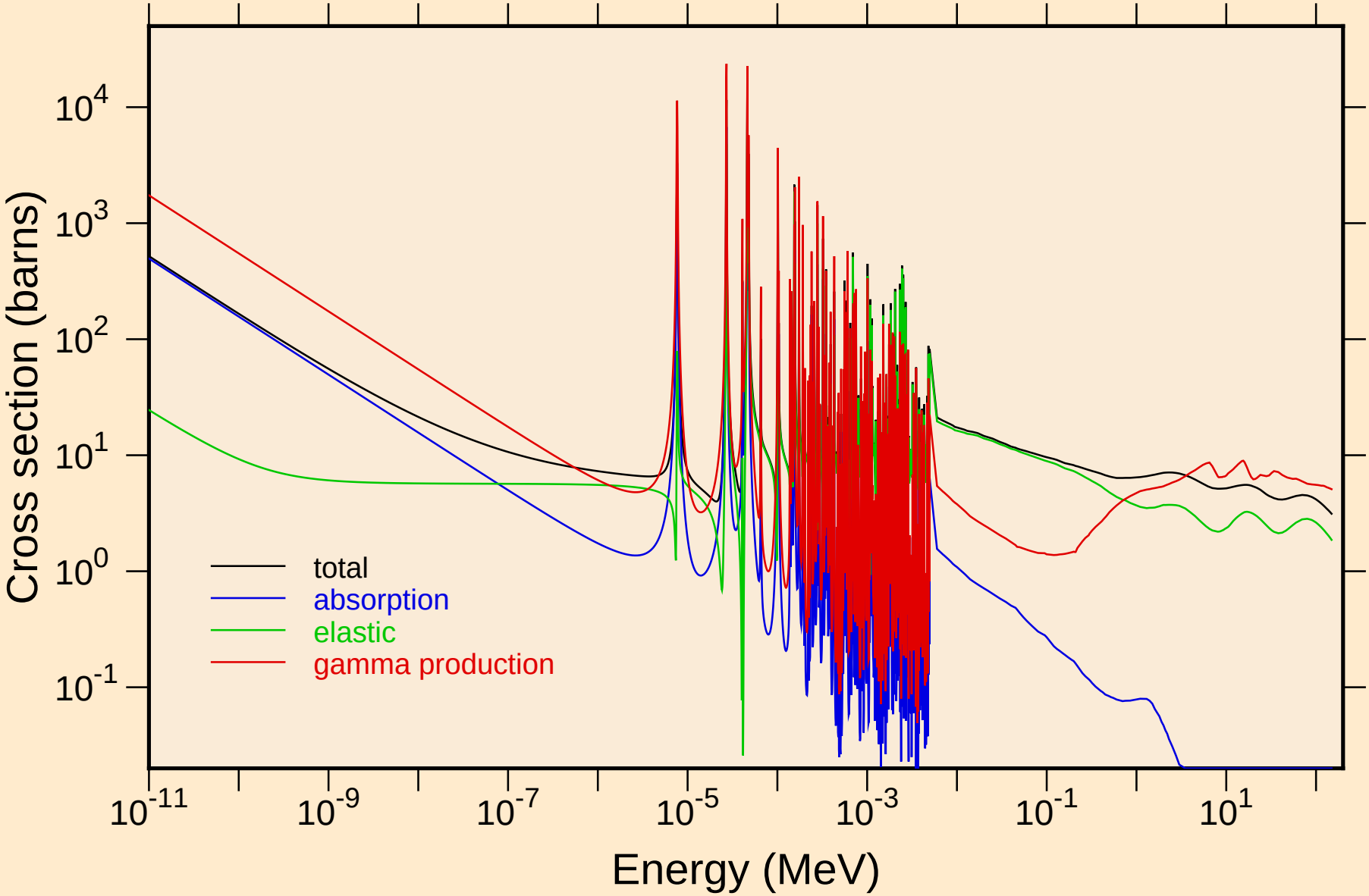
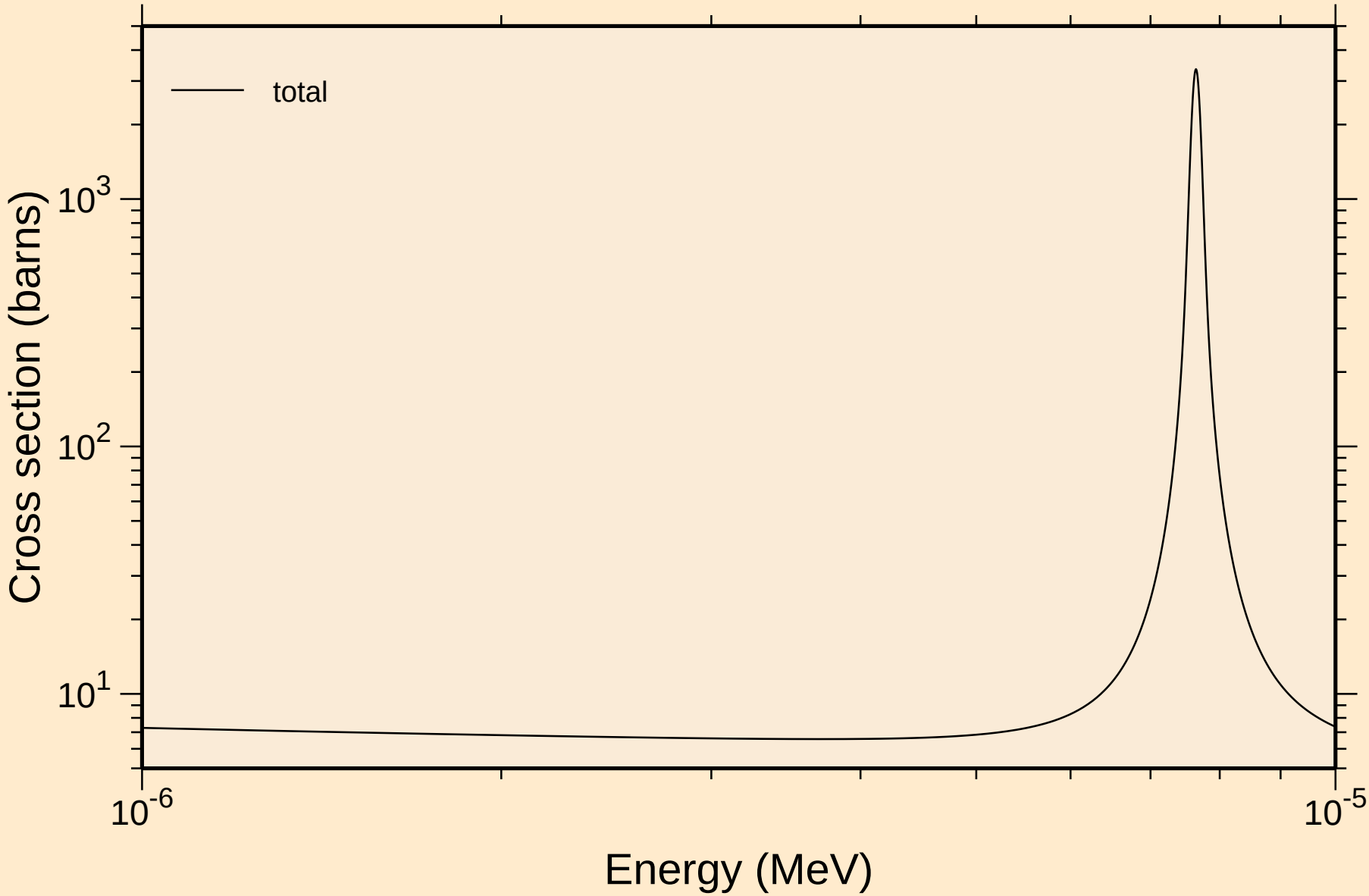
ADVANCE CALCULATIONS

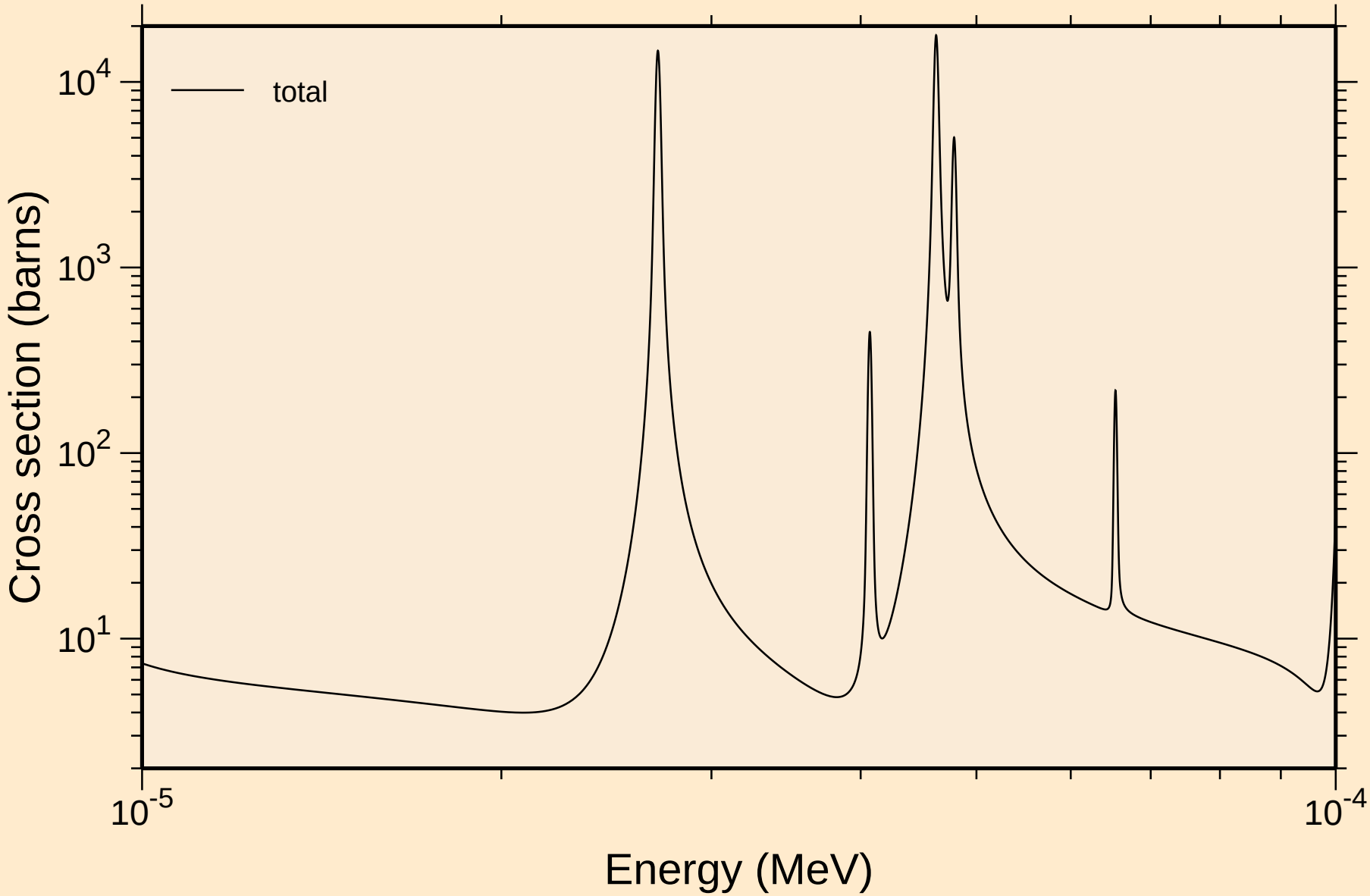
Principal cross sections



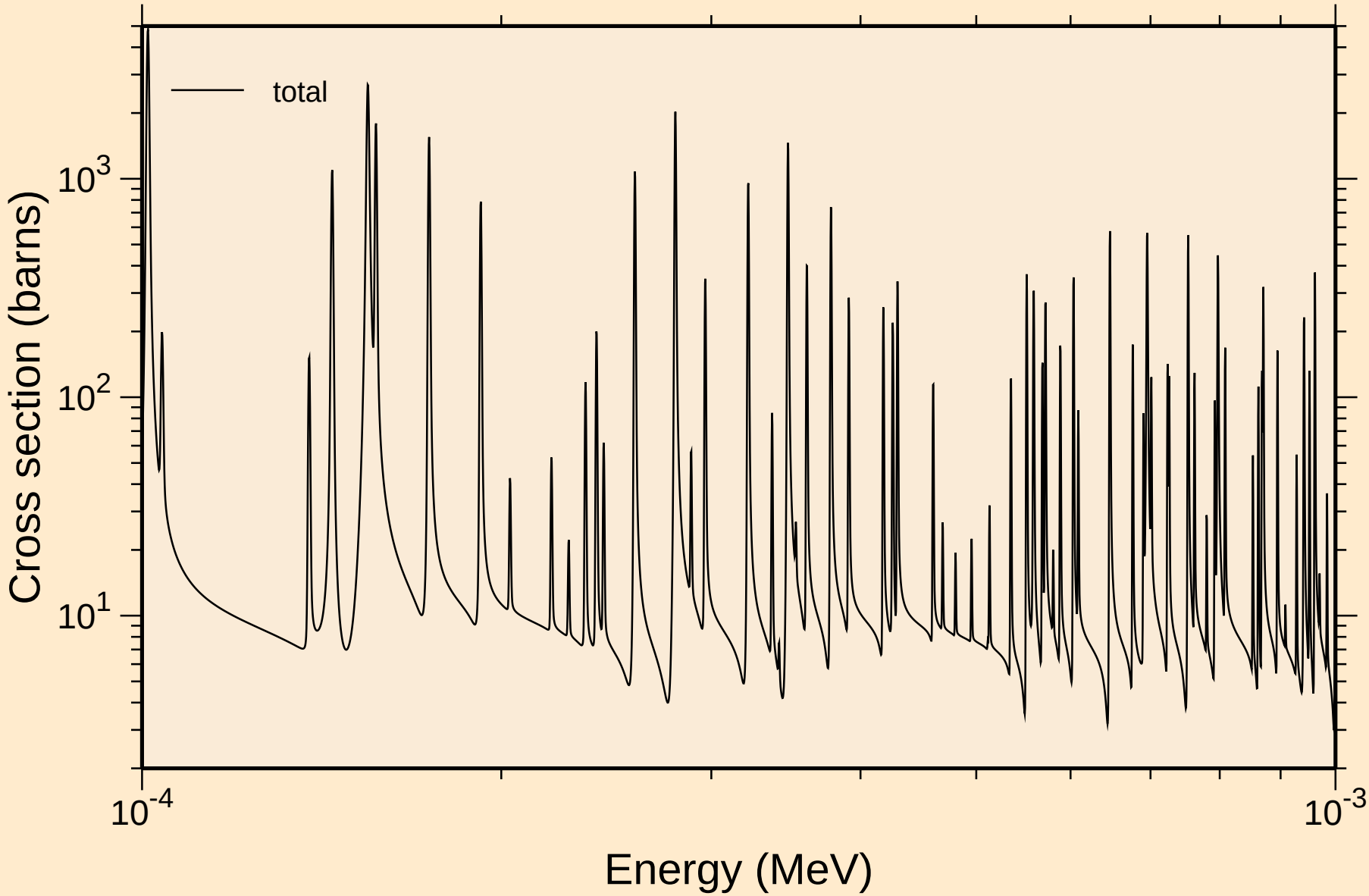
ADVANCE CALCULATIONS
resonance total cross section



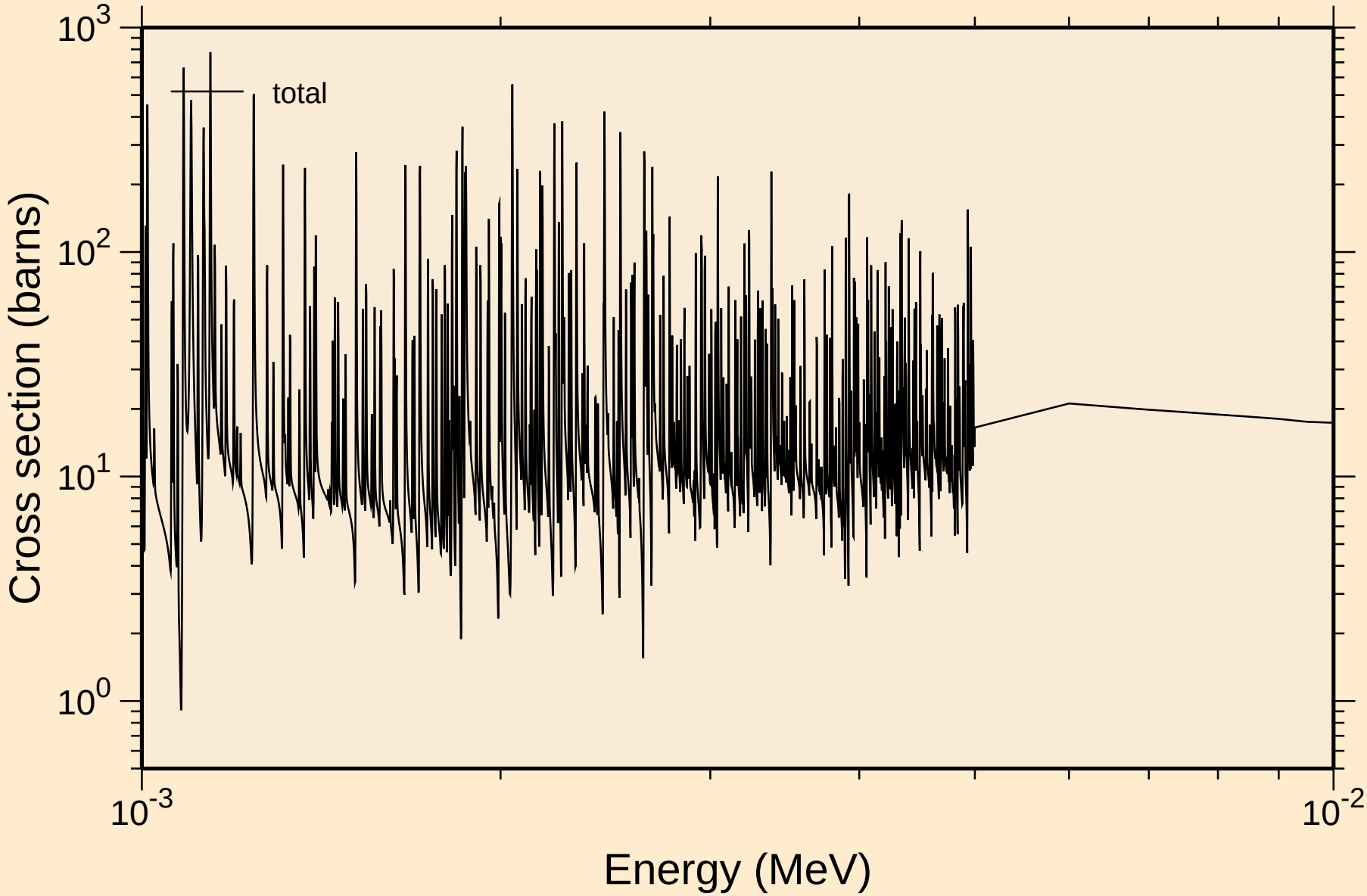
ADVANCE CALCULATIONS
resonance total cross section



ADVANCE CALCULATIONS
resonance total cross section

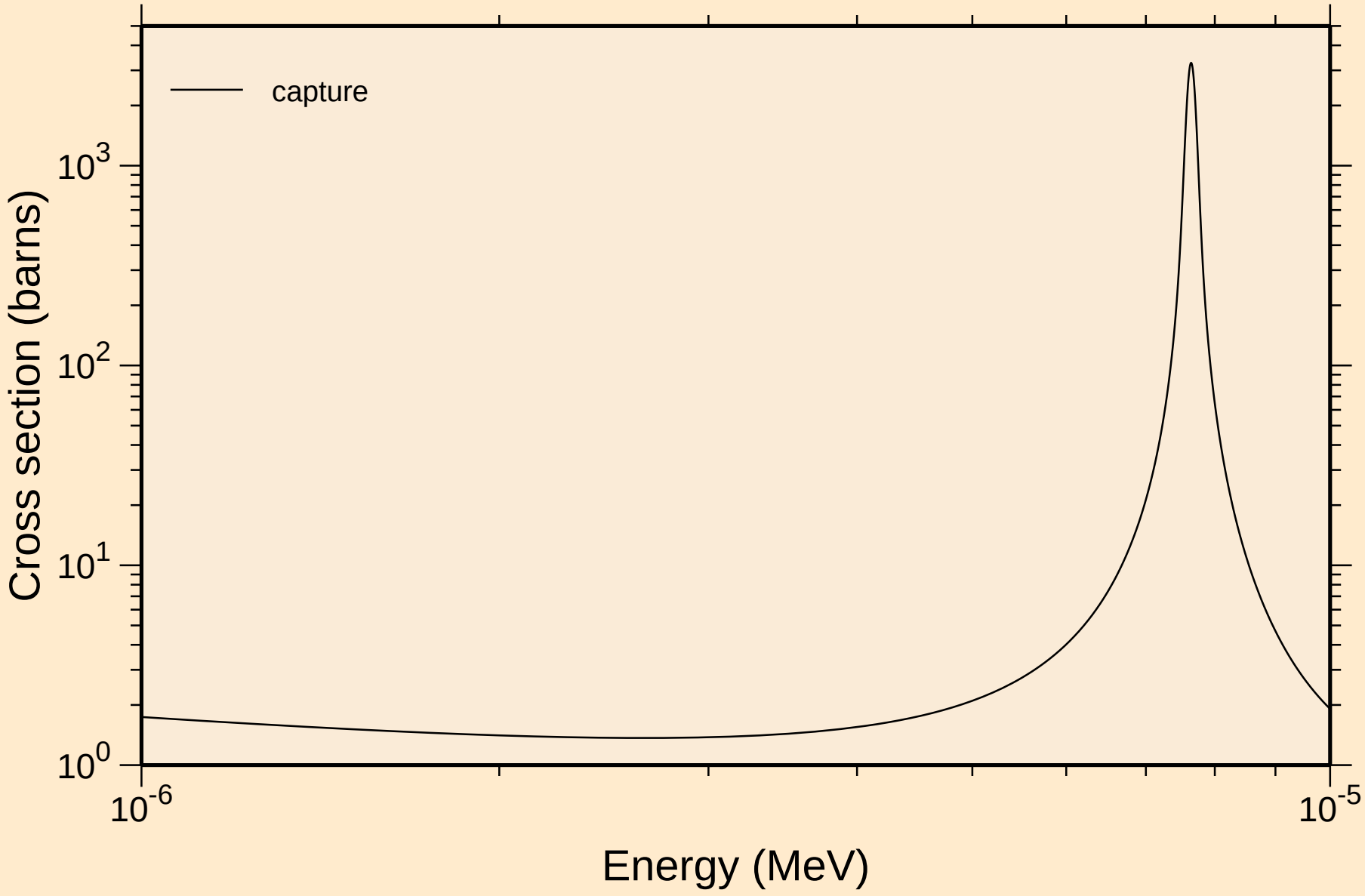


ADVANCE CALCULATIONS
resonance total cross section



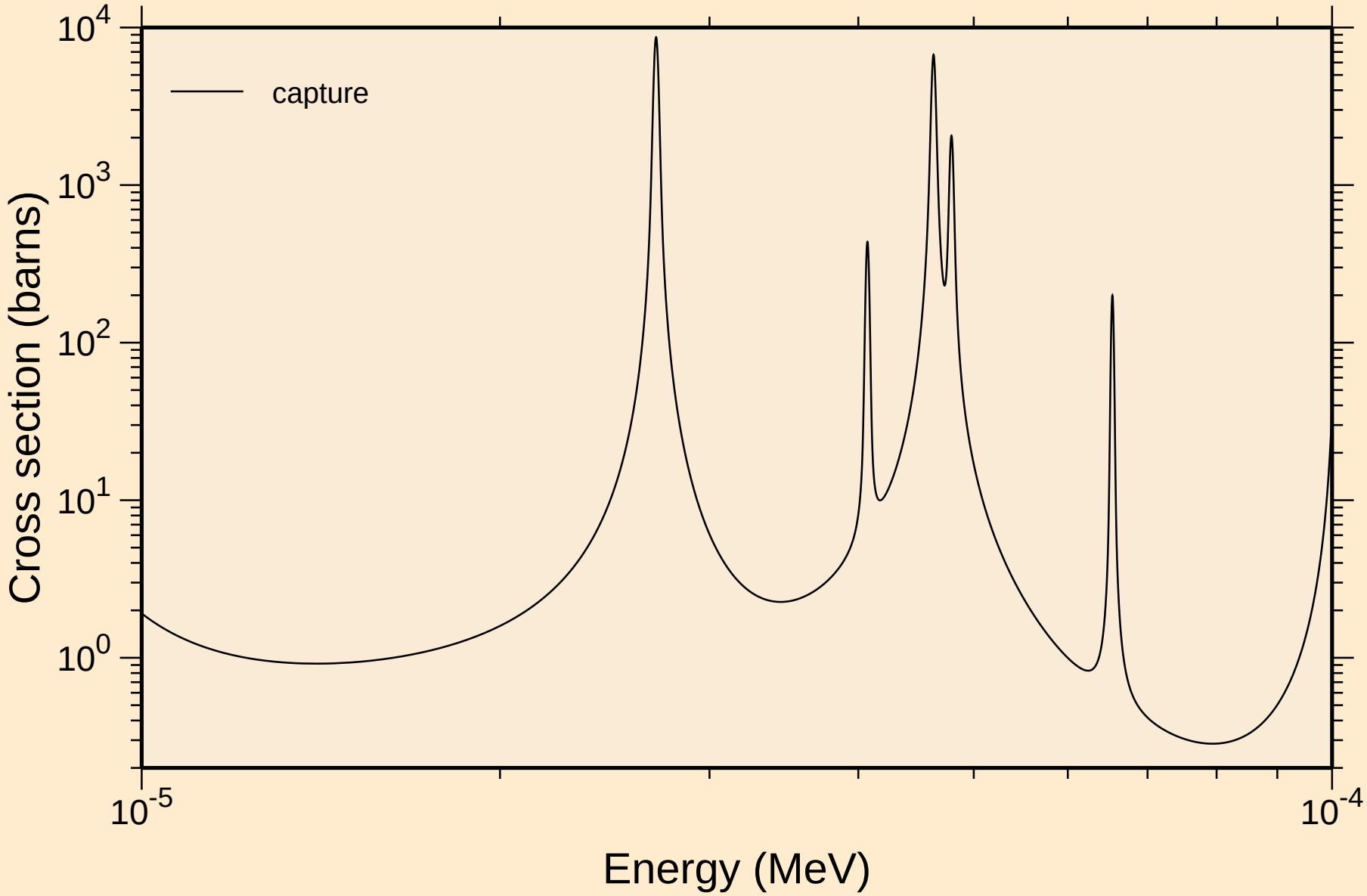
ADVANCE CALCULATIONS

resonance absorption cross sections

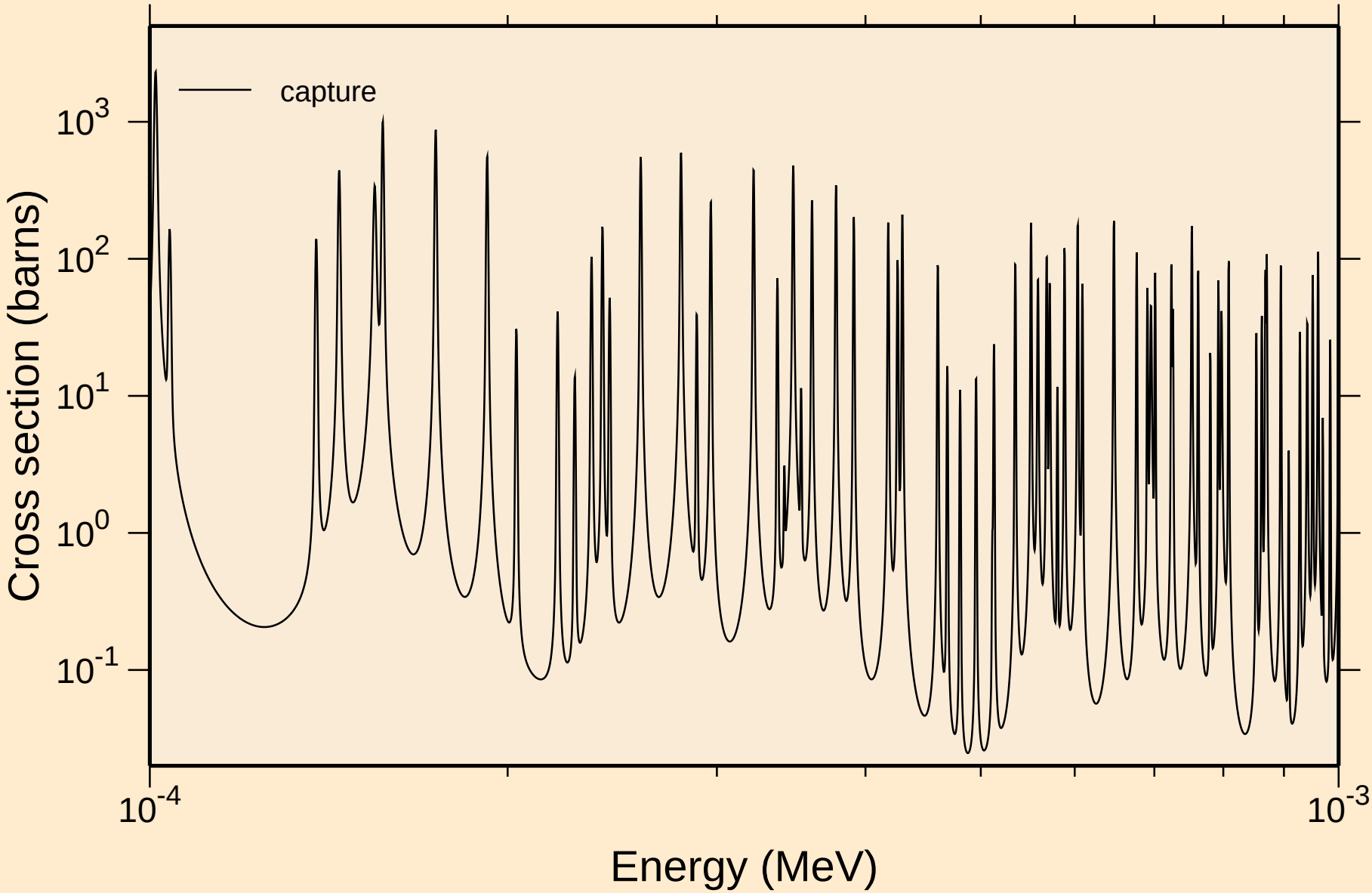


ADVANCE CALCULATIONS

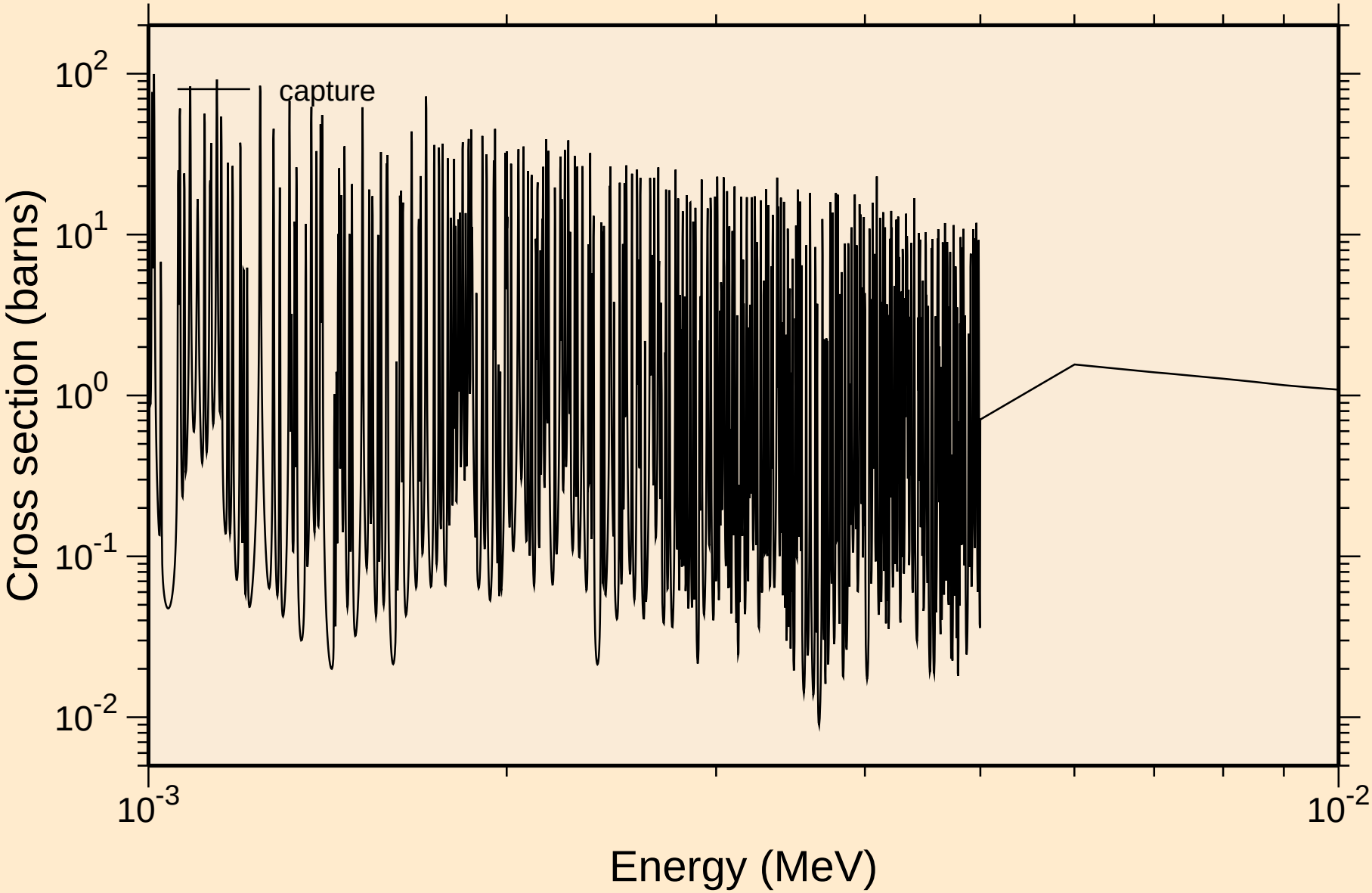
resonance absorption cross sections



ADVANCE CALCULATIONS
resonance absorption cross sections

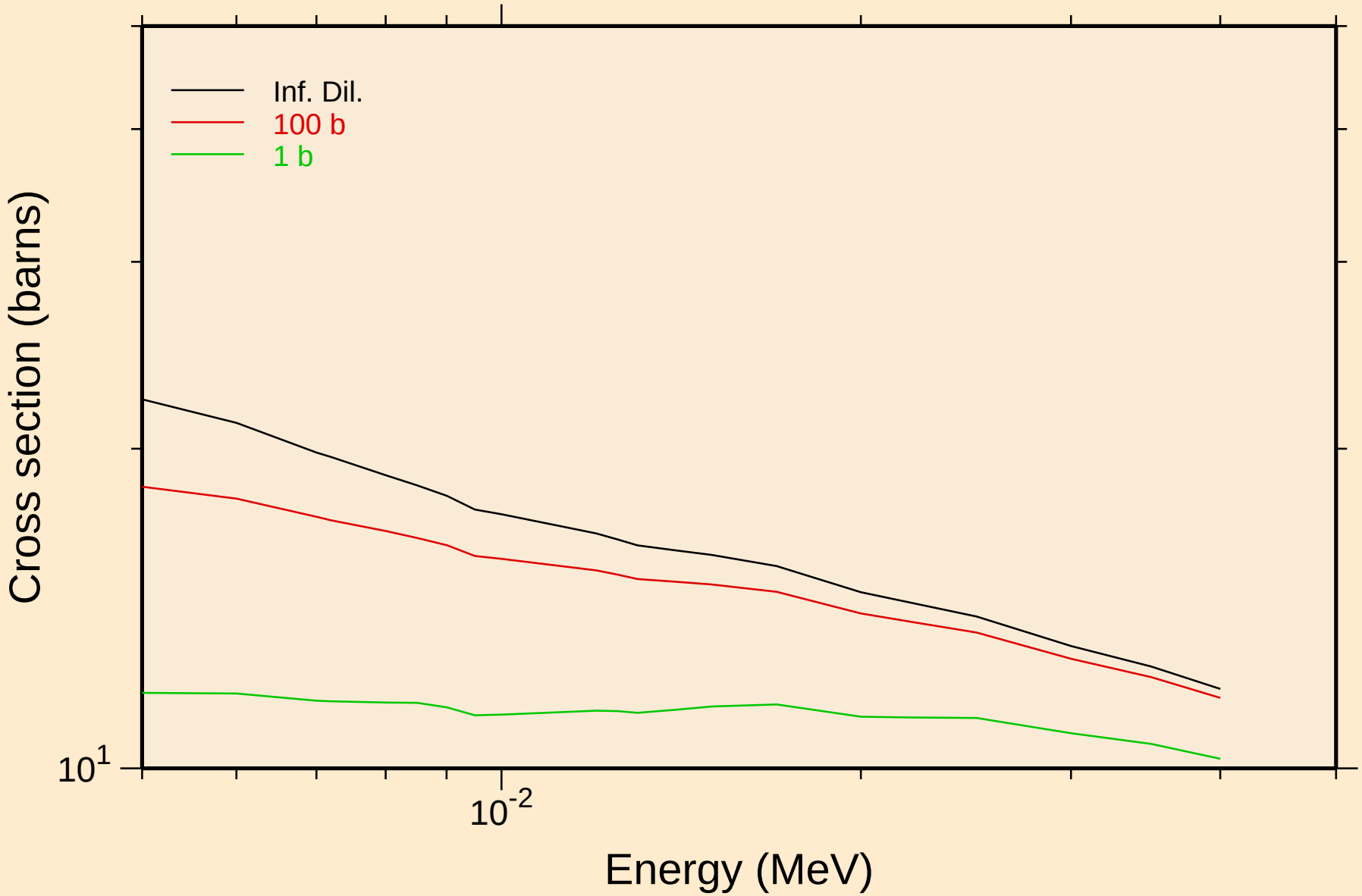


ADVANCE CALCULATIONS
resonance absorption cross sections



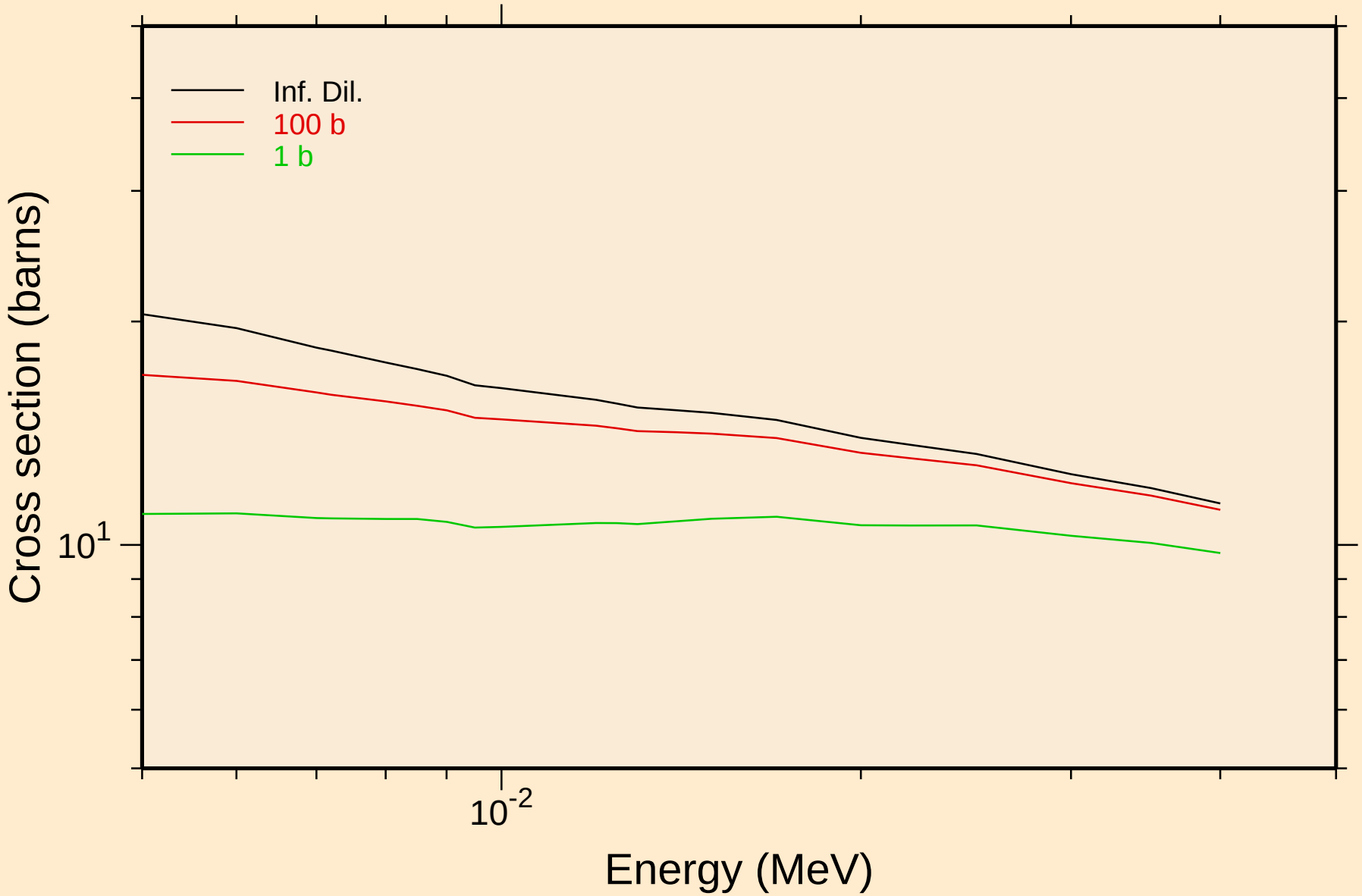
ADVANCE CALCULATIONS

UR total cross section



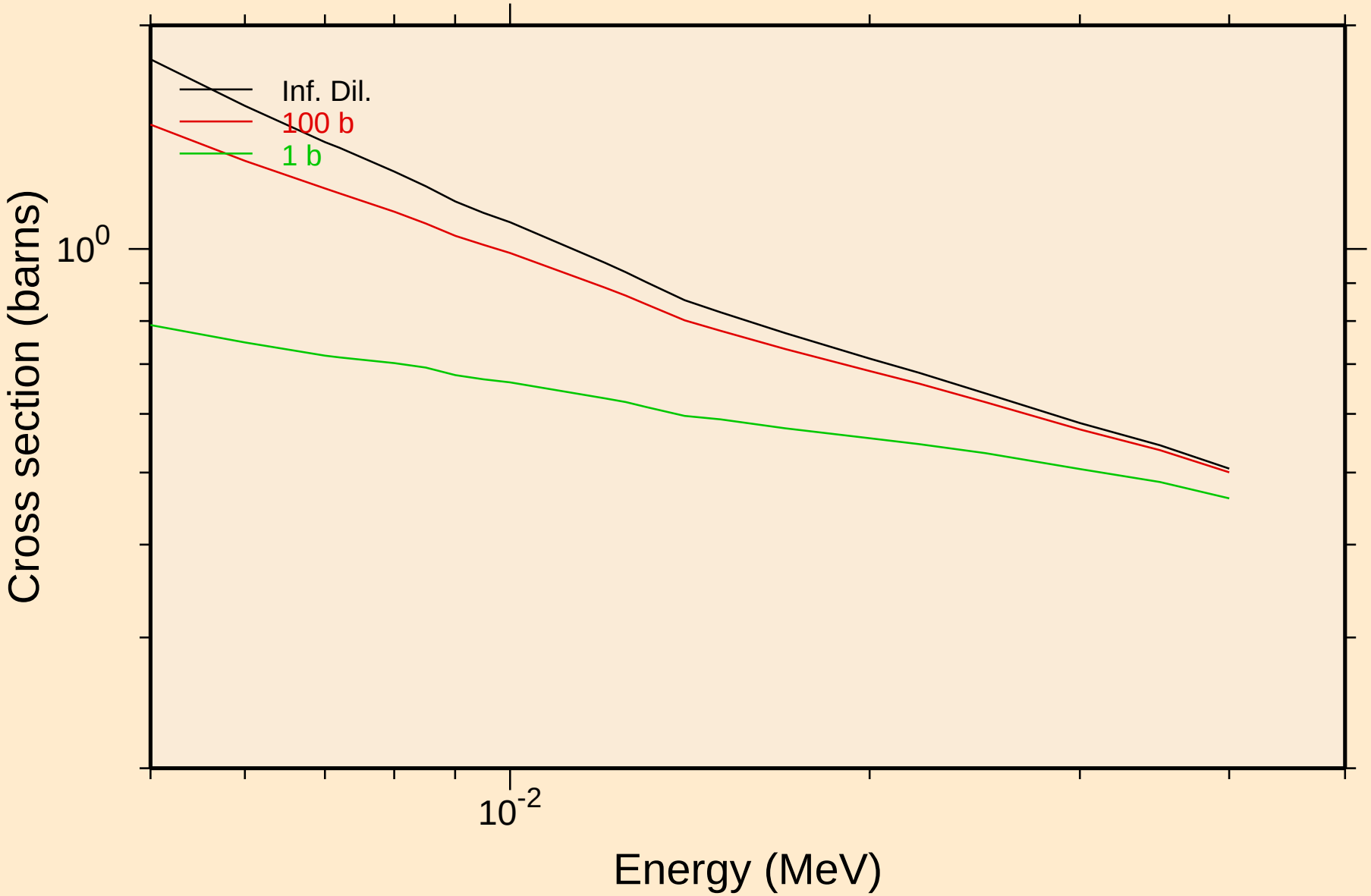
ADVANCE CALCULATIONS

UR elastic cross section

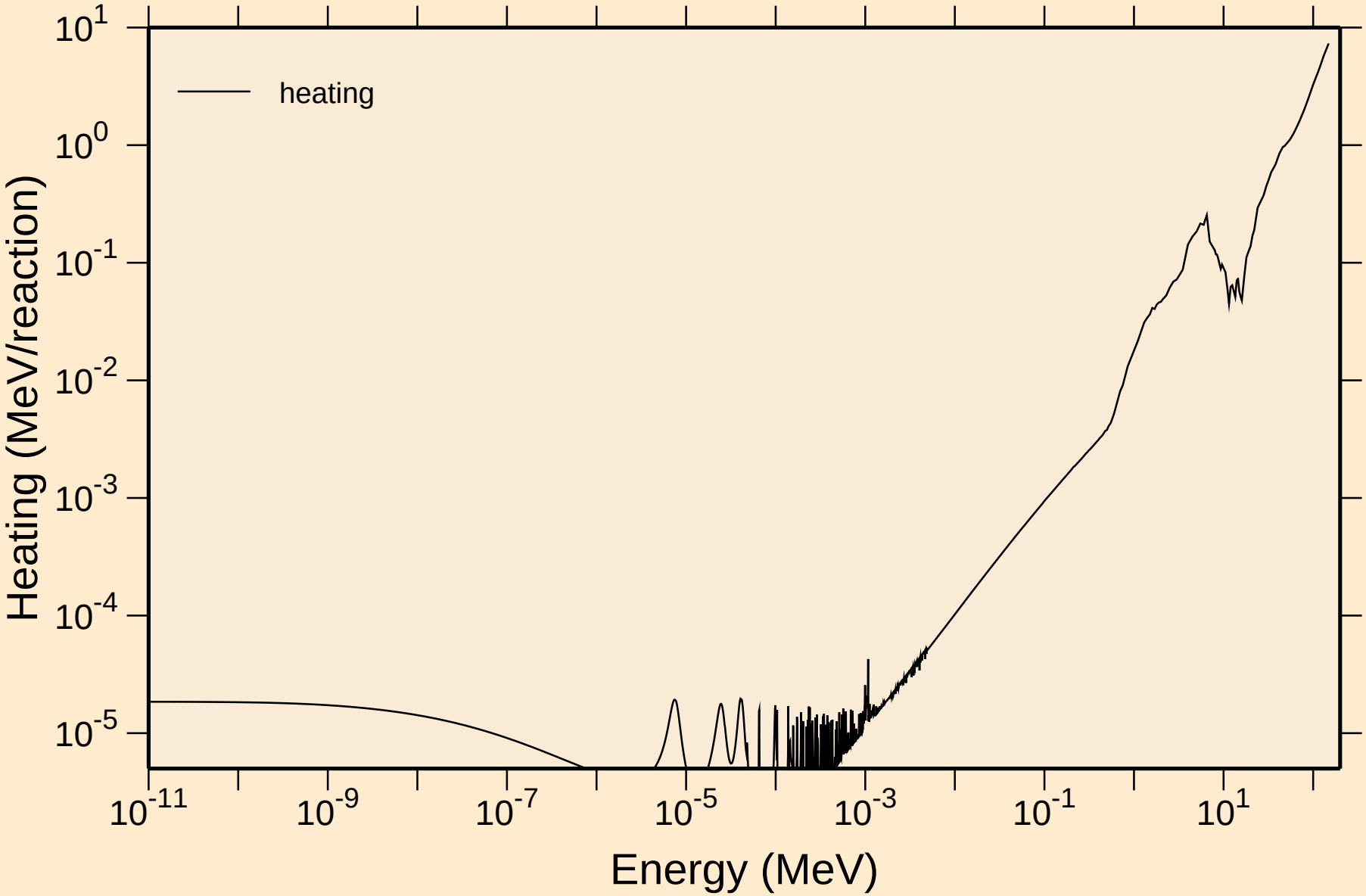


ADVANCE CALCULATIONS

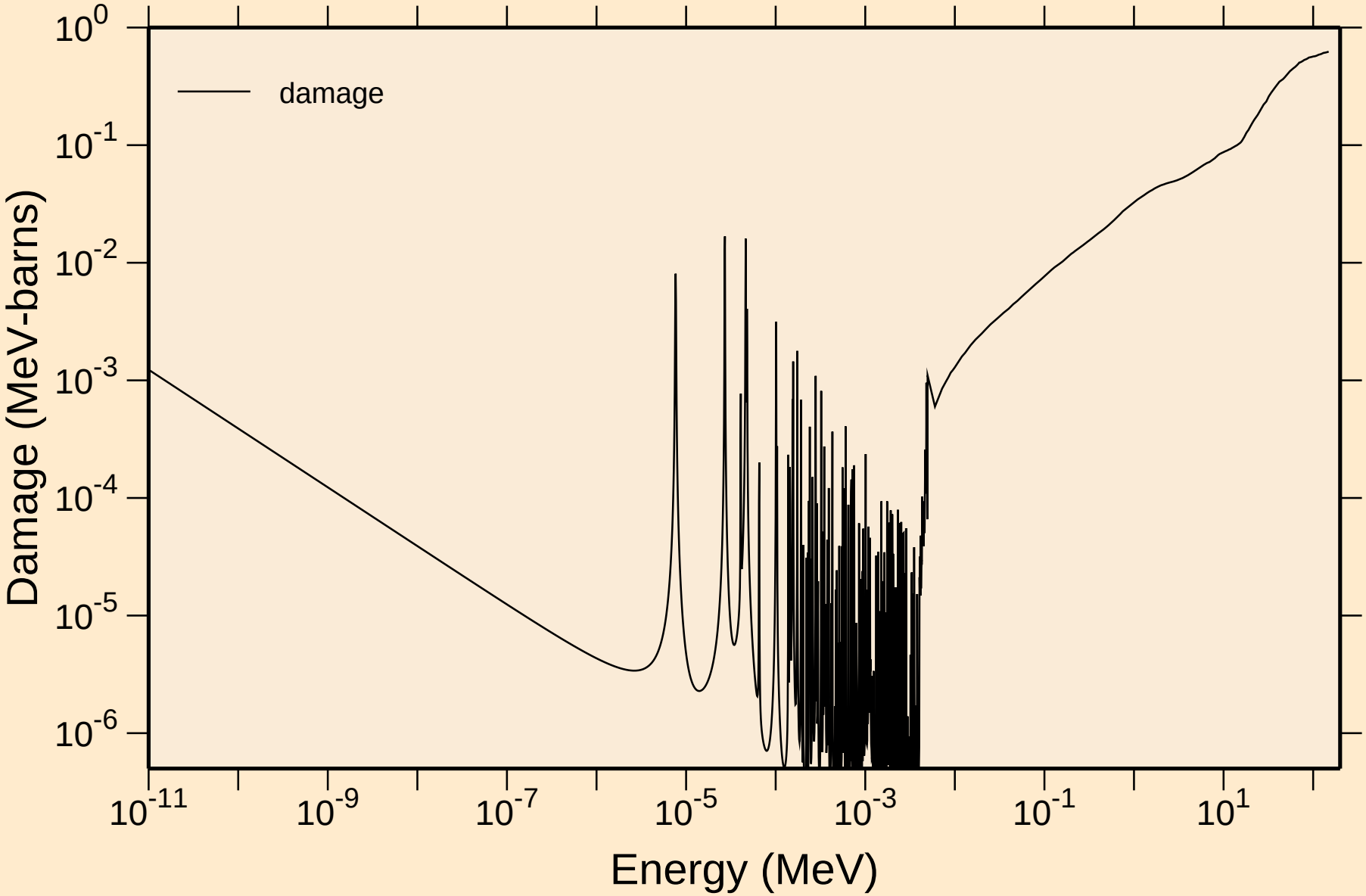
UR capture cross section



ADVANCE CALCULATIONS
Heating

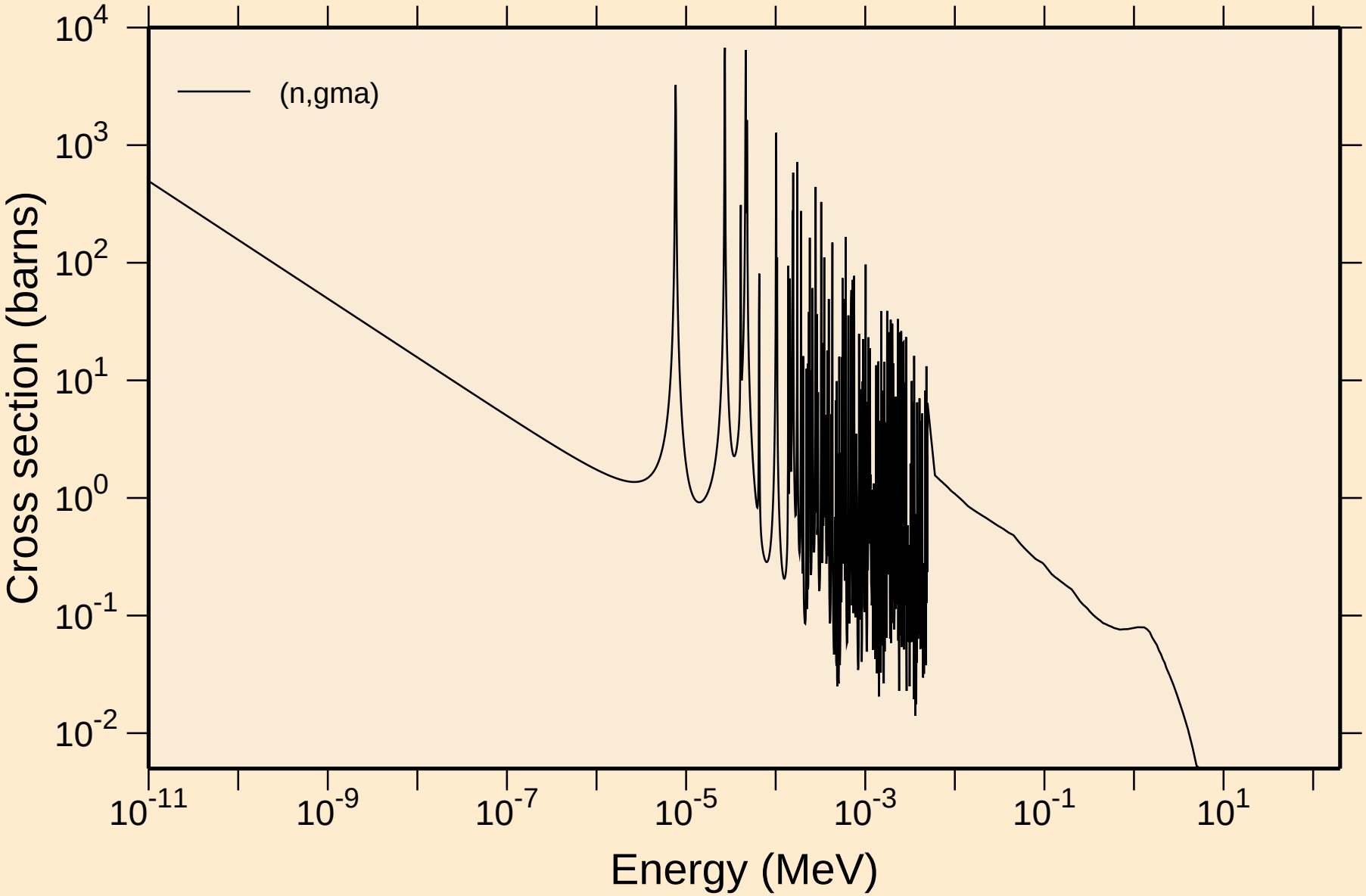


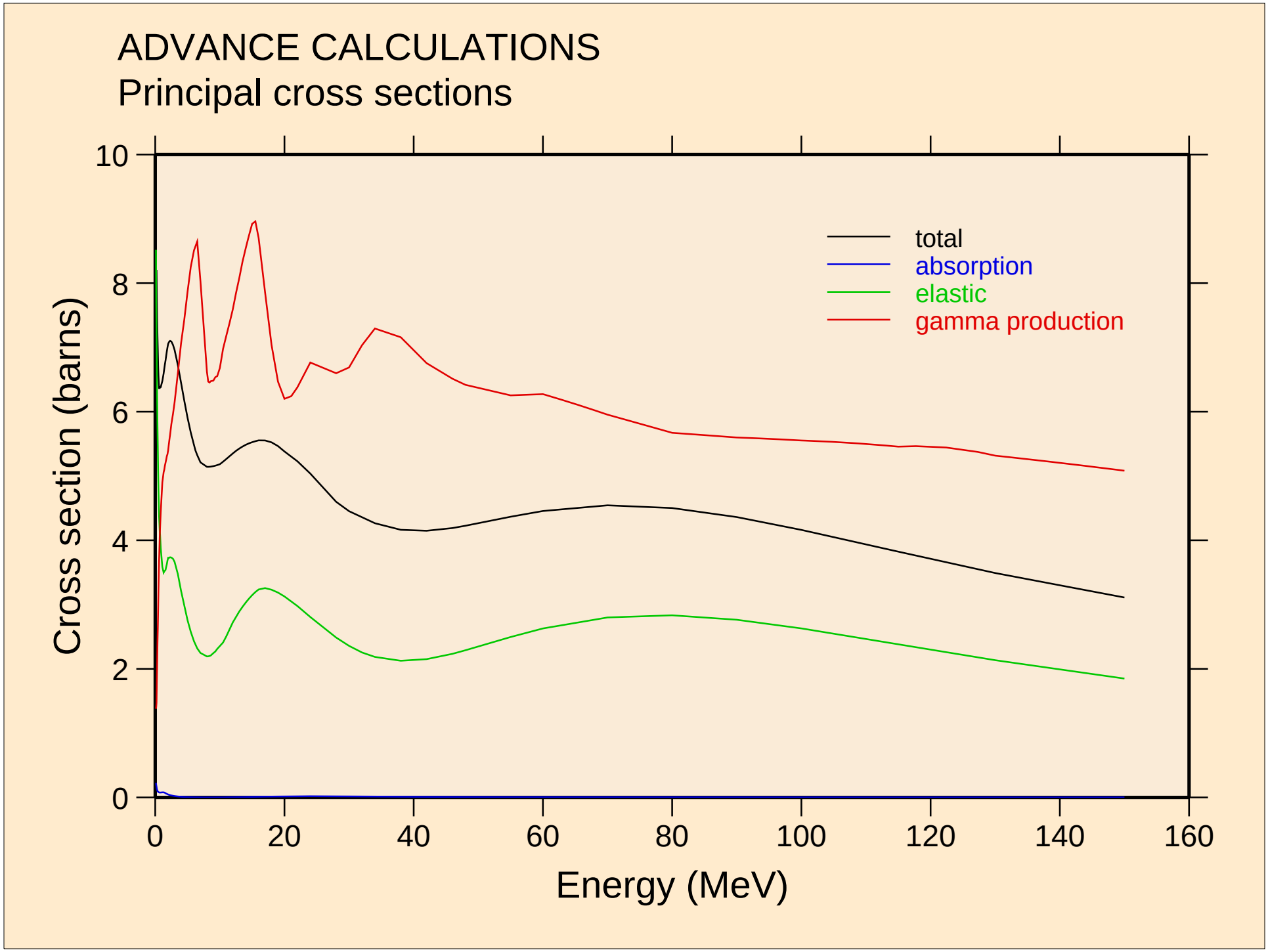
ADVANCE CALCULATIONS
Damage



ADVANCE CALCULATIONS

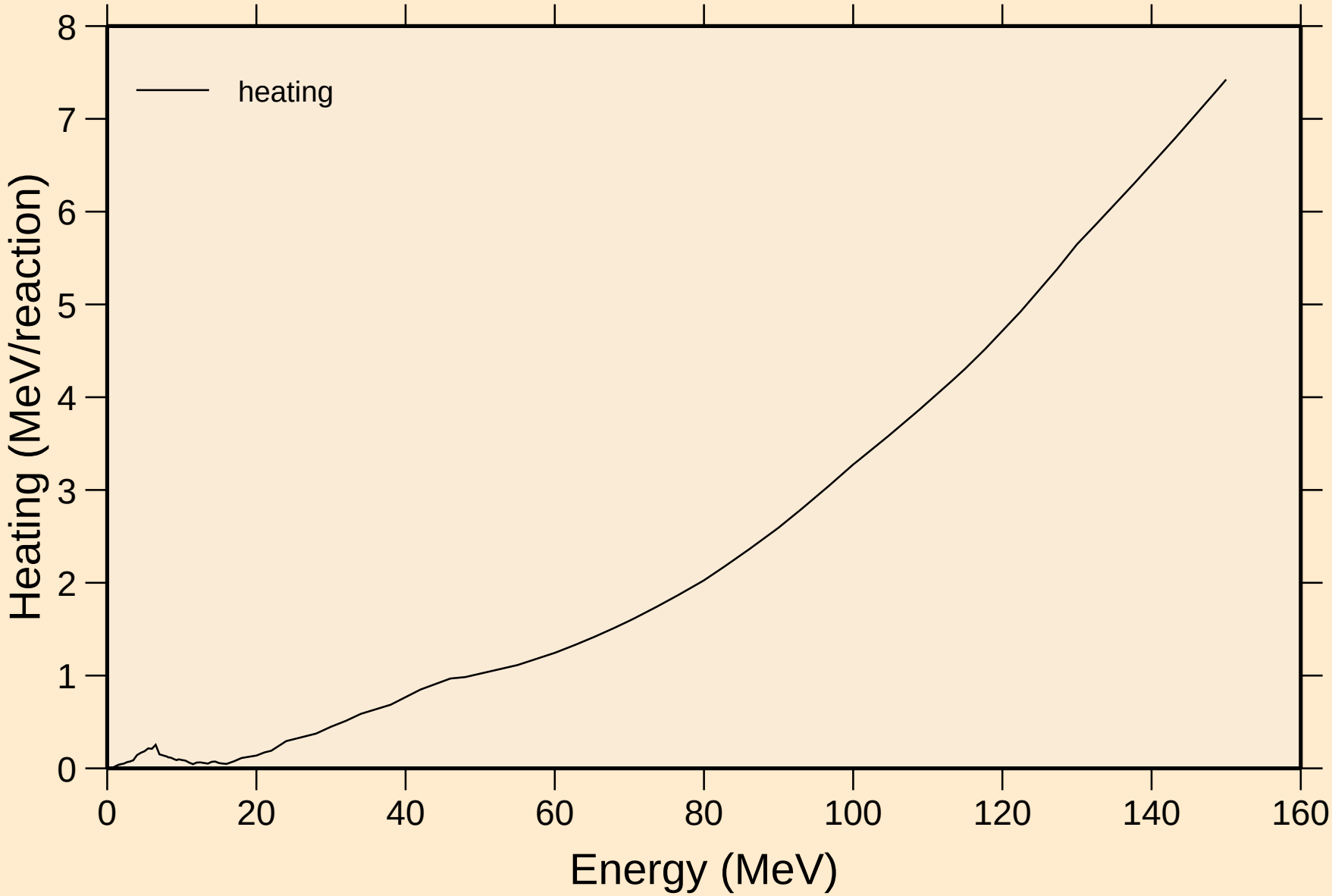
Non-threshold reactions

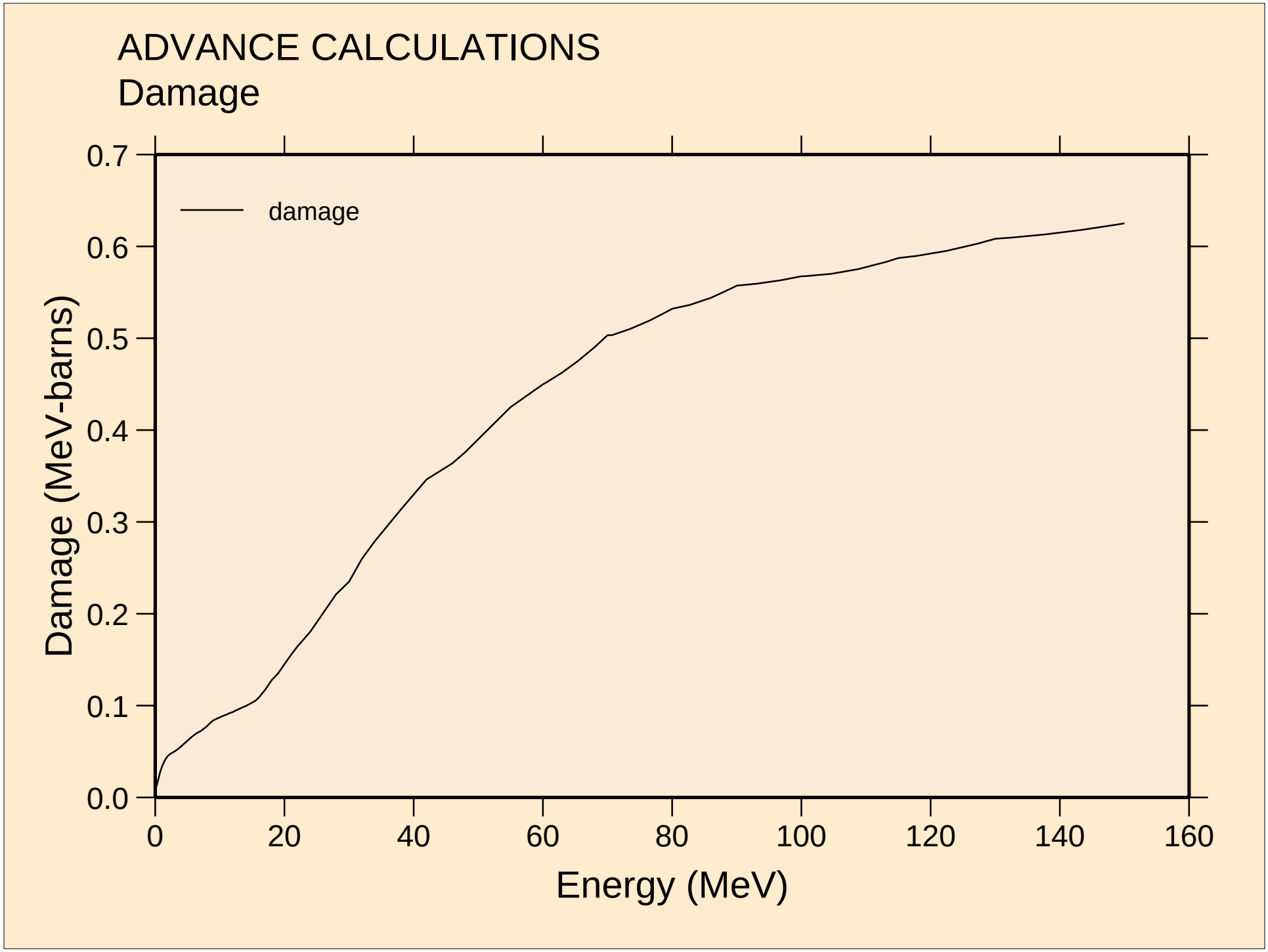



ADVANCE CALCULATIONS
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
2
4
6
8
10
0
20
40
60
80
100
120
140
160

ADVANCE CALCULATIONS

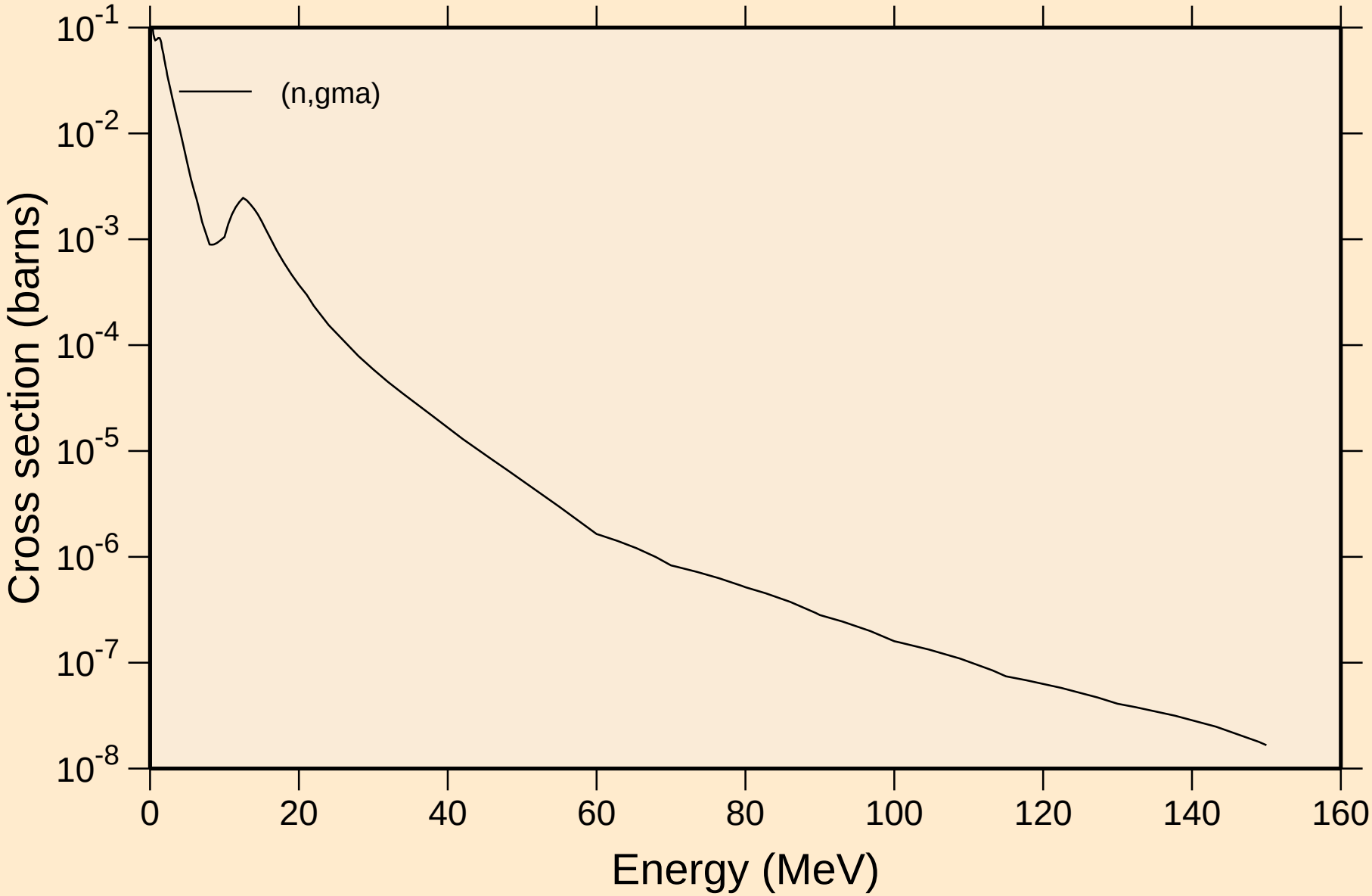
Heating

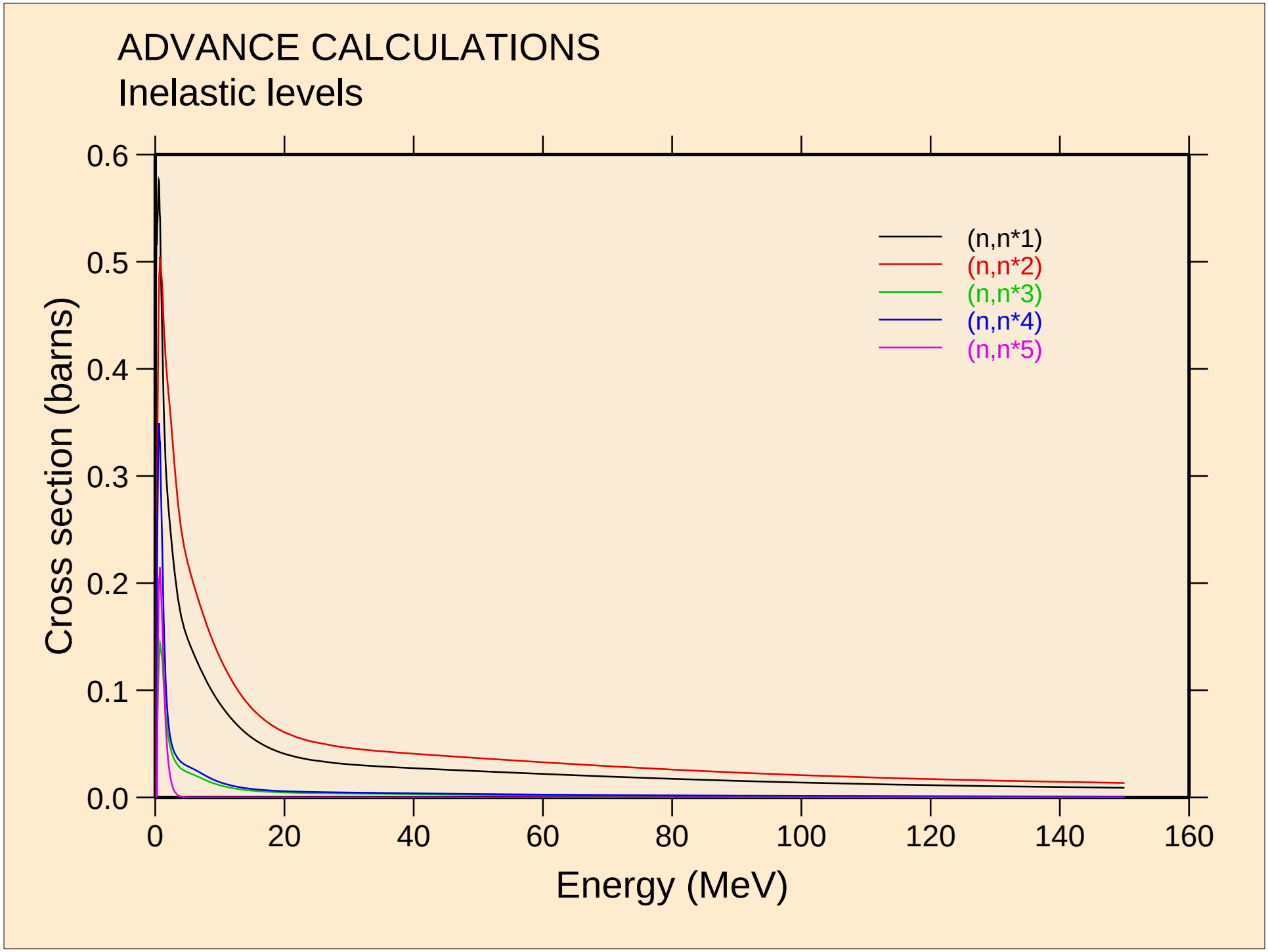



ADVANCE CALCULATIONS
Damage
damage
Damage (MeV-barns)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
20
40
60
80
100
120
140
160
Energy (MeV)

