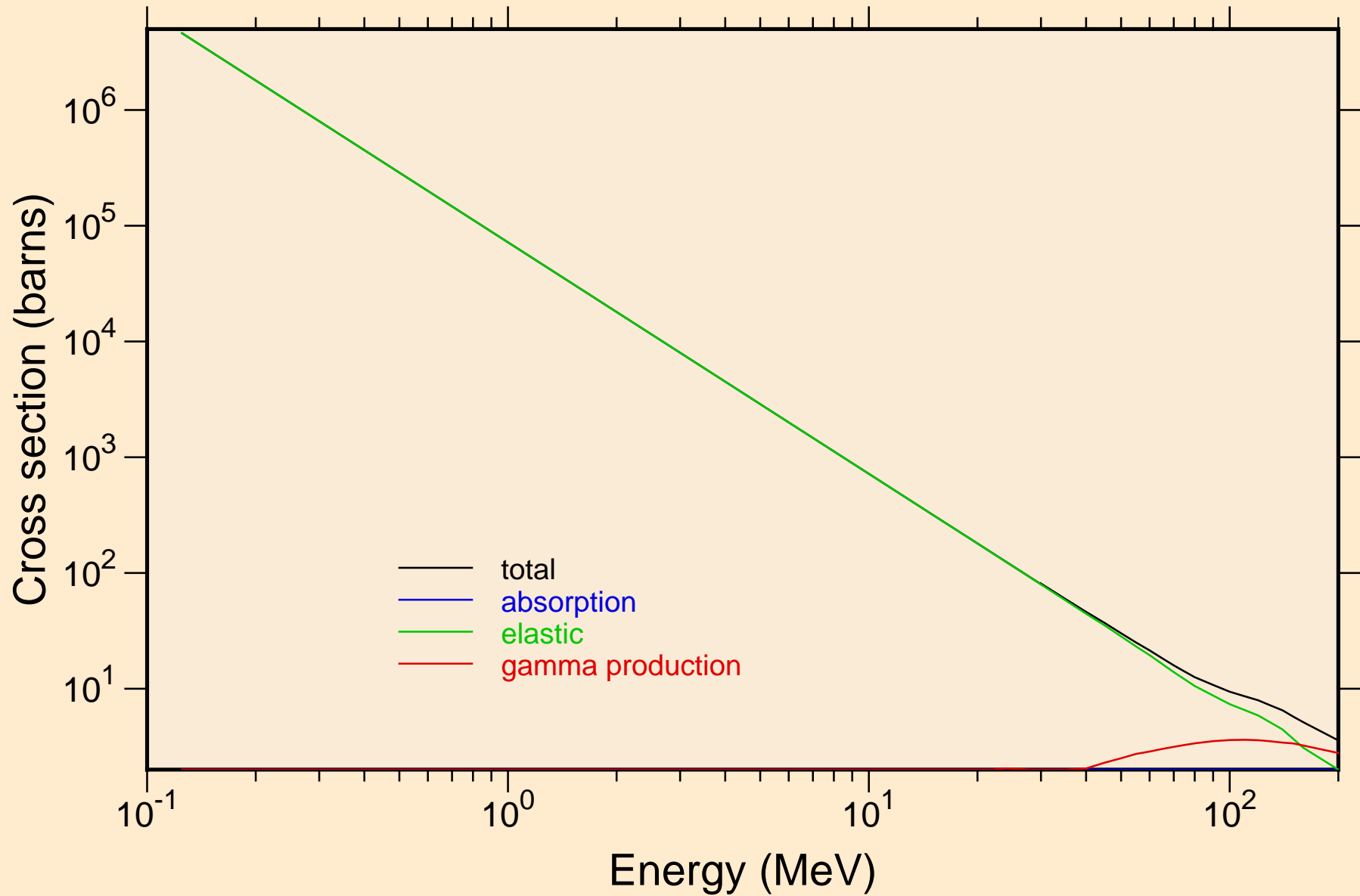
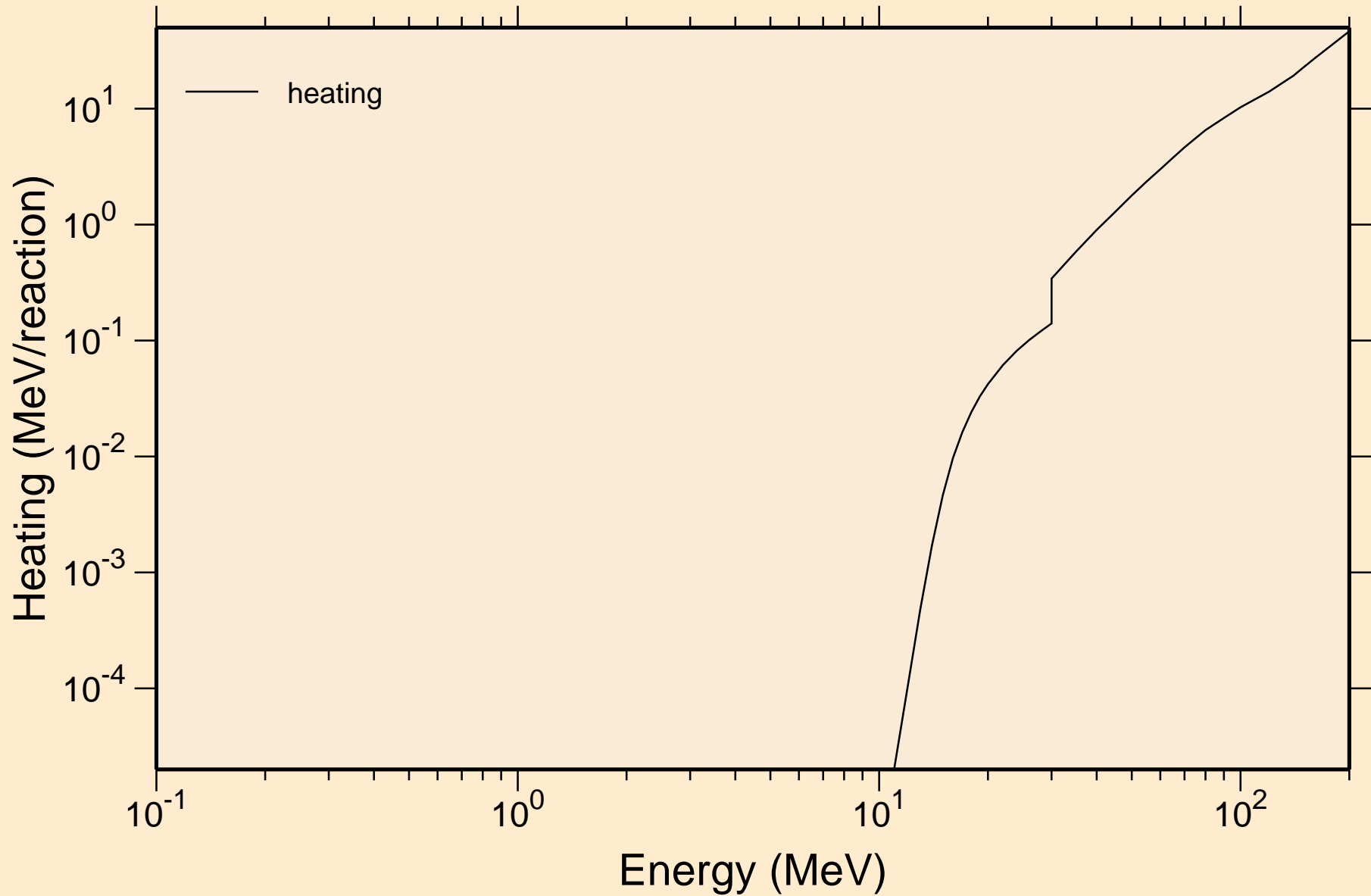


I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
Principal cross sections



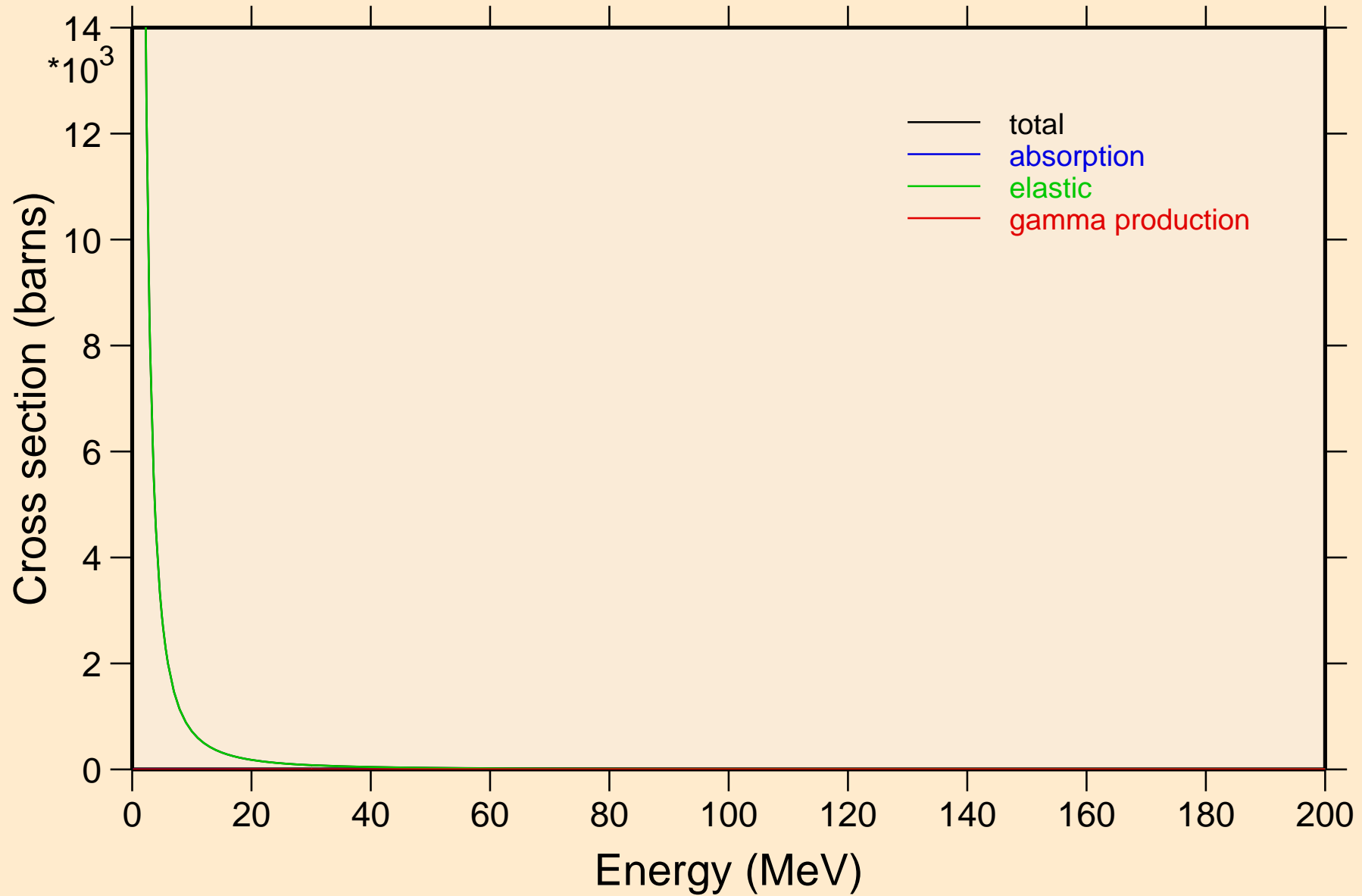
# I139 HELION ACER TENDL-2024 LIBRARY; T=0.K

## Heating



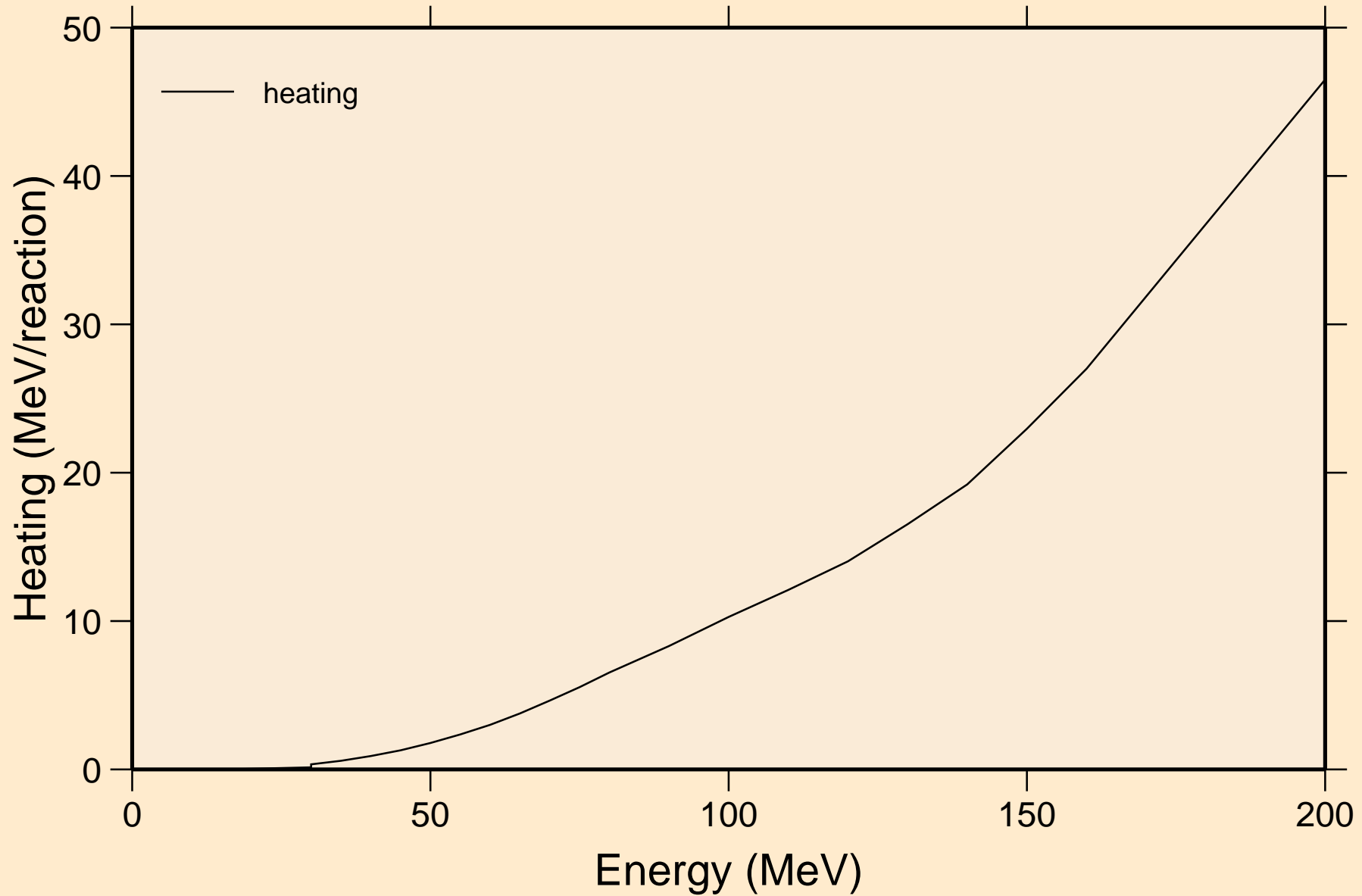
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## Principal cross sections



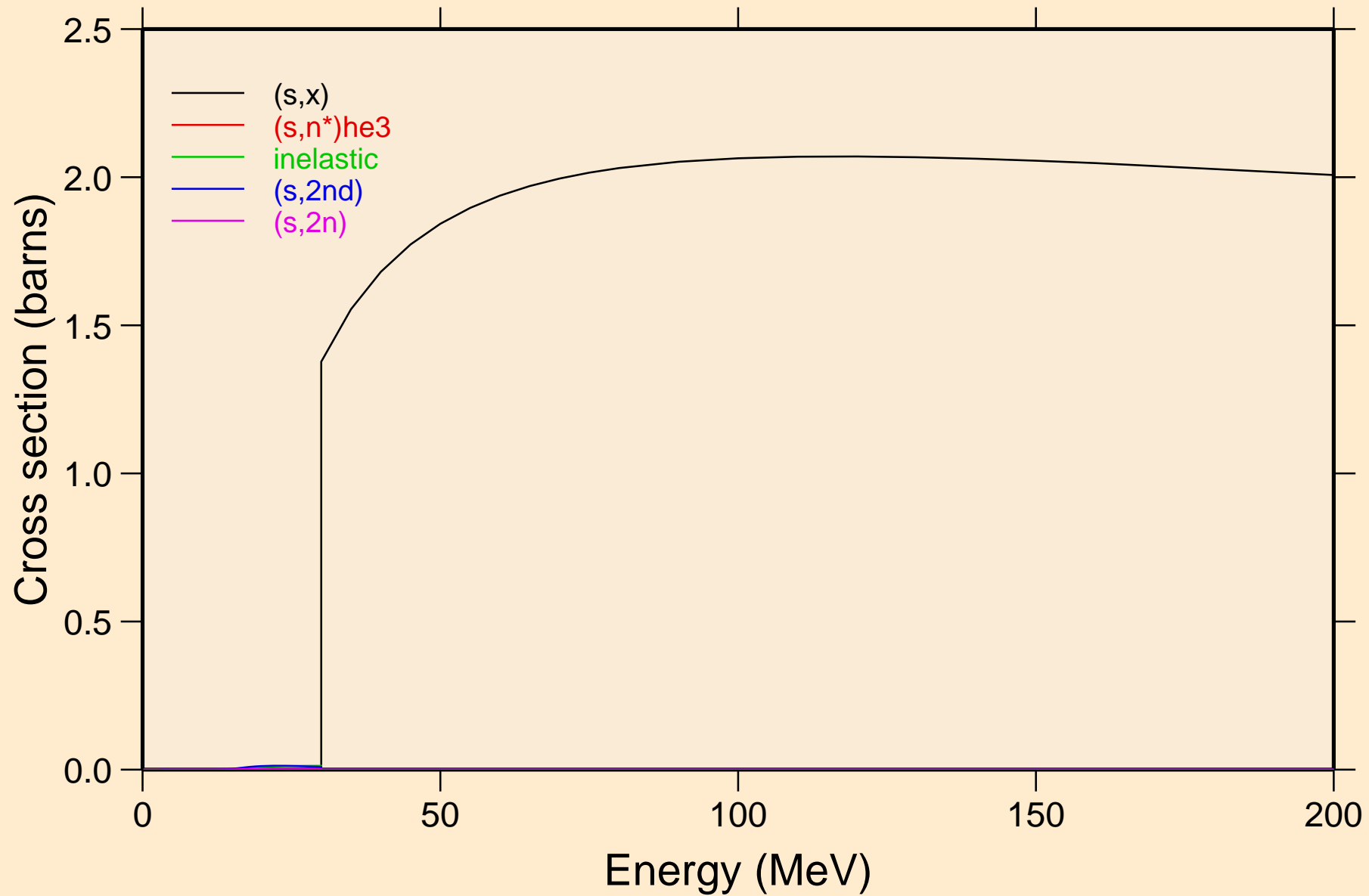
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## Heating

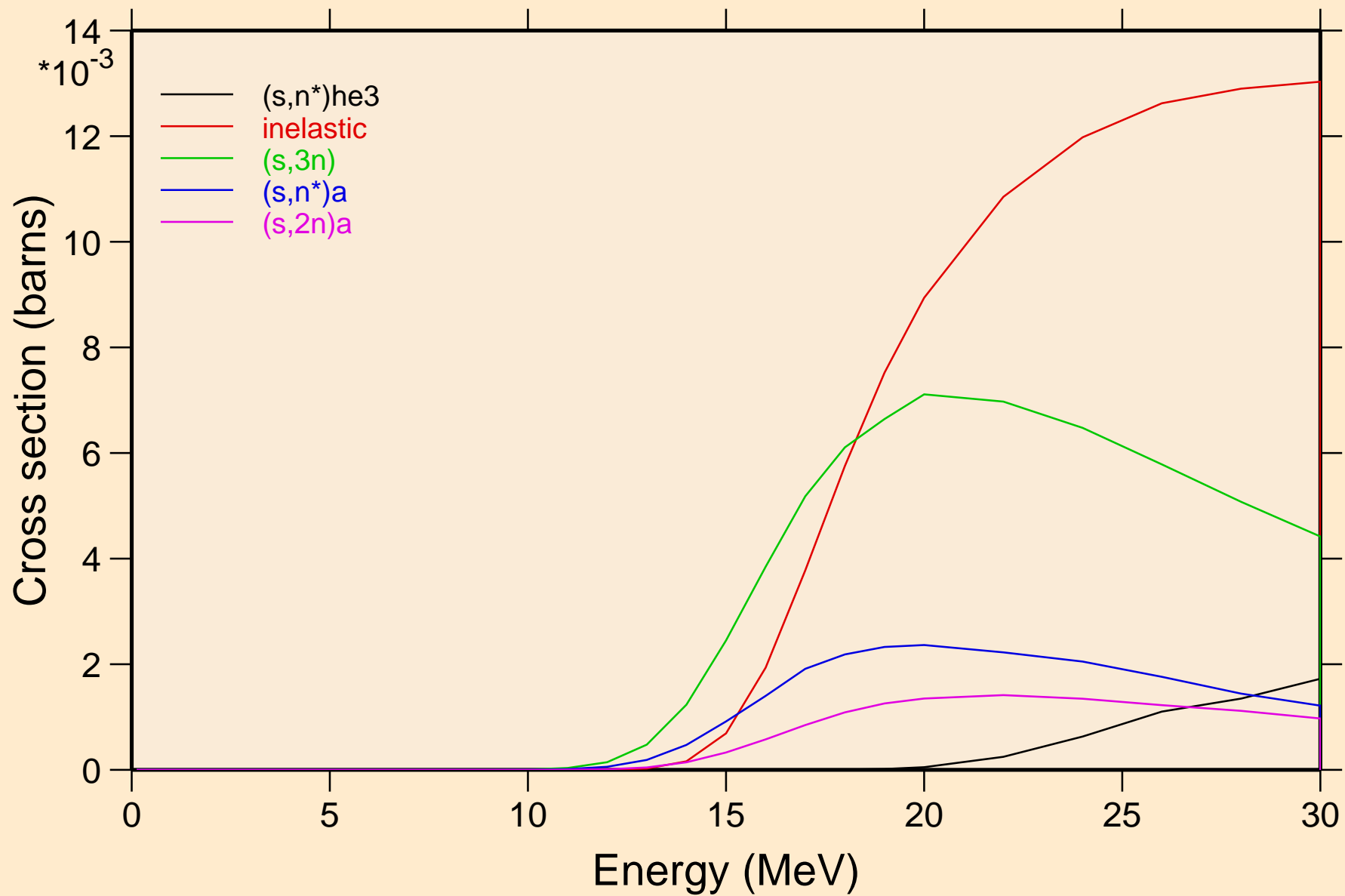


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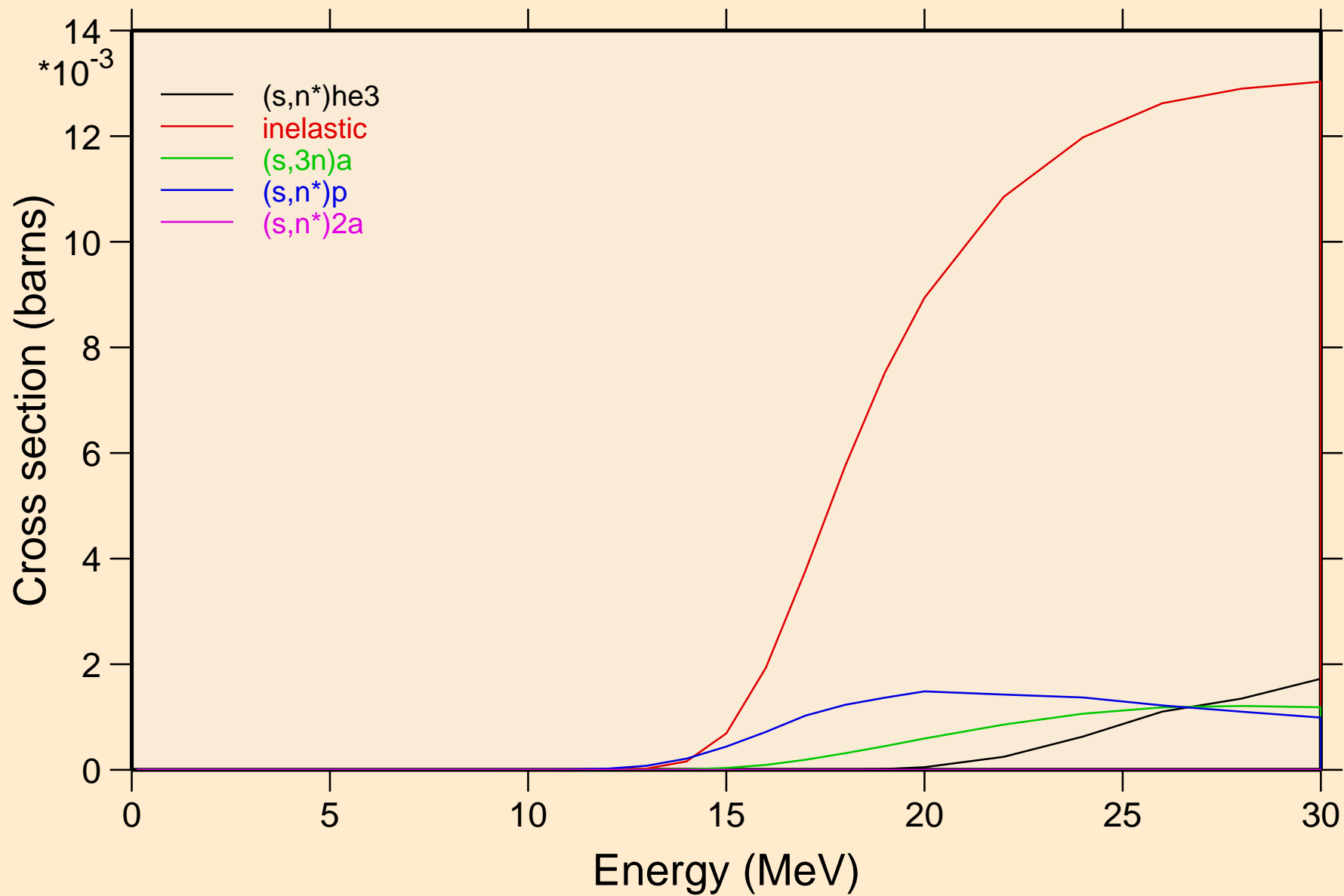
## Threshold reactions



I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
Threshold reactions

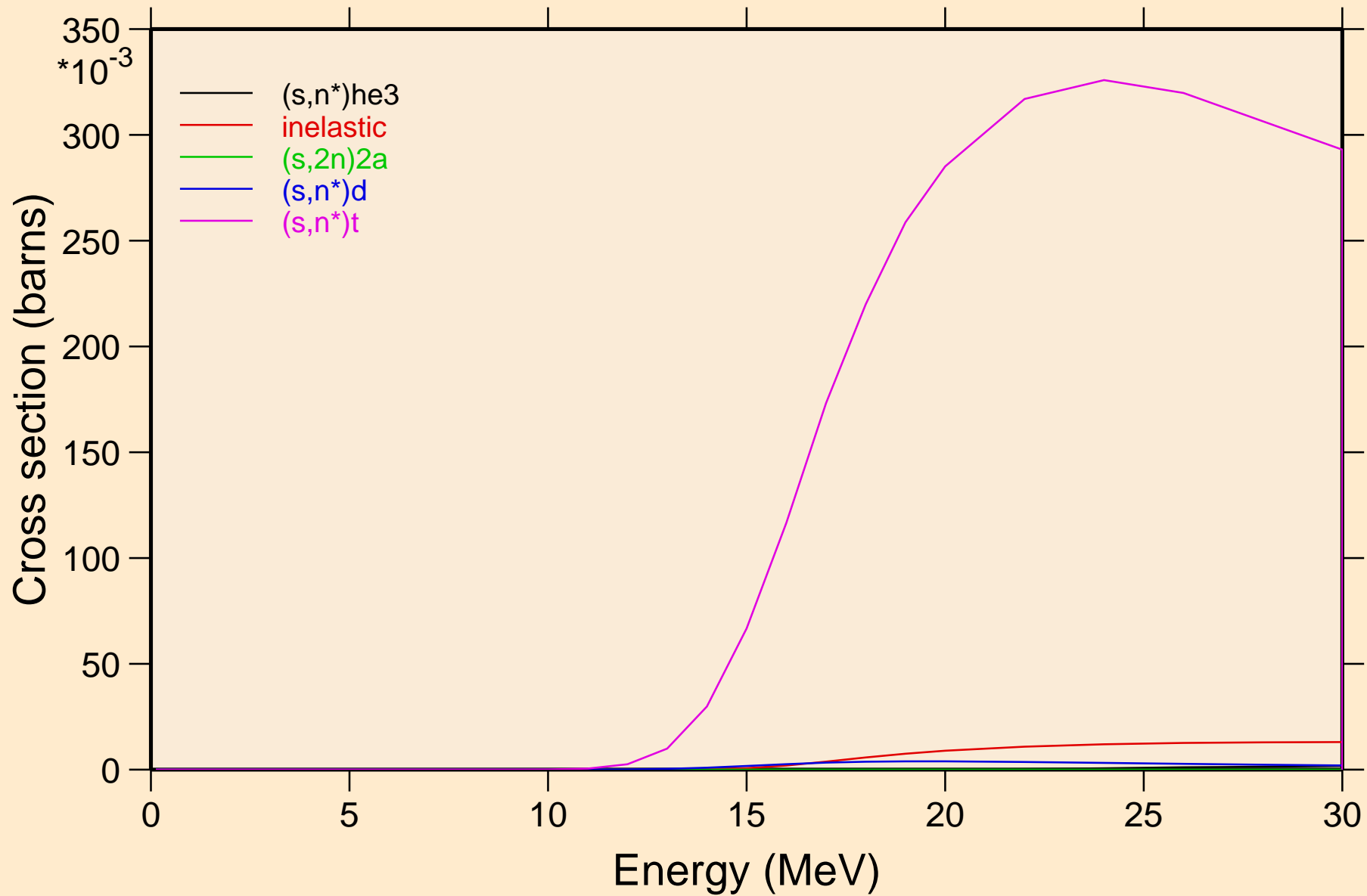


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Threshold reactions



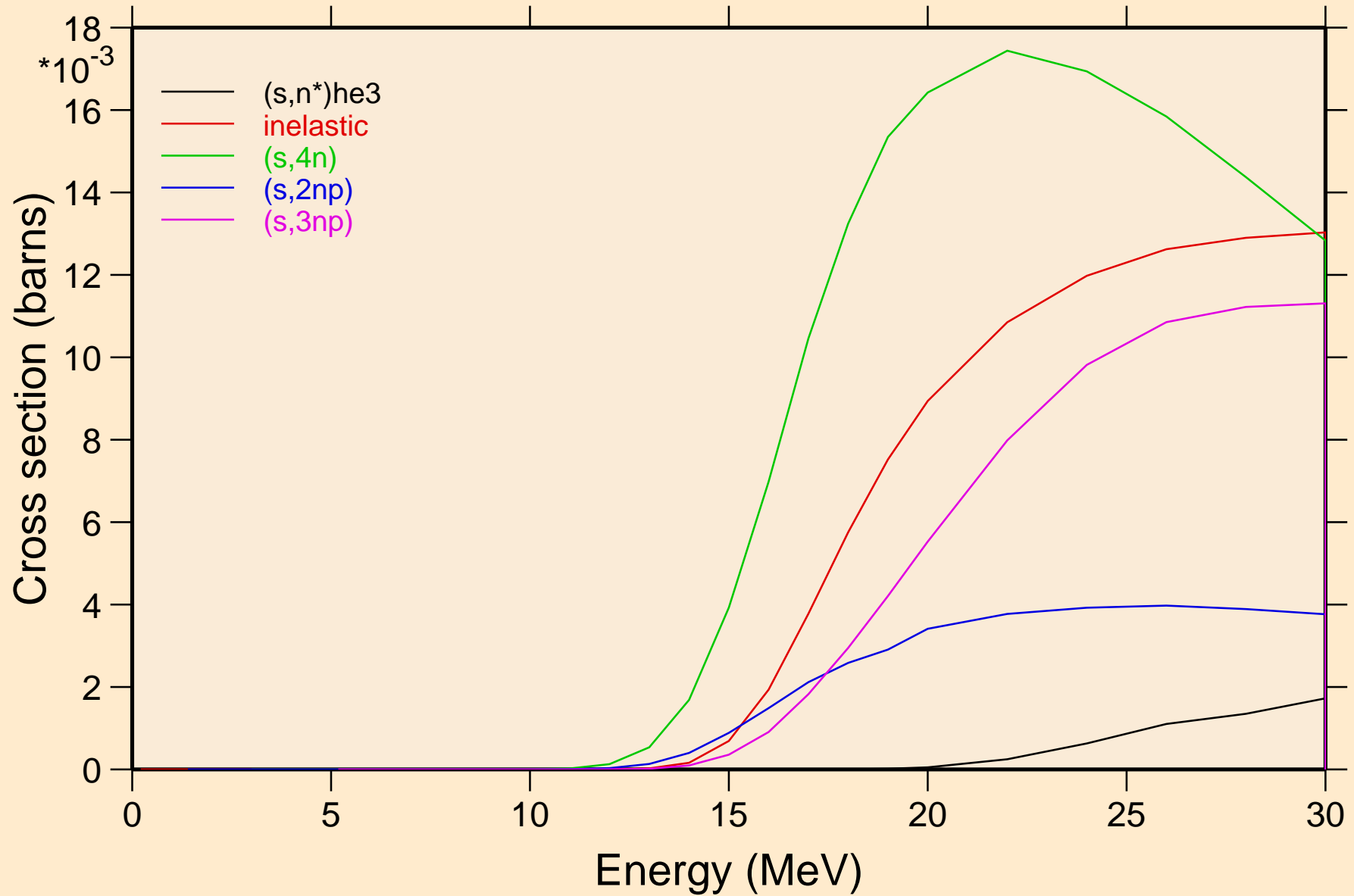
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## Threshold reactions

