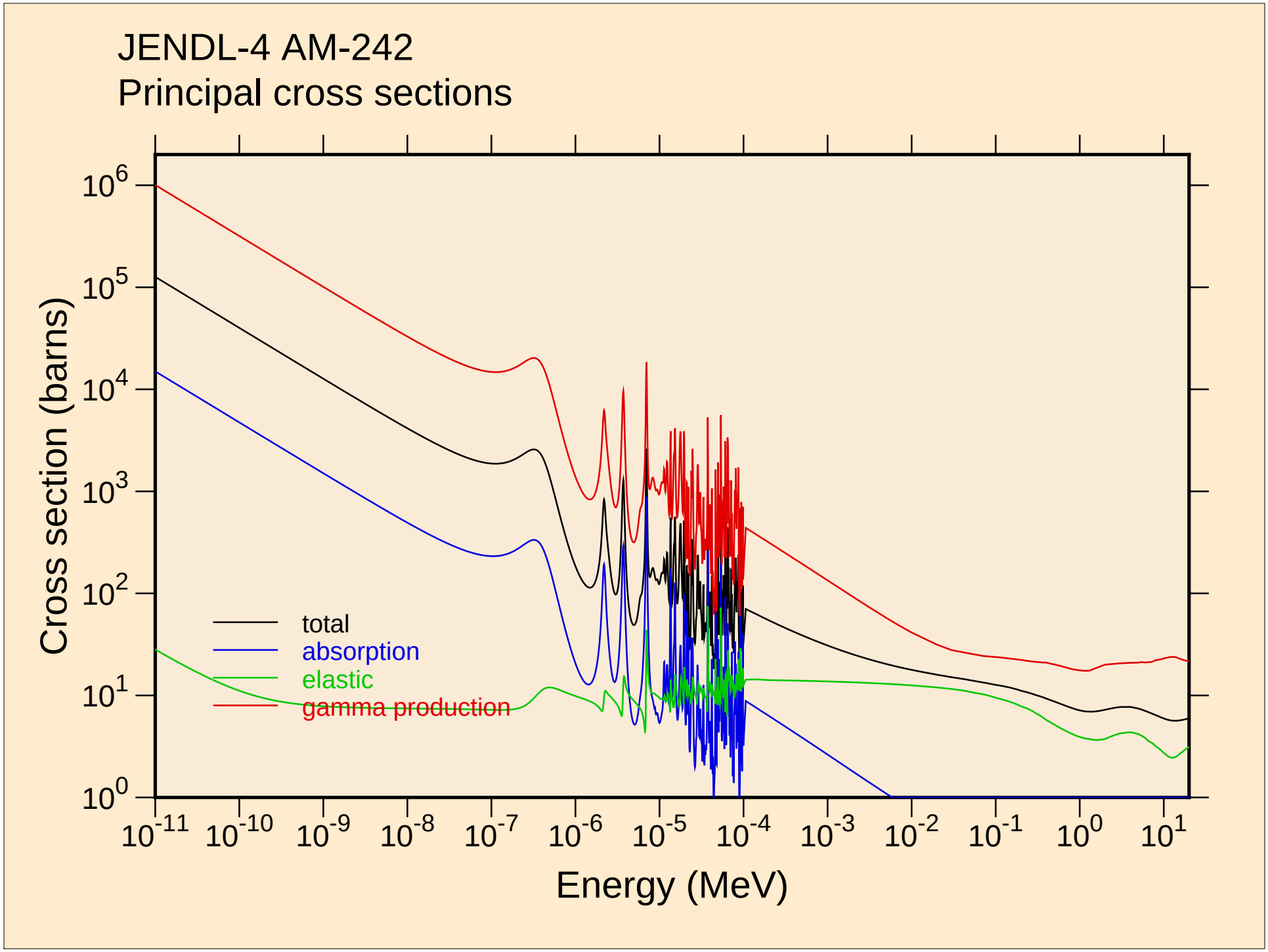
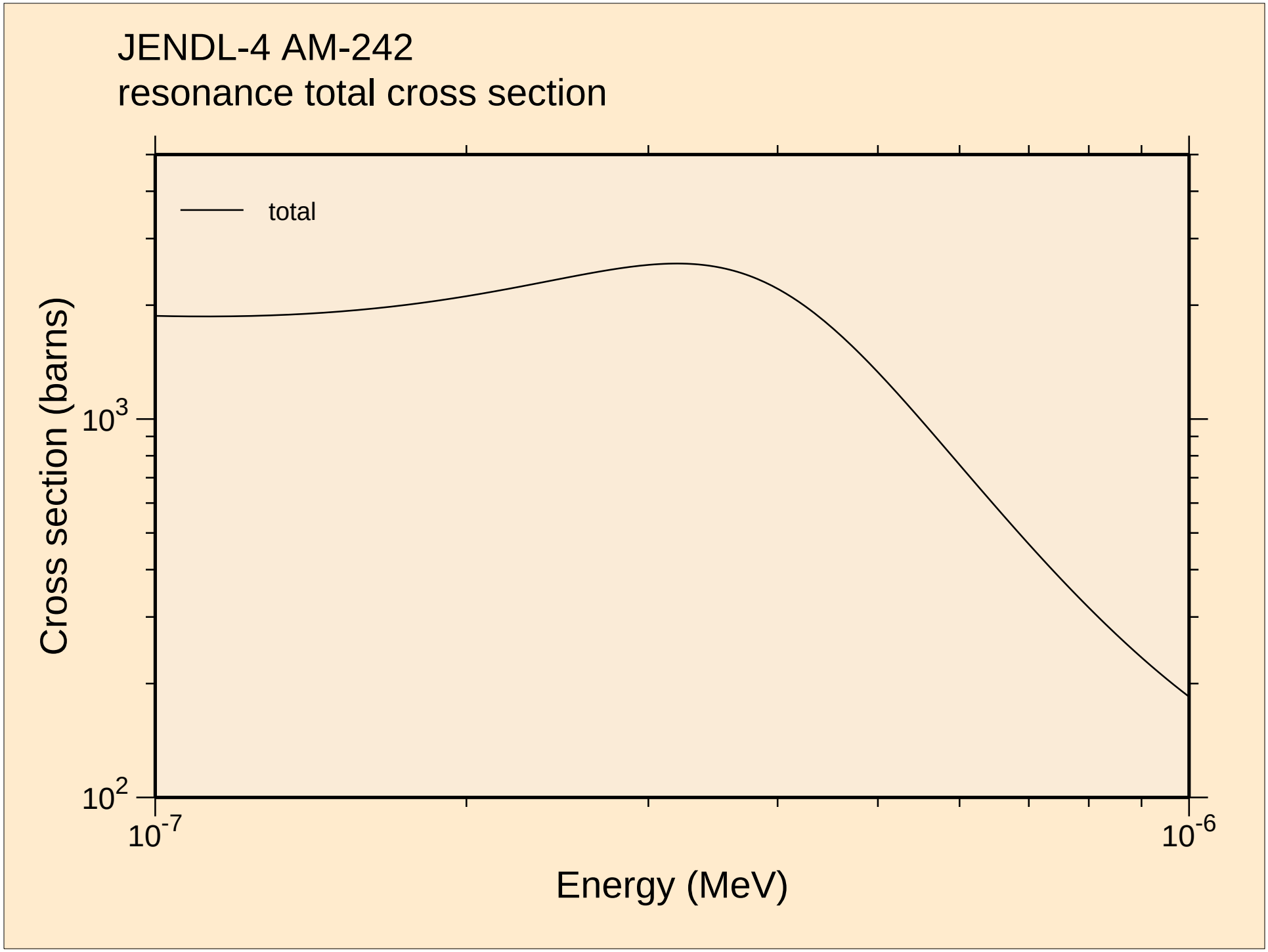
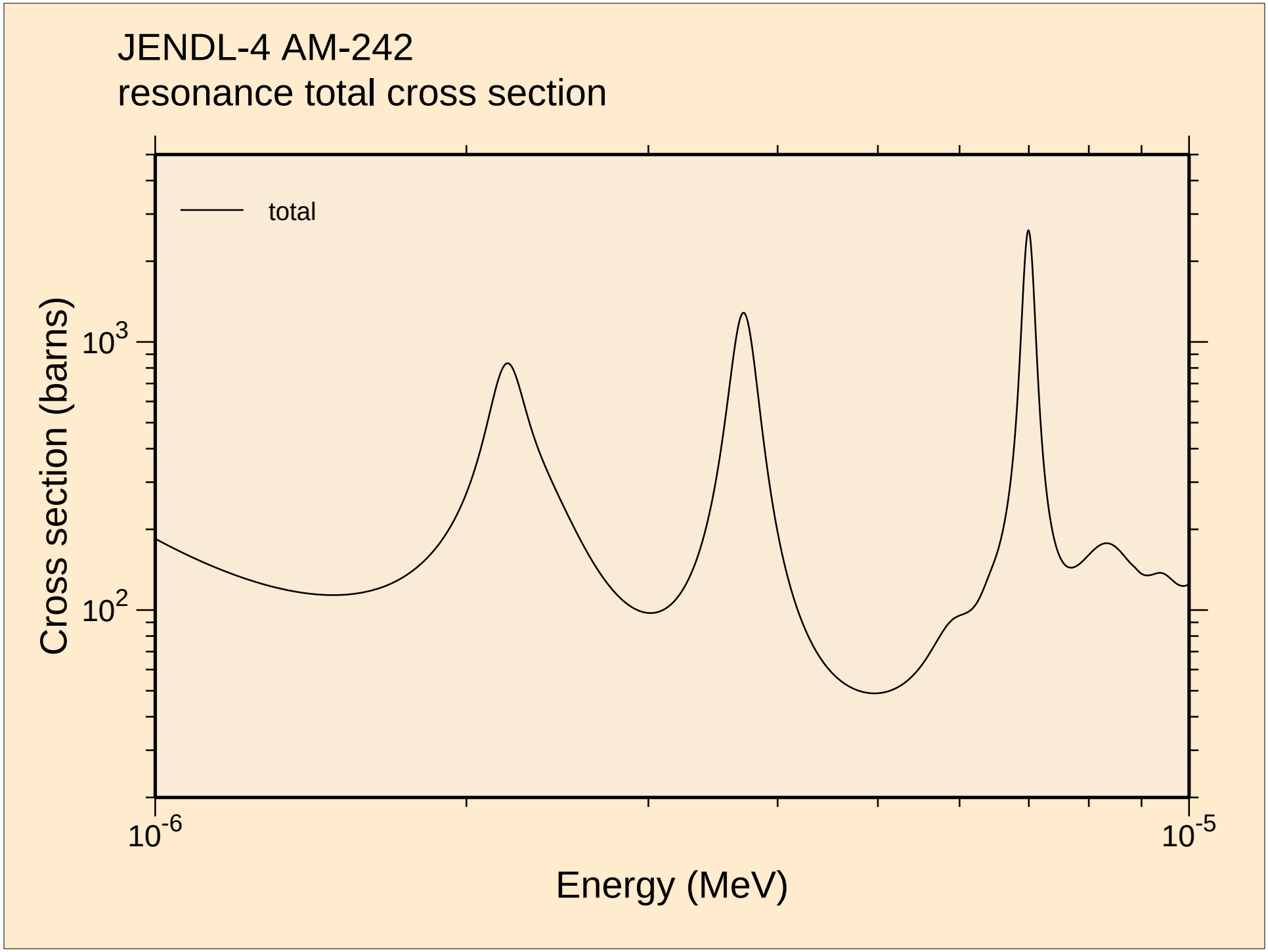
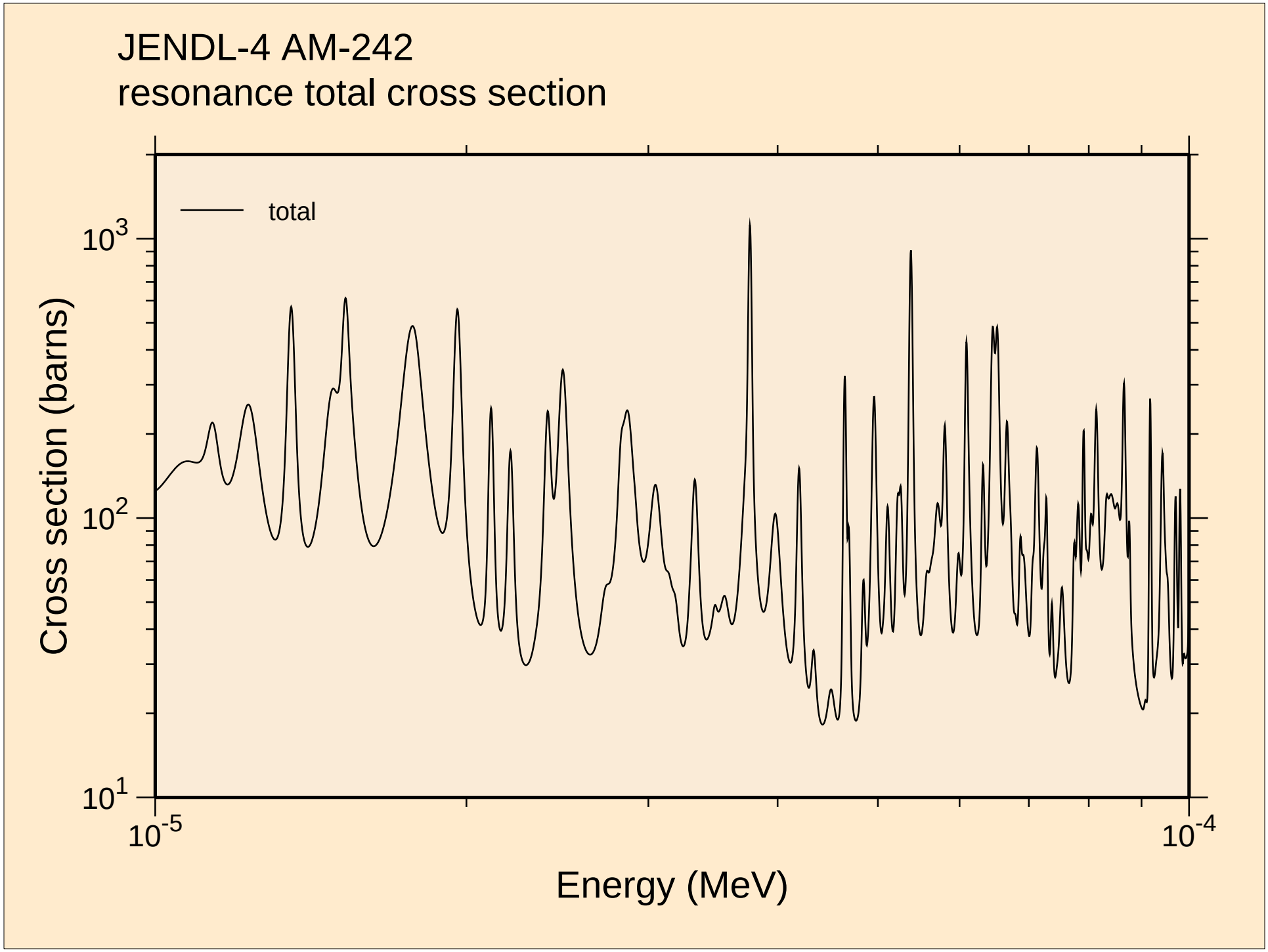
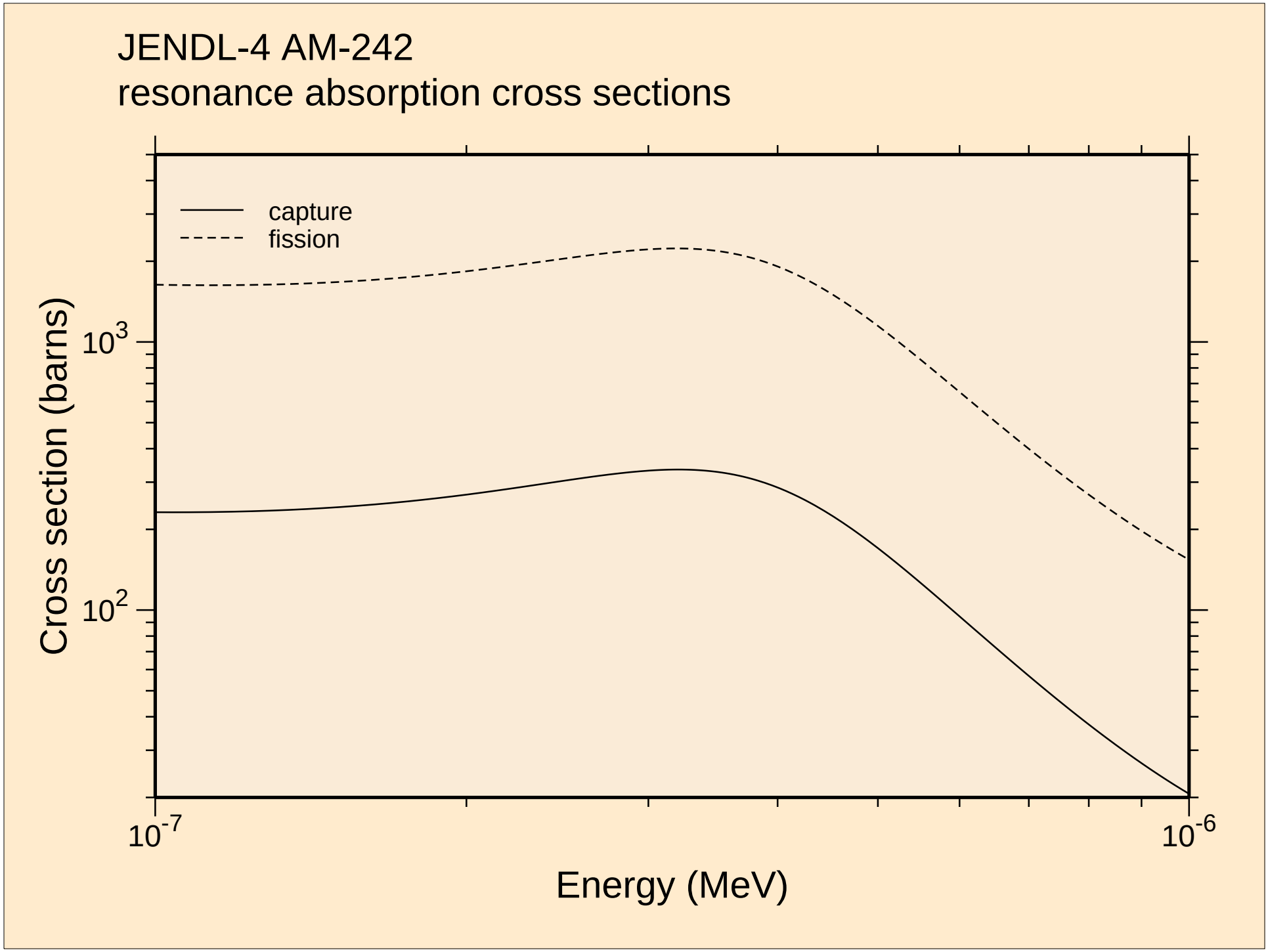
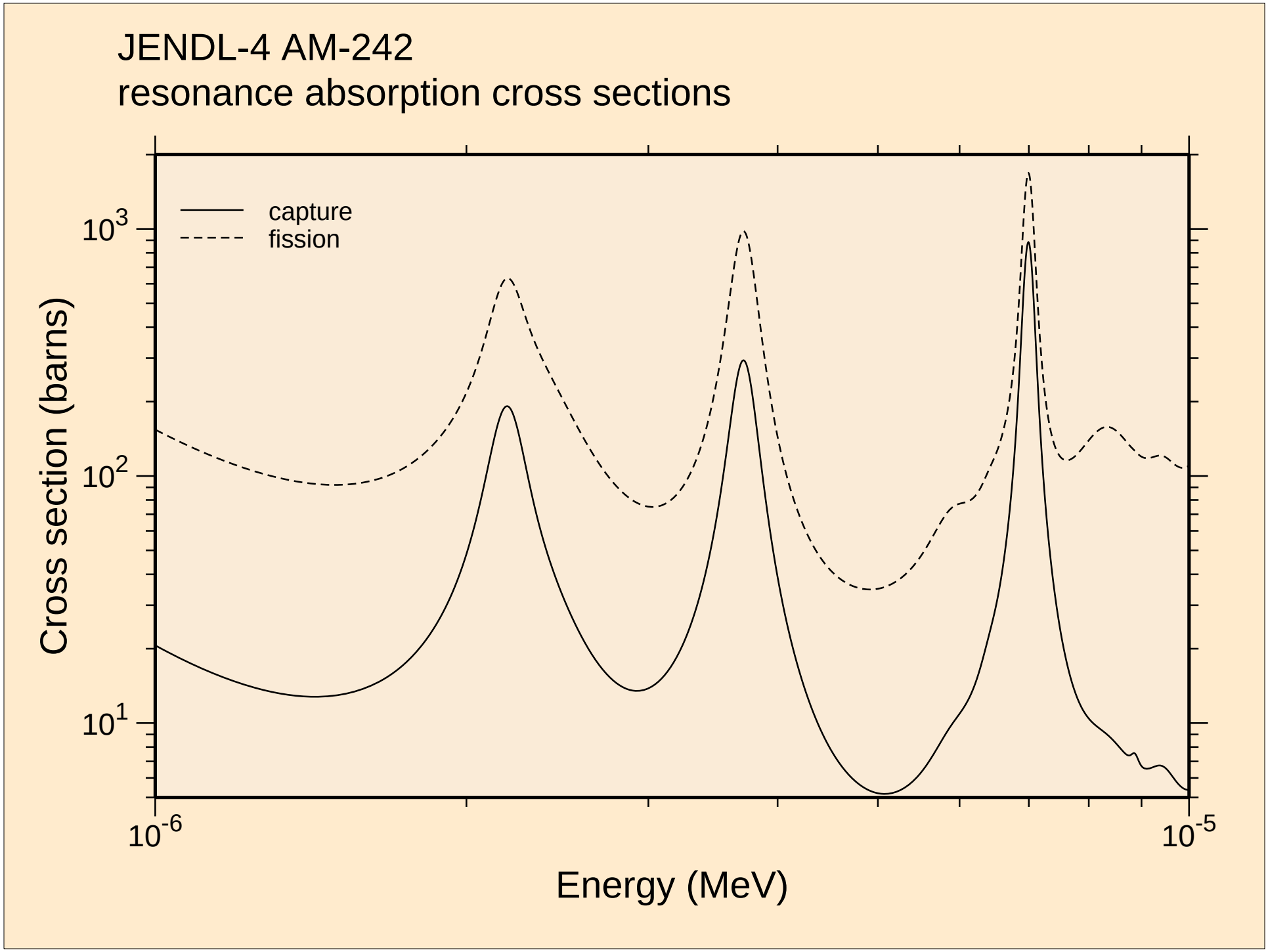

JENDL-4 AM-242
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
10^{6}
10^{5}
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}

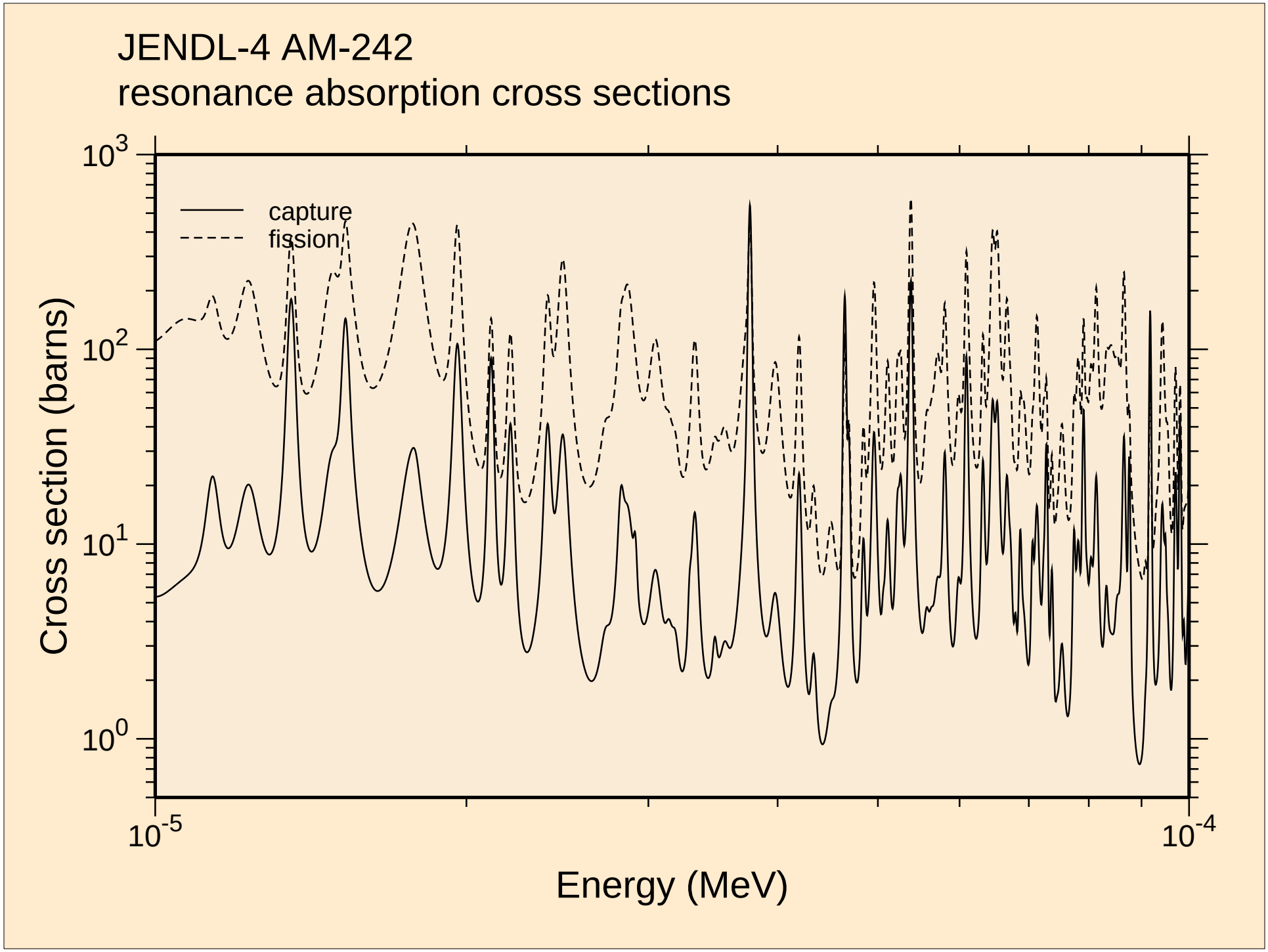

JENDL-4 AM-242
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^{-7}
10^{-6}
Energy (MeV)


JENDL-4 AM-242
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^-6
10^-5
Energy (MeV)

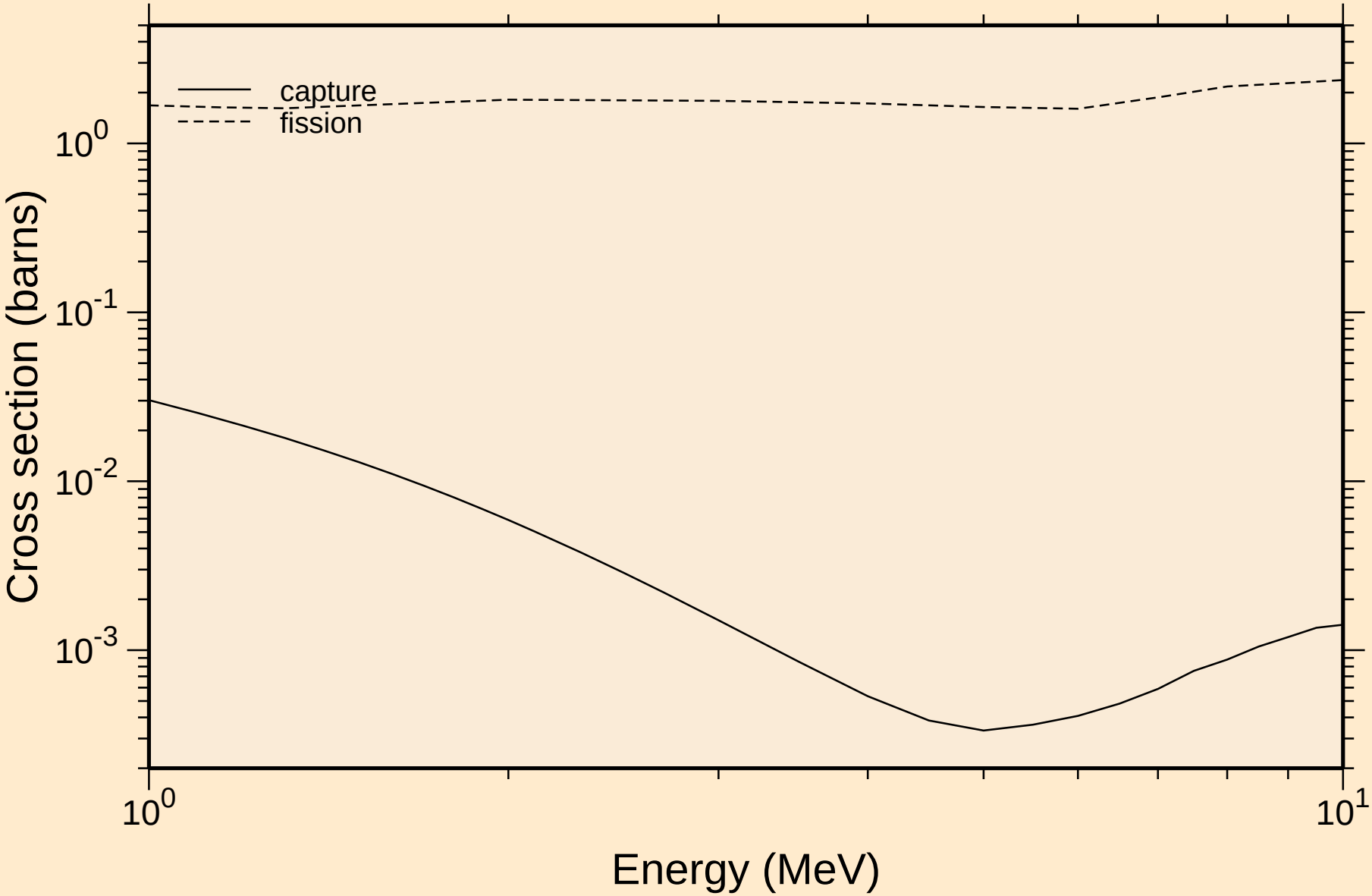

JENDL-4 AM-242
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^{-5}
10^{-4}
Energy (MeV)

