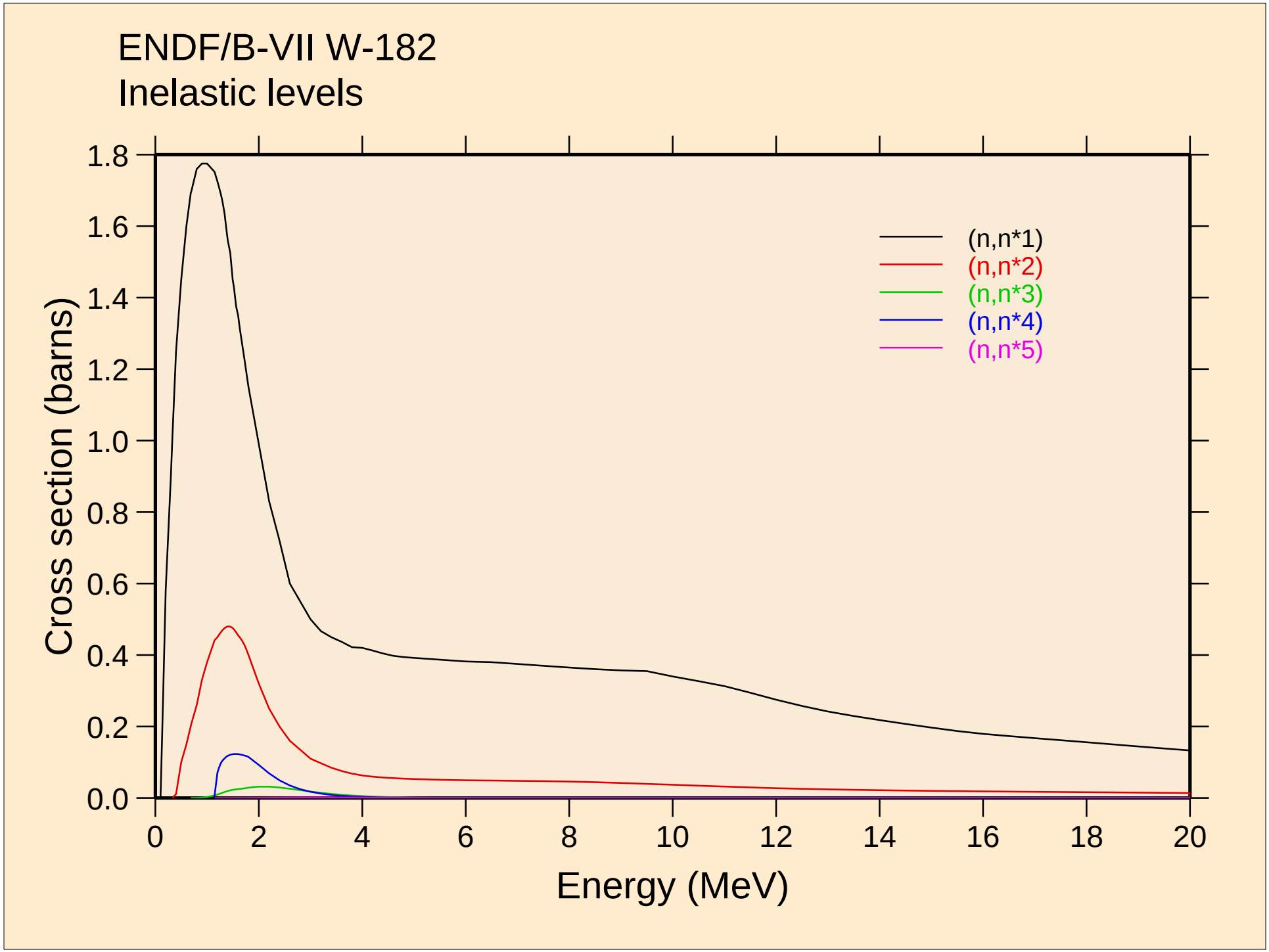

ENDF/B-VII W-182
Non-threshold reactions
(n,gma)
Cross section (barns)
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

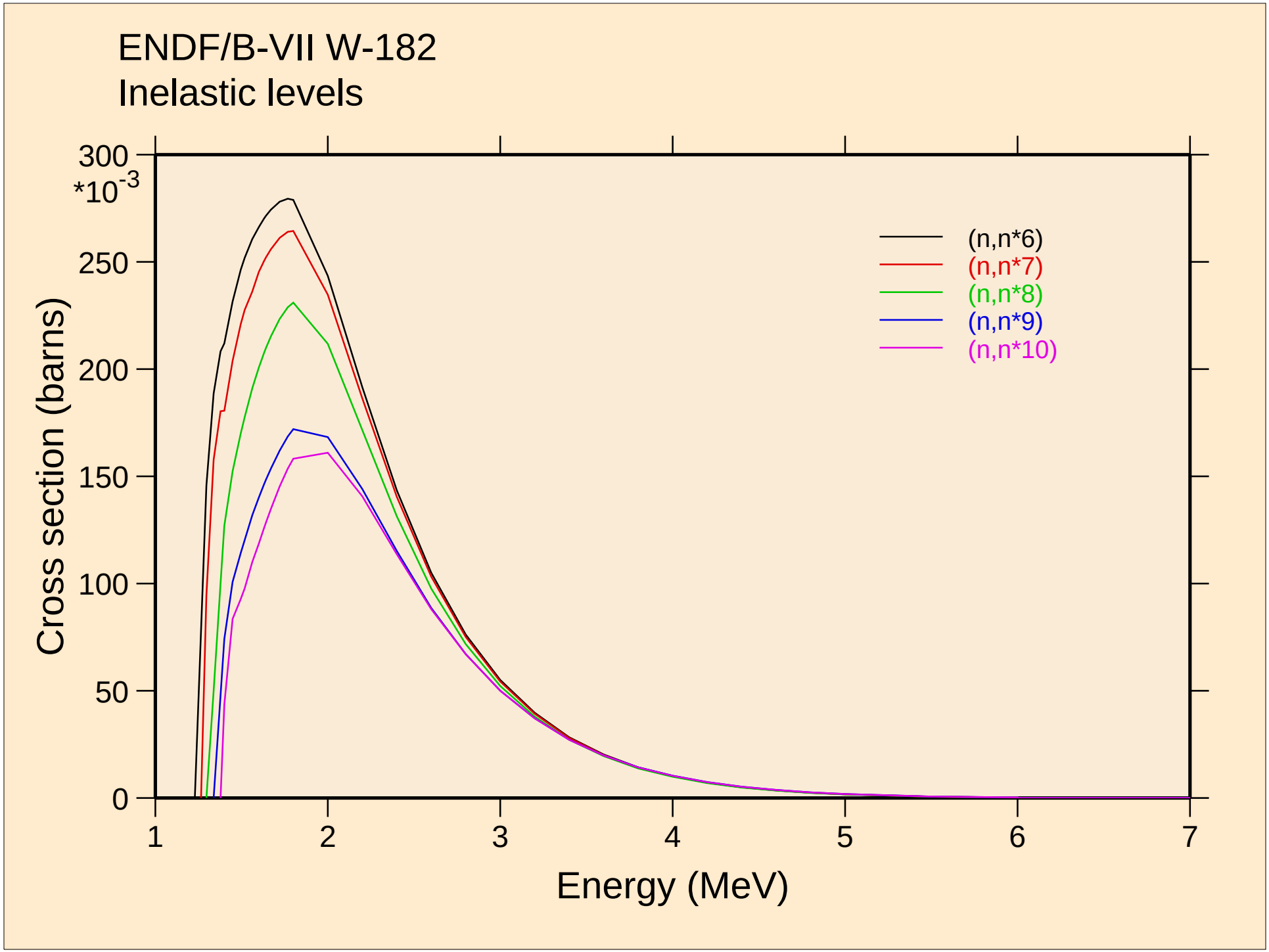

ENDF/B-VII W-182
Principal cross sections
Cross section (barns)
Energy (MeV)
0
2
4
6
8
10
12
14
0
20
40
60
80
100
120
140
160
total
absorption
elastic
gamma production

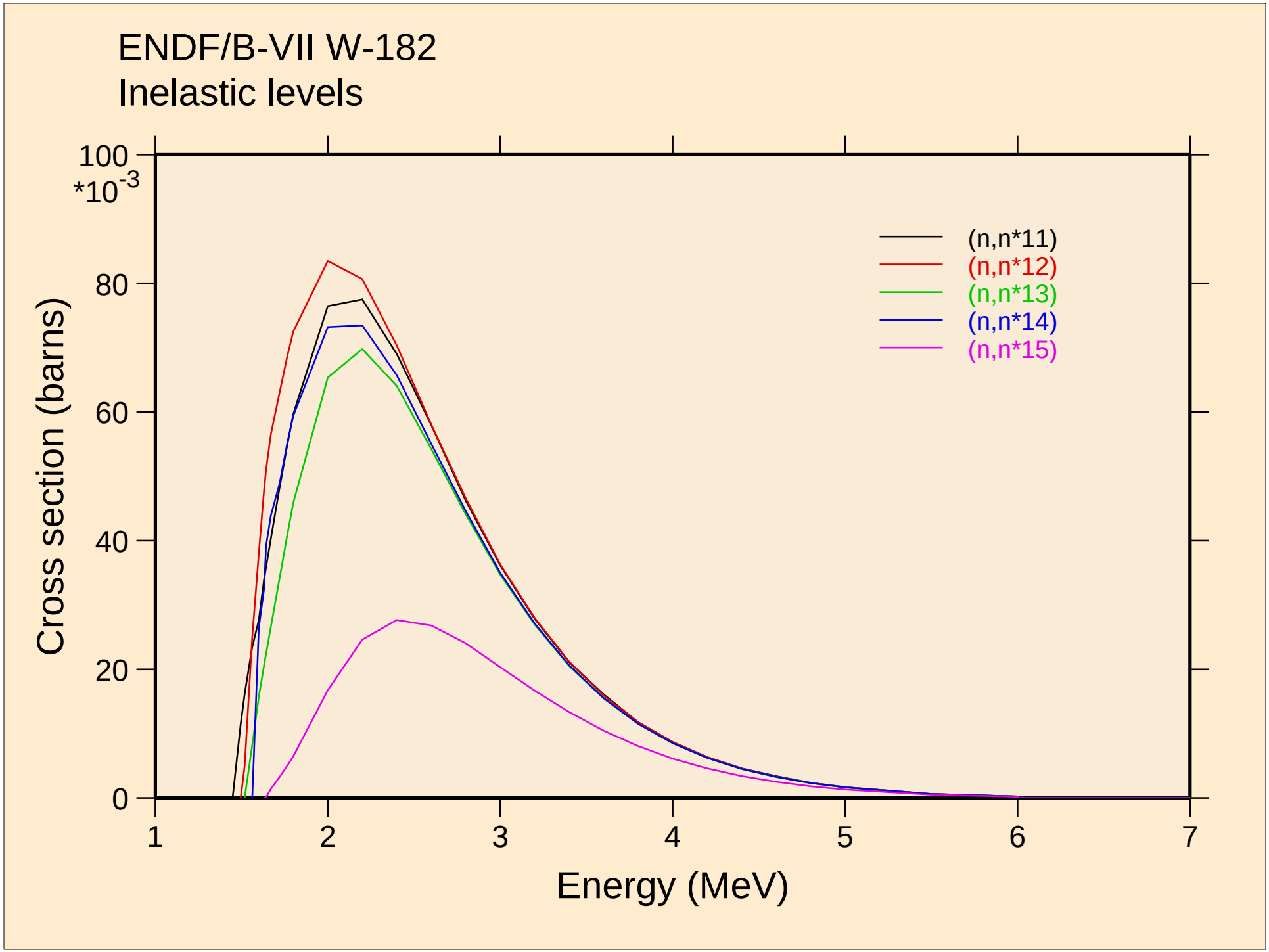

ENDF/B-VII W-182
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
0
20
40
60
80
100
120
140
160

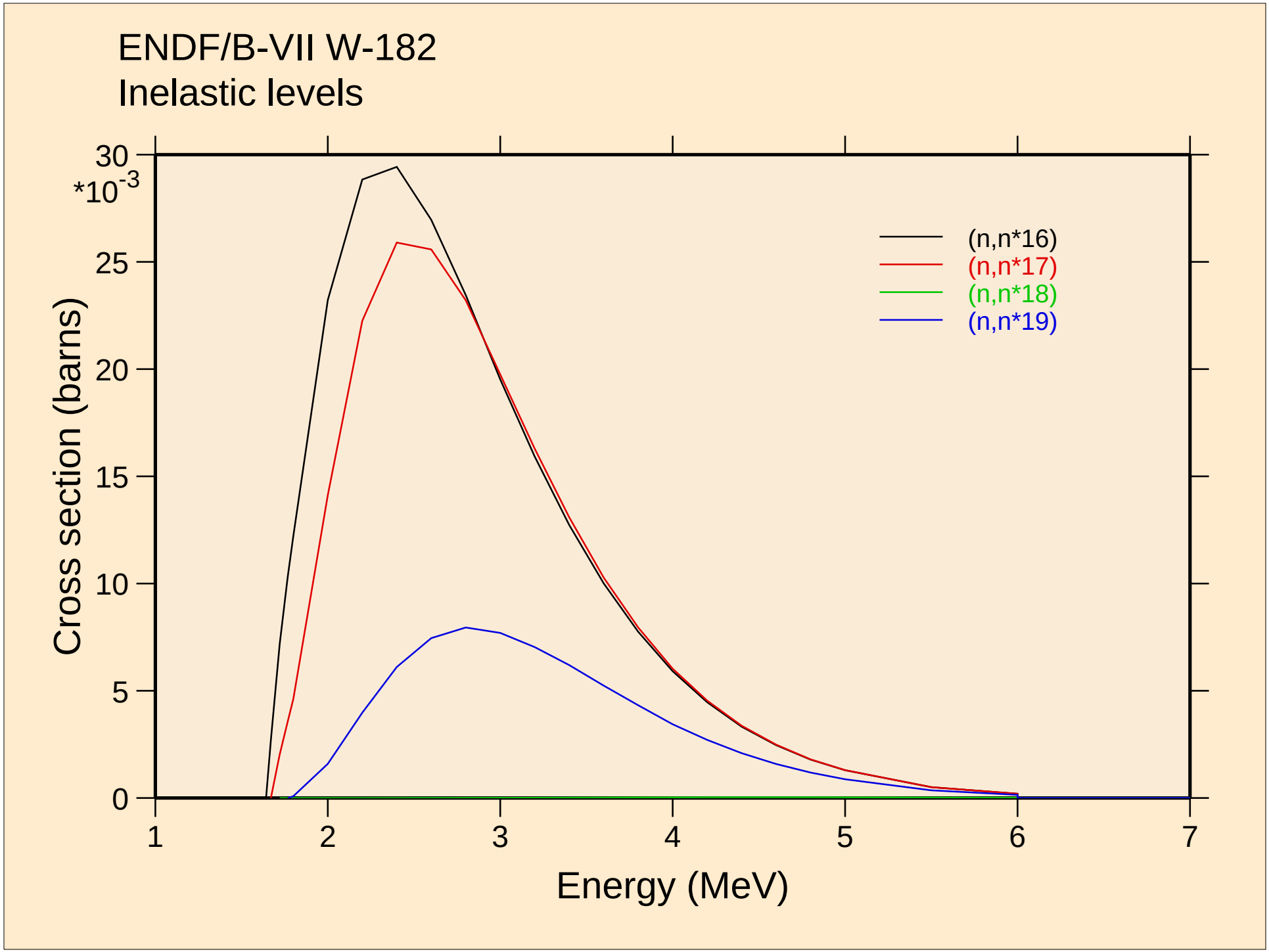

ENDF/B-VII W-182
Damage
600
*10-3
500
400
300
200
100
0
damage
Damage (MeV-barns)
0
20
40
60
80
100
120
140
160
Energy (MeV)

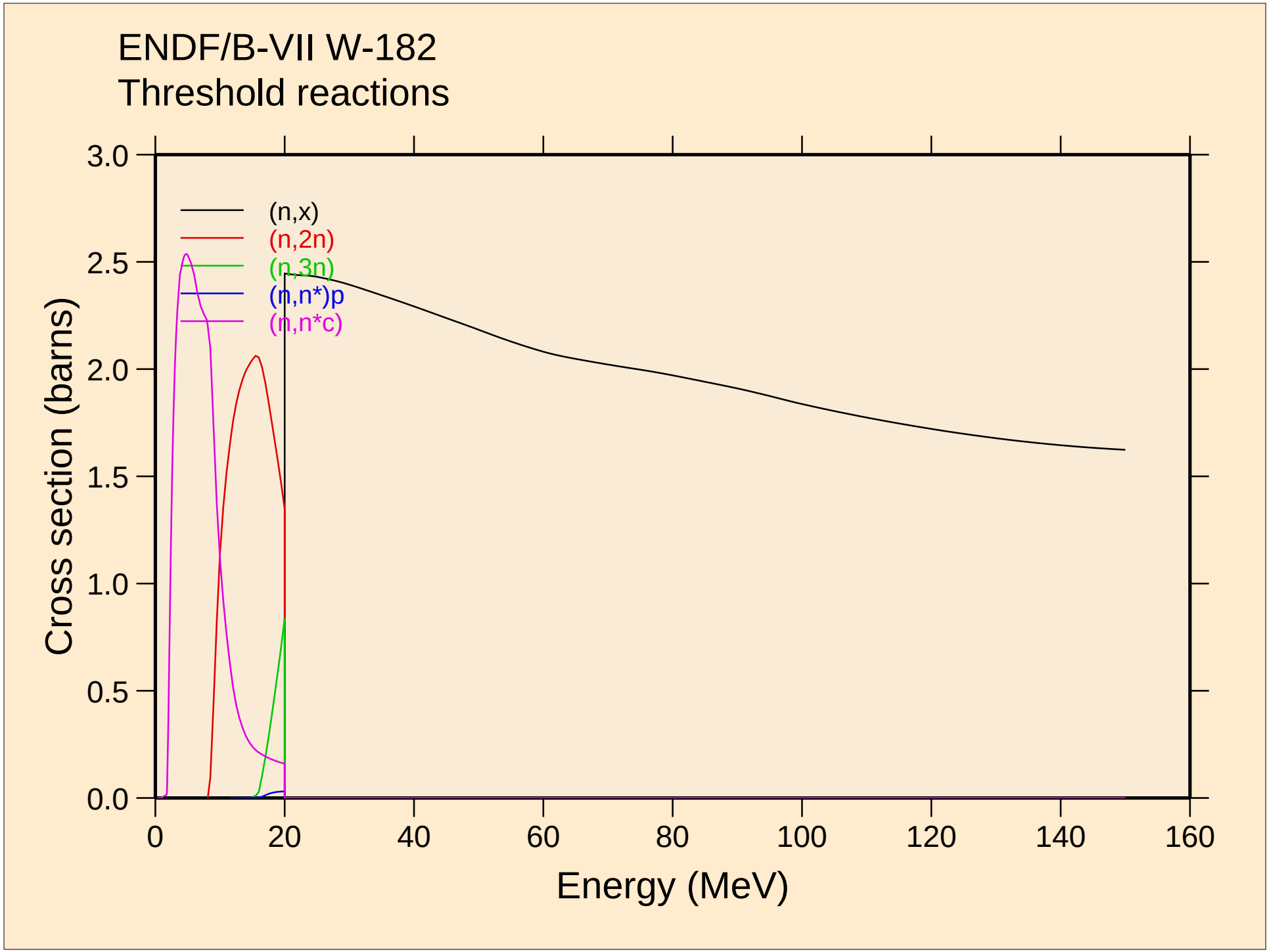

ENDF/B-VII W-182
Non-threshold reactions
(n,gma)
Cross section (barns)
10-1
10-2
10-3
10-4
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

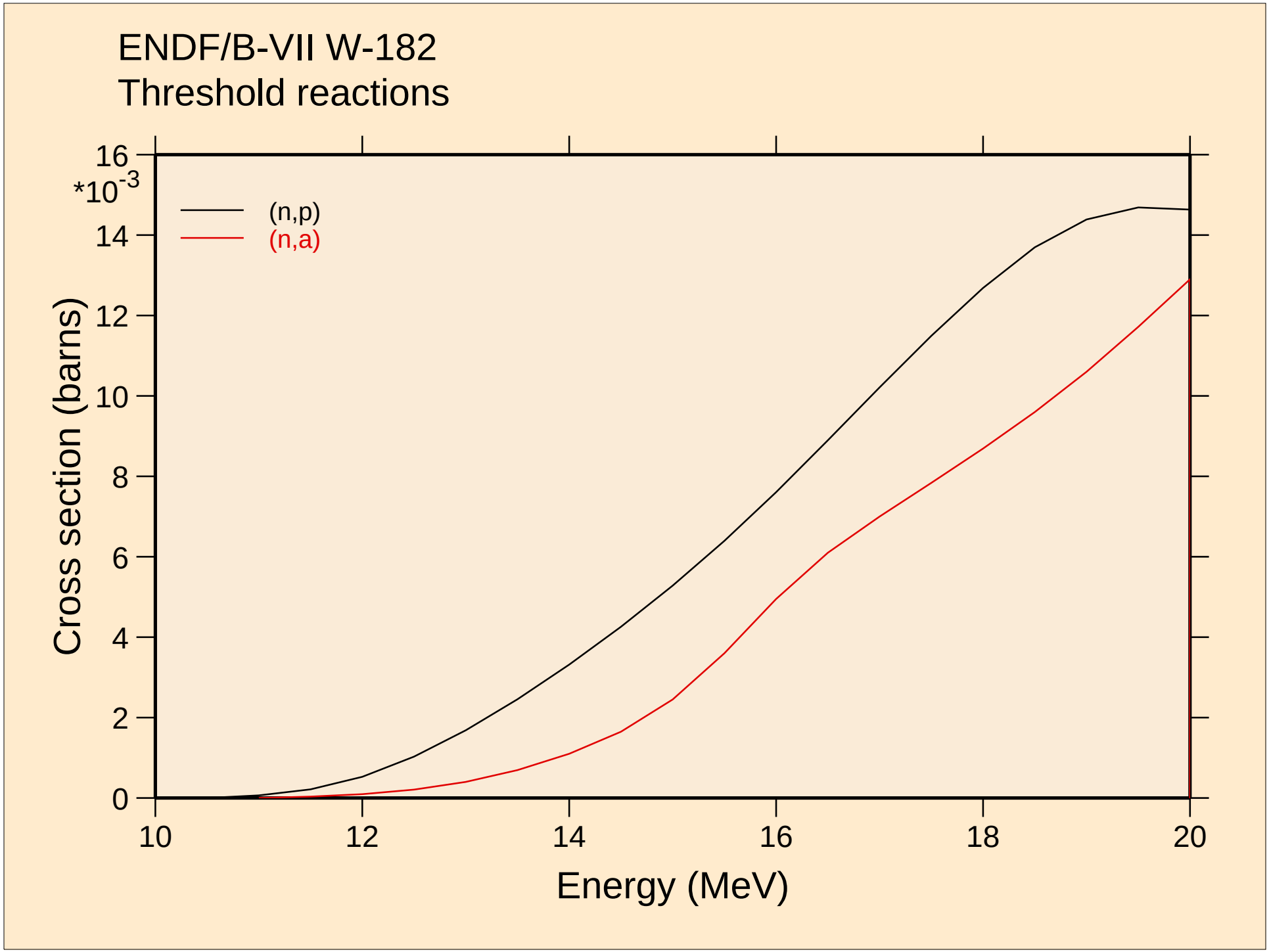

ENDF/B-VII W-182
Inelastic levels
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
2
4
6
8
10
12
14
16
18
20
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

