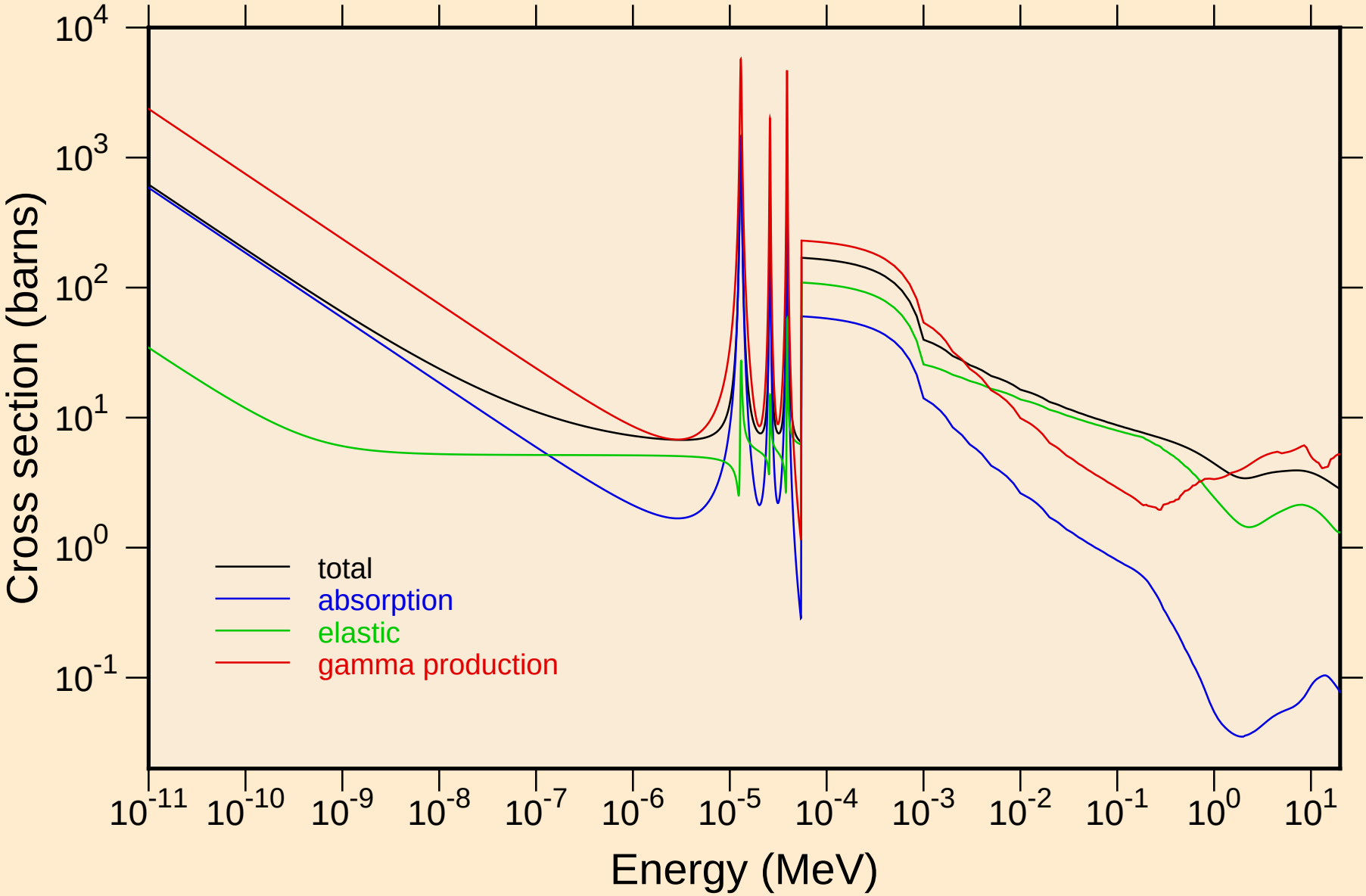
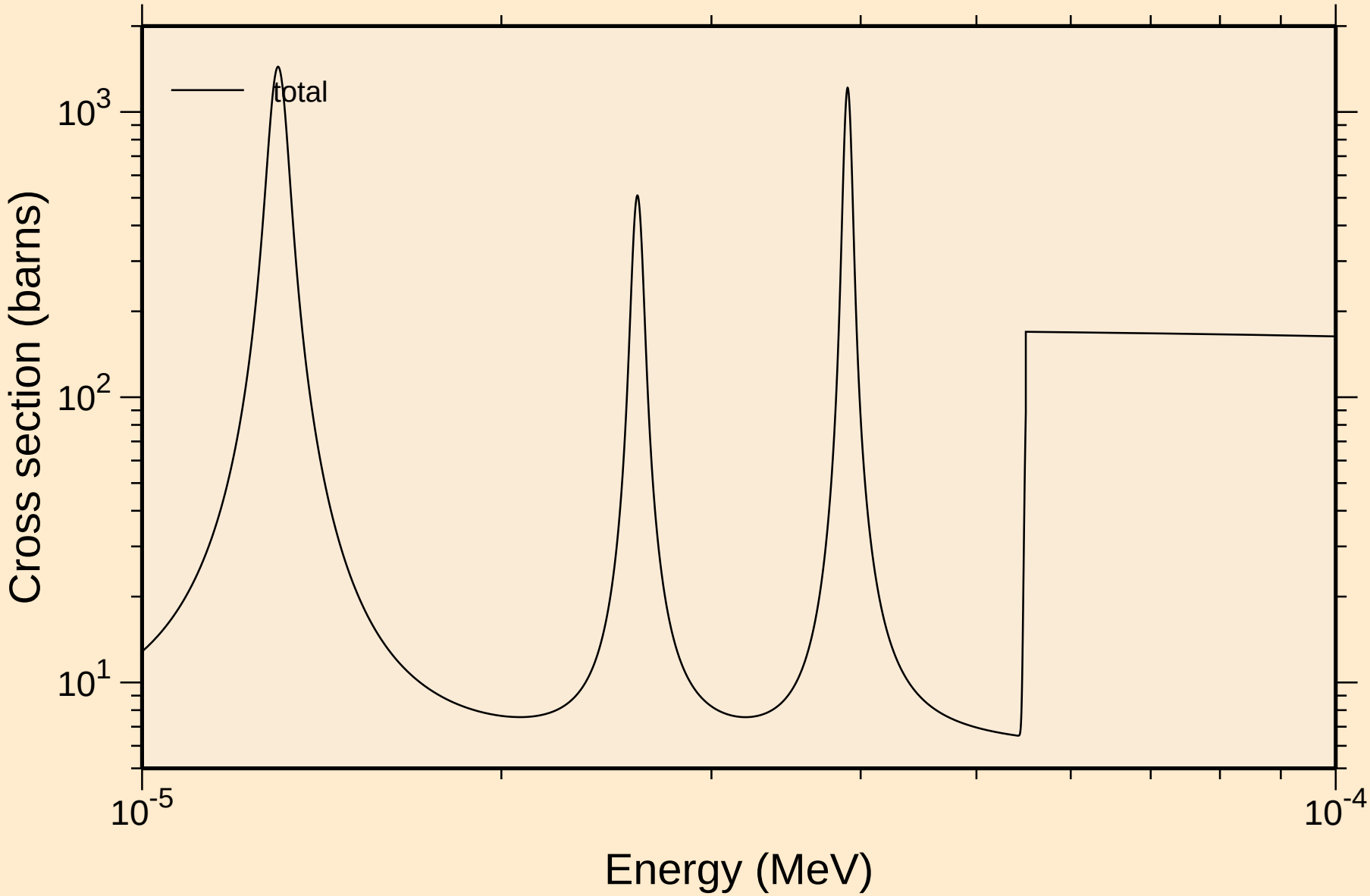
ADVANCE CALCULATIONS

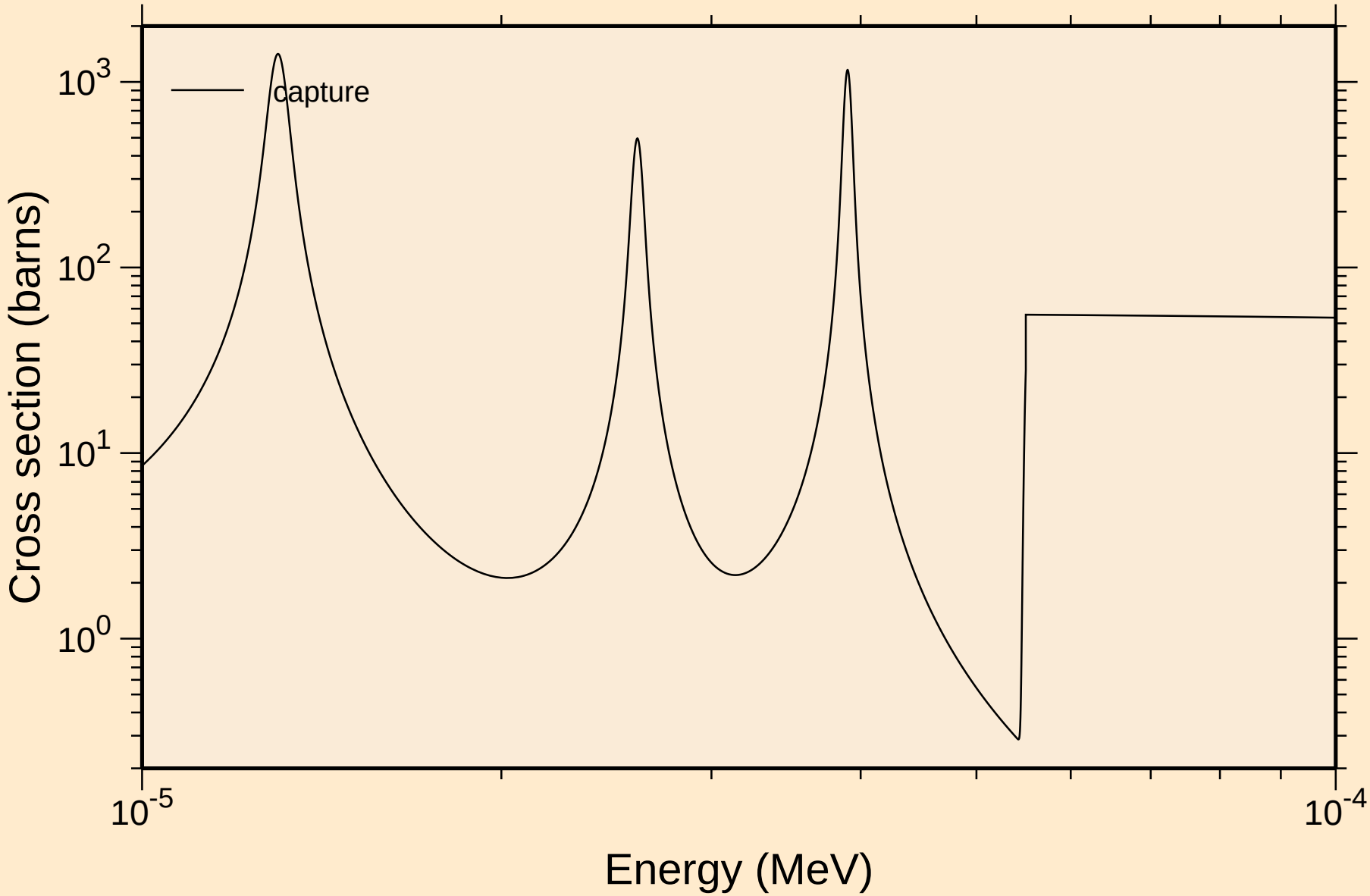
Principal cross sections



ADVANCE CALCULATIONS
resonance total cross section

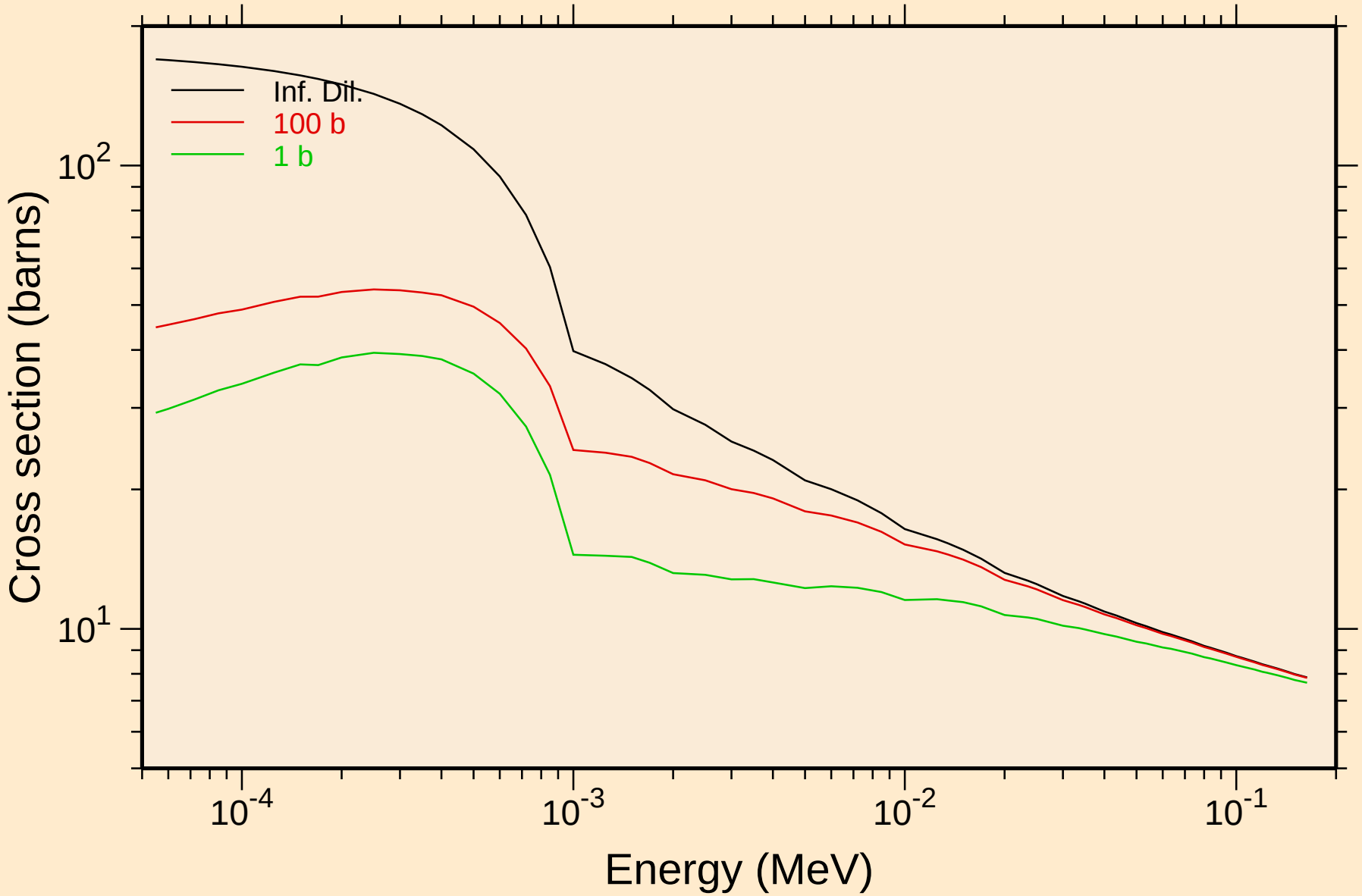


ADVANCE CALCULATIONS
resonance absorption cross sections



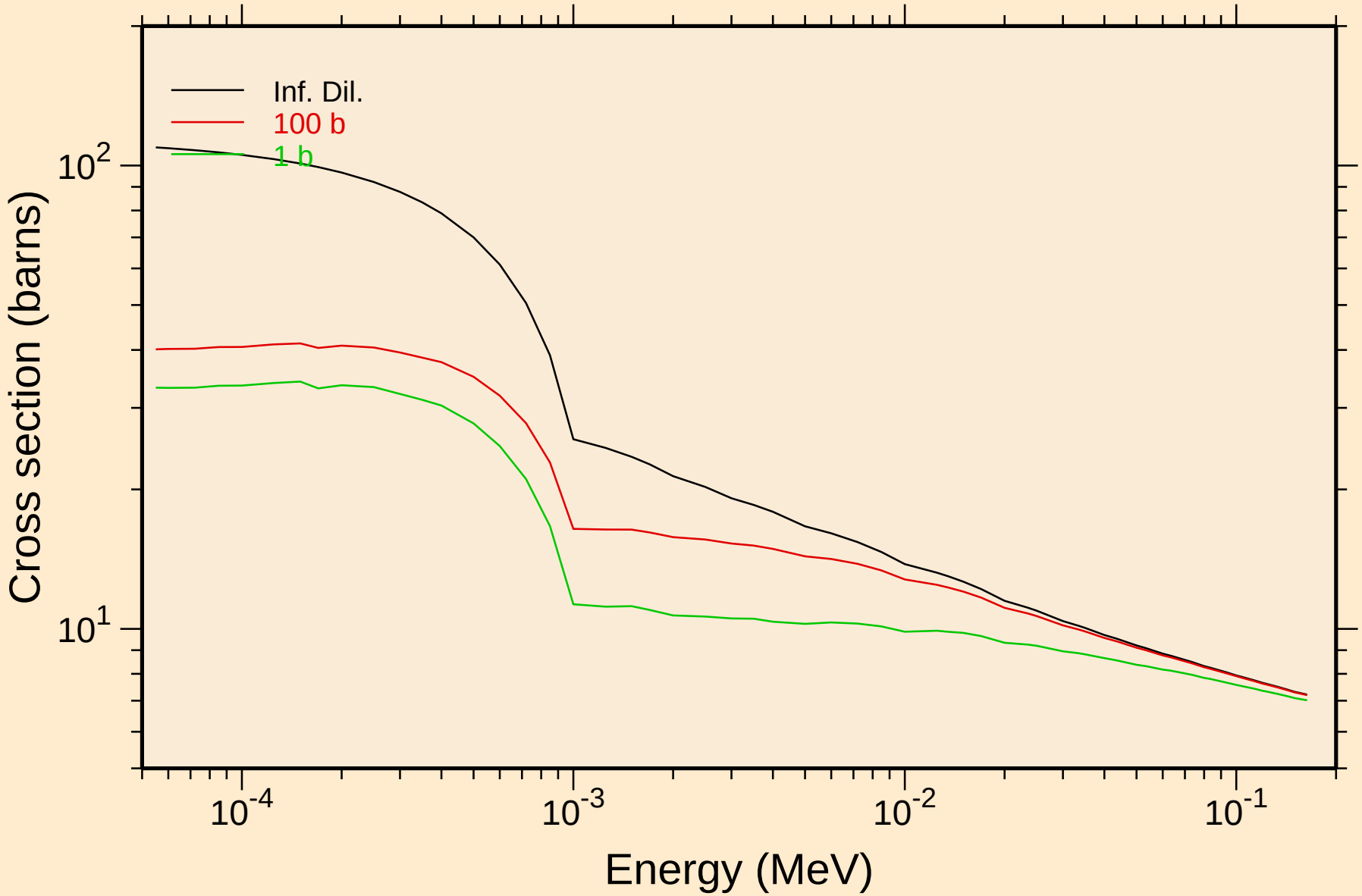
ADVANCE CALCULATIONS

UR total cross section



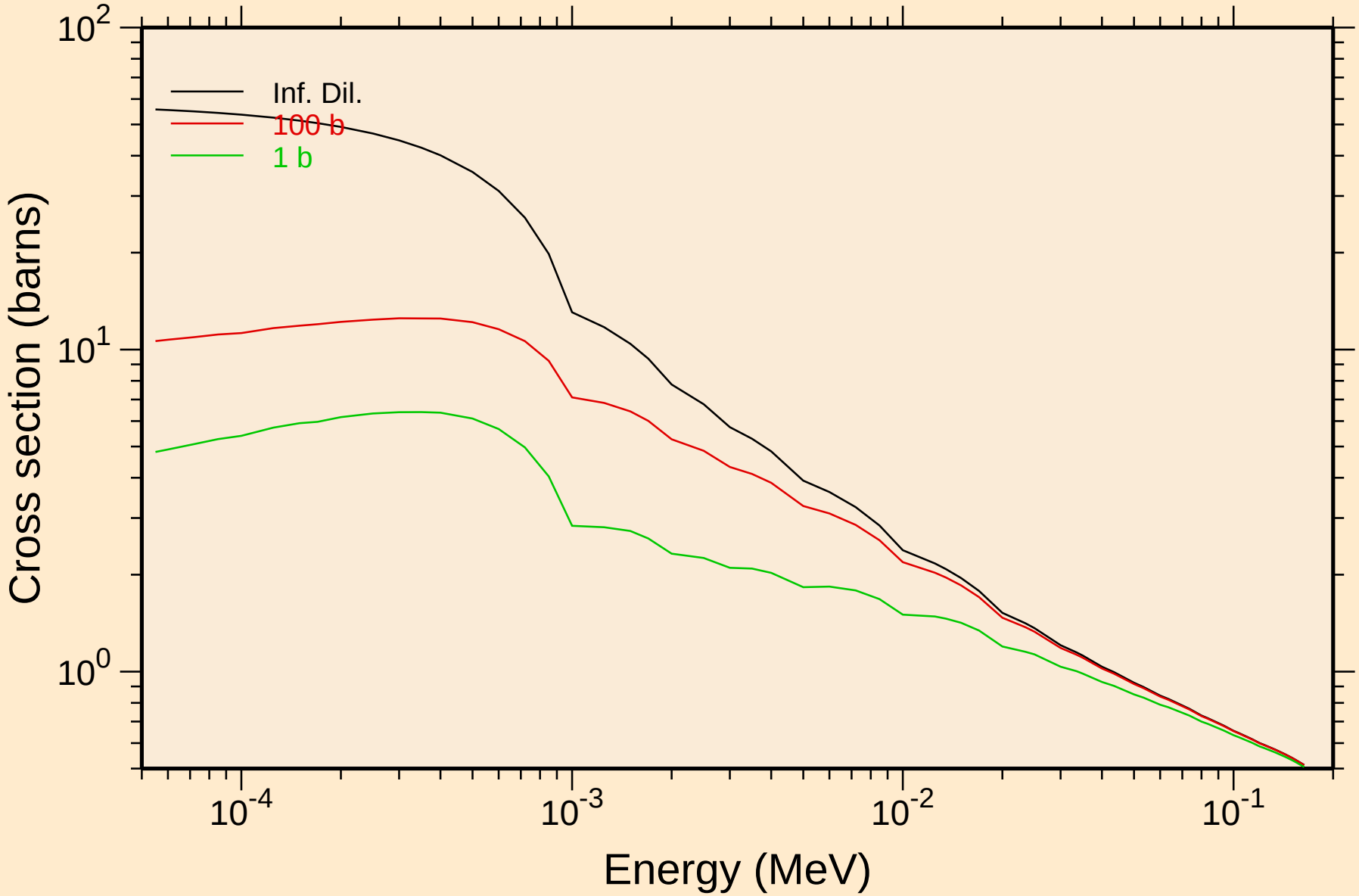
ADVANCE CALCULATIONS

UR elastic cross section



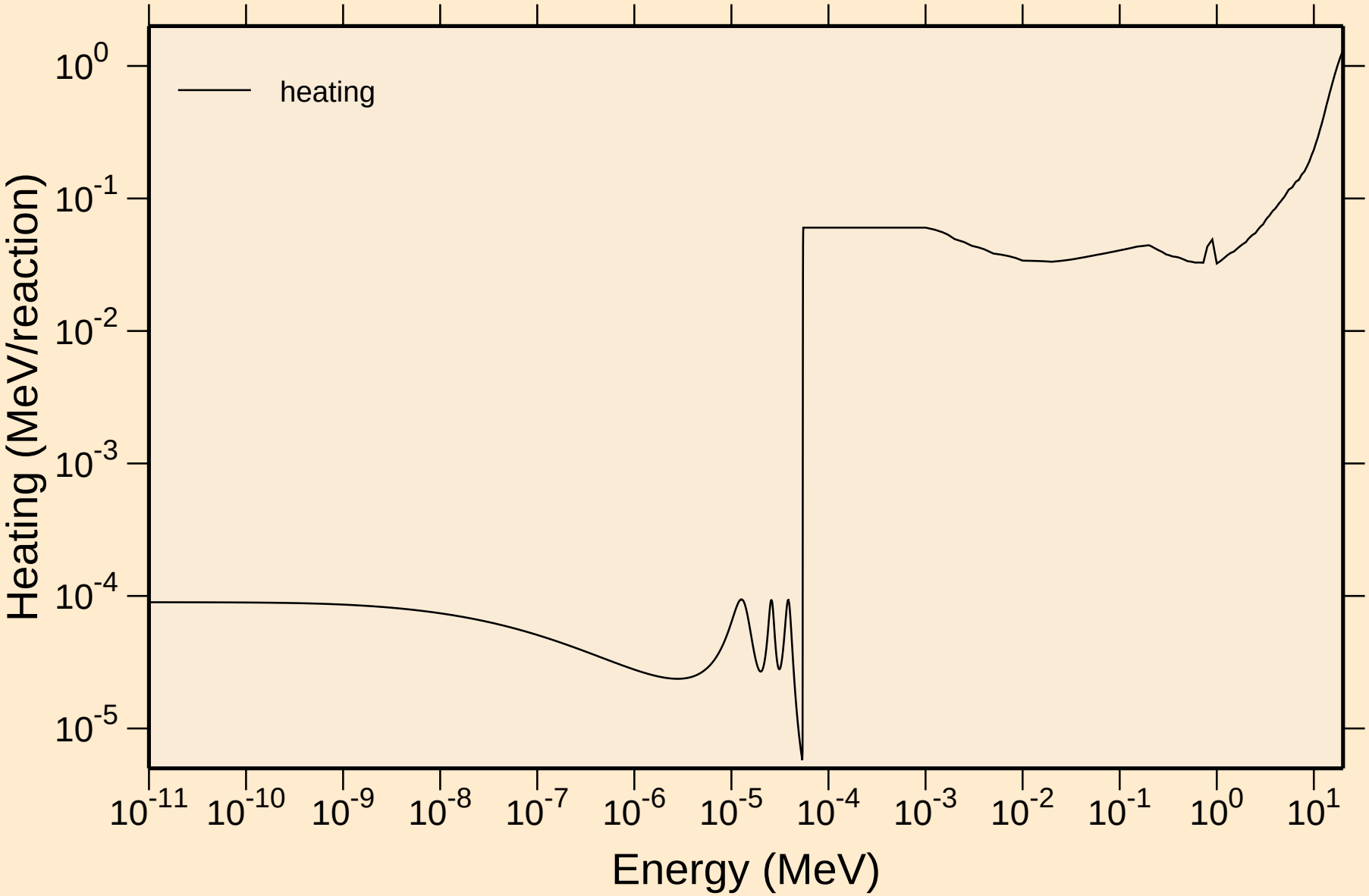
ADVANCE CALCULATIONS

UR capture cross section

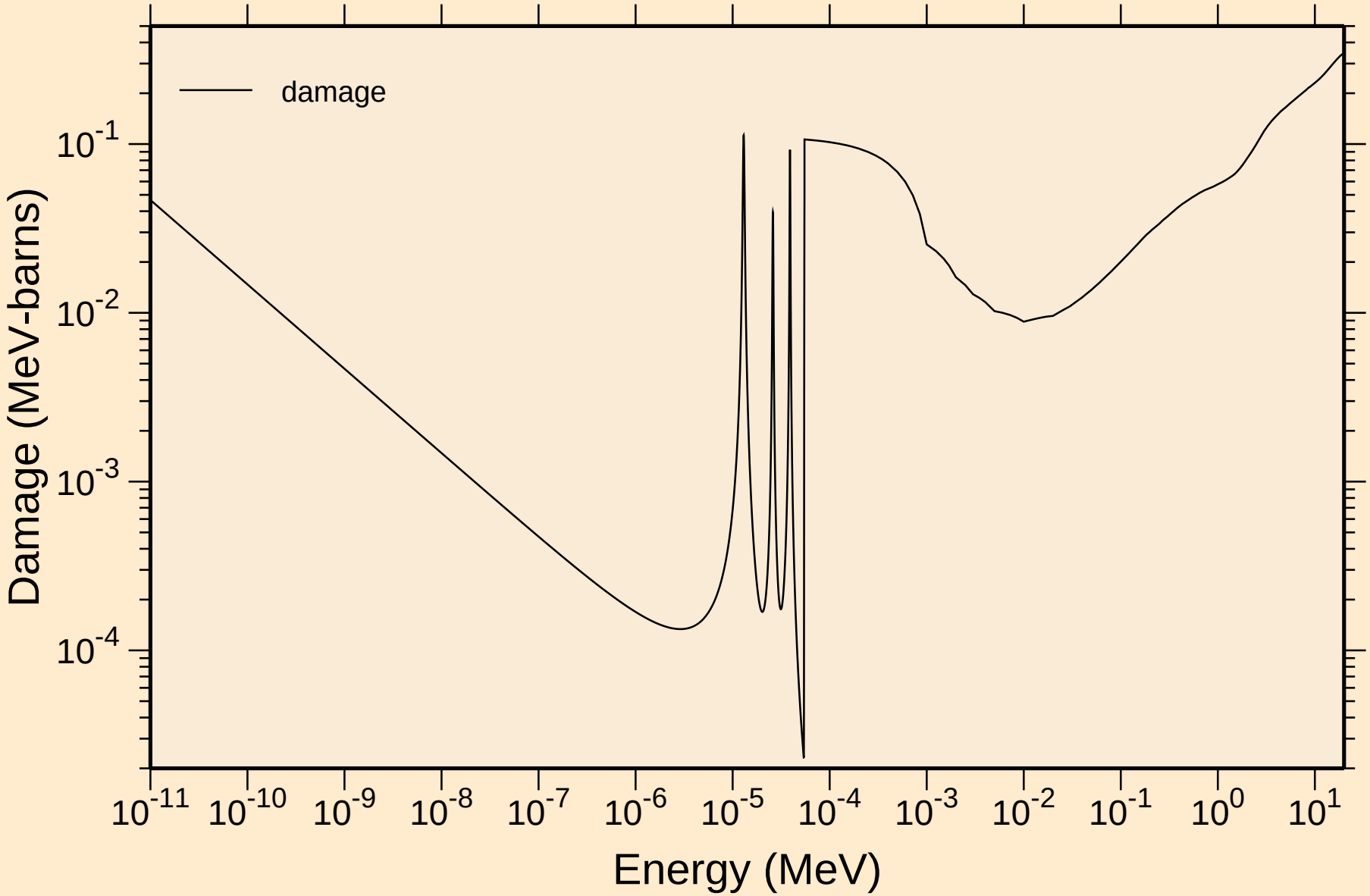


ADVANCE CALCULATIONS

Heating

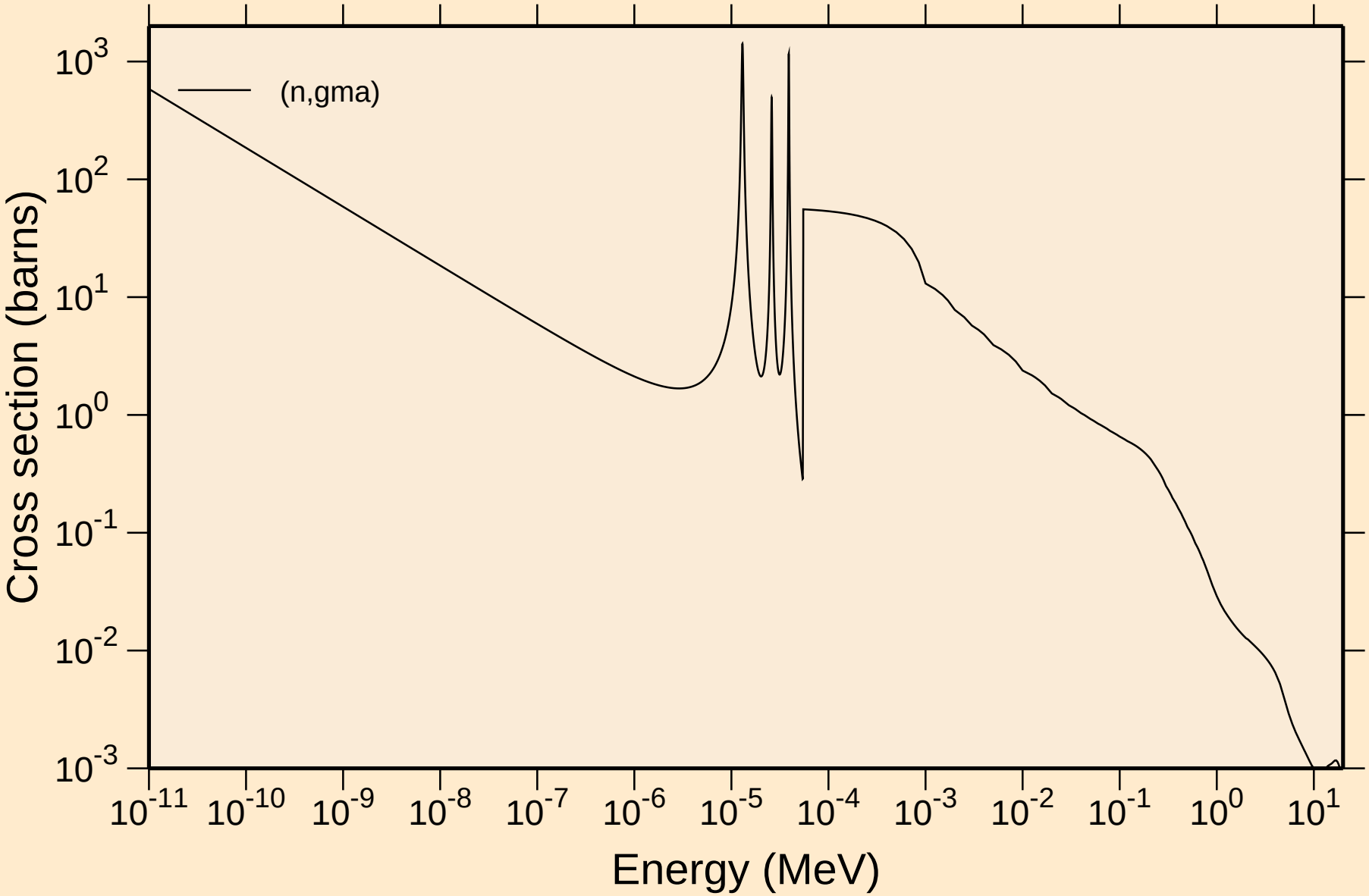


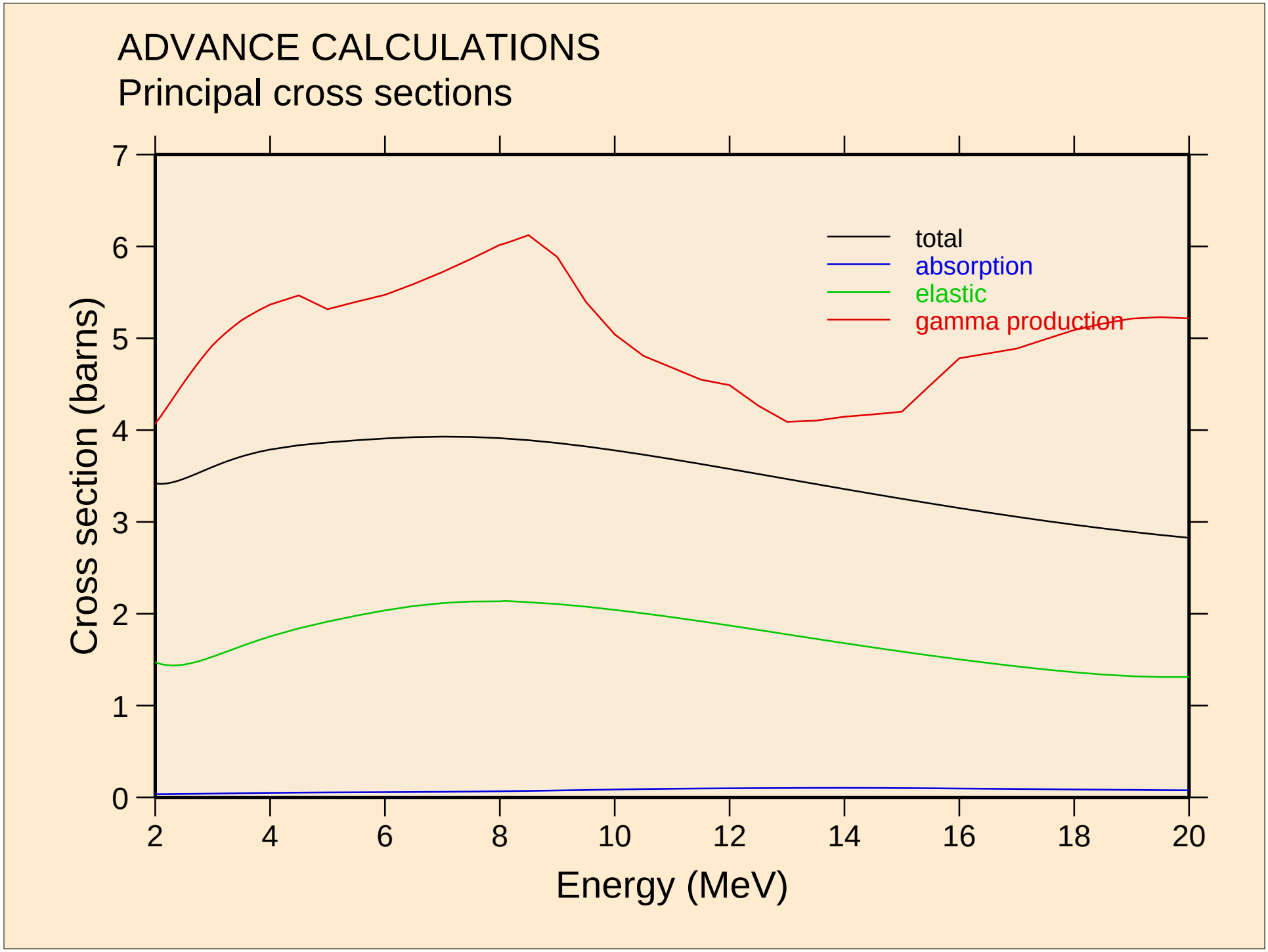
ADVANCE CALCULATIONS
Damage



ADVANCE CALCULATIONS

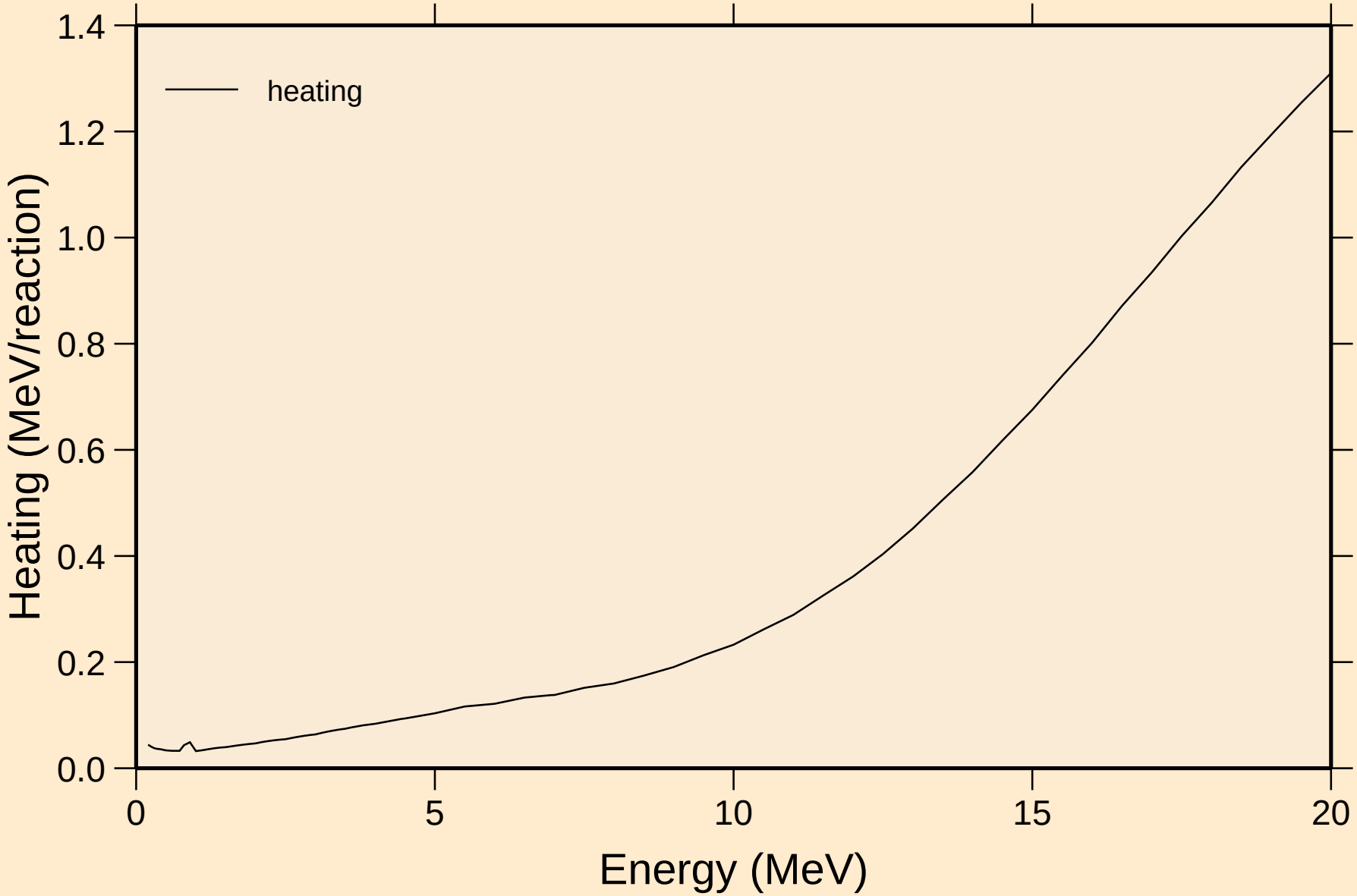
Non-threshold reactions




ADVANCE CALCULATIONS
Principal cross sections
total
absorption
elastic
gamma production
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
2
4
6
8
10
12
14
16
18
20

