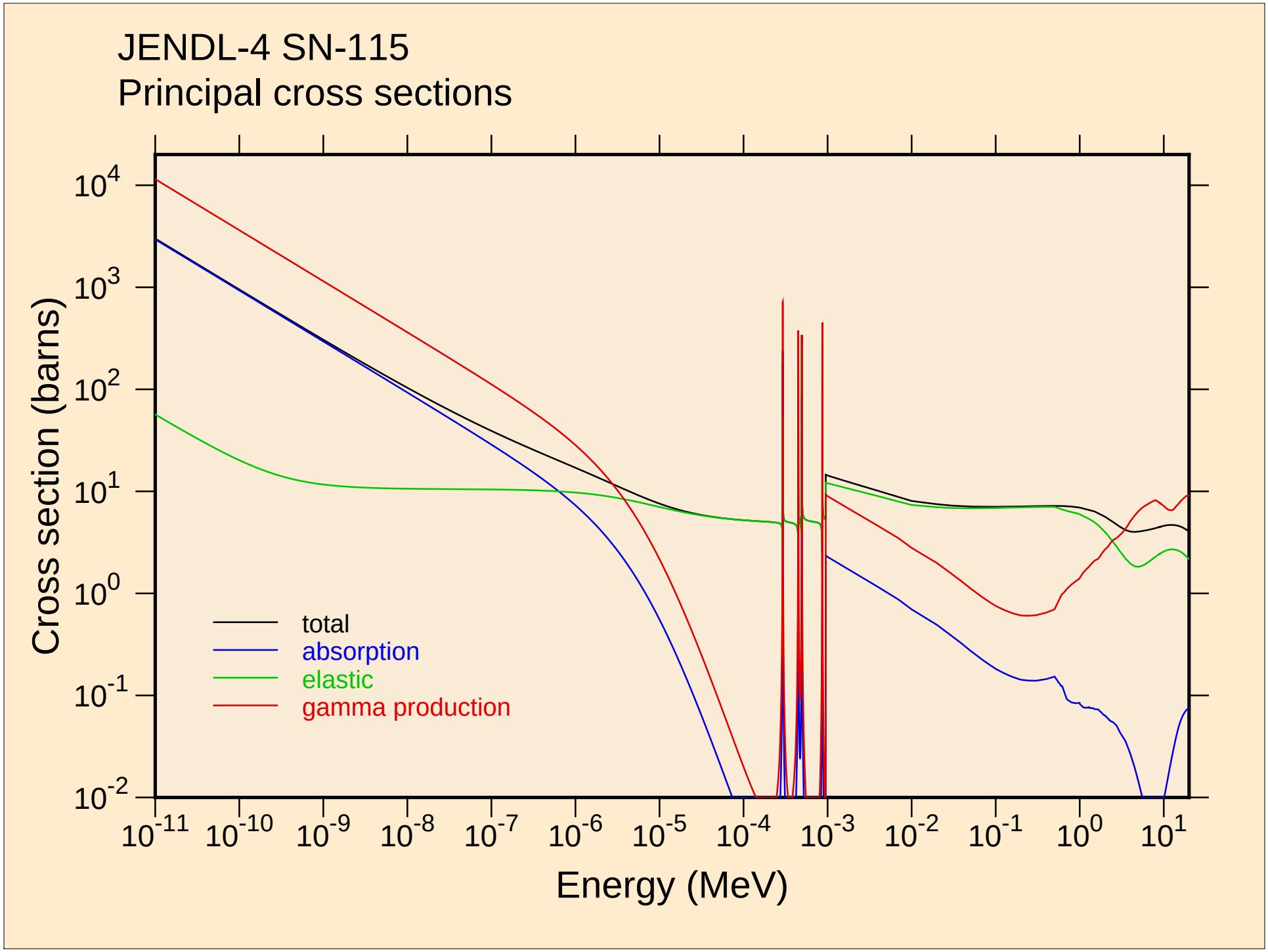
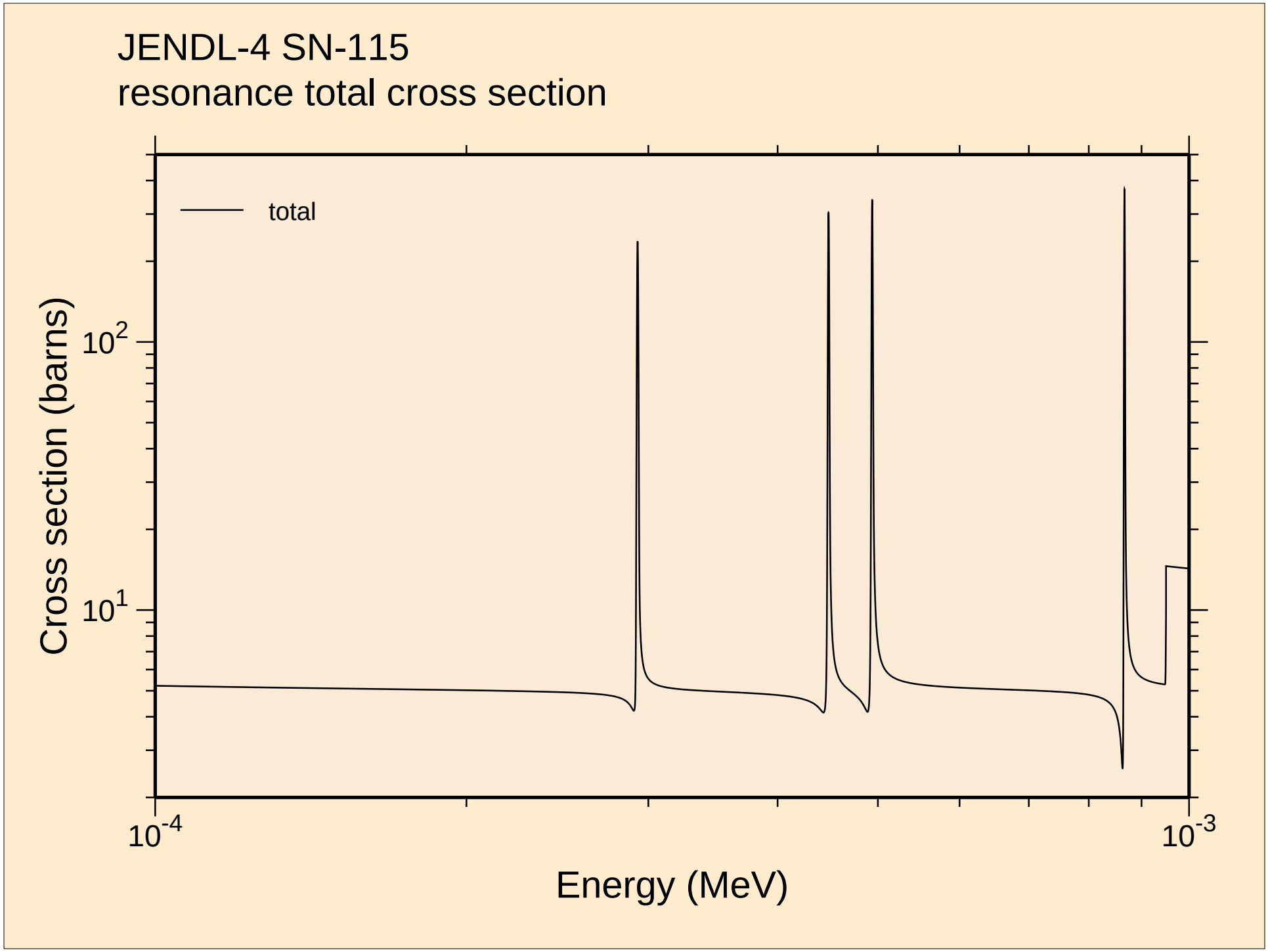
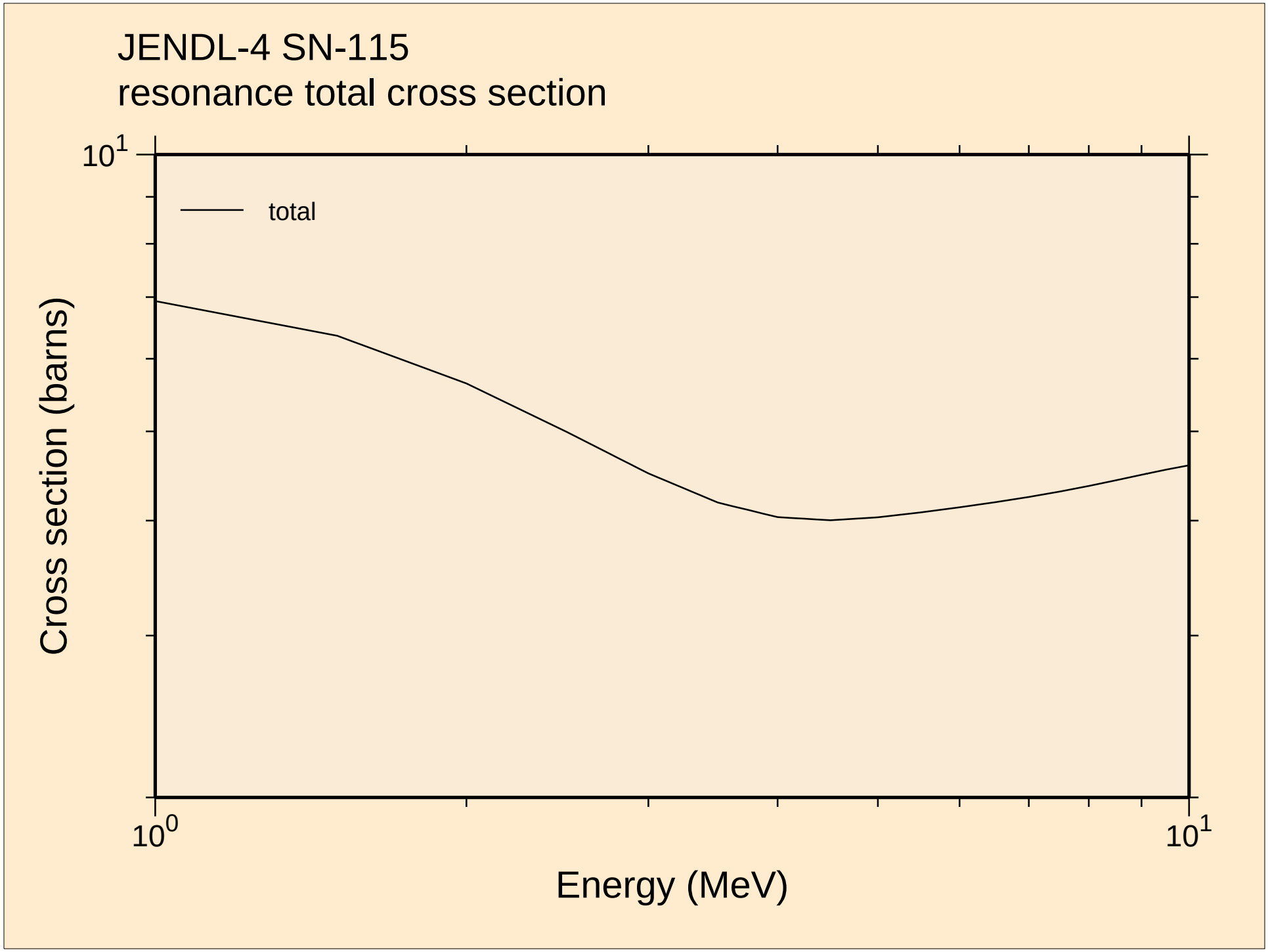
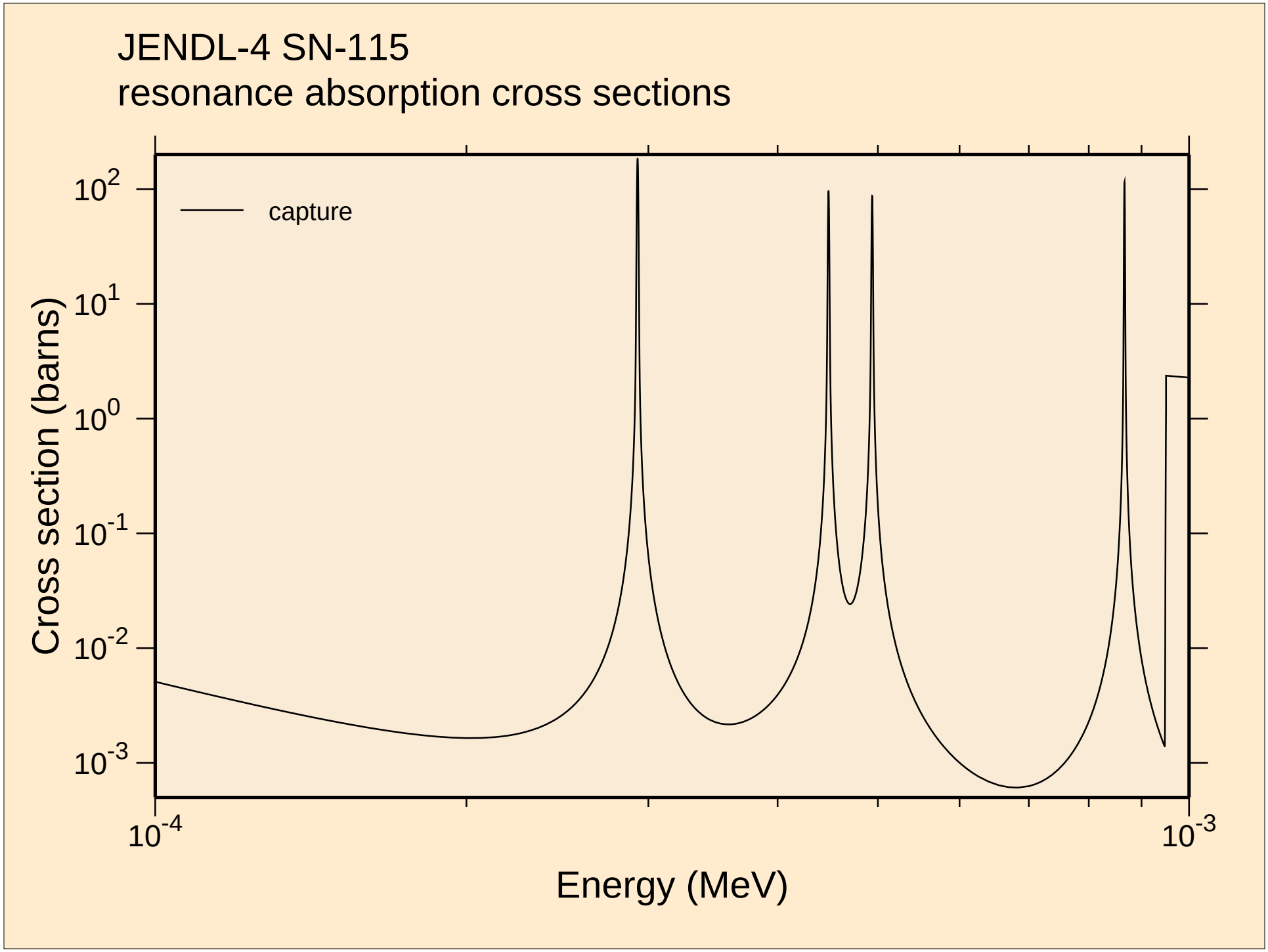
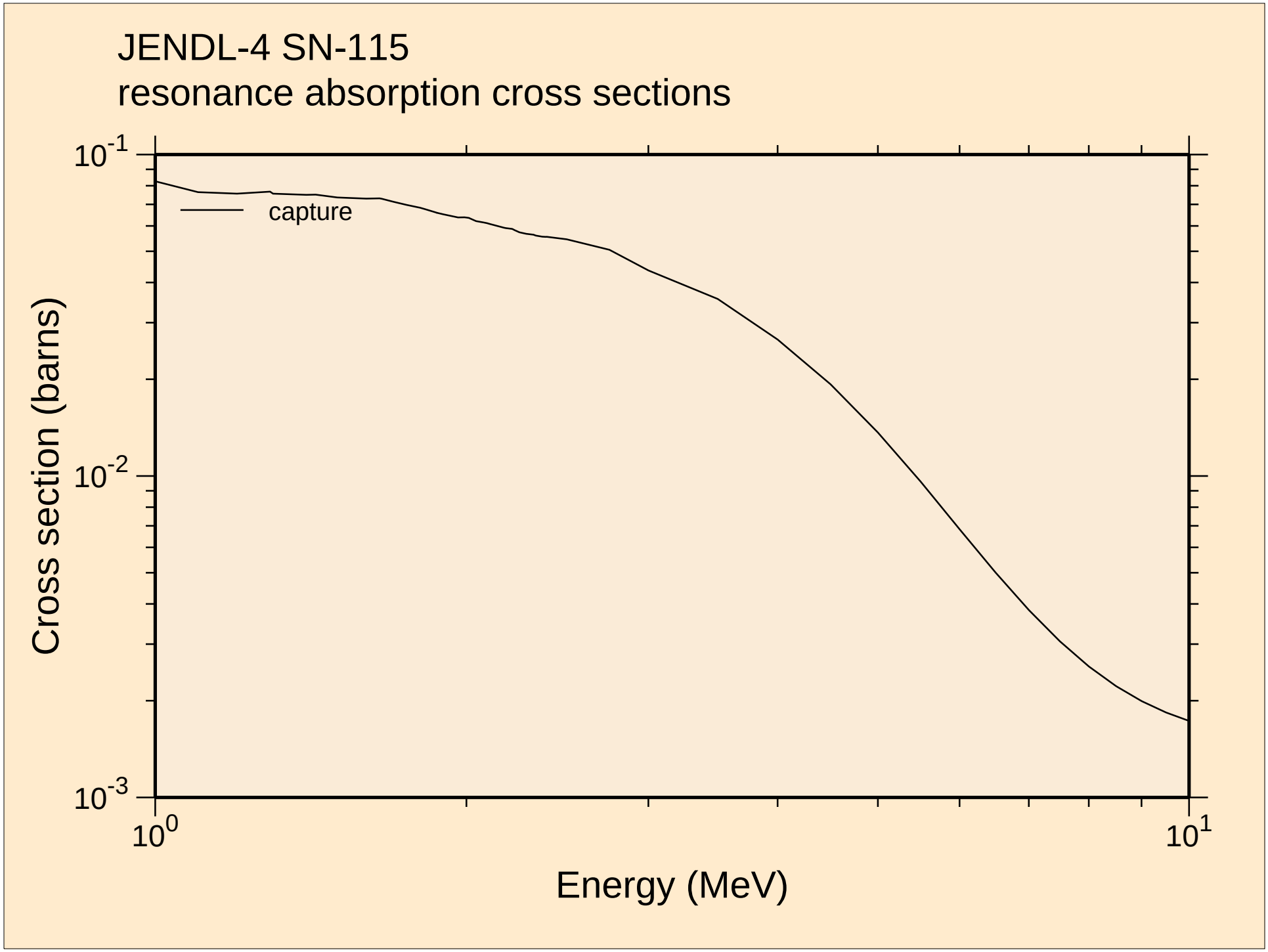
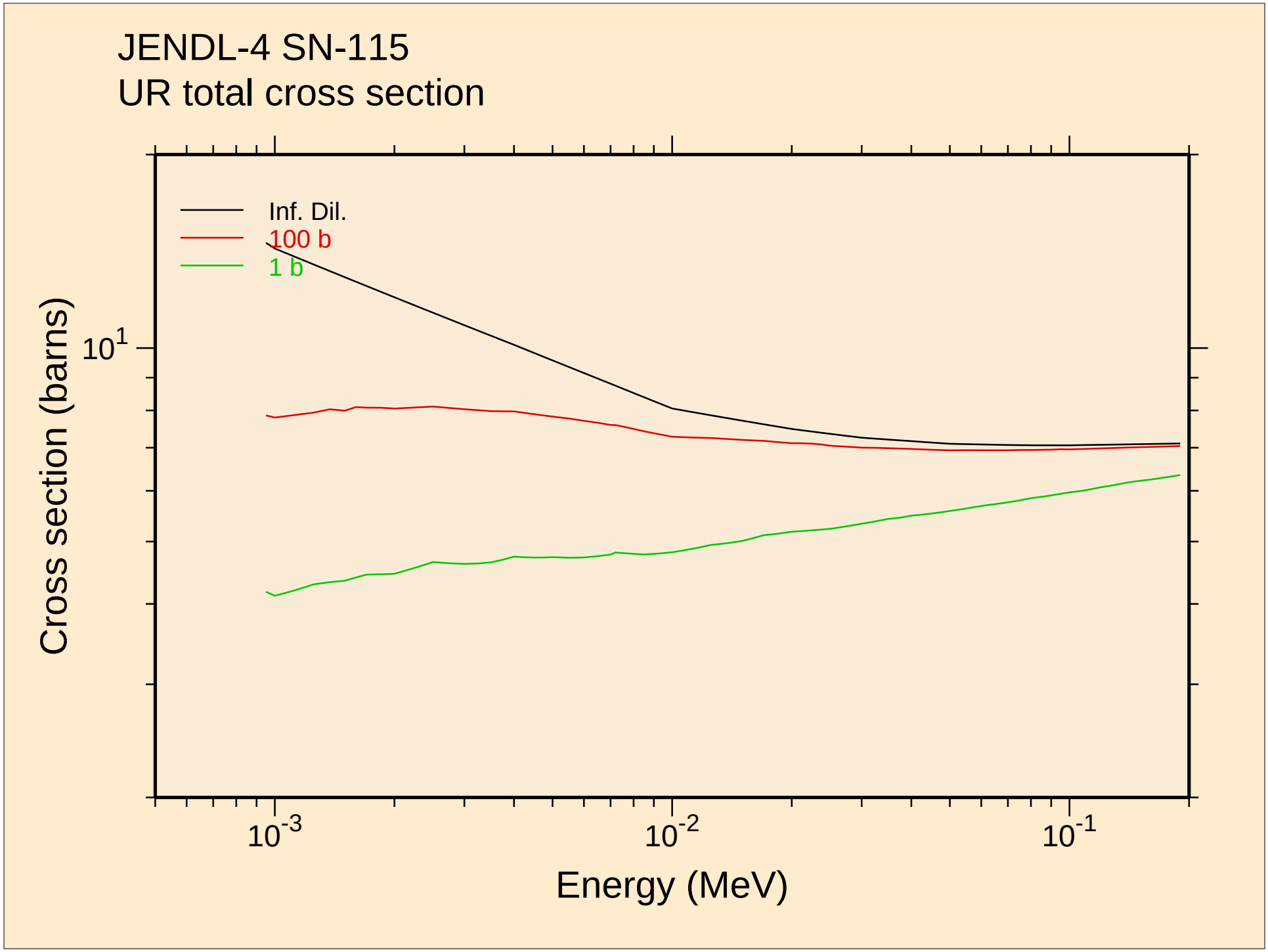

JENDL-4 SN-115
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}

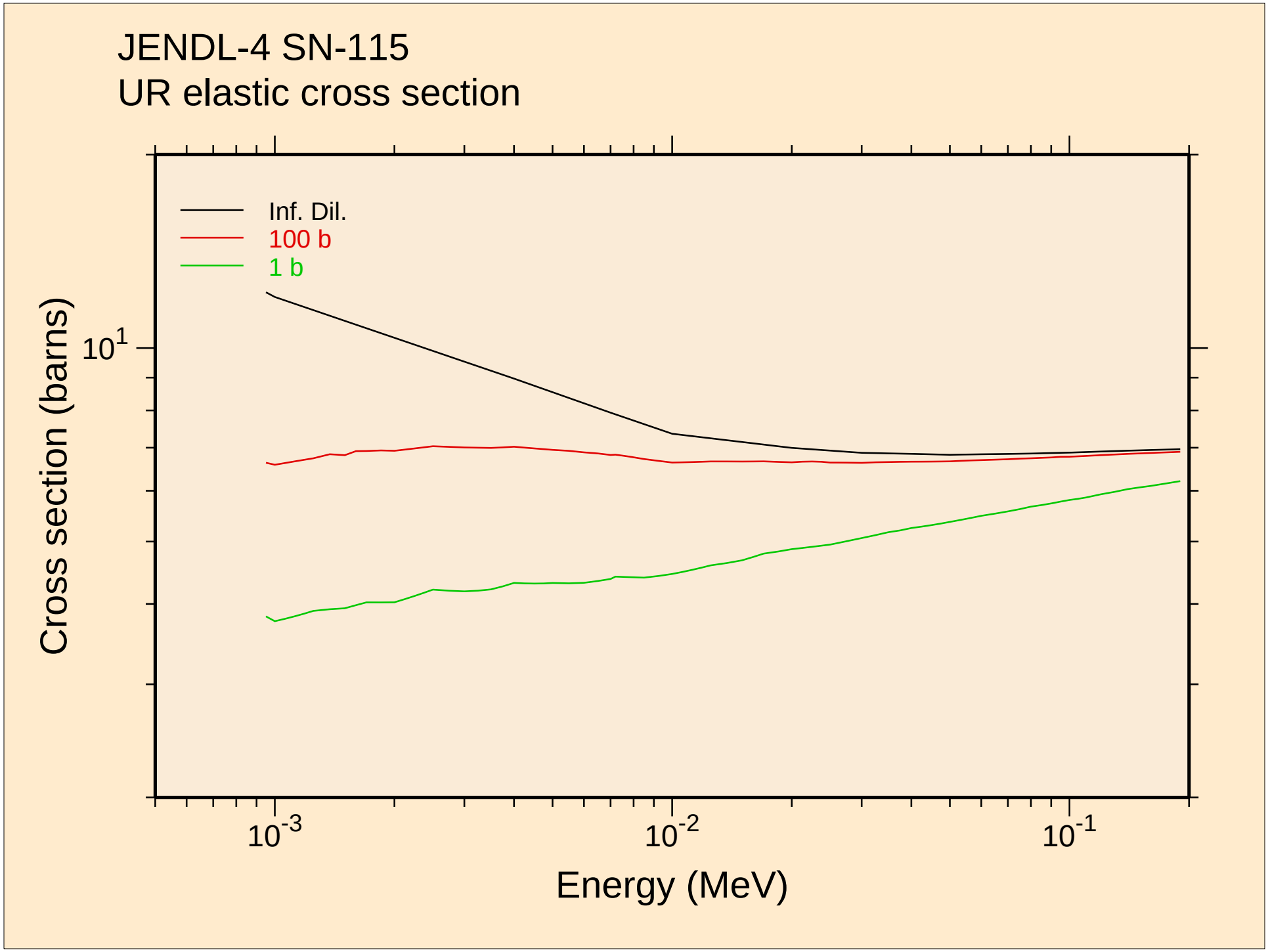

JENDL-4 SN-115
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^{-4}
10^{-3}
Energy (MeV)

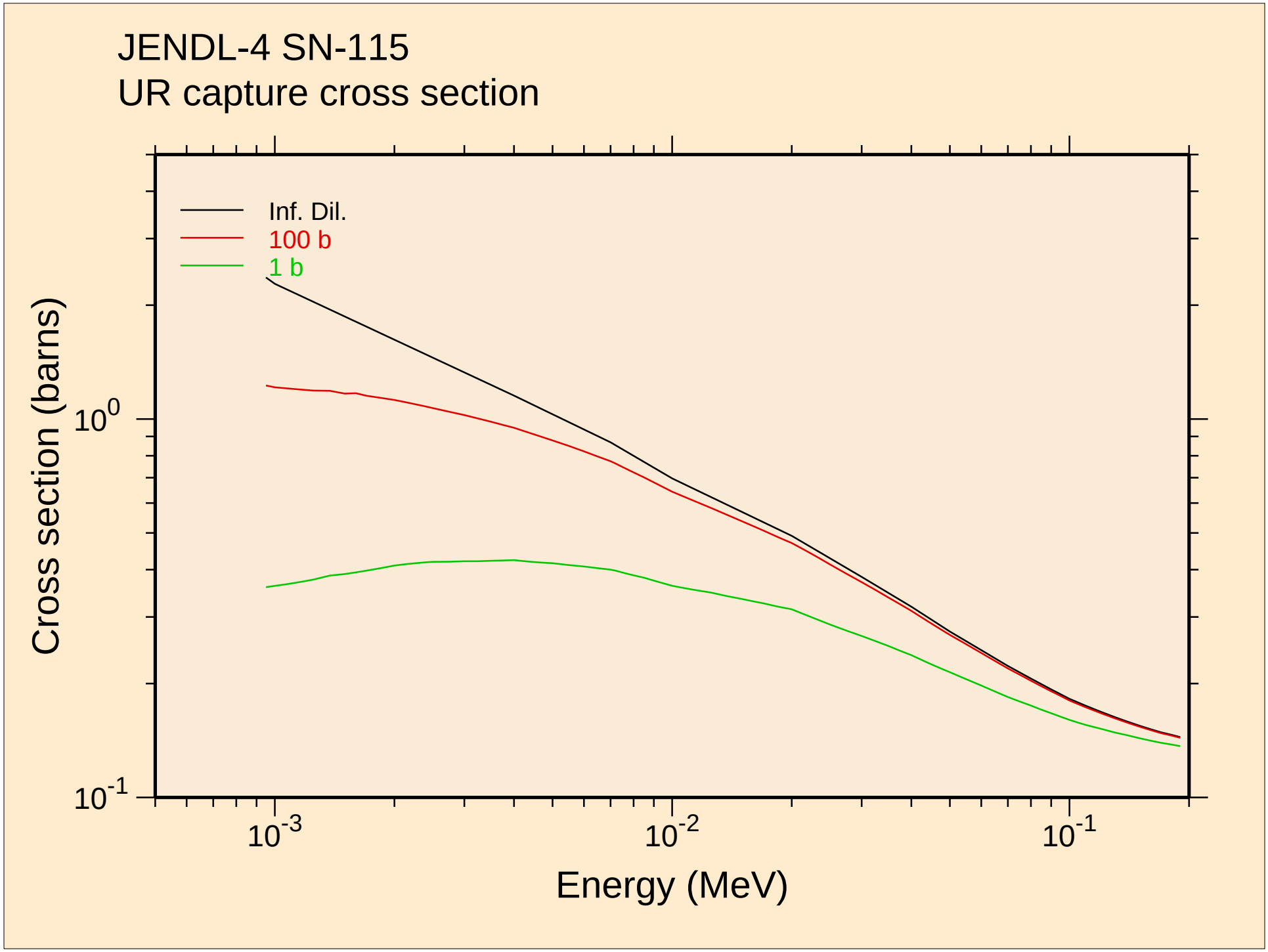

JENDL-4 SN-115
resonance total cross section
total
Cross section (barns)
Energy (MeV)
10^1
10^0
10^1

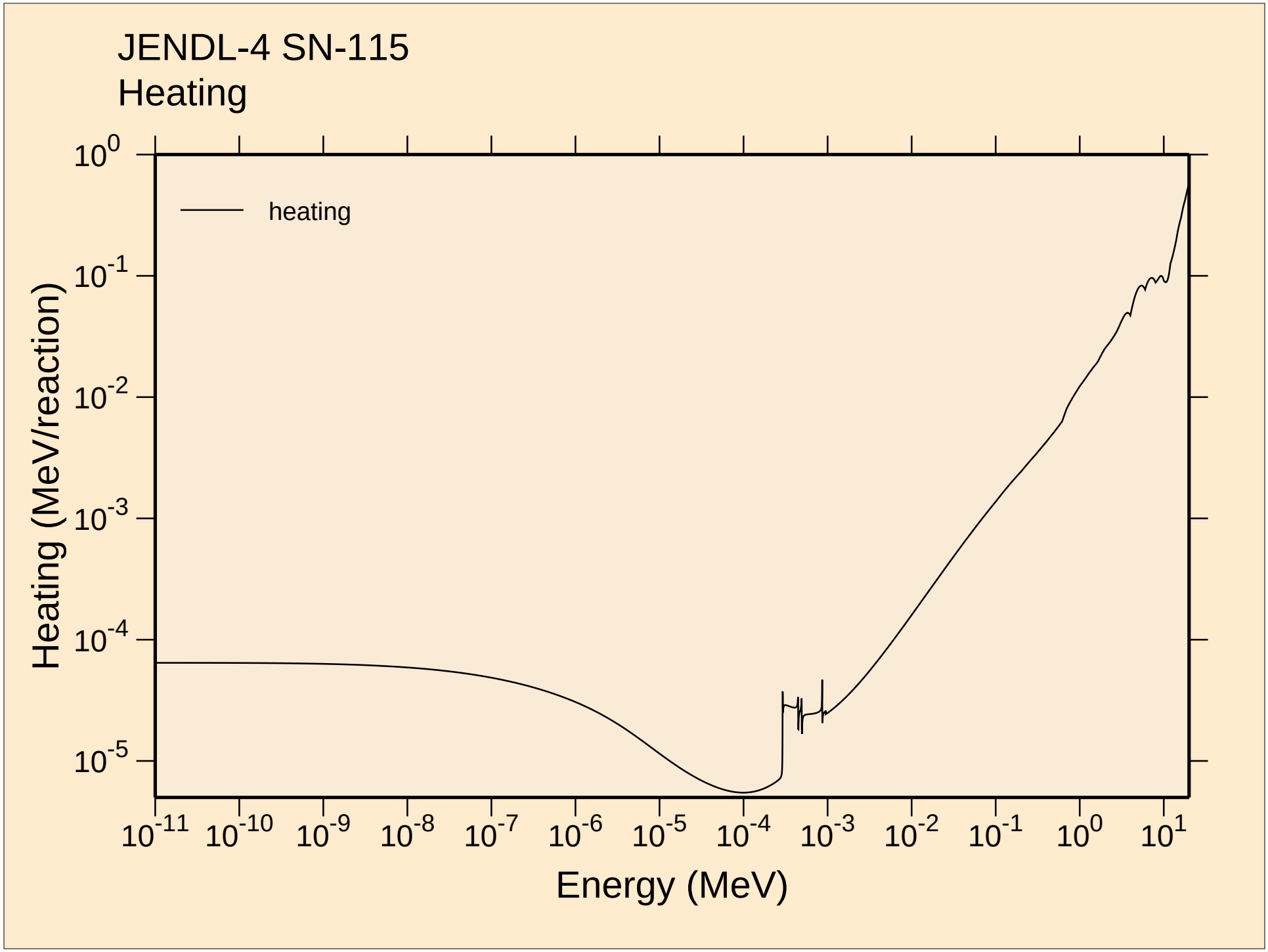

JENDL-4 SN-115
resonance absorption cross sections
capture
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-3}
Energy (MeV)

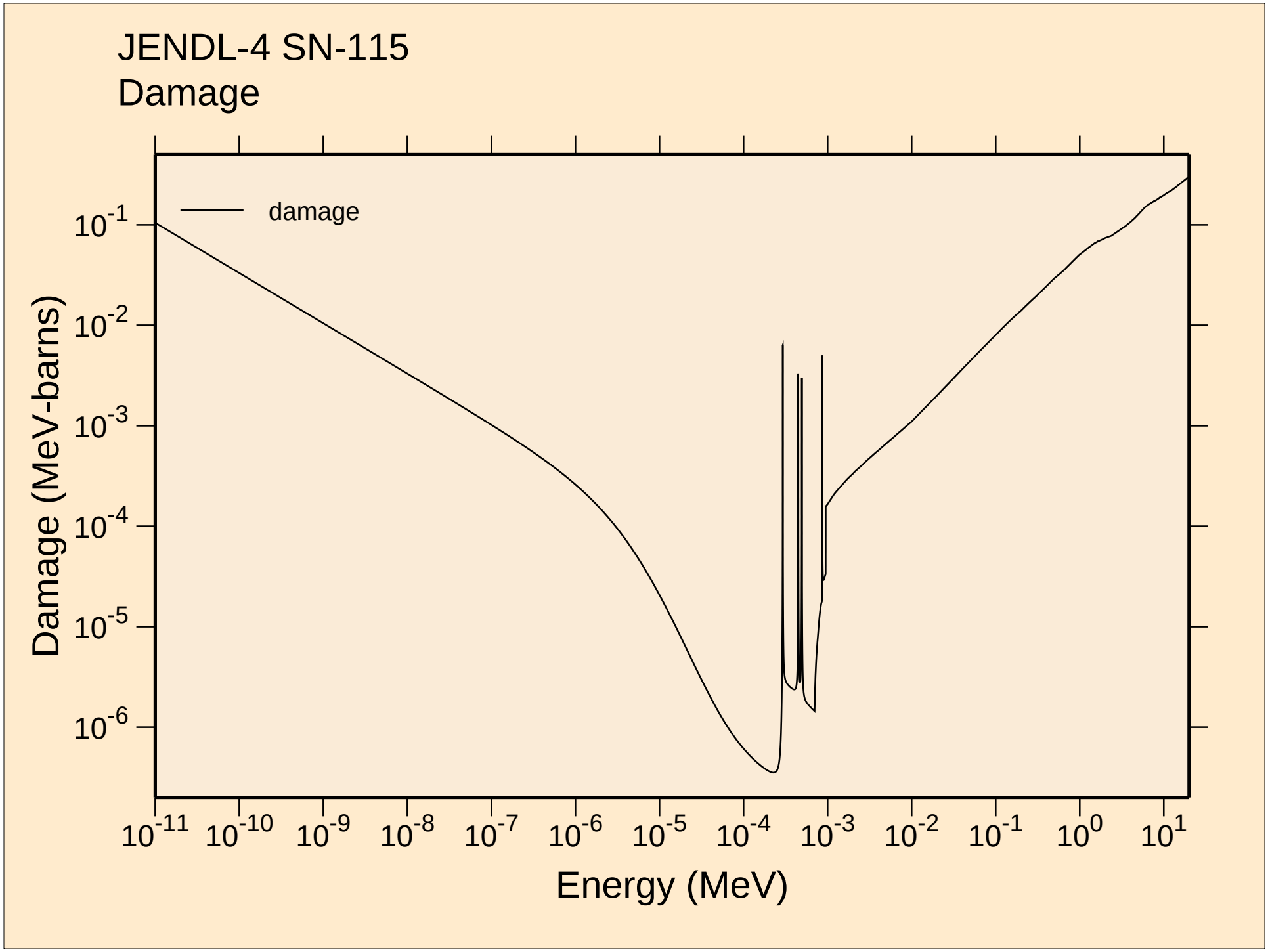

JENDL-4 SN-115
resonance absorption cross sections
capture
Cross section (barns)
Energy (MeV)
10-1
10-2
10-3
100
101

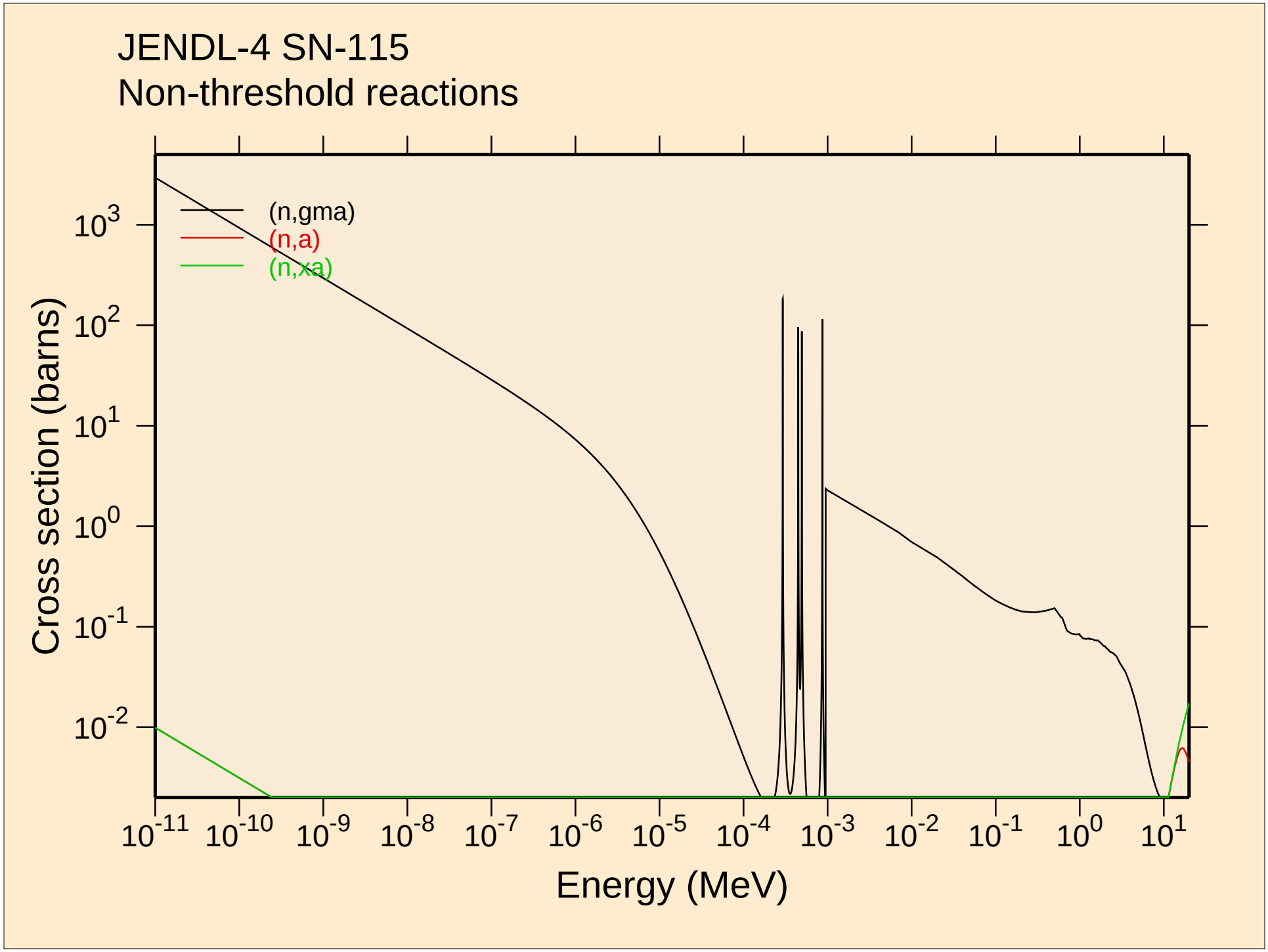

JENDL-4 SN-115
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^-3
10^-2
10^-1
Energy (MeV)

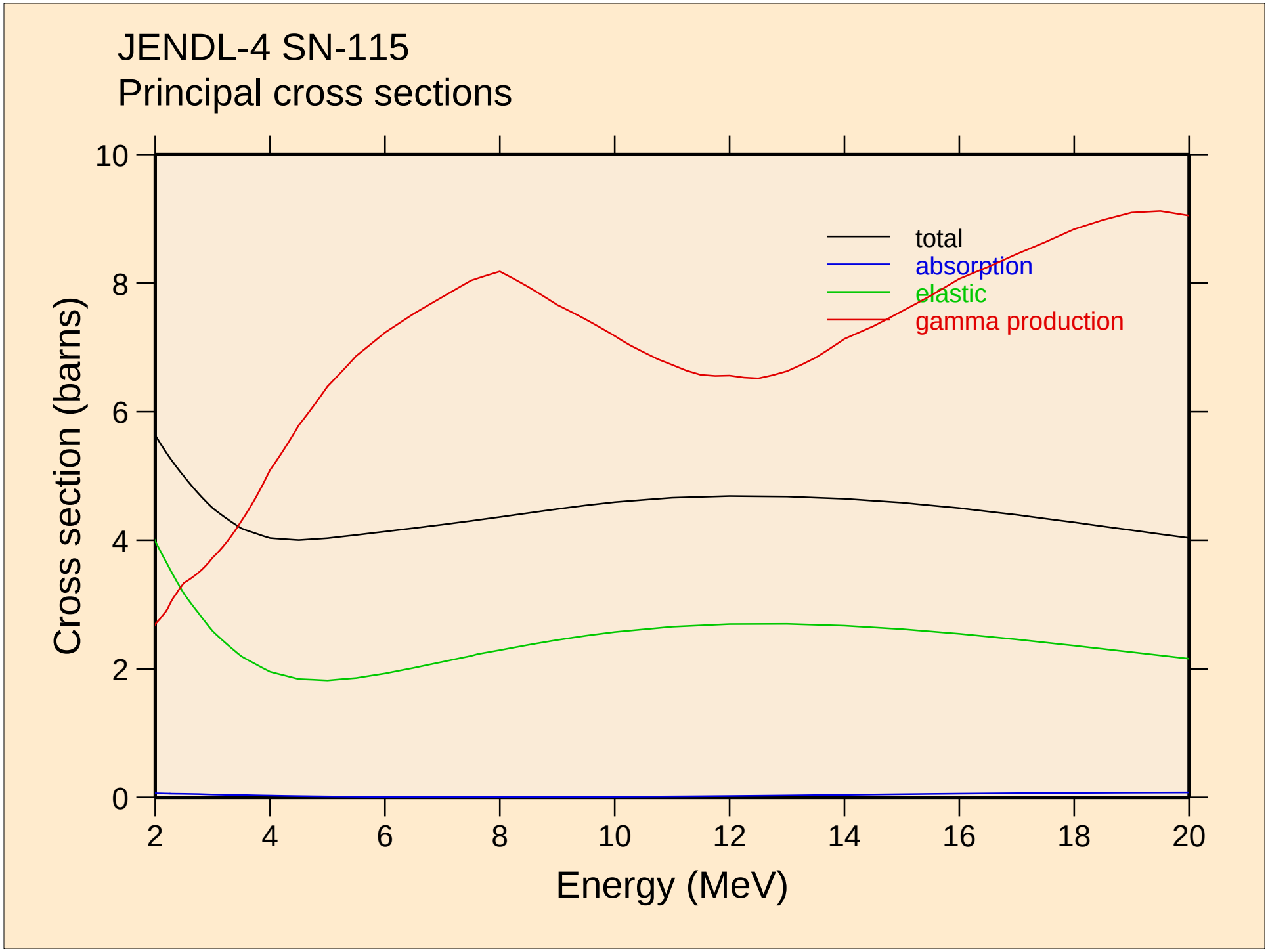

JENDL-4 SN-115
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^-3
10^-2
10^-1
Energy (MeV)

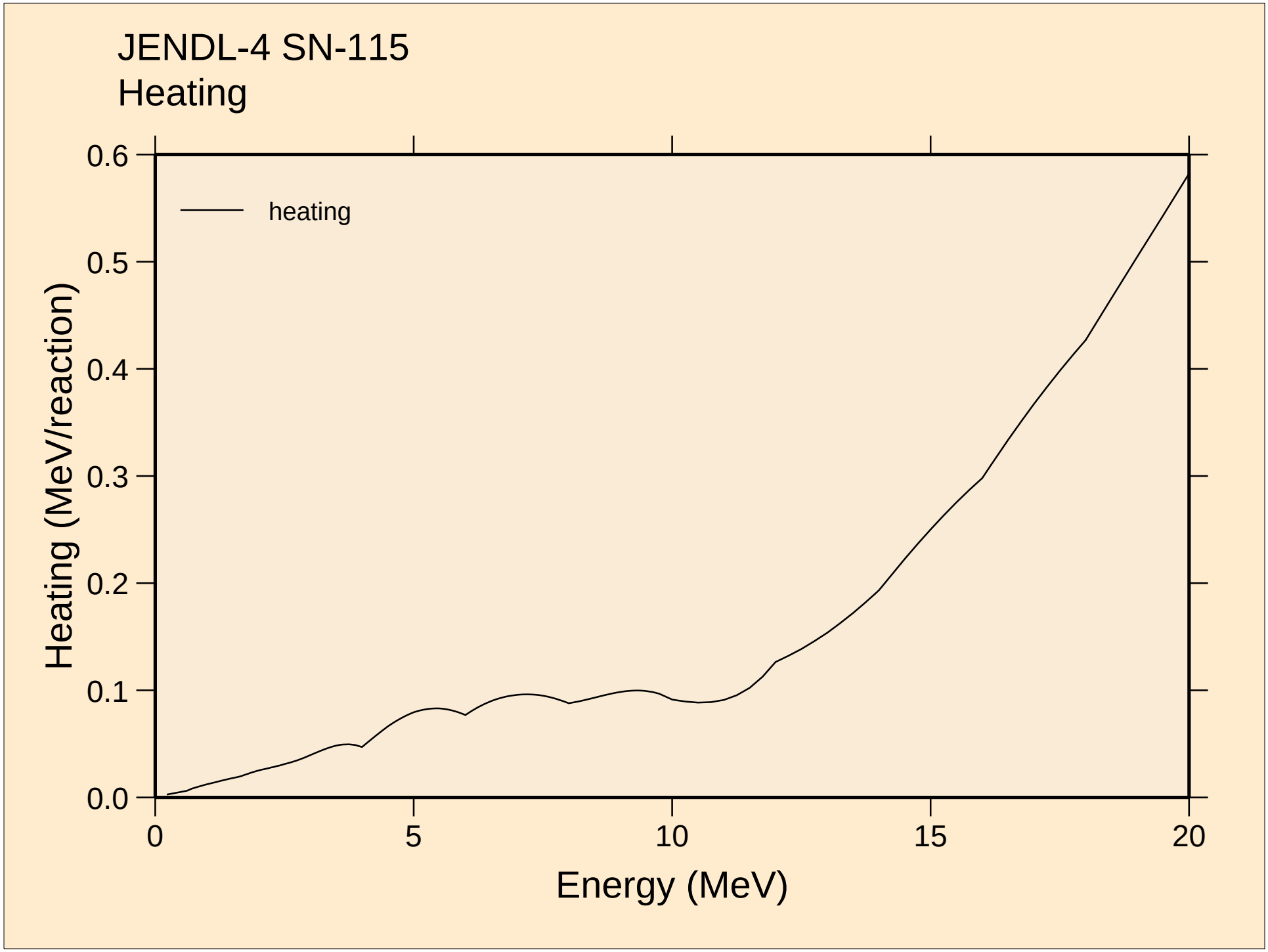

JENDL-4 SN-115
UR capture cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{0}
10^{-1}
10^{-3}
10^{-2}
10^{-1}
Energy (MeV)

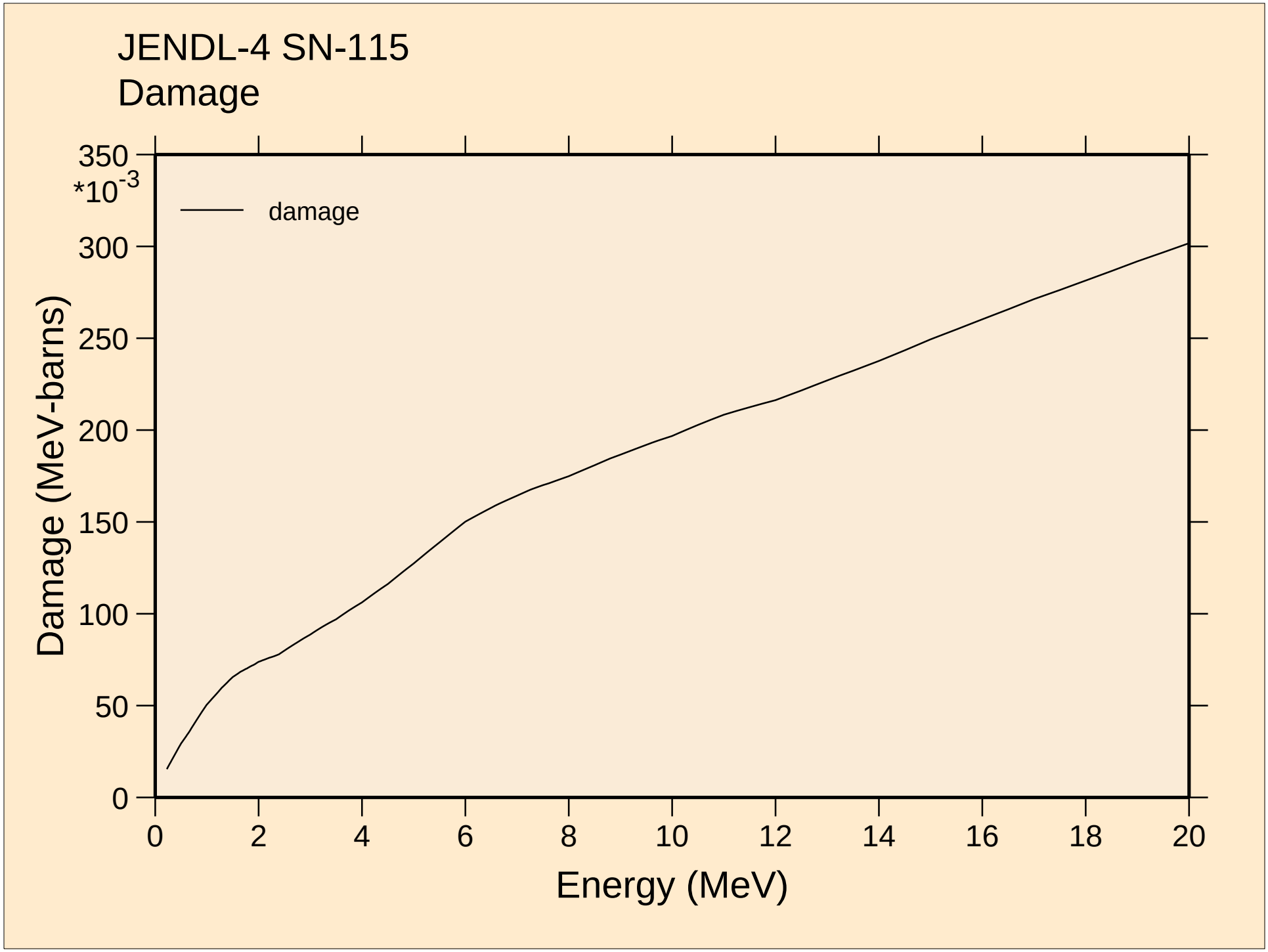

JENDL-4 SN-115
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

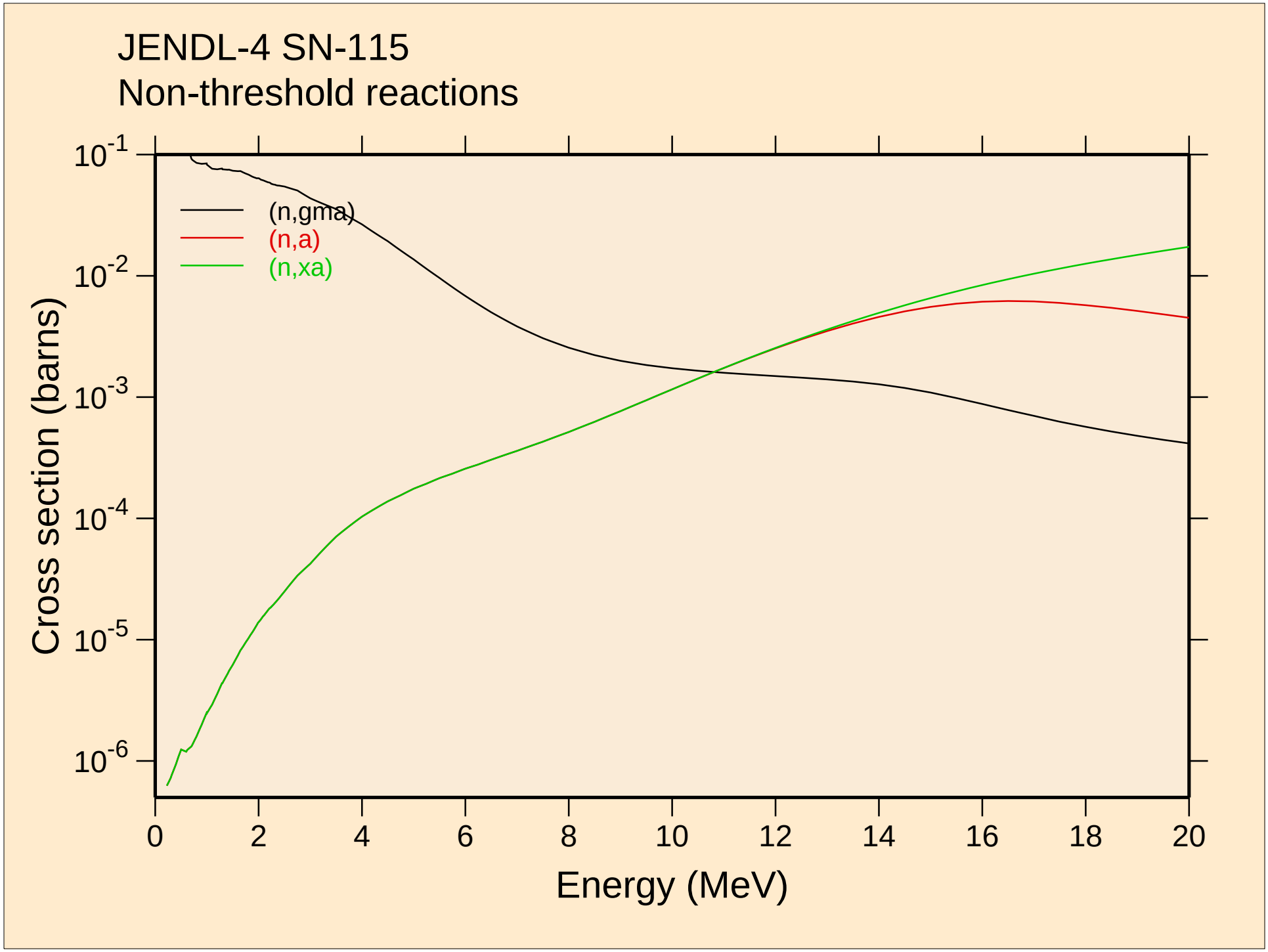

JENDL-4 SN-115
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

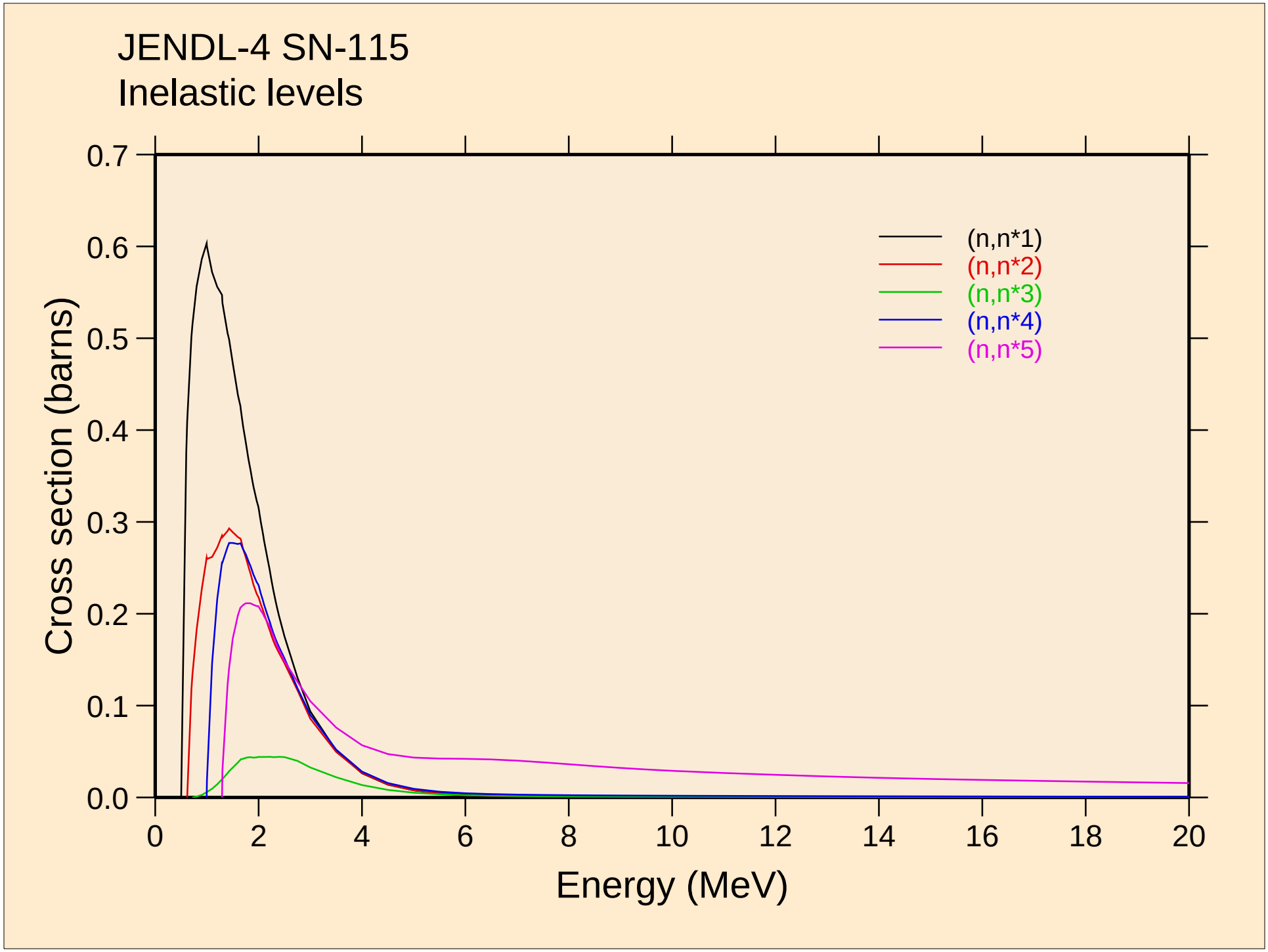

JENDL-4 SN-115
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

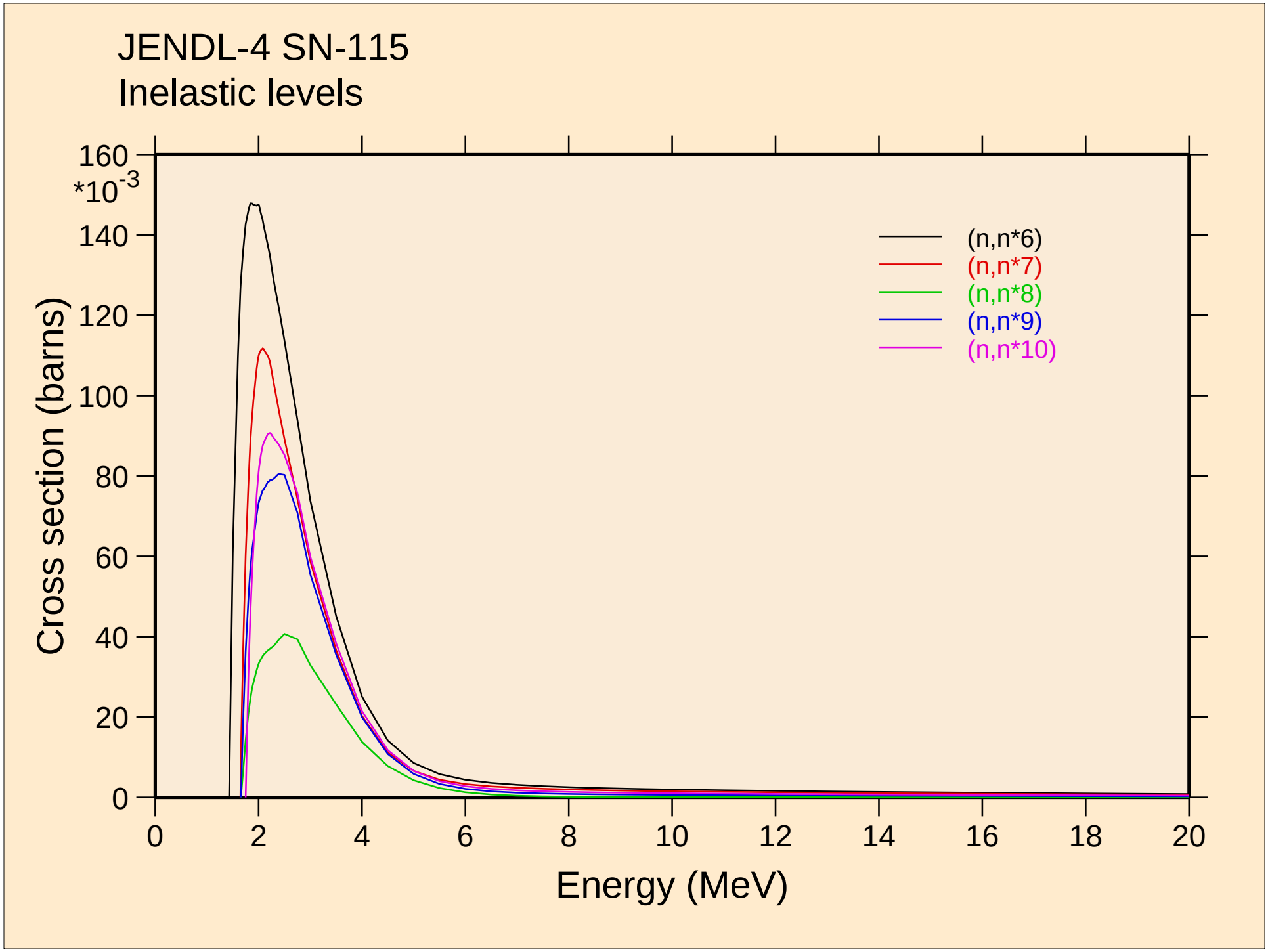

JENDL-4 SN-115
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
2
4
6
8
10
2
4
6
8
10
12
14
16
18
20

