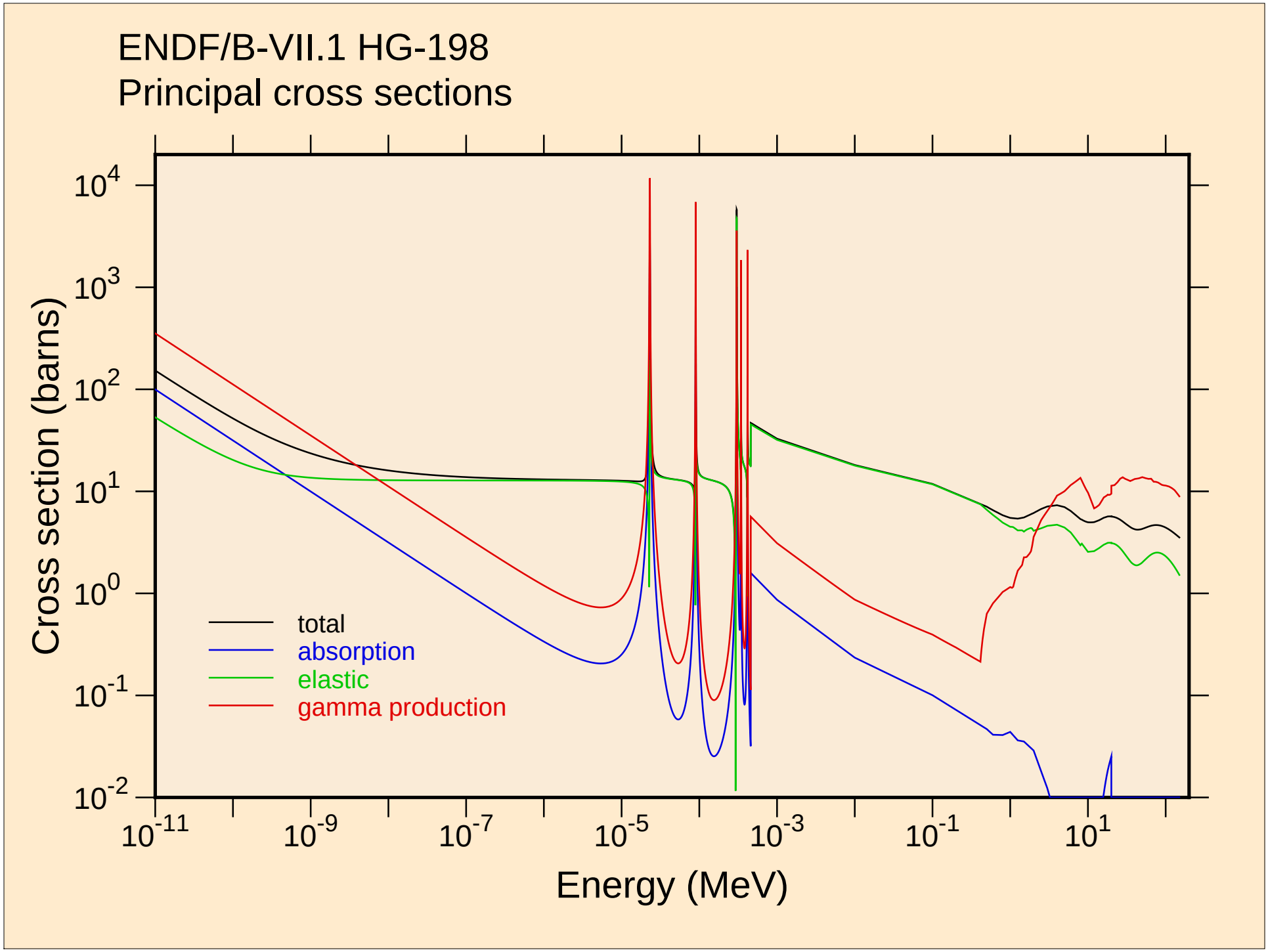
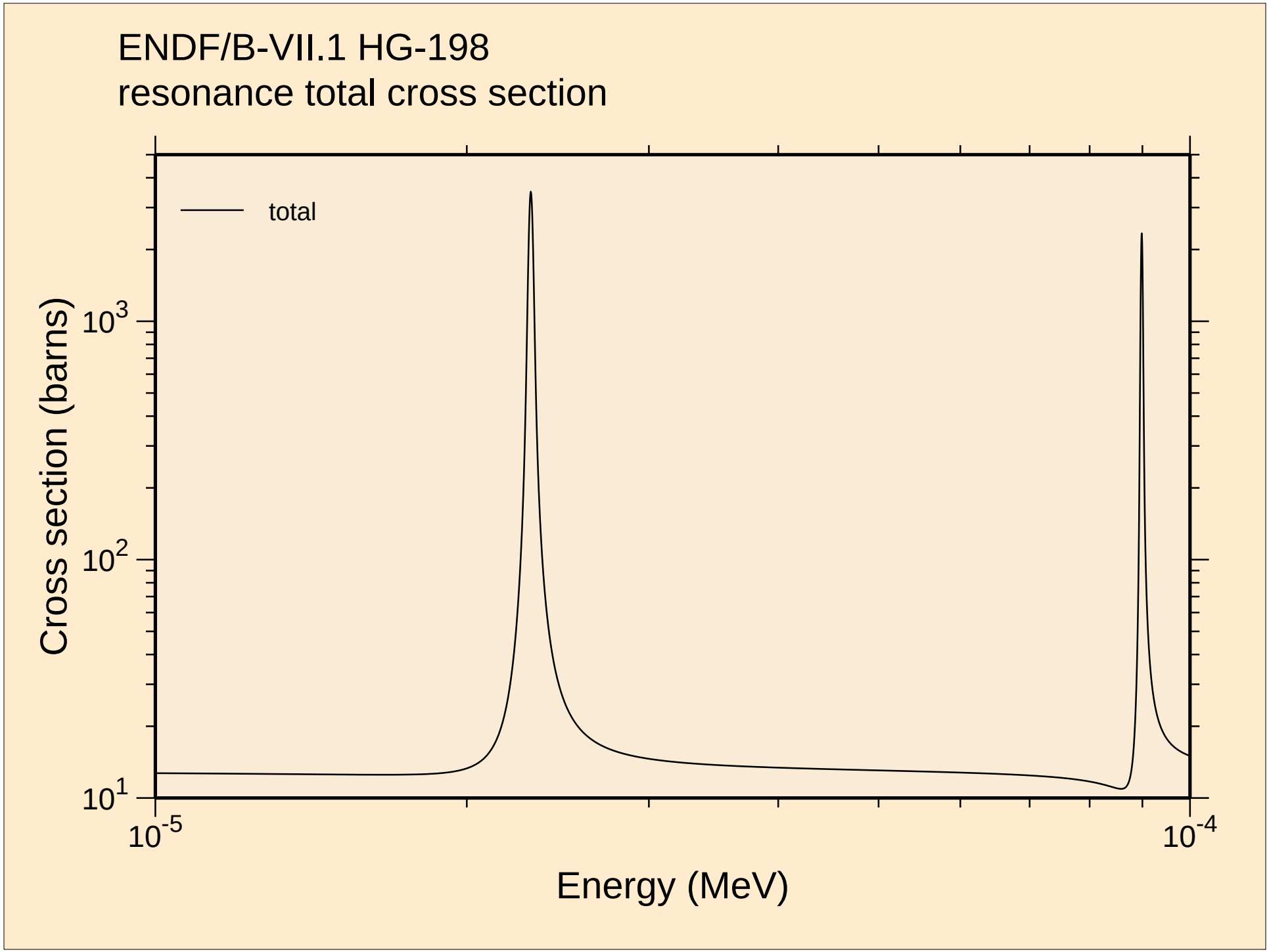
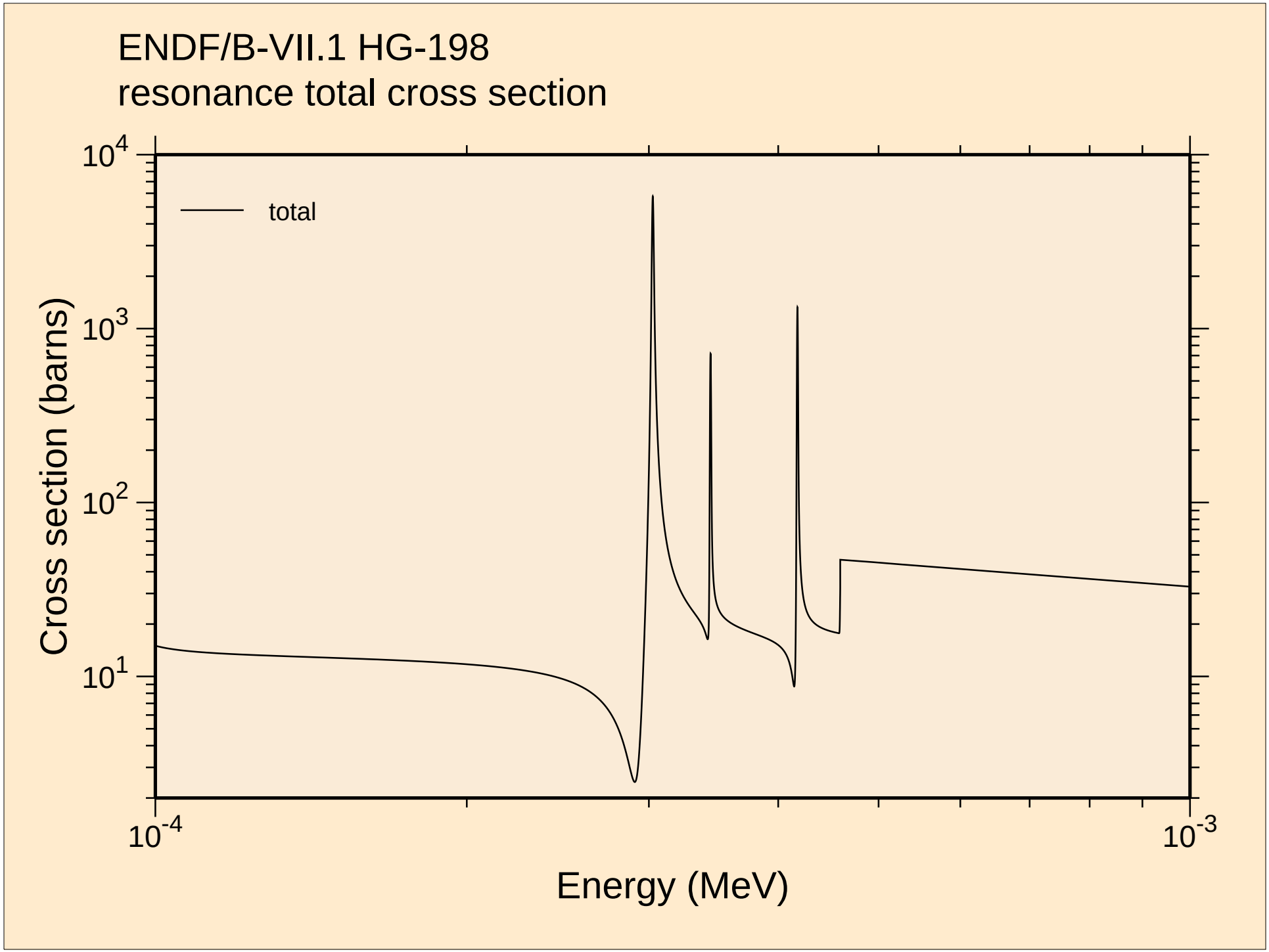
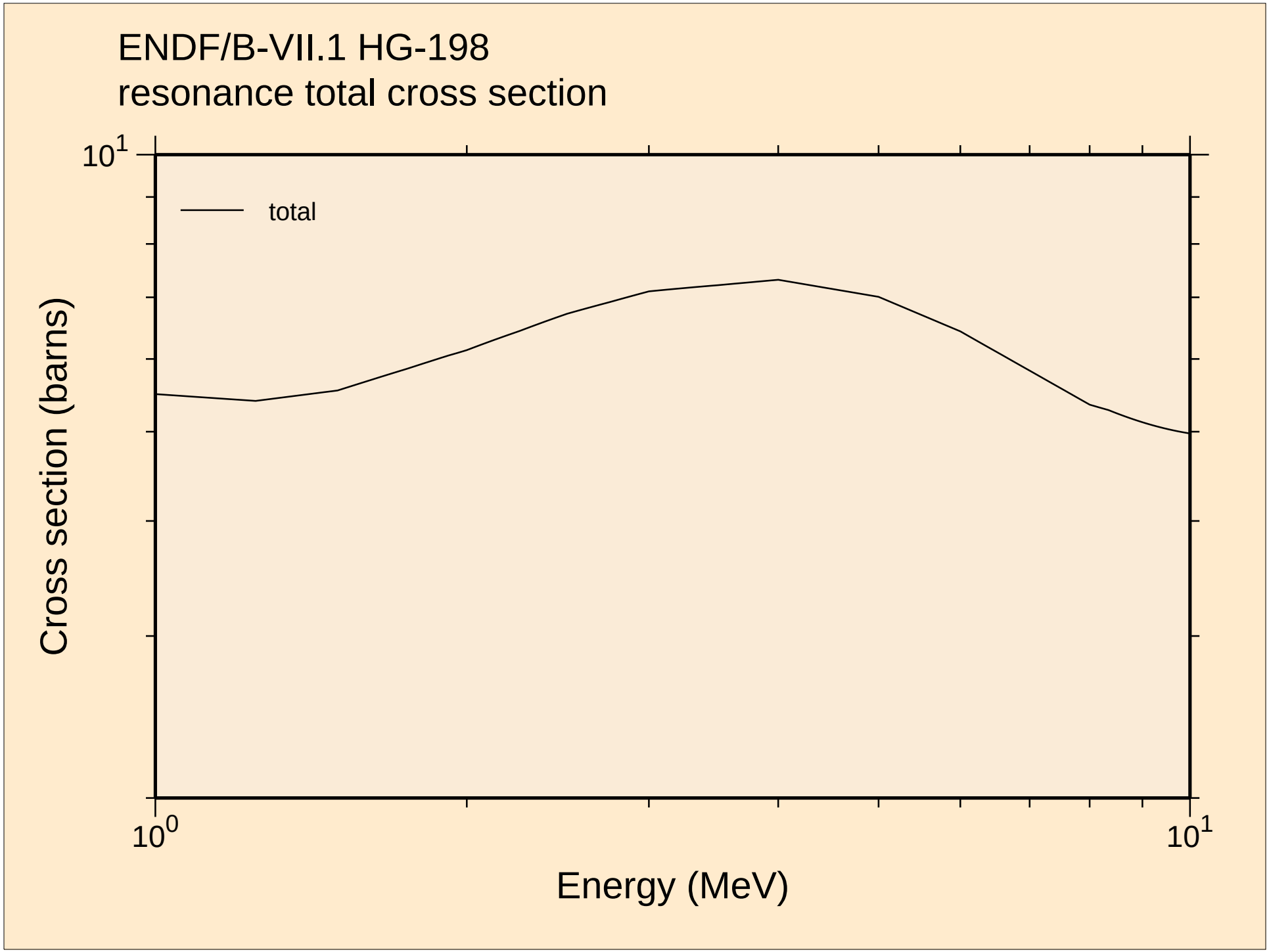
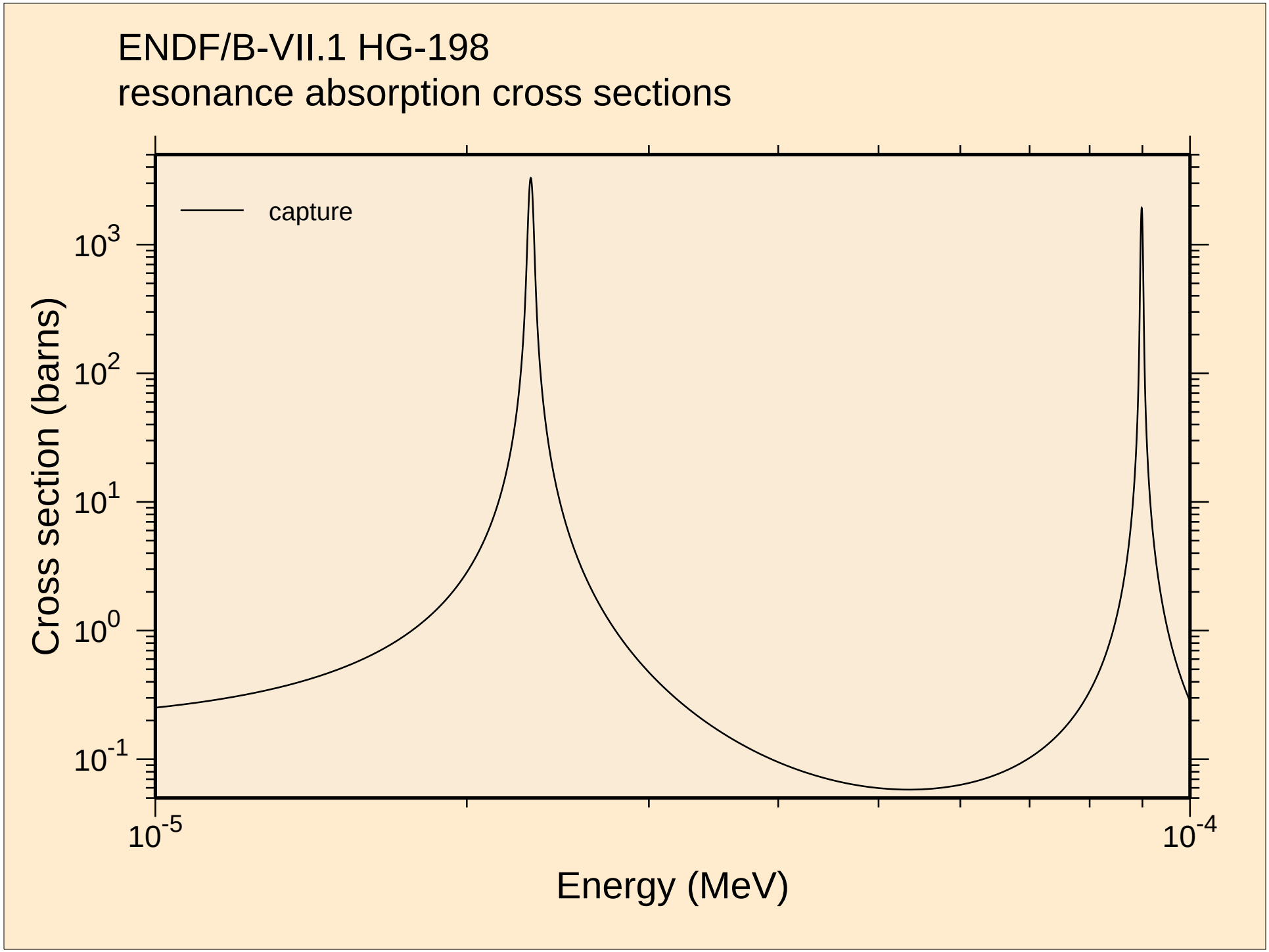
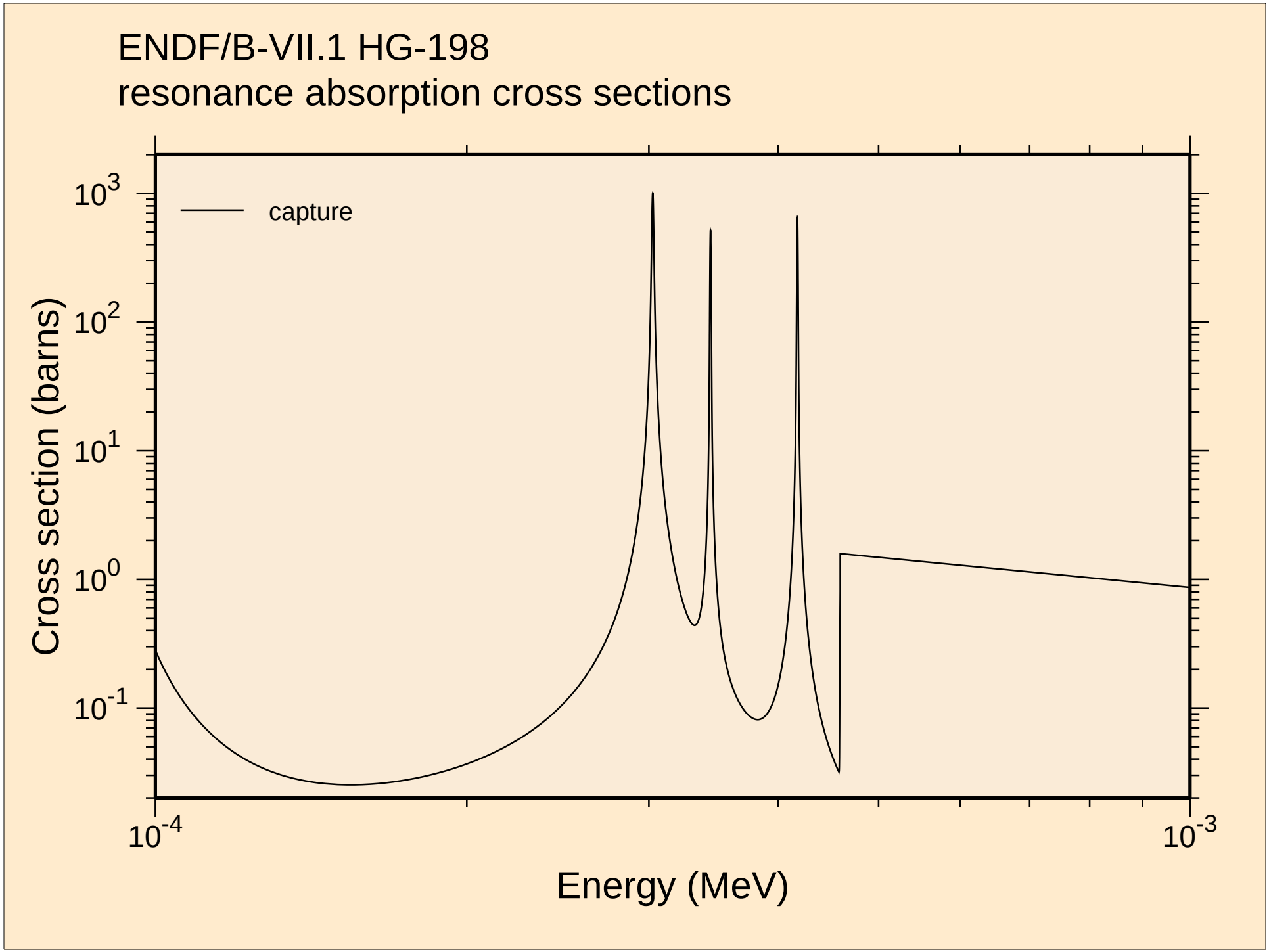

ENDF/B-VII.1 HG-198
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production


ENDF/B-VII.1 HG-198
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^-5
10^-4
Energy (MeV)

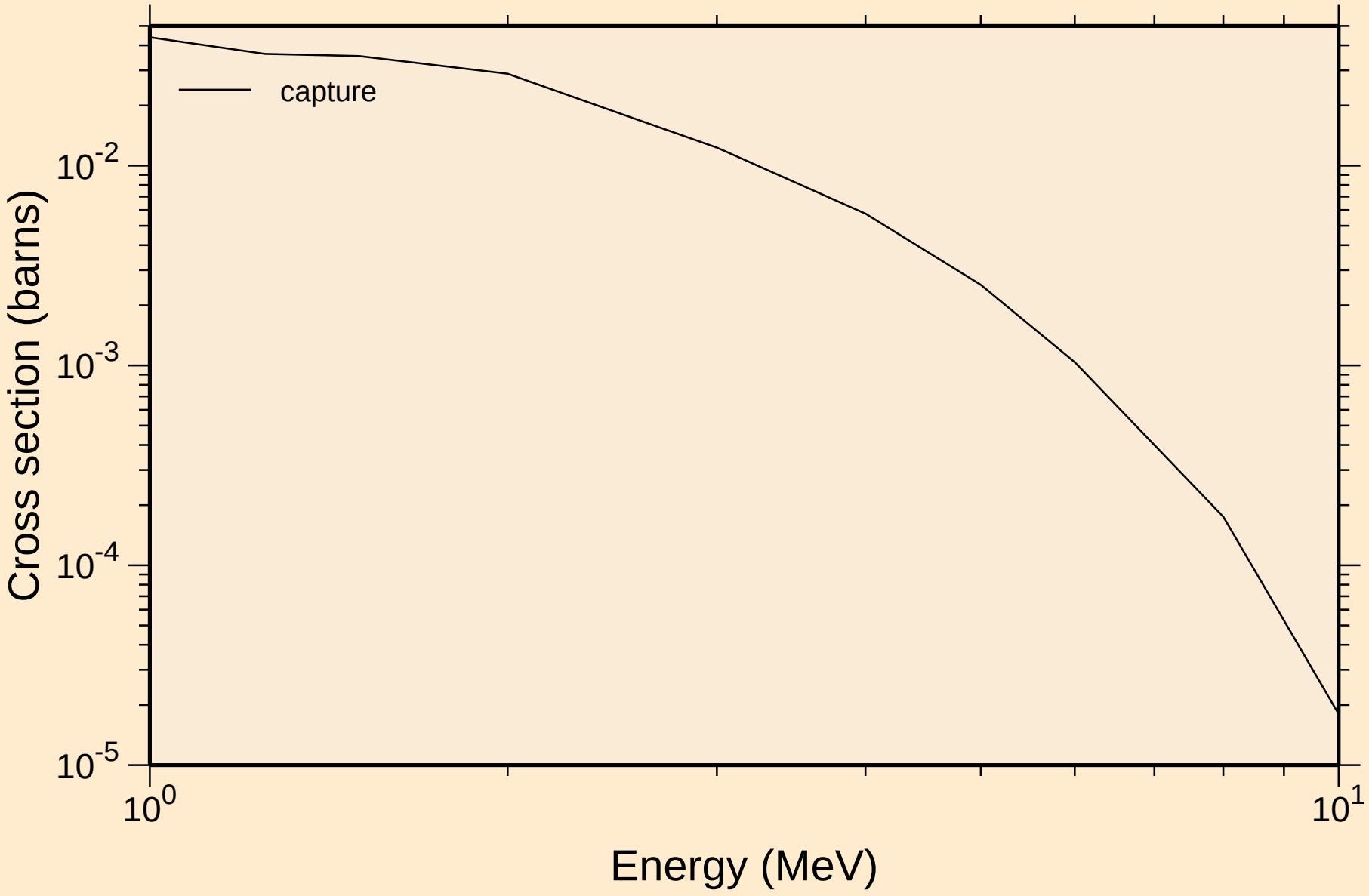

ENDF/B-VII.1 HG-198
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^{-4}
10^{-3}
Energy (MeV)

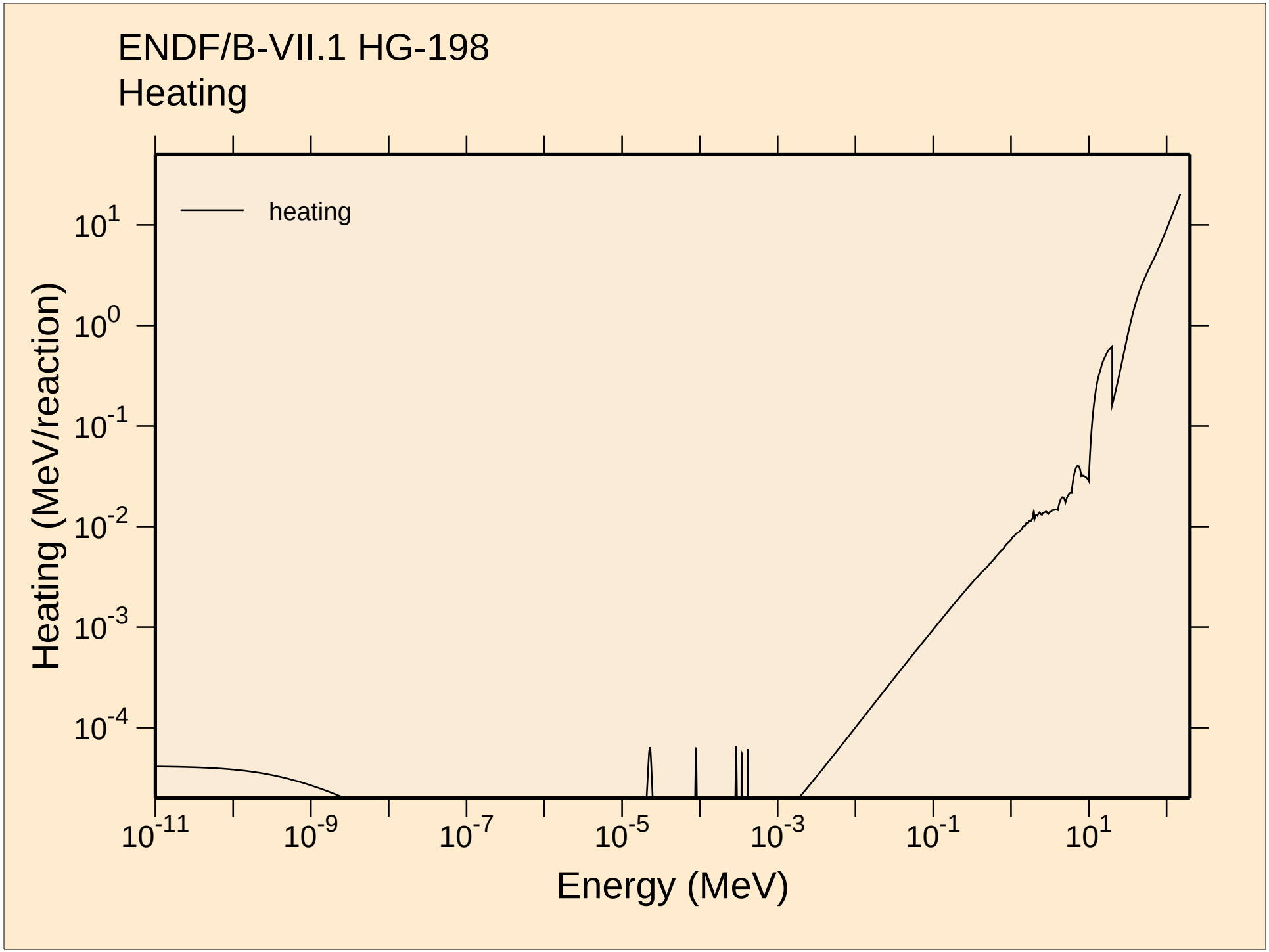

ENDF/B-VII.1 HG-198
resonance total cross section
10^1
total
Cross section (barns)
10^0
10^1
Energy (MeV)

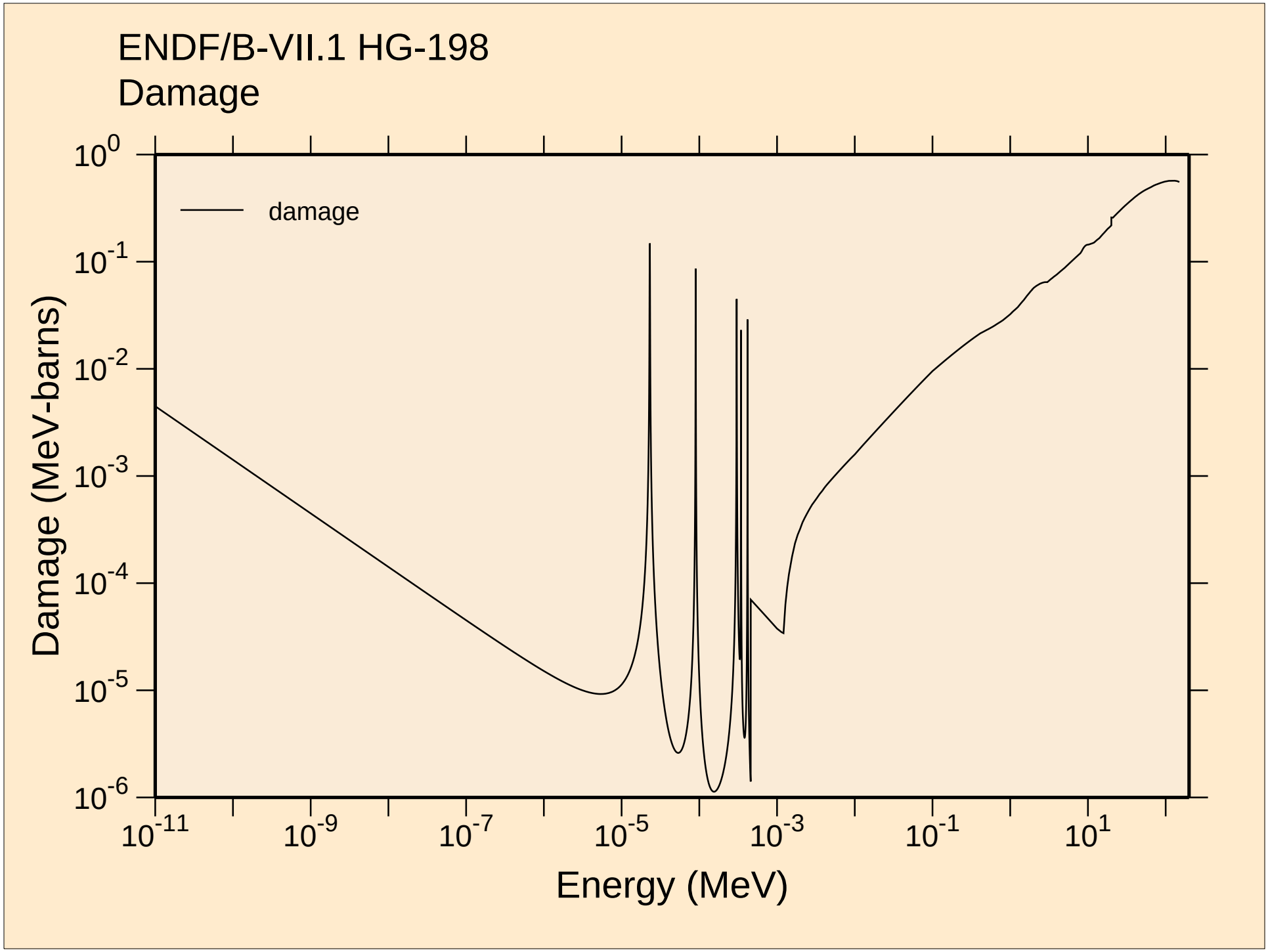

ENDF/B-VII.1 HG-198
resonance absorption cross sections
capture
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-5
10^-4
Energy (MeV)

