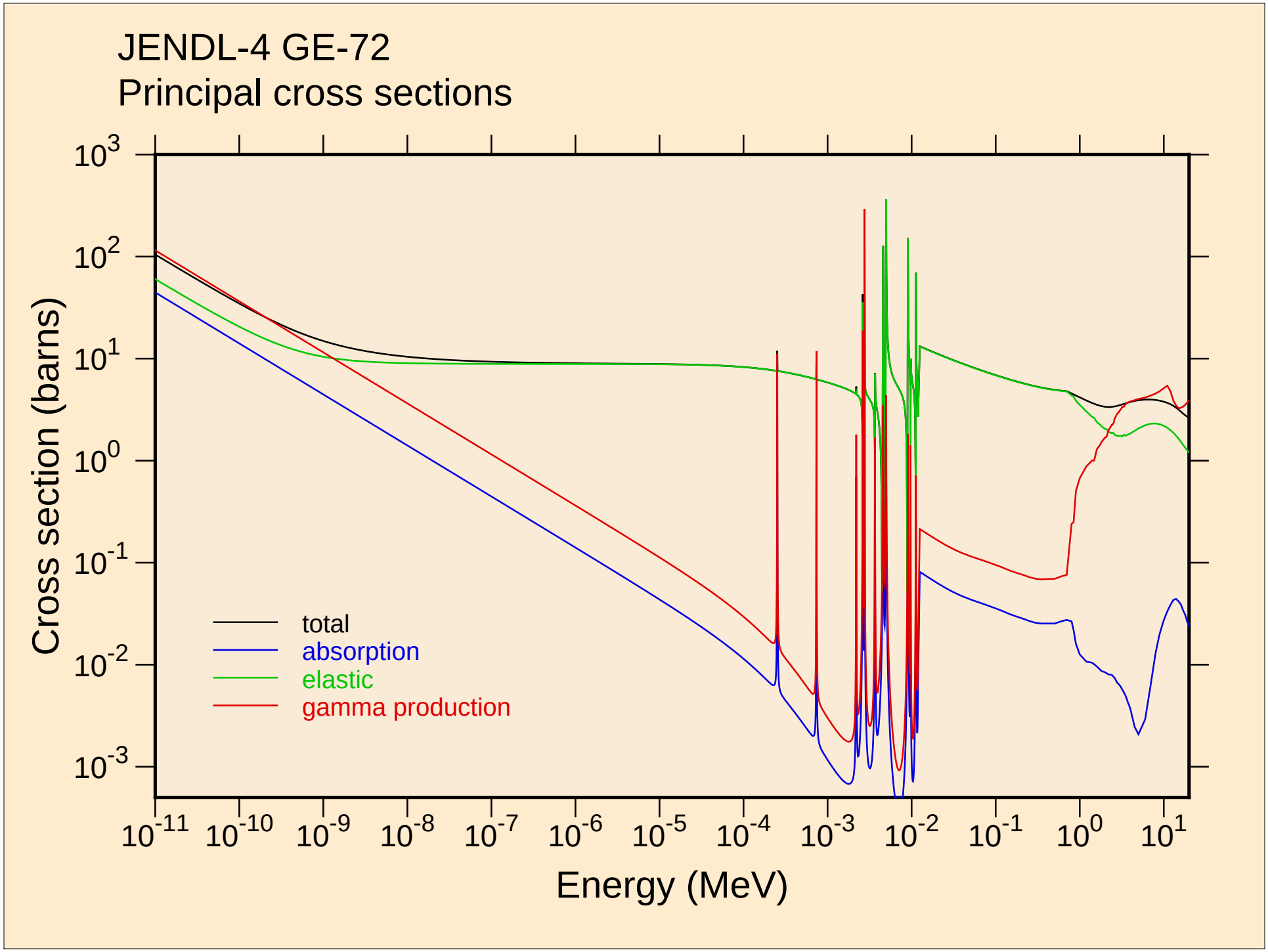
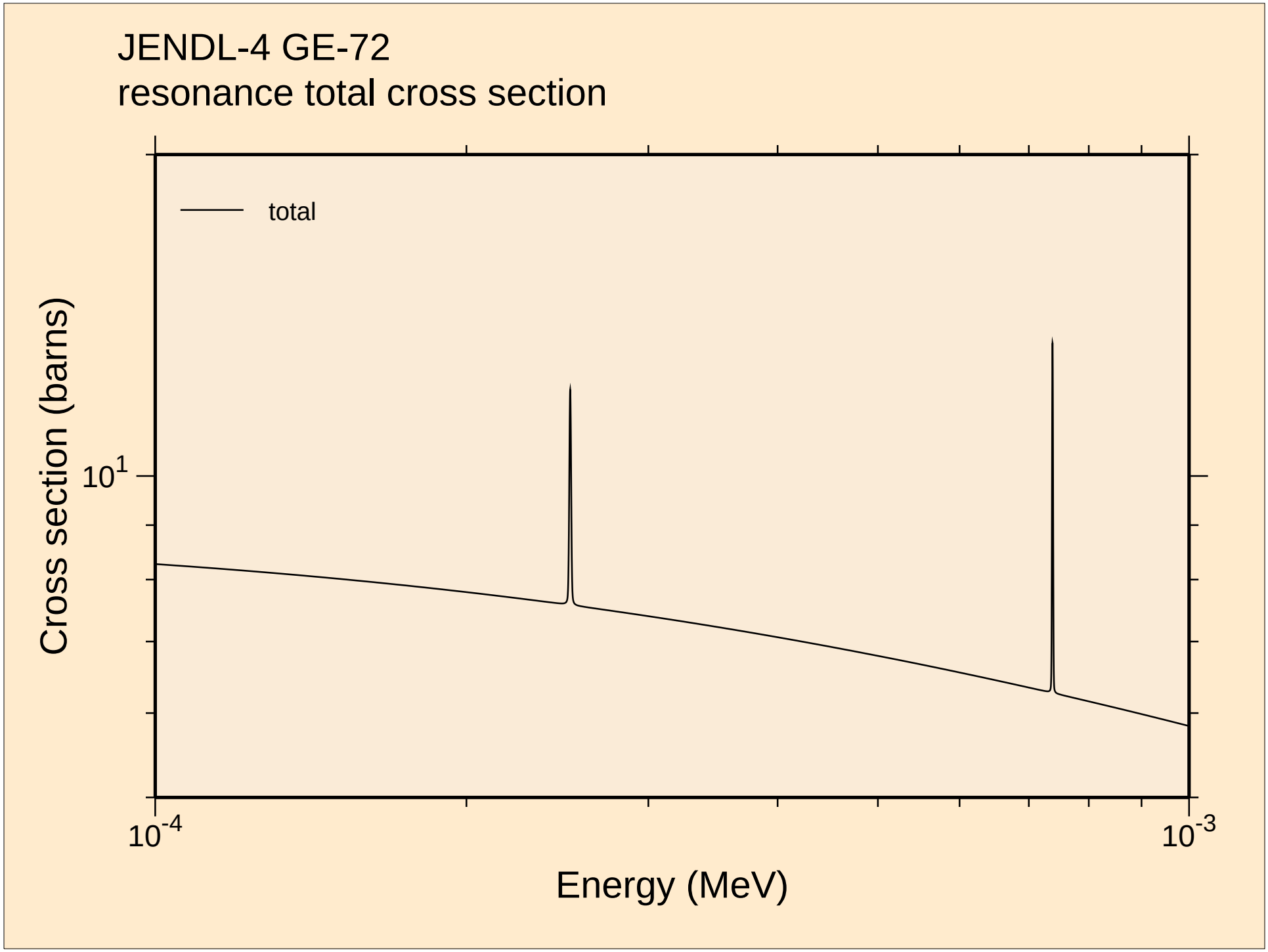
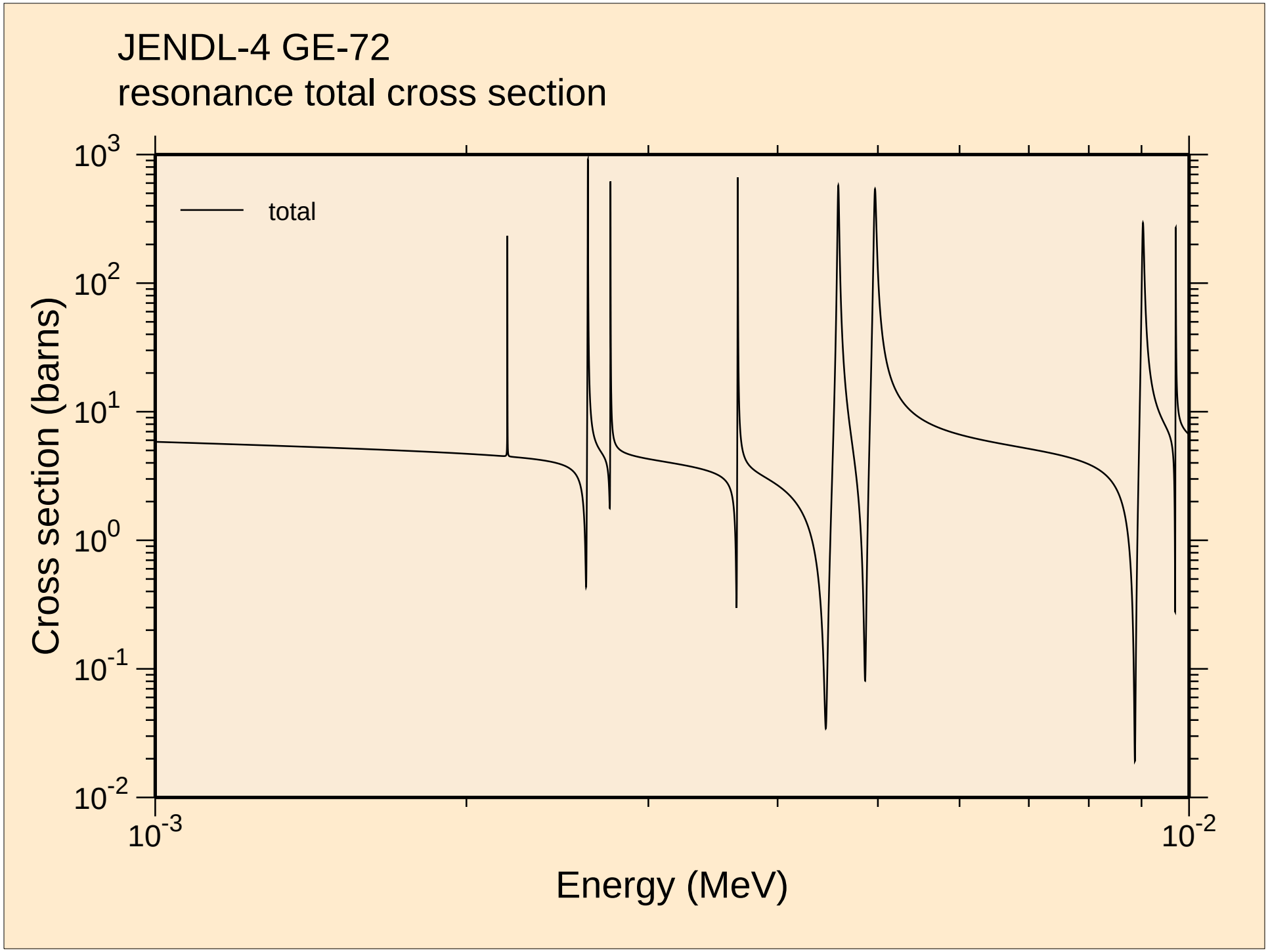
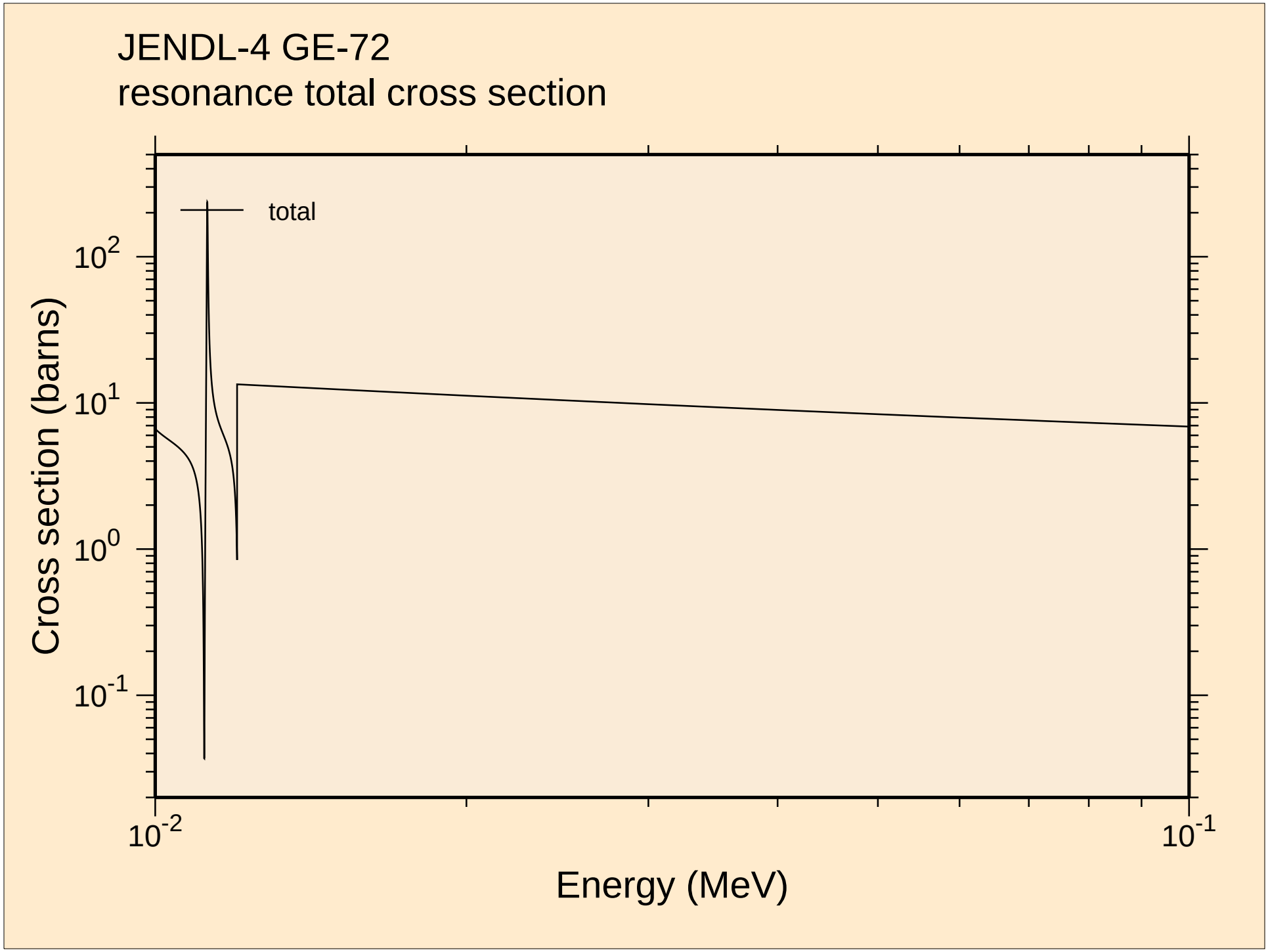
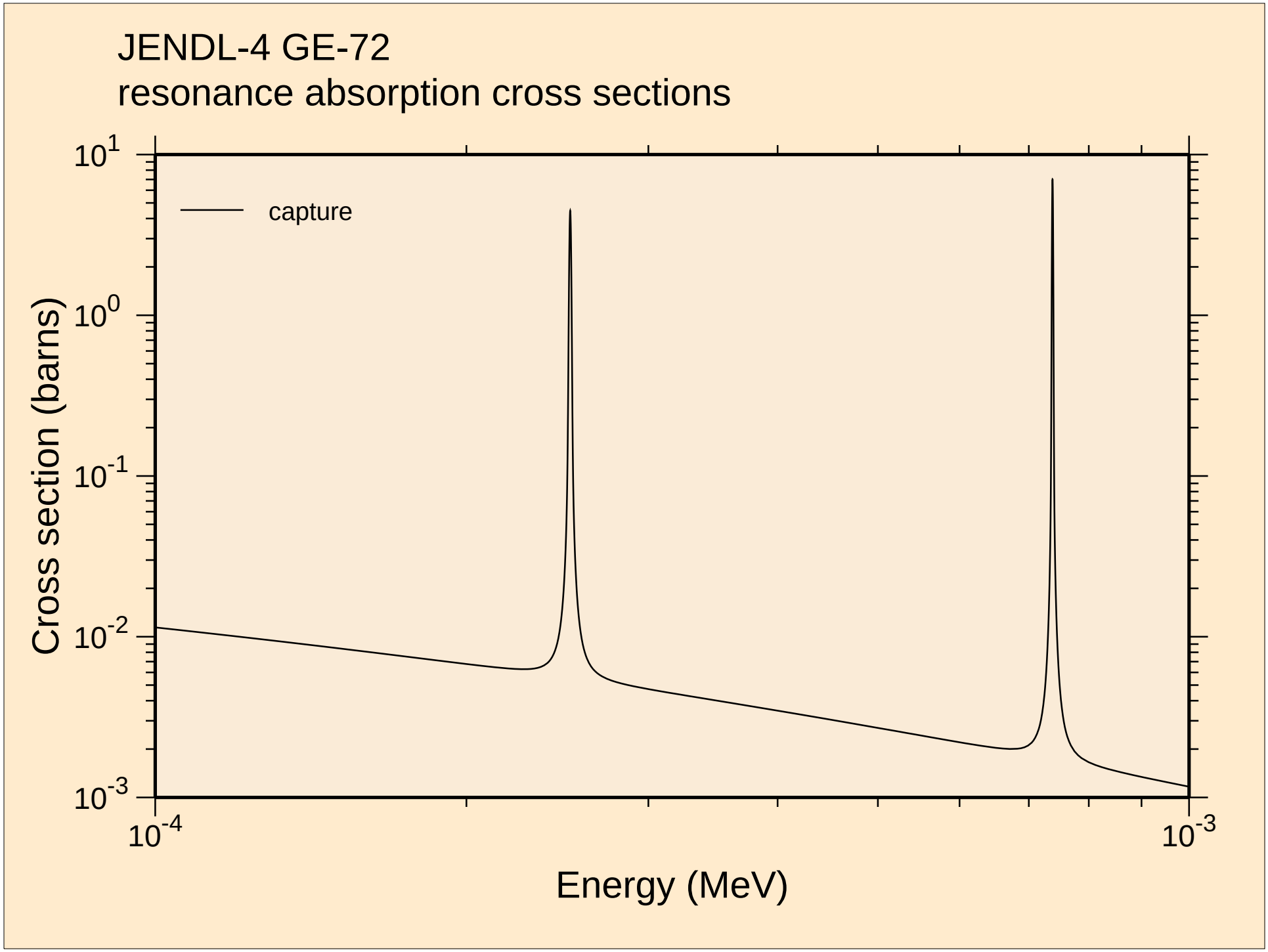
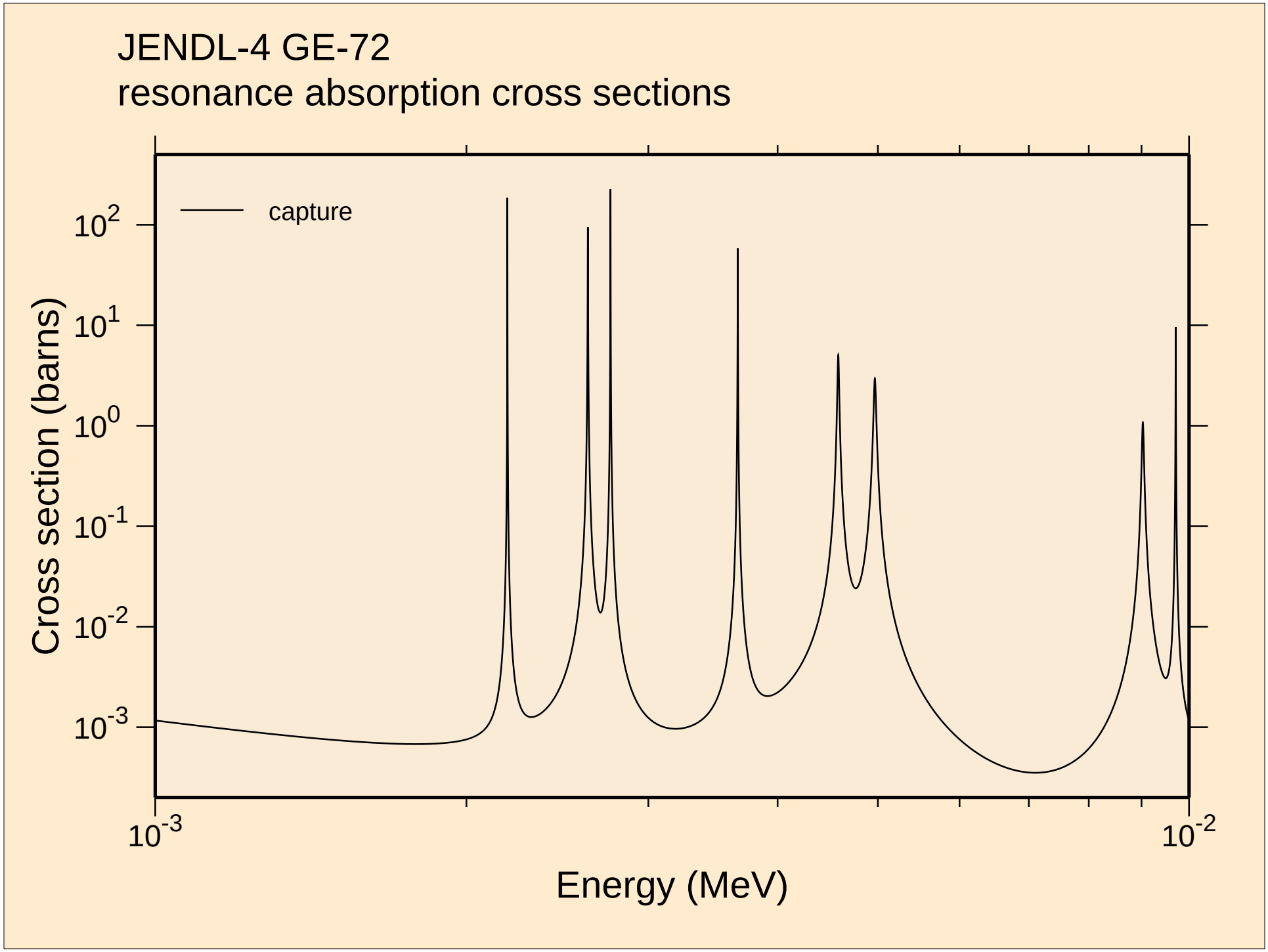

JENDL-4 GE-72
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production

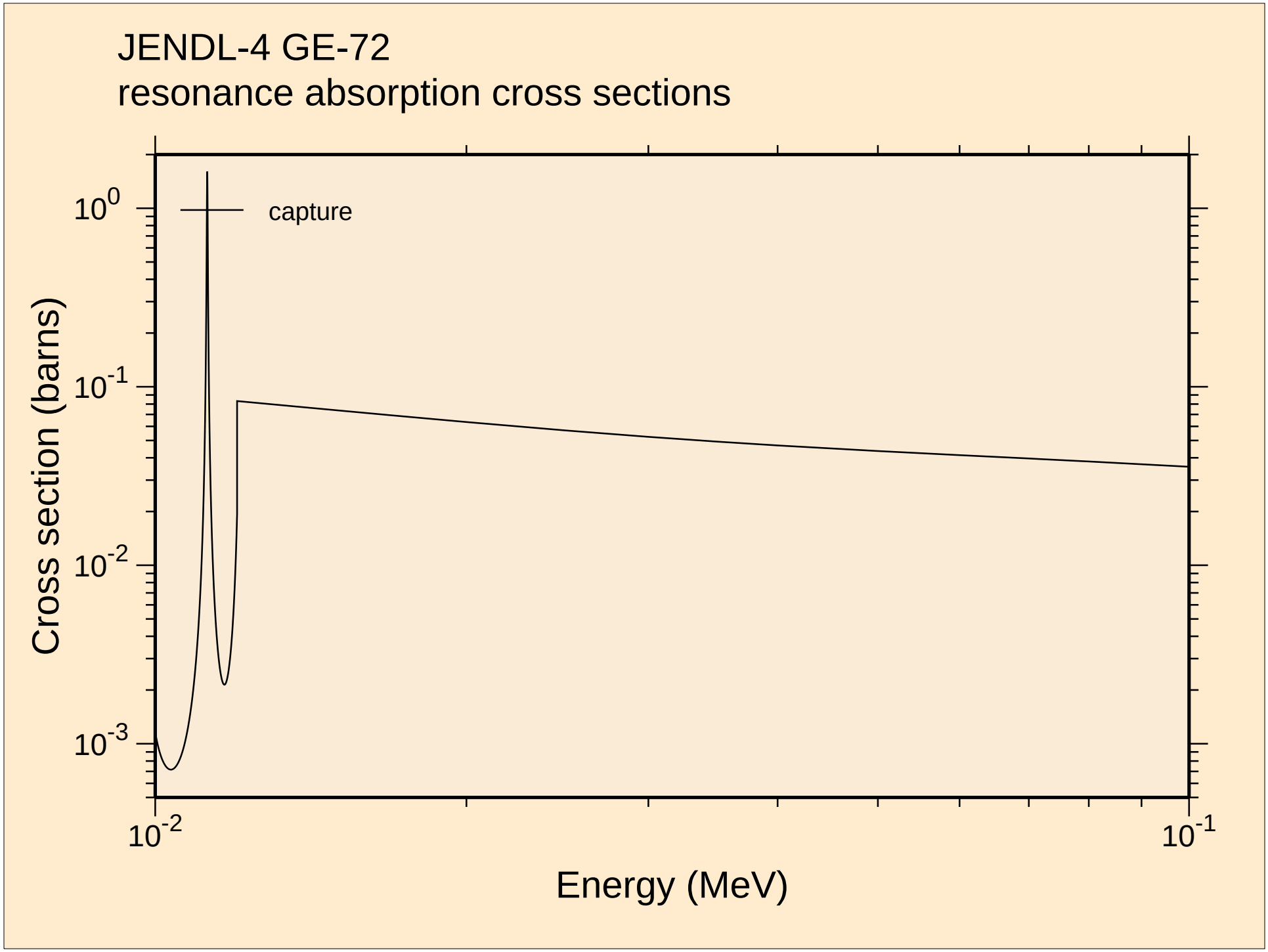

JENDL-4 GE-72
resonance total cross section
total
Cross section (barns)
10^1
10^{-4}
10^{-3}
Energy (MeV)

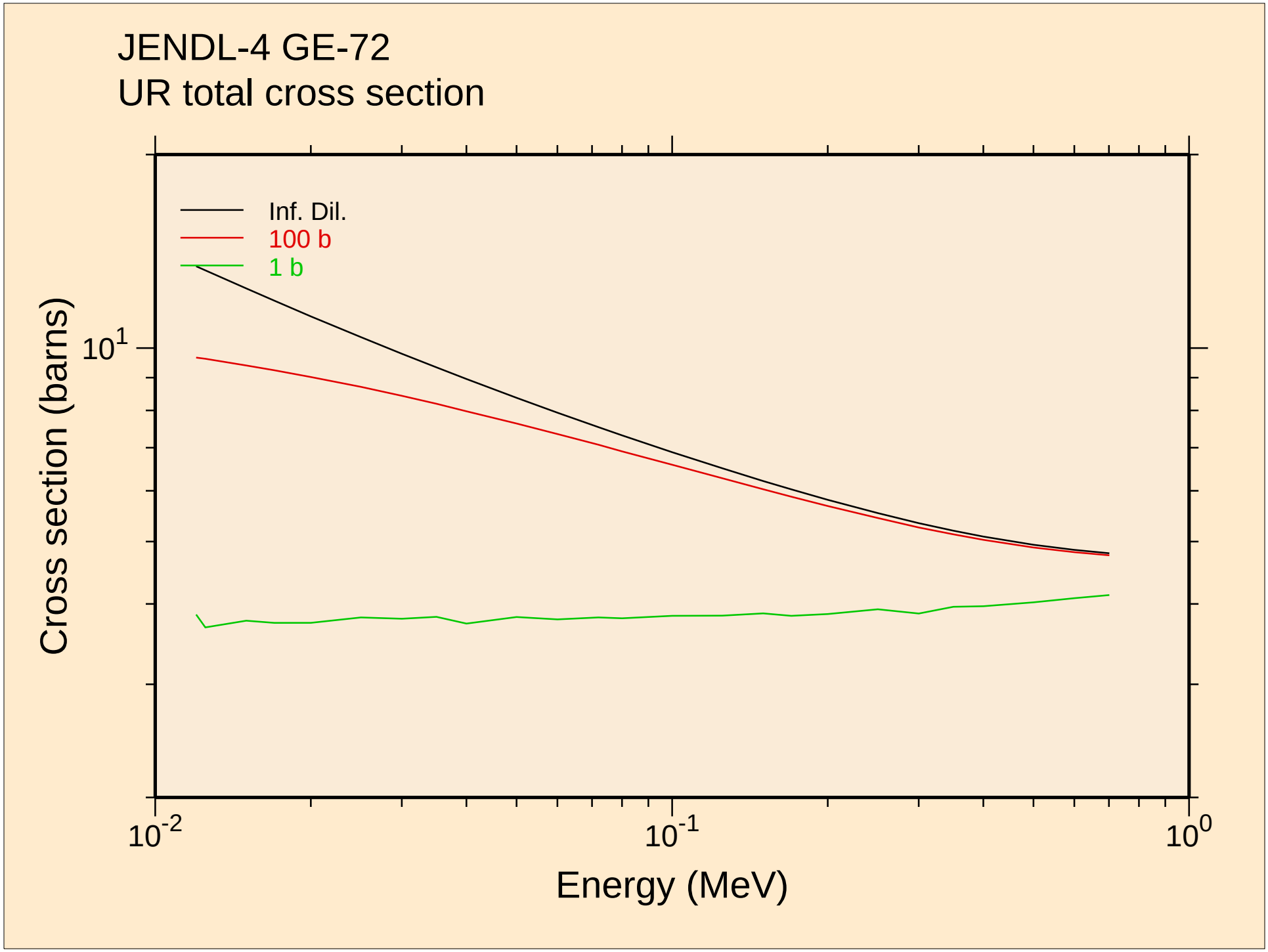

JENDL-4 GE-72
resonance total cross section
total
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-2

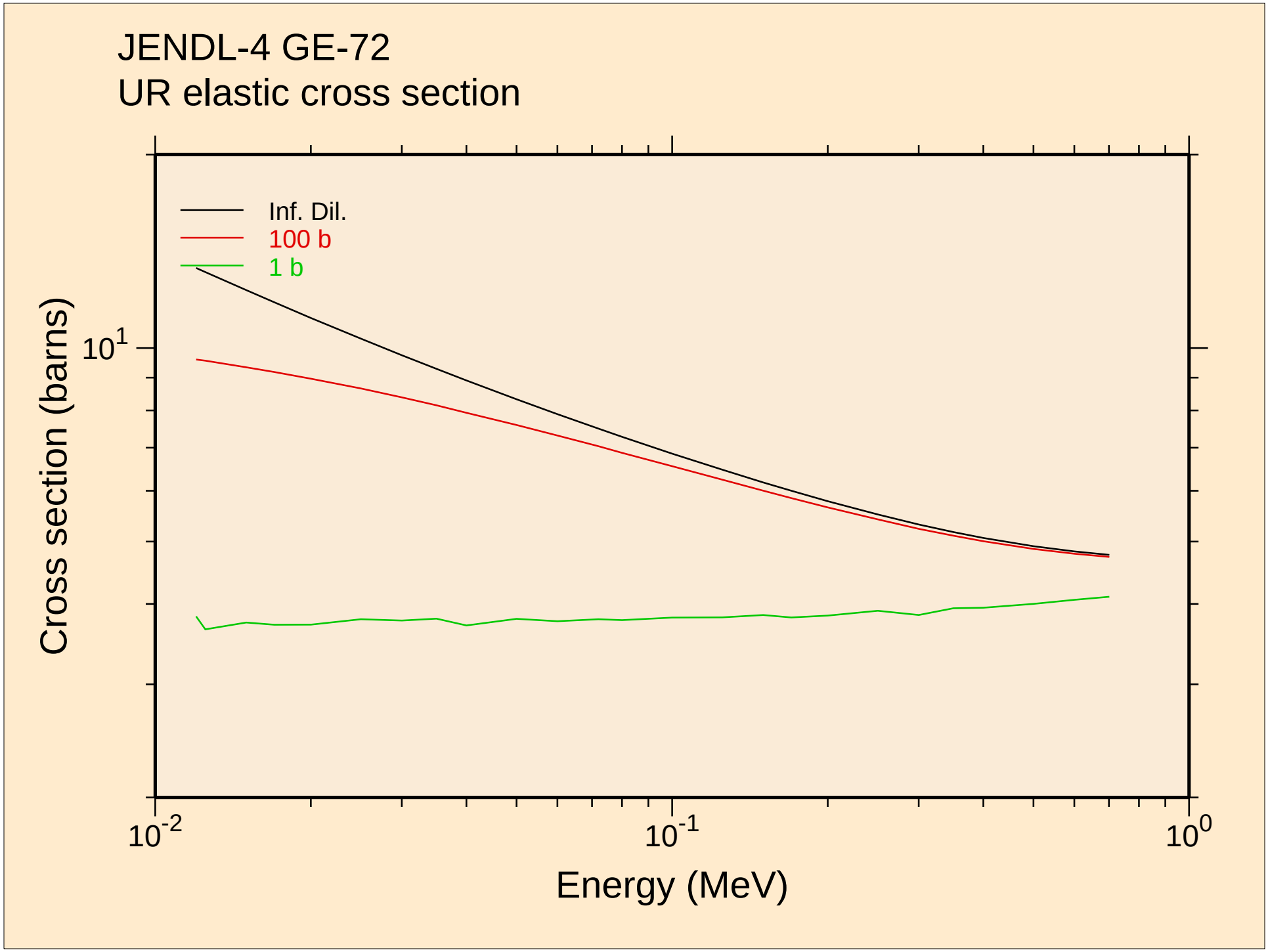

JENDL-4 GE-72
resonance total cross section
total
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-1}
Energy (MeV)

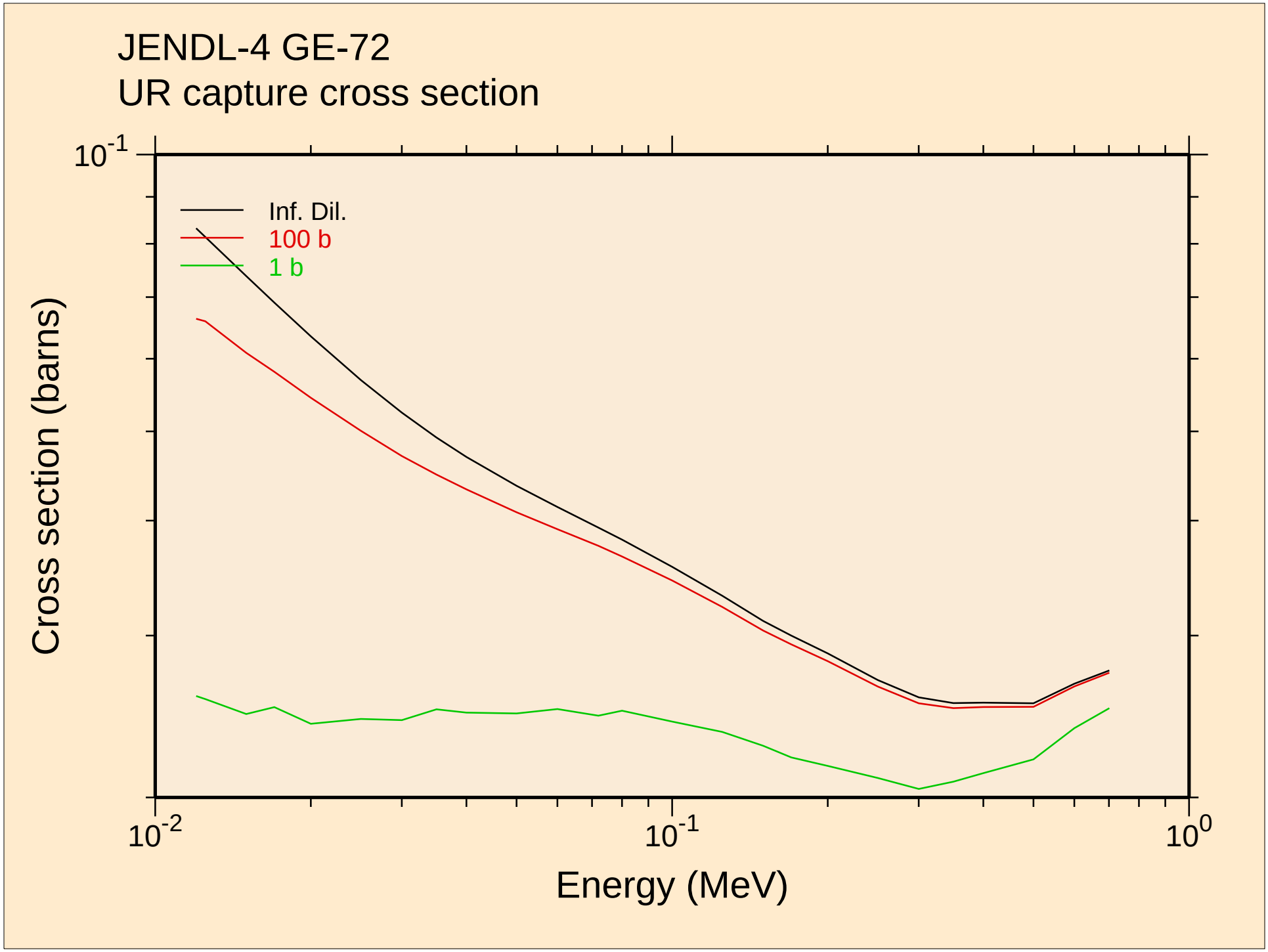

JENDL-4 GE-72
resonance absorption cross sections
capture
Cross section (barns)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-3

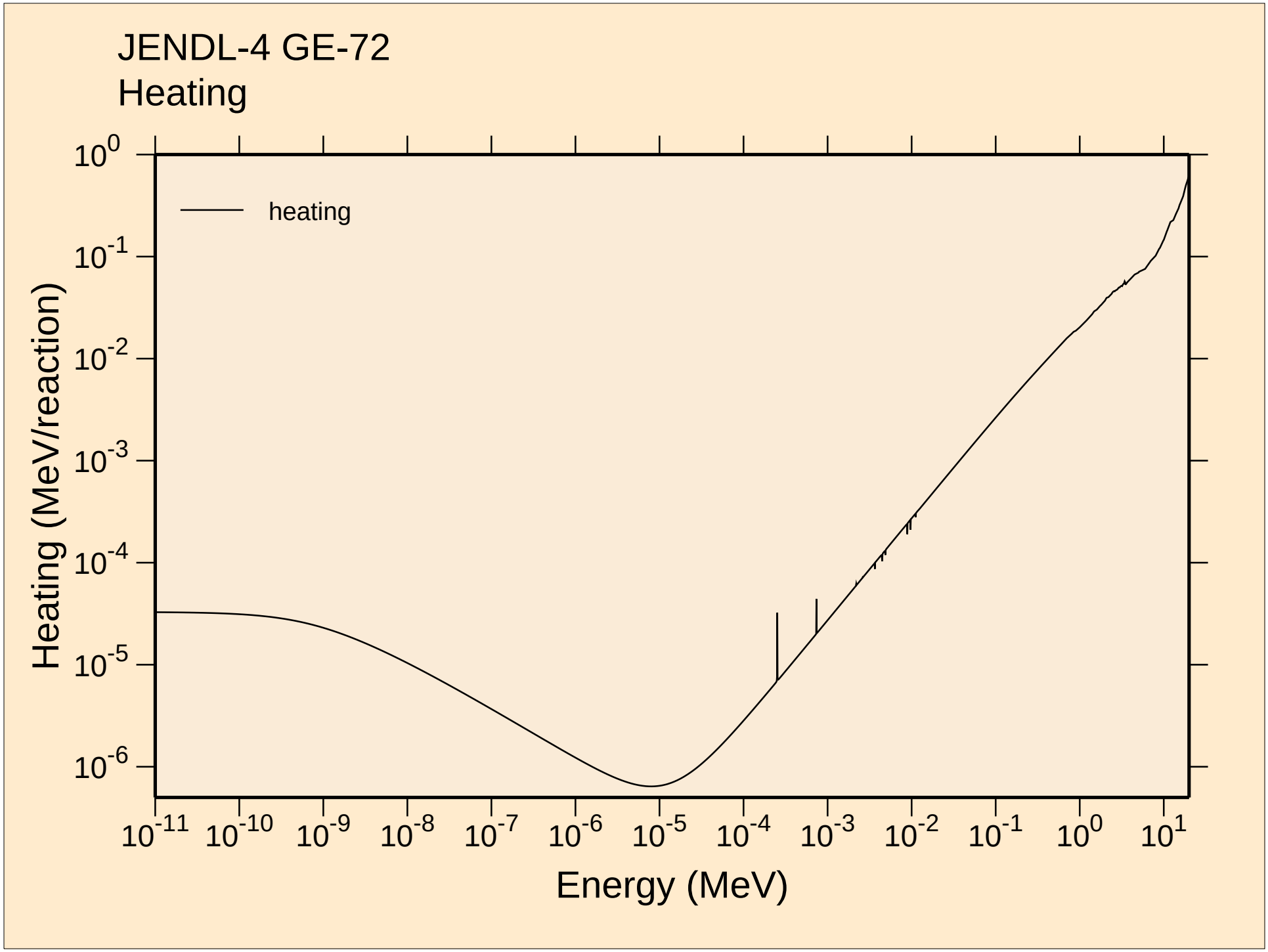

JENDL-4 GE-72
resonance absorption cross sections
capture
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-3}
10^{-2}
Energy (MeV)

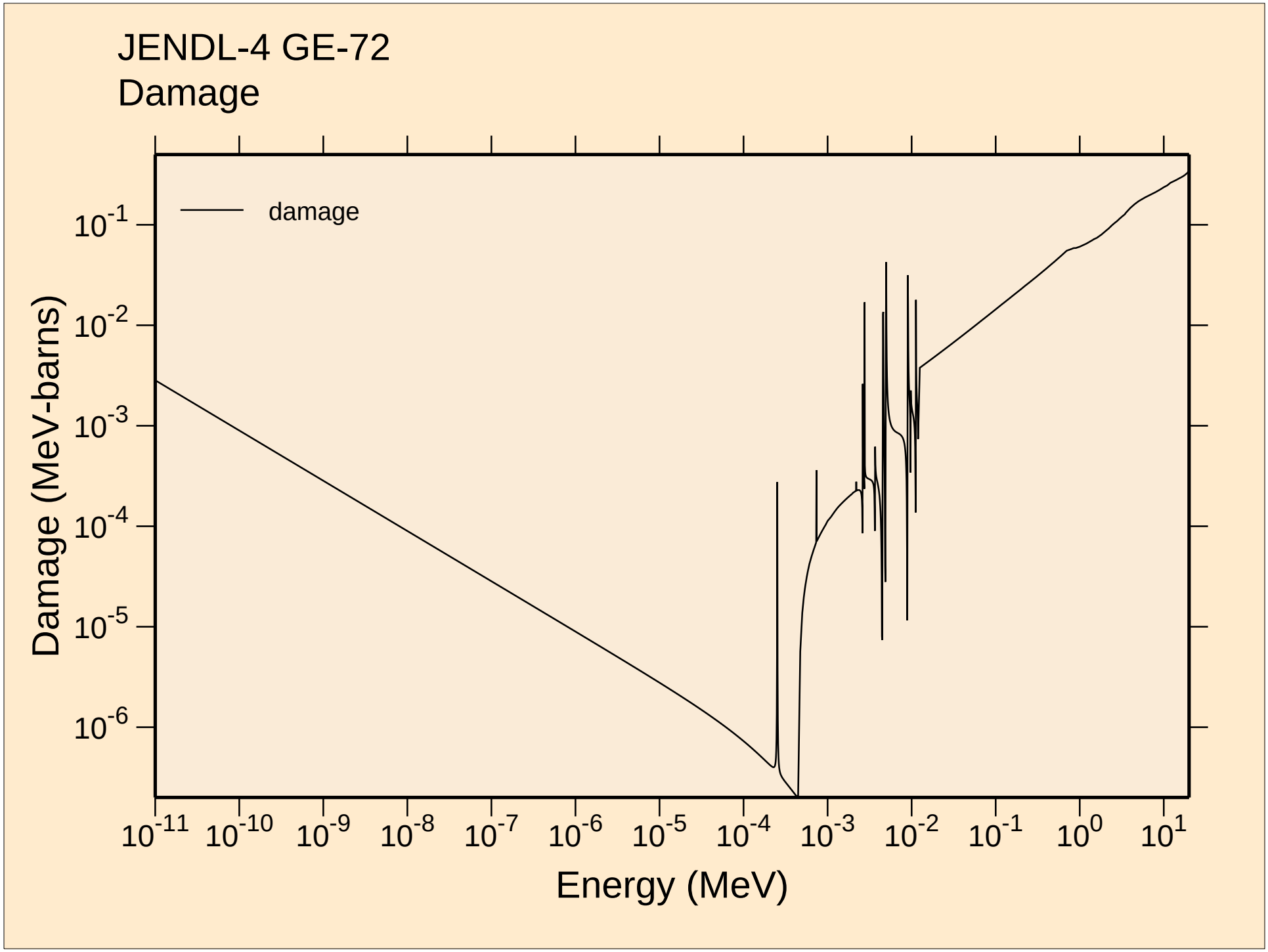

JENDL-4 GE-72
resonance absorption cross sections
capture
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-2}
10^{-1}
Energy (MeV)

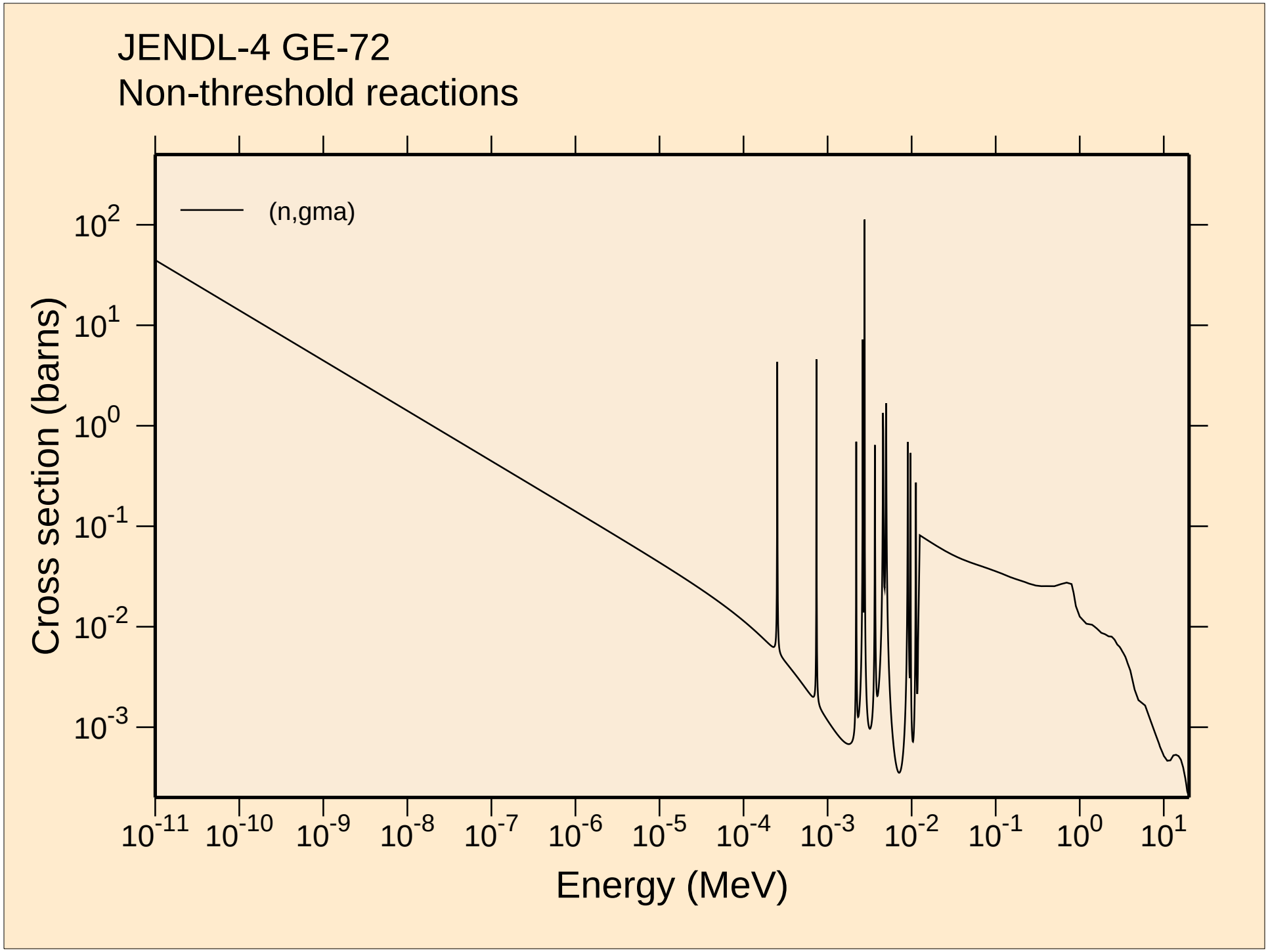

JENDL-4 GE-72
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^{-2}
10^{-1}
10^0
Energy (MeV)

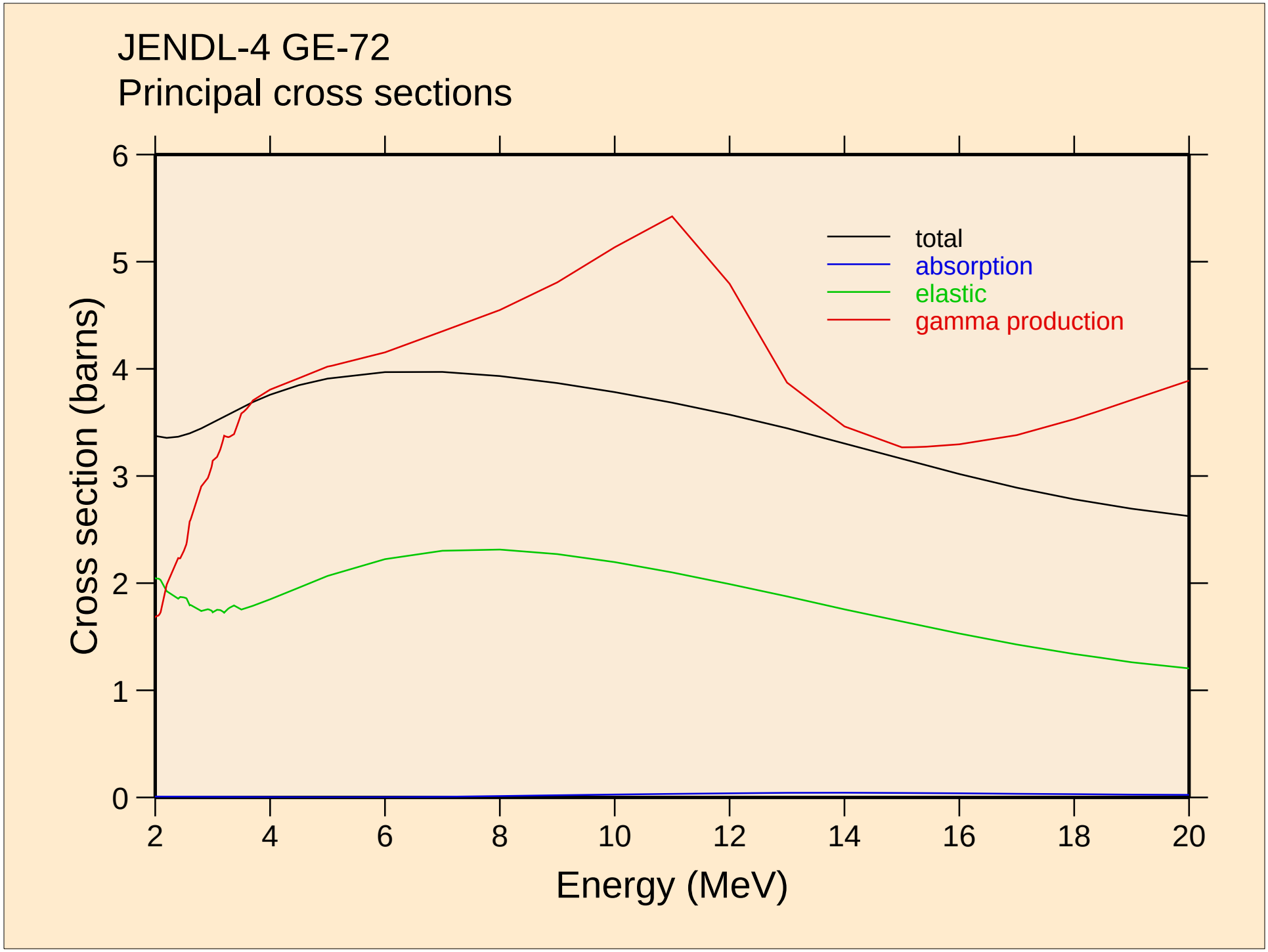

JENDL-4 GE-72
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^{-2}
10^{-1}
10^0
Energy (MeV)

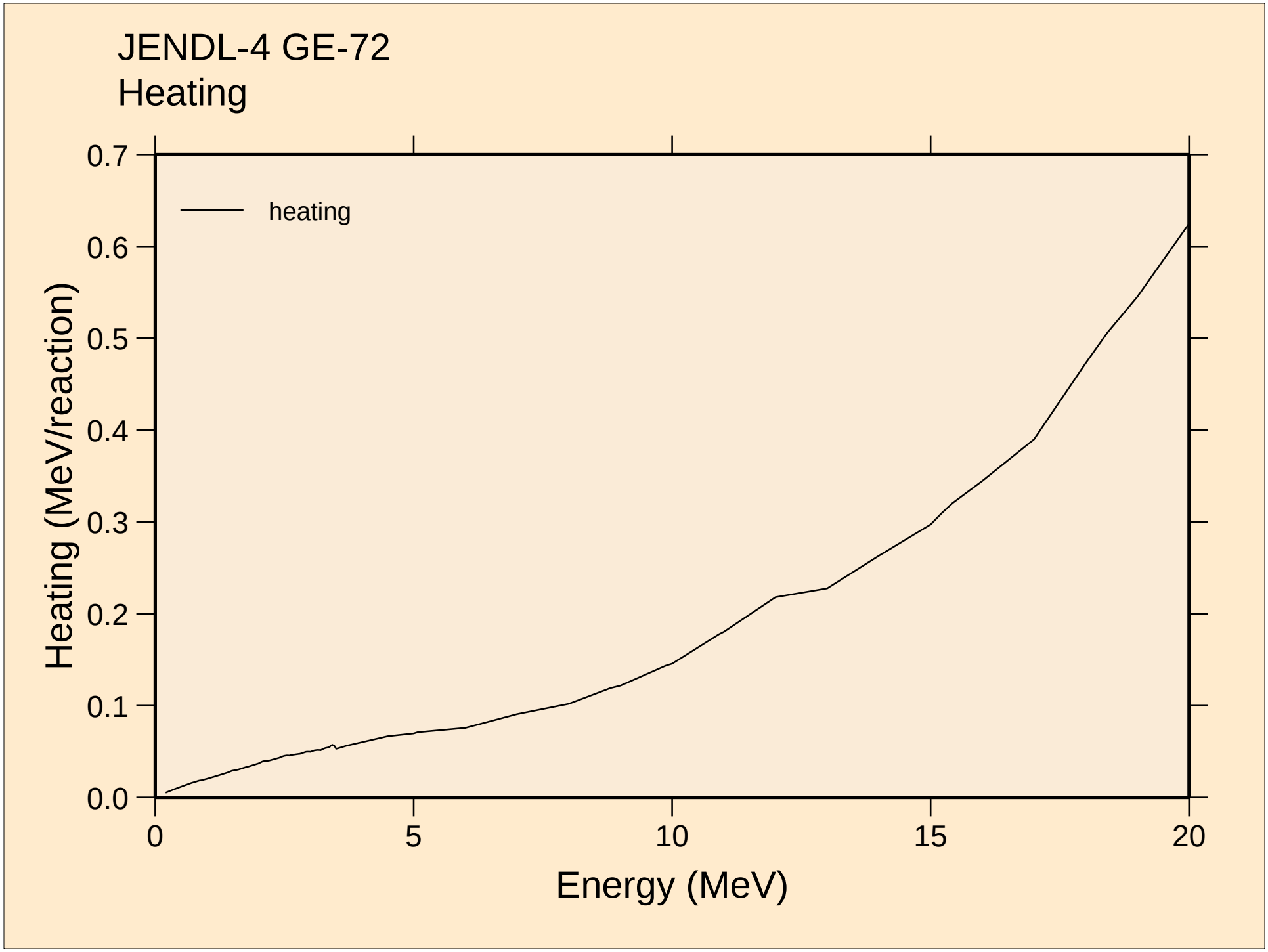

JENDL-4 GE-72
UR capture cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
Energy (MeV)
10^-1
10^-2
10^-1
10^0

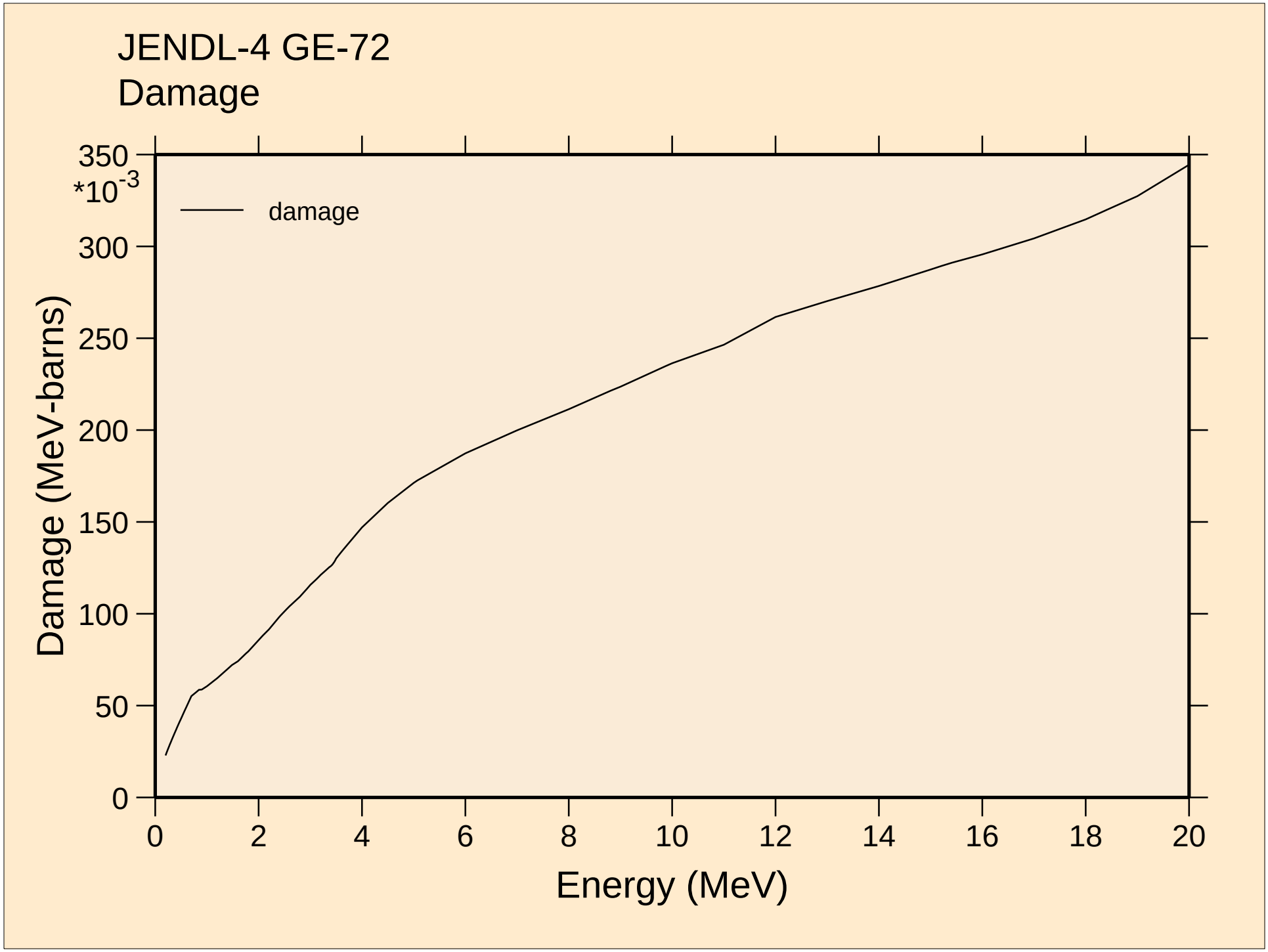

JENDL-4 GE-72
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

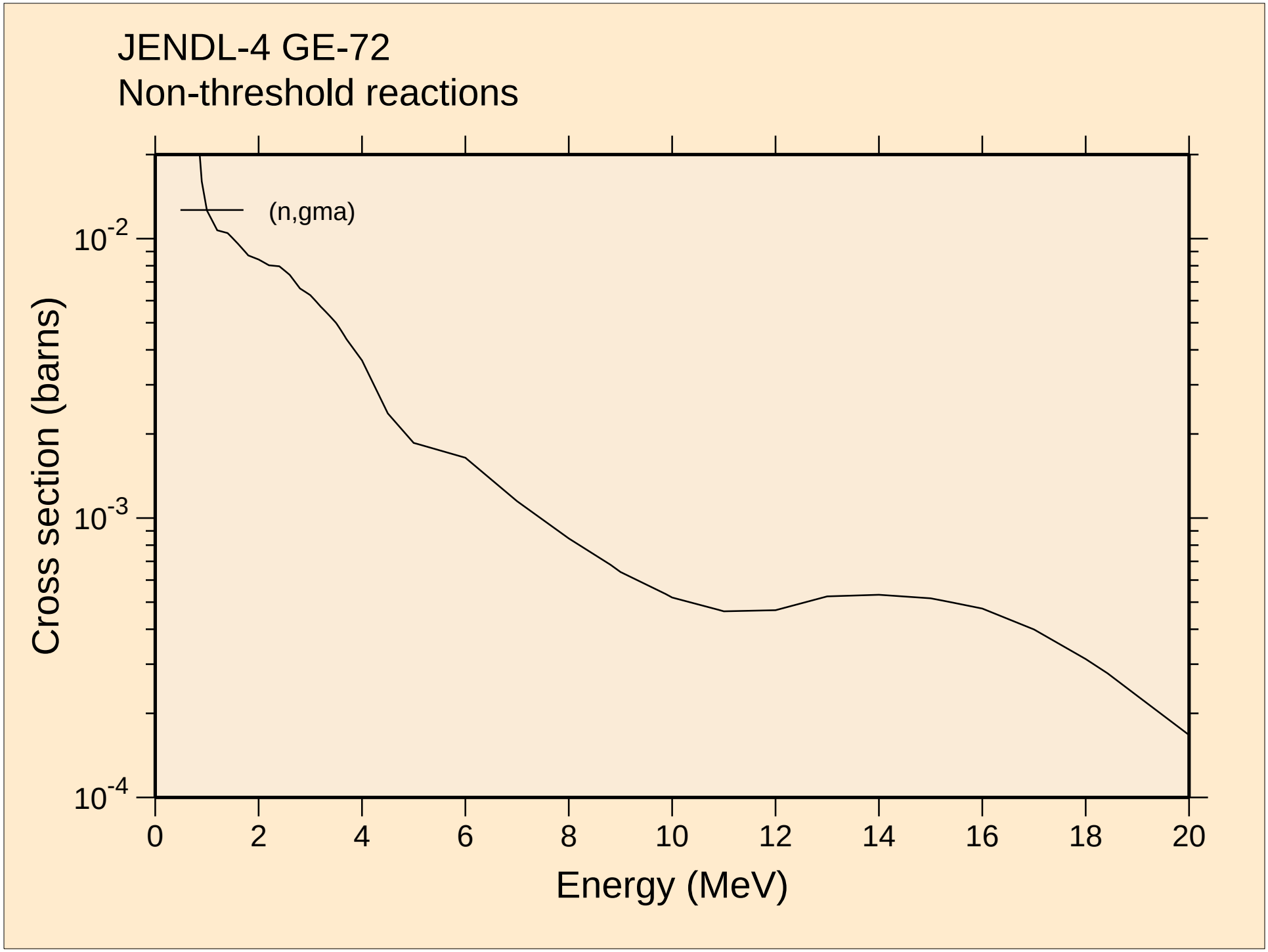

JENDL-4 GE-72
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

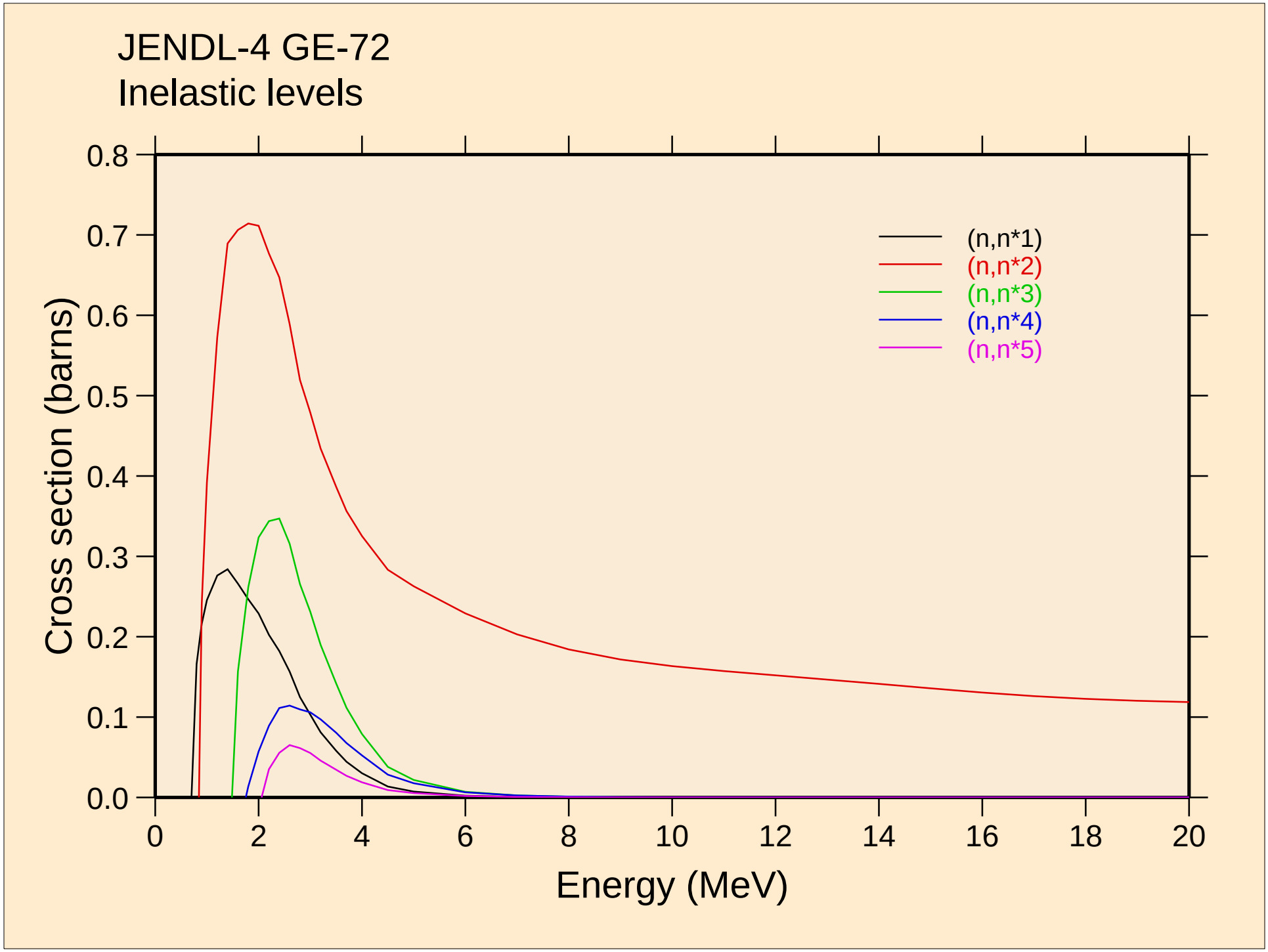

JENDL-4 GE-72
Non-threshold reactions
(n,gma)
Cross section (barns)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