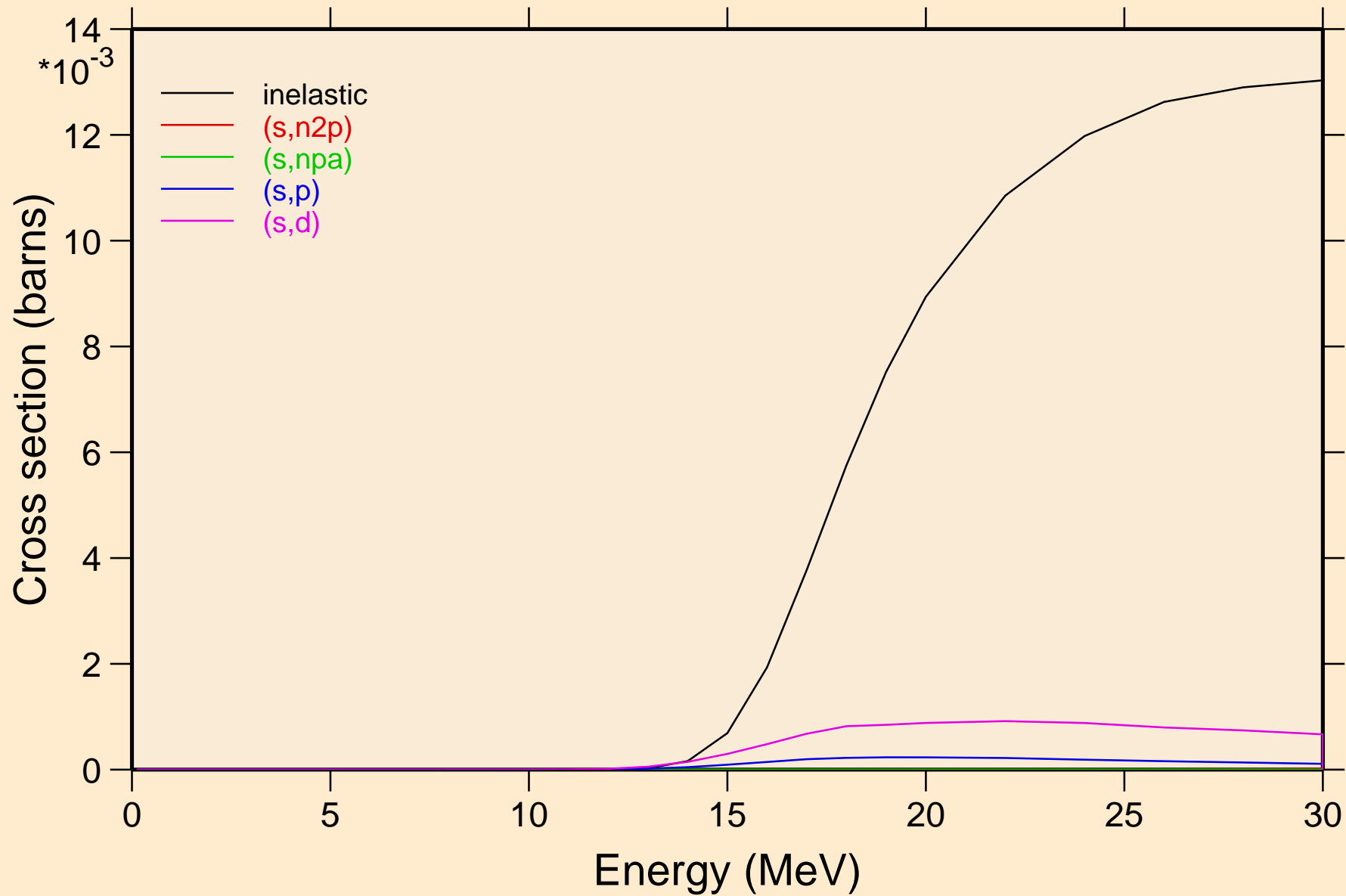


# I139 HELION ACER TENDL-2024 LIBRARY; T=0.K

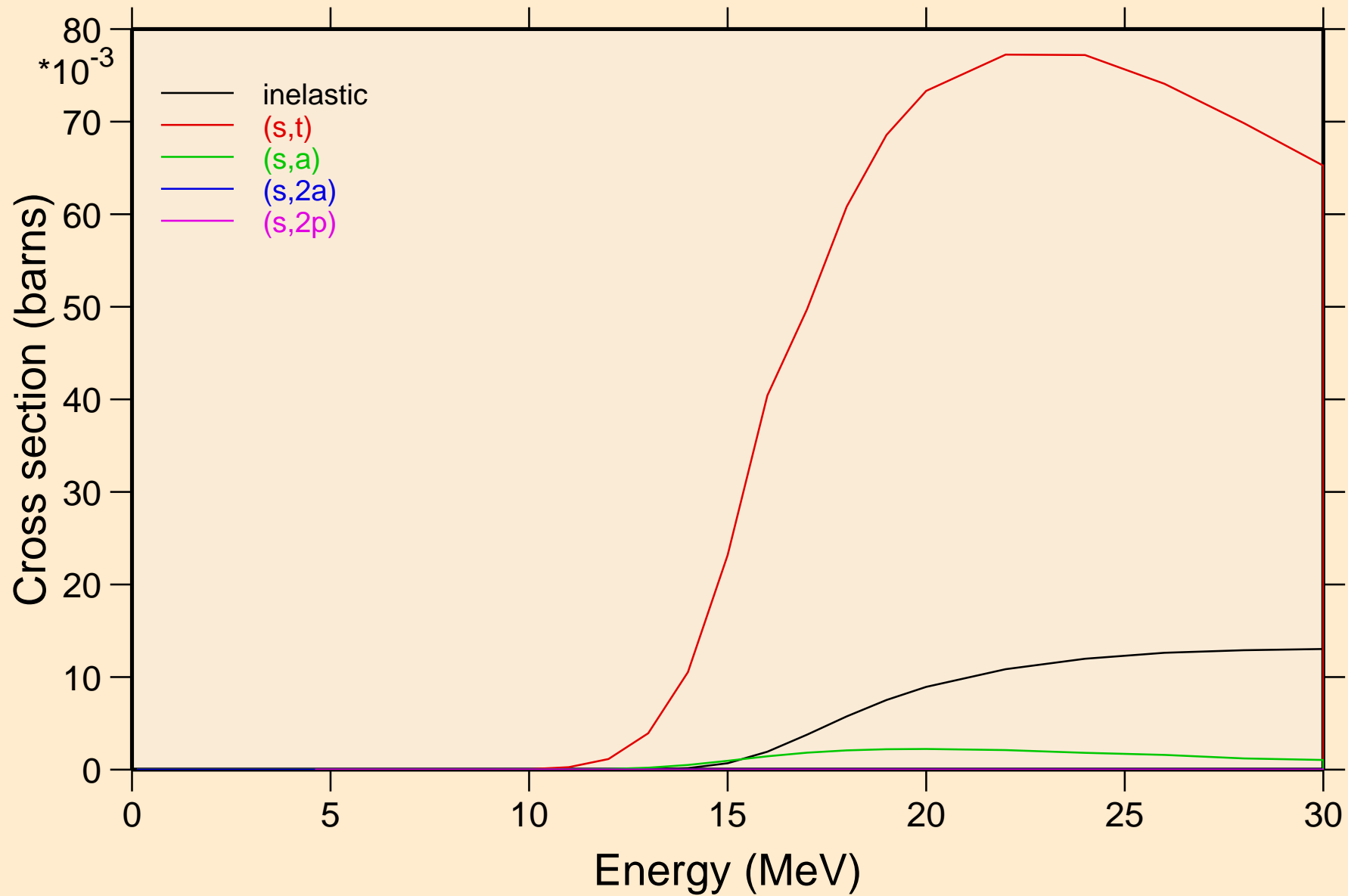
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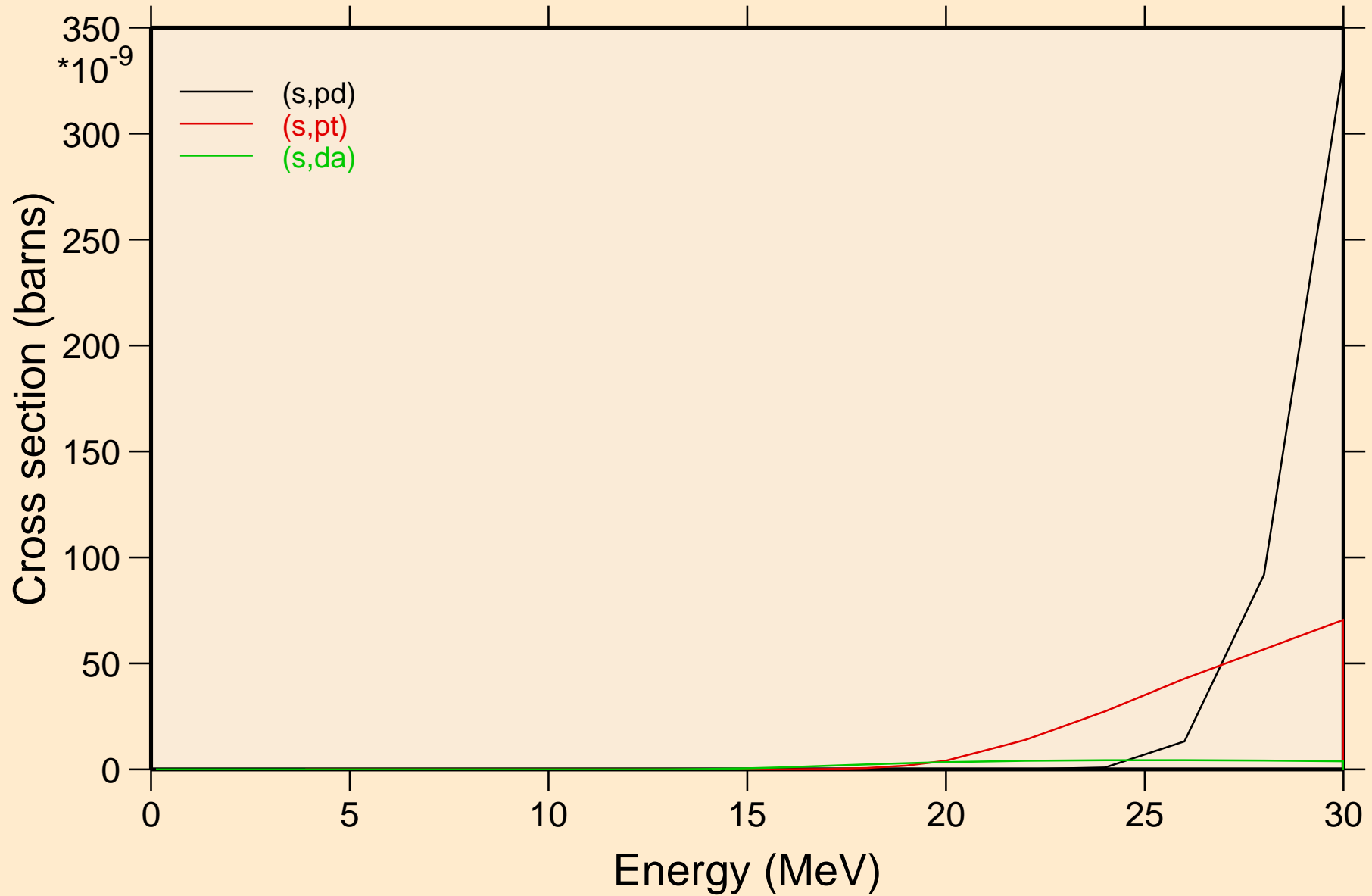
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
Threshold reactions



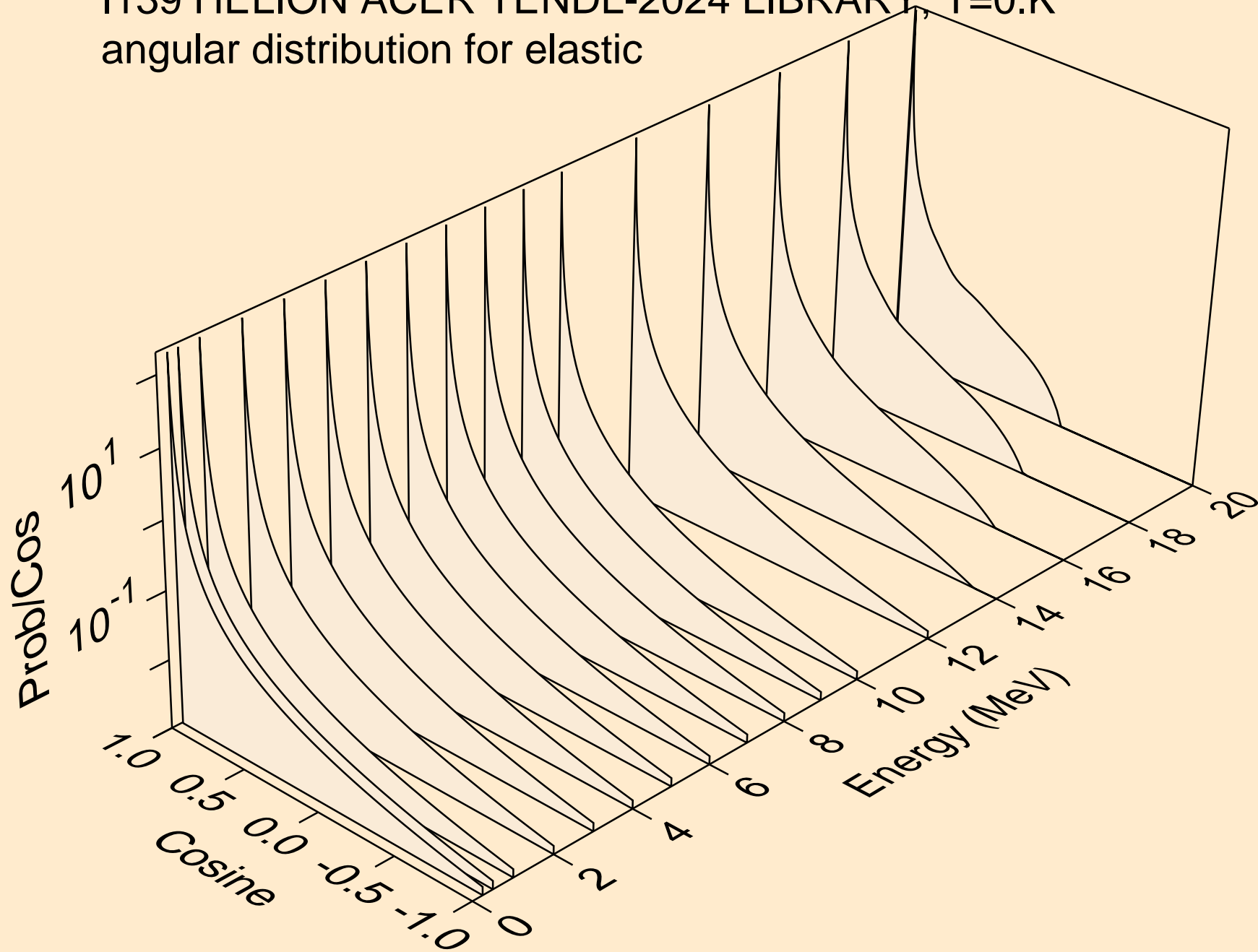
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Threshold reactions



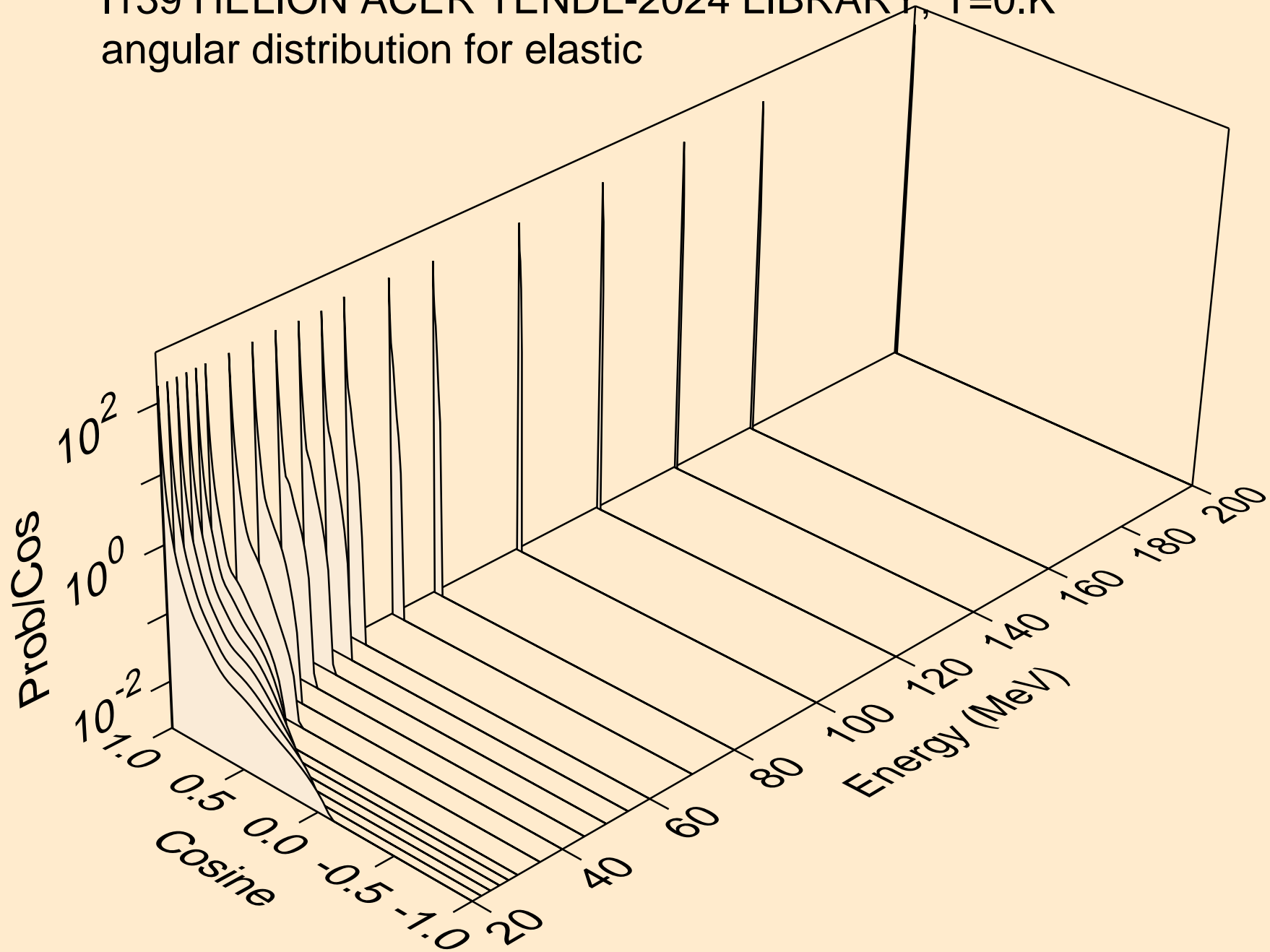
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Threshold reactions



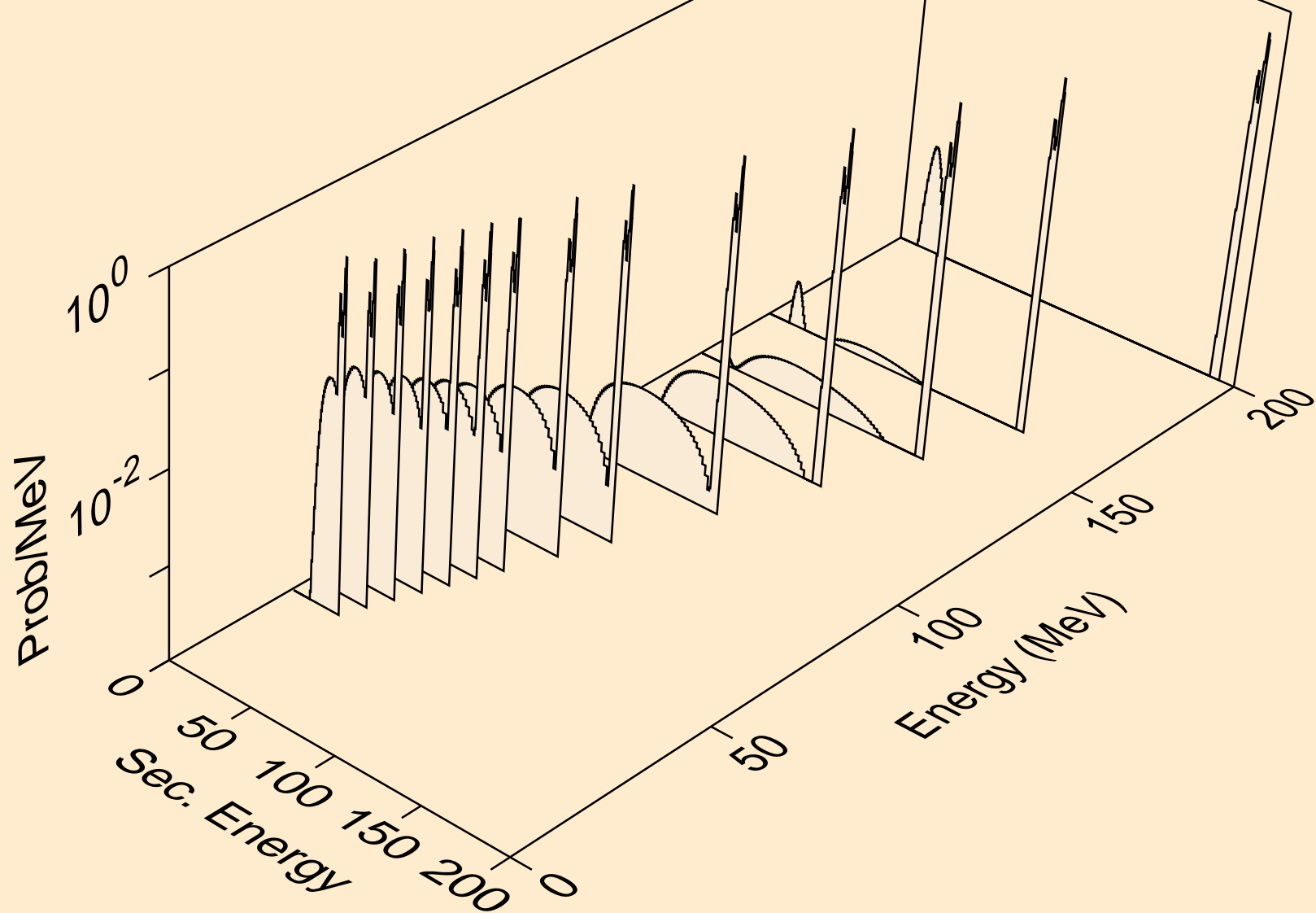
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
angular distribution for elastic



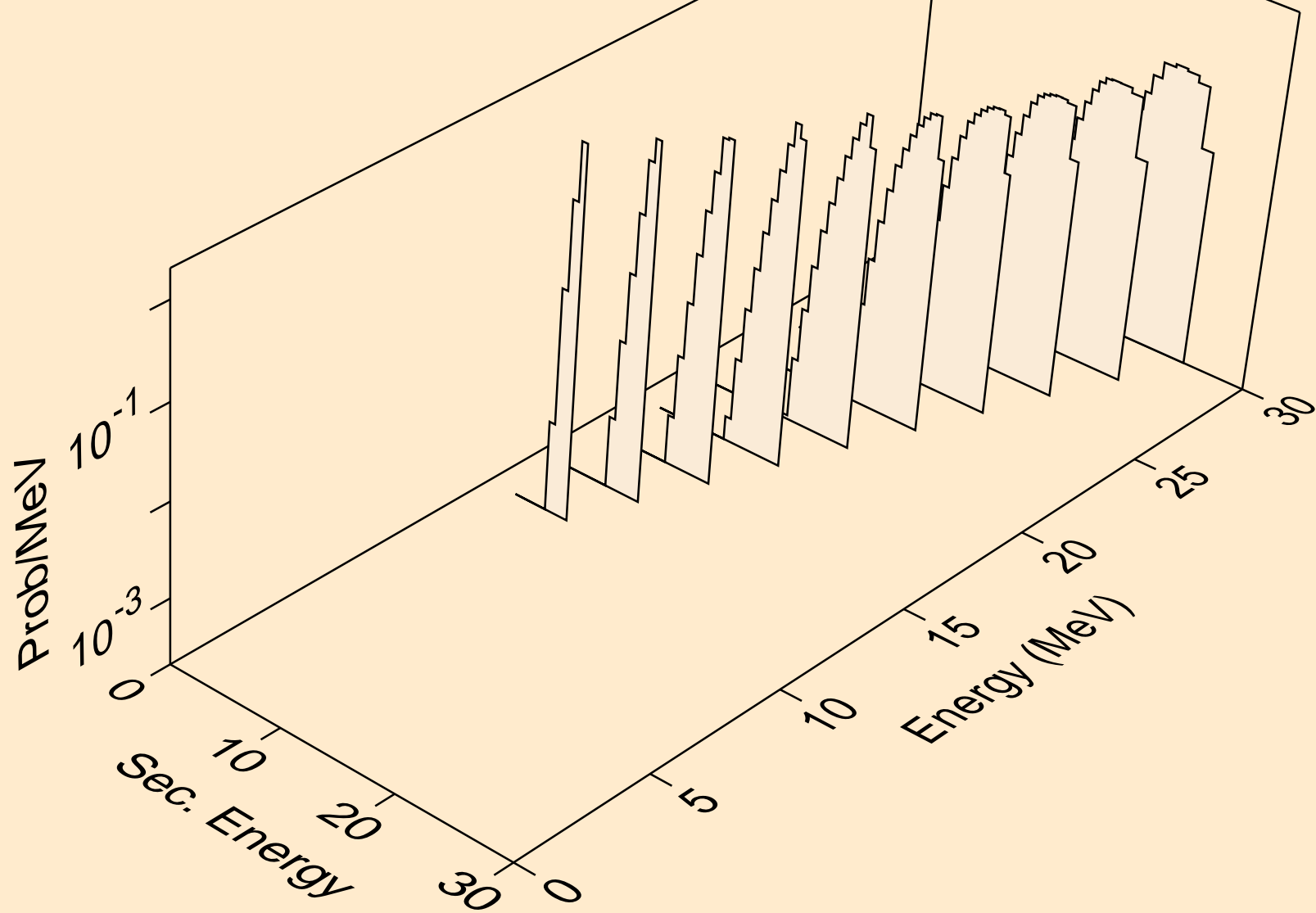
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angular distribution for elastic



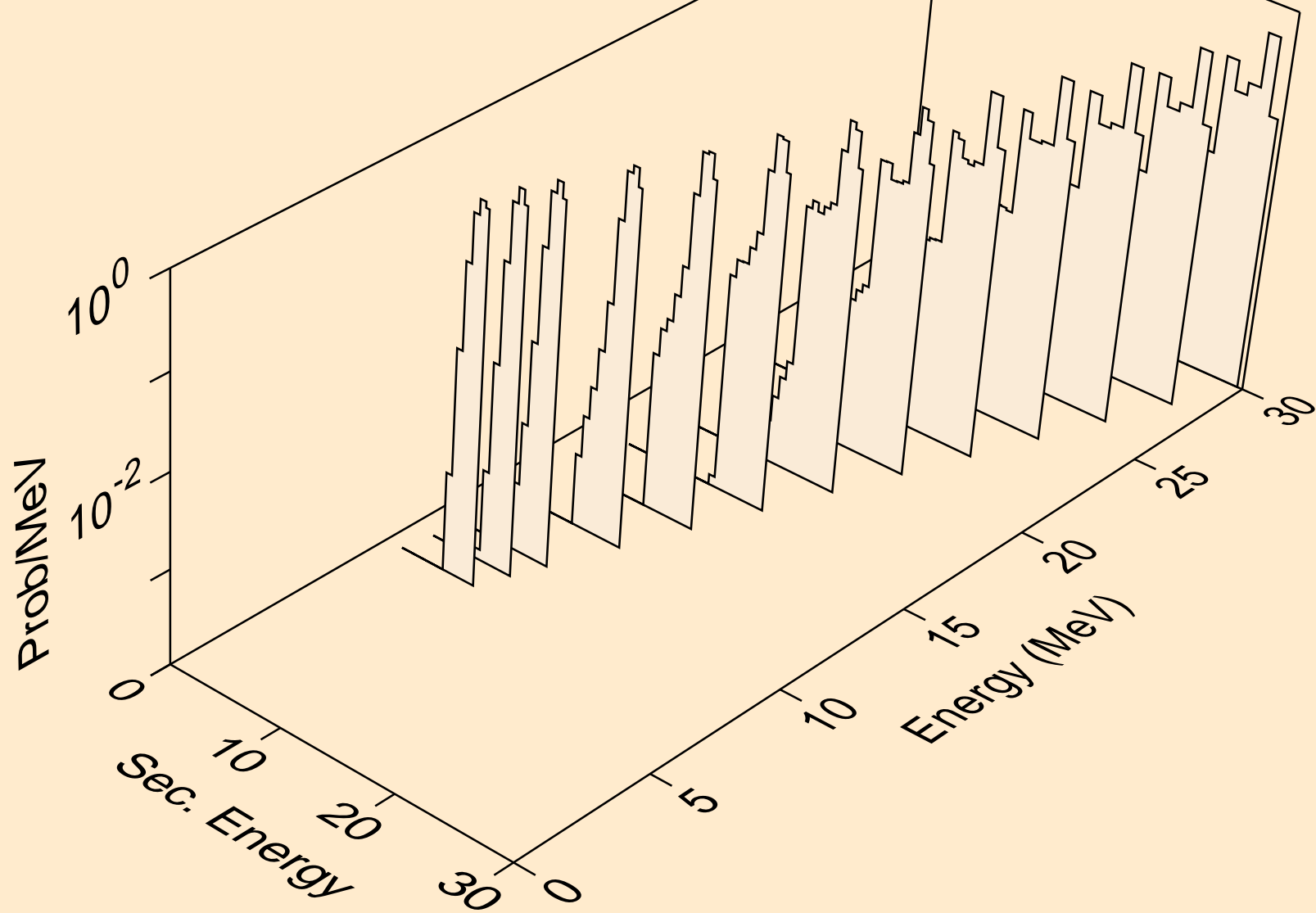
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
He-3 emission for (s,x)



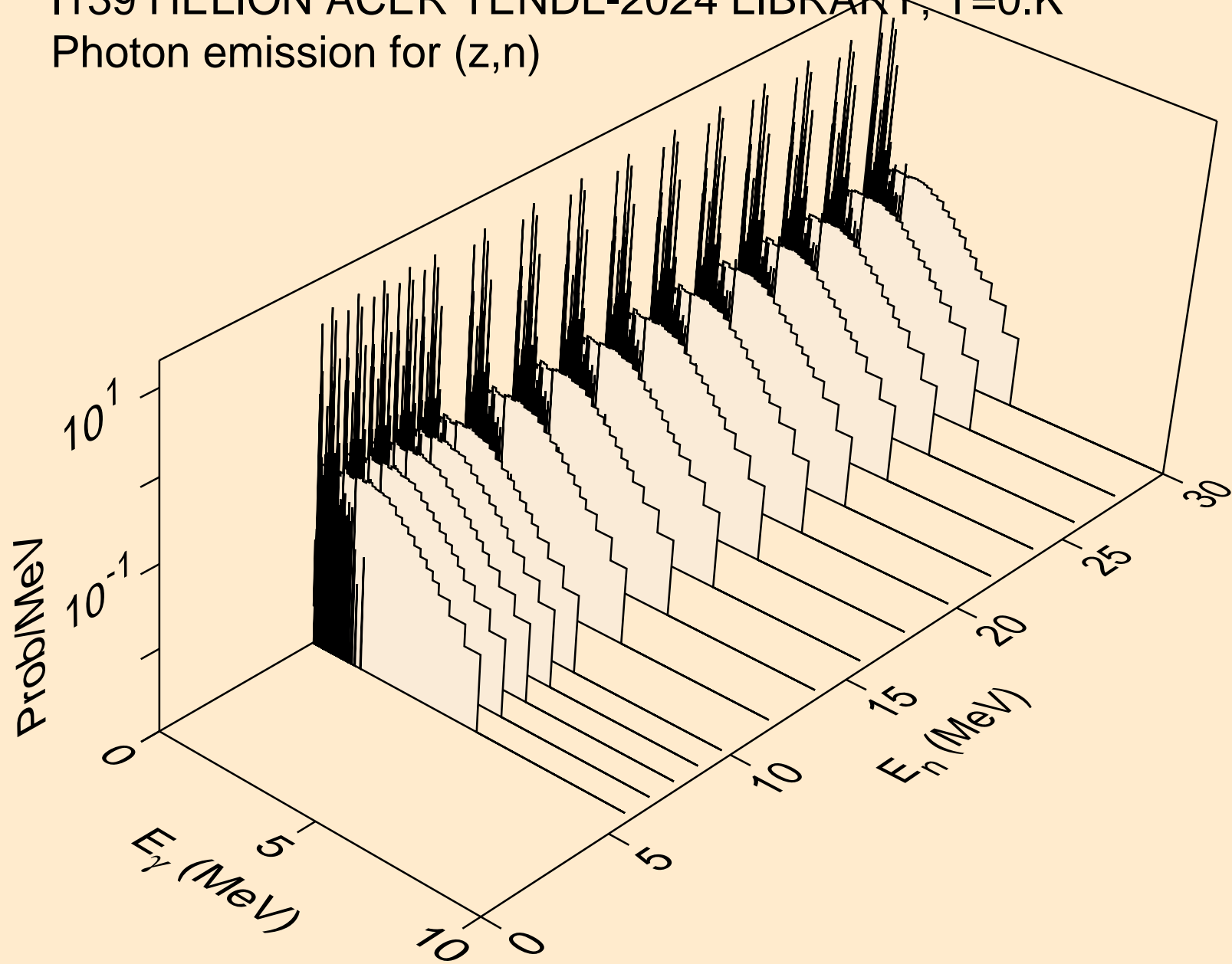
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
He-3 emission for (s,n\*)he3