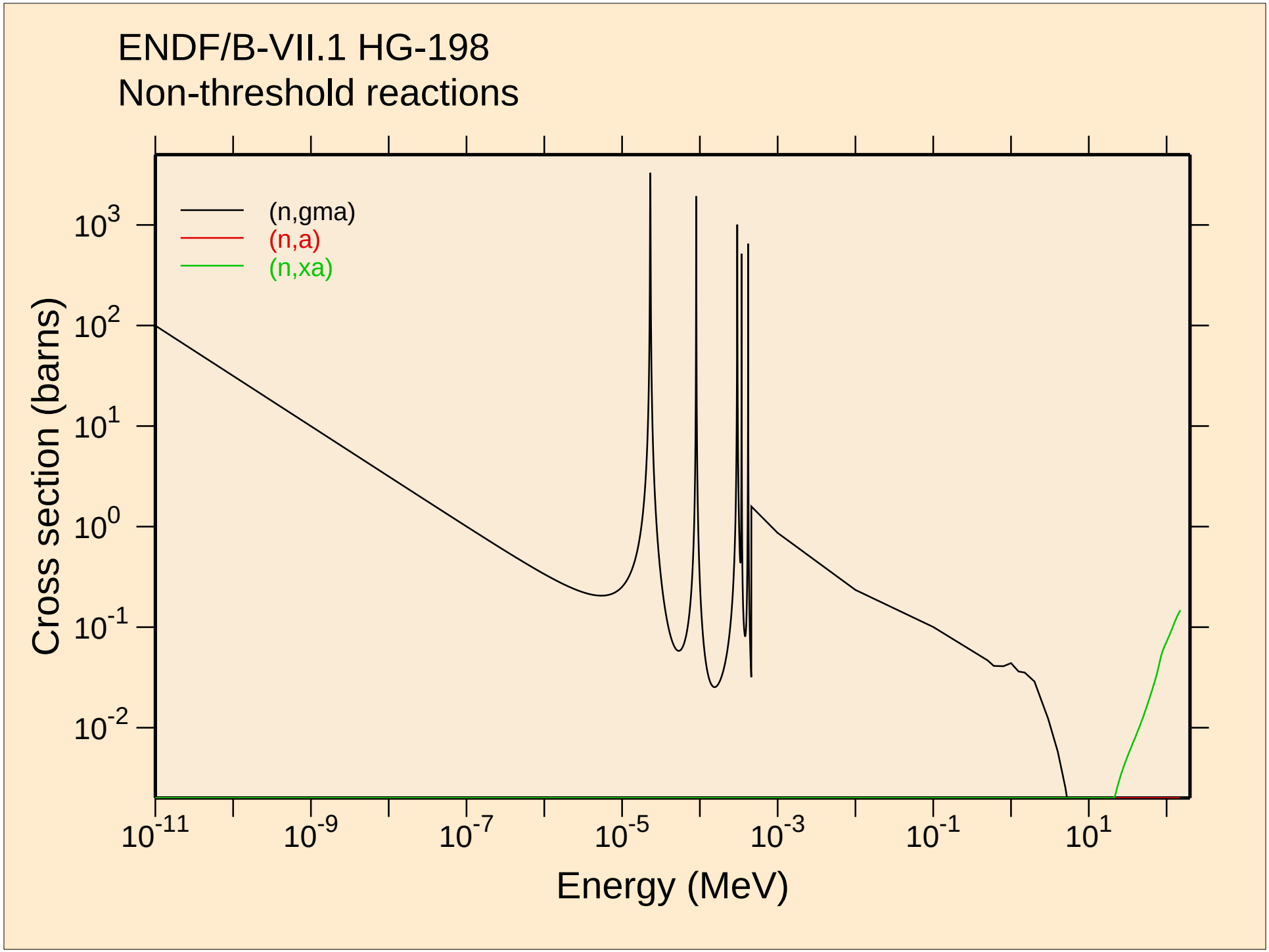

ENDF/B-VII.1 HG-198
resonance absorption cross sections
capture
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-4
10^-3
Energy (MeV)

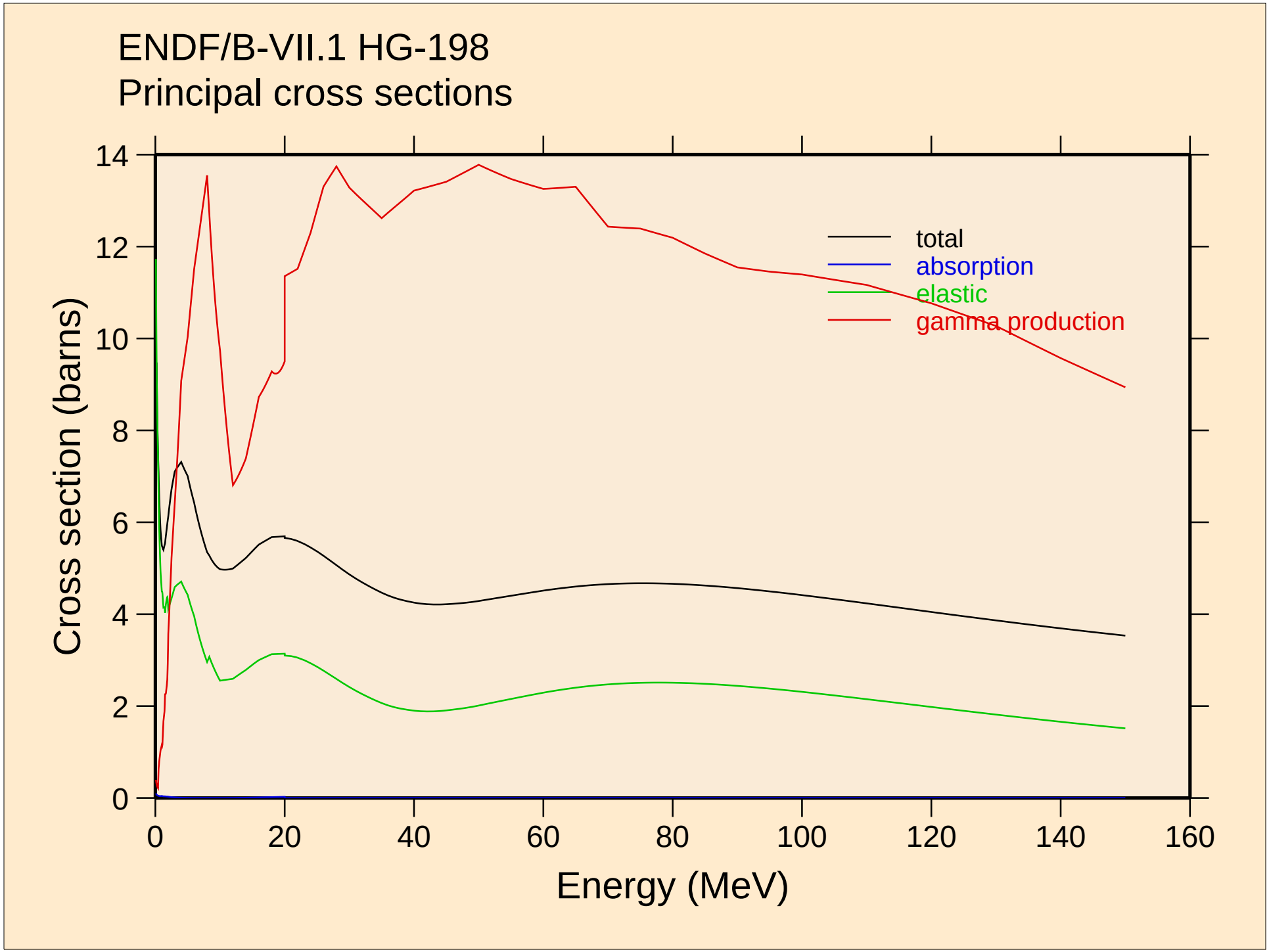
ENDF/B-VII.1 HG-198
resonance absorption cross sections

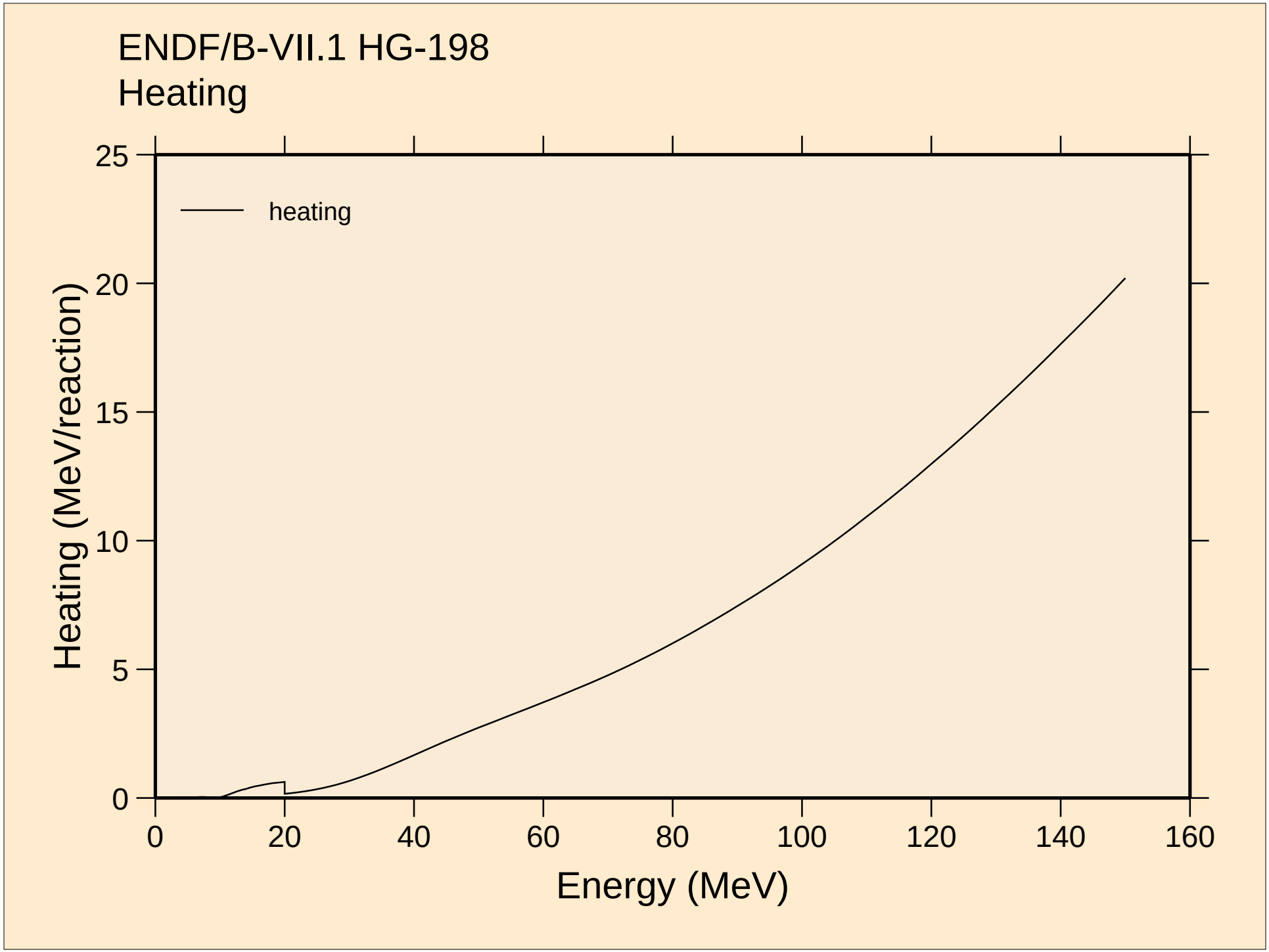


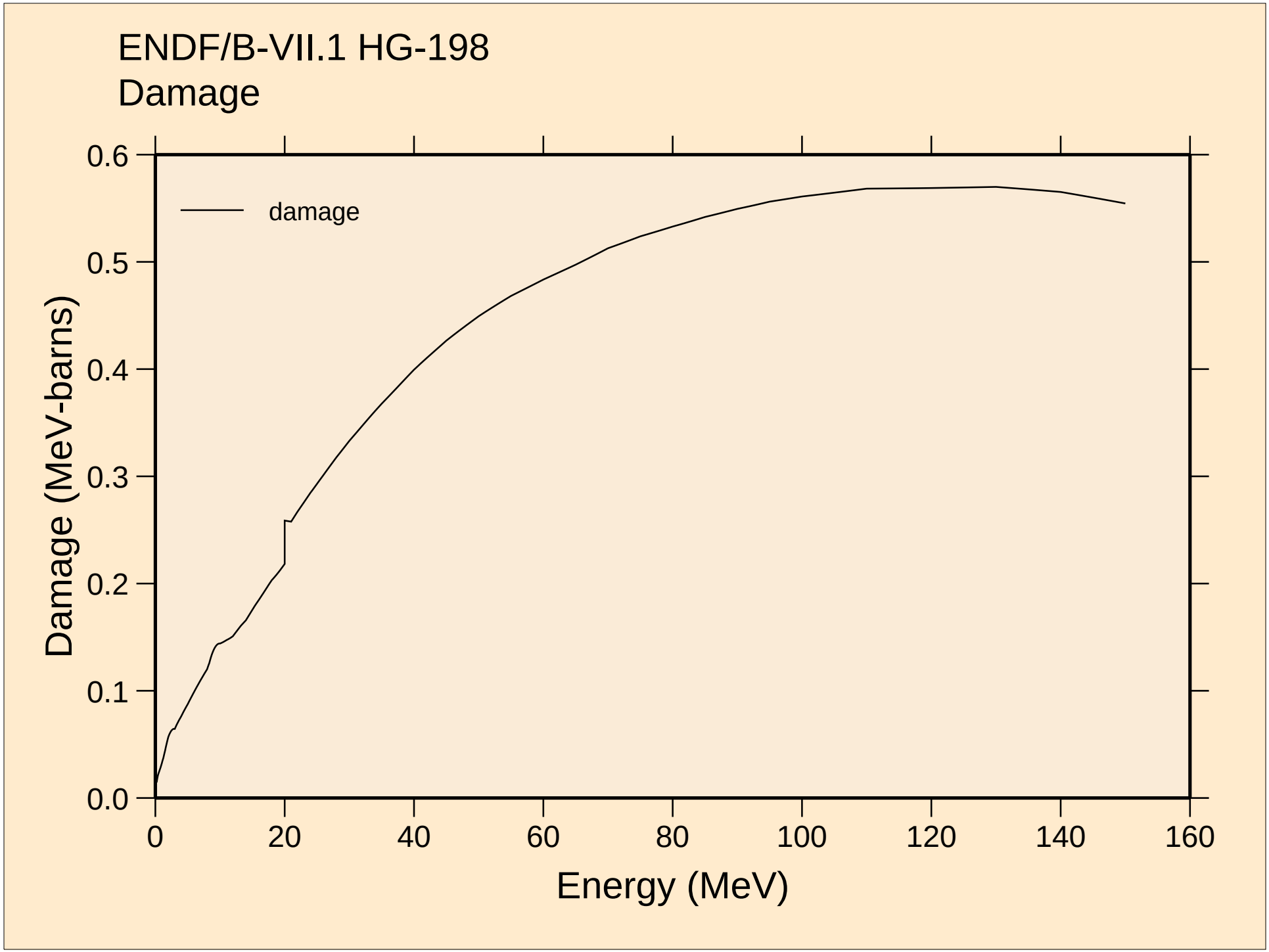

ENDF/B-VII.1 HG-198
Heating
heating
Heating (MeV/reaction)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)

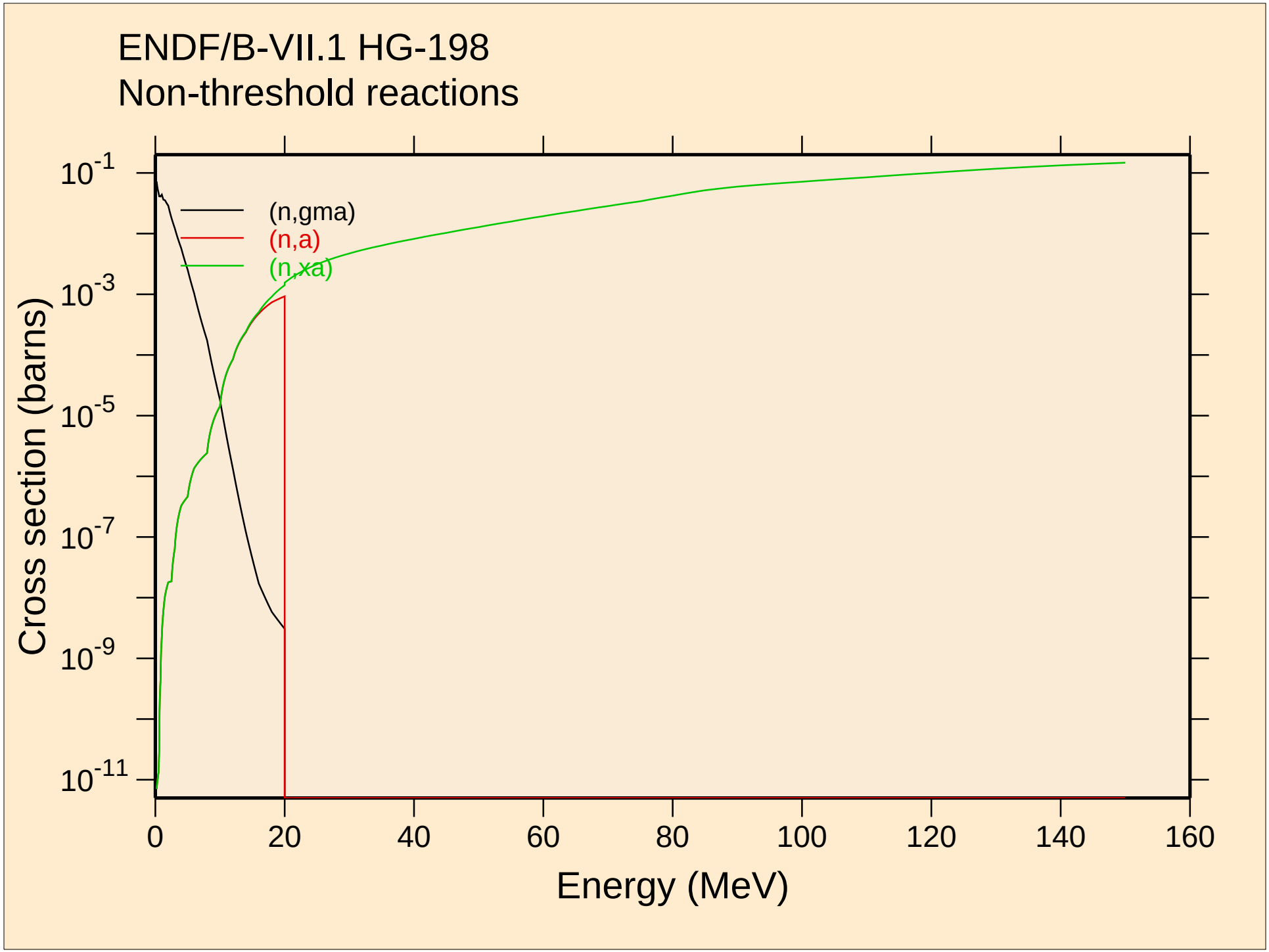

ENDF/B-VII.1 HG-198
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

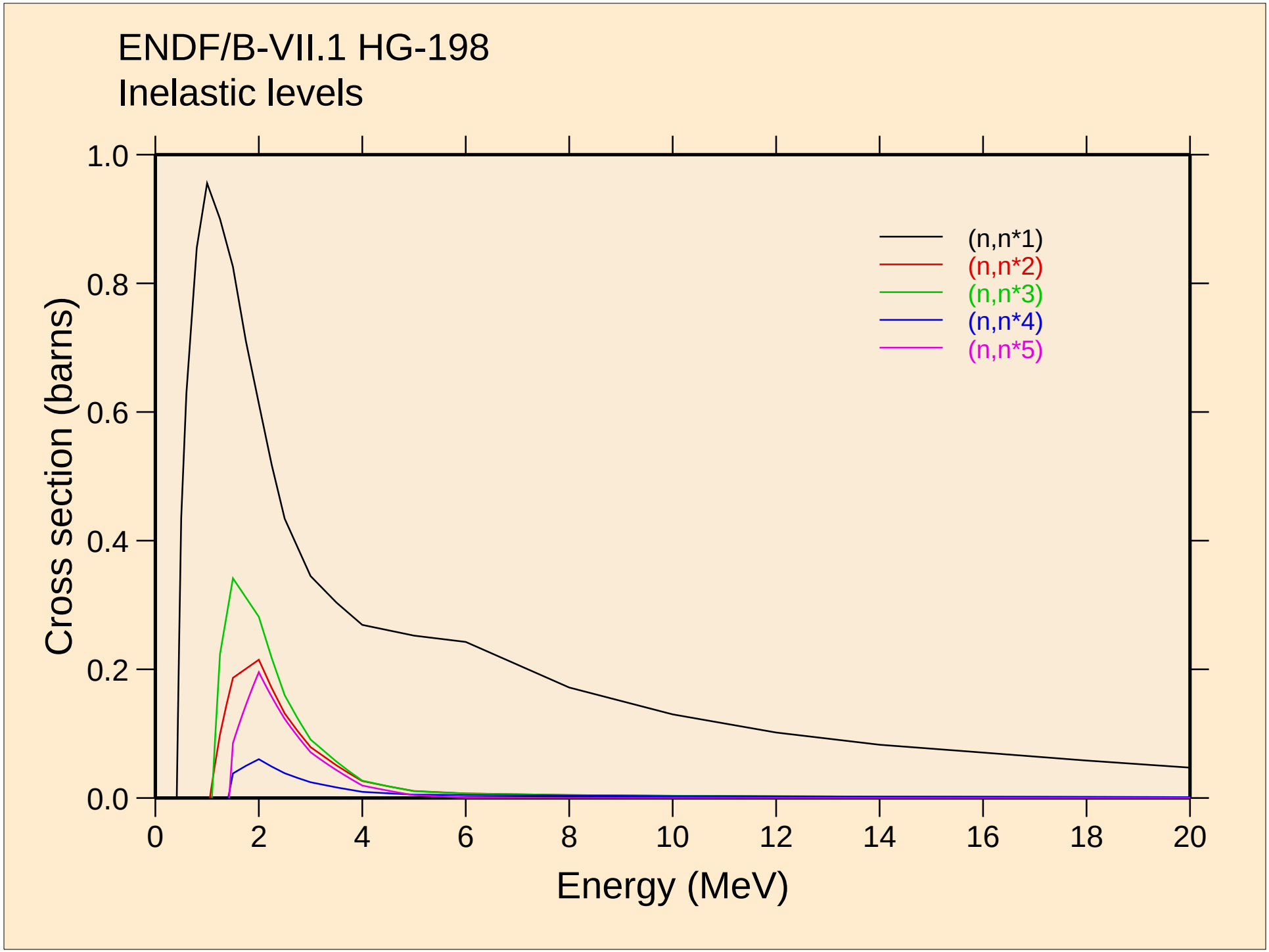

ENDF/B-VII.1 HG-198
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

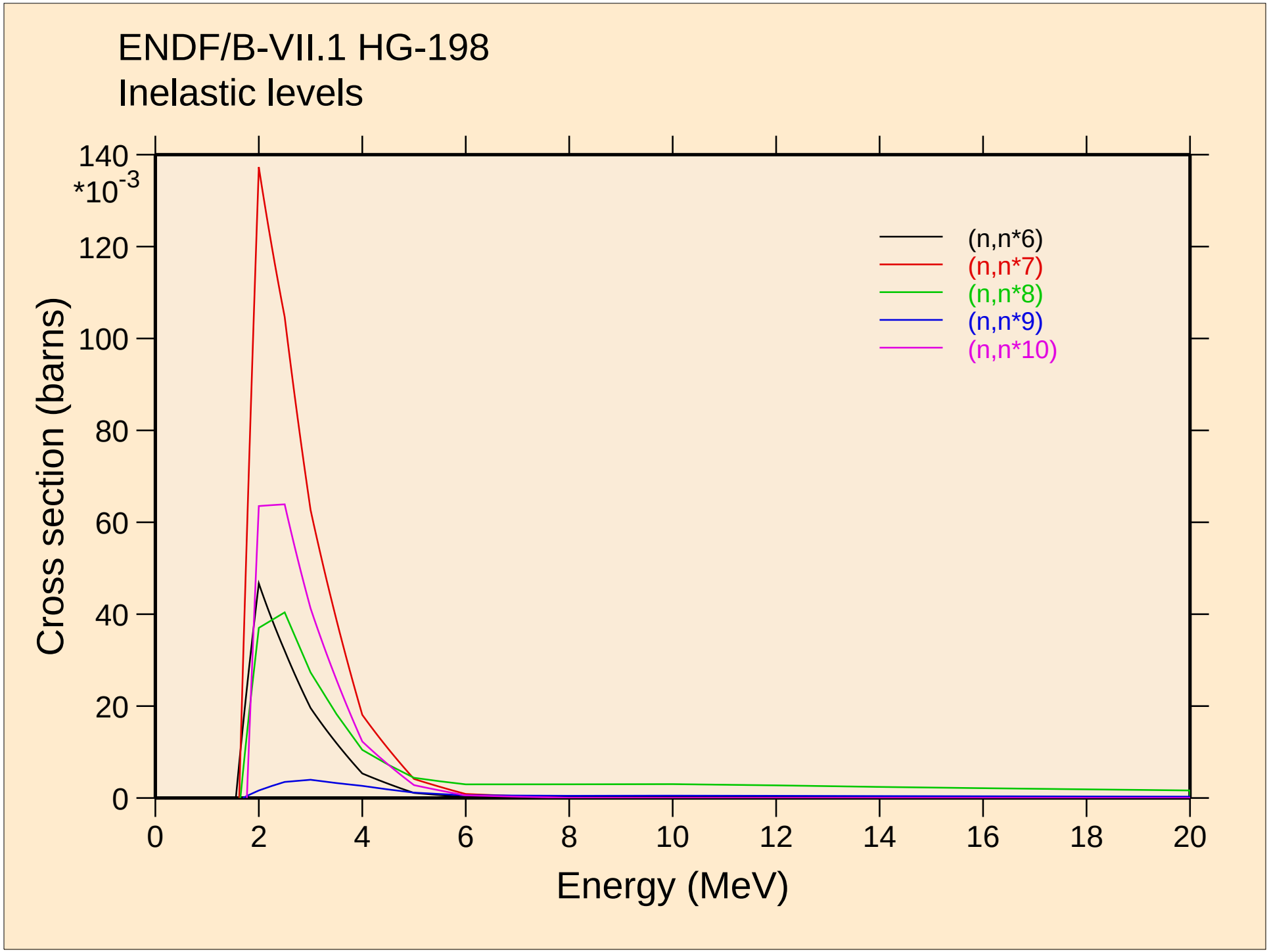

ENDF/B-VII.1 HG-198
Principal cross sections
Cross section (barns)
Energy (MeV)
0
2
4
6
8
10
12
14
0
20
40
60
80
100
120
140
160
total
absorption
elastic
gamma production

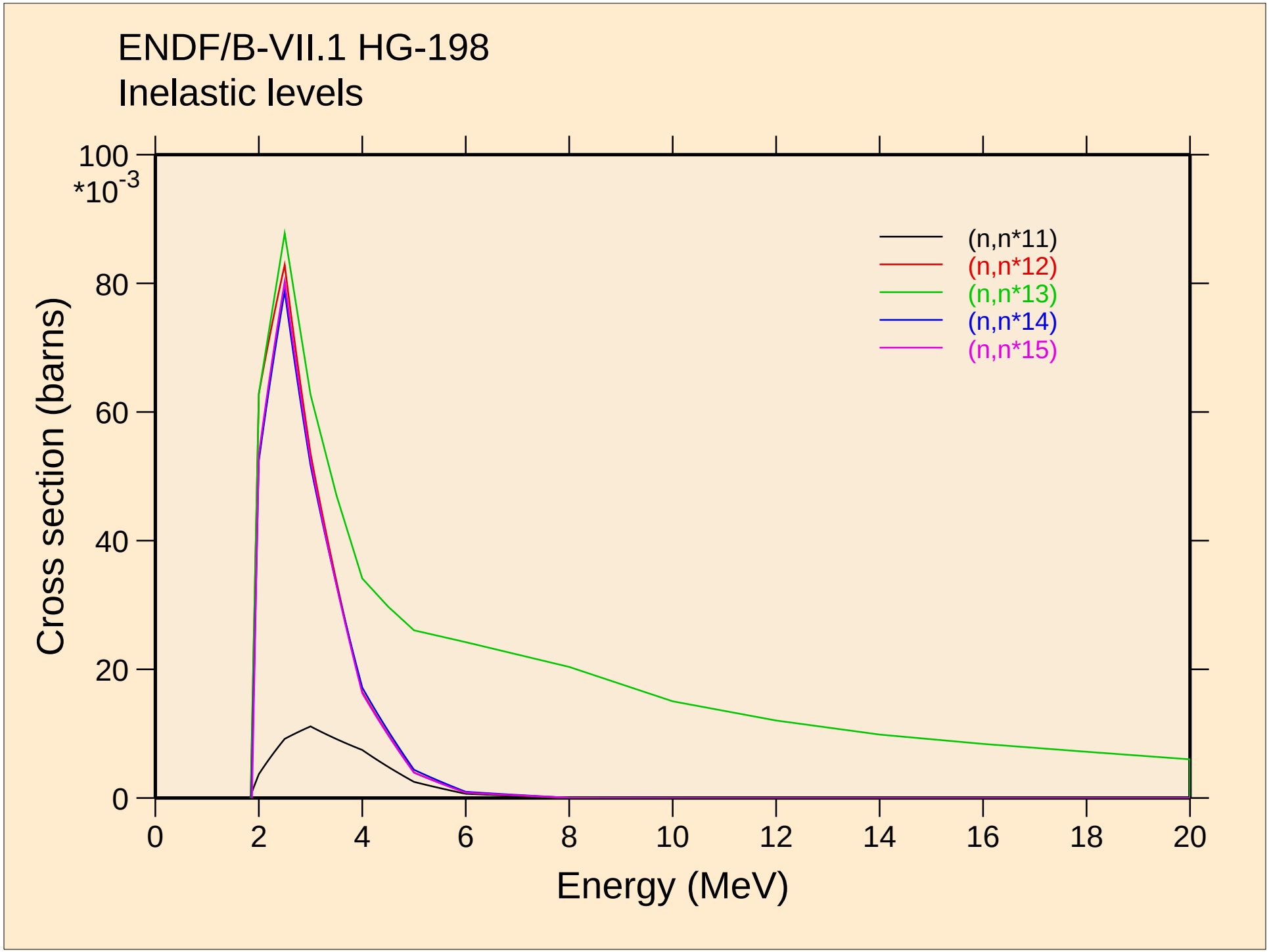

ENDF/B-VII.1 HG-198
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
5
10
15
20
25
0
20
40
60
80
100
120
140
160