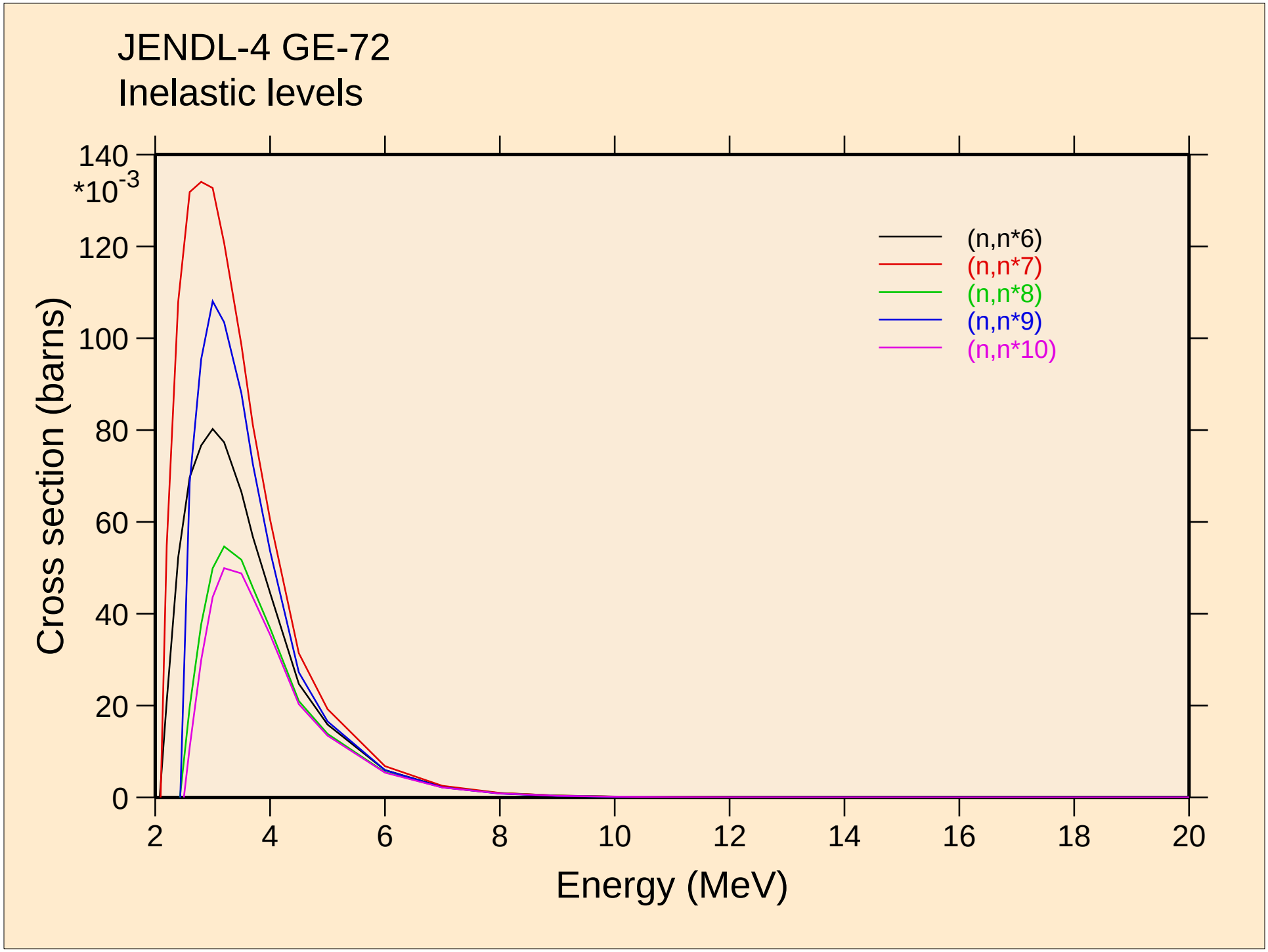

JENDL-4 GE-72
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
1
2
3
4
5
6
2
4
6
8
10
12
14
16
18
20

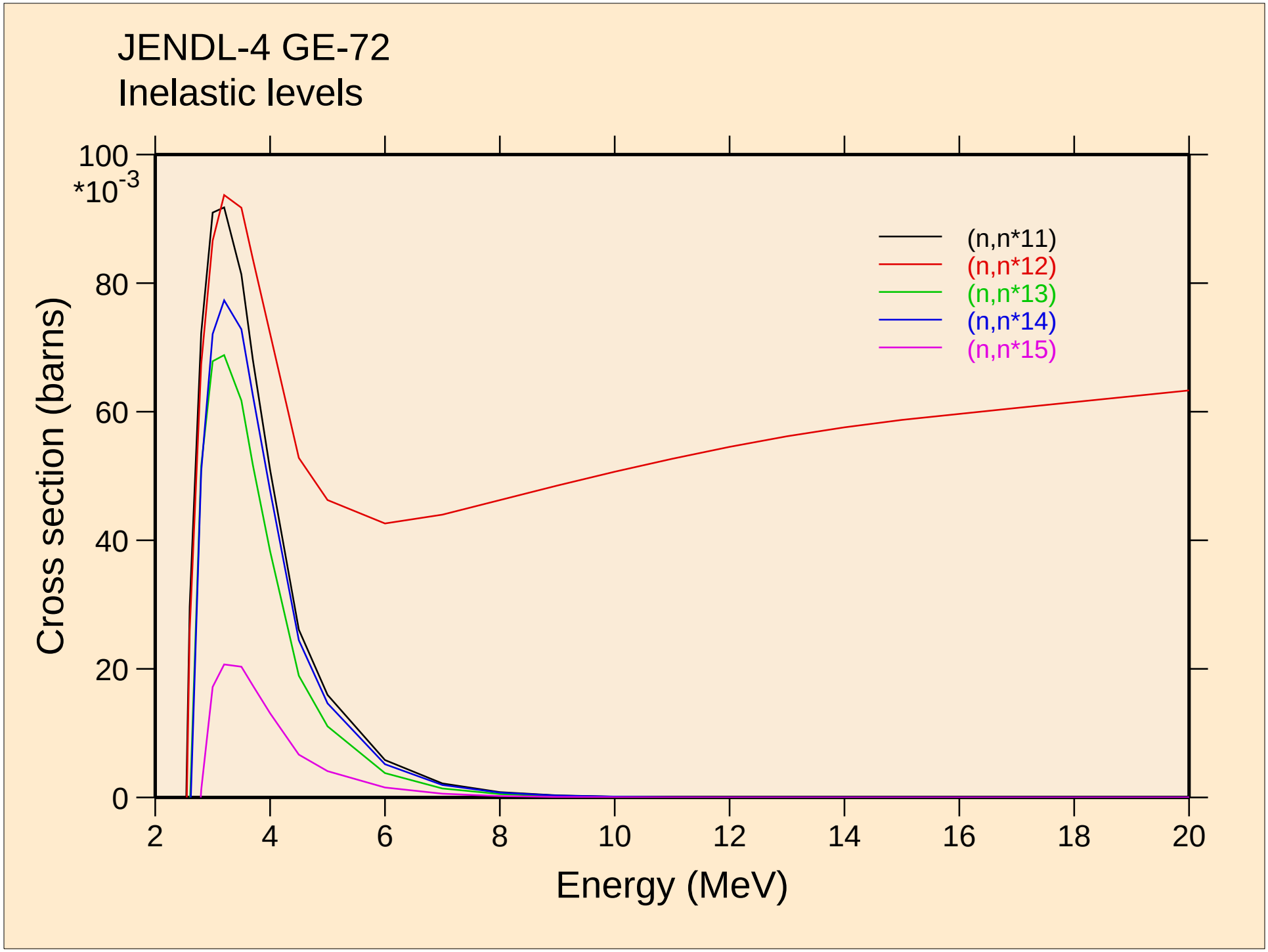

JENDL-4 GE-72
Heating
heating
Heating (MeV/reaction)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
5
10
15
20
Energy (MeV)

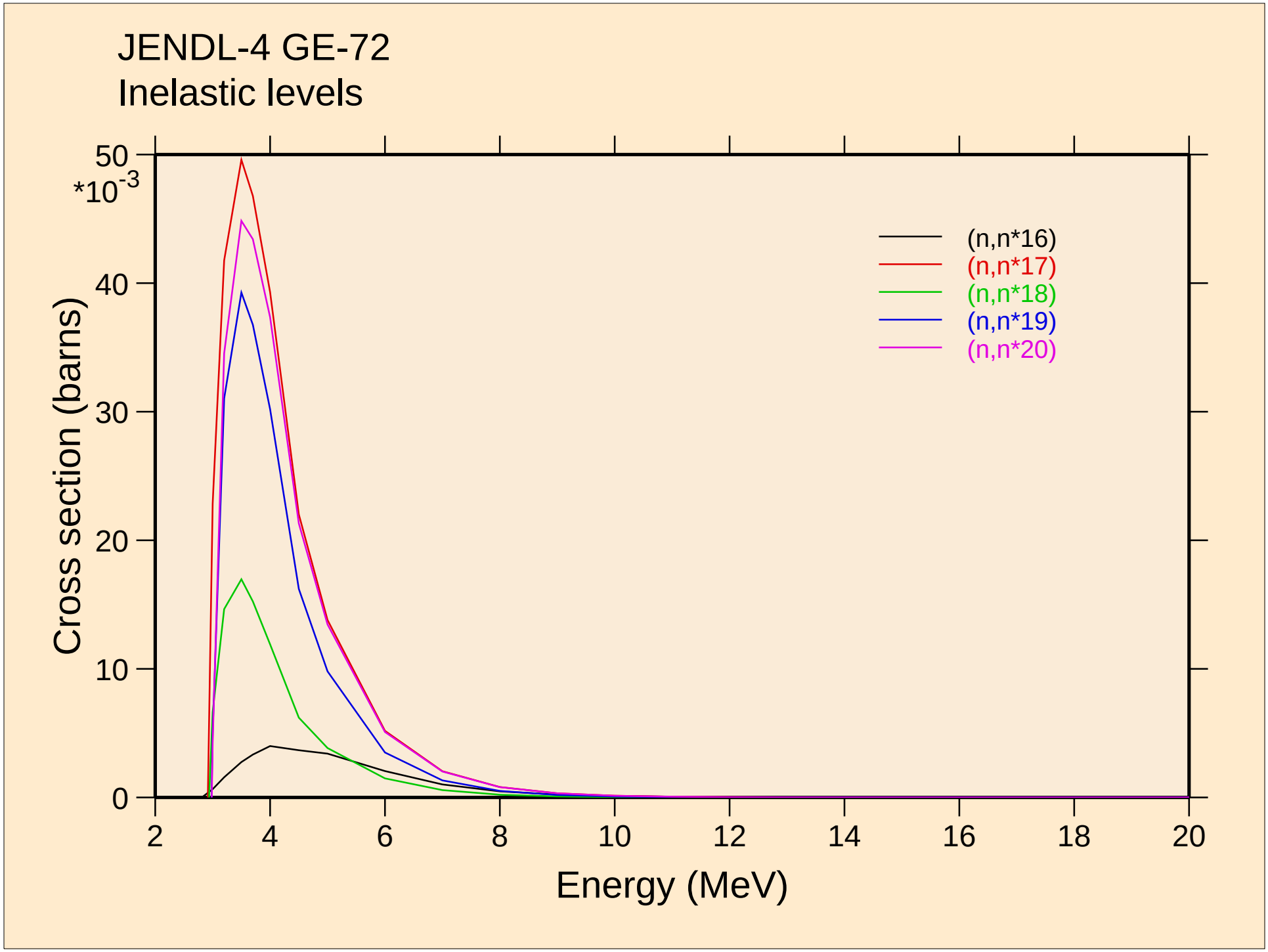

JENDL-4 GE-72
Damage
damage
*10-3
350
300
250
200
150
100
50
0
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

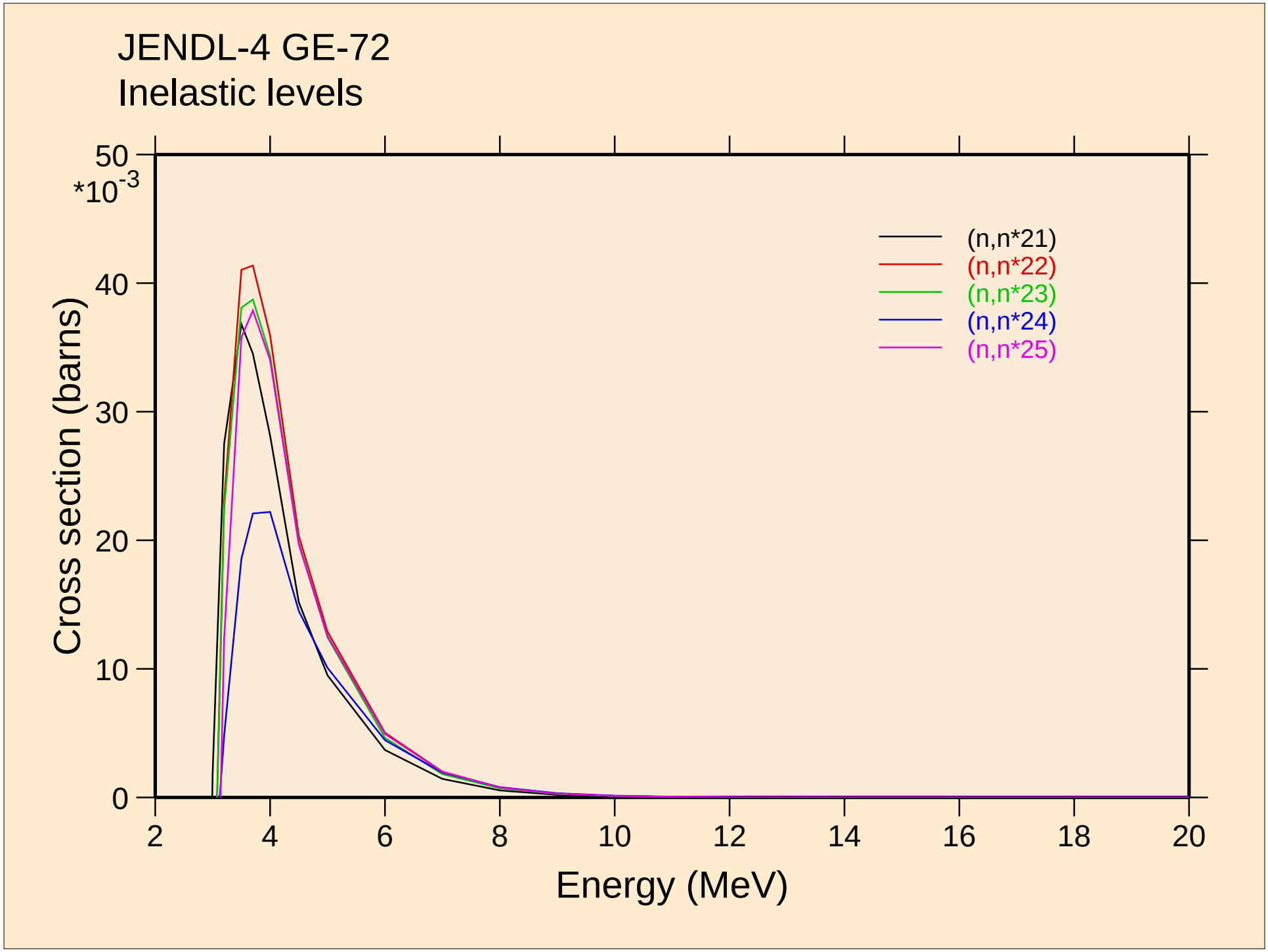

JENDL-4 GE-72
Non-threshold reactions
(n,gma)
Cross section (barns)
10-2
10-3
10-4
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

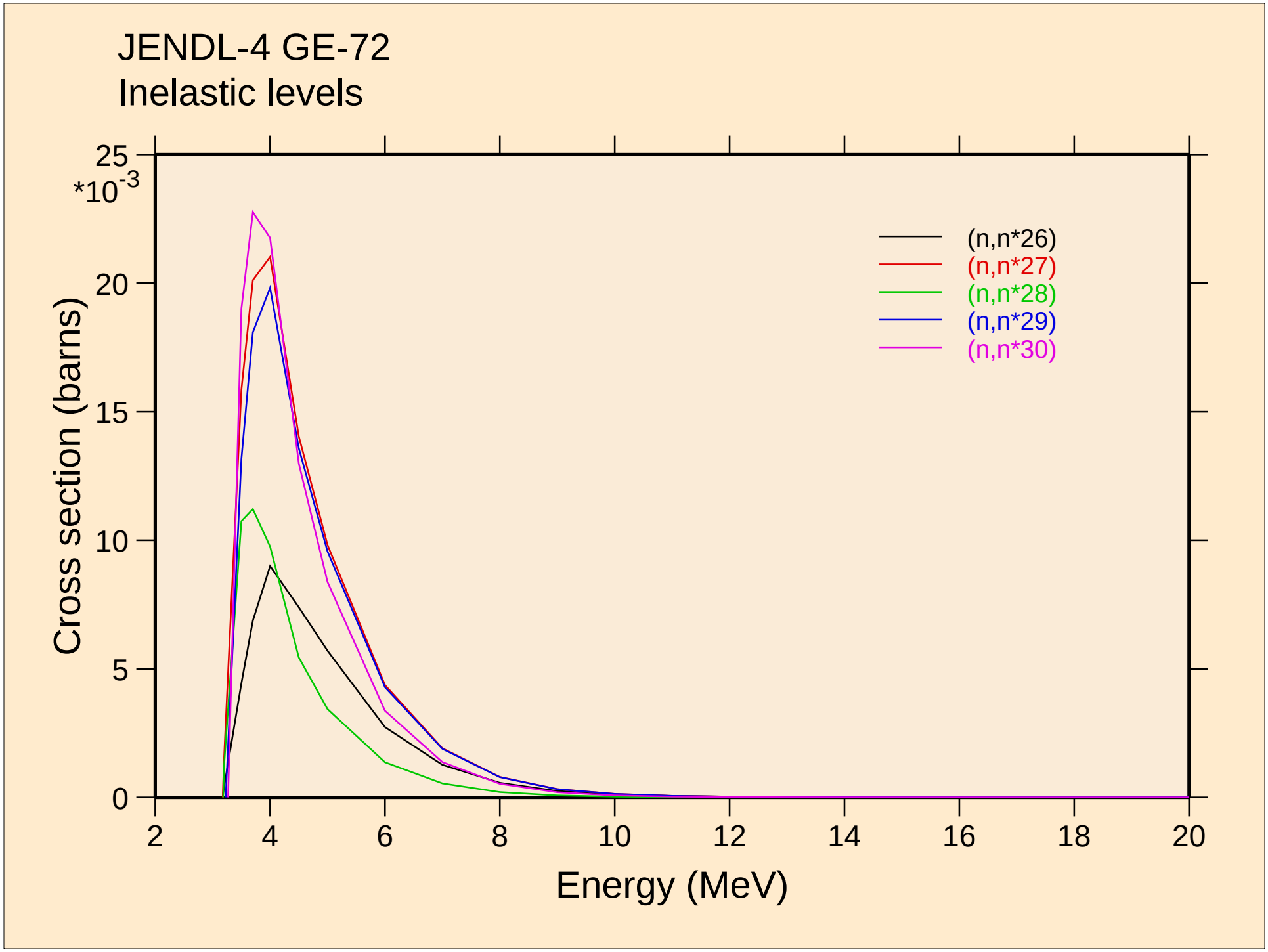

JENDL-4 GE-72
Inelastic levels
Cross section (barns)
Energy (MeV)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0
2
4
6
8
10
12
14
16
18
20
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

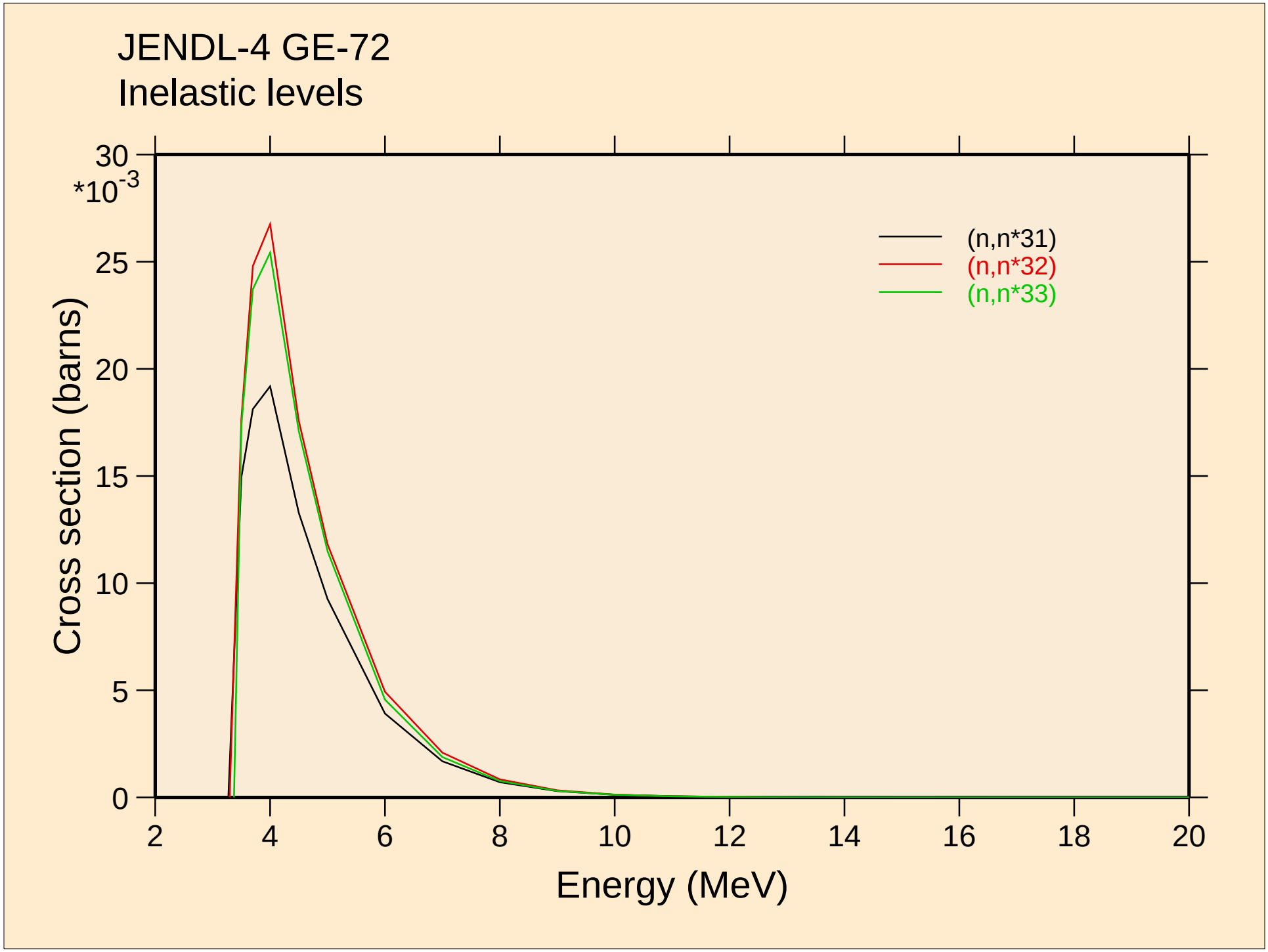

JENDL-4 GE-72
Inelastic levels
Cross section (barns)
*10^-3
140
120
100
80
60
40
20
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

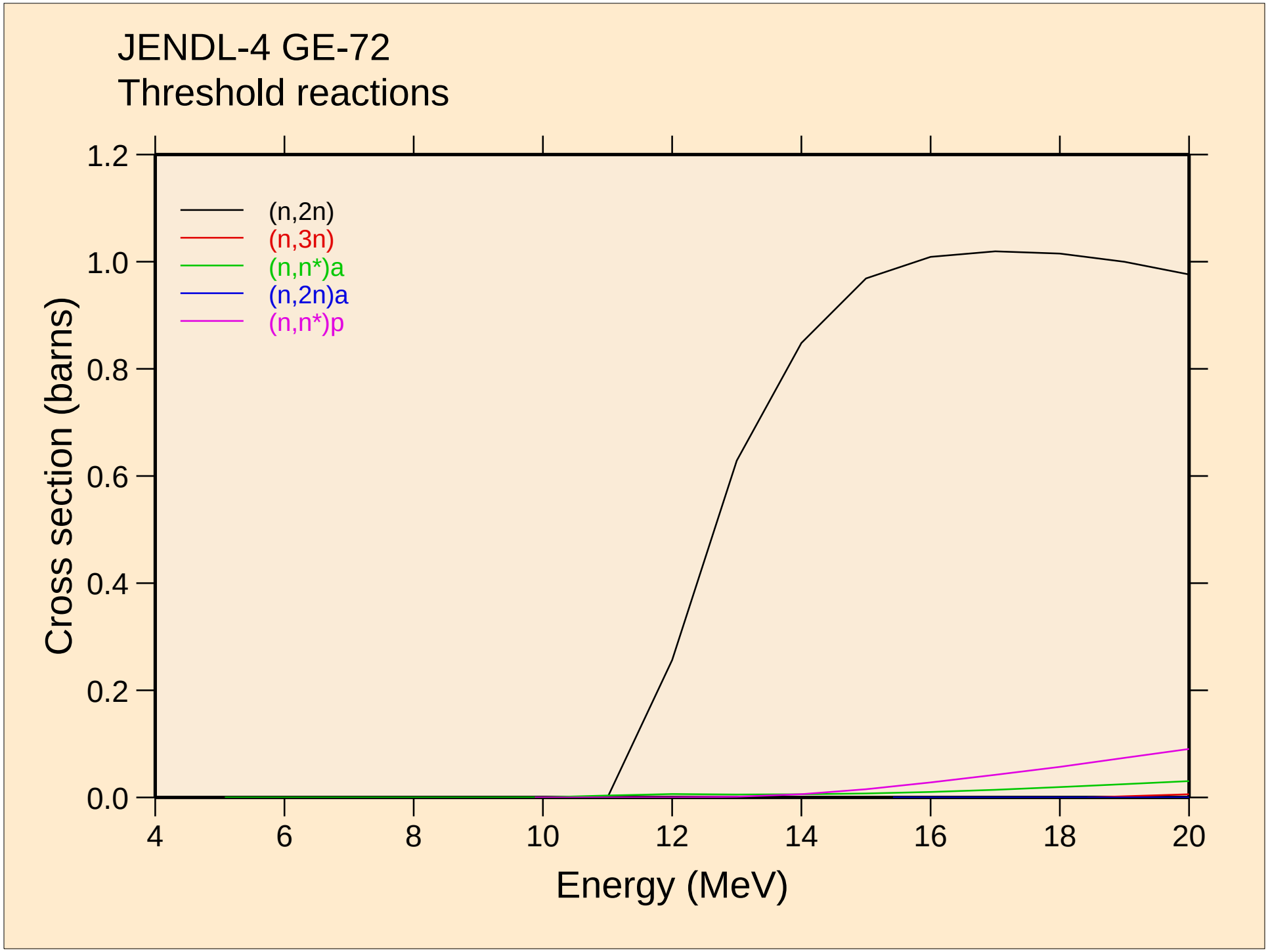

JENDL-4 GE-72
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

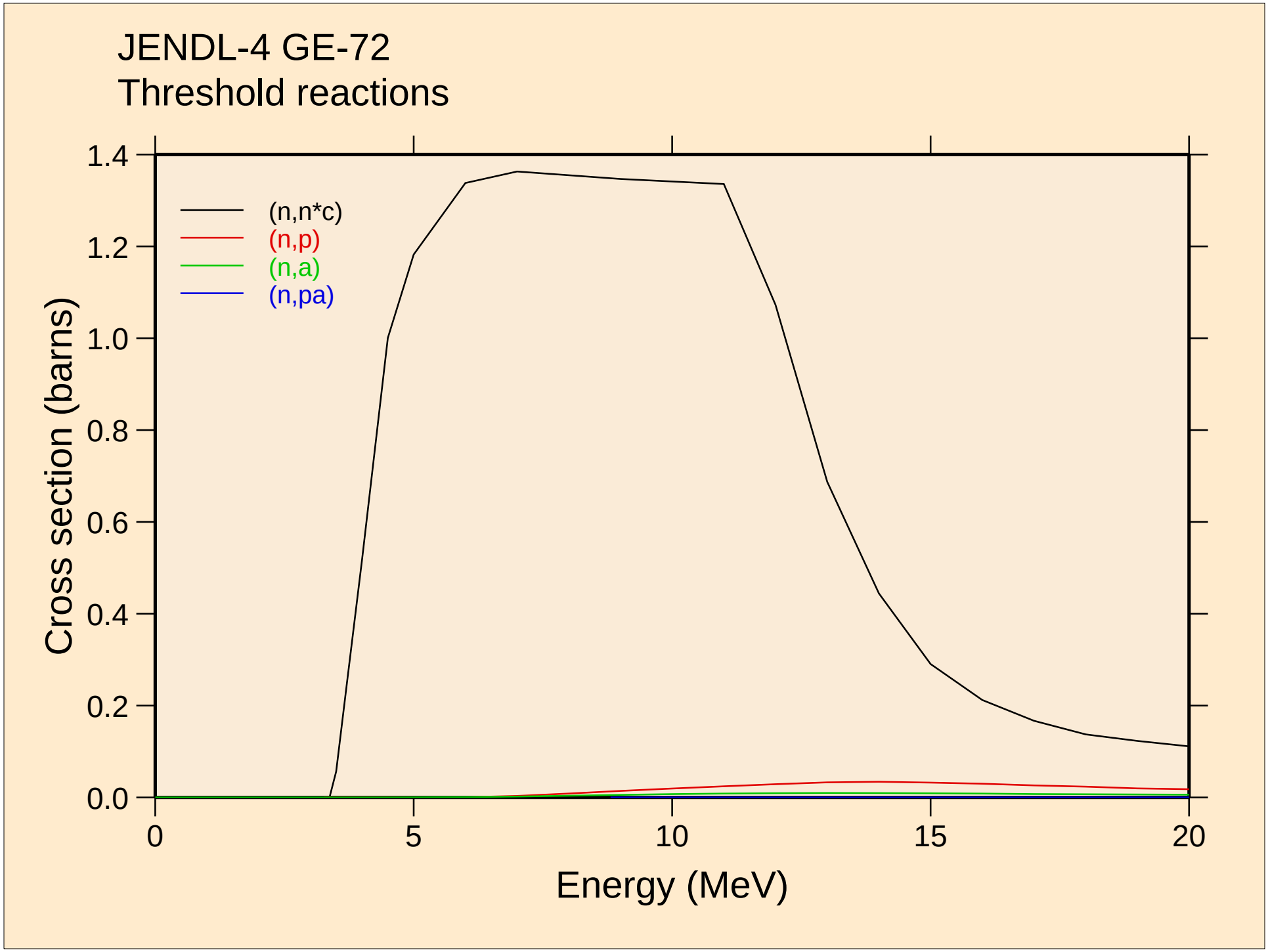

JENDL-4 GE-72
Inelastic levels
Cross section (barns)
*10^-3
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

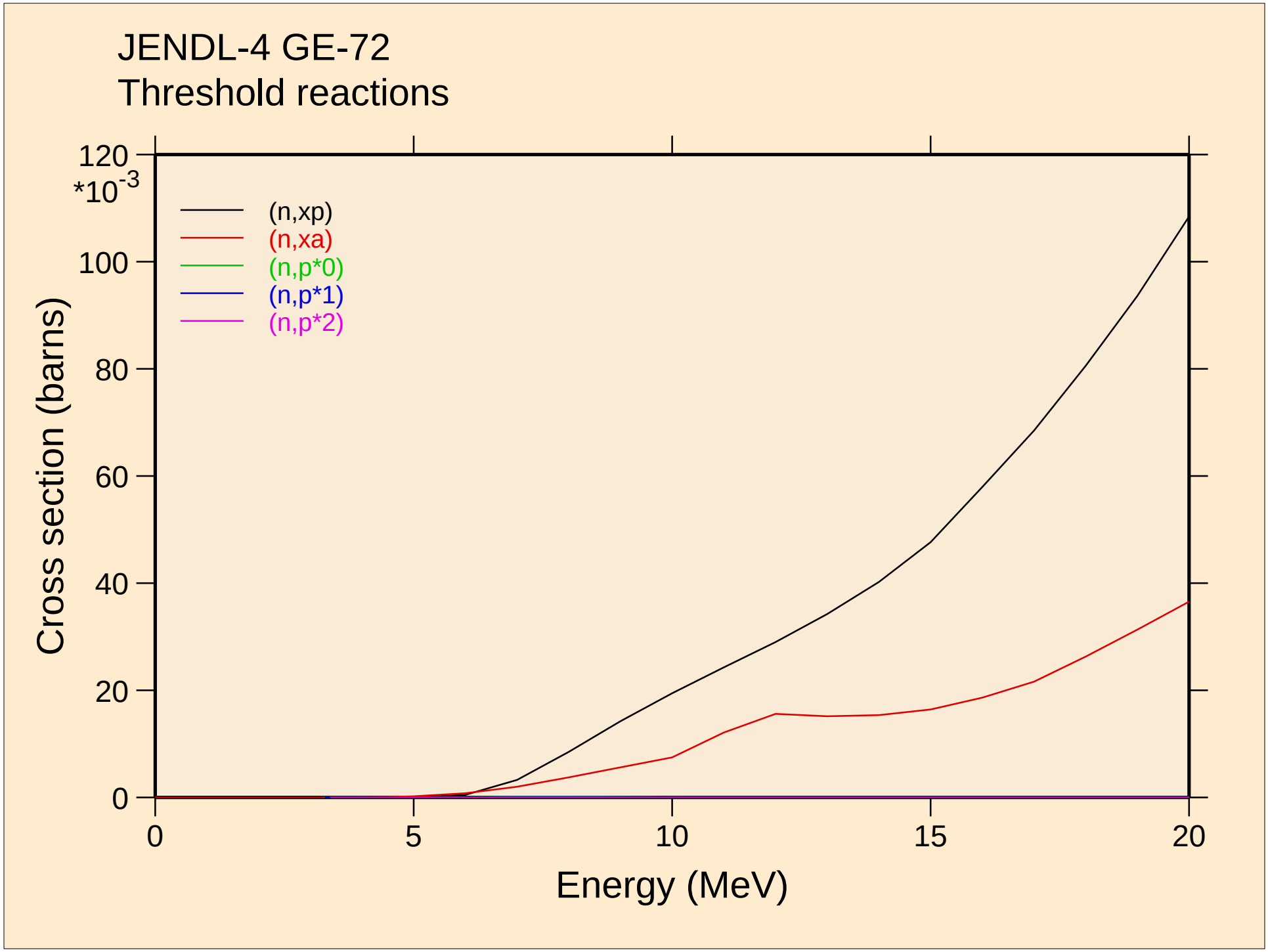

JENDL-4 GE-72
Inelastic levels
*10-3
50
40
30
20
10
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

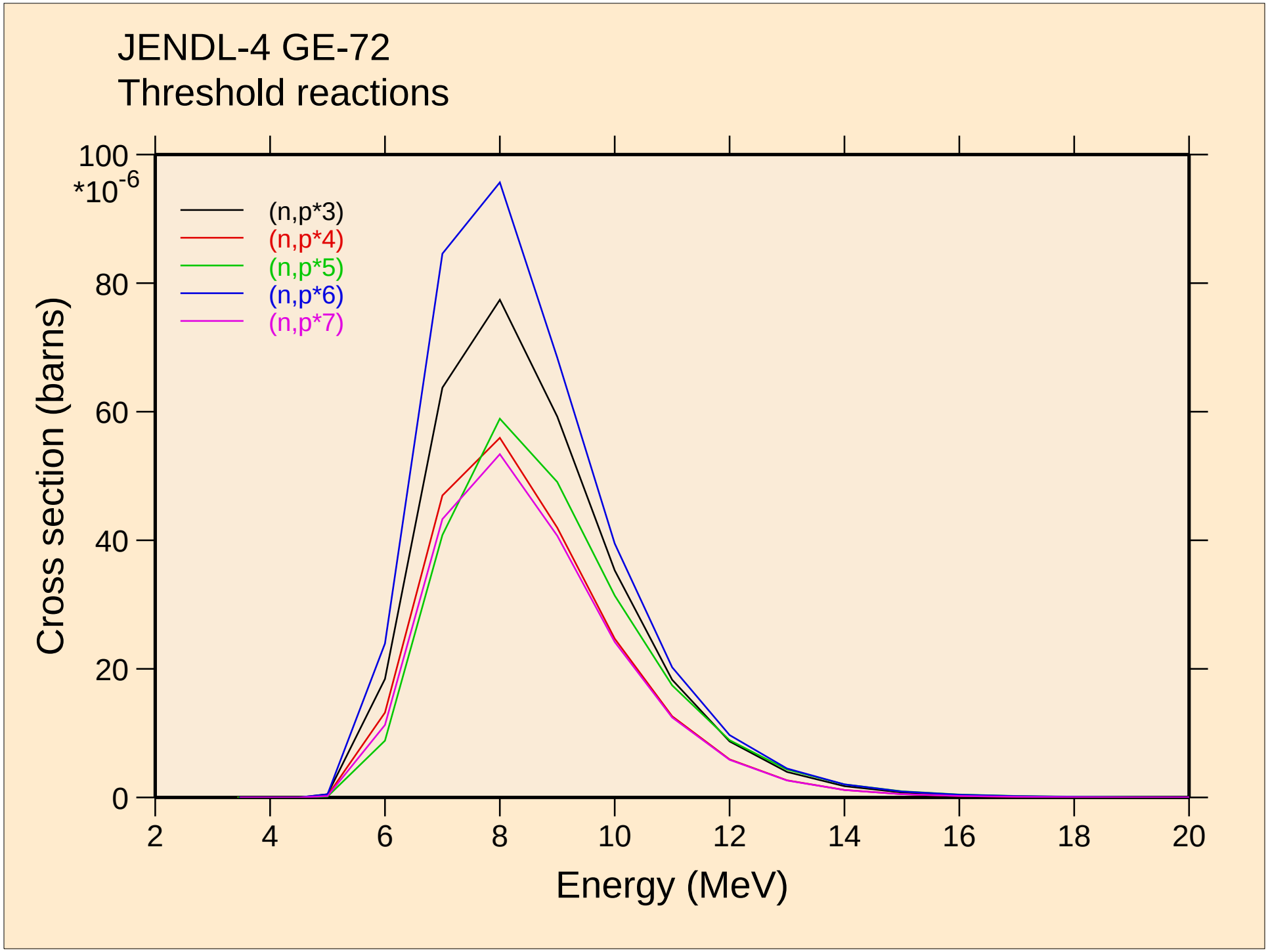

JENDL-4 GE-72
Inelastic levels
*10-3
25
20
15
10
5
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

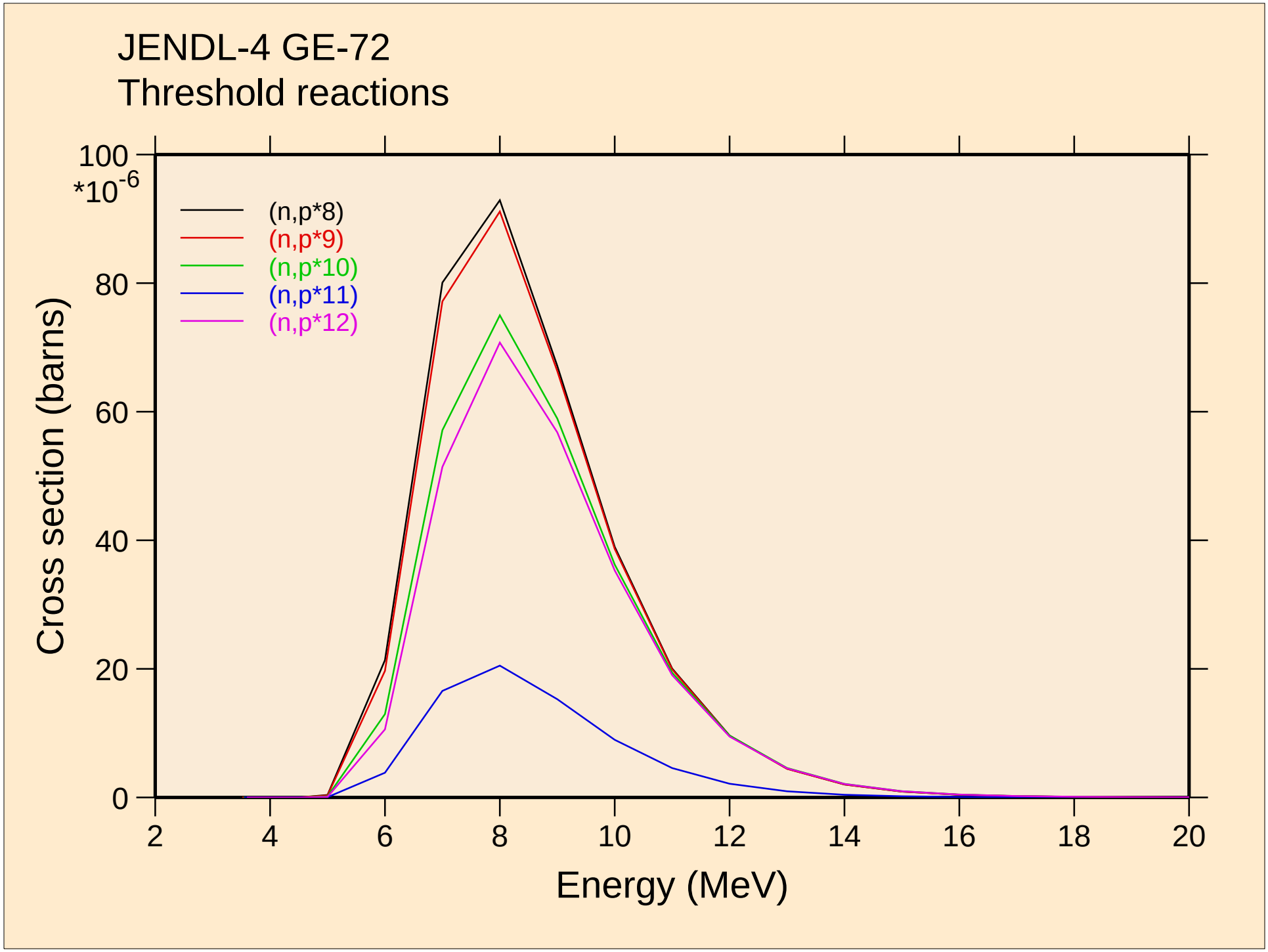

JENDL-4 GE-72
Inelastic levels
*10-3
30
25
20
15
10
5
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*31)
(n,n*32)
(n,n*33)

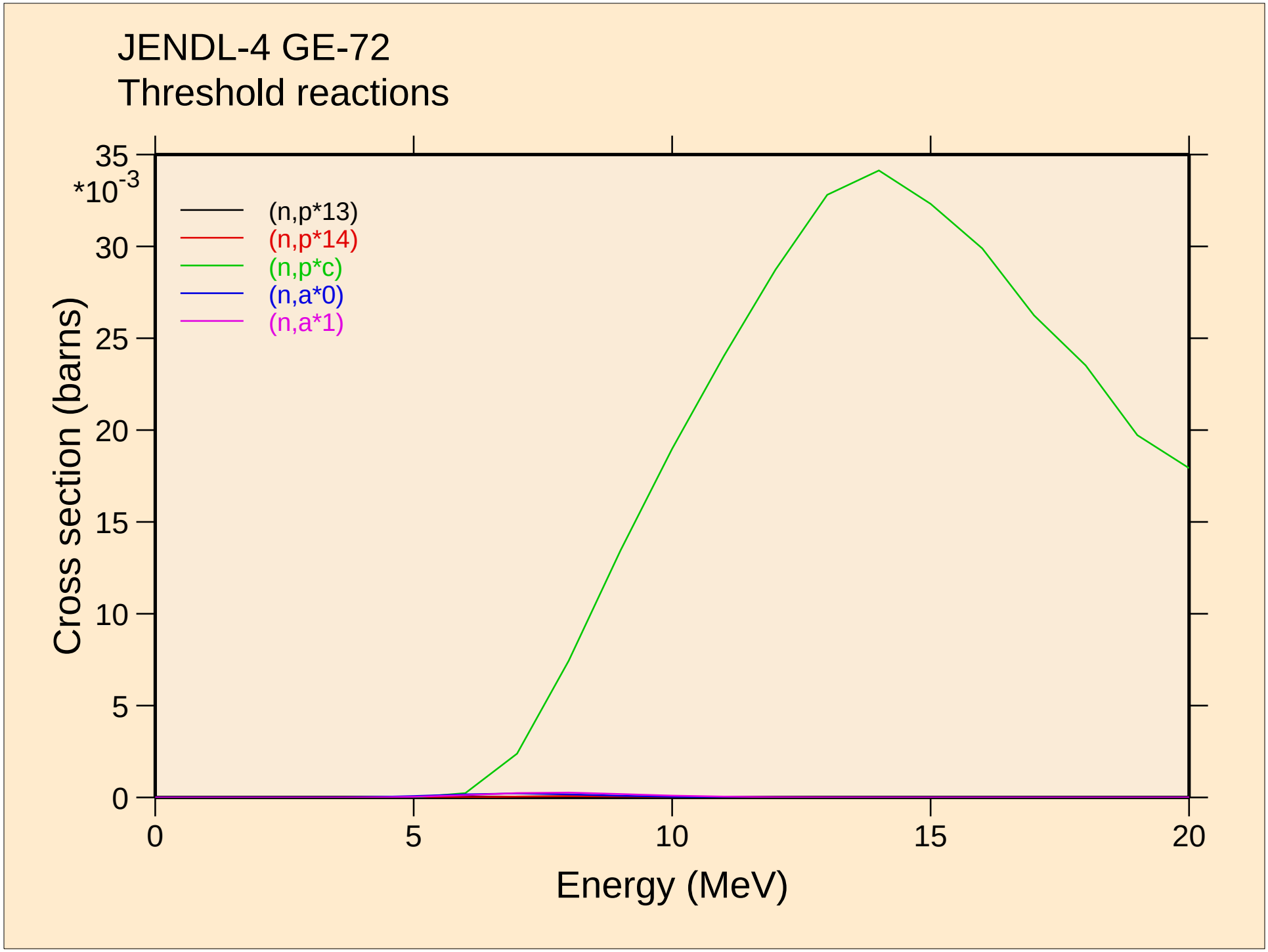

JENDL-4 GE-72
Threshold reactions
(n,2n)
(n,3n)
(n,n*)a
(n,2n)a
(n,n*)p
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
4
6
8
10
12
14
16
18
20

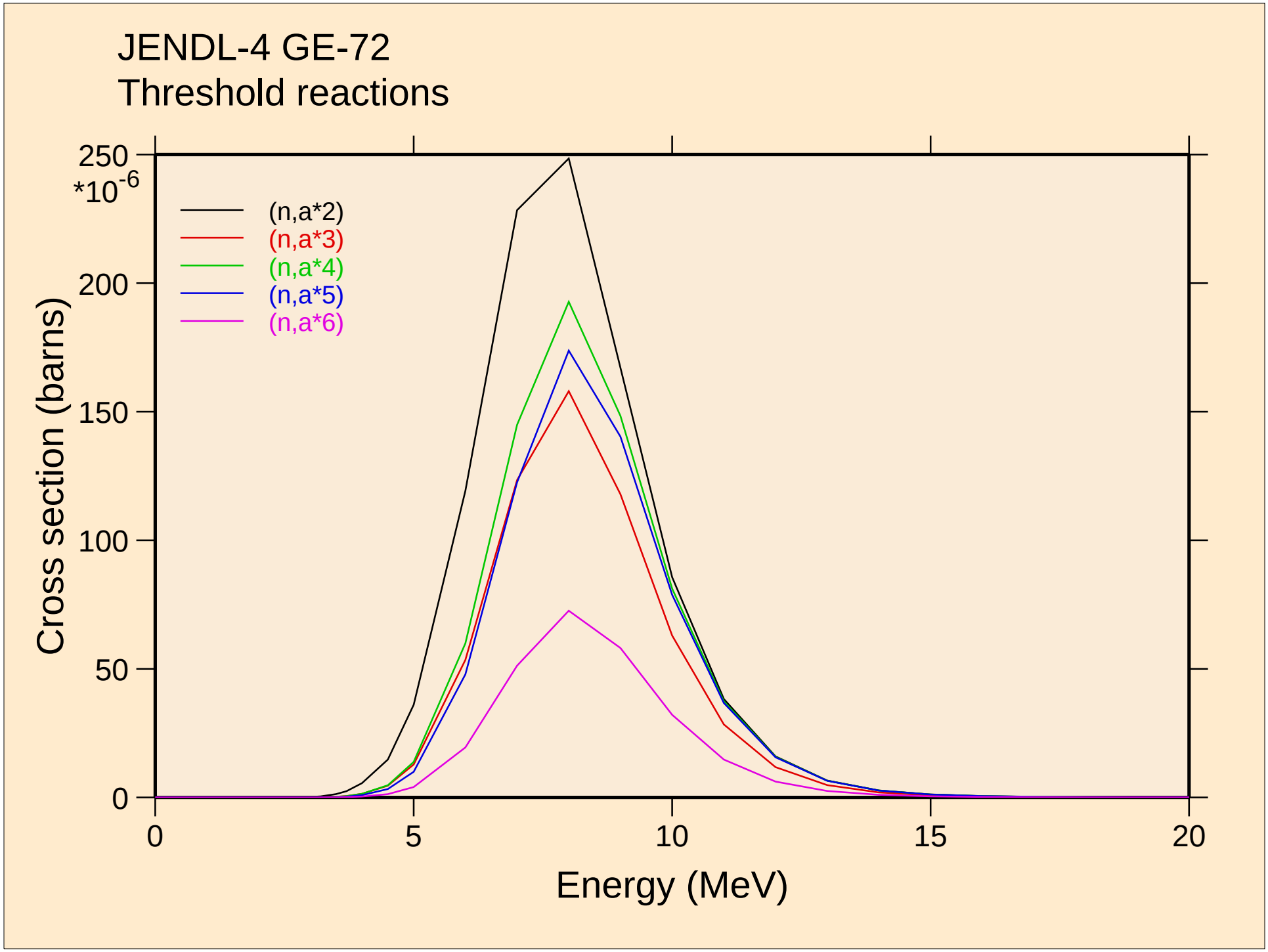

JENDL-4 GE-72
Threshold reactions
(n,n*c)
(n,p)
(n,a)
(n,pa)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
5
10
15
20

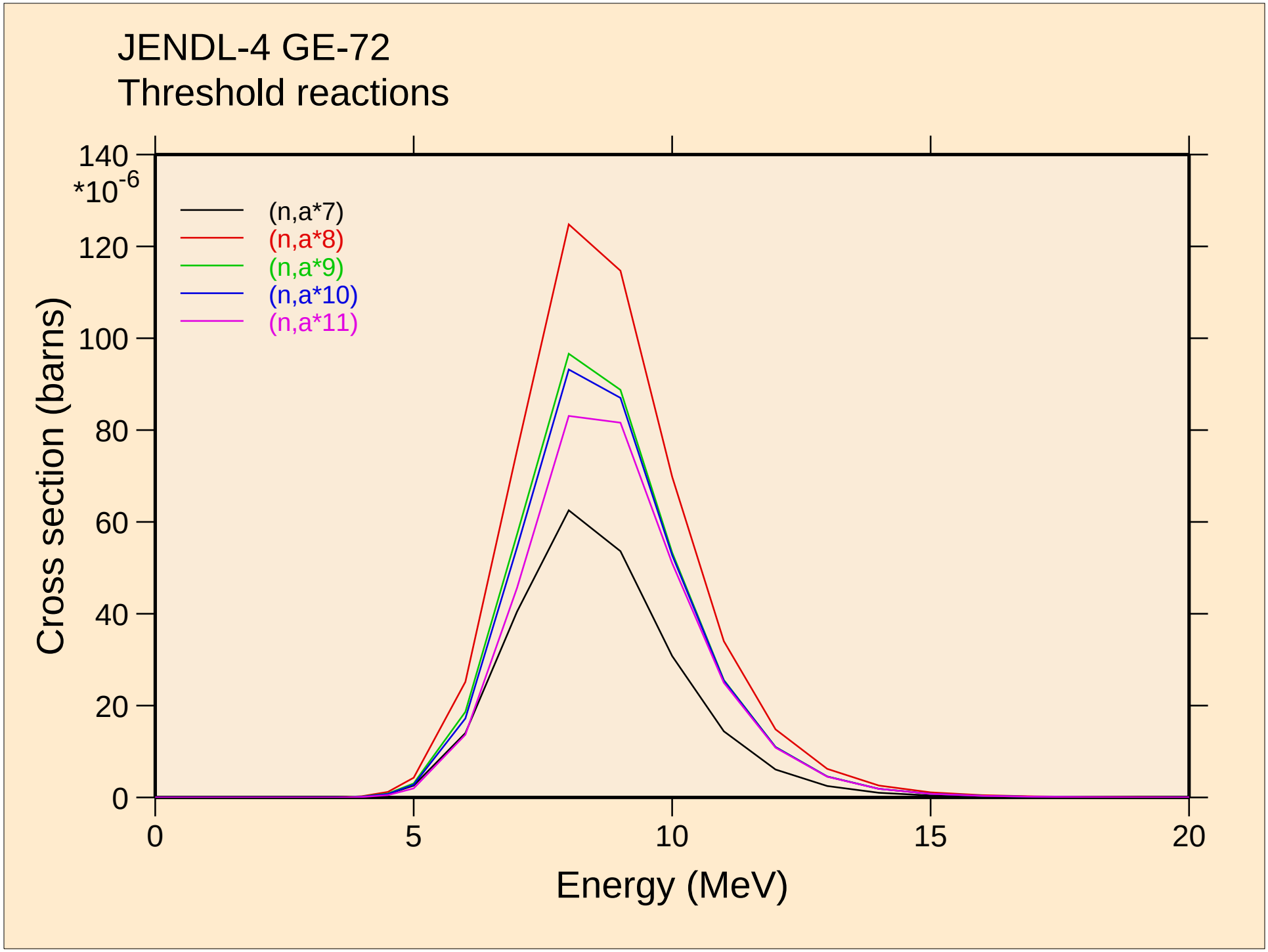

JENDL-4 GE-72
Threshold reactions
120
*10-3
100
80
60
40
20
0
Cross section (barns)
(n,xp)
(n,xa)
(n,p*0)
(n,p*1)
(n,p*2)
0
5
10
15
20
Energy (MeV)

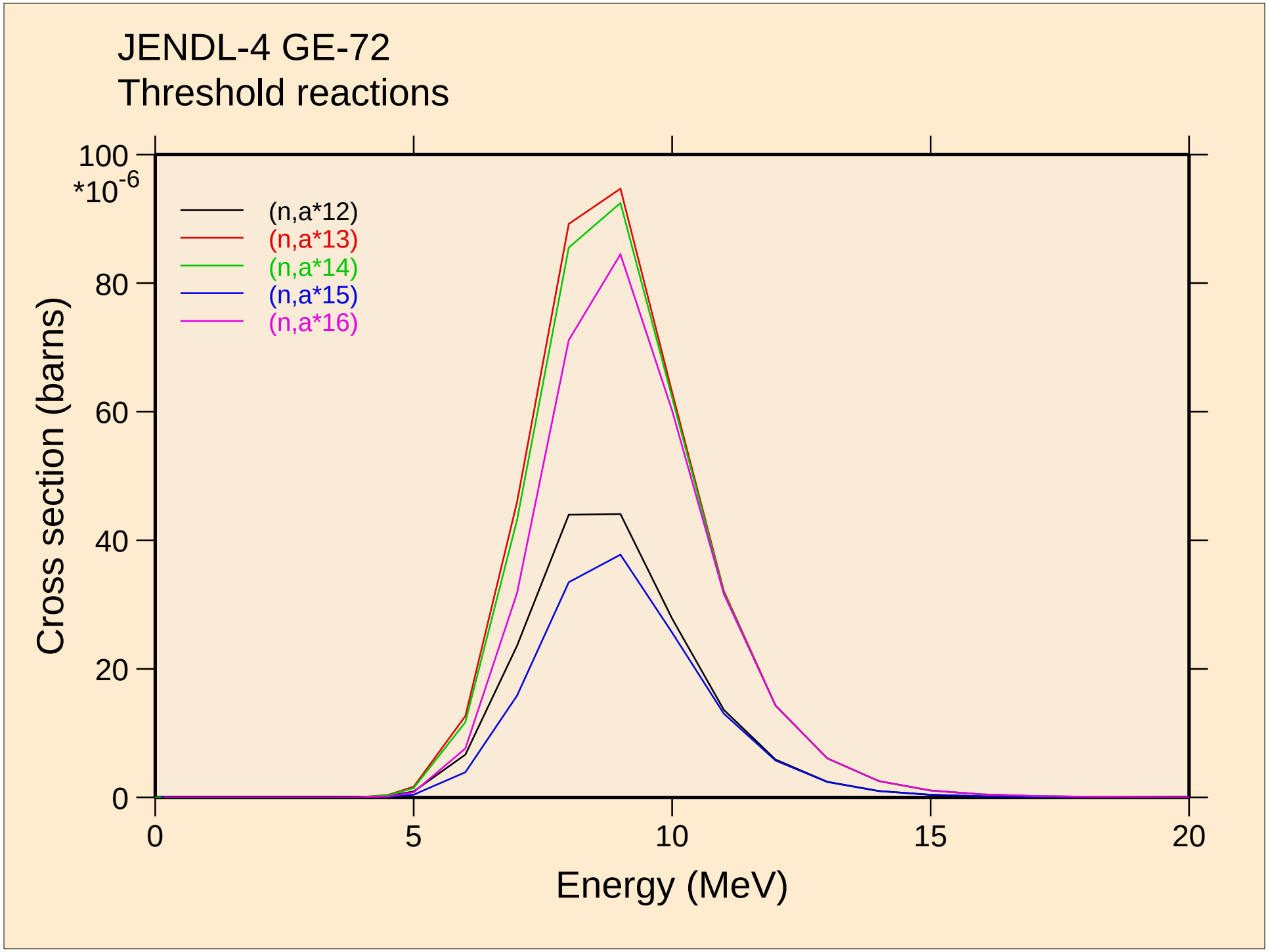

JENDL-4 GE-72
Threshold reactions
(n,p*3)
(n,p*4)
(n,p*5)
(n,p*6)
(n,p*7)
Cross section (barns)
*10-6
100
80
60
40
20
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

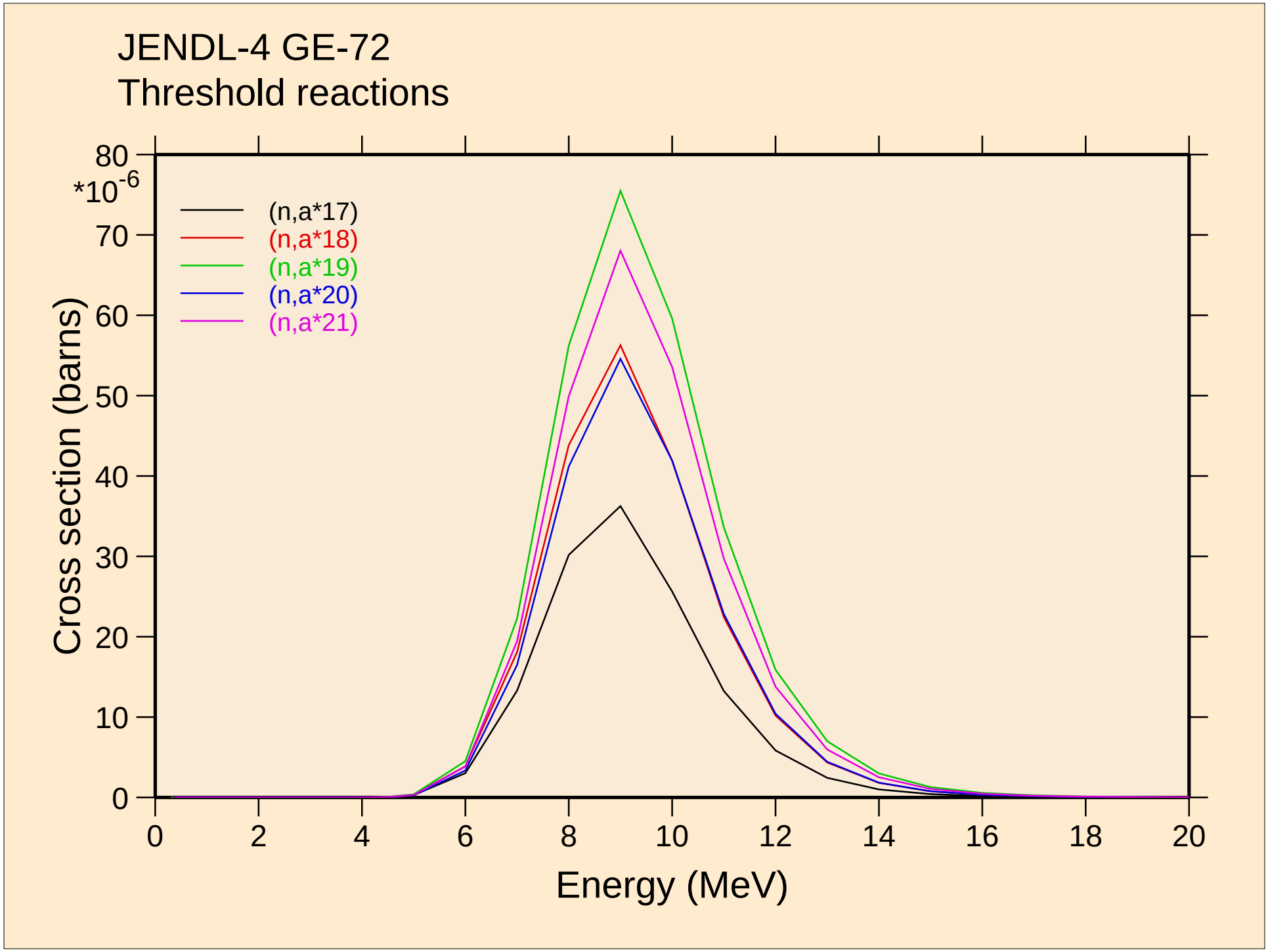

JENDL-4 GE-72
Threshold reactions
100
*10-6
80
60
40
20
0
Cross section (barns)
(n,p*8)
(n,p*9)
(n,p*10)
(n,p*11)
(n,p*12)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

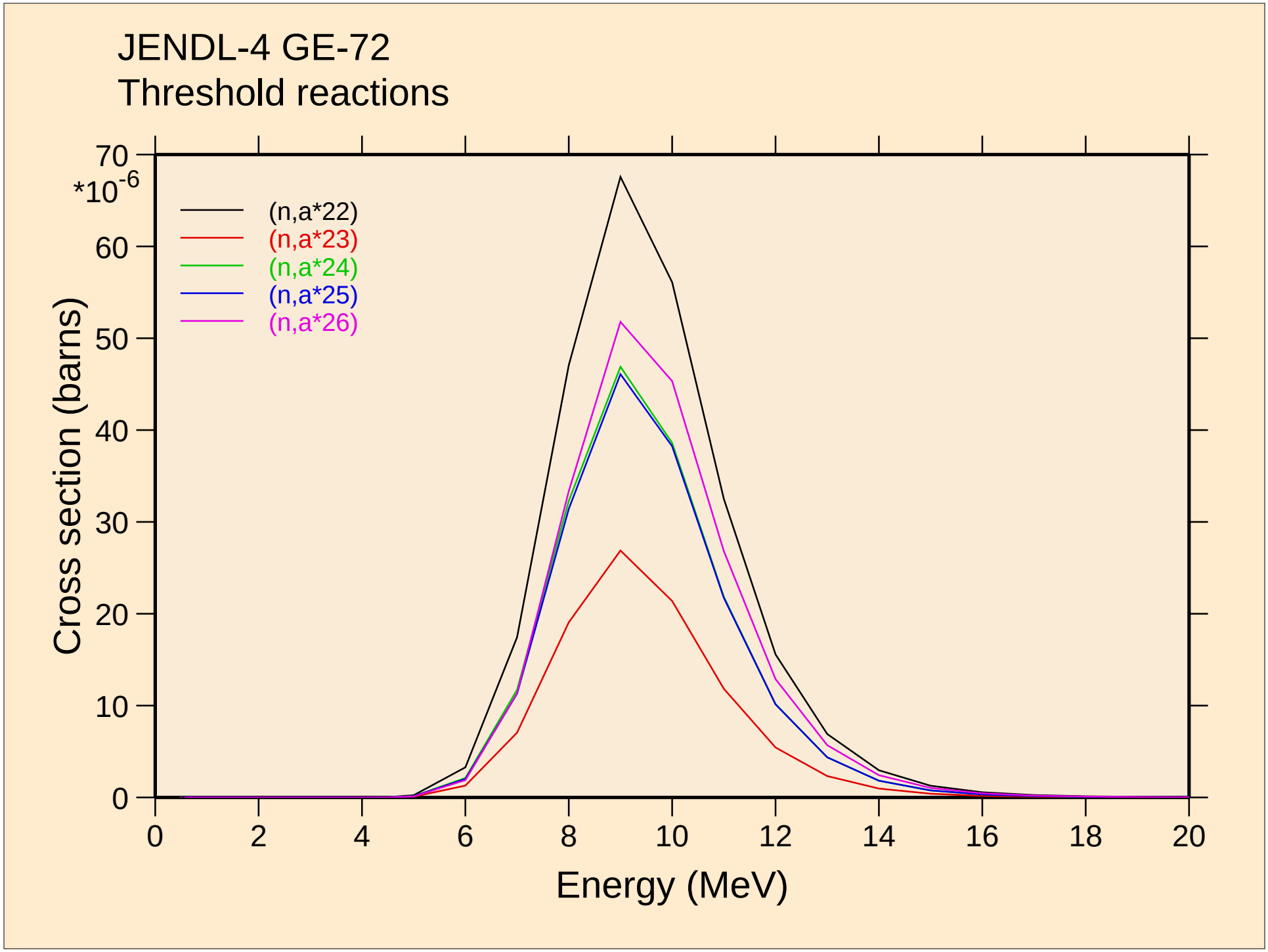

JENDL-4 GE-72
Threshold reactions
*10-3
(n,p*13)
(n,p*14)
(n,p*c)
(n,a*0)
(n,a*1)
Cross section (barns)
Energy (MeV)
0
5
10
15
20
25
30
35
0
5
10
15
20