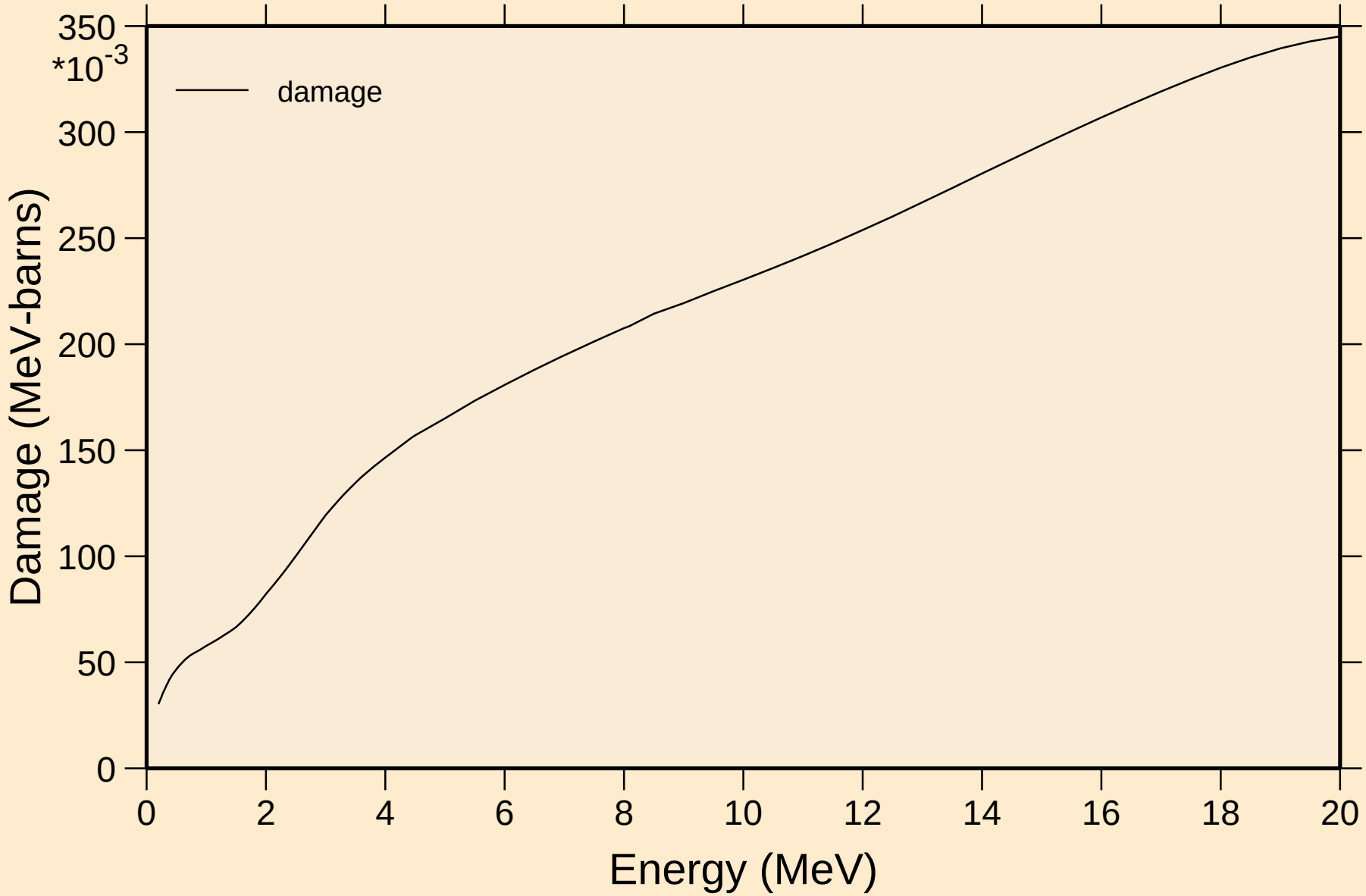
ADVANCE CALCULATIONS

Heating



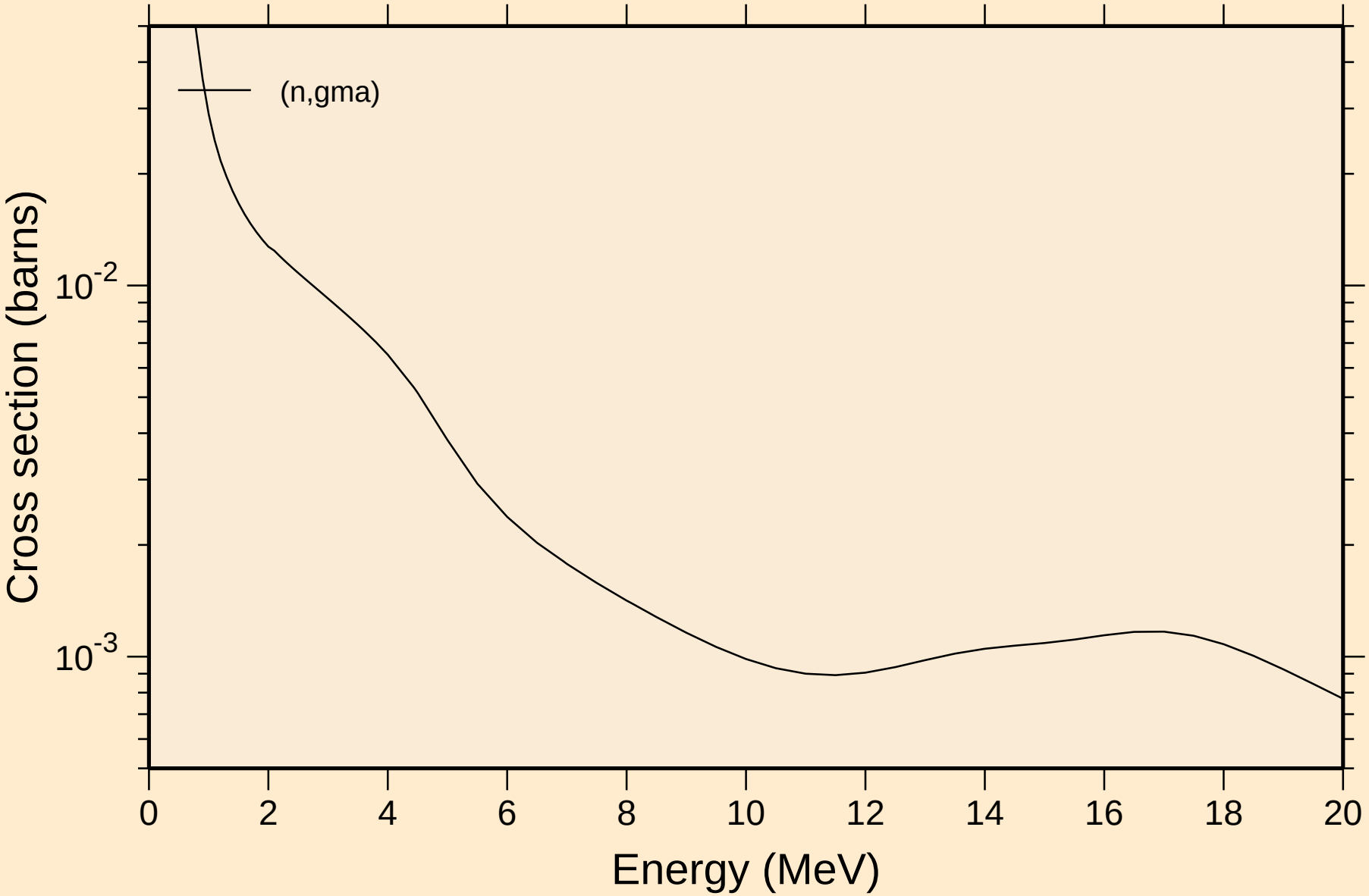
ADVANCE CALCULATIONS

Damage



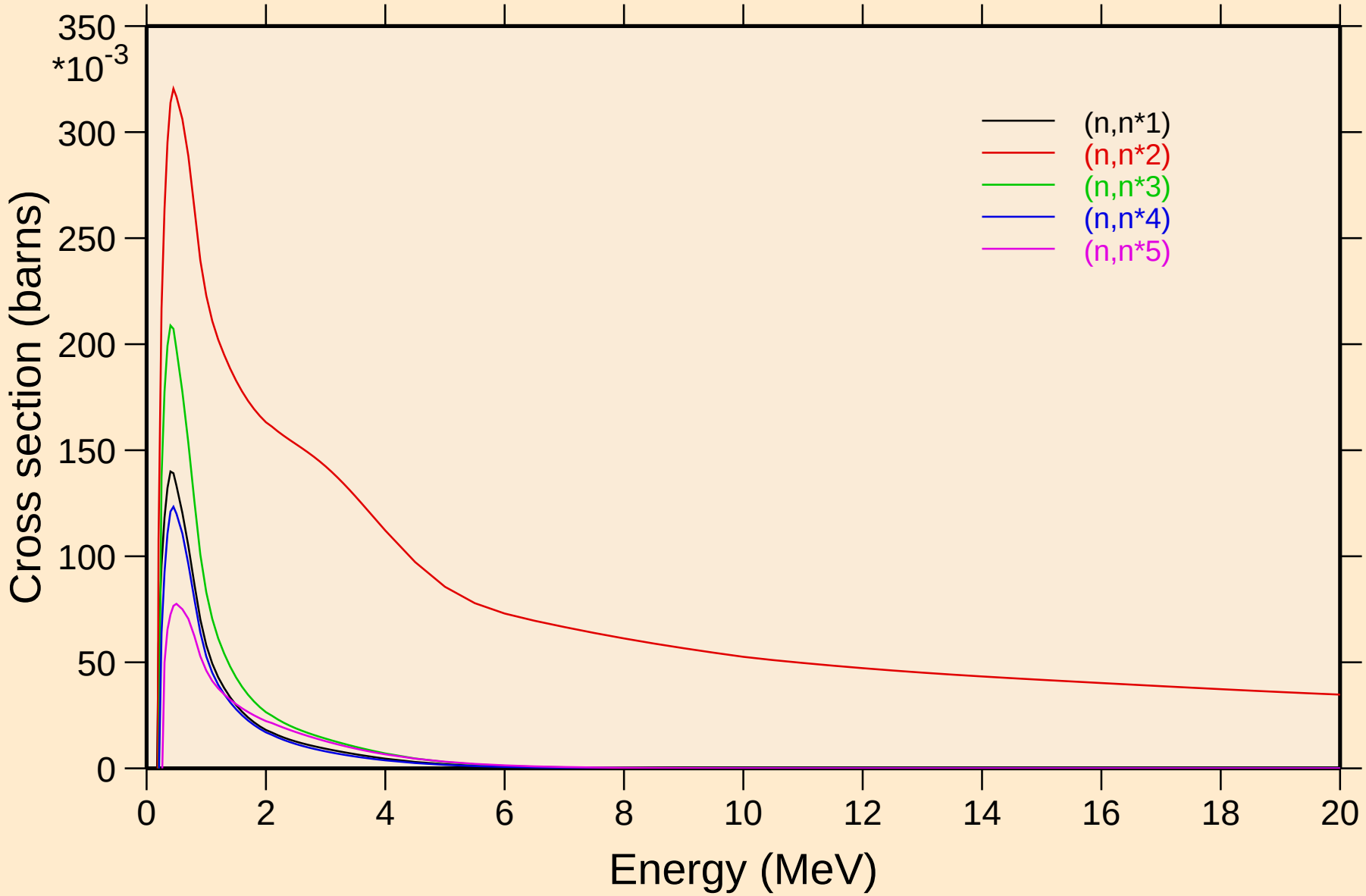
ADVANCE CALCULATIONS

Non-threshold reactions



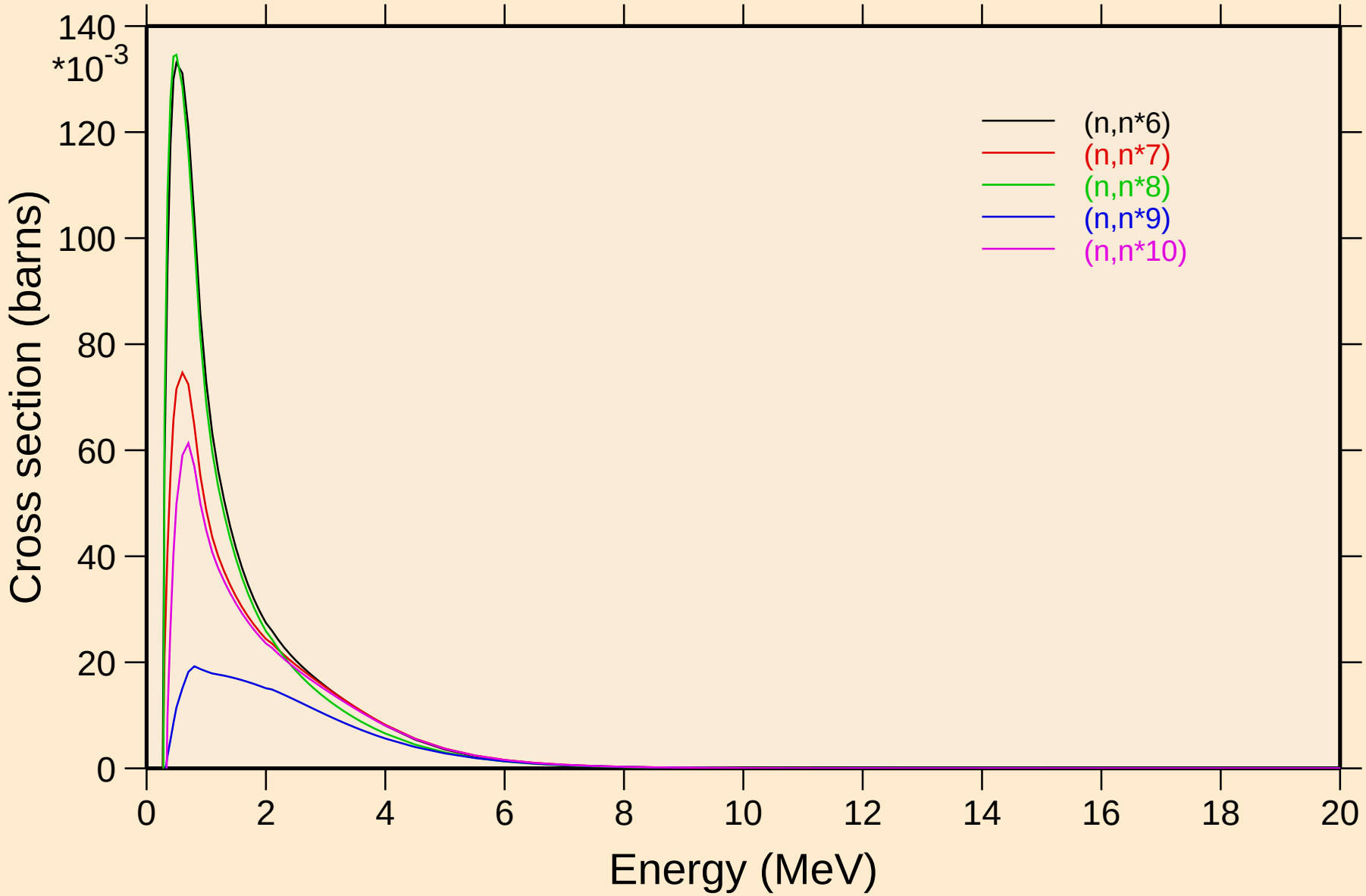
ADVANCE CALCULATIONS

Inelastic levels



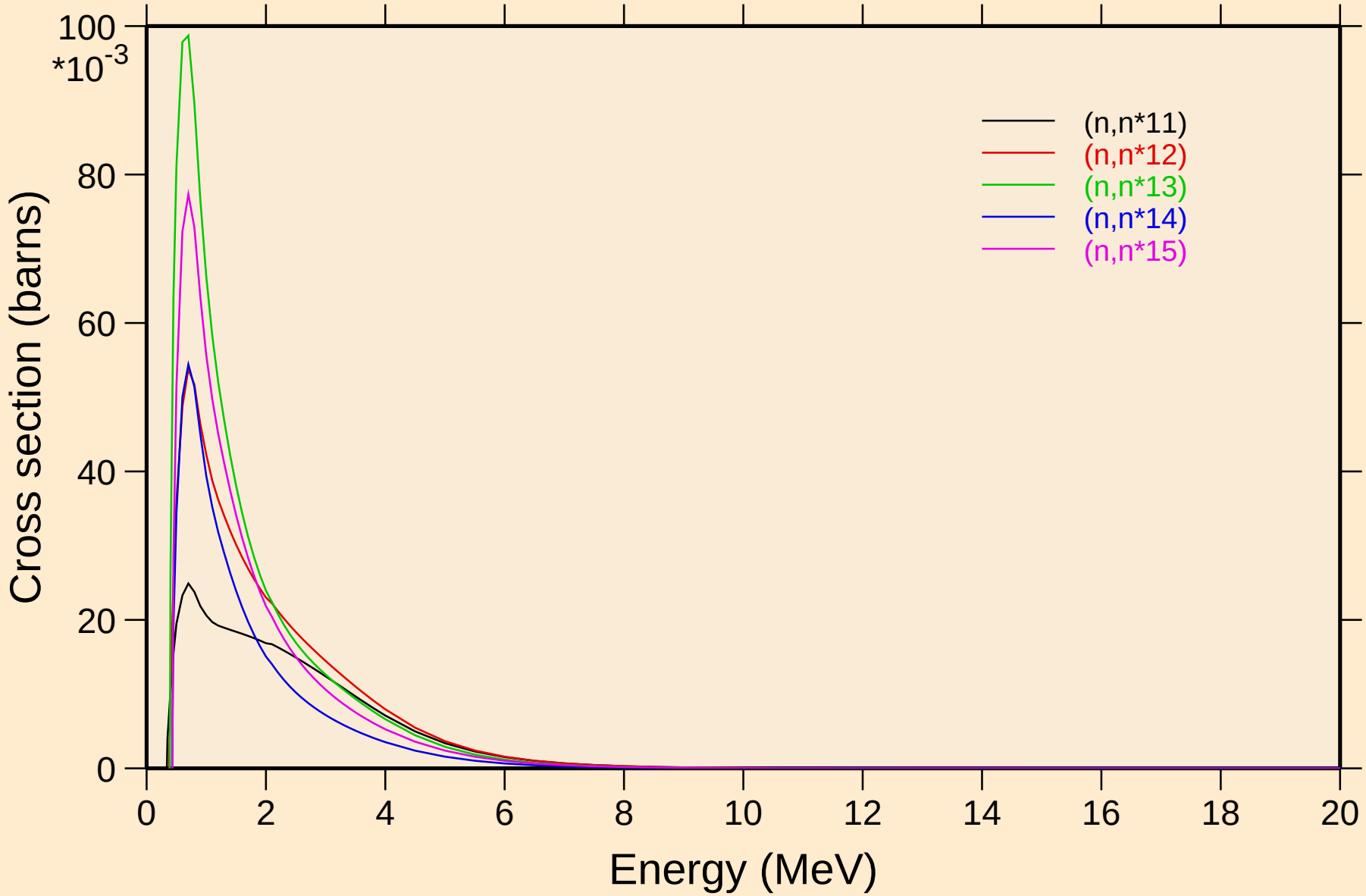
ADVANCE CALCULATIONS

Inelastic levels



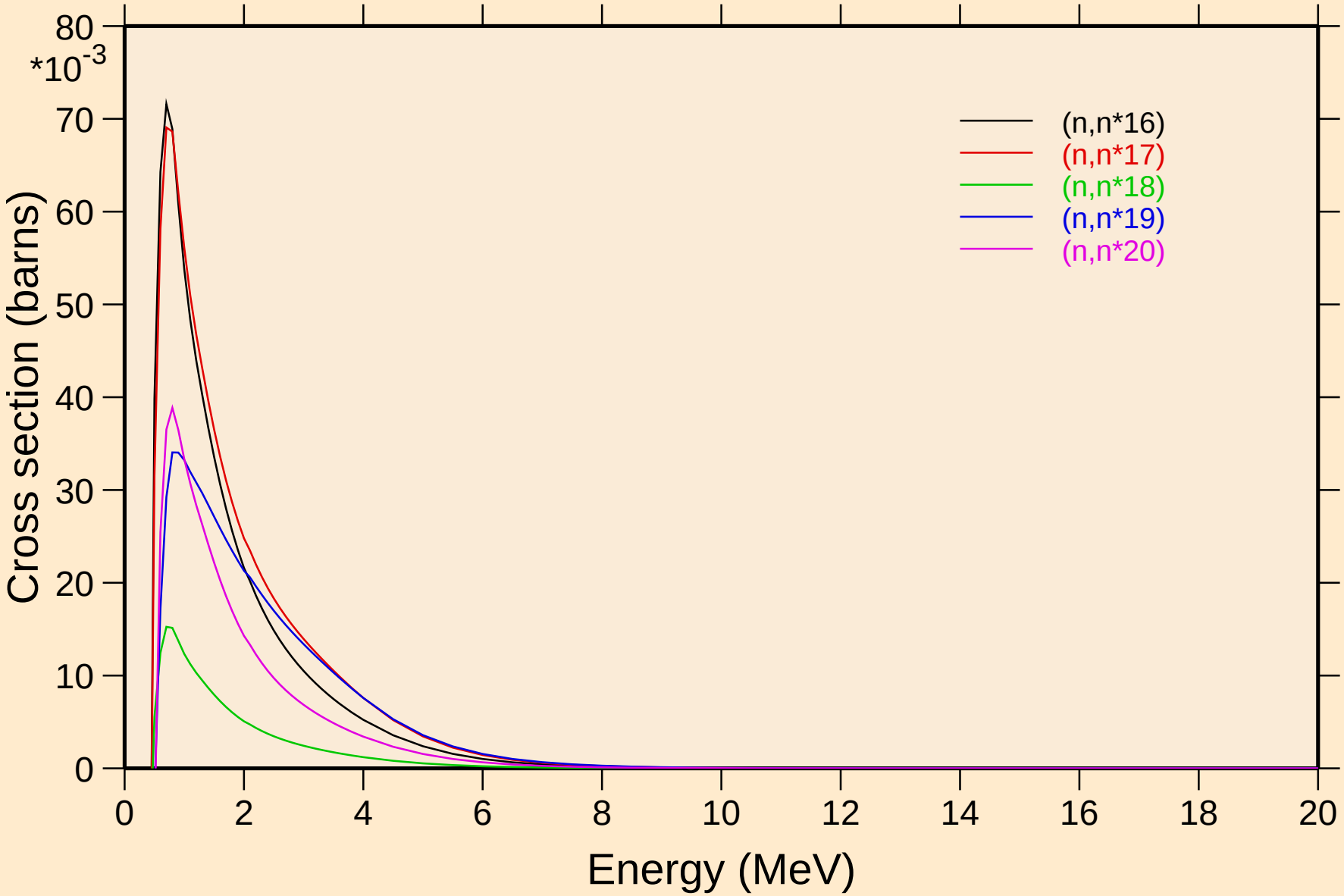
ADVANCE CALCULATIONS

Inelastic levels



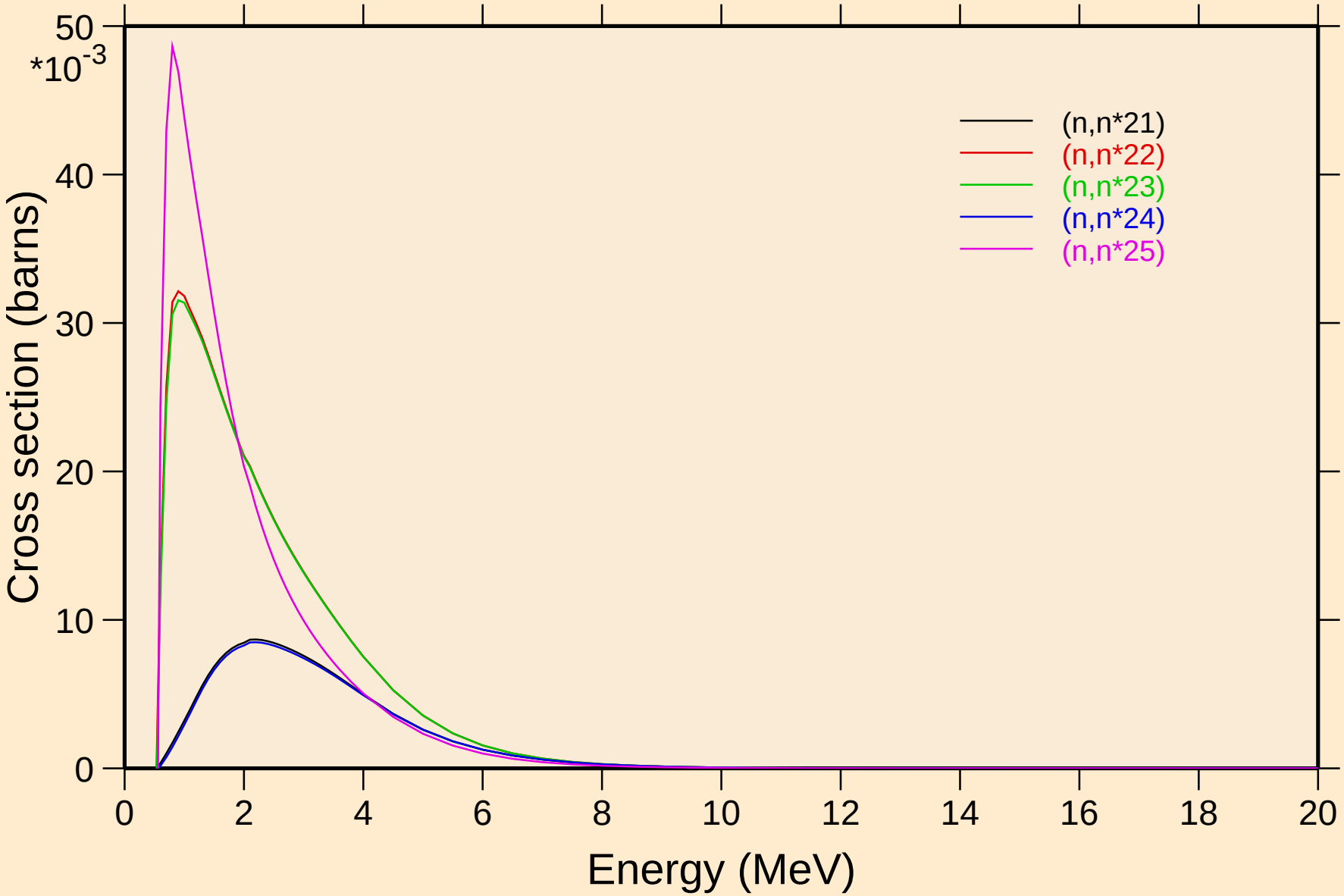
ADVANCE CALCULATIONS

Inelastic levels



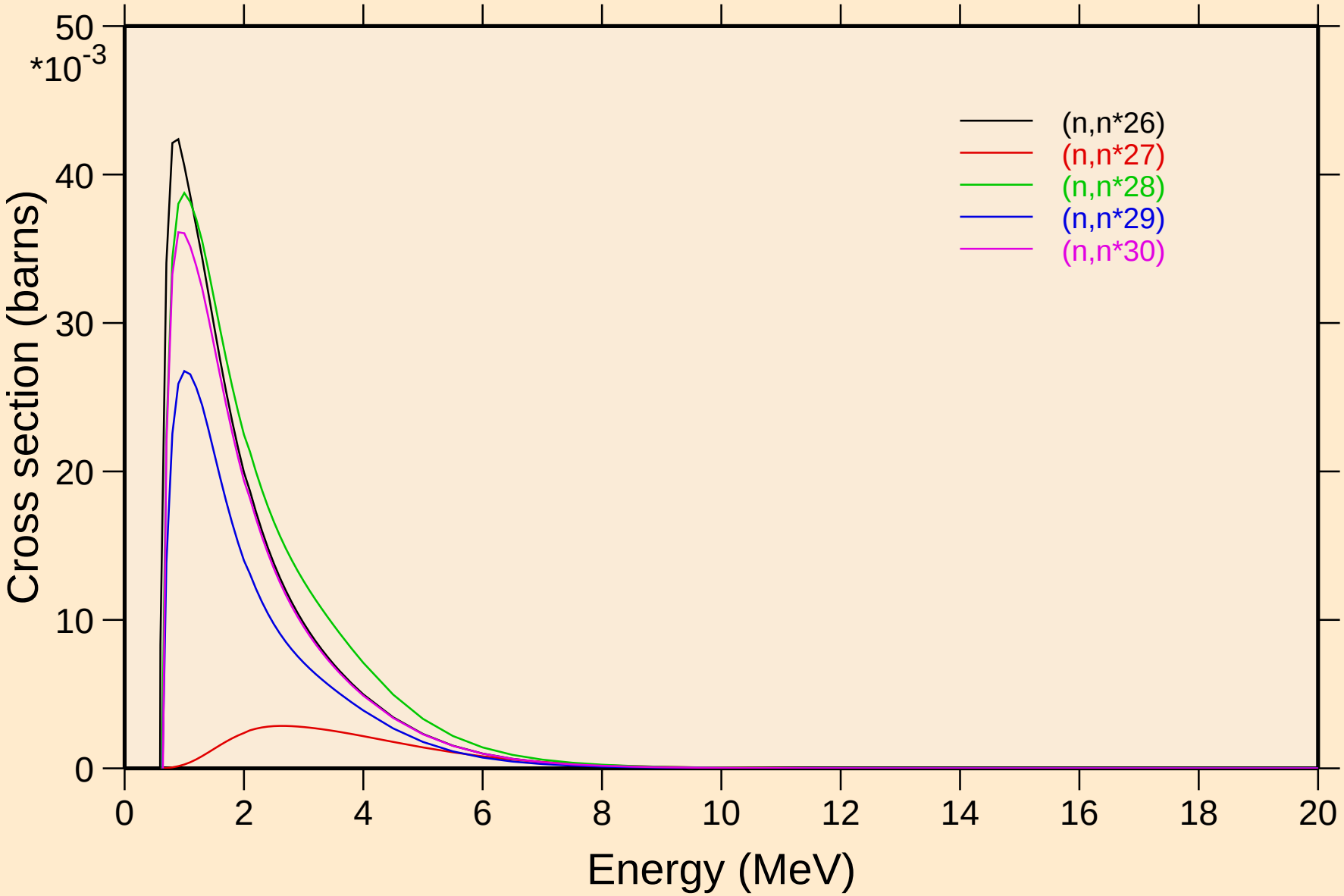
ADVANCE CALCULATIONS

Inelastic levels



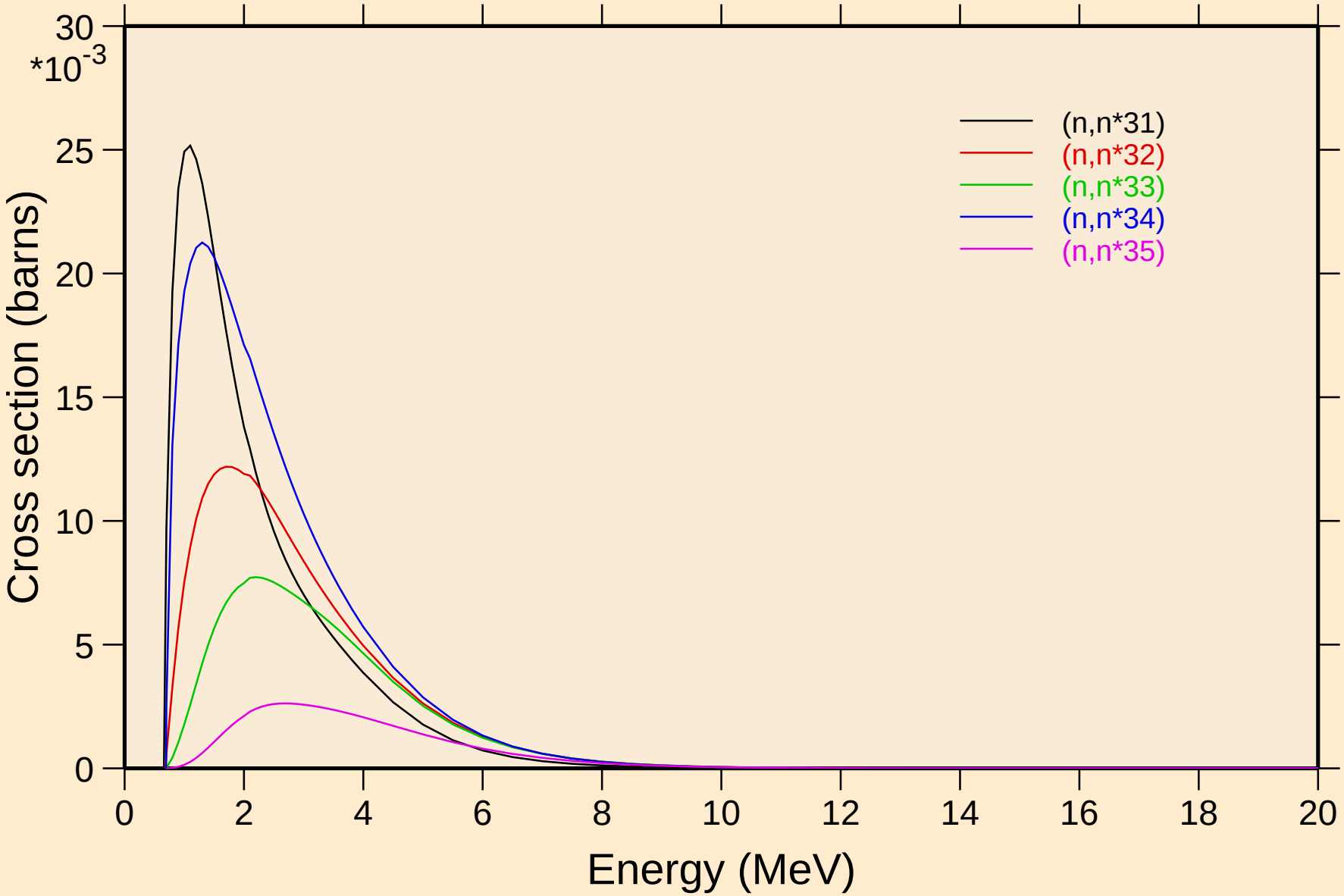
ADVANCE CALCULATIONS

Inelastic levels



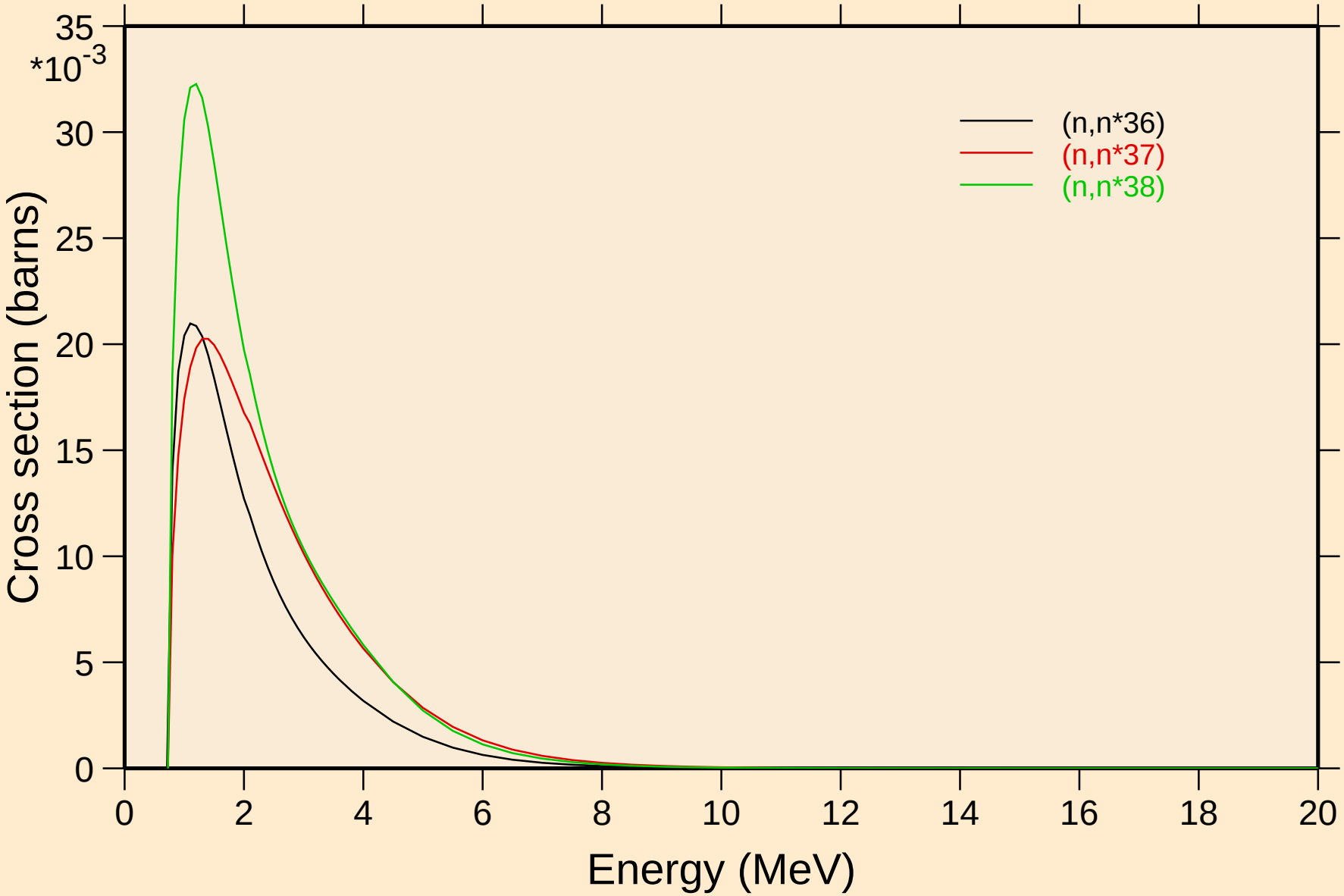
ADVANCE CALCULATIONS

Inelastic levels

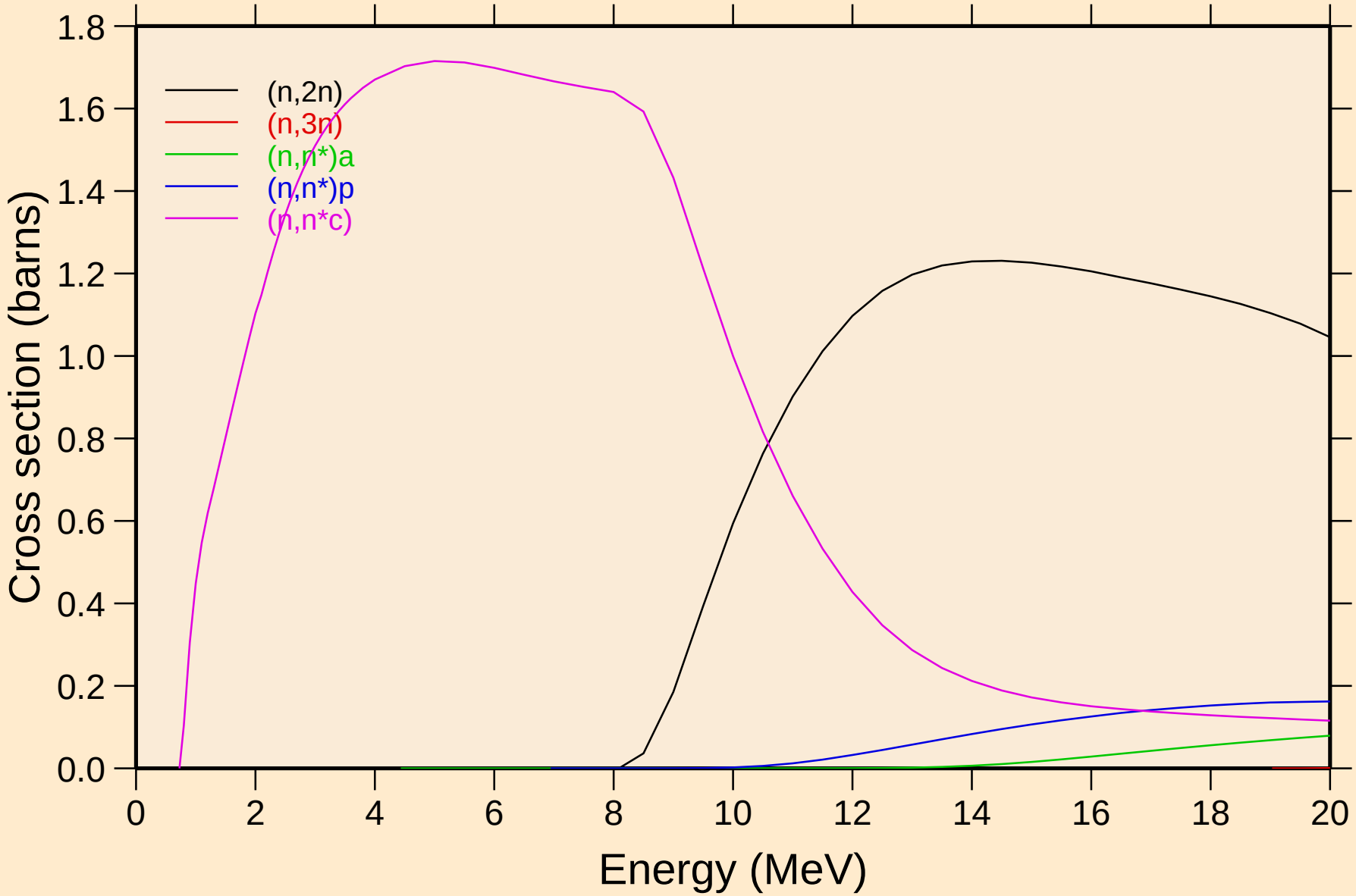


ADVANCE CALCULATIONS

Inelastic levels