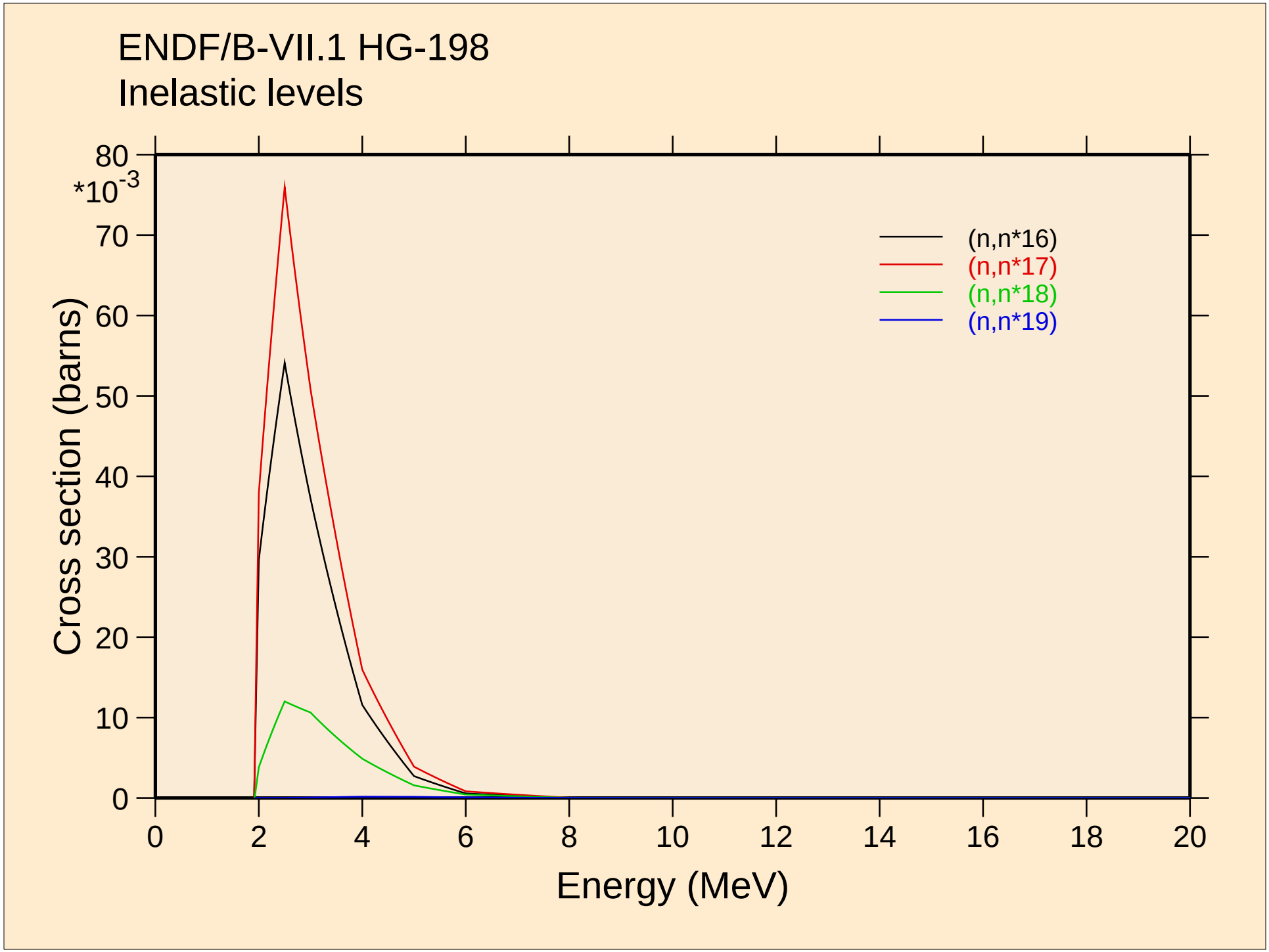

ENDF/B-VII.1 HG-198
Damage
damage
Damage (MeV-barns)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
20
40
60
80
100
120
140
160
Energy (MeV)

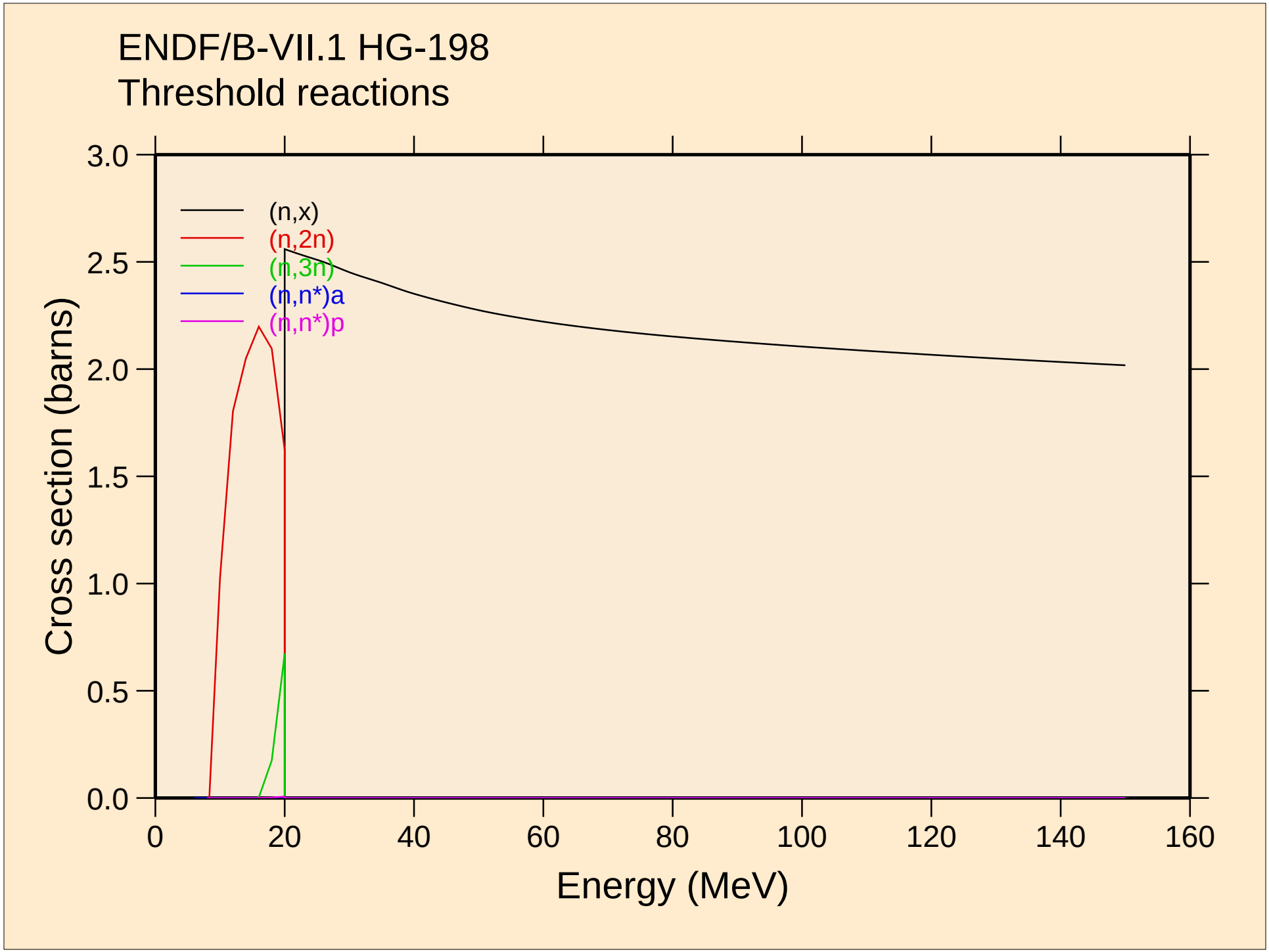

ENDF/B-VII.1 HG-198
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
10-1
10-3
10-5
10-7
10-9
10-11
0
20
40
60
80
100
120
140
160
Energy (MeV)

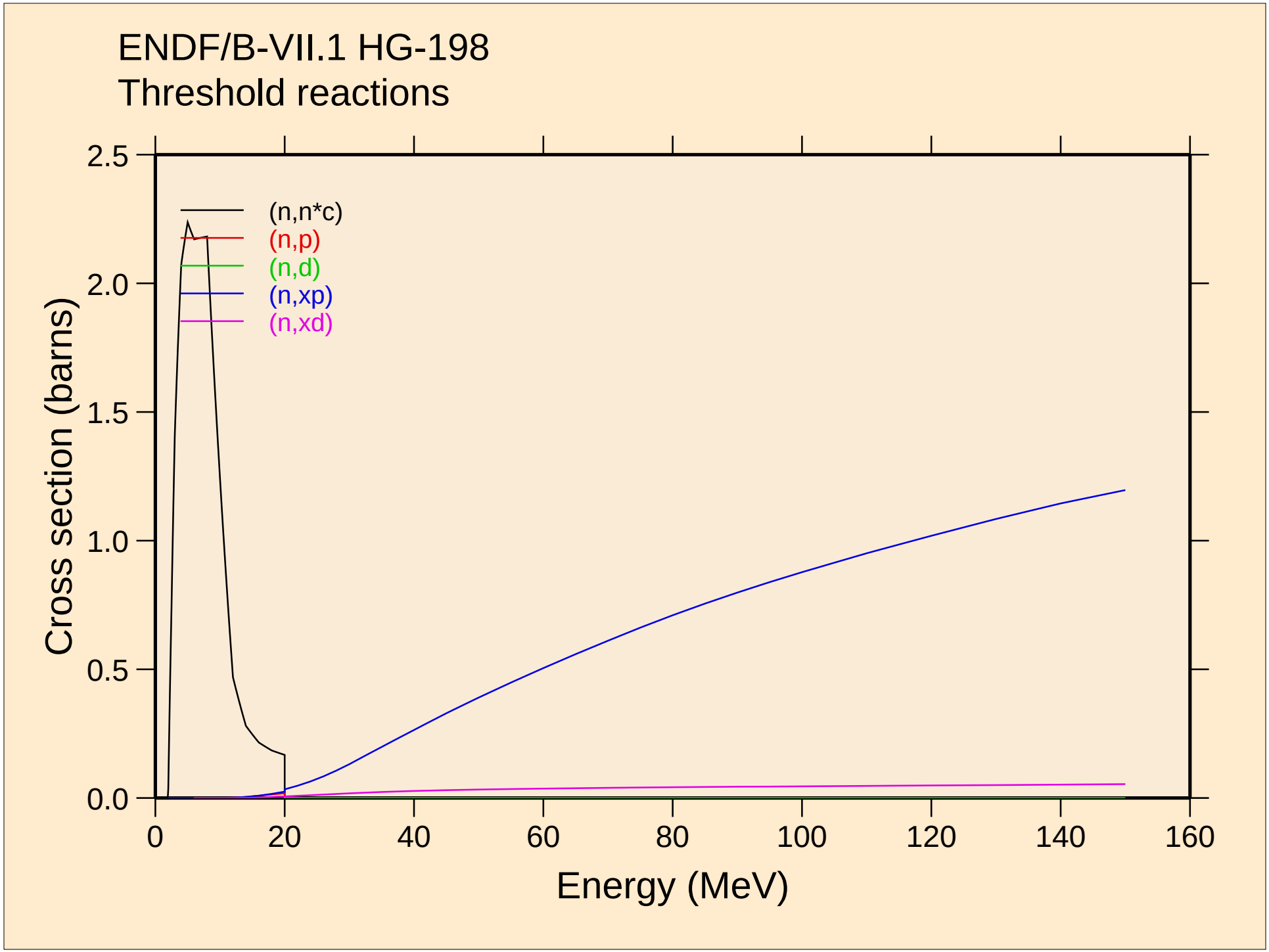

ENDF/B-VII.1 HG-198
Inelastic levels
Cross section (barns)
Energy (MeV)
1.0
0.8
0.6
0.4
0.2
0.0
0
2
4
6
8
10
12
14
16
18
20
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

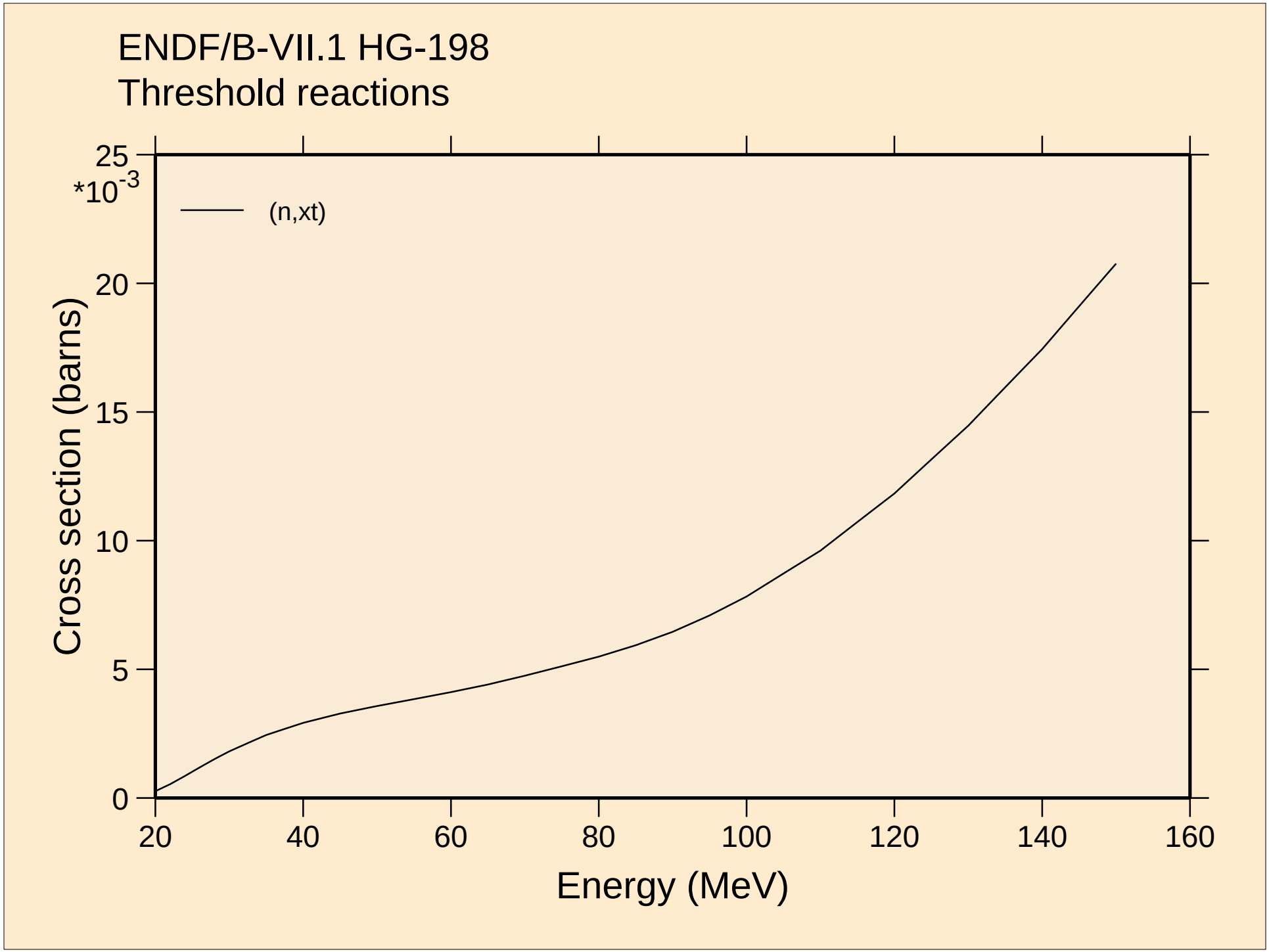

ENDF/B-VII.1 HG-198
Inelastic levels
Cross section (barns)
*10-3
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

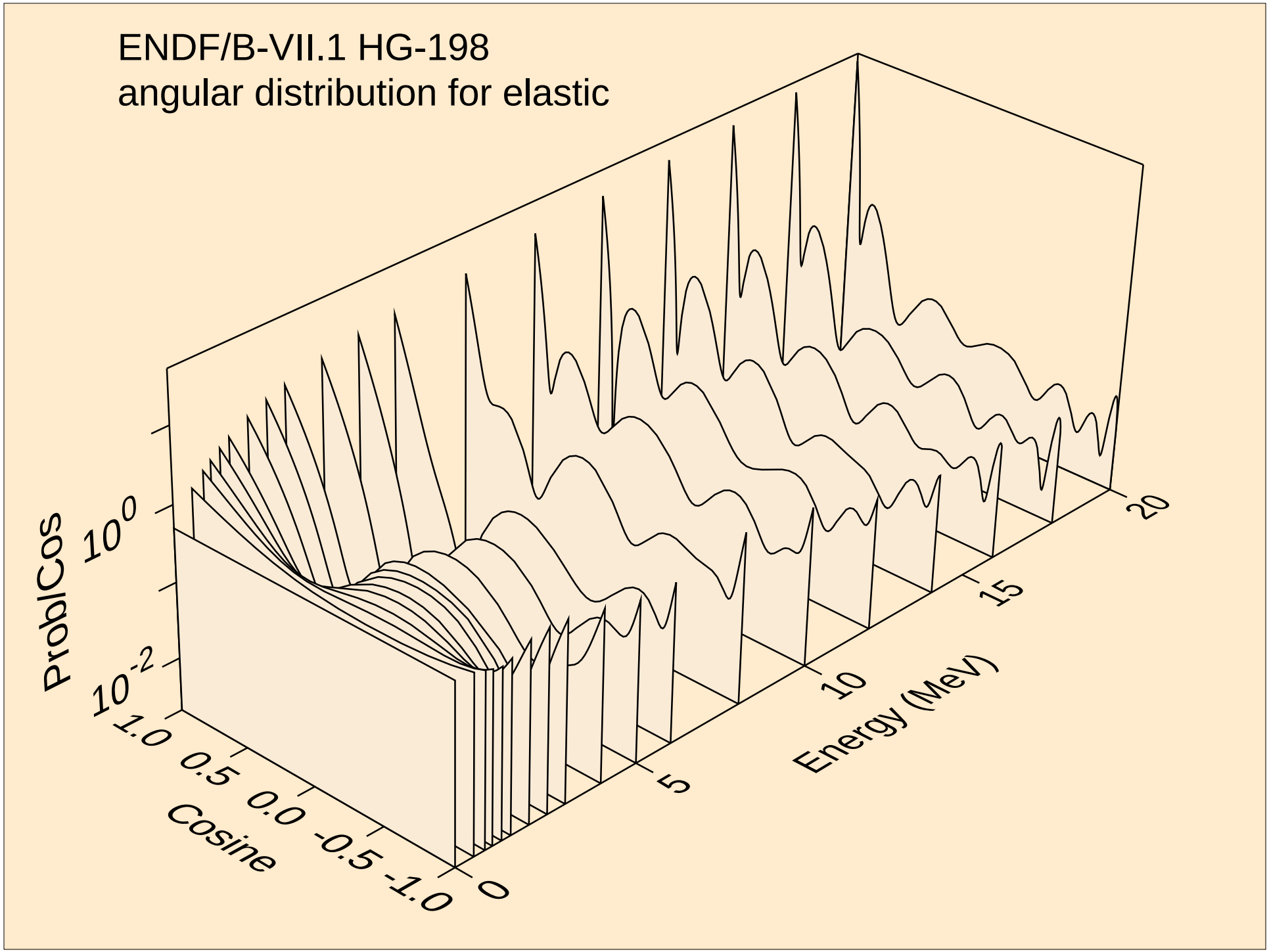

ENDF/B-VII.1 HG-198
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

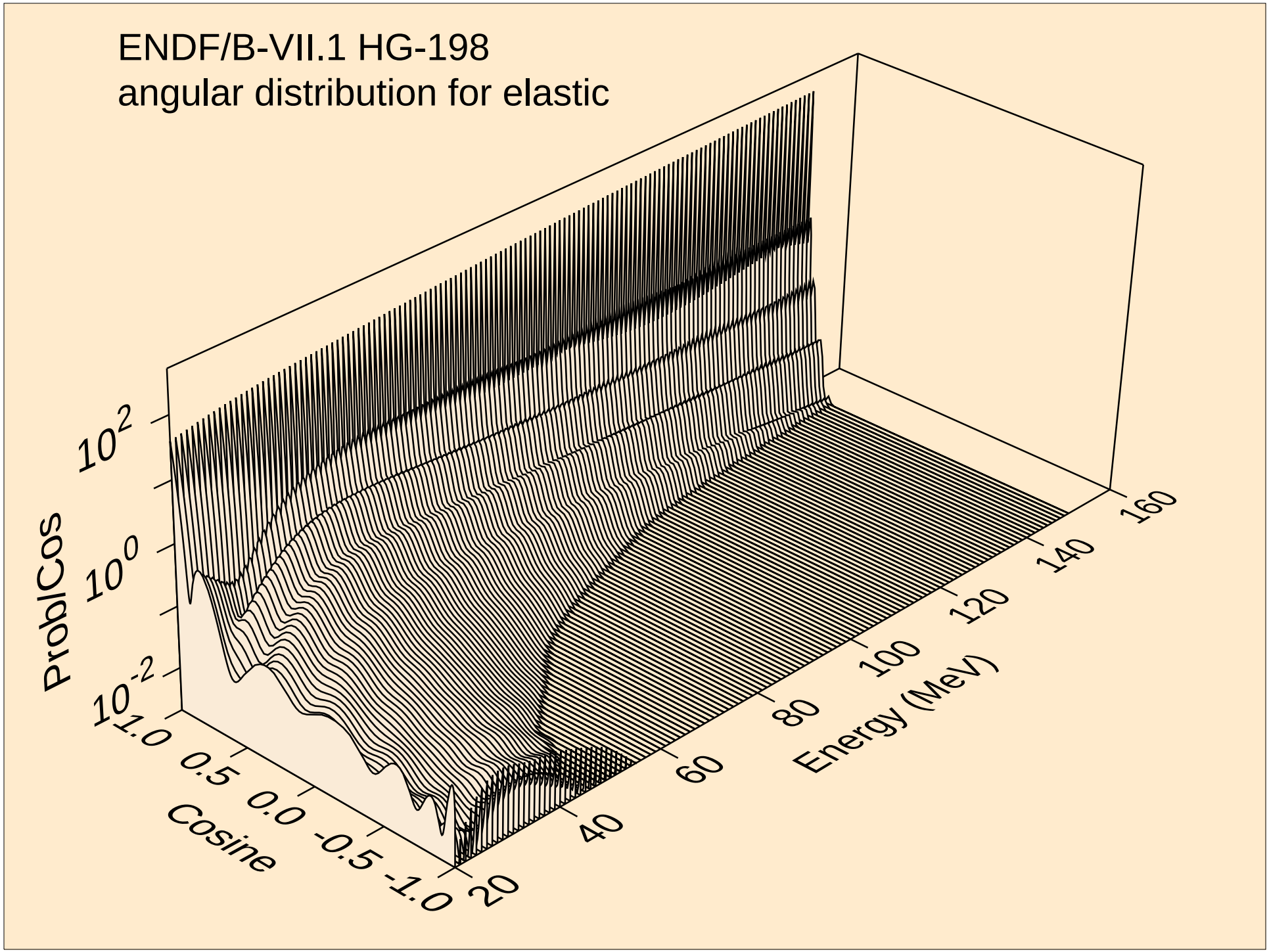

ENDF/B-VII.1 HG-198
Inelastic levels
Cross section (barns)
*10-3
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)

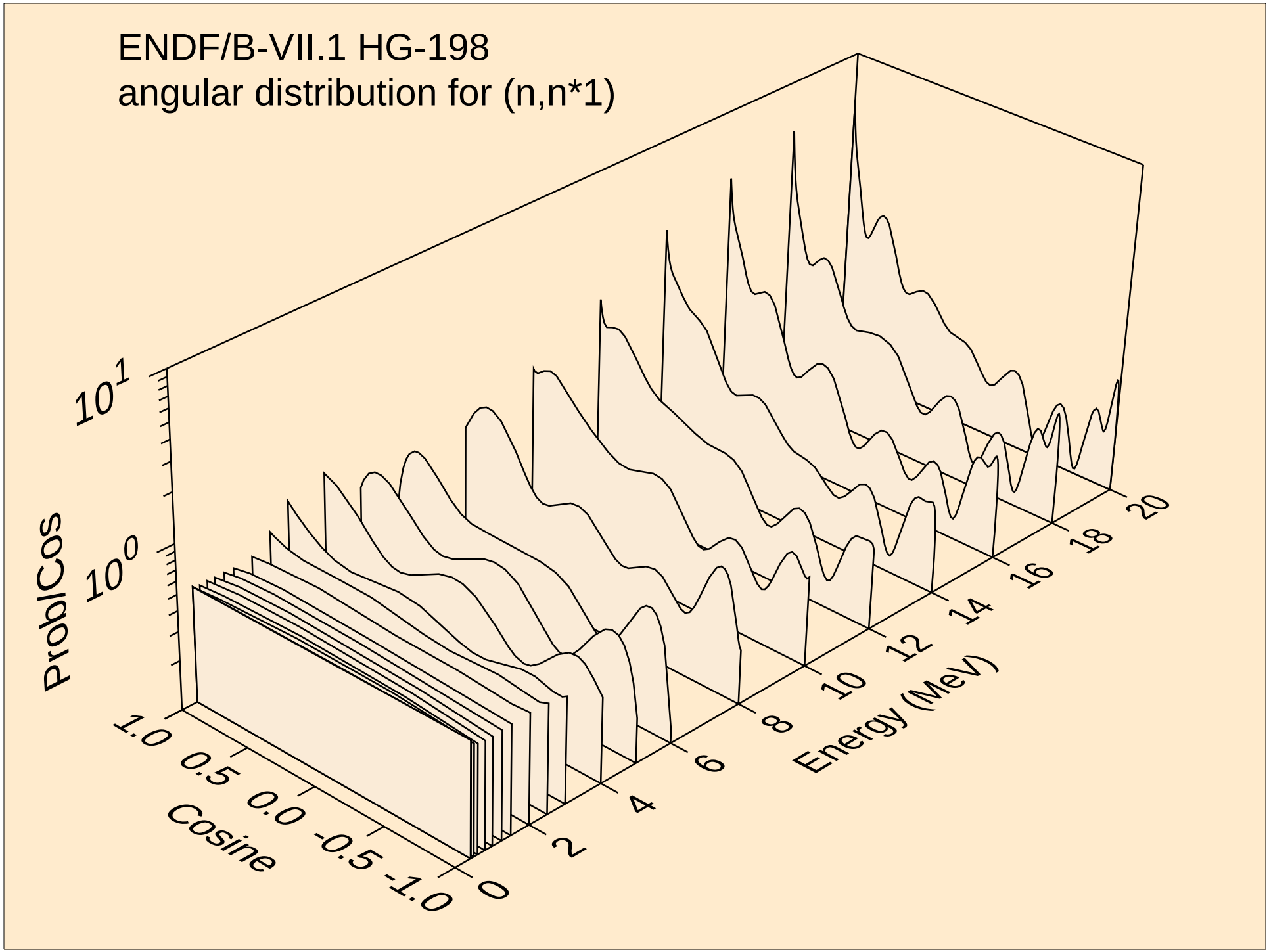

ENDF/B-VII.1 HG-198
Threshold reactions
(n,x)
(n,2n)
(n,3n)
(n,n*)a
(n,n*)p
Cross section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
20
40
60
80
100
120
140
160
Energy (MeV)

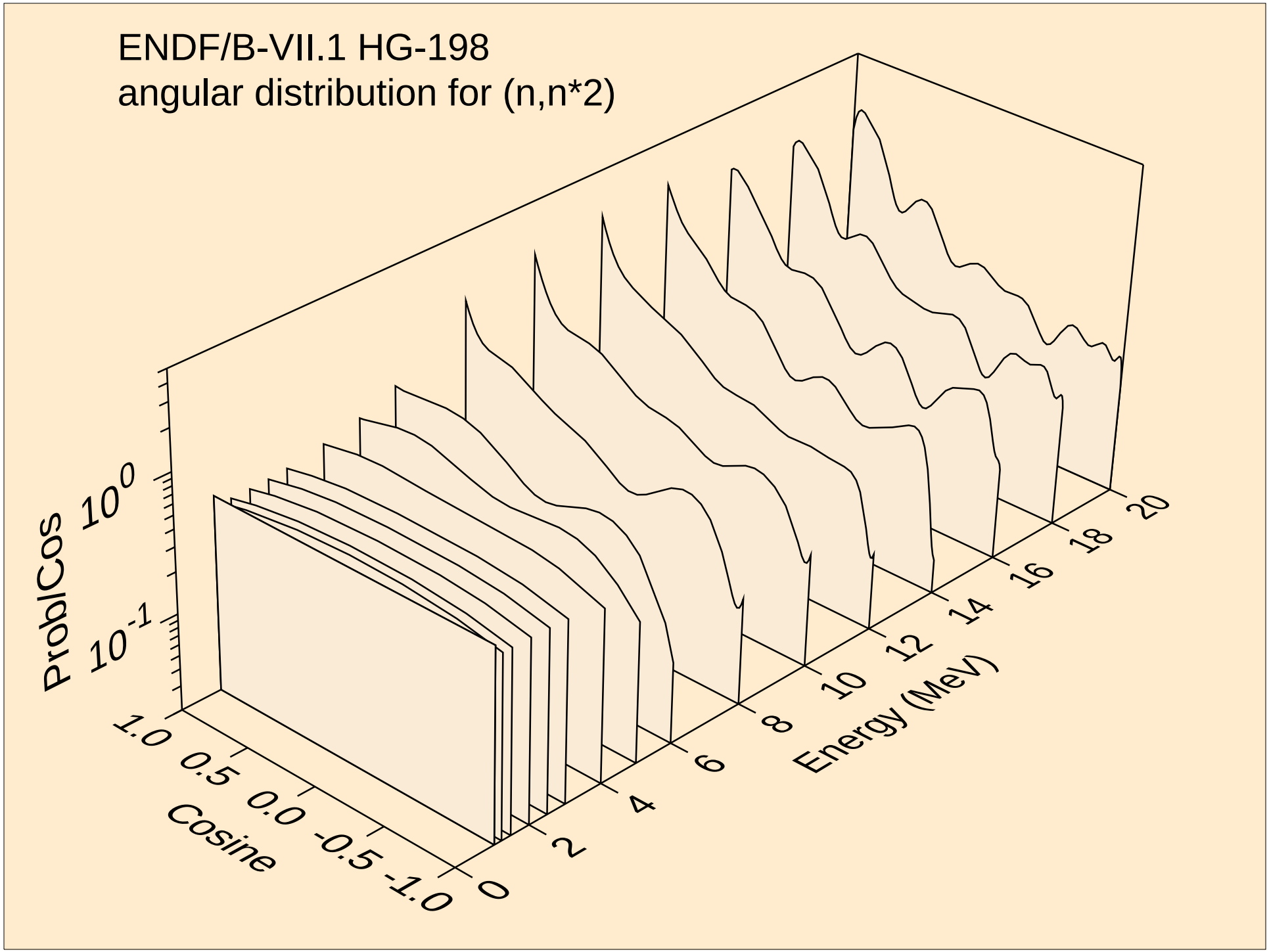

ENDF/B-VII.1 HG-198
Threshold reactions
(n,n*c)
(n,p)
(n,d)
(n,xp)
(n,xd)
Cross section (barns)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
0
20
40
60
80
100
120
140
160

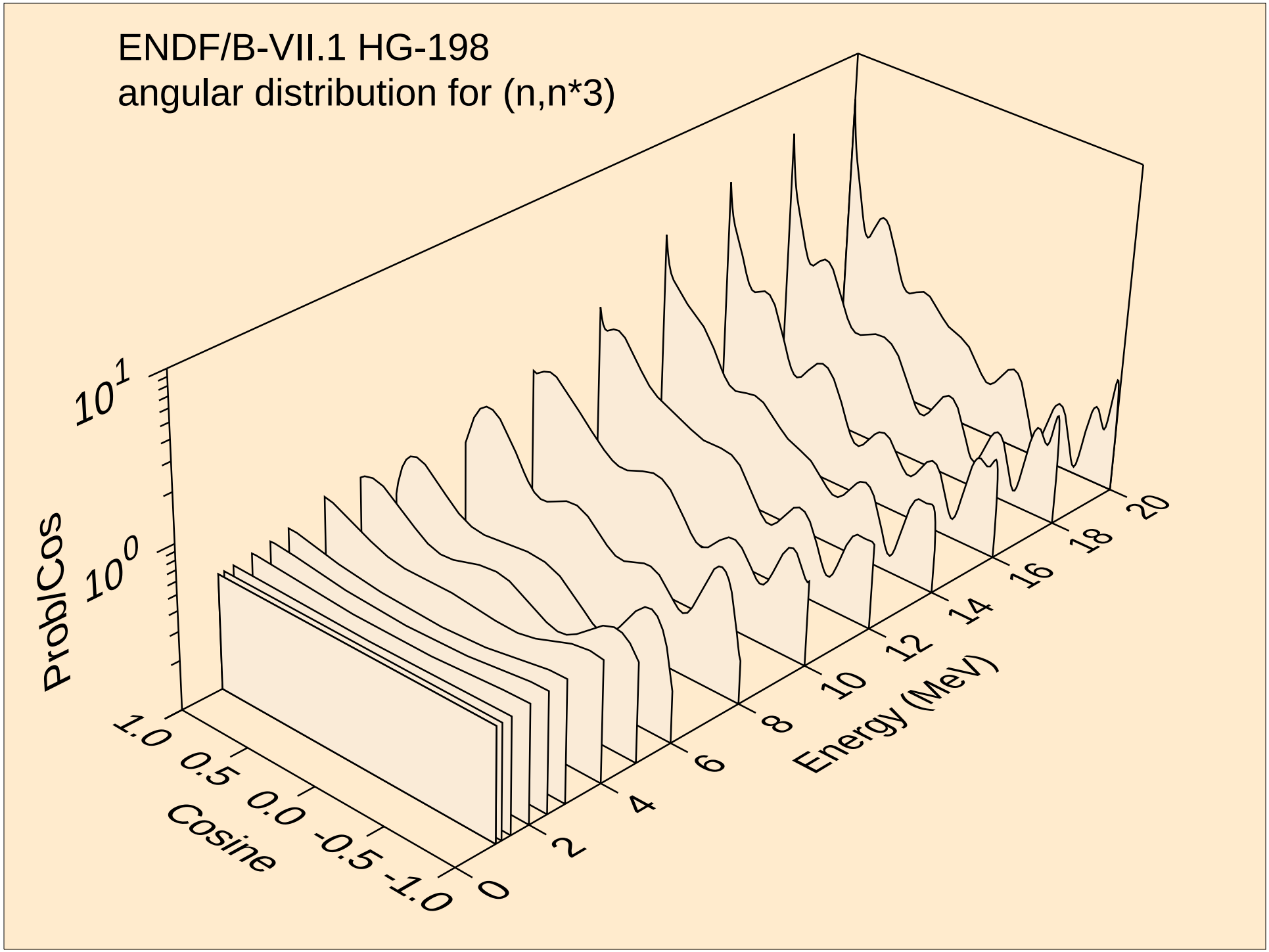

ENDF/B-VII.1 HG-198
Threshold reactions
25
*10-3
20
15
10
5
0
(n,xt)
Cross section (barns)
20
40
60
80
100
120
140
160
Energy (MeV)