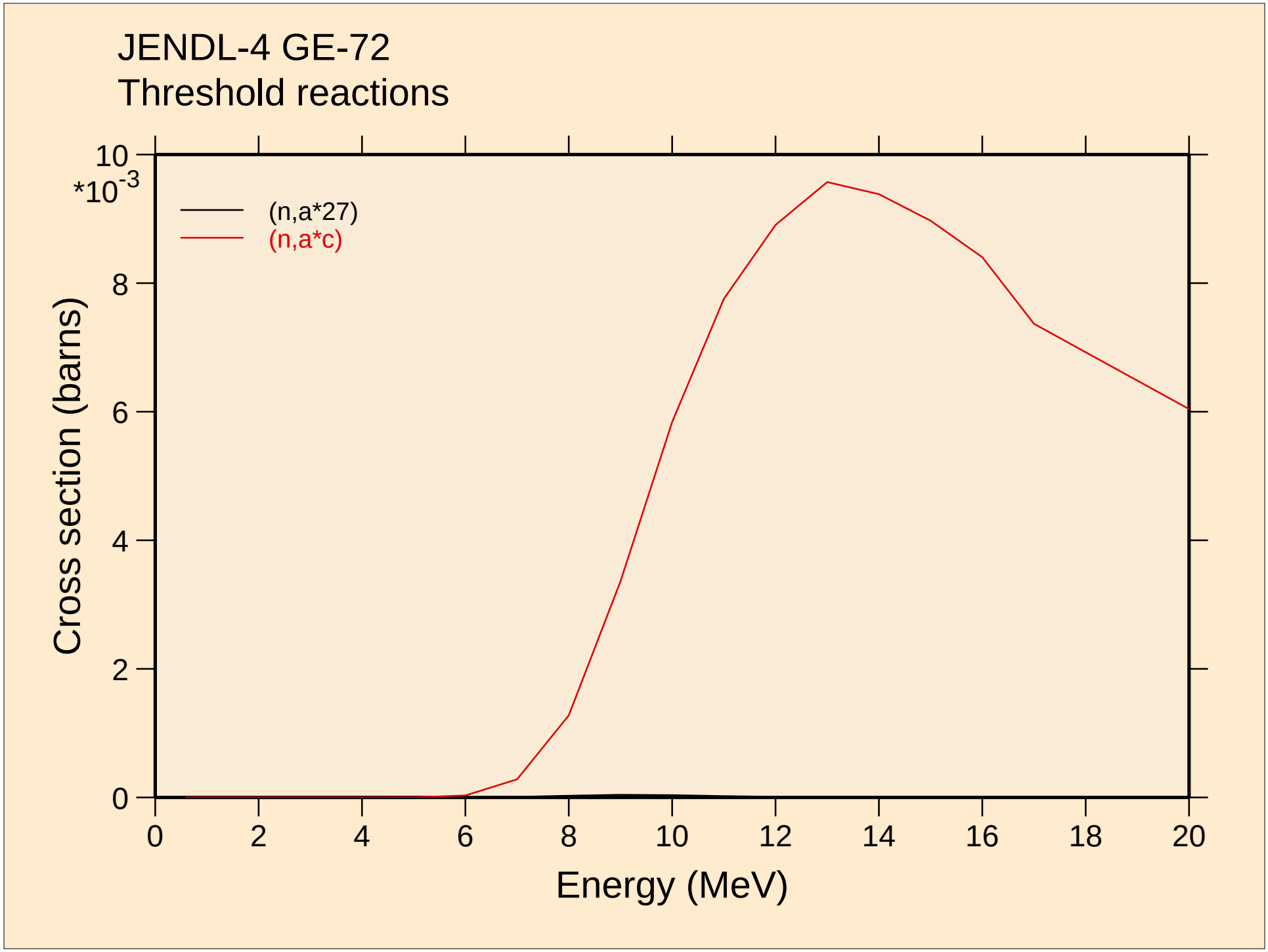

JENDL-4 GE-72
Threshold reactions
250
*10-6
200
150
100
50
0
Cross section (barns)
(n,a*2)
(n,a*3)
(n,a*4)
(n,a*5)
(n,a*6)
0
5
10
15
20
Energy (MeV)

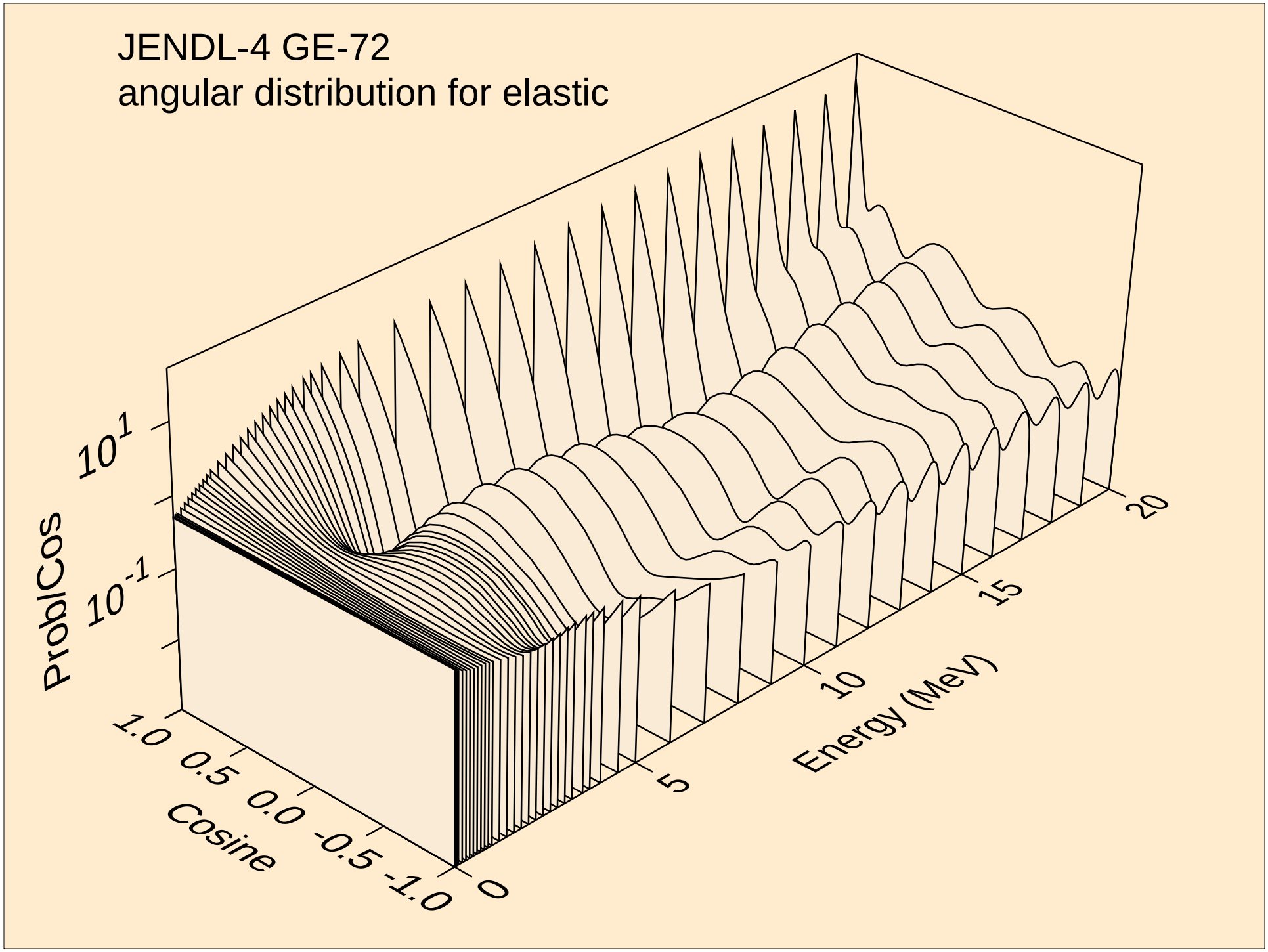

JENDL-4 GE-72
Threshold reactions
(n,a*7)
(n,a*8)
(n,a*9)
(n,a*10)
(n,a*11)
*10-6
140
120
100
80
60
40
20
0
Cross section (barns)
0
5
10
15
20
Energy (MeV)

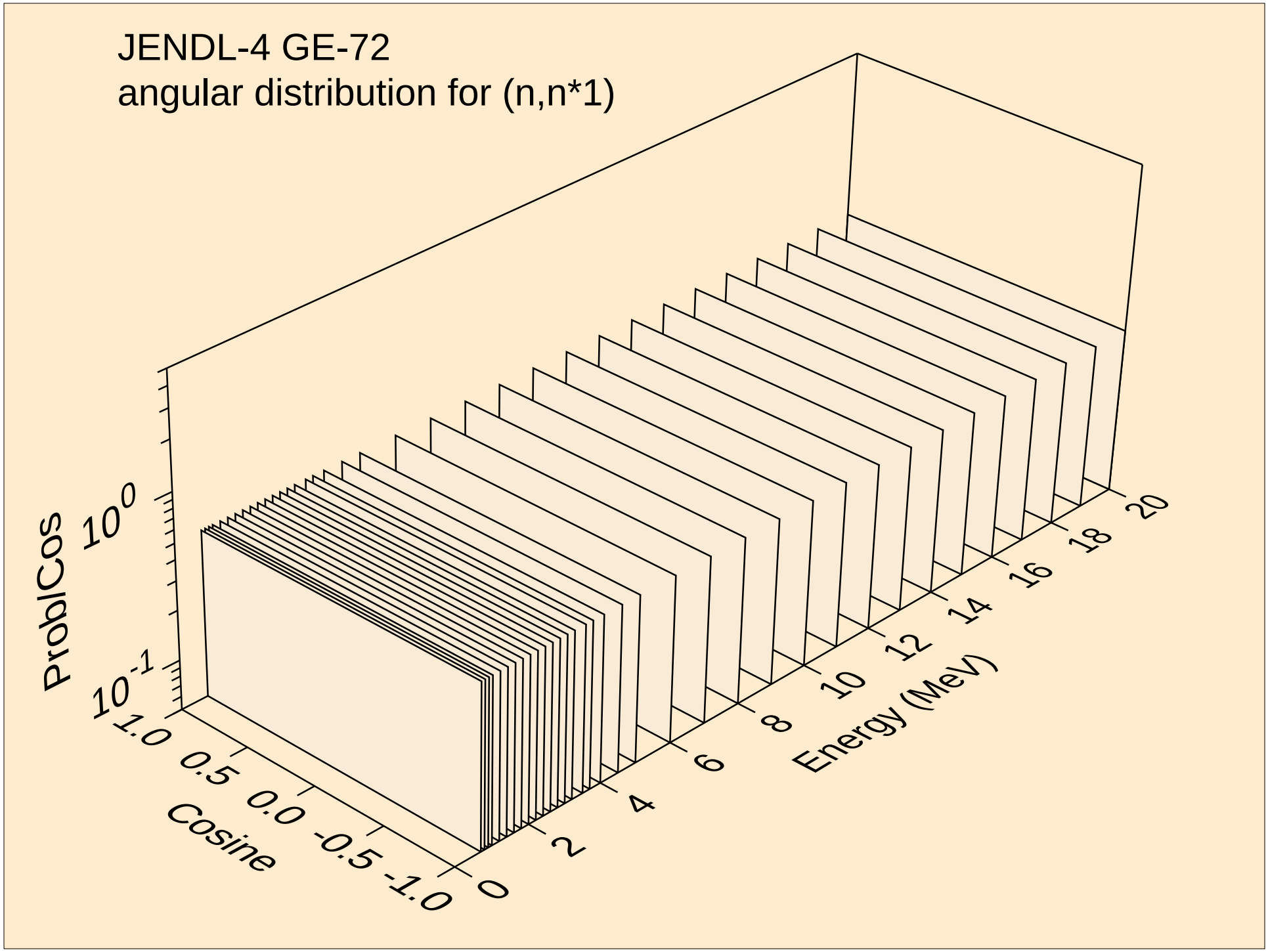

JENDL-4 GE-72
Threshold reactions
(n,a*12)
(n,a*13)
(n,a*14)
(n,a*15)
(n,a*16)
Cross section (barns)
*10-6
100
80
60
40
20
0
0
5
10
15
20
Energy (MeV)

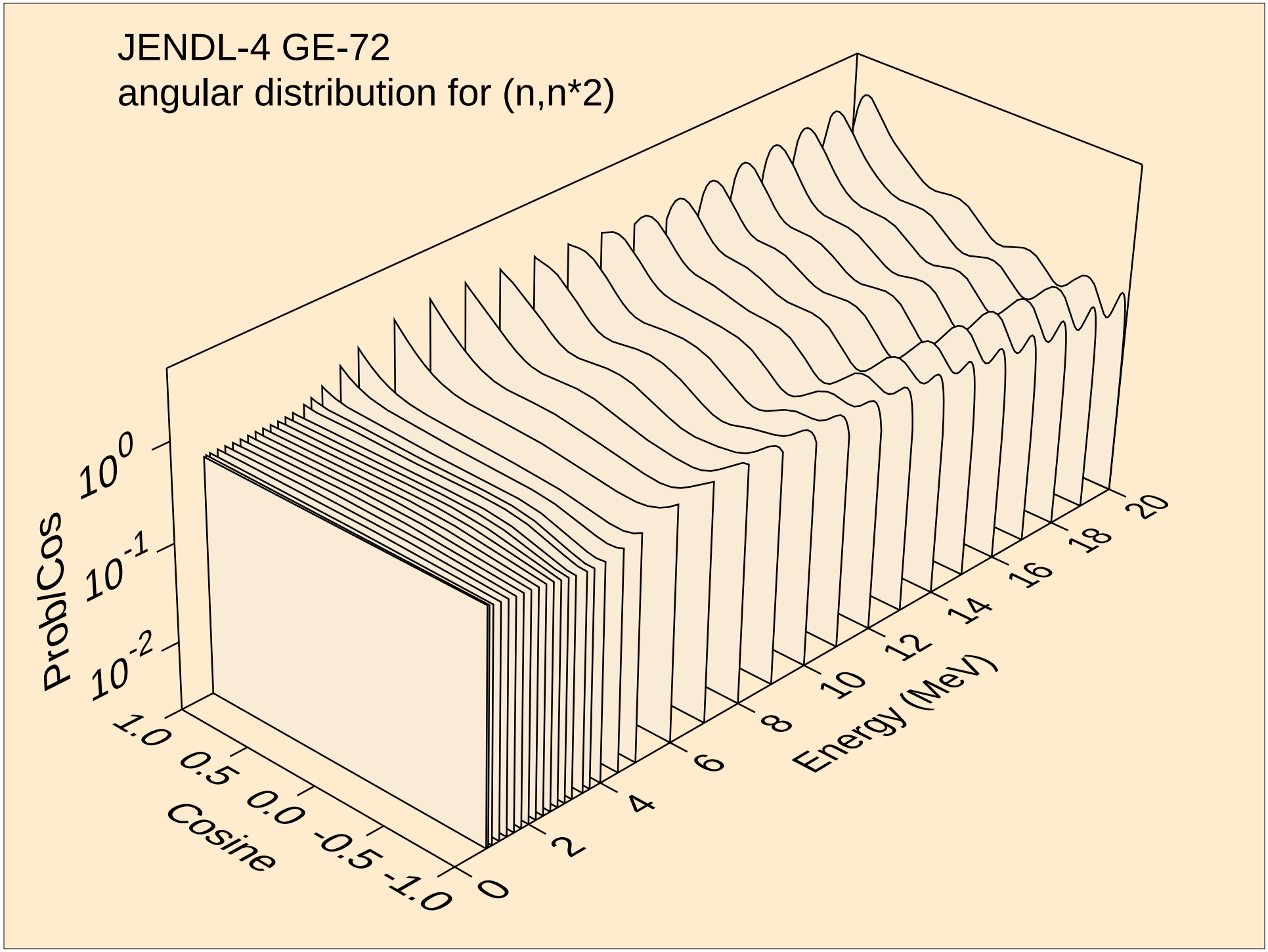

JENDL-4 GE-72
Threshold reactions
*10-6
(n,a*17)
(n,a*18)
(n,a*19)
(n,a*20)
(n,a*21)
Cross section (barns)
Energy (MeV)
0
10
20
30
40
50
60
70
80
0
2
4
6
8
10
12
14
16
18
20

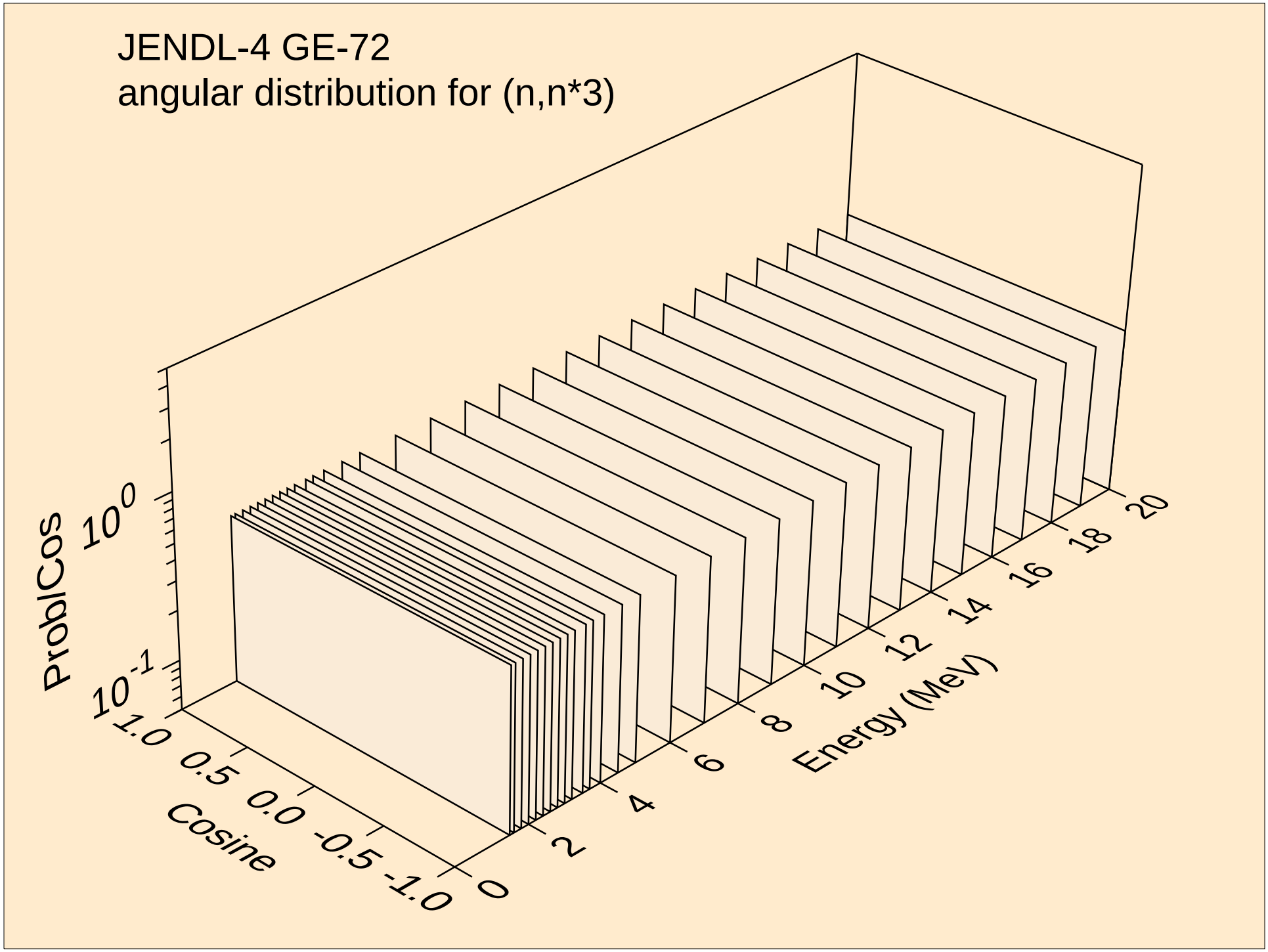

JENDL-4 GE-72
Threshold reactions
*10-6
(n,a*22)
(n,a*23)
(n,a*24)
(n,a*25)
(n,a*26)
Cross section (barns)
Energy (MeV)
0
10
20
30
40
50
60
70
0
2
4
6
8
10
12
14
16
18
20

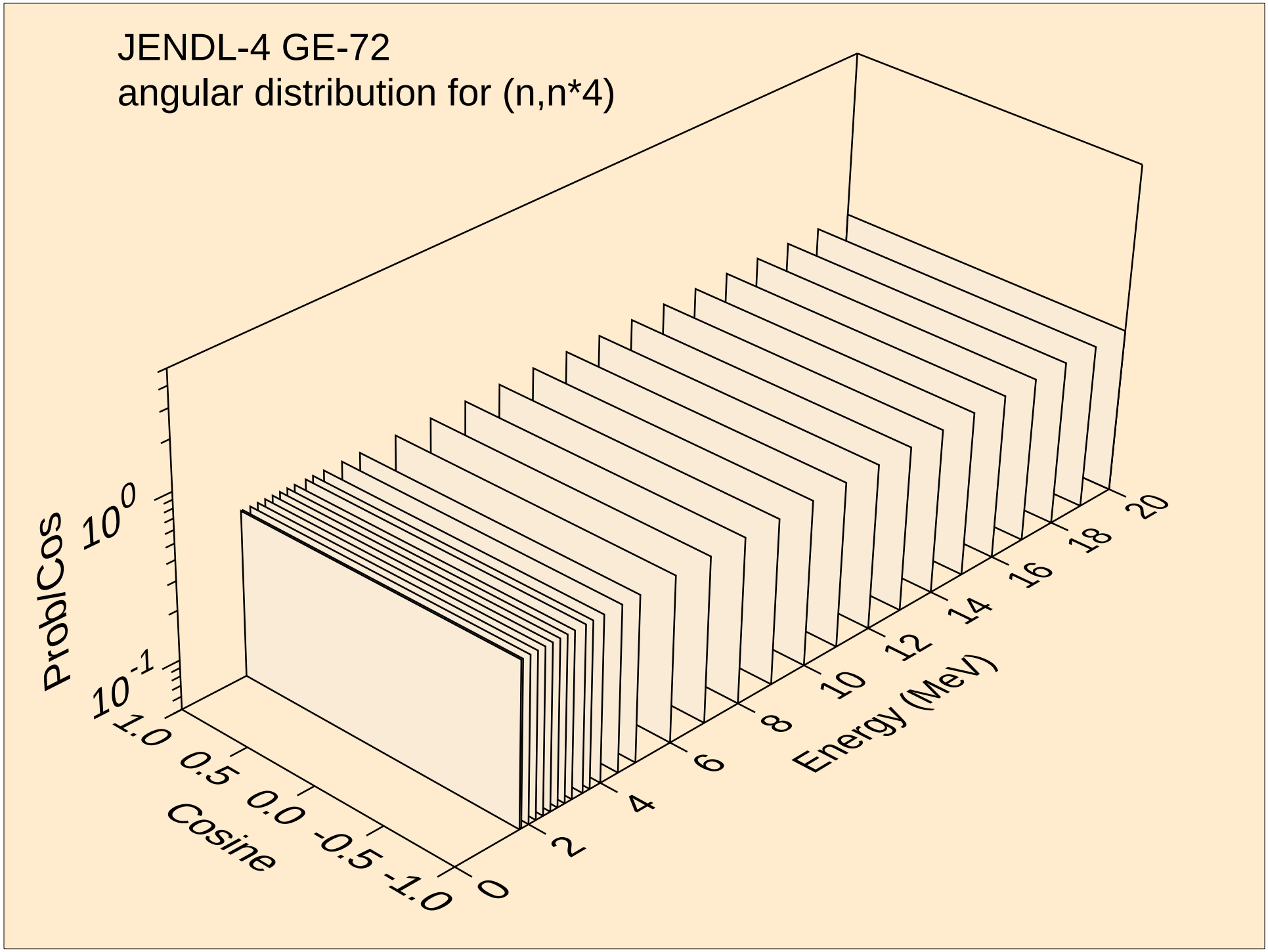

JENDL-4 GE-72
Threshold reactions
(n,a*27)
(n,a*c)
Cross section (barns)
*10-3
10
8
6
4
2
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

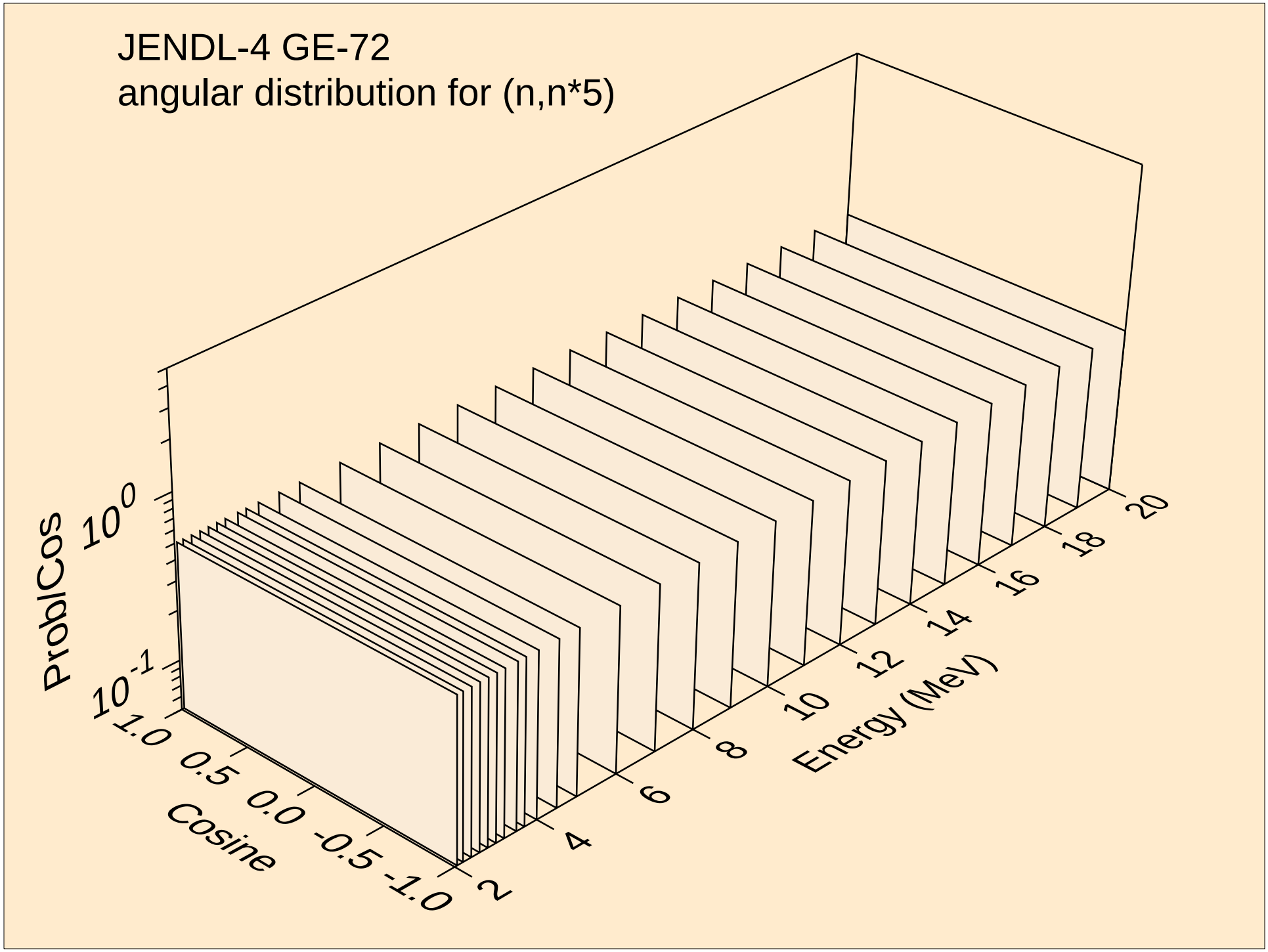

JENDL-4 GE-72
angular distribution for elastic
ProblCos
10^{1}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

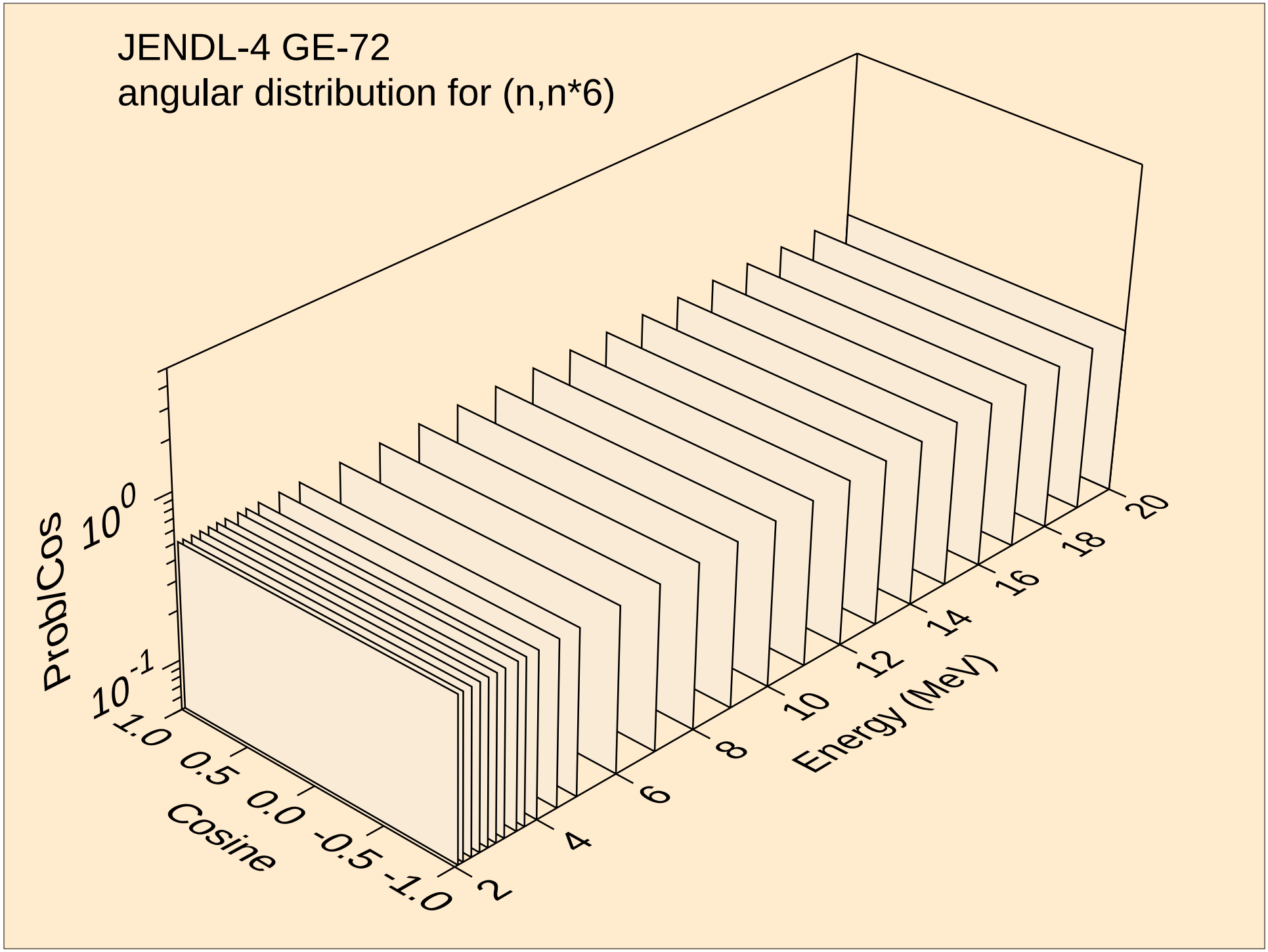

JENDL-4 GE-72
angular distribution for (n,n*1)
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

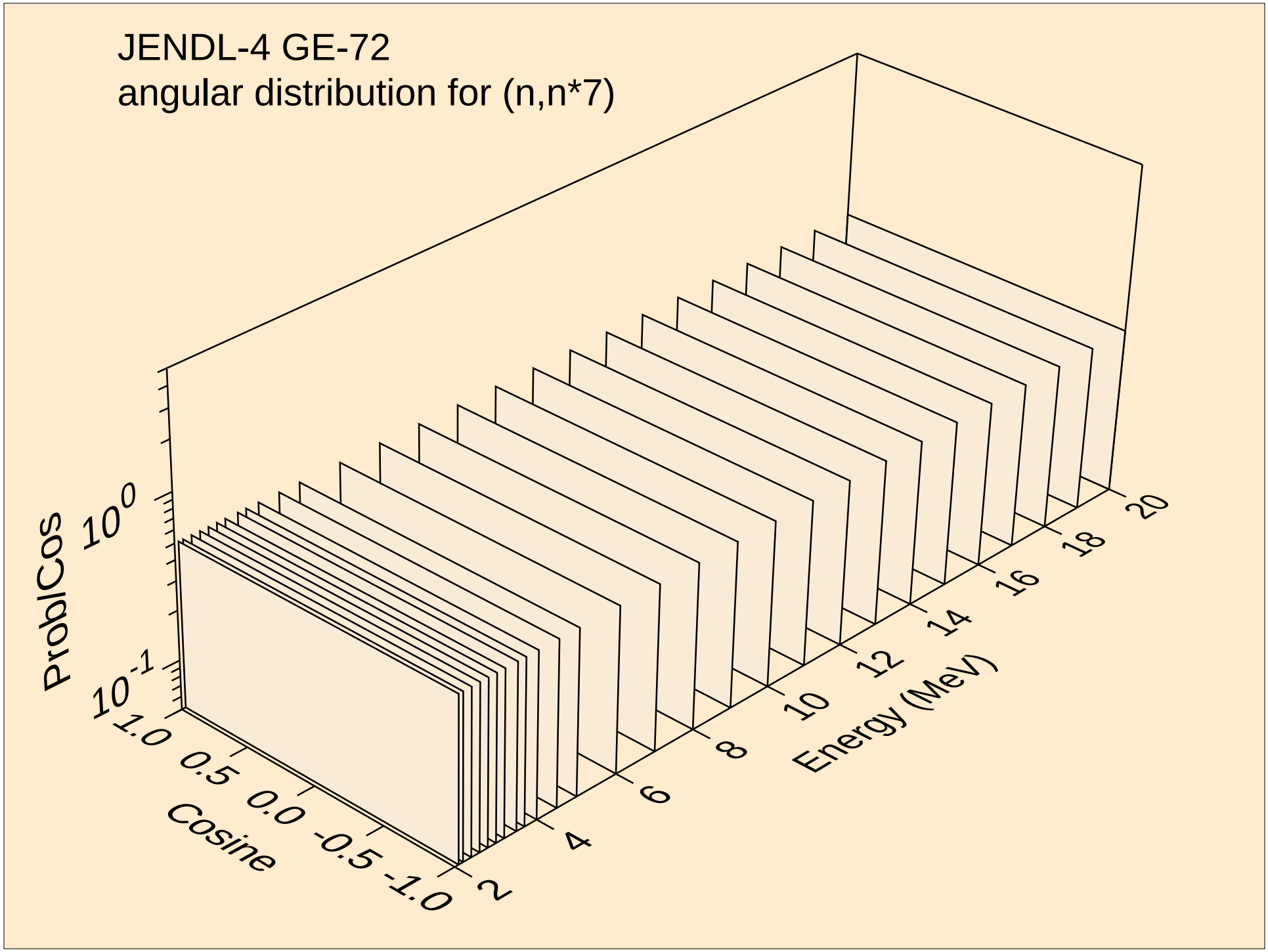

JENDL-4 GE-72
angular distribution for (n,n*2)
ProbCos
10^{0}
10^{-1}
10^{-2}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

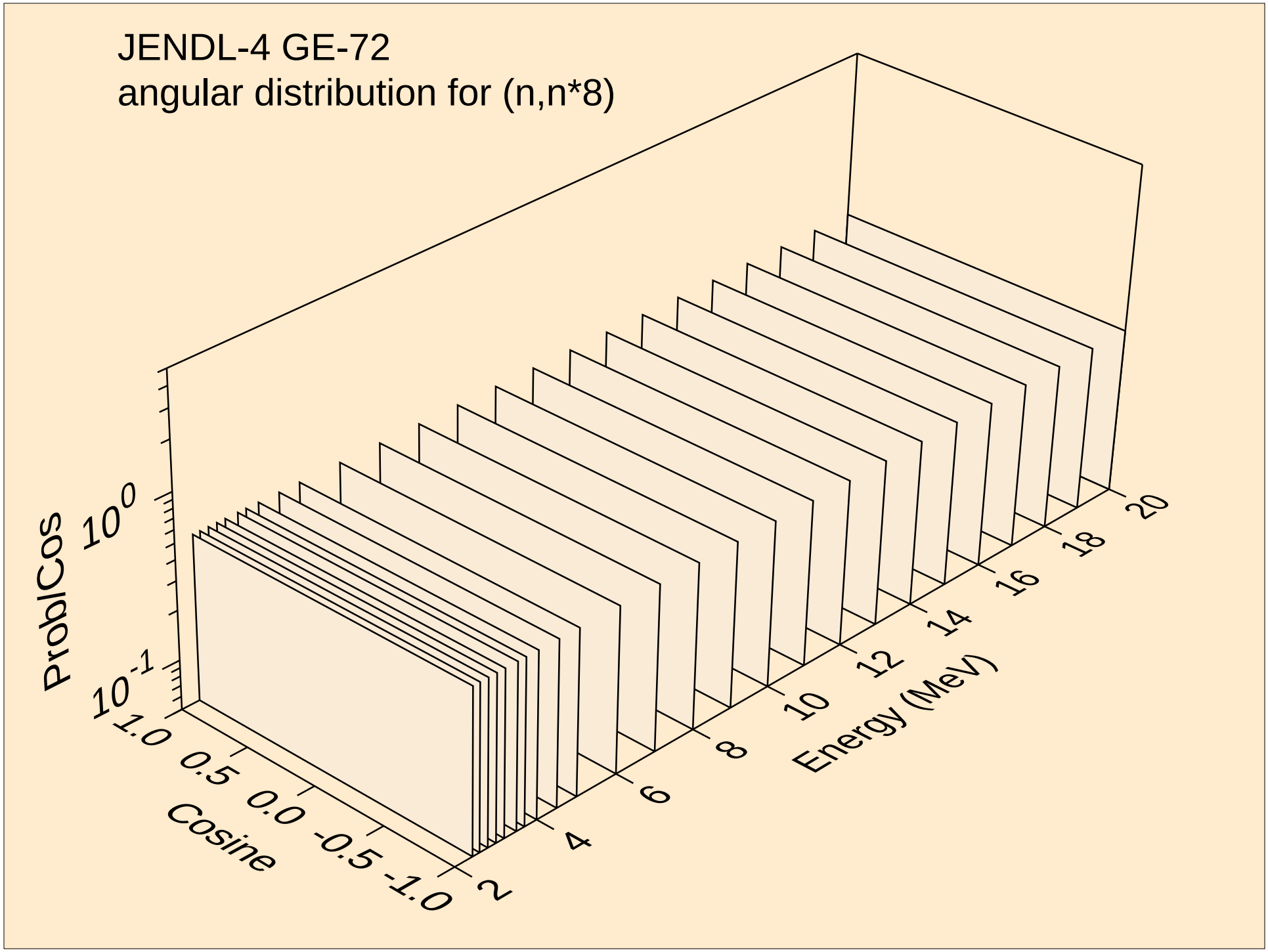

JENDL-4 GE-72
angular distribution for (n,n*3)
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

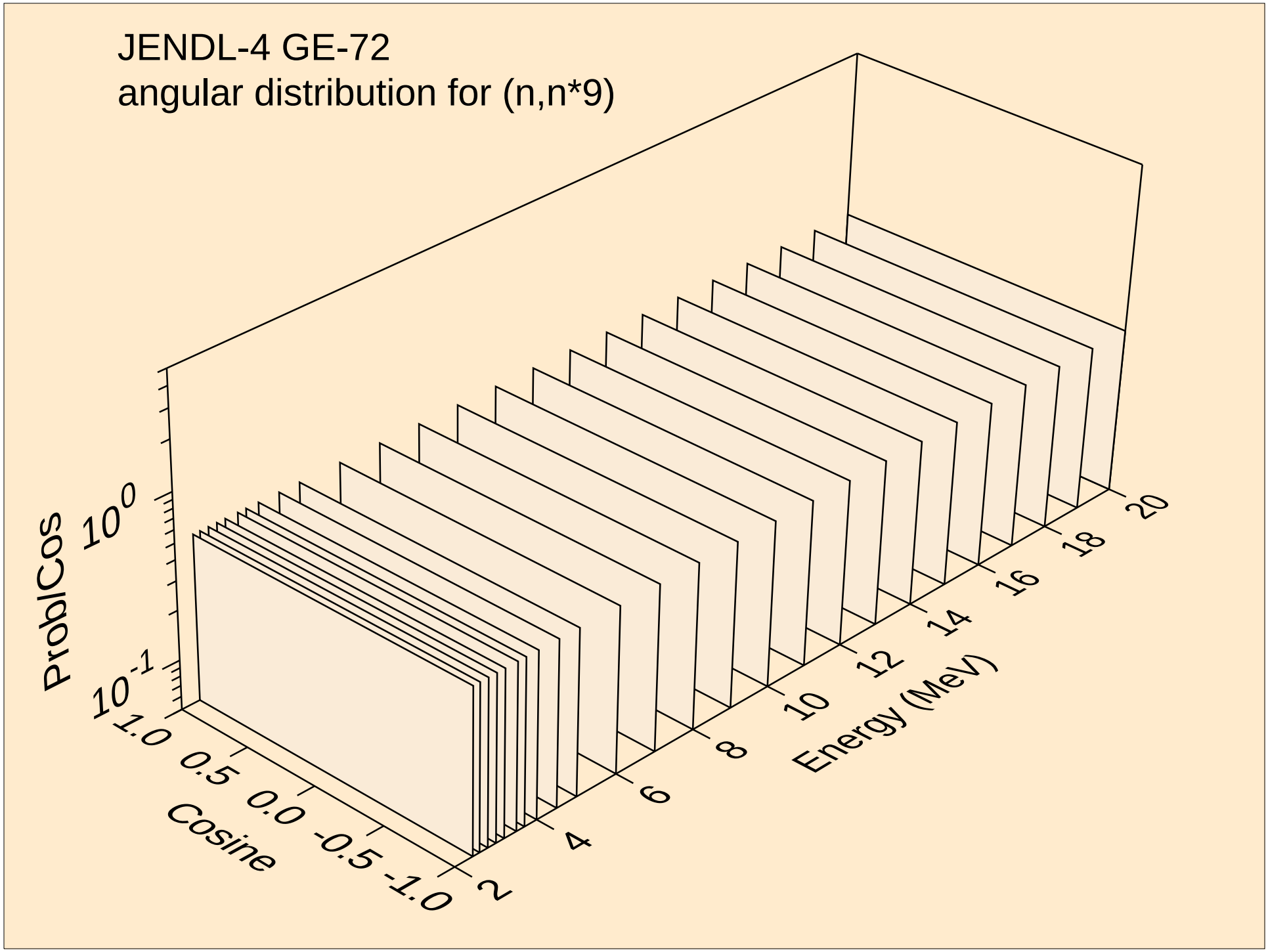

JENDL-4 GE-72
angular distribution for (n,n*4)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

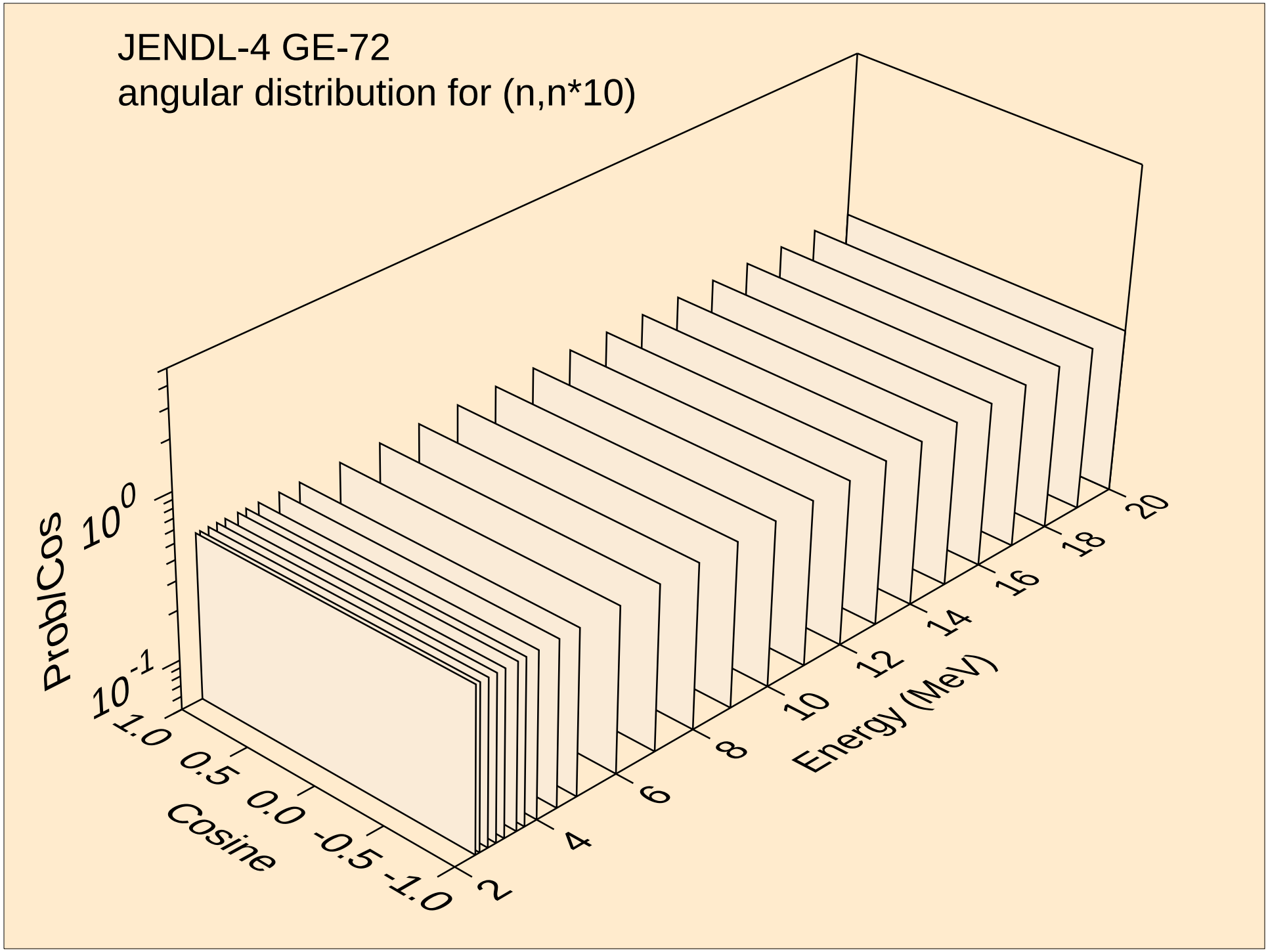

JENDL-4 GE-72
angular distribution for (n,n*5)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

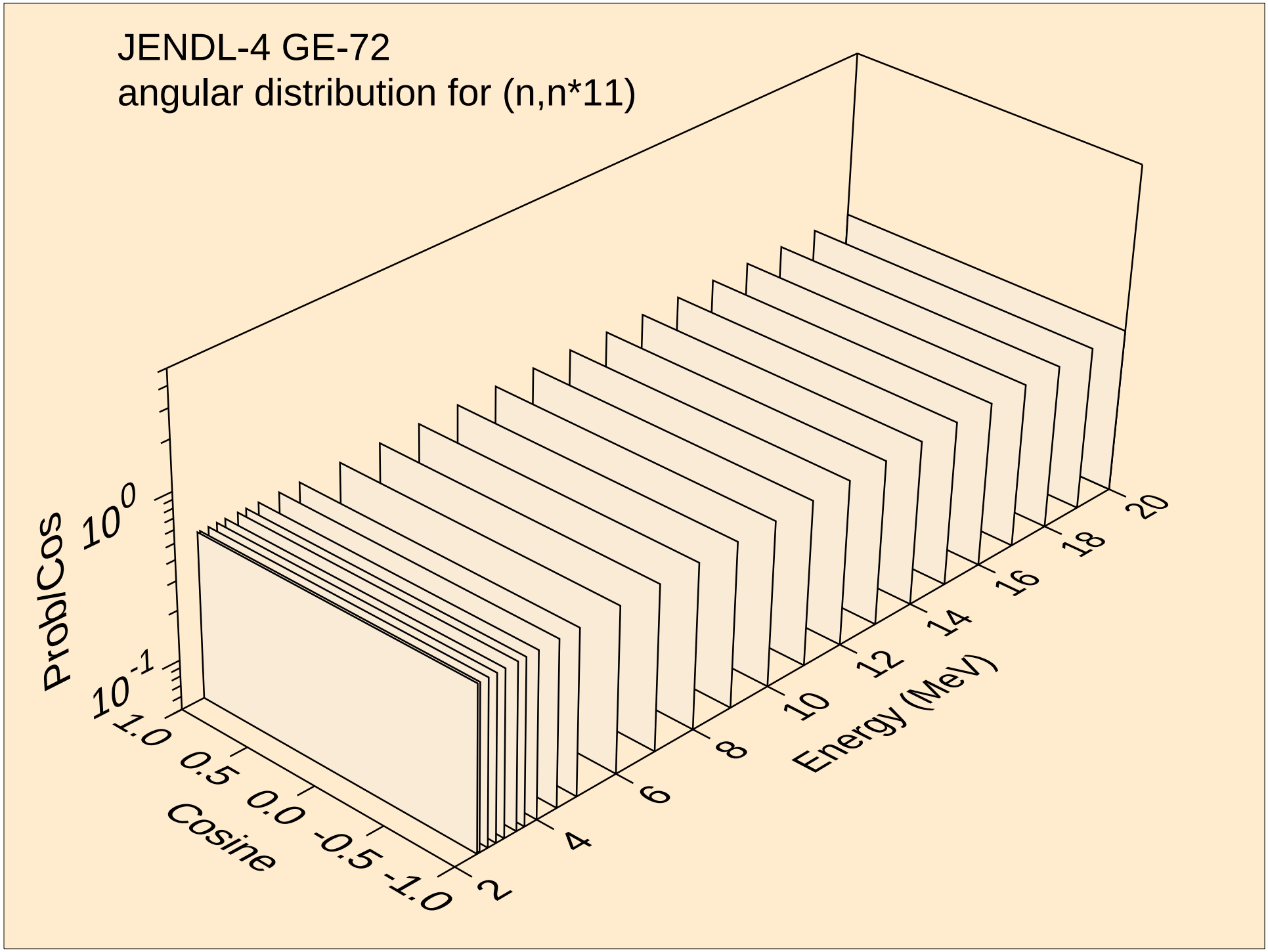

JENDL-4 GE-72
angular distribution for (n,n*6)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

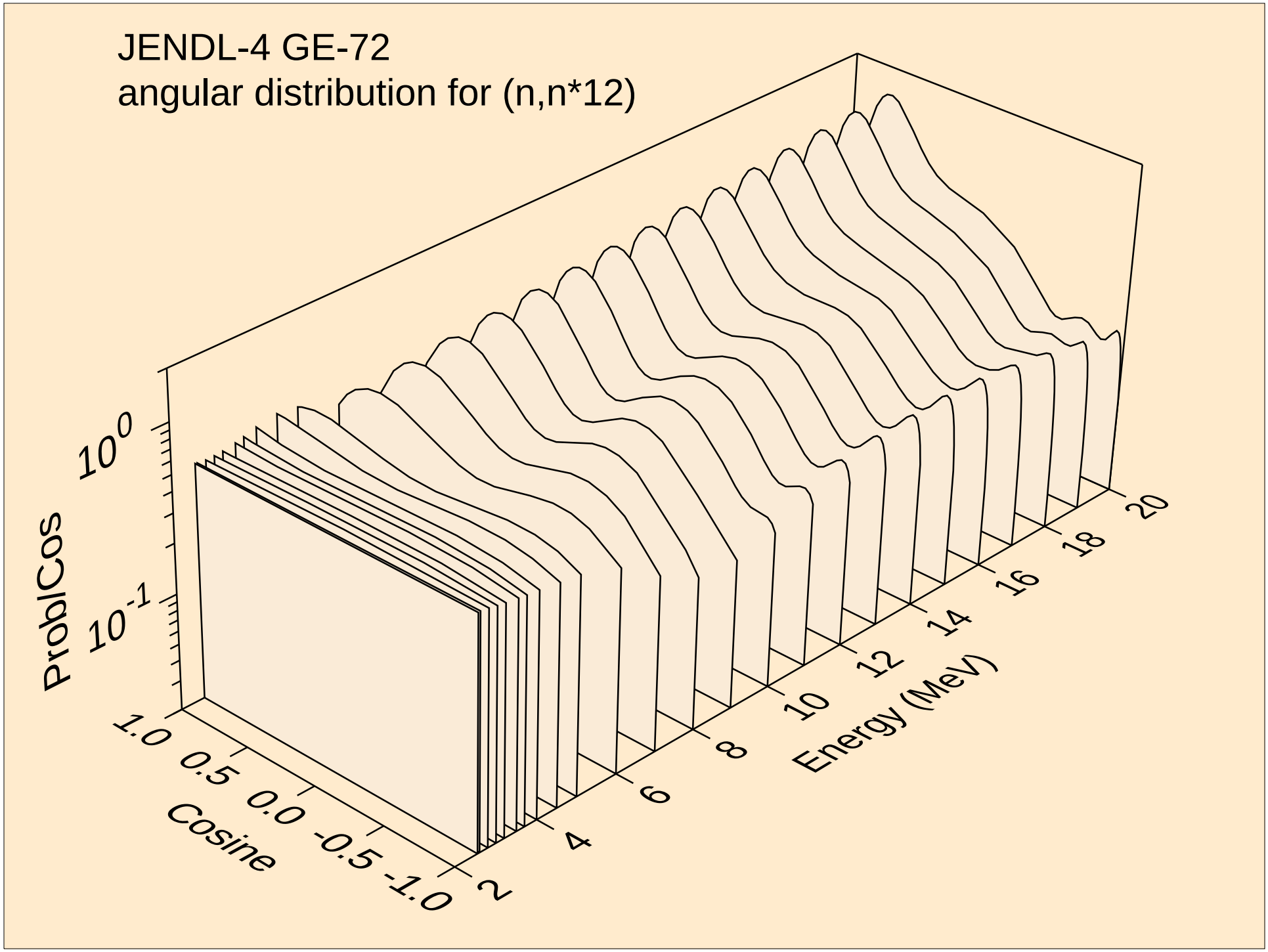

JENDL-4 GE-72
angular distribution for (n,n*7)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

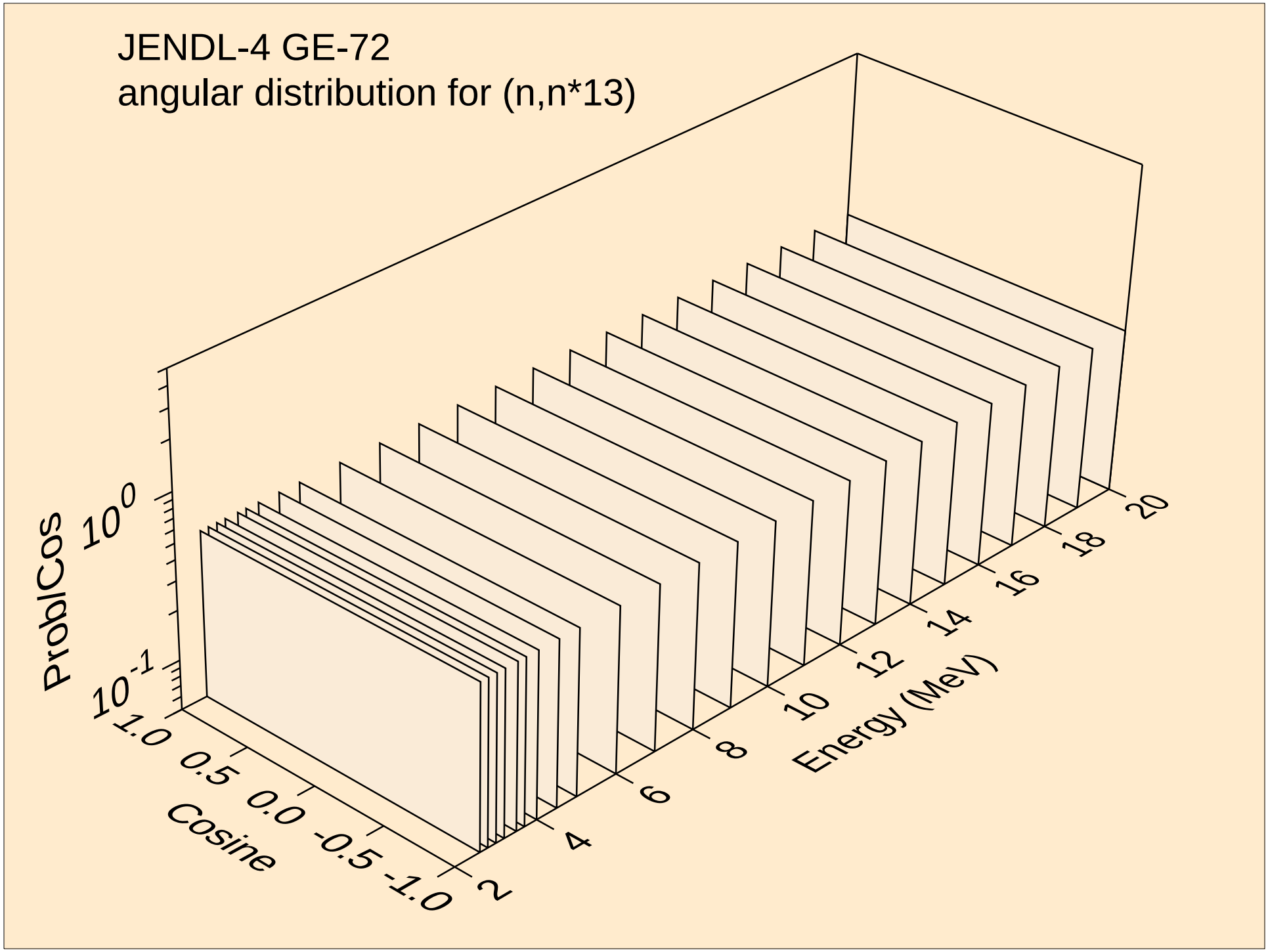

JENDL-4 GE-72
angular distribution for (n,n*8)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

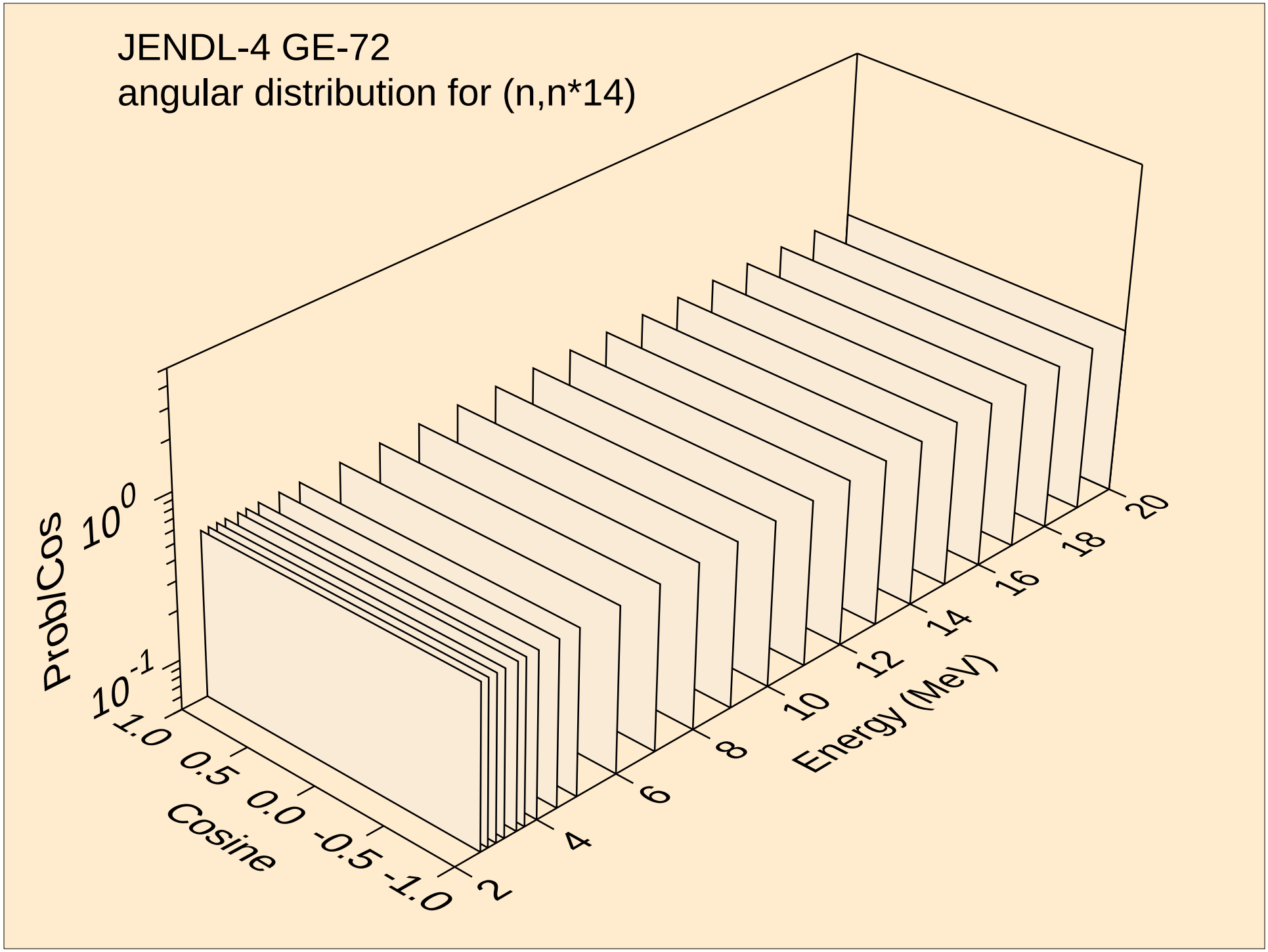

JENDL-4 GE-72
angular distribution for (n,n*9)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

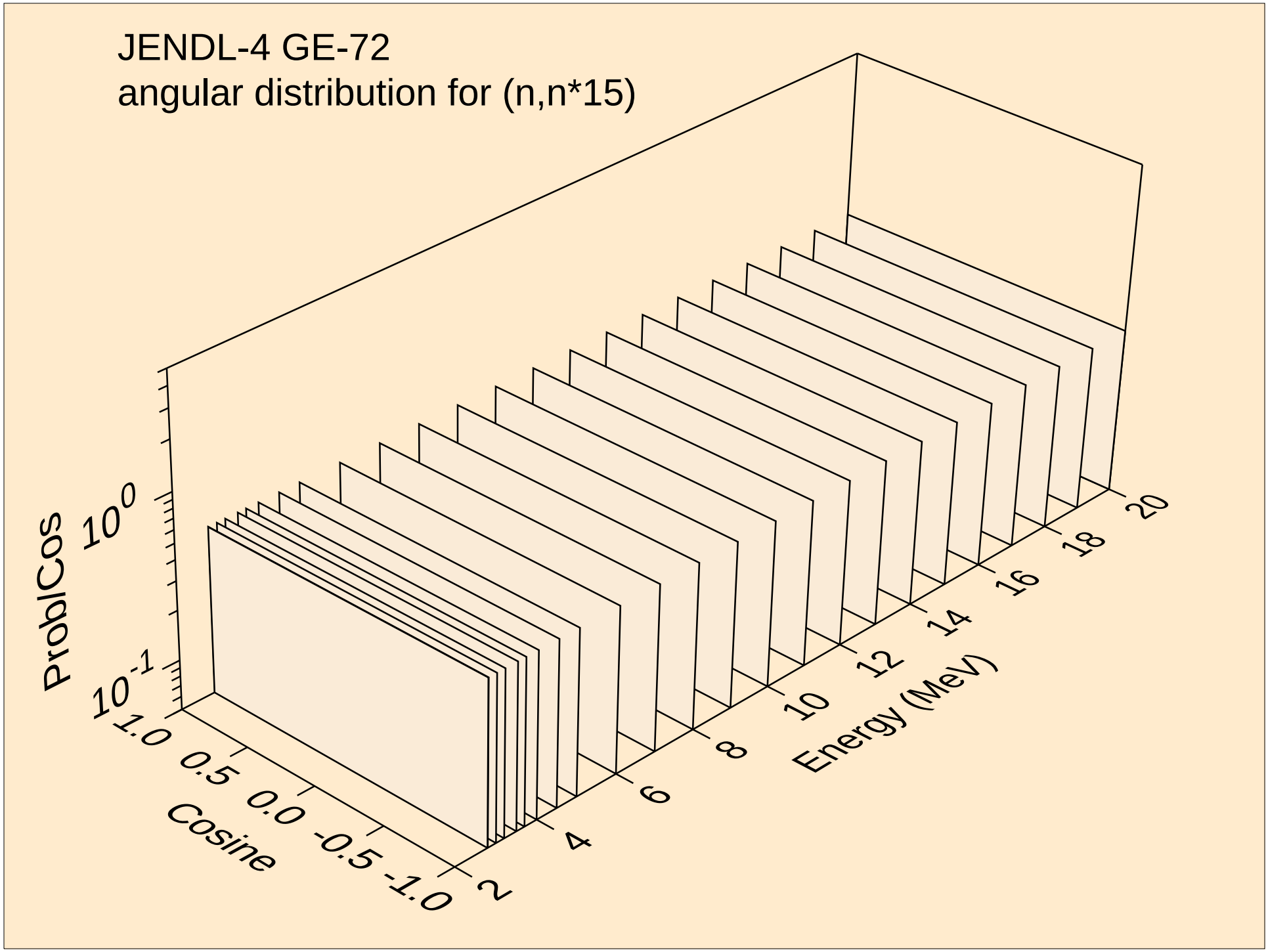

JENDL-4 GE-72
angular distribution for (n,n*10)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