ADVANCE CALCULATIONS

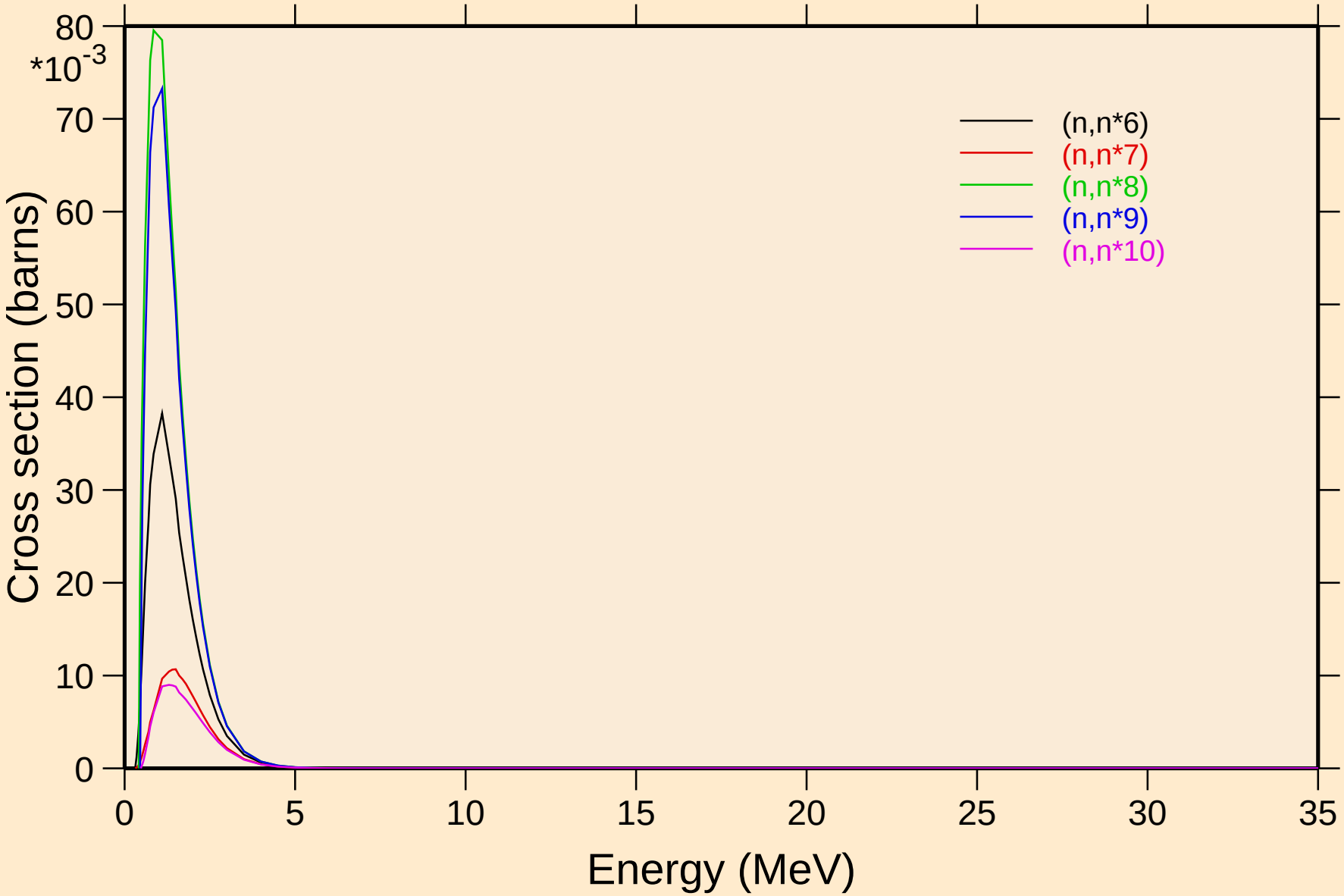
Non-threshold reactions



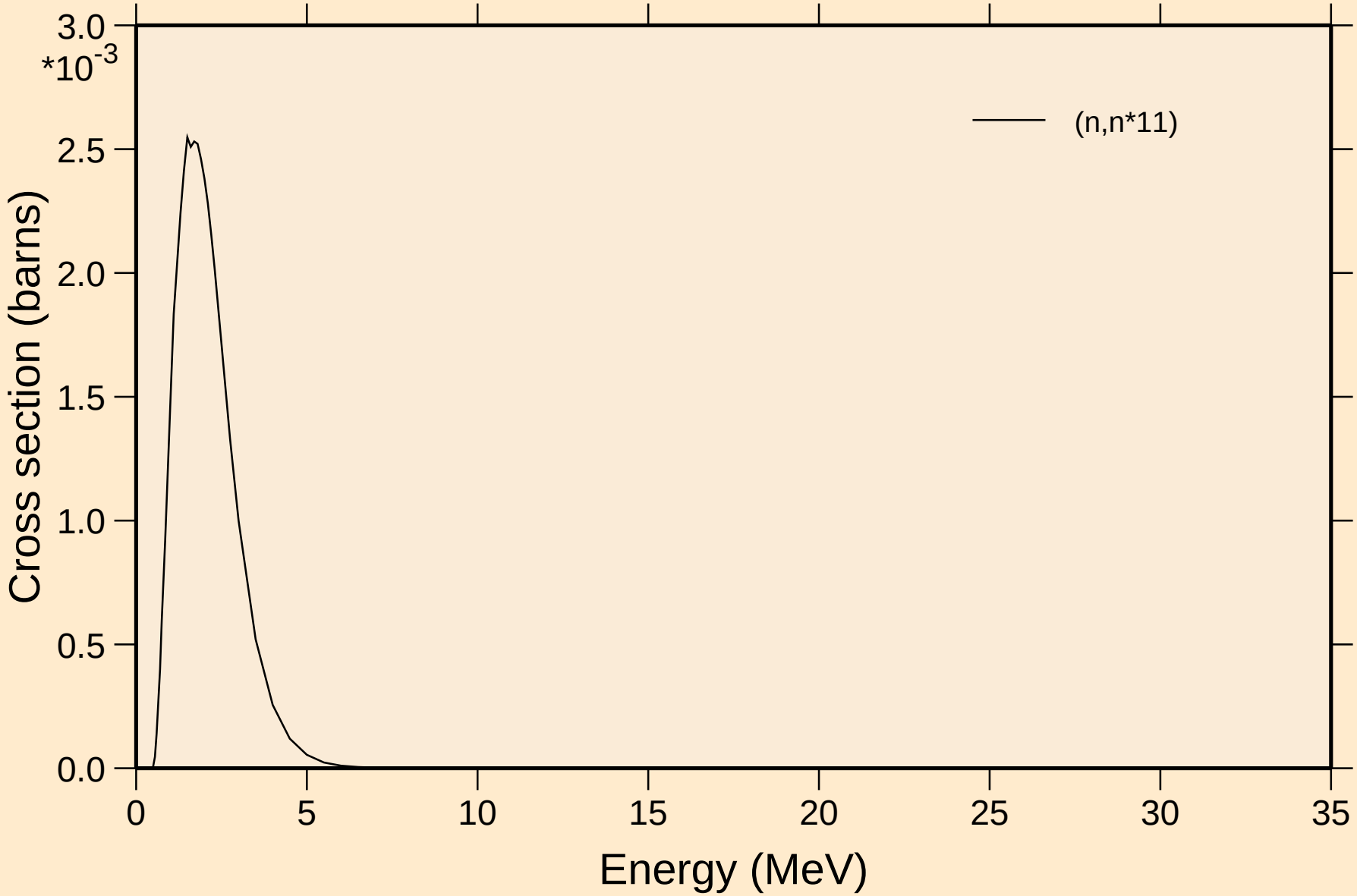

ADVANCE CALCULATIONS
Inelastic levels
Cross section (barns)
Energy (MeV)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
20
40
60
80
100
120
140
160
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

ADVANCE CALCULATIONS

Inelastic levels

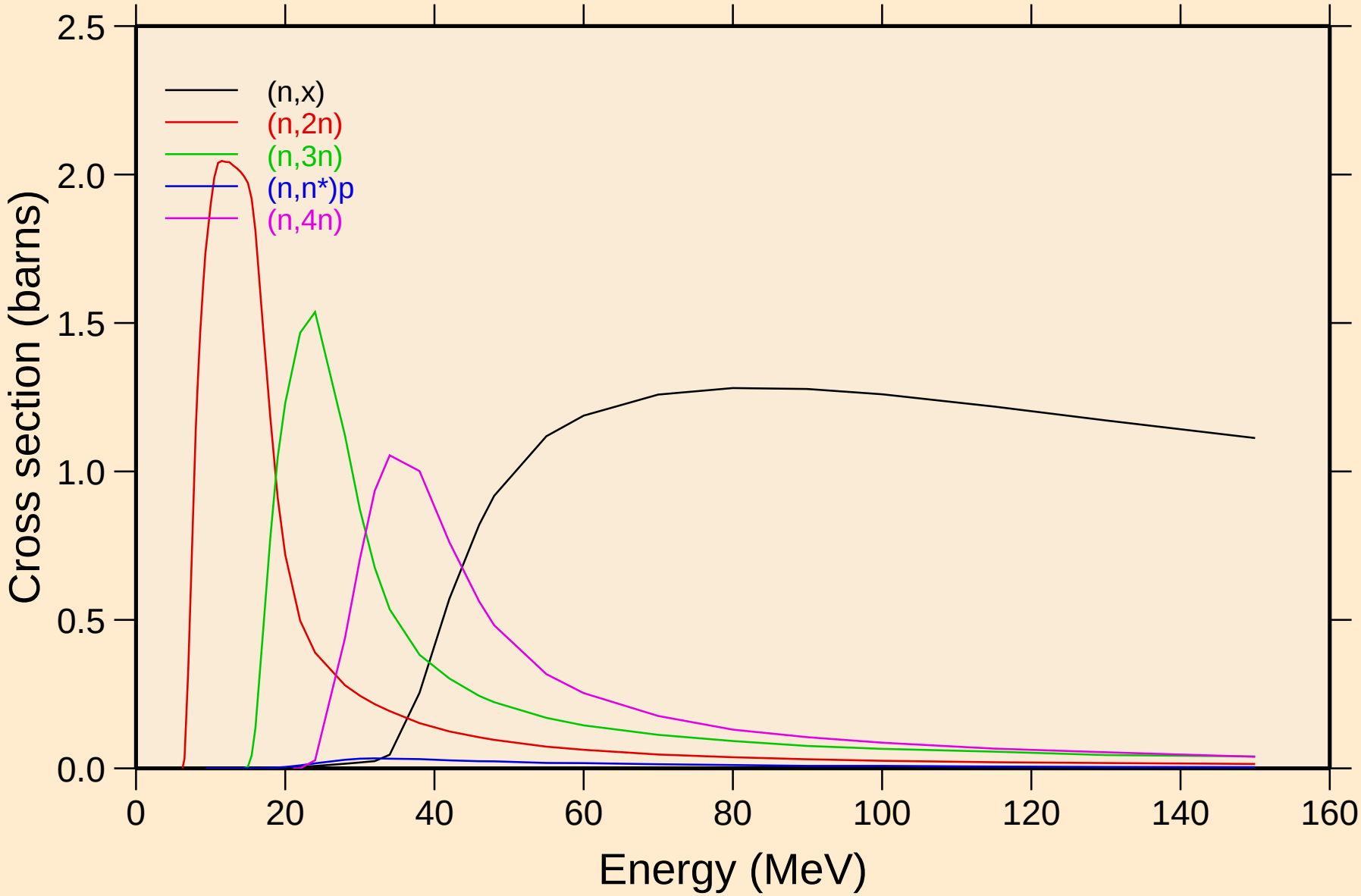


ADVANCE CALCULATIONS
Inelastic levels

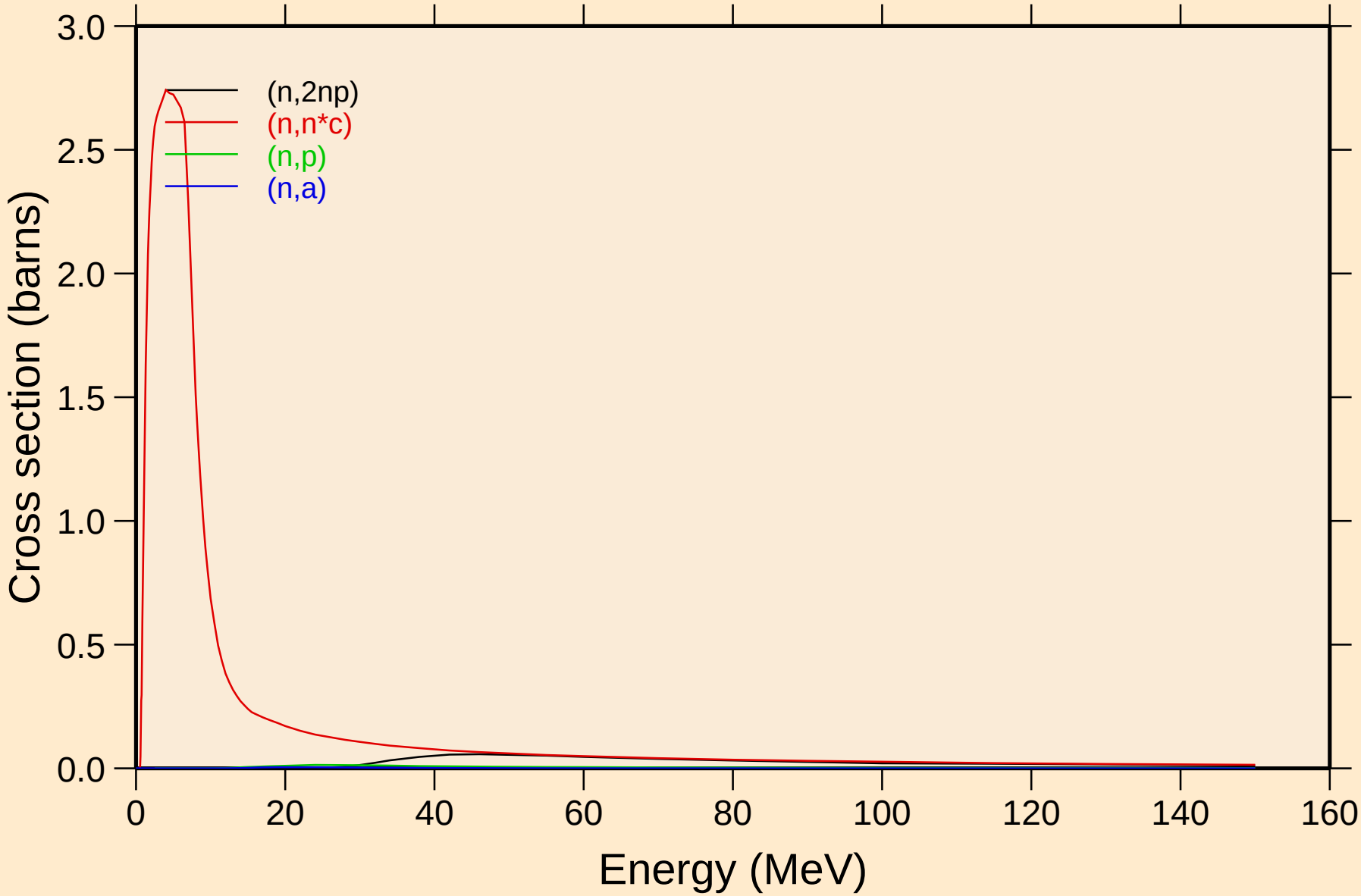


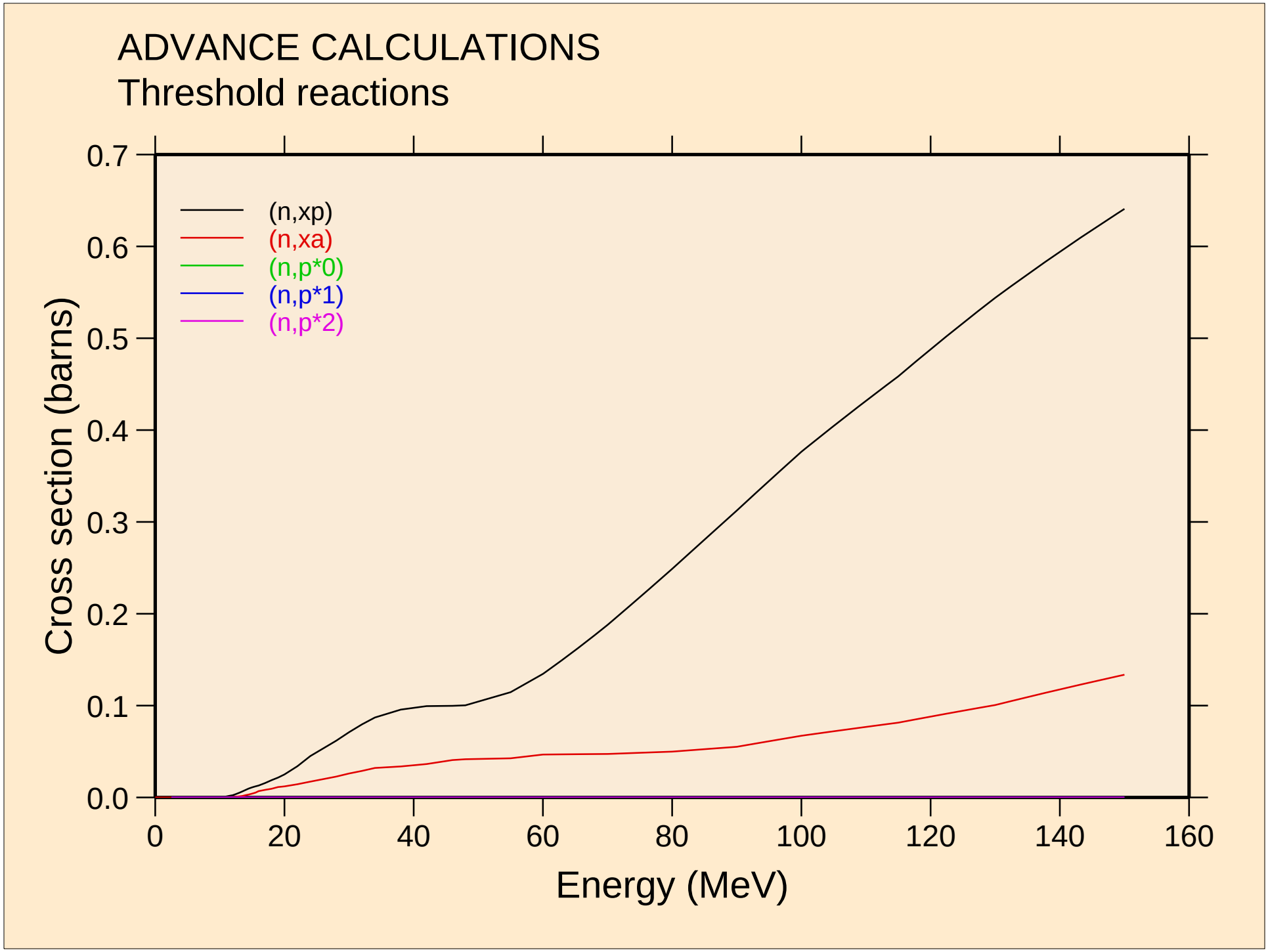
ADVANCE CALCULATIONS

Threshold reactions



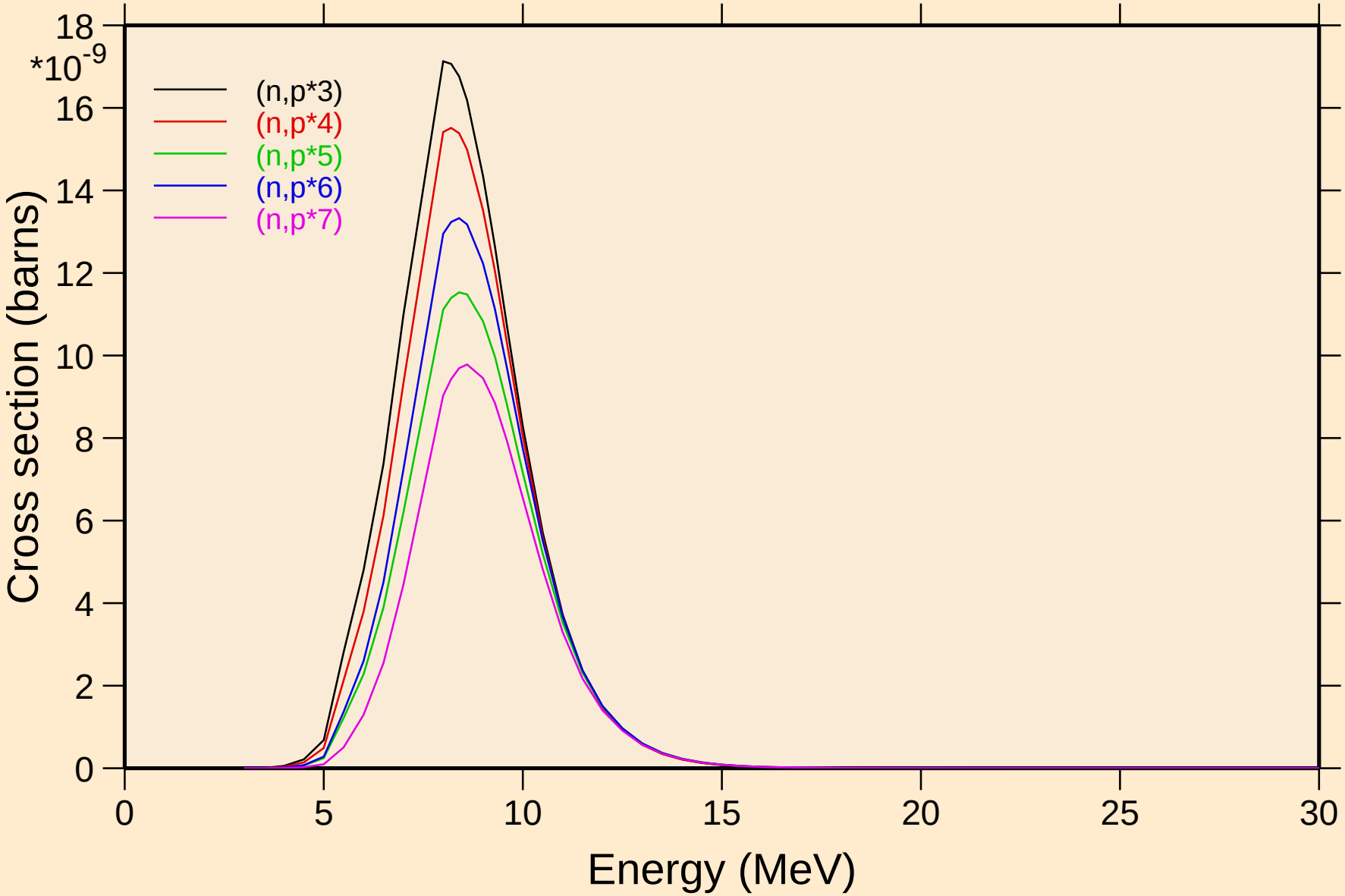
ADVANCE CALCULATIONS
Threshold reactions




ADVANCE CALCULATIONS
Threshold reactions
(n,xp)
(n,xa)
(n,p*0)
(n,p*1)
(n,p*2)
Cross section (barns)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
20
40
60
80
100
120
140
160
Energy (MeV)

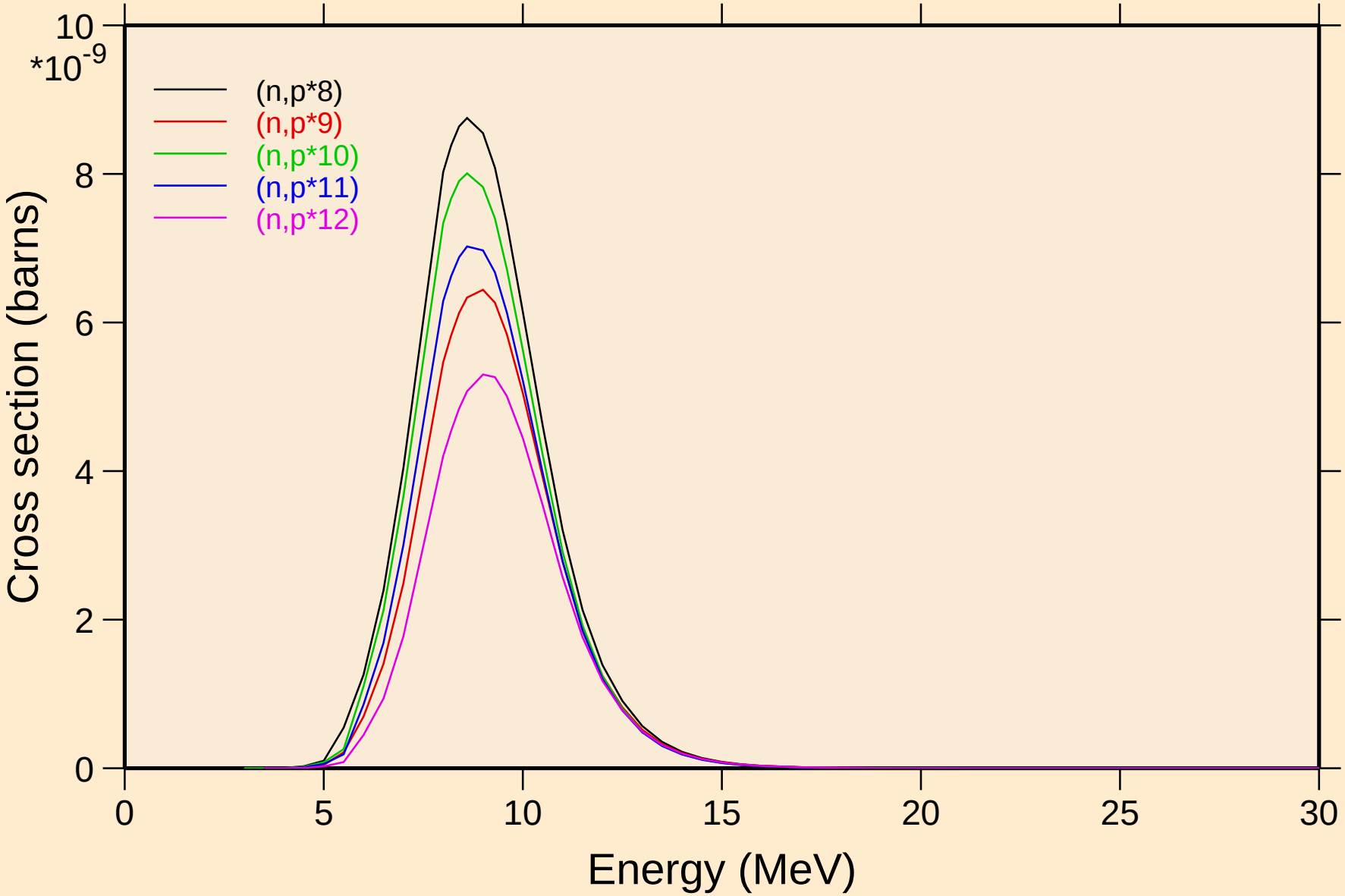
ADVANCE CALCULATIONS

Threshold reactions



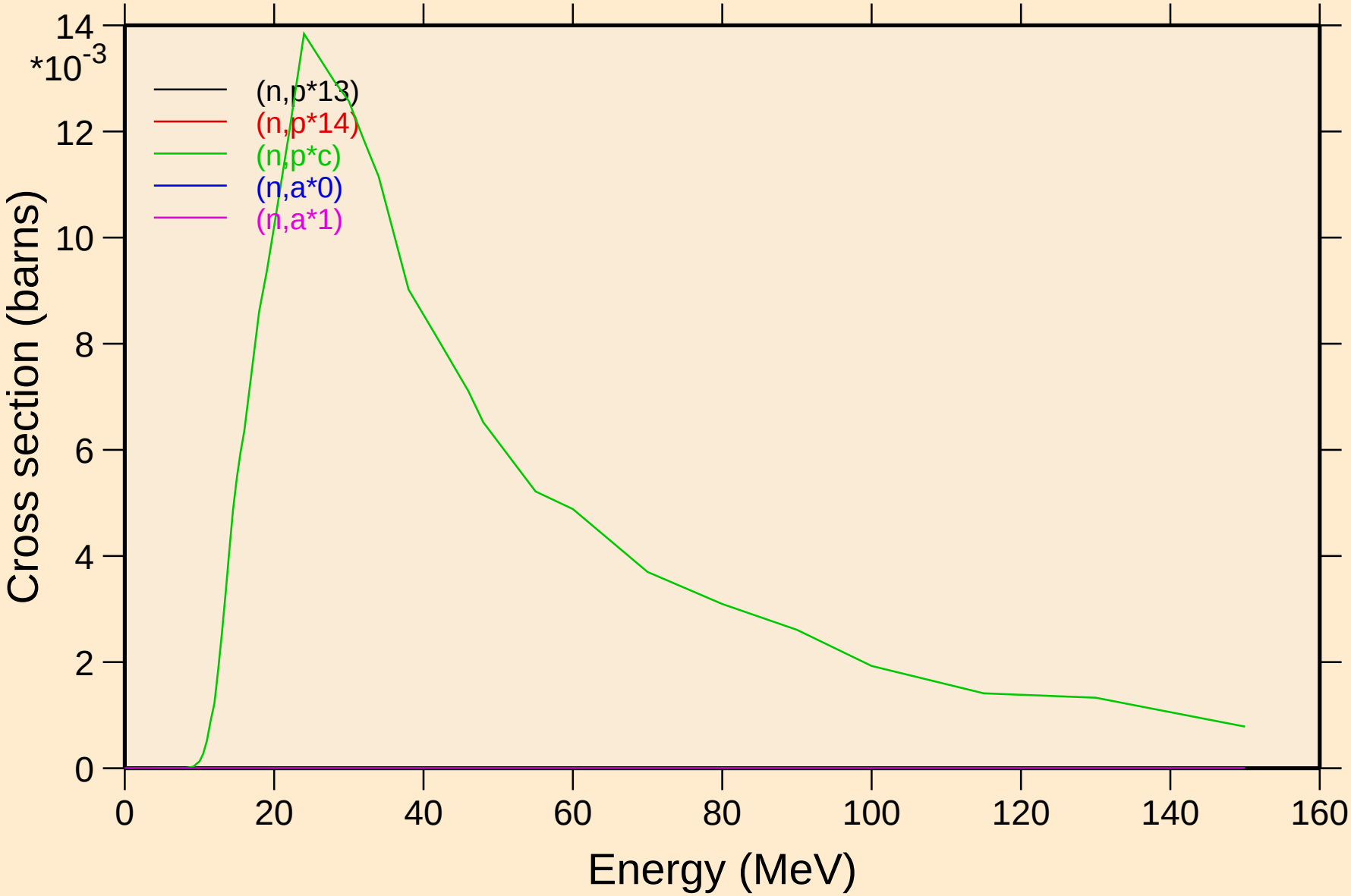
ADVANCE CALCULATIONS

Threshold reactions



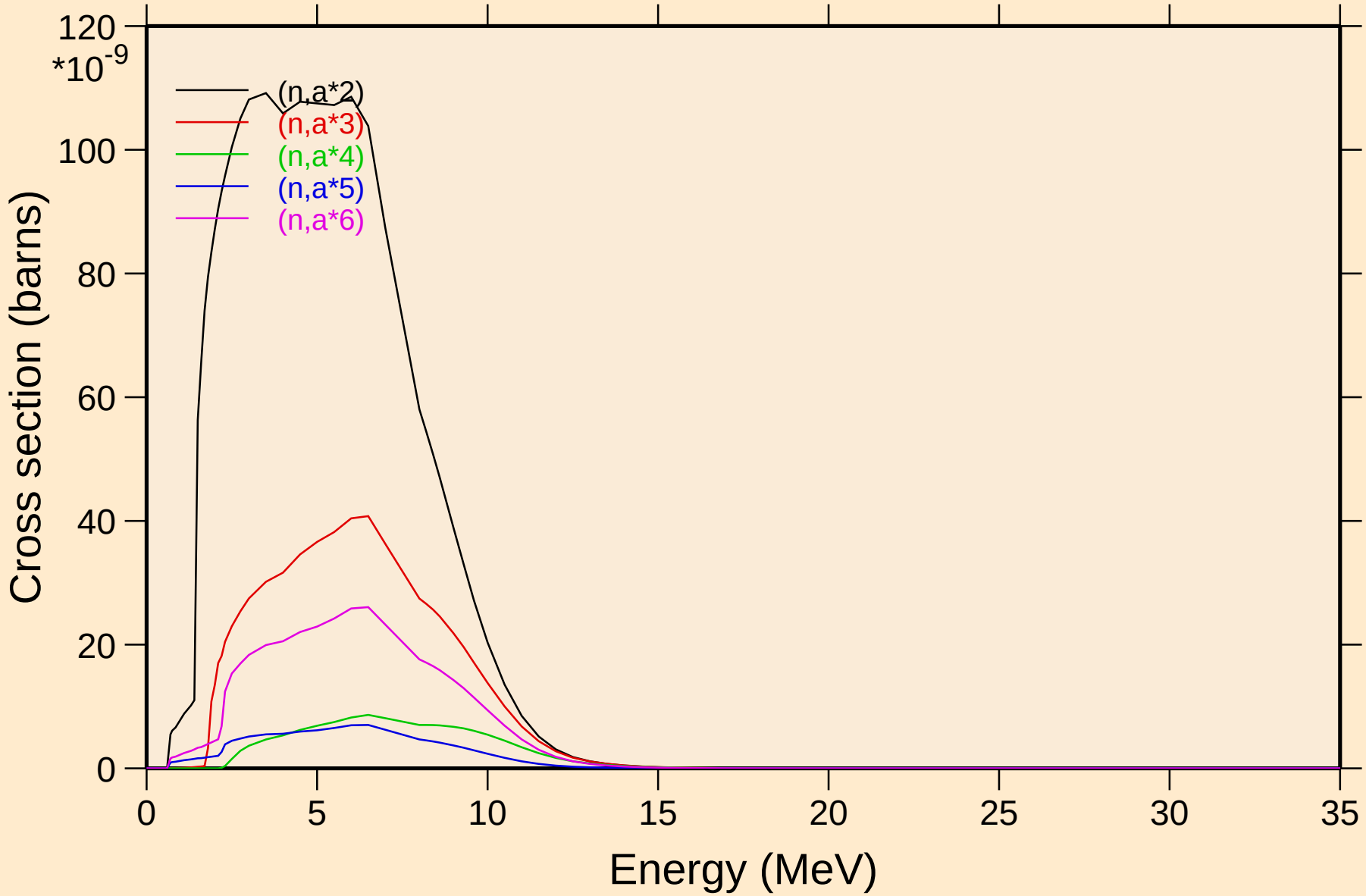
ADVANCE CALCULATIONS

Threshold reactions



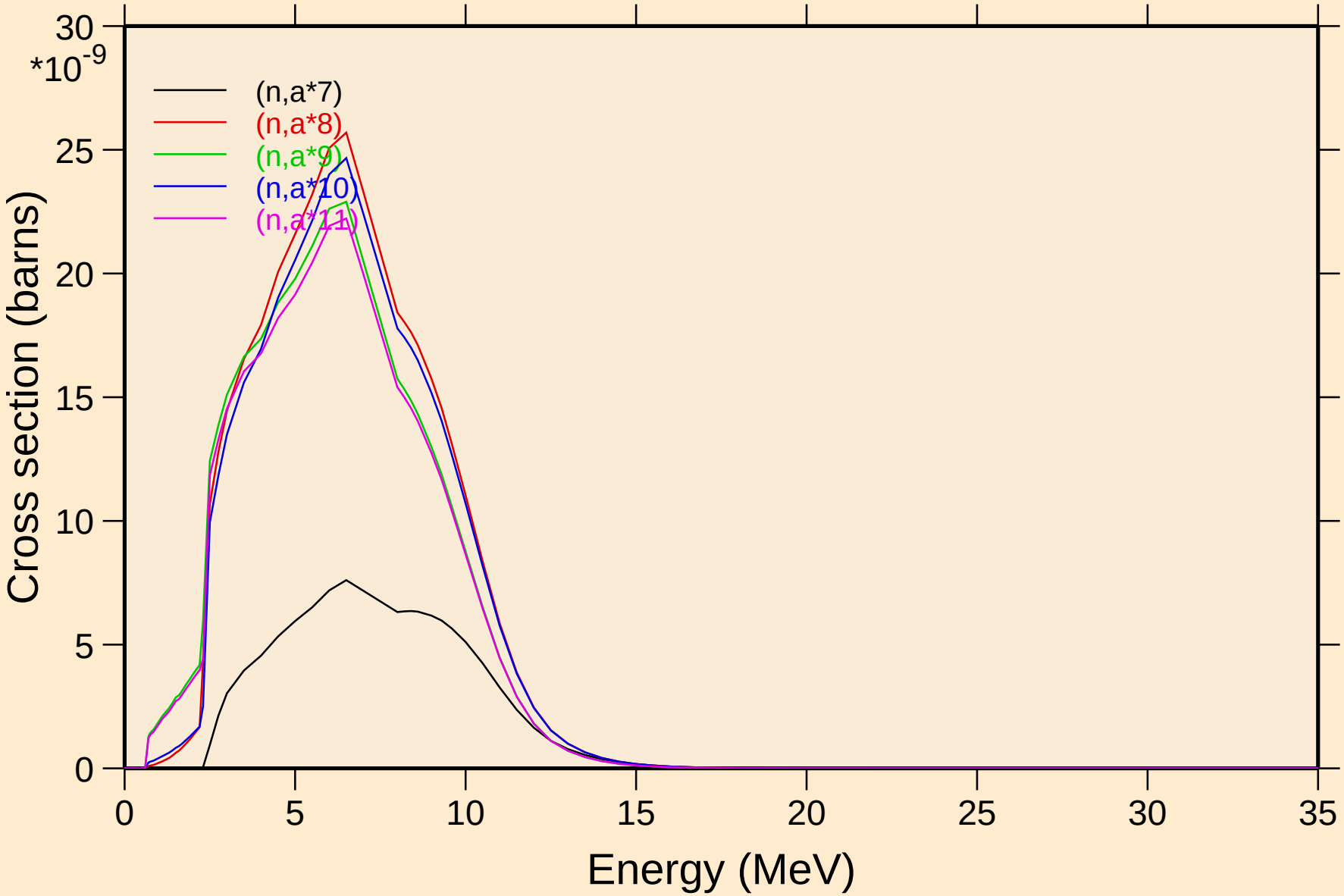
ADVANCE CALCULATIONS

Threshold reactions



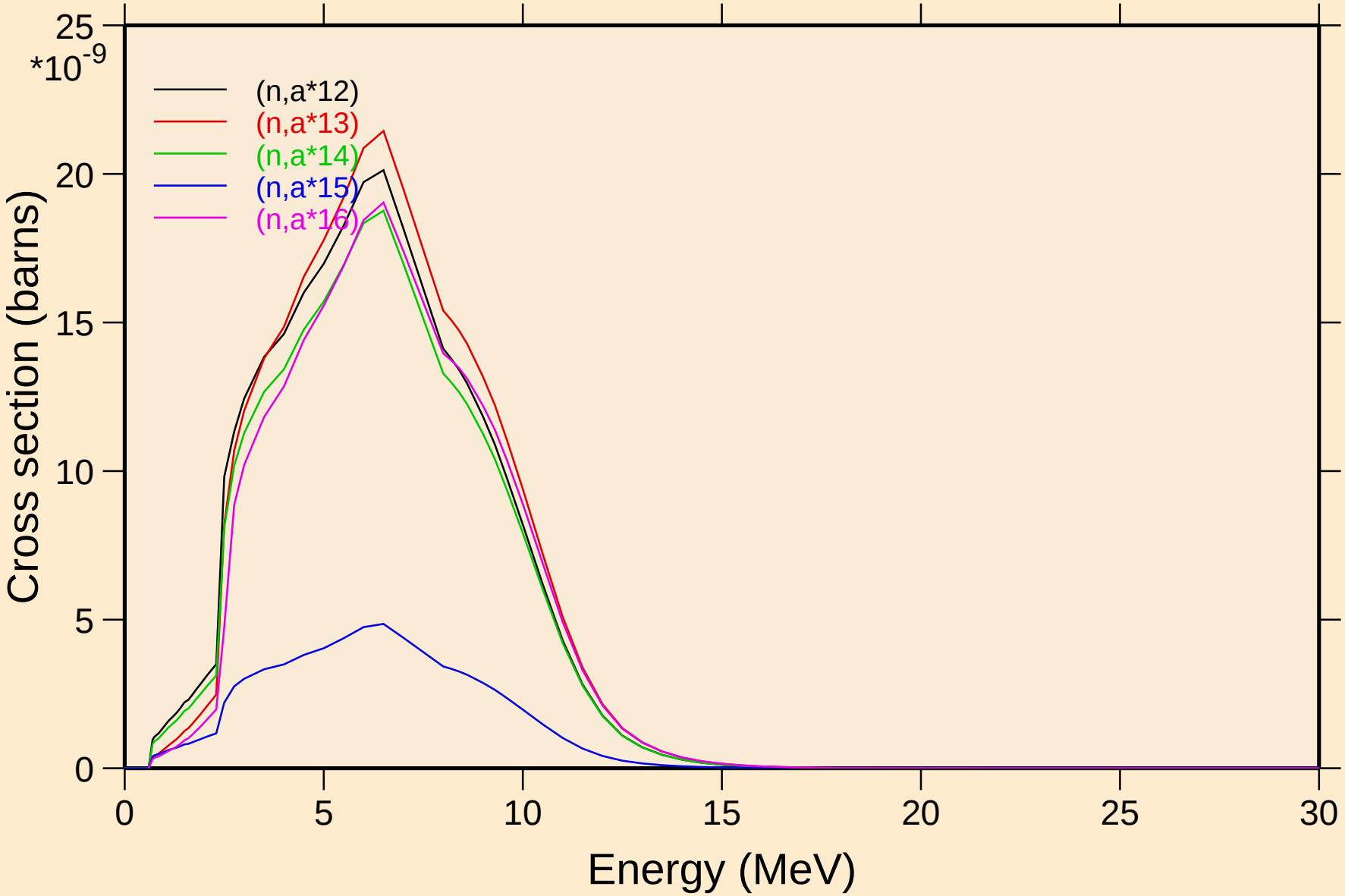
ADVANCE CALCULATIONS

Threshold reactions



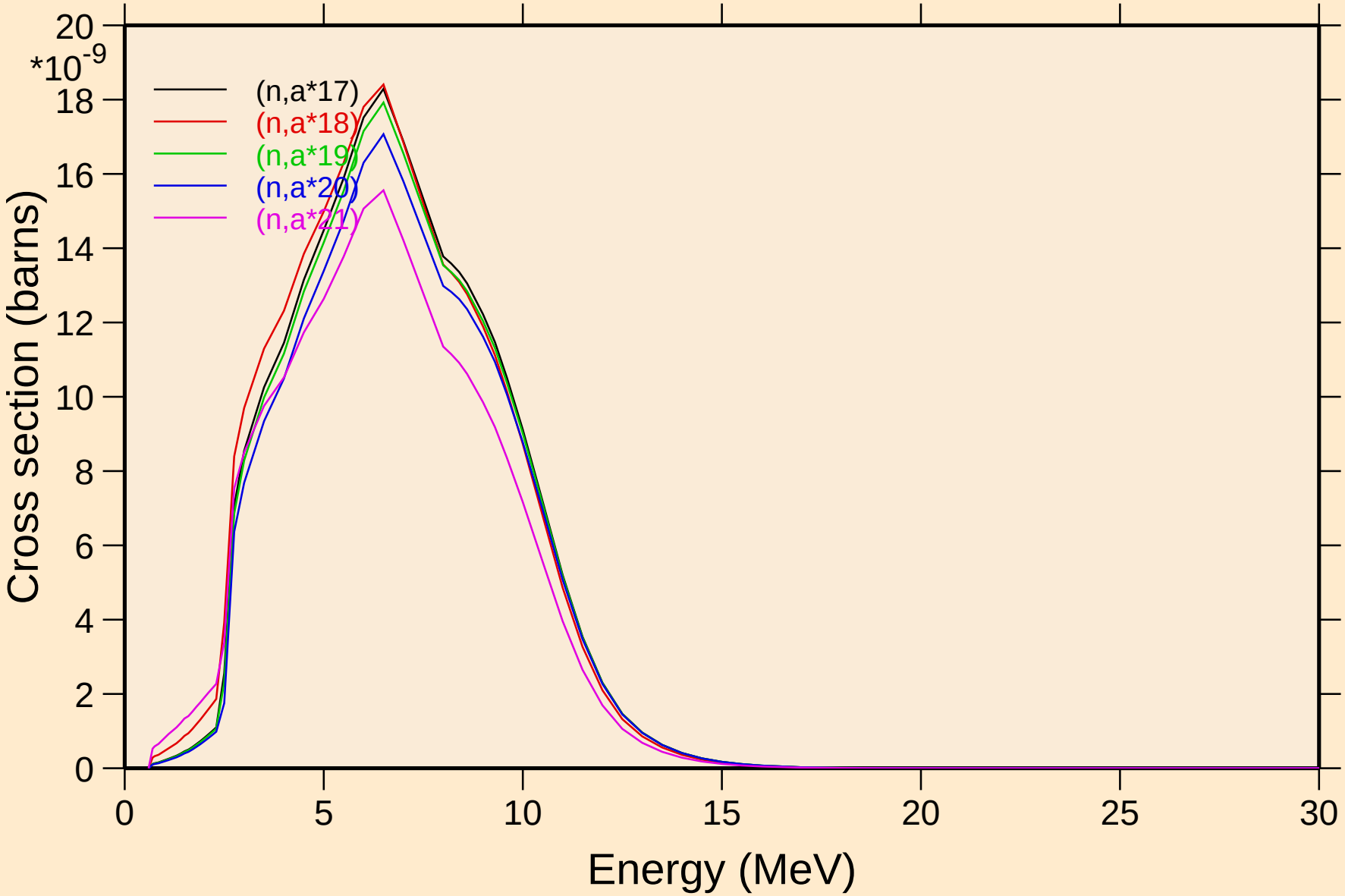
ADVANCE CALCULATIONS

Threshold reactions



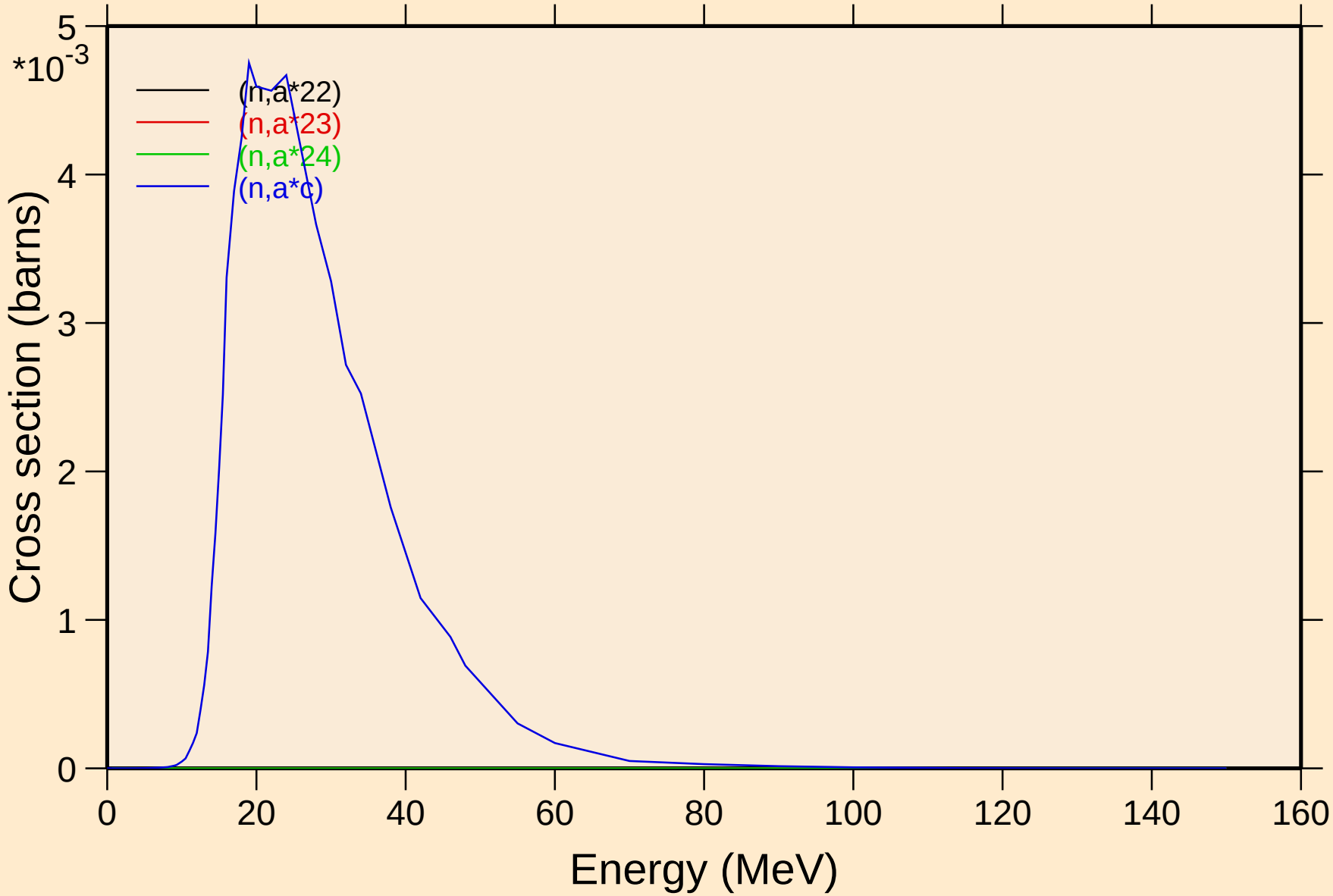
ADVANCE CALCULATIONS

Threshold reactions

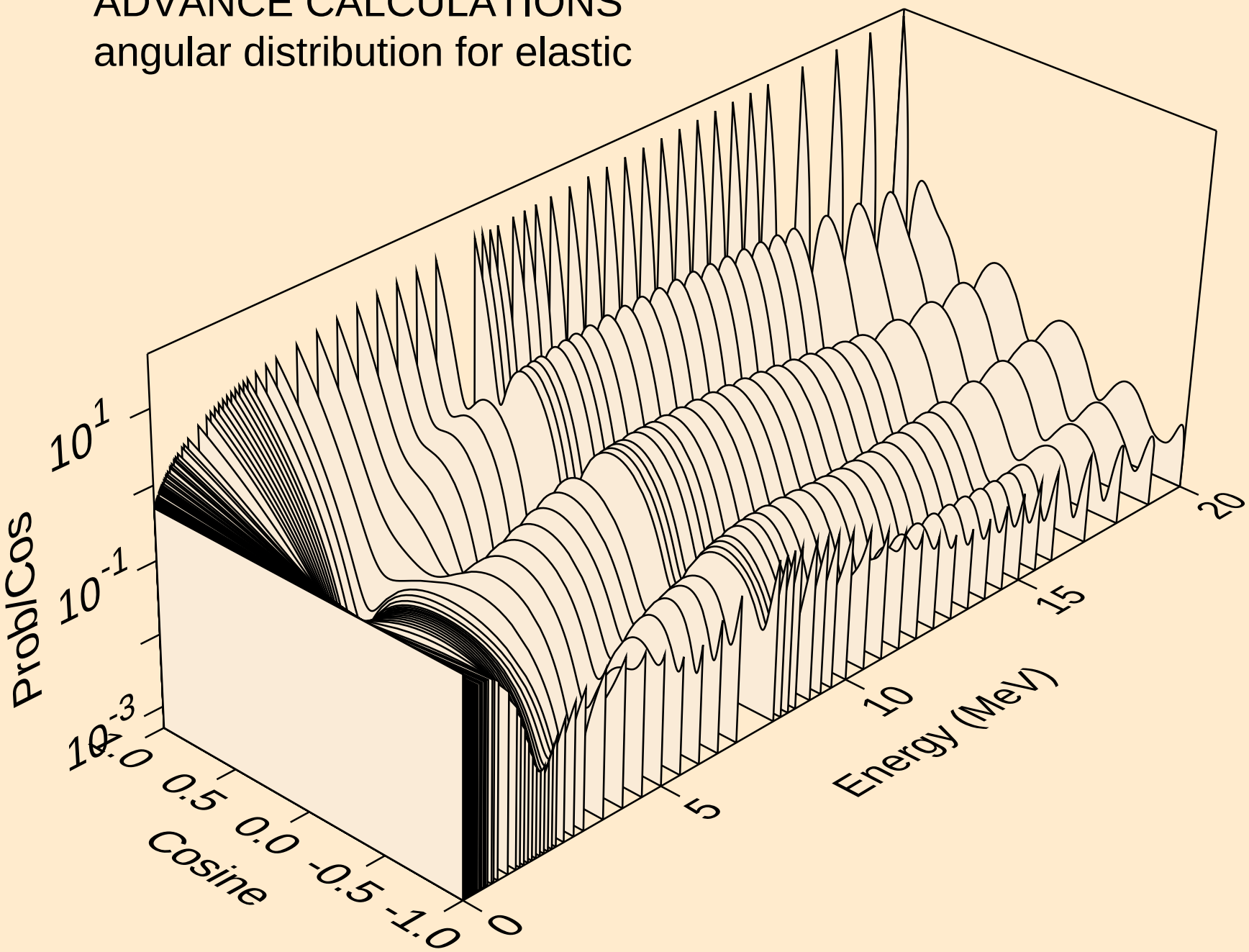


ADVANCE CALCULATIONS

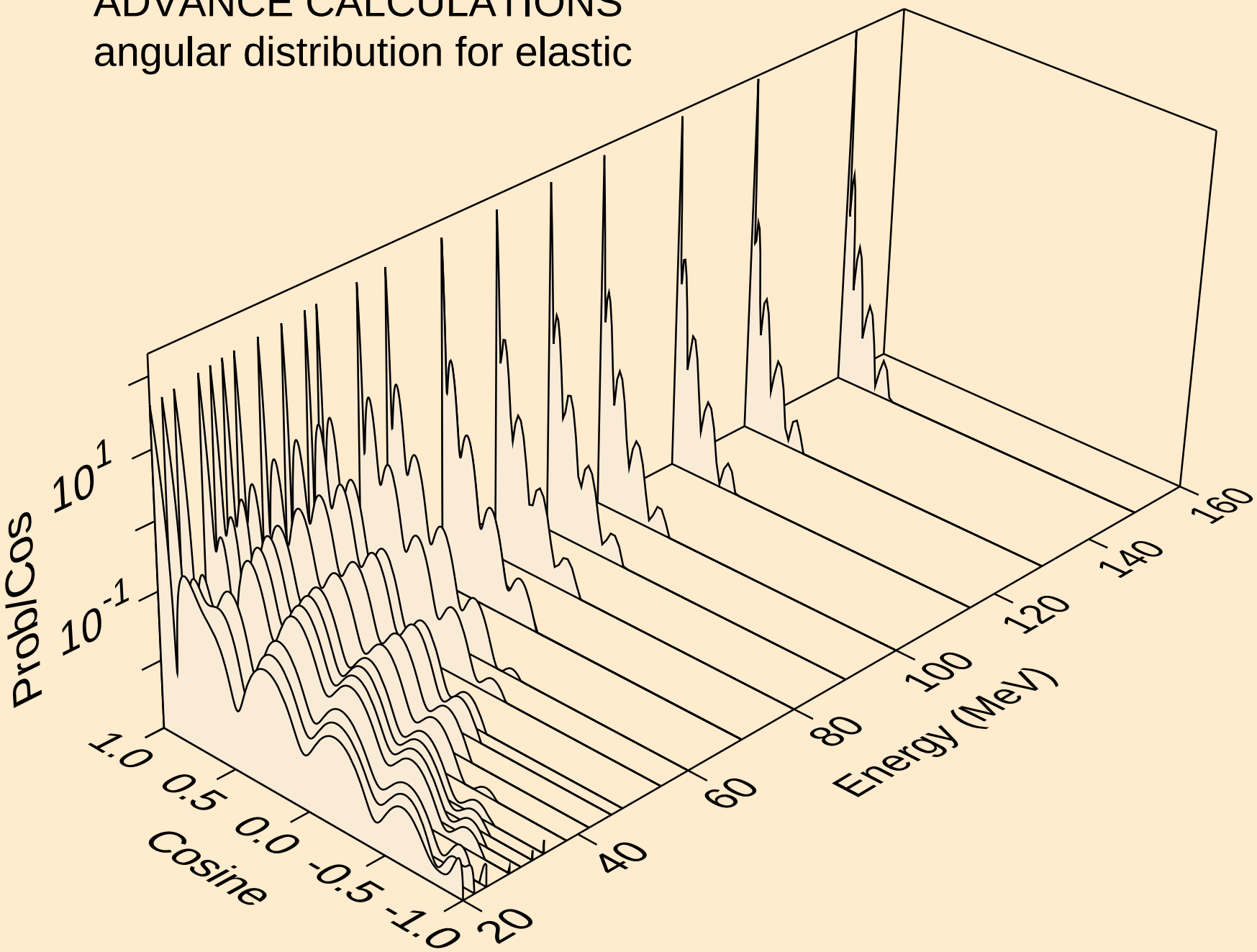
Threshold reactions



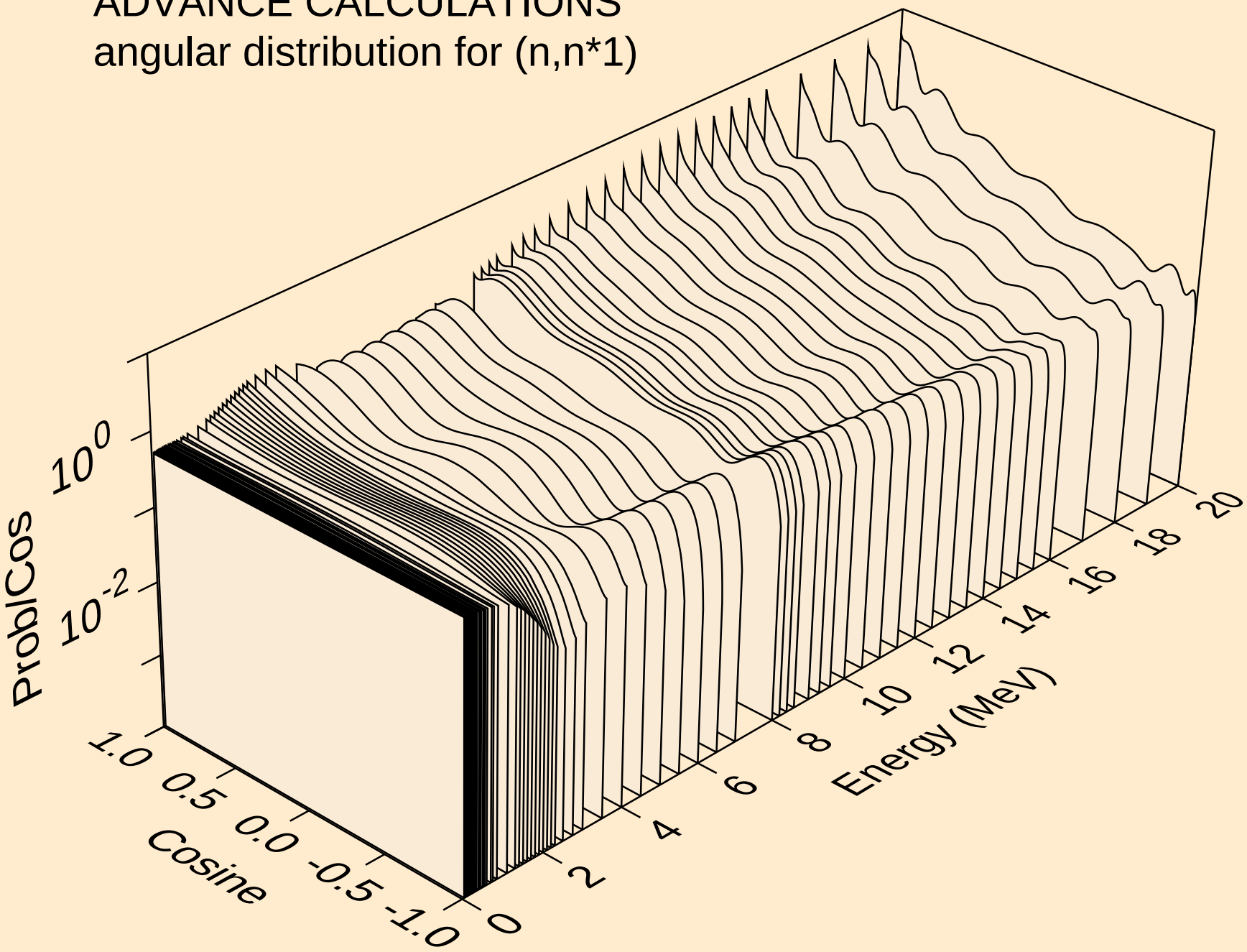
ADVANCE CALCULATIONS
angular distribution for elastic



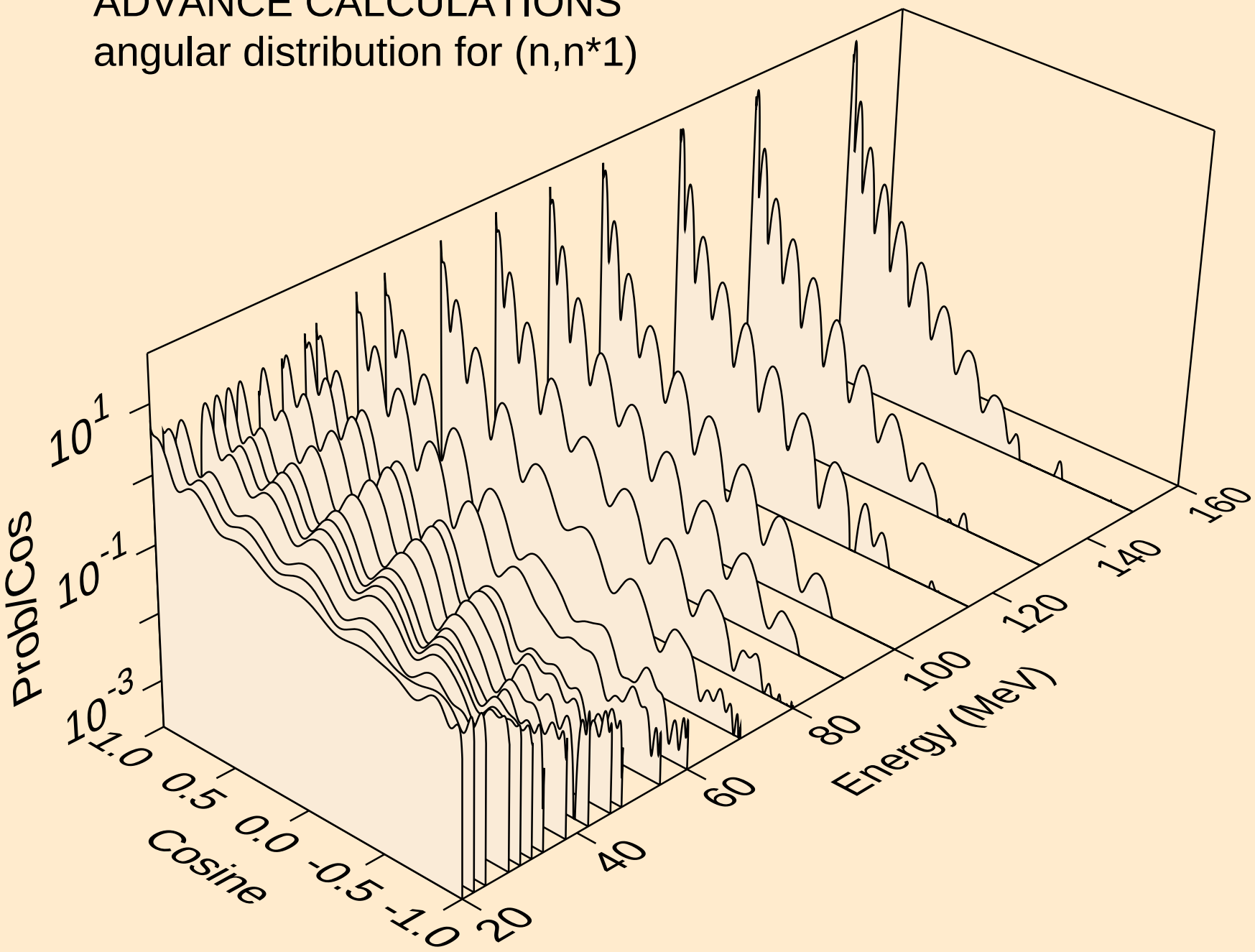
ADVANCE CALCULATIONS
angular distribution for elastic



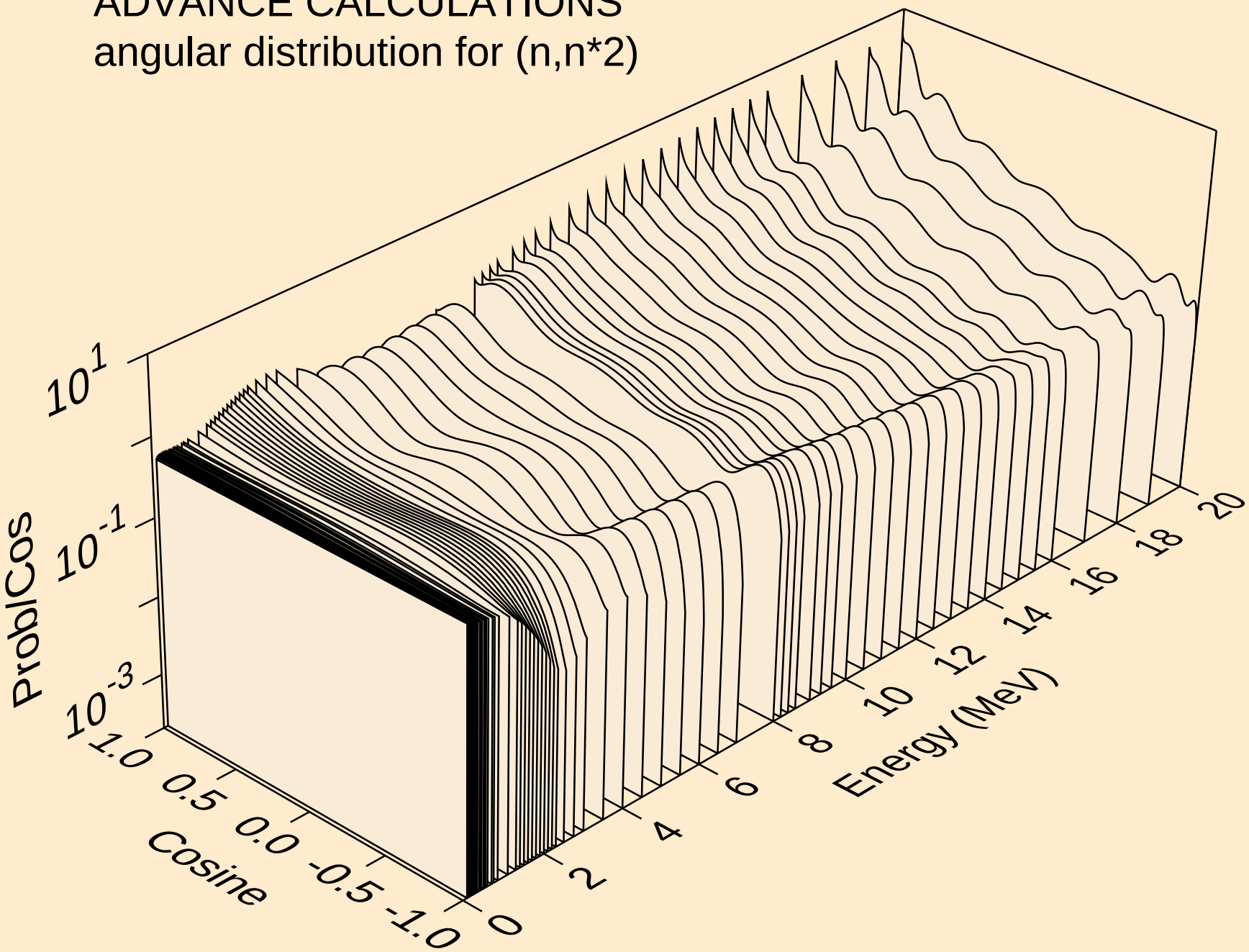
ADVANCE CALCULATIONS
angular distribution for (n,n*1)



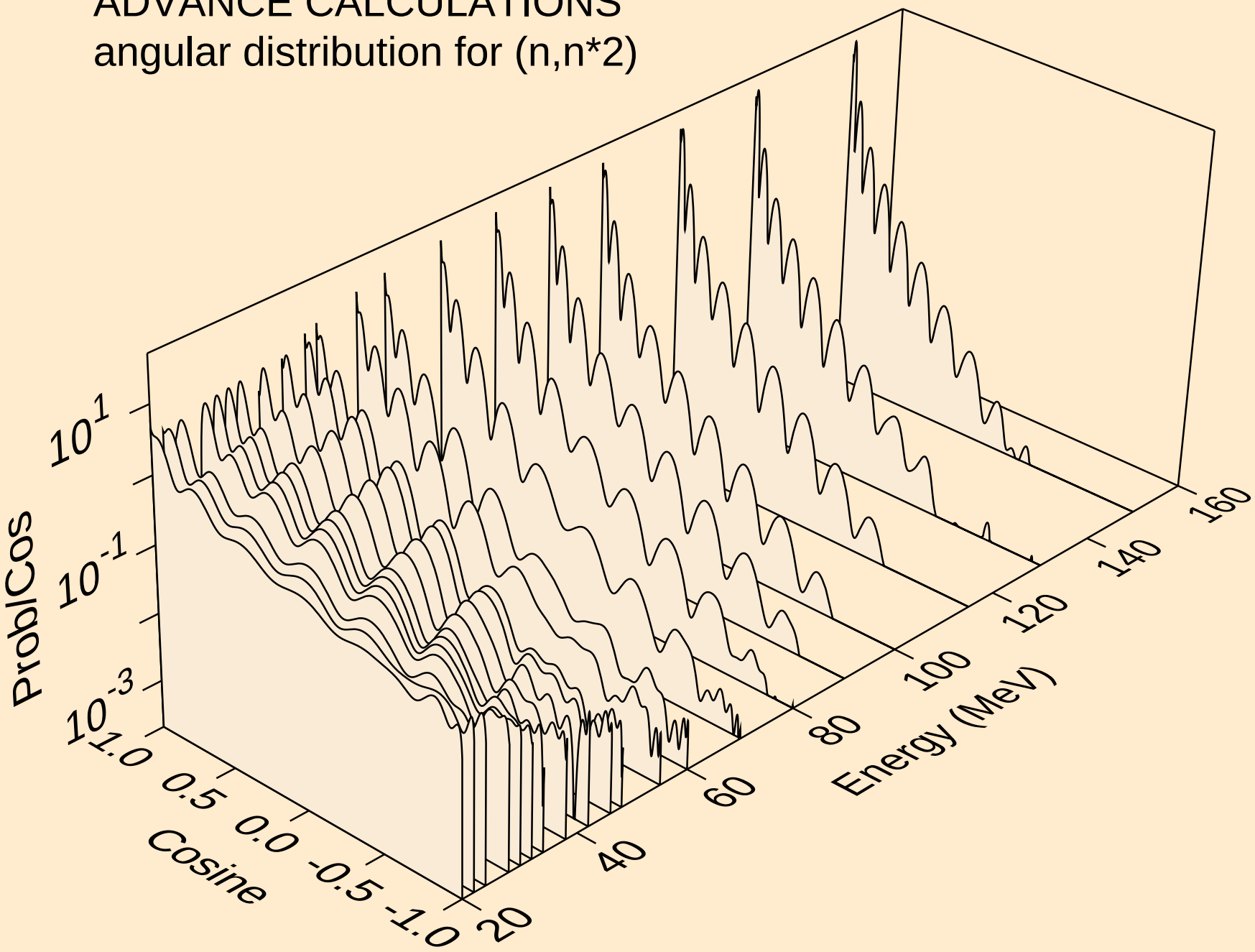
ADVANCE CALCULATIONS
angular distribution for (n,n*1)



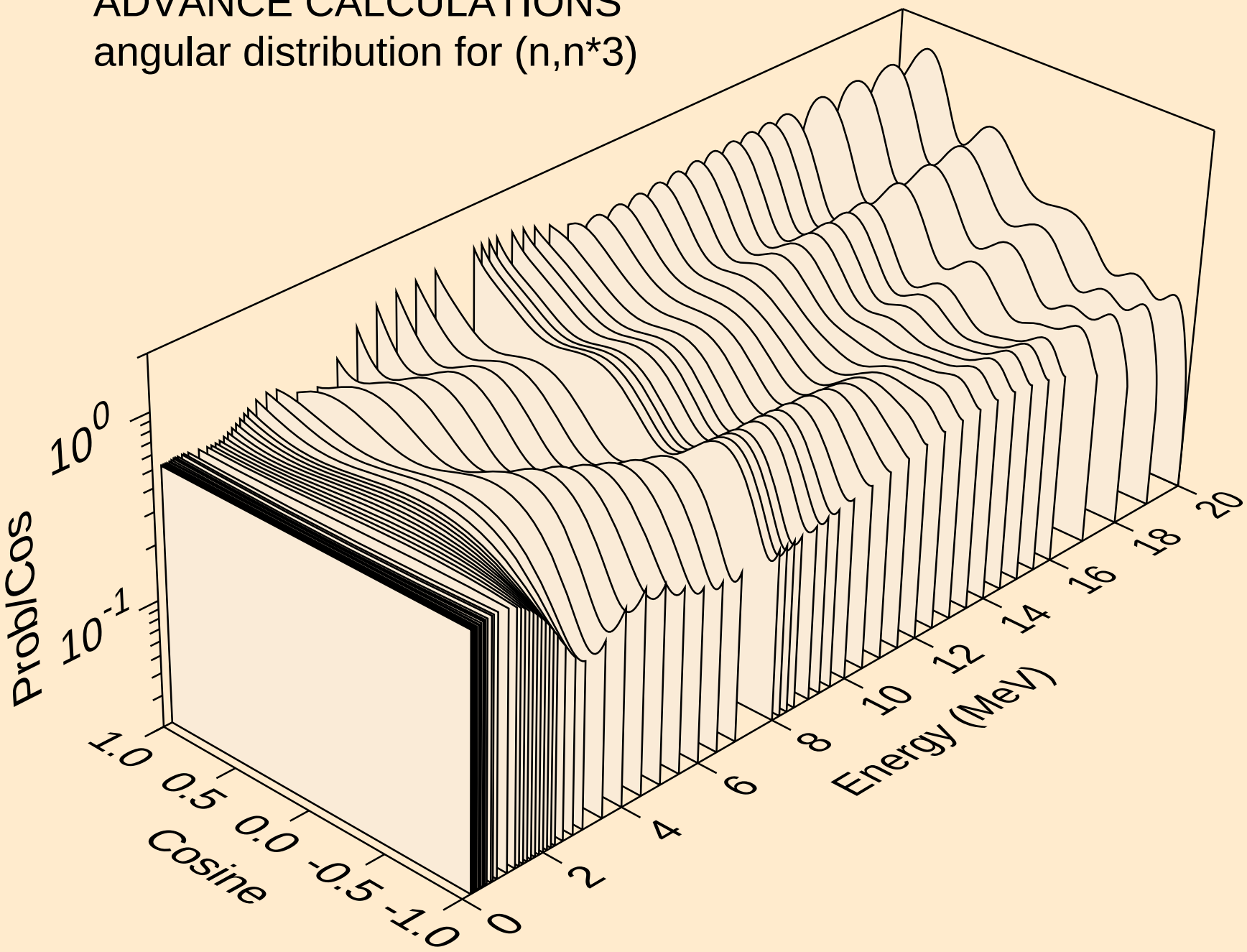
ADVANCE CALCULATIONS
angular distribution for (n,n*2)



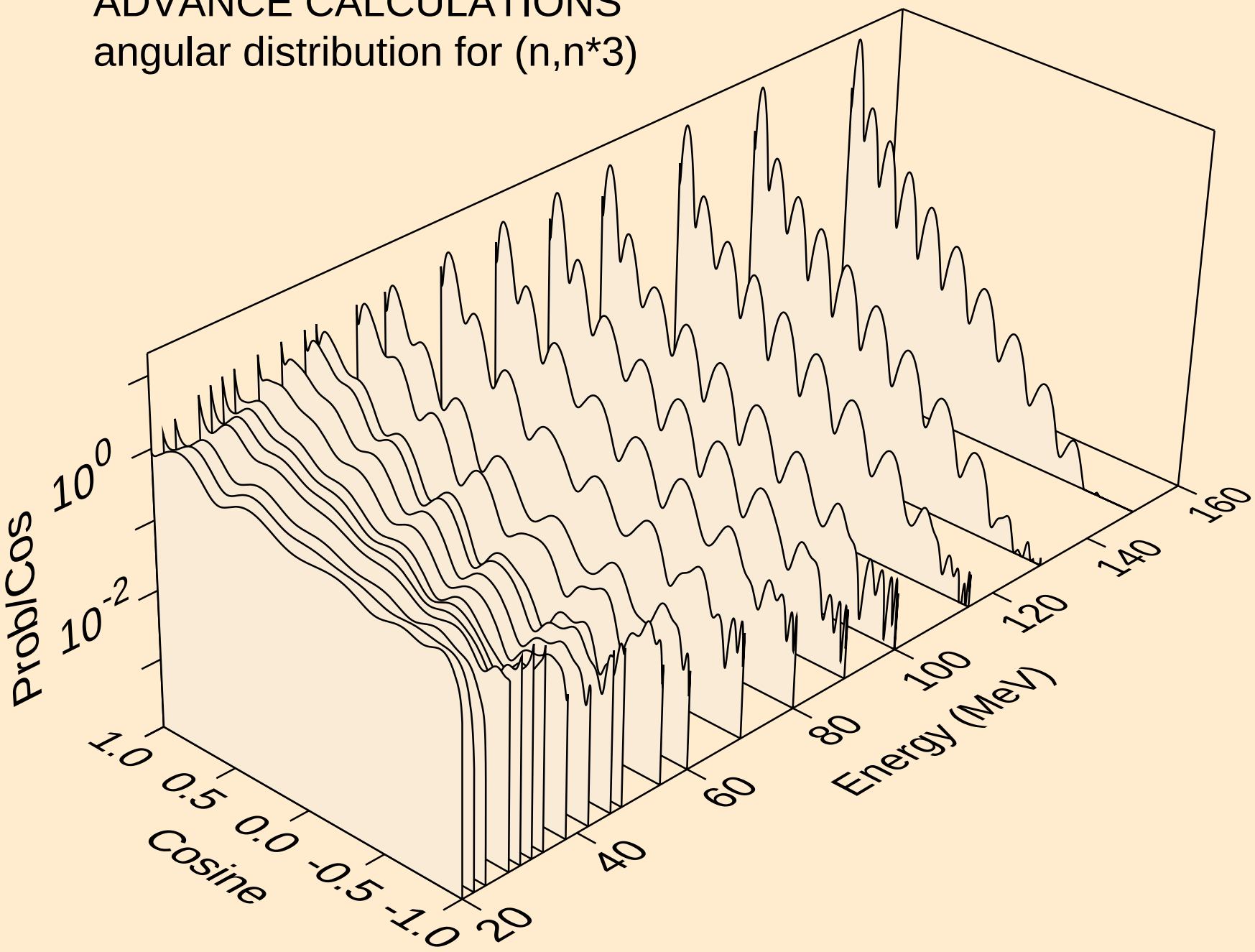
ADVANCE CALCULATIONS
angular distribution for (n,n*2)