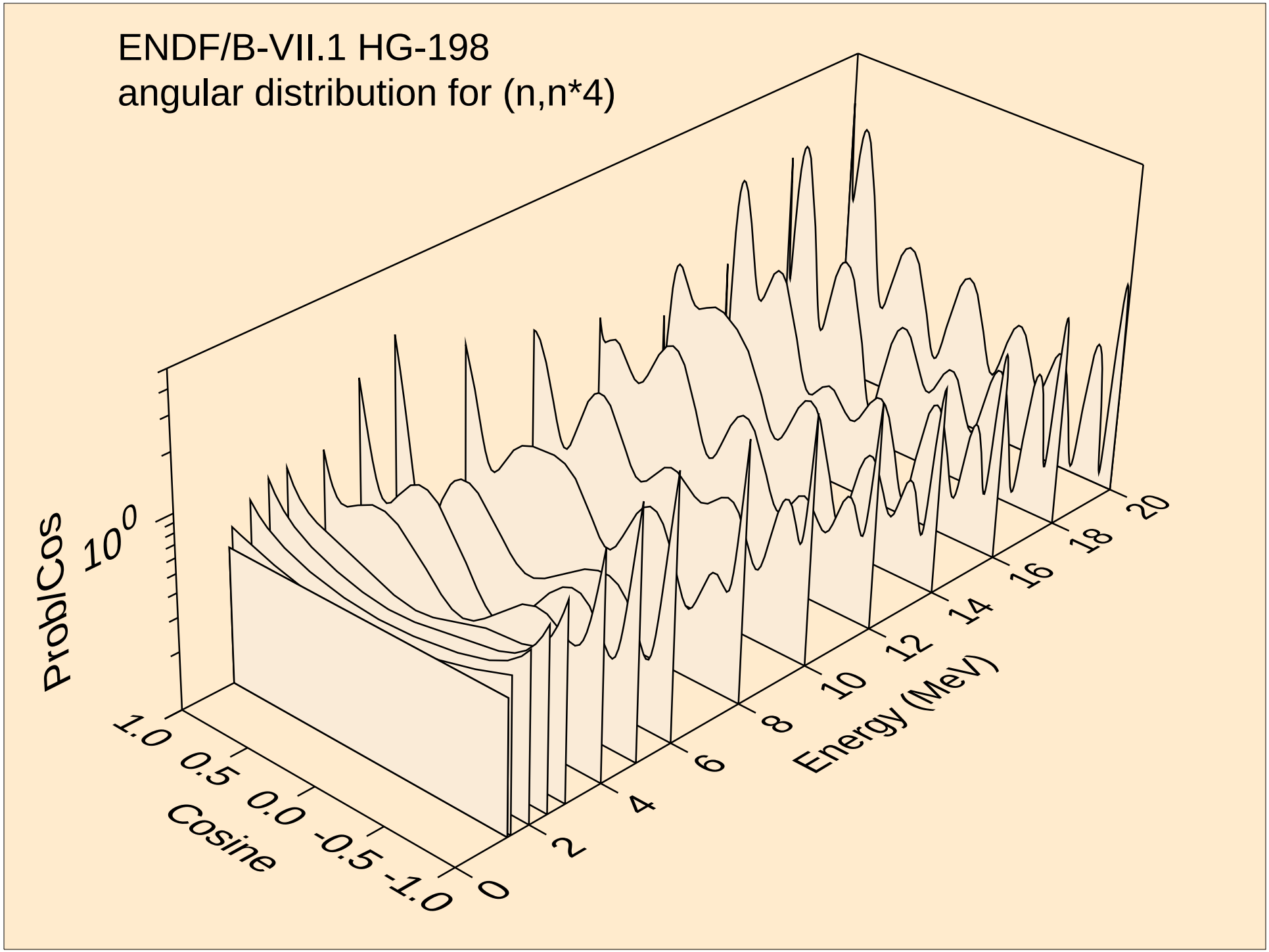

ENDF/B-VII.1 HG-198
angular distribution for elastic
ProbCos
10^0
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

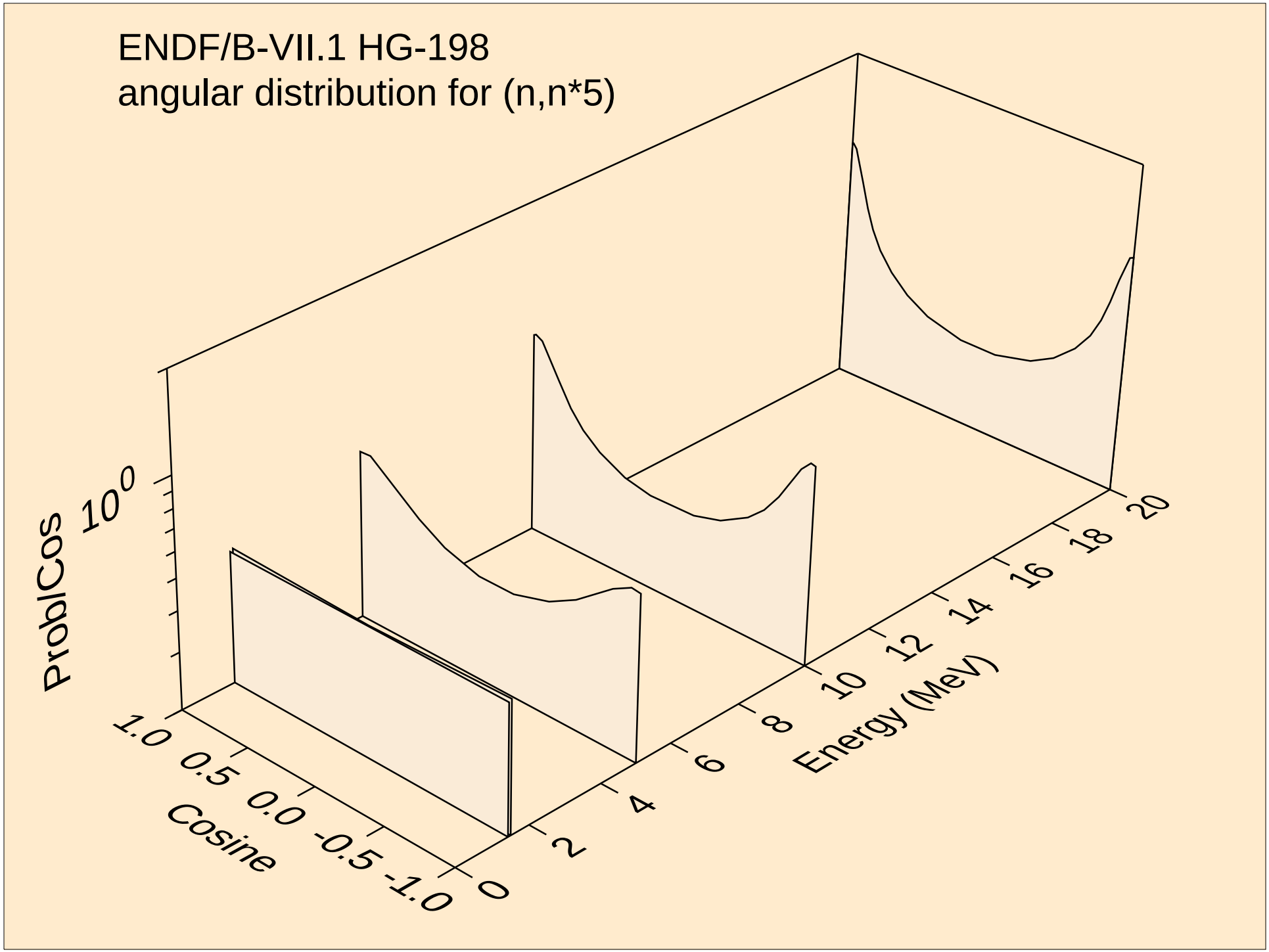

ENDF/B-VII.1 HG-198
angular distribution for elastic
ProbCos
10^{2}
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
Energy (MeV)

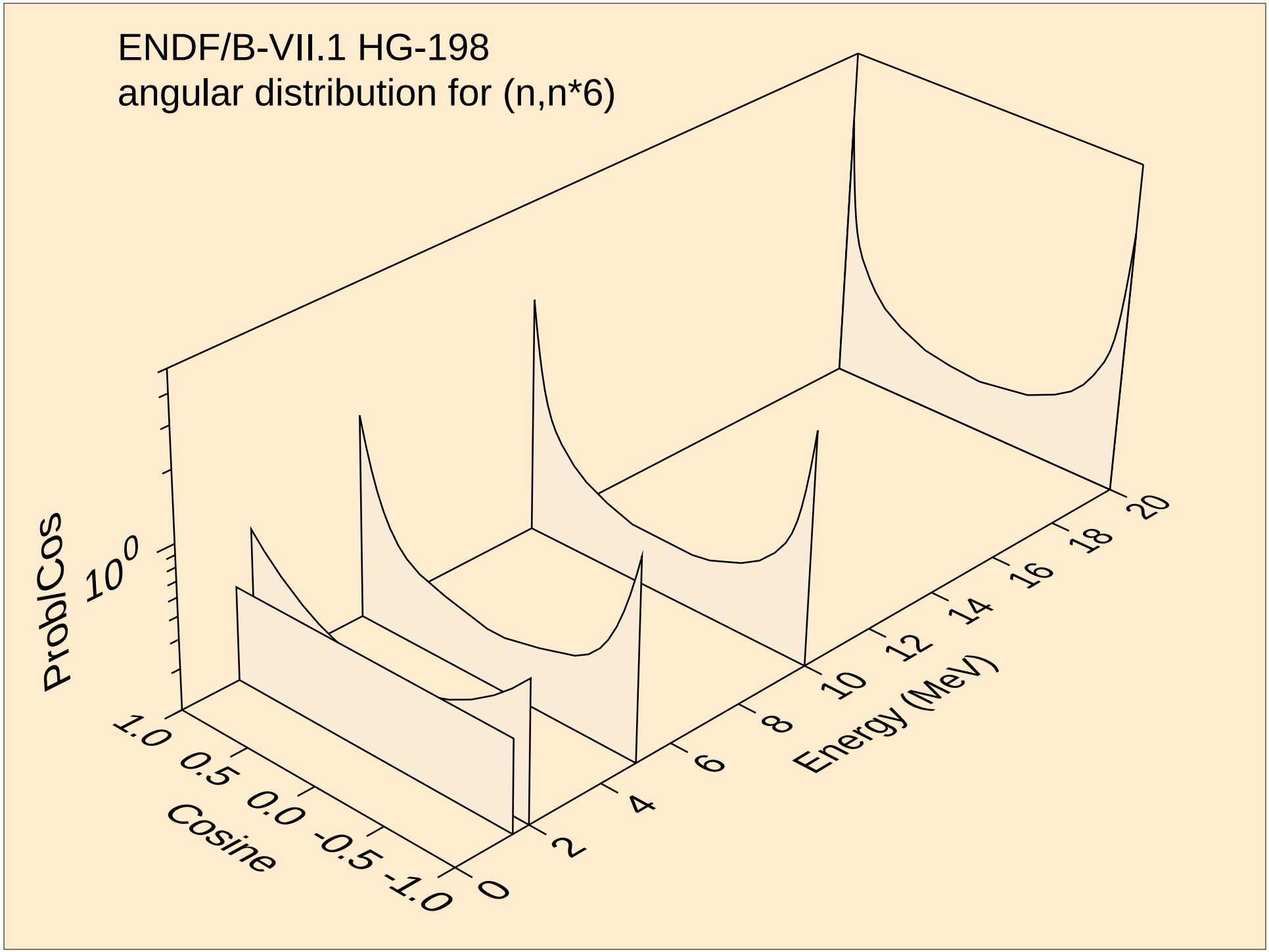

ENDF/B-VII.1 HG-198
angular distribution for (n,n*1)
ProbICos
10^1
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

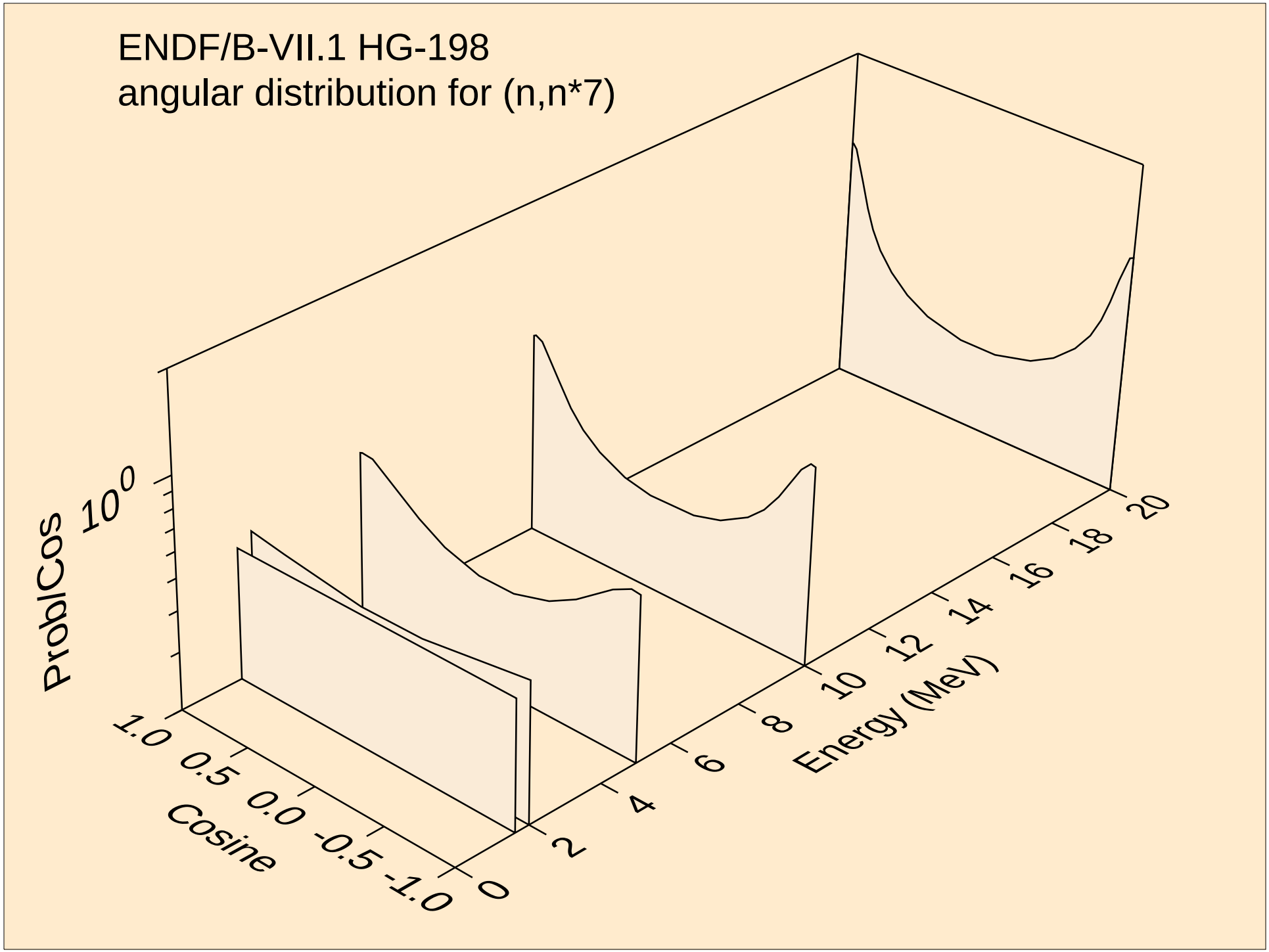

ENDF/B-VII.1 HG-198
angular distribution for (n,n*2)
Prob\Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

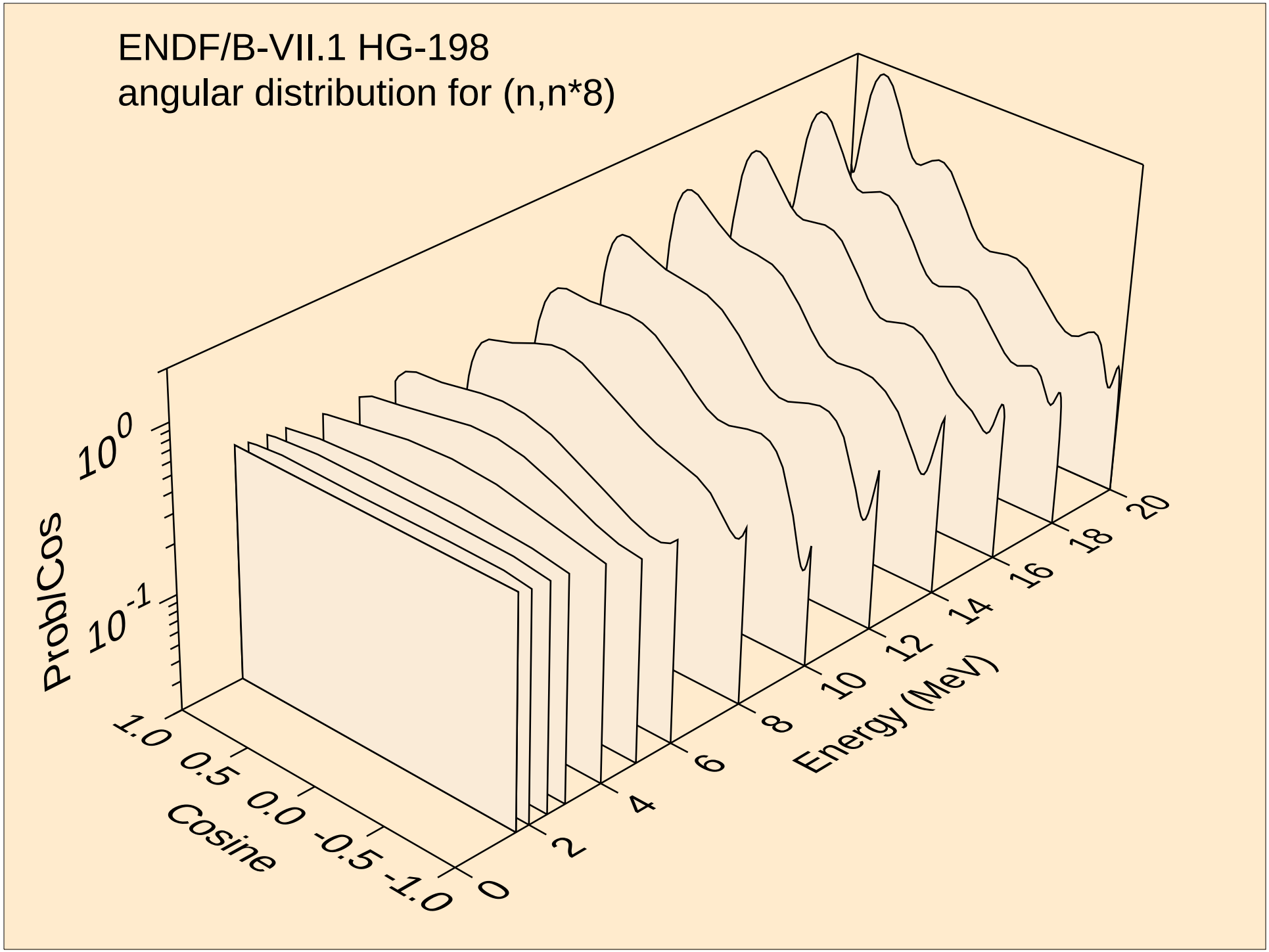

ENDF/B-VII.1 HG-198
angular distribution for (n,n*3)
Prob\Cos
10^1
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

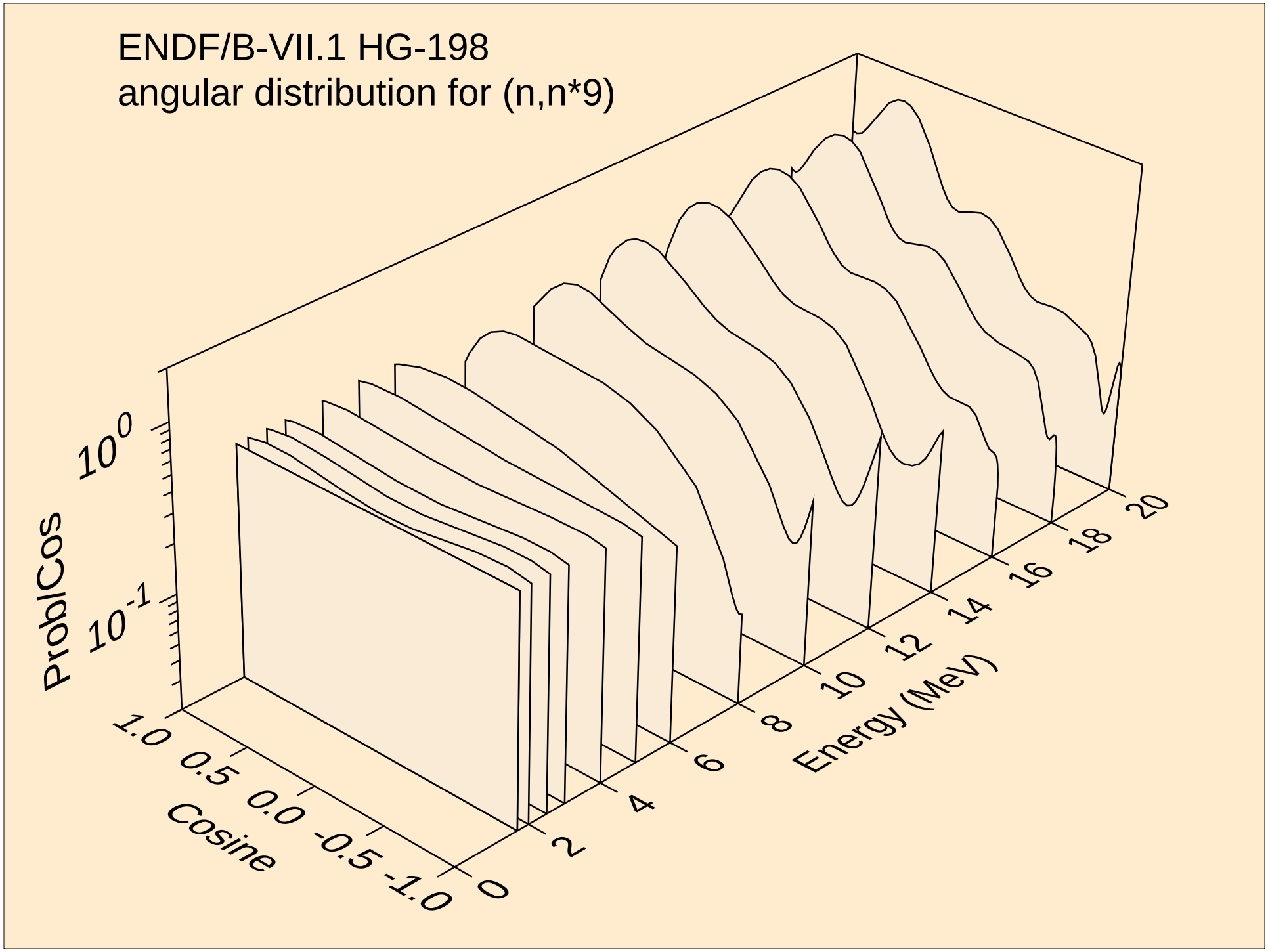

ENDF/B-VII.1 HG-198
angular distribution for (n,n*4)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

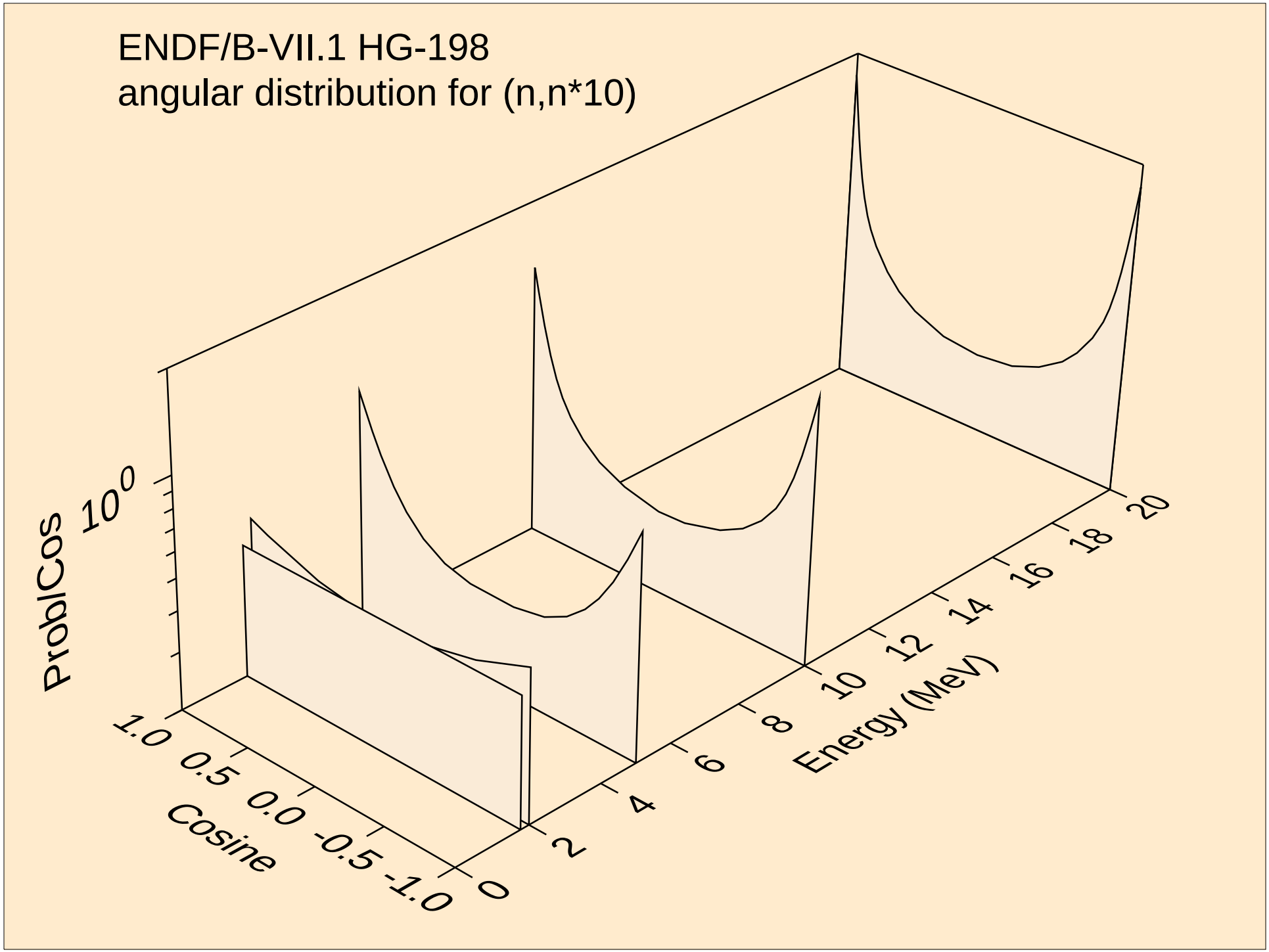

ENDF/B-VII.1 HG-198
angular distribution for (n,n*5)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

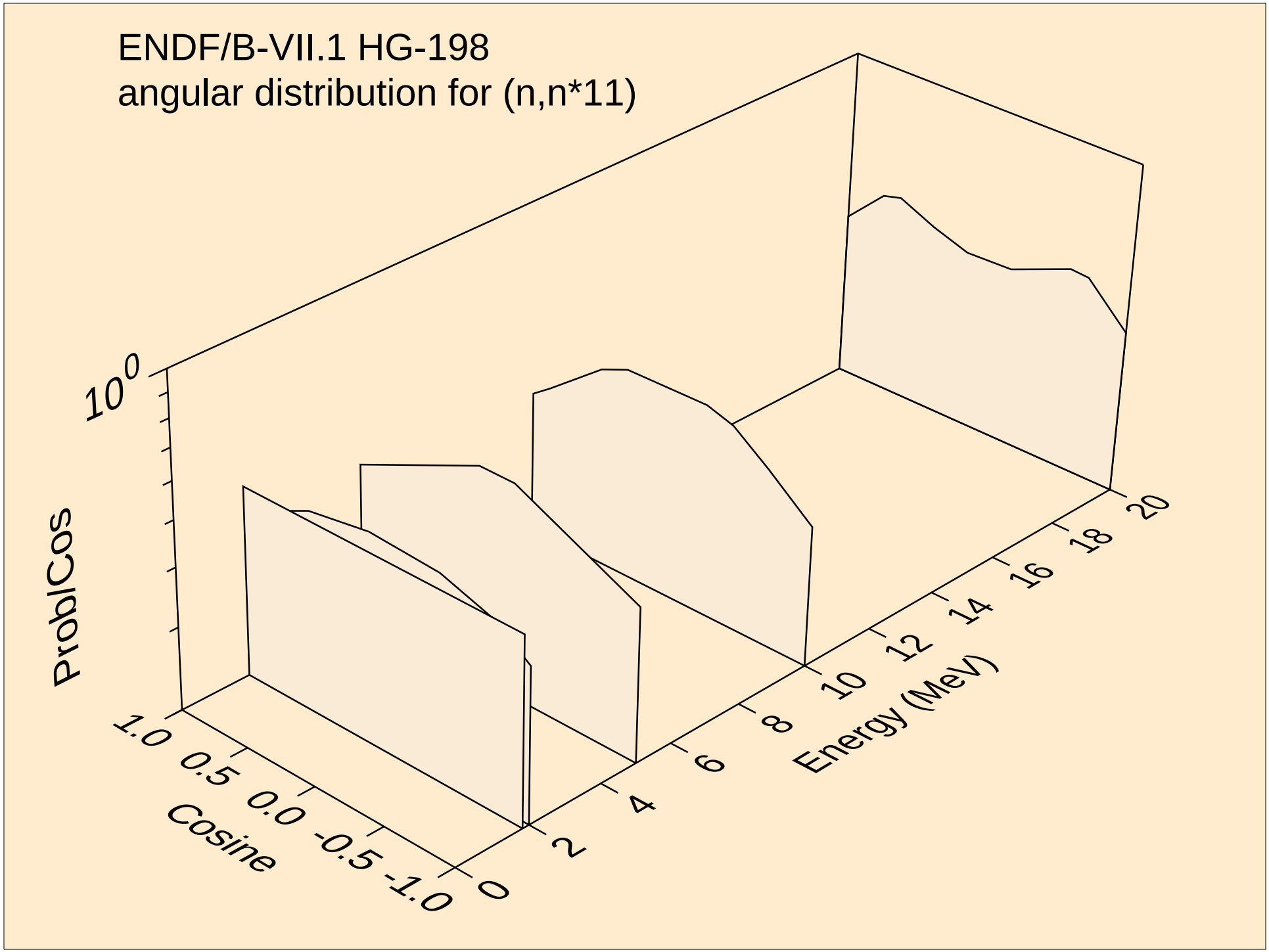

ENDF/B-VII.1 HG-198
angular distribution for (n,n*6)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