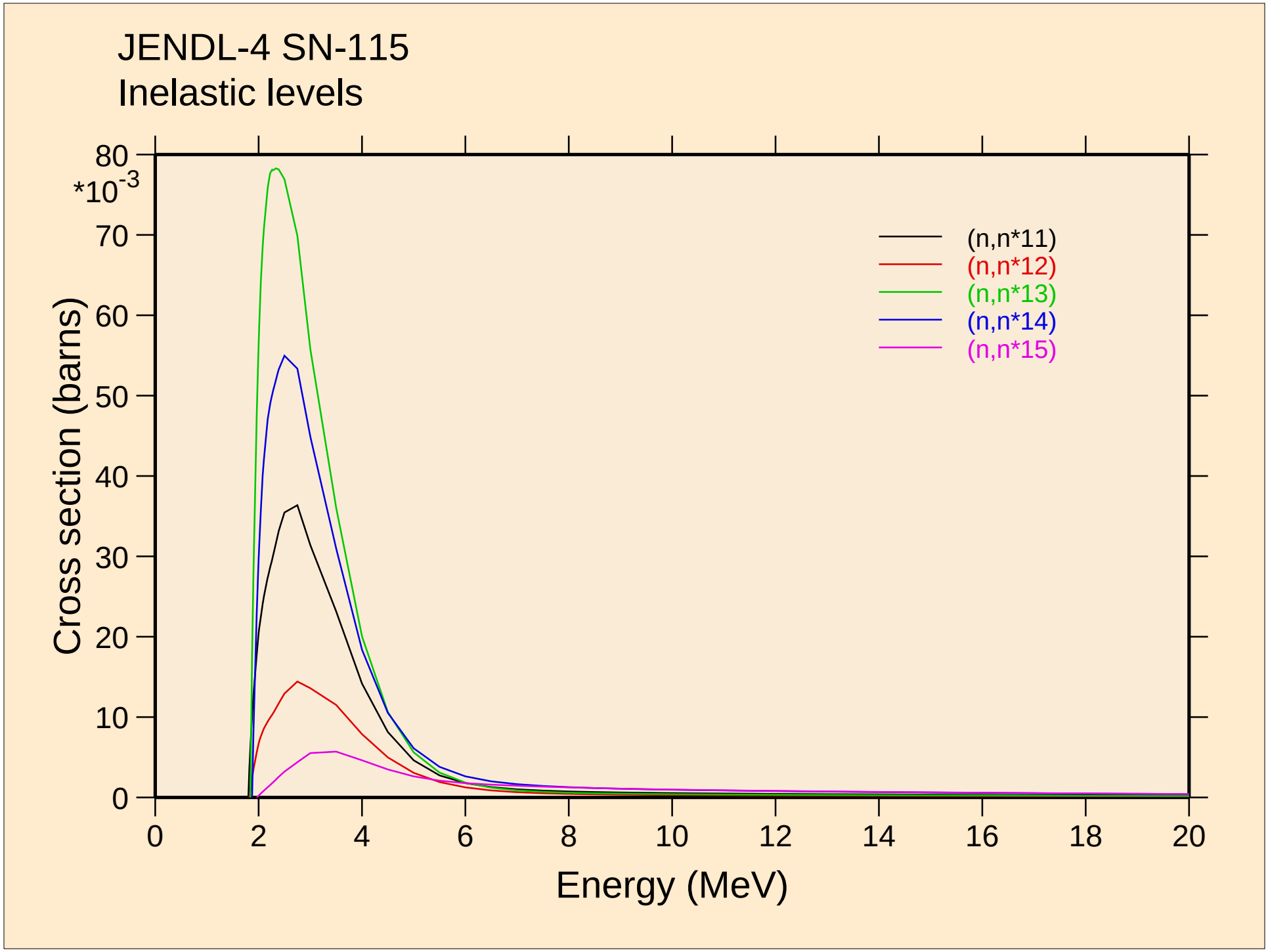

JENDL-4 SN-115
Heating
heating
Heating (MeV/reaction)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
5
10
15
20
Energy (MeV)

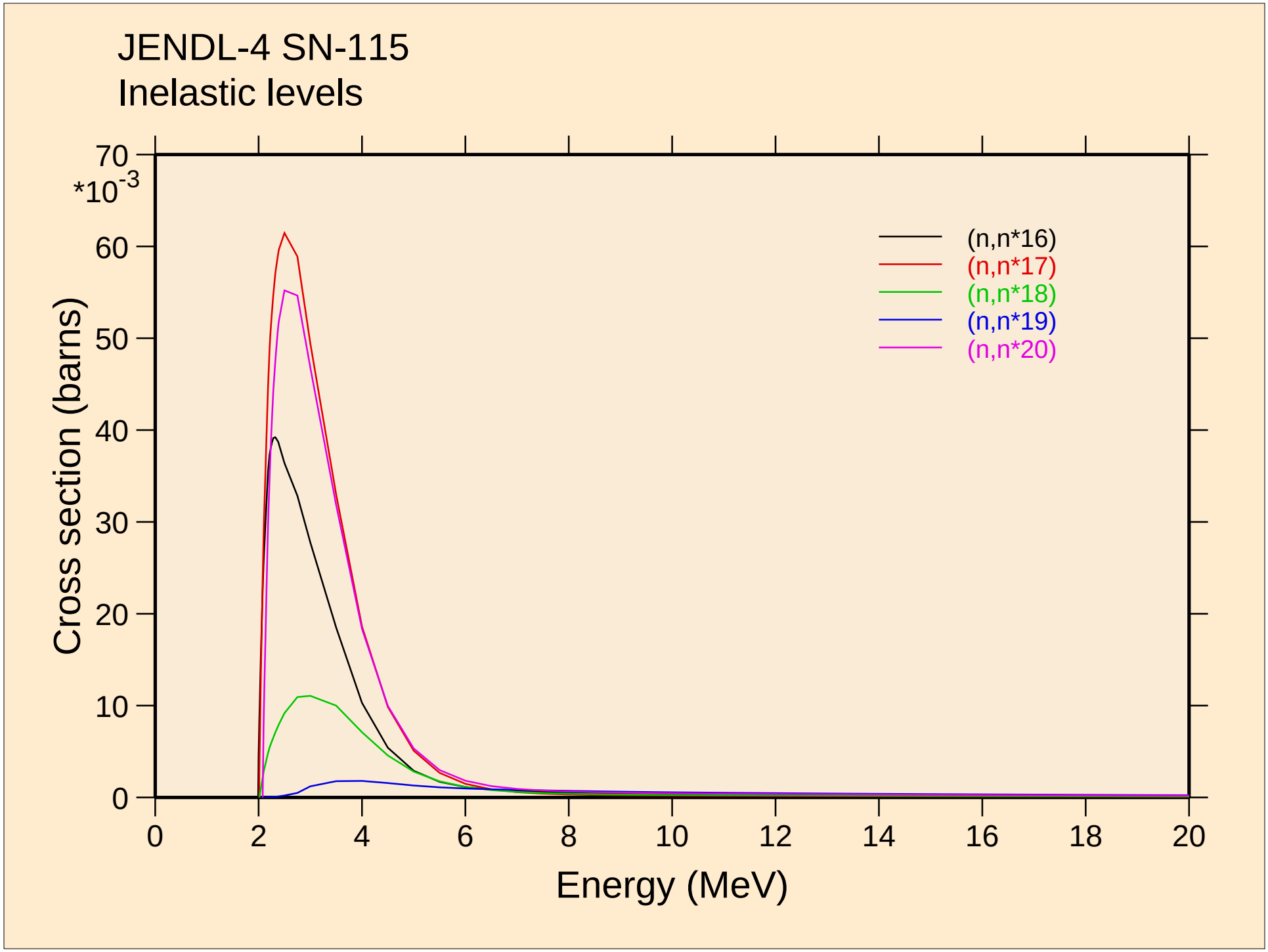

JENDL-4 SN-115
Damage
damage
Damage (MeV-barns)
*10-3
350
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

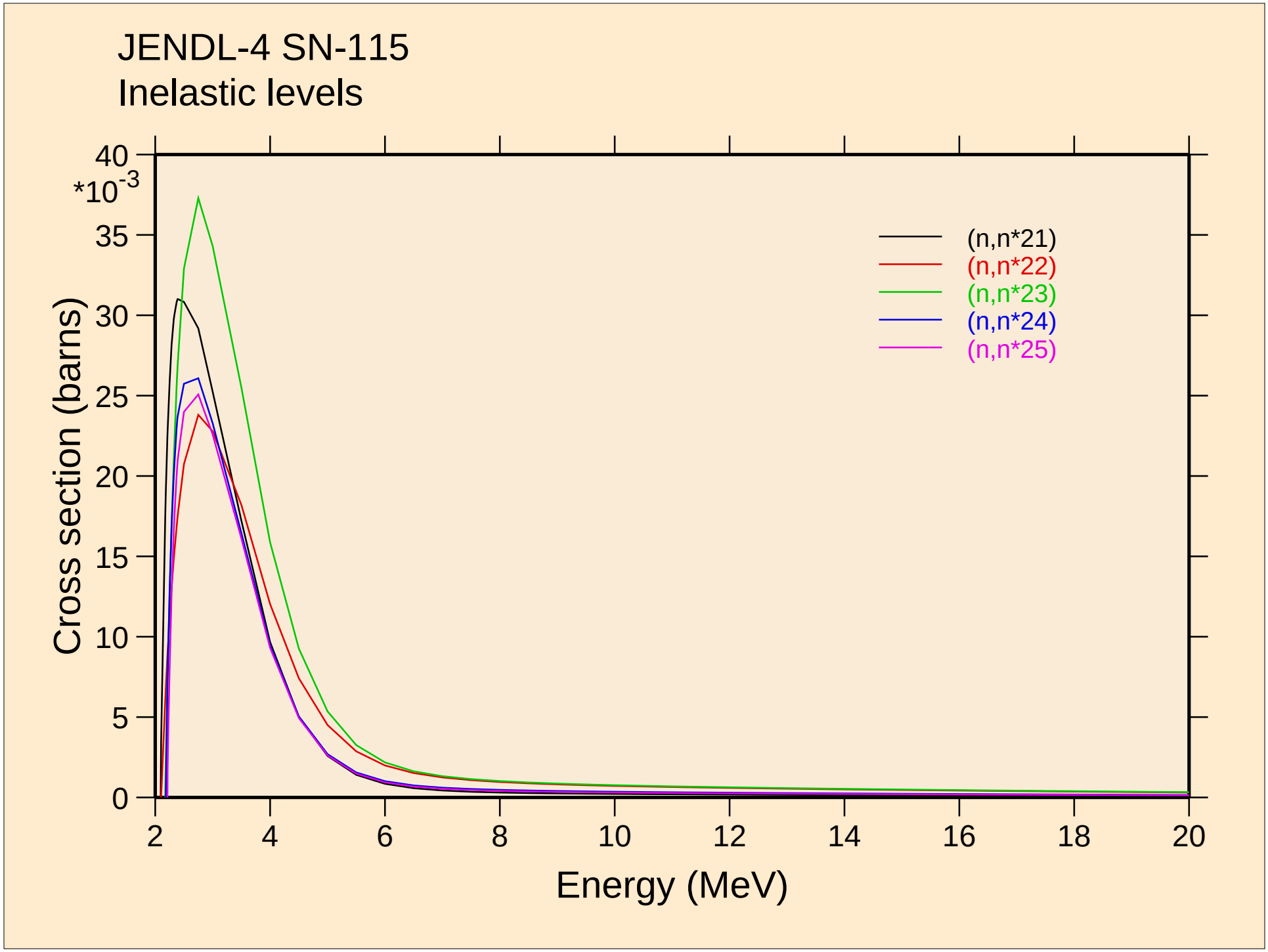

JENDL-4 SN-115
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
Energy (MeV)
10-1
10-2
10-3
10-4
10-5
10-6
0
2
4
6
8
10
12
14
16
18
20

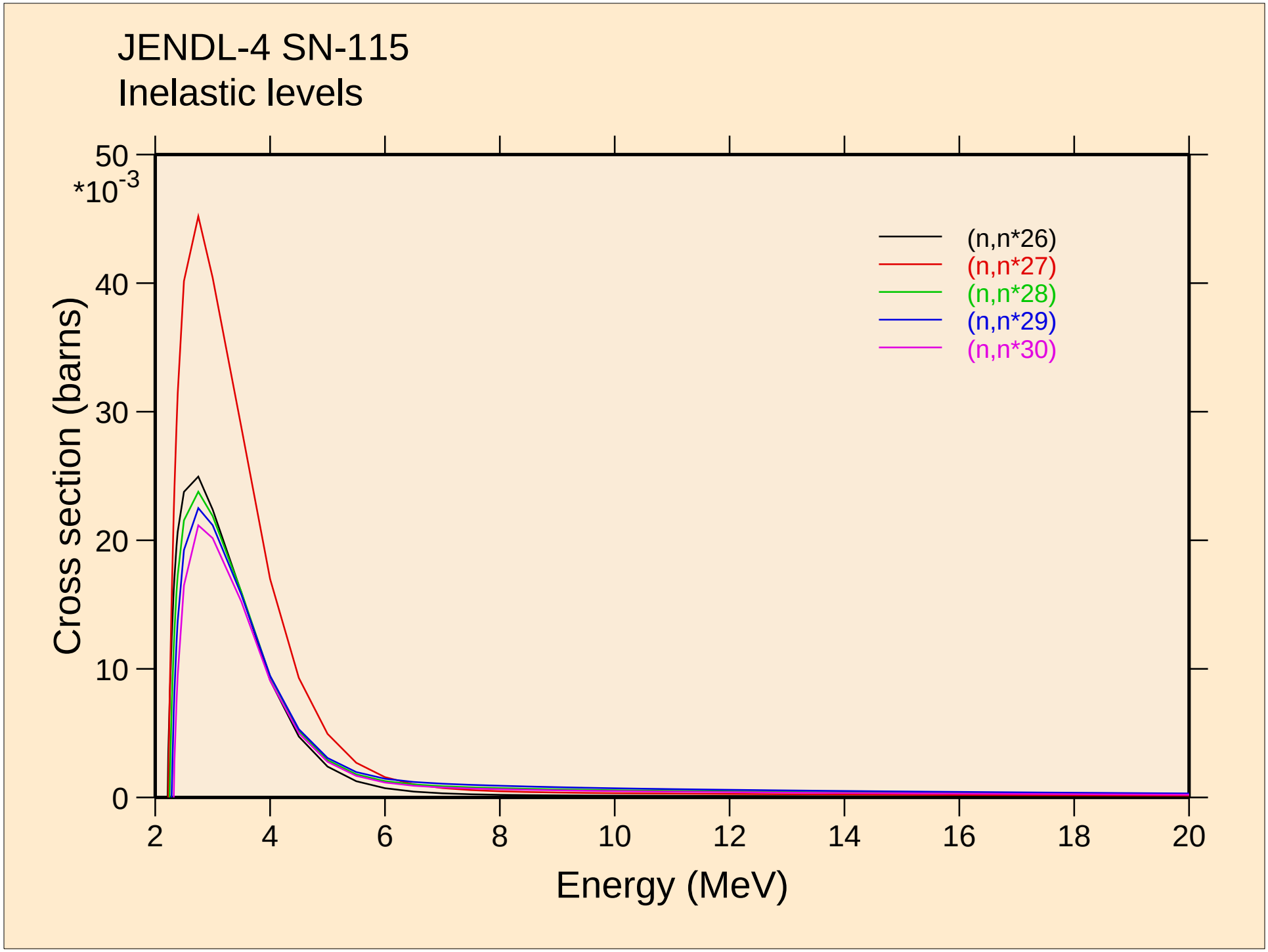

JENDL-4 SN-115
Inelastic levels
Cross section (barns)
Energy (MeV)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
2
4
6
8
10
12
14
16
18
20
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

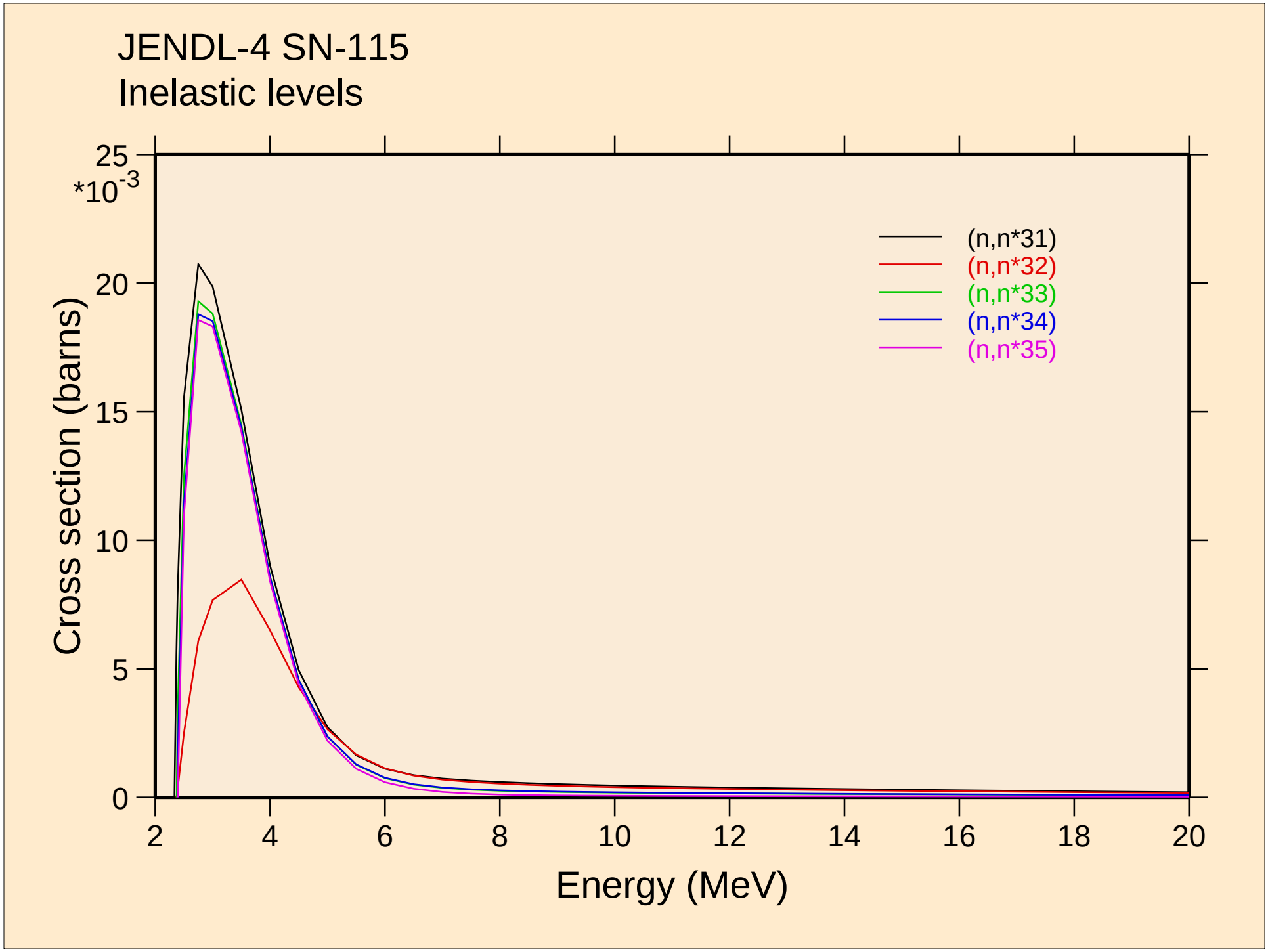

JENDL-4 SN-115
Inelastic levels
Cross section (barns)
*10-3
160
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

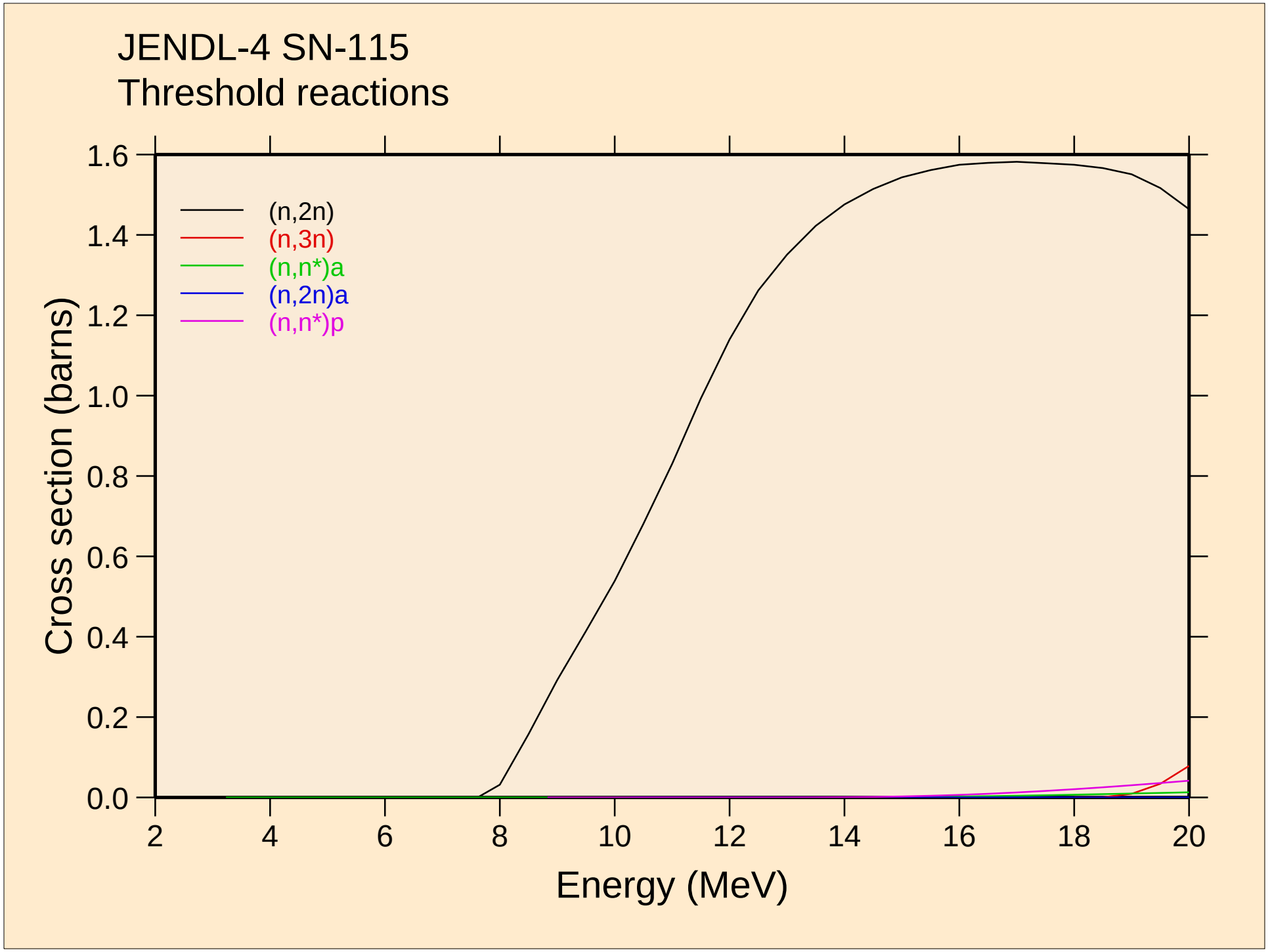

JENDL-4 SN-115
Inelastic levels
Cross section (barns)
*10-3
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

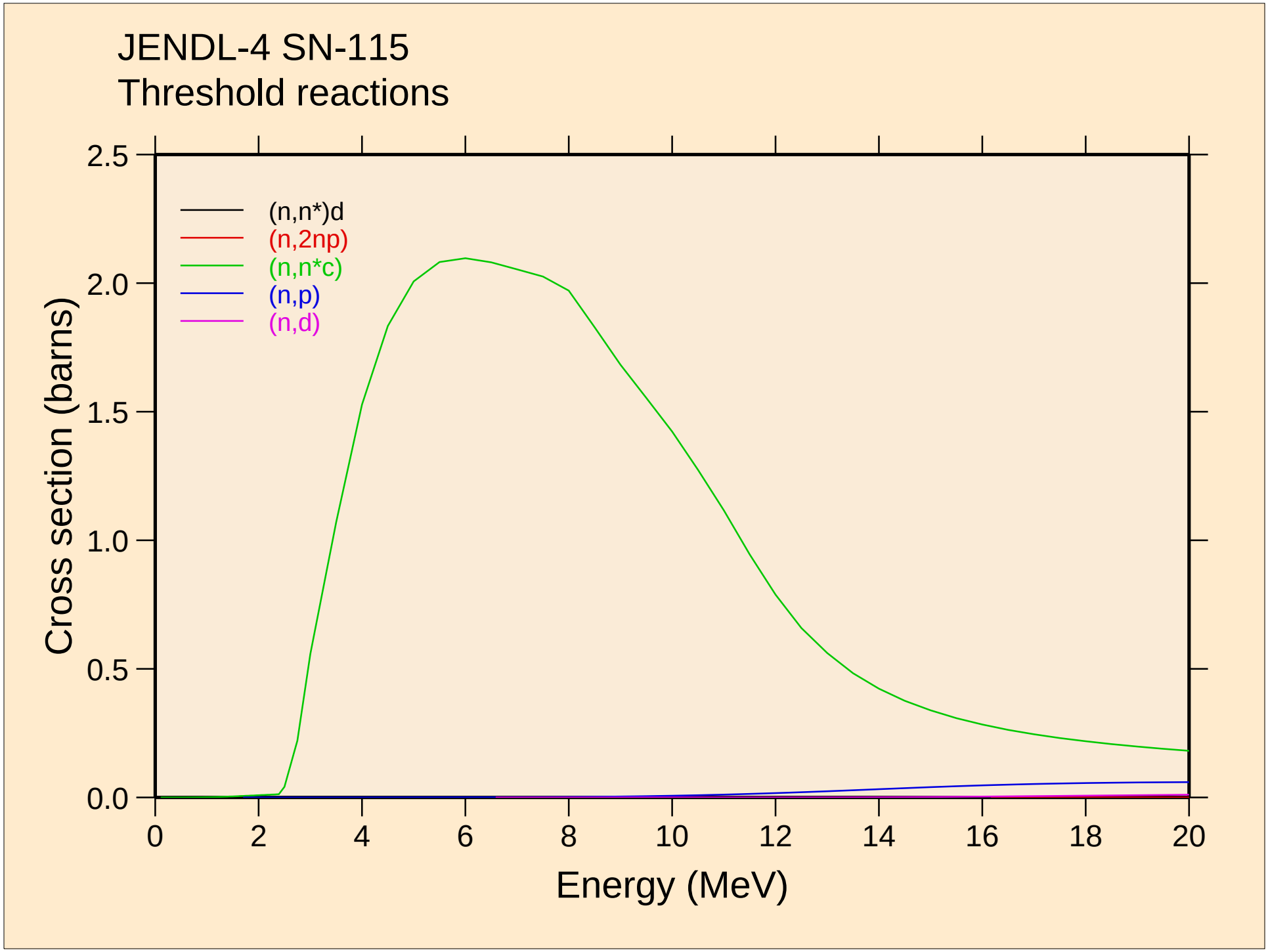

JENDL-4 SN-115
Inelastic levels
Cross section (barns)
*10^-3
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

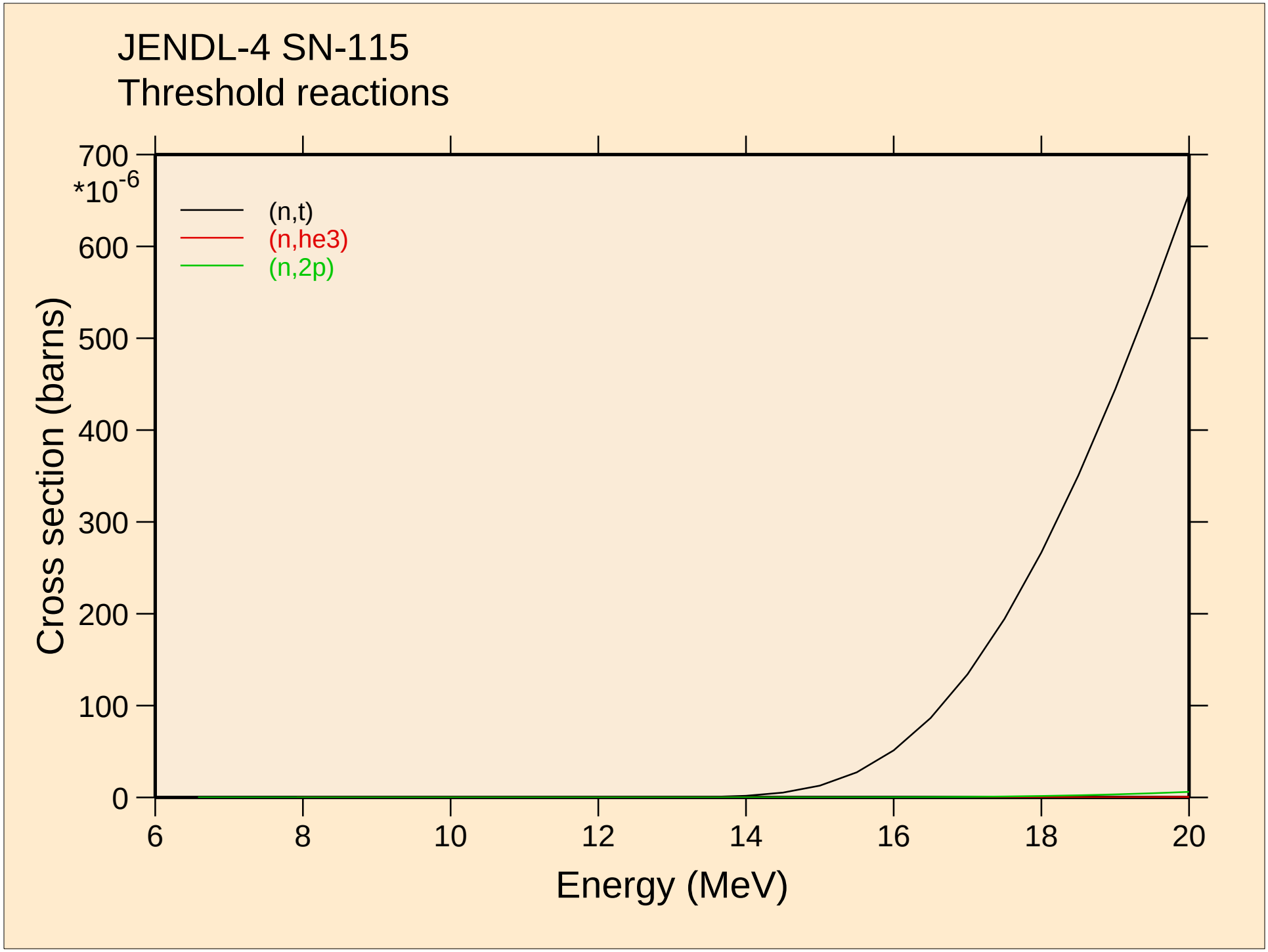

JENDL-4 SN-115
Inelastic levels
*10-3
40
35
30
25
20
15
10
5
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

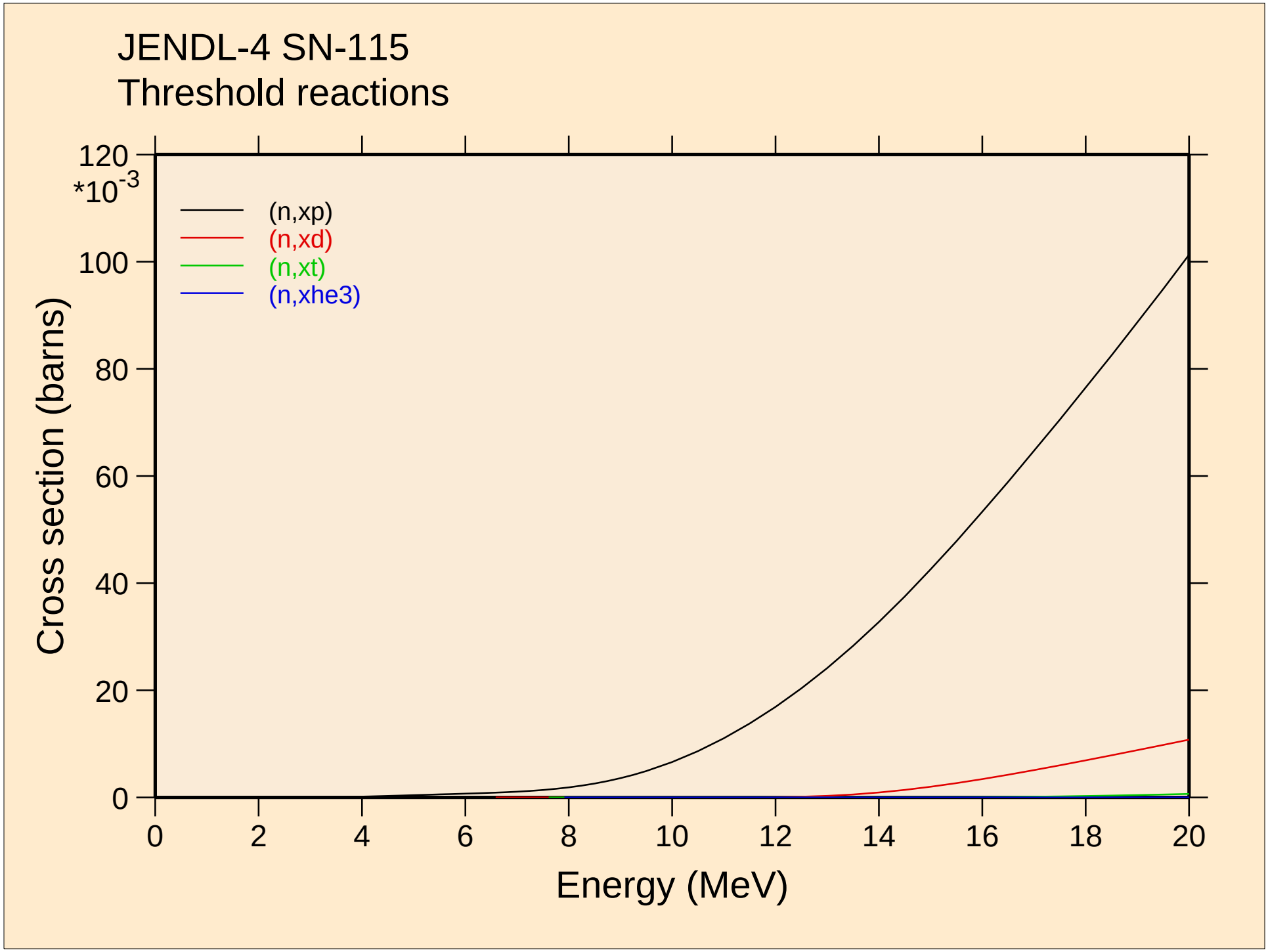

JENDL-4 SN-115
Inelastic levels
Cross section (barns)
*10^-3
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

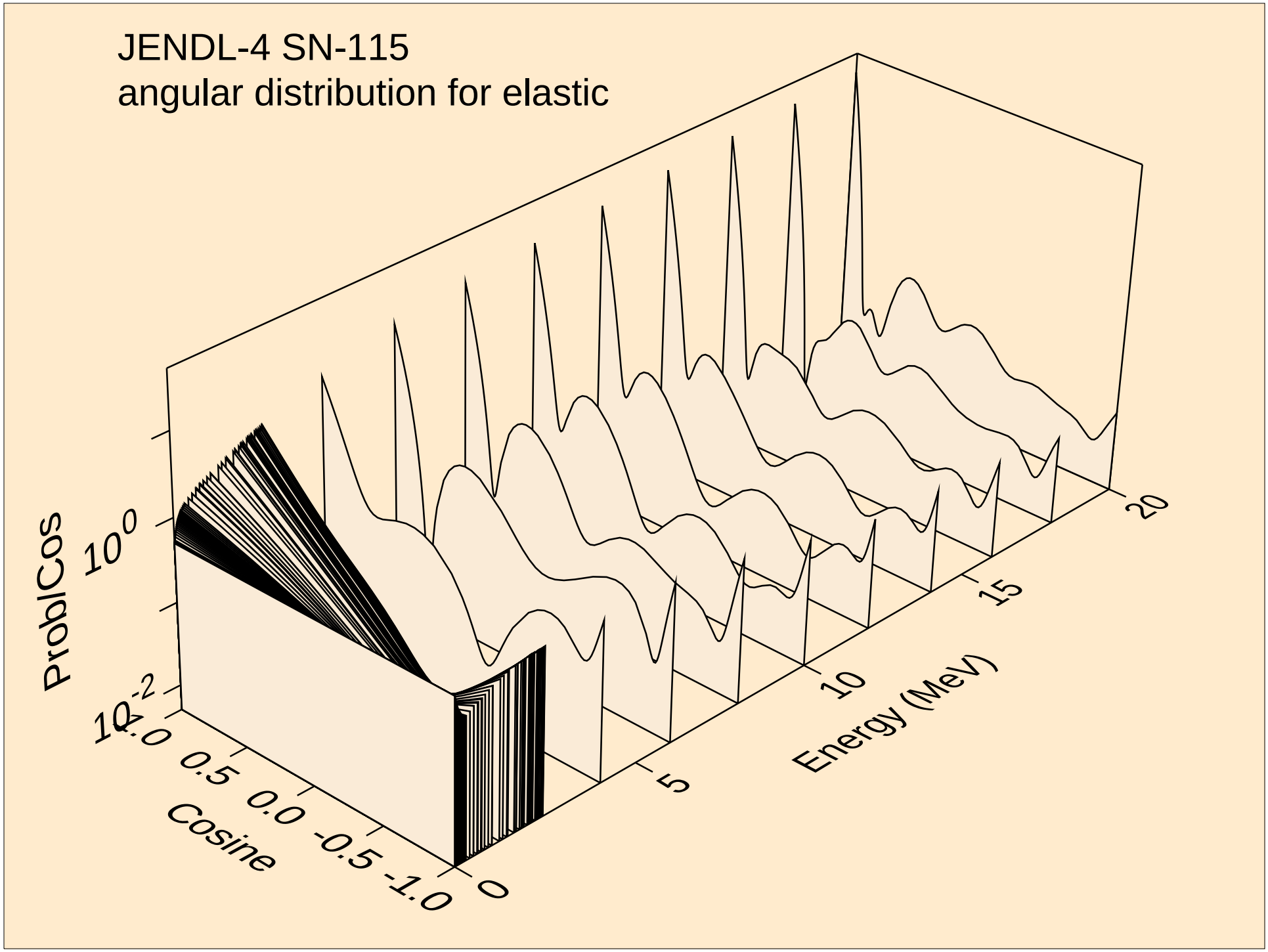

JENDL-4 SN-115
Inelastic levels
*10-3
25
20
15
10
5
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*31)
(n,n*32)
(n,n*33)
(n,n*34)
(n,n*35)

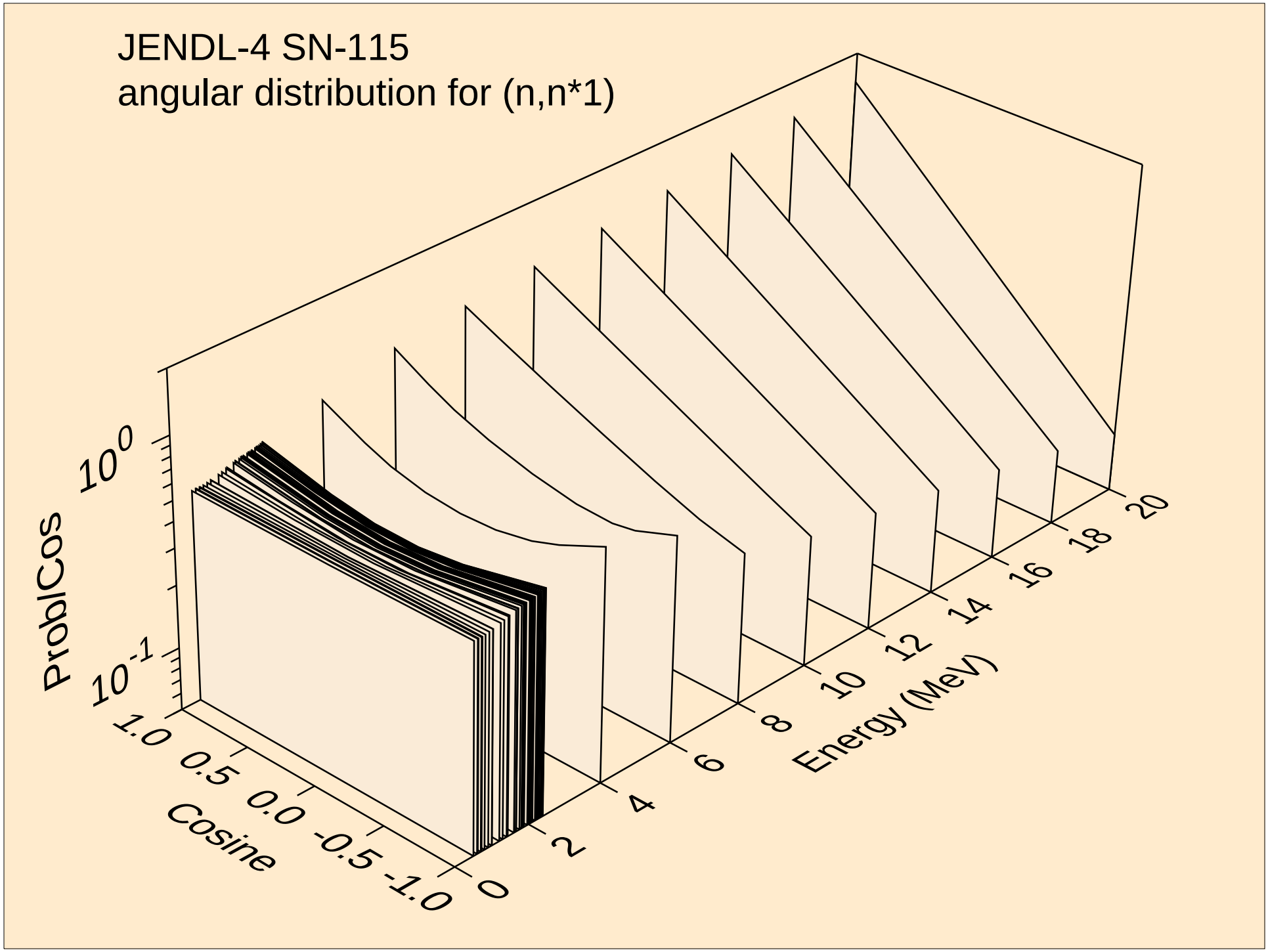

JENDL-4 SN-115
Threshold reactions
(n,2n)
(n,3n)
(n,n*)a
(n,2n)a
(n,n*)p
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
2
4
6
8
10
12
14
16
18
20

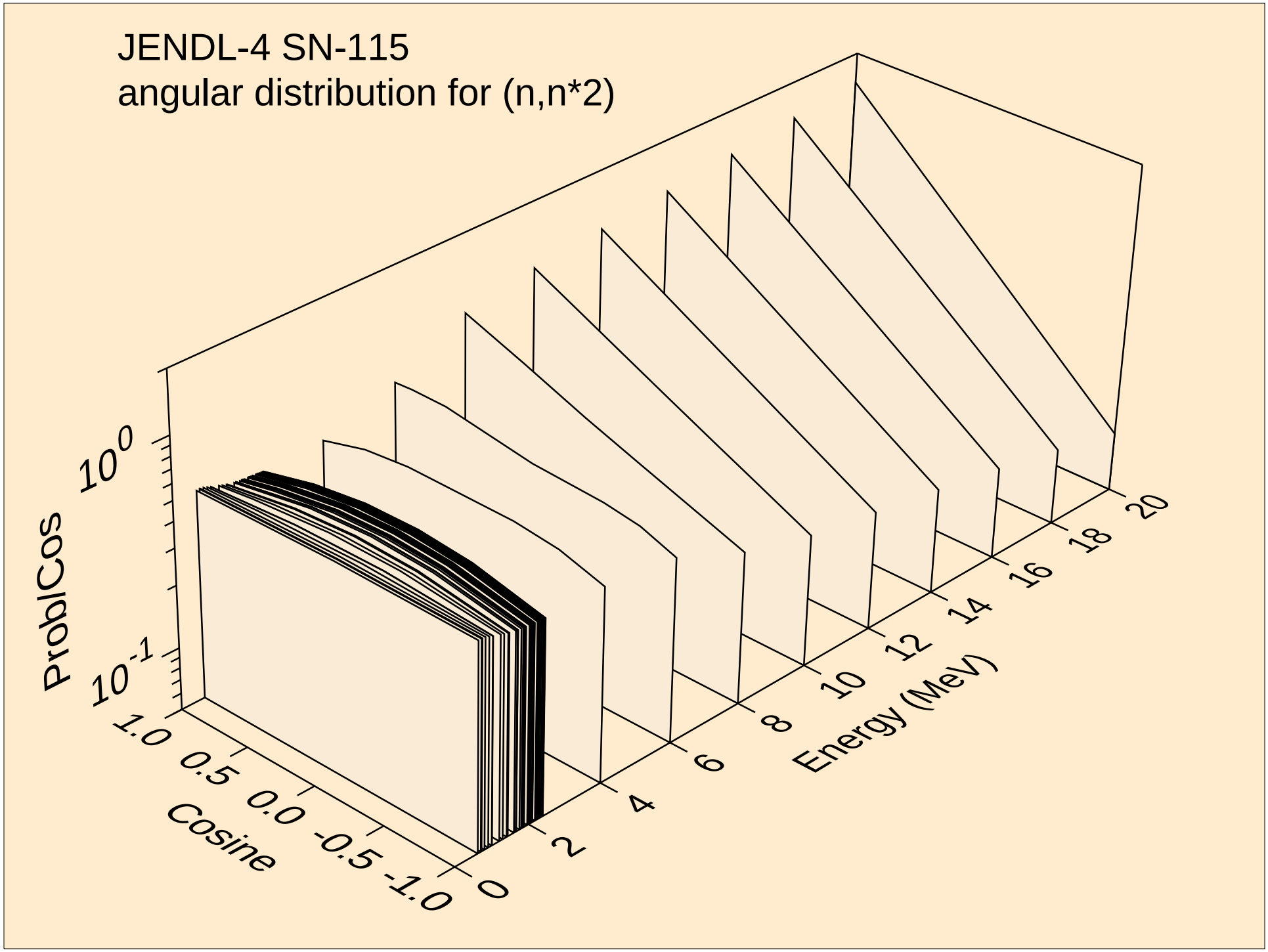

JENDL-4 SN-115
Threshold reactions
(n,n*)d
(n,2np)
(n,n*c)
(n,p)
(n,d)
Cross section (barns)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
0
2
4
6
8
10
12
14
16
18
20

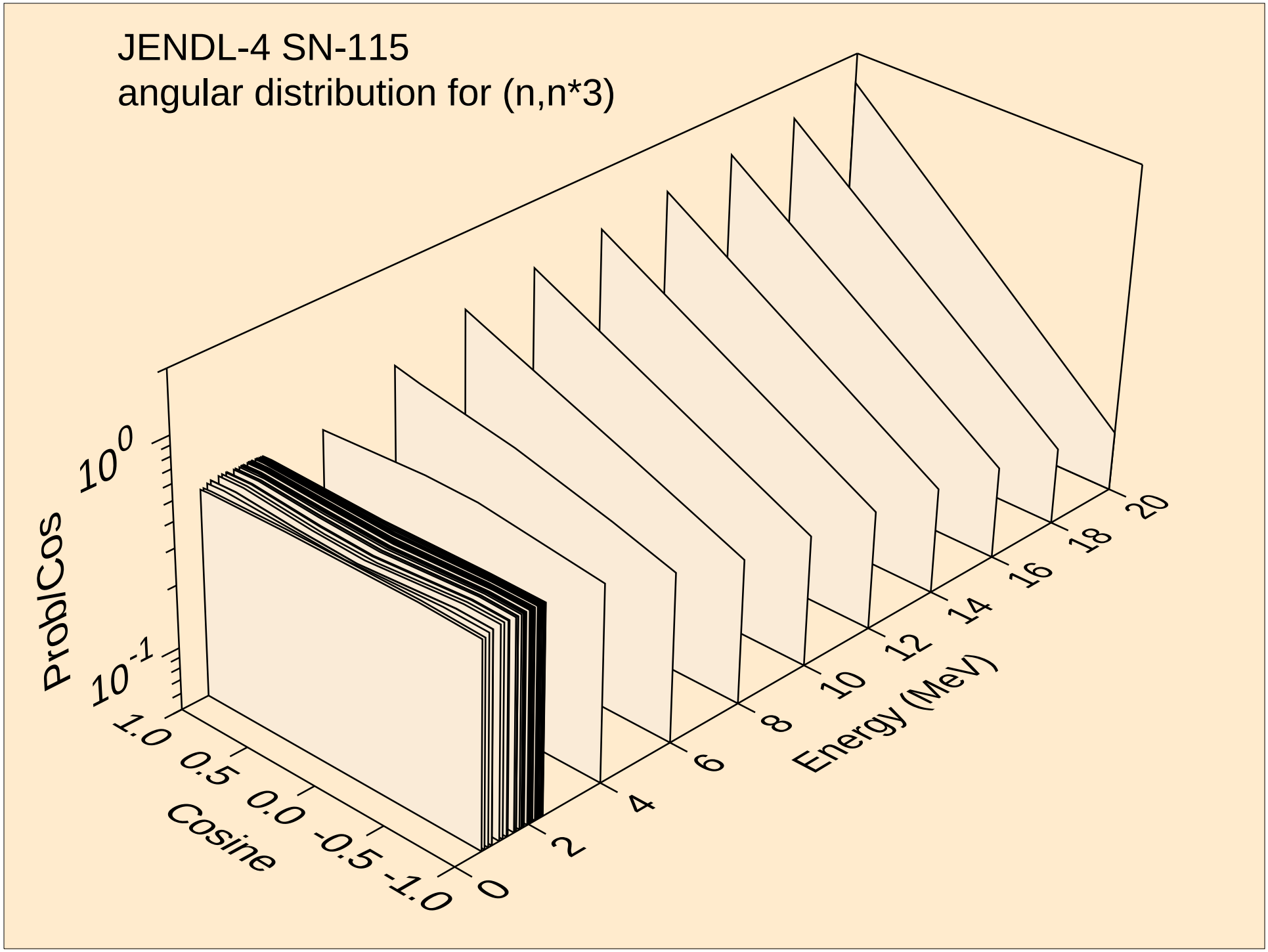

JENDL-4 SN-115
Threshold reactions
(n,t)
(n,he3)
(n,2p)
Cross section (barns)
*10-6
700
600
500
400
300
200
100
0
6
8
10
12
14
16
18
20
Energy (MeV)

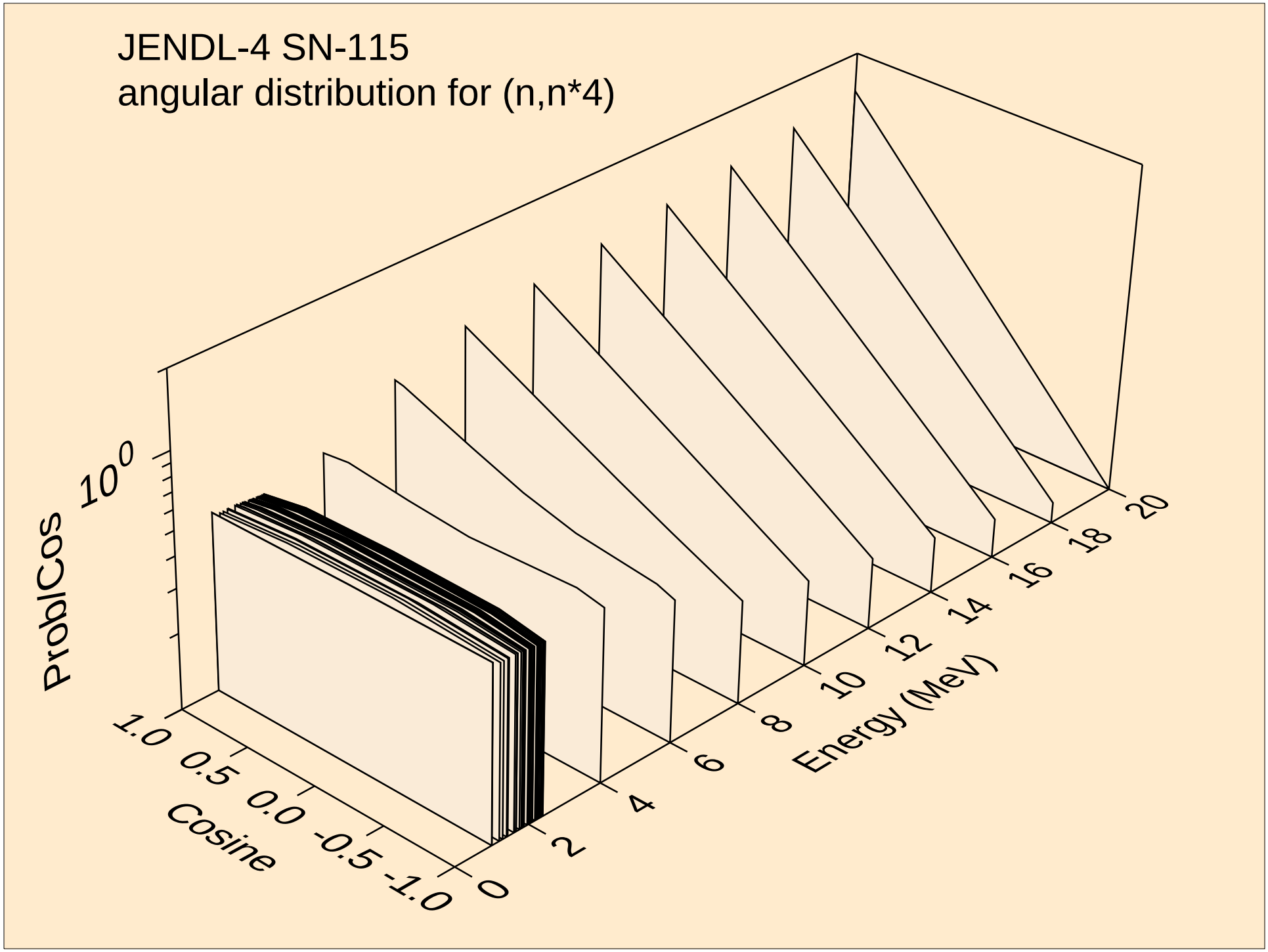

JENDL-4 SN-115
Threshold reactions
*10-3
120
100
80
60
40
20
0
Cross section (barns)
(n,xp)
(n,xd)
(n,xt)
(n,xhe3)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