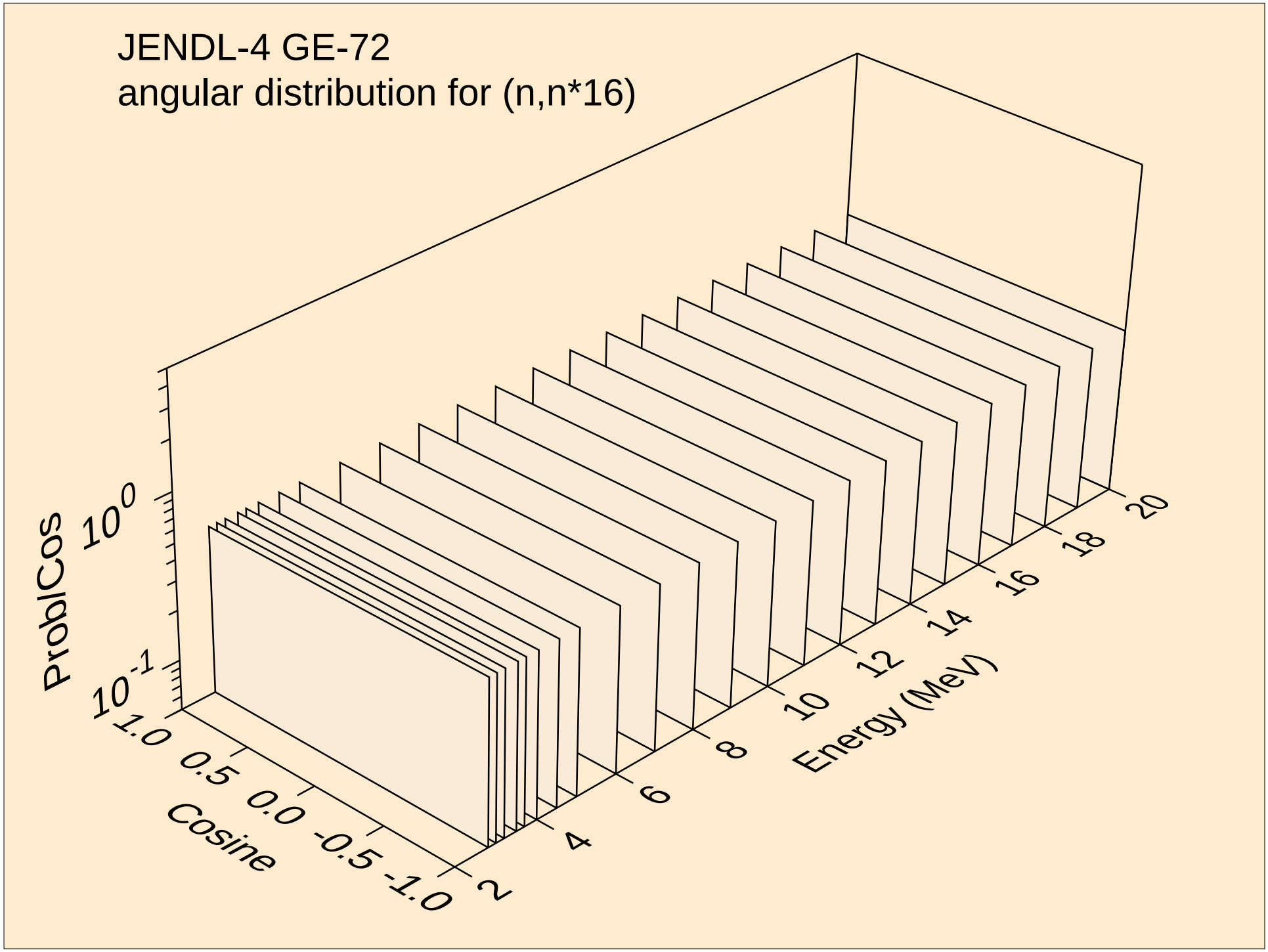

JENDL-4 GE-72
angular distribution for (n,n*11)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

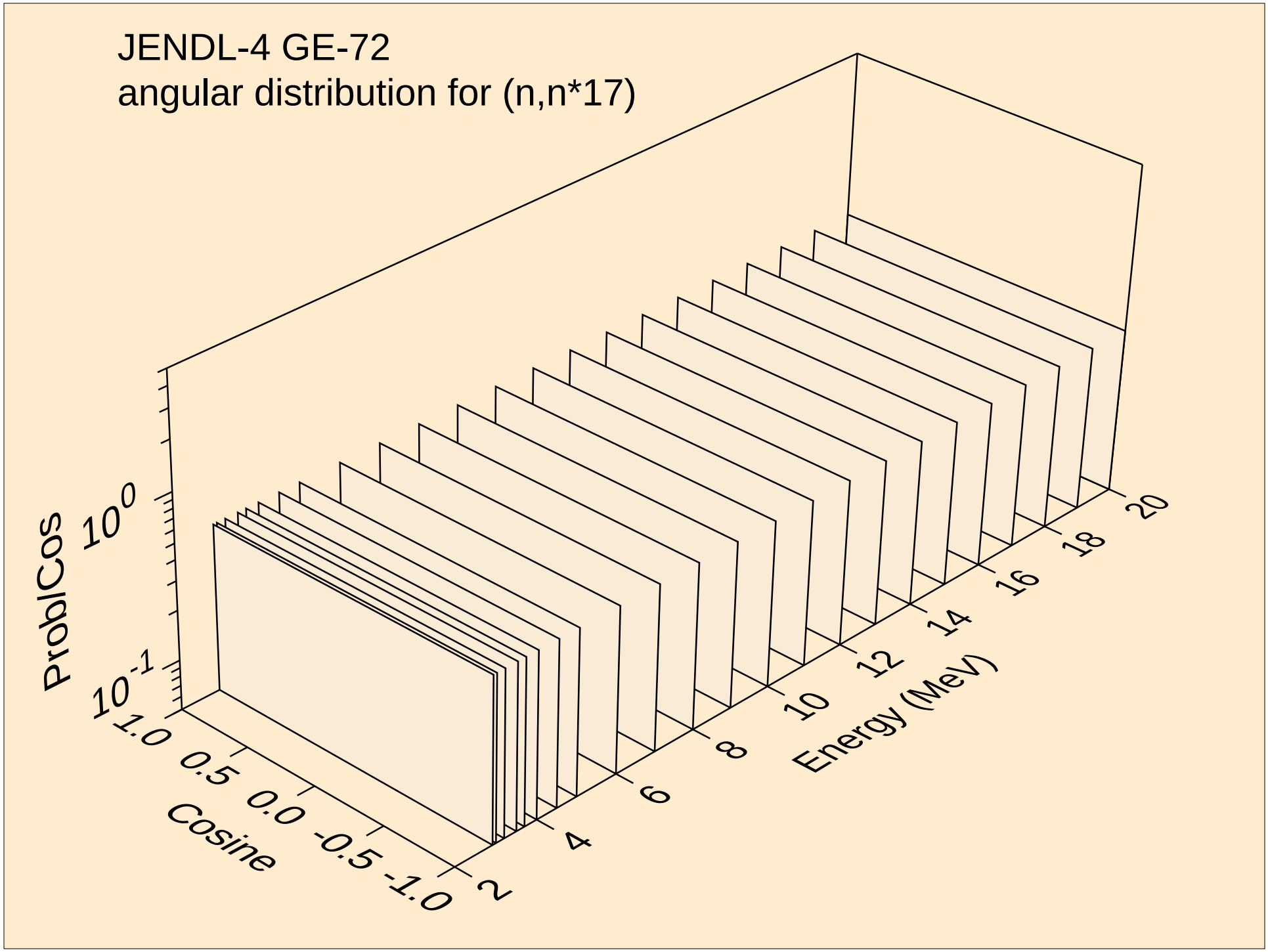

JENDL-4 GE-72
angular distribution for (n,n*12)
ProbCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

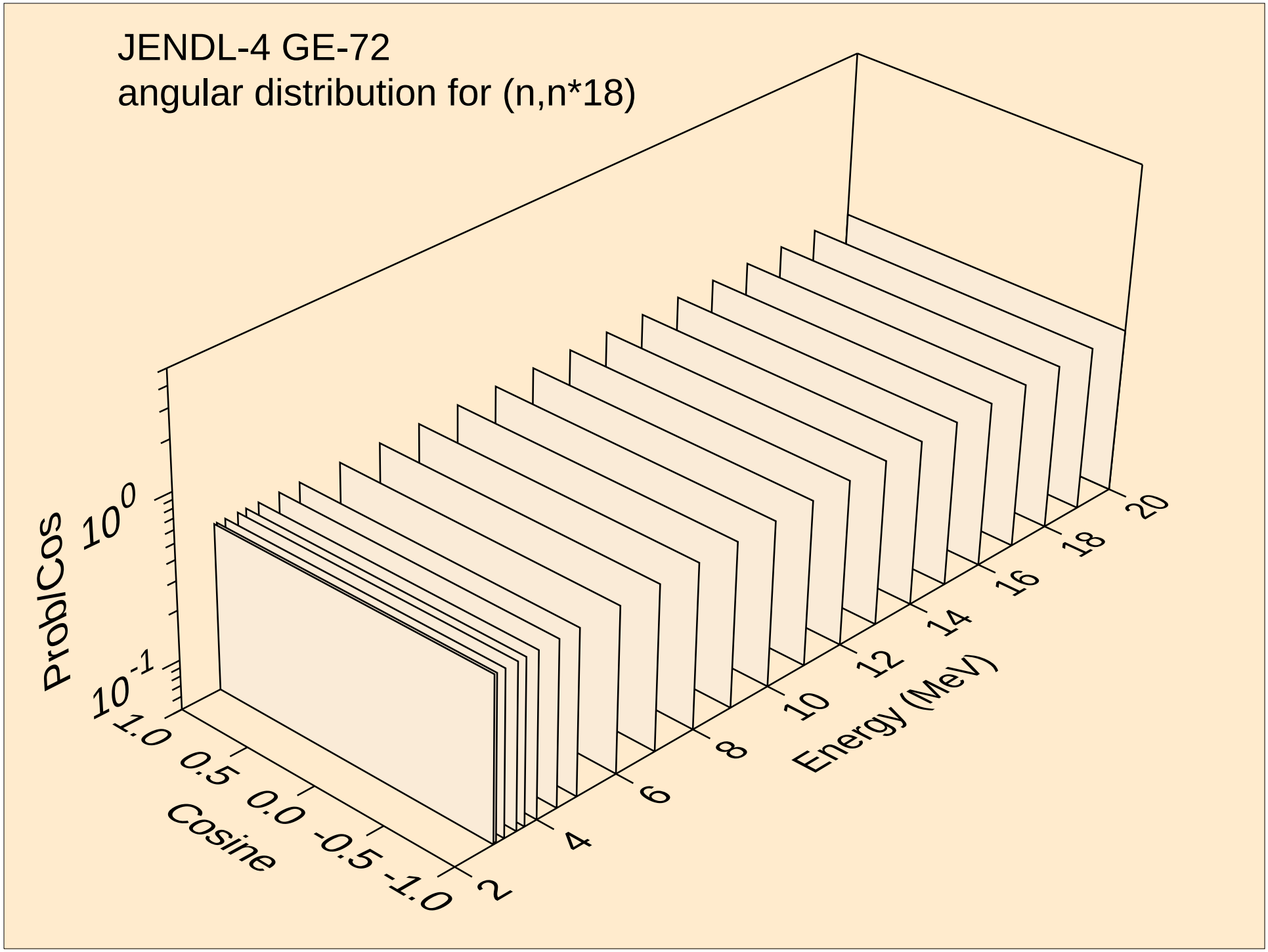

JENDL-4 GE-72
angular distribution for (n,n*13)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

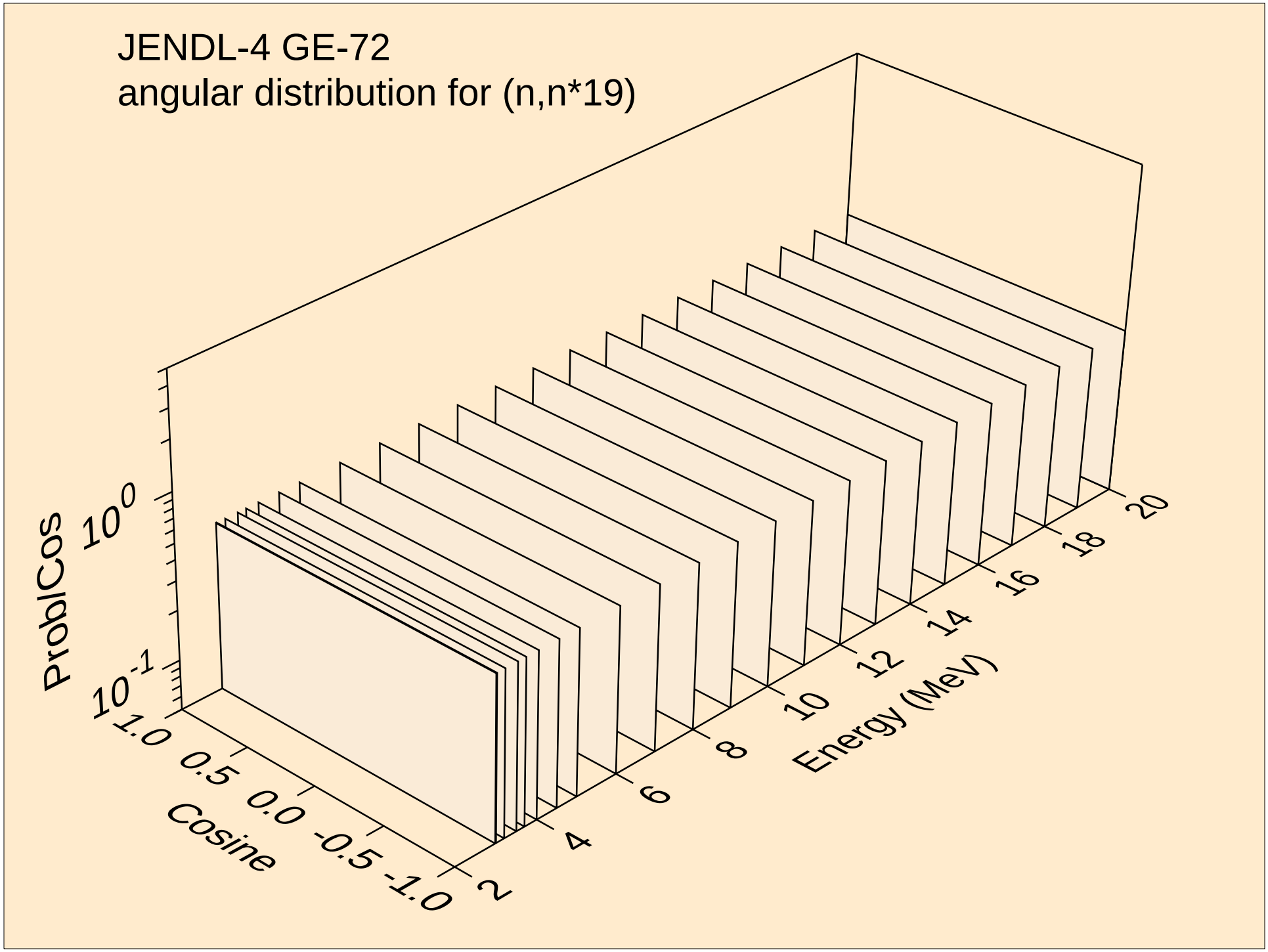

JENDL-4 GE-72
angular distribution for (n,n*14)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

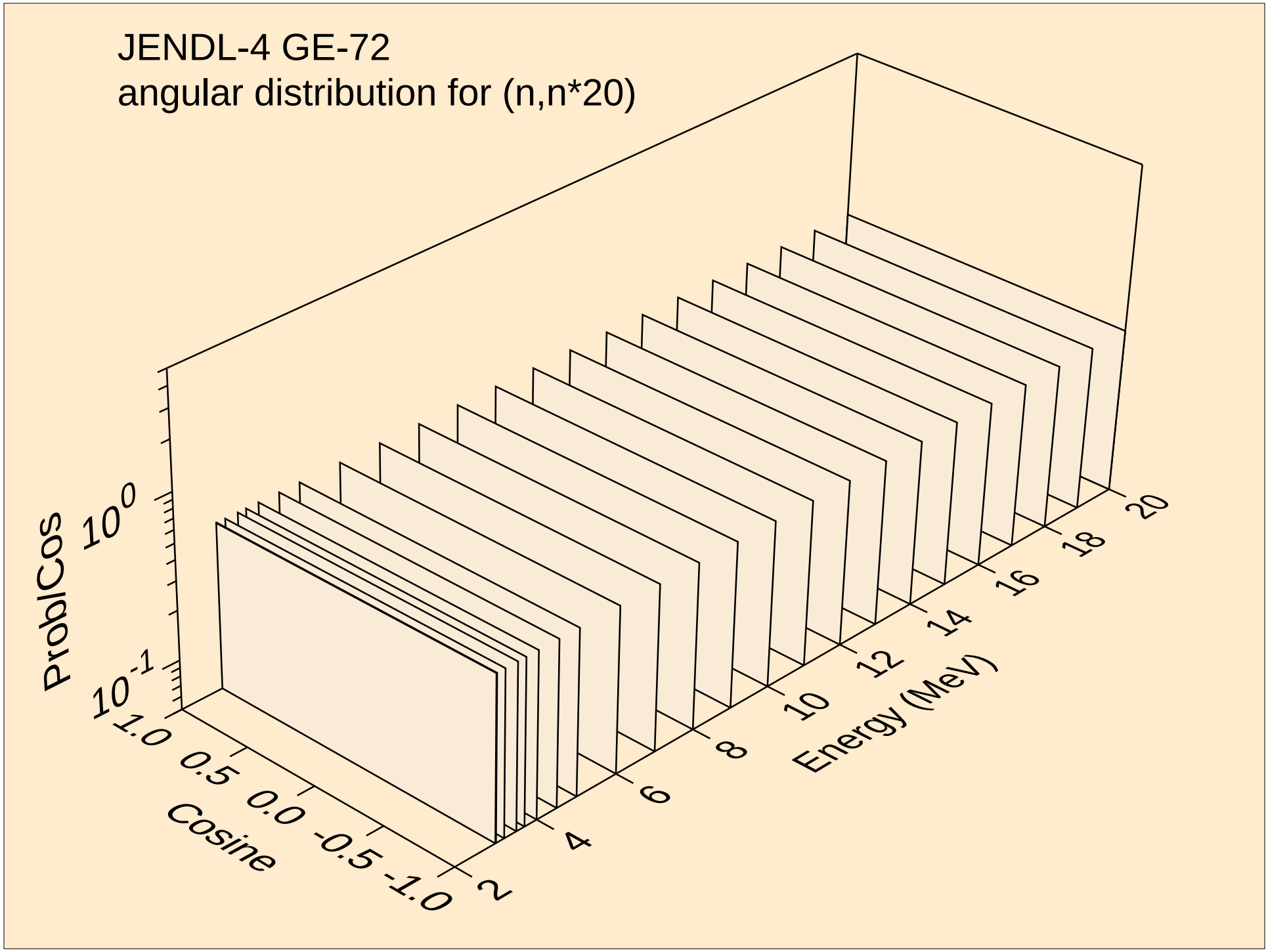

JENDL-4 GE-72
angular distribution for (n,n*15)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

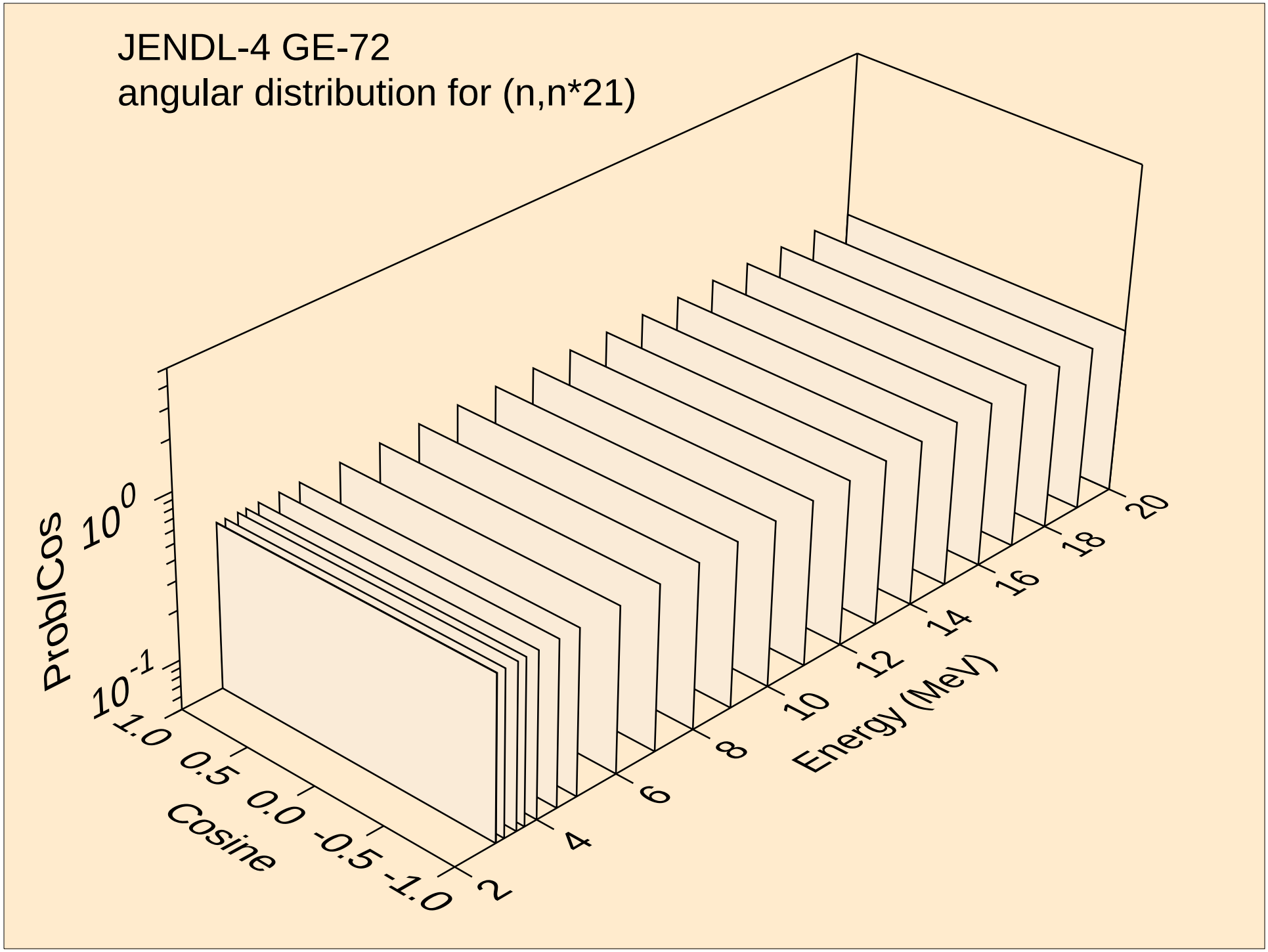

JENDL-4 GE-72
angular distribution for (n,n*16)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

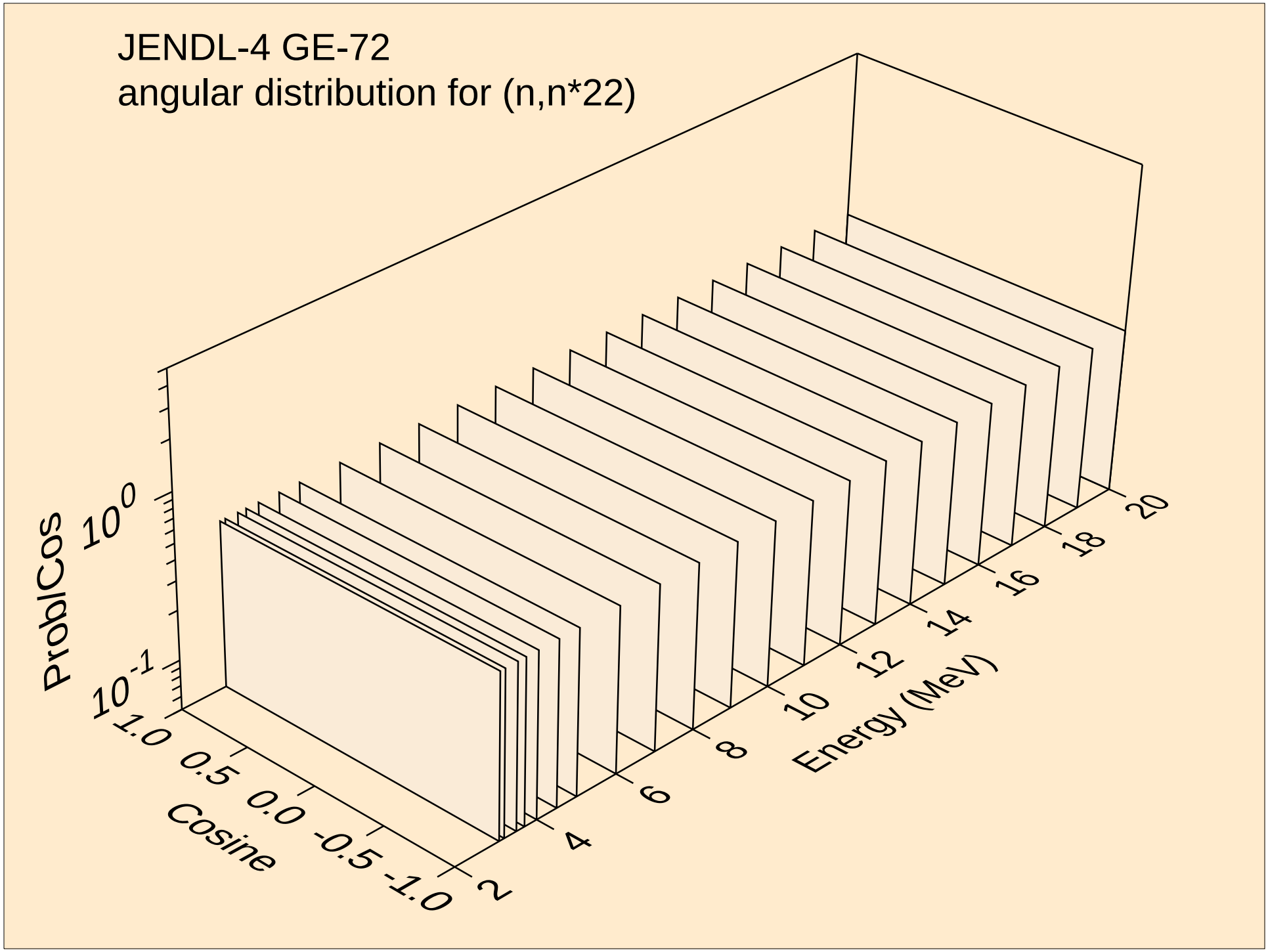

JENDL-4 GE-72
angular distribution for (n,n*17)
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

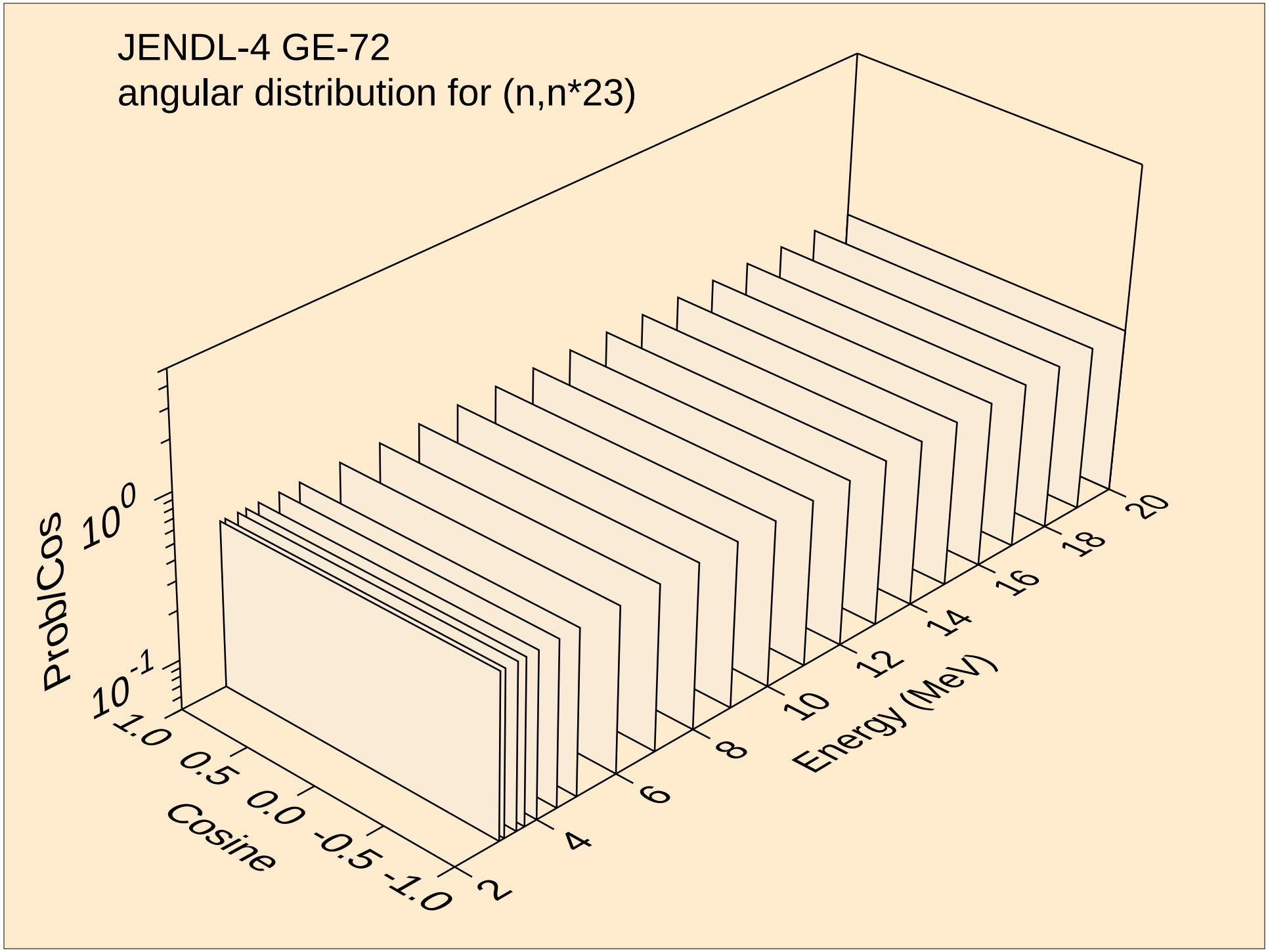

JENDL-4 GE-72
angular distribution for (n,n*18)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

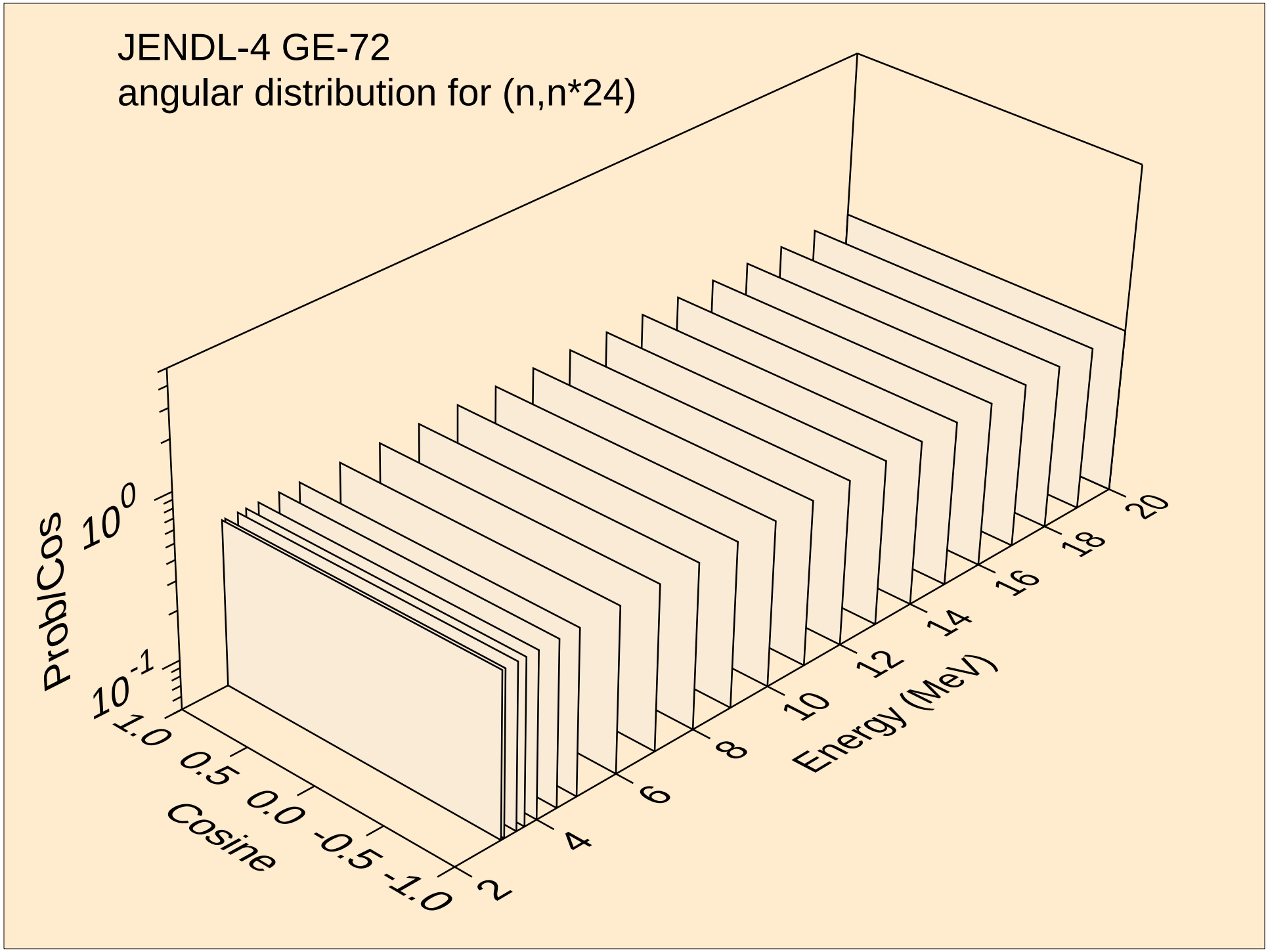

JENDL-4 GE-72
angular distribution for (n,n*19)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

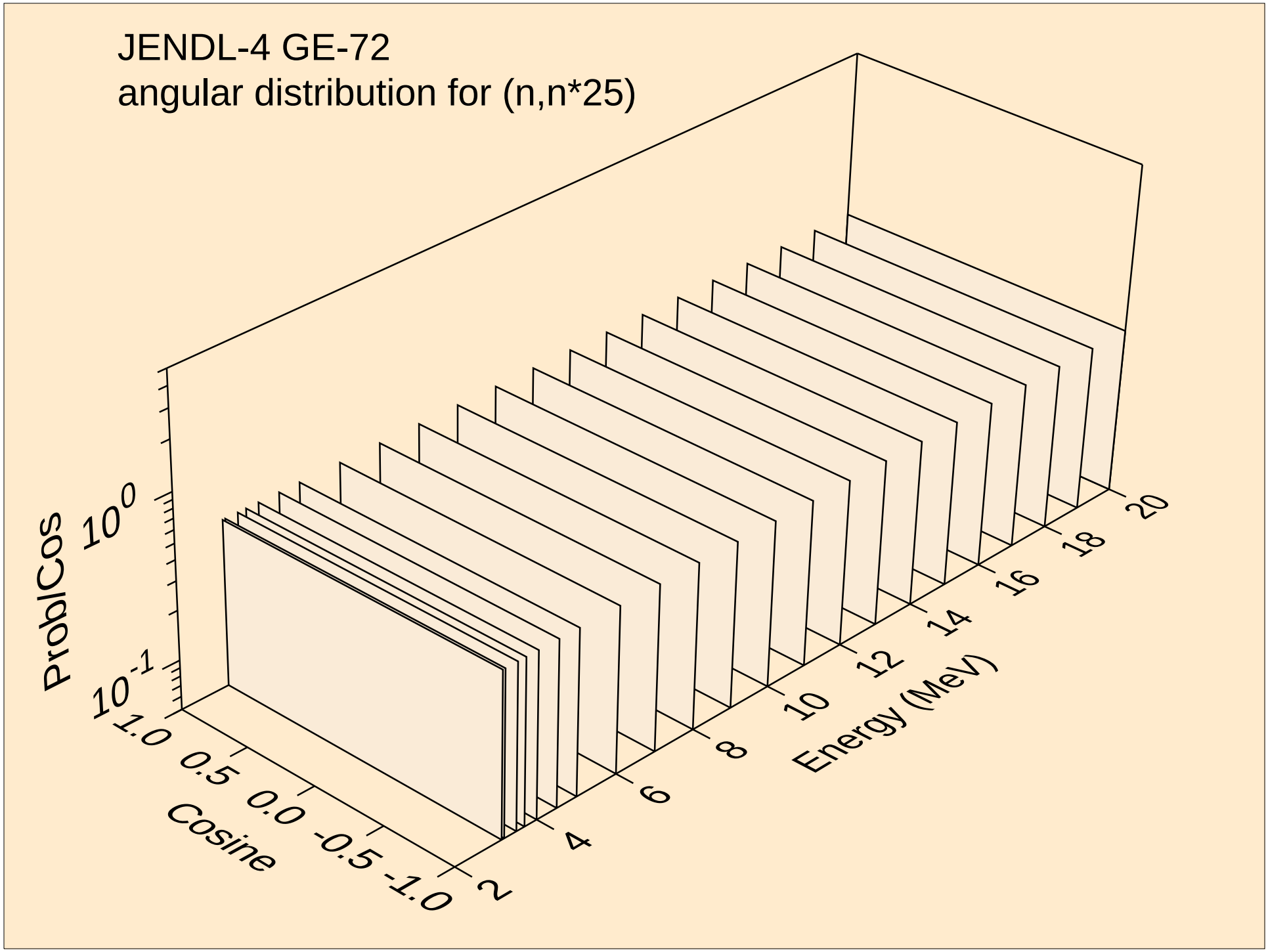

JENDL-4 GE-72
angular distribution for (n,n*20)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

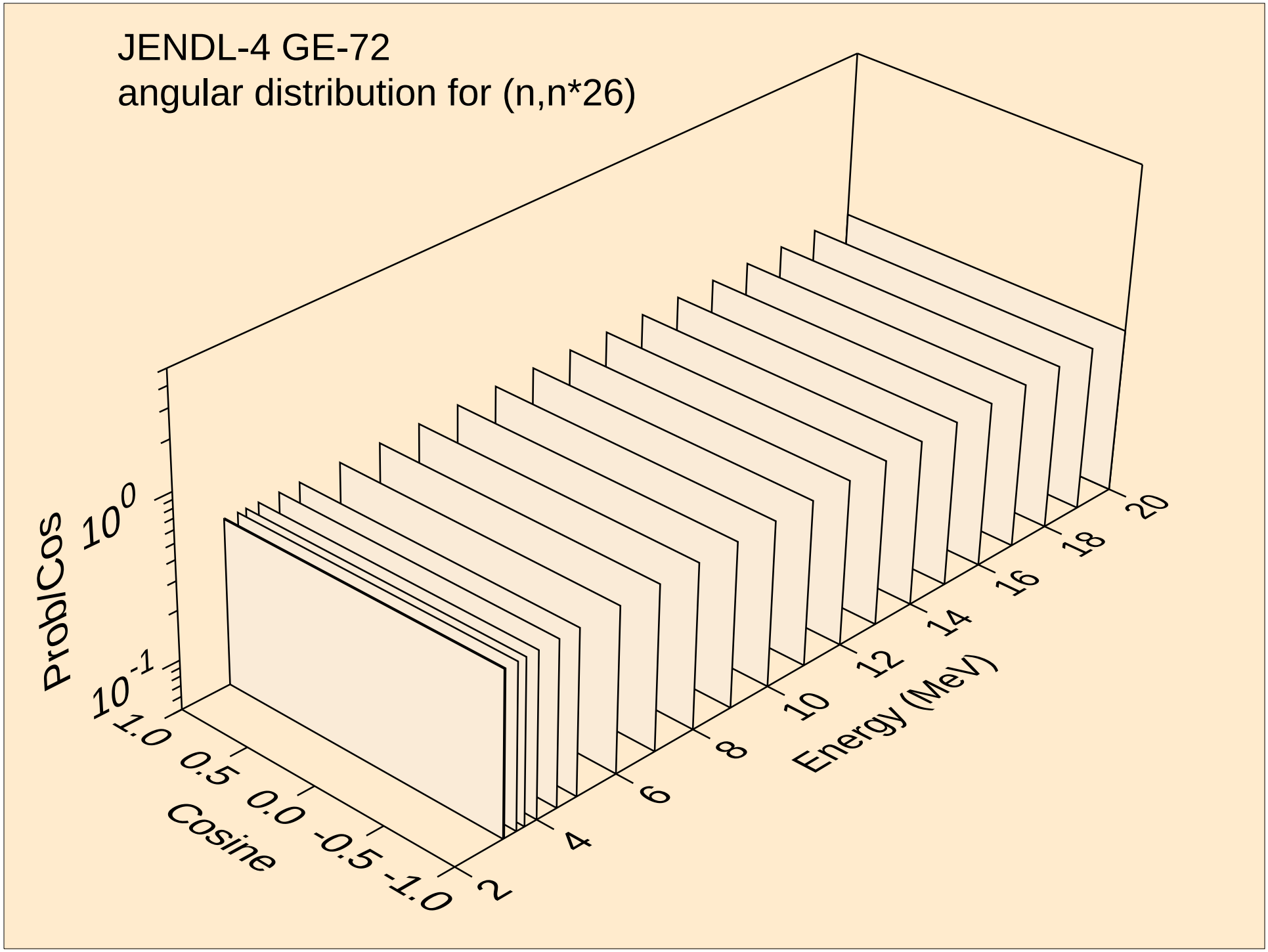

JENDL-4 GE-72
angular distribution for (n,n*21)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

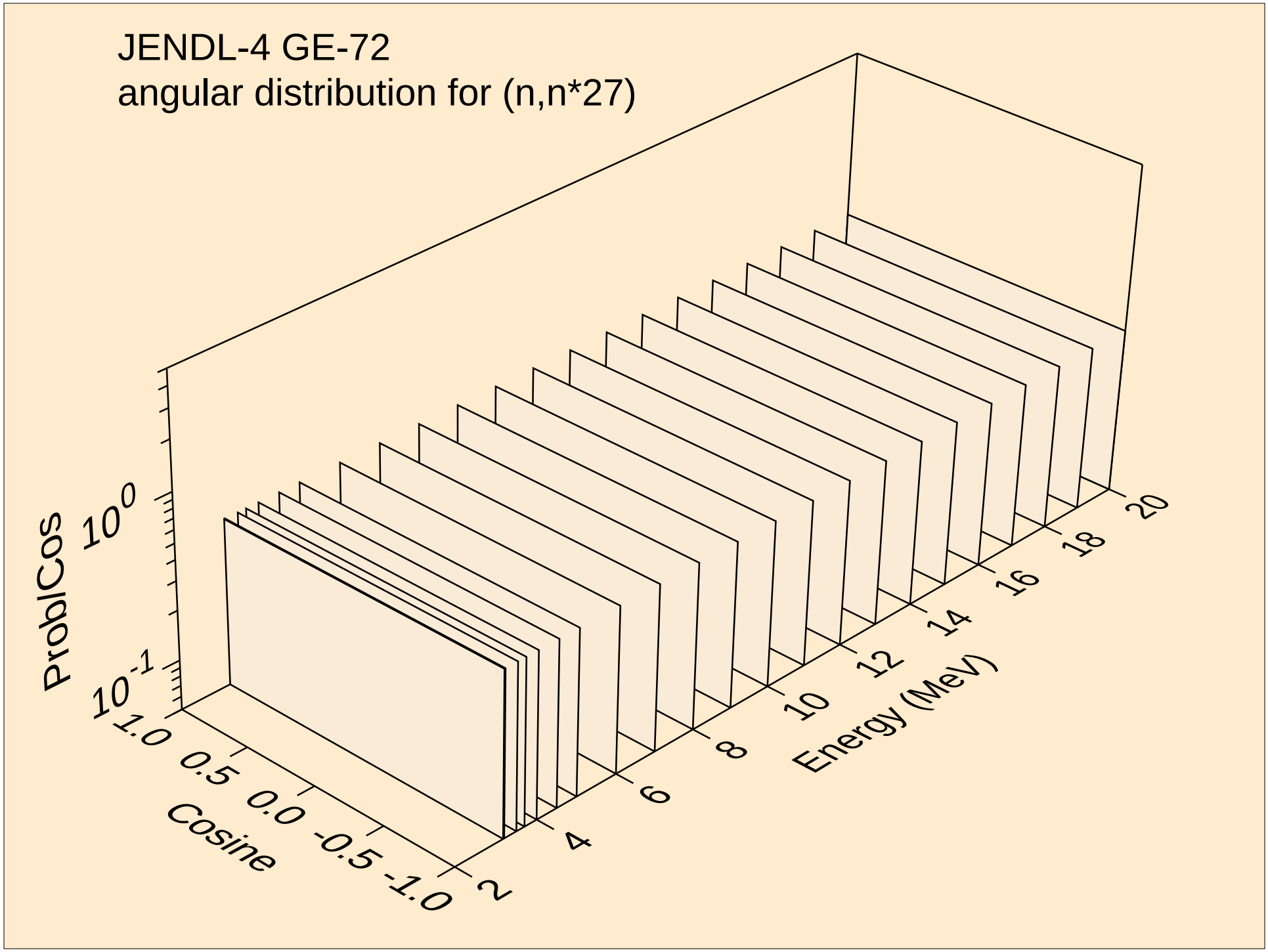

JENDL-4 GE-72
angular distribution for (n,n*22)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

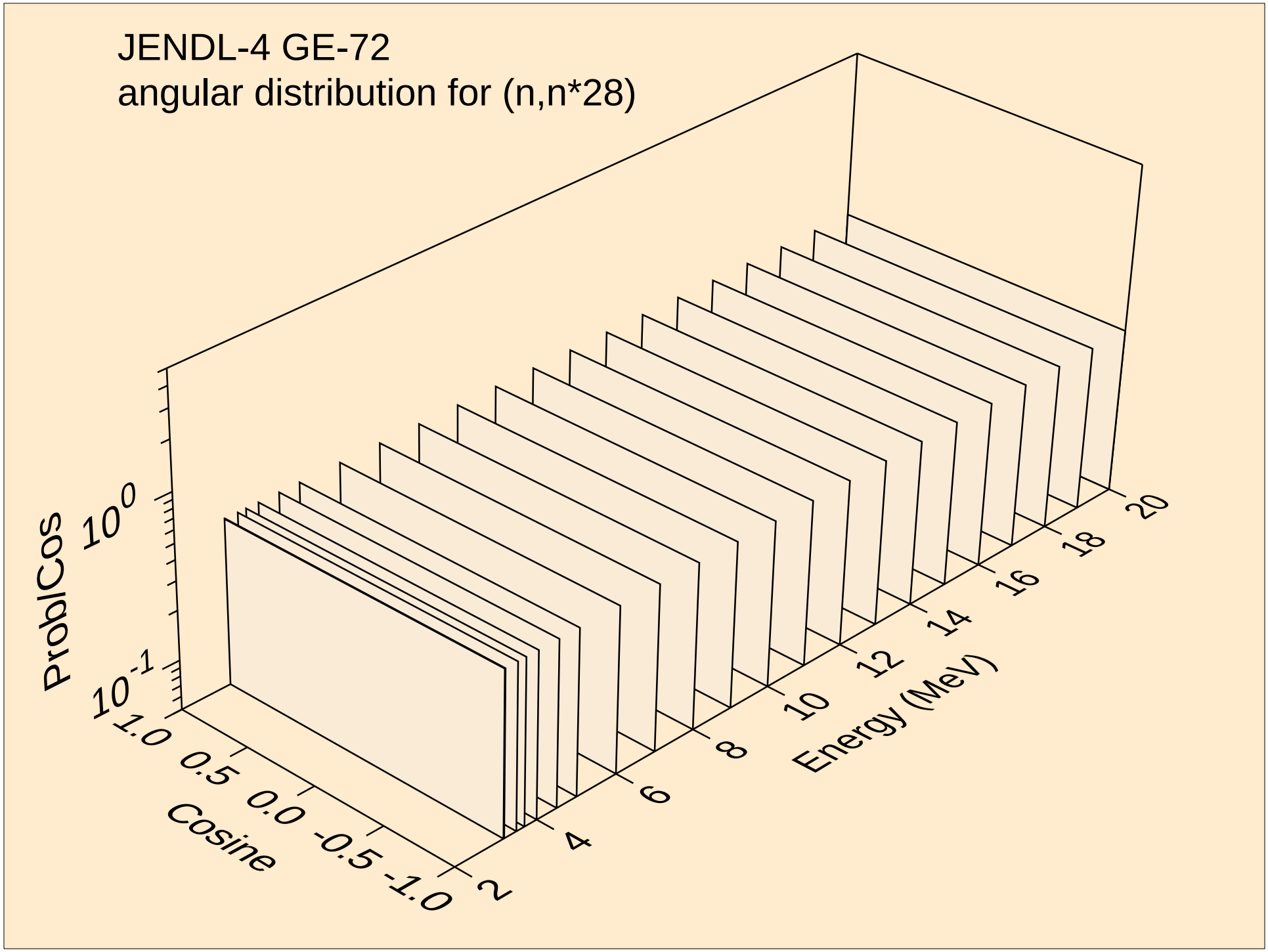

JENDL-4 GE-72
angular distribution for (n,n*23)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

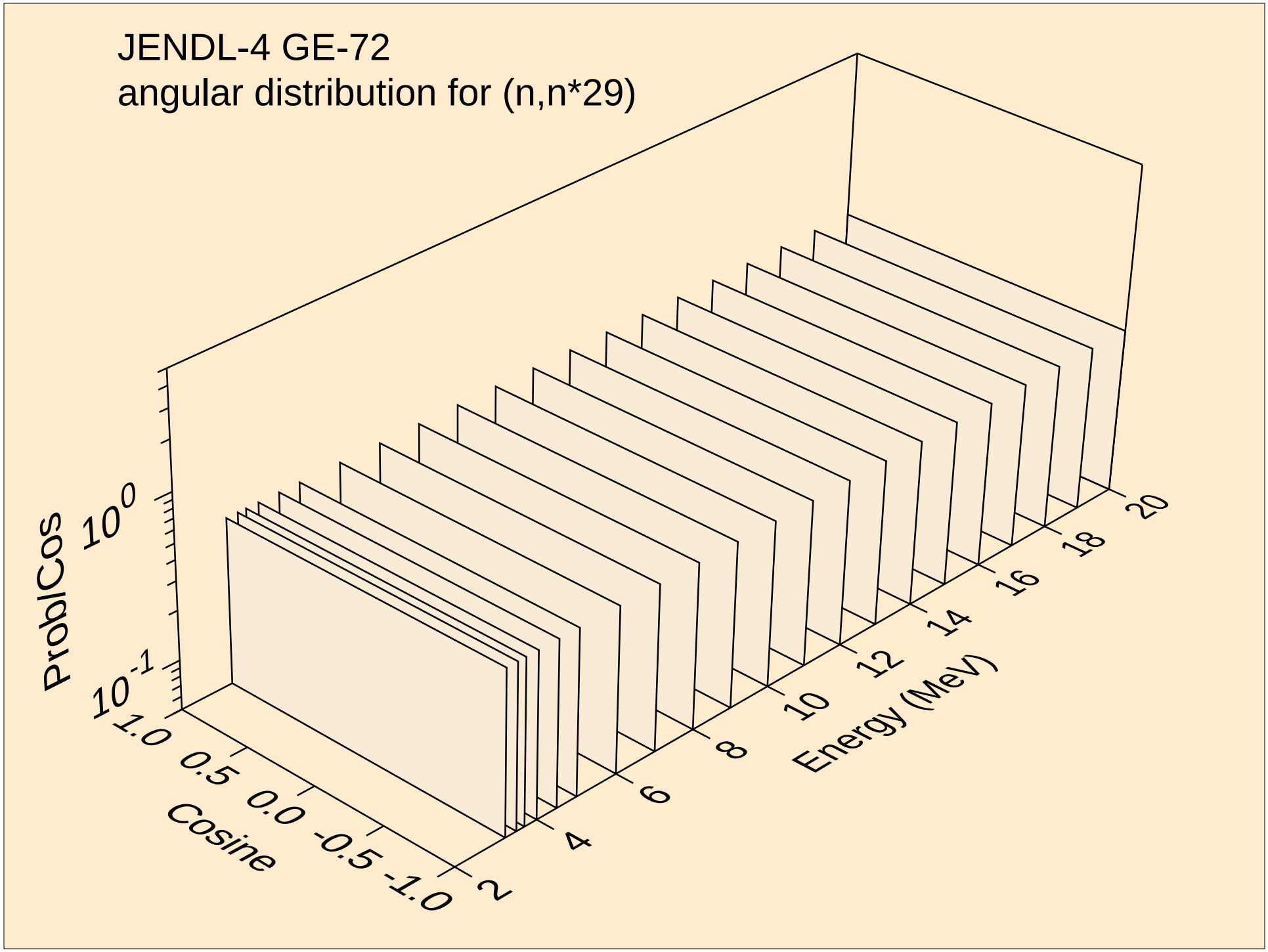

JENDL-4 GE-72
angular distribution for (n,n*24)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

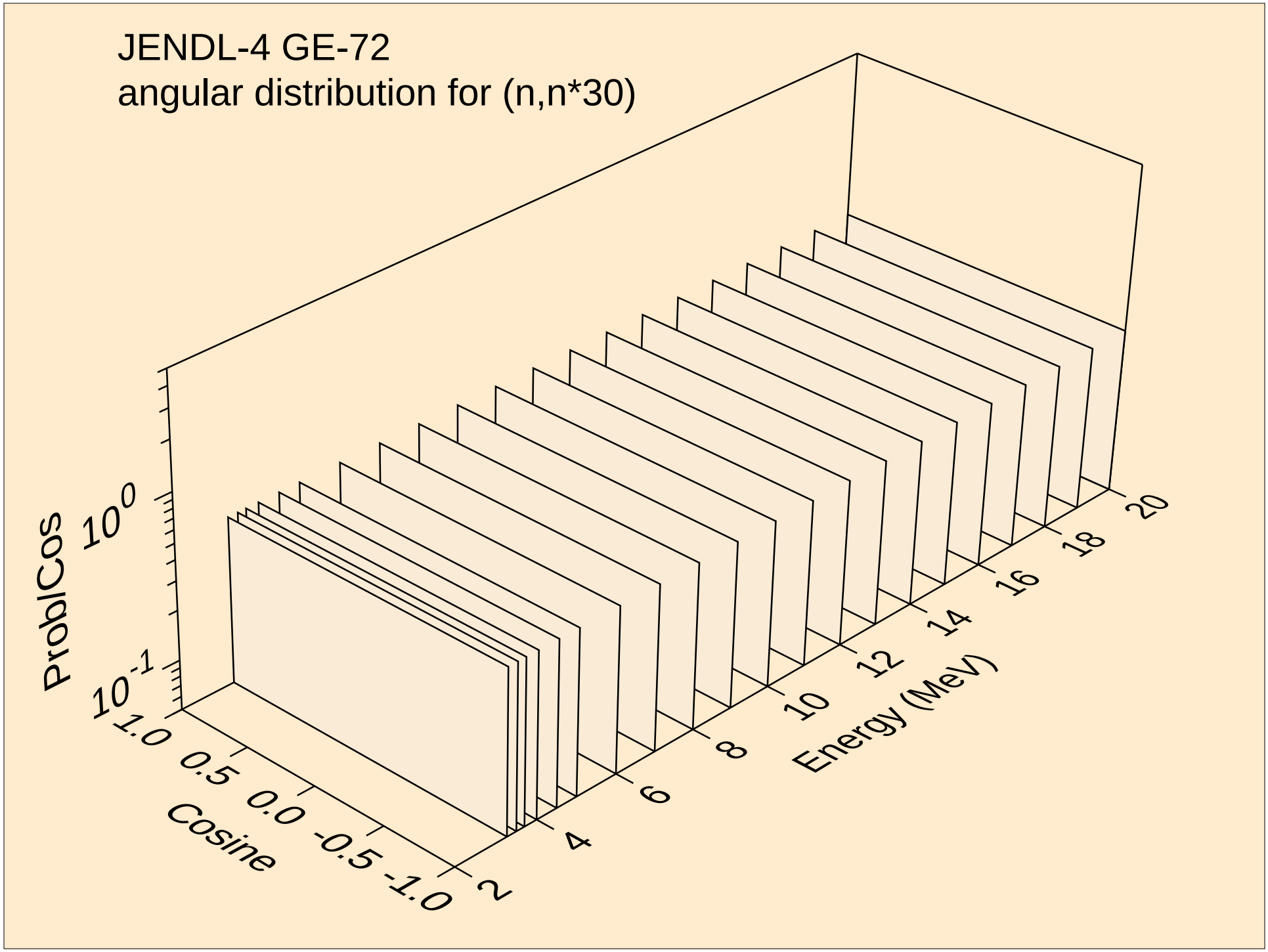

JENDL-4 GE-72
angular distribution for (n,n*25)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

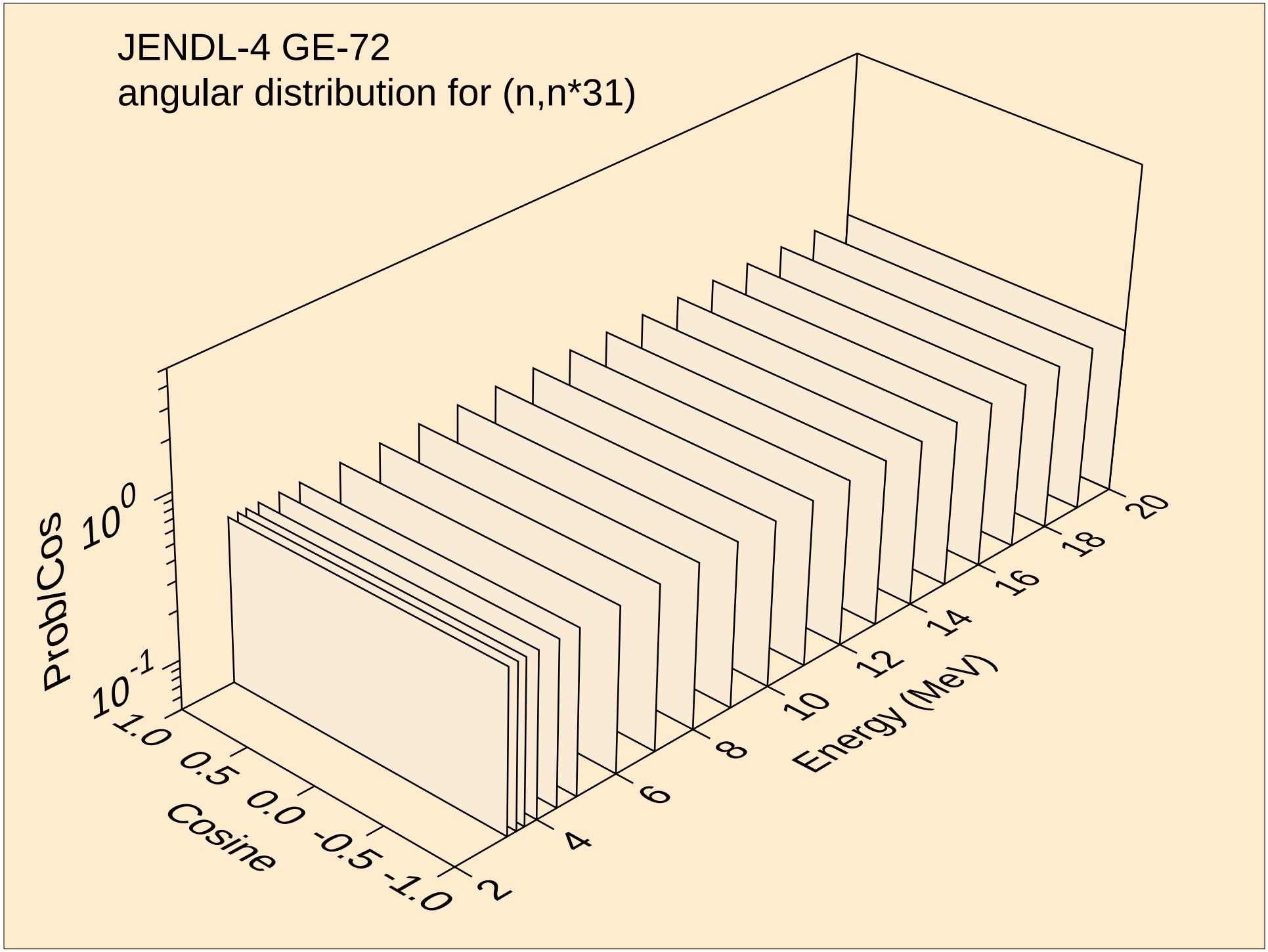

JENDL-4 GE-72
angular distribution for (n,n*26)
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

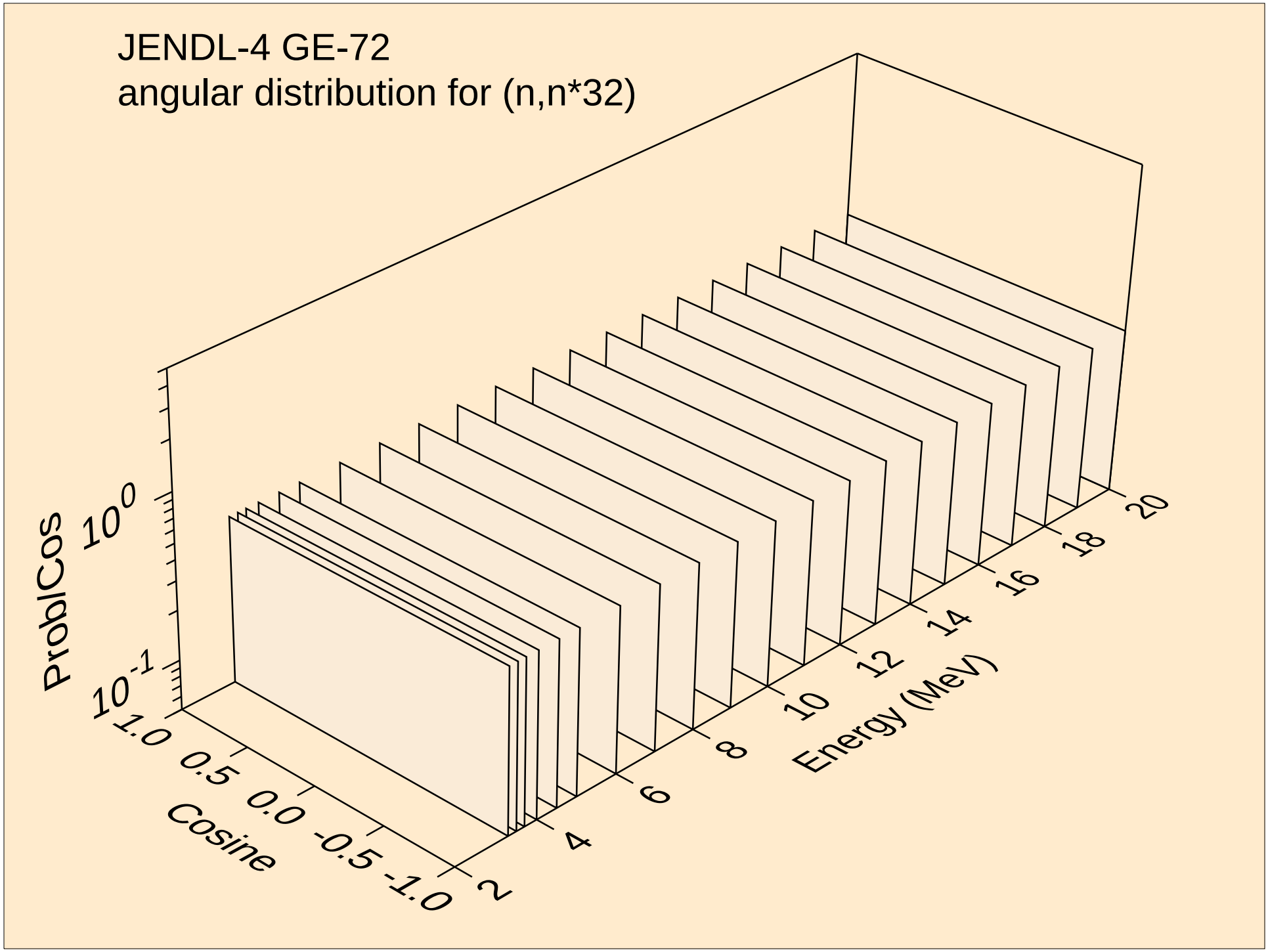

JENDL-4 GE-72
angular distribution for (n,n*27)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