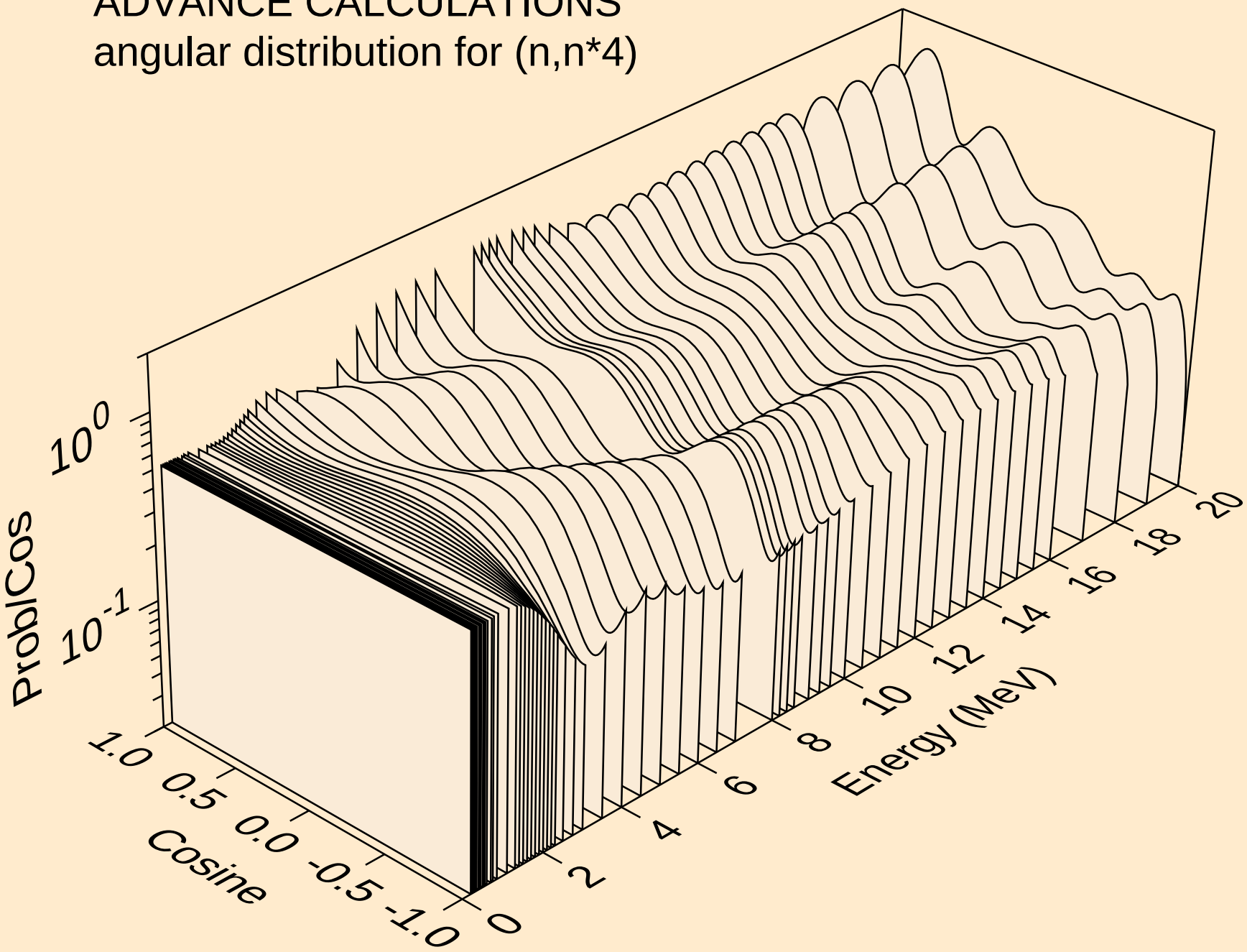
ADVANCE CALCULATIONS
angular distribution for (n,n*3)



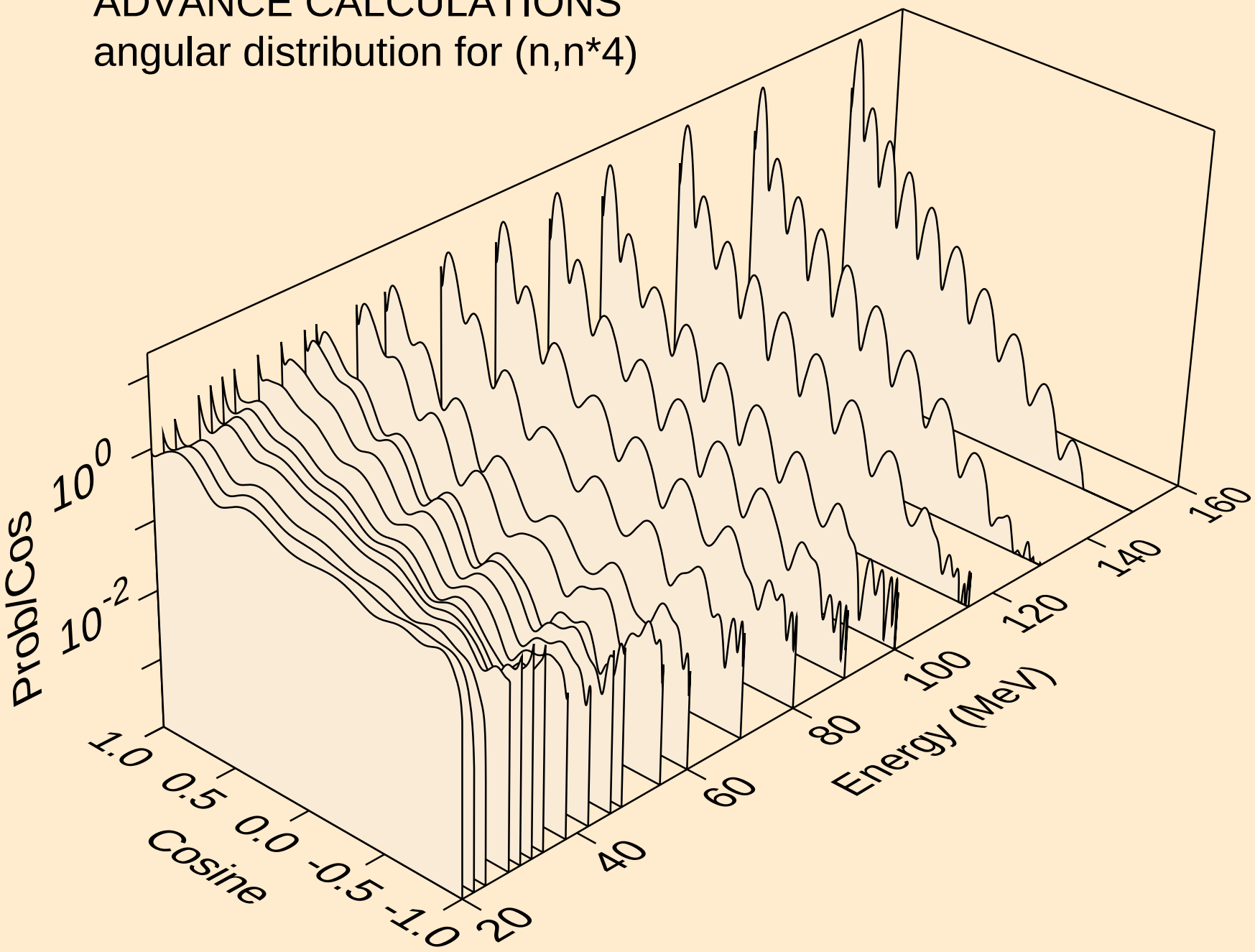
ADVANCE CALCULATIONS
angular distribution for (n,n*3)



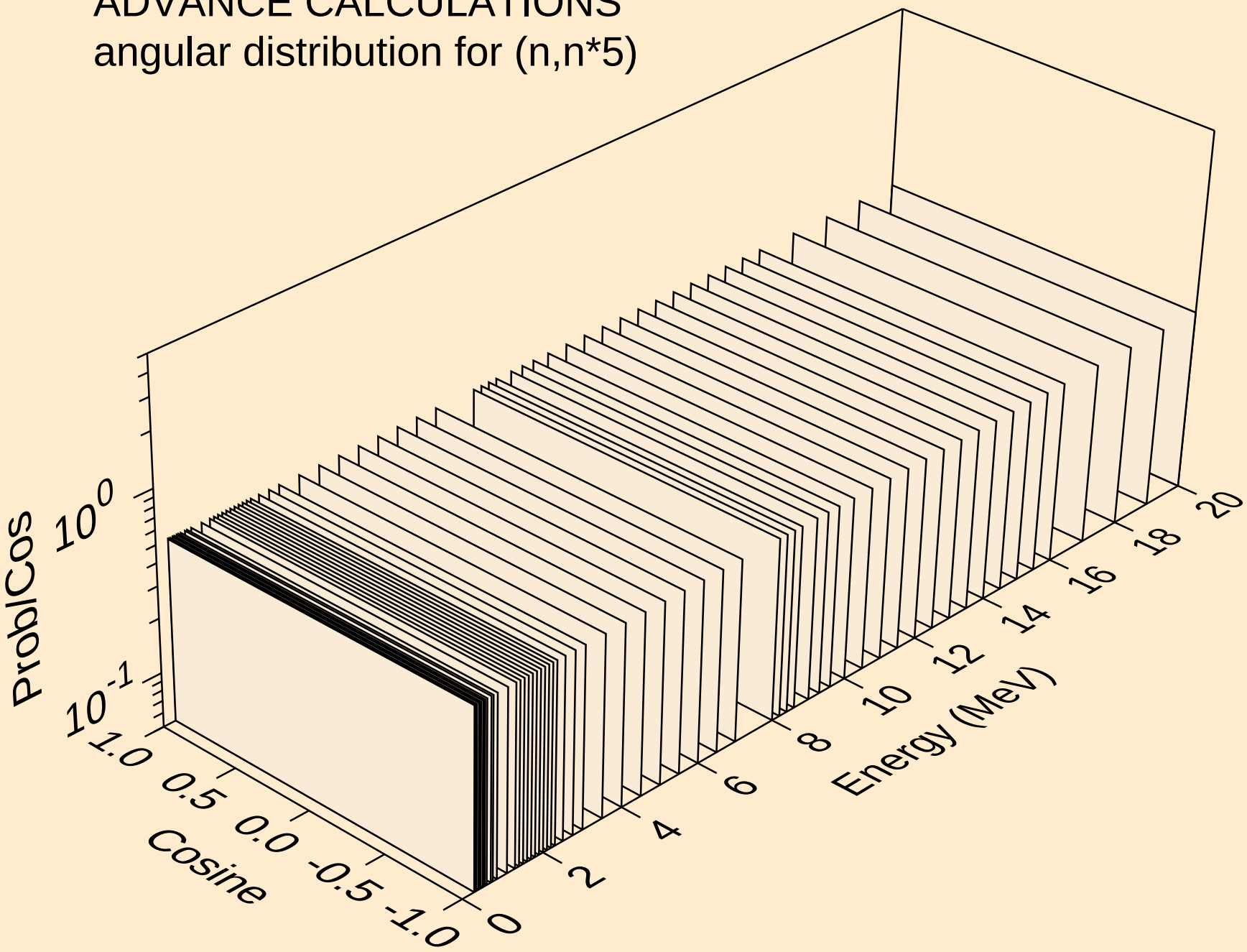
ADVANCE CALCULATIONS
angular distribution for (n,n*4)



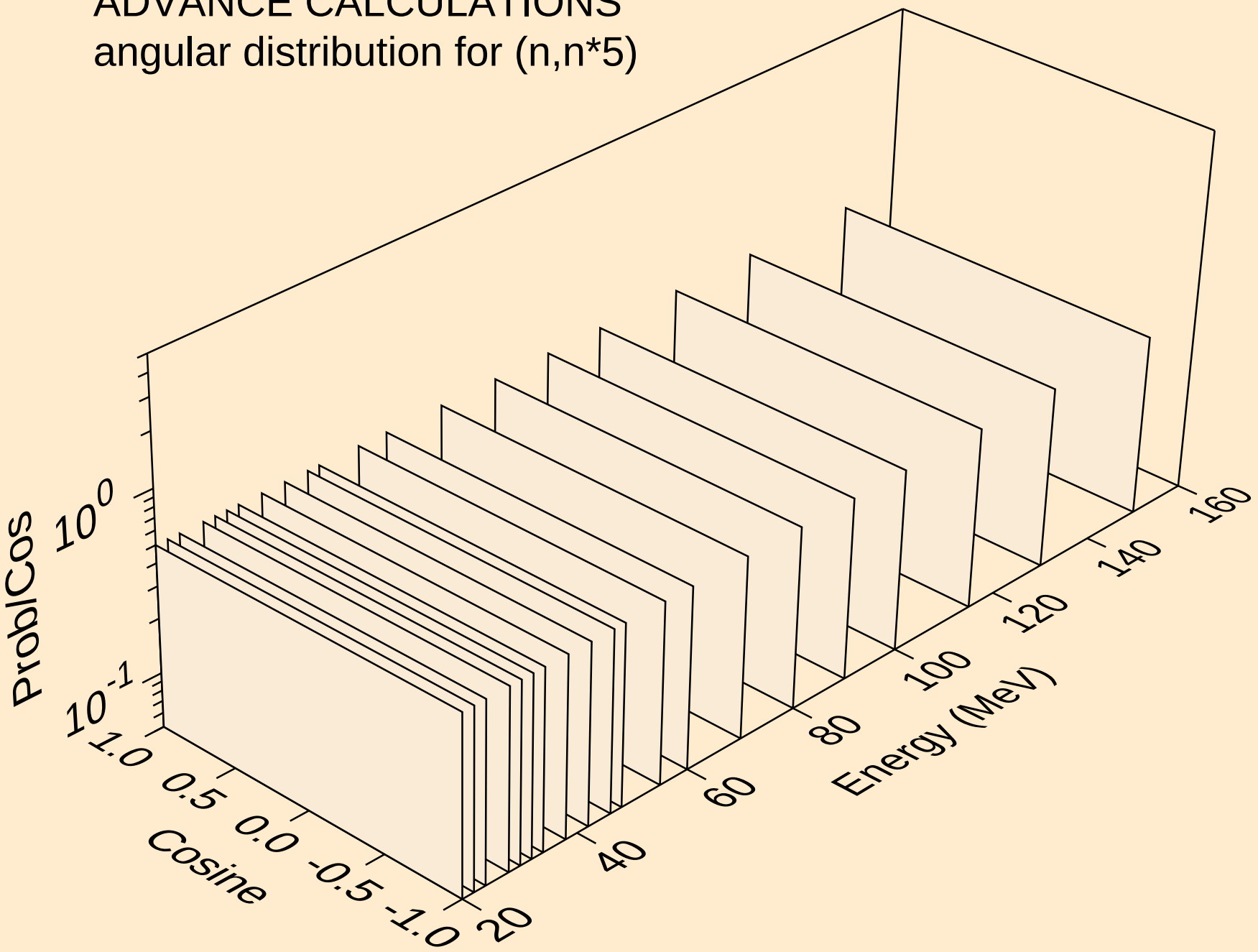
ADVANCE CALCULATIONS
angular distribution for (n,n*4)



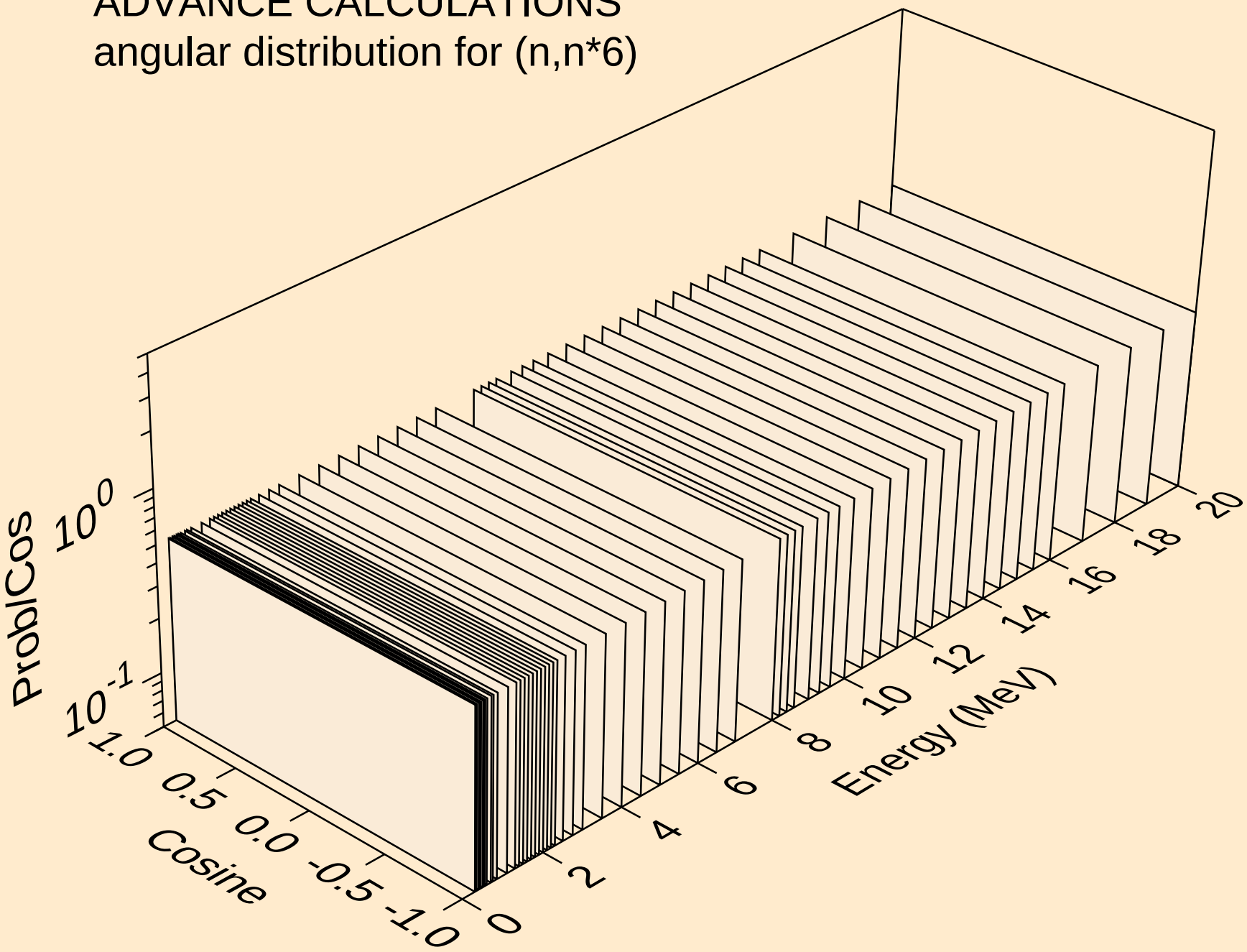
ADVANCE CALCULATIONS
angular distribution for (n,n*5)



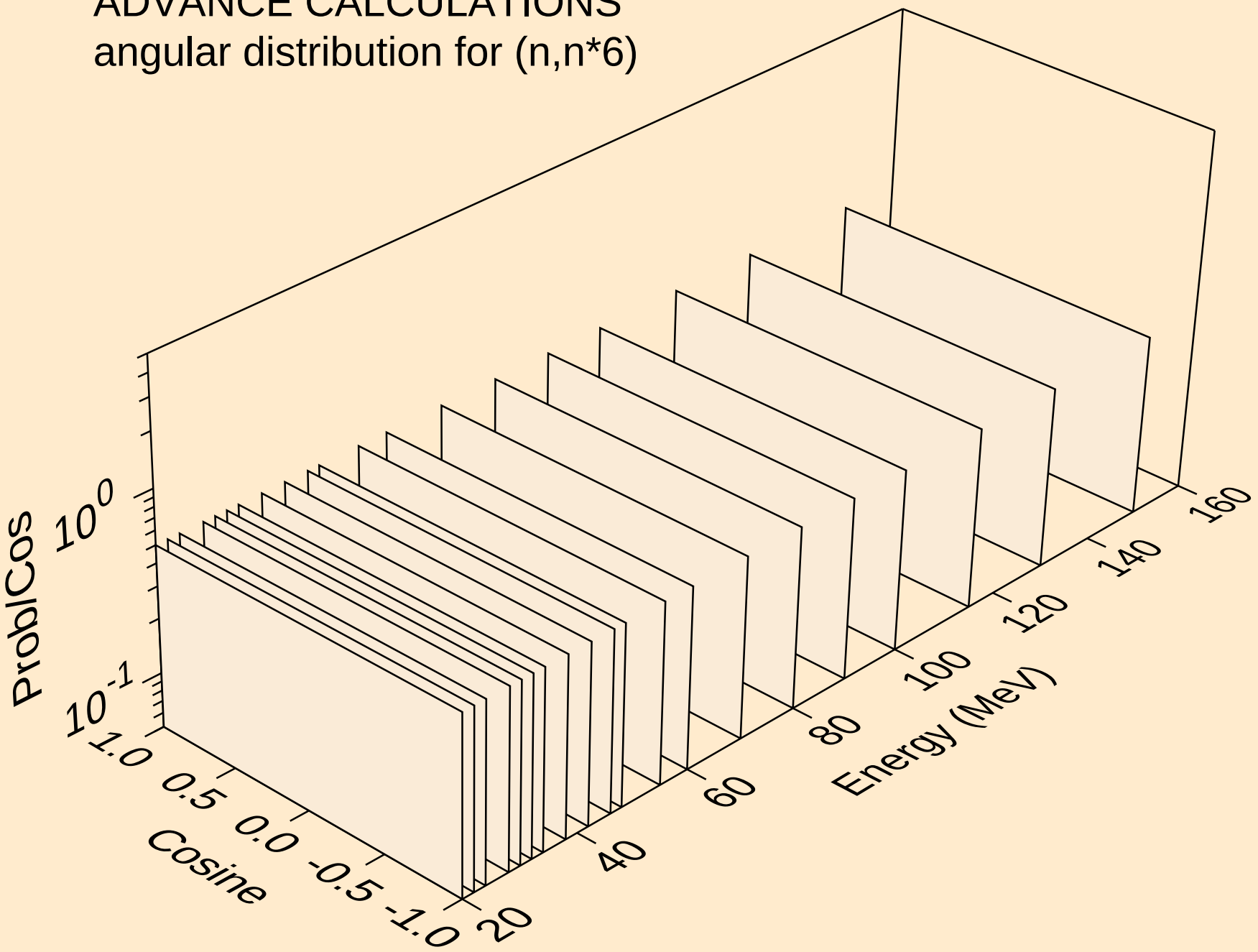
ADVANCE CALCULATIONS
angular distribution for (n,n*5)



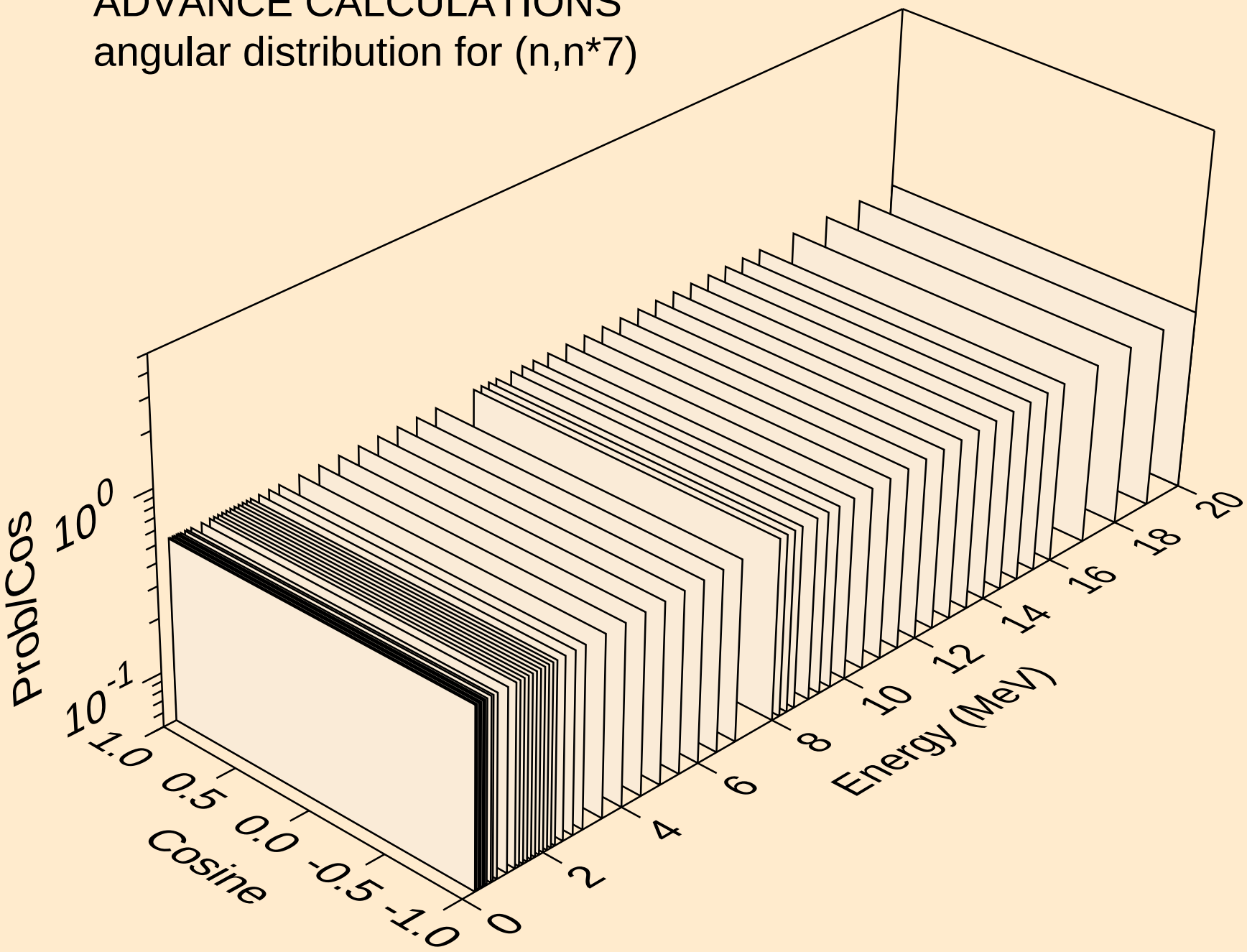
ADVANCE CALCULATIONS
angular distribution for (n,n*6)



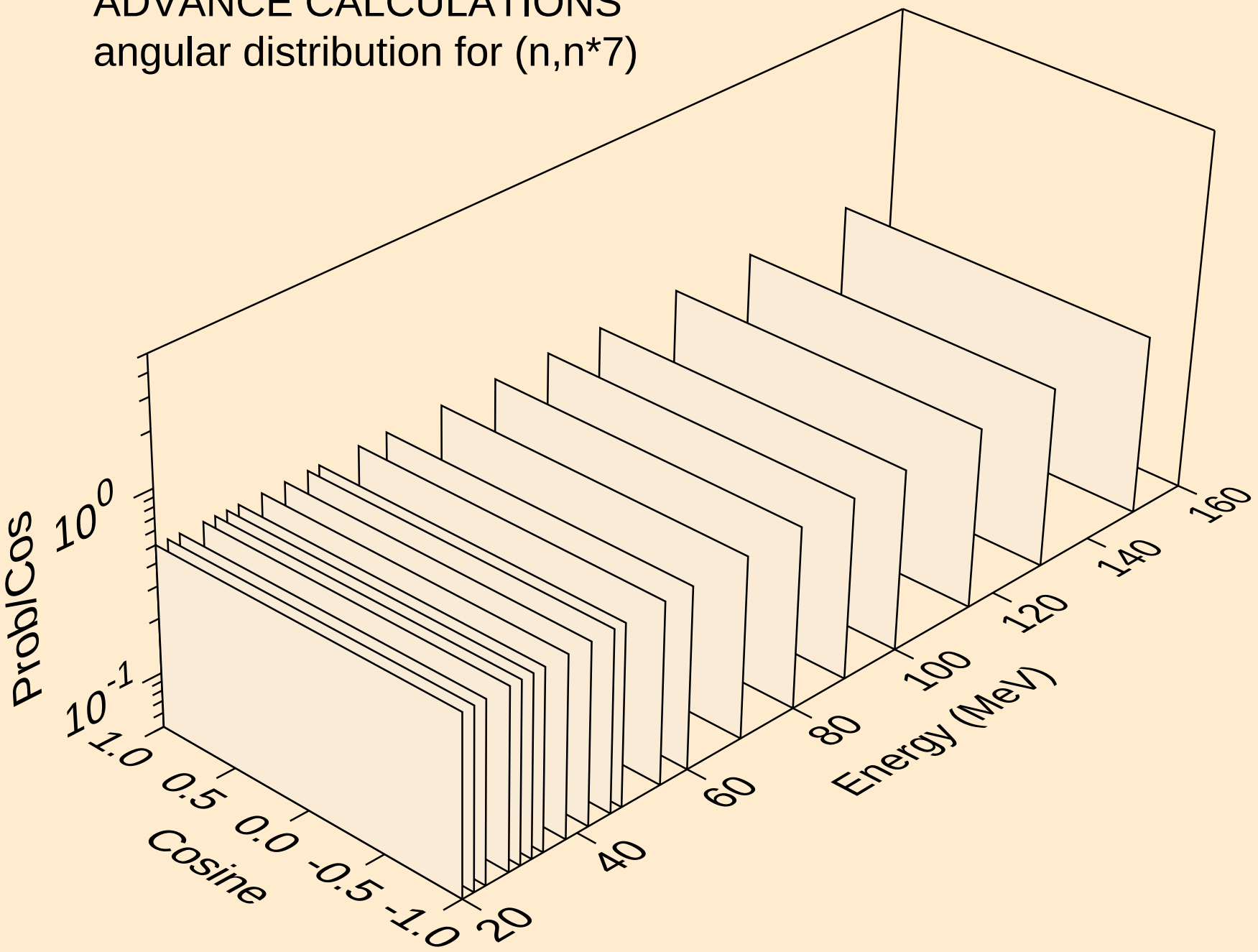
ADVANCE CALCULATIONS
angular distribution for (n,n*6)



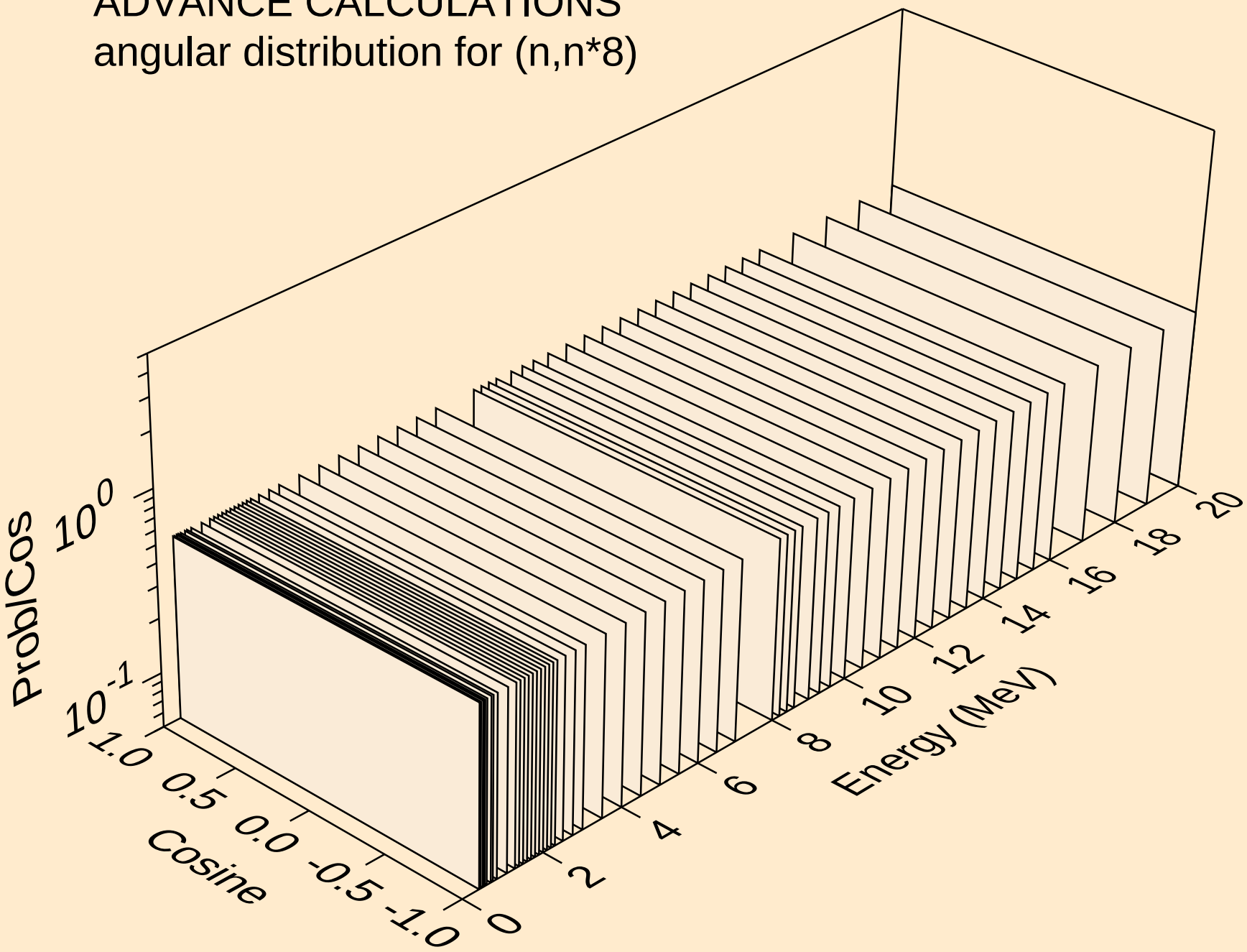
ADVANCE CALCULATIONS
angular distribution for (n,n*7)



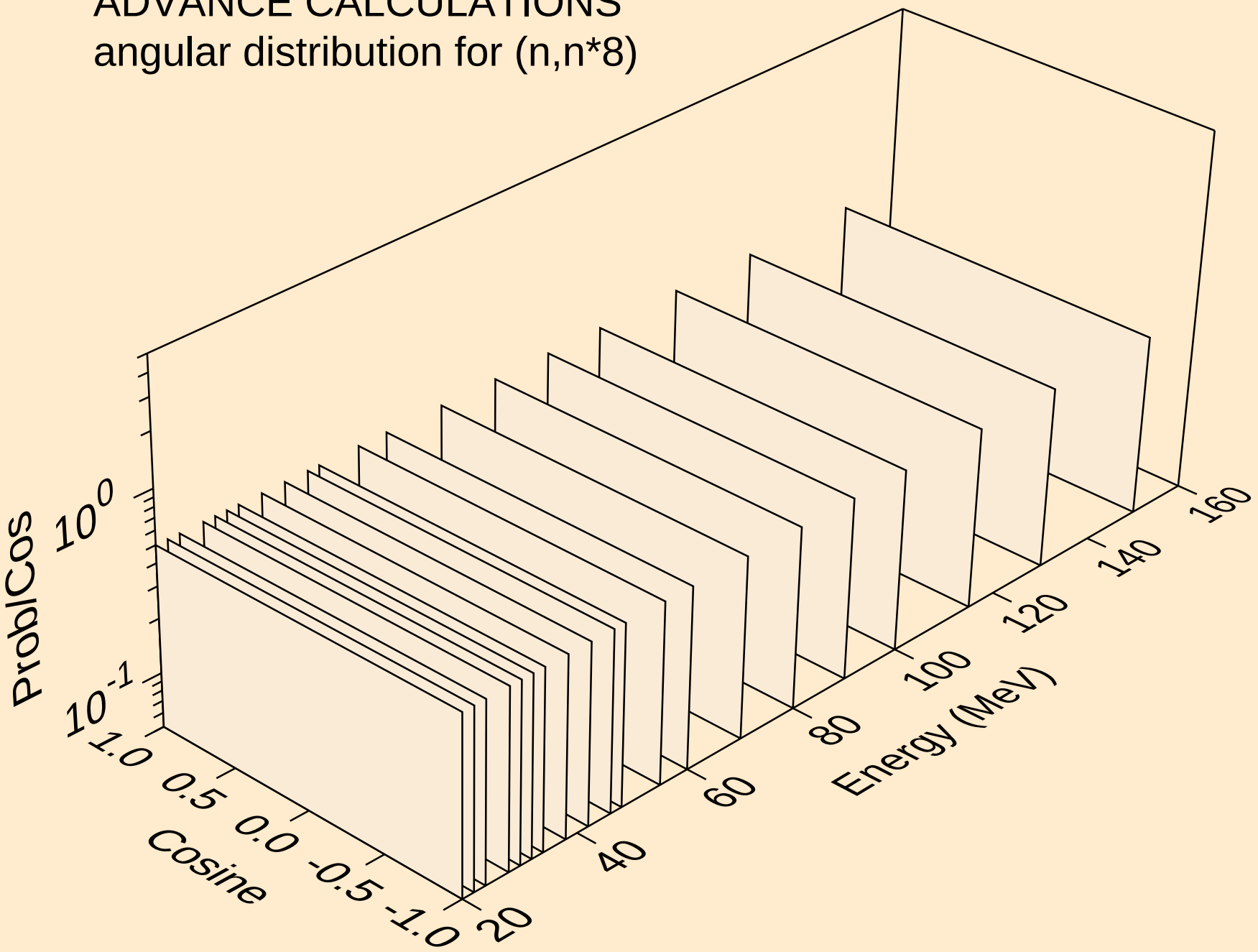
ADVANCE CALCULATIONS
angular distribution for (n,n*7)



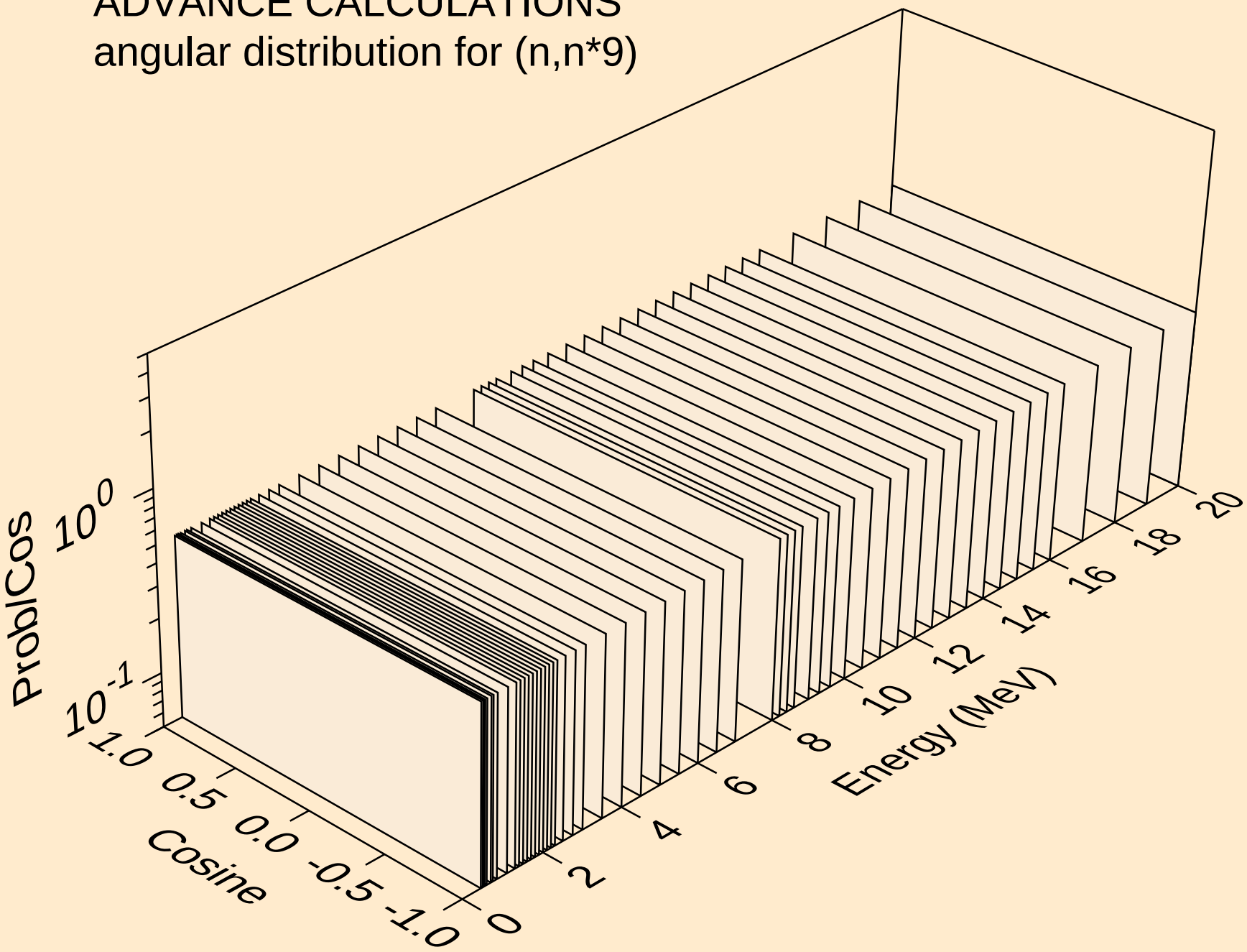
ADVANCE CALCULATIONS
angular distribution for (n,n*8)



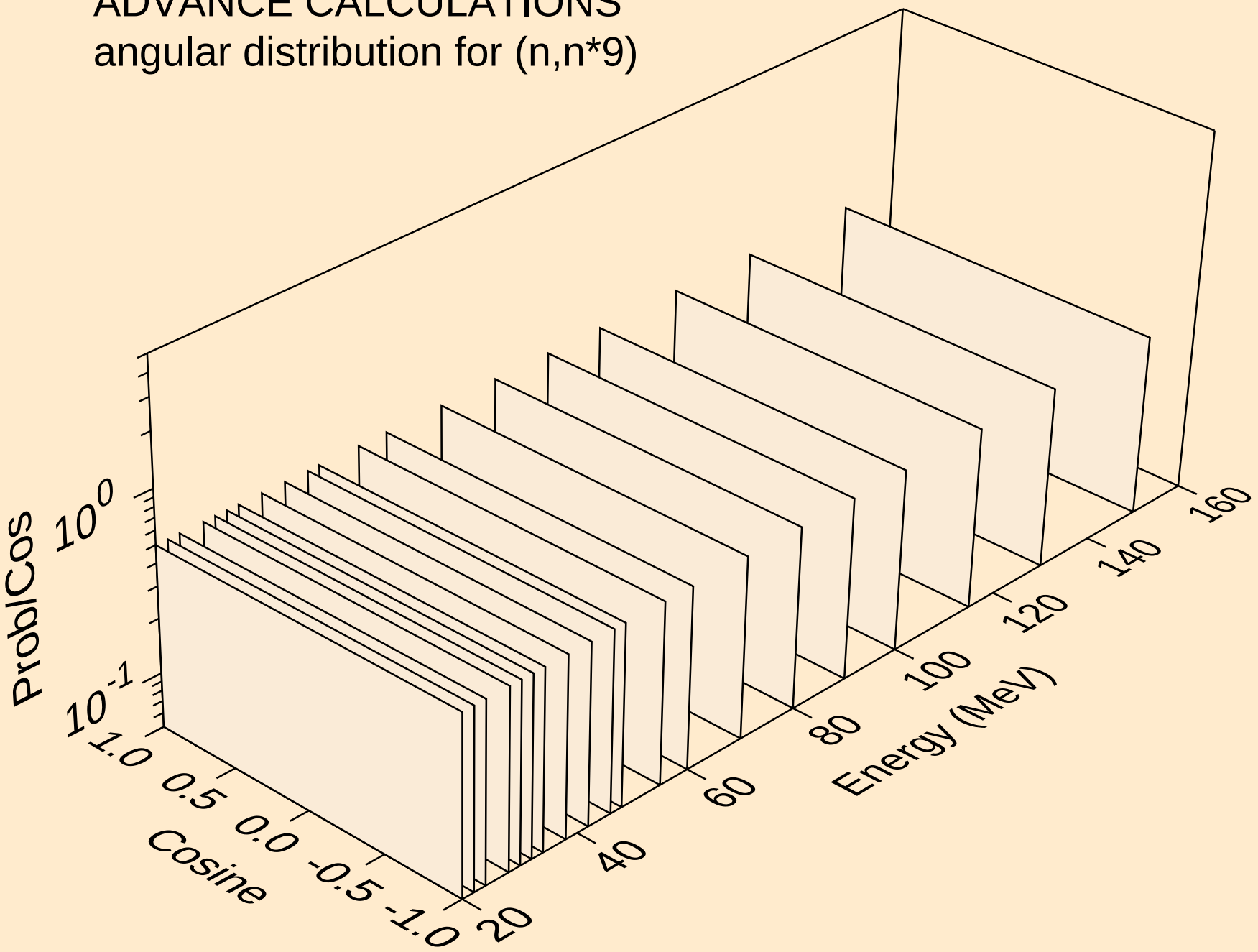
ADVANCE CALCULATIONS
angular distribution for (n,n*8)



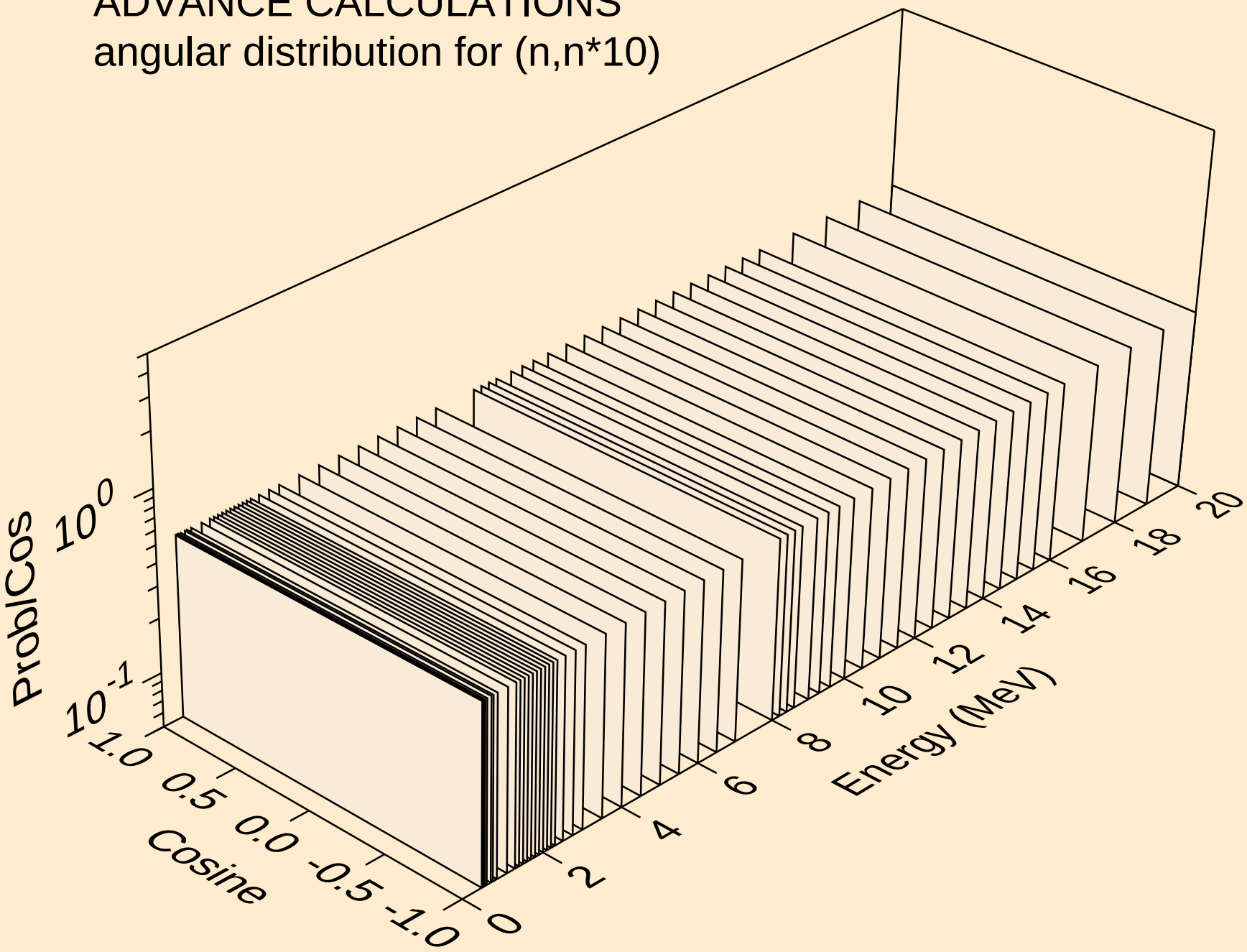
ADVANCE CALCULATIONS
angular distribution for (n,n*9)



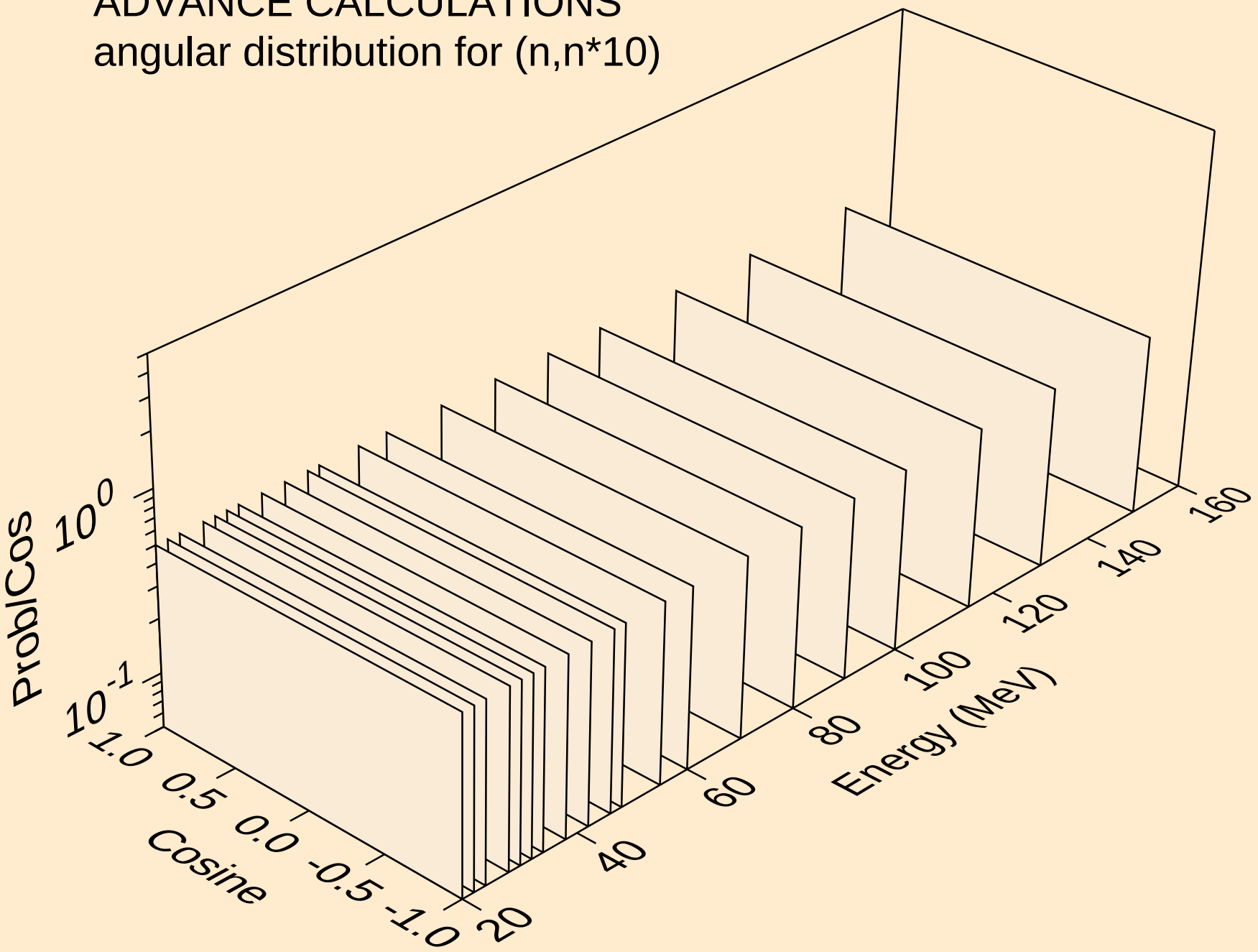
ADVANCE CALCULATIONS
angular distribution for (n,n*9)



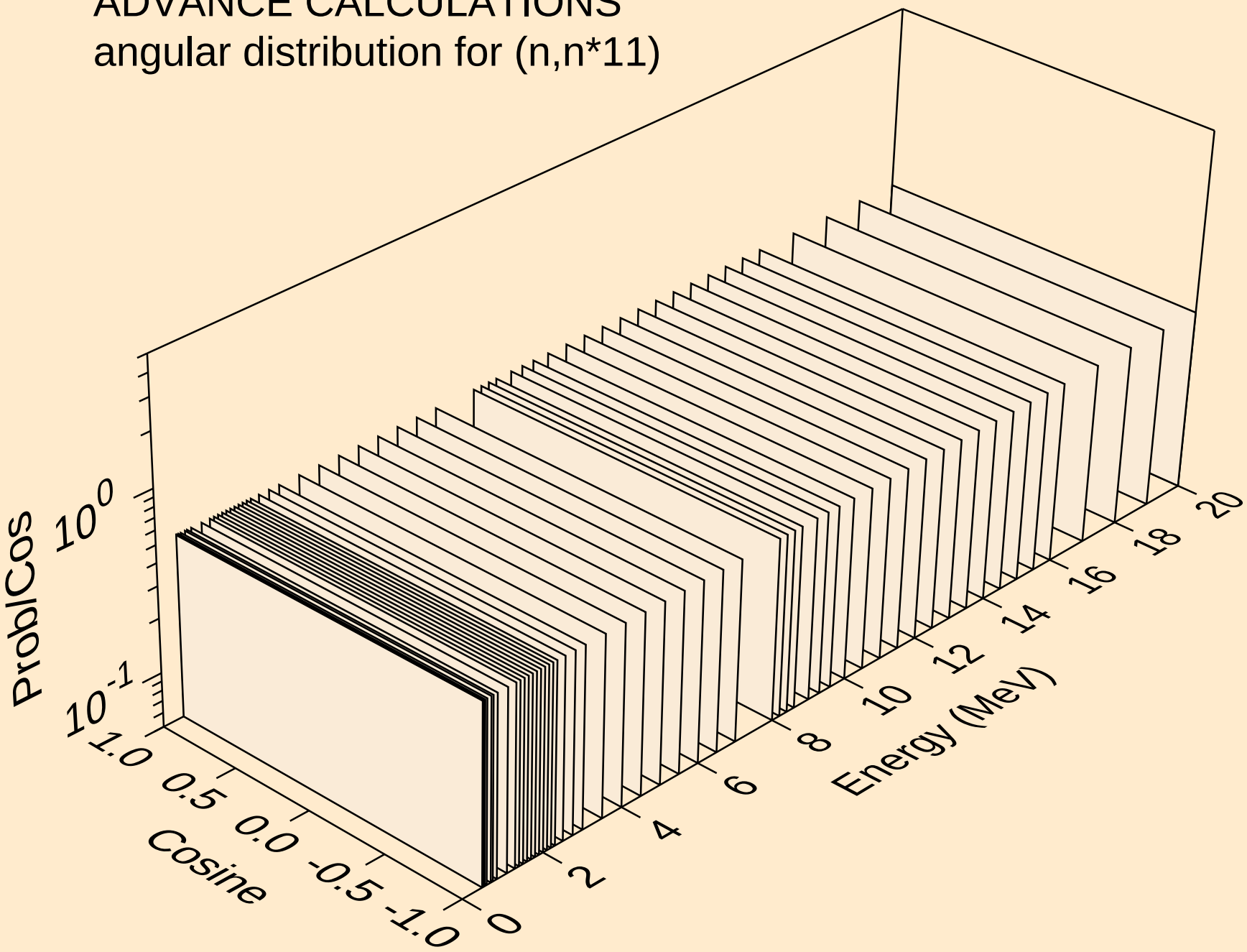
ADVANCE CALCULATIONS
angular distribution for (n,n*10)



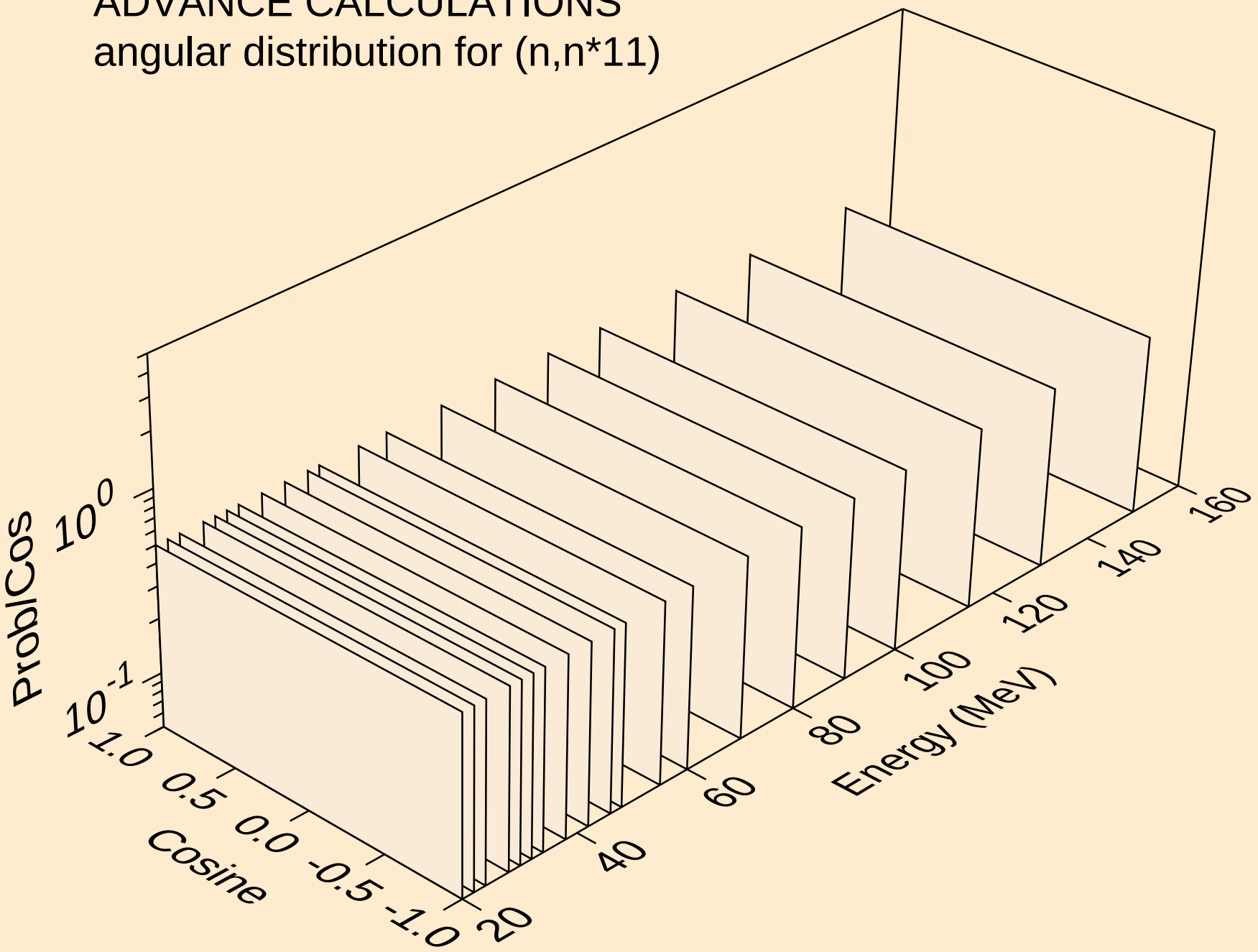
ADVANCE CALCULATIONS
angular distribution for (n,n*10)



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

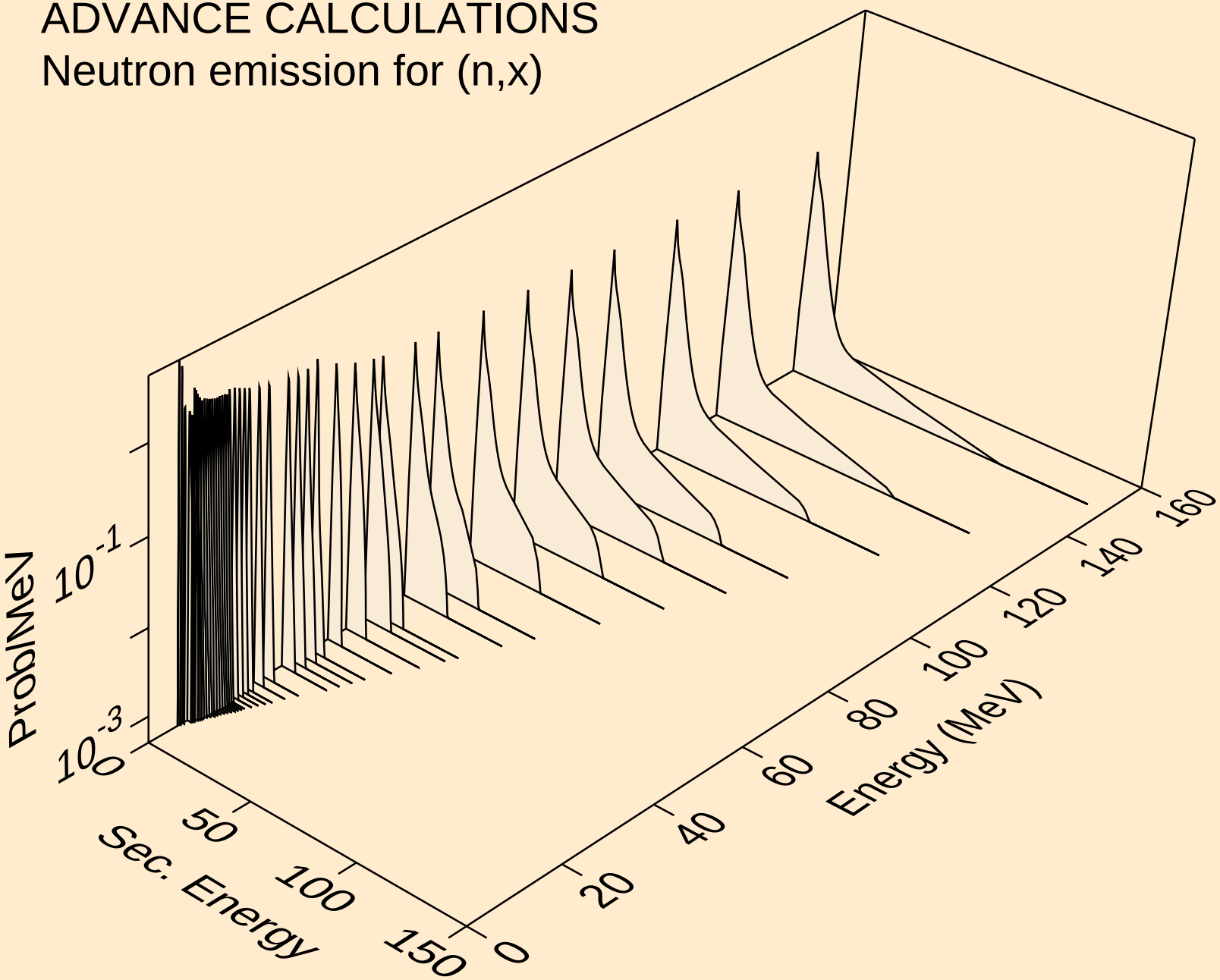


ADVANCE CALCULATIONS
angular distribution for (n,n*11)



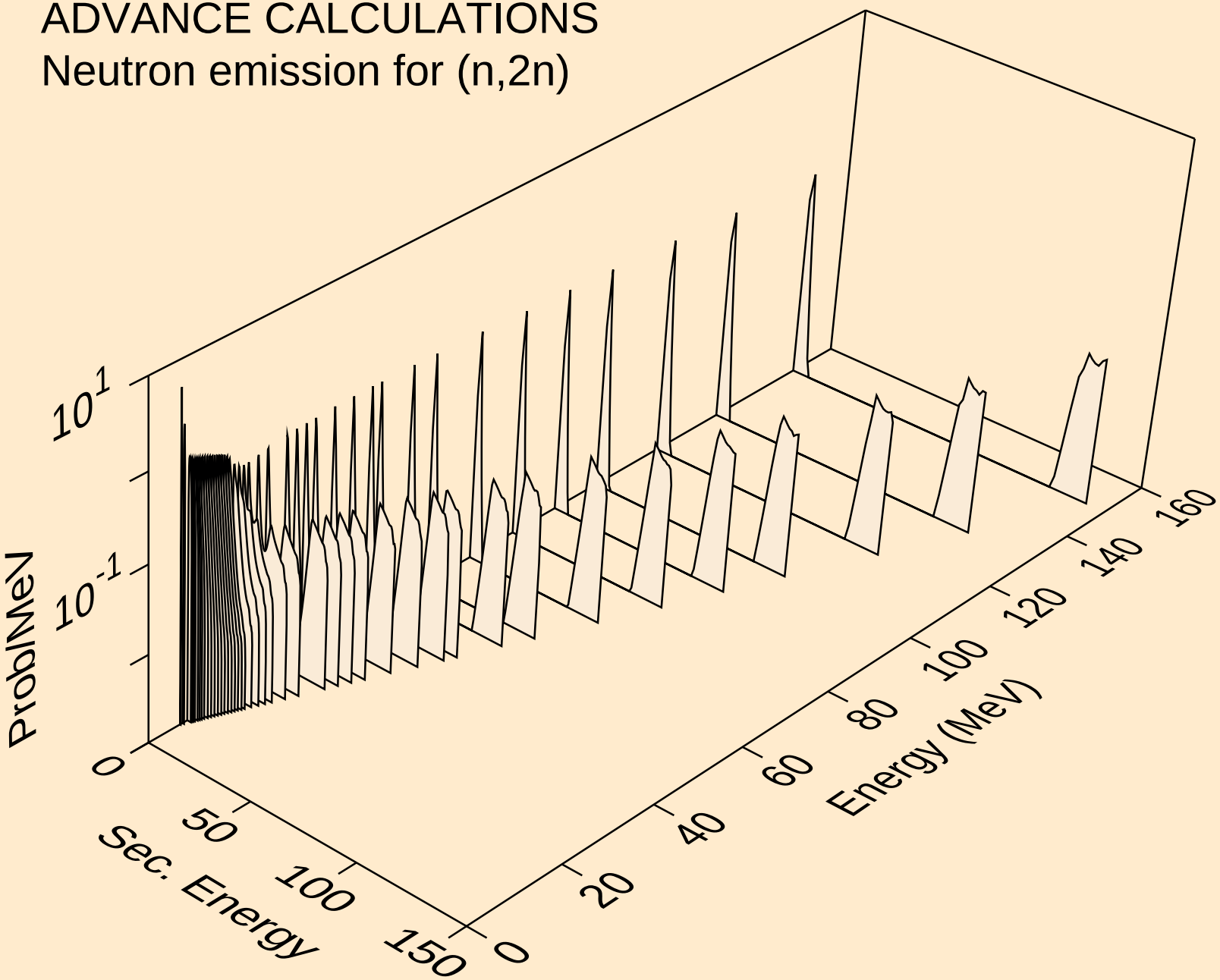
ADVANCE CALCULATIONS

Neutron emission for (n,x)



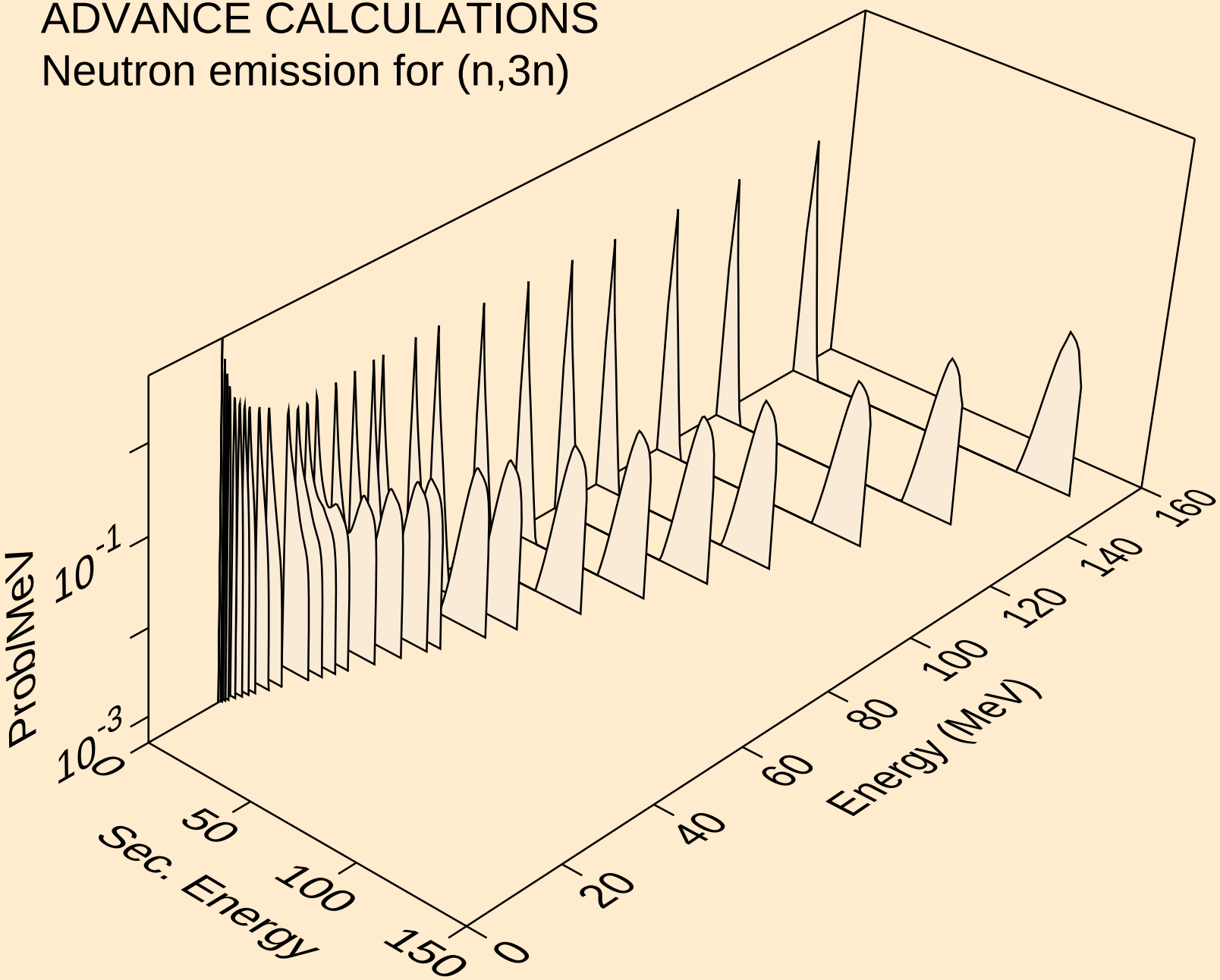
ADVANCE CALCULATIONS

Neutron emission for (n,2n)



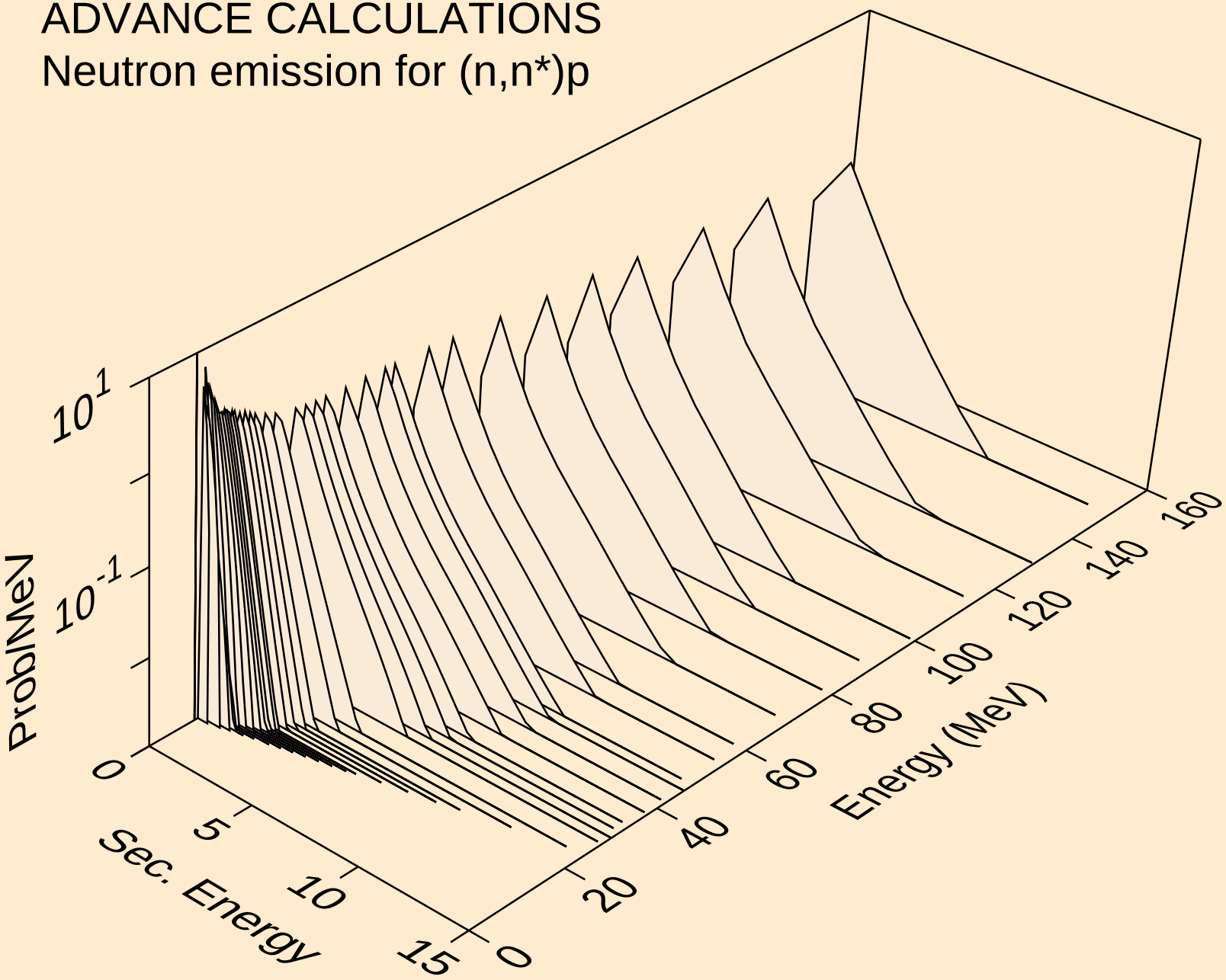
ADVANCE CALCULATIONS

Neutron emission for (n,3n)



