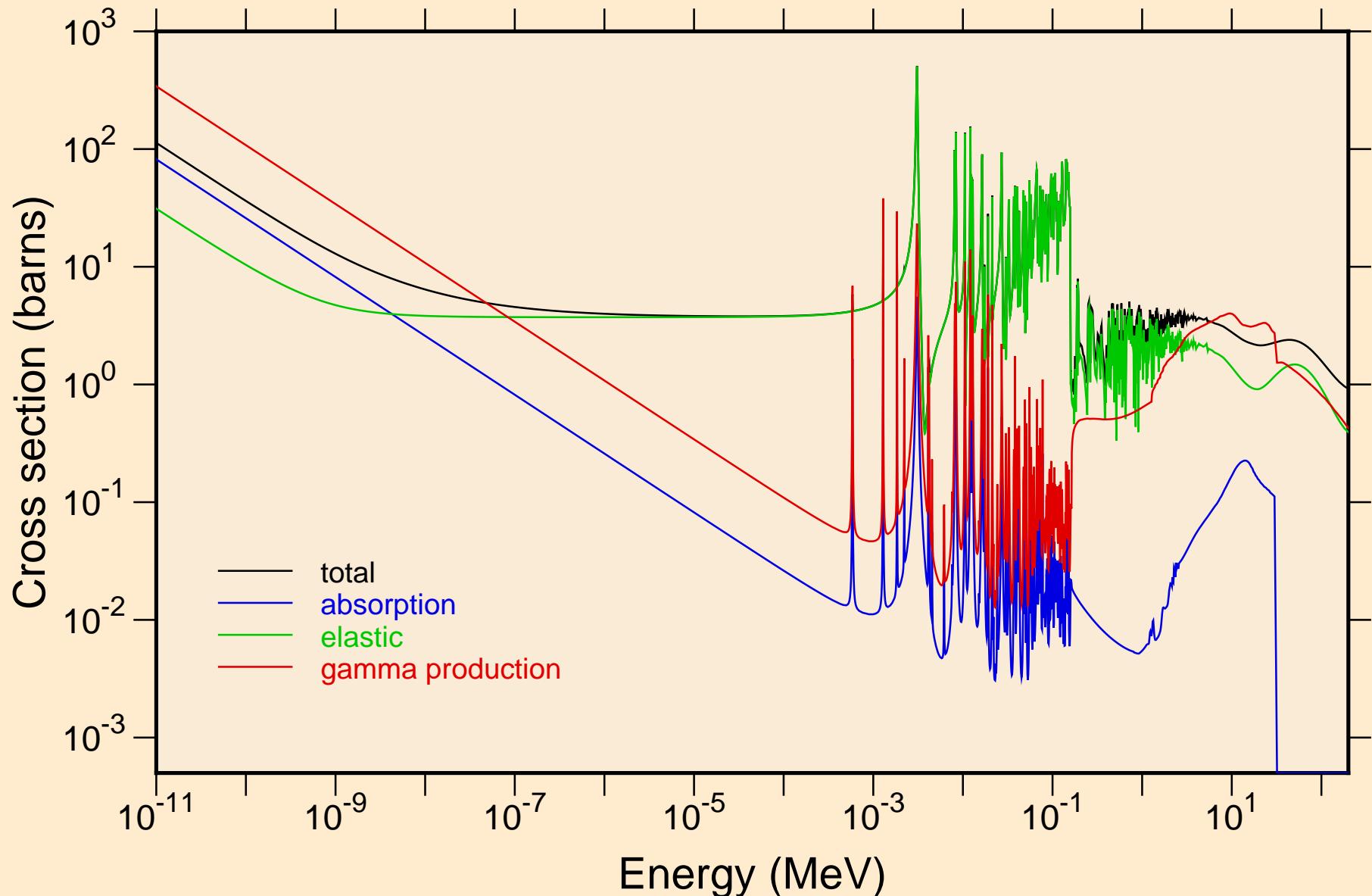
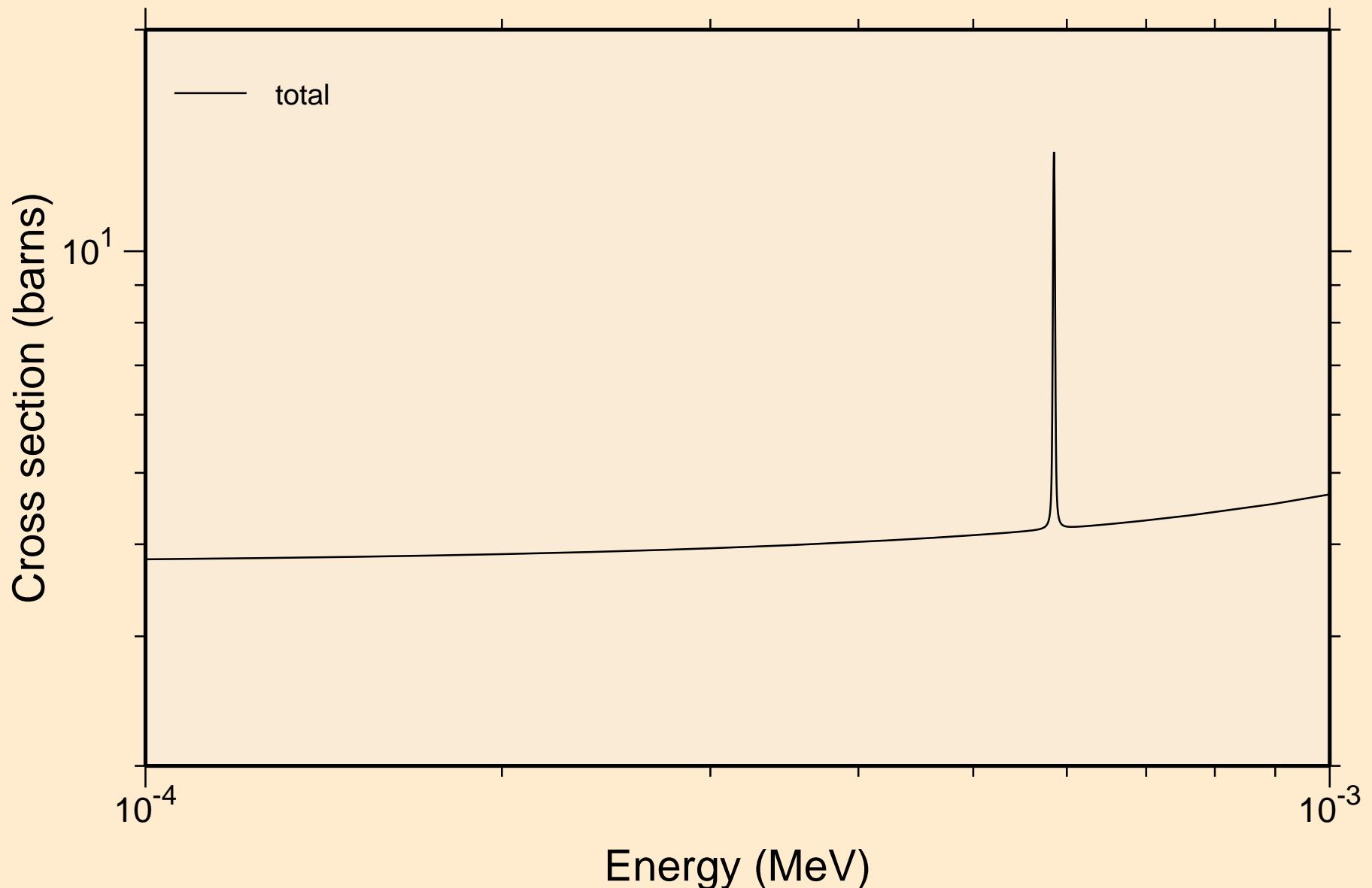


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

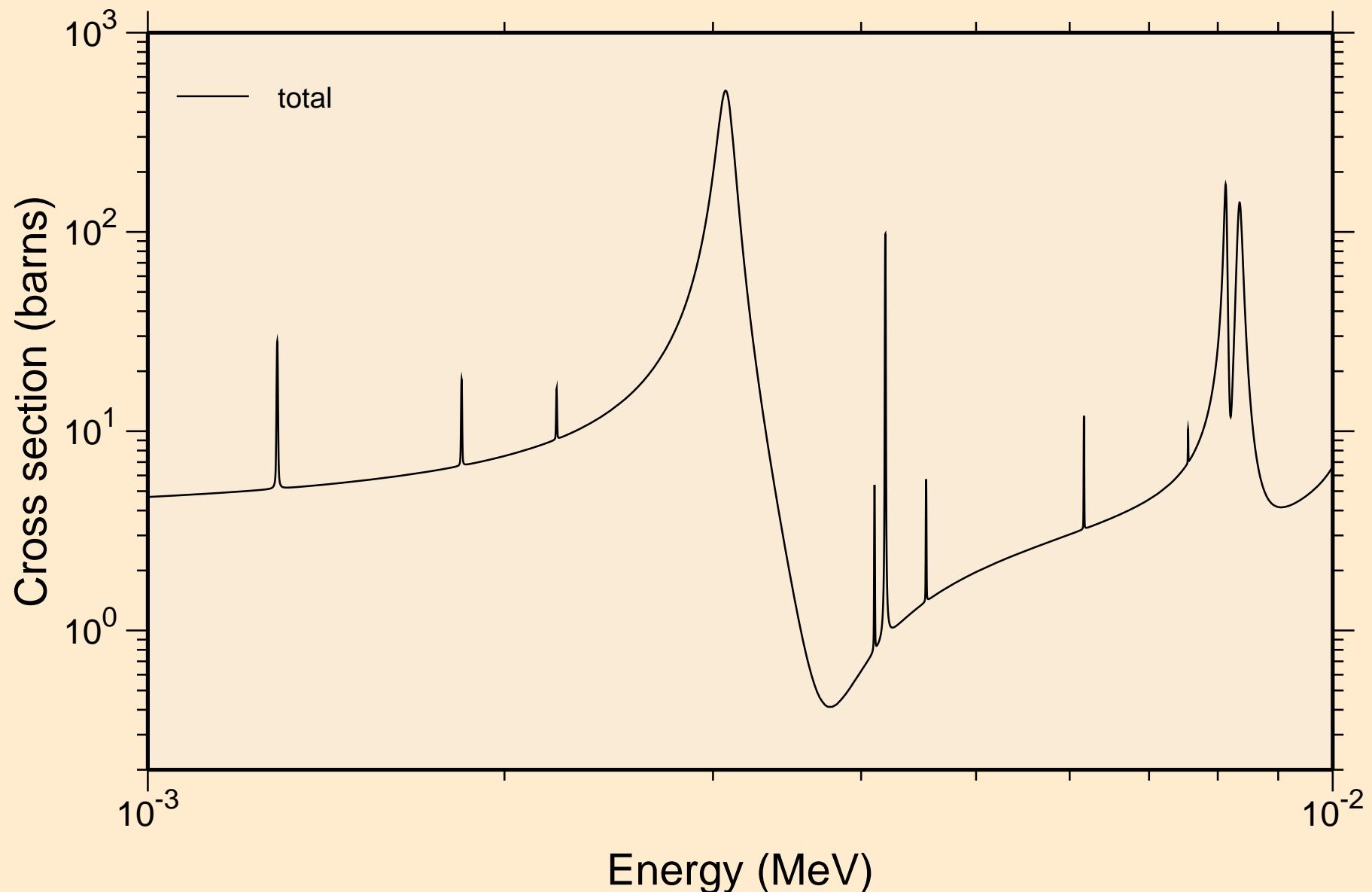
## Principal cross sections



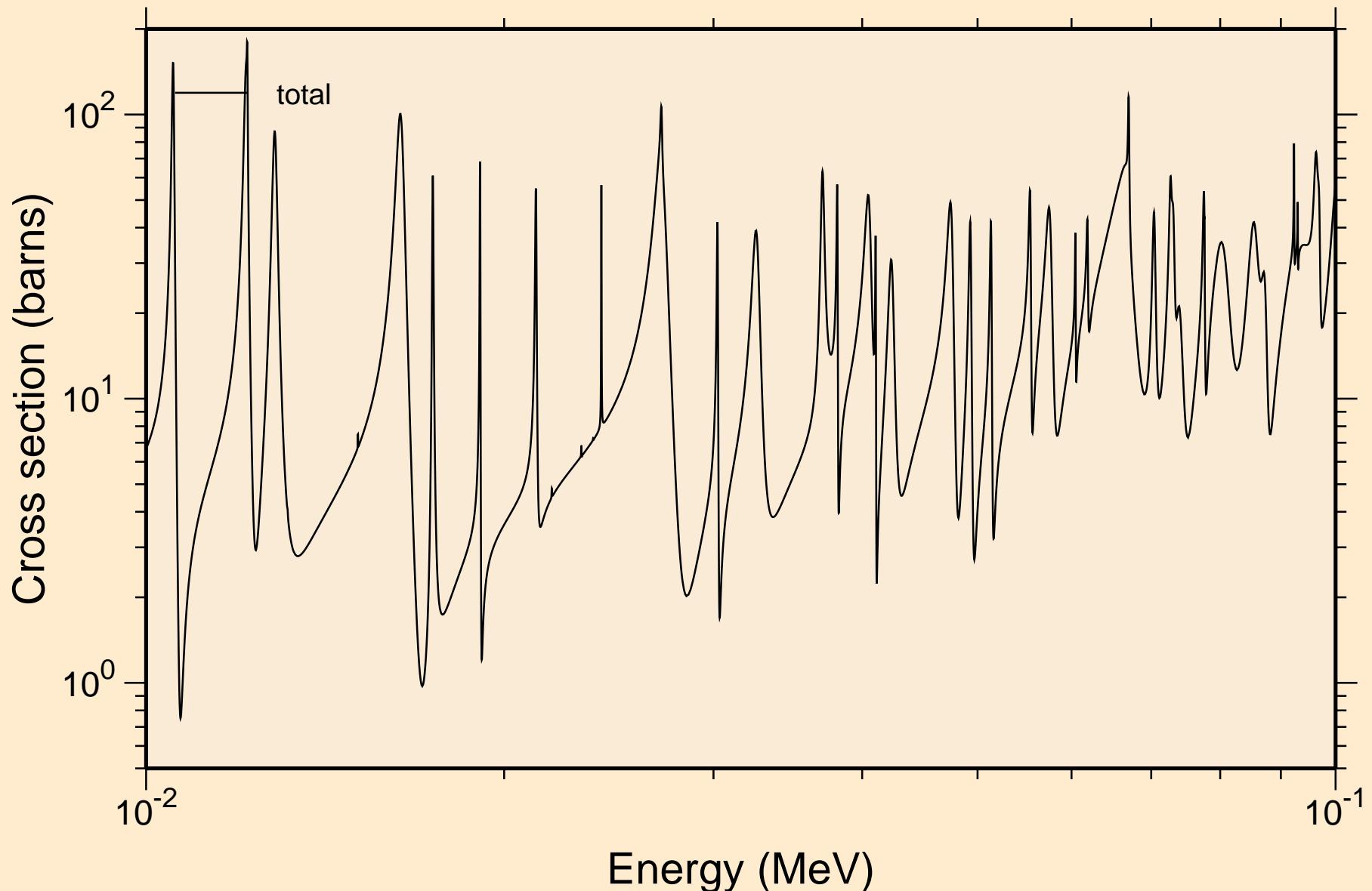
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance total cross section



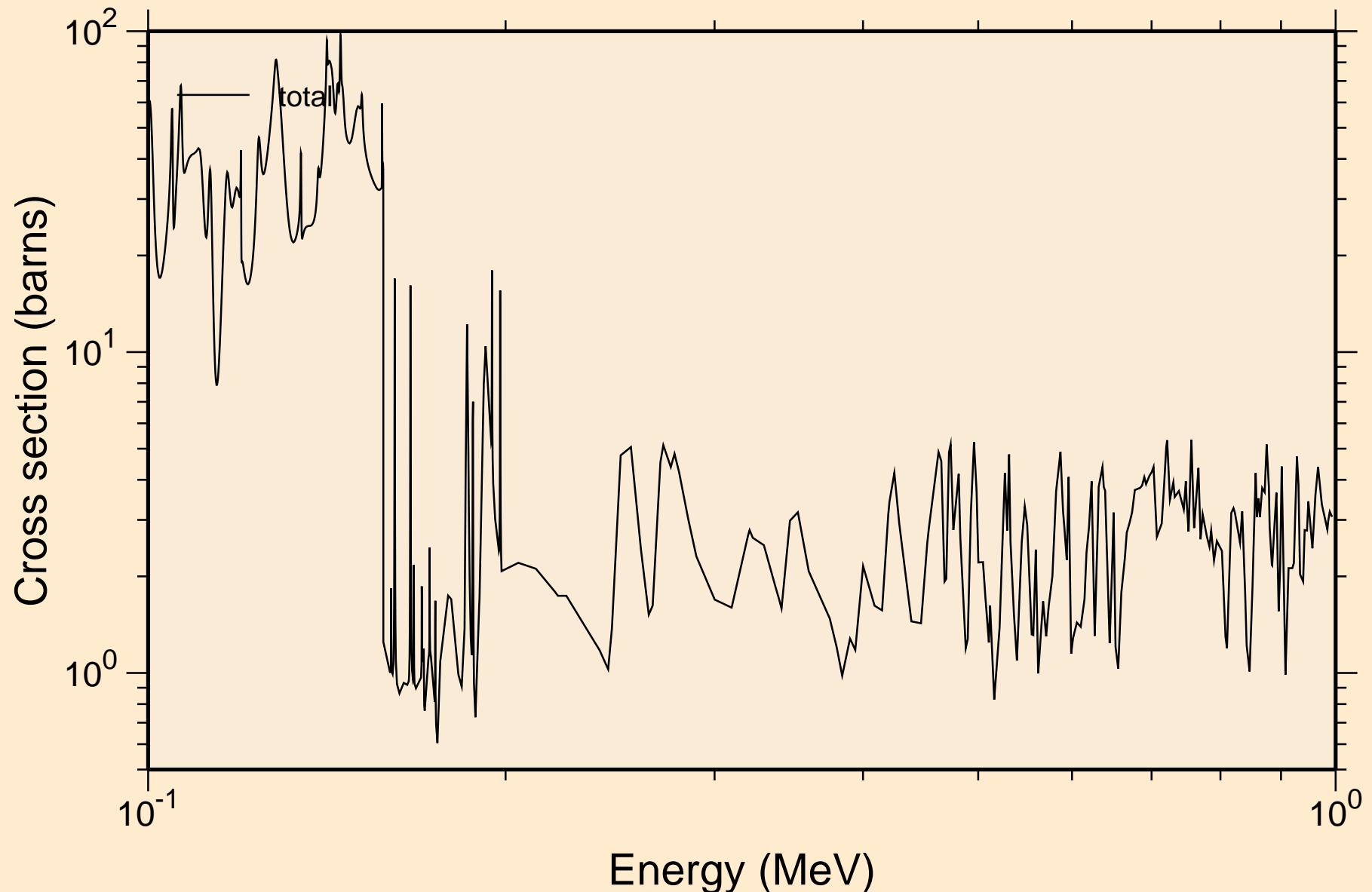
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance total cross section



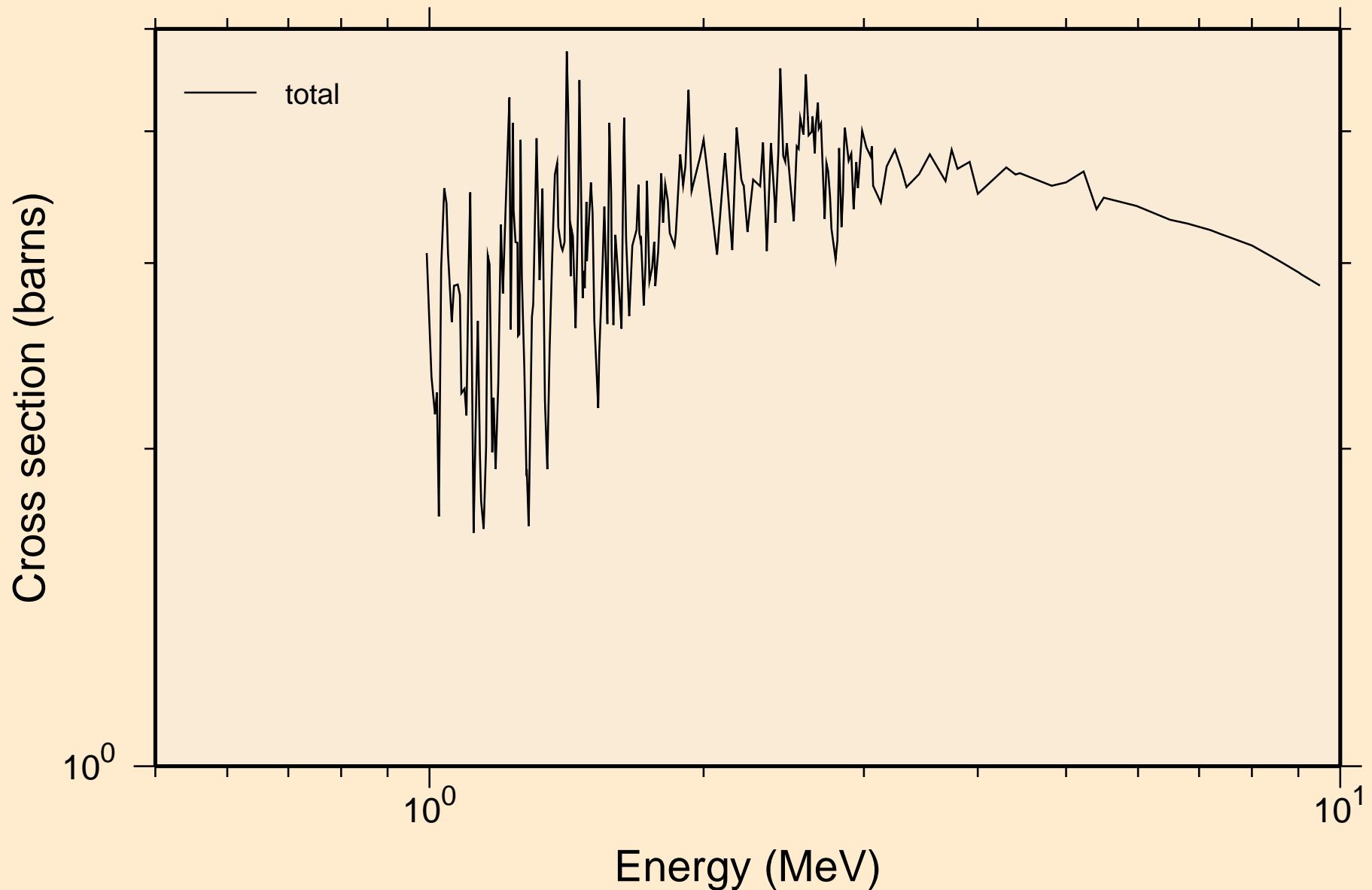
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance total cross section



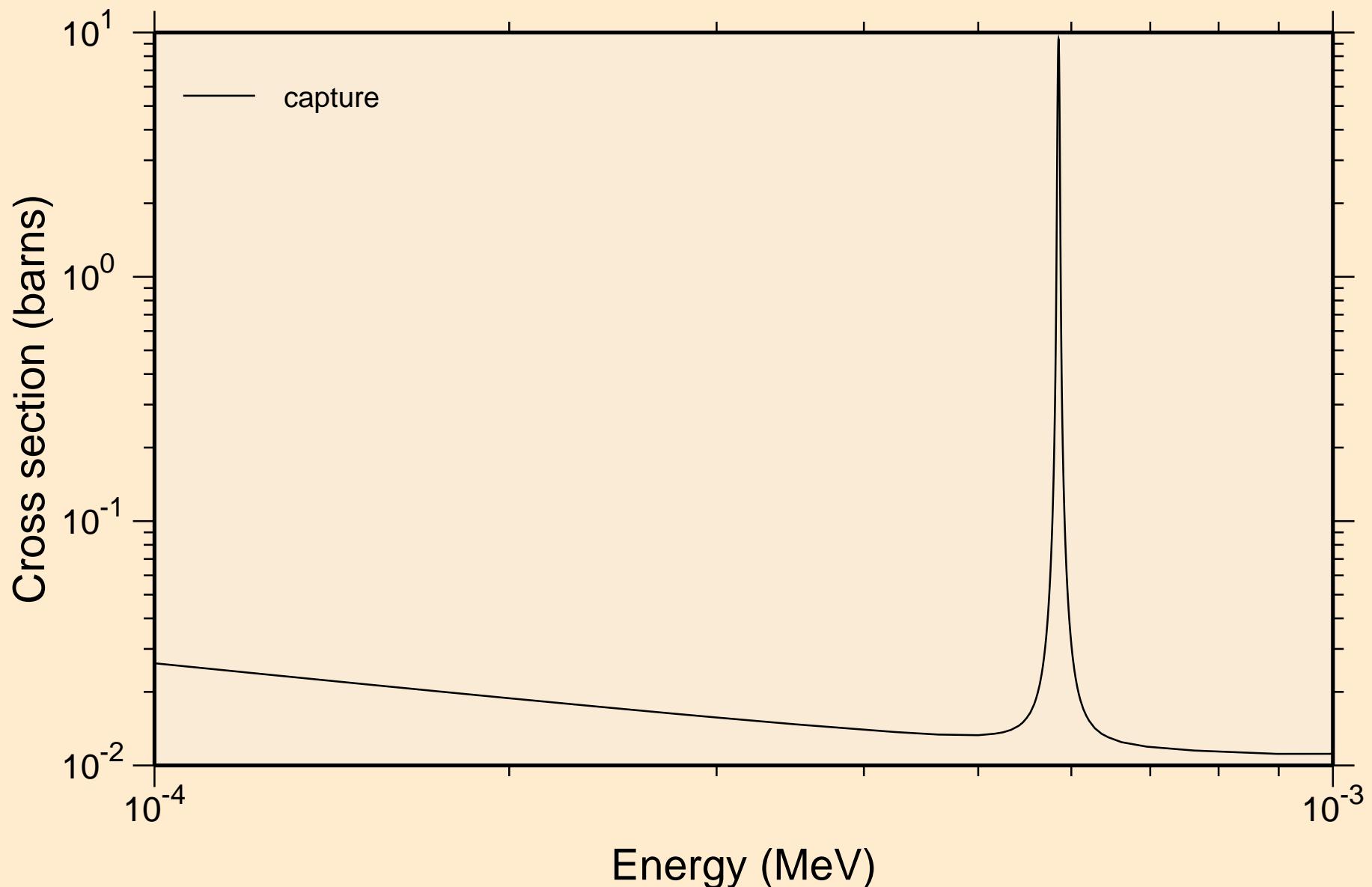
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance total cross section



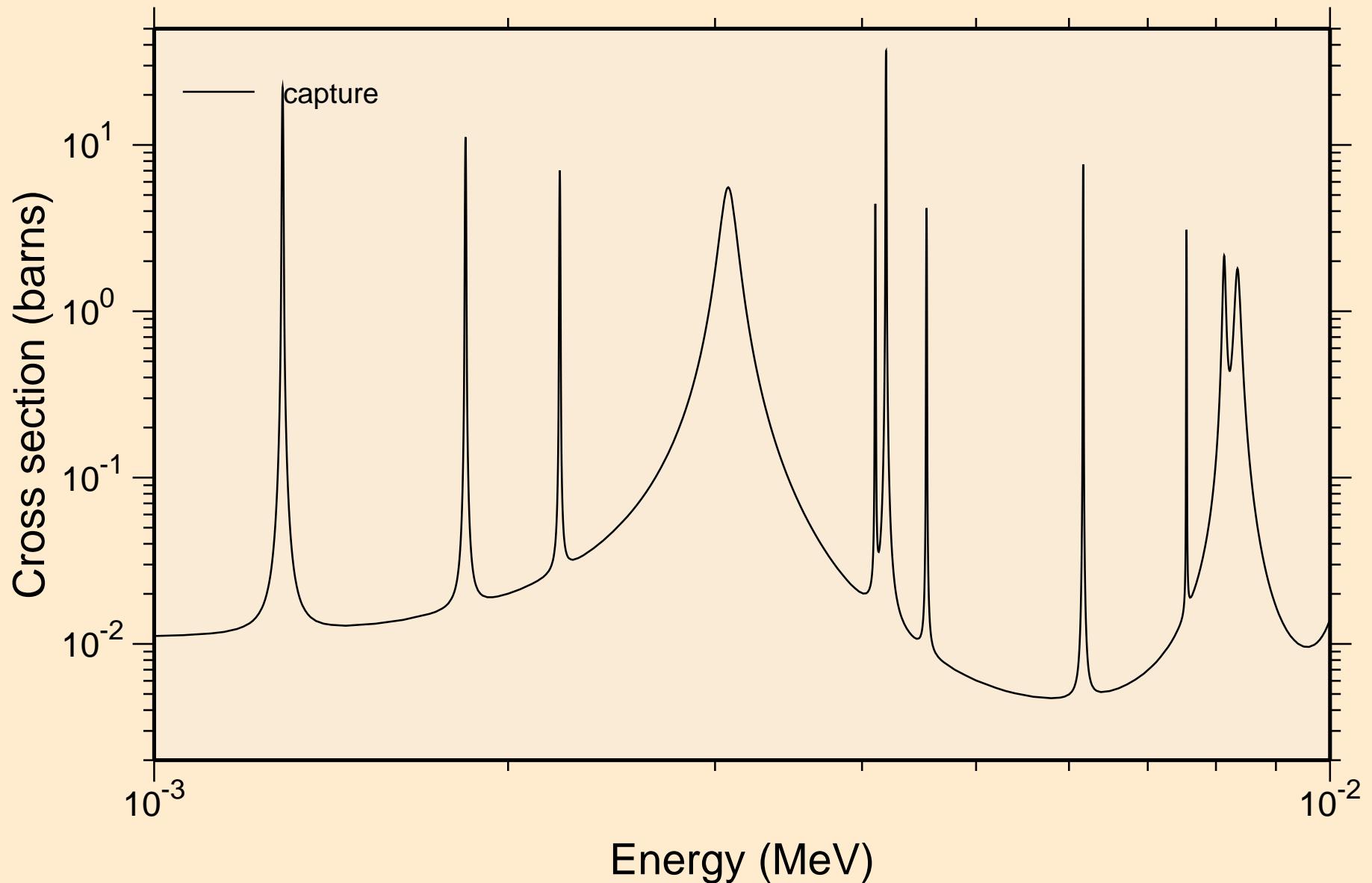
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance total cross section



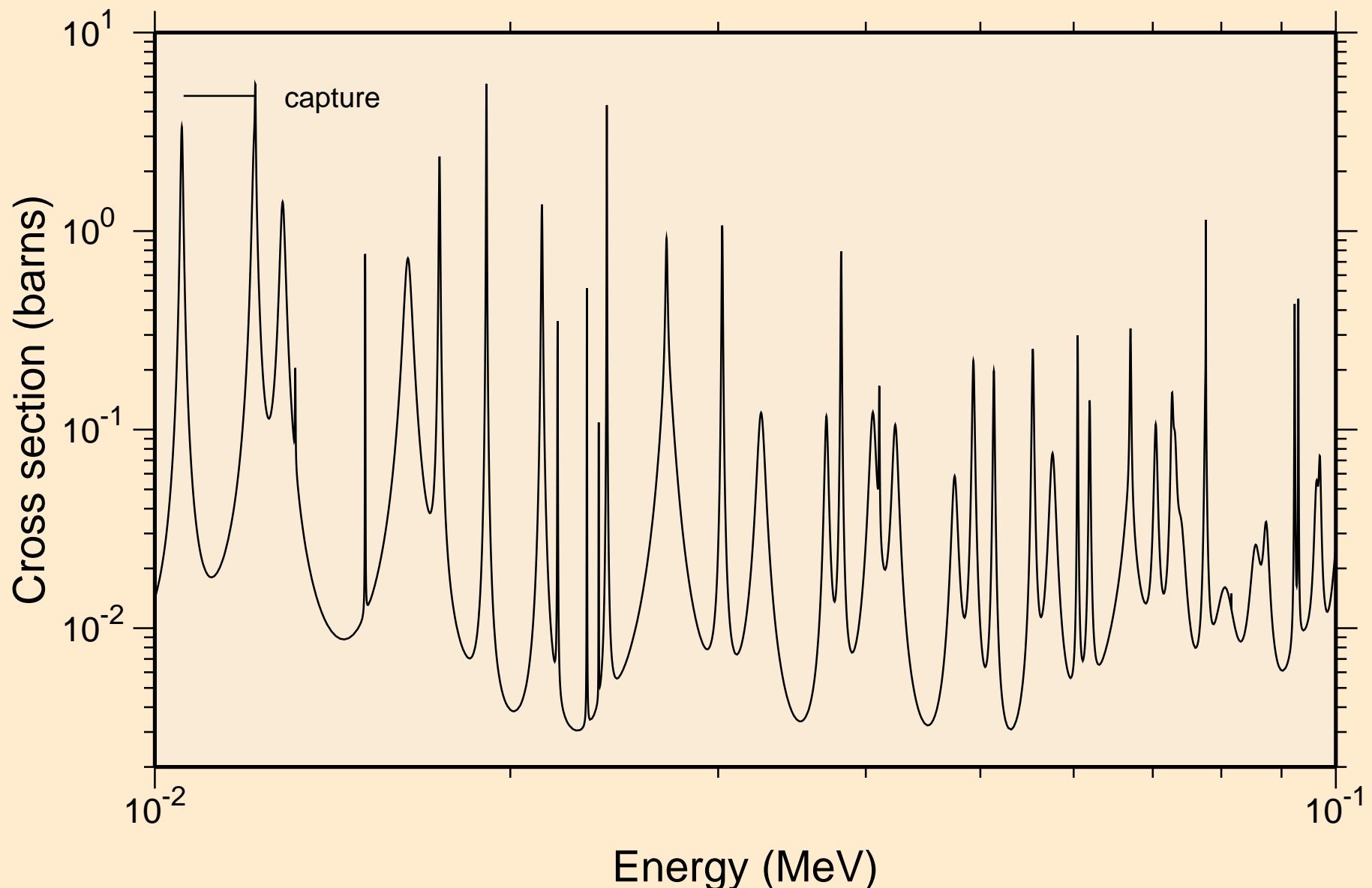
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance absorption cross sections



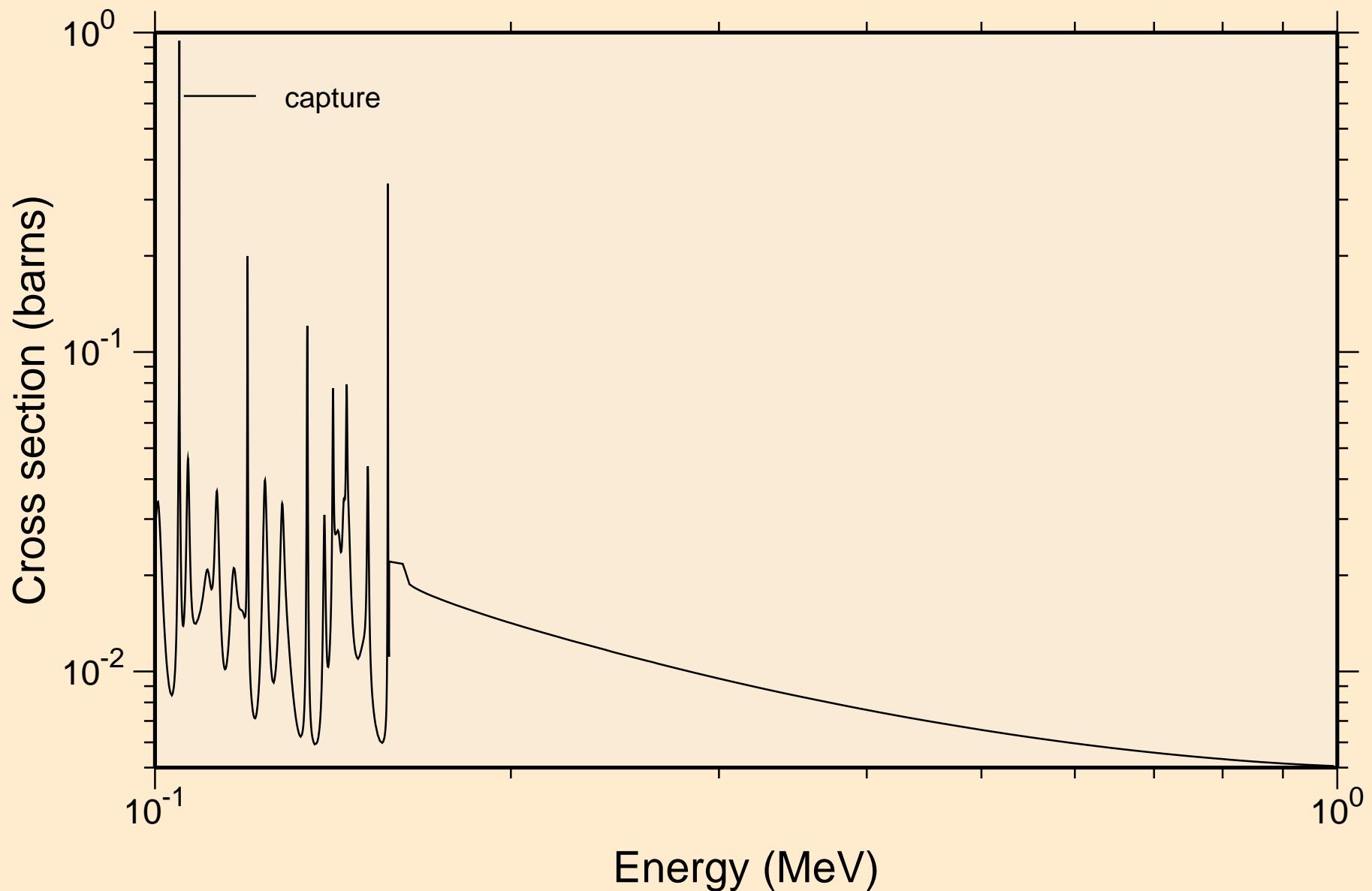
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resonance absorption cross sections



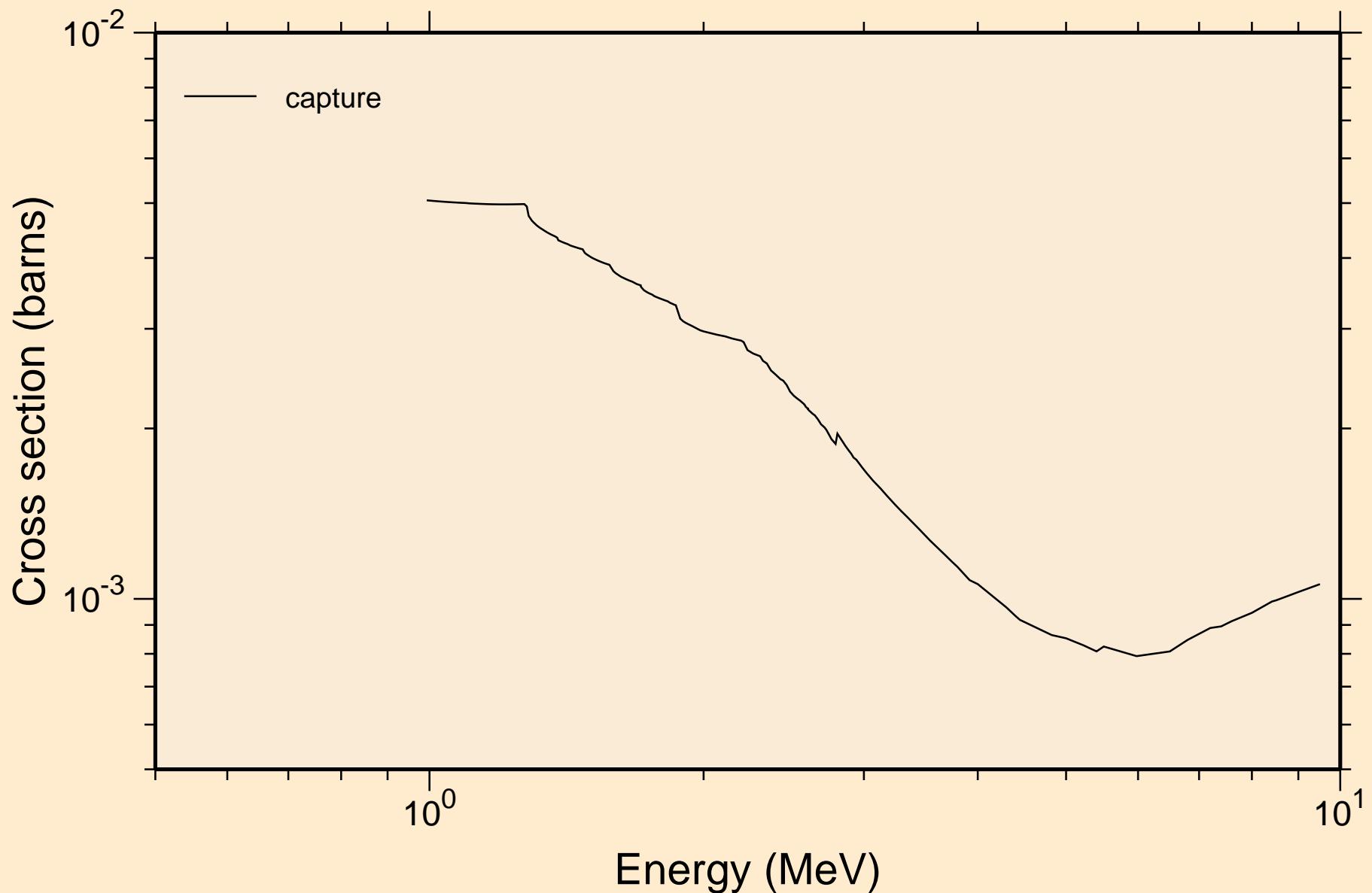
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance absorption cross sections



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance absorption cross sections

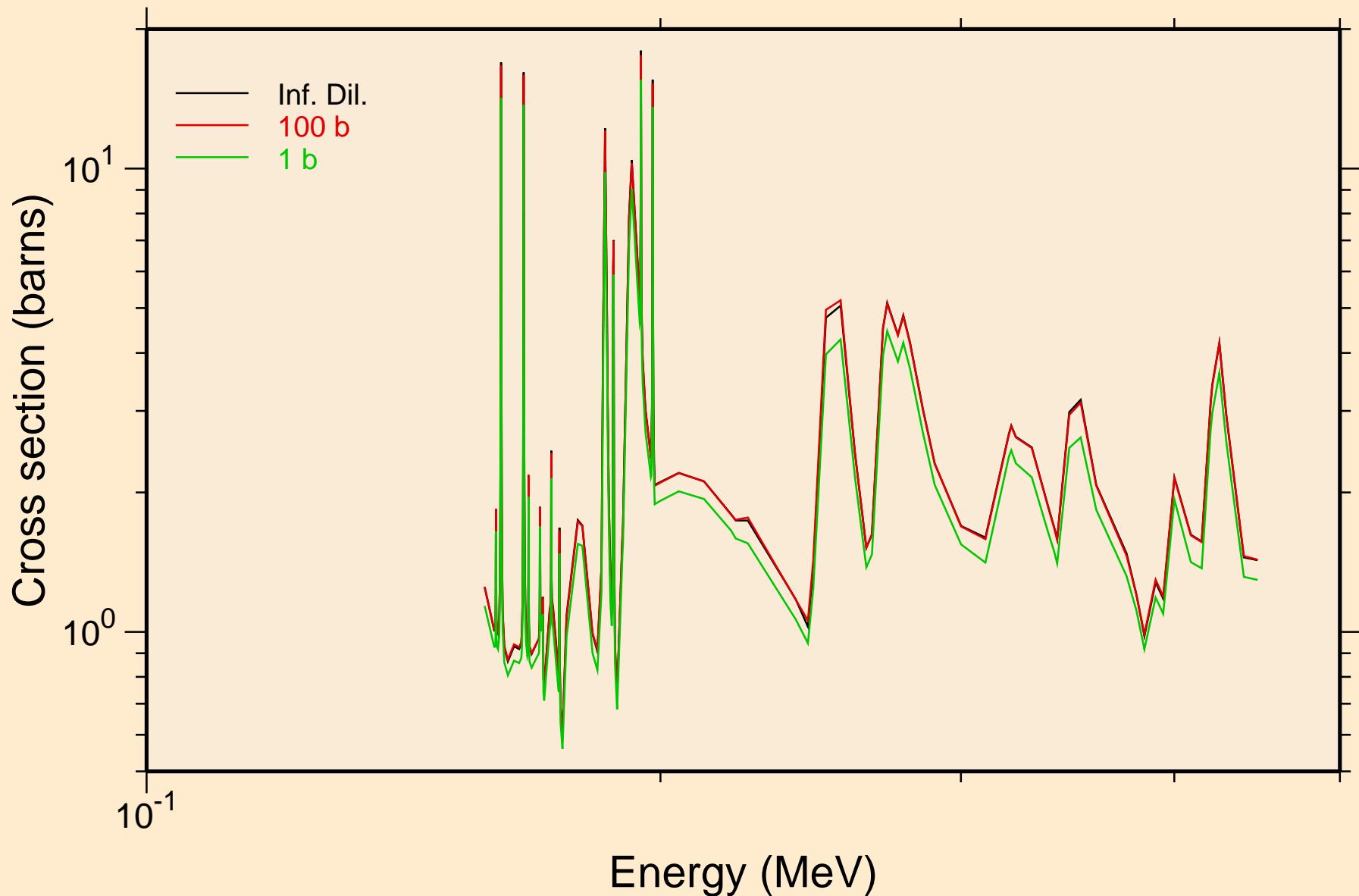


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
resonance absorption cross sections



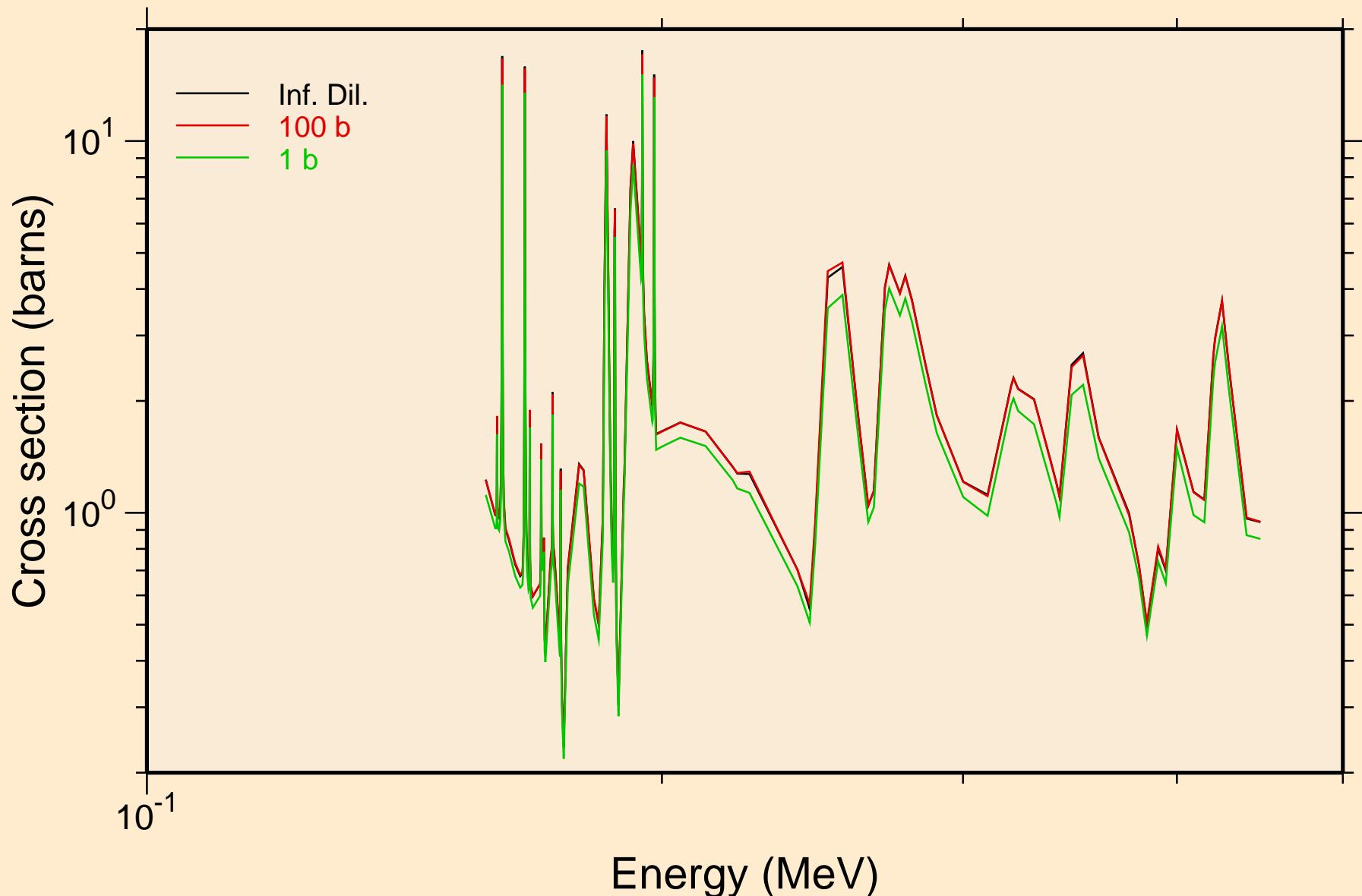
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## UR total cross section

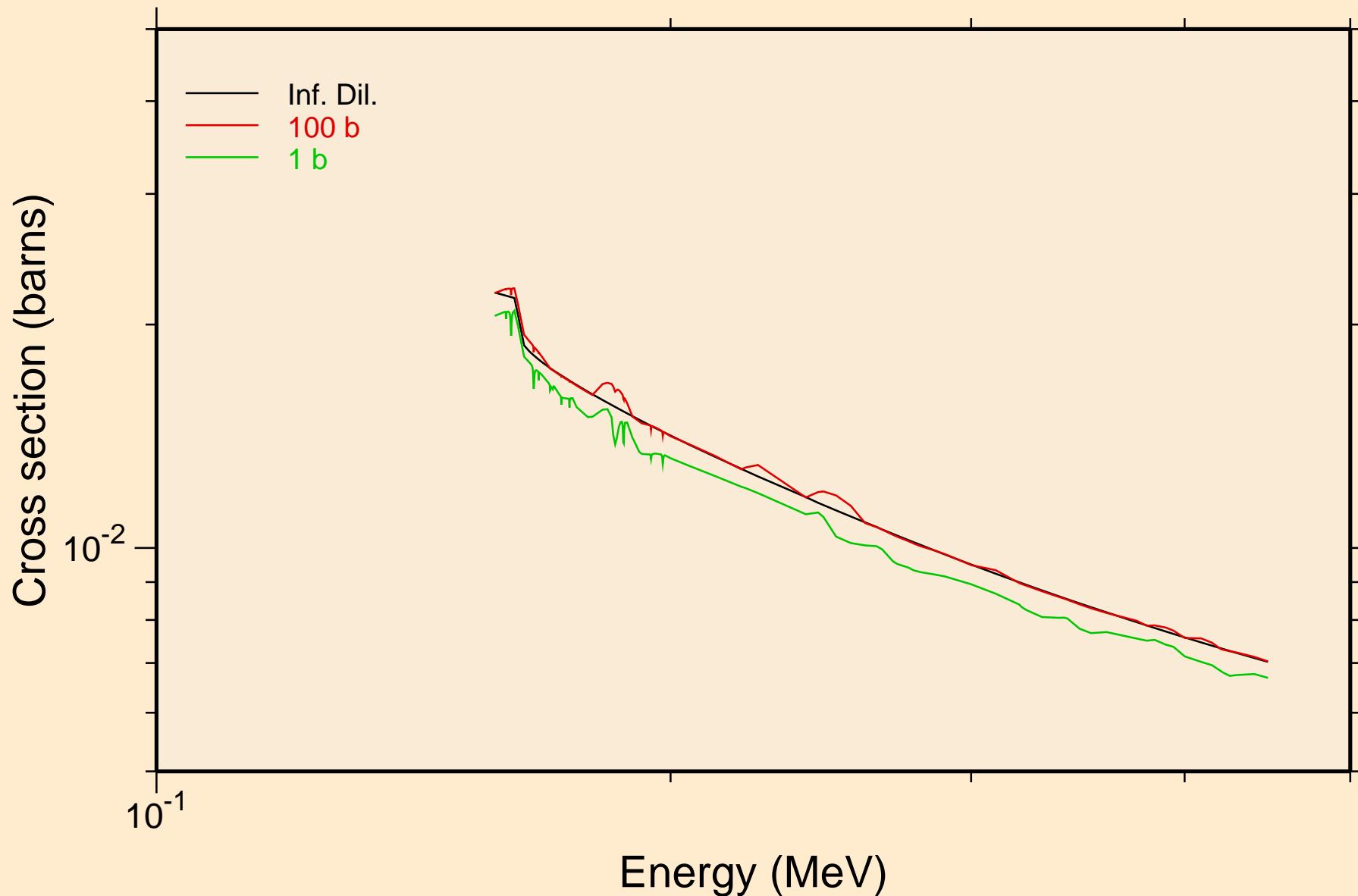


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

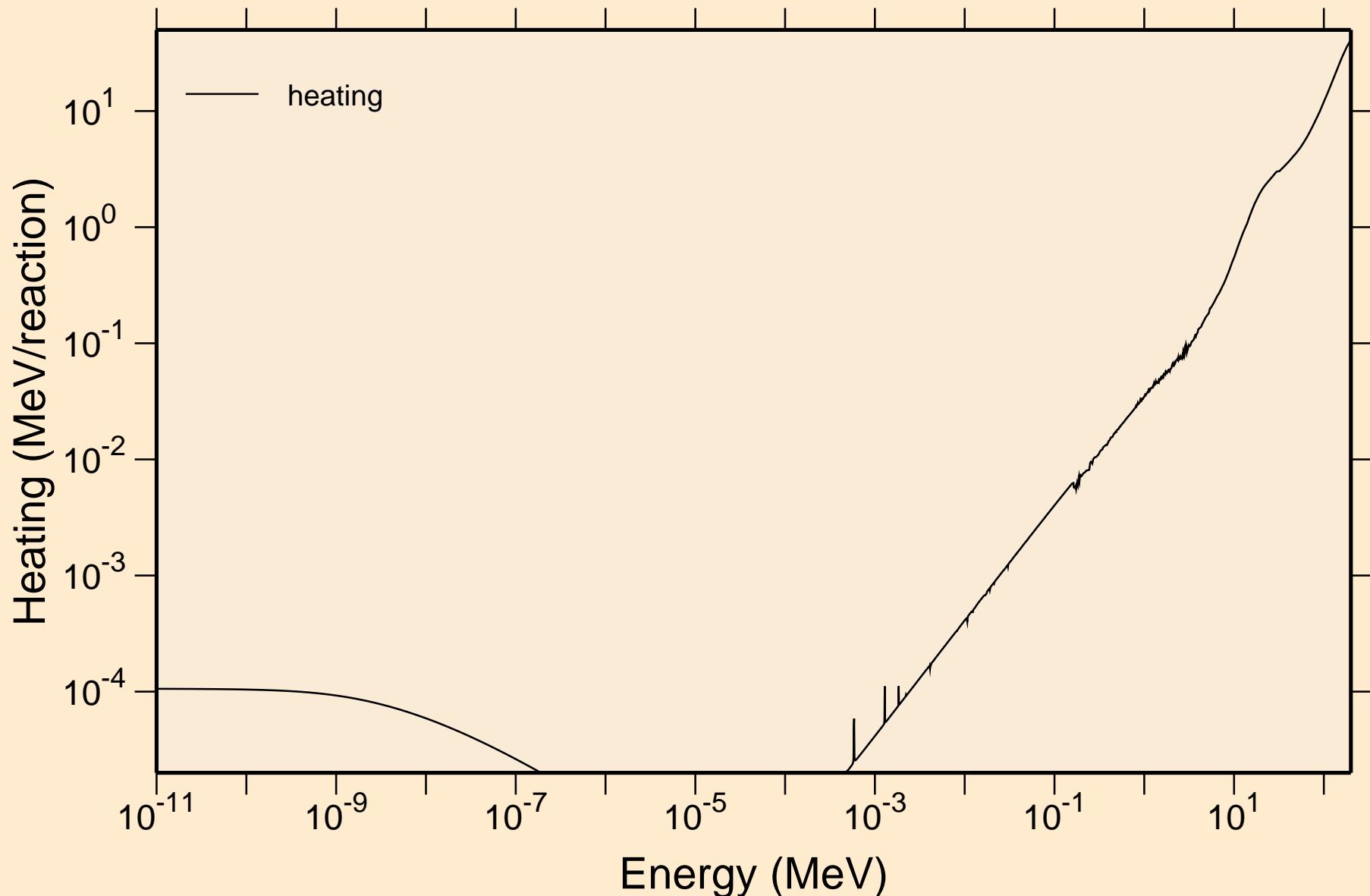
## UR elastic cross section



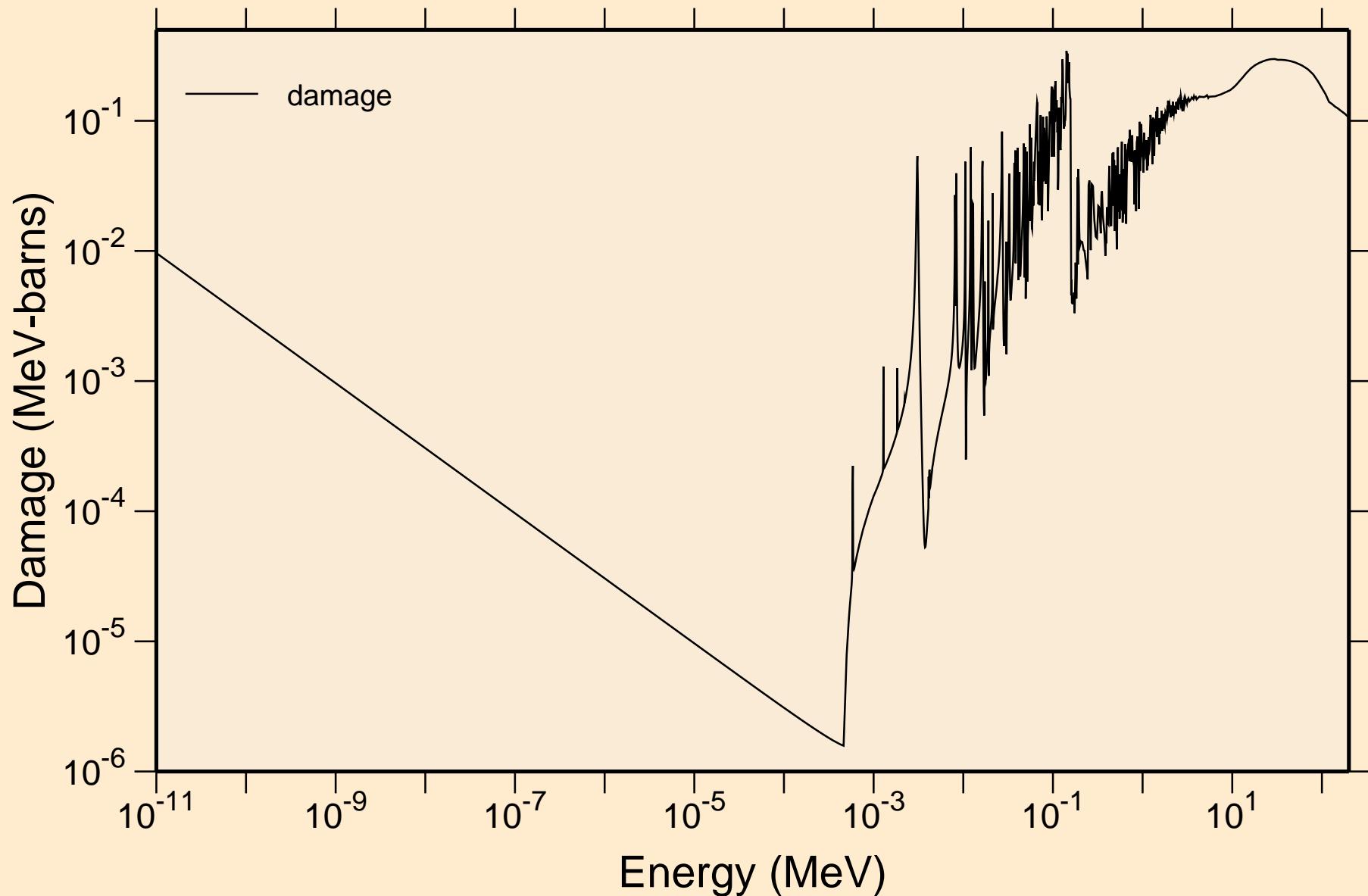
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
UR capture cross section



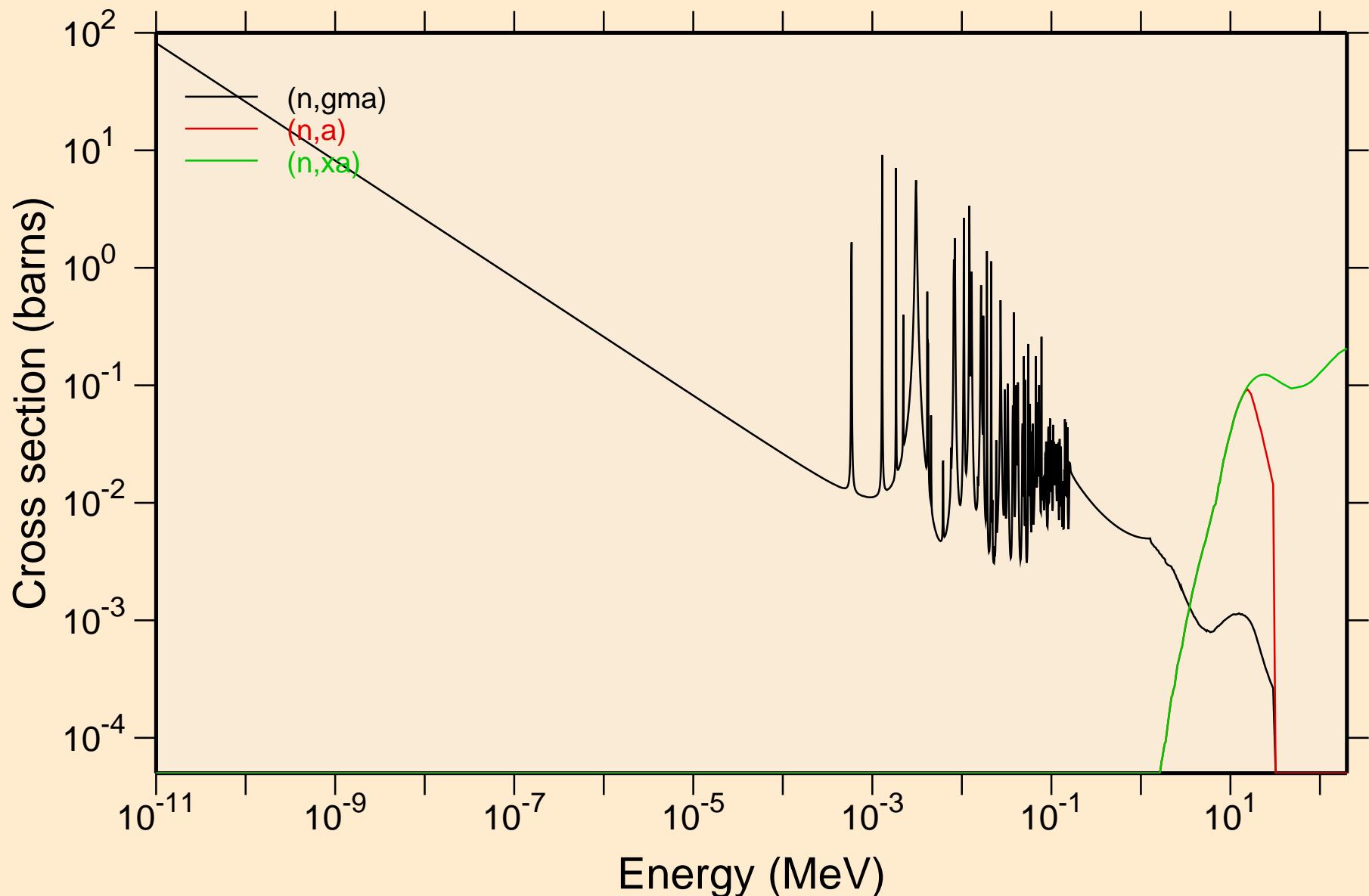
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Heating