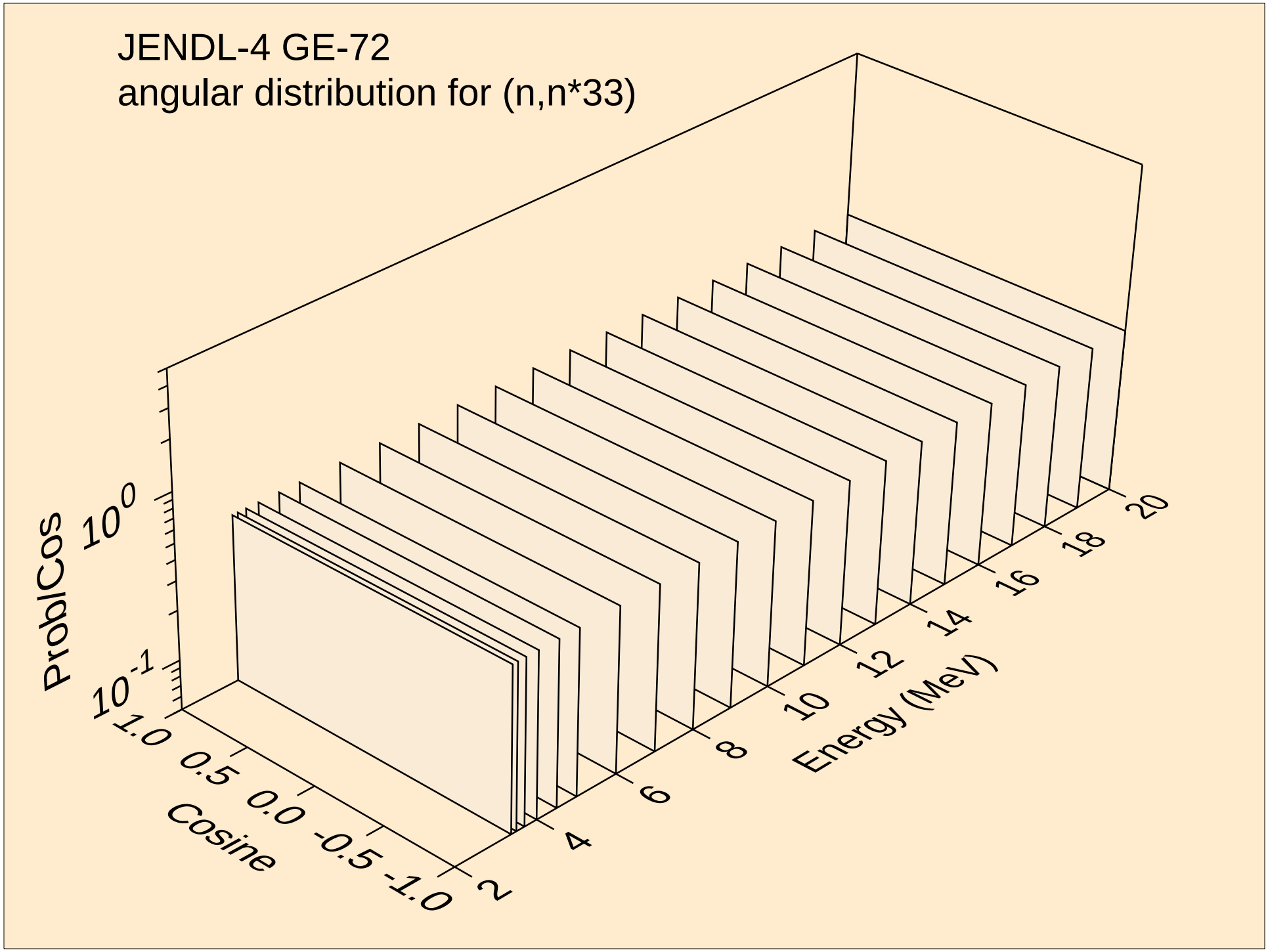

JENDL-4 GE-72
angular distribution for (n,n*28)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

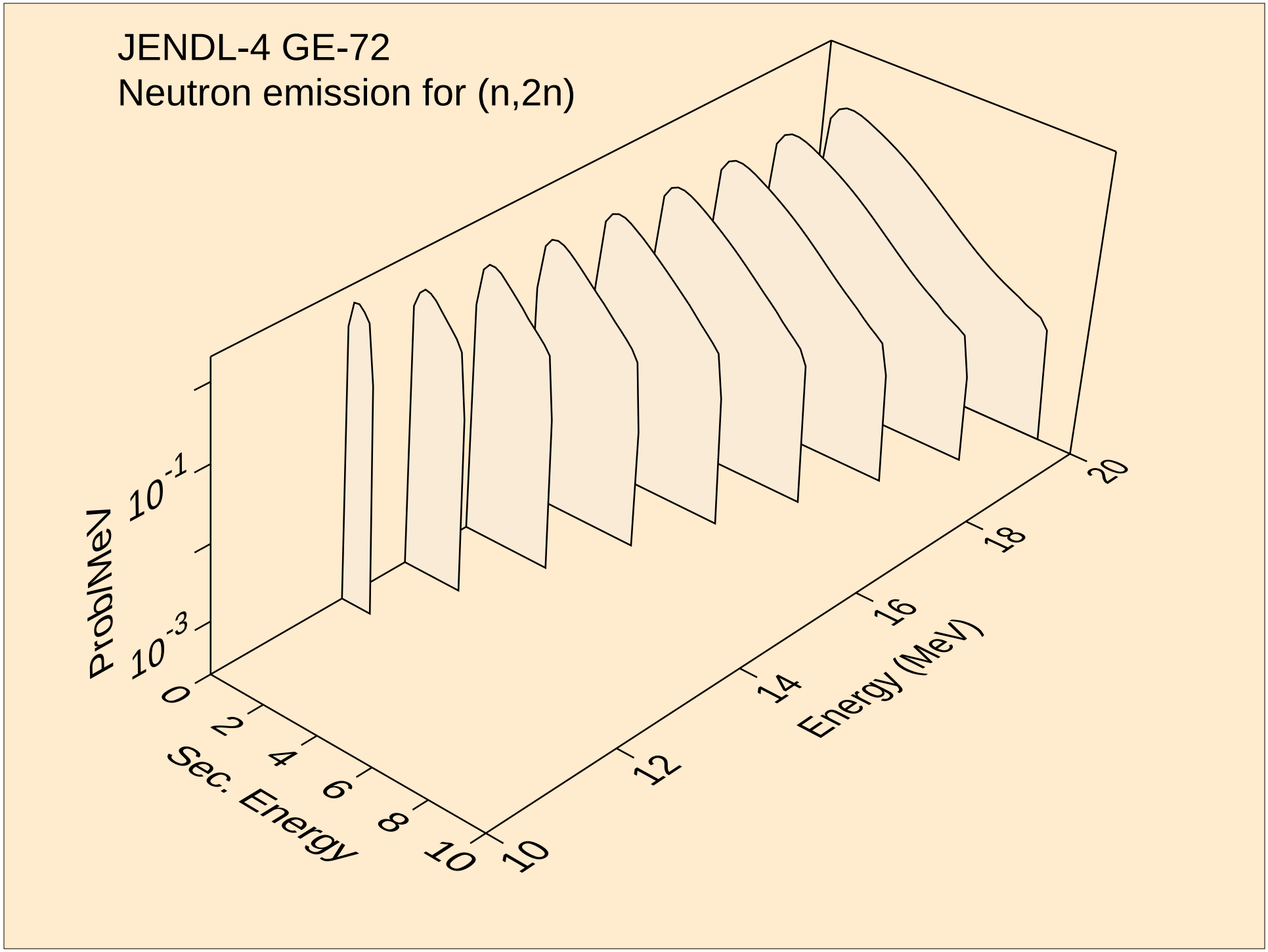

JENDL-4 GE-72
angular distribution for (n,n*29)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

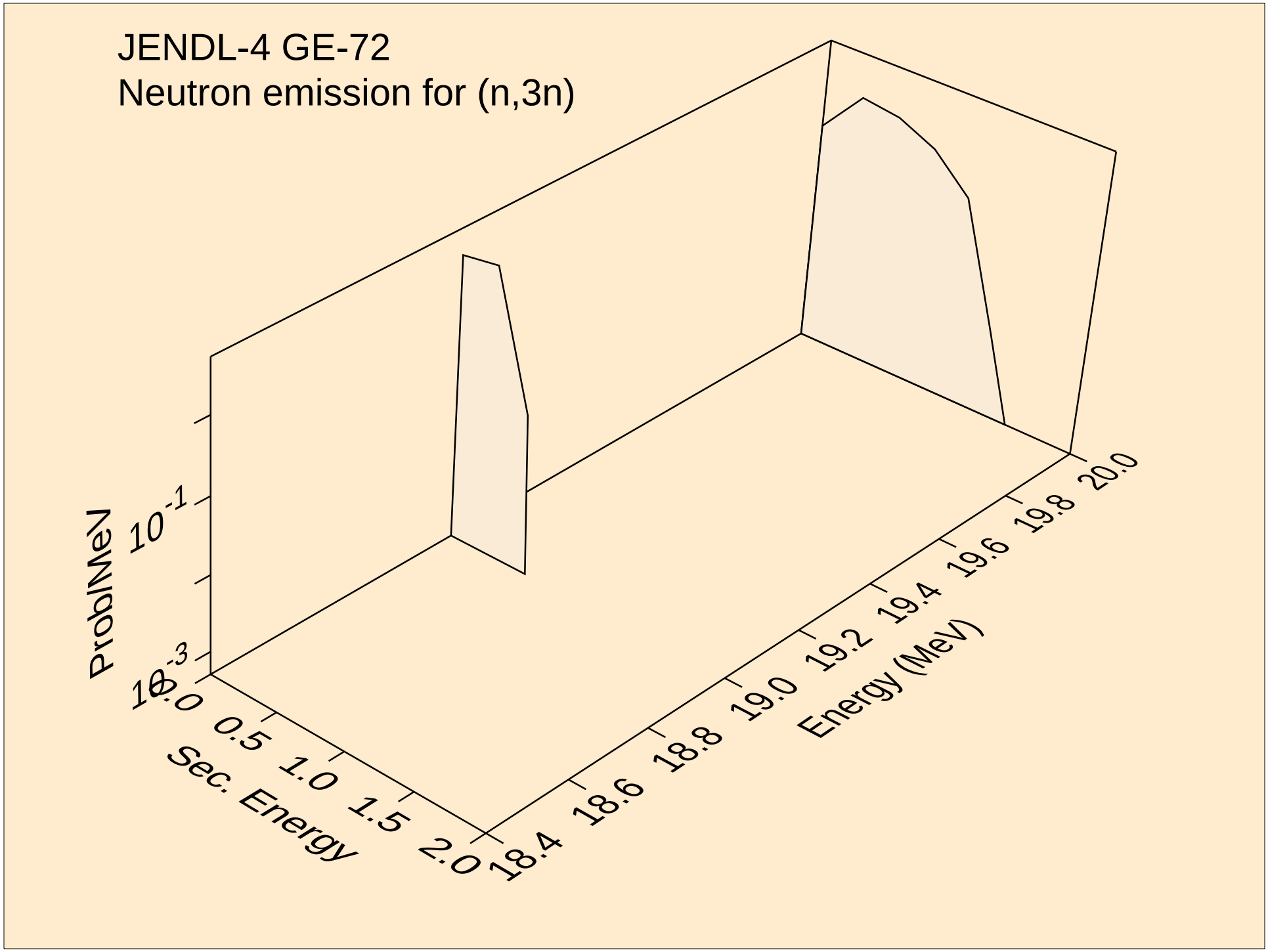

JENDL-4 GE-72
angular distribution for (n,n*30)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

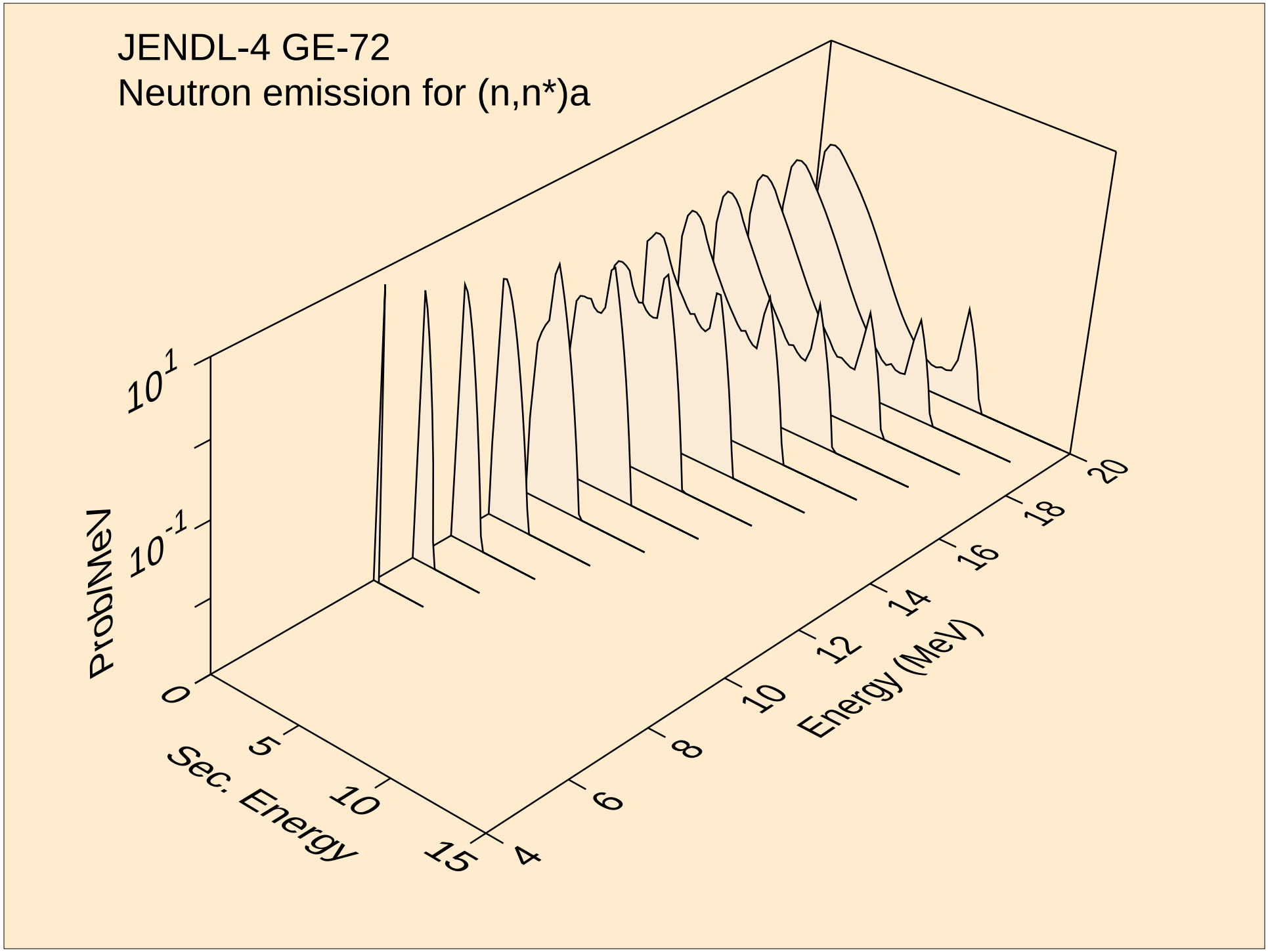

JENDL-4 GE-72
angular distribution for (n,n*31)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 GE-72
angular distribution for (n,n*32)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

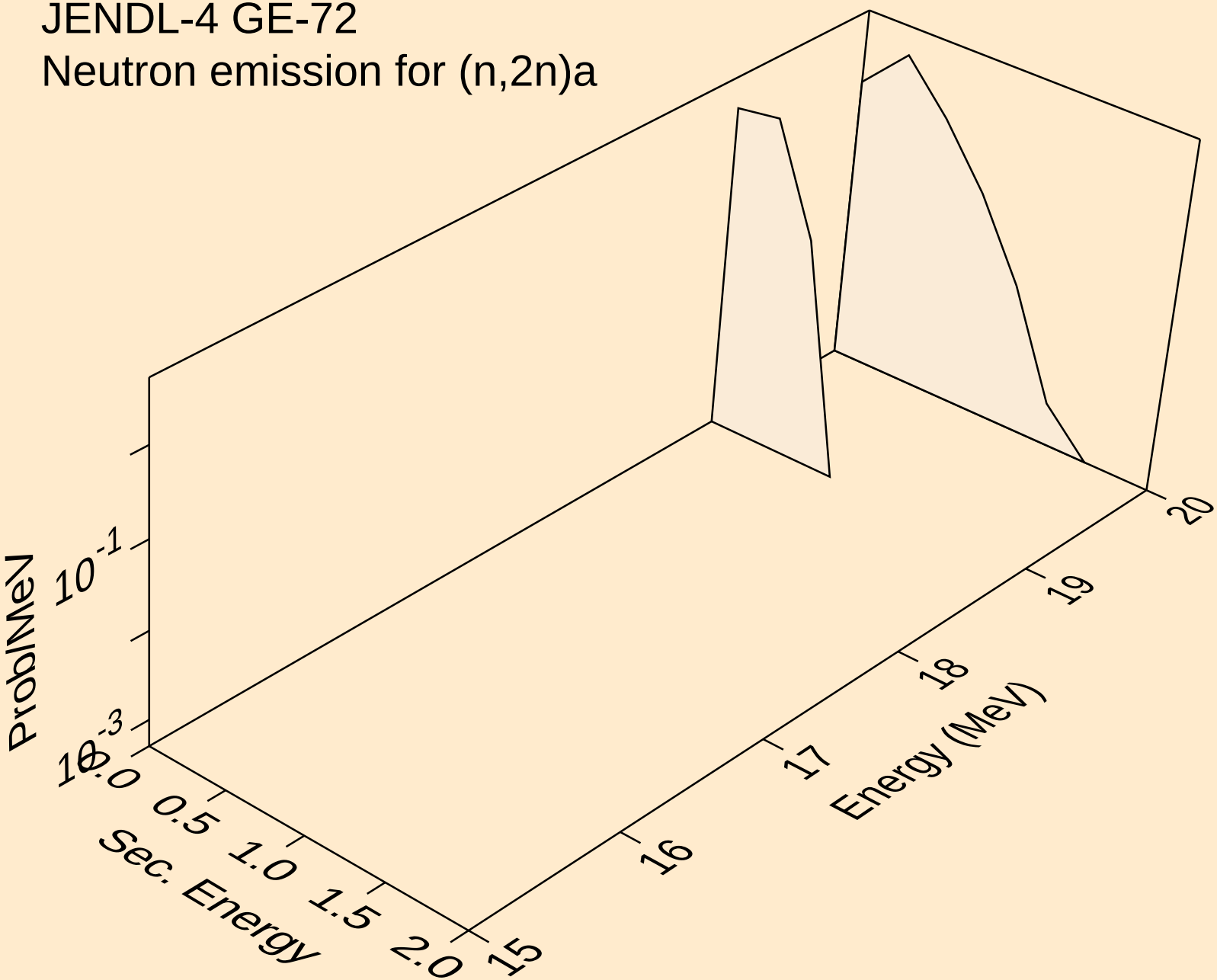

JENDL-4 GE-72
angular distribution for (n,n*33)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

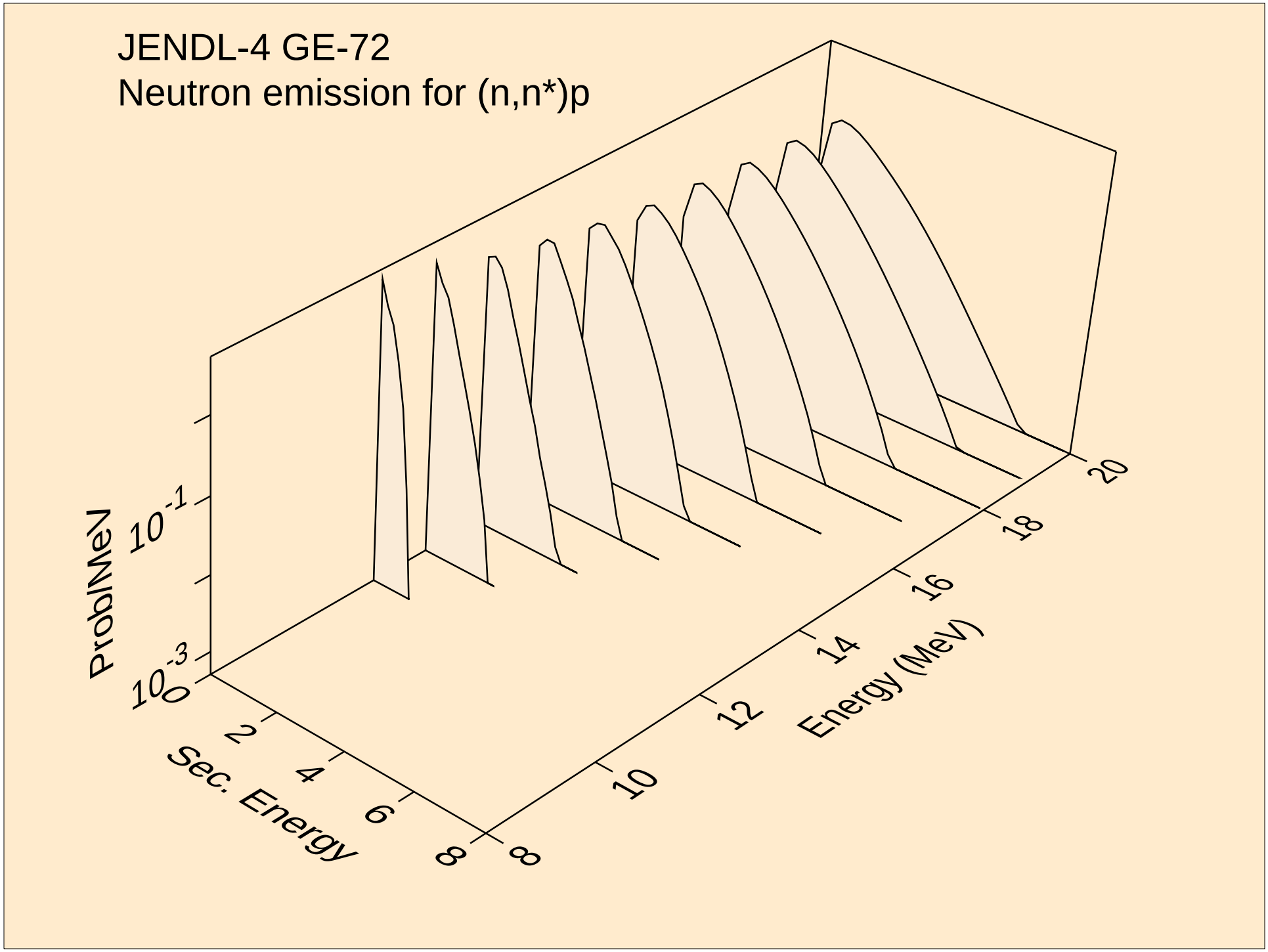

JENDL-4 GE-72
Neutron emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
2
4
6
8
10
Sec. Energy
10
12
14
16
18
20
Energy (MeV)

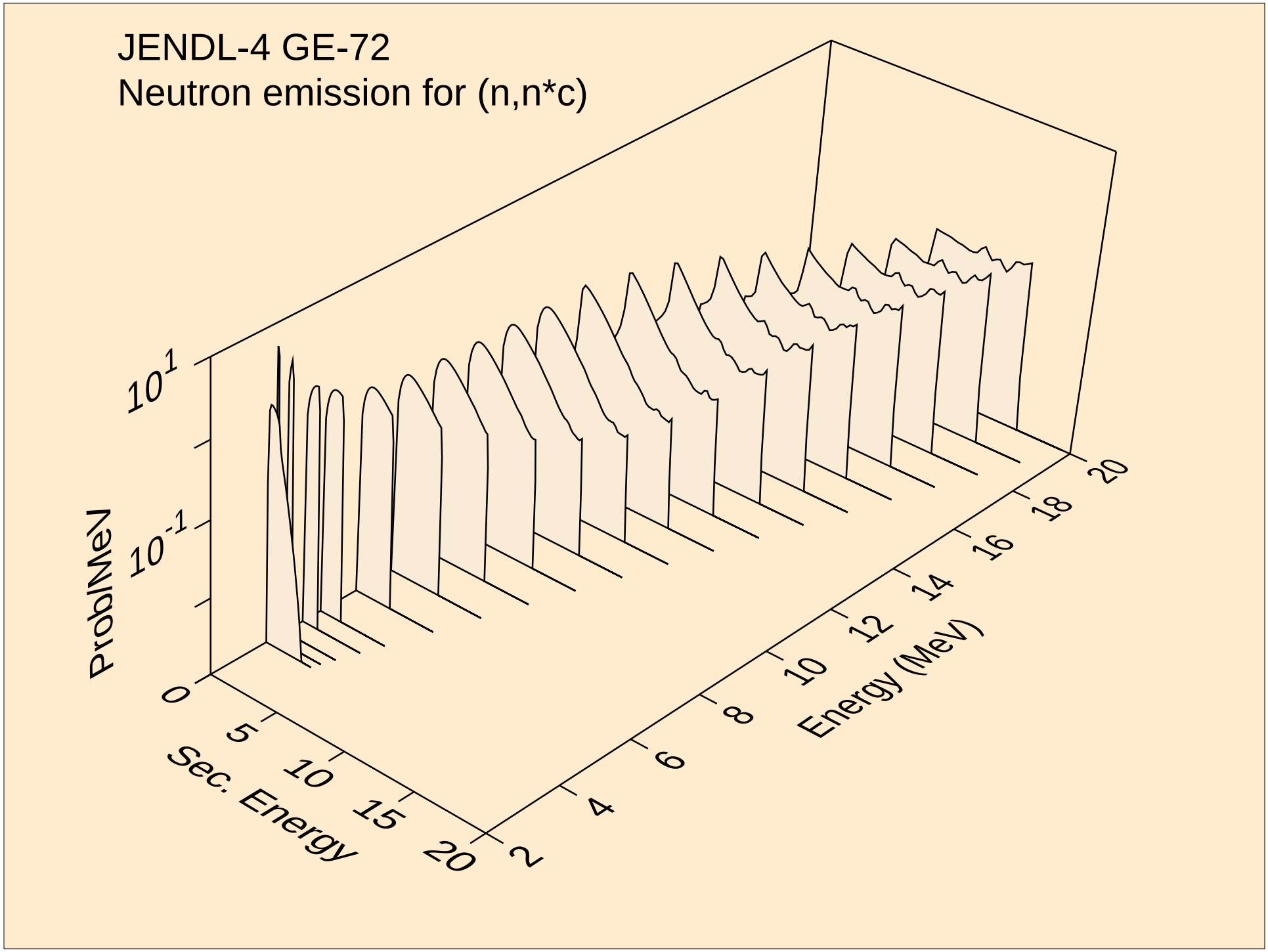

JENDL-4 GE-72
Neutron emission for (n,3n)
Prob/MeV
10^-1
10^-3
0.0
0.5
1.0
1.5
2.0
Sec. Energy
18.4
18.6
18.8
19.0
19.2
19.4
19.6
19.8
20.0
Energy (MeV)

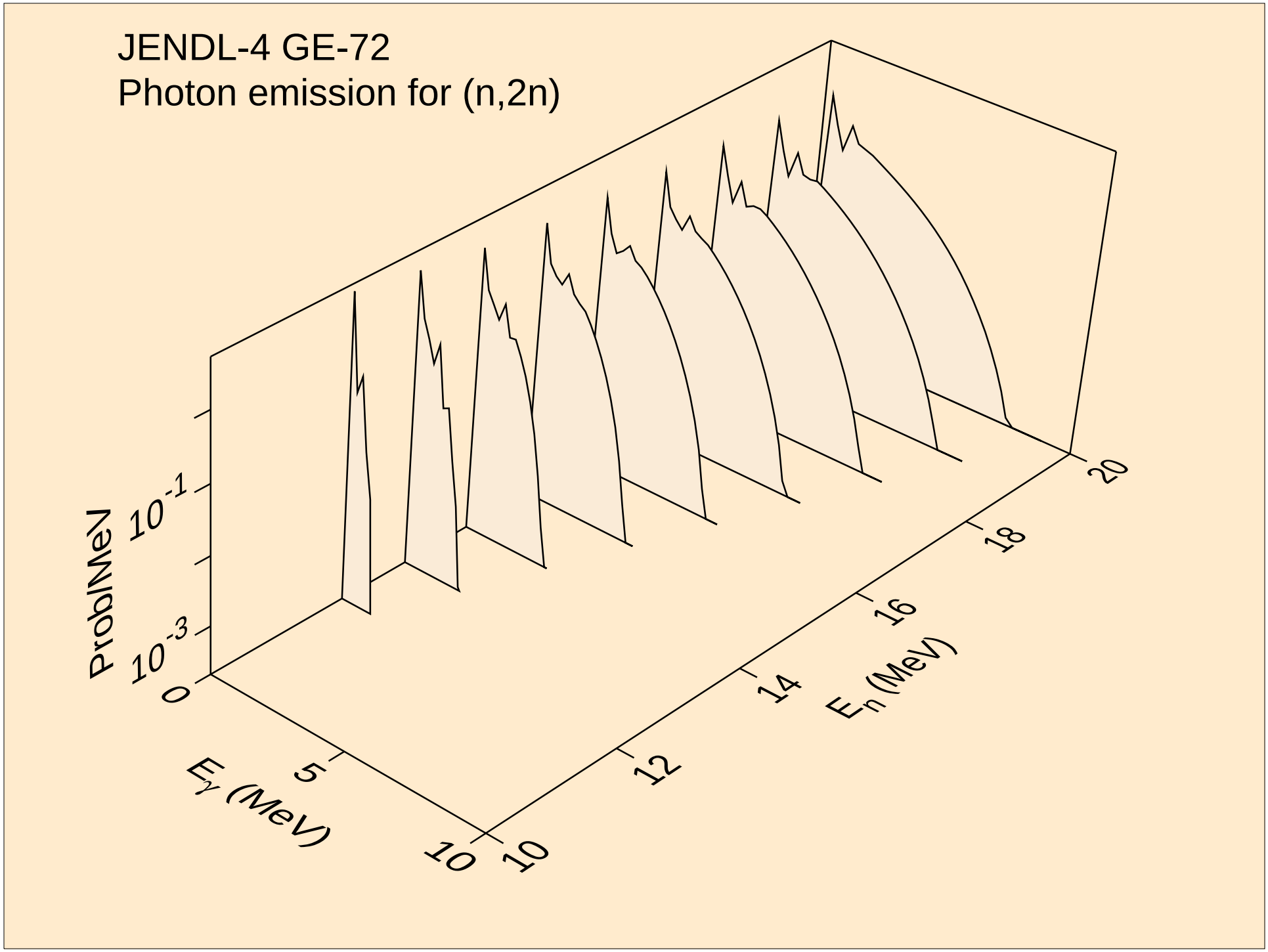

JENDL-4 GE-72
Neutron emission for (n,n*)a
Prob/MeV
10^{1}
10^{-1}
0
5
10
15
Sec. Energy
4
6
8
10
12
14
16
18
20
Energy (MeV)

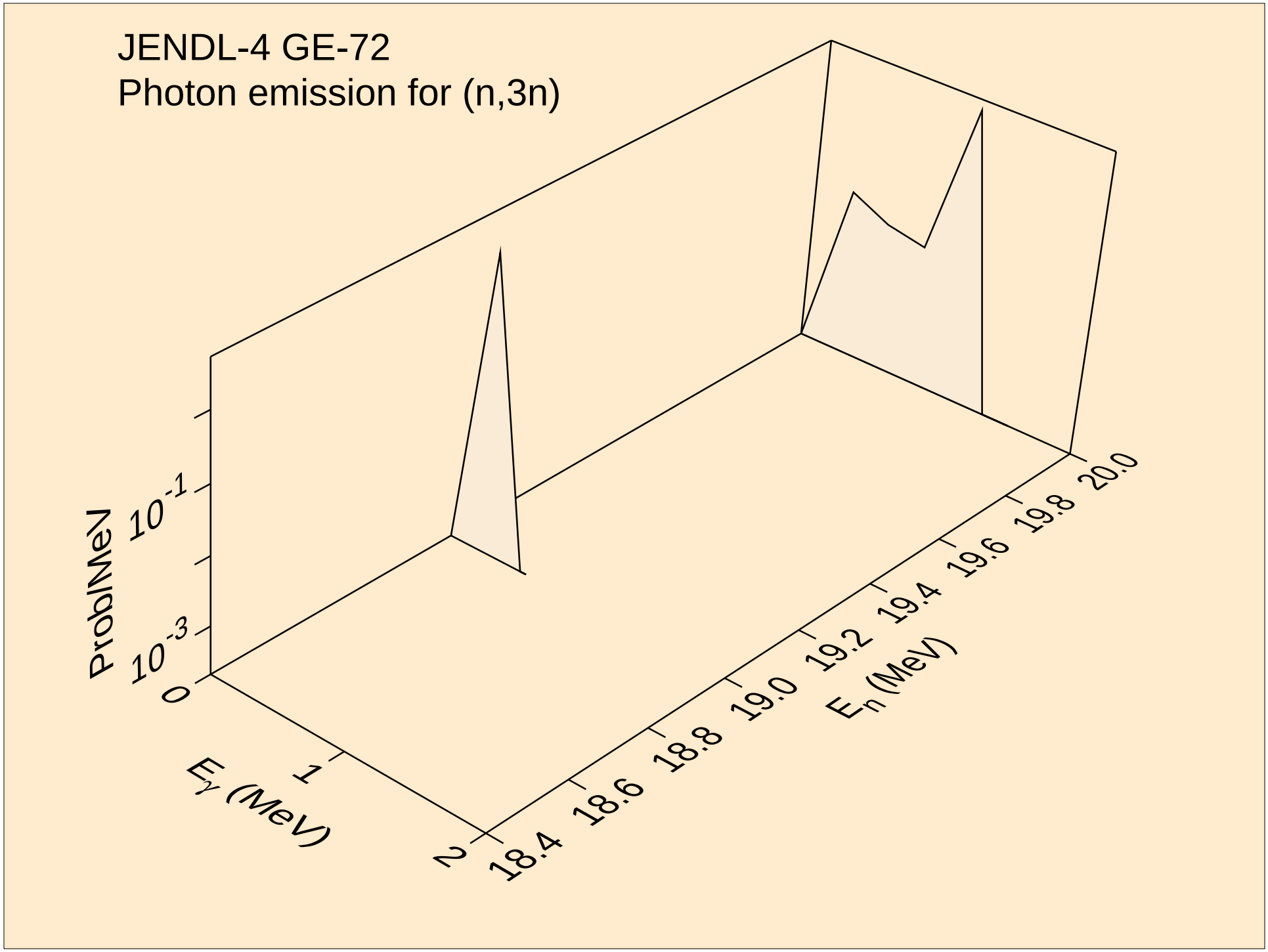
JENDL-4 GE-72
Neutron emission for (n,2n)a



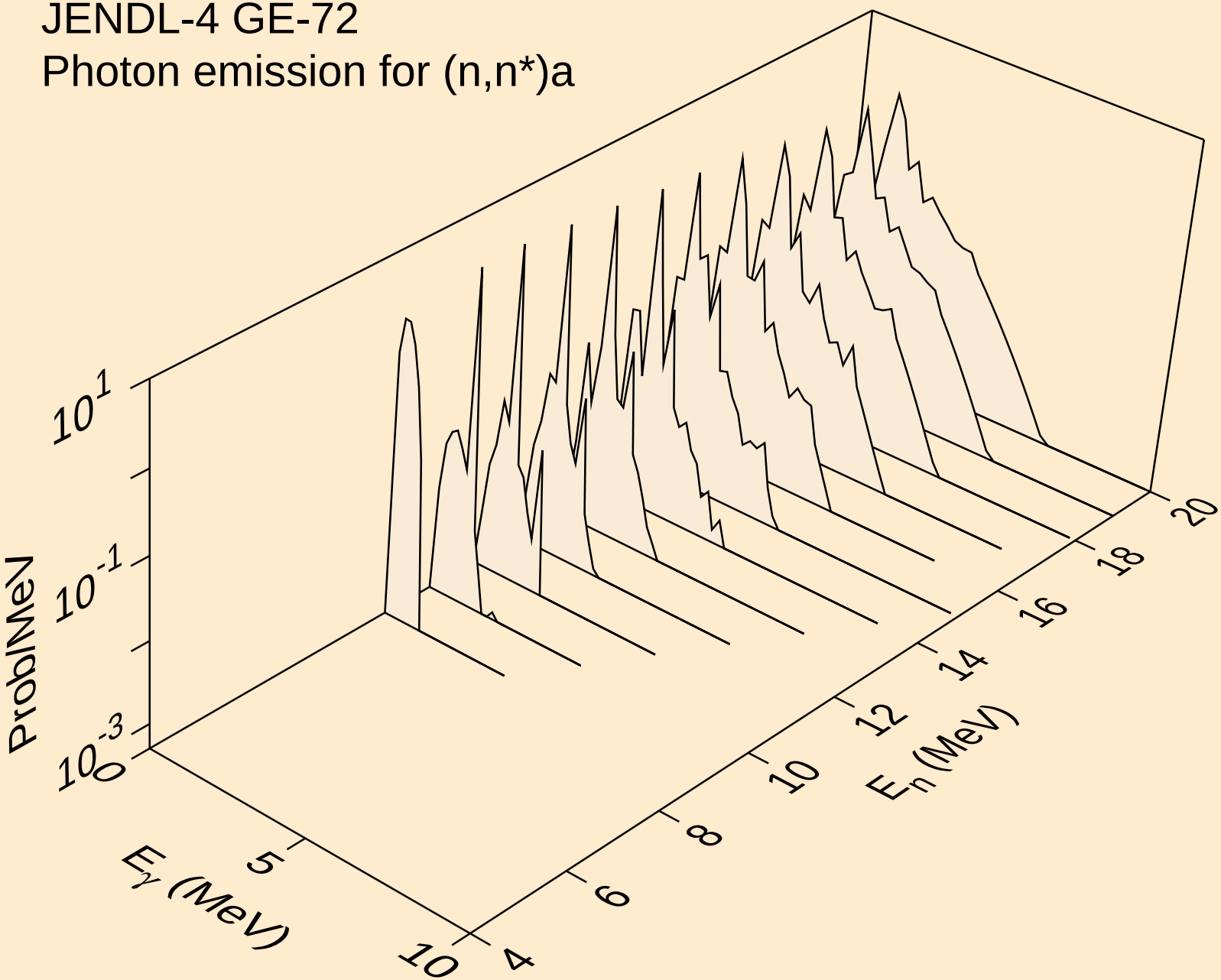

JENDL-4 GE-72
Neutron emission for (n,n*)p
Prob/MeV
10^-1
10^-3
0
2
4
6
8
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 GE-72
Neutron emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
15
20
Sec. Energy
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

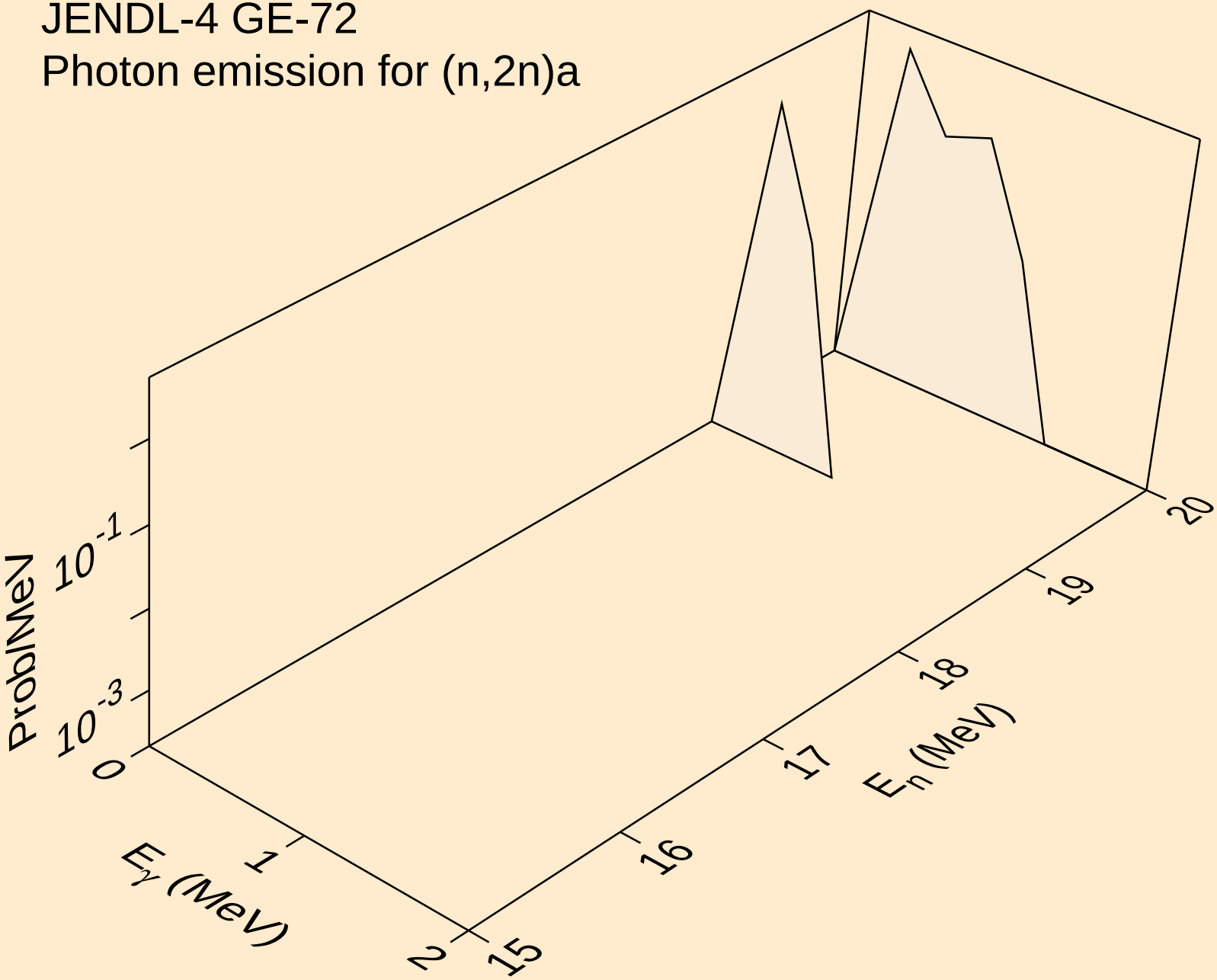

JENDL-4 GE-72
Photon emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
5
10
Eγ (MeV)
10
12
14
16
18
20
En (MeV)

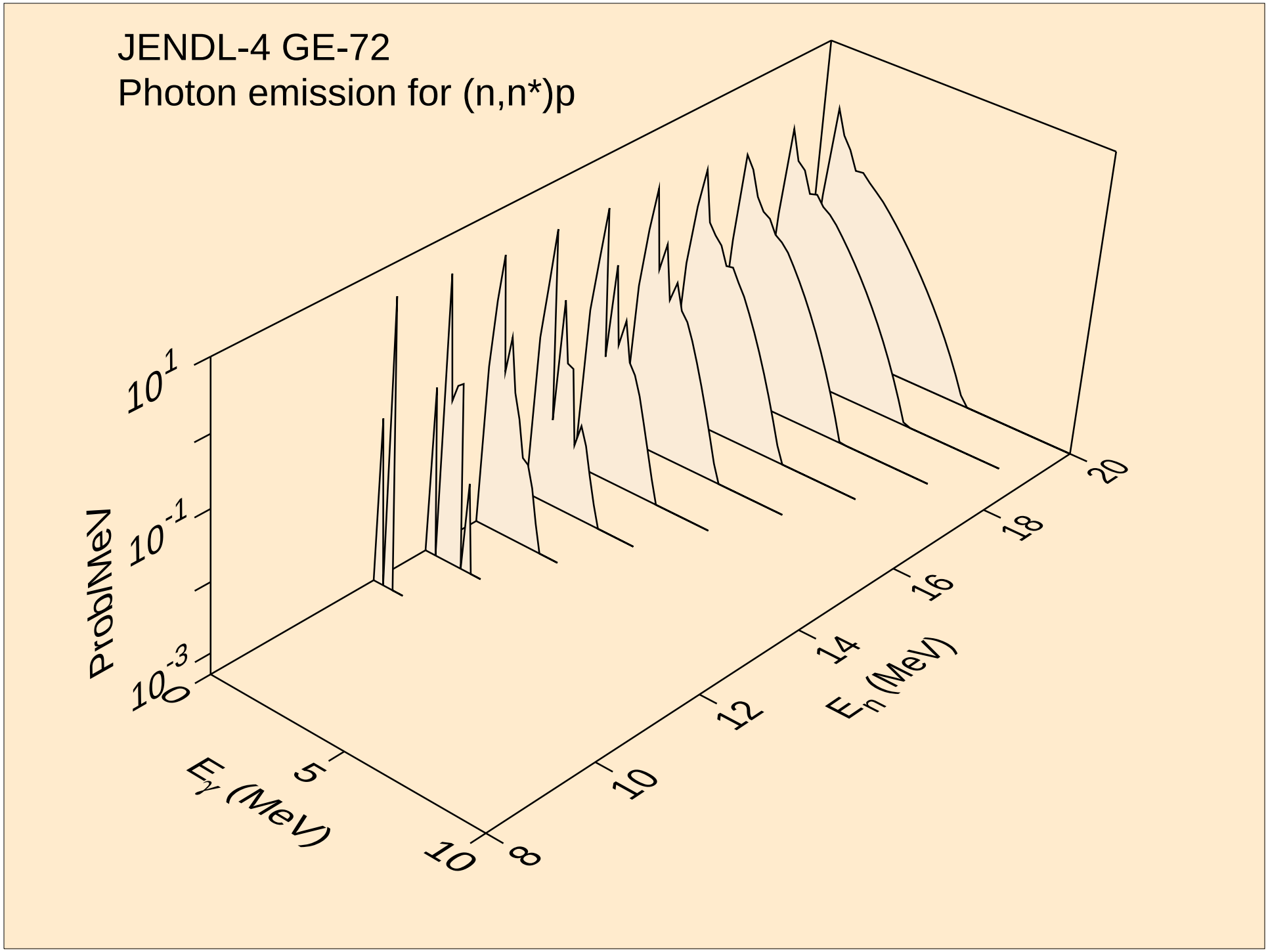

JENDL-4 GE-72
Photon emission for (n,3n)
Prob/MeV
10^-1
10^-3
0
1
2
Eγ (MeV)
18.4
18.6
18.8
19.0
19.2
19.4
19.6
19.8
20.0
En (MeV)

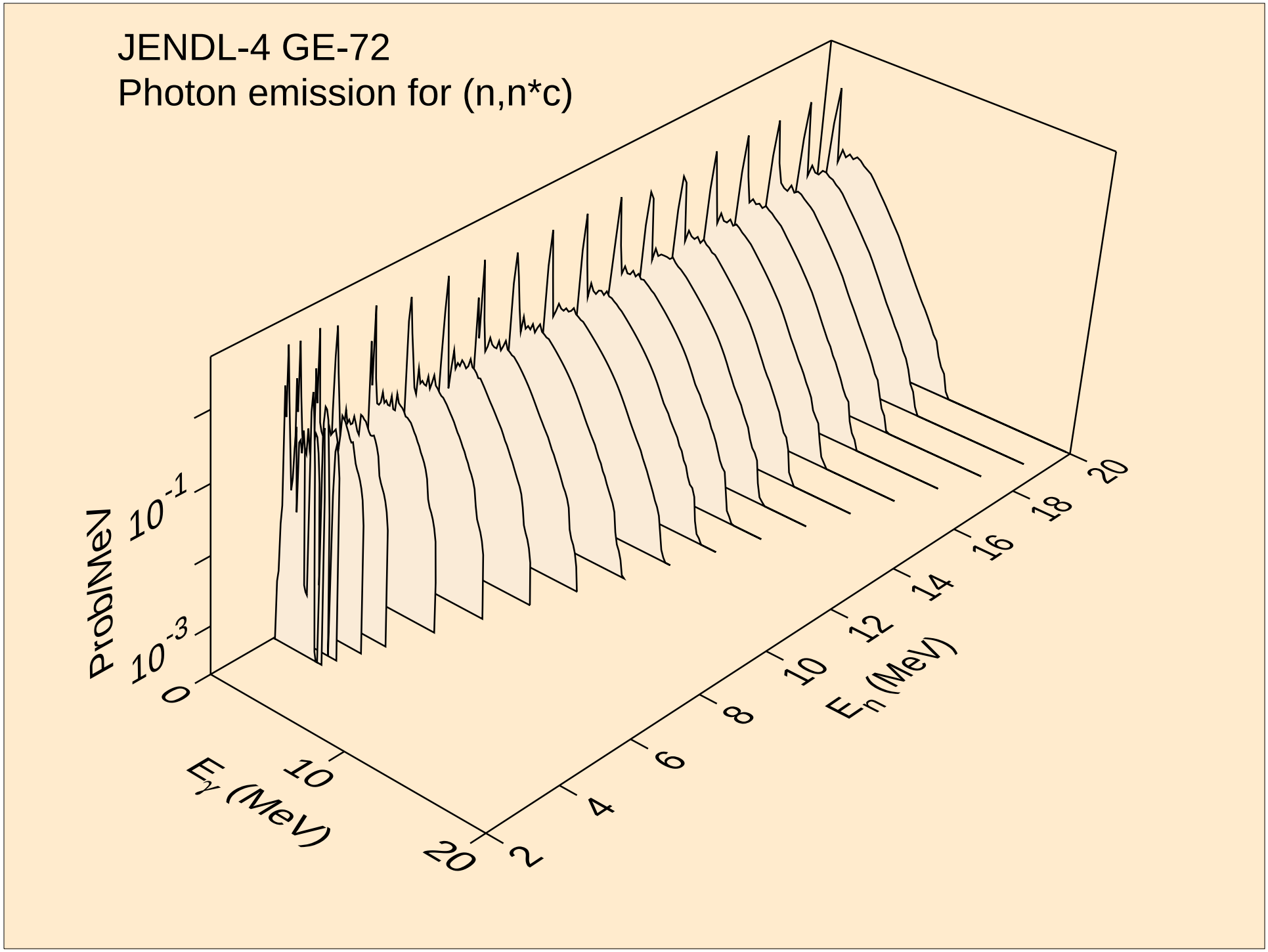
JENDL-4 GE-72
Photon emission for (n,n*)a

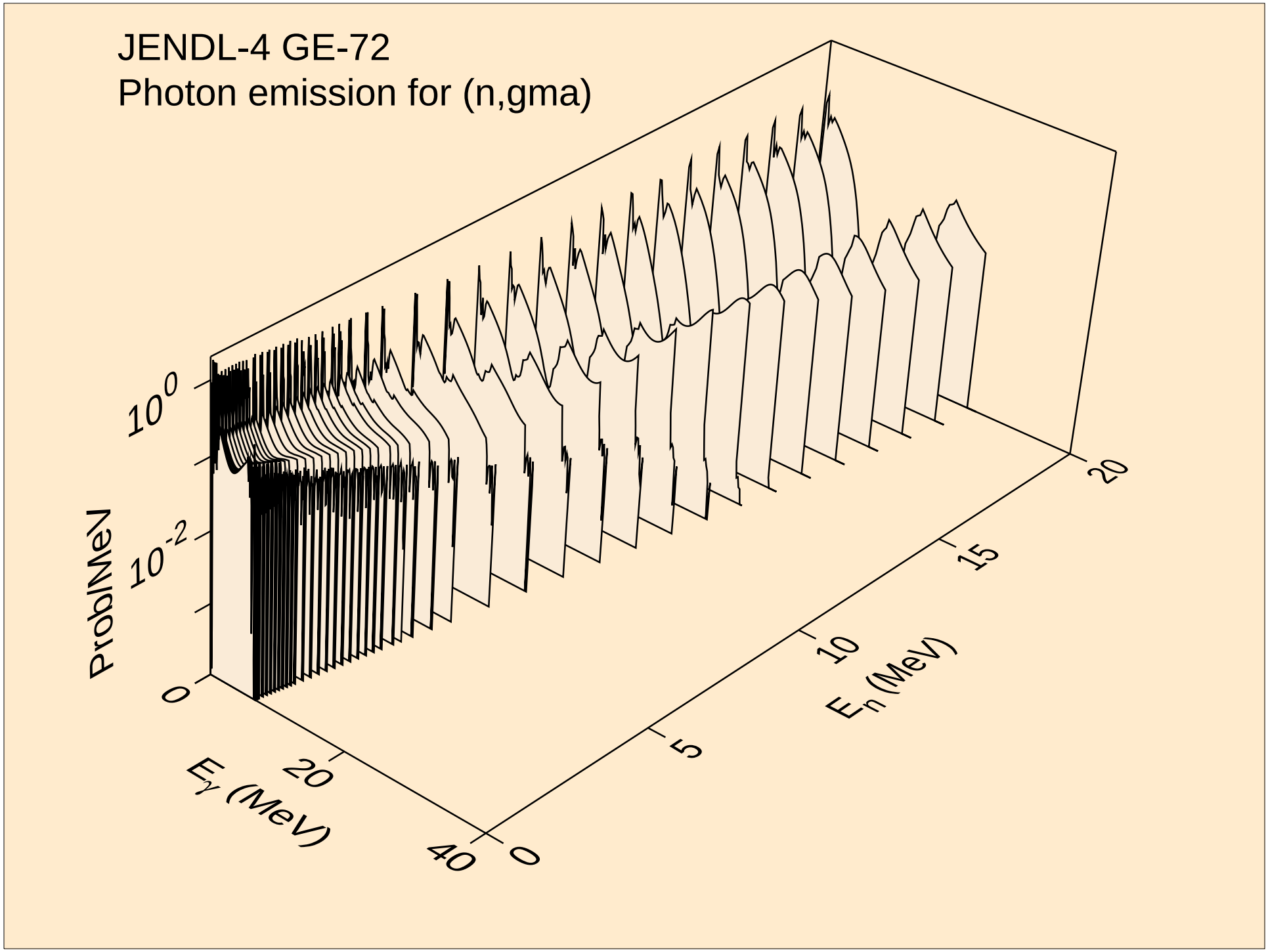


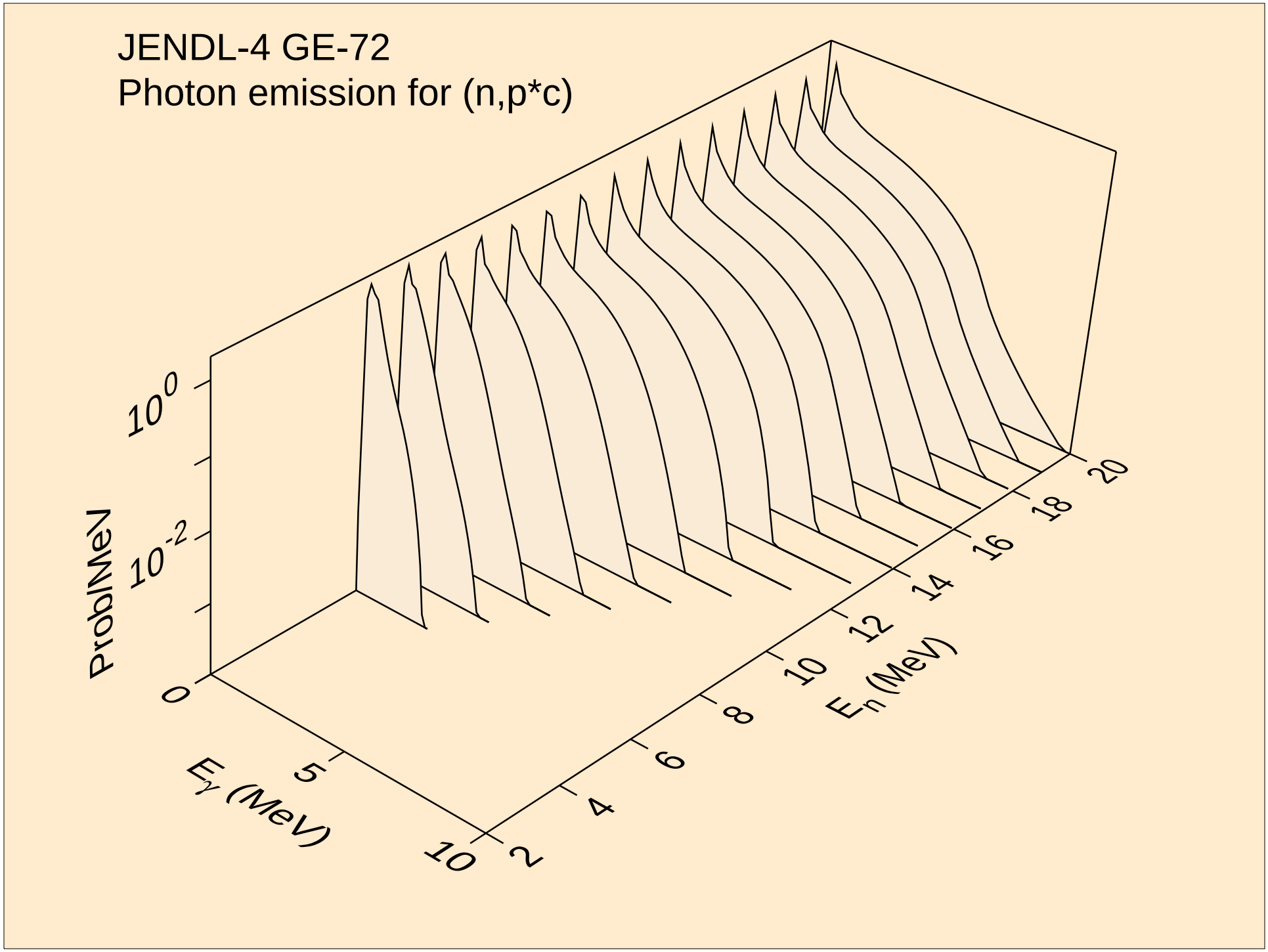
JENDL-4 GE-72
Photon emission for (n,2n)a

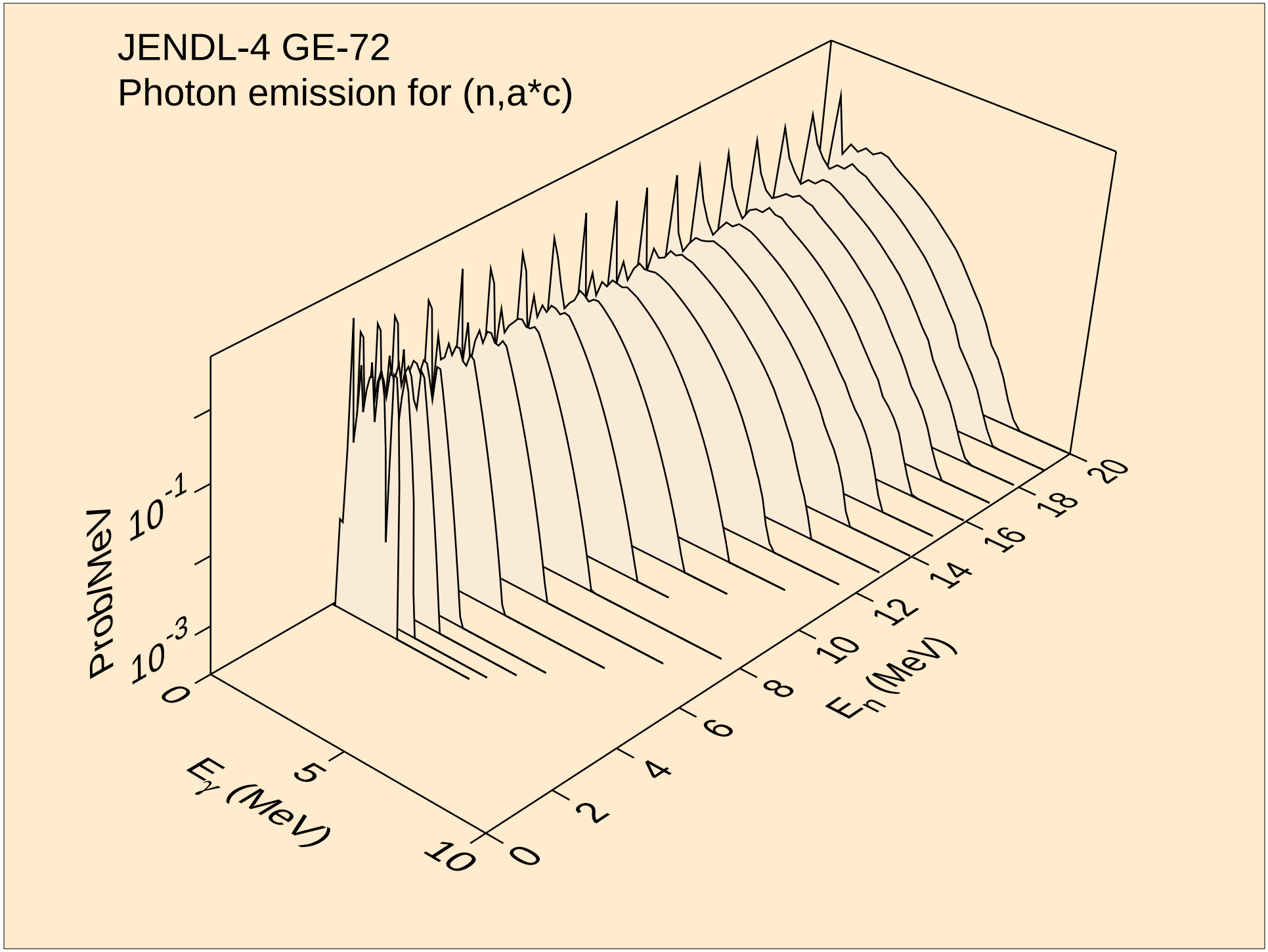


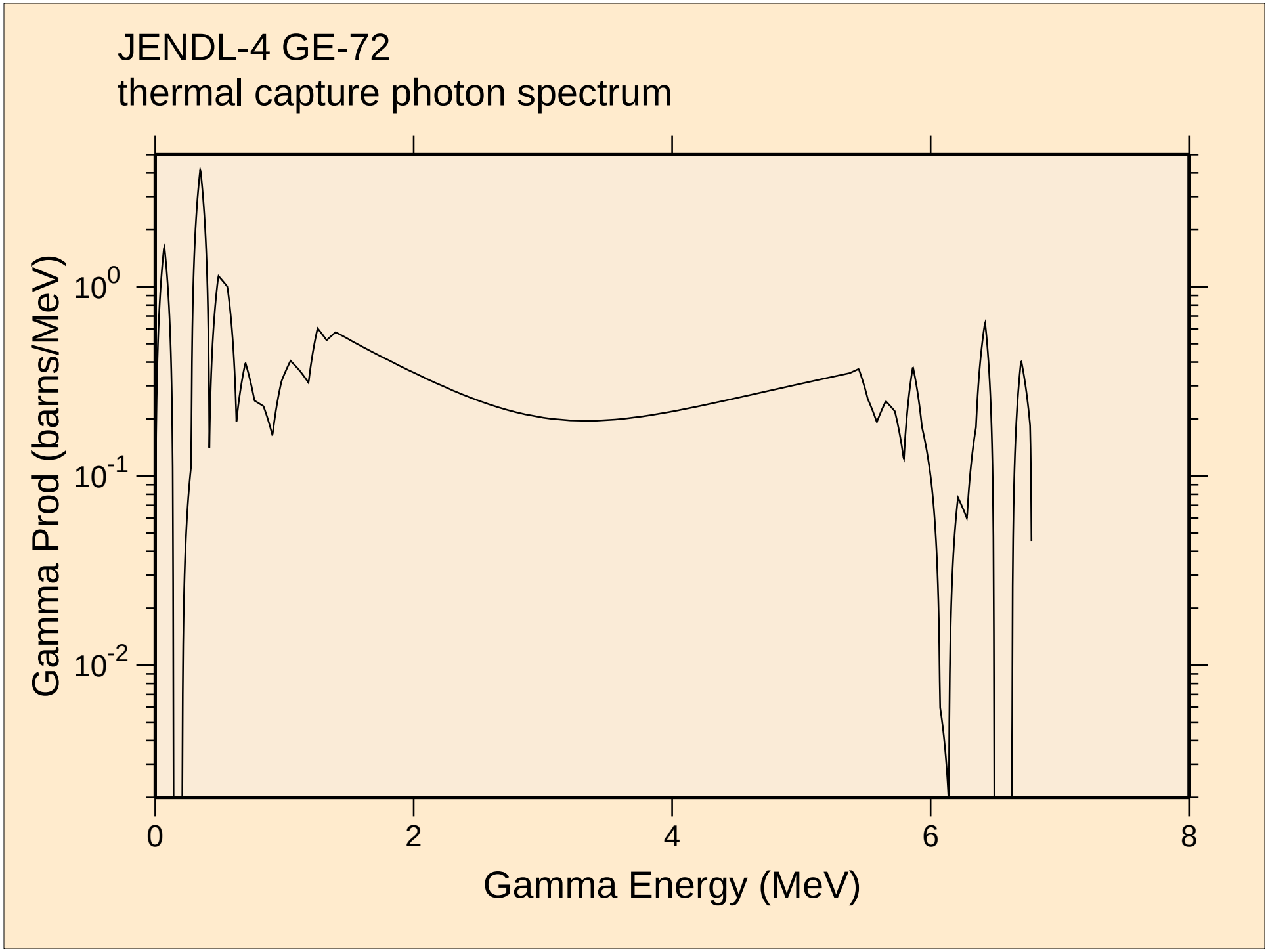

JENDL-4 GE-72
Photon emission for (n,n*)p
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
5
10
E_γ (MeV)
8
10
12
14
16
18
20
E_n (MeV)