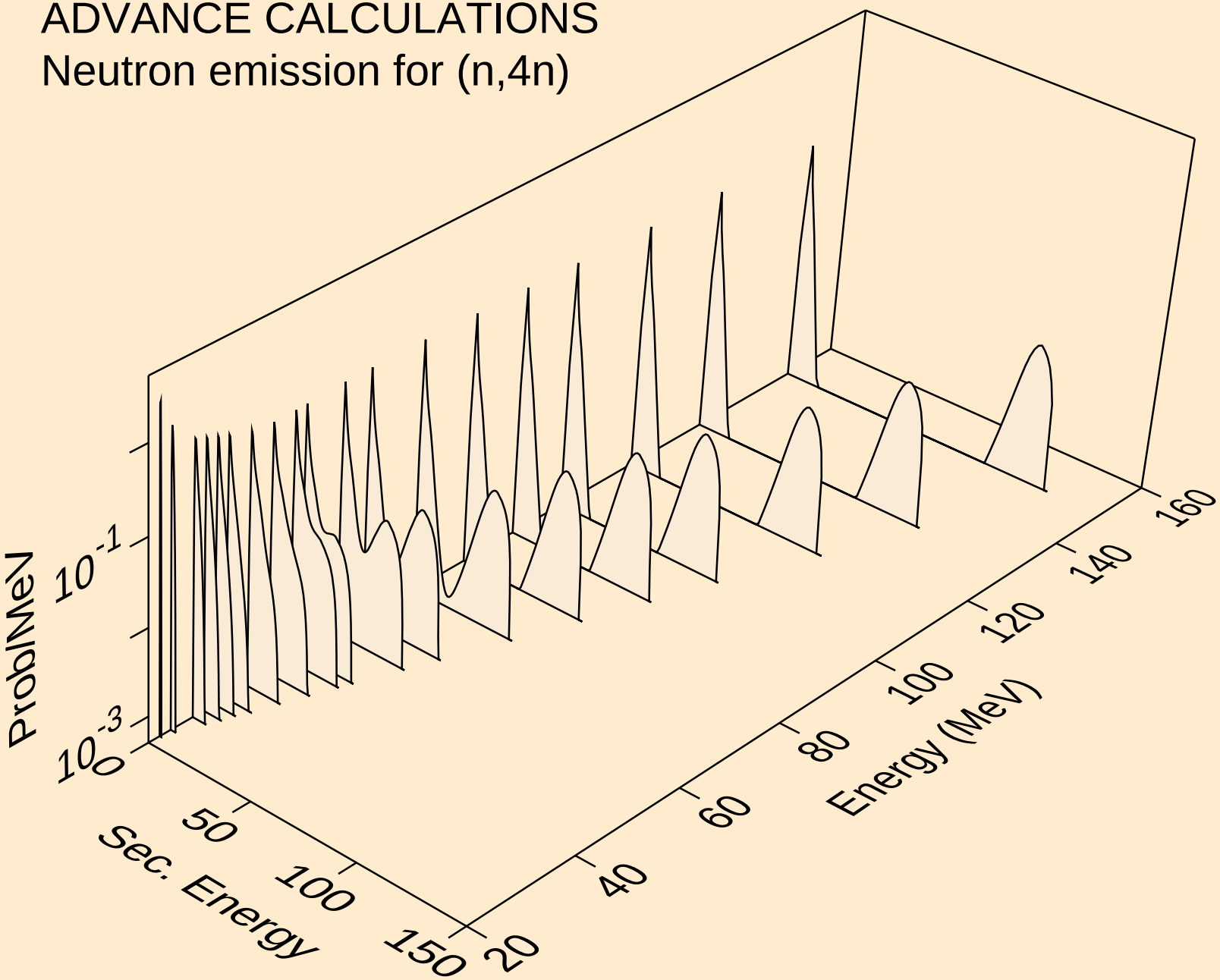
ADVANCE CALCULATIONS

Neutron emission for (n,n*)p



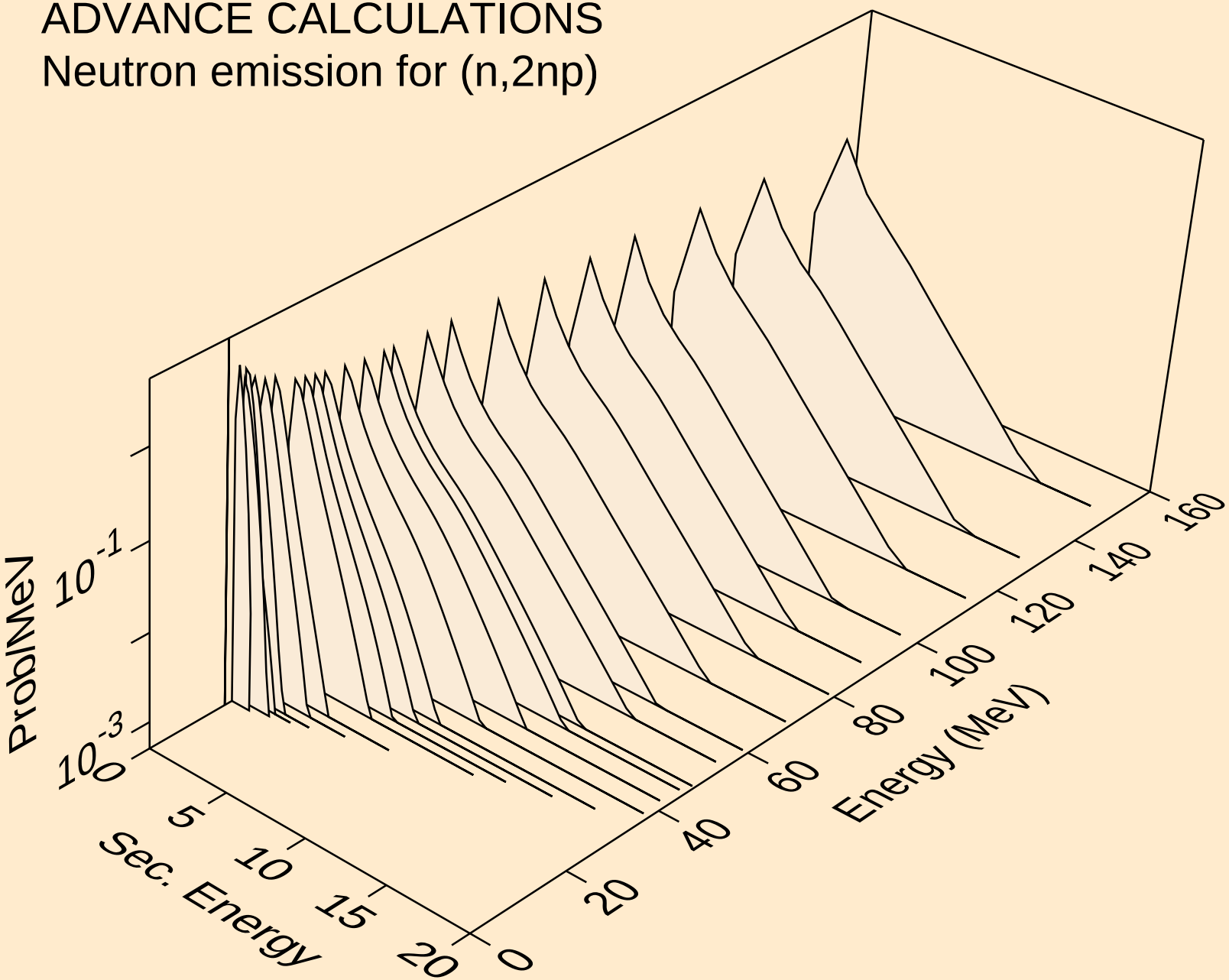
ADVANCE CALCULATIONS

Neutron emission for (n,4n)



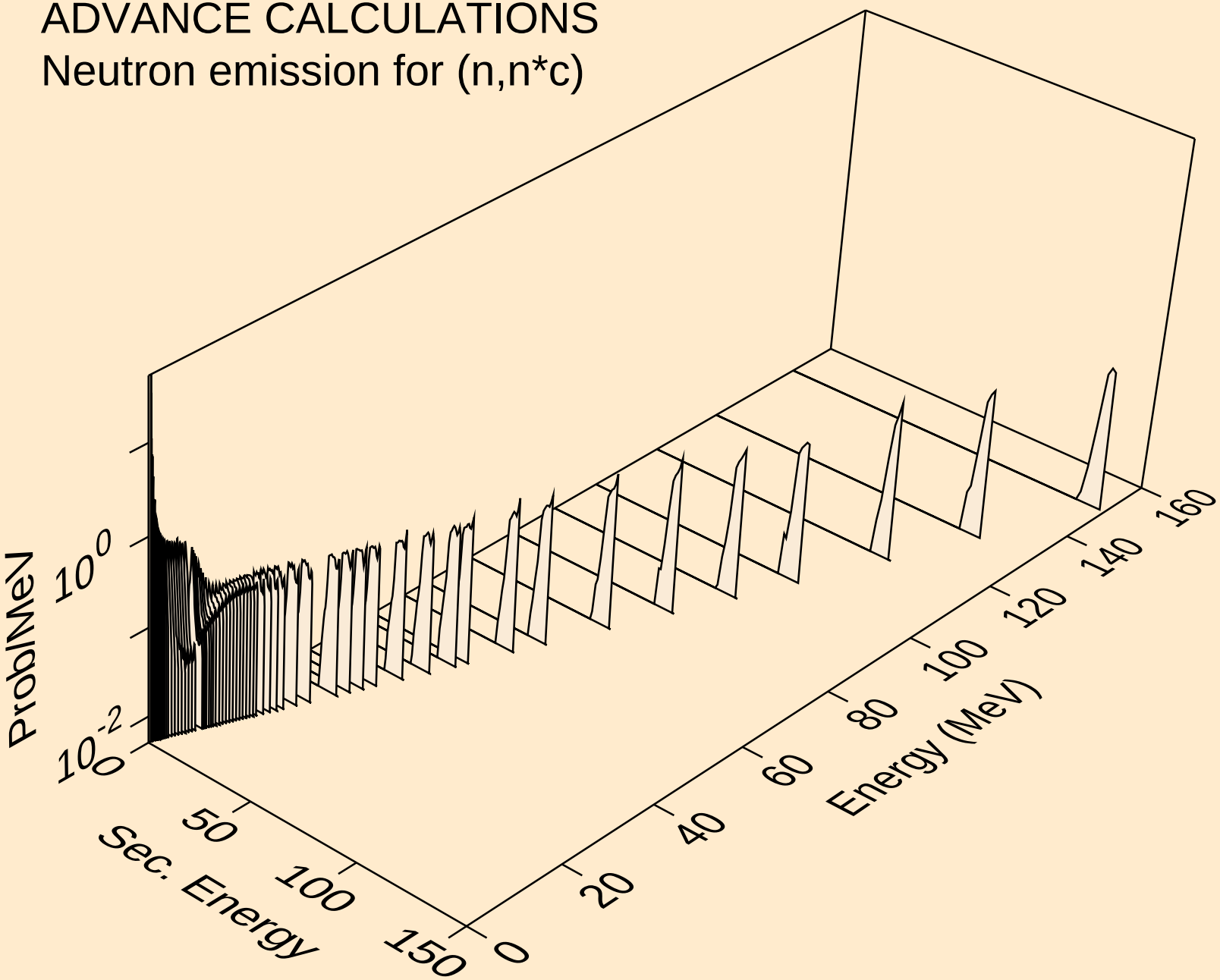
ADVANCE CALCULATIONS

Neutron emission for (n,2np)



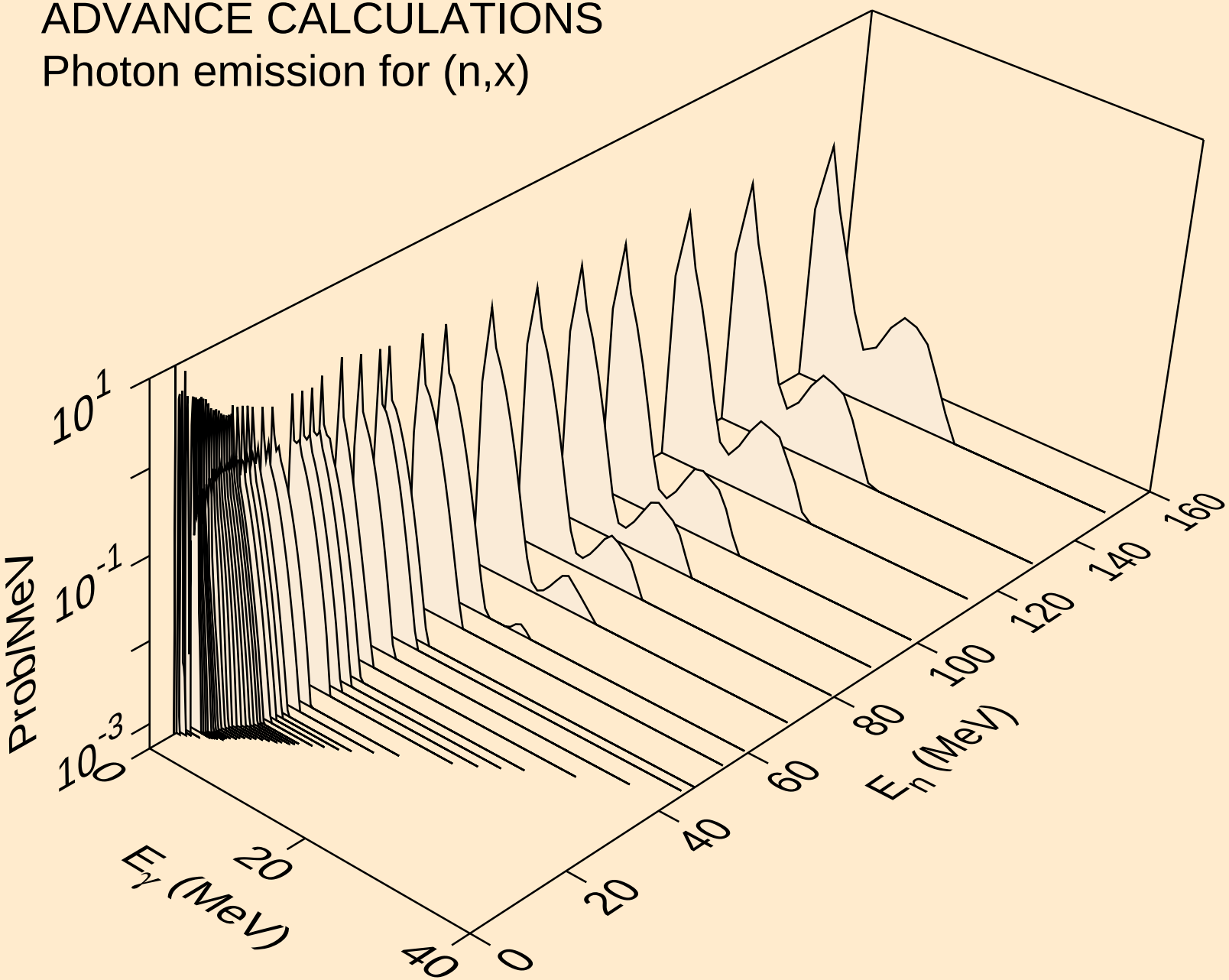
ADVANCE CALCULATIONS

Neutron emission for (n,n*c)



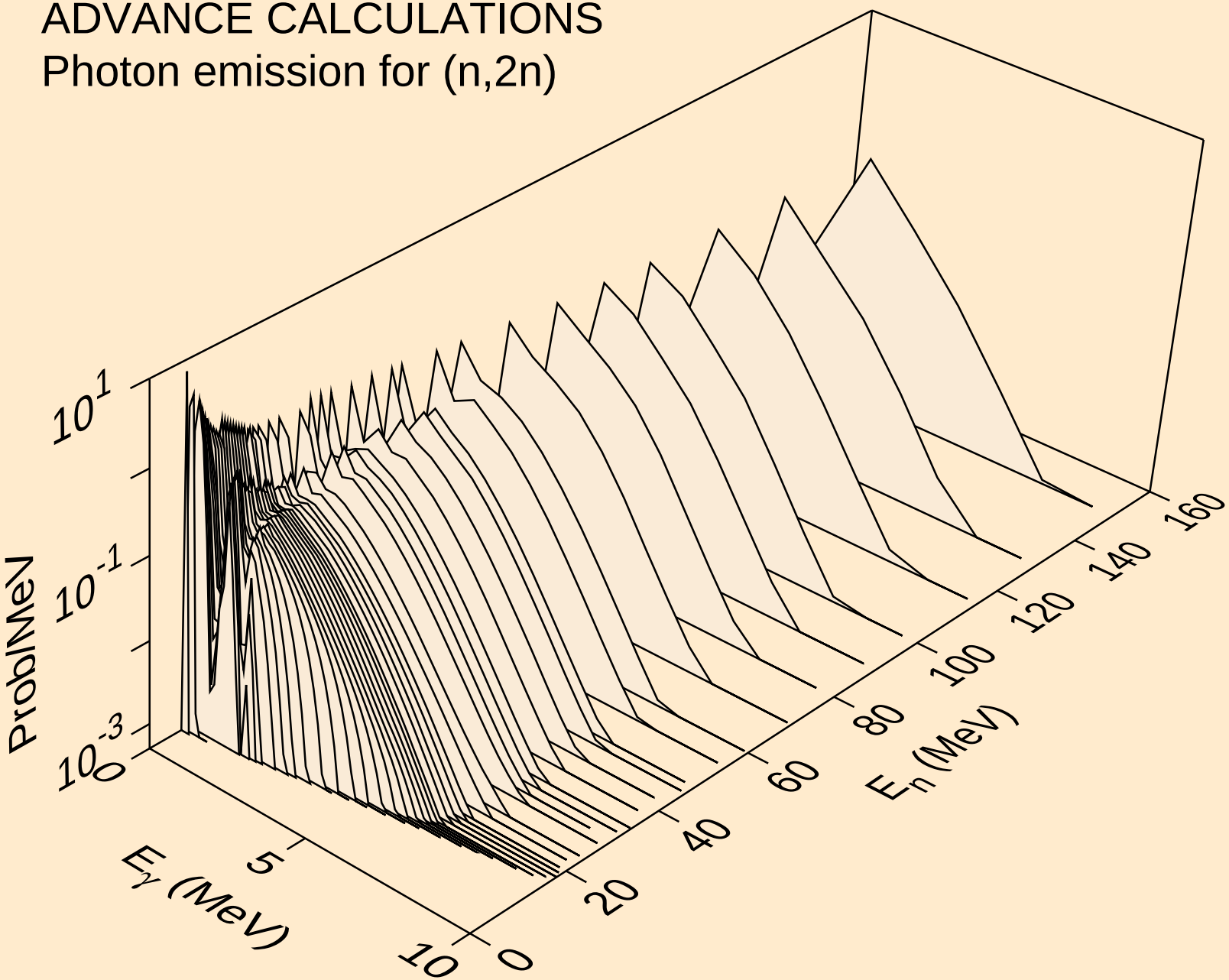
ADVANCE CALCULATIONS

Photon emission for (n,x)



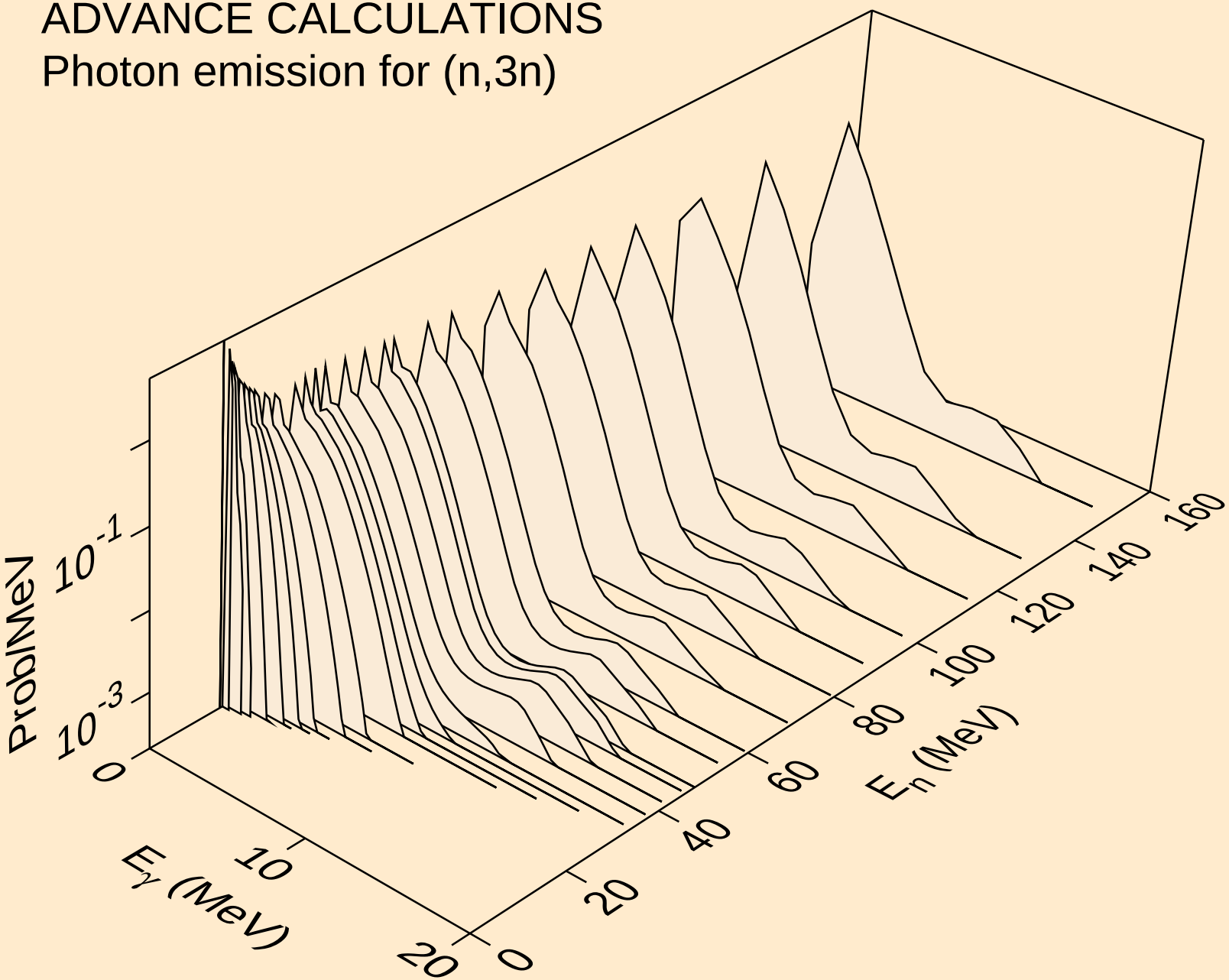
ADVANCE CALCULATIONS

Photon emission for (n,2n)



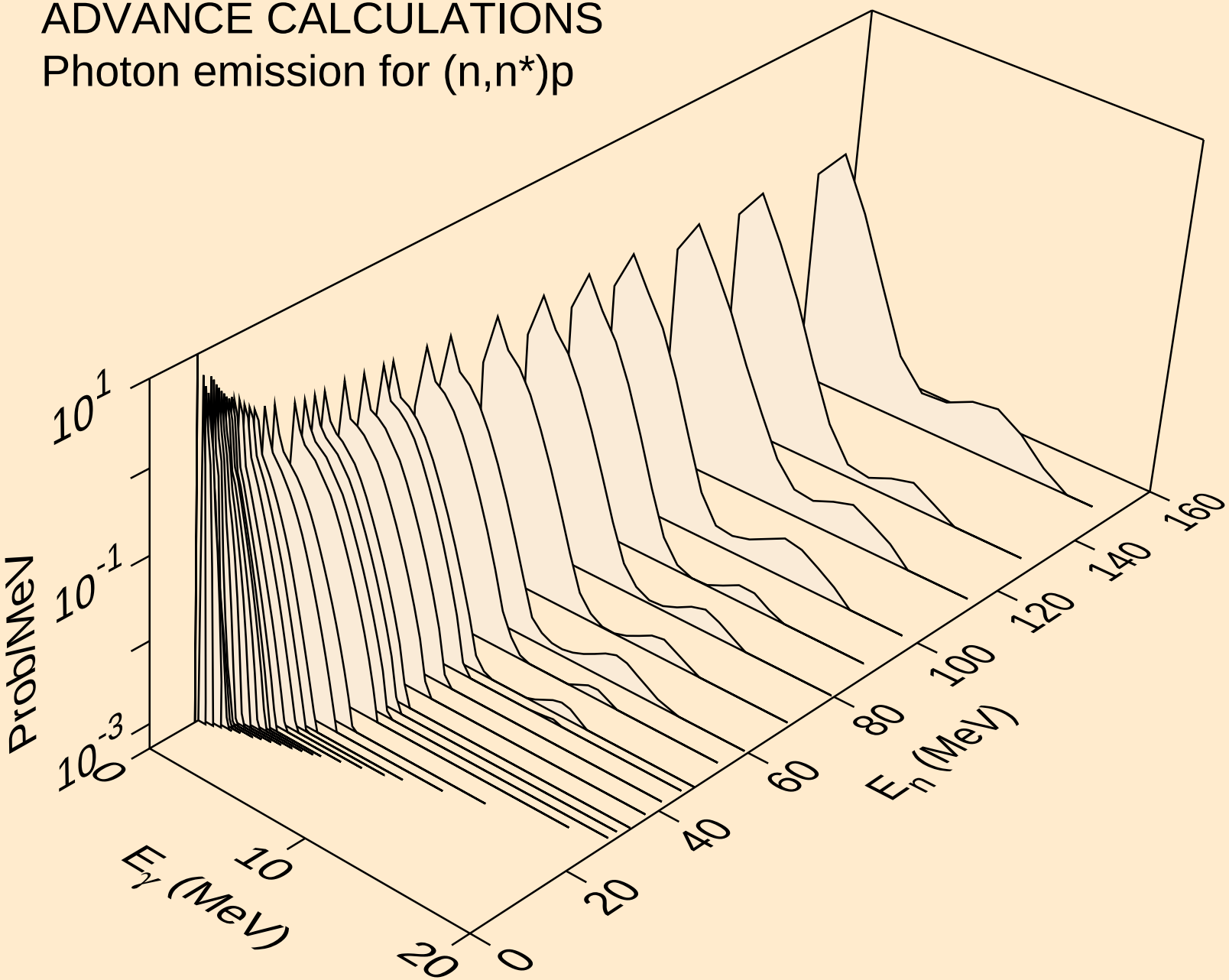
ADVANCE CALCULATIONS

Photon emission for (n,3n)



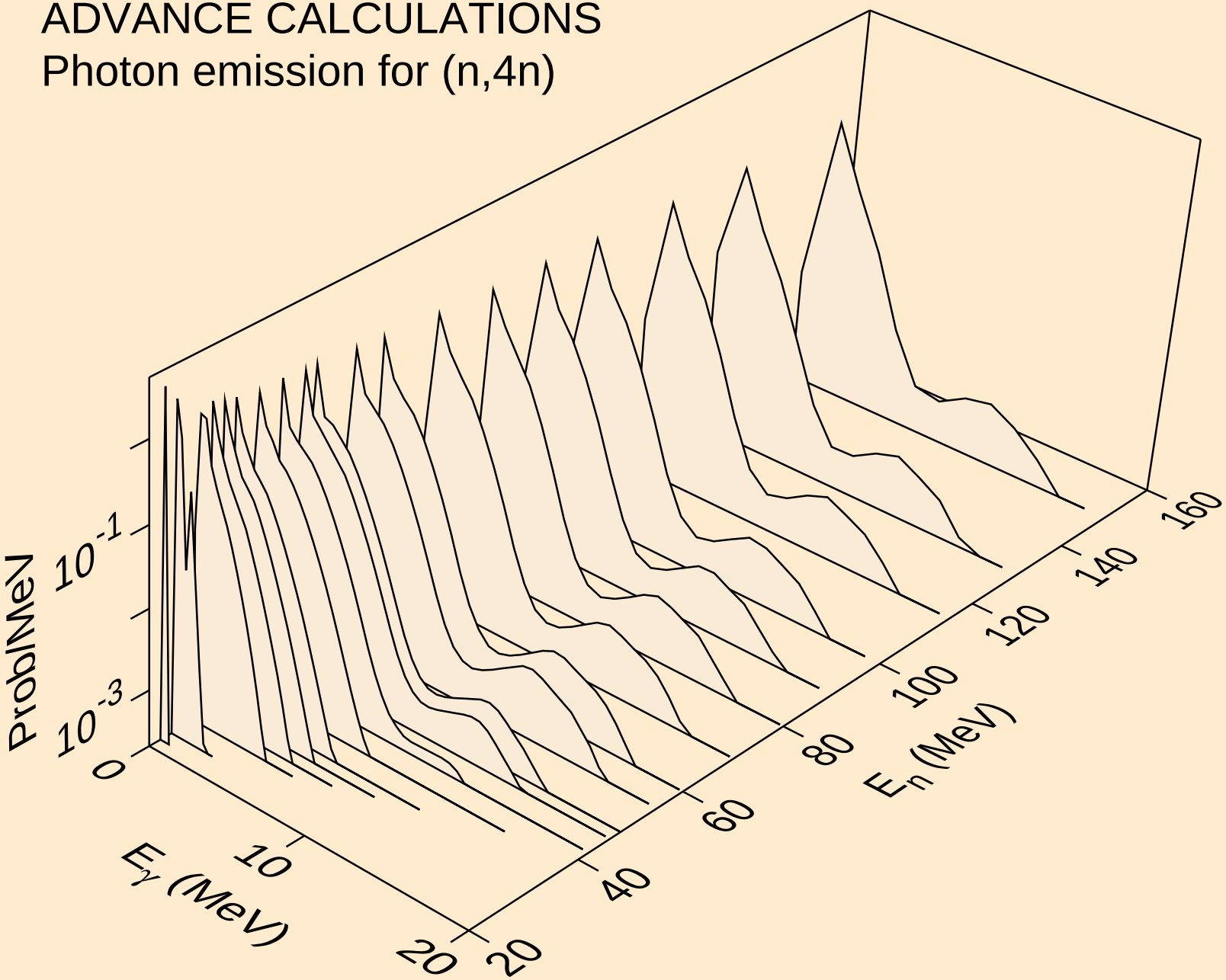
ADVANCE CALCULATIONS

Photon emission for (n,n*)p



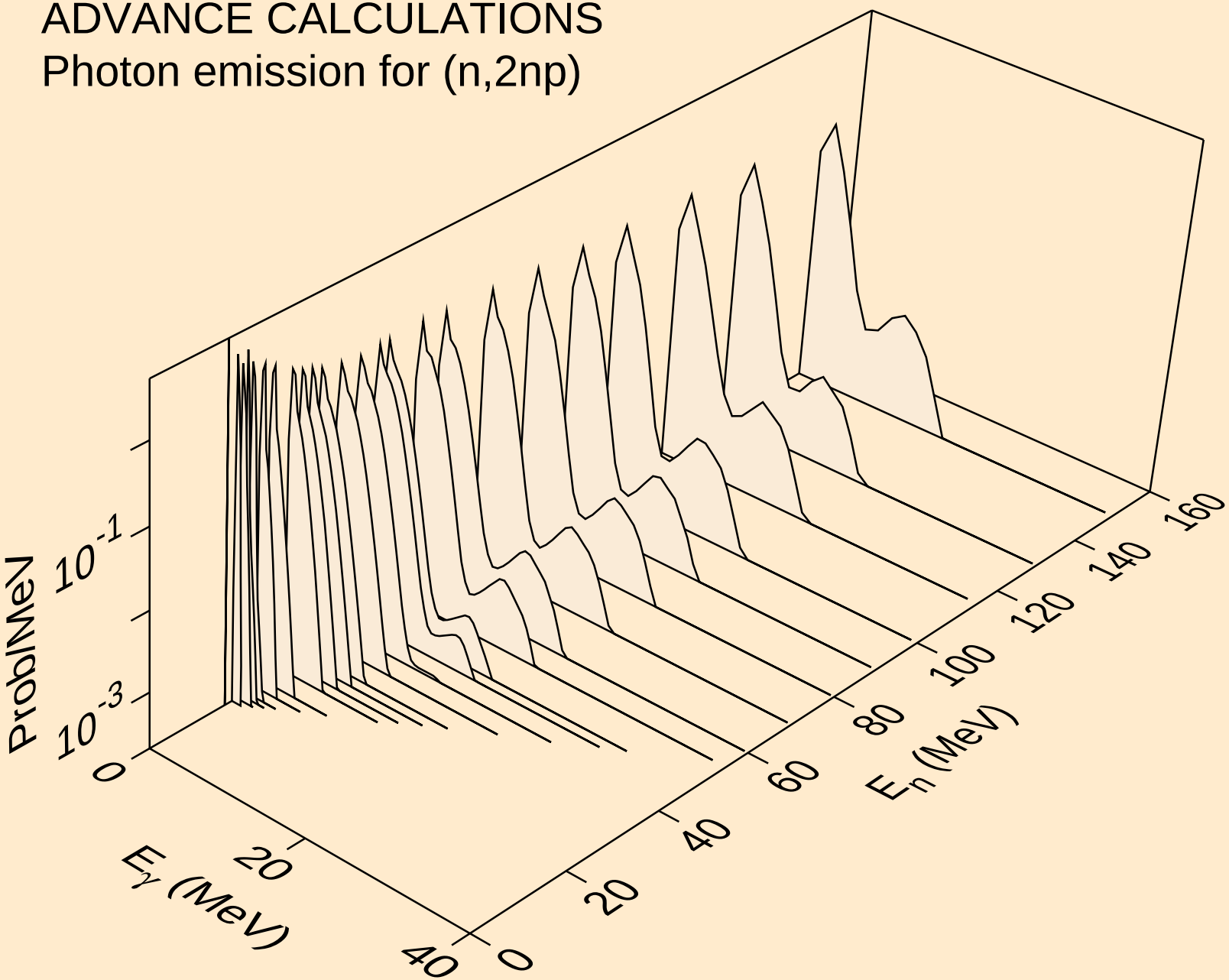
ADVANCE CALCULATIONS

Photon emission for (n,4n)



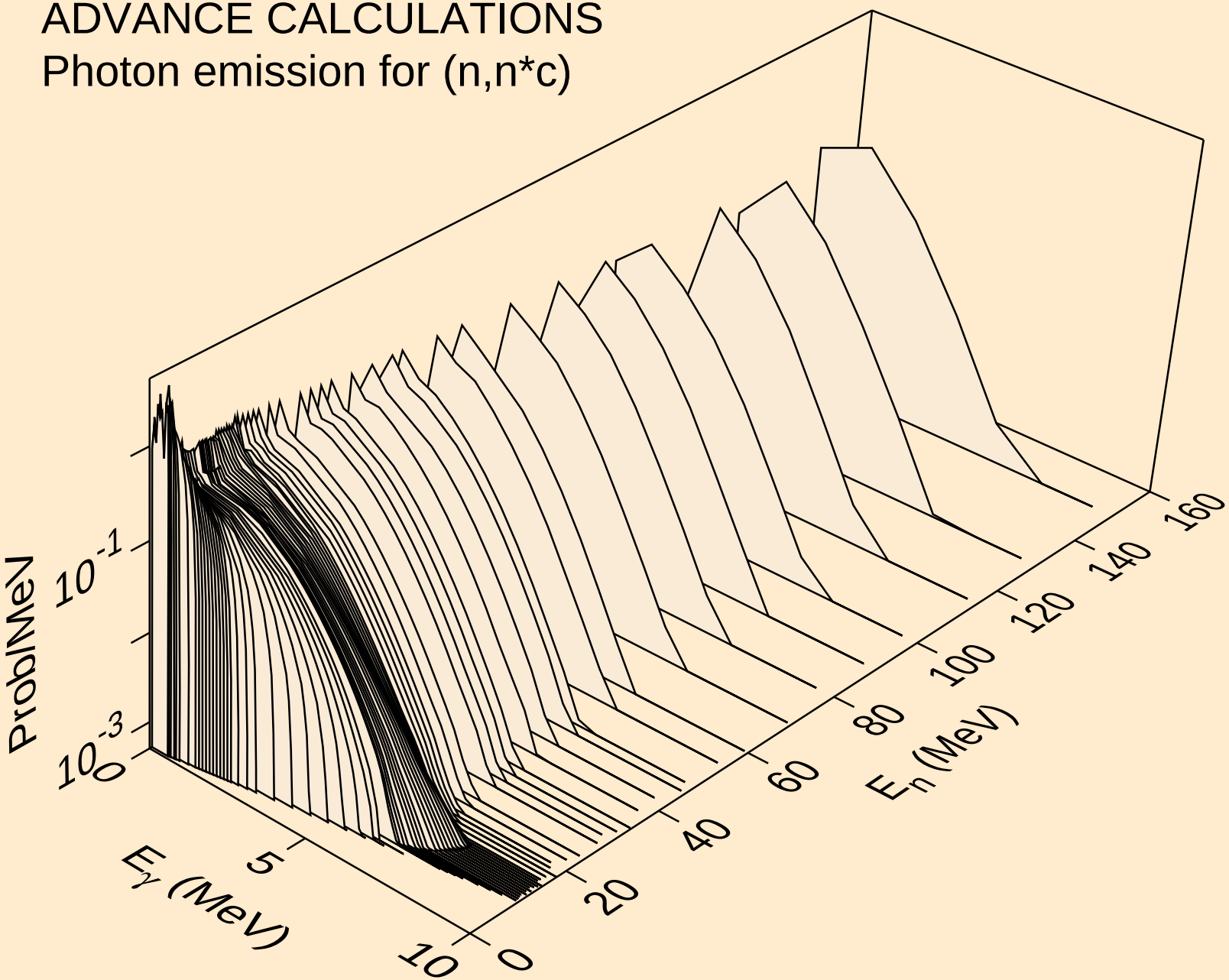
ADVANCE CALCULATIONS

Photon emission for (n,2np)



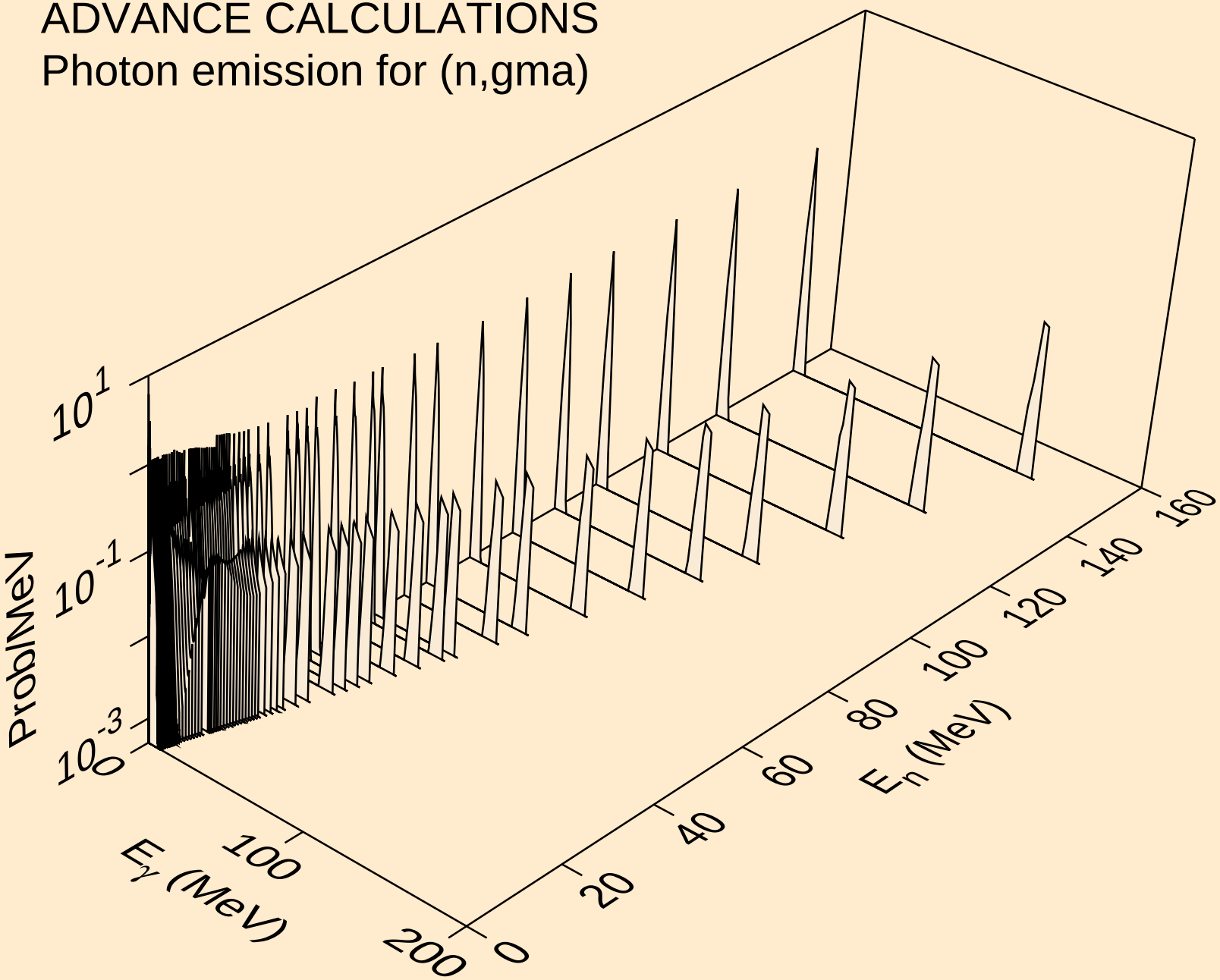
ADVANCE CALCULATIONS

Photon emission for (n,n*c)



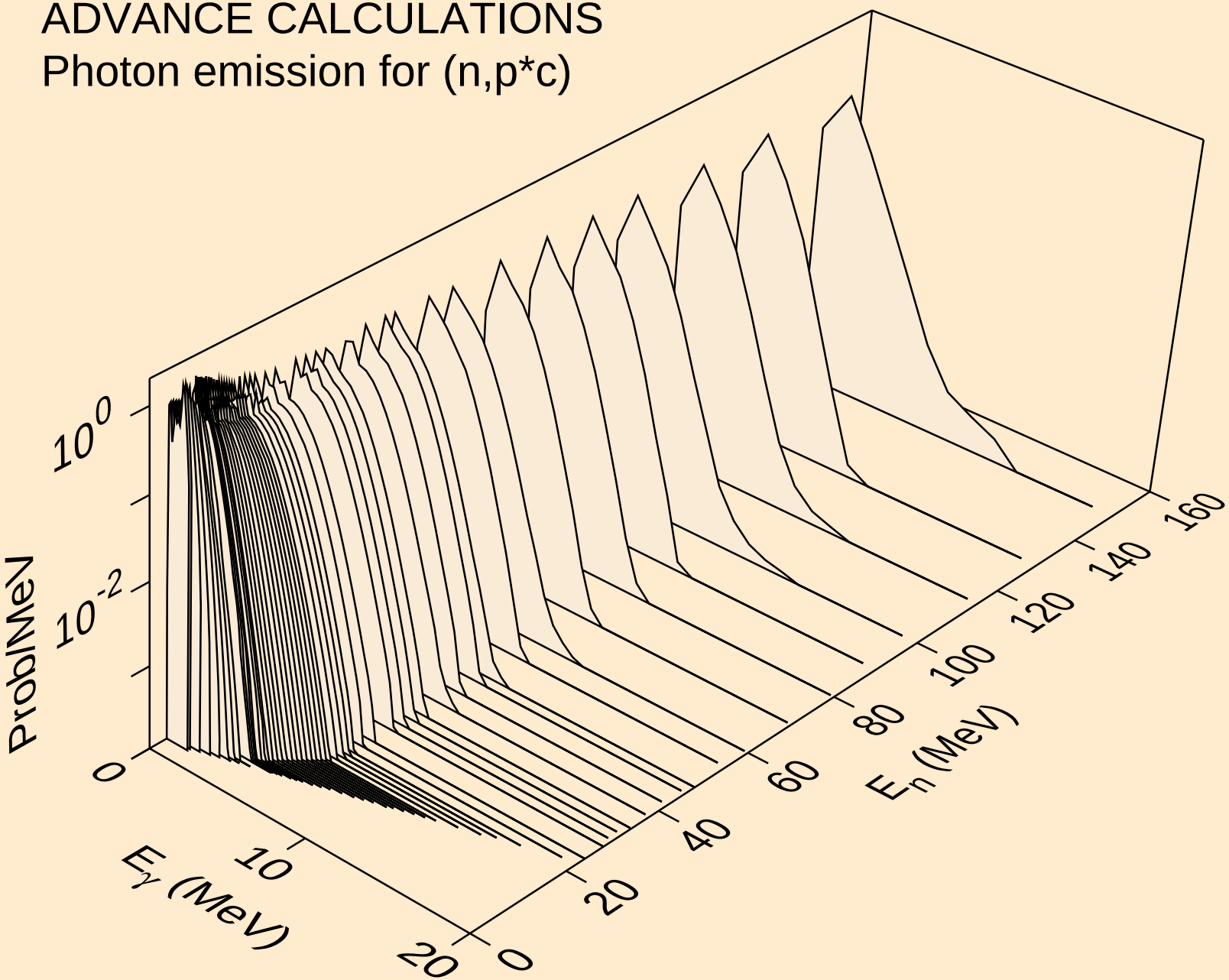
ADVANCE CALCULATIONS

Photon emission for (n,gma)



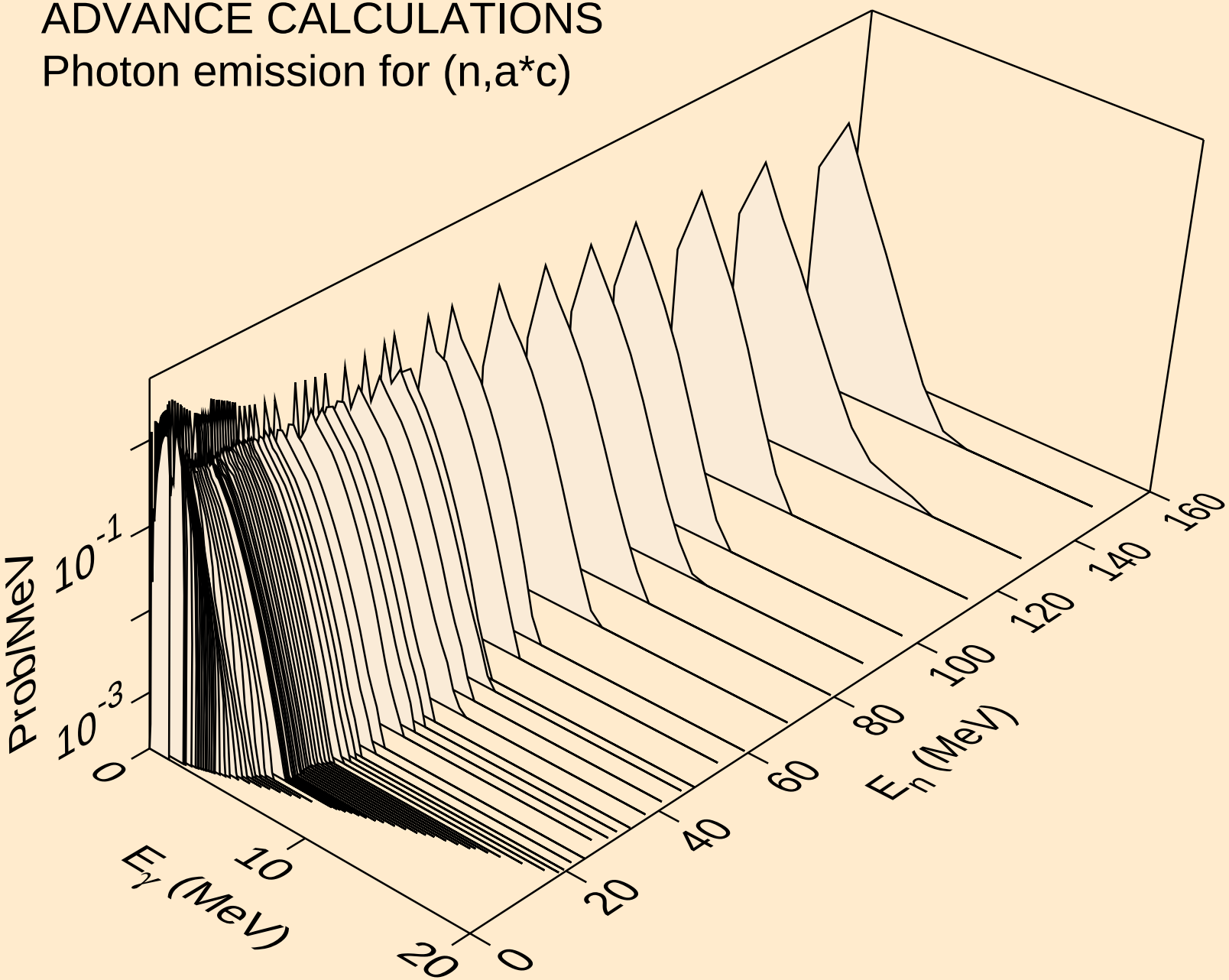
ADVANCE CALCULATIONS

Photon emission for (n,p*c)

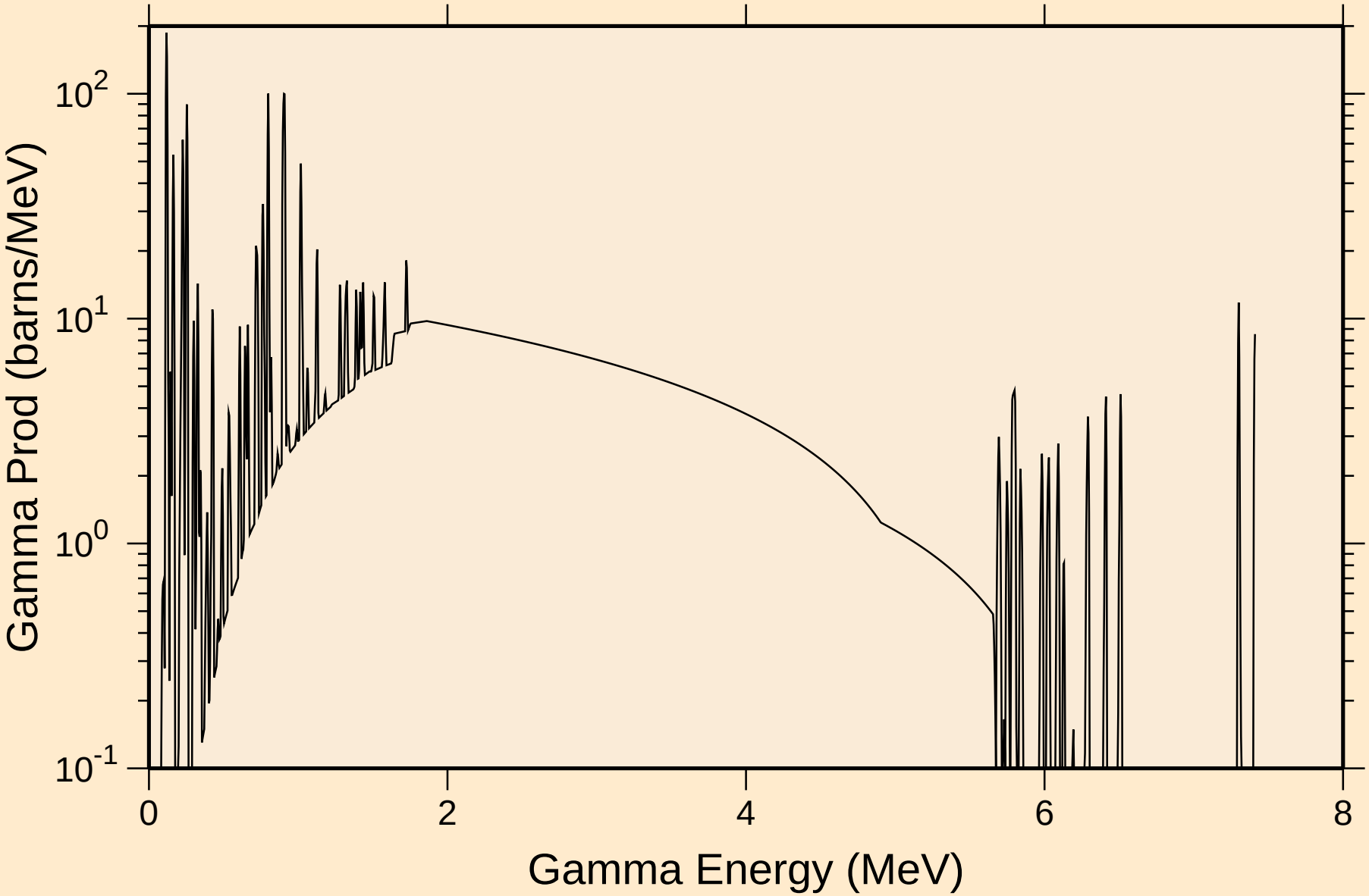


ADVANCE CALCULATIONS

Photon emission for (n,a*c)

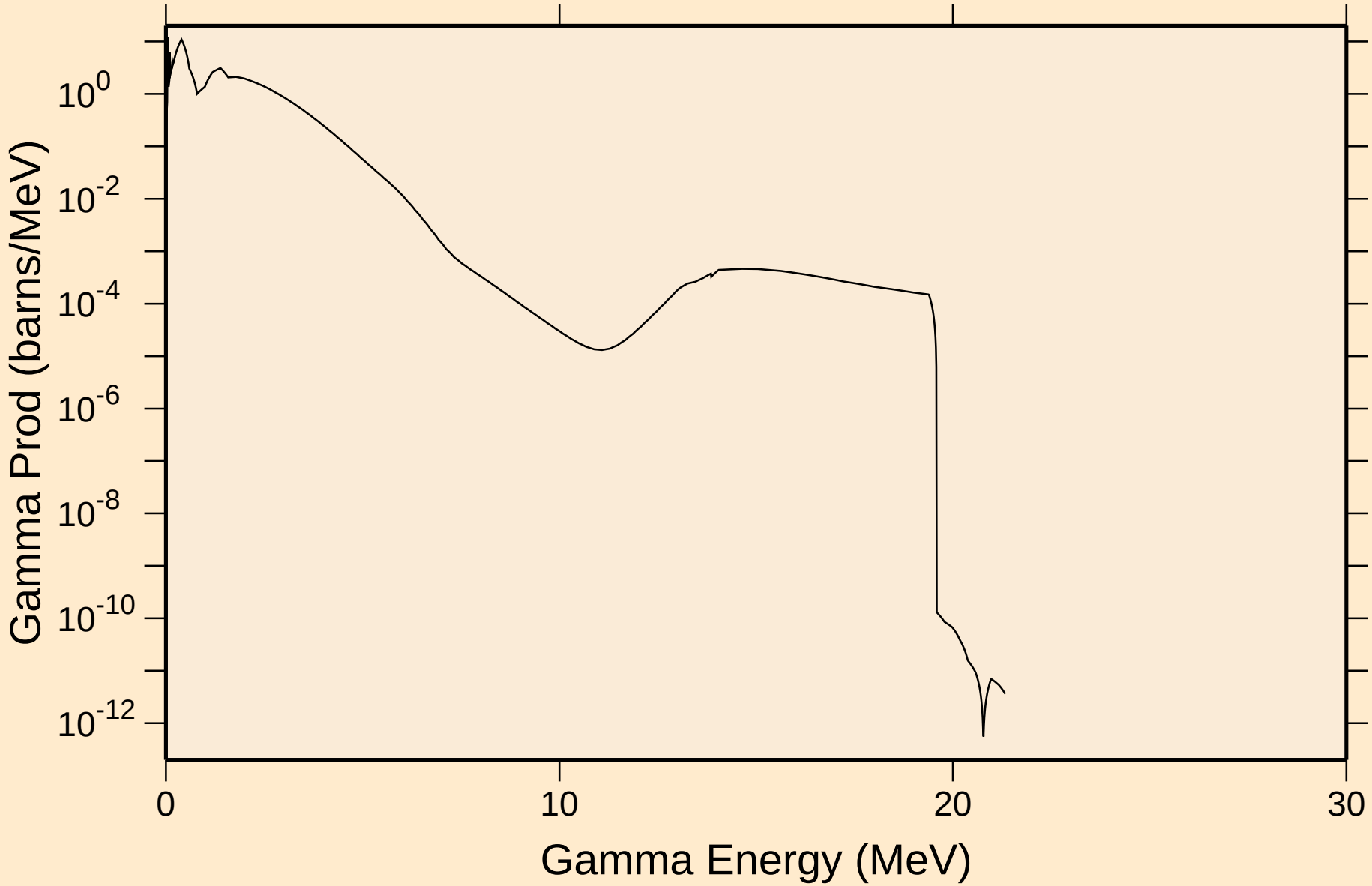


ADVANCE CALCULATIONS
thermal capture photon spectrum



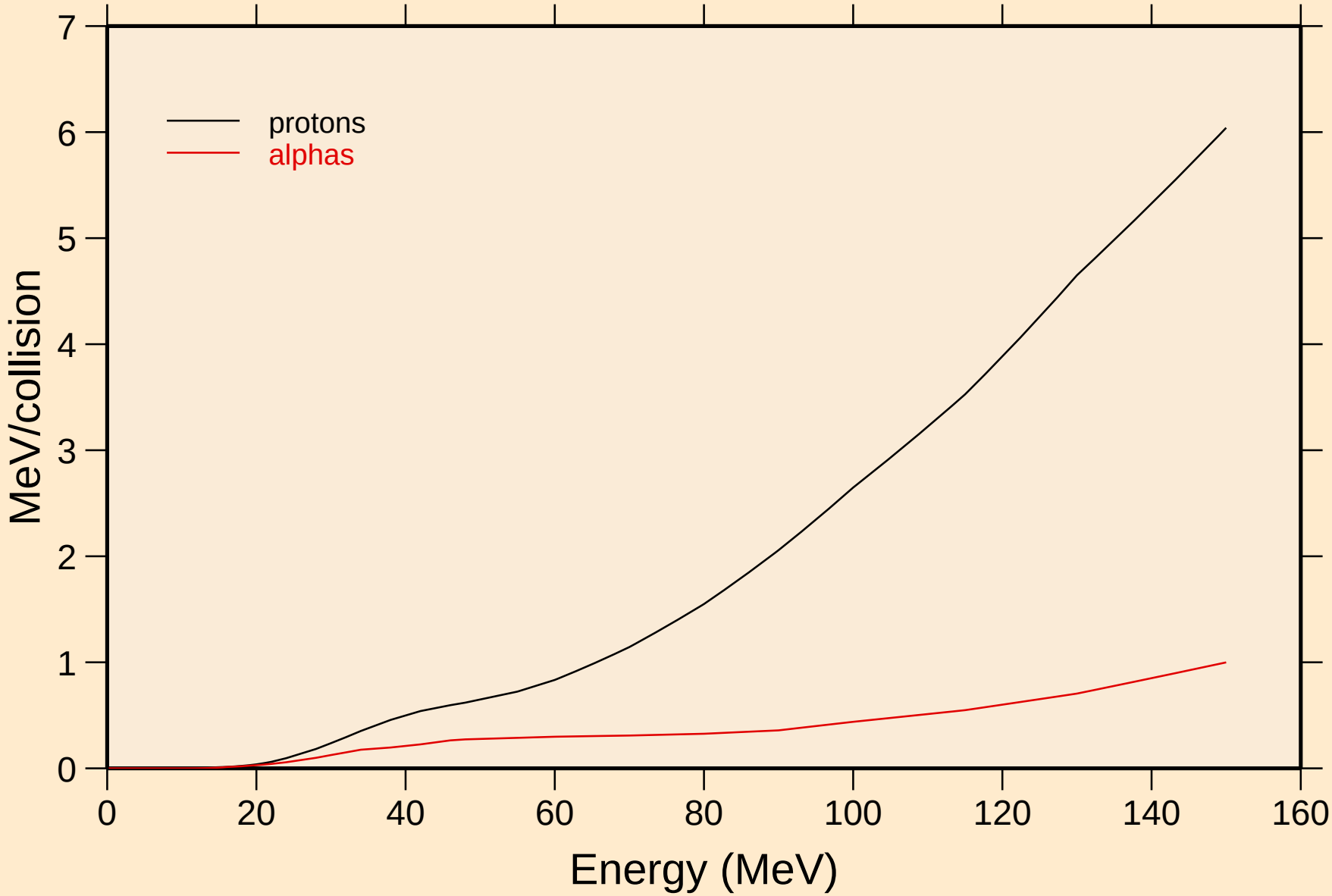
ADVANCE CALCULATIONS

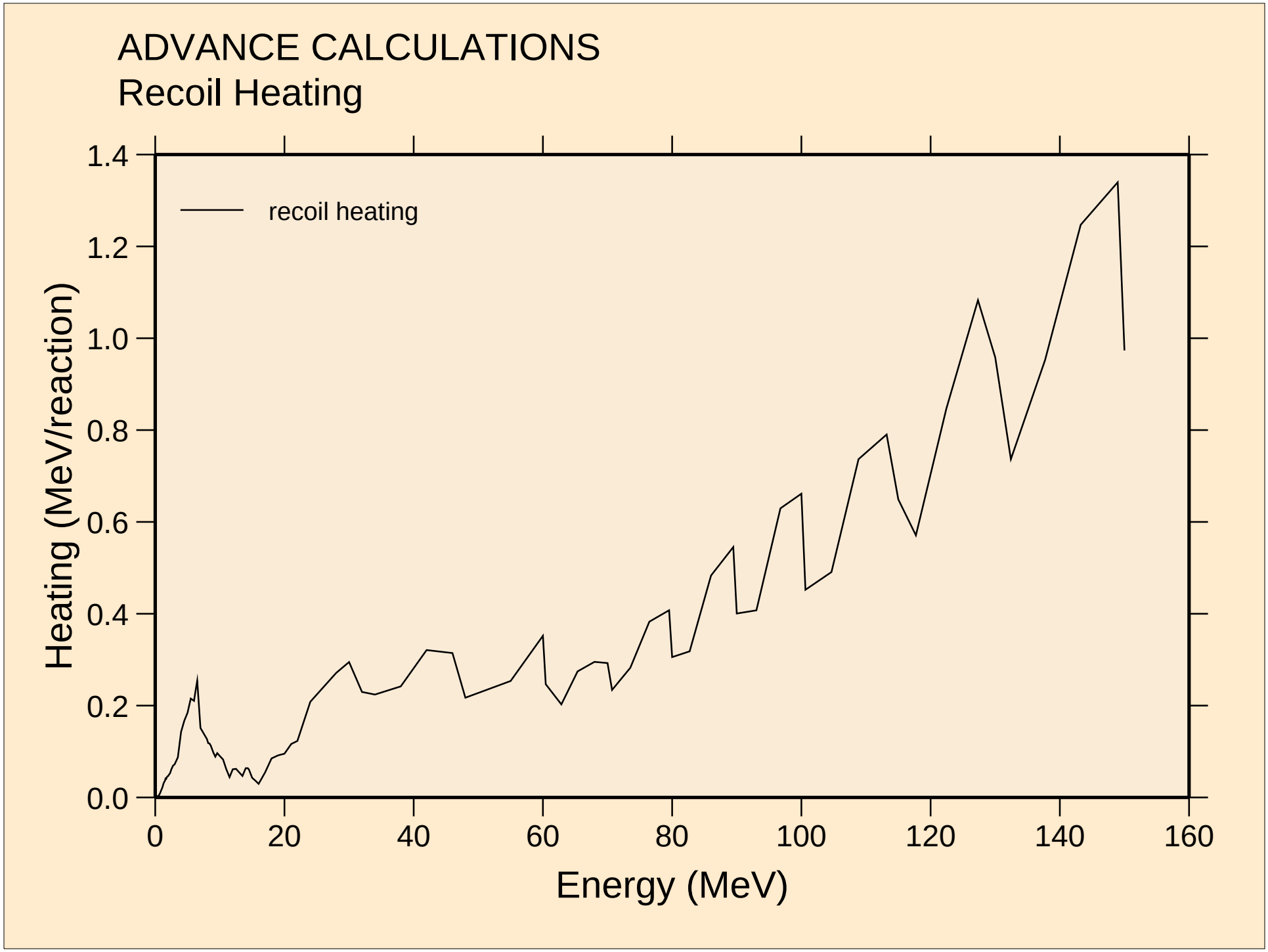
14 MeV photon spectrum



ADVANCE CALCULATIONS

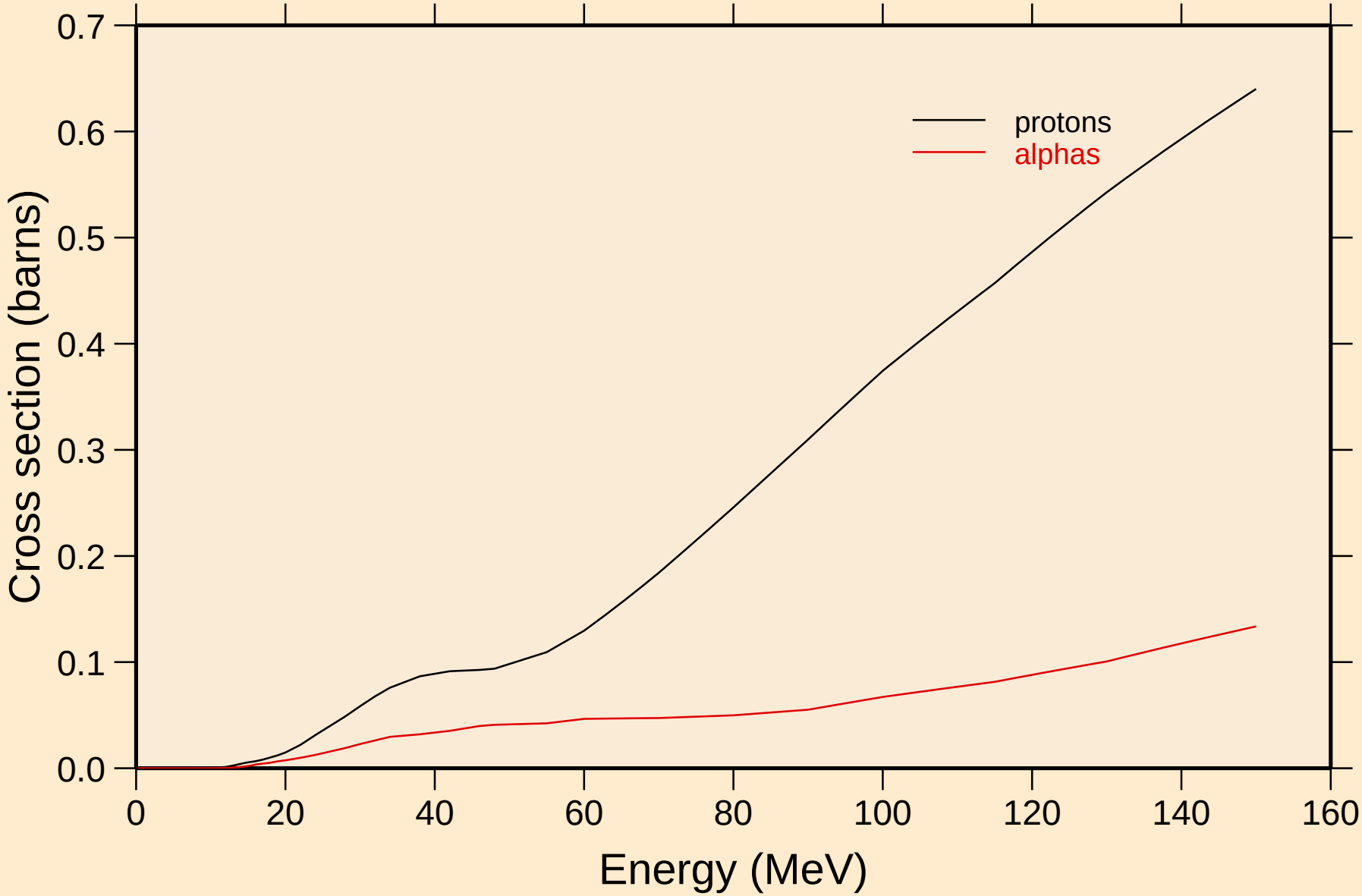
Particle heating contributions



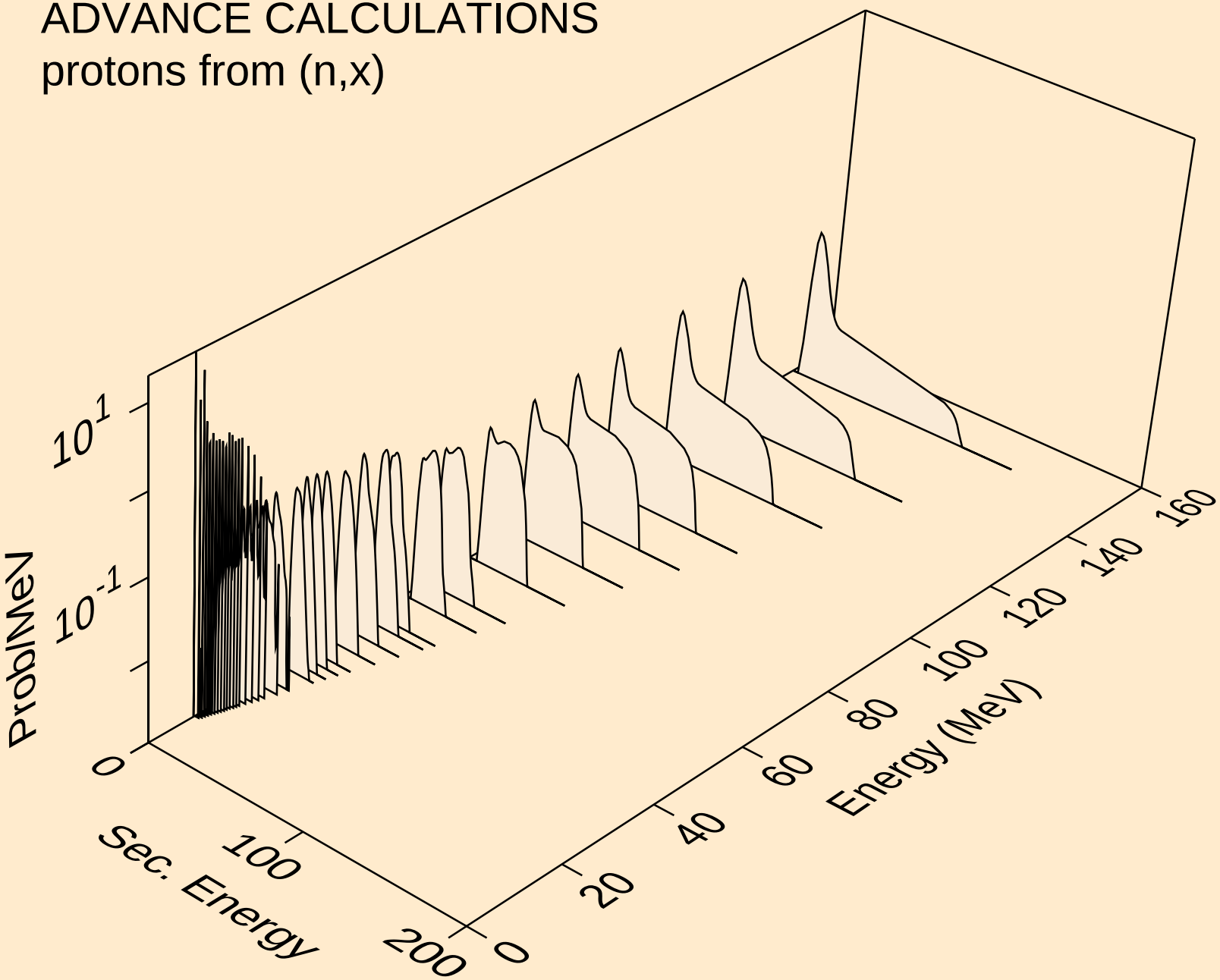

ADVANCE CALCULATIONS
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
20
40
60
80
100
120
140
160

ADVANCE CALCULATIONS

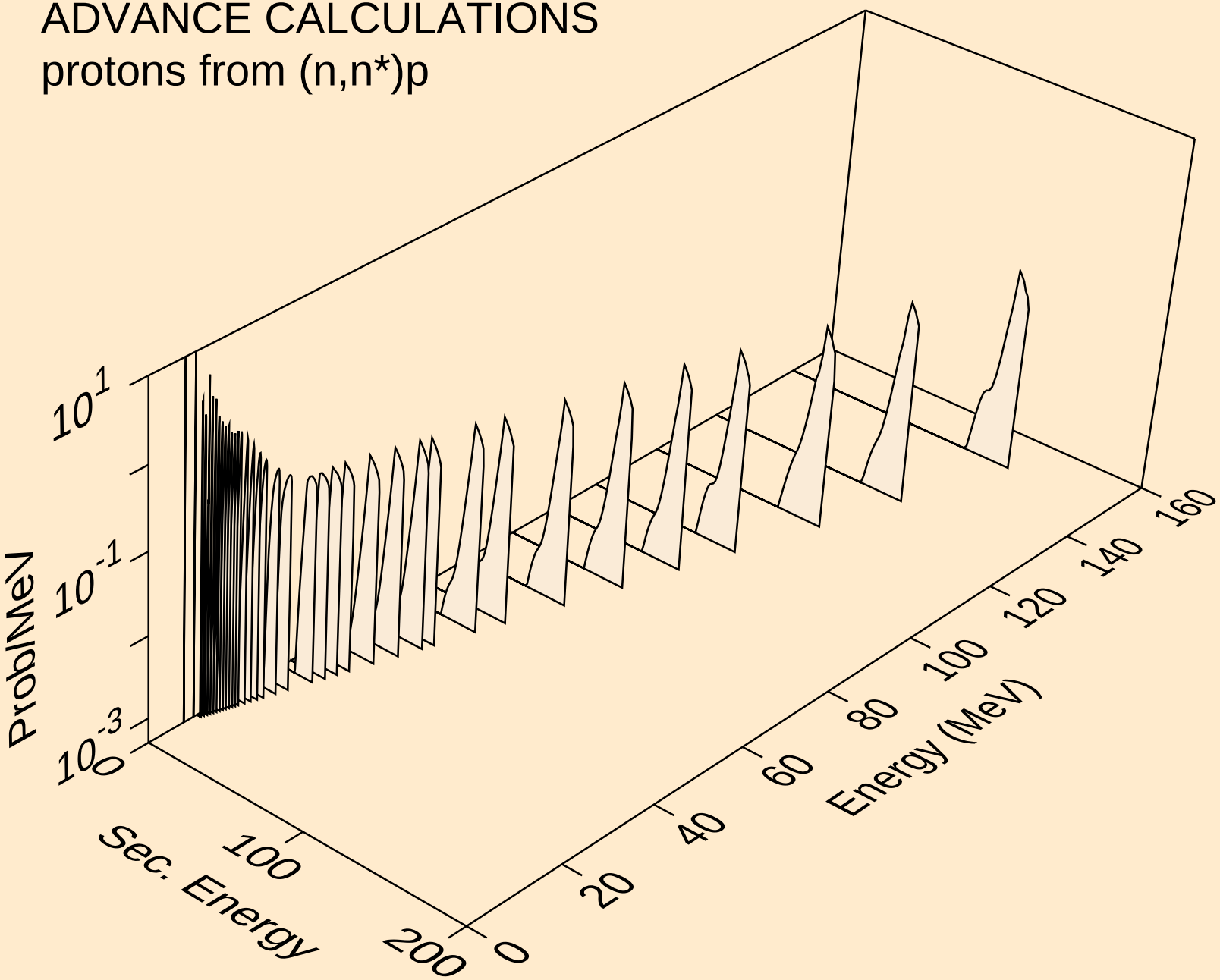
Particle production cross sections



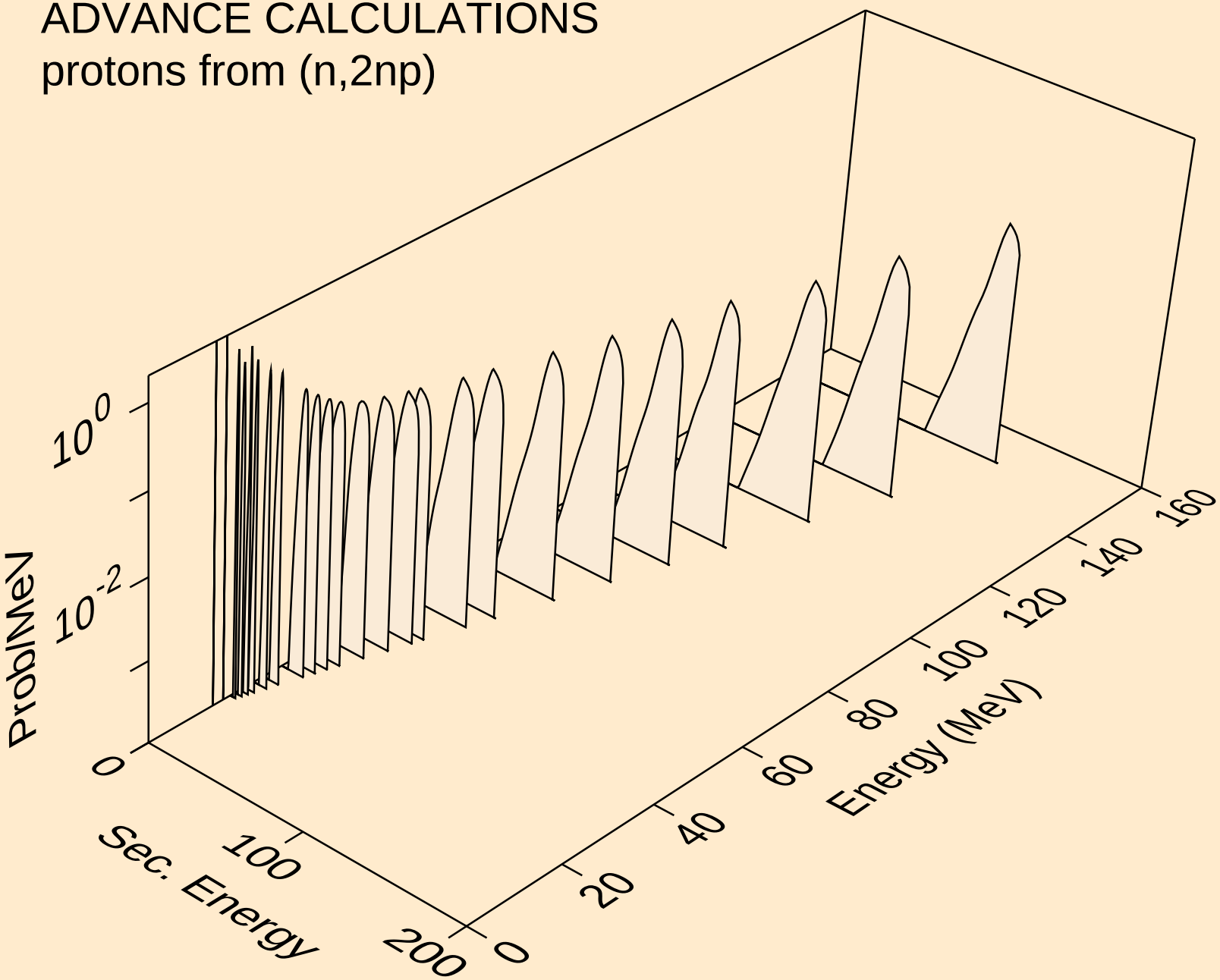
ADVANCE CALCULATIONS
protons from (n,x)