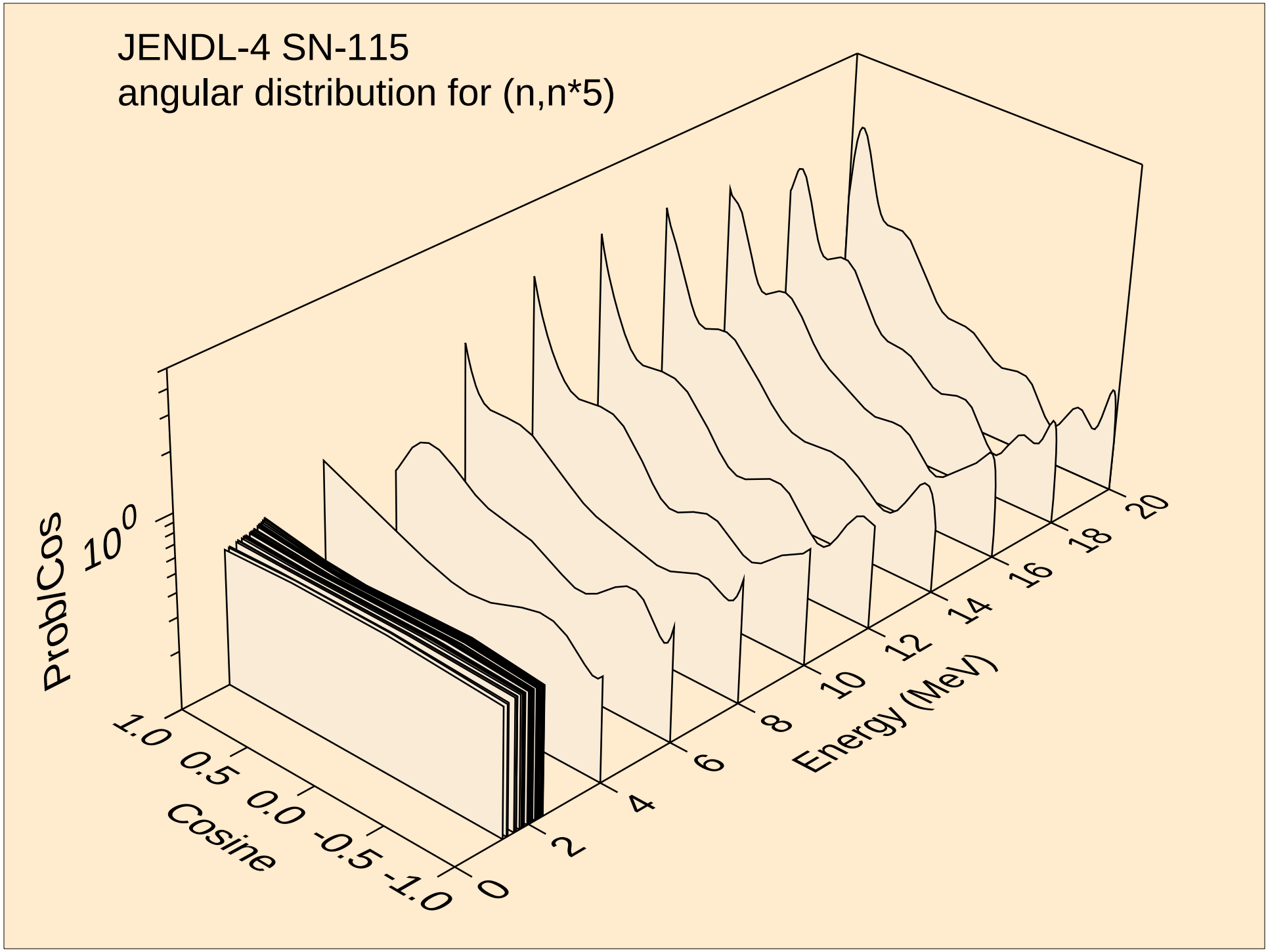

JENDL-4 SN-115
angular distribution for elastic
ProblCos
10^0
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

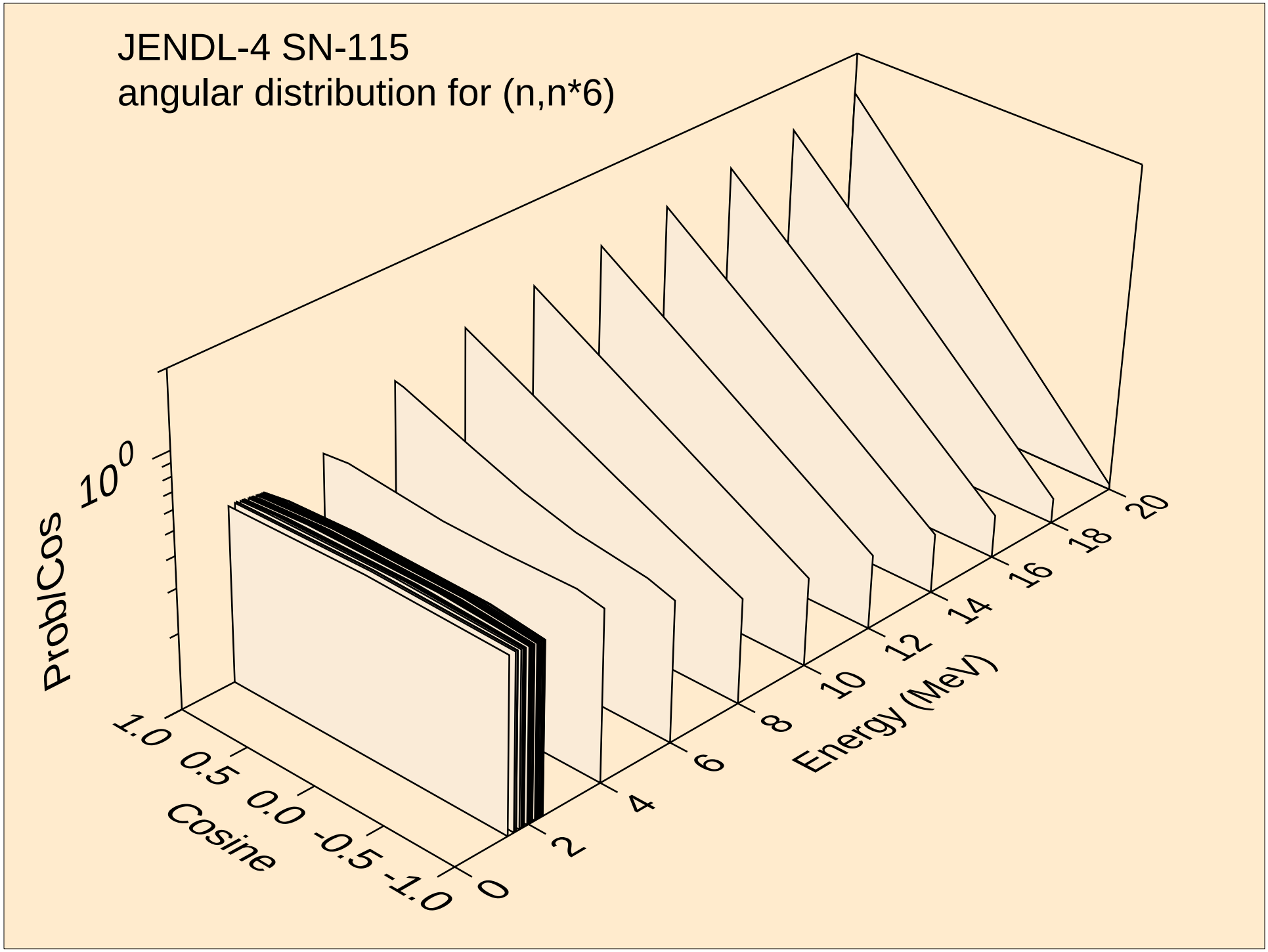

JENDL-4 SN-115
angular distribution for (n,n*1)
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

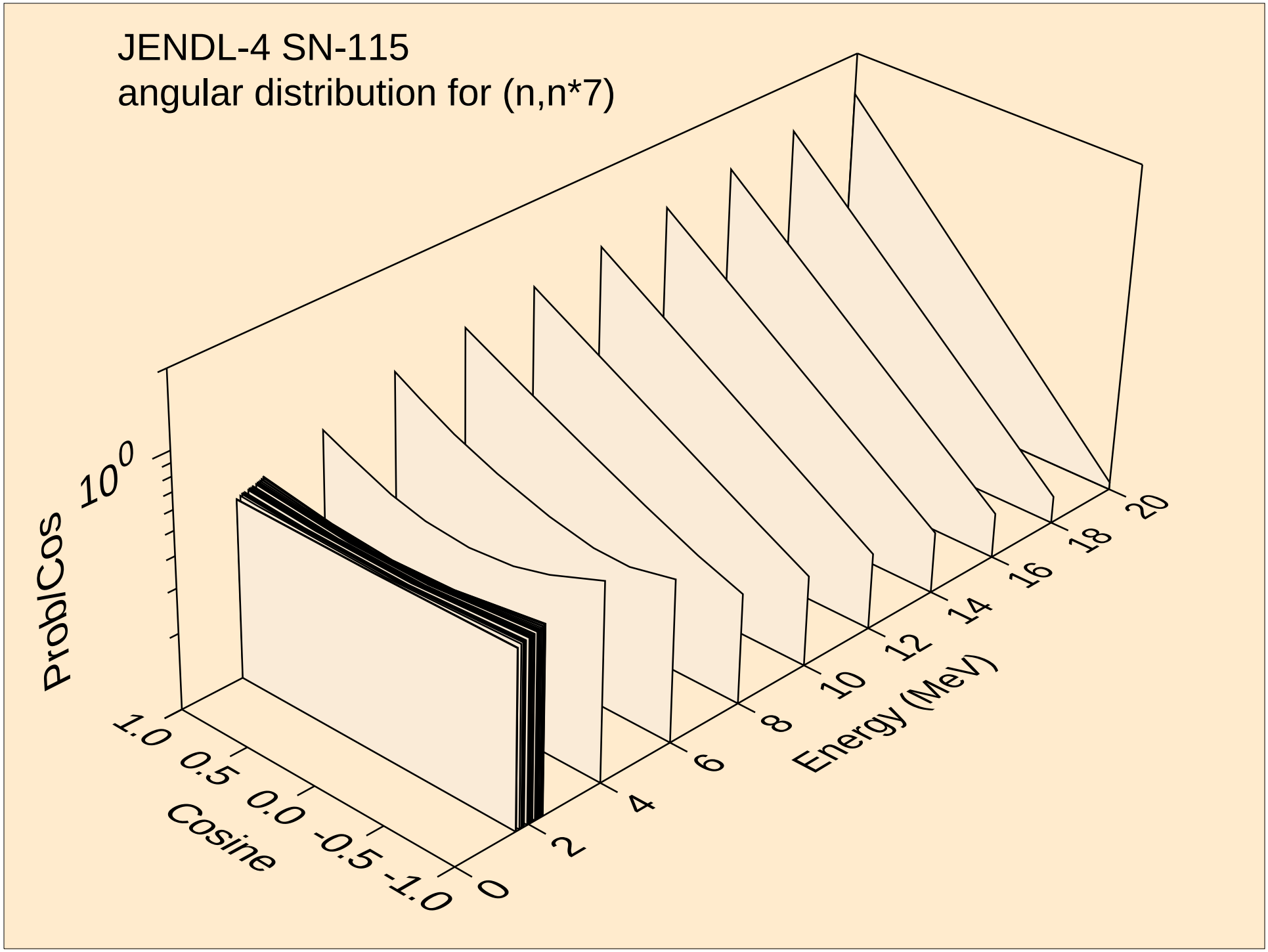

JENDL-4 SN-115
angular distribution for (n,n*2)
ProbCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

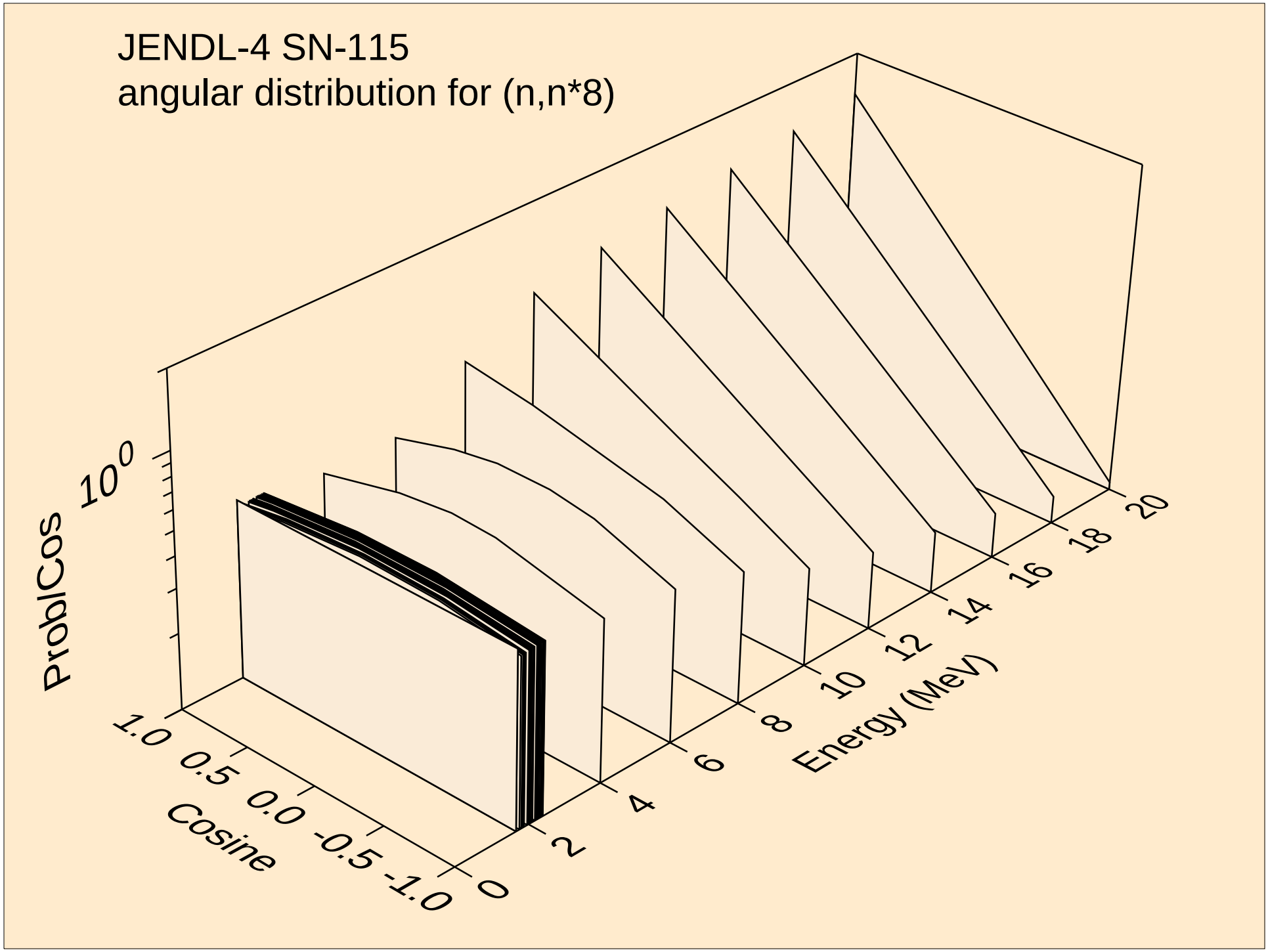

JENDL-4 SN-115
angular distribution for (n,n*3)
ProbCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

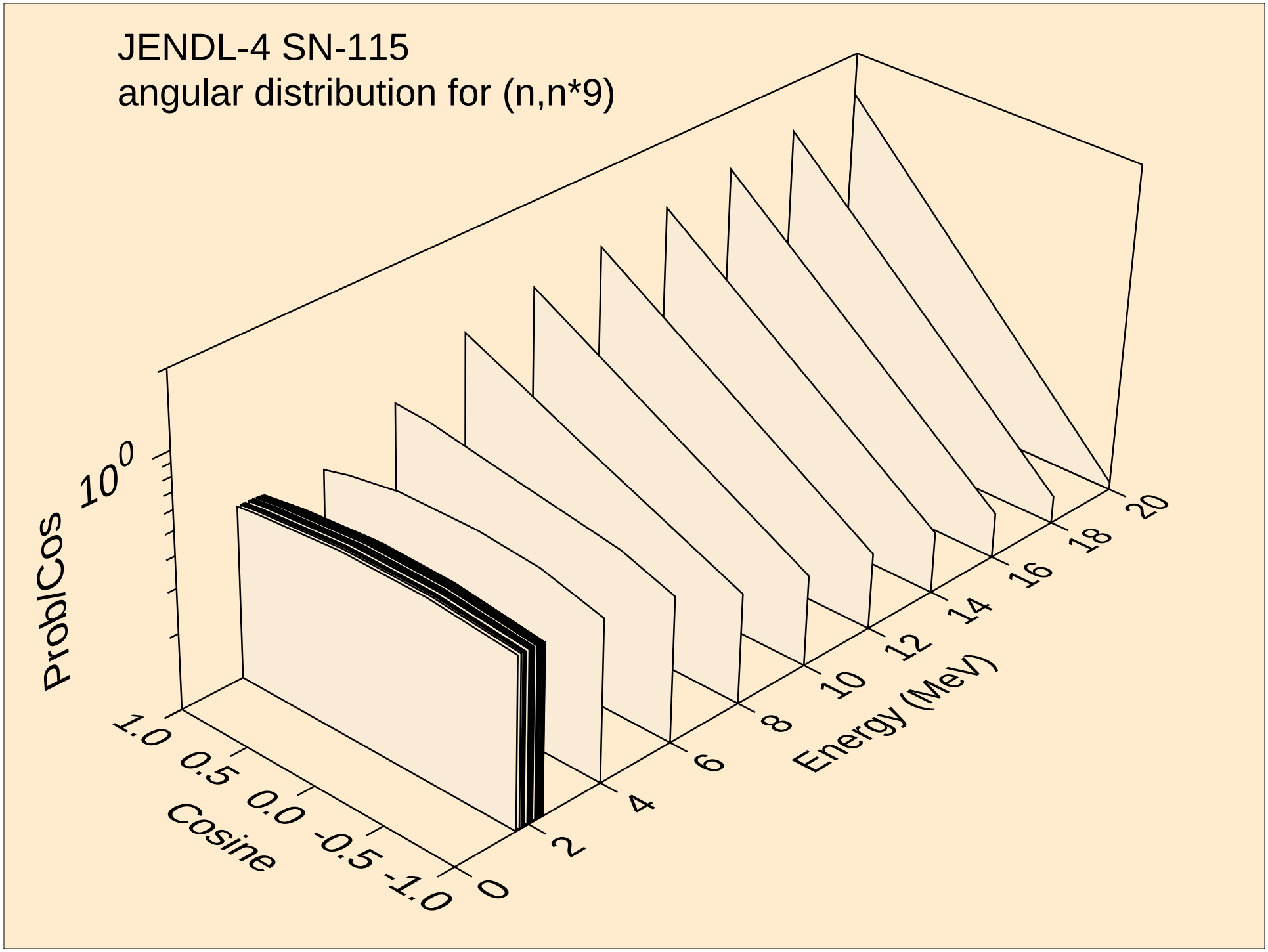

JENDL-4 SN-115
angular distribution for (n,n*4)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20


JENDL-4 SN-115
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)


JENDL-4 SN-115
angular distribution for (n,n*6)
ProbCos
10^0
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 SN-115
angular distribution for (n,n*7)
ProbCos
10^0
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 SN-115
angular distribution for (n,n*8)
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)


JENDL-4 SN-115
angular distribution for (n,n*9)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
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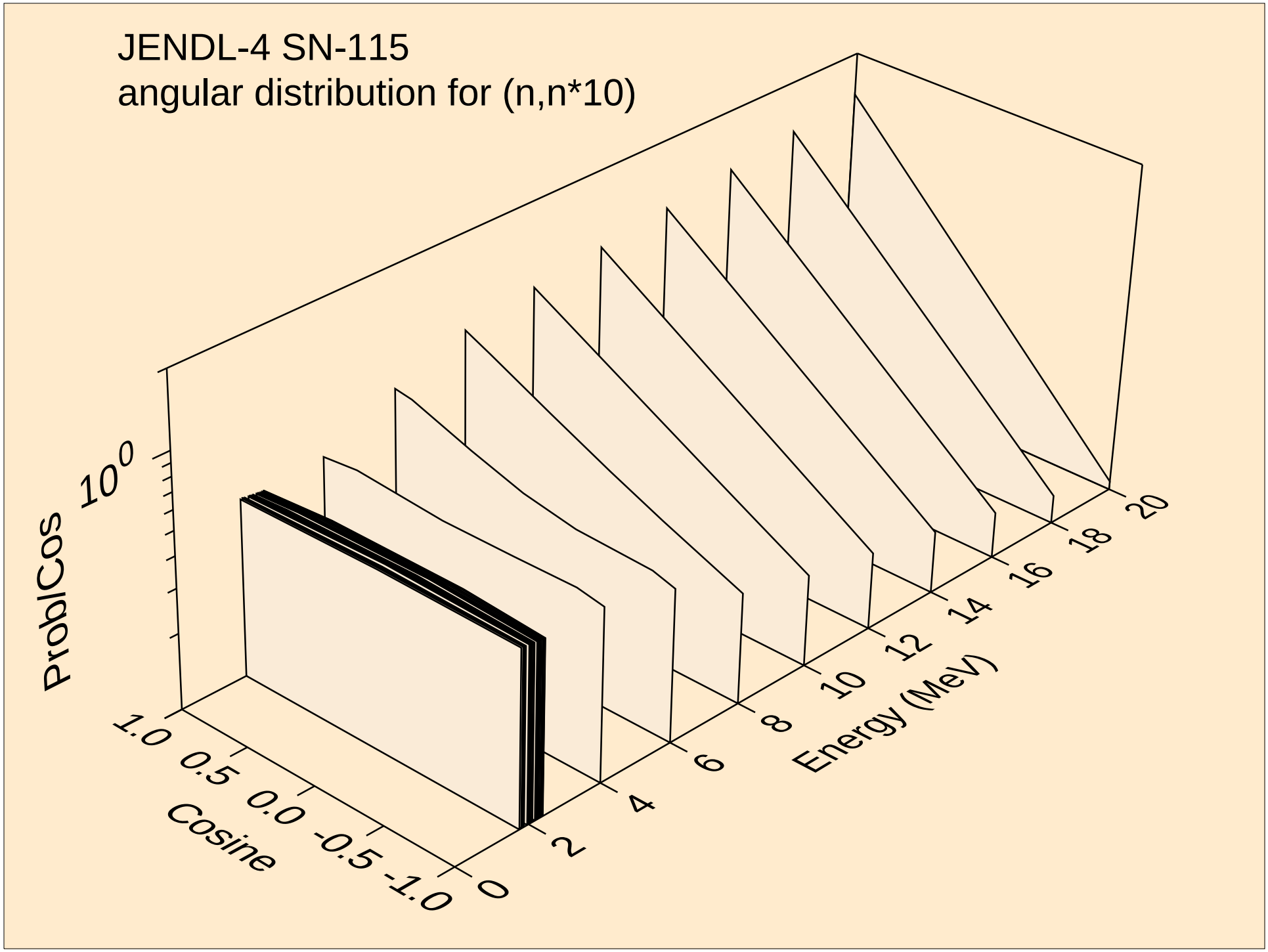
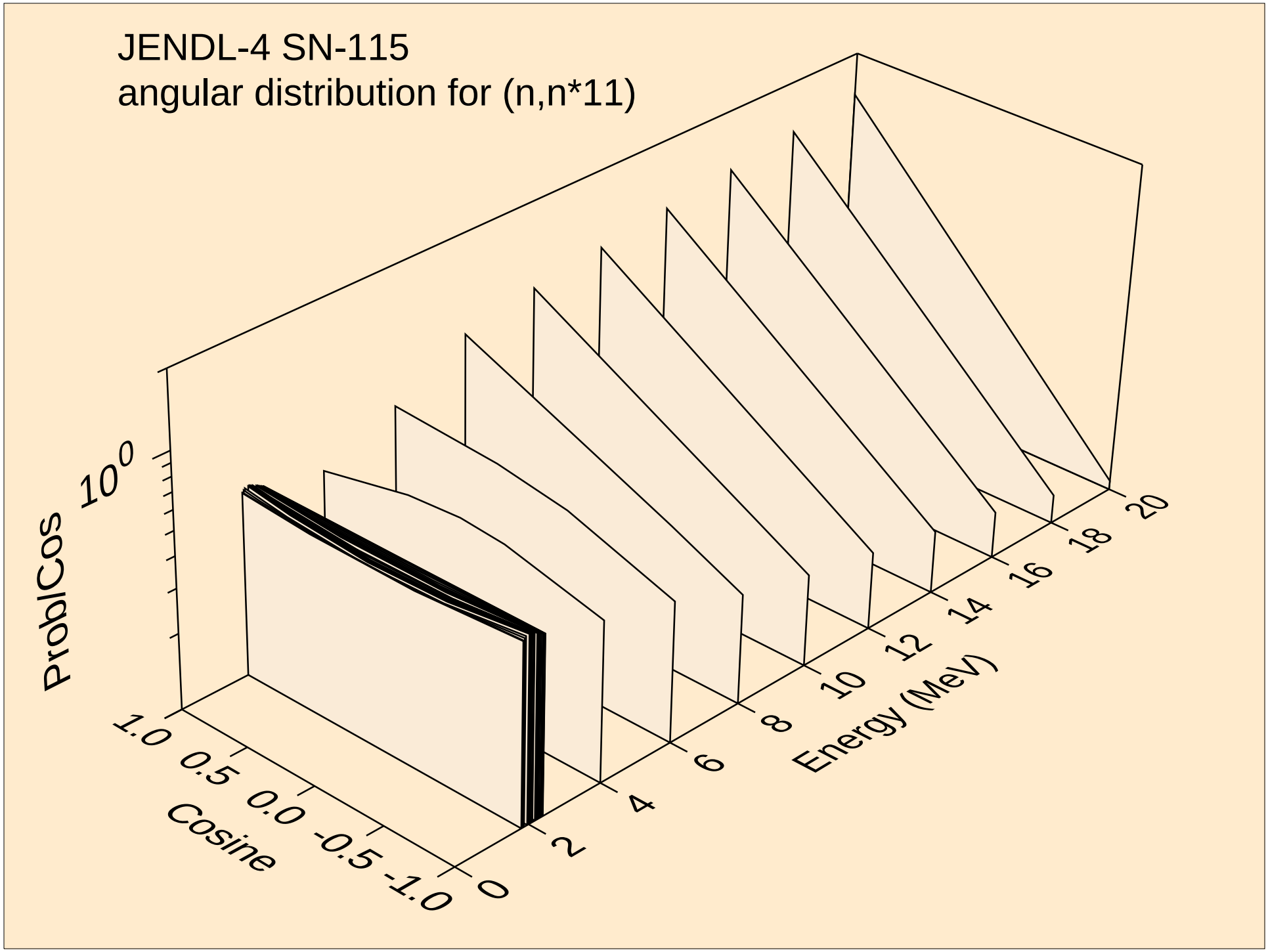
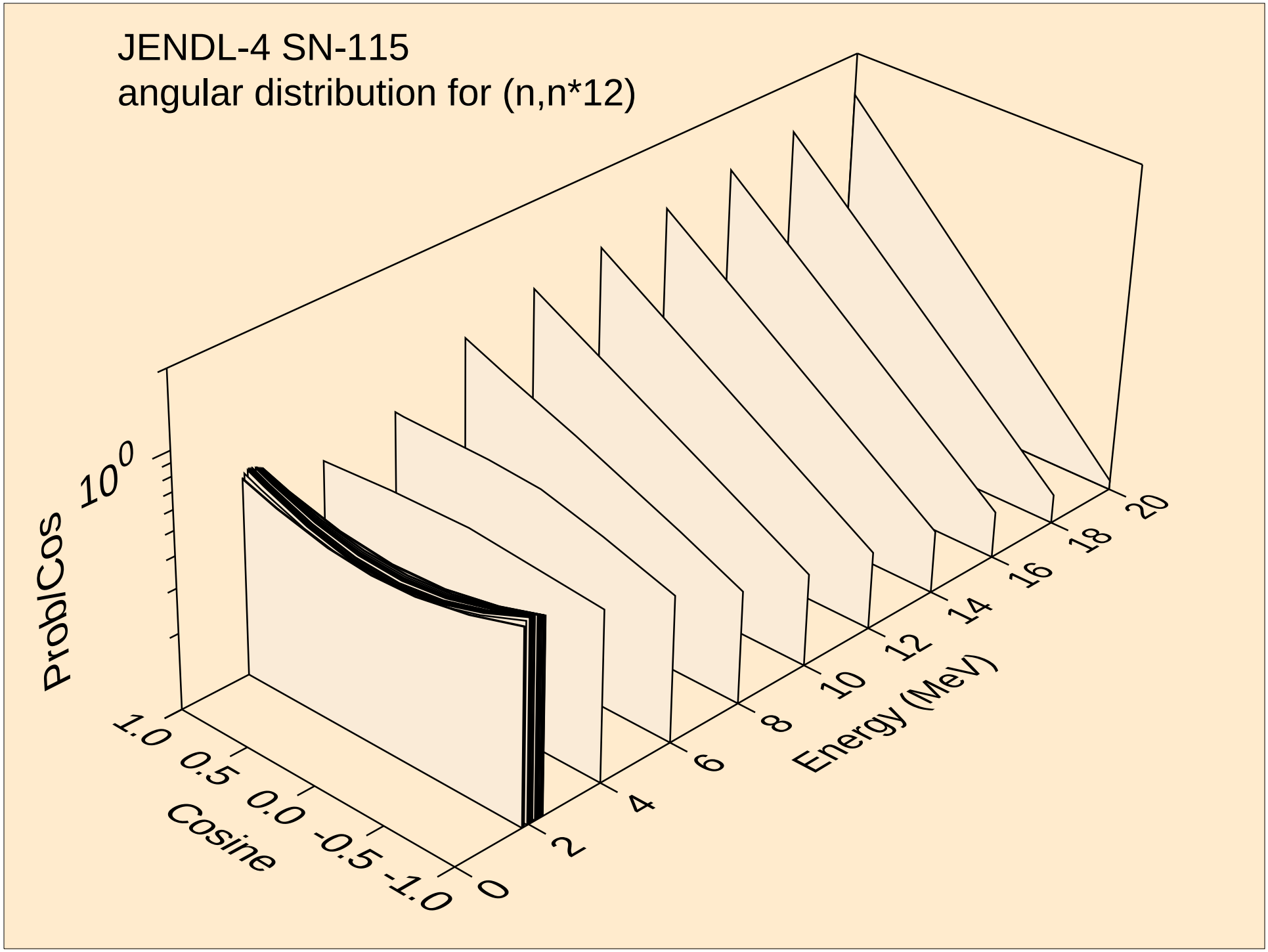
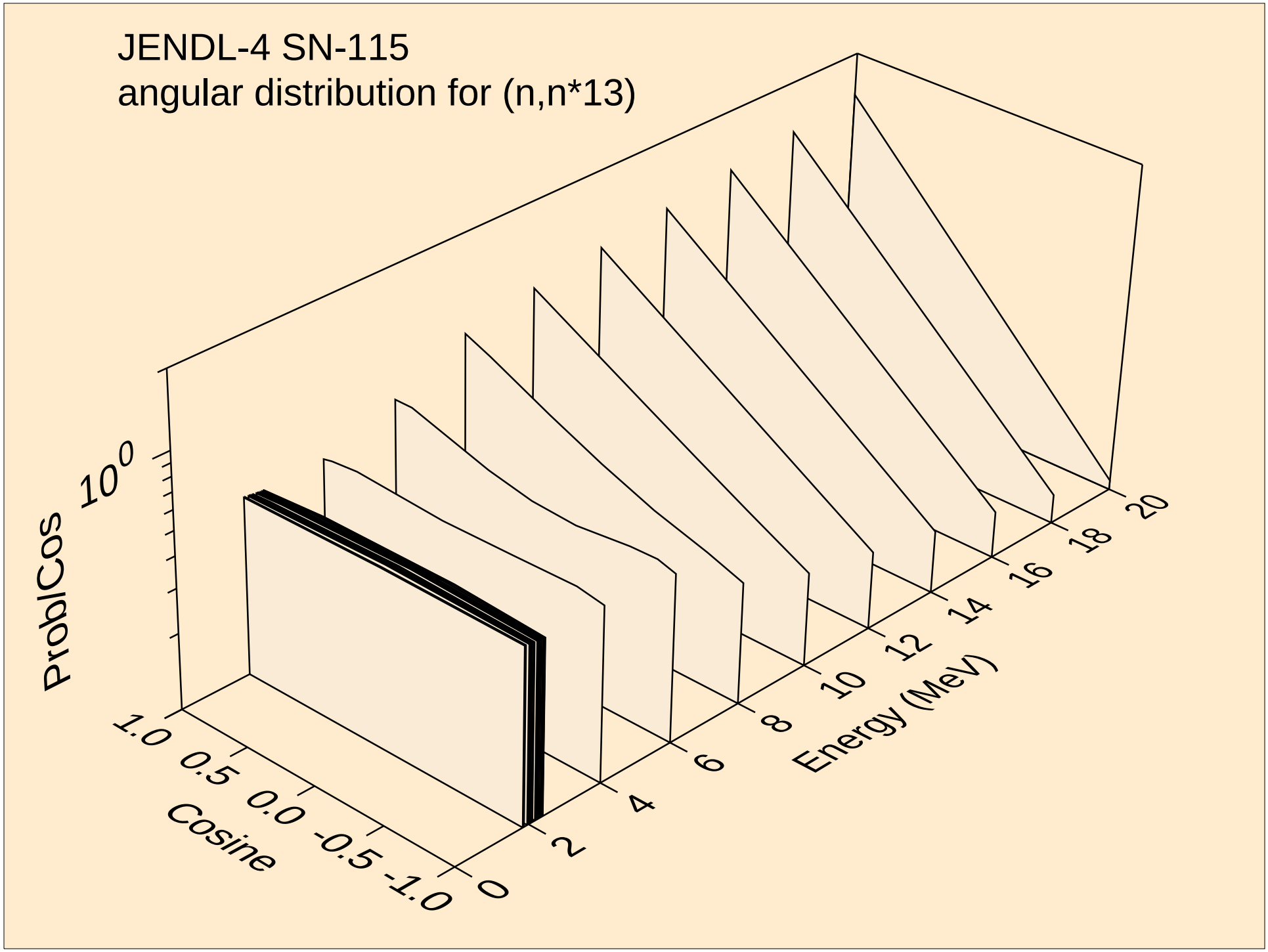
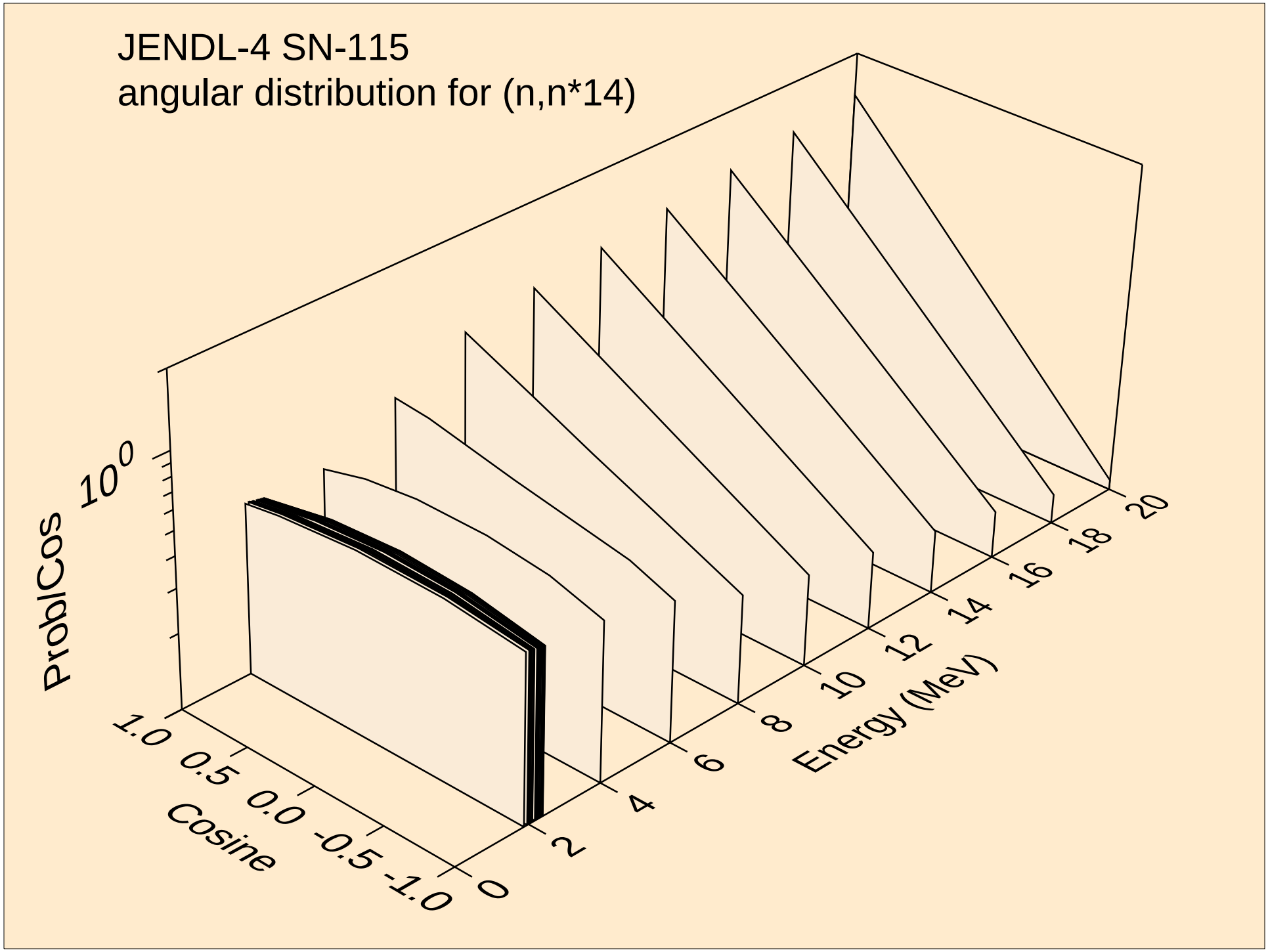
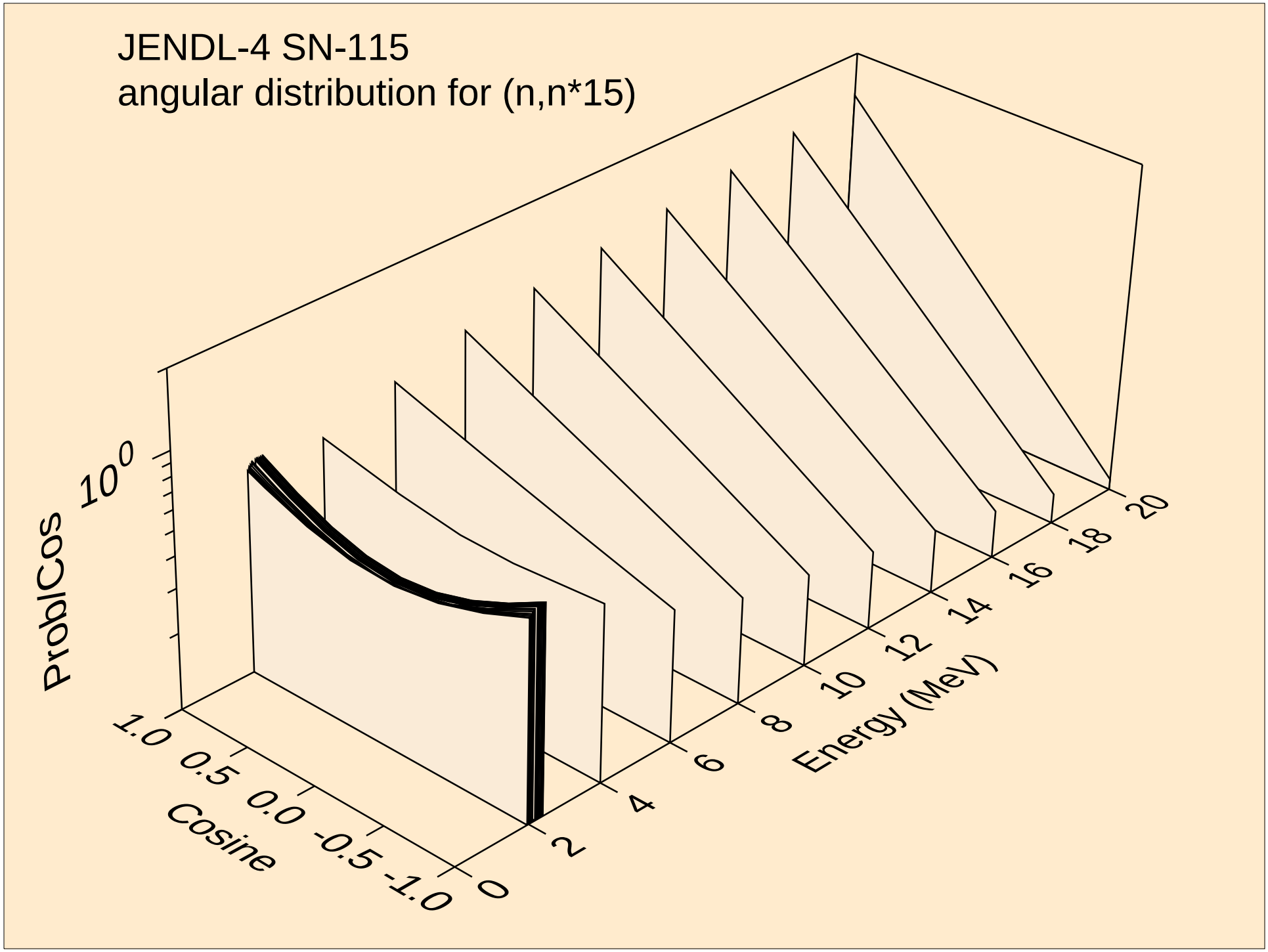

JENDL-4 SN-115
angular distribution for (n,n*10)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

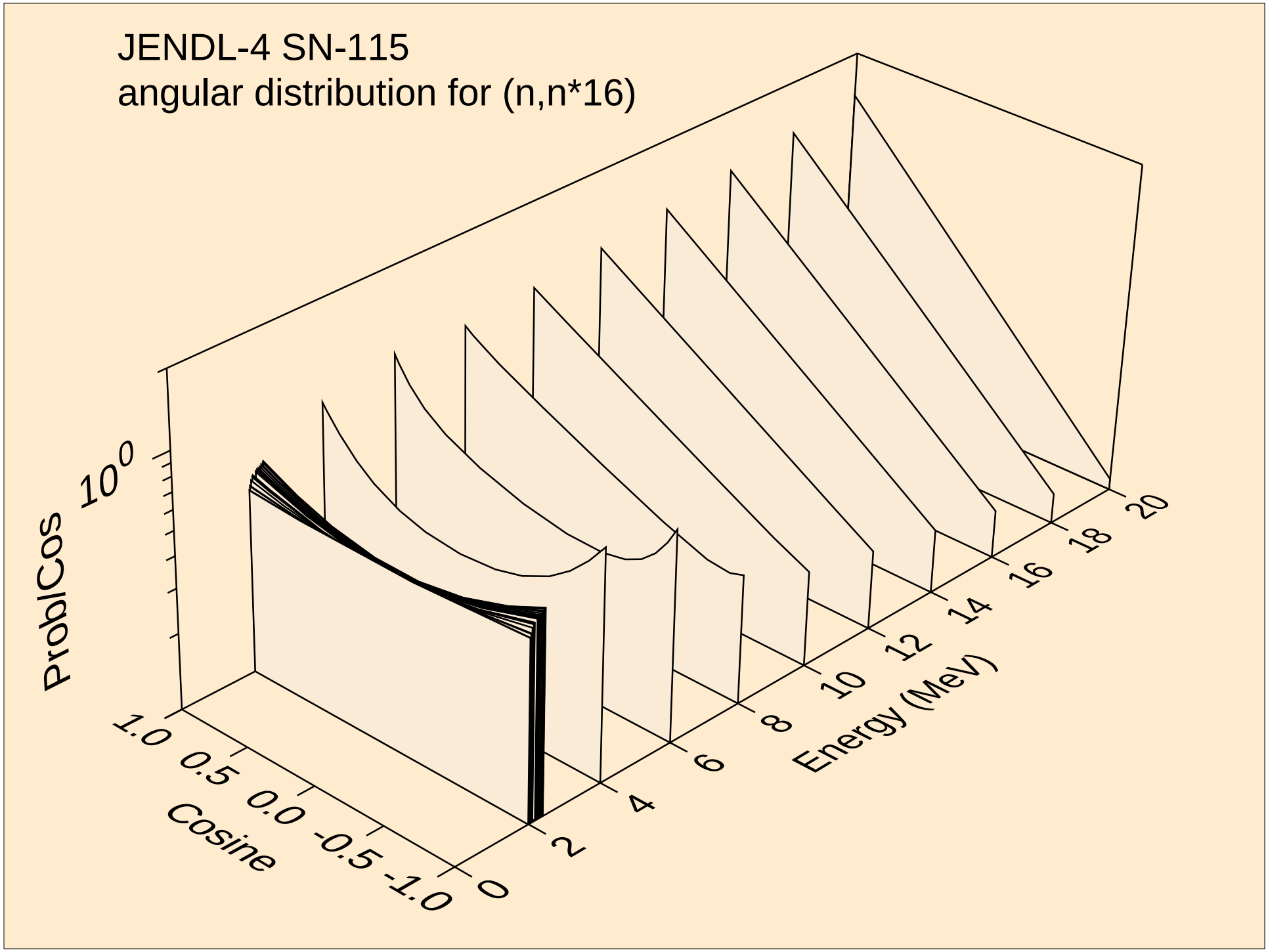

JENDL-4 SN-115
angular distribution for (n,n*11)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

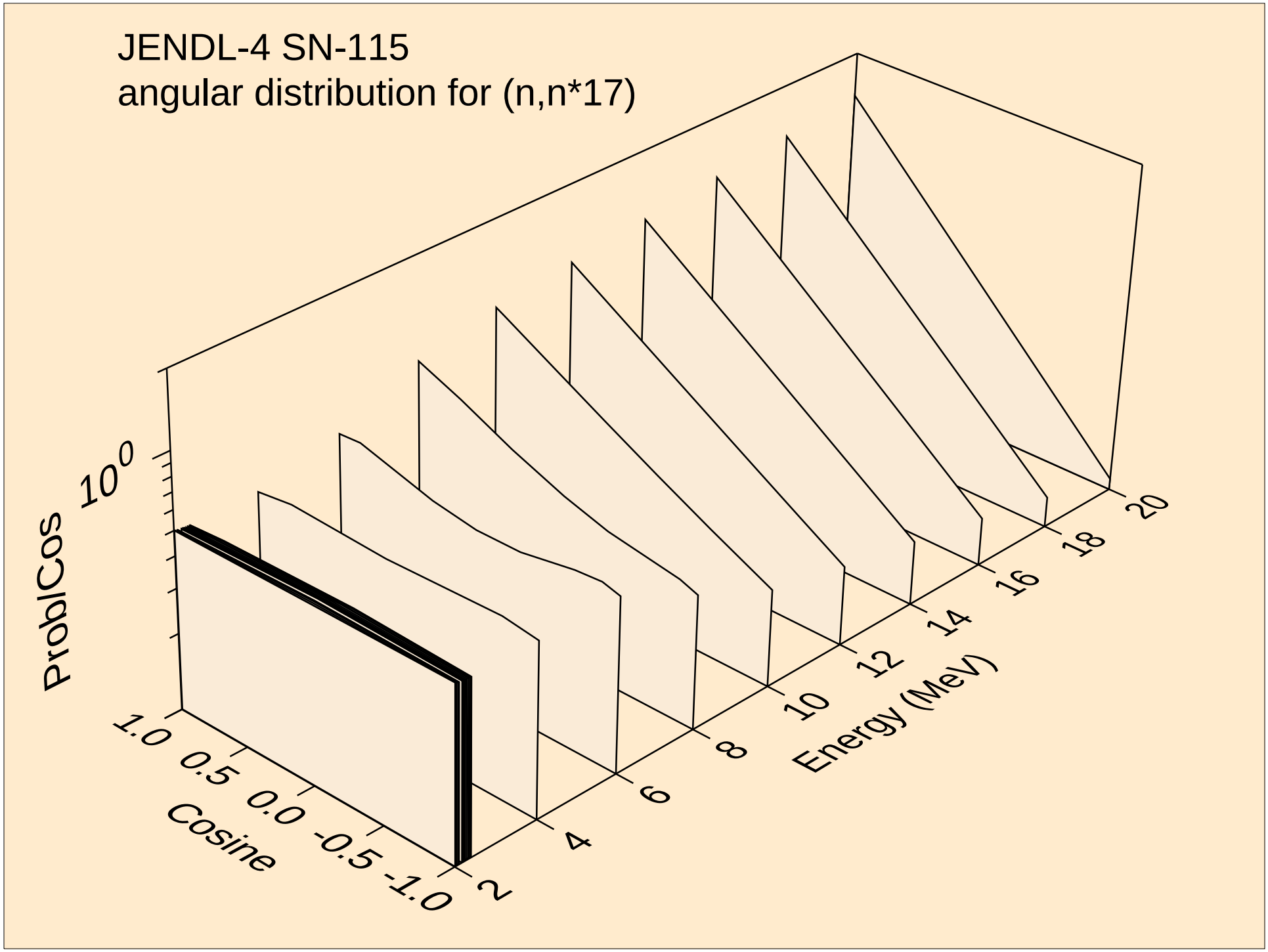

JENDL-4 SN-115
angular distribution for (n,n*12)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

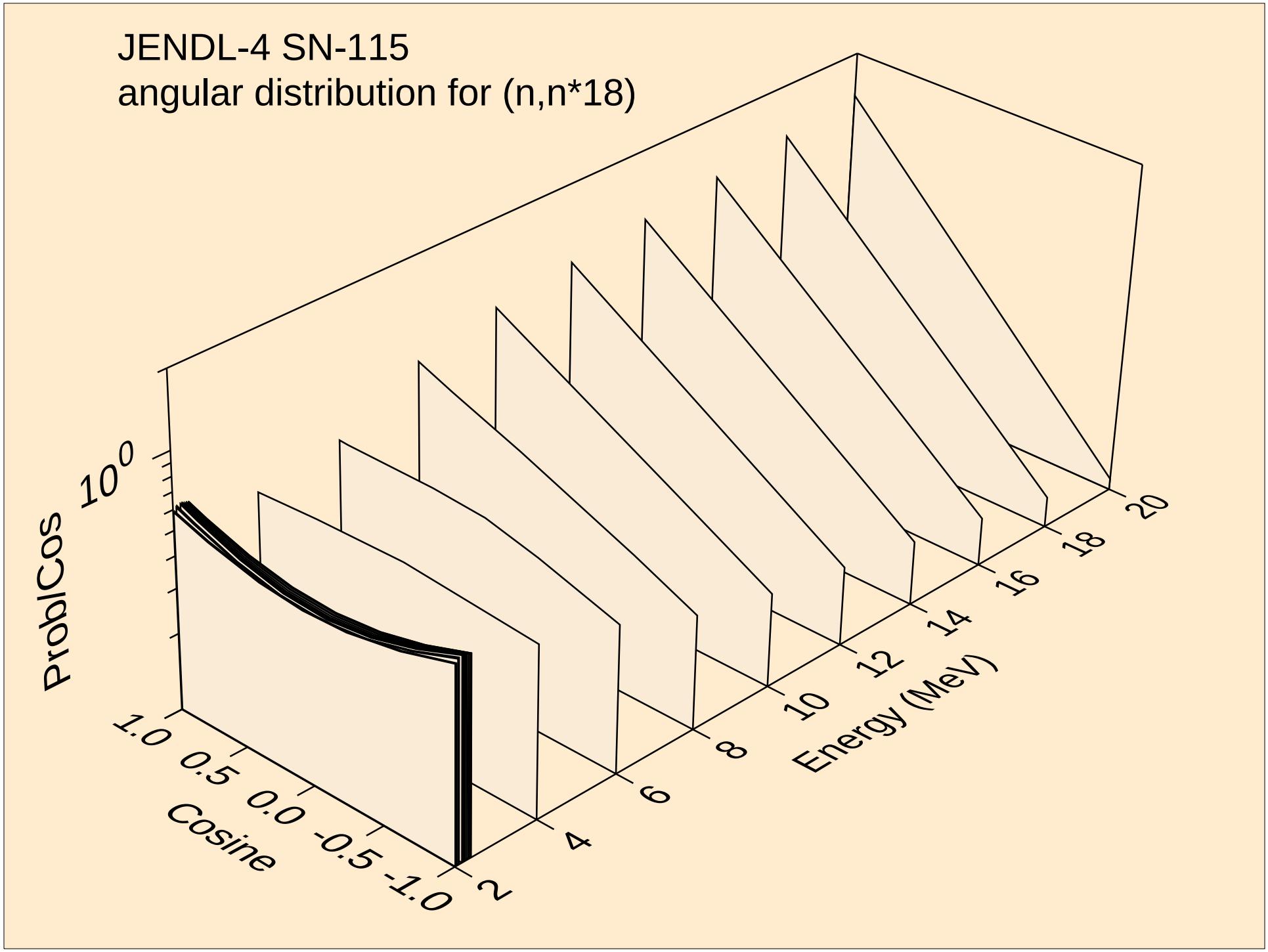

JENDL-4 SN-115
angular distribution for (n,n*13)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

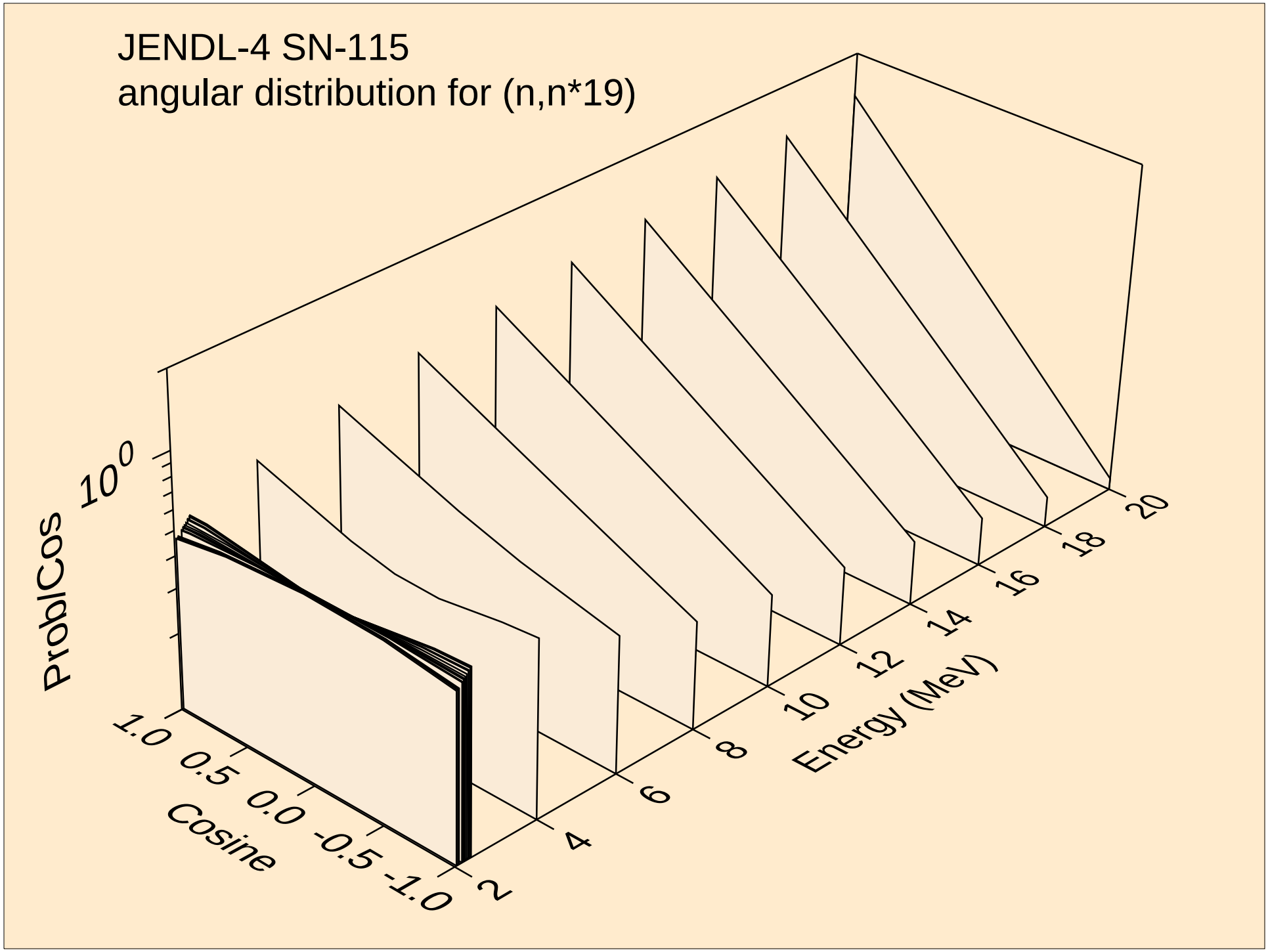

JENDL-4 SN-115
angular distribution for (n,n*14)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

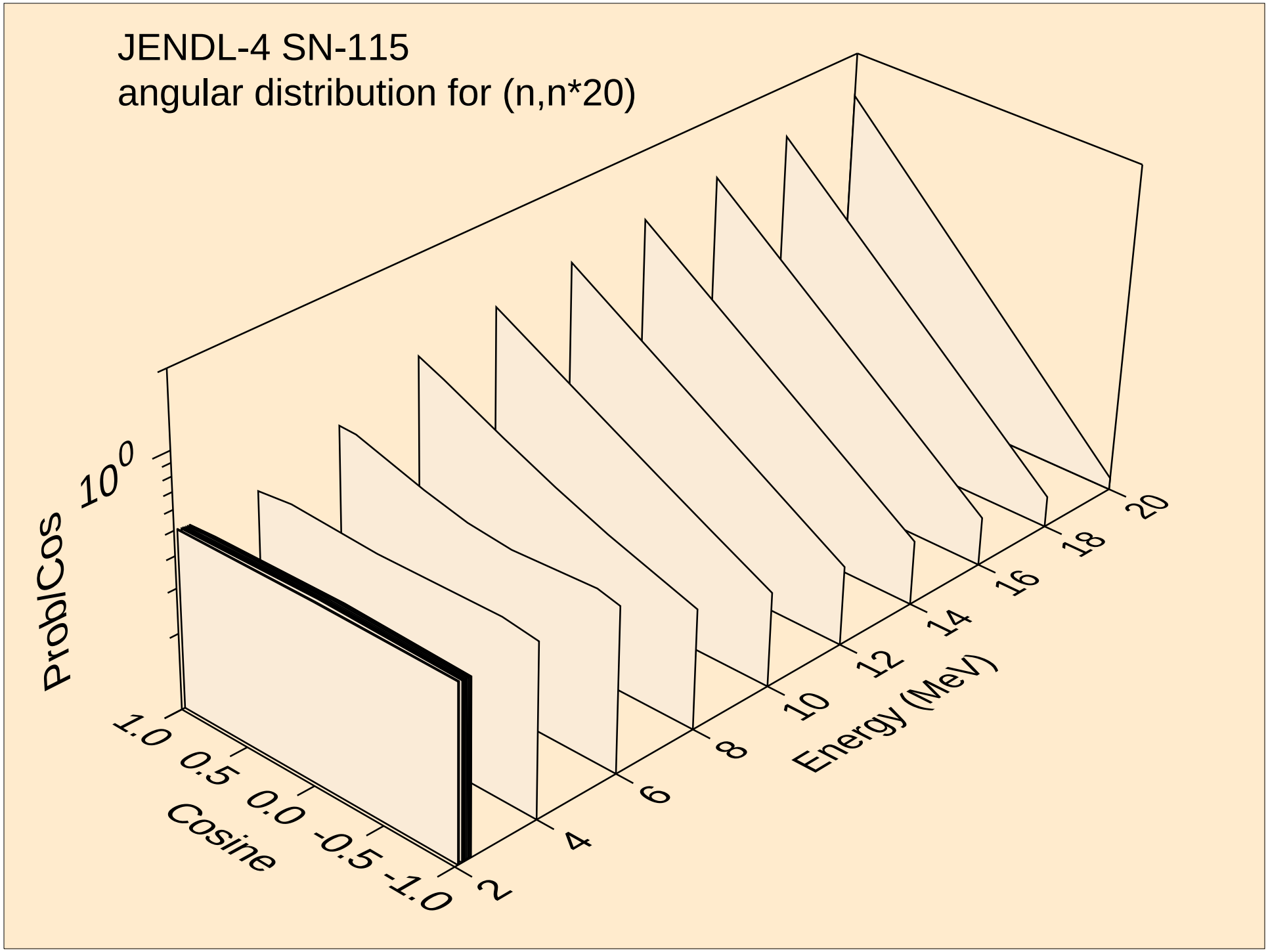

JENDL-4 SN-115
angular distribution for (n,n*15)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