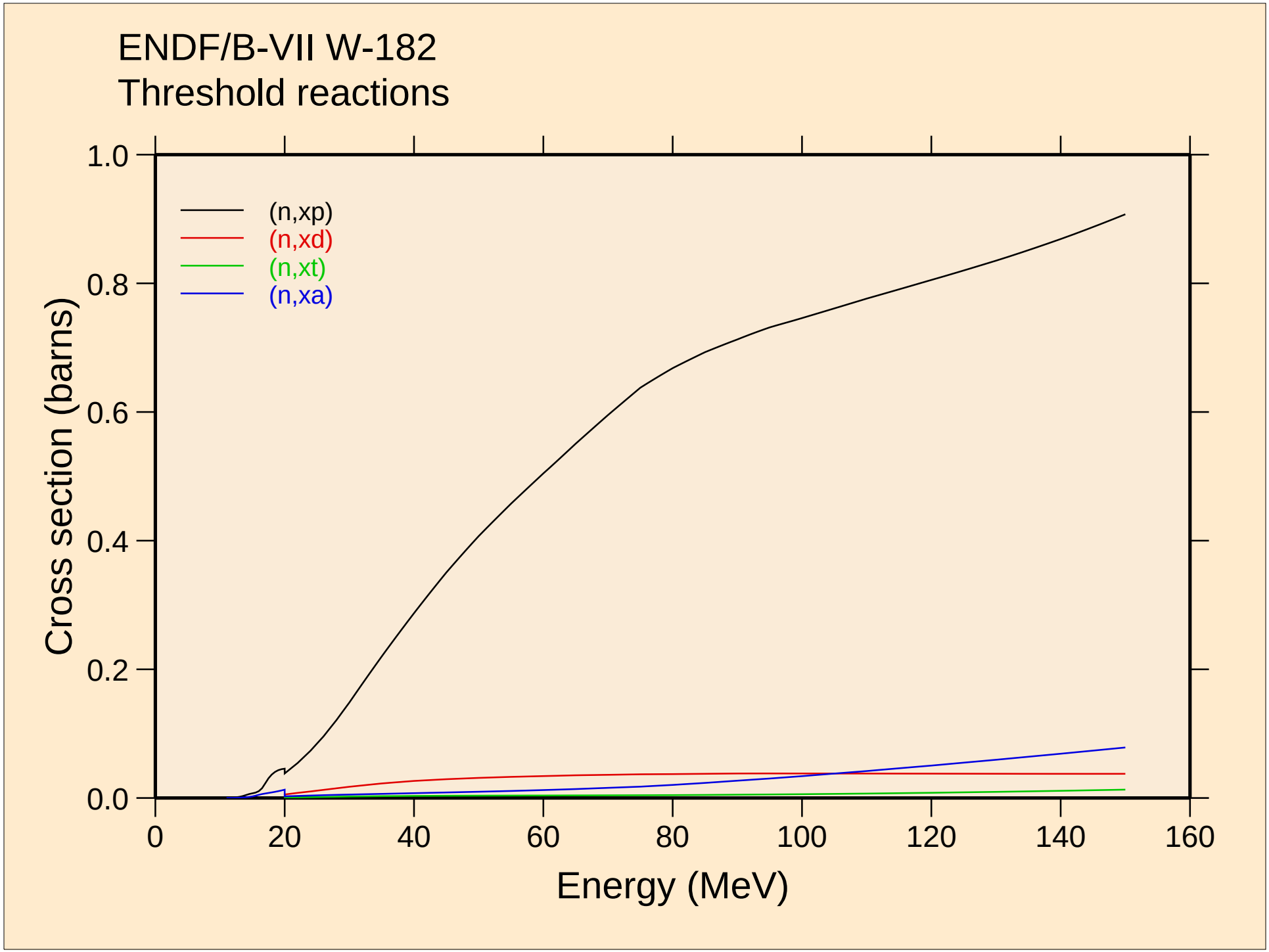

ENDF/B-VII W-182
Inelastic levels
300
*10-3
250
200
150
100
50
0
Cross section (barns)
1
2
3
4
5
6
7
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

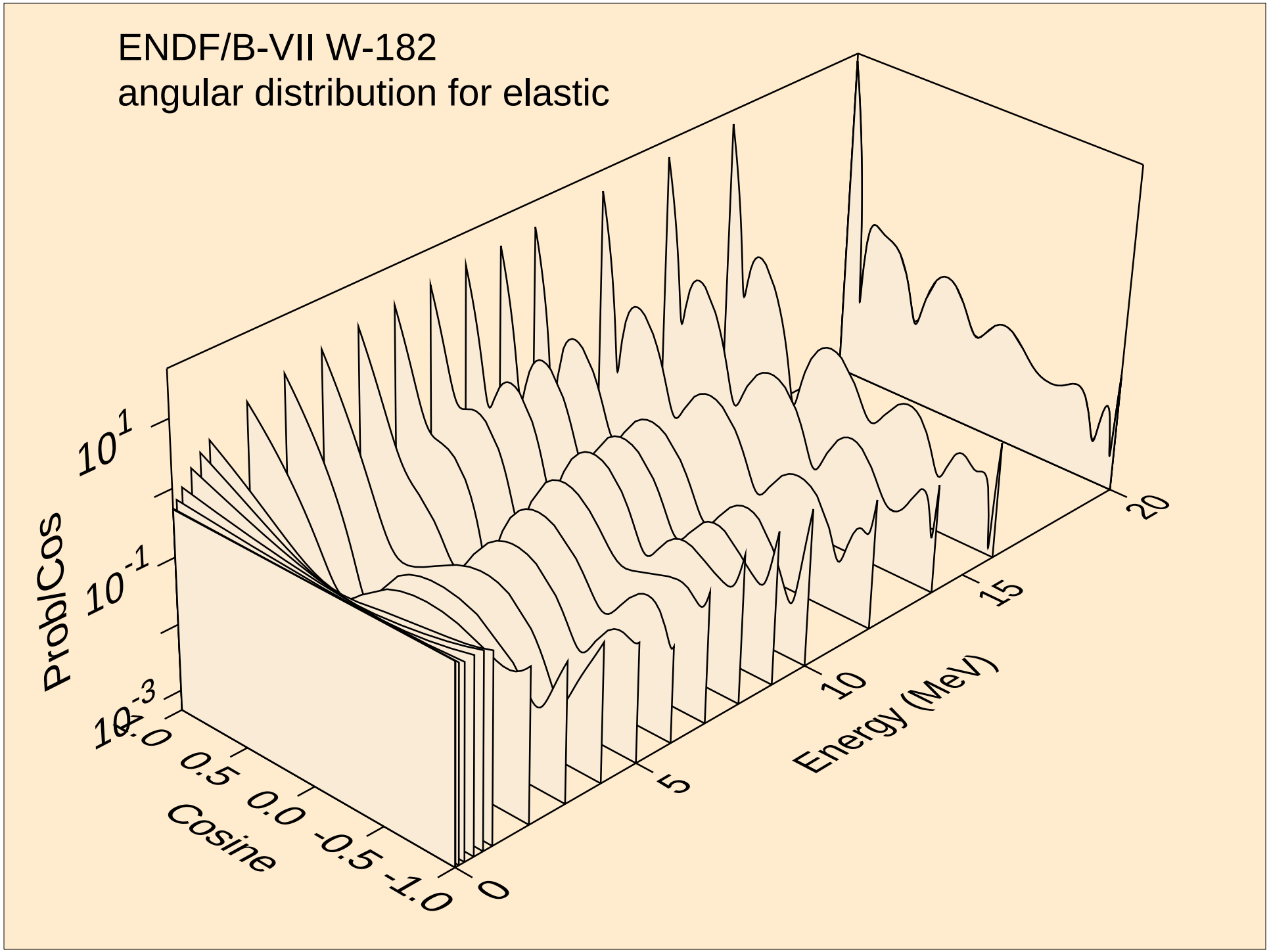

ENDF/B-VII W-182
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
1
2
3
4
5
6
7
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

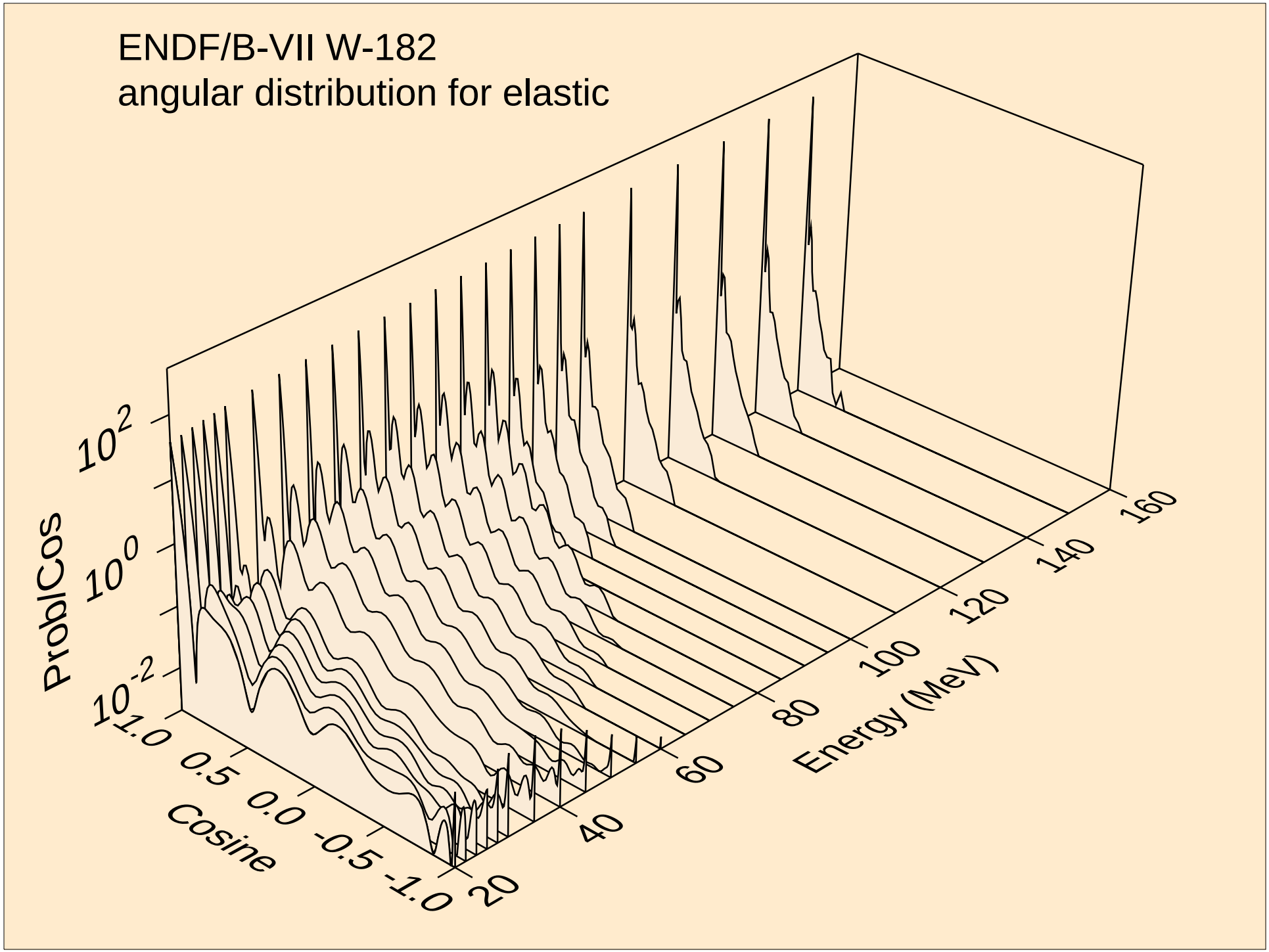

ENDF/B-VII W-182
Inelastic levels
30
*10-3
25
20
15
10
5
0
Cross section (barns)
1
2
3
4
5
6
7
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)

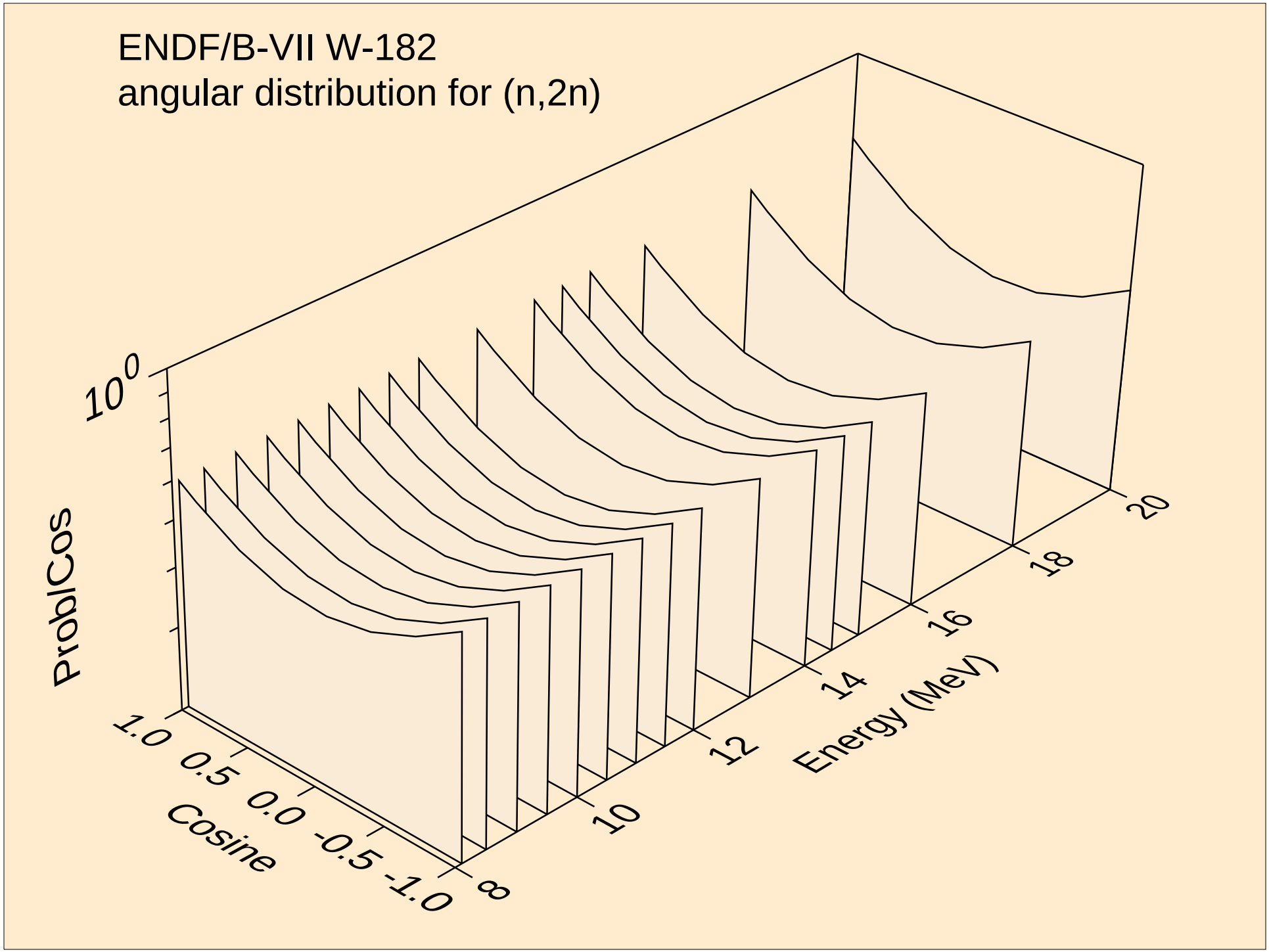

ENDF/B-VII W-182
Threshold reactions
Cross section (barns)
Energy (MeV)
(n,x)
(n,2n)
(n,3n)
(n,n*)p
(n,n*c)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
20
40
60
80
100
120
140
160

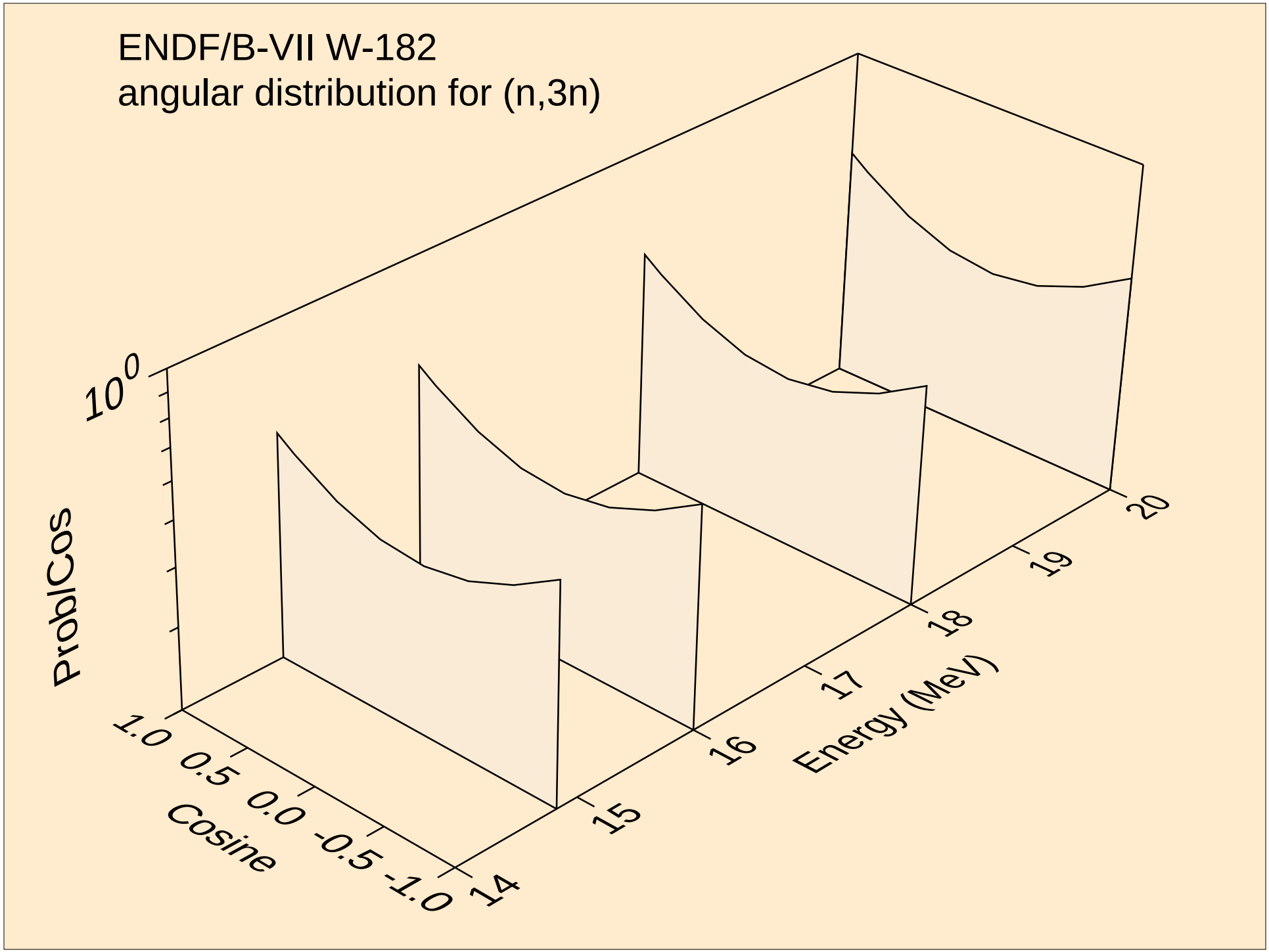

ENDF/B-VII W-182
Threshold reactions
*10-3
16
14
12
10
8
6
4
2
0
(n,p)
(n,a)
Cross section (barns)
10
12
14
16
18
20
Energy (MeV)

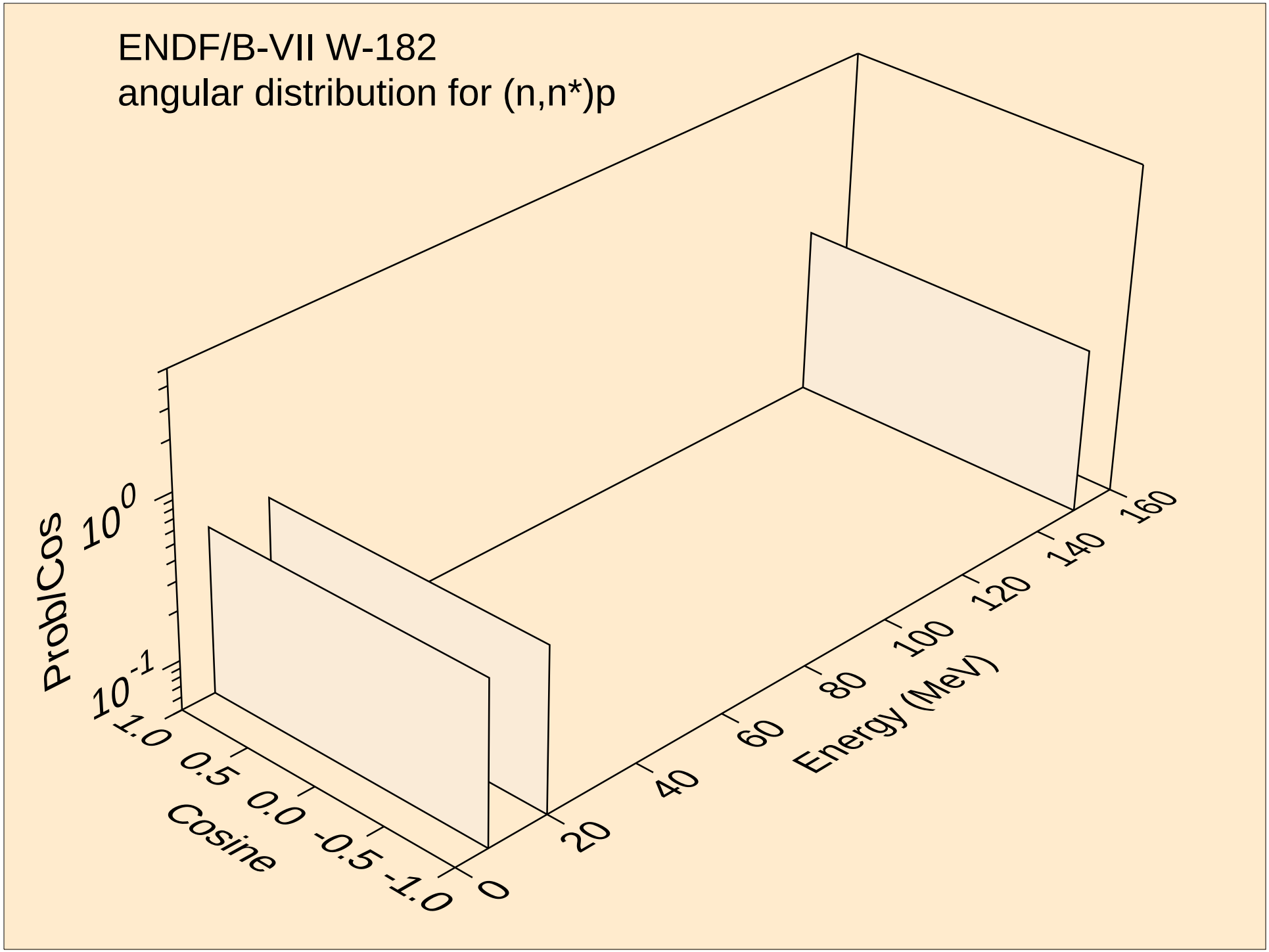

ENDF/B-VII W-182
Threshold reactions
(n,xp)
(n,xd)
(n,xt)
(n,xa)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
120
140
160