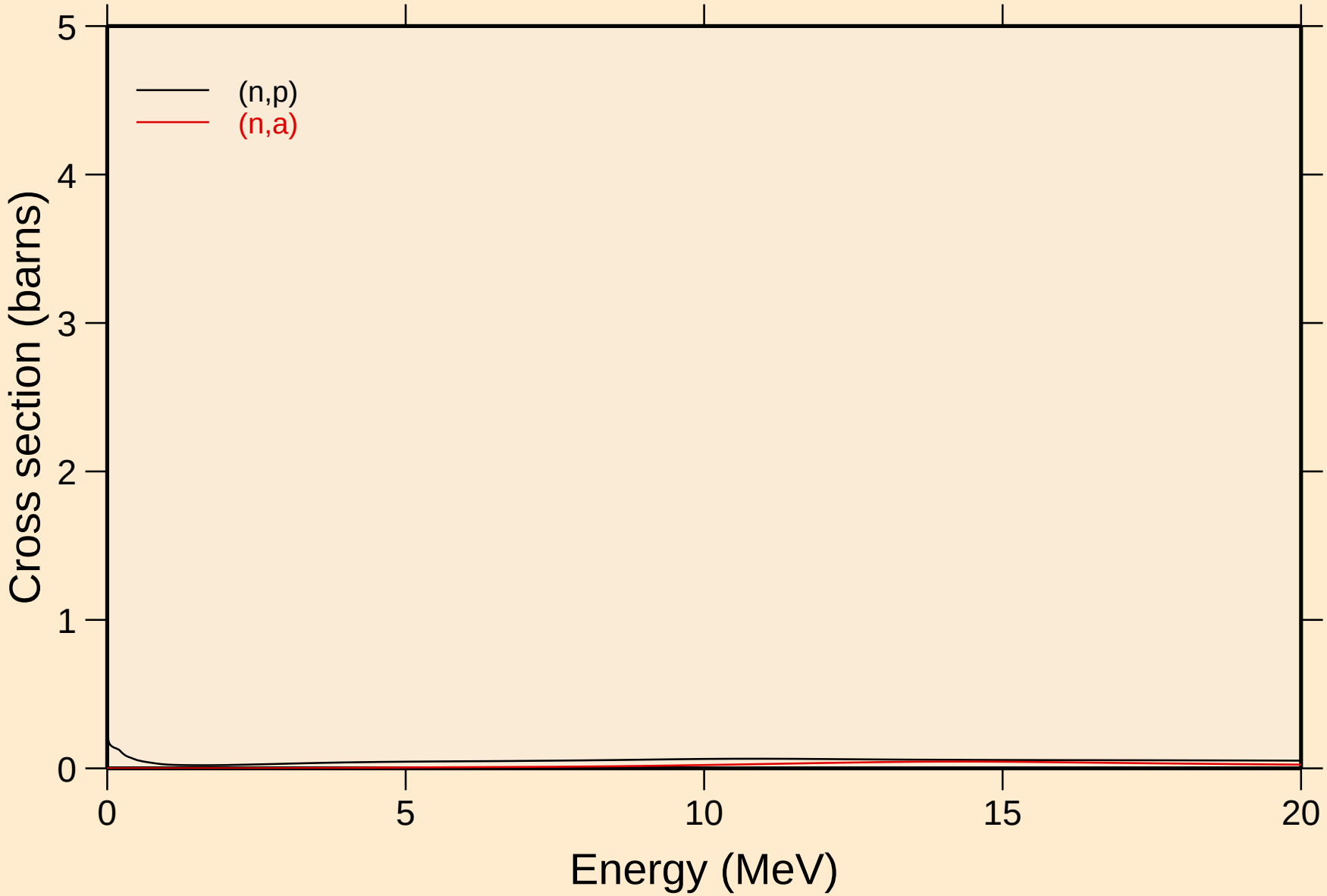


ADVANCE CALCULATIONS
Threshold reactions



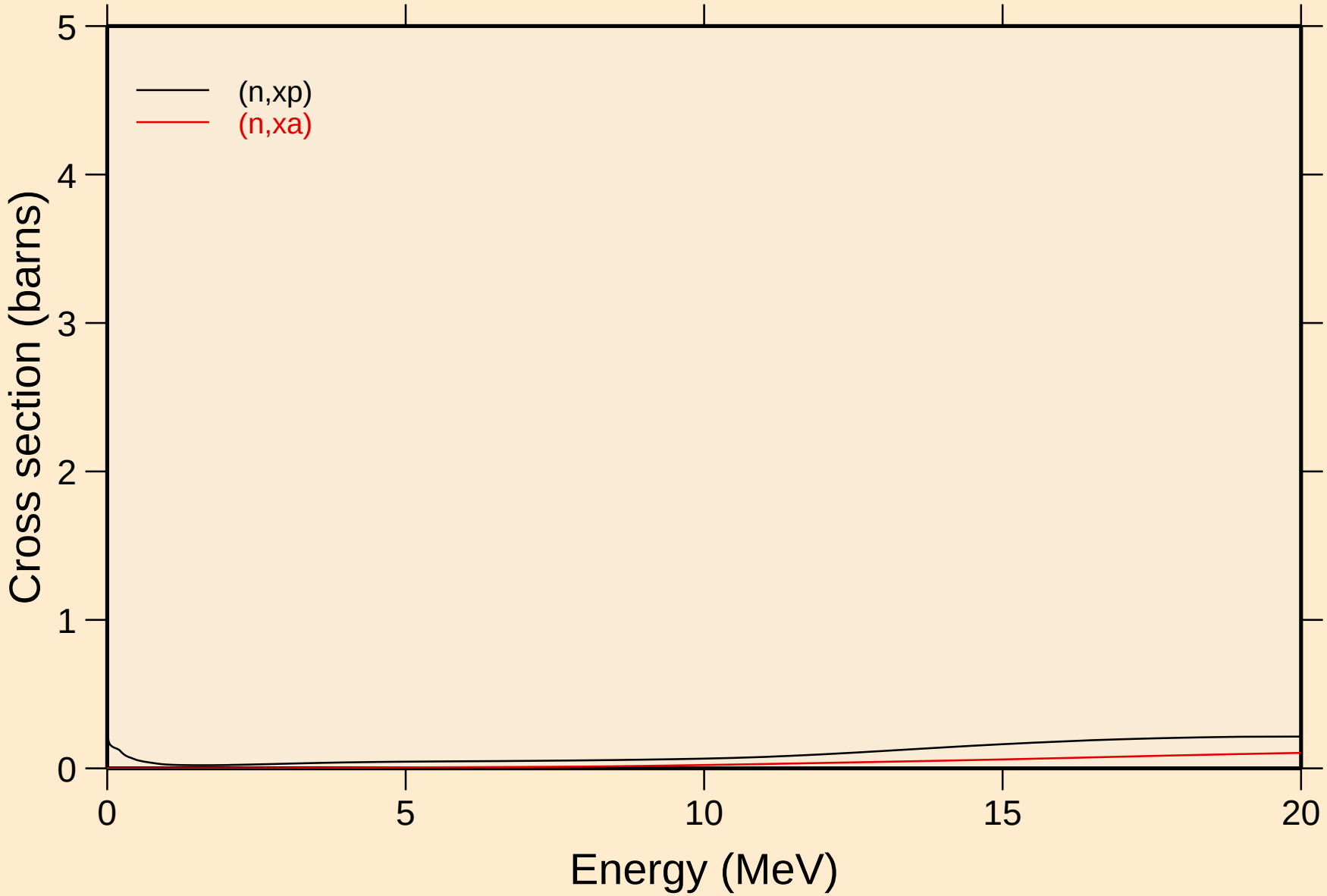
ADVANCE CALCULATIONS

Threshold reactions

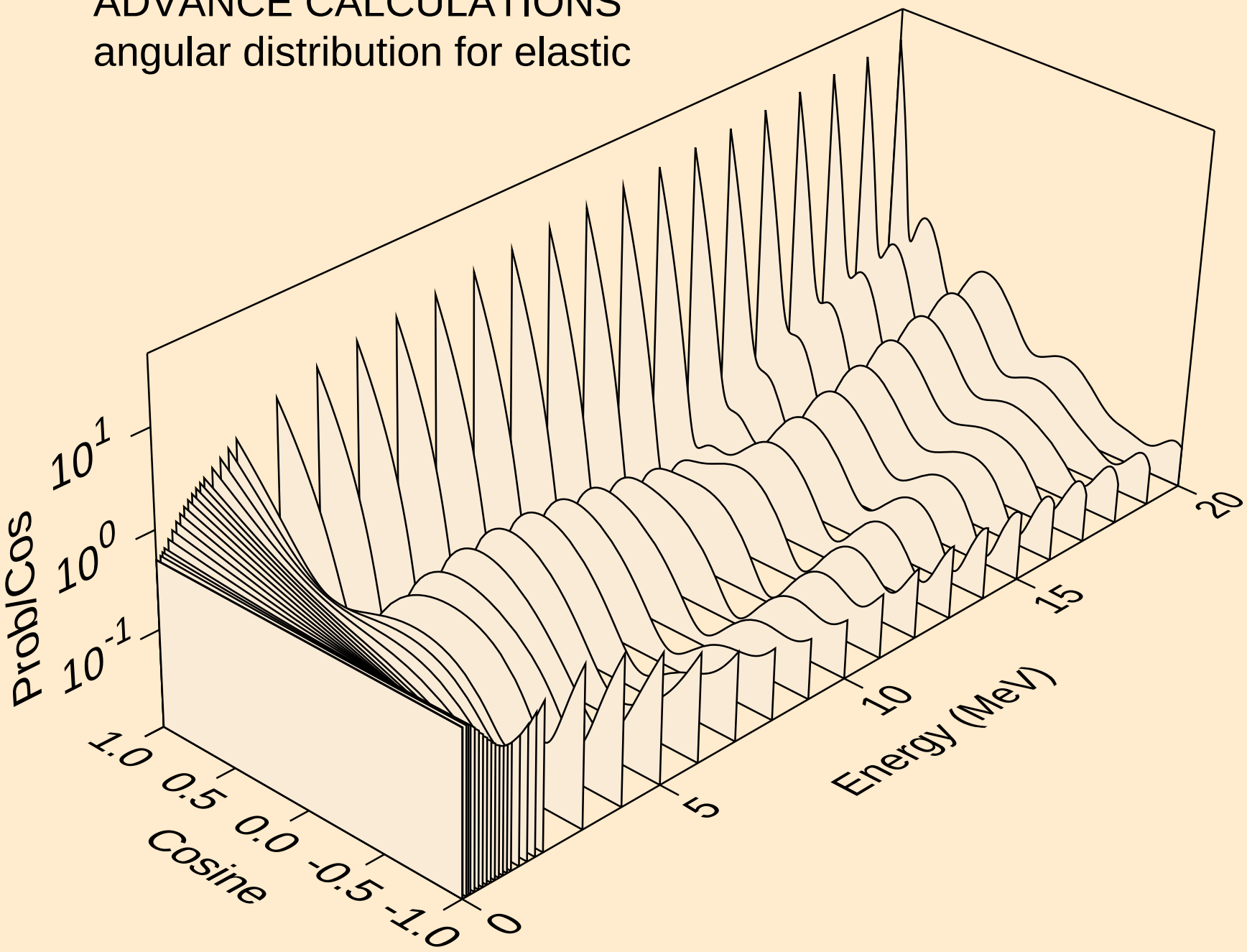


ADVANCE CALCULATIONS

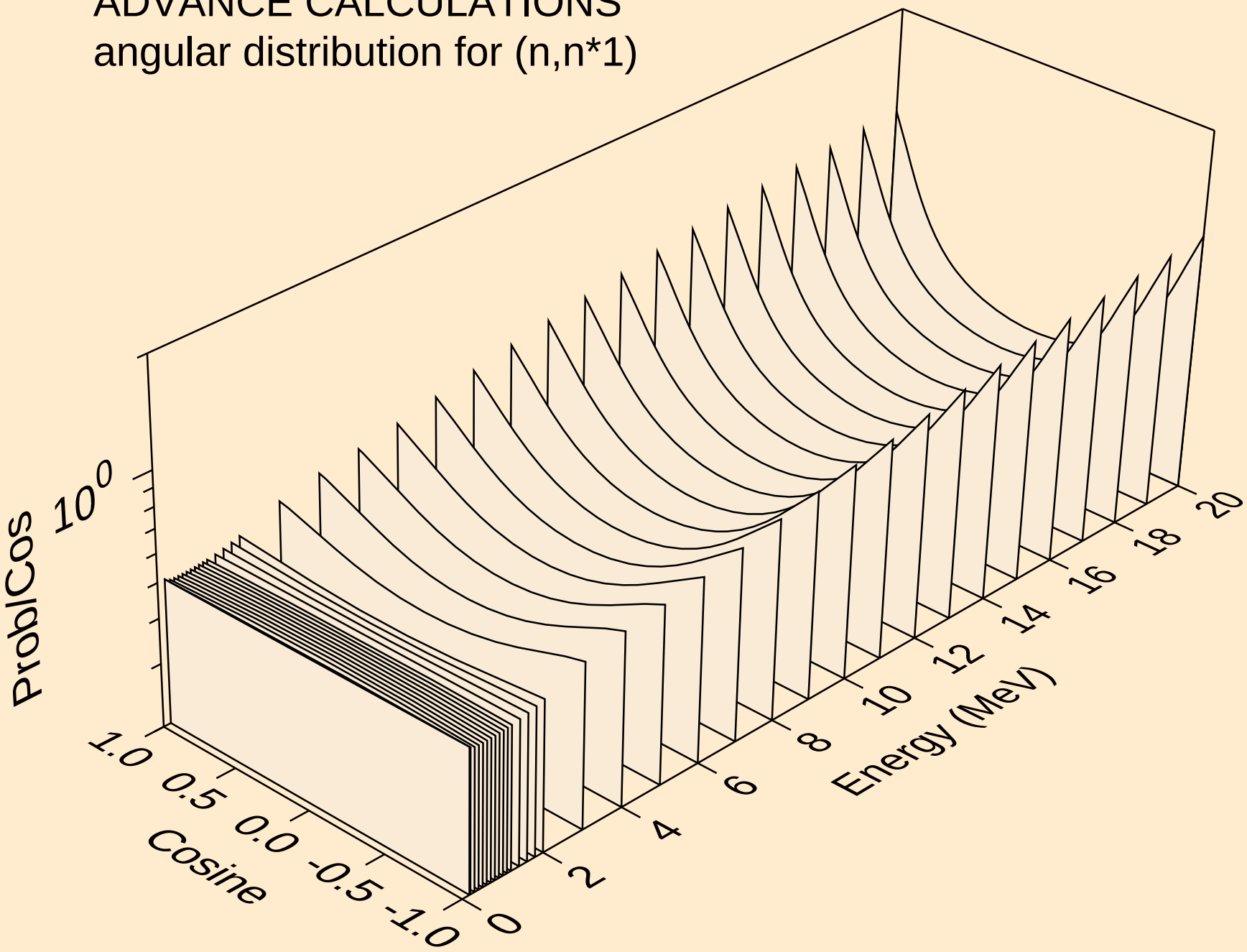
Threshold reactions



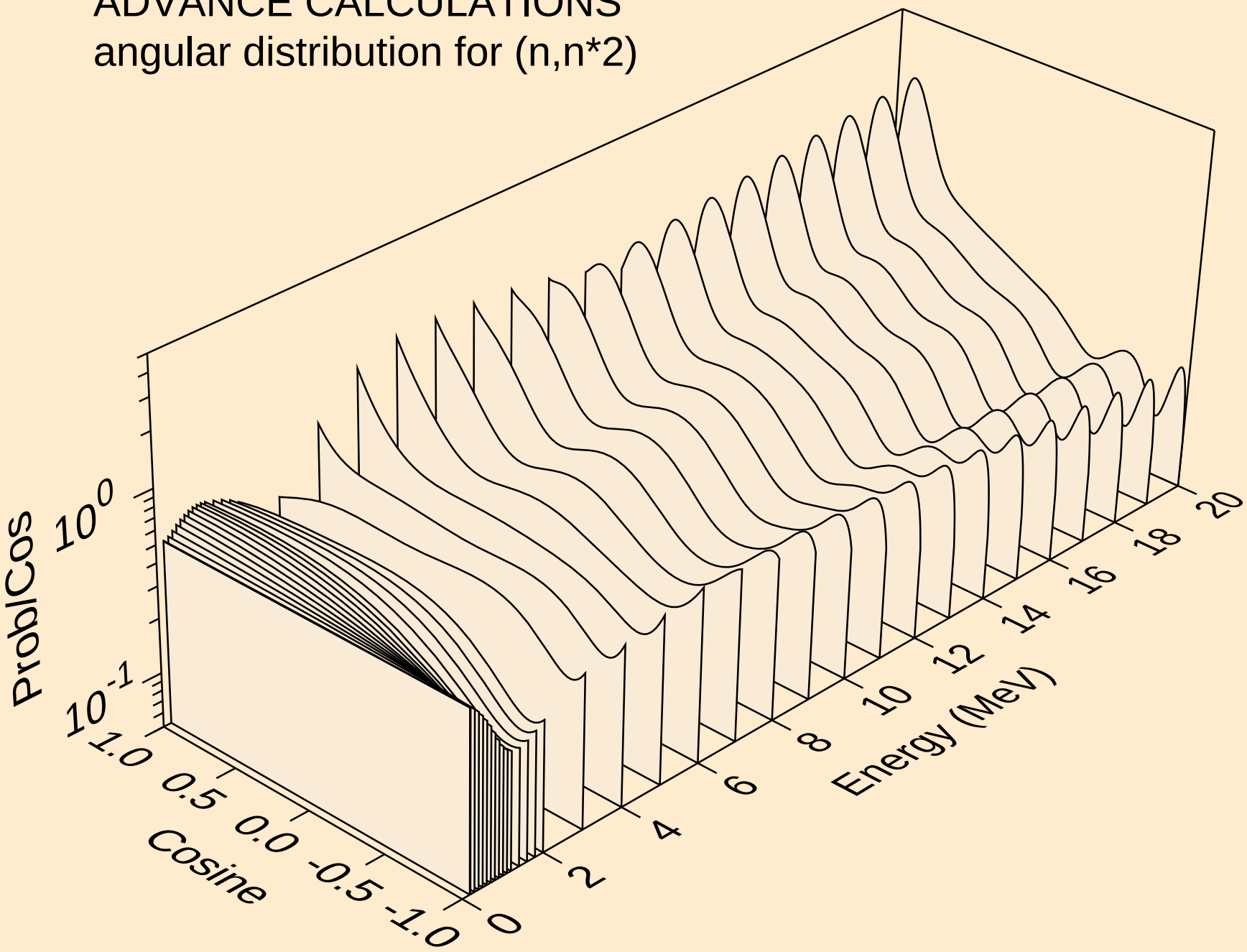
ADVANCE CALCULATIONS
angular distribution for elastic



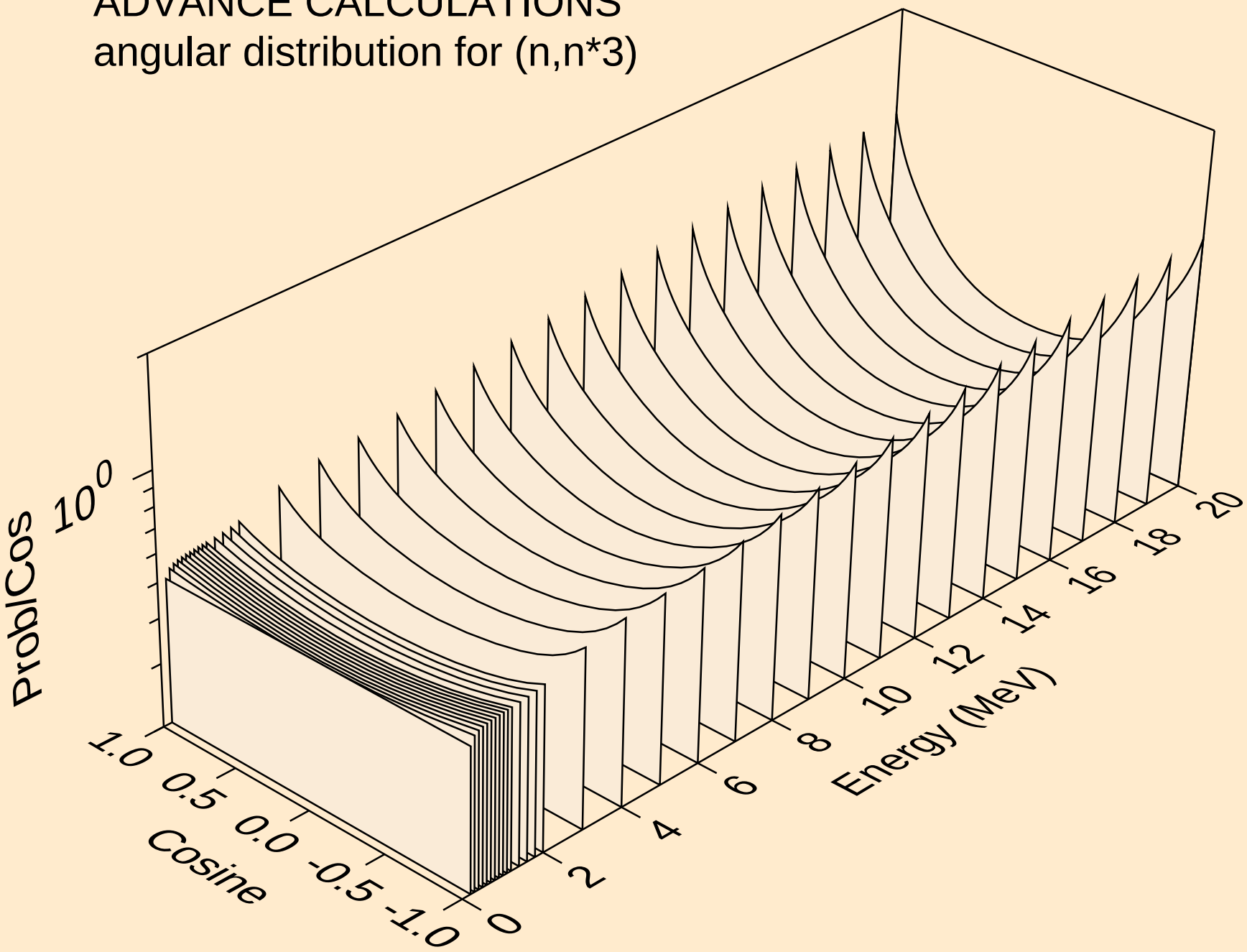
ADVANCE CALCULATIONS
angular distribution for (n,n*1)



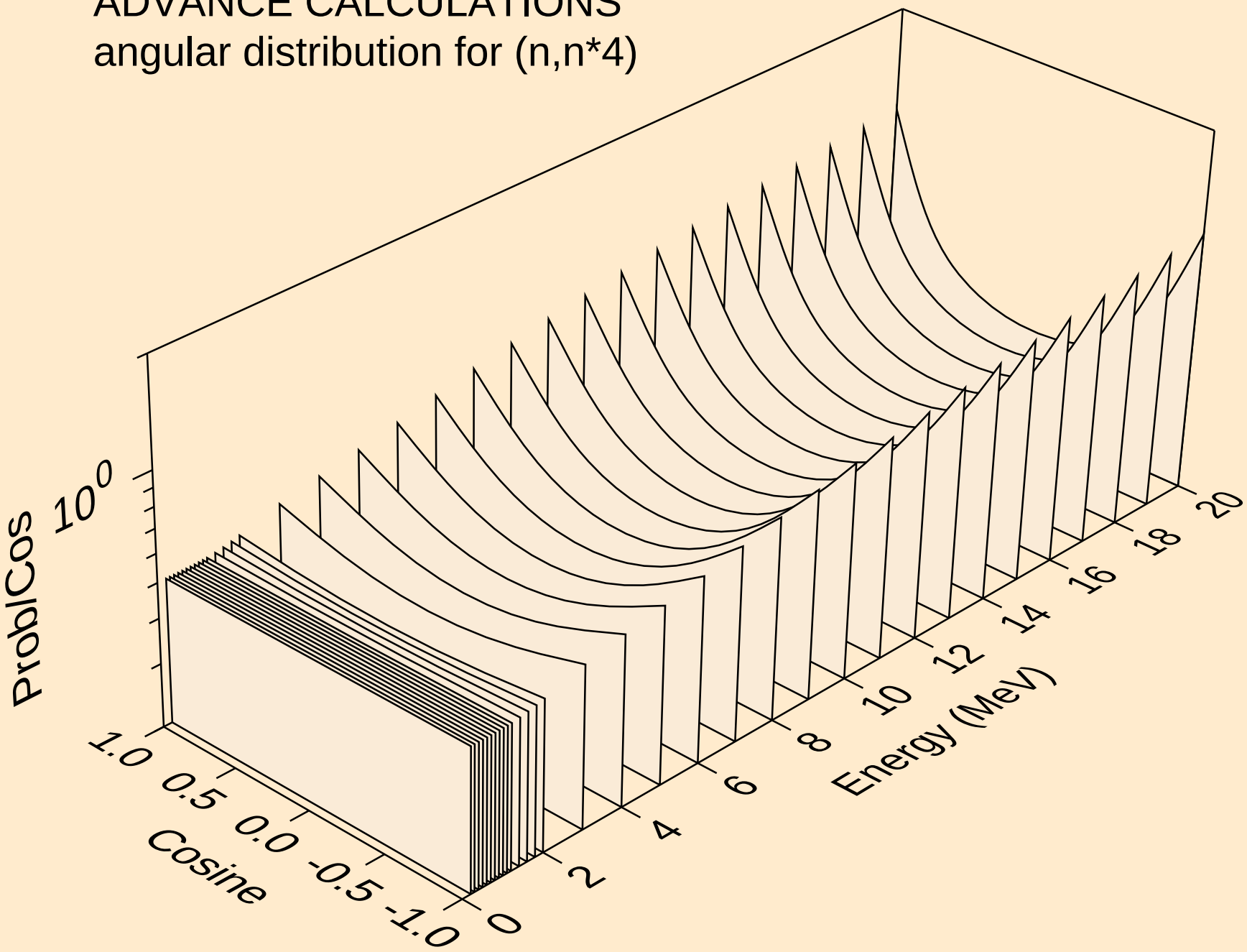
ADVANCE CALCULATIONS
angular distribution for (n,n*2)



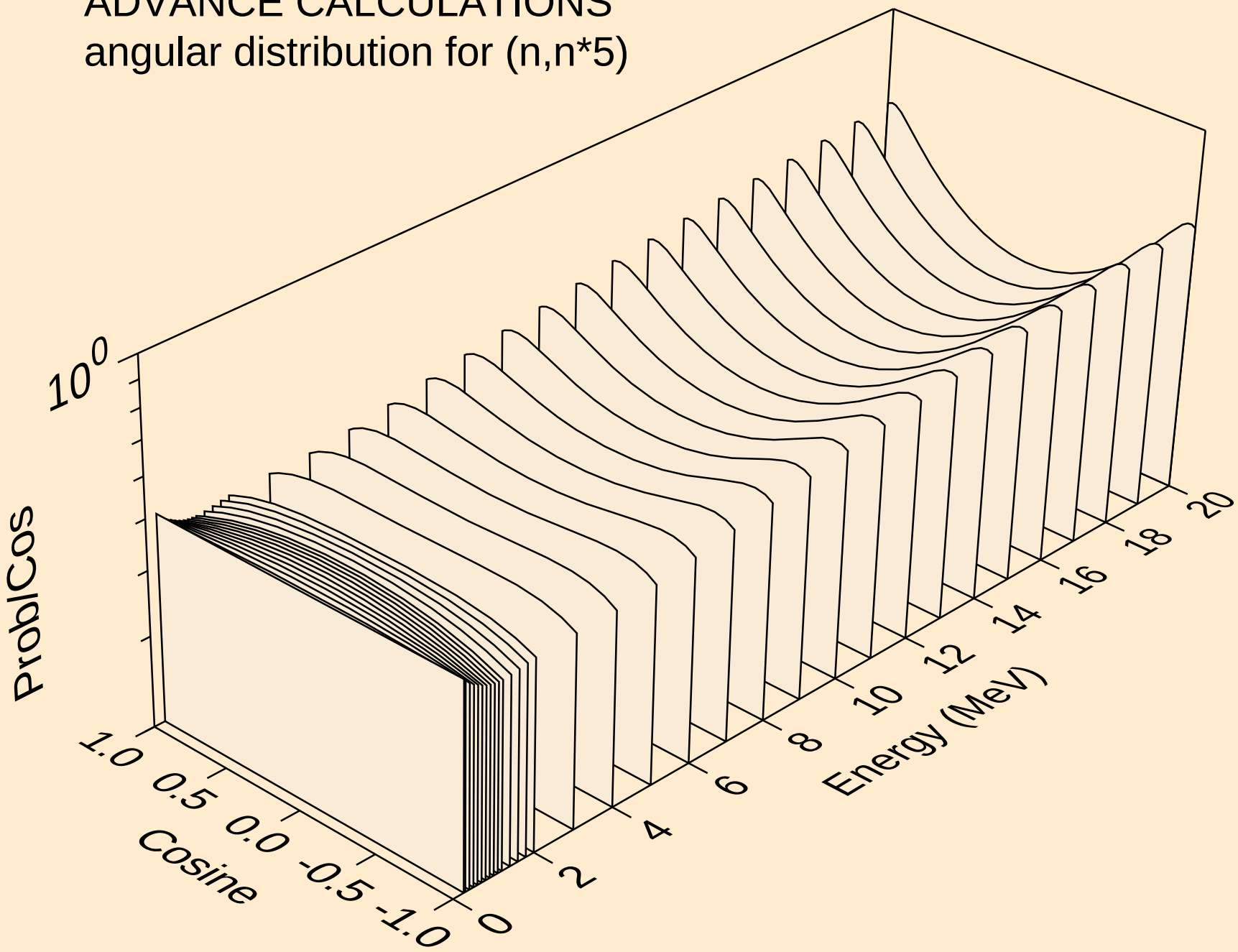
ADVANCE CALCULATIONS
angular distribution for (n,n*3)



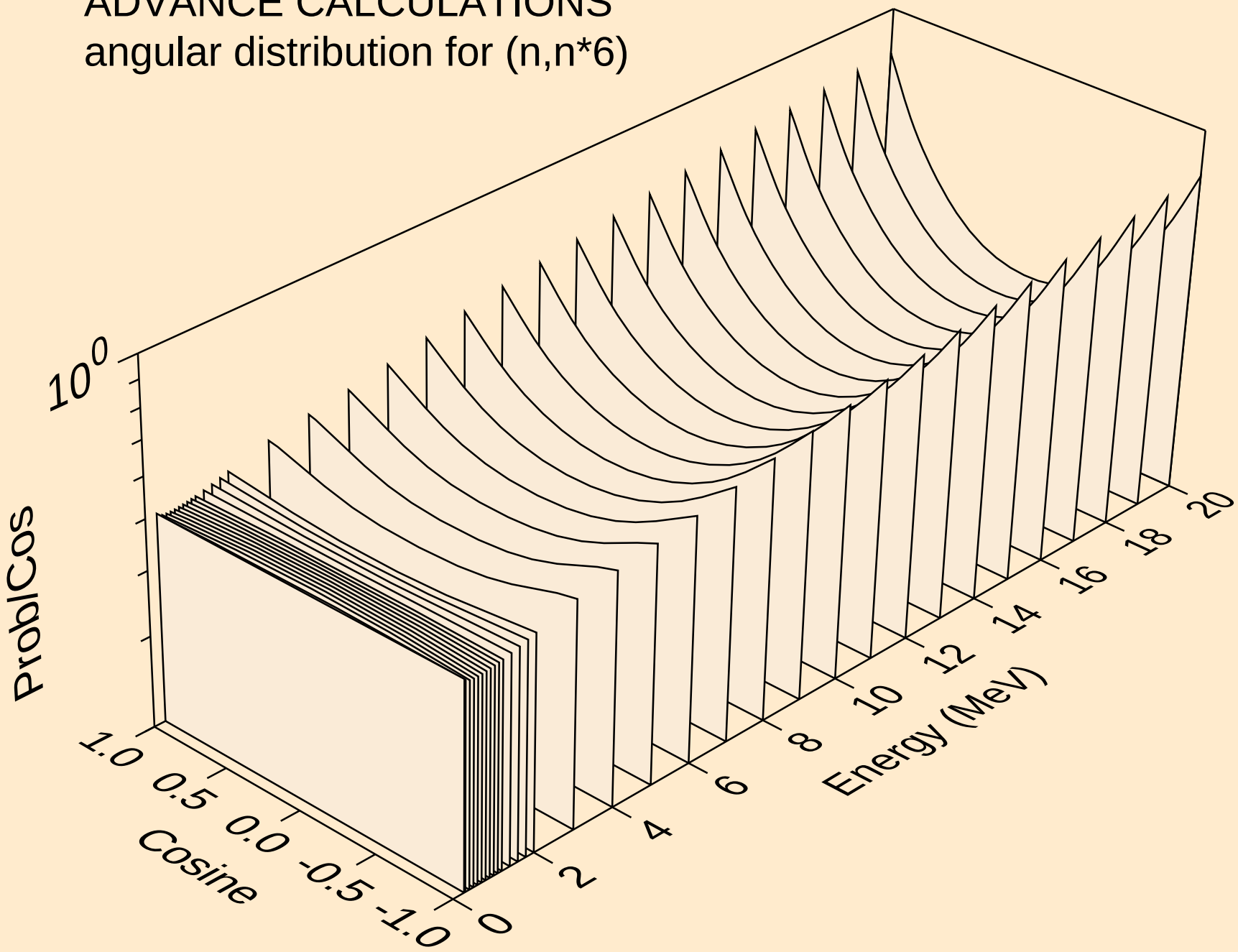
ADVANCE CALCULATIONS
angular distribution for (n,n*4)



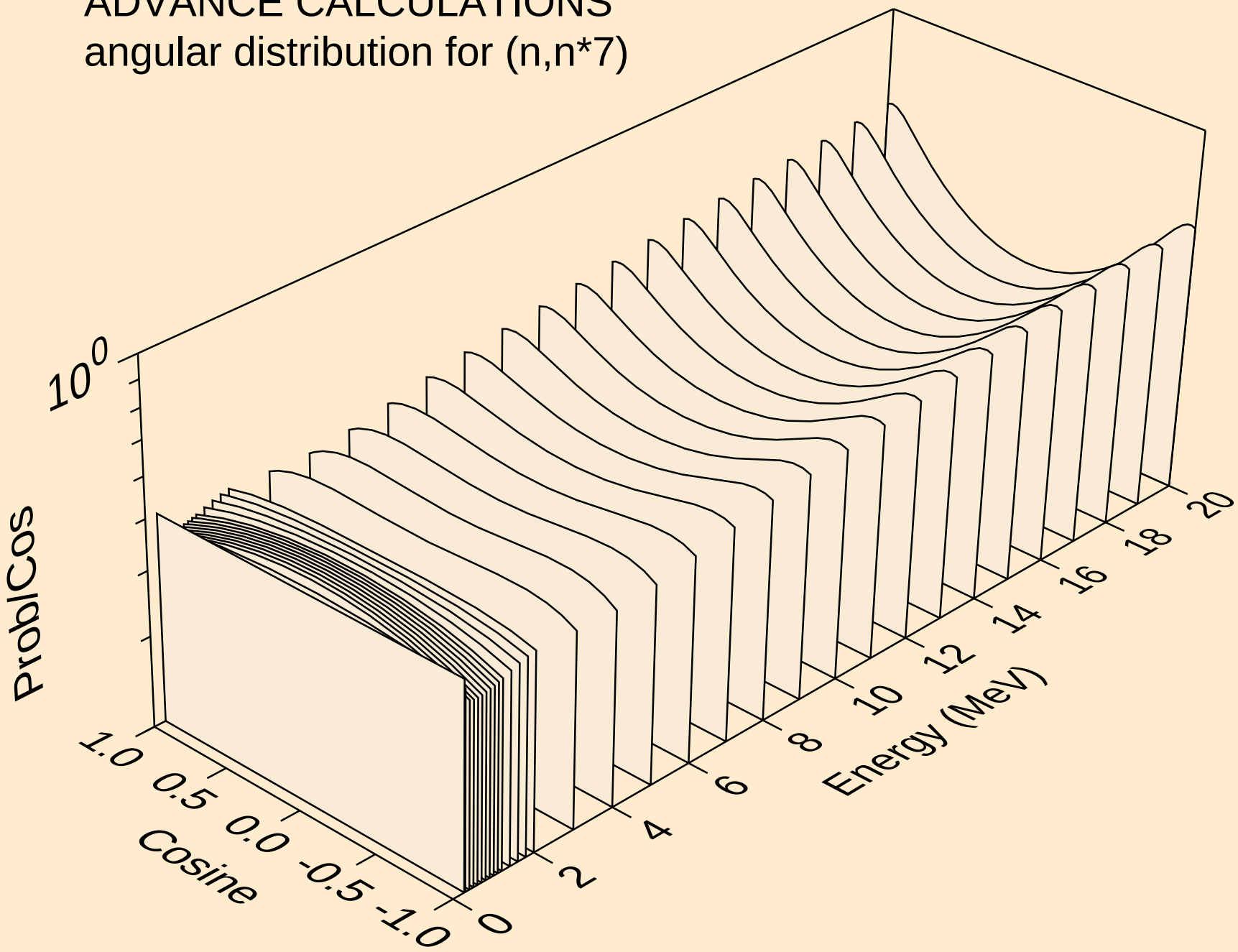
ADVANCE CALCULATIONS
angular distribution for (n,n*5)