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Damage

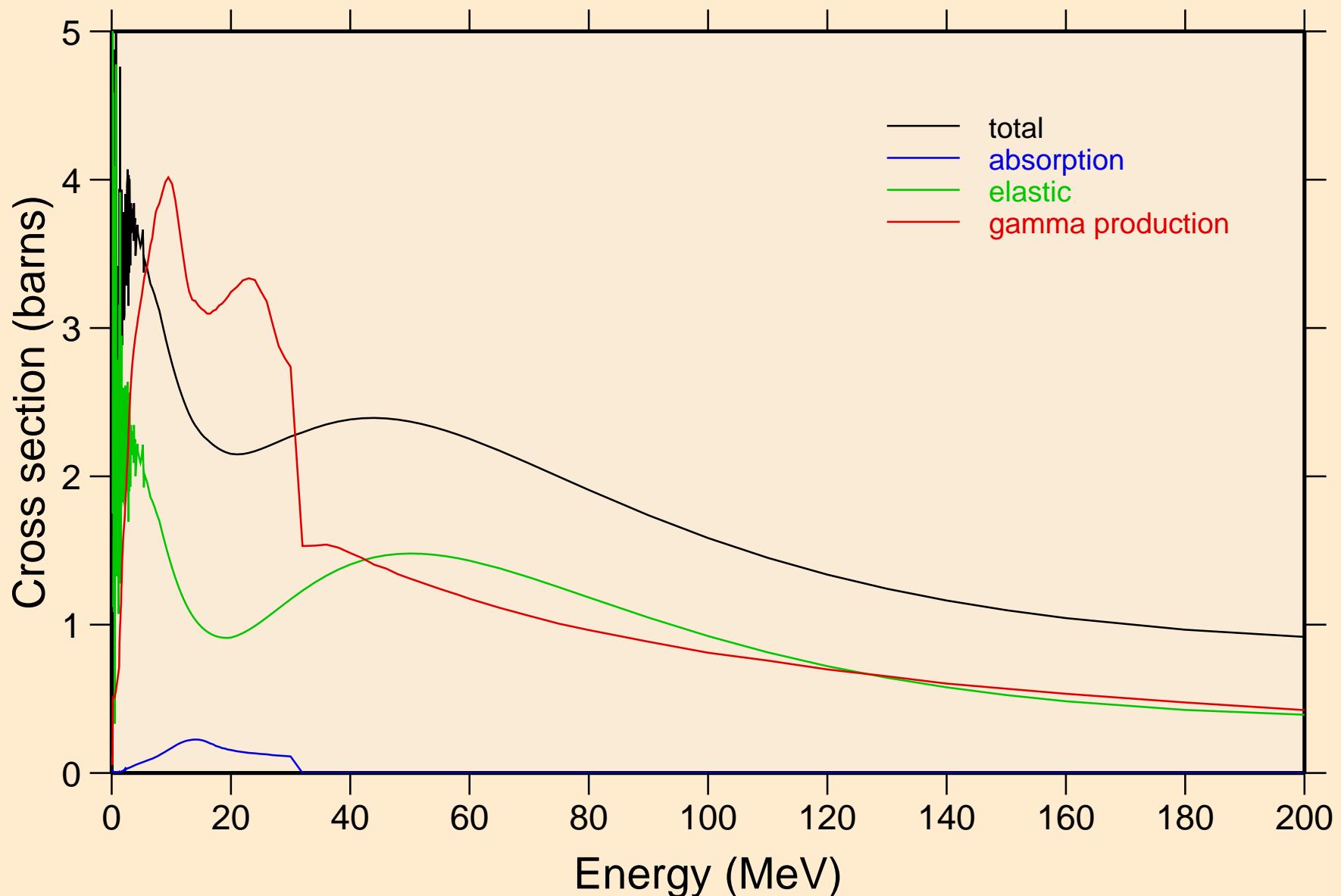


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Non-threshold reactions

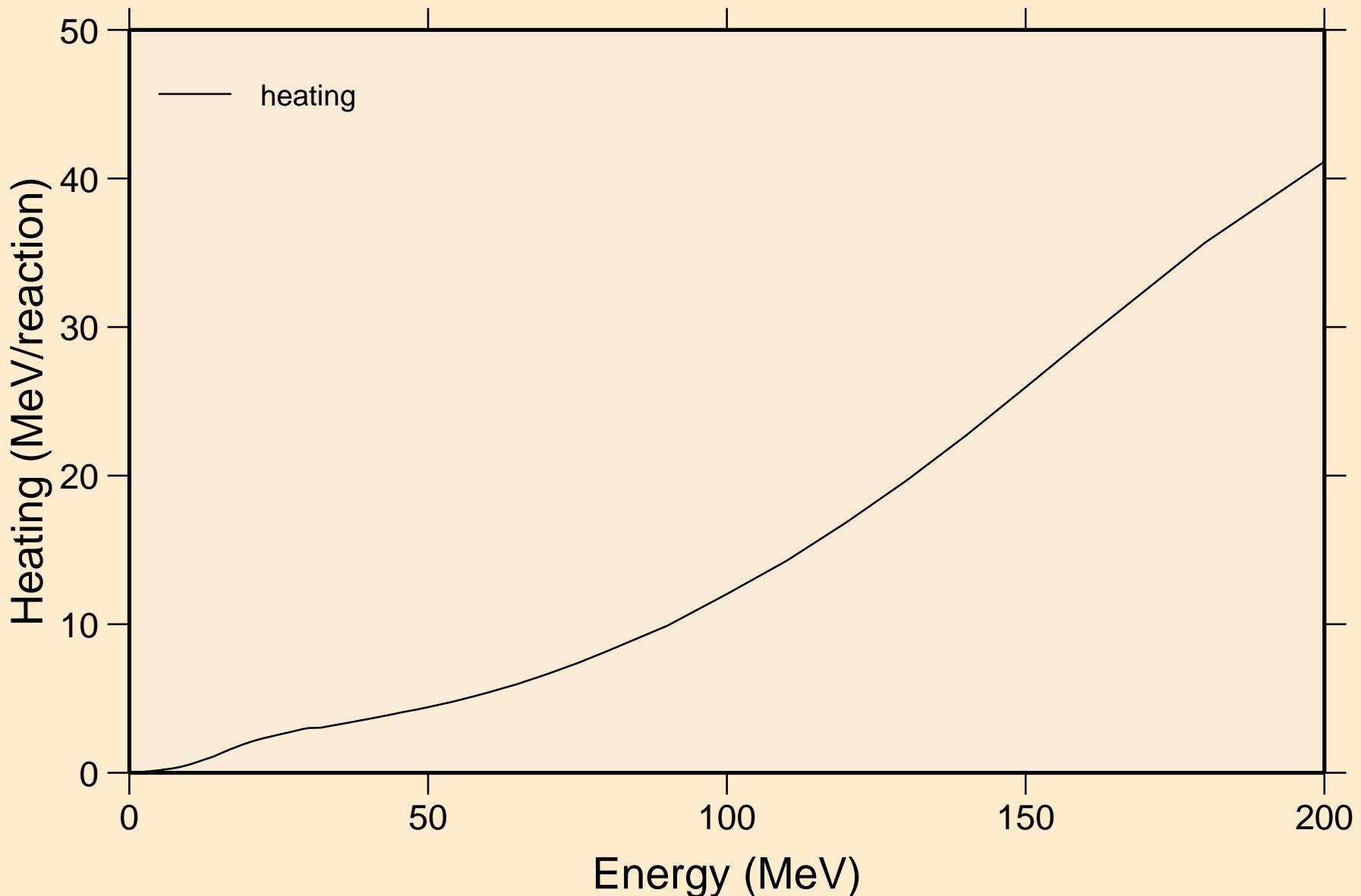


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

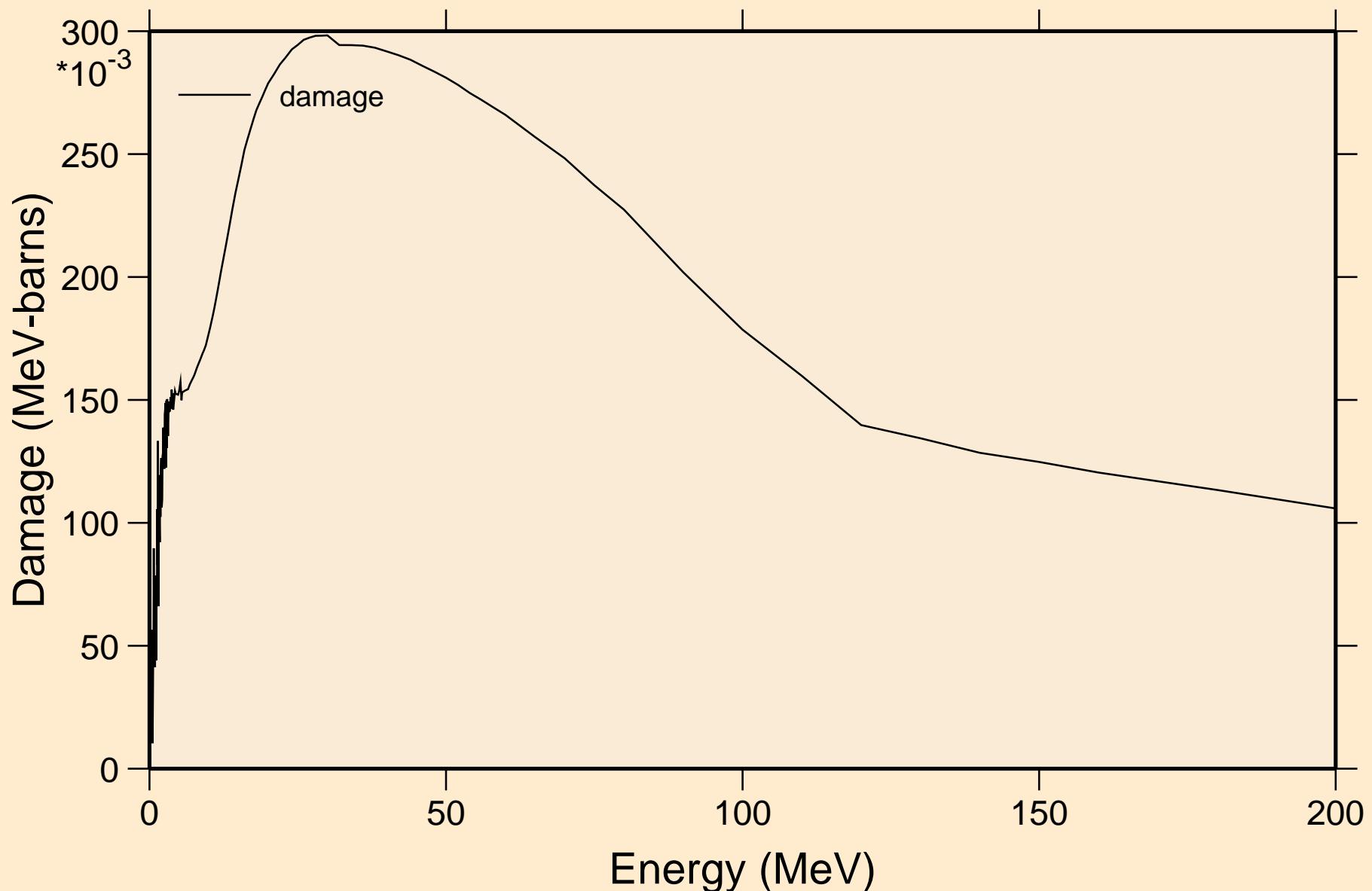
## Principal cross sections



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Heating

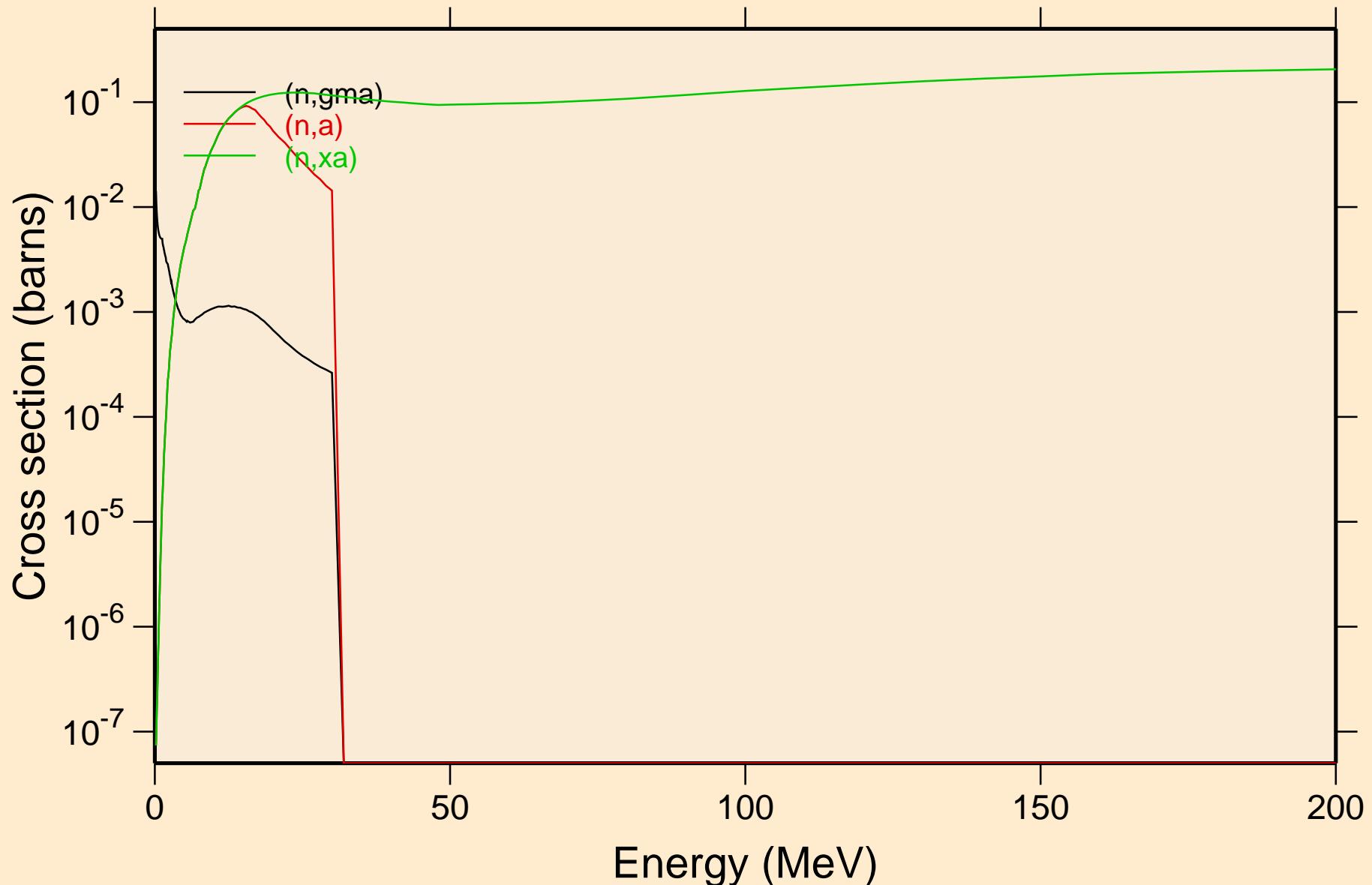


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Damage



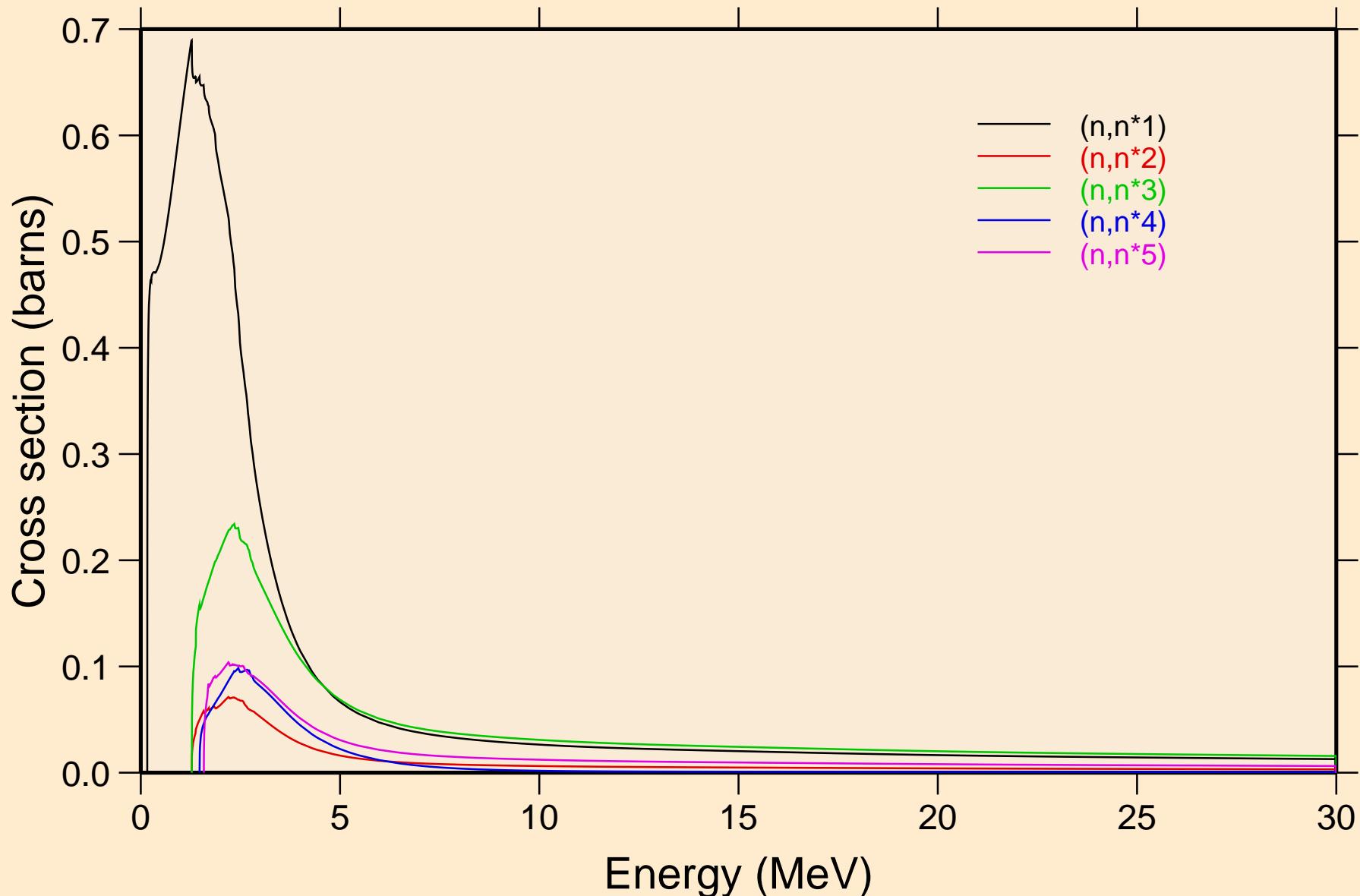
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Non-threshold reactions



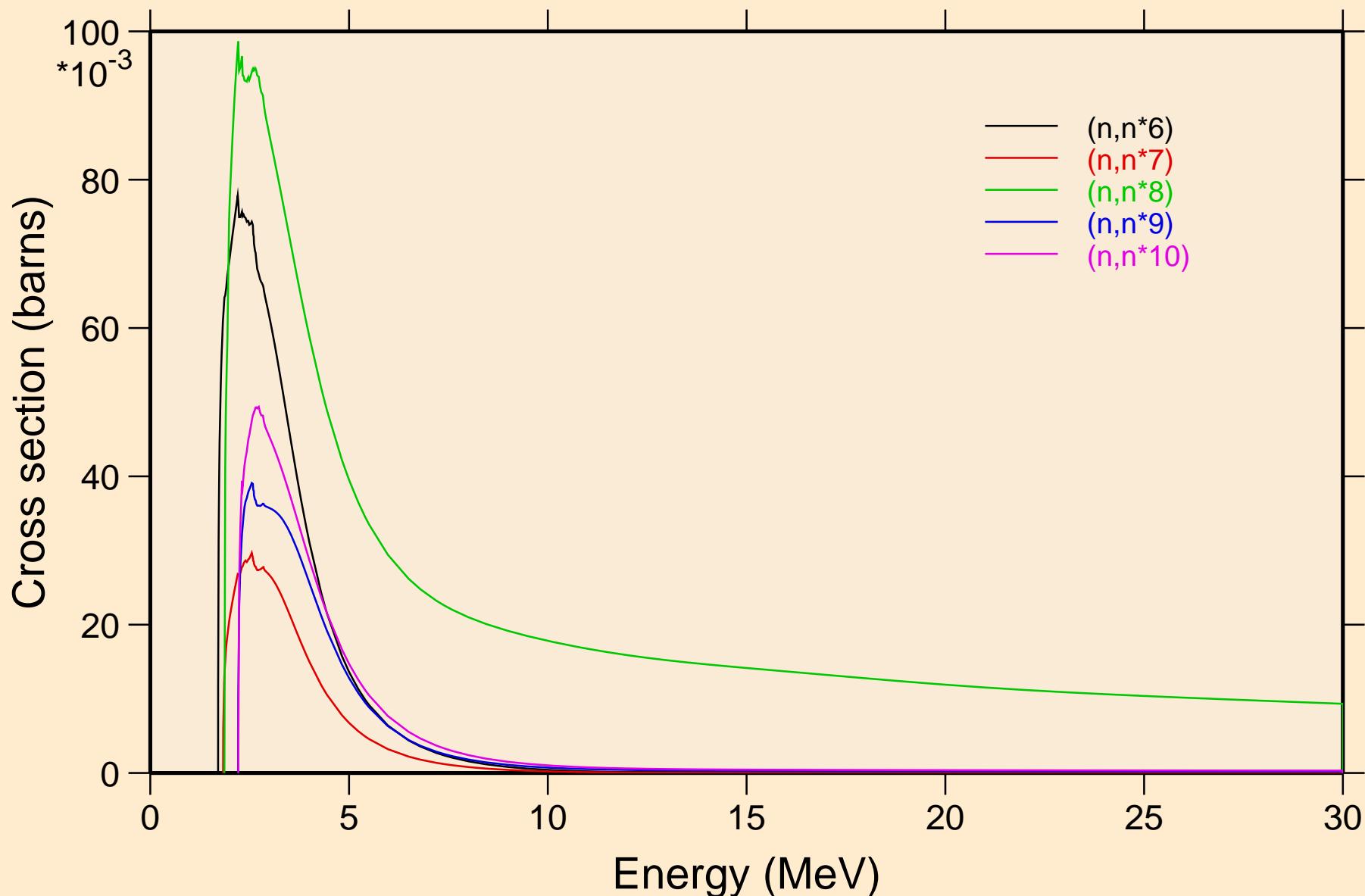
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Inelastic levels

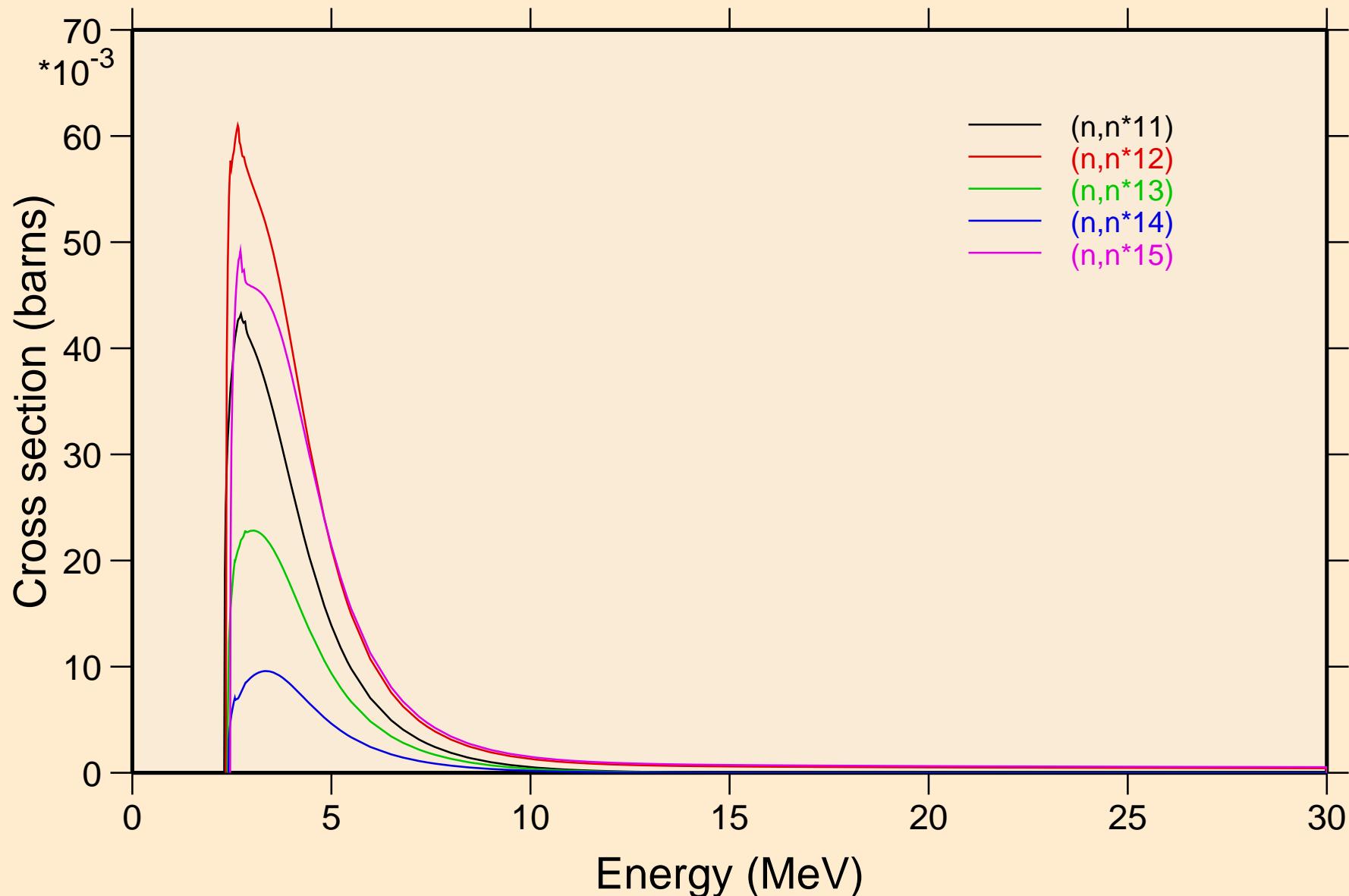


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

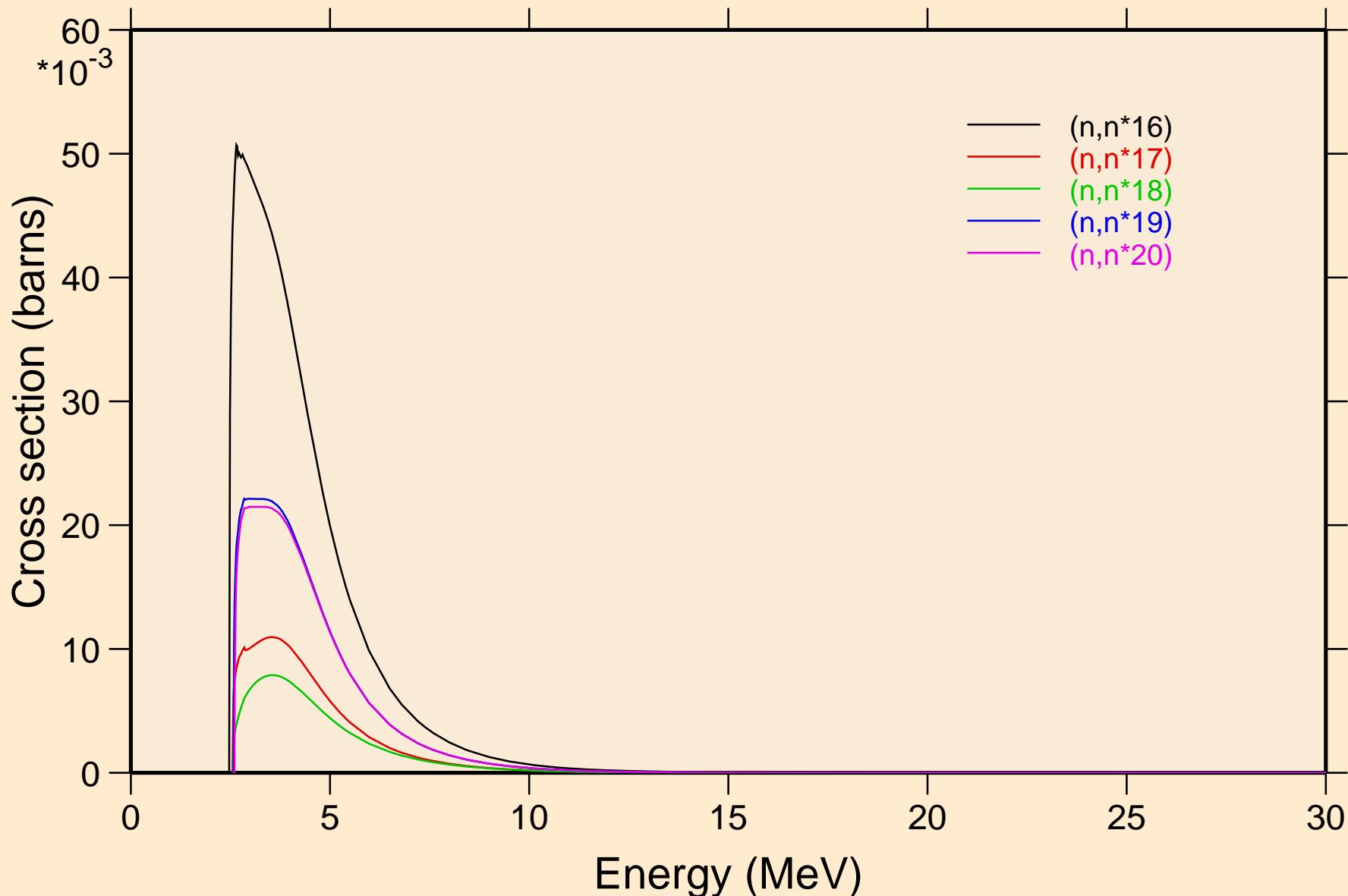
## Inelastic levels



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Inelastic levels

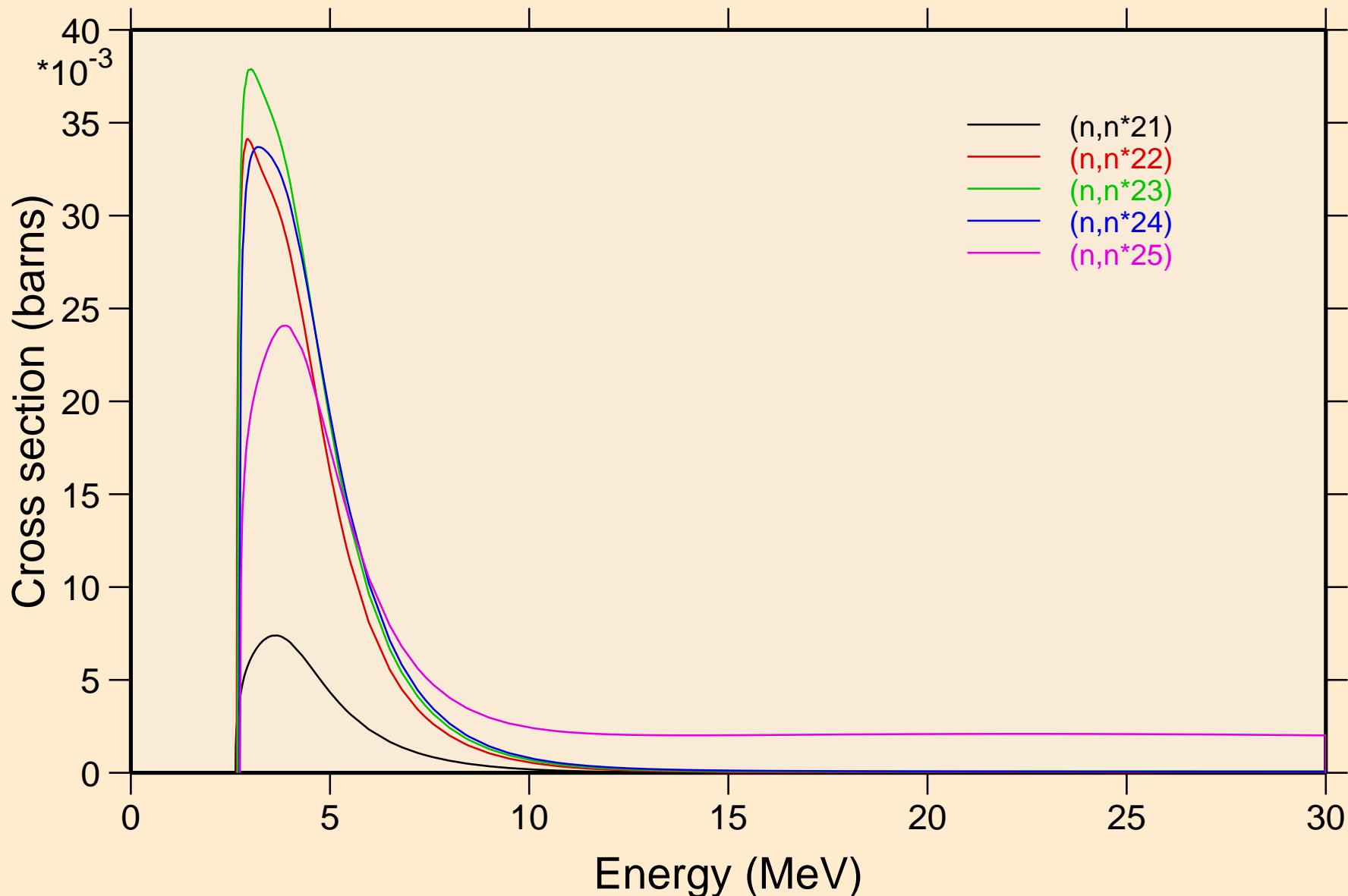


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Inelastic levels

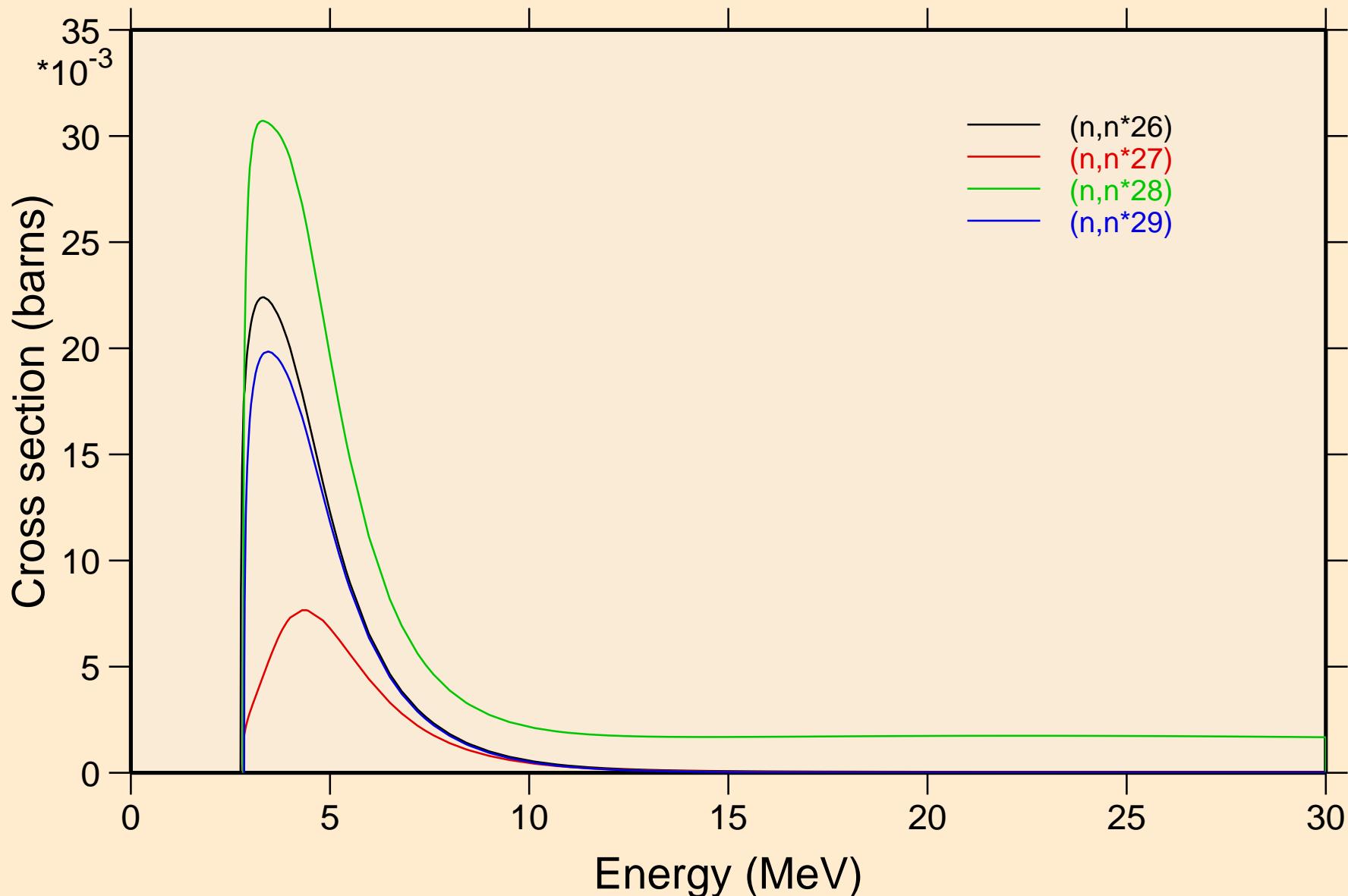


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Inelastic levels

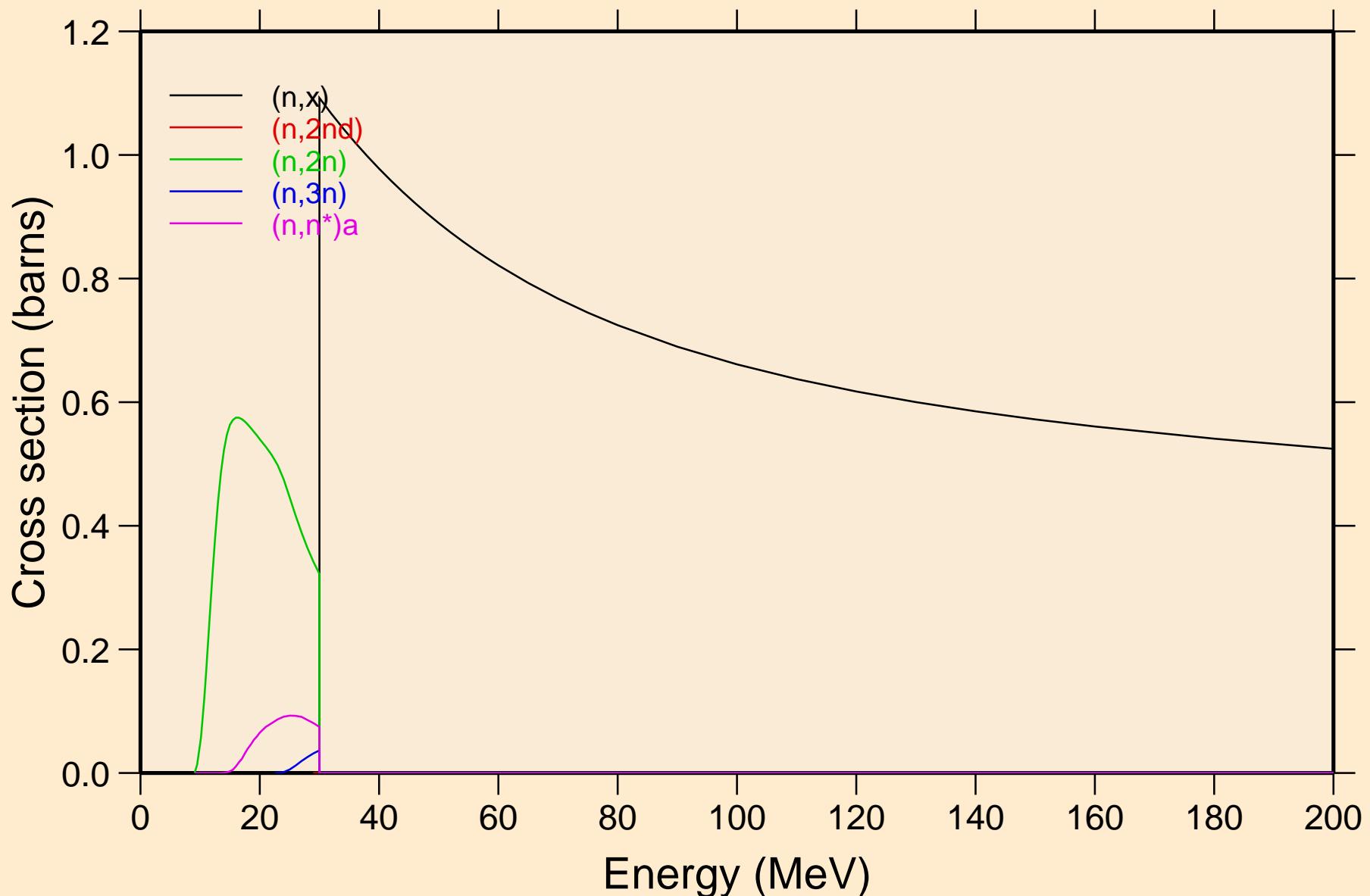


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Inelastic levels



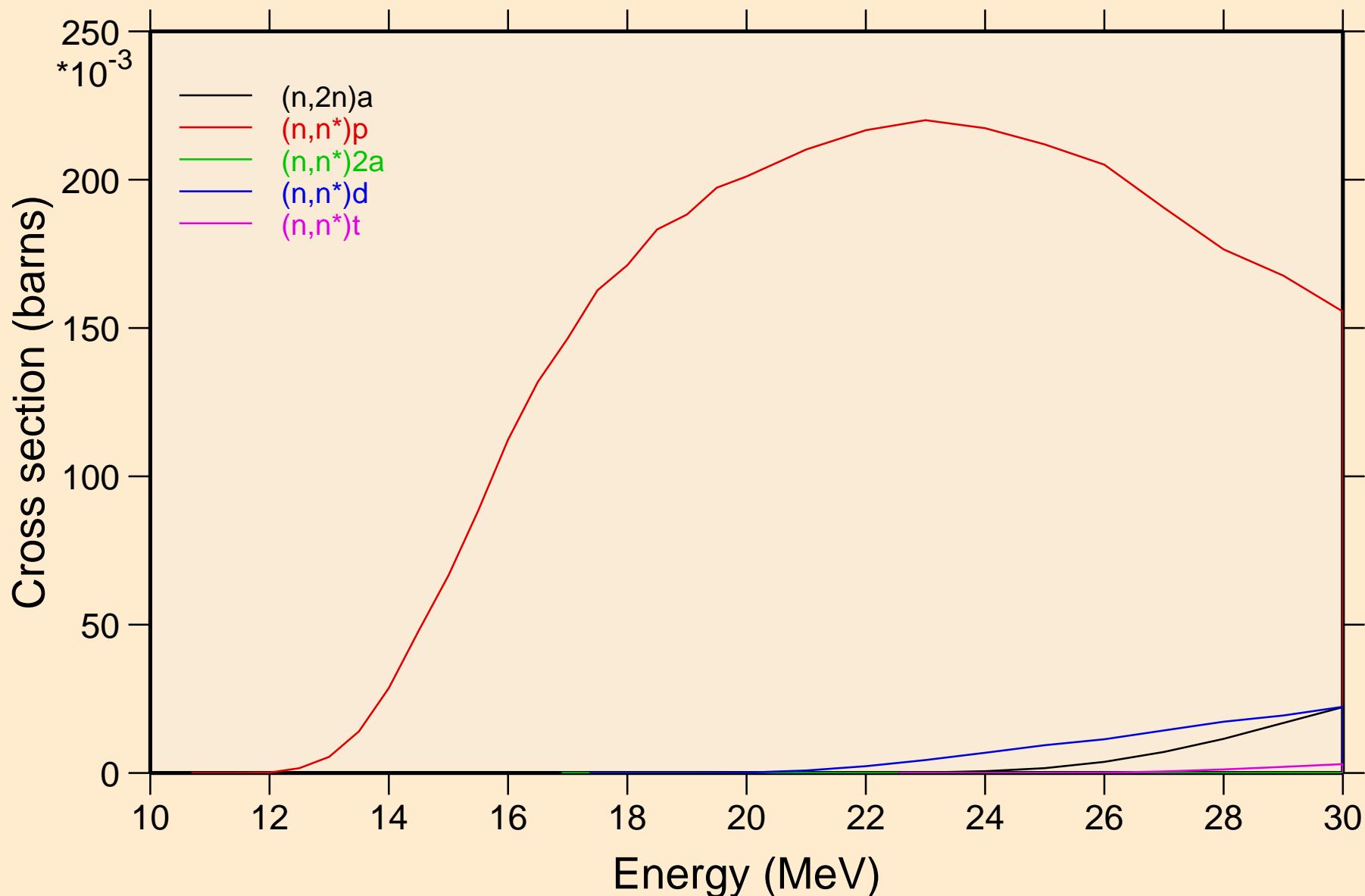
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Threshold reactions



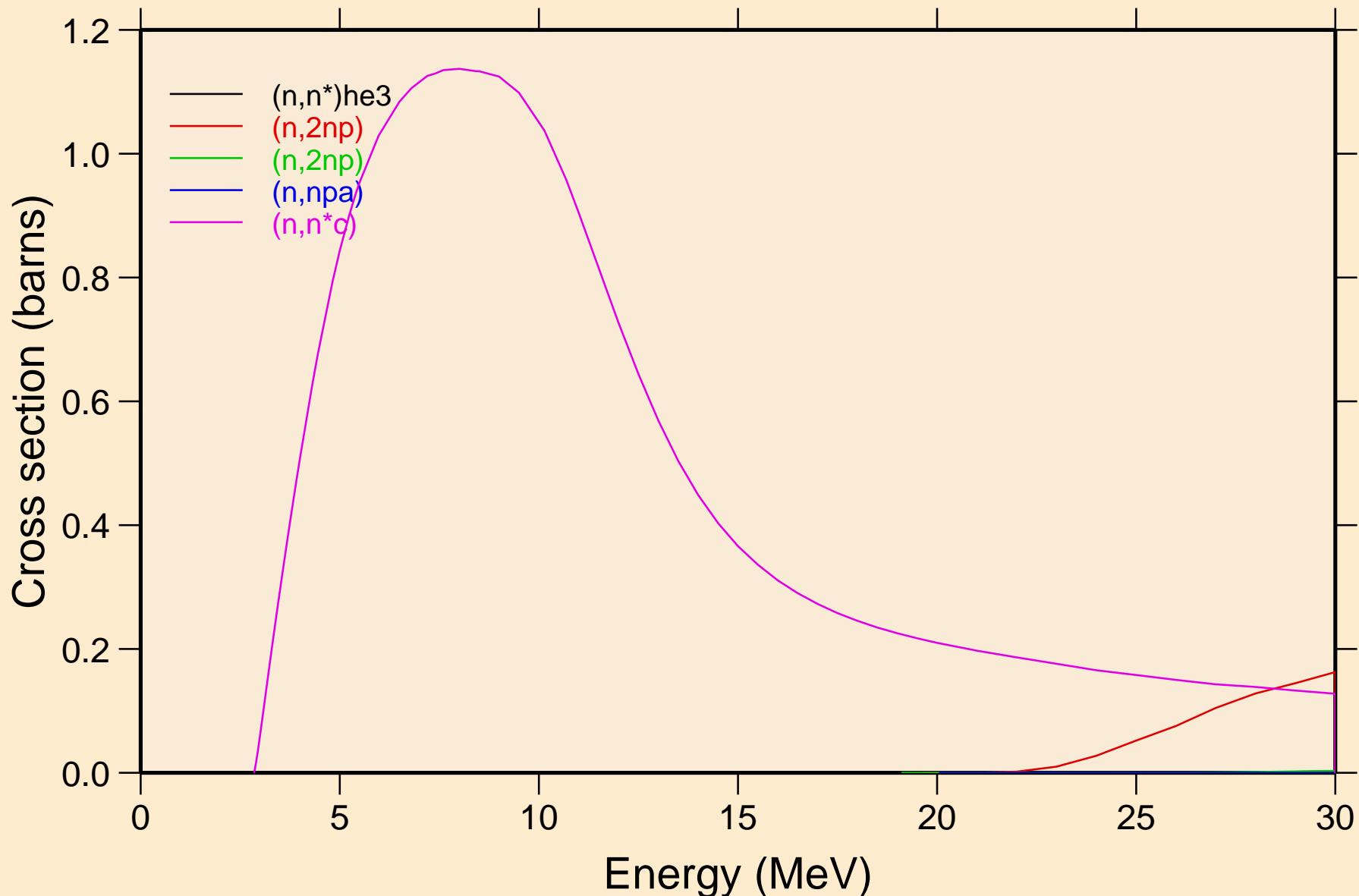
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Threshold reactions



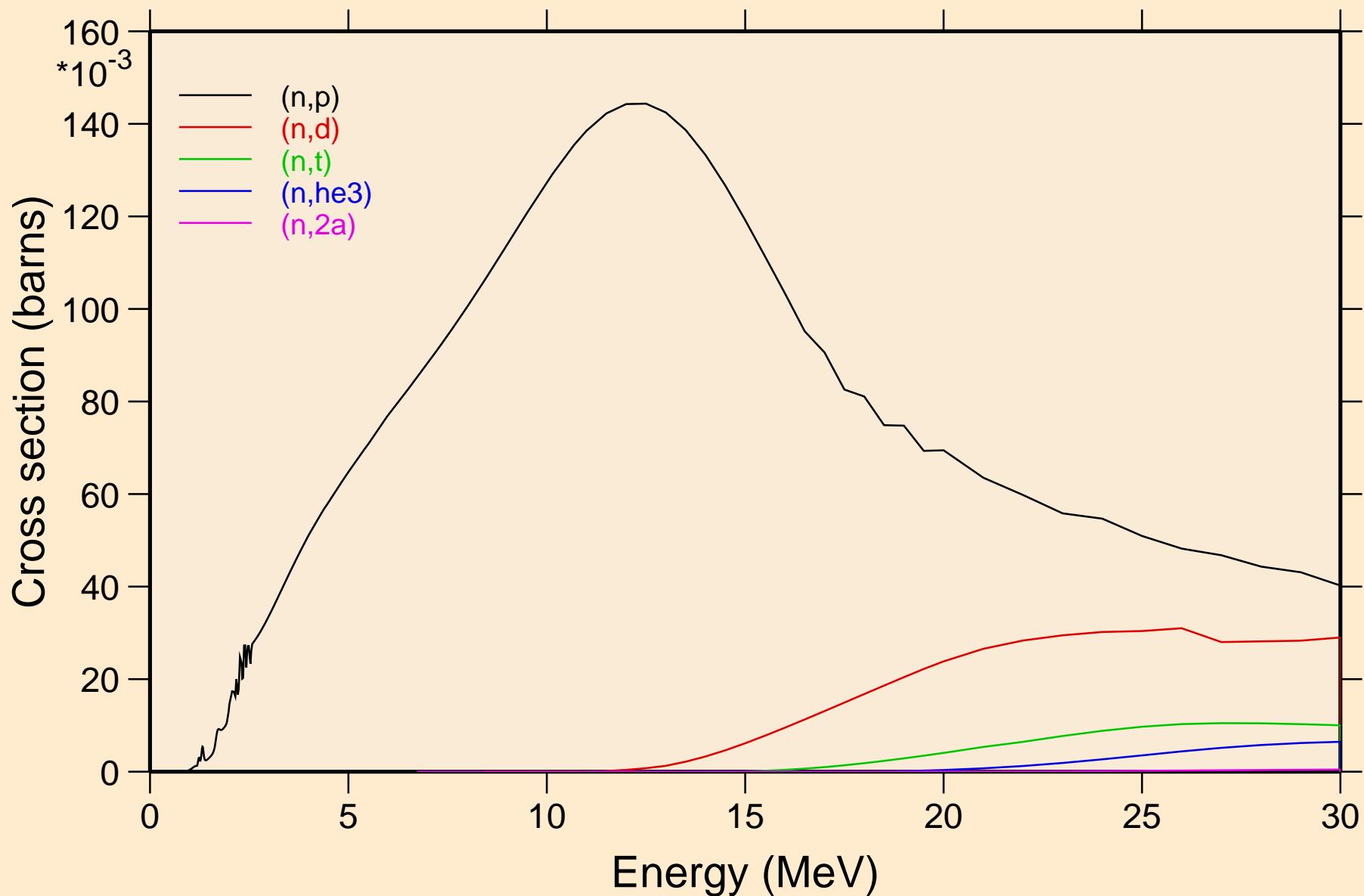
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Threshold reactions



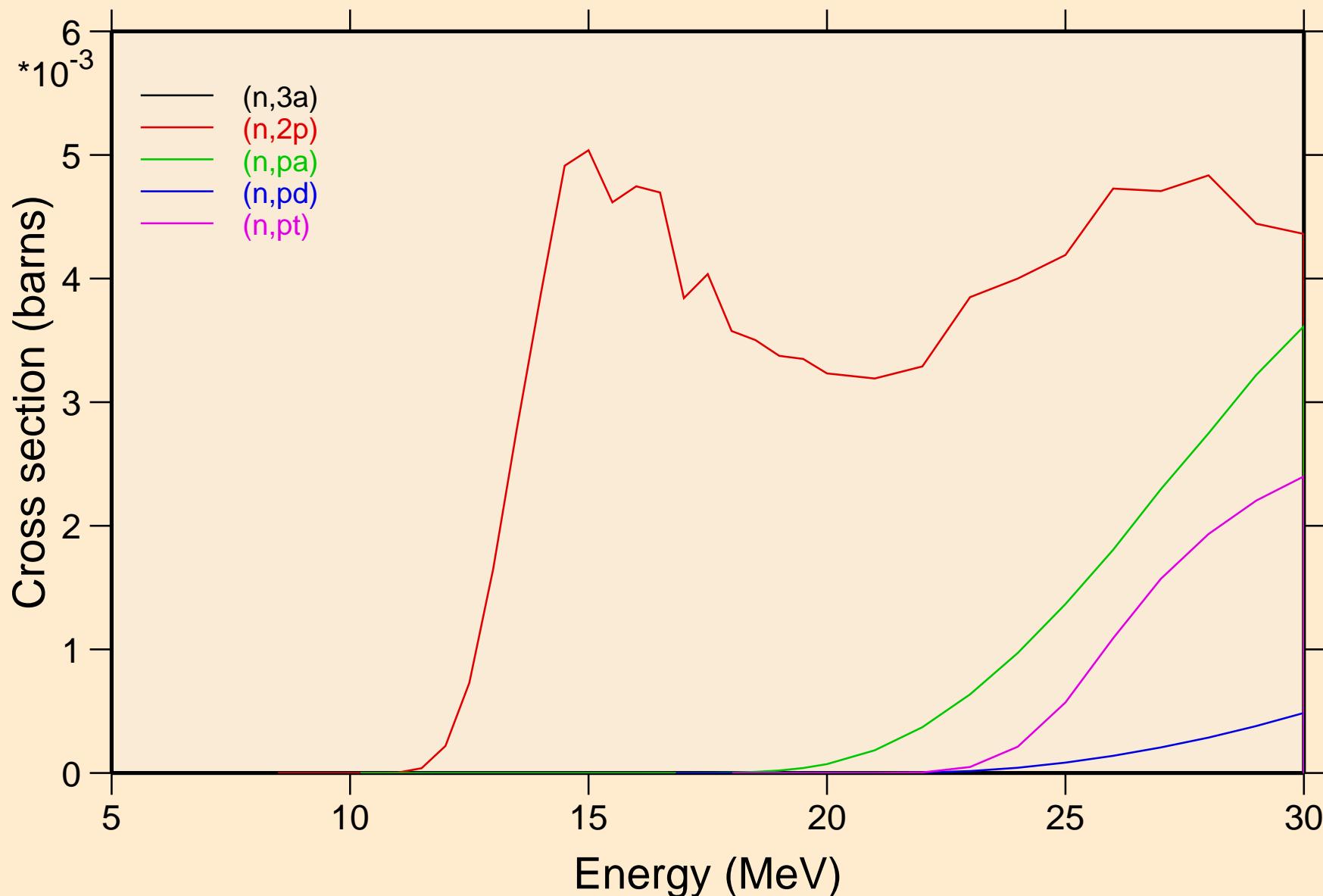
# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Threshold reactions

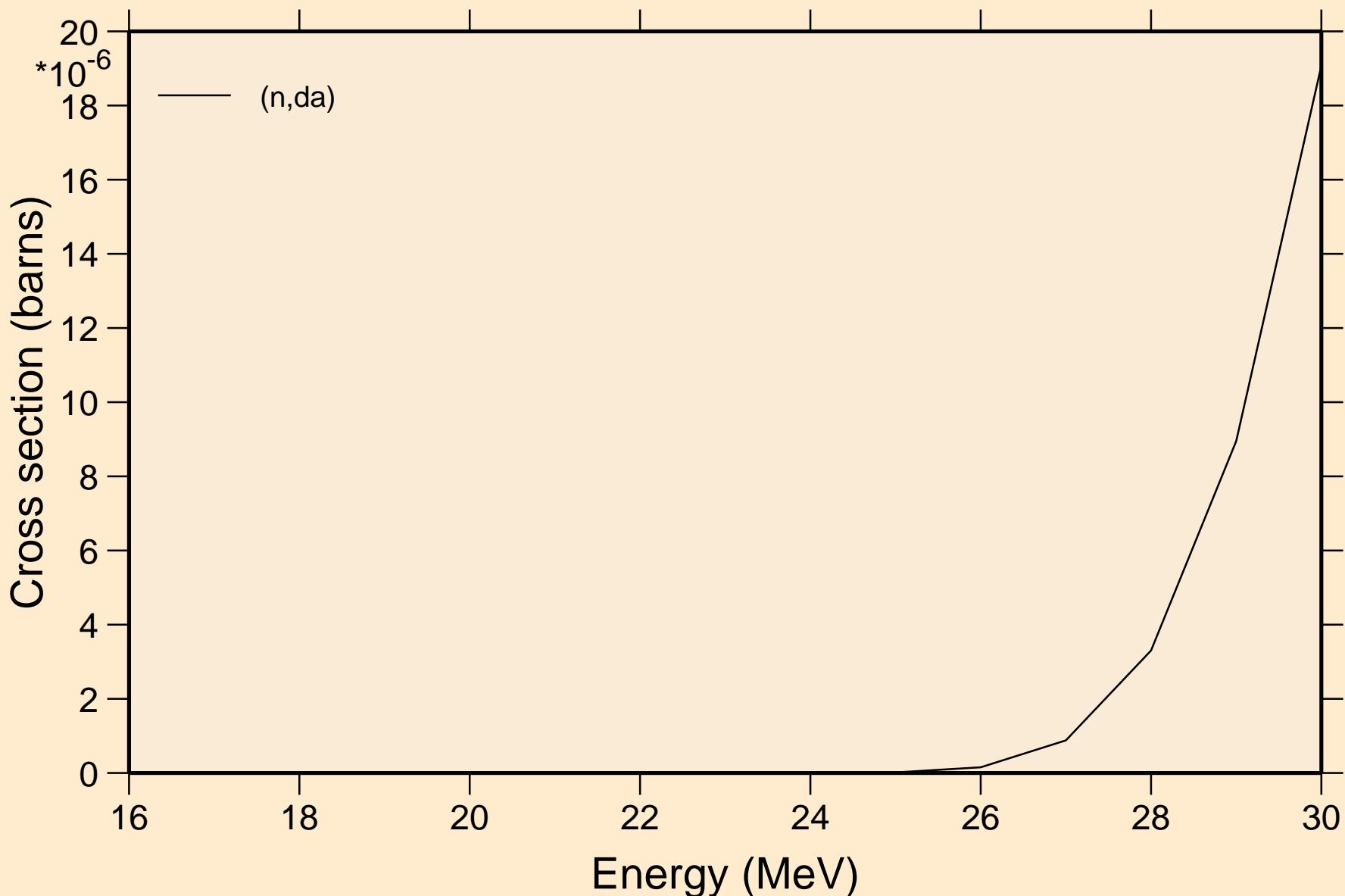


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

## Threshold reactions

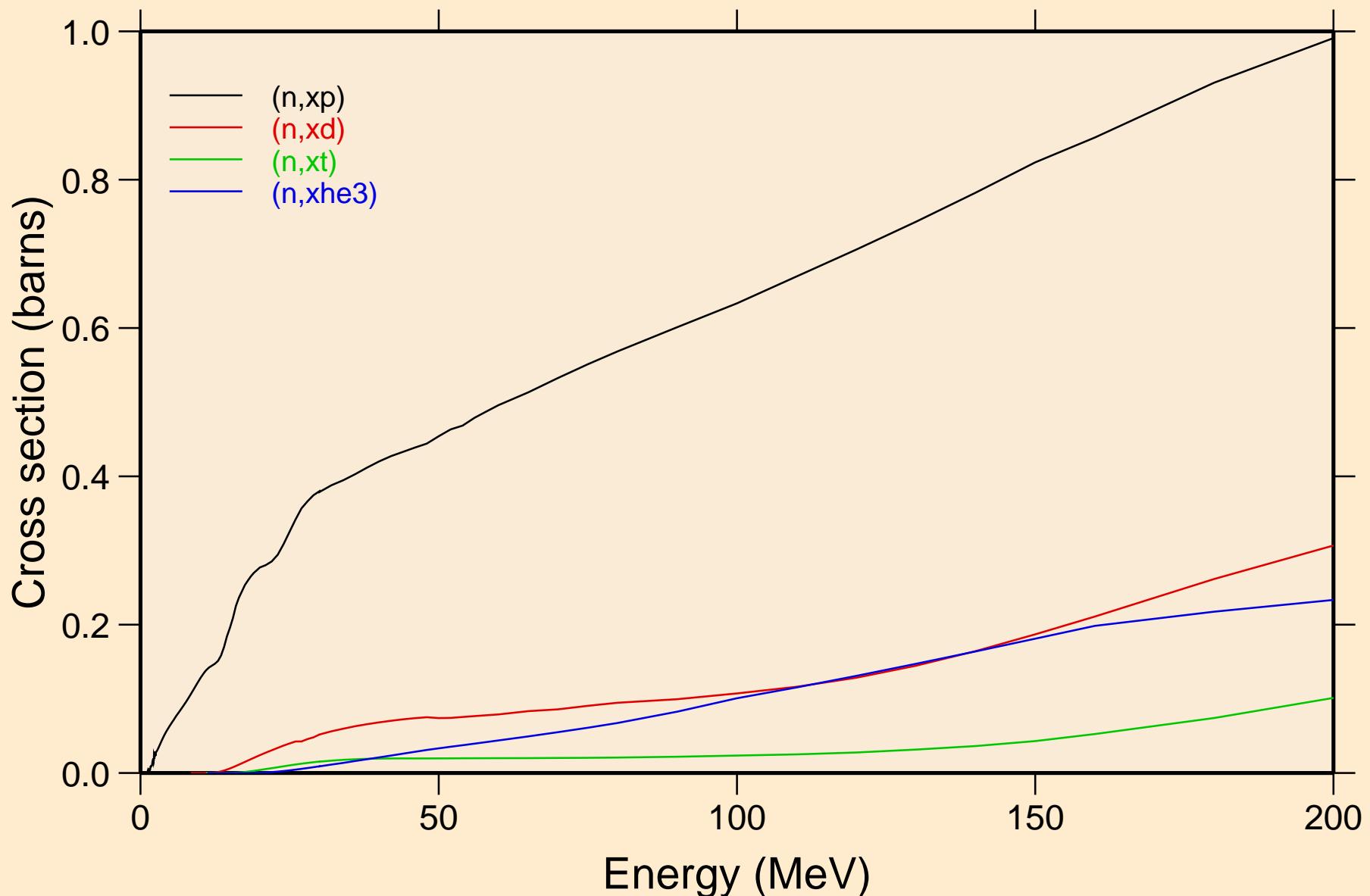


MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Threshold reactions

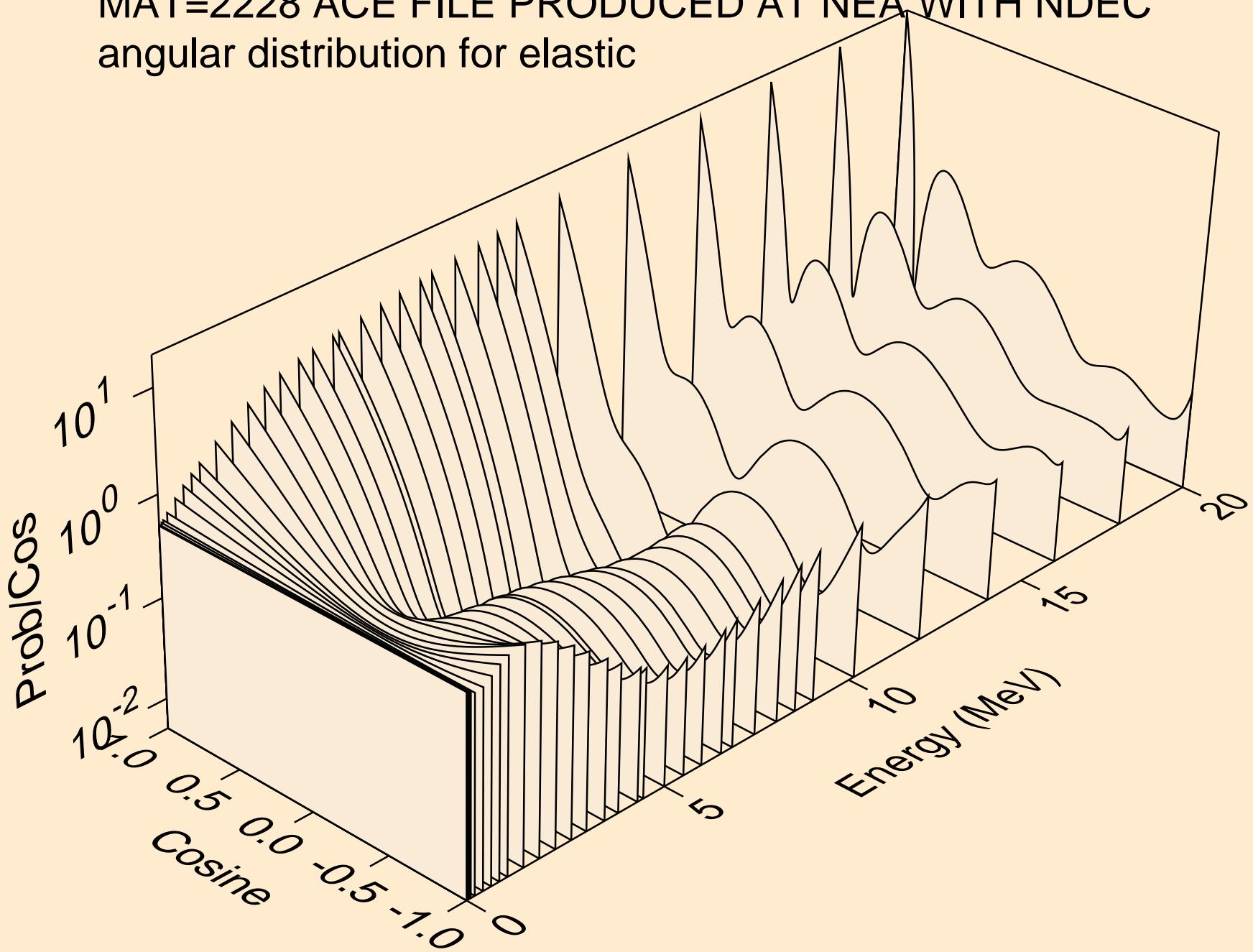


# MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC

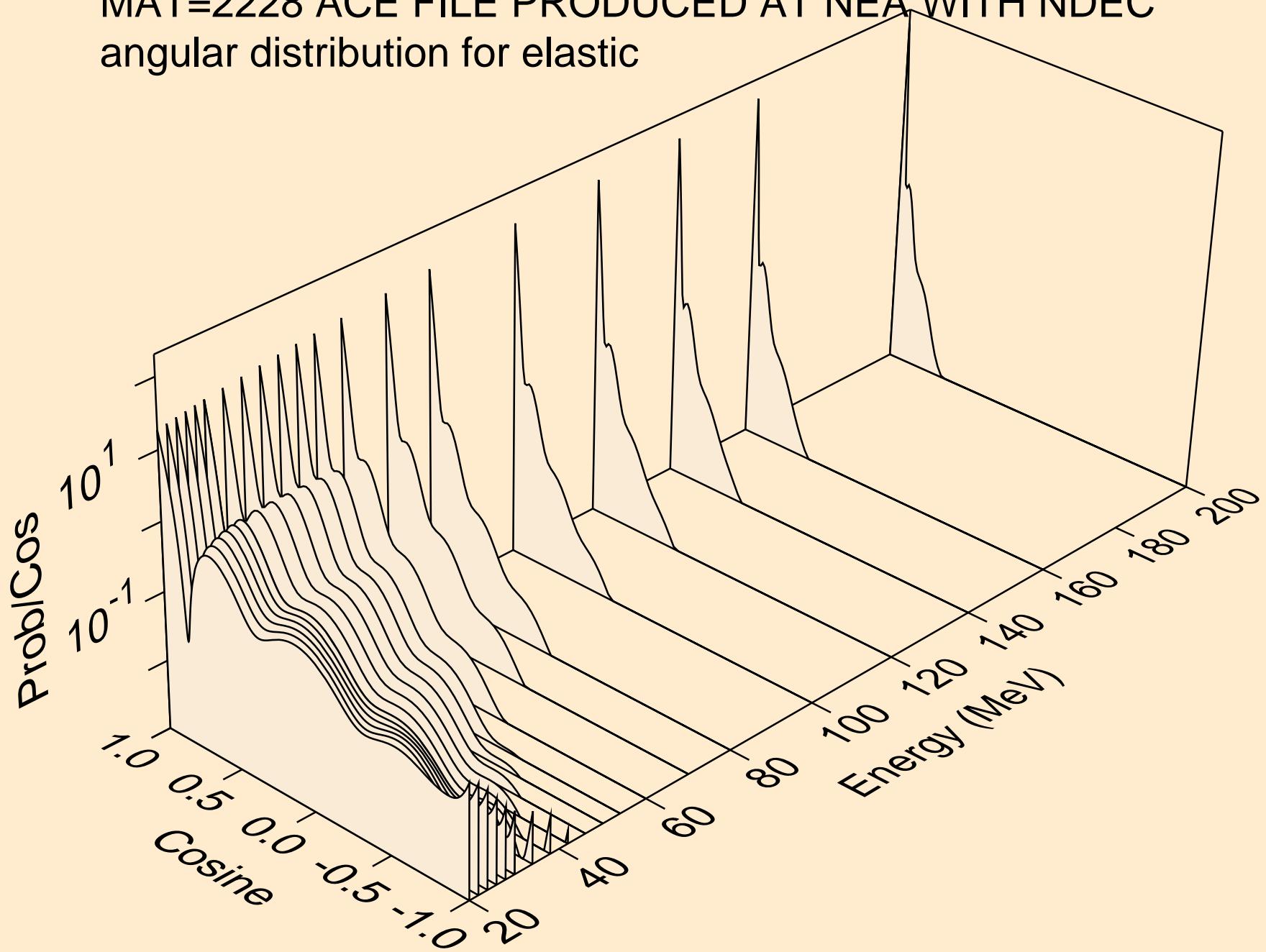
## Threshold reactions



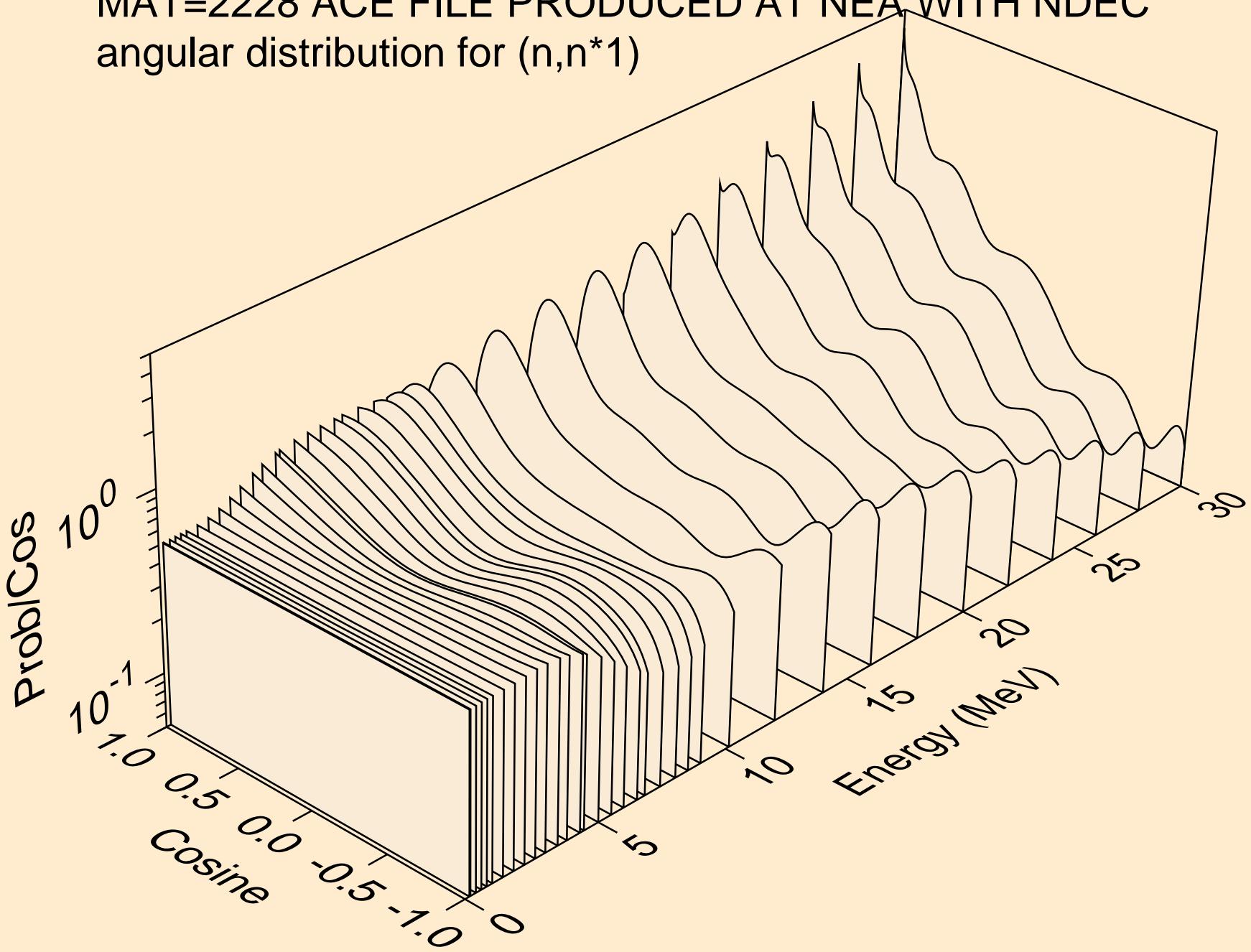
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for elastic