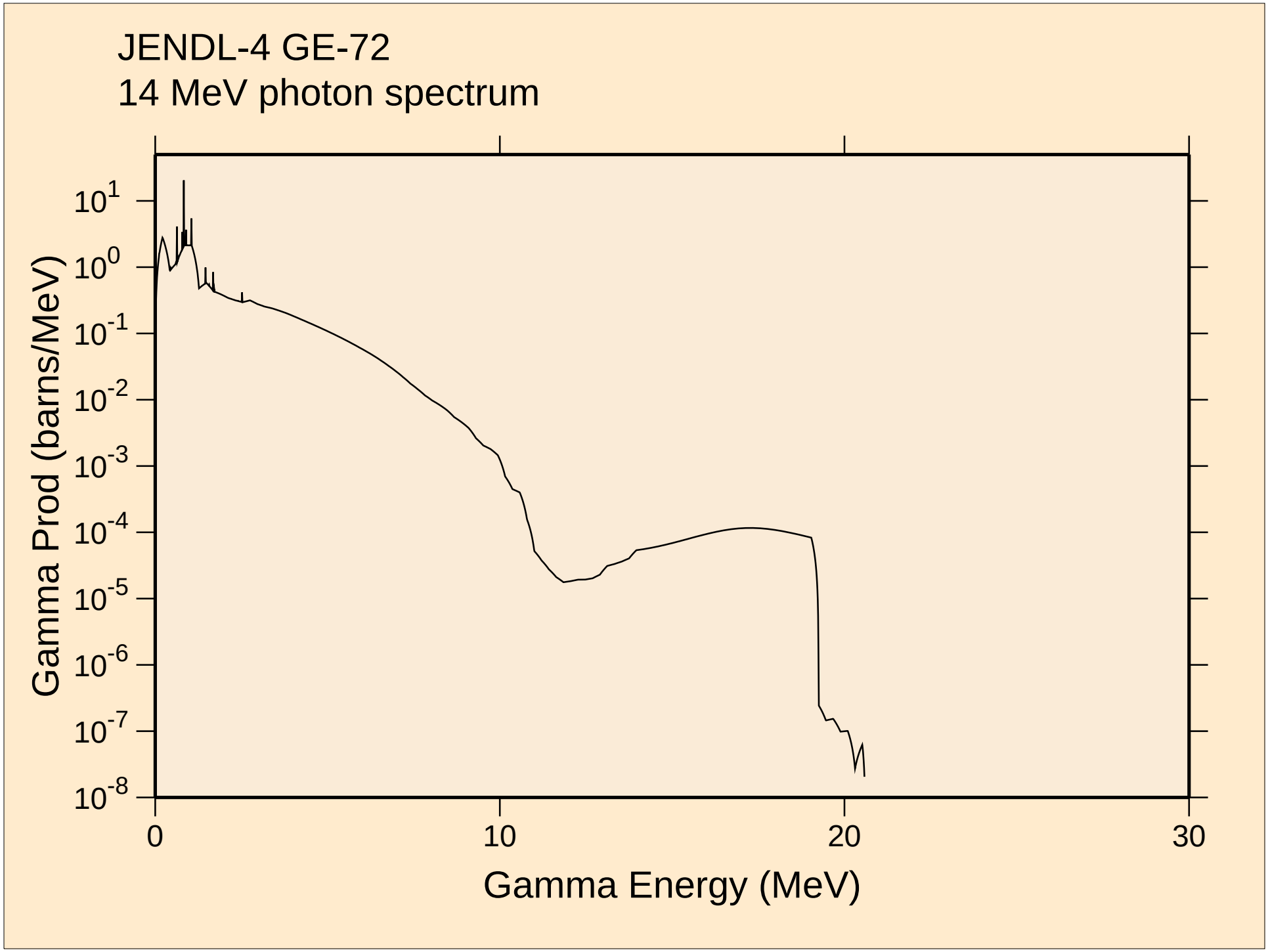

JENDL-4 GE-72
Photon emission for (n,n*c)
Prob/MeV
10^{-1}
10^{-3}
0
10
20
E_γ (MeV)
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

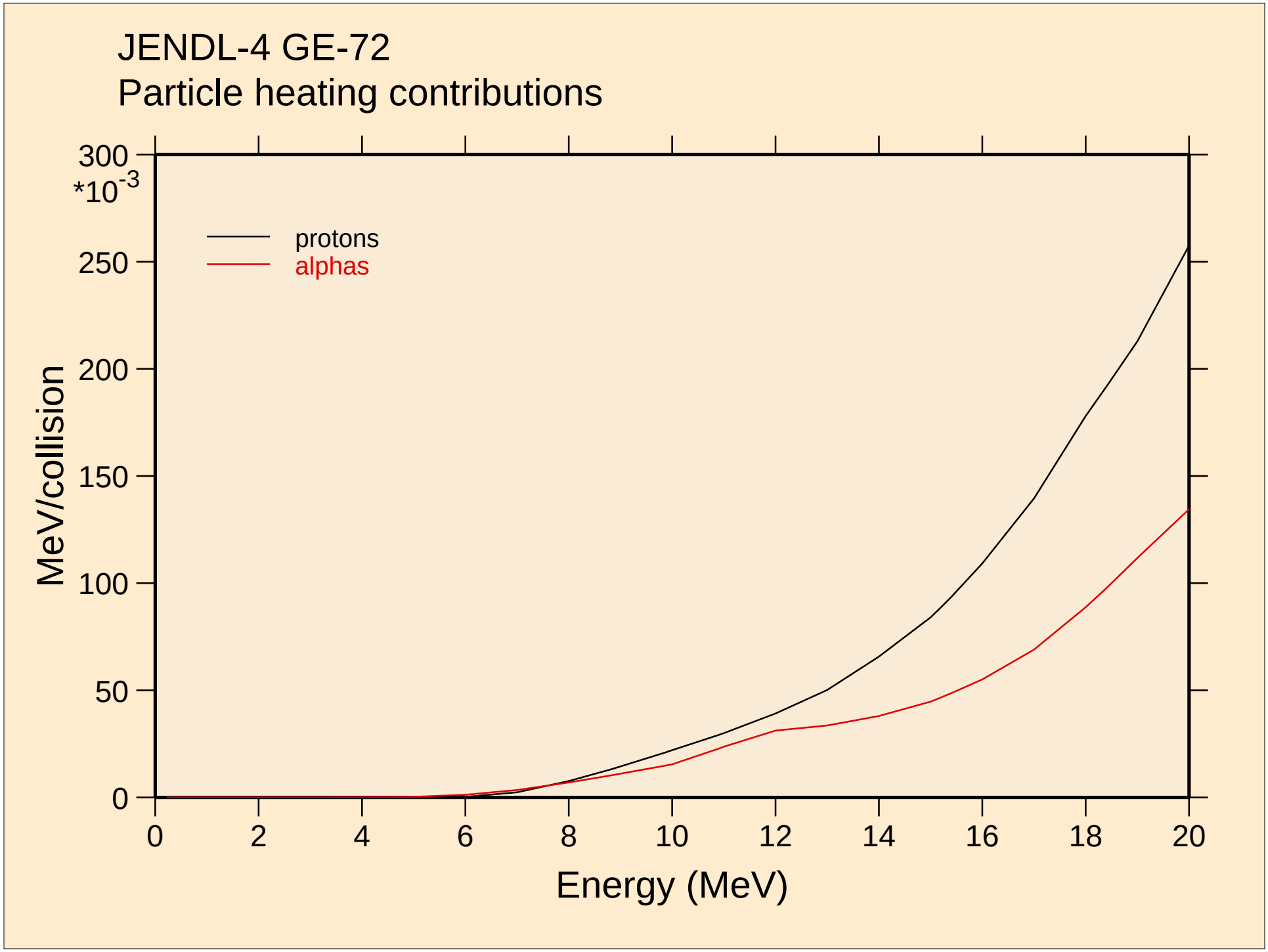

JENDL-4 GE-72
Photon emission for (n,gma)
Prob/MeV
10^0
10^{-2}
0
20
40
E_γ (MeV)
0
5
10
15
20
E_n (MeV)

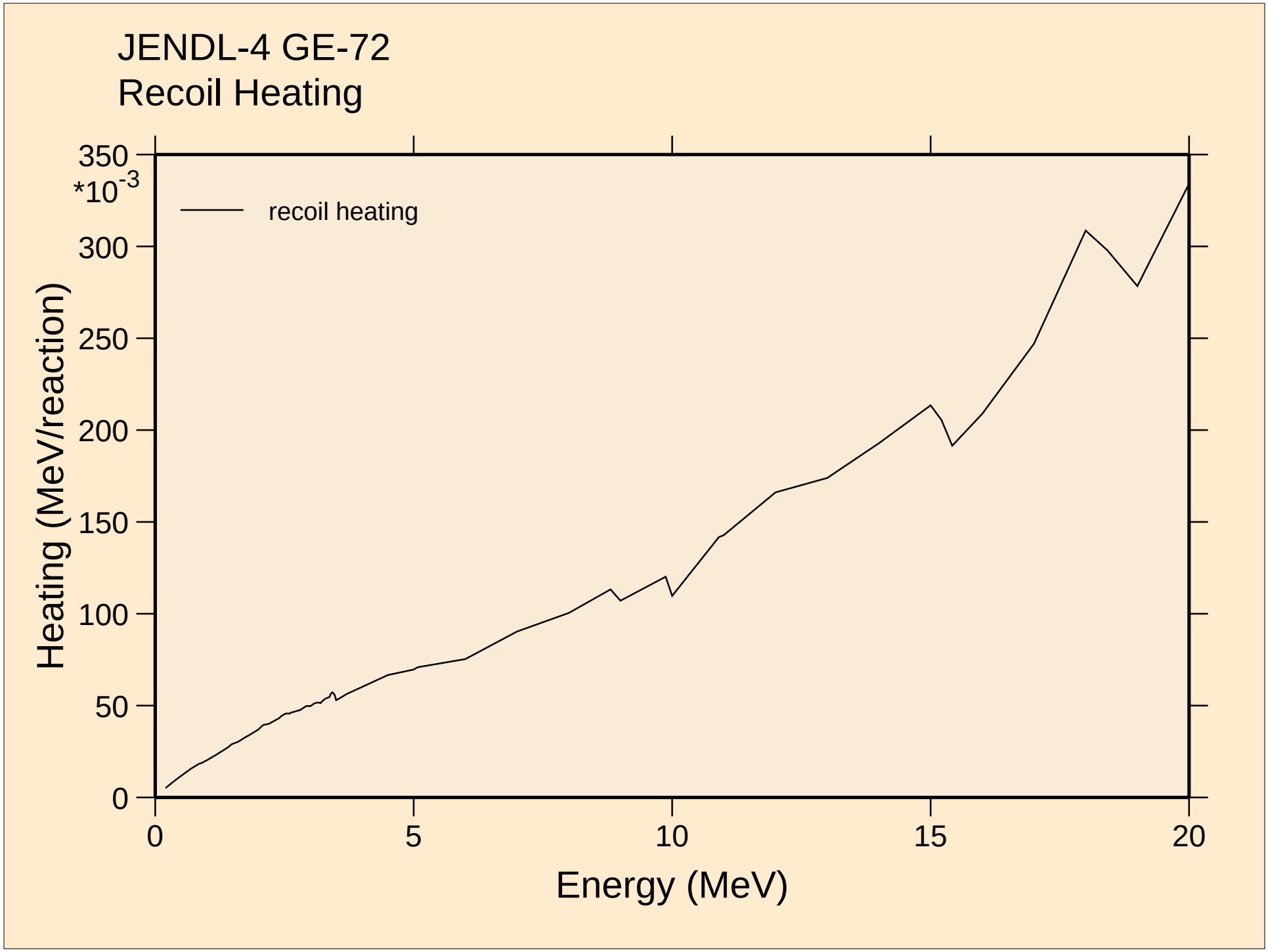

JENDL-4 GE-72
Photon emission for (n,p*c)
Prob/MeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

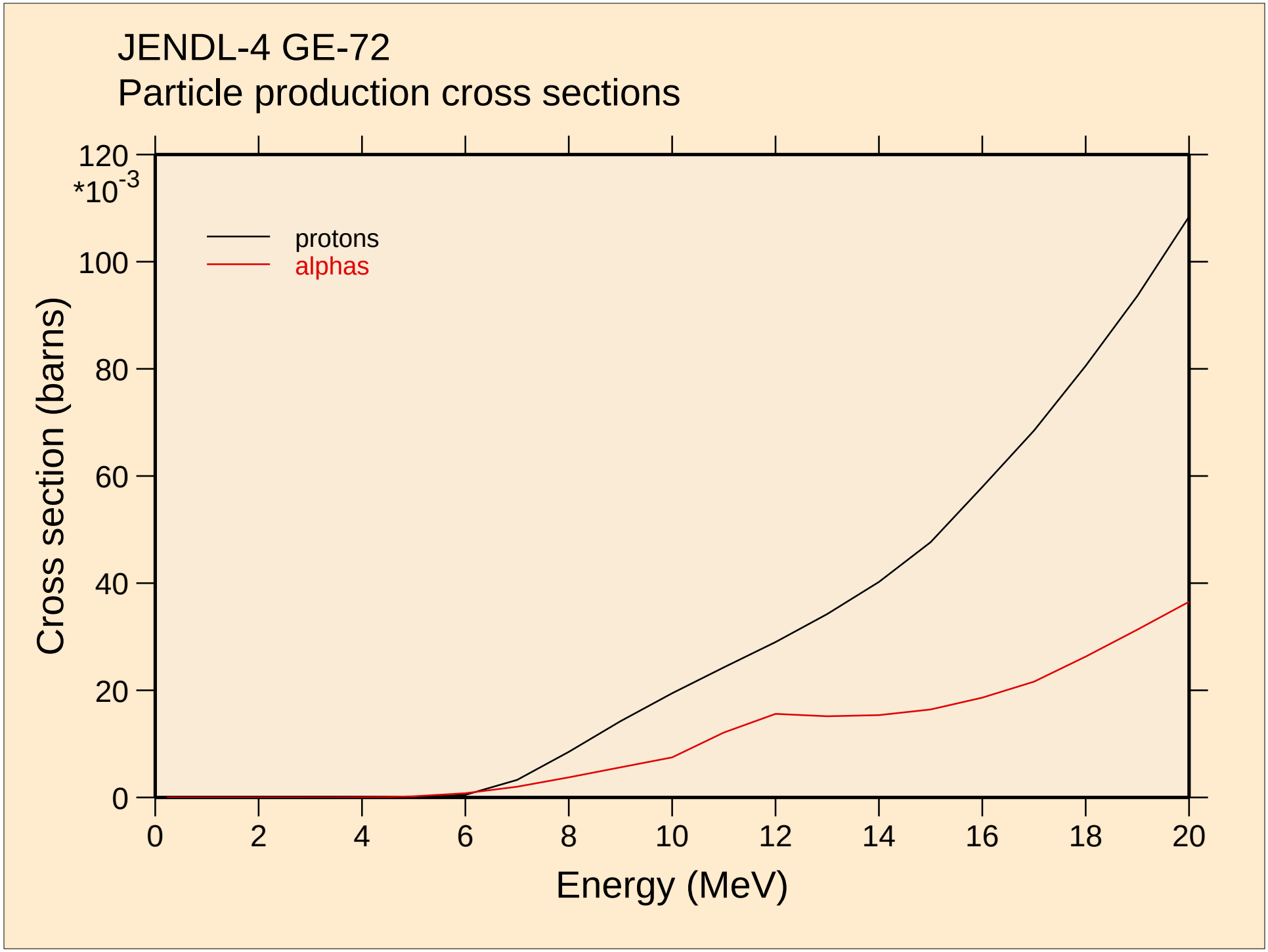

JENDL-4 GE-72
Photon emission for (n,a*c)
Prob/MeV
10^-1
10^-3
0
5
10
Eγ (MeV)
0
2
4
6
8
10
12
14
16
18
20
En (MeV)

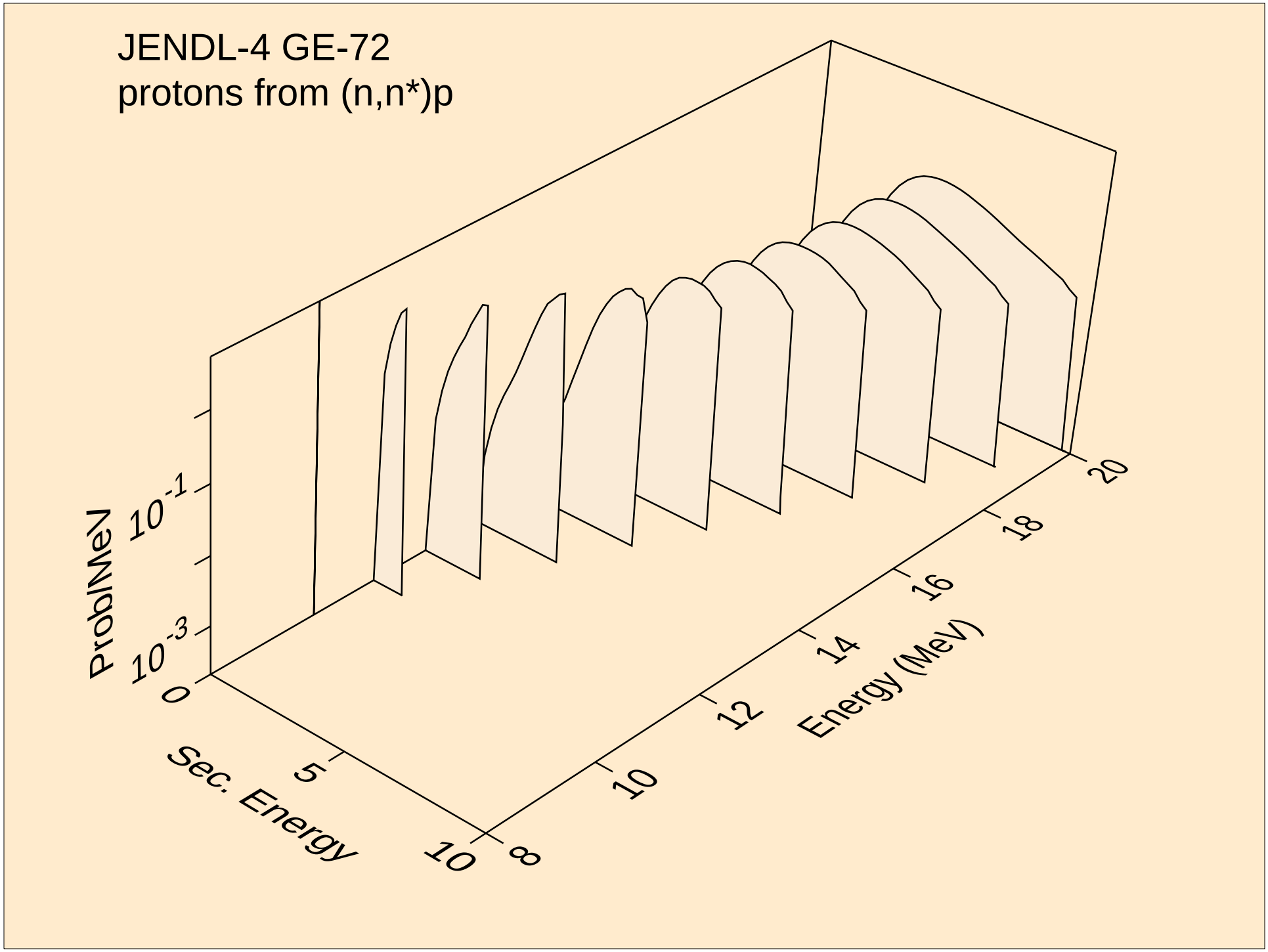

JENDL-4 GE-72
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^0
10^{-1}
10^{-2}
0
2
4
6
8
Gamma Energy (MeV)

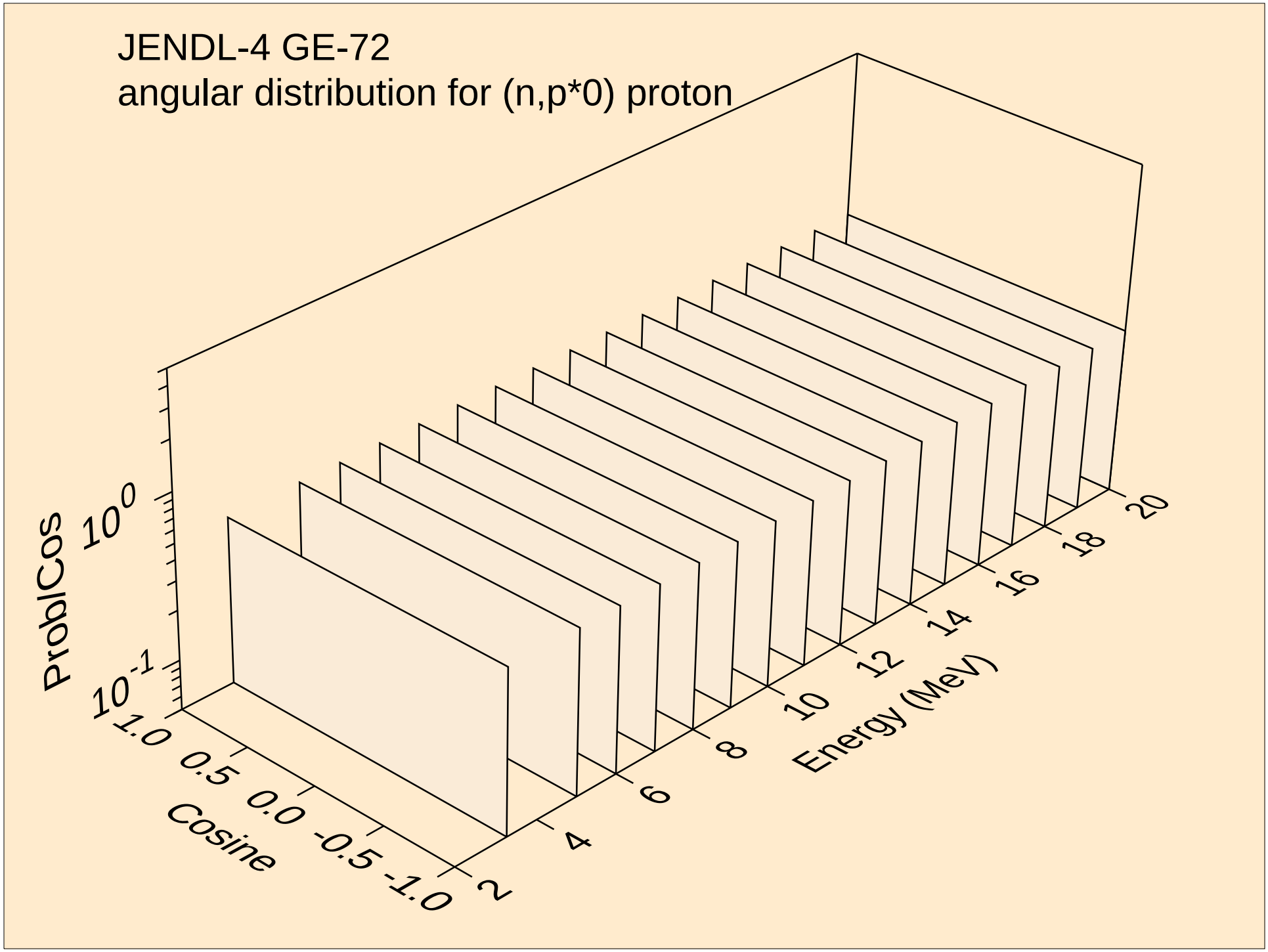

JENDL-4 GE-72
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-7
10^-8
0
10
20
30
Gamma Energy (MeV)

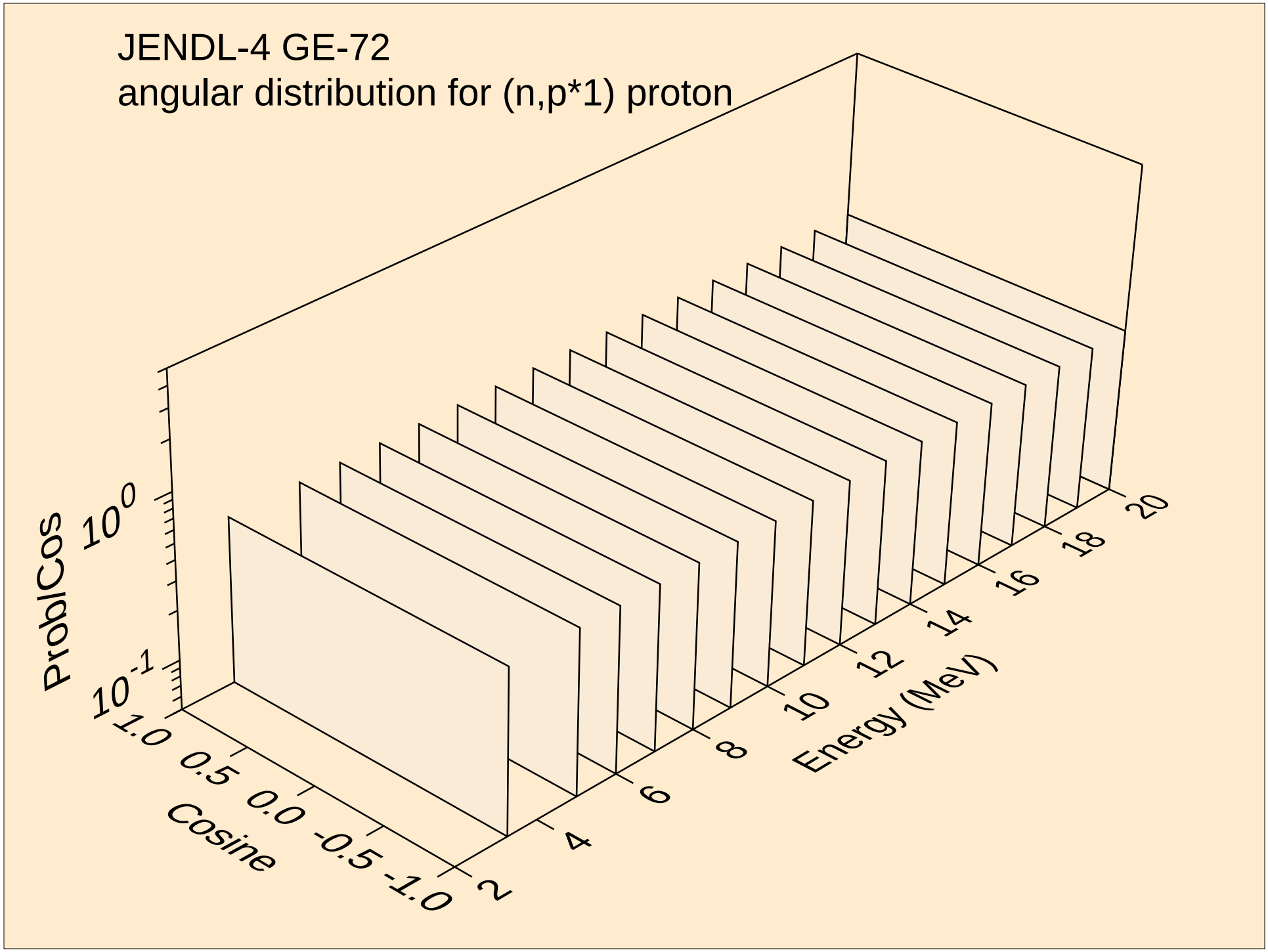

JENDL-4 GE-72
Particle heating contributions
protons
alphas
MeV/collision
*10^-3
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

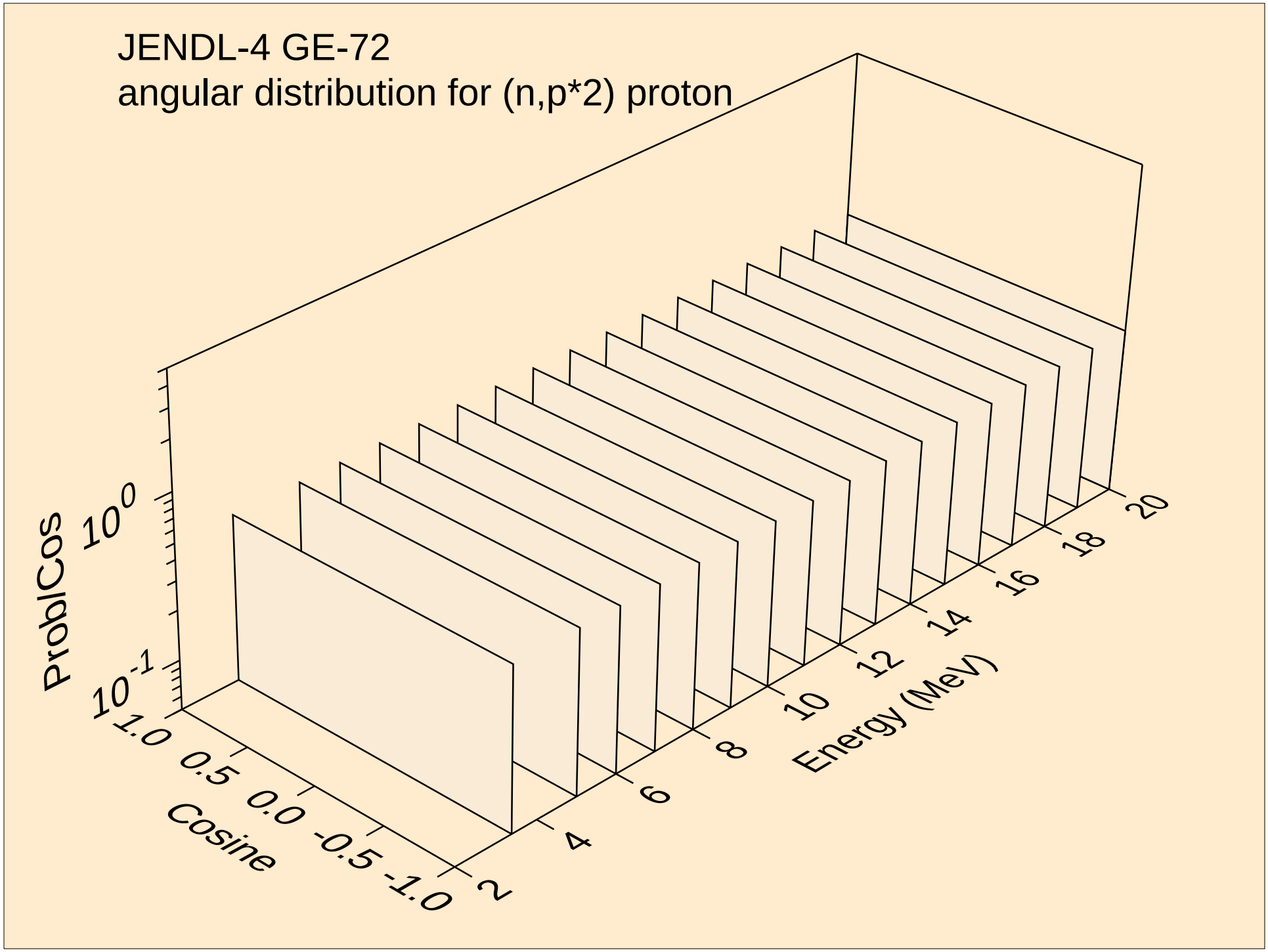

JENDL-4 GE-72
Recoil Heating
recoil heating
Heating (MeV/reaction)
*10-3
350
300
250
200
150
100
50
0
0
5
10
15
20
Energy (MeV)

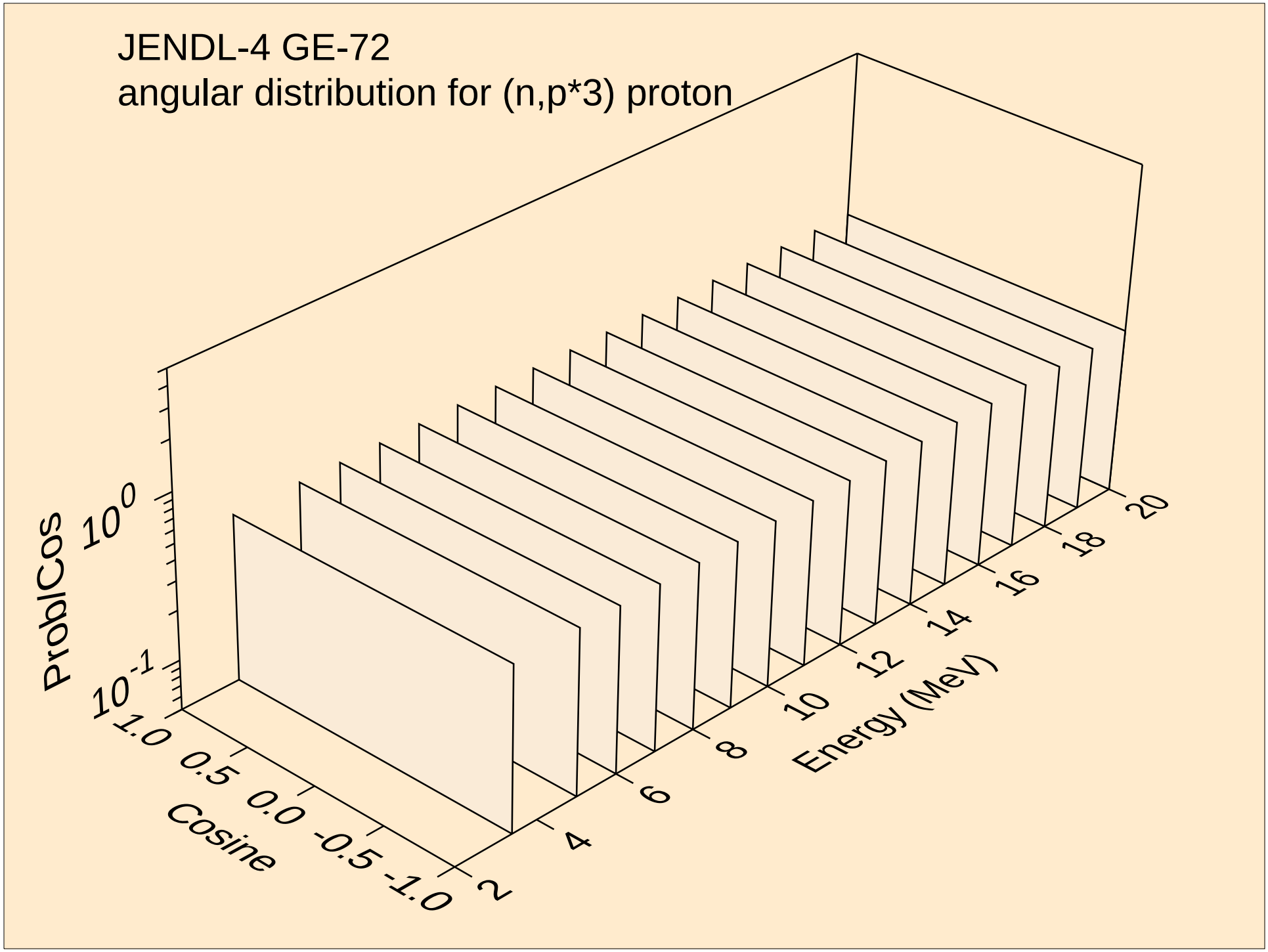

JENDL-4 GE-72
Particle production cross sections
120
*10-3
100
80
60
40
20
0
Cross section (barns)
protons
alphas
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

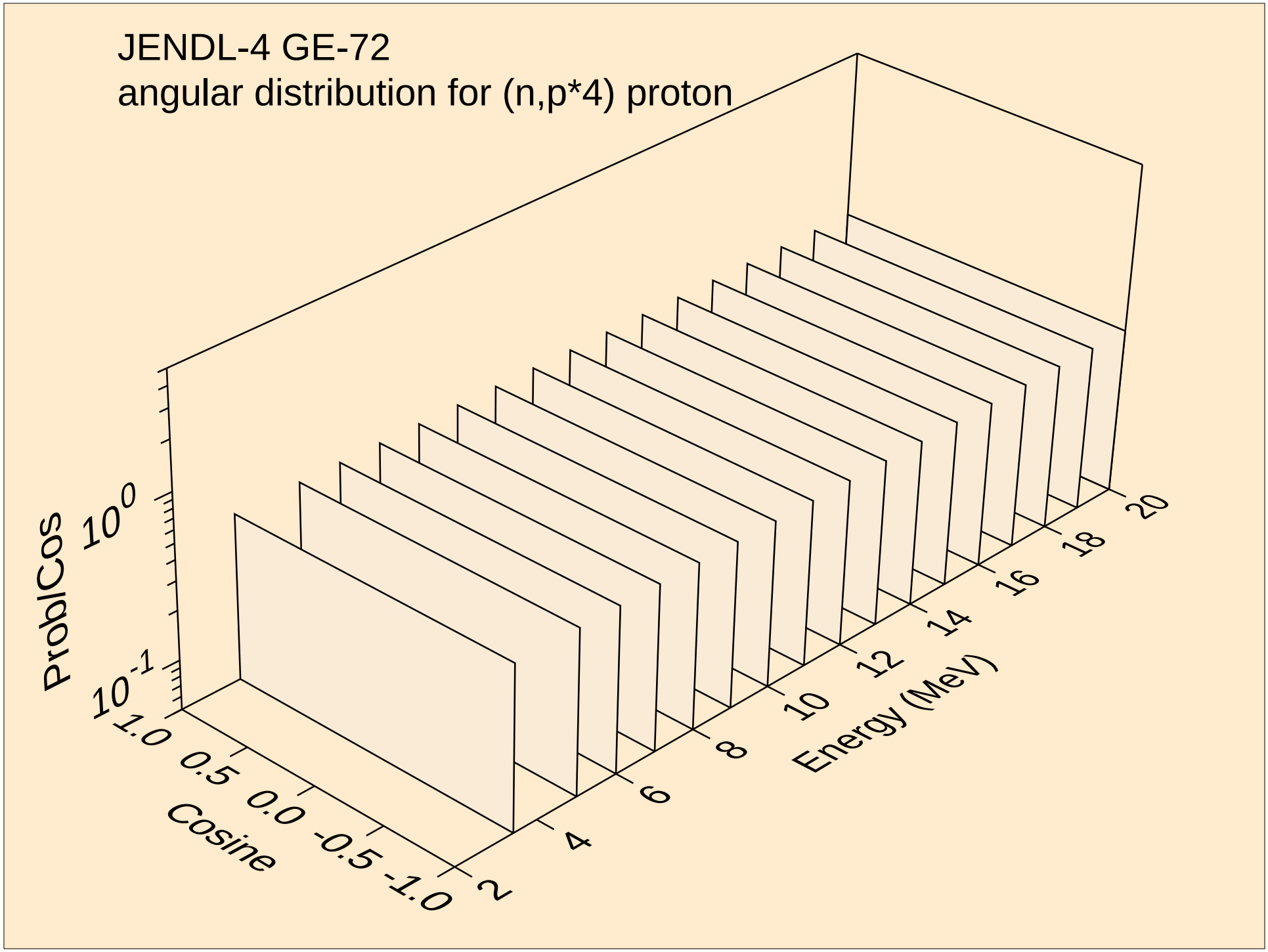

JENDL-4 GE-72
protons from (n,n*)p
Prob/MeV
10-1
10-3
0
Sec. Energy
5
10
8
10
12
14
16
18
20
Energy (MeV)

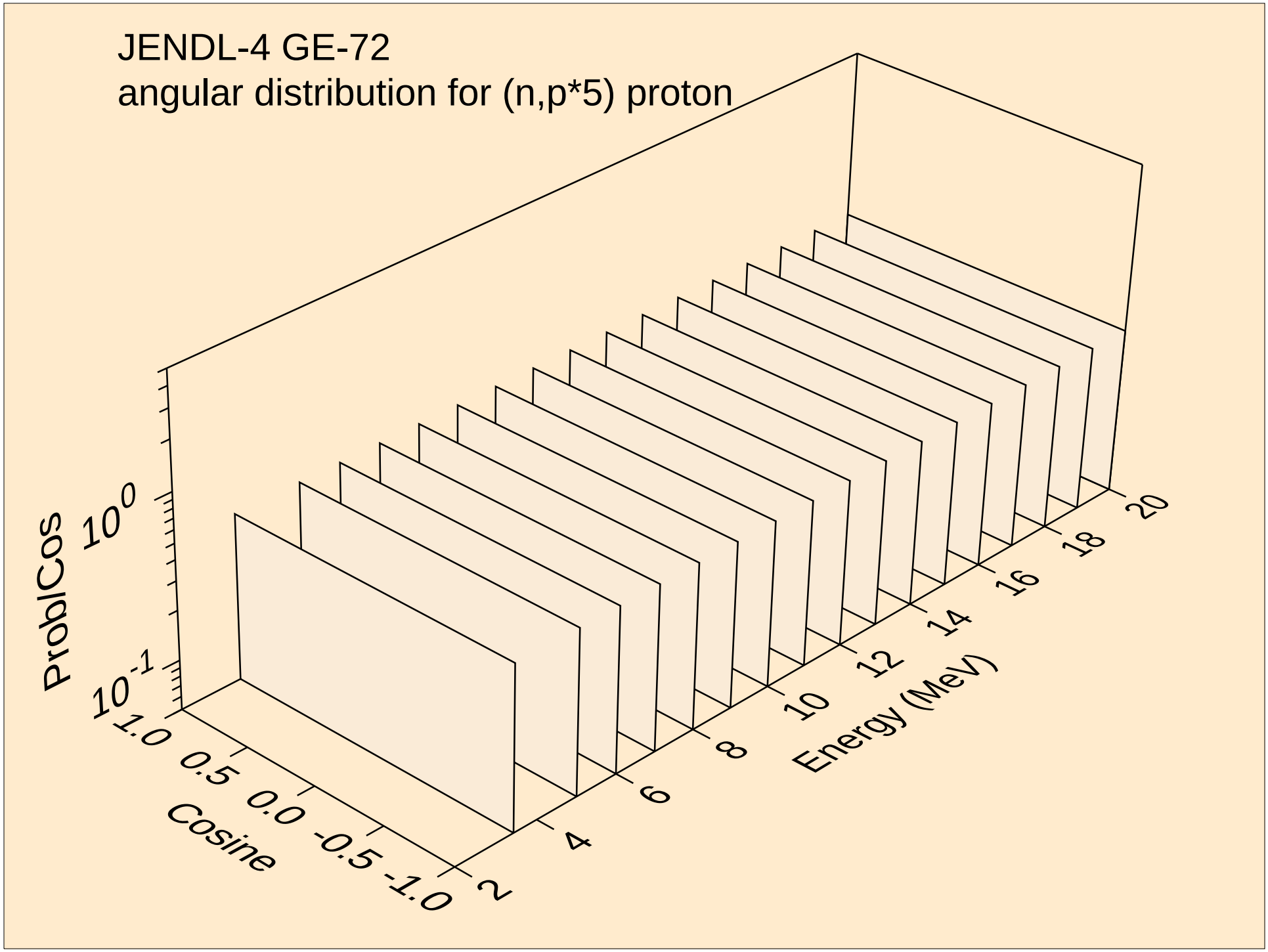

JENDL-4 GE-72
angular distribution for (n,p*0) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

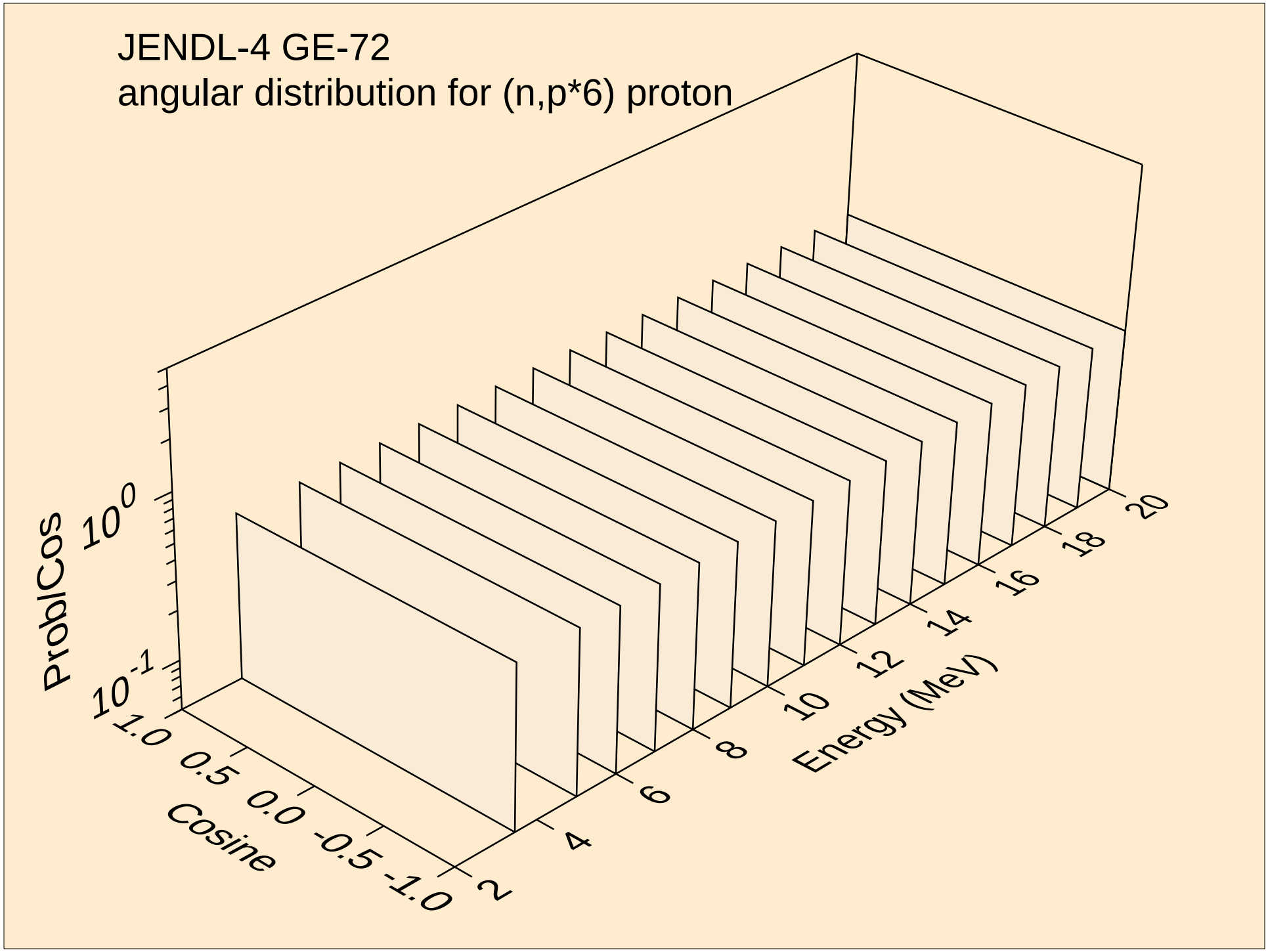

JENDL-4 GE-72
angular distribution for (n,p*1) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

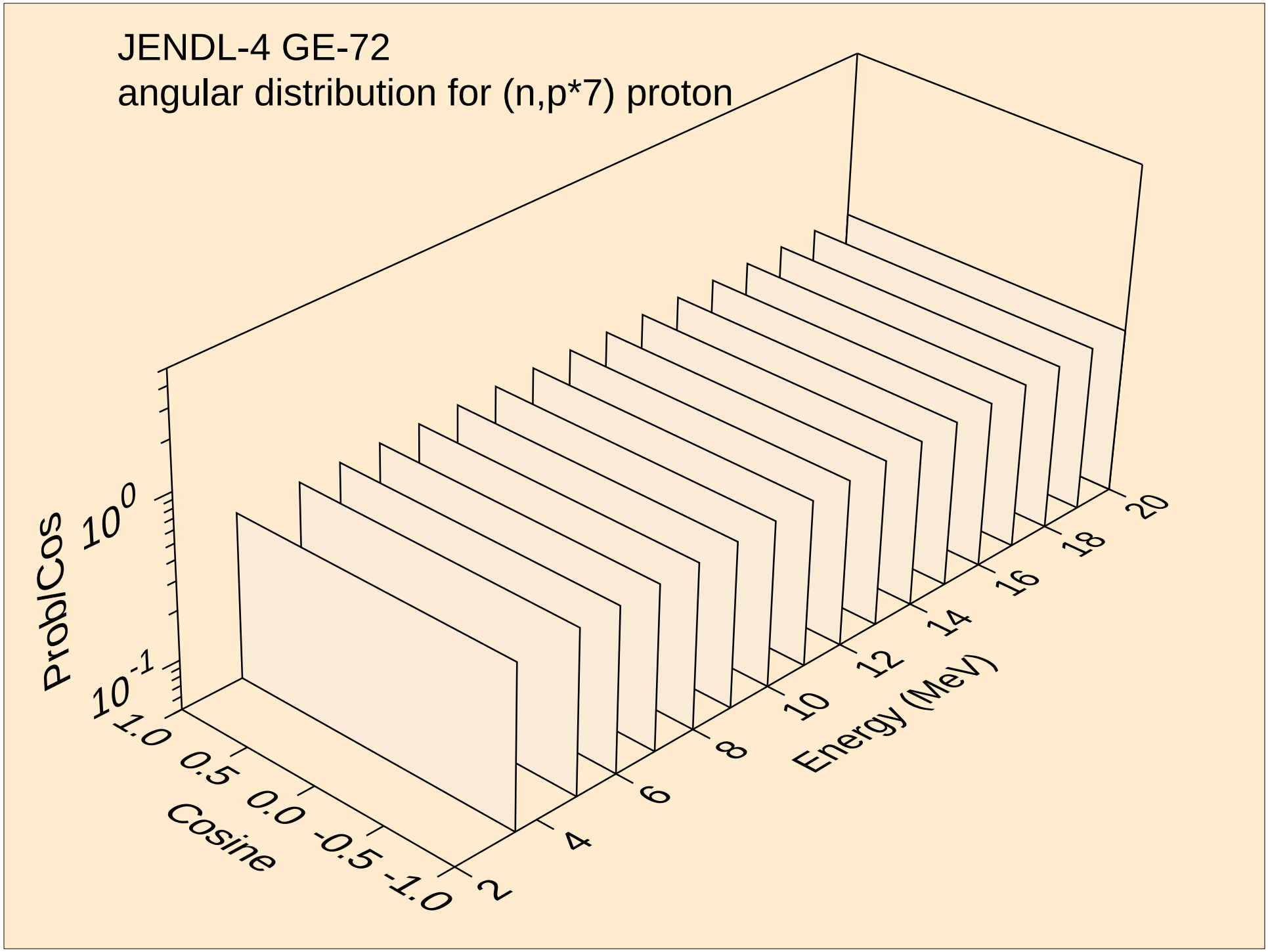

JENDL-4 GE-72
angular distribution for (n,p*2) proton
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

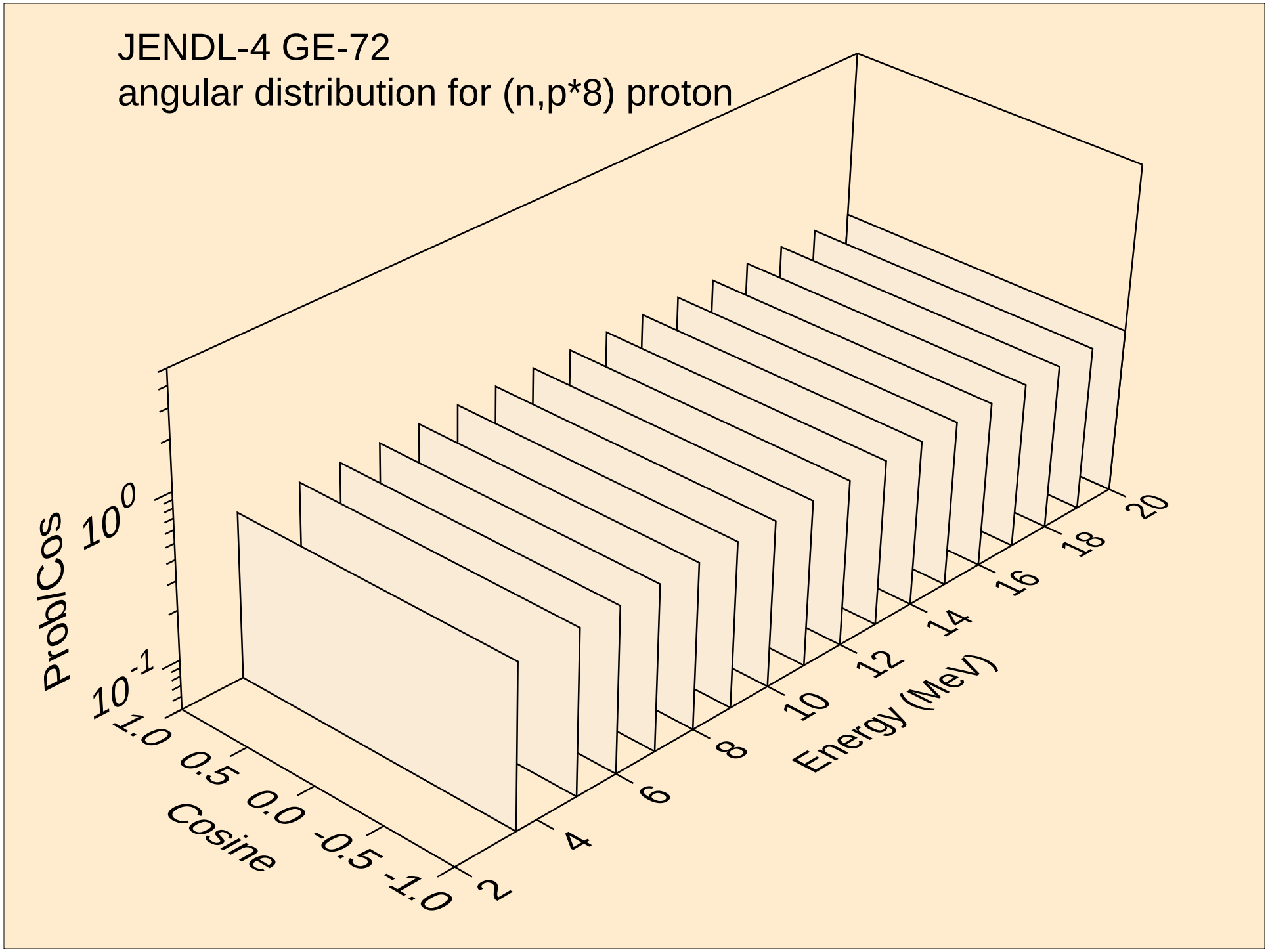

JENDL-4 GE-72
angular distribution for (n,p*3) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

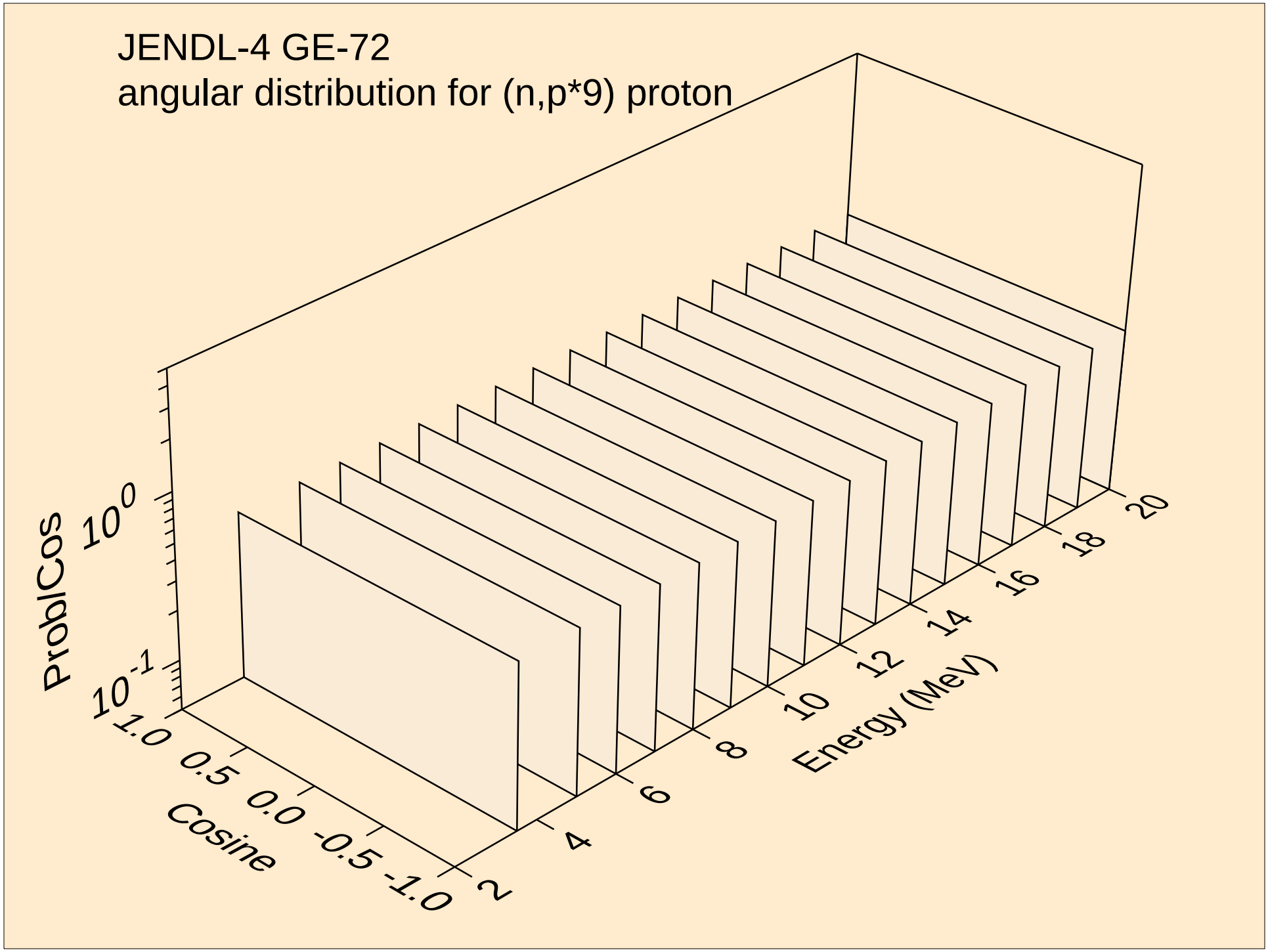

JENDL-4 GE-72
angular distribution for (n,p*4) proton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

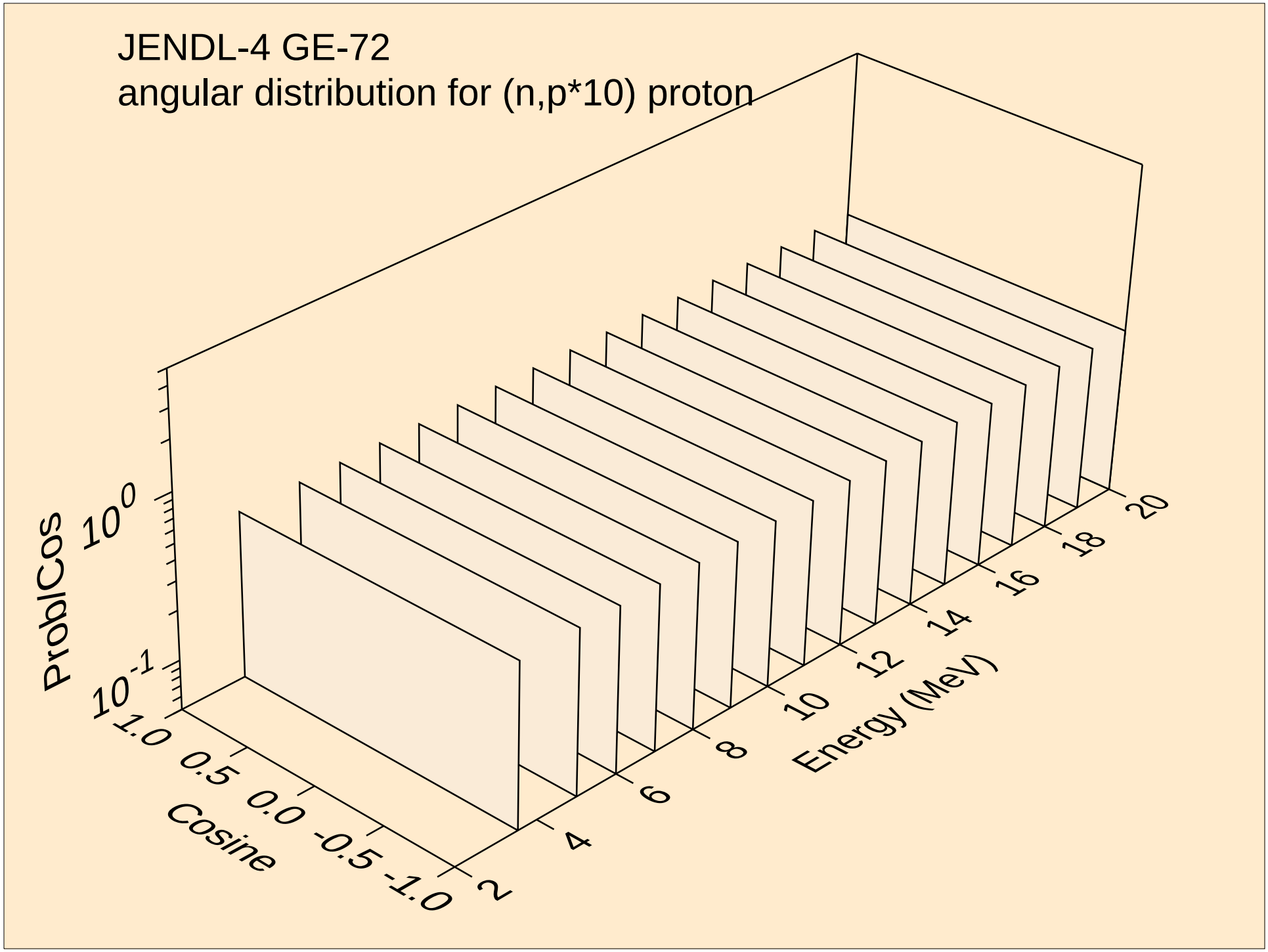

JENDL-4 GE-72
angular distribution for (n,p*5) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

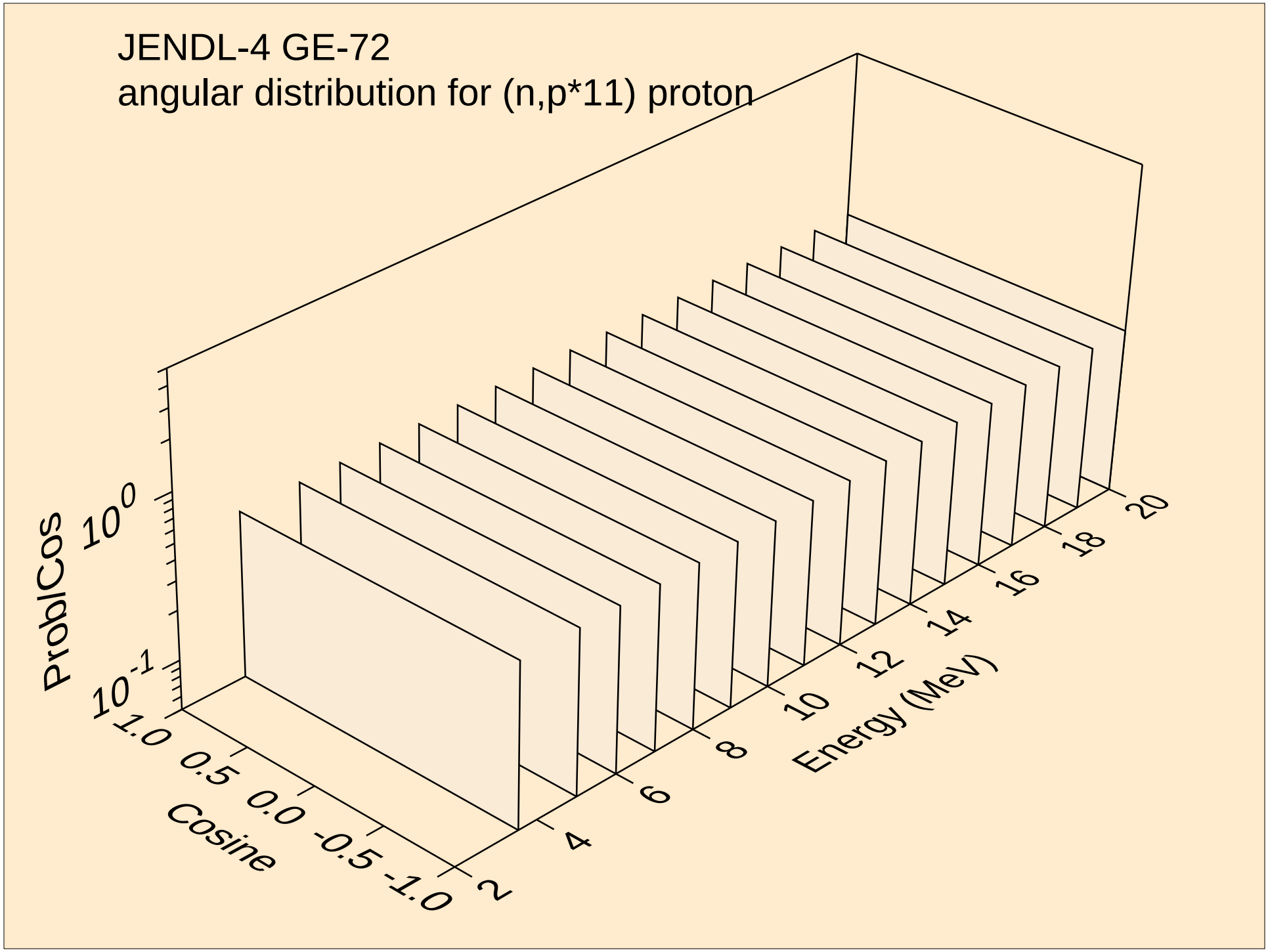

JENDL-4 GE-72
angular distribution for (n,p*6) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