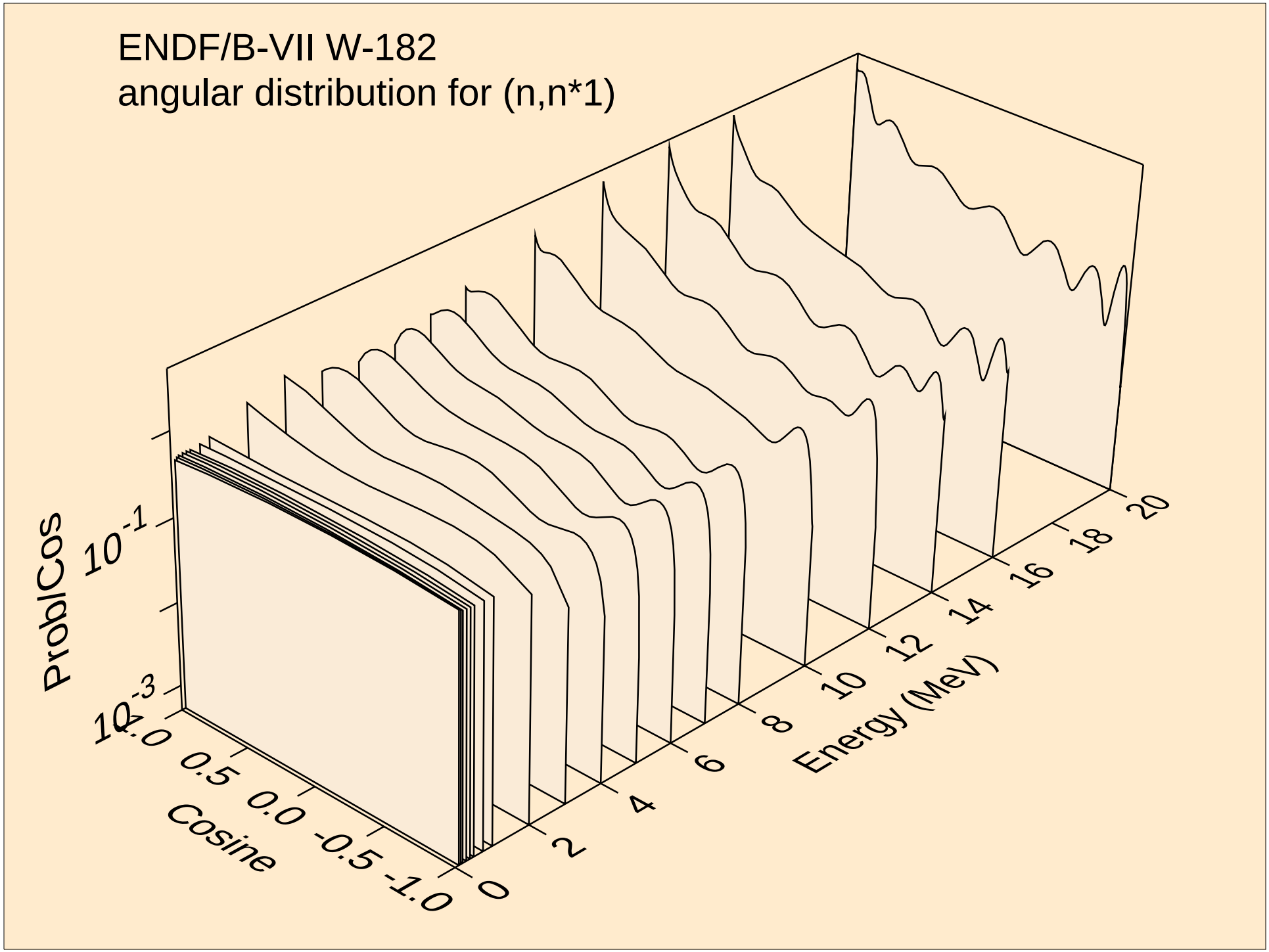

ENDF/B-VII W-182
angular distribution for elastic
ProbICos
10^{1}
10^{-1}
10^{-3}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

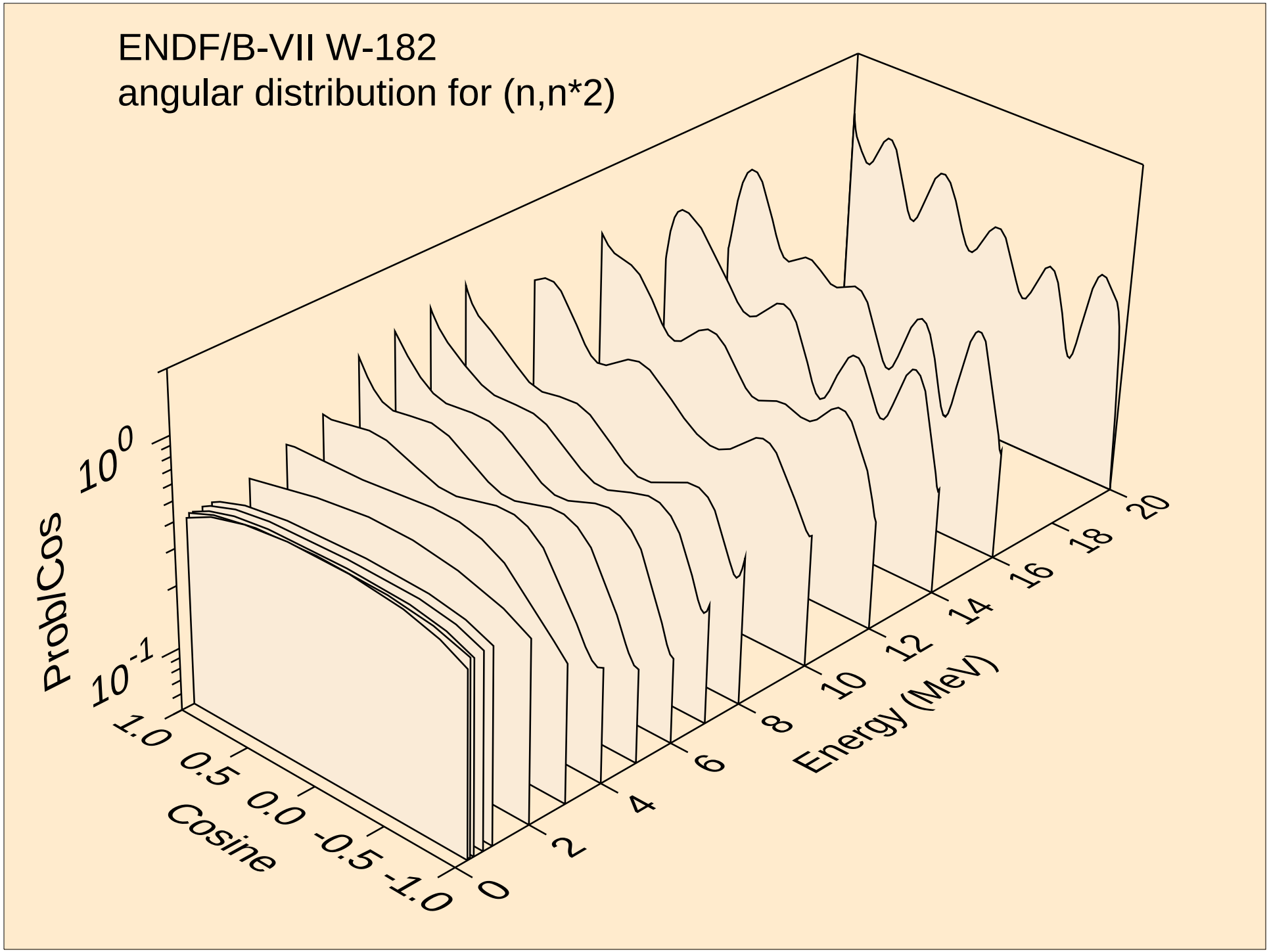

ENDF/B-VII W-182
angular distribution for elastic
ProbICos
10^{2}
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
Energy (MeV)

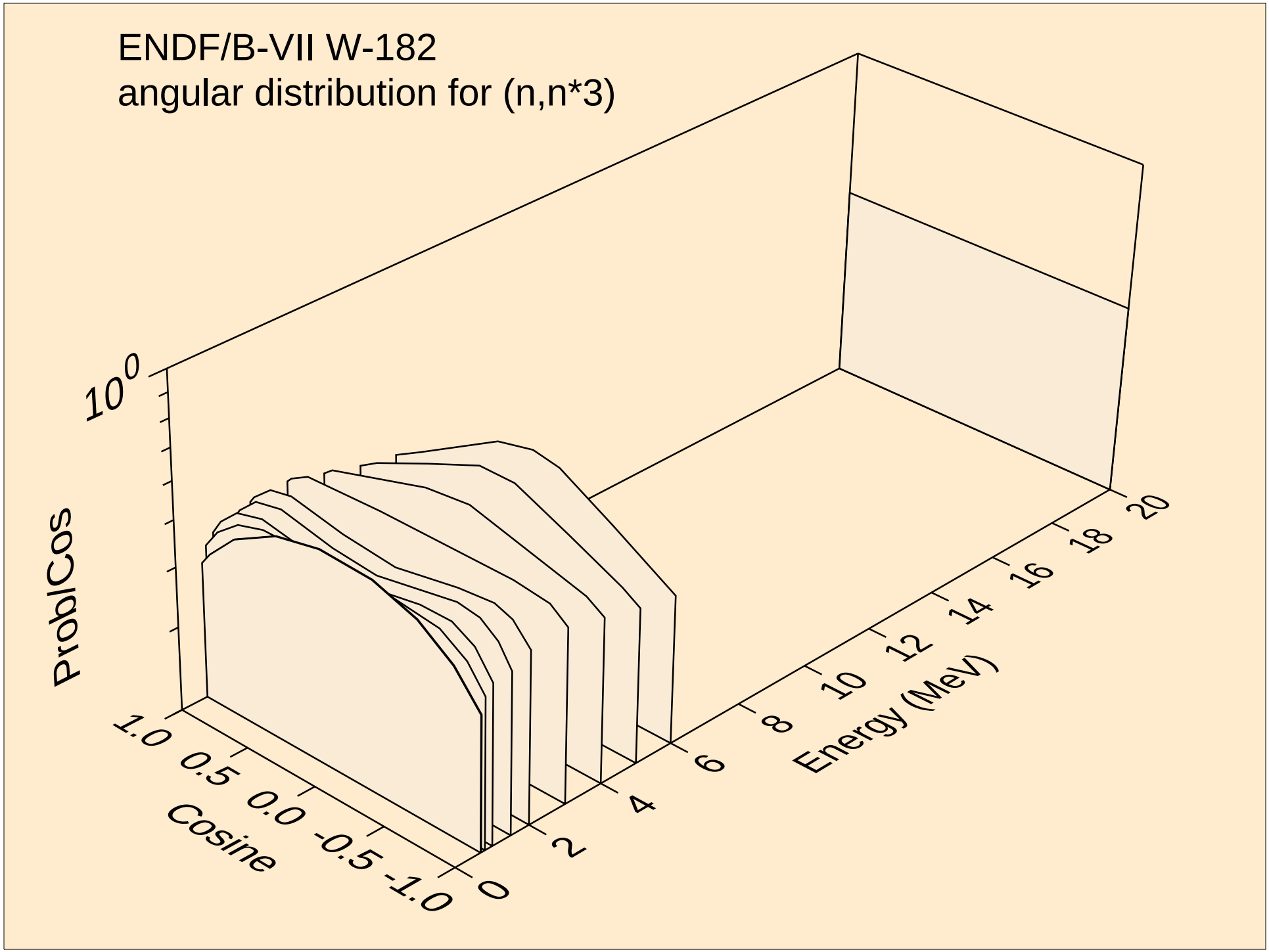

ENDF/B-VII W-182
angular distribution for (n,2n)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

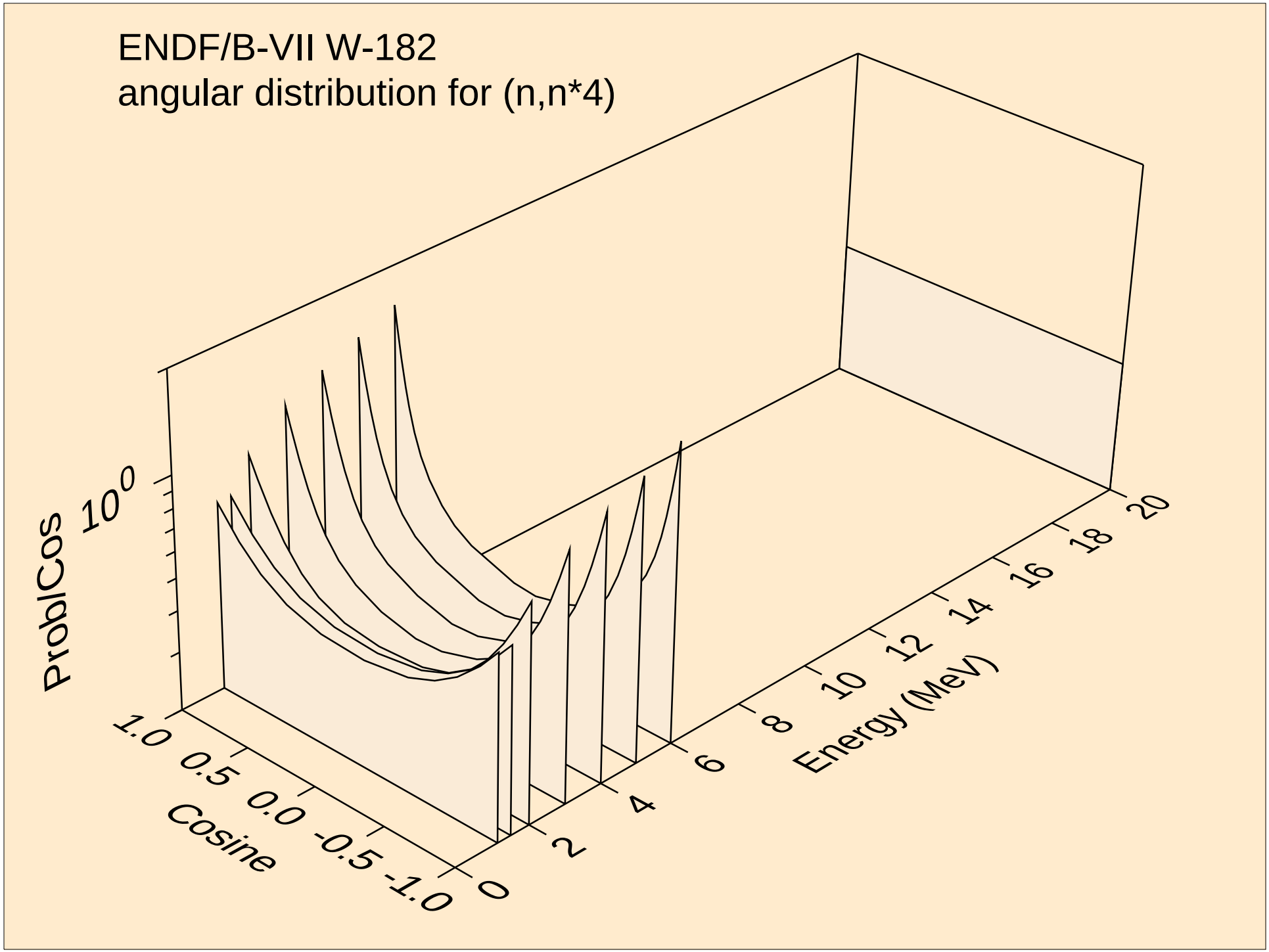

ENDF/B-VII W-182
angular distribution for (n,3n)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
14
15
16
17
18
19
20
Energy (MeV)

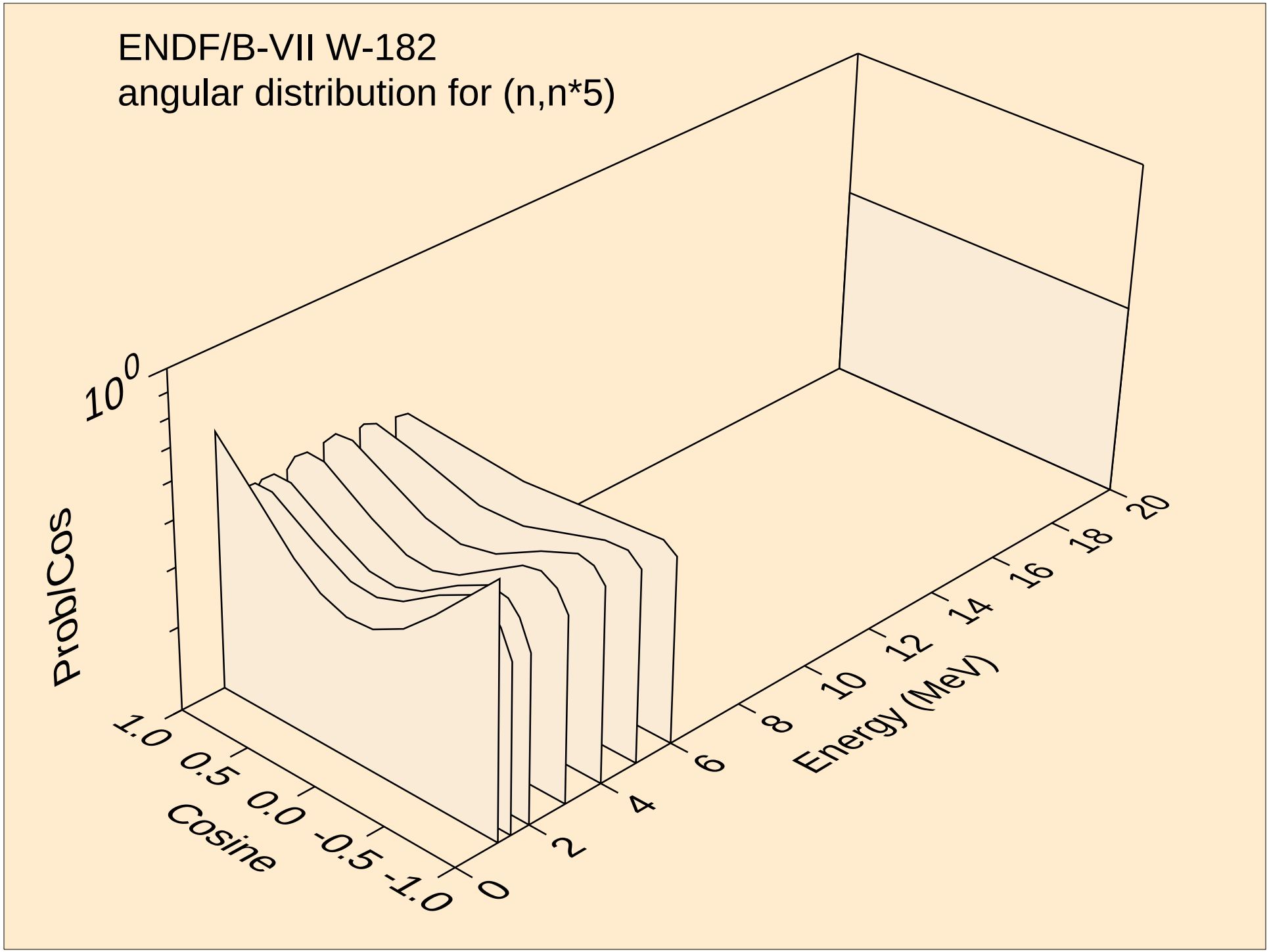

ENDF/B-VII W-182
angular distribution for (n,n*)p
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

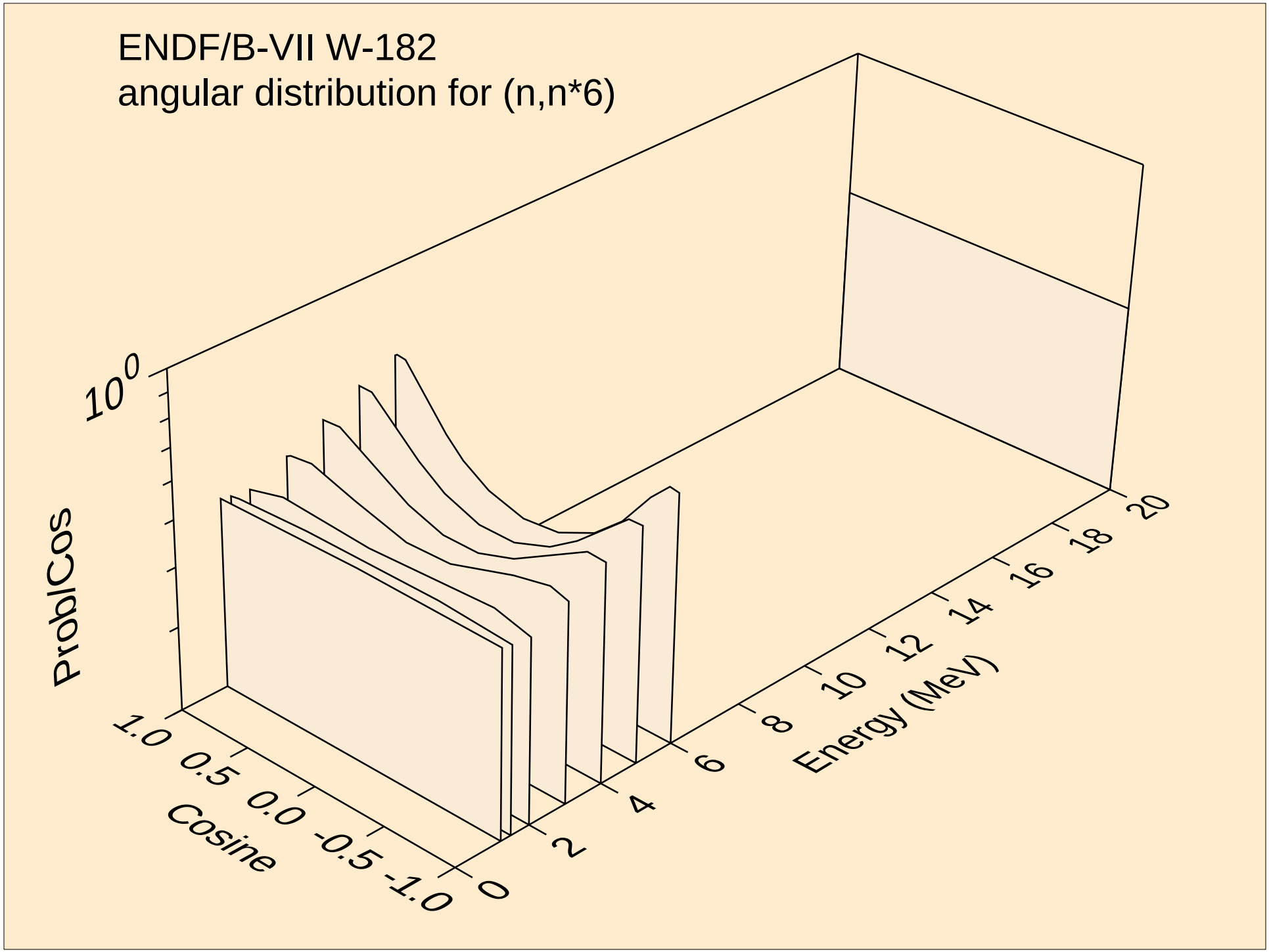

ENDF/B-VII W-182
angular distribution for (n,n*1)
Prob\Cos
10-1
10-3
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

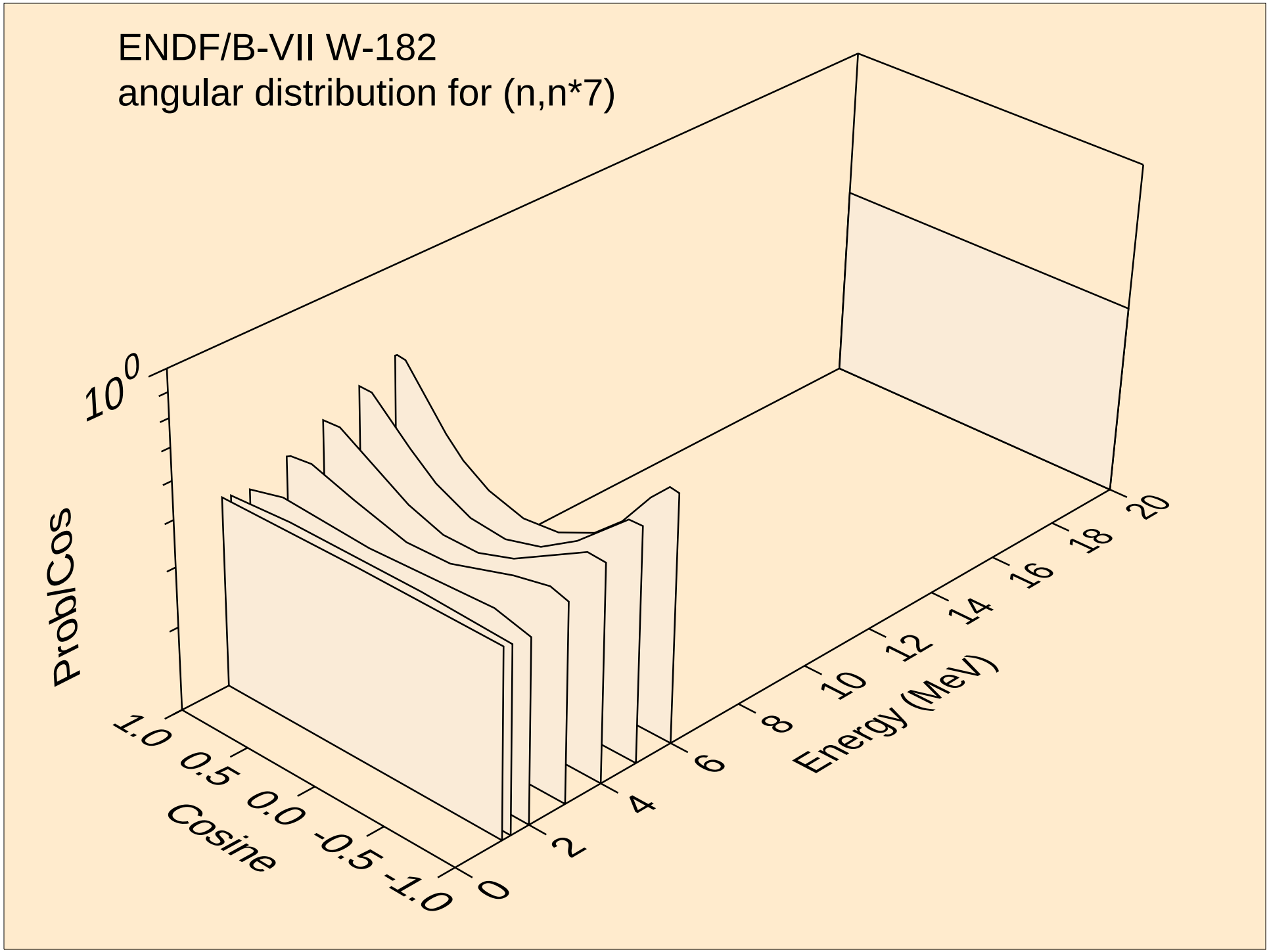

ENDF/B-VII W-182
angular distribution for (n,n*2)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