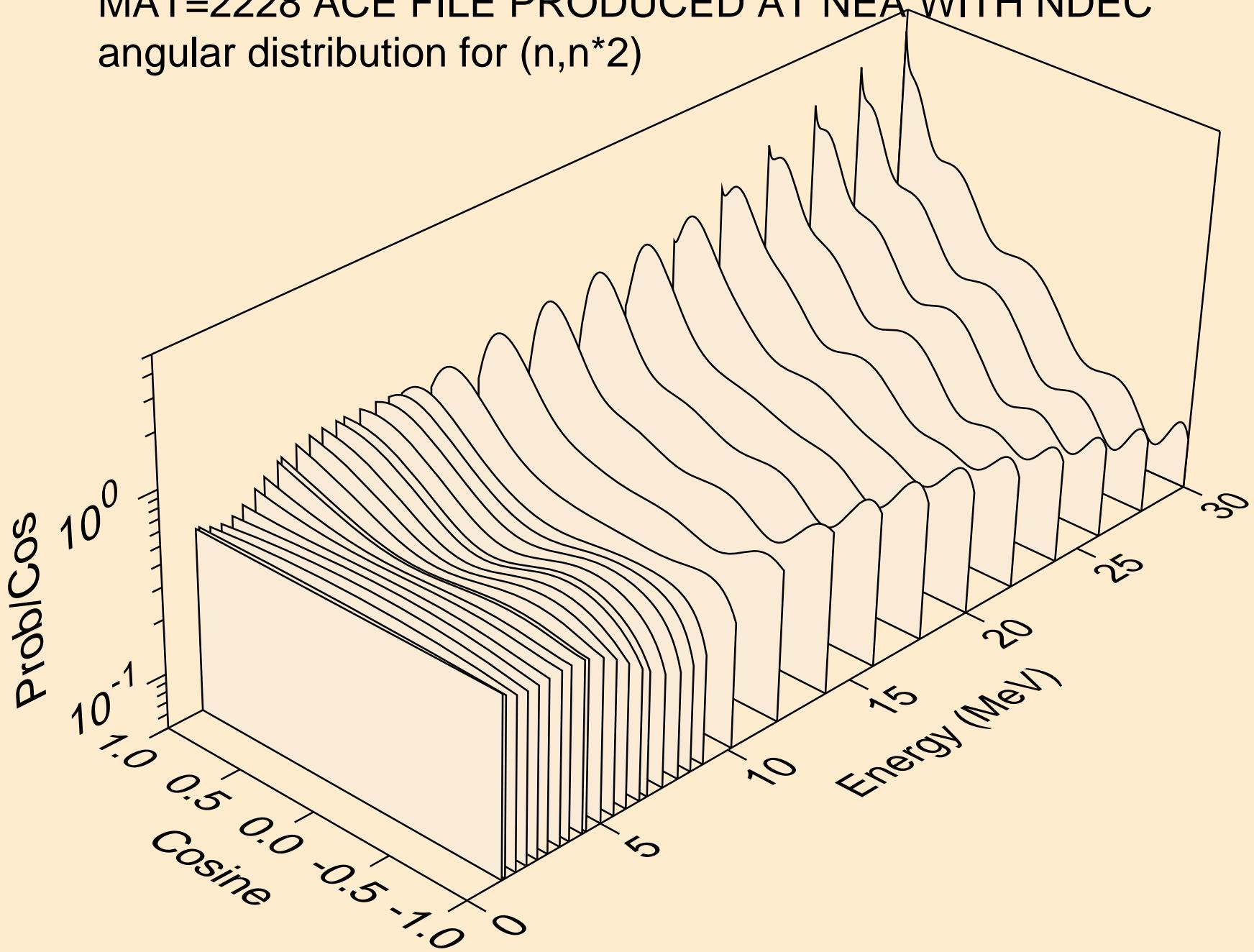
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for elastic



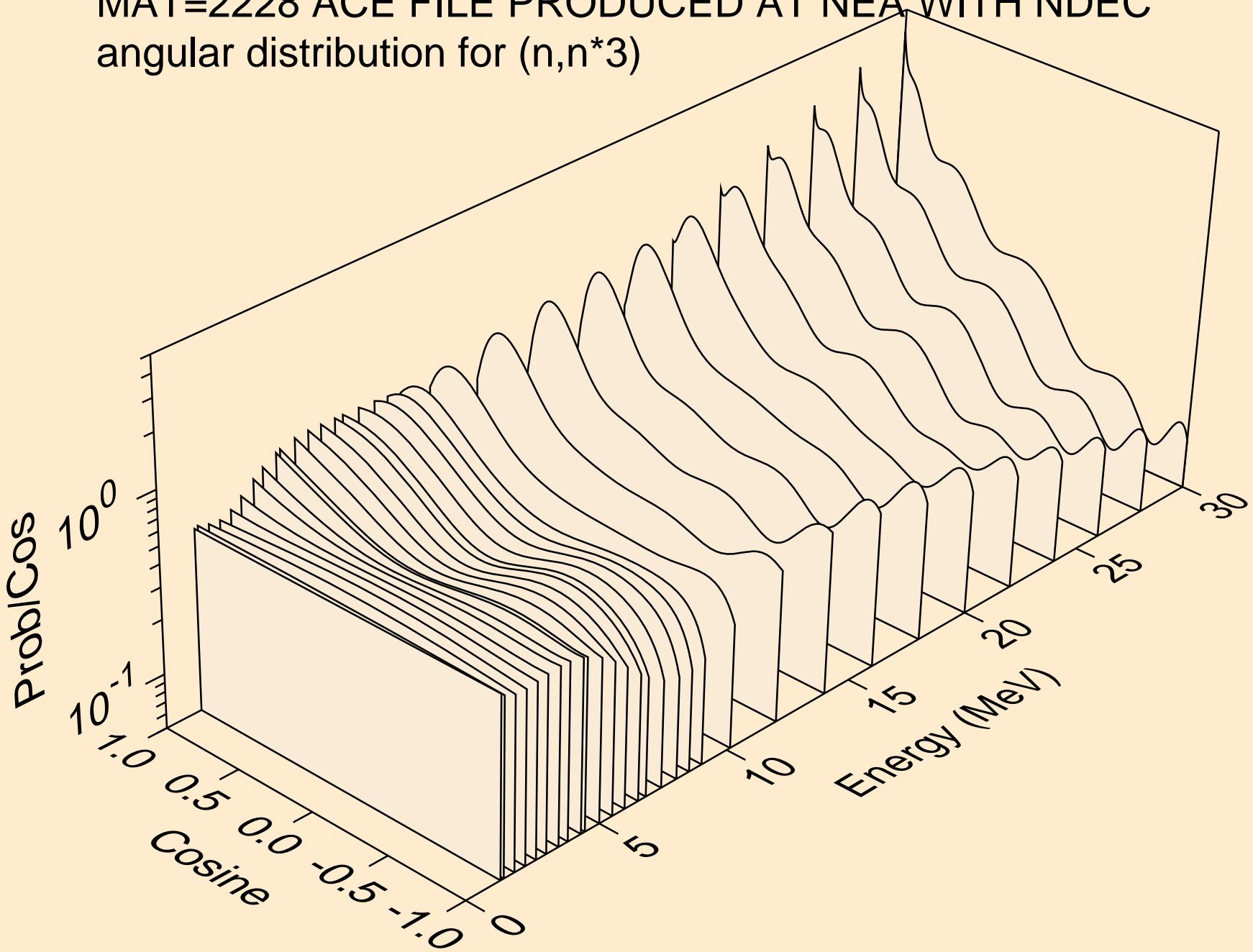
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*1)



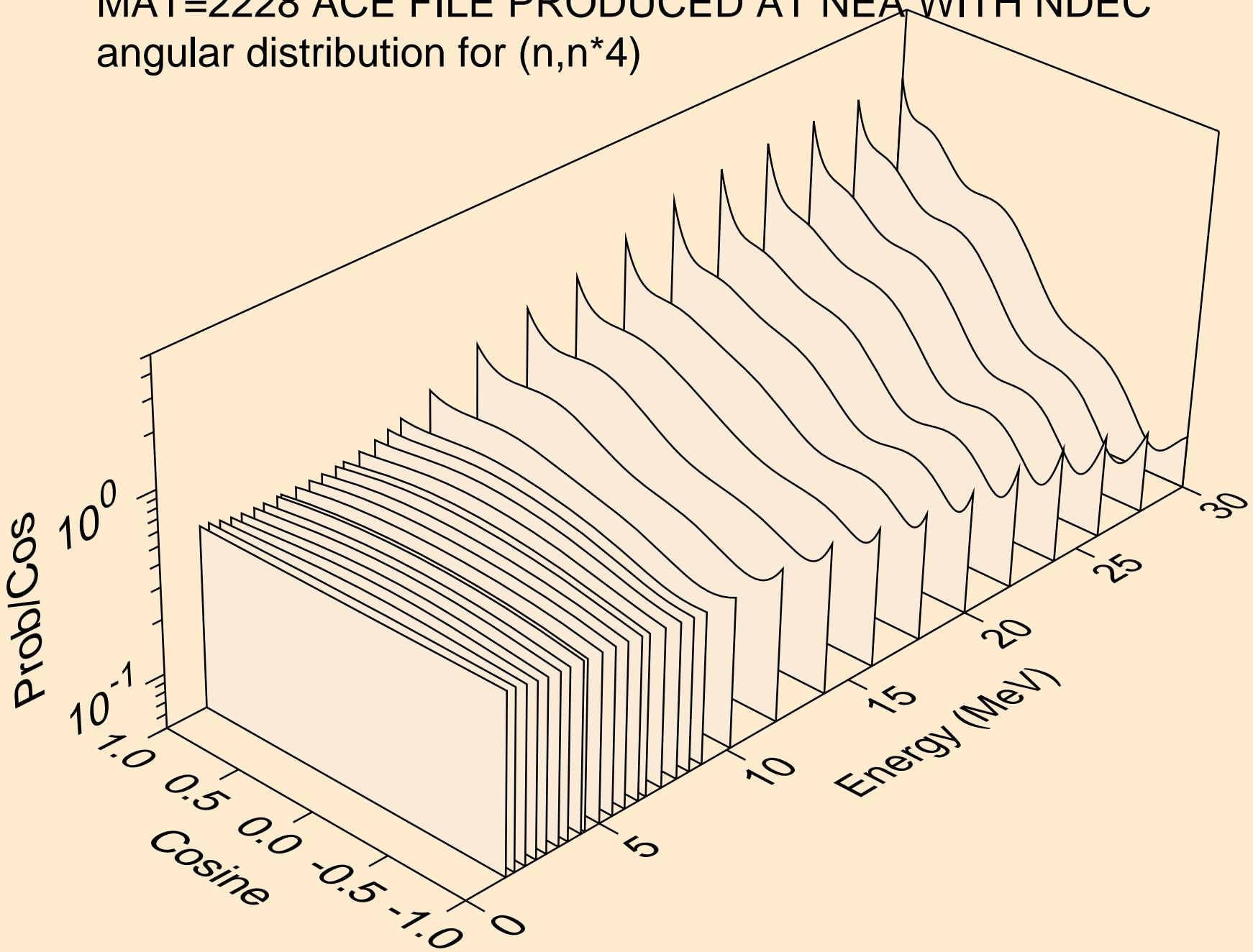
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for  $(n, n^*2)$



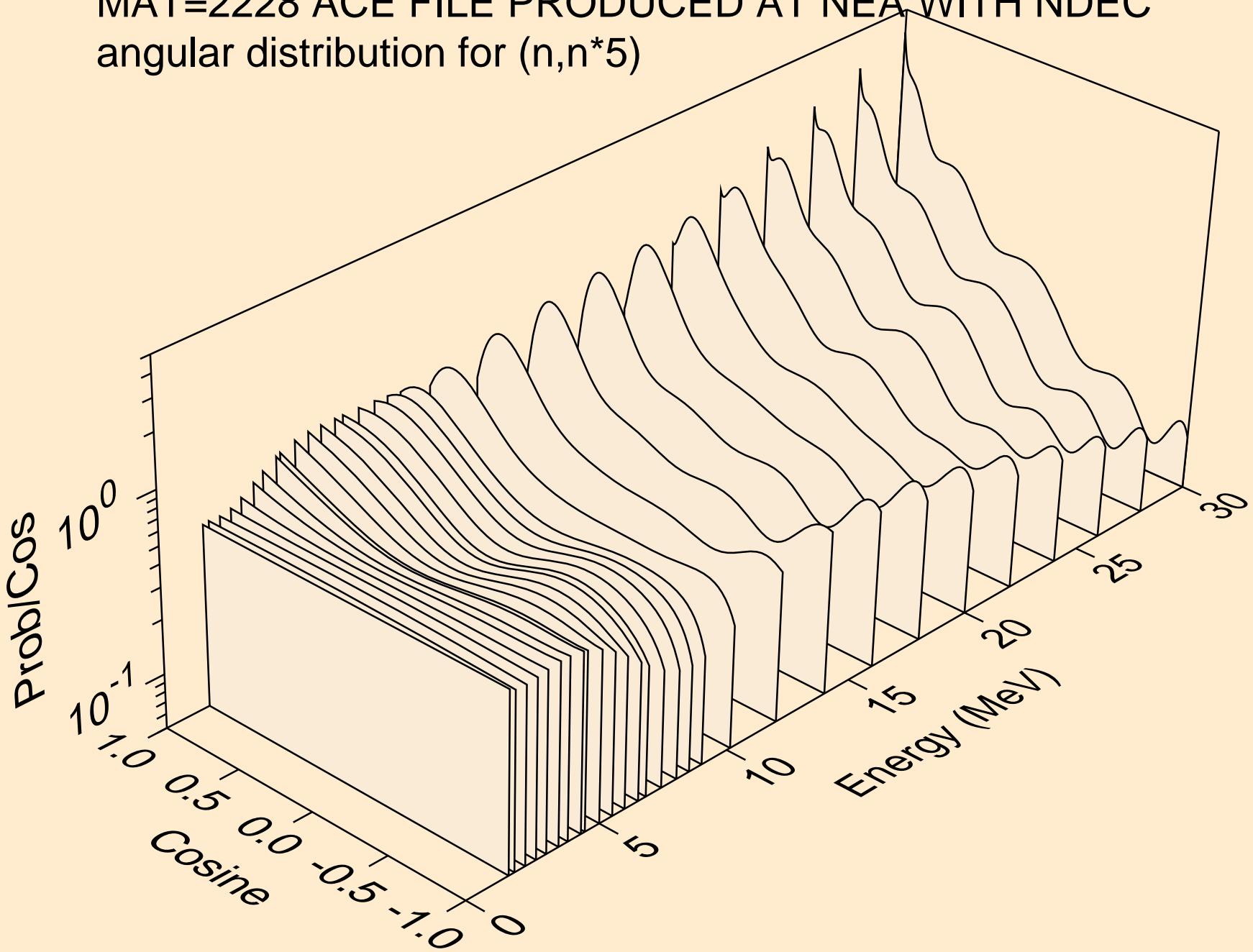
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*3)



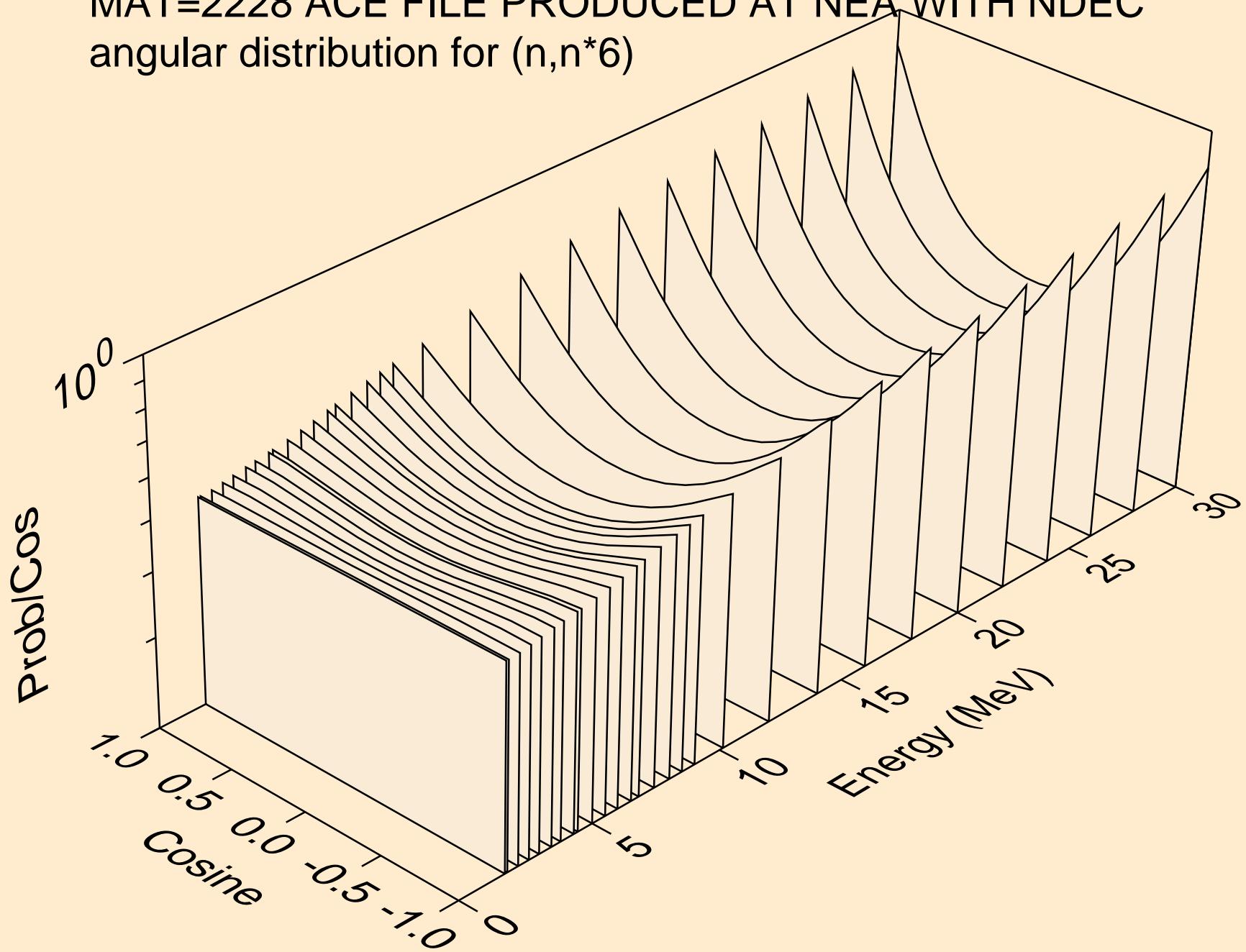
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*4)



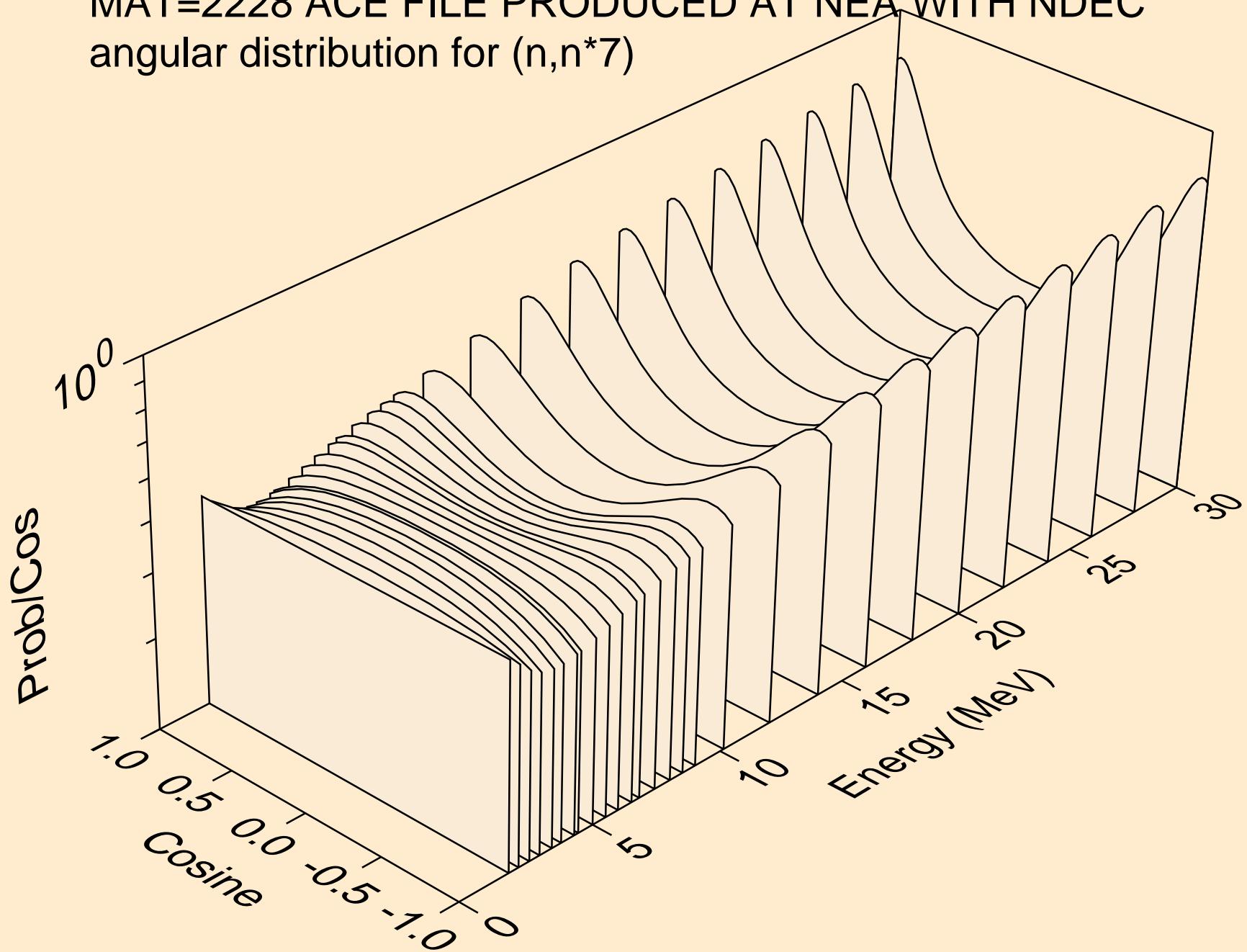
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*5)



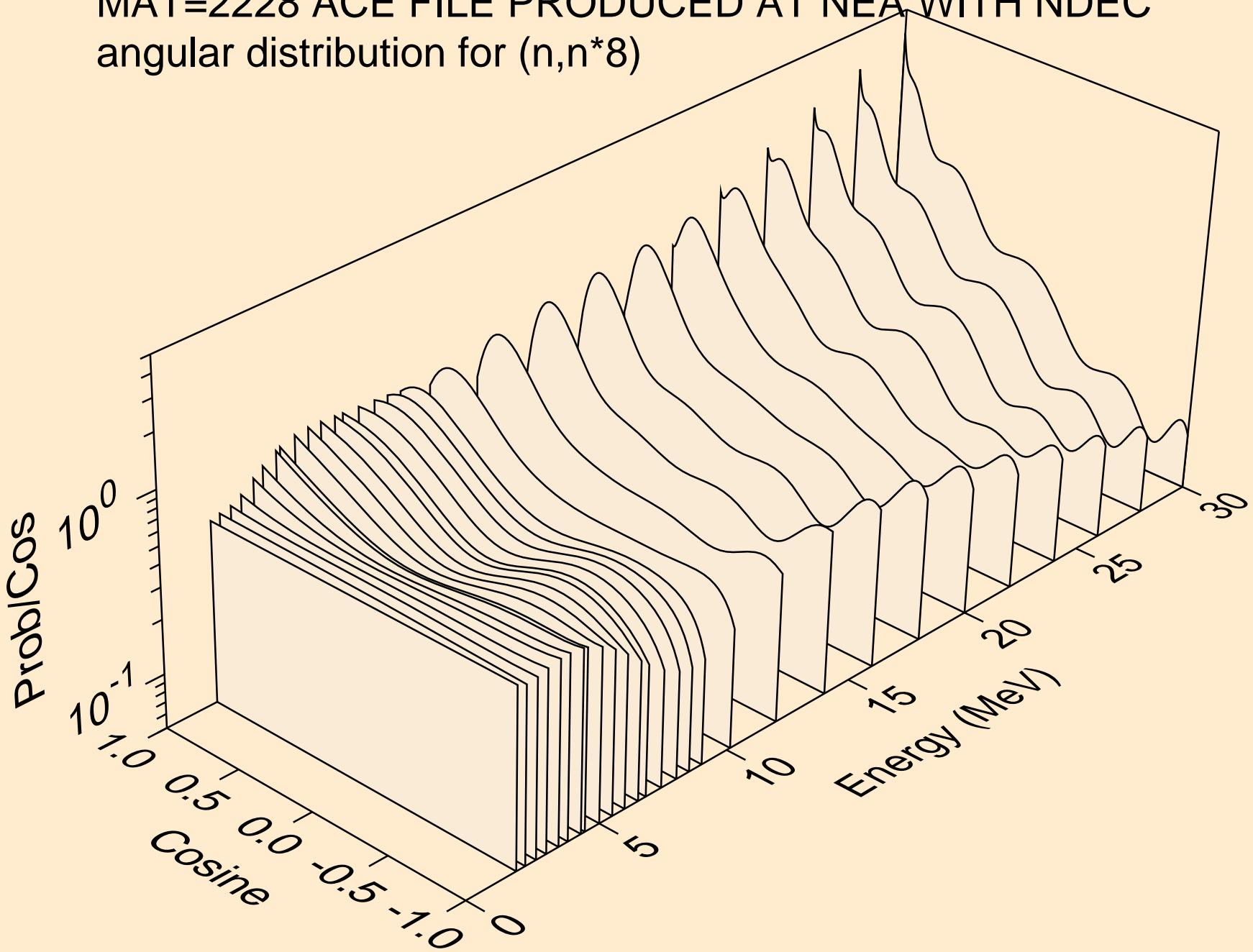
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*6)



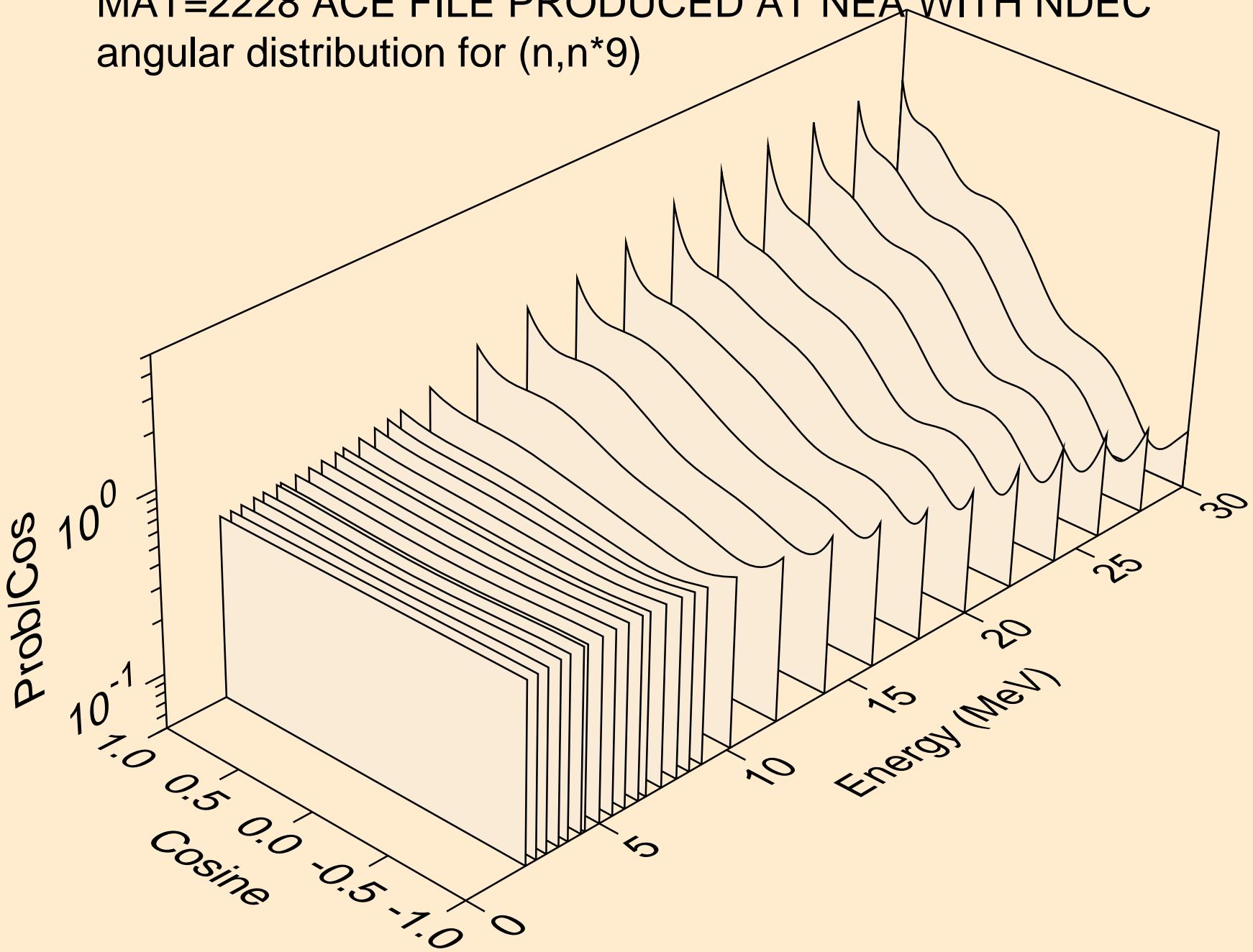
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*7)



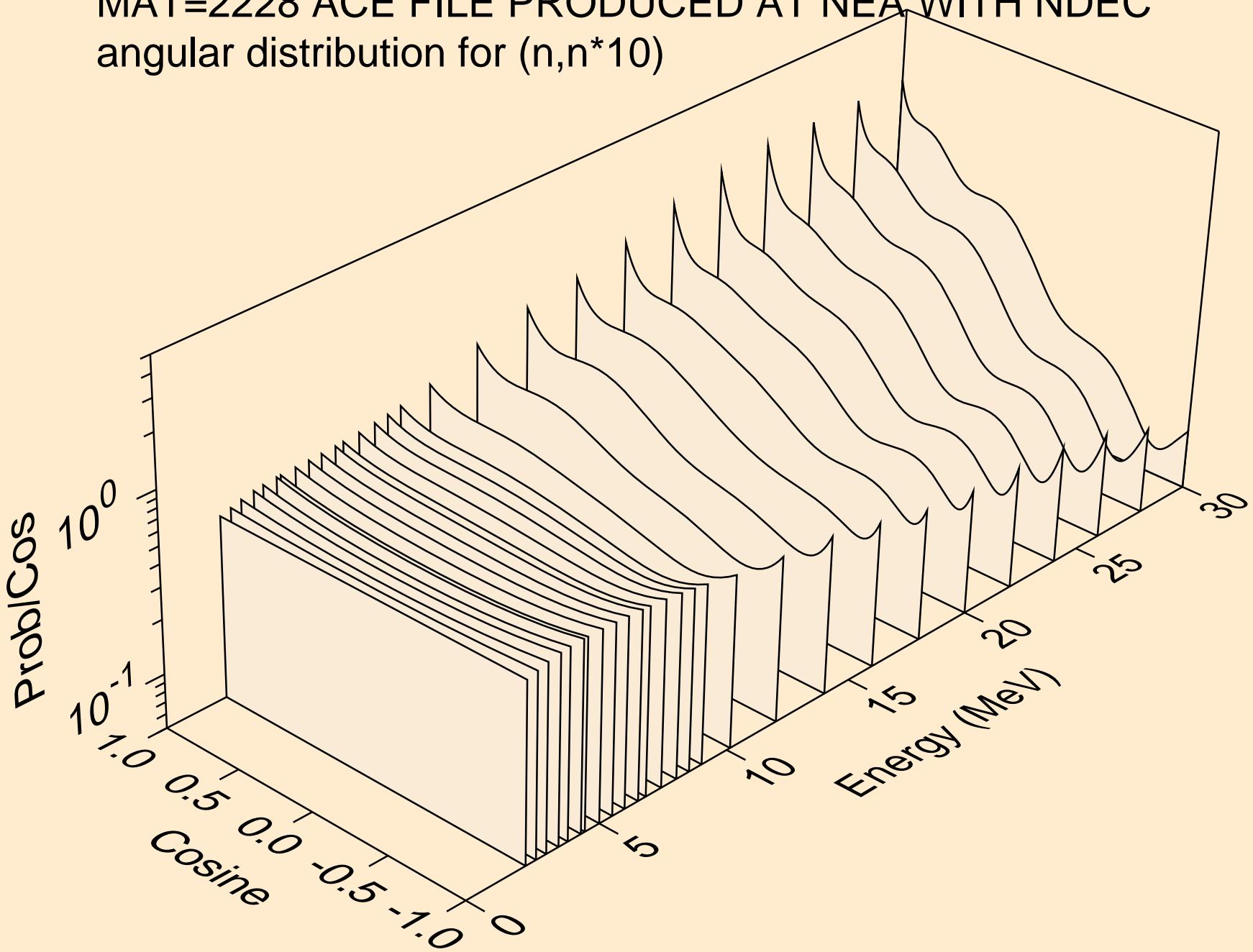
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*8)



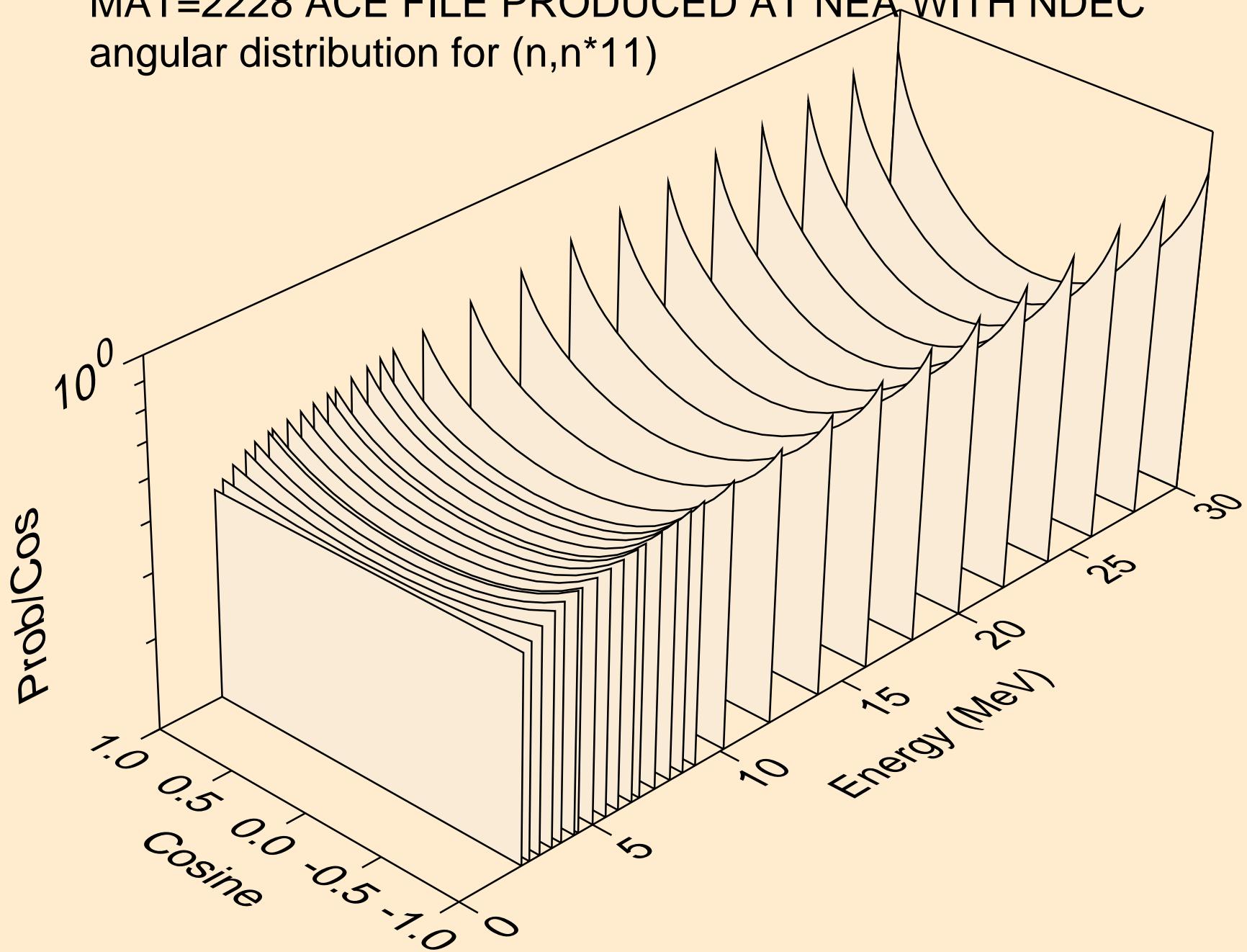
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*9)



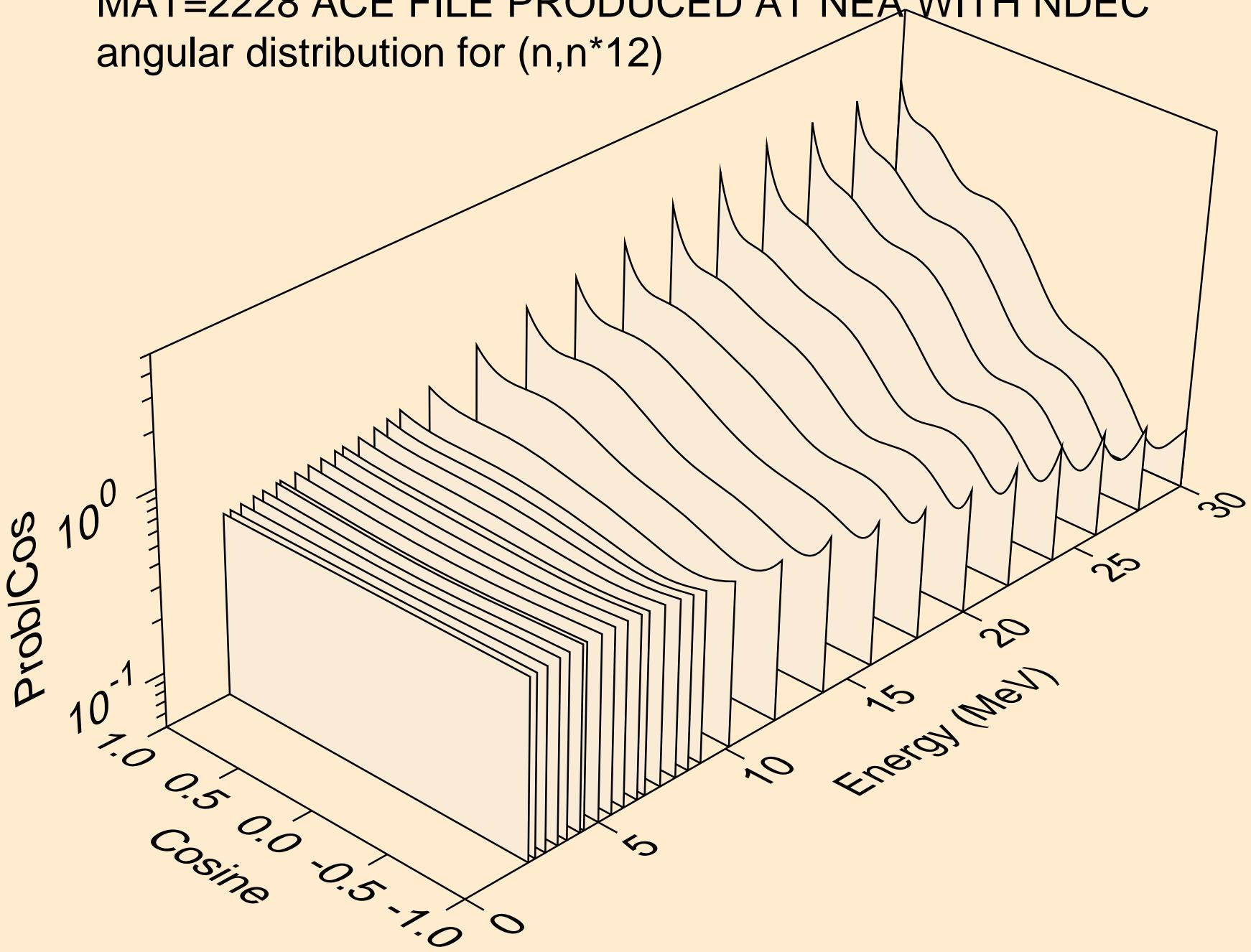
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angular distribution for (n,n\*10)



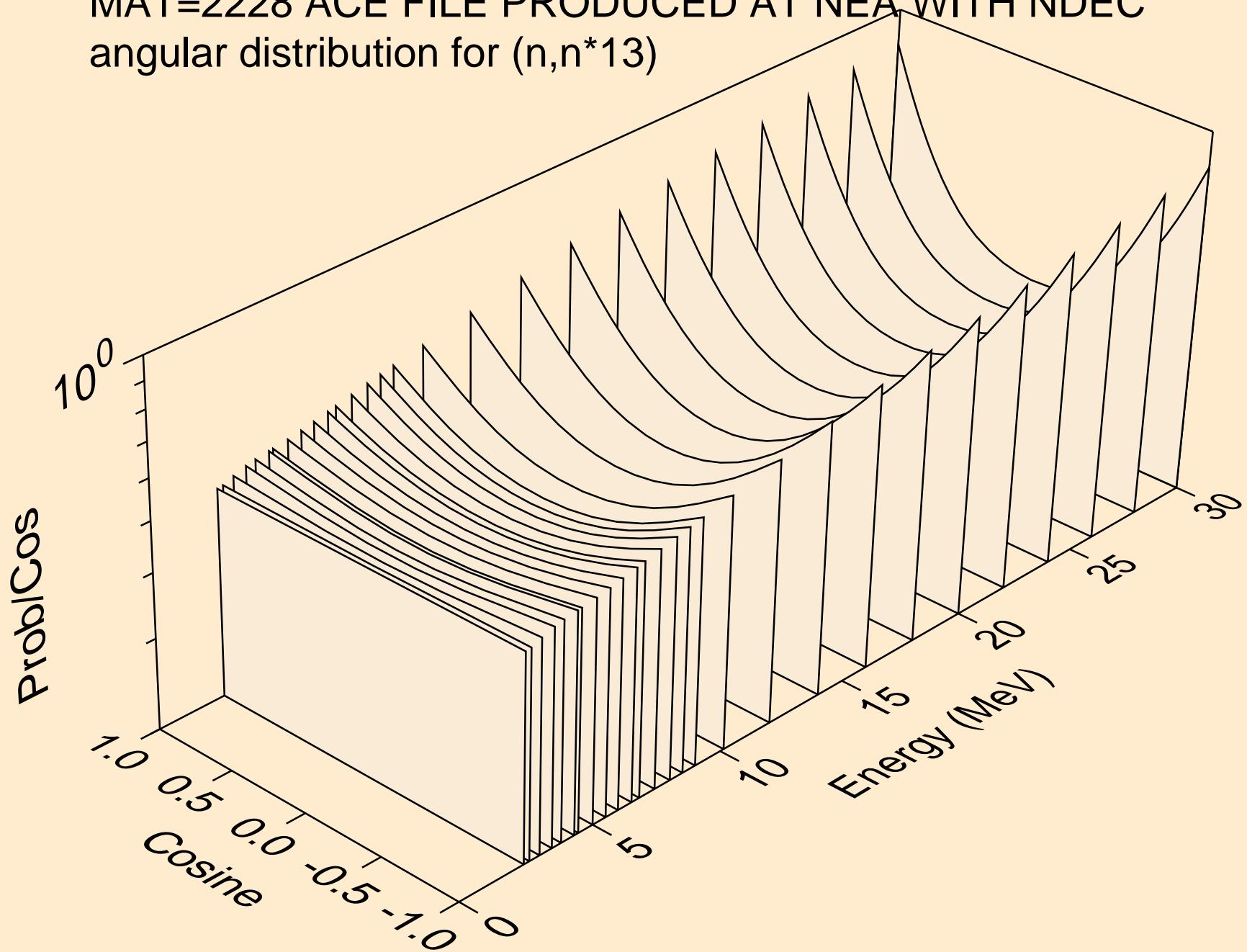
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*11)



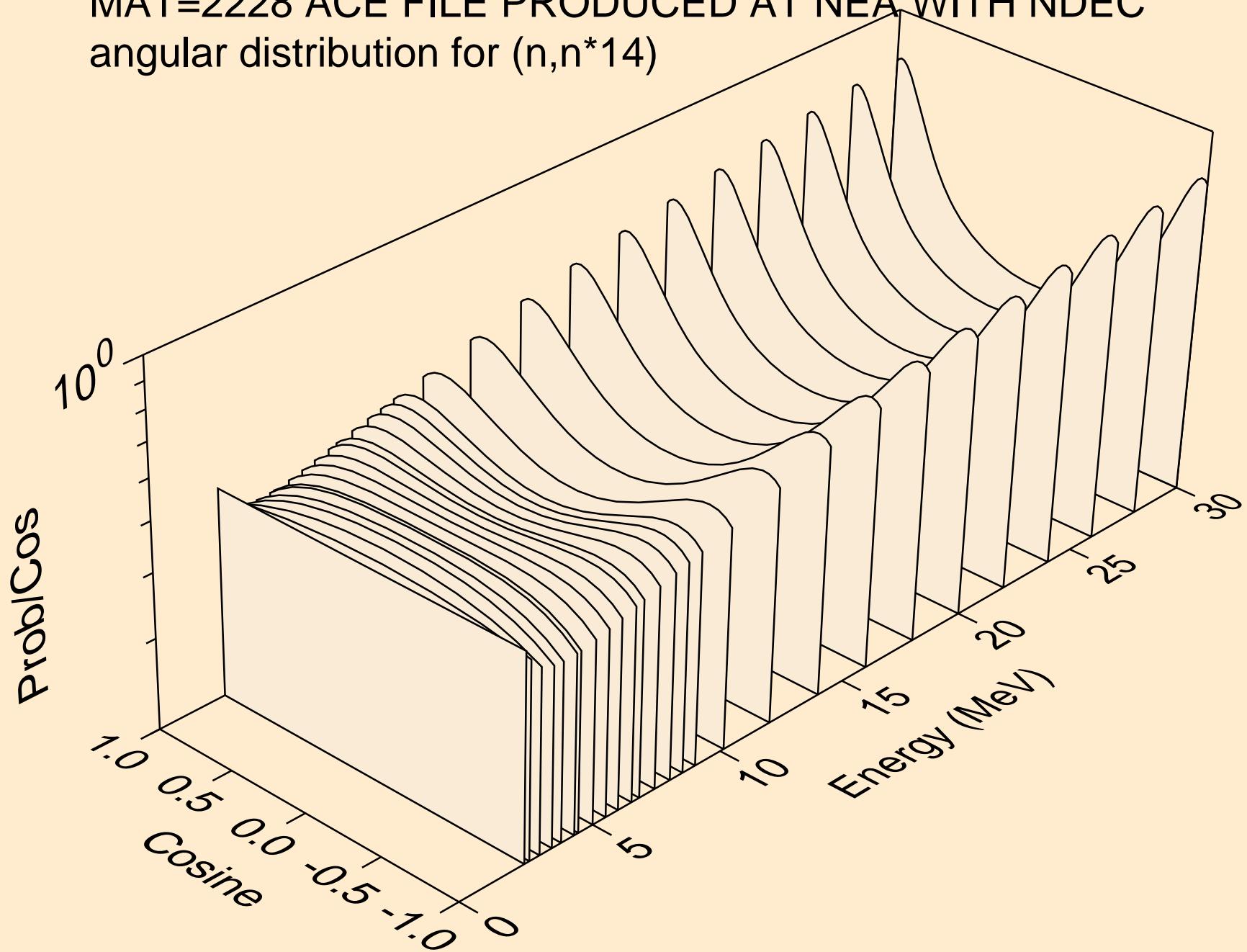
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*12)



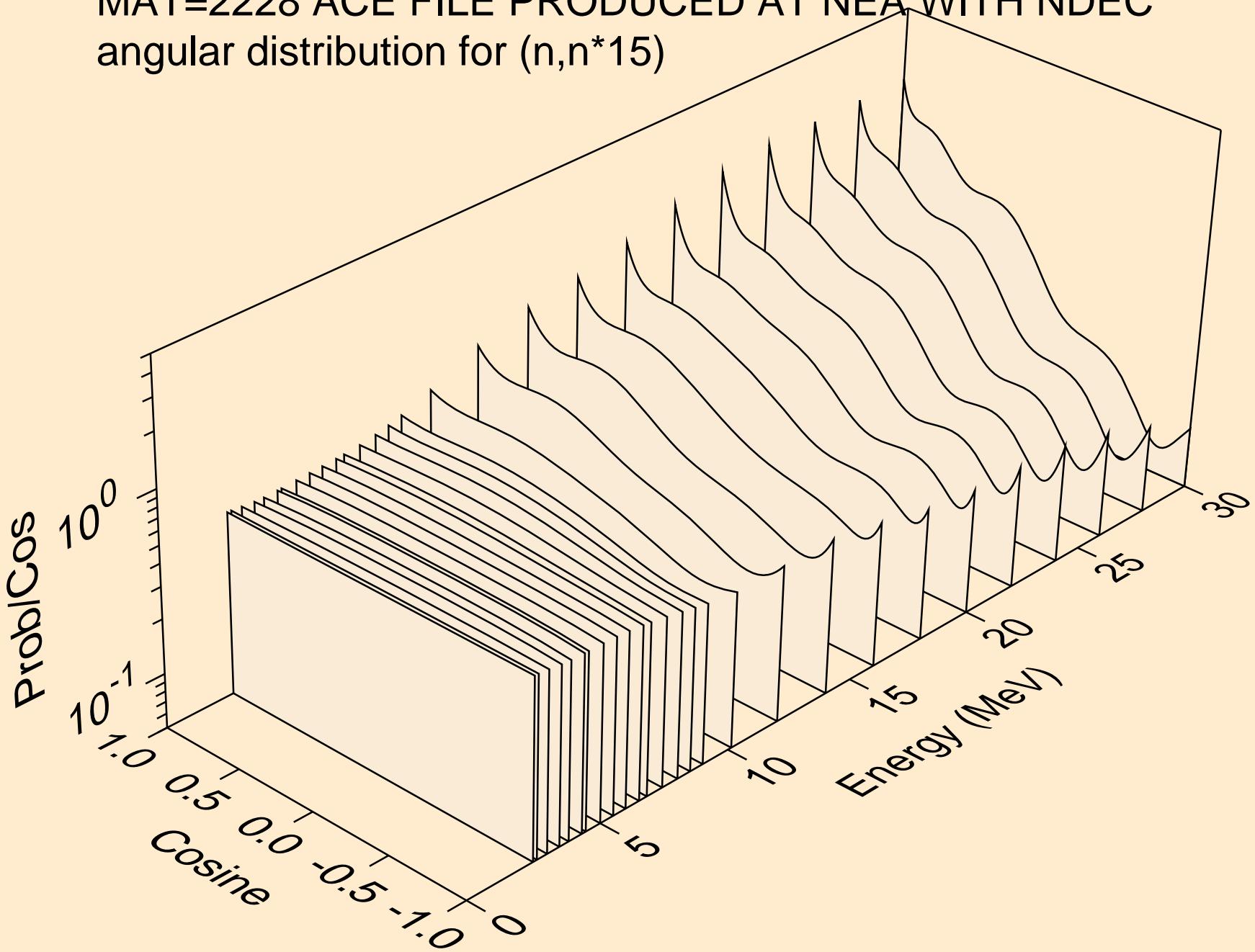
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*13)



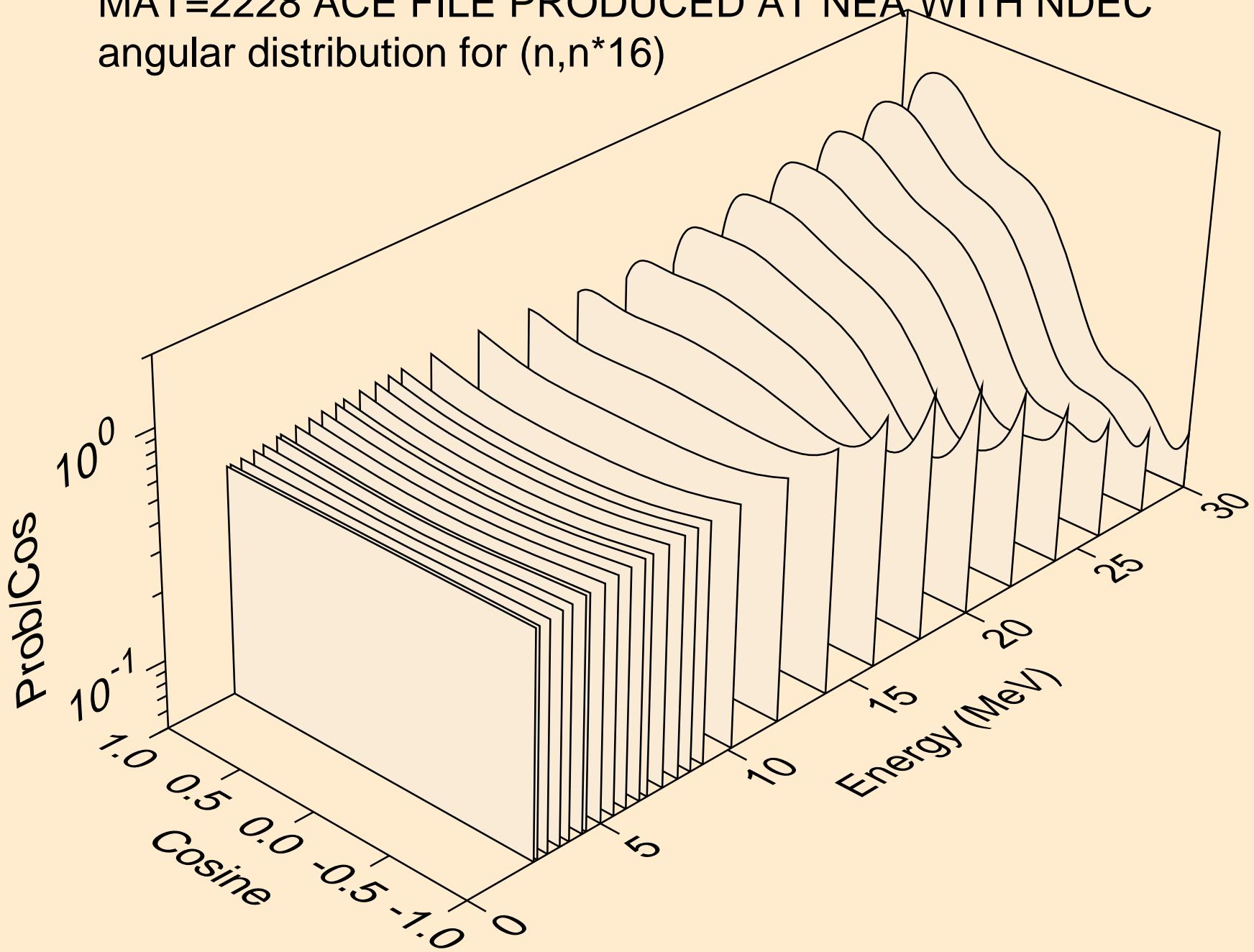
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*14)



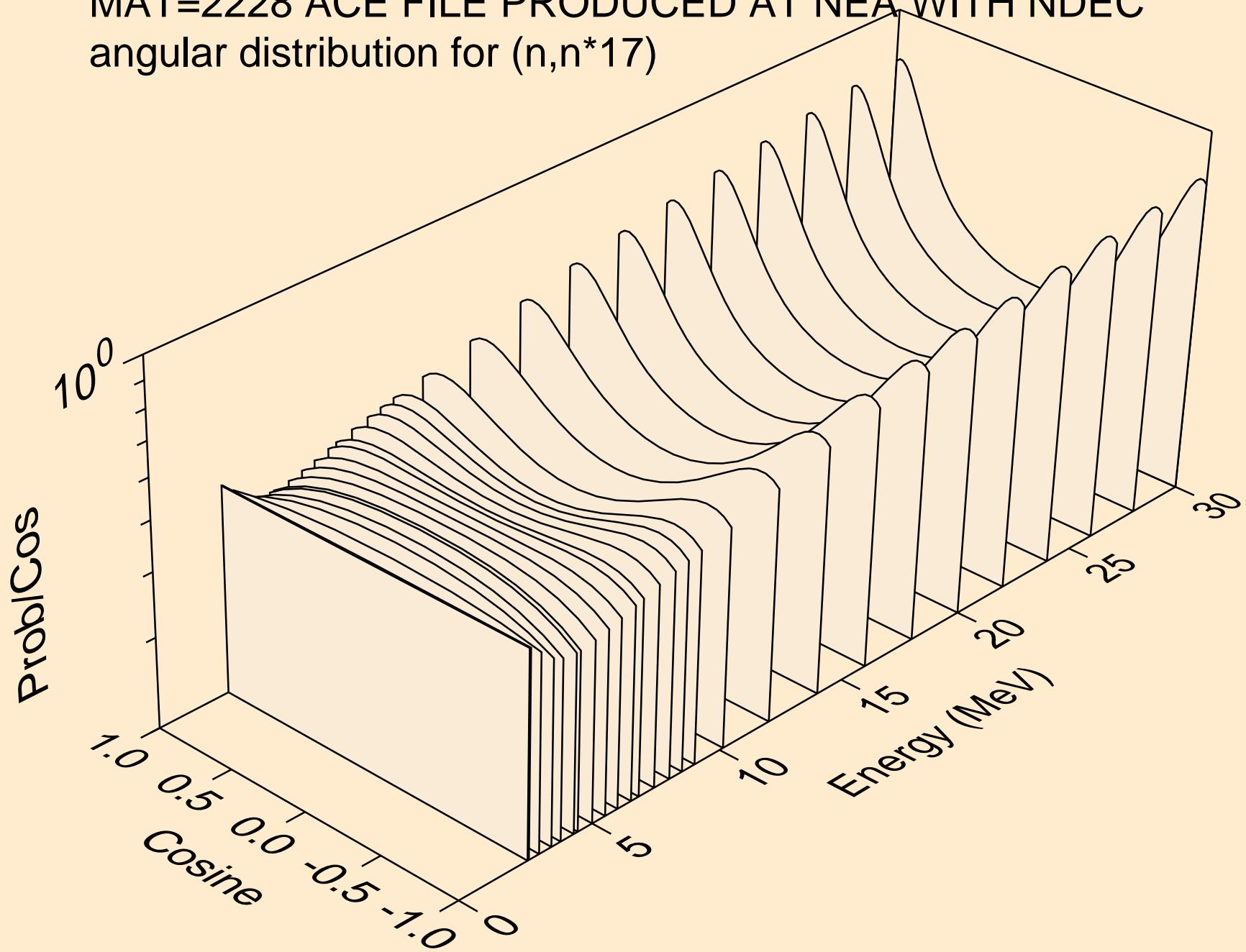
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*15)



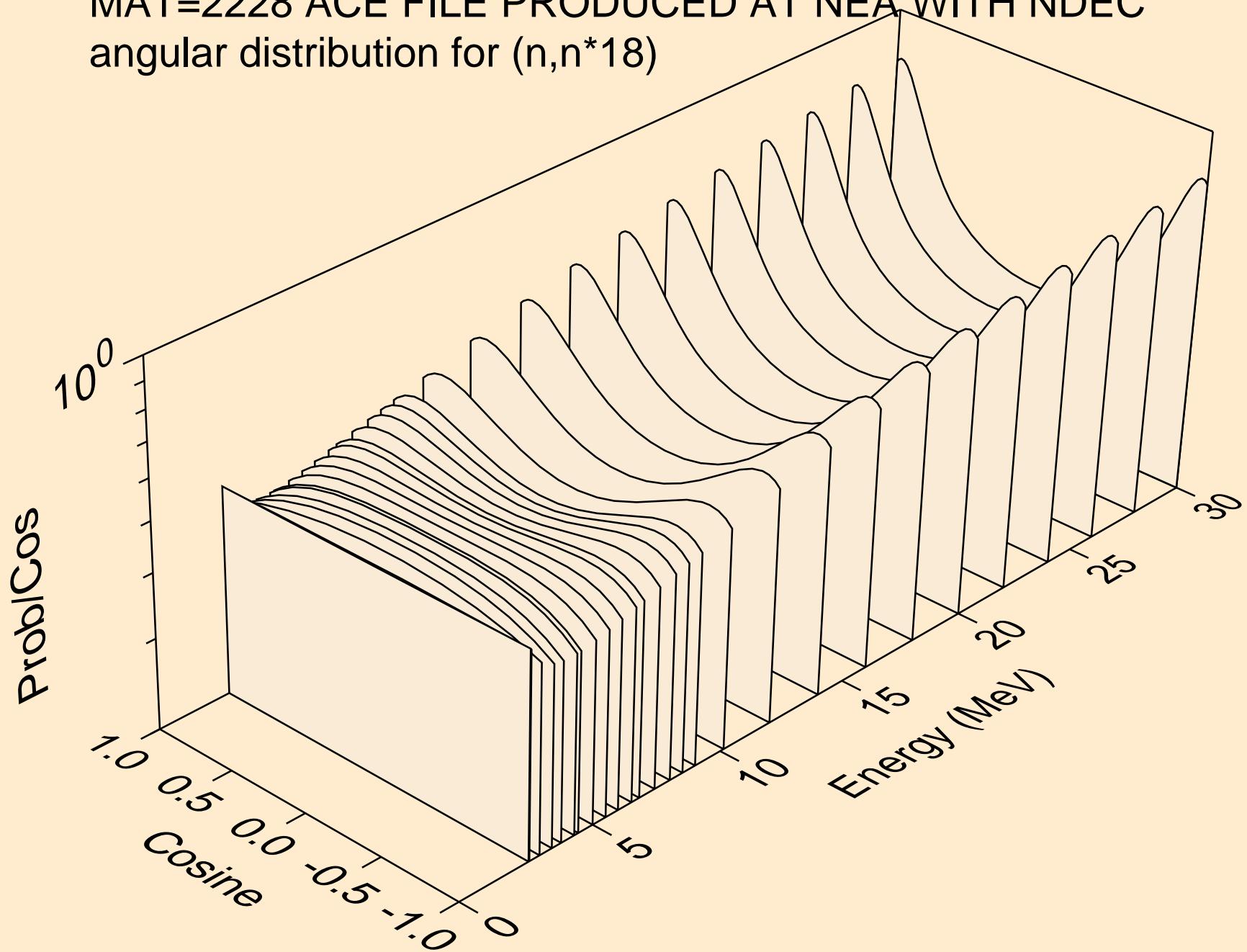
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*16)