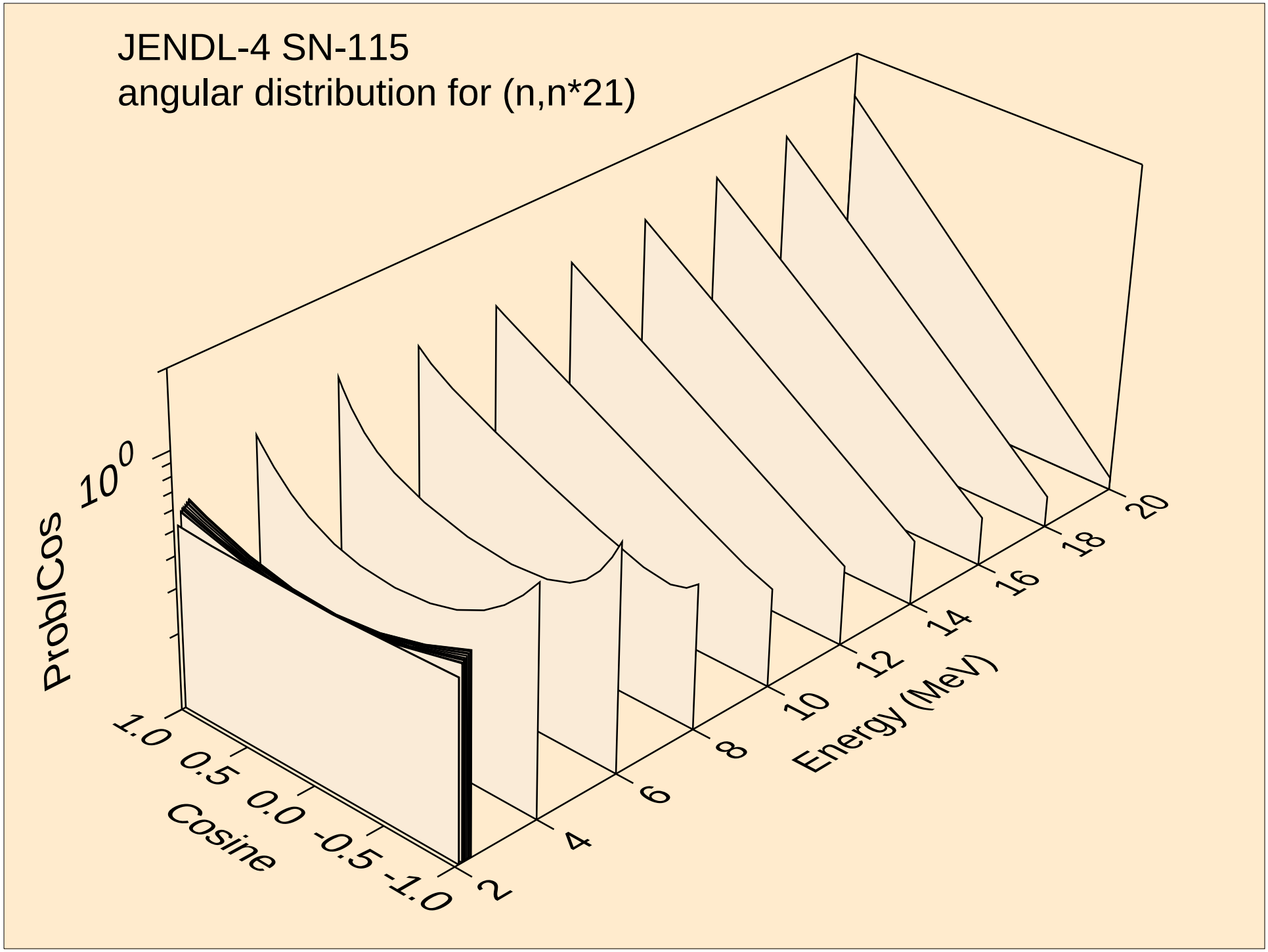

JENDL-4 SN-115
angular distribution for (n,n*16)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20

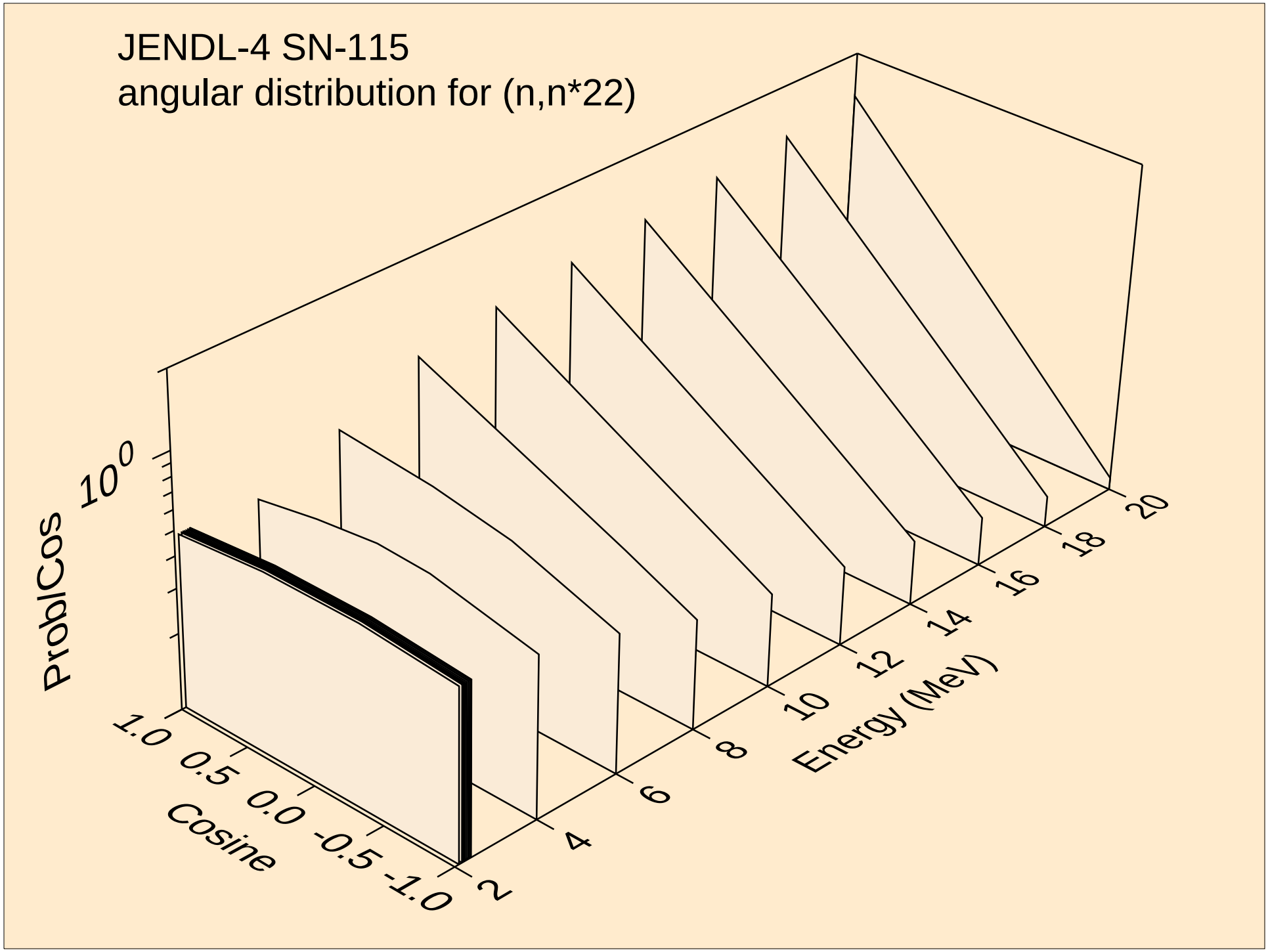

JENDL-4 SN-115
angular distribution for (n,n*17)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

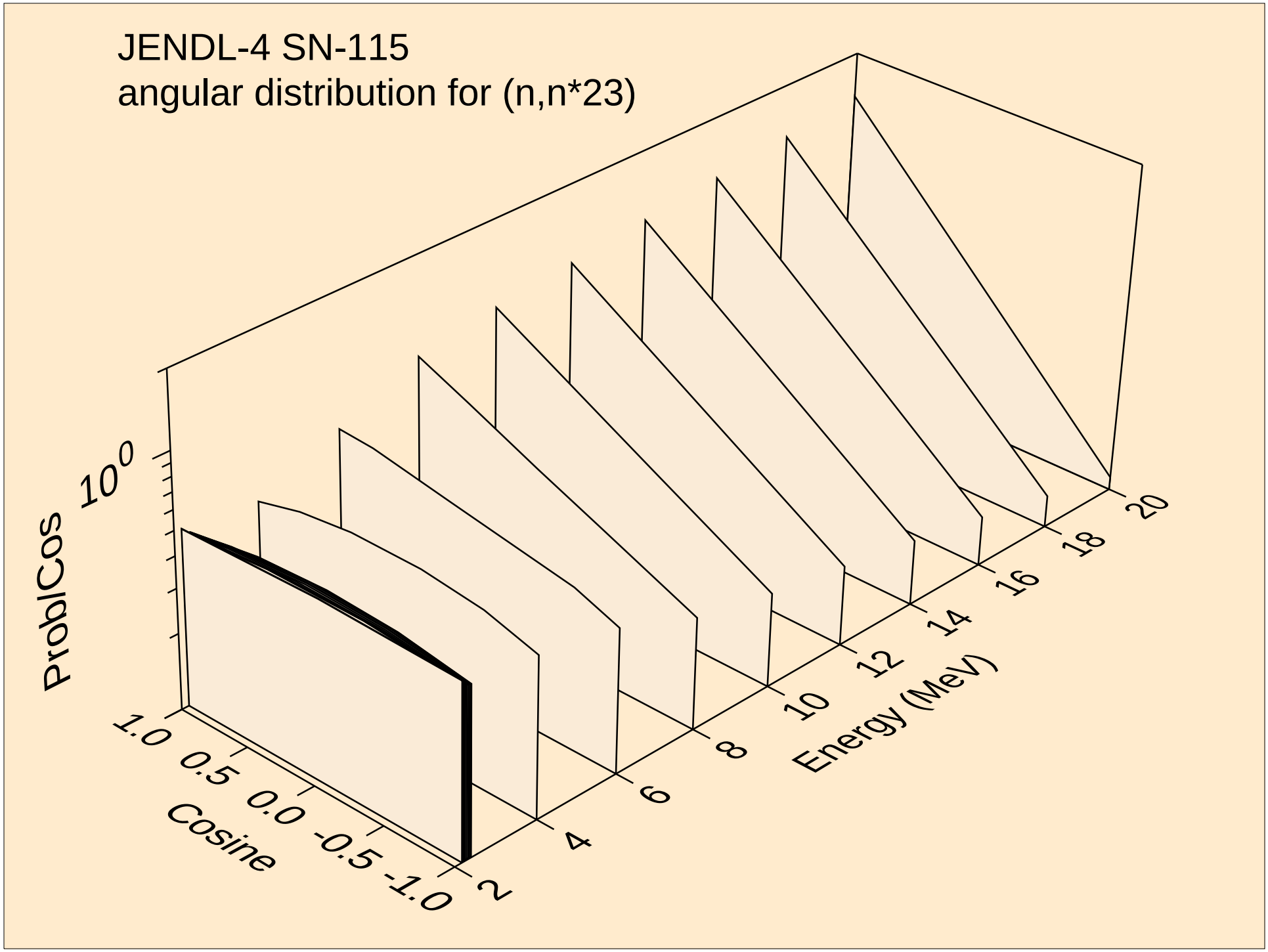

JENDL-4 SN-115
angular distribution for (n,n*18)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

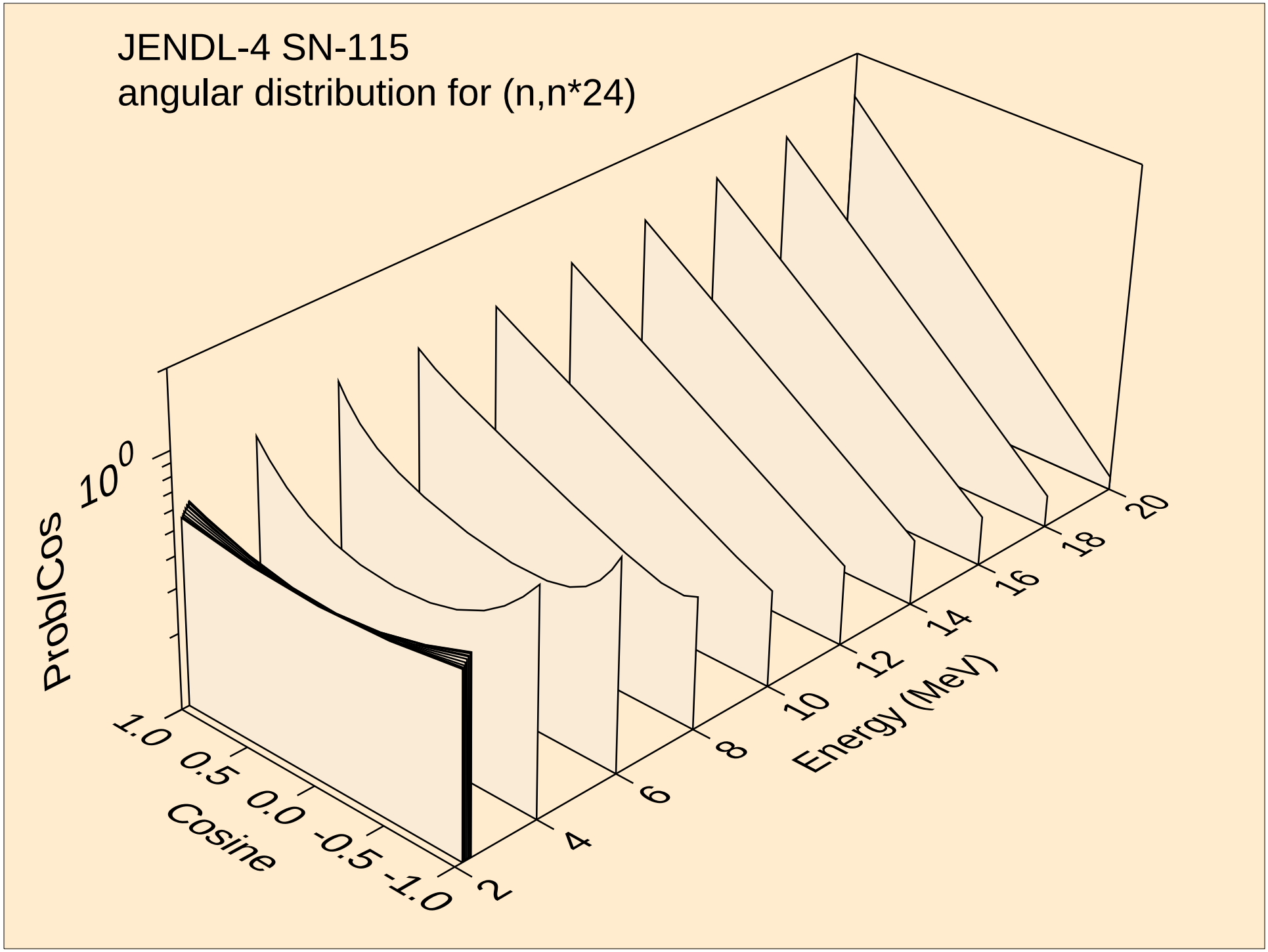

JENDL-4 SN-115
angular distribution for (n,n*19)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

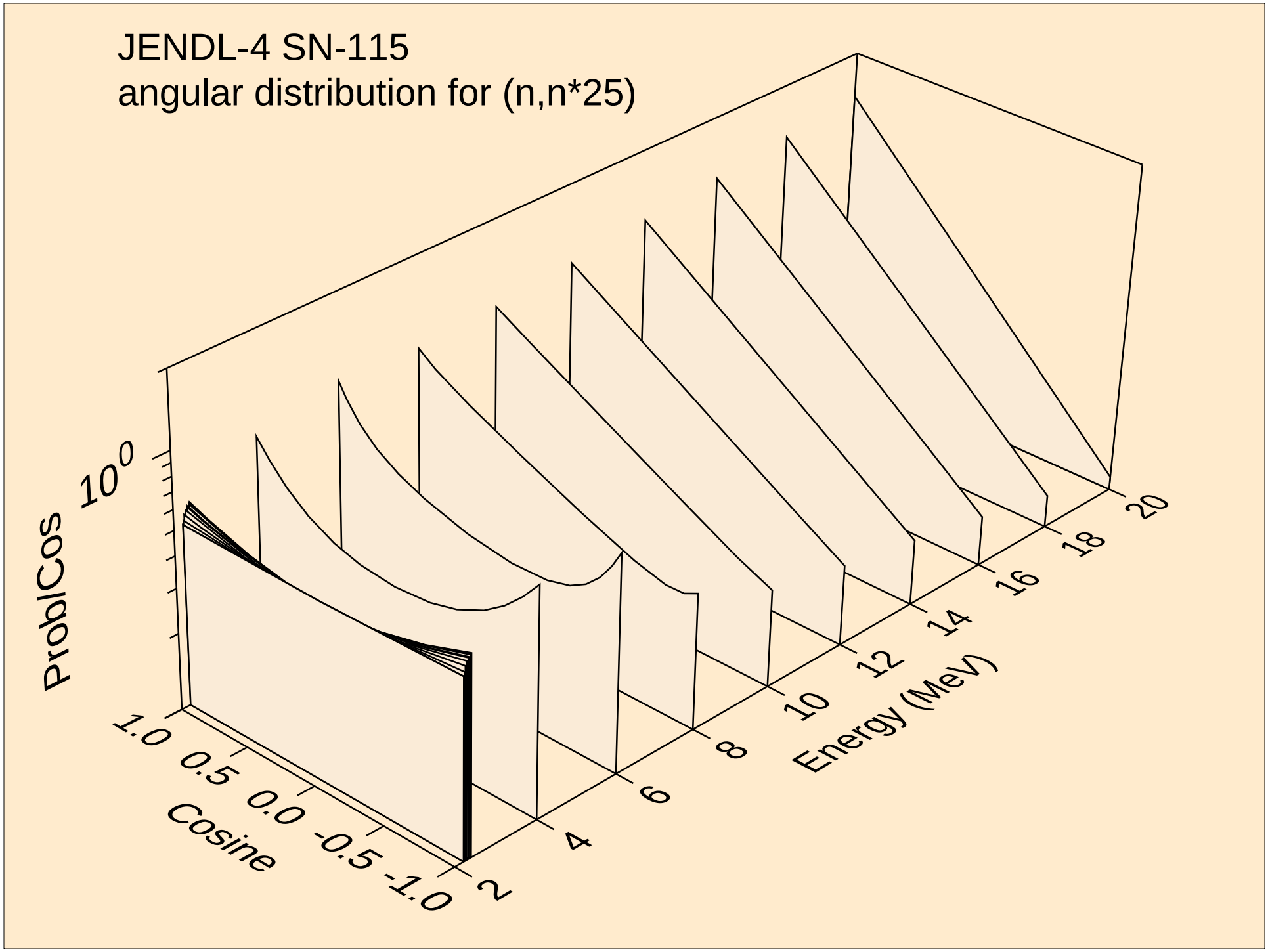

JENDL-4 SN-115
angular distribution for (n,n*20)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

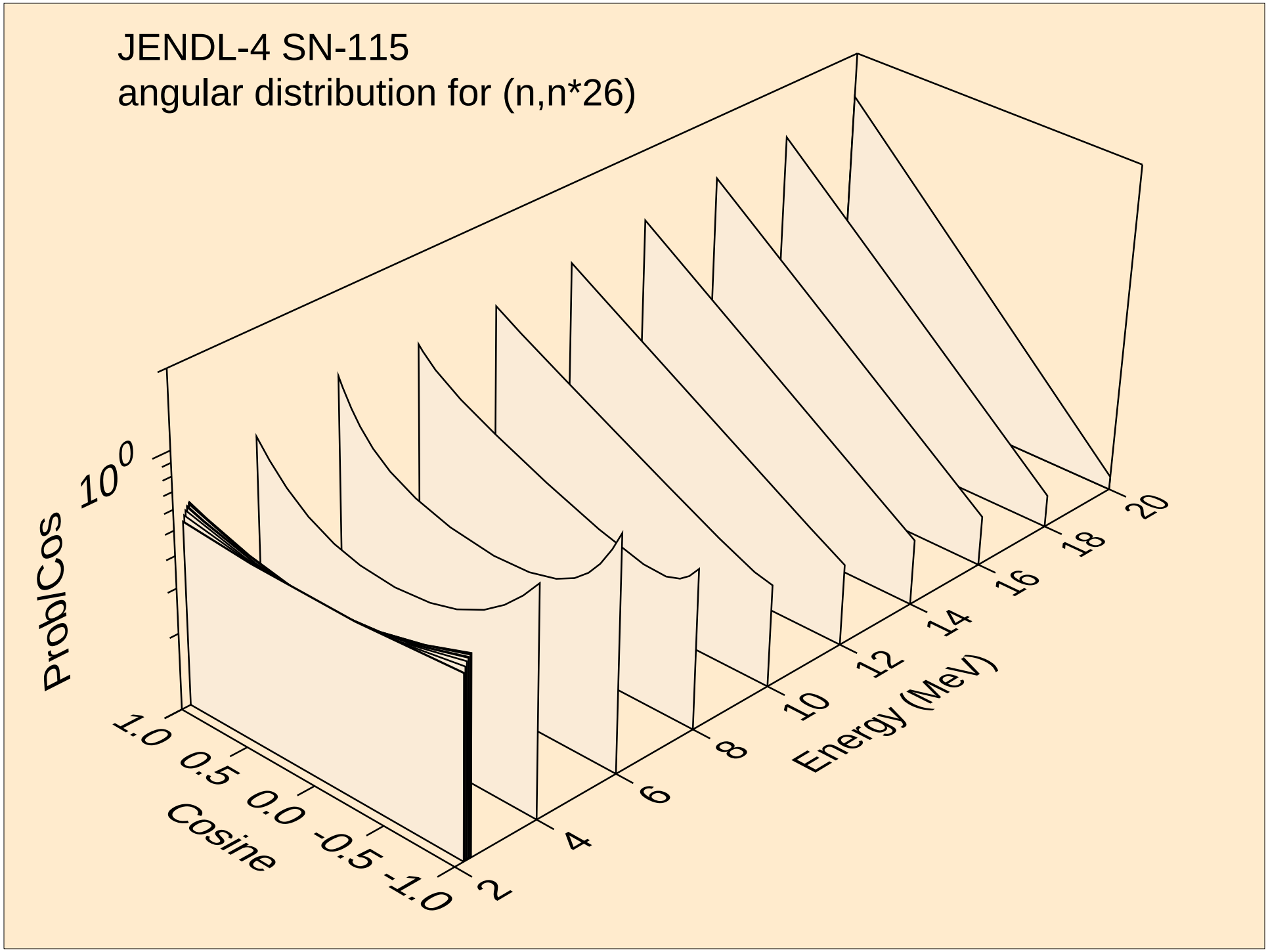

JENDL-4 SN-115
angular distribution for (n,n*21)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

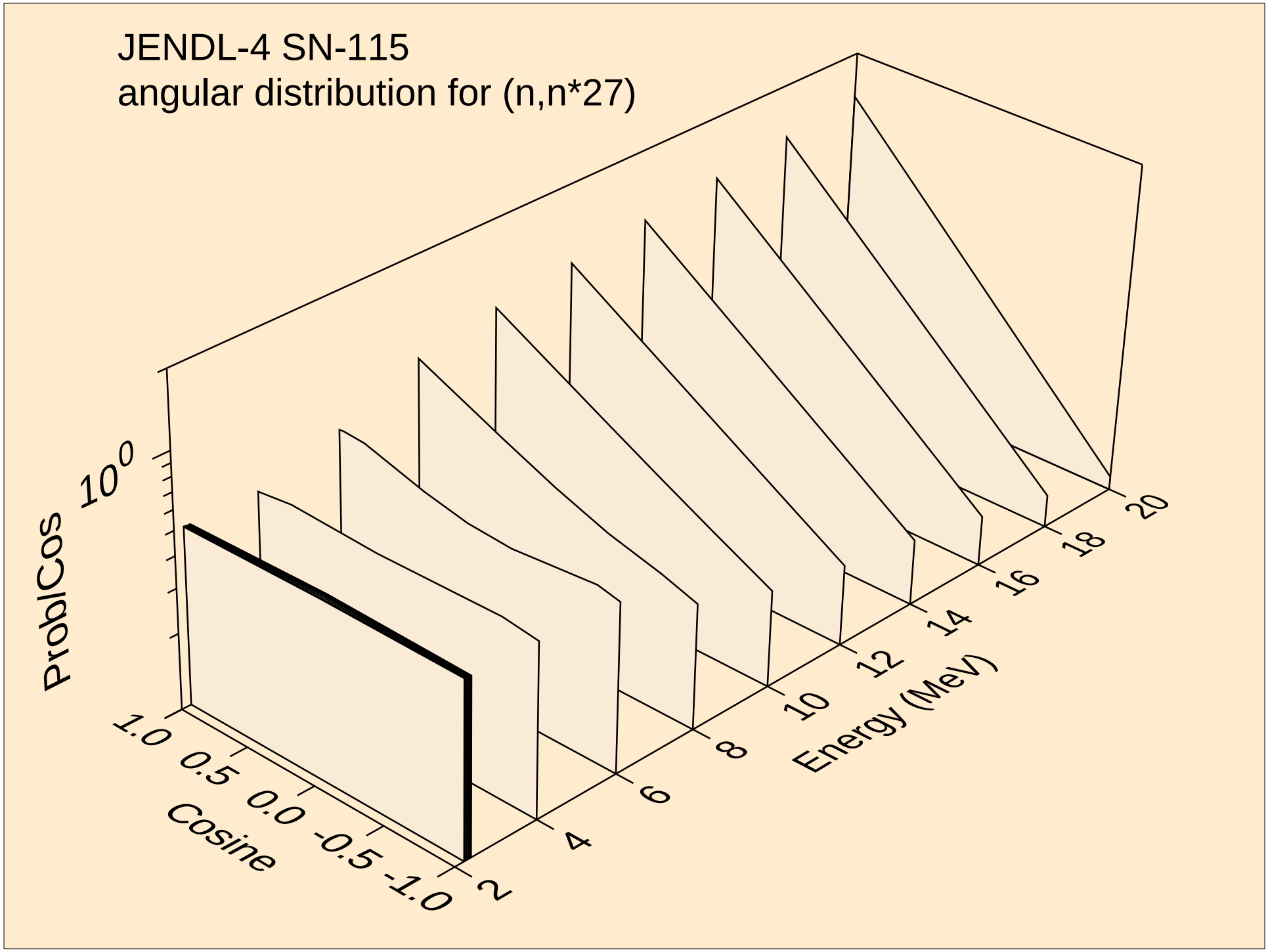

JENDL-4 SN-115
angular distribution for (n,n*22)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

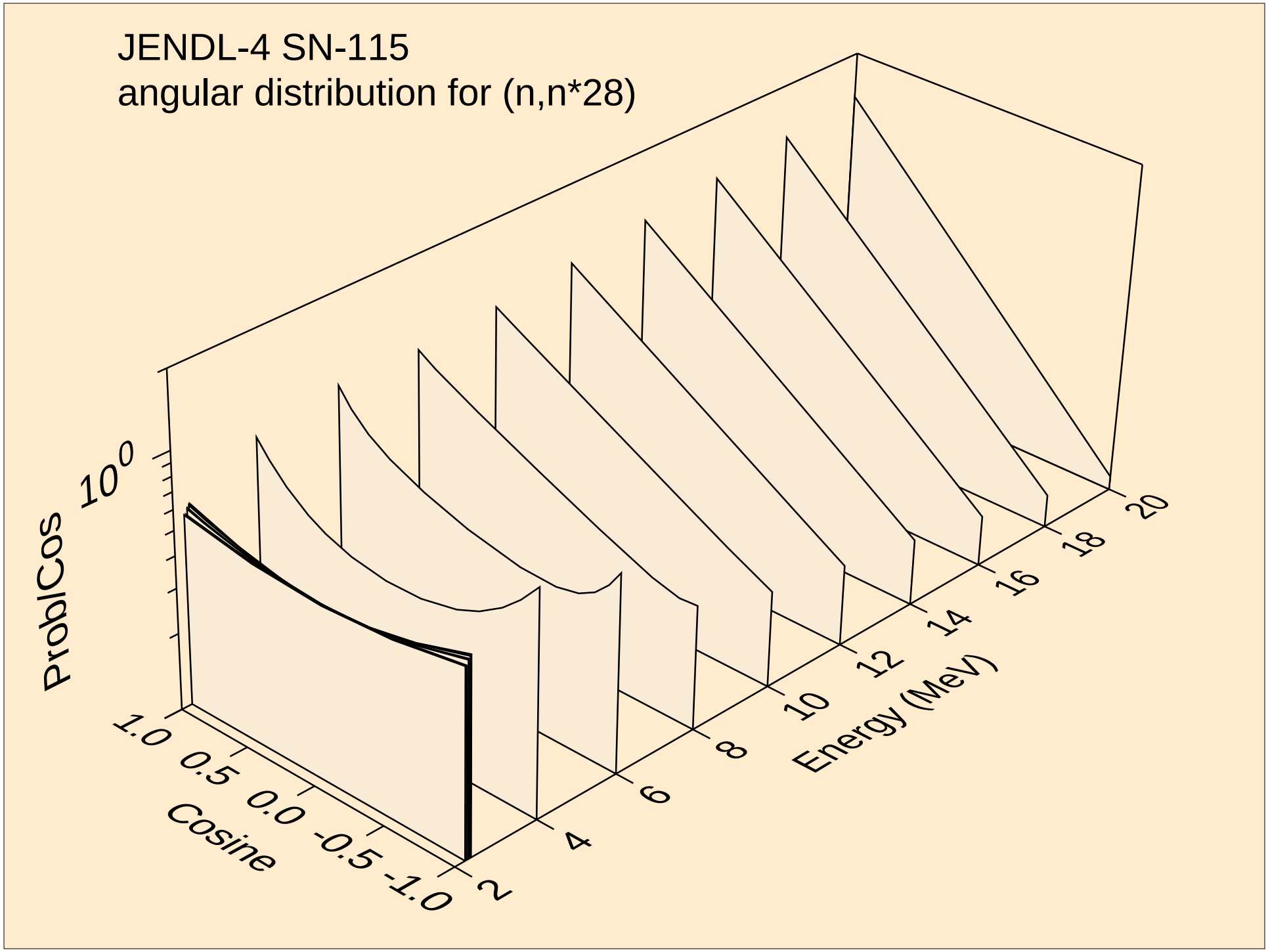

JENDL-4 SN-115
angular distribution for (n,n*23)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

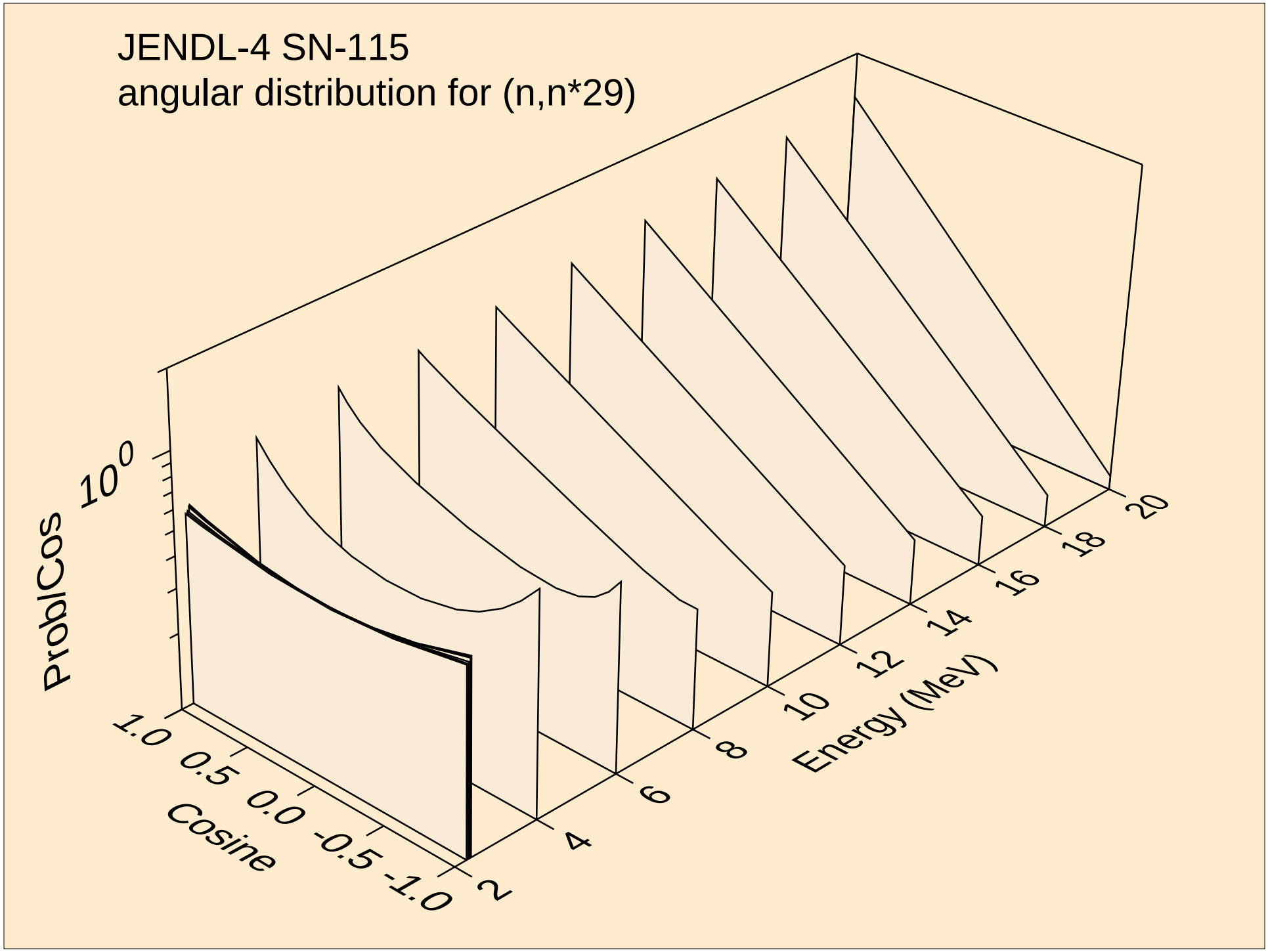

JENDL-4 SN-115
angular distribution for (n,n*24)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

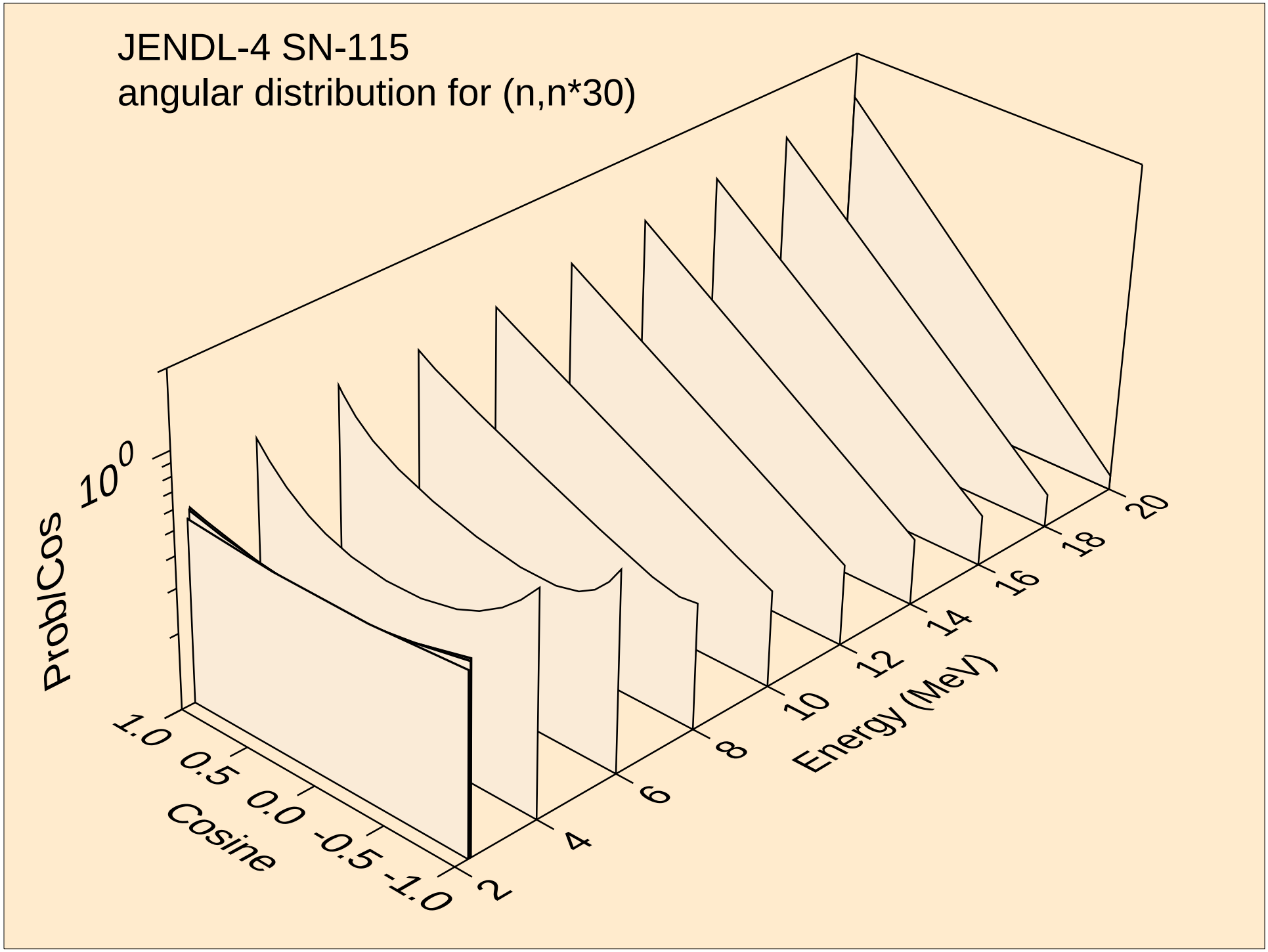

JENDL-4 SN-115
angular distribution for (n,n*25)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

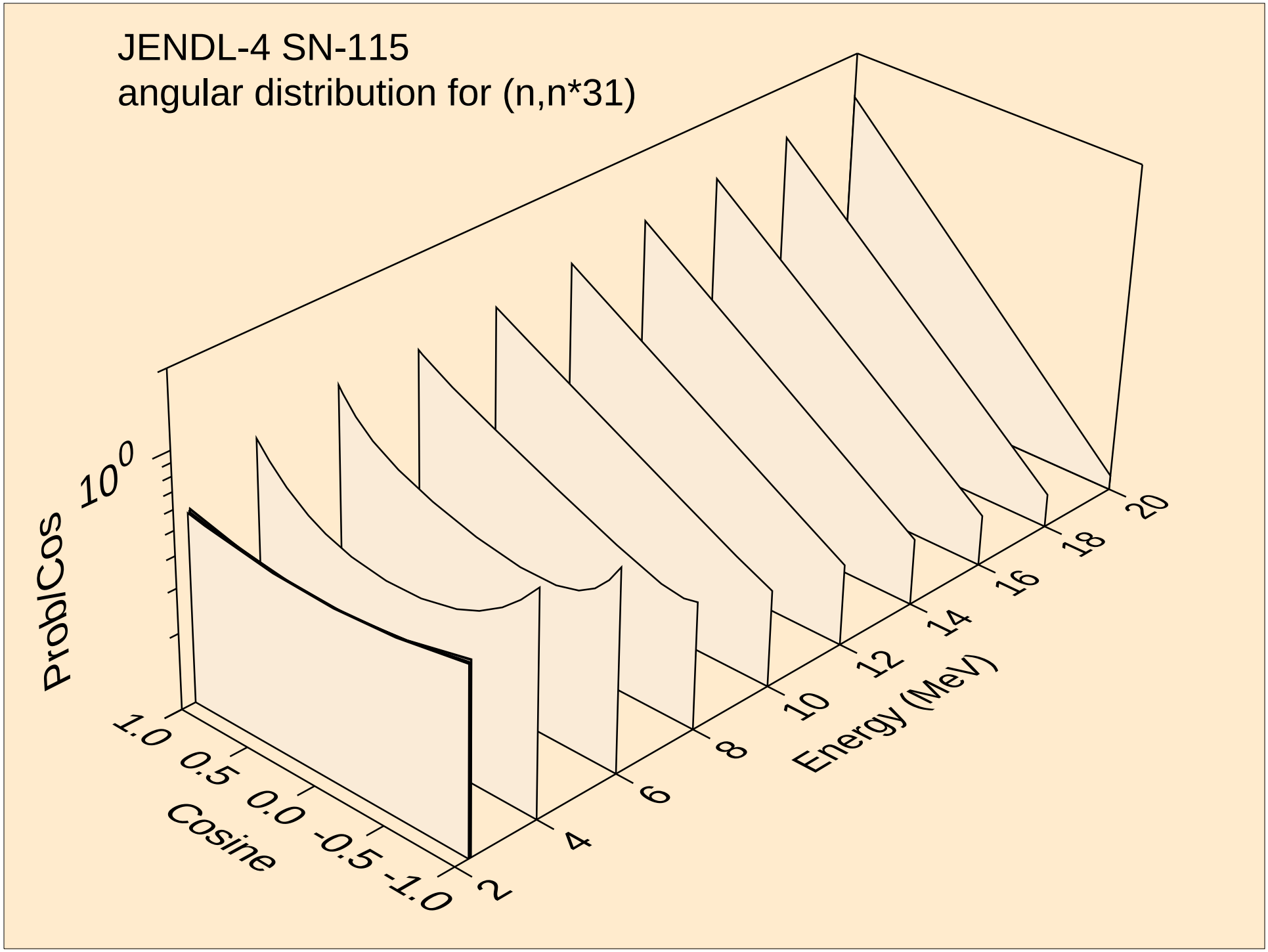

JENDL-4 SN-115
angular distribution for (n,n*26)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

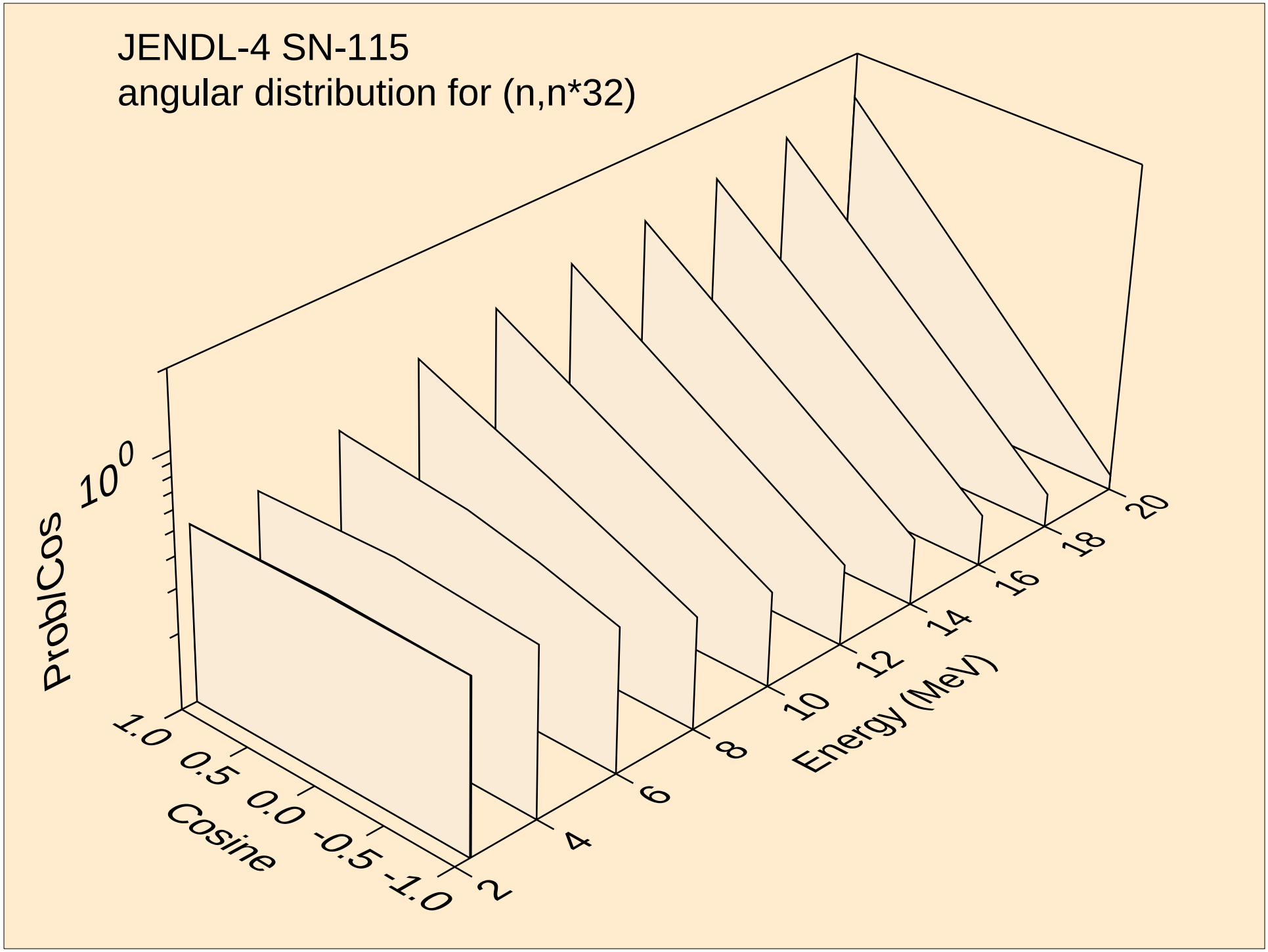

JENDL-4 SN-115
angular distribution for (n,n*27)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

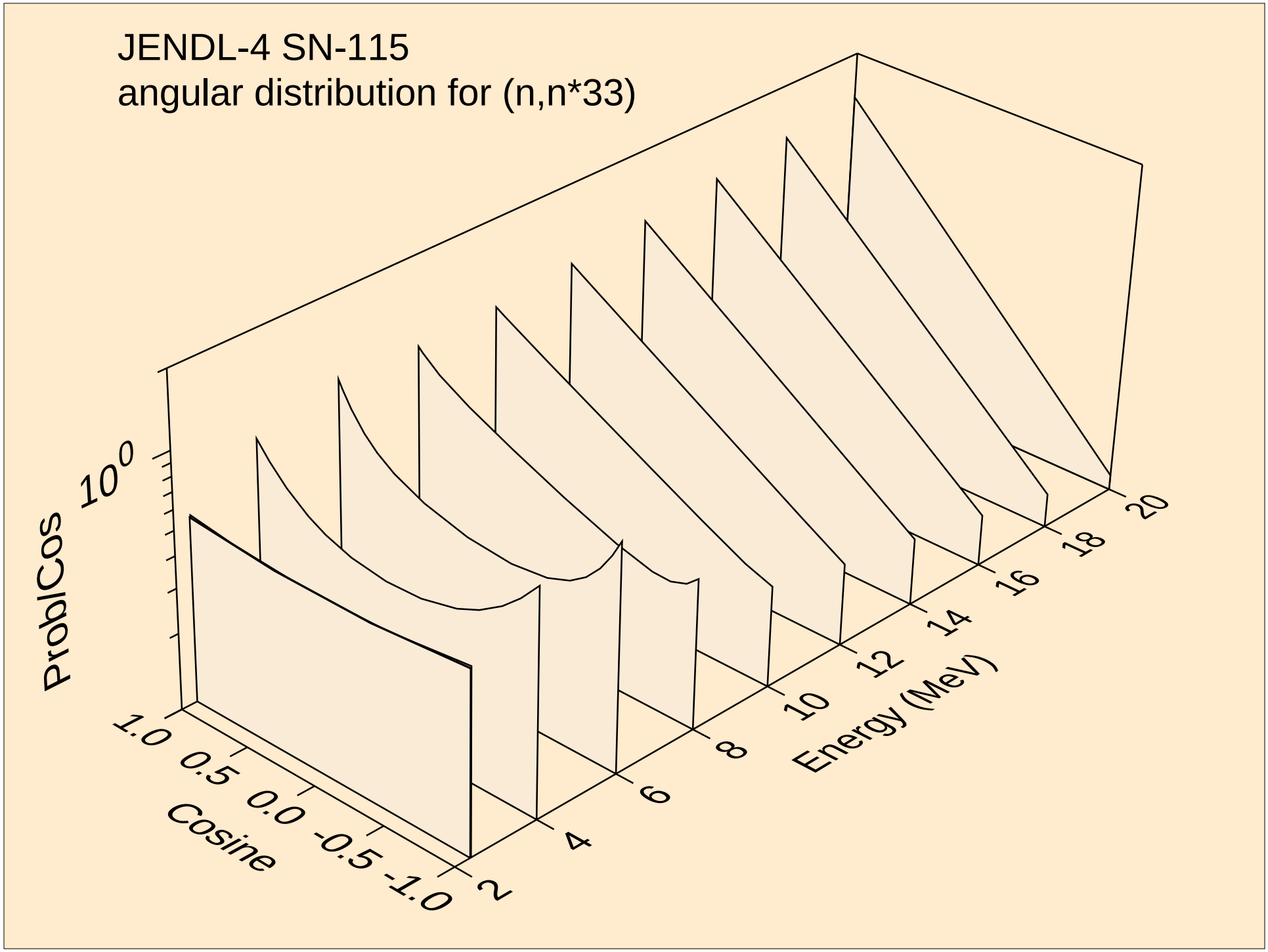

JENDL-4 SN-115
angular distribution for (n,n*28)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

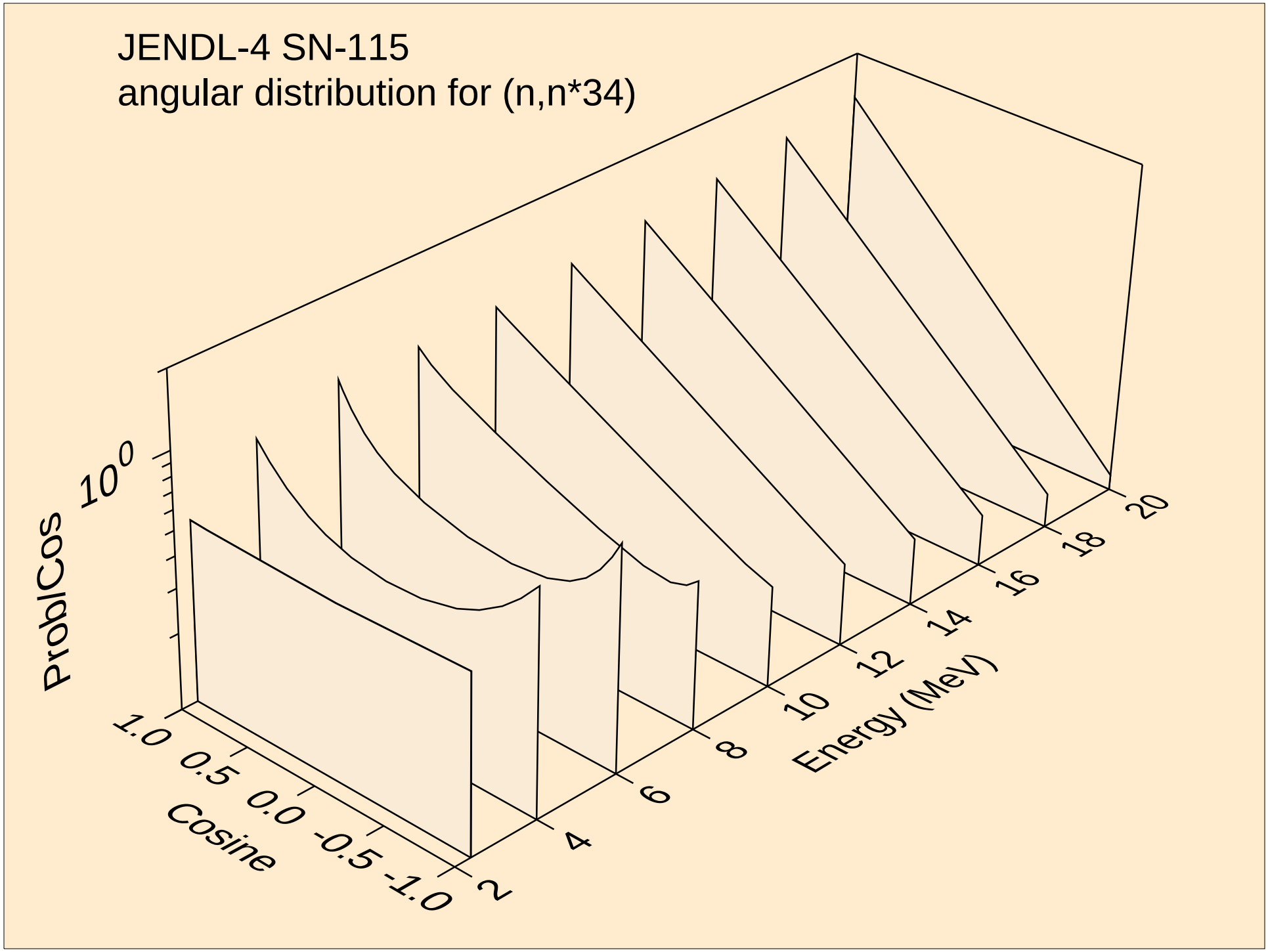

JENDL-4 SN-115
angular distribution for (n,n*29)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

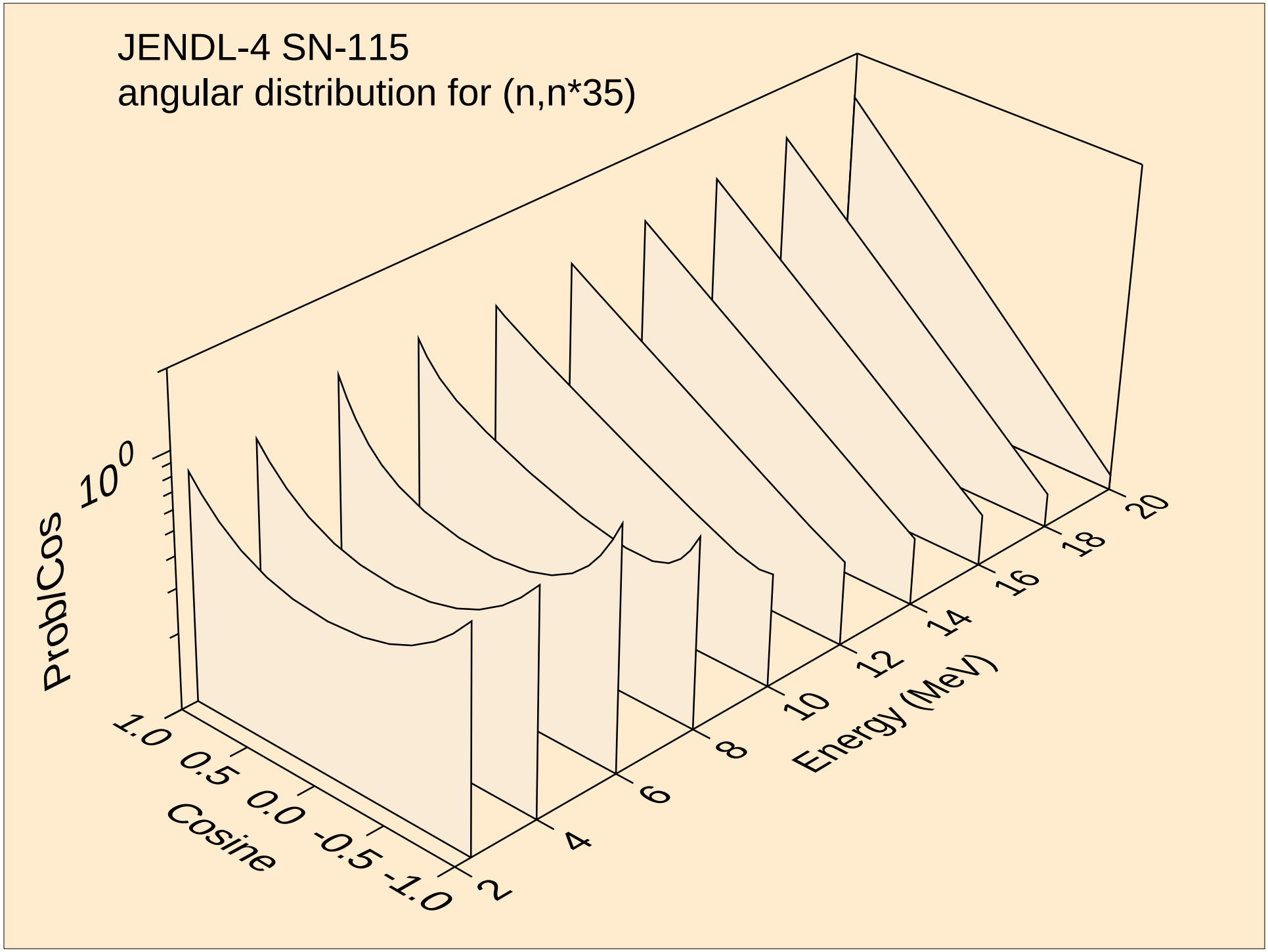

JENDL-4 SN-115
angular distribution for (n,n*30)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