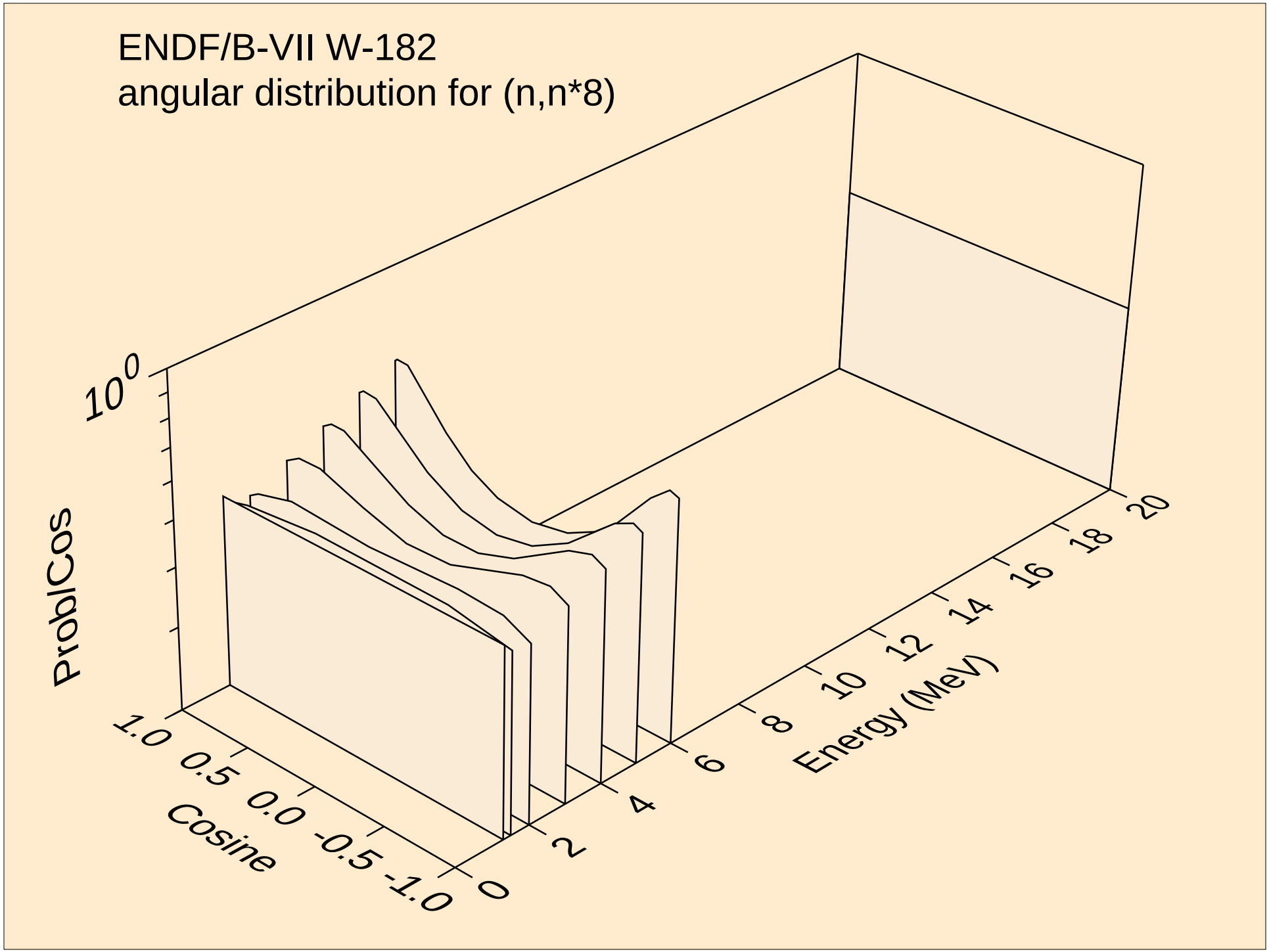

ENDF/B-VII W-182
angular distribution for (n,n*3)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

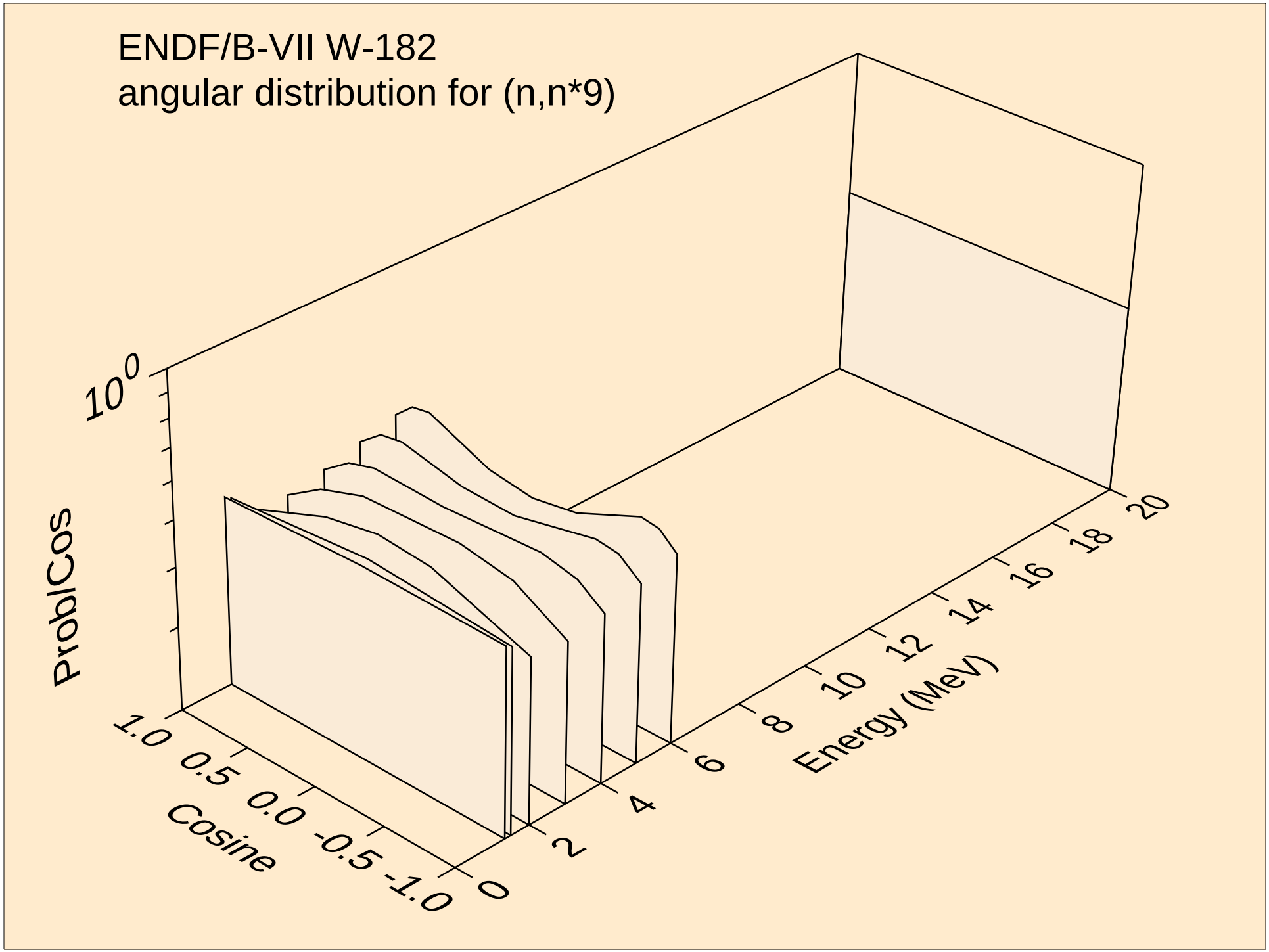

ENDF/B-VII W-182
angular distribution for (n,n*4)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

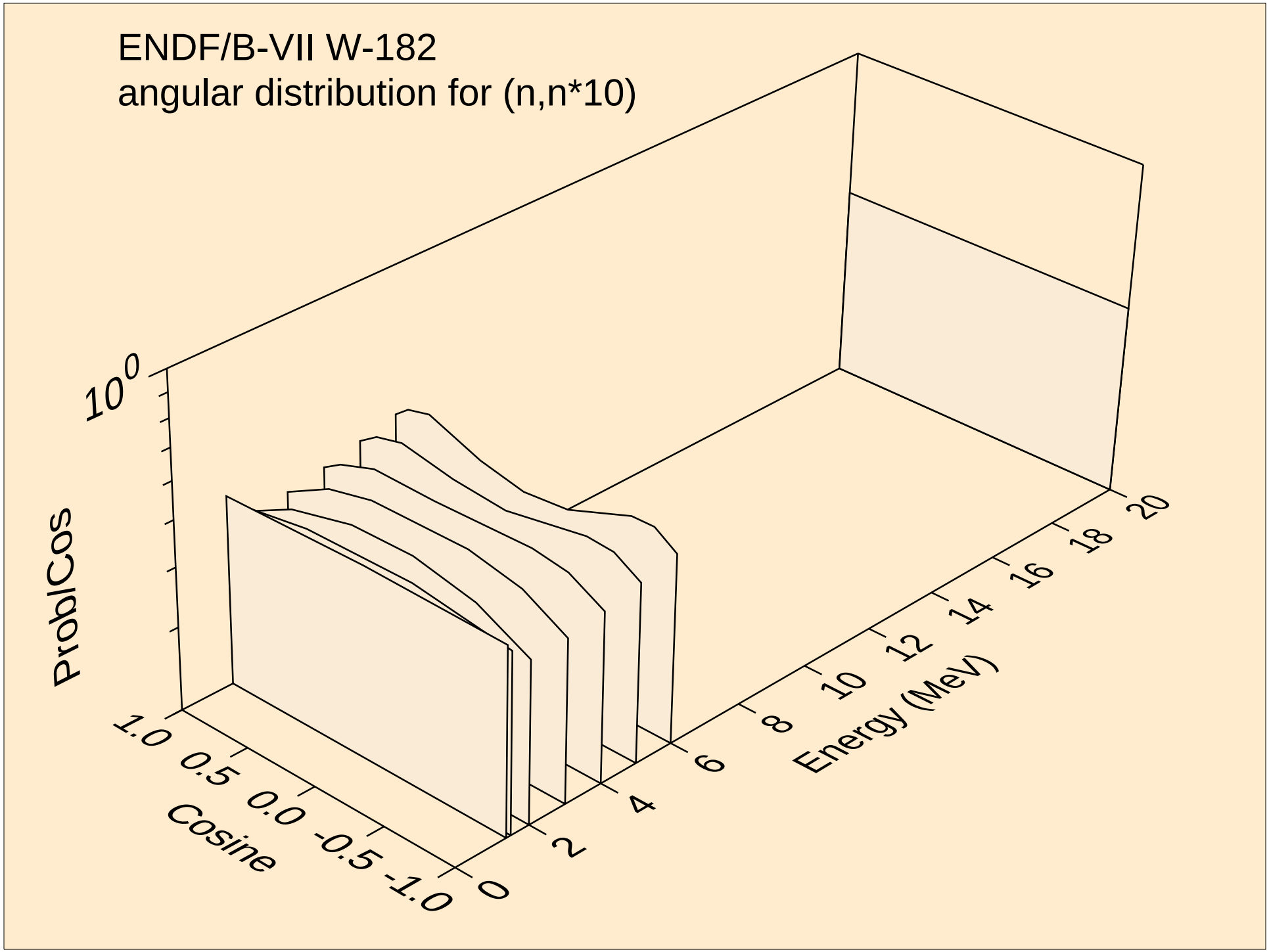

ENDF/B-VII W-182
angular distribution for (n,n*5)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

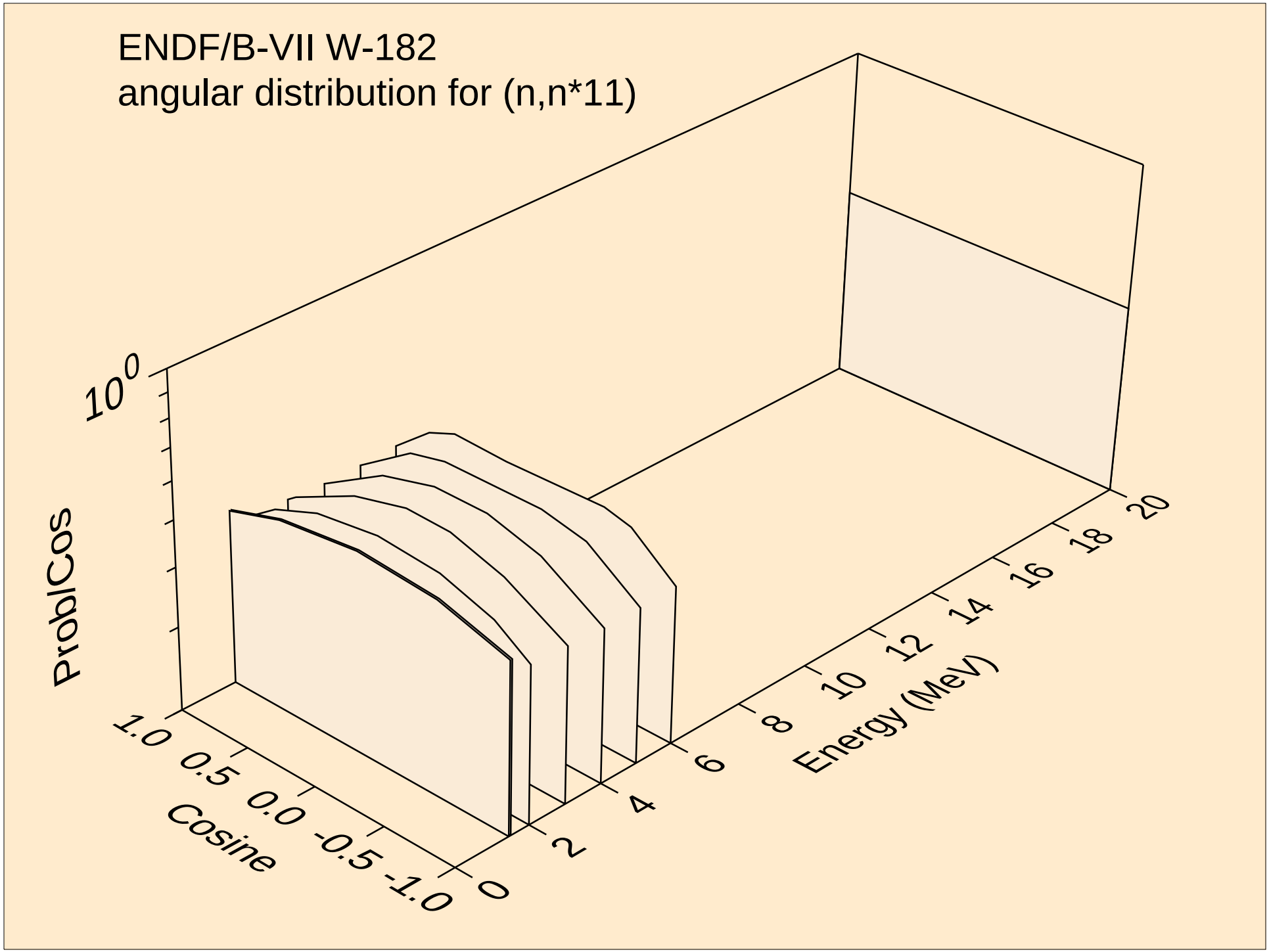

ENDF/B-VII W-182
angular distribution for (n,n*6)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

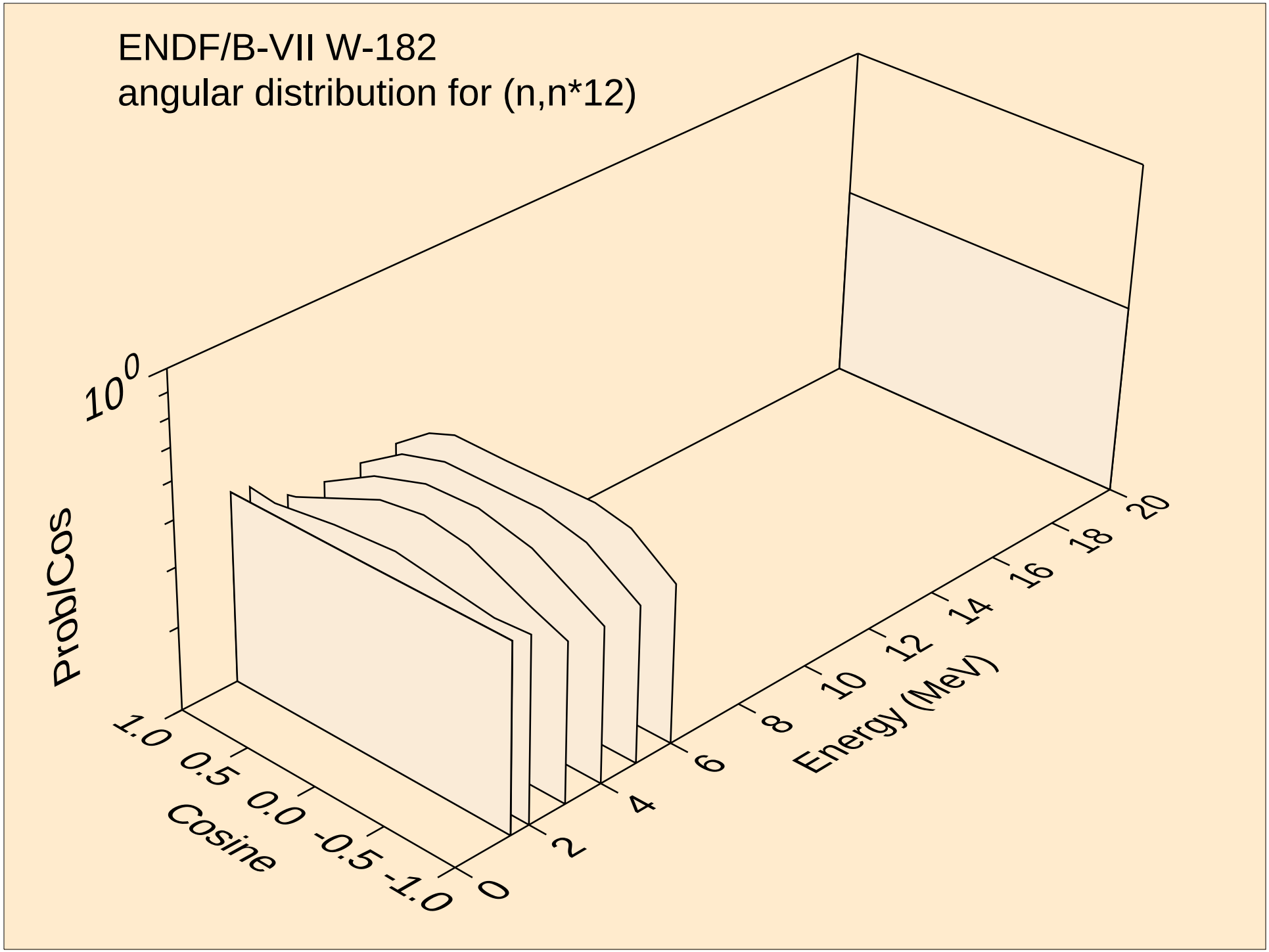

ENDF/B-VII W-182
angular distribution for (n,n*7)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

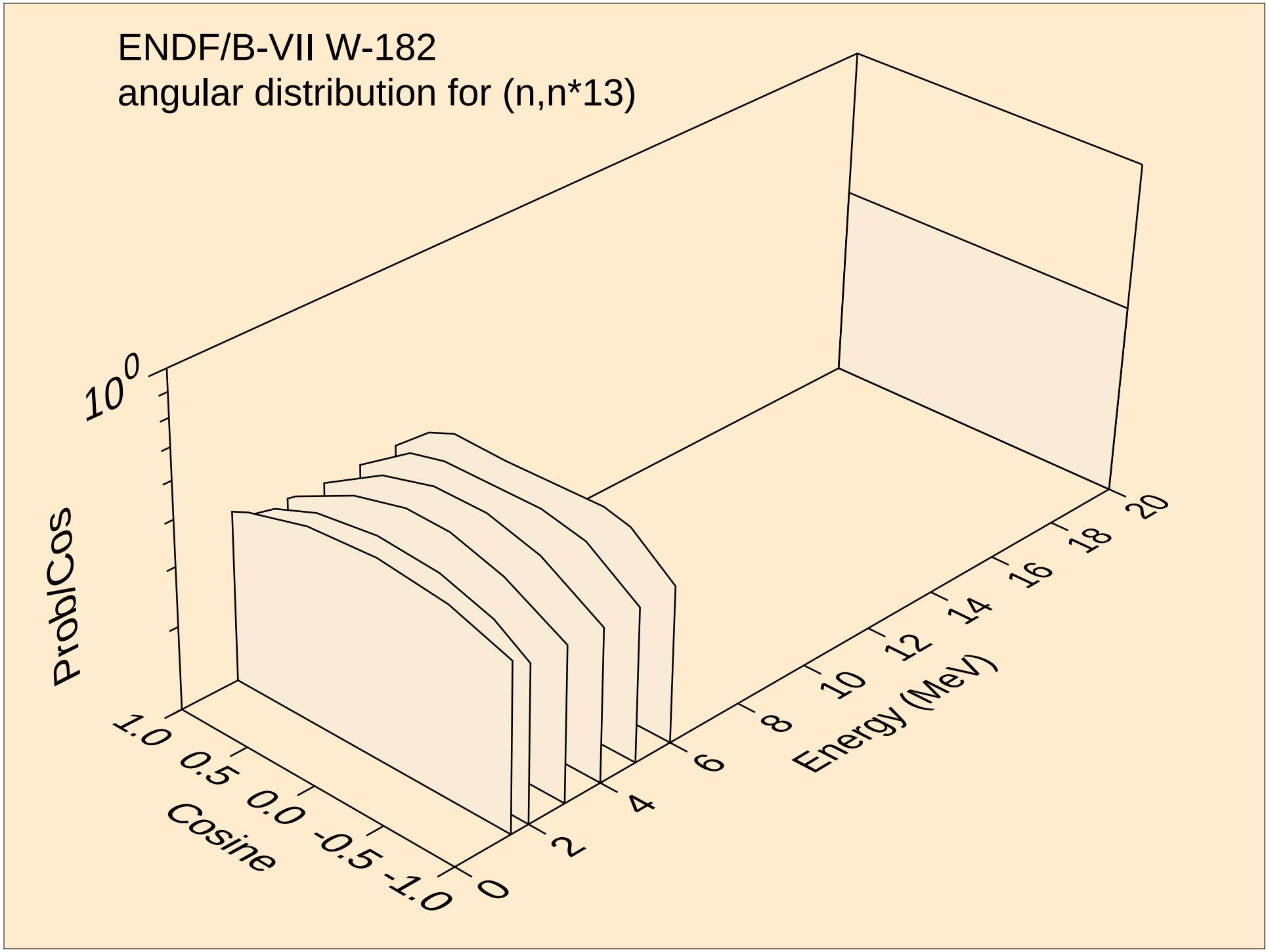

ENDF/B-VII W-182
angular distribution for (n,n*8)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