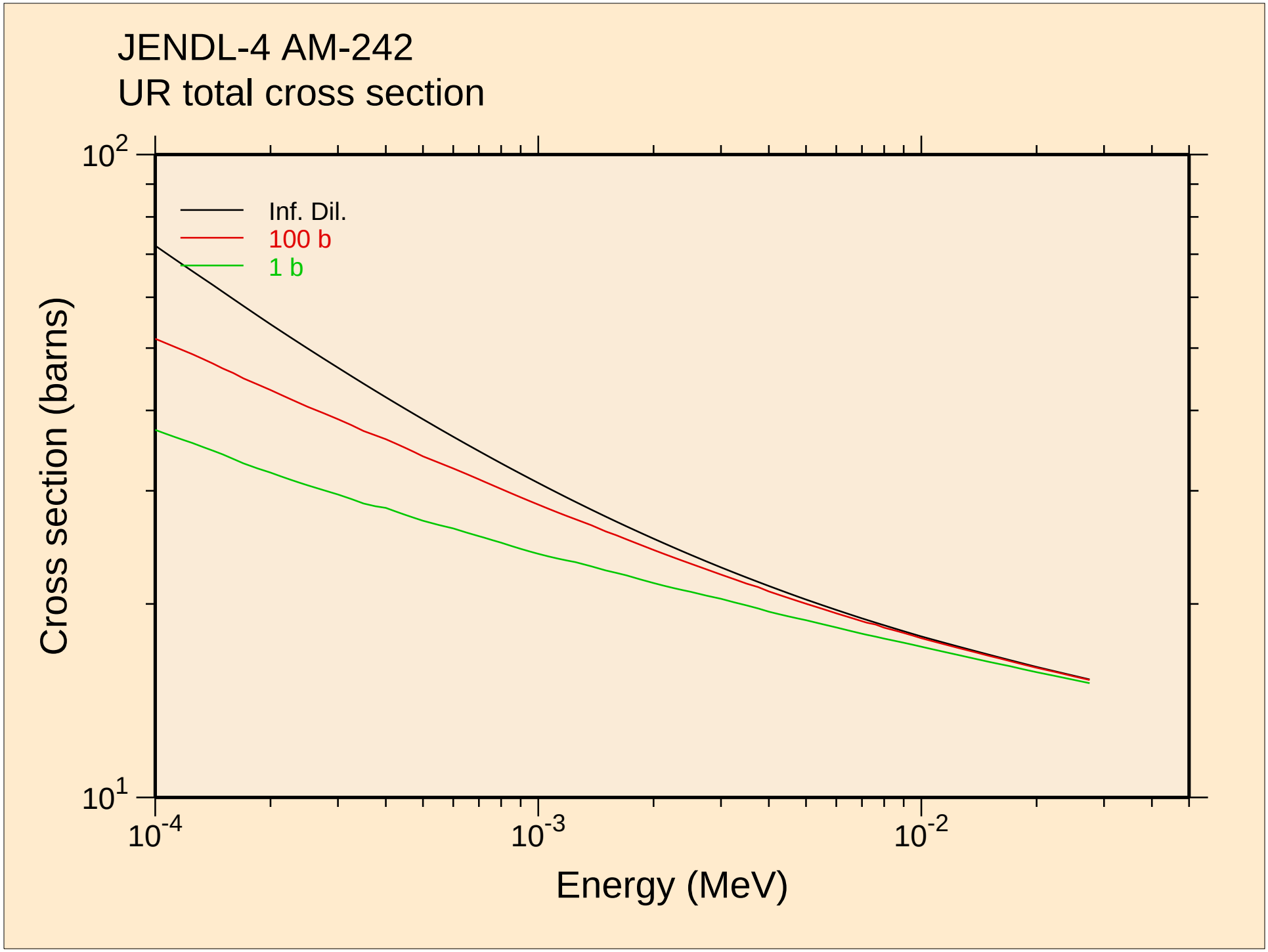

JENDL-4 AM-242
resonance absorption cross sections
capture
fission
Cross section (barns)
10^3
10^2
10^{-7}
10^{-6}
Energy (MeV)

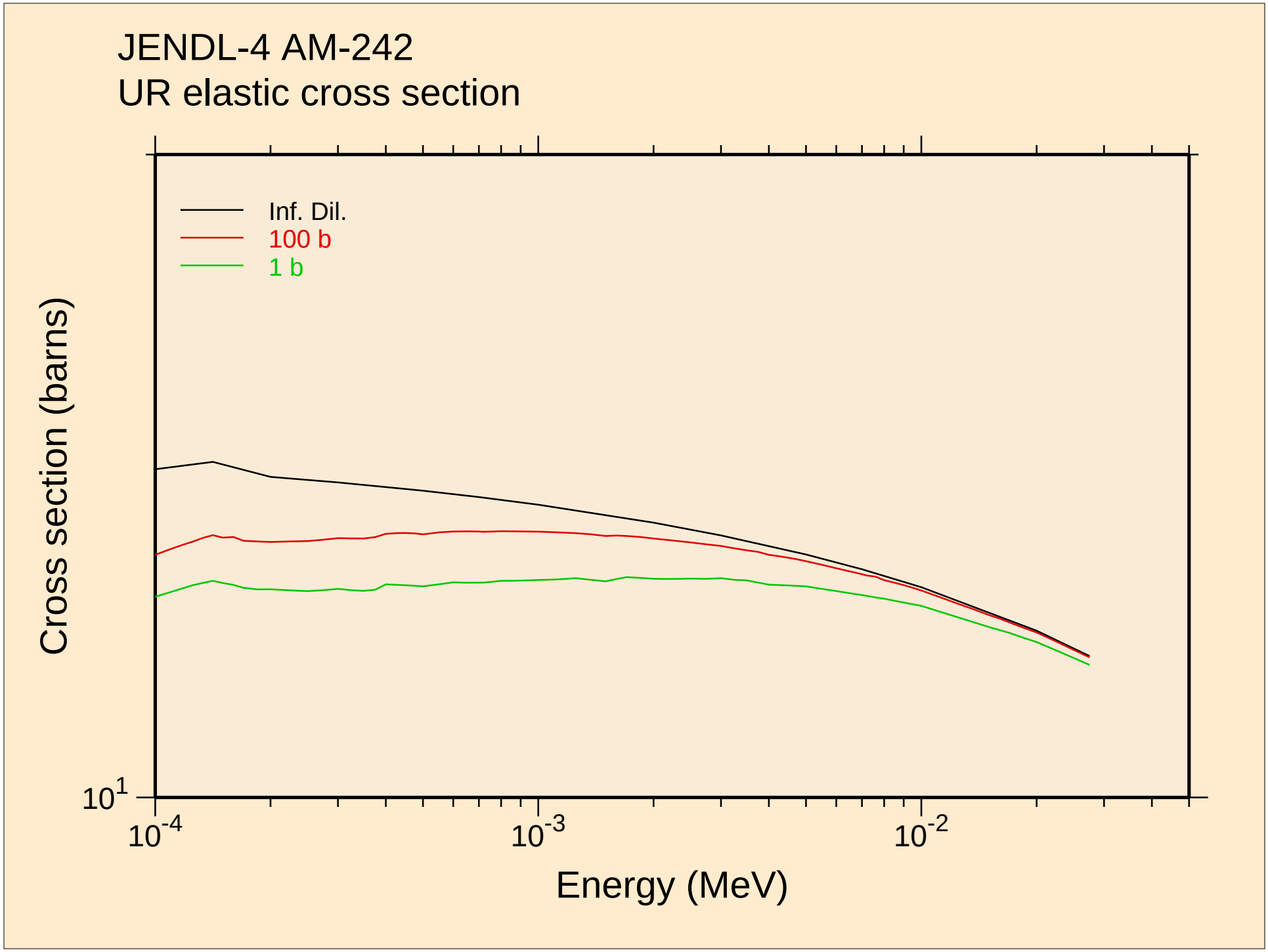

JENDL-4 AM-242
resonance absorption cross sections
capture
fission
Cross section (barns)
10^3
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)

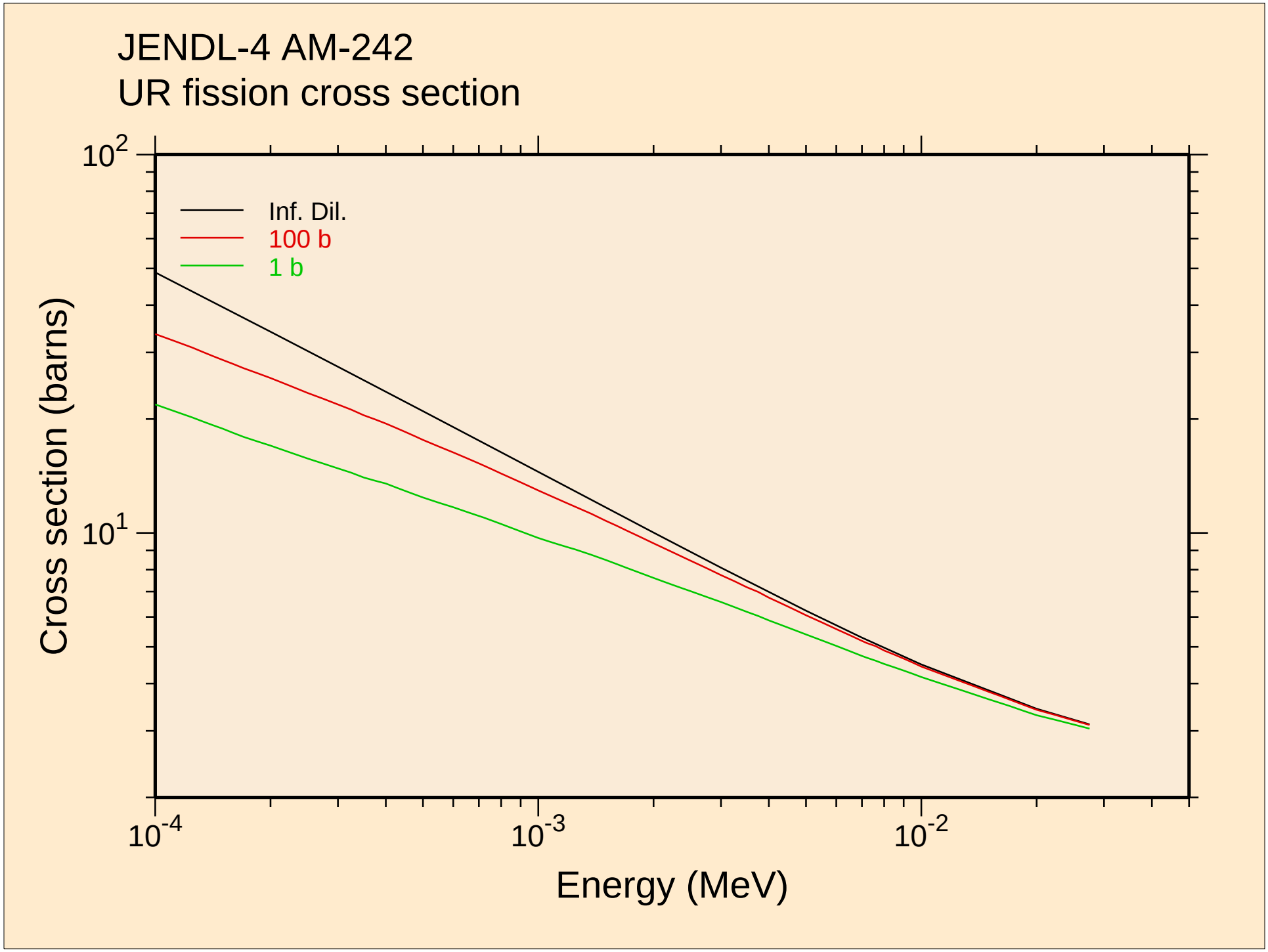

JENDL-4 AM-242
resonance absorption cross sections
capture
fission
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-5
10^-4

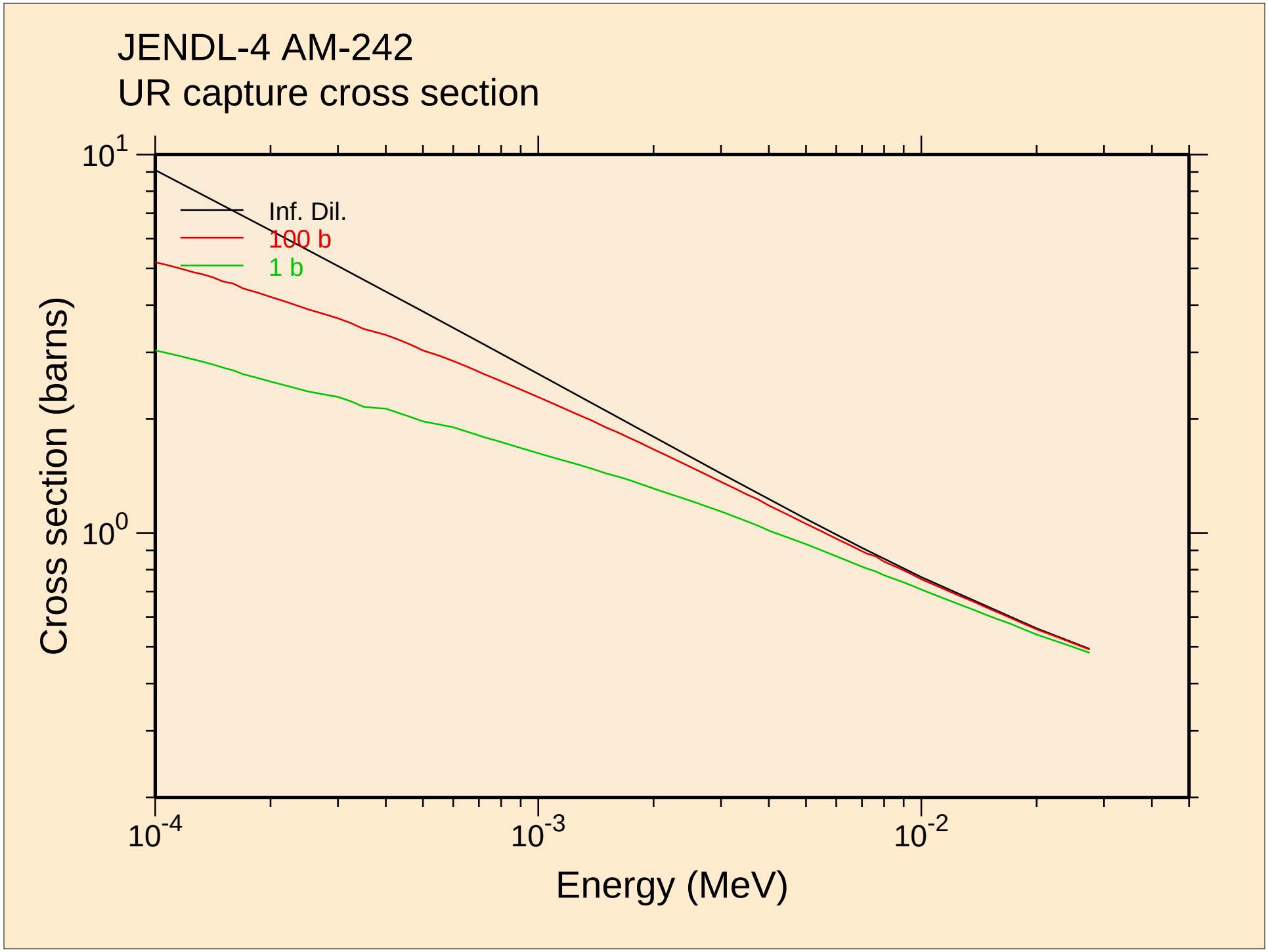
JENDL-4 AM-242
resonance absorption cross sections

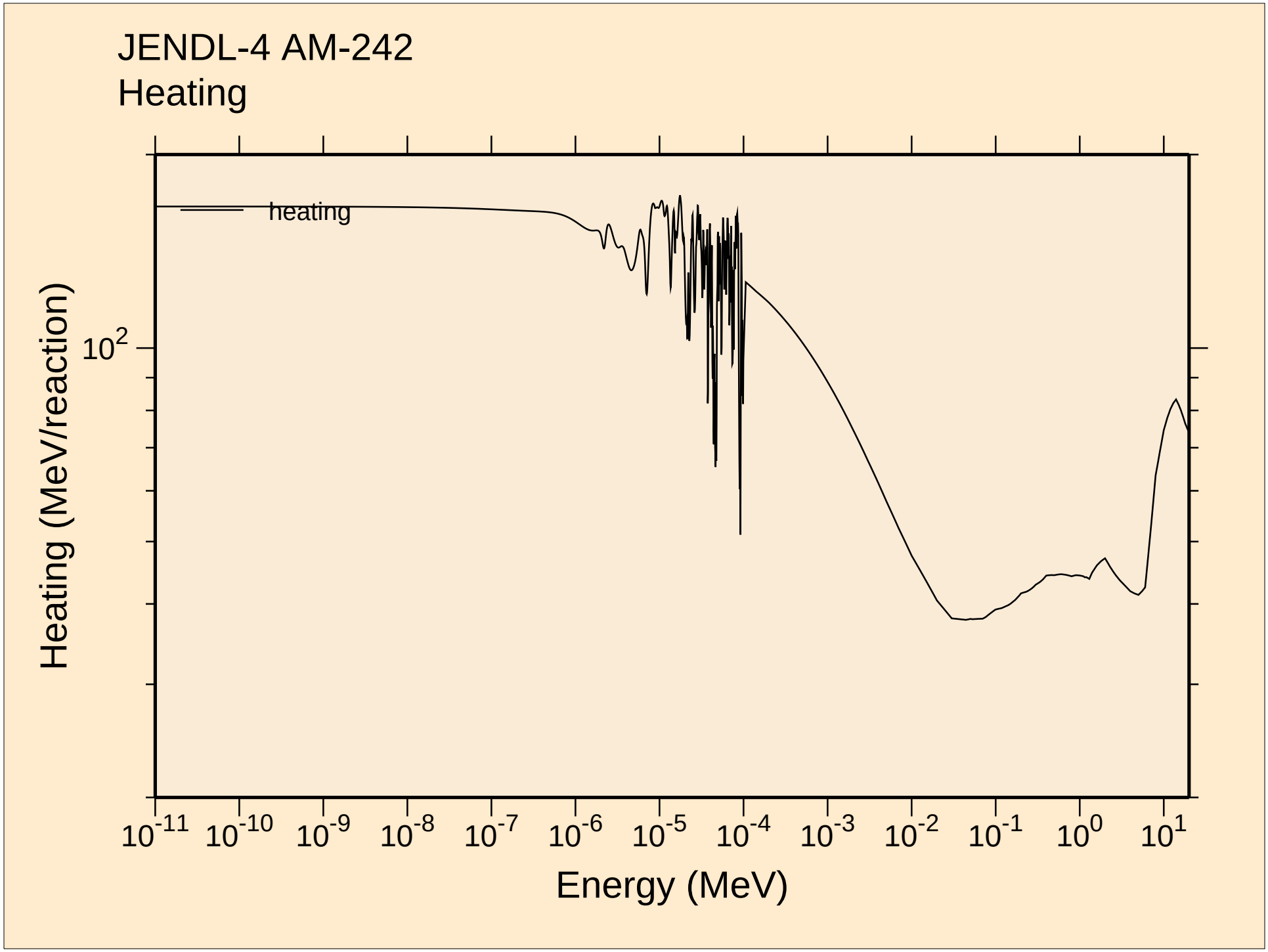


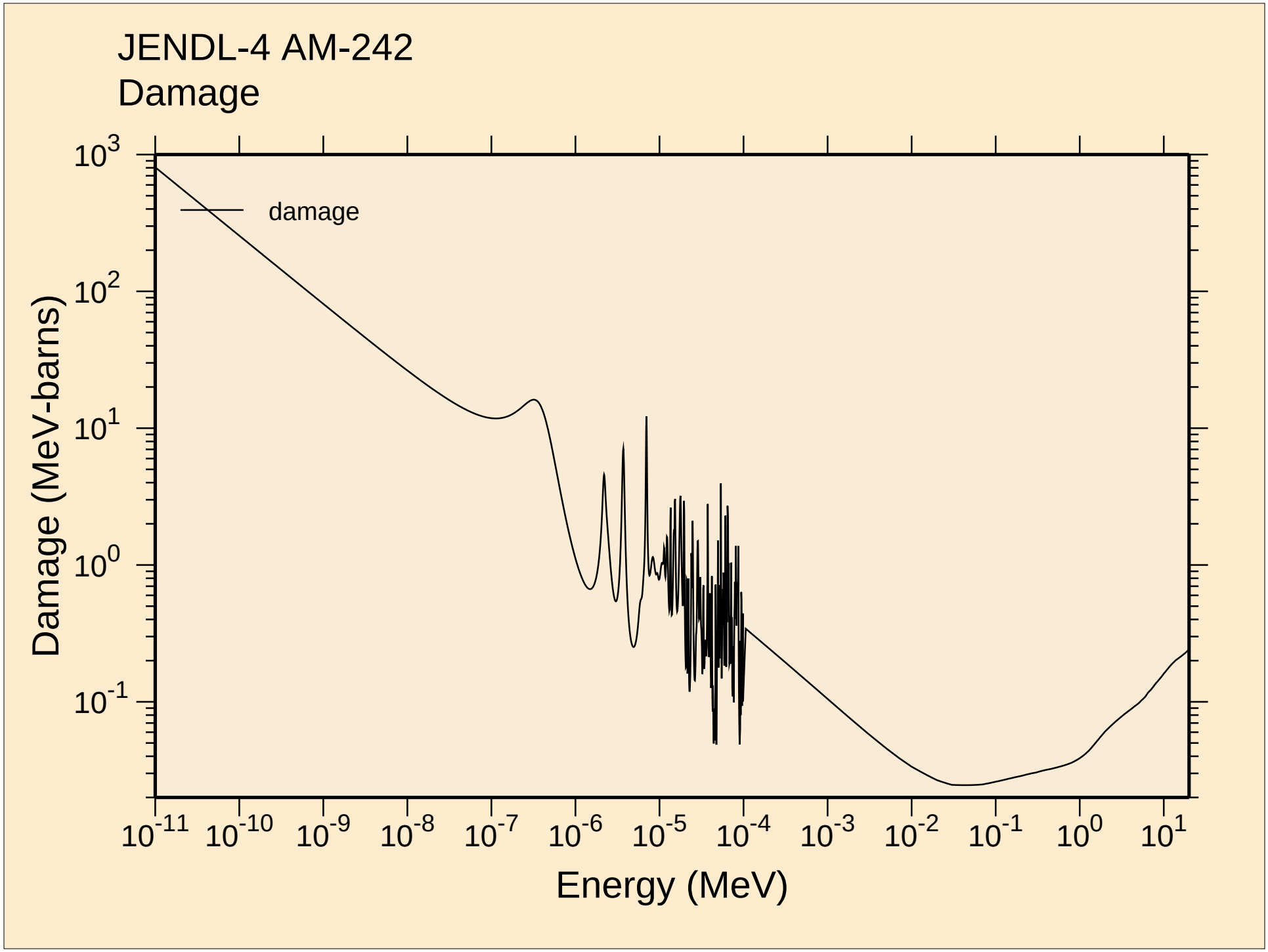

JENDL-4 AM-242
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
Energy (MeV)
10^2
10^1
10^-4
10^-3
10^-2

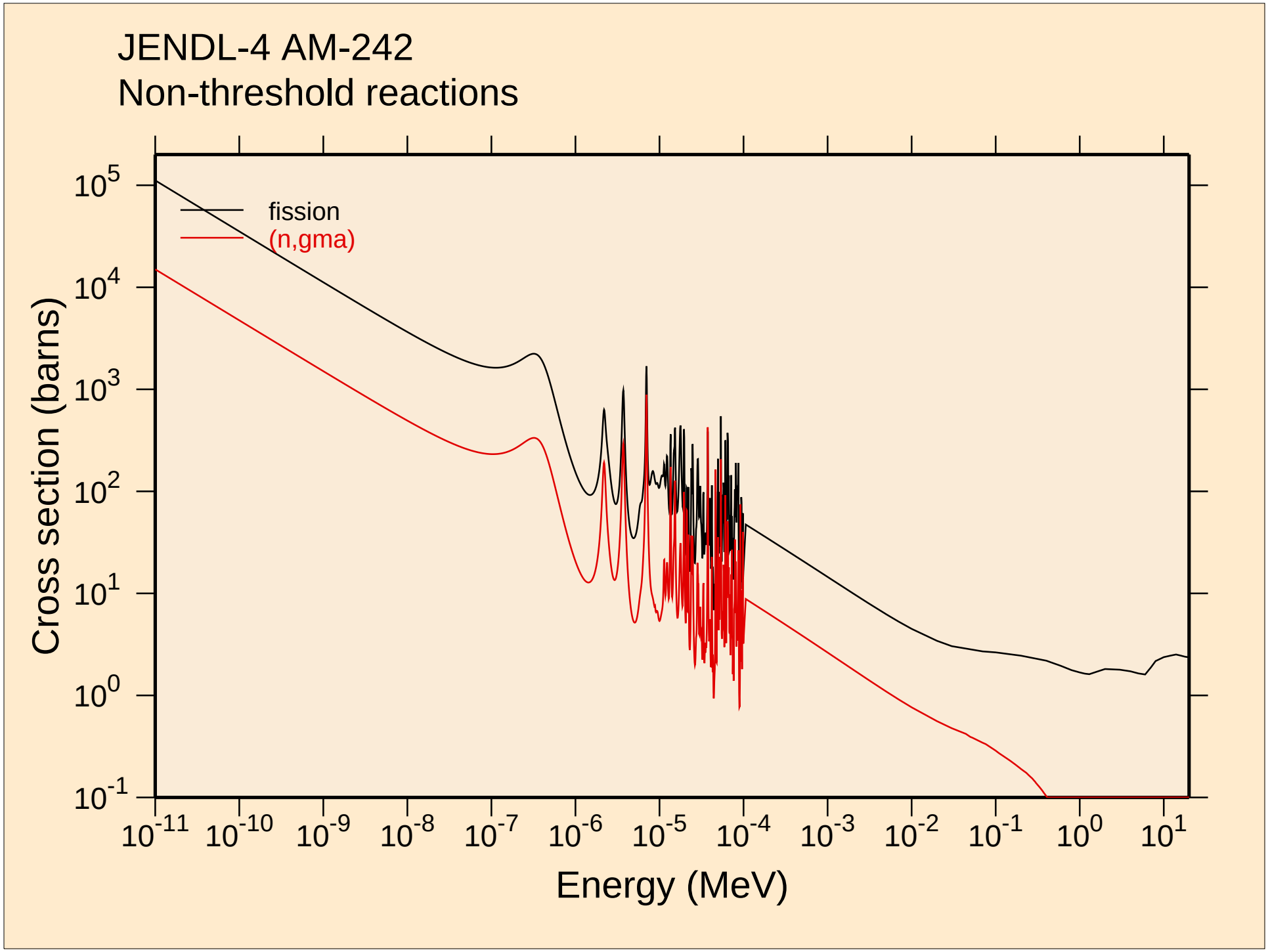

JENDL-4 AM-242
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^-4
10^-3
10^-2
Energy (MeV)

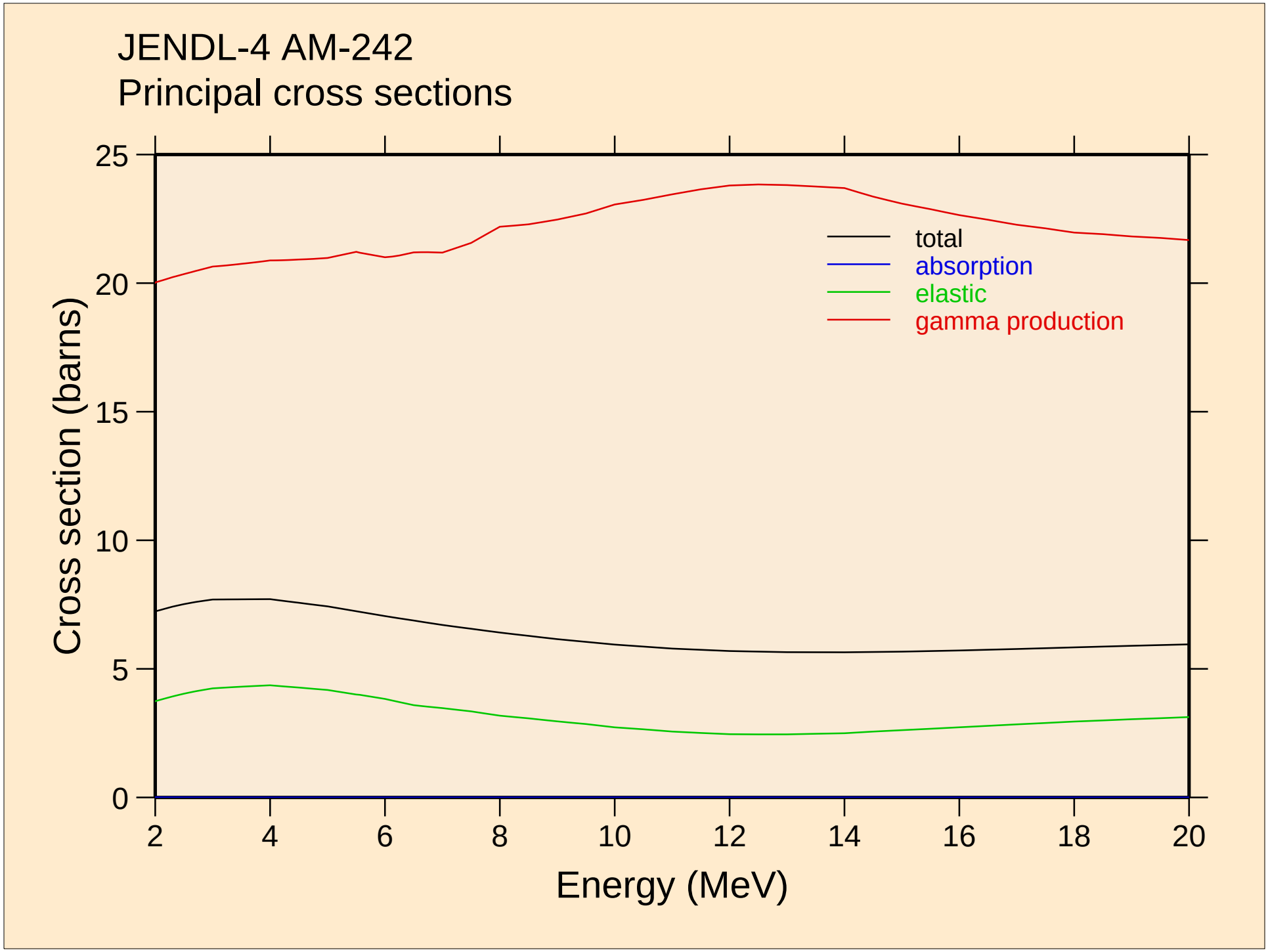

JENDL-4 AM-242
UR fission cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
Energy (MeV)
10^2
10^1
10^-4
10^-3
10^-2

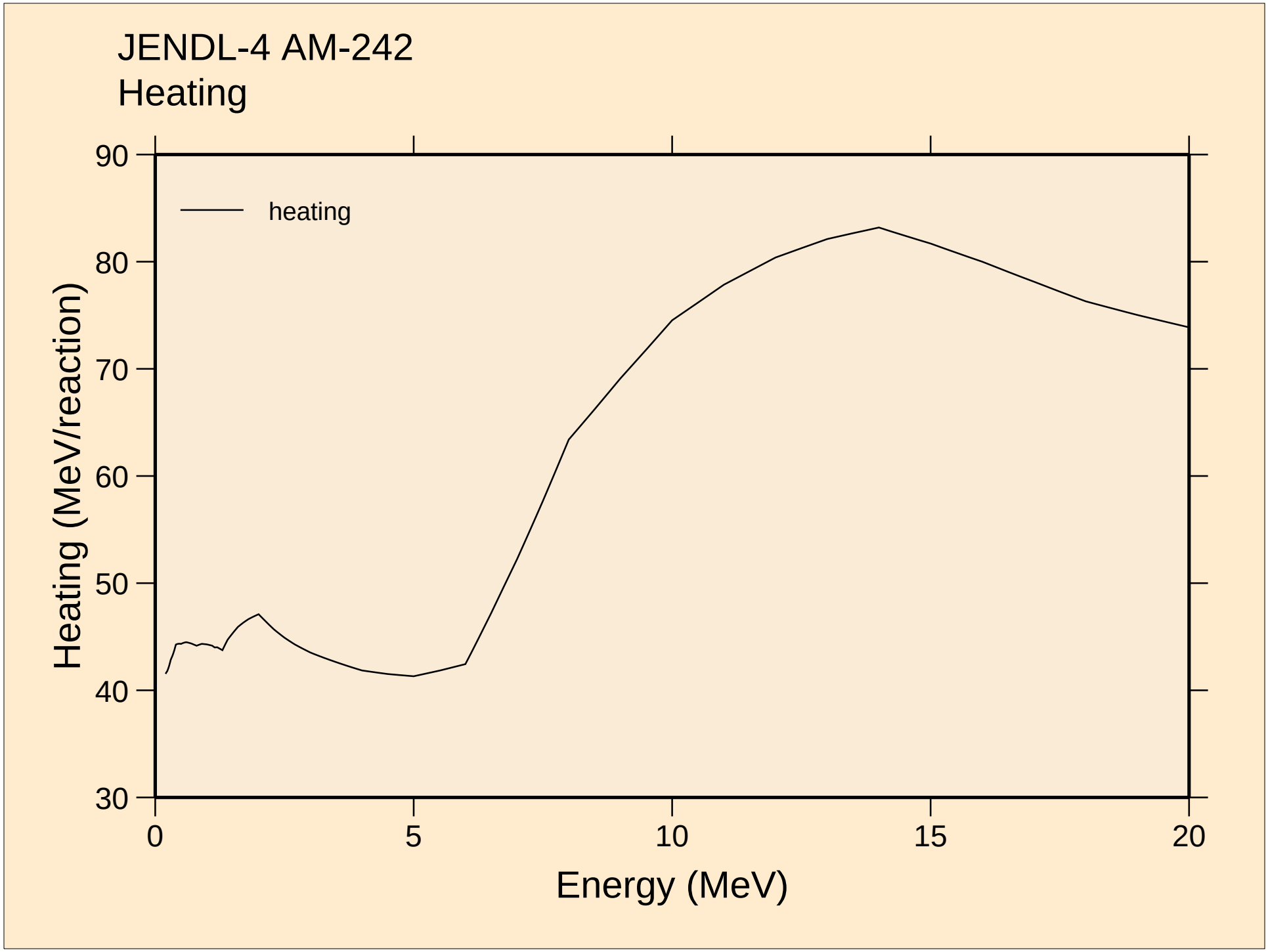

JENDL-4 AM-242
UR capture cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
Energy (MeV)
10^1
10^0
10^-4
10^-3
10^-2