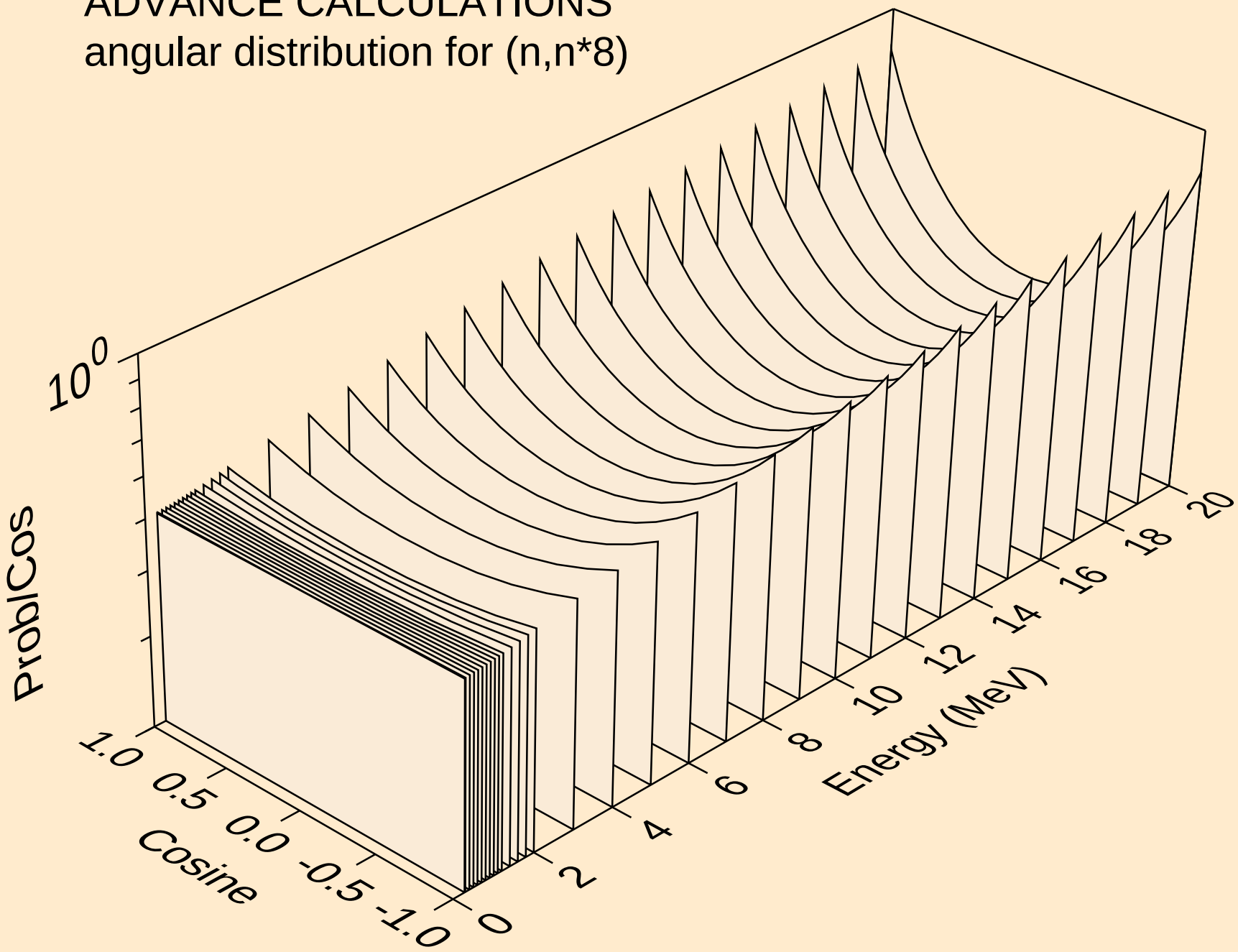
ADVANCE CALCULATIONS
angular distribution for (n,n*6)



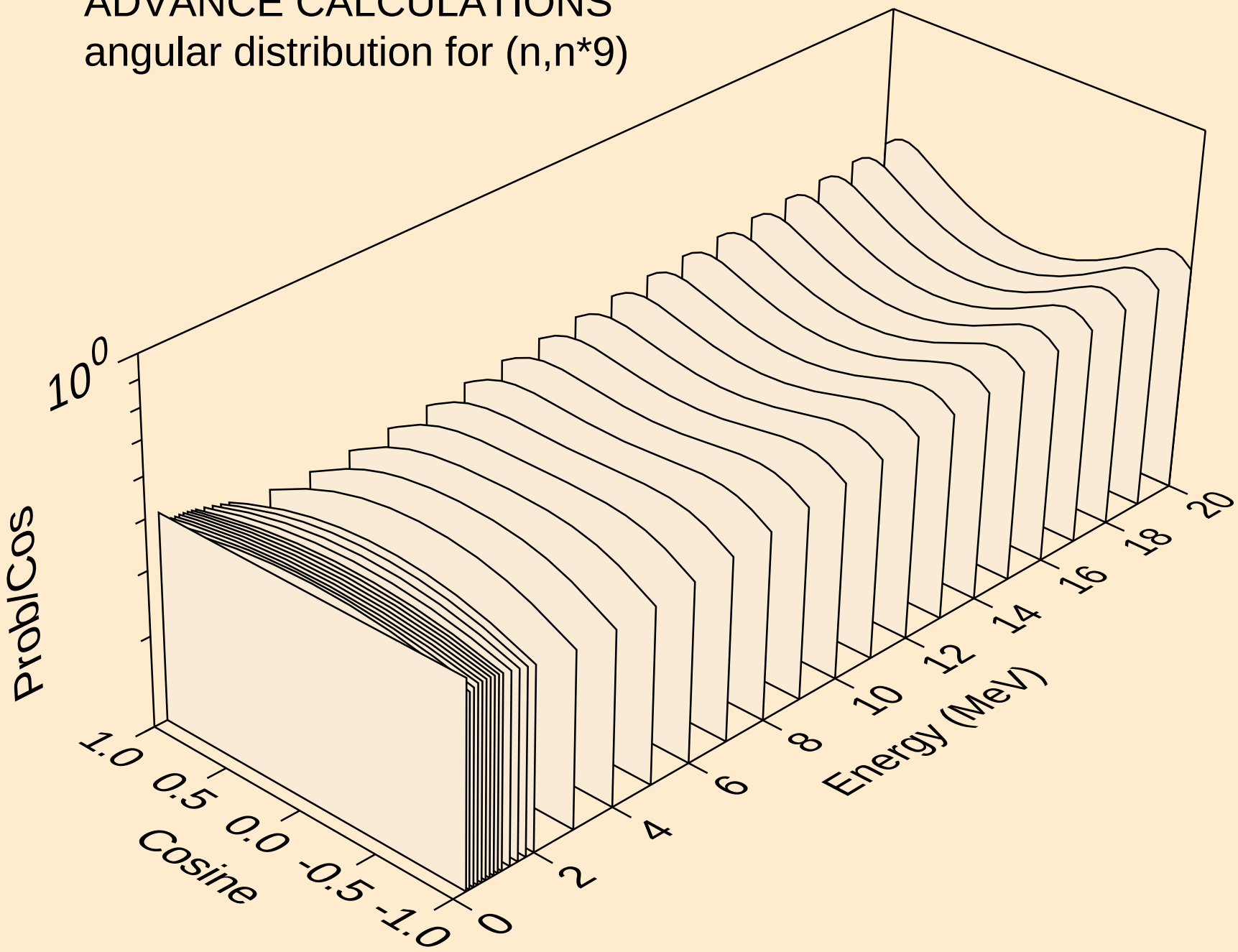
ADVANCE CALCULATIONS
angular distribution for (n,n*7)



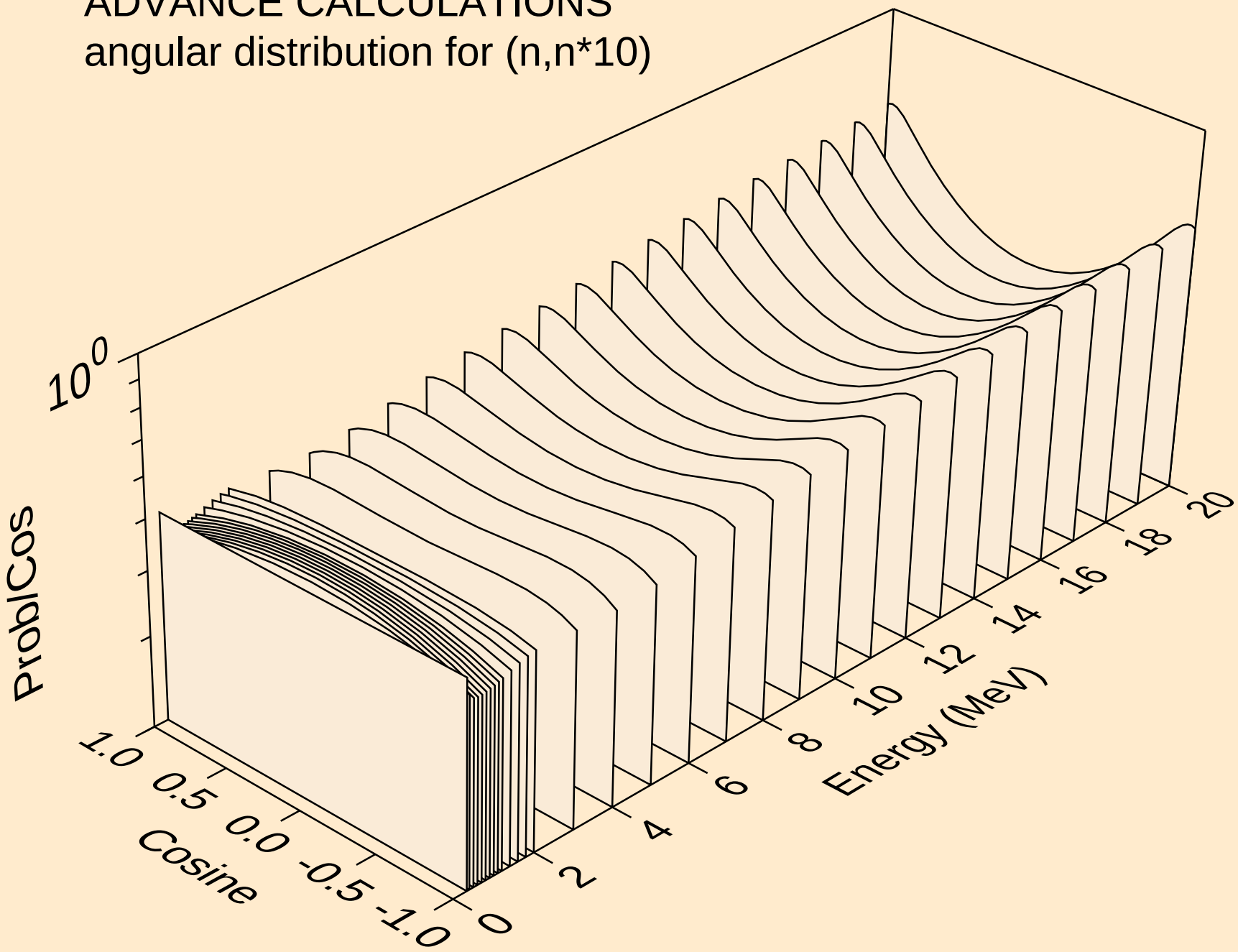
ADVANCE CALCULATIONS
angular distribution for (n,n*8)



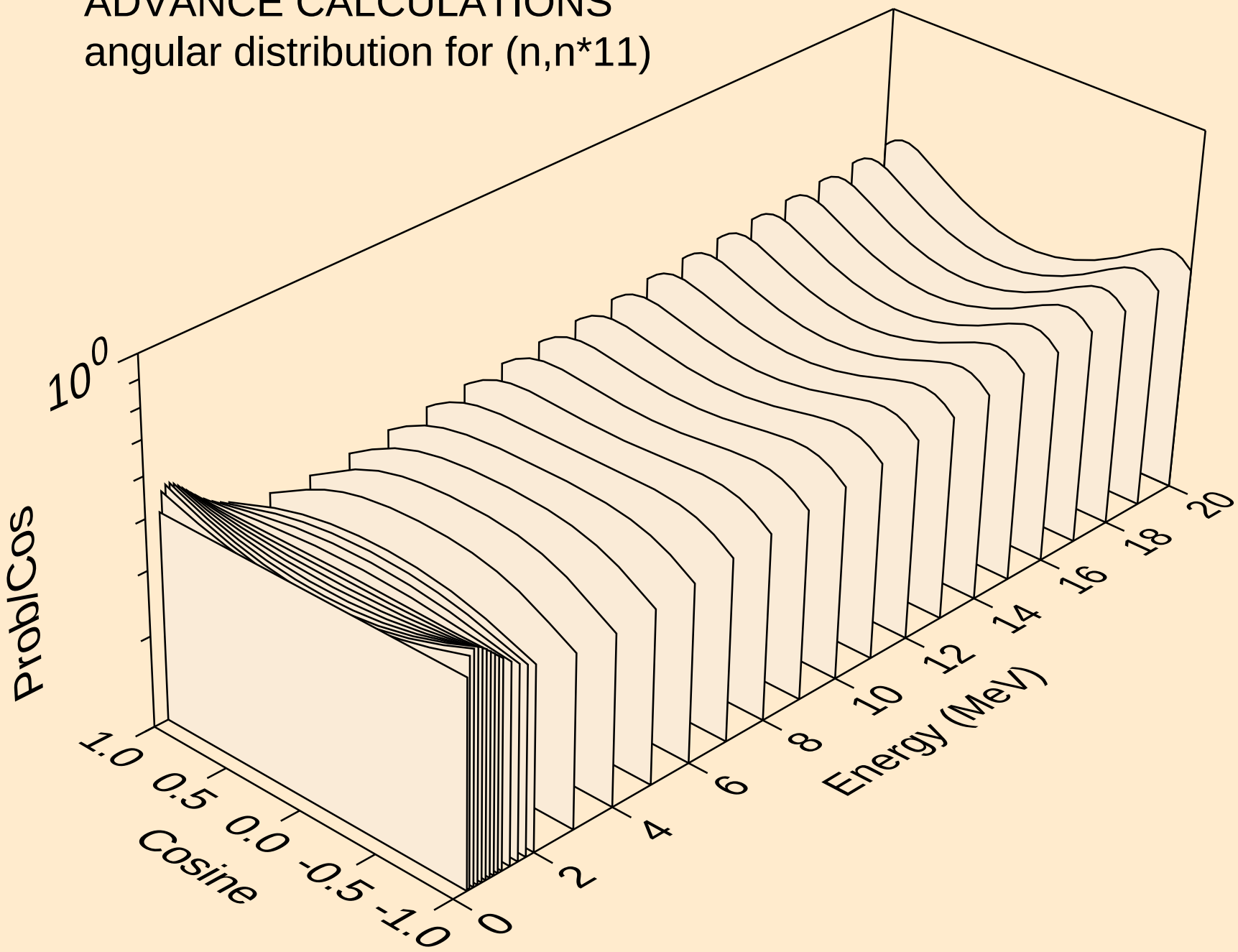
ADVANCE CALCULATIONS
angular distribution for (n,n*9)



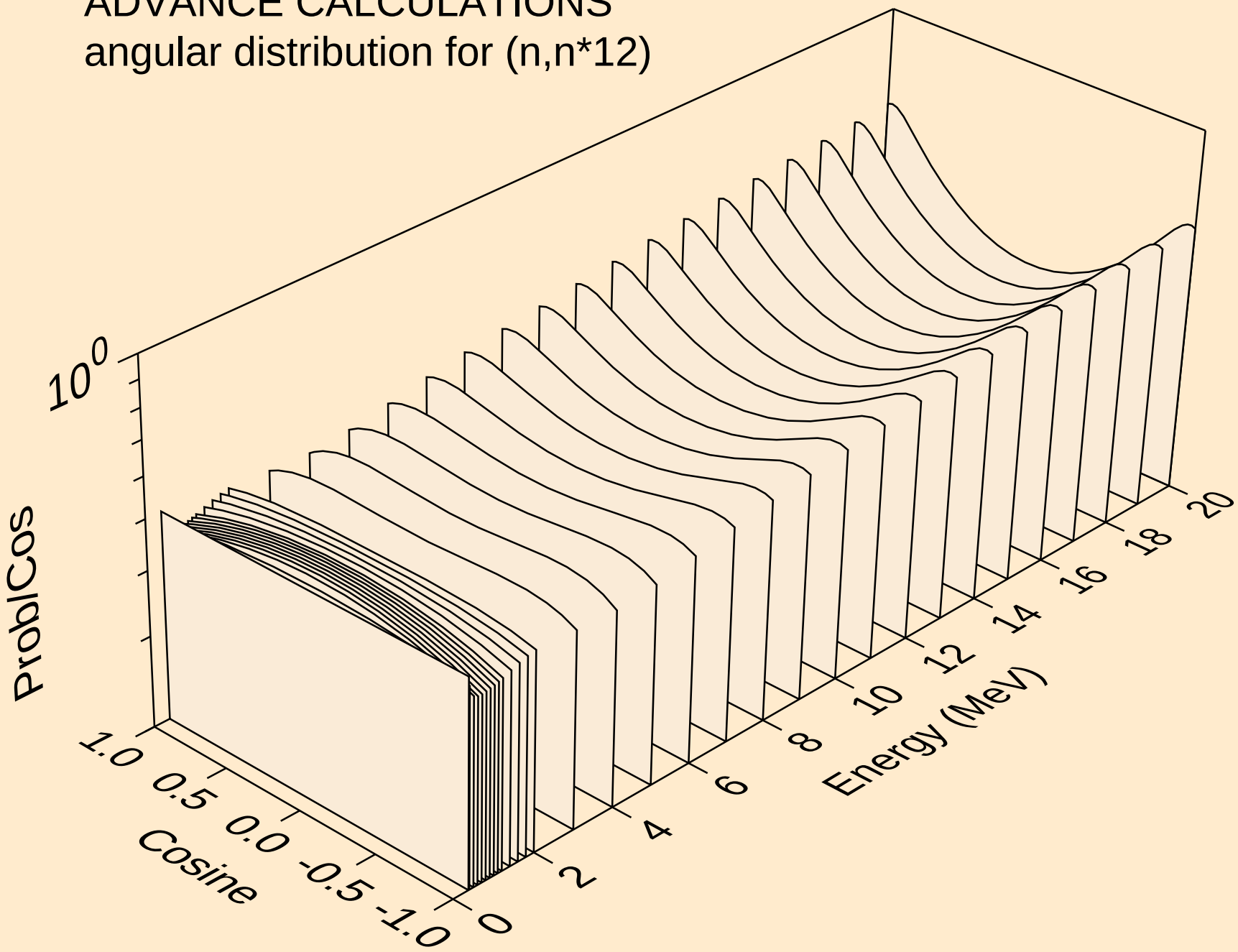
ADVANCE CALCULATIONS
angular distribution for (n,n*10)



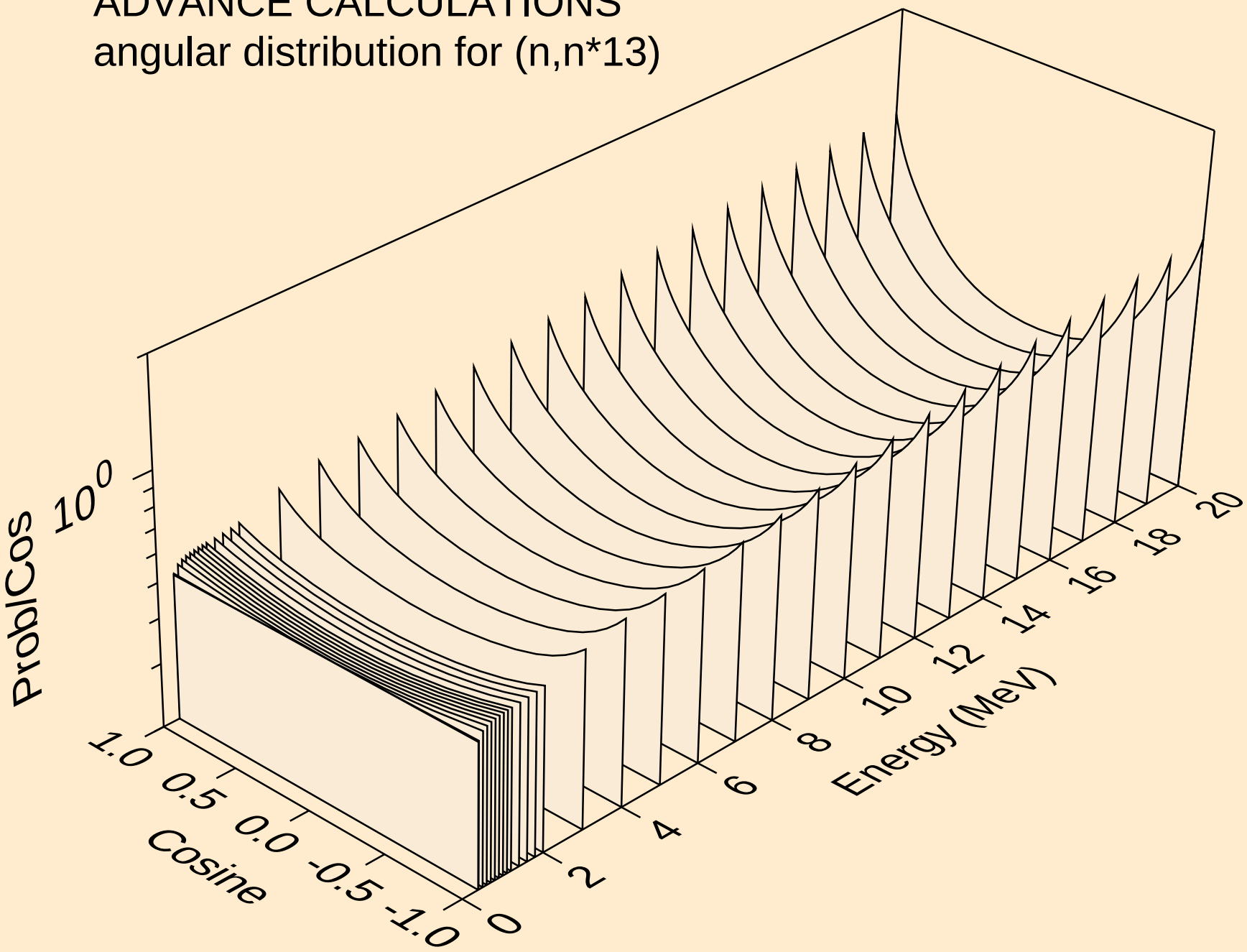
ADVANCE CALCULATIONS
angular distribution for (n,n*11)



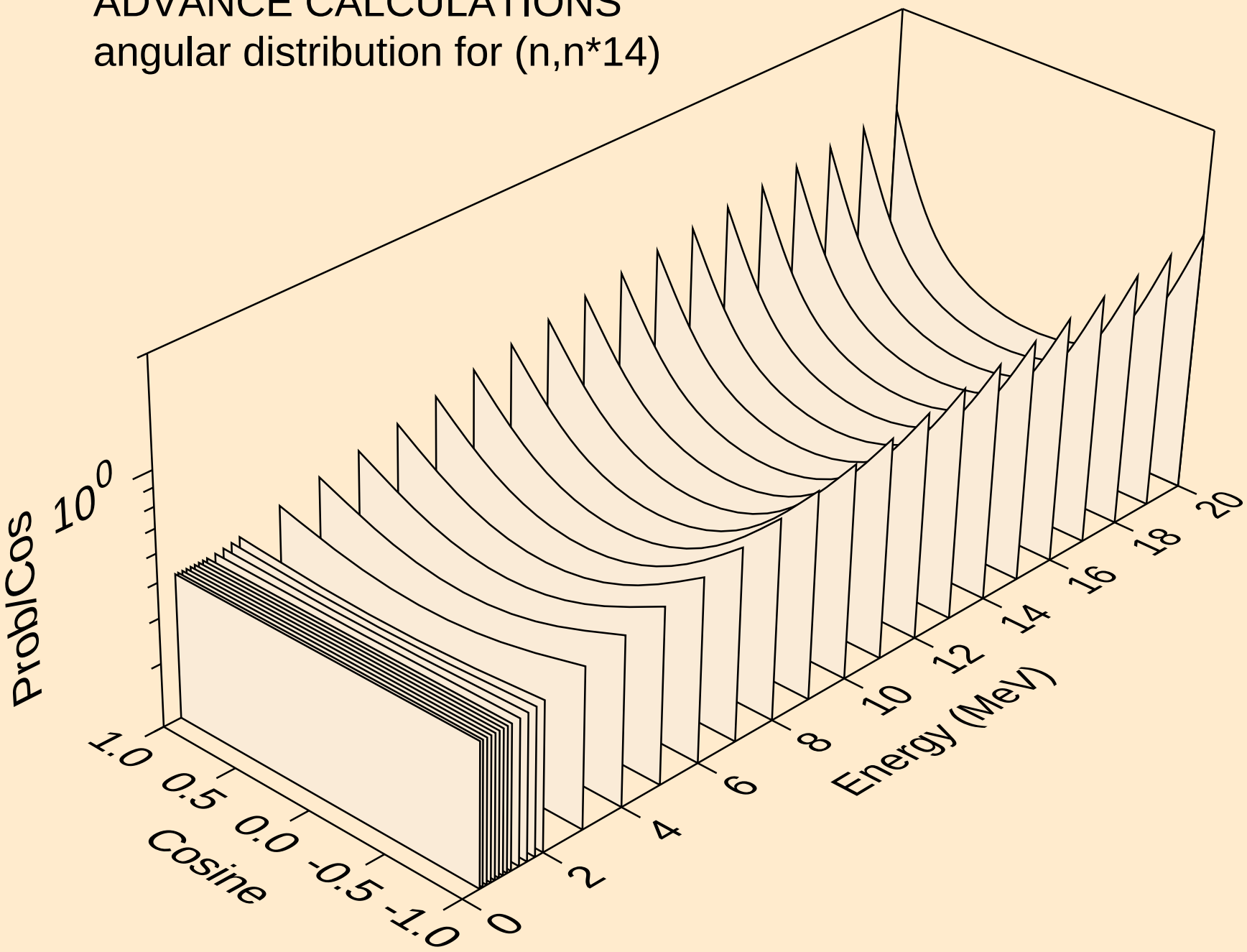
ADVANCE CALCULATIONS
angular distribution for (n,n*12)



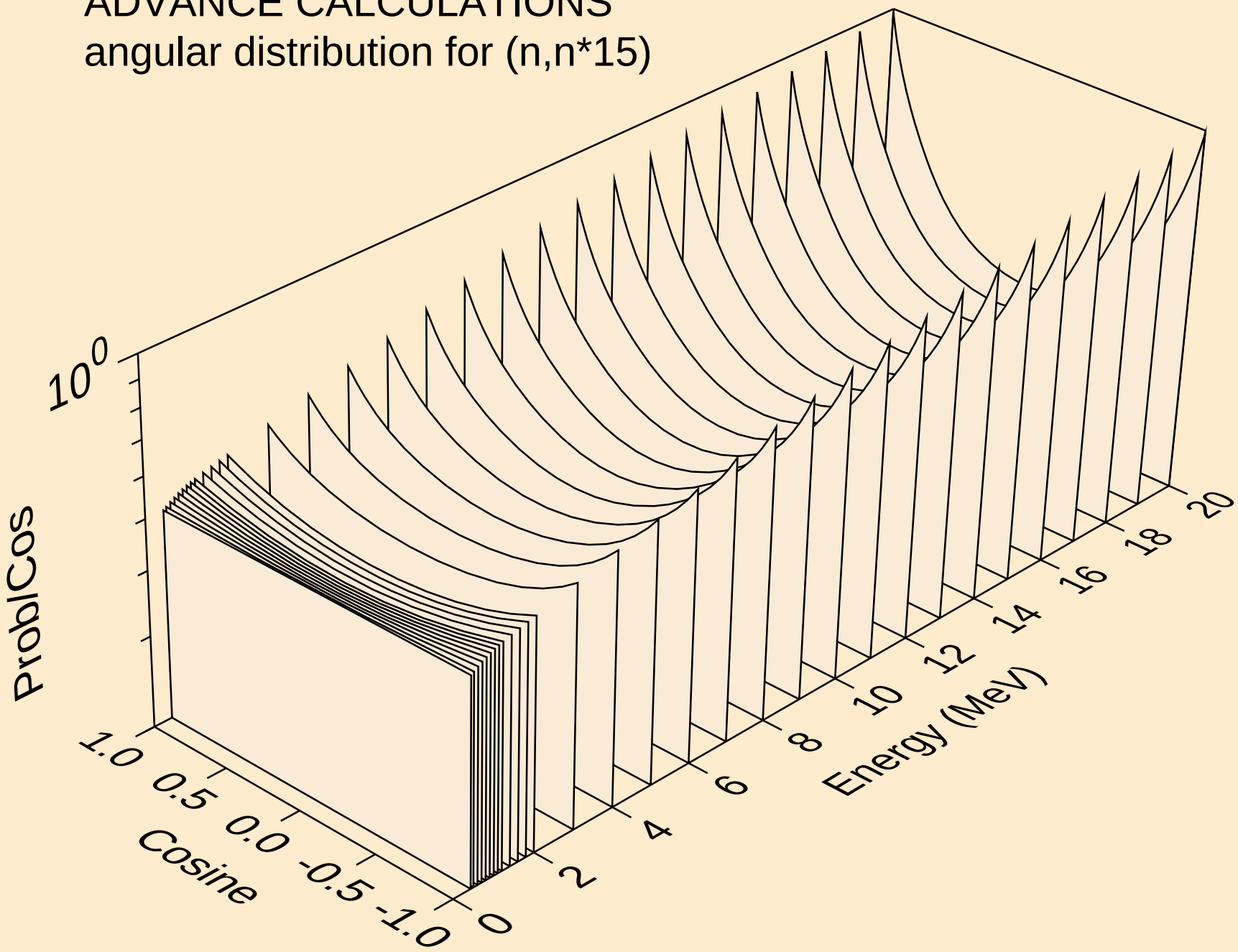
ADVANCE CALCULATIONS
angular distribution for (n,n*13)



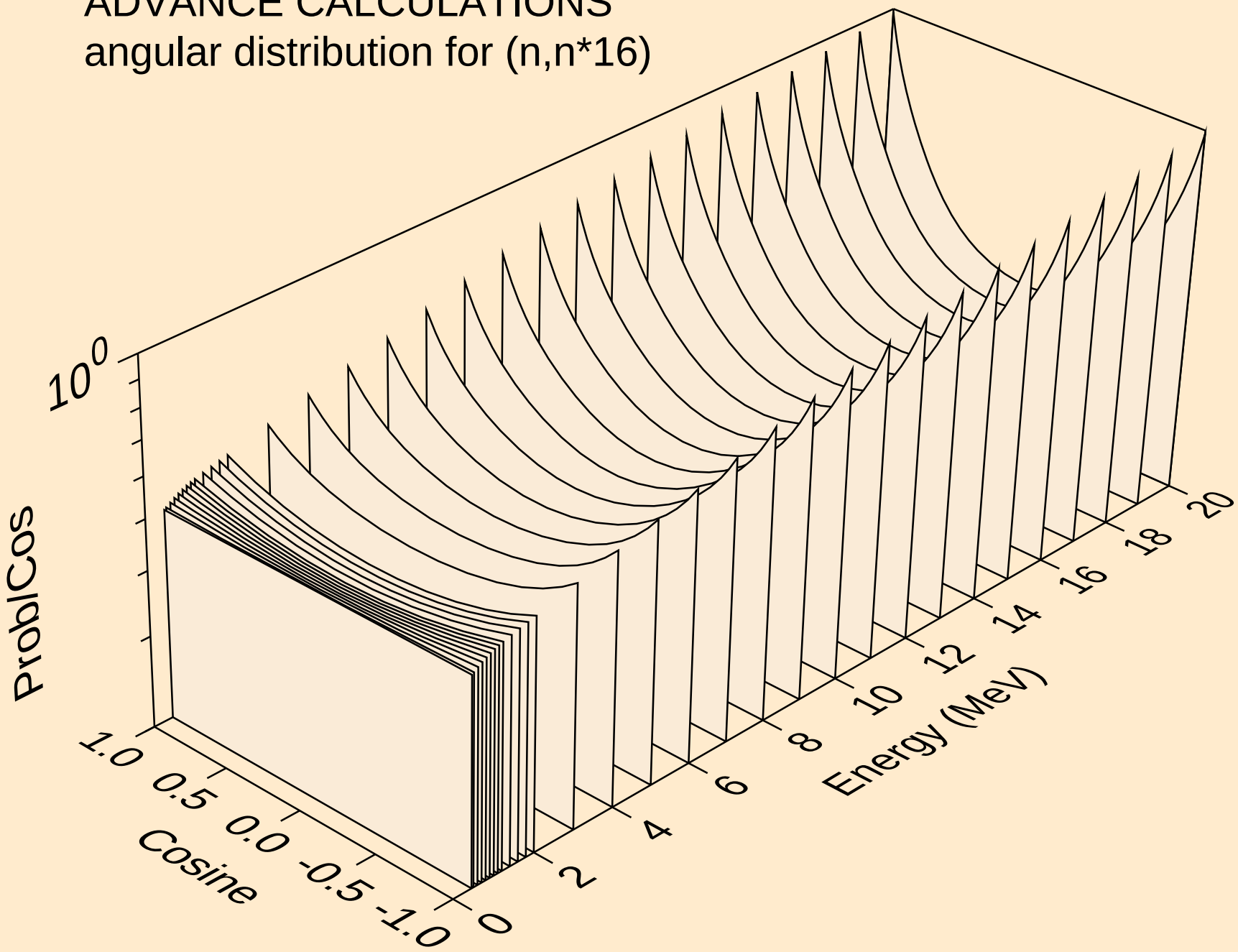
ADVANCE CALCULATIONS
angular distribution for (n,n*14)



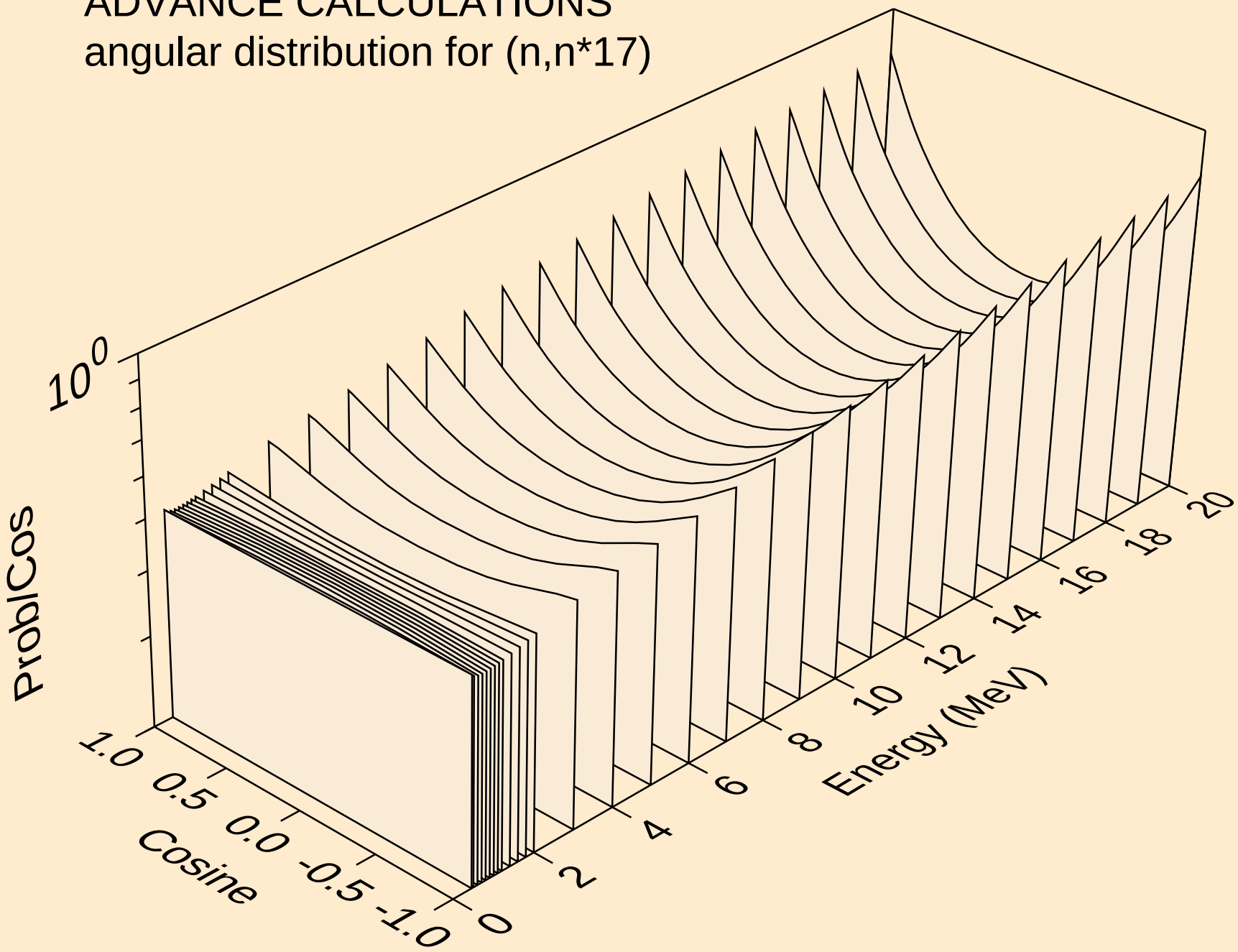
ADVANCE CALCULATIONS
angular distribution for (n,n*15)