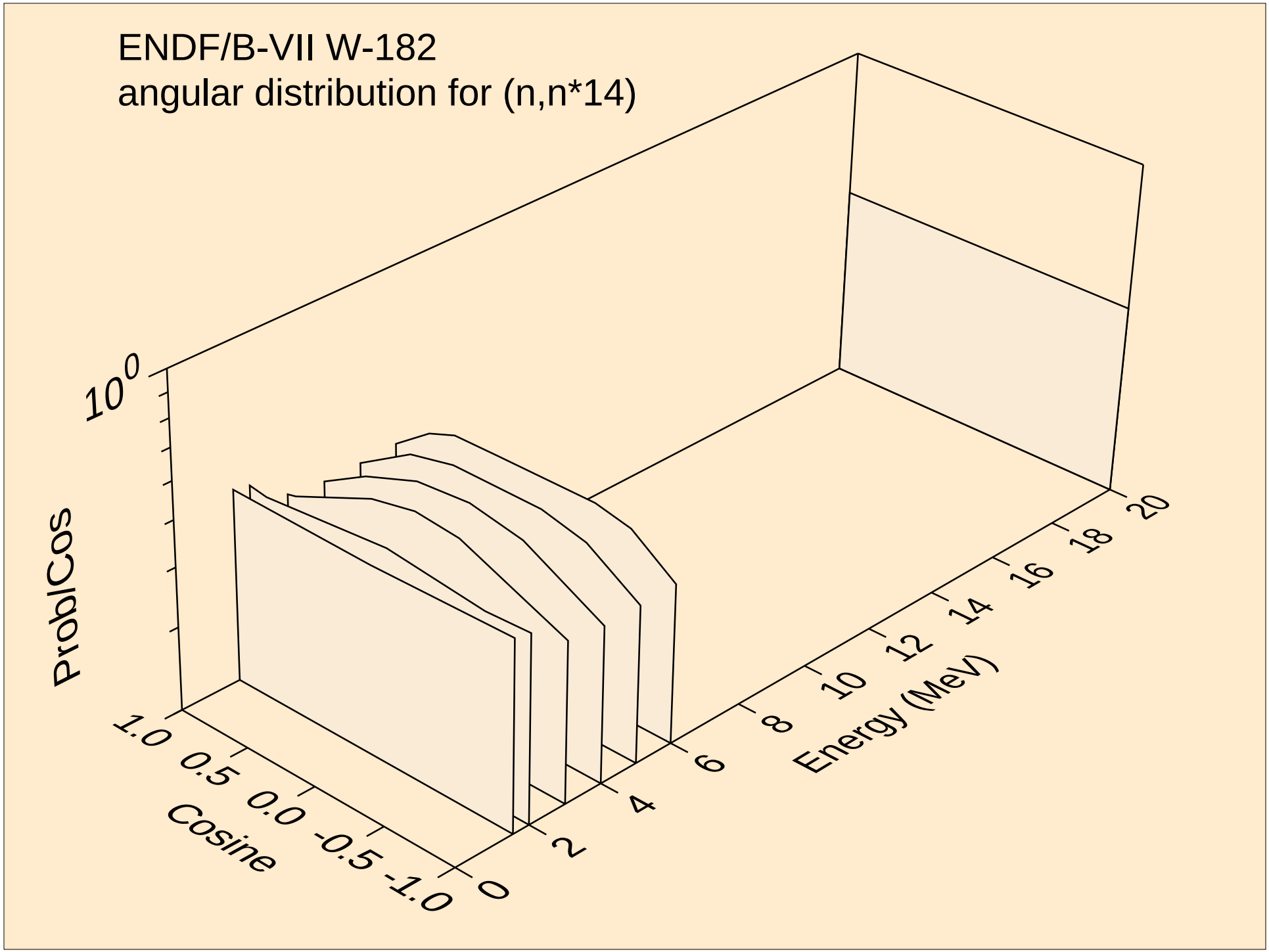

ENDF/B-VII W-182
angular distribution for (n,n*9)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

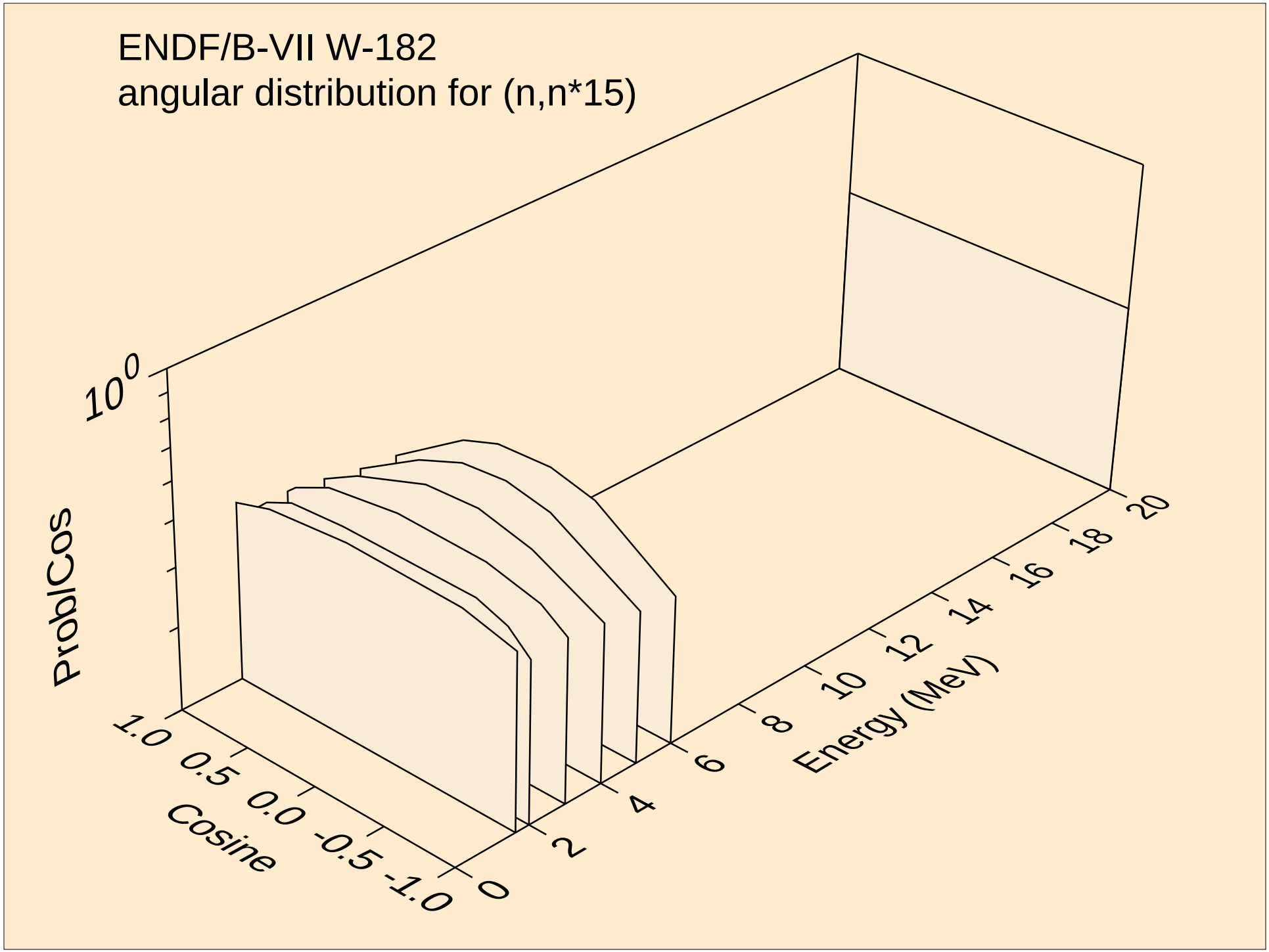

ENDF/B-VII W-182
angular distribution for (n,n*10)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

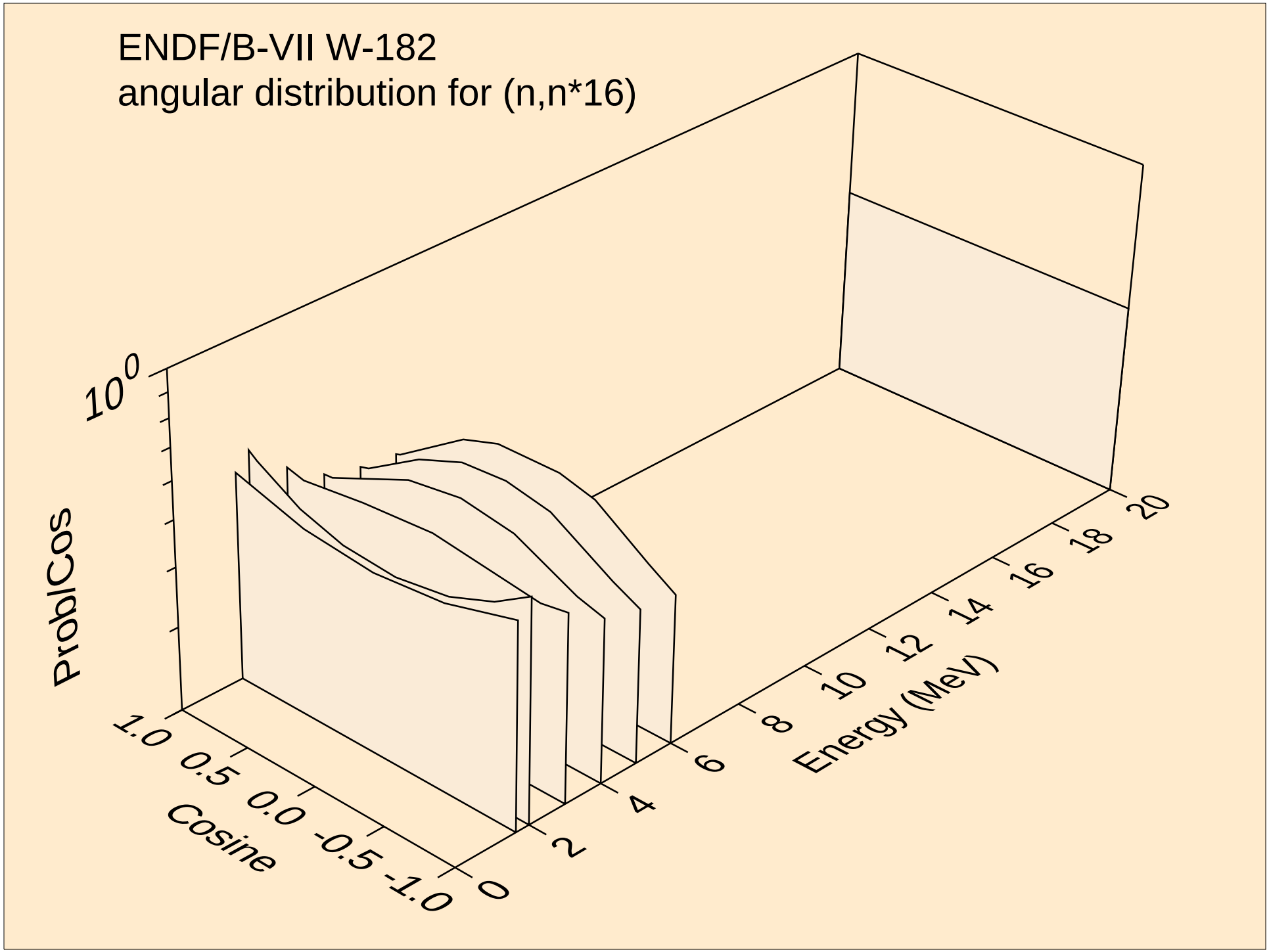

ENDF/B-VII W-182
angular distribution for (n,n*11)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

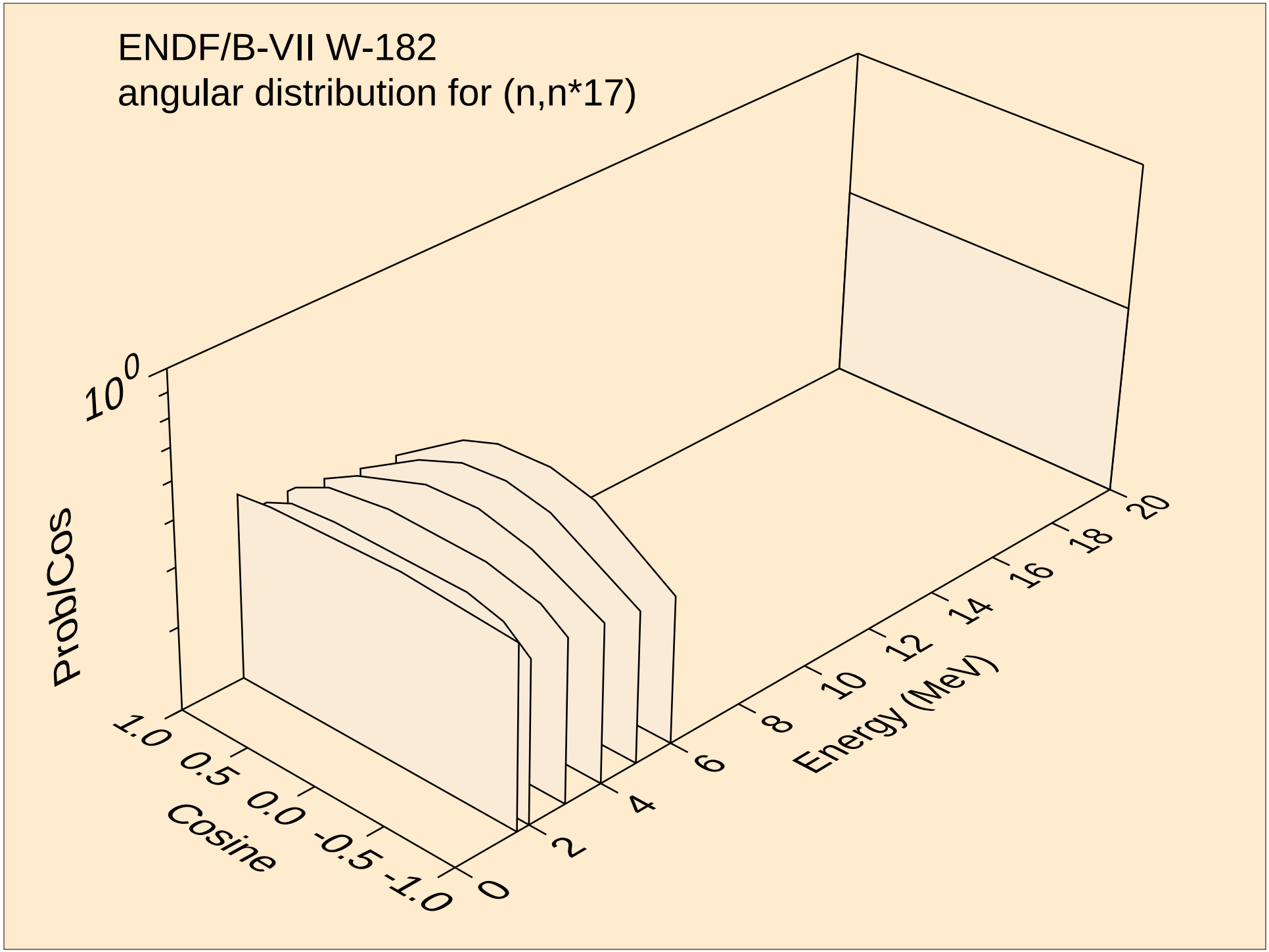

ENDF/B-VII W-182
angular distribution for (n,n*12)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

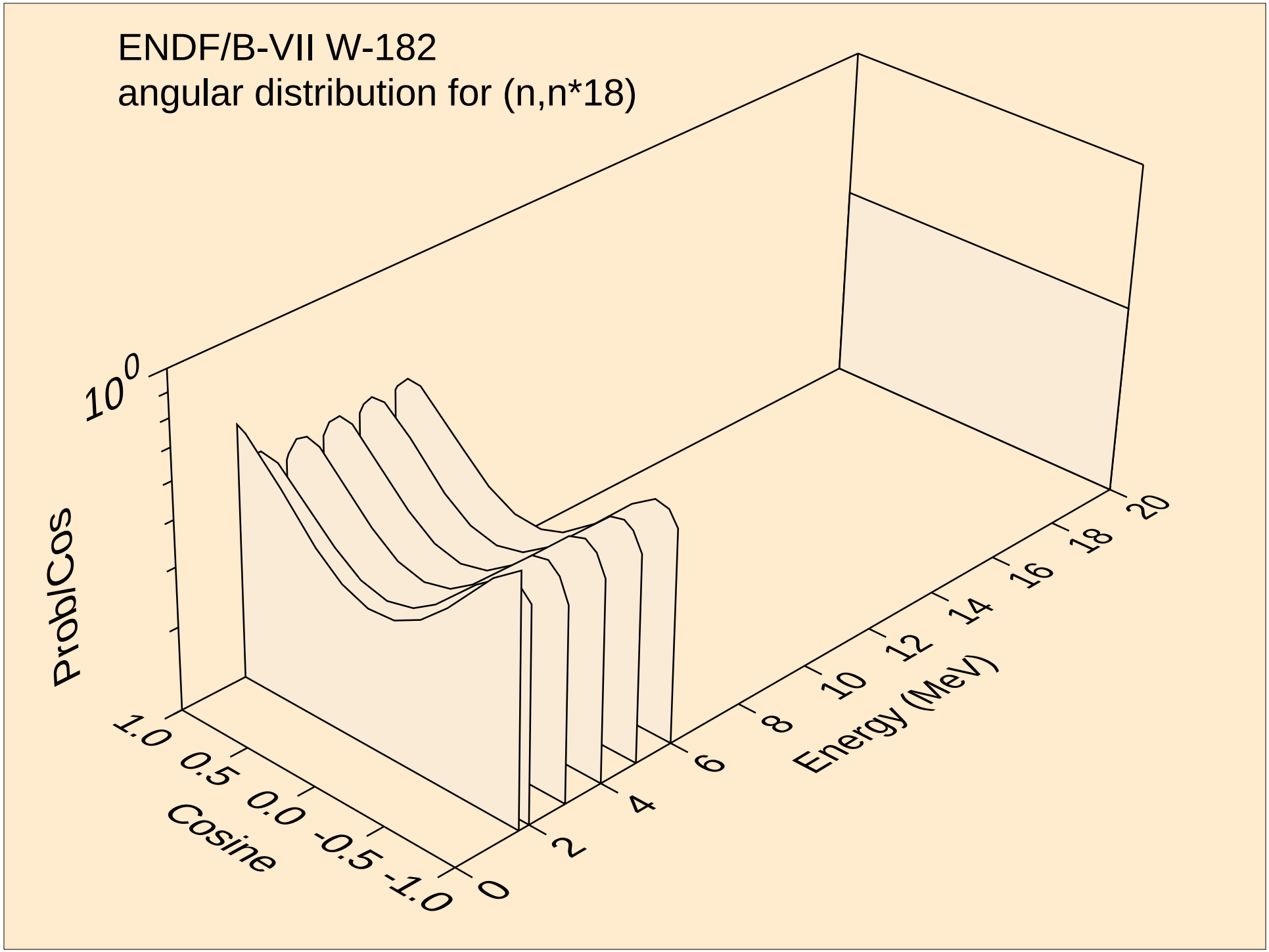

ENDF/B-VII W-182
angular distribution for (n,n*13)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

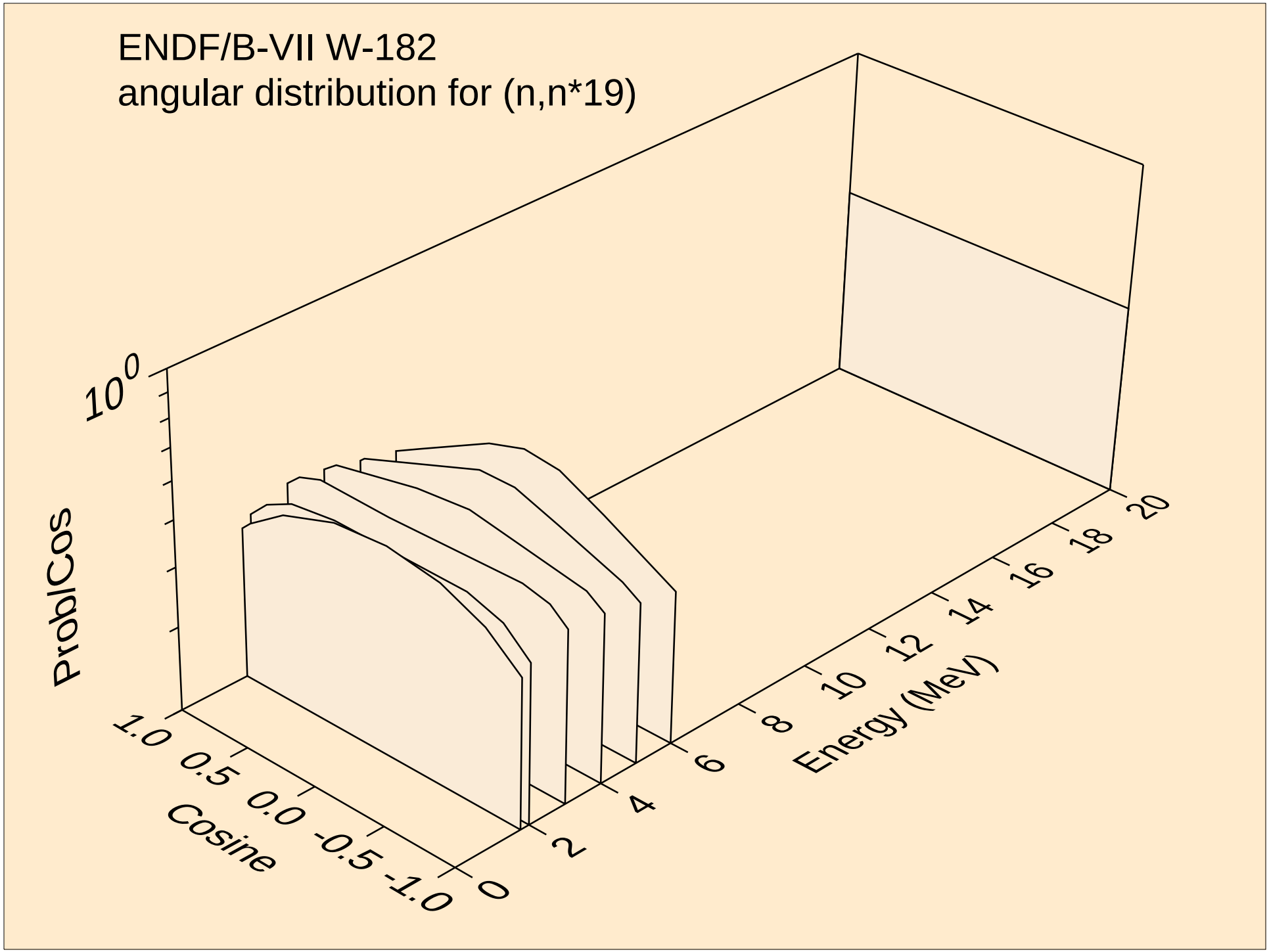

ENDF/B-VII W-182
angular distribution for (n,n*14)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