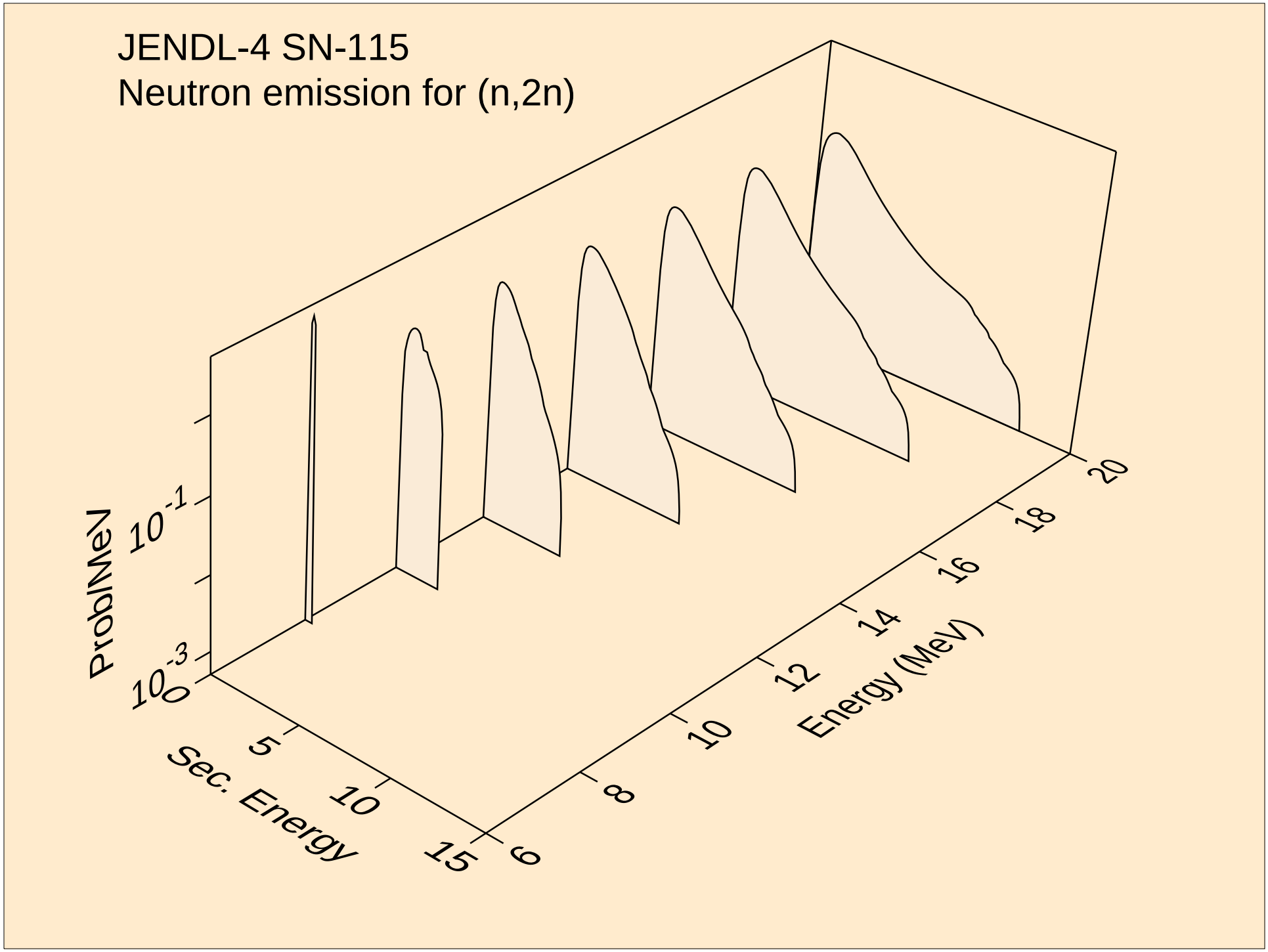

JENDL-4 SN-115
angular distribution for (n,n*31)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

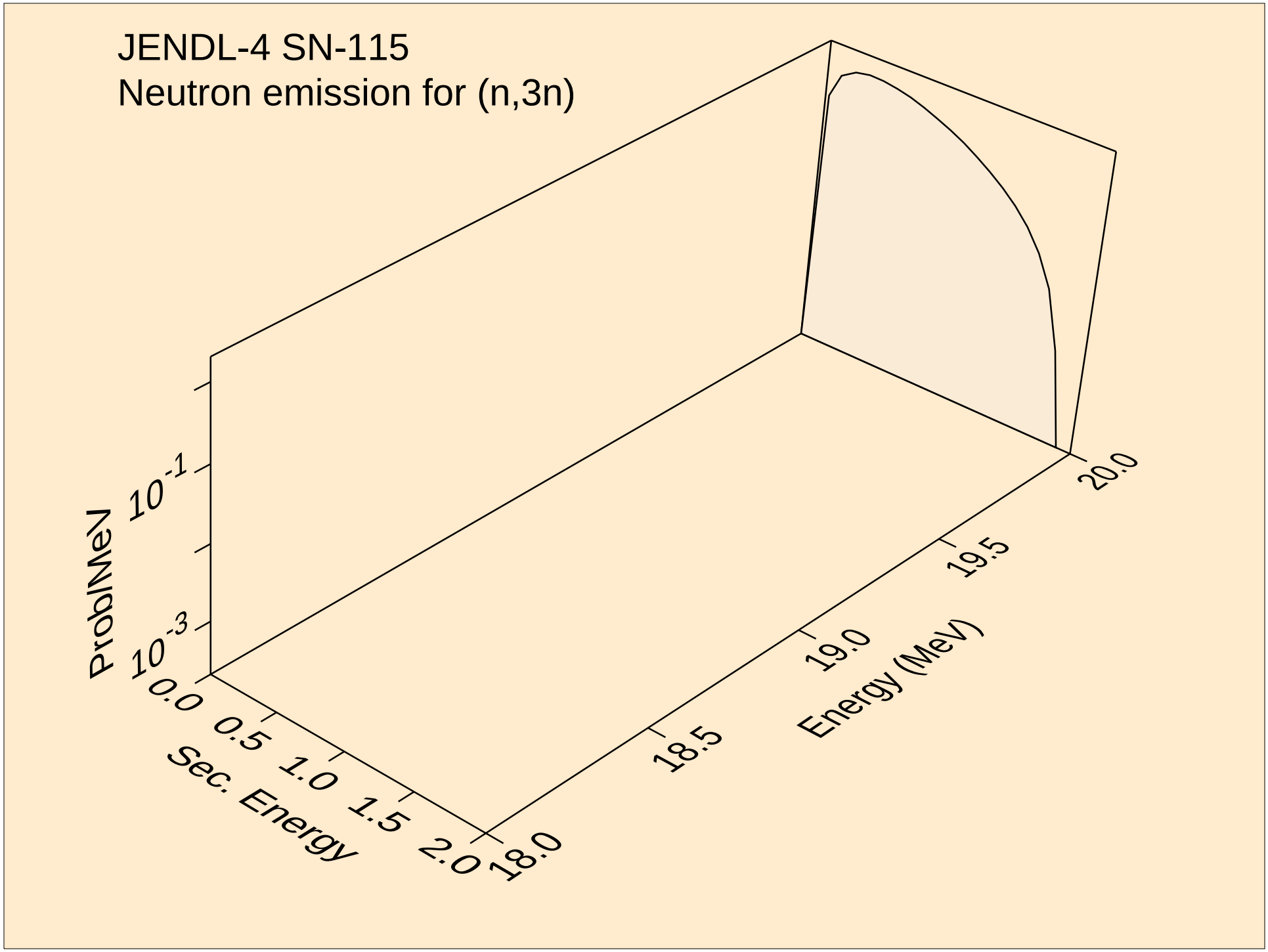

JENDL-4 SN-115
angular distribution for (n,n*32)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

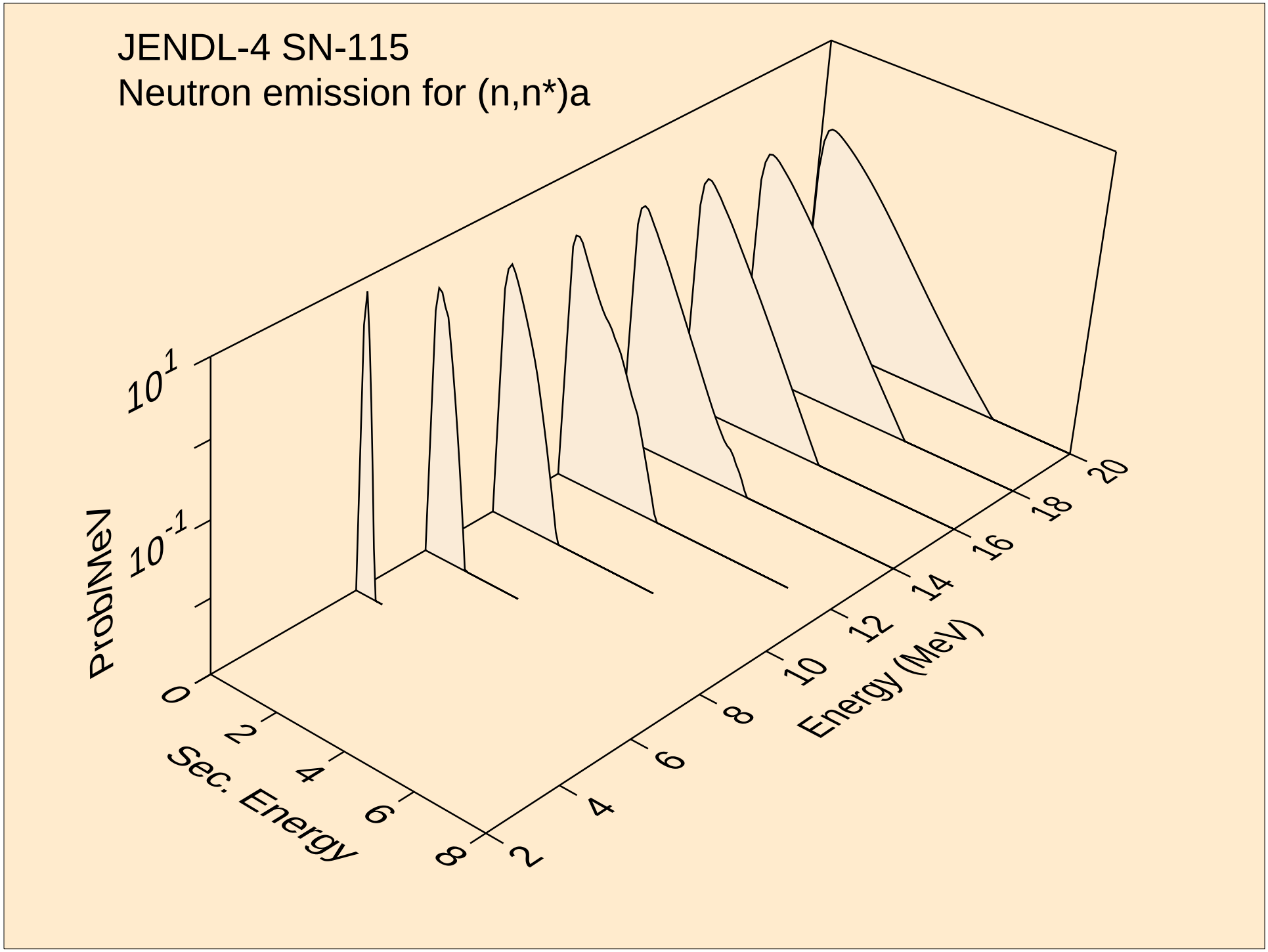

JENDL-4 SN-115
angular distribution for (n,n*33)
ProbCos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

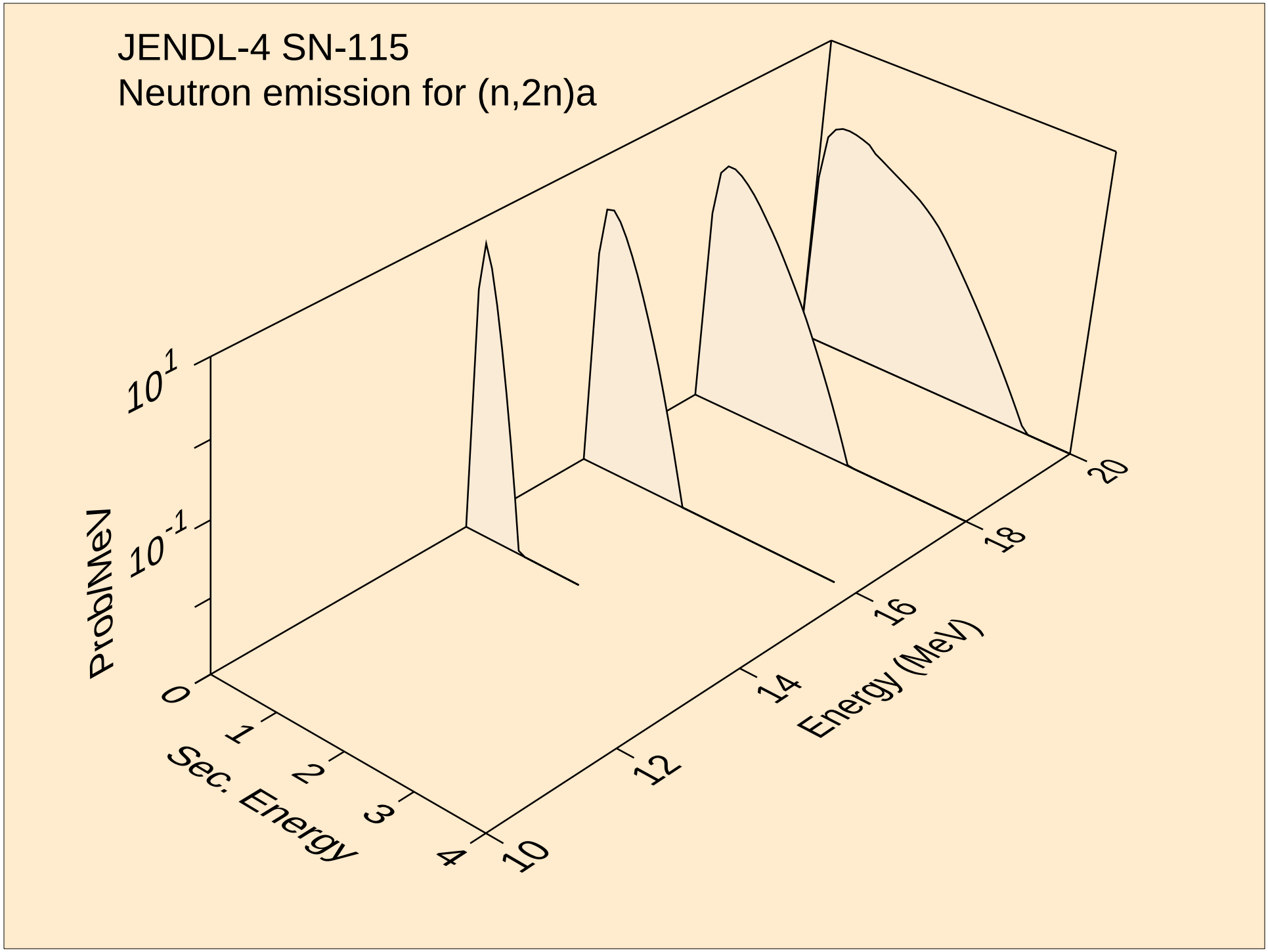

JENDL-4 SN-115
angular distribution for (n,n*34)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

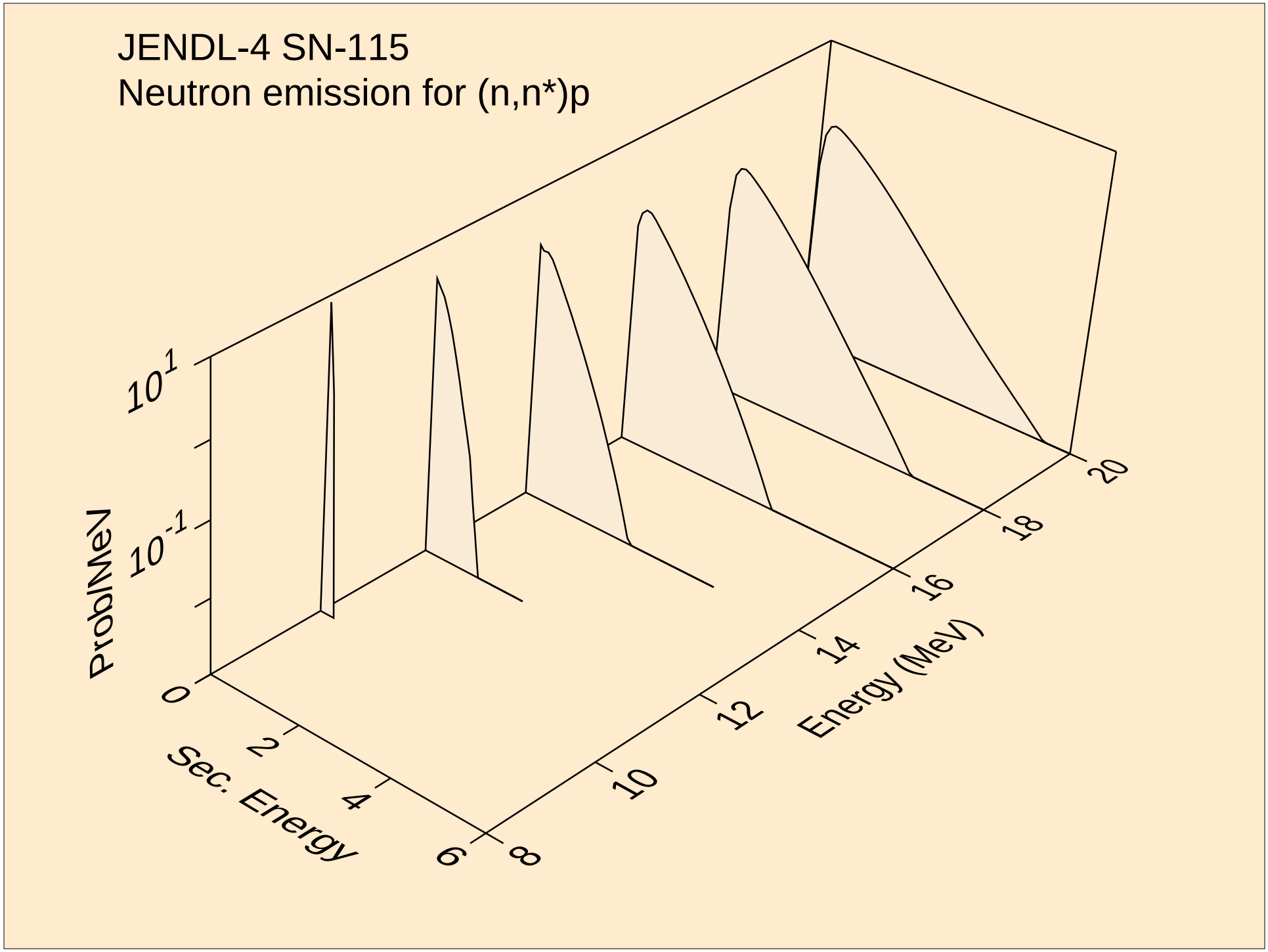

JENDL-4 SN-115
angular distribution for (n,n*35)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 SN-115
Neutron emission for (n,2n)
Prob/MeV
10^{-1}
10^{-3}
0
5
10
15
Sec. Energy
6
8
10
12
14
16
18
20
Energy (MeV)

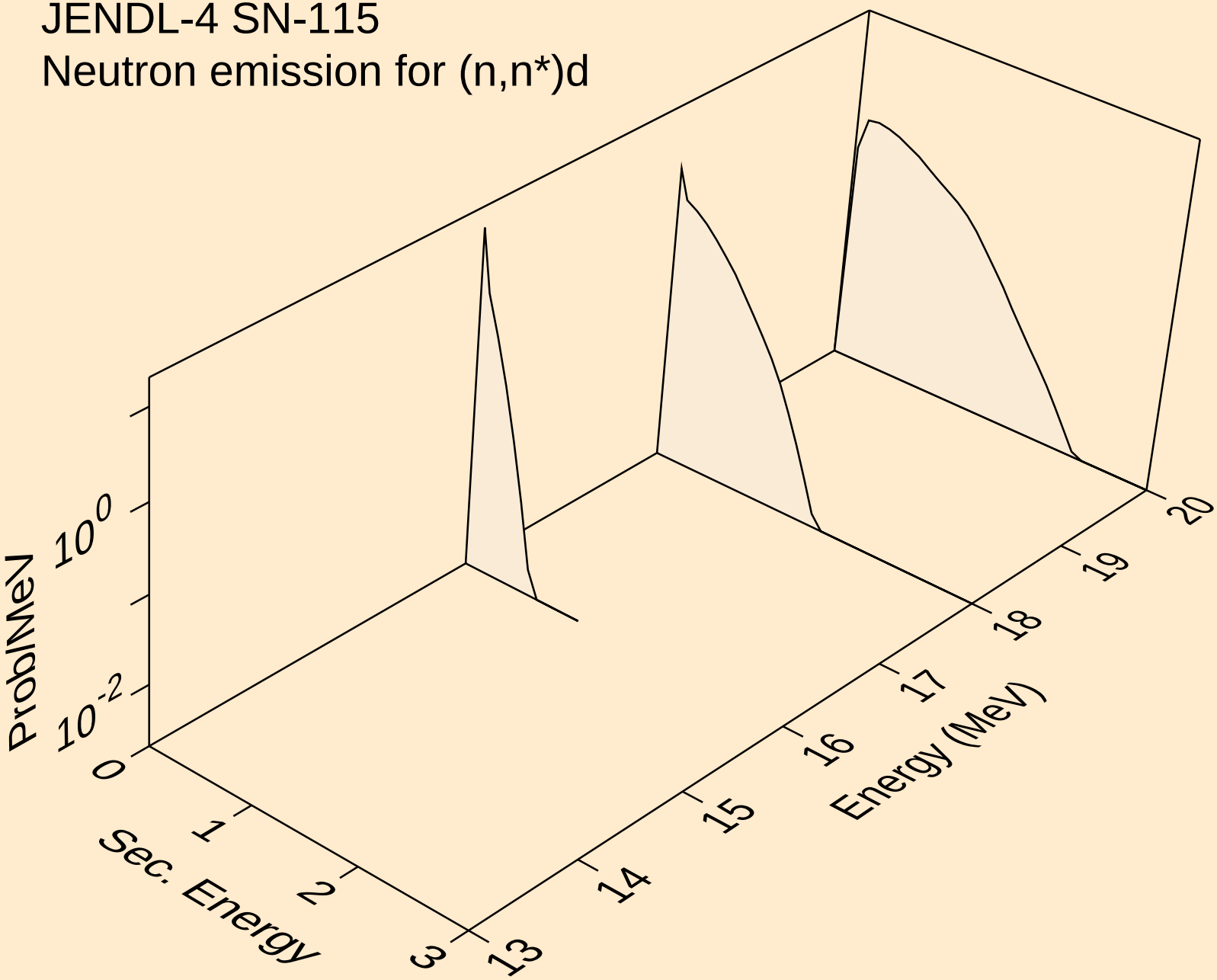

JENDL-4 SN-115
Neutron emission for (n,3n)
Prob/MeV
10-1
10-3
0.0
0.5
1.0
1.5
2.0
Sec. Energy
18.0
18.5
19.0
19.5
20.0
Energy (MeV)

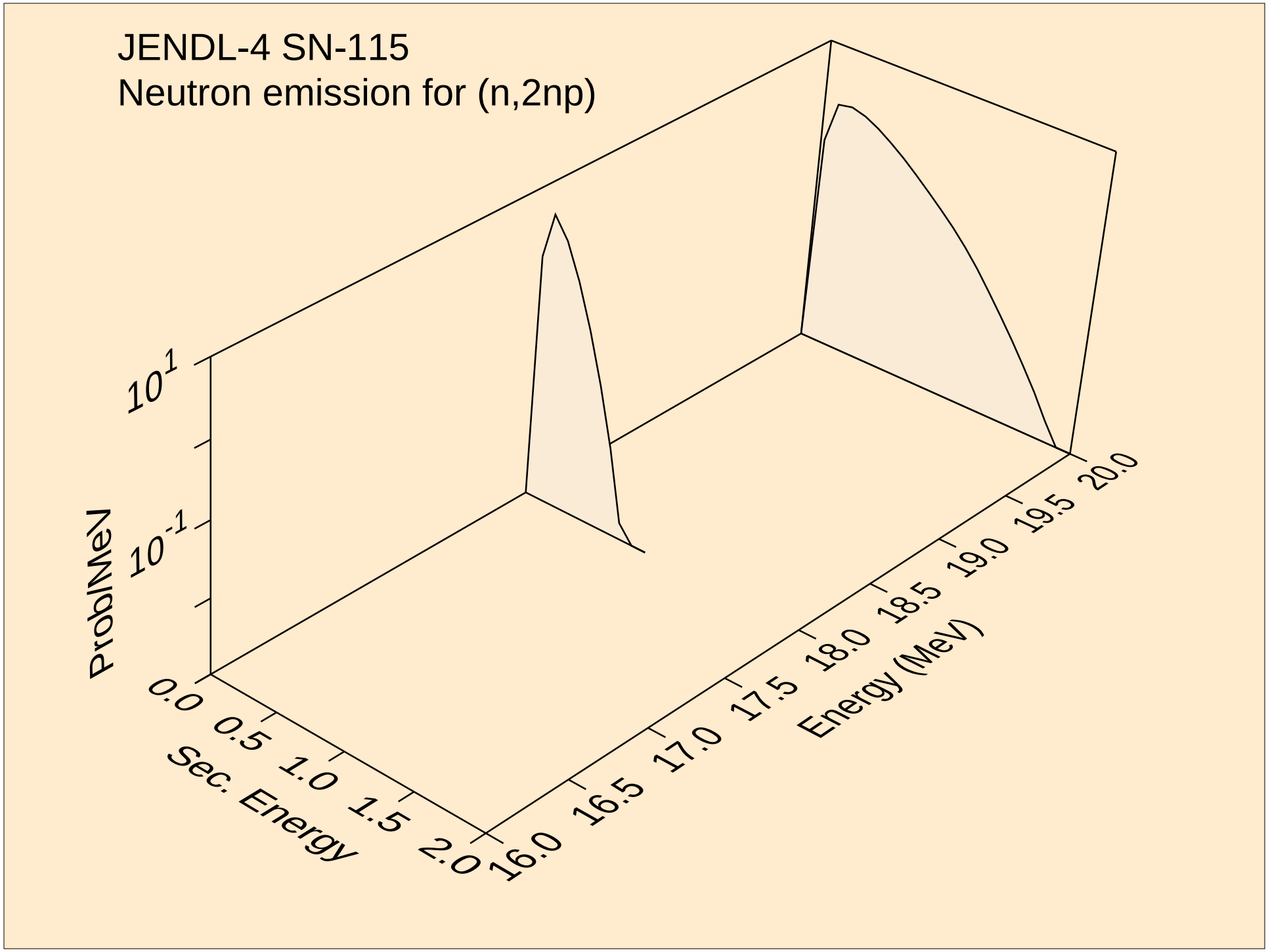

JENDL-4 SN-115
Neutron emission for (n,n*)a
Prob/MeV
10^{1}
10^{-1}
0
Sec. Energy
2
4
6
8
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

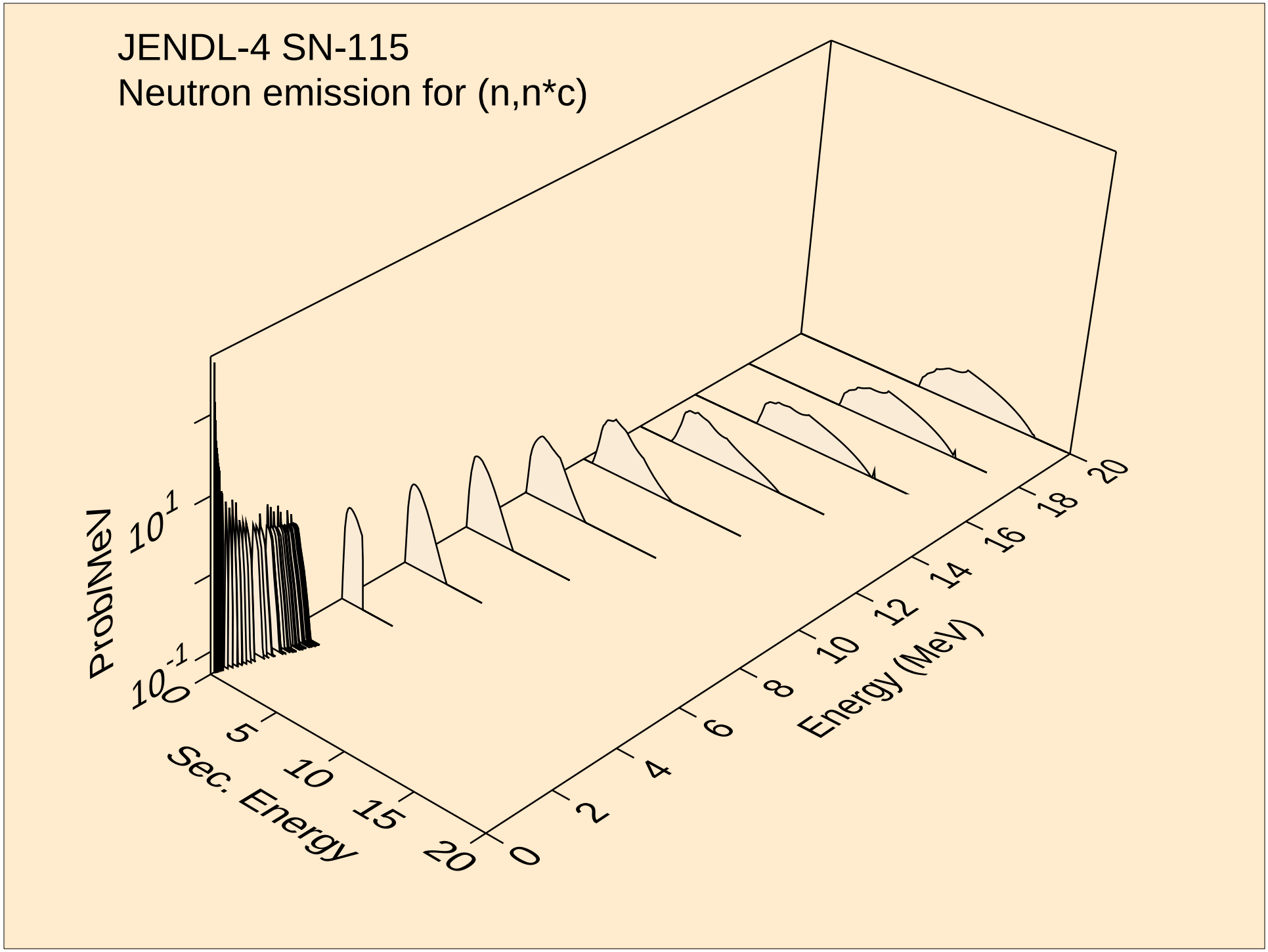

JENDL-4 SN-115
Neutron emission for (n,2n)a
Prob/MeV
10^{1}
10^{-1}
0
Sec. Energy
1
2
3
4
Energy (MeV)
10
12
14
16
18
20


JENDL-4 SN-115
Neutron emission for (n,n*)p
Prob/MeV
10^1
10^-1
0
Sec. Energy
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

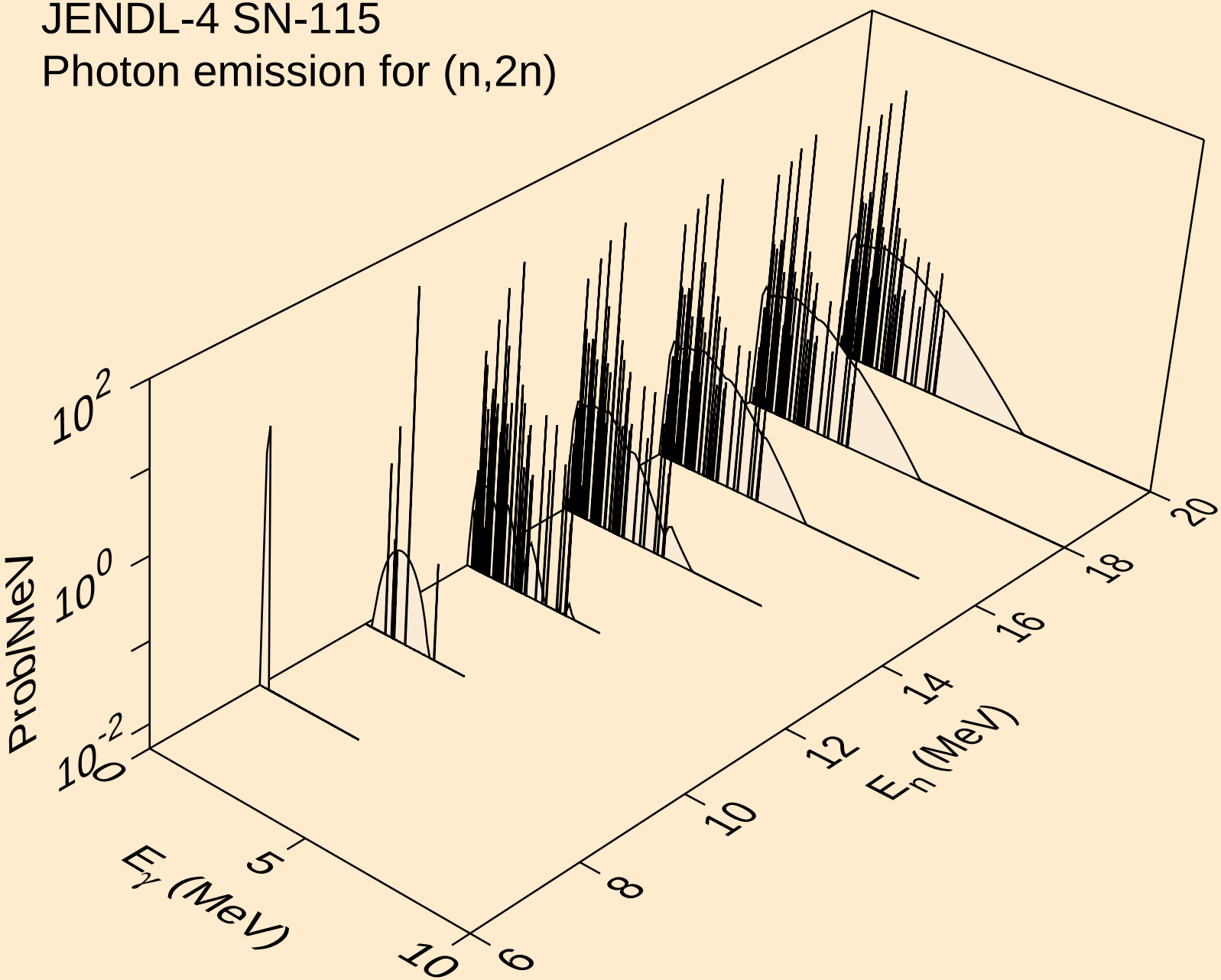
JENDL-4 SN-115
Neutron emission for (n,n*)d



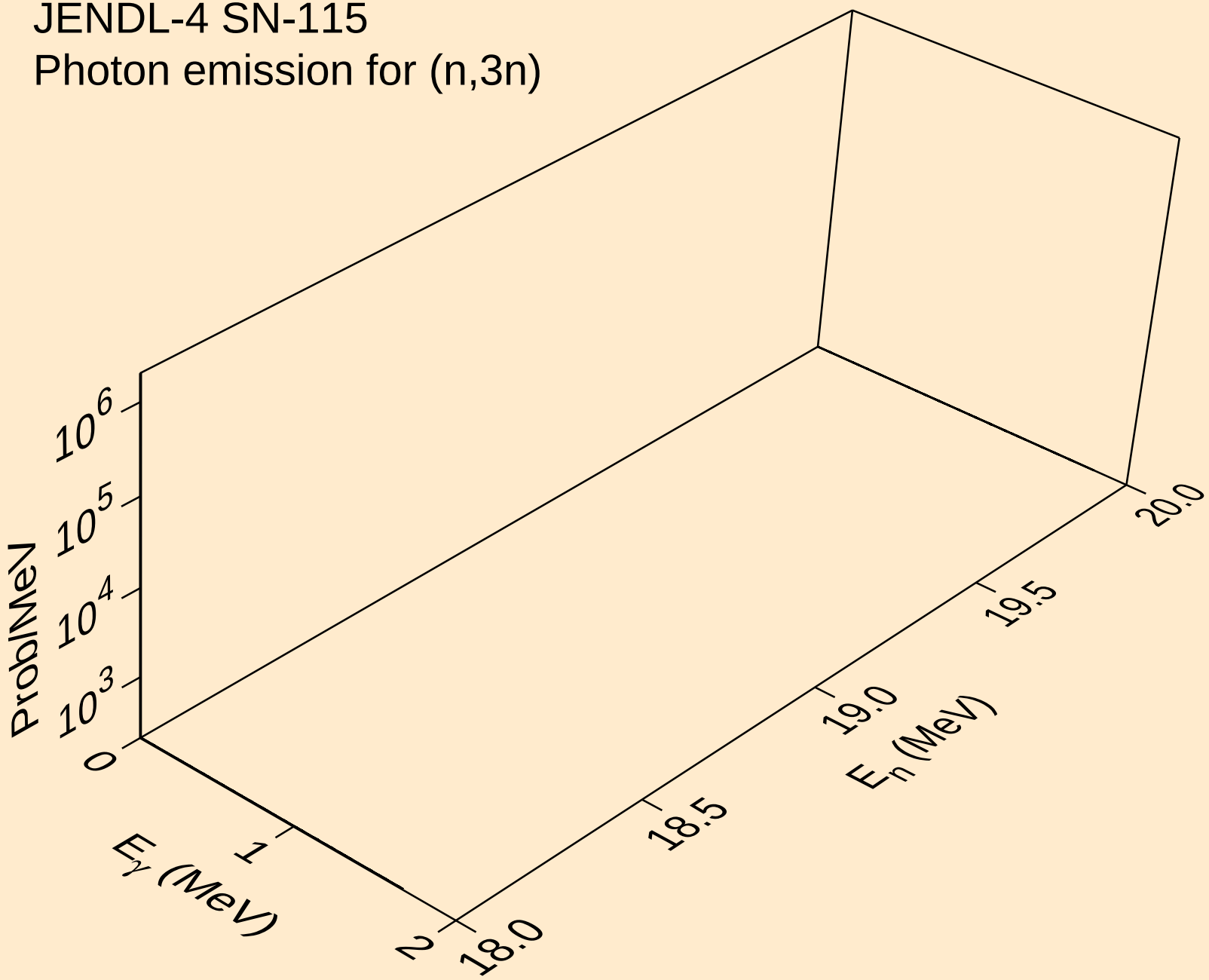

JENDL-4 SN-115
Neutron emission for (n,2np)
Prob/MeV
10^1
10^-1
0.0
0.5
1.0
1.5
2.0
Sec. Energy
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
Energy (MeV)

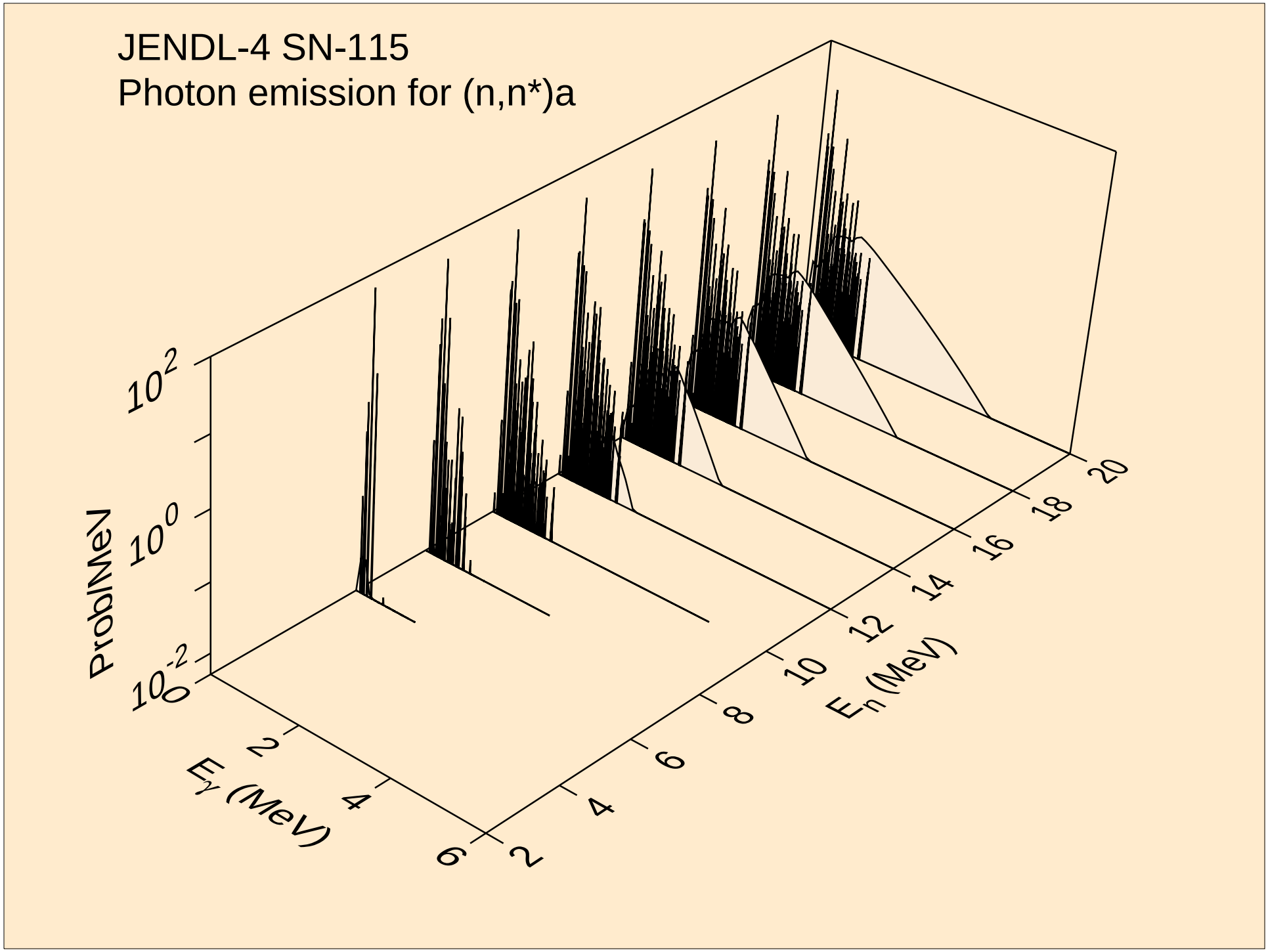

JENDL-4 SN-115
Neutron emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

JENDL-4 SN-115
Photon emission for (n,2n)

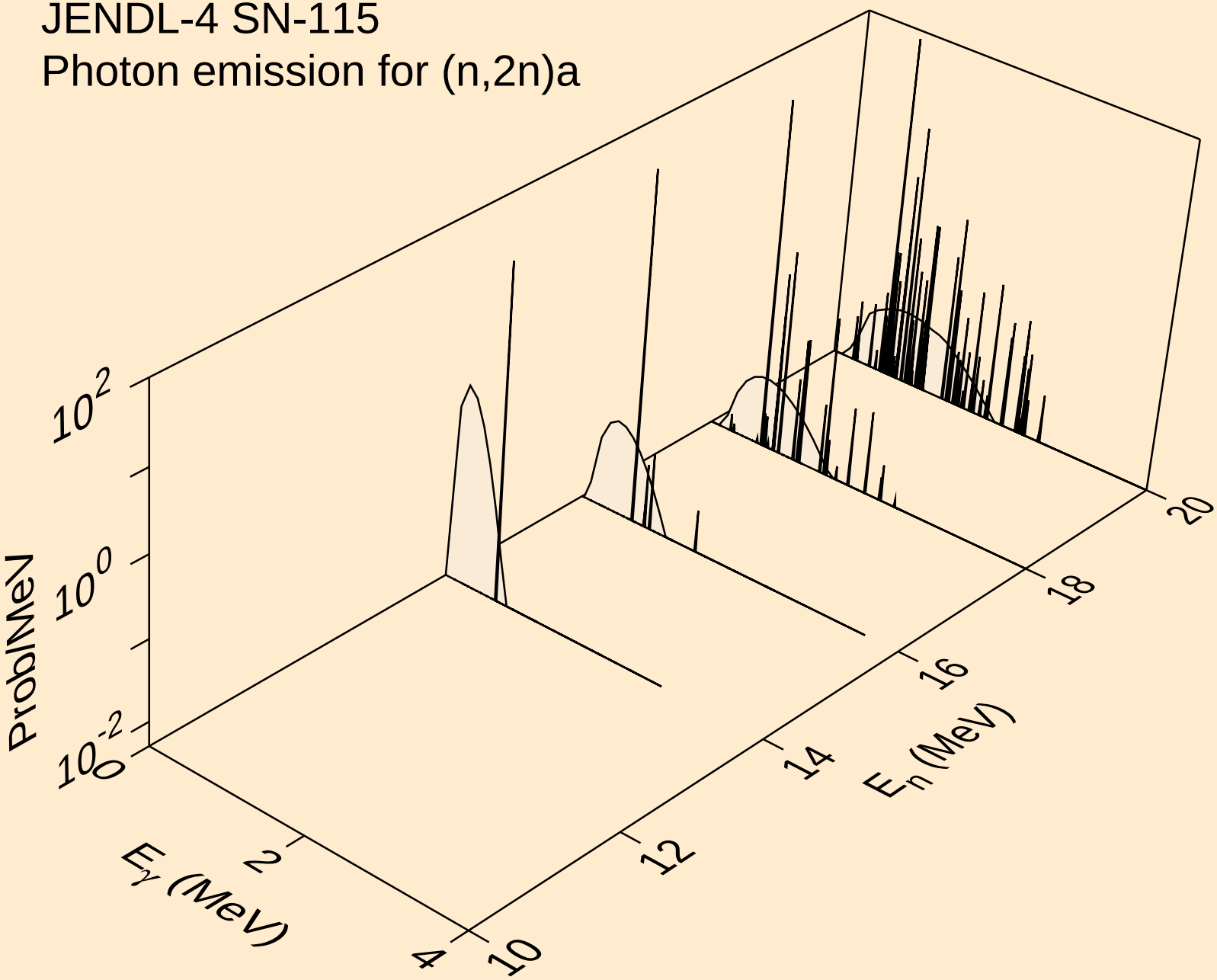


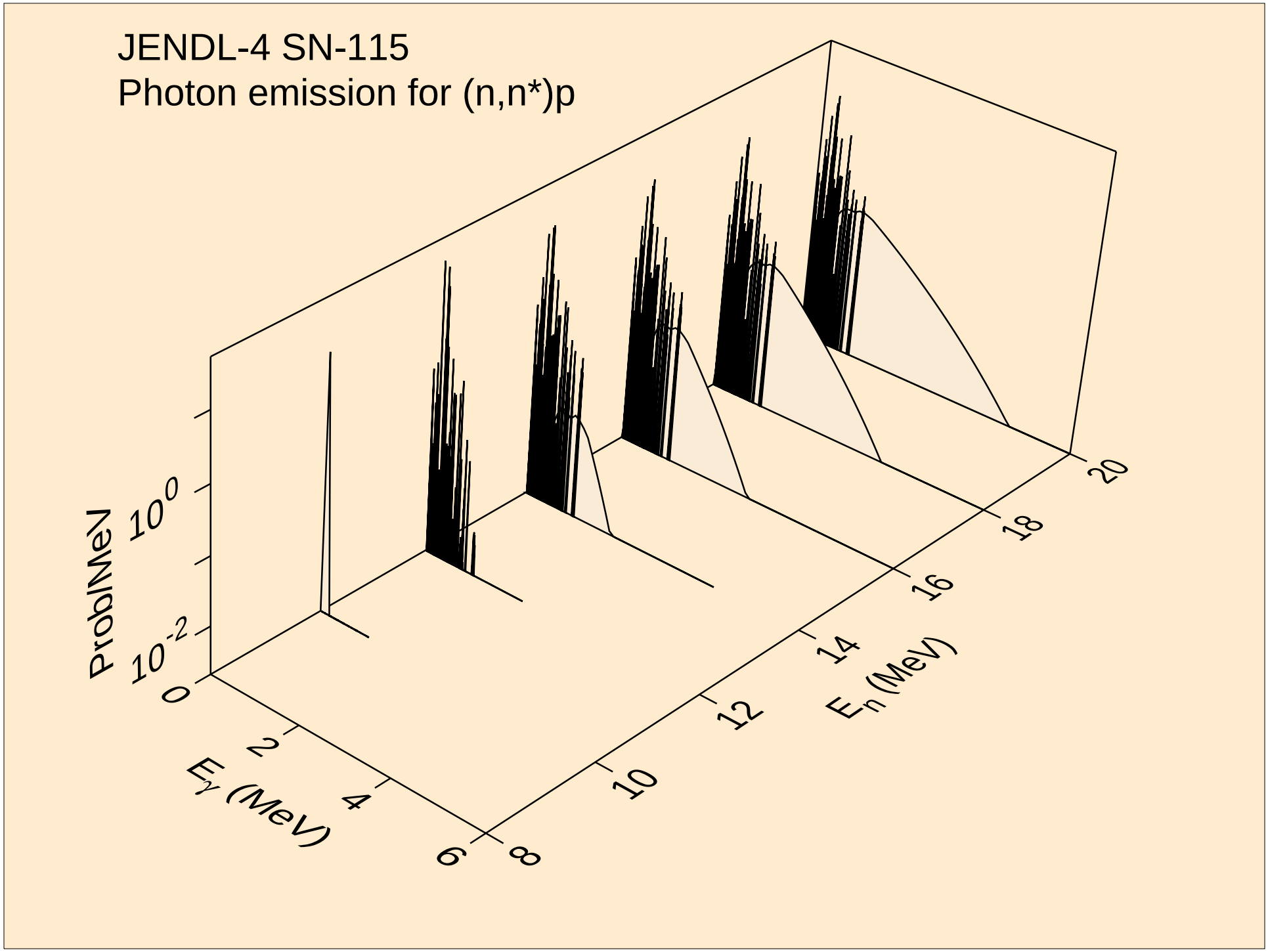
JENDL-4 SN-115
Photon emission for (n,3n)

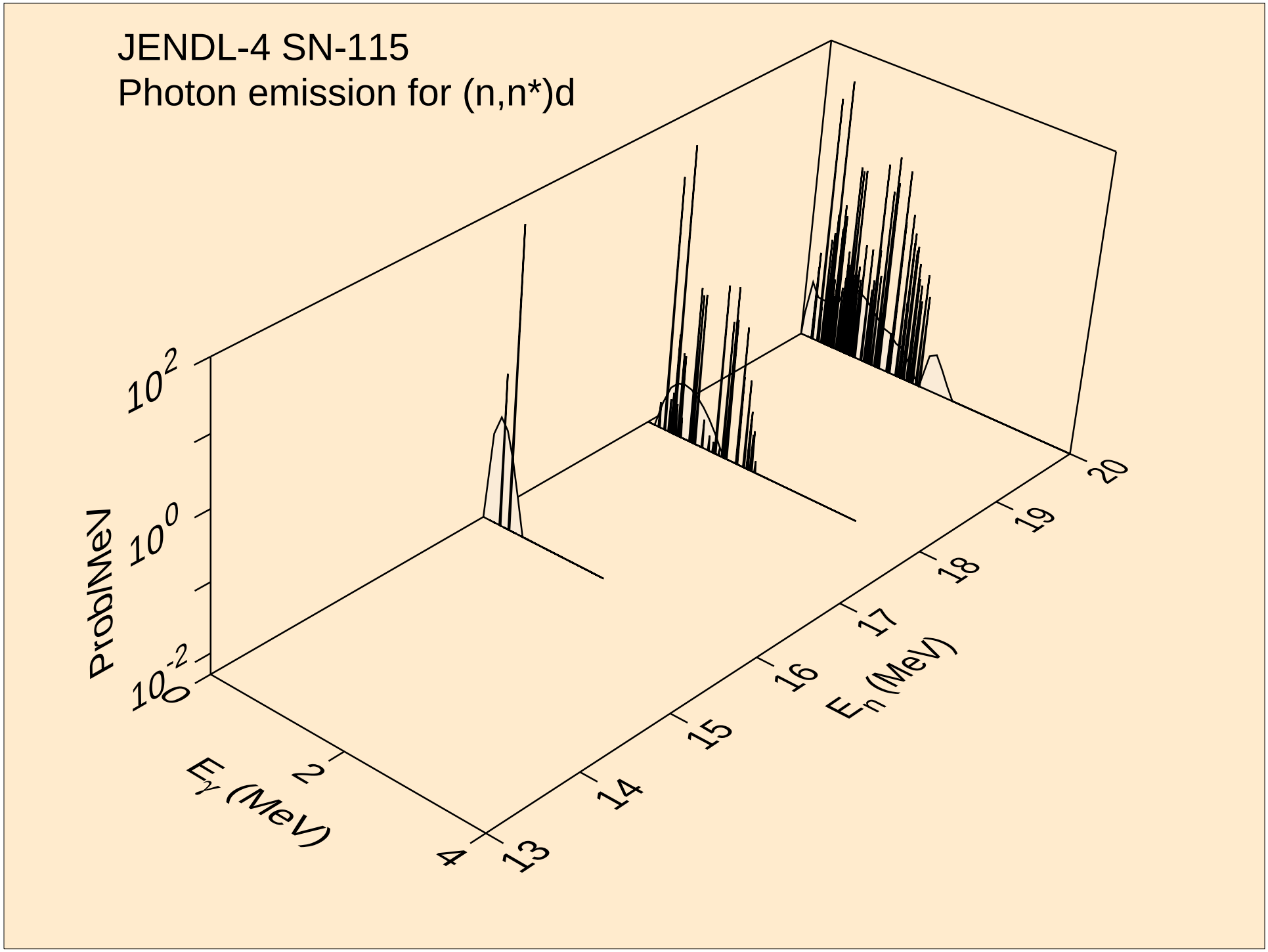


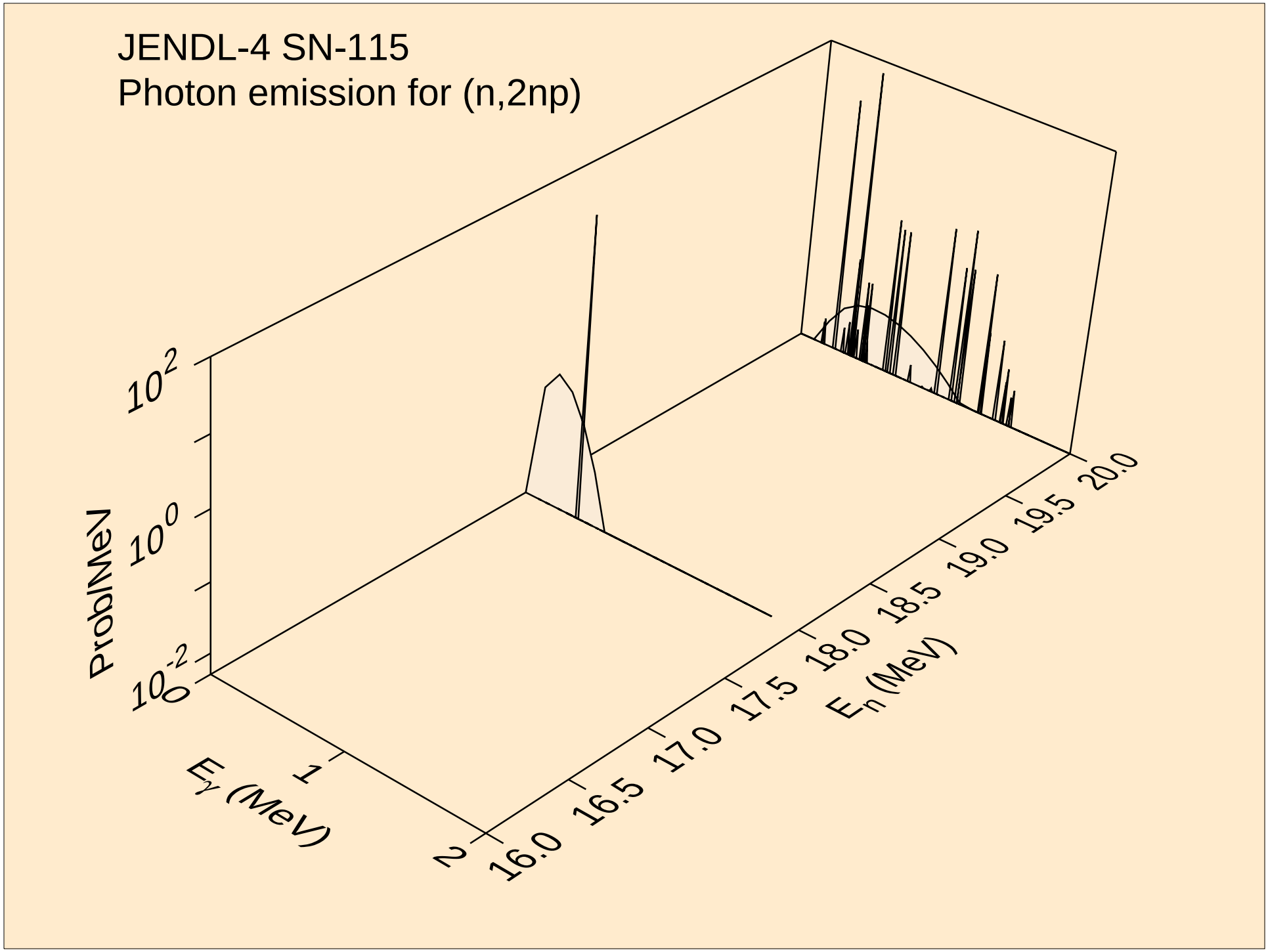

JENDL-4 SN-115
Photon emission for (n,n*)a
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

JENDL-4 SN-115
Photon emission for (n,2n)a

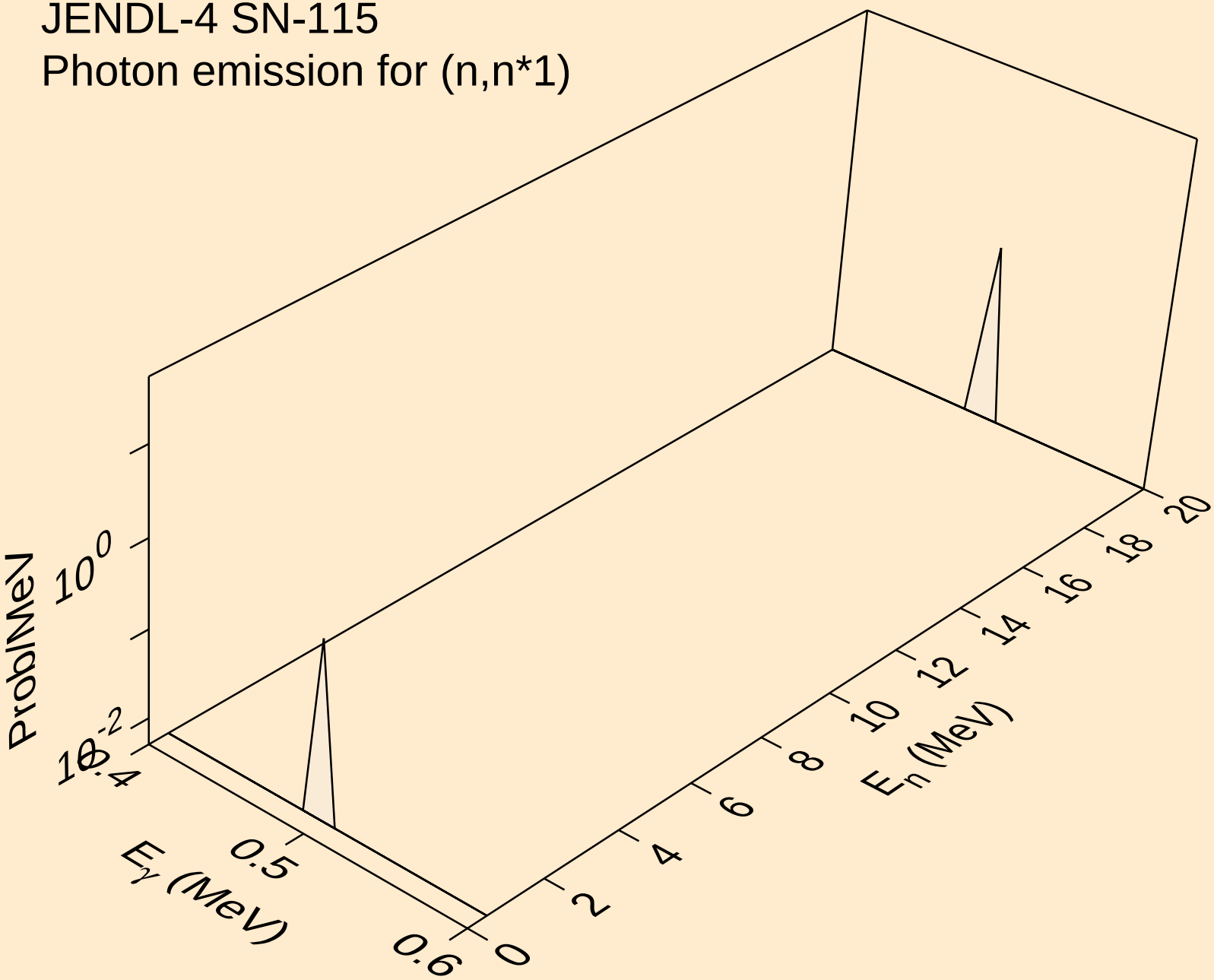



JENDL-4 SN-115
Photon emission for (n,n*)p
Prob/MeV
10^0
10^{-2}
0
2
4
6
8
10
12
14
16
18
20
E_γ (MeV)
E_n (MeV)