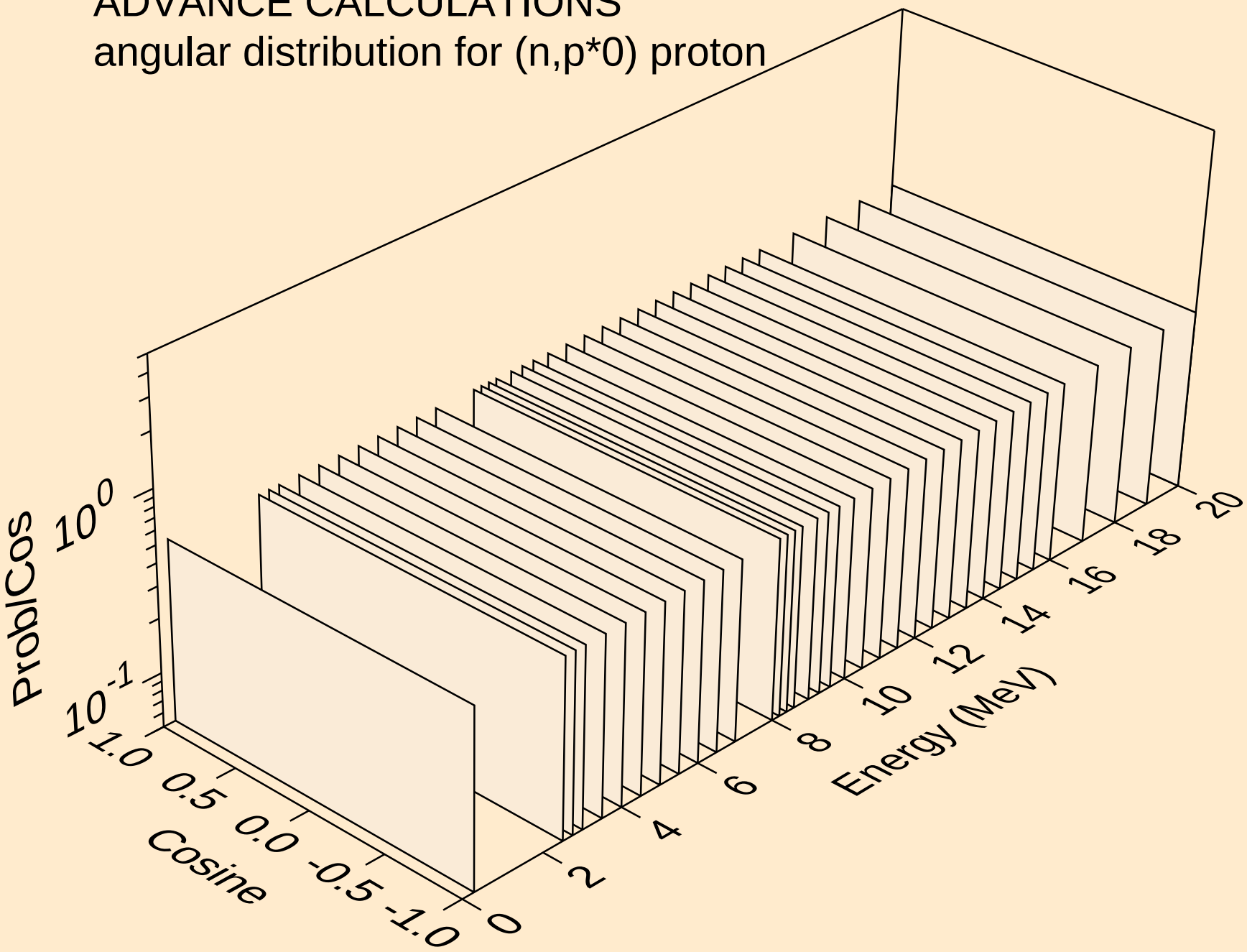
ADVANCE CALCULATIONS
protons from (n,n*)p



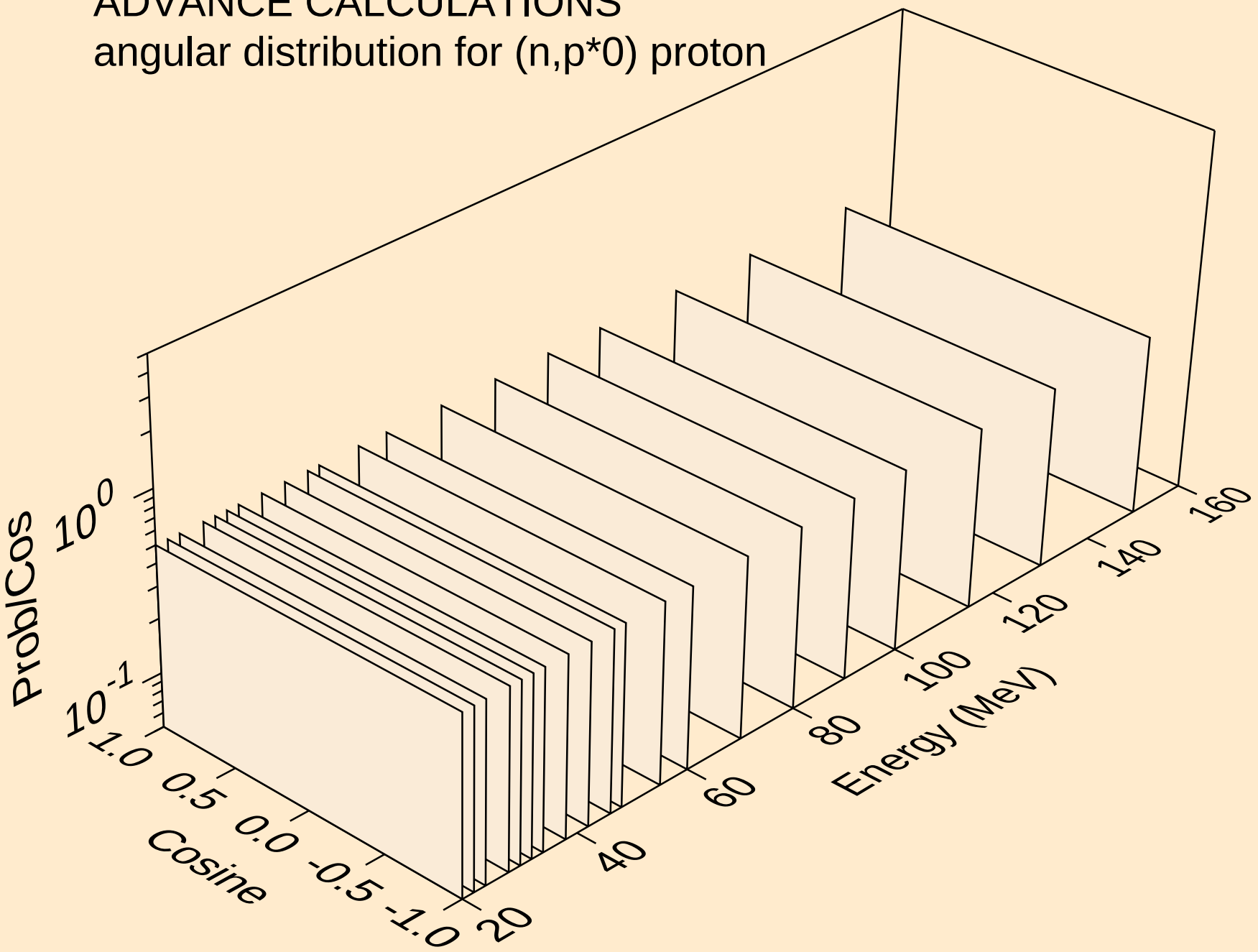
ADVANCE CALCULATIONS
protons from (n,2np)



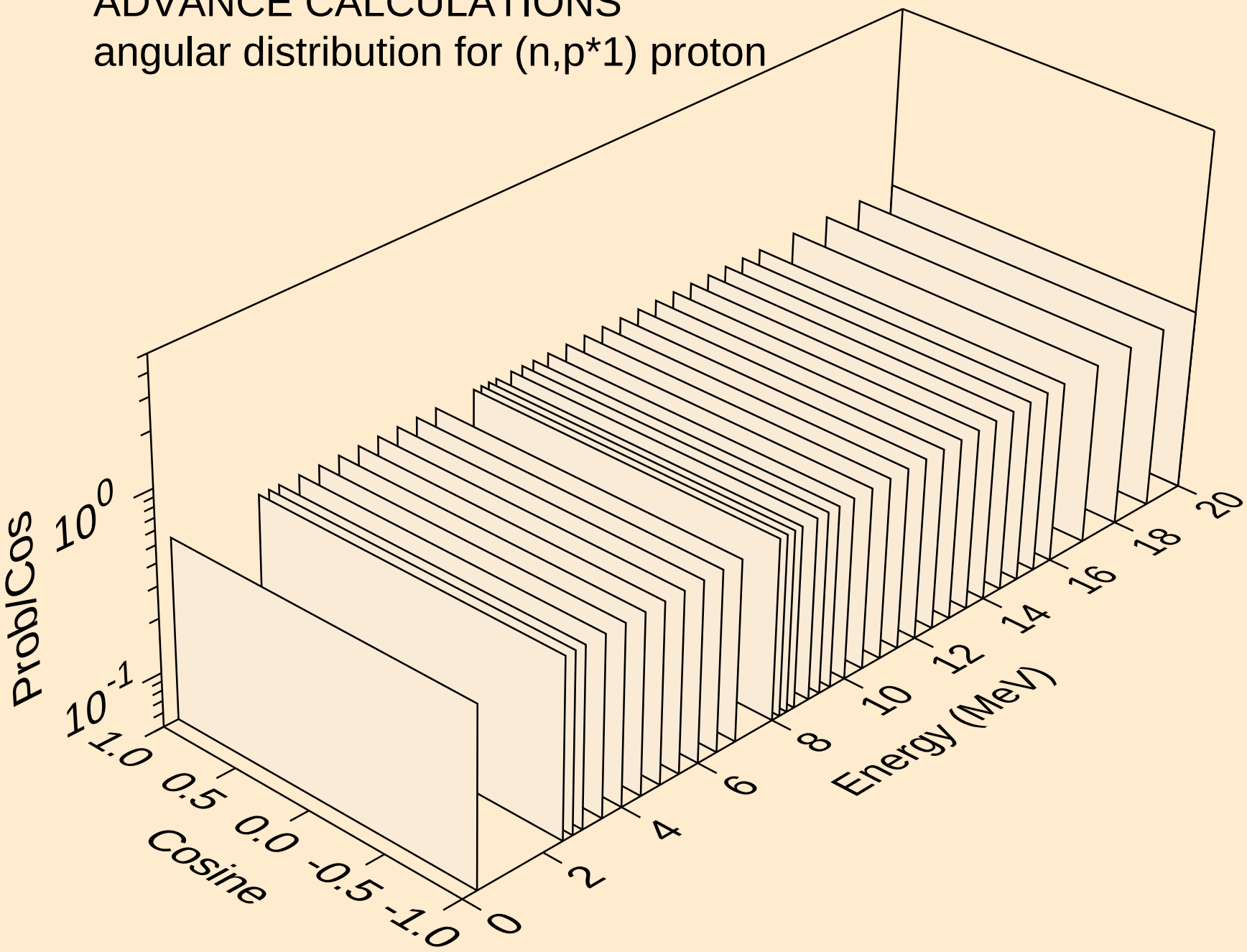
ADVANCE CALCULATIONS
angular distribution for (n,p*0) proton



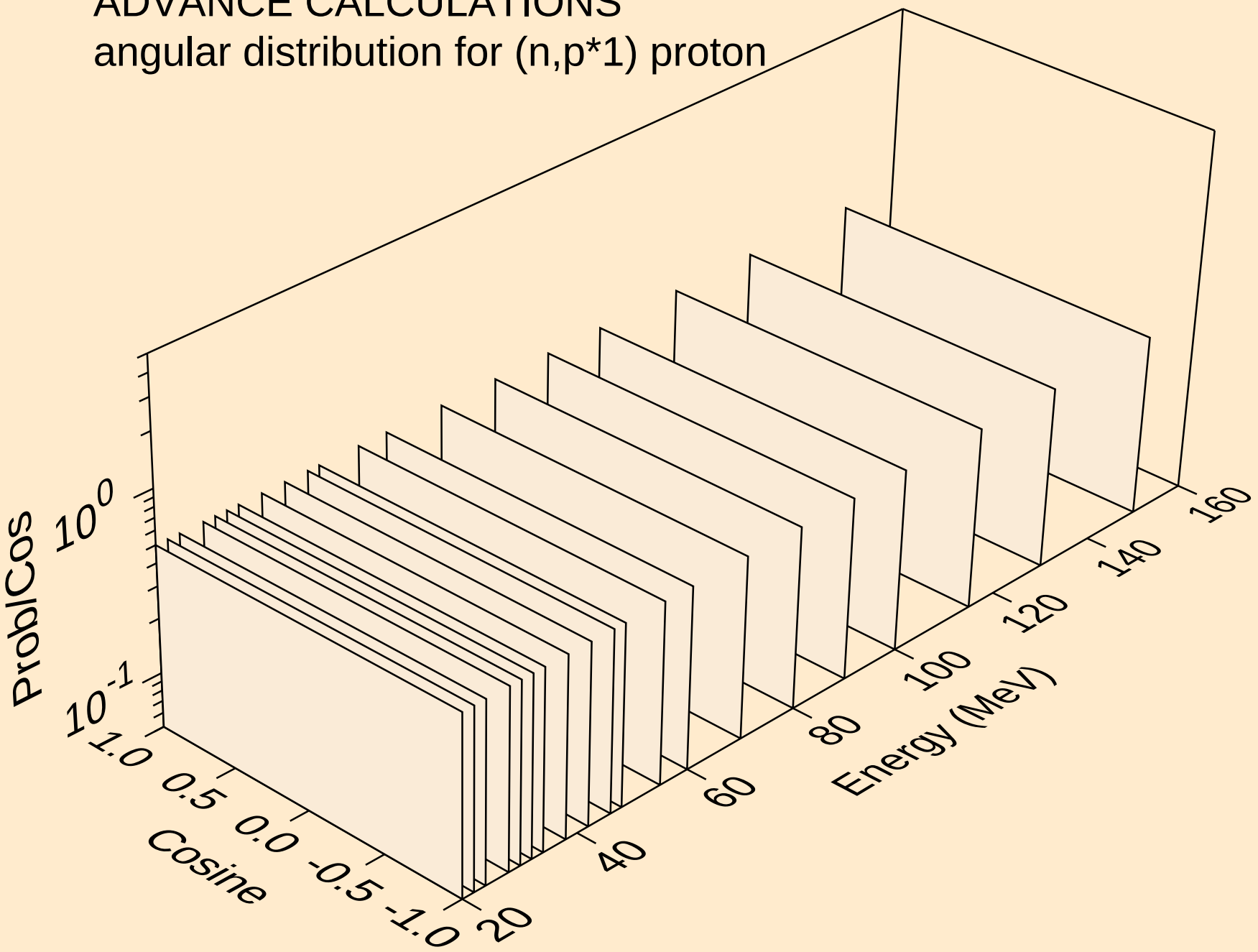
ADVANCE CALCULATIONS
angular distribution for (n,p*0) proton



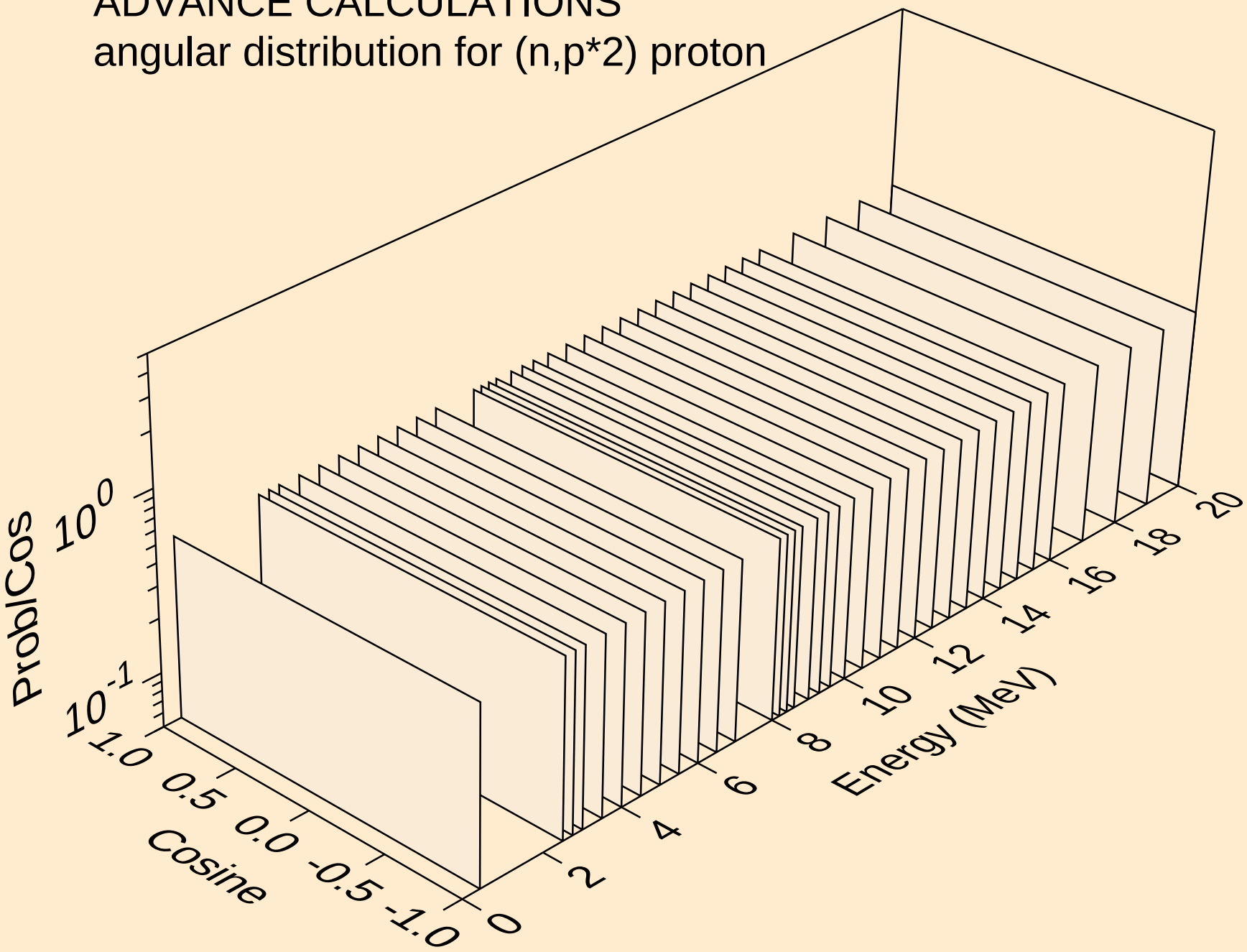
ADVANCE CALCULATIONS
angular distribution for (n,p*1) proton



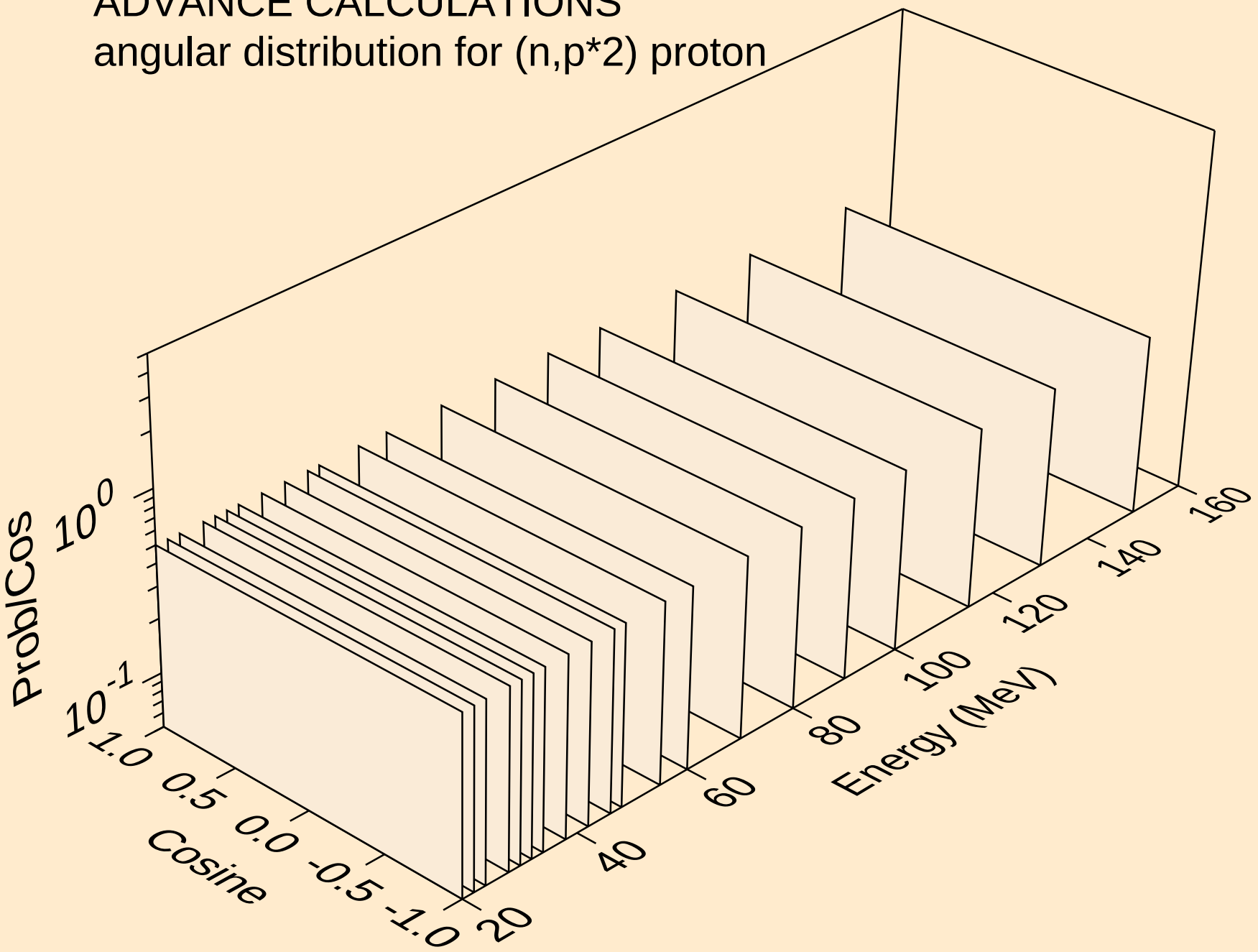
ADVANCE CALCULATIONS
angular distribution for (n,p*1) proton



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

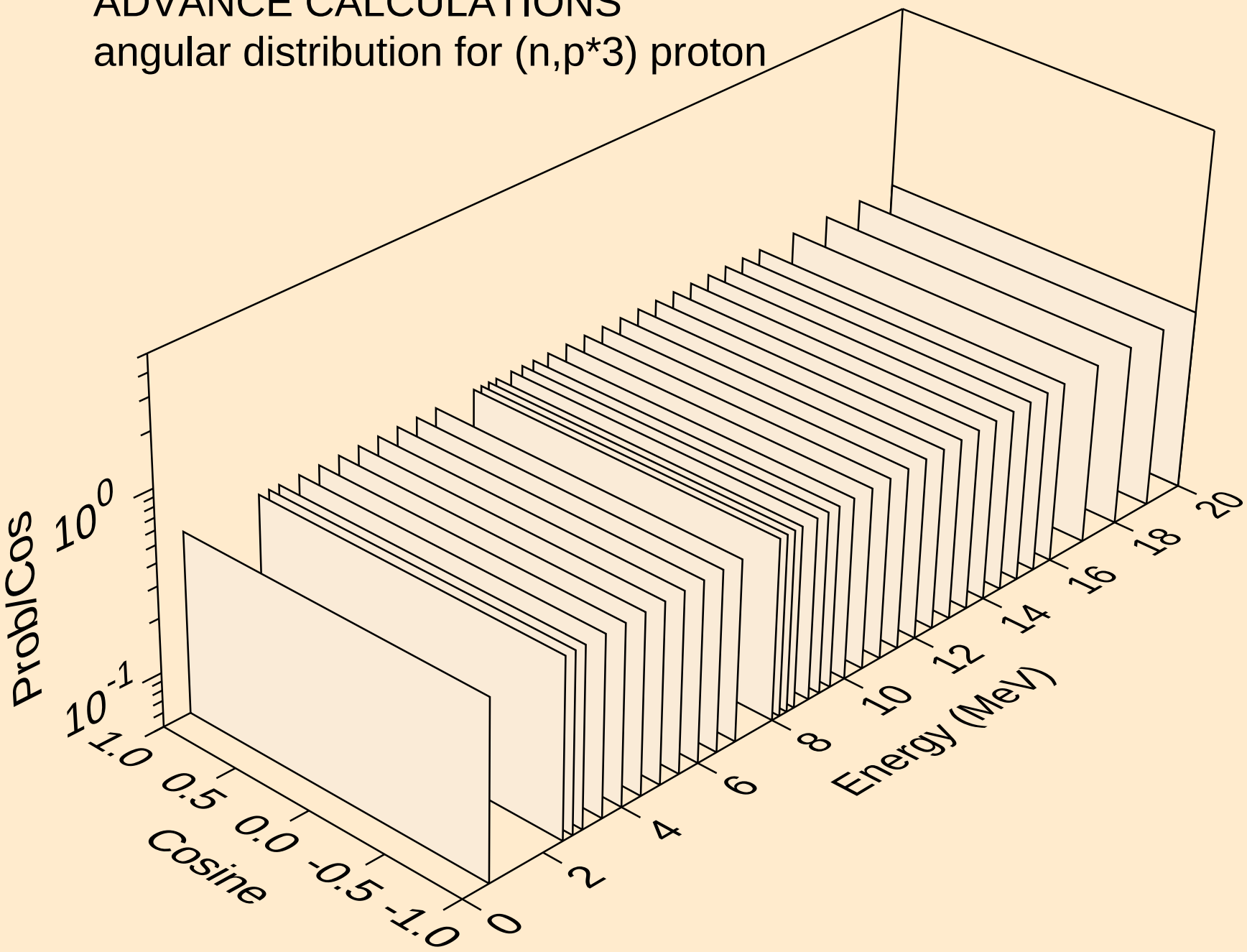


ADVANCE CALCULATIONS
angular distribution for (n,p*2) proton

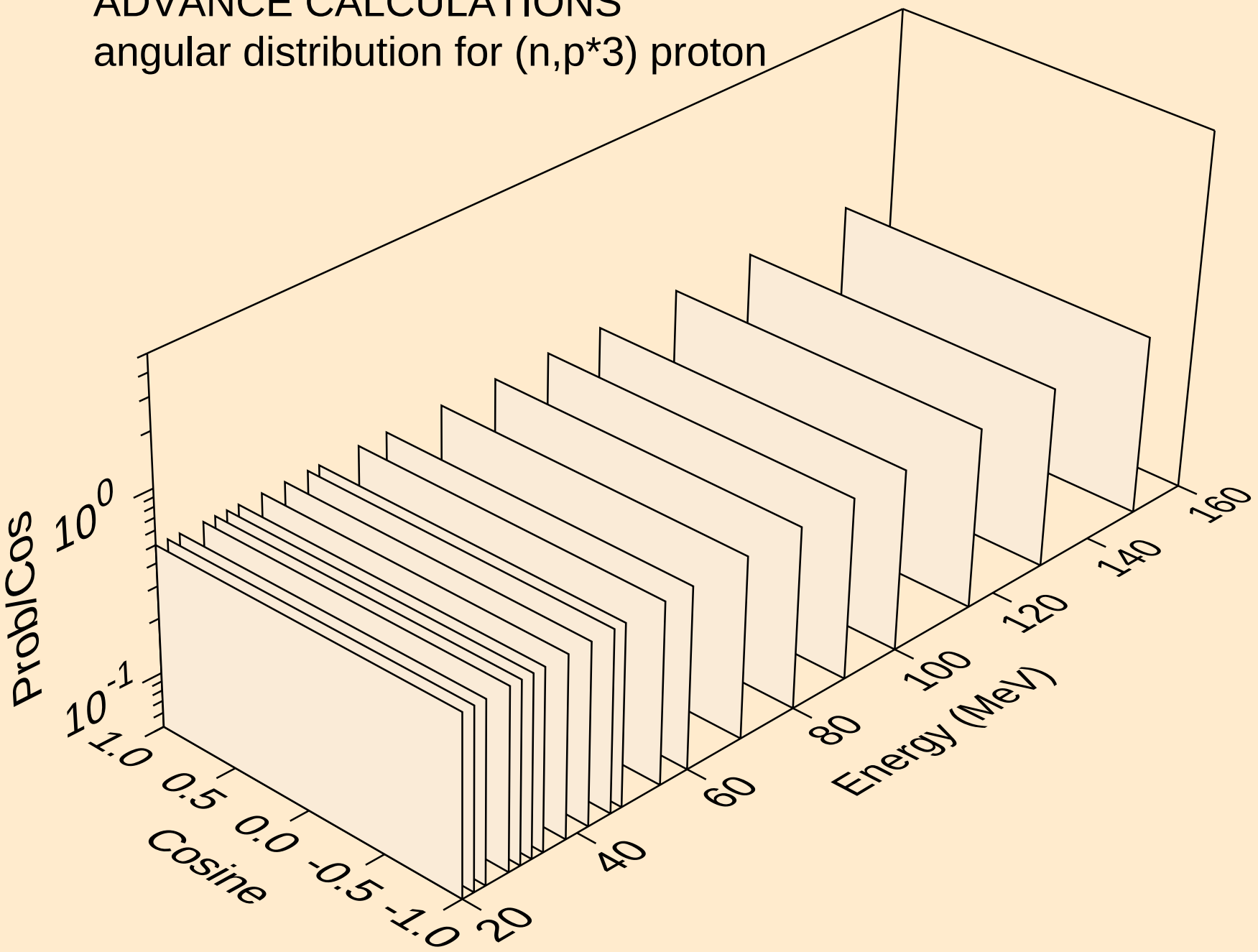


ADVANCE CALCULATIONS

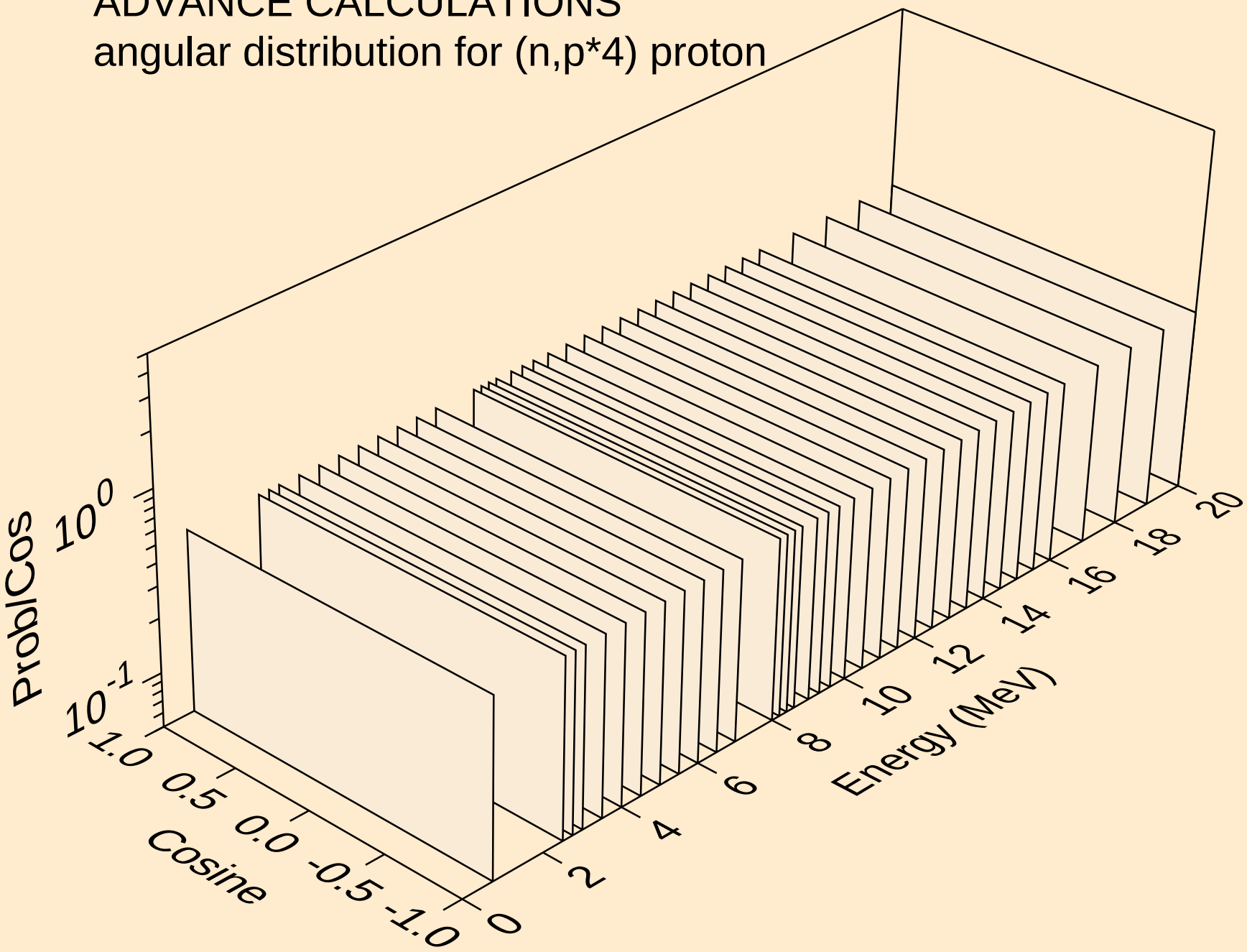
angular distribution for (n,p*3) proton



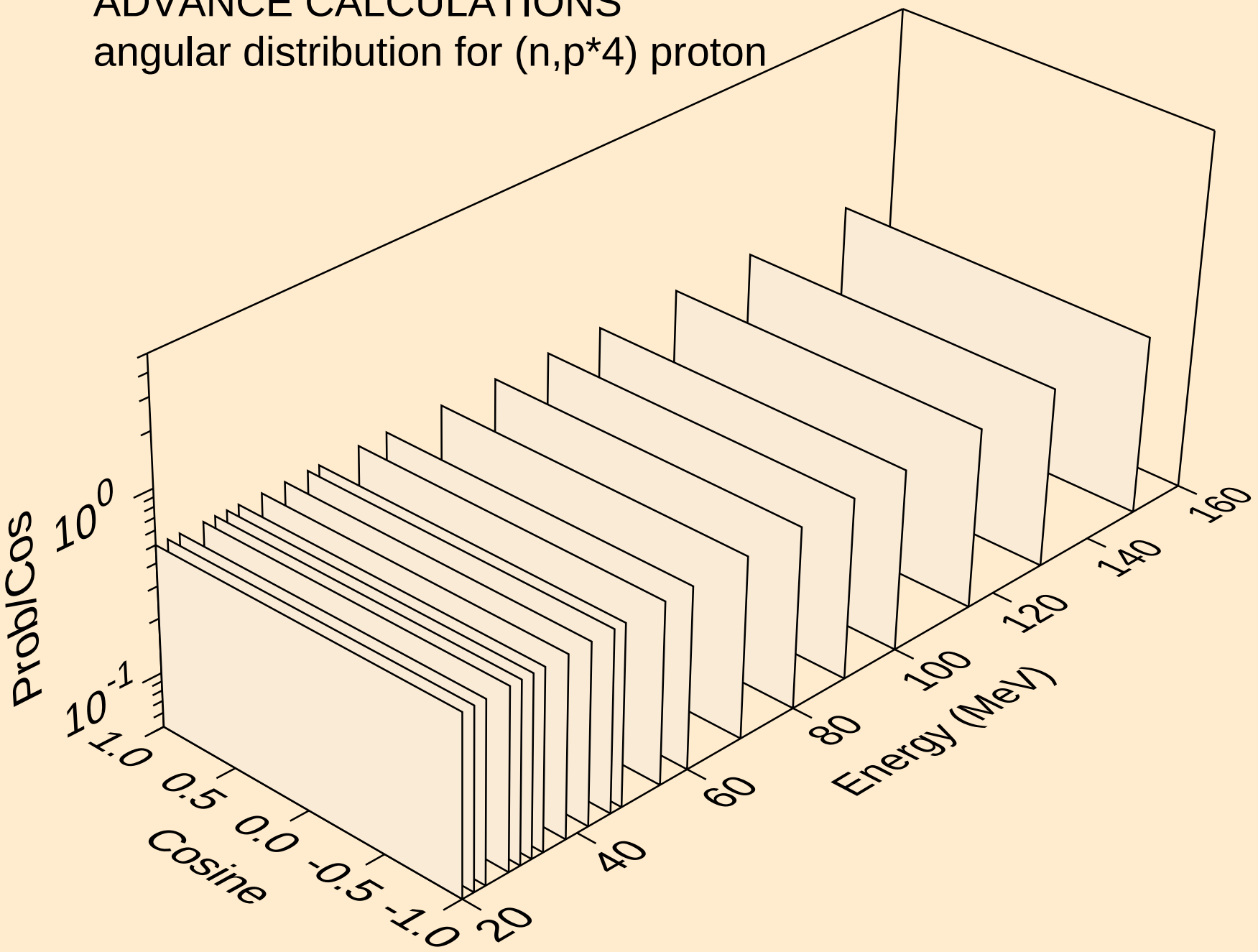
ADVANCE CALCULATIONS
angular distribution for (n,p*3) proton



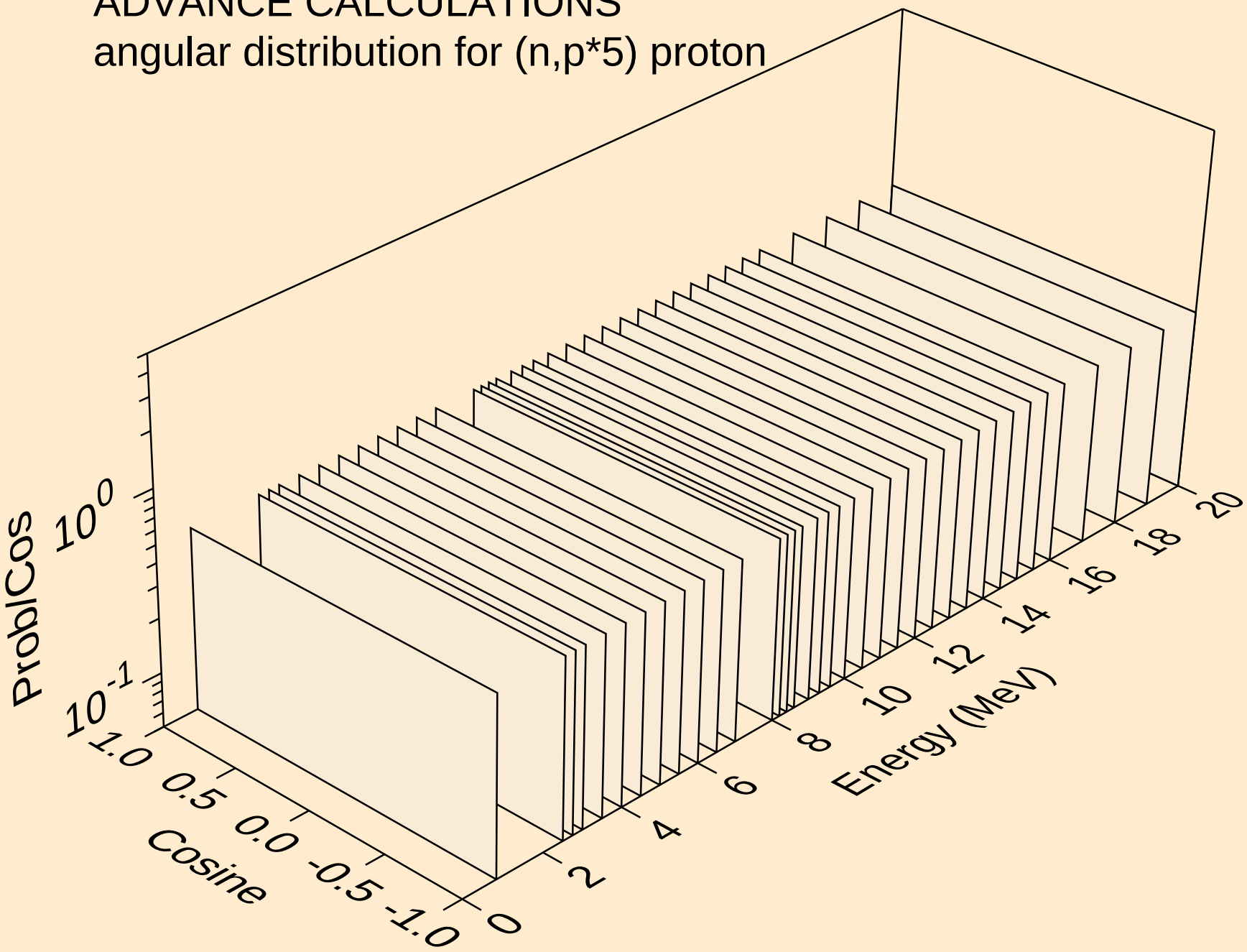
ADVANCE CALCULATIONS
angular distribution for (n,p*4) proton



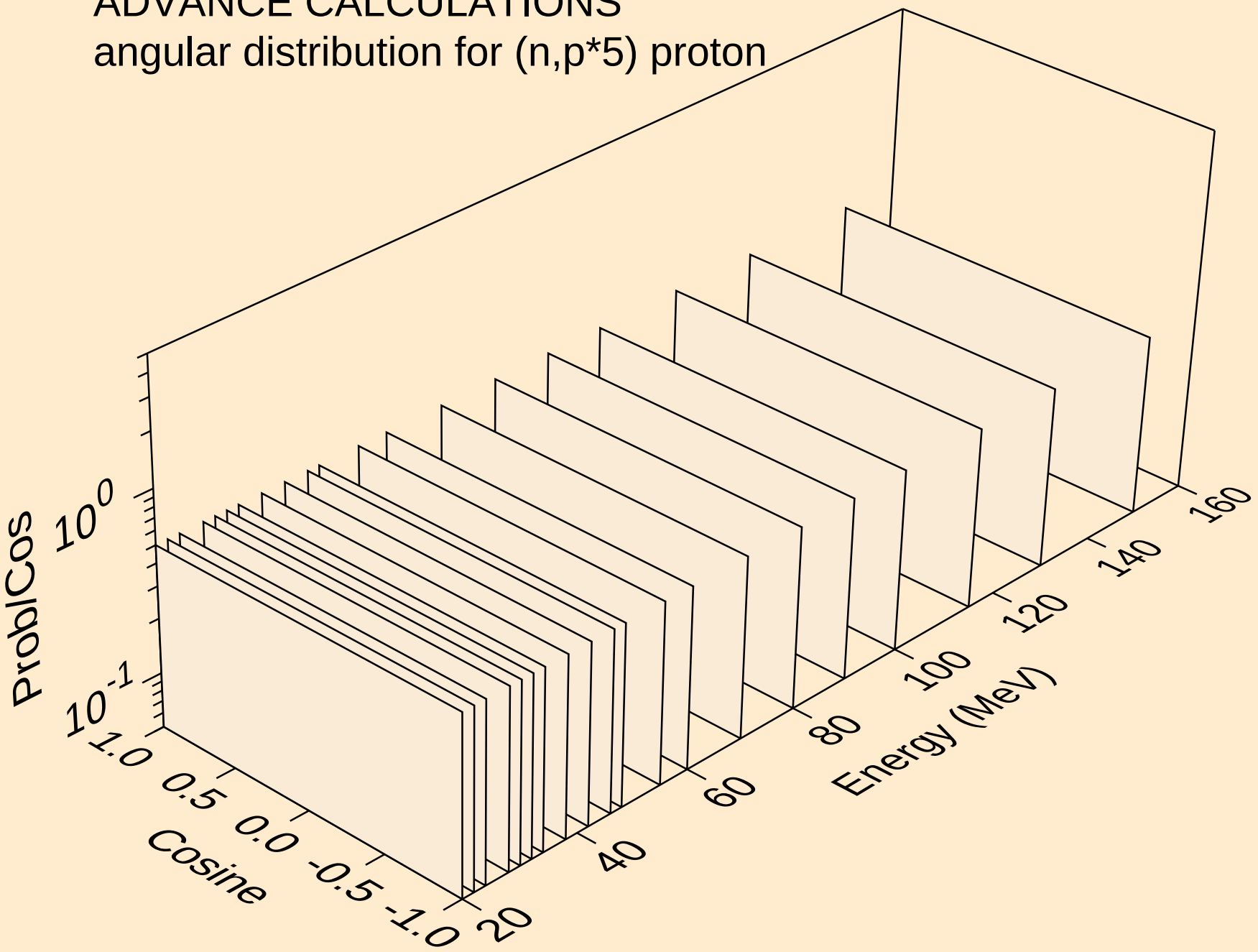
ADVANCE CALCULATIONS
angular distribution for (n,p*4) proton