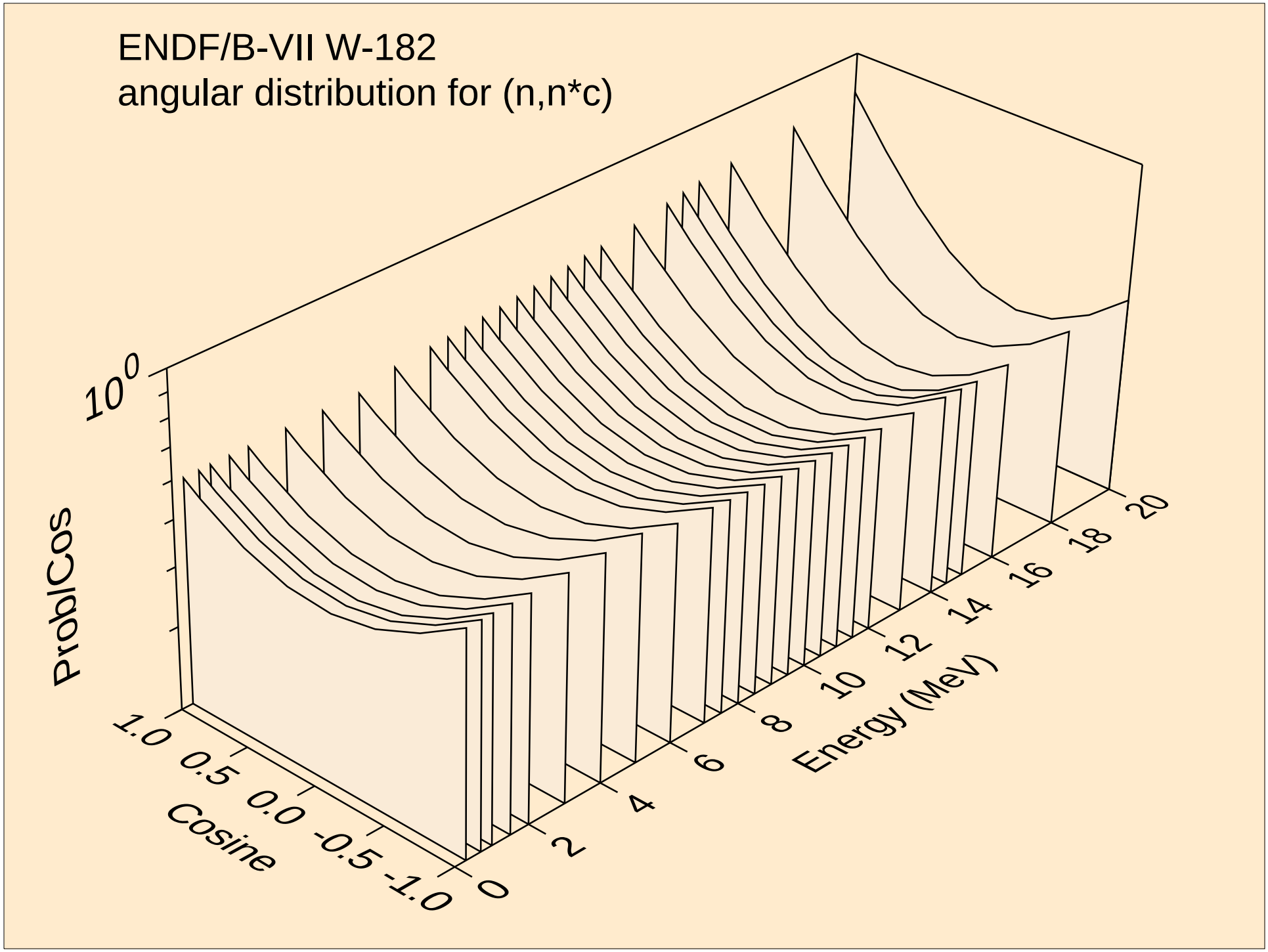

ENDF/B-VII W-182
angular distribution for (n,n*15)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

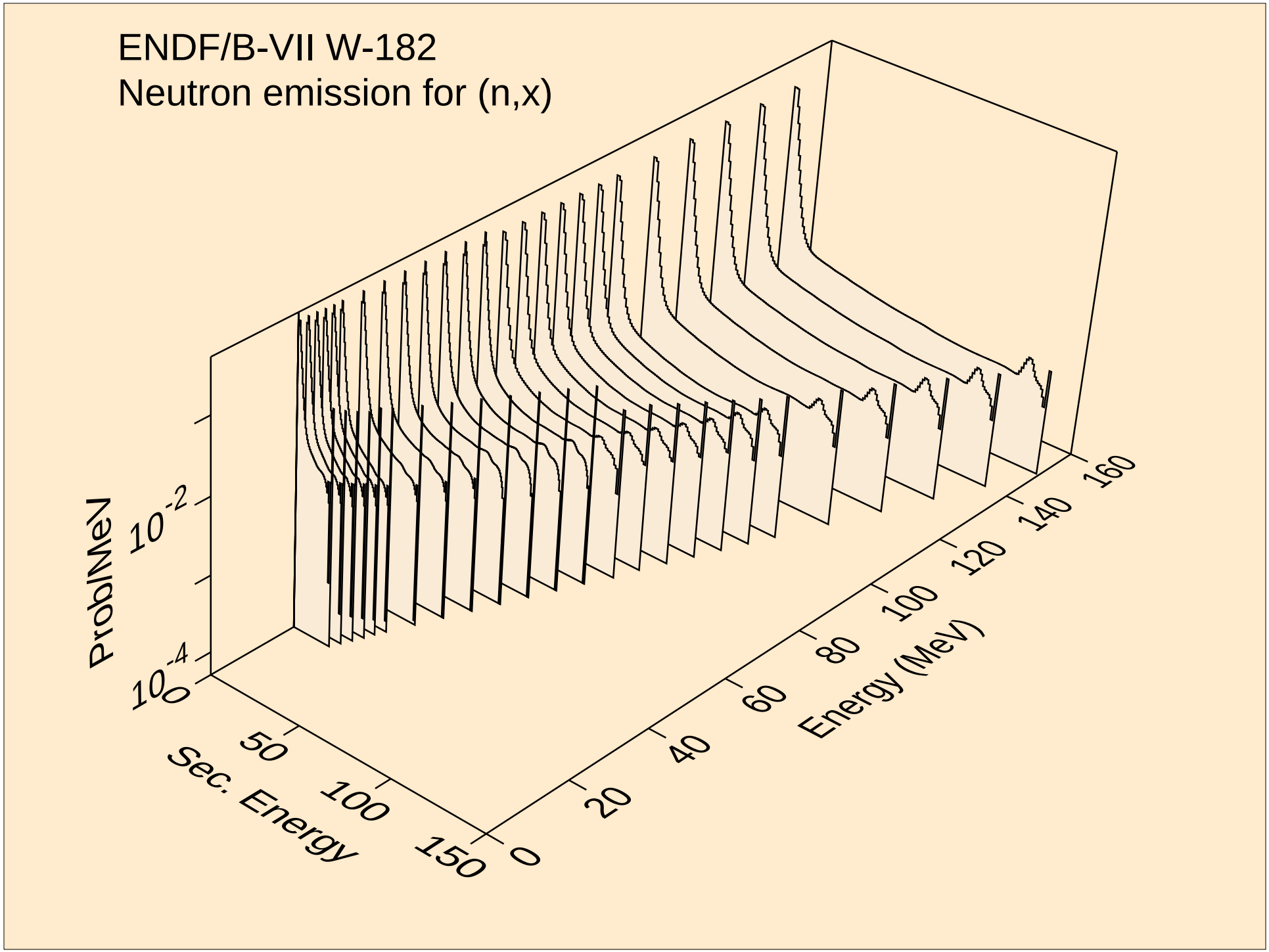

ENDF/B-VII W-182
angular distribution for (n,n*16)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

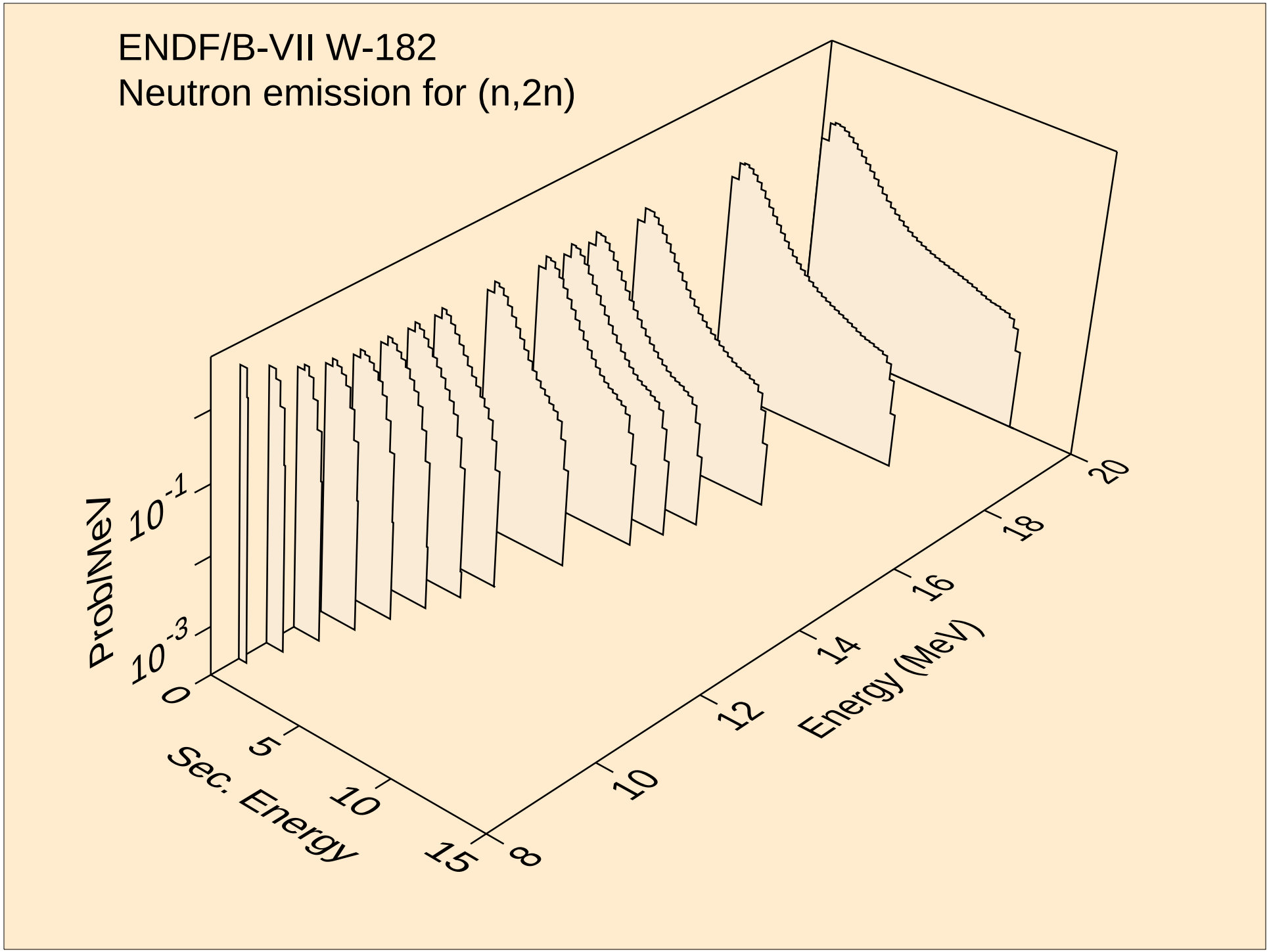

ENDF/B-VII W-182
angular distribution for (n,n*17)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

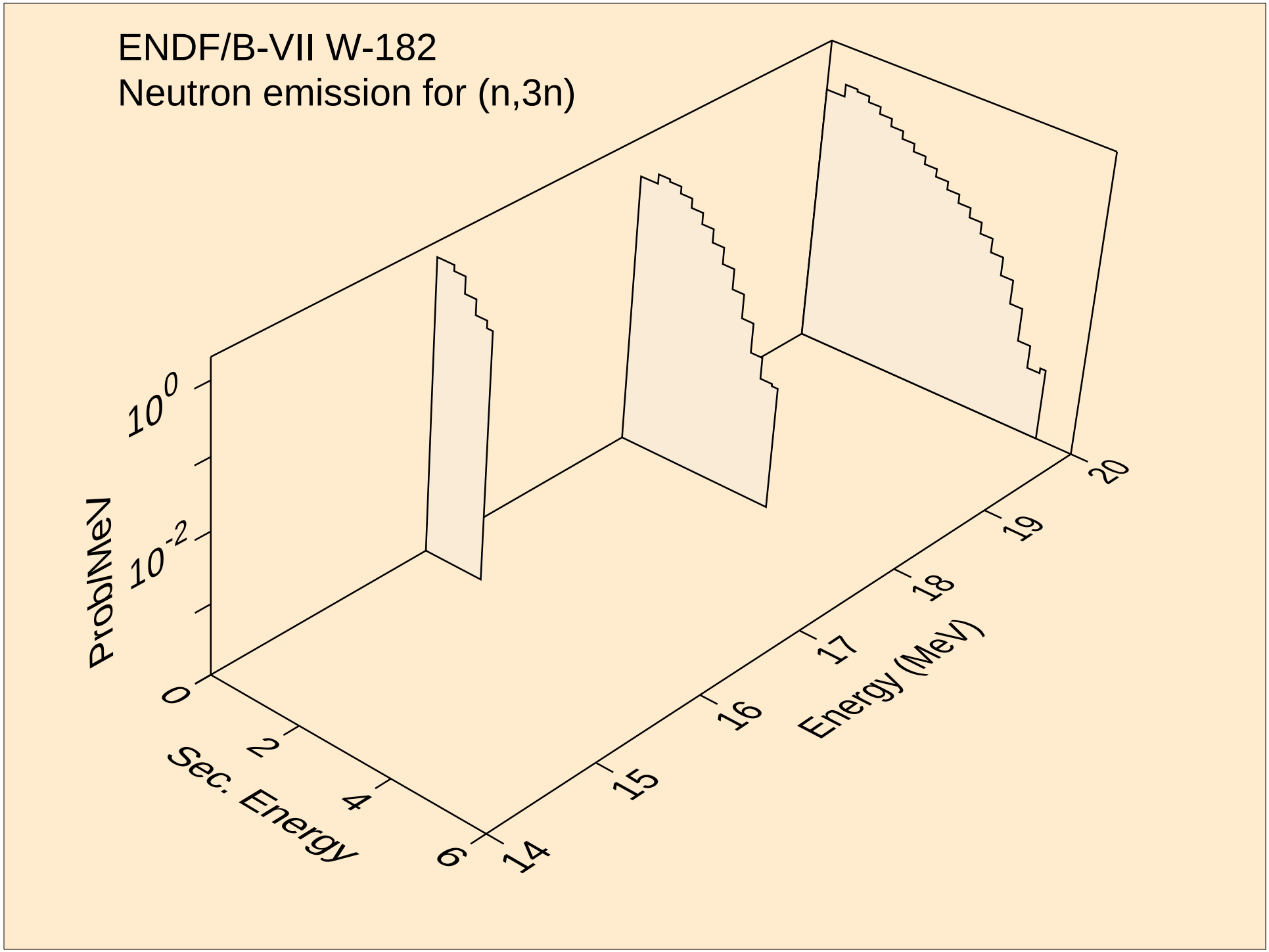

ENDF/B-VII W-182
angular distribution for (n,n*18)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

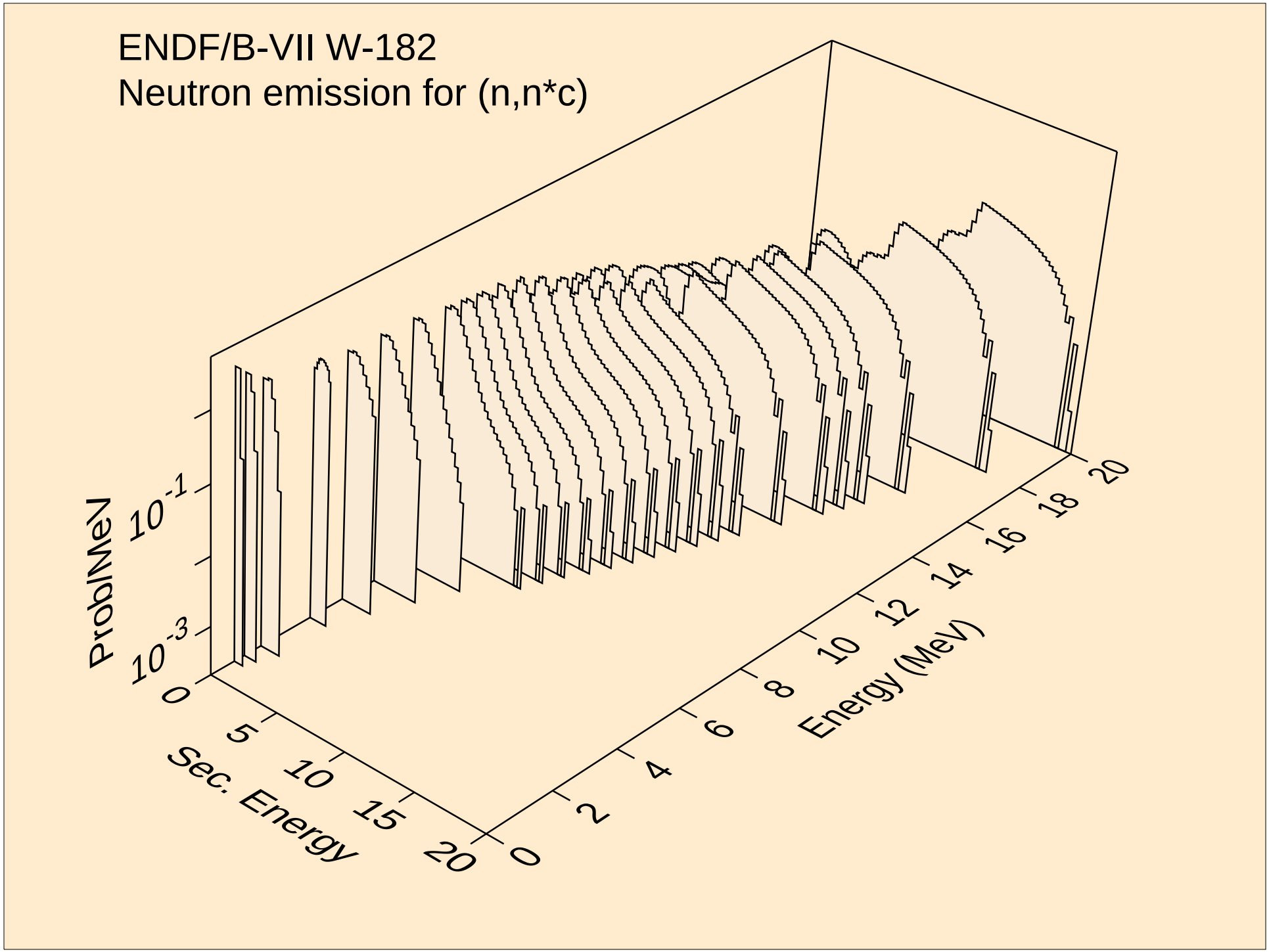

ENDF/B-VII W-182
angular distribution for (n,n*19)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

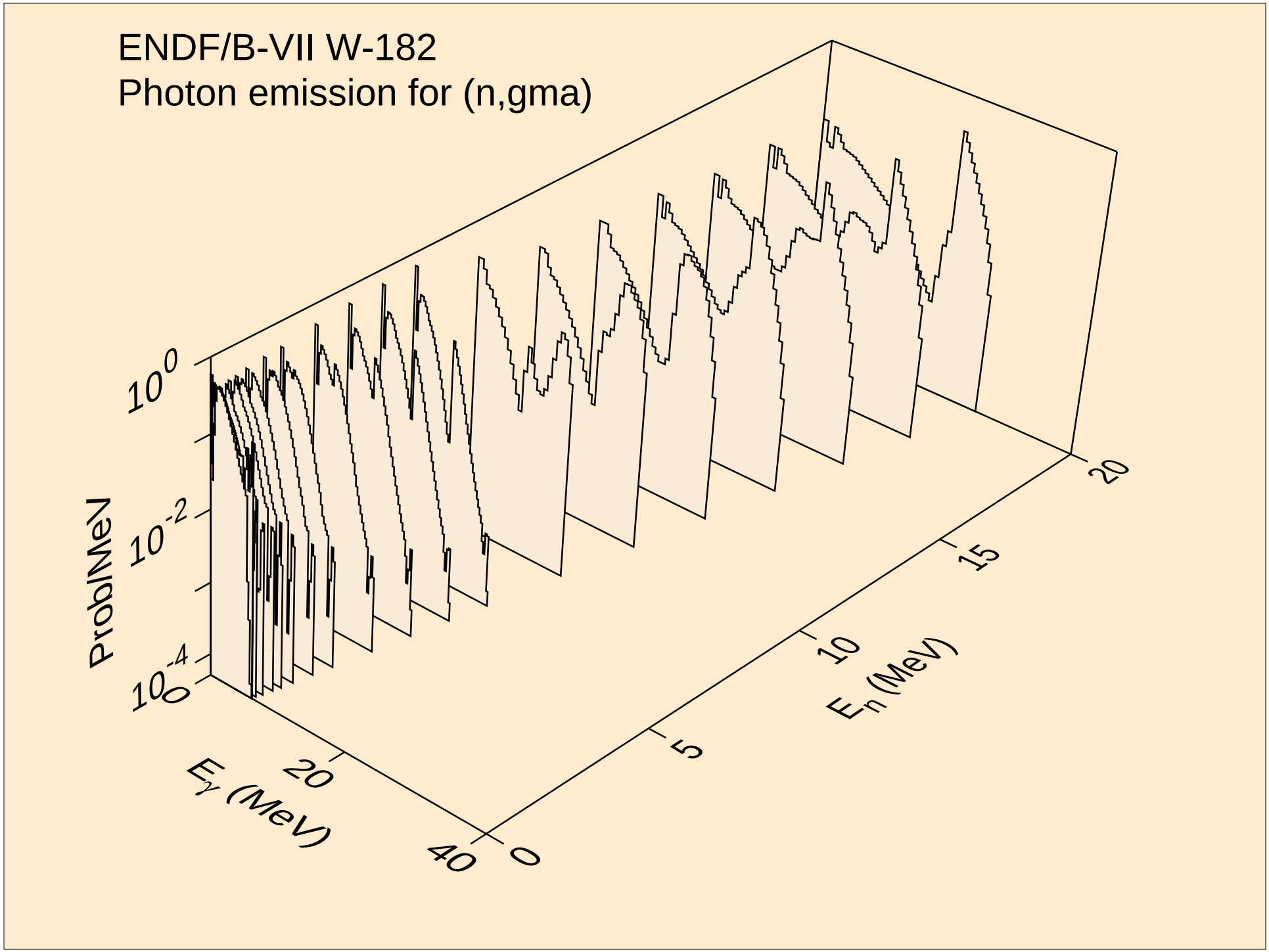

ENDF/B-VII W-182
angular distribution for (n,n*c)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

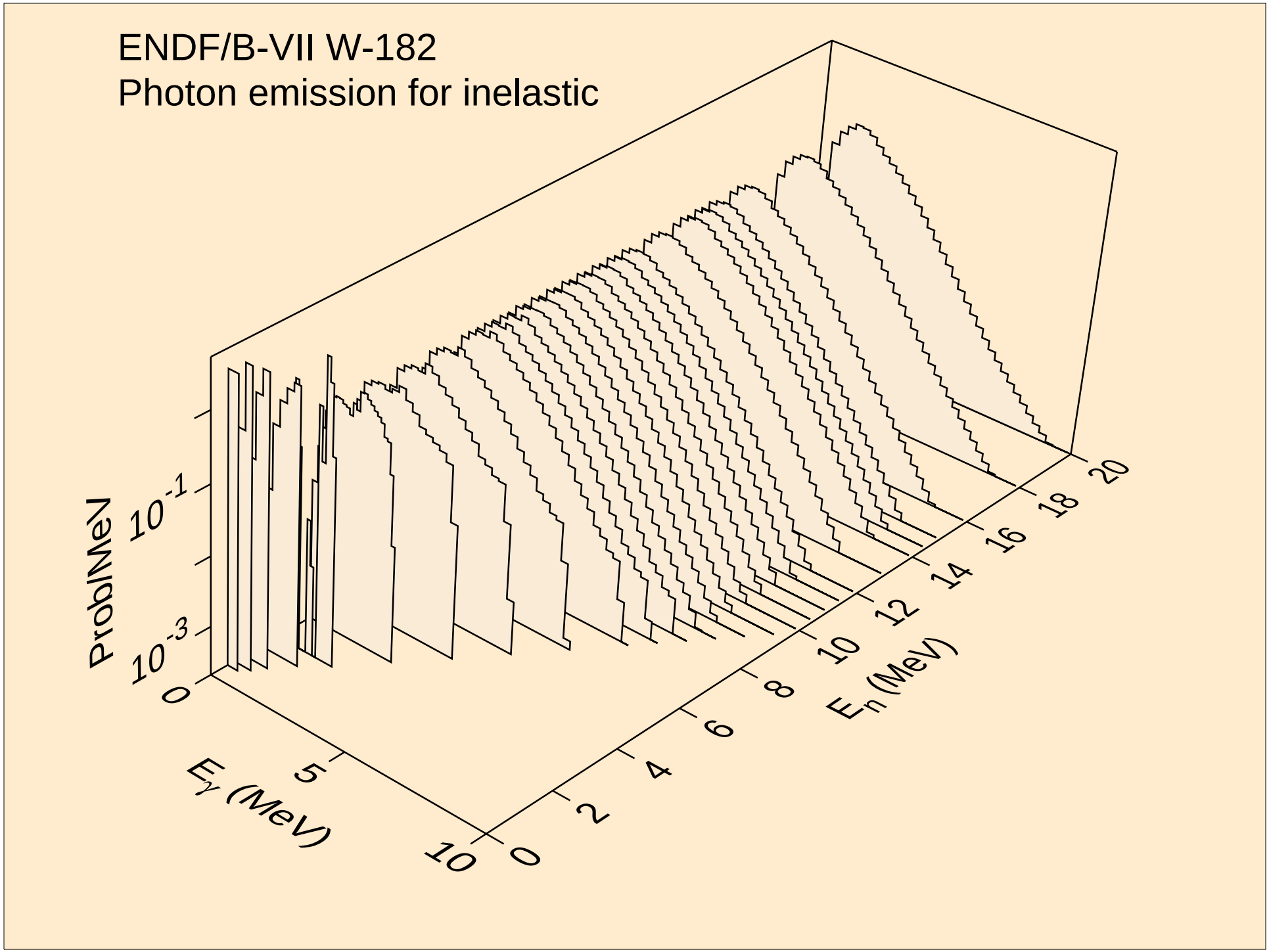

ENDF/B-VII W-182
Neutron emission for (n,x)
Prob/MeV
10-2
10-4
0
50
100
150
Sec. Energy
0
20
40
60
80
100
120
140
160
Energy (MeV)