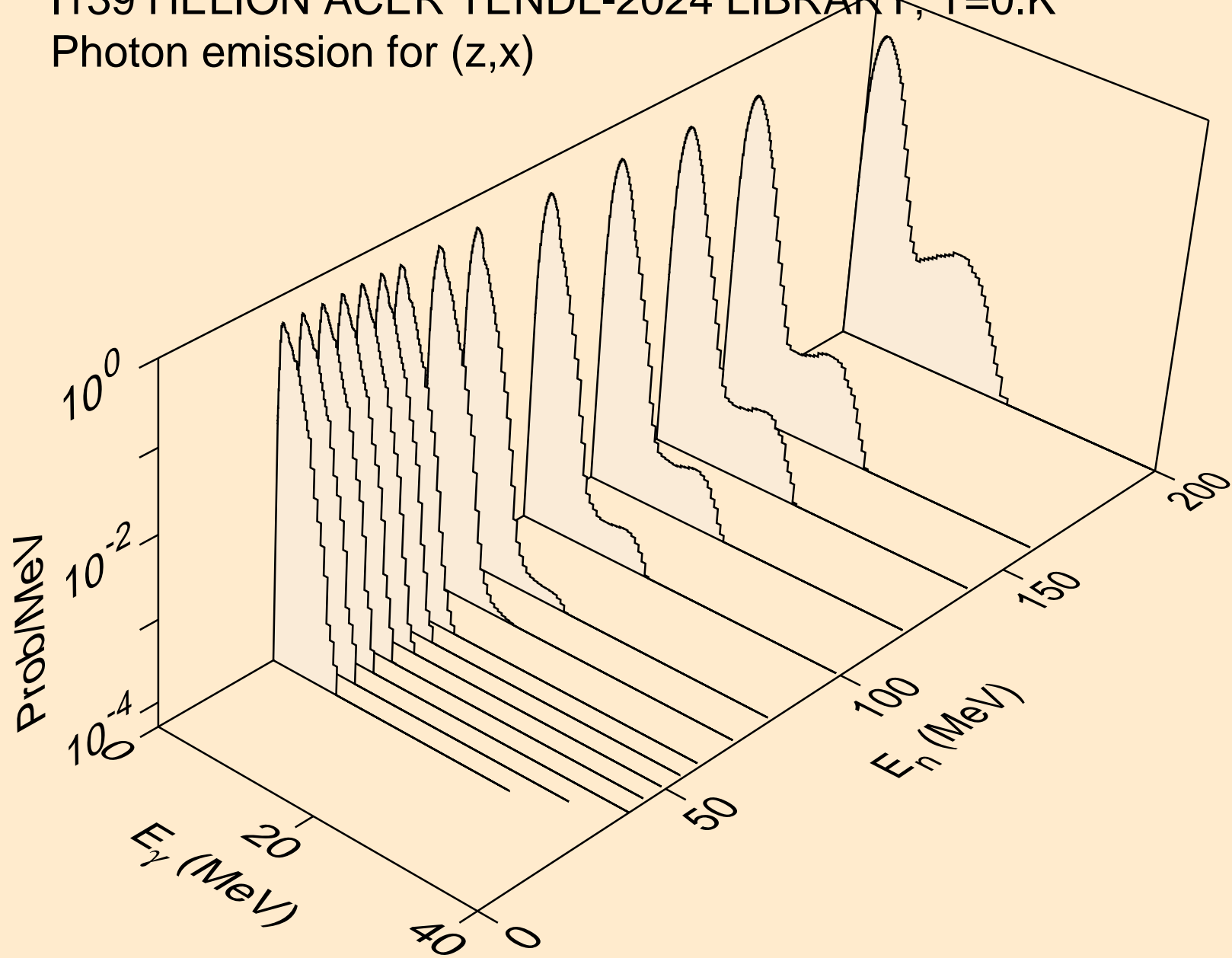
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
He-3 emission for inelastic



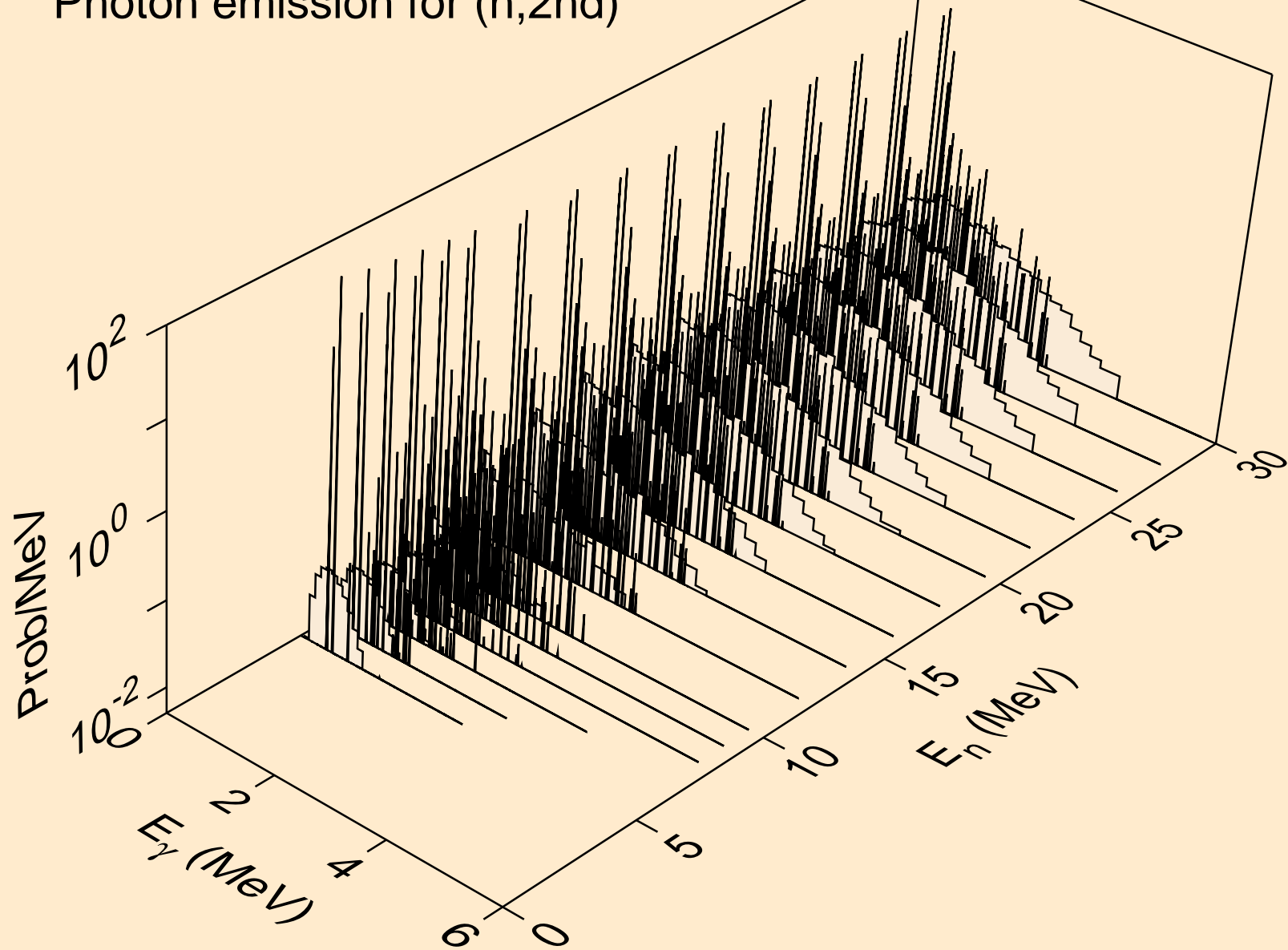
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Photon emission for (z,n)



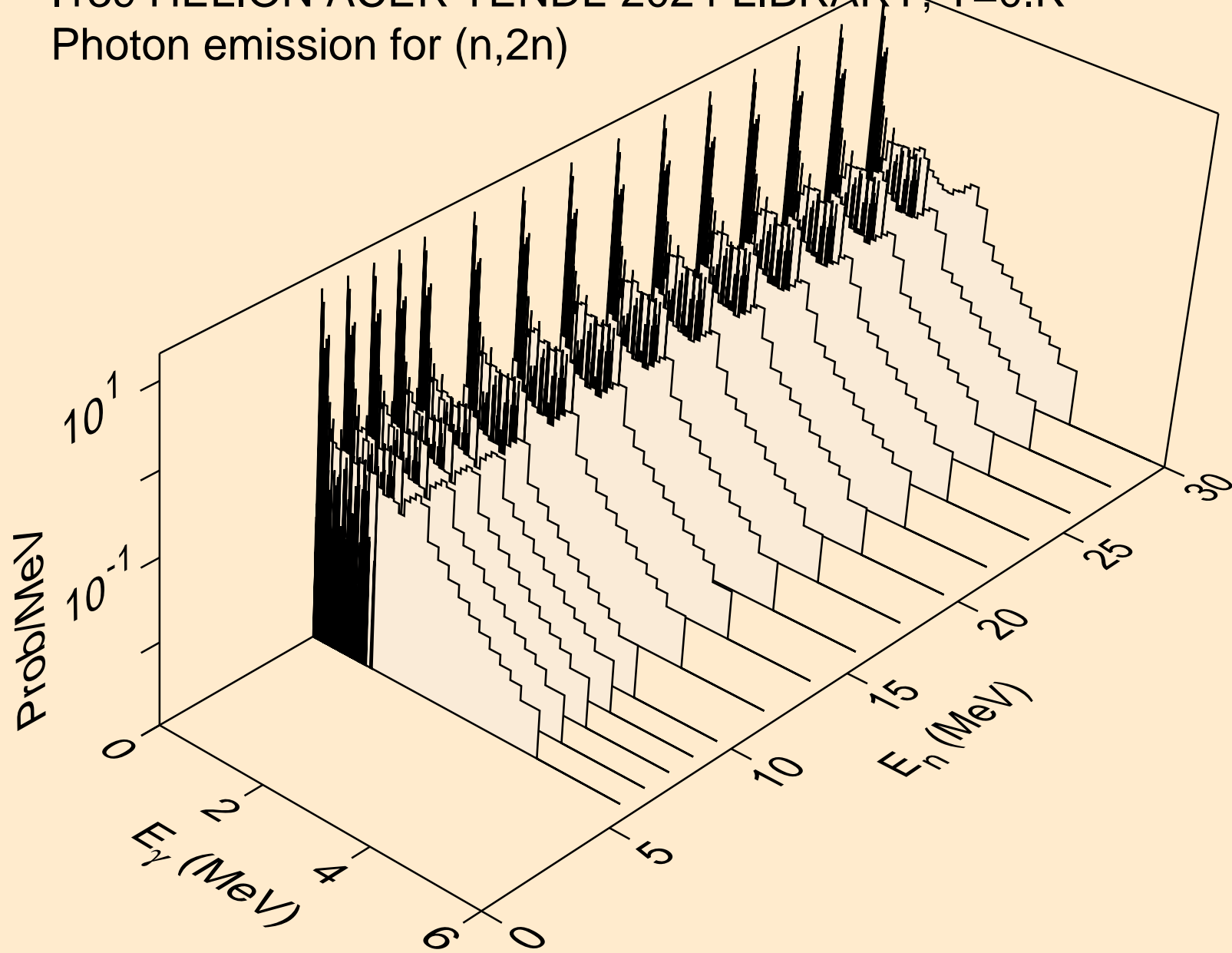
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Photon emission for (z,x)



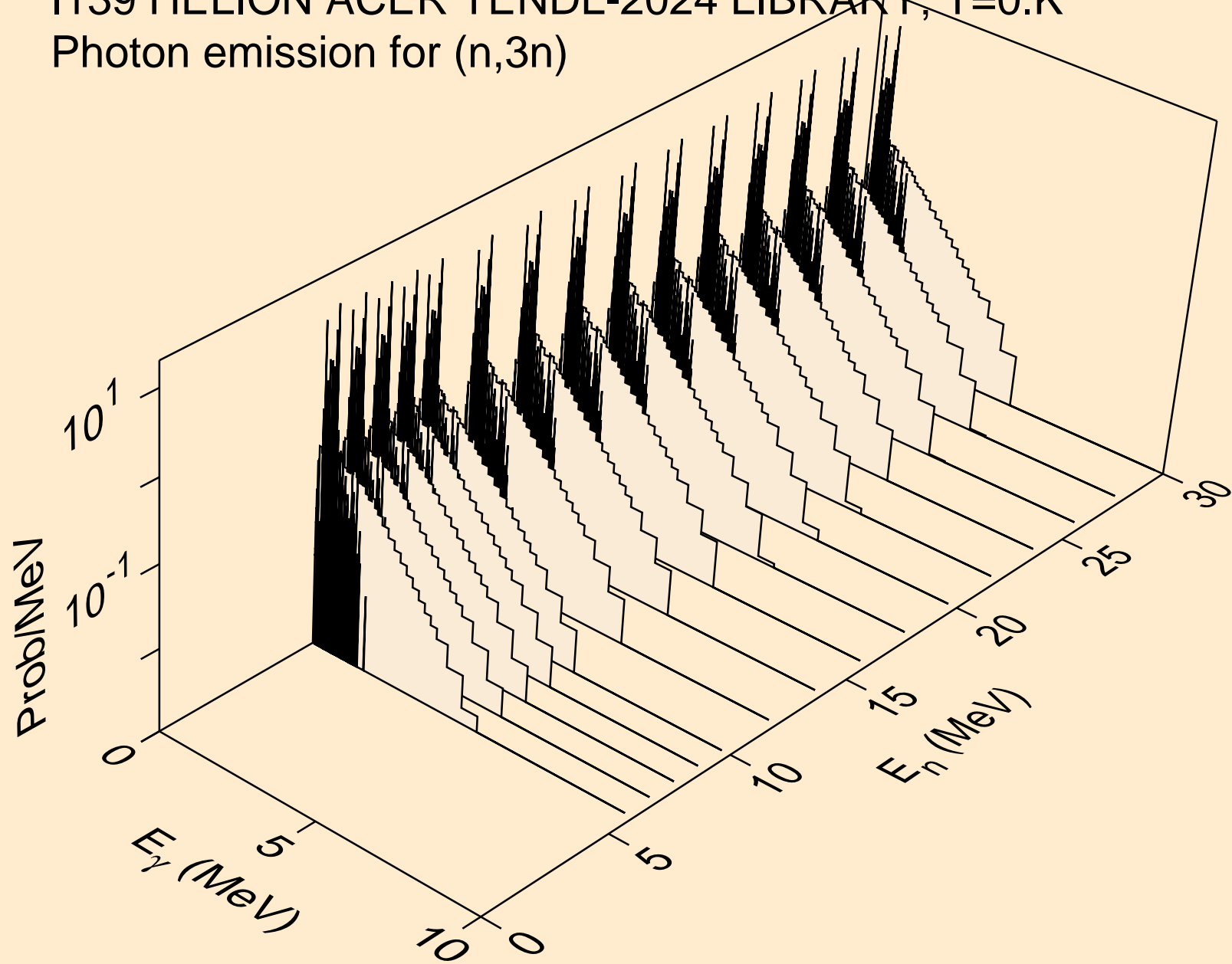
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Photon emission for (n,2nd)



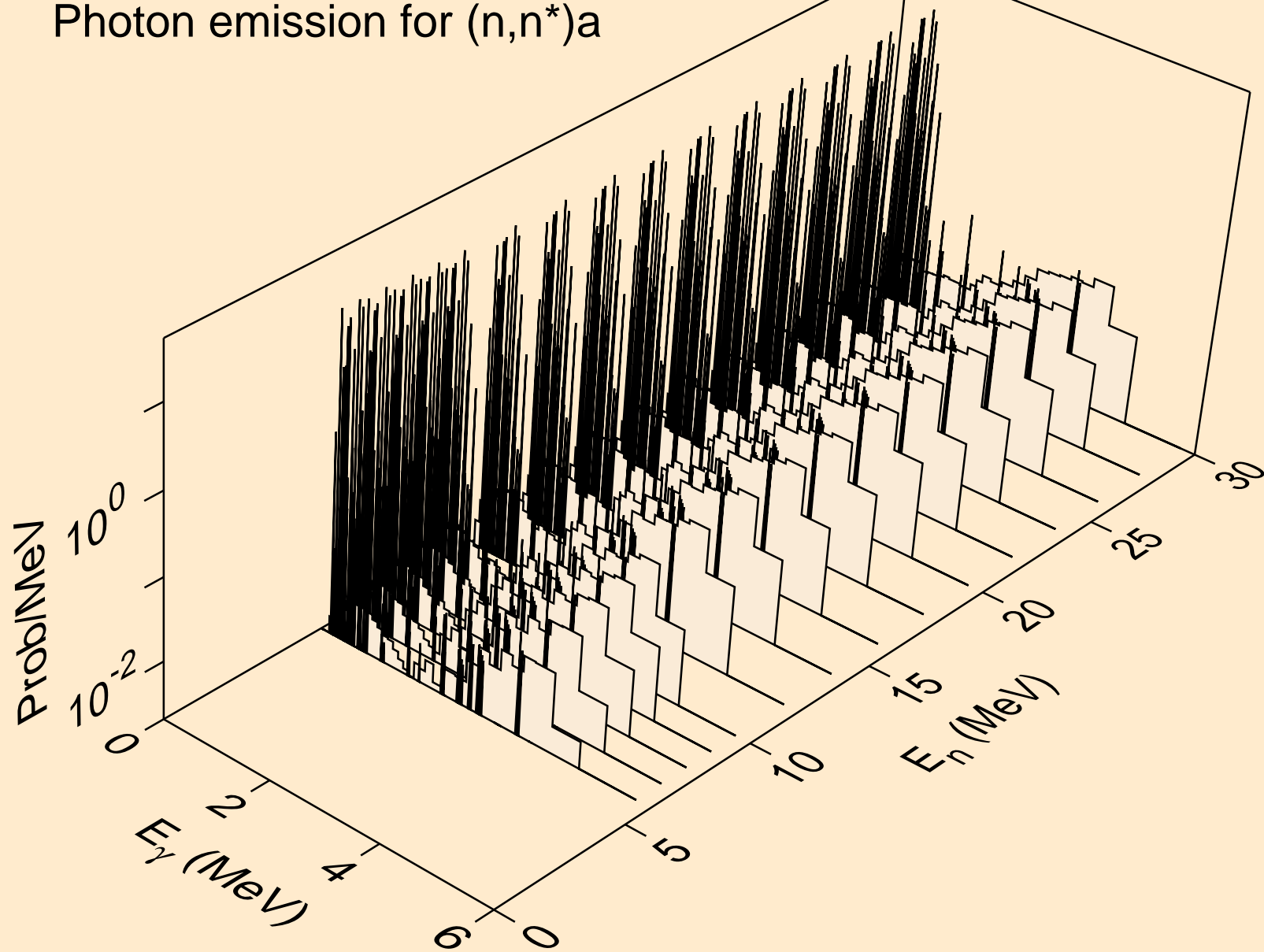
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Photon emission for (n,2n)



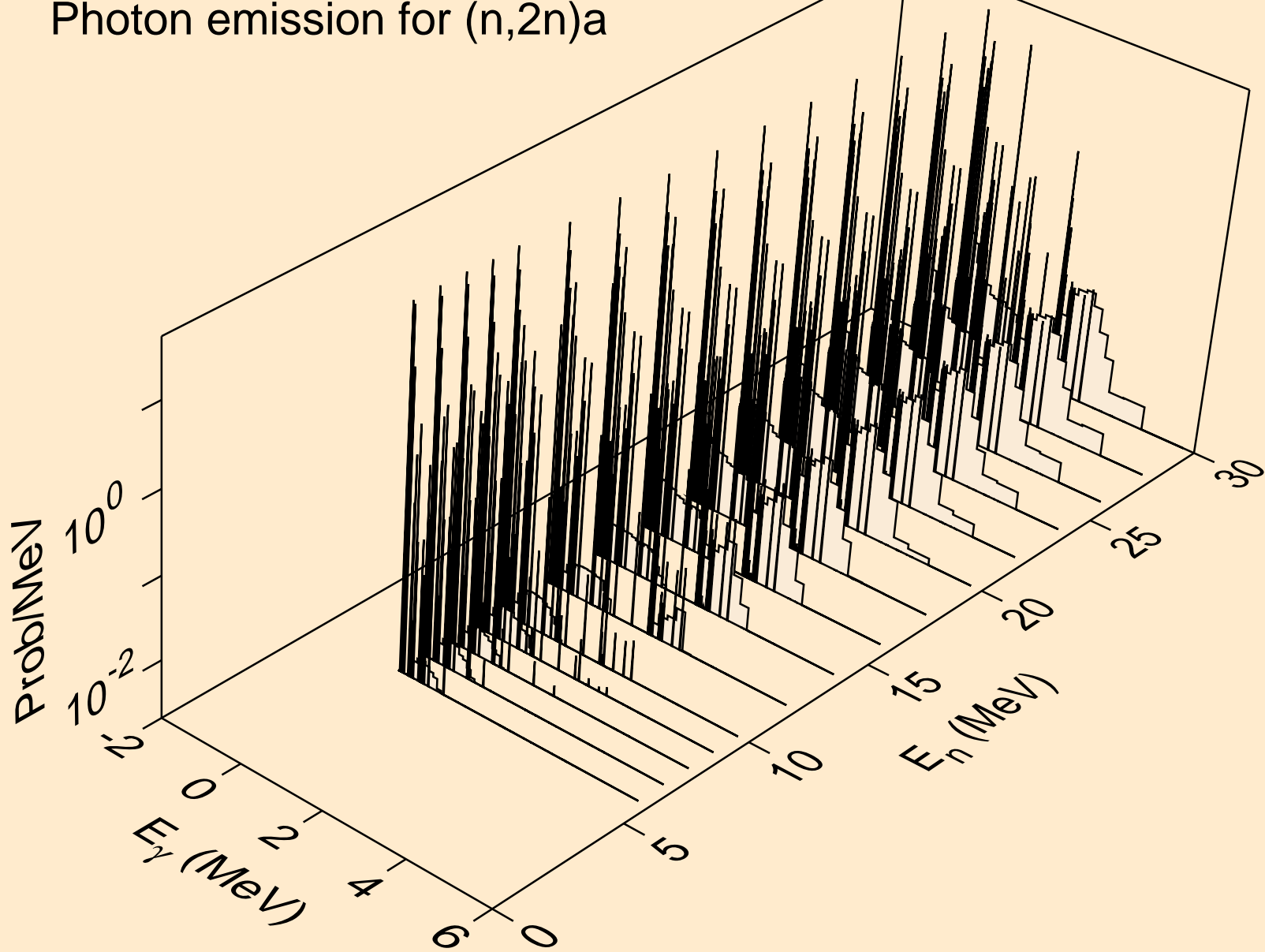
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Photon emission for (n,3n)



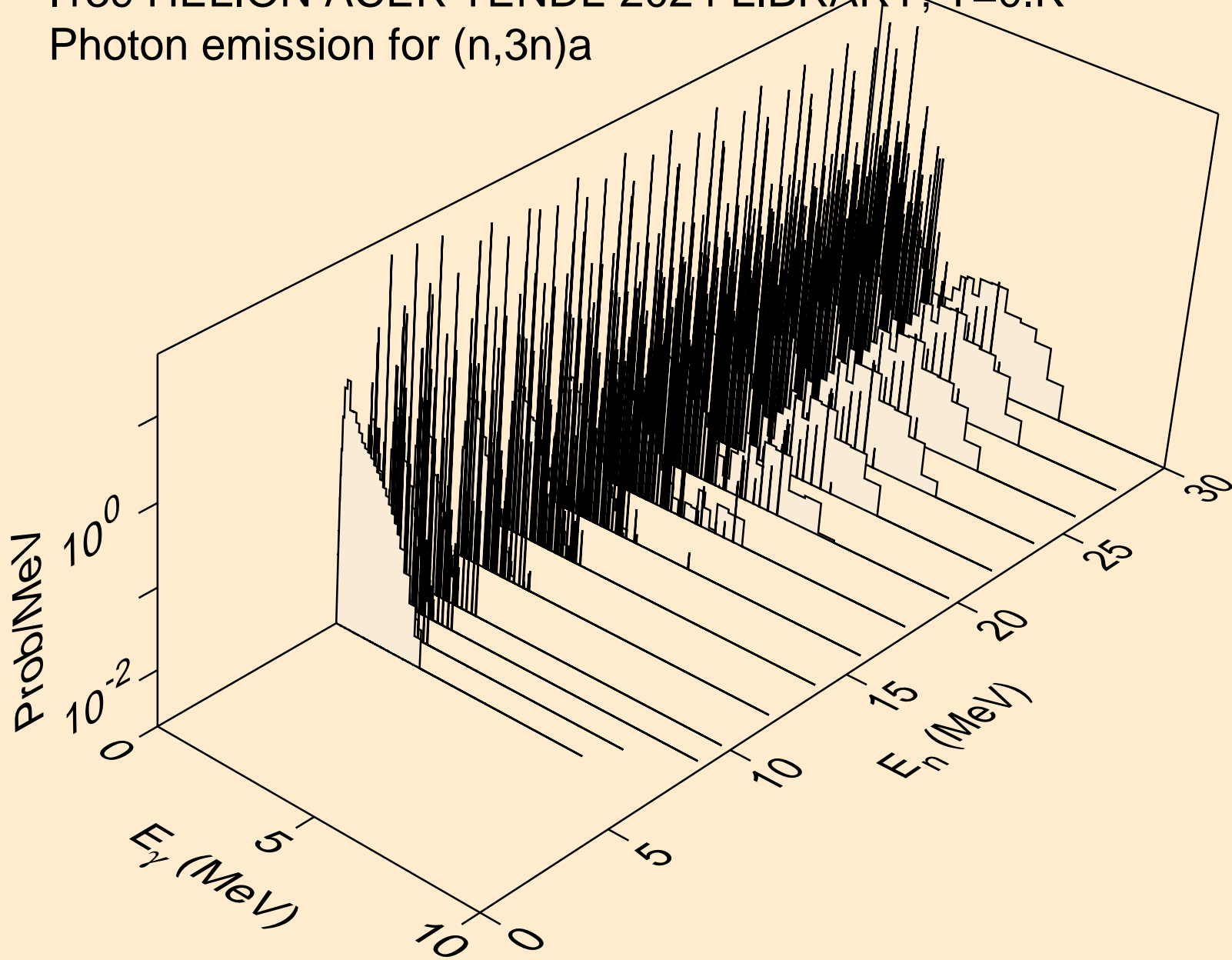
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Photon emission for (n,n\*)a



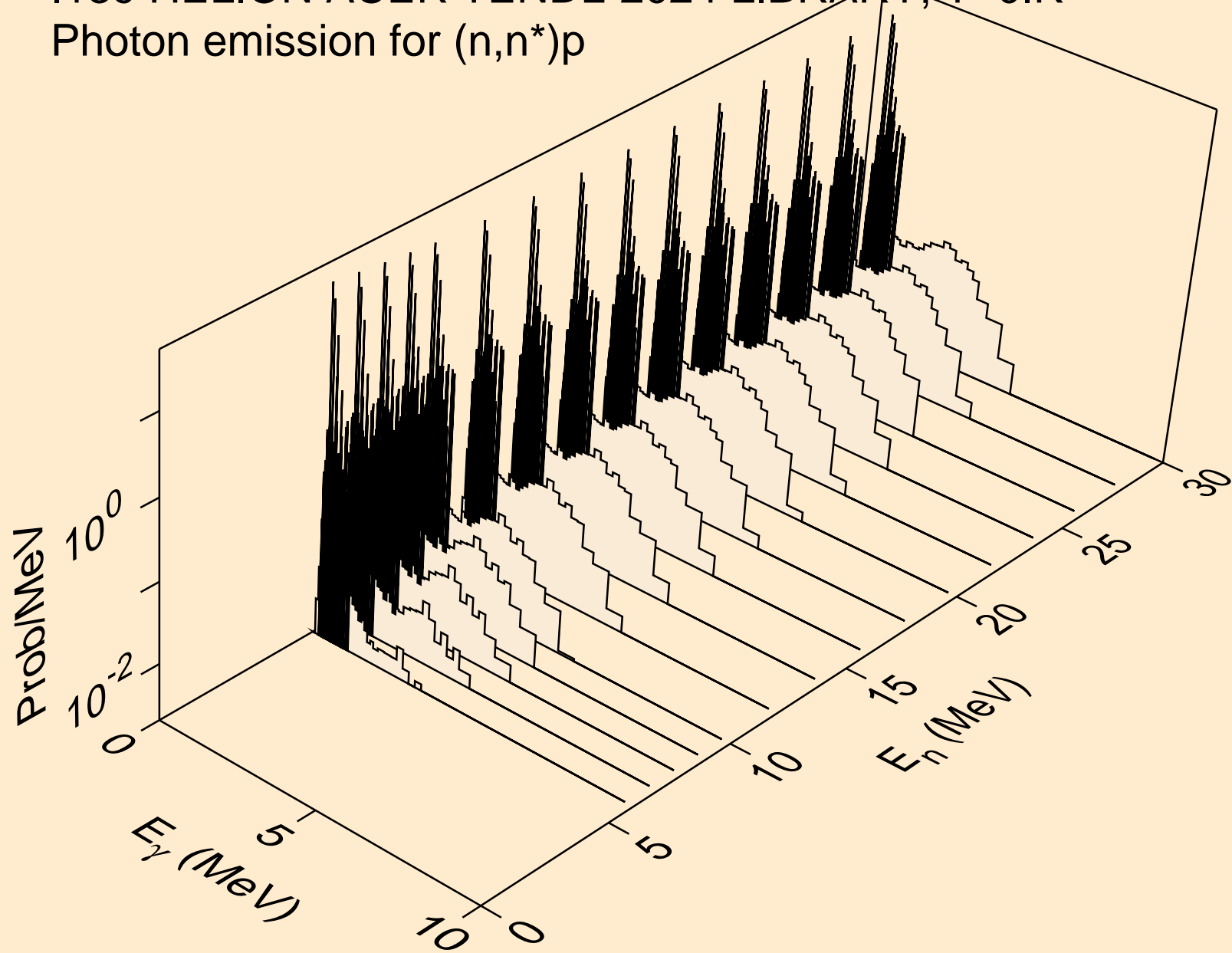
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Photon emission for (n,2n)a



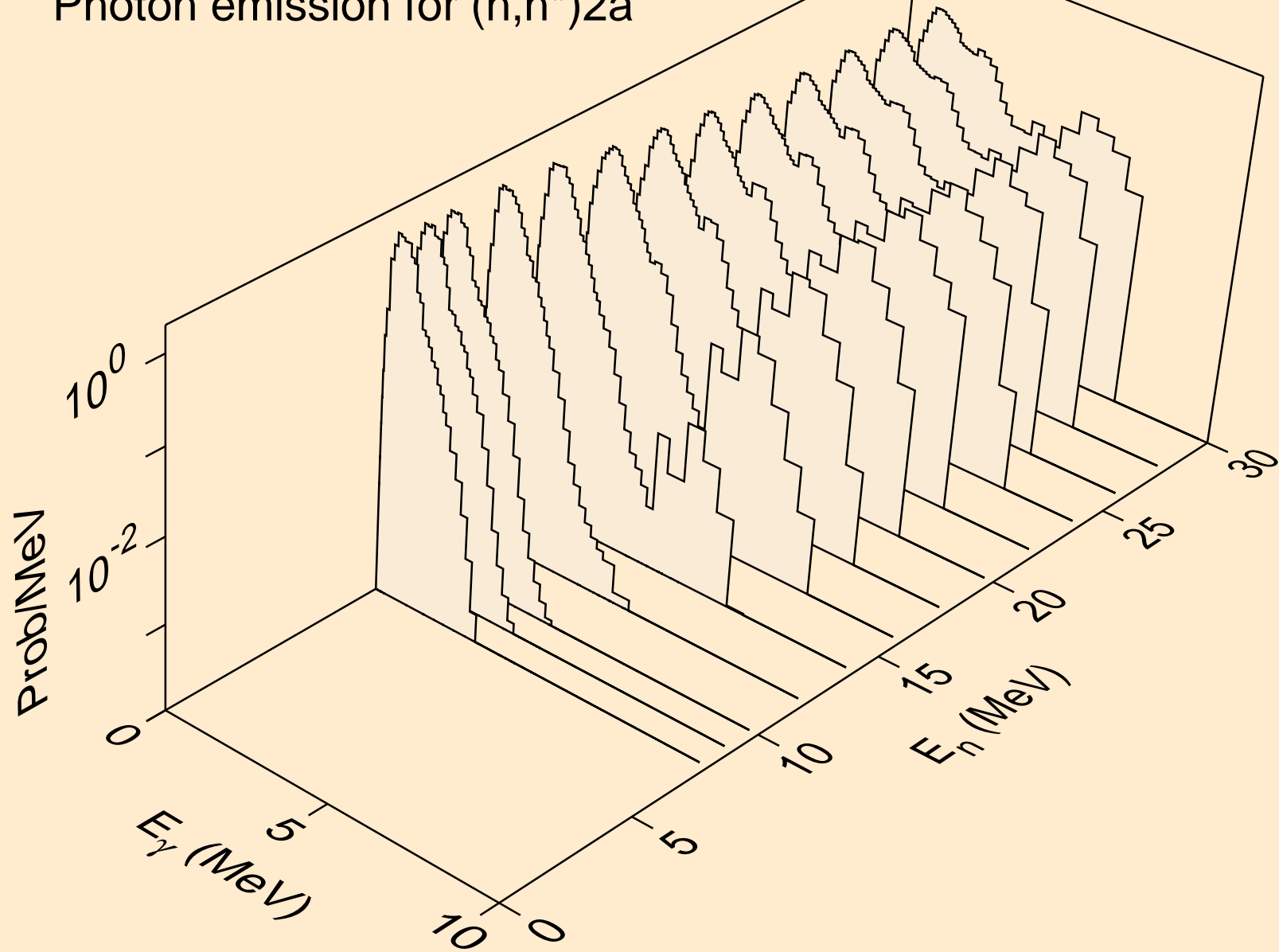
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Photon emission for (n,3n)a



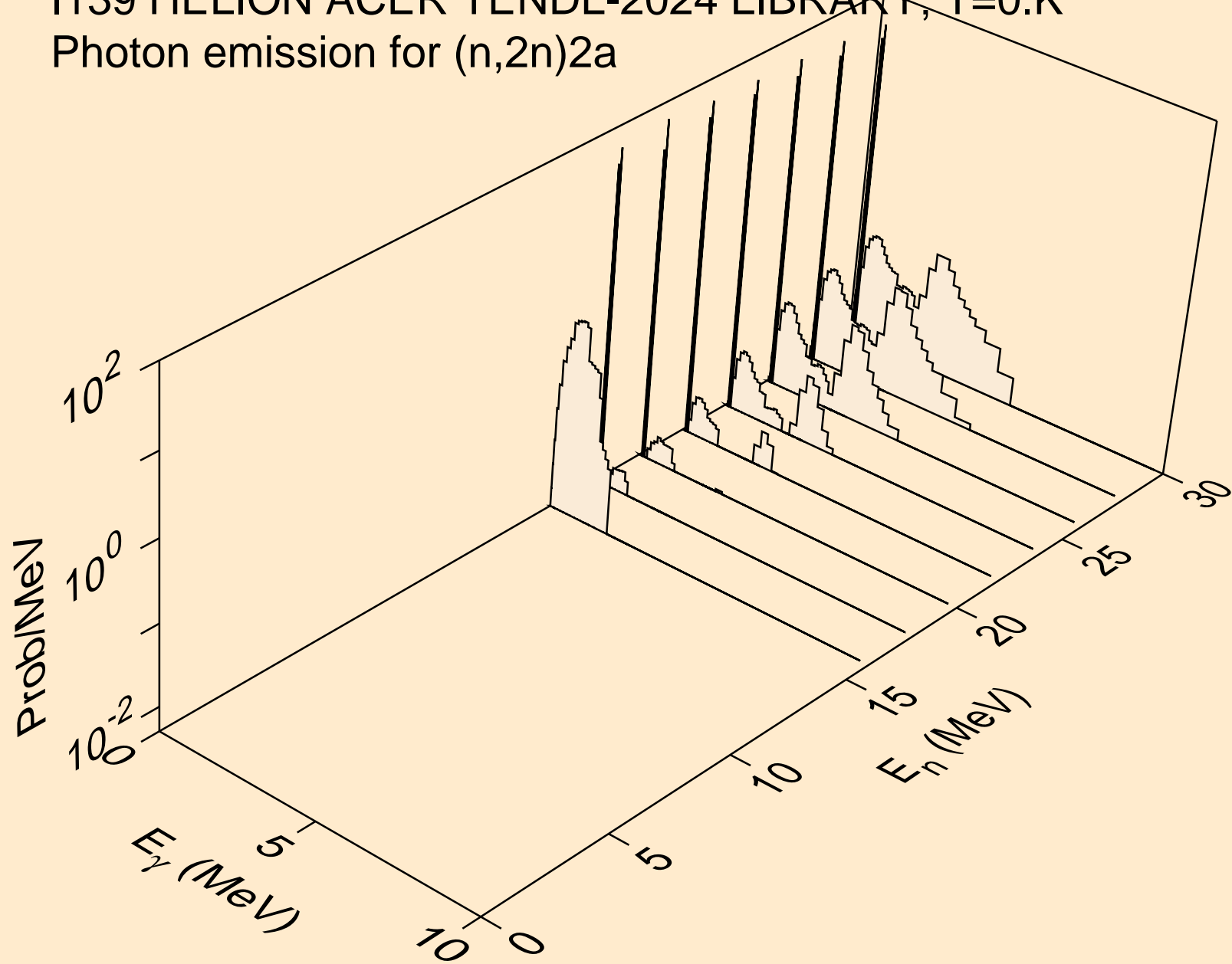
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Photon emission for (n,n\*)p