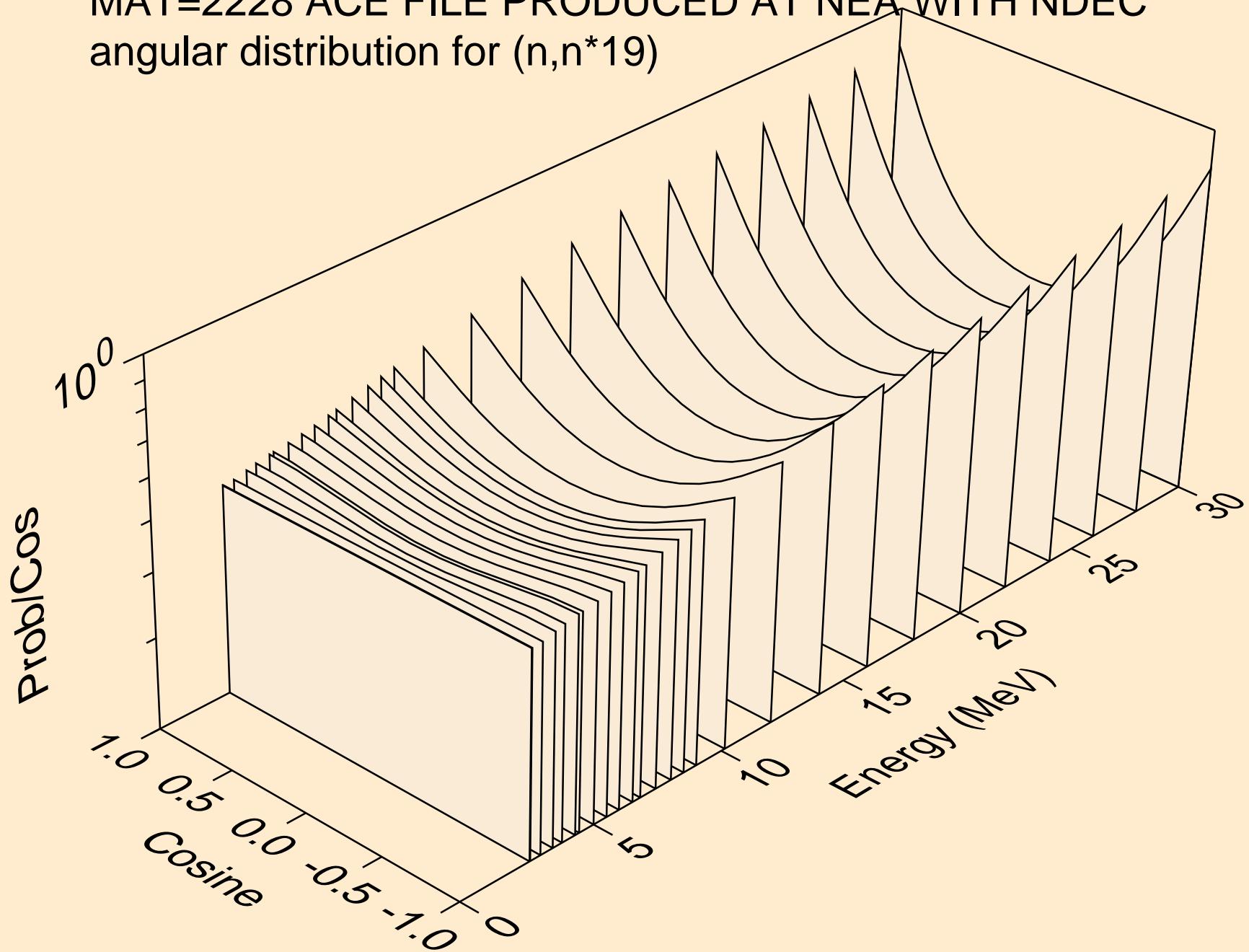
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*17)



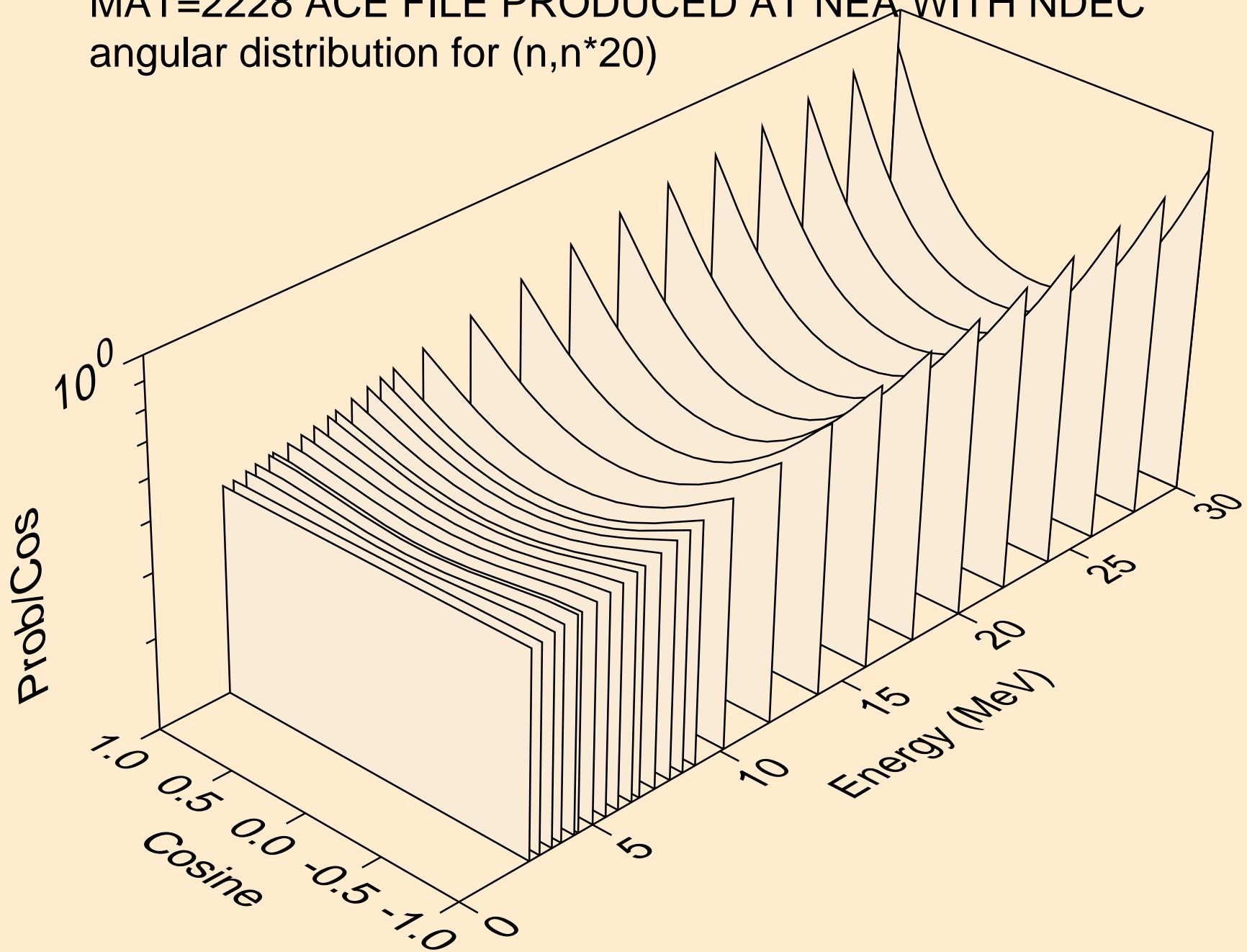
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*18)



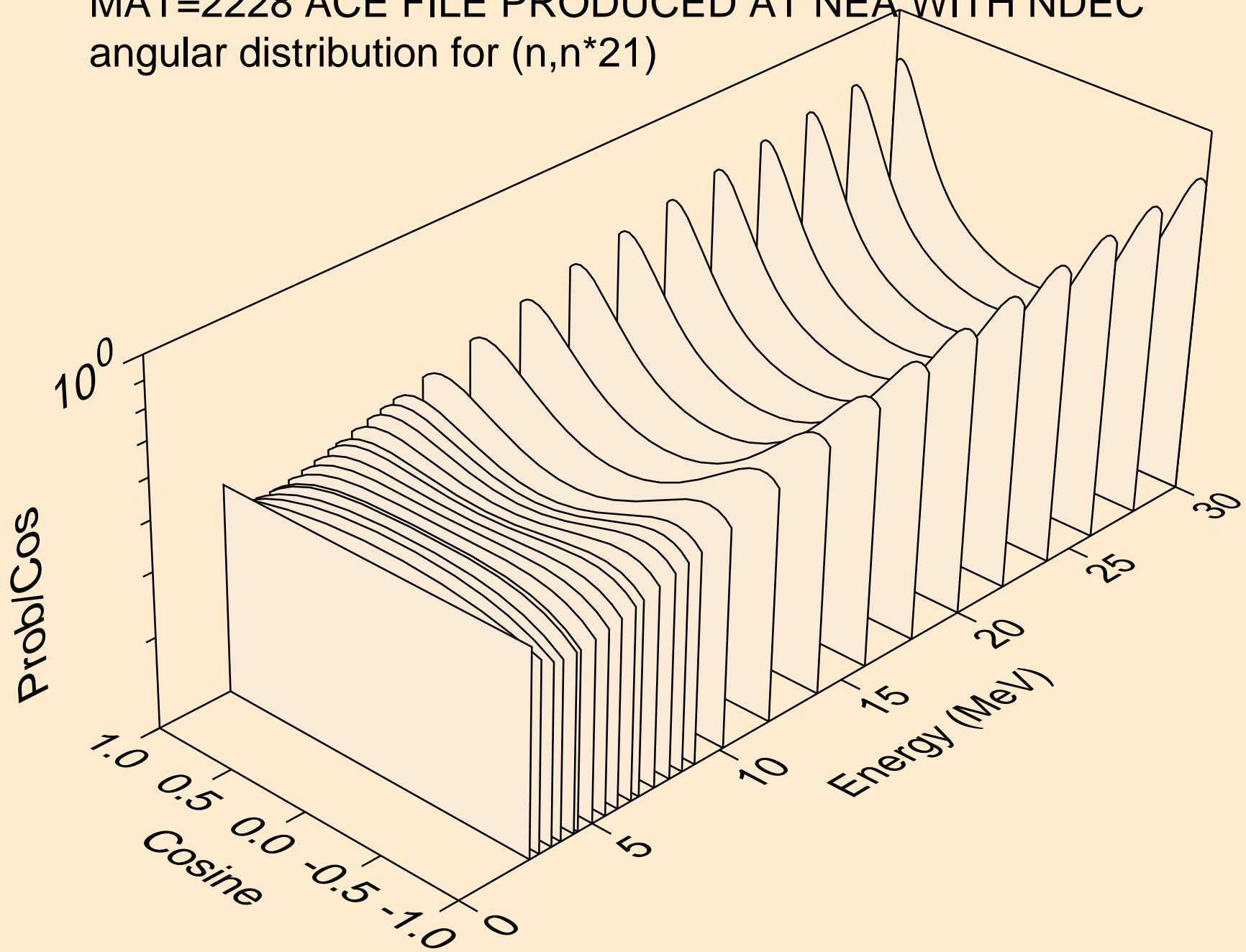
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*19)



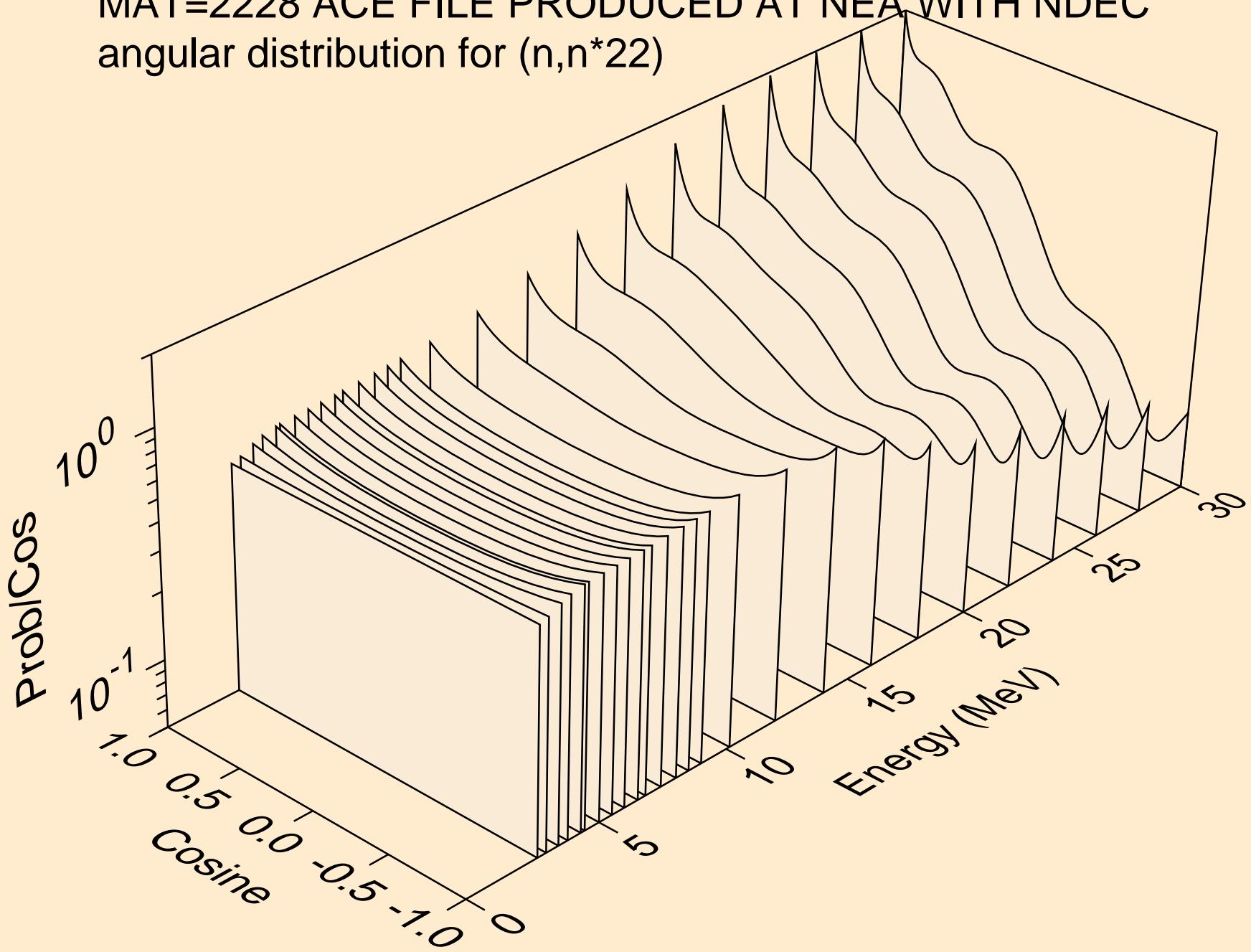
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*20)



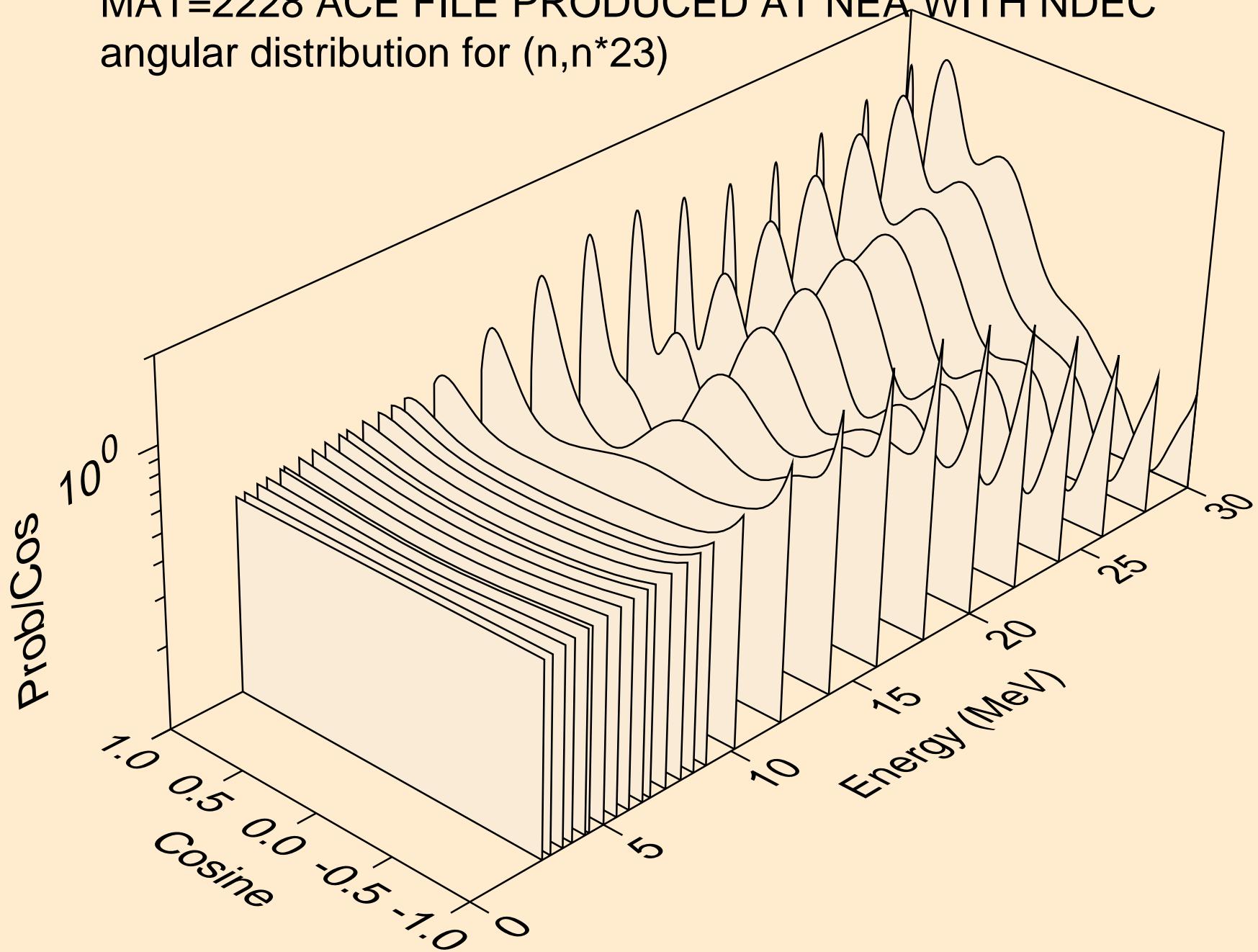
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*21)



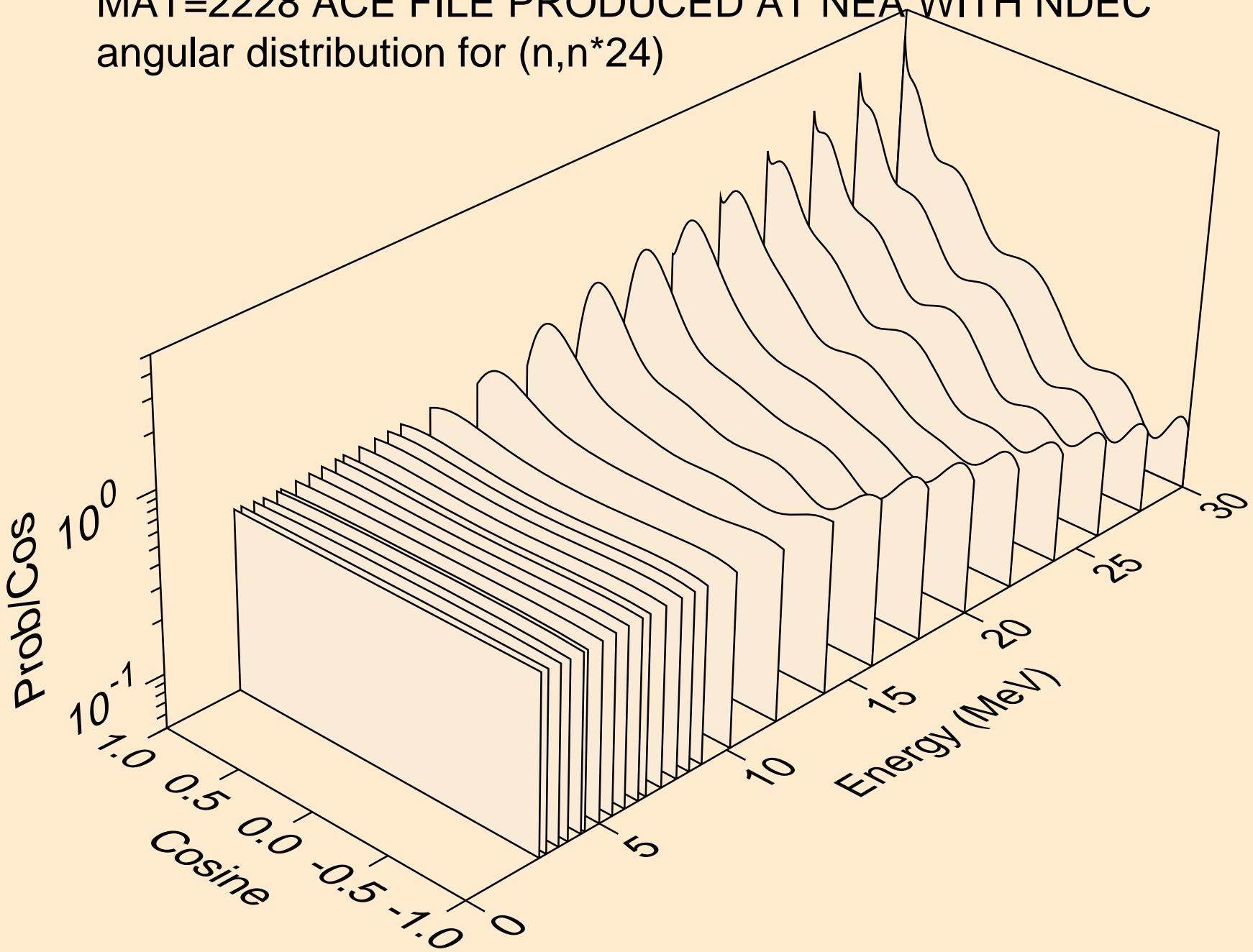
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*22)



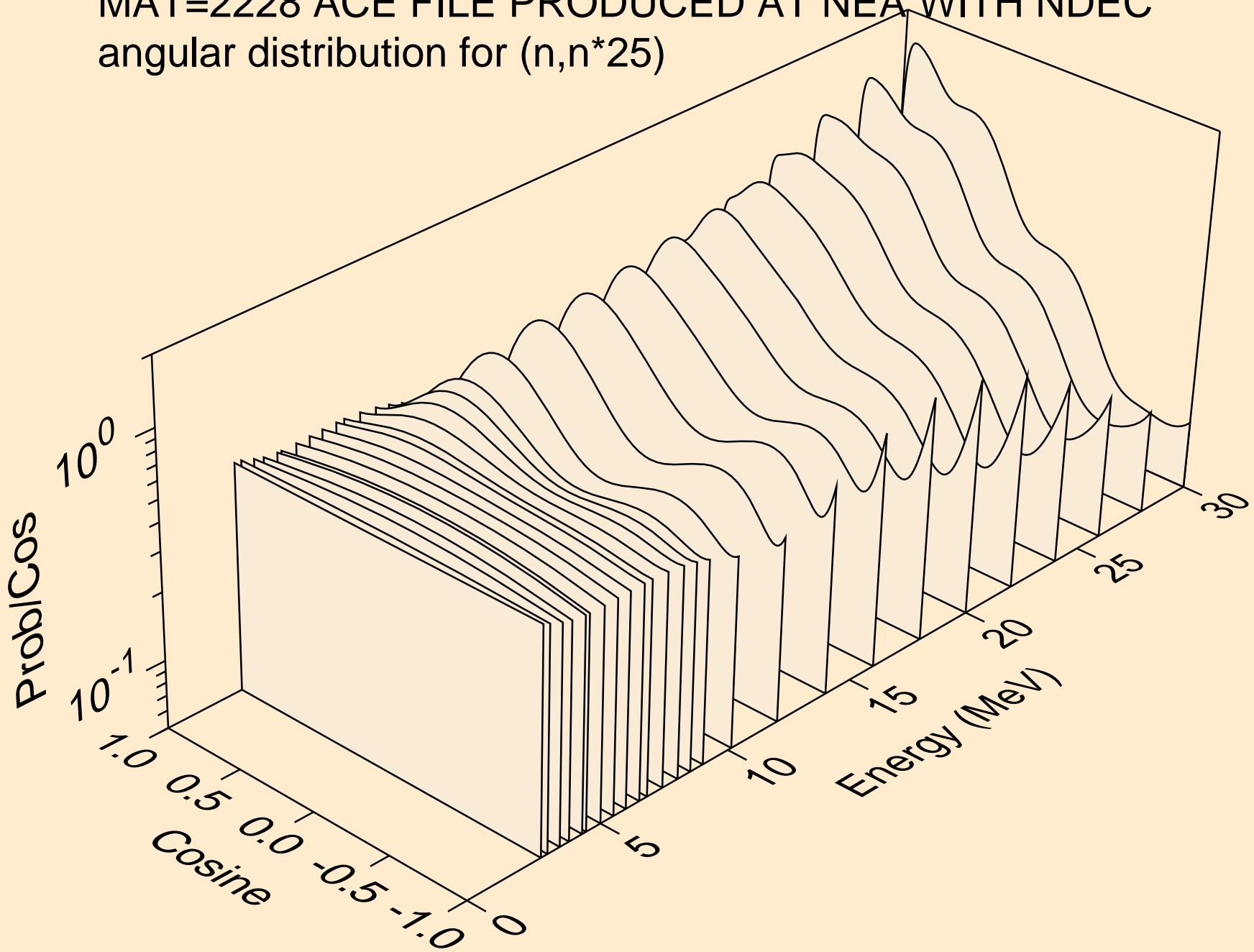
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*23)



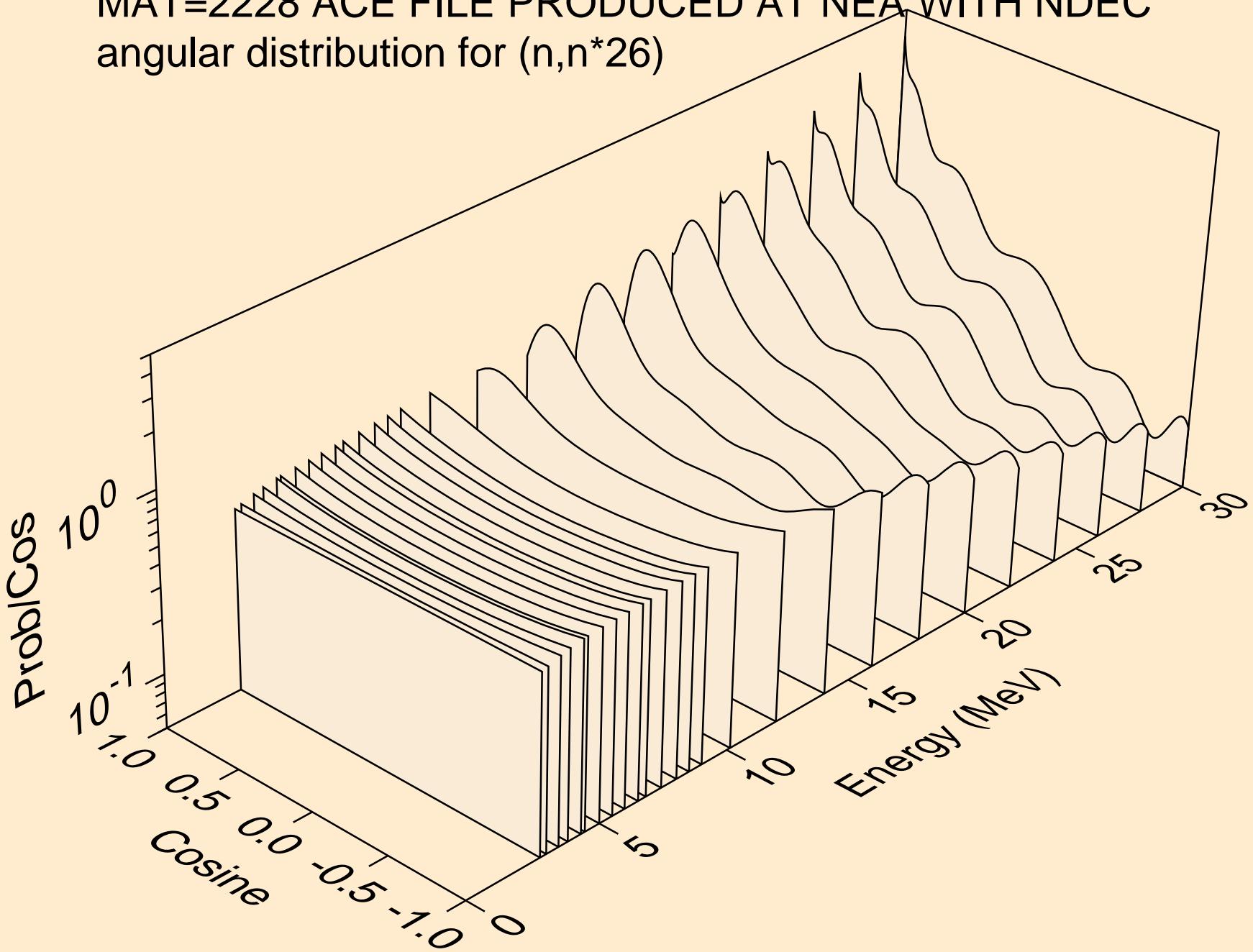
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*24)



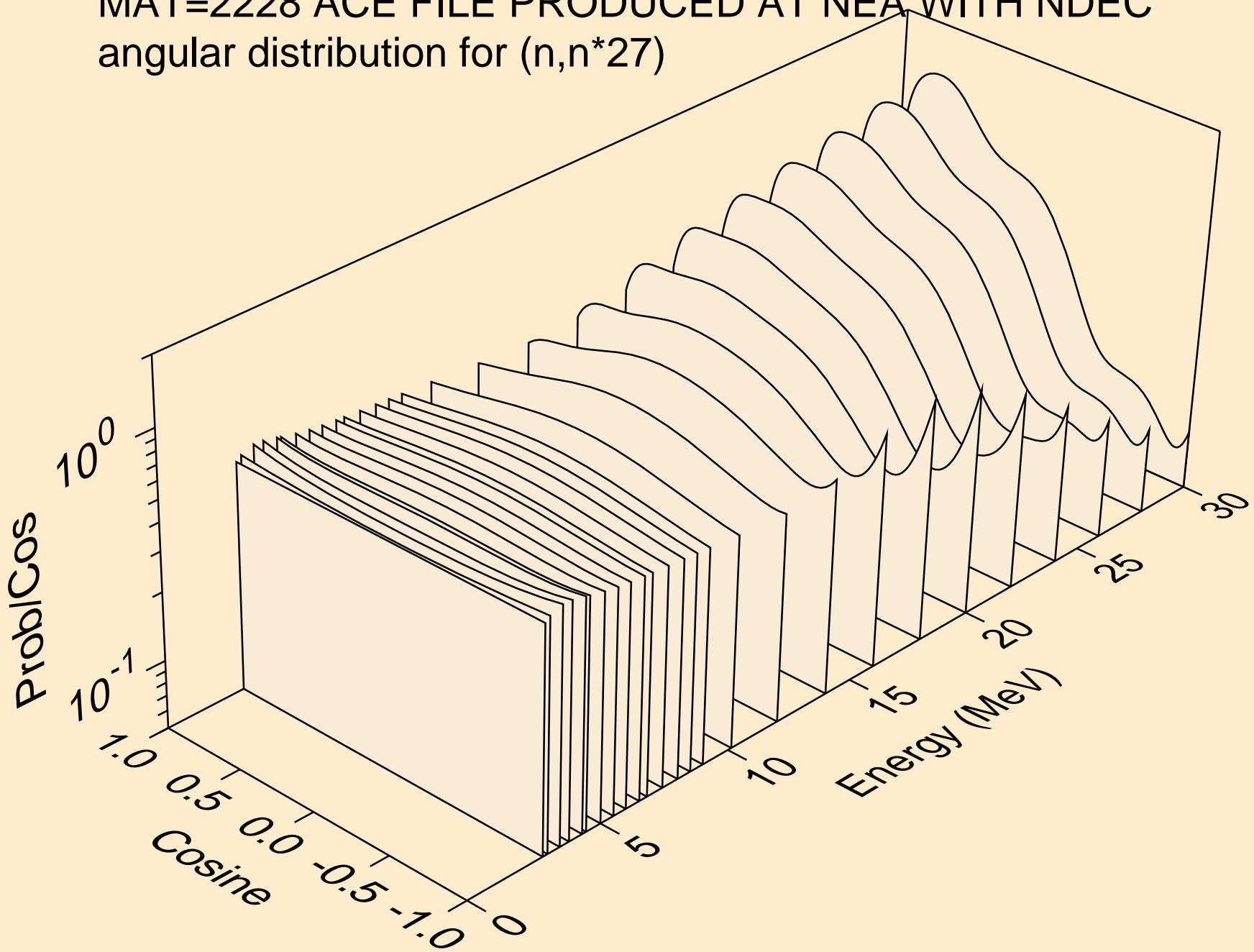
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*25)



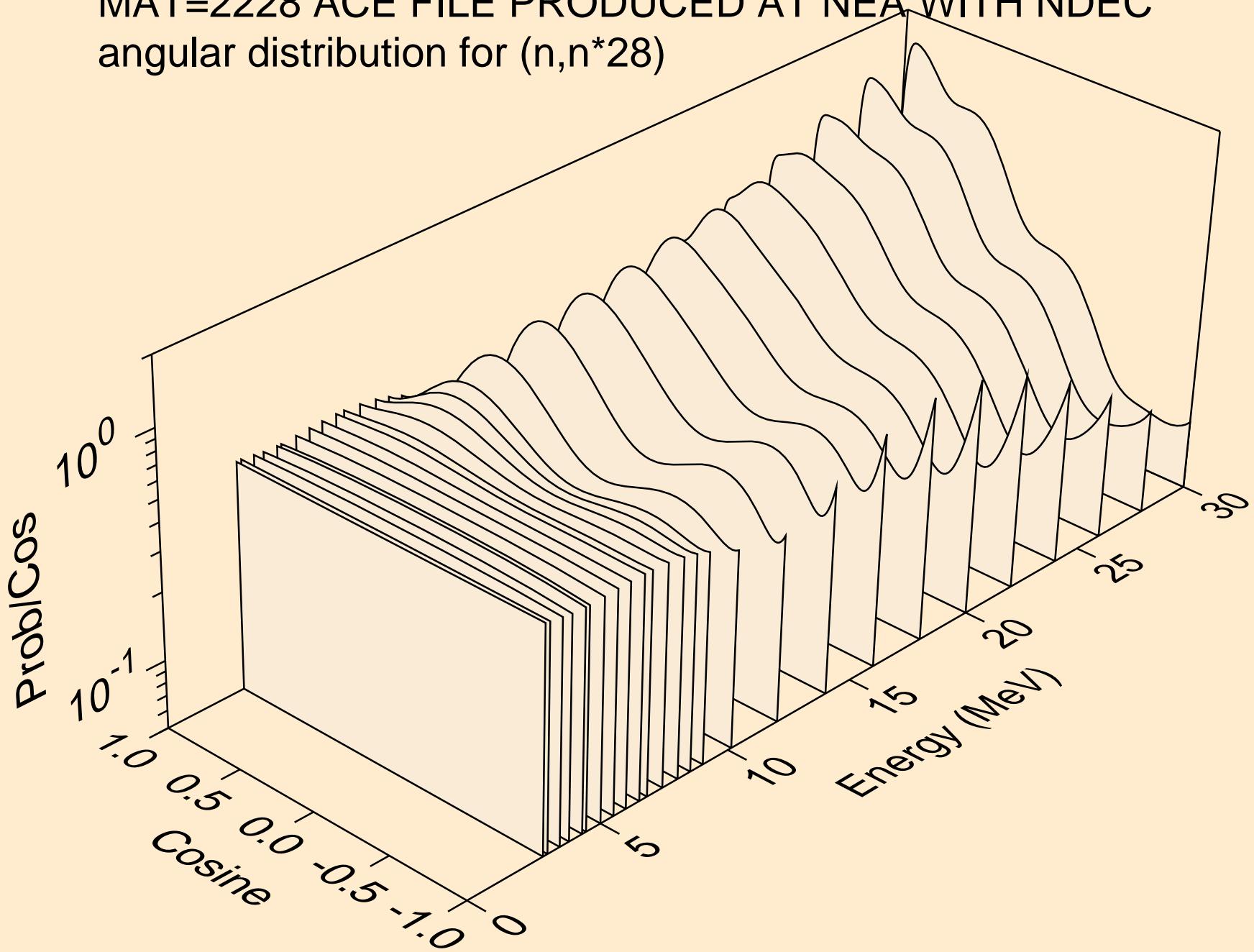
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*26)



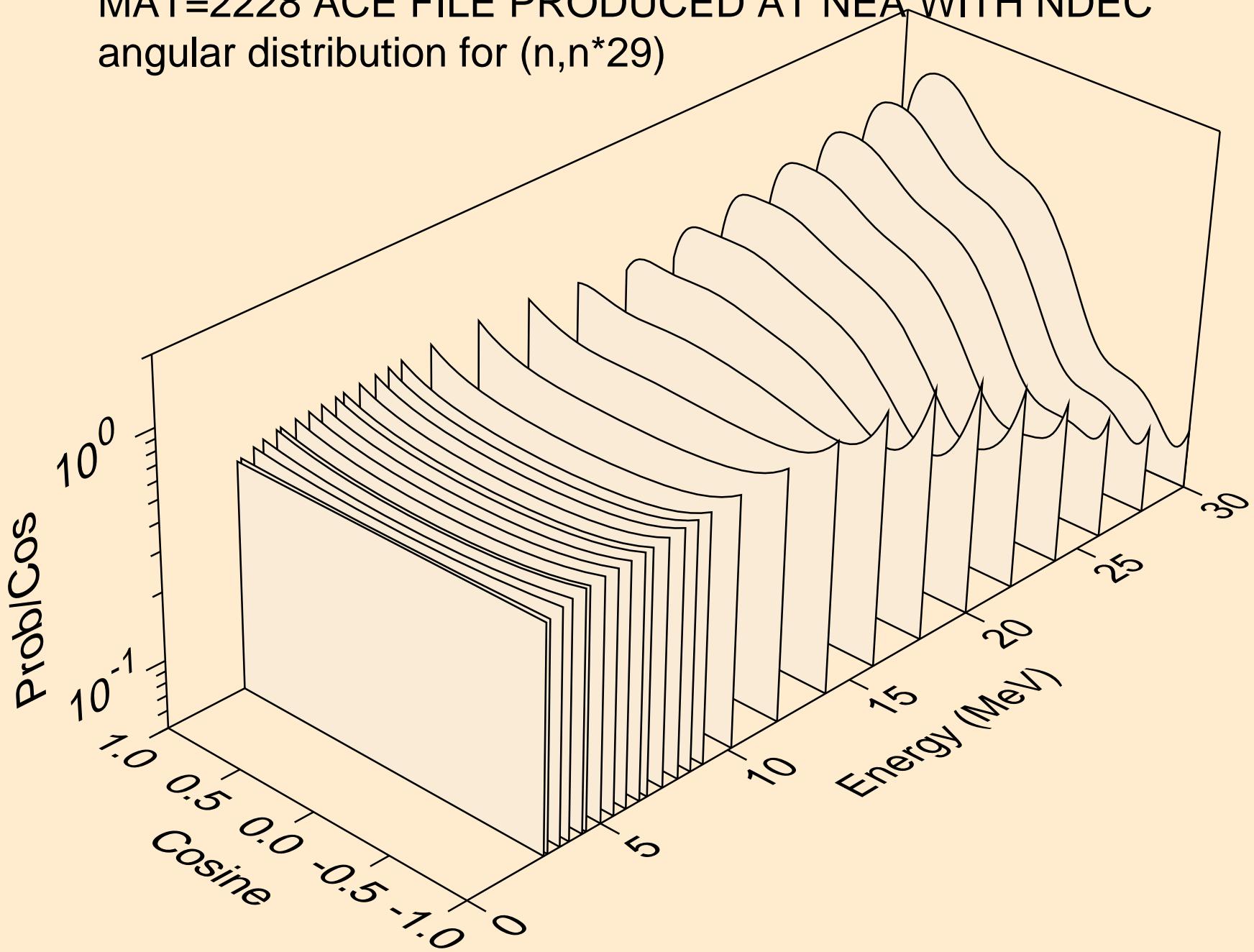
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*27)



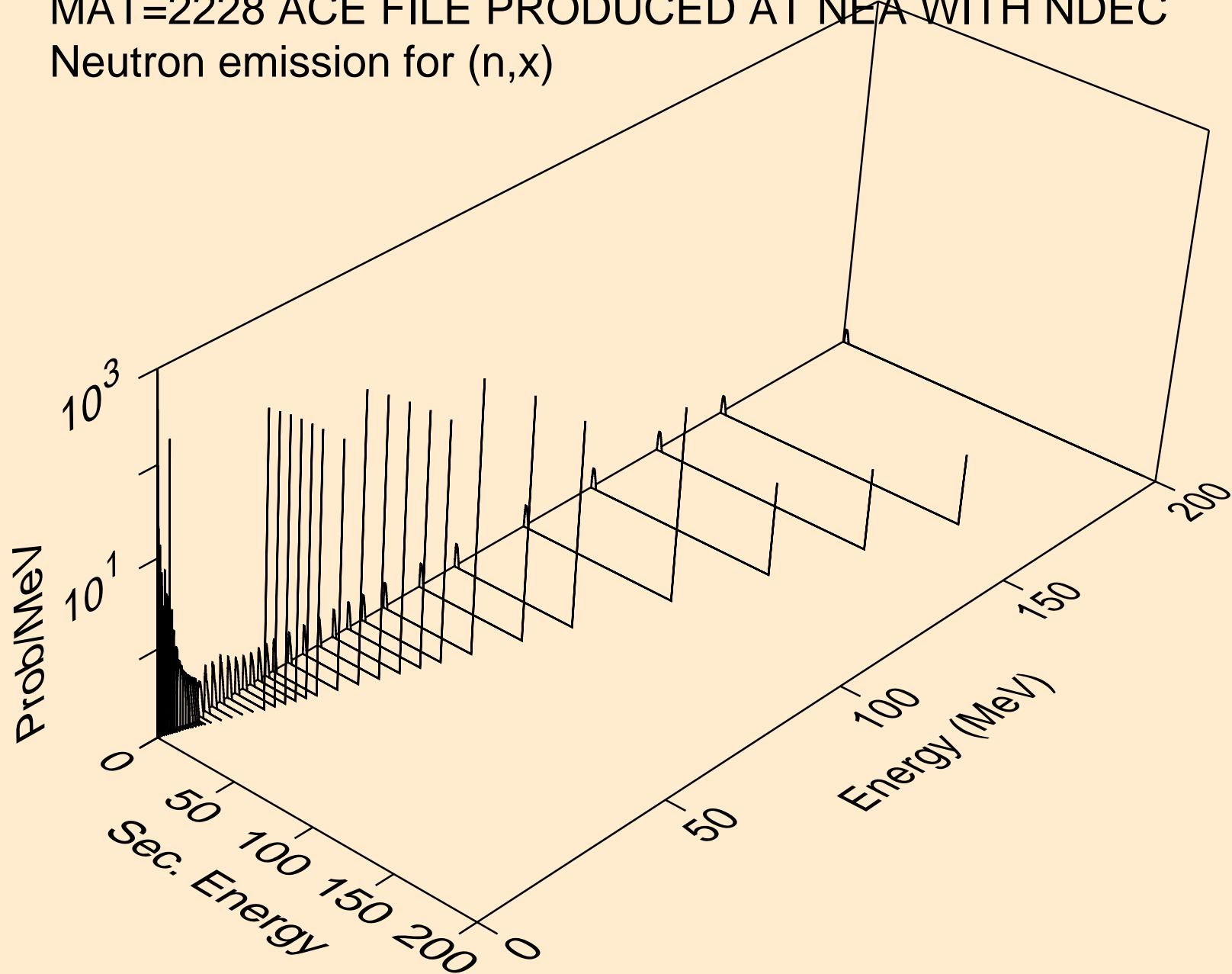
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*28)



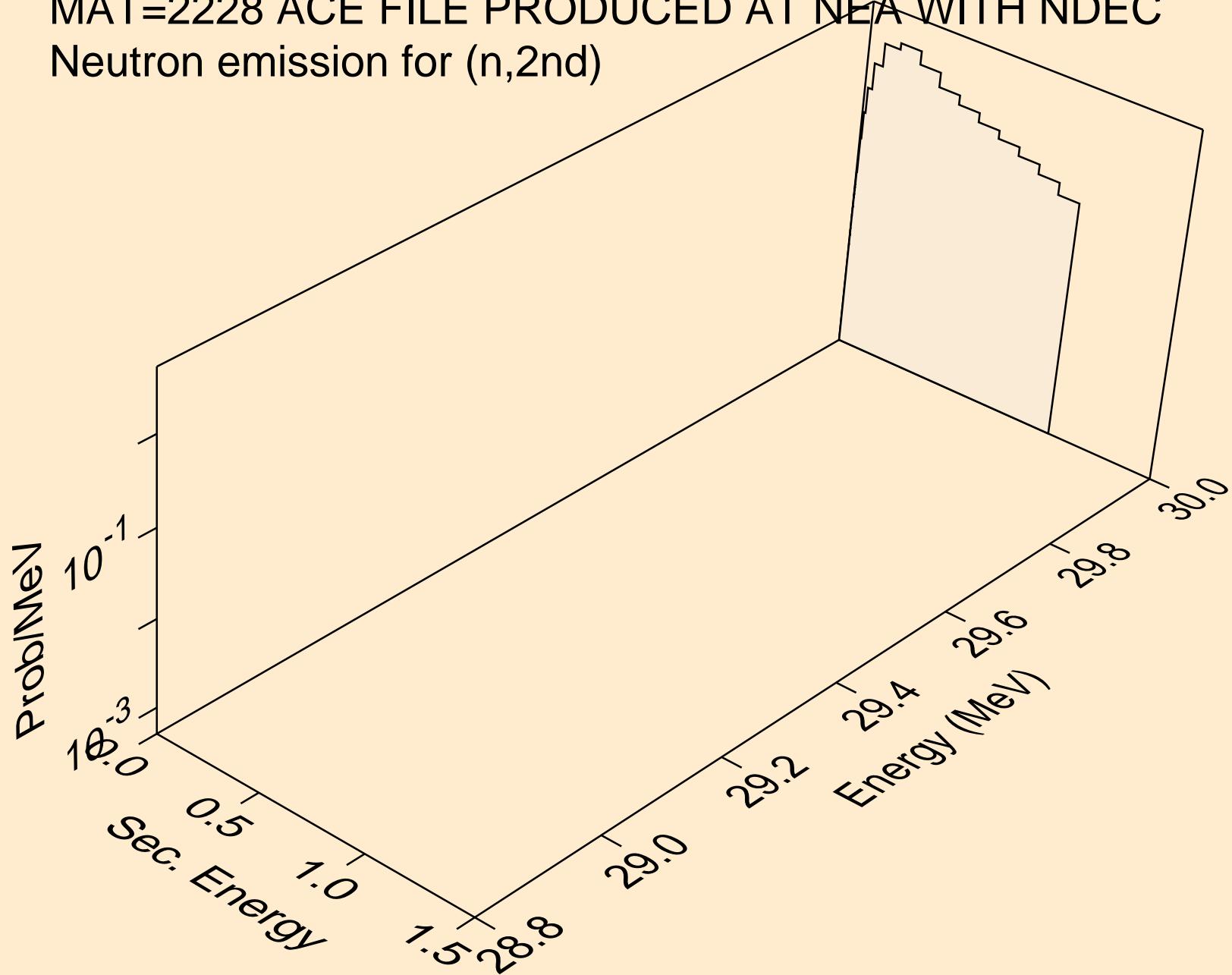
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
angular distribution for (n,n\*29)



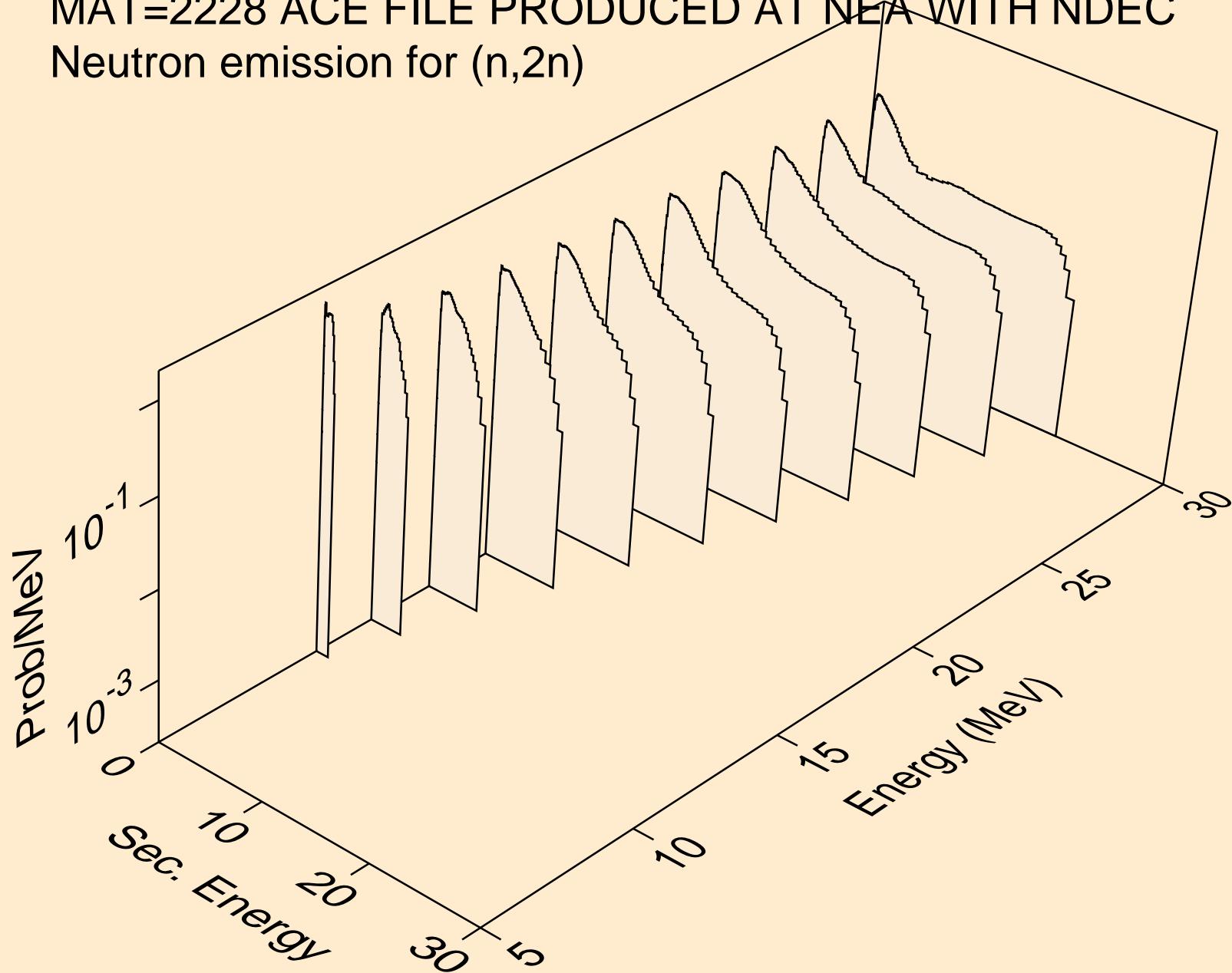
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for (n,x)



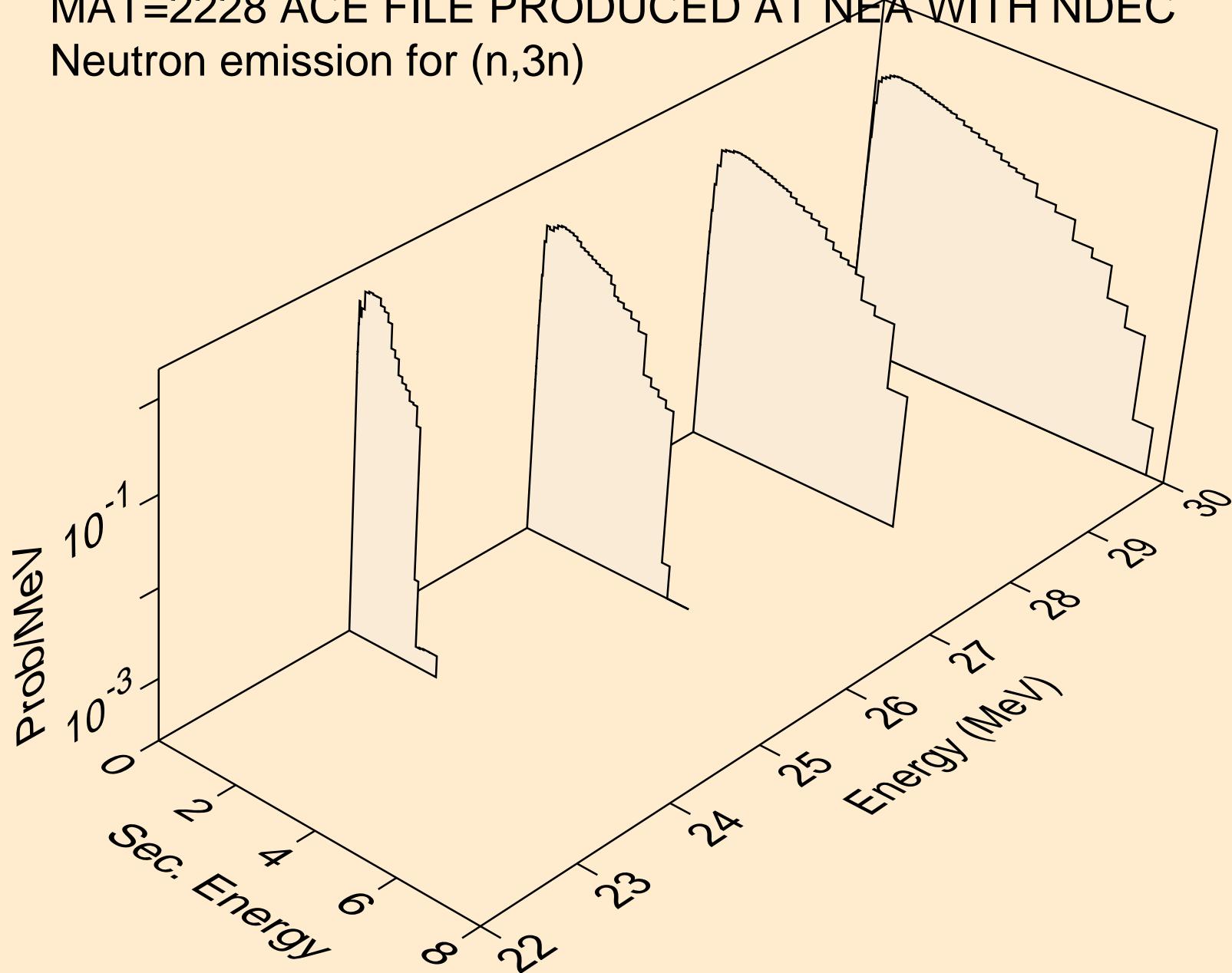
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for (n,2nd)



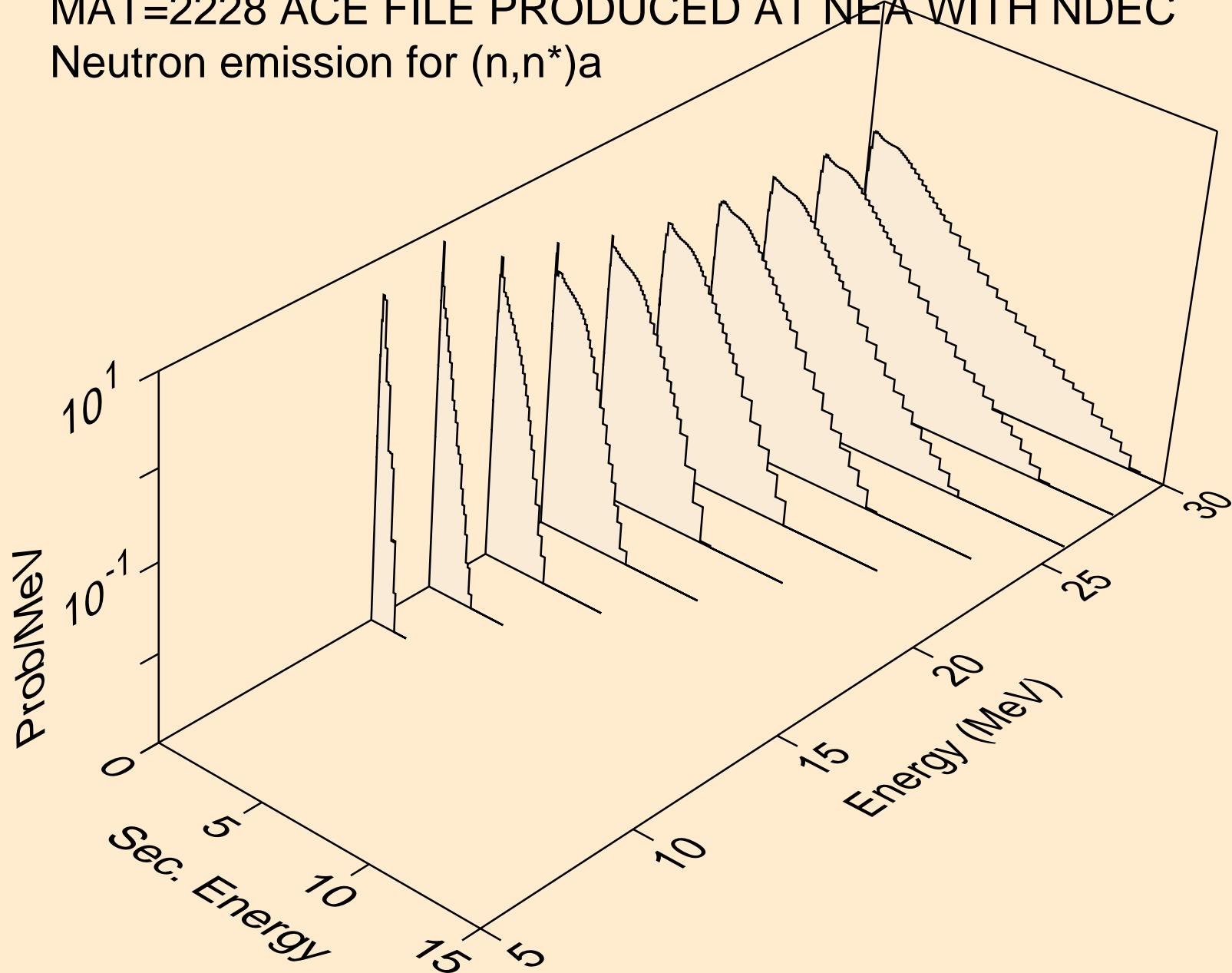
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for (n,2n)



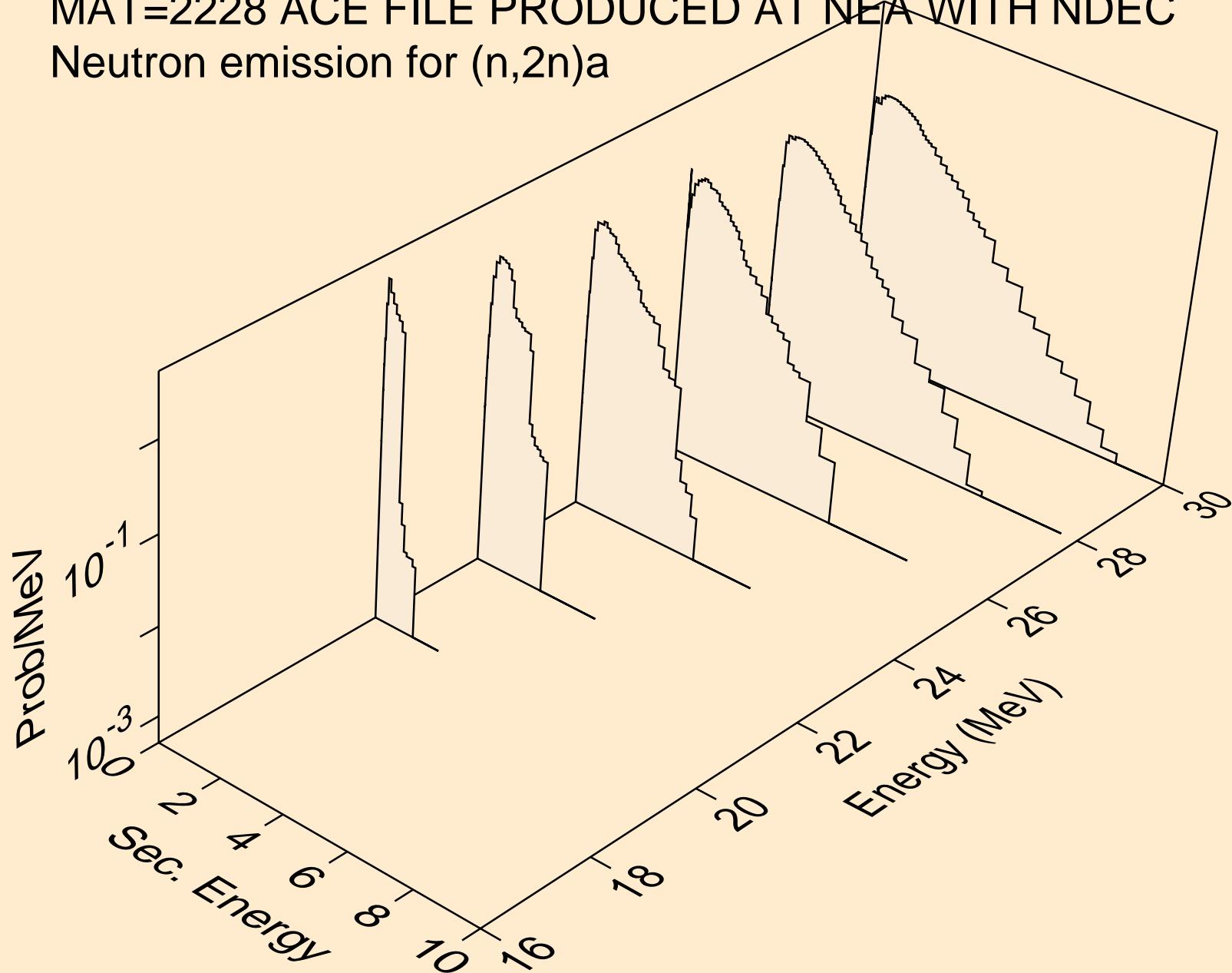
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for (n,3n)



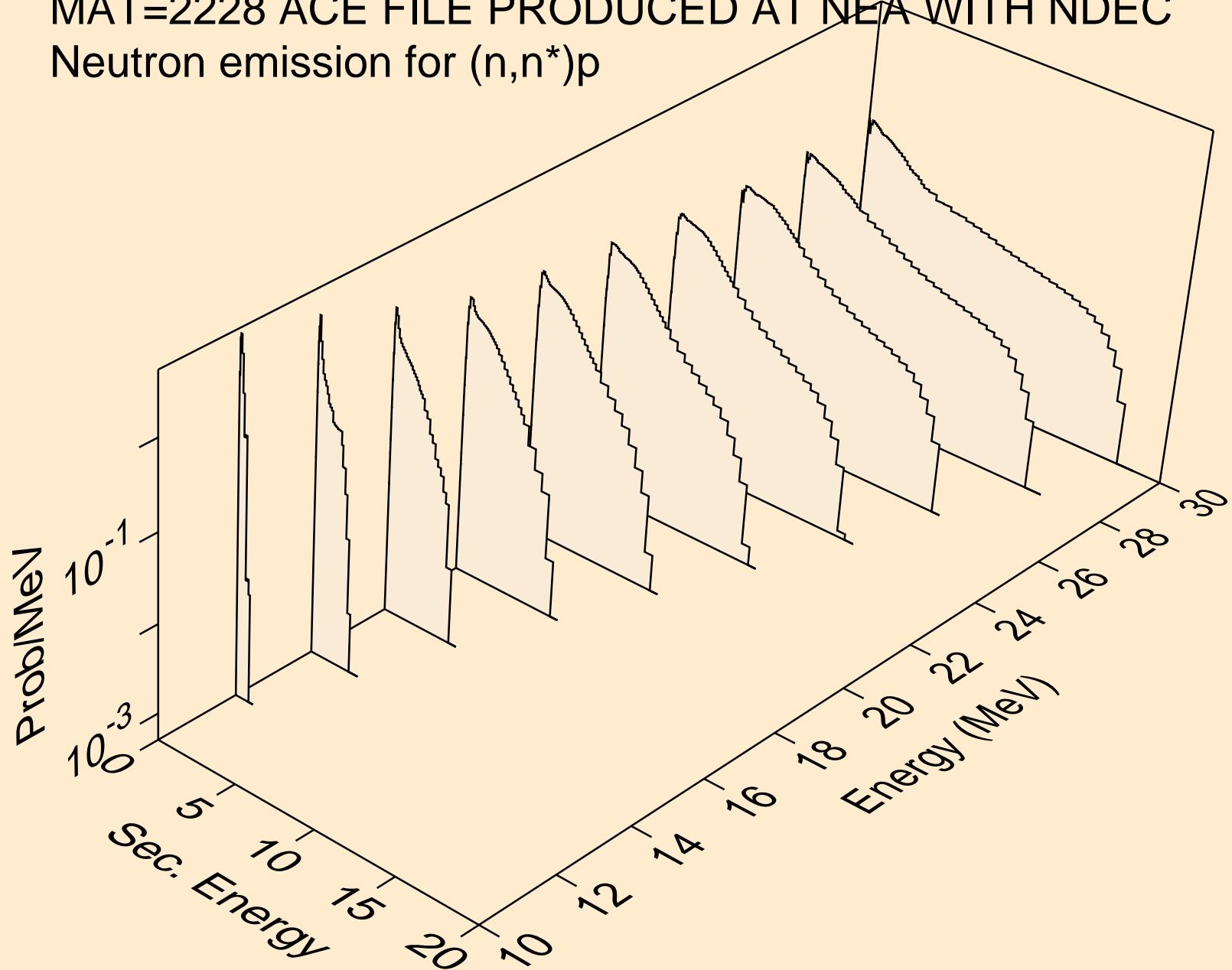
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,n^*)a$



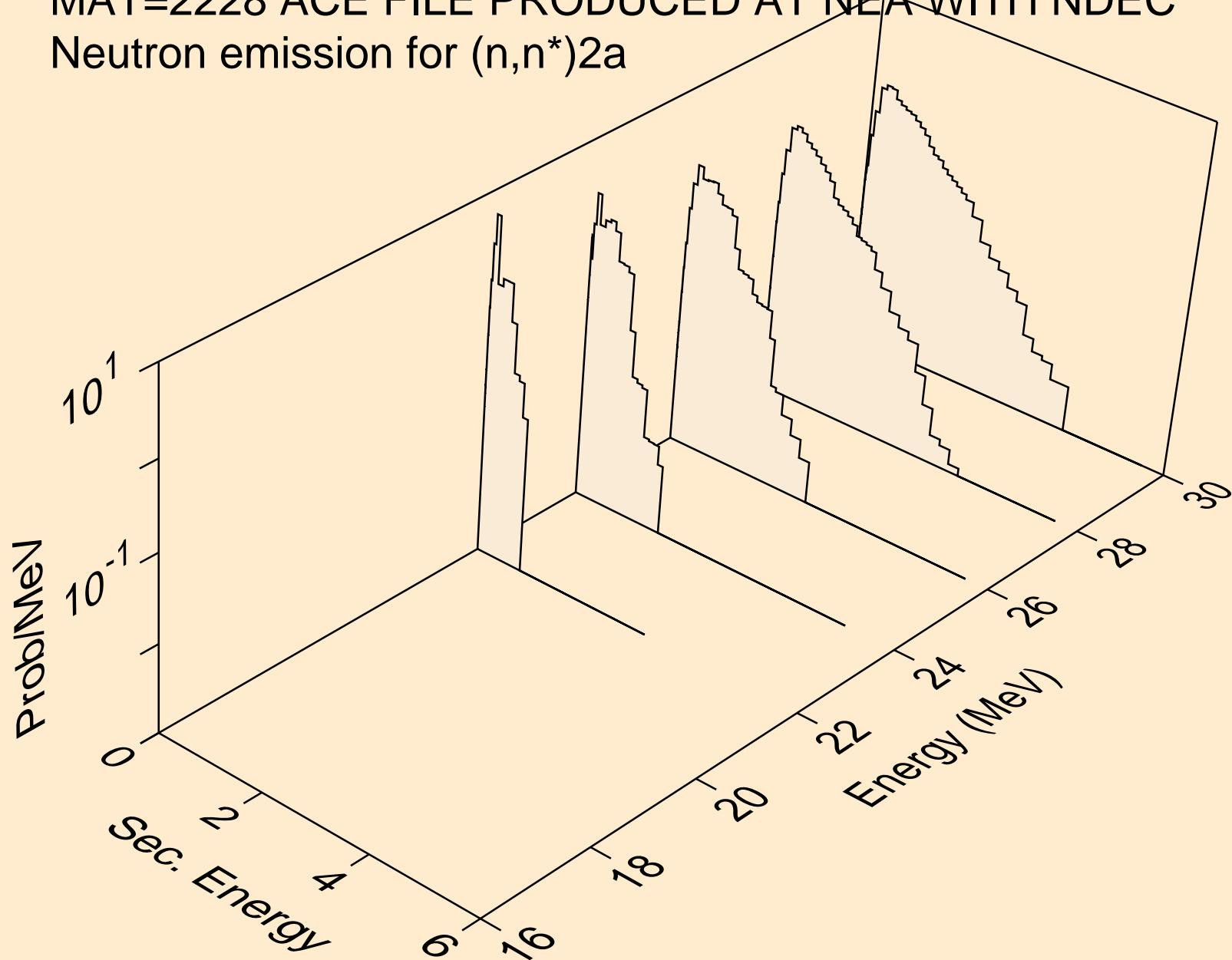
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,2n)a$