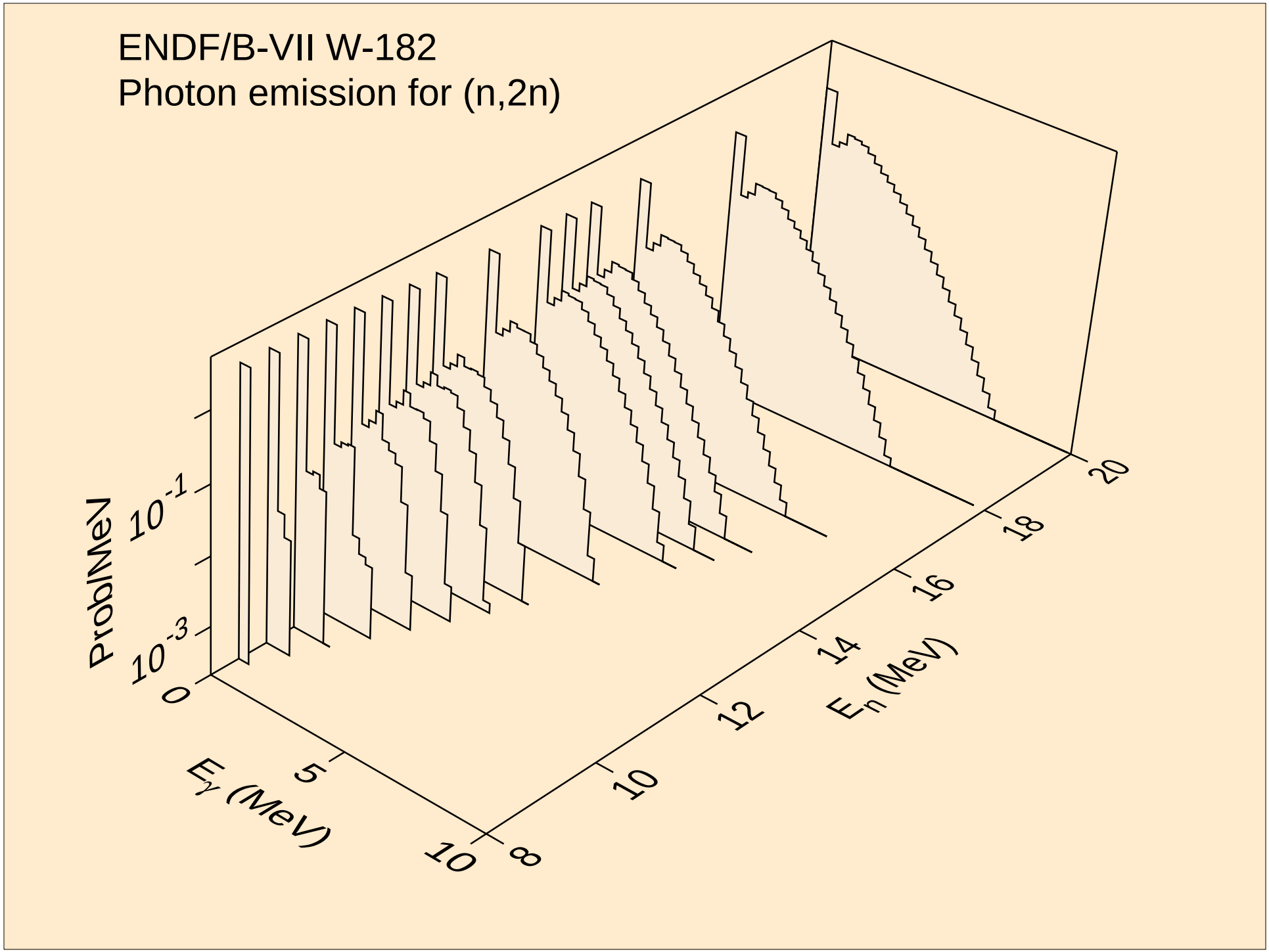

ENDF/B-VII W-182
Neutron emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
5
10
15
8
10
12
14
16
18
20
Energy (MeV)

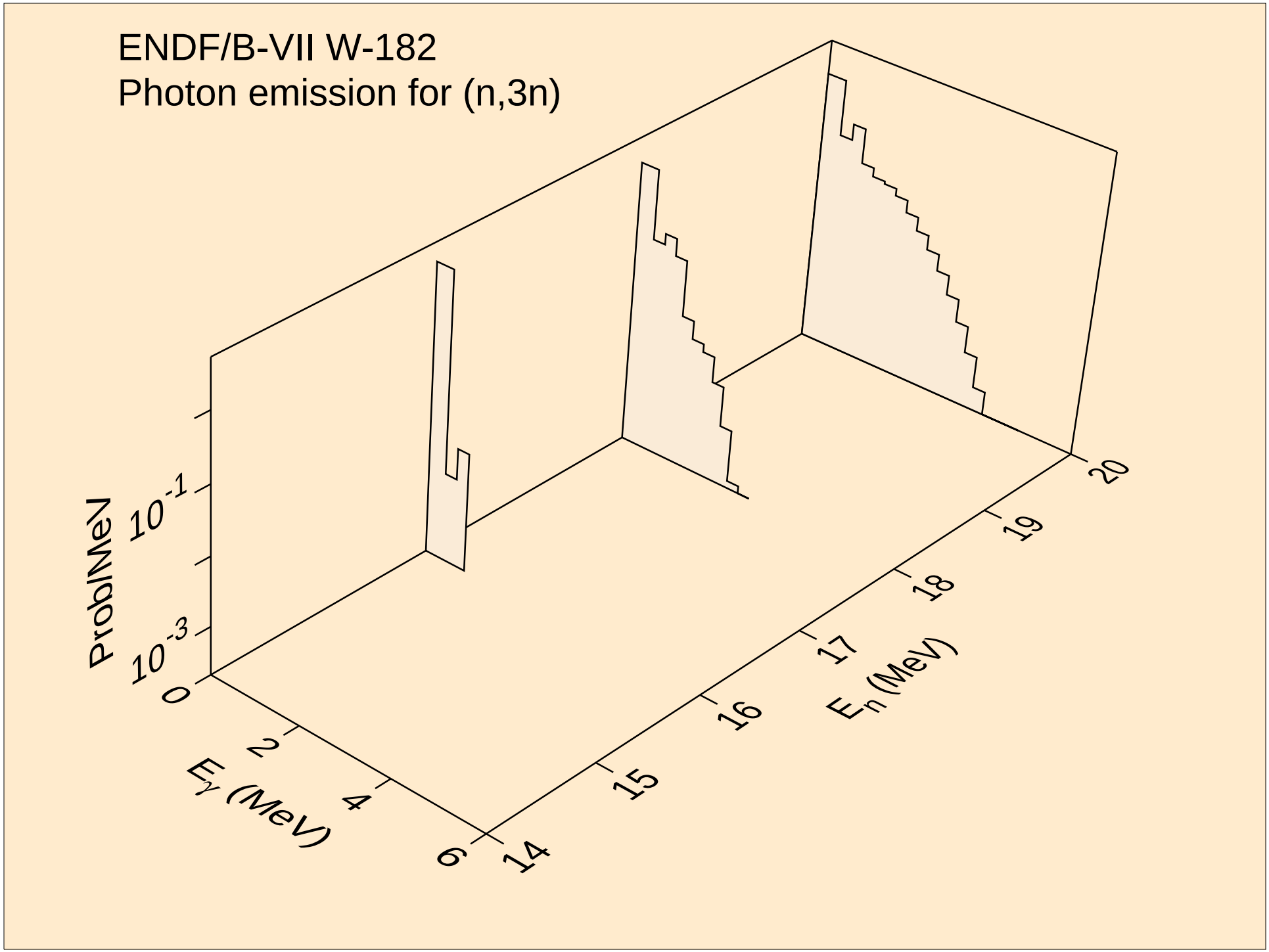

ENDF/B-VII W-182
Neutron emission for (n,3n)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
Sec. Energy
14
15
16
17
18
19
20
Energy (MeV)

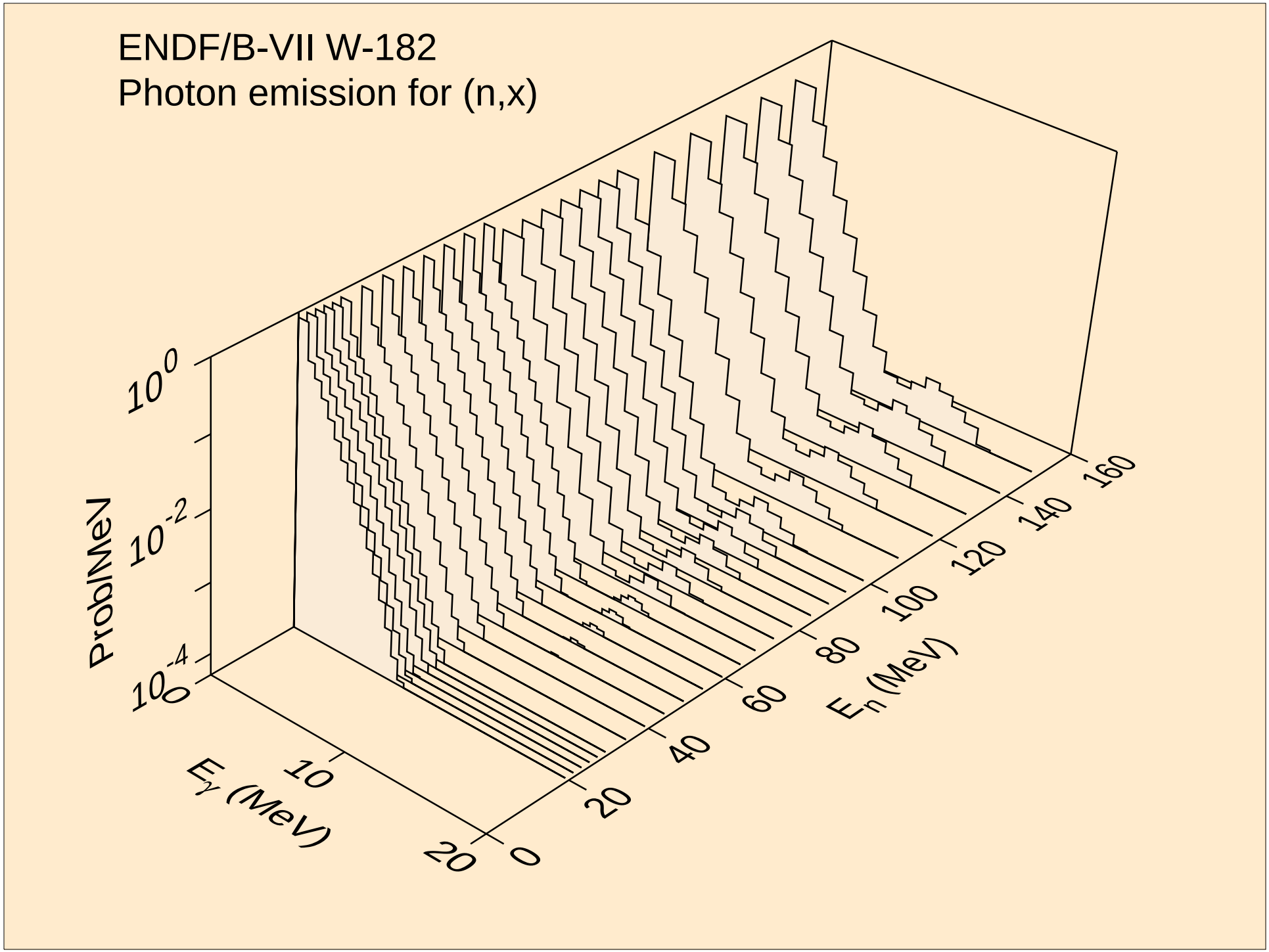

ENDF/B-VII W-182
Neutron emission for (n,n*c)
Prob/MeV
10^-1
10^-3
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

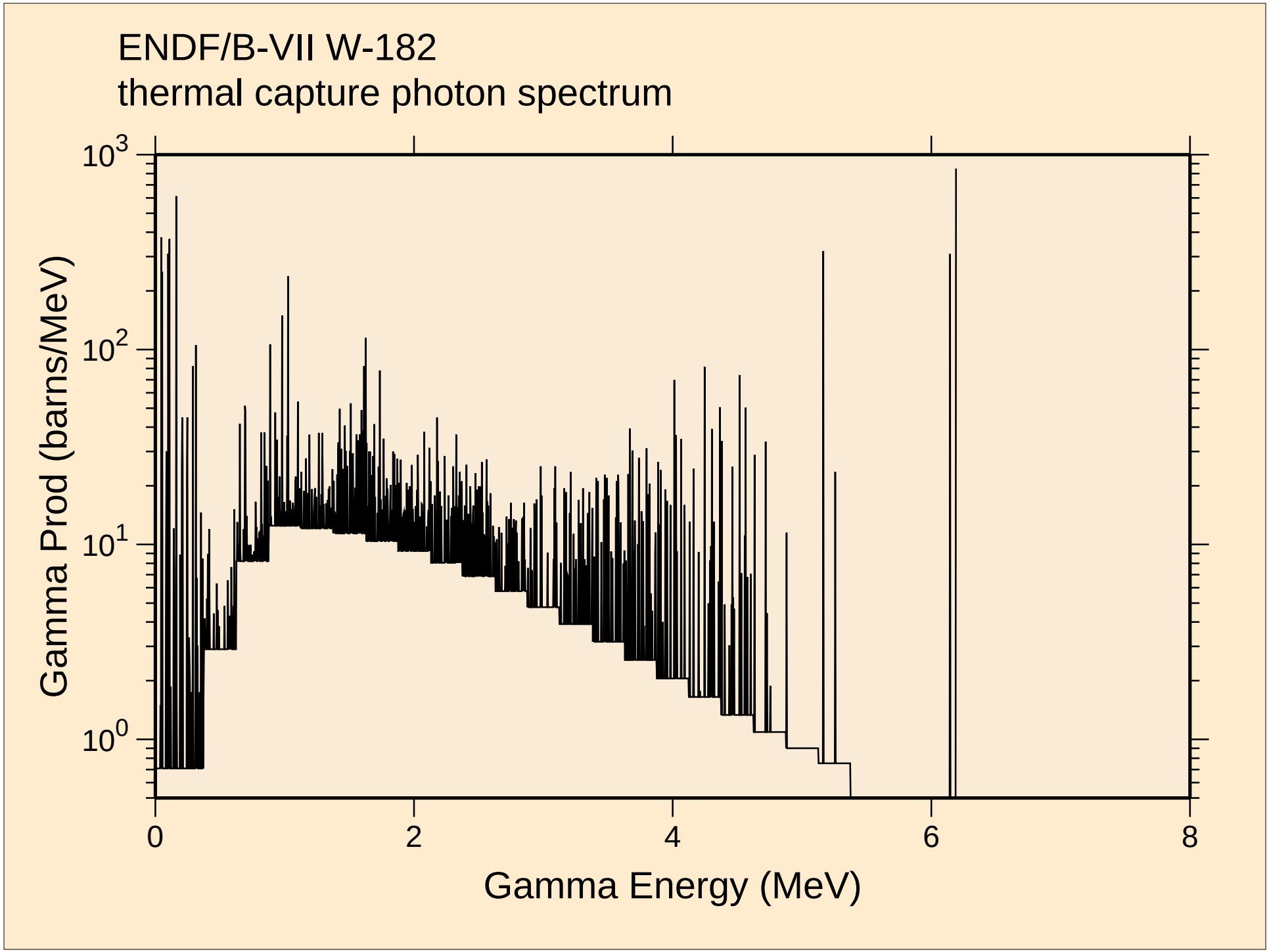

ENDF/B-VII W-182
Photon emission for (n,gma)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
E_γ (MeV)
0
20
40
E_n (MeV)
0
5
10
15
20

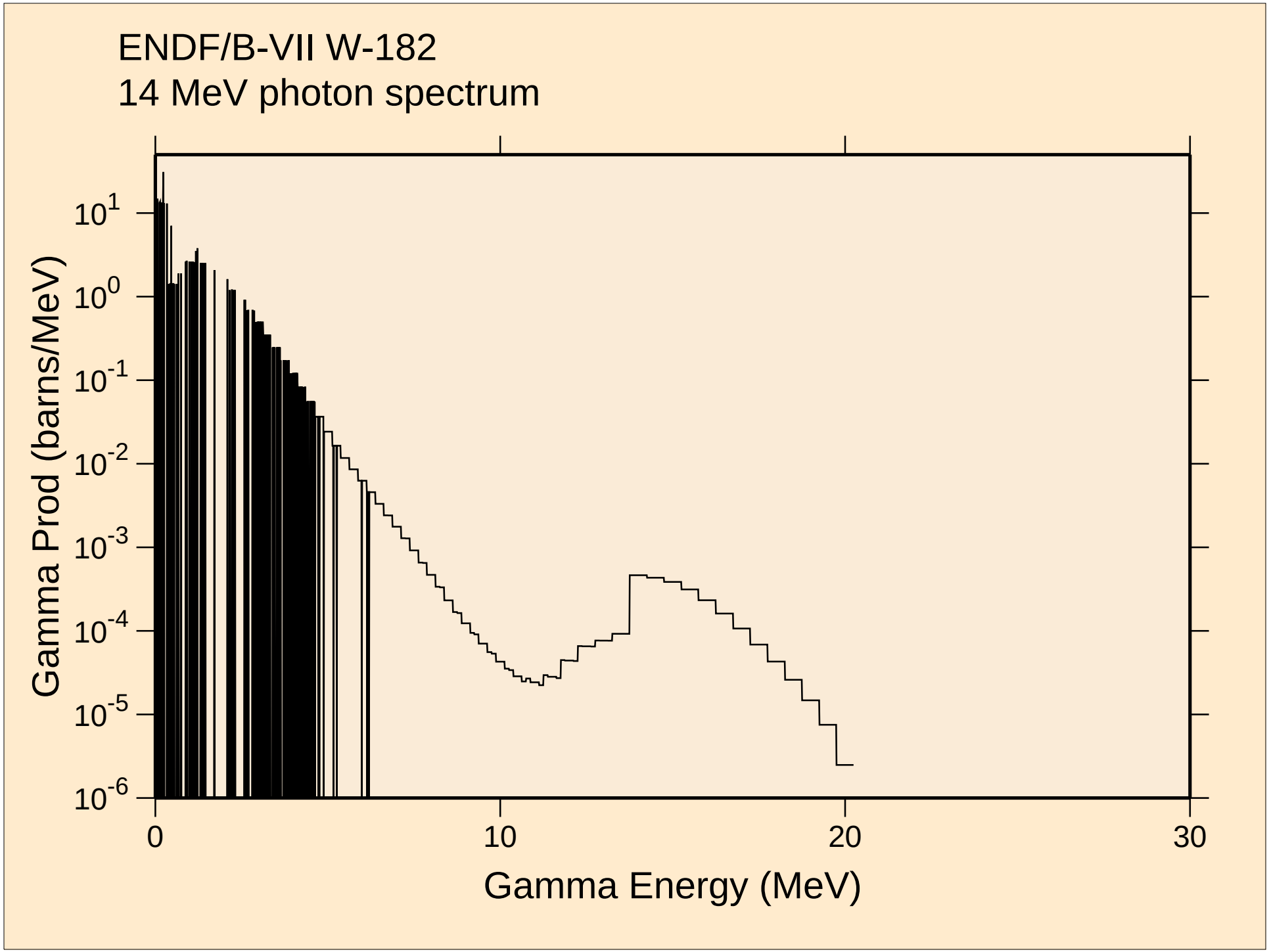

ENDF/B-VII W-182
Photon emission for inelastic
Prob/MeV
10^{-1}
10^{-3}
0
E_γ (MeV)
5
10
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

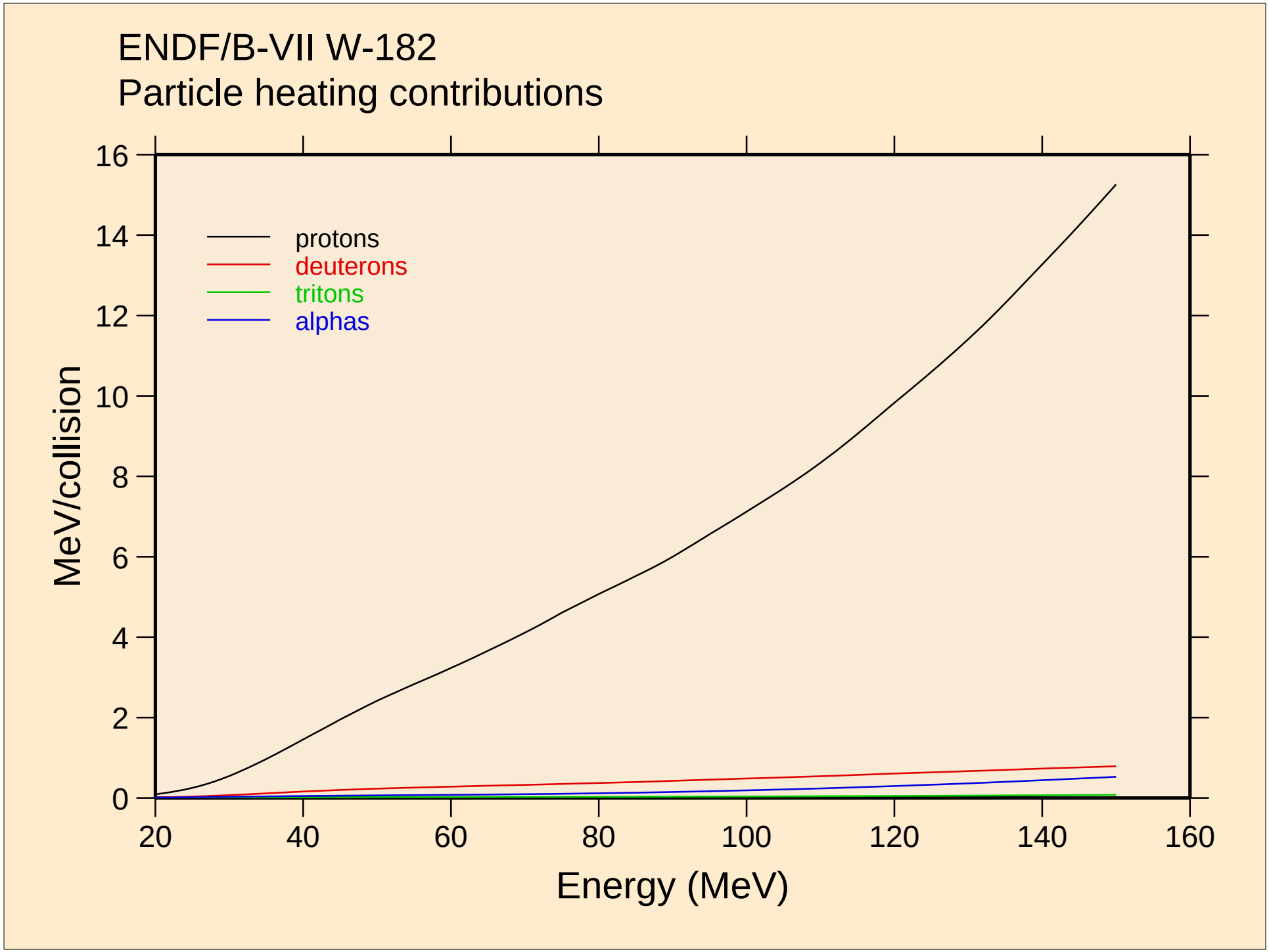

ENDF/B-VII W-182
Photon emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
E_γ (MeV)
5
10
8
10
12
14
16
18
20
E_n (MeV)