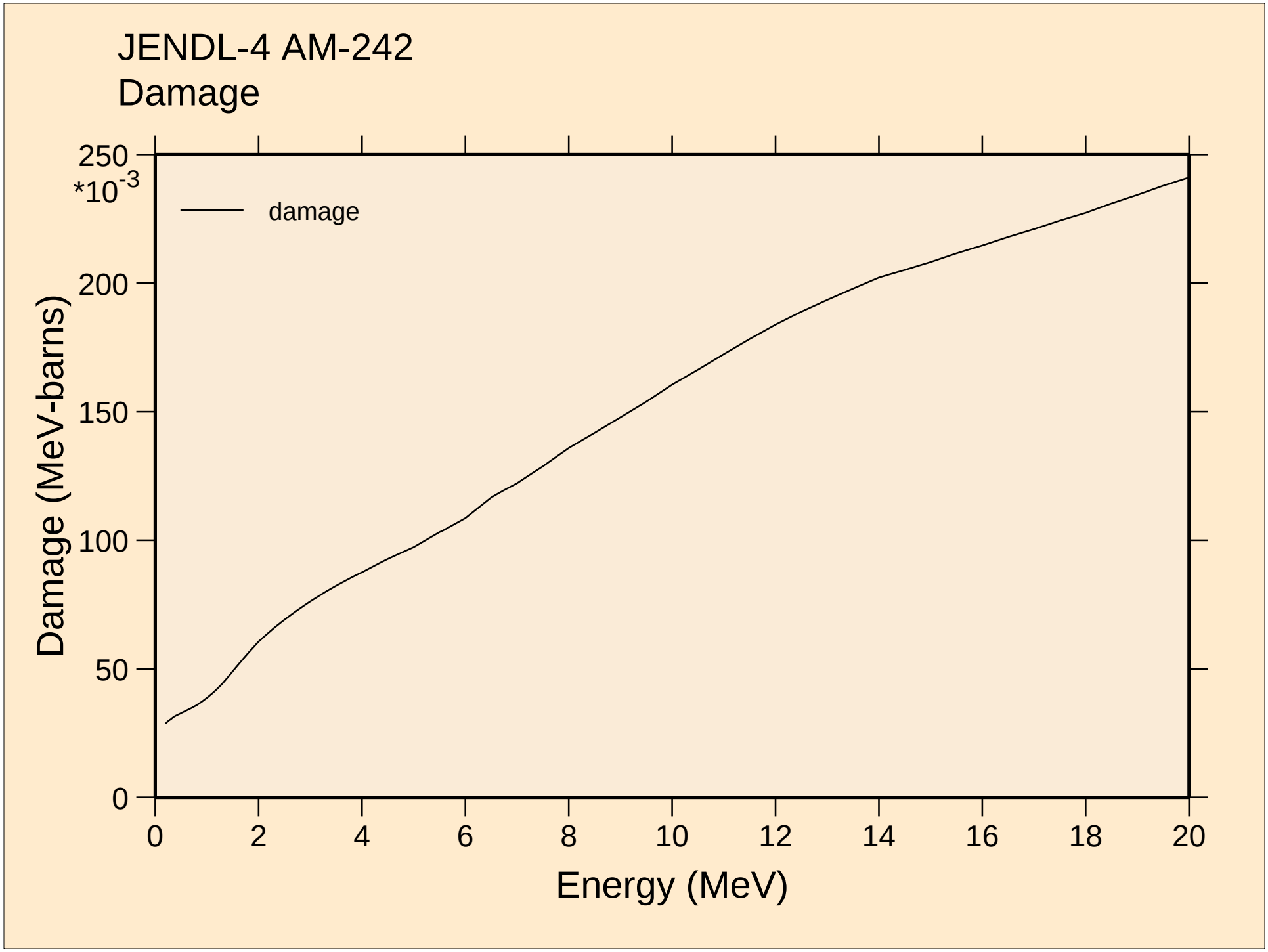

JENDL-4 AM-242
Heating
heating
Heating (MeV/reaction)
10^{2}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

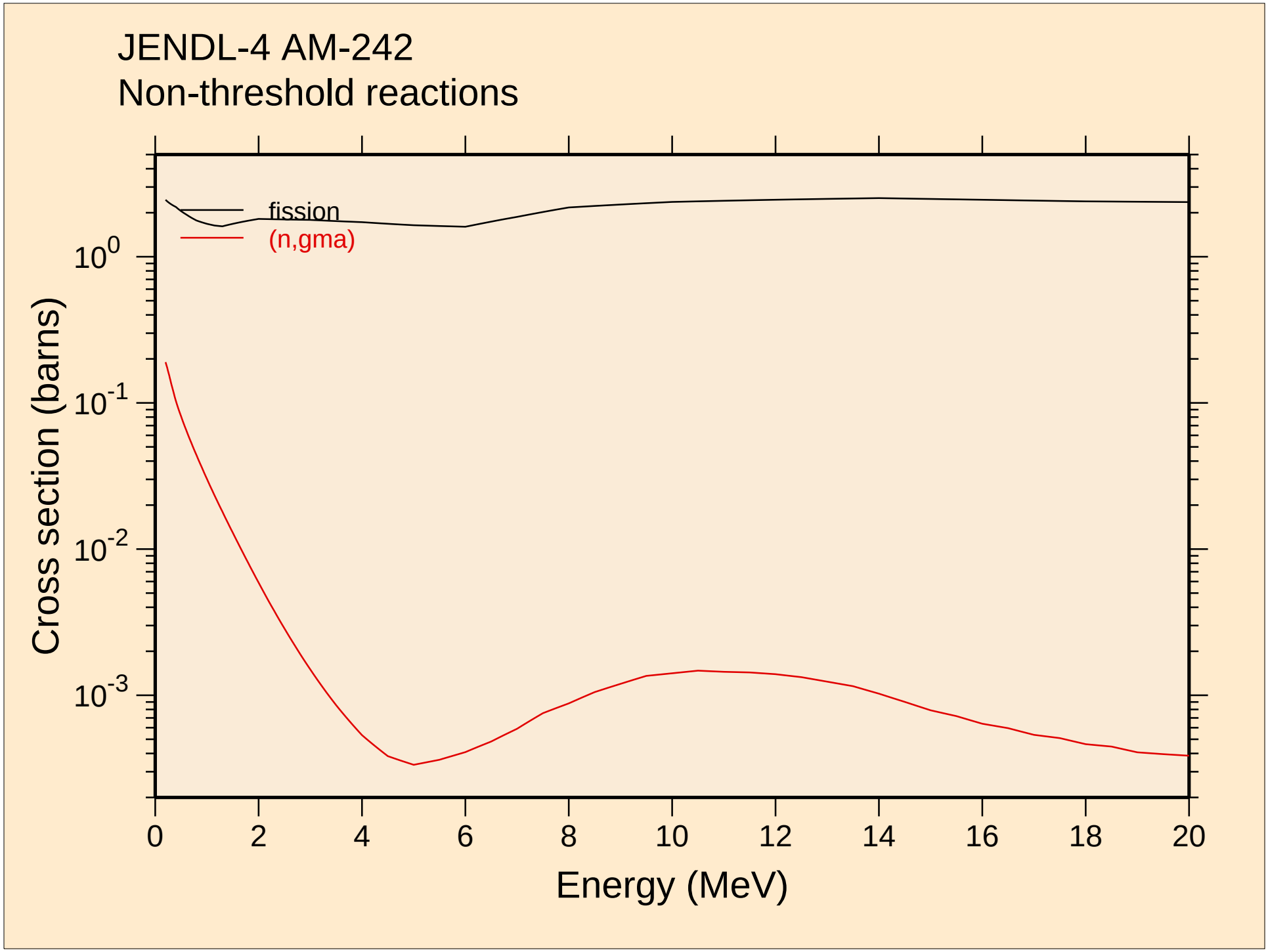

JENDL-4 AM-242
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

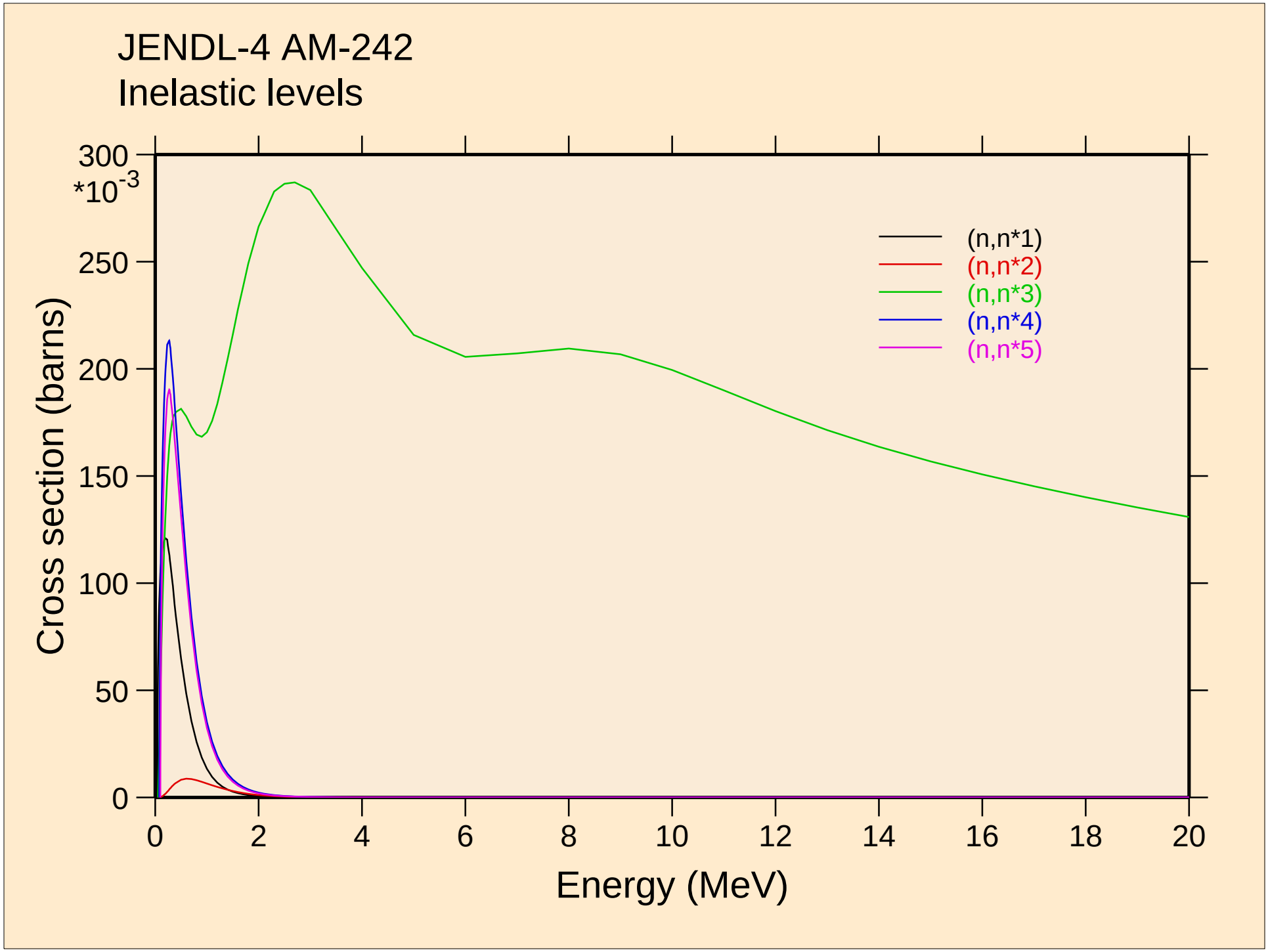

JENDL-4 AM-242
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
Energy (MeV)
10^{5}
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

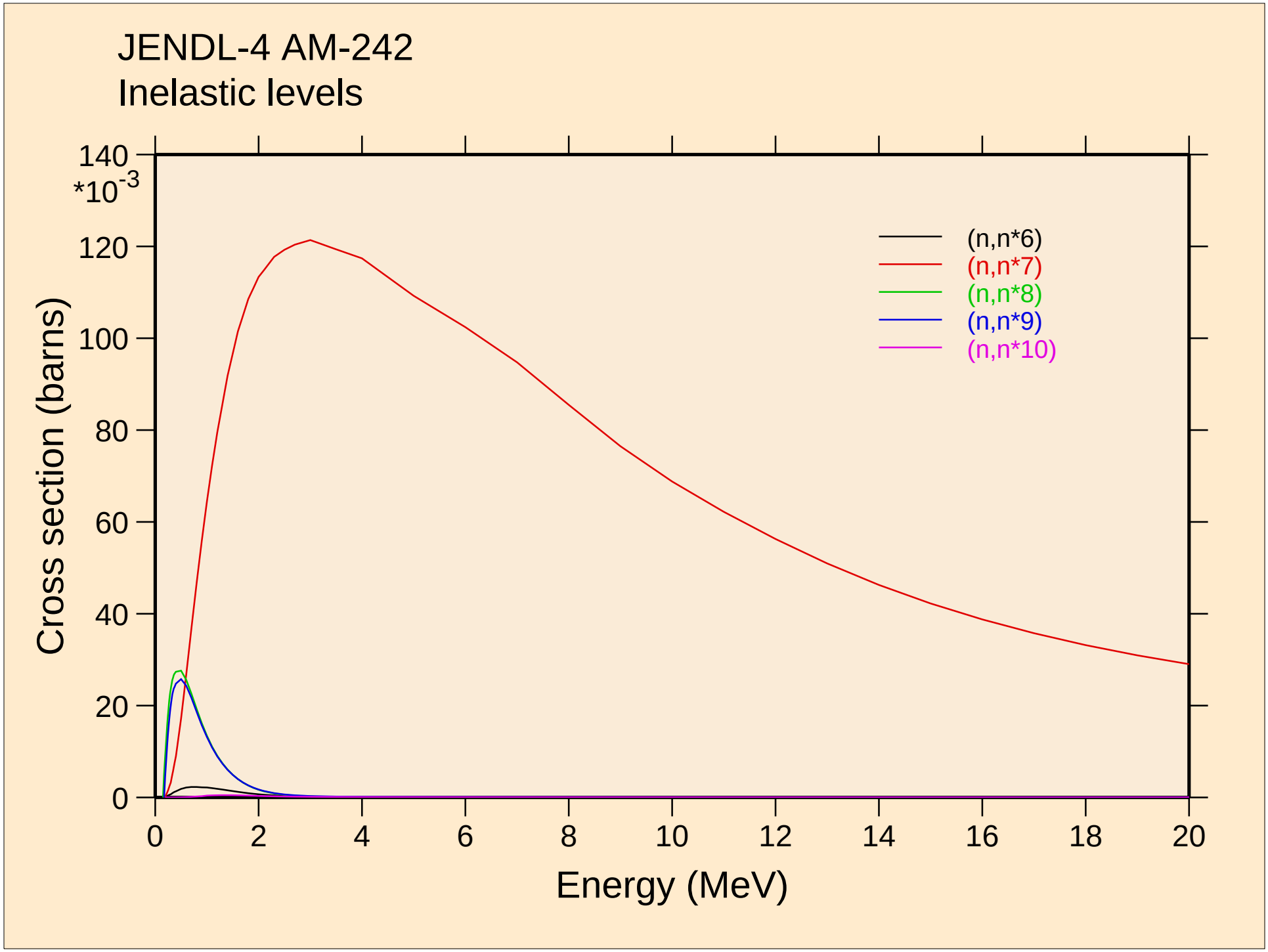

JENDL-4 AM-242
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
5
10
15
20
25
2
4
6
8
10
12
14
16
18
20

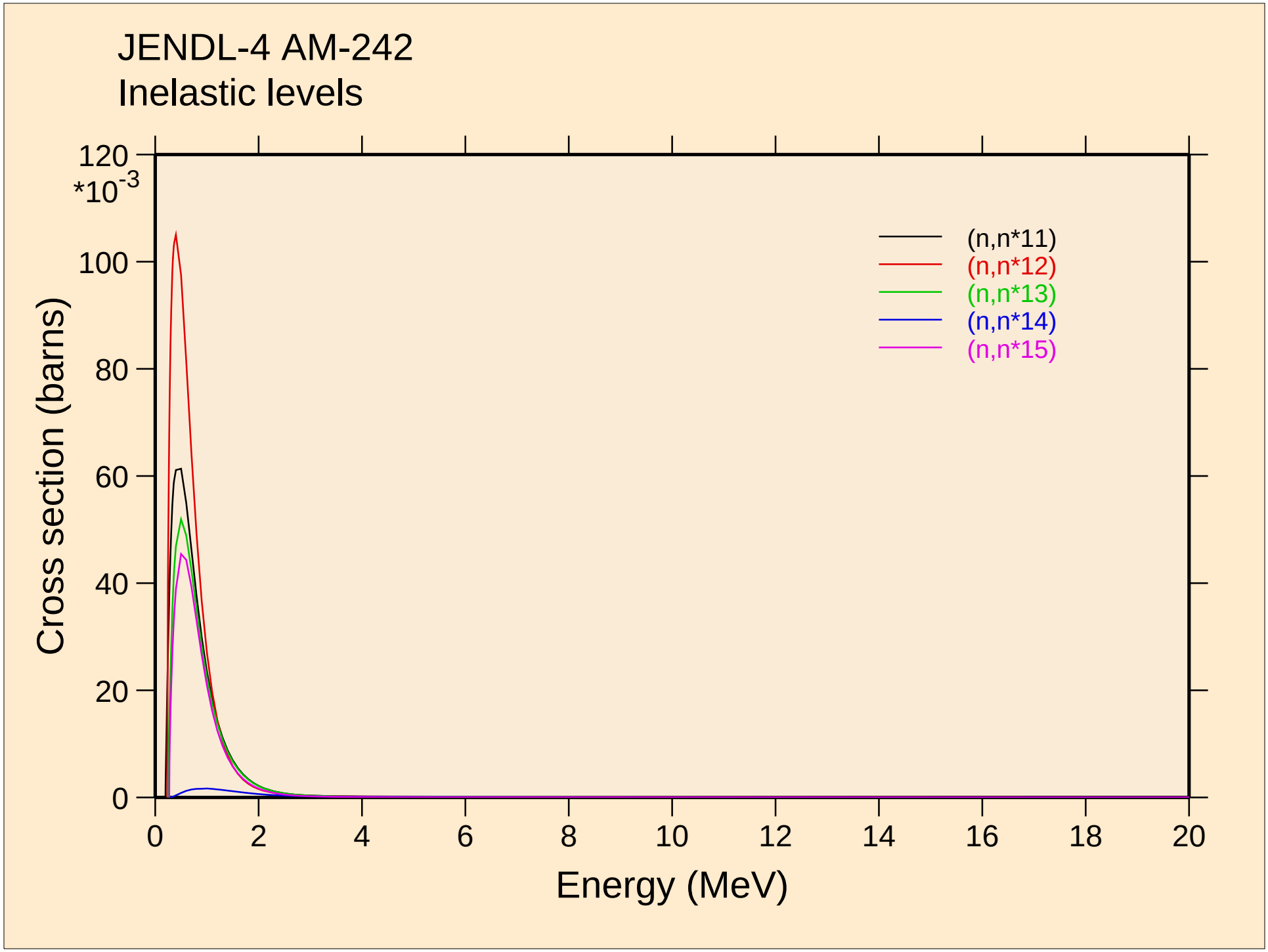

JENDL-4 AM-242
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
90
80
70
60
50
40
30
0
5
10
15
20

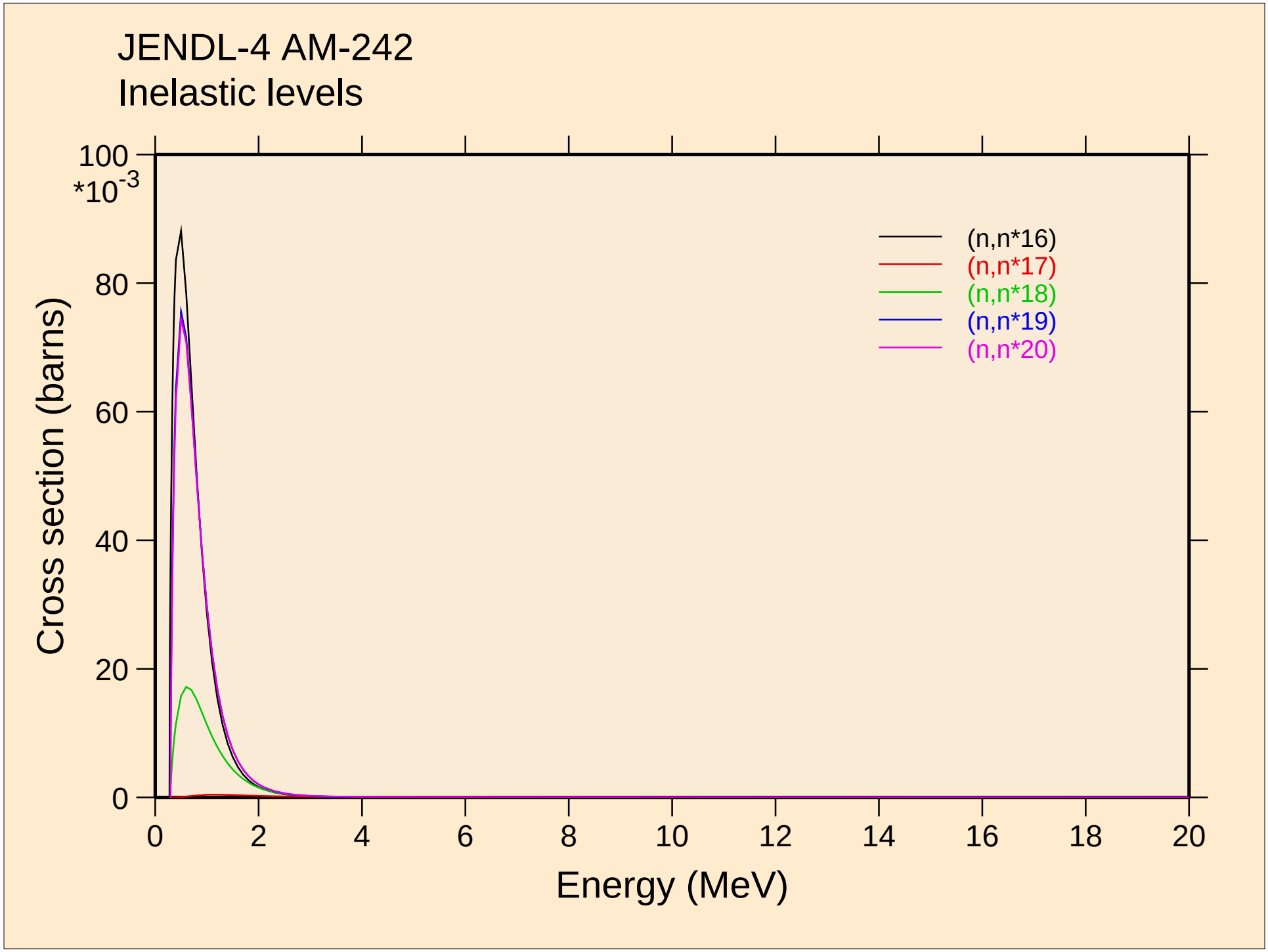

JENDL-4 AM-242
Damage
damage
Damage (MeV-barns)
*10-3
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

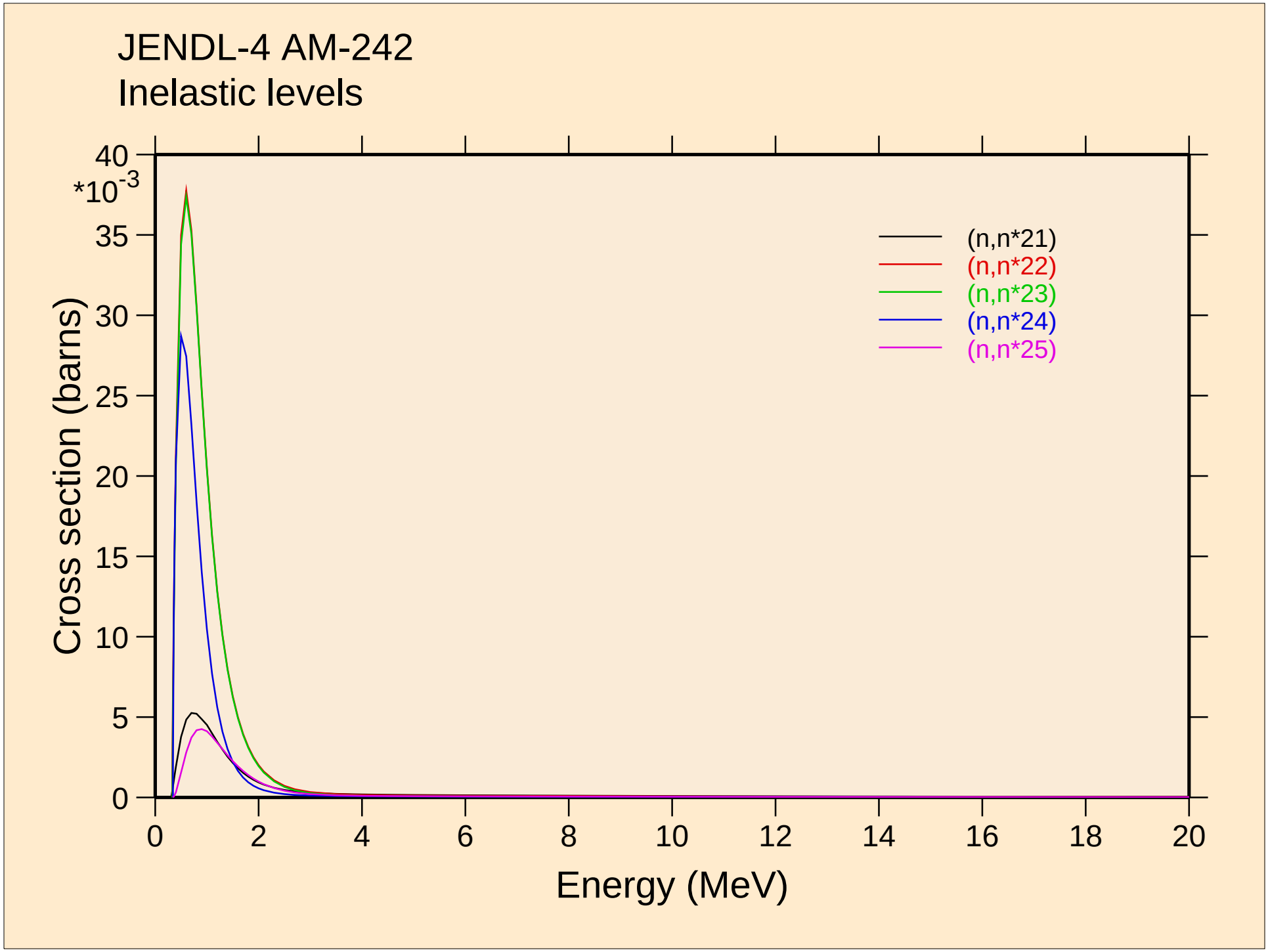

JENDL-4 AM-242
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

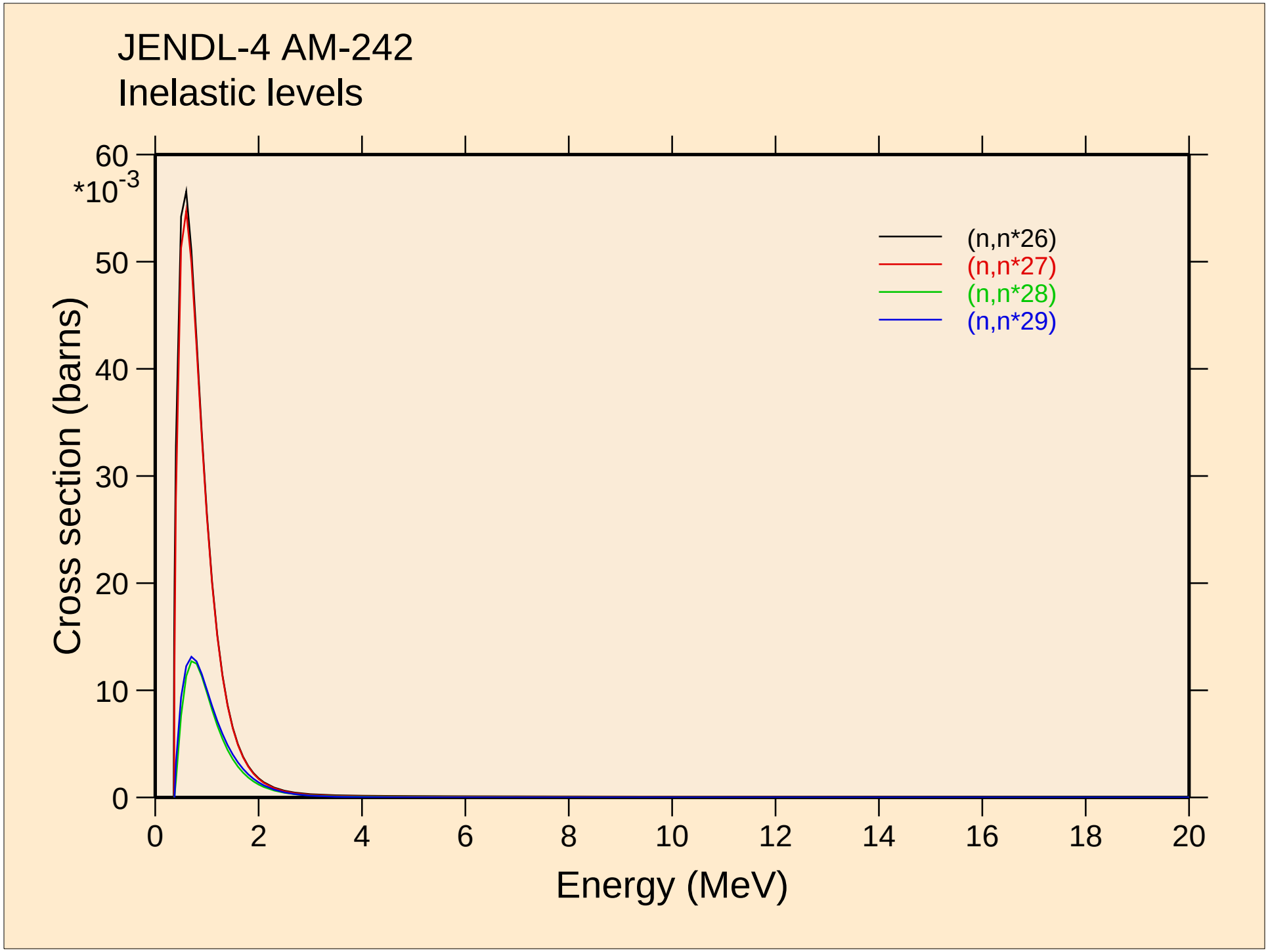

JENDL-4 AM-242
Inelastic levels
Cross section (barns)
*10^-3
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