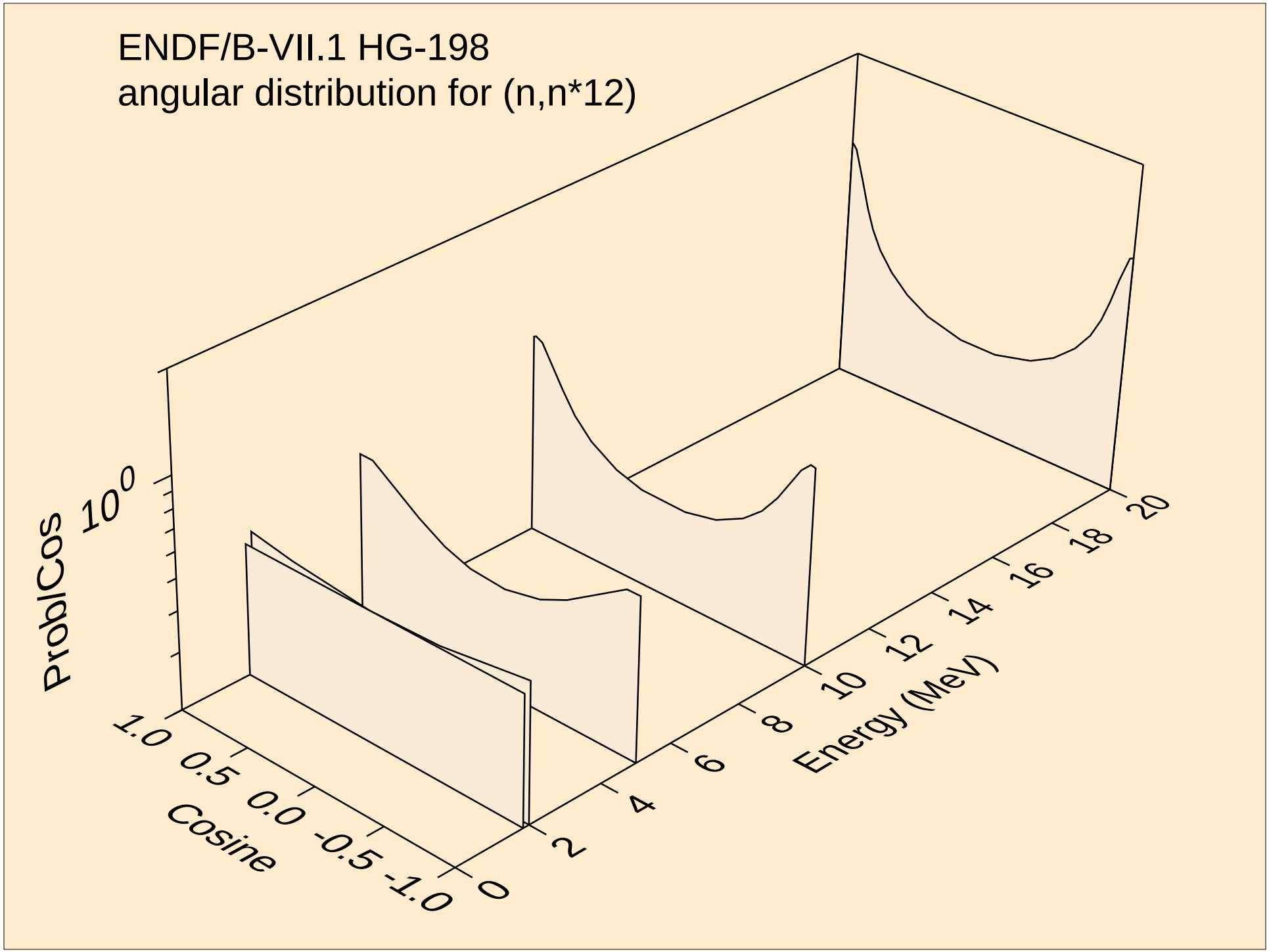

ENDF/B-VII.1 HG-198
angular distribution for (n,n*7)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

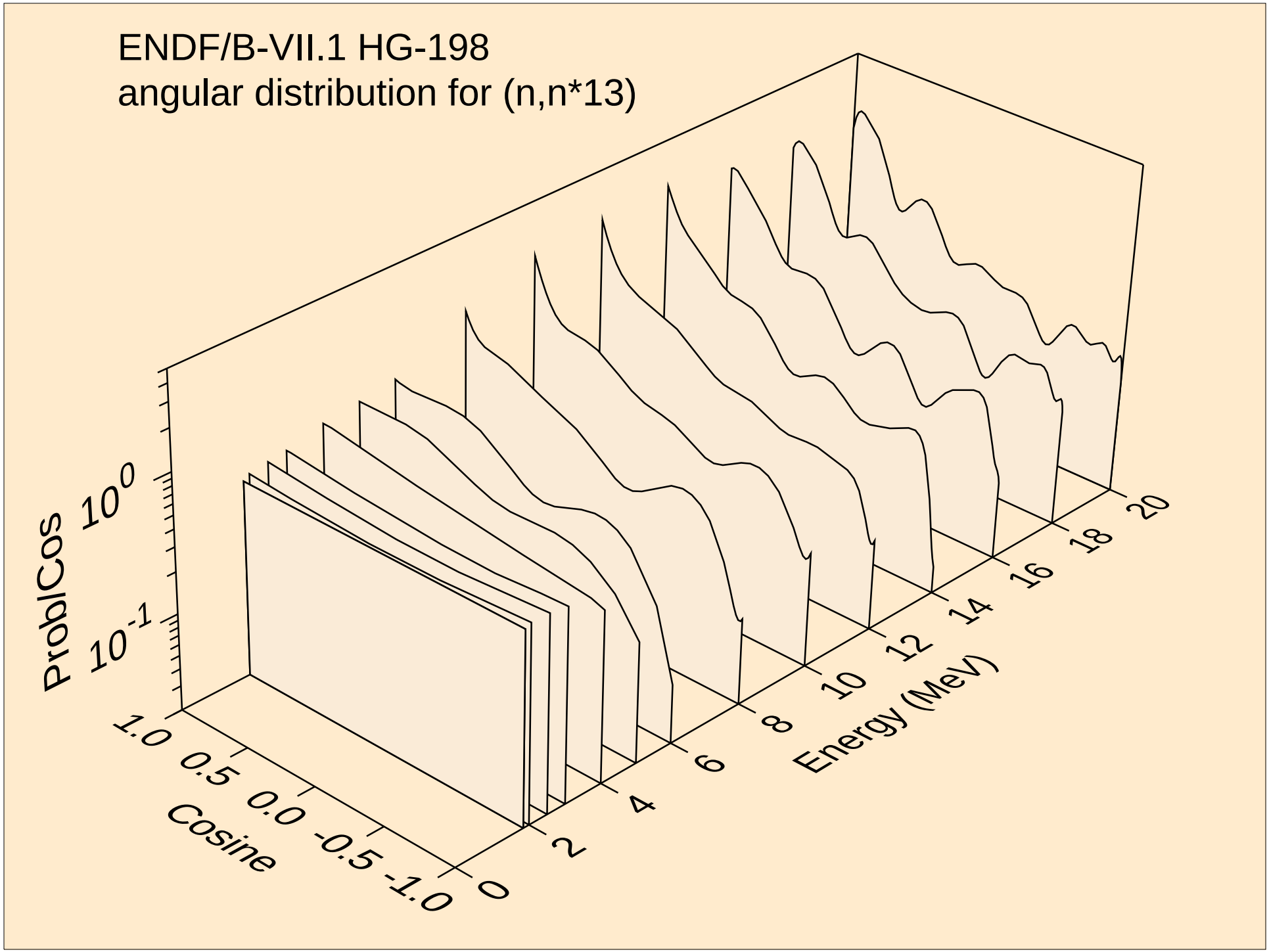

ENDF/B-VII.1 HG-198
angular distribution for (n,n*8)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

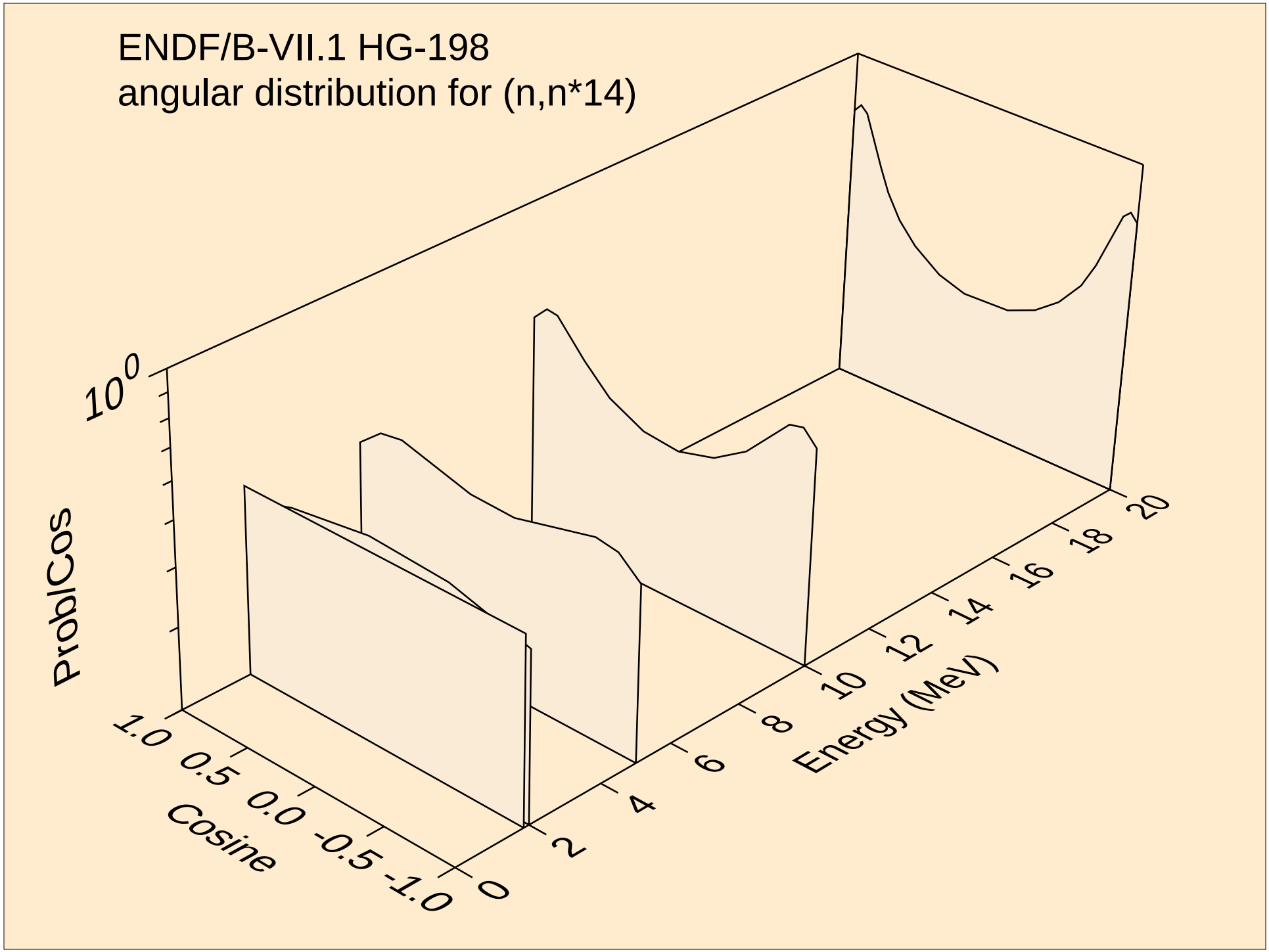

ENDF/B-VII.1 HG-198
angular distribution for (n,n*9)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

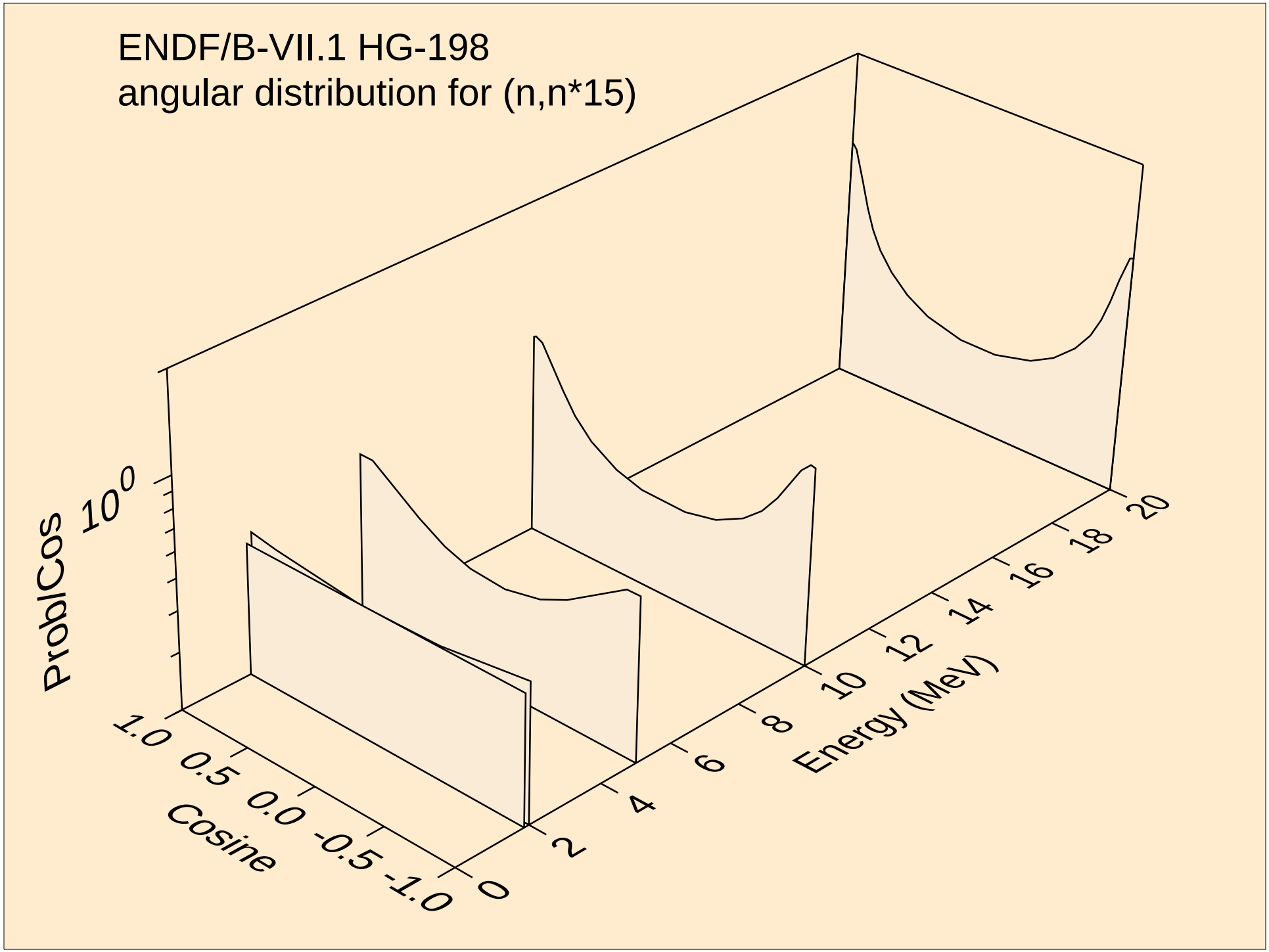

ENDF/B-VII.1 HG-198
angular distribution for (n,n*10)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

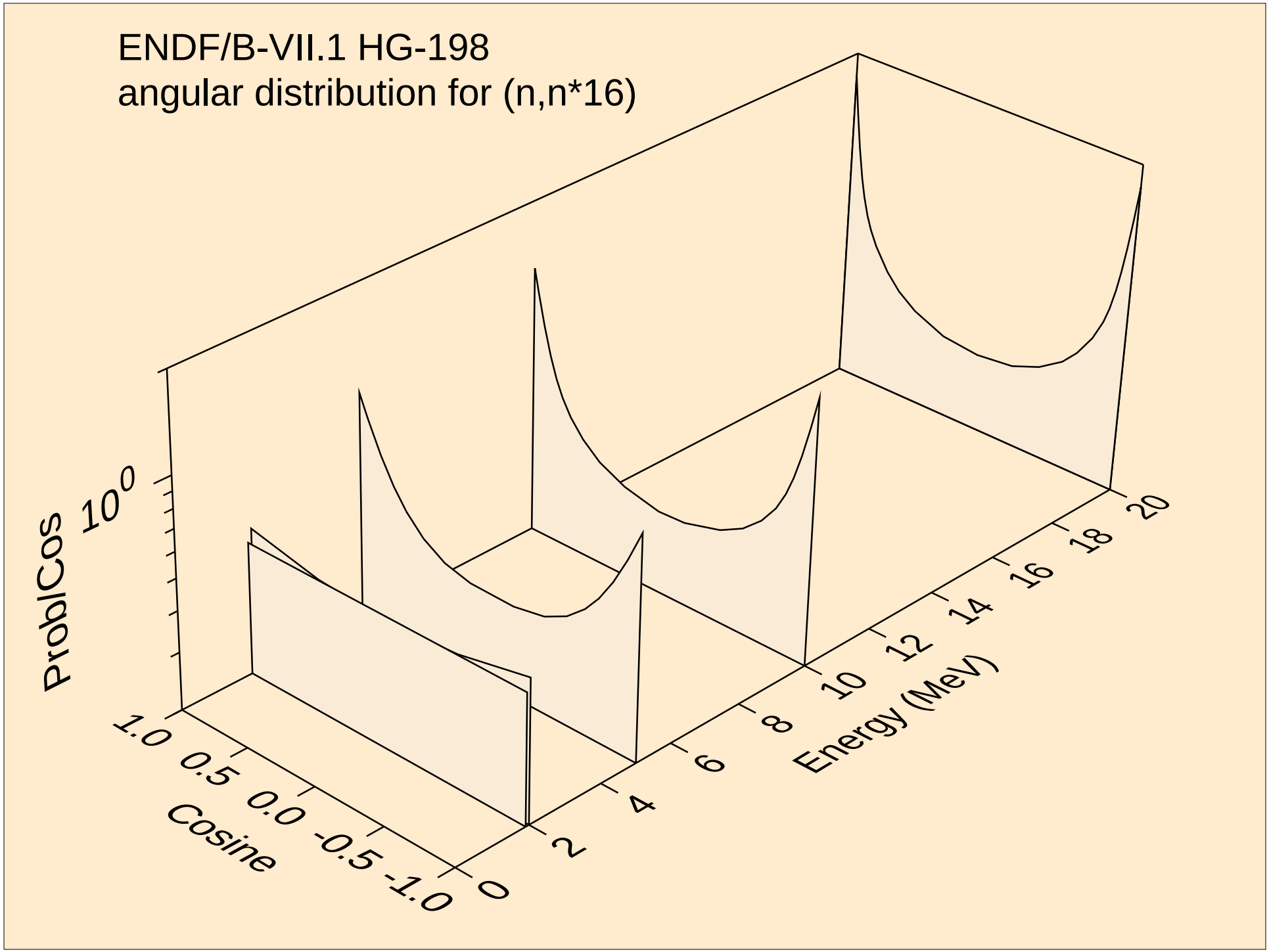

ENDF/B-VII.1 HG-198
angular distribution for (n,n*11)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

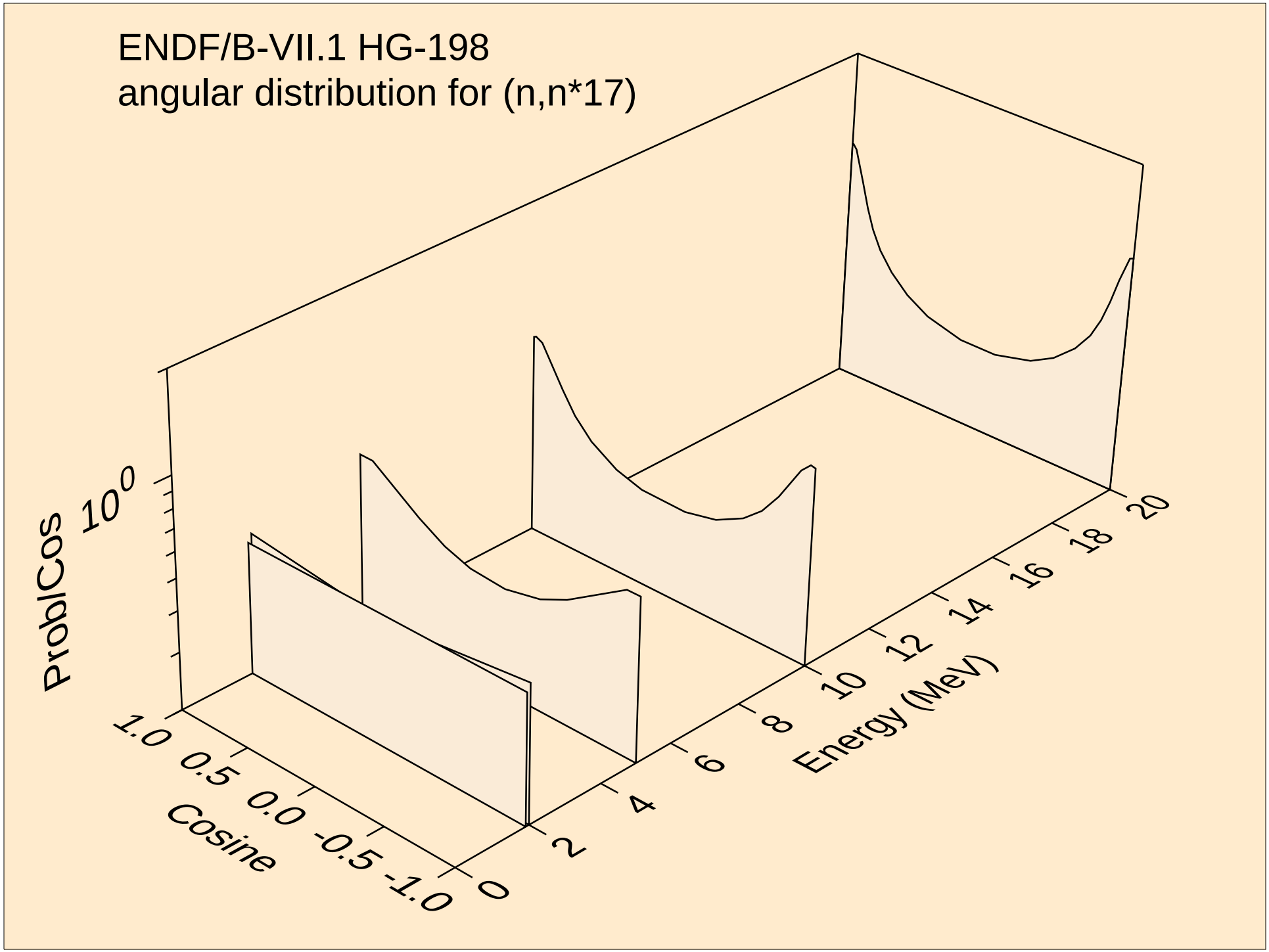

ENDF/B-VII.1 HG-198
angular distribution for (n,n*12)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

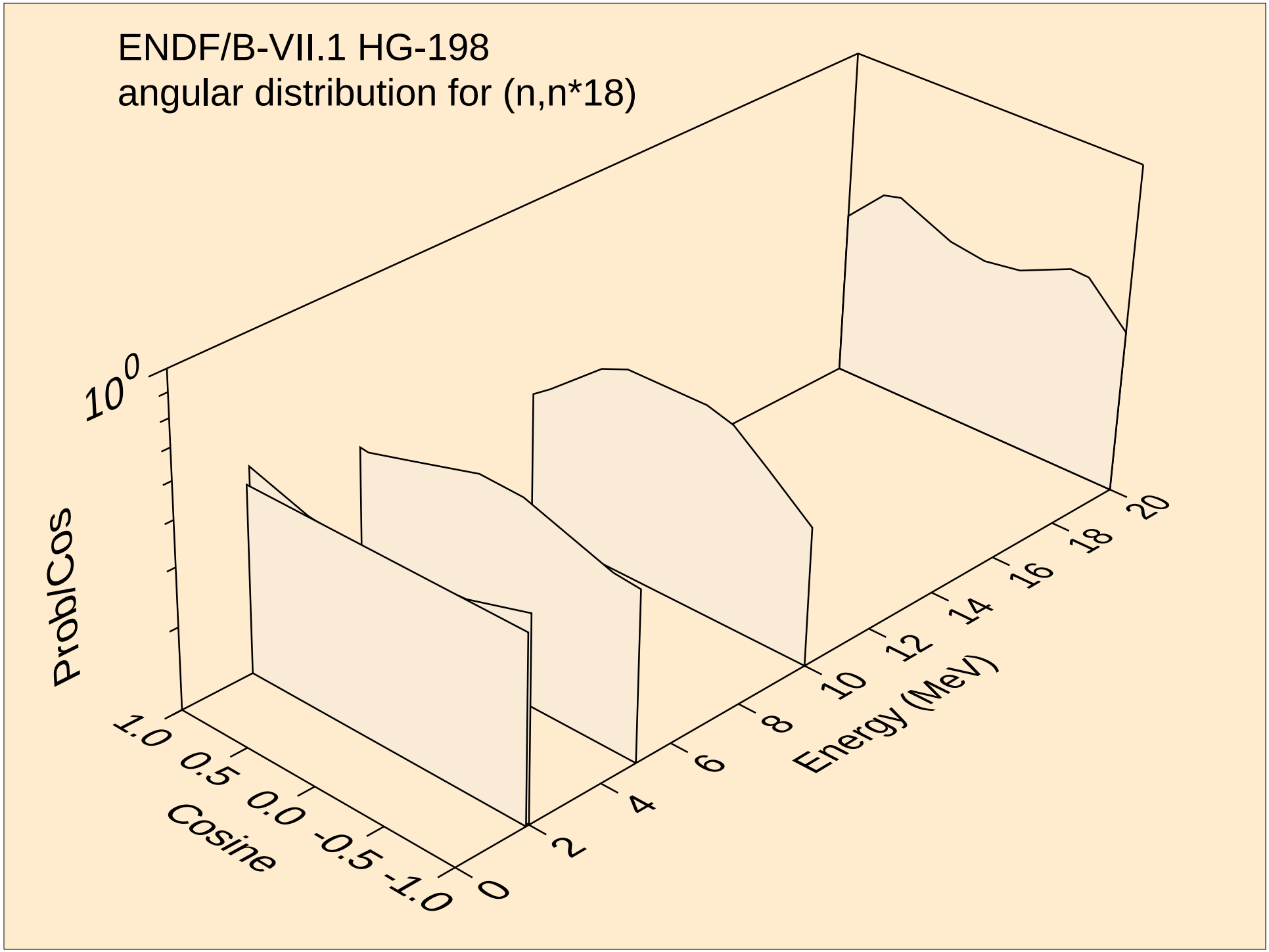

ENDF/B-VII.1 HG-198
angular distribution for (n,n*13)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

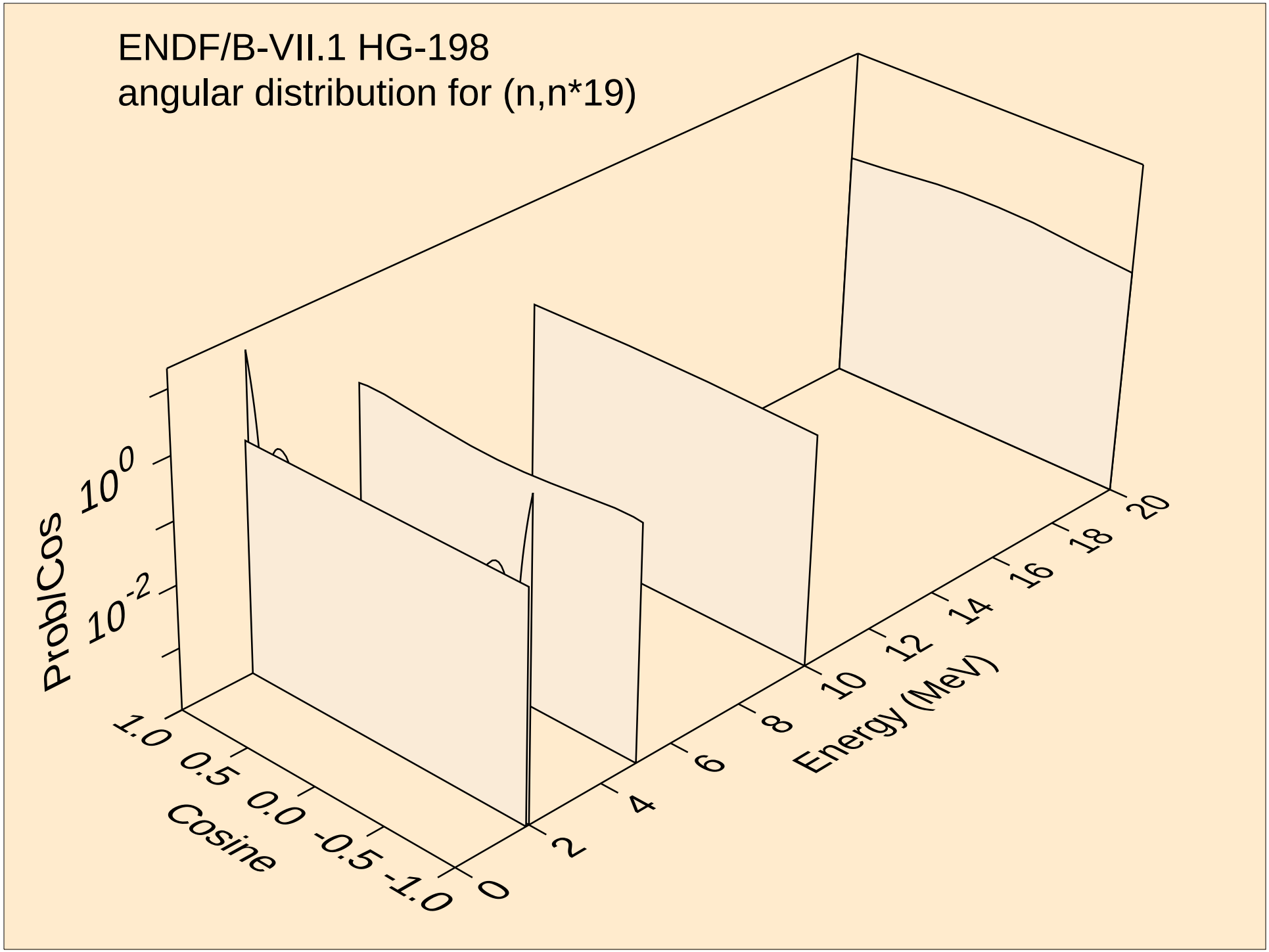

ENDF/B-VII.1 HG-198
angular distribution for (n,n*14)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

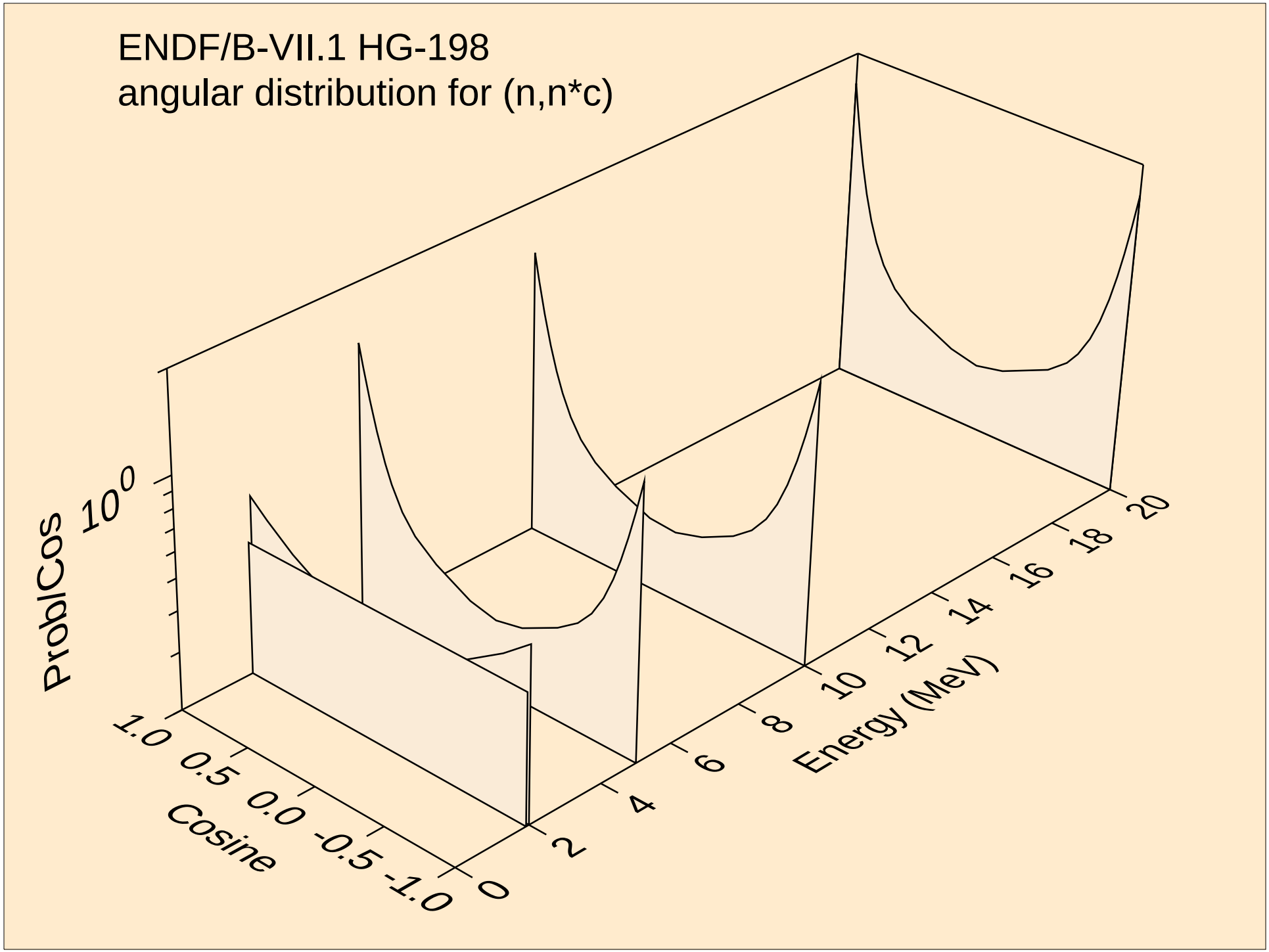

ENDF/B-VII.1 HG-198
angular distribution for (n,n*15)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