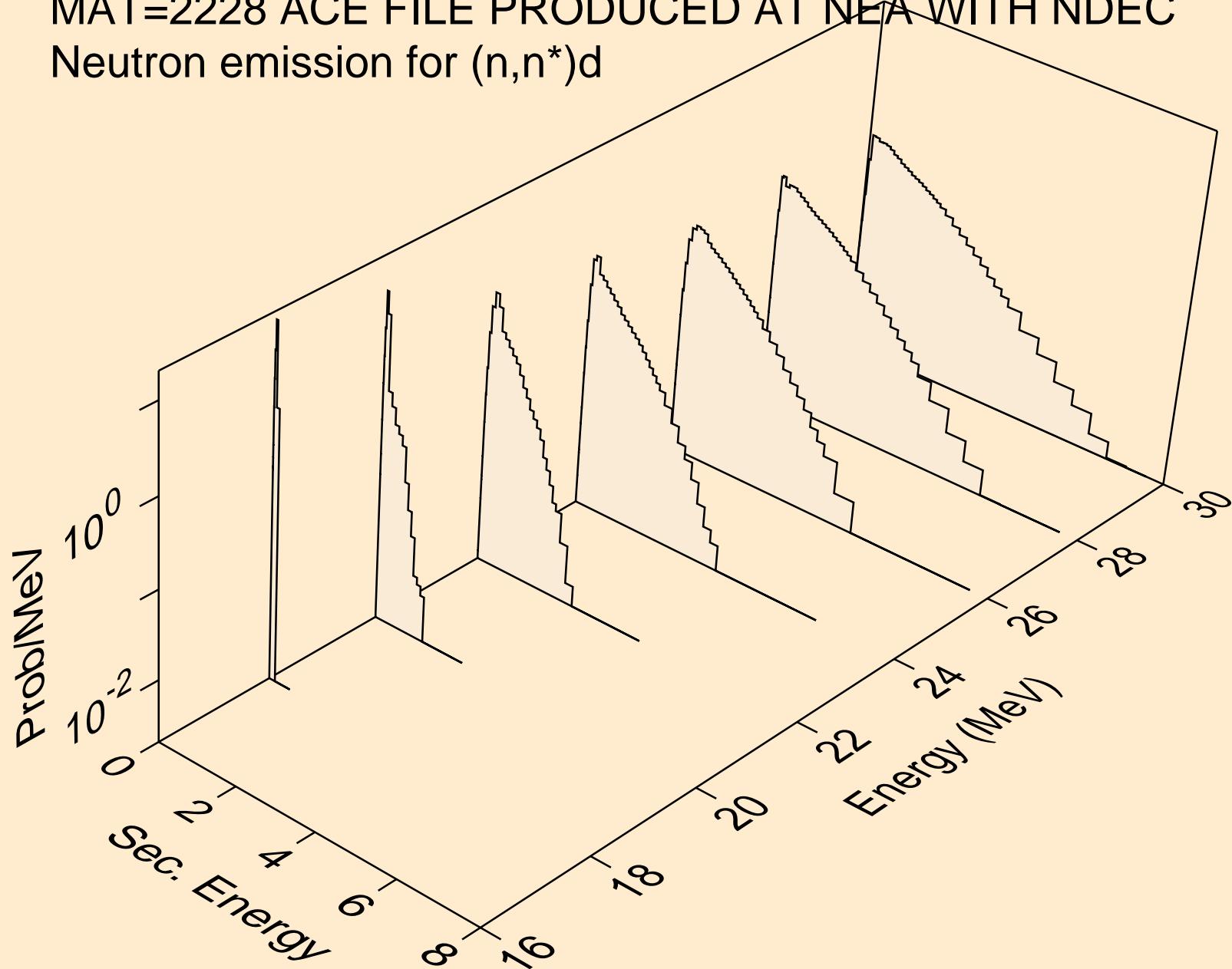
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,n^*)p$



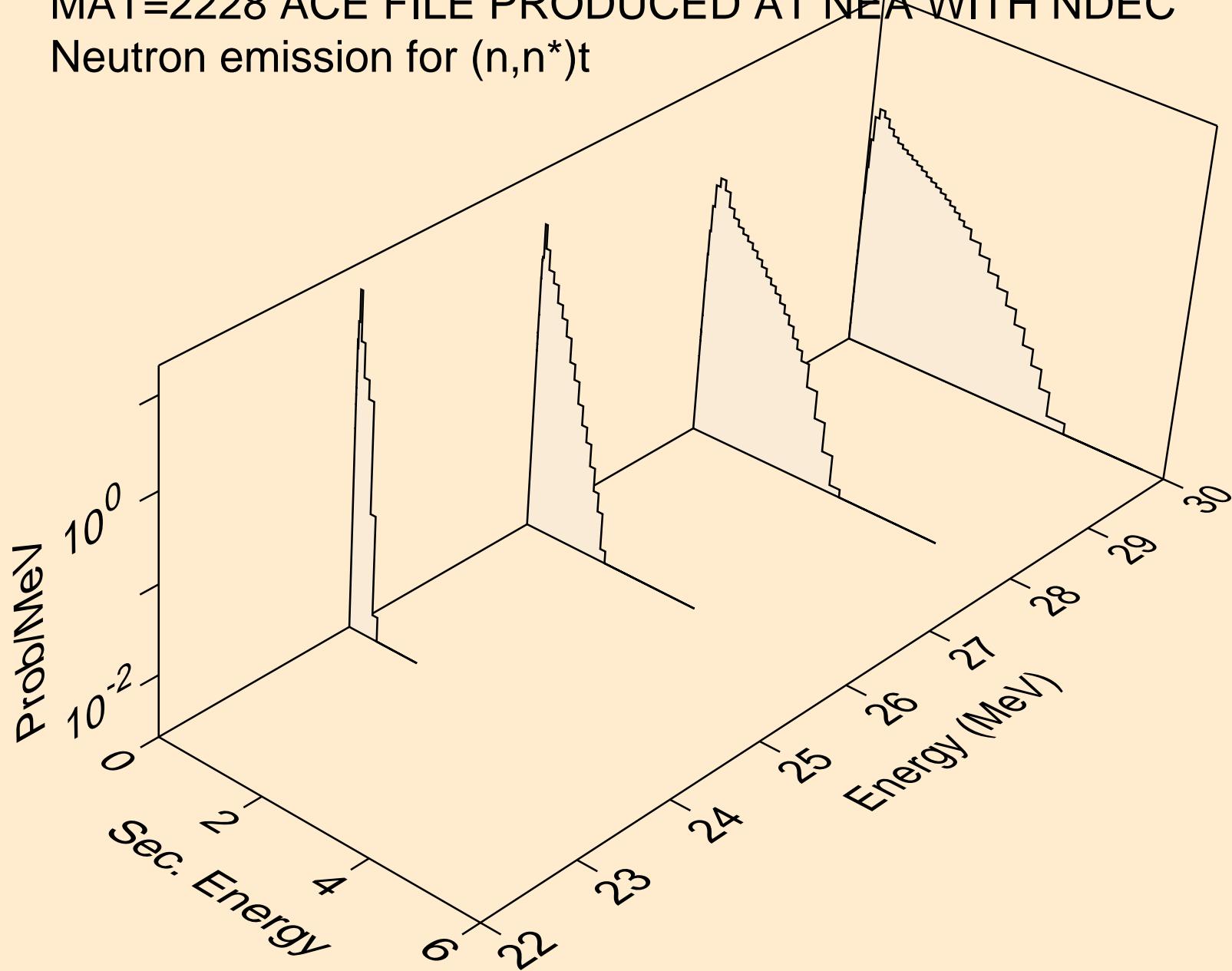
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Neutron emission for  $(n,n^*)2a$



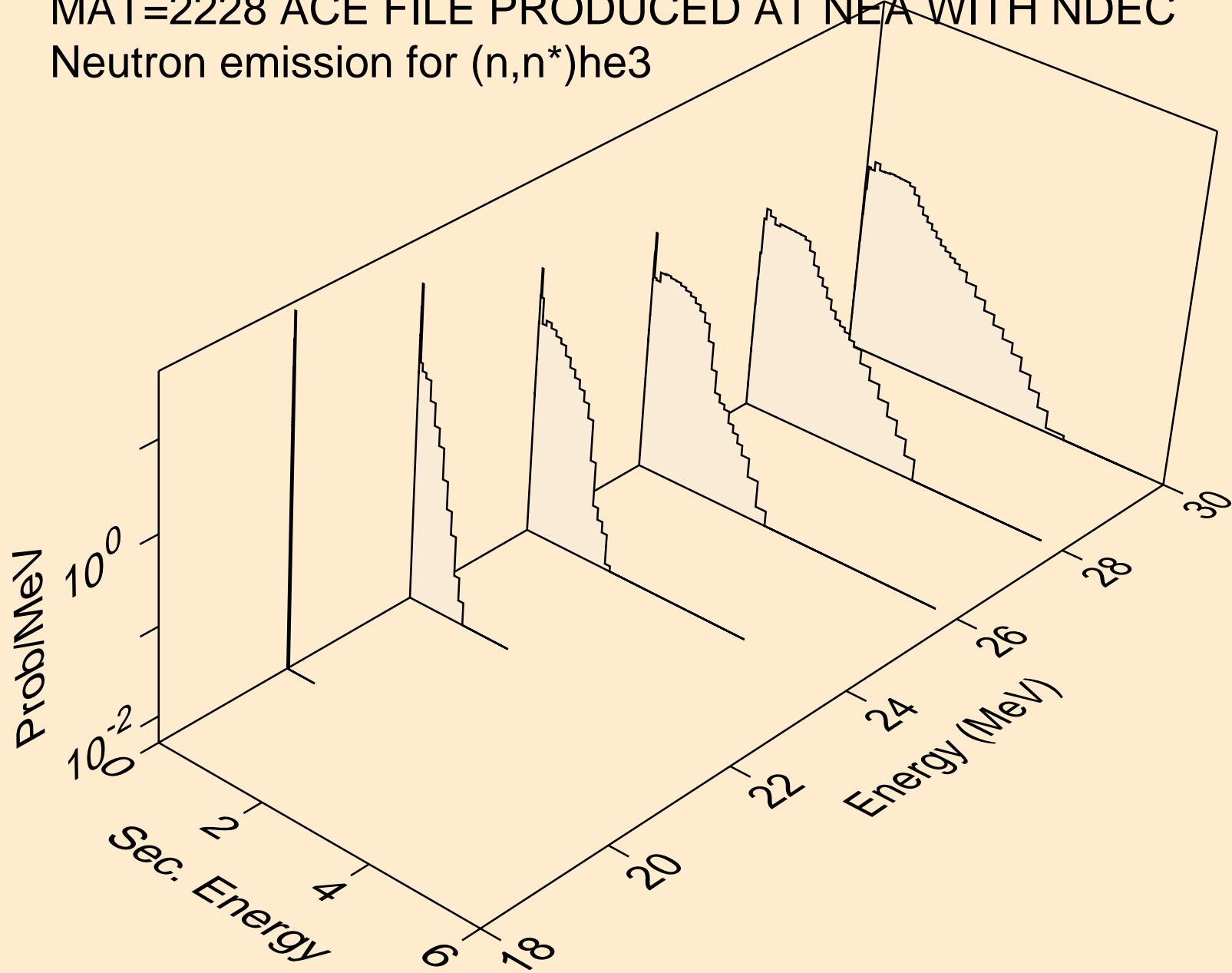
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,n^*)d$



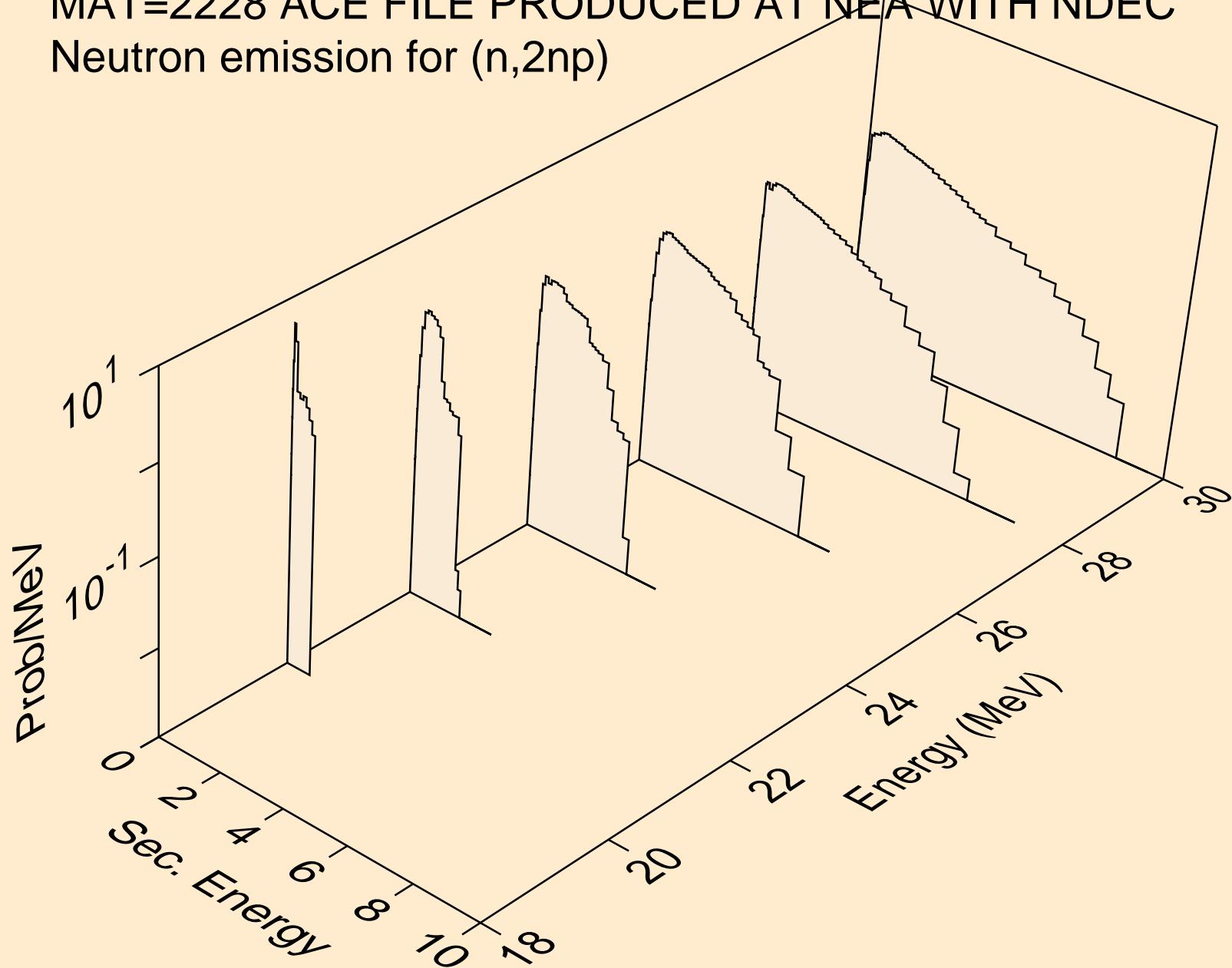
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,n^*)t$



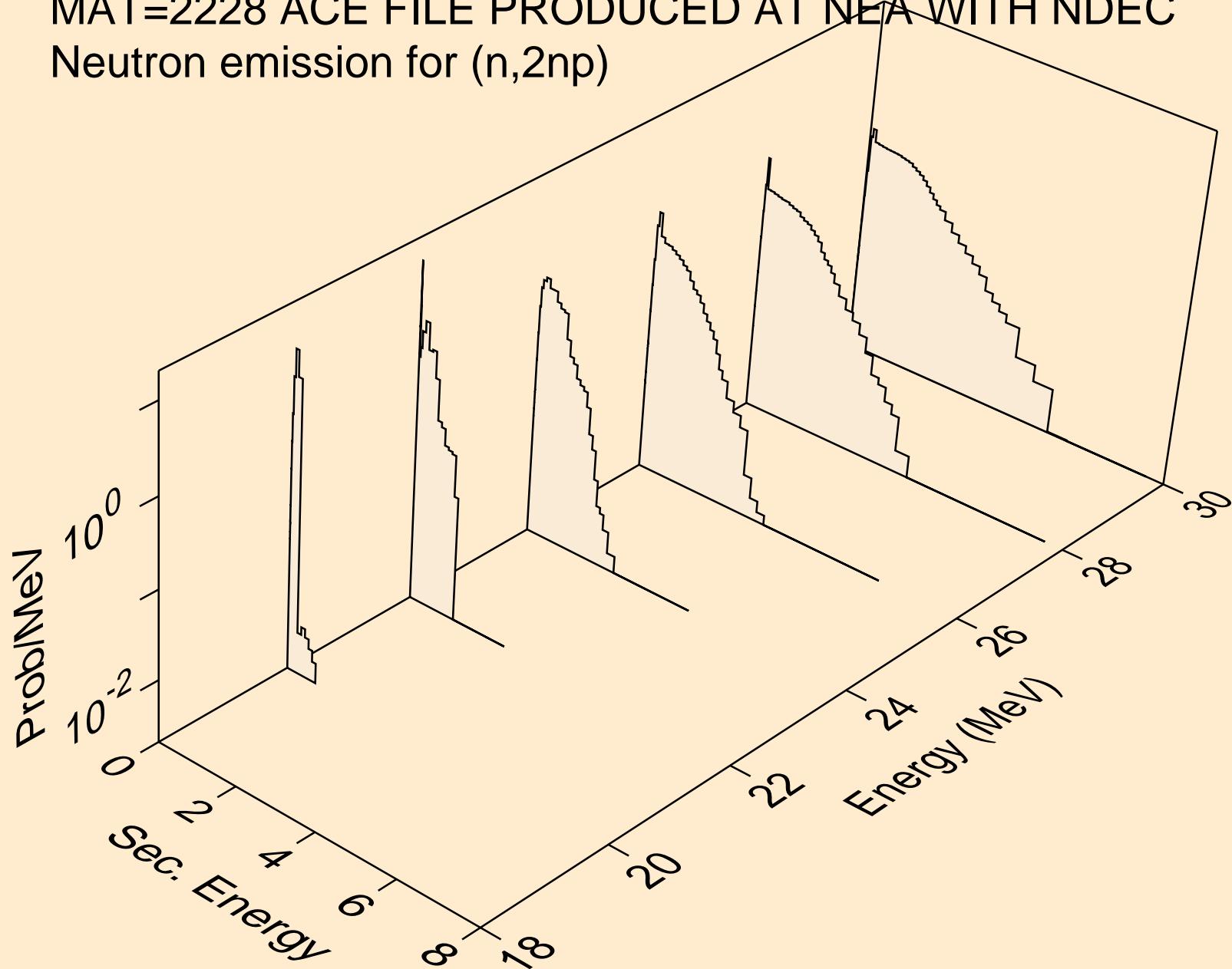
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Neutron emission for  $(n,n^*)\text{he3}$



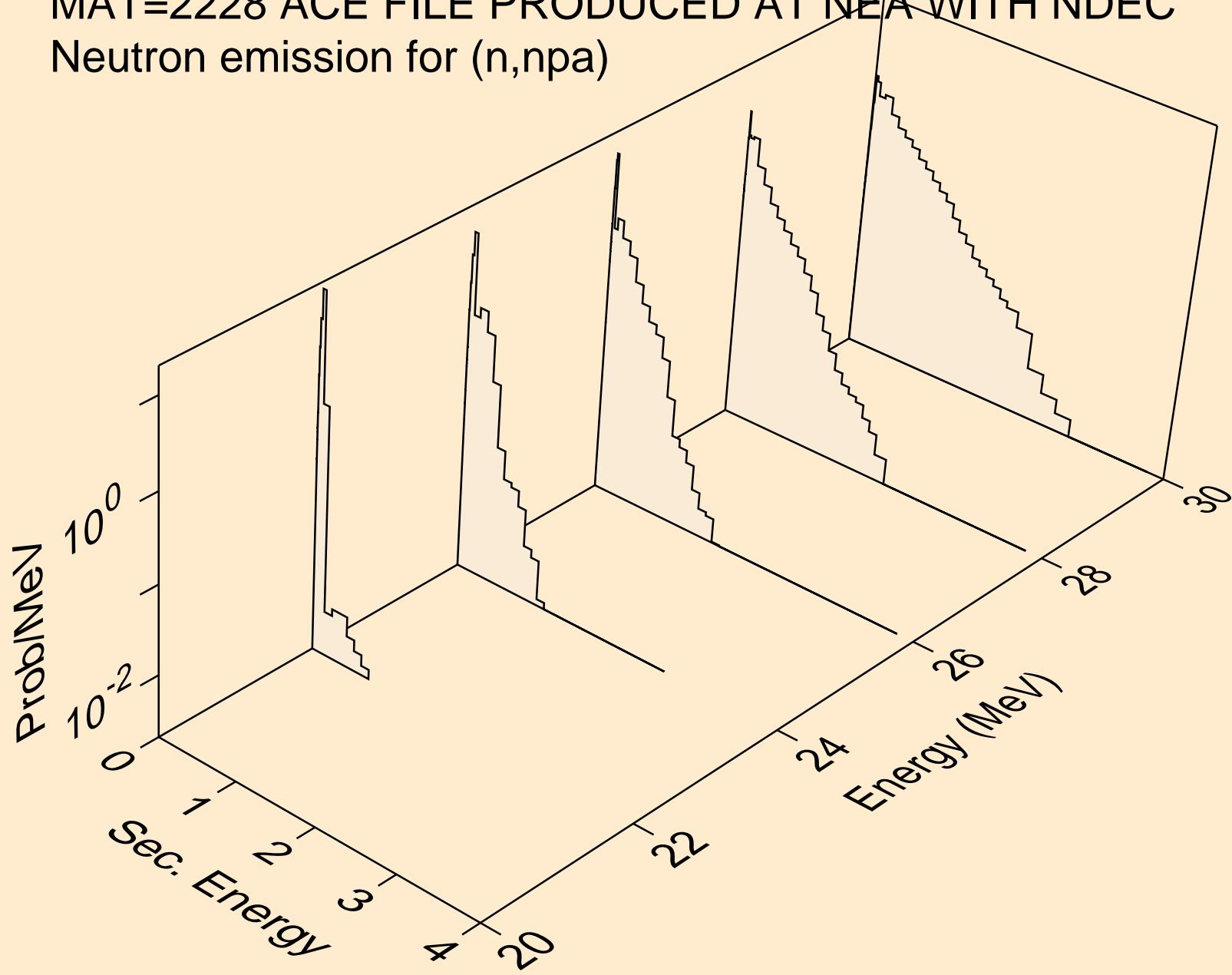
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Neutron emission for (n,2np)



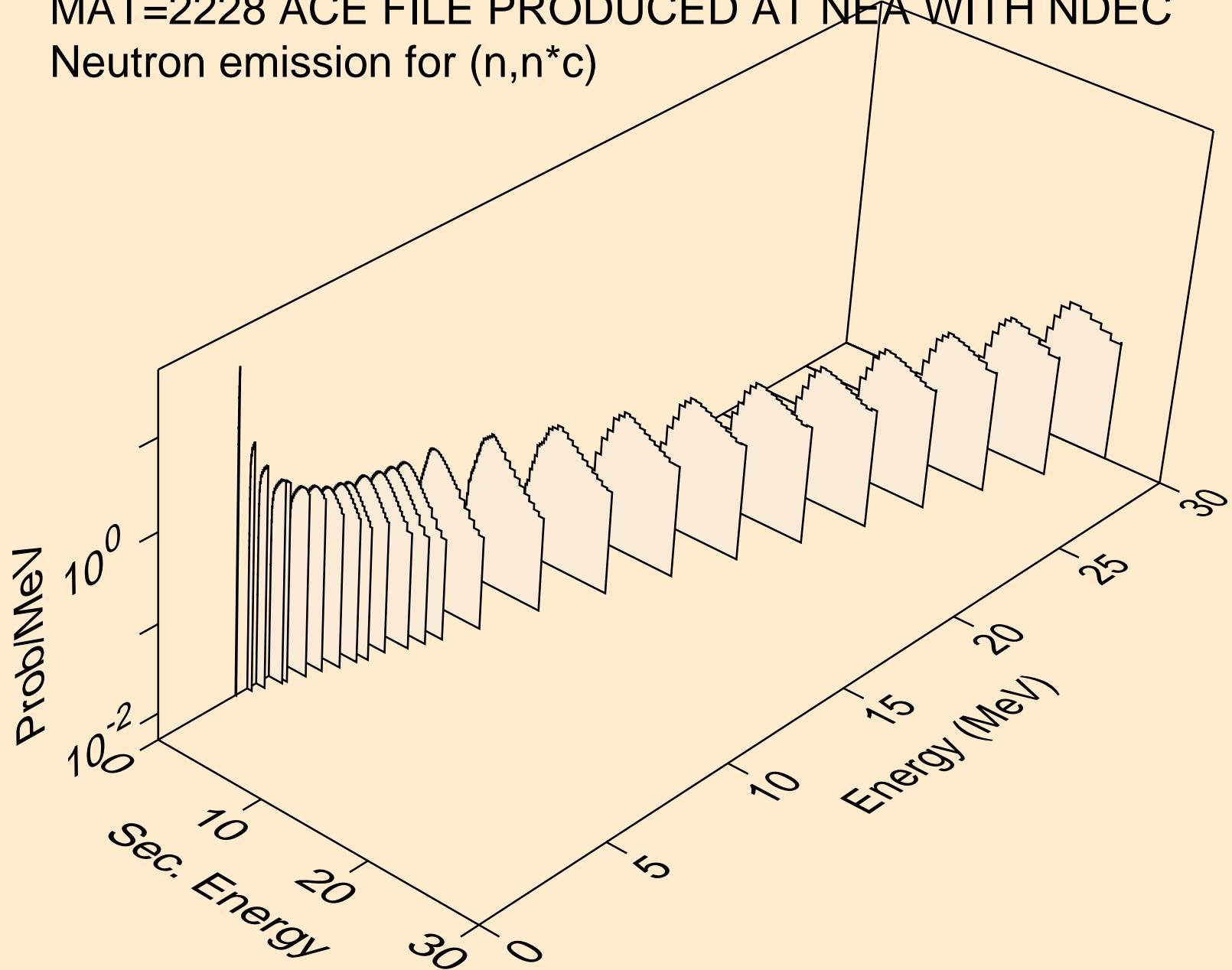
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Neutron emission for (n,2np)



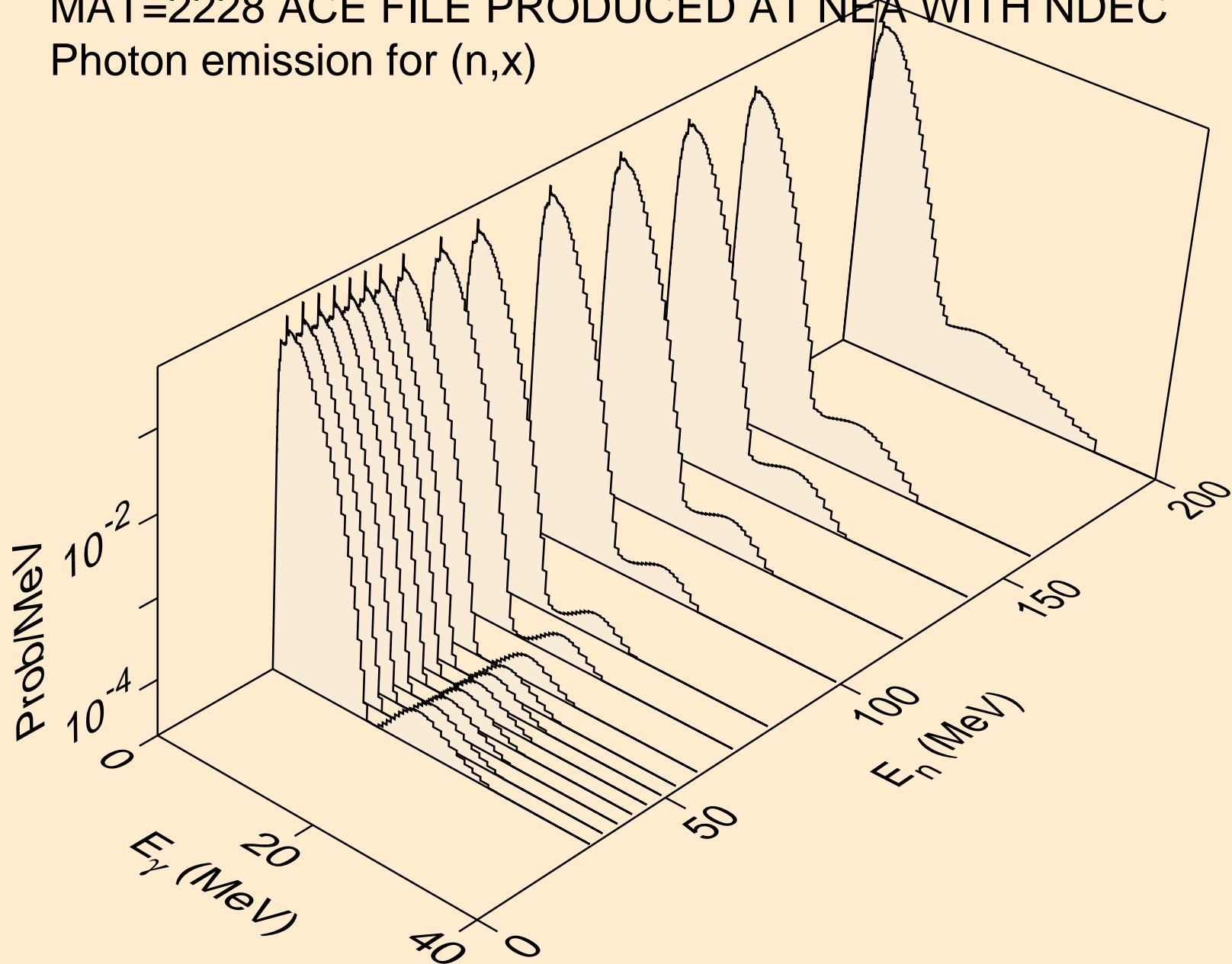
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Neutron emission for (n,npa)



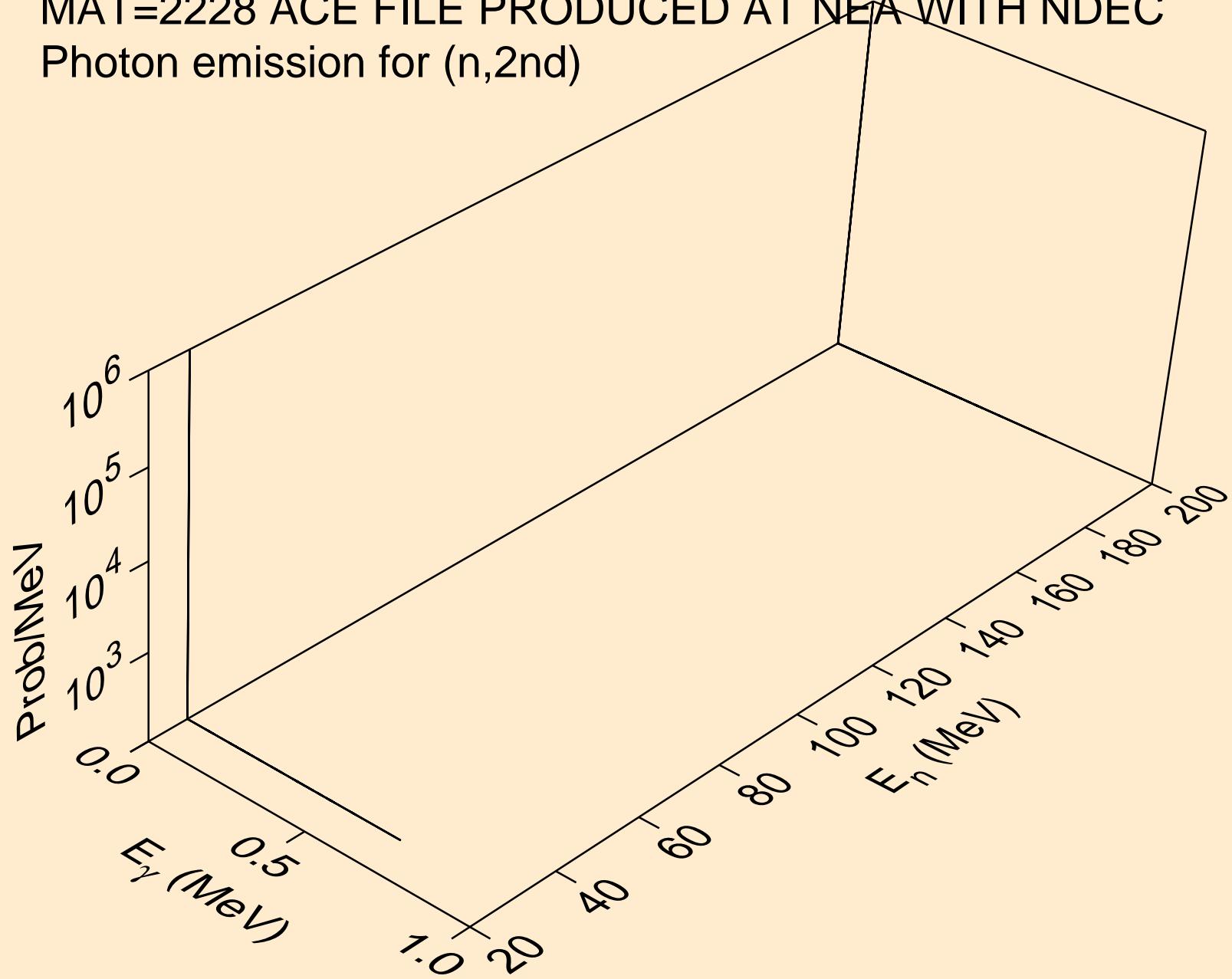
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Neutron emission for  $(n, n^*c)$



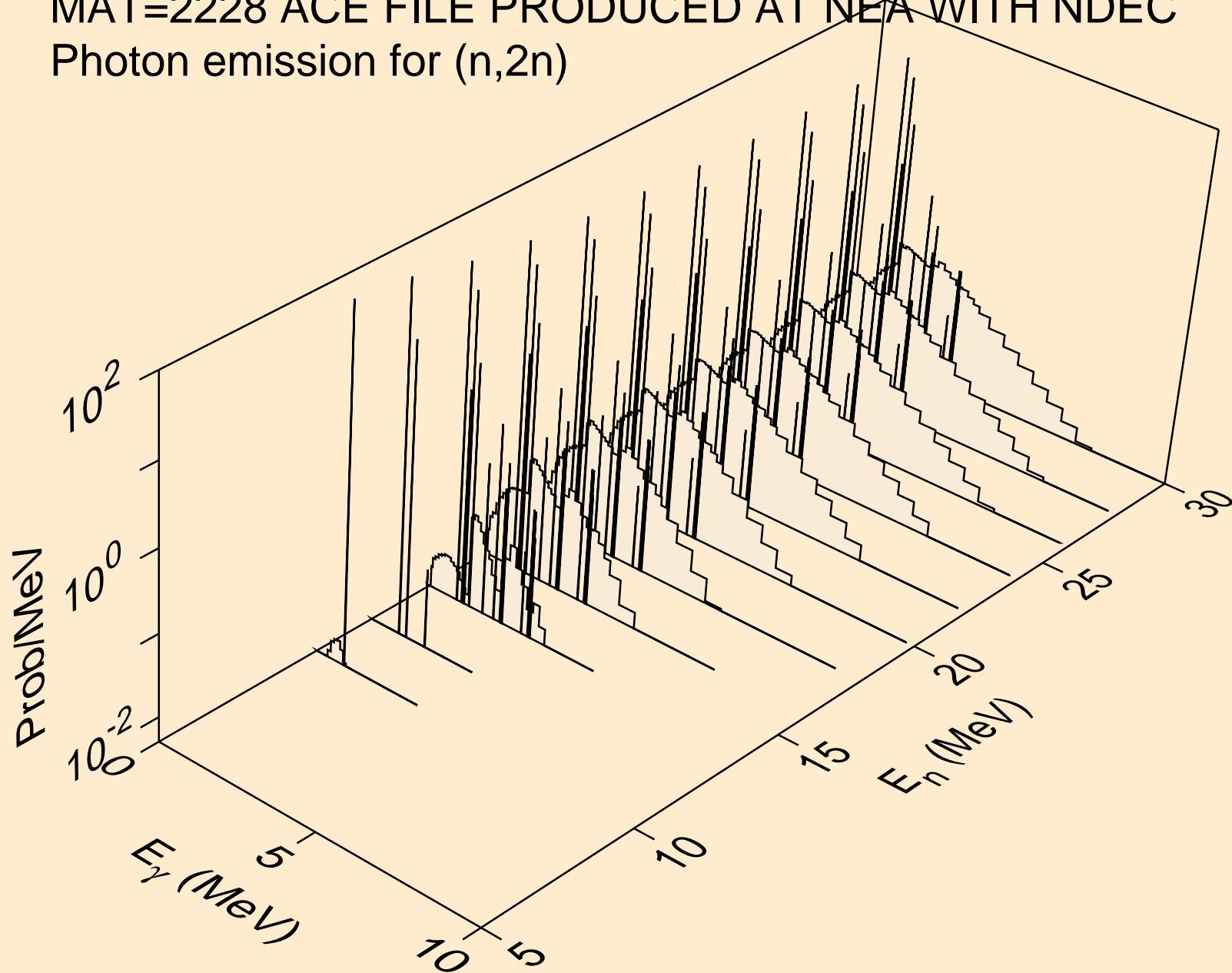
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Photon emission for (n,x)



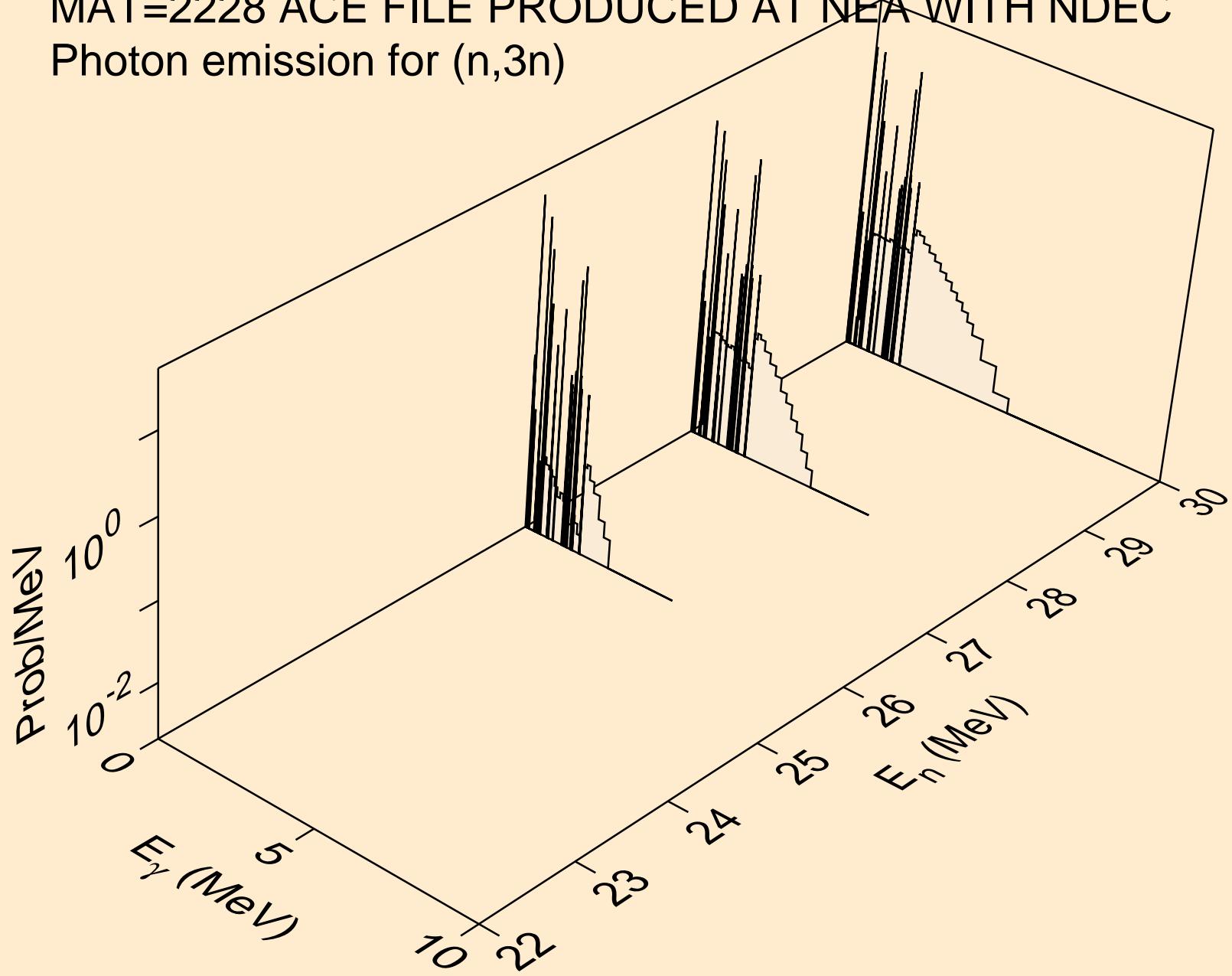
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Photon emission for (n,2nd)



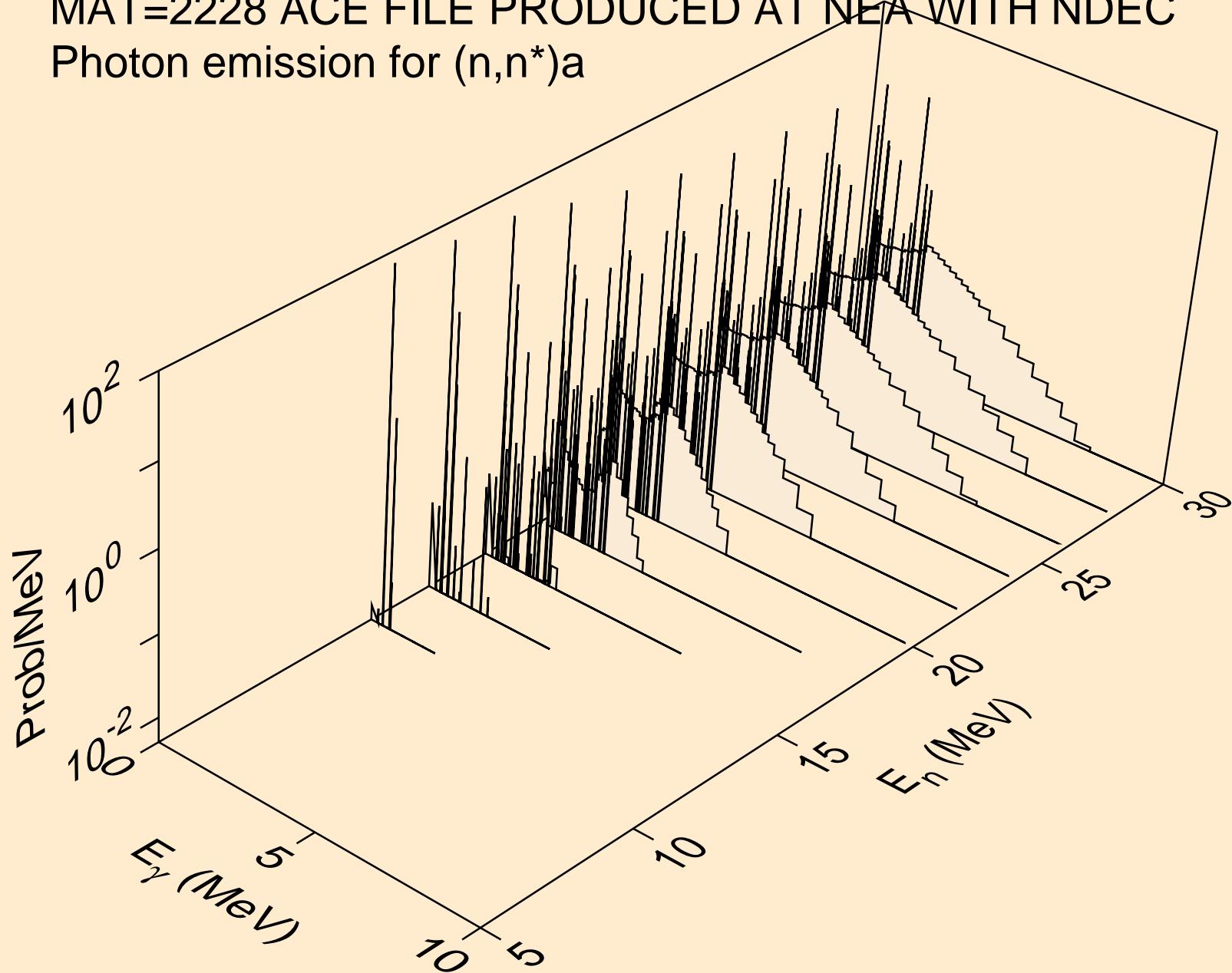
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Photon emission for (n,2n)



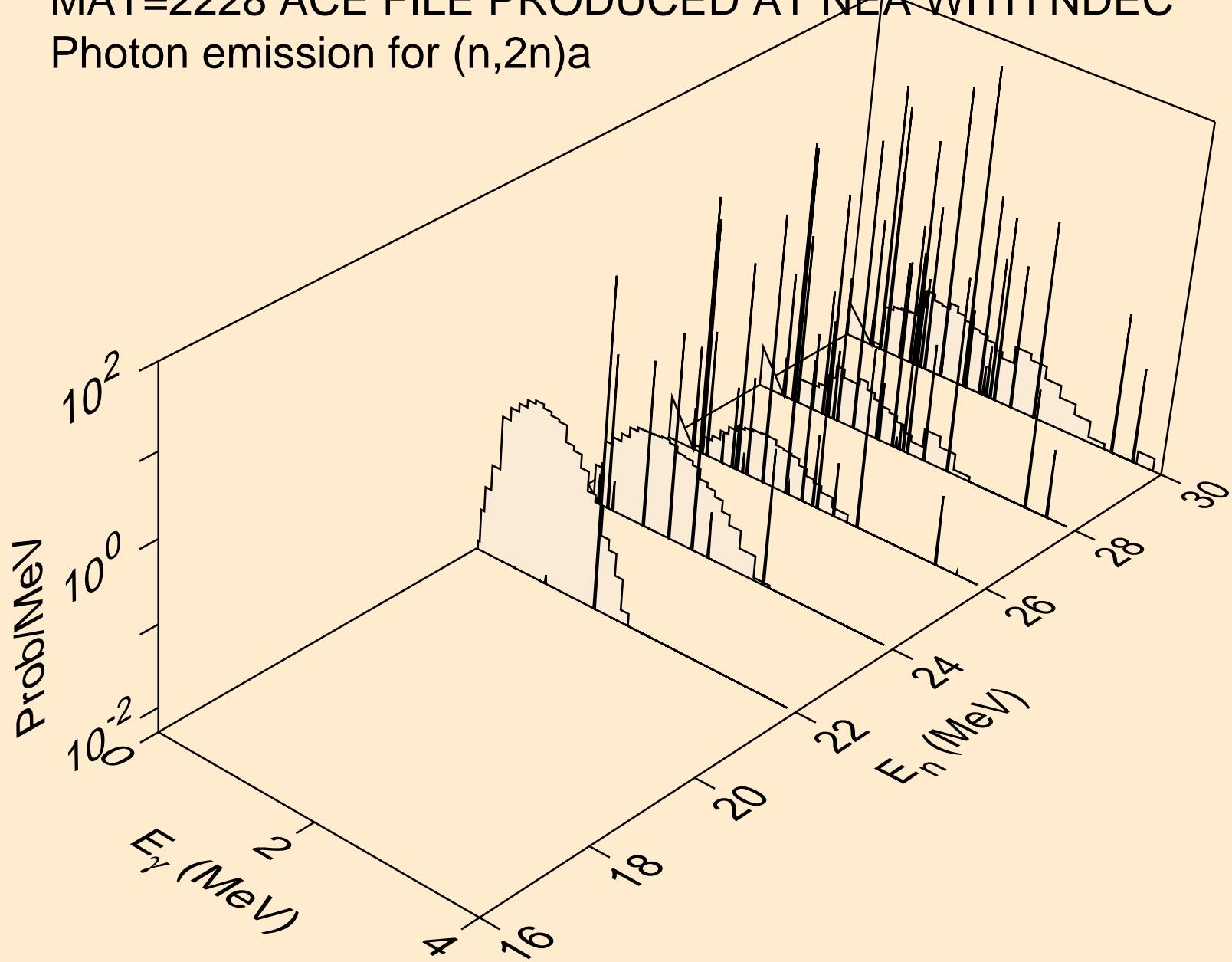
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Photon emission for (n,3n)



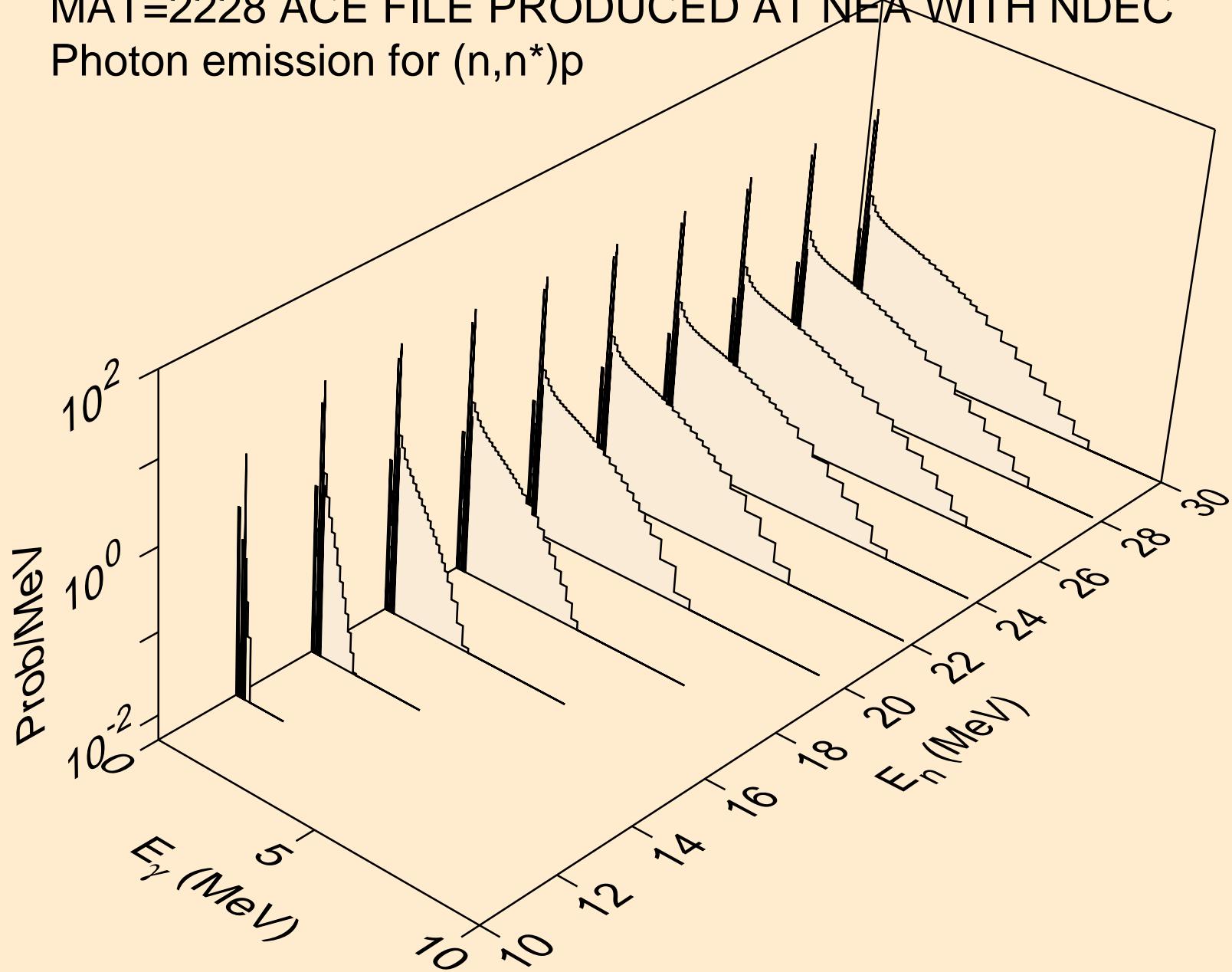
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Photon emission for  $(n,n^*)a$



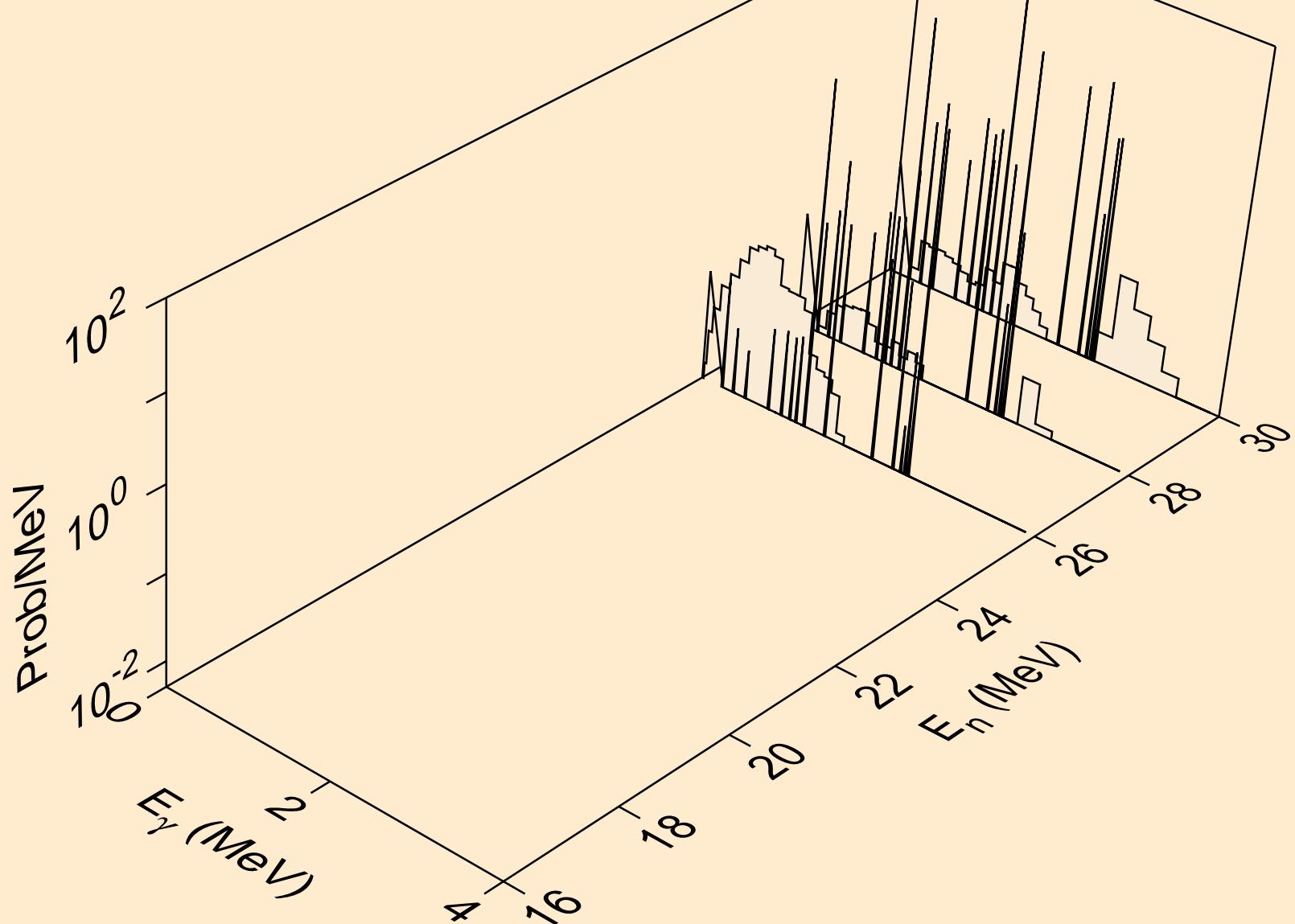
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Photon emission for (n,2n)a



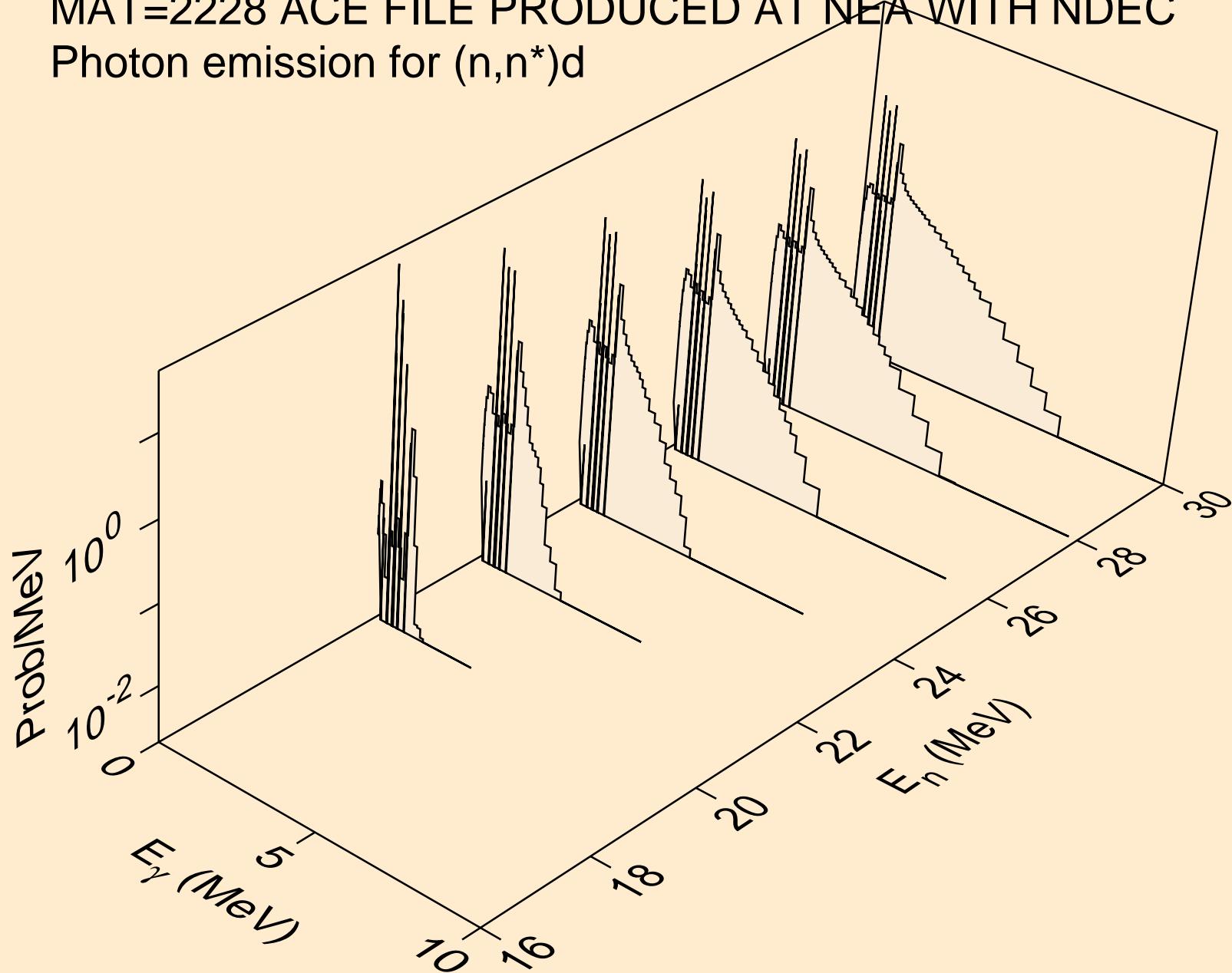
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Photon emission for  $(n,n^*)p$



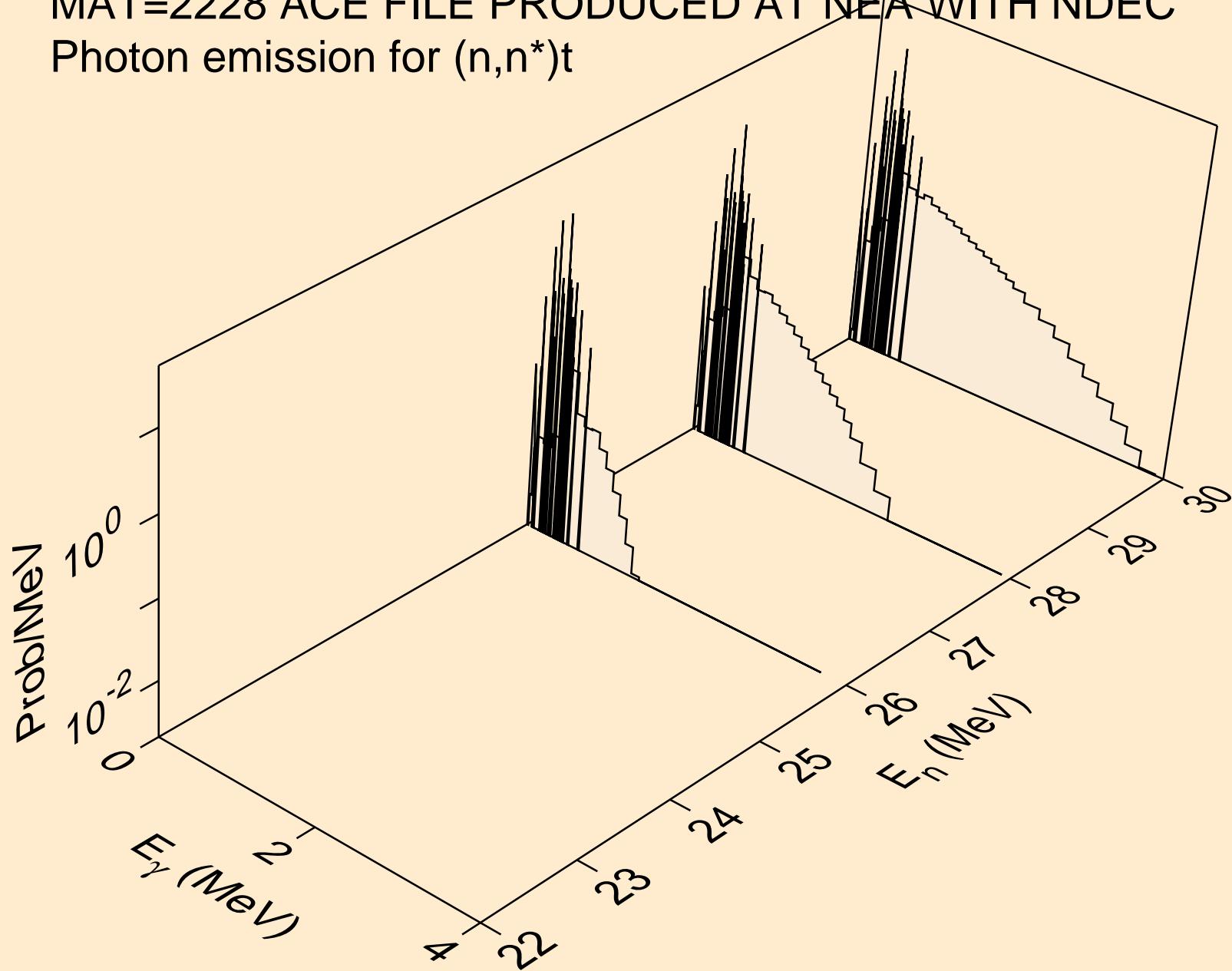
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Photon emission for  $(n,n^*)2a$



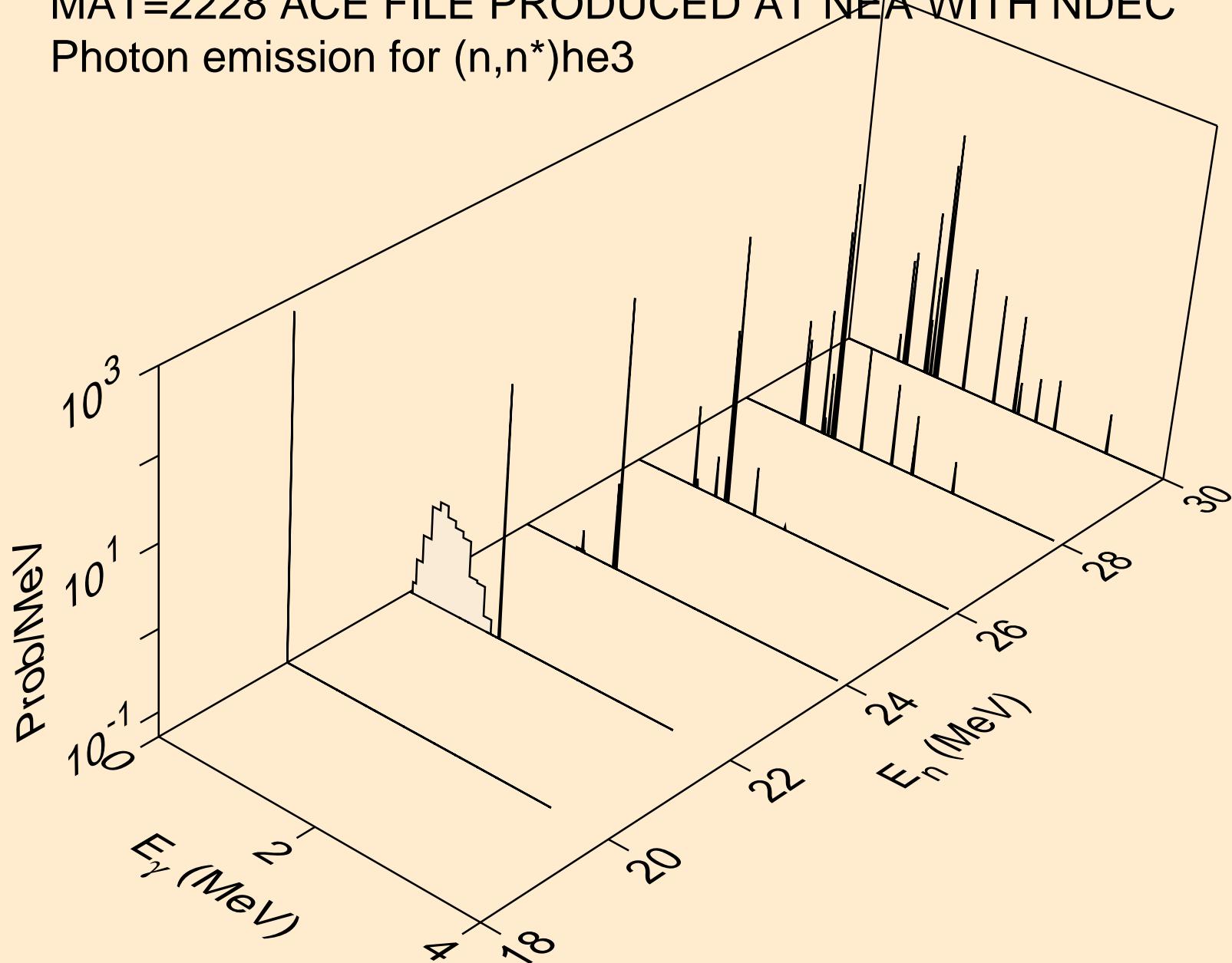
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Photon emission for  $(n,n^*)d$