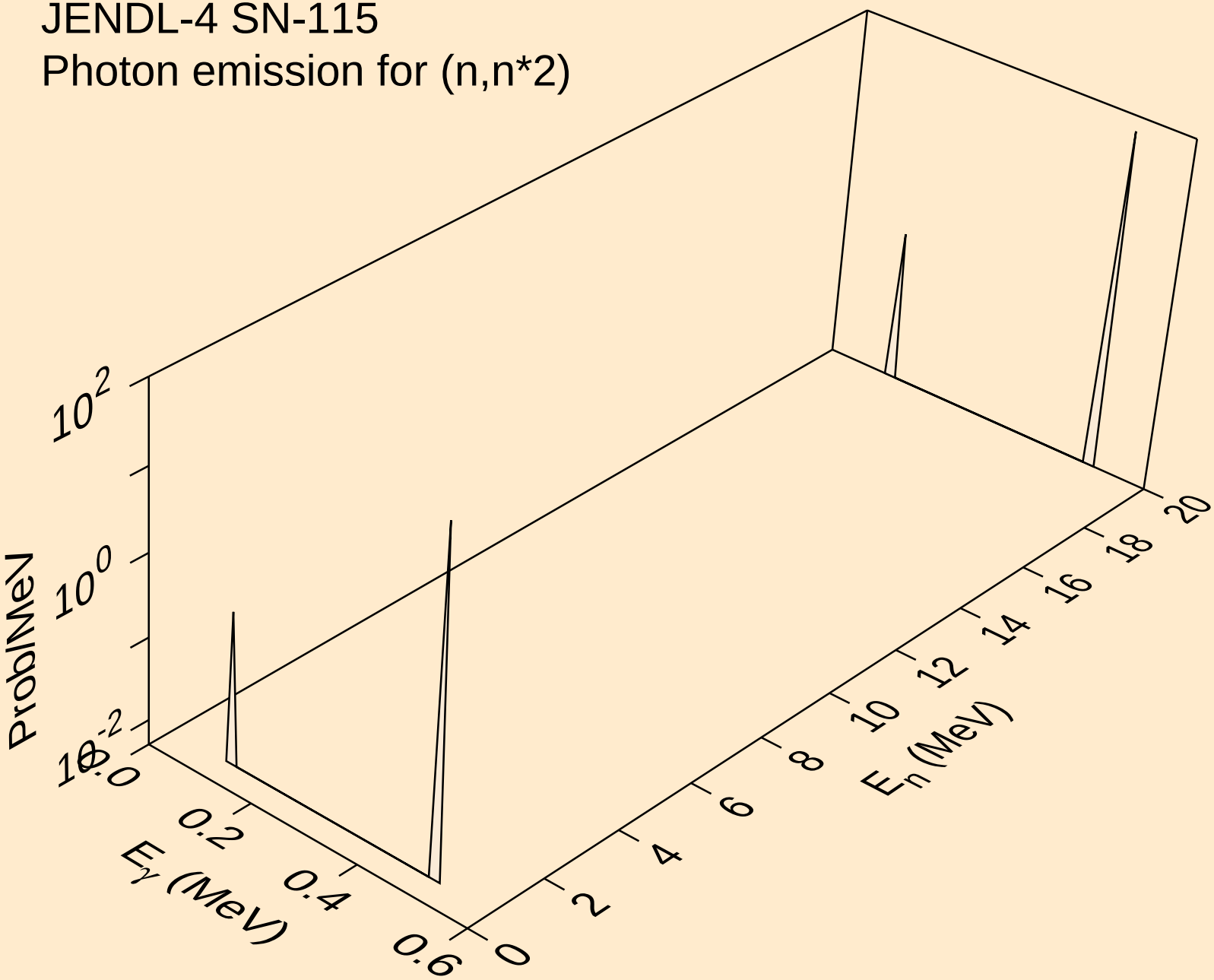

JENDL-4 SN-115
Photon emission for (n,n*)d
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
2
4
E_γ (MeV)
13
14
15
16
17
18
19
20
E_n (MeV)


JENDL-4 SN-115
Photon emission for (n,2np)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0

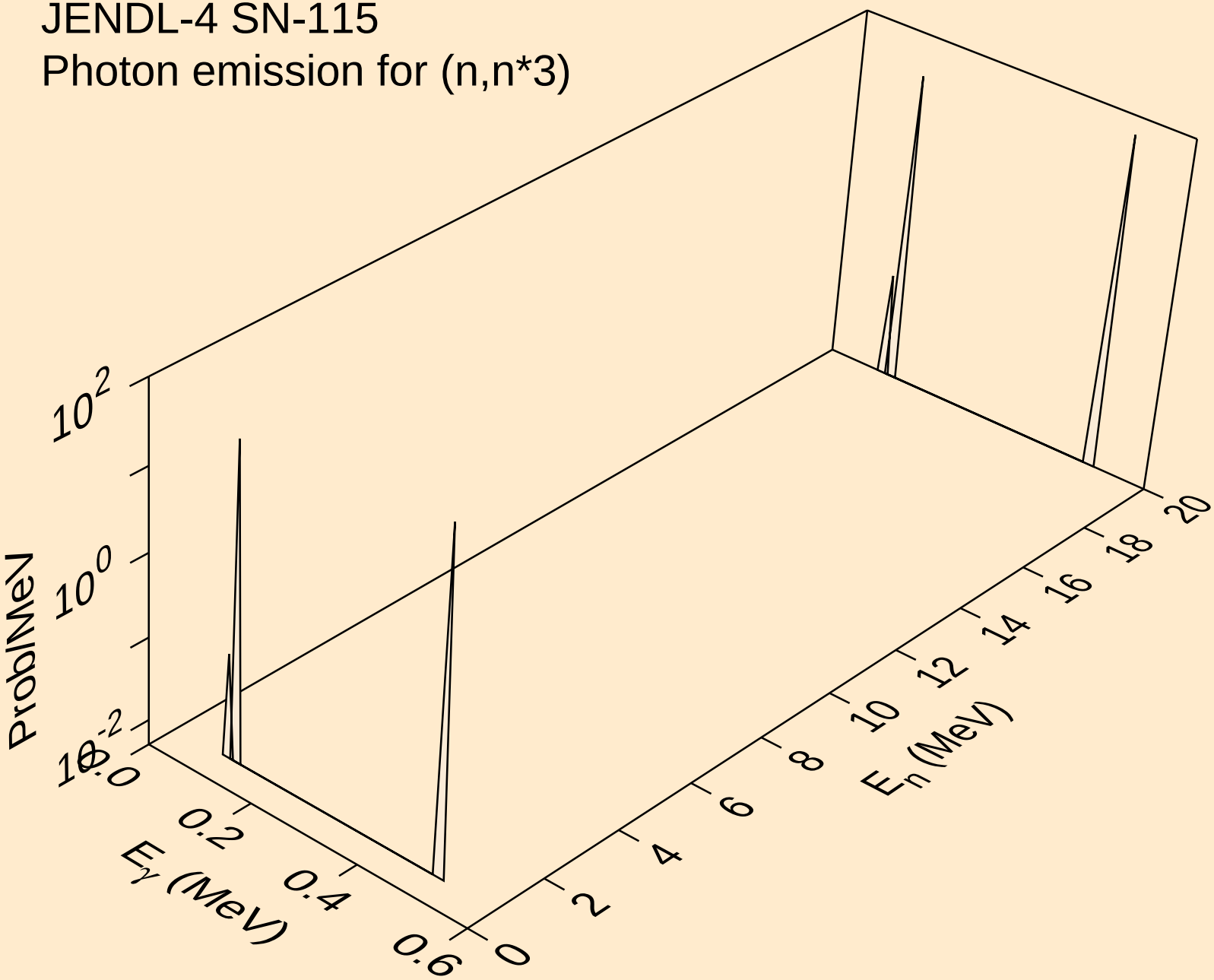
JENDL-4 SN-115
Photon emission for (n,n*1)

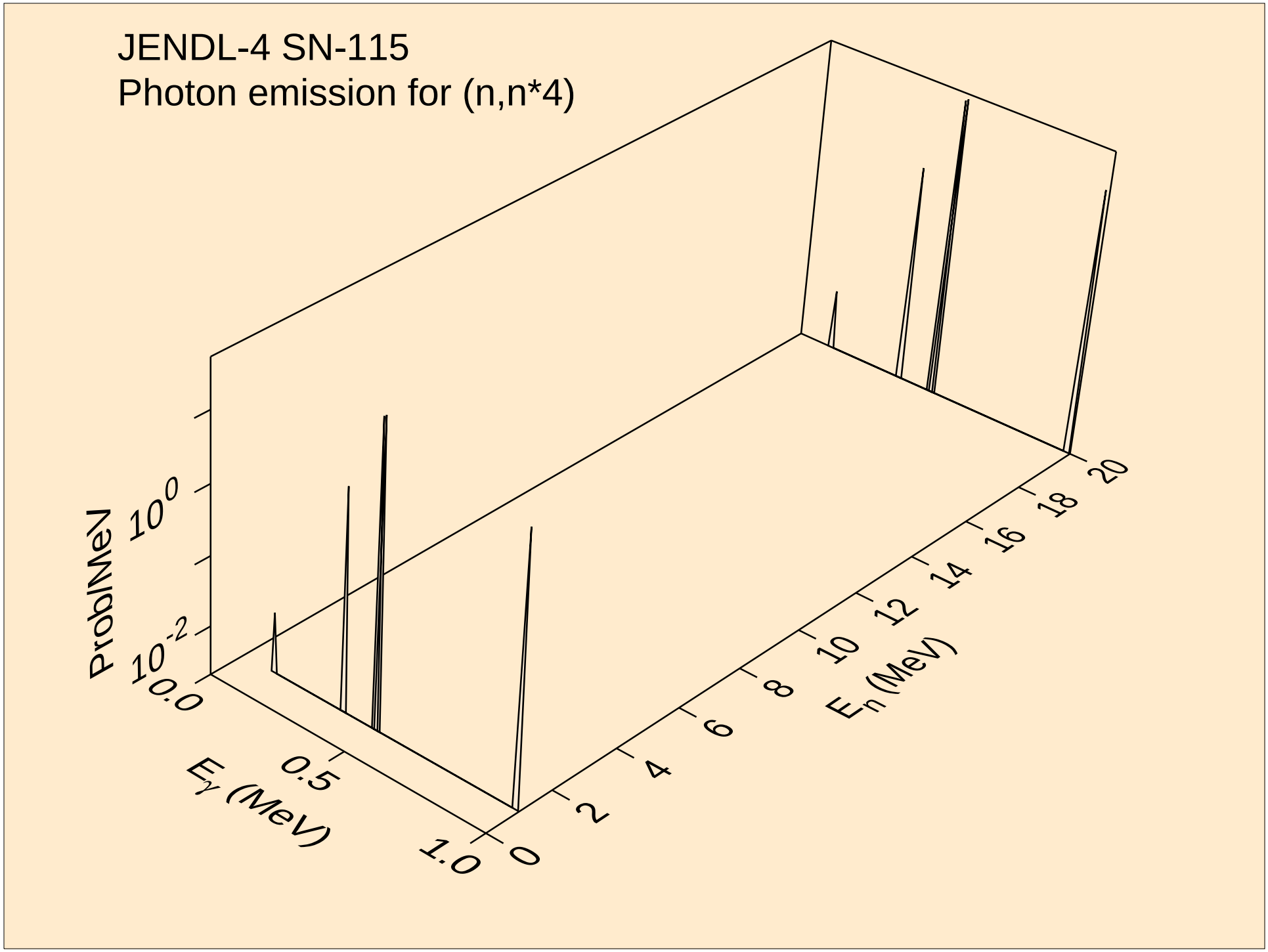


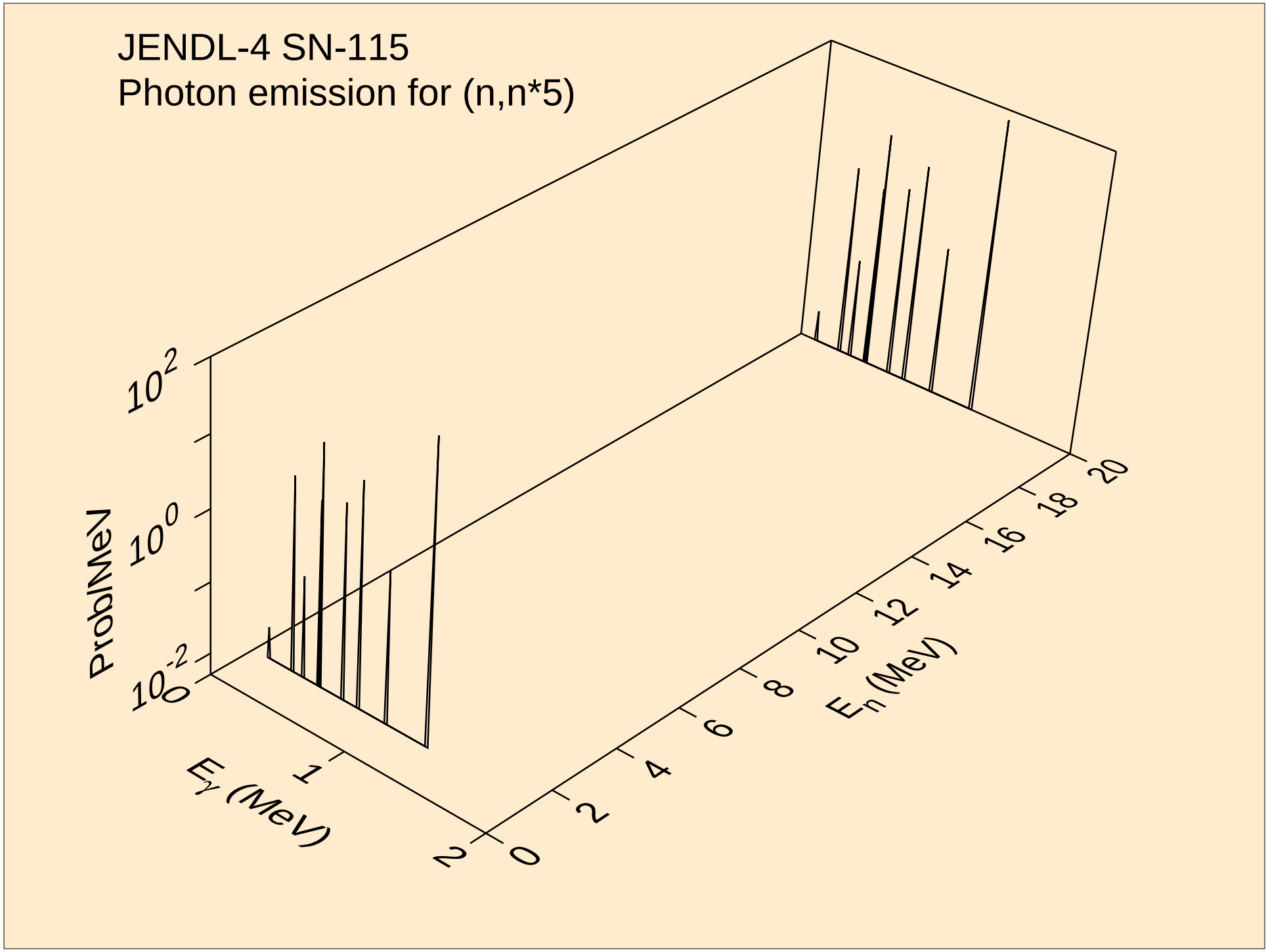
JENDL-4 SN-115
Photon emission for (n,n*2)

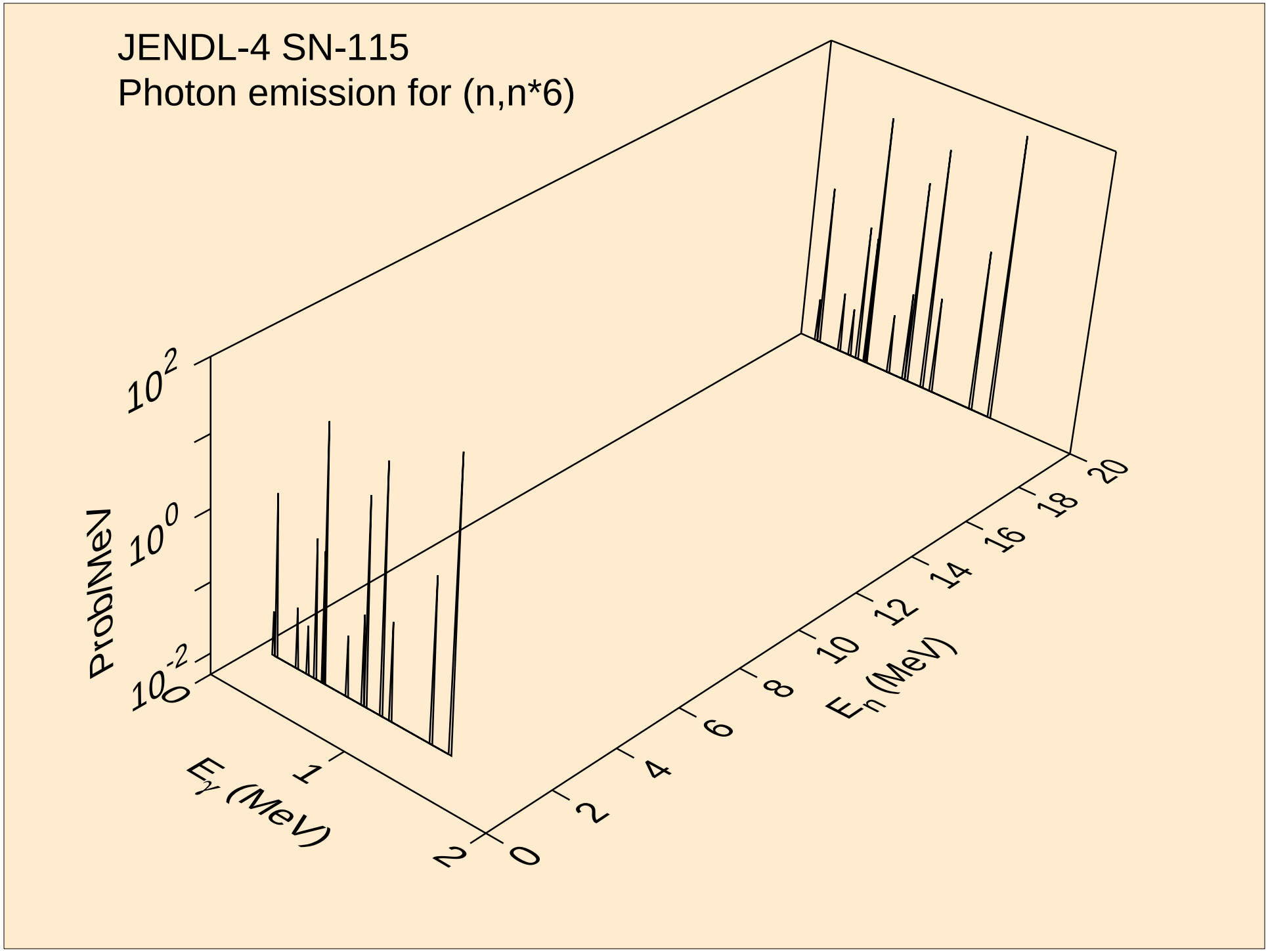


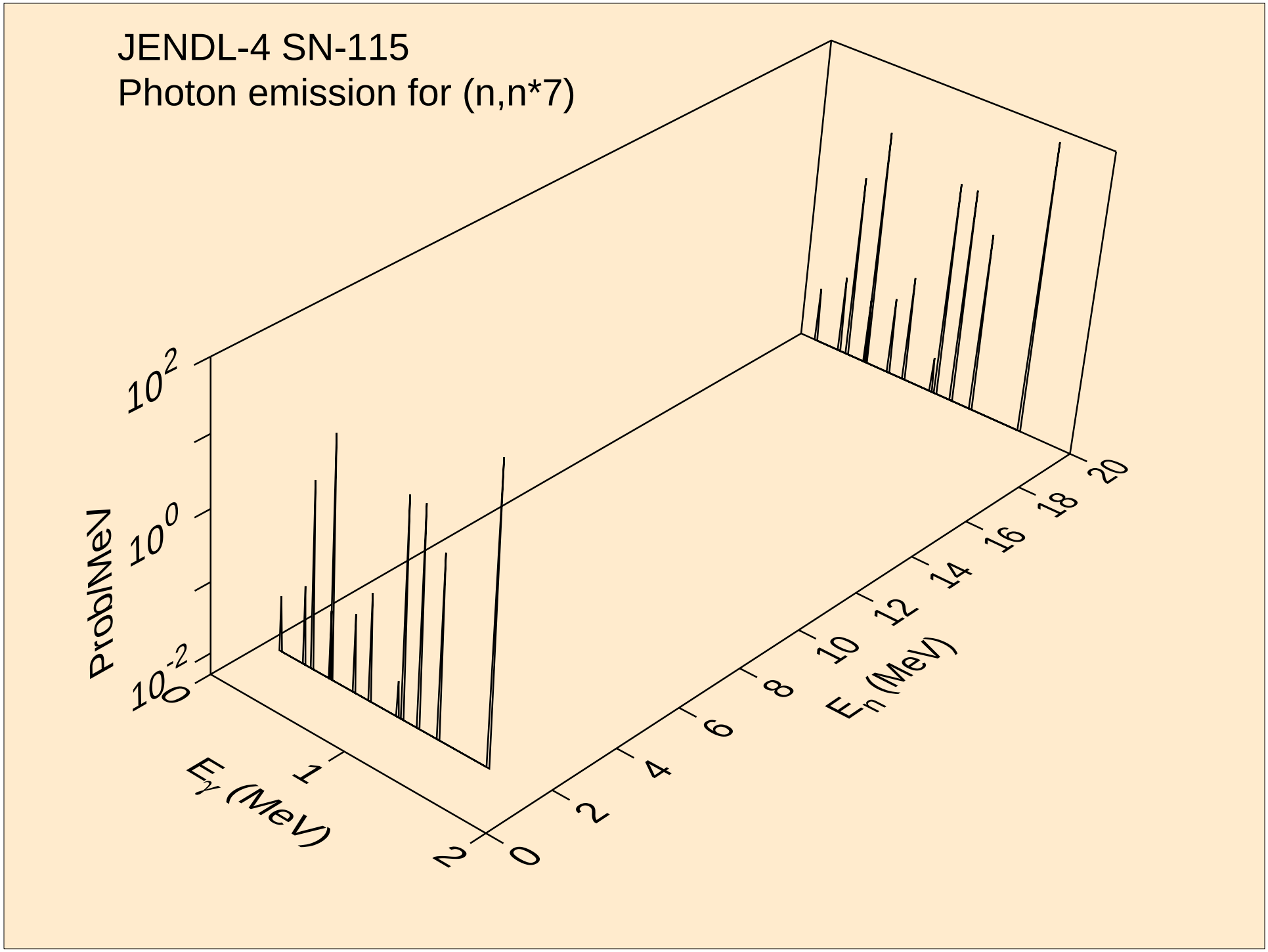
JENDL-4 SN-115
Photon emission for (n,n*3)

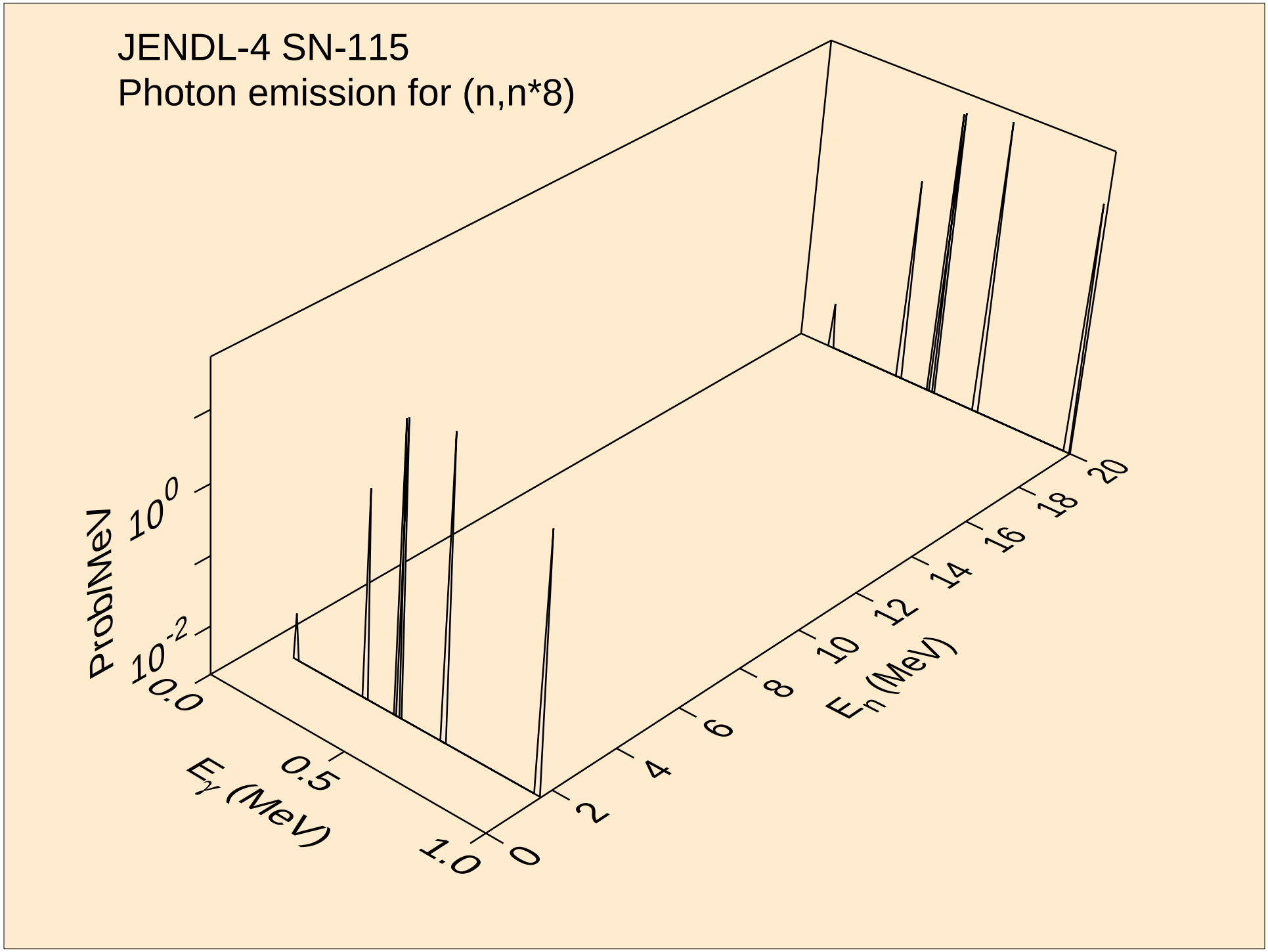


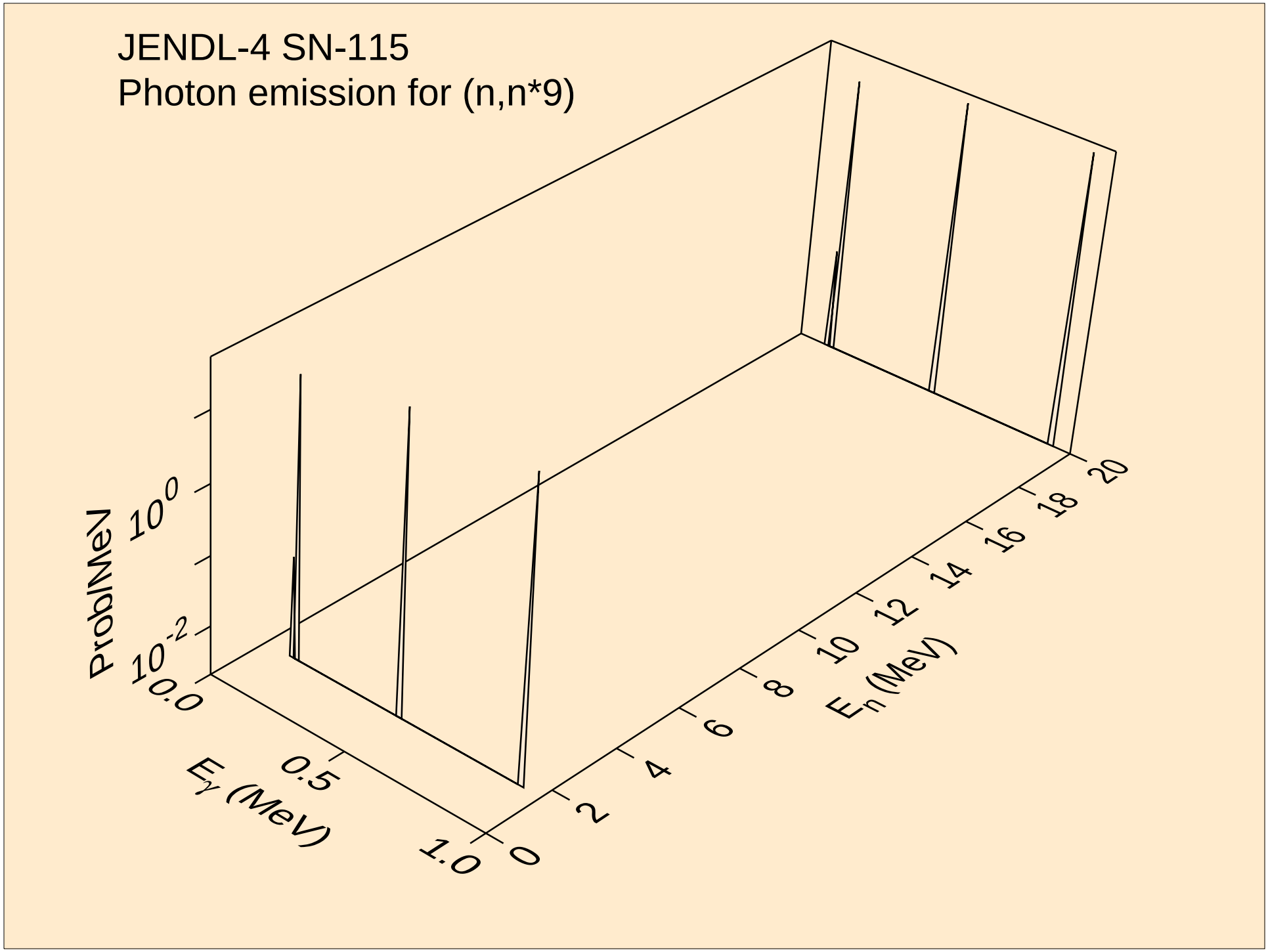

JENDL-4 SN-115
Photon emission for (n,n*4)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

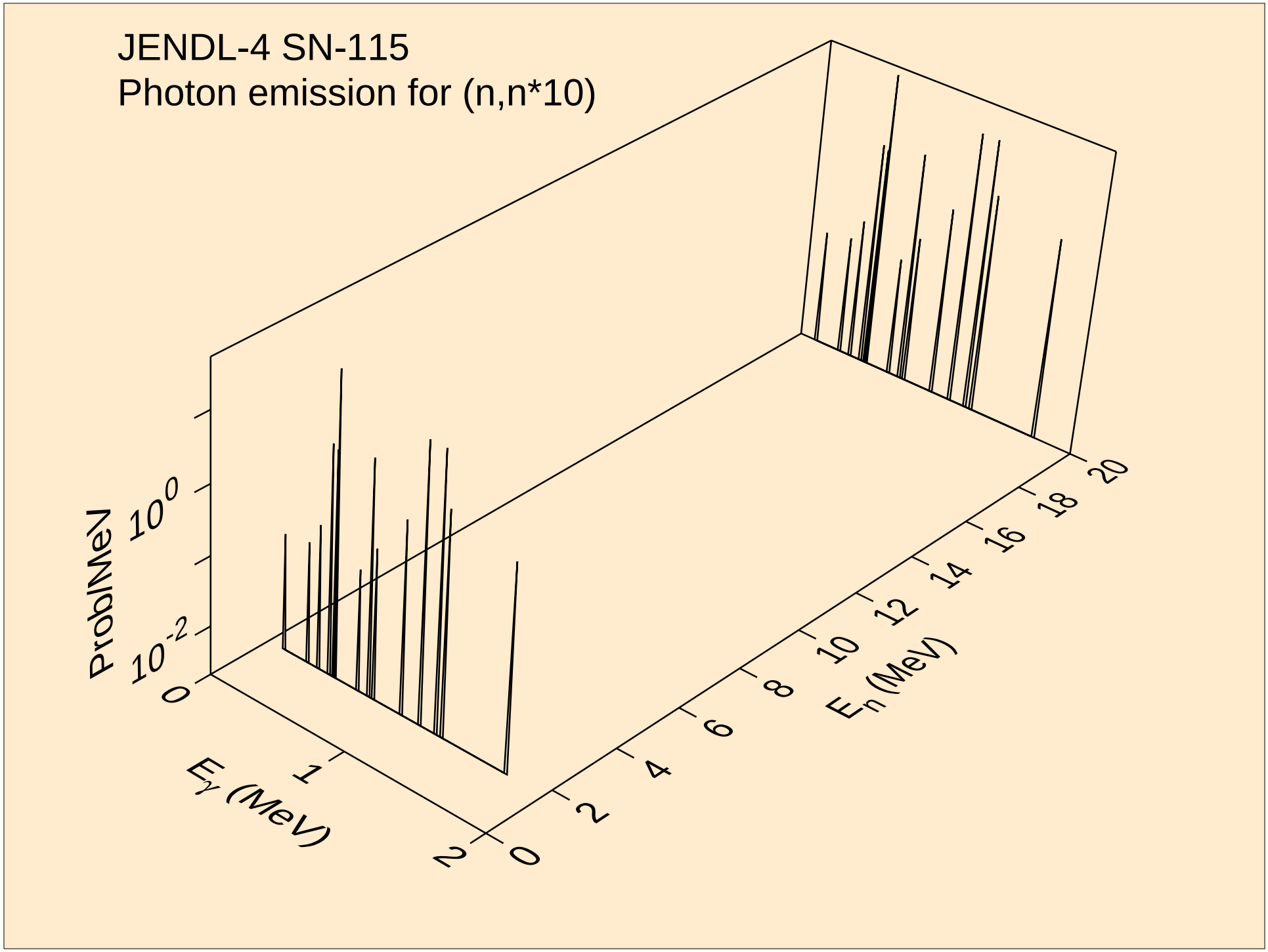

JENDL-4 SN-115
Photon emission for (n,n*5)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
0
2
4
6
8
10
12
14
16
18
20

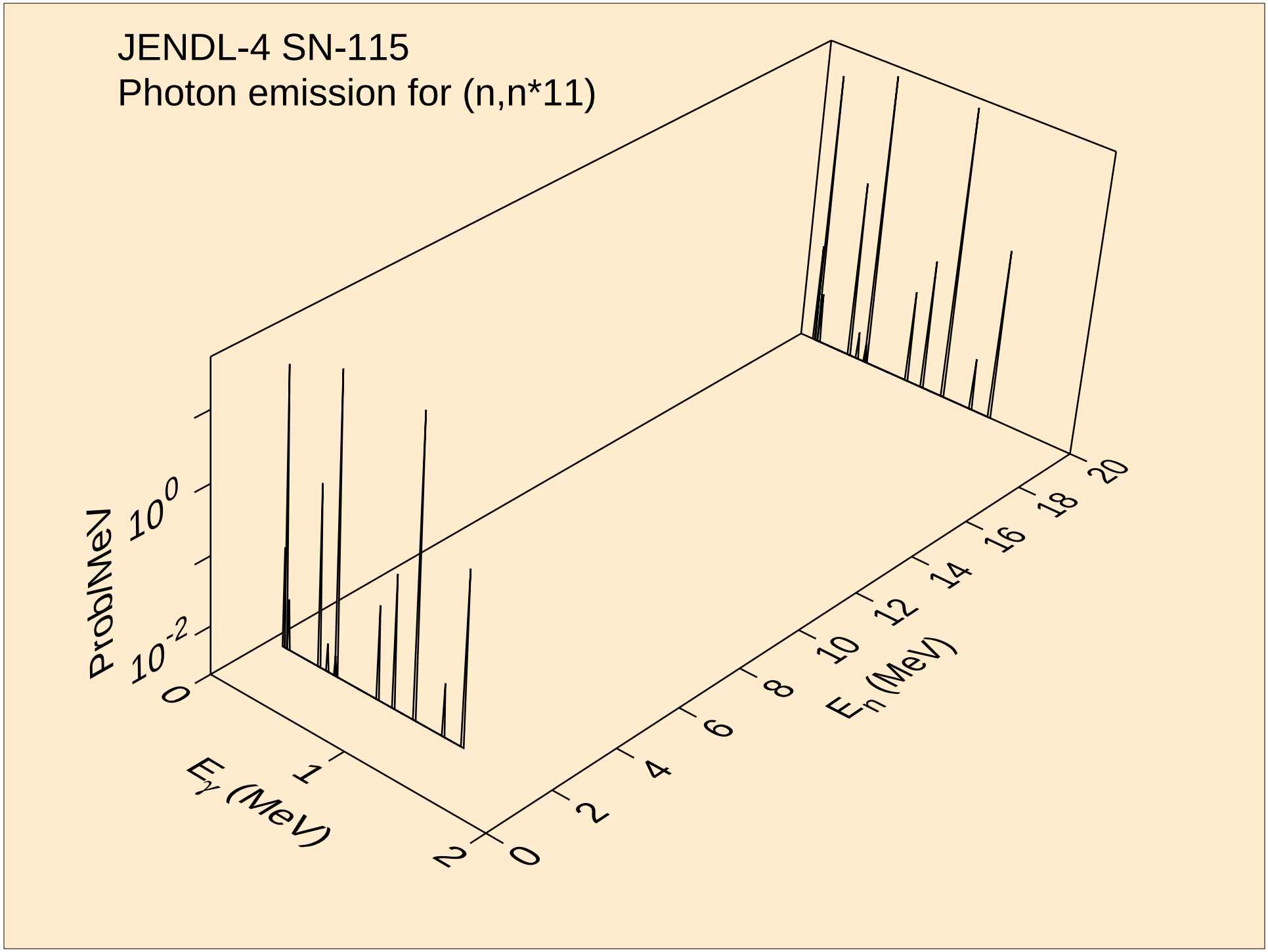

JENDL-4 SN-115
Photon emission for (n,n*6)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
0
2
4
6
8
10
12
14
16
18
20


JENDL-4 SN-115
Photon emission for (n,n*7)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
0
2
4
6
8
10
12
14
16
18
20

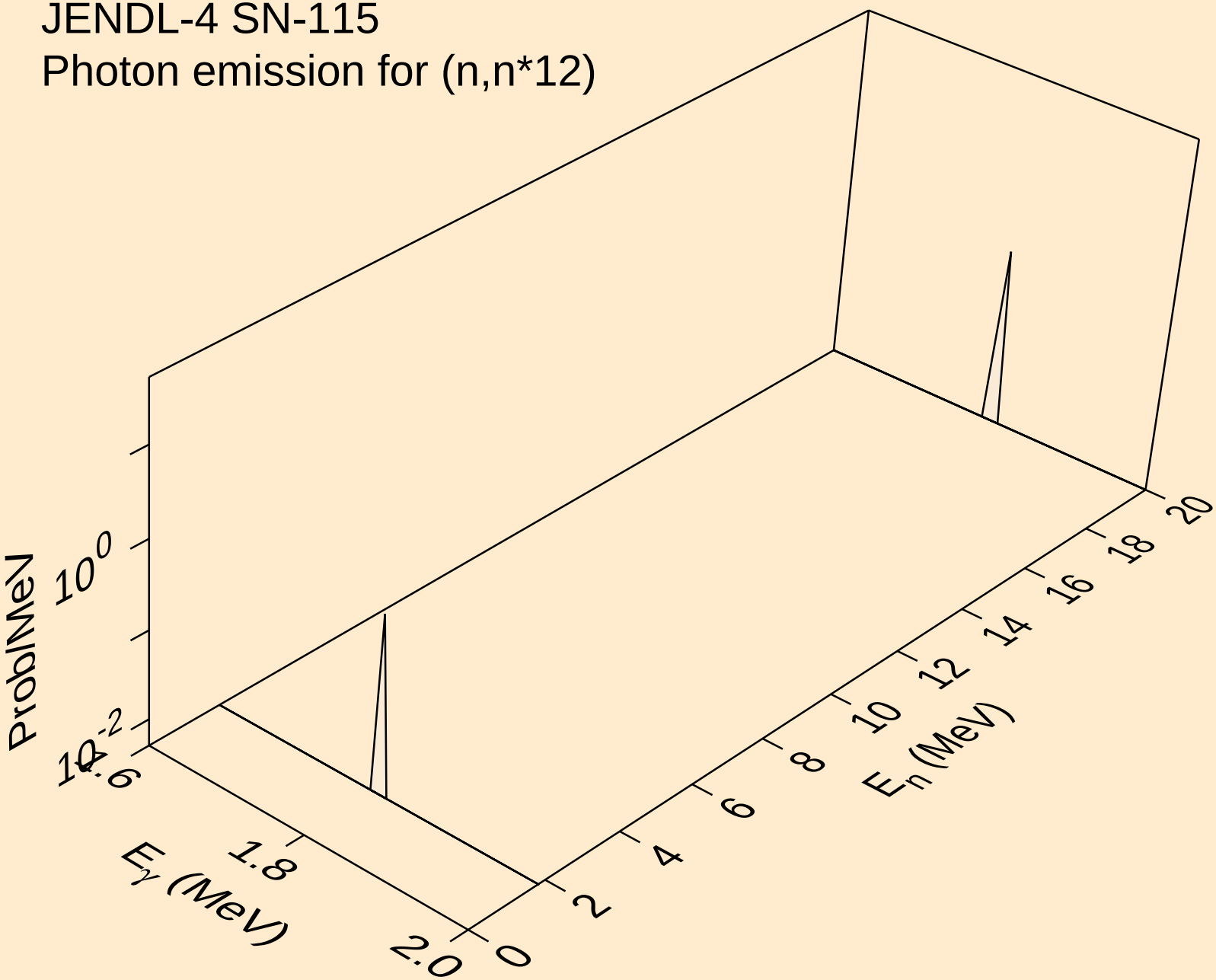

JENDL-4 SN-115
Photon emission for (n,n*8)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

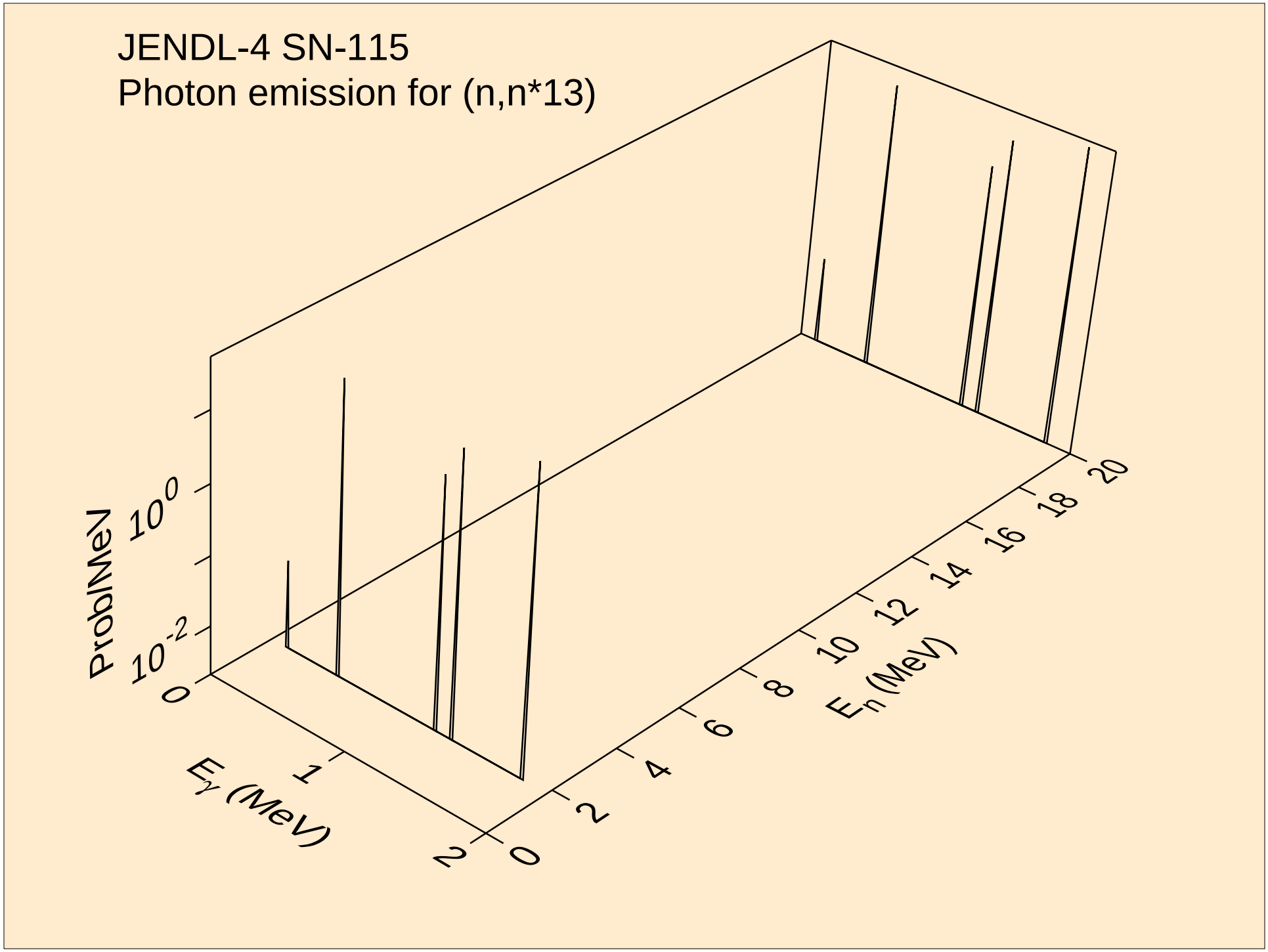

JENDL-4 SN-115
Photon emission for (n,n*9)
Prob/MeV
10^0
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

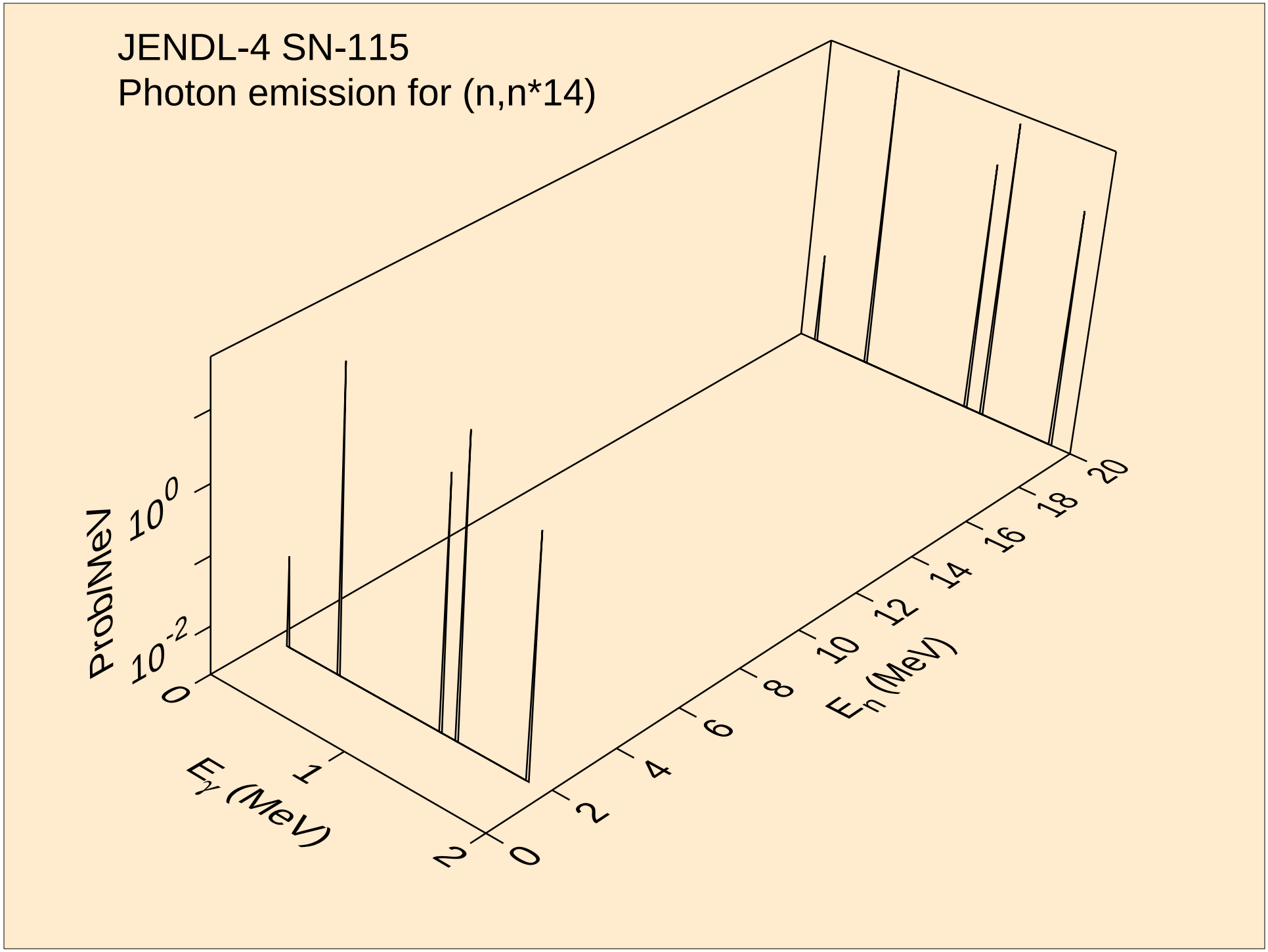

JENDL-4 SN-115
Photon emission for (n,n*10)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

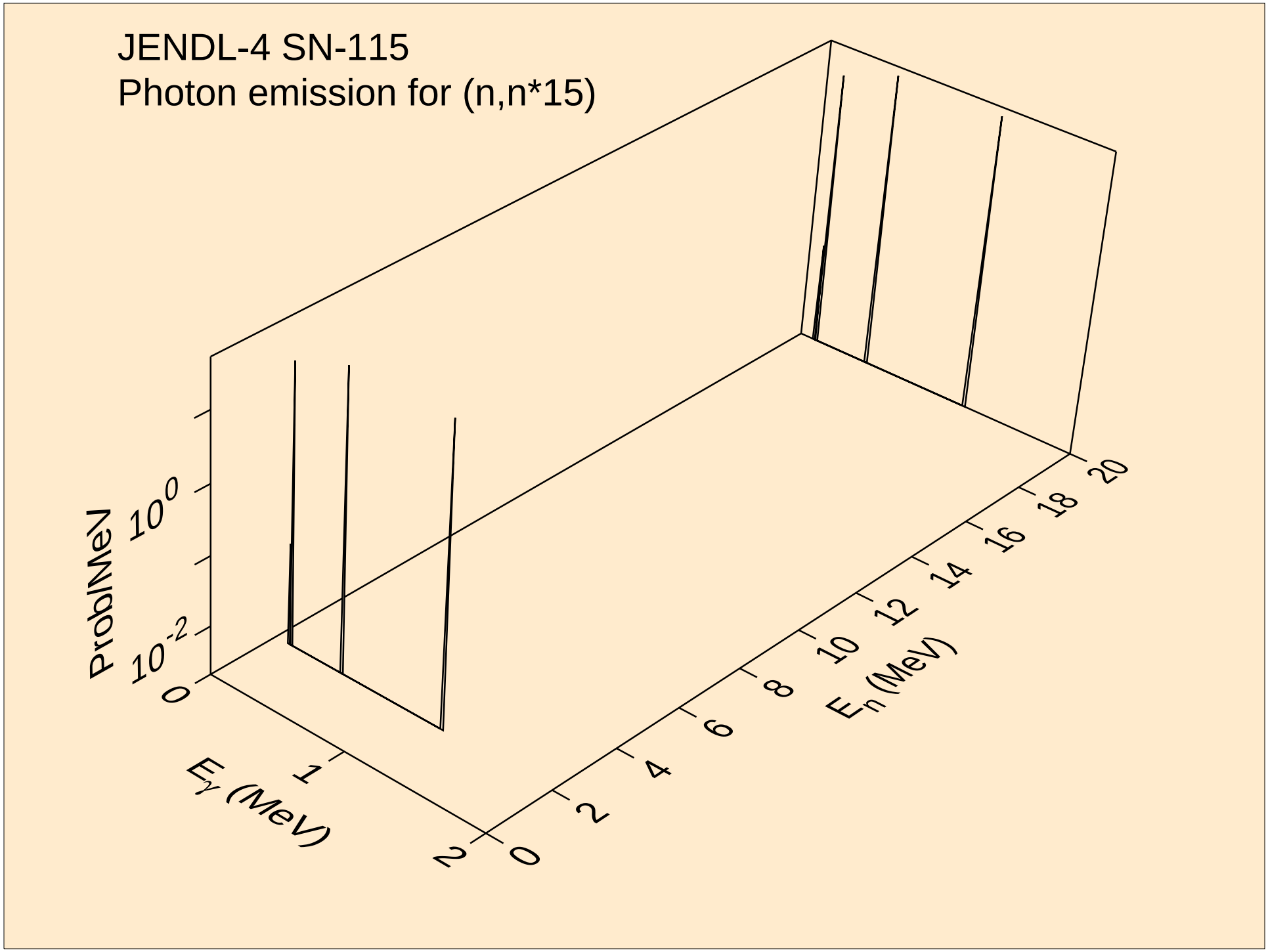

JENDL-4 SN-115
Photon emission for (n,n*11)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

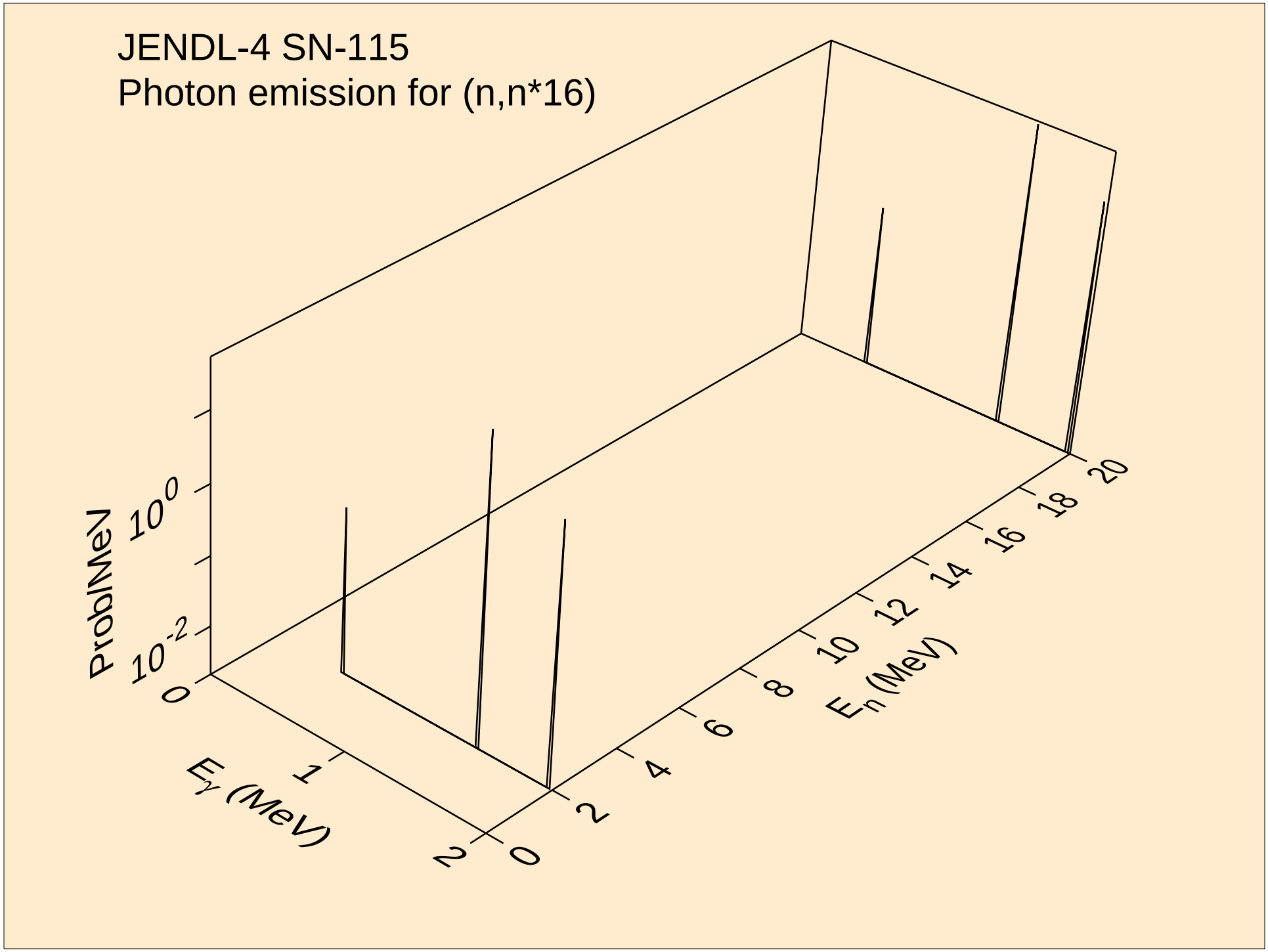
JENDL-4 SN-115
Photon emission for (n,n*12)