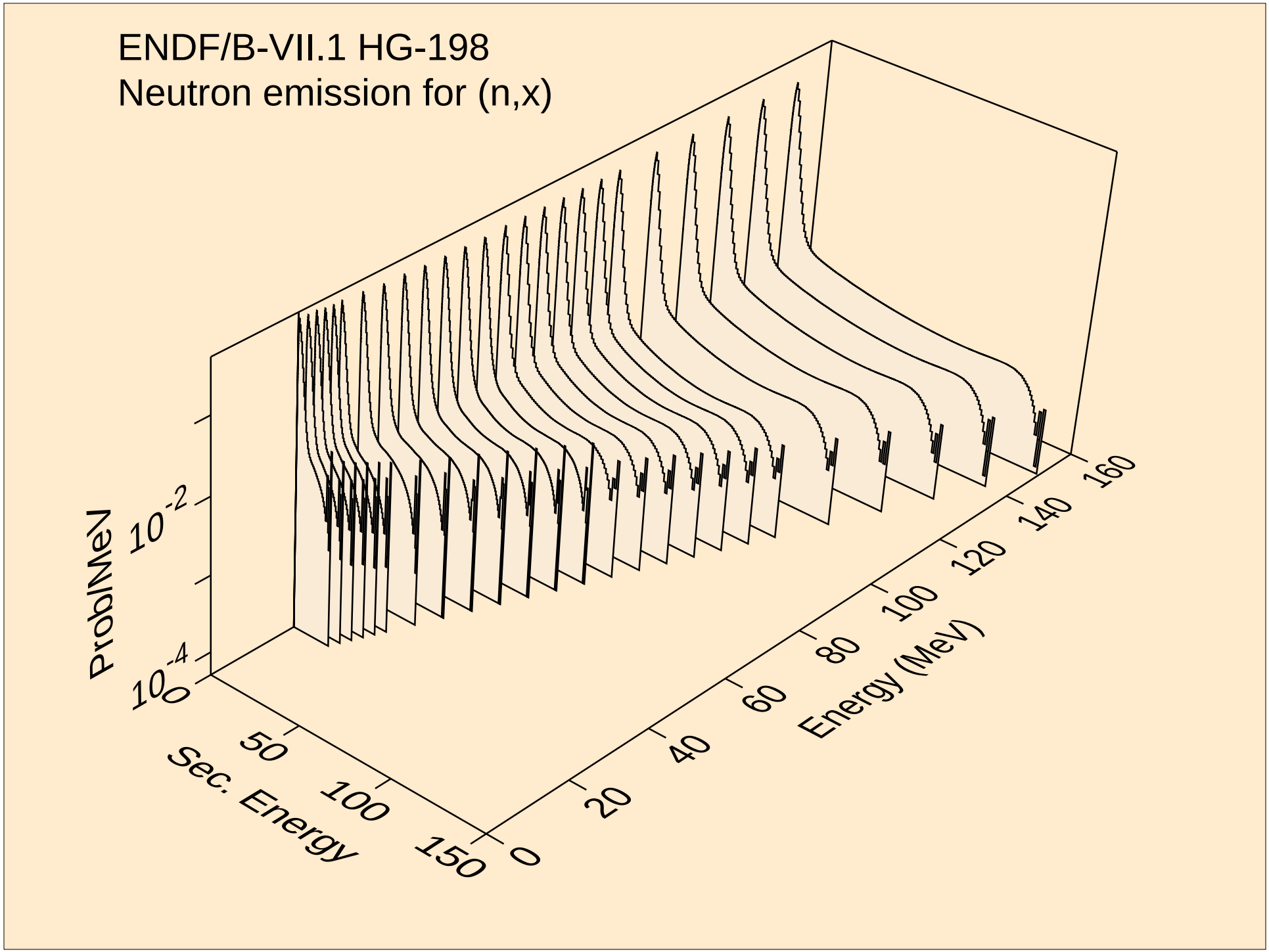

ENDF/B-VII.1 HG-198
angular distribution for (n,n*16)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

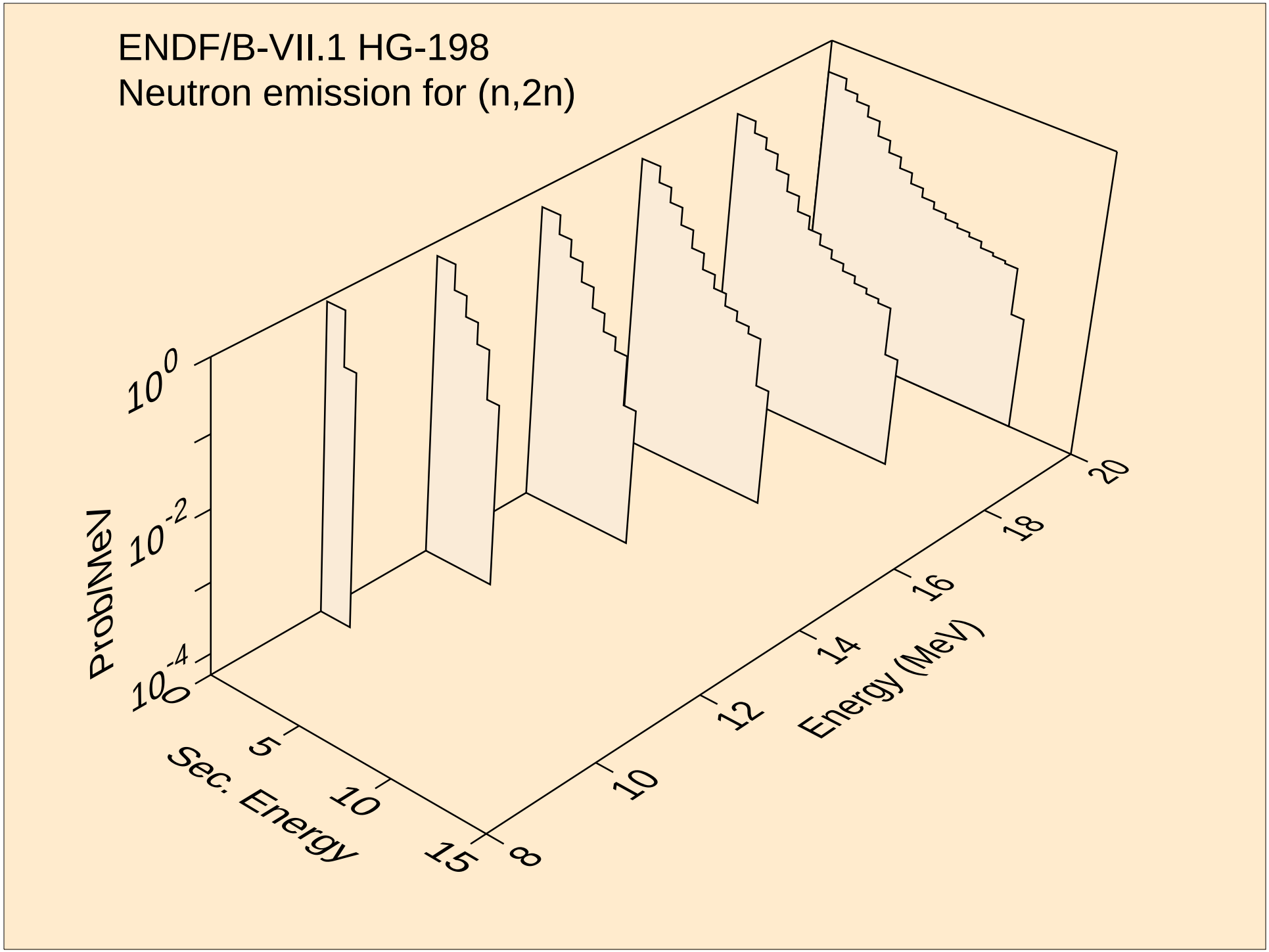

ENDF/B-VII.1 HG-198
angular distribution for (n,n*17)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

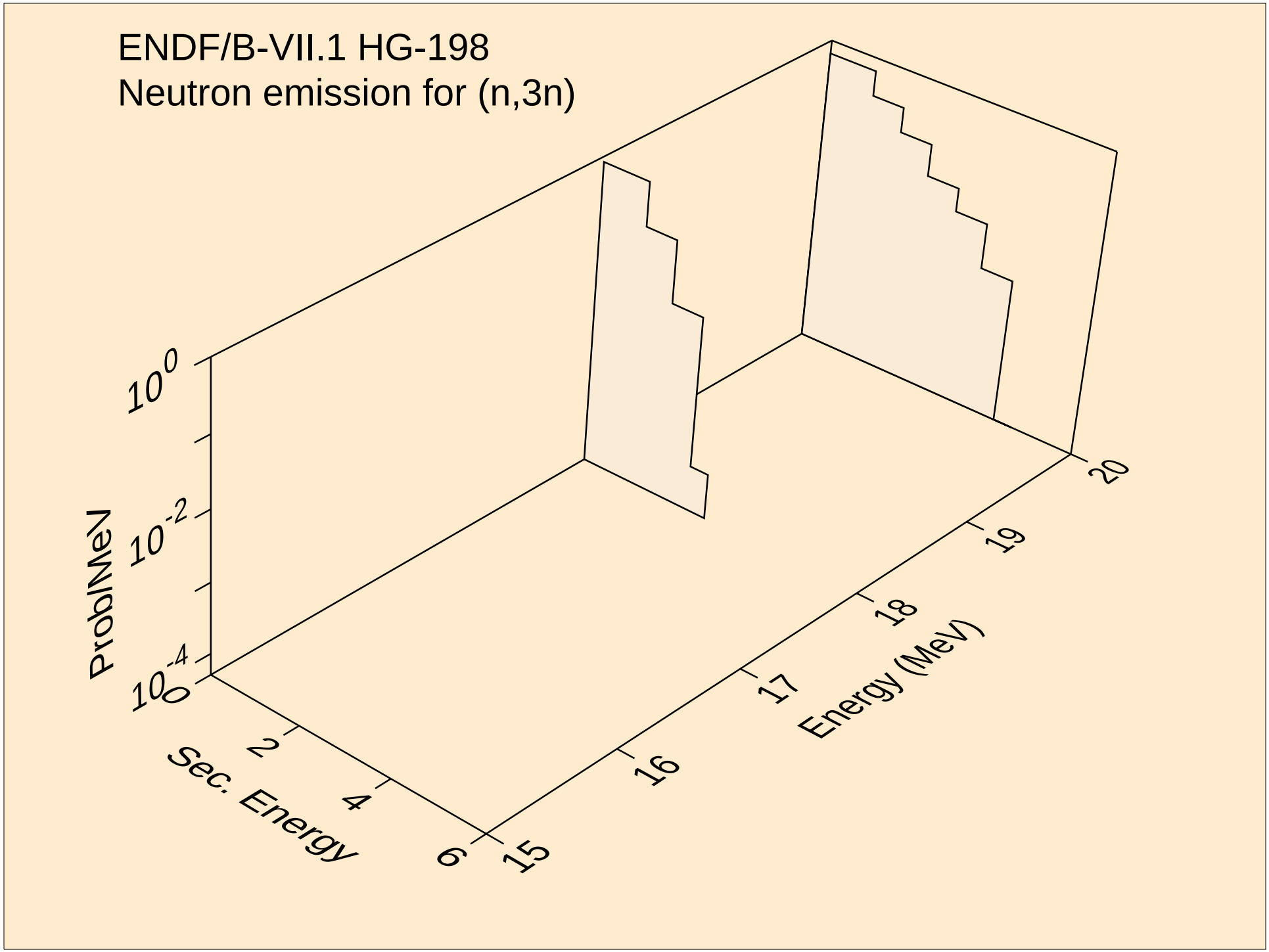

ENDF/B-VII.1 HG-198
angular distribution for (n,n*18)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

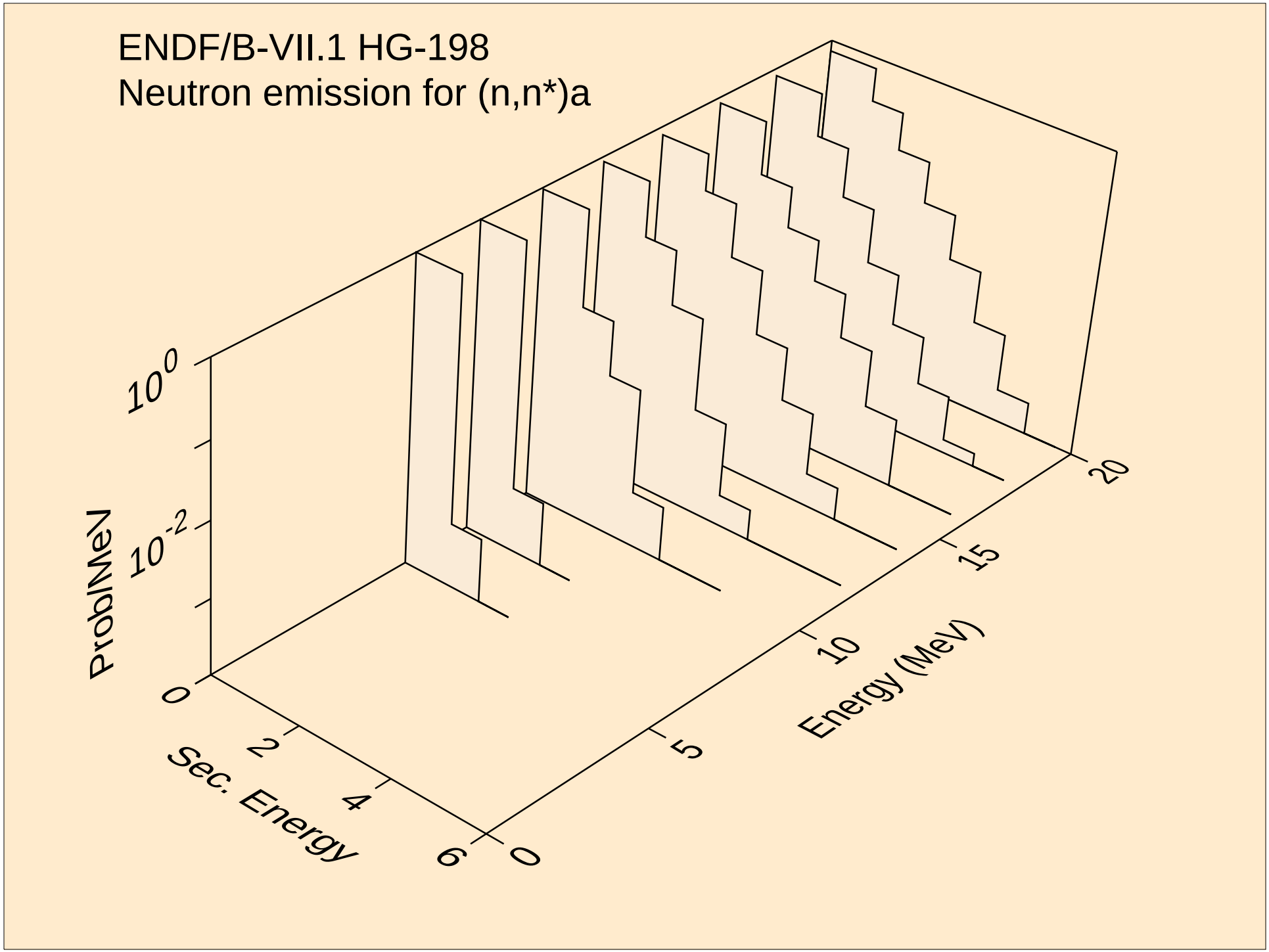

ENDF/B-VII.1 HG-198
angular distribution for (n,n*19)
Prob\Cos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

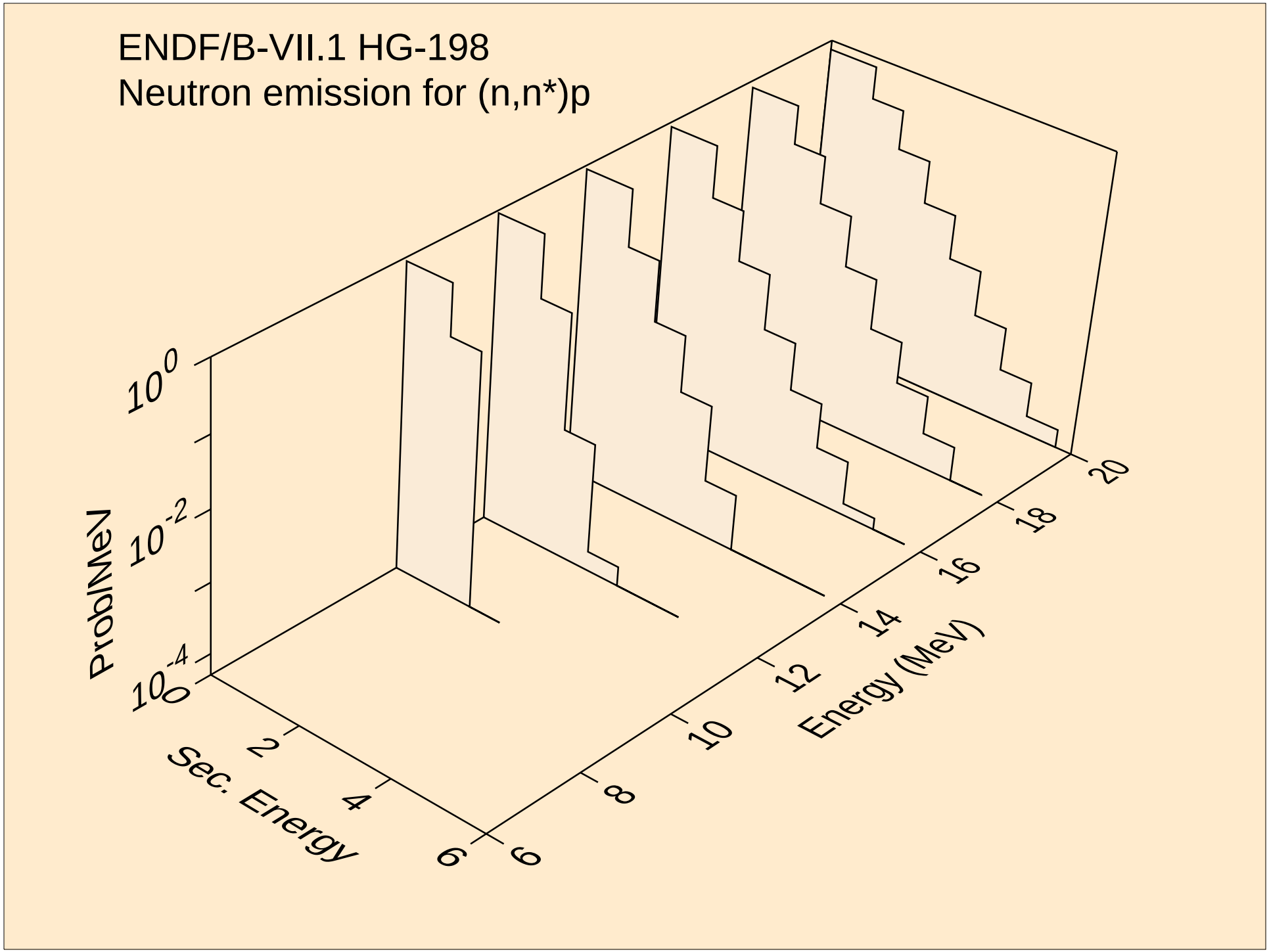

ENDF/B-VII.1 HG-198
angular distribution for (n,n*c)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

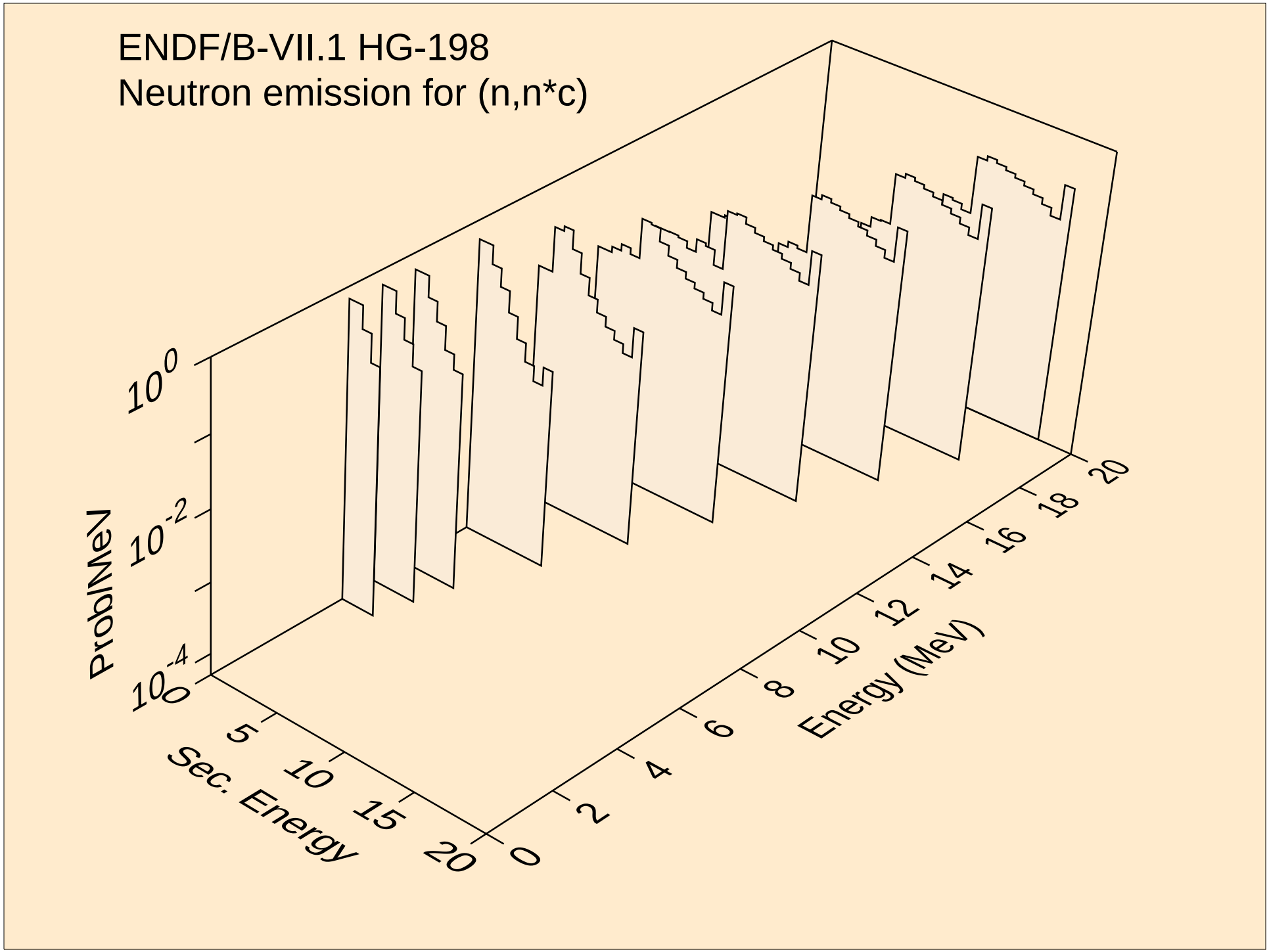

ENDF/B-VII.1 HG-198
Neutron emission for (n,x)
Prob/MeV
10-2
10-4
0
50
100
150
Sec. Energy
0
20
40
60
80
100
120
140
160
Energy (MeV)

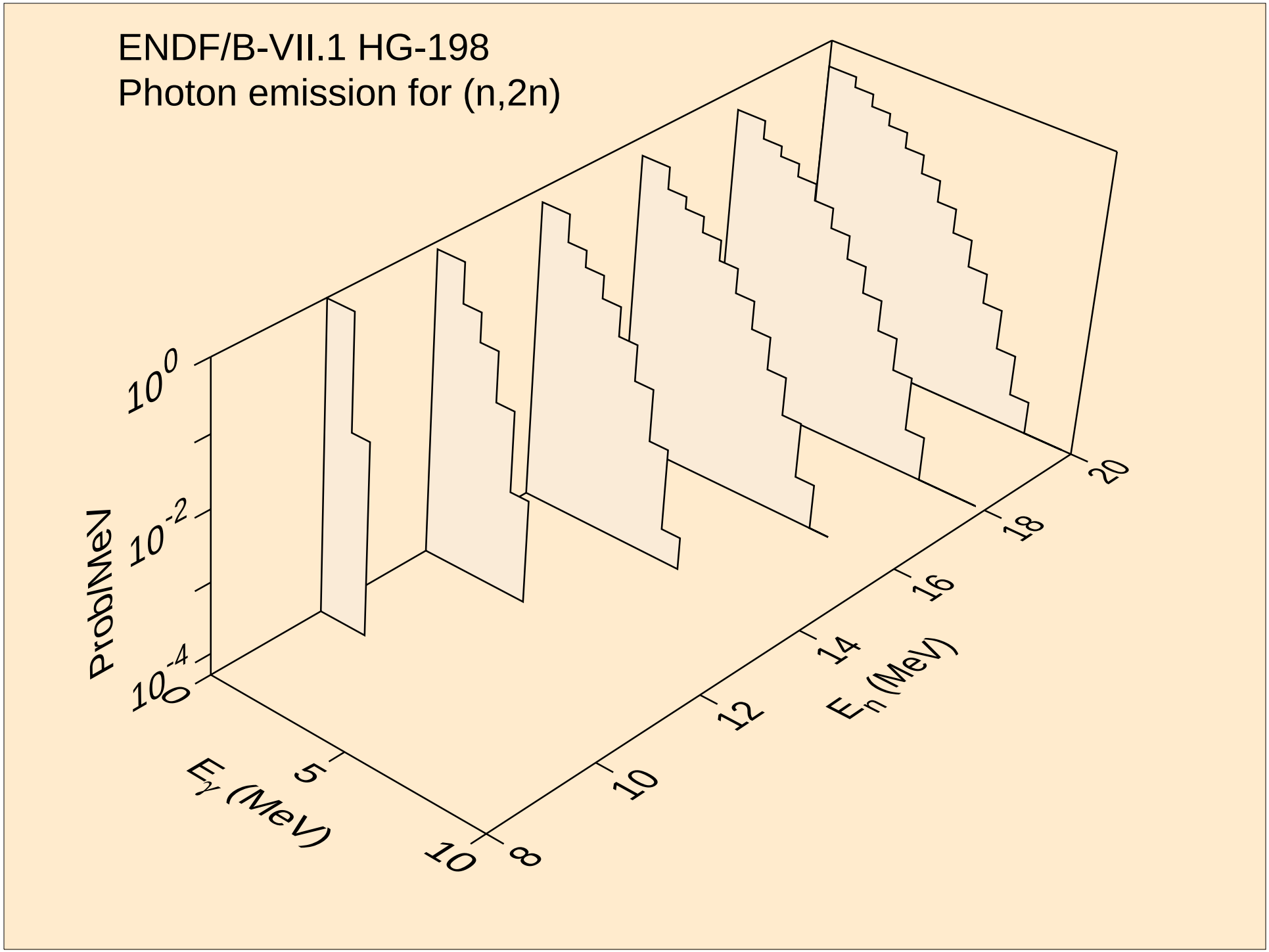

ENDF/B-VII.1 HG-198
Neutron emission for (n,2n)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

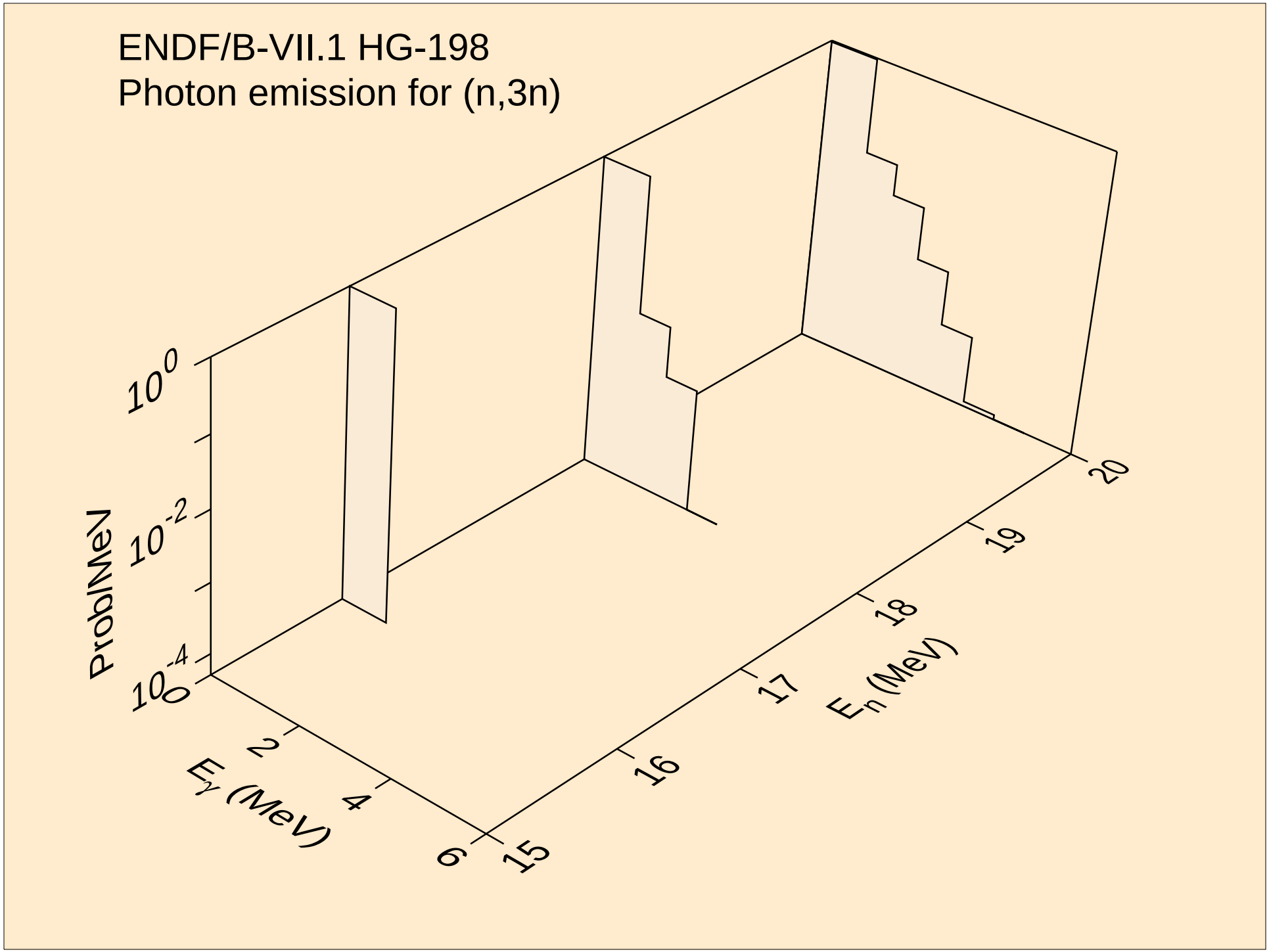

ENDF/B-VII.1 HG-198
Neutron emission for (n,3n)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
2
4
6
Sec. Energy
15
16
17
18
19
20
Energy (MeV)