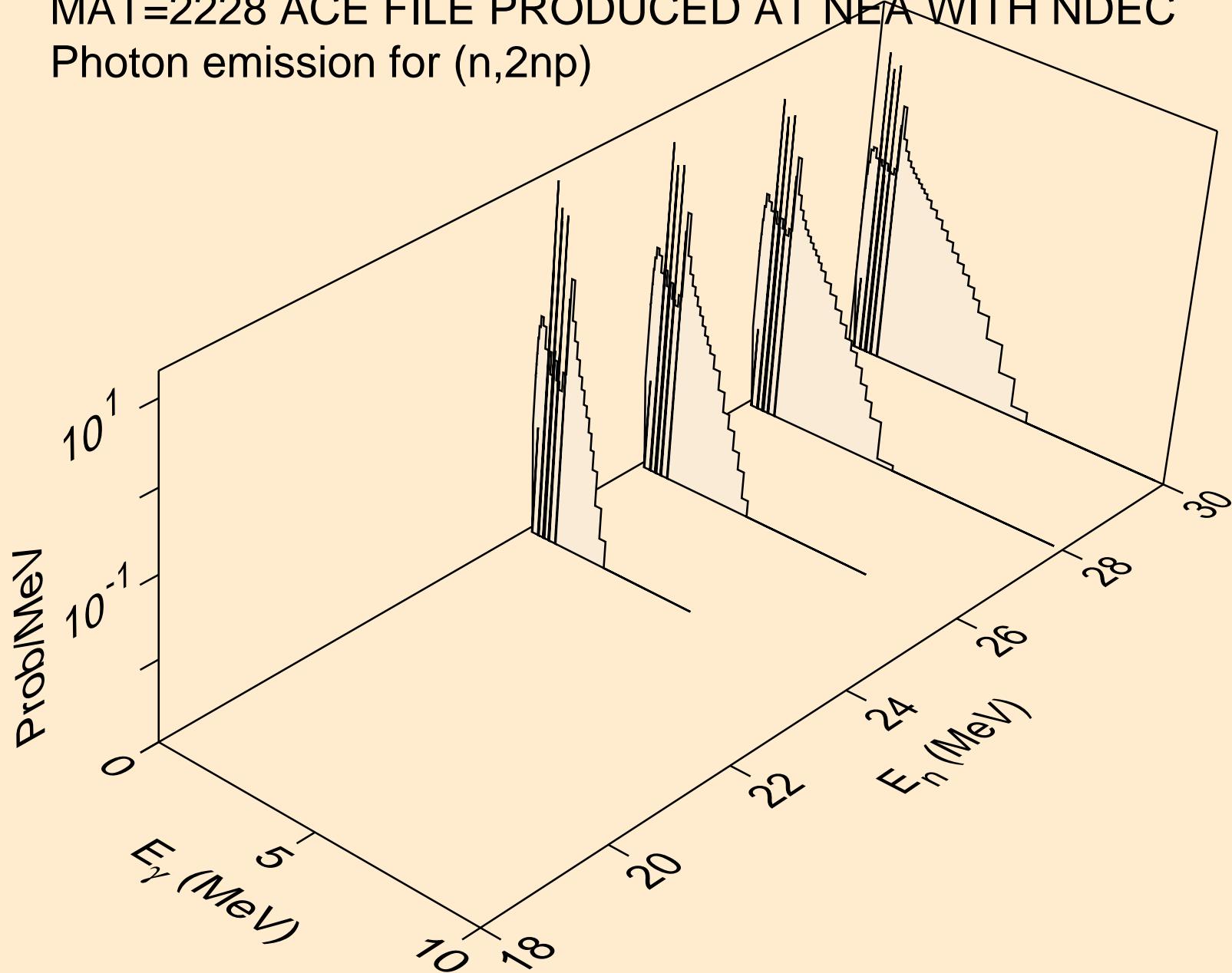
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Photon emission for  $(n,n^*)t$



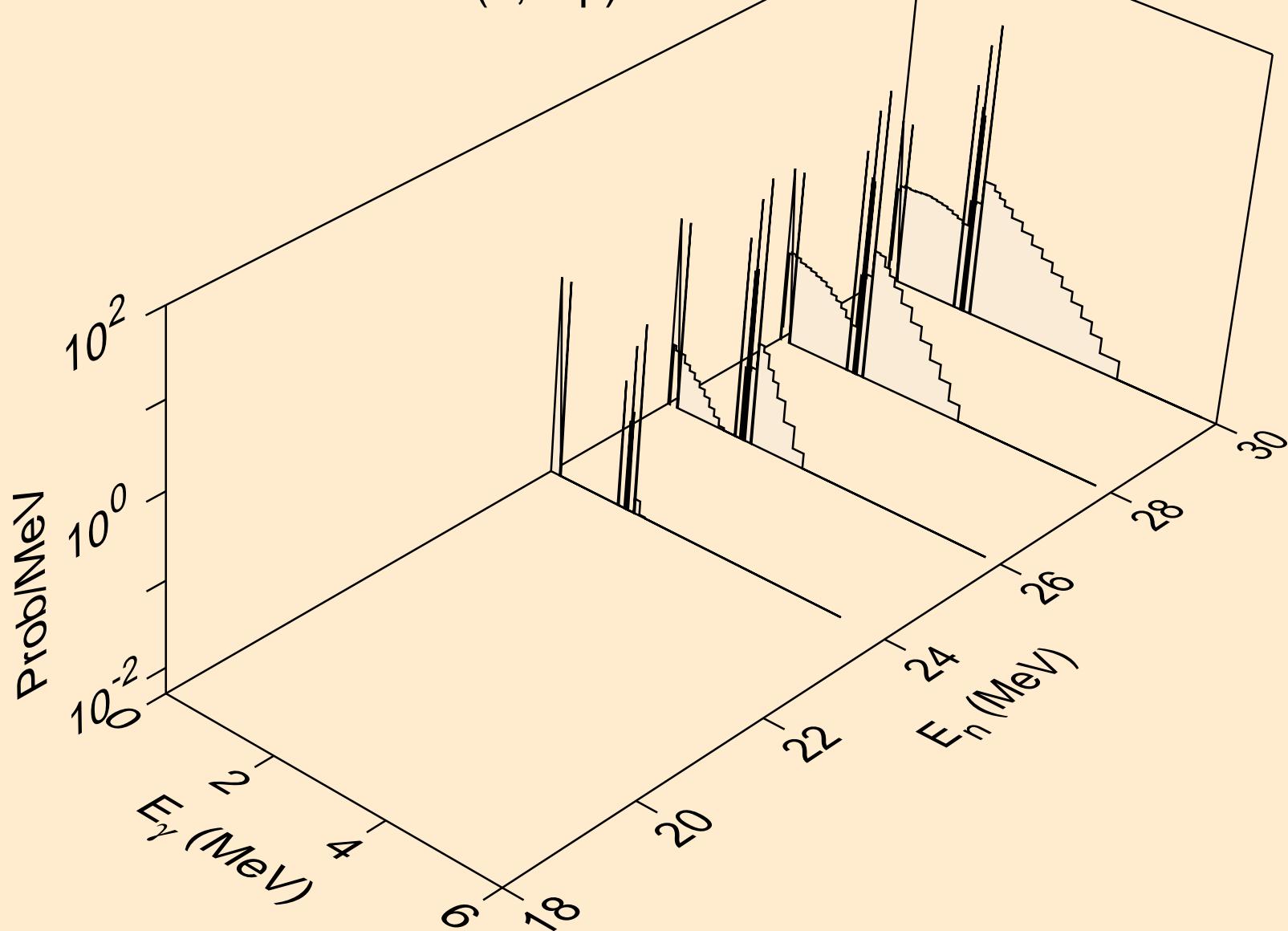
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Photon emission for  $(n,n^*)\text{he3}$



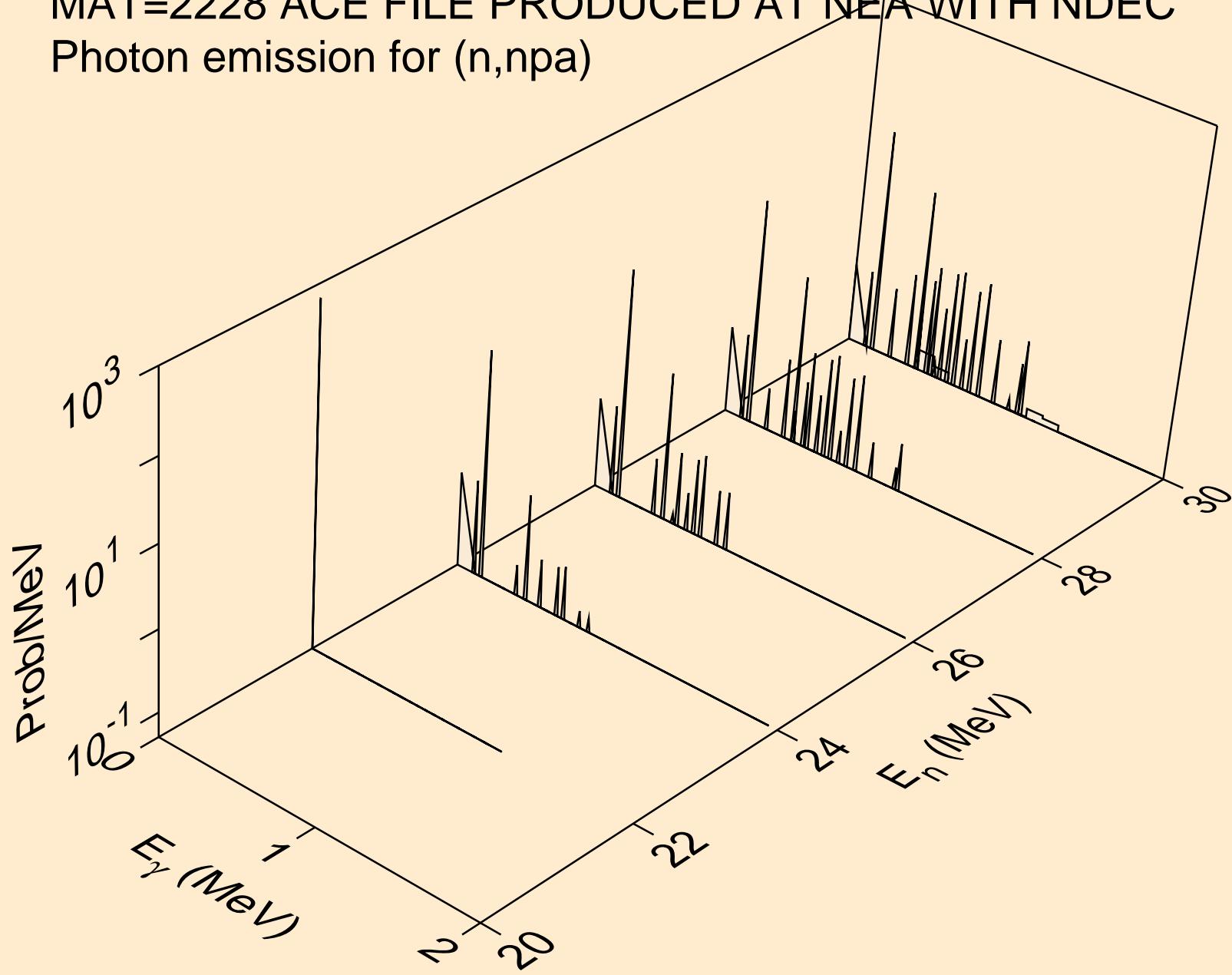
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Photon emission for (n,2np)



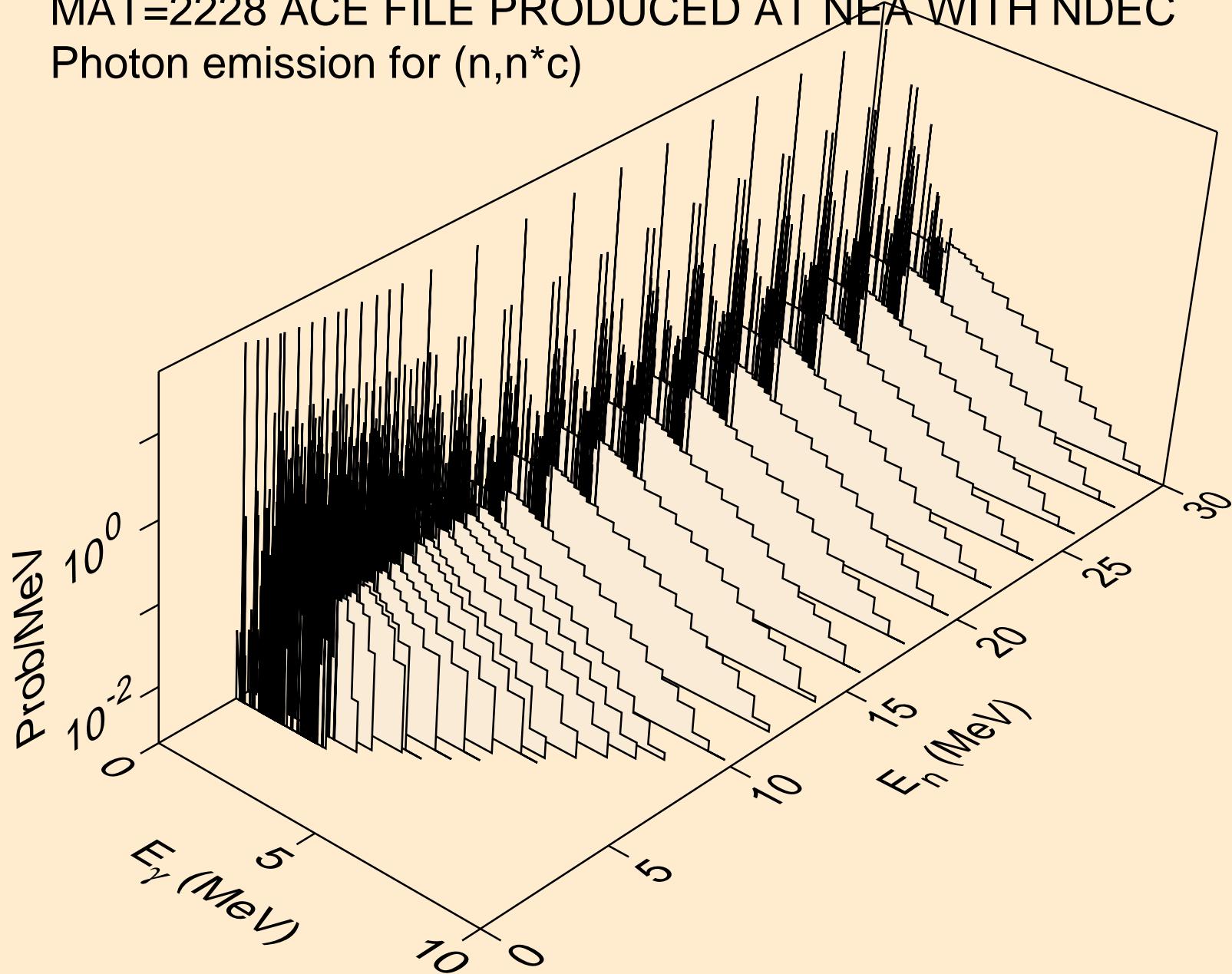
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Photon emission for (n,2np)



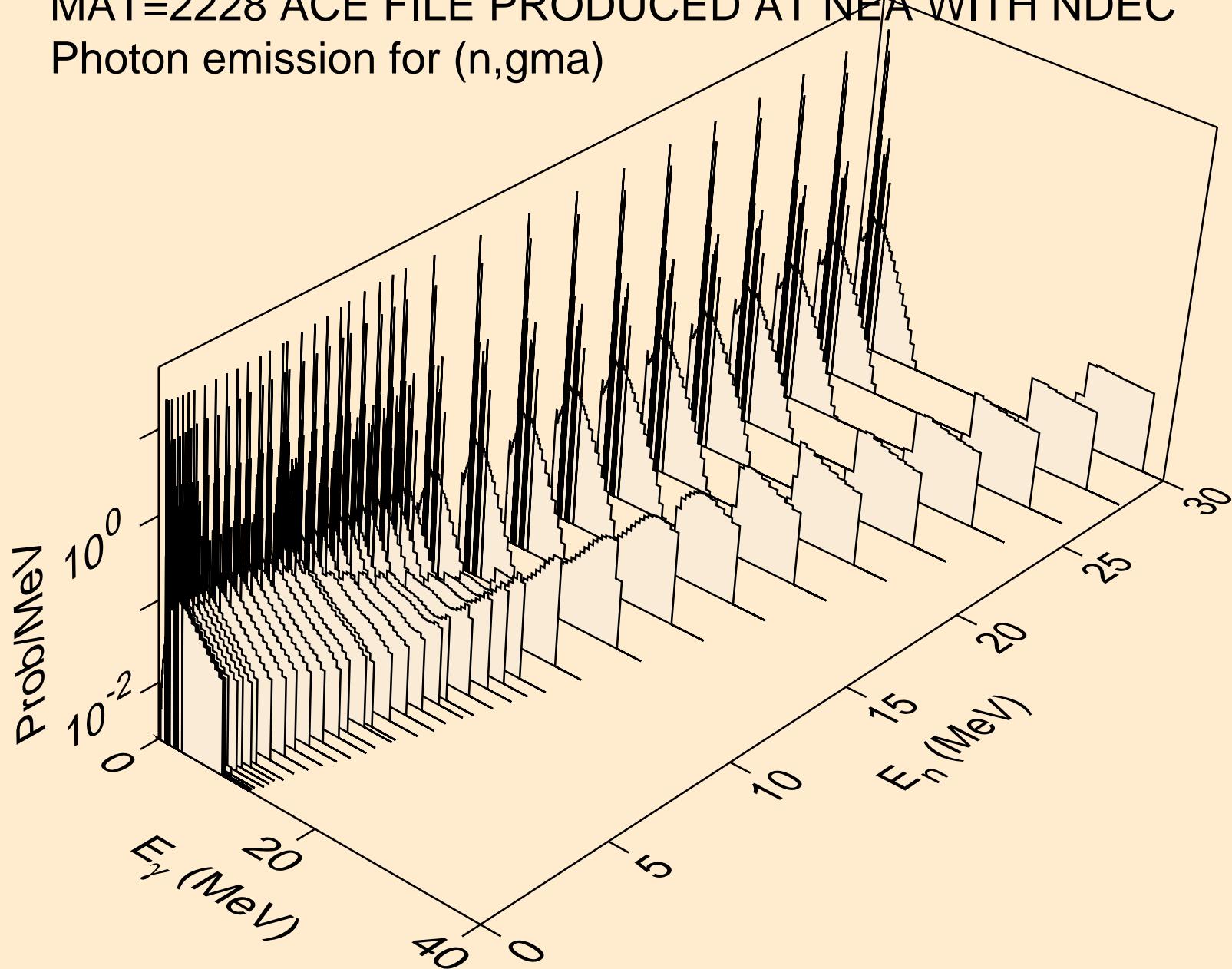
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Photon emission for (n,npa)



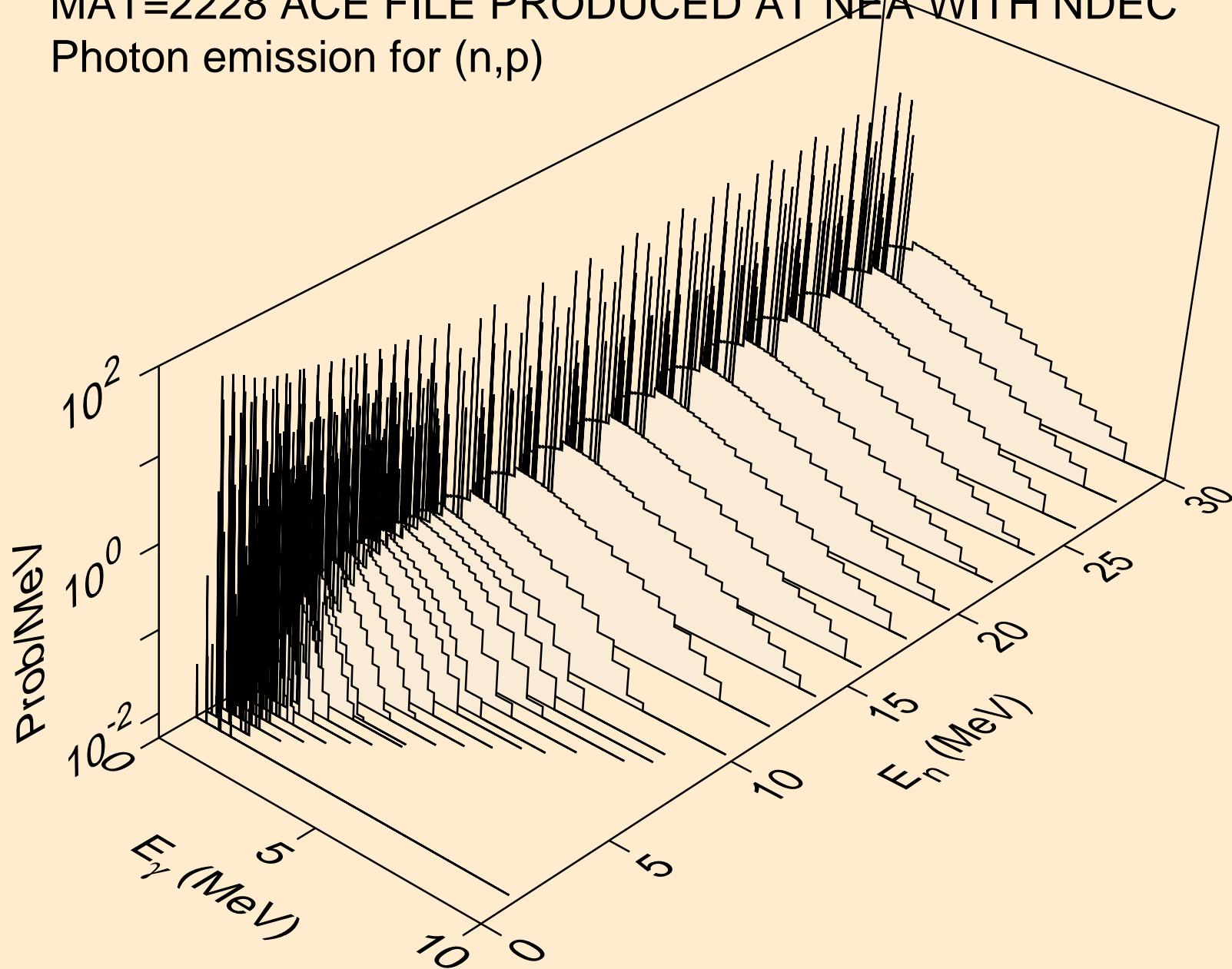
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Photon emission for (n,n\*c)



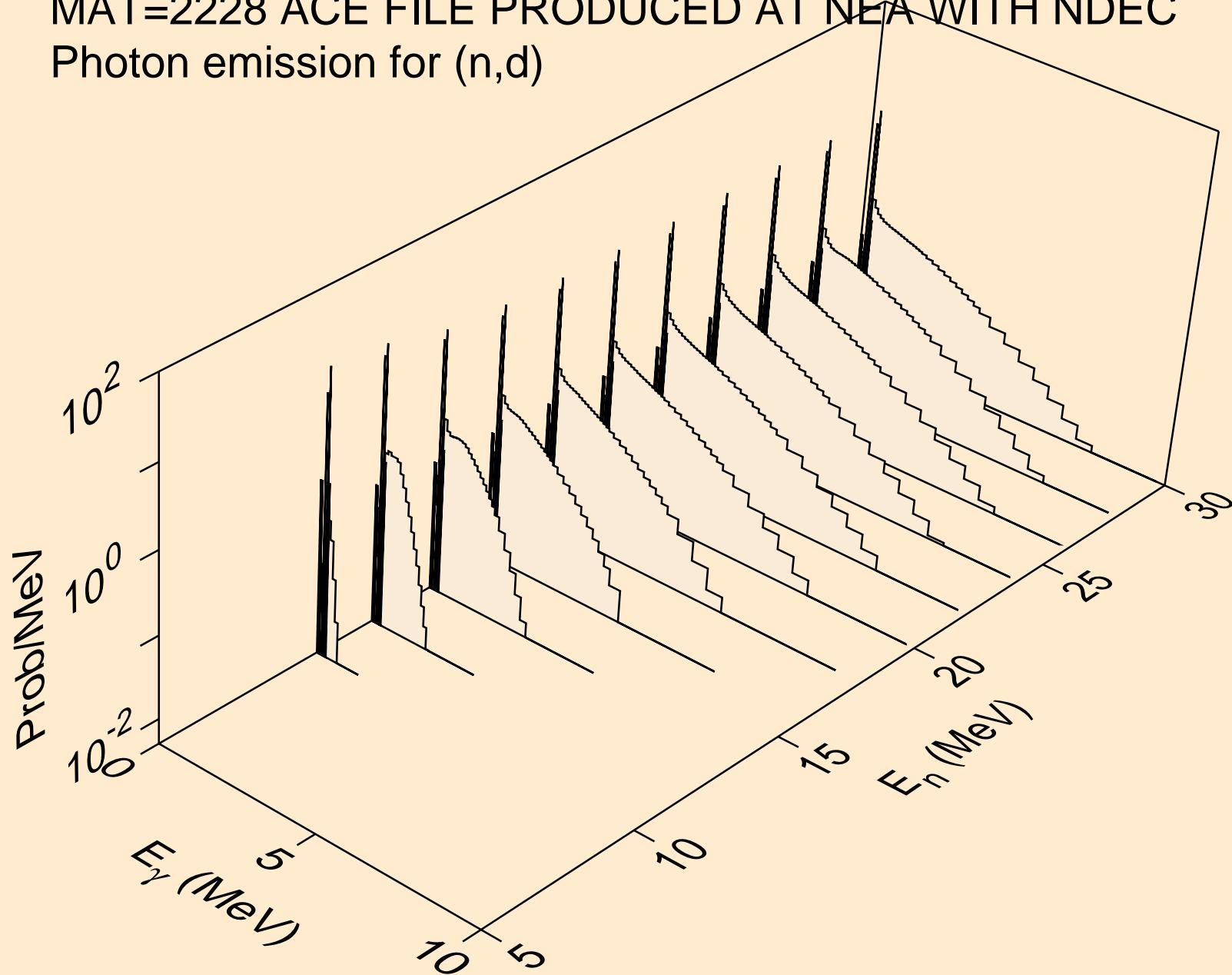
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Photon emission for (n,gma)



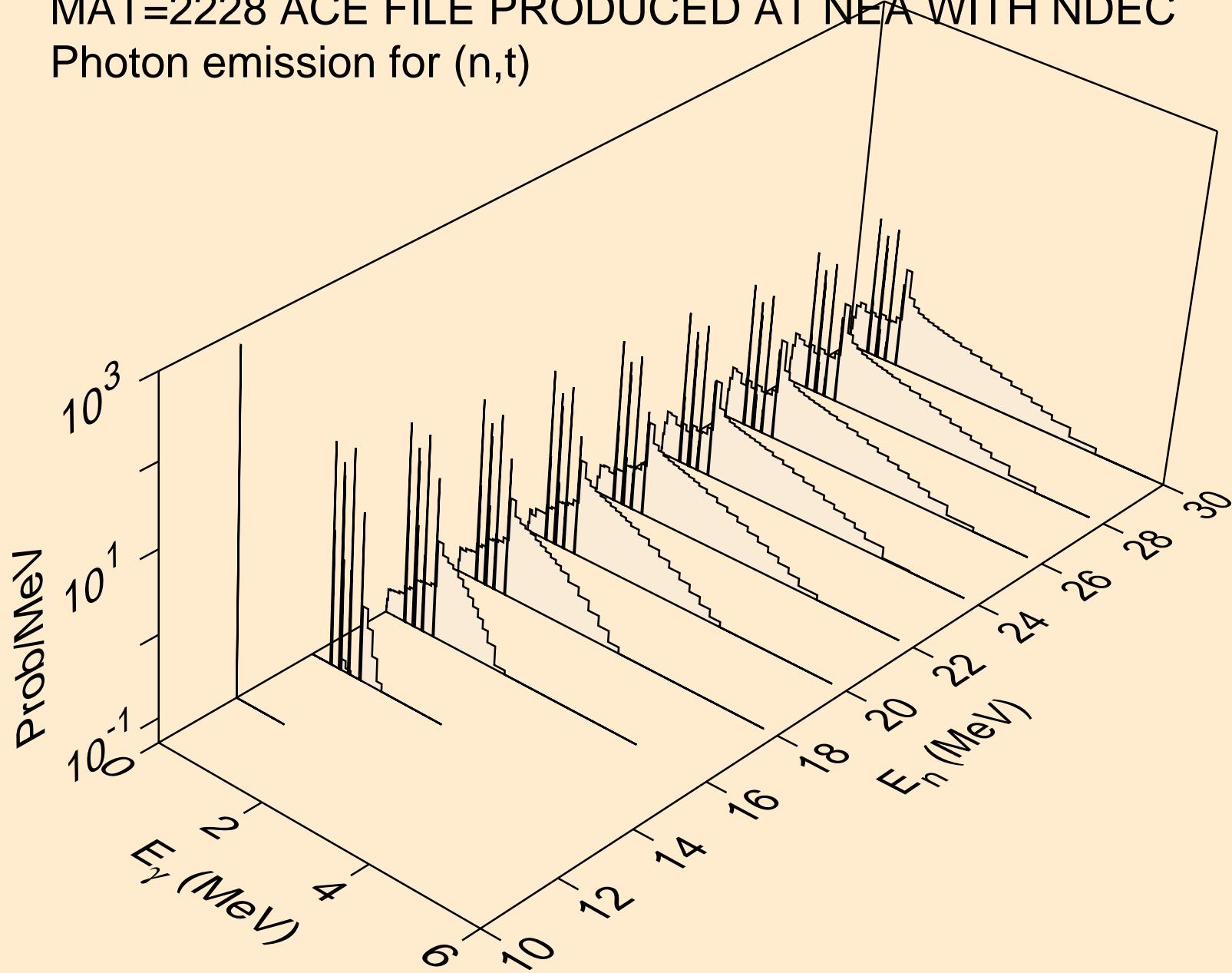
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Photon emission for (n,p)



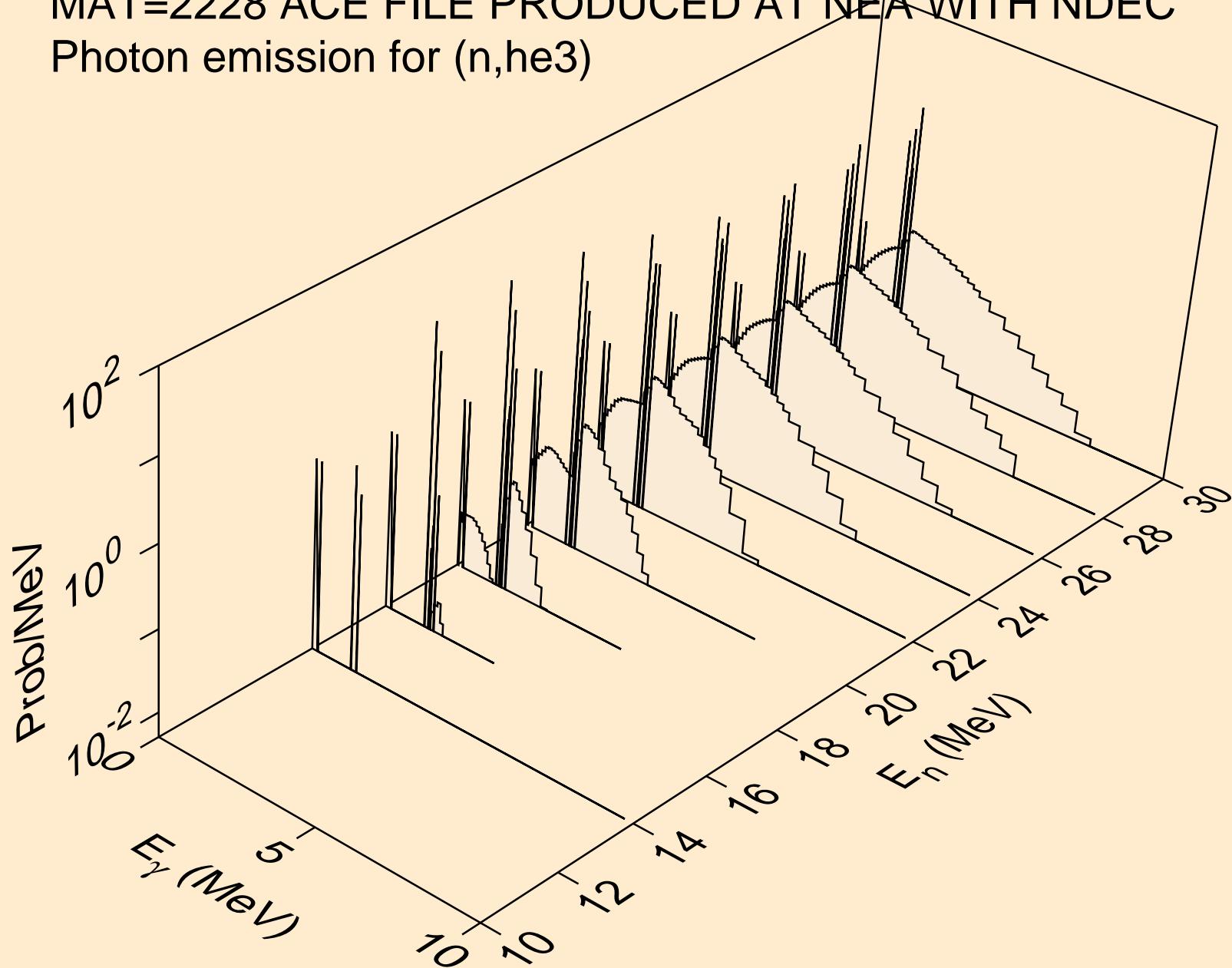
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Photon emission for (n,d)



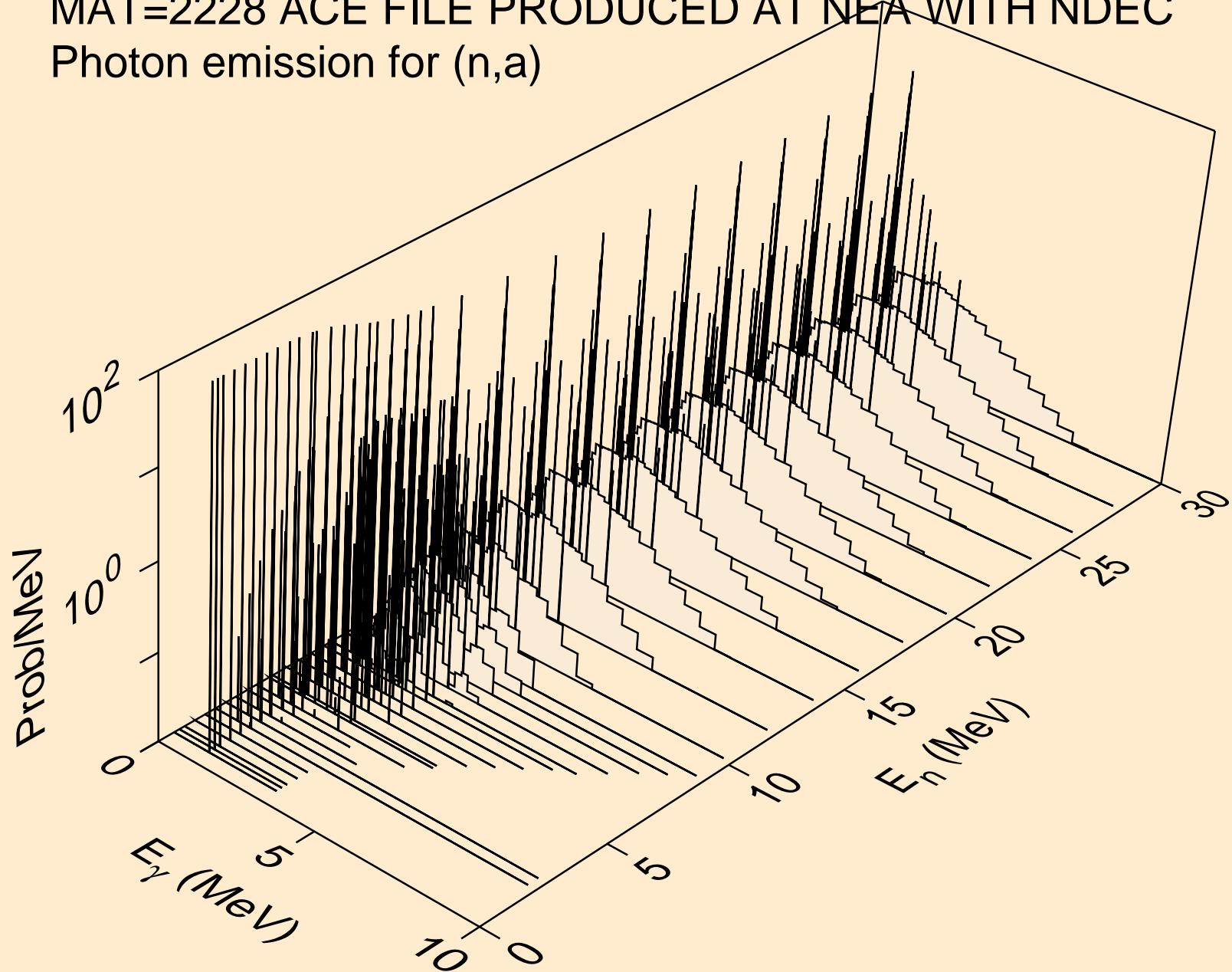
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Photon emission for (n,t)



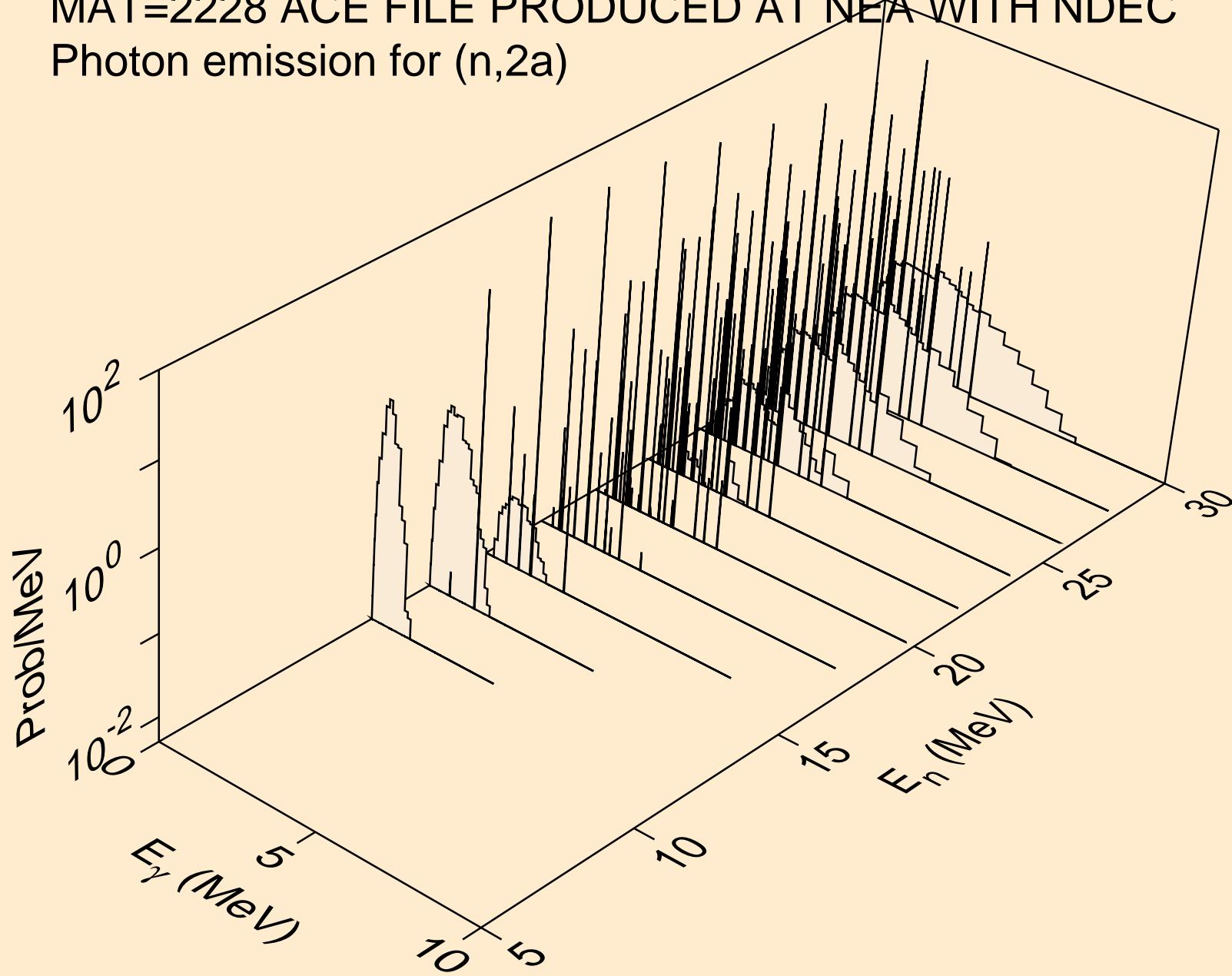
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Photon emission for (n,he3)



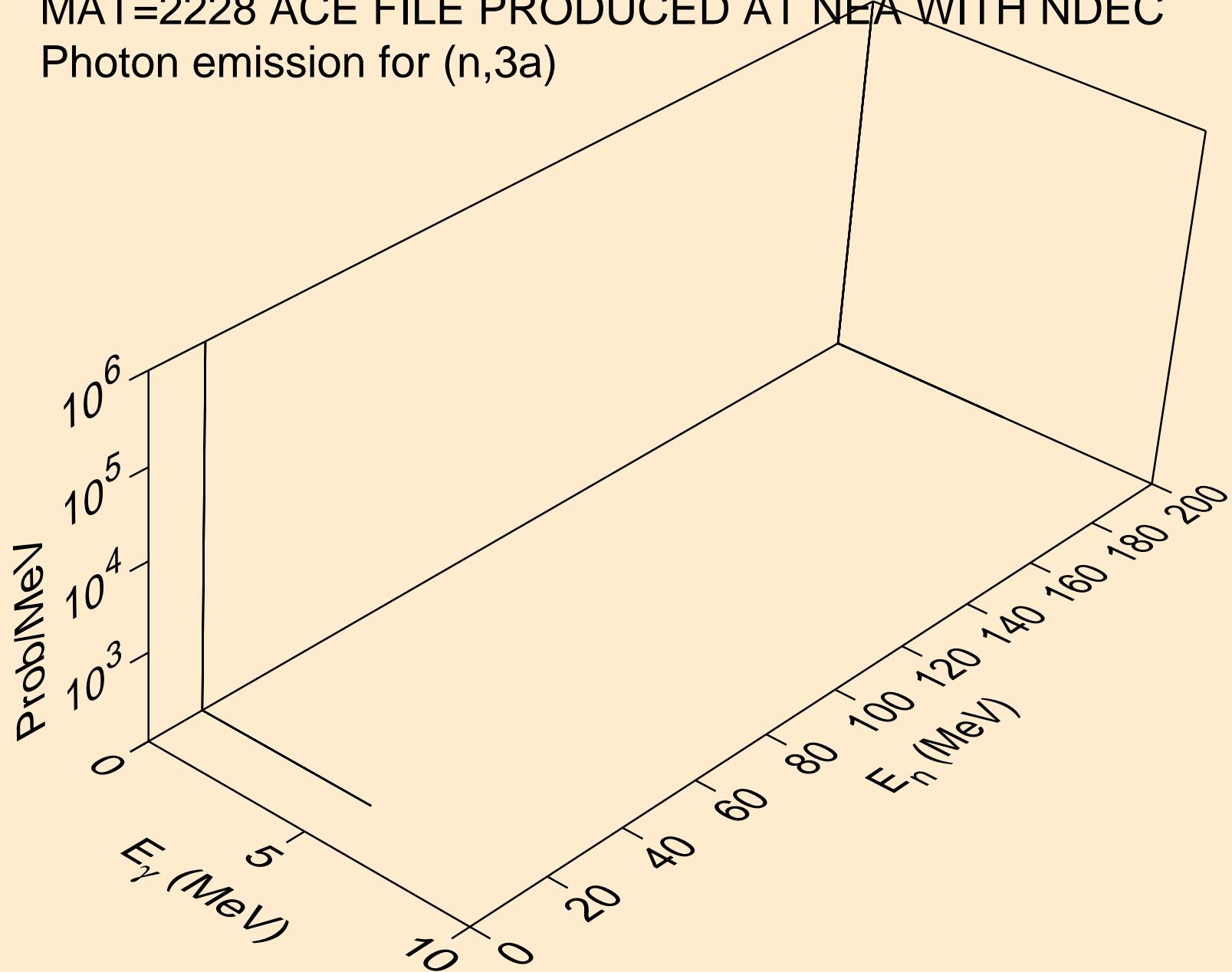
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Photon emission for (n,a)



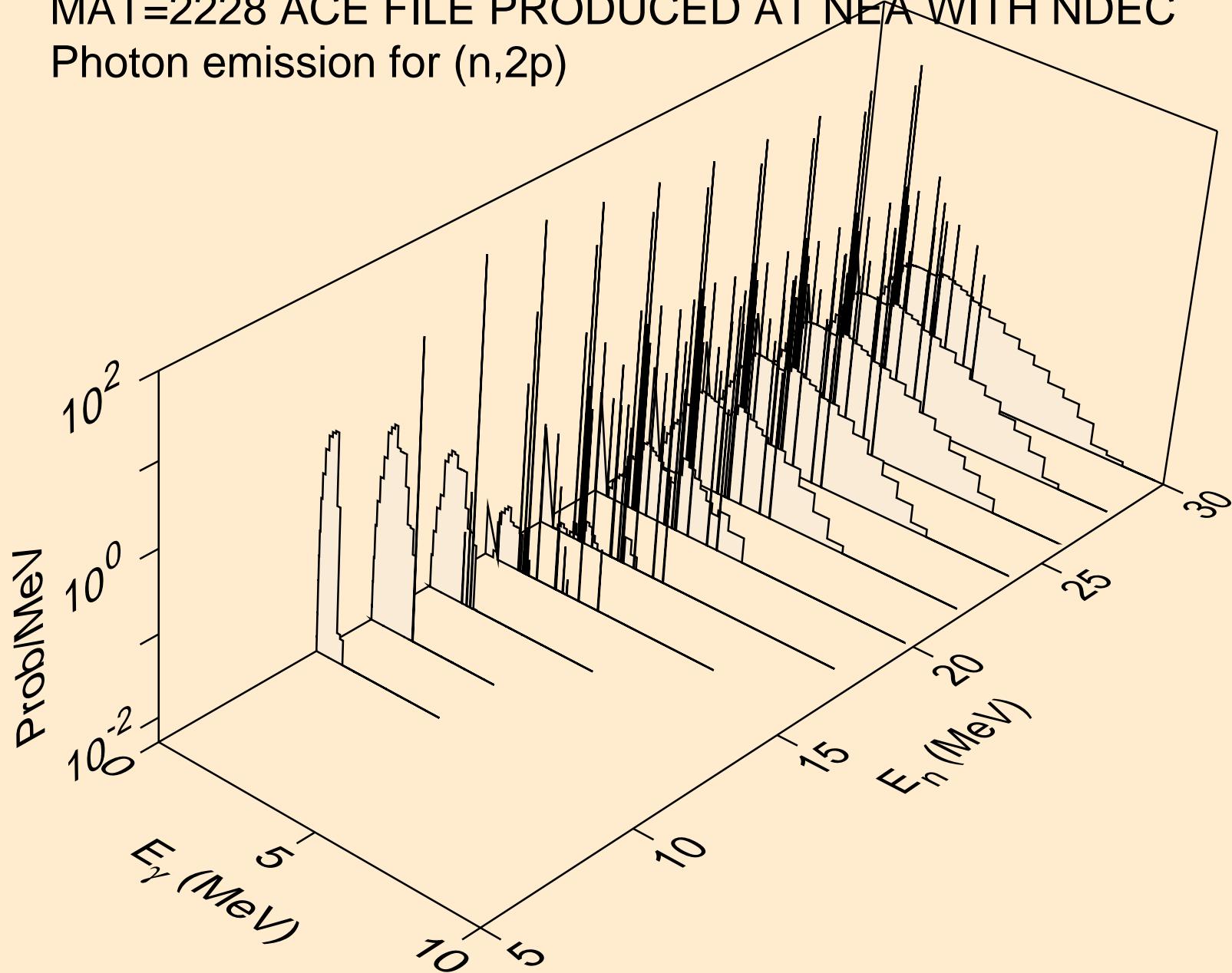
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Photon emission for (n,2a)



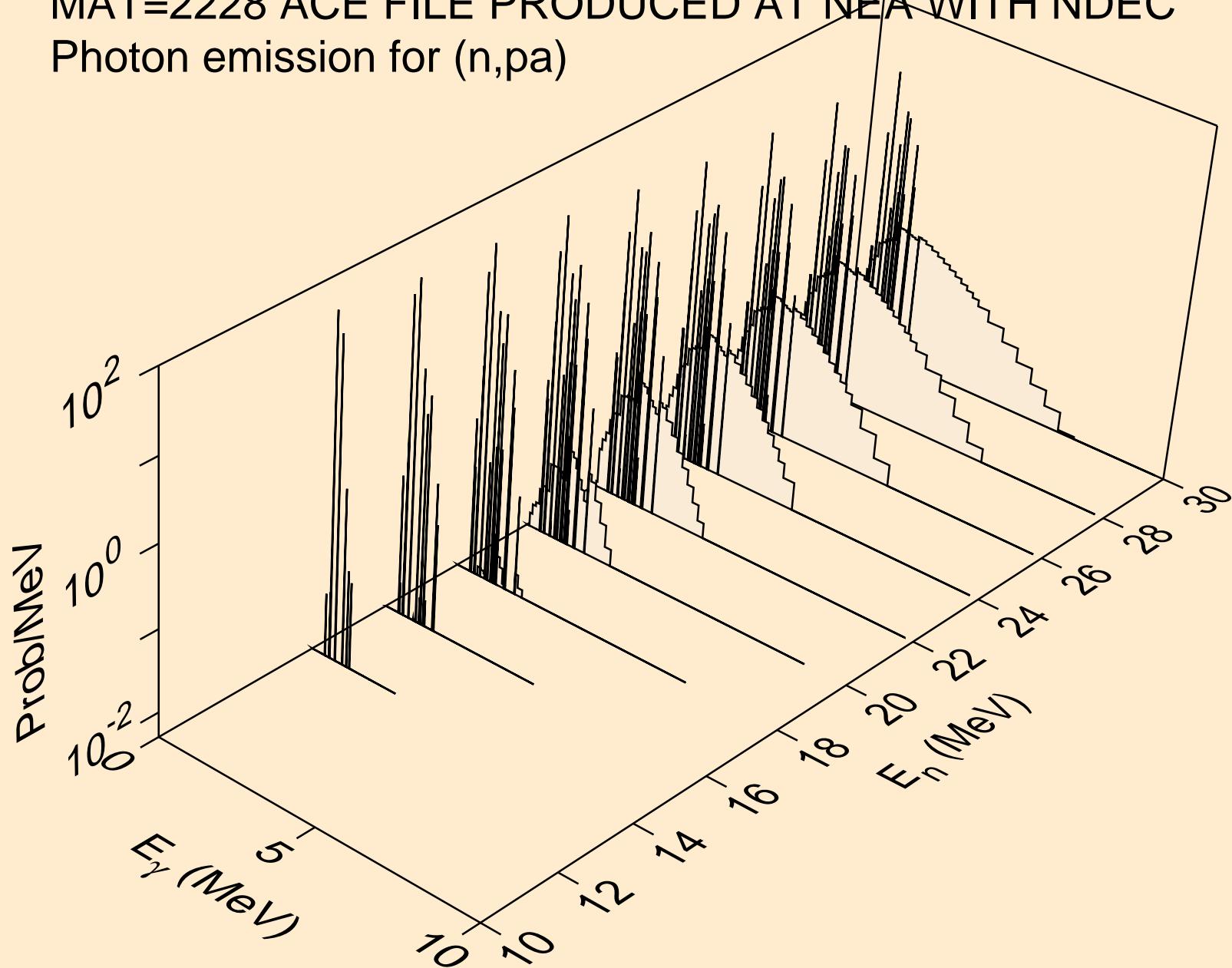
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Photon emission for (n,3a)



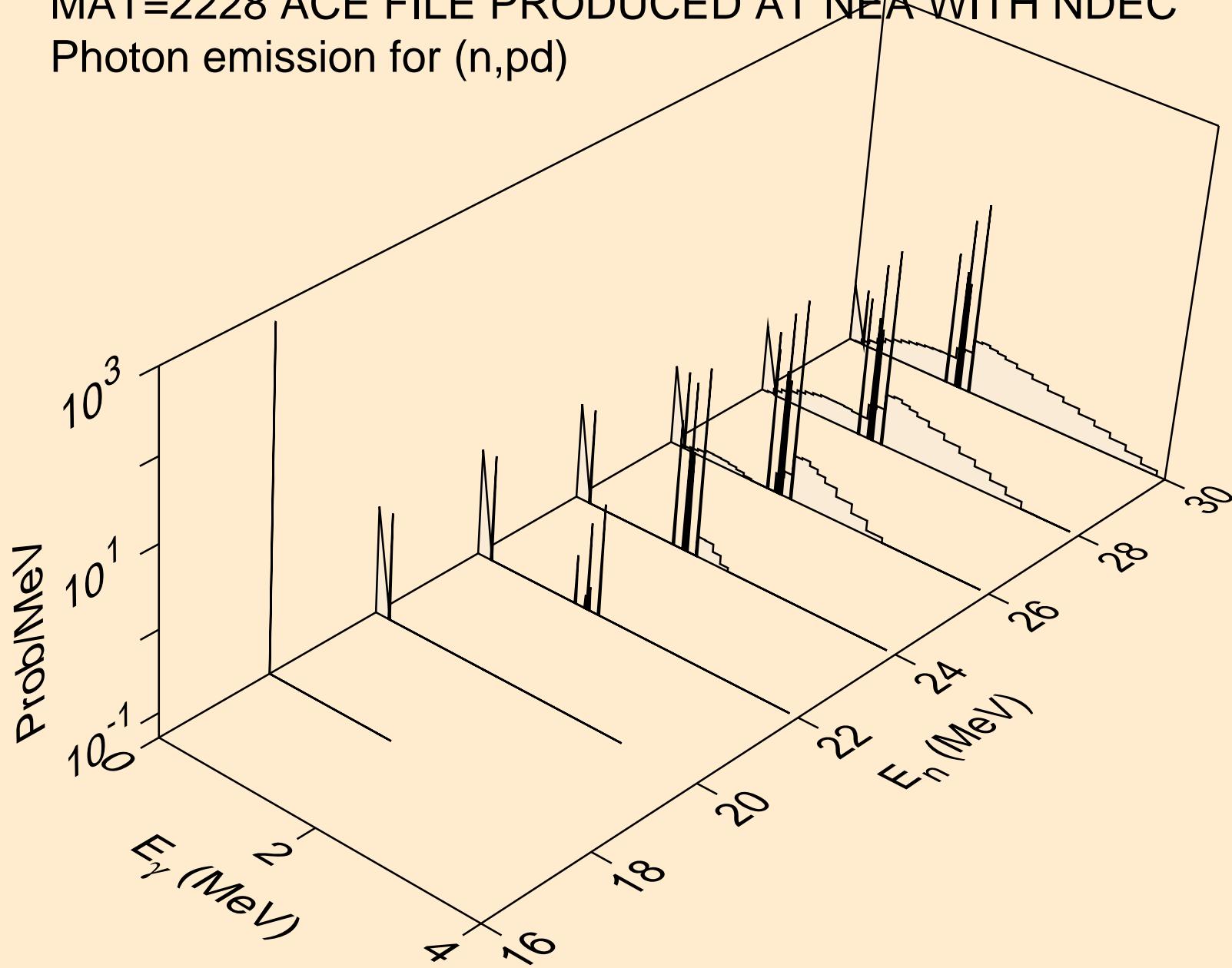
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Photon emission for (n,2p)



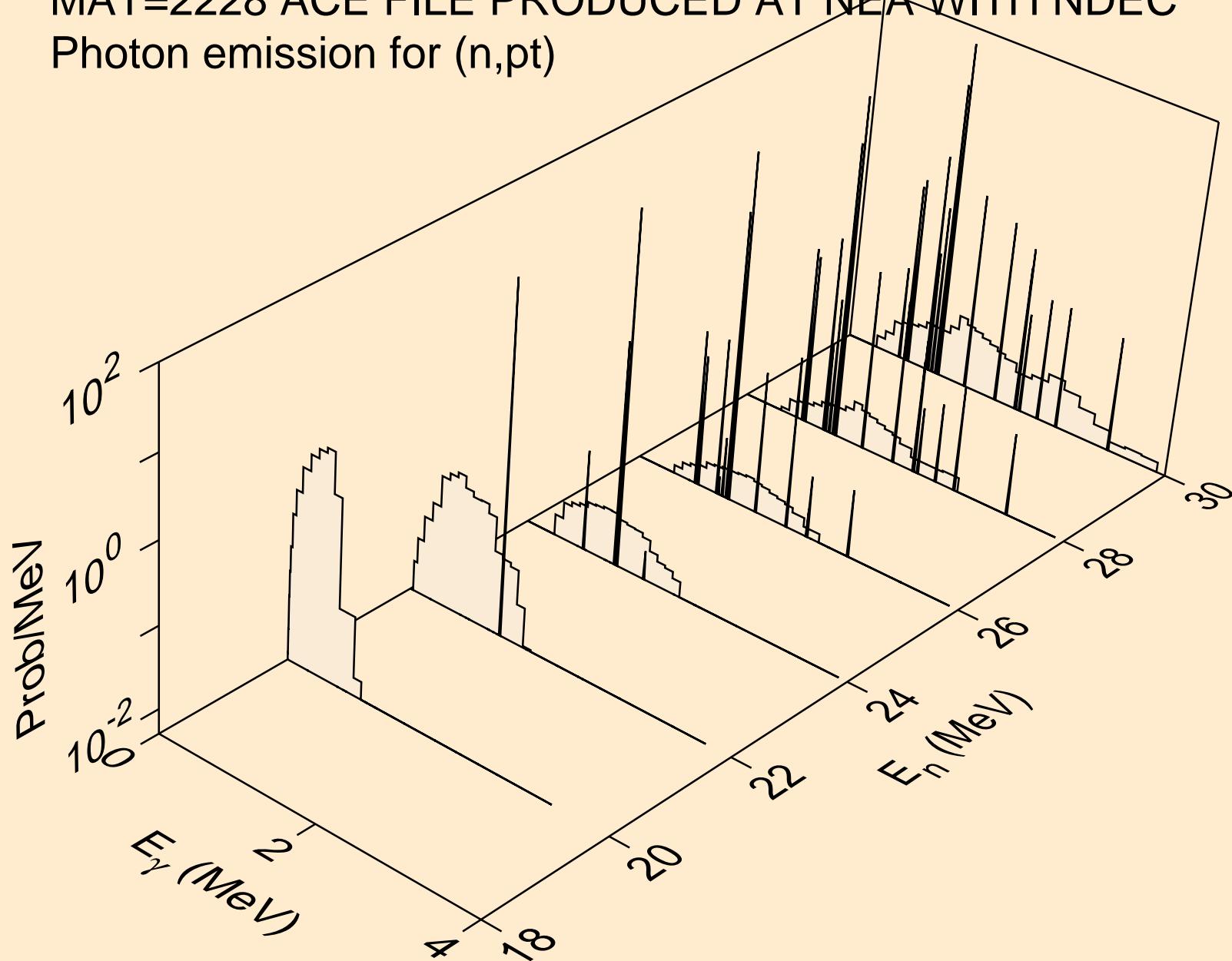
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Photon emission for (n,pa)



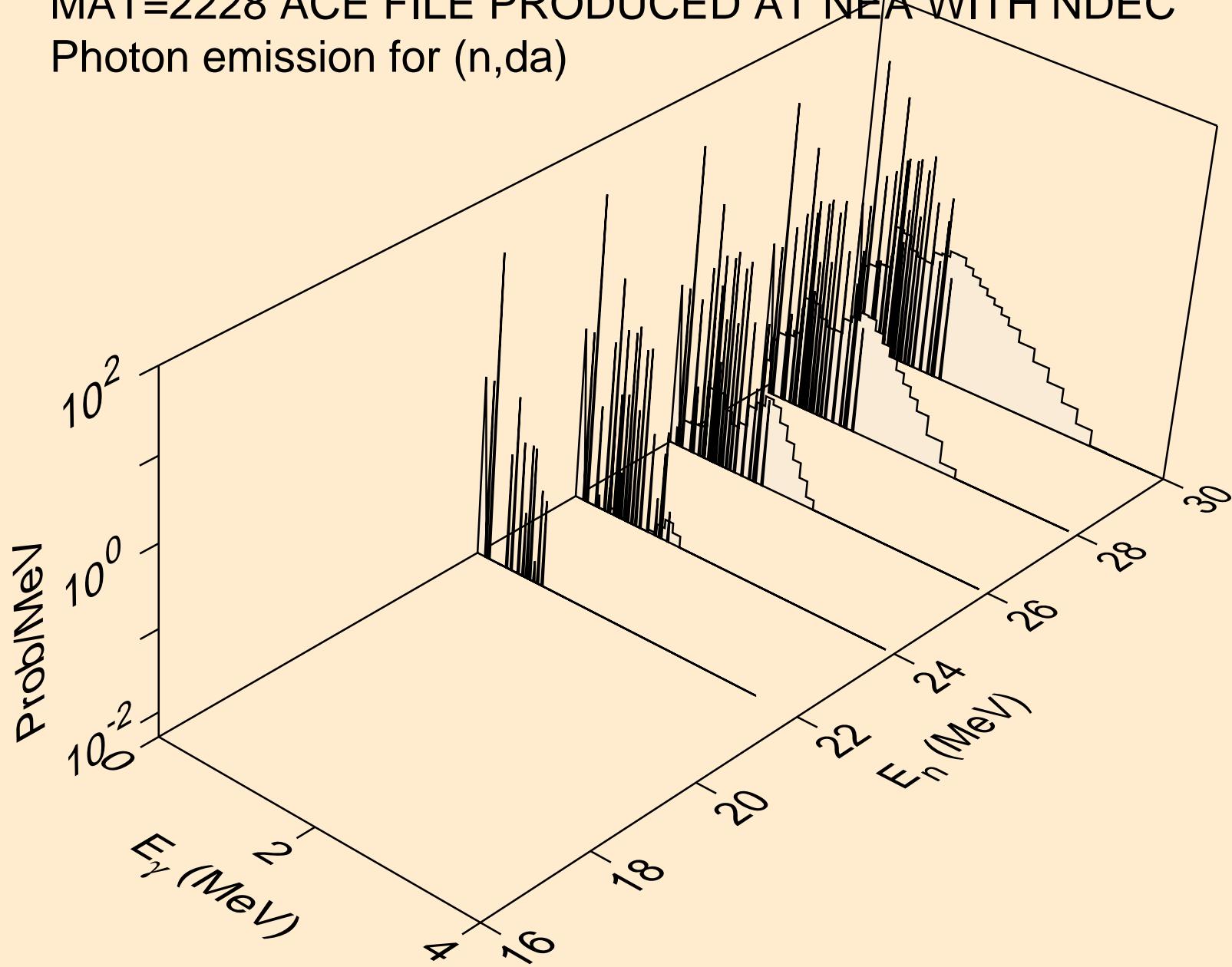
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
Photon emission for (n,pd)



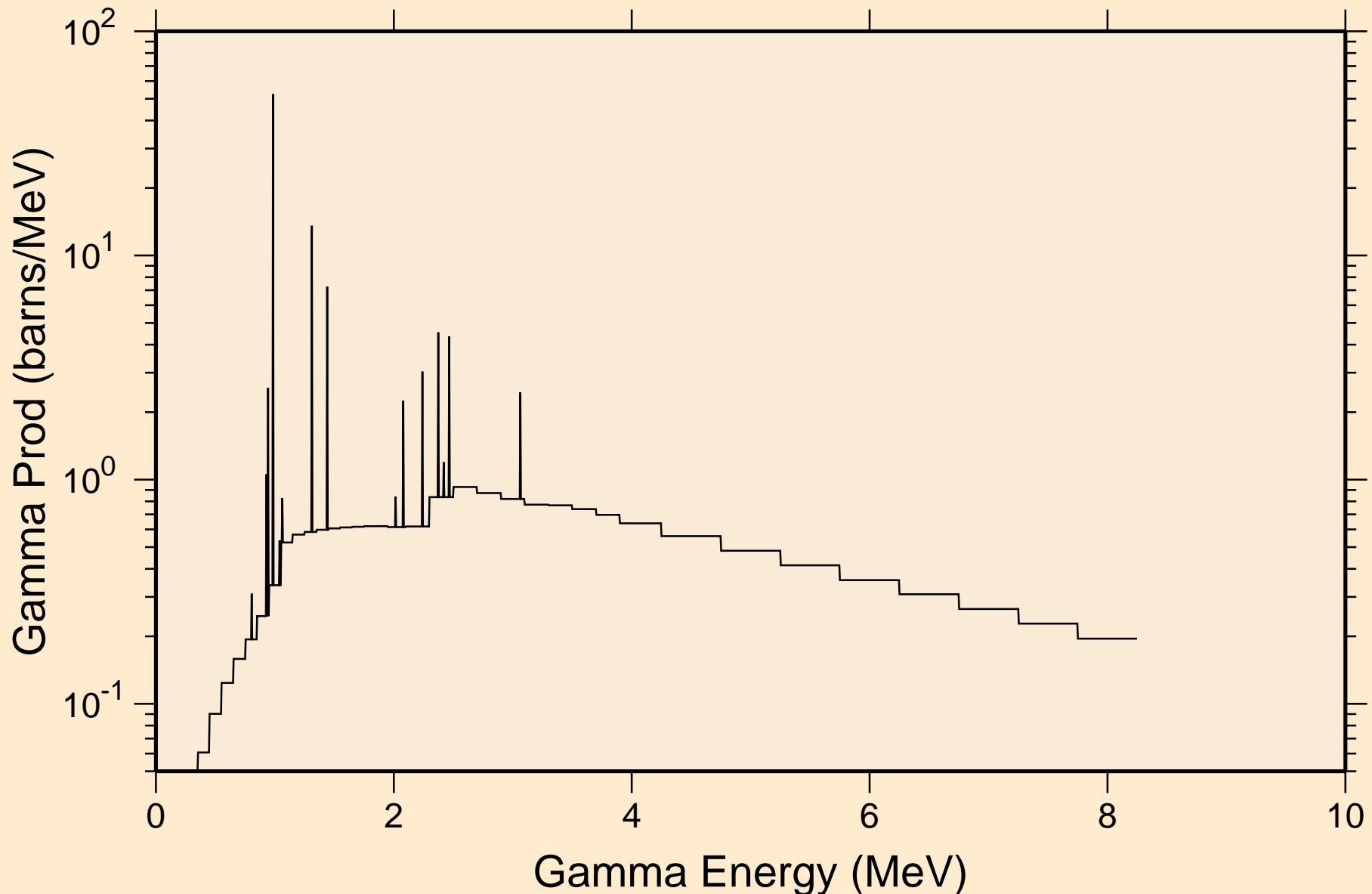
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Photon emission for (n,pt)



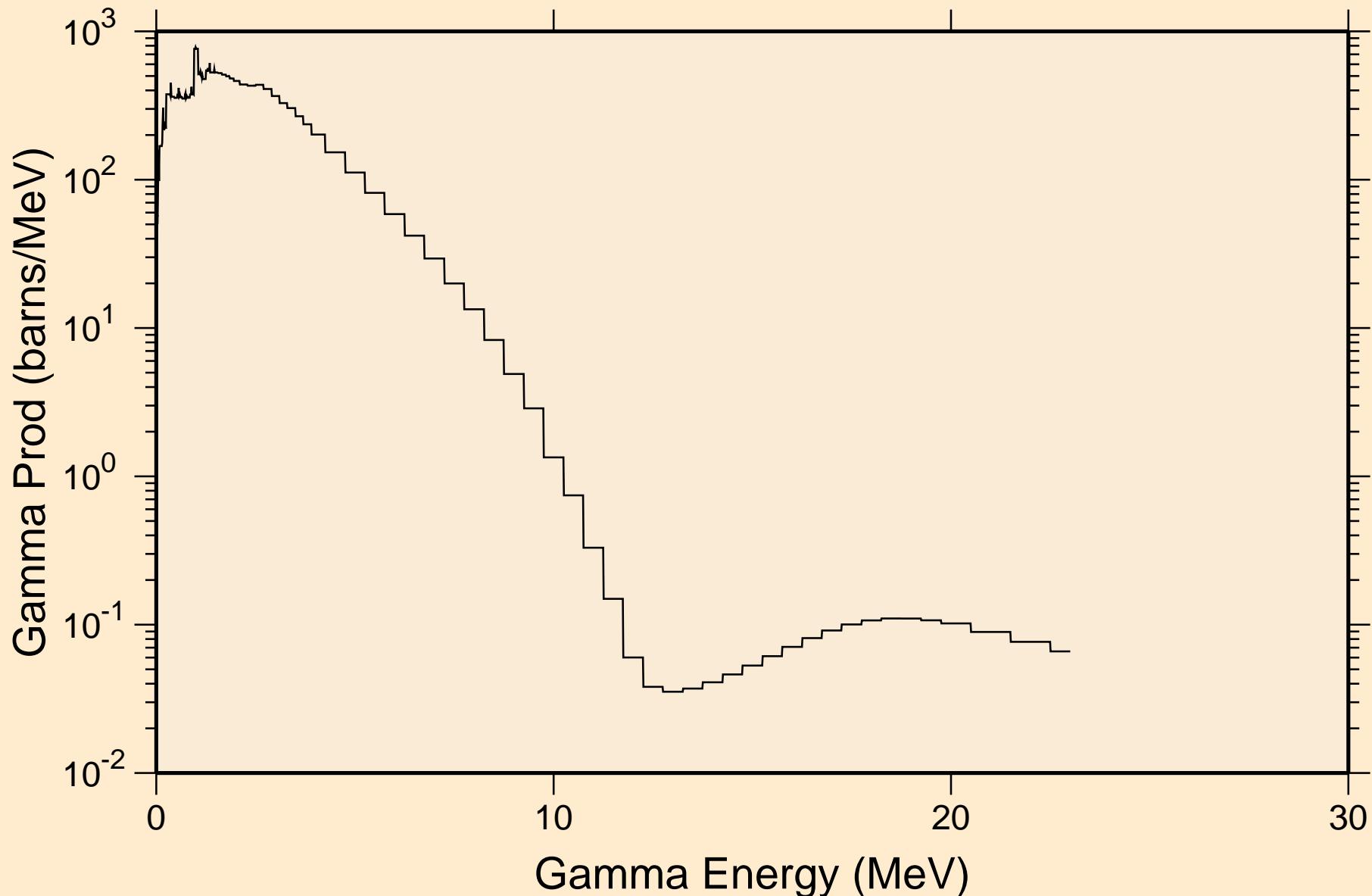
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Photon emission for (n,da)



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
thermal capture photon spectrum

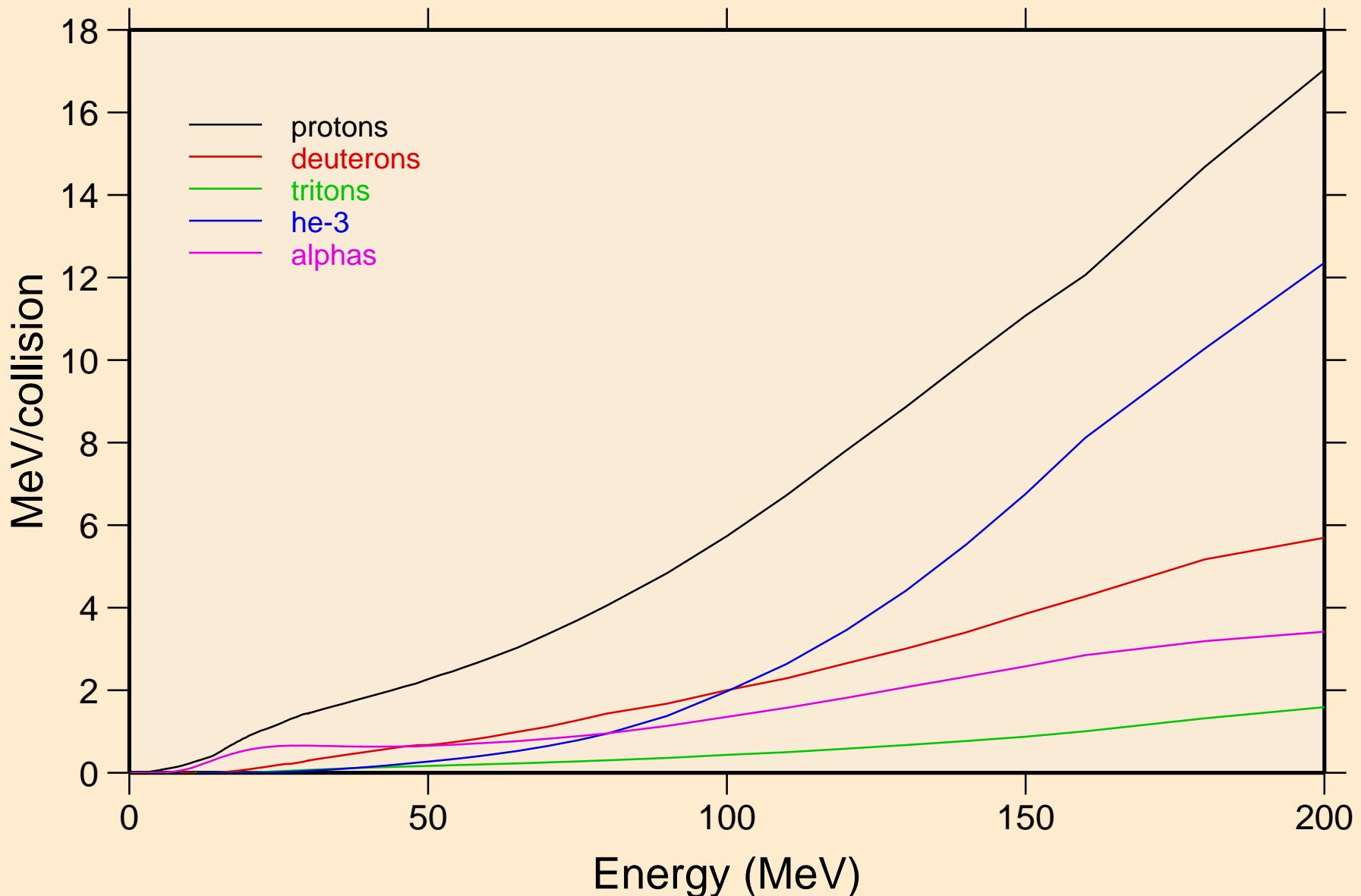


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14 MeV photon spectrum

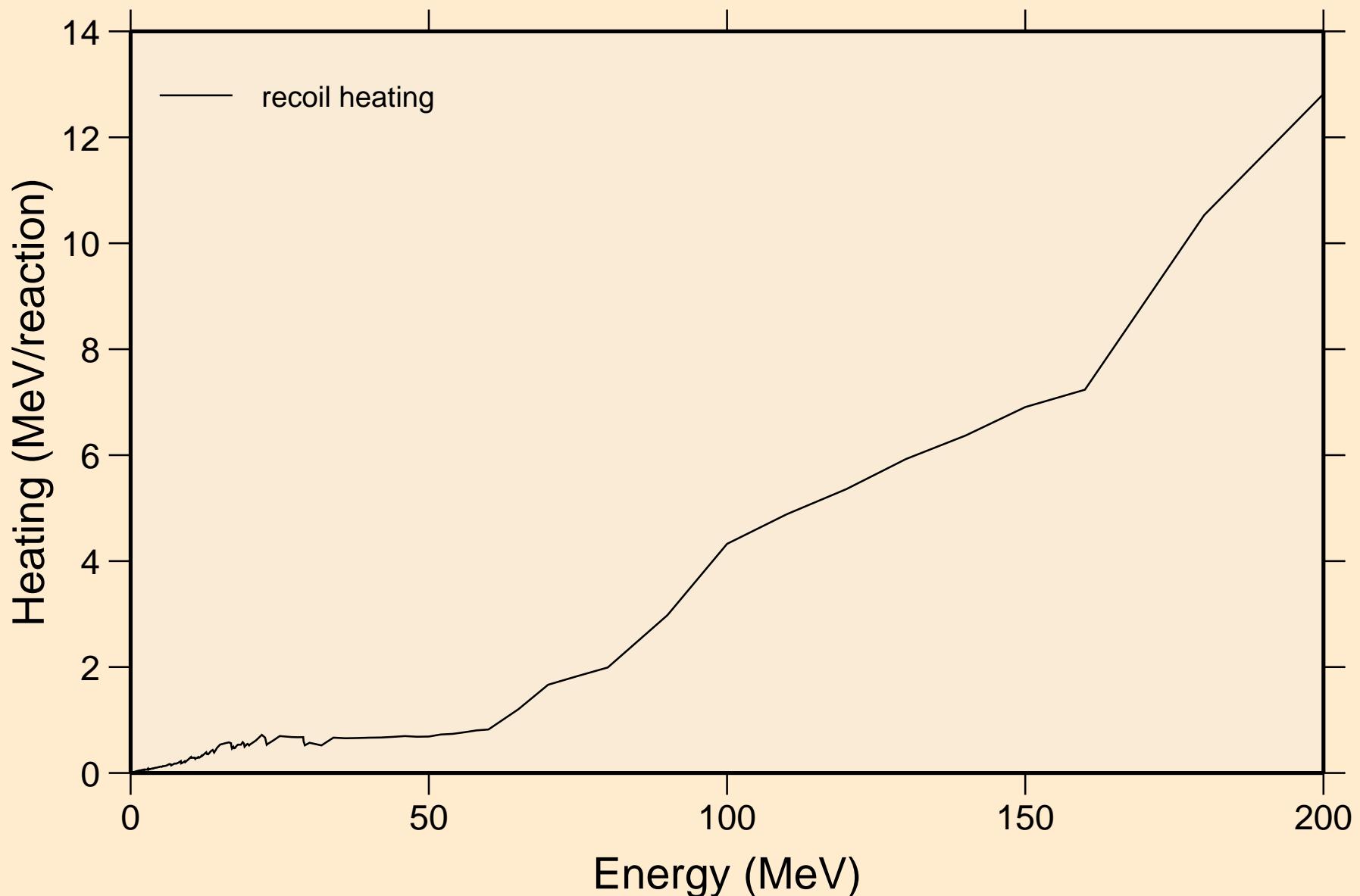


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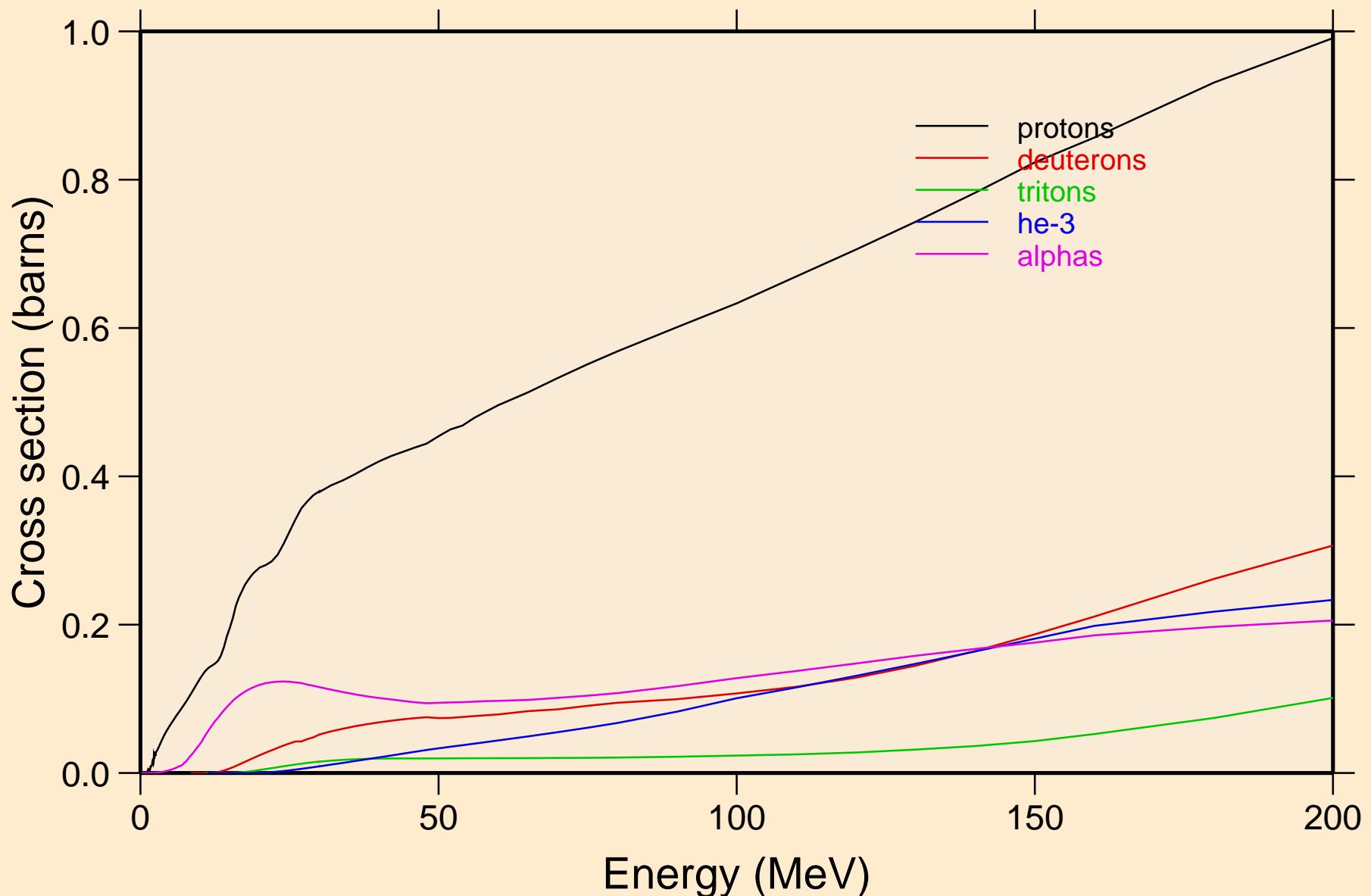
## Particle heating contributions



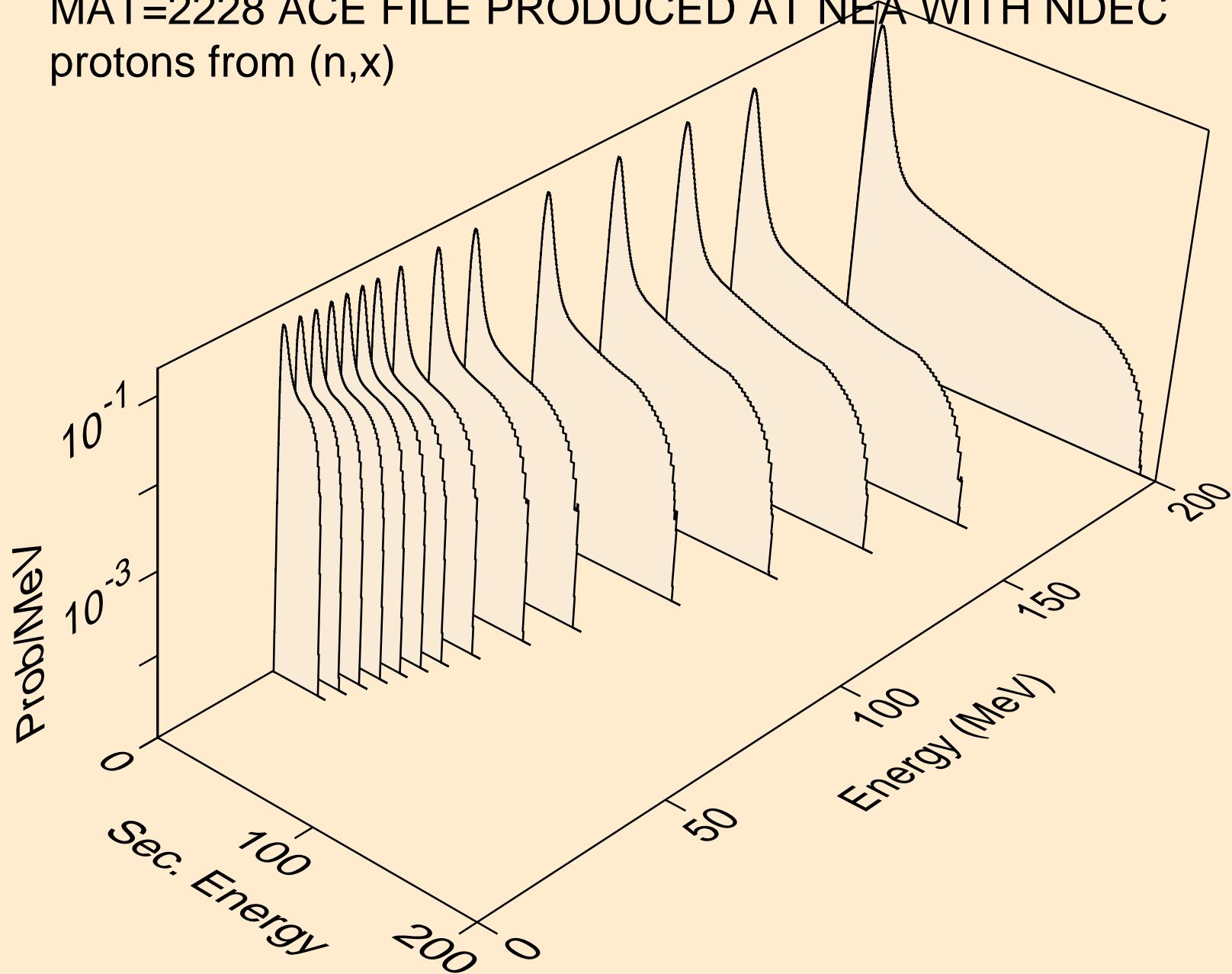
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Recoil Heating



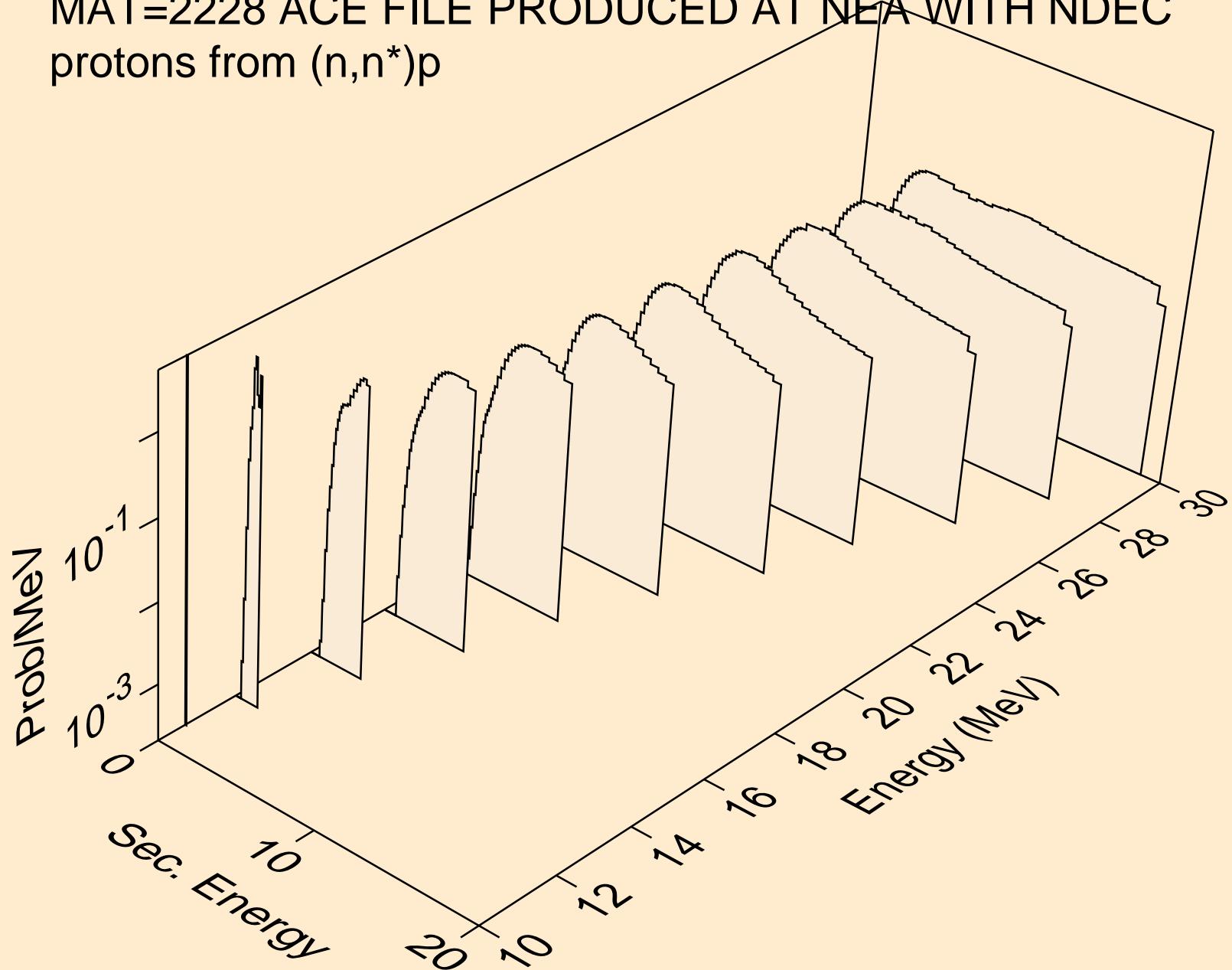
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Particle production cross sections



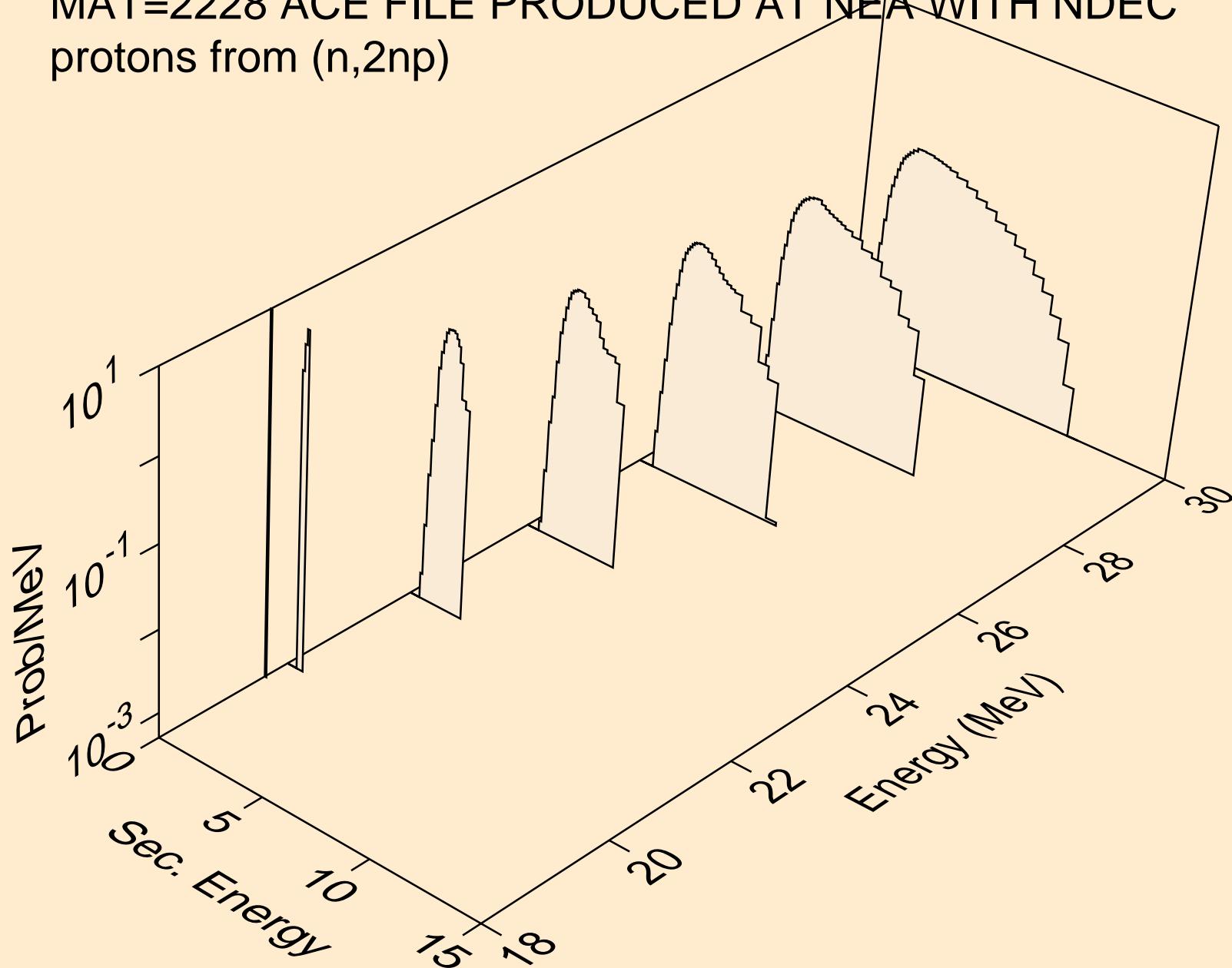
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
protons from (n,x)



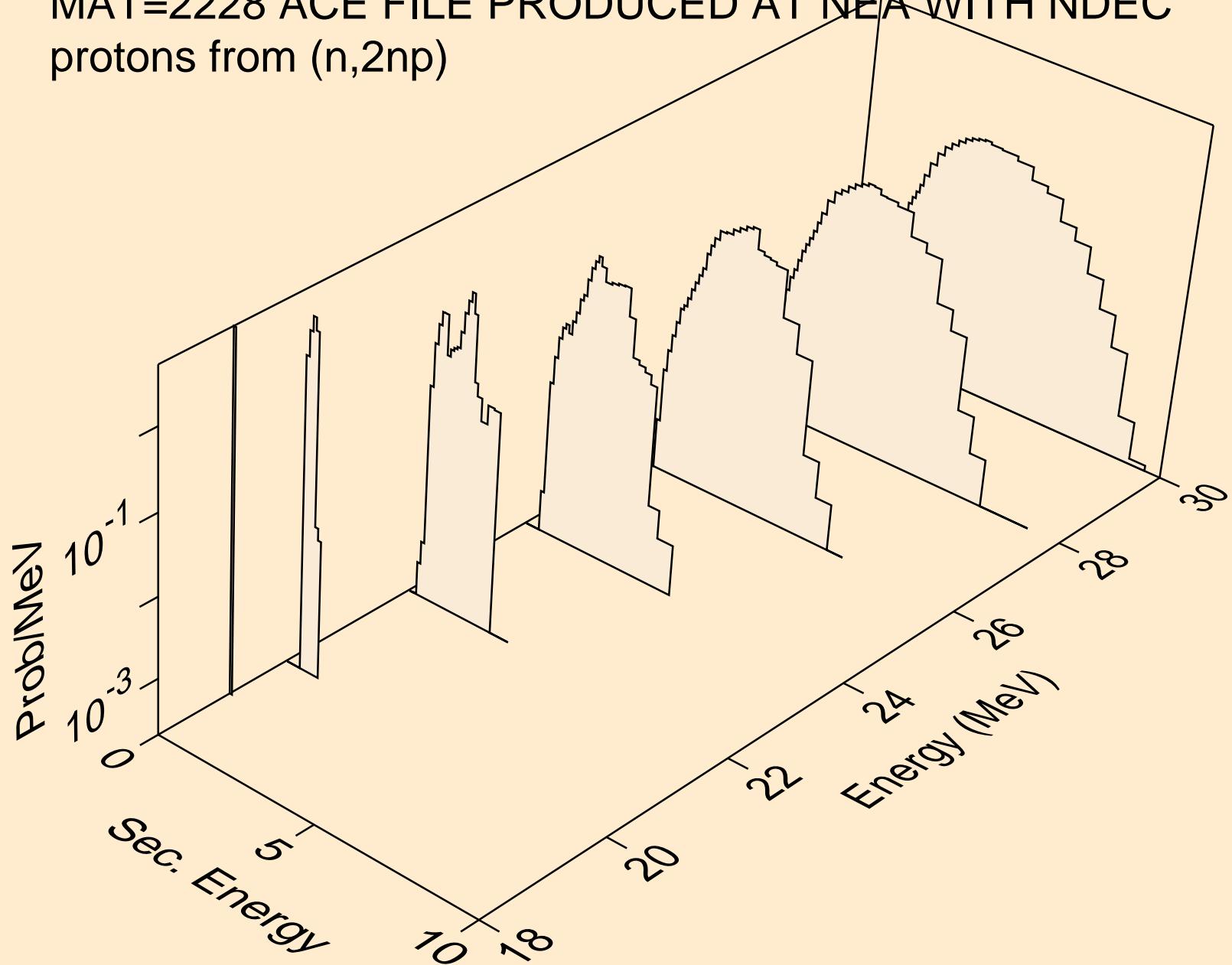
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
protons from  $(n,n^*)p$



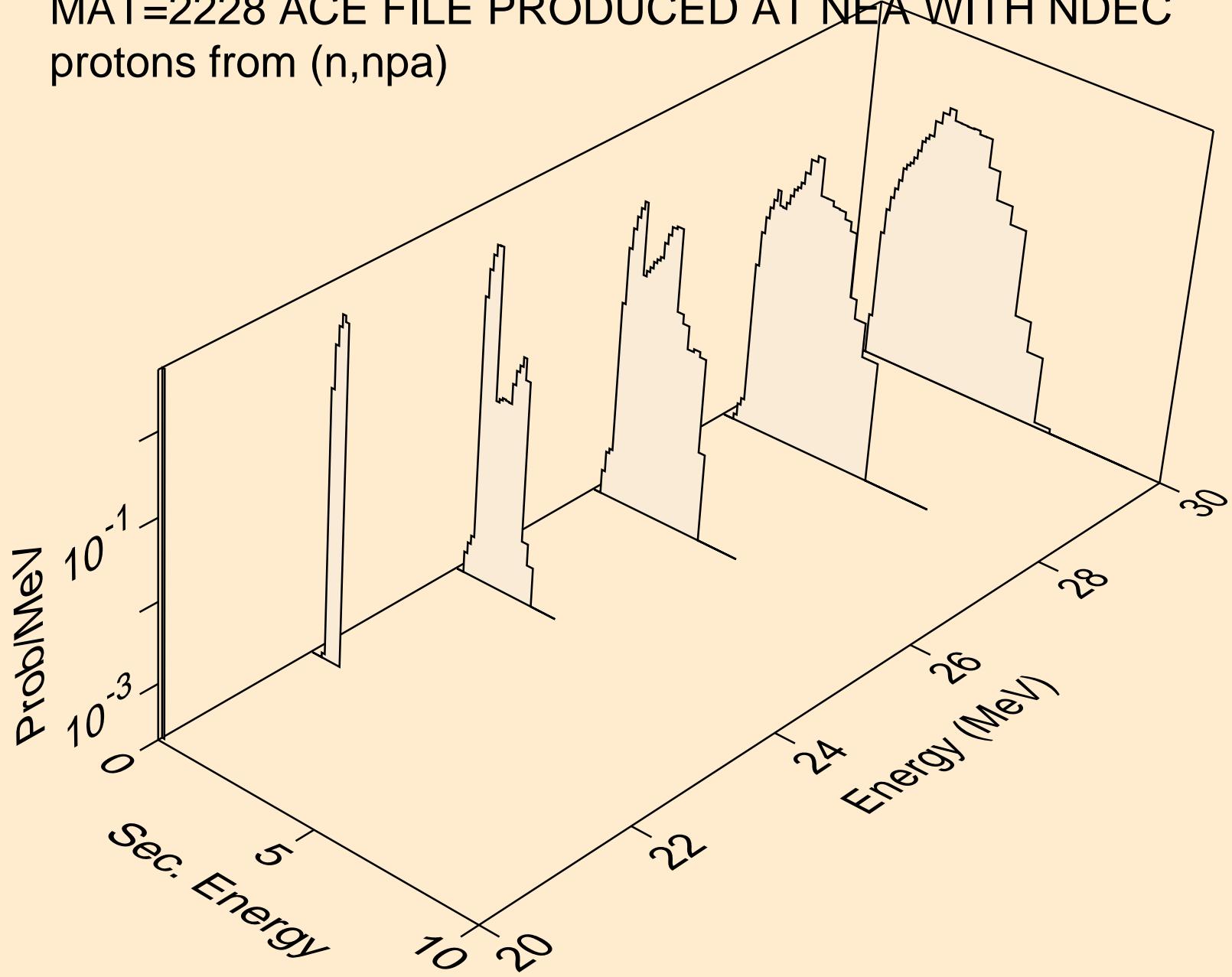
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protons from (n,2np)



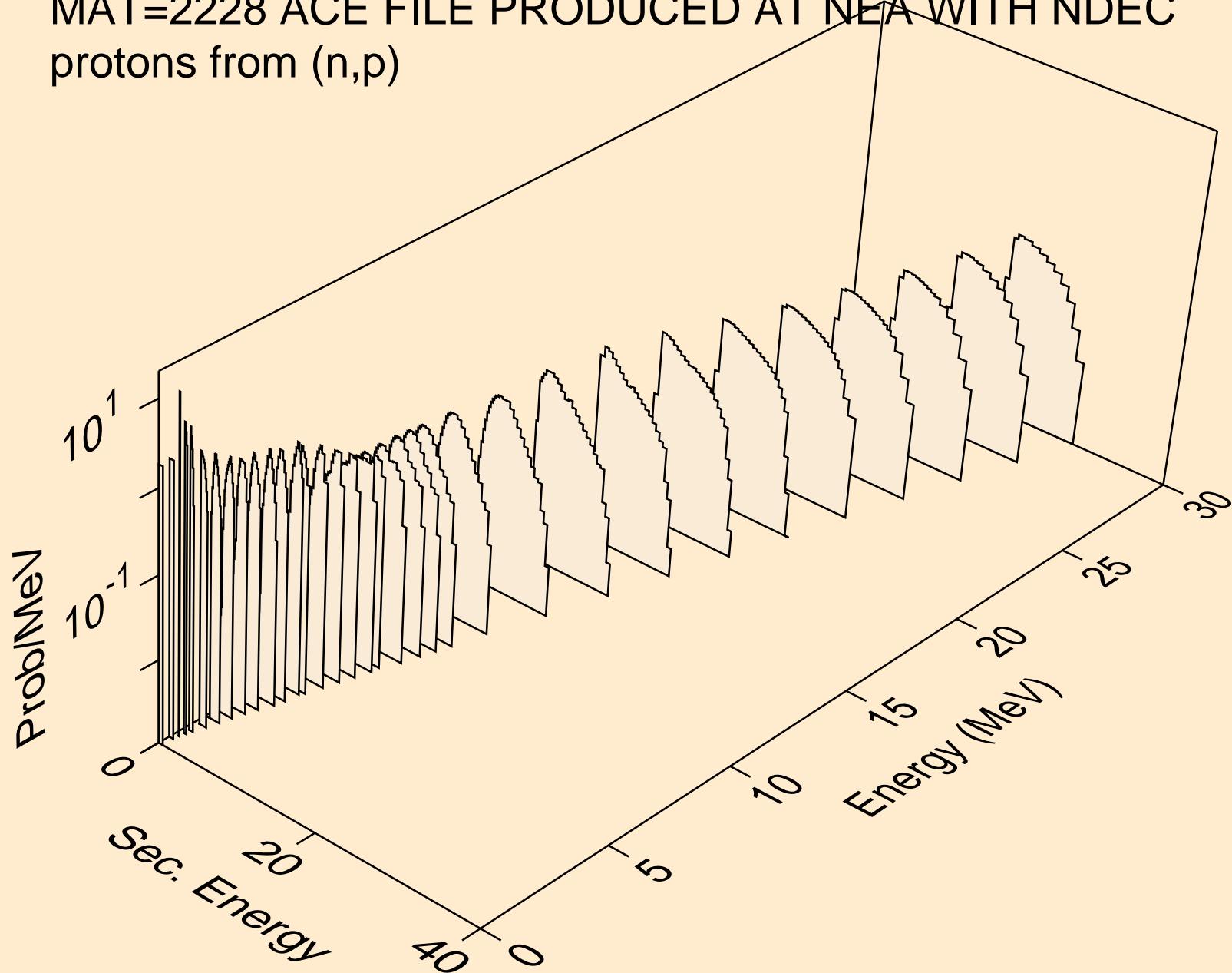
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protons from (n,2np)



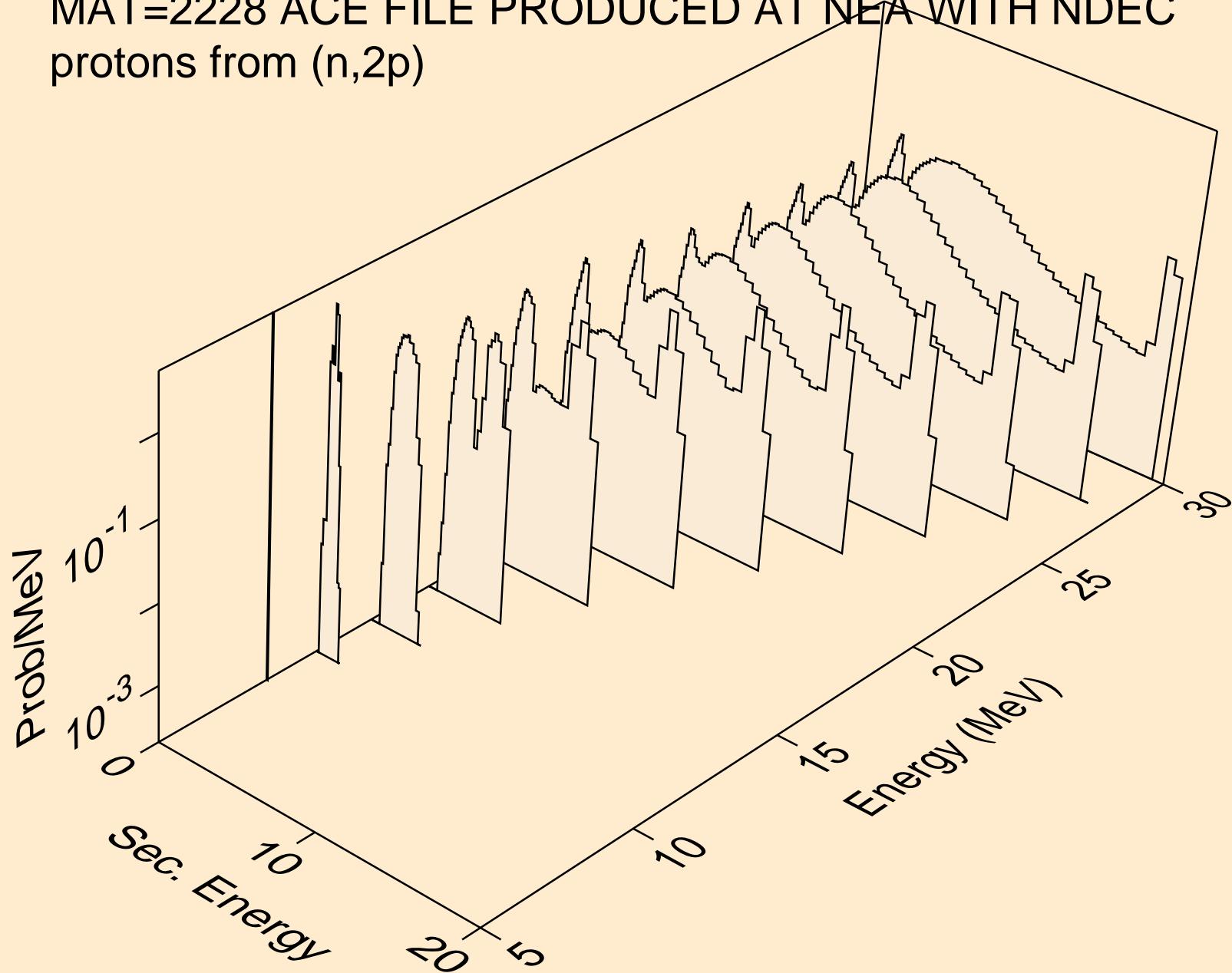
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protons from (n,npa)



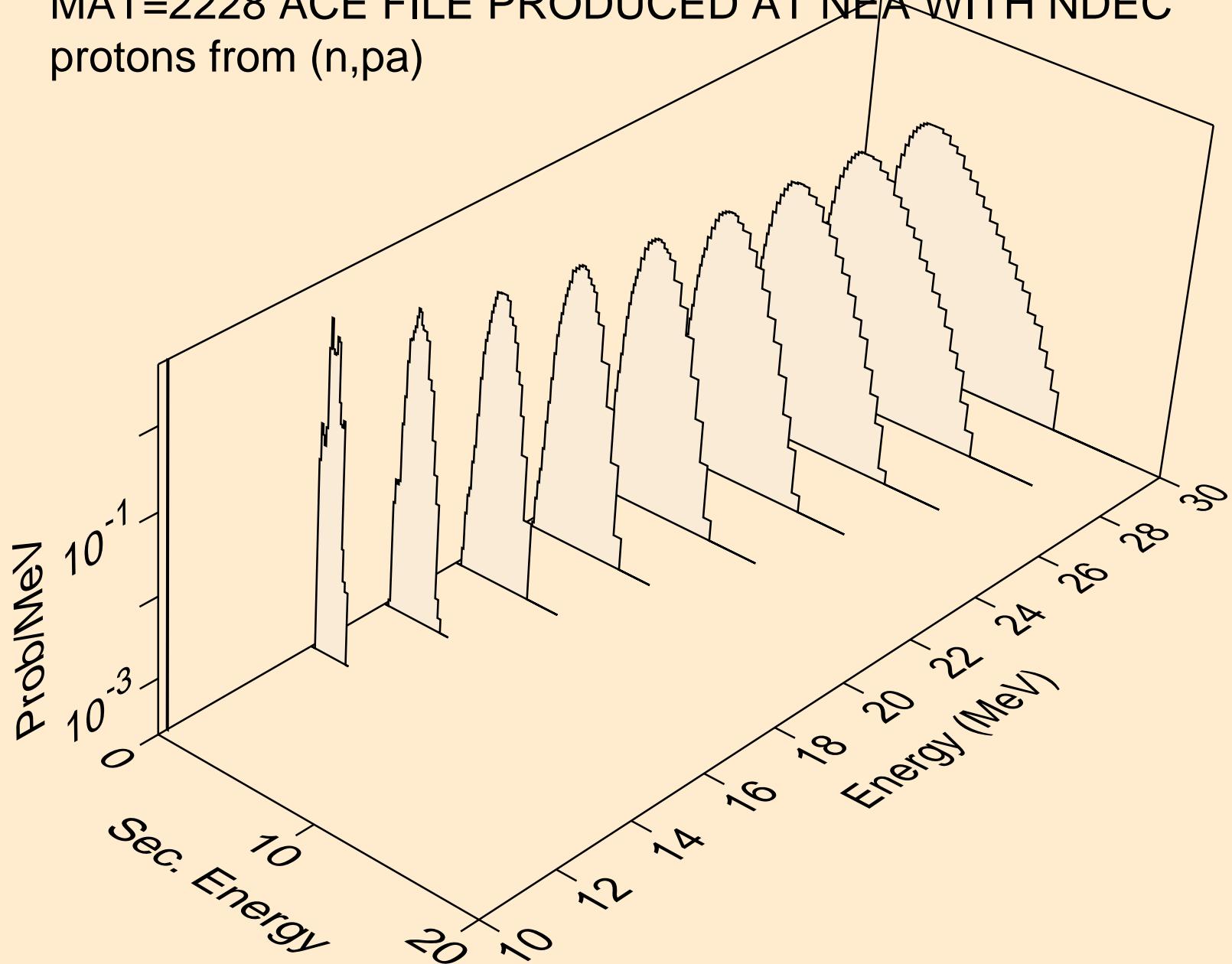
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protons from (n,p)



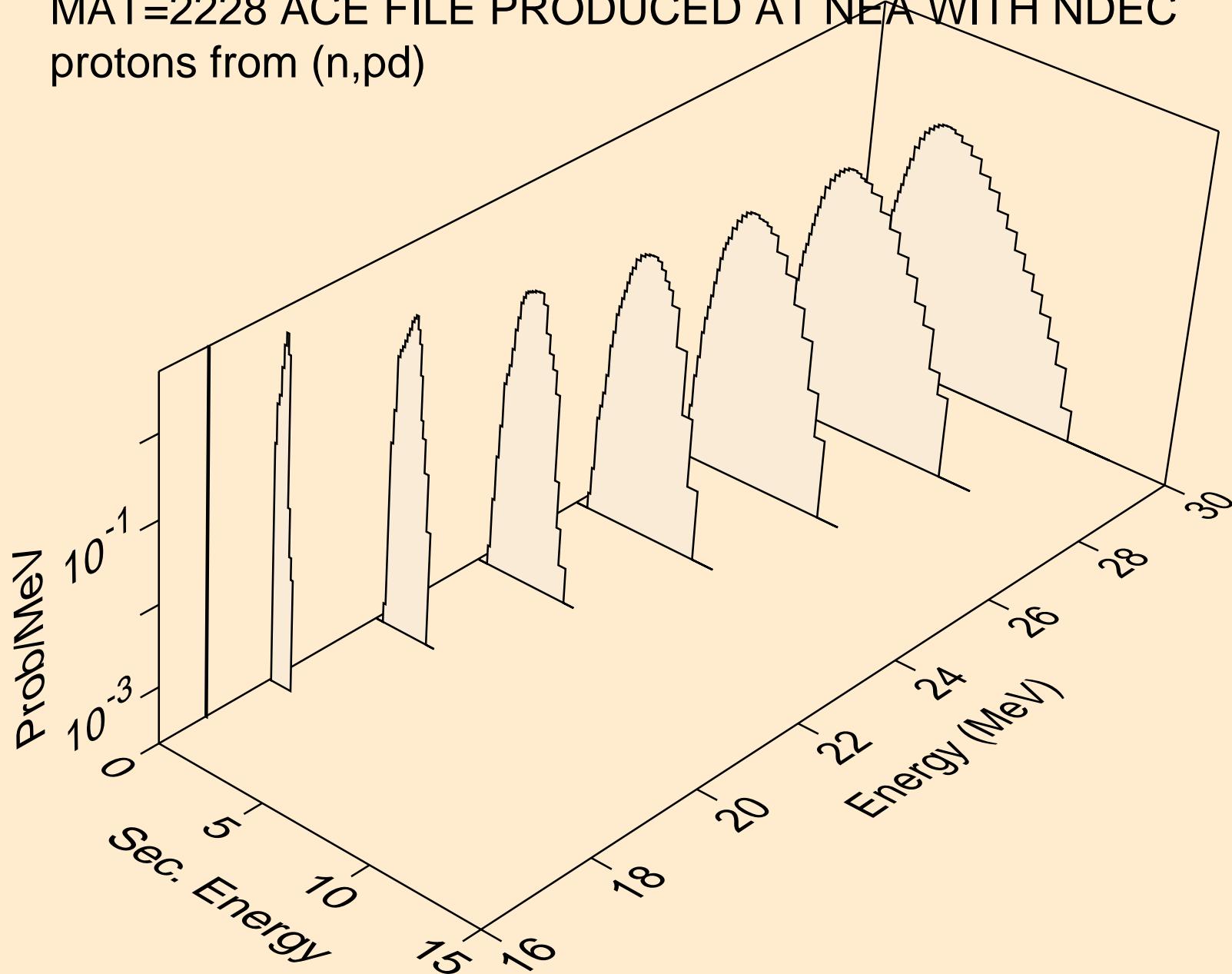
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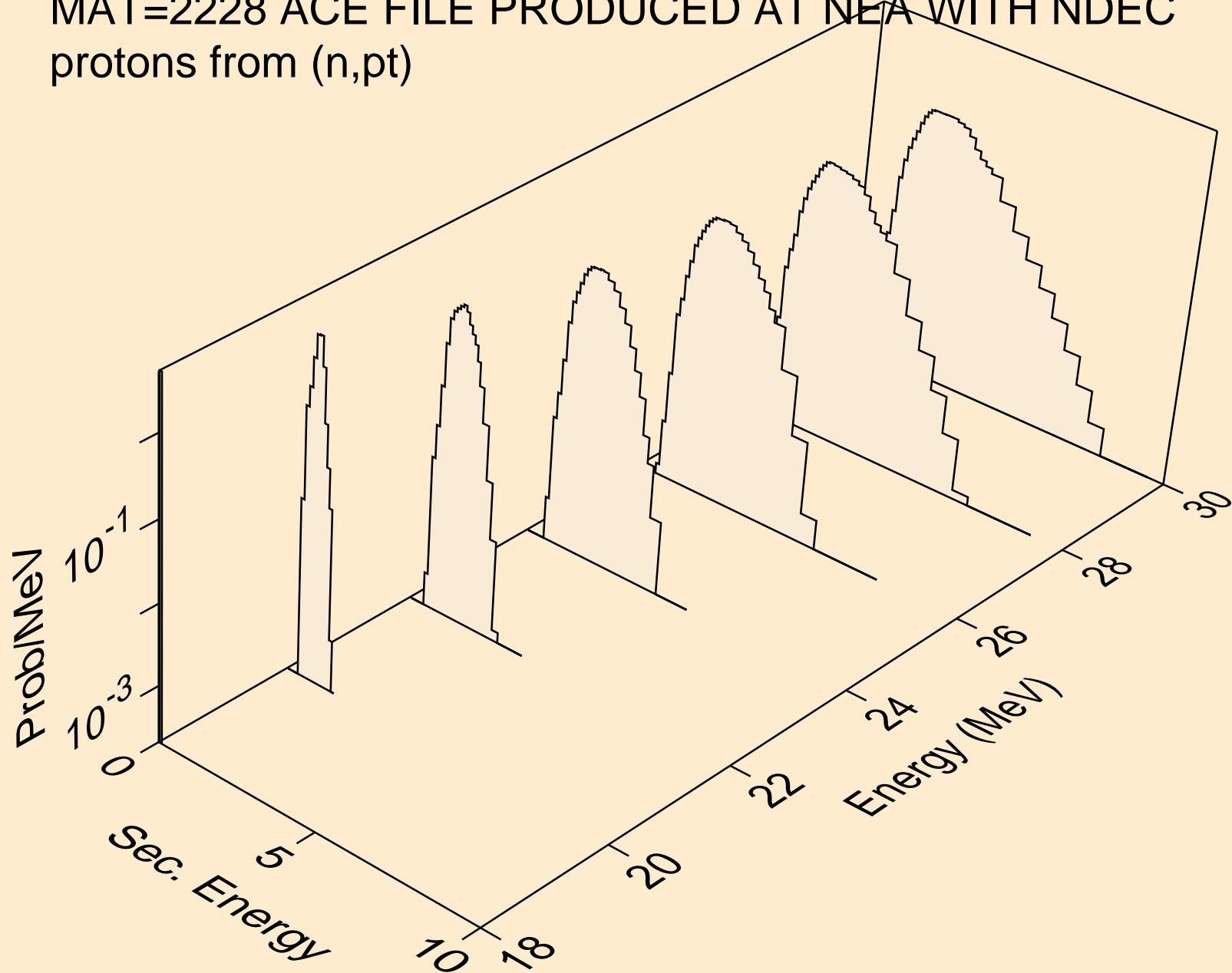
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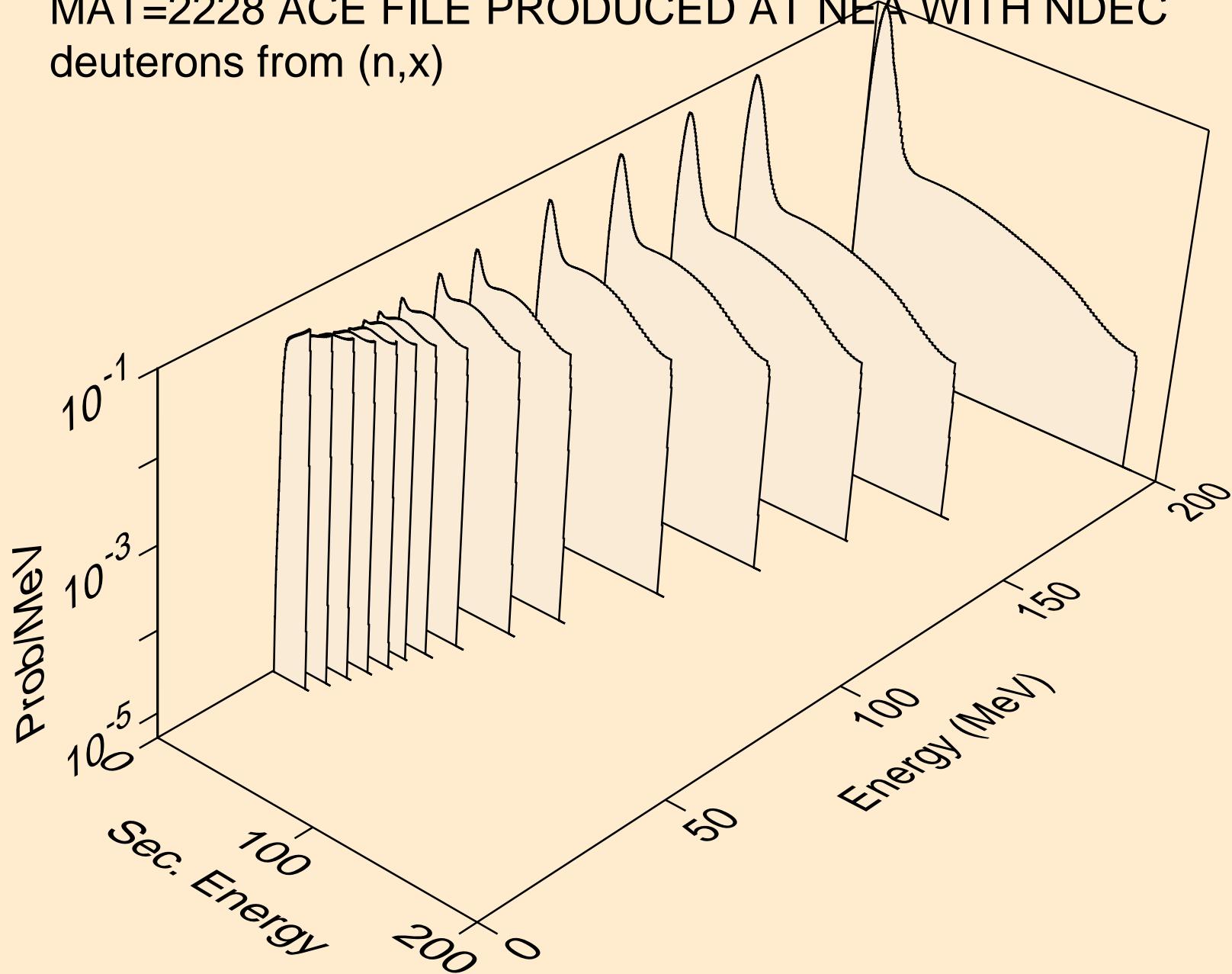
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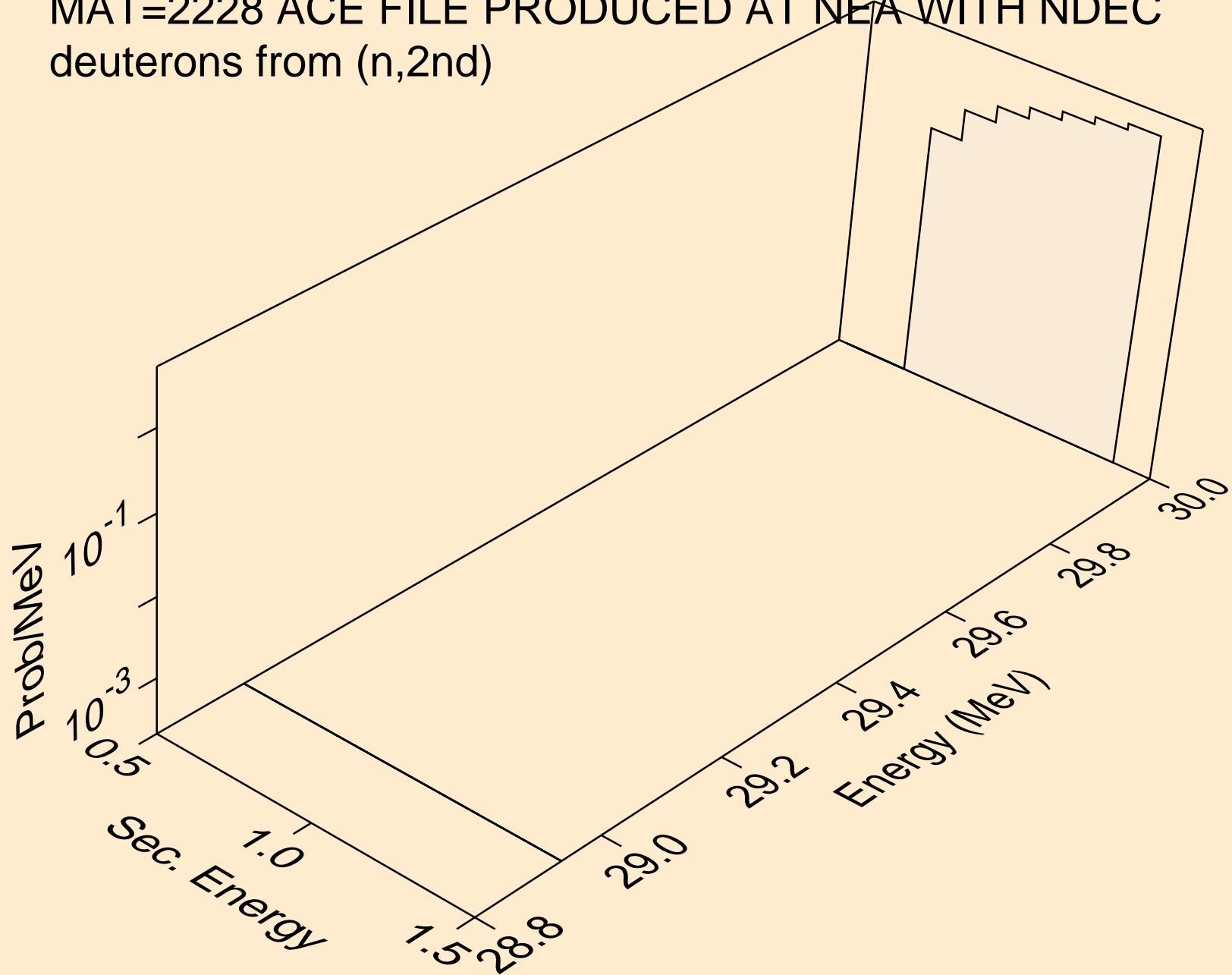
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protons from (n,pt)



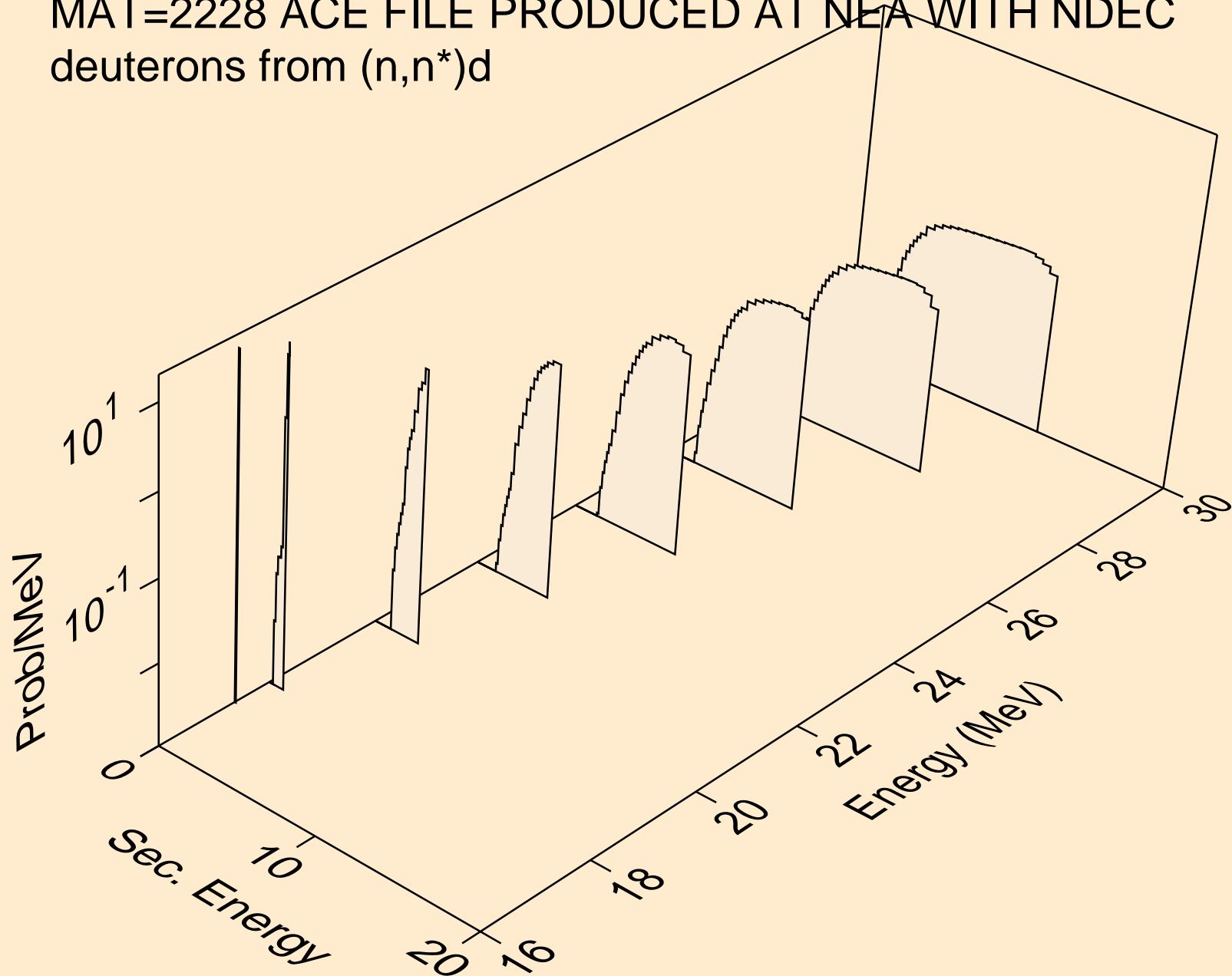
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deuterons from (n,x)



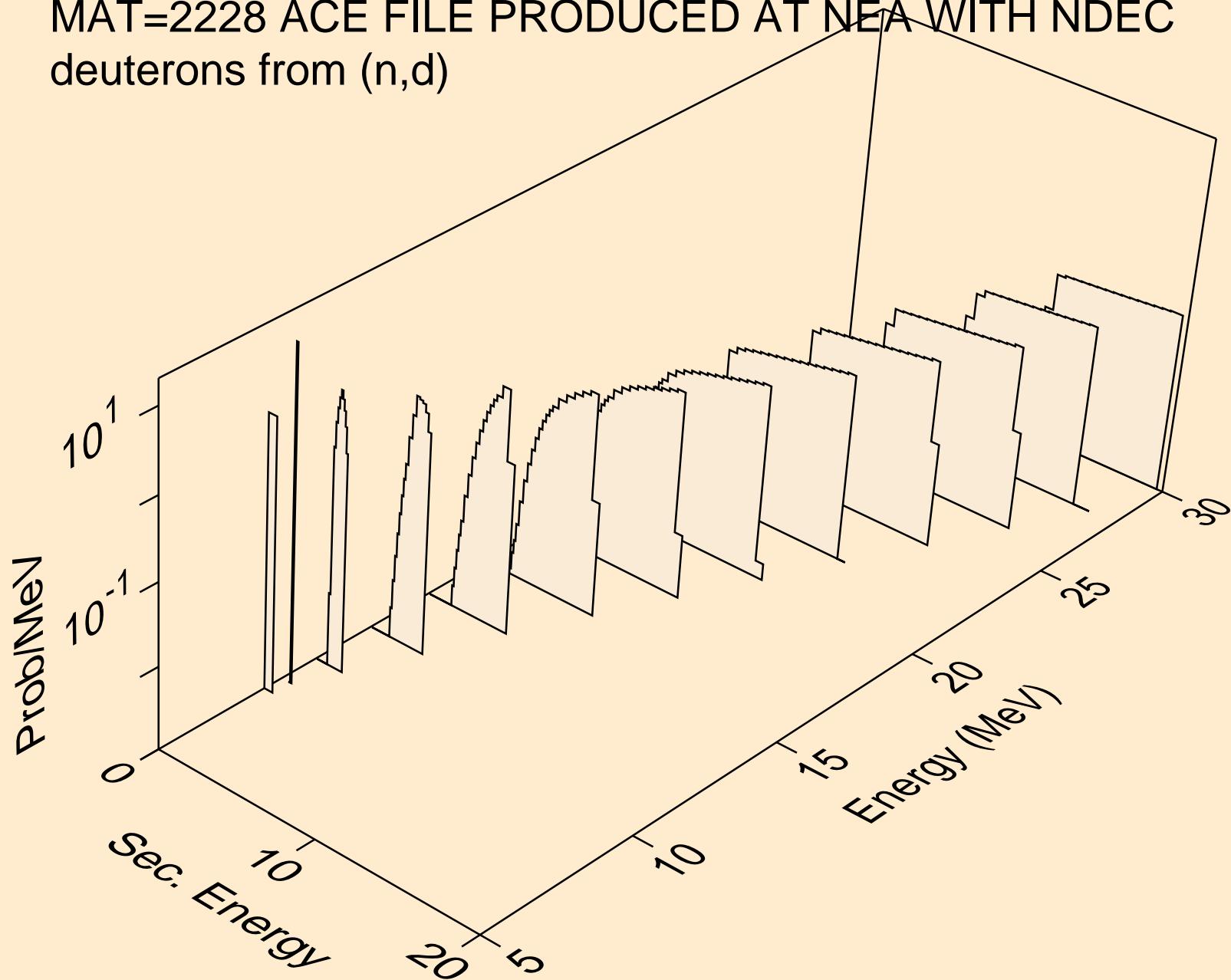
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deuterons from (n,2nd)



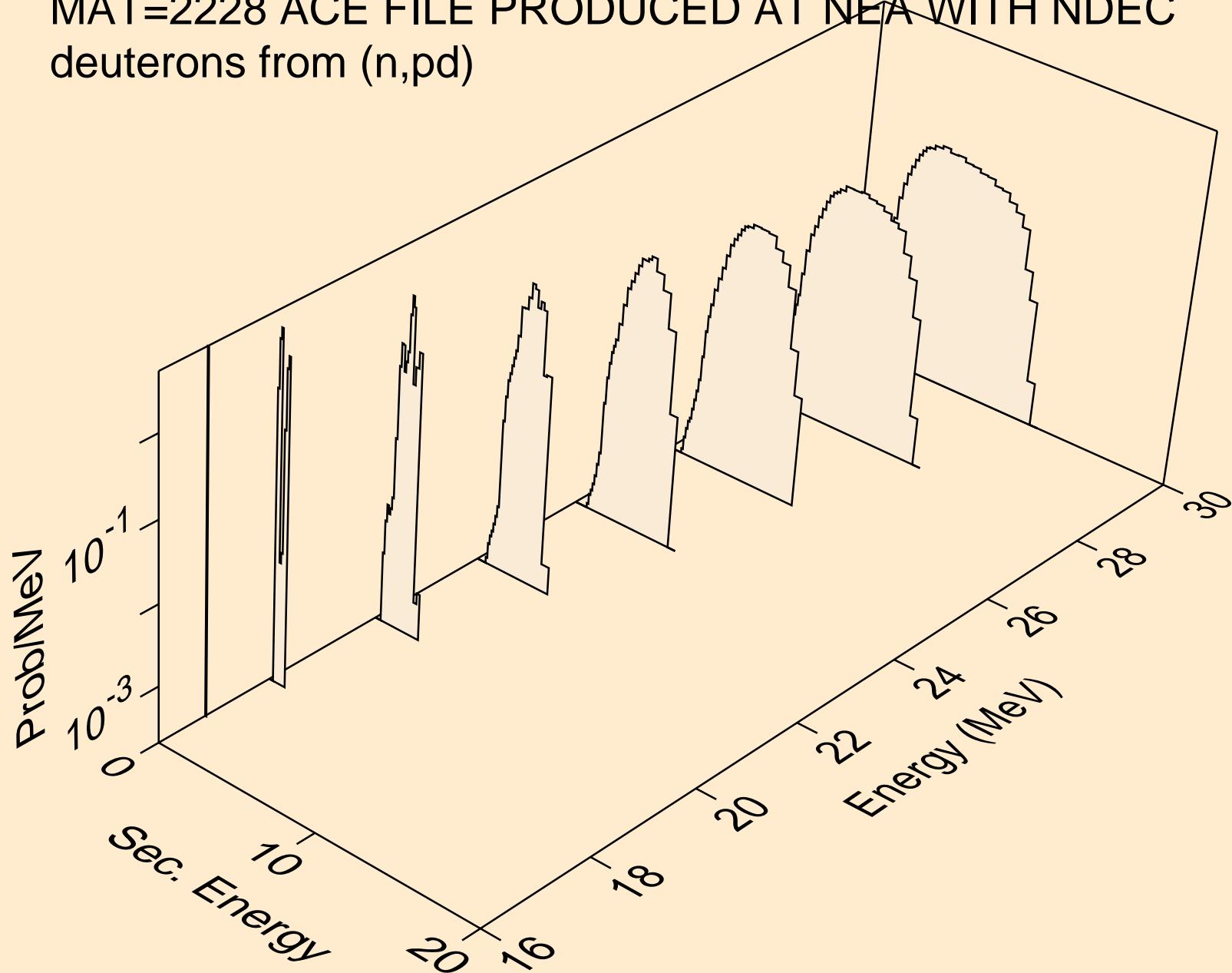
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deuterons from  $(n,n^*)d$



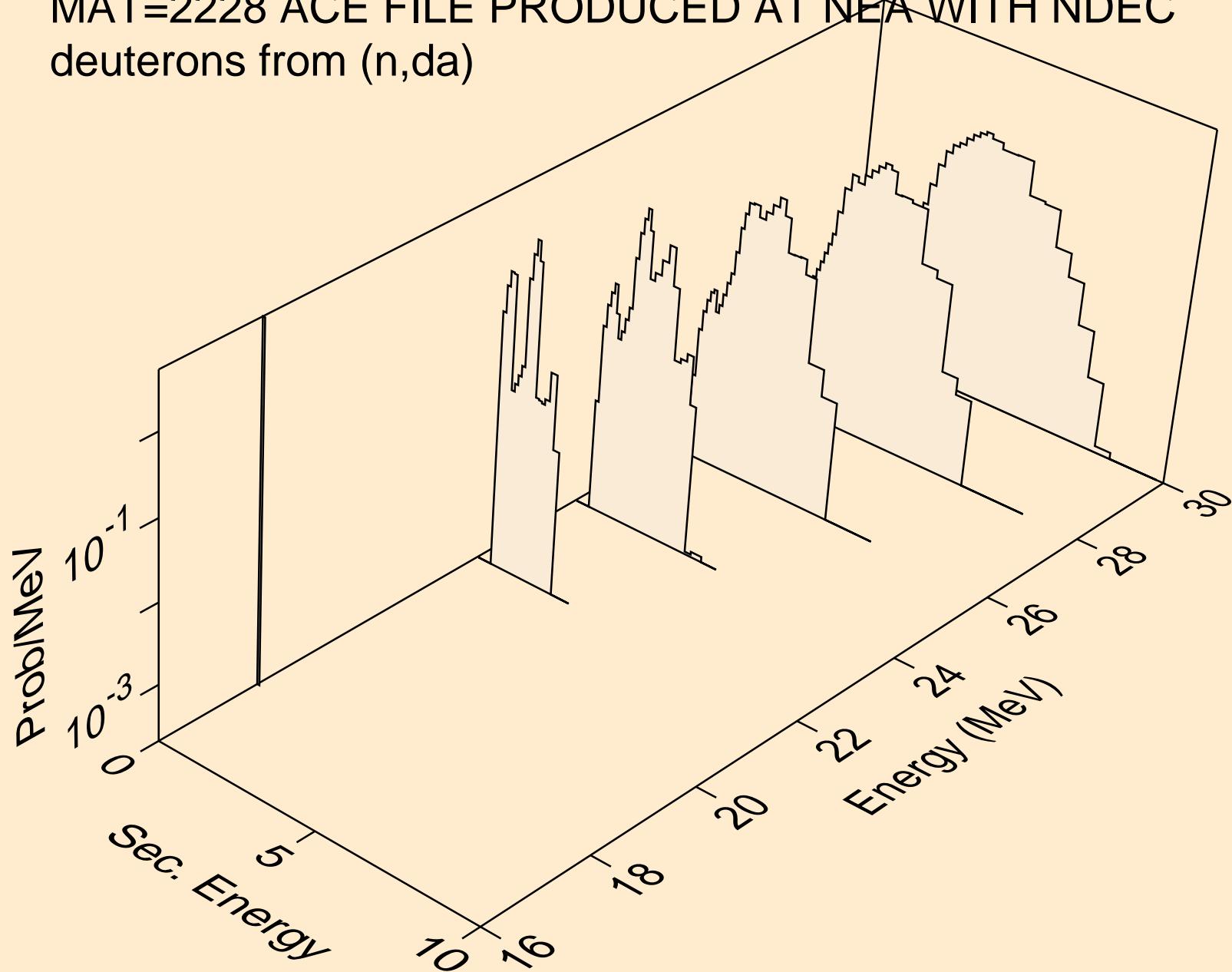
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deuterons from (n,d)



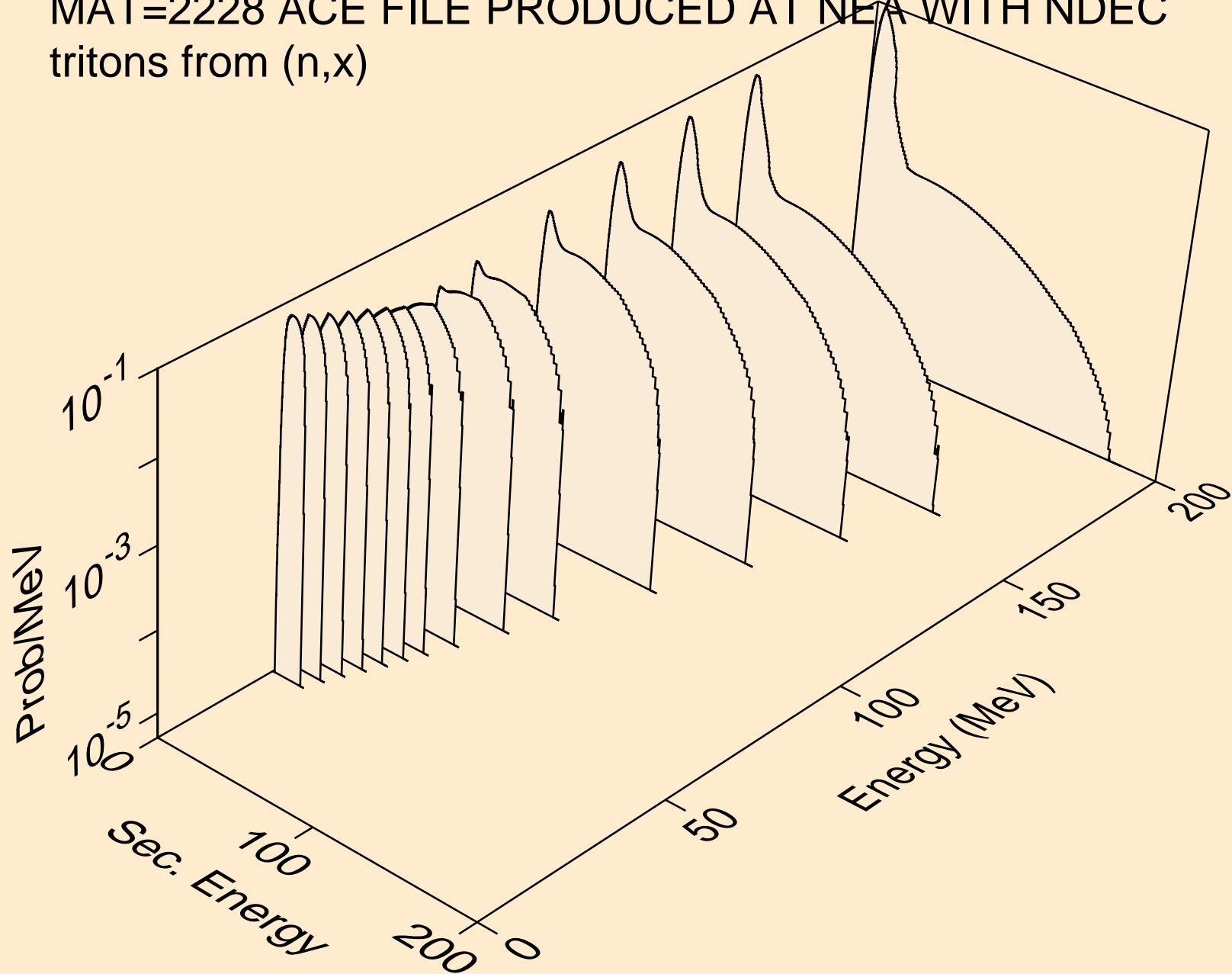
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deuterons from (n,pd)



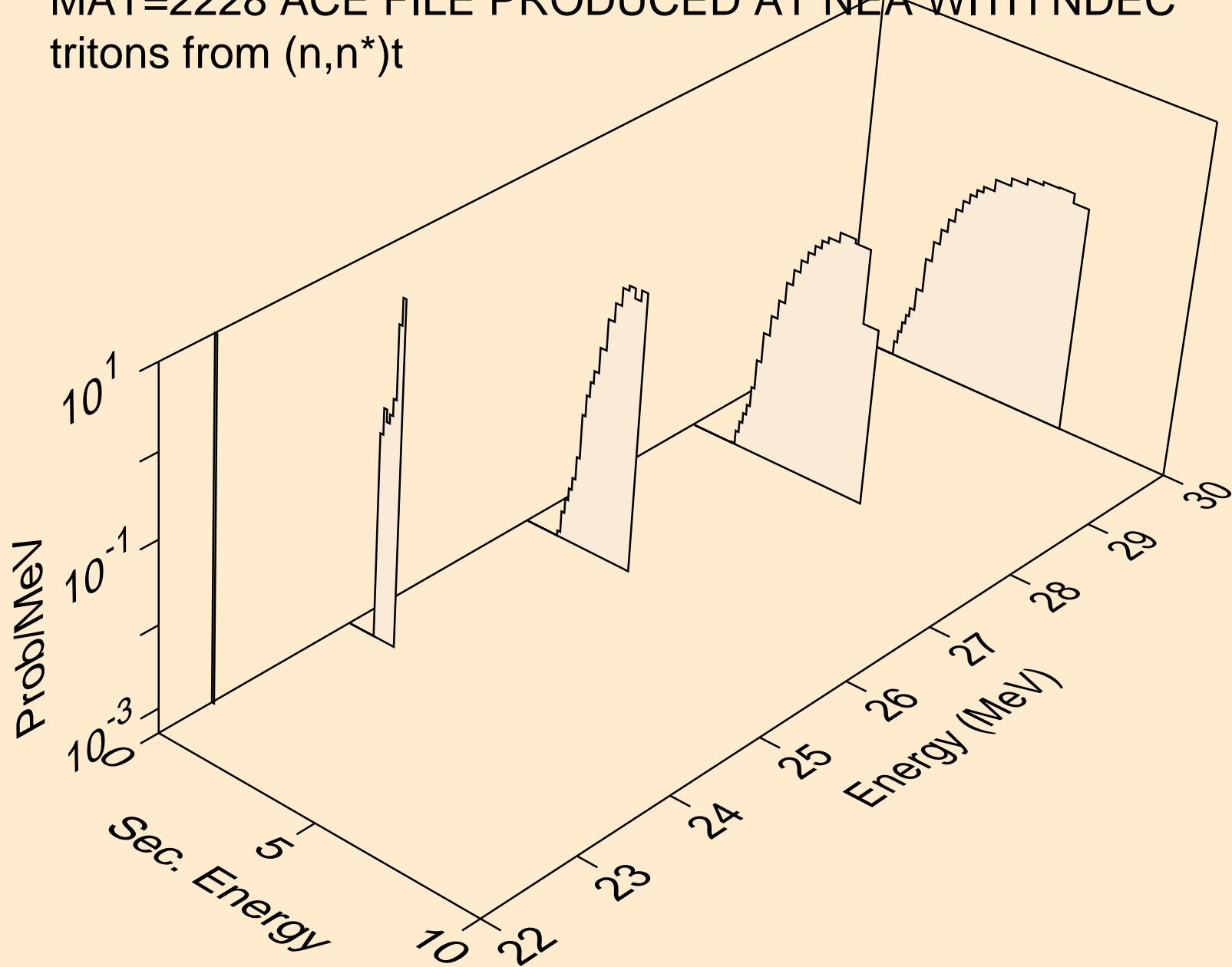
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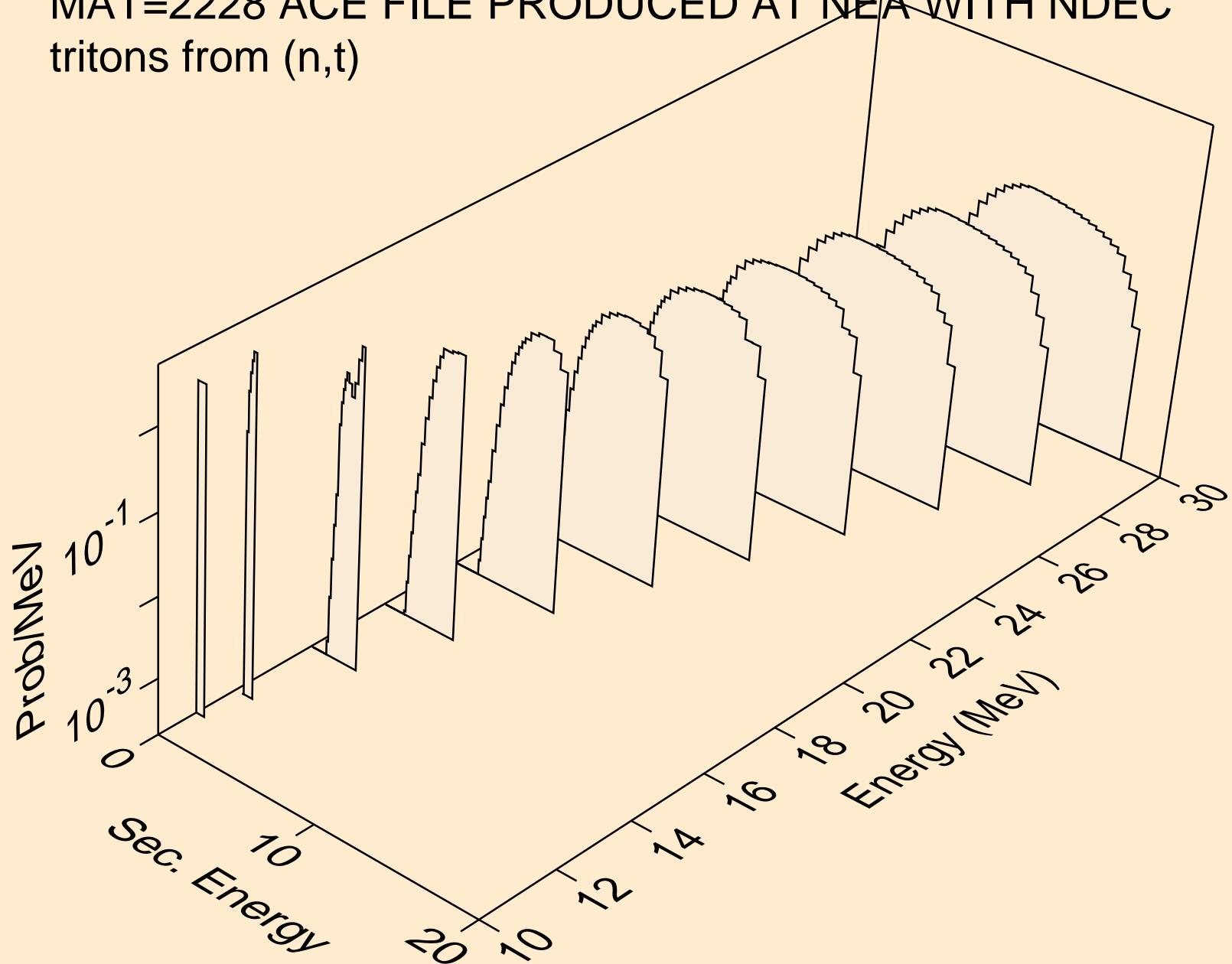
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tritons from (n,x)



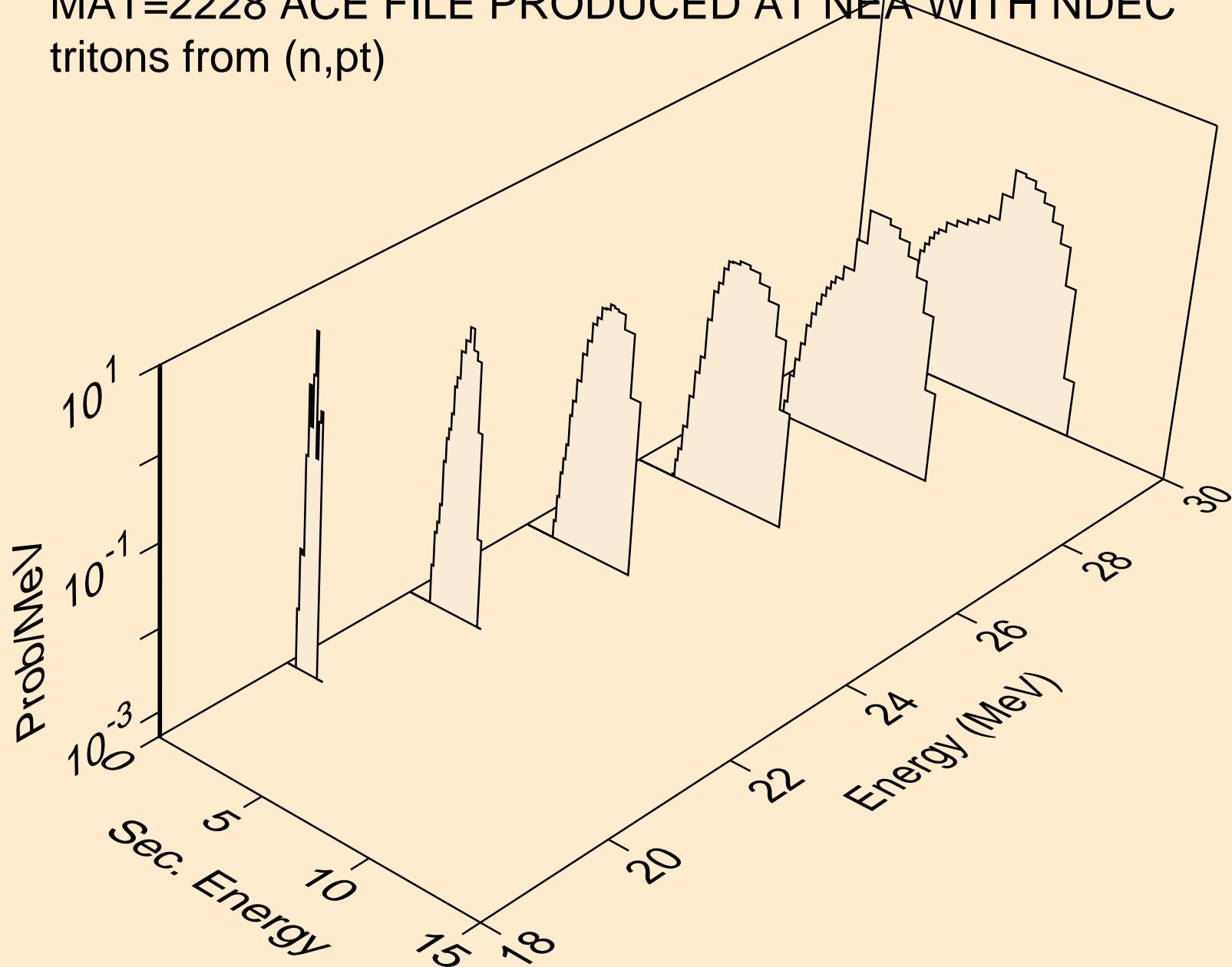
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tritons from  $(n,n^*)t$



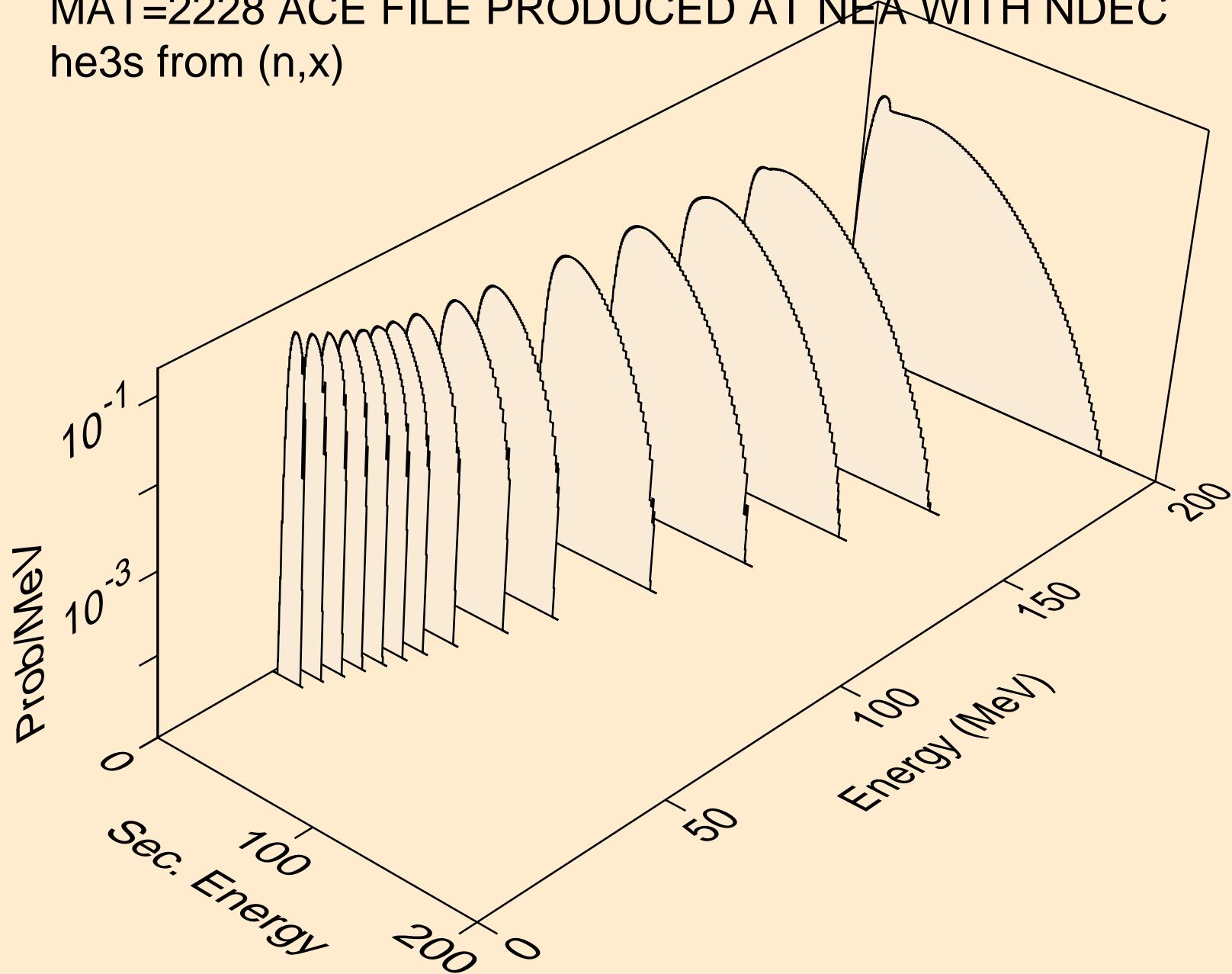
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tritons from (n,t)



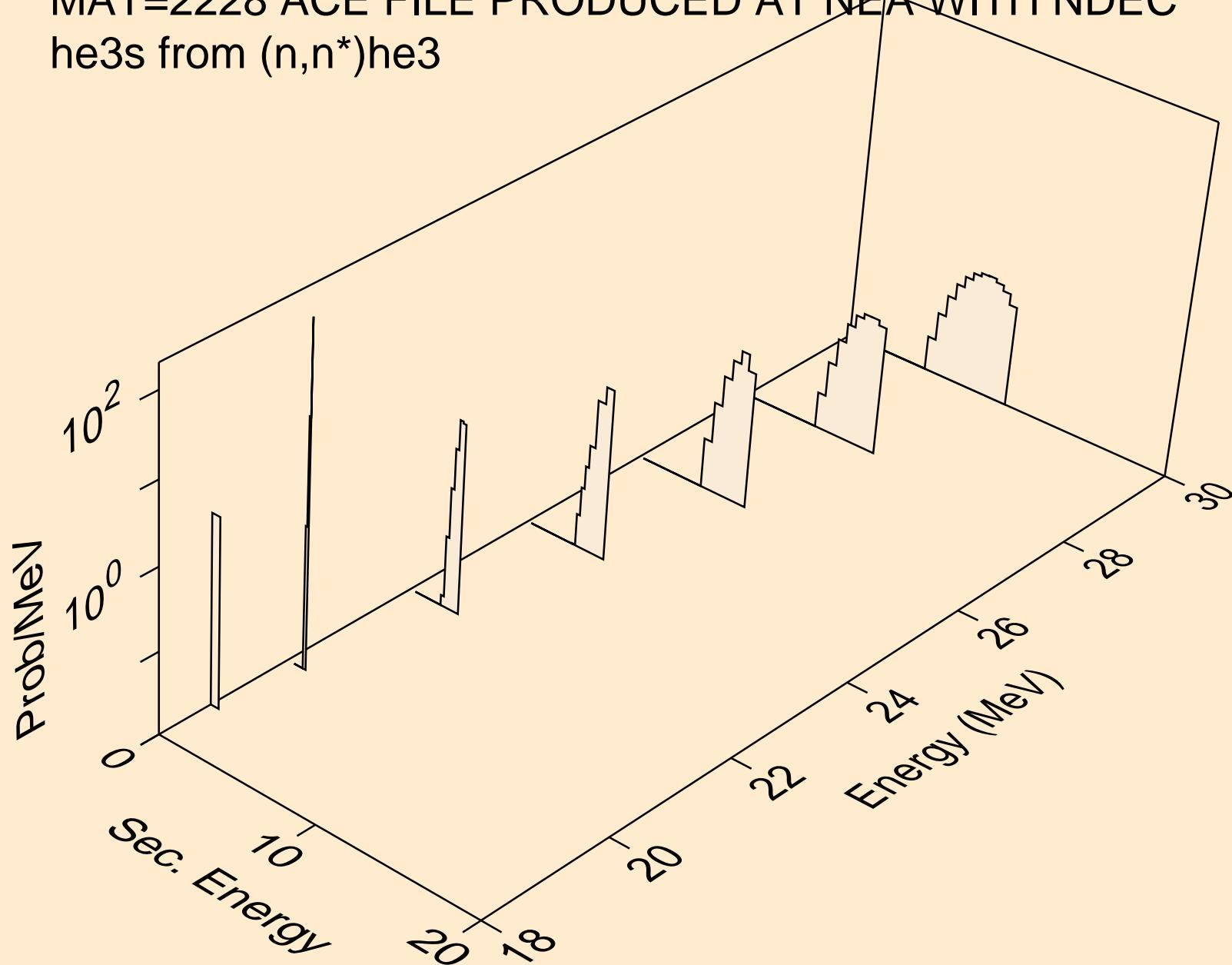
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
tritons from (n,pt)



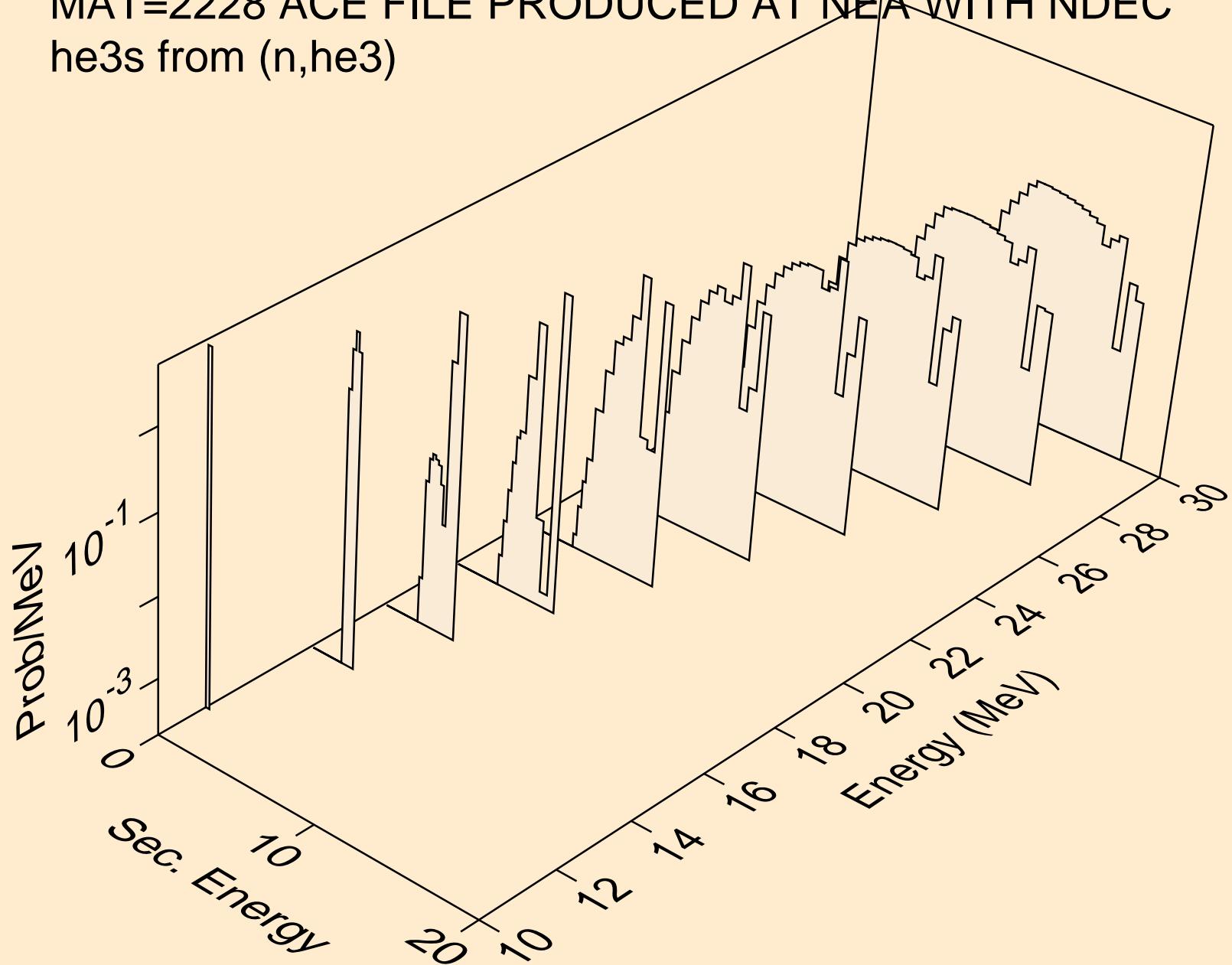
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he3s from (n,x)



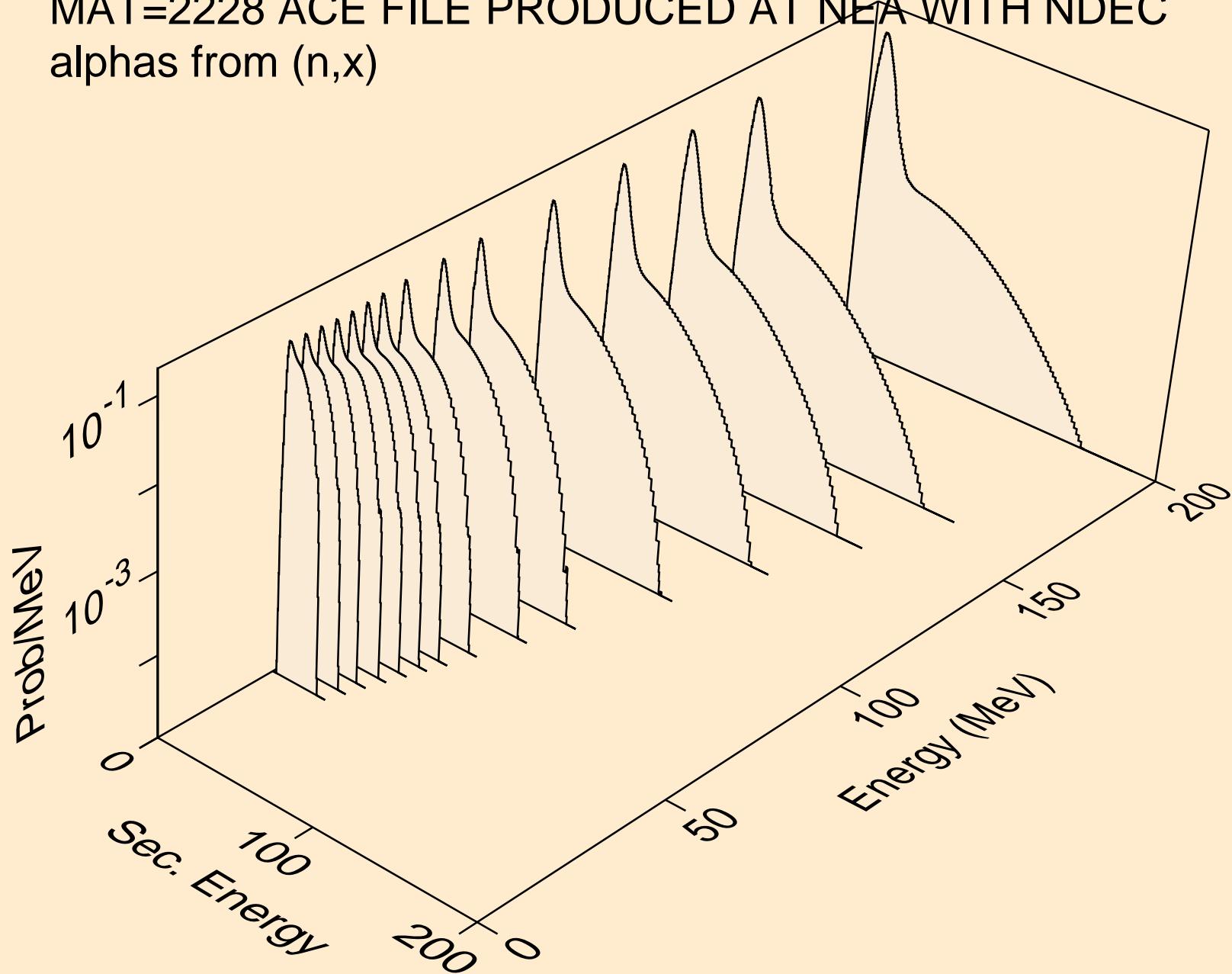
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he3s from  $(n,n^*)\text{he3}$



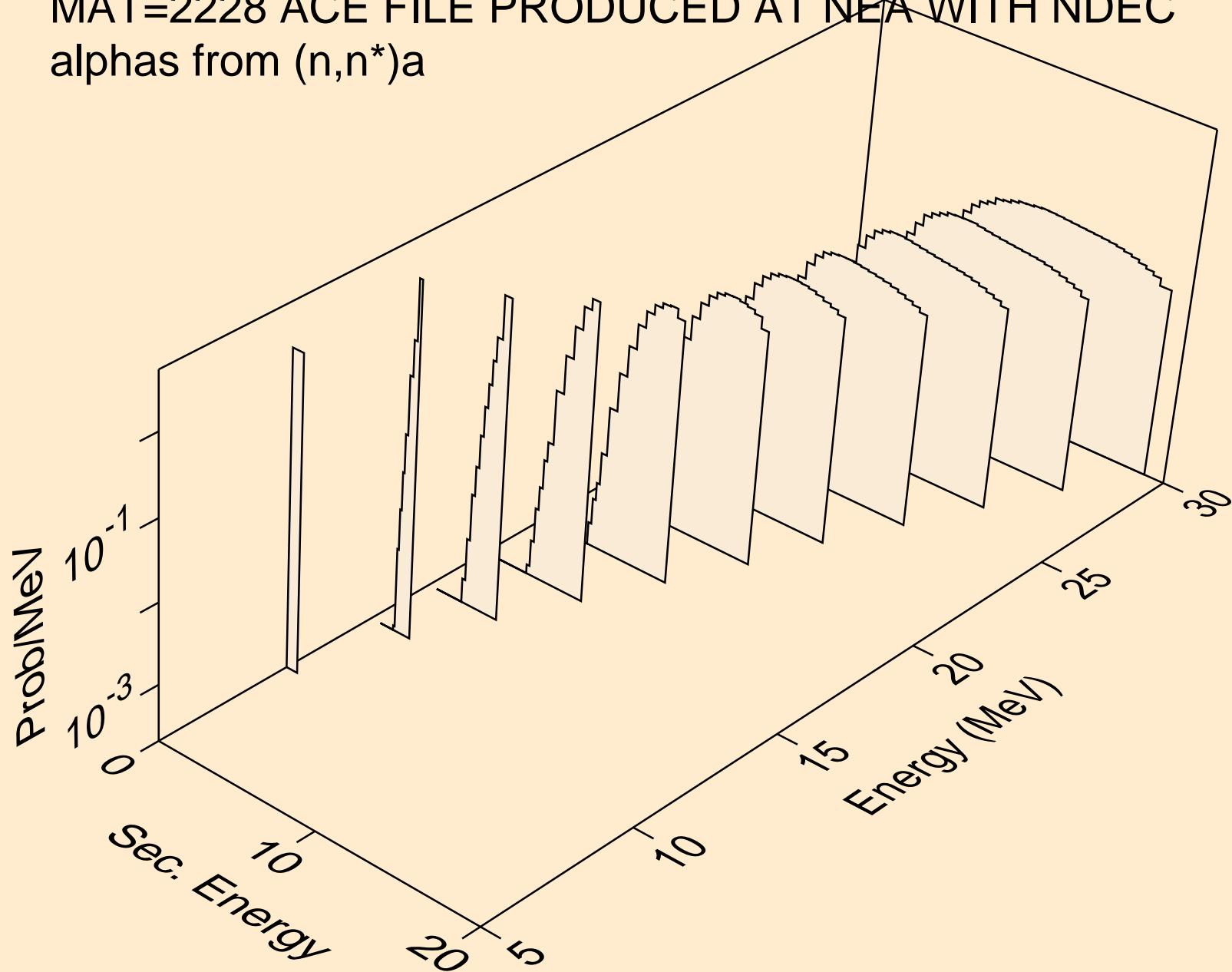
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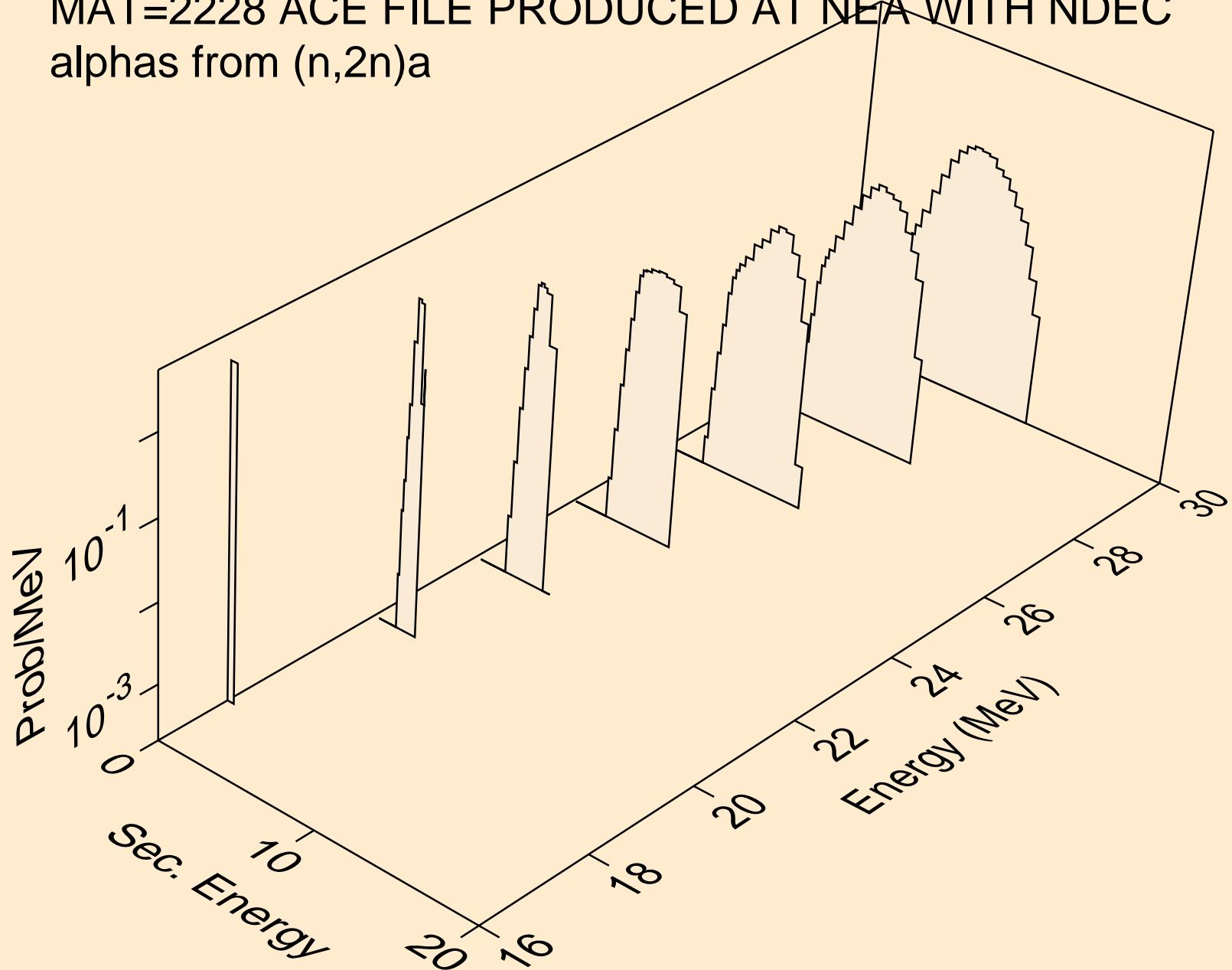
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alphas from (n,x)



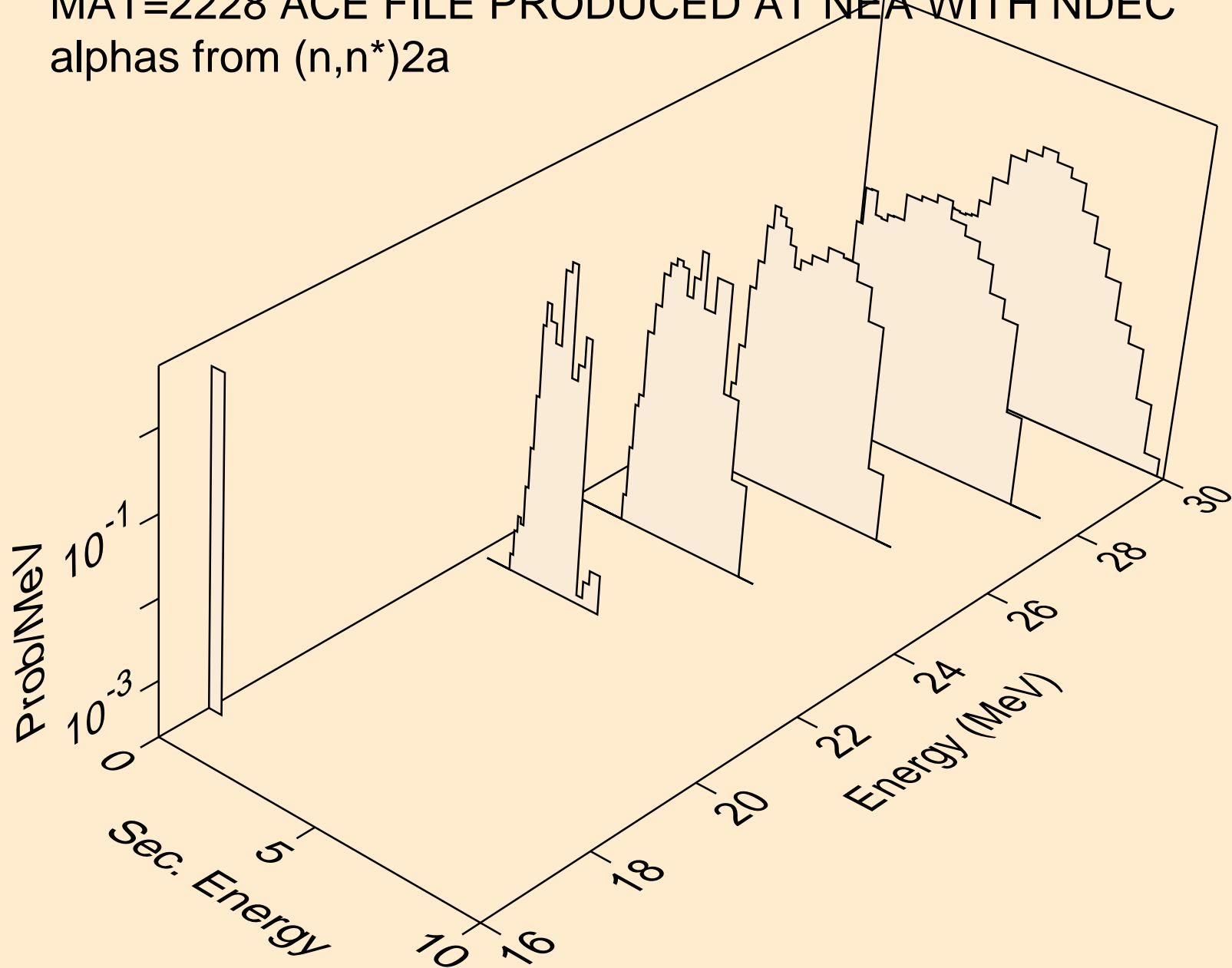
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alphas from  $(n,n^*)a$



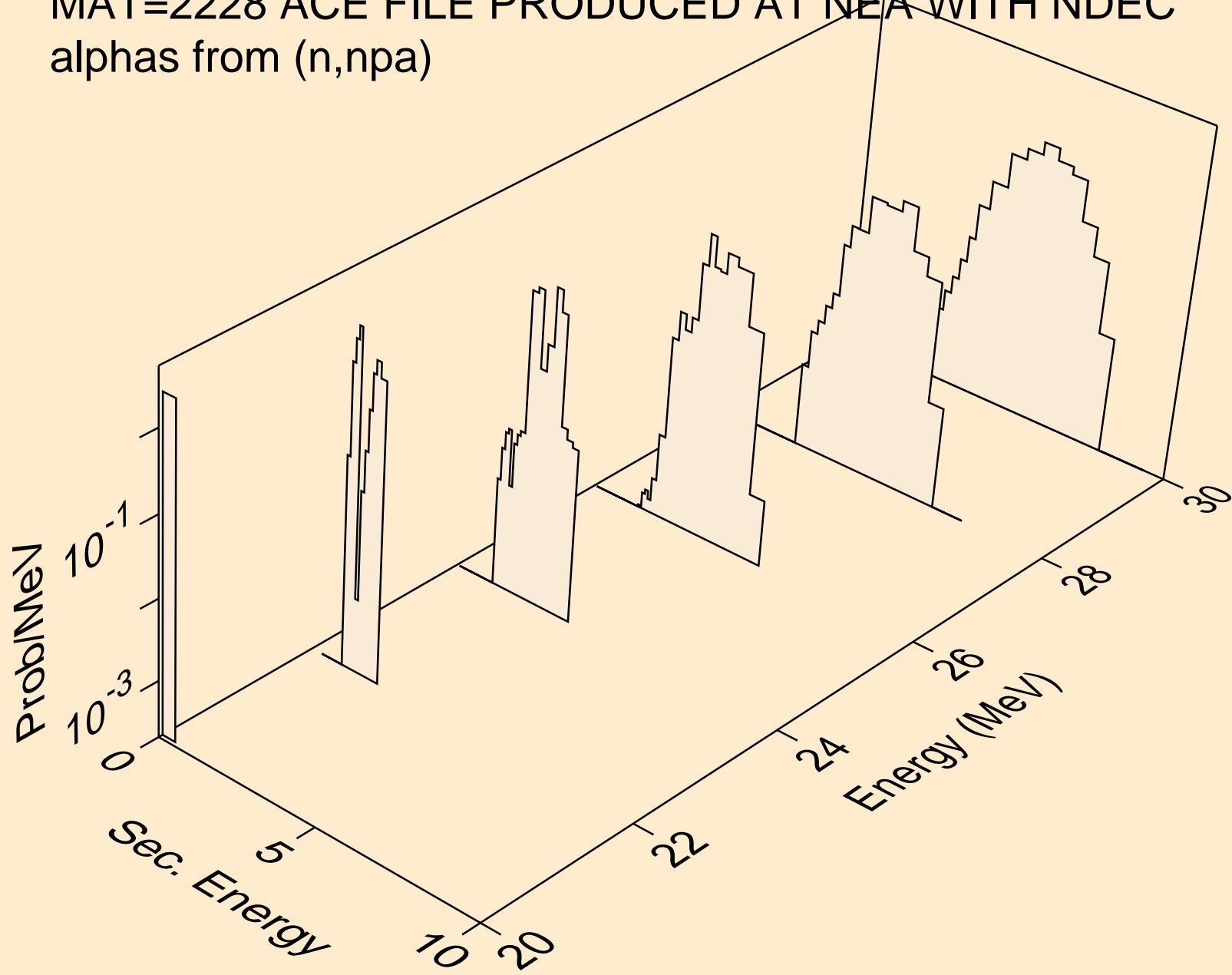
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alphas from (n,2n)a



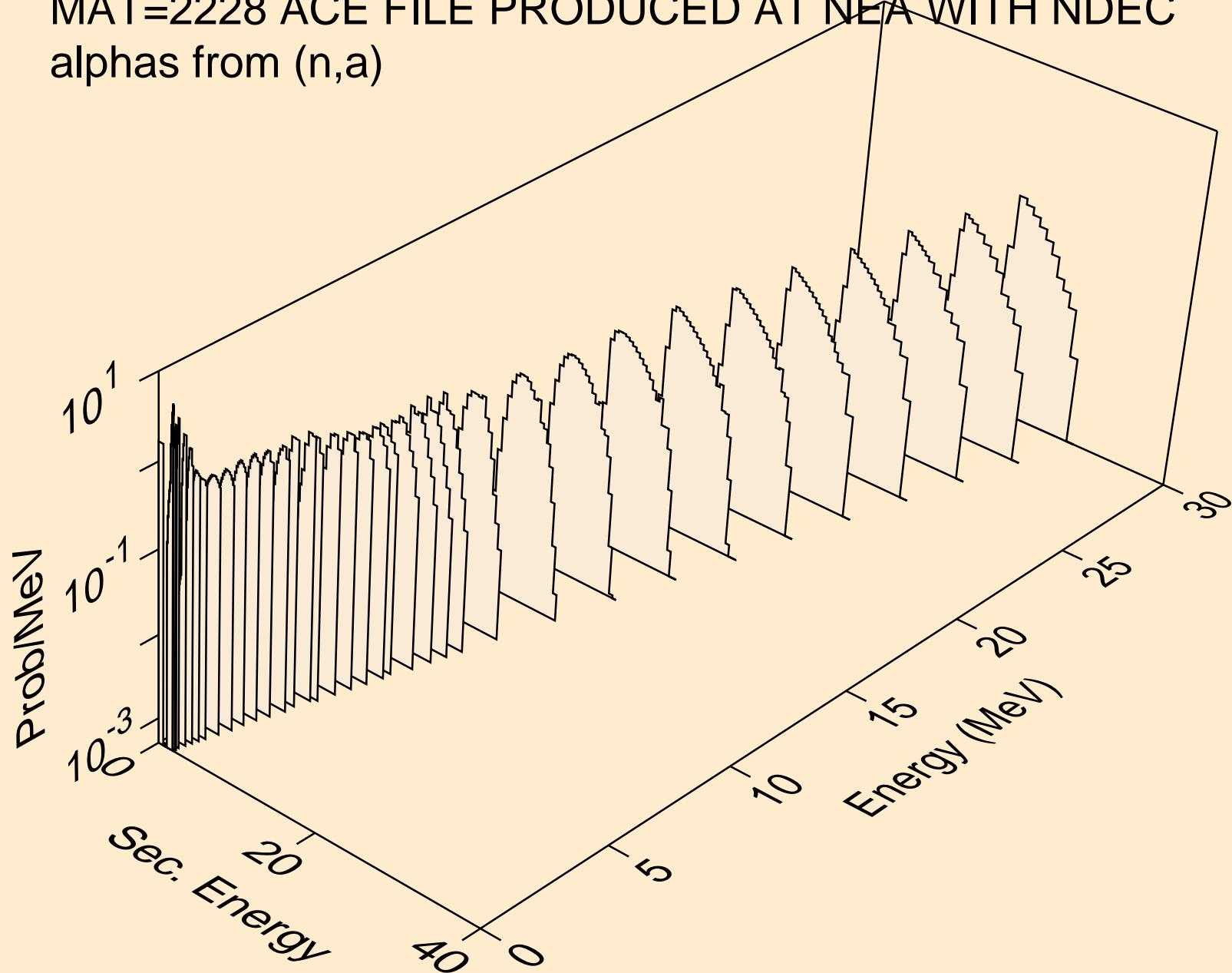
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alphas from  $(n,n^*)2a$



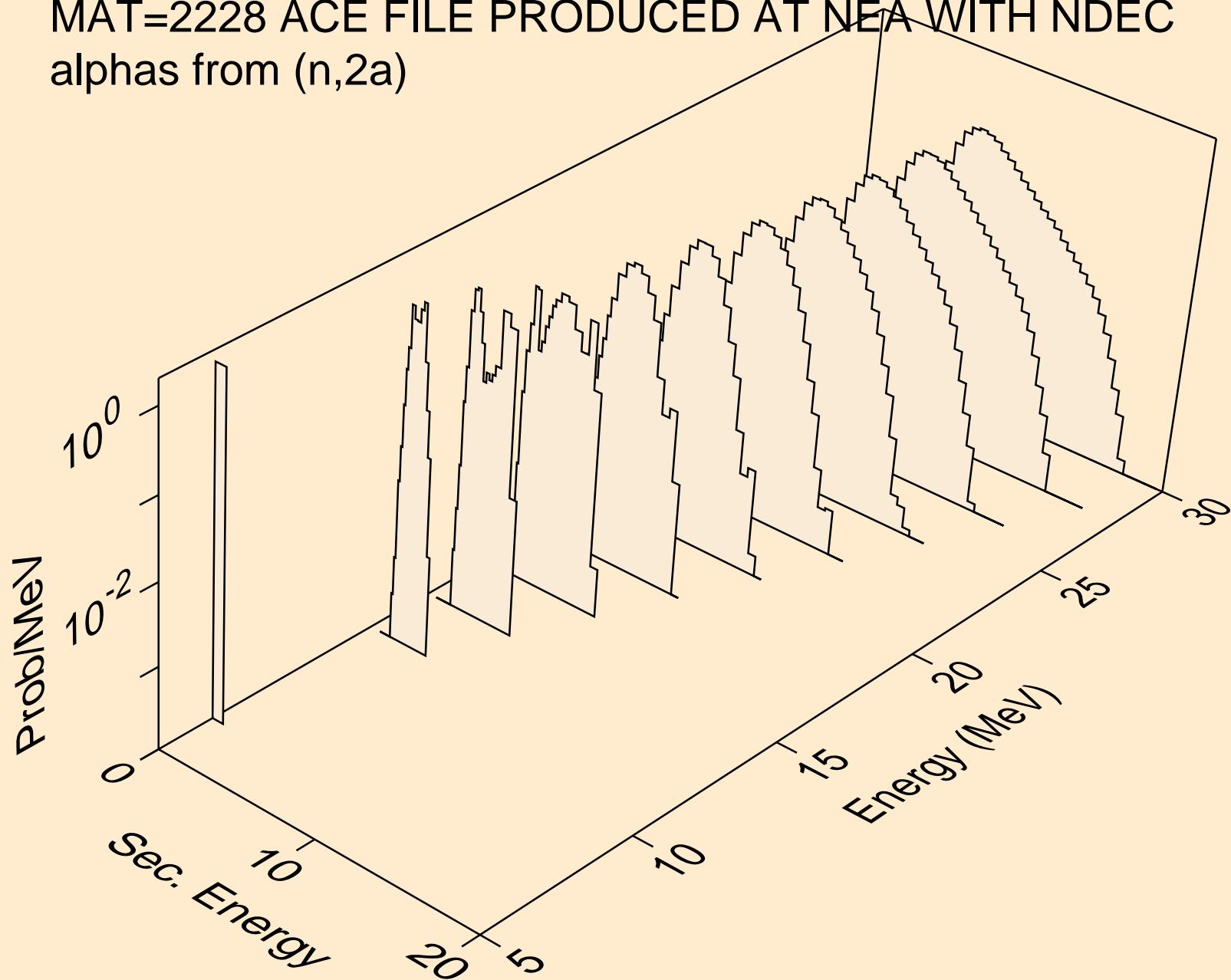
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alphas from (n,npa)



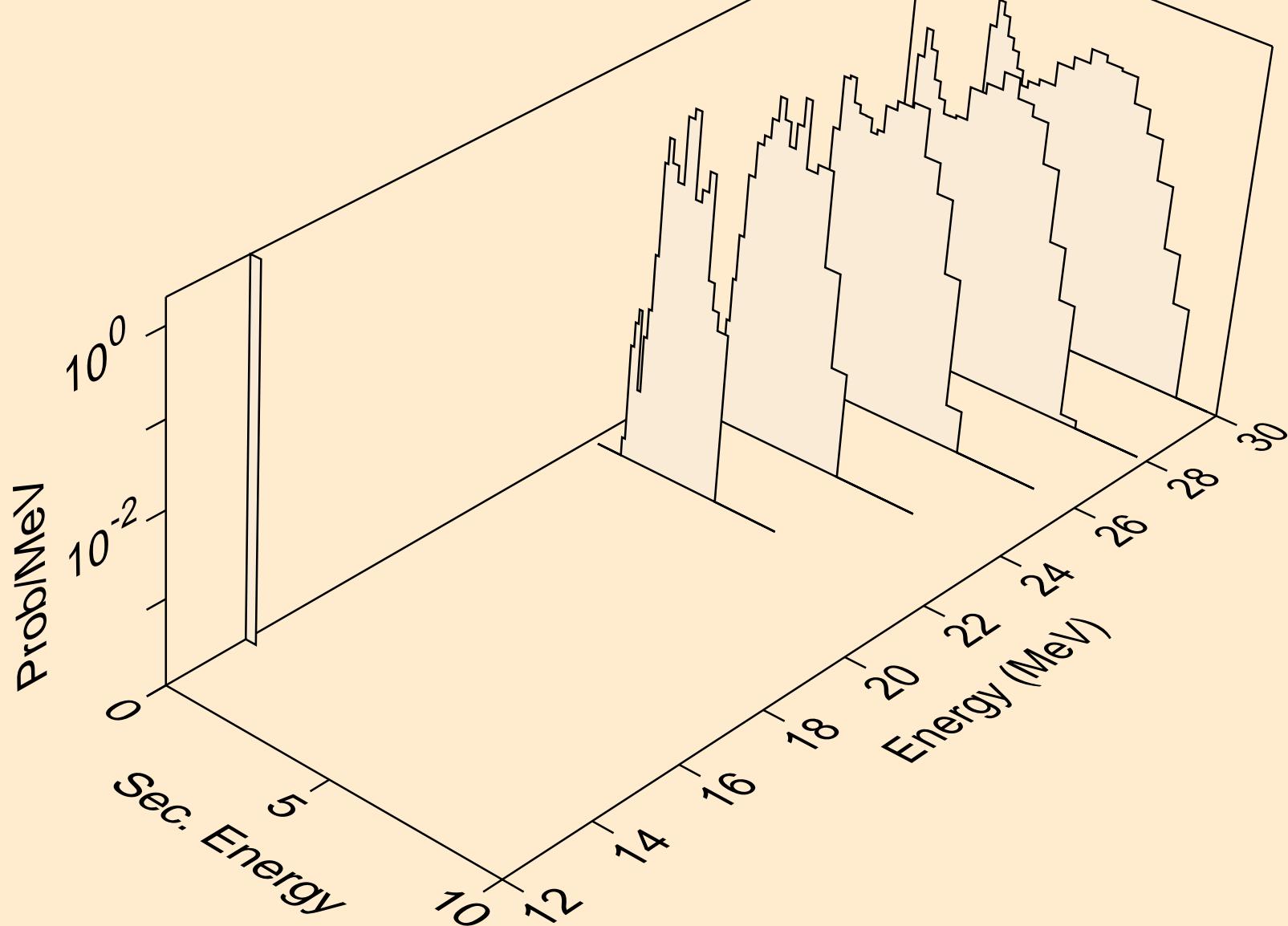
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alphas from (n,a)



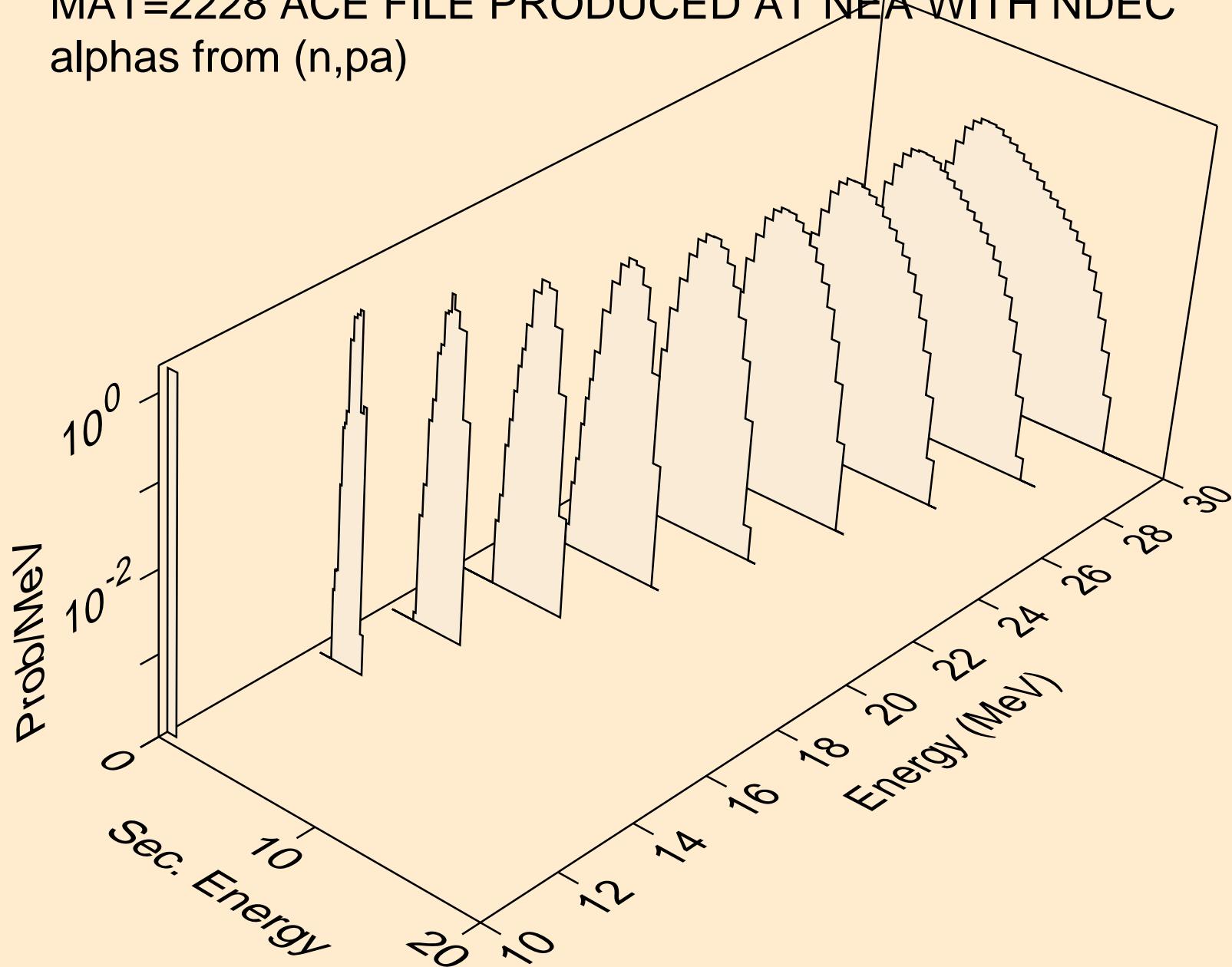
MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
alphas from (n,2a)



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
alphas from (n,3a)



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
alphas from (n,pa)



MAT=2228 ACE FILE PRODUCED AT NEA WITH NDEC  
alphas from (n,da)