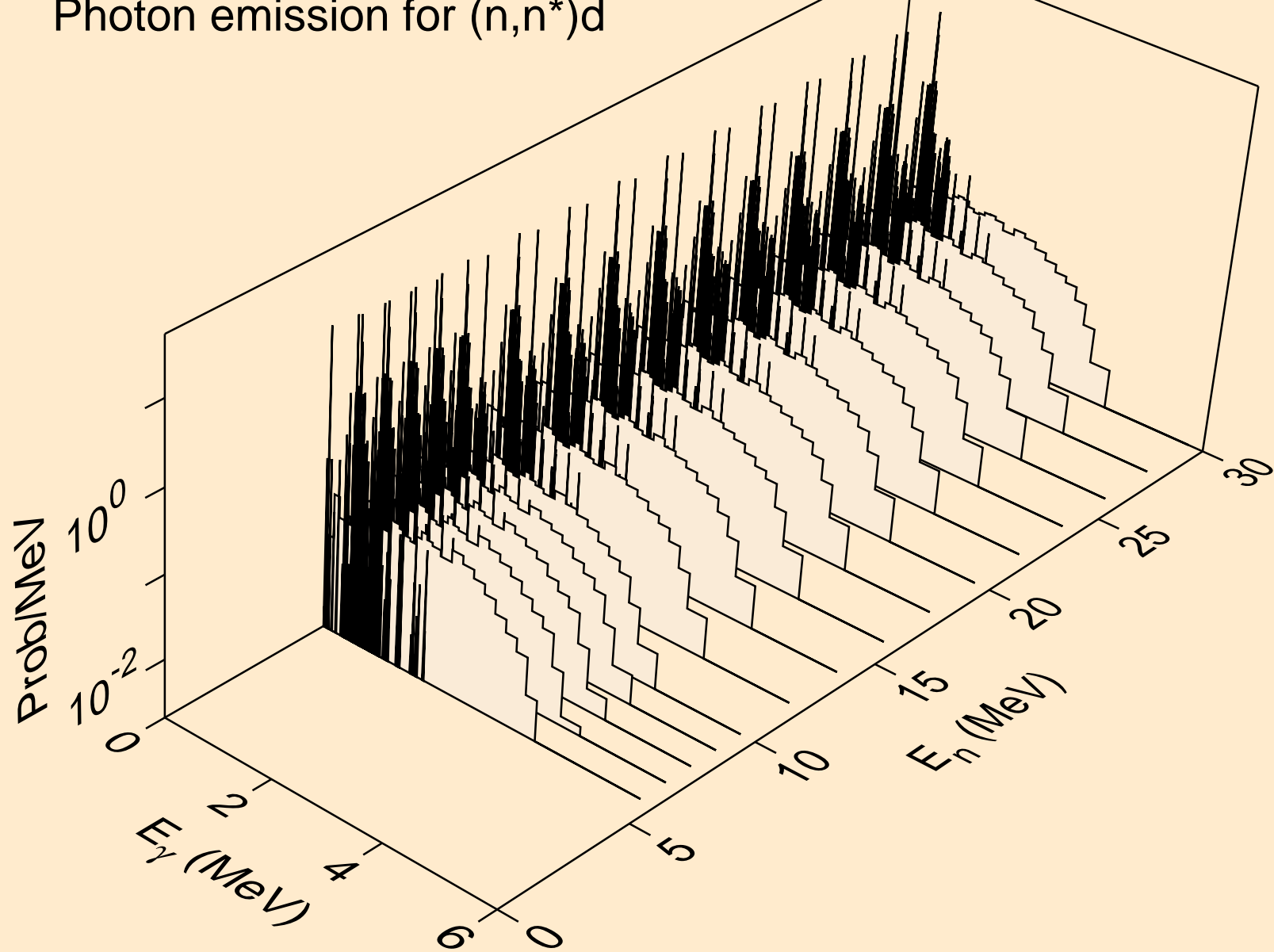
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Photon emission for (n,n\*)2a



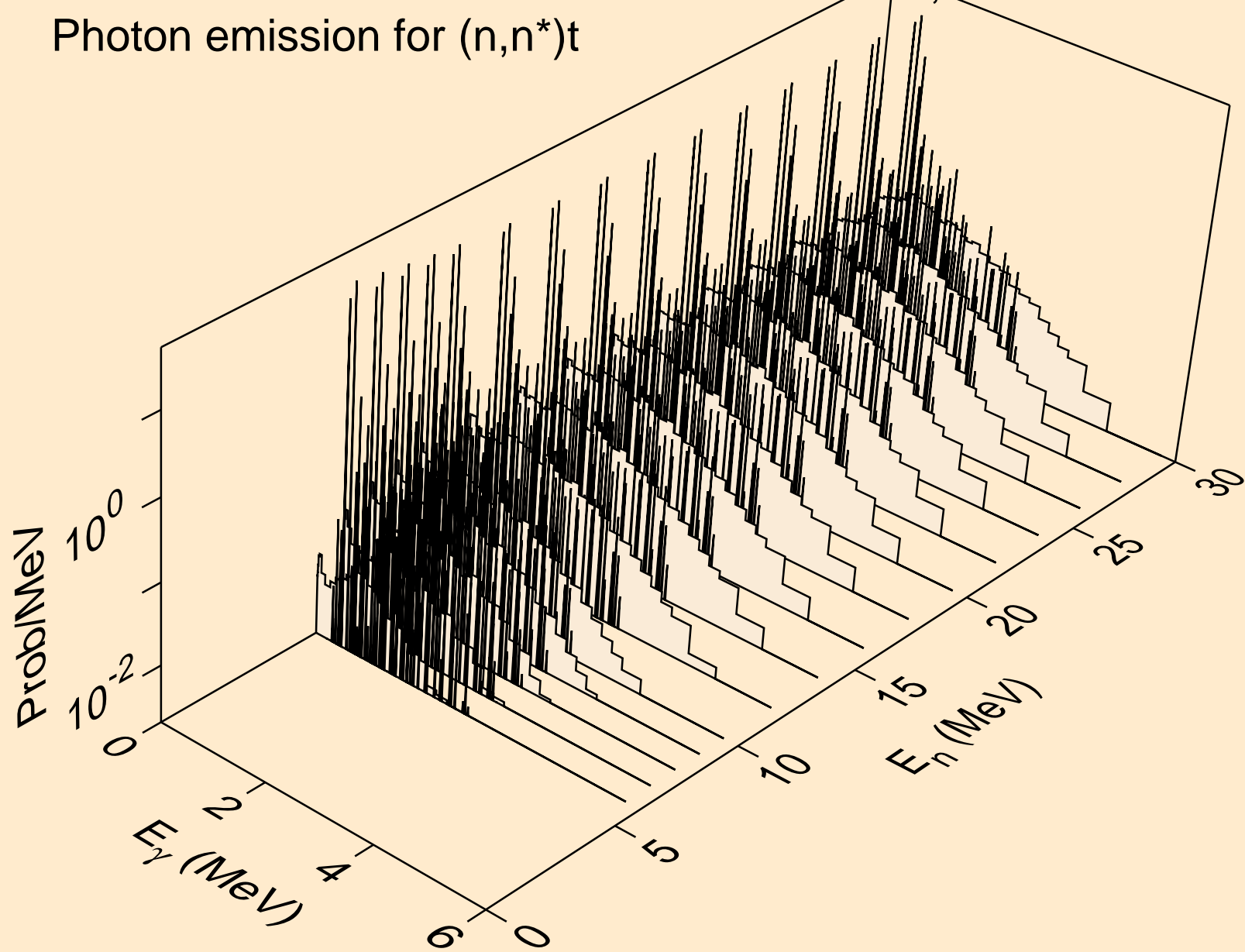
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Photon emission for (n,2n)2a



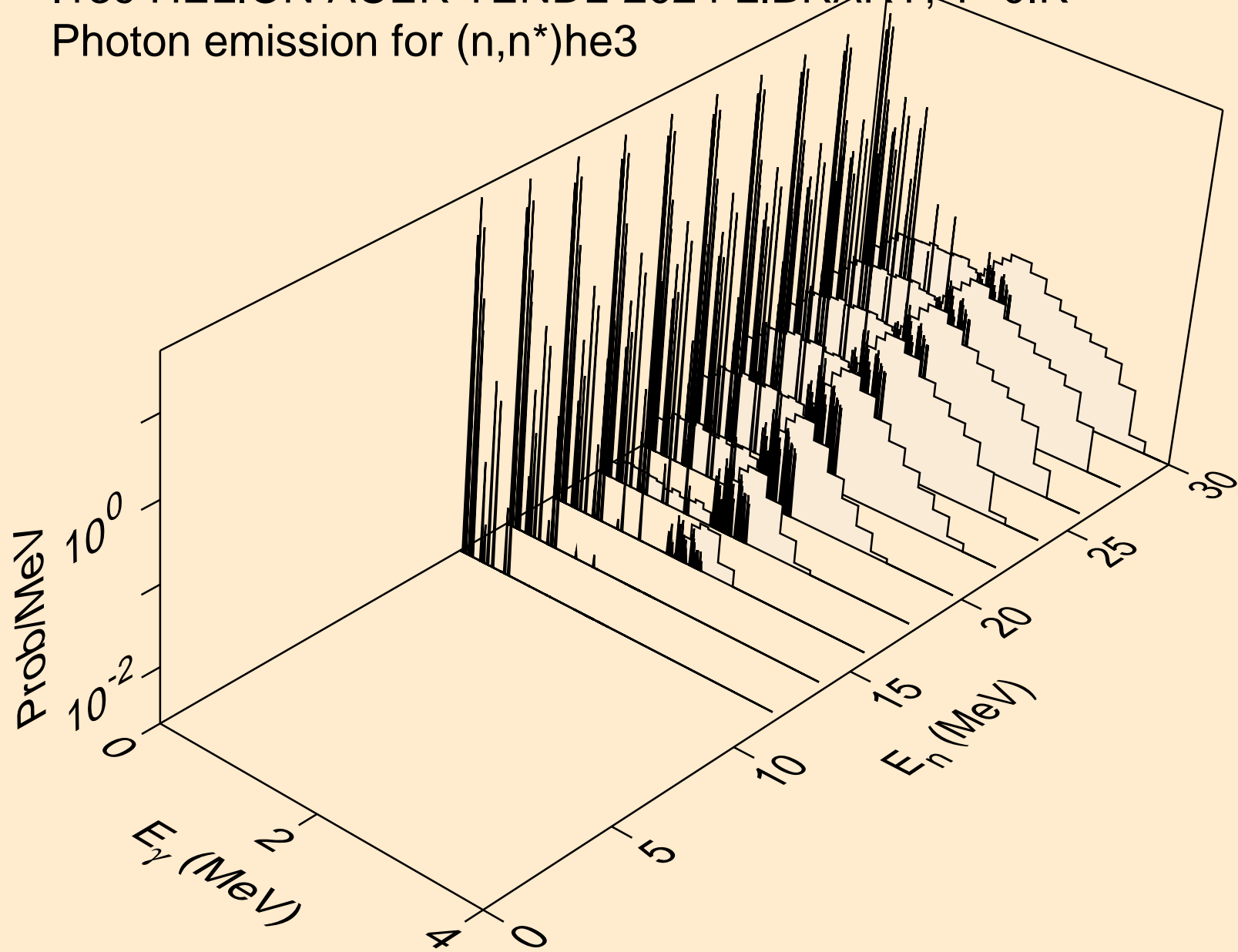
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Photon emission for (n,n\*)d



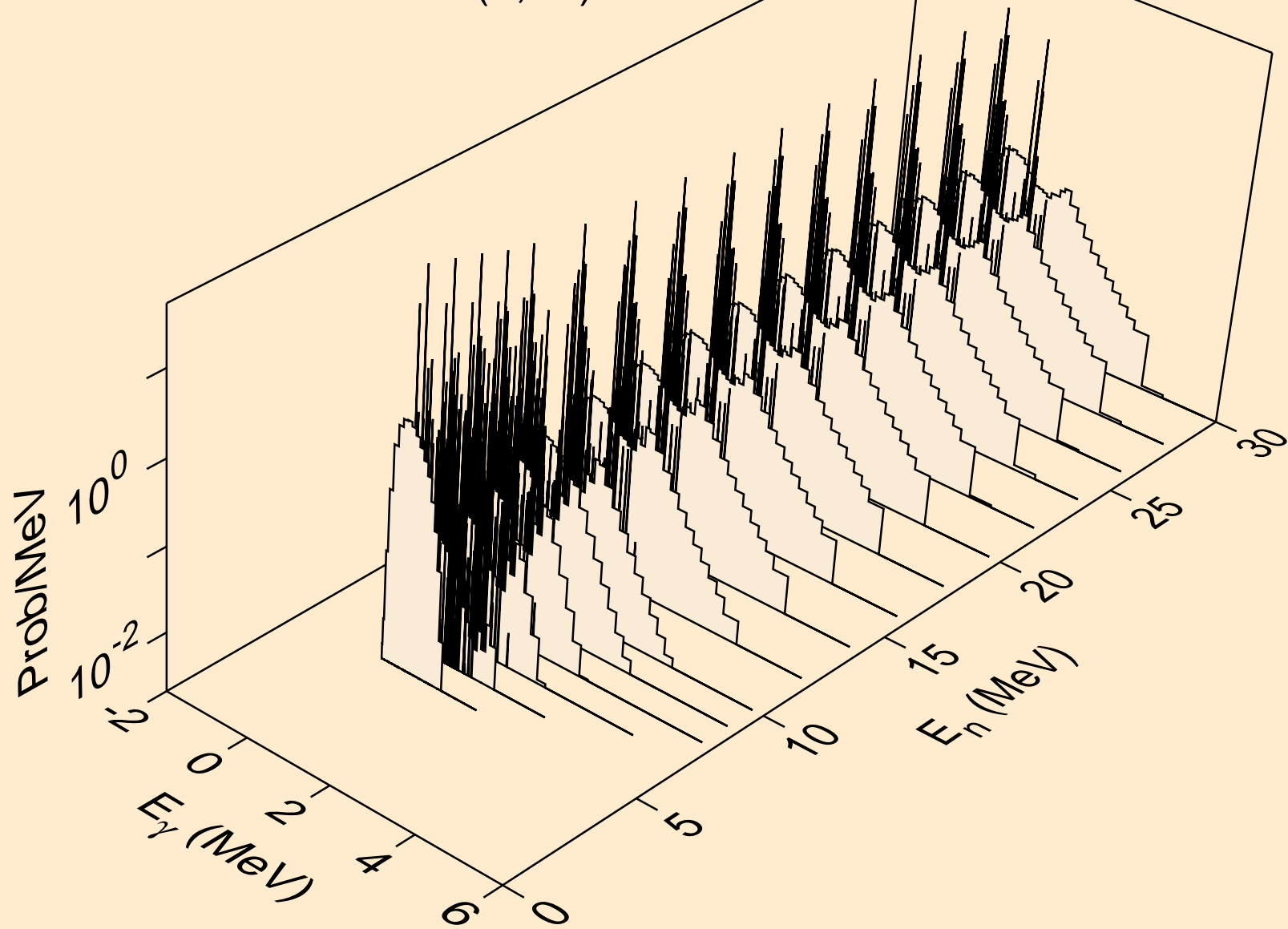
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Photon emission for (n,n\*)t



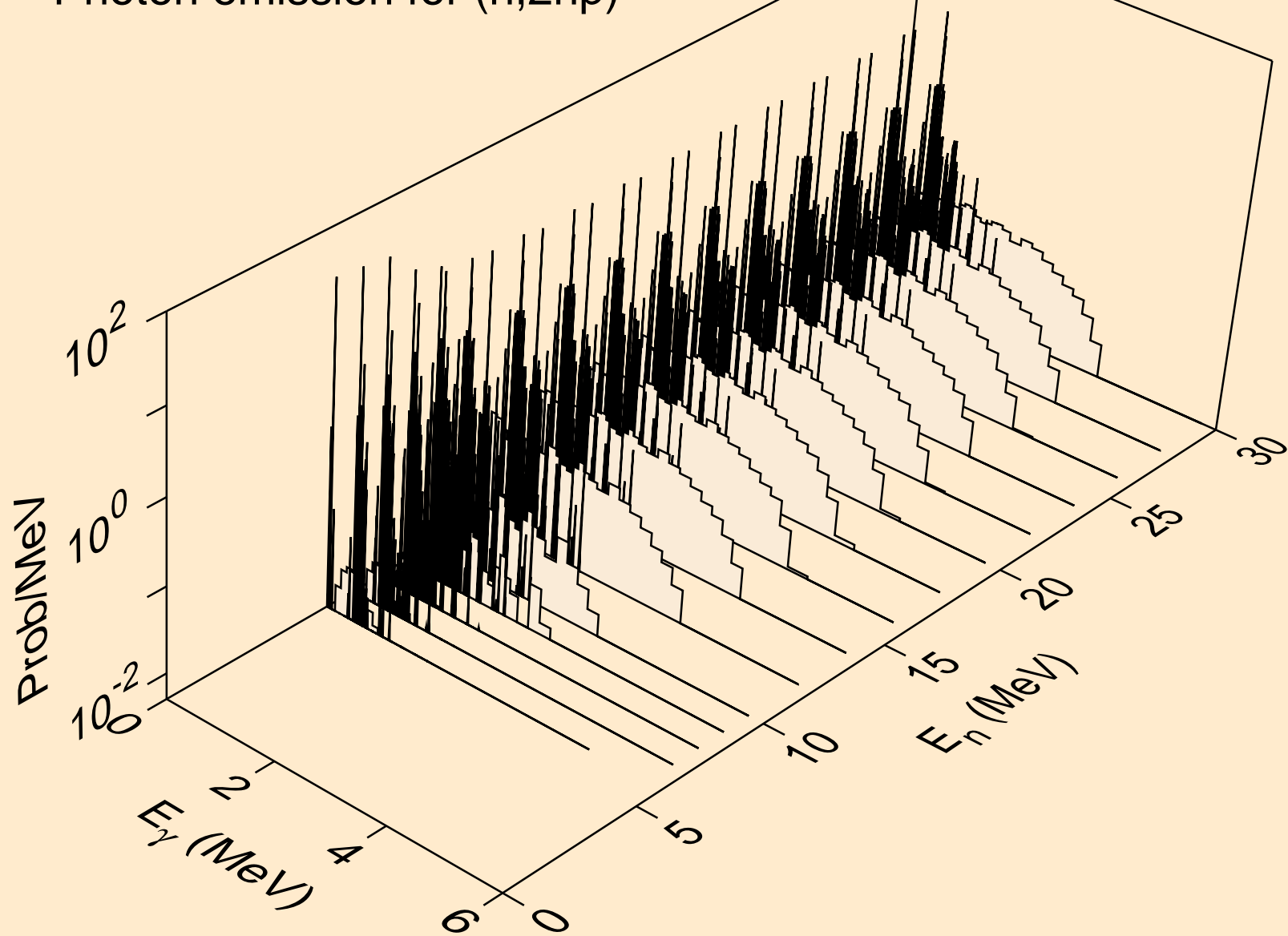
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Photon emission for (n,n\*)he3



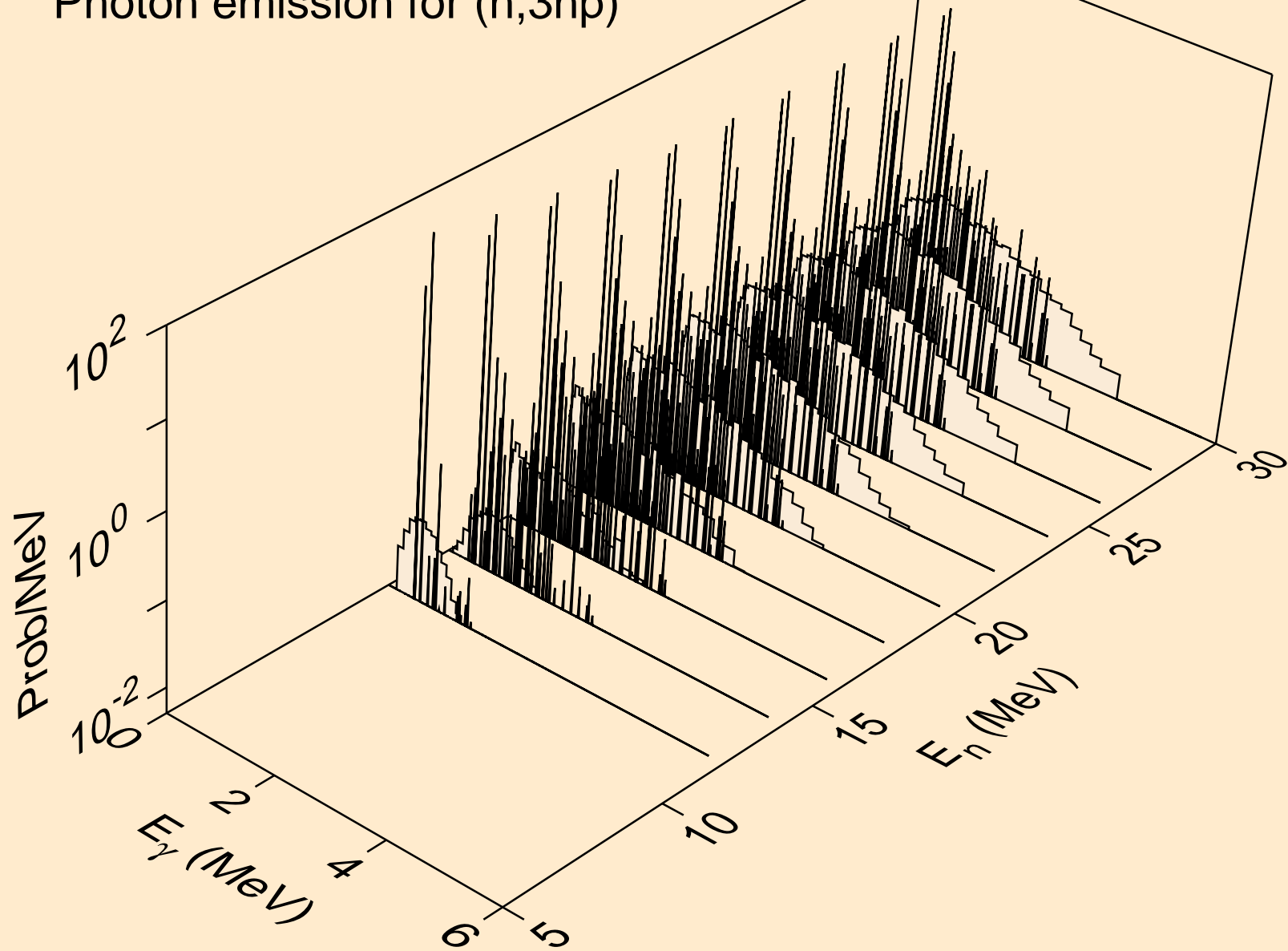
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Photon emission for (n,4n)



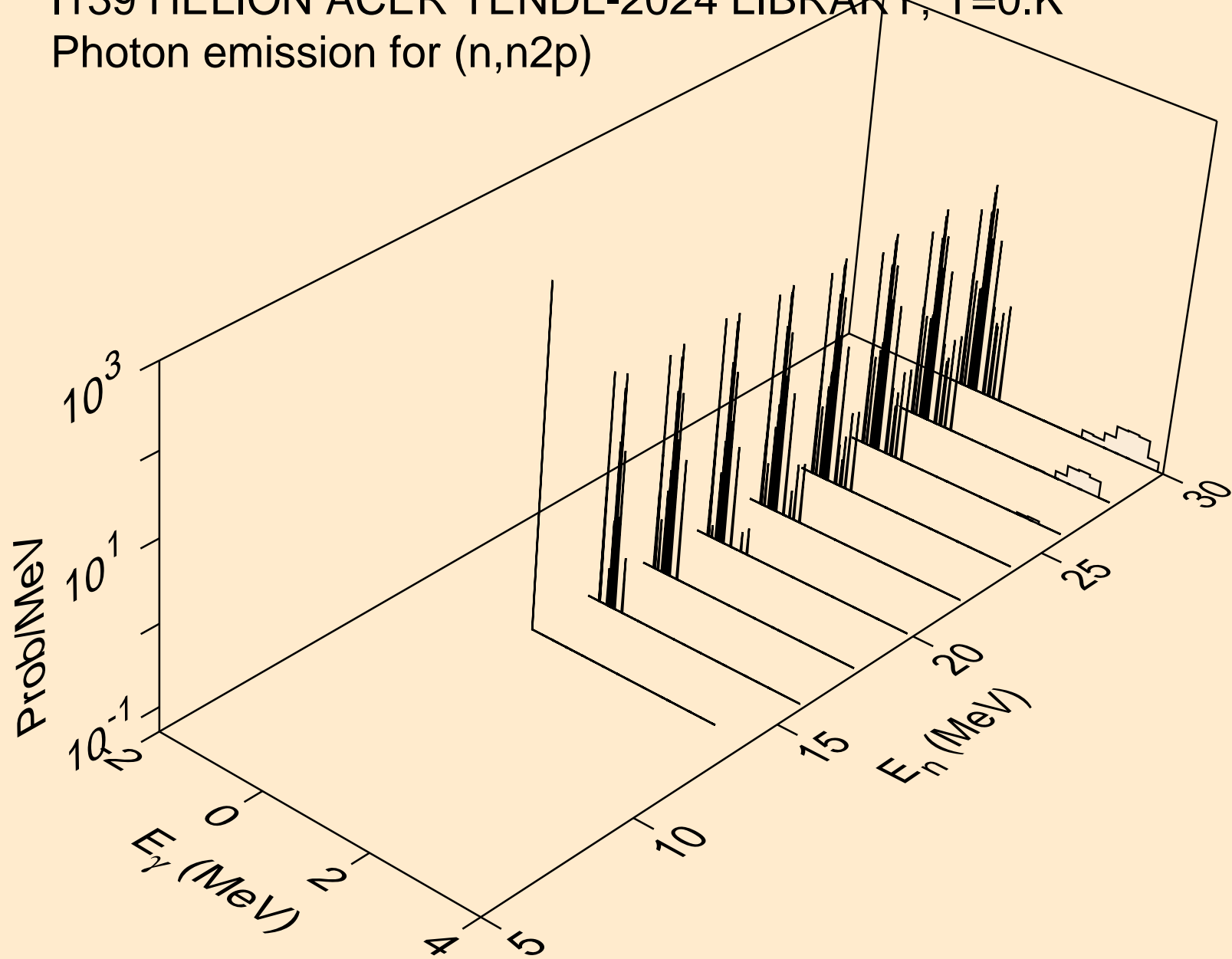
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Photon emission for (n,2np)



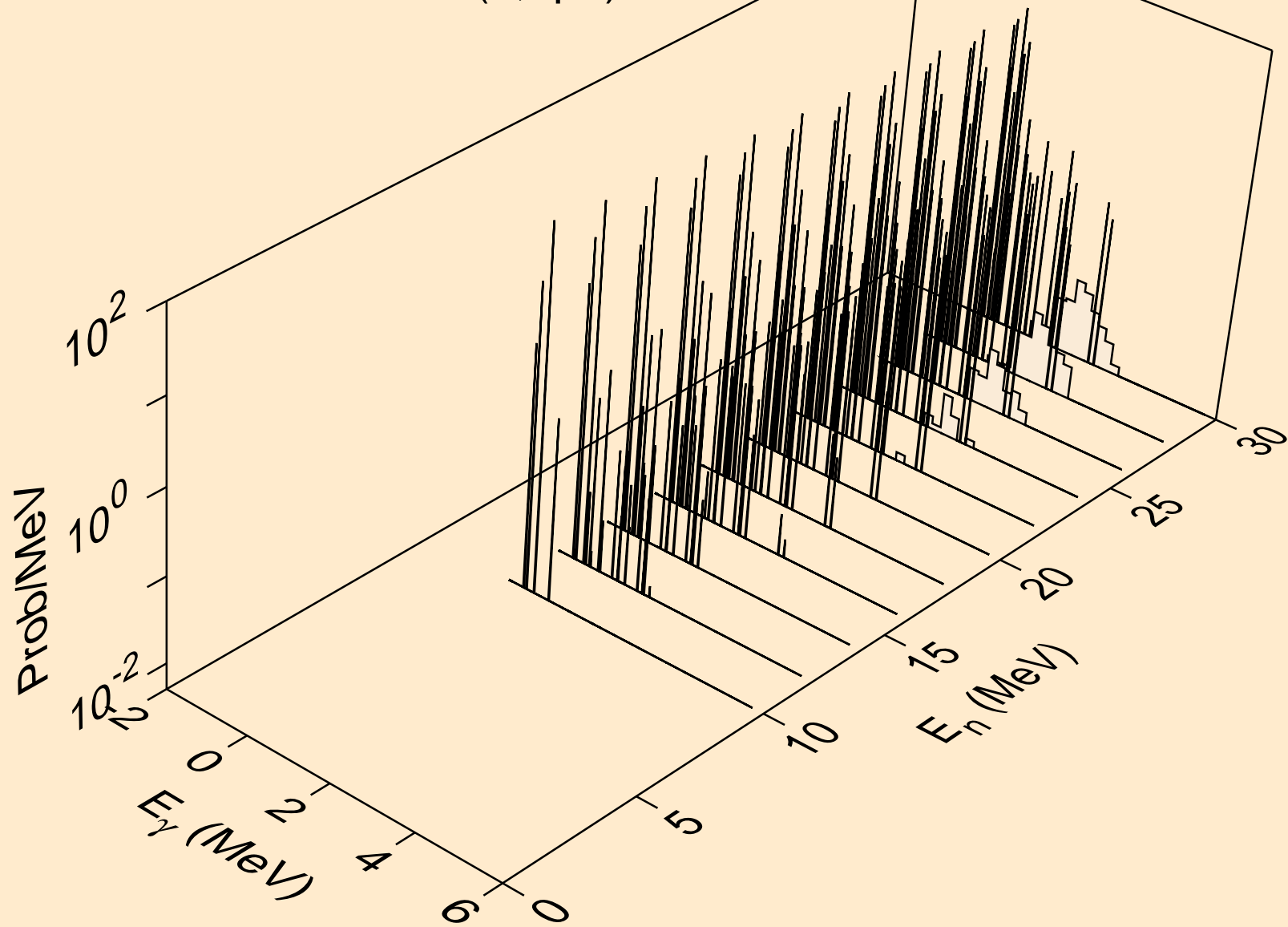
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Photon emission for (n,3np)



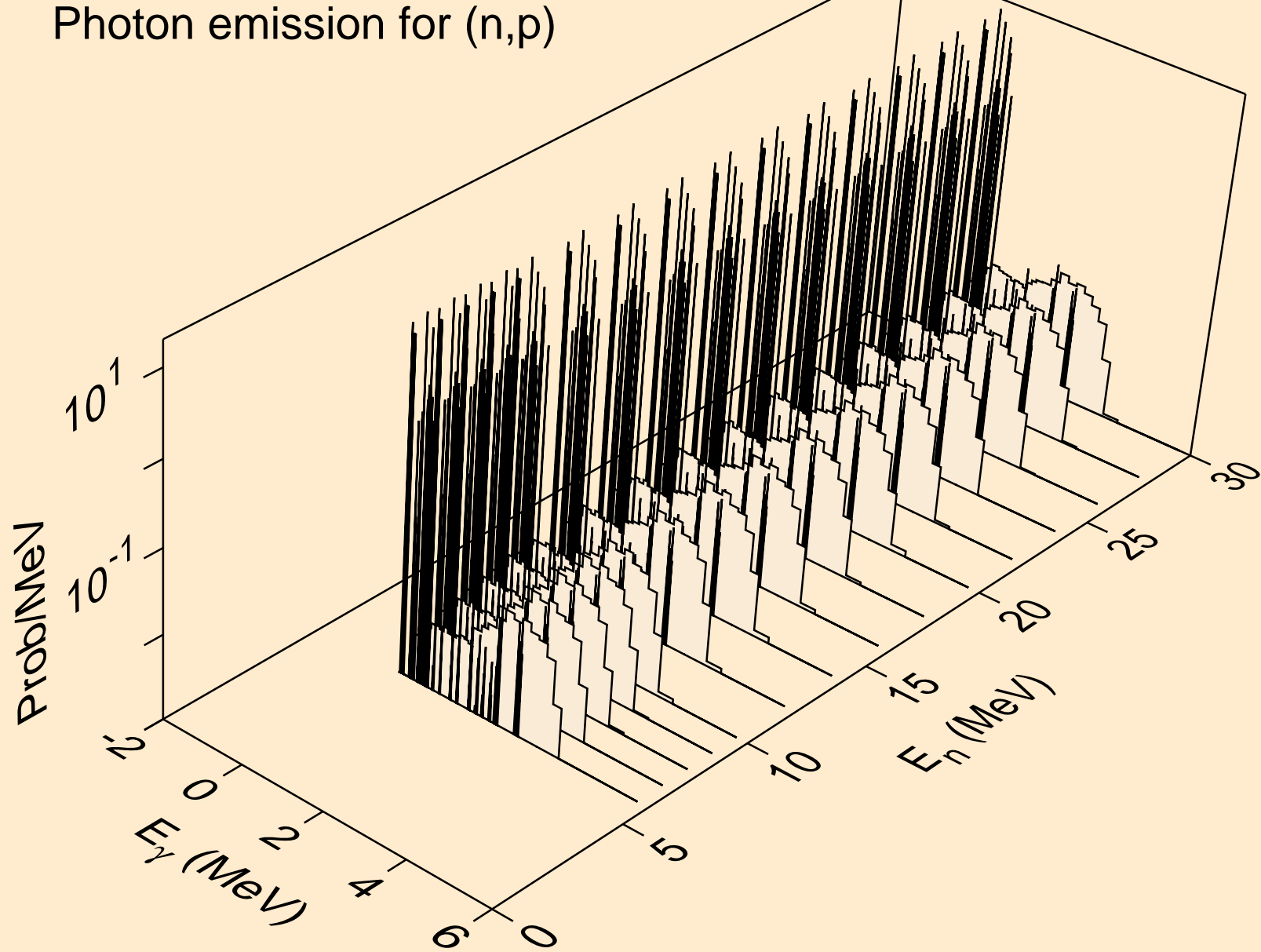
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Photon emission for (n,n2p)