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

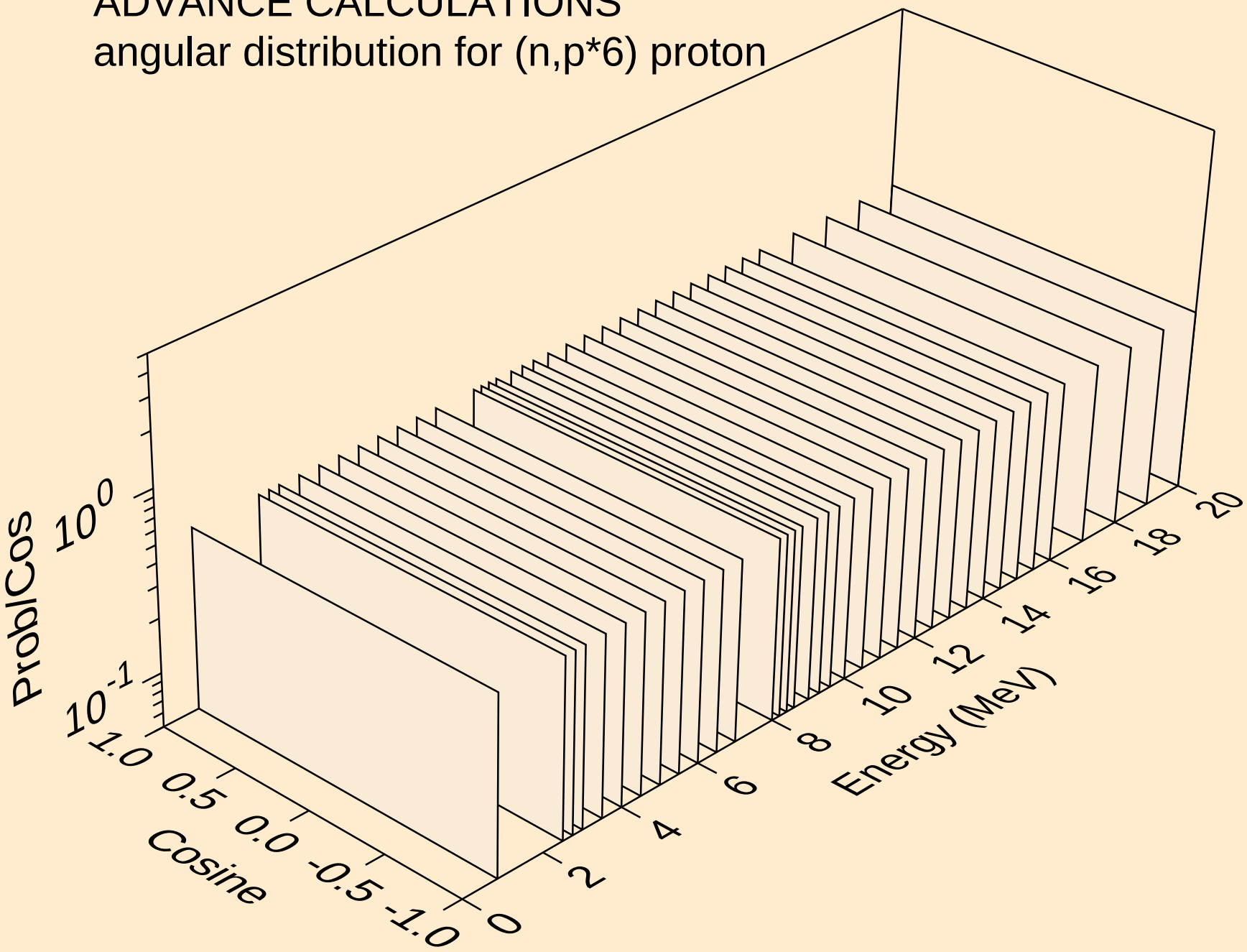


ADVANCE CALCULATIONS
angular distribution for (n,p*5) proton

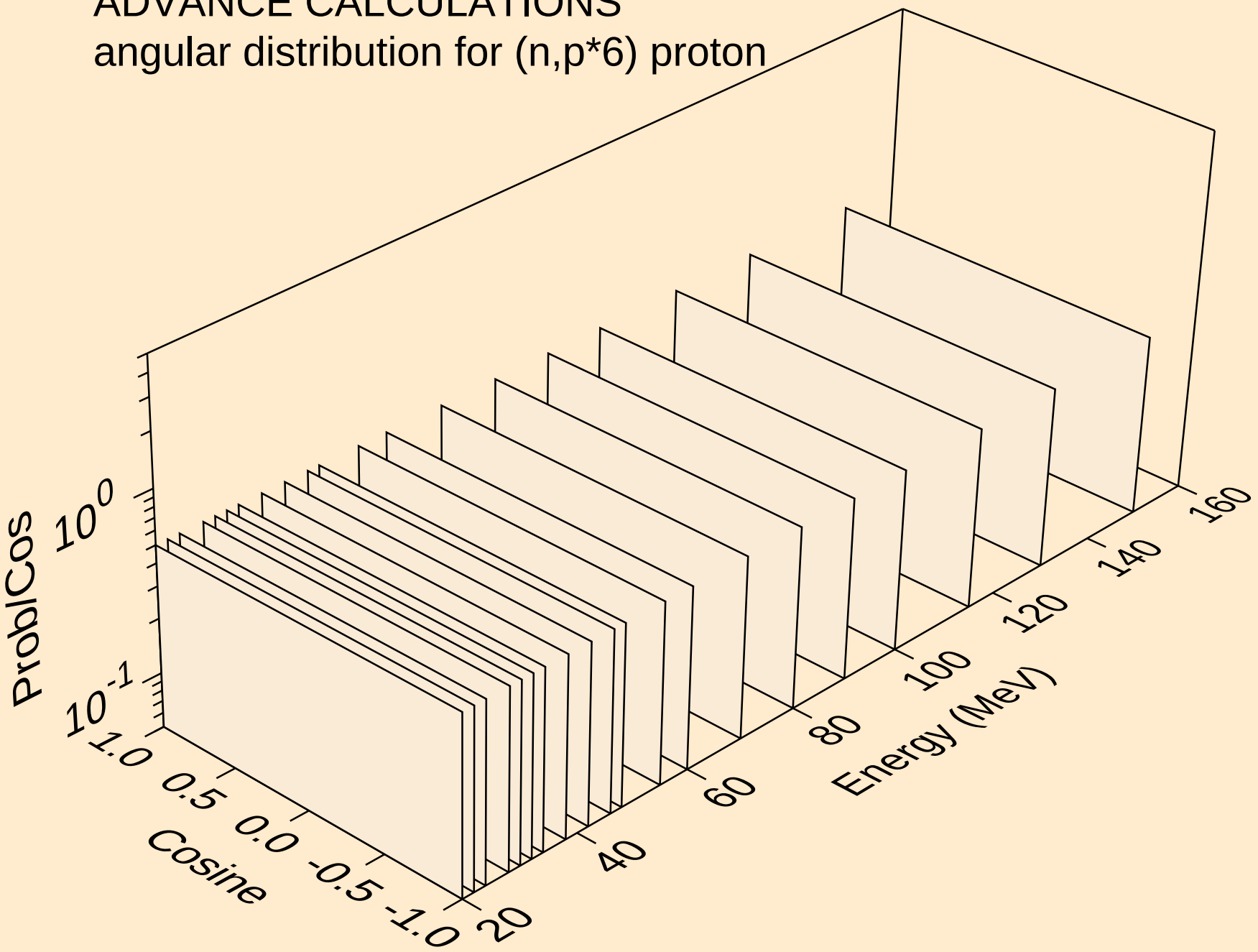


ADVANCE CALCULATIONS

angular distribution for (n,p*6) proton

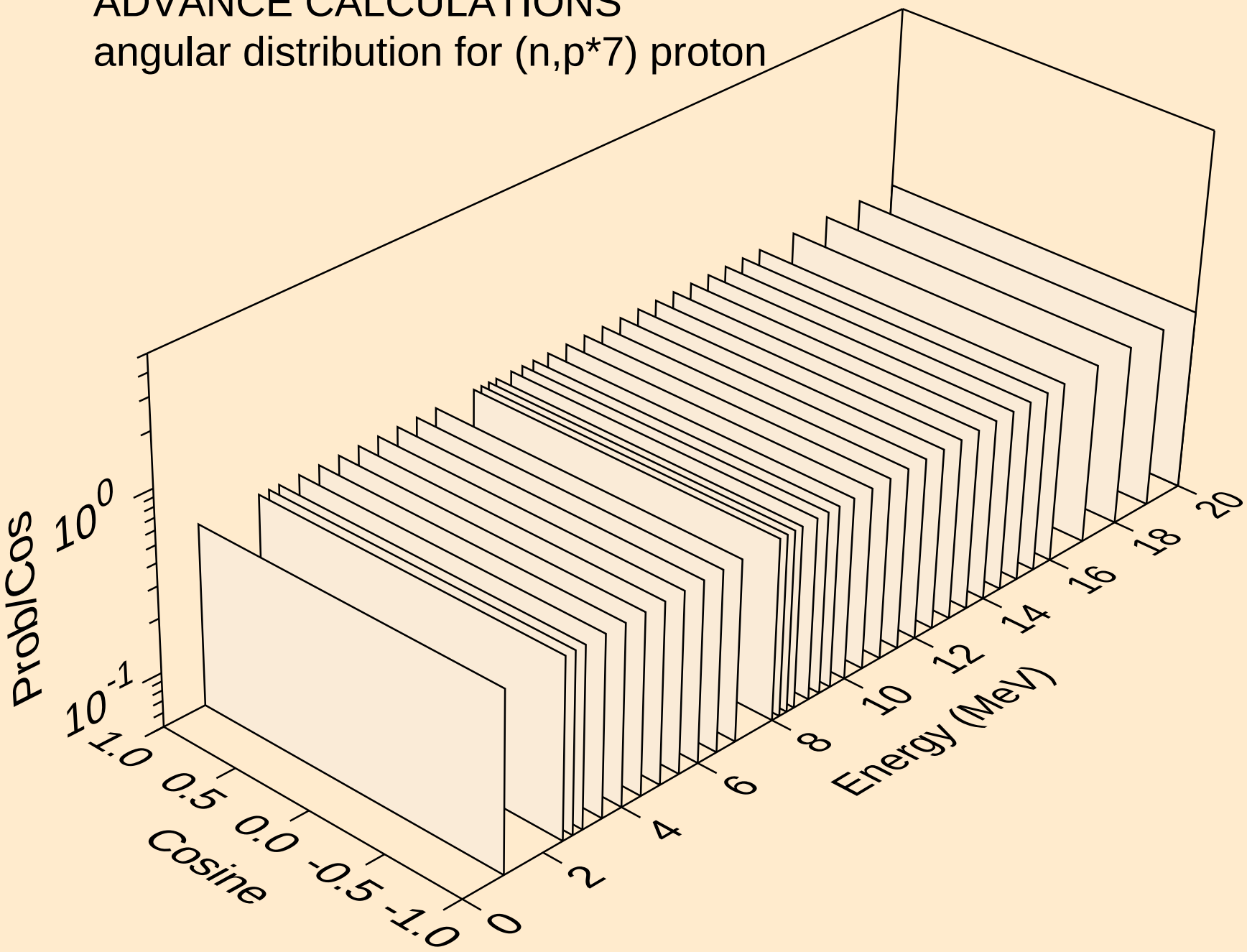


ADVANCE CALCULATIONS
angular distribution for (n,p*6) proton

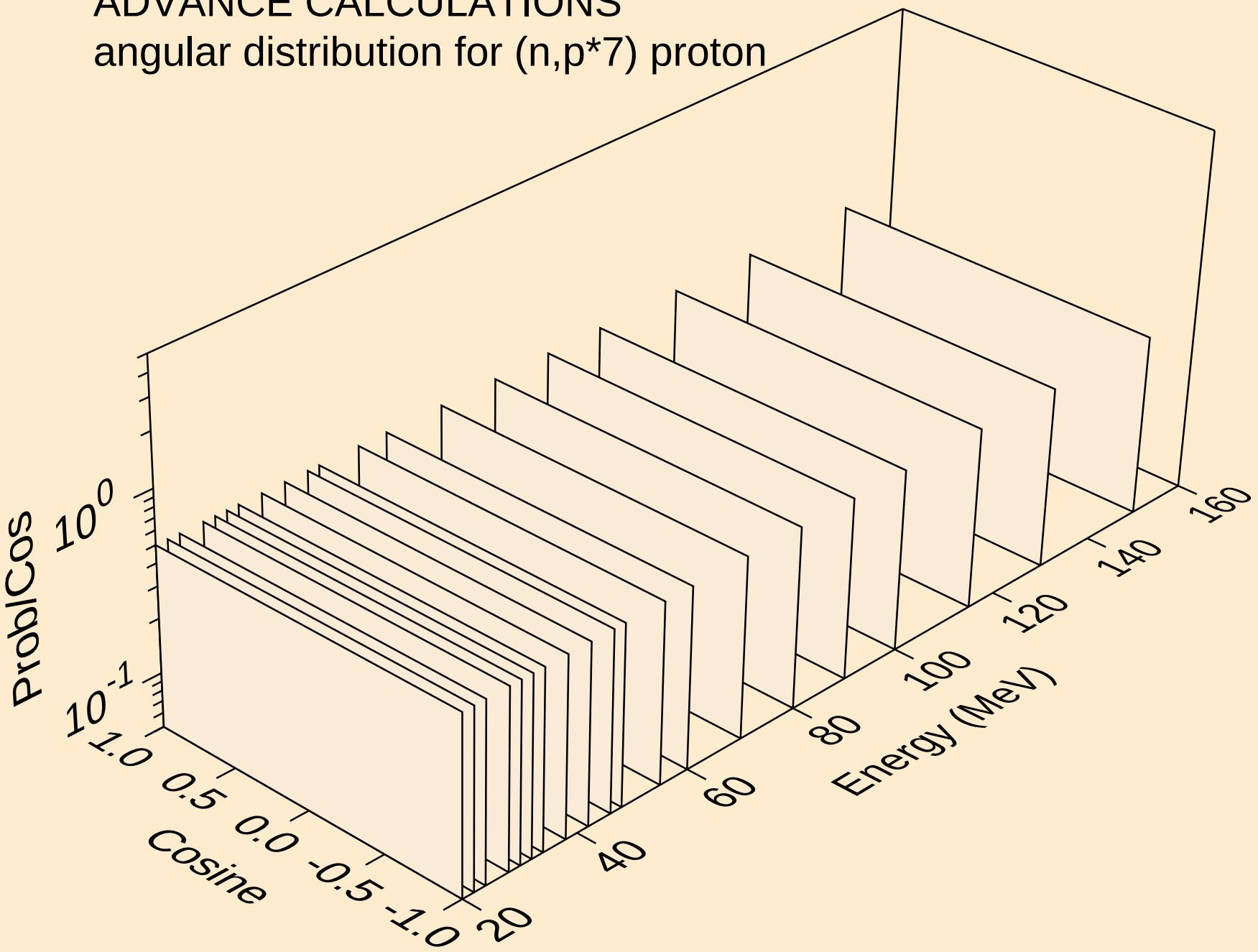


ADVANCE CALCULATIONS

angular distribution for (n,p*7) proton

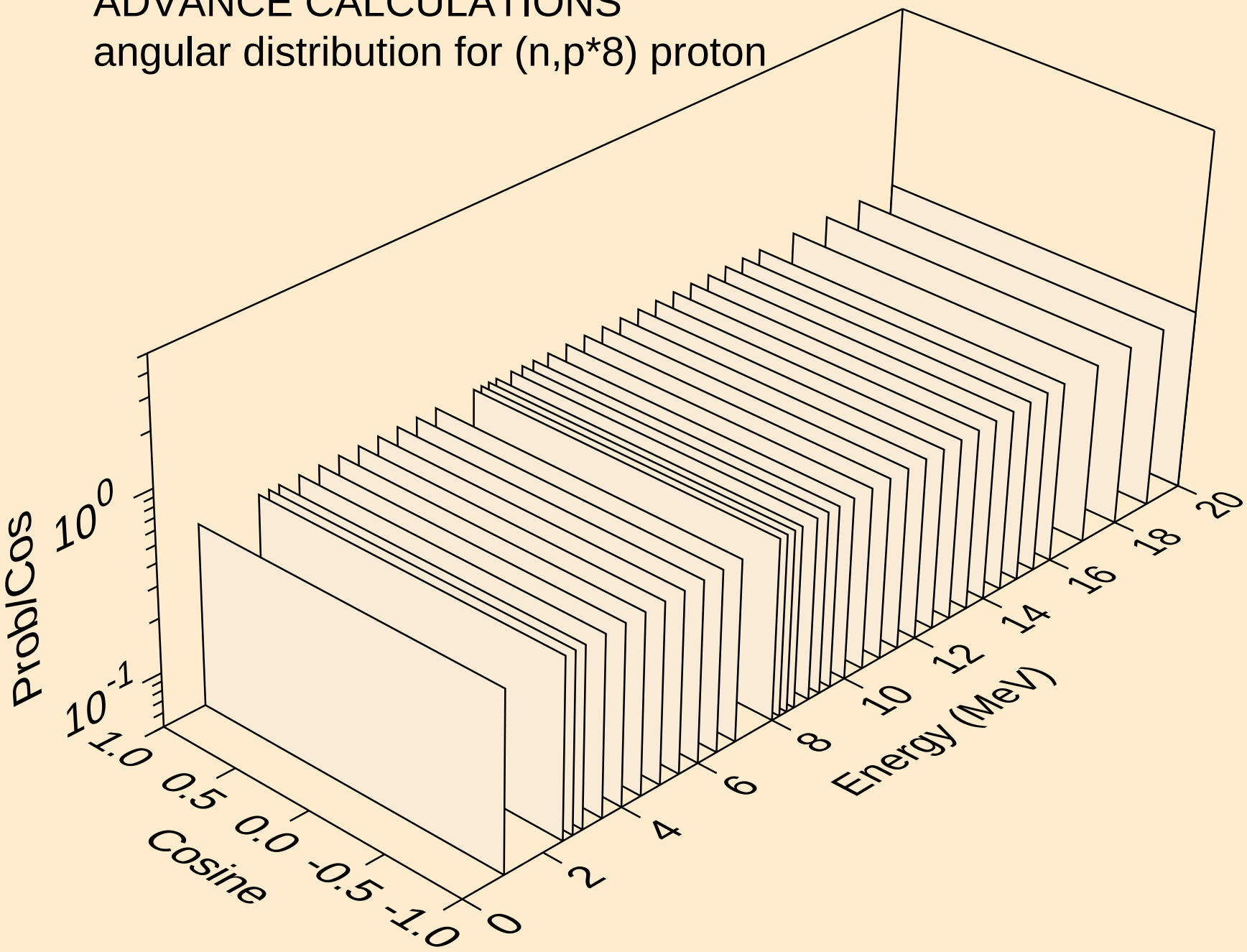


ADVANCE CALCULATIONS
angular distribution for (n,p*7) proton



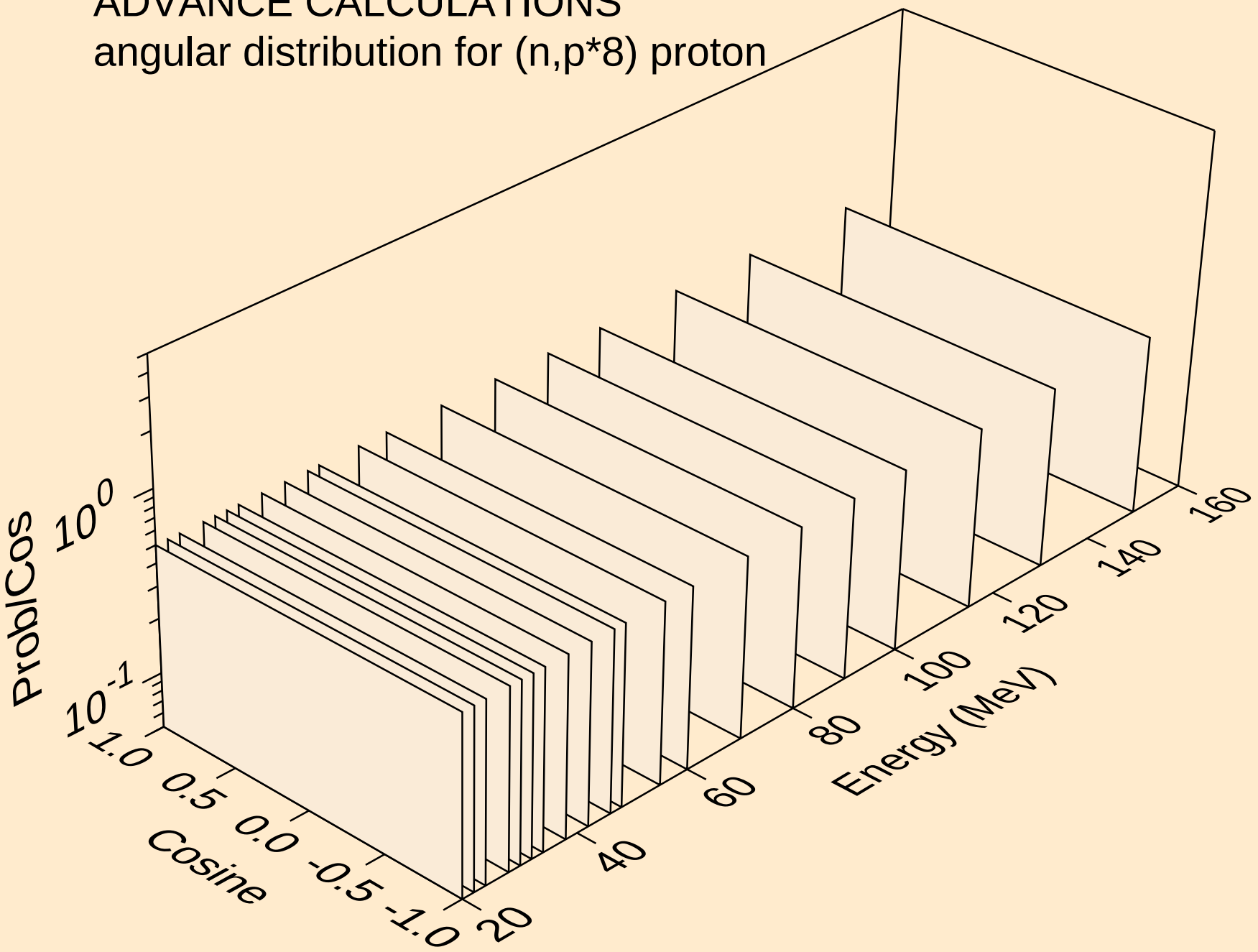
ADVANCE CALCULATIONS

angular distribution for (n,p*8) proton



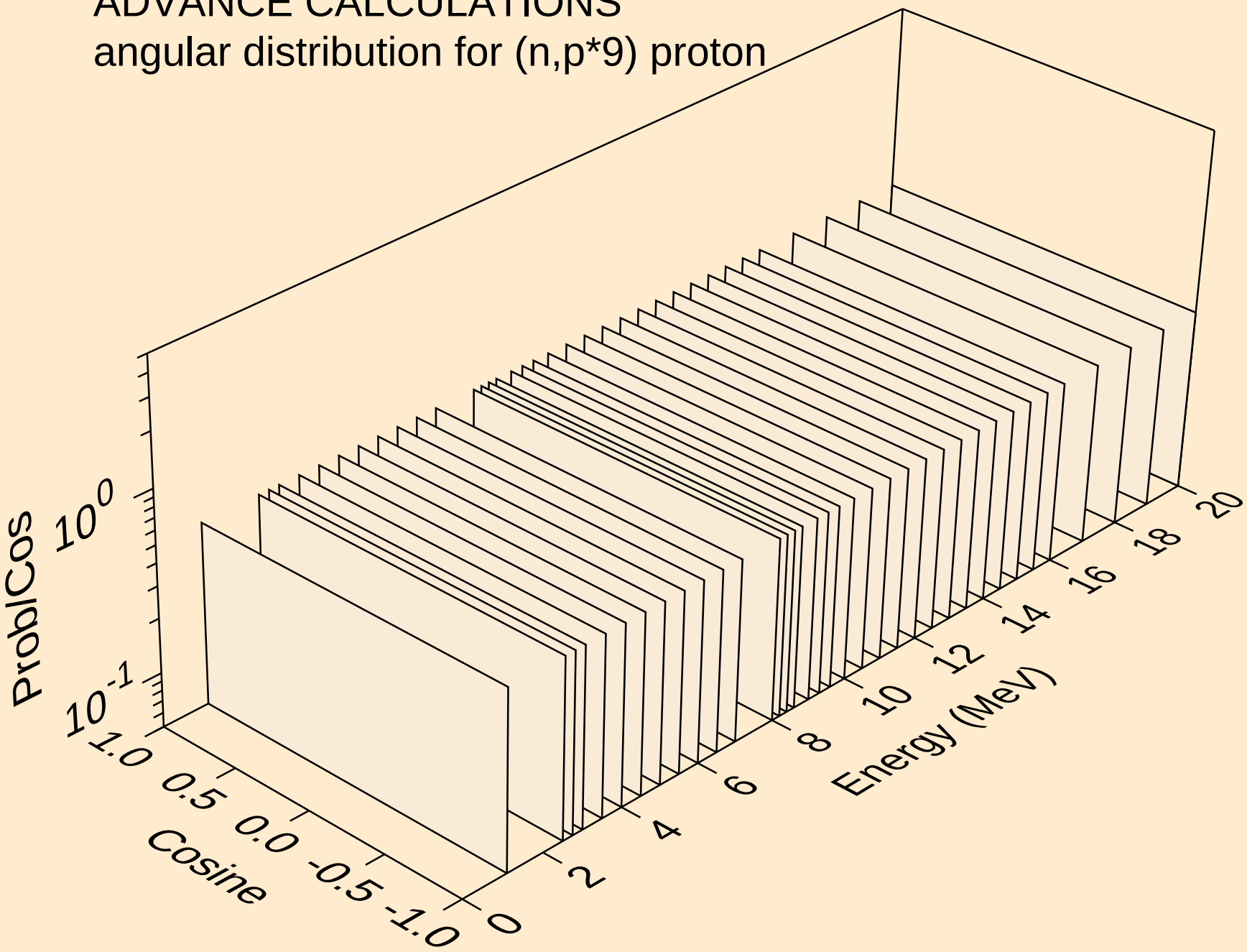
ADVANCE CALCULATIONS

angular distribution for (n,p*8) proton

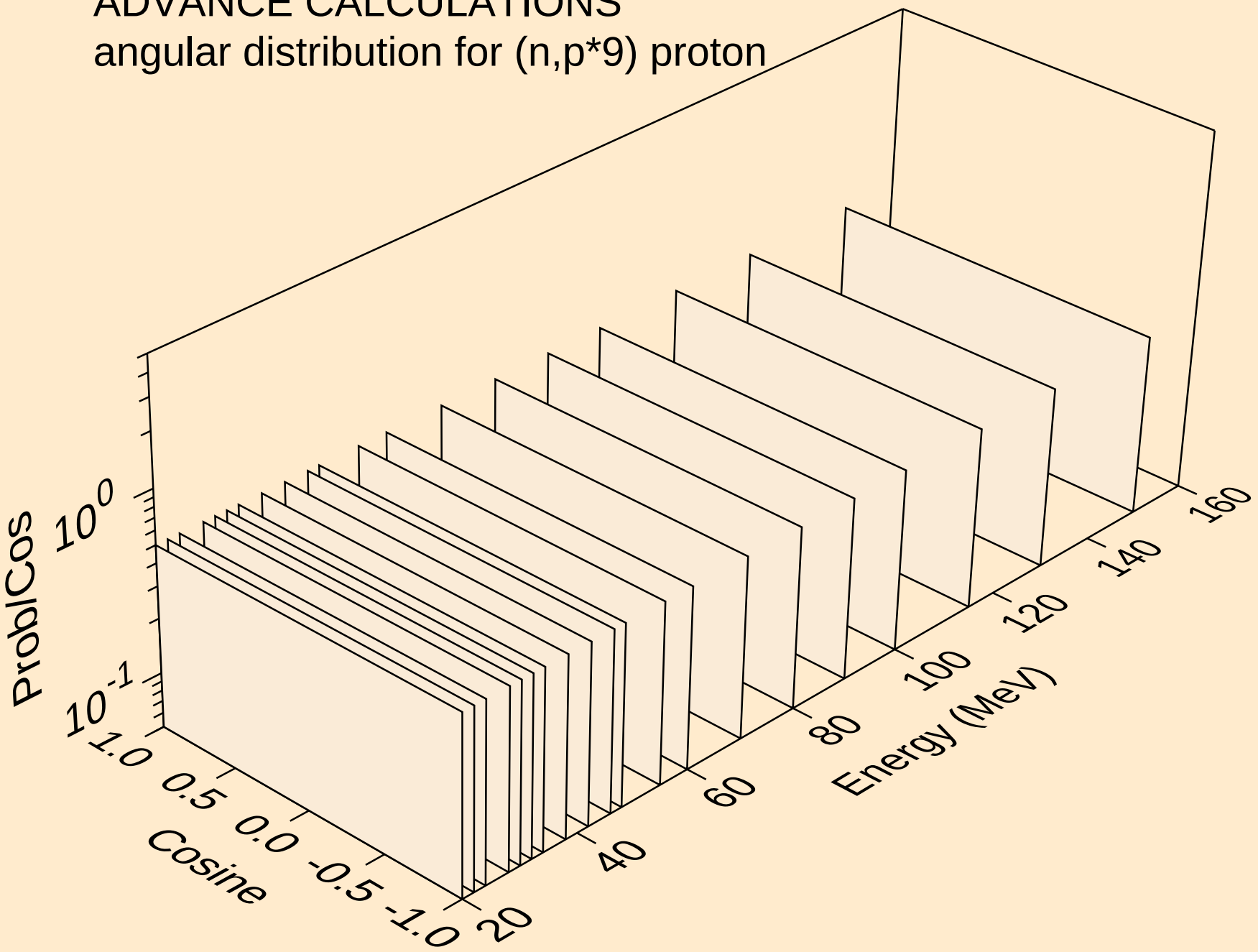


ADVANCE CALCULATIONS

angular distribution for (n,p*9) proton

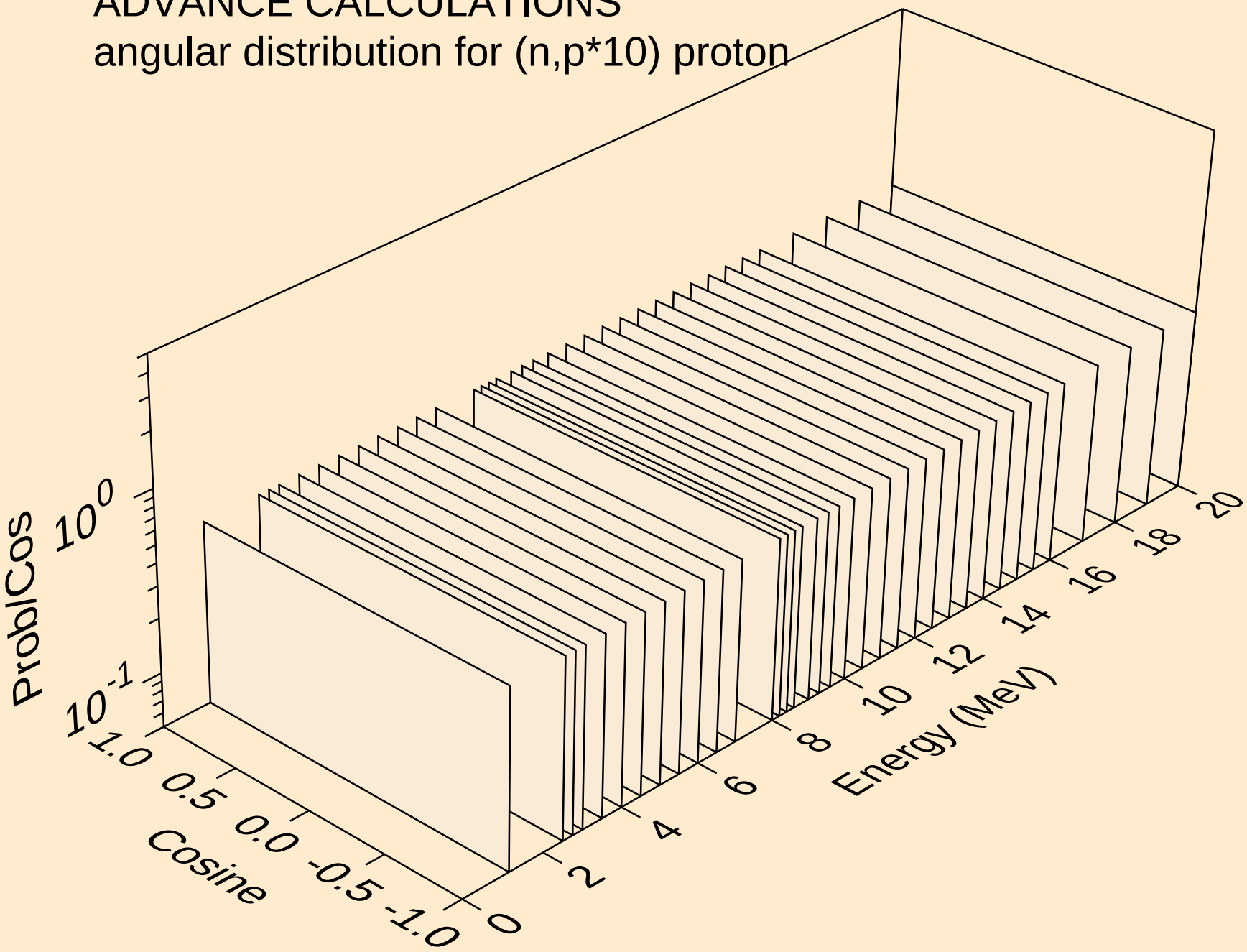


ADVANCE CALCULATIONS
angular distribution for (n,p*9) proton



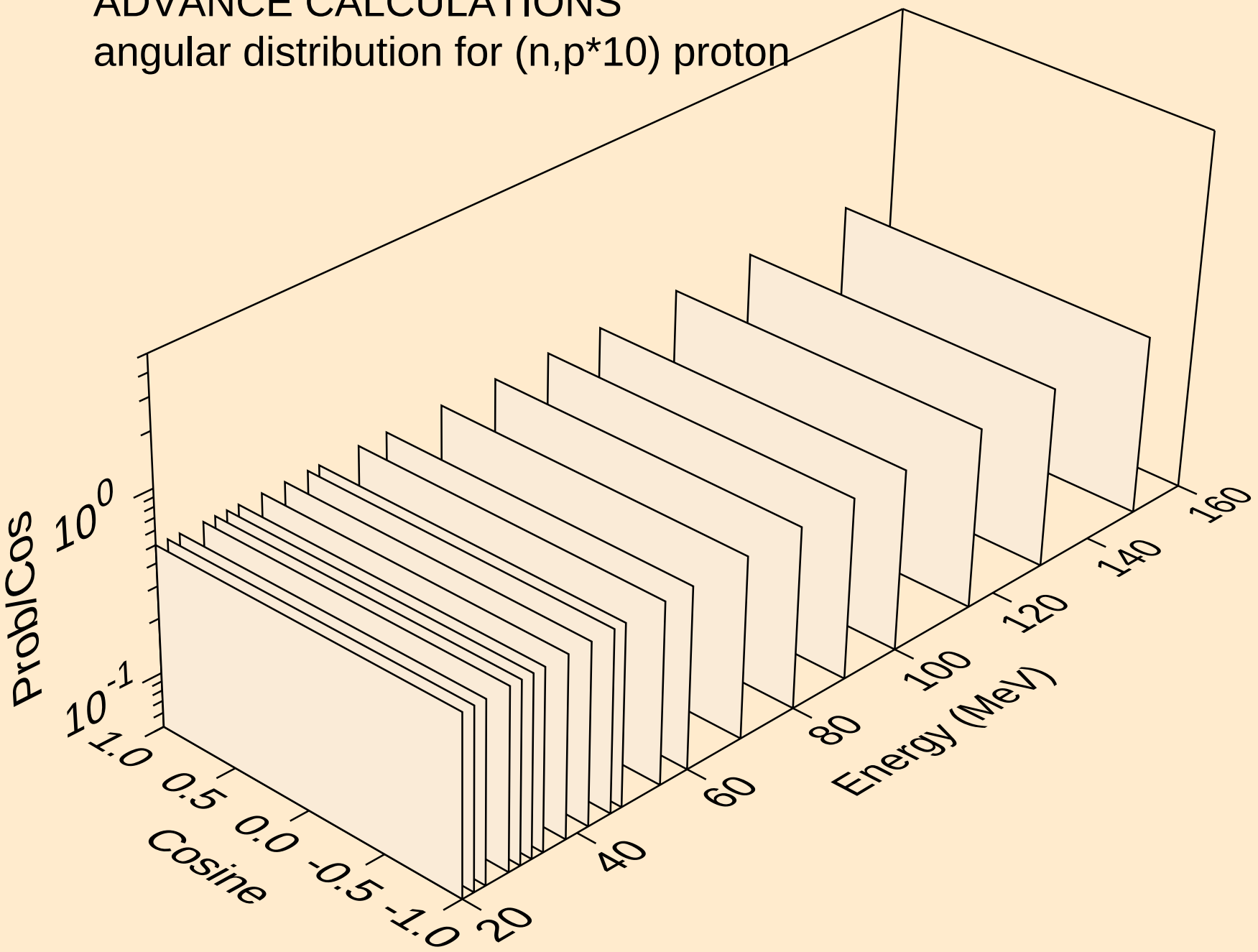
ADVANCE CALCULATIONS

angular distribution for (n,p*10) proton



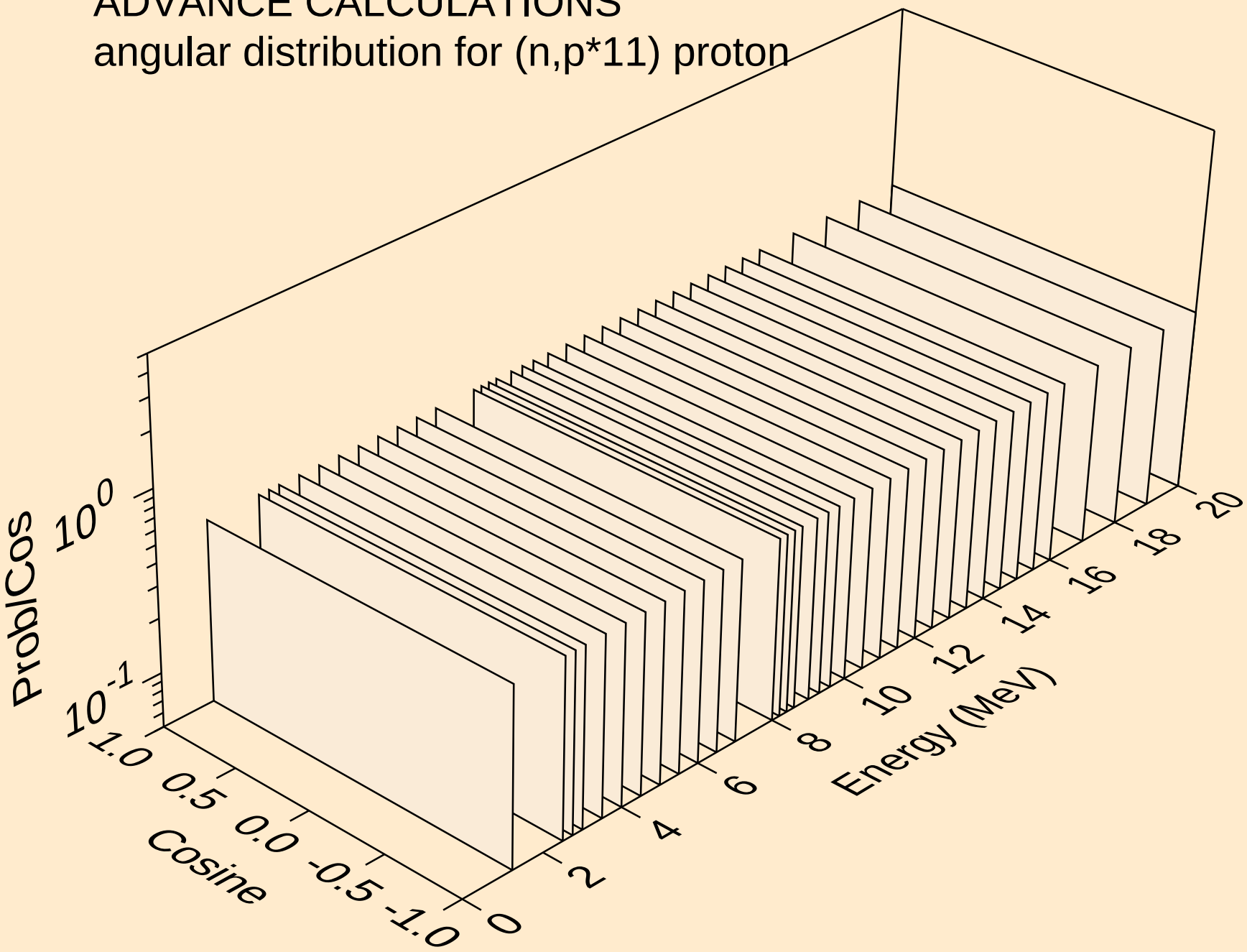
ADVANCE CALCULATIONS

angular distribution for (n,p*10) proton

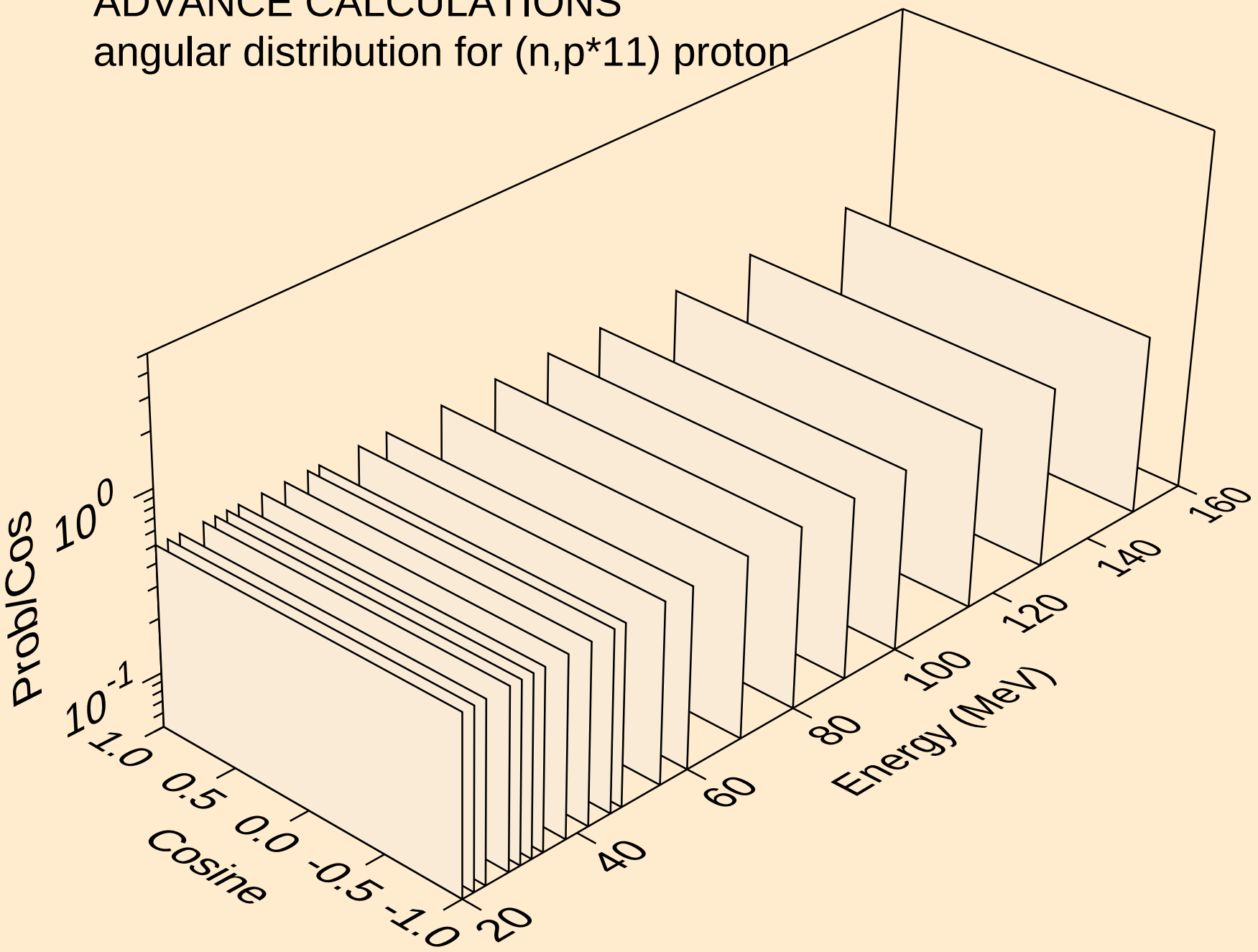


ADVANCE CALCULATIONS

angular distribution for (n,p*11) proton

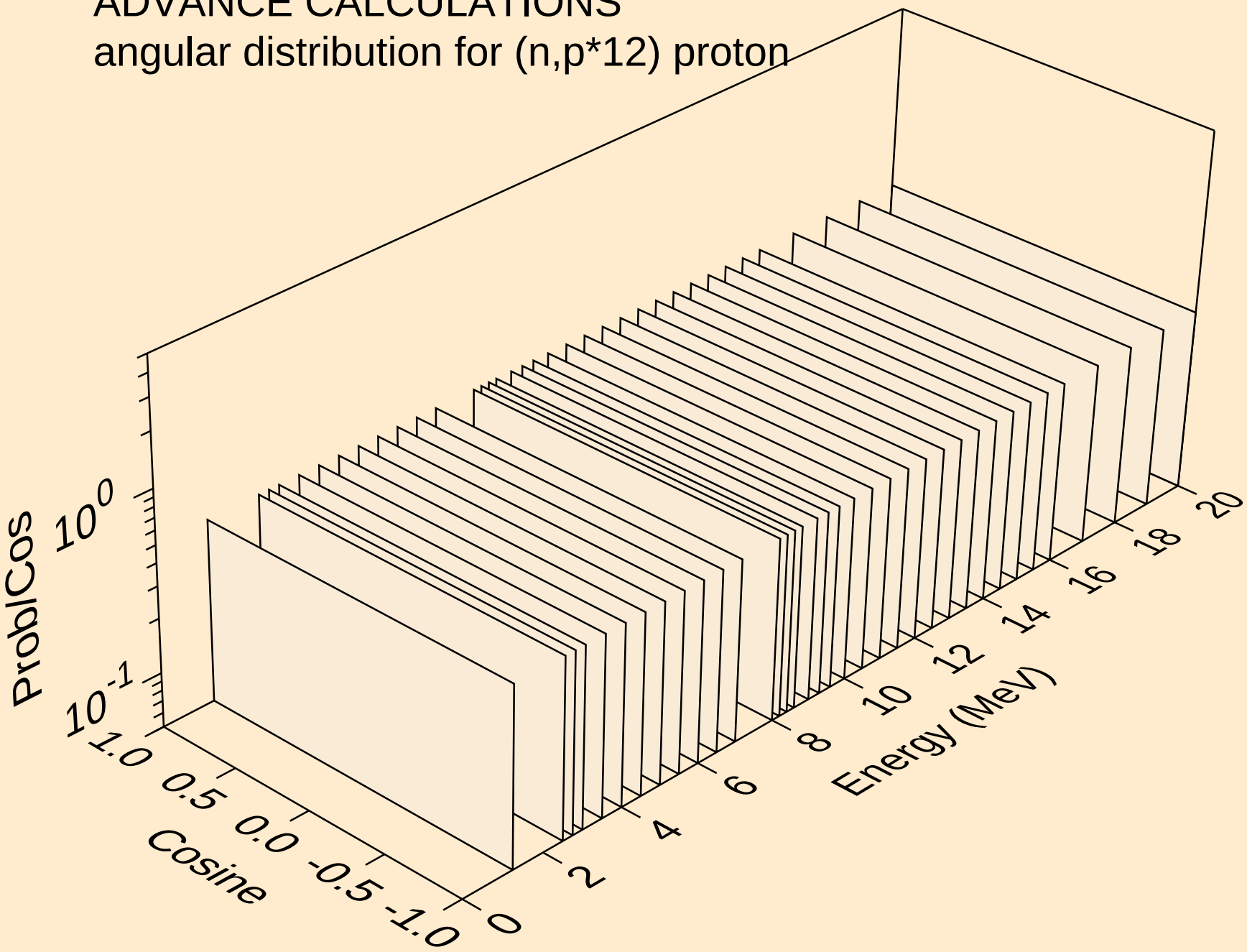


ADVANCE CALCULATIONS
angular distribution for (n,p*11) proton



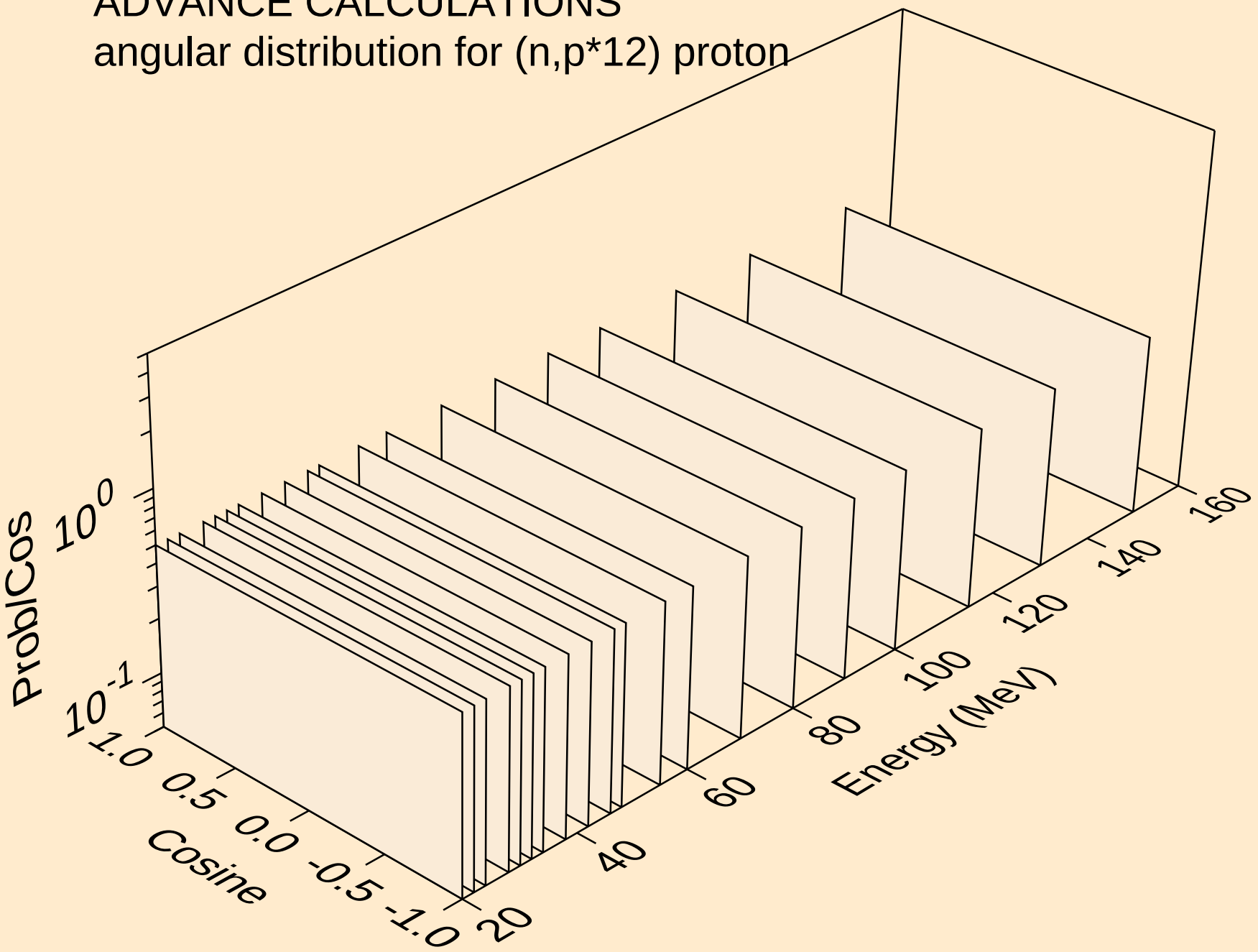
ADVANCE CALCULATIONS

angular distribution for (n,p*12) proton



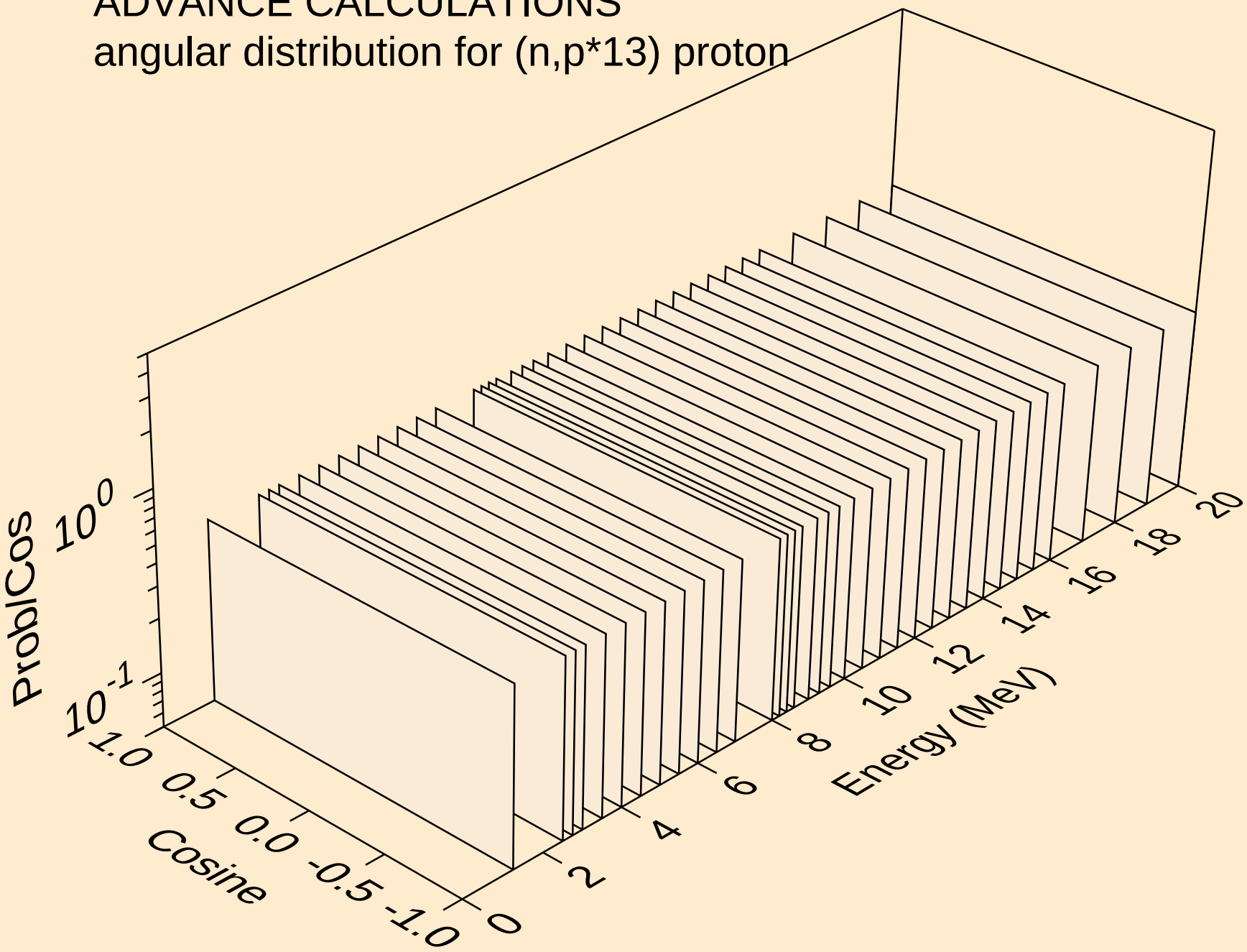
ADVANCE CALCULATIONS

angular distribution for (n,p*12) proton



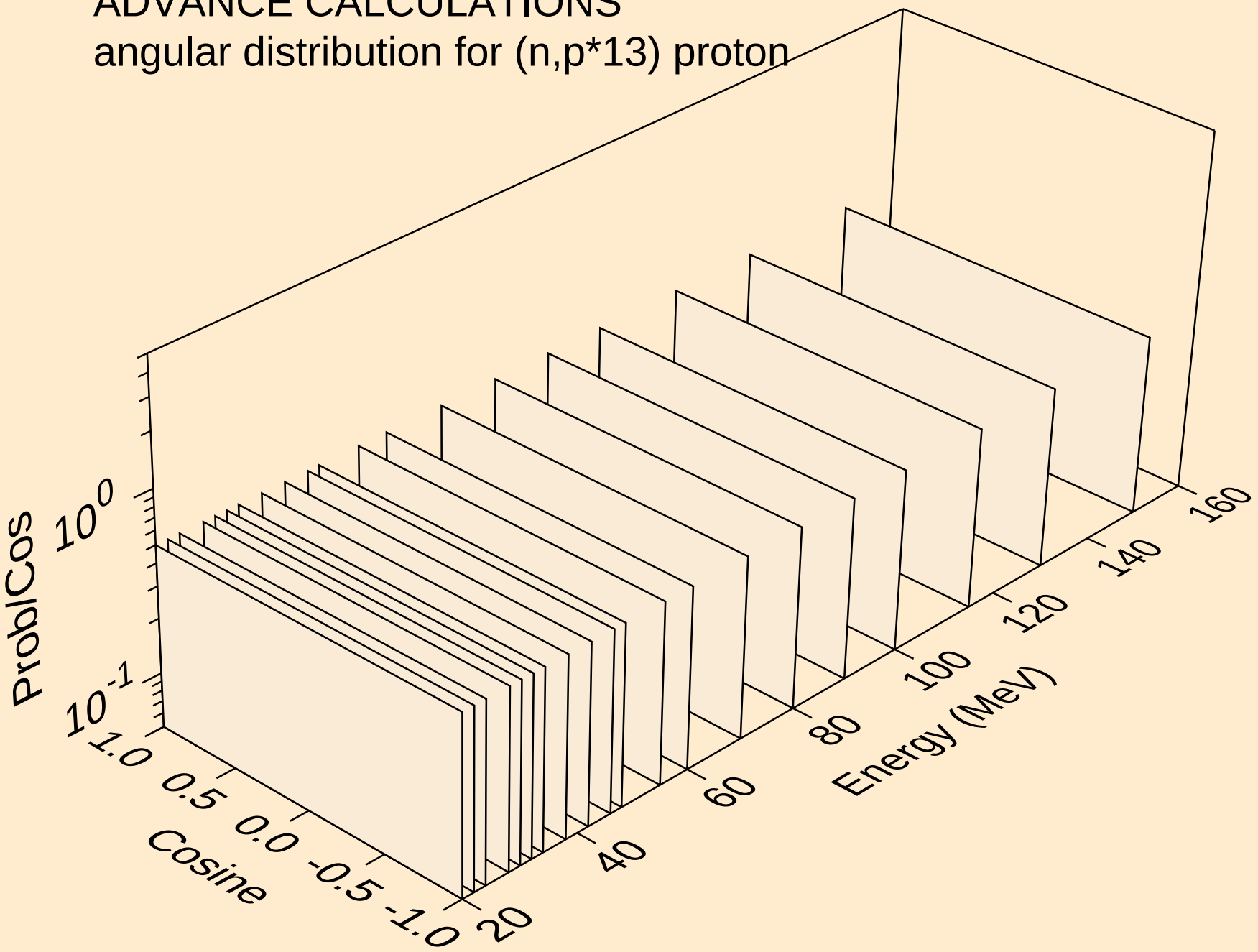
ADVANCE CALCULATIONS

angular distribution for (n,p*13) proton



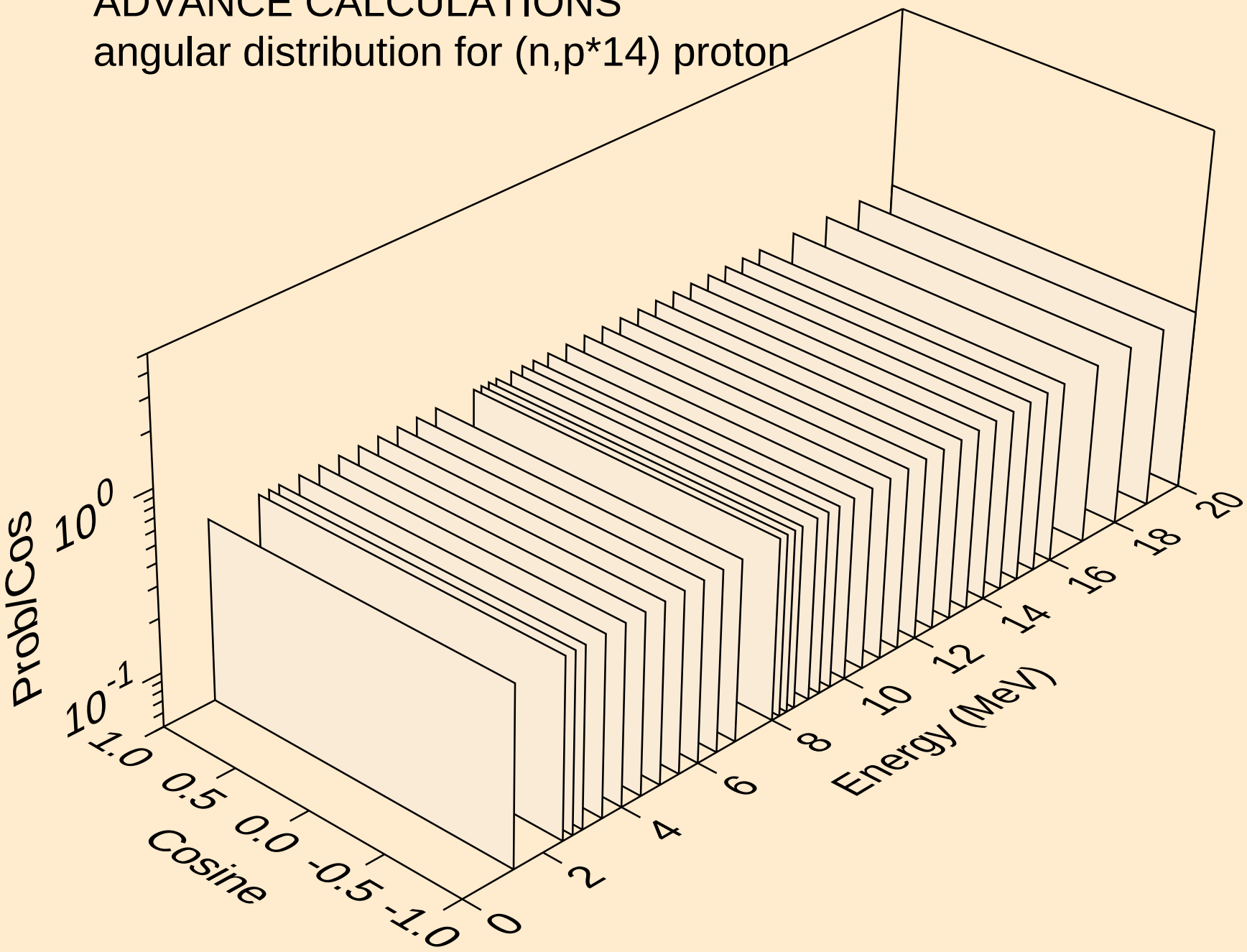
ADVANCE CALCULATIONS

angular distribution for (n,p*13) proton



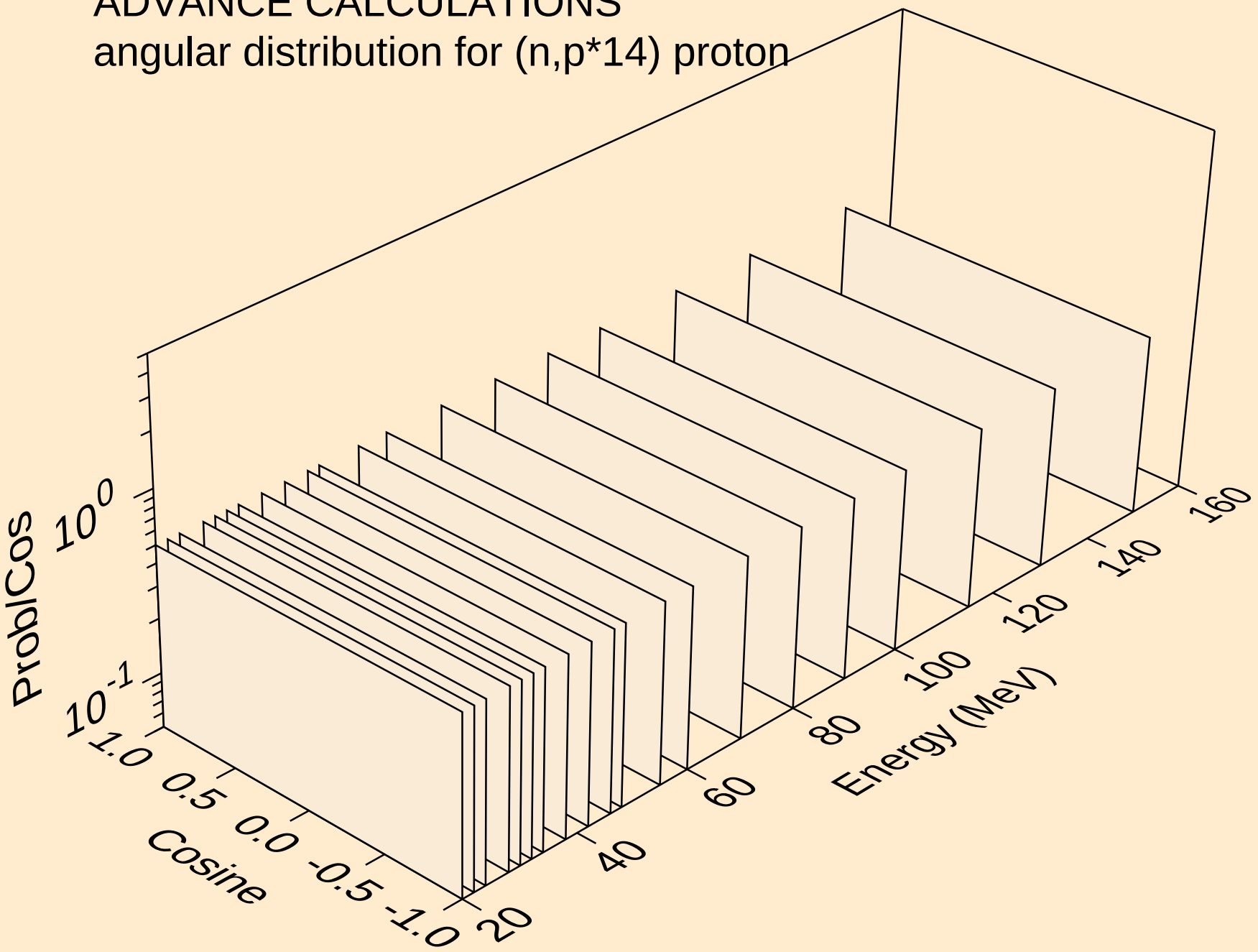
ADVANCE CALCULATIONS

angular distribution for (n,p*14) proton

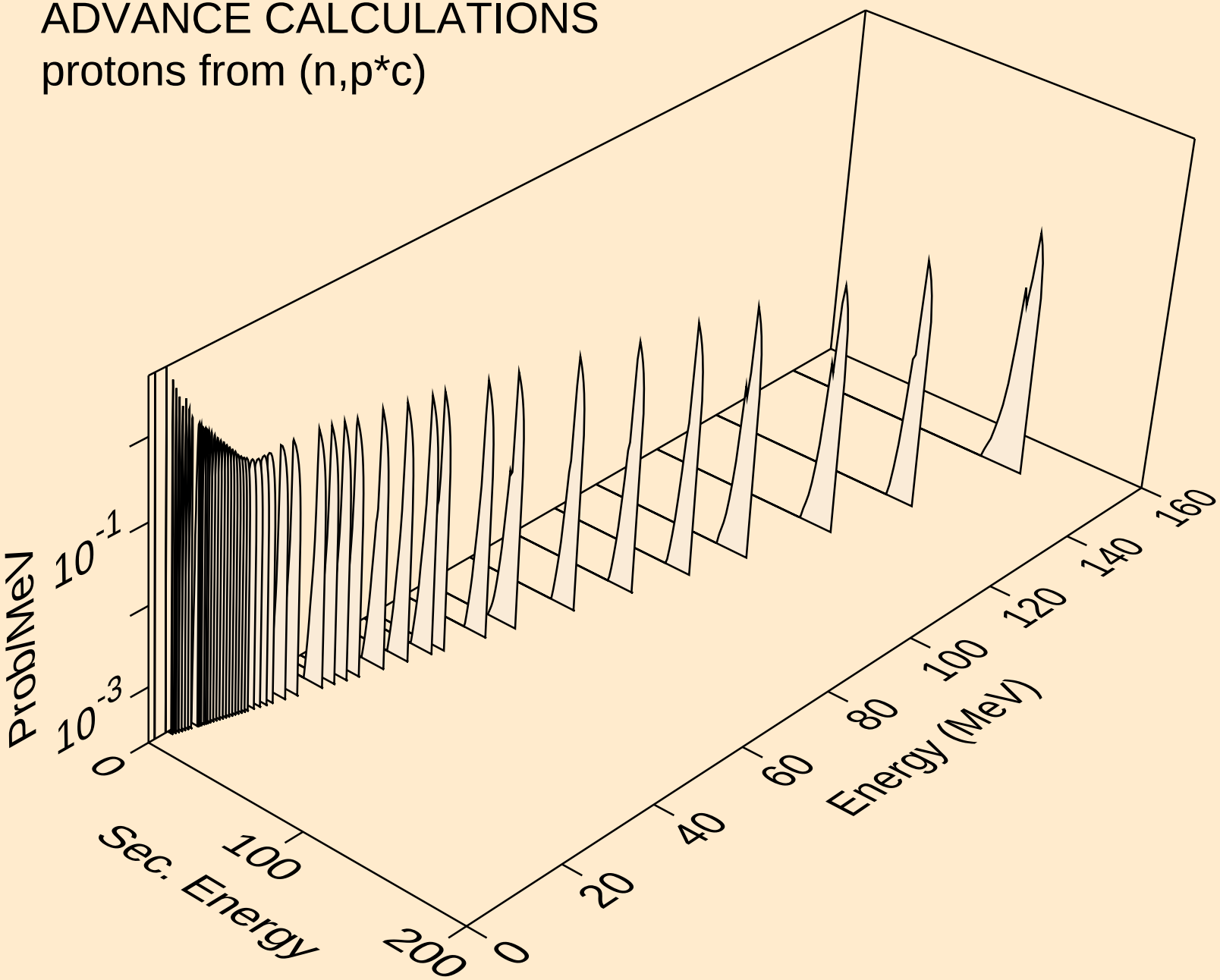


ADVANCE CALCULATIONS

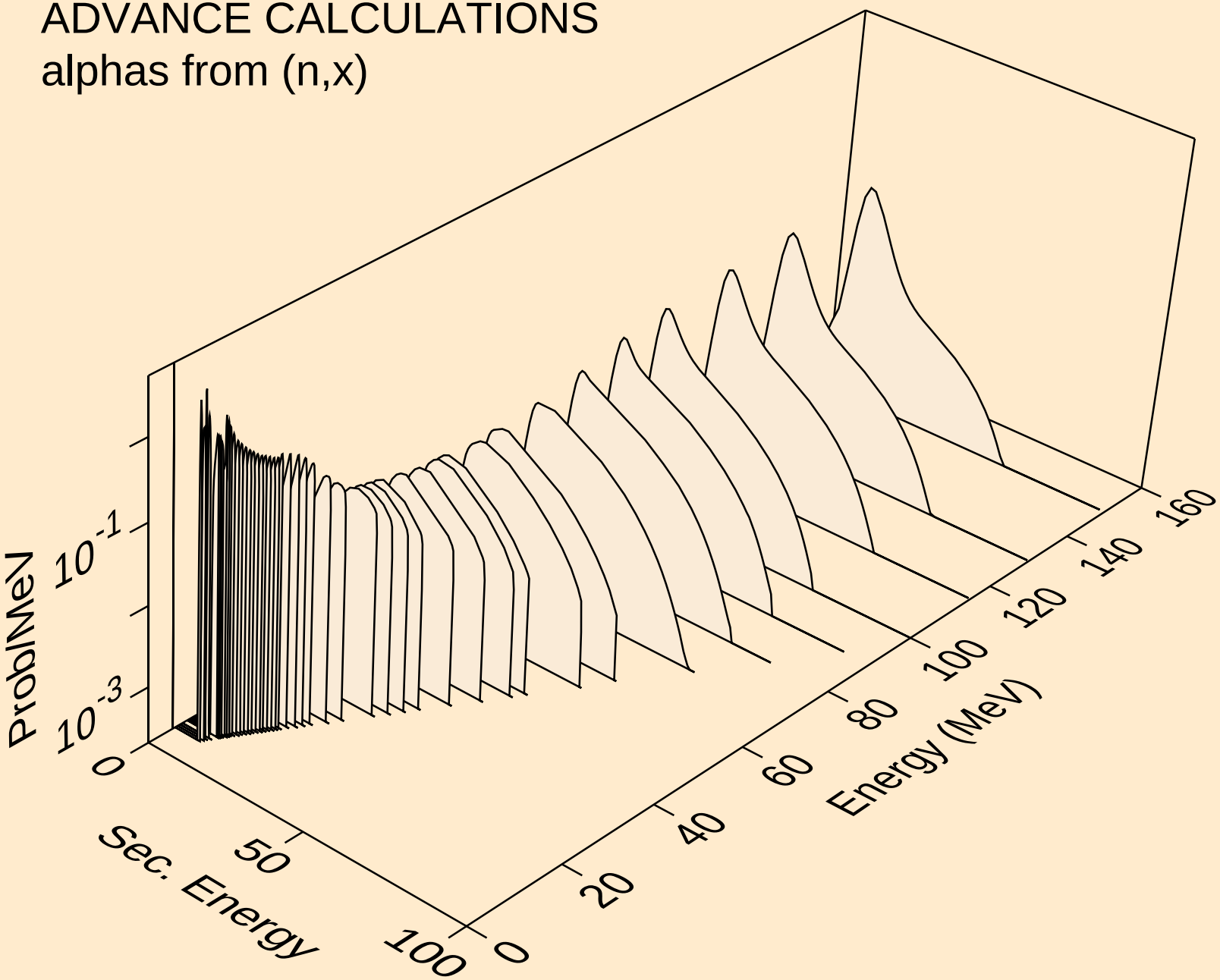
angular distribution for (n,p*14) proton



ADVANCE CALCULATIONS
protons from (n,p*c)

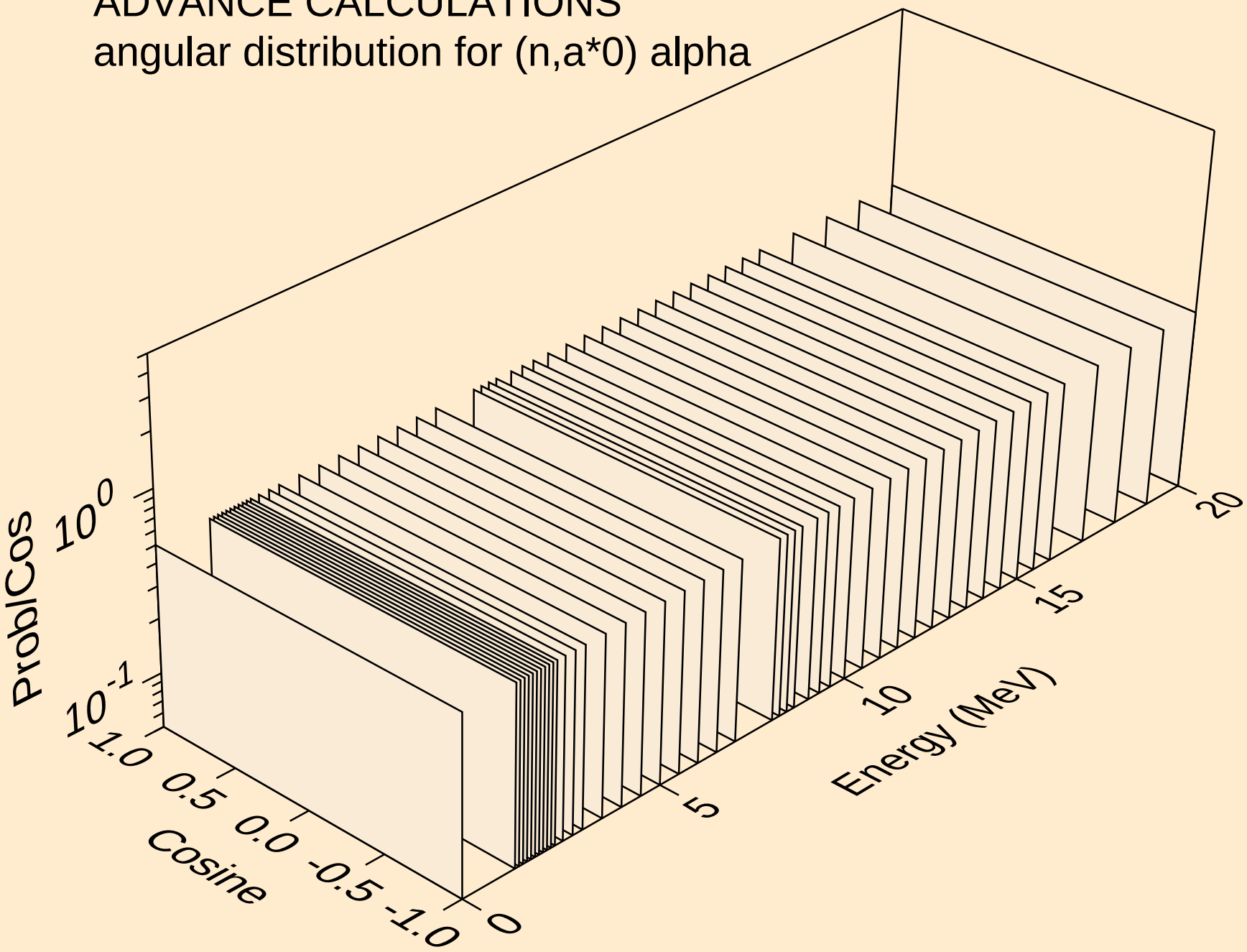


ADVANCE CALCULATIONS
alphas from (n,x)