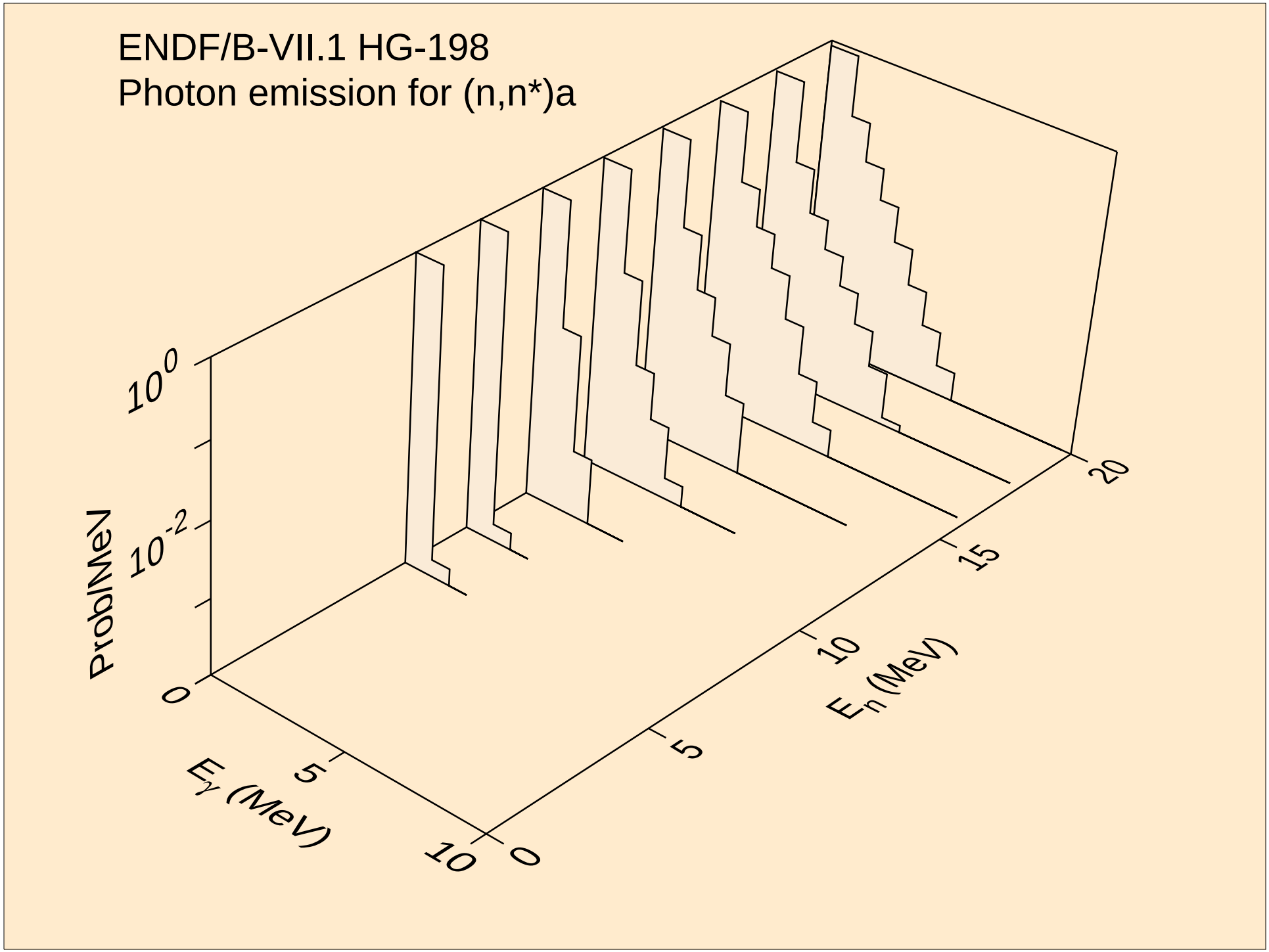

ENDF/B-VII.1 HG-198
Neutron emission for (n,n*)a
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
Sec. Energy
0
5
10
15
20
Energy (MeV)

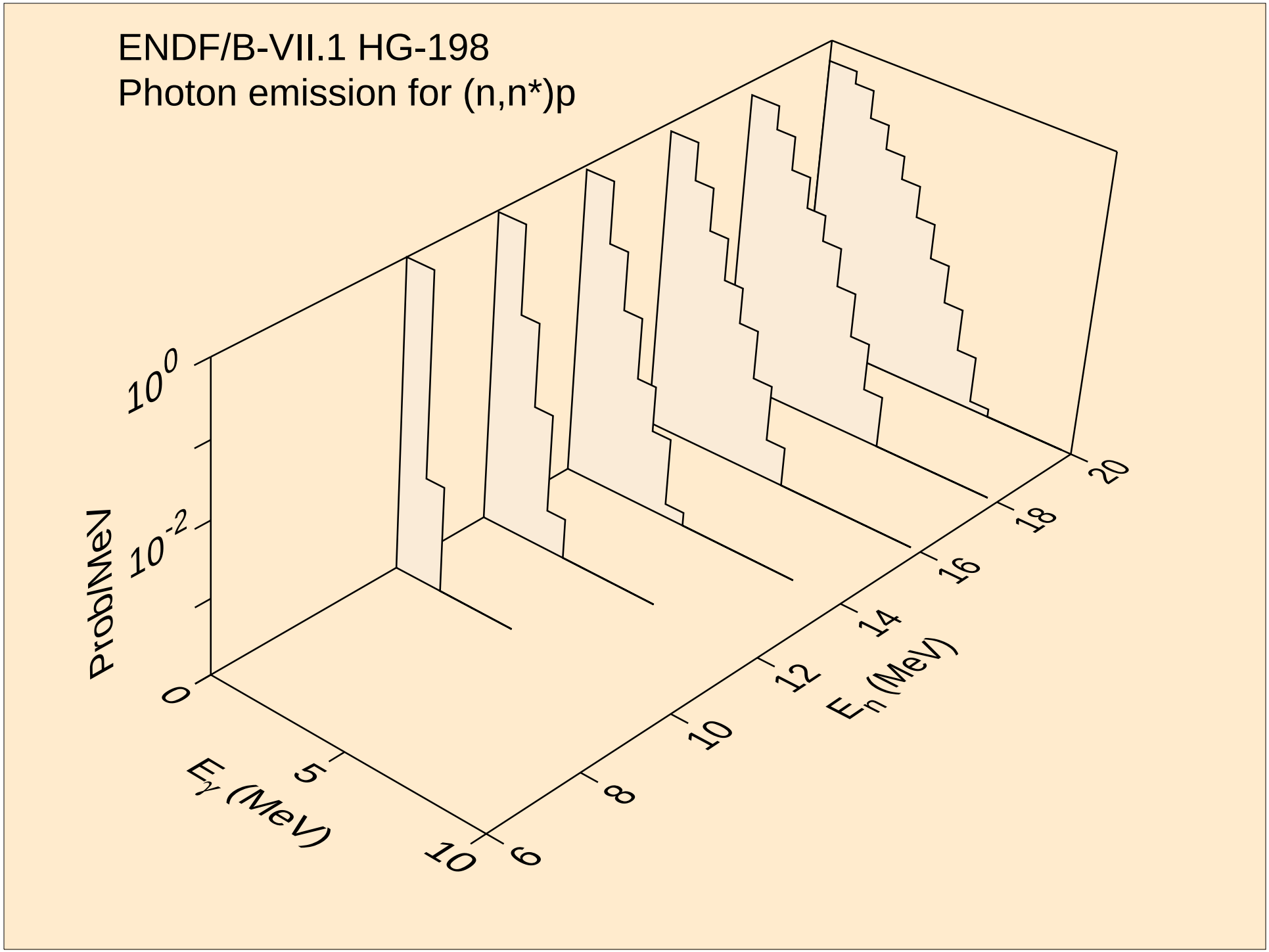

ENDF/B-VII.1 HG-198
Neutron emission for (n,n*)p
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
2
4
6
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

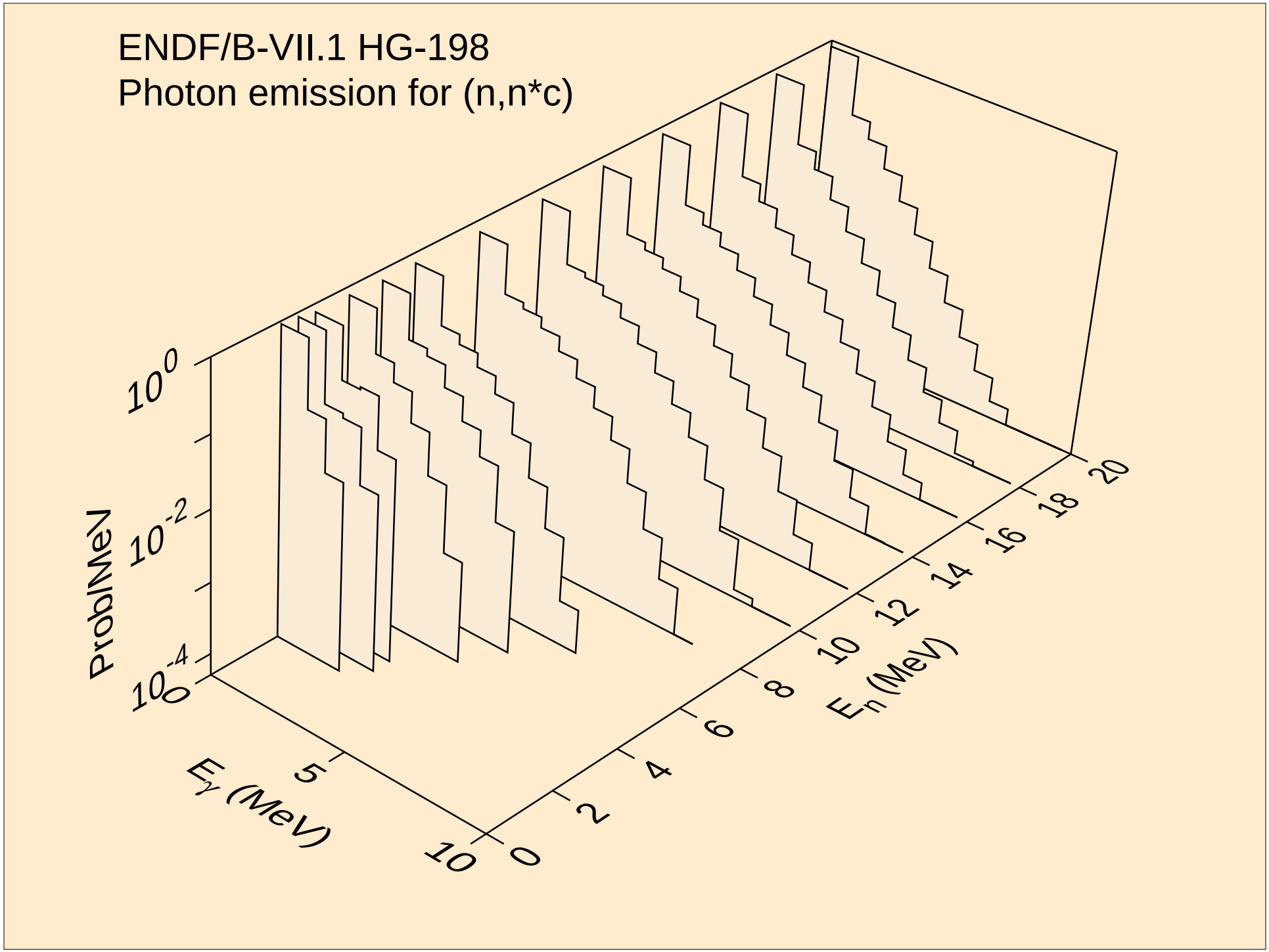

ENDF/B-VII.1 HG-198
Neutron emission for (n,n*c)
Prob/MeV
10^0
10^-2
10^-4
Sec. Energy
0
5
10
15
20
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

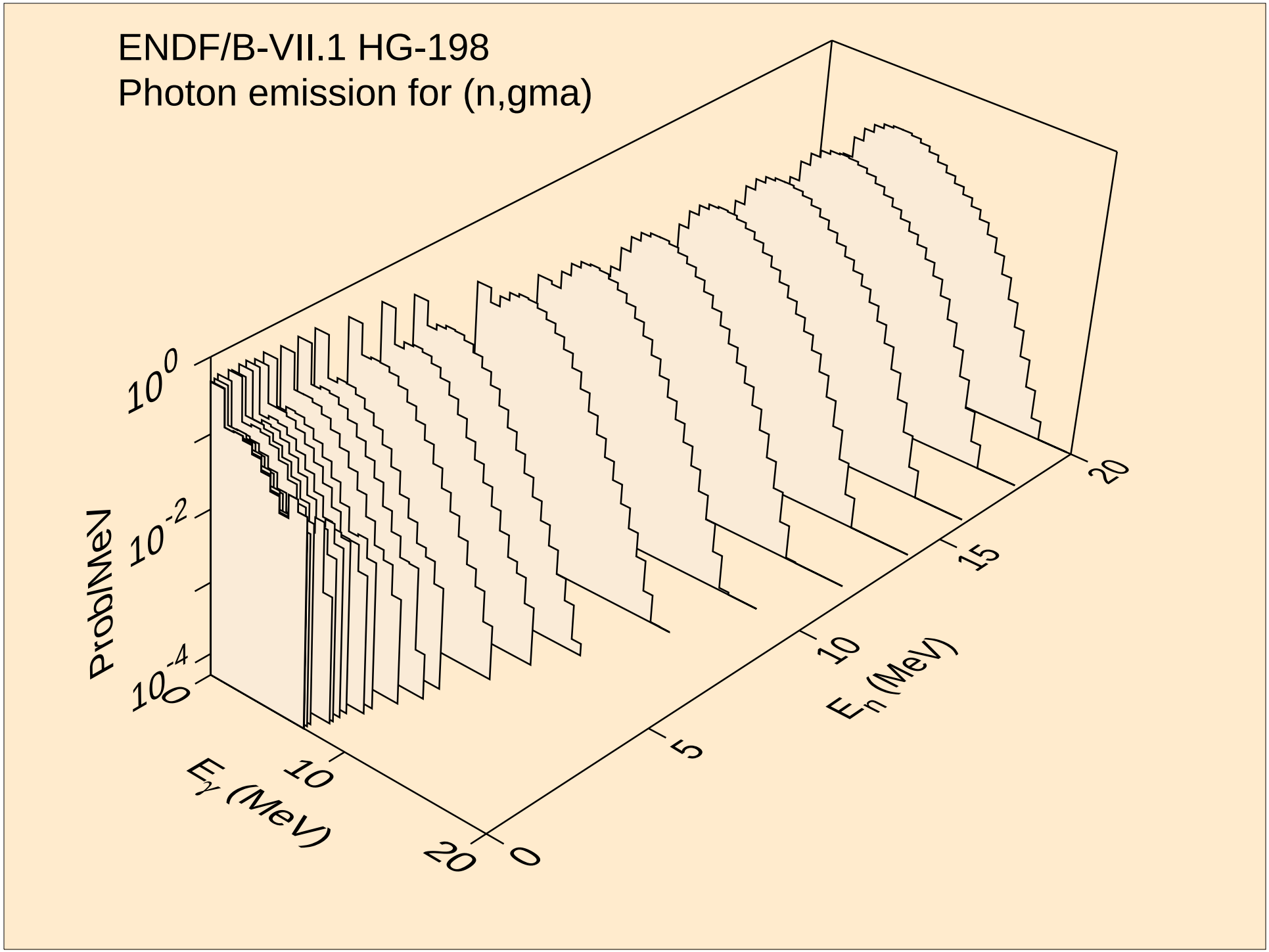

ENDF/B-VII.1 HG-198
Photon emission for (n,2n)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
5
10
E_γ (MeV)
8
10
12
14
16
18
20
E_n (MeV)

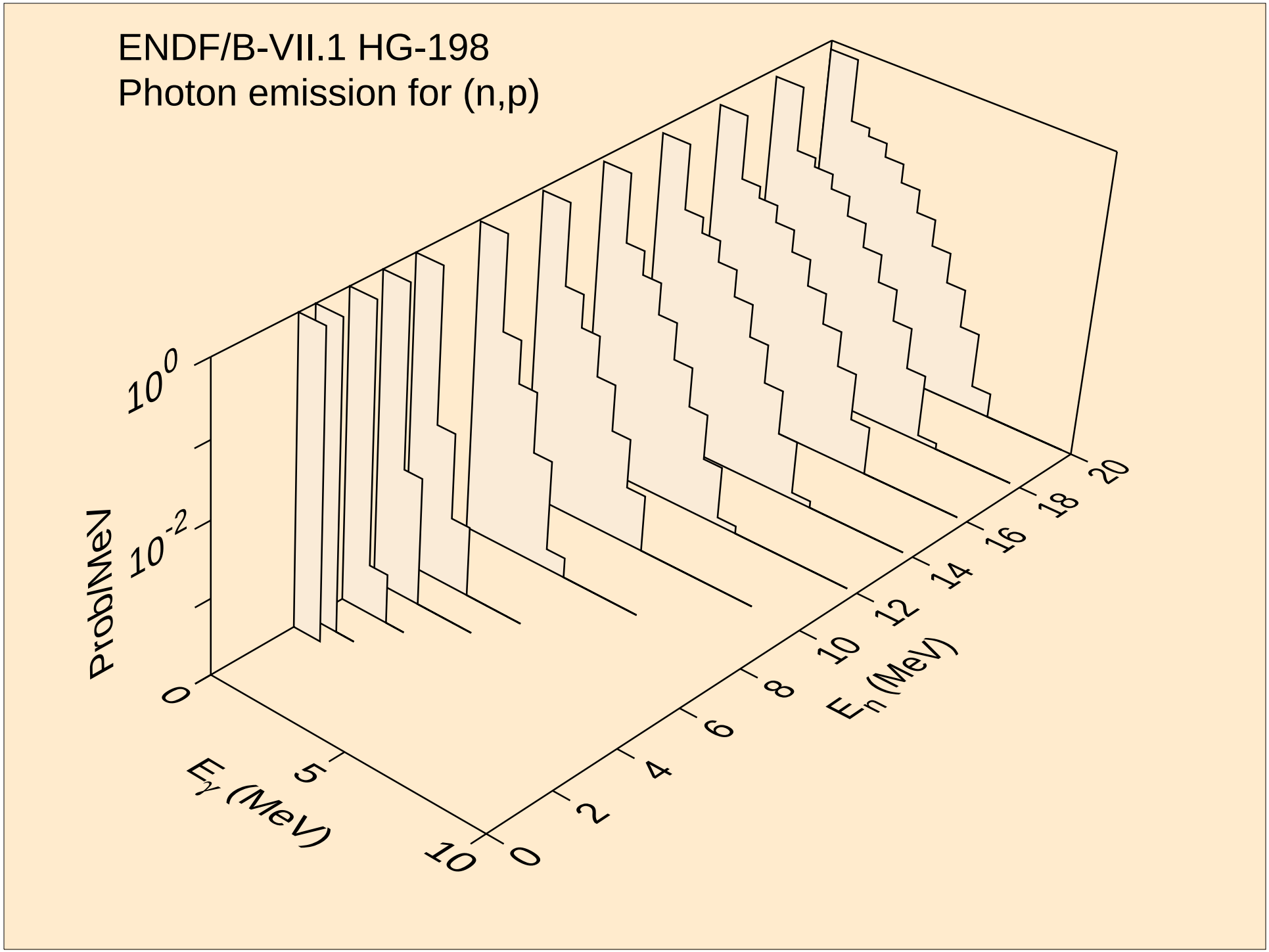

ENDF/B-VII.1 HG-198
Photon emission for (n,3n)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
2
4
6
E_γ (MeV)
15
16
17
18
19
20
E_n (MeV)

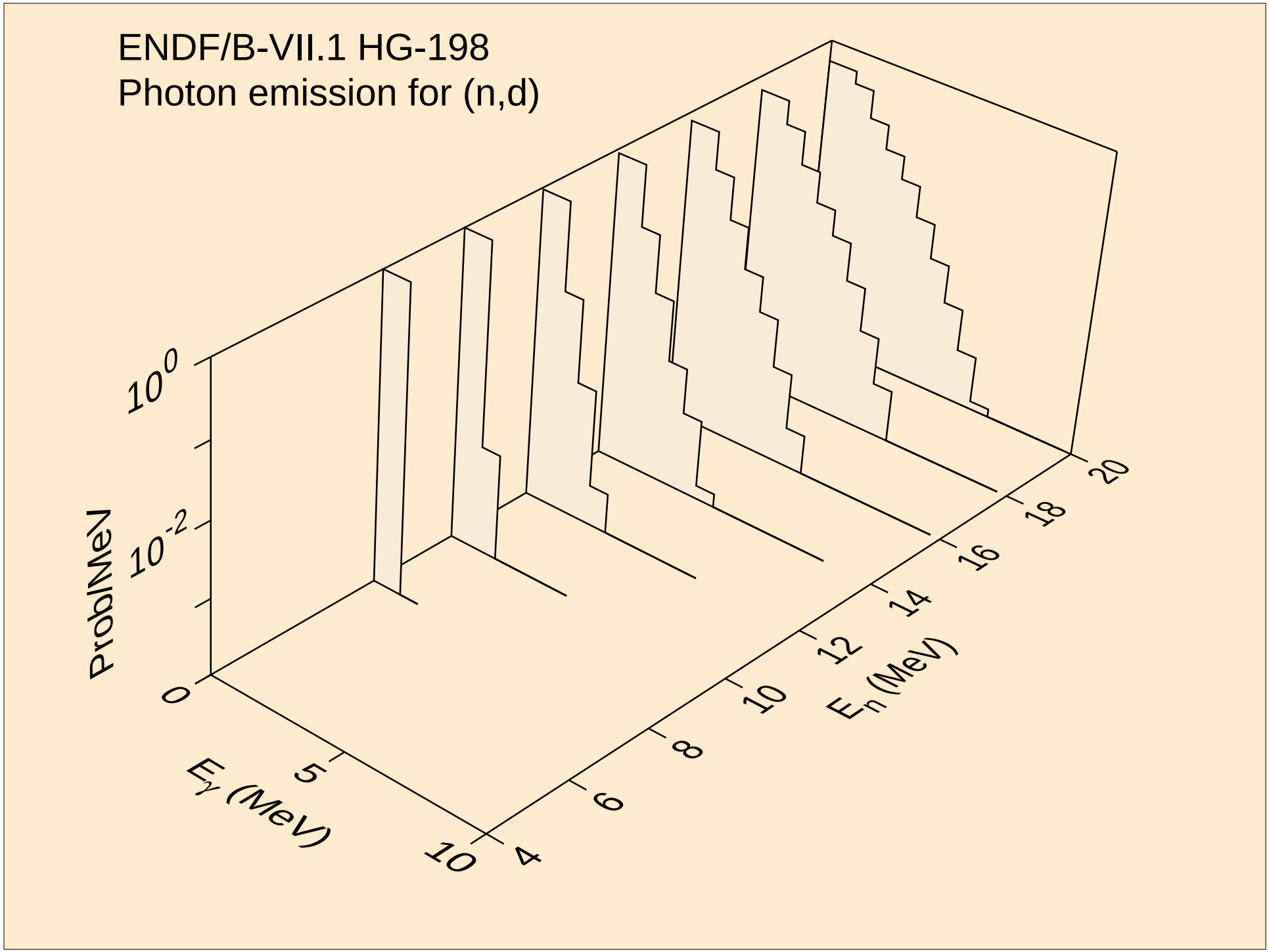

ENDF/B-VII.1 HG-198
Photon emission for (n,n*)a
Prob/MeV
10^0
10^-2
0
E_γ (MeV)
5
10
0
5
10
15
20
E_n (MeV)

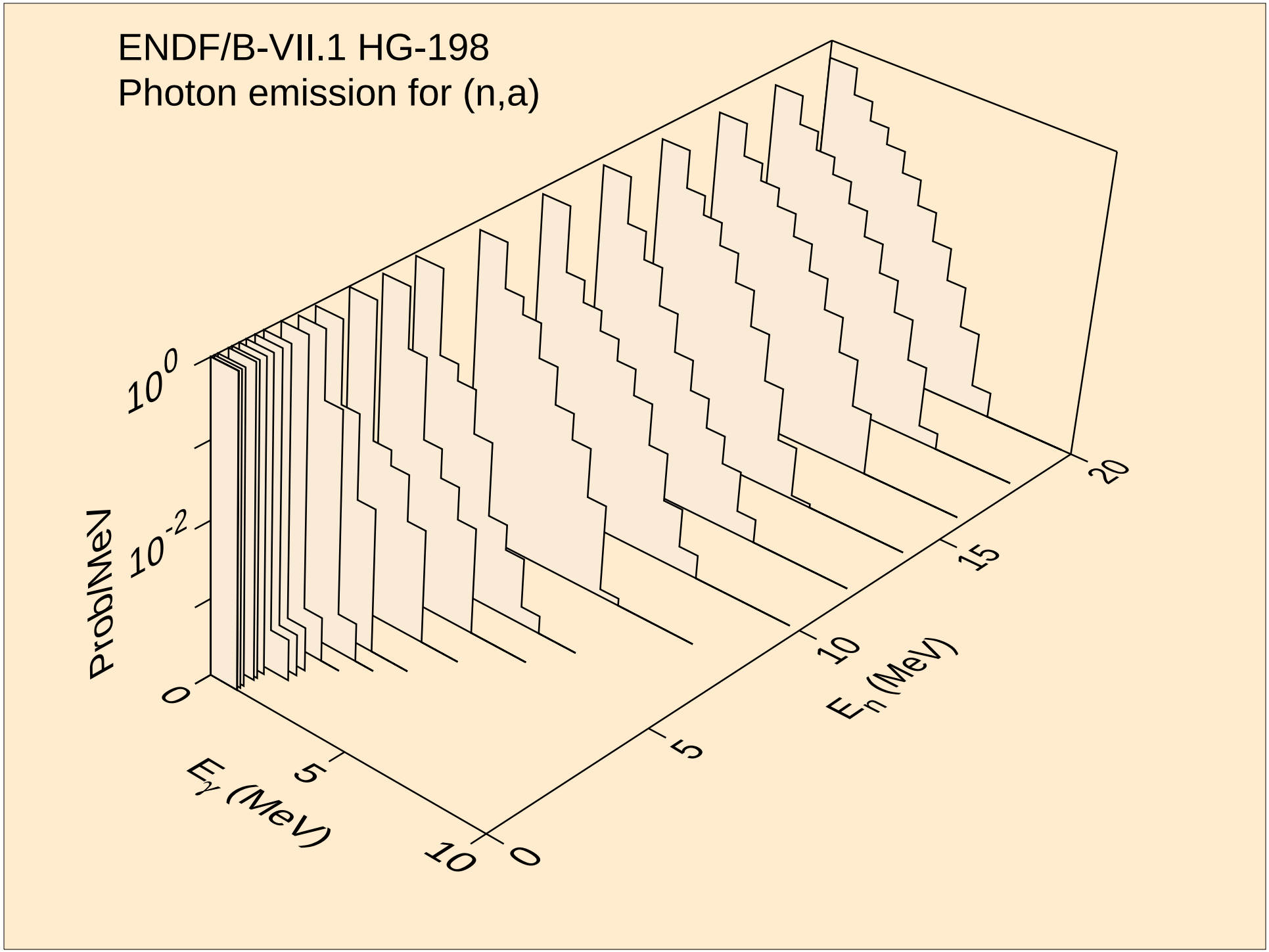

ENDF/B-VII.1 HG-198
Photon emission for (n,n*)p
Prob/MeV
10^0
10^-2
0
5
10
Eγ (MeV)
6
8
10
12
14
16
18
20
En (MeV)

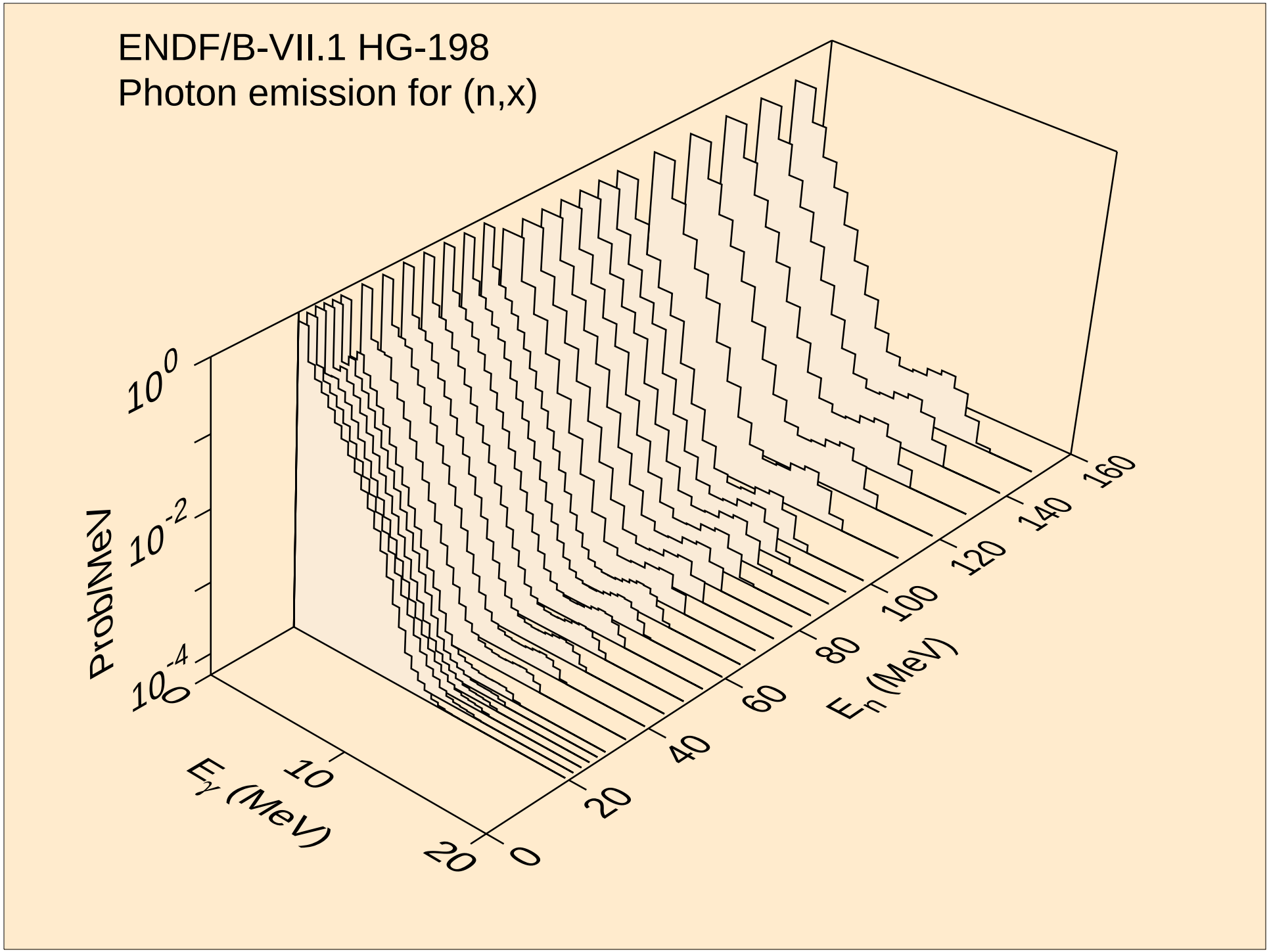

ENDF/B-VII.1 HG-198
Photon emission for (n,n*c)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
E_γ (MeV)
0
5
10
E_n (MeV)
0
2
4
6
8
10
12
14
16
18
20

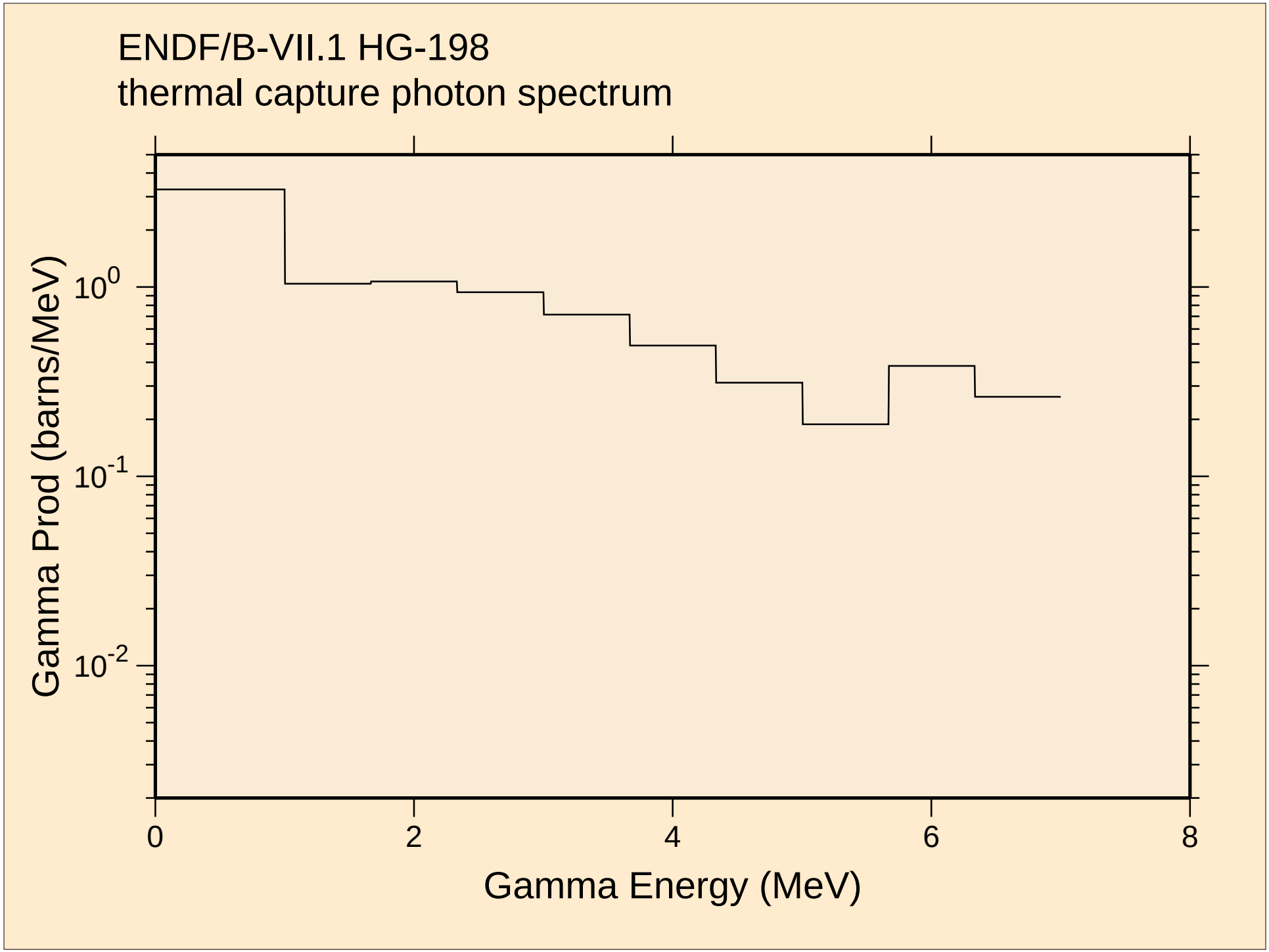

ENDF/B-VII.1 HG-198
Photon emission for (n,gma)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
10
20
E_γ (MeV)
5
10
15
20
E_n (MeV)