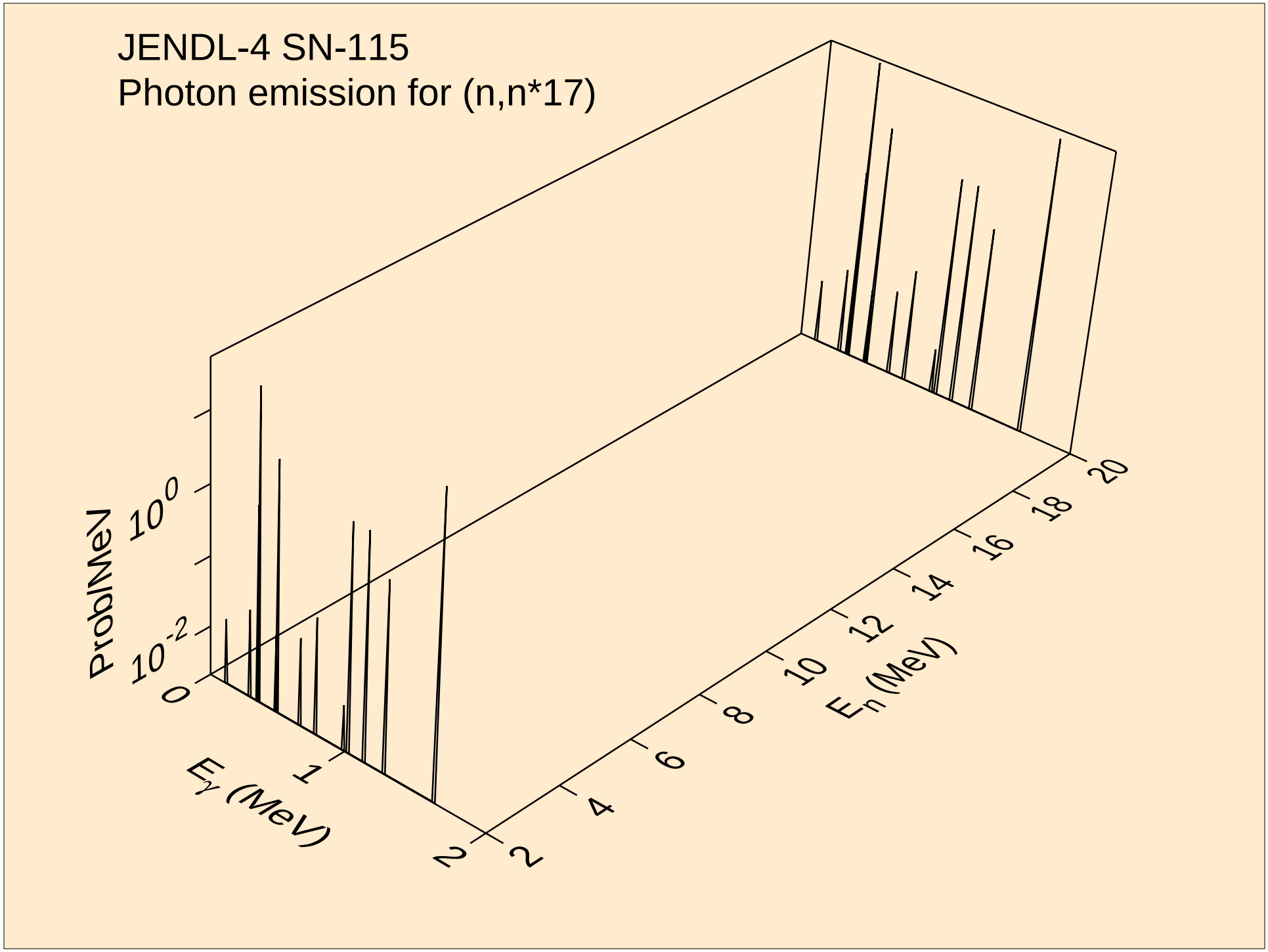



JENDL-4 SN-115
Photon emission for (n,n*13)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

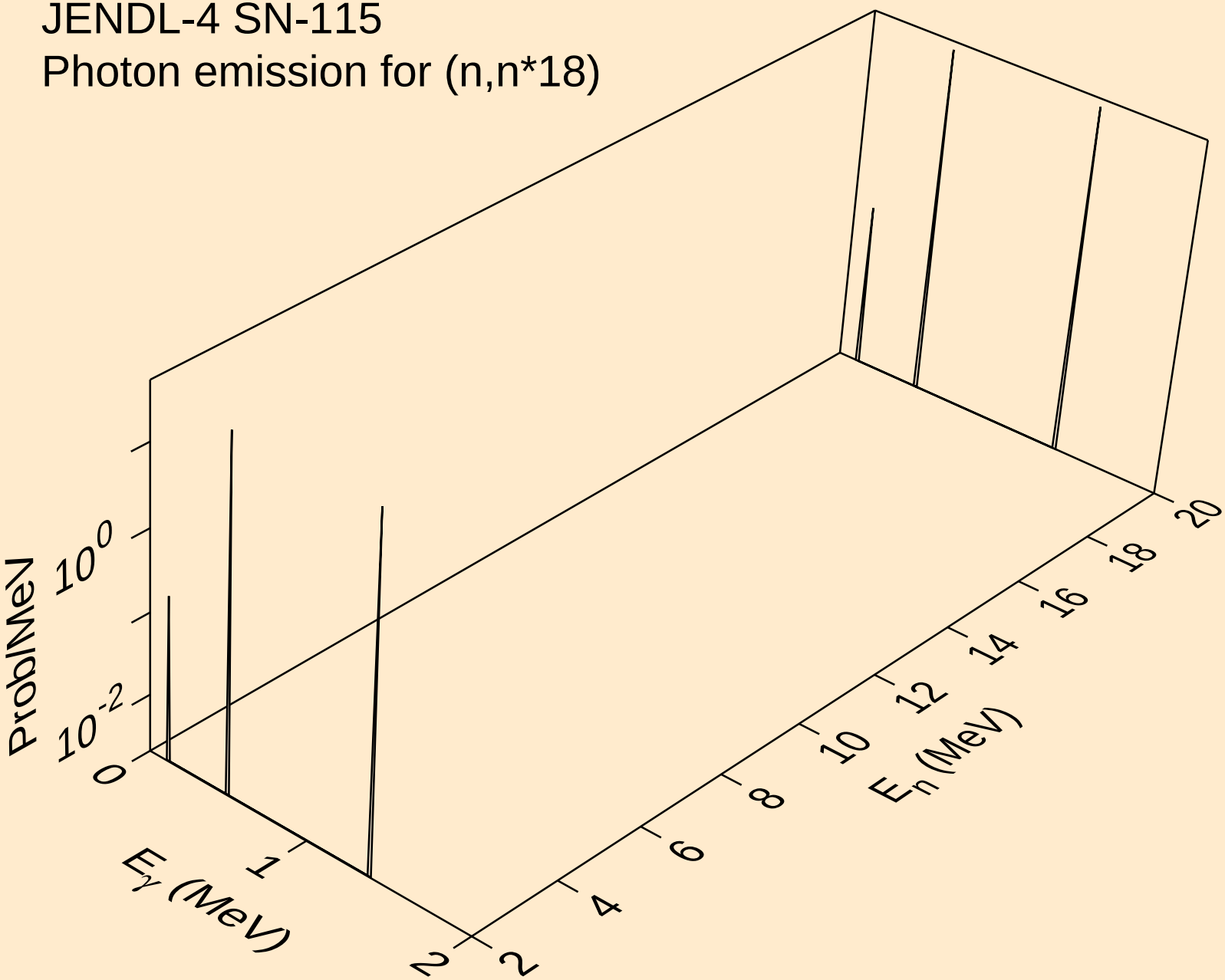

JENDL-4 SN-115
Photon emission for (n,n*14)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 SN-115
Photon emission for (n,n*15)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

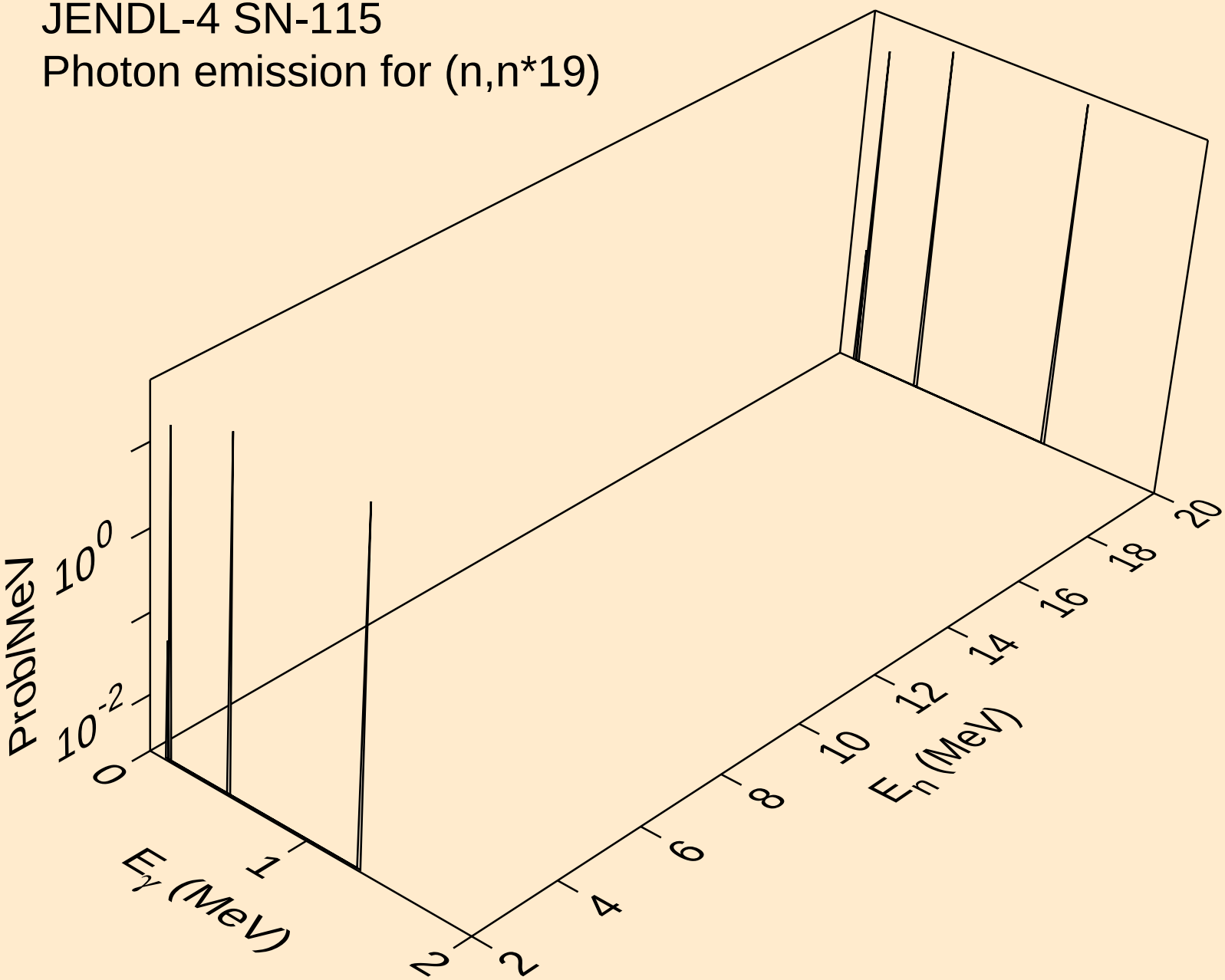

JENDL-4 SN-115
Photon emission for (n,n*16)
Prob/MeV
10^0
10^{-2}
0
1
2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

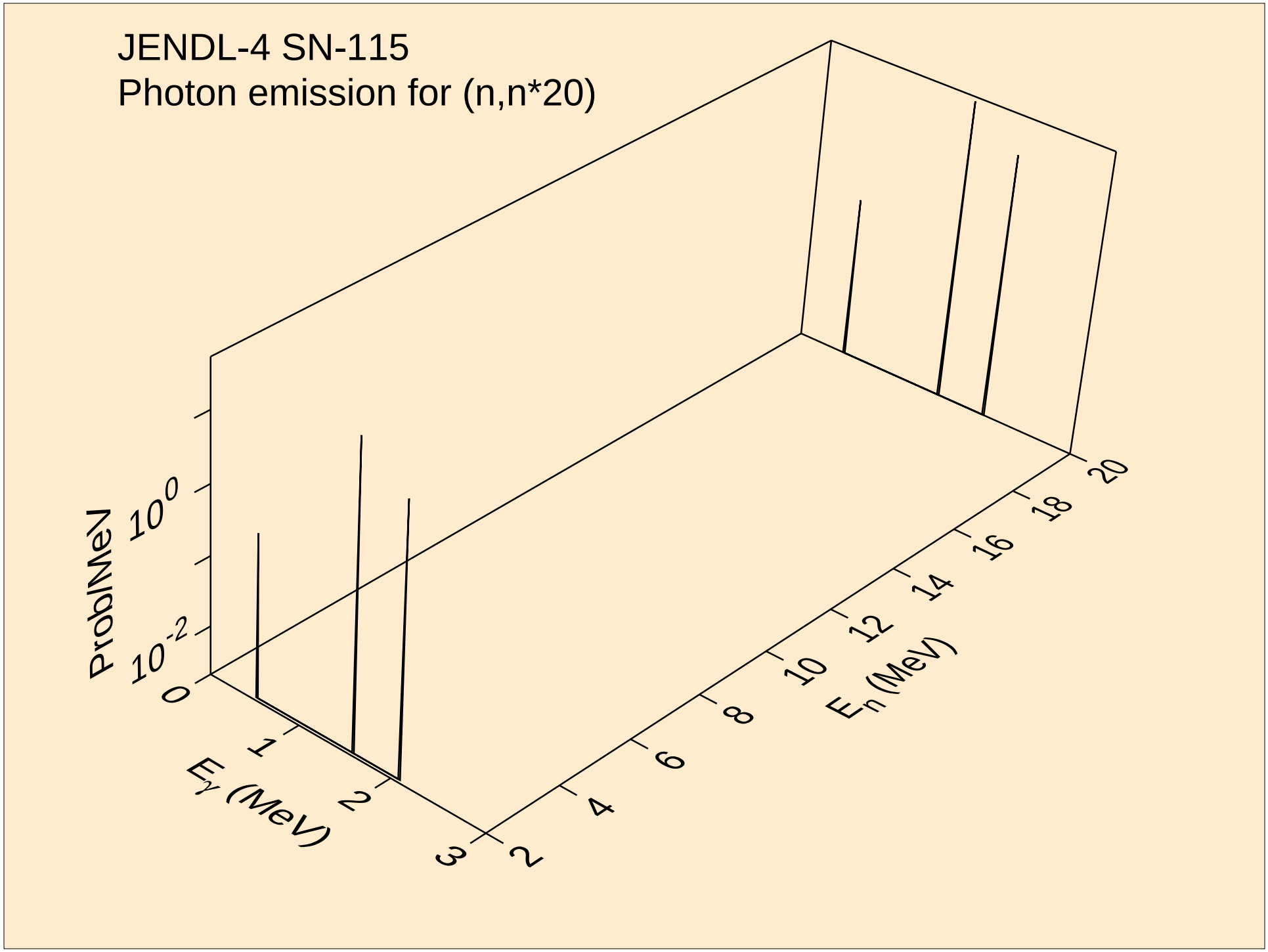

JENDL-4 SN-115
Photon emission for (n,n*17)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

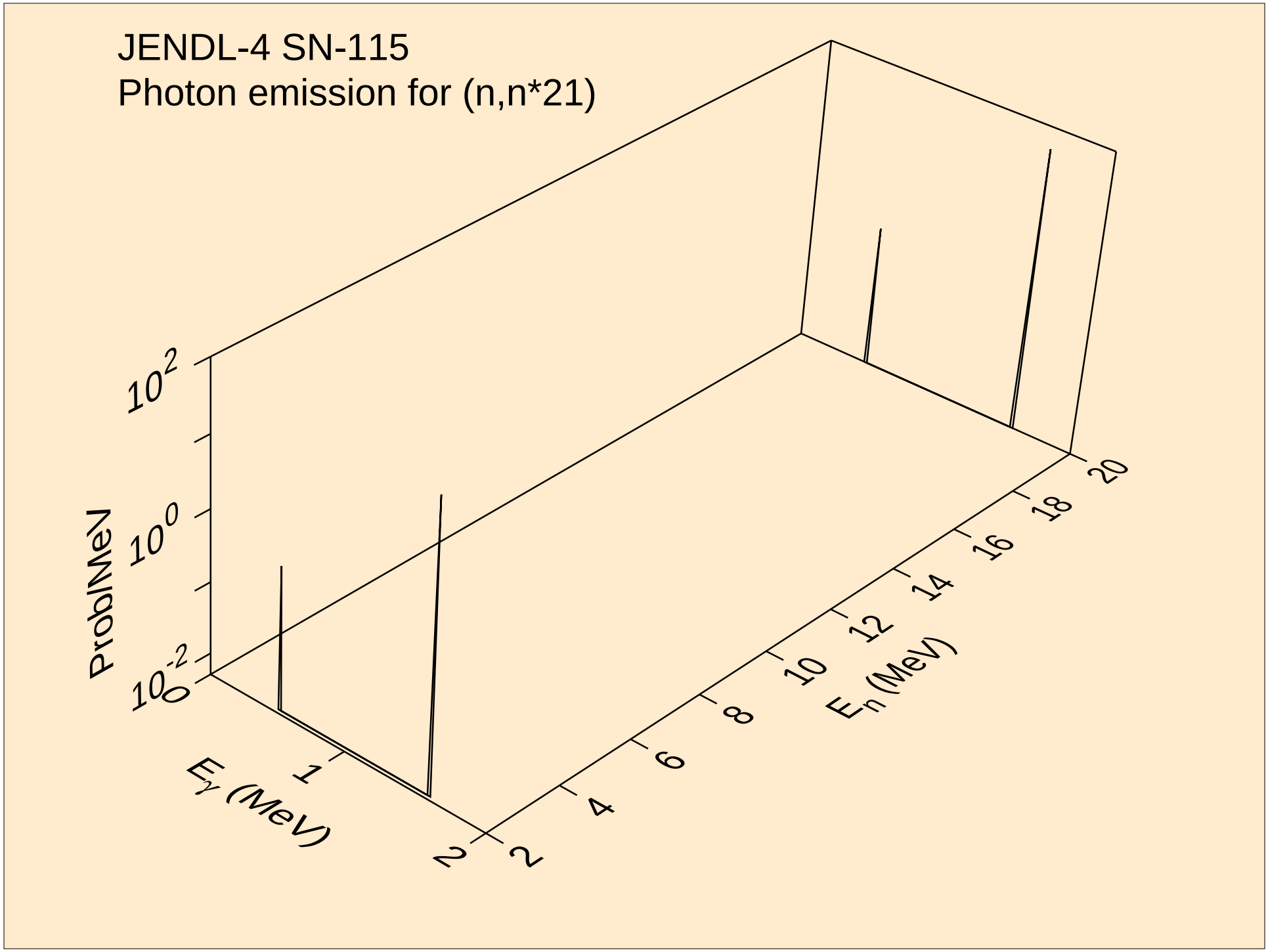
JENDL-4 SN-115
Photon emission for (n,n*18)

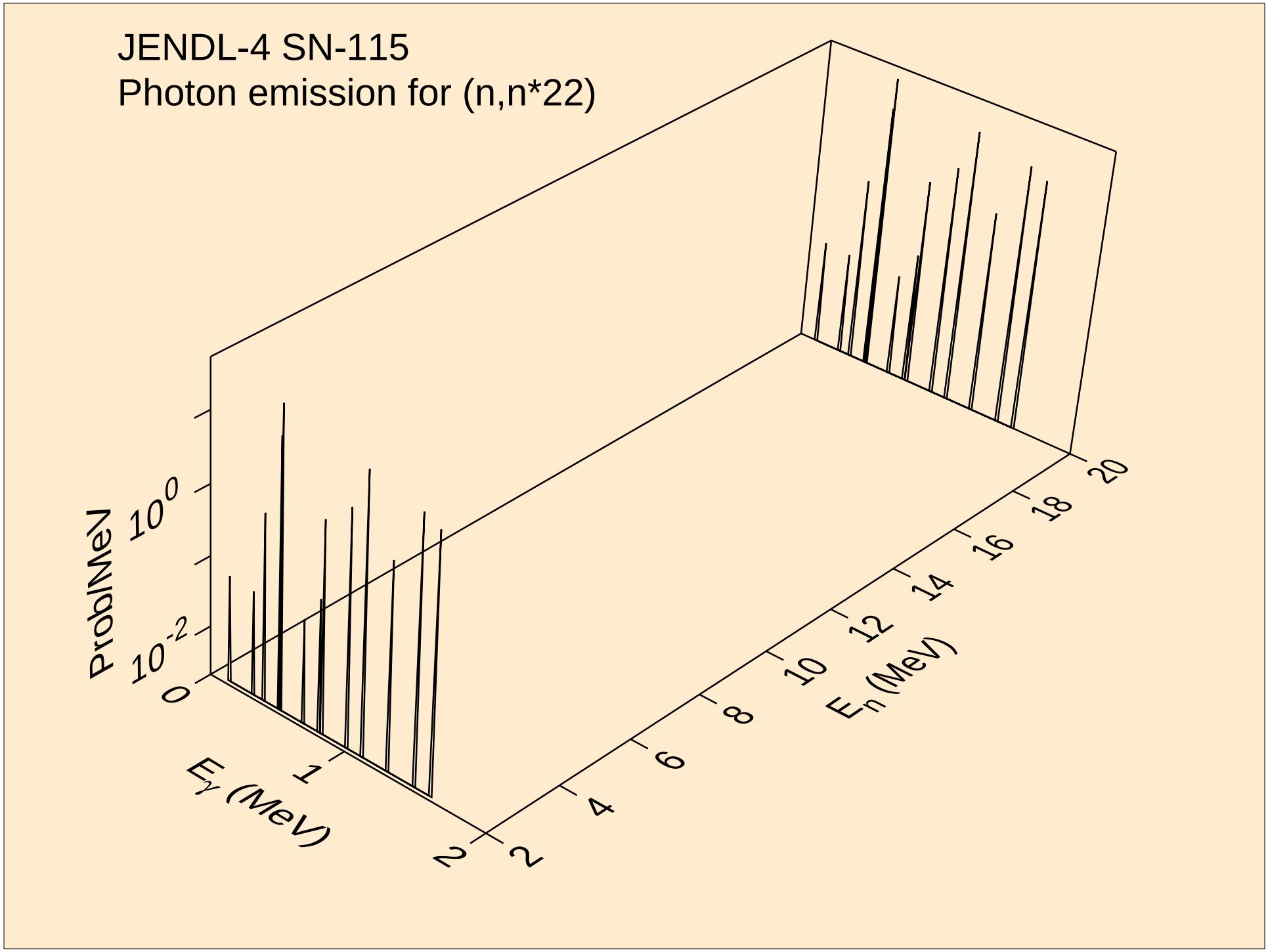


JENDL-4 SN-115
Photon emission for (n,n*19)

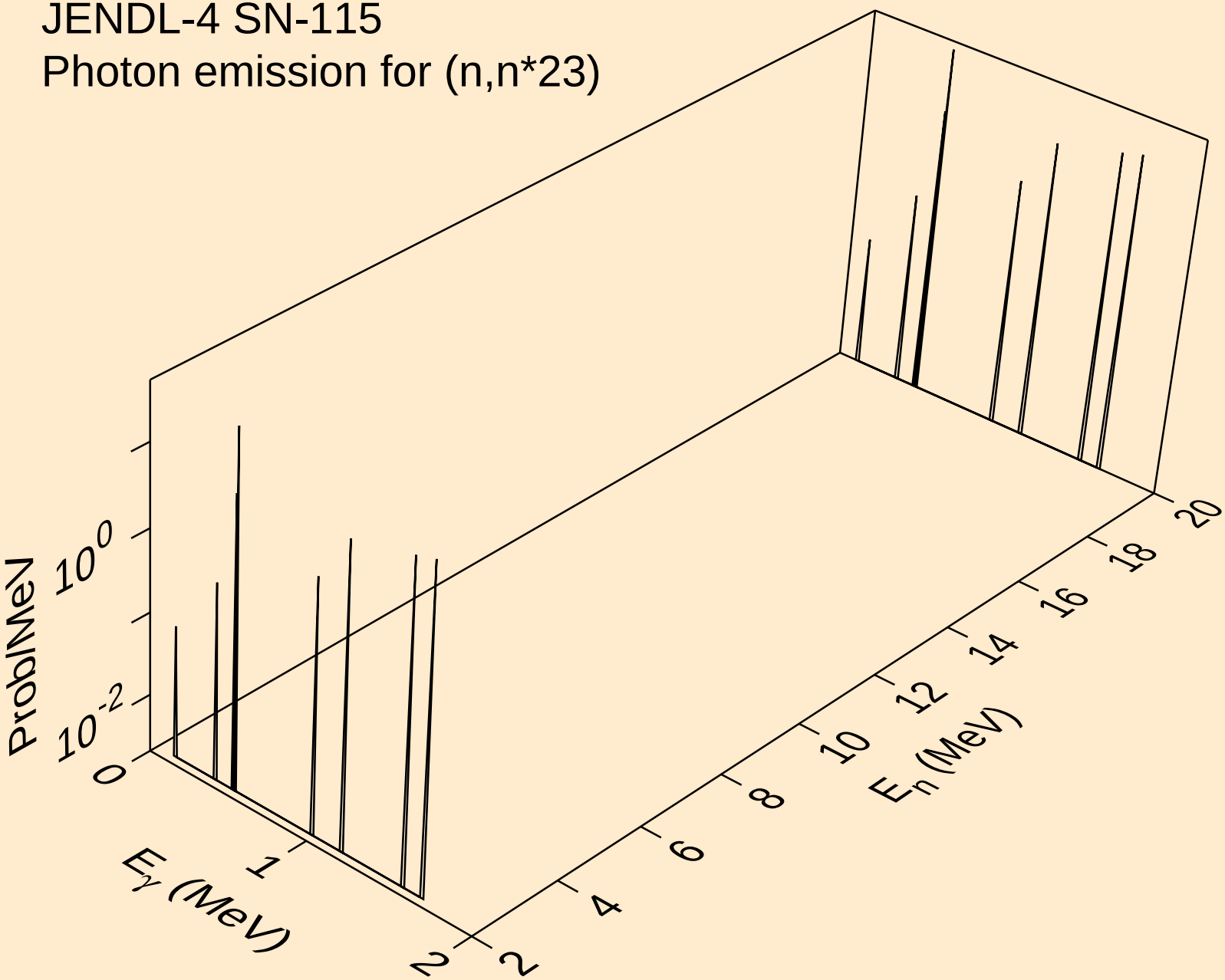


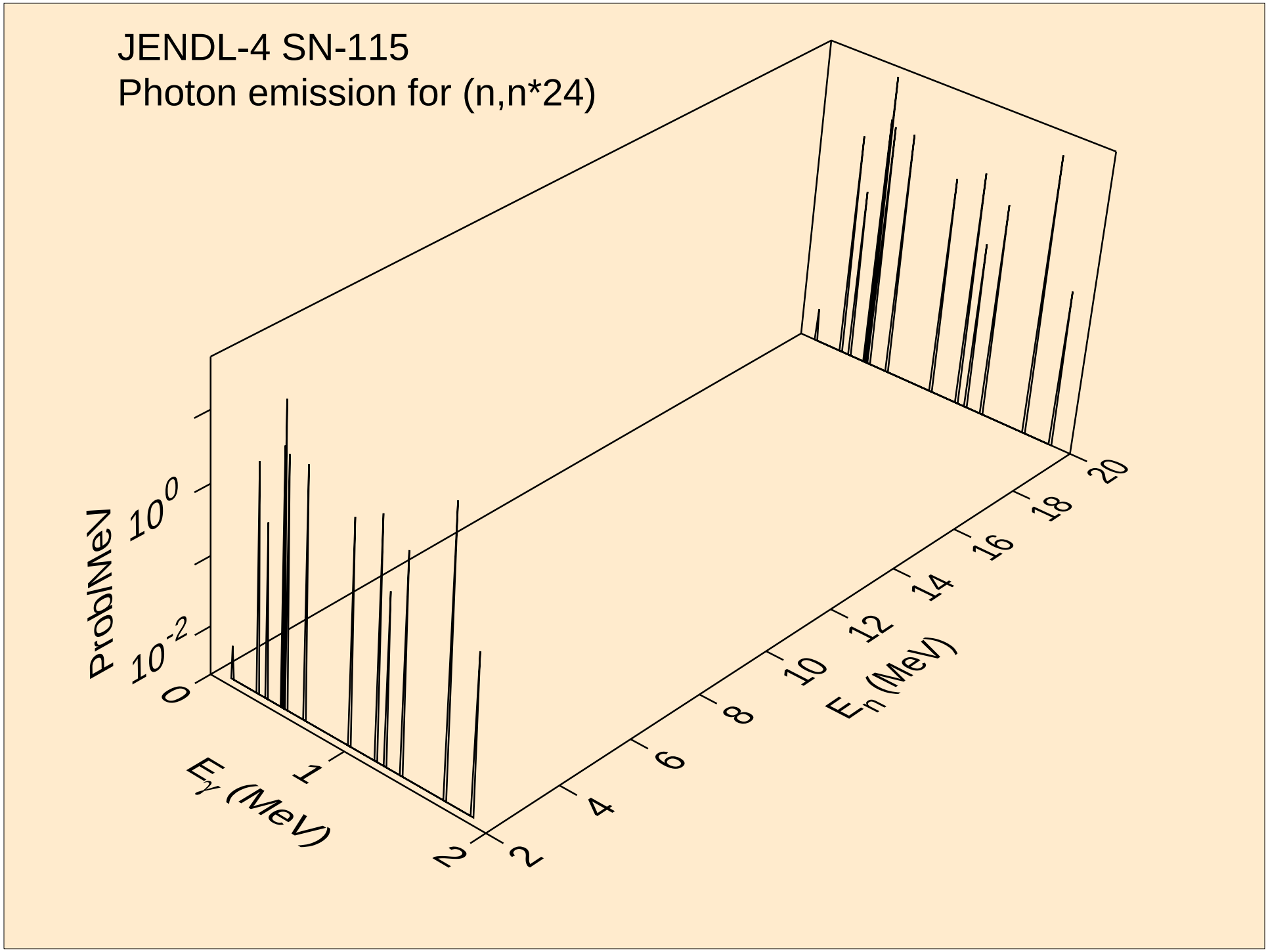

JENDL-4 SN-115
Photon emission for (n,n*20)
Prob/MeV
10^0
10^{-2}
0
1
2
3
E_γ (MeV)
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

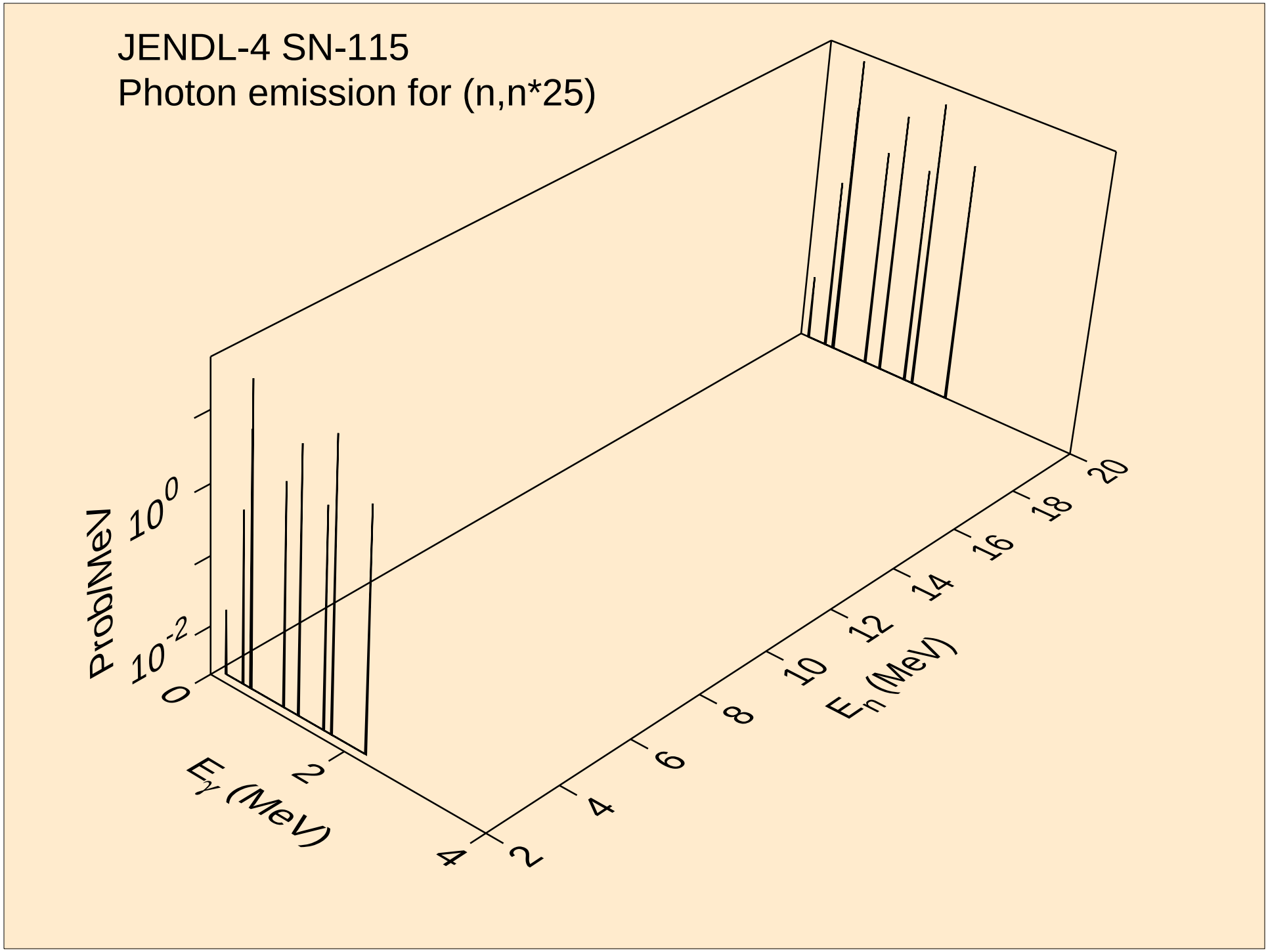

JENDL-4 SN-115
Photon emission for (n,n*21)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

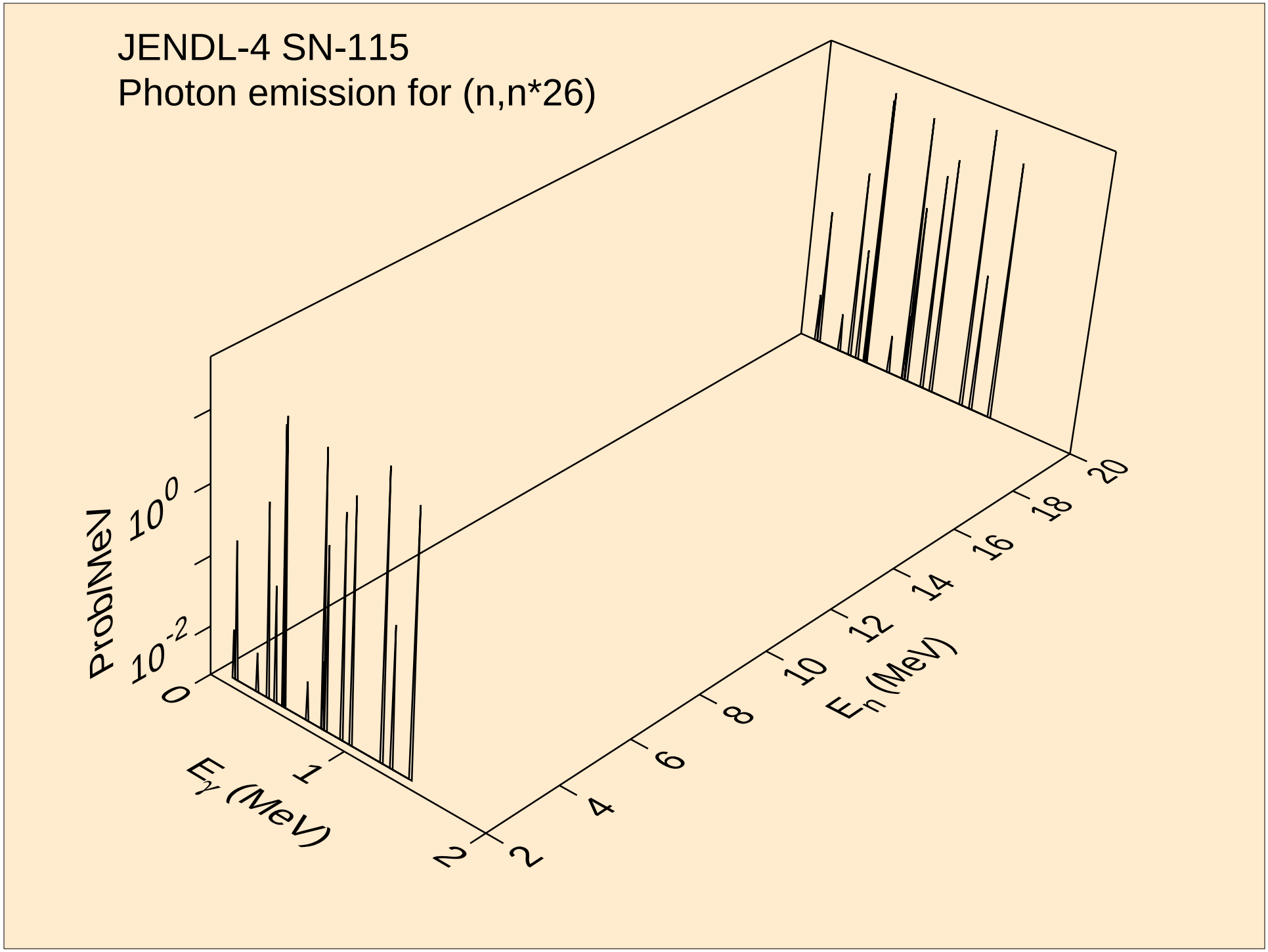

JENDL-4 SN-115
Photon emission for (n,n*22)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

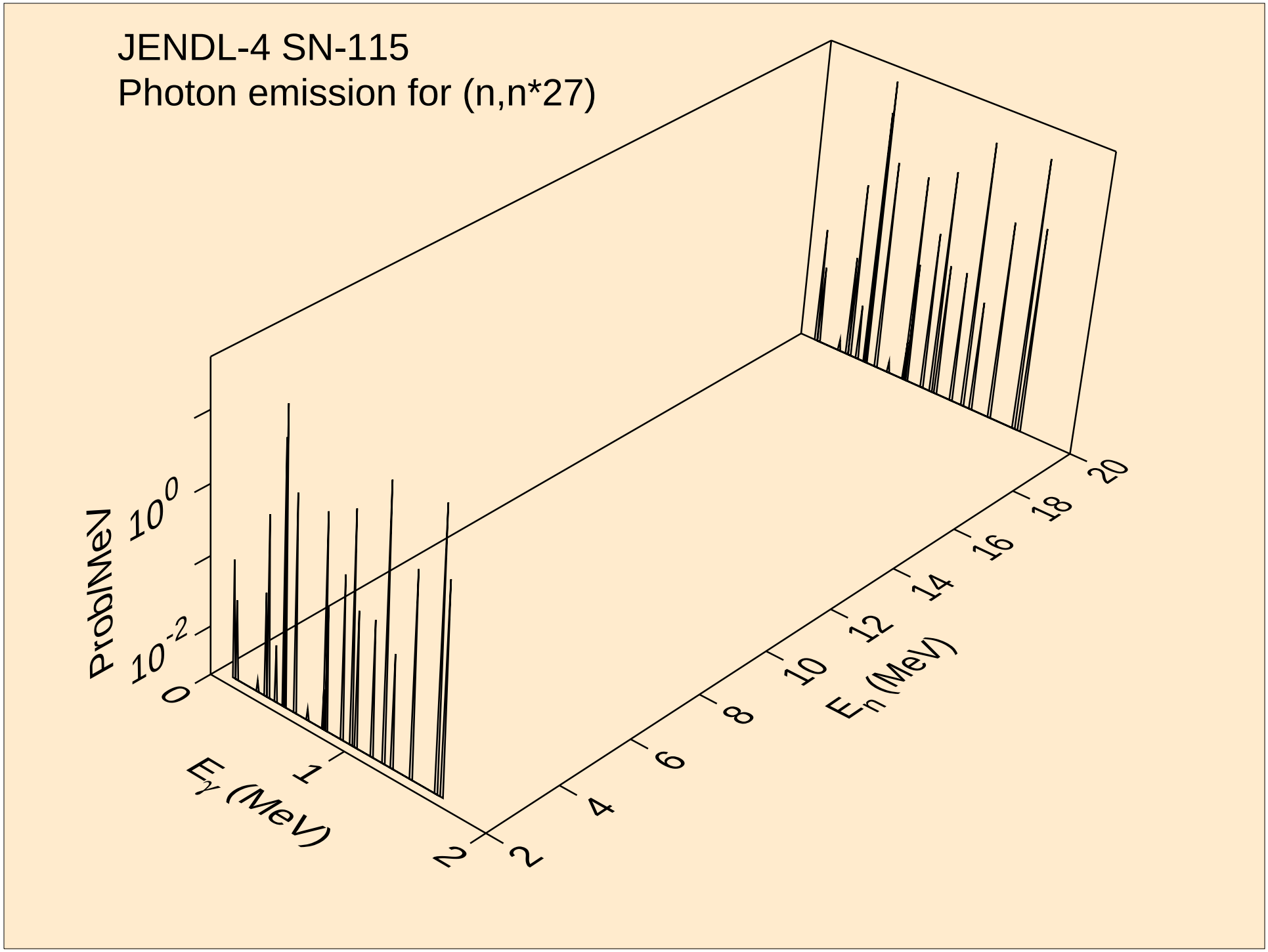
JENDL-4 SN-115
Photon emission for (n,n*23)

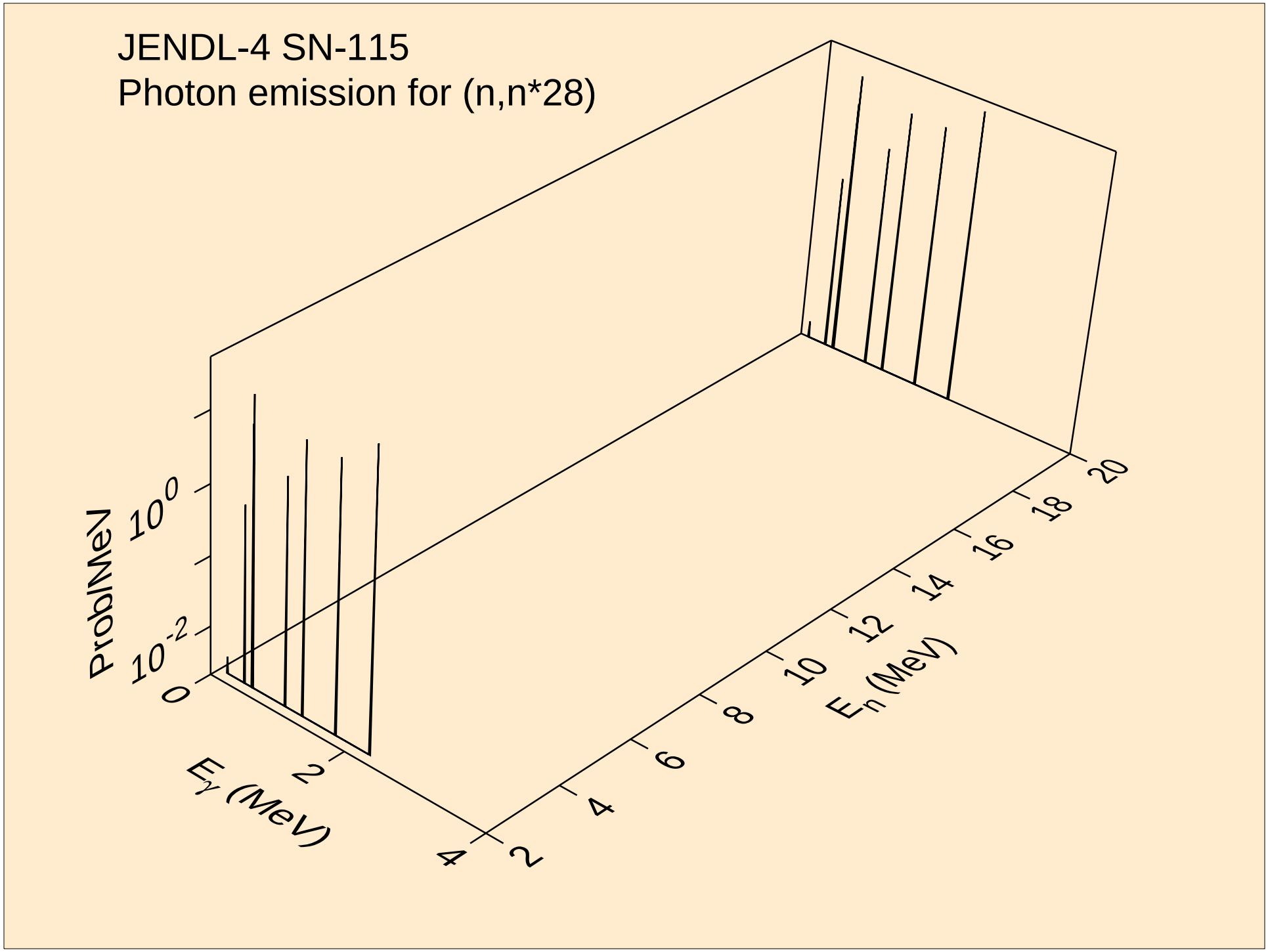



JENDL-4 SN-115
Photon emission for (n,n*24)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

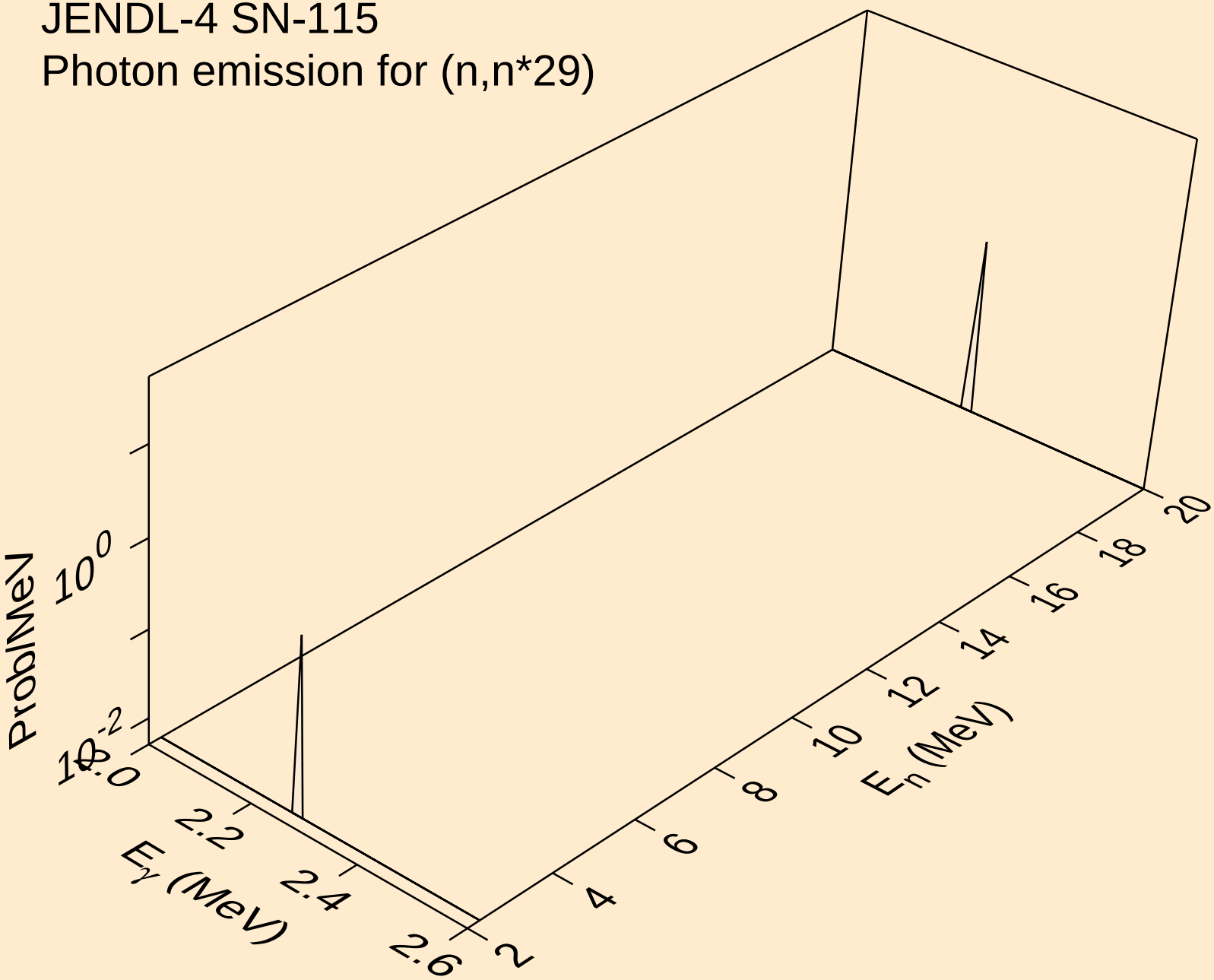

JENDL-4 SN-115
Photon emission for (n,n*25)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
2
4
E_n (MeV)
2
4
6
8
10
12
14
16
18
20


JENDL-4 SN-115
Photon emission for (n,n*26)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

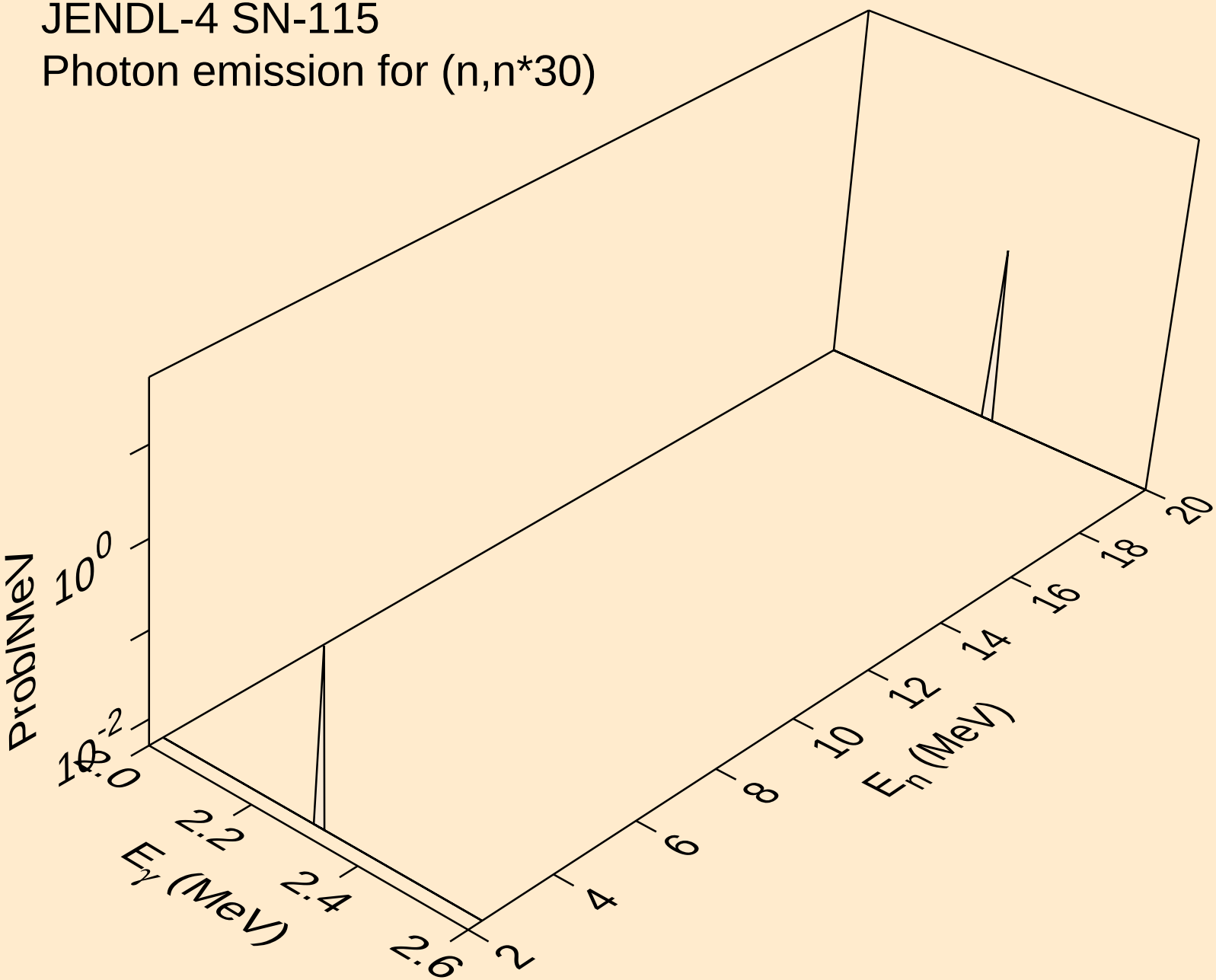

JENDL-4 SN-115
Photon emission for (n,n*27)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

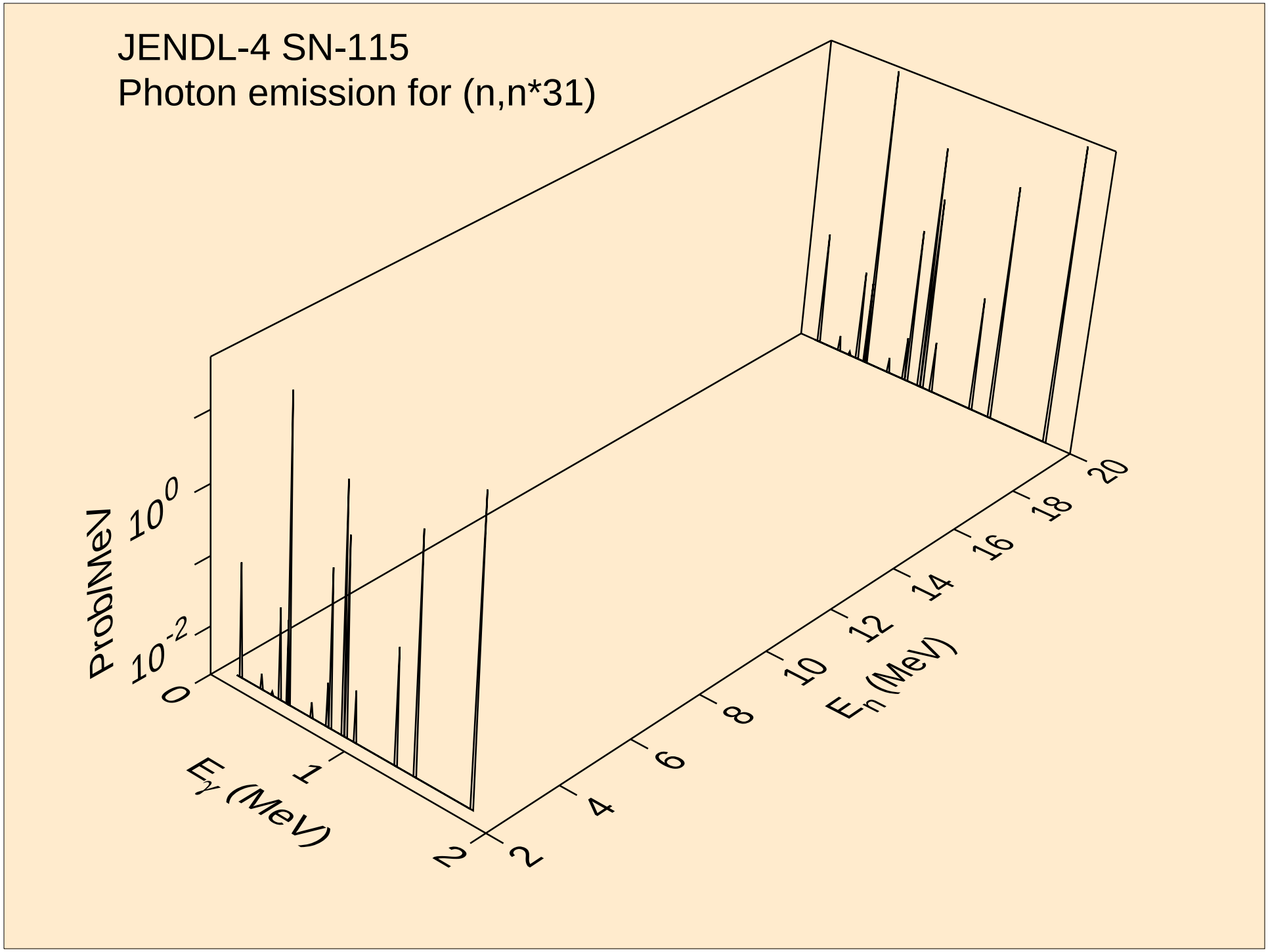

JENDL-4 SN-115
Photon emission for (n,n*28)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
2
4
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

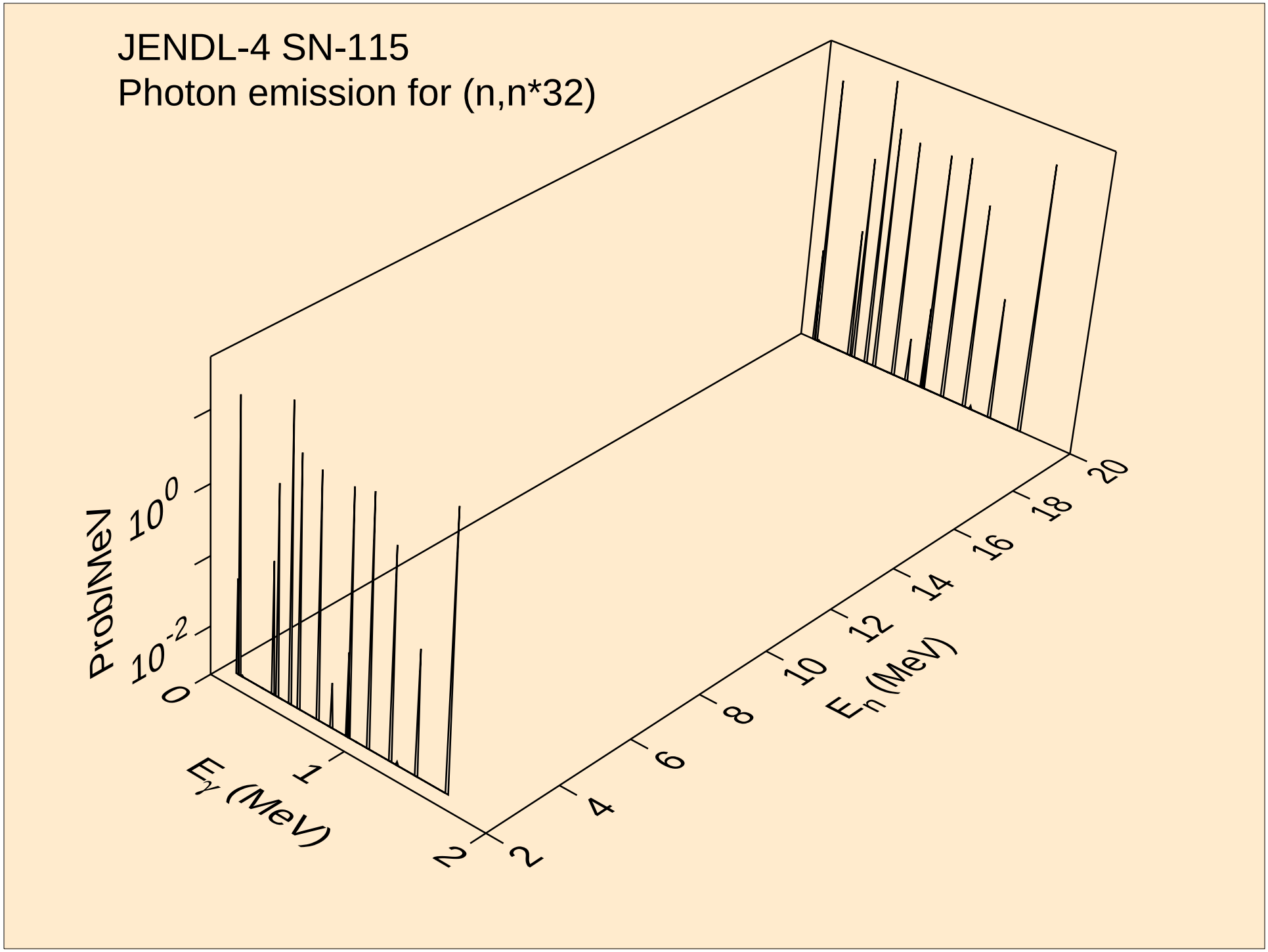
JENDL-4 SN-115
Photon emission for (n,n*29)