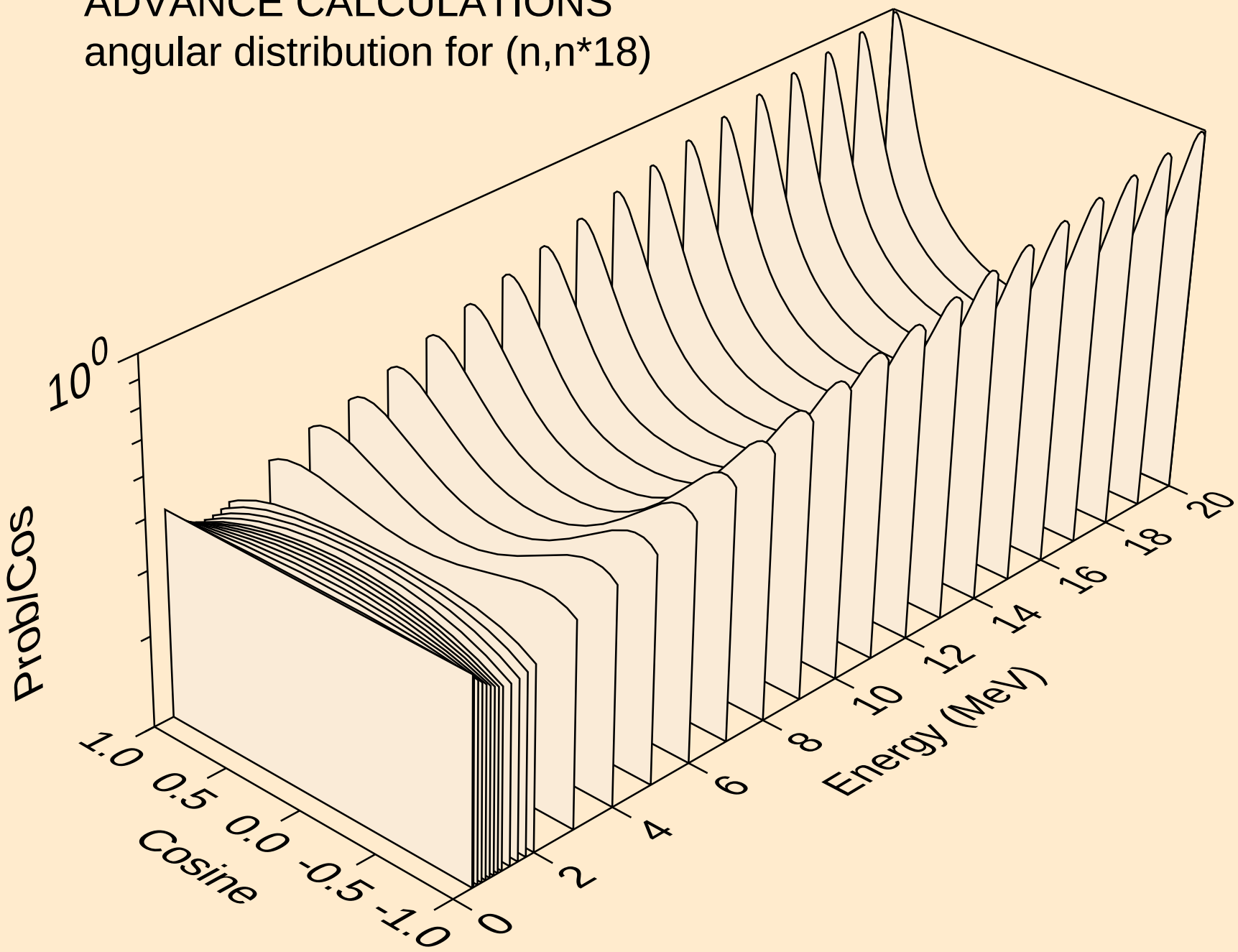
ADVANCE CALCULATIONS
angular distribution for (n,n*16)



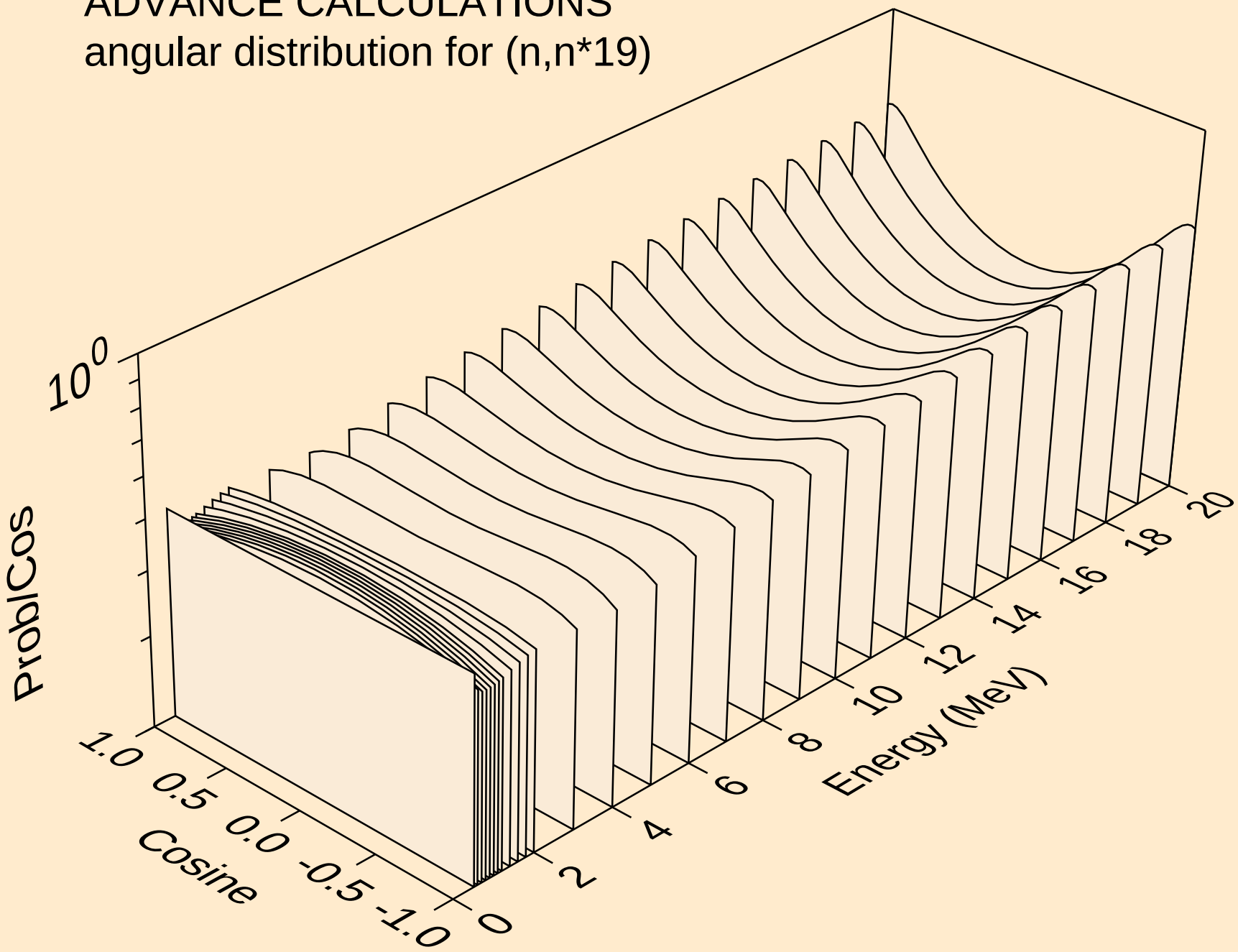
ADVANCE CALCULATIONS
angular distribution for (n,n*17)



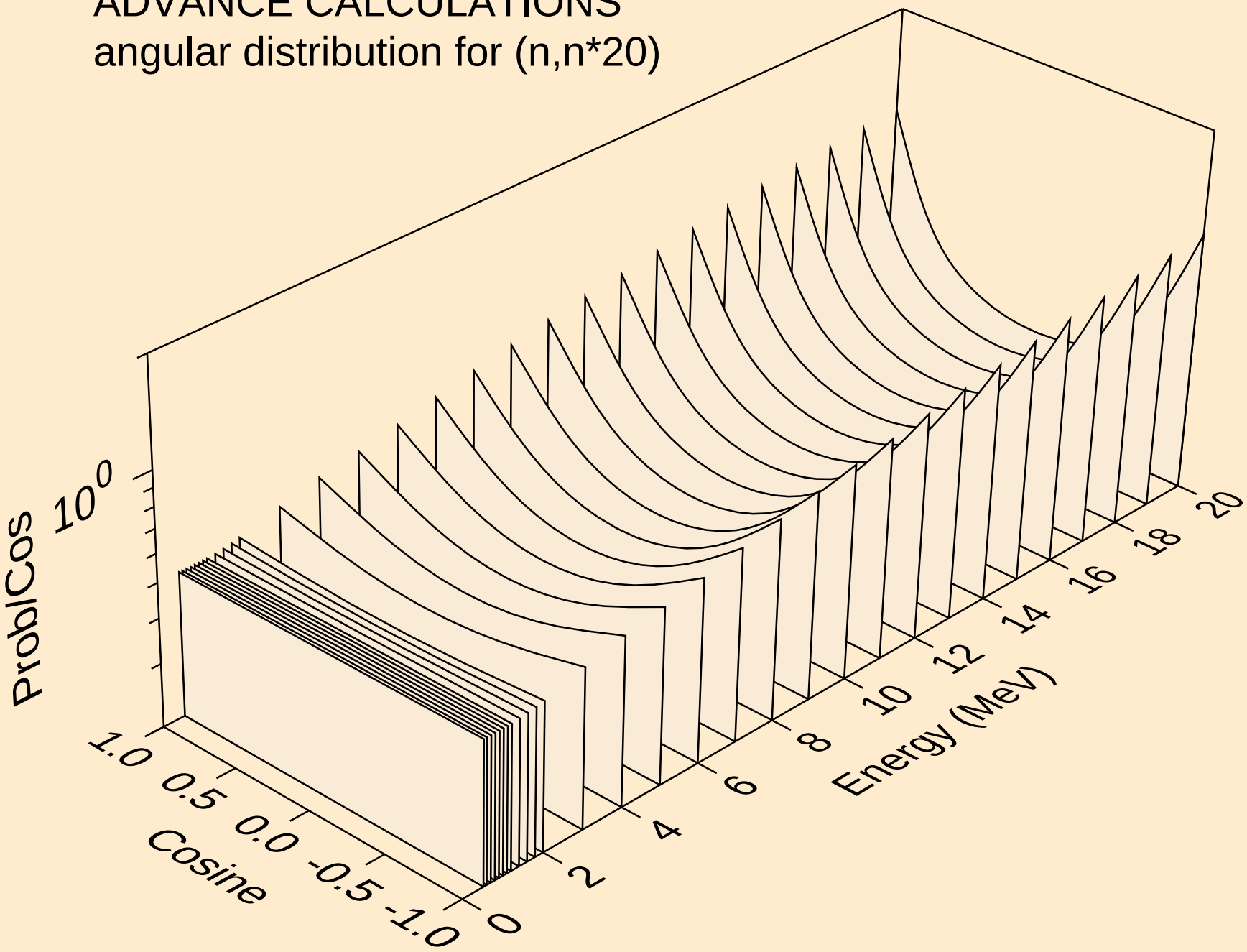
ADVANCE CALCULATIONS
angular distribution for (n,n*18)



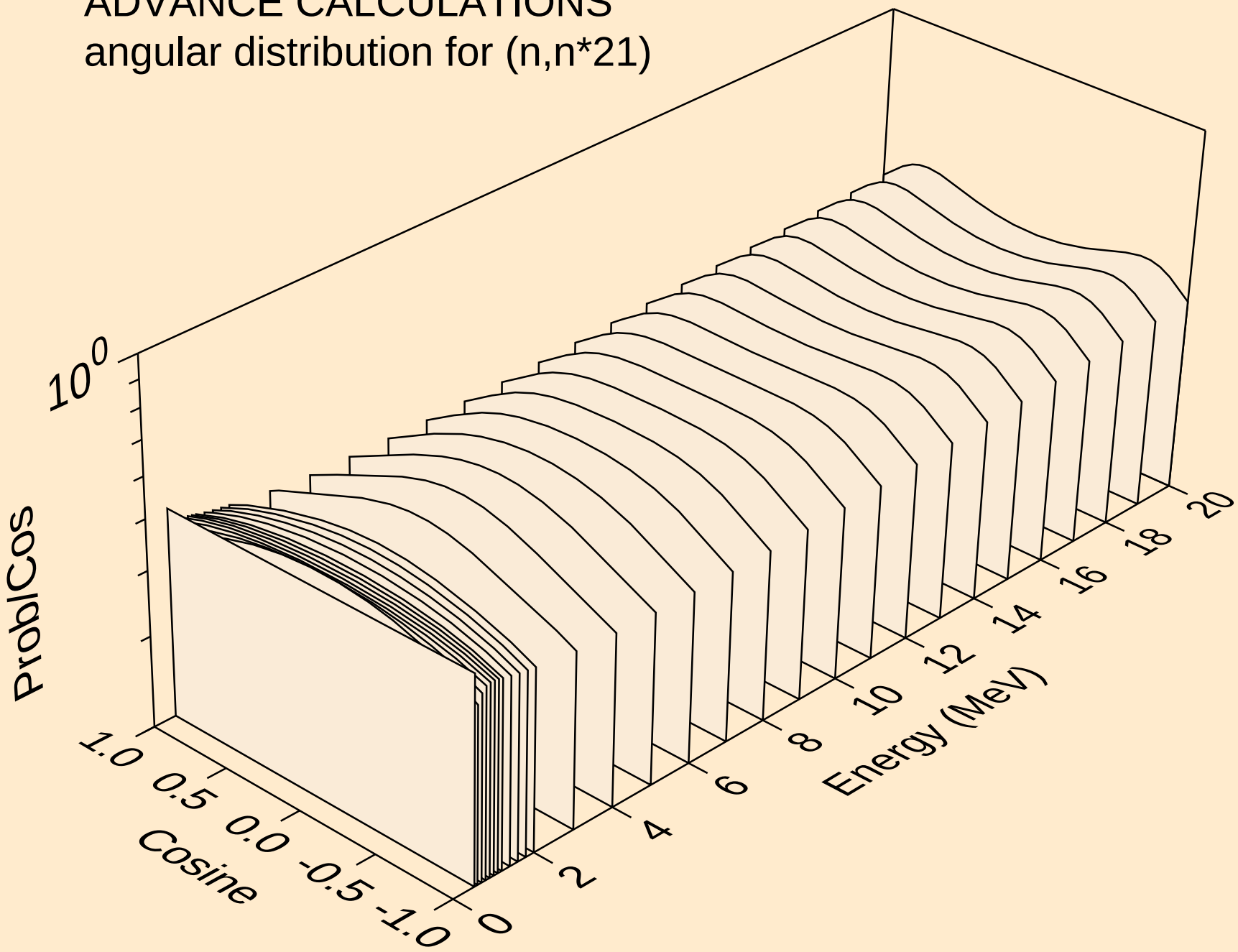
ADVANCE CALCULATIONS
angular distribution for (n,n*19)



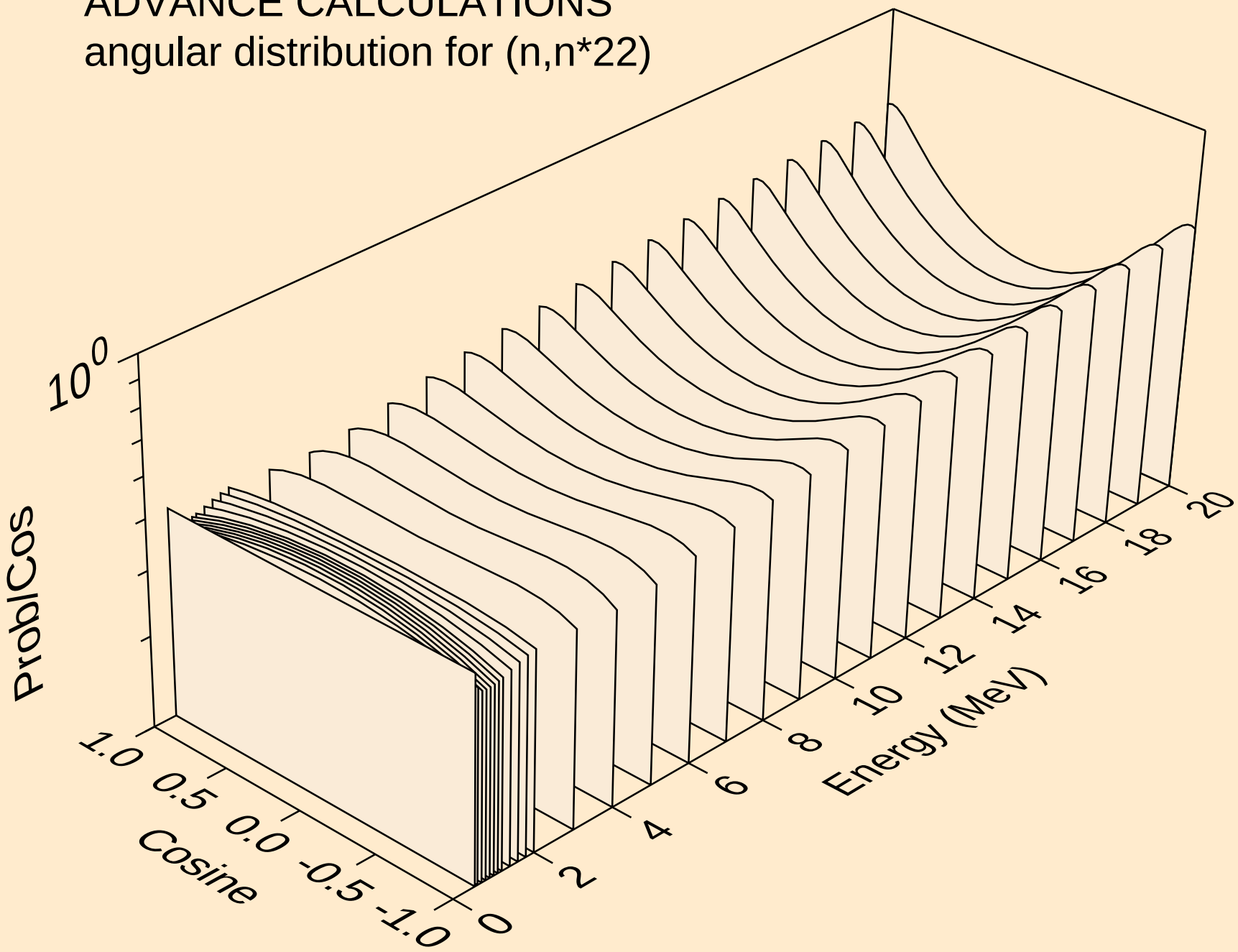
ADVANCE CALCULATIONS
angular distribution for (n,n*20)



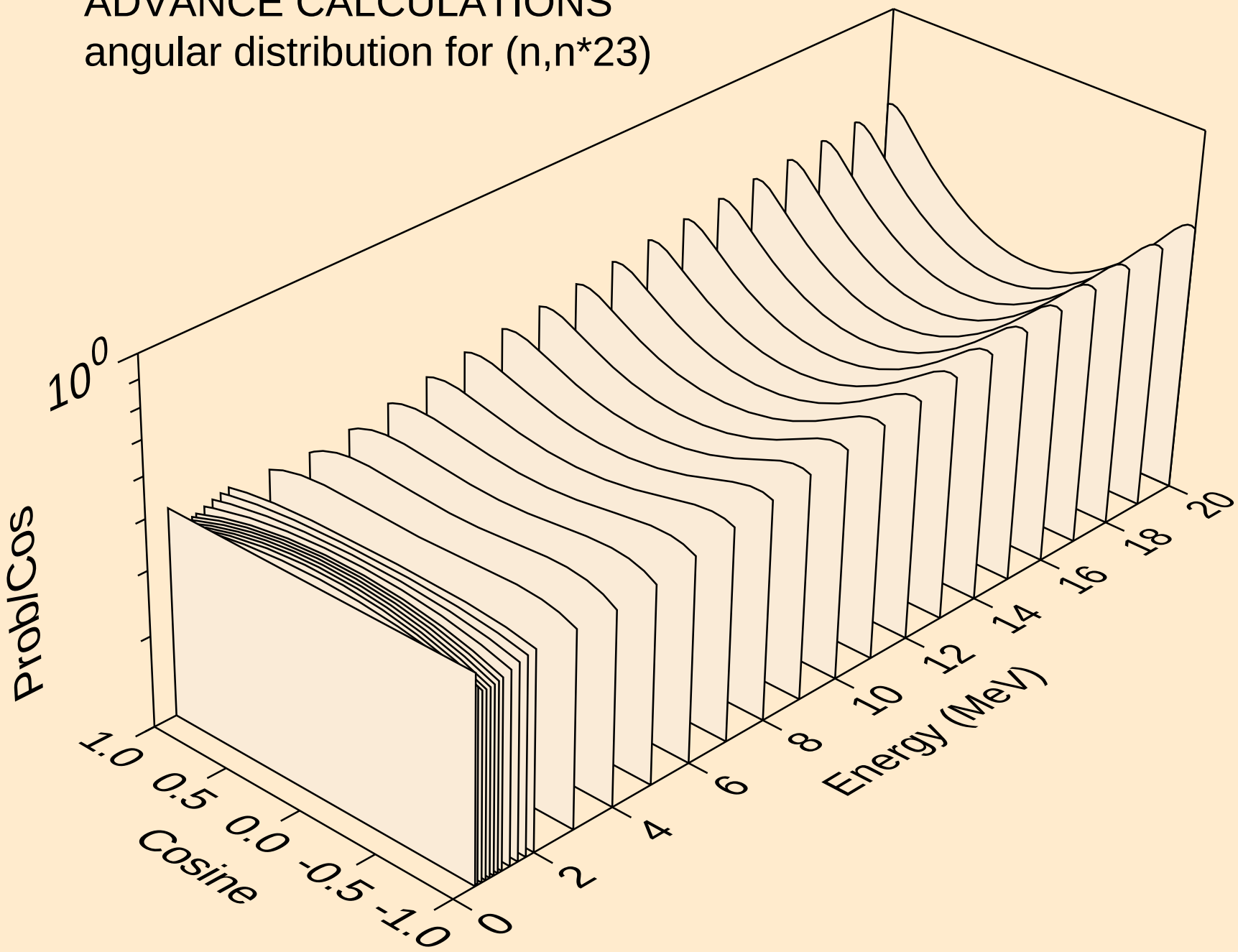
ADVANCE CALCULATIONS
angular distribution for (n,n*21)



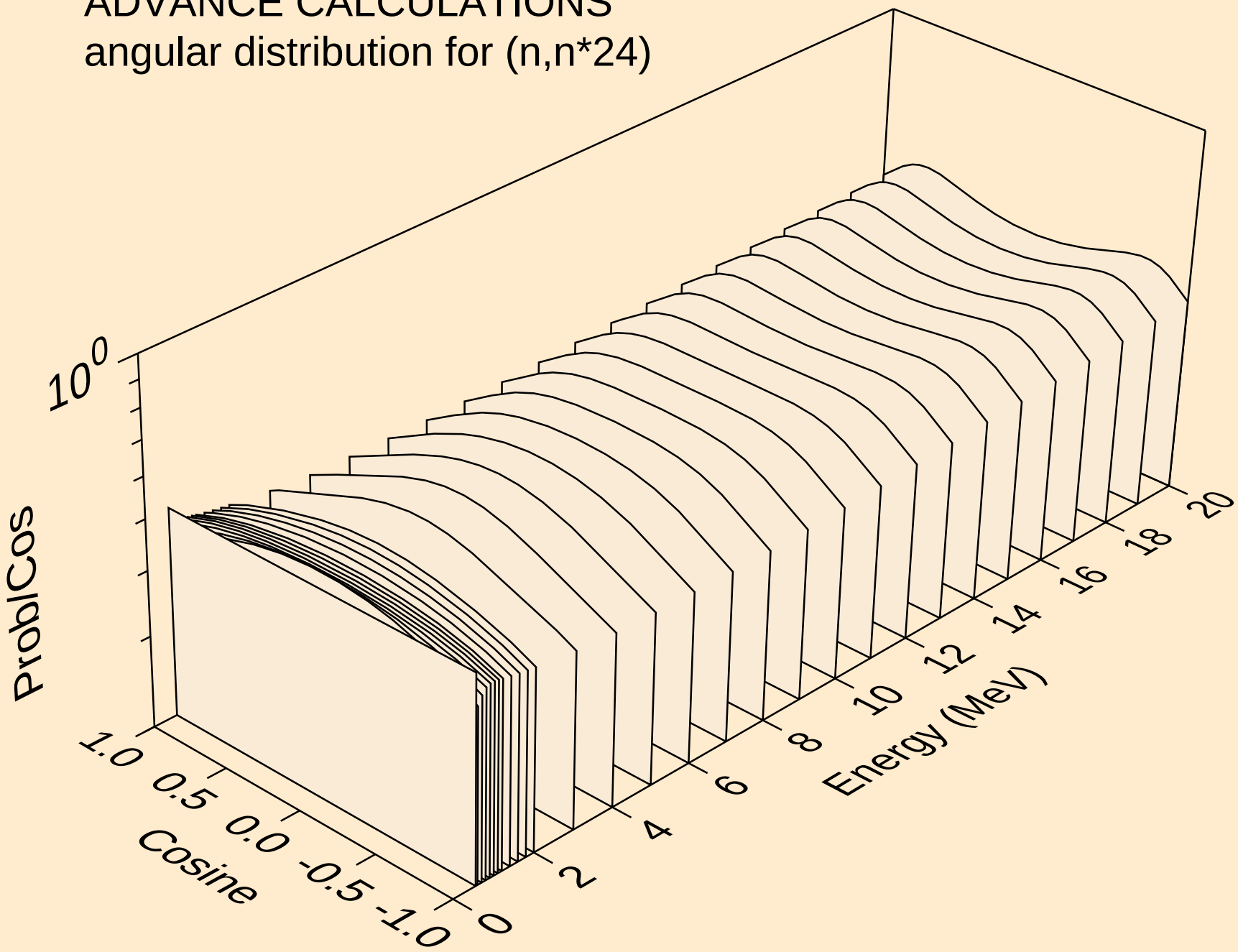
ADVANCE CALCULATIONS
angular distribution for (n,n*22)



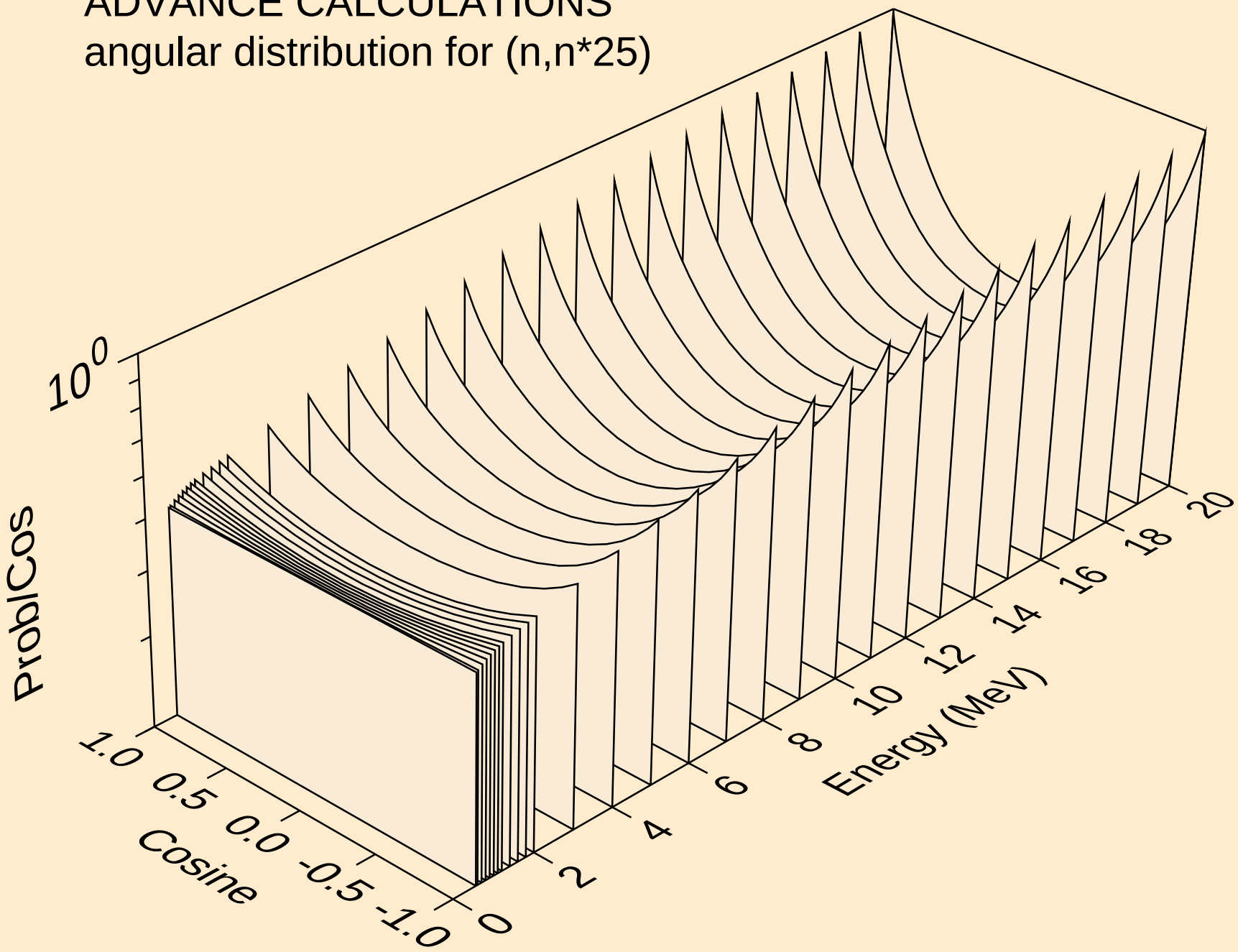
ADVANCE CALCULATIONS
angular distribution for (n,n*23)



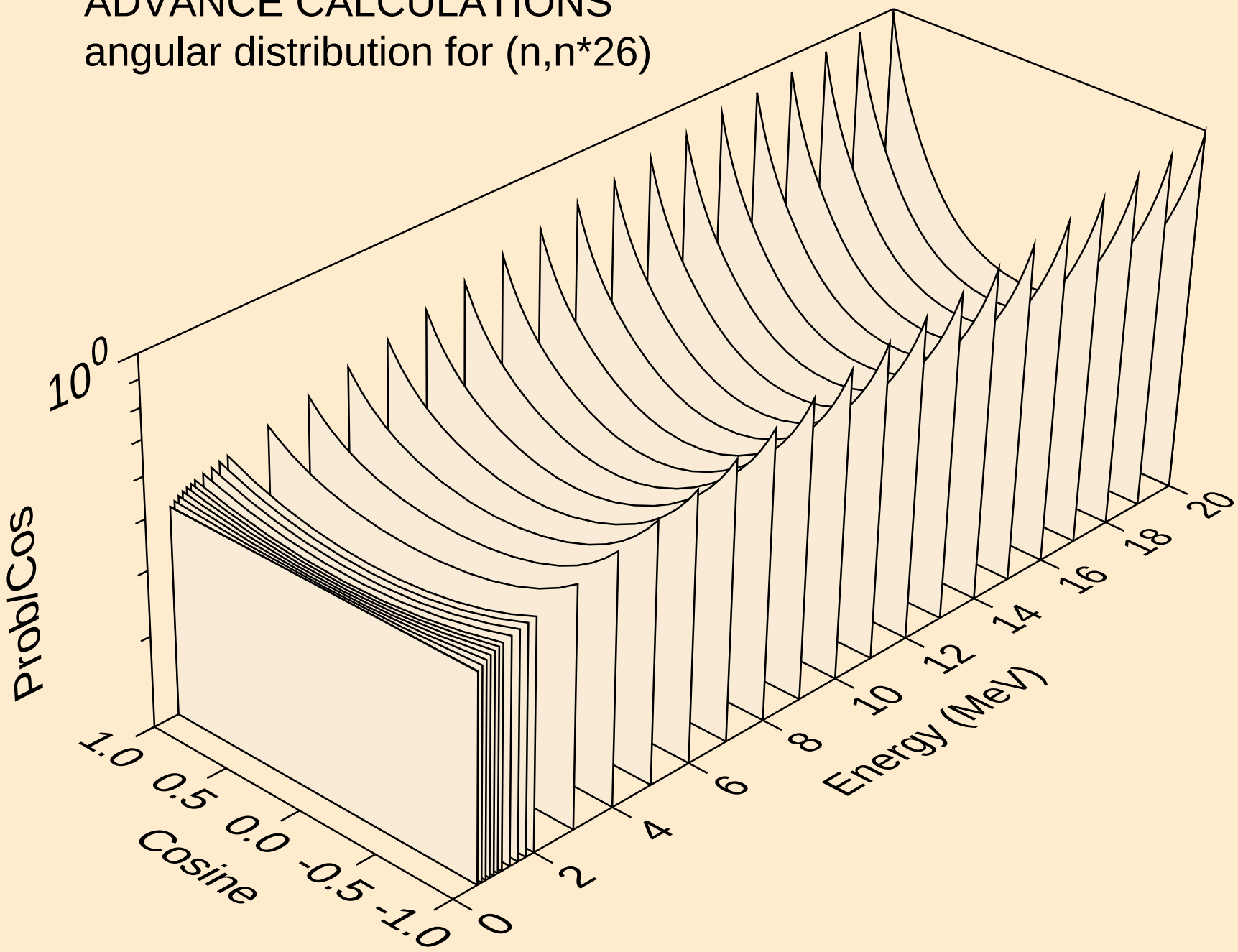
ADVANCE CALCULATIONS
angular distribution for (n,n*24)



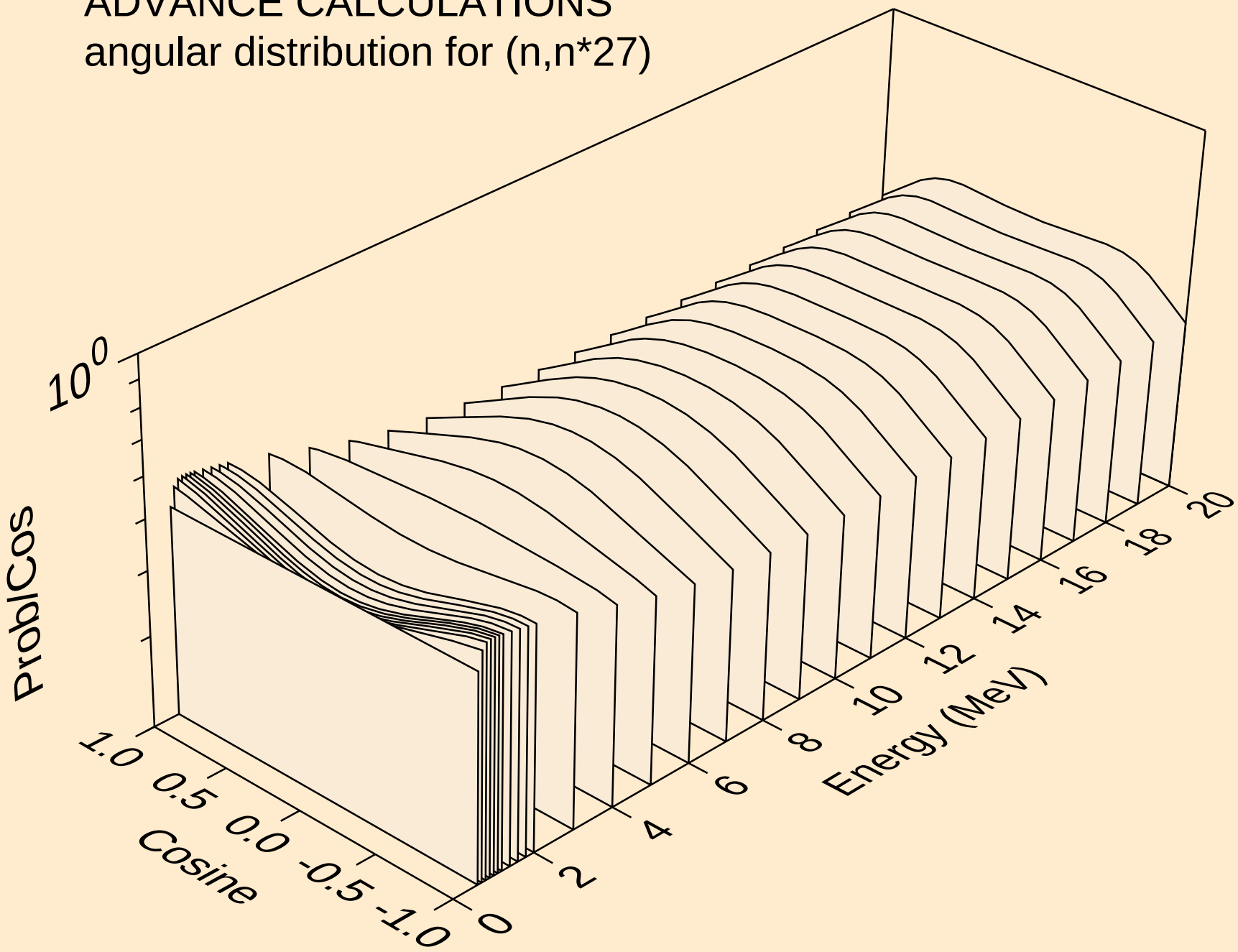
ADVANCE CALCULATIONS
angular distribution for (n,n*25)



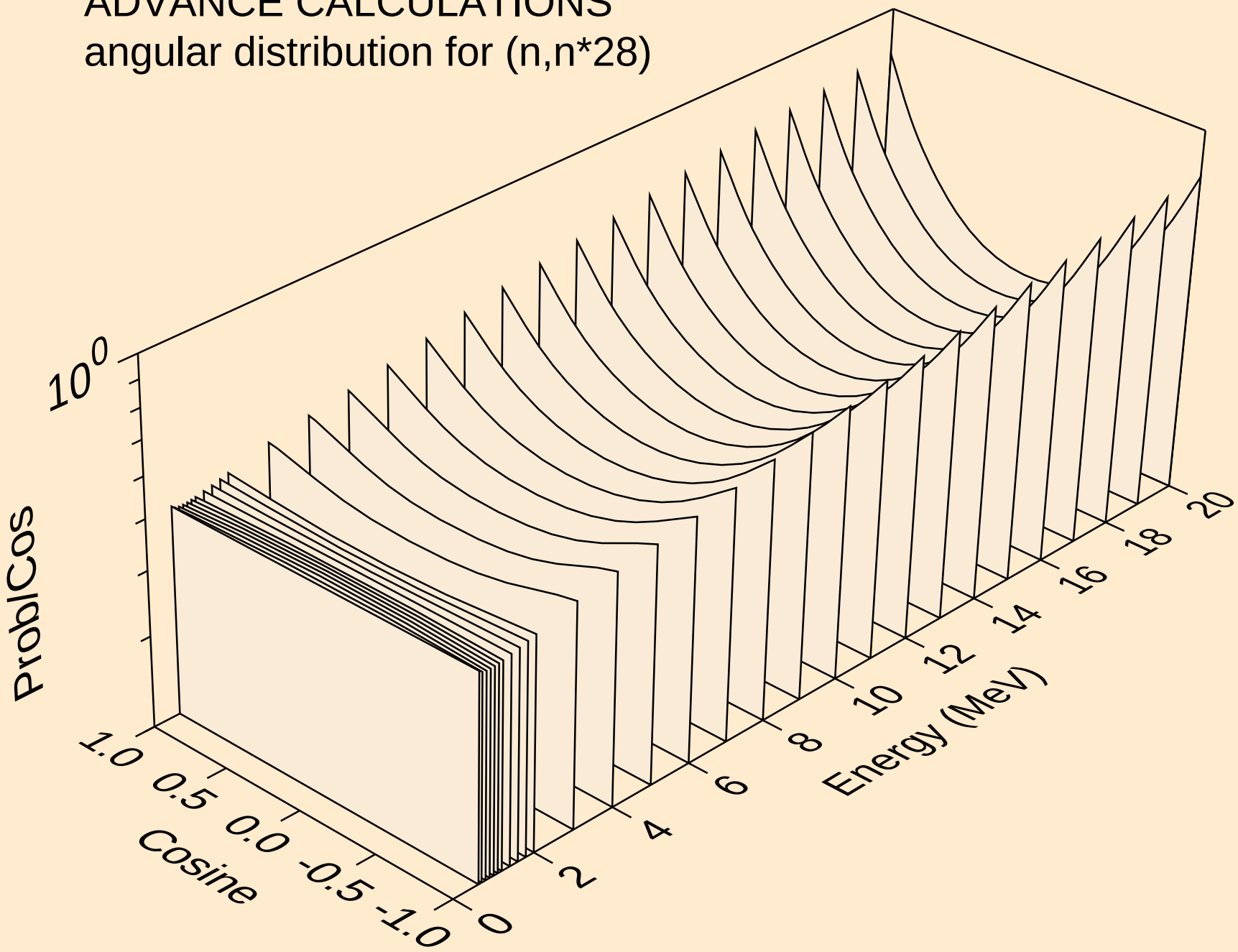
ADVANCE CALCULATIONS
angular distribution for (n,n*26)



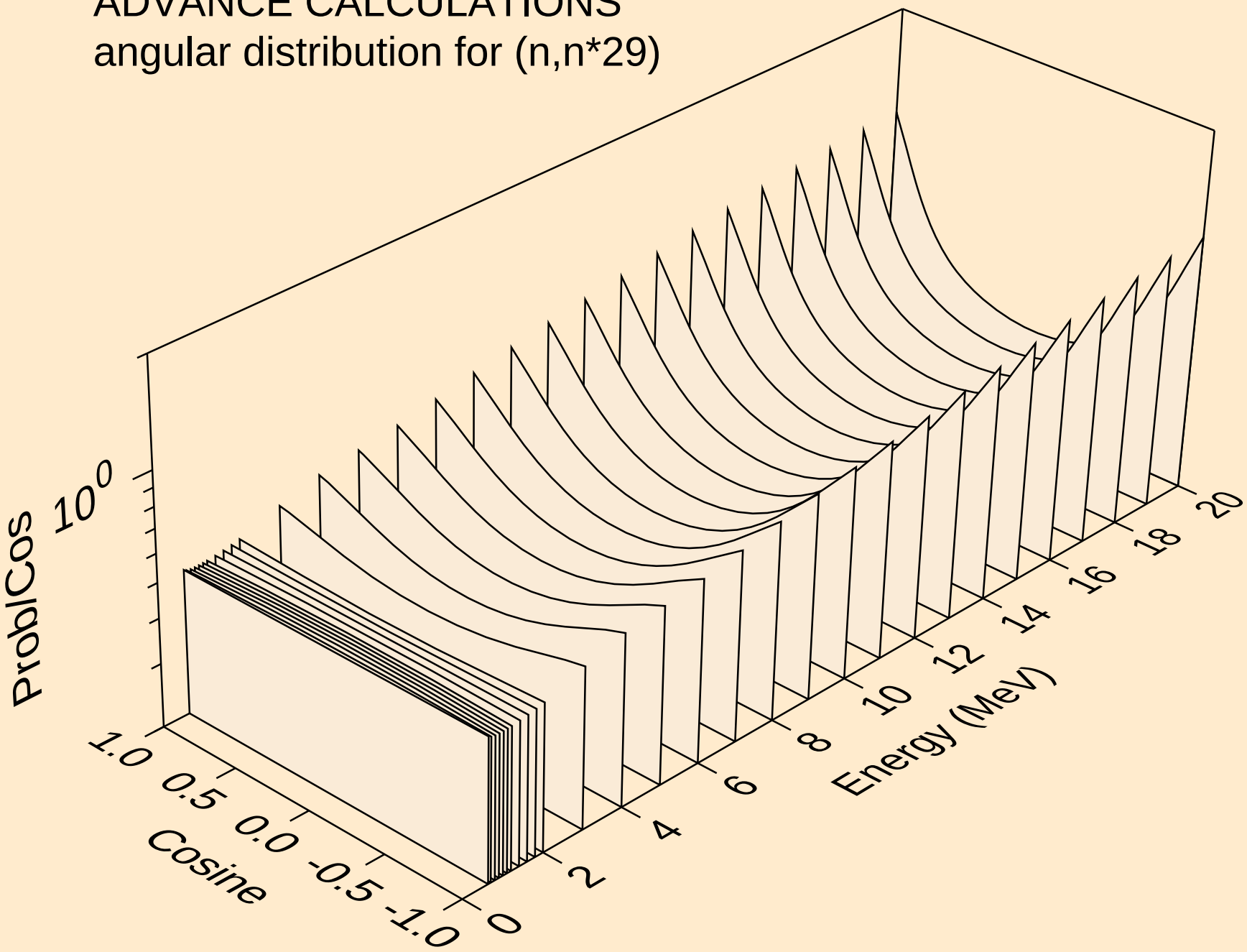
ADVANCE CALCULATIONS
angular distribution for (n,n*27)



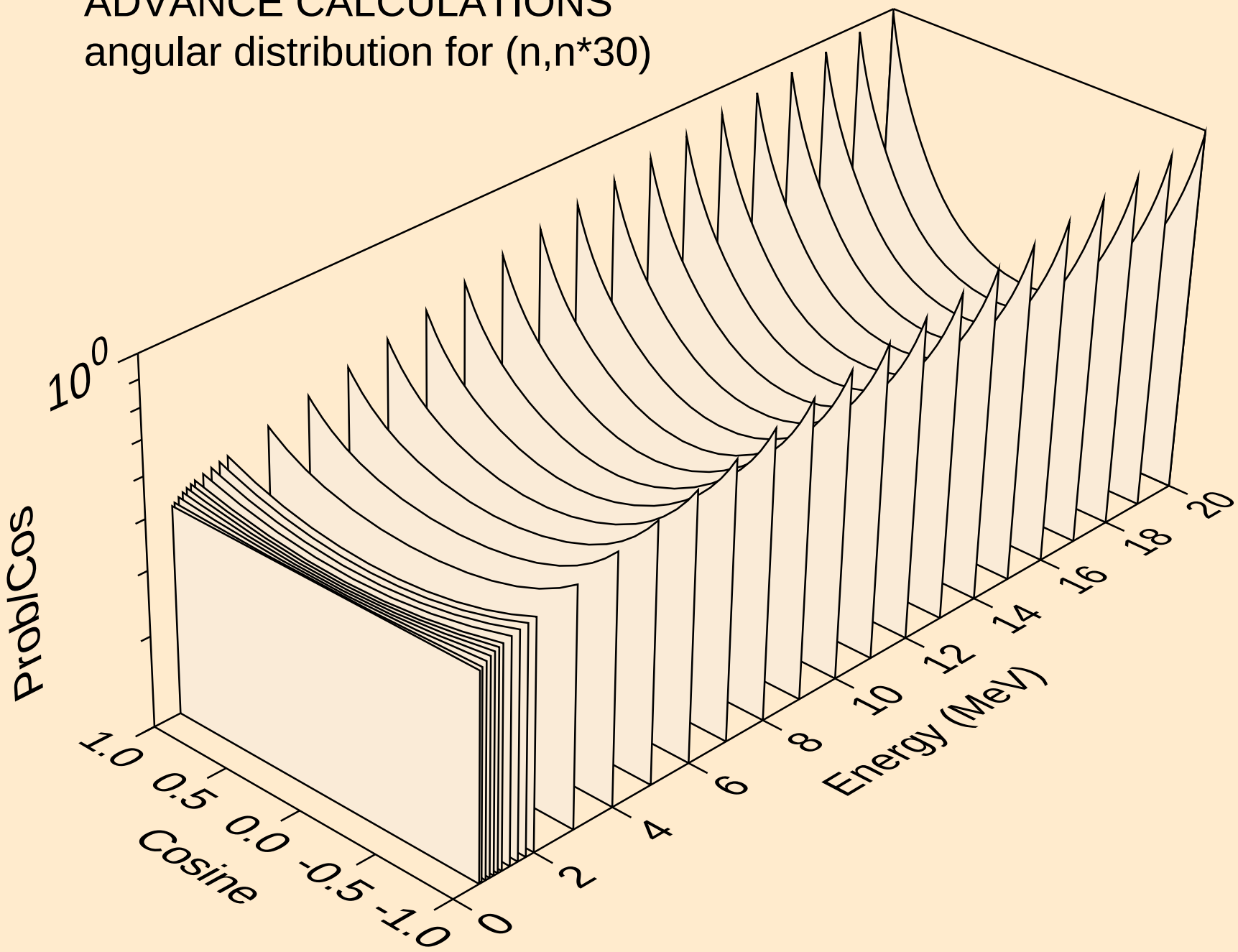
ADVANCE CALCULATIONS
angular distribution for (n,n*28)



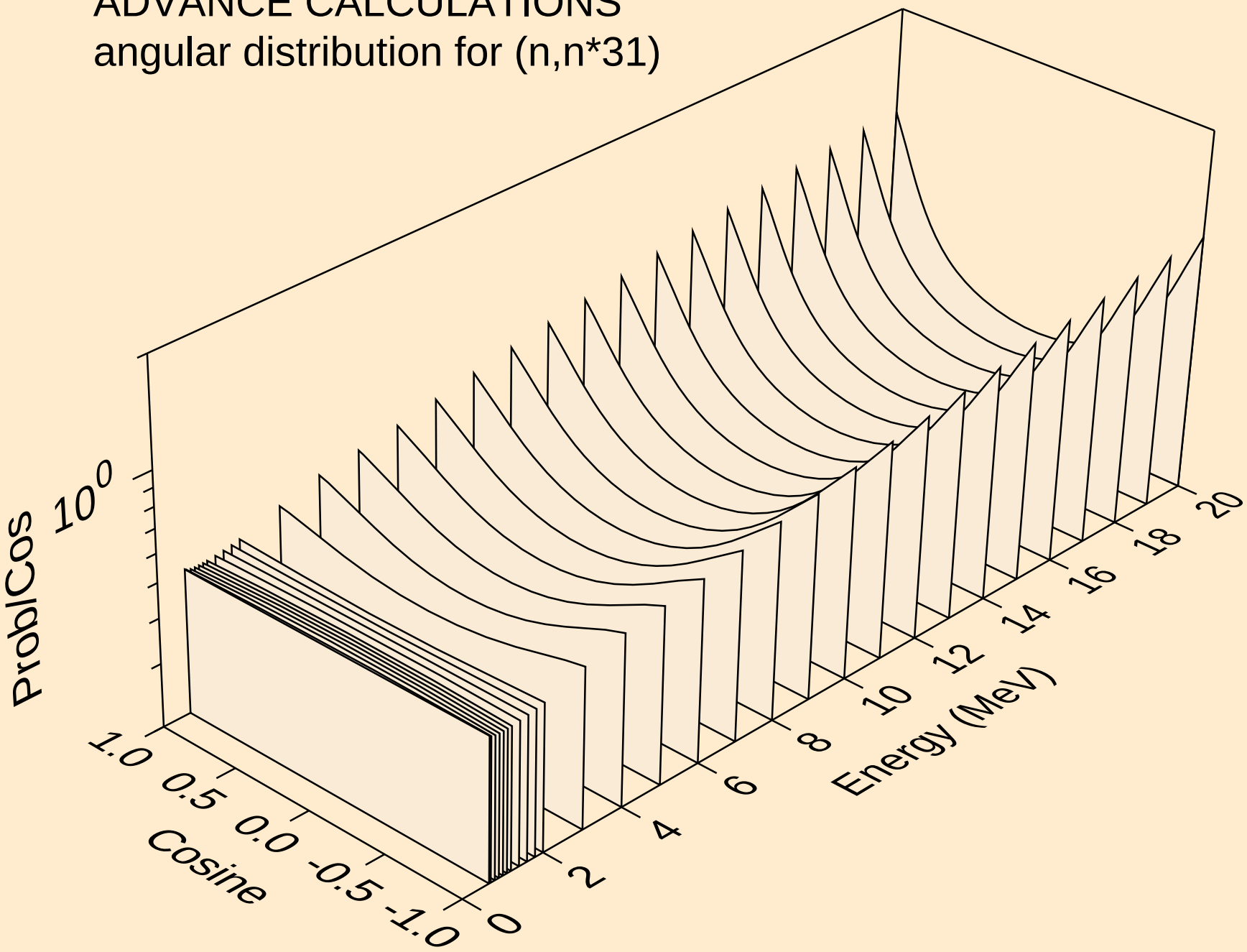
ADVANCE CALCULATIONS
angular distribution for (n,n*29)



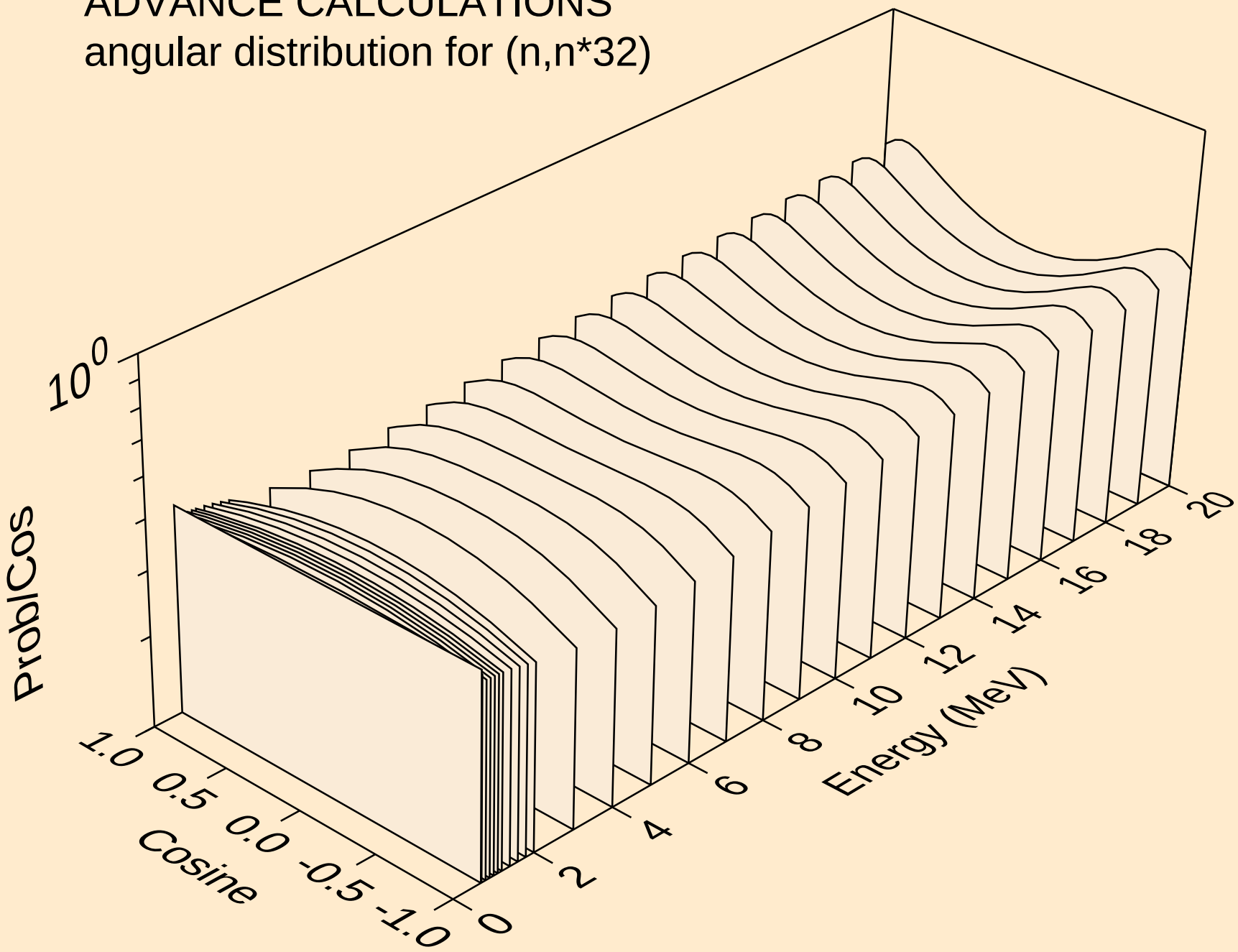
ADVANCE CALCULATIONS
angular distribution for (n,n*30)



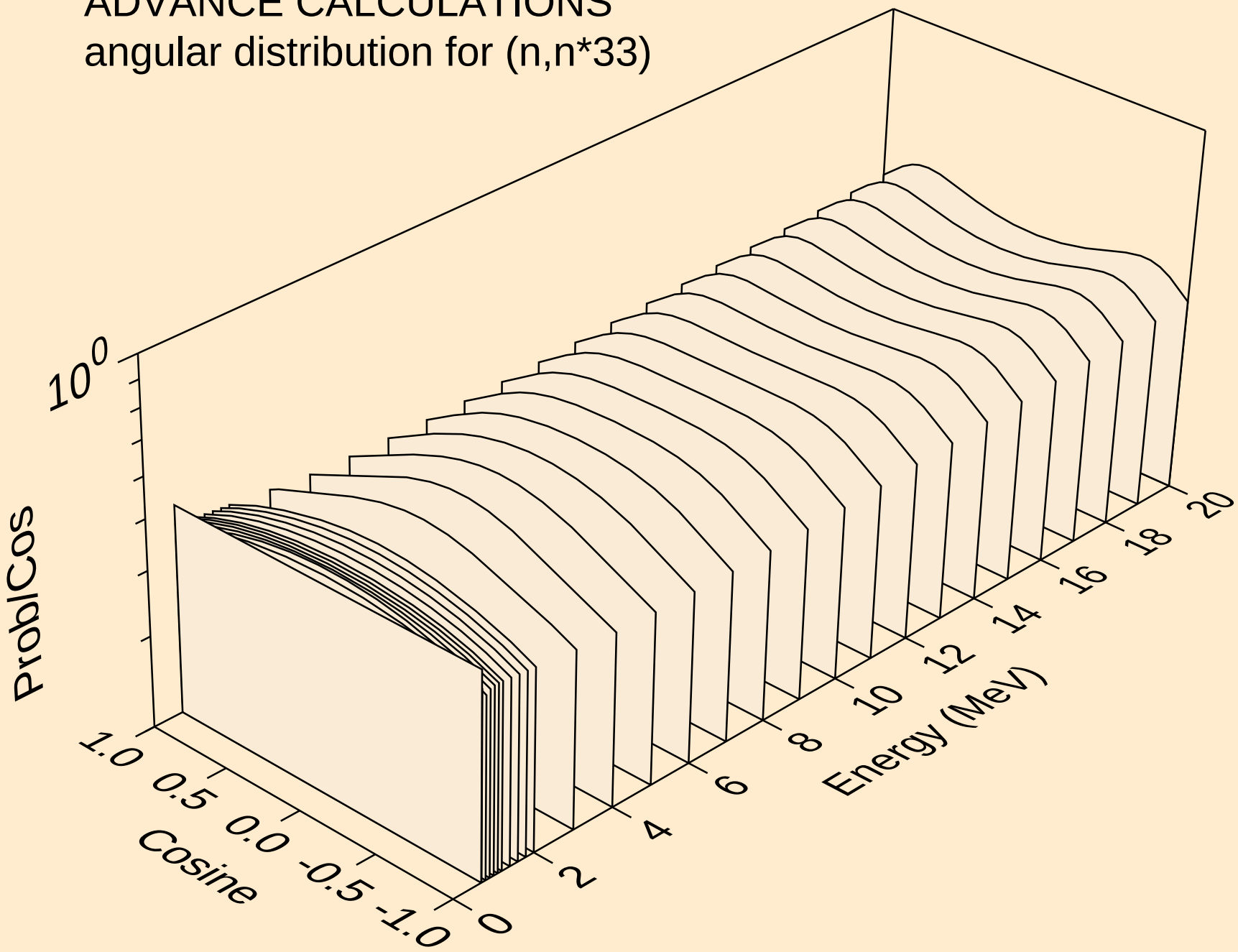
ADVANCE CALCULATIONS
angular distribution for (n,n*31)



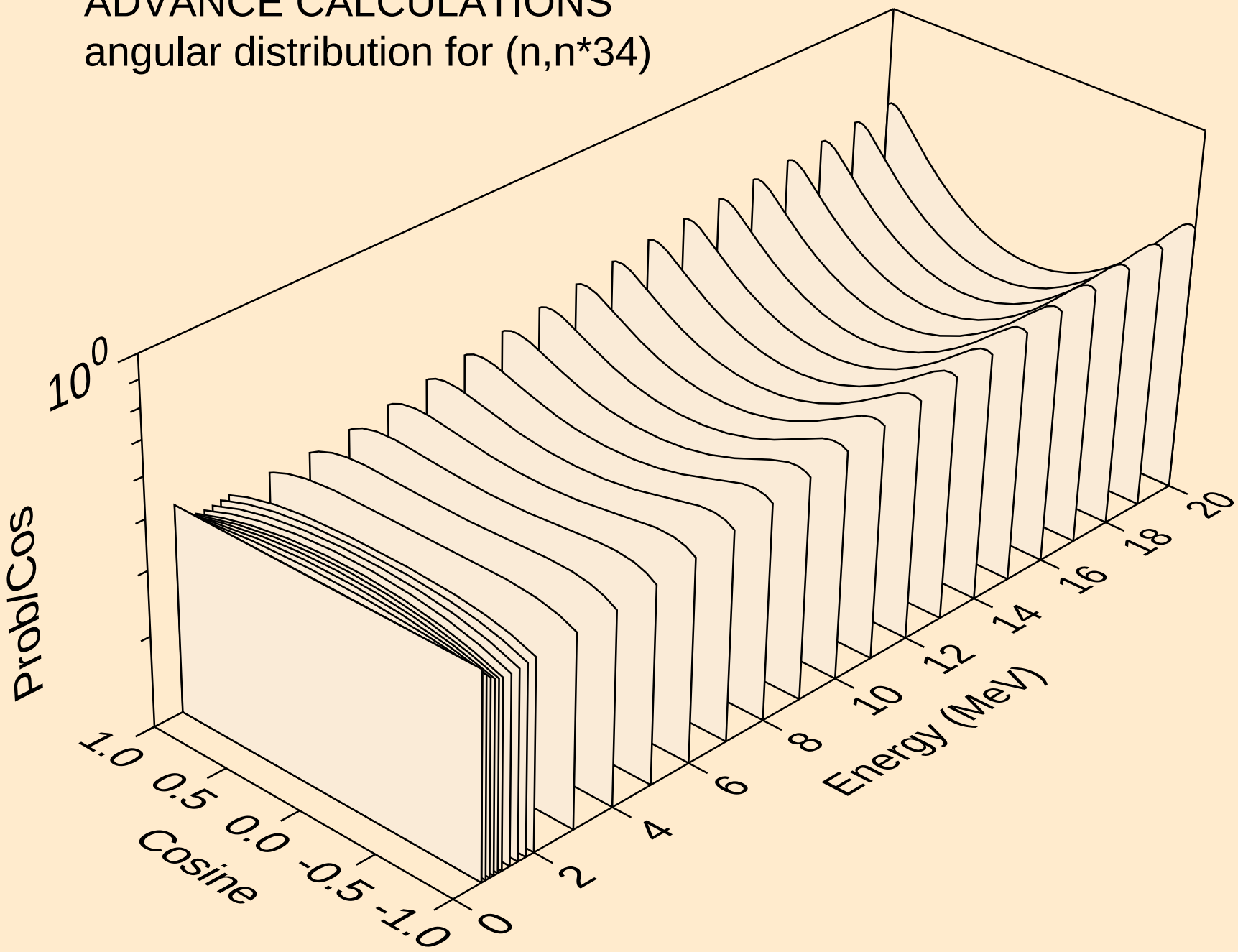
ADVANCE CALCULATIONS
angular distribution for (n,n*32)



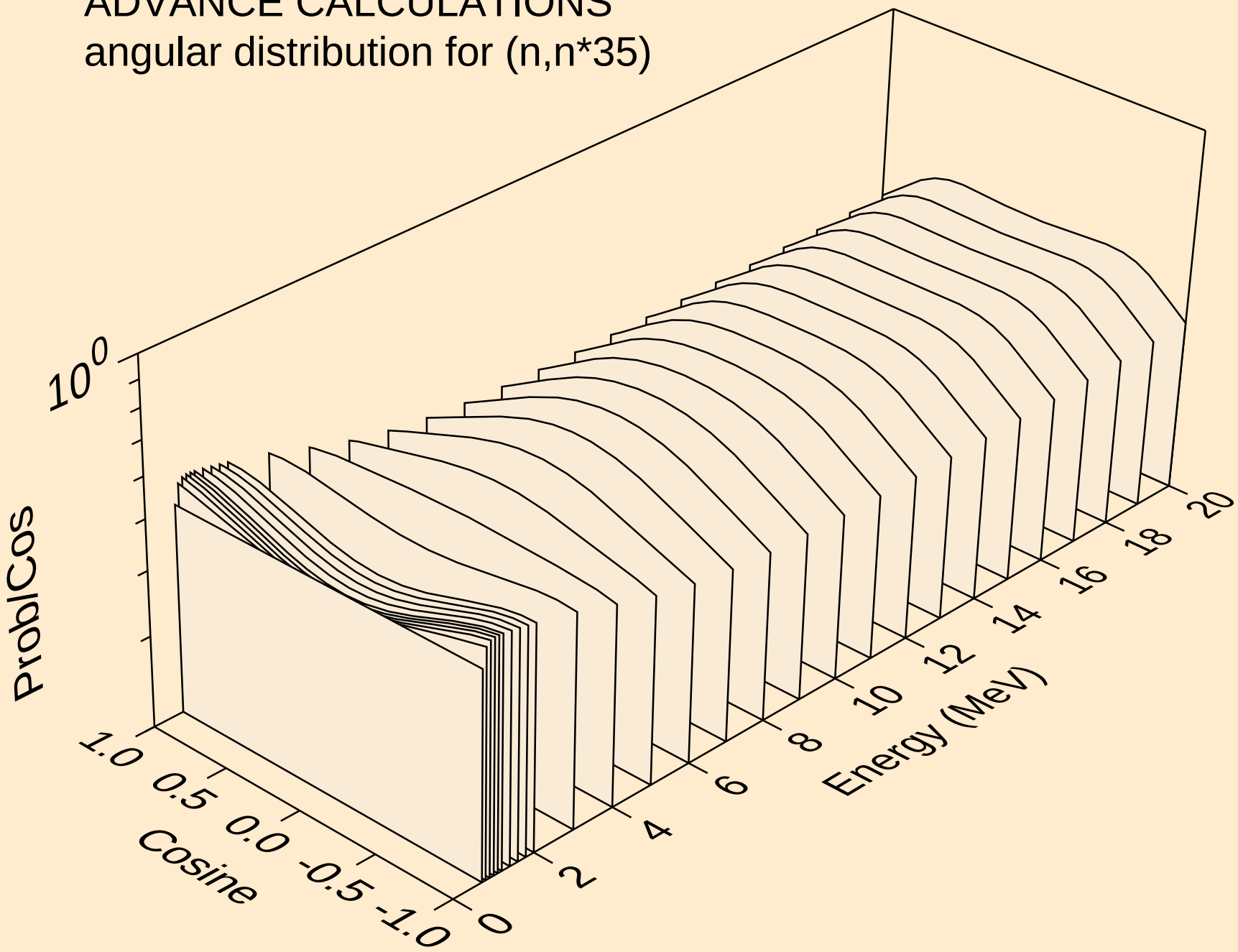
ADVANCE CALCULATIONS
angular distribution for (n,n*33)



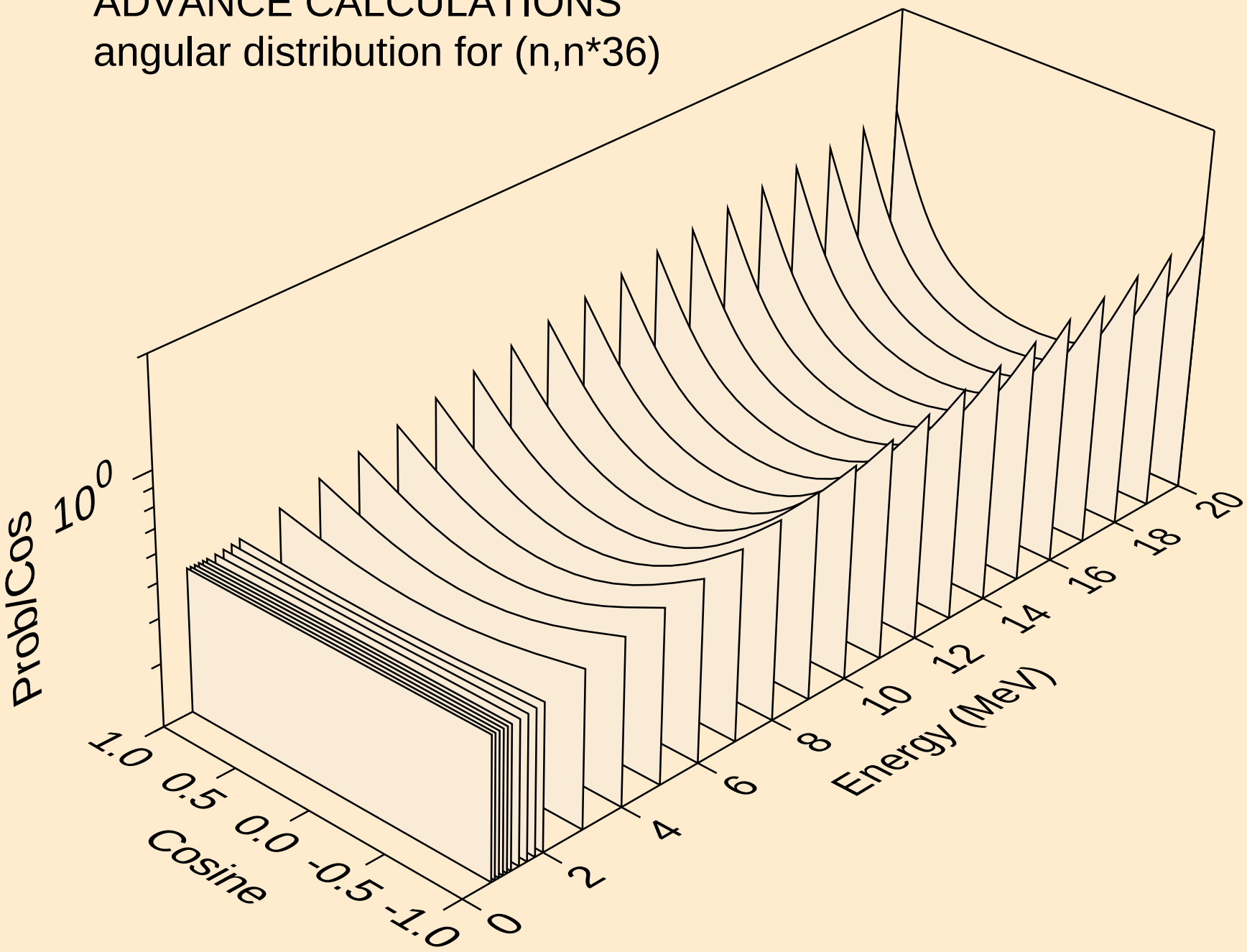
ADVANCE CALCULATIONS
angular distribution for (n,n*34)



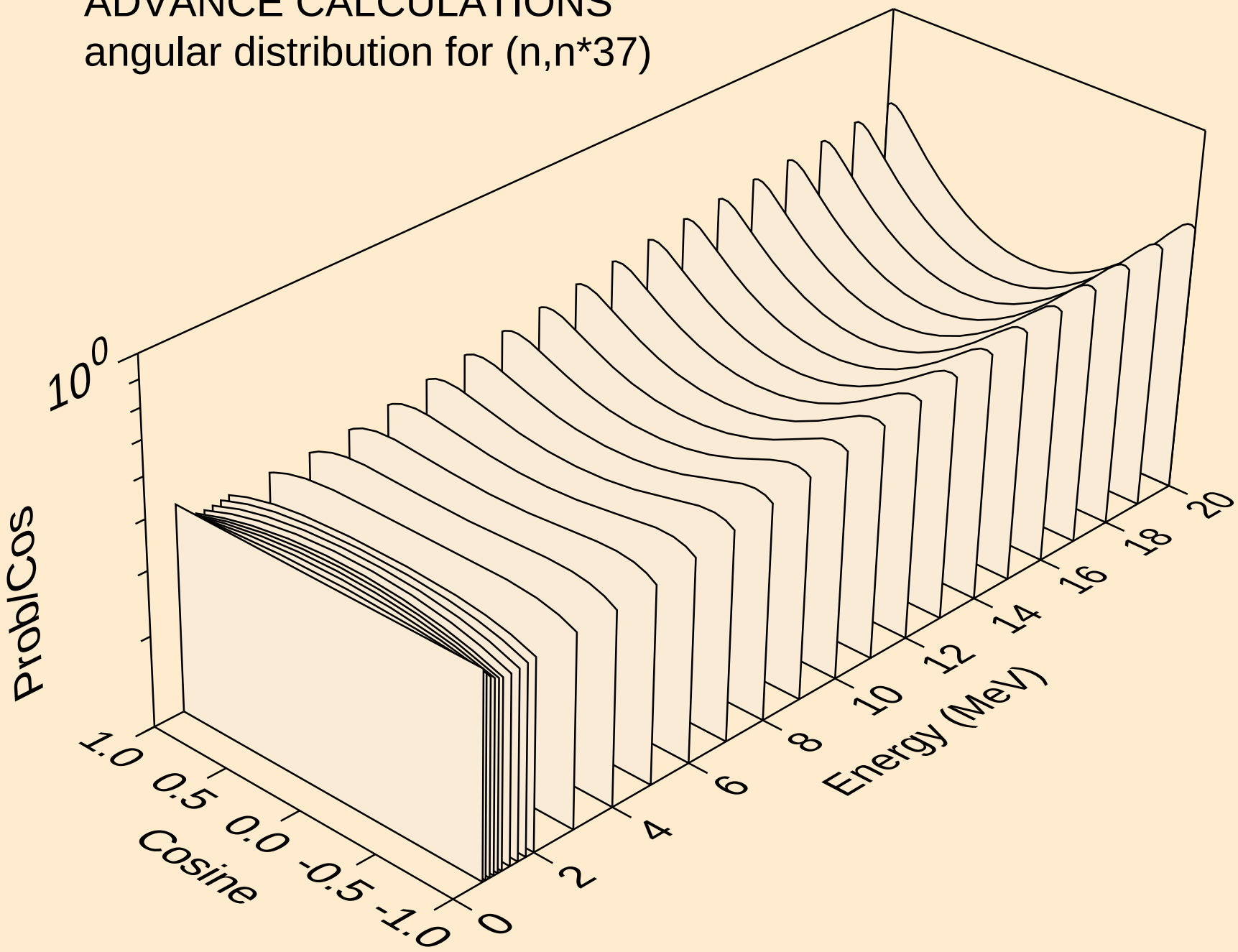
ADVANCE CALCULATIONS
angular distribution for (n,n*35)



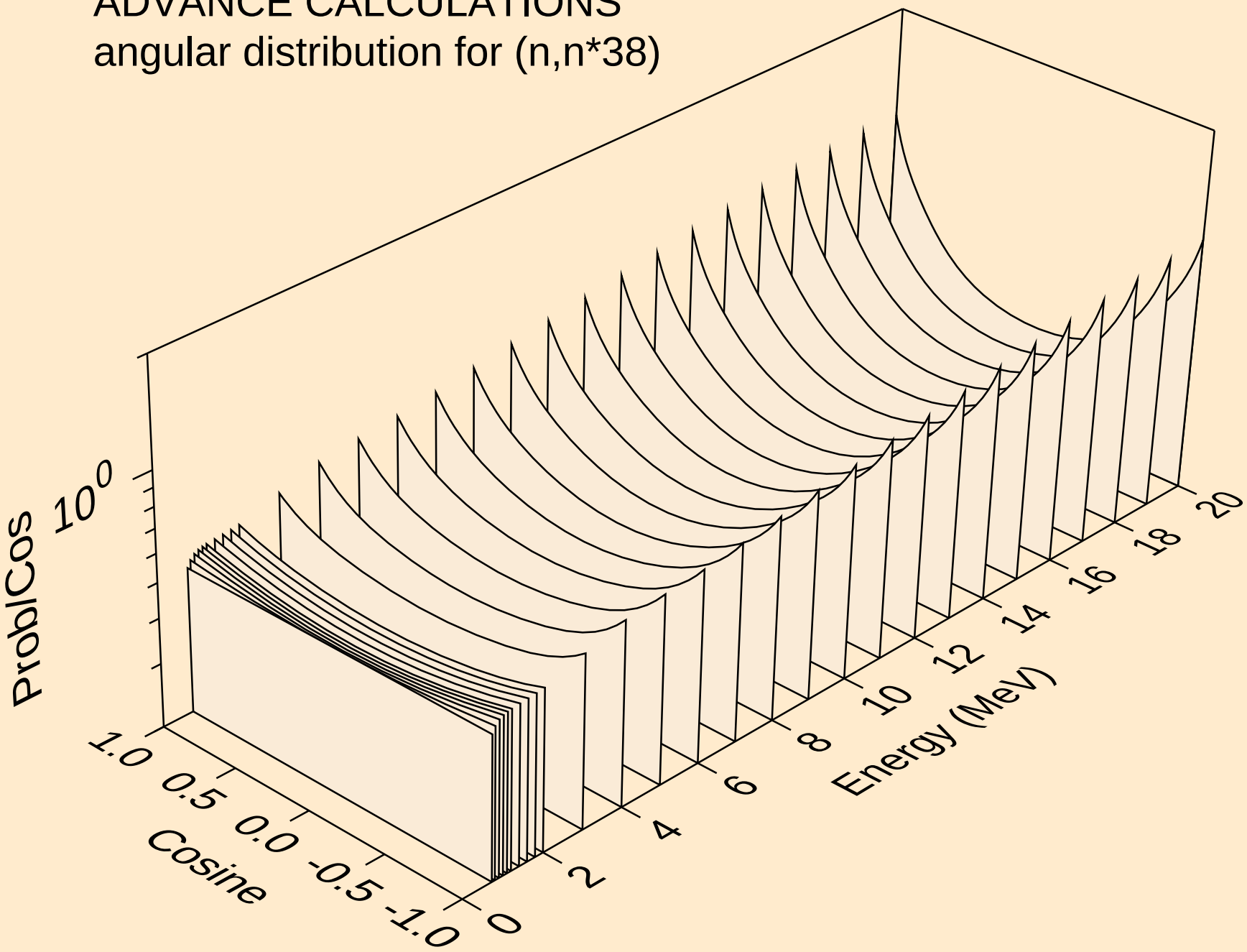
ADVANCE CALCULATIONS
angular distribution for (n,n*36)



ADVANCE CALCULATIONS
angular distribution for (n,n*37)

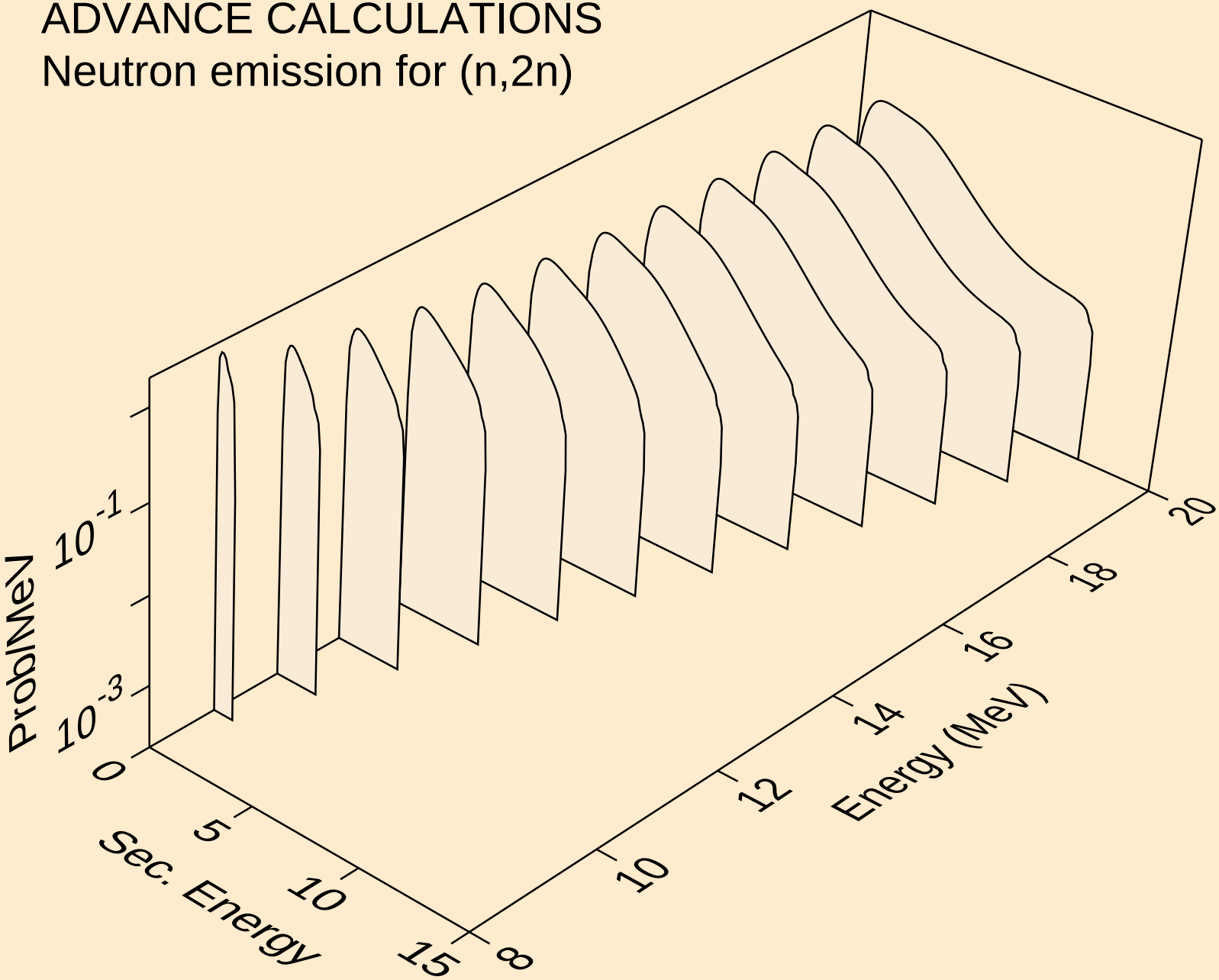


ADVANCE CALCULATIONS
angular distribution for (n,n*38)



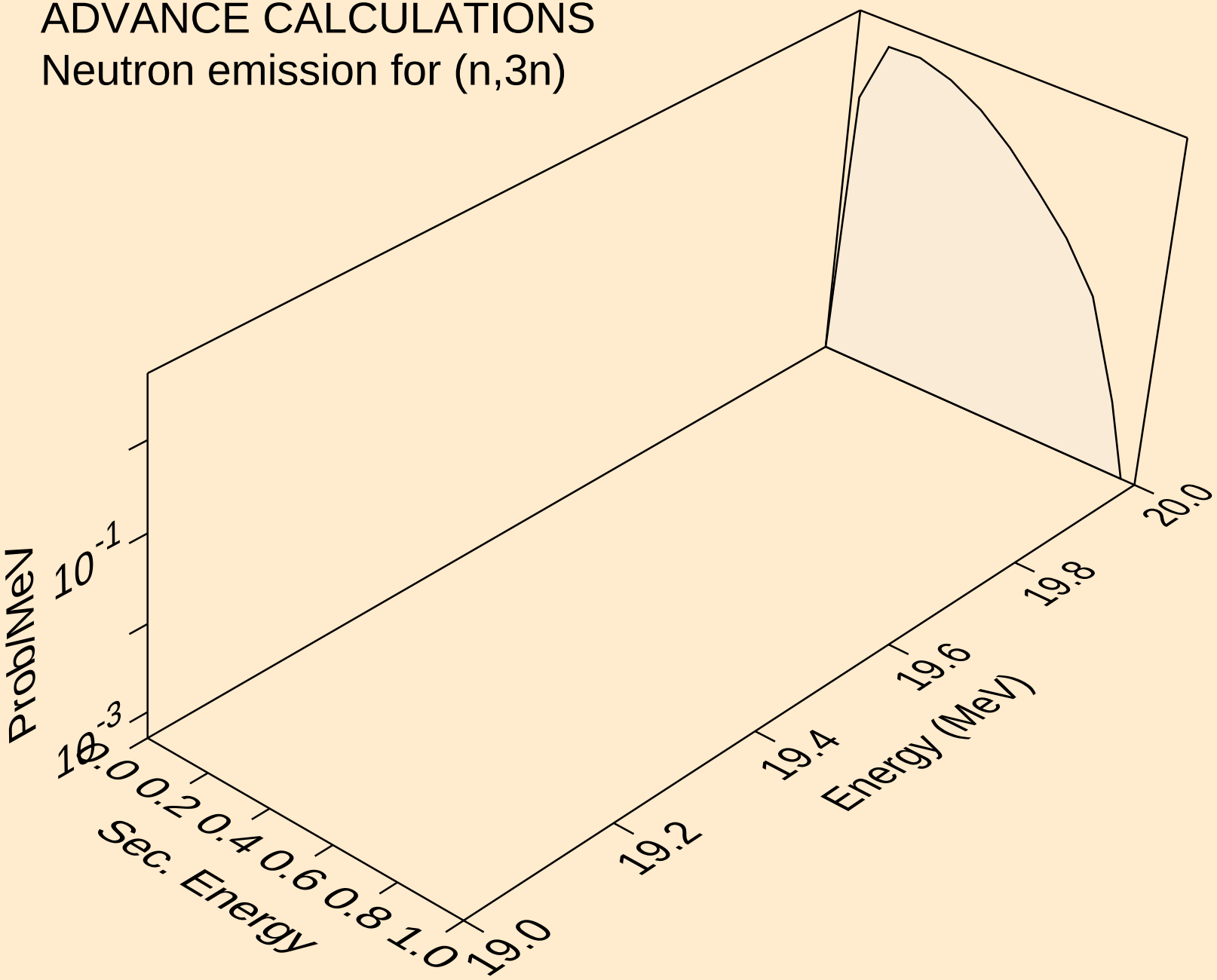
ADVANCE CALCULATIONS

Neutron emission for (n,2n)



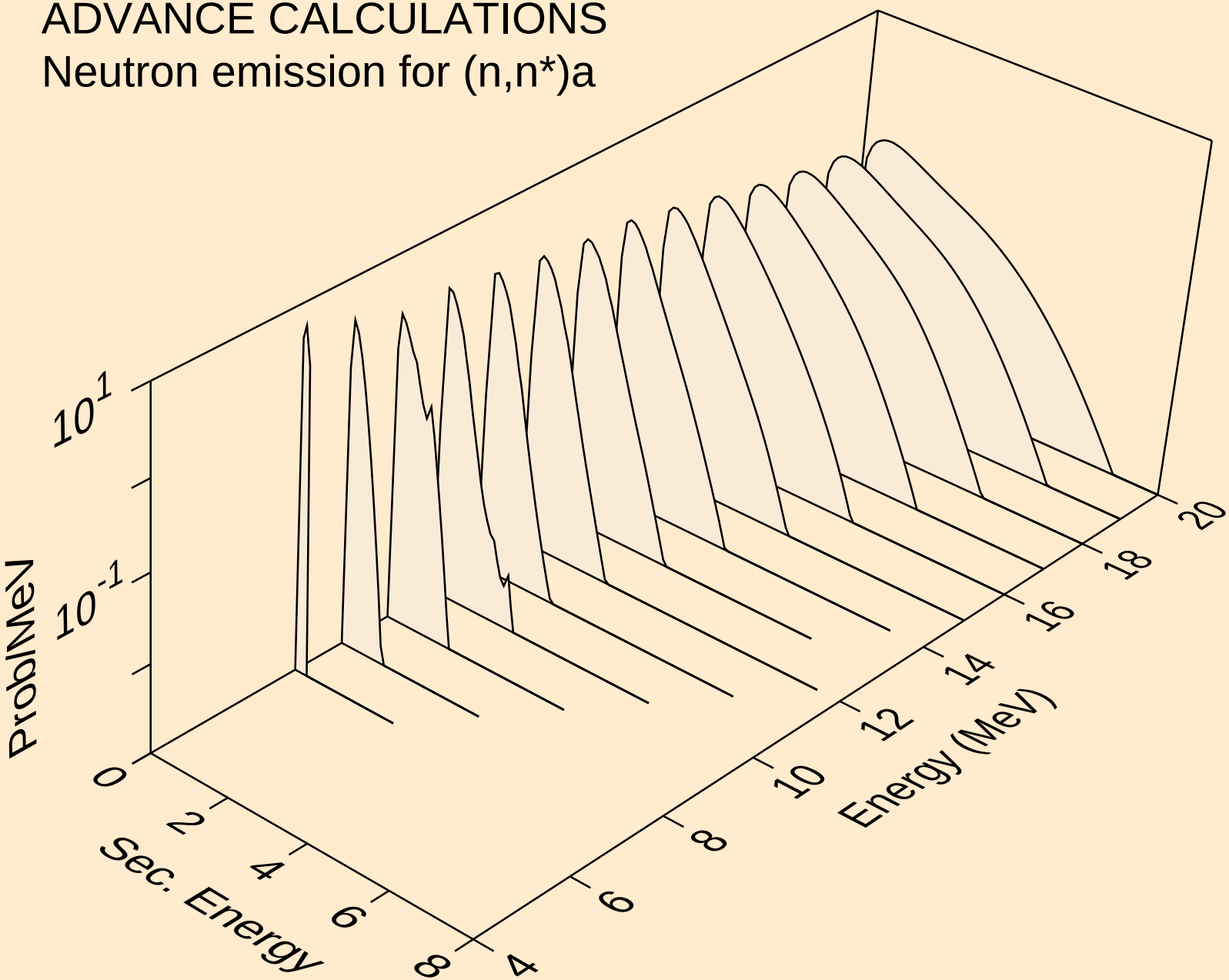
ADVANCE CALCULATIONS

Neutron emission for (n,3n)



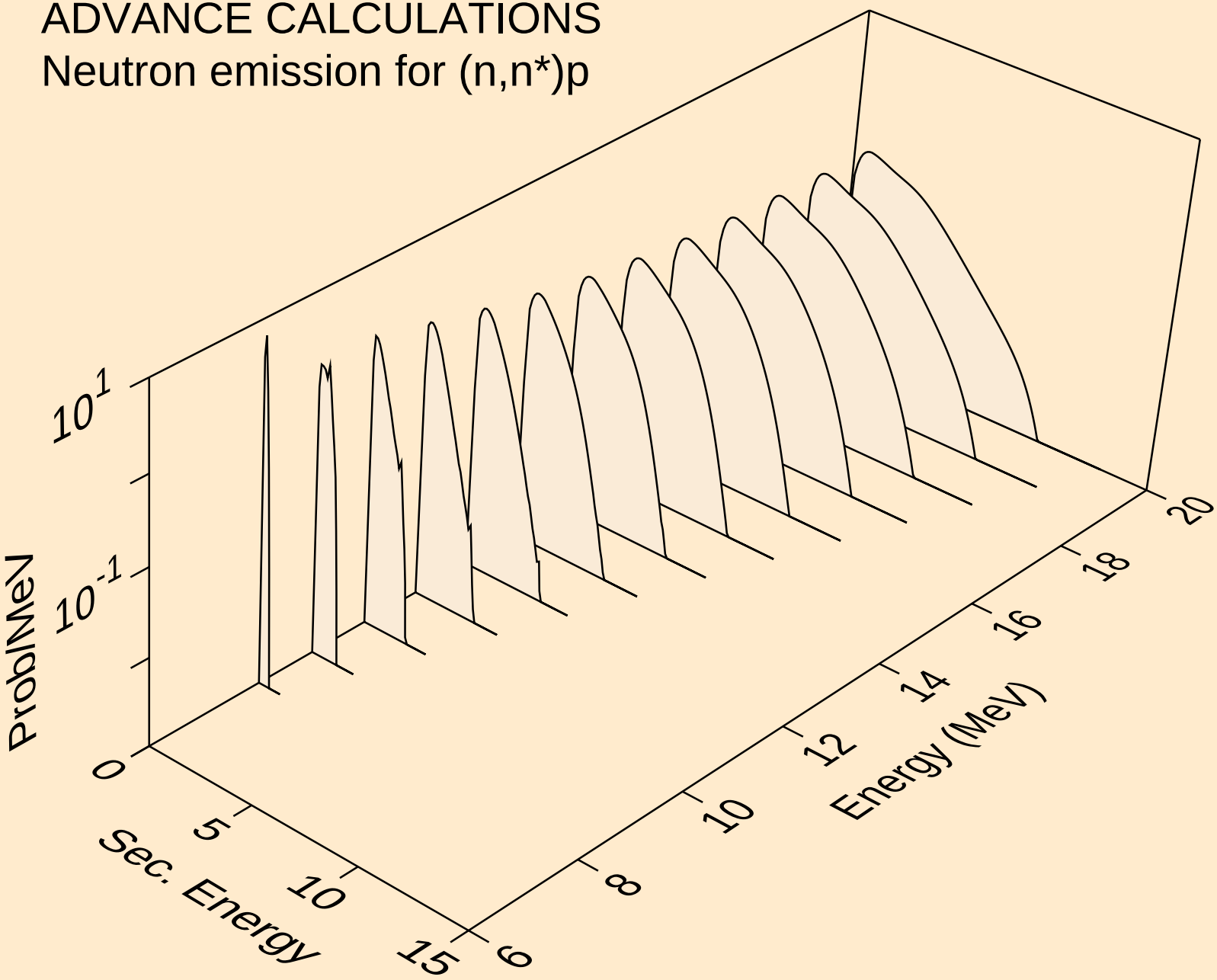
ADVANCE CALCULATIONS

Neutron emission for (n,n*)a



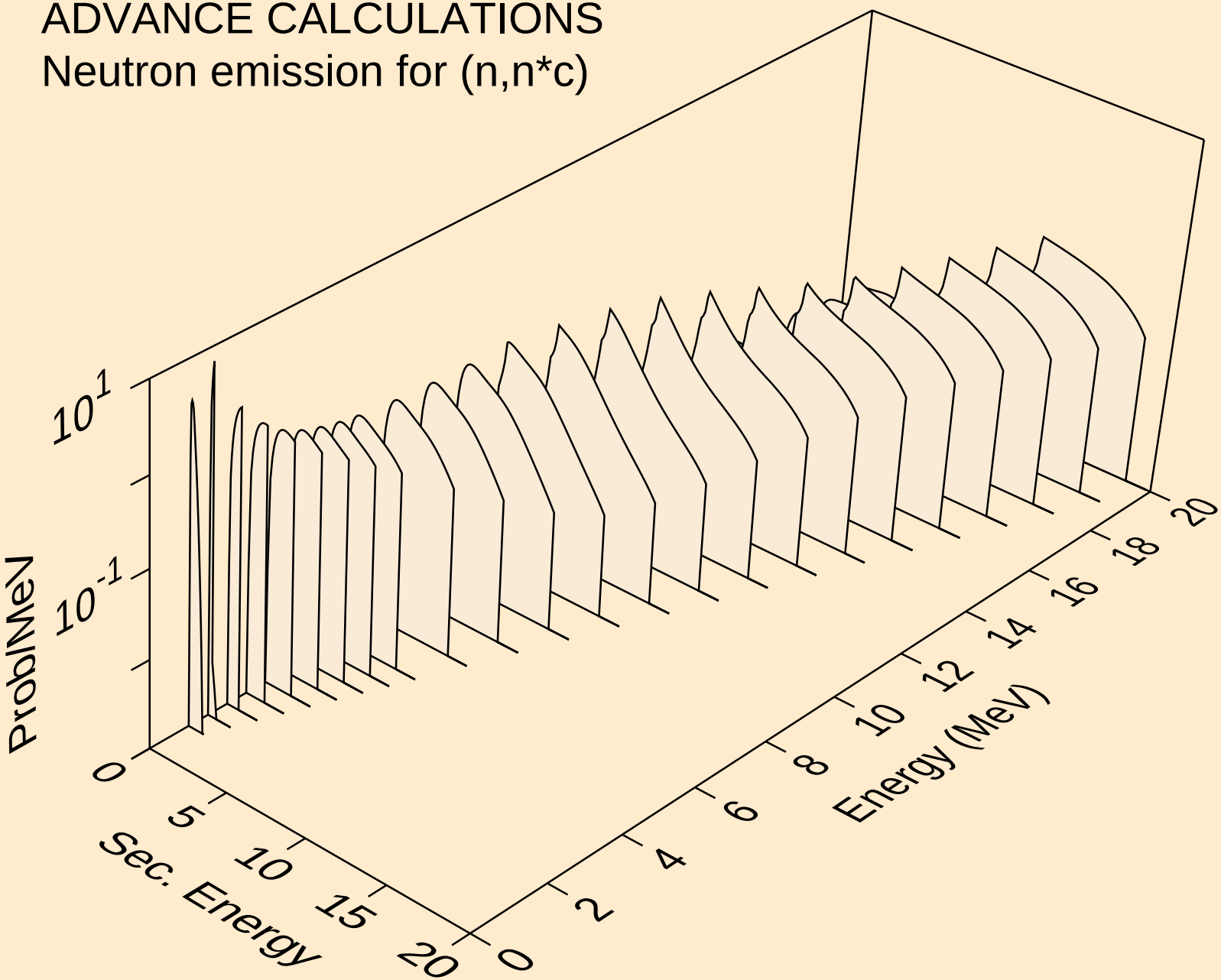
ADVANCE CALCULATIONS

Neutron emission for (n,n*)p



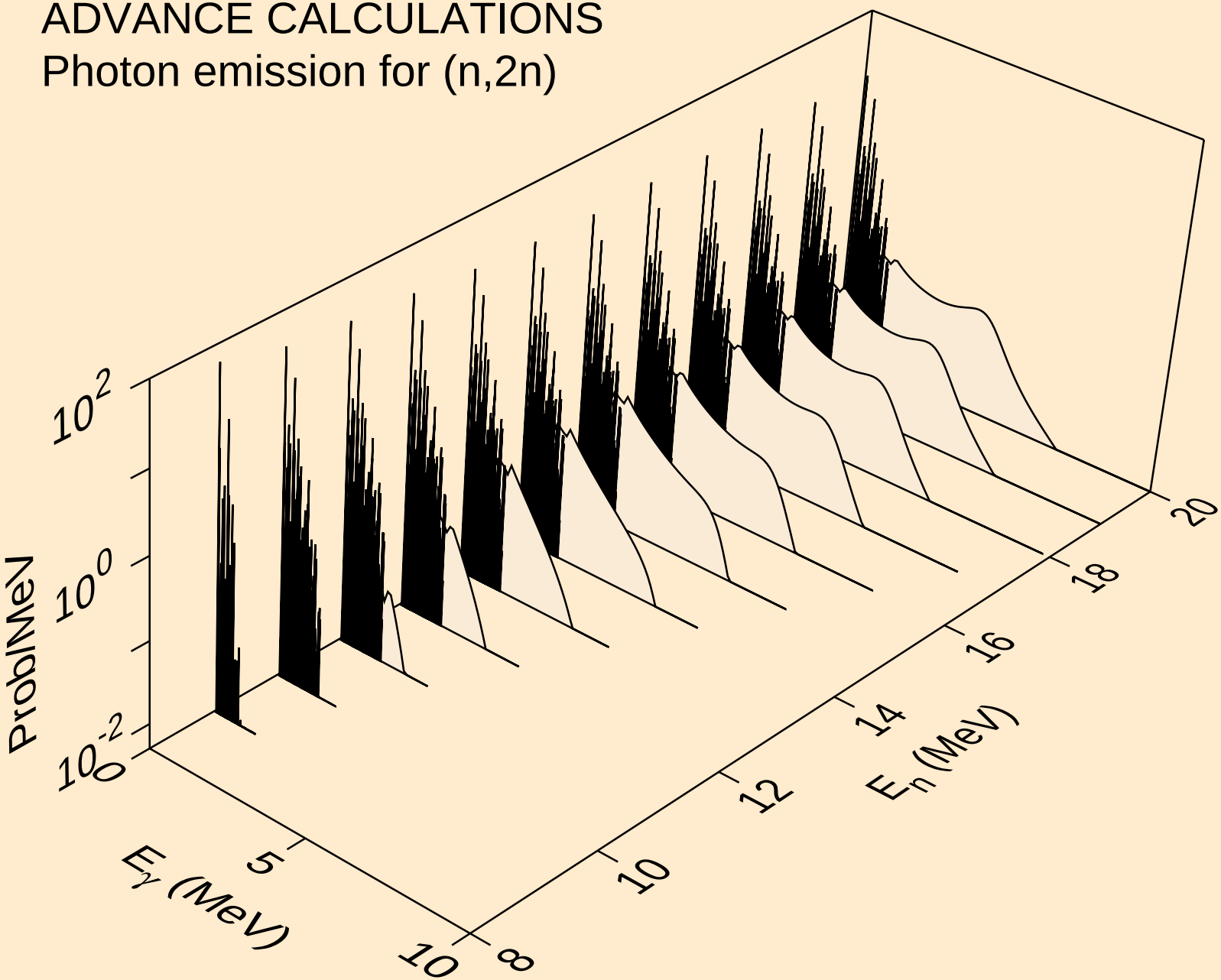
ADVANCE CALCULATIONS

Neutron emission for (n,n*c)



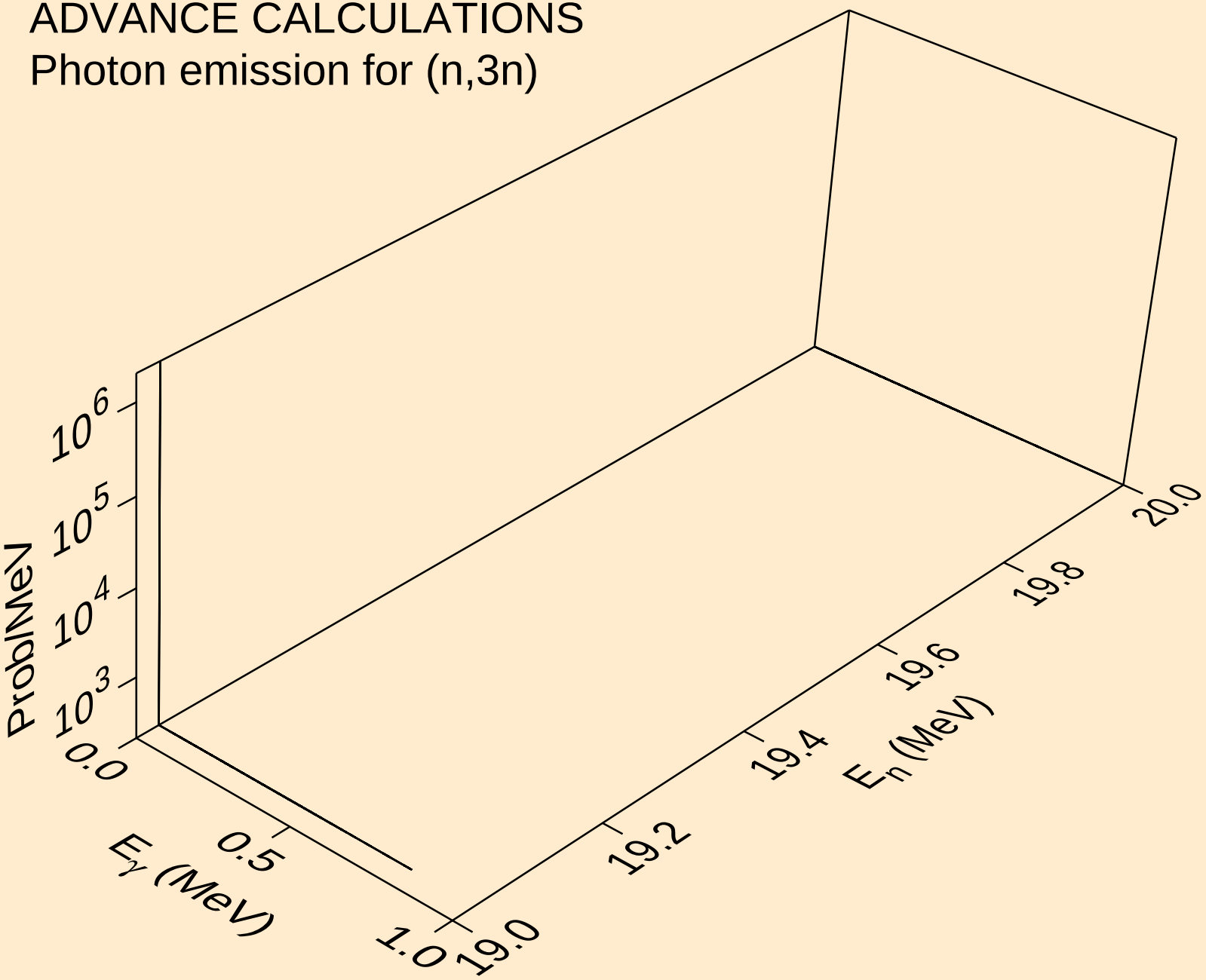
ADVANCE CALCULATIONS

Photon emission for (n,2n)



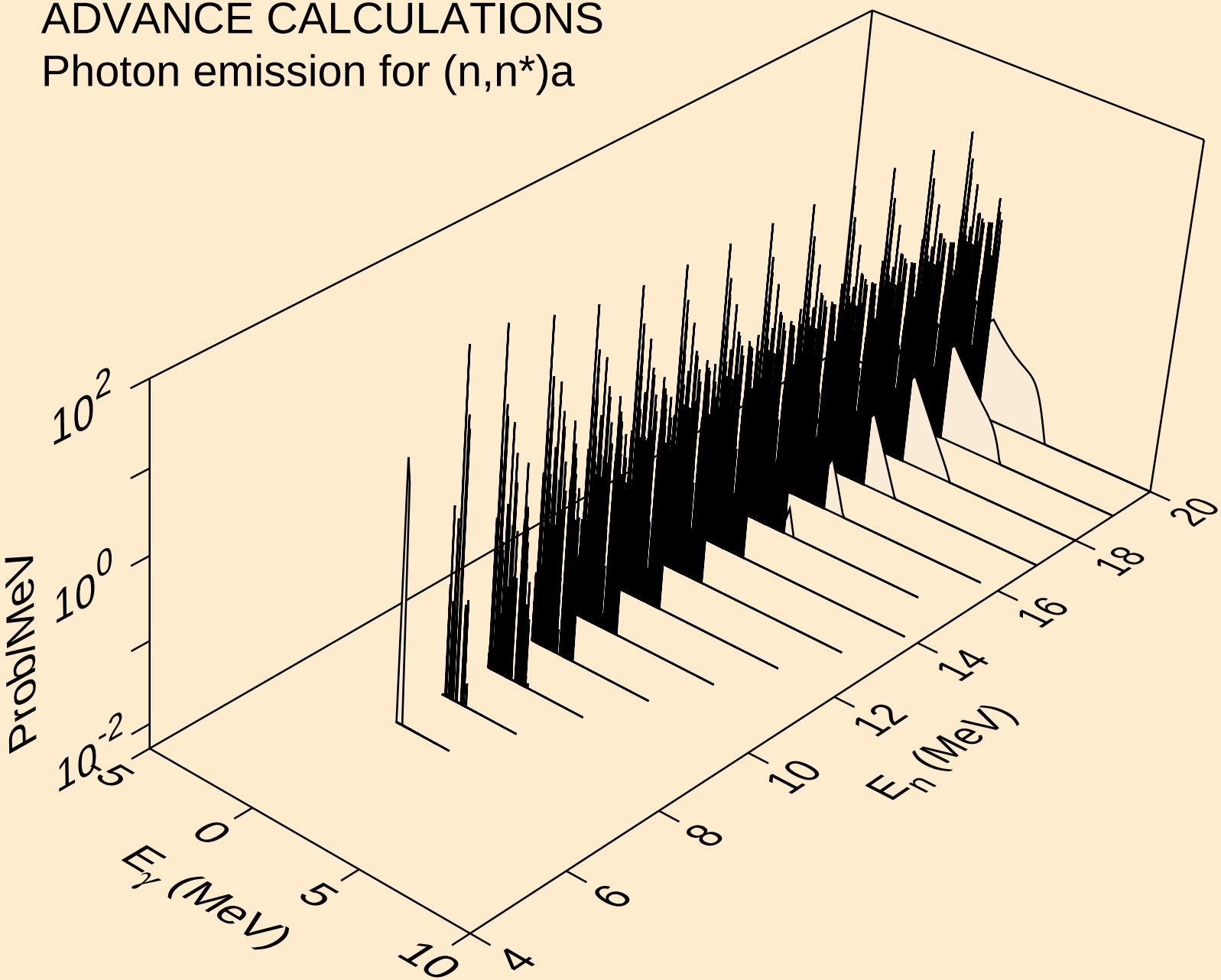
ADVANCE CALCULATIONS

Photon emission for (n,3n)



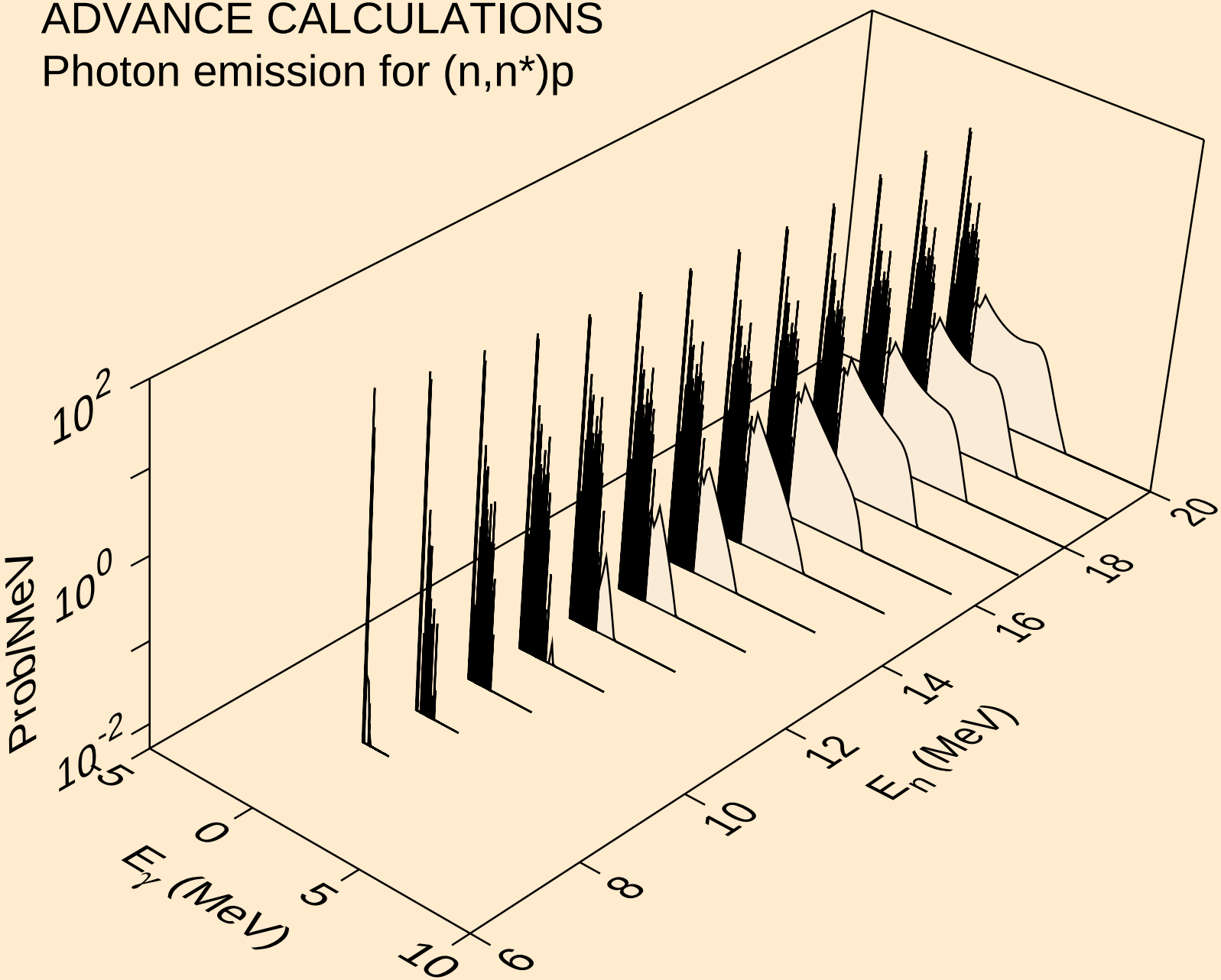
ADVANCE CALCULATIONS

Photon emission for (n,n*)a



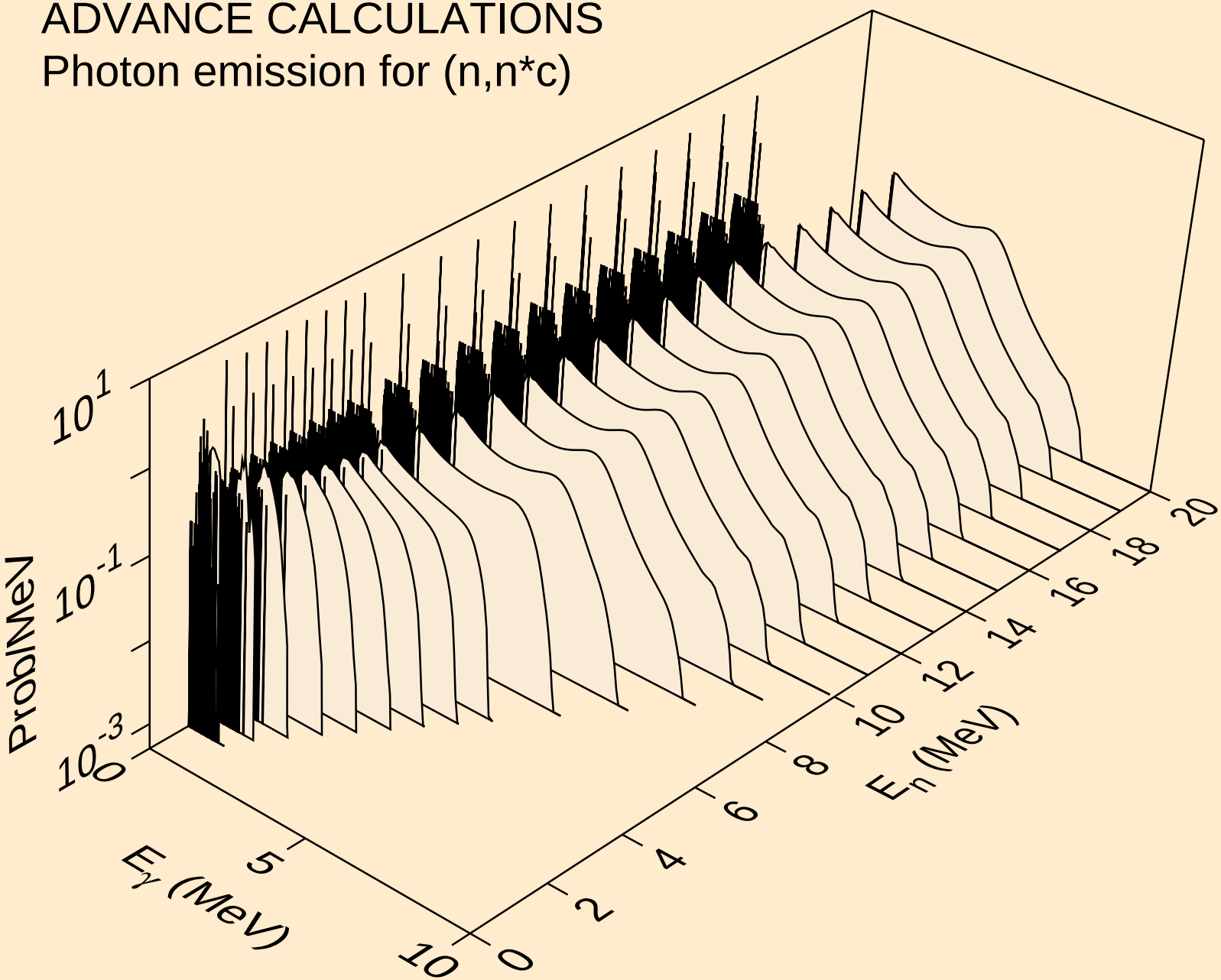
ADVANCE CALCULATIONS

Photon emission for (n,n*)p



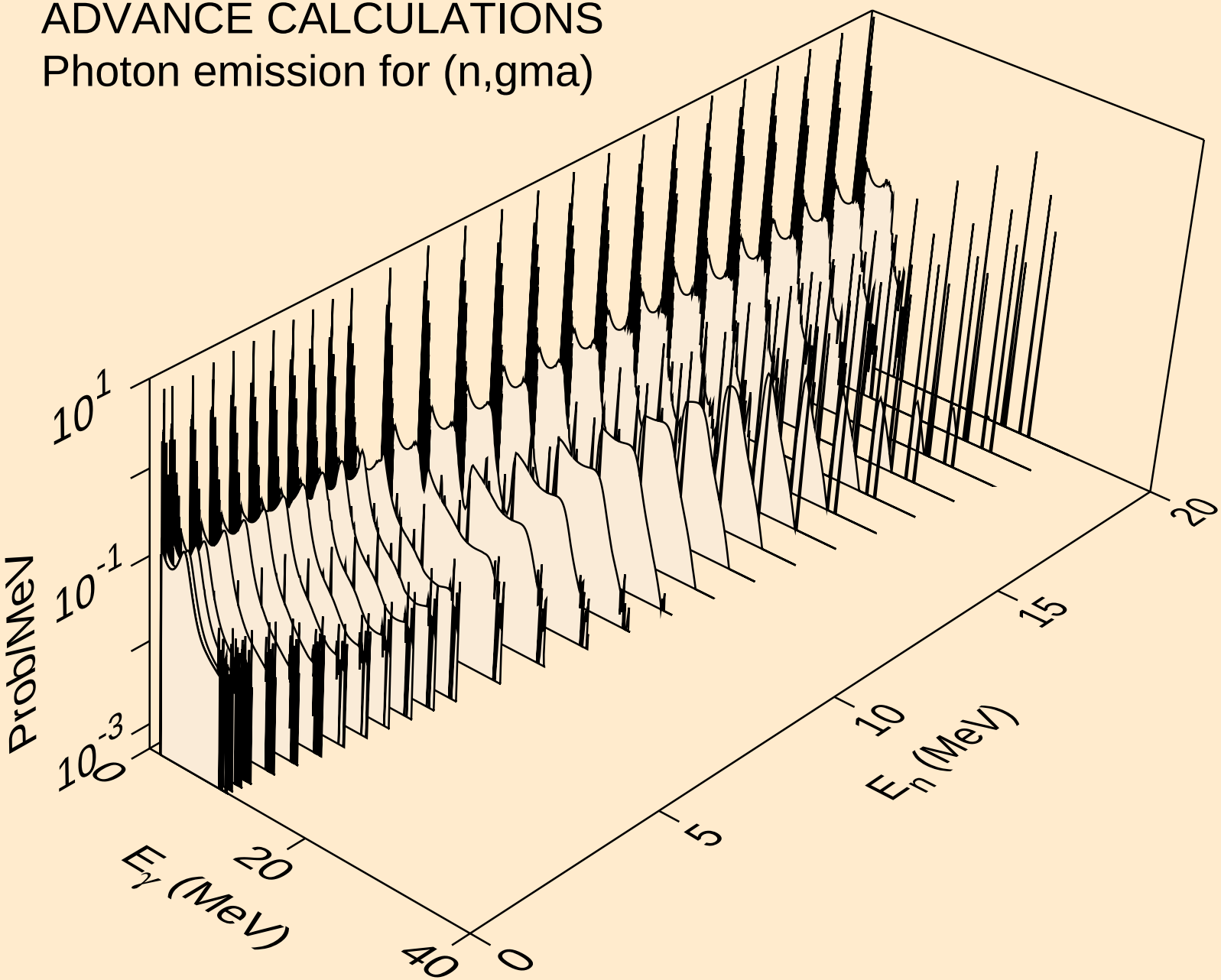
ADVANCE CALCULATIONS

Photon emission for (n,n*c)



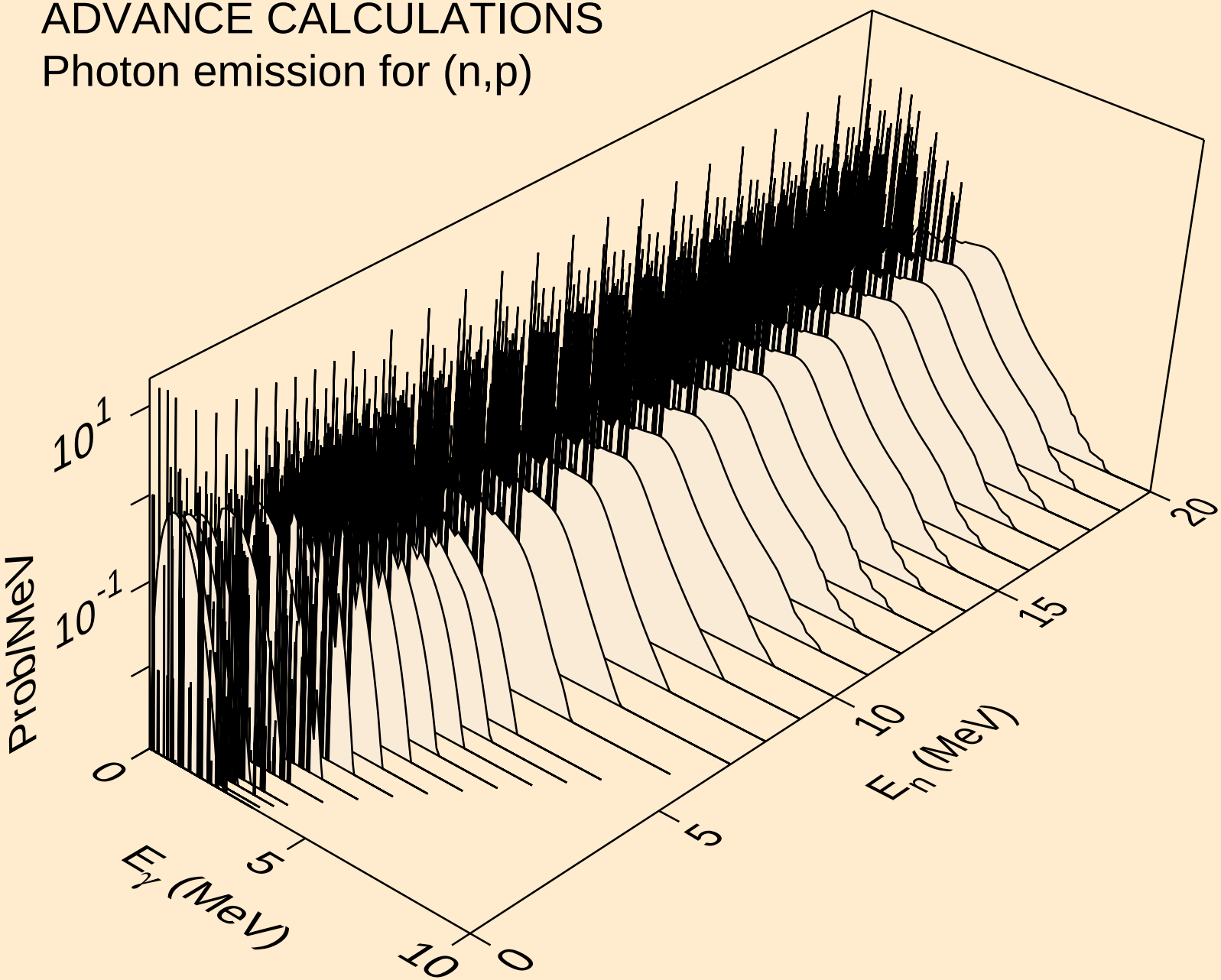
ADVANCE CALCULATIONS

Photon emission for (n,gma)



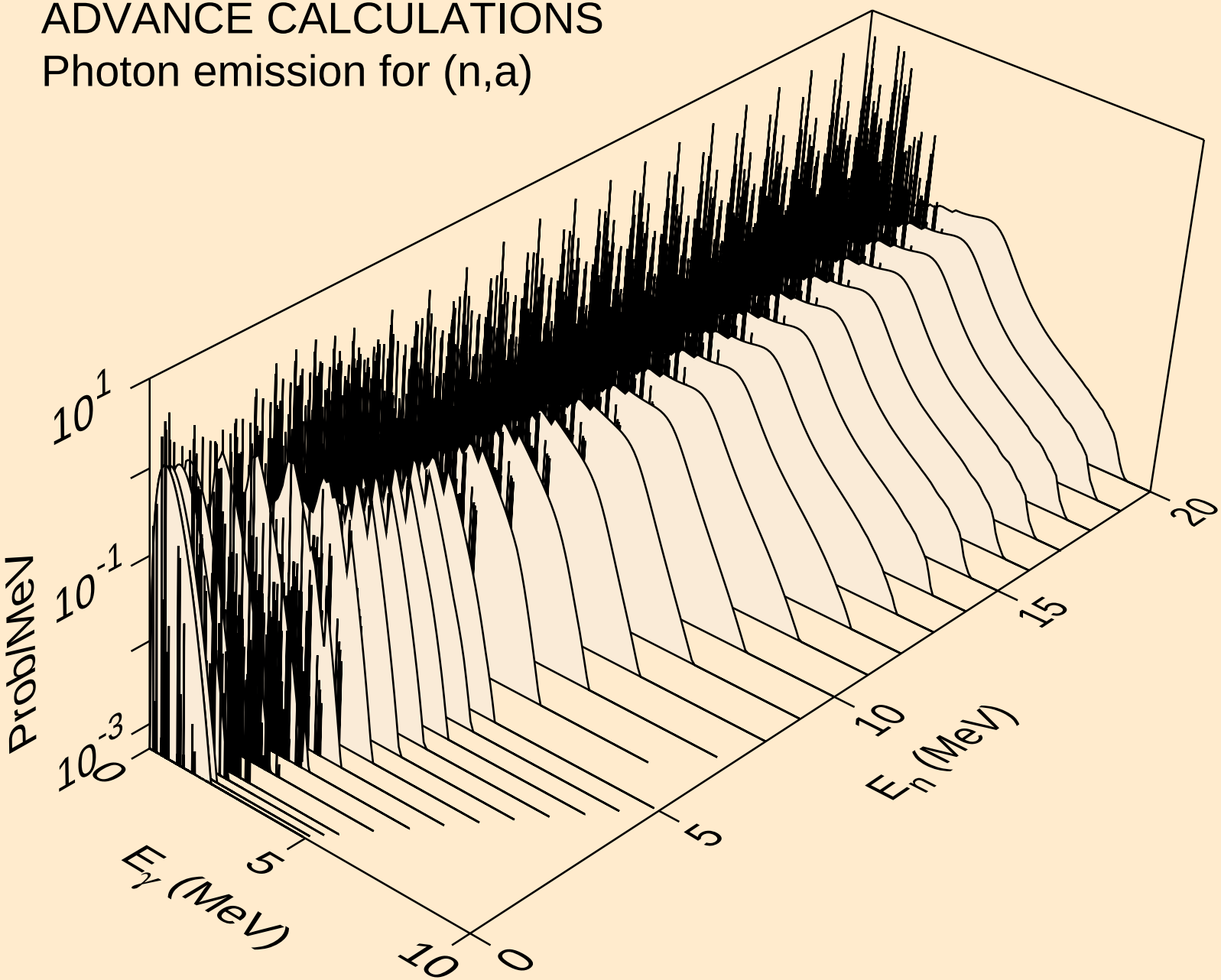
ADVANCE CALCULATIONS

Photon emission for (n,p)

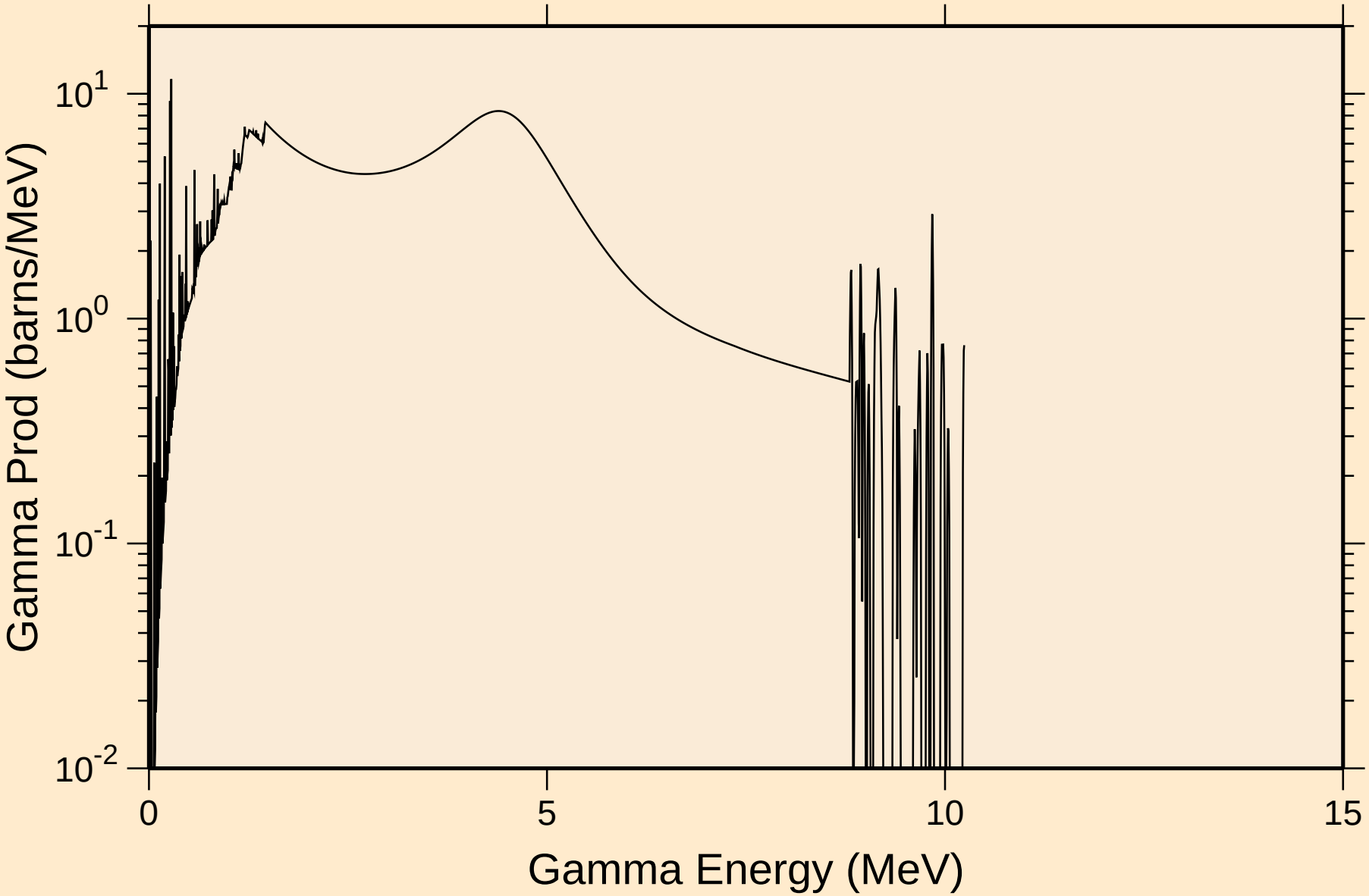


ADVANCE CALCULATIONS

Photon emission for (n,a)

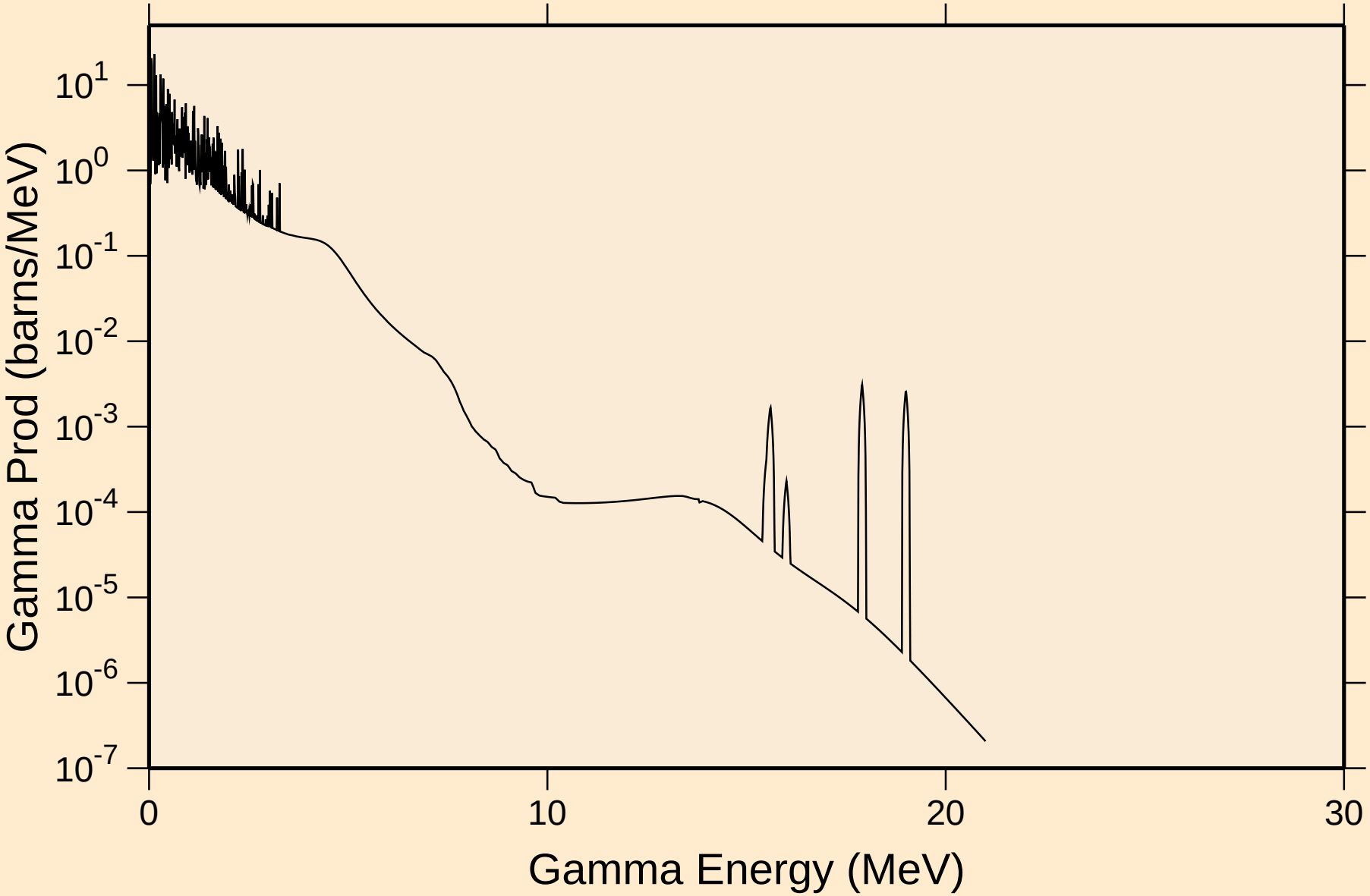


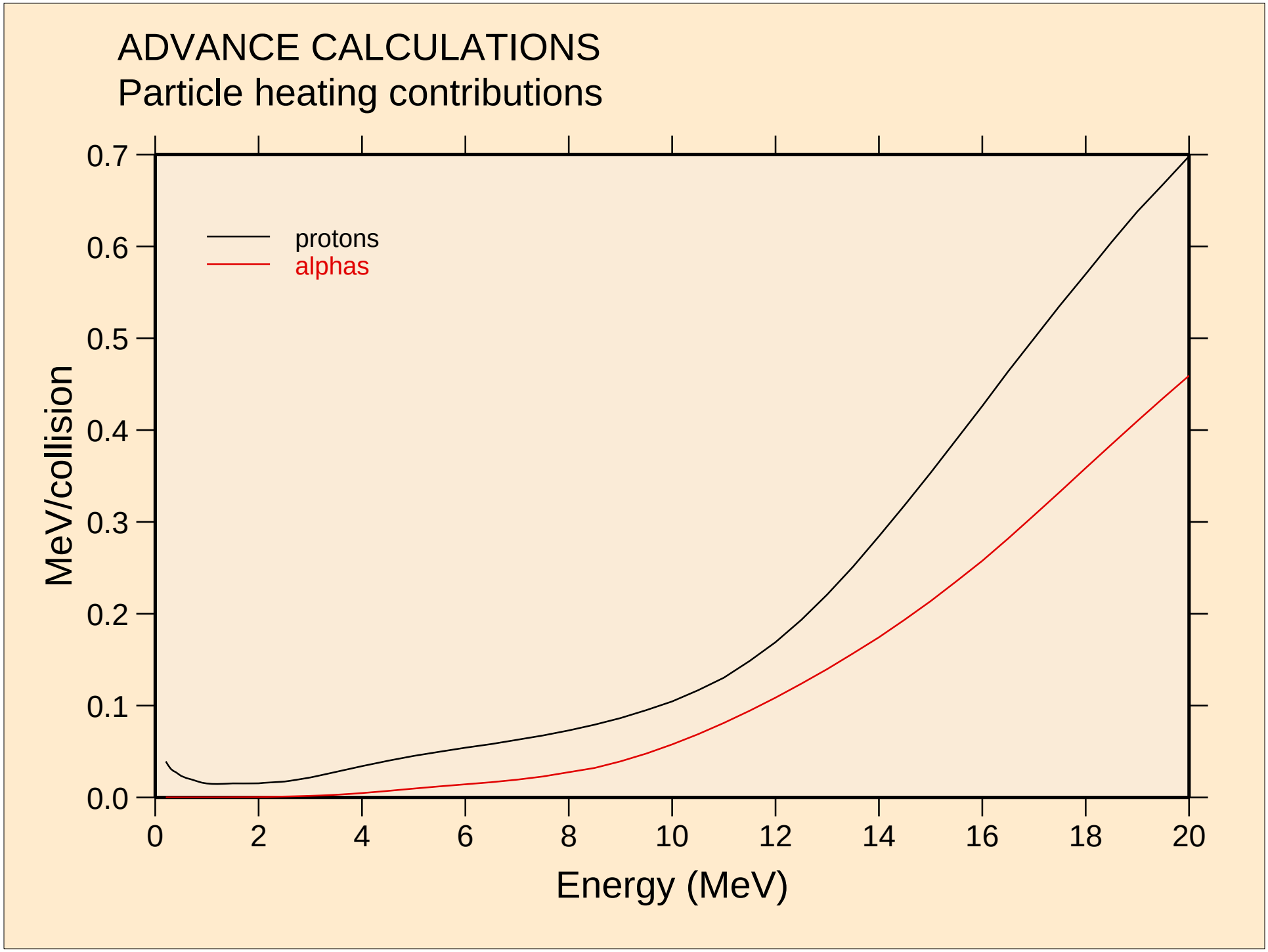
ADVANCE CALCULATIONS
thermal capture photon spectrum



ADVANCE CALCULATIONS

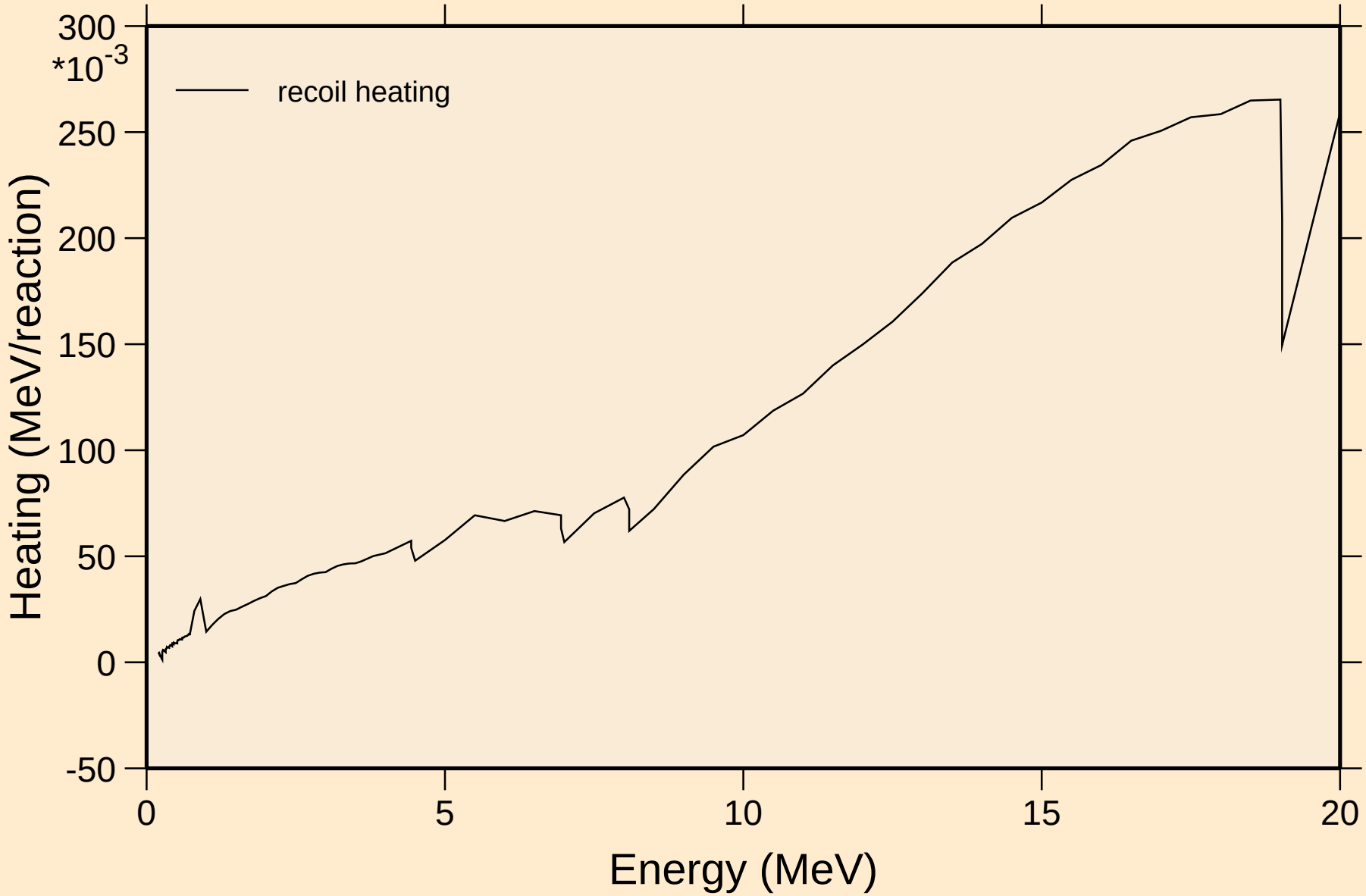
14 MeV photon spectrum




ADVANCE CALCULATIONS
Particle heating contributions
protons
alphas
MeV/collision
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
Energy (MeV)

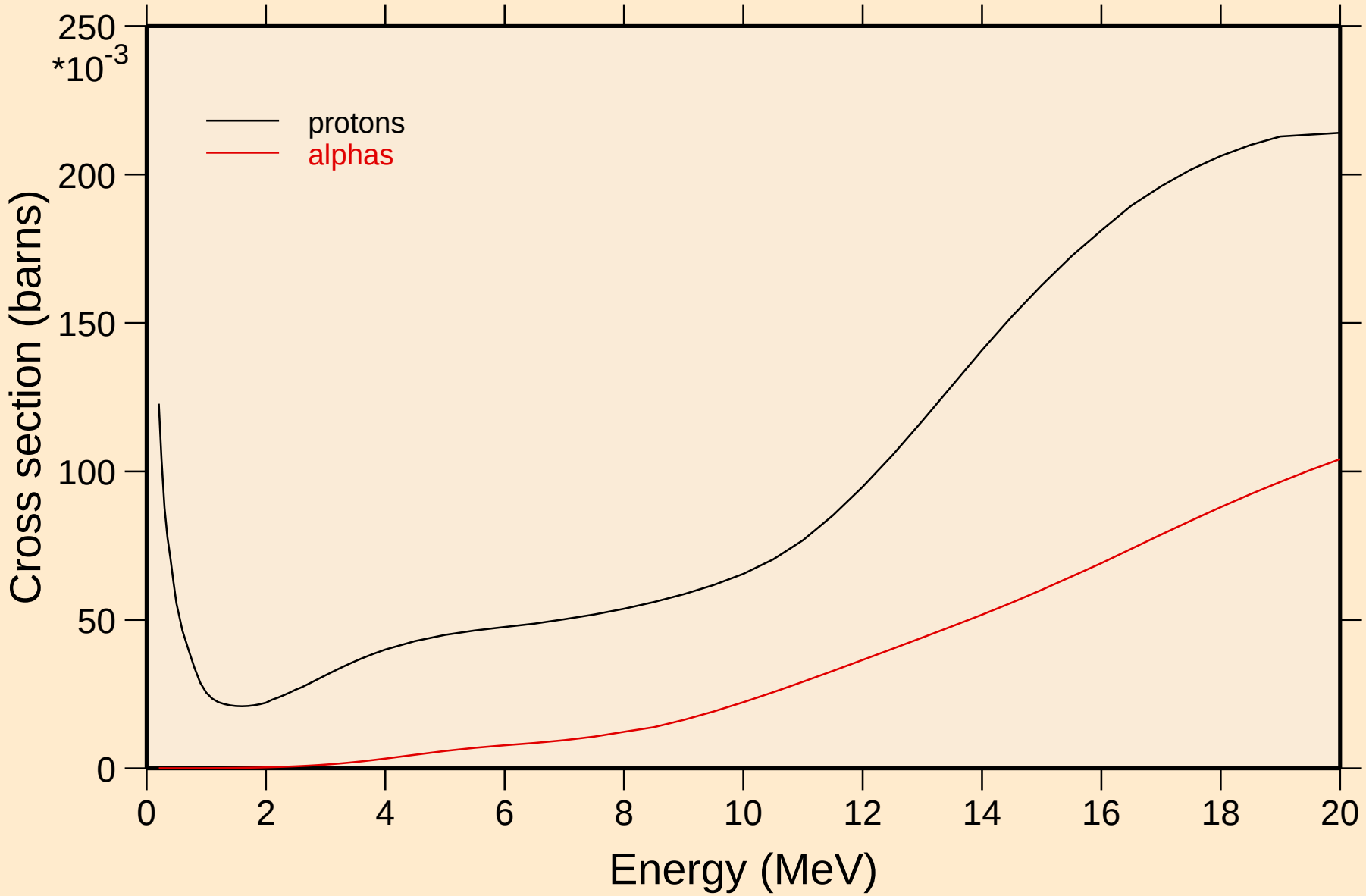
ADVANCE CALCULATIONS

Recoil Heating

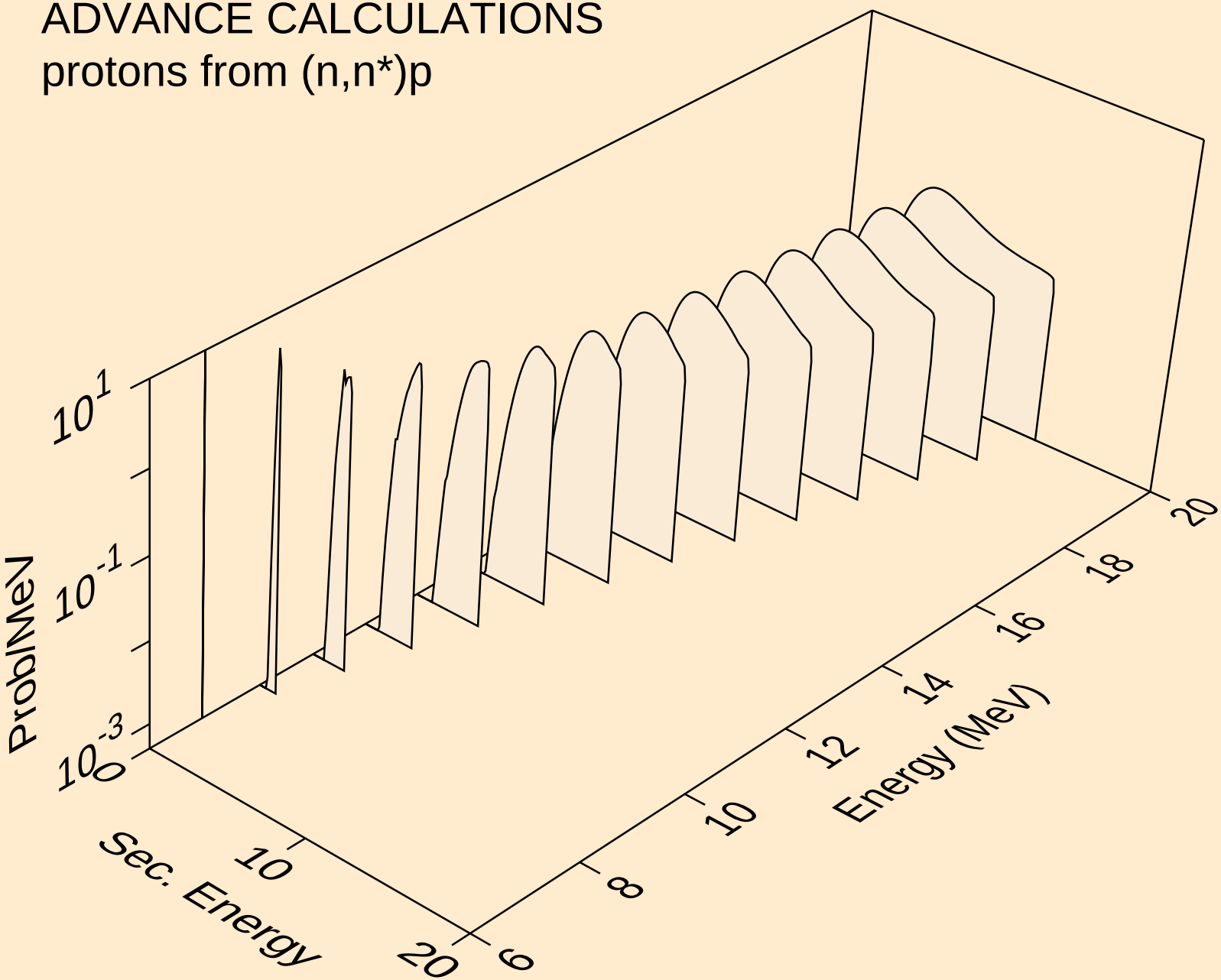


ADVANCE CALCULATIONS

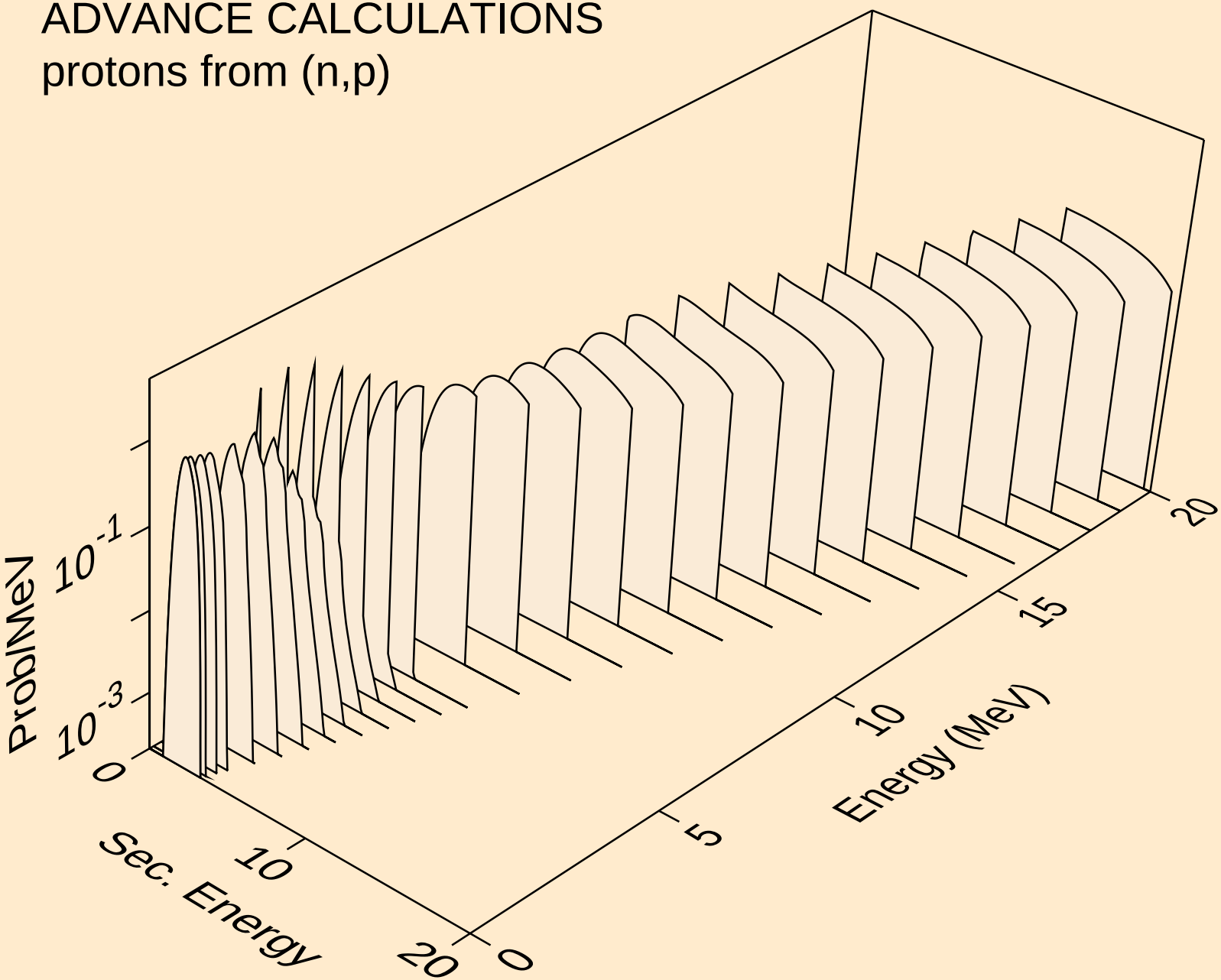
Particle production cross sections



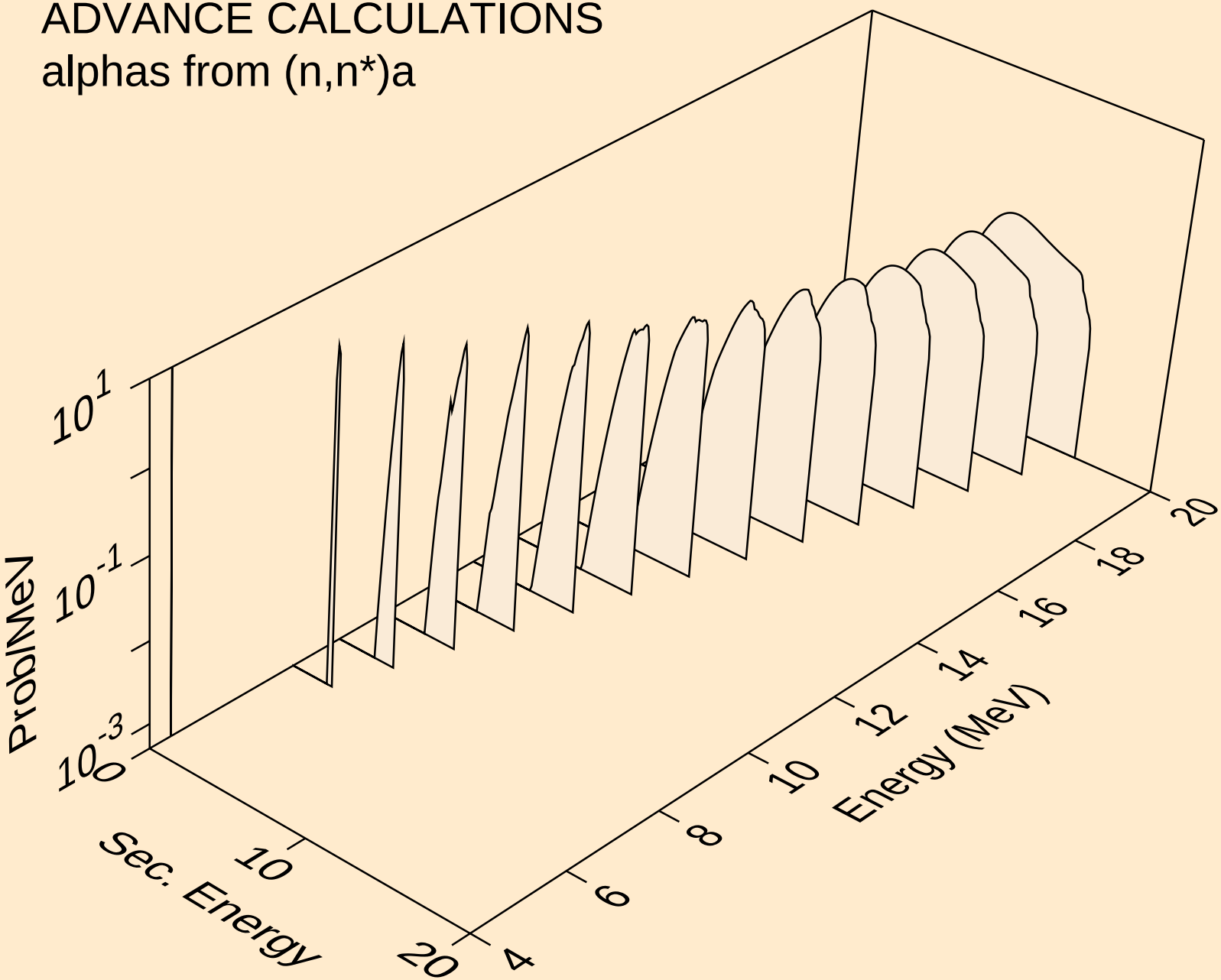
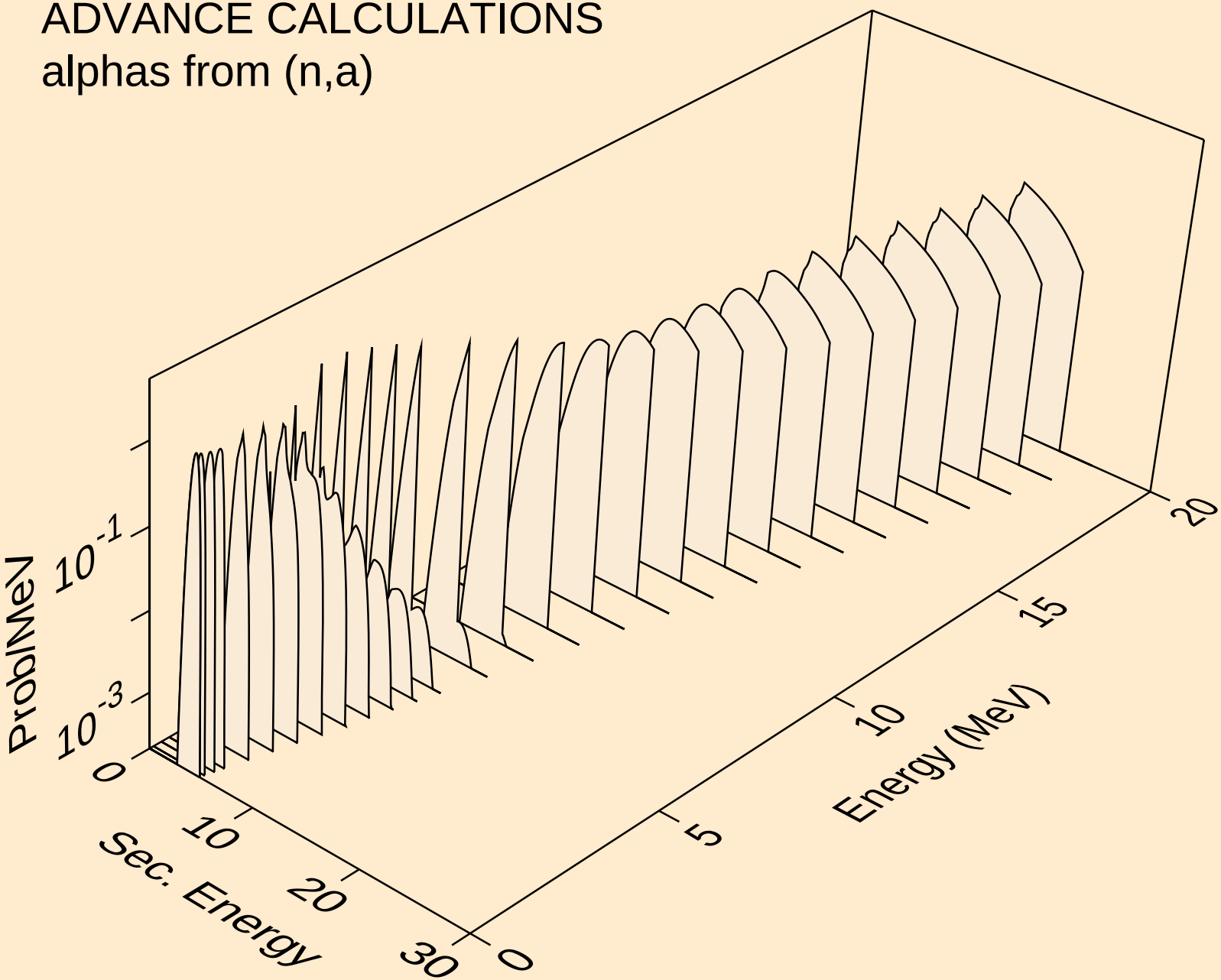
ADVANCE CALCULATIONS
protons from (n,n*)p



ADVANCE CALCULATIONS
protons from (n,p)



ADVANCE CALCULATIONS
alphas from (n,n*)a



ADVANCE CALCULATIONS
alphas from (n,a)