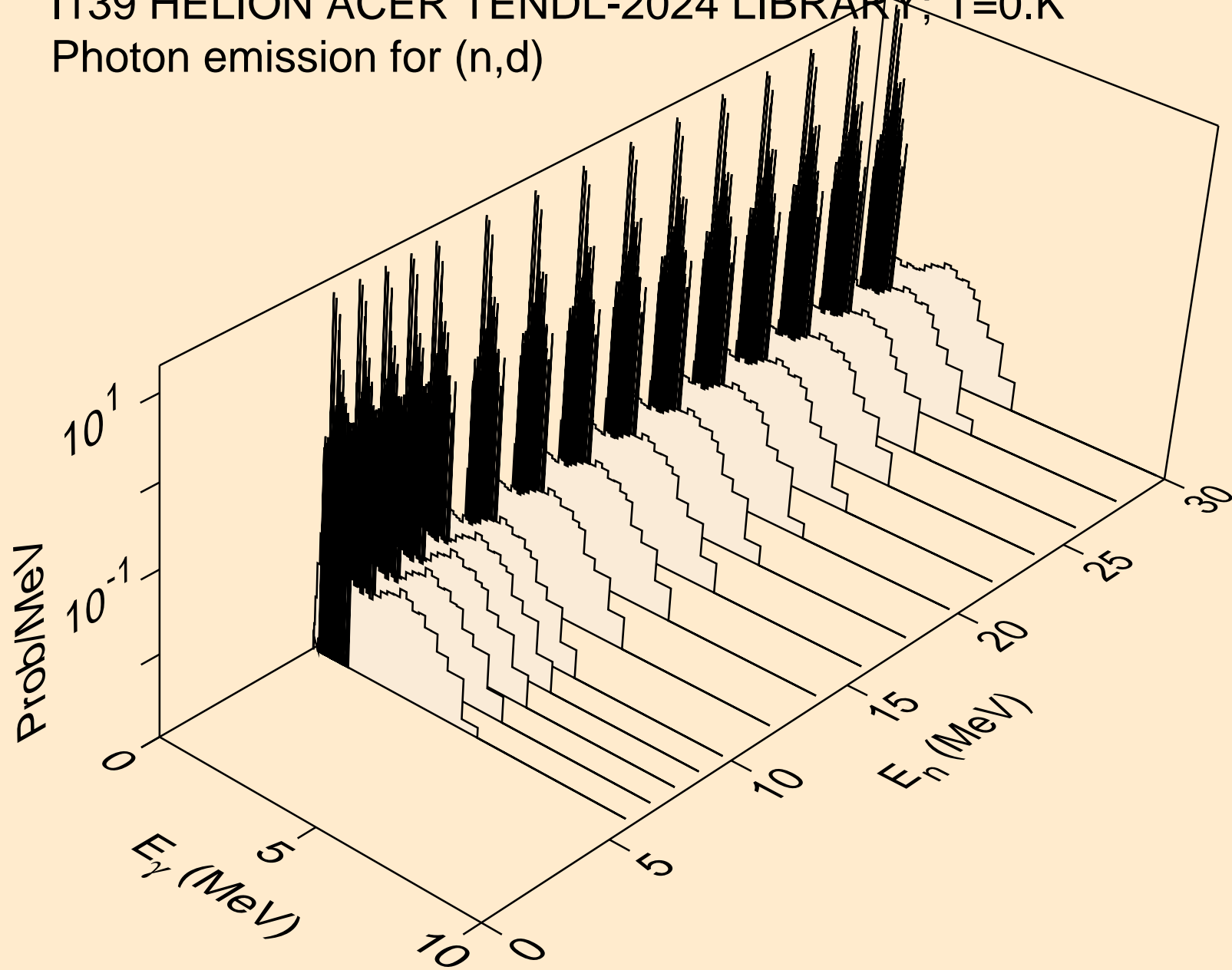
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Photon emission for (n,npa)



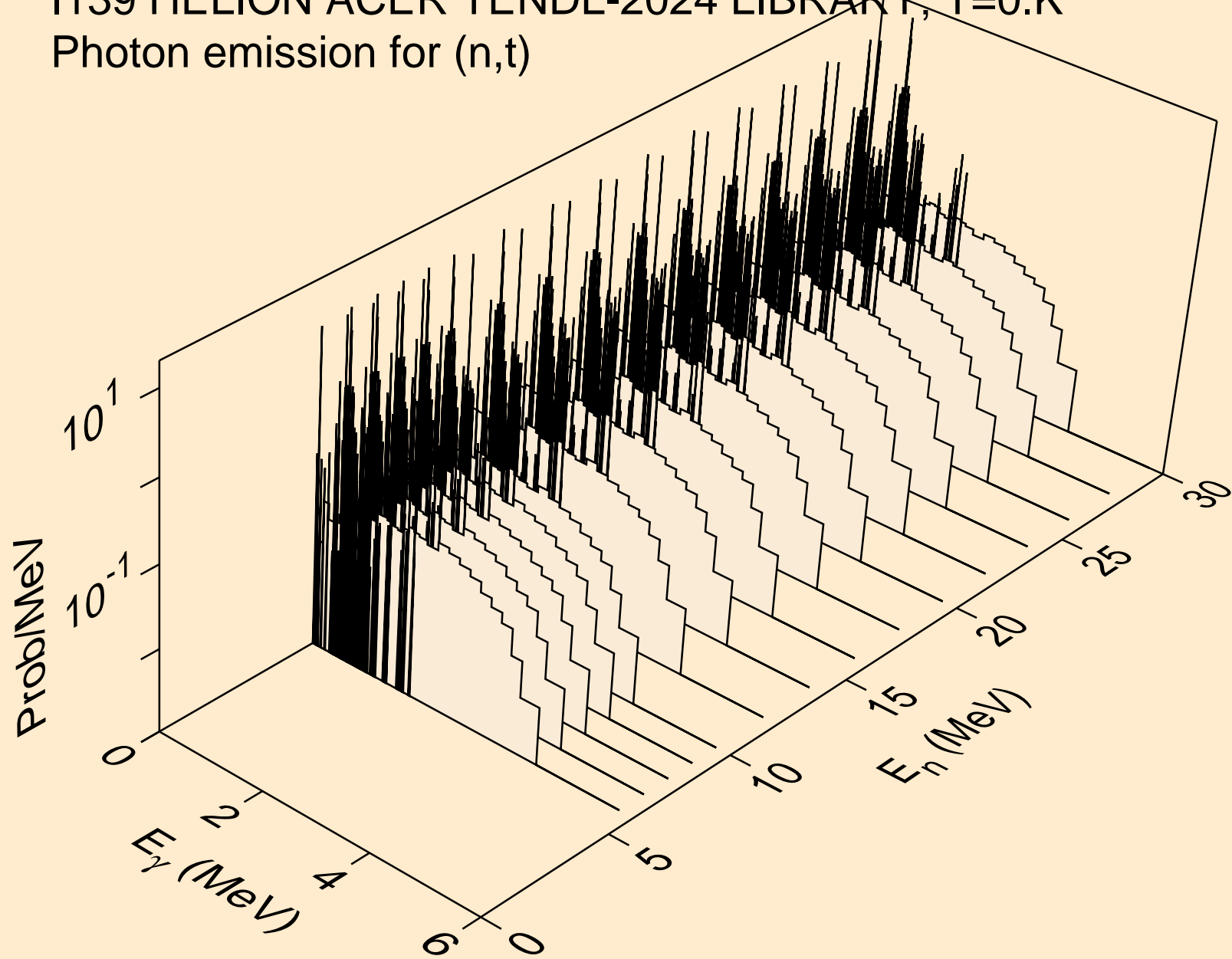
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Photon emission for (n,p)



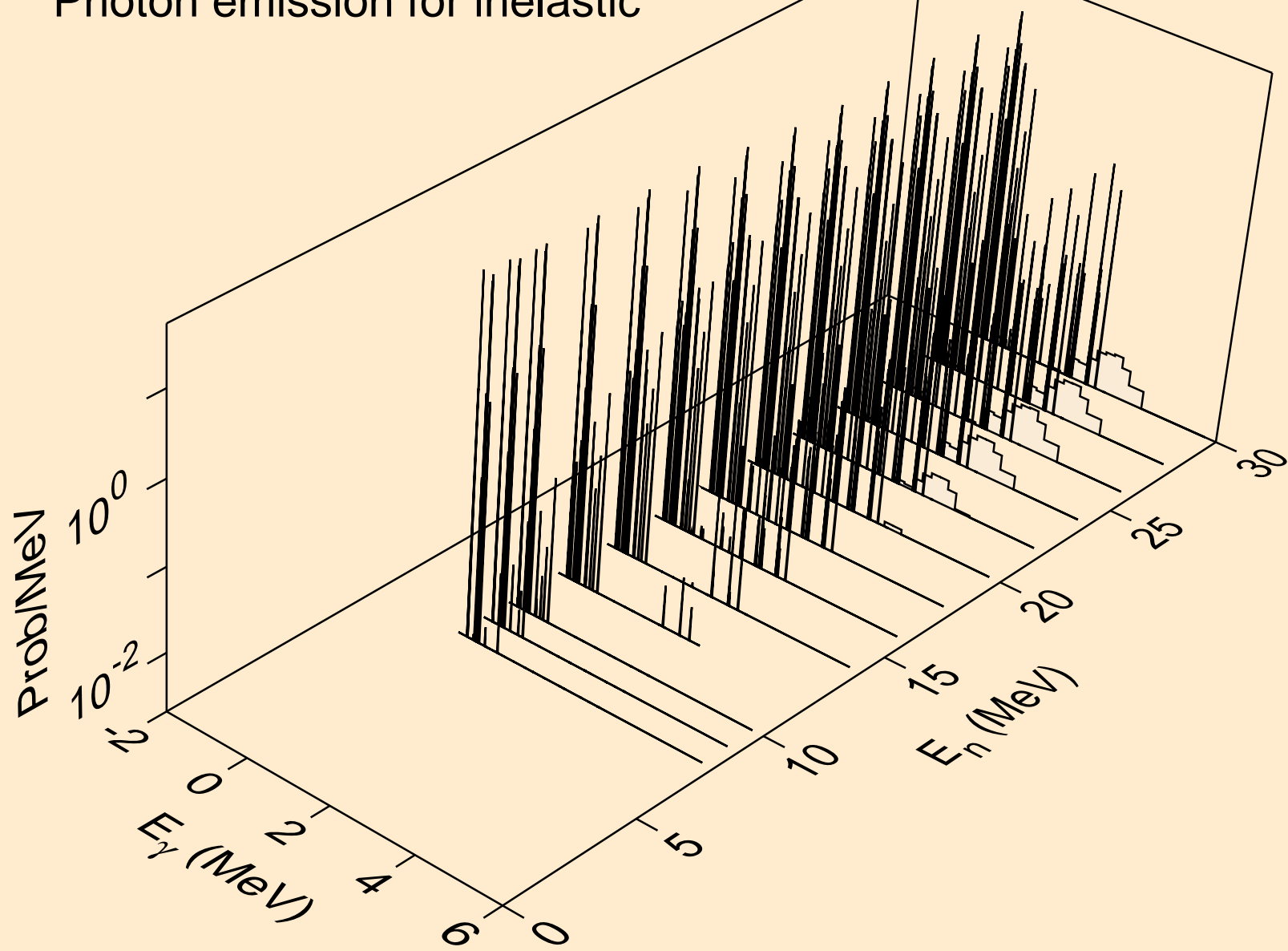
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Photon emission for (n,d)



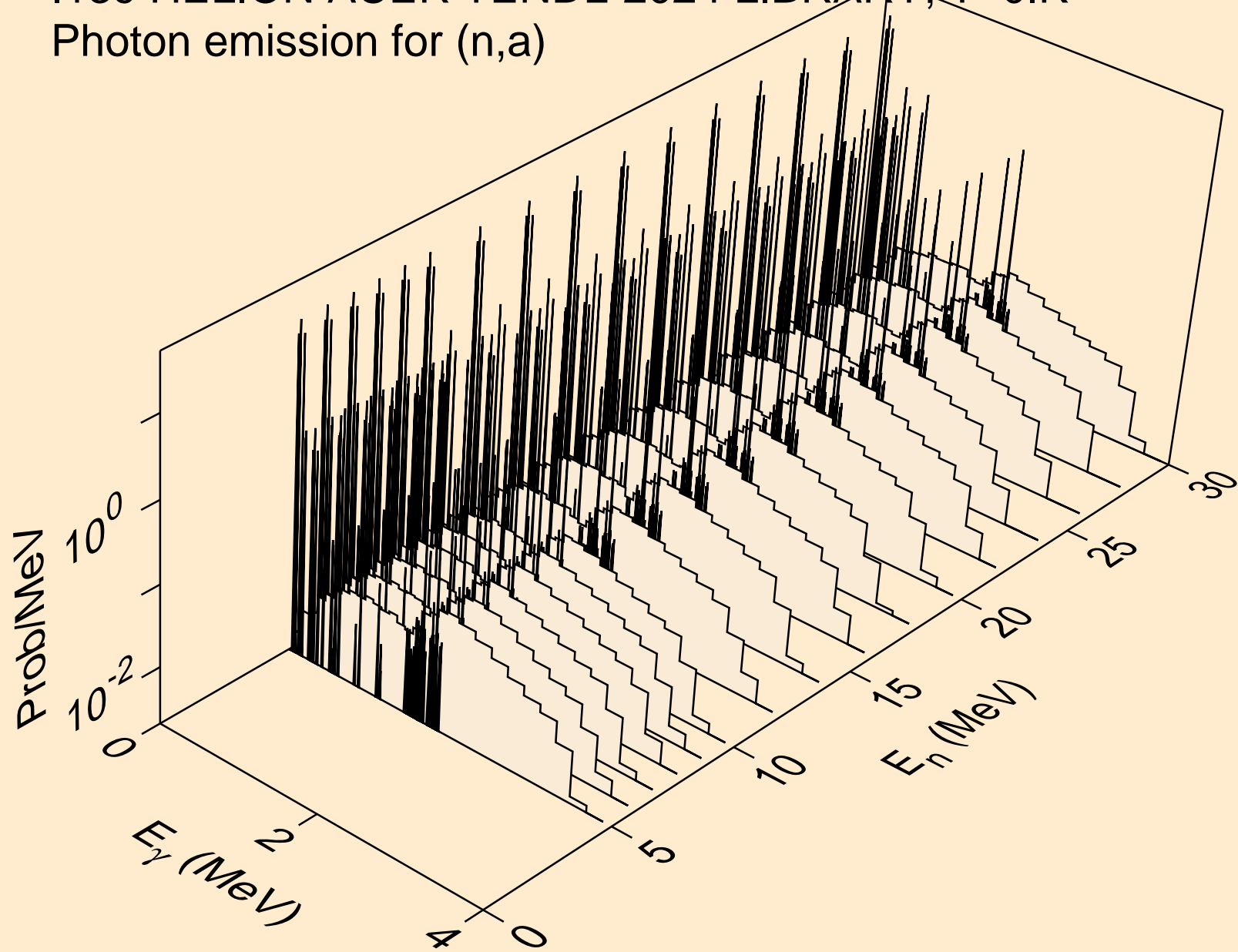
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Photon emission for (n,t)



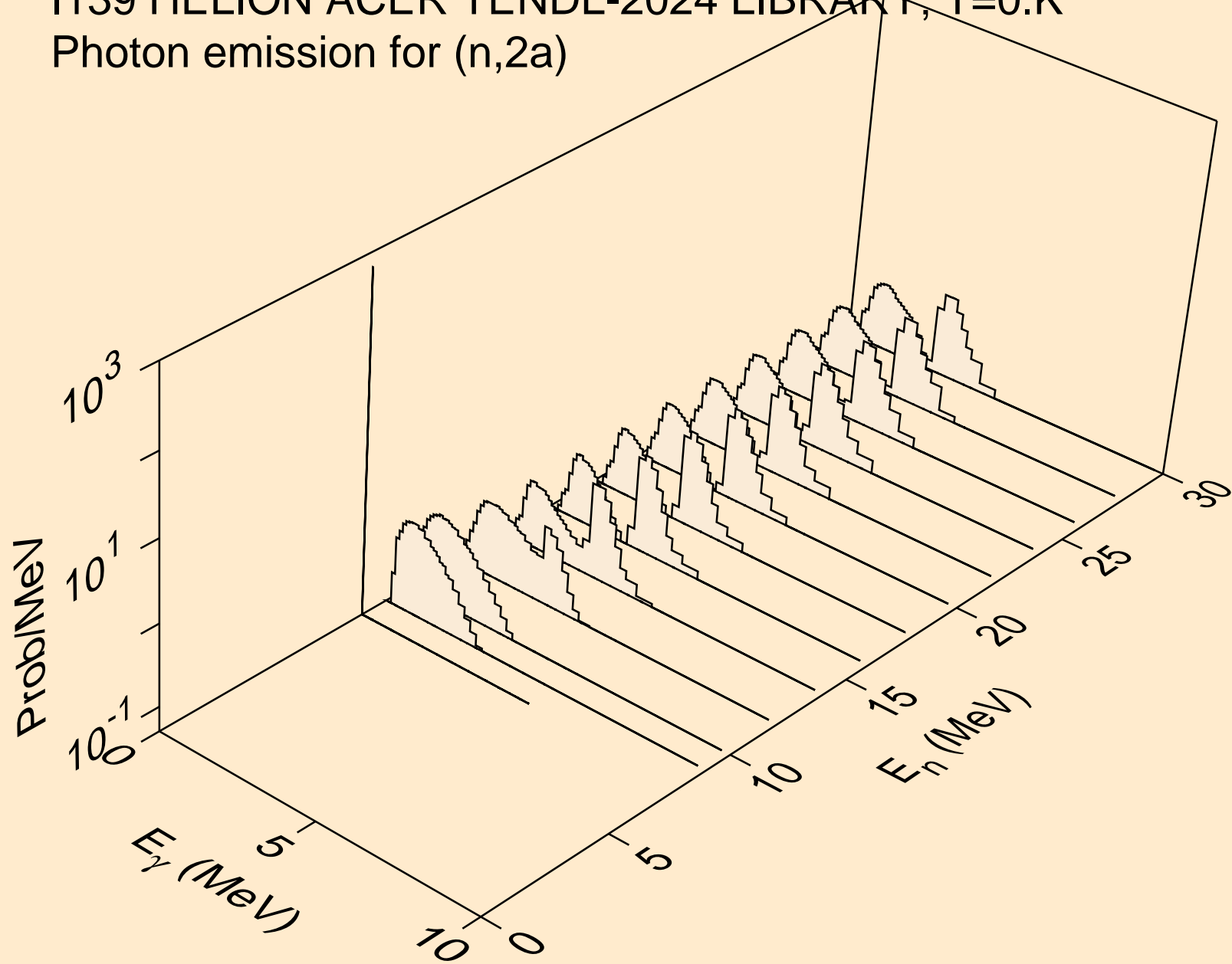
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Photon emission for inelastic



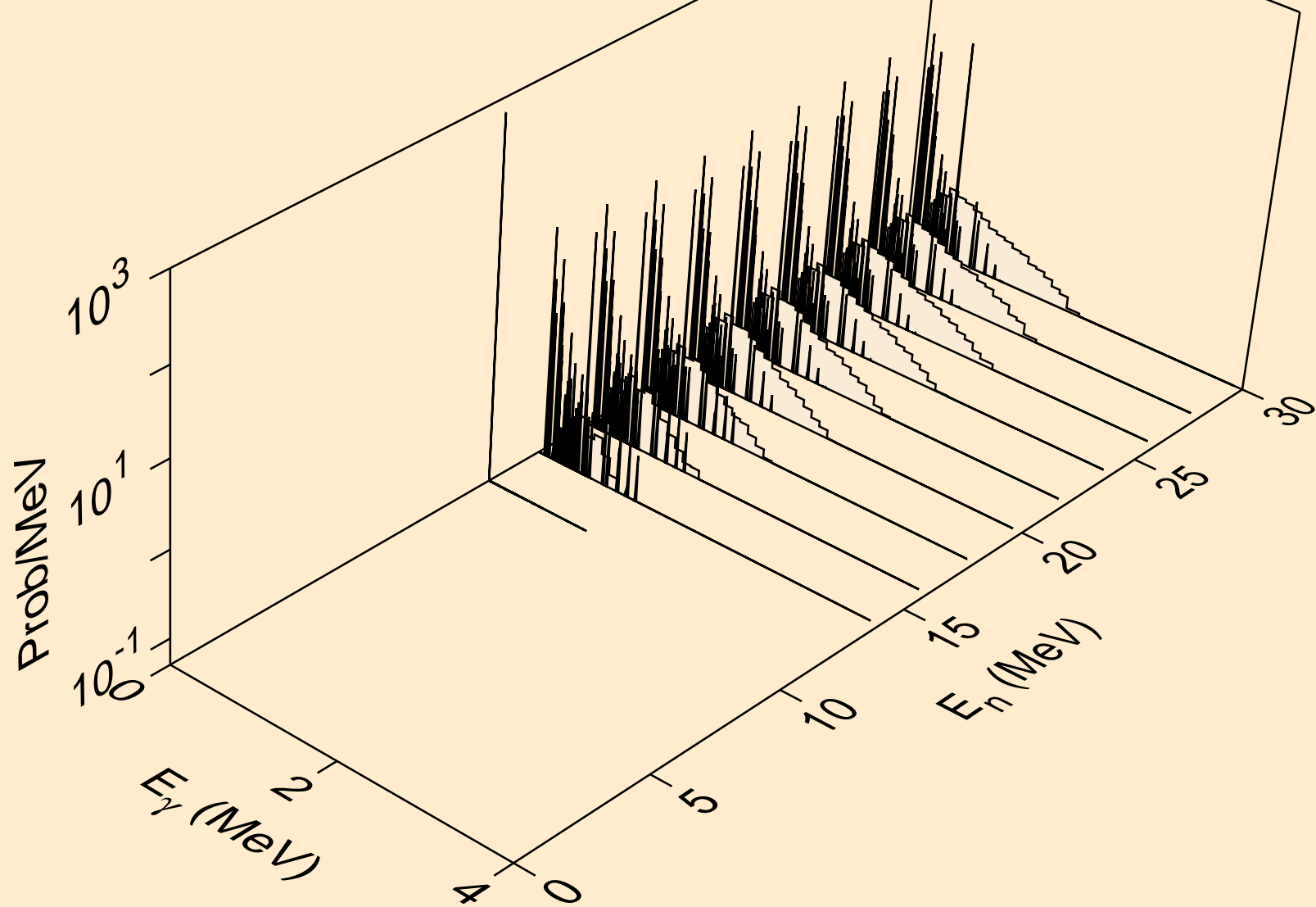
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Photon emission for (n,a)



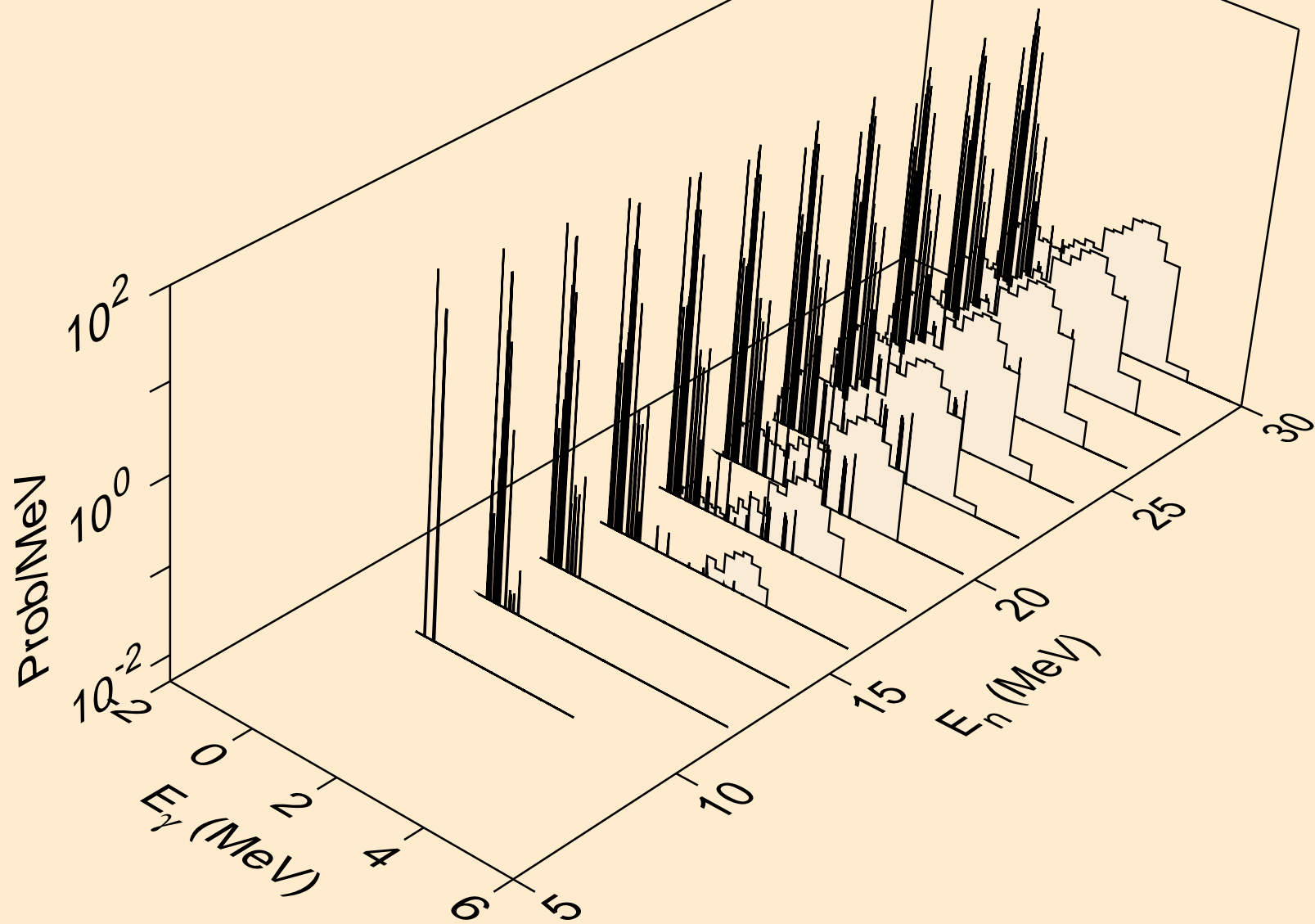
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Photon emission for (n,2a)



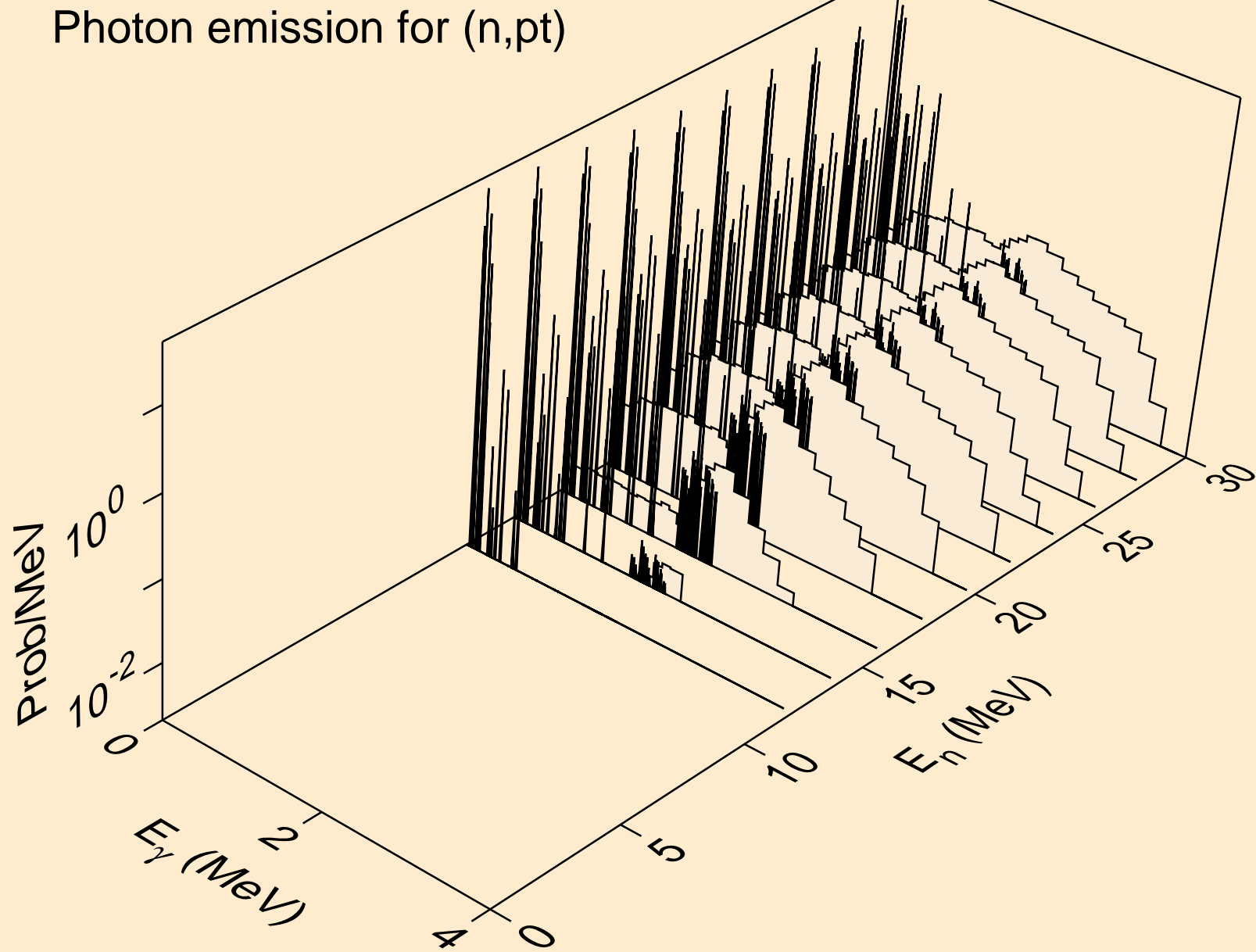
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Photon emission for (n,2p)



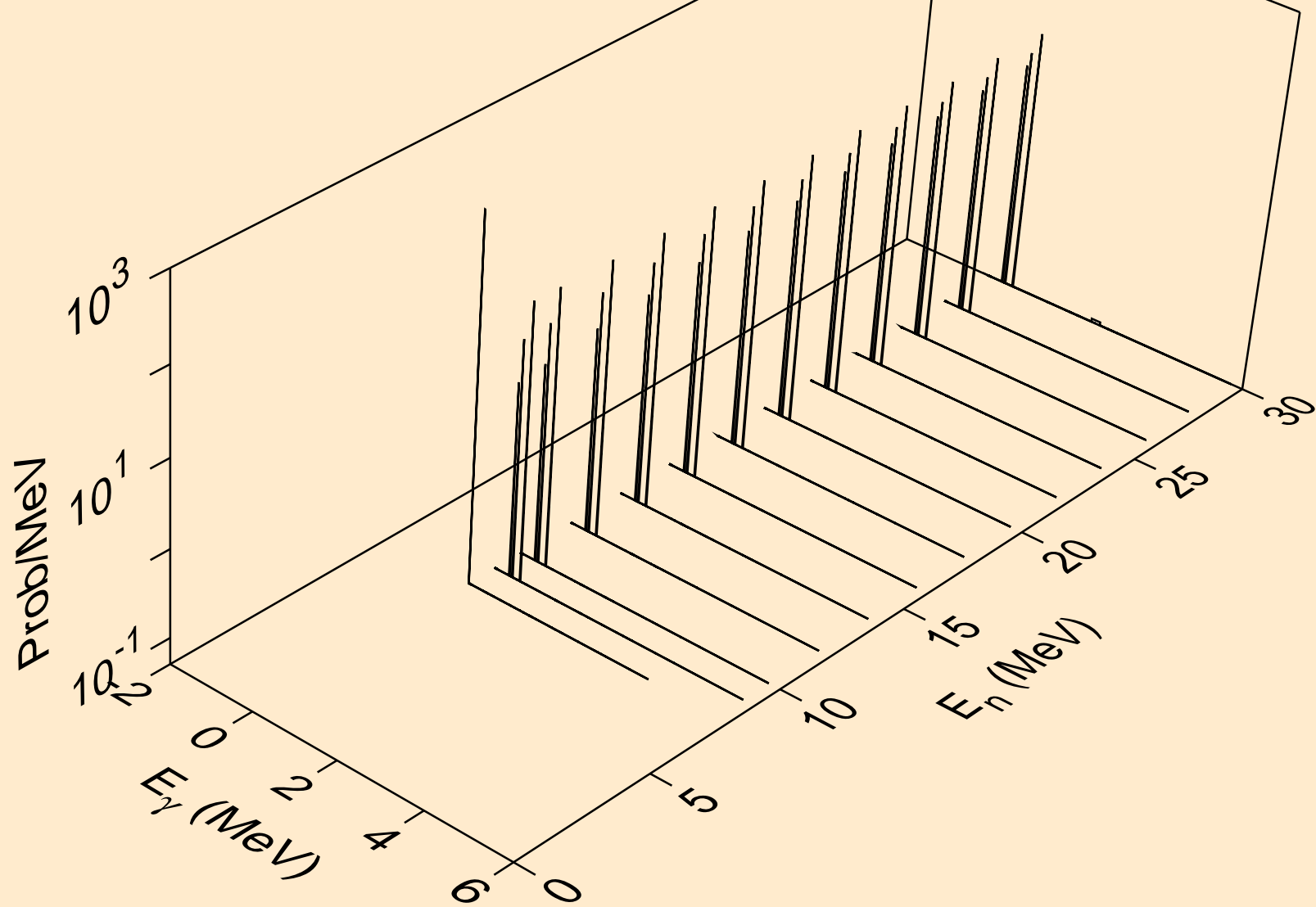
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Photon emission for (n,pd)



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Photon emission for (n,pt)