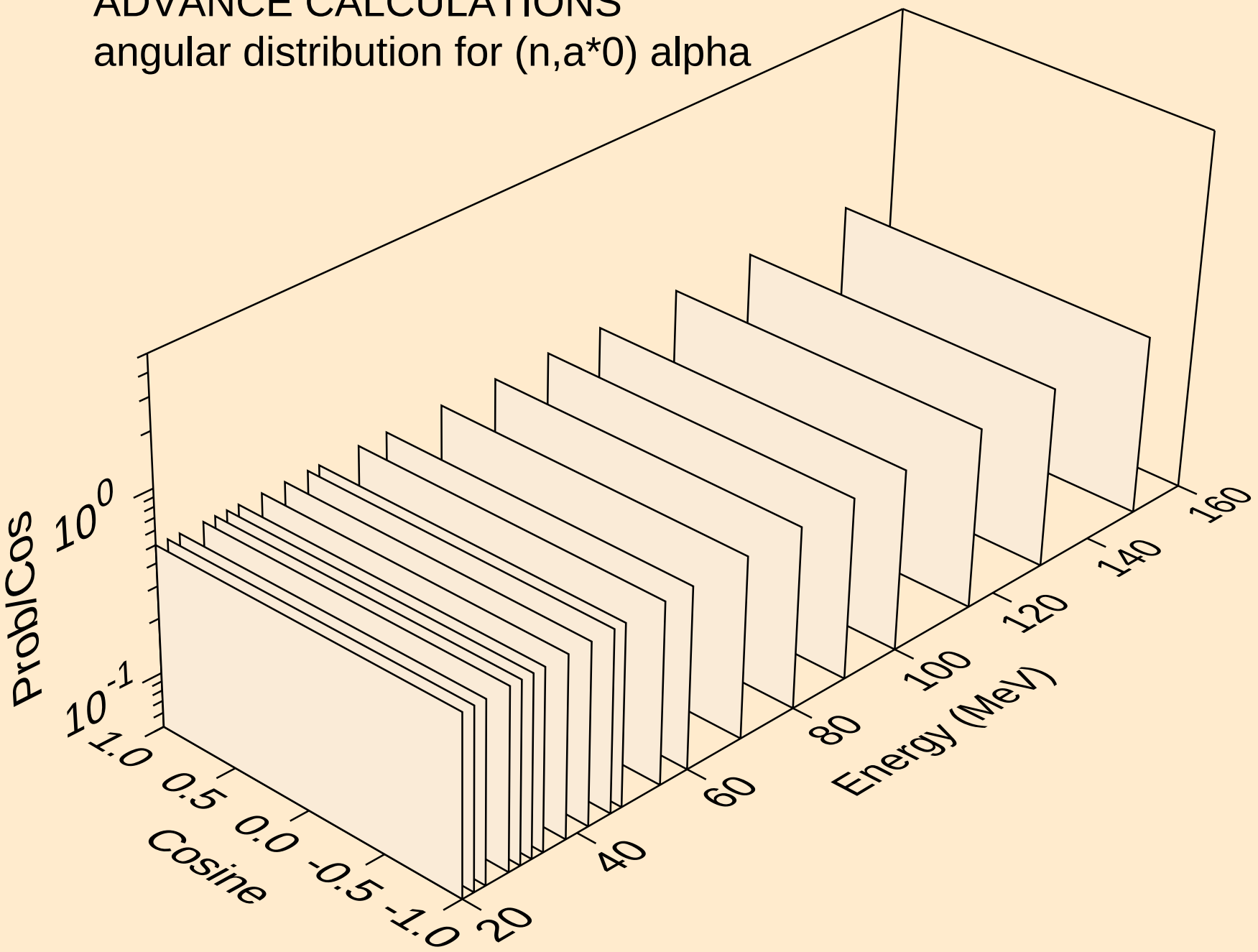
ADVANCE CALCULATIONS

angular distribution for (n,a*0) alpha



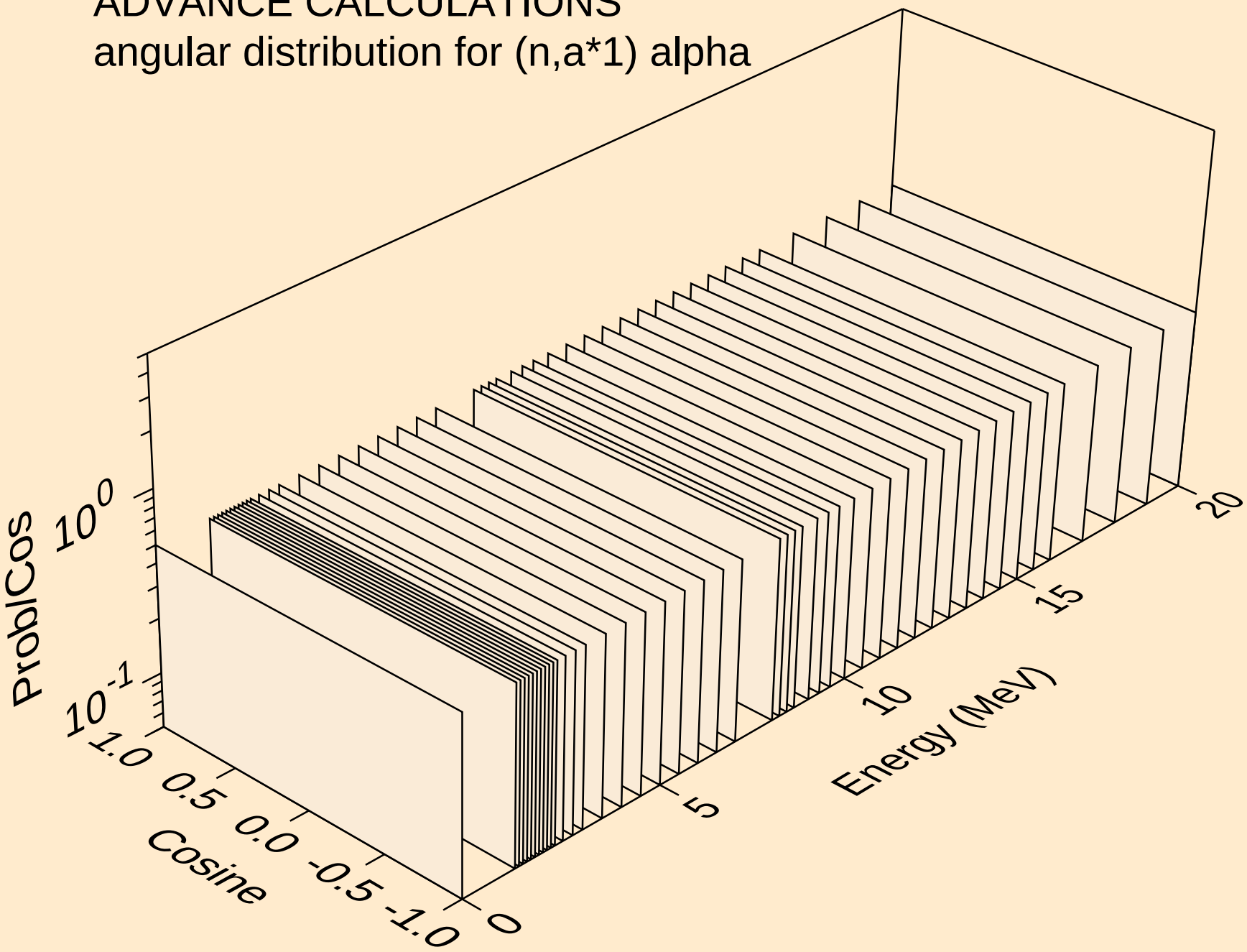
ADVANCE CALCULATIONS

angular distribution for (n,a*0) alpha



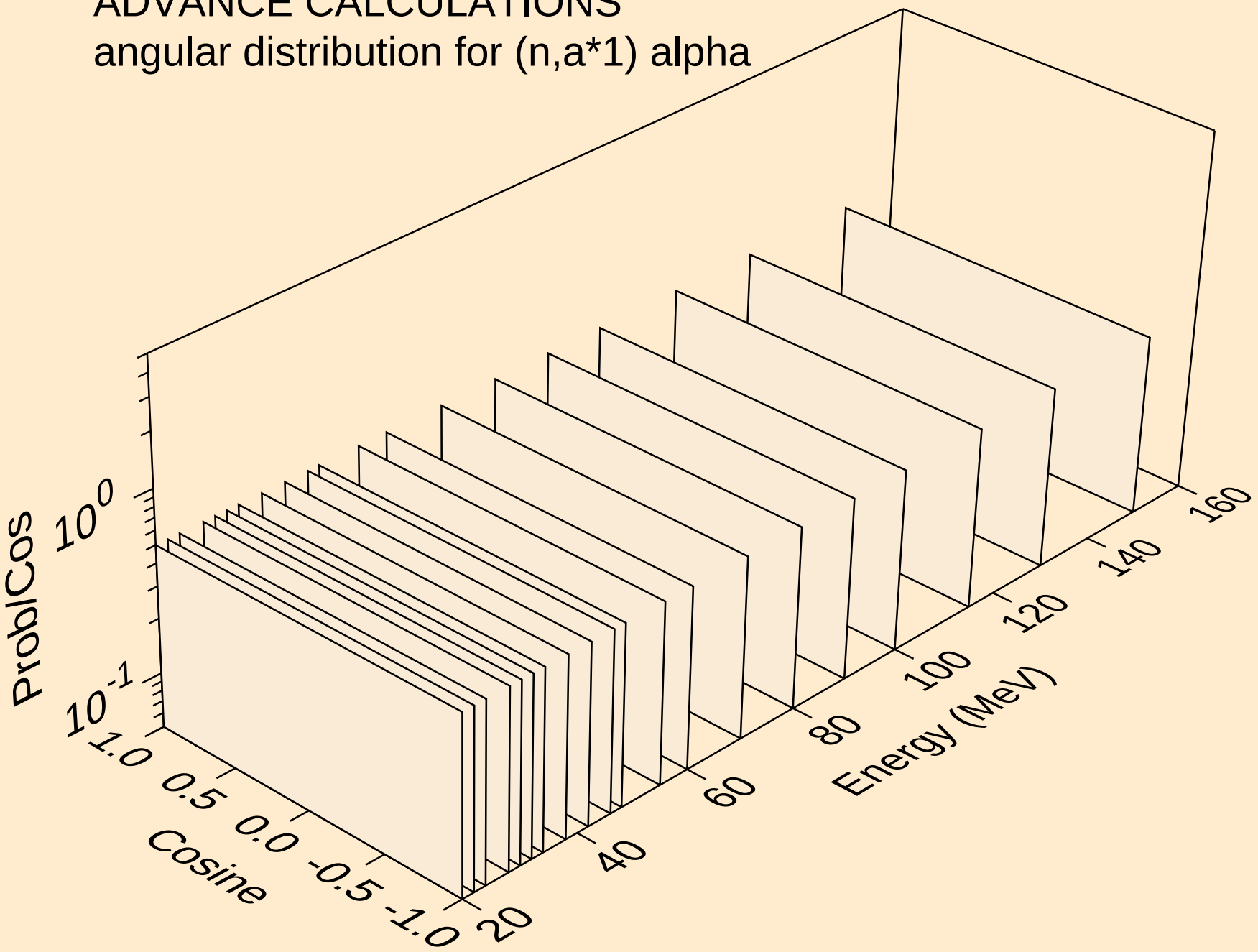
ADVANCE CALCULATIONS

angular distribution for (n,a*1) alpha



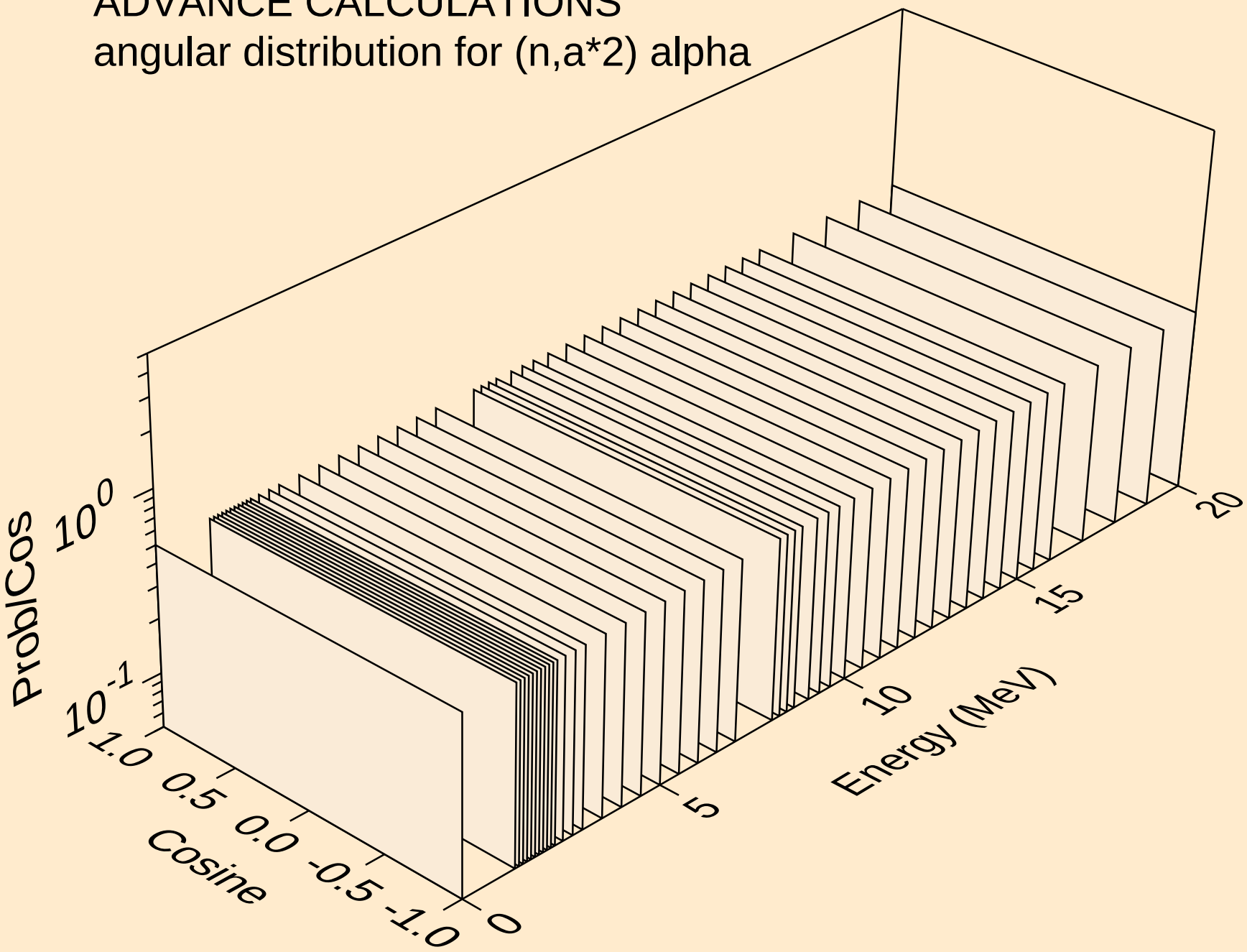
ADVANCE CALCULATIONS

angular distribution for (n,a*1) alpha

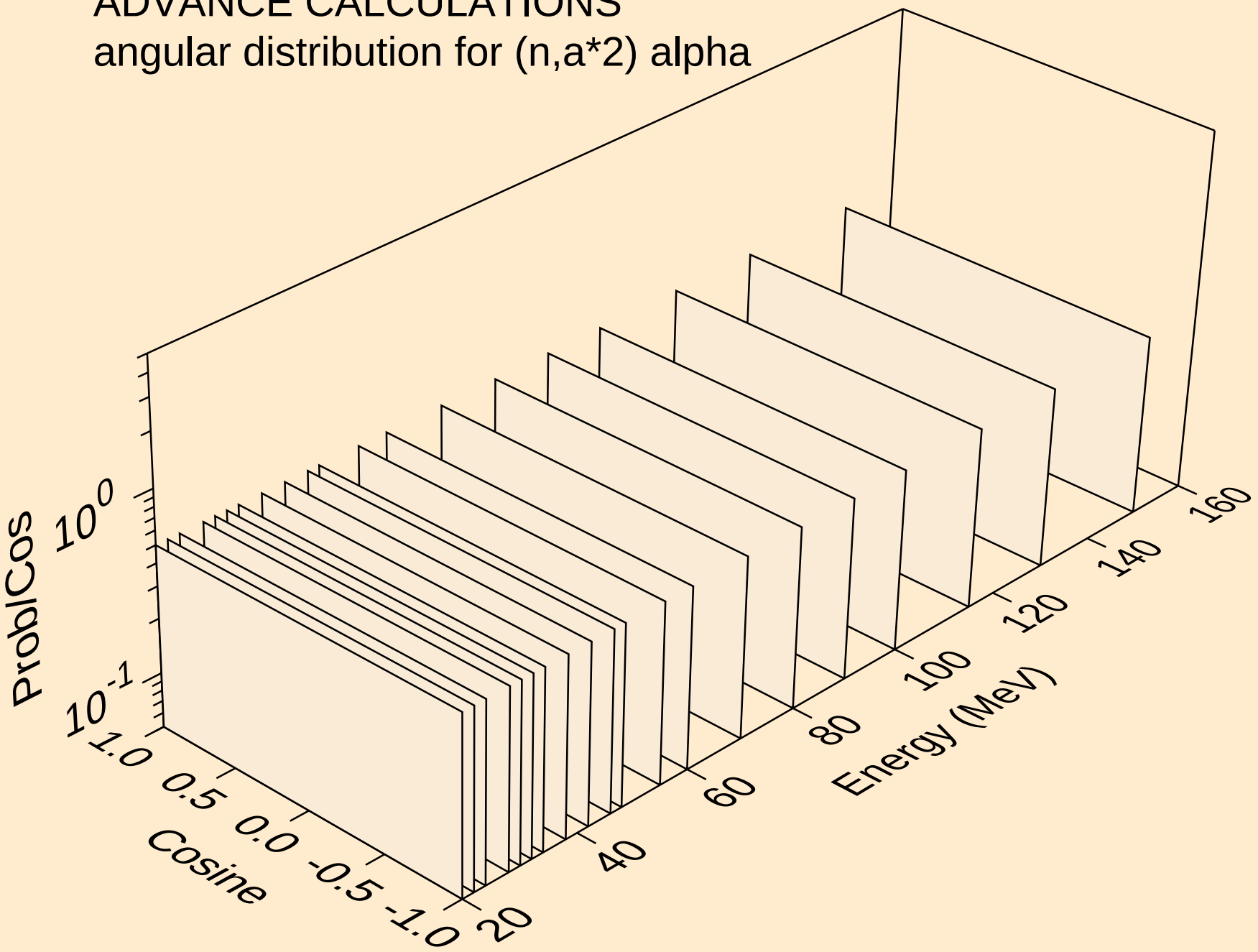


ADVANCE CALCULATIONS

angular distribution for (n,a*2) alpha

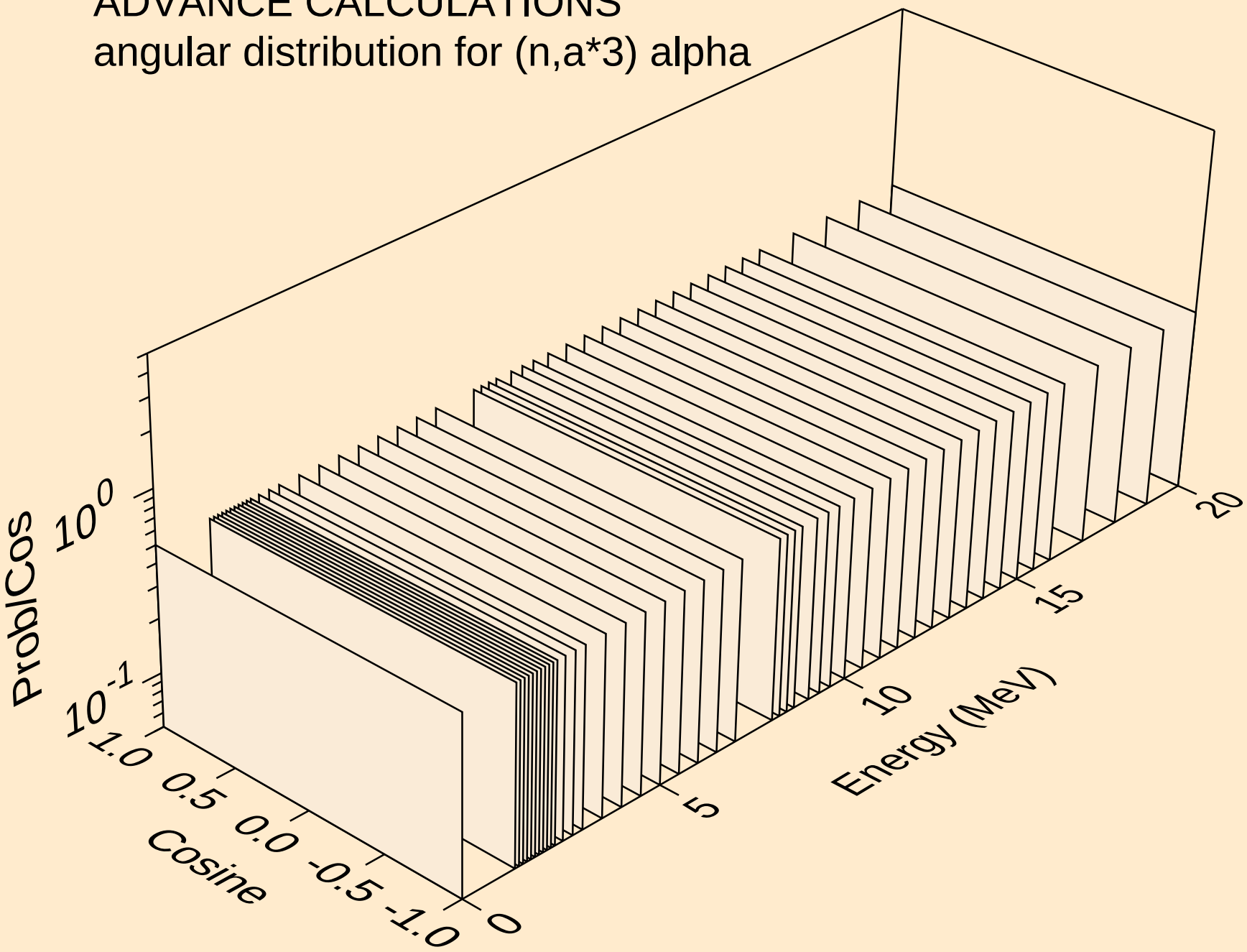


ADVANCE CALCULATIONS
angular distribution for (n,a*2) alpha



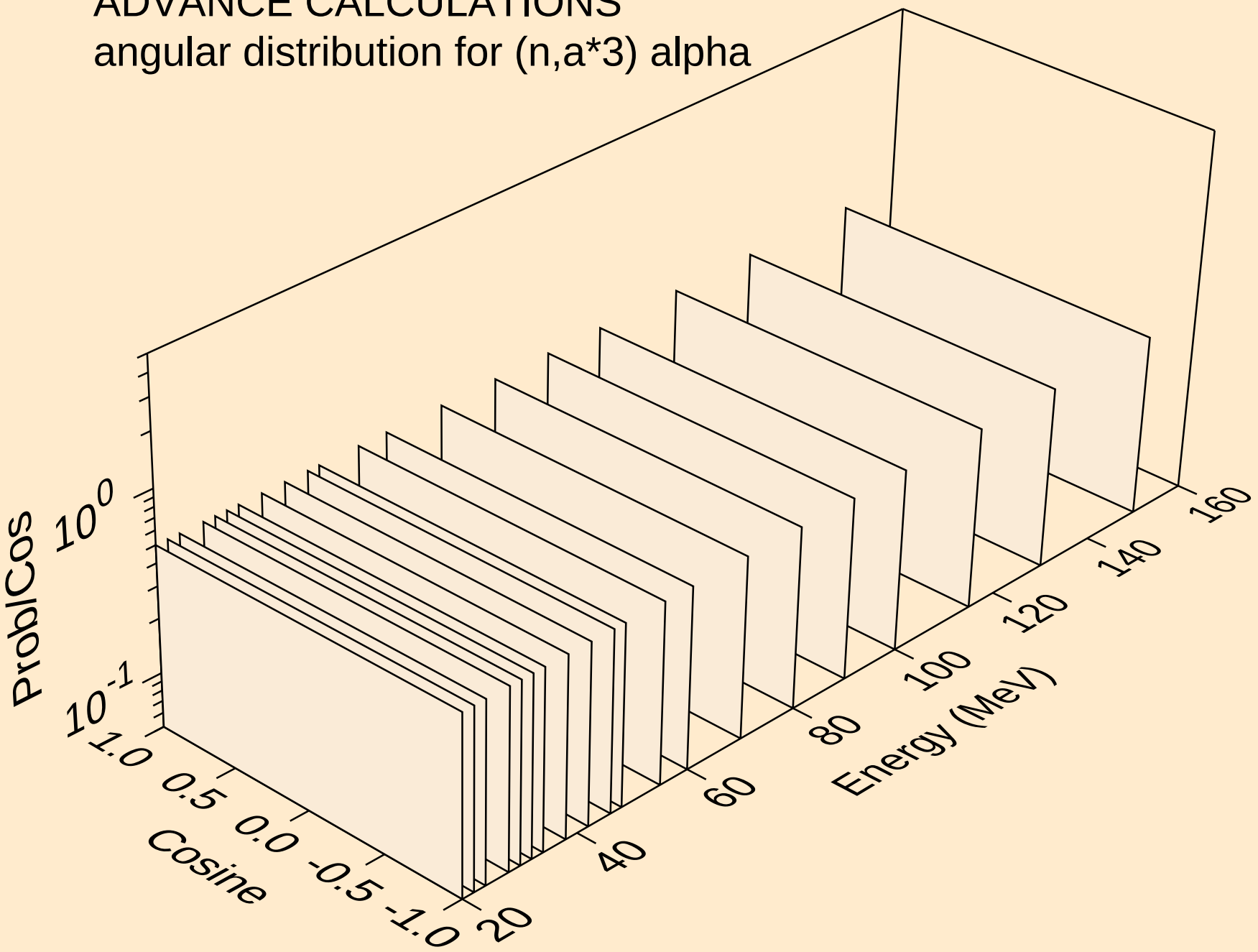
ADVANCE CALCULATIONS

angular distribution for (n,a*3) alpha



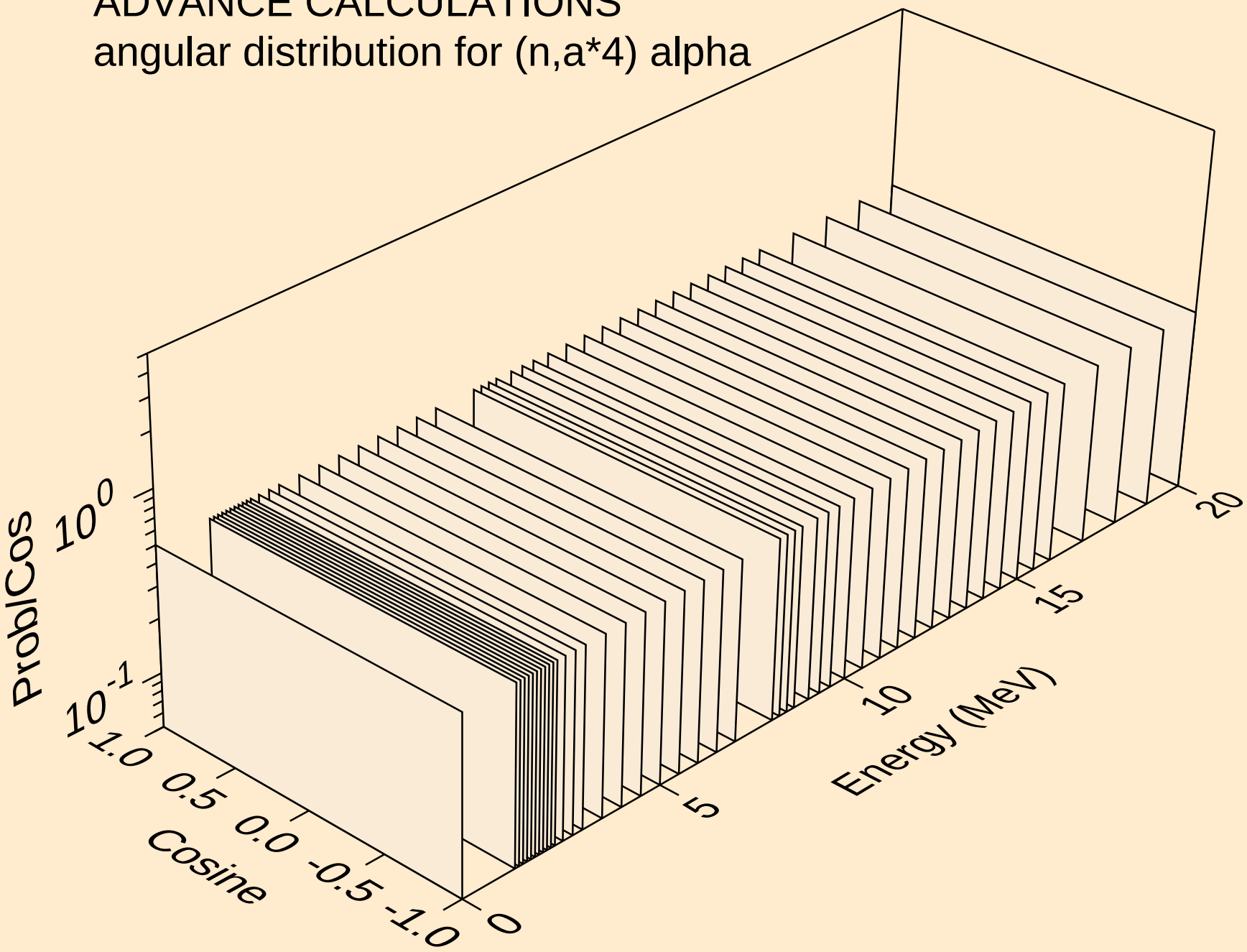
ADVANCE CALCULATIONS

angular distribution for (n,a*3) alpha



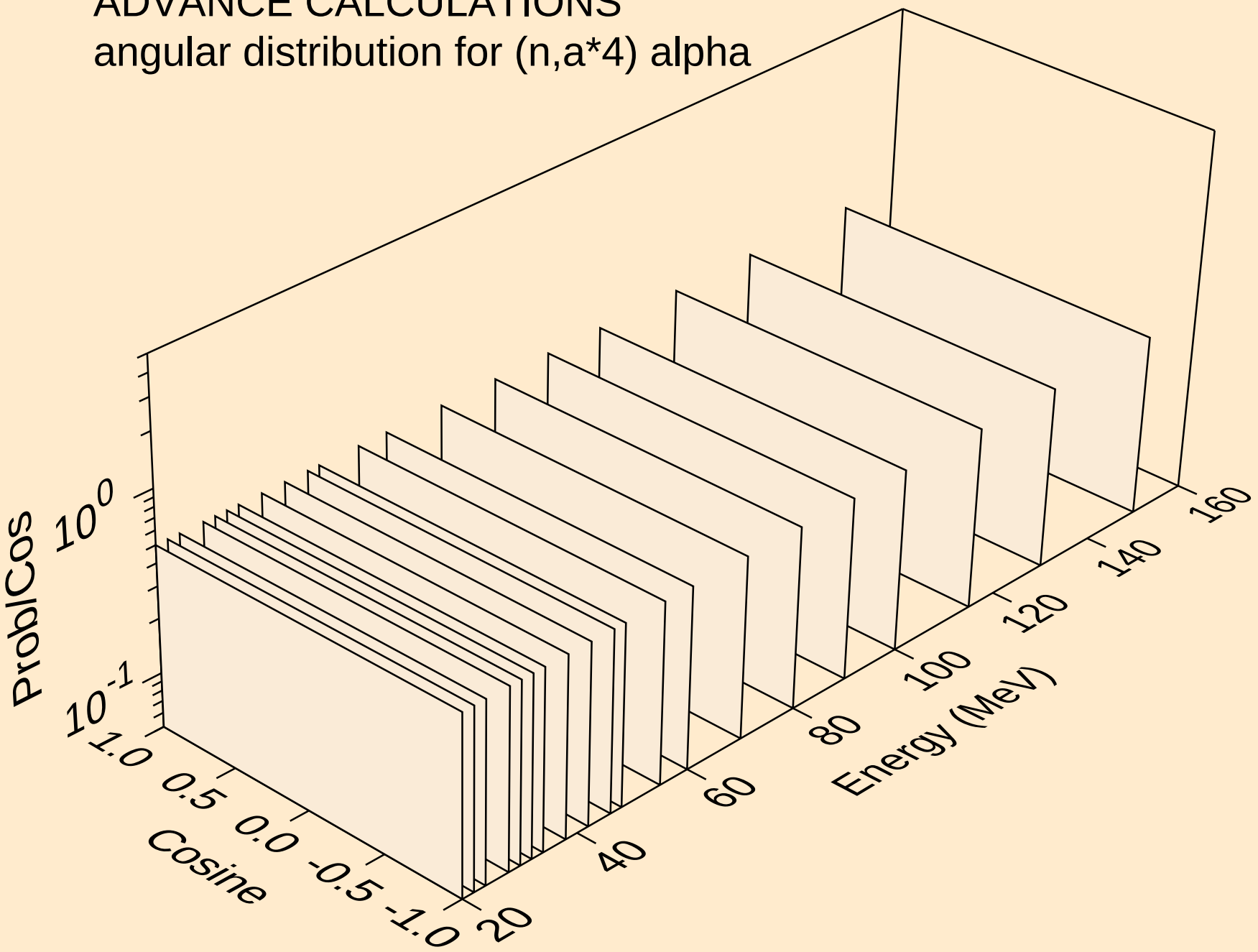
ADVANCE CALCULATIONS

angular distribution for (n,a*4) alpha



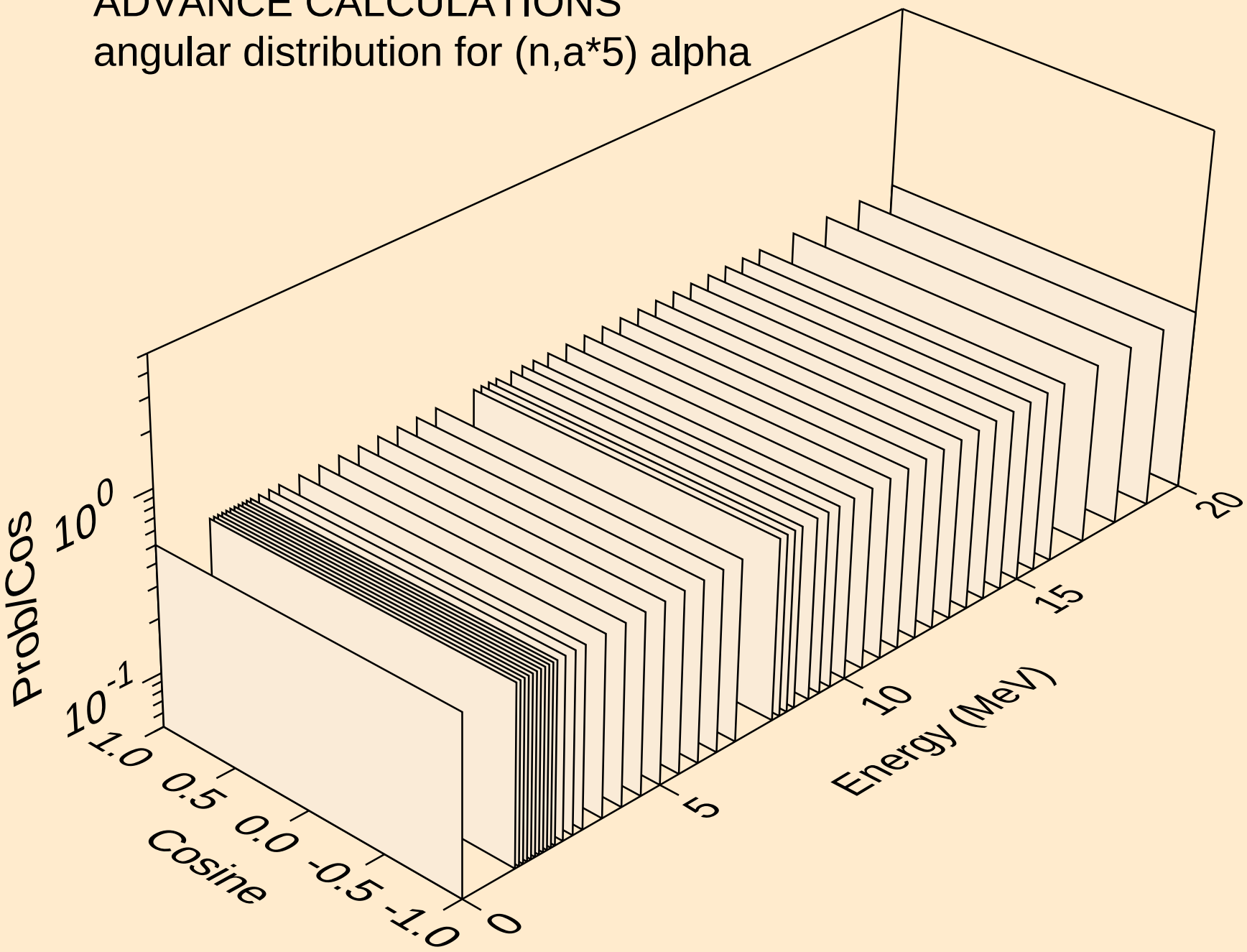
ADVANCE CALCULATIONS

angular distribution for (n,a*4) alpha



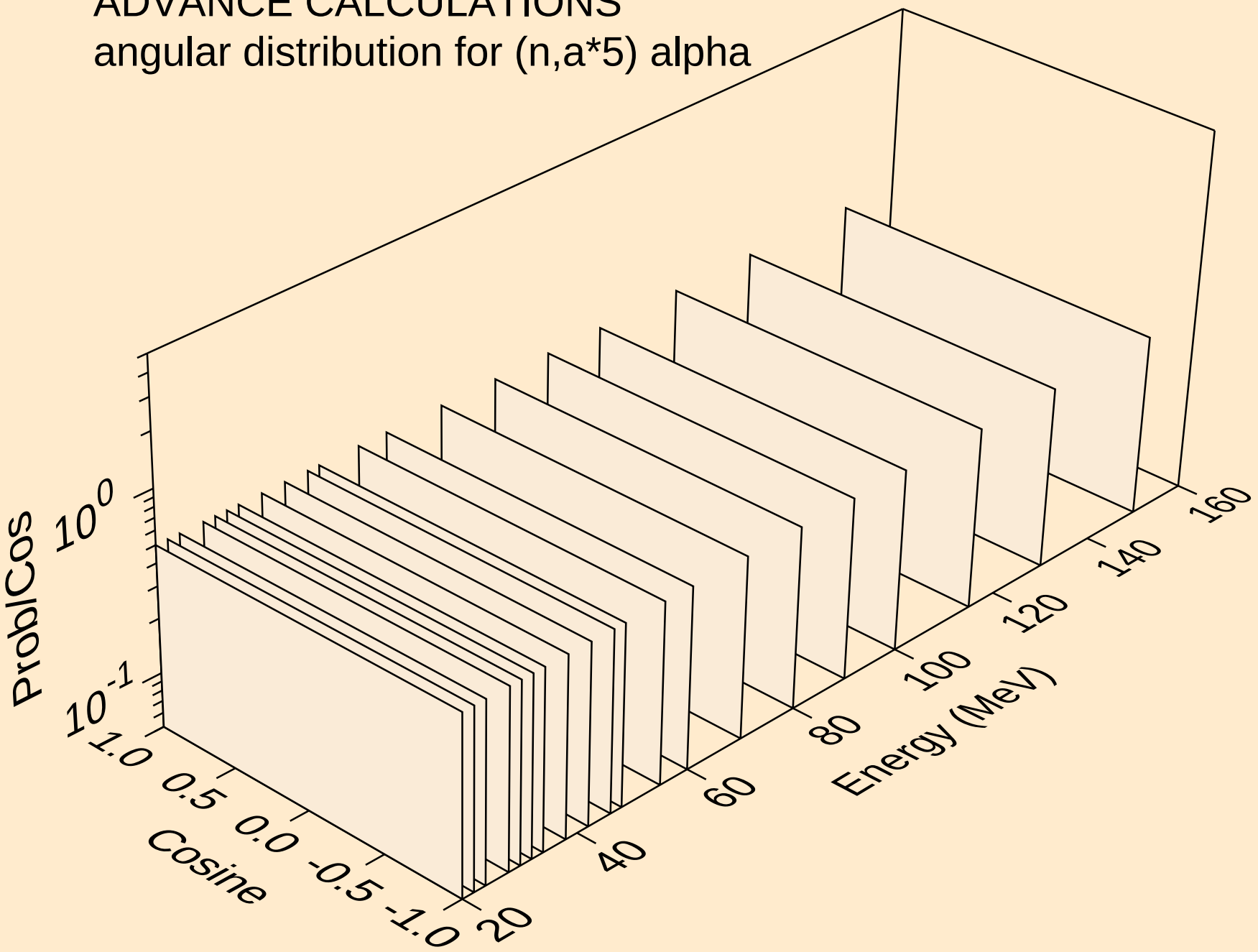
ADVANCE CALCULATIONS

angular distribution for (n,a*5) alpha



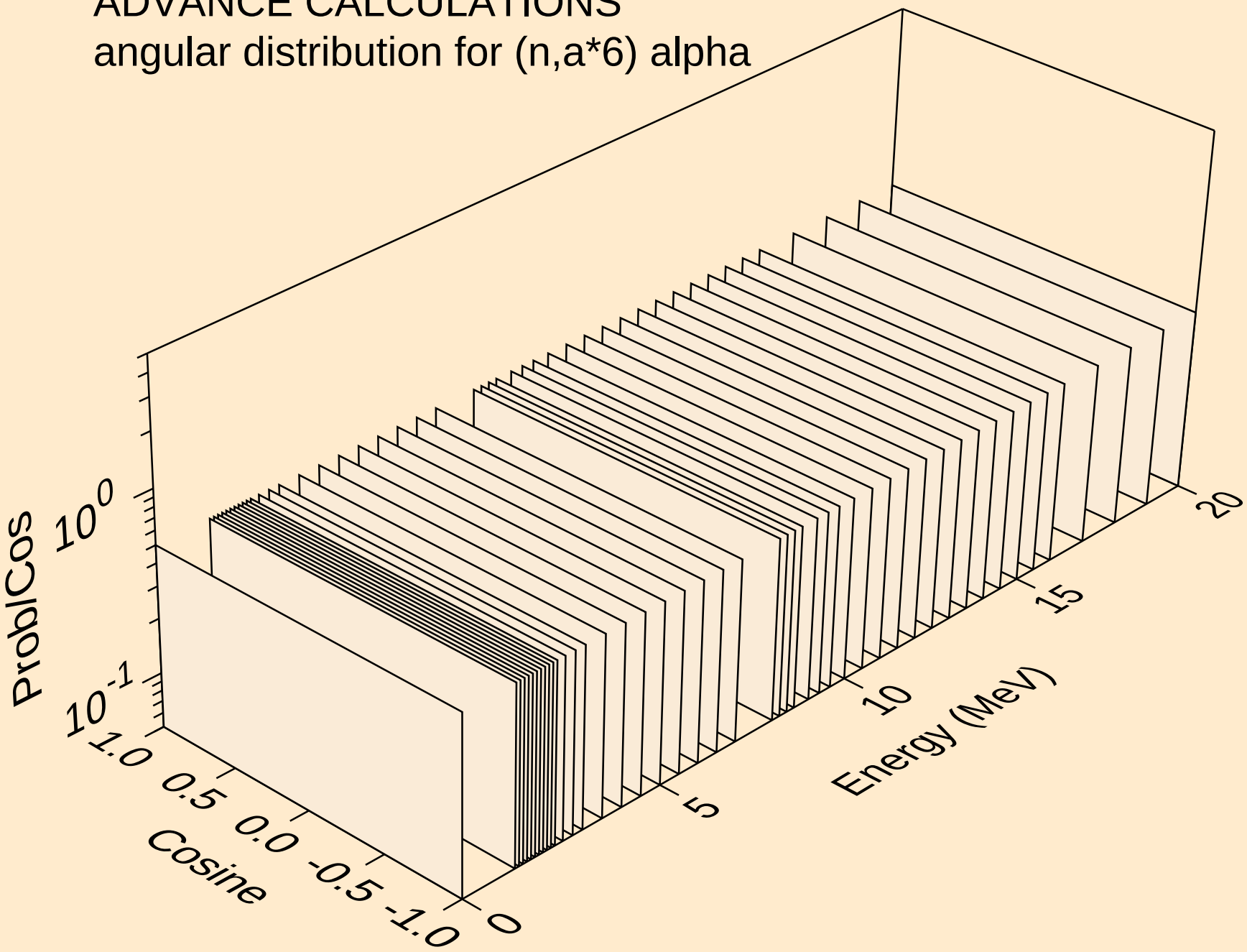
ADVANCE CALCULATIONS

angular distribution for (n,a*5) alpha



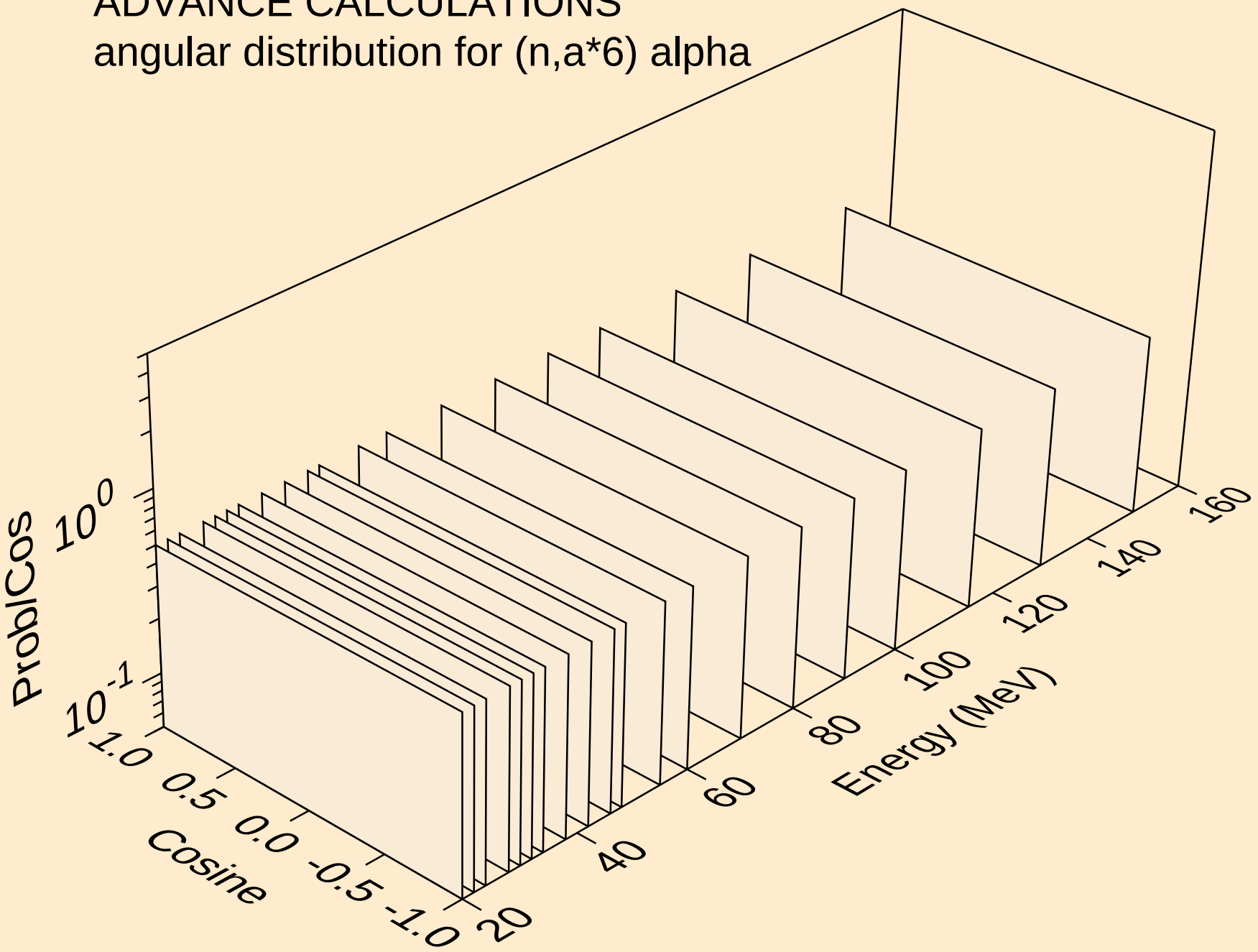
ADVANCE CALCULATIONS

angular distribution for (n,a*6) alpha



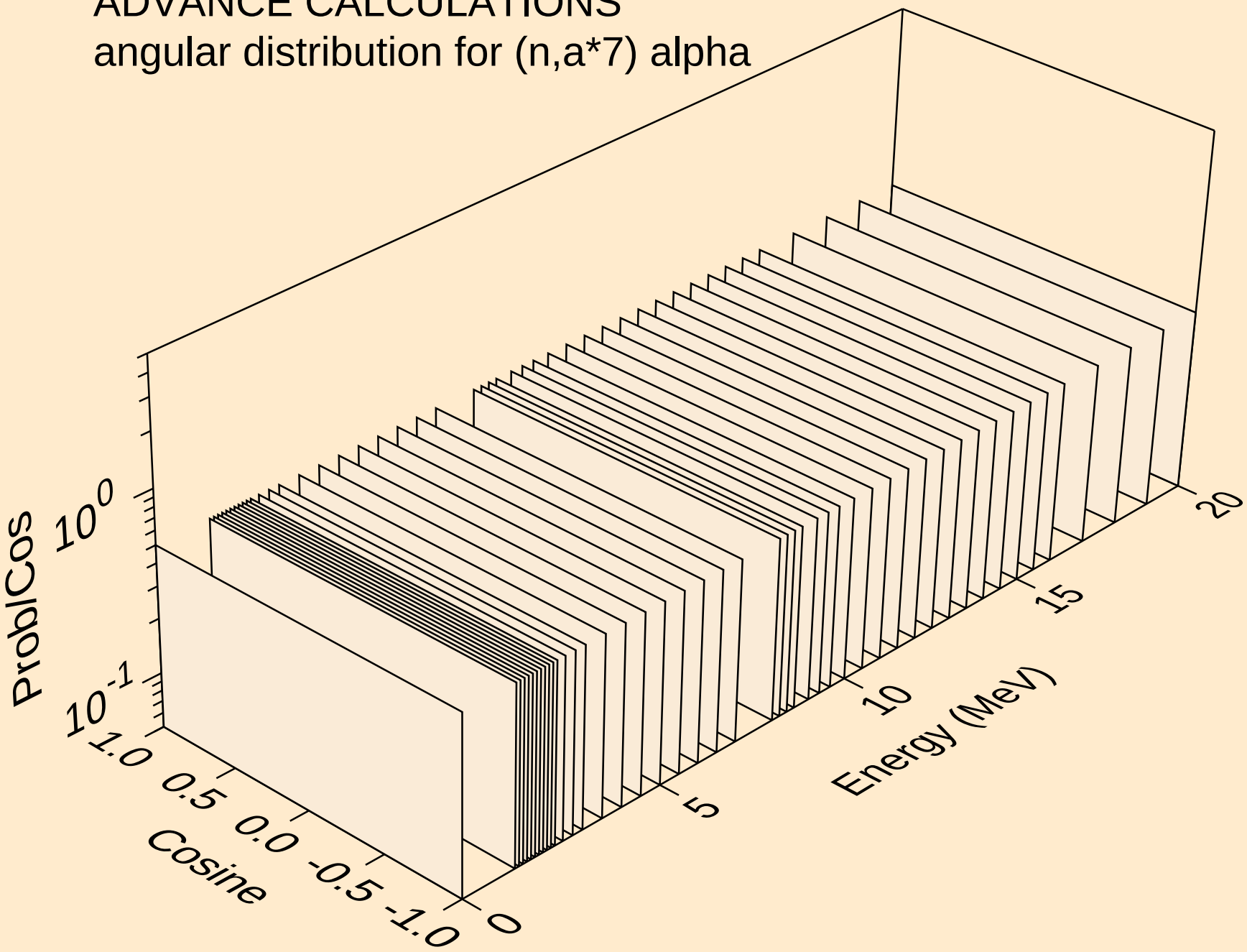
ADVANCE CALCULATIONS

angular distribution for (n,a*6) alpha

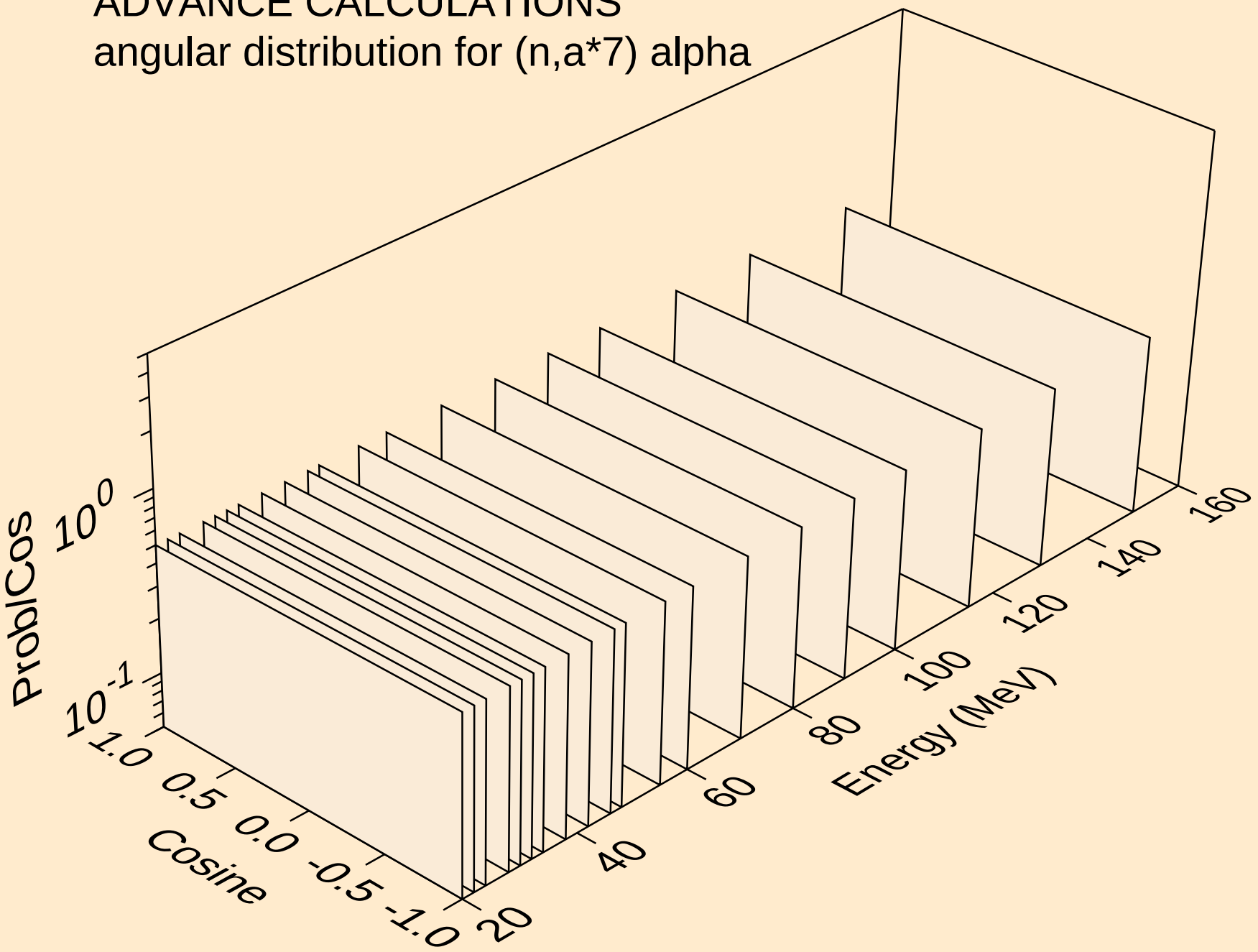


ADVANCE CALCULATIONS

angular distribution for (n,a*7) alpha

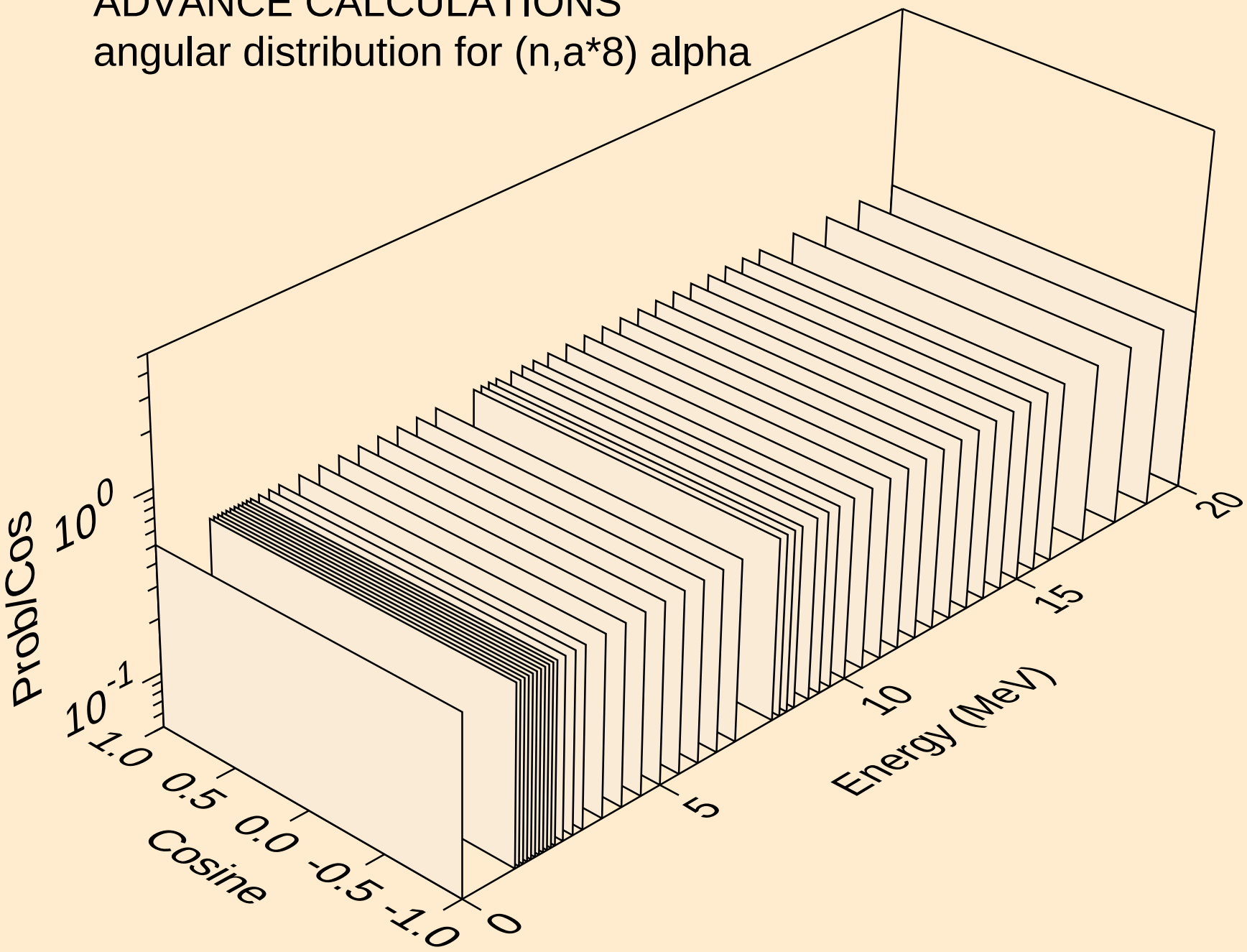


ADVANCE CALCULATIONS
angular distribution for (n,a*7) alpha



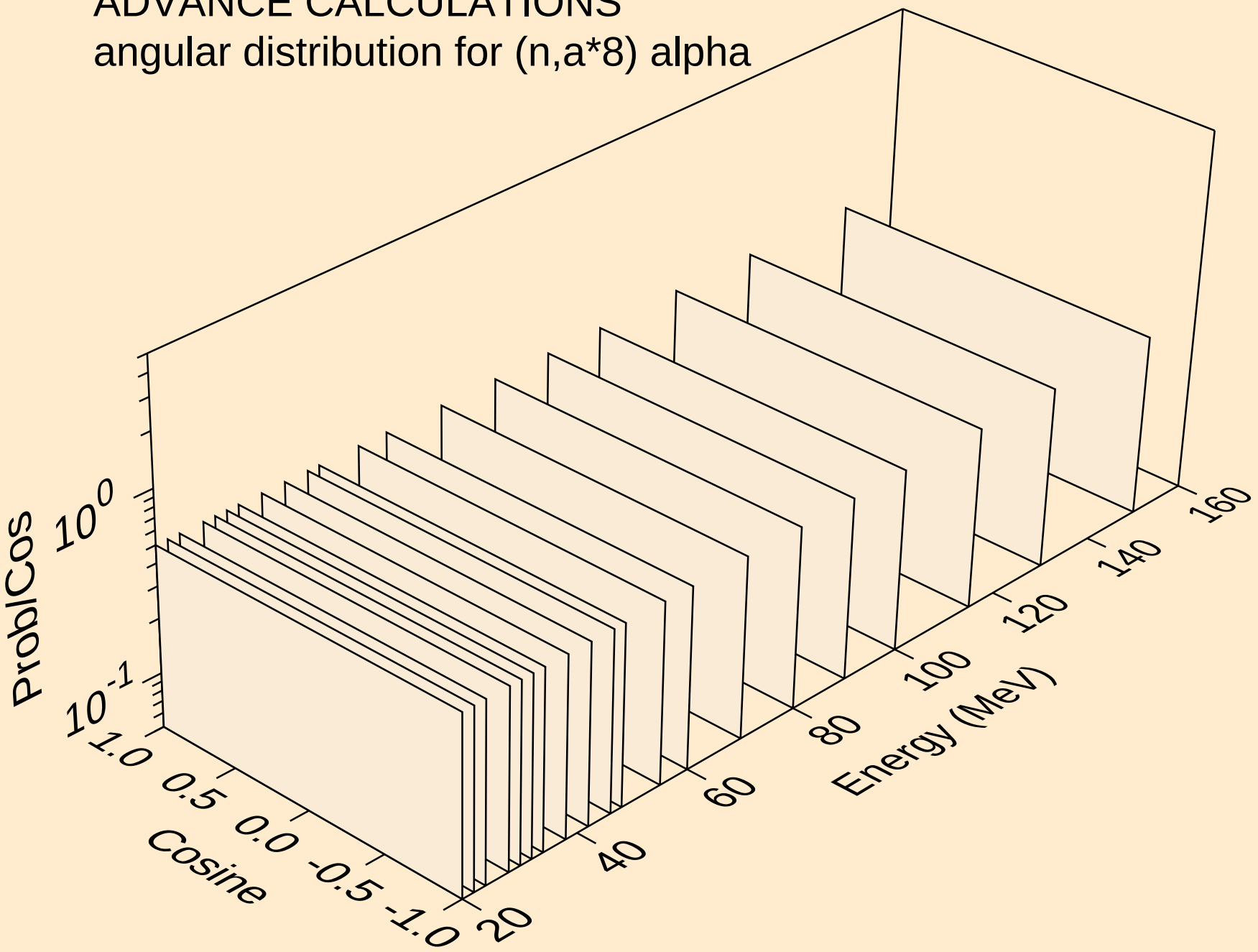
ADVANCE CALCULATIONS

angular distribution for (n,a*8) alpha



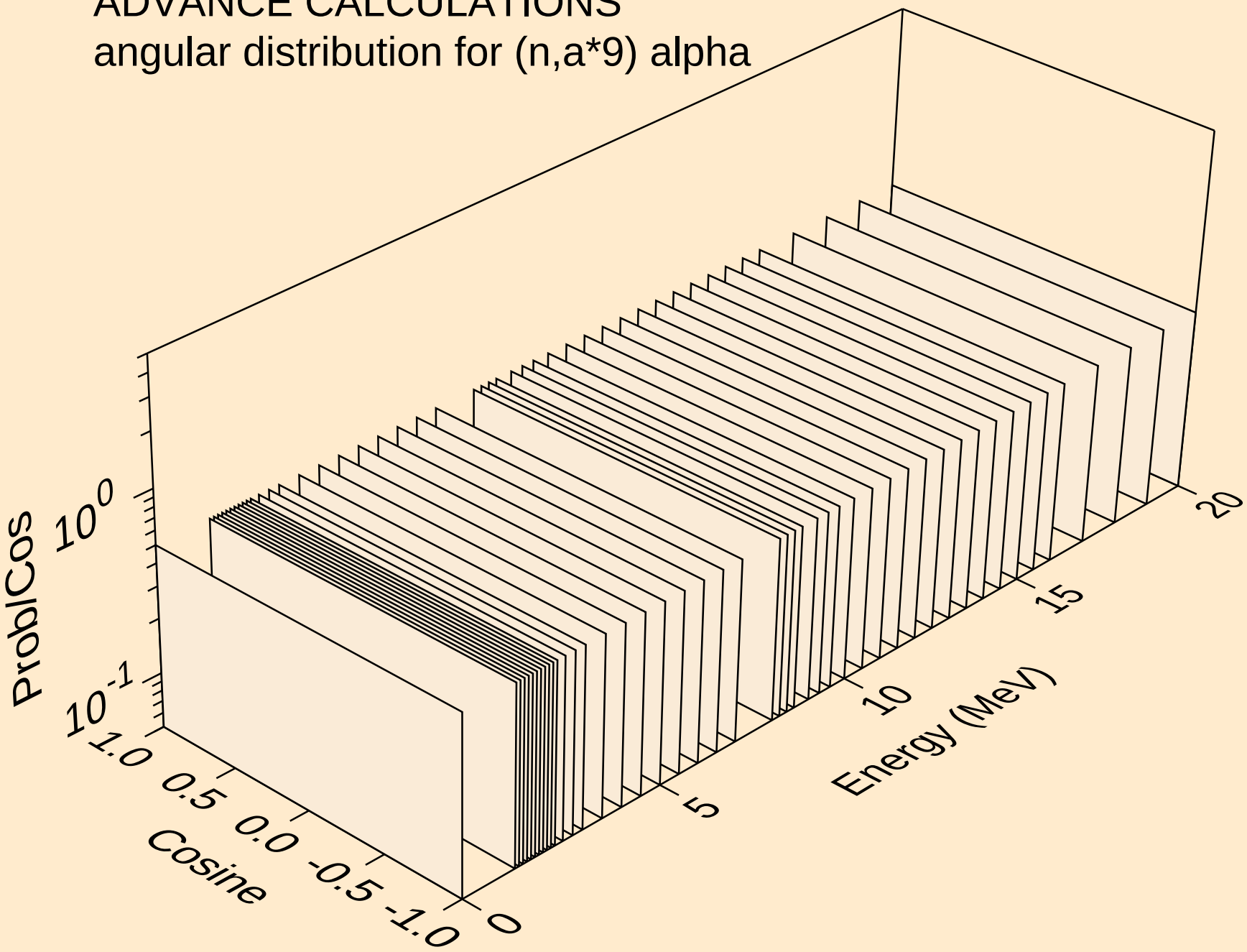
ADVANCE CALCULATIONS

angular distribution for (n,a*8) alpha

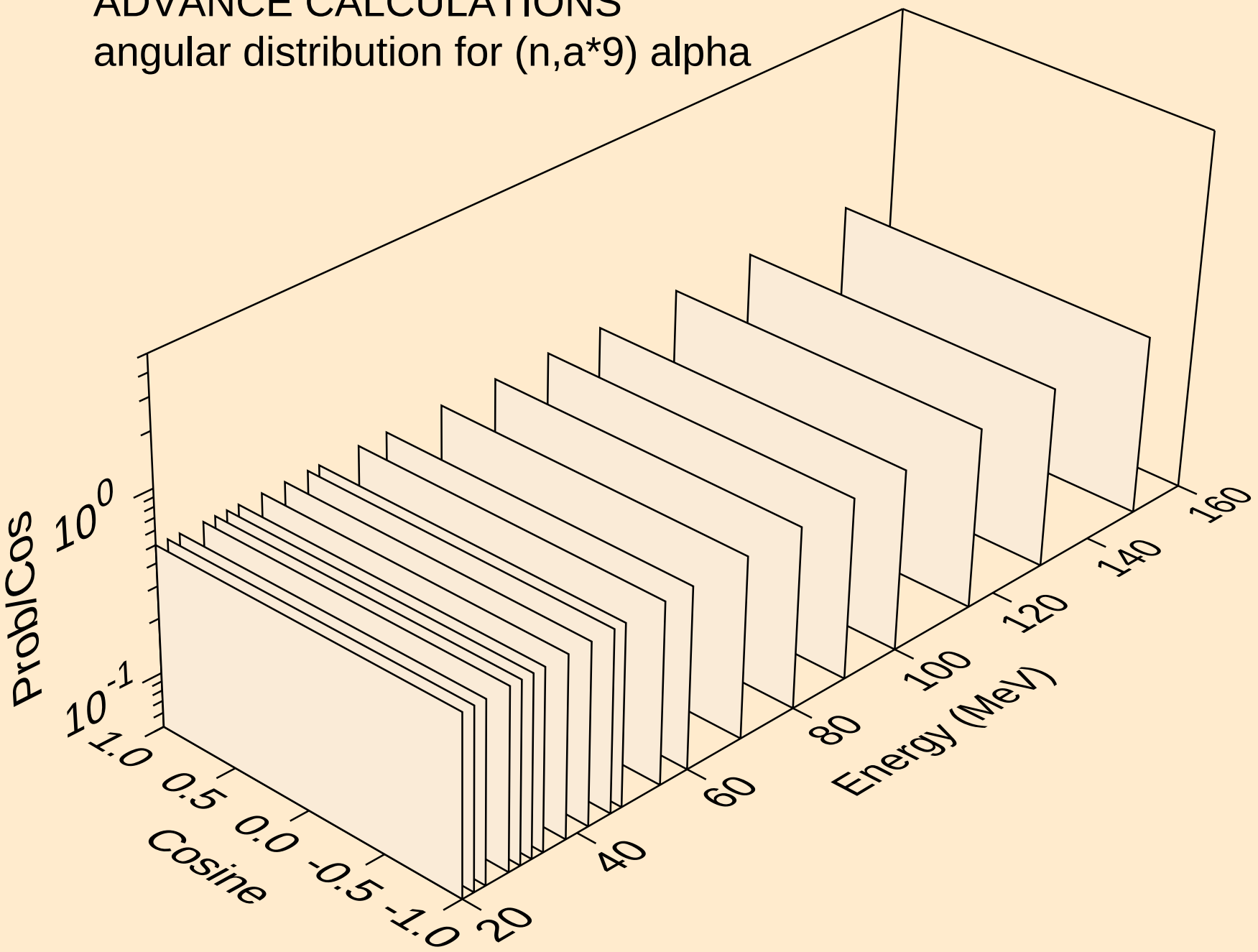


ADVANCE CALCULATIONS

angular distribution for (n,a*9) alpha

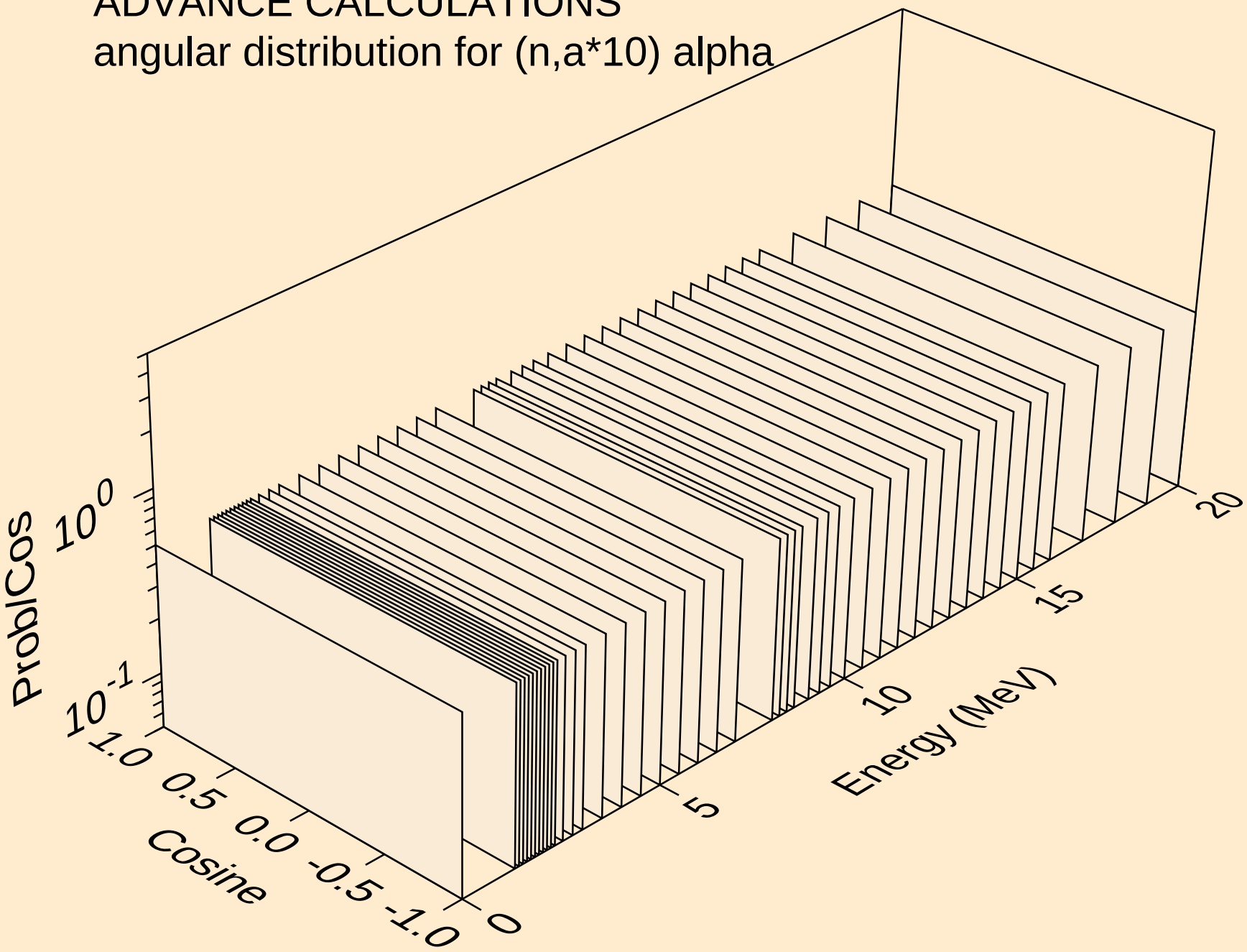


ADVANCE CALCULATIONS
angular distribution for (n,a*9) alpha



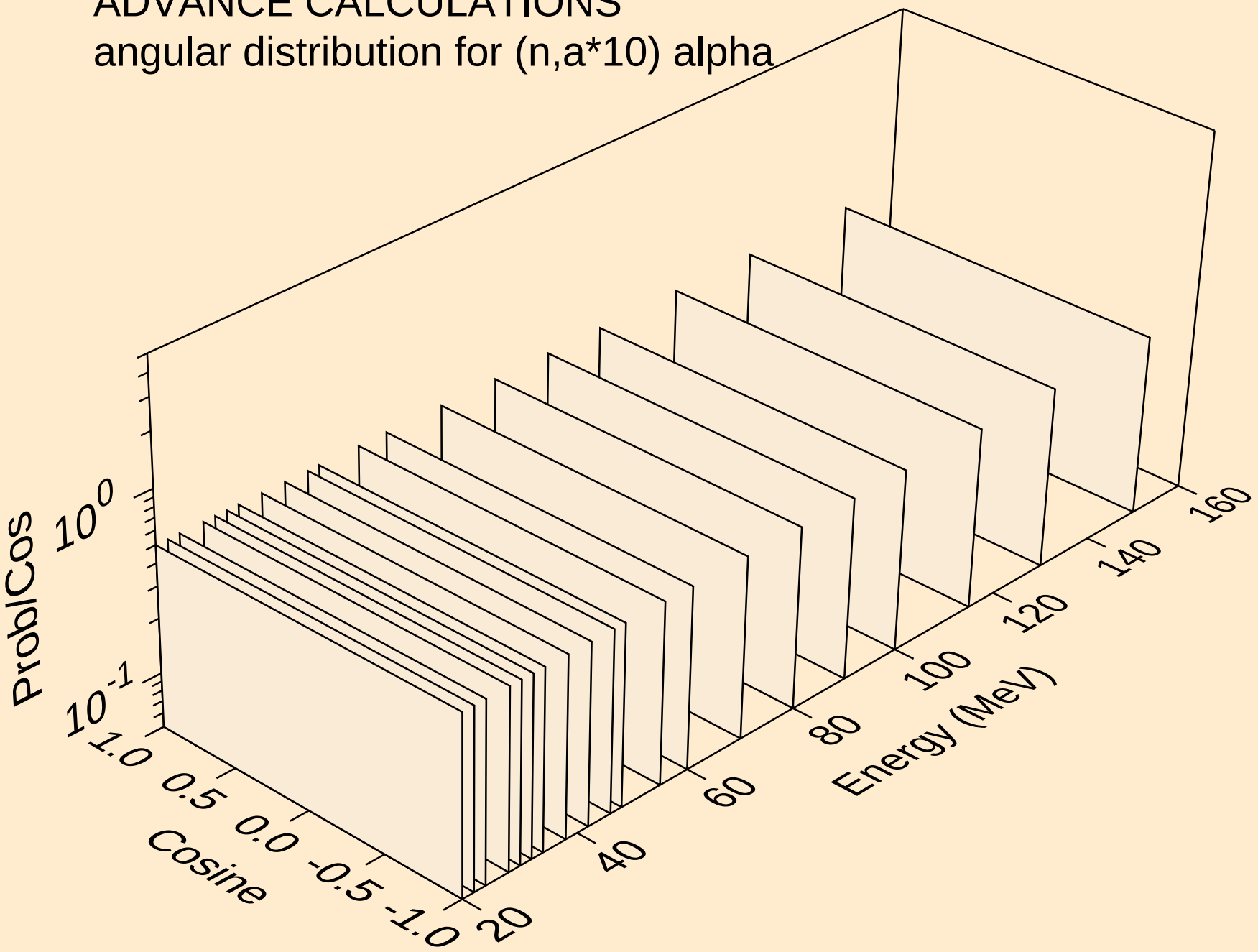
ADVANCE CALCULATIONS

angular distribution for (n,a*10) alpha



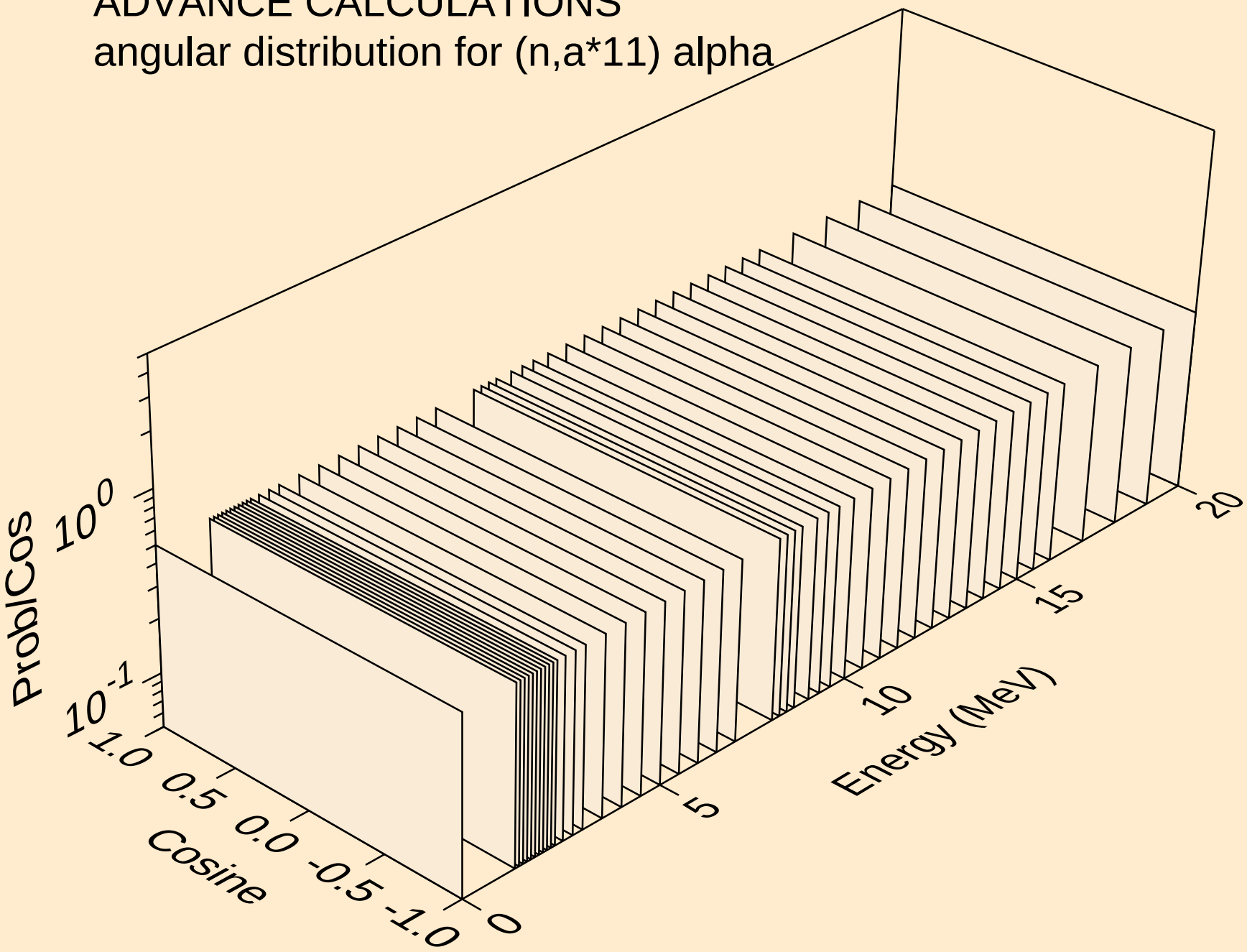
ADVANCE CALCULATIONS

angular distribution for (n,a*10) alpha



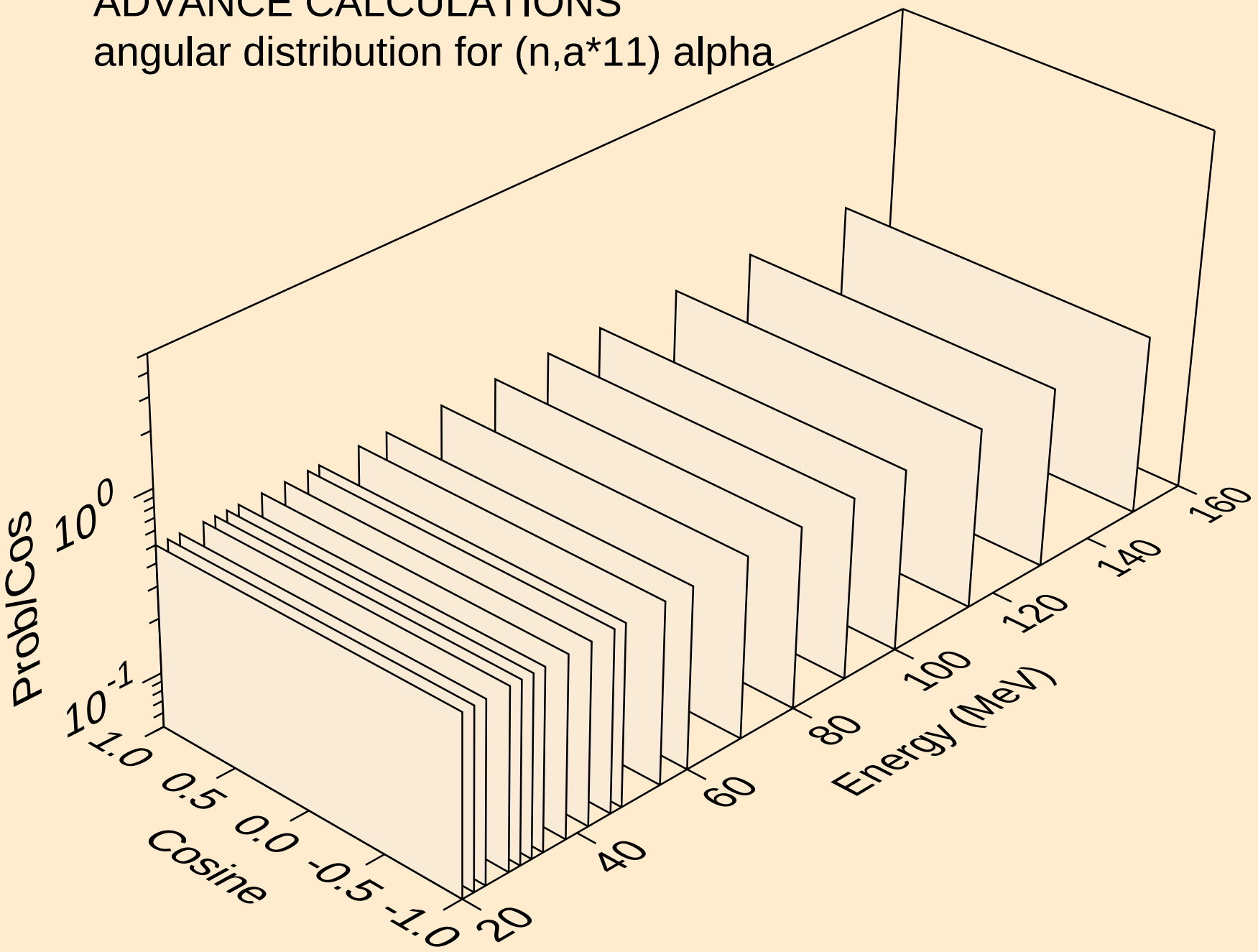
ADVANCE CALCULATIONS

angular distribution for (n,a*11) alpha



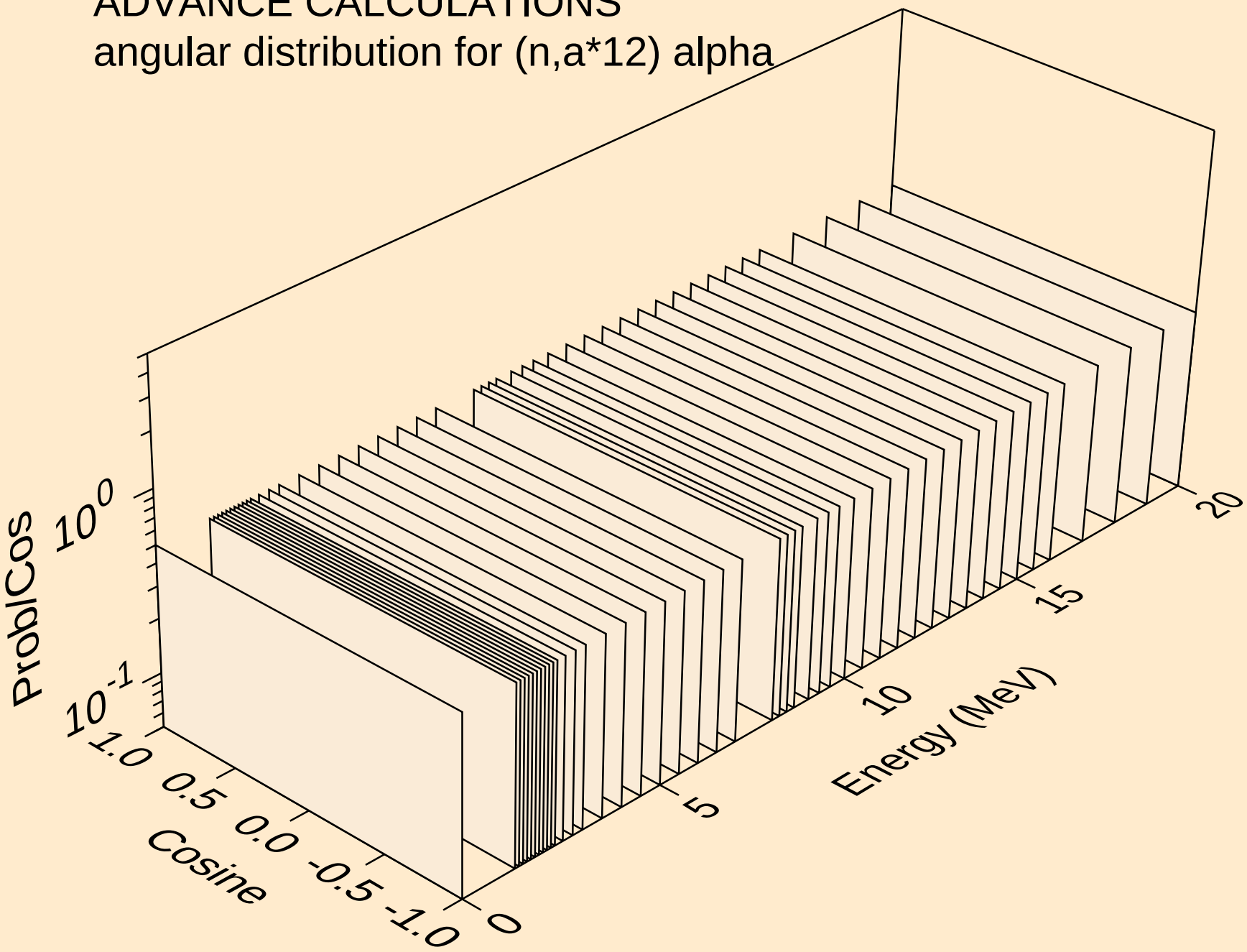
ADVANCE CALCULATIONS

angular distribution for (n,a*11) alpha



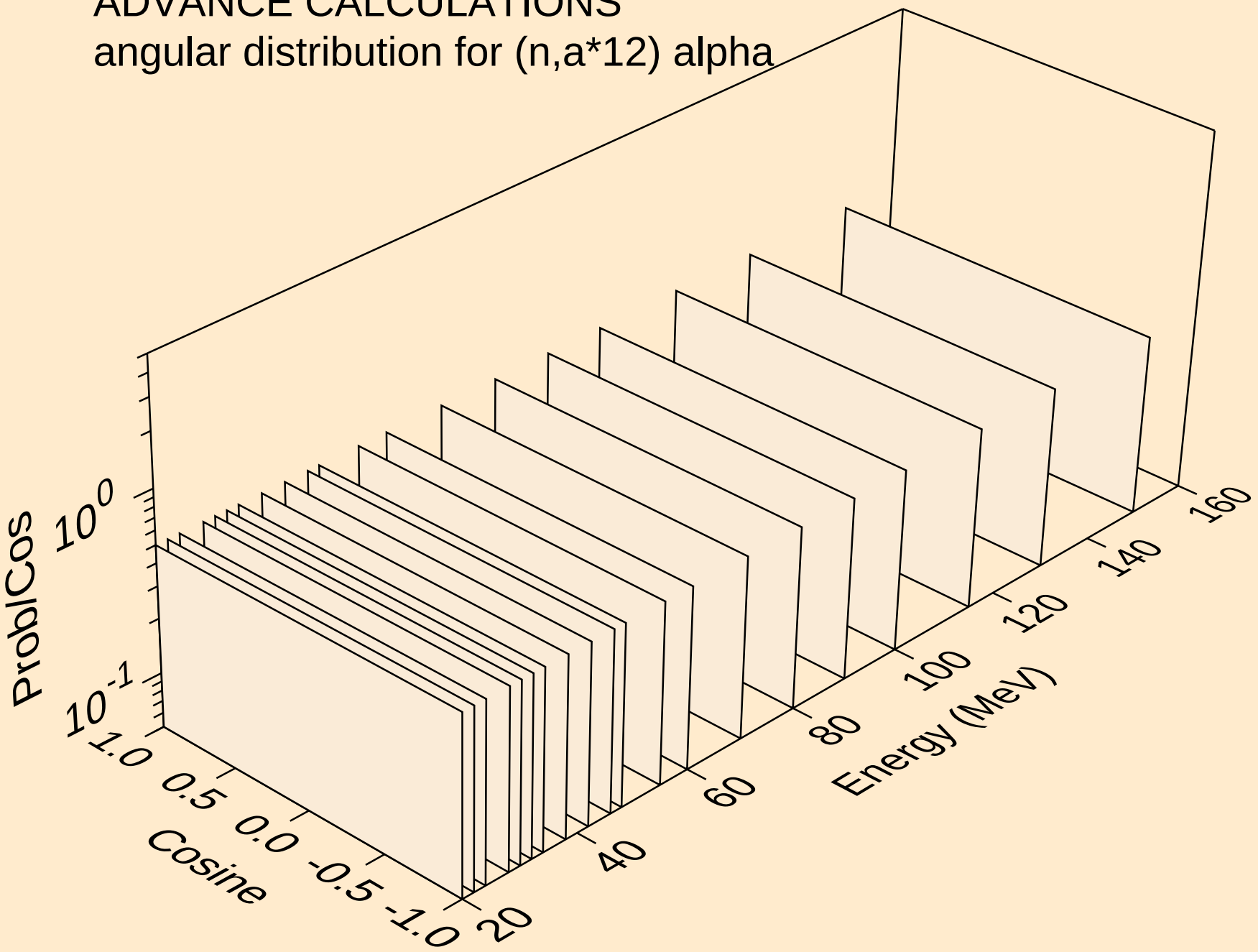
ADVANCE CALCULATIONS

angular distribution for (n,a*12) alpha



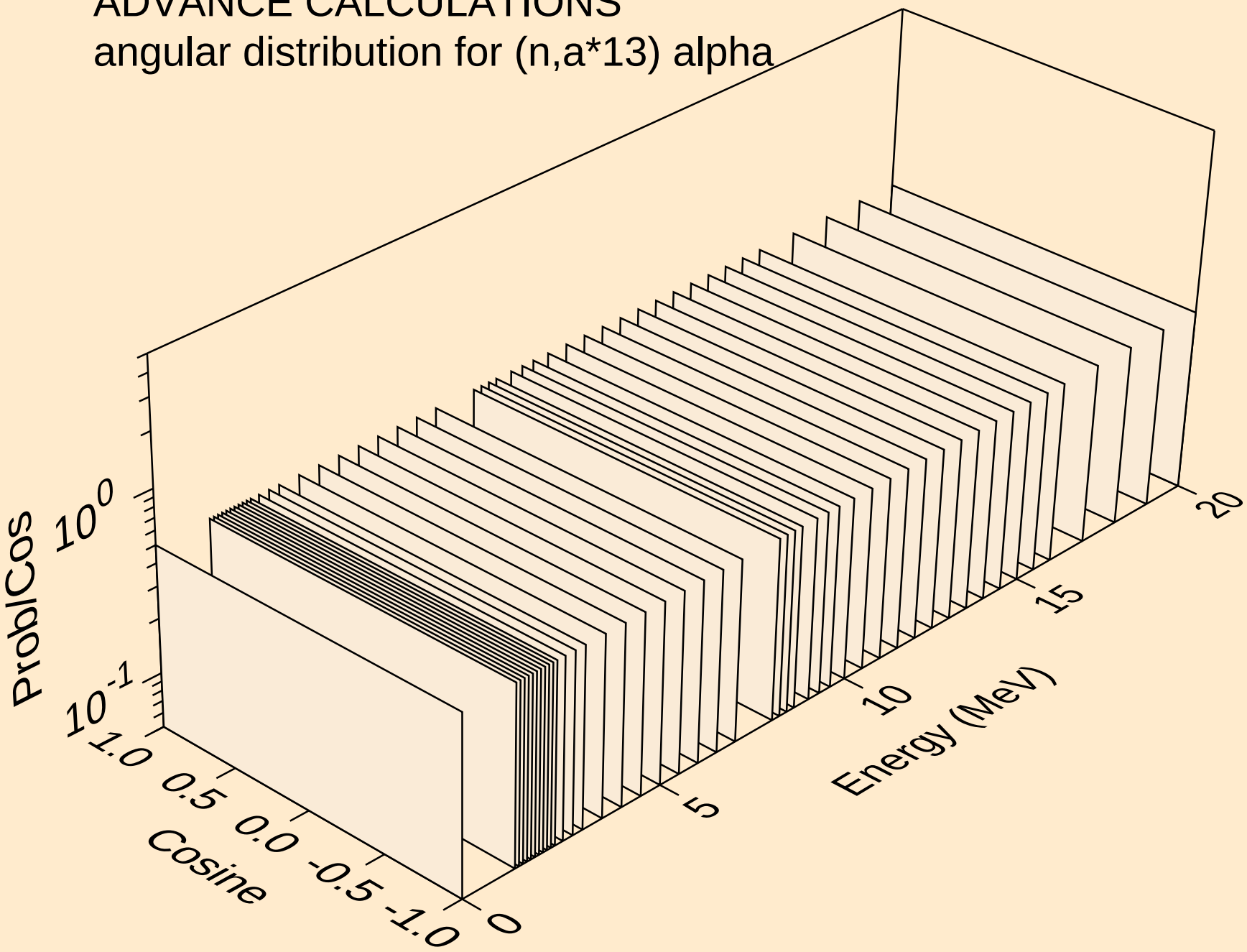