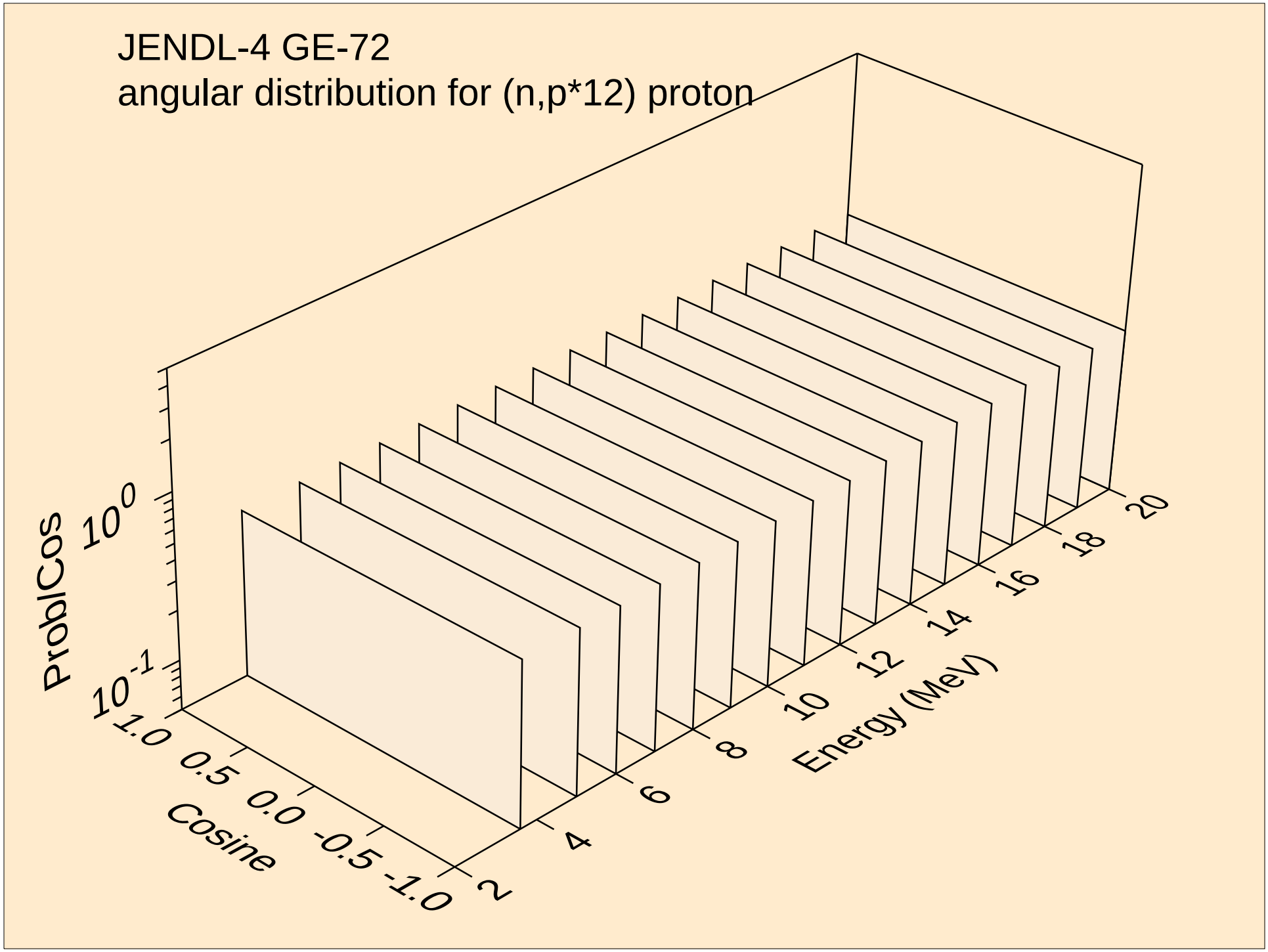

JENDL-4 GE-72
angular distribution for (n,p*7) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

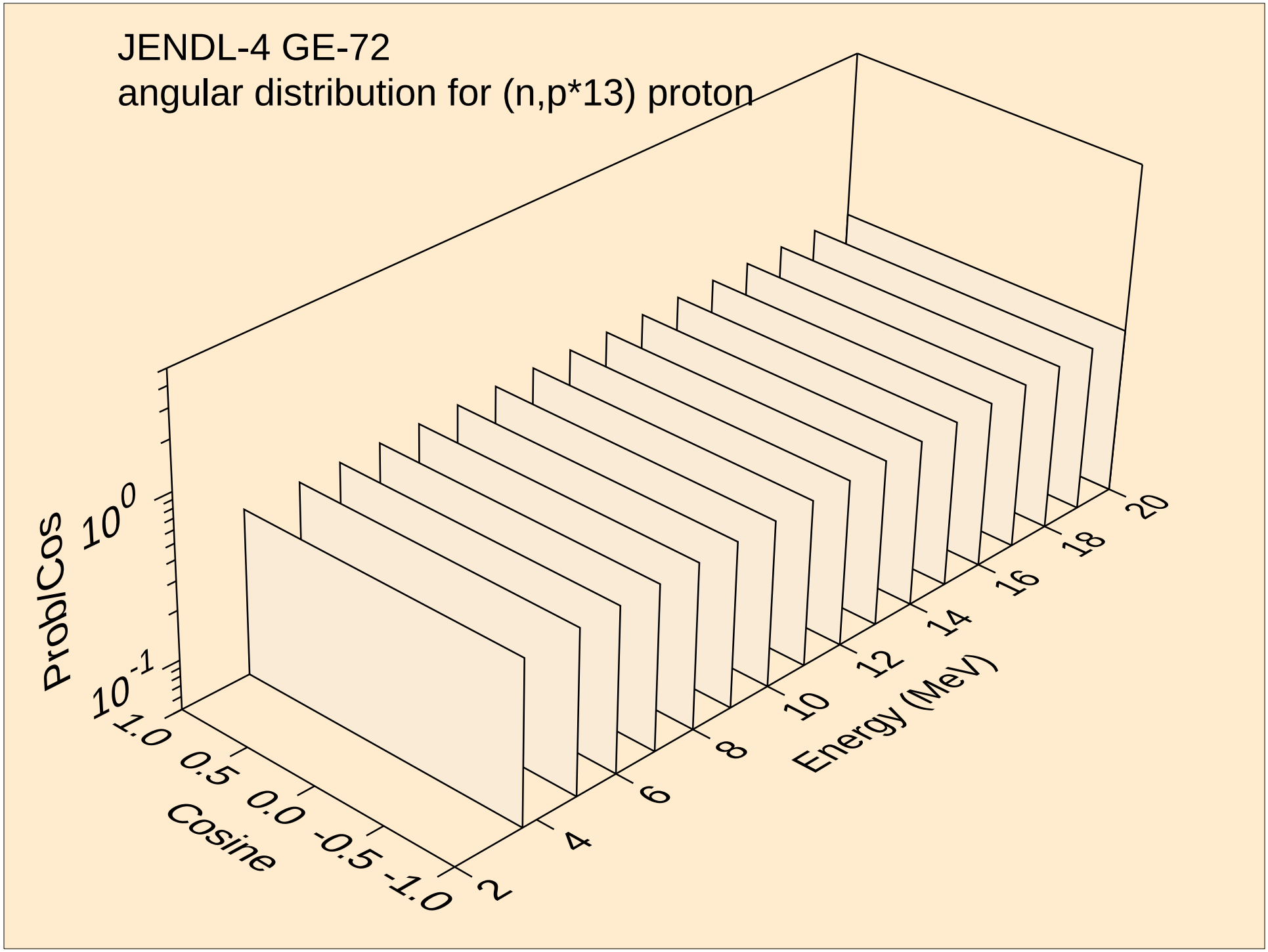

JENDL-4 GE-72
angular distribution for (n,p*8) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

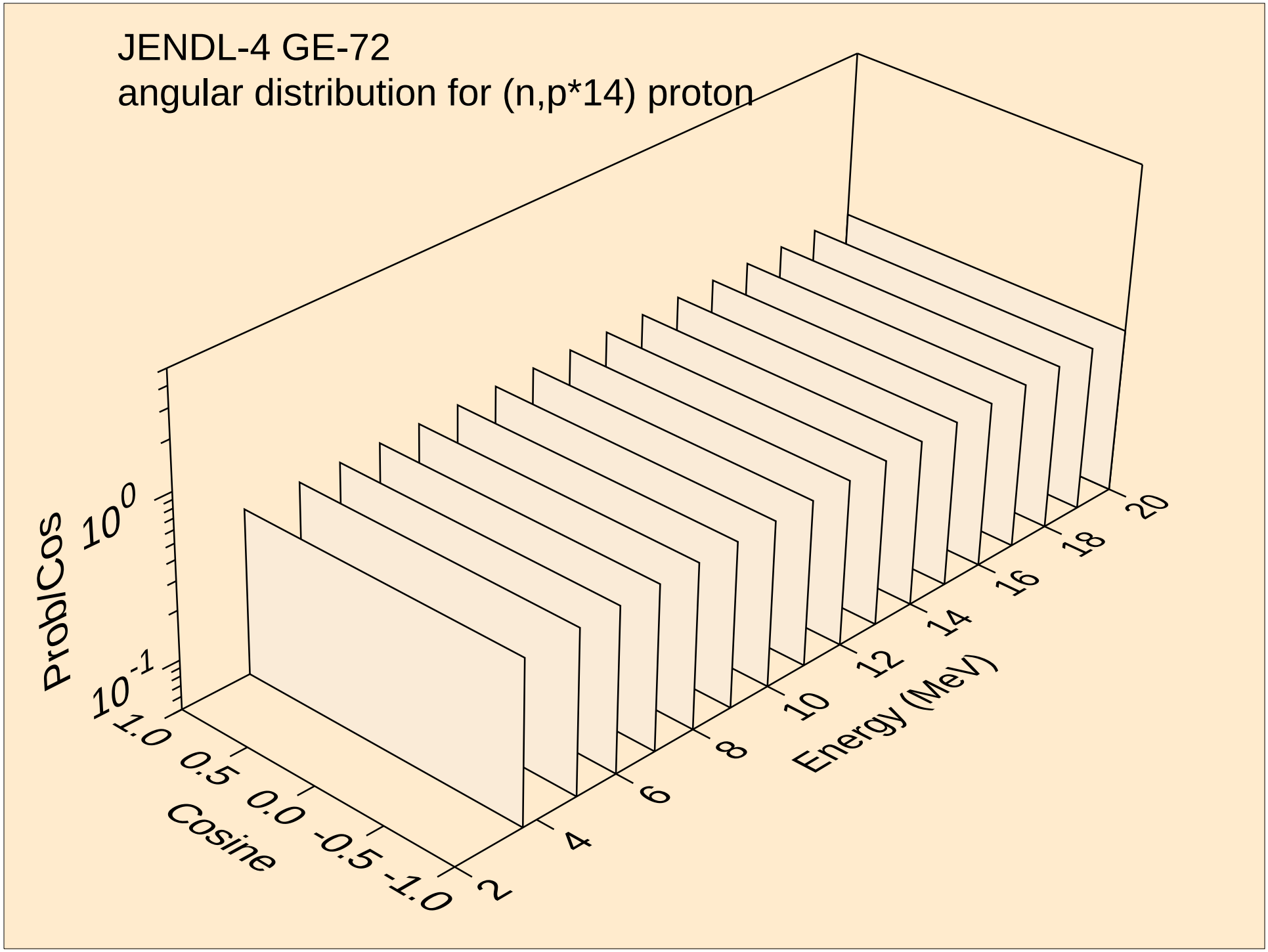

JENDL-4 GE-72
angular distribution for (n,p*9) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

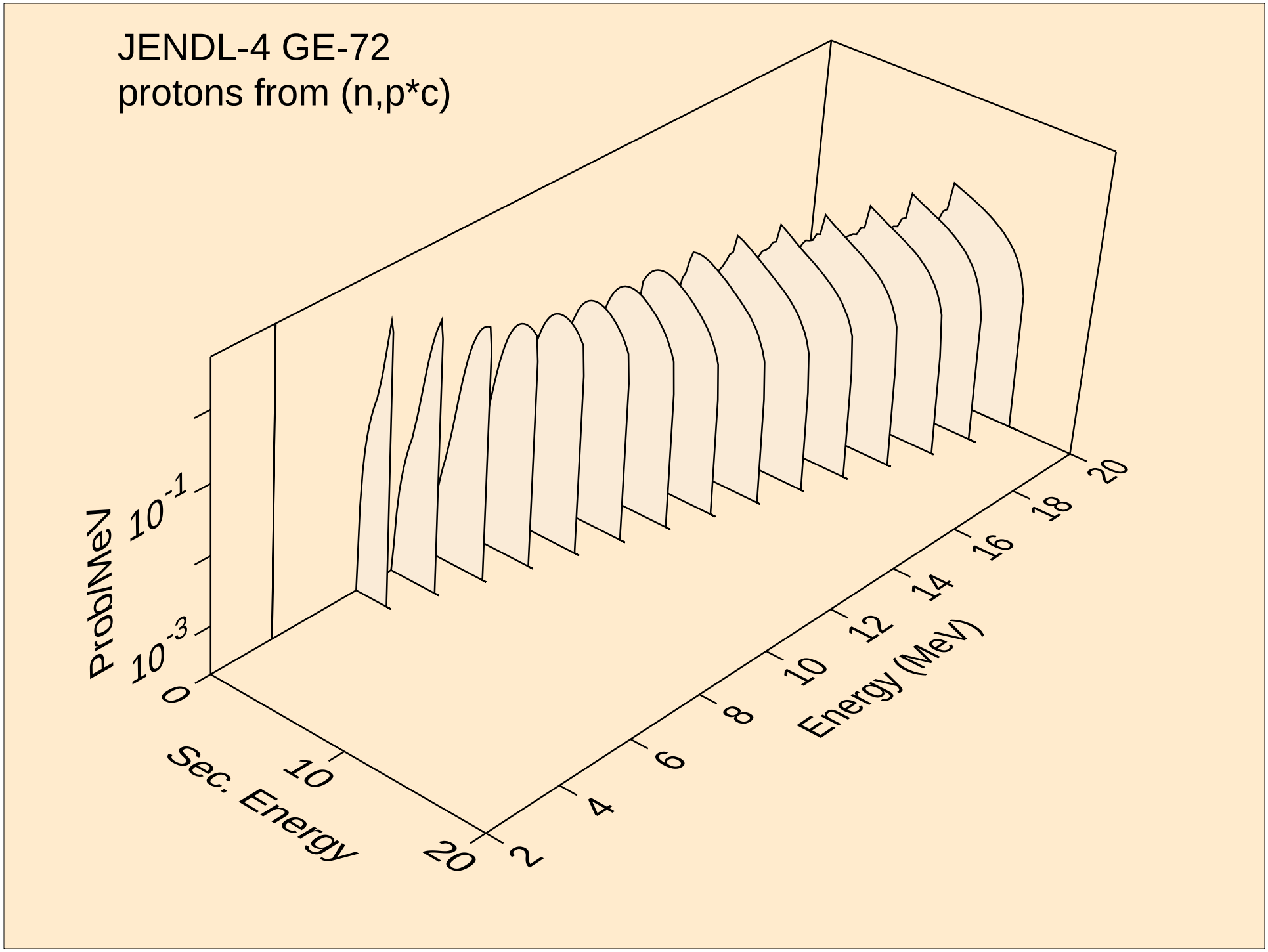

JENDL-4 GE-72
angular distribution for (n,p*10) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

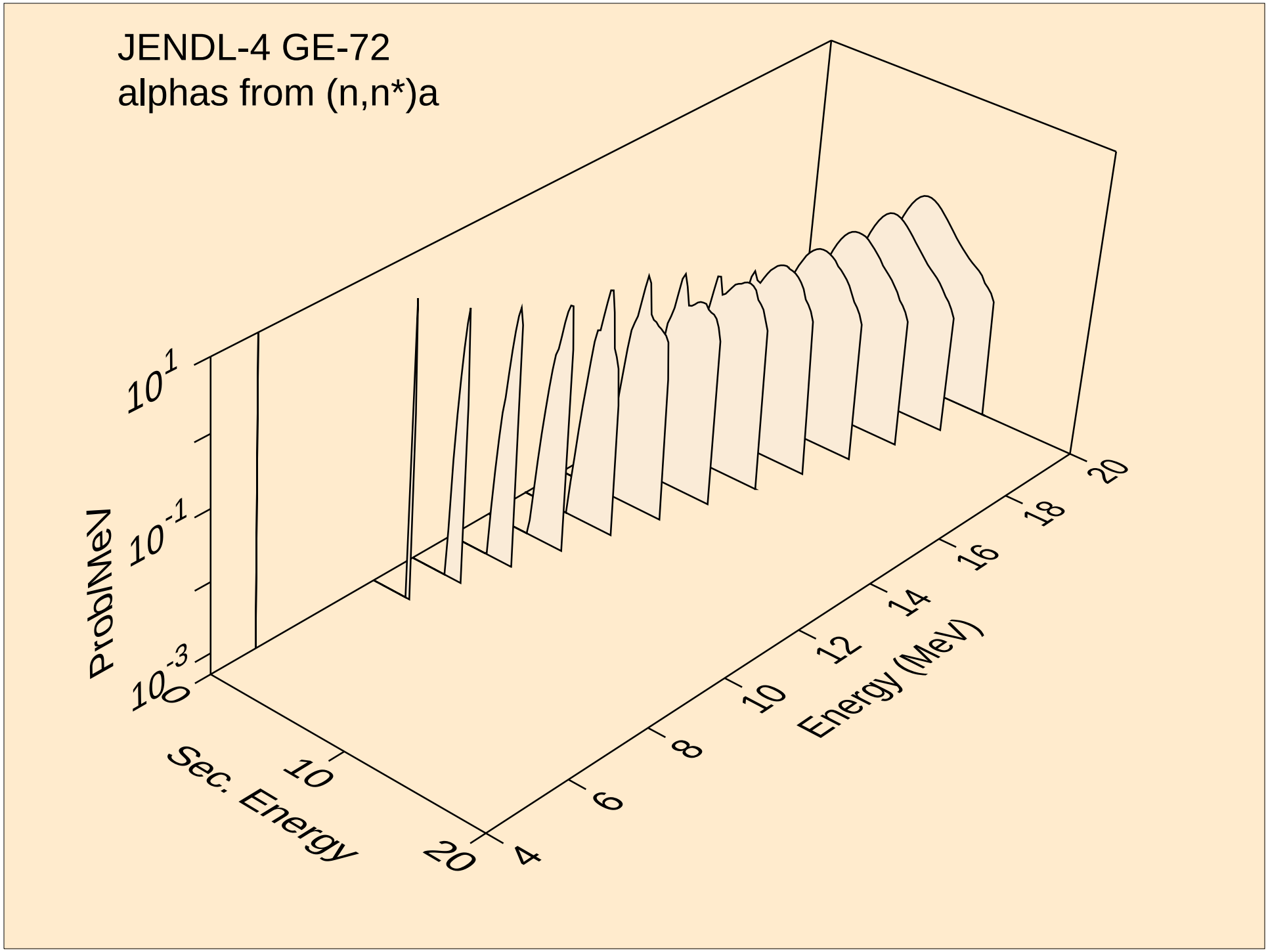

JENDL-4 GE-72
angular distribution for (n,p*11) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

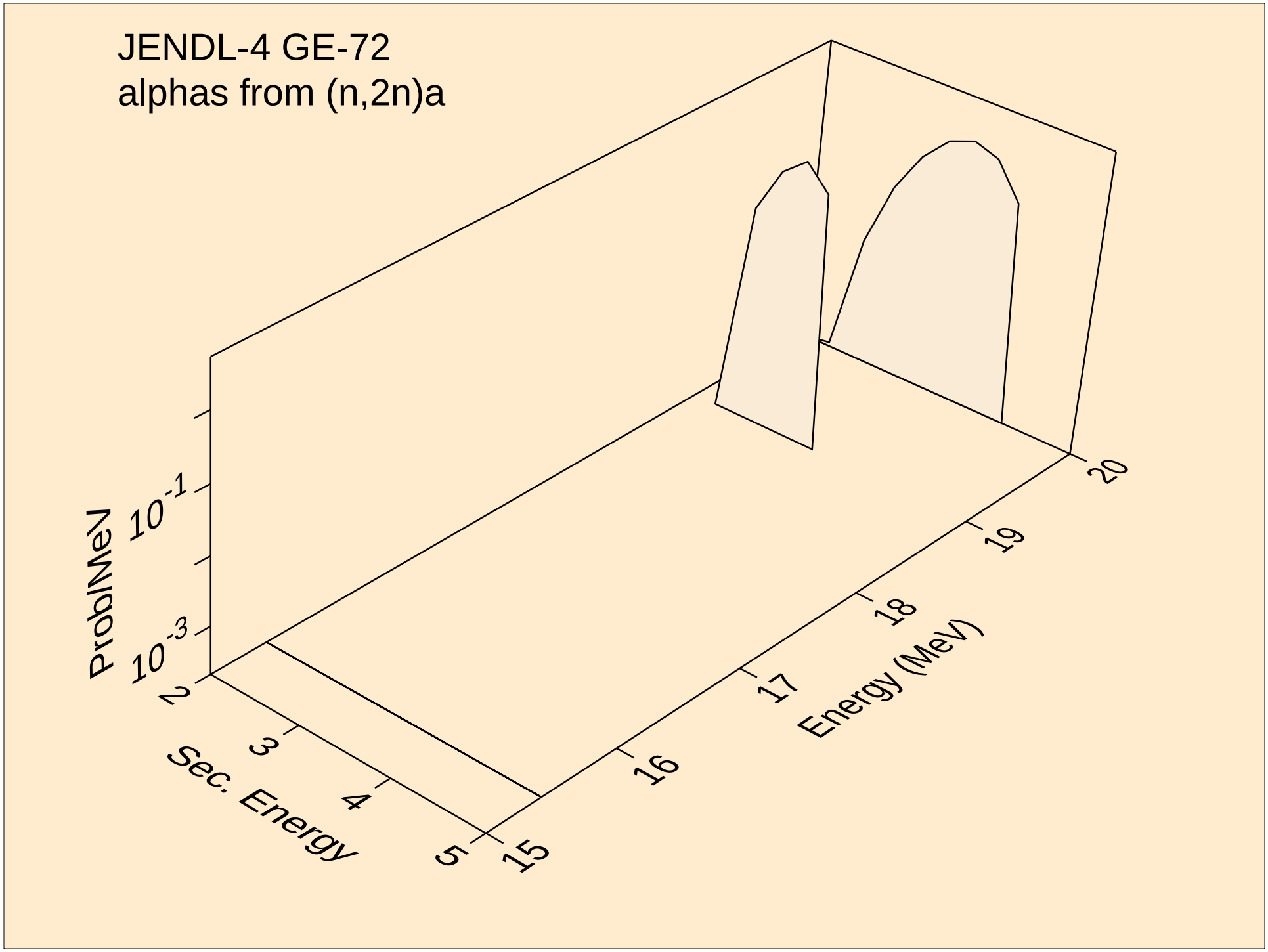

JENDL-4 GE-72
angular distribution for (n,p*12) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

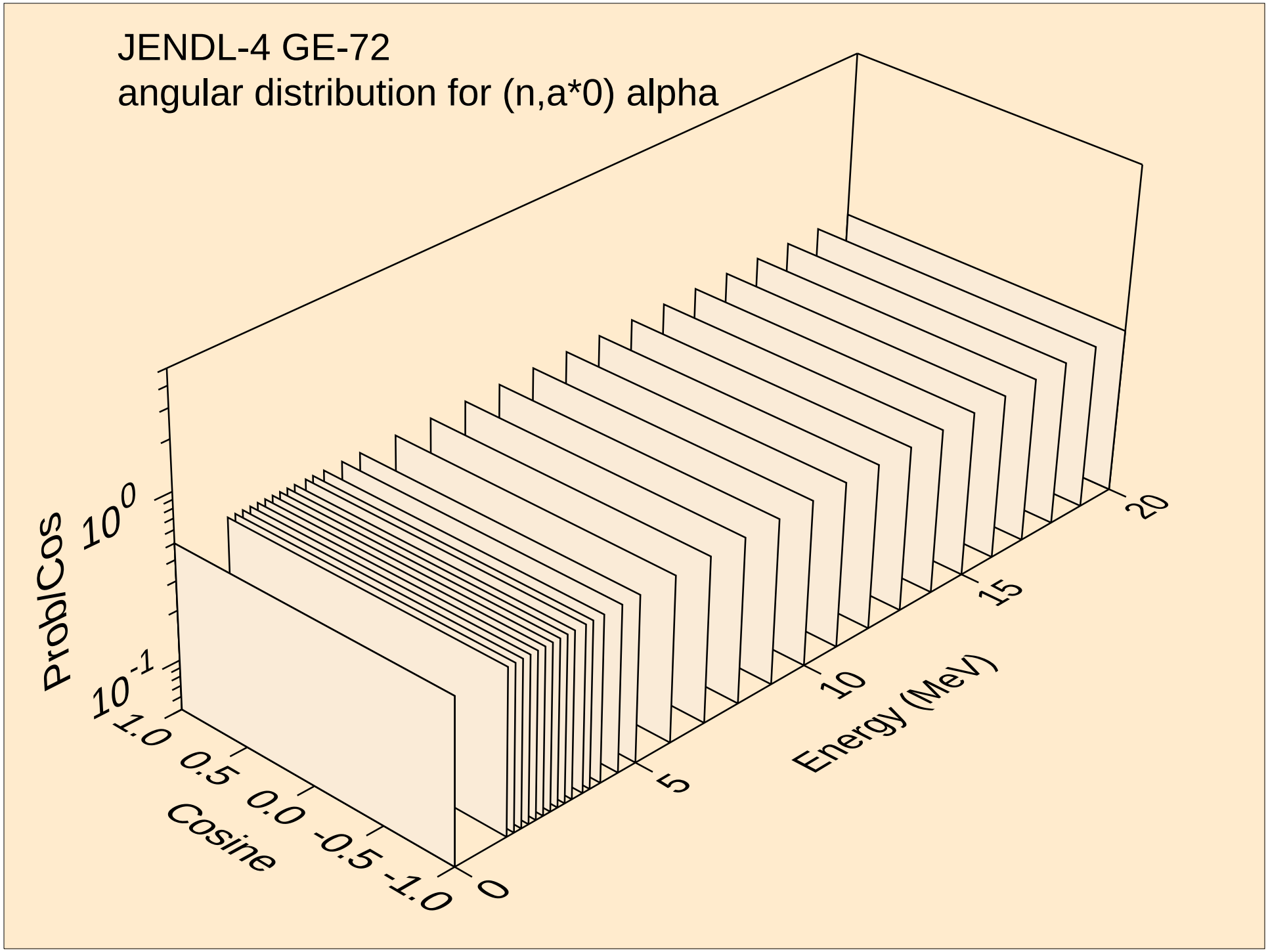

JENDL-4 GE-72
angular distribution for (n,p*13) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

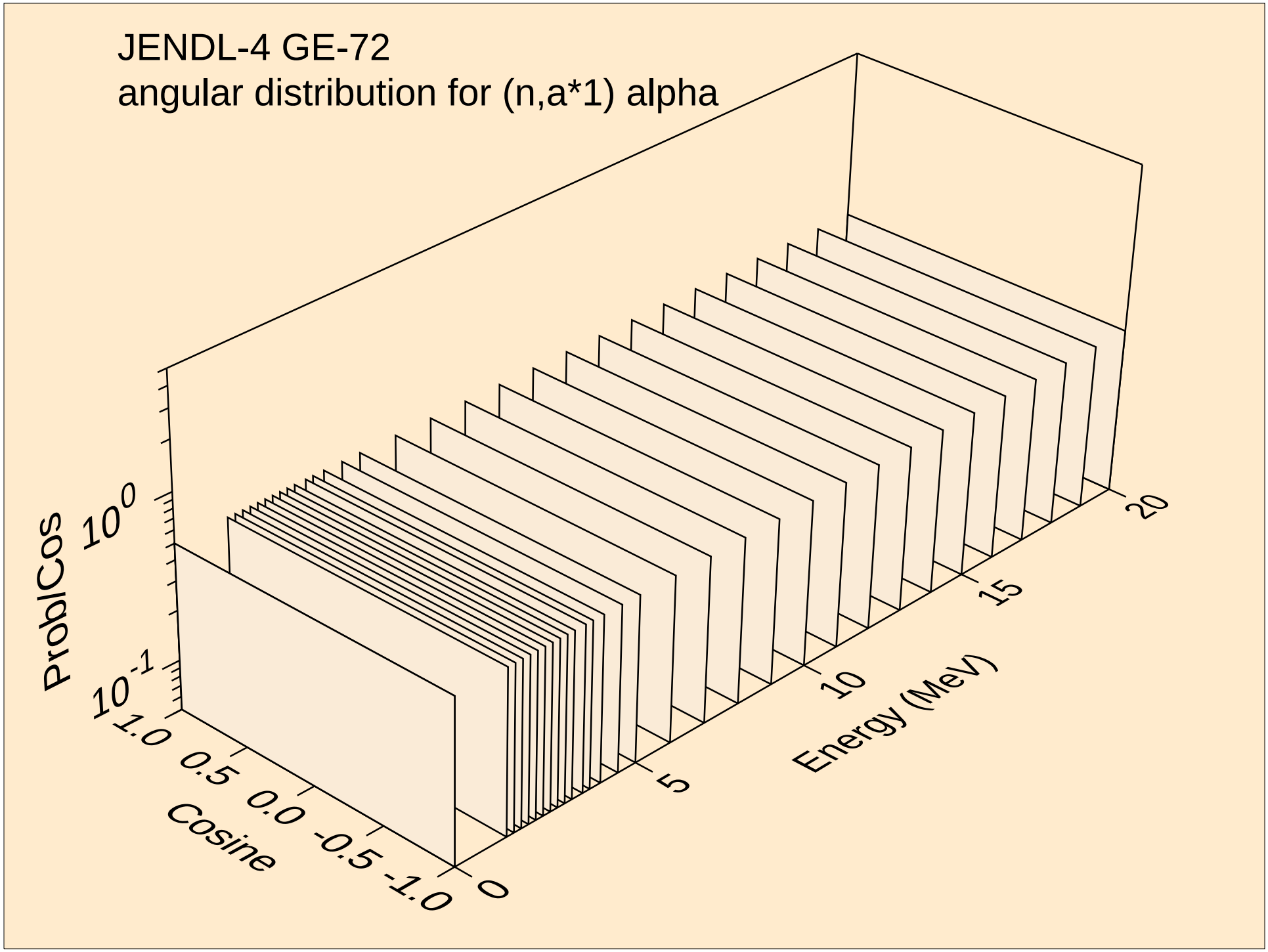

JENDL-4 GE-72
angular distribution for (n,p*14) proton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

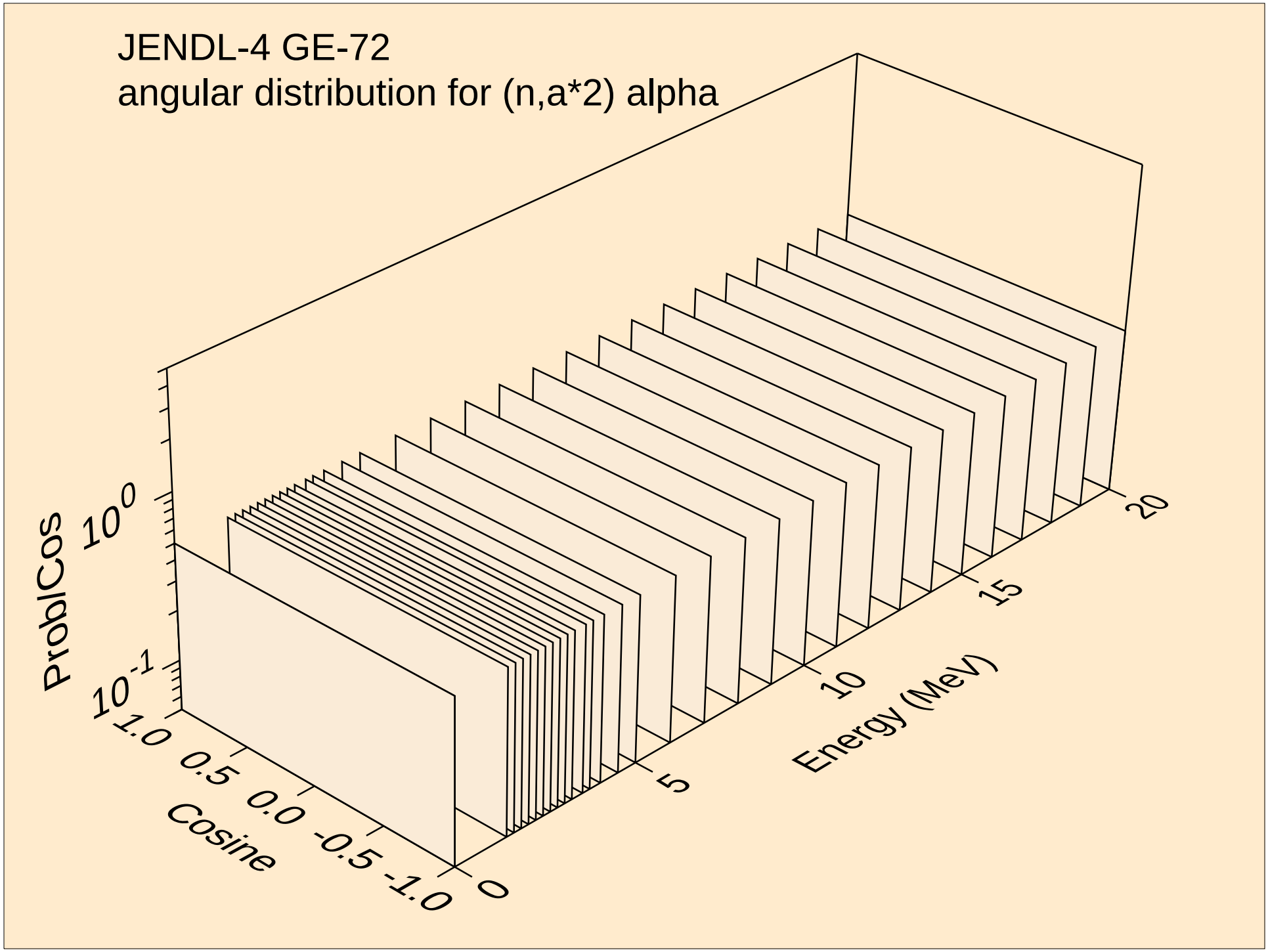

JENDL-4 GE-72
protons from (n,p*c)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

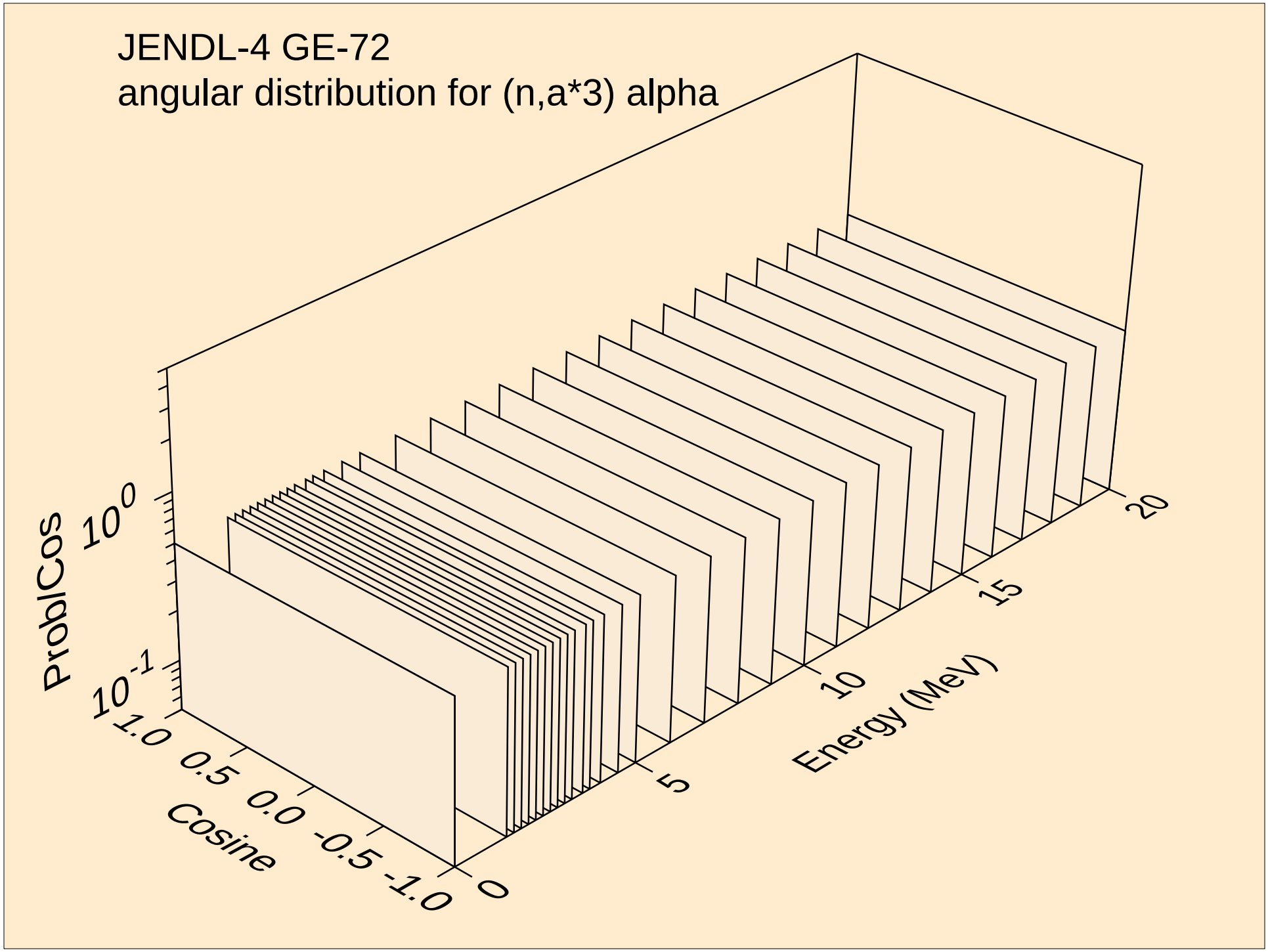

JENDL-4 GE-72
alphas from (n,n*)a
Prob/MeV
10^1
10^-1
10^-3
Sec. Energy
0
10
20
Energy (MeV)
4
6
8
10
12
14
16
18
20

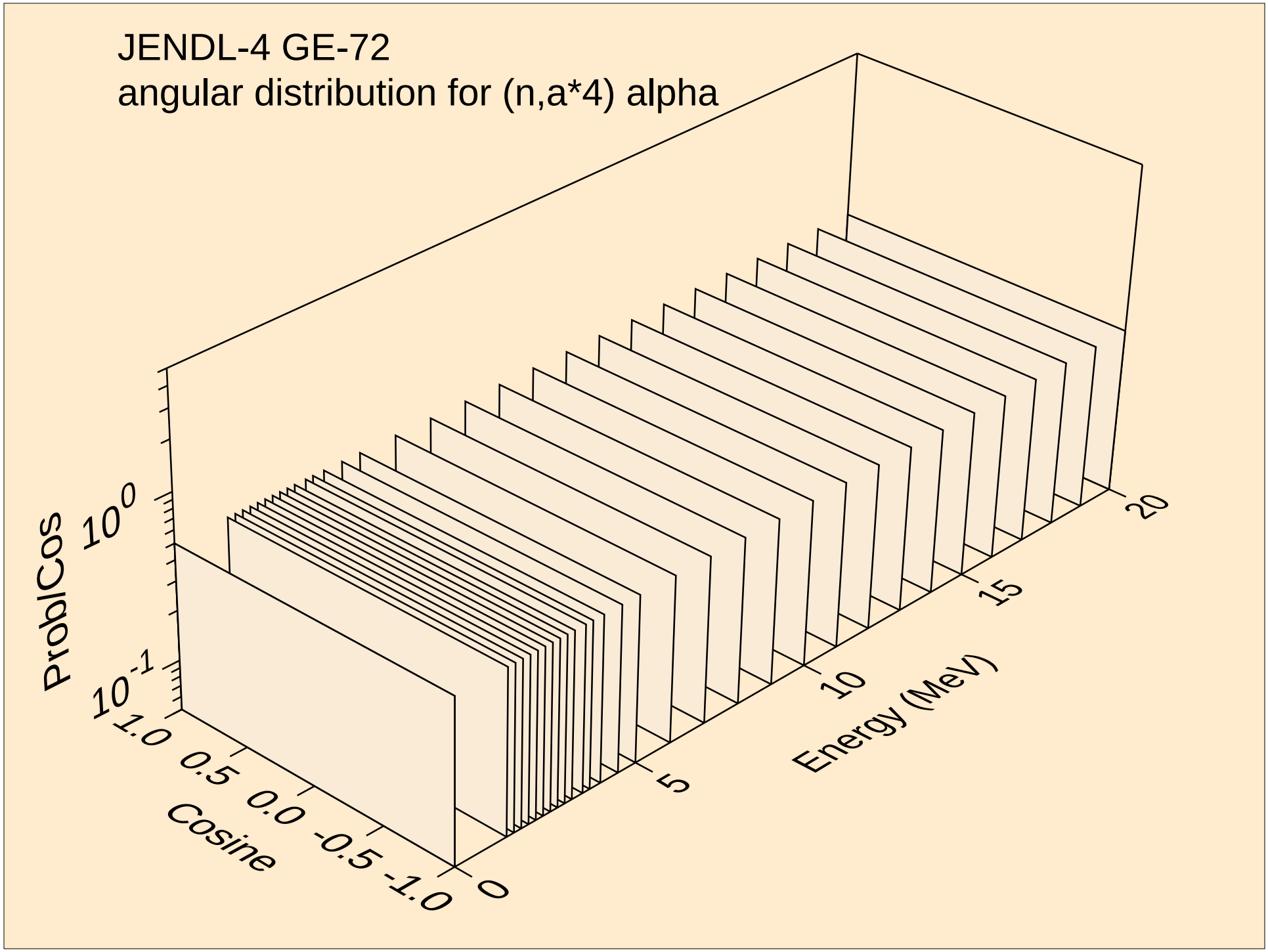

JENDL-4 GE-72
alphas from (n,2n)a
Prob/MeV
10^-1
10^-3
Sec. Energy
2
3
4
5
Energy (MeV)
15
16
17
18
19
20

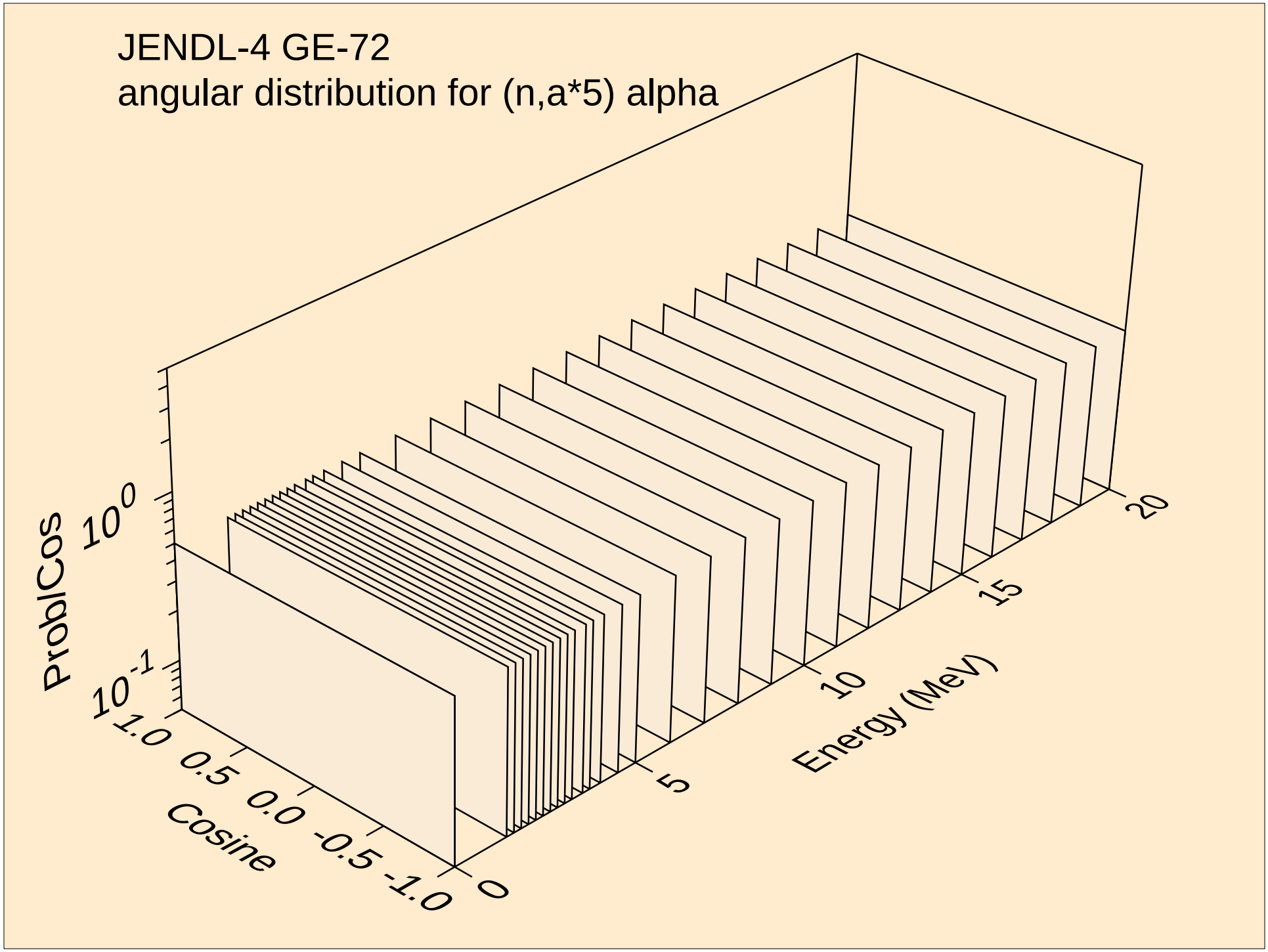

JENDL-4 GE-72
angular distribution for (n,a*0) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

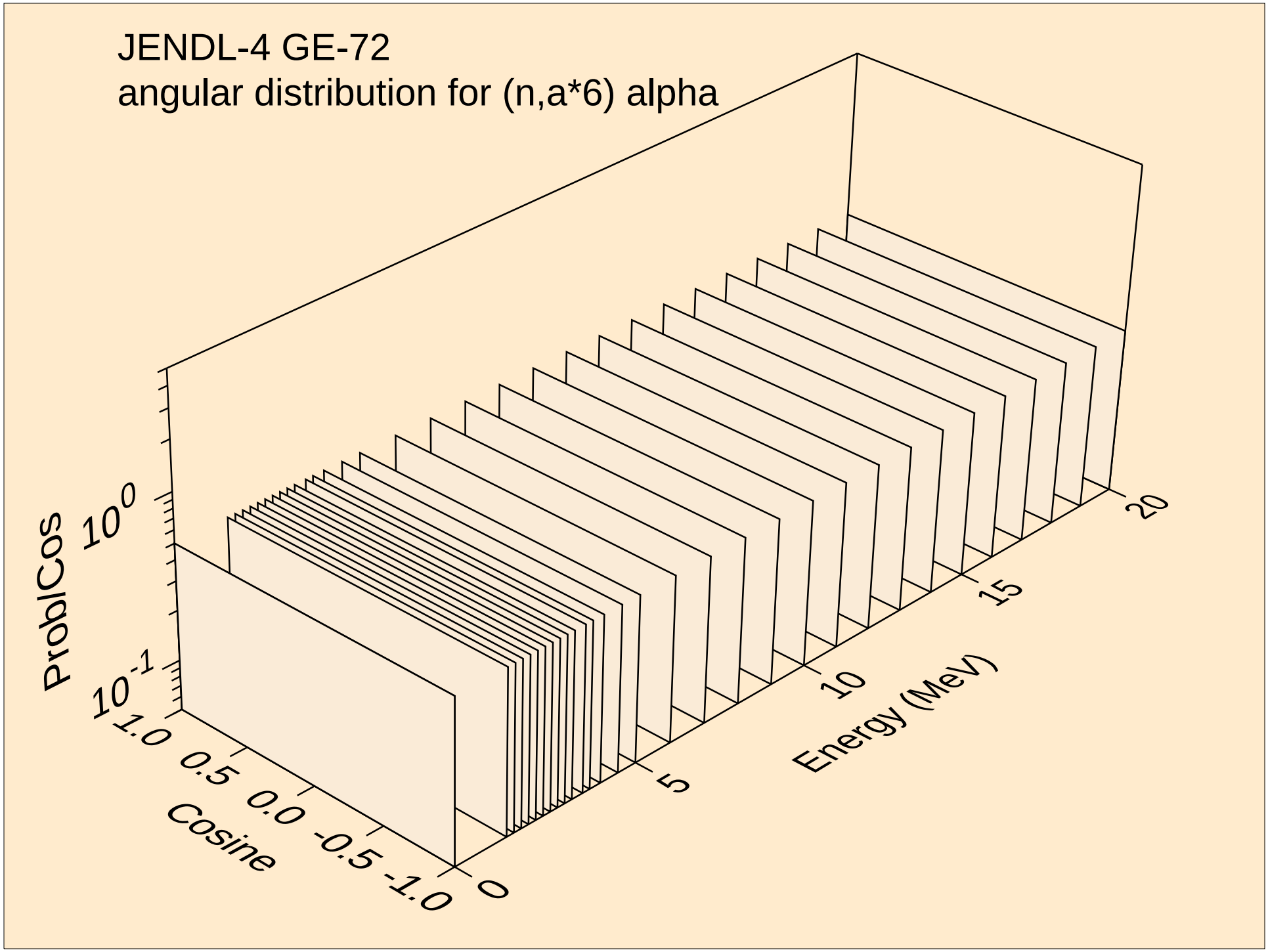

JENDL-4 GE-72
angular distribution for (n,a*1) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

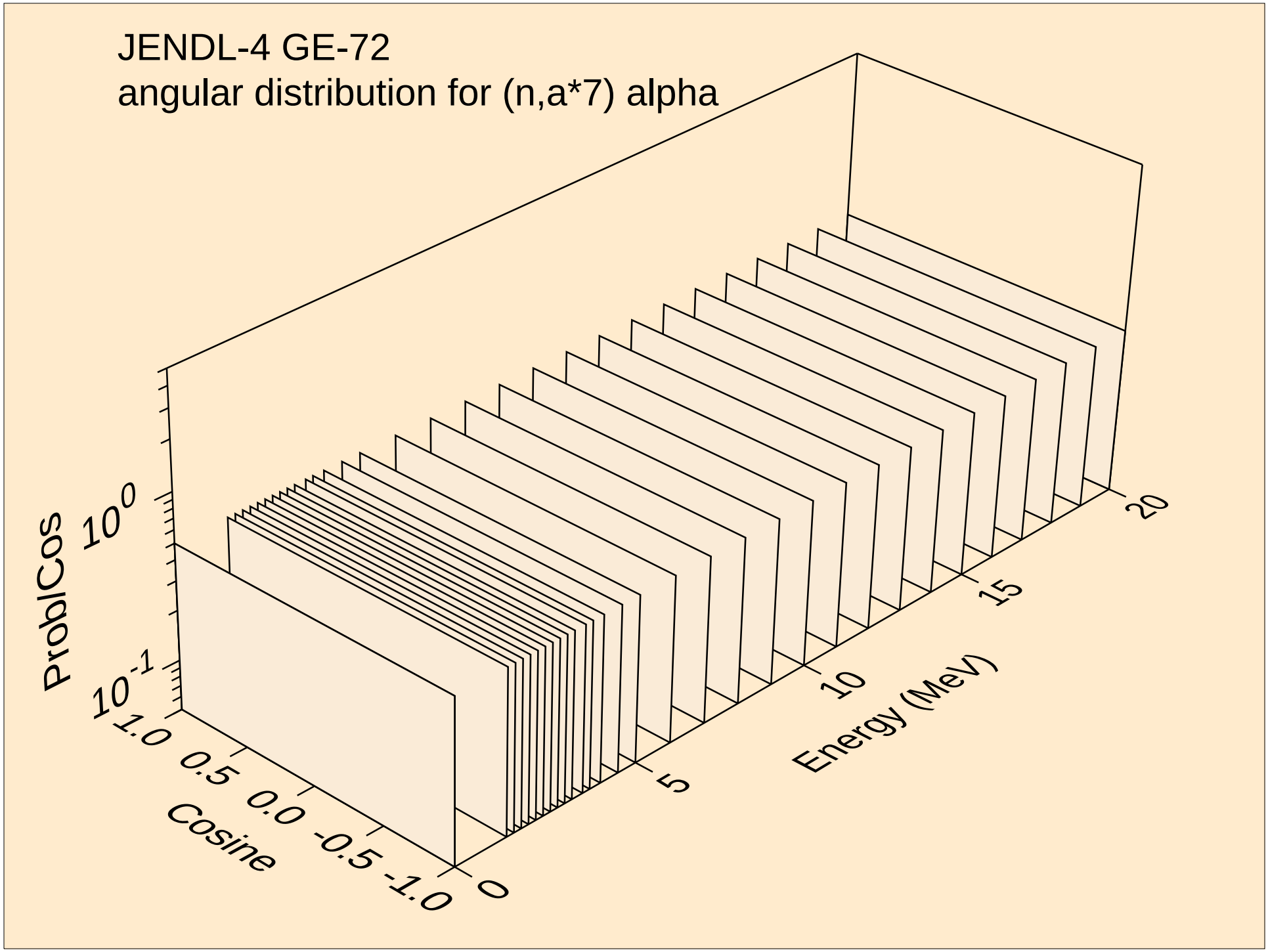

JENDL-4 GE-72
angular distribution for (n,a*2) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

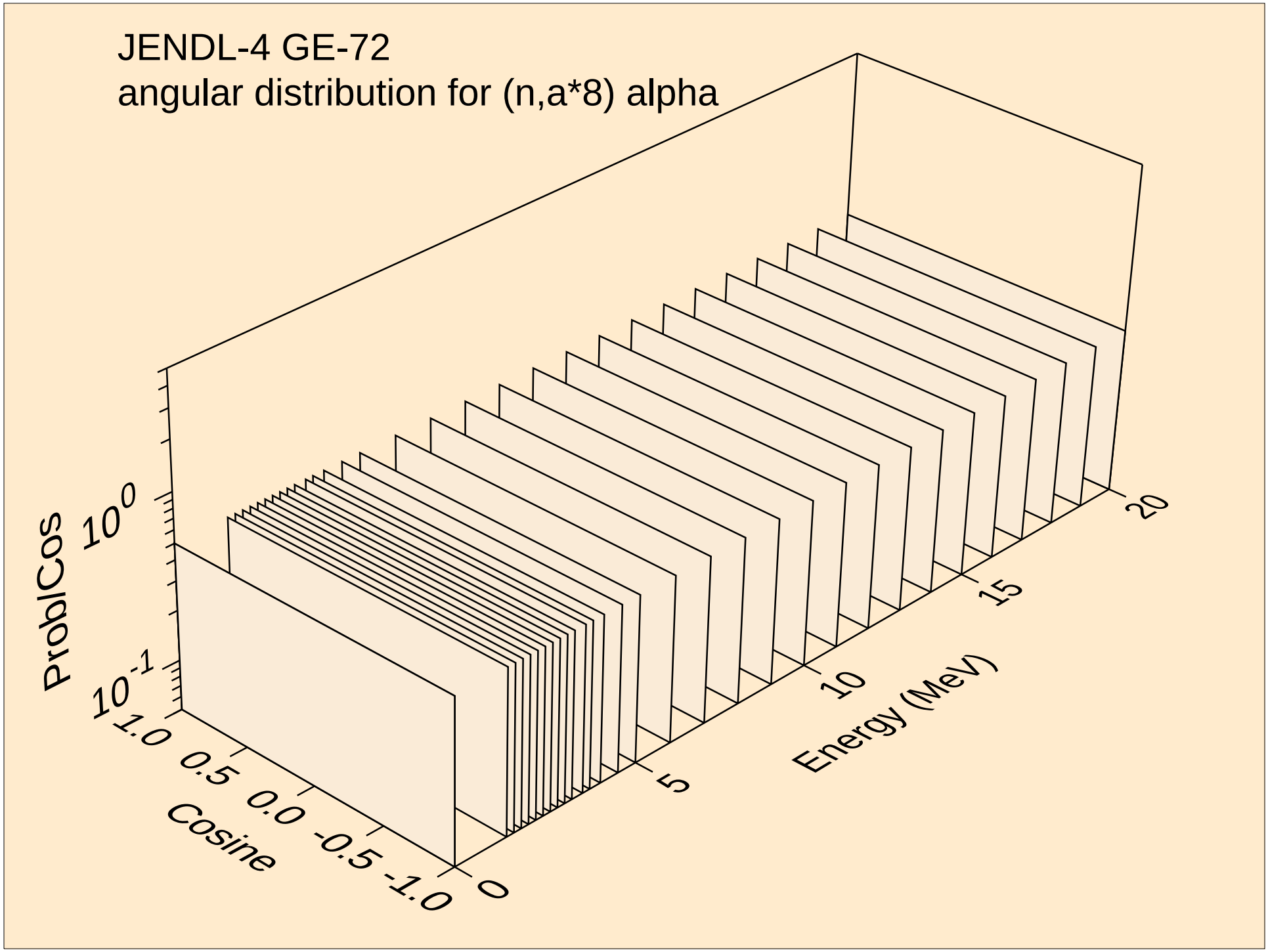

JENDL-4 GE-72
angular distribution for (n,a*3) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

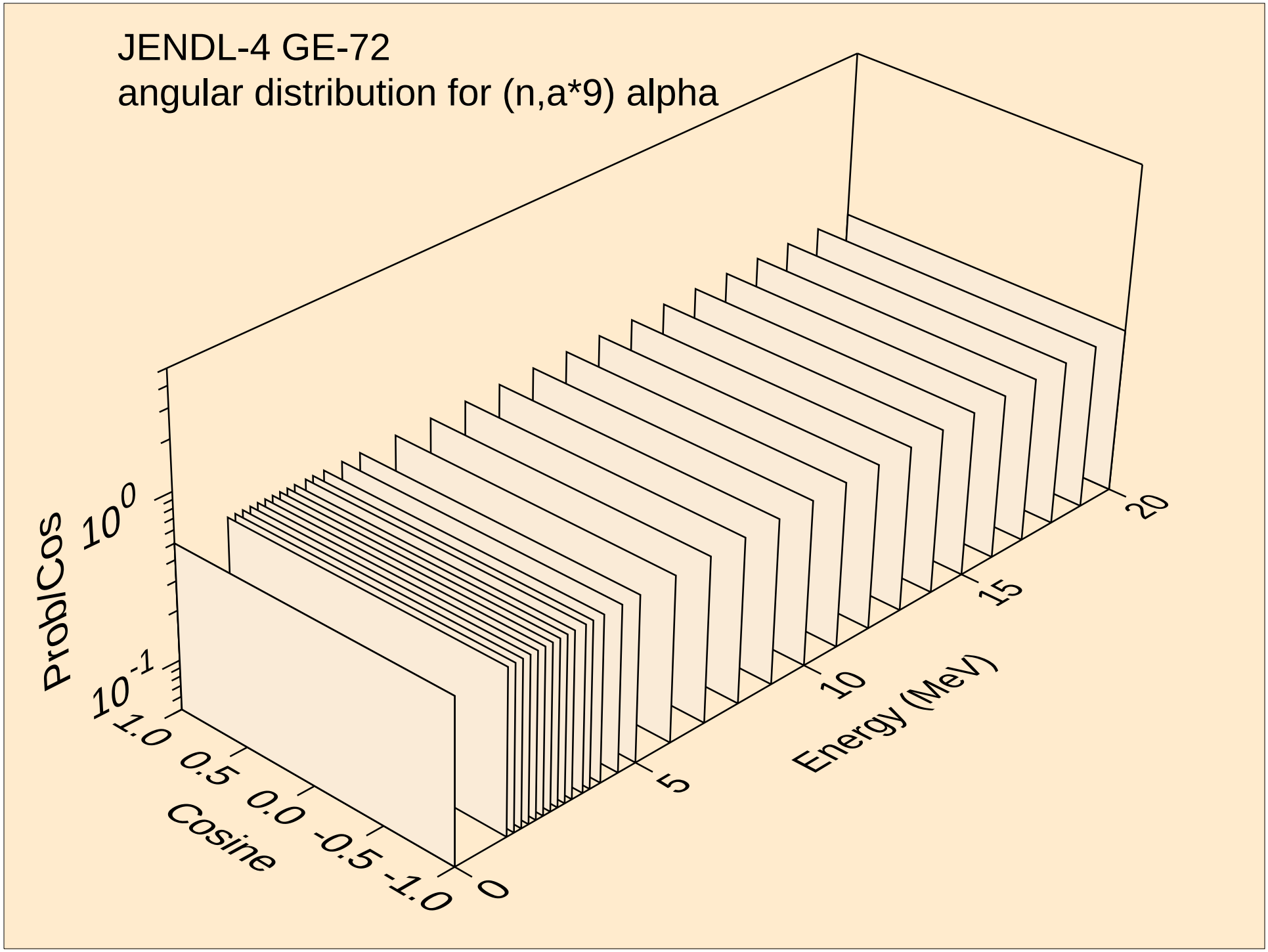

JENDL-4 GE-72
angular distribution for (n,a*4) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

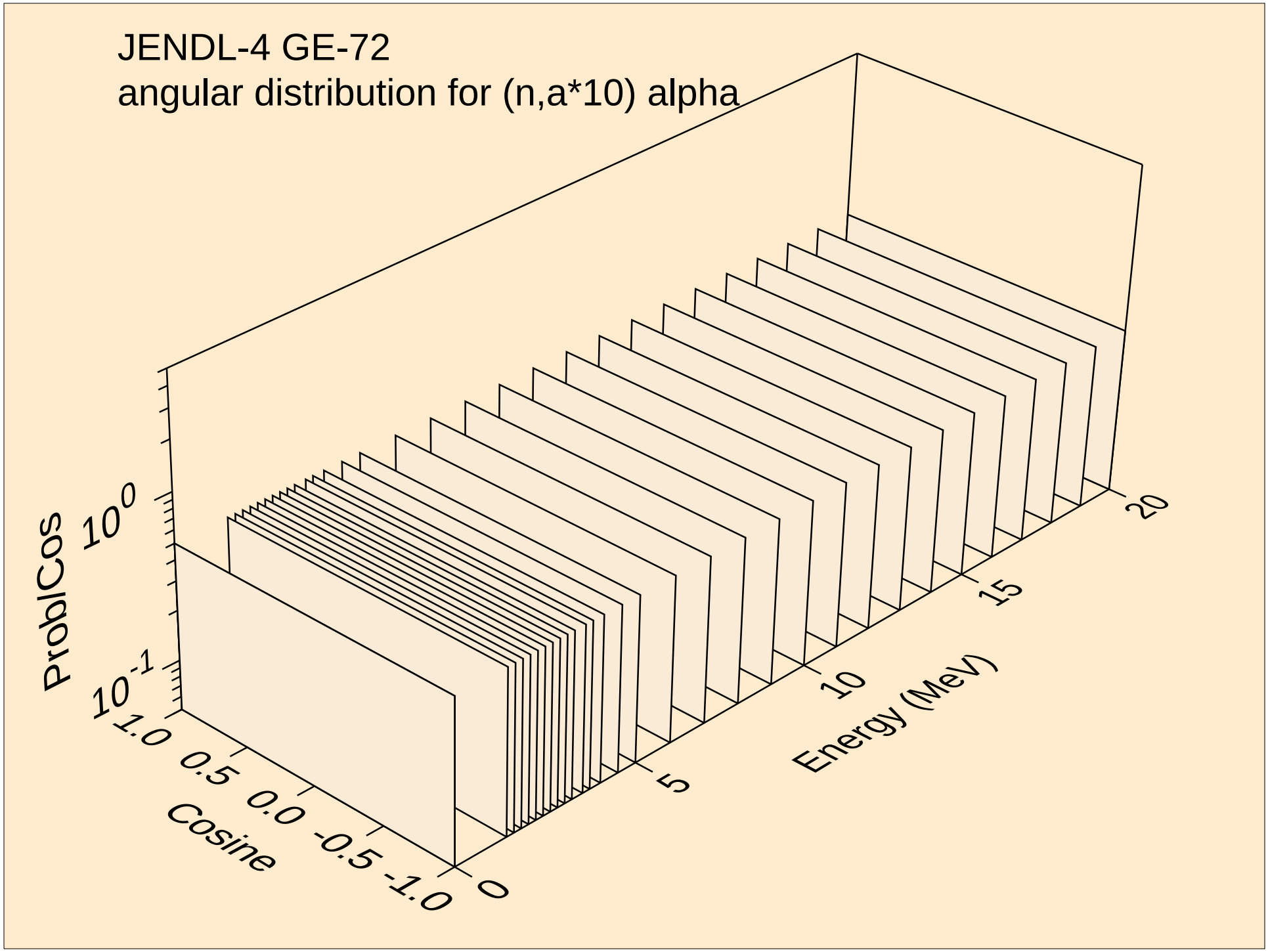

JENDL-4 GE-72
angular distribution for (n,a*5) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

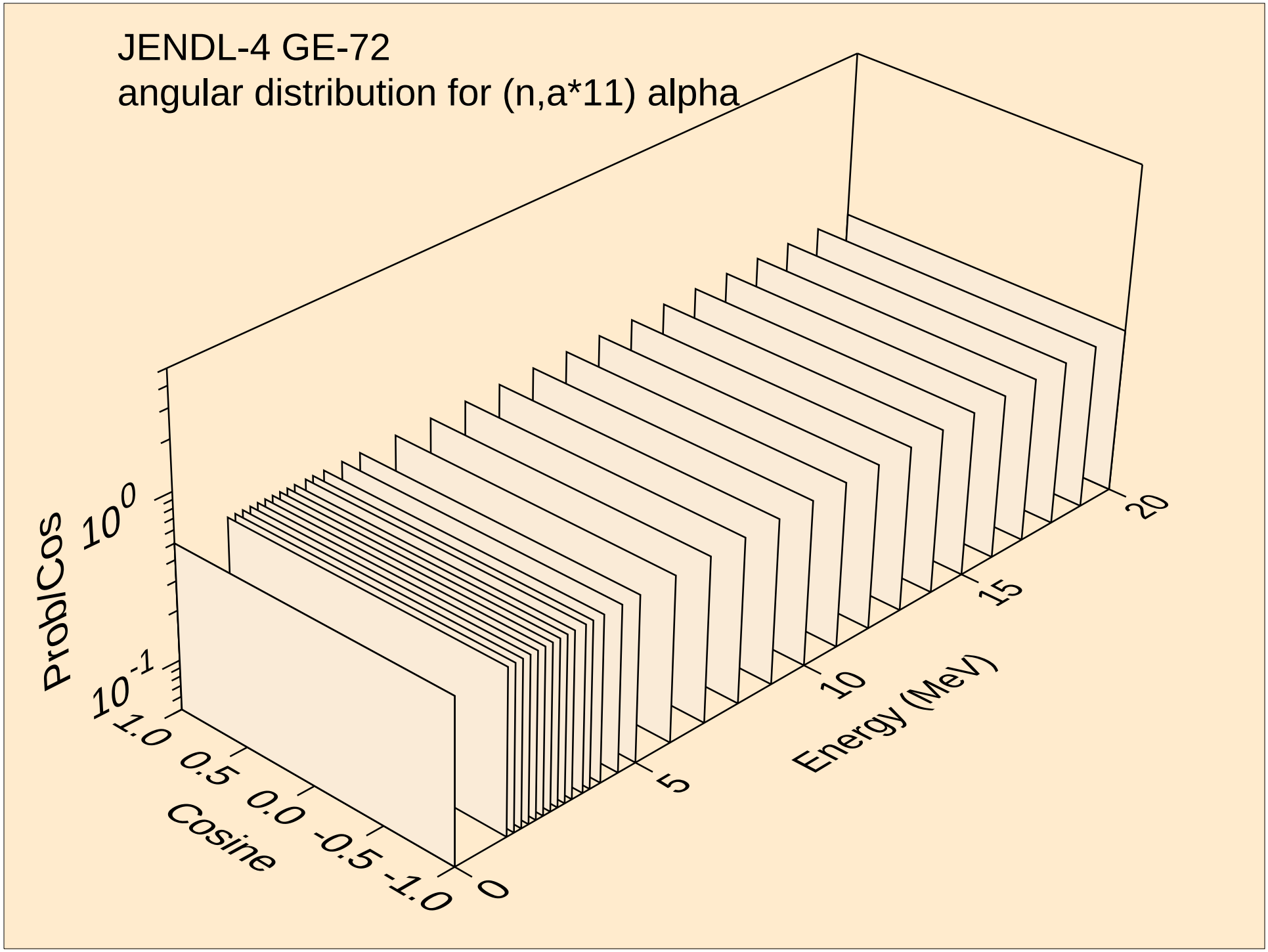

JENDL-4 GE-72
angular distribution for (n,a*6) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