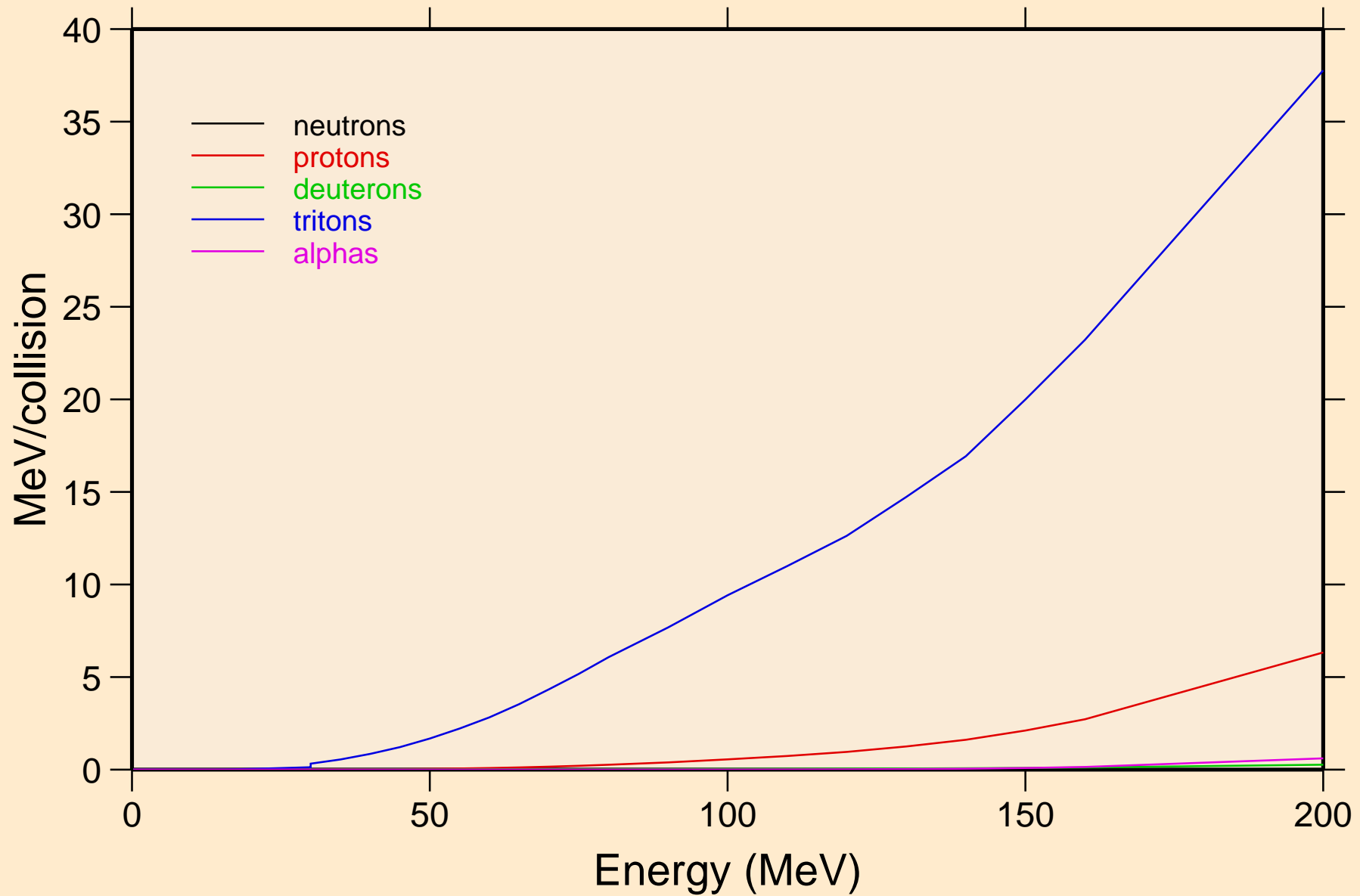


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Photon emission for (n,da)

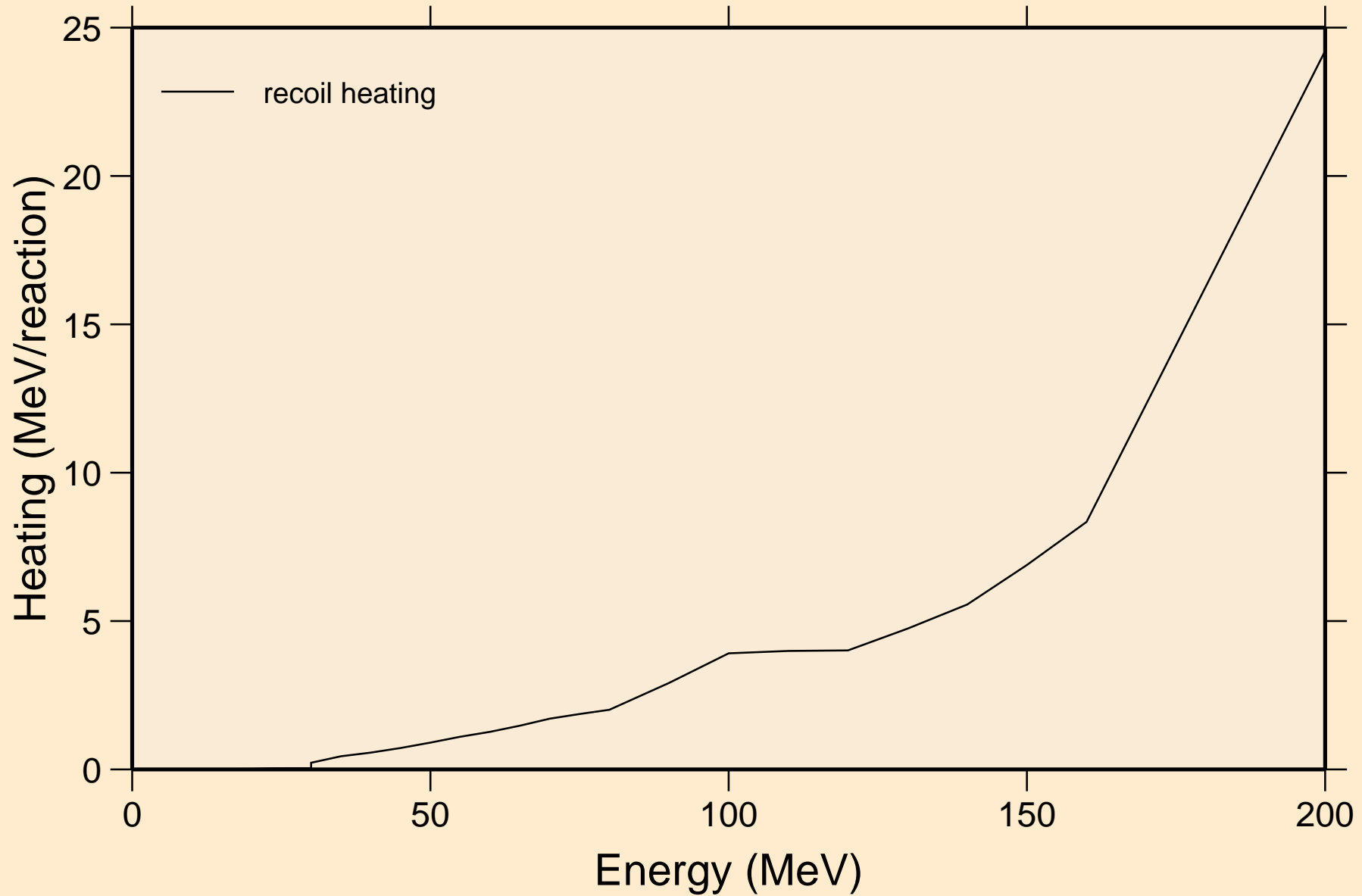


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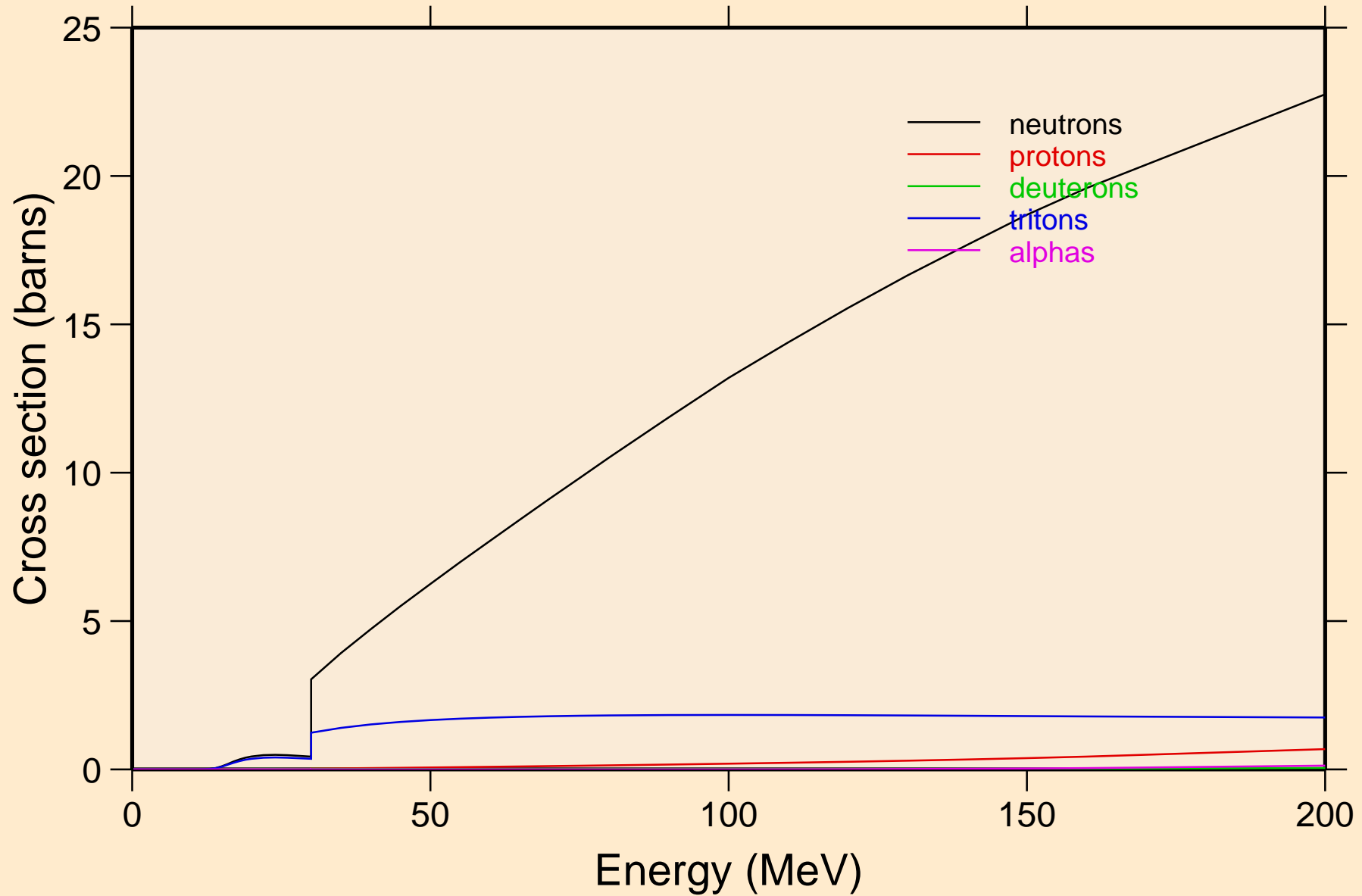
## Particle heating contributions



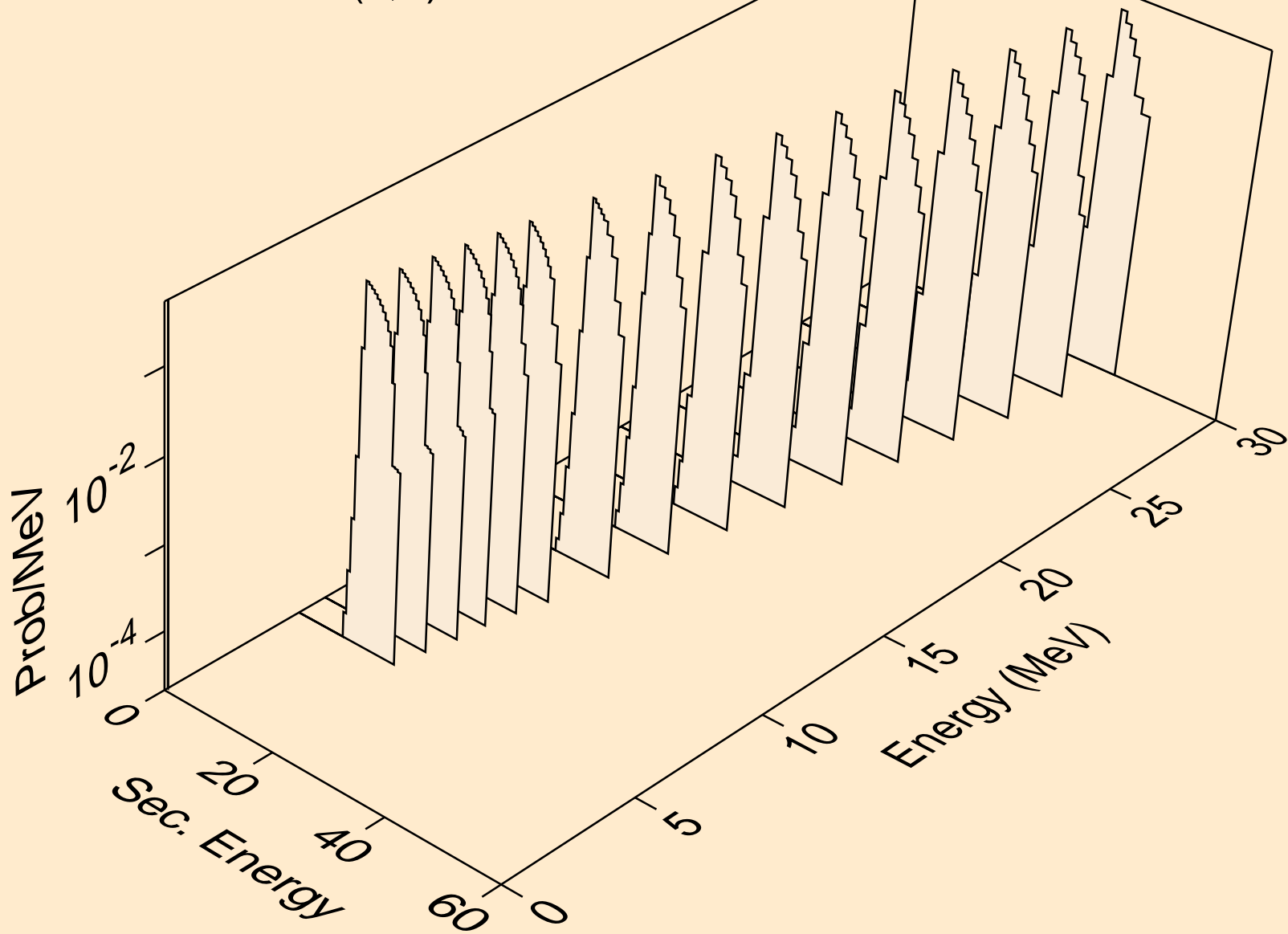
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Recoil Heating



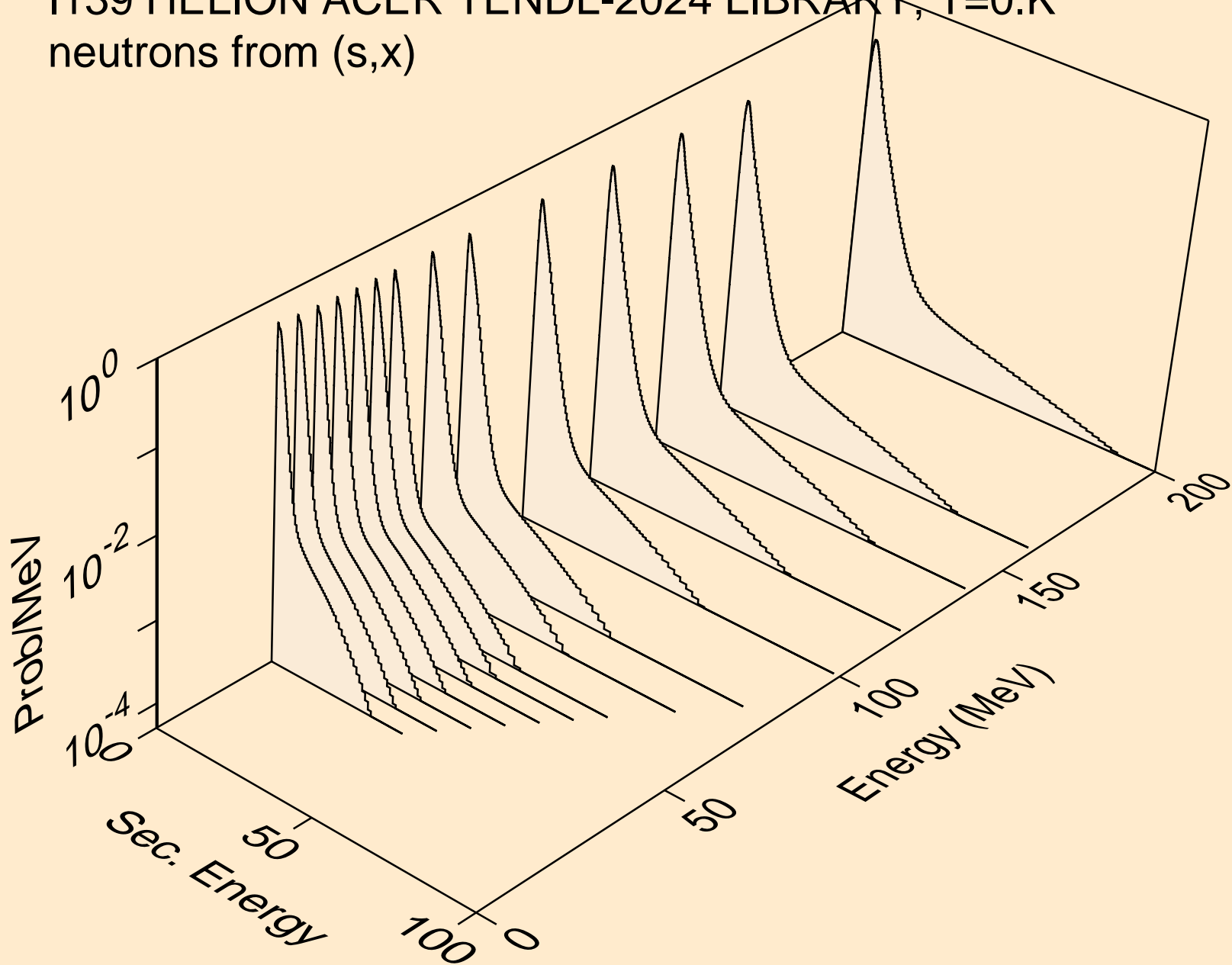
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Particle production cross sections



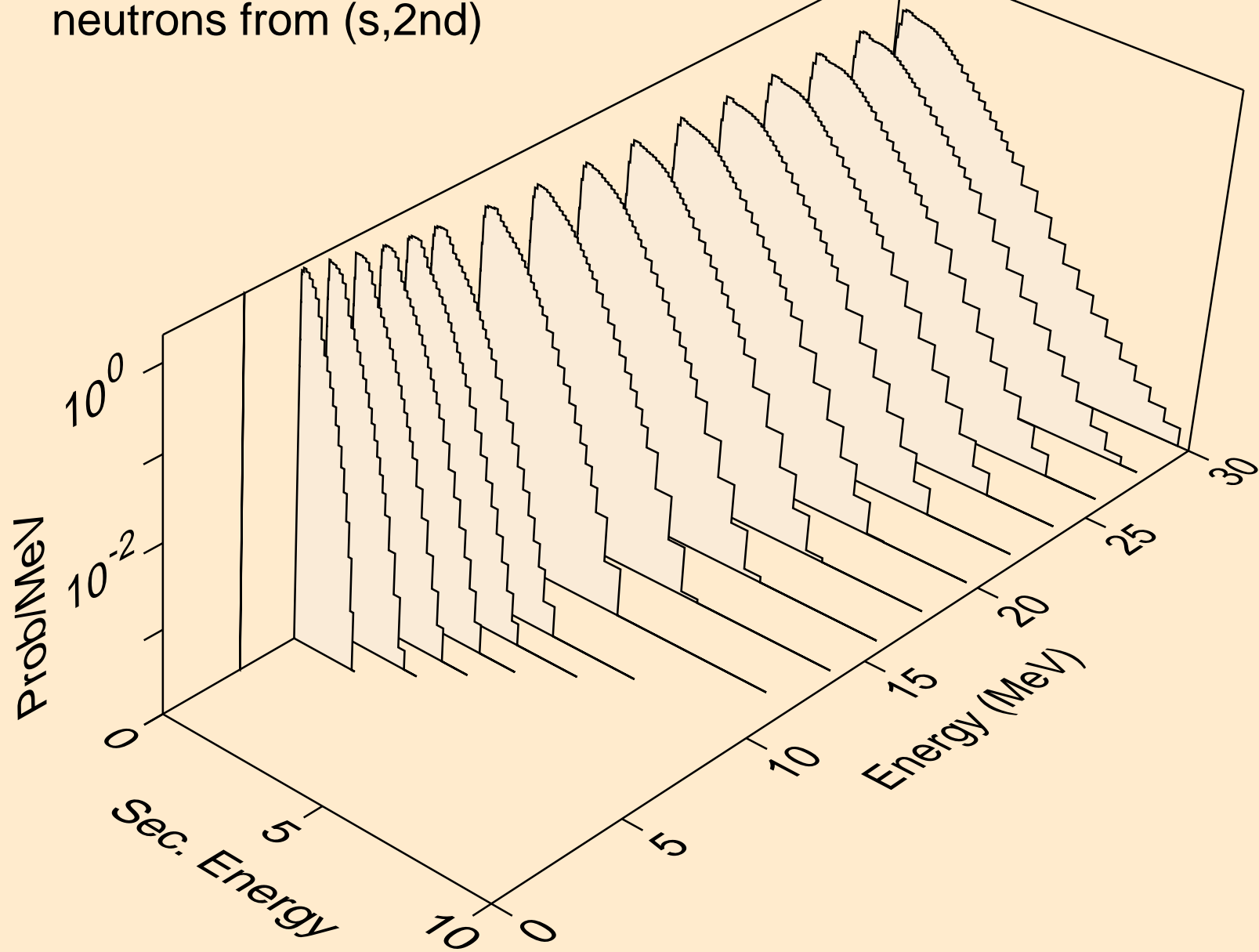
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
neutrons from (s,n)



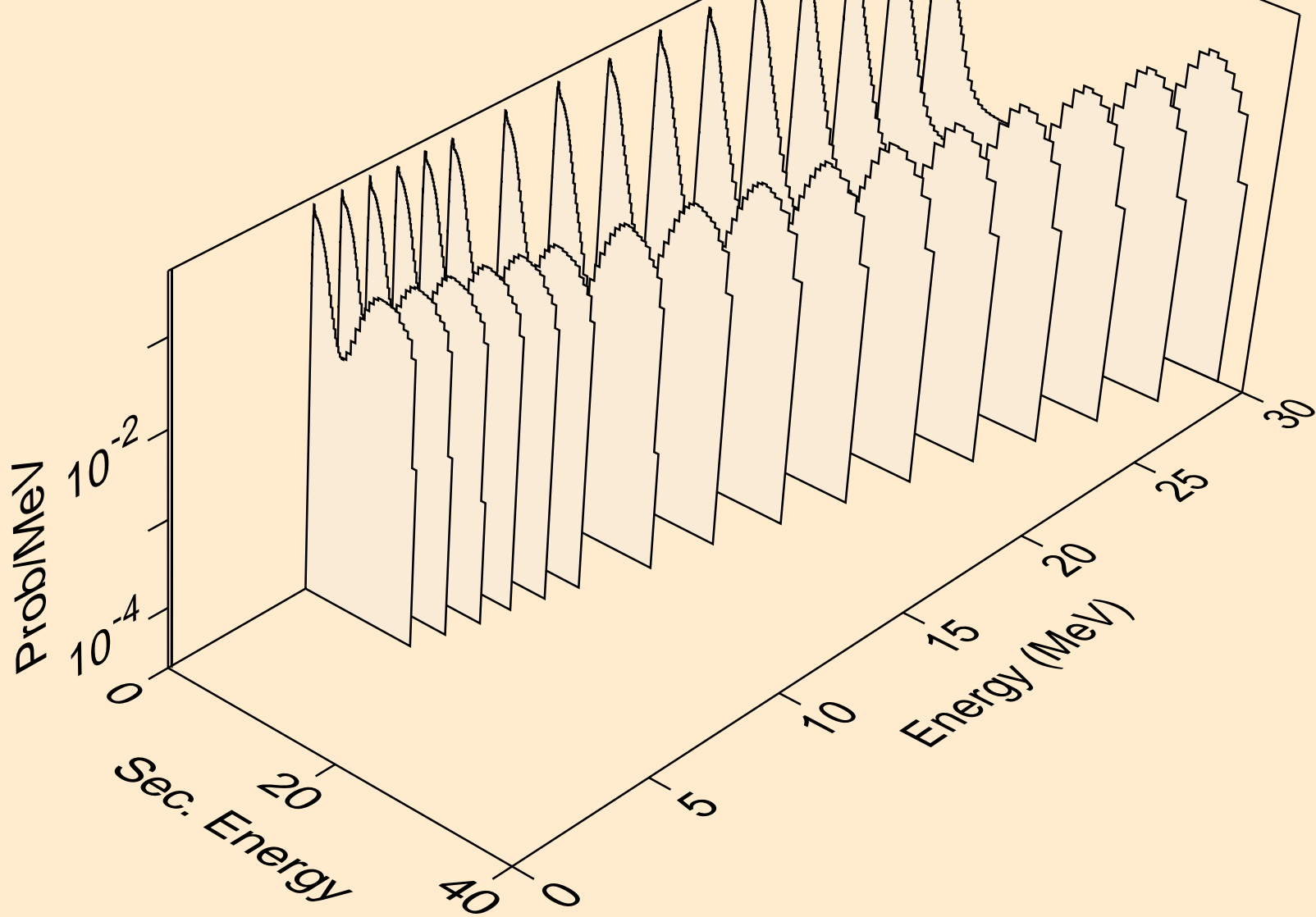
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neutrons from (s,x)



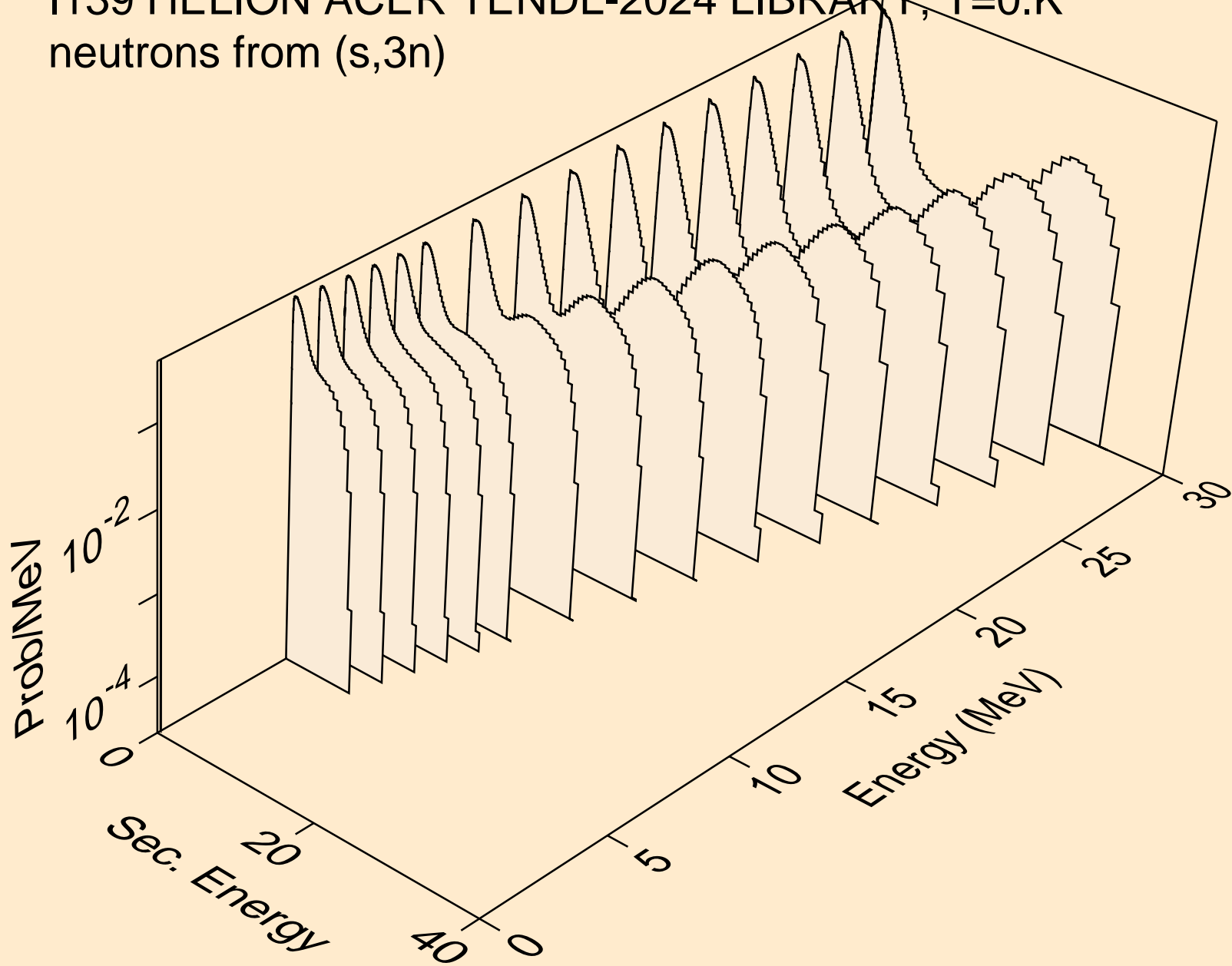
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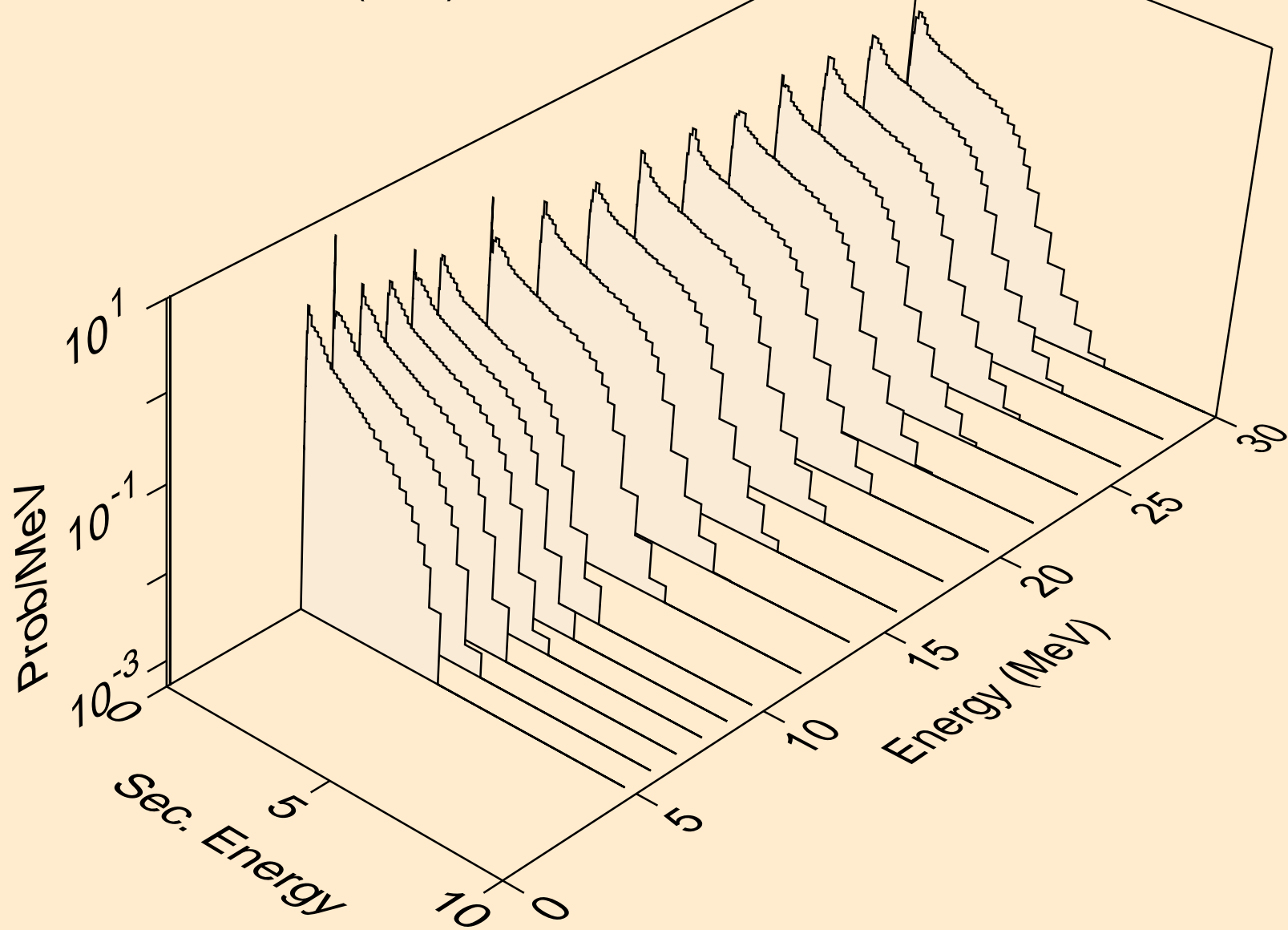
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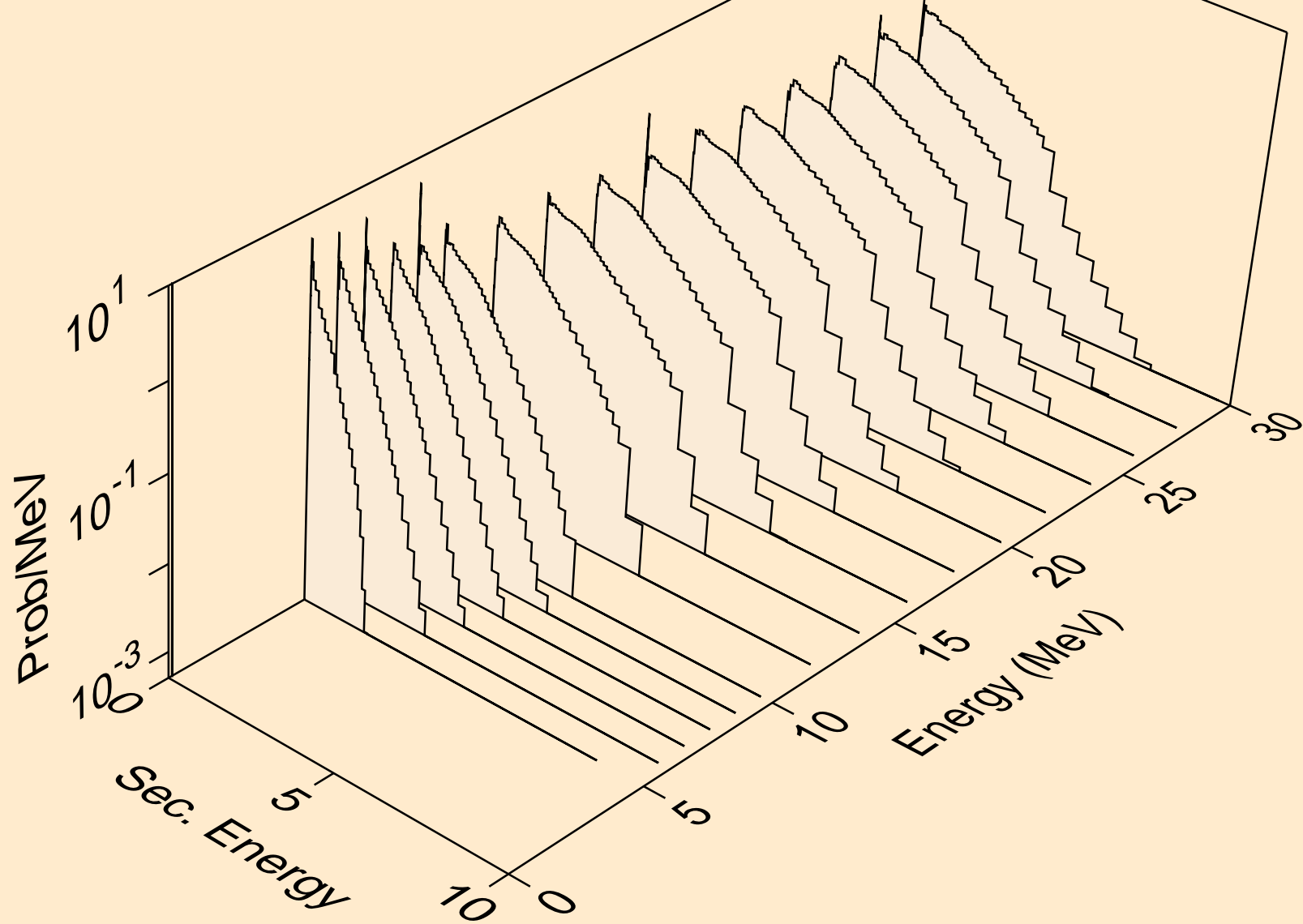
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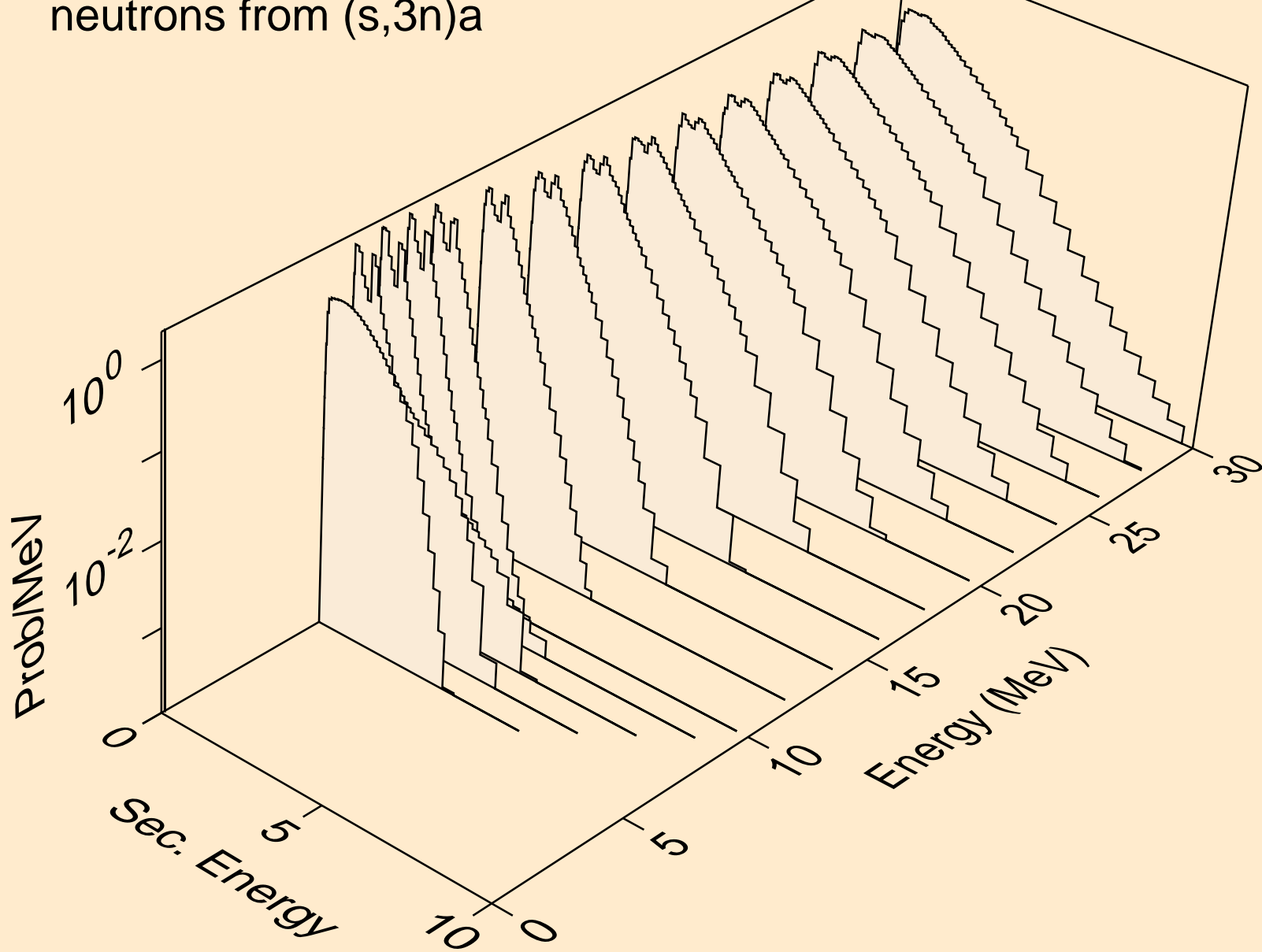
I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
neutrons from (s,n\*)a