ADVANCE CALCULATIONS

angular distribution for (n,a*12) alpha



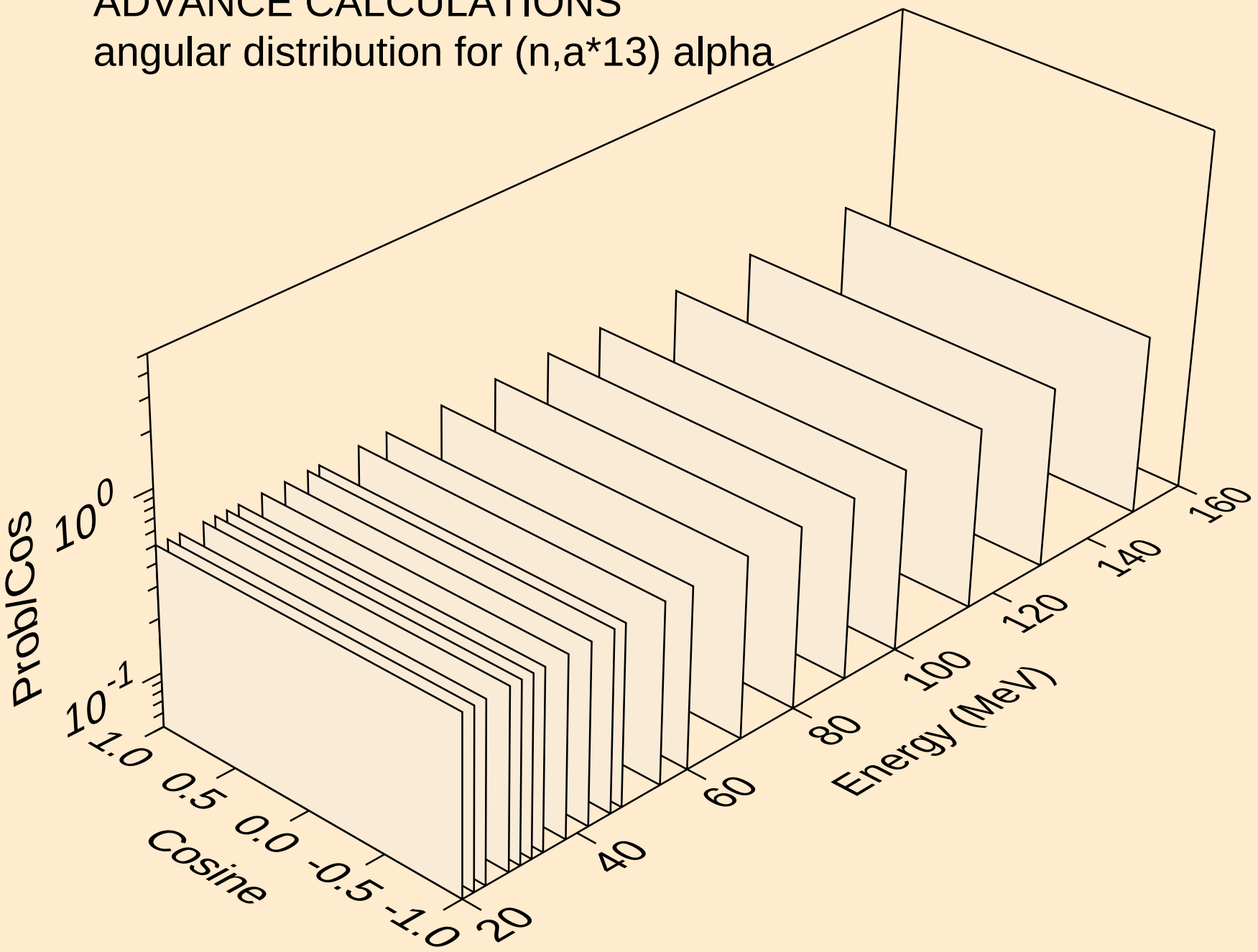
ADVANCE CALCULATIONS

angular distribution for (n,a*13) alpha



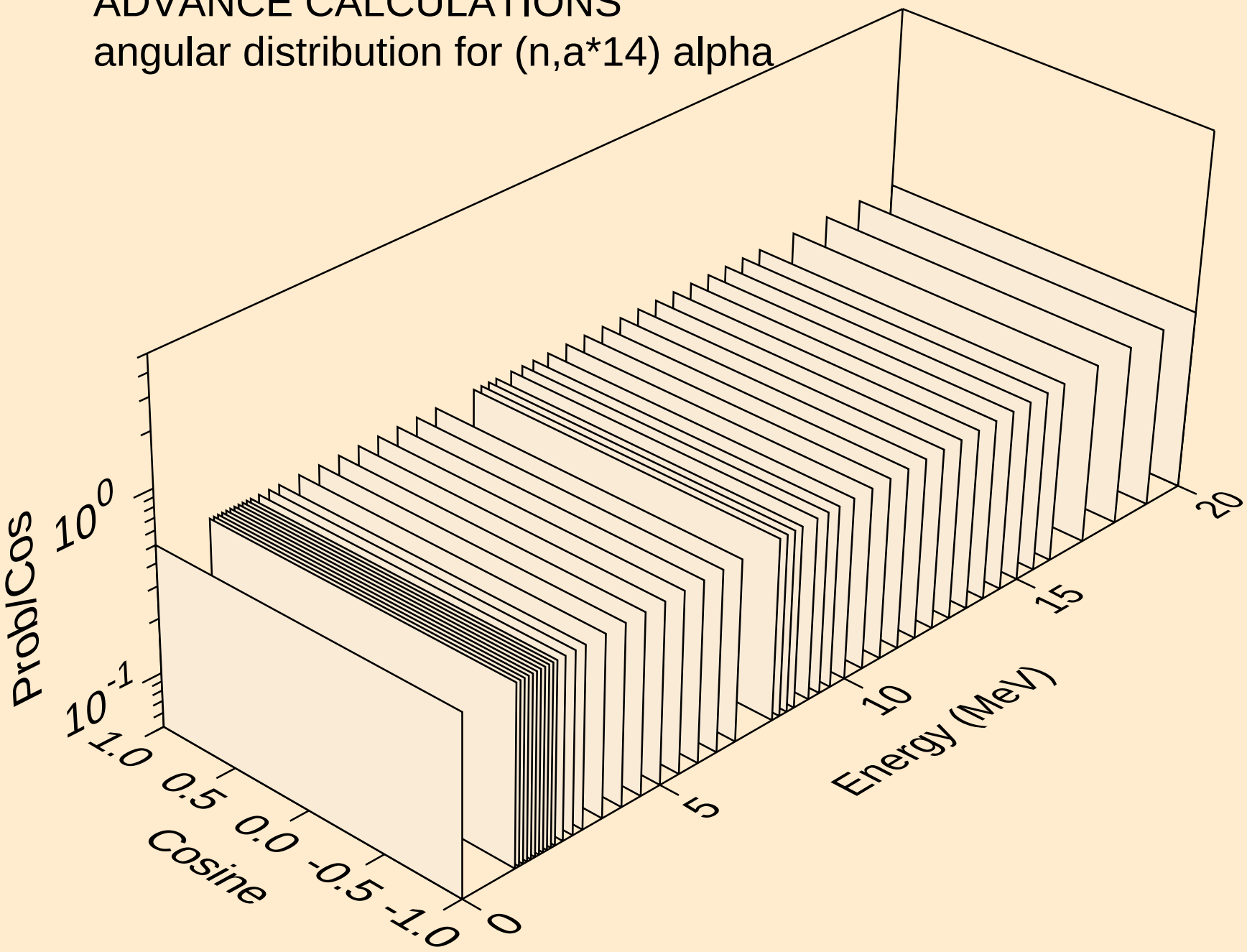
ADVANCE CALCULATIONS

angular distribution for (n,a*13) alpha



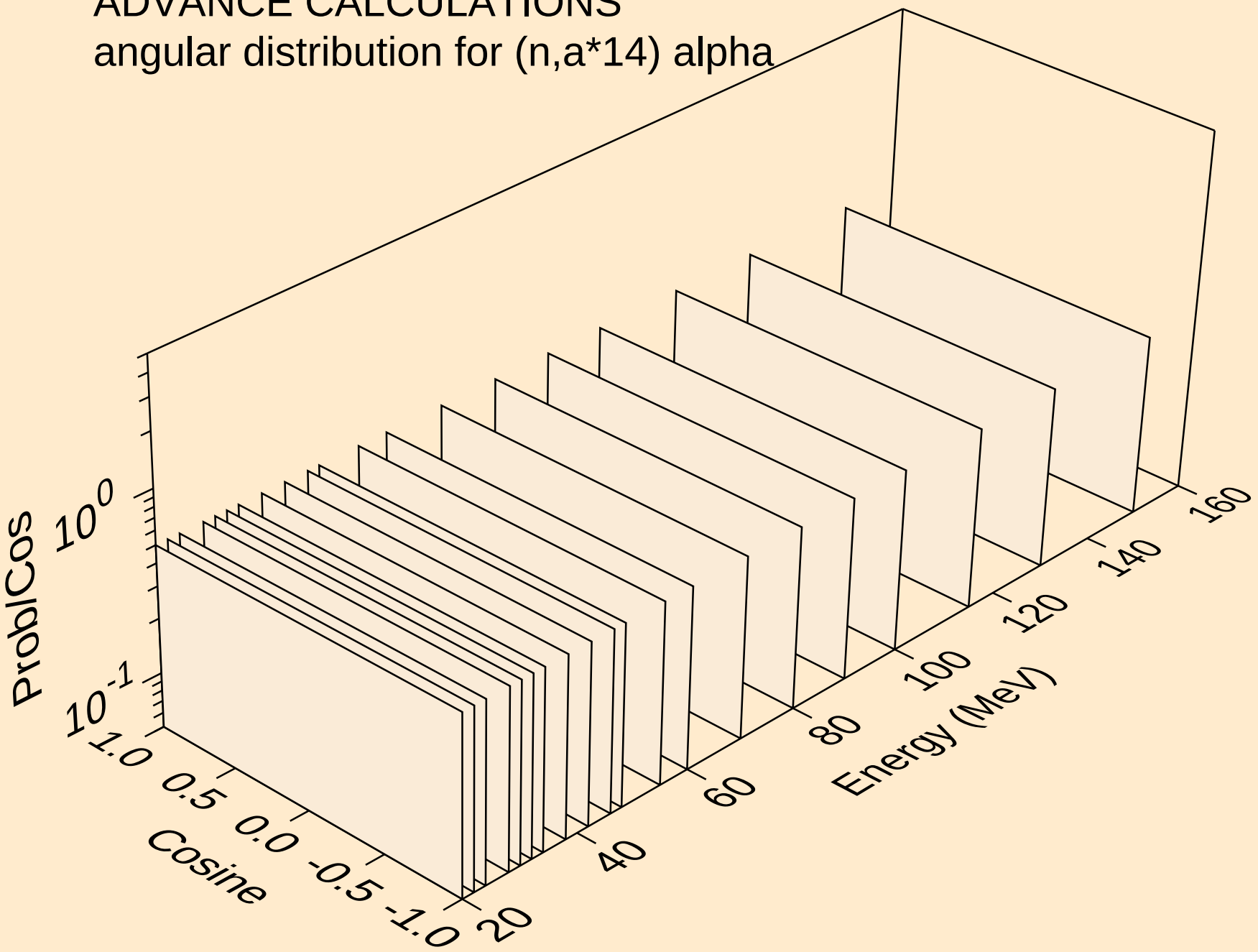
ADVANCE CALCULATIONS

angular distribution for (n,a*14) alpha



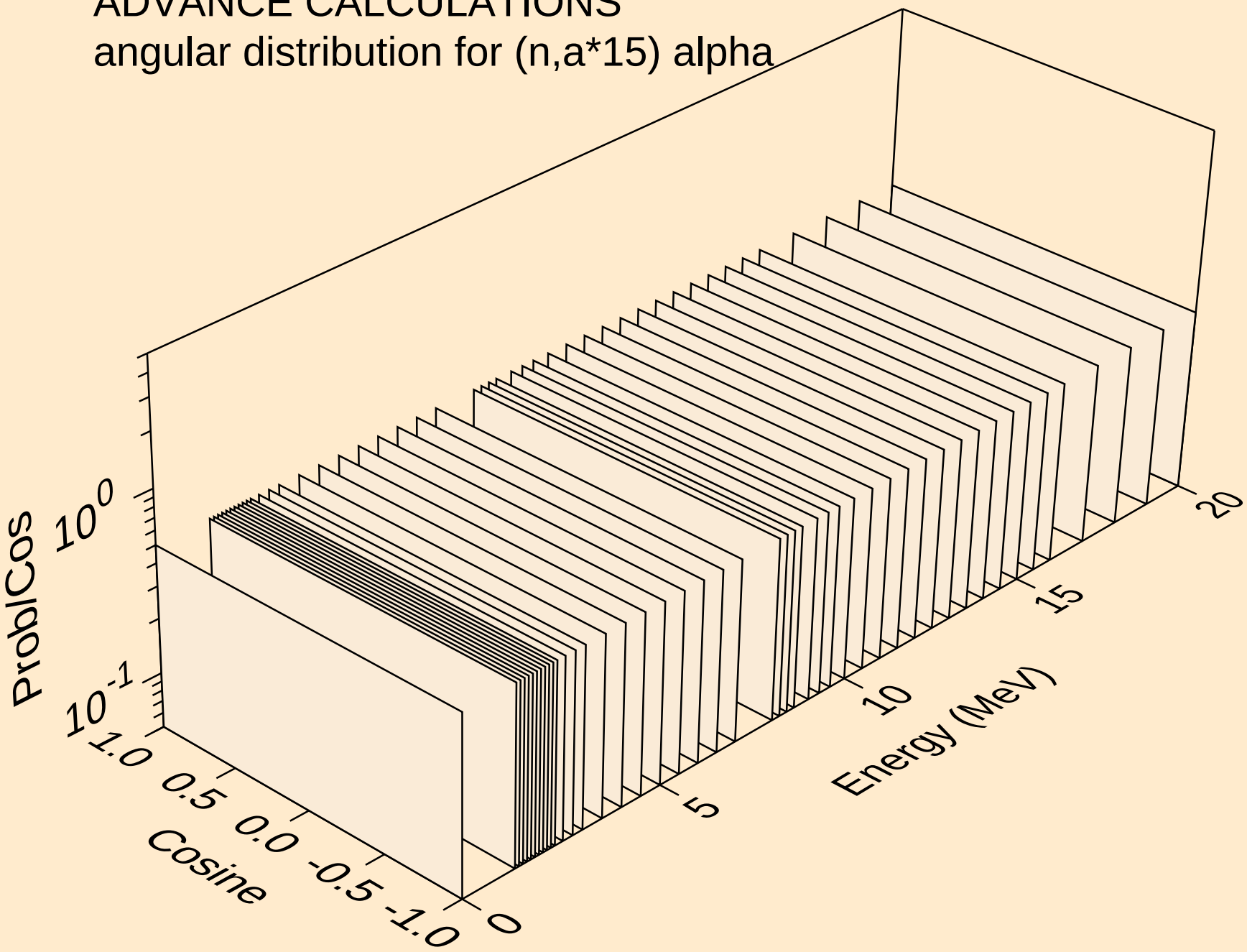
ADVANCE CALCULATIONS

angular distribution for (n,a*14) alpha



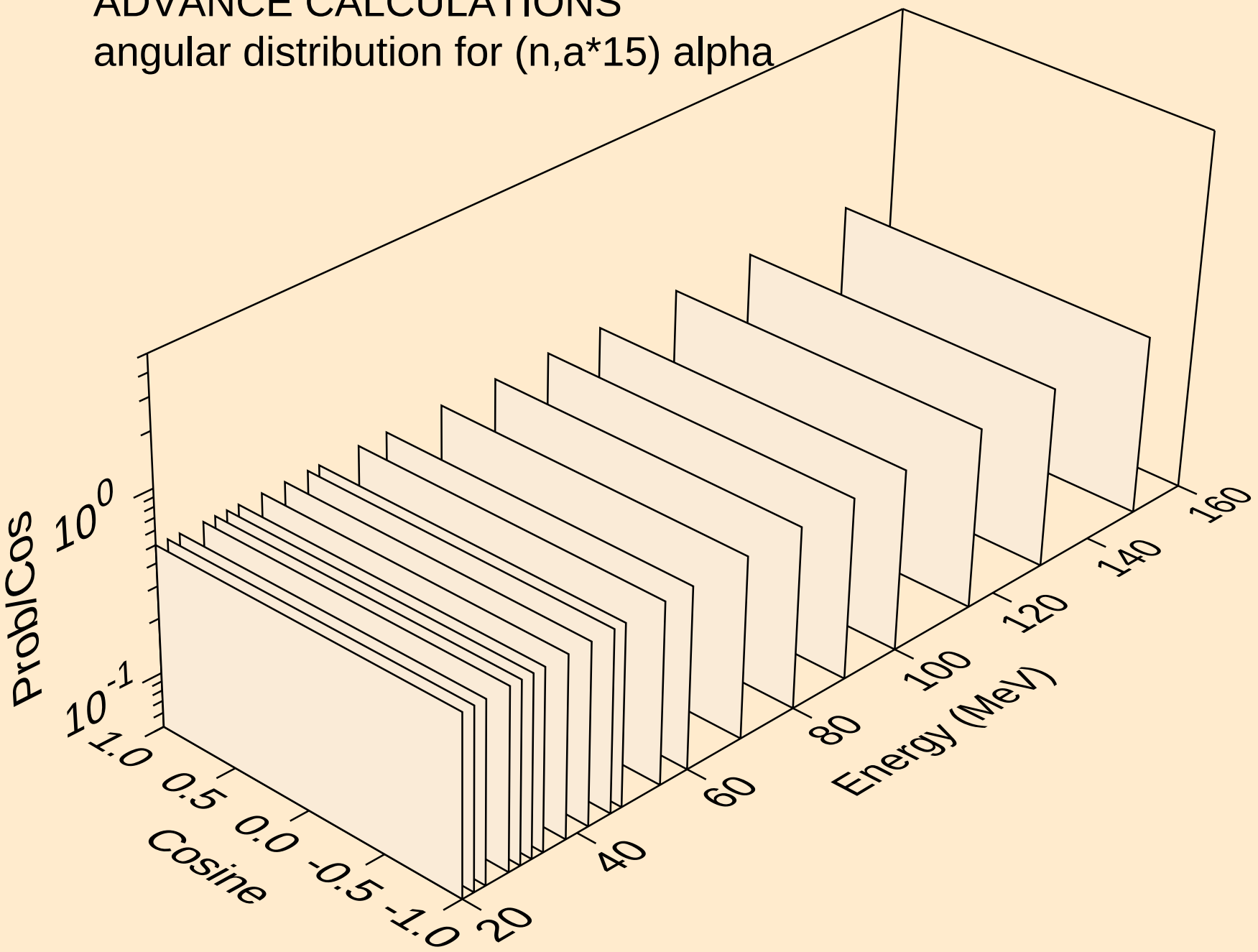
ADVANCE CALCULATIONS

angular distribution for (n,a*15) alpha



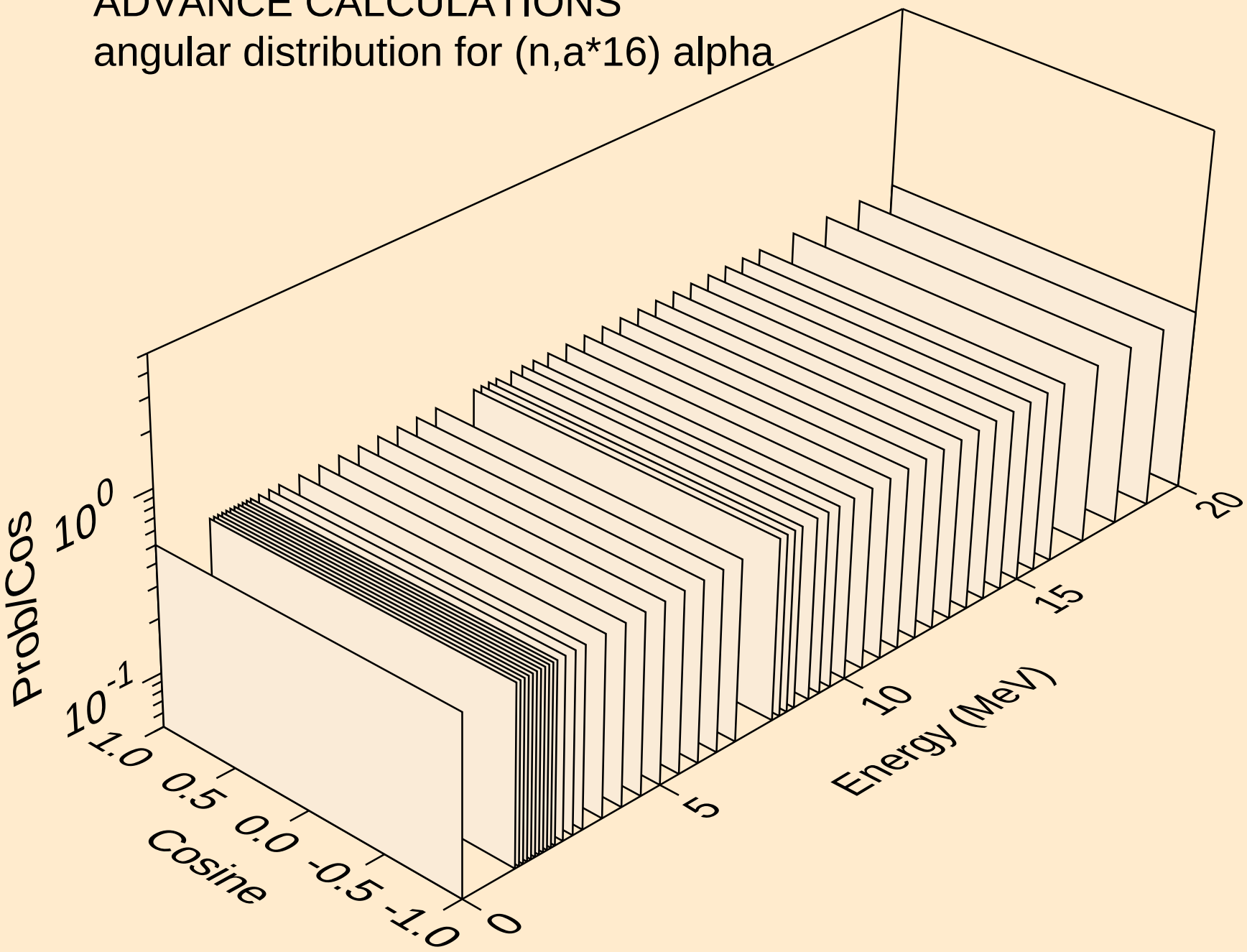
ADVANCE CALCULATIONS

angular distribution for (n,a*15) alpha



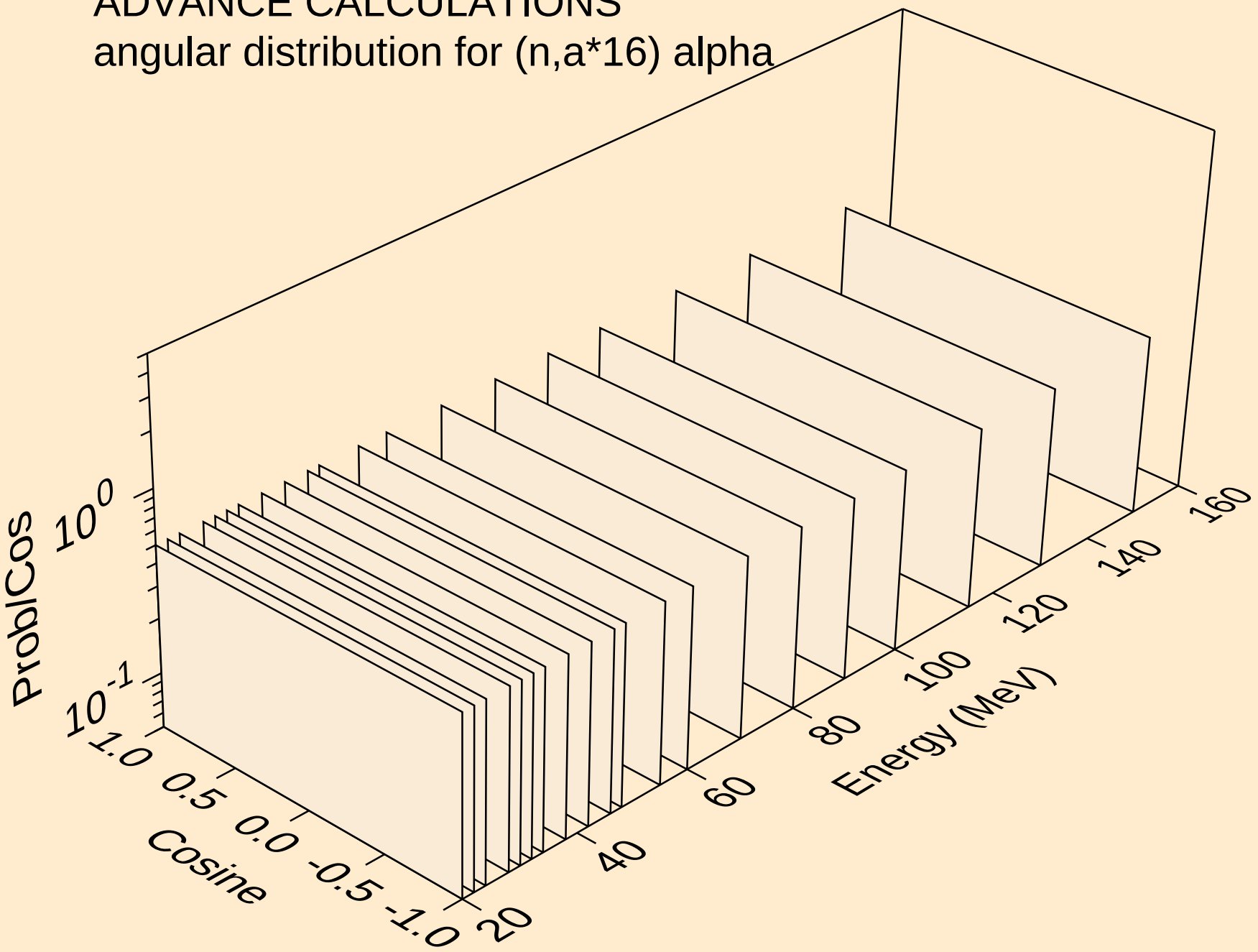
ADVANCE CALCULATIONS

angular distribution for (n,a*16) alpha



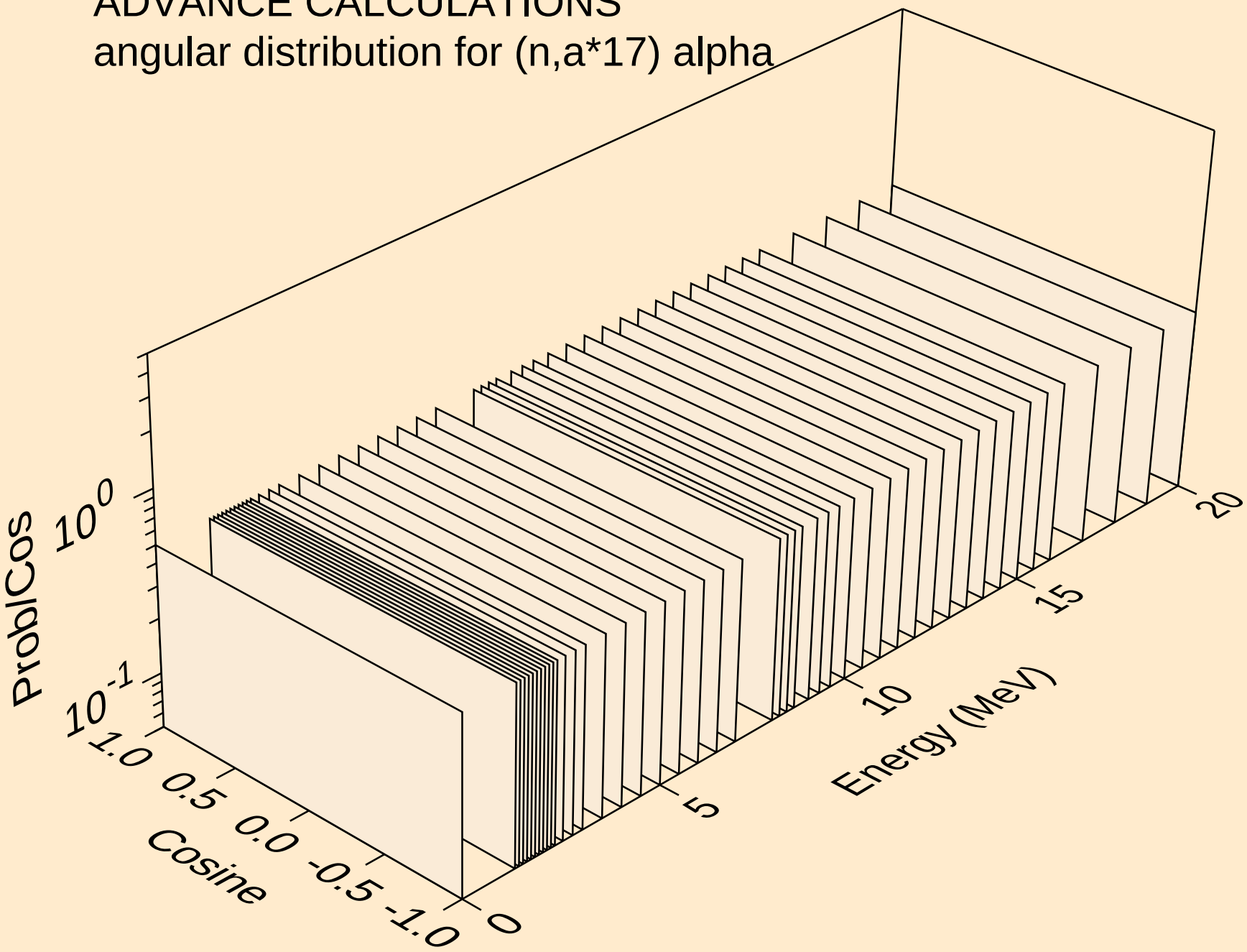
ADVANCE CALCULATIONS

angular distribution for (n,a*16) alpha

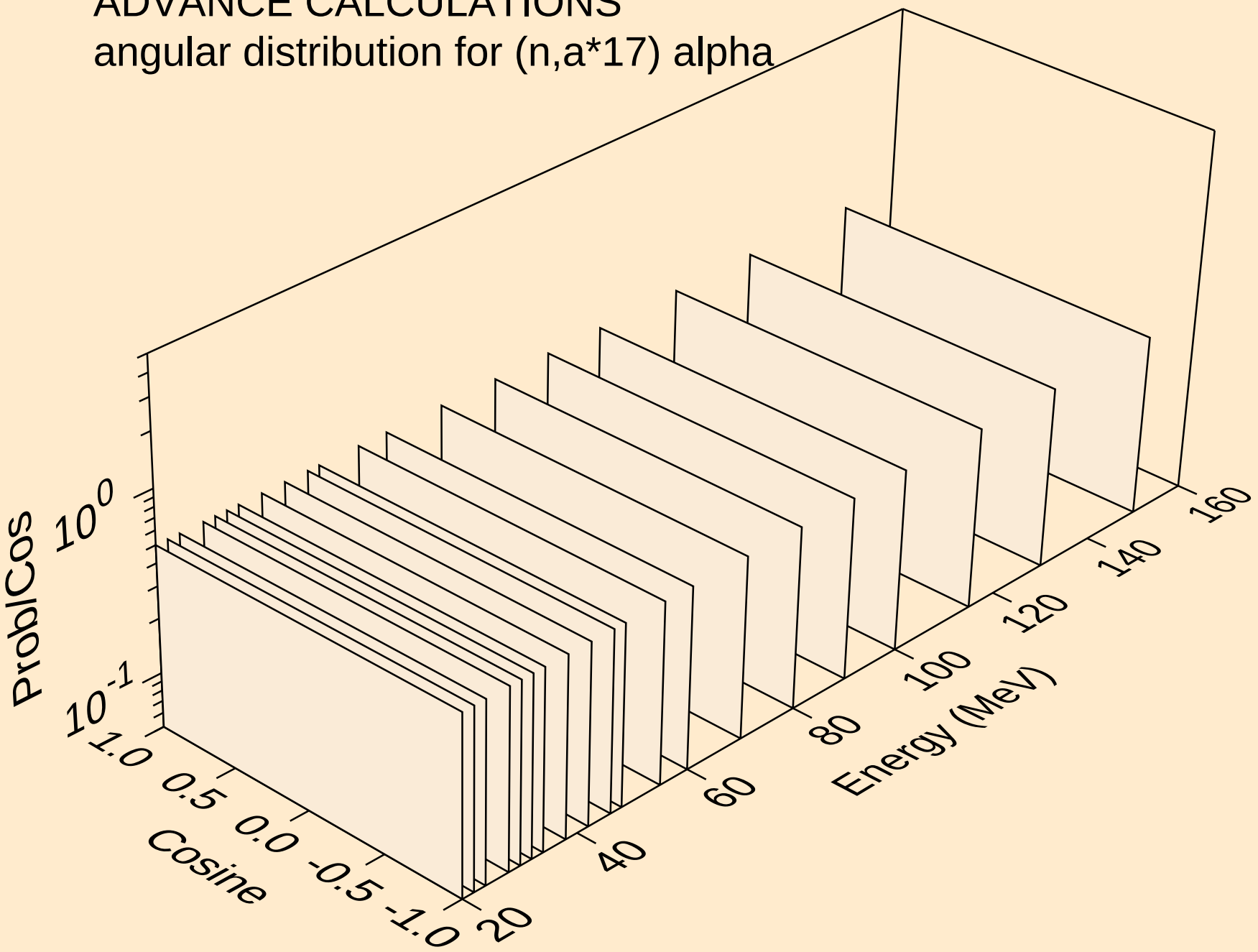


ADVANCE CALCULATIONS

angular distribution for (n,a*17) alpha

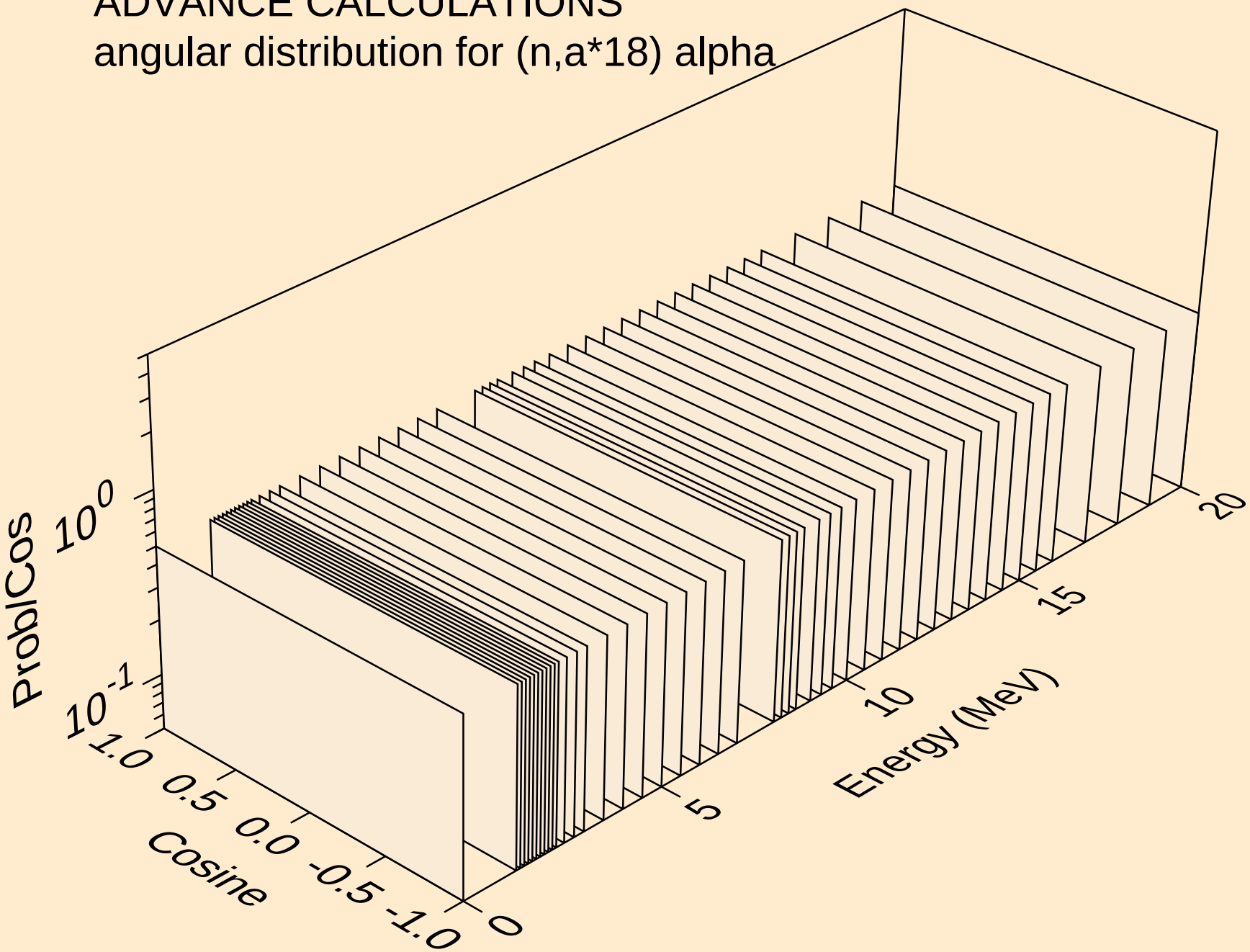


ADVANCE CALCULATIONS
angular distribution for (n,a*17) alpha

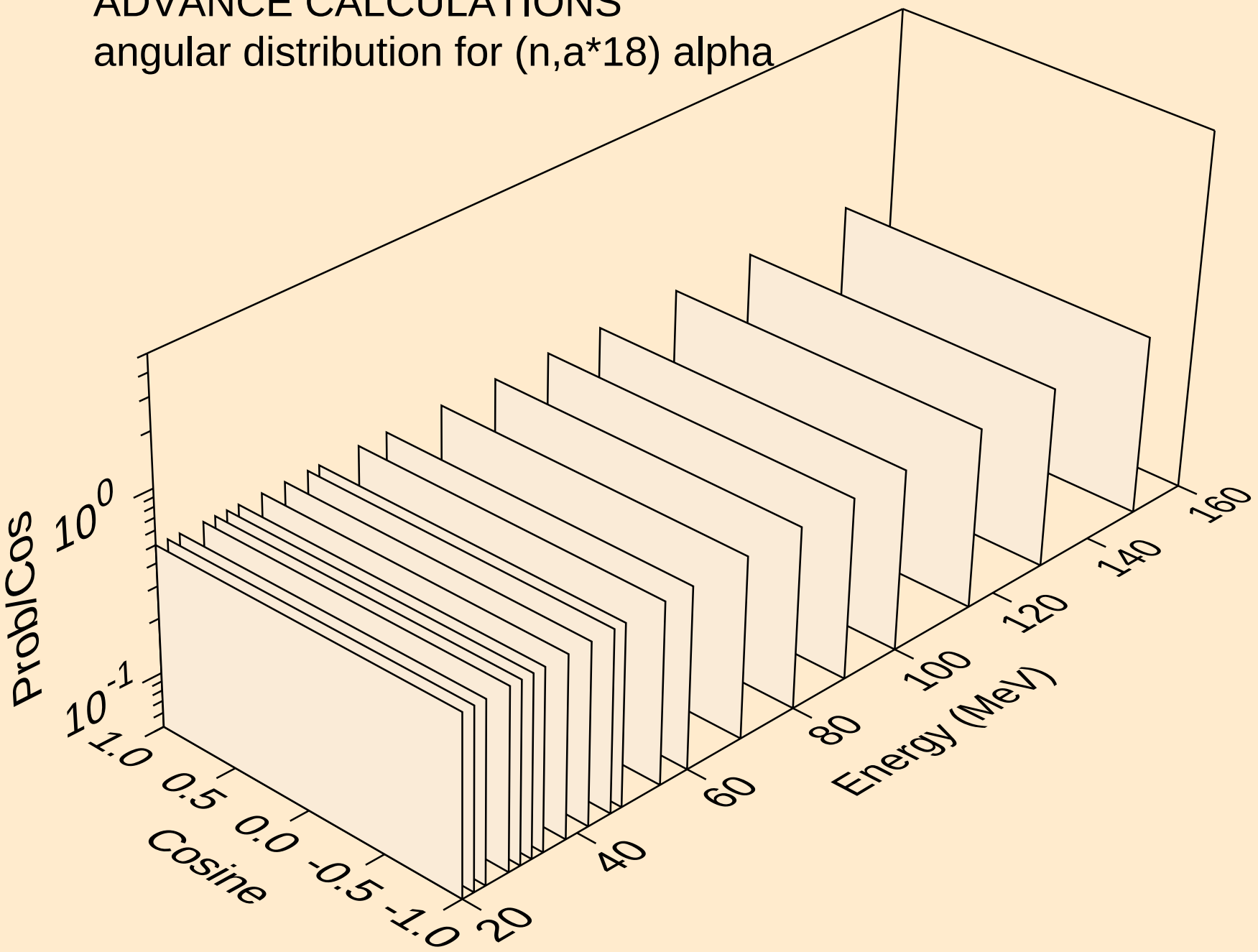


ADVANCE CALCULATIONS

angular distribution for (n,a*18) alpha

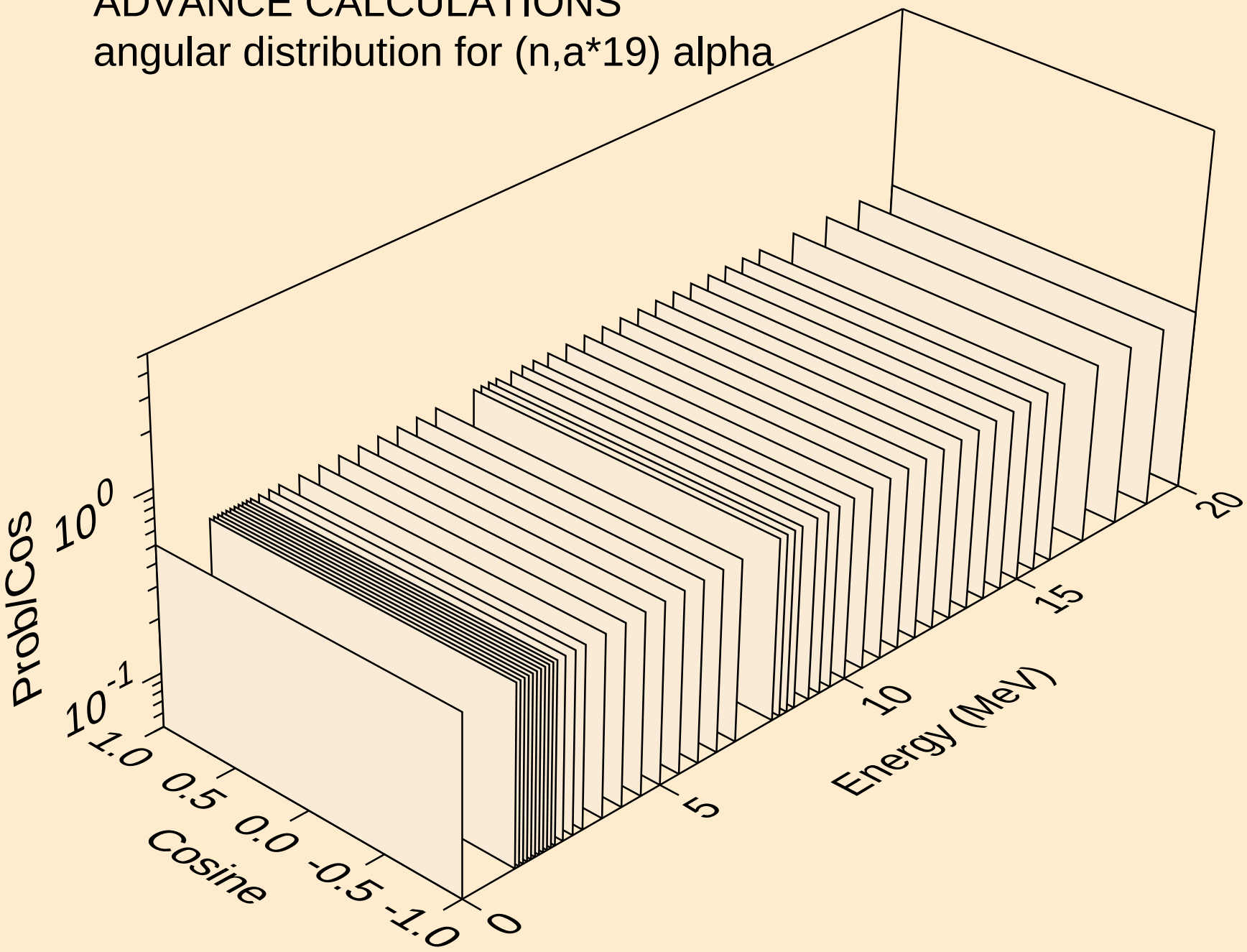


ADVANCE CALCULATIONS
angular distribution for (n,a*18) alpha

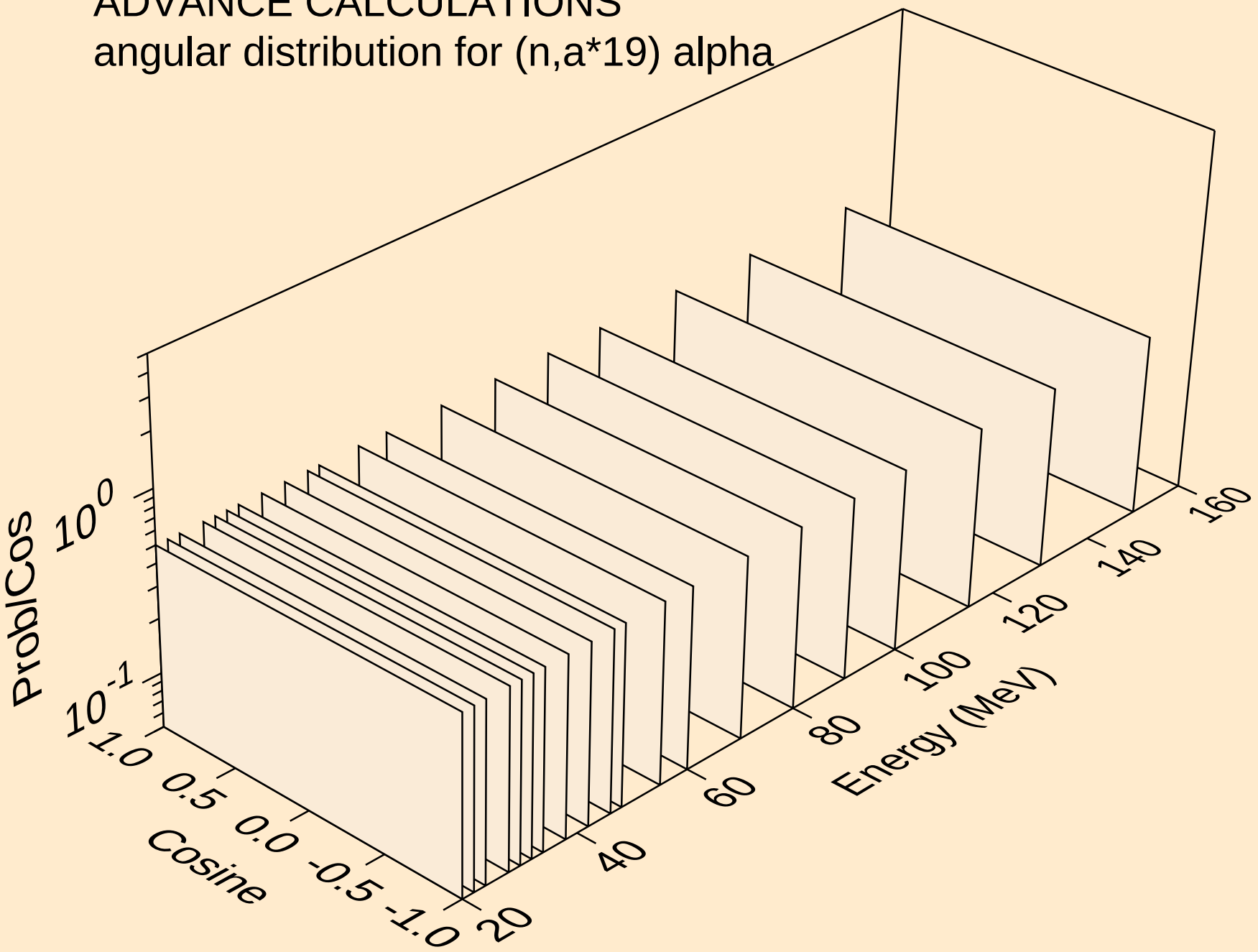


ADVANCE CALCULATIONS

angular distribution for (n,a*19) alpha

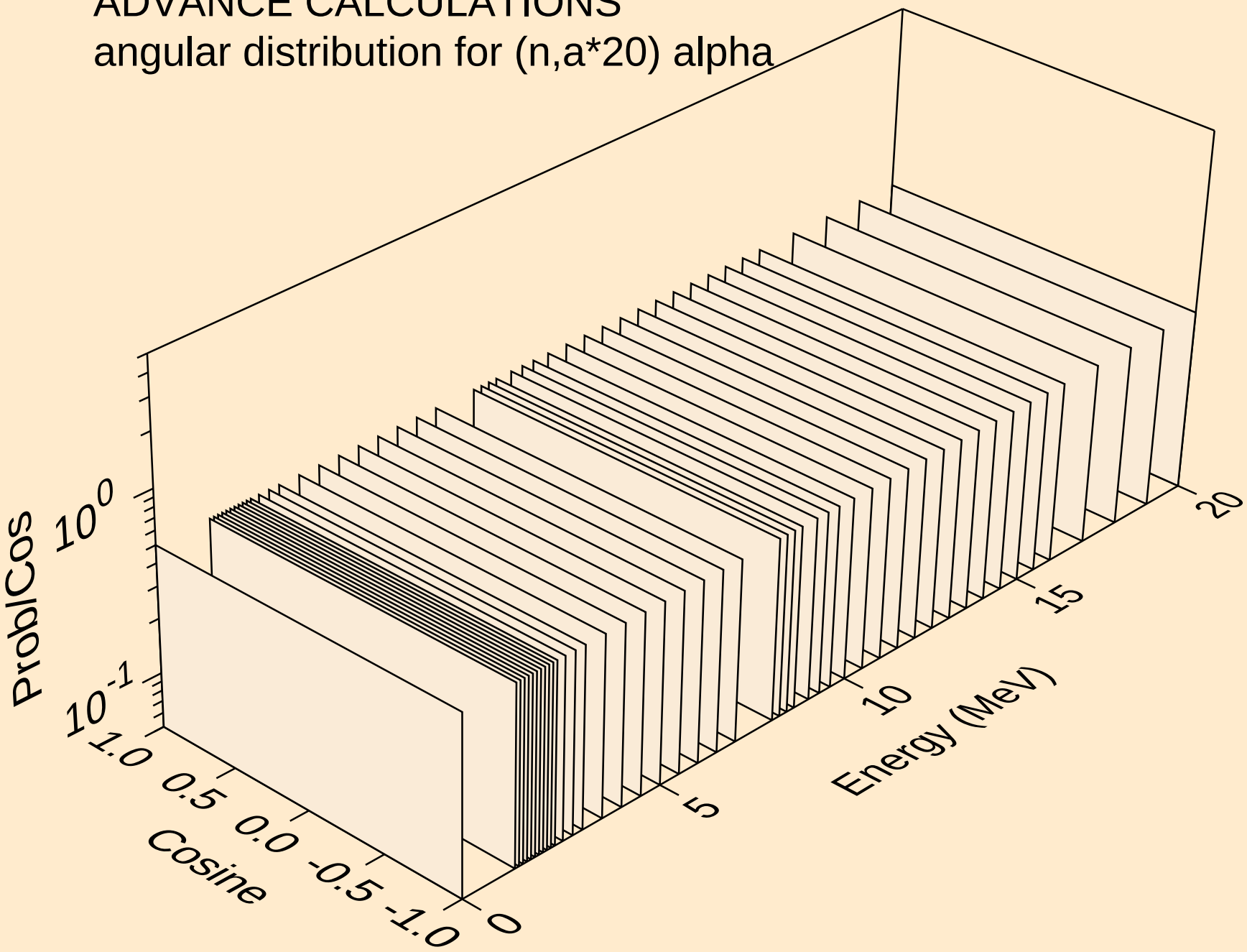


ADVANCE CALCULATIONS
angular distribution for (n,a*19) alpha



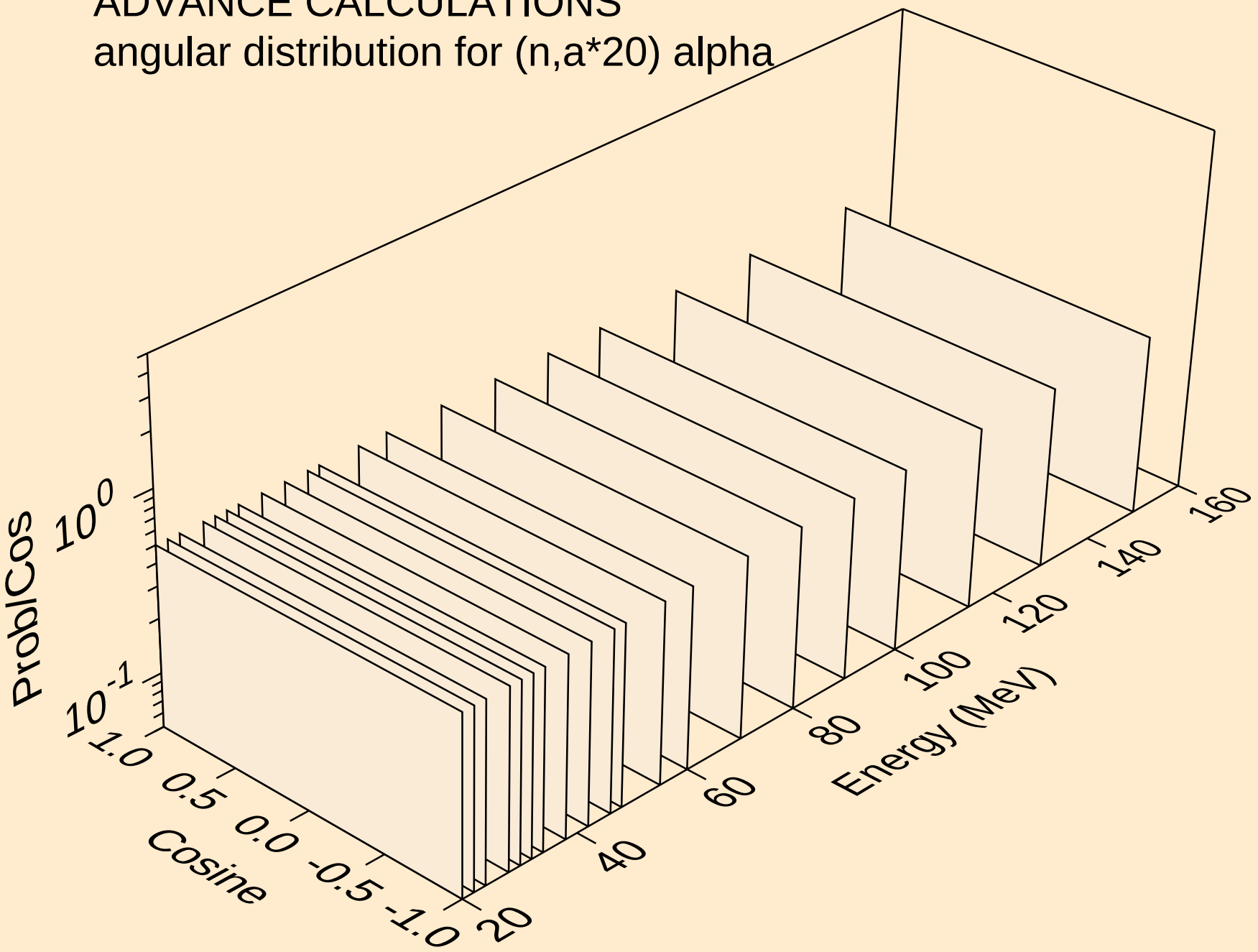
ADVANCE CALCULATIONS

angular distribution for (n,a*20) alpha



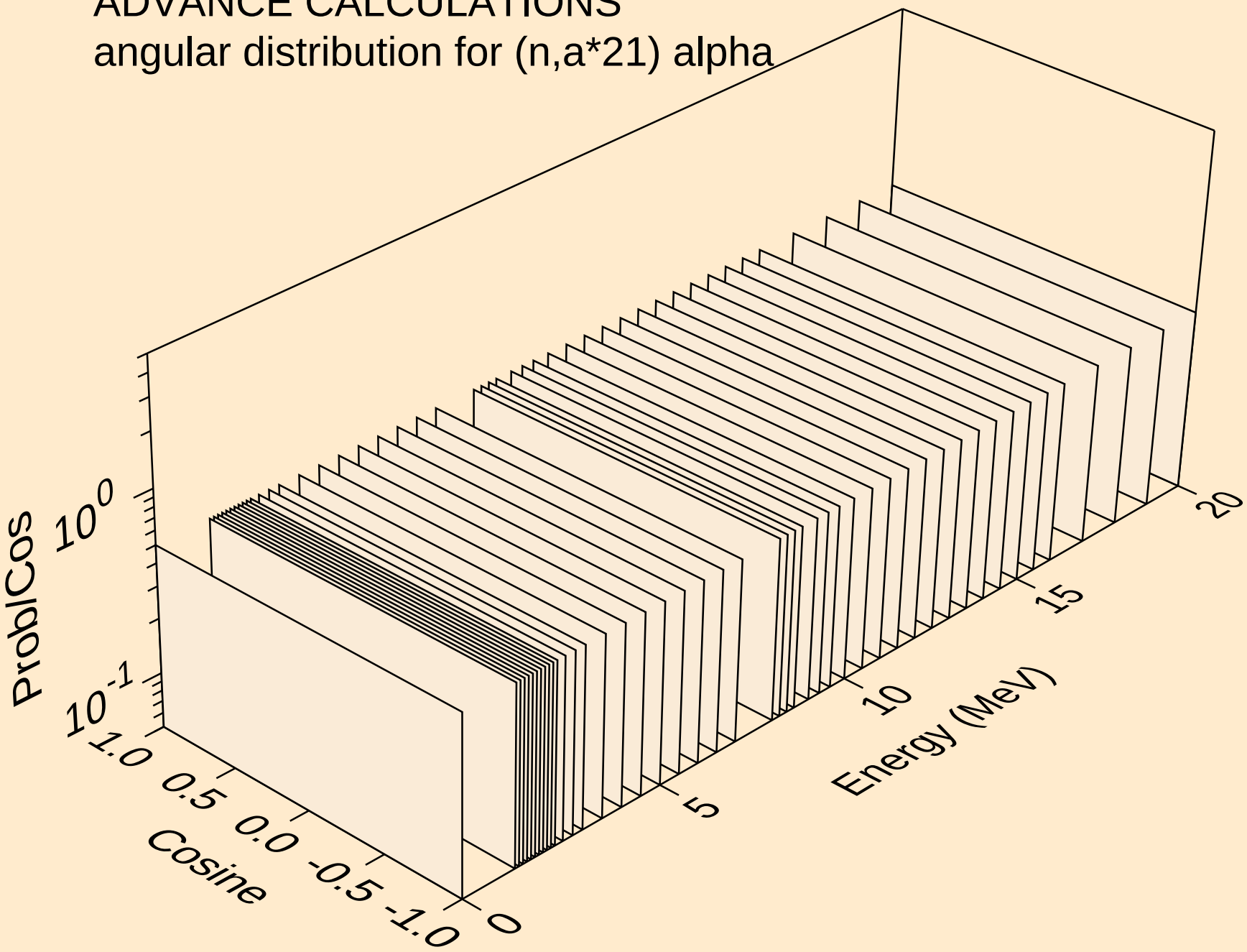
ADVANCE CALCULATIONS

angular distribution for (n,a*20) alpha



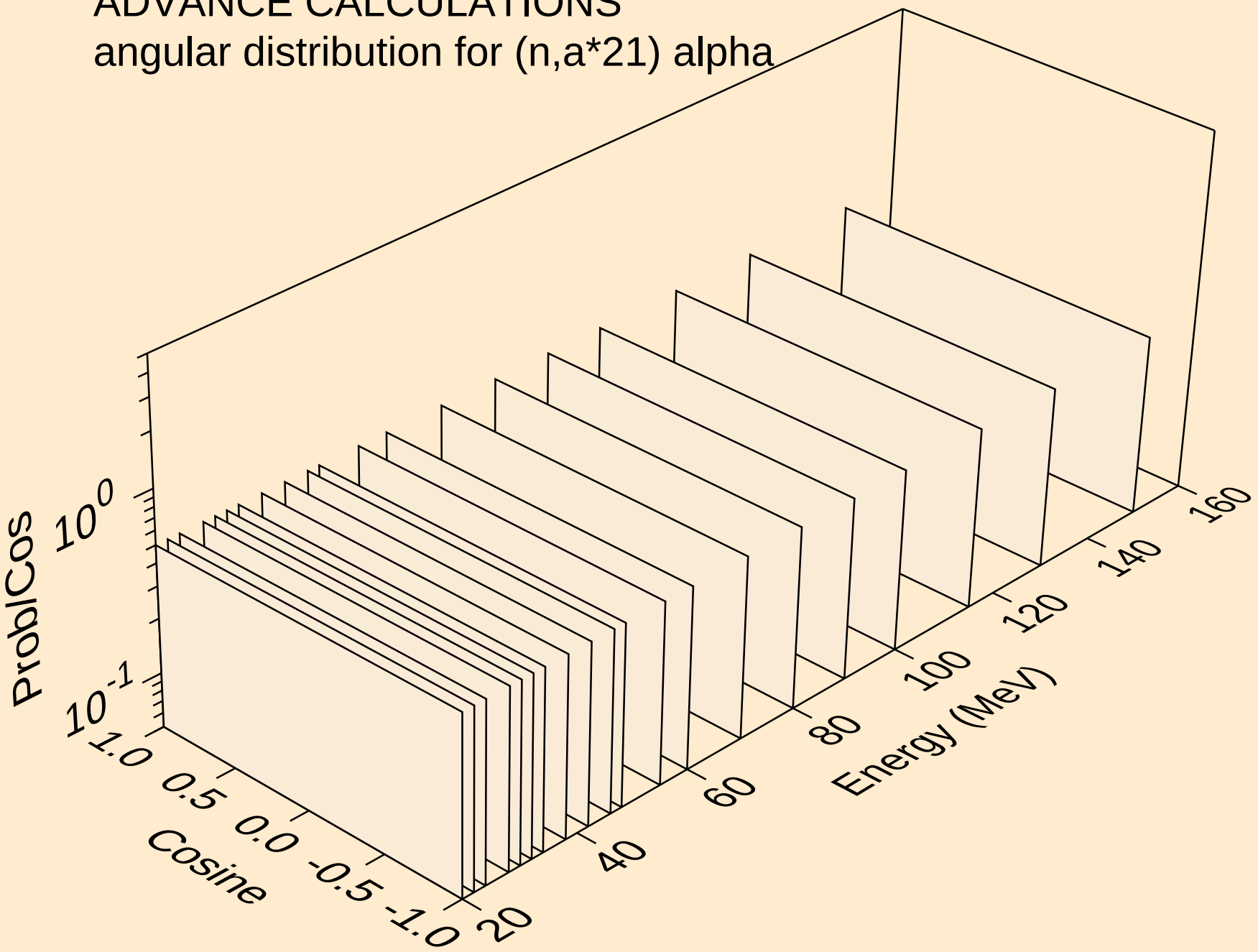
ADVANCE CALCULATIONS

angular distribution for (n,a*21) alpha



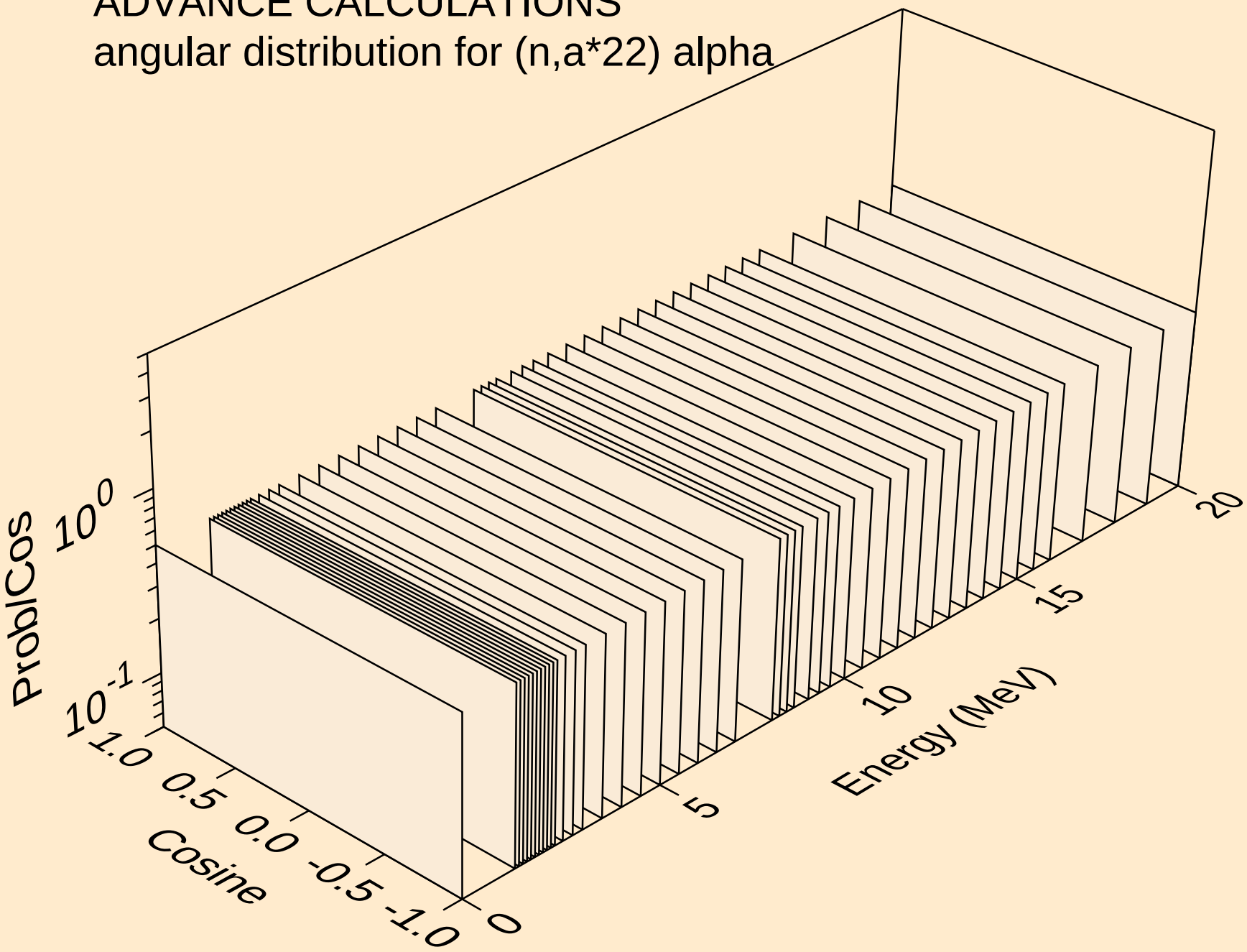
ADVANCE CALCULATIONS

angular distribution for (n,a*21) alpha



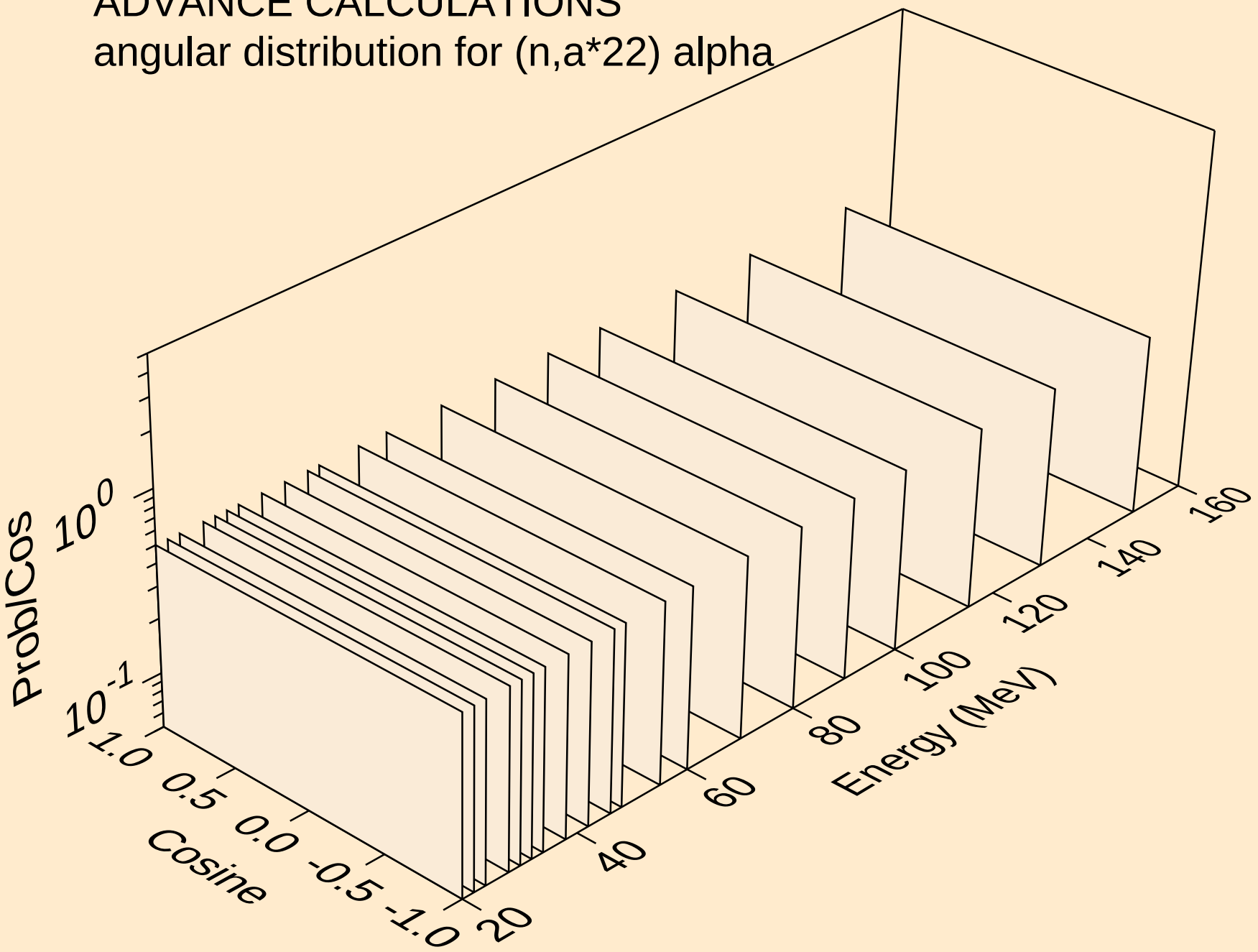
ADVANCE CALCULATIONS

angular distribution for (n,a*22) alpha



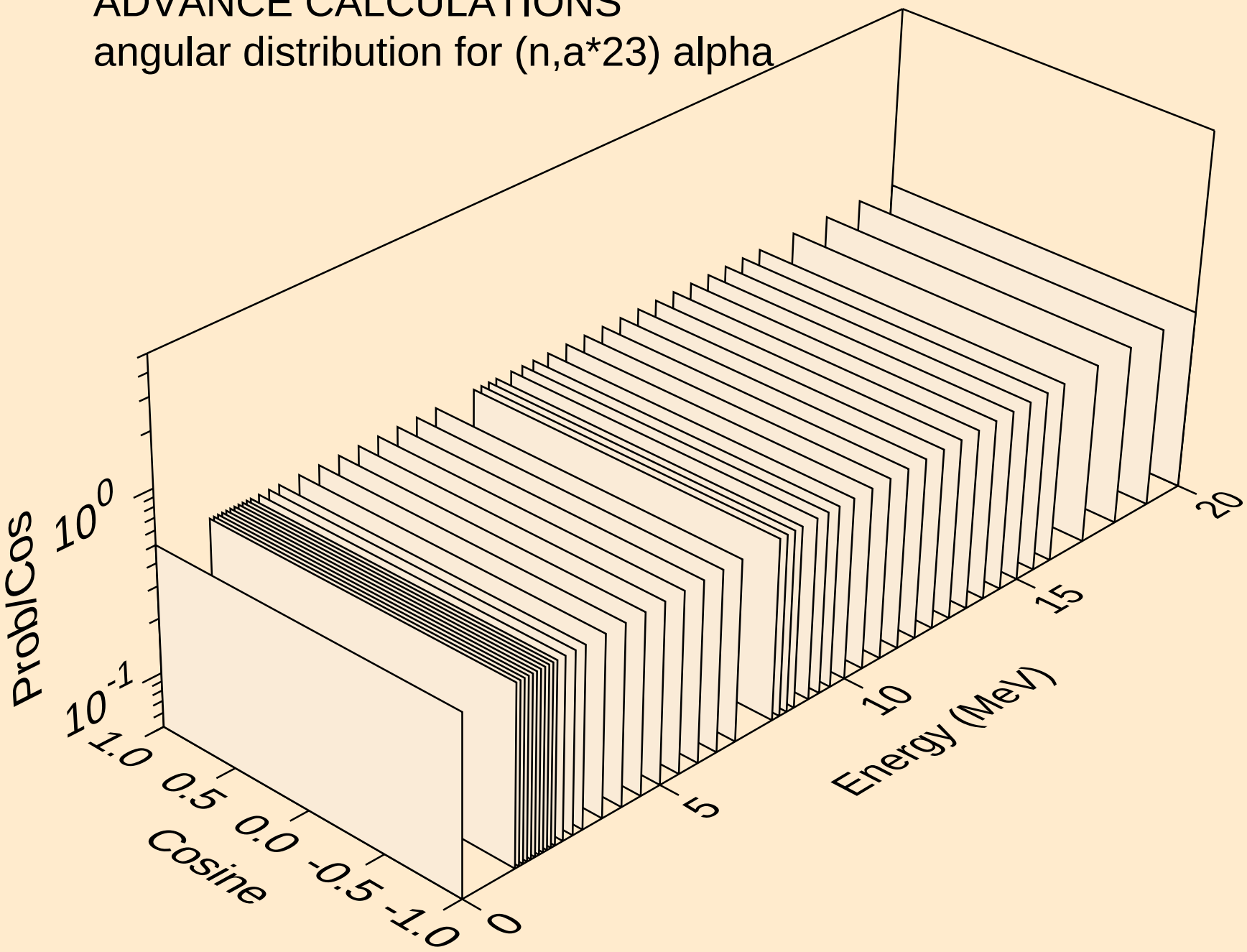
ADVANCE CALCULATIONS

angular distribution for (n,a*22) alpha



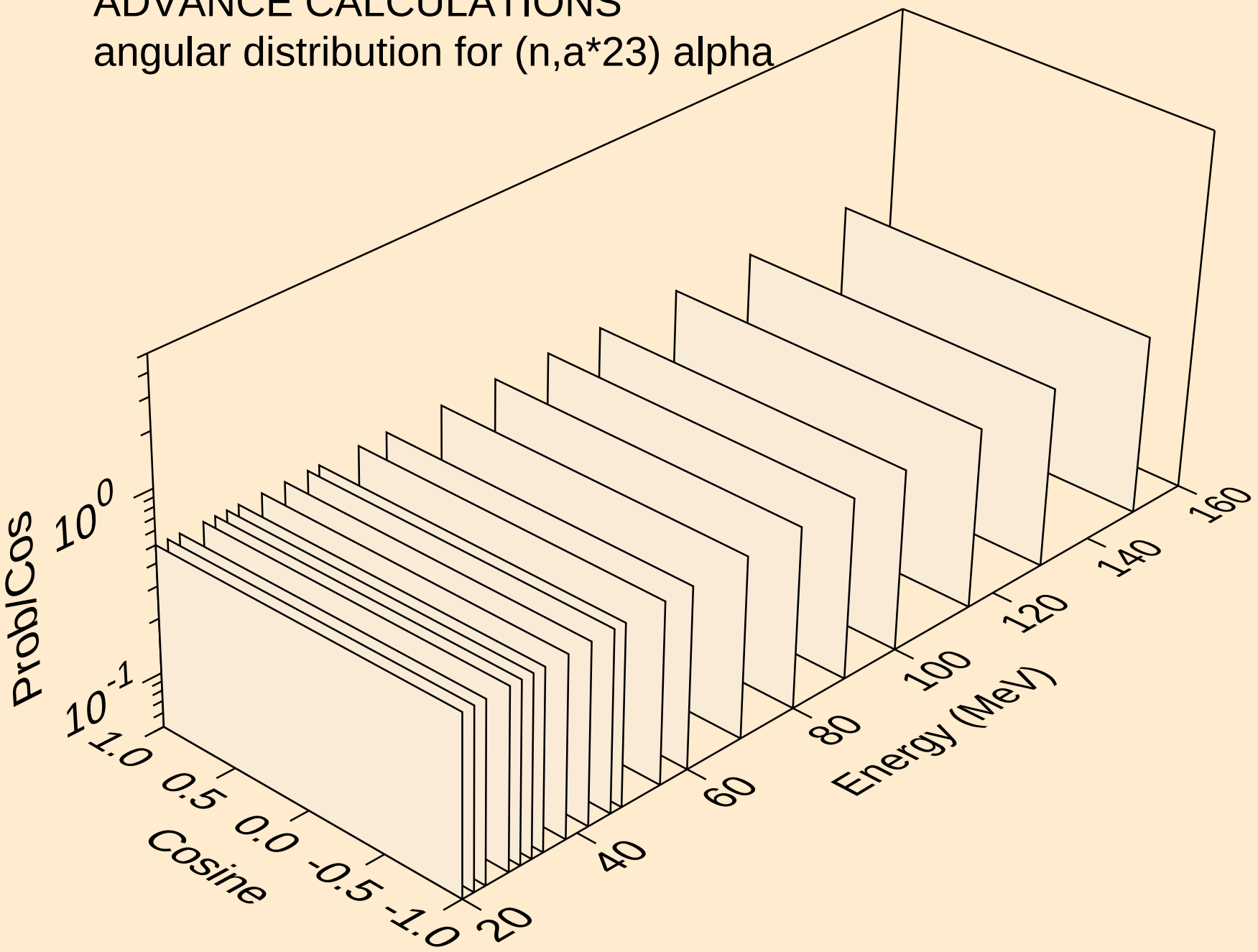
ADVANCE CALCULATIONS

angular distribution for (n,a*23) alpha



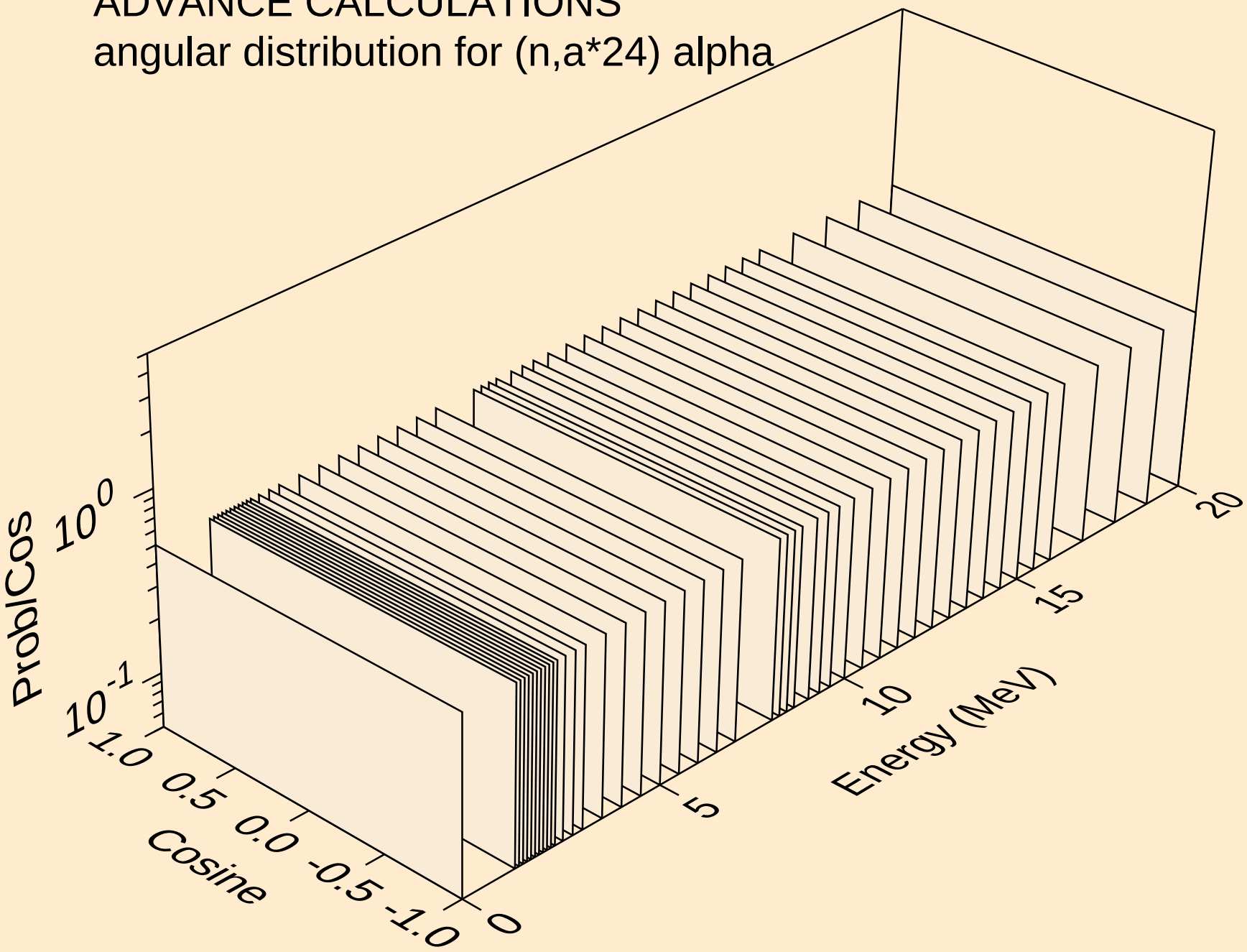
ADVANCE CALCULATIONS

angular distribution for (n,a*23) alpha



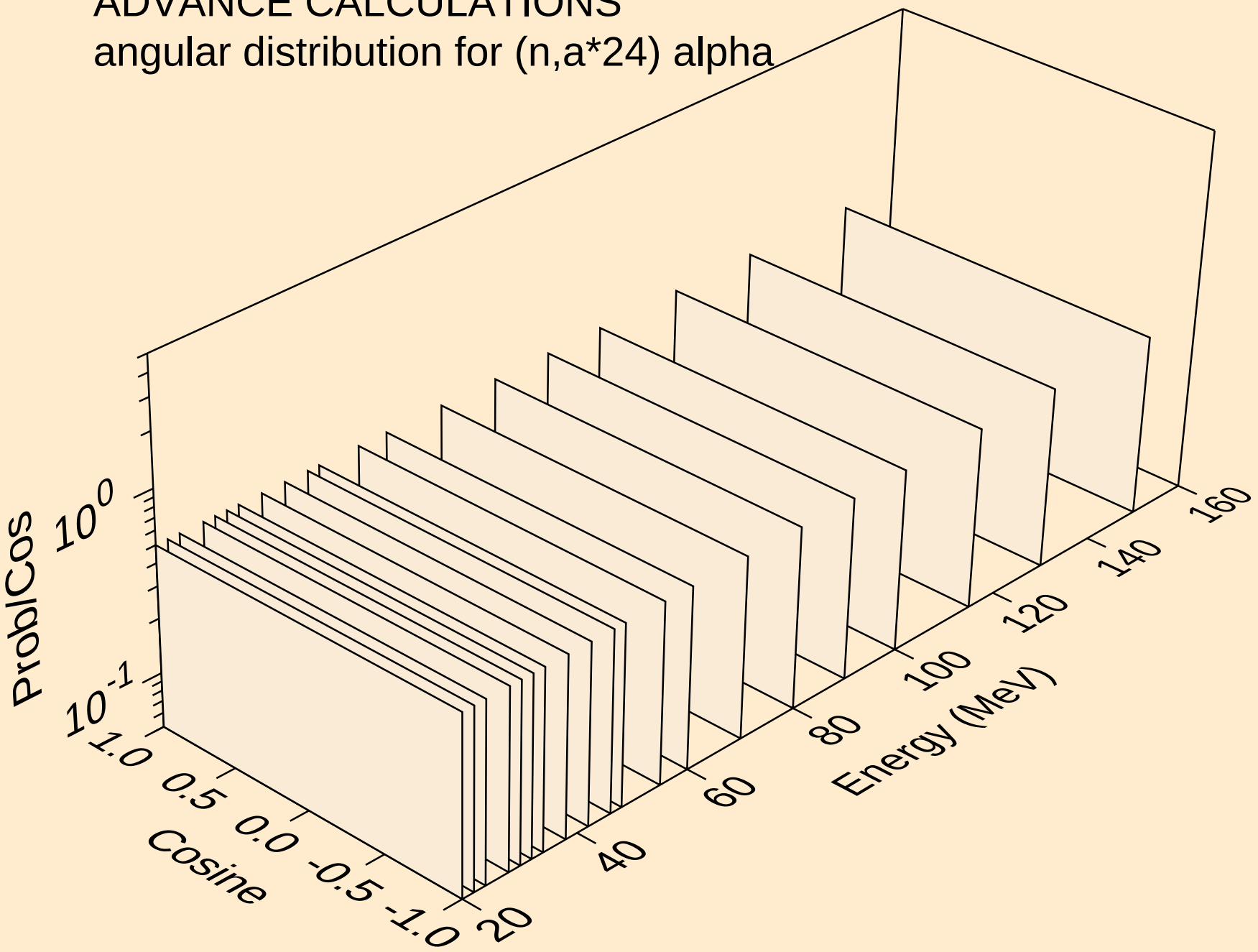
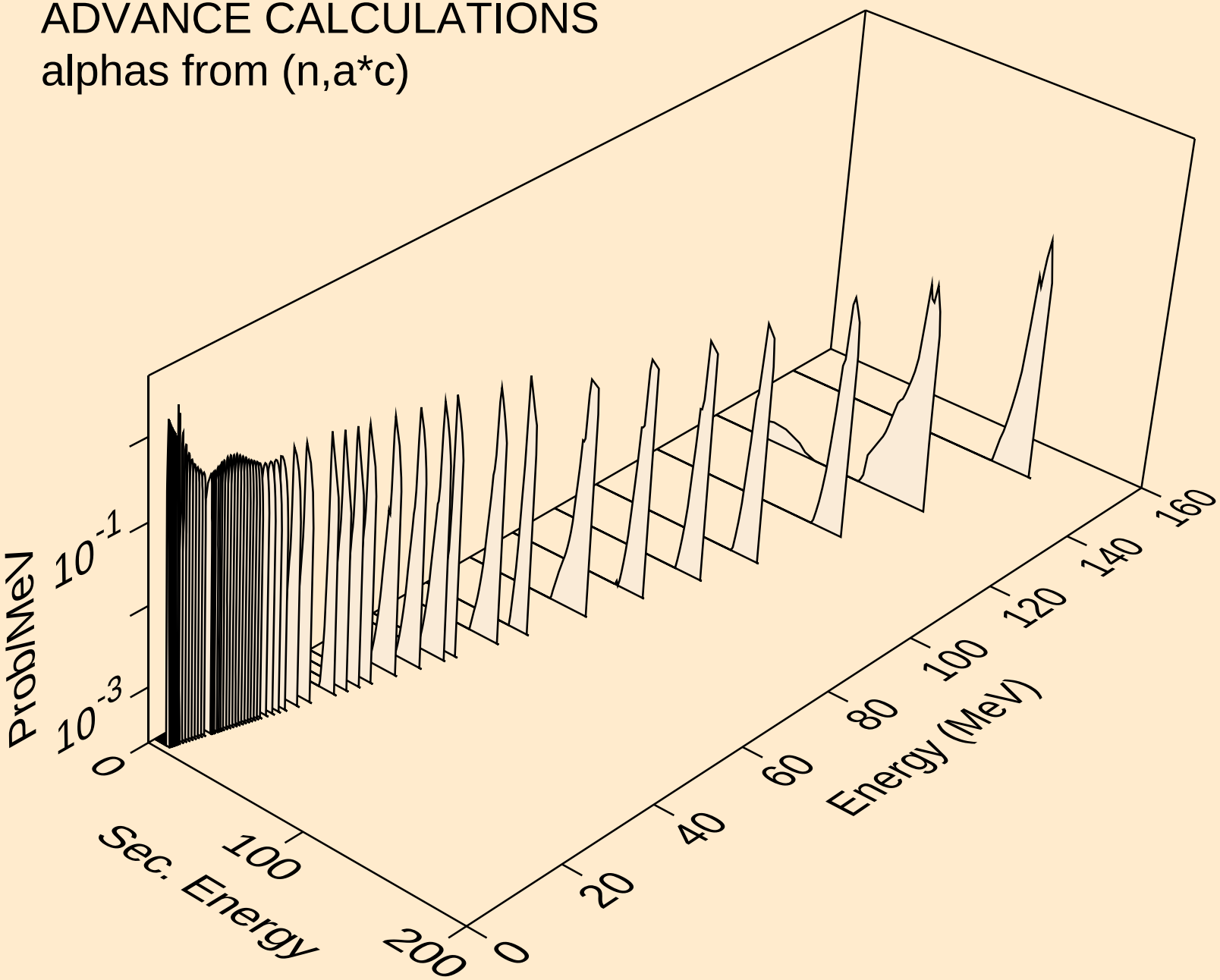
ADVANCE CALCULATIONS

angular distribution for (n,a*24) alpha



ADVANCE CALCULATIONS

angular distribution for (n,a*24) alpha



ADVANCE CALCULATIONS
alphas from (n,a*c)