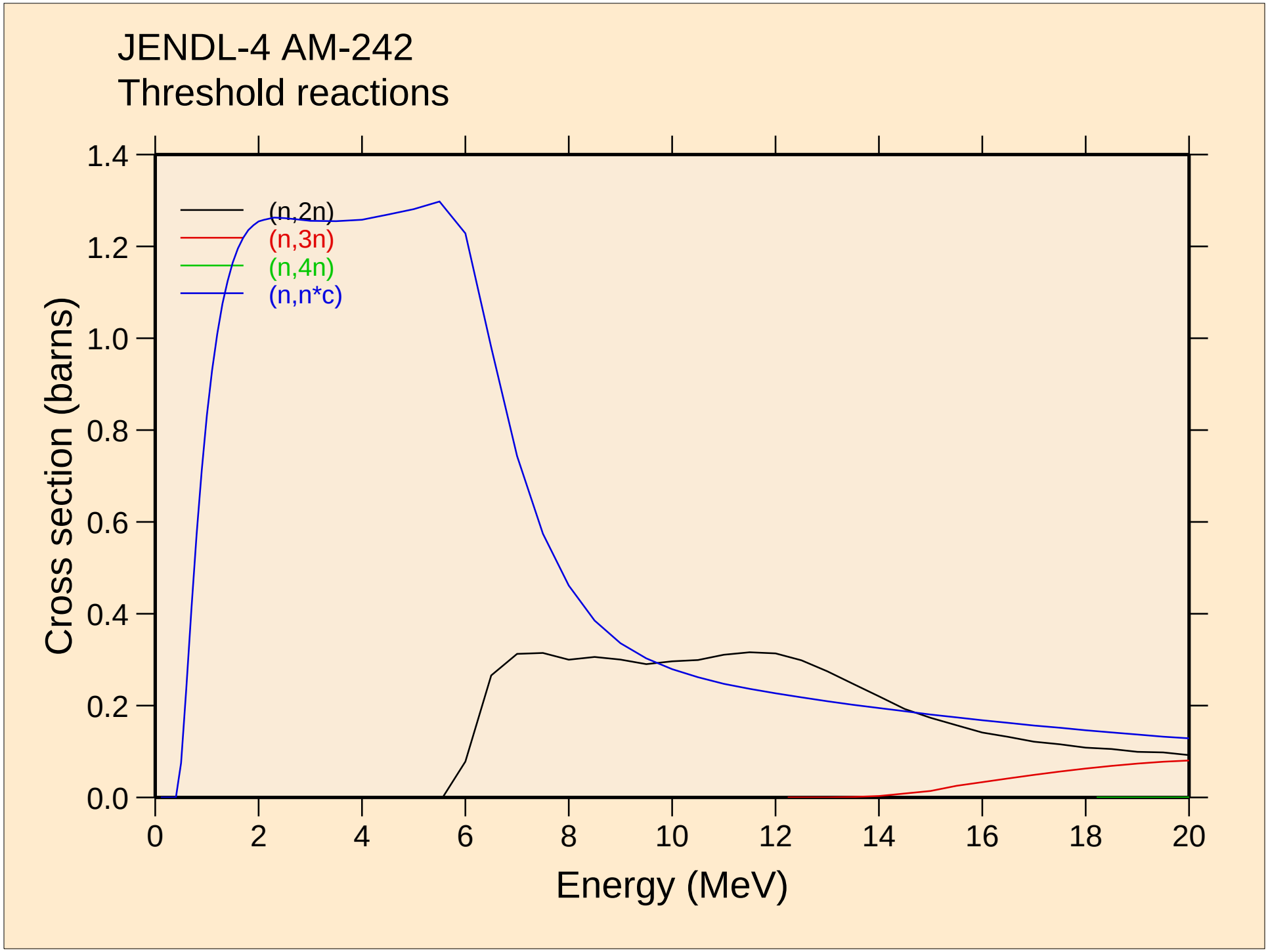

JENDL-4 AM-242
Inelastic levels
Cross section (barns)
*10^-3
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

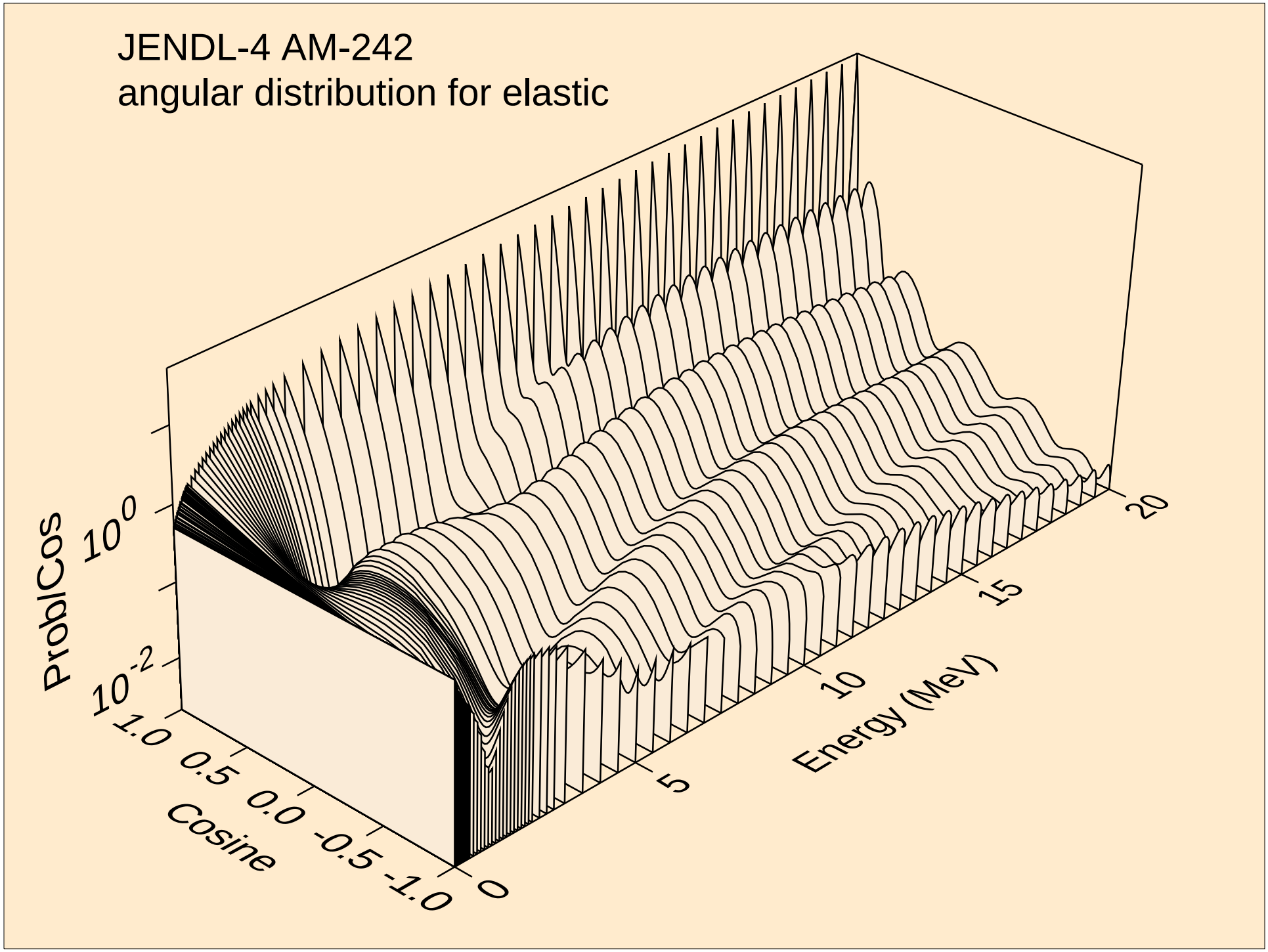

JENDL-4 AM-242
Inelastic levels
Cross section (barns)
*10^-3
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

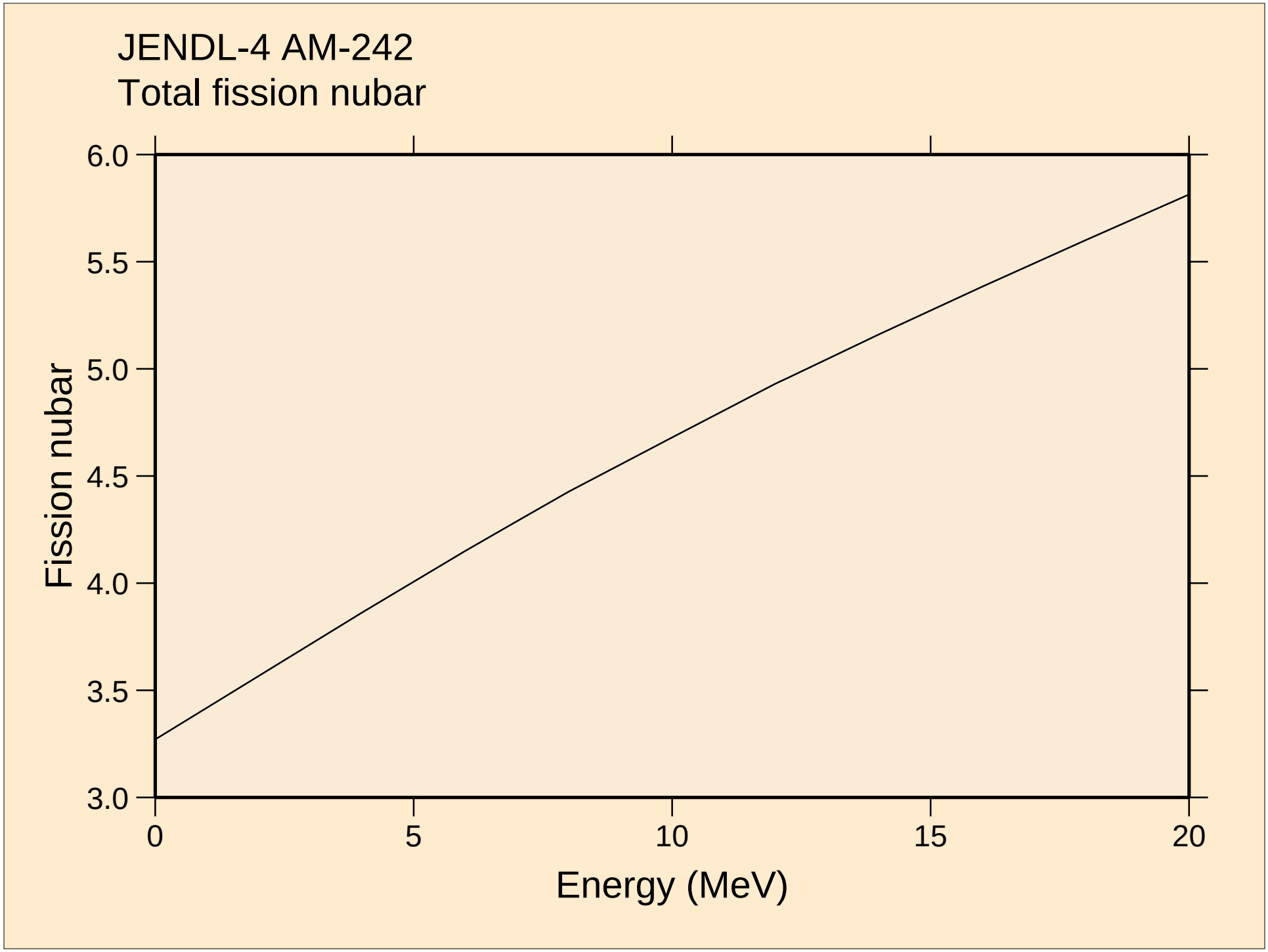

JENDL-4 AM-242
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

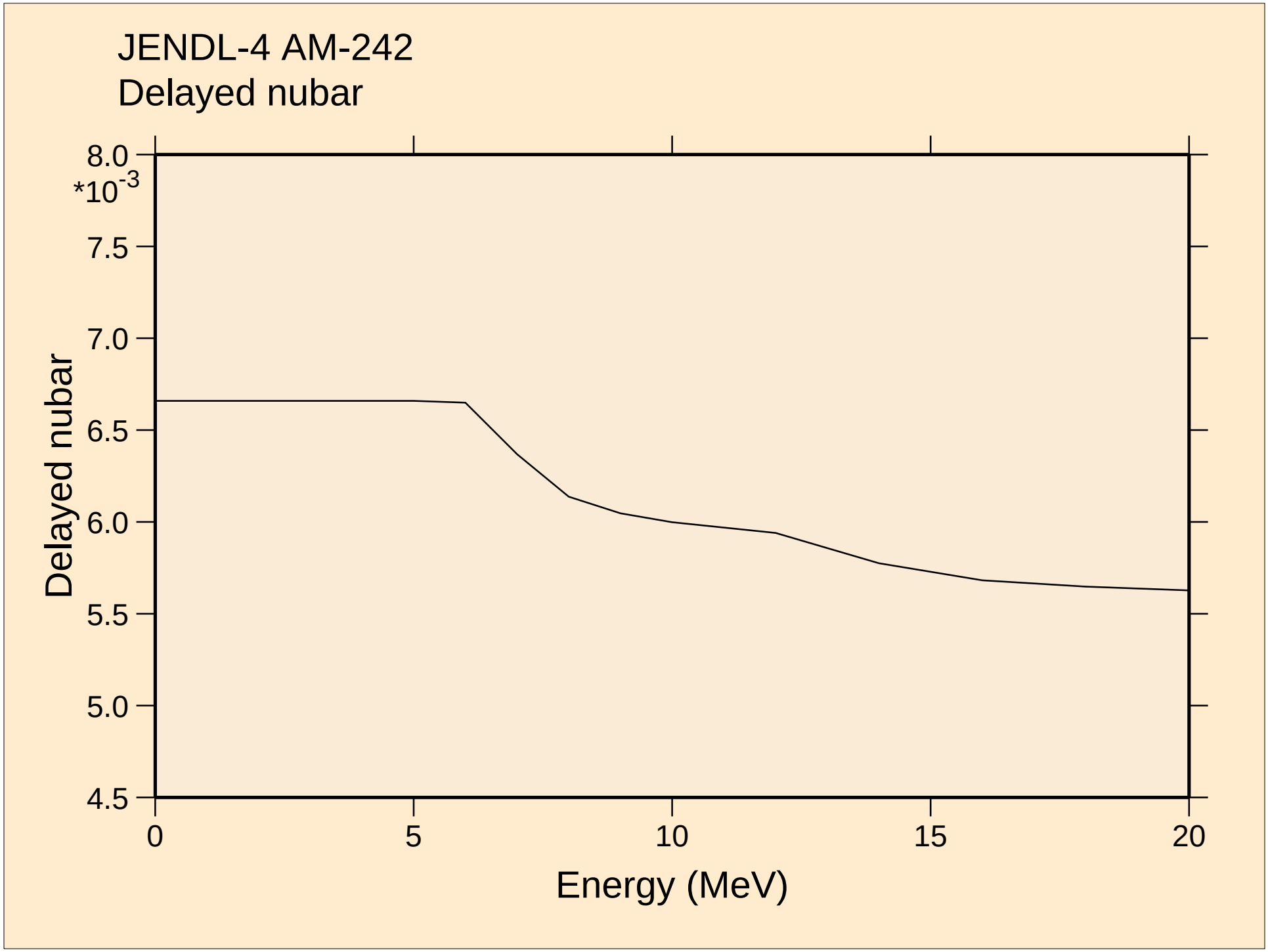

JENDL-4 AM-242
Inelastic levels
Cross section (barns)
*10-3
40
35
30
25
20
15
10
5
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

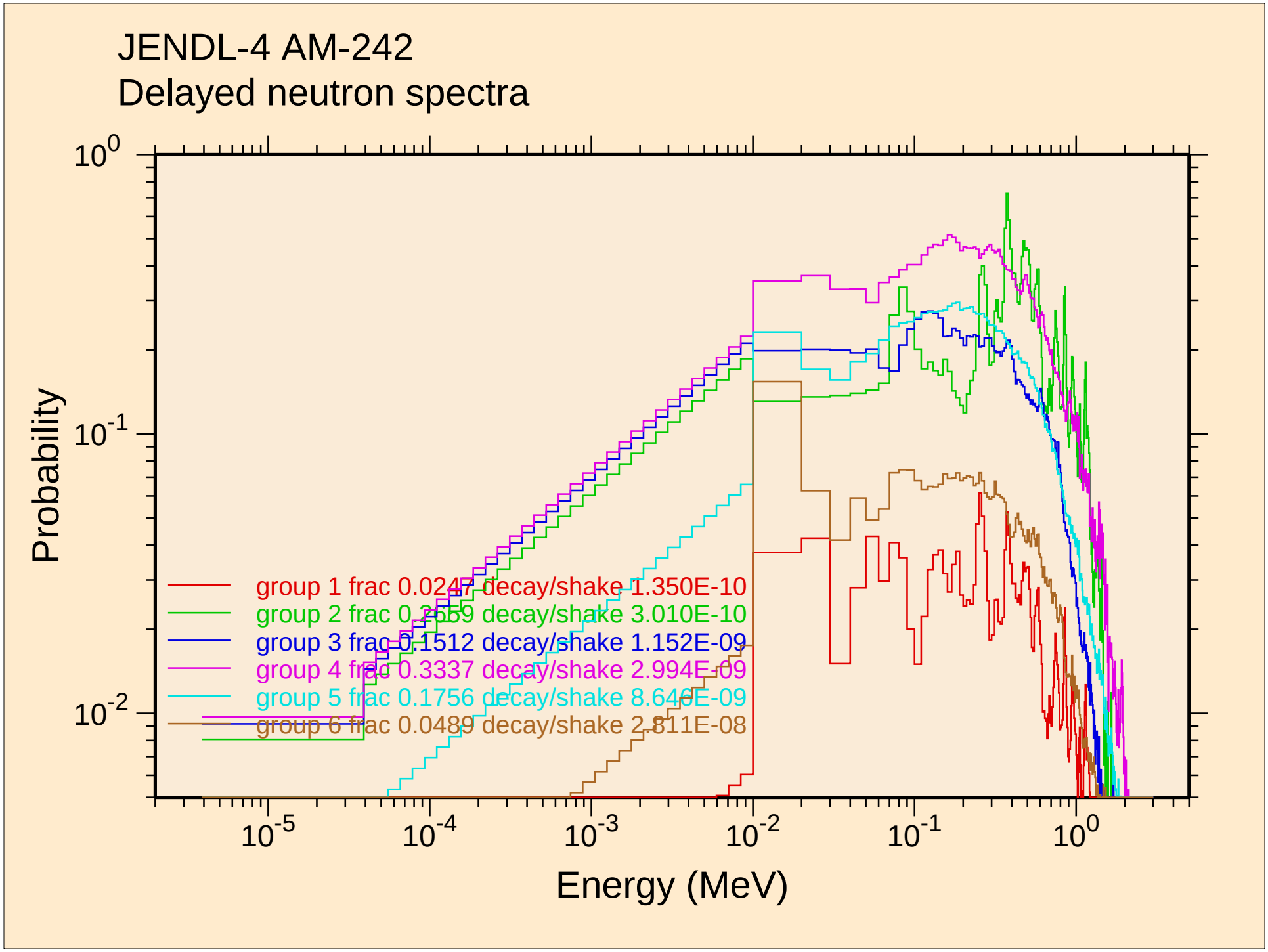

JENDL-4 AM-242
Inelastic levels
Cross section (barns)
*10-3
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)


JENDL-4 AM-242
Threshold reactions
(n,2n)
(n,3n)
(n,4n)
(n,n*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
2
4
6
8
10
12
14
16
18
20

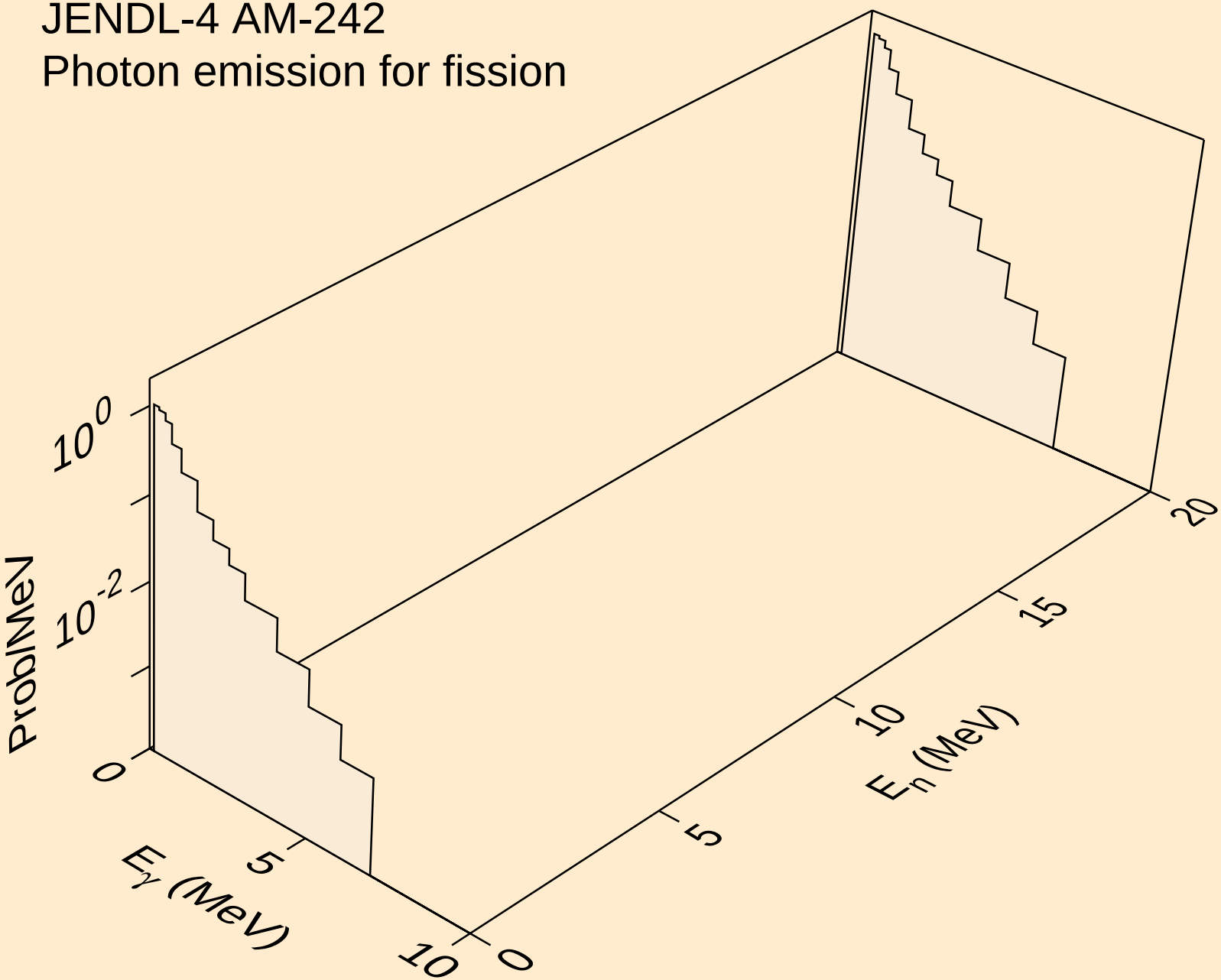

JENDL-4 AM-242
angular distribution for elastic
ProblCos
10^0
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

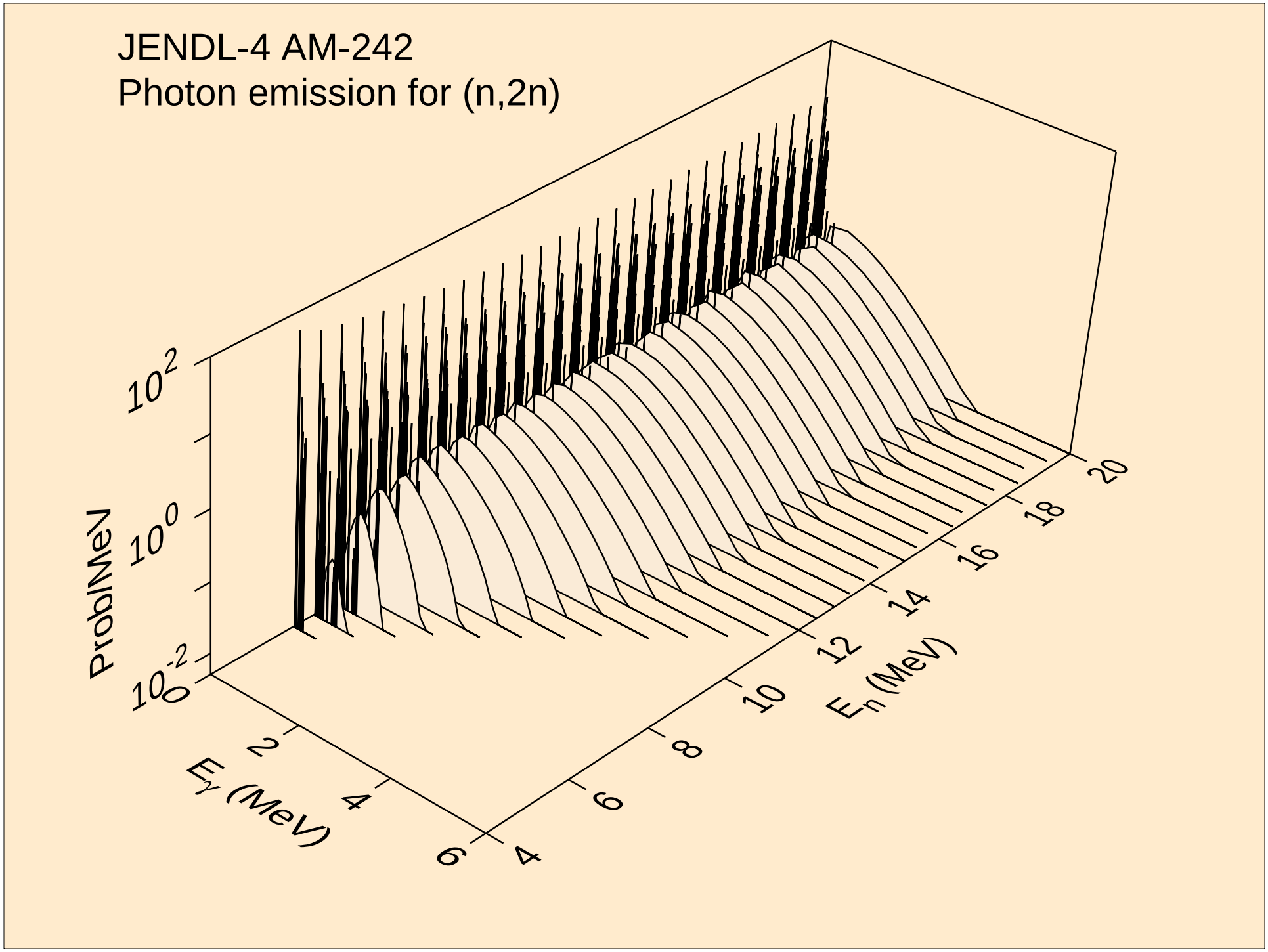

JENDL-4 AM-242
Total fission nubar
Fission nubar
6.0
5.5
5.0
4.5
4.0
3.5
3.0
0
5
10
15
20
Energy (MeV)

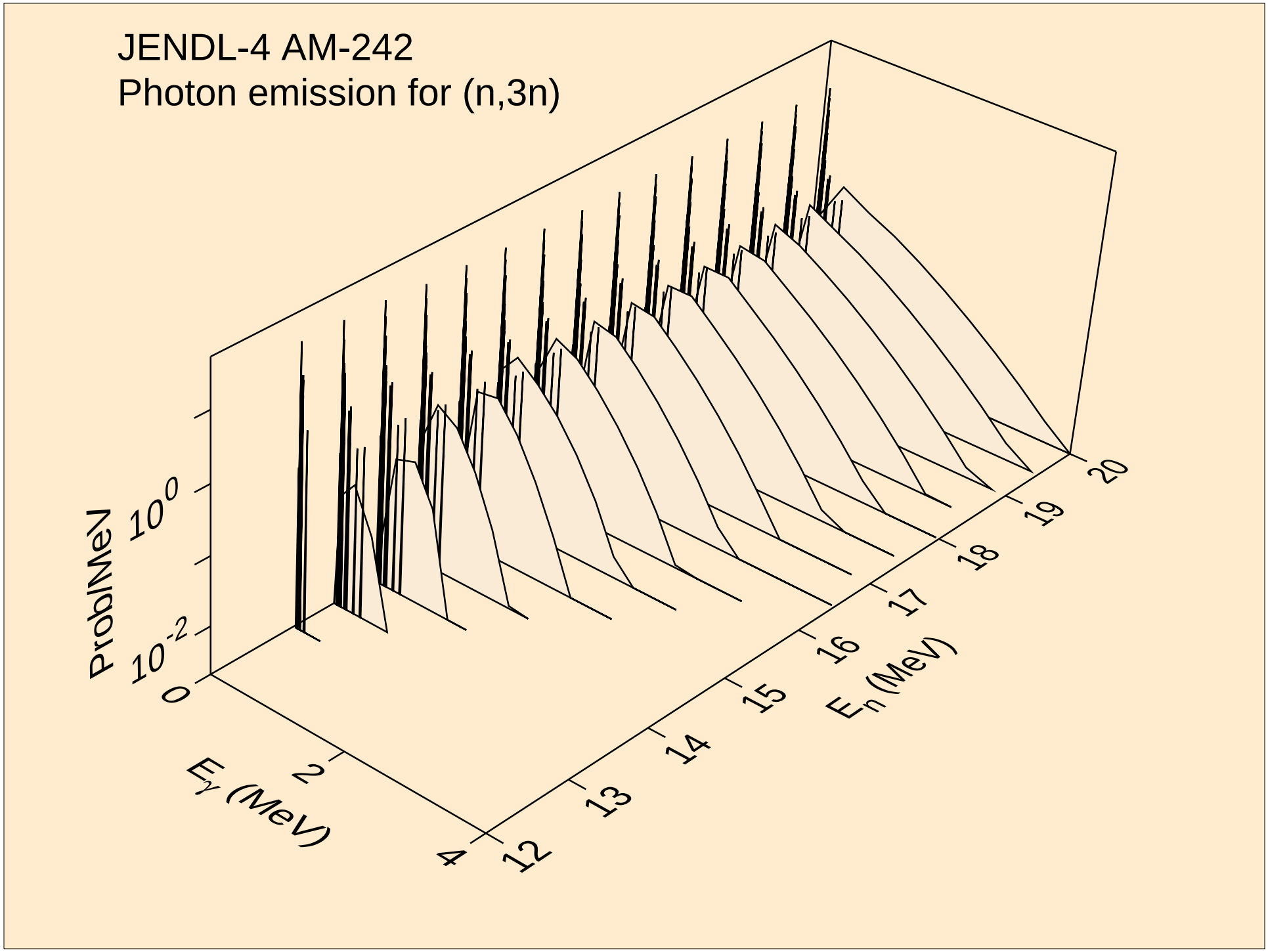

JENDL-4 AM-242
Delayed nubar
8.0
*10-3
7.5
7.0
6.5
6.0
5.5
5.0
4.5
Delayed nubar
0
5
10
15
20
Energy (MeV)

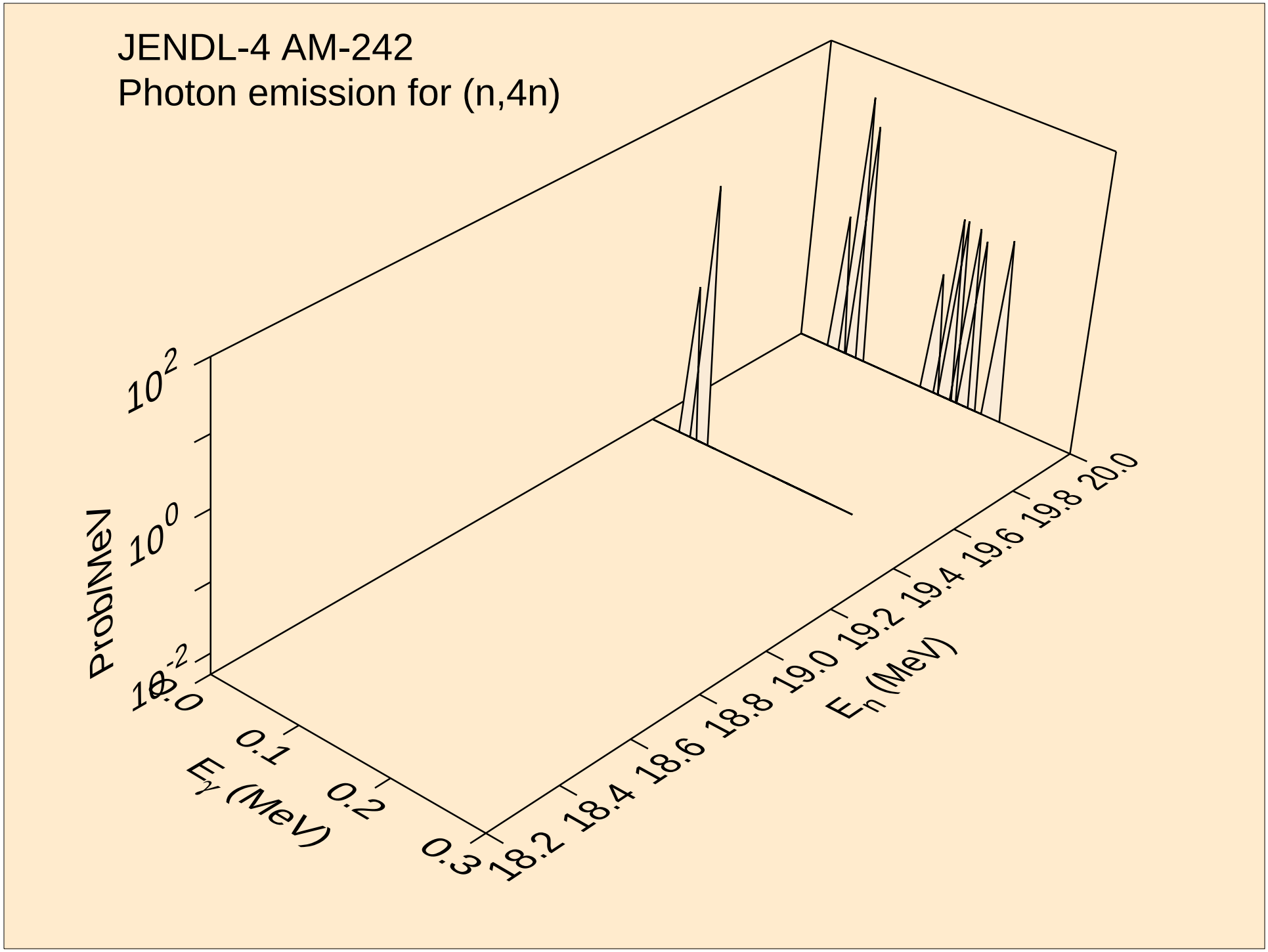

JENDL-4 AM-242
Delayed neutron spectra
Probability
Energy (MeV)
group 1 frac 0.0247 decay/shake 1.350E-10
group 2 frac 0.2659 decay/shake 3.010E-10
group 3 frac 0.1512 decay/shake 1.152E-09
group 4 frac 0.3337 decay/shake 2.994E-09
group 5 frac 0.1756 decay/shake 8.646E-09
group 6 frac 0.0489 decay/shake 2.811E-08

JENDL-4 AM-242
Photon emission for fission

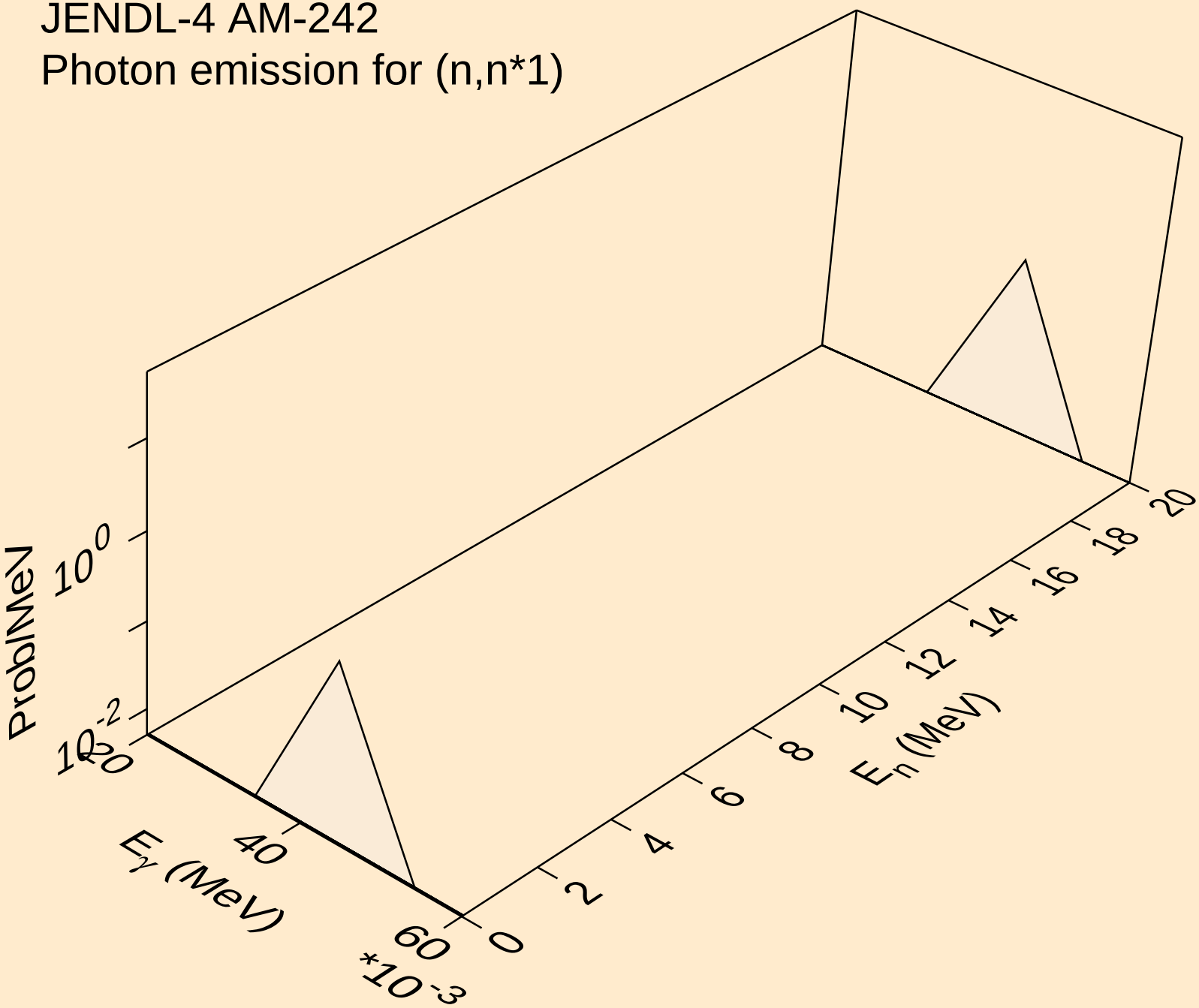


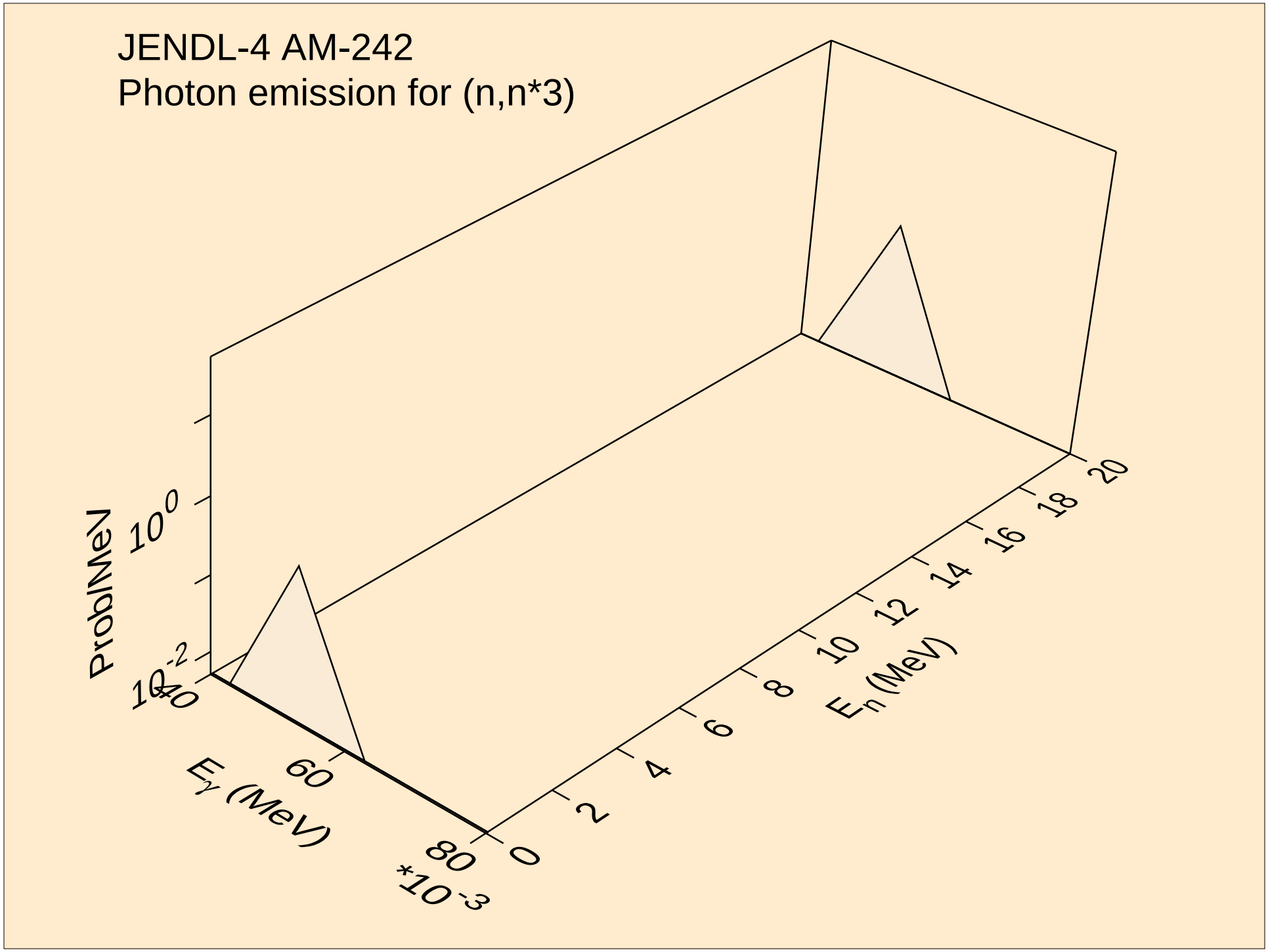

JENDL-4 AM-242
Photon emission for (n,2n)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
4
6
8
10
12
14
16
18
20


JENDL-4 AM-242
Photon emission for (n,3n)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
12
13
14
15
16
17
18
19
20
E_n (MeV)

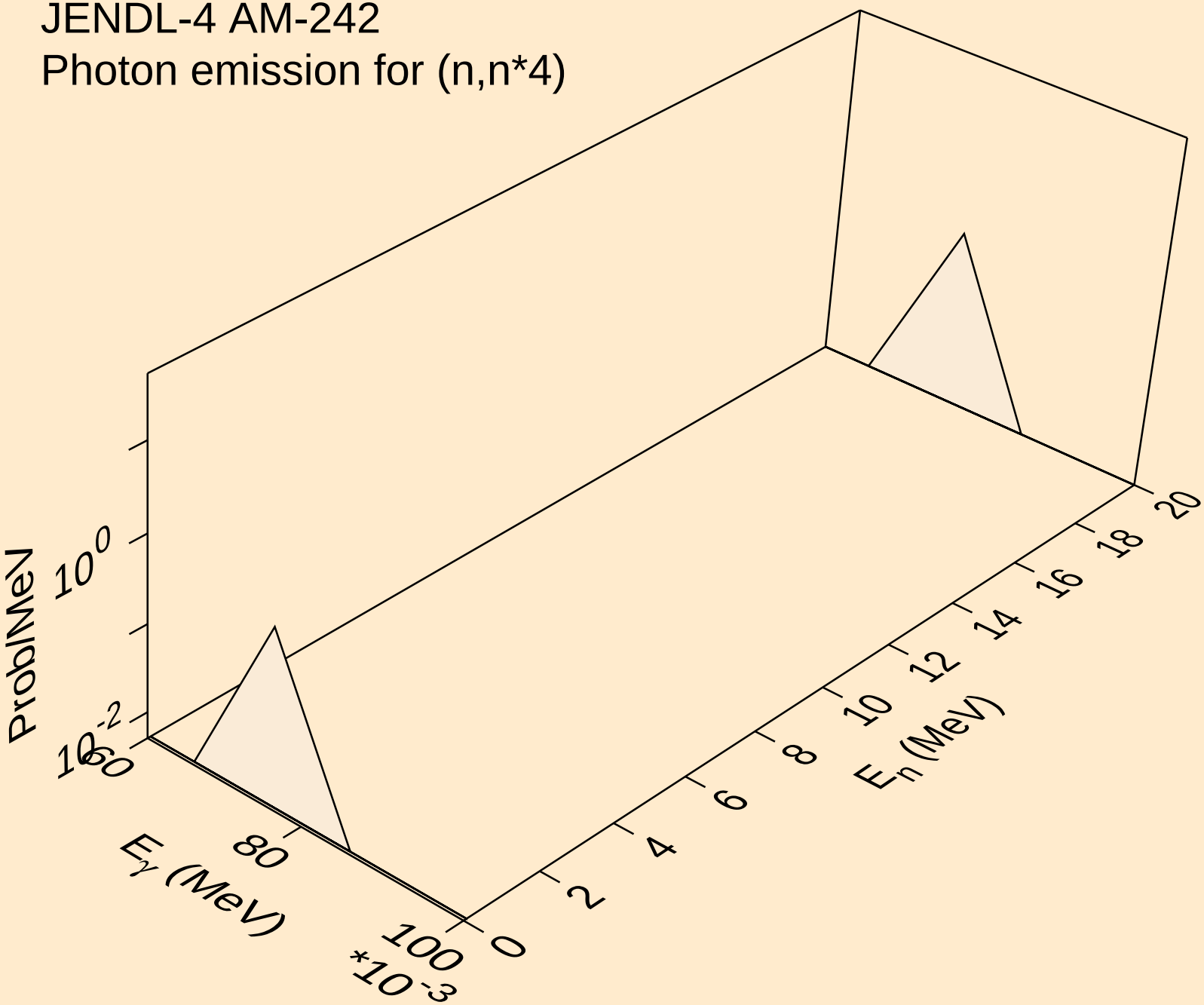

JENDL-4 AM-242
Photon emission for (n,4n)
Prob/MeV
10^{2}
10^{0}
10^{-2}
0.0
0.1
0.2
0.3
E_γ (MeV)
18.2
18.4
18.6
18.8
19.0
19.2
19.4
19.6
19.8
20.0
E_n (MeV)

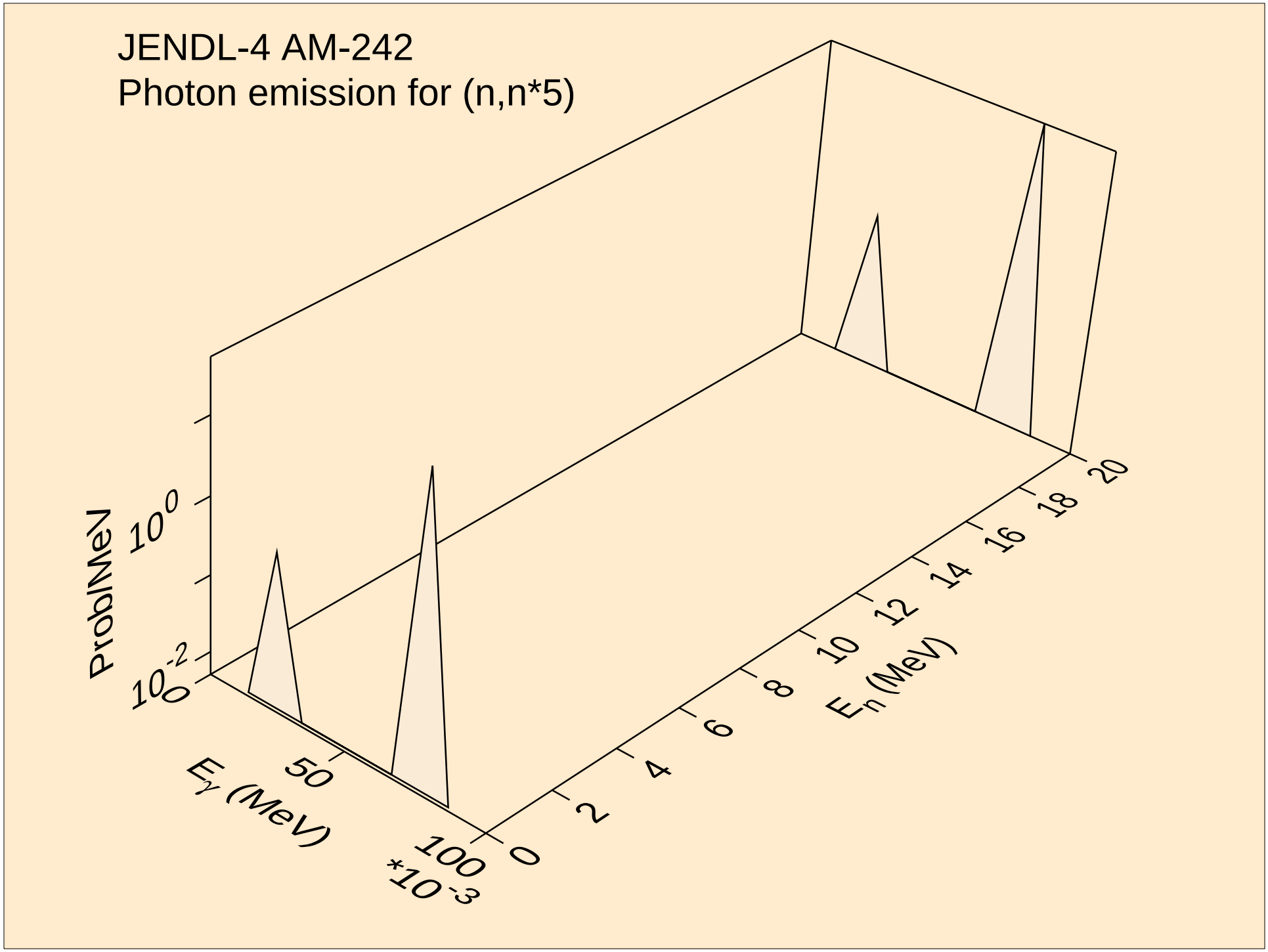
JENDL-4 AM-242
Photon emission for (n,n*1)

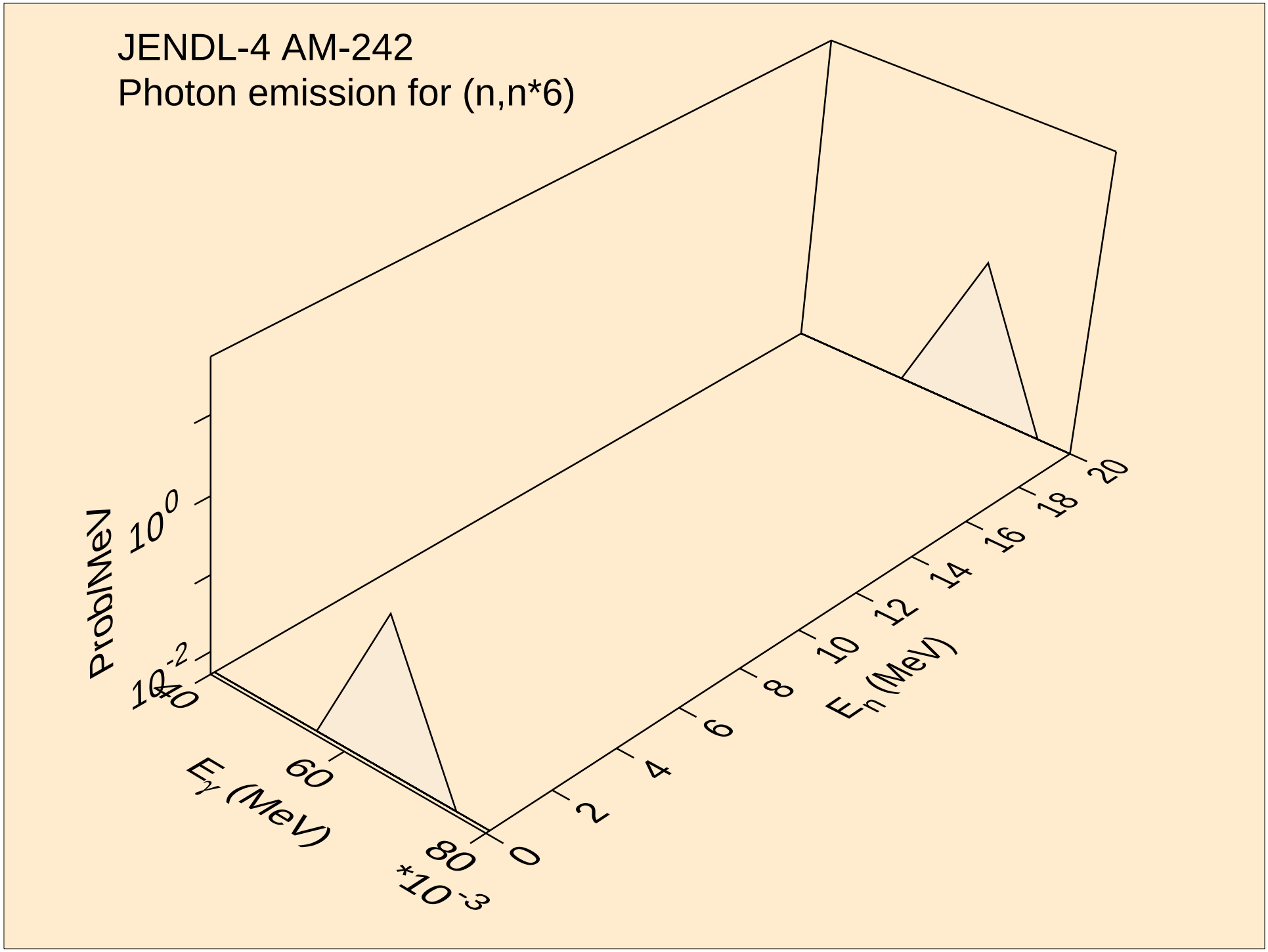


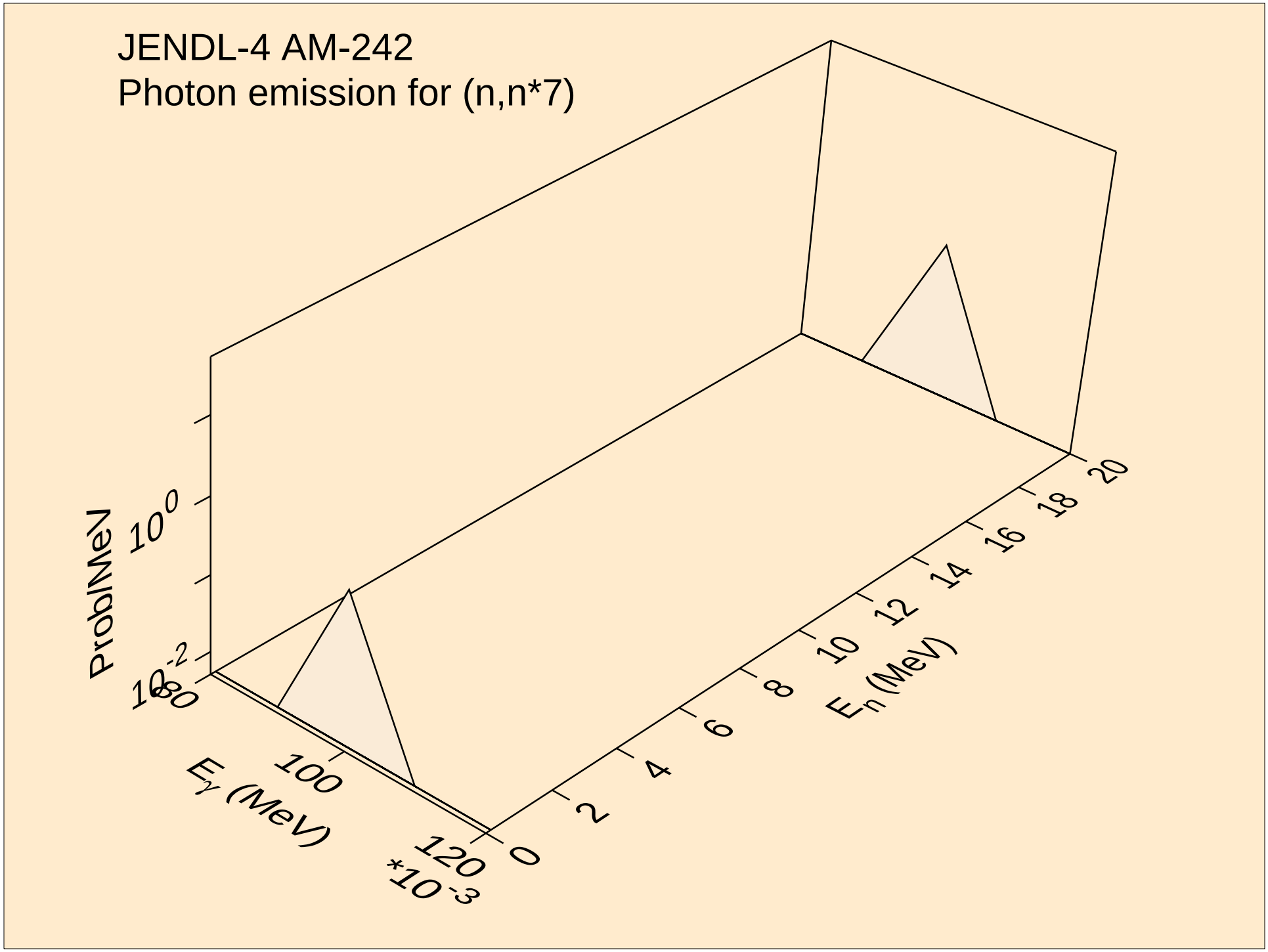

JENDL-4 AM-242
Photon emission for (n,n*3)
Prob/MeV
10^{0}
10^{-2}
40
60
80
E_γ (MeV)
*10^{-3}
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

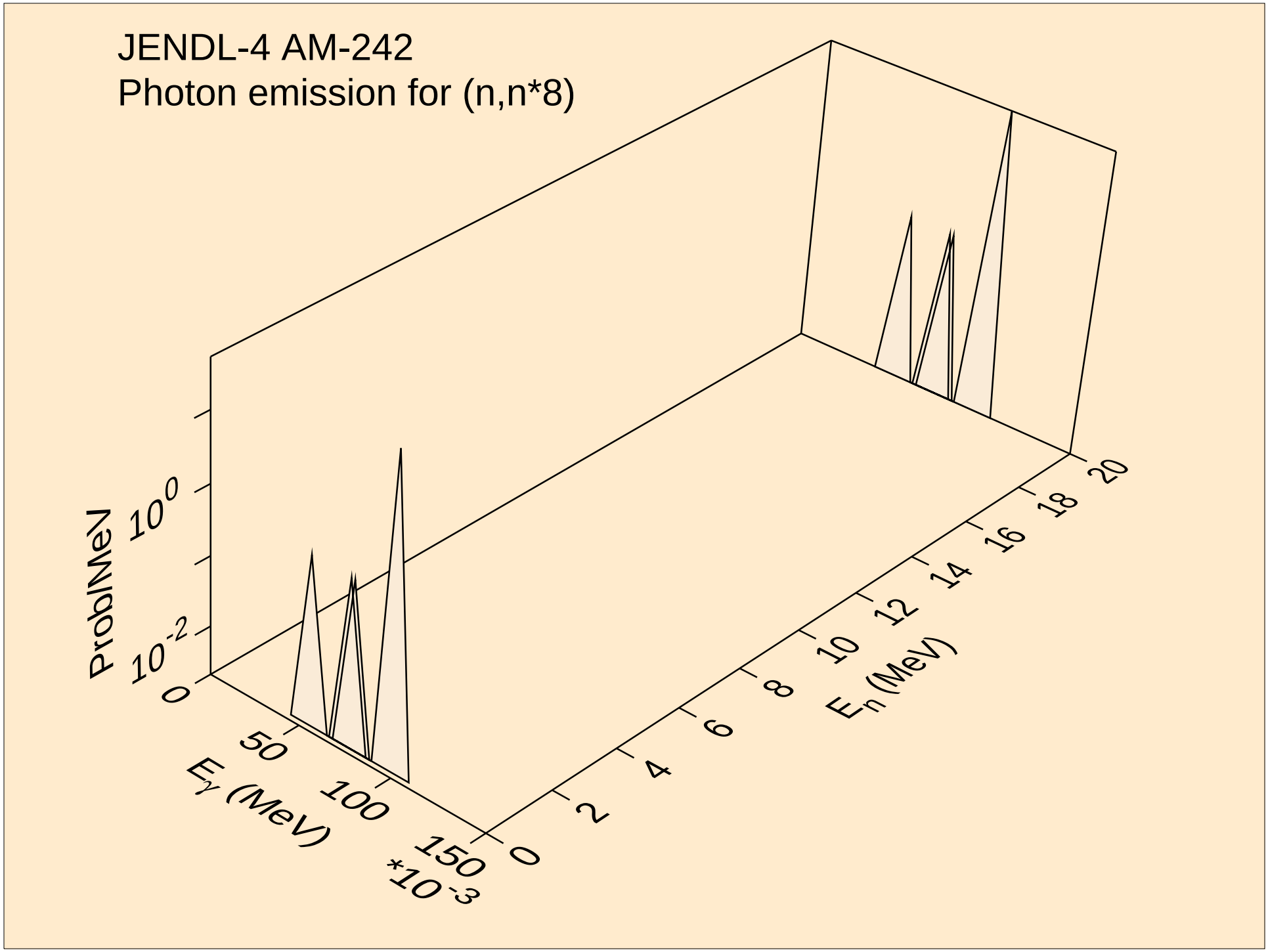
JENDL-4 AM-242
Photon emission for (n,n*4)

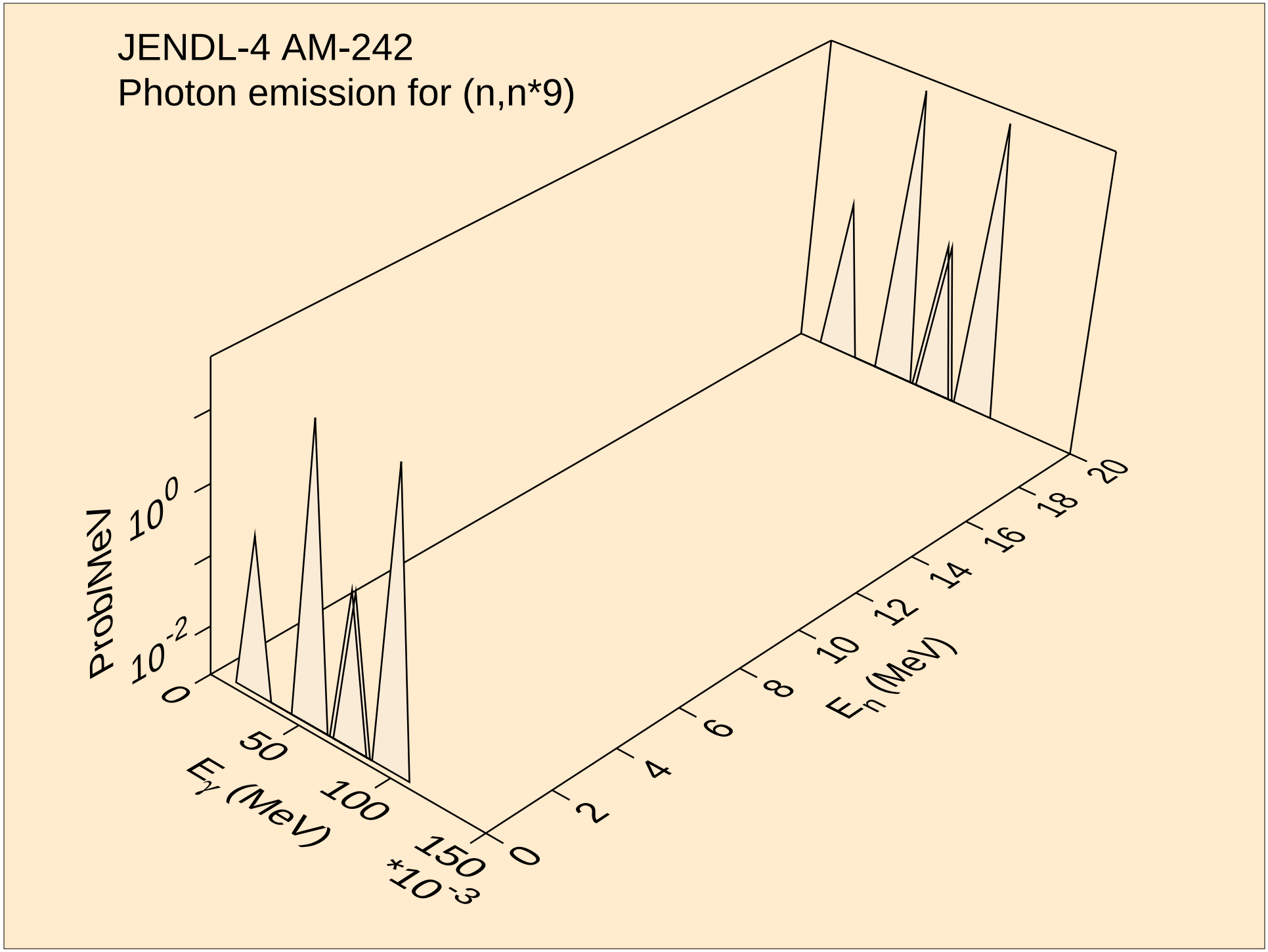


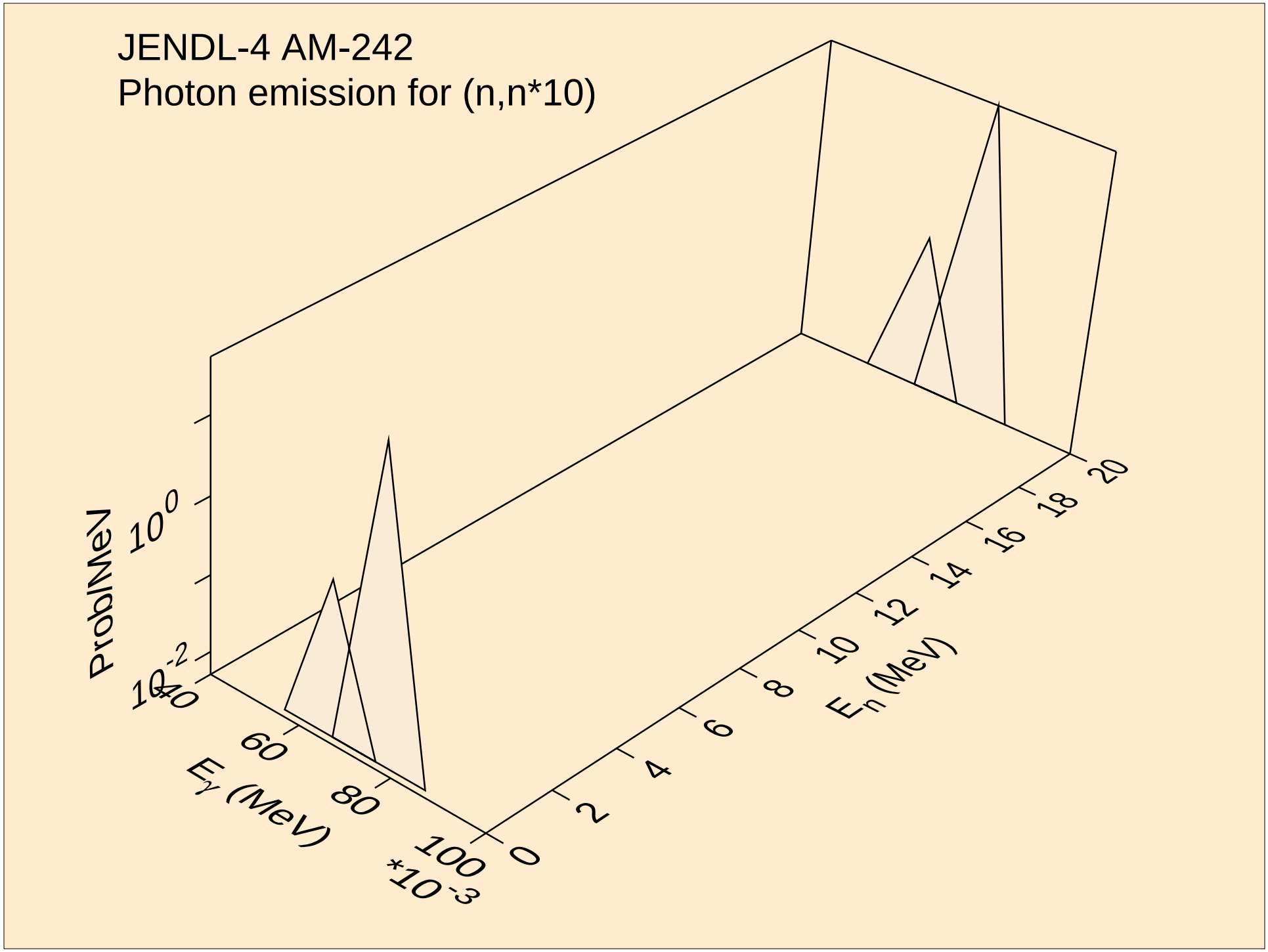

JENDL-4 AM-242
Photon emission for (n,n*5)
Prob/MeV
10^{0}
10^{-2}
0
50
100
E_γ (MeV)
$*10^{-3}$
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 AM-242
Photon emission for (n,n*6)
Prob/MeV
10^{0}
10^{-2}
40
60
80
E_γ (MeV)
*10^{-3}
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

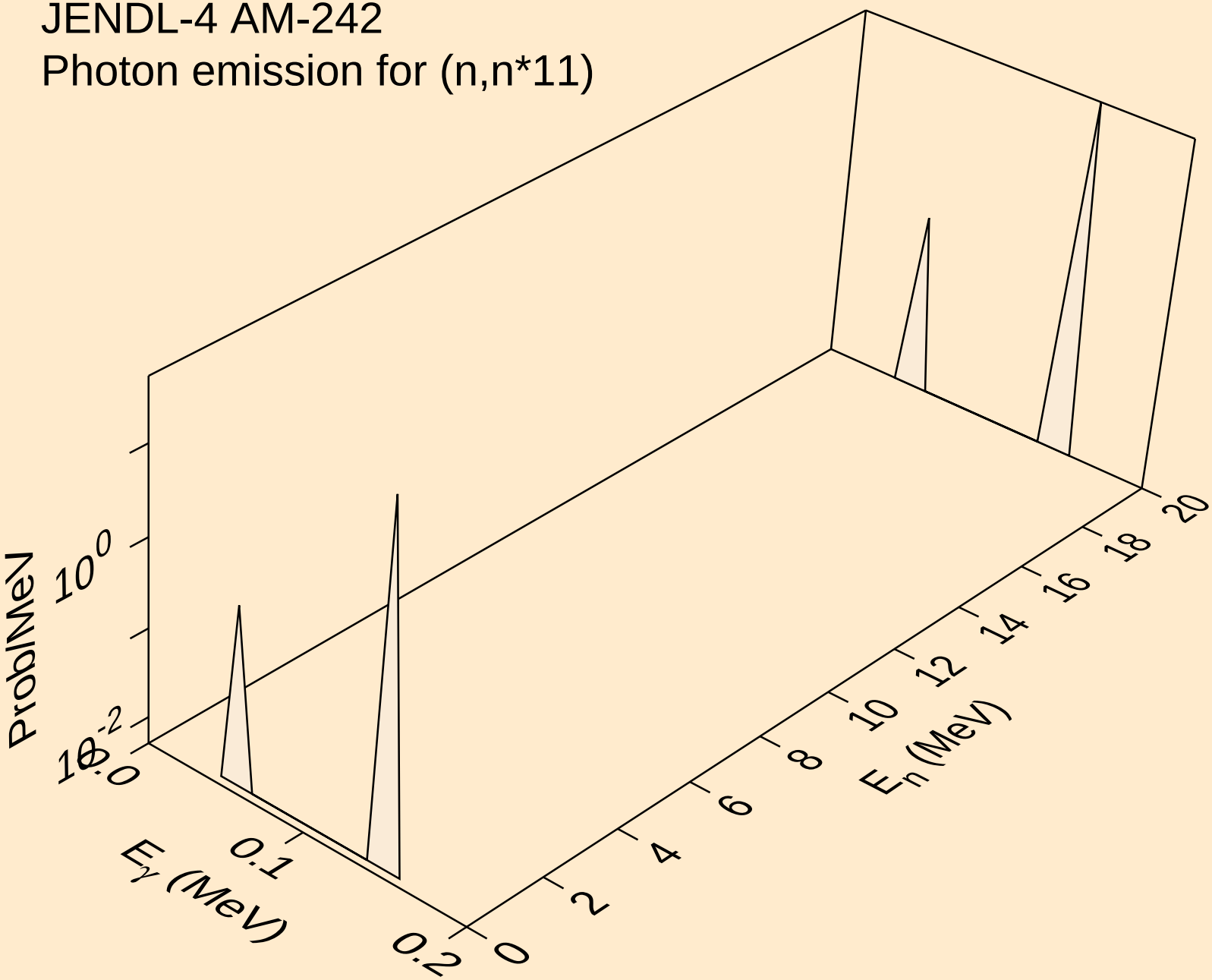

JENDL-4 AM-242
Photon emission for (n,n*7)
Prob/MeV
10^{0}
10^{-2}
80
100
120
E_γ (MeV)
*10^{-3}
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

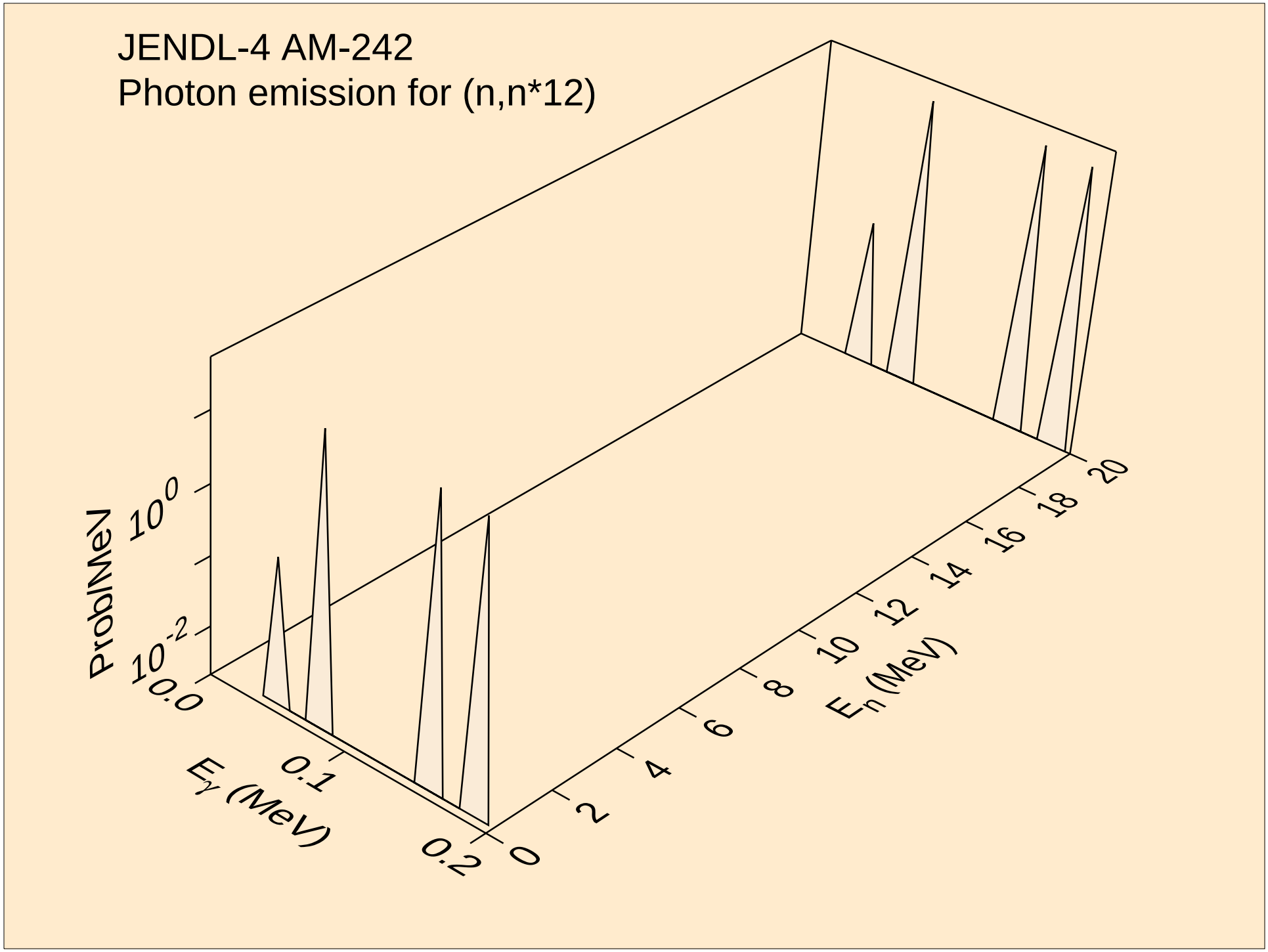

JENDL-4 AM-242
Photon emission for (n,n*8)
Prob/MeV
10^0
10^{-2}
0
50
100
150
E_γ (MeV)
$*10^{-3}$
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 AM-242
Photon emission for (n,n*9)
Prob/MeV
10^0
10^{-2}
0
50
100
150
E_γ (MeV)
$*10^{-3}$
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

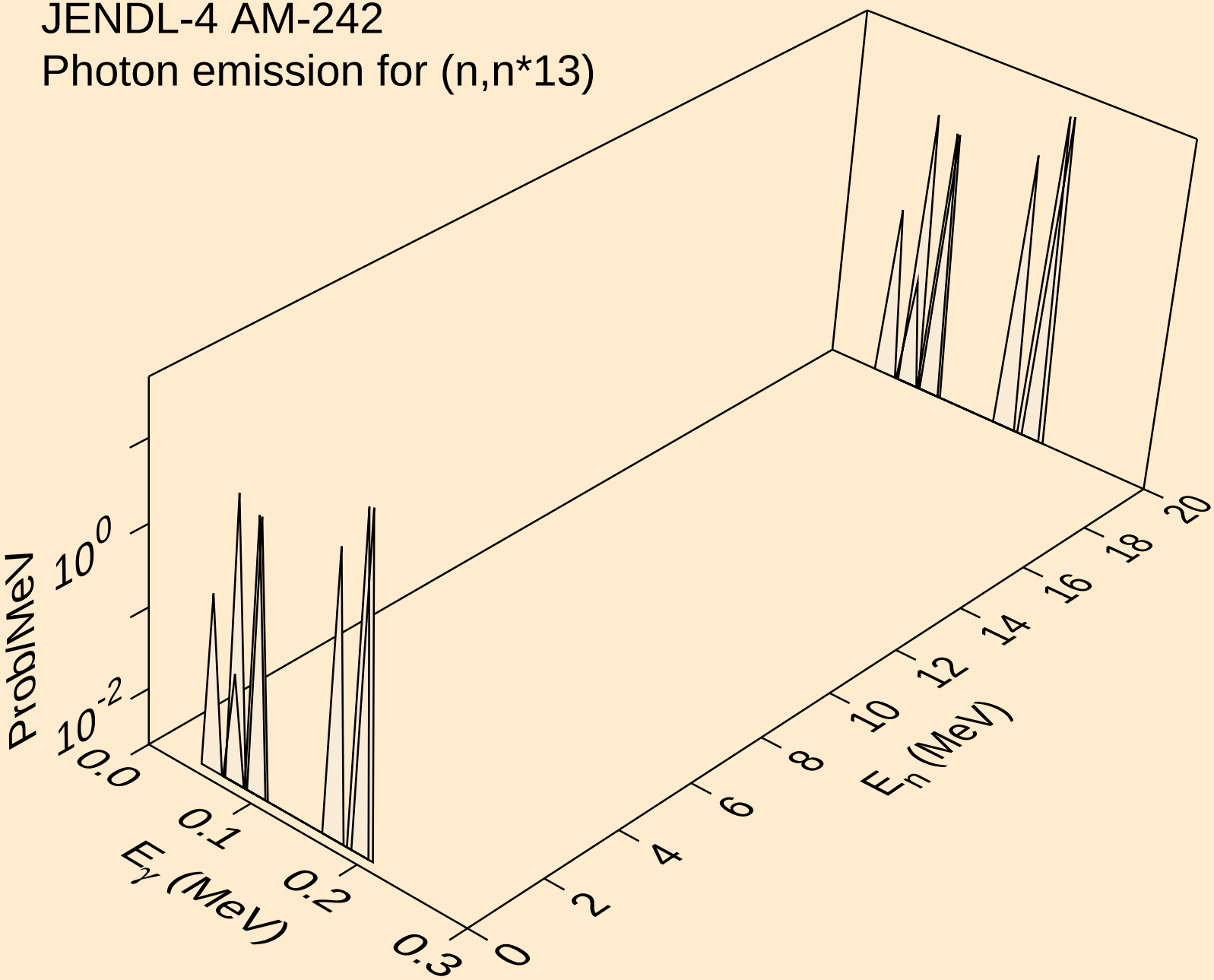

JENDL-4 AM-242
Photon emission for (n,n*10)
Prob/MeV
10^{0}
10^{-2}
40
60
80
100
E_γ (MeV)
$*10^{-3}$
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

JENDL-4 AM-242
Photon emission for (n,n*11)

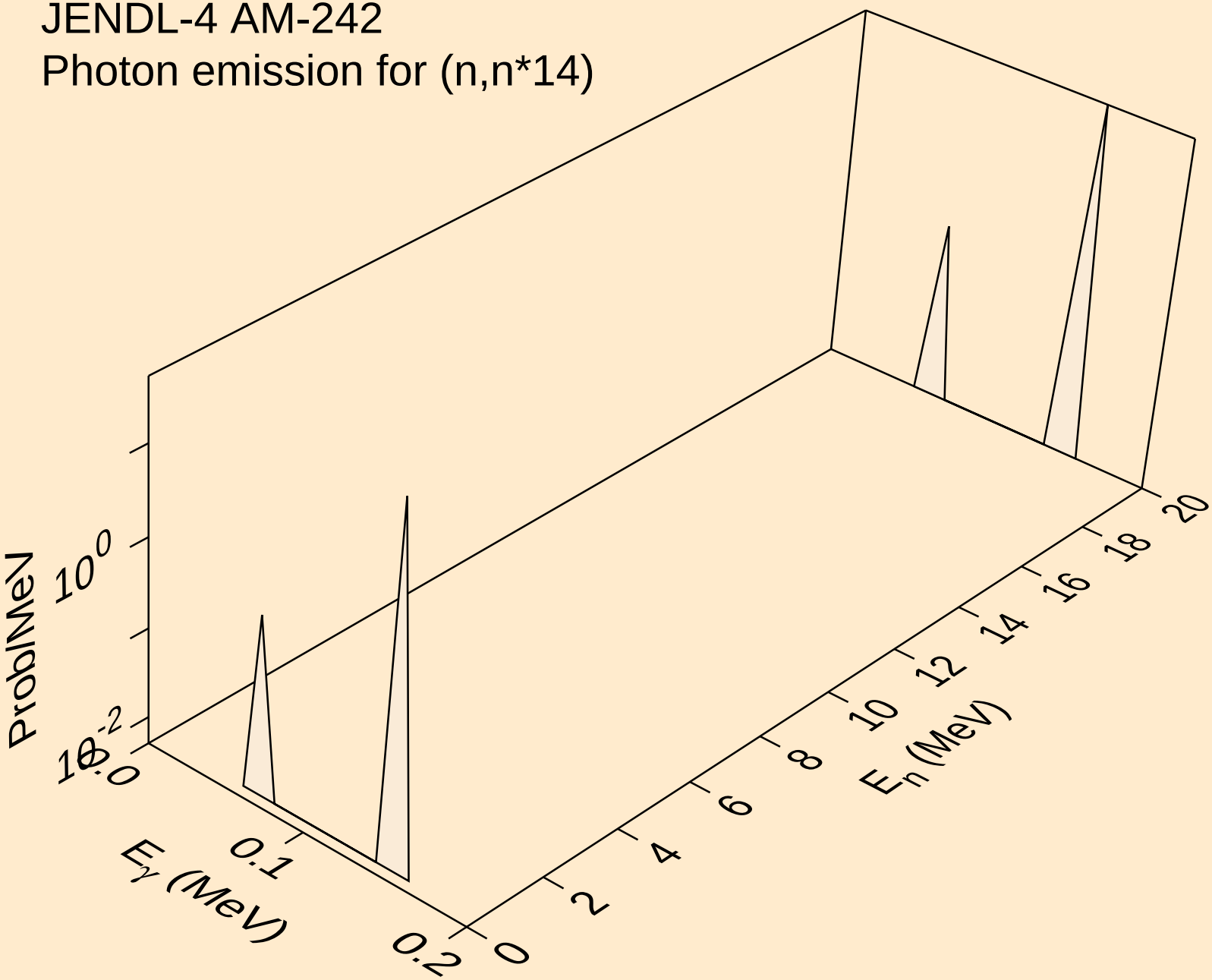



JENDL-4 AM-242
Photon emission for (n,n*12)
Prob/MeV
10^0
10^{-2}
0.0
0.1
0.2
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

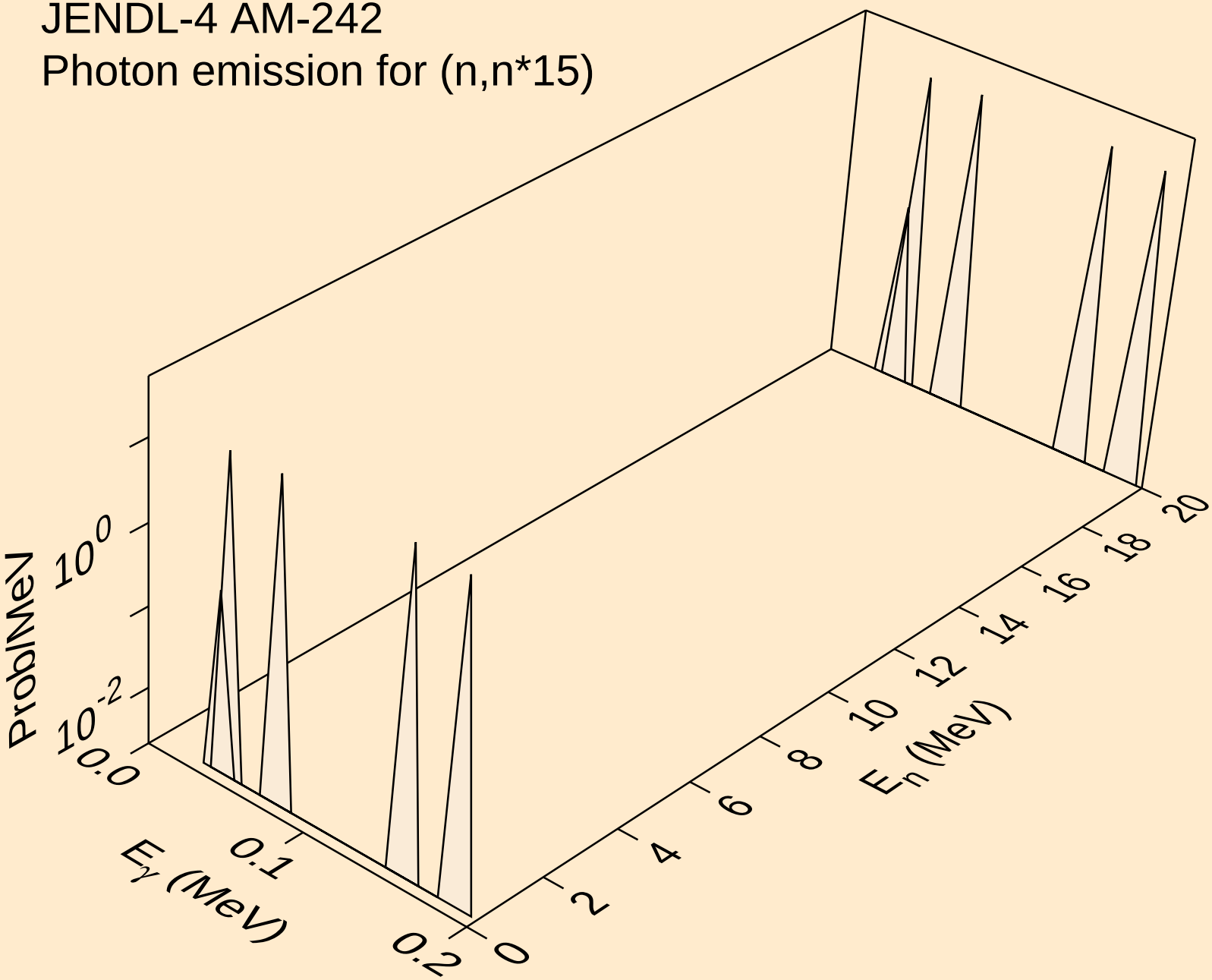
JENDL-4 AM-242
Photon emission for (n,n*13)



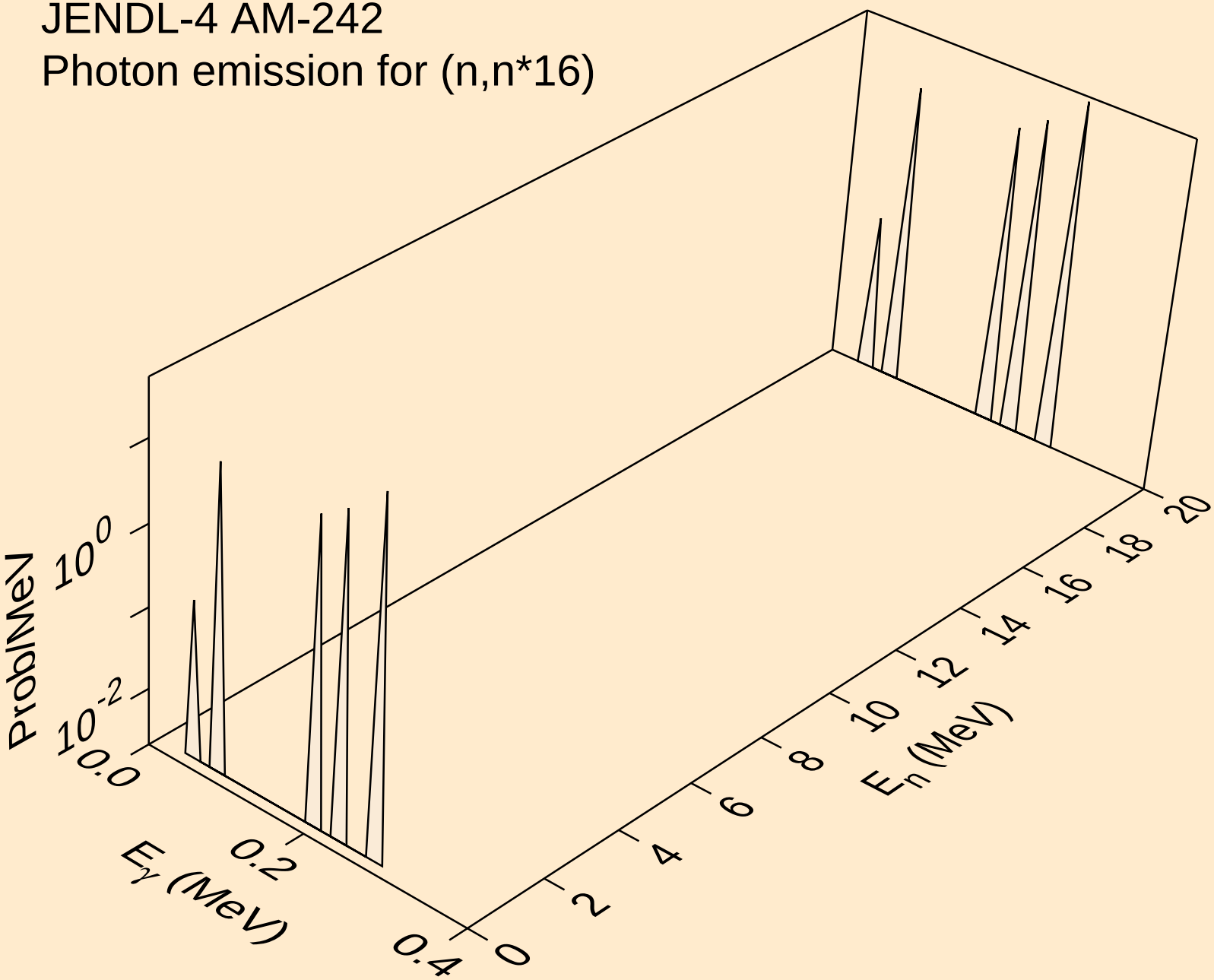
JENDL-4 AM-242
Photon emission for (n,n*14)

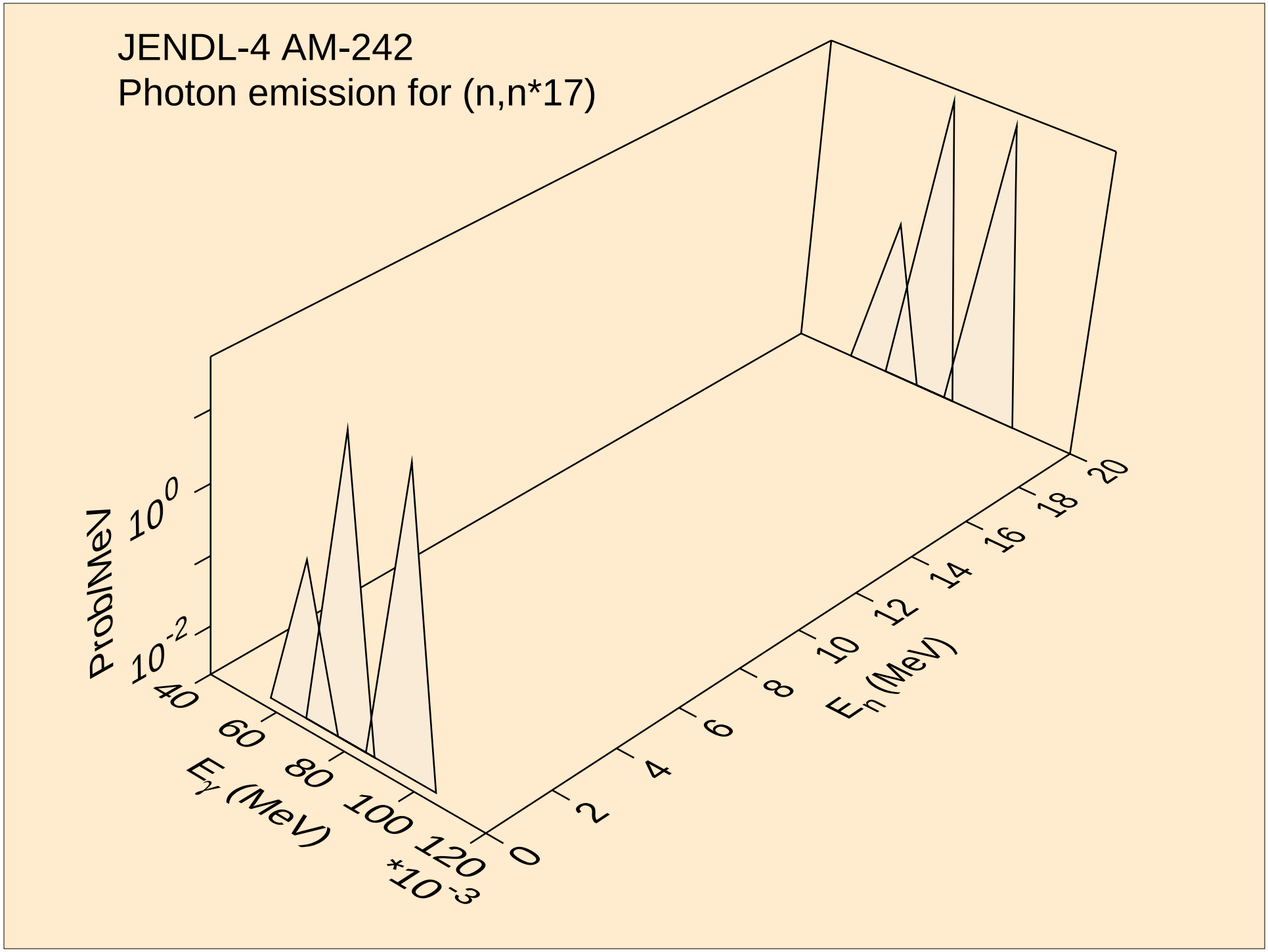


JENDL-4 AM-242
Photon emission for (n,n*15)

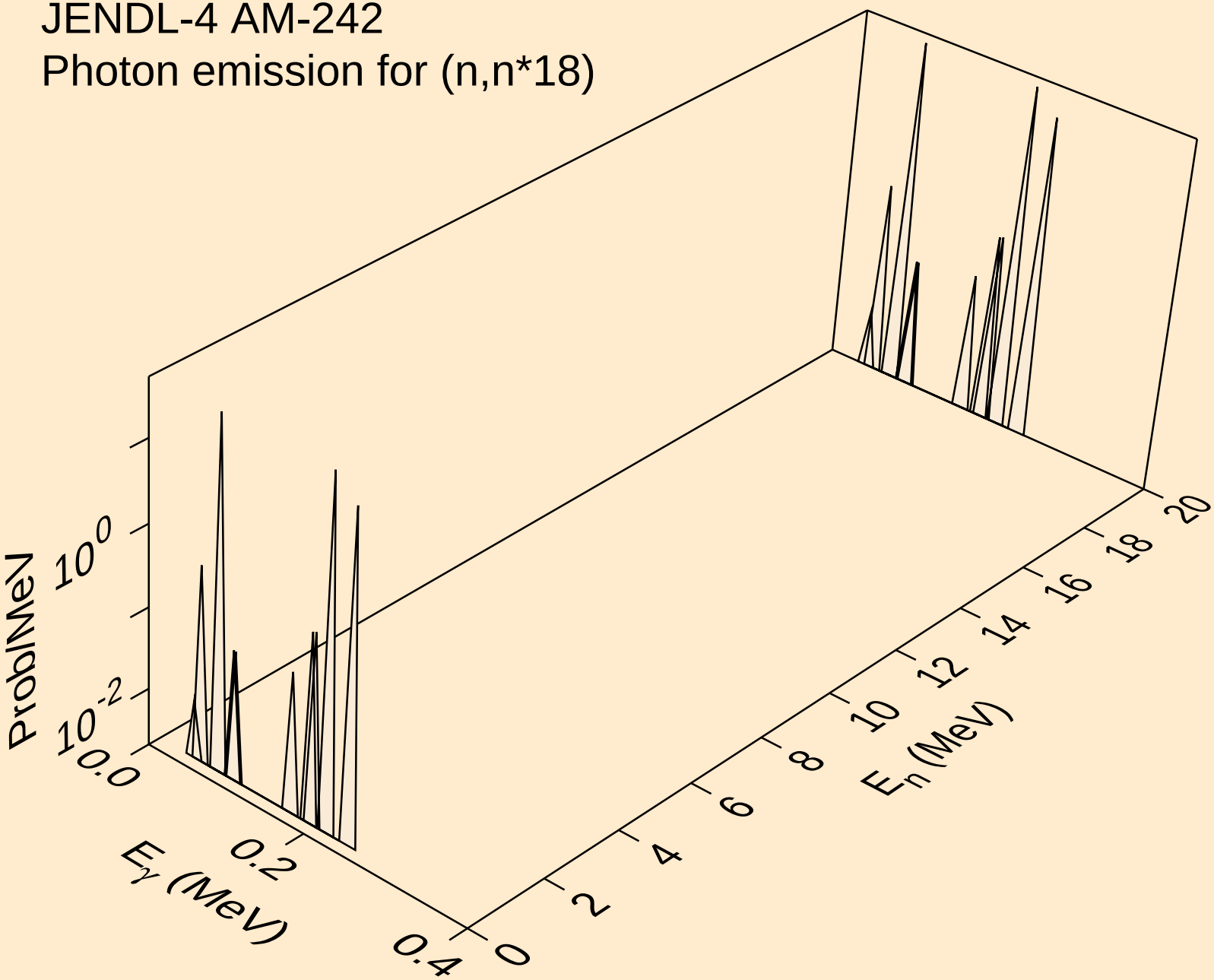


JENDL-4 AM-242
Photon emission for (n,n*16)

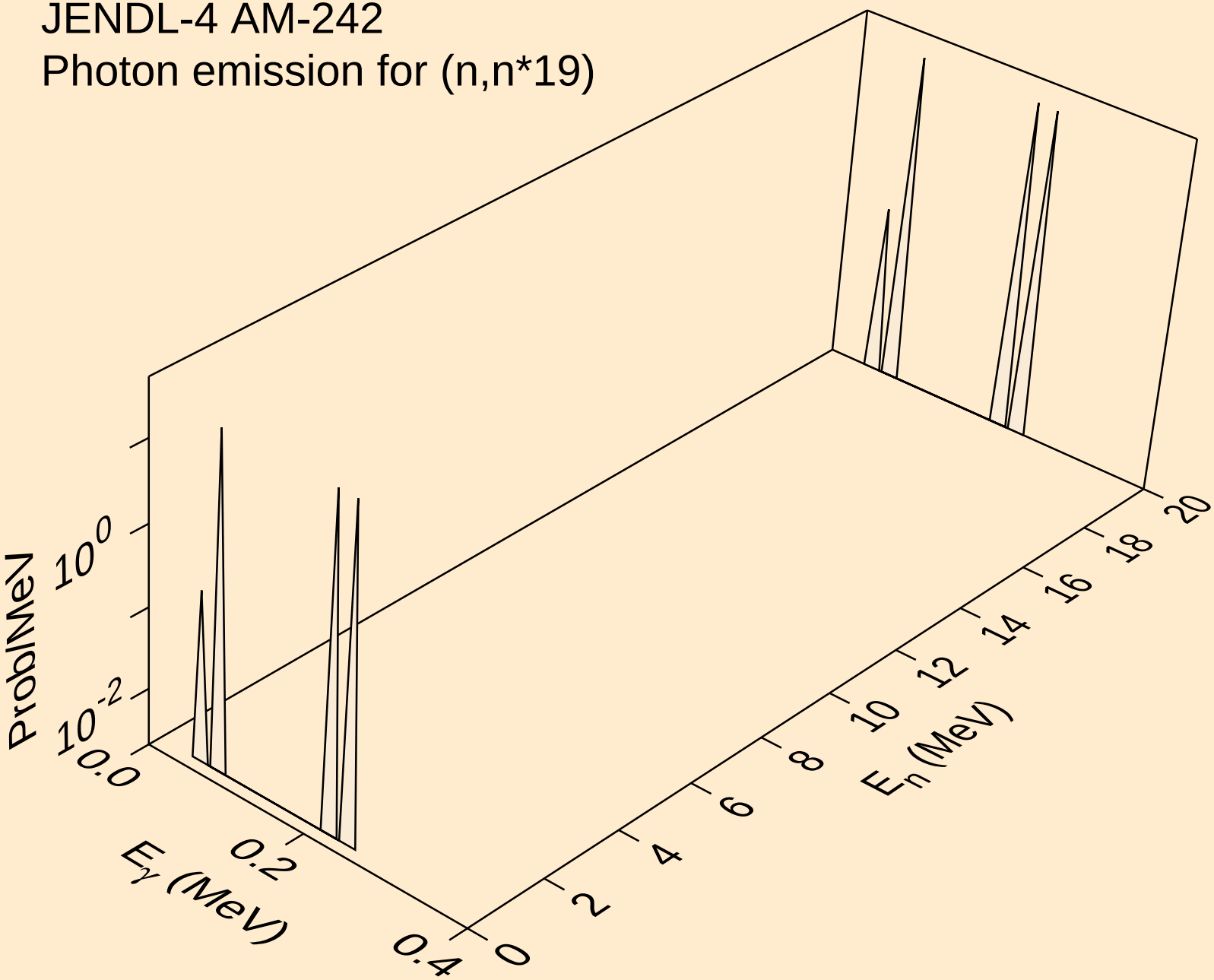



JENDL-4 AM-242
Photon emission for (n,n*17)
Prob/MeV
10^{0}
10^{-2}
40
60
80
100
120
E_γ (MeV)
$*10^{-3}$
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

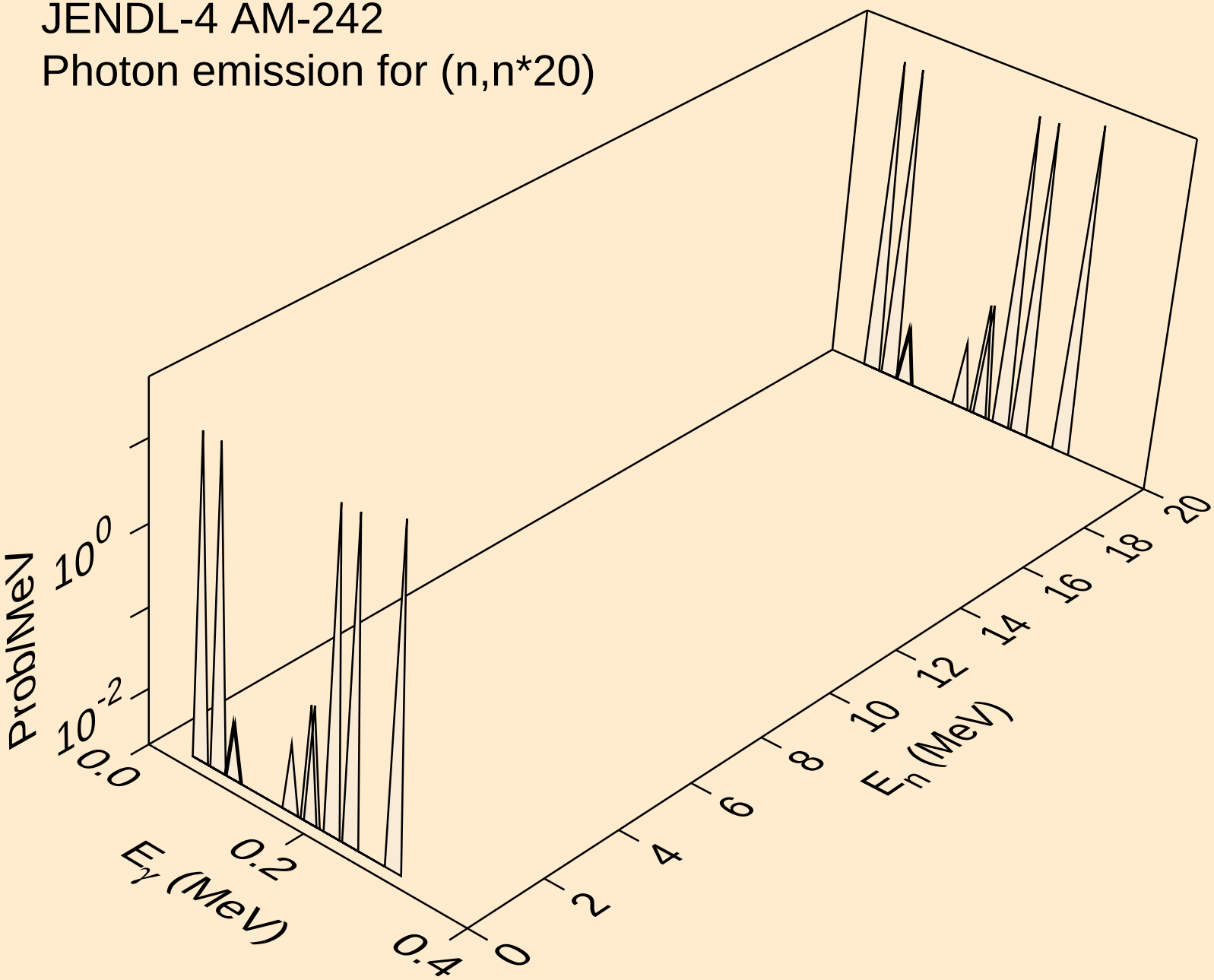
JENDL-4 AM-242
Photon emission for (n,n*18)



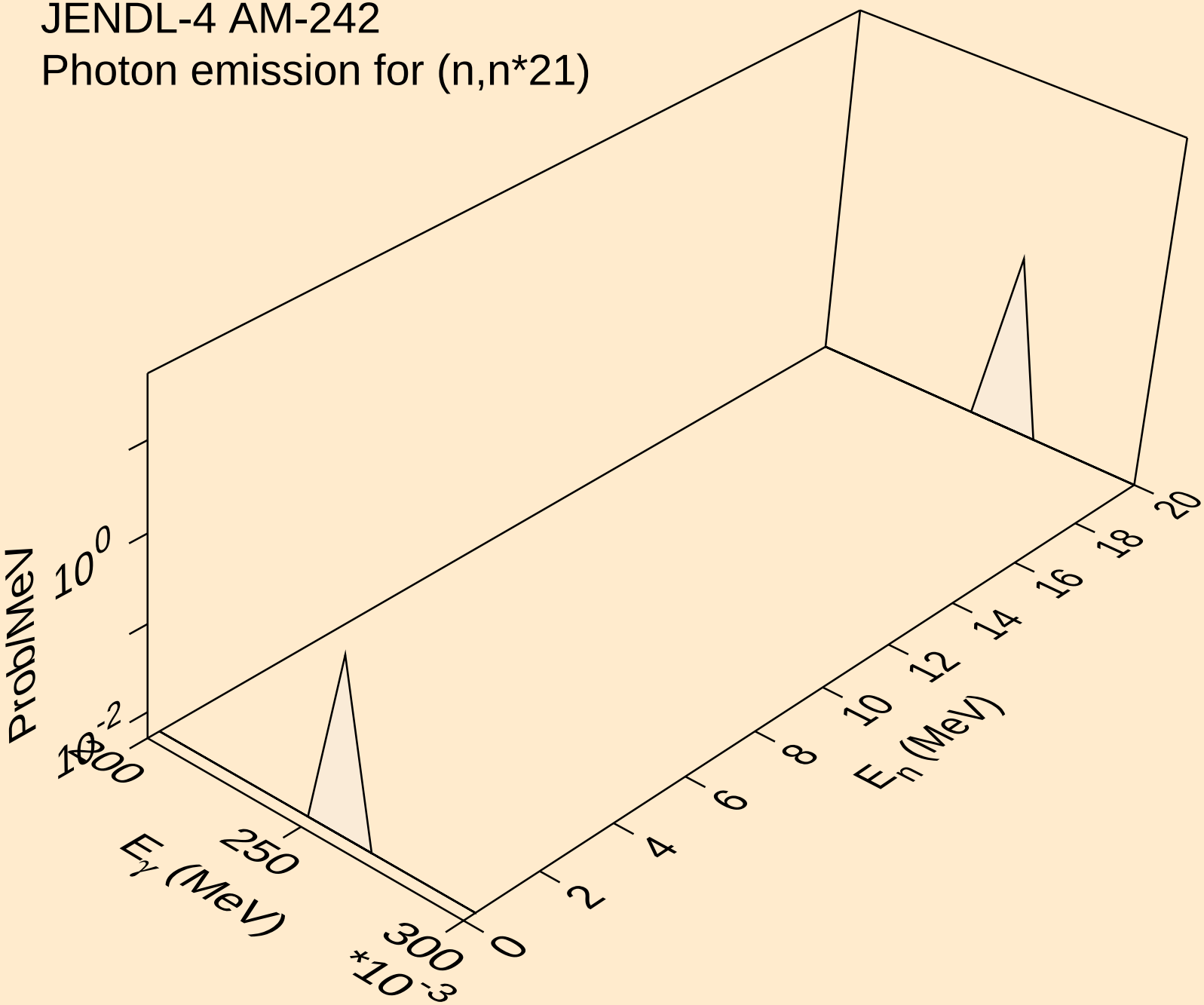
JENDL-4 AM-242
Photon emission for (n,n*19)



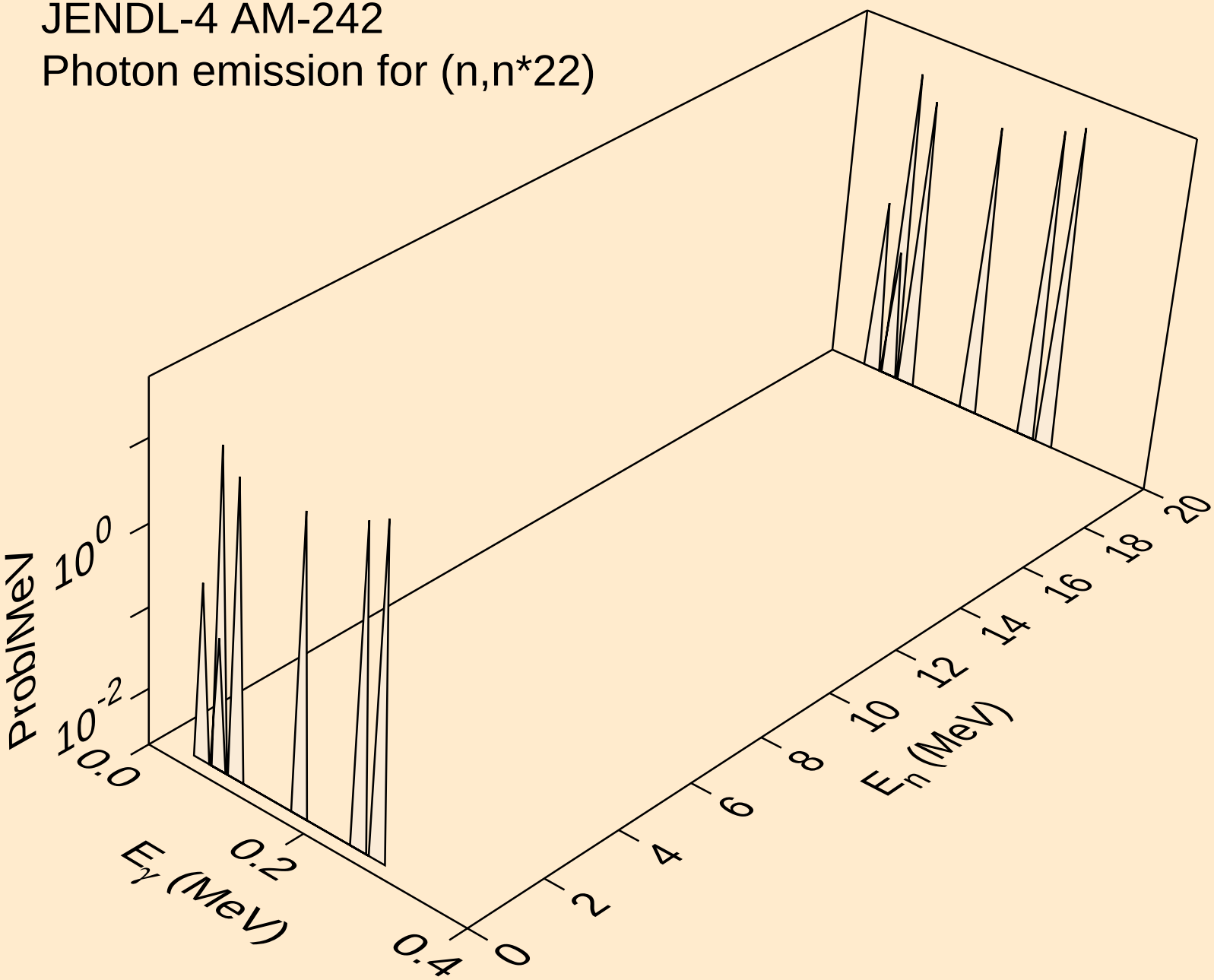
JENDL-4 AM-242
Photon emission for (n,n*20)



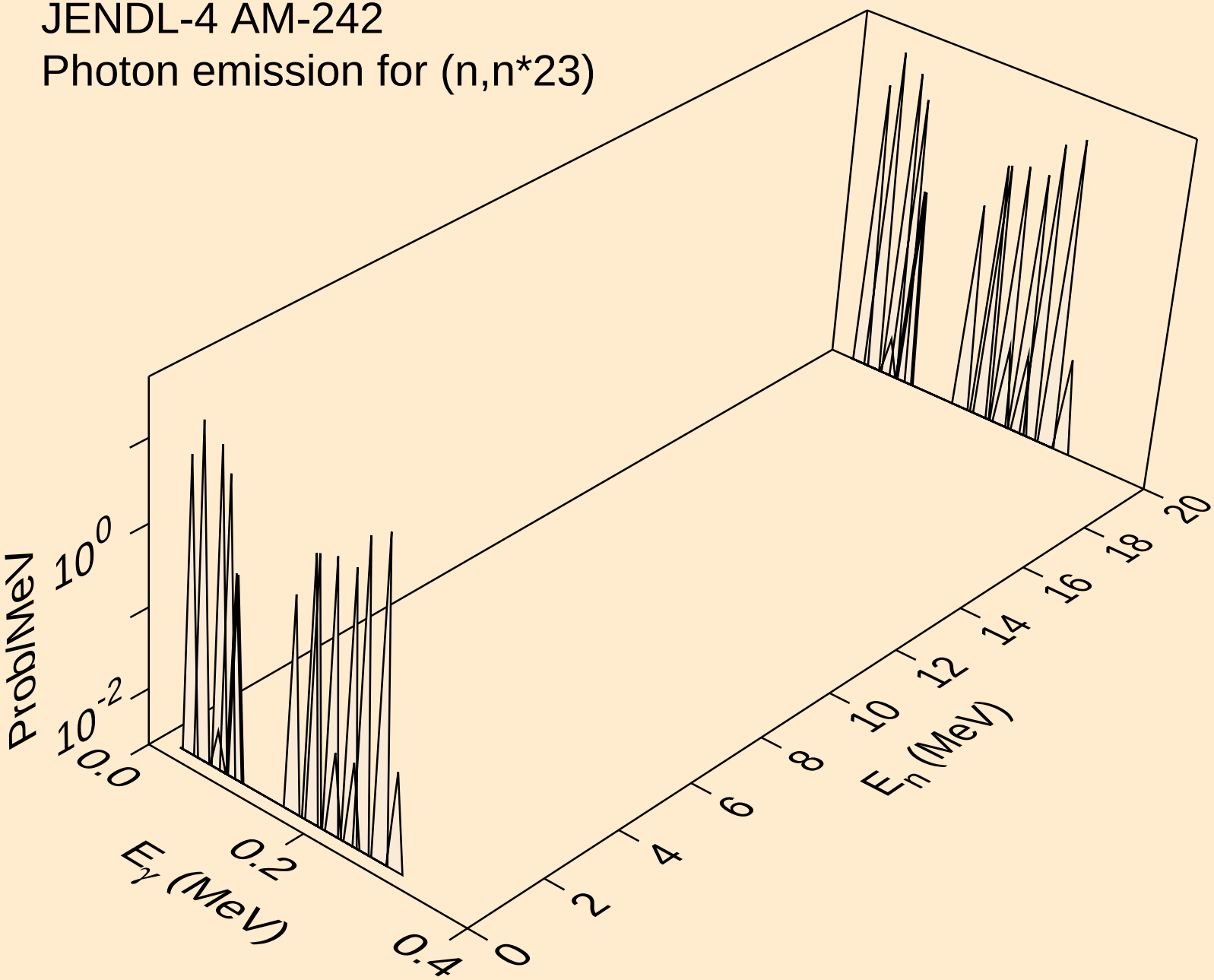
JENDL-4 AM-242
Photon emission for (n,n*21)



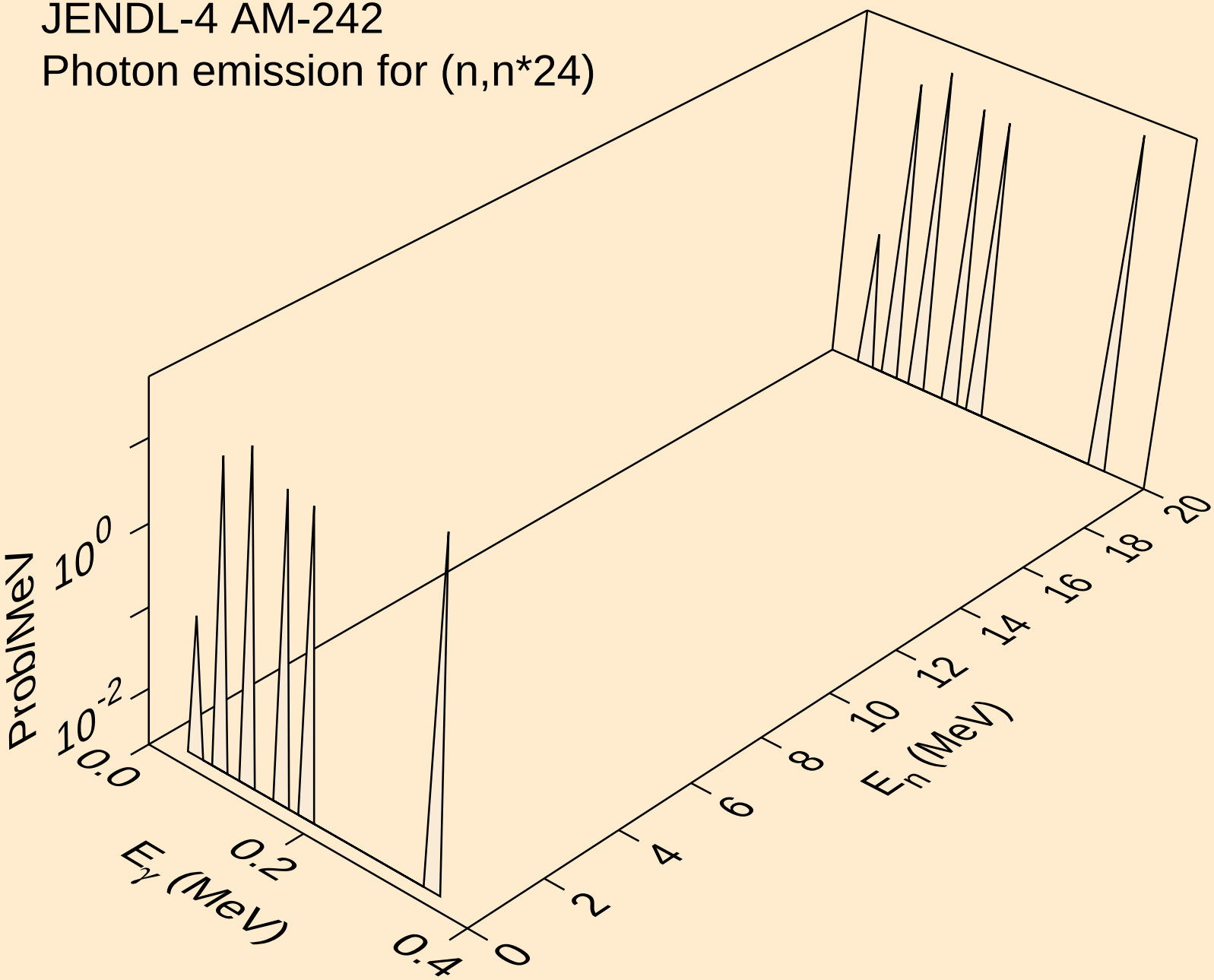
JENDL-4 AM-242
Photon emission for (n,n*22)



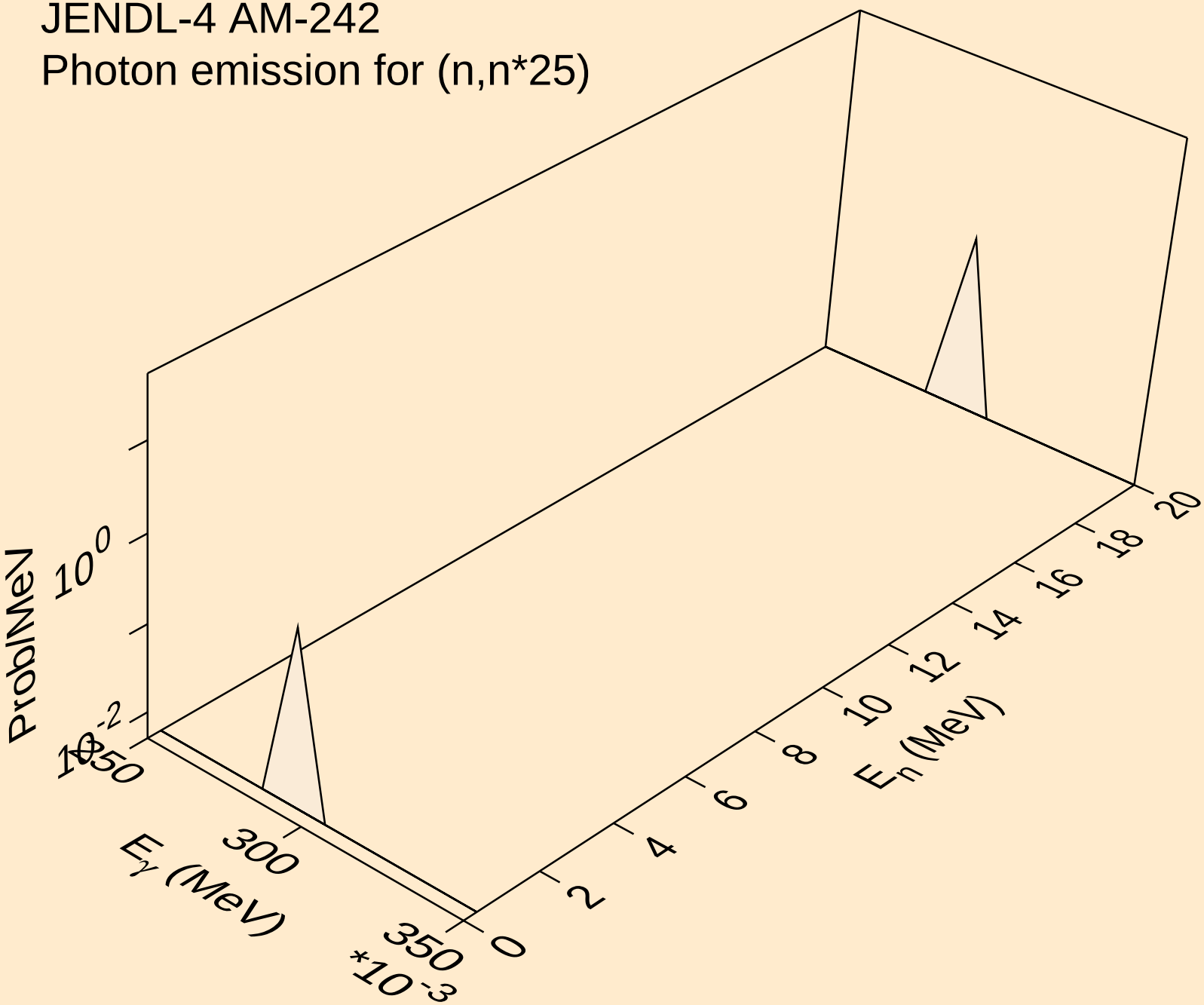
JENDL-4 AM-242
Photon emission for (n,n*23)

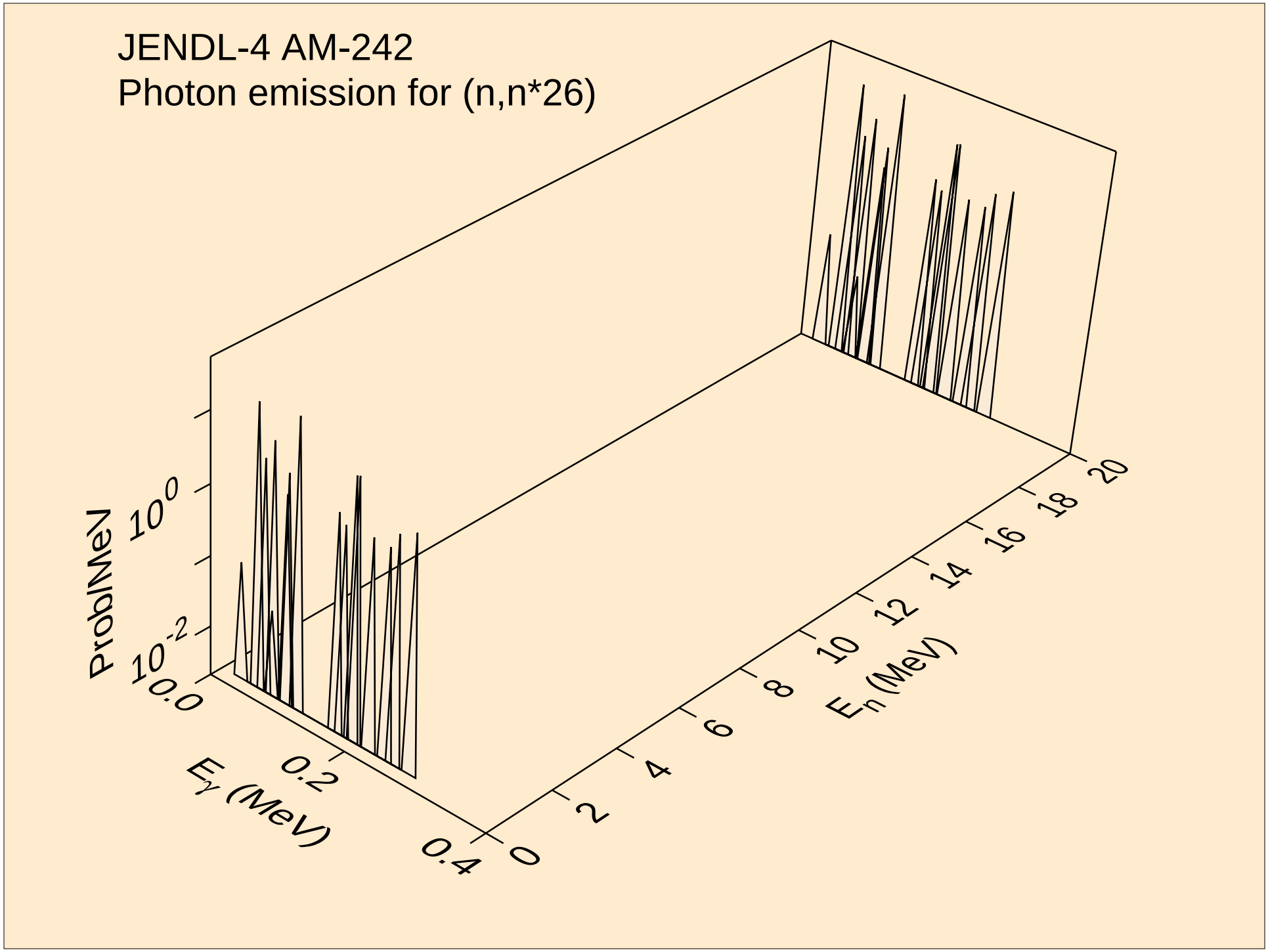


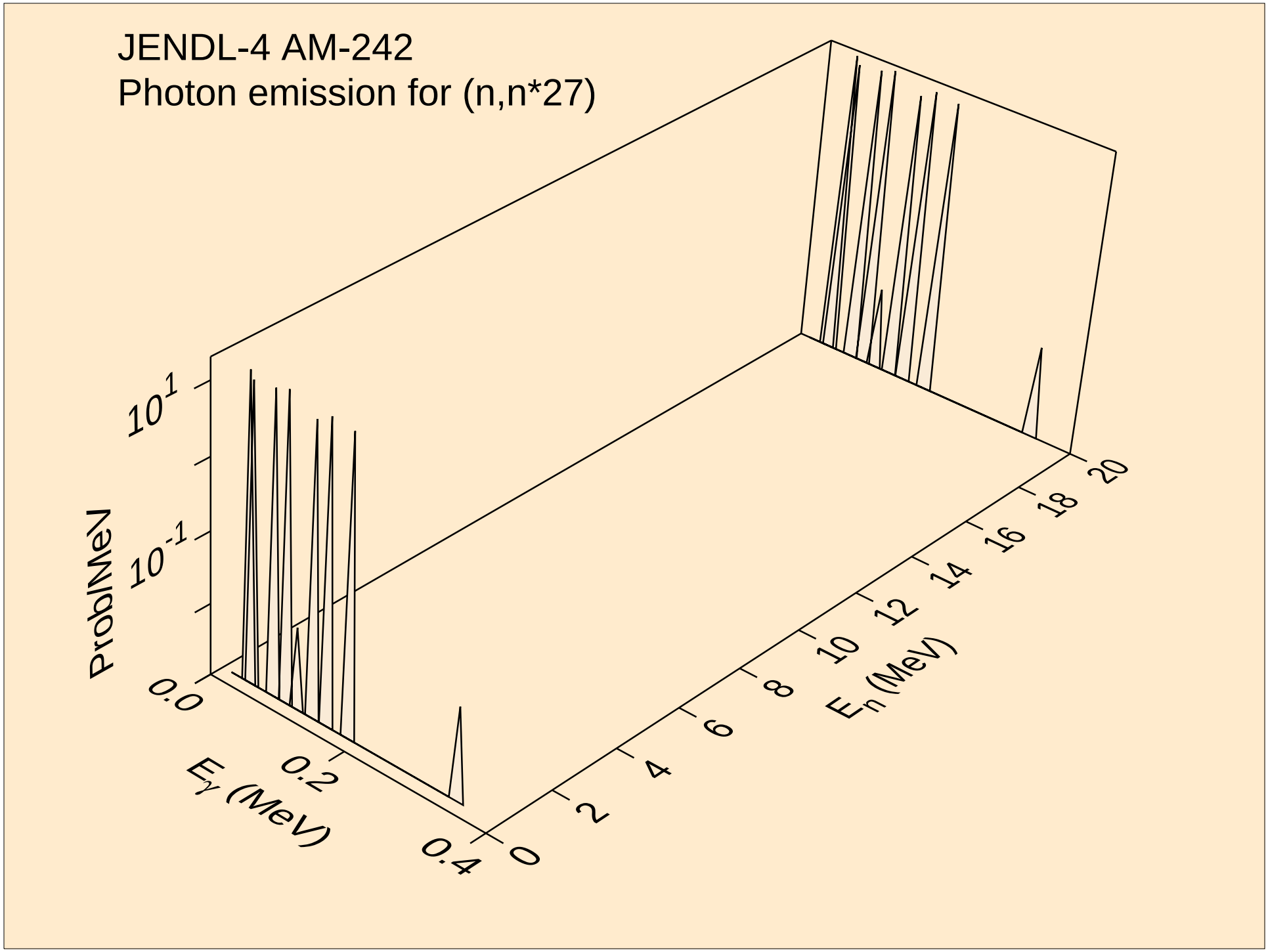
JENDL-4 AM-242
Photon emission for (n,n*24)



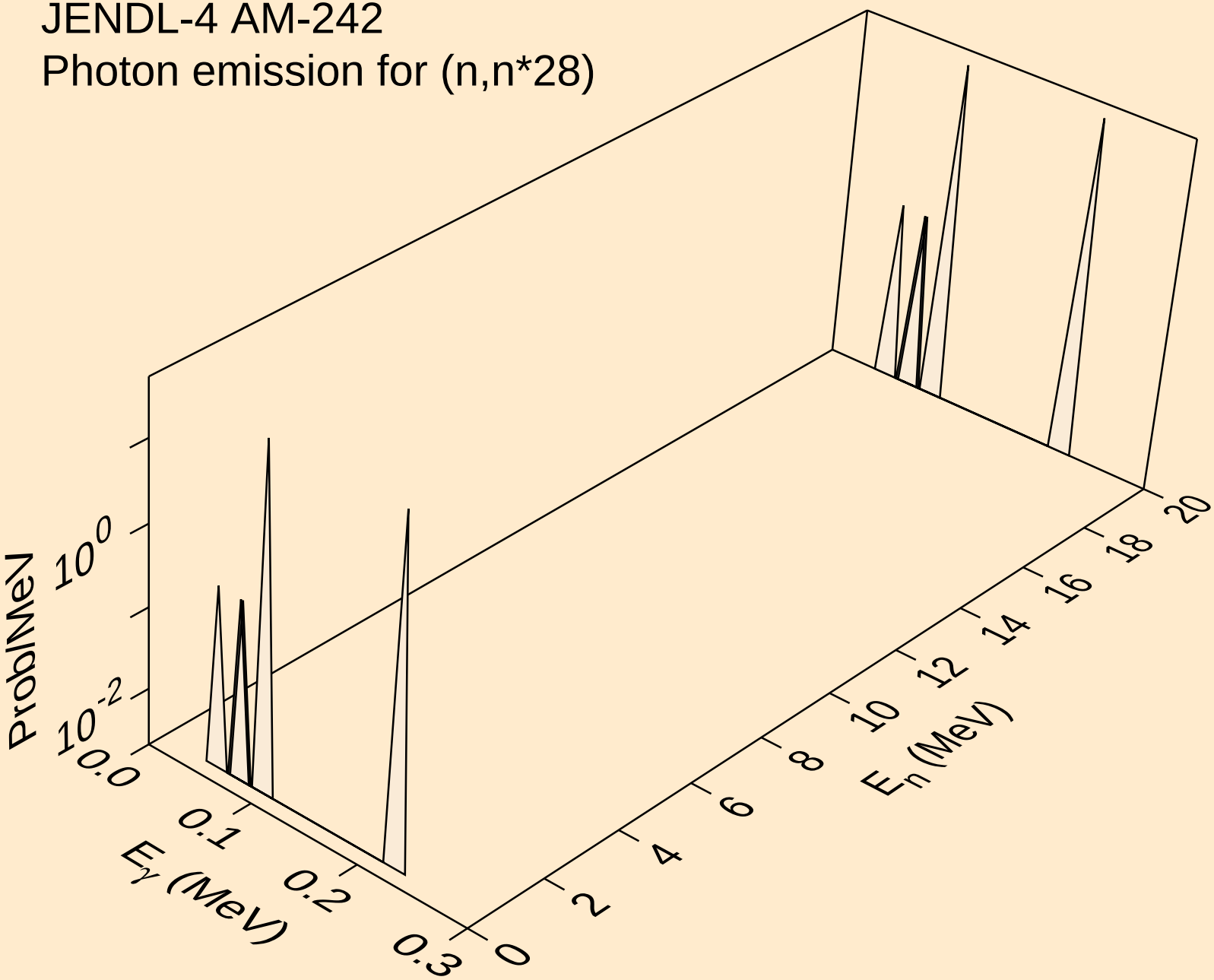
JENDL-4 AM-242
Photon emission for (n,n*25)



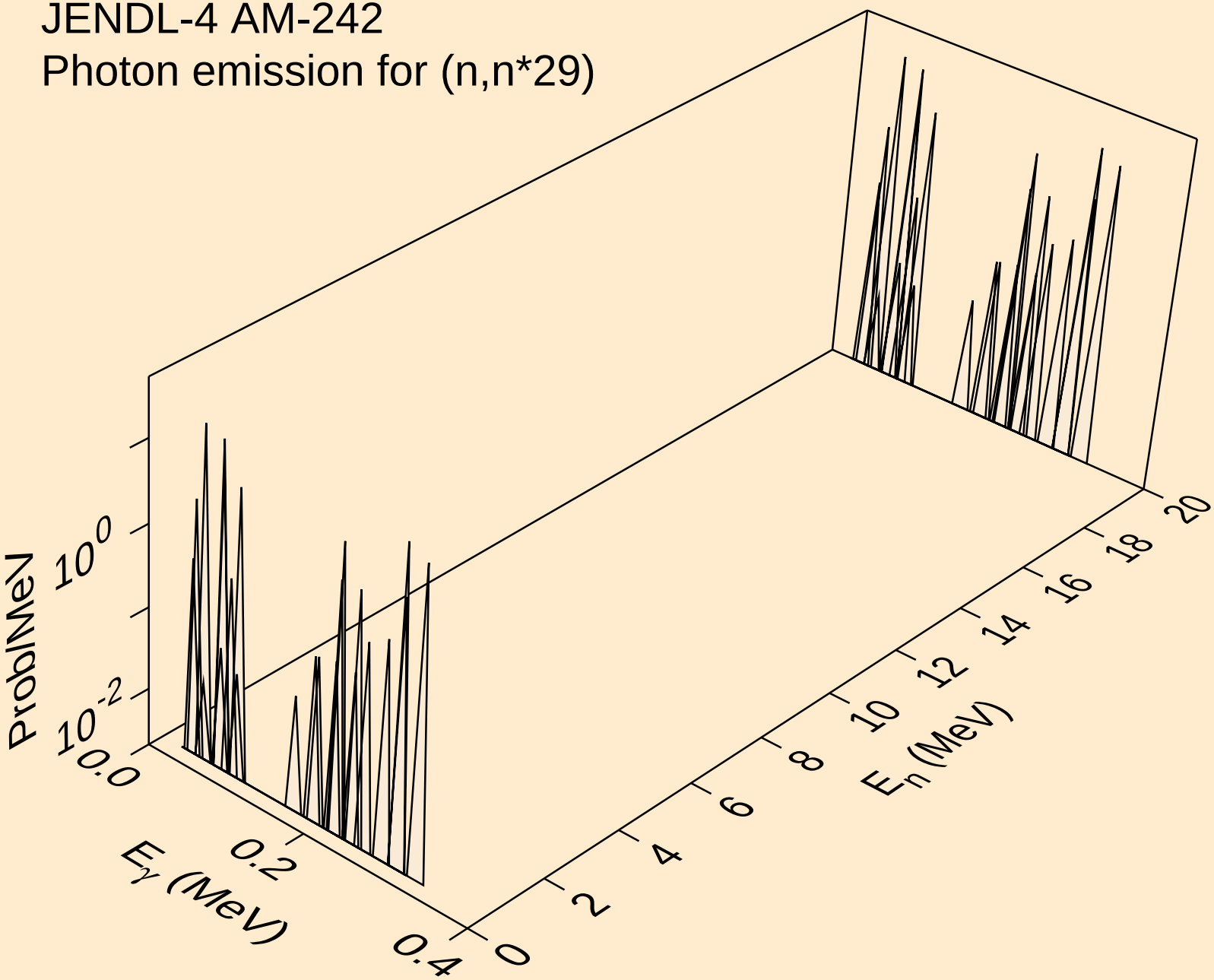

JENDL-4 AM-242
Photon emission for (n,n*26)
Prob/MeV
10^0
10^{-2}
0.0
0.2
0.4
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

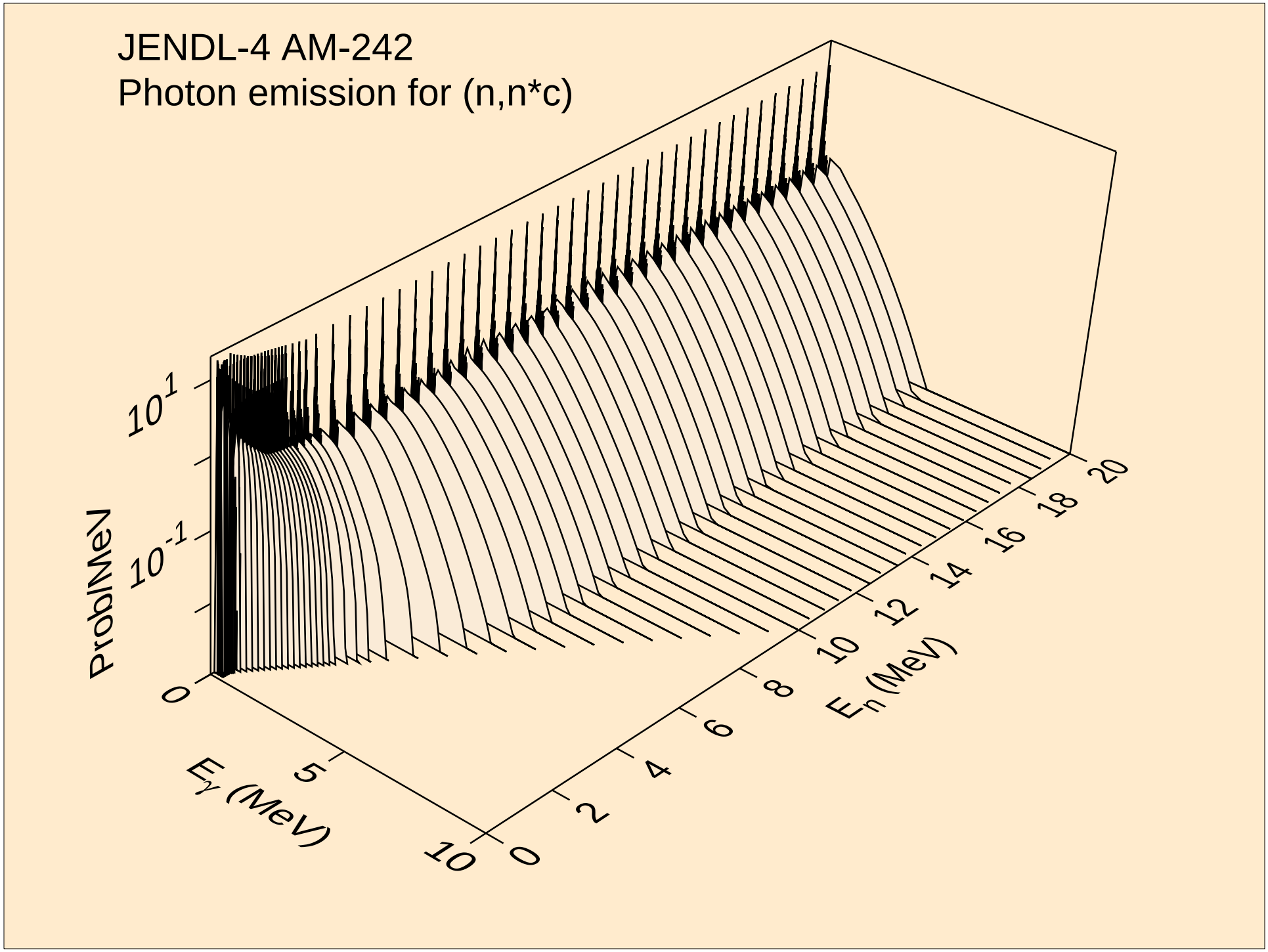

JENDL-4 AM-242
Photon emission for (n,n*27)
Prob/MeV
10^{1}
10^{-1}
0.0
0.2
0.4
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

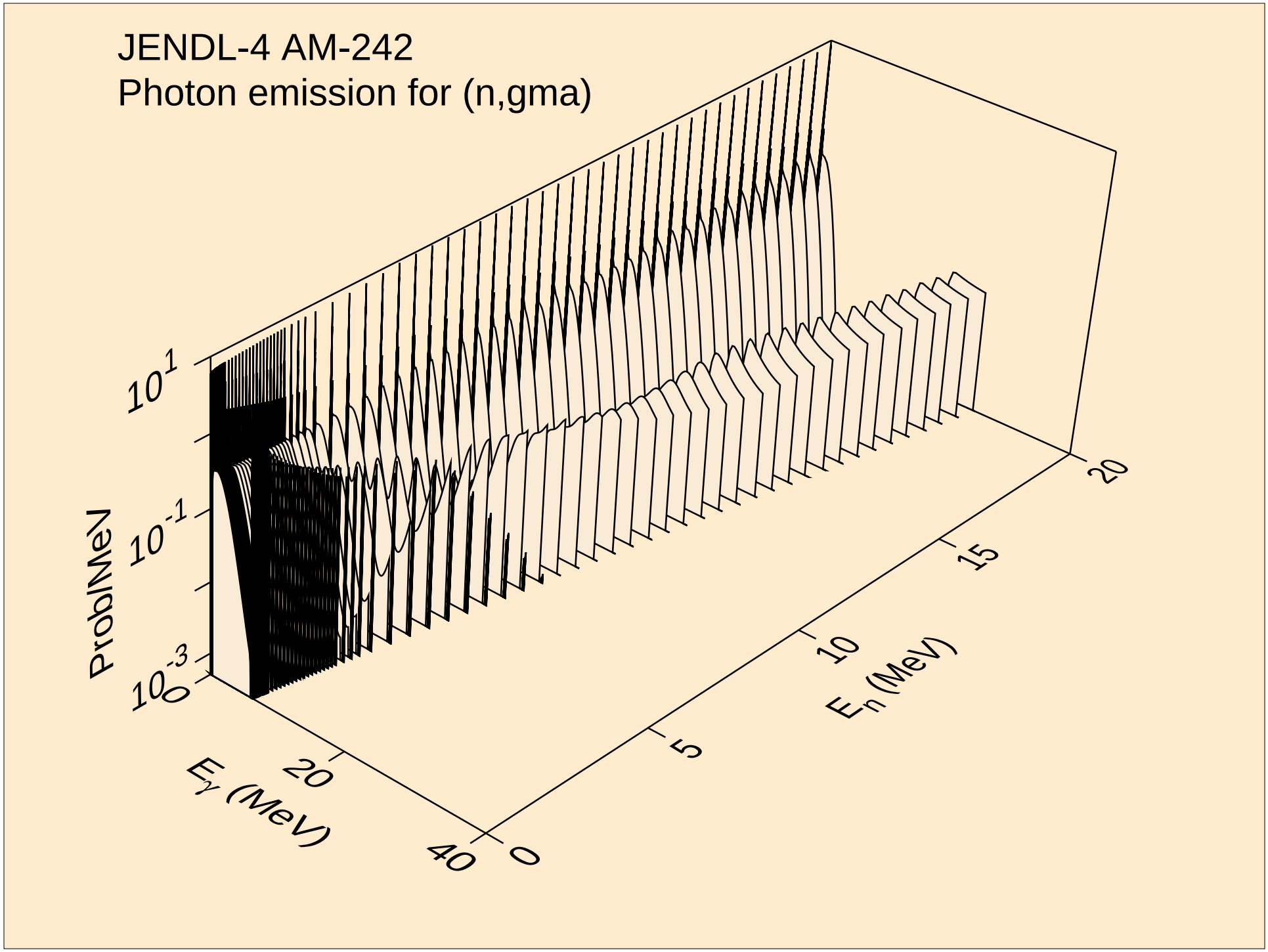
JENDL-4 AM-242
Photon emission for (n,n*28)

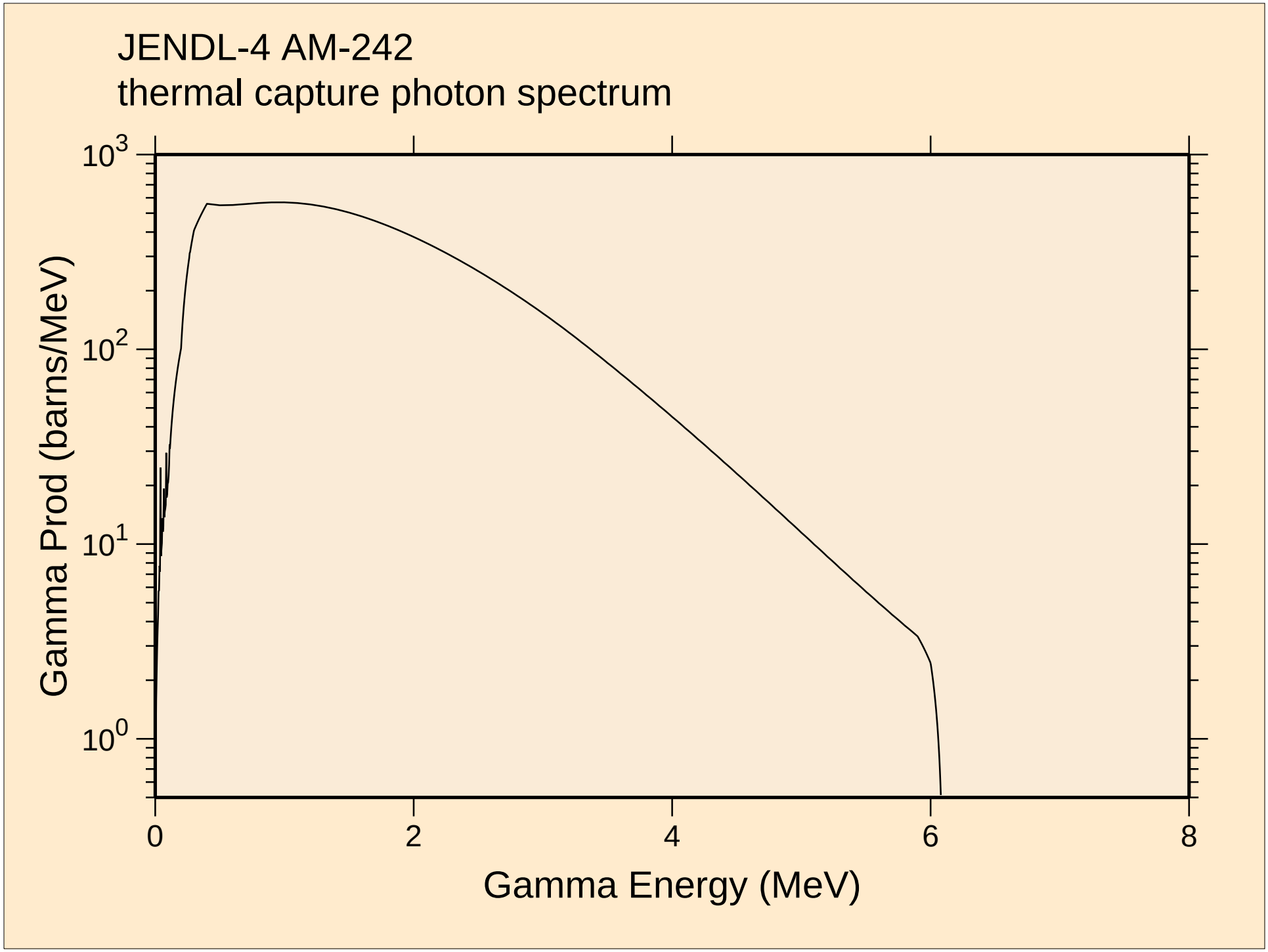


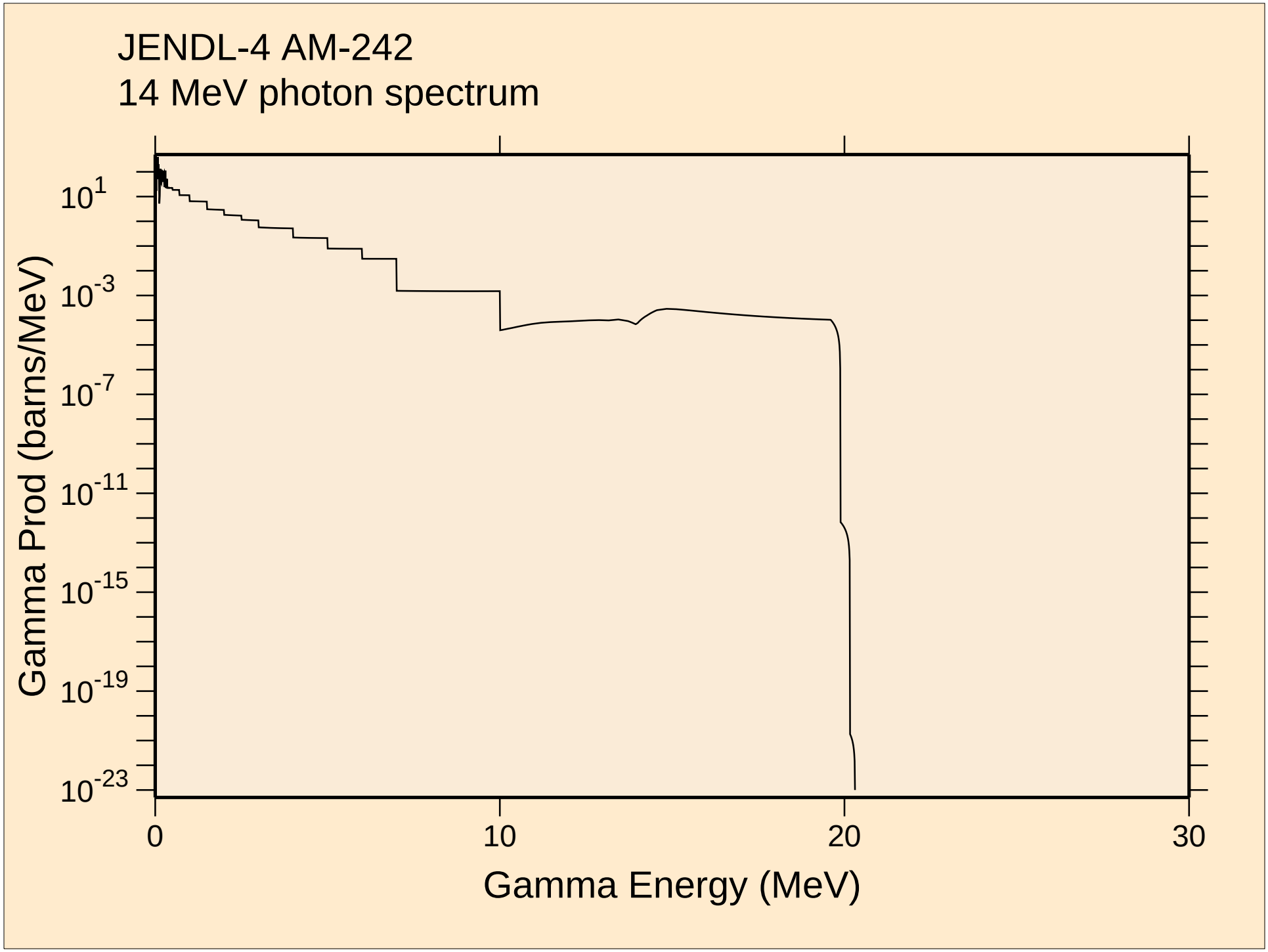
JENDL-4 AM-242
Photon emission for (n,n*29)




JENDL-4 AM-242
Photon emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 AM-242
Photon emission for (n,gma)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
E_γ (MeV)
0
20
40
E_n (MeV)
0
5
10
15
20


JENDL-4 AM-242
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^3
10^2
10^1
10^0
0
2
4
6
8
Gamma Energy (MeV)


JENDL-4 AM-242
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^-3
10^-7
10^-11
10^-15
10^-19
10^-23
0
10
20
30
Gamma Energy (MeV)