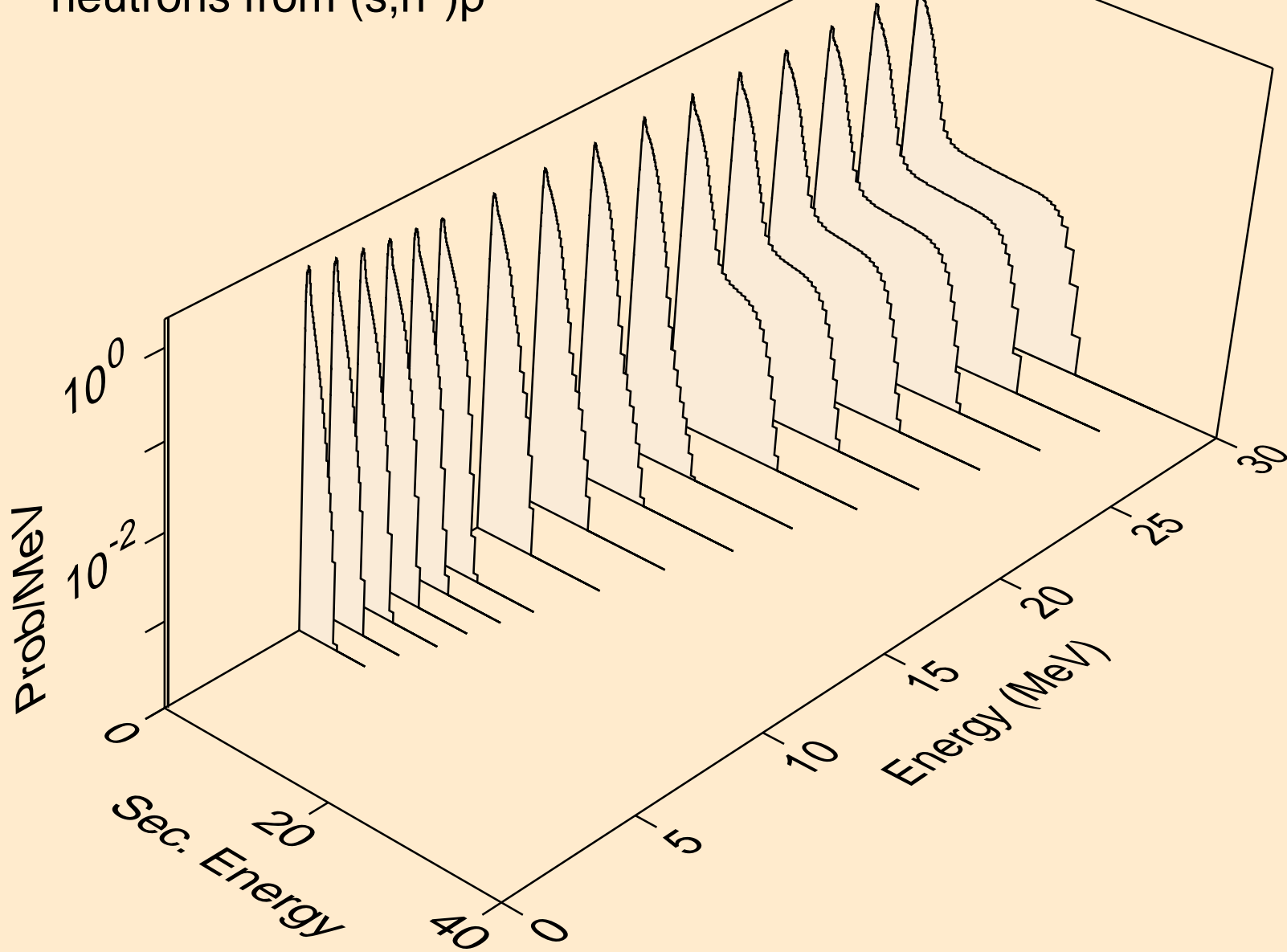
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neutrons from (s,2n)a



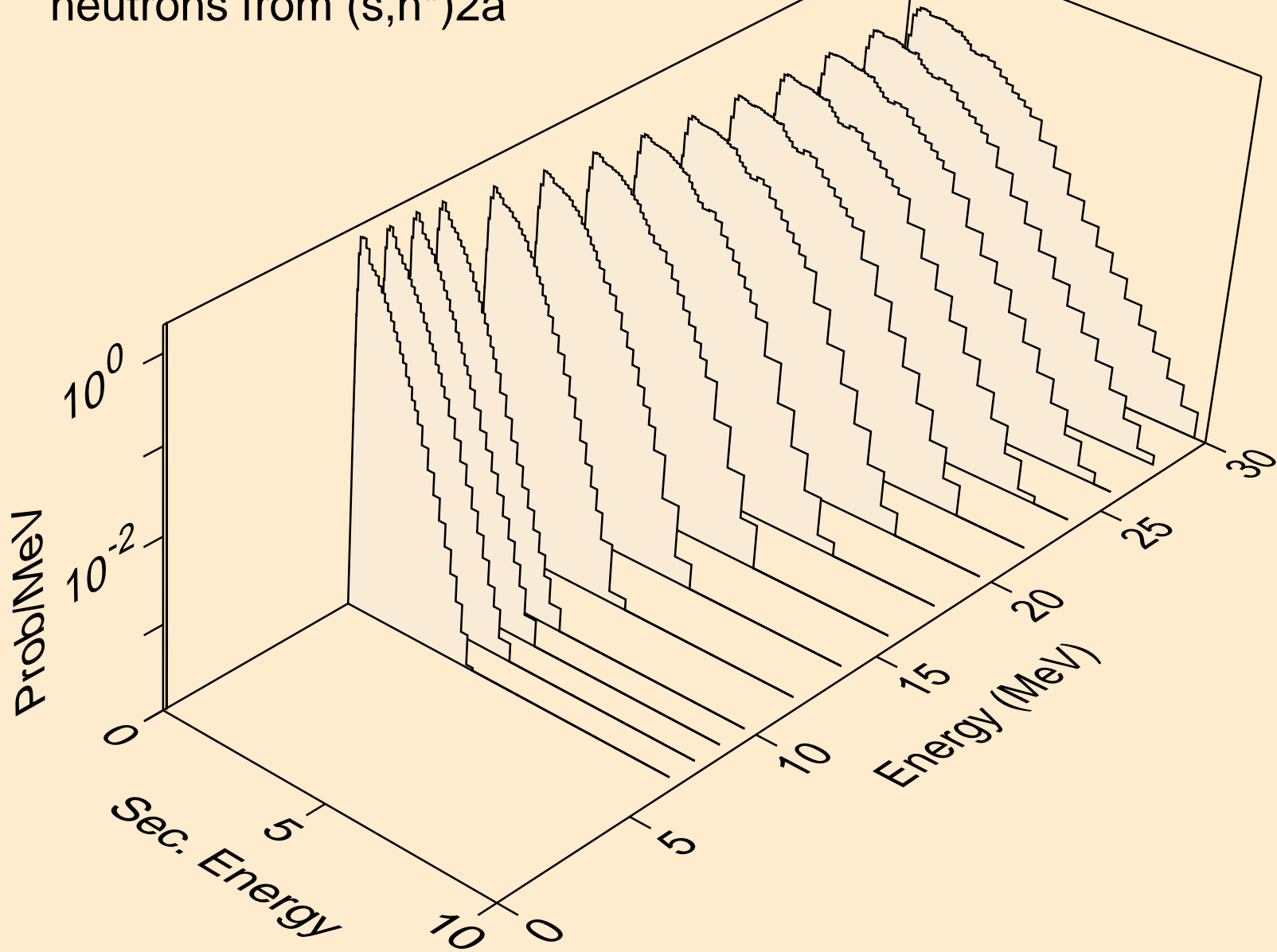
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neutrons from (s,3n)a



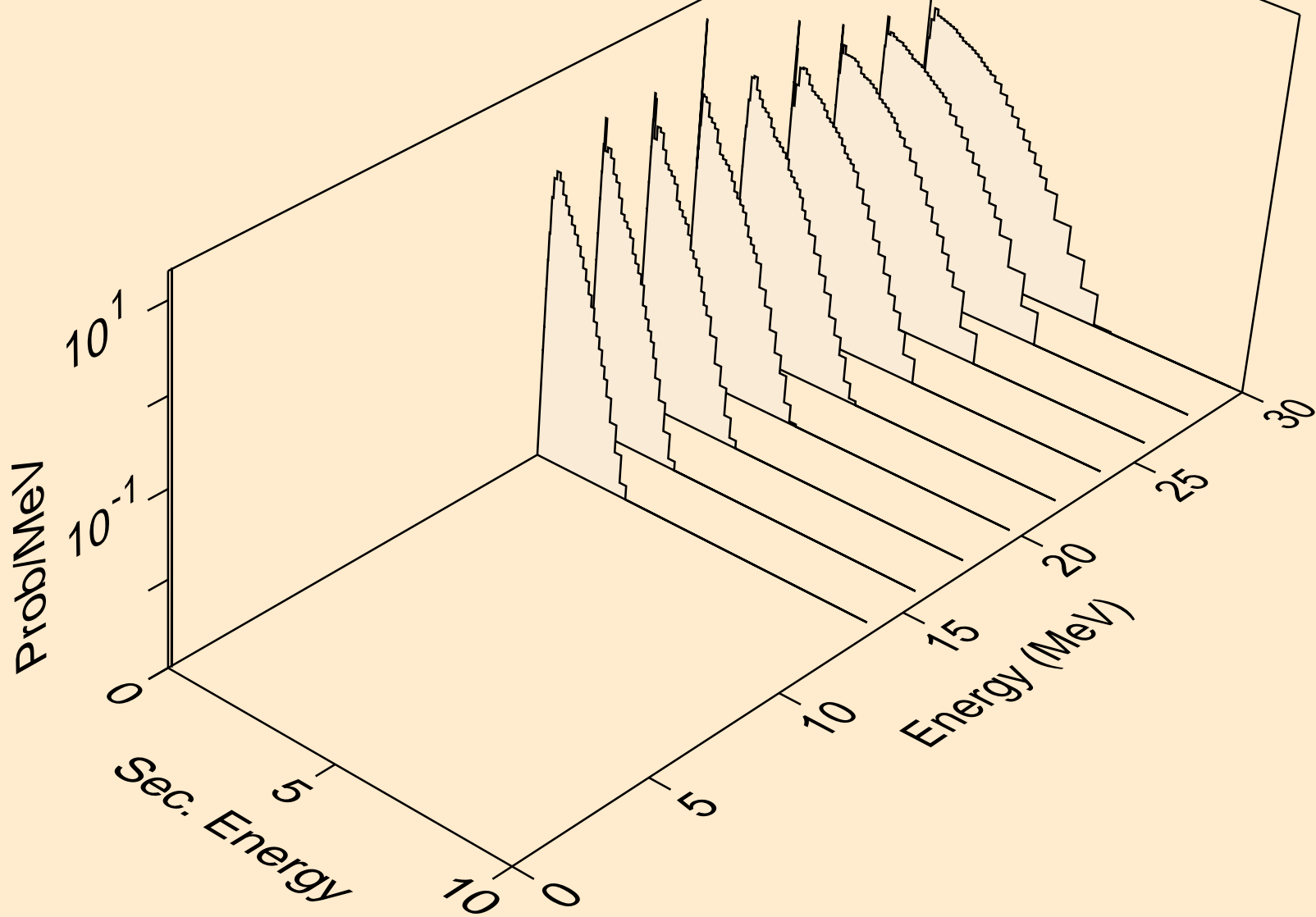
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neutrons from (s,n\*)p



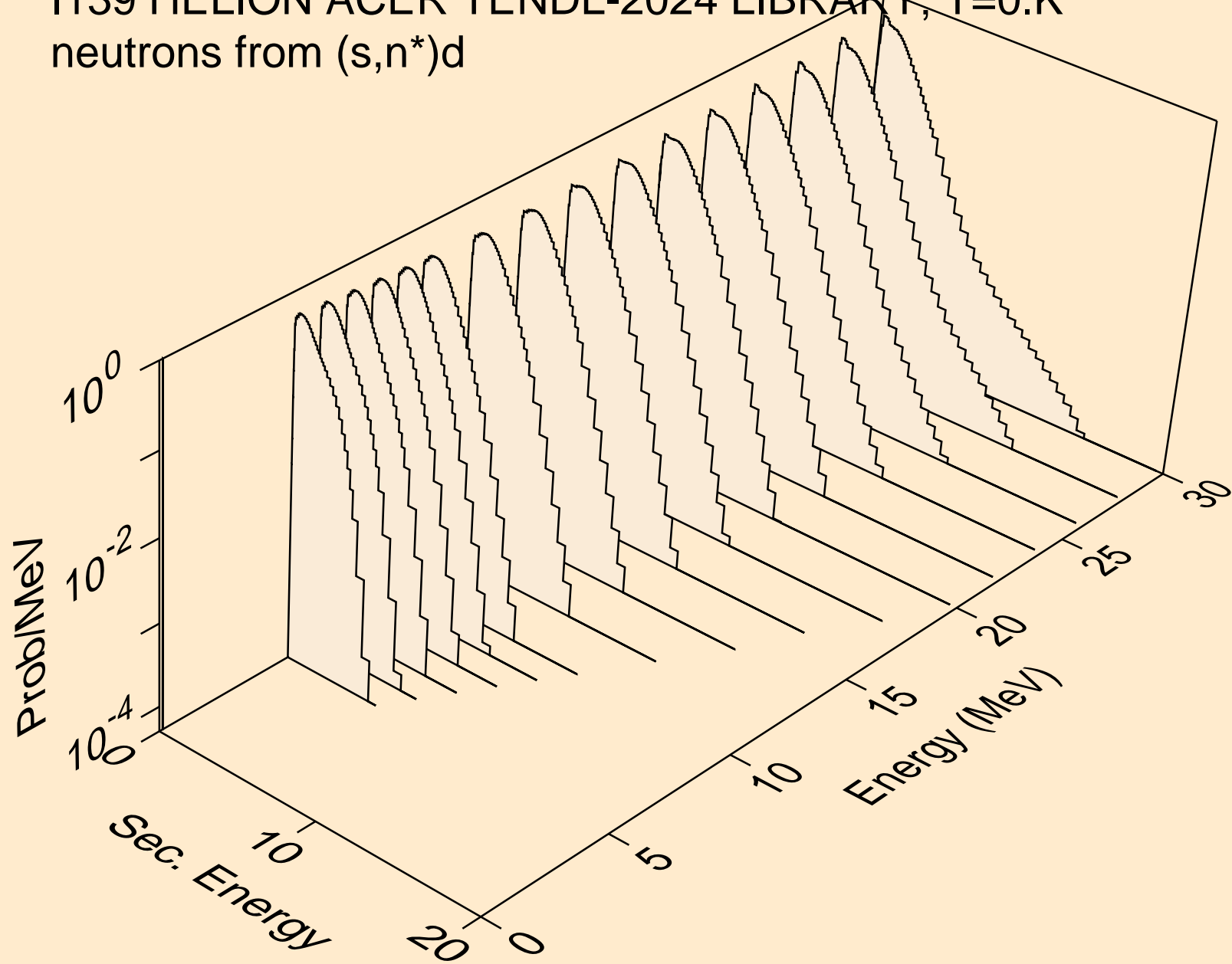
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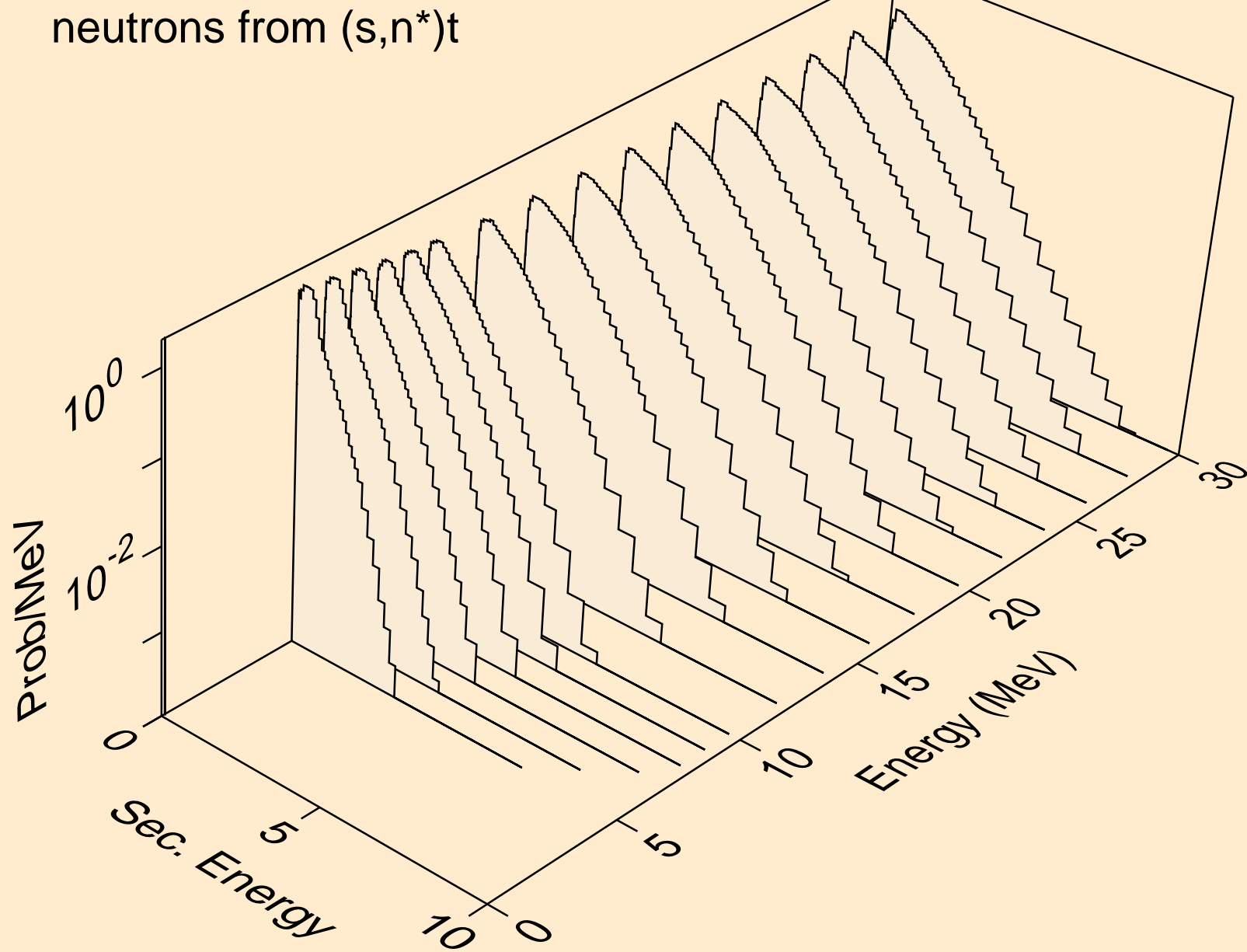
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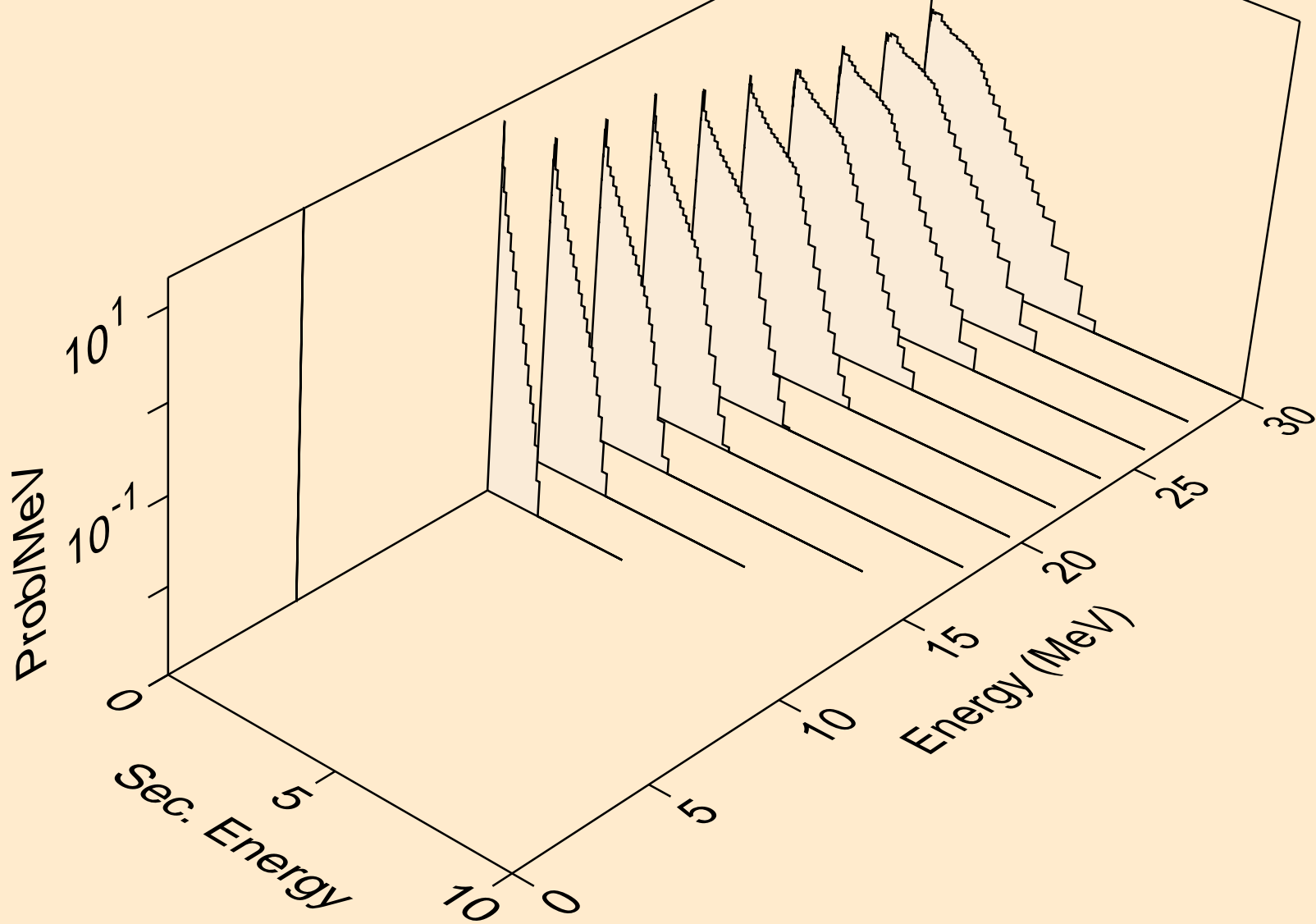
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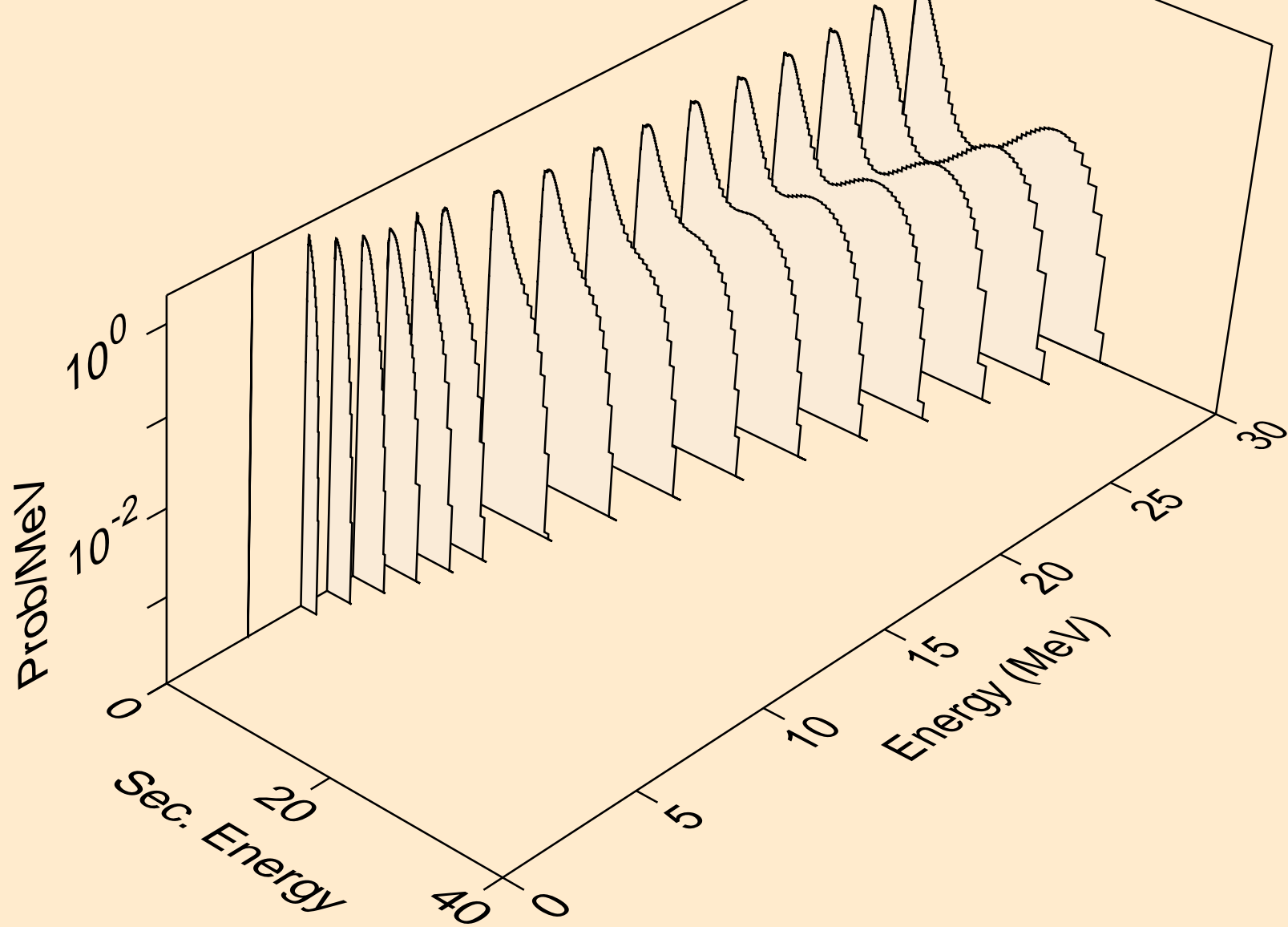
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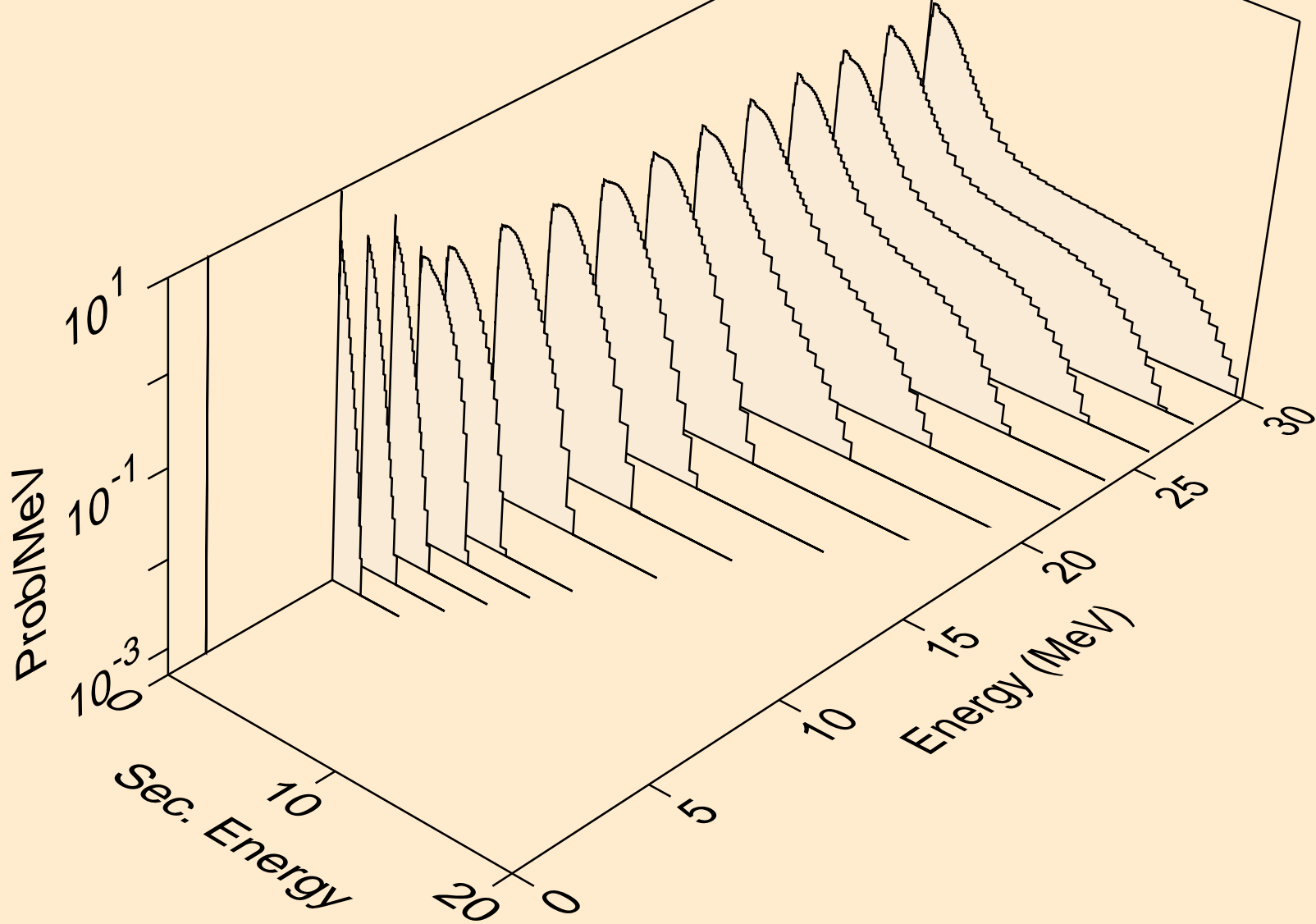
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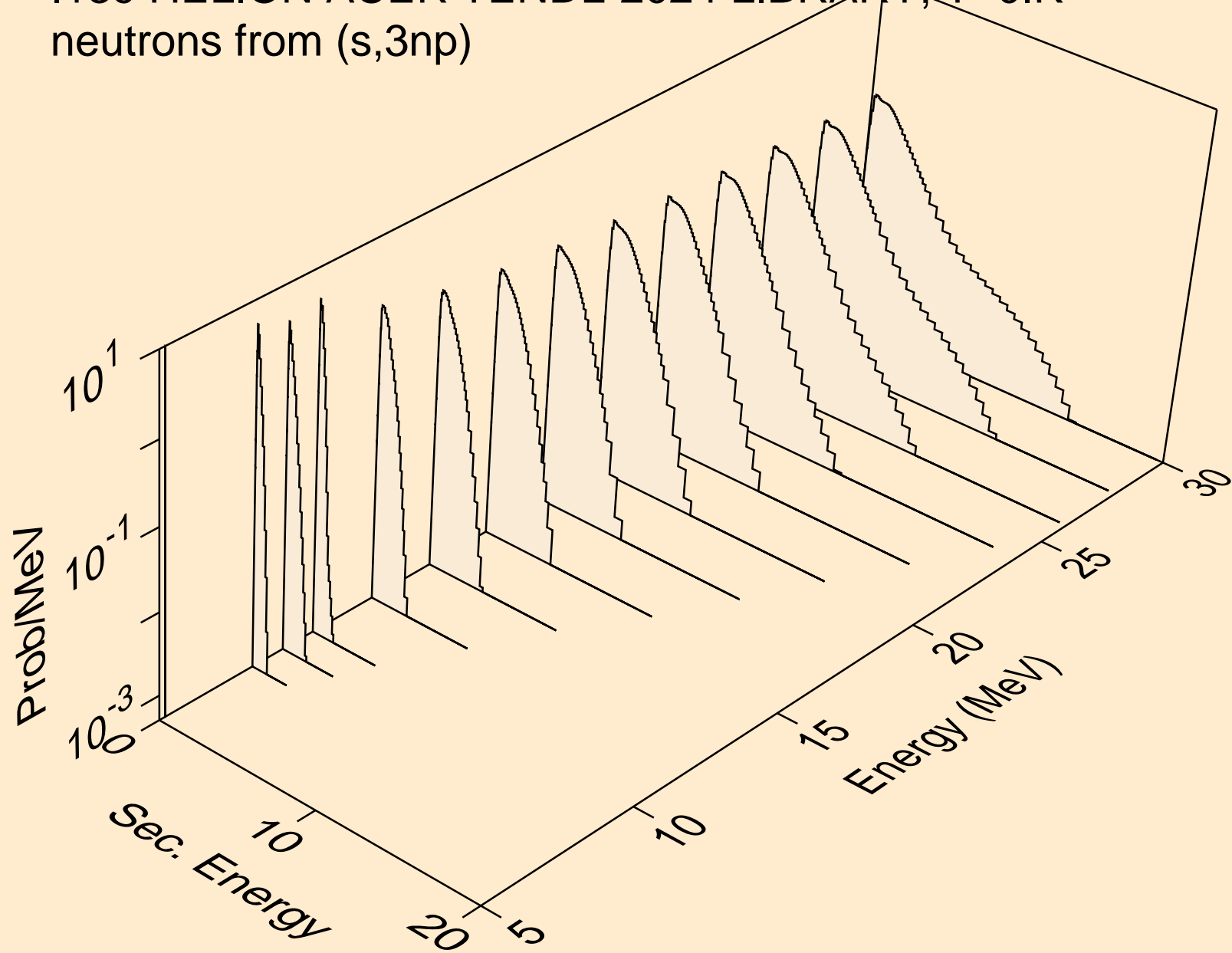
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neutrons from (s,4n)