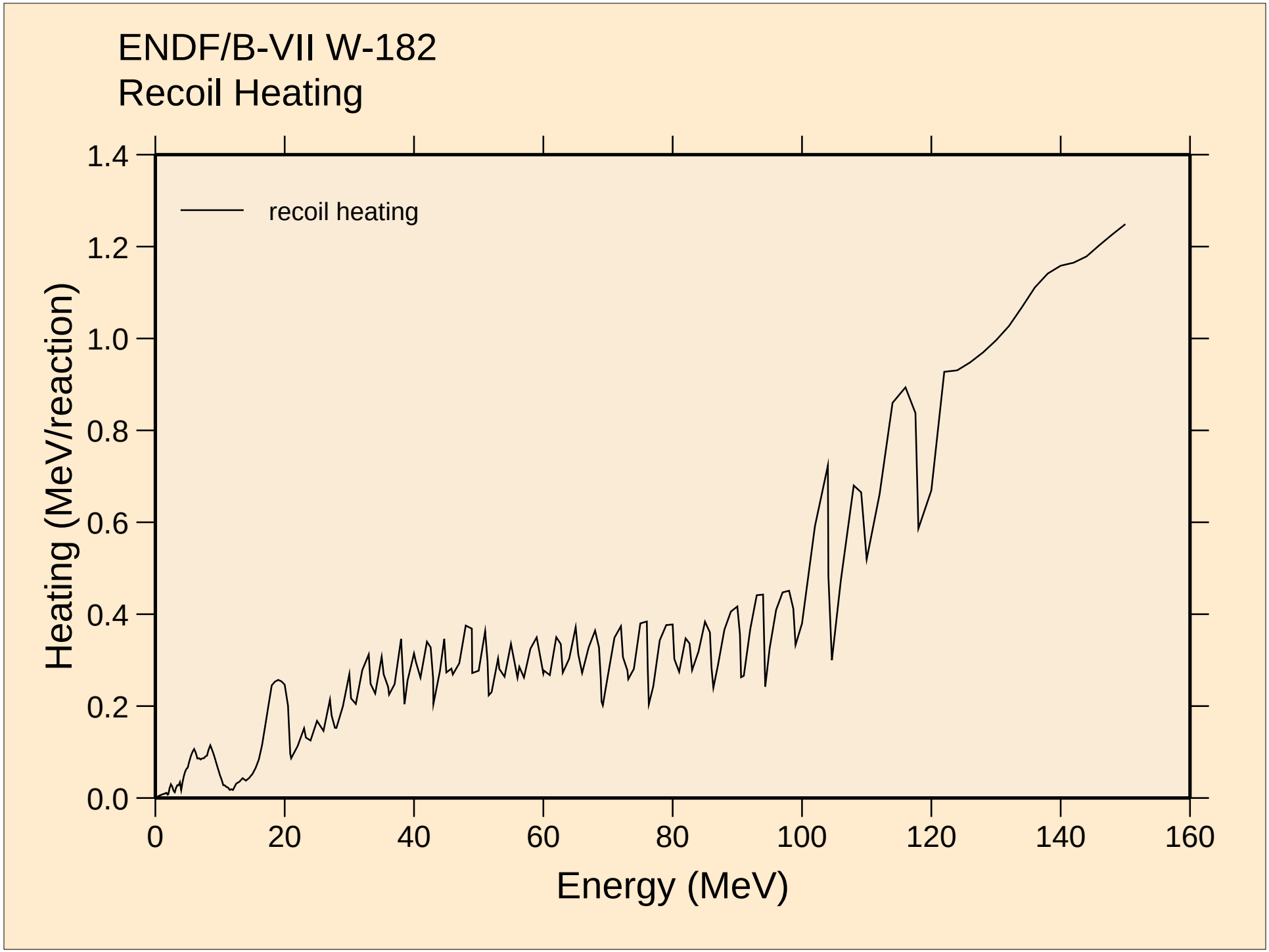

ENDF/B-VII W-182
Photon emission for (n,3n)
Prob/MeV
10^-1
10^-3
0
2
4
6
E_γ (MeV)
14
15
16
17
18
19
20
E_n (MeV)

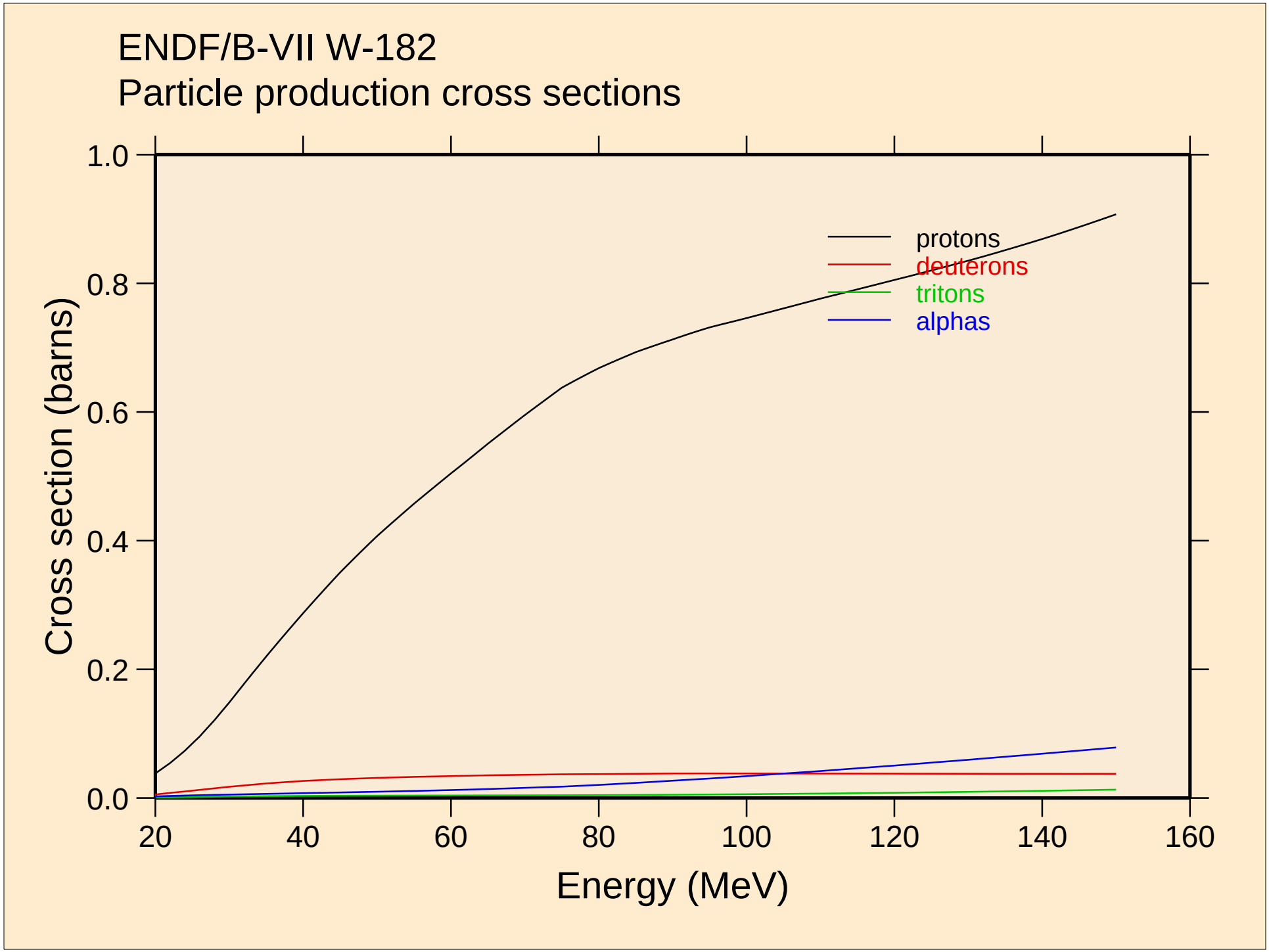

ENDF/B-VII W-182
Photon emission for (n,x)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
10
20
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

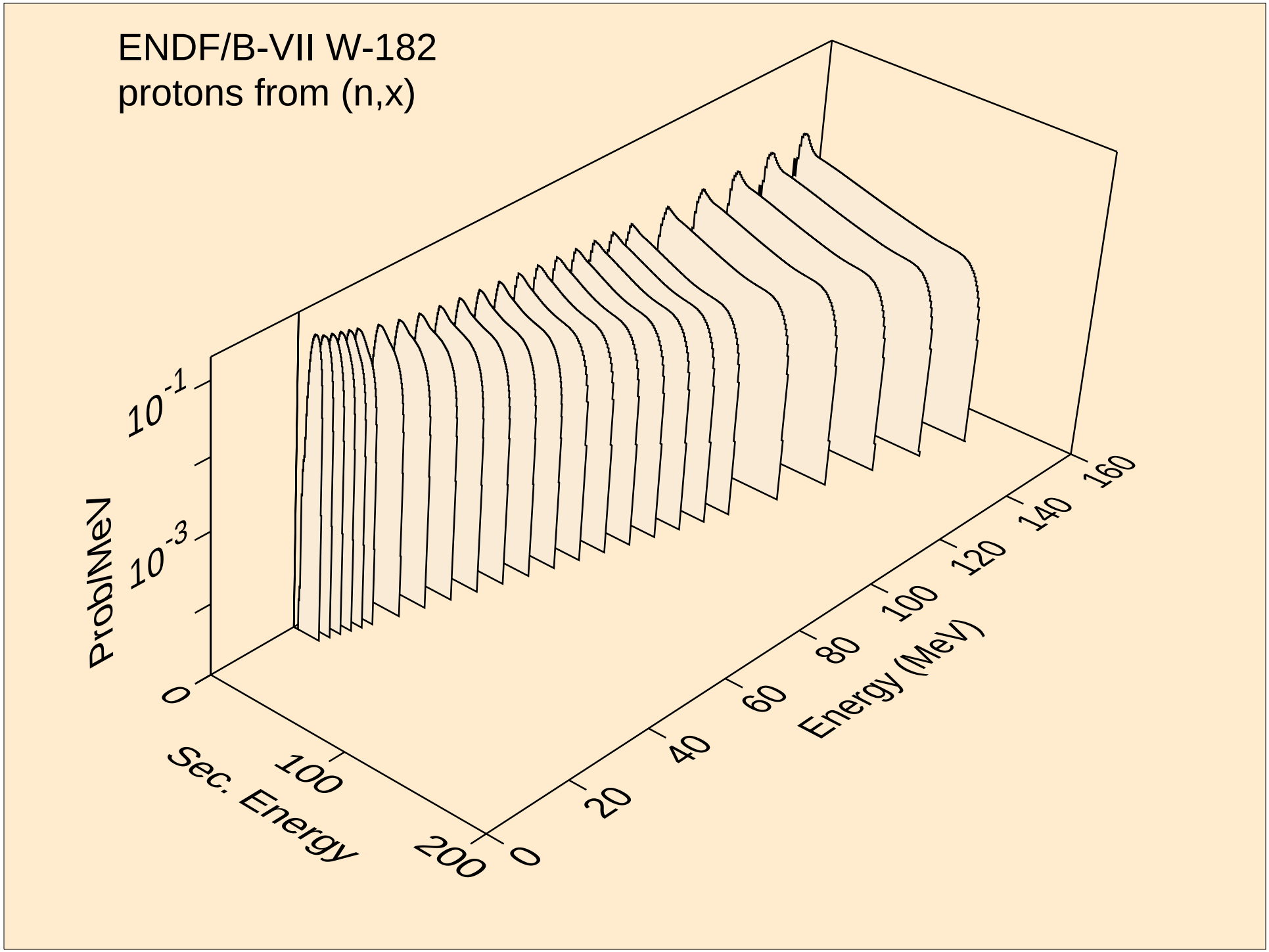

ENDF/B-VII W-182
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^3
10^2
10^1
10^0
0
2
4
6
8
Gamma Energy (MeV)

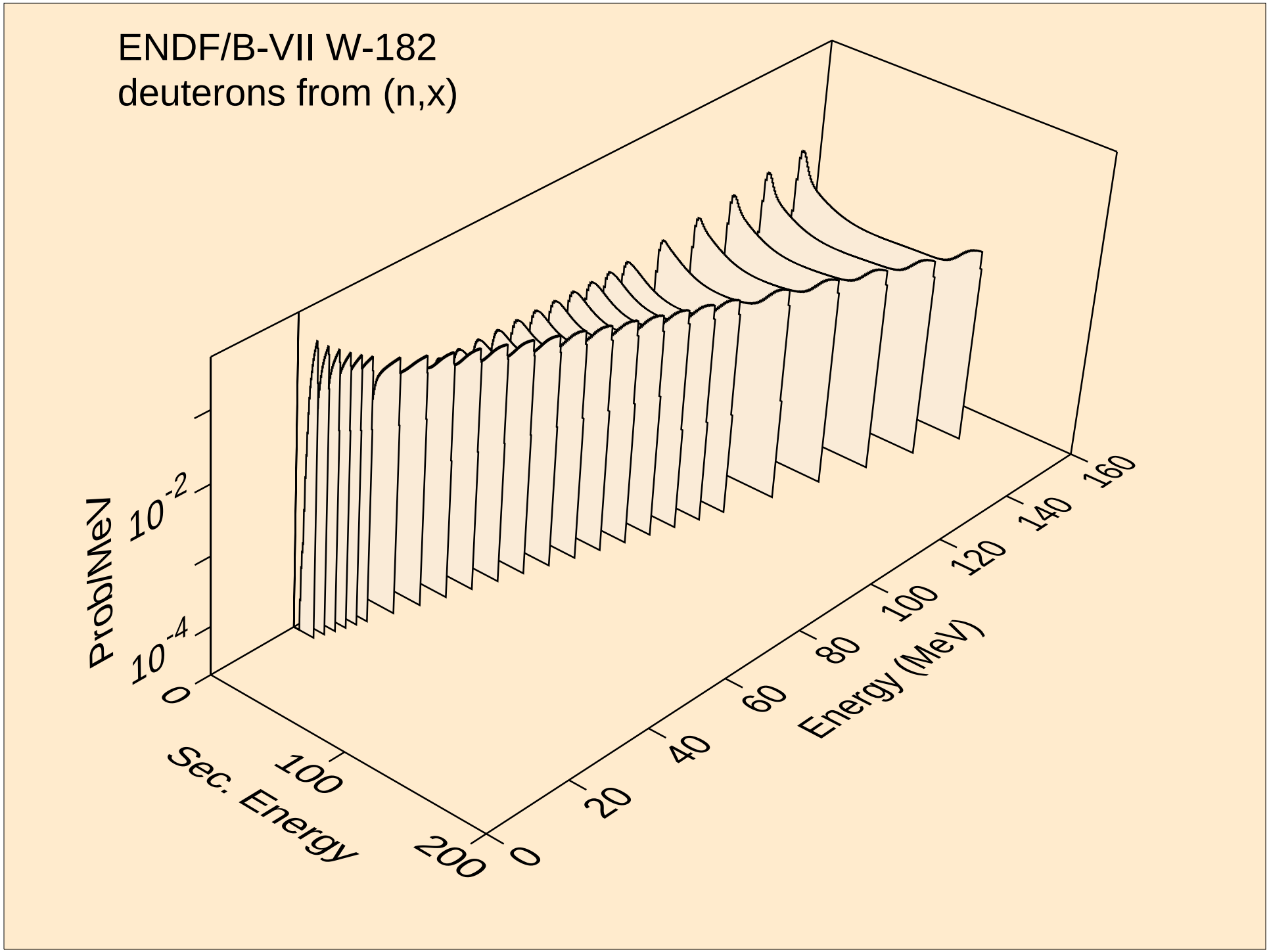

ENDF/B-VII W-182
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
0
10
20
30
Gamma Energy (MeV)

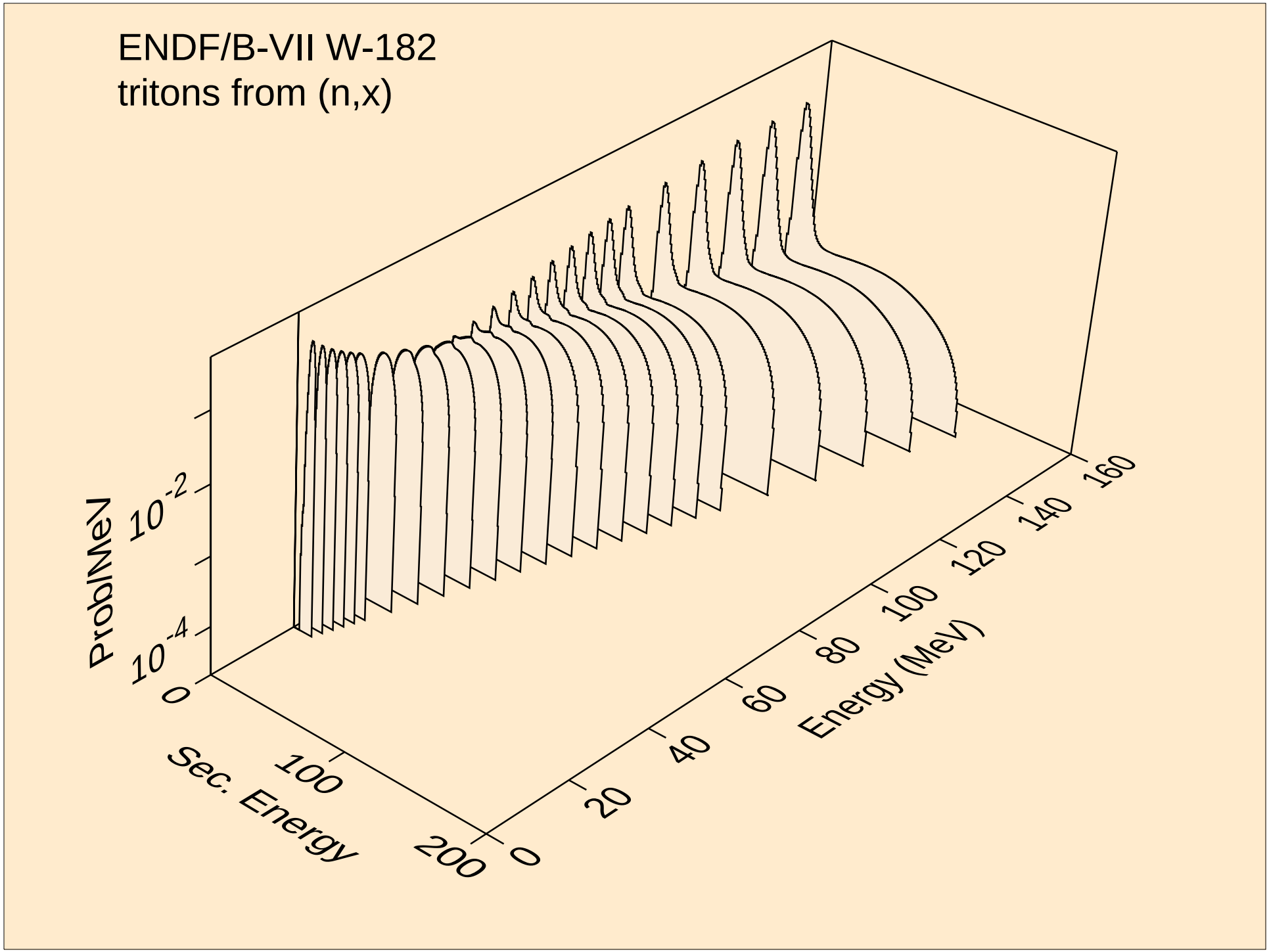

ENDF/B-VII W-182
Particle heating contributions
protons
deuterons
tritons
alphas
MeV/collision
Energy (MeV)
0
2
4
6
8
10
12
14
16
20
40
60
80
100
120
140
160

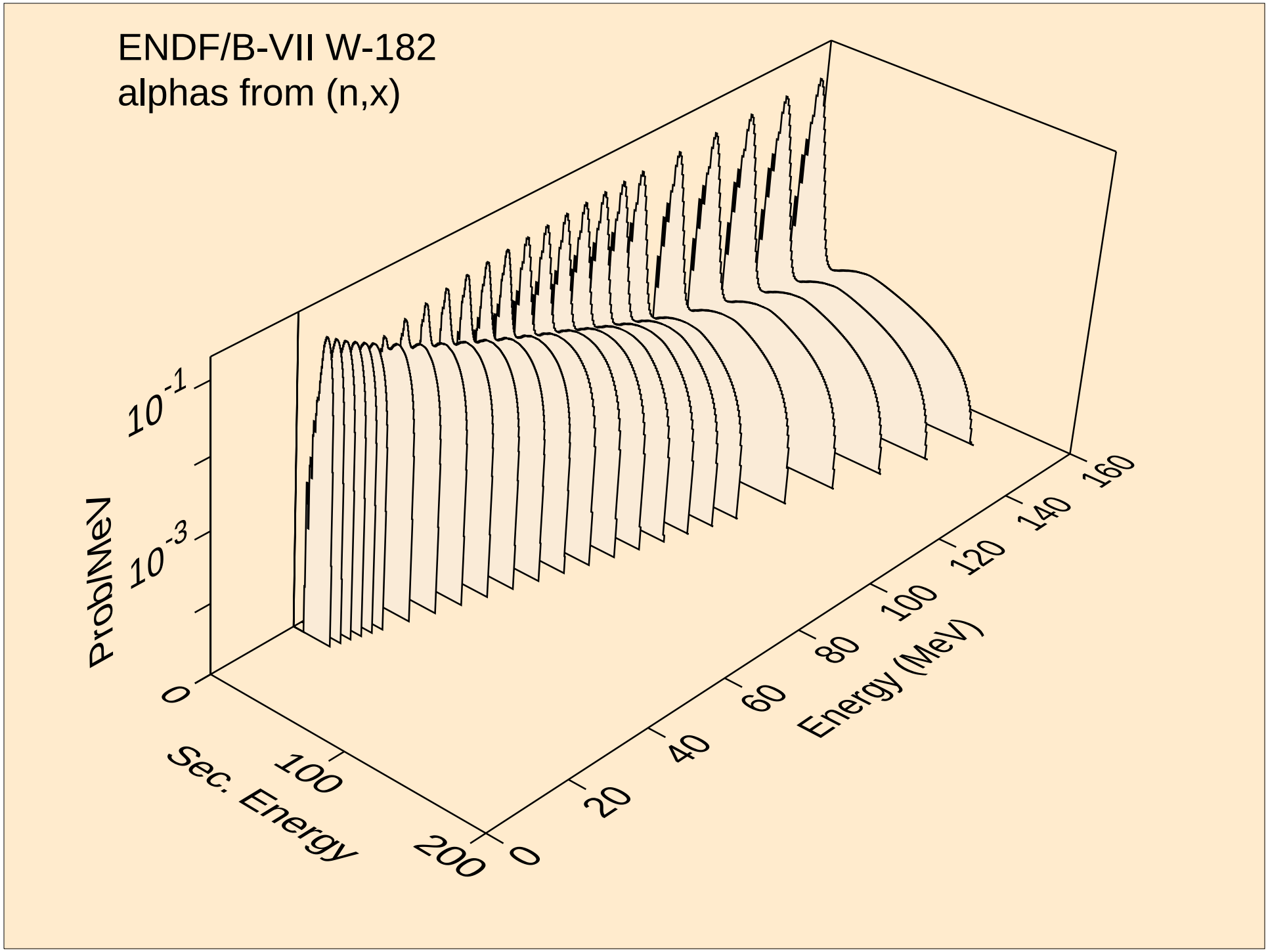

ENDF/B-VII W-182
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
20
40
60
80
100
120
140
160


ENDF/B-VII W-182
Particle production cross sections
Cross section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
20
40
60
80
100
120
140
160
Energy (MeV)
protons
deuterons
tritons
alphas


ENDF/B-VII W-182
protons from (n,x)
Prob/MeV
10-1
10-3
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)


ENDF/B-VII W-182
deuterons from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)


ENDF/B-VII W-182
tritons from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)


ENDF/B-VII W-182
alphas from (n,x)
Prob/MeV
10-1
10-3
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)