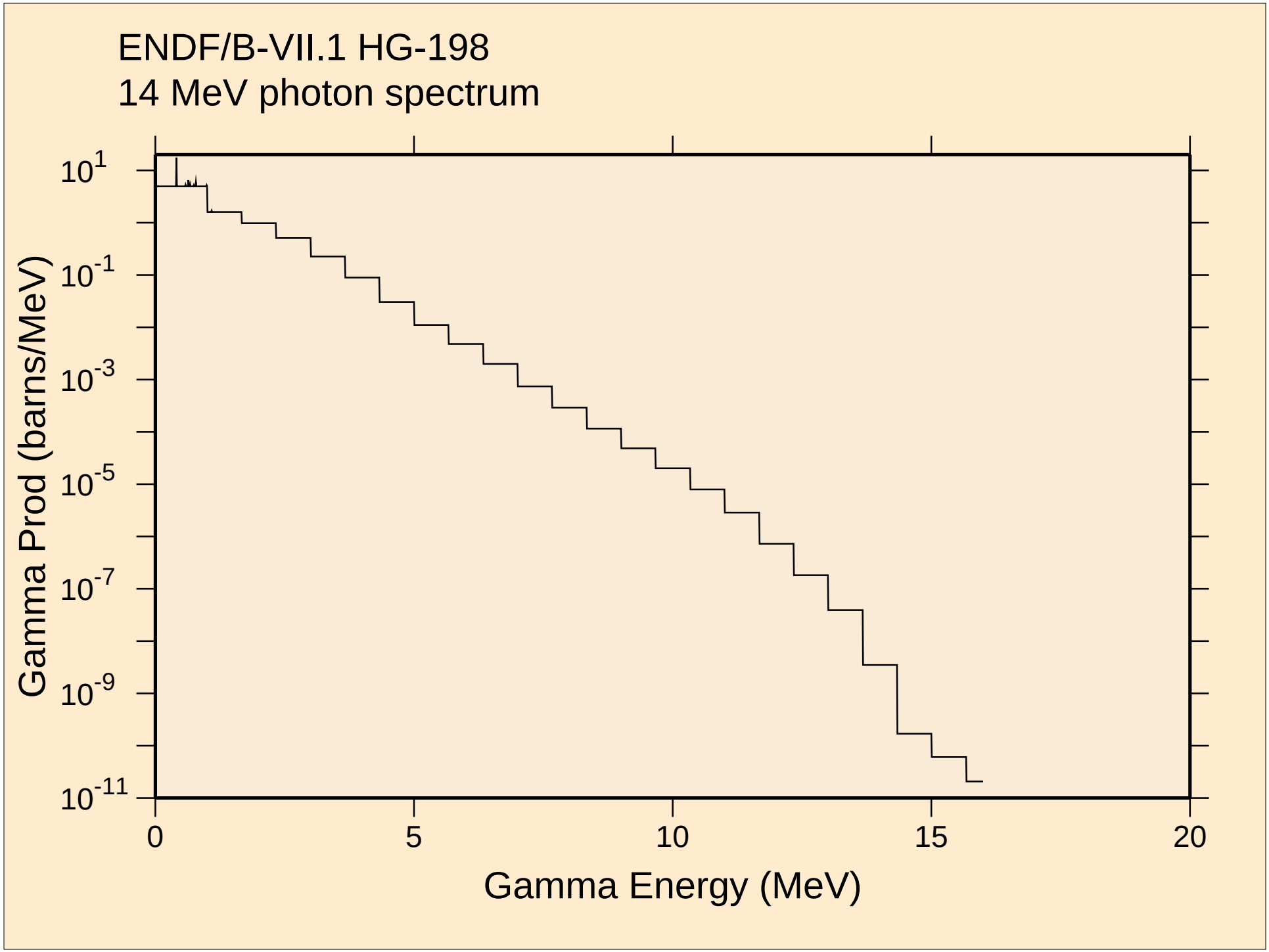

ENDF/B-VII.1 HG-198
Photon emission for (n,p)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
5
10
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

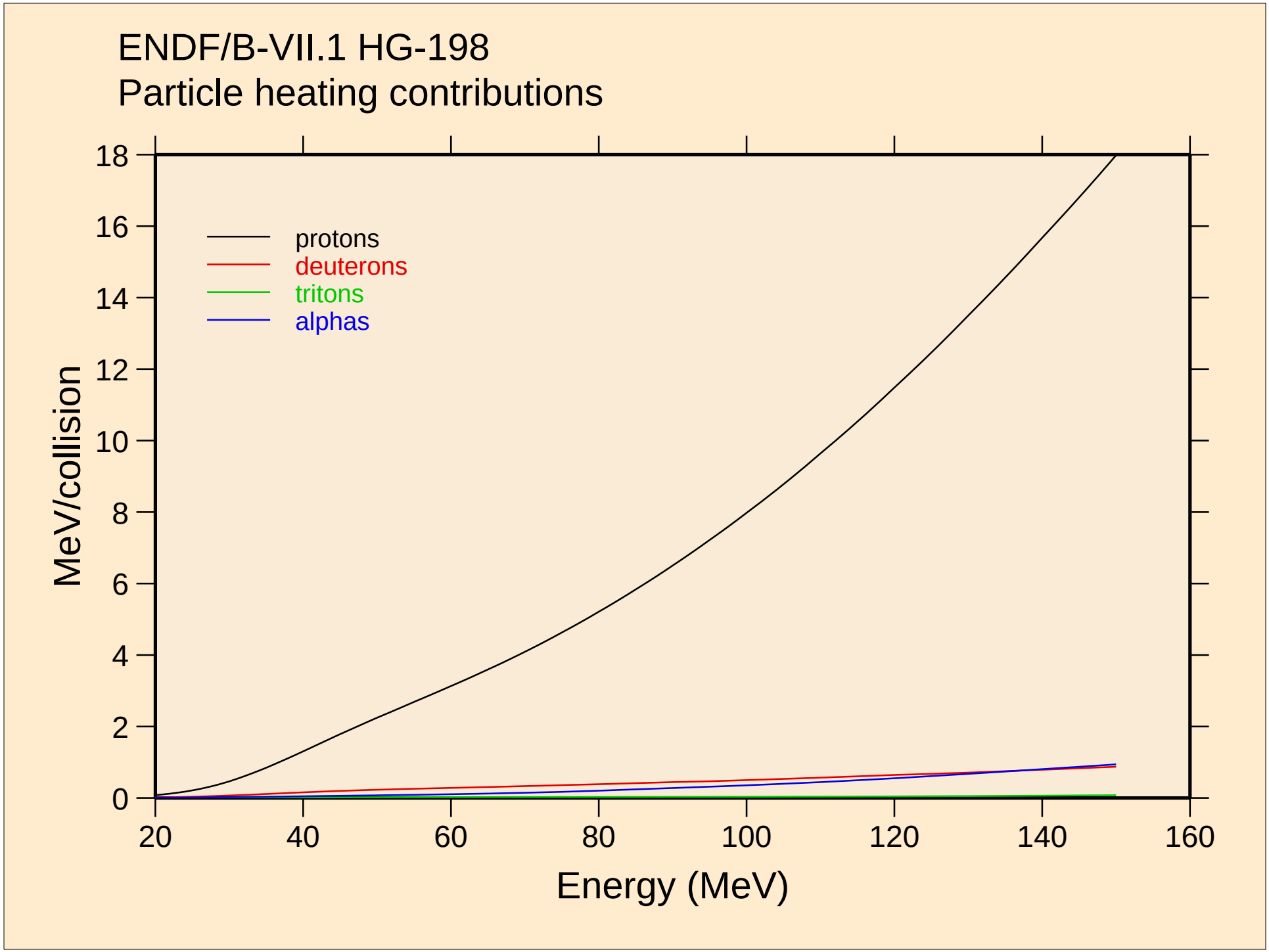

ENDF/B-VII.1 HG-198
Photon emission for (n,d)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
5
10
4
6
8
10
12
14
16
18
20
E_n (MeV)

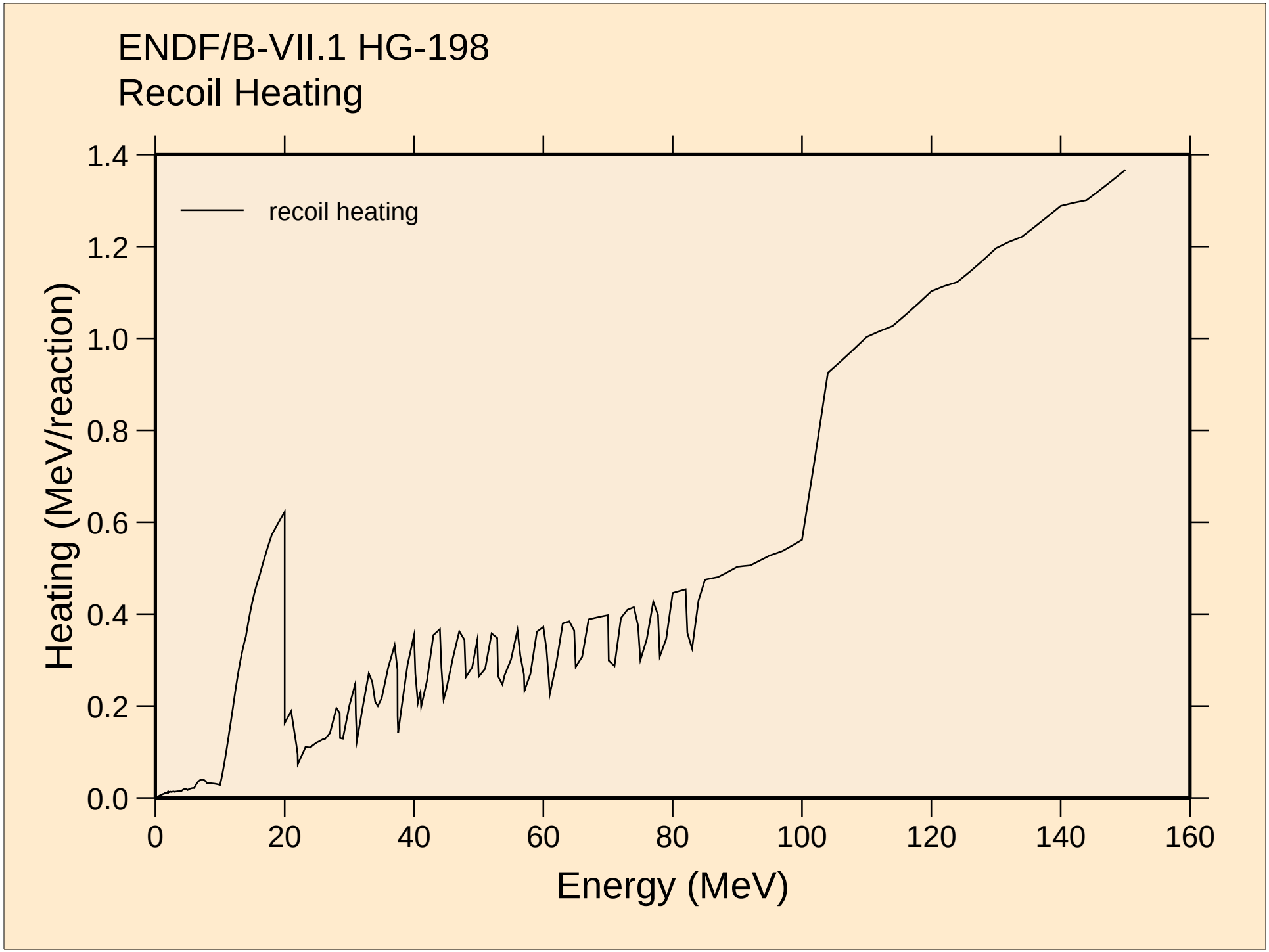

ENDF/B-VII.1 HG-198
Photon emission for (n,a)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
5
10
0
5
10
15
20
E_n (MeV)

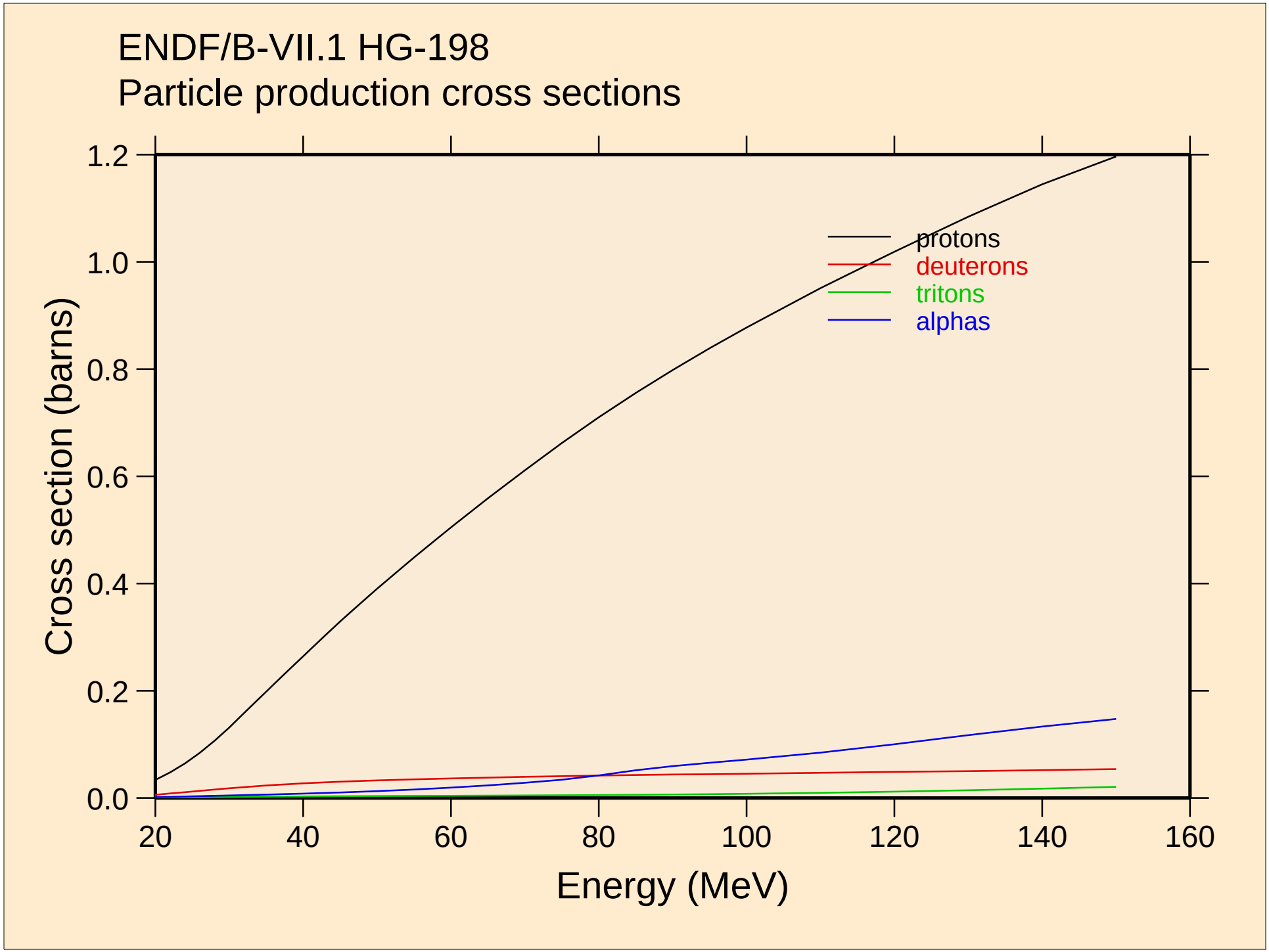

ENDF/B-VII.1 HG-198
Photon emission for (n,x)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
10
20
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

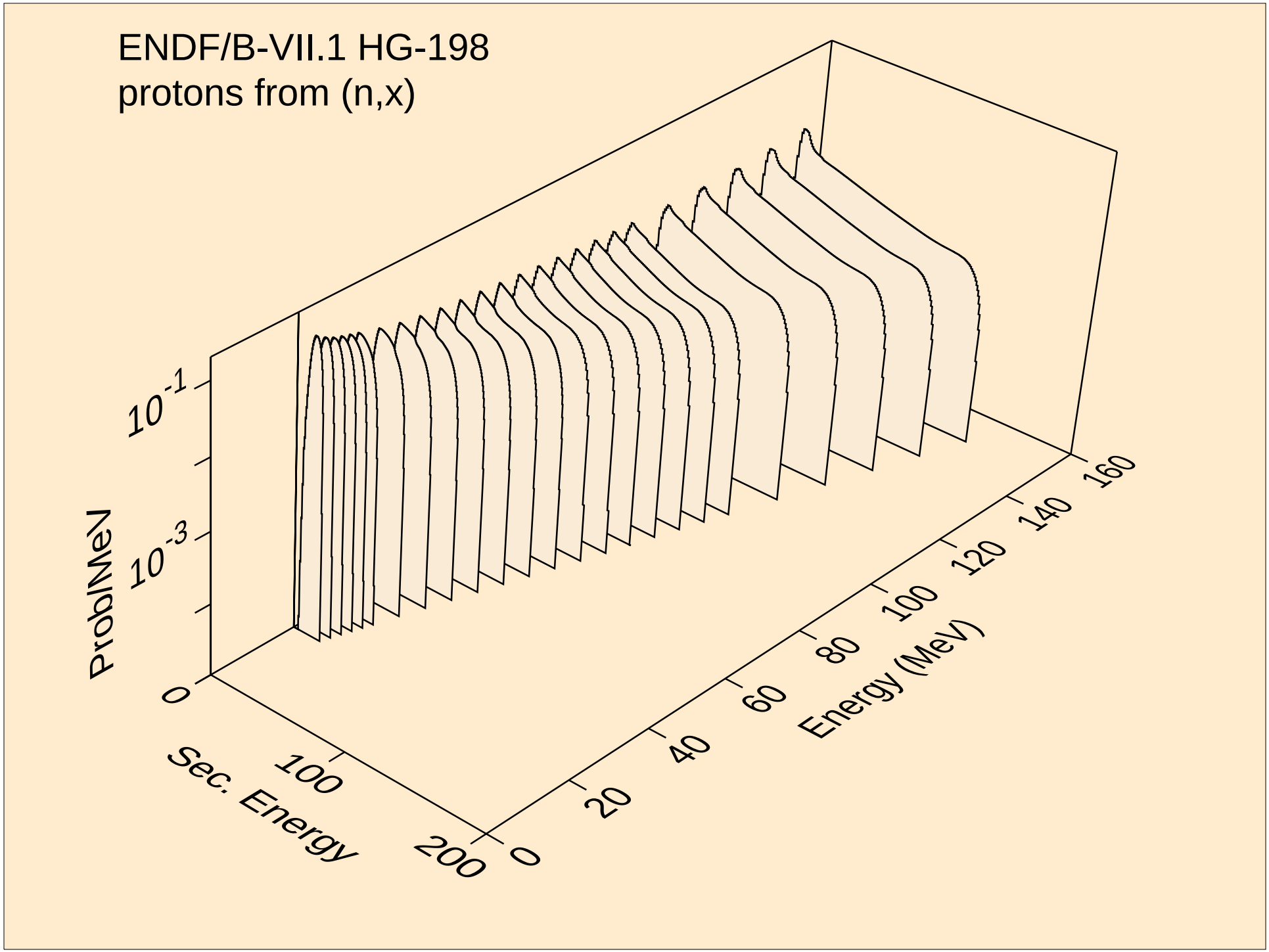

ENDF/B-VII.1 HG-198
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^0
10^-1
10^-2
0
2
4
6
8
Gamma Energy (MeV)

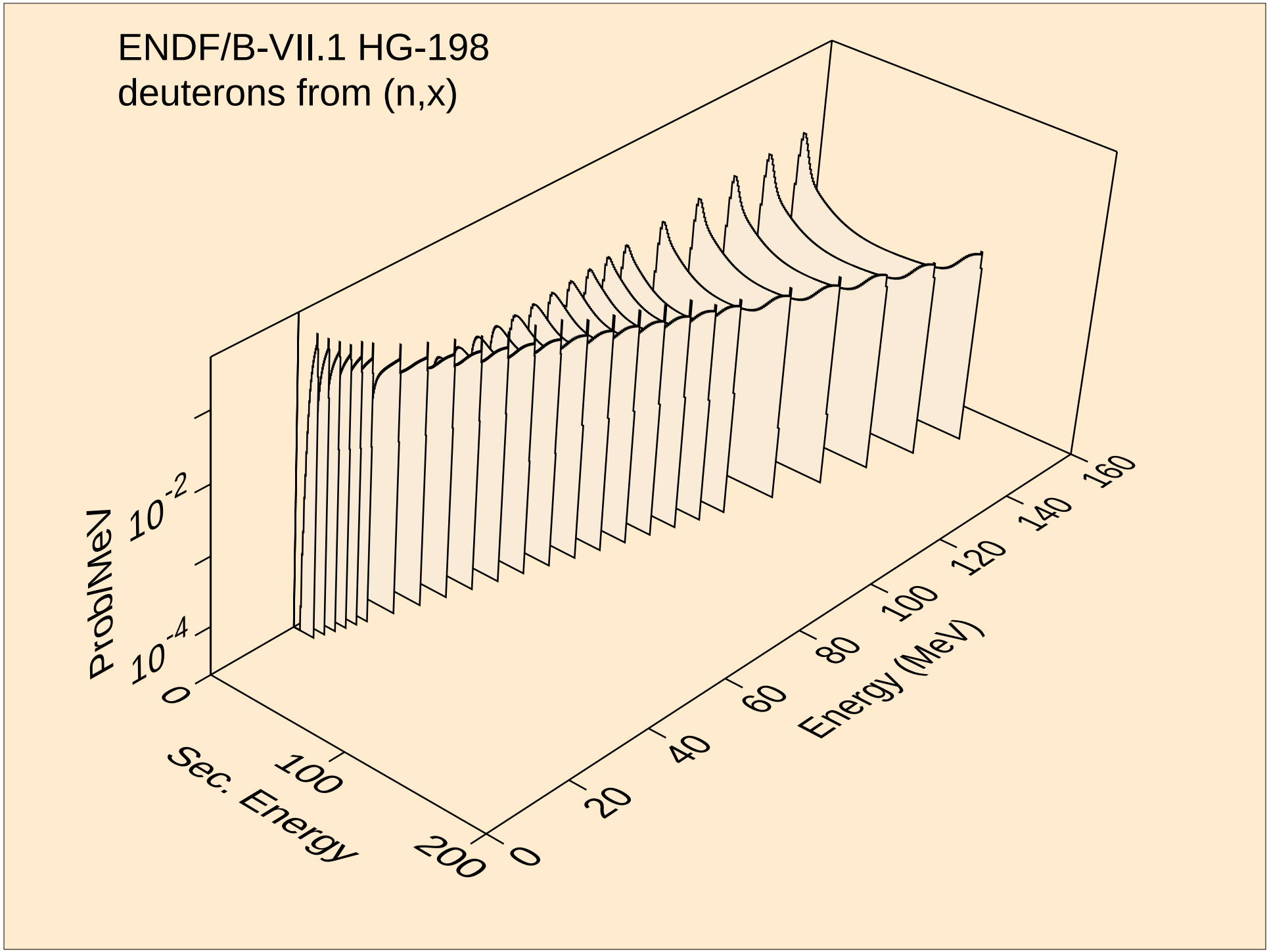

ENDF/B-VII.1 HG-198
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^-1
10^-3
10^-5
10^-7
10^-9
10^-11
0
5
10
15
20
Gamma Energy (MeV)

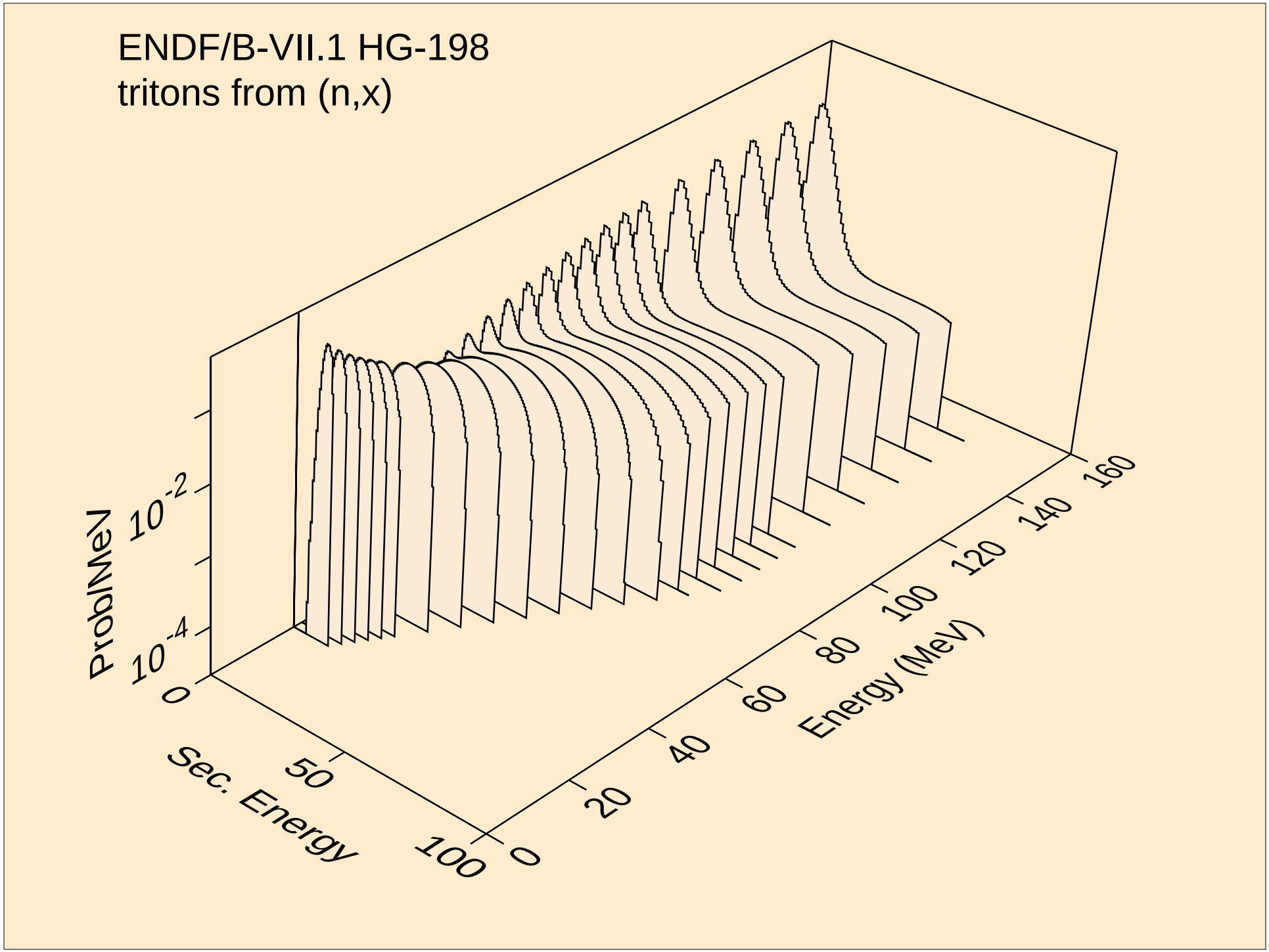

ENDF/B-VII.1 HG-198
Particle heating contributions
protons
deuterons
tritons
alphas
MeV/collision
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20
40
60
80
100
120
140
160

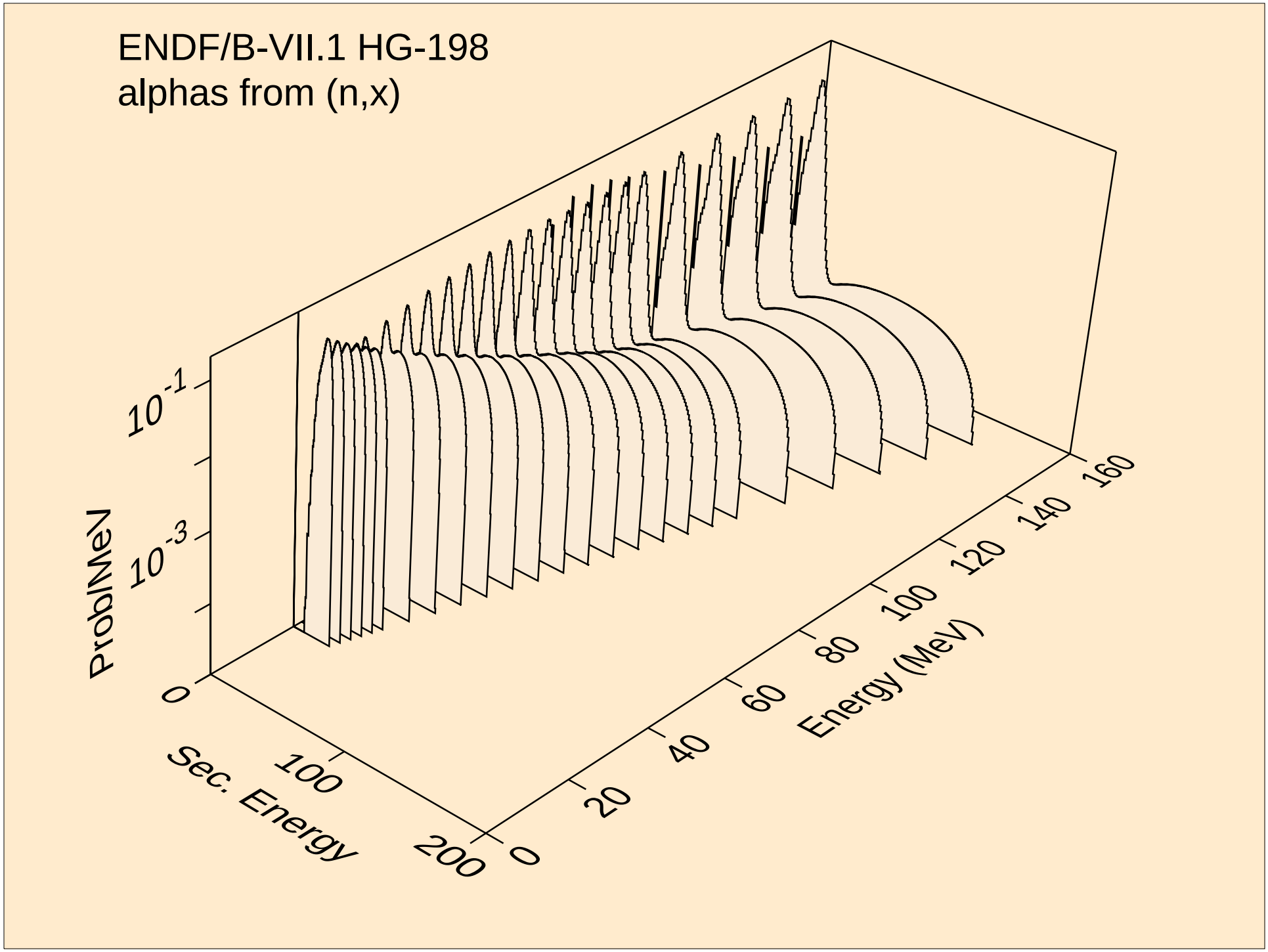

ENDF/B-VII.1 HG-198
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
20
40
60
80
100
120
140
160


ENDF/B-VII.1 HG-198
Particle production cross sections
Cross section (barns)
Energy (MeV)
protons
deuterons
tritons
alphas
0.0
0.2
0.4
0.6
0.8
1.0
1.2
20
40
60
80
100
120
140
160


ENDF/B-VII.1 HG-198
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.1 HG-198
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.1 HG-198
tritons from (n,x)
Prob/MeV
10^{-2}
10^{-4}
0
Sec. Energy
50
100
0
20
40
60
80
100
120
140
160
Energy (MeV)


ENDF/B-VII.1 HG-198
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)