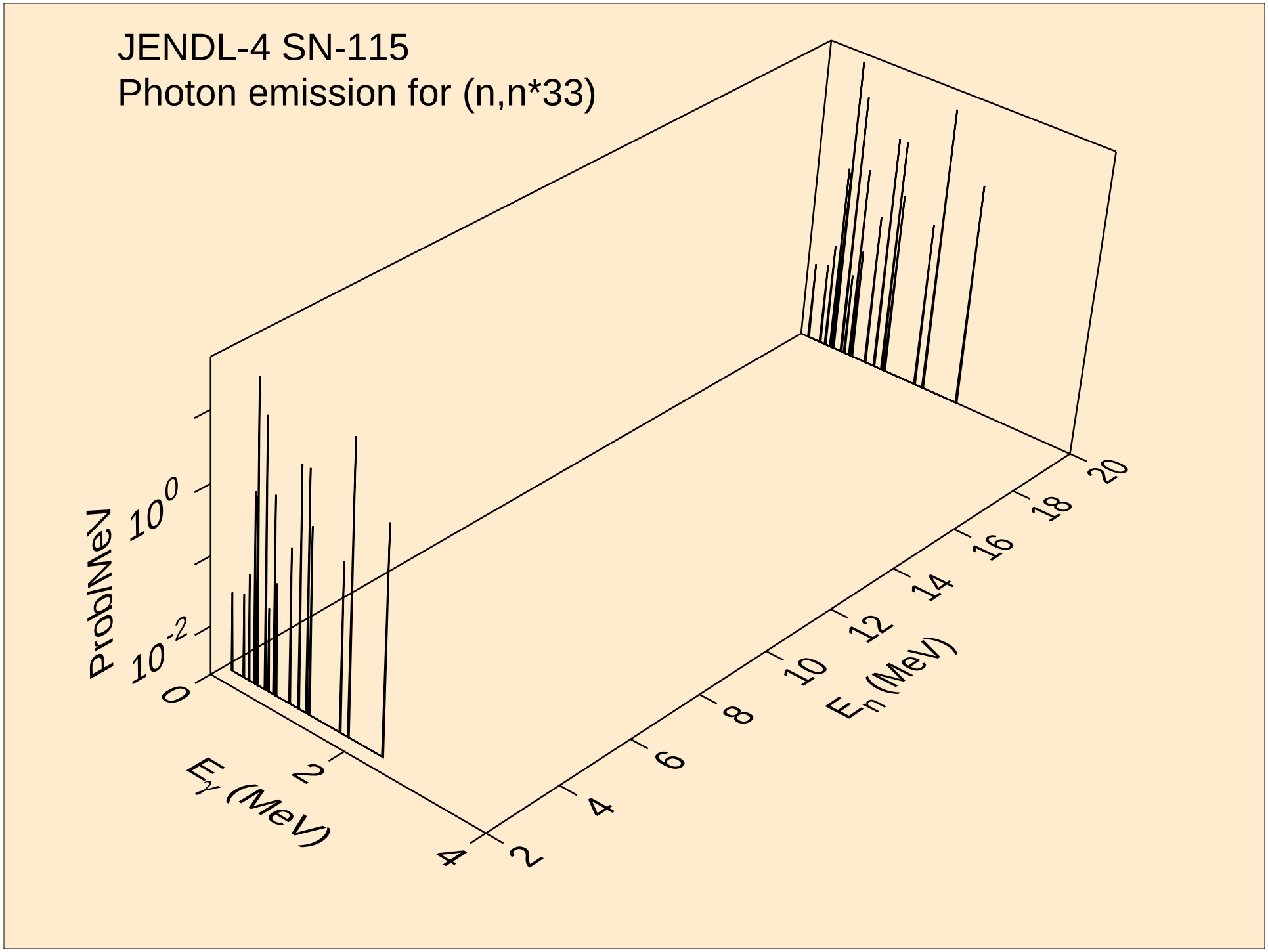


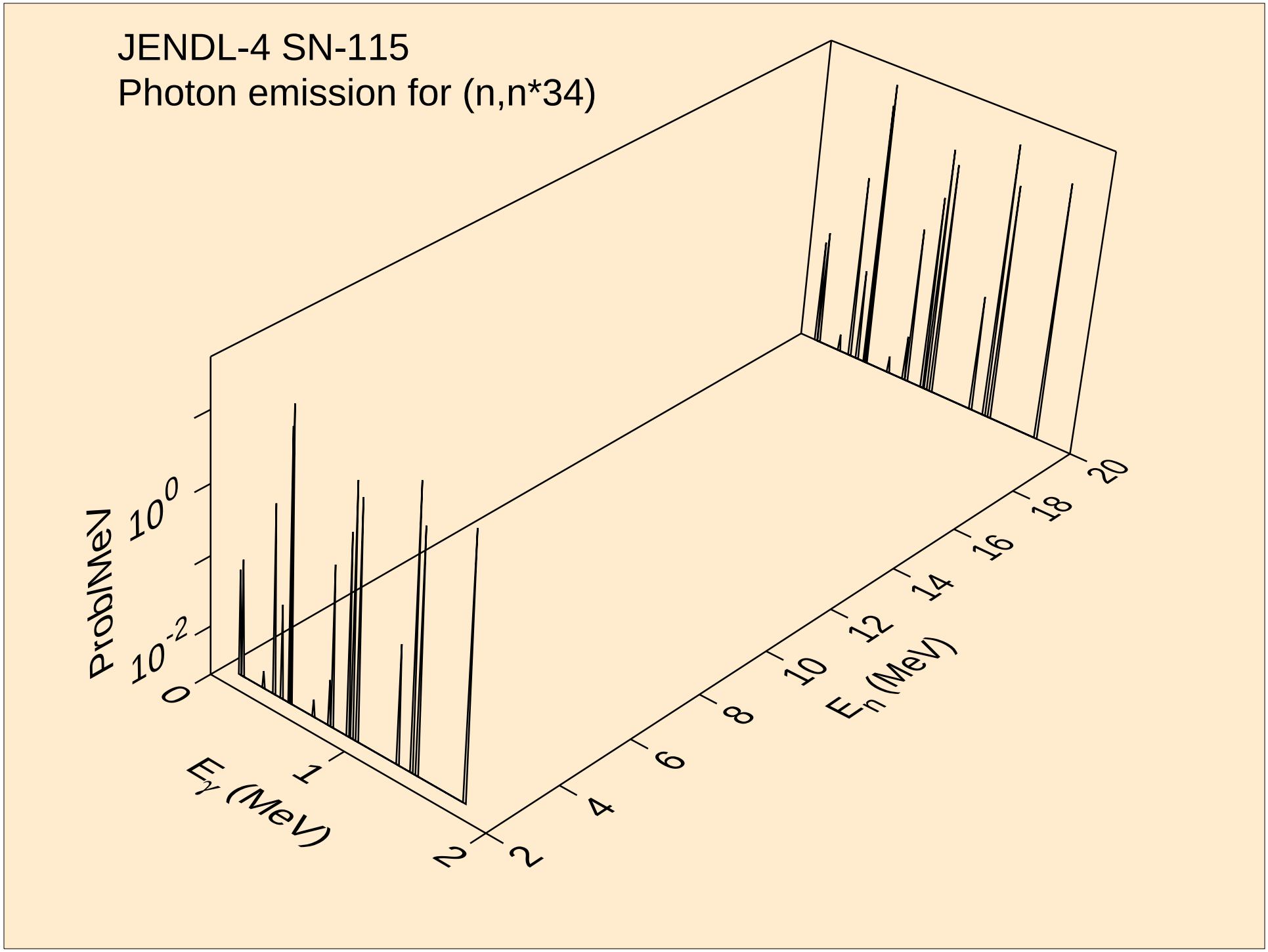
JENDL-4 SN-115
Photon emission for (n,n*30)

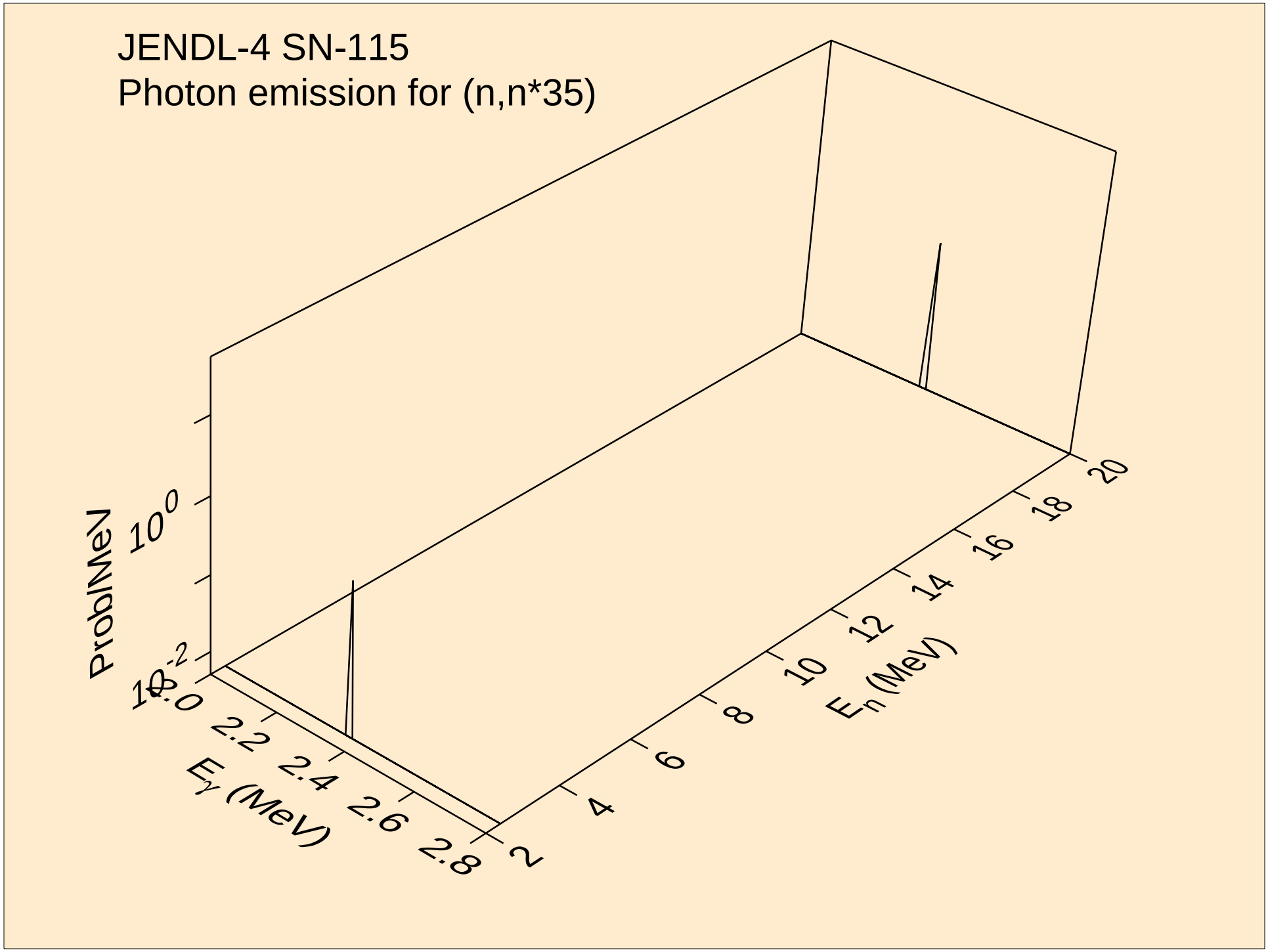


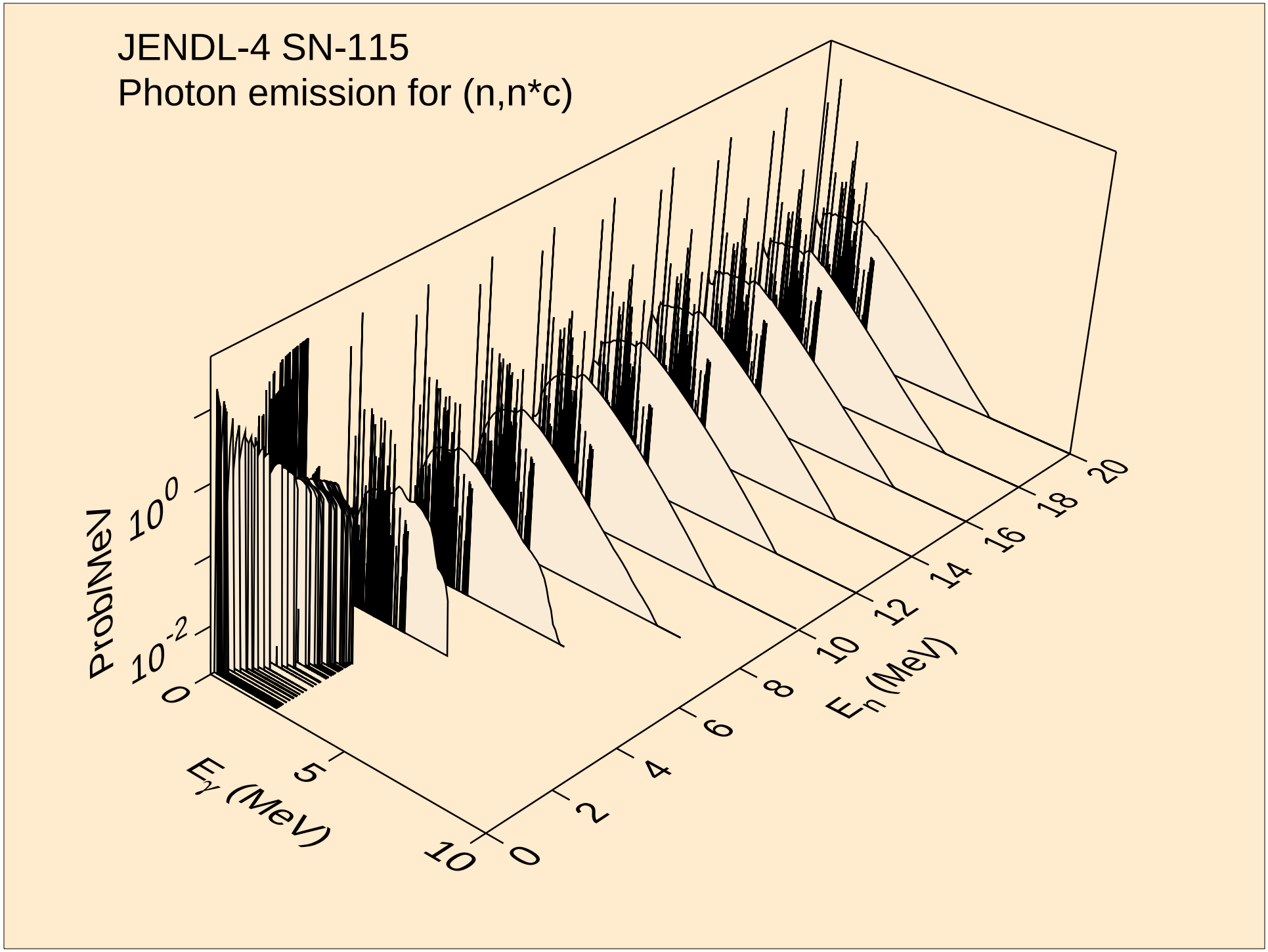

JENDL-4 SN-115
Photon emission for (n,n*31)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

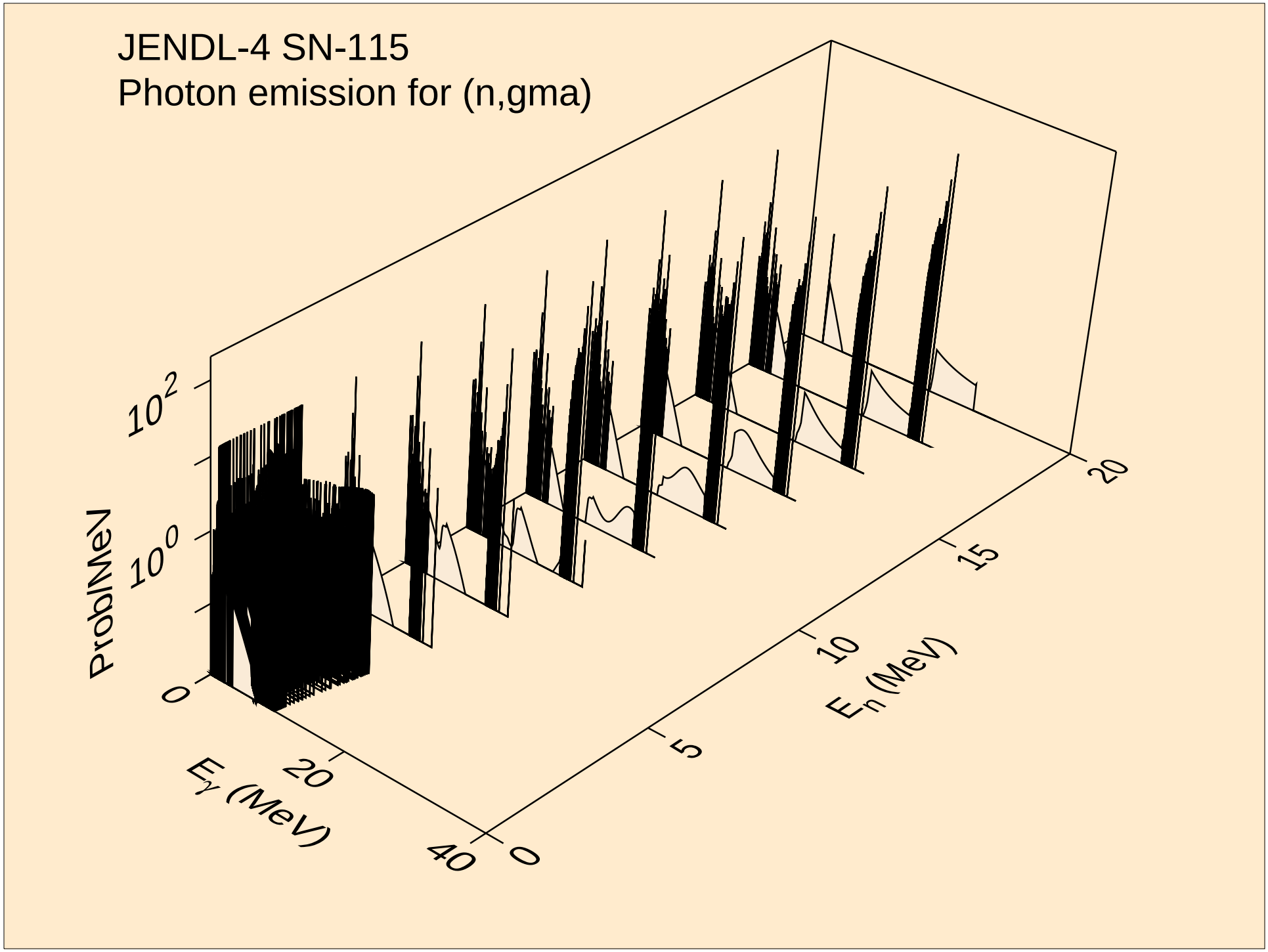

JENDL-4 SN-115
Photon emission for (n,n*32)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
E_n (MeV)
2
4
6
8
10
12
14
16
18
20

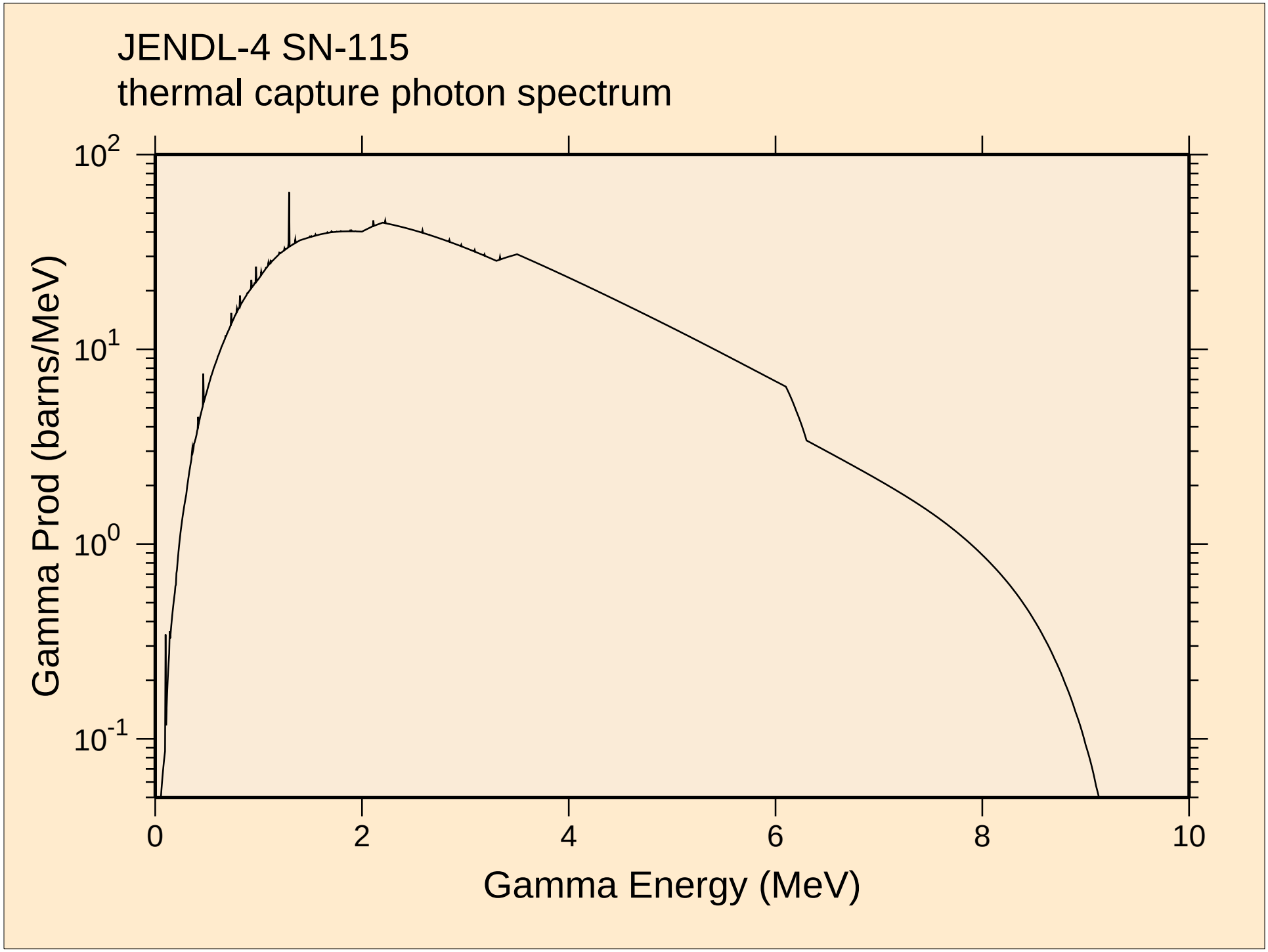

JENDL-4 SN-115
Photon emission for (n,n*33)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
2
4
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

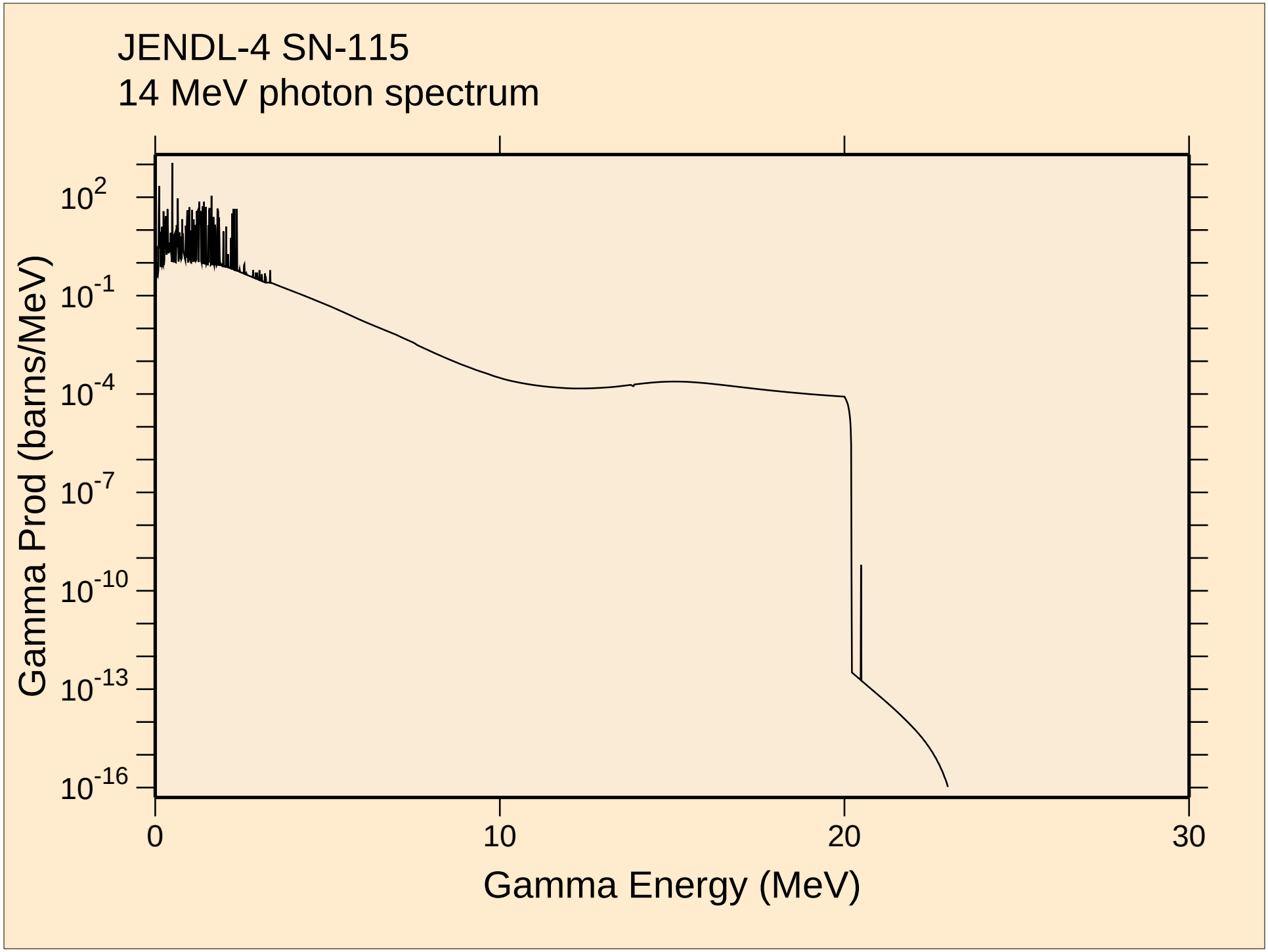

JENDL-4 SN-115
Photon emission for (n,n*34)
Prob/MeV
10^0
10^{-2}
0
E_γ (MeV)
1
2
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

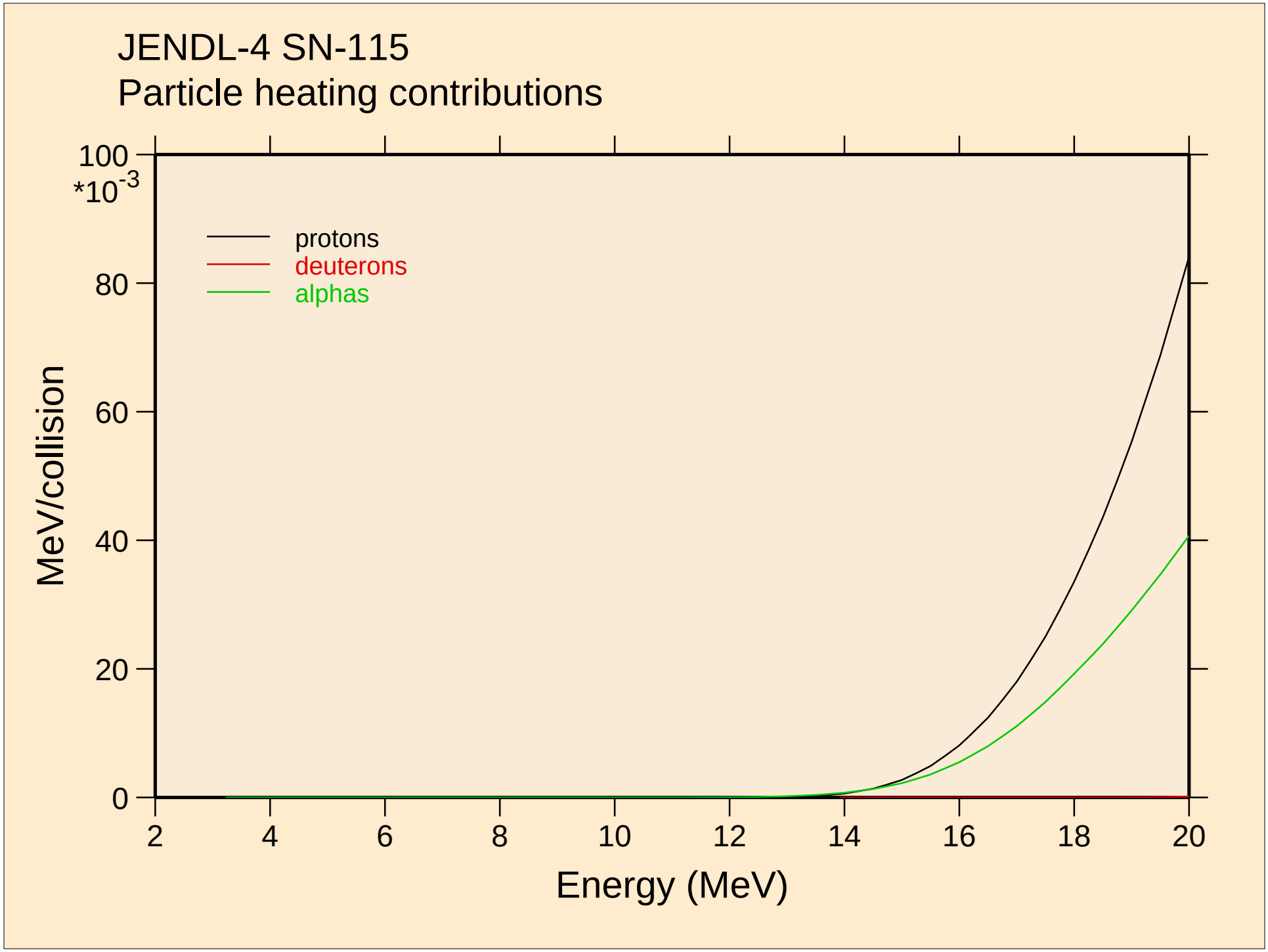

JENDL-4 SN-115
Photon emission for (n,n*35)
Prob/MeV
10^0
10^{-2}
2.0
2.2
2.4
2.6
2.8
E_γ (MeV)
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

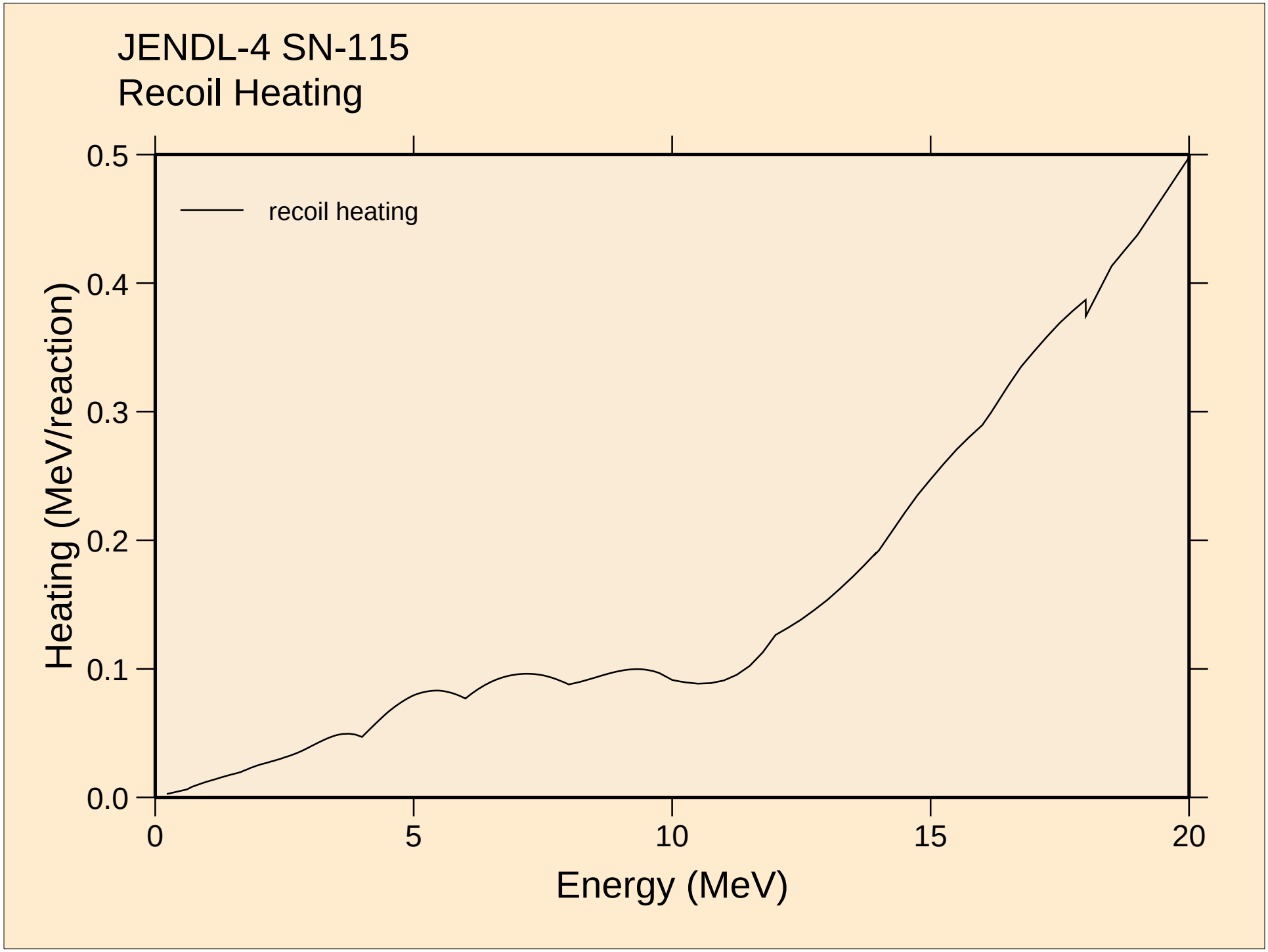

JENDL-4 SN-115
Photon emission for (n,n*c)
Prob/MeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

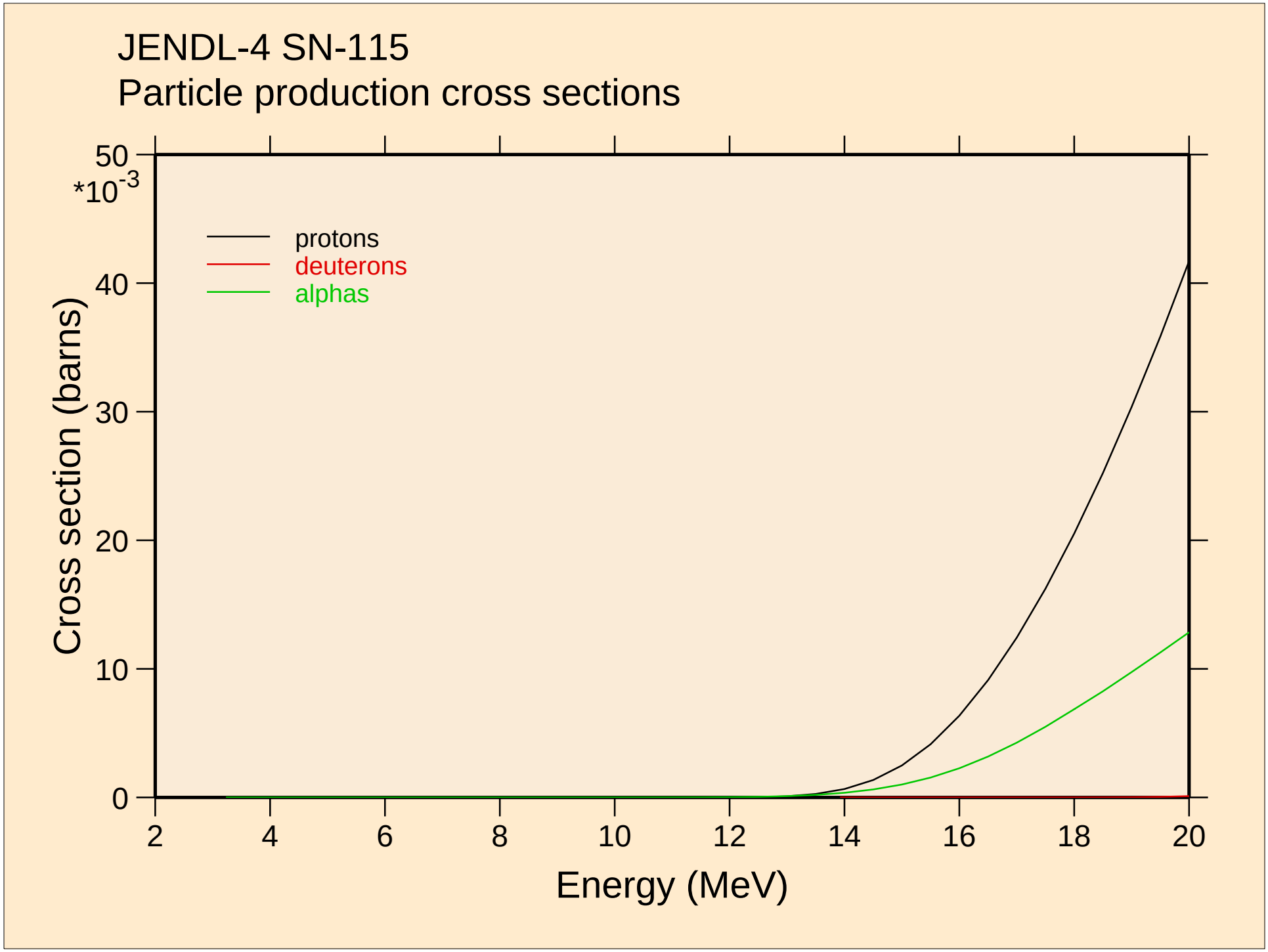

JENDL-4 SN-115
Photon emission for (n,gma)
Prob/MeV
10^2
10^0
0
20
40
E_γ (MeV)
0
5
10
15
20
E_n (MeV)

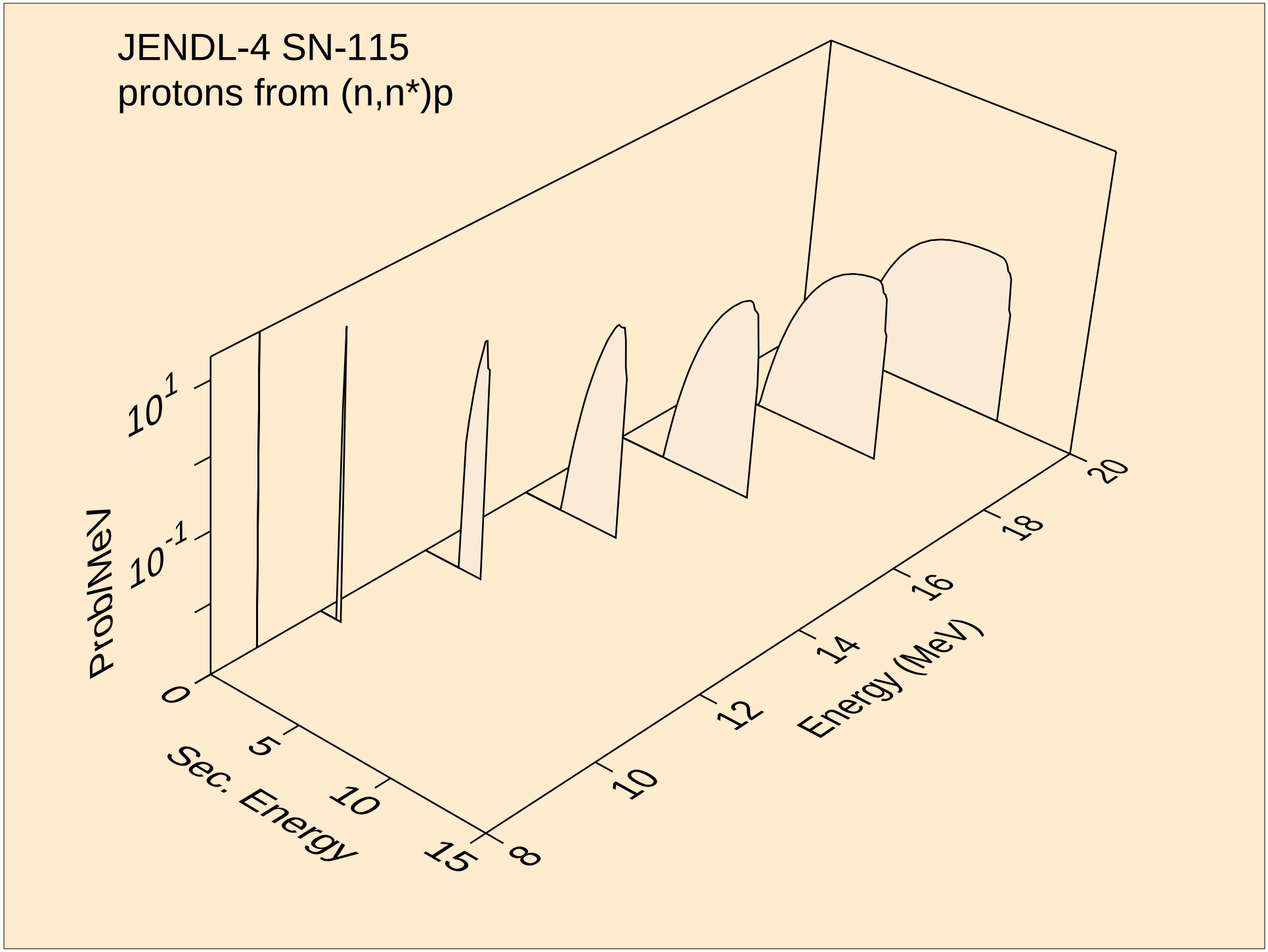

JENDL-4 SN-115
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^{2}
10^{1}
10^{0}
10^{-1}
0
2
4
6
8
10
Gamma Energy (MeV)

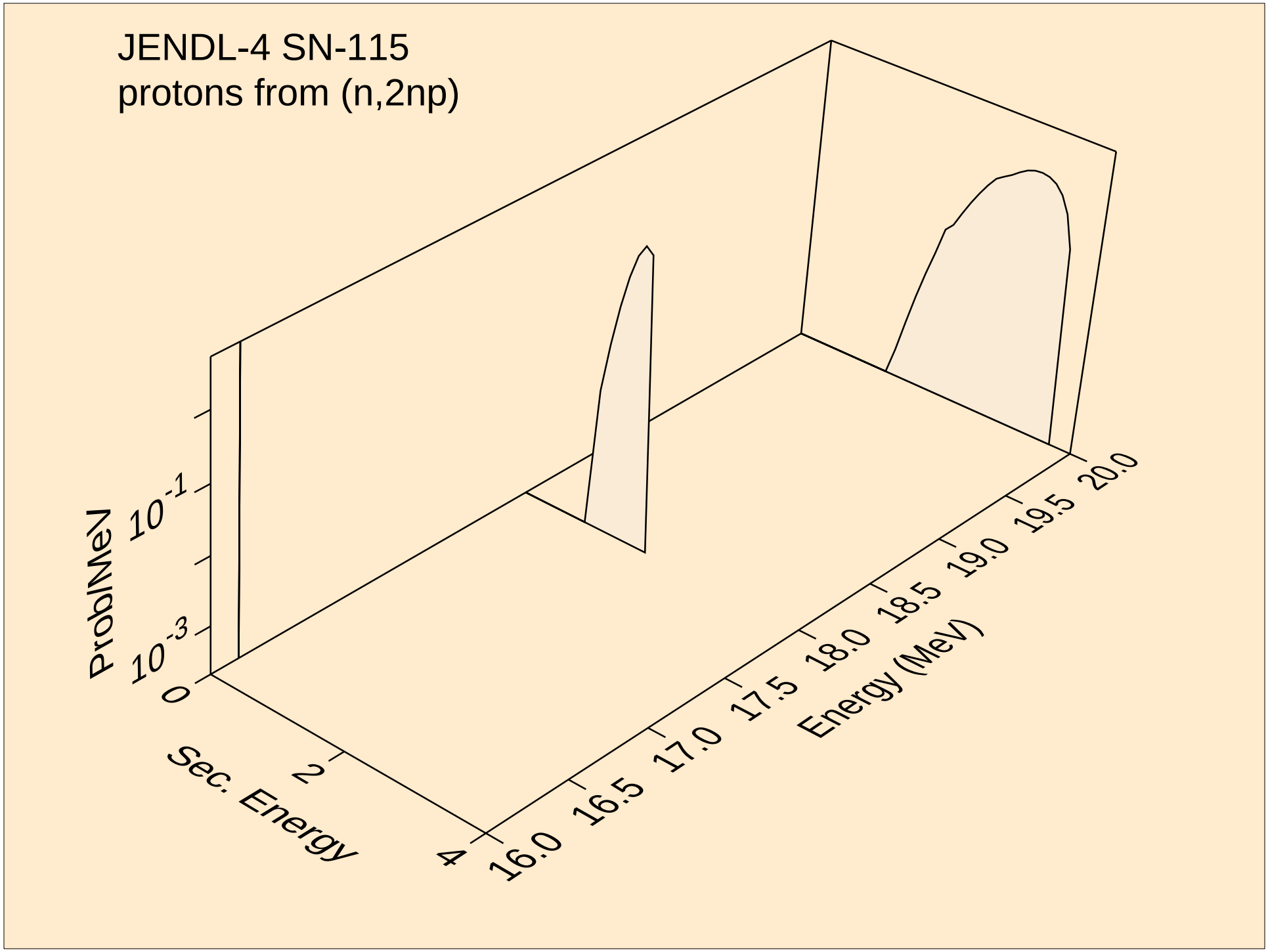

JENDL-4 SN-115
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^2
10^-1
10^-4
10^-7
10^-10
10^-13
10^-16
0
10
20
30
Gamma Energy (MeV)

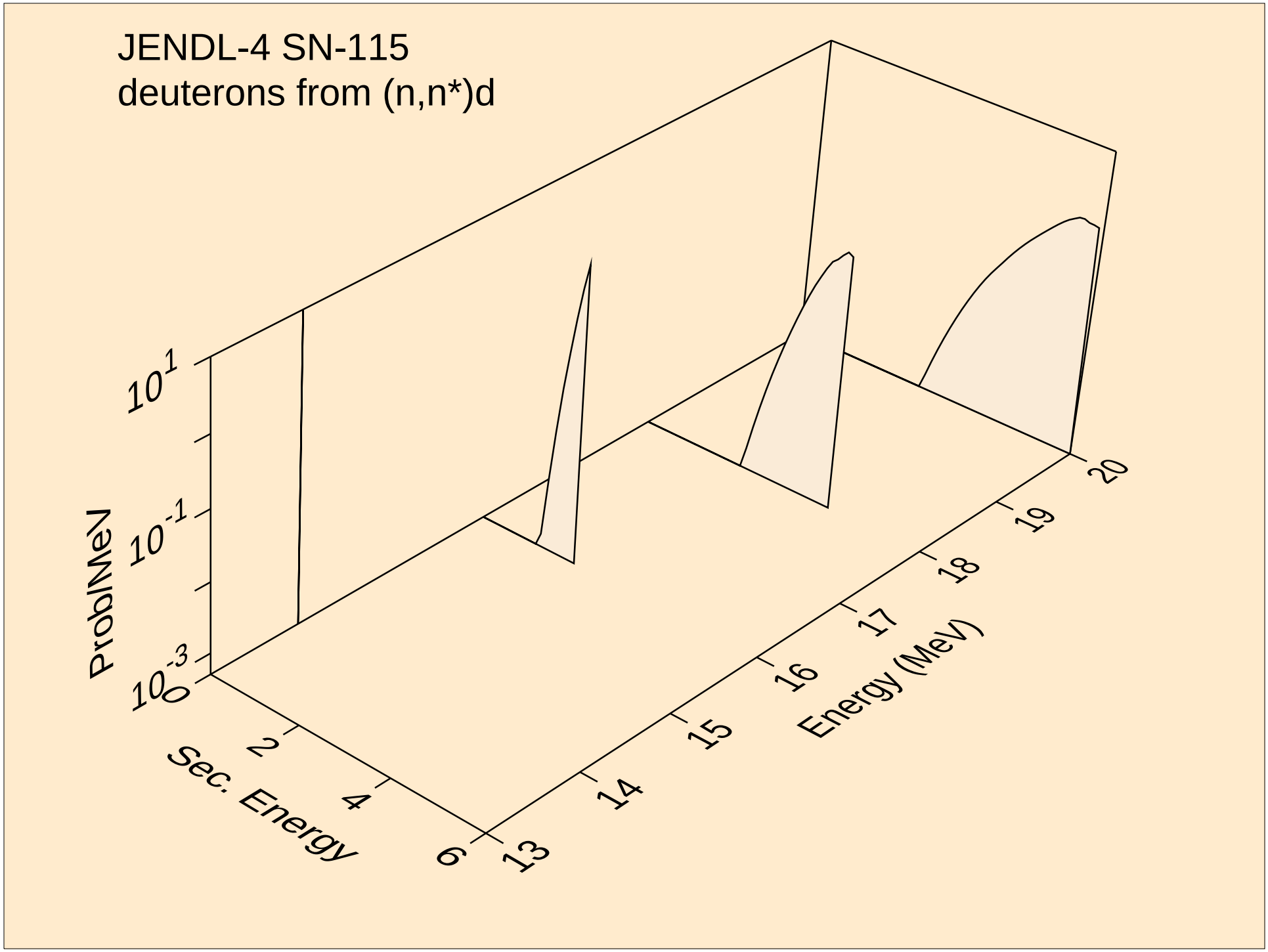

JENDL-4 SN-115
Particle heating contributions
100
*10-3
80
60
40
20
0
MeV/collision
protons
deuterons
alphas
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

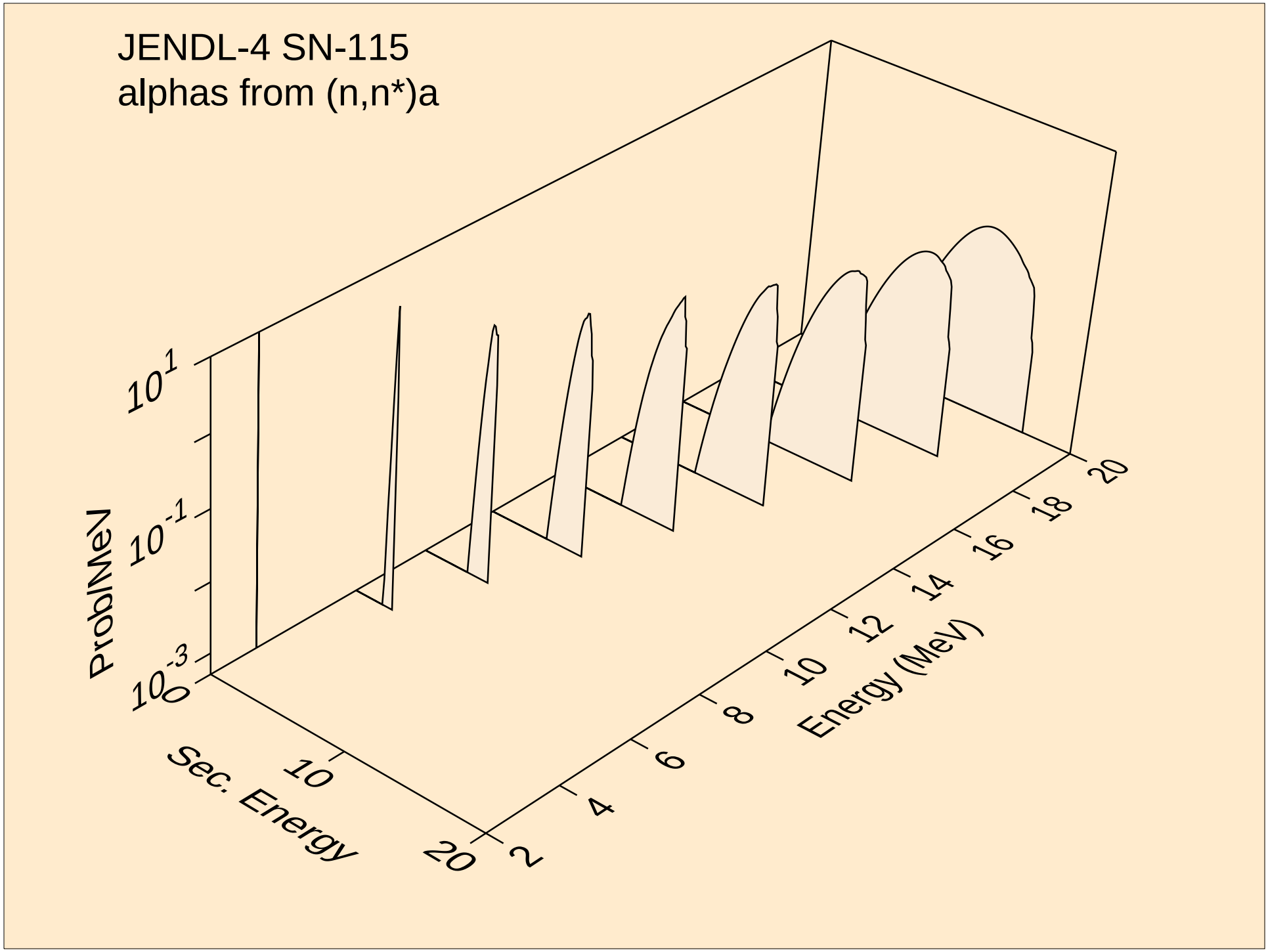

JENDL-4 SN-115
Recoil Heating
recoil heating
Heating (MeV/reaction)
0.0
0.1
0.2
0.3
0.4
0.5
0
5
10
15
20
Energy (MeV)

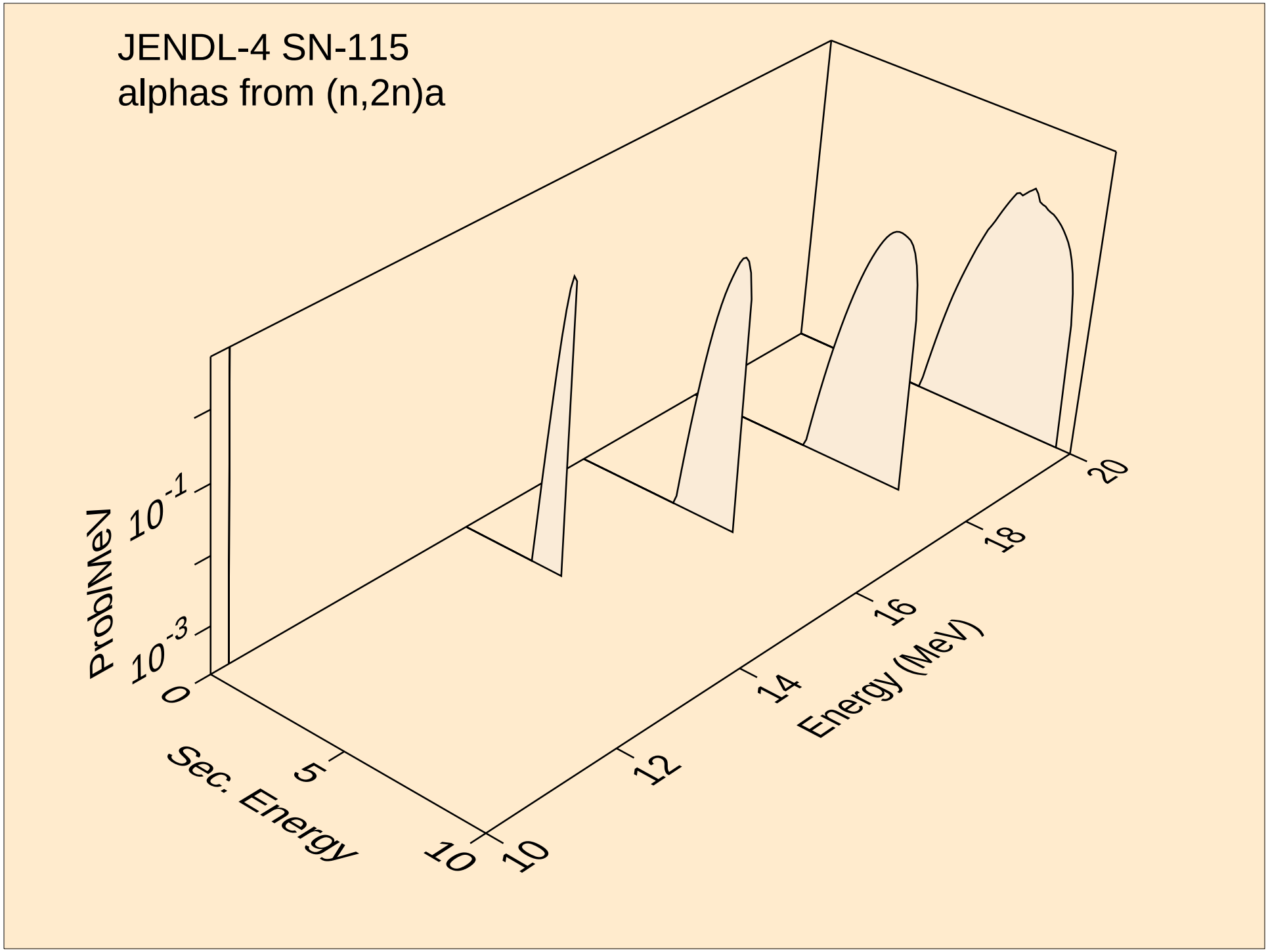

JENDL-4 SN-115
Particle production cross sections
protons
deuterons
alphas
Cross section (barns)
*10^-3
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 SN-115
protons from (n,n*)p
Prob/MeV
10^1
10^-1
0
Sec. Energy
5
10
15
8
10
12
14
16
18
20
Energy (MeV)


JENDL-4 SN-115
protons from (n,2np)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
2
4
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
Energy (MeV)


JENDL-4 SN-115
deuterons from (n,n*)d
Prob/MeV
10^1
10^-1
10^-3
0
2
4
6
Sec. Energy
13
14
15
16
17
18
19
20
Energy (MeV)


JENDL-4 SN-115
alphas from (n,n*)a
Prob/MeV
10^1
10^-1
10^-3
Sec. Energy
0
10
20
Energy (MeV)
2
4
6
8
10
12
14
16
18
20


JENDL-4 SN-115
alphas from (n,2n)a
Prob/MeV
10^-1
10^-3
0
Sec. Energy
5
10
10
12
14
16
18
20
Energy (MeV)