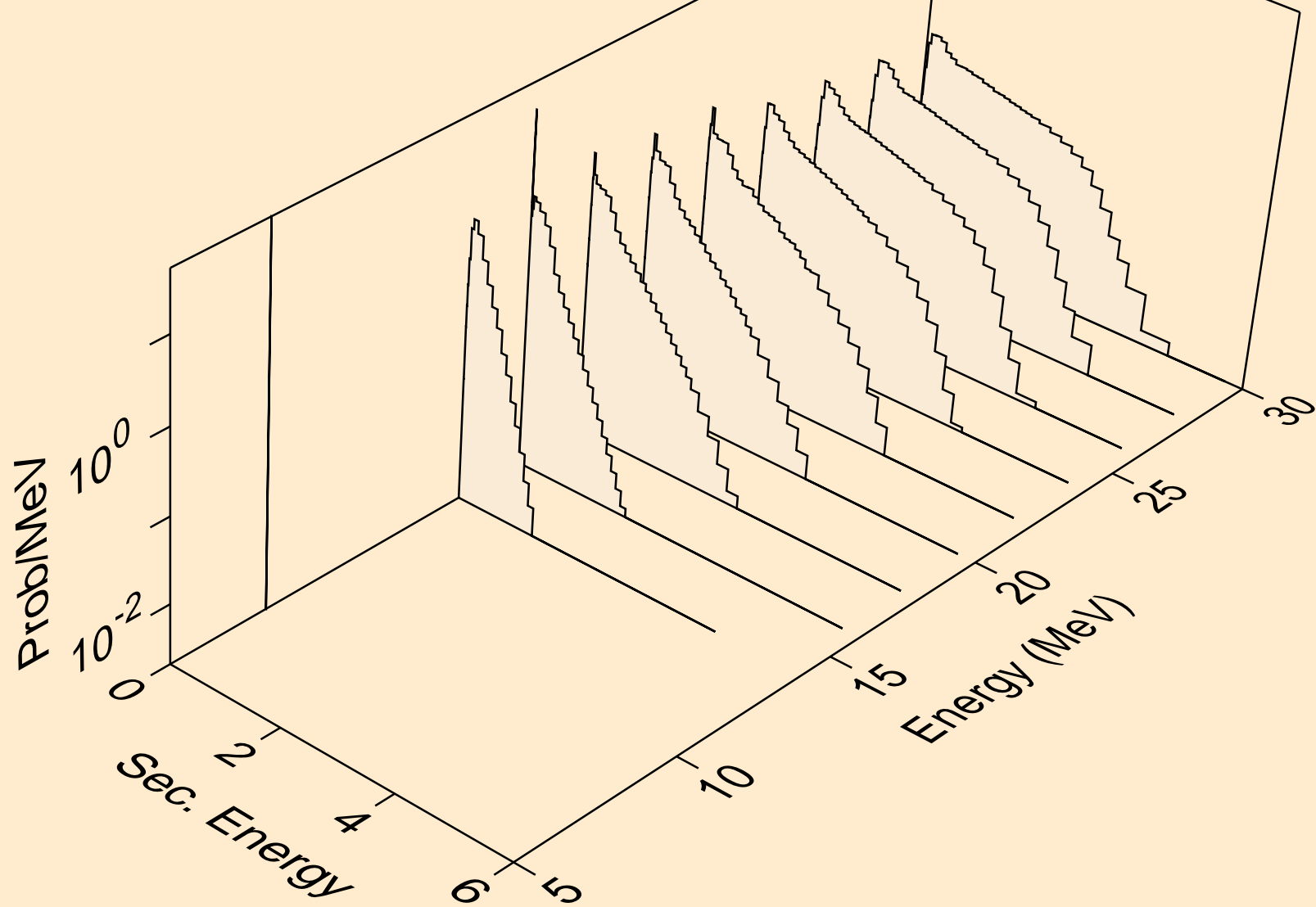
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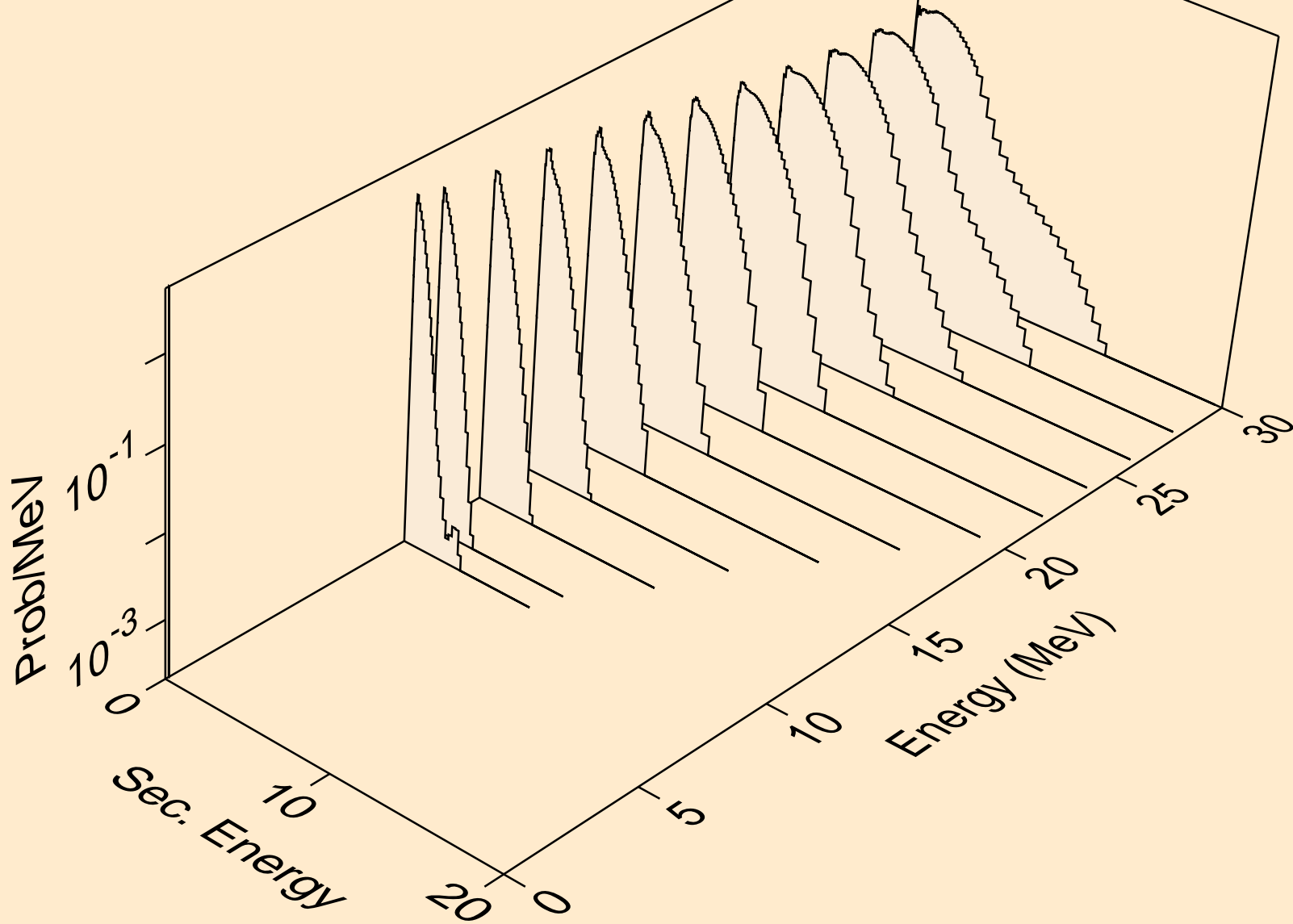
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neutrons from (s,3np)



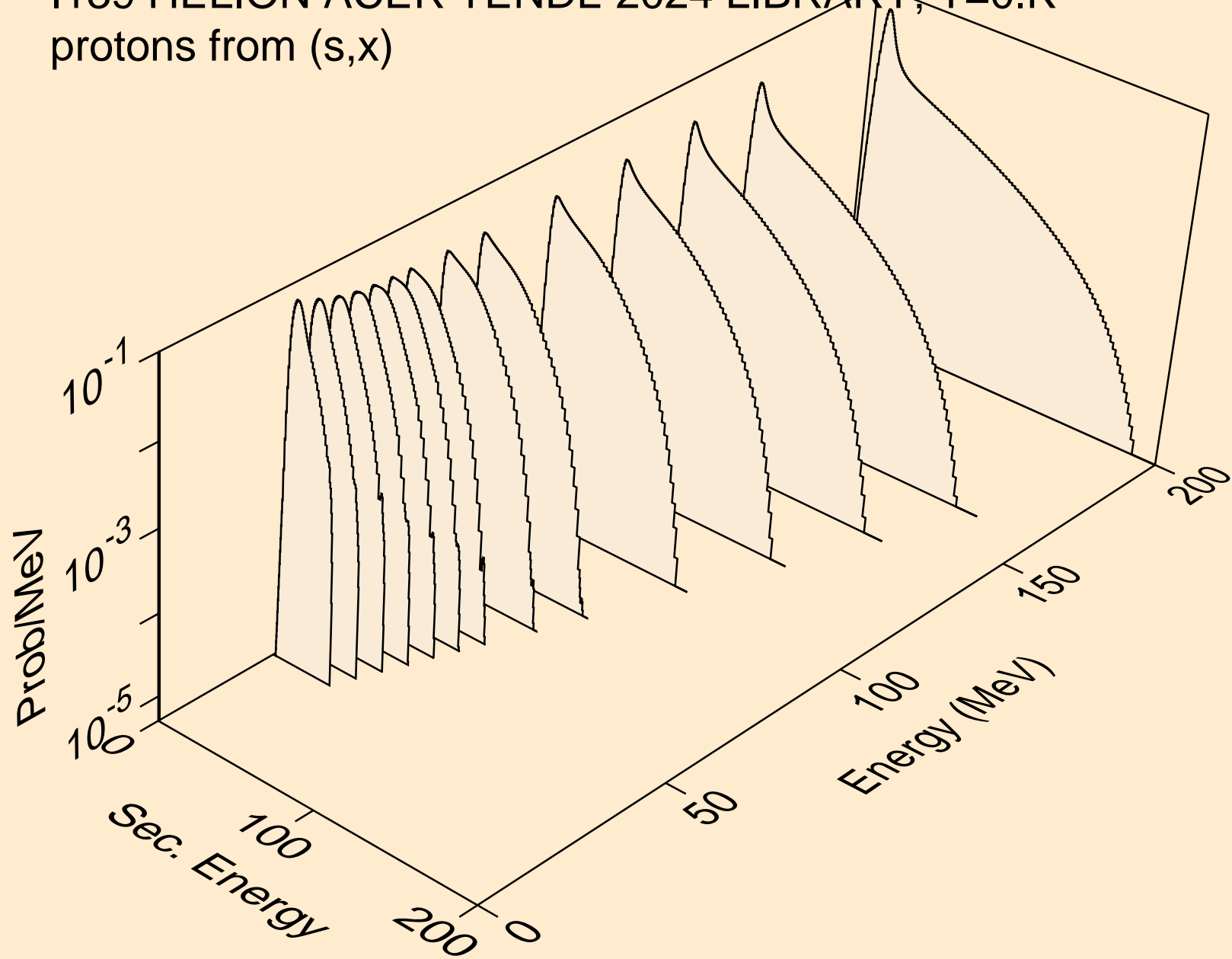
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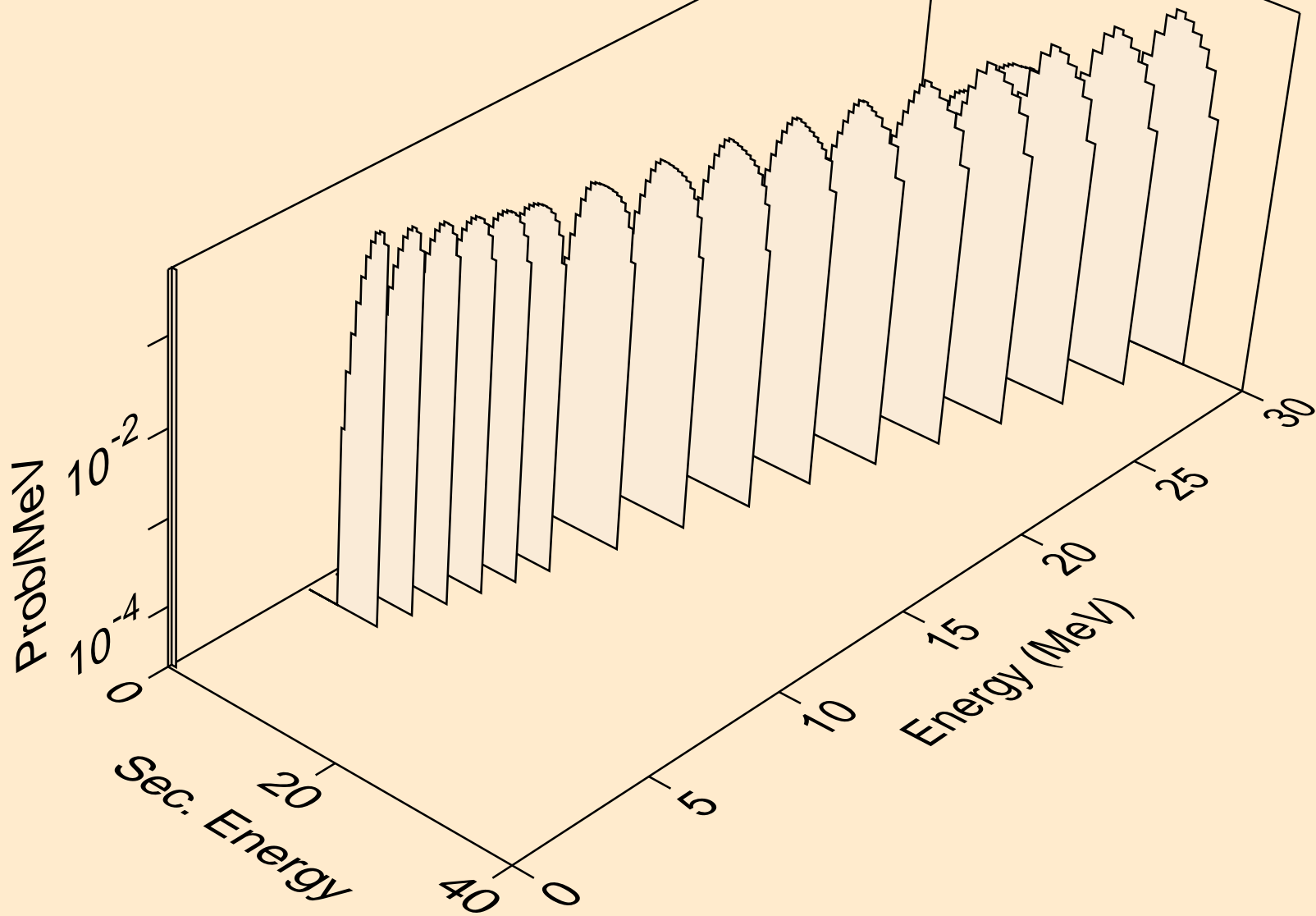
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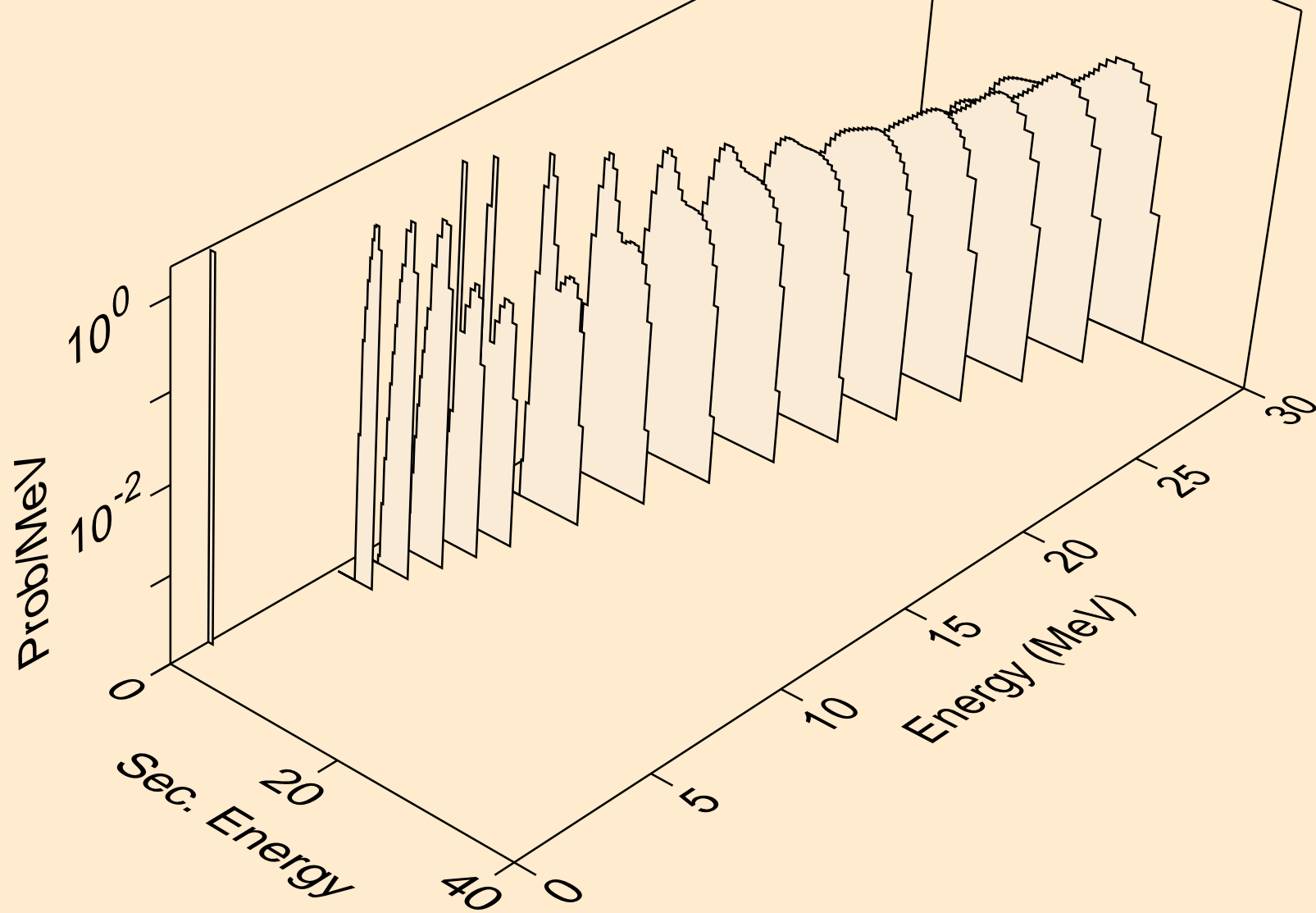
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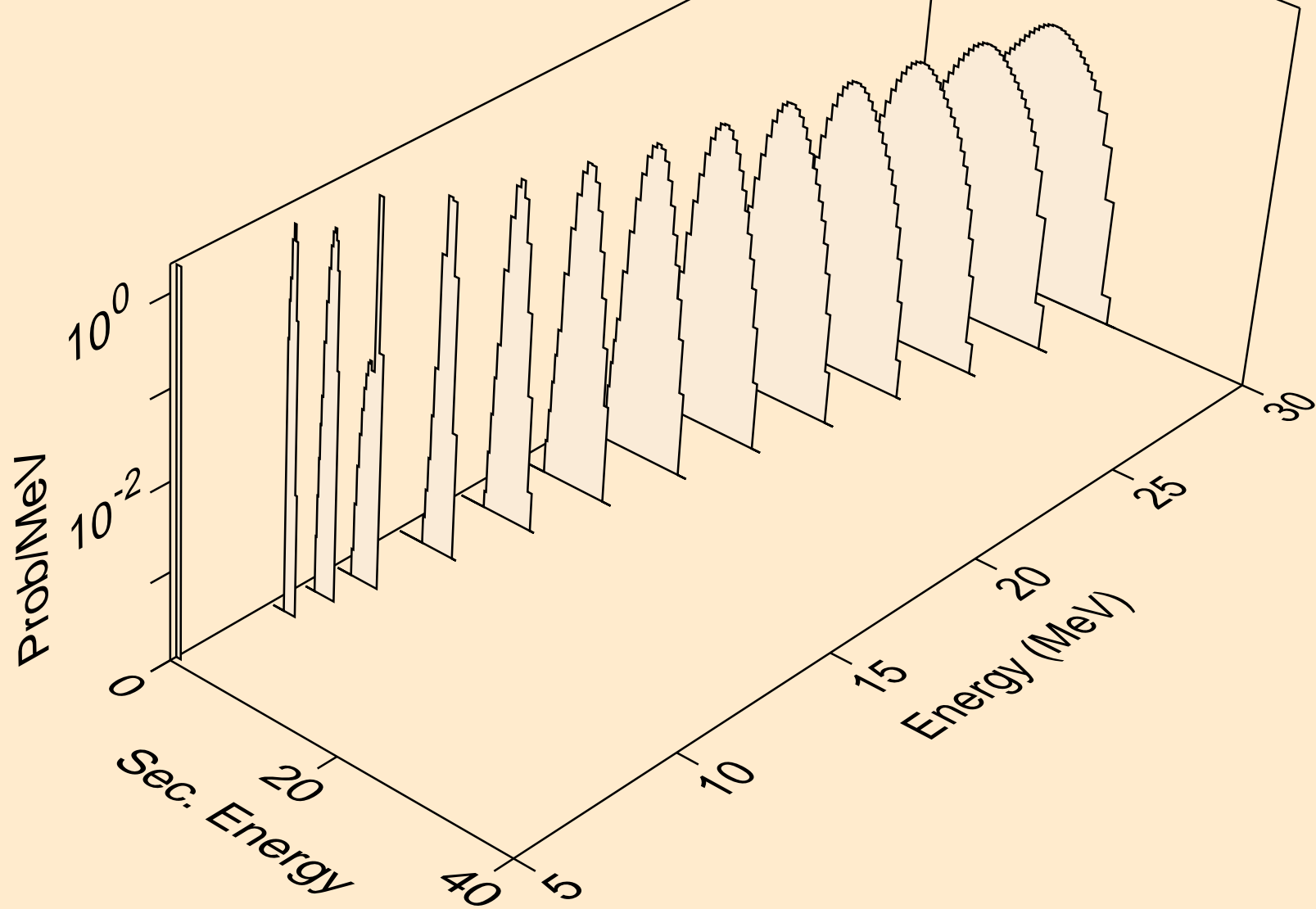
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protons from (s,n\*)p



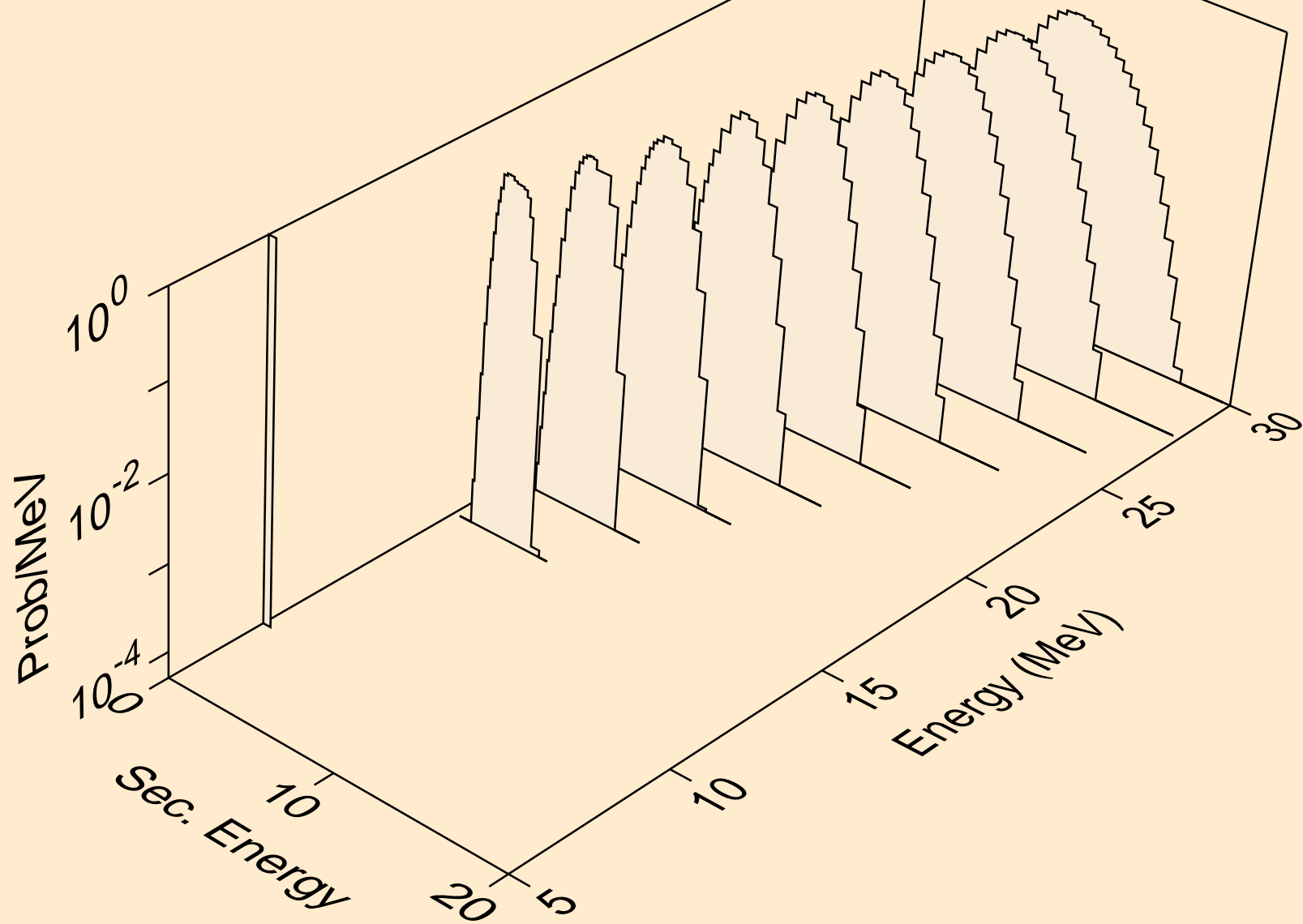
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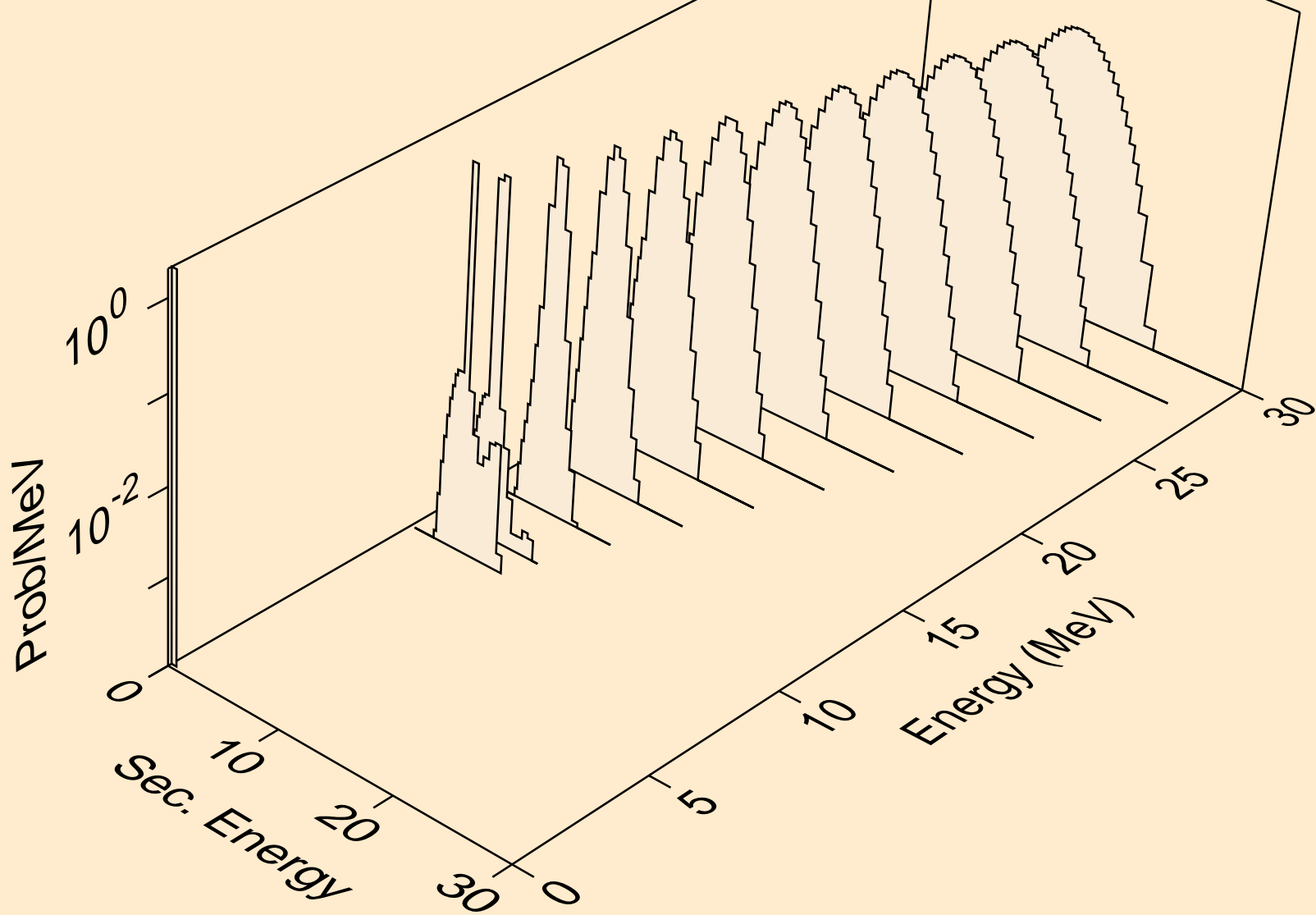
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