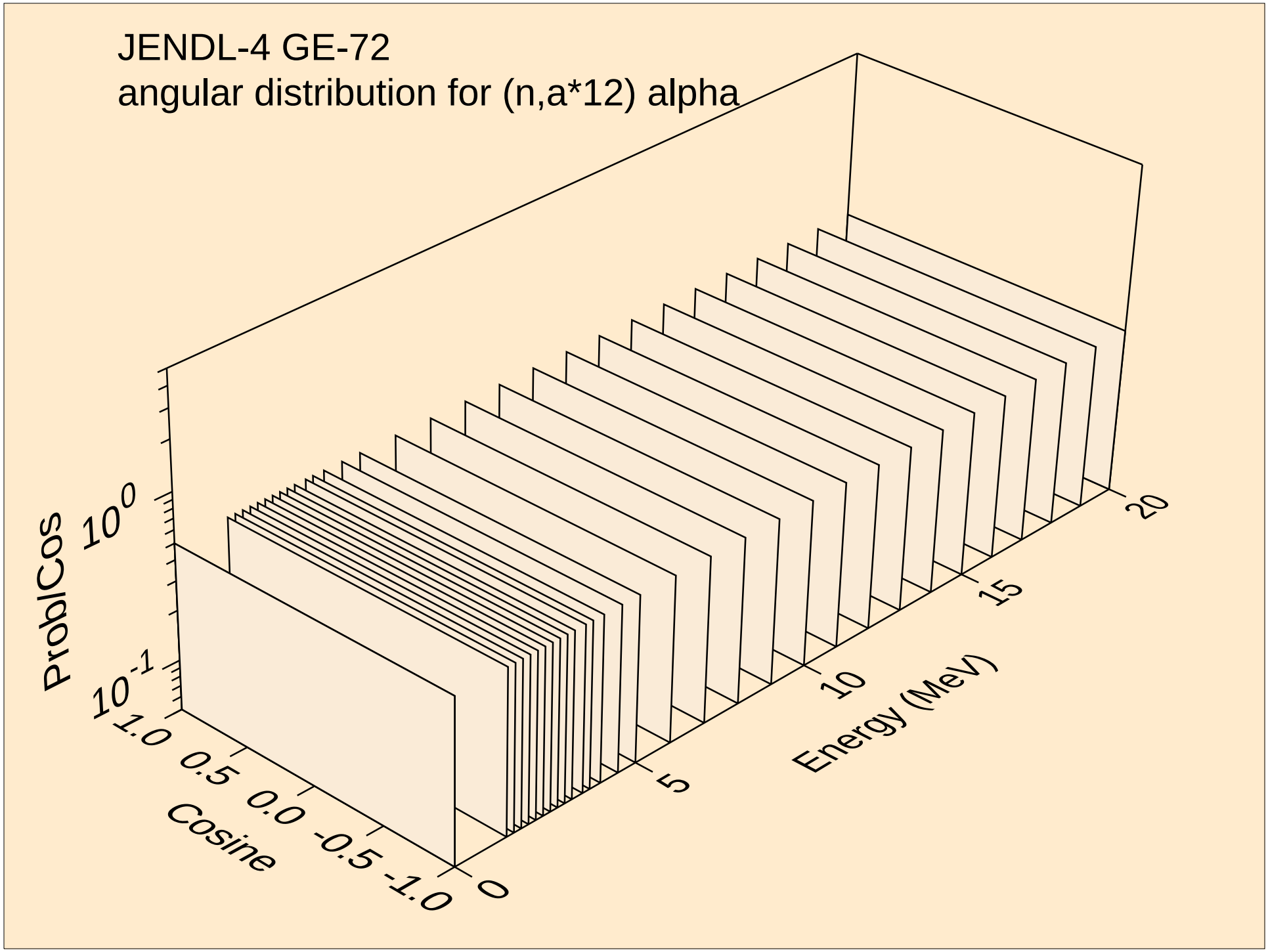

JENDL-4 GE-72
angular distribution for (n,a*7) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

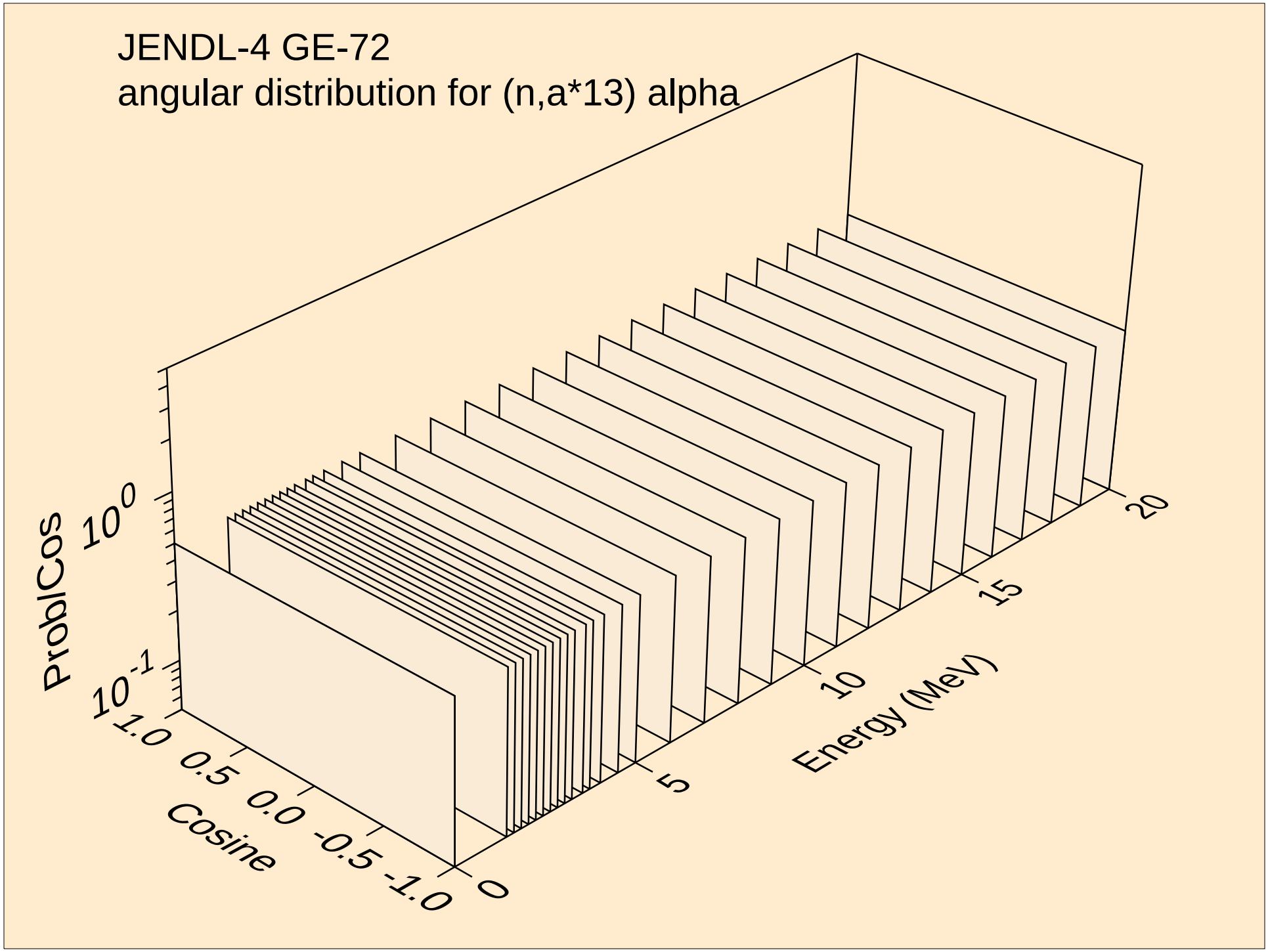

JENDL-4 GE-72
angular distribution for (n,a*8) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

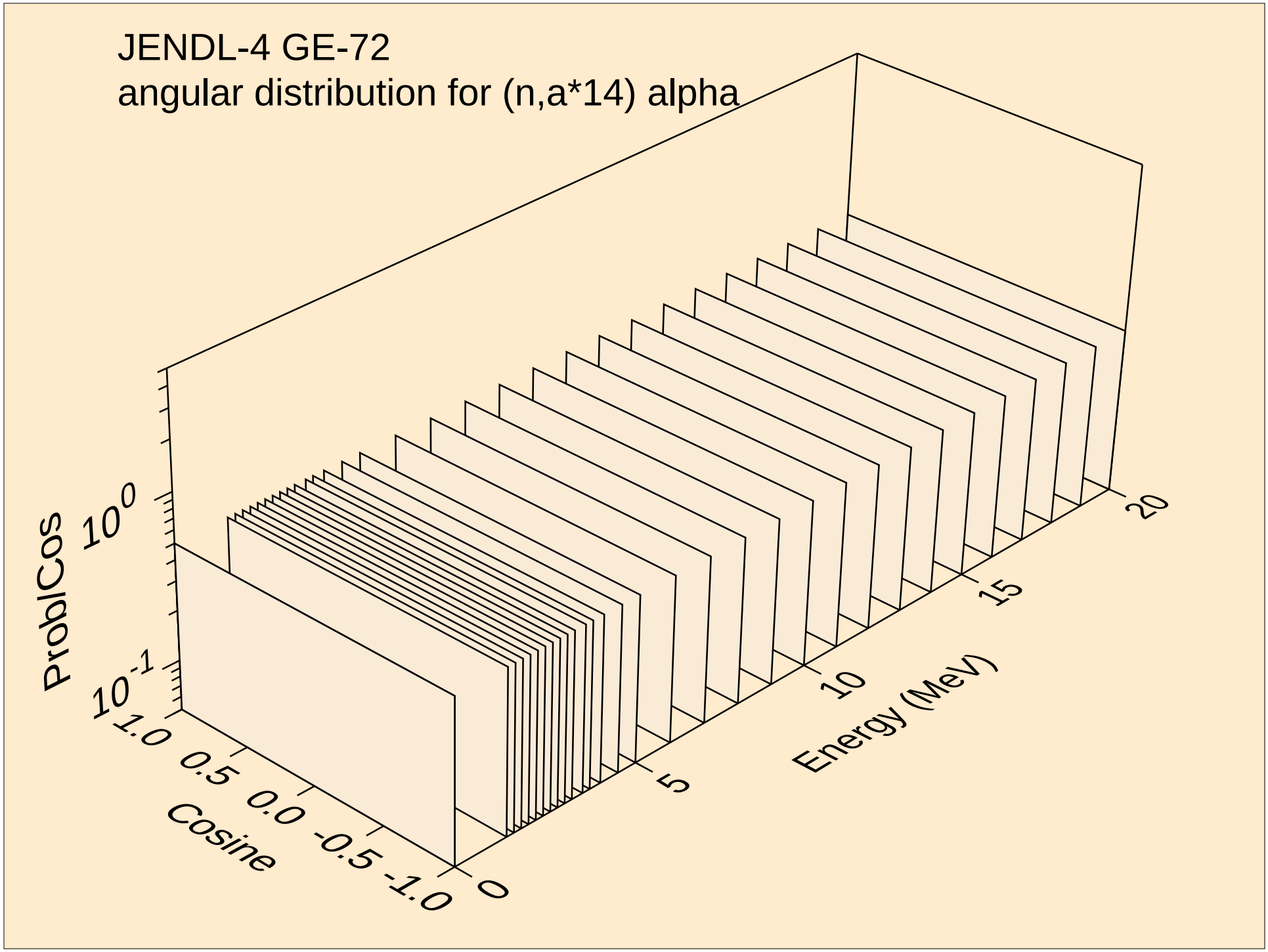

JENDL-4 GE-72
angular distribution for (n,a*9) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

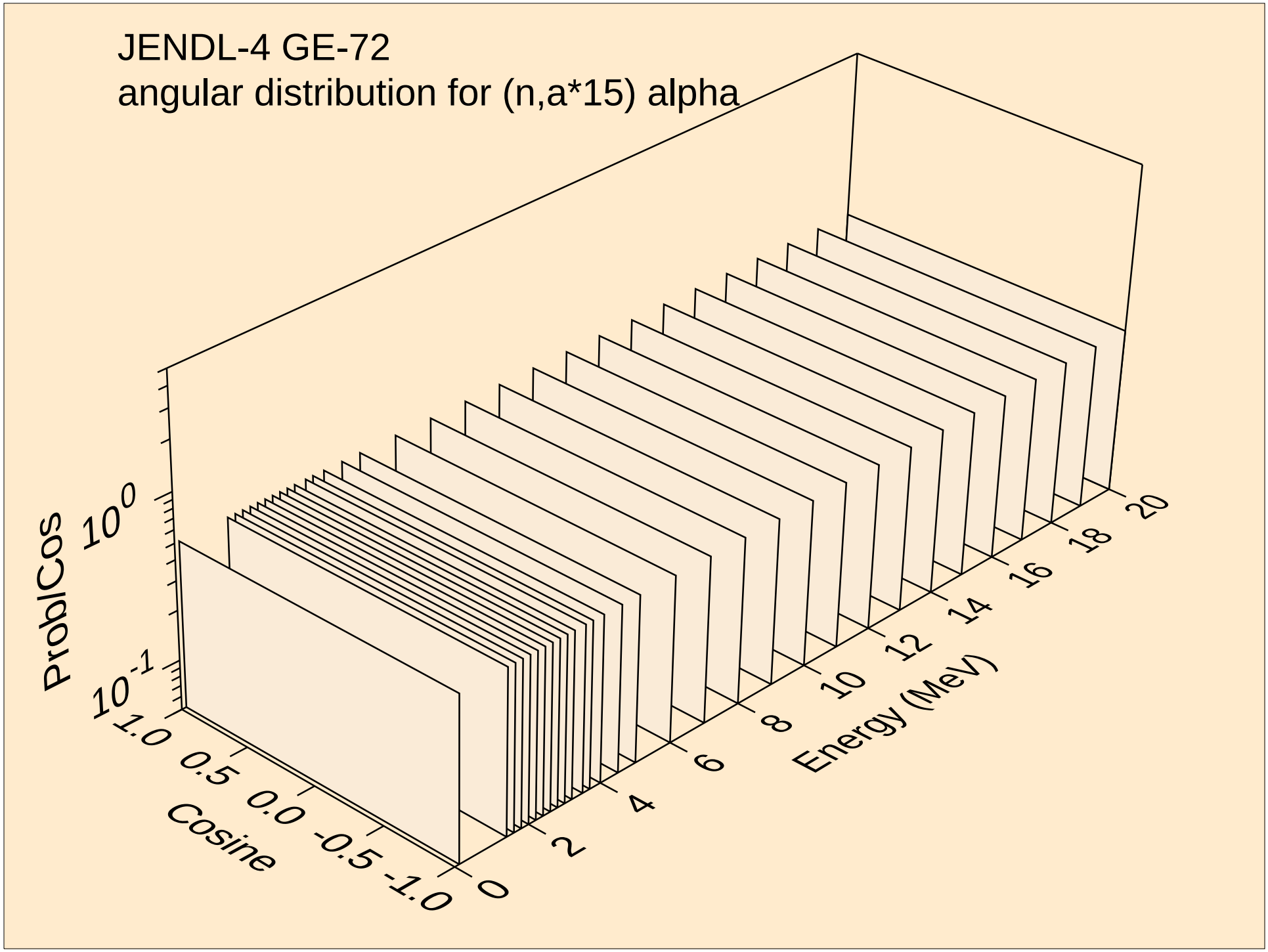

JENDL-4 GE-72
angular distribution for (n,a*10) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

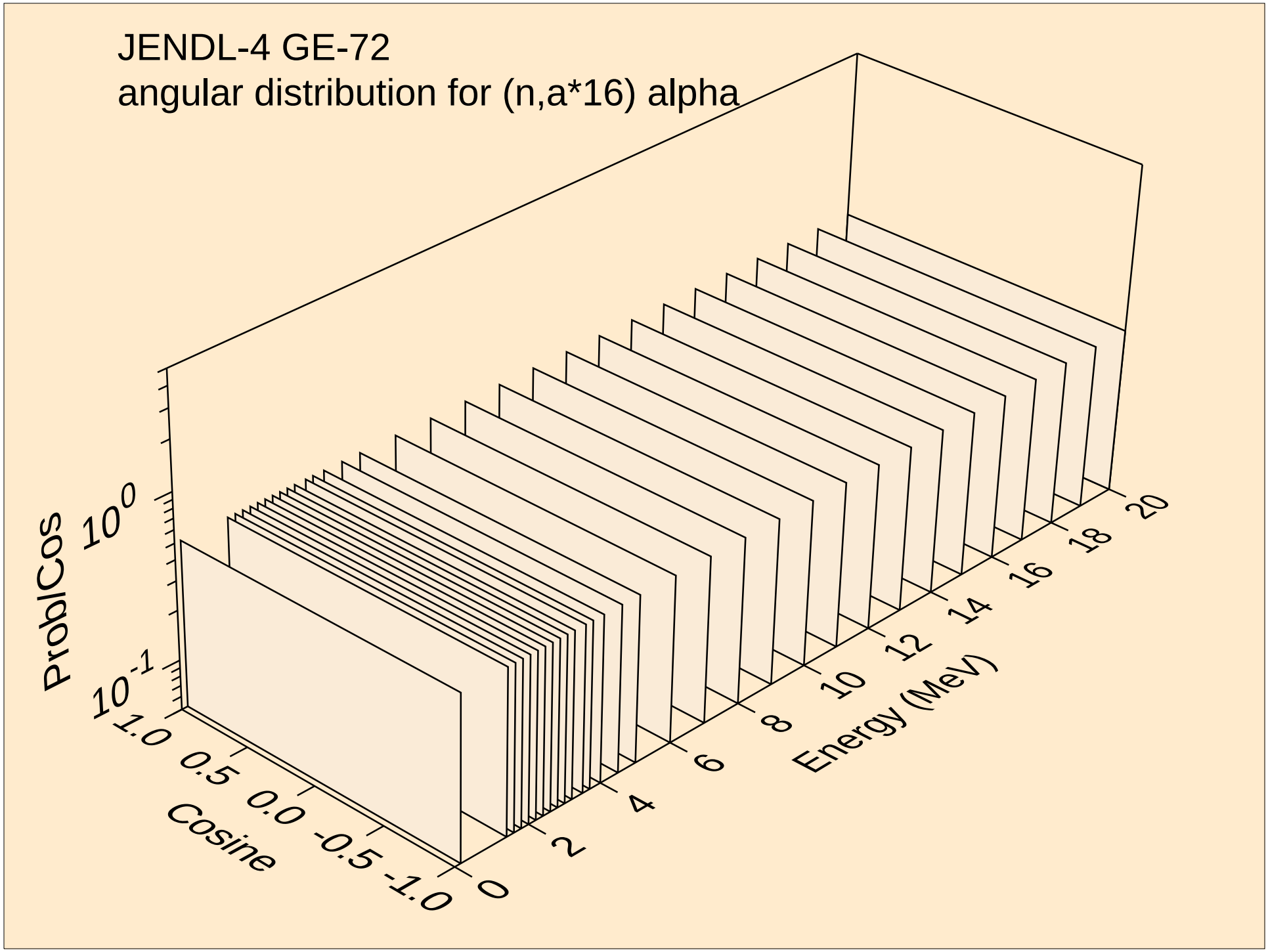

JENDL-4 GE-72
angular distribution for (n,a*11) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

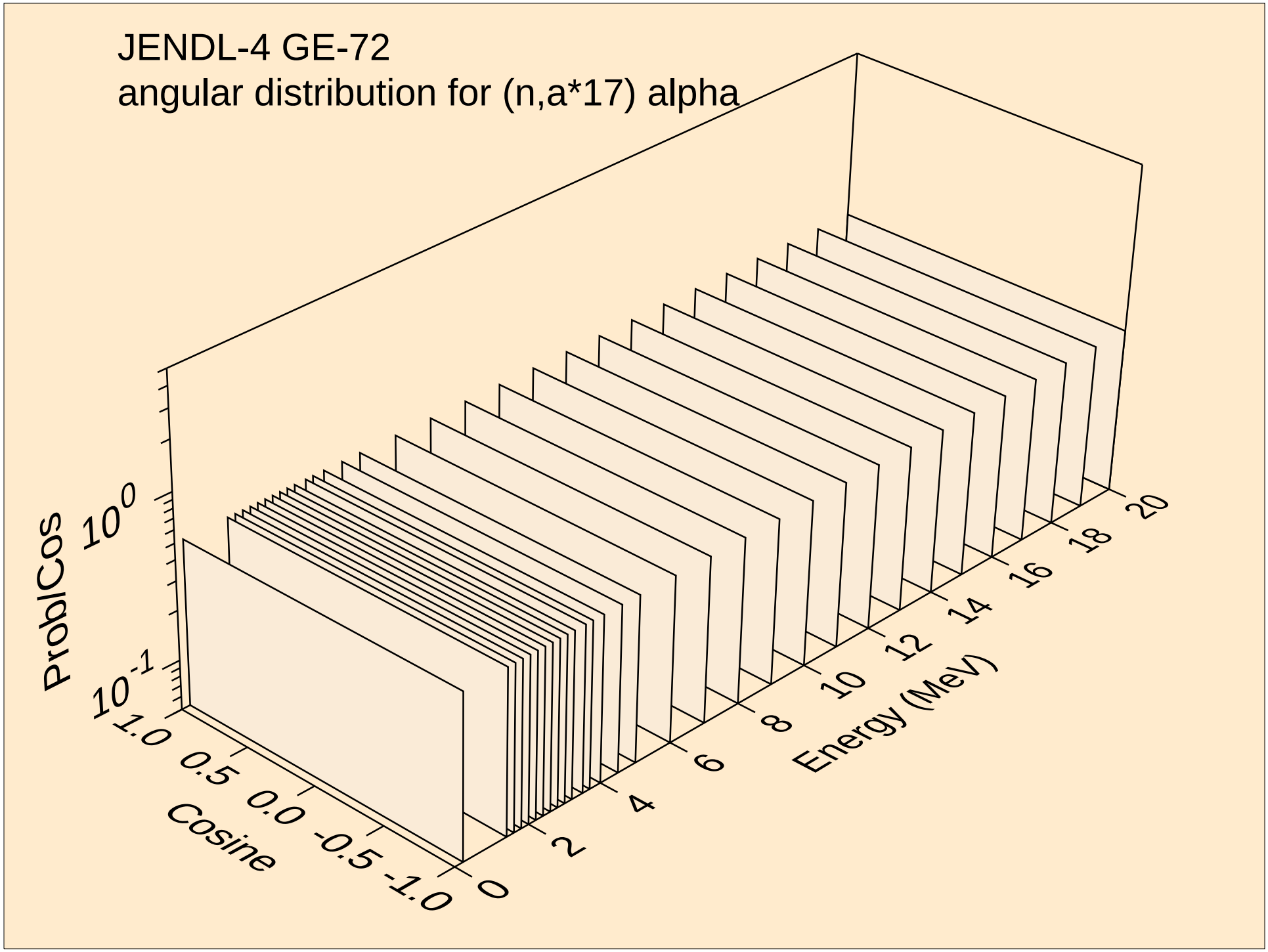

JENDL-4 GE-72
angular distribution for (n,a*12) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

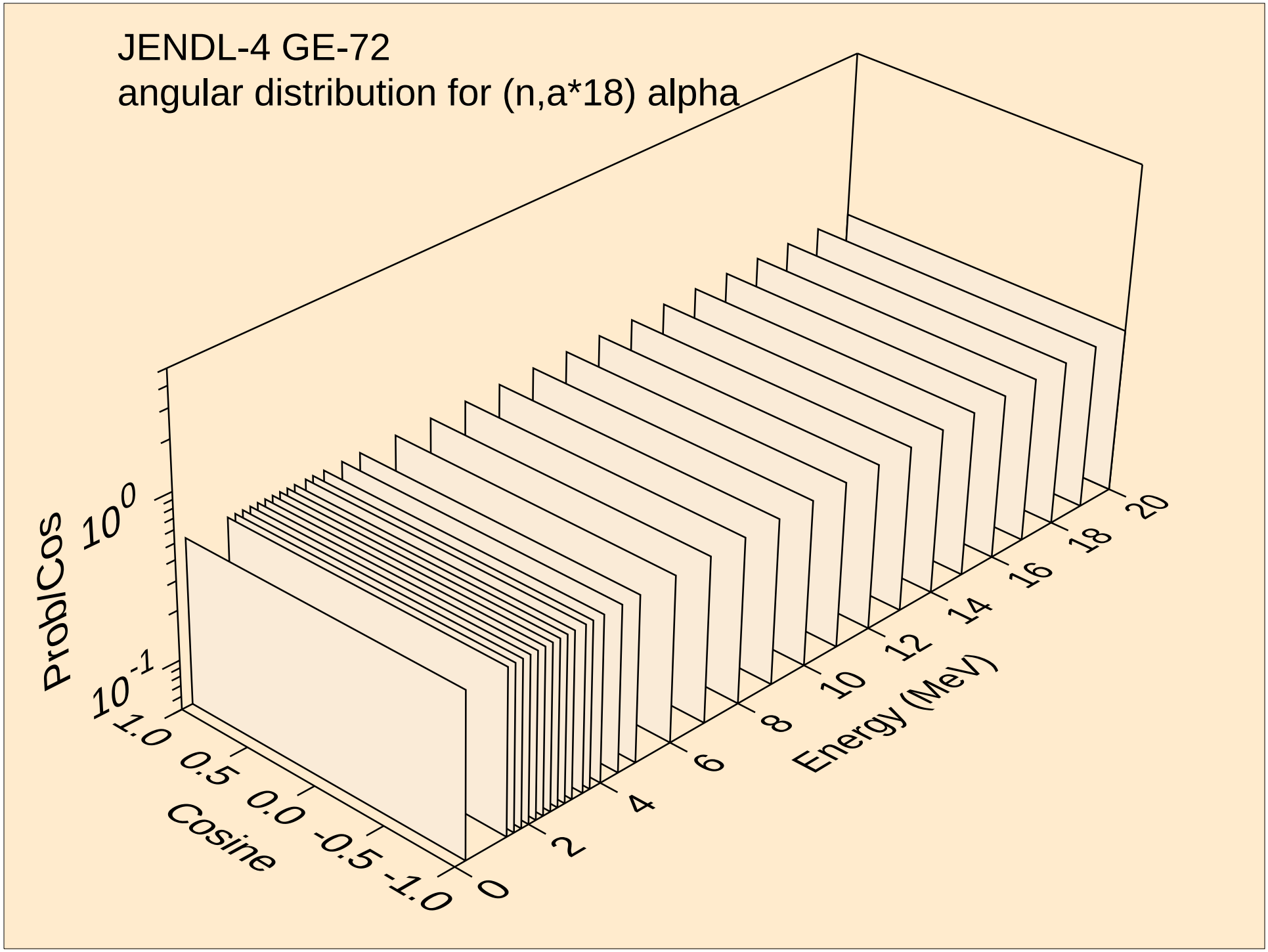

JENDL-4 GE-72
angular distribution for (n,a*13) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

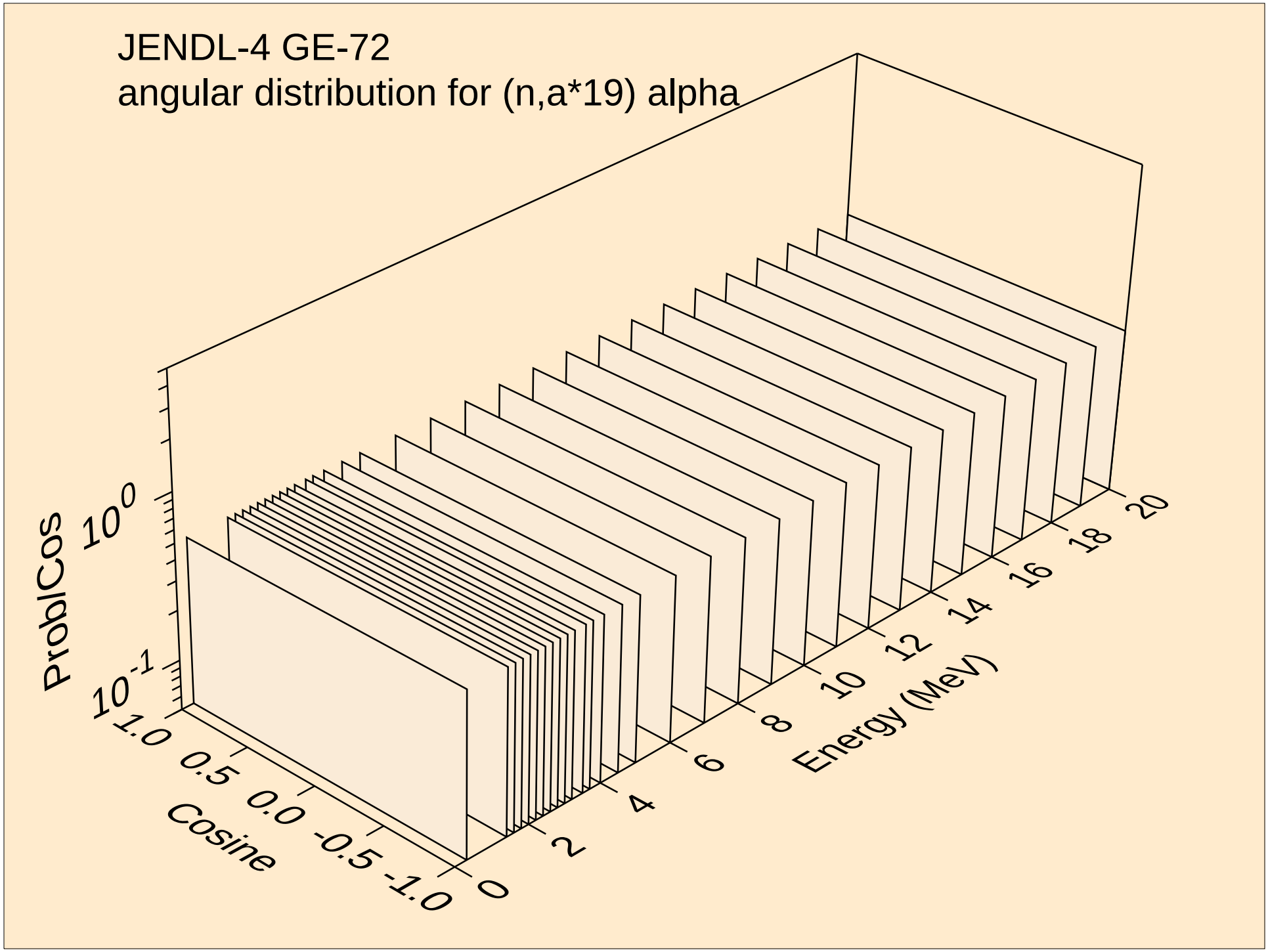

JENDL-4 GE-72
angular distribution for (n,a*14) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

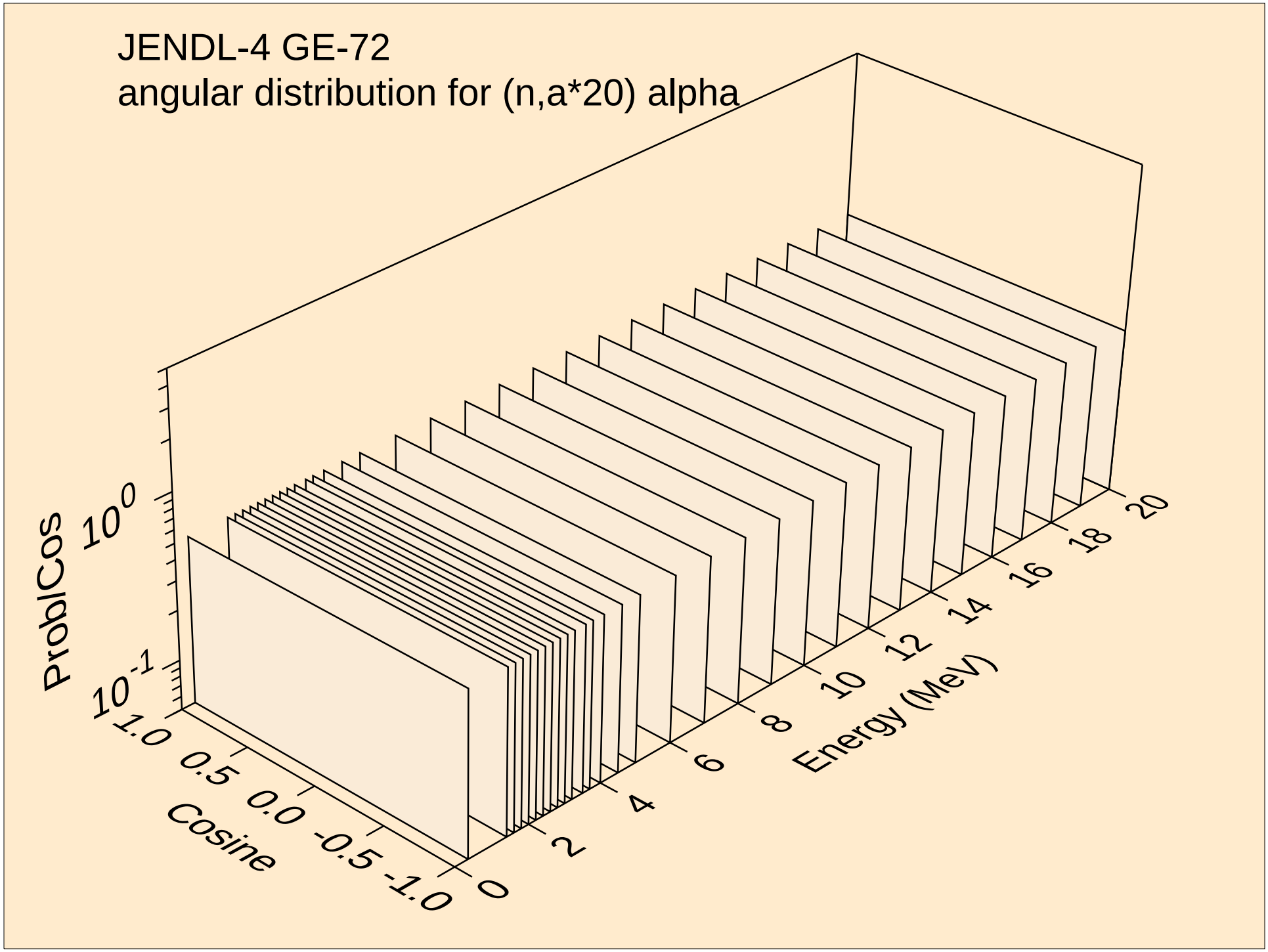

JENDL-4 GE-72
angular distribution for (n,a*15) alpha
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

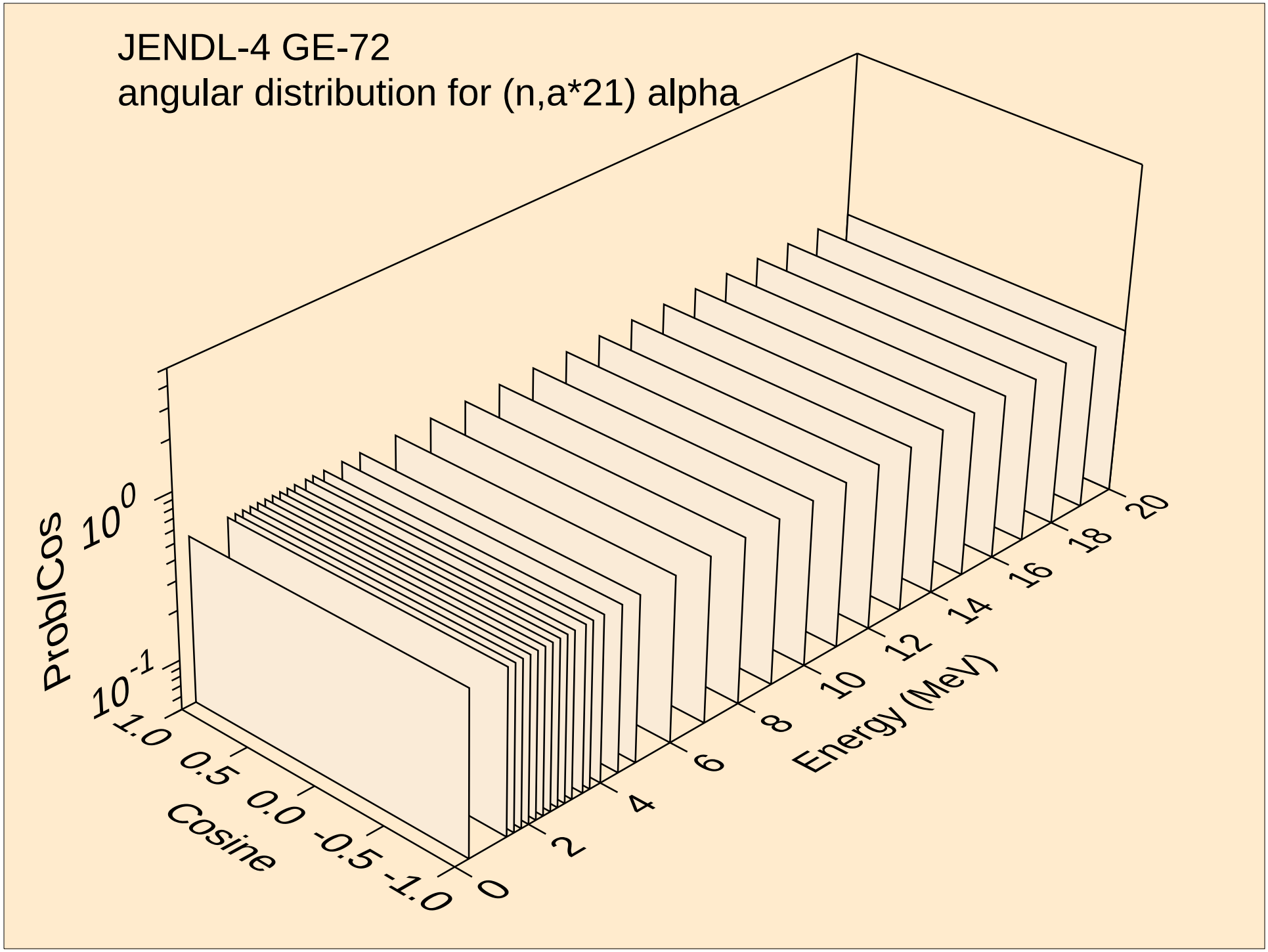

JENDL-4 GE-72
angular distribution for (n,a*16) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

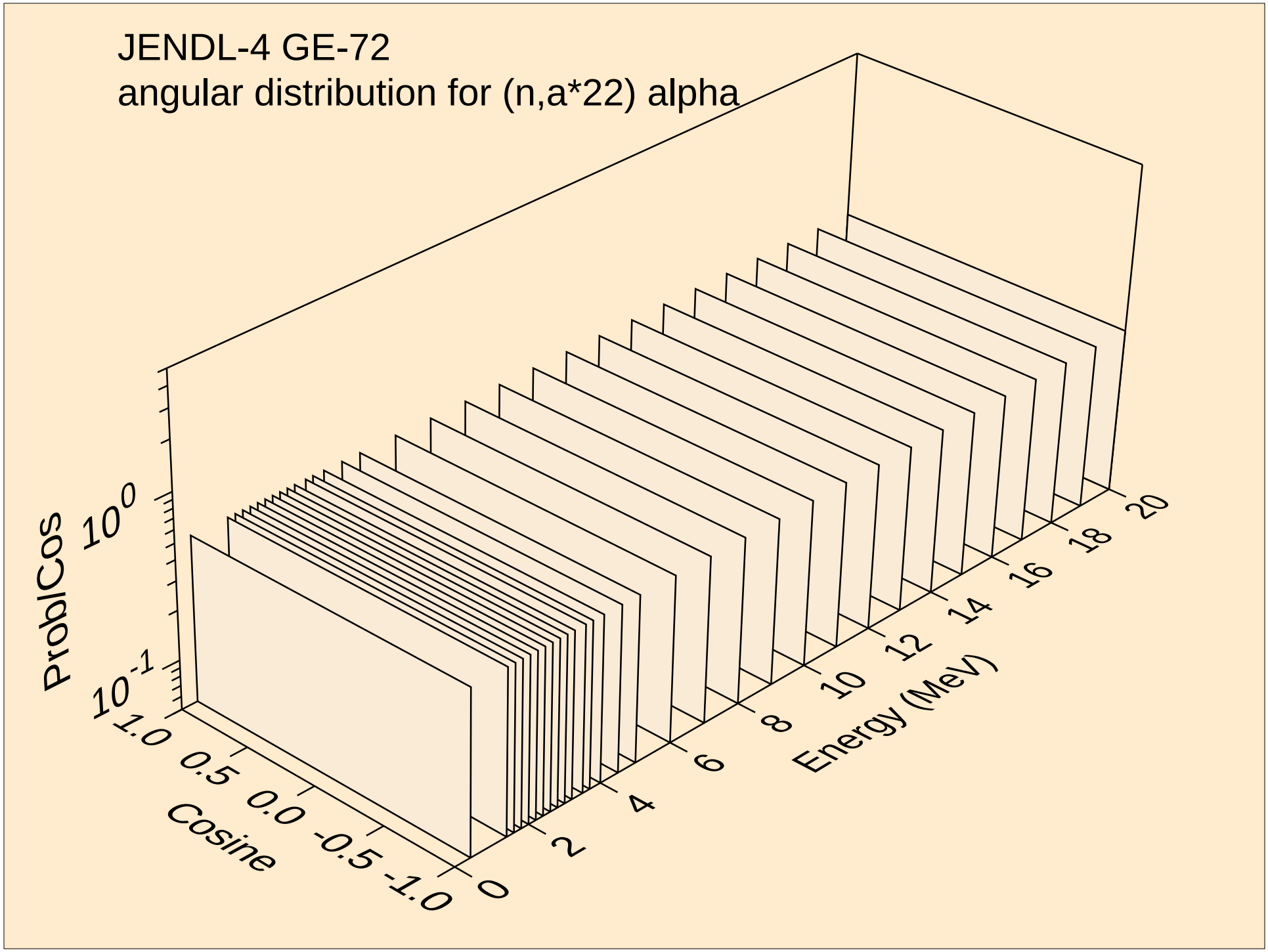

JENDL-4 GE-72
angular distribution for (n,a*17) alpha
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

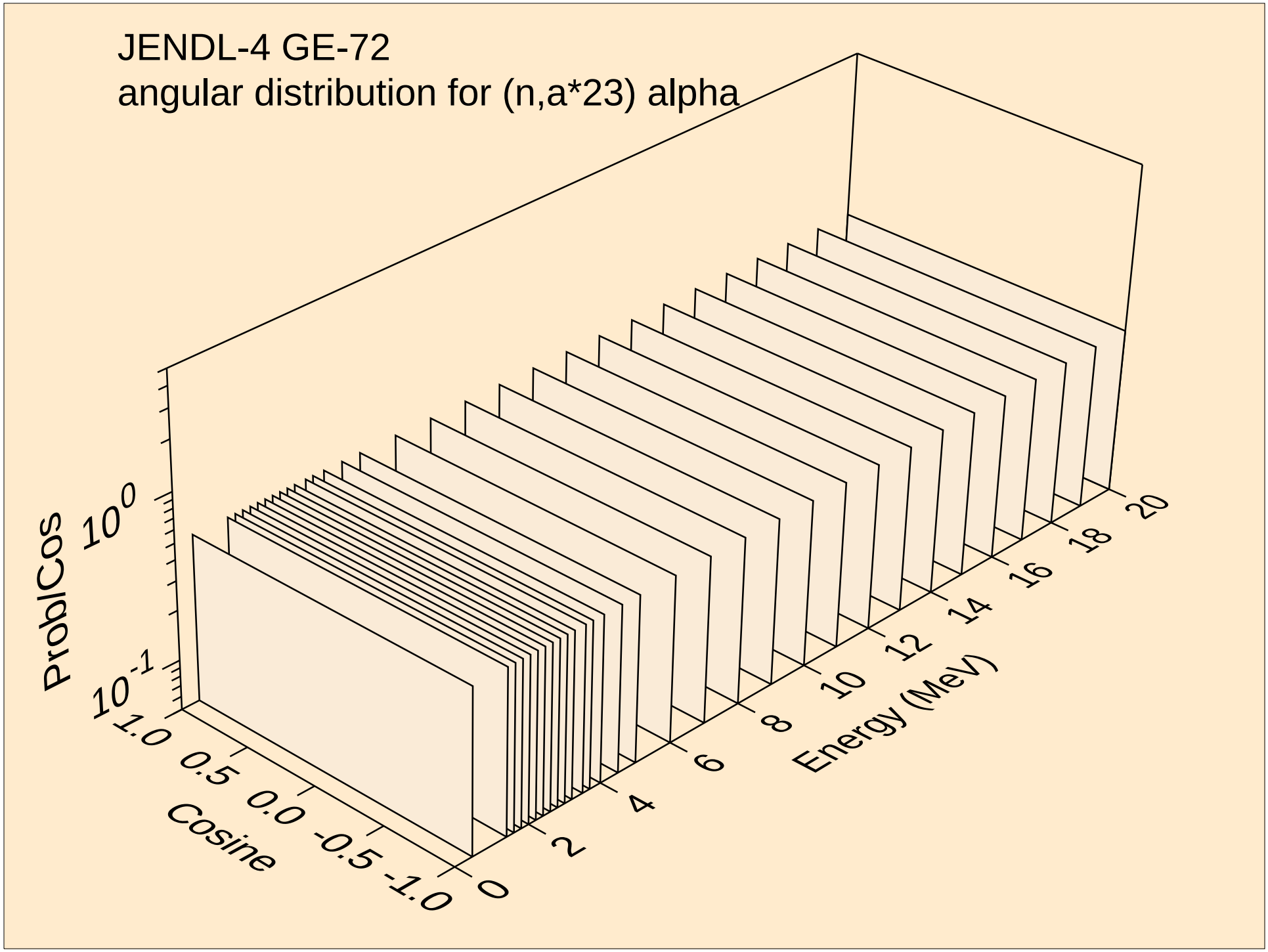

JENDL-4 GE-72
angular distribution for (n,a*18) alpha
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

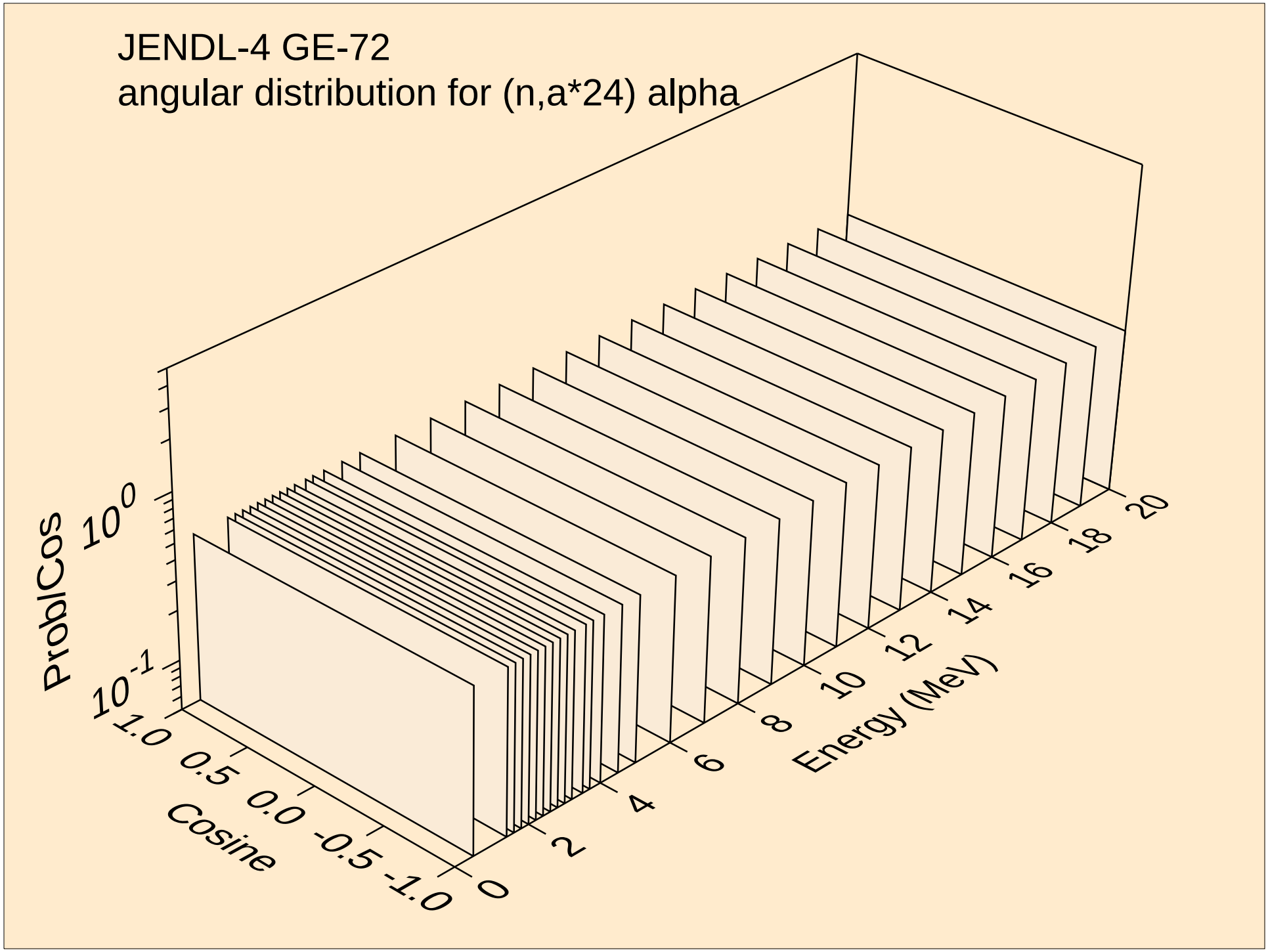

JENDL-4 GE-72
angular distribution for (n,a*19) alpha
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

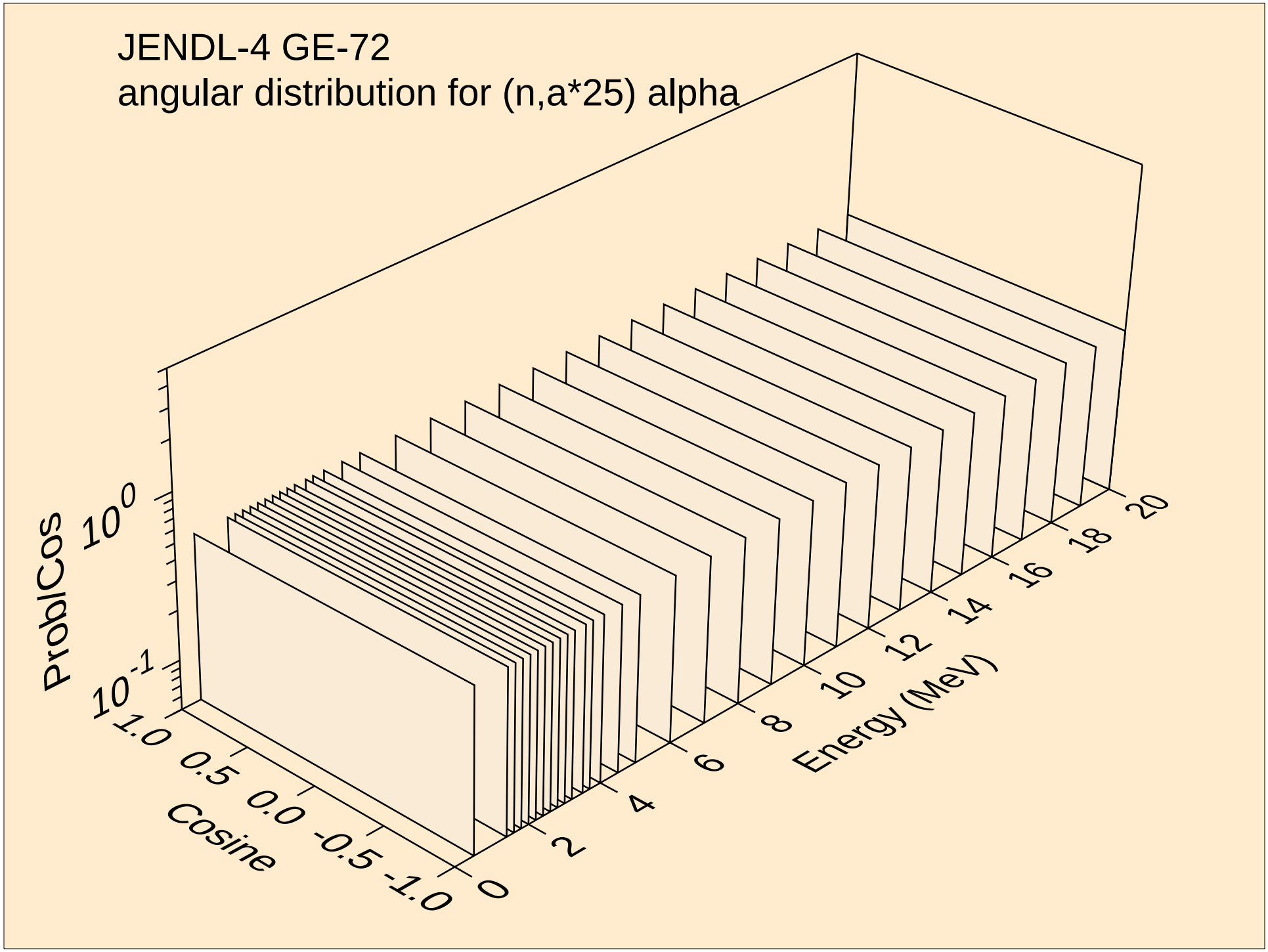

JENDL-4 GE-72
angular distribution for (n,a*20) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

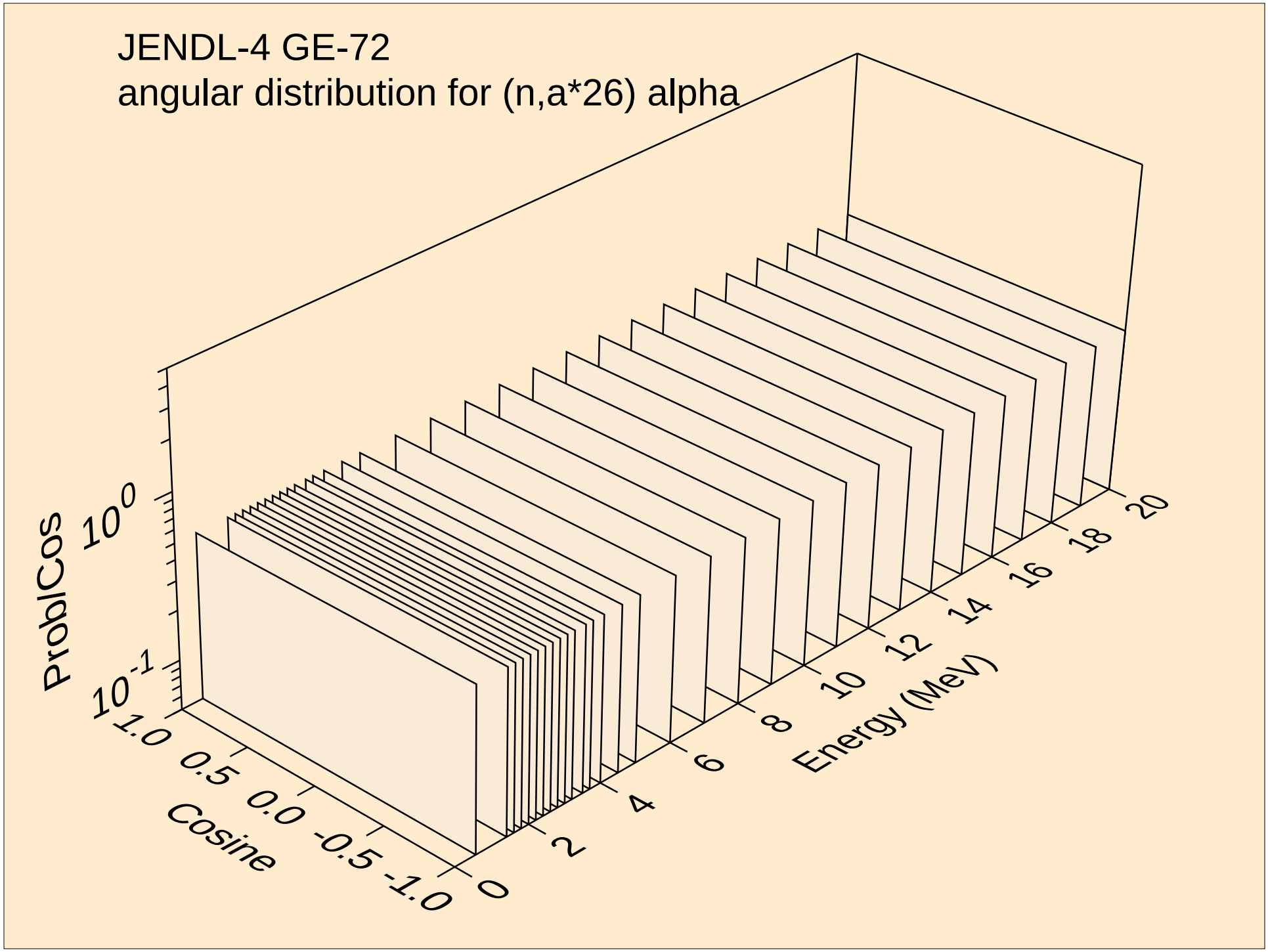

JENDL-4 GE-72
angular distribution for (n,a*21) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

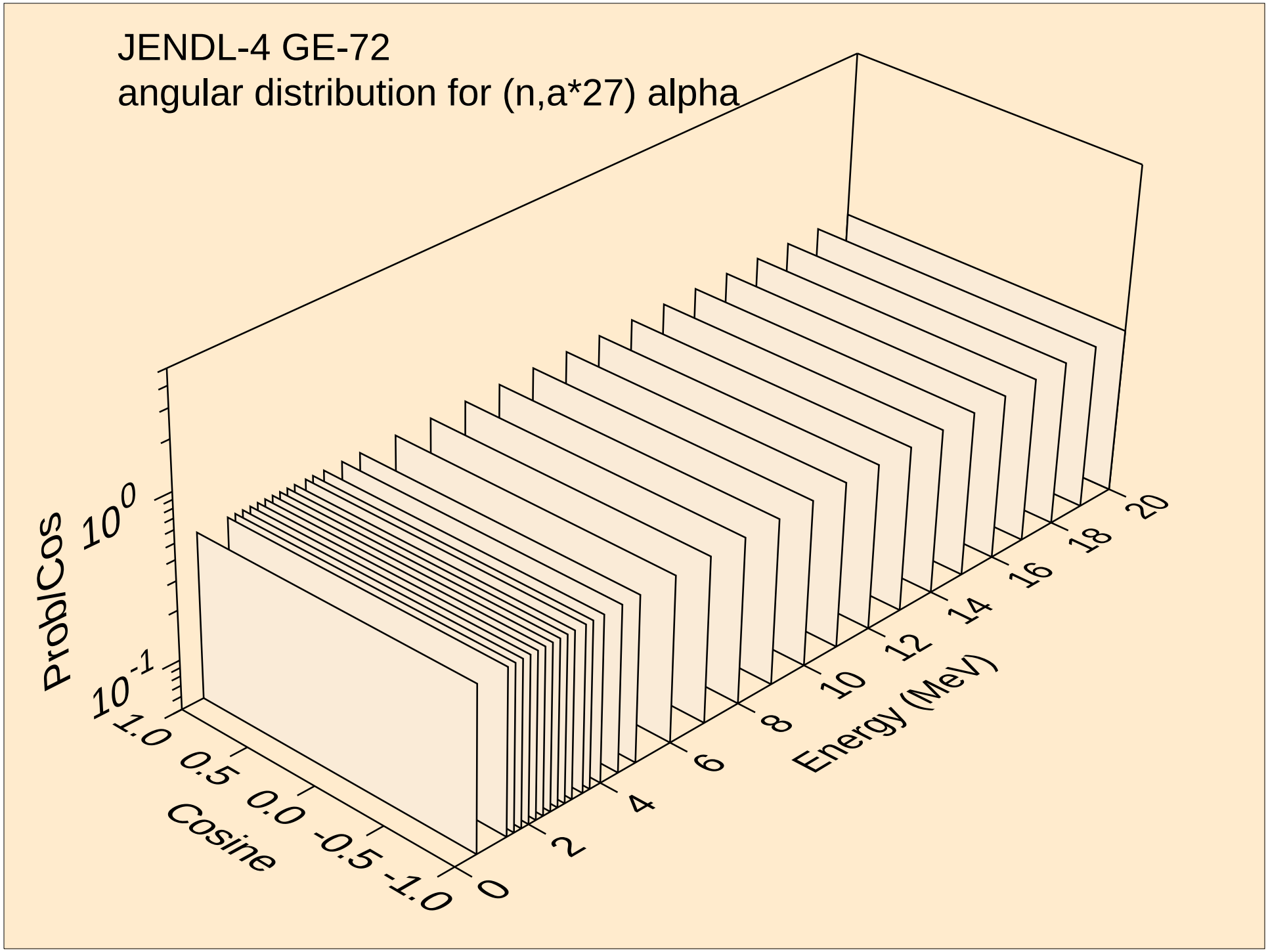

JENDL-4 GE-72
angular distribution for (n,a*22) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

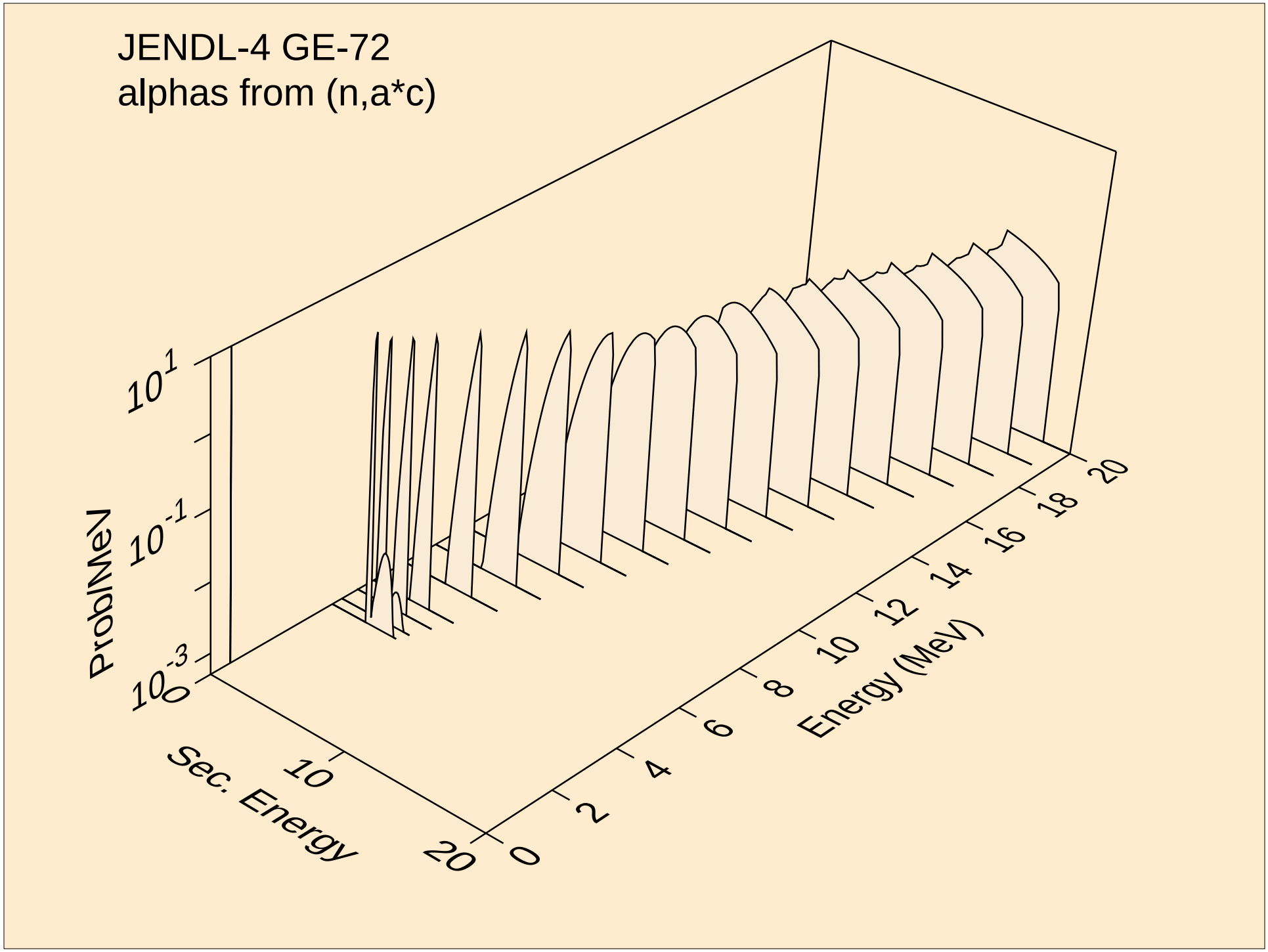

JENDL-4 GE-72
angular distribution for (n,a*23) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 GE-72
angular distribution for (n,a*24) alpha
ProblCos
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)


JENDL-4 GE-72
angular distribution for (n,a*25) alpha
ProblCos
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)


JENDL-4 GE-72
angular distribution for (n,a*26) alpha
ProblCos
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)


JENDL-4 GE-72
angular distribution for (n,a*27) alpha
ProblCos
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)


JENDL-4 GE-72
alphas from (n,a*c)
Prob/MeV
10^1
10^-1
10^-3
Sec. Energy
0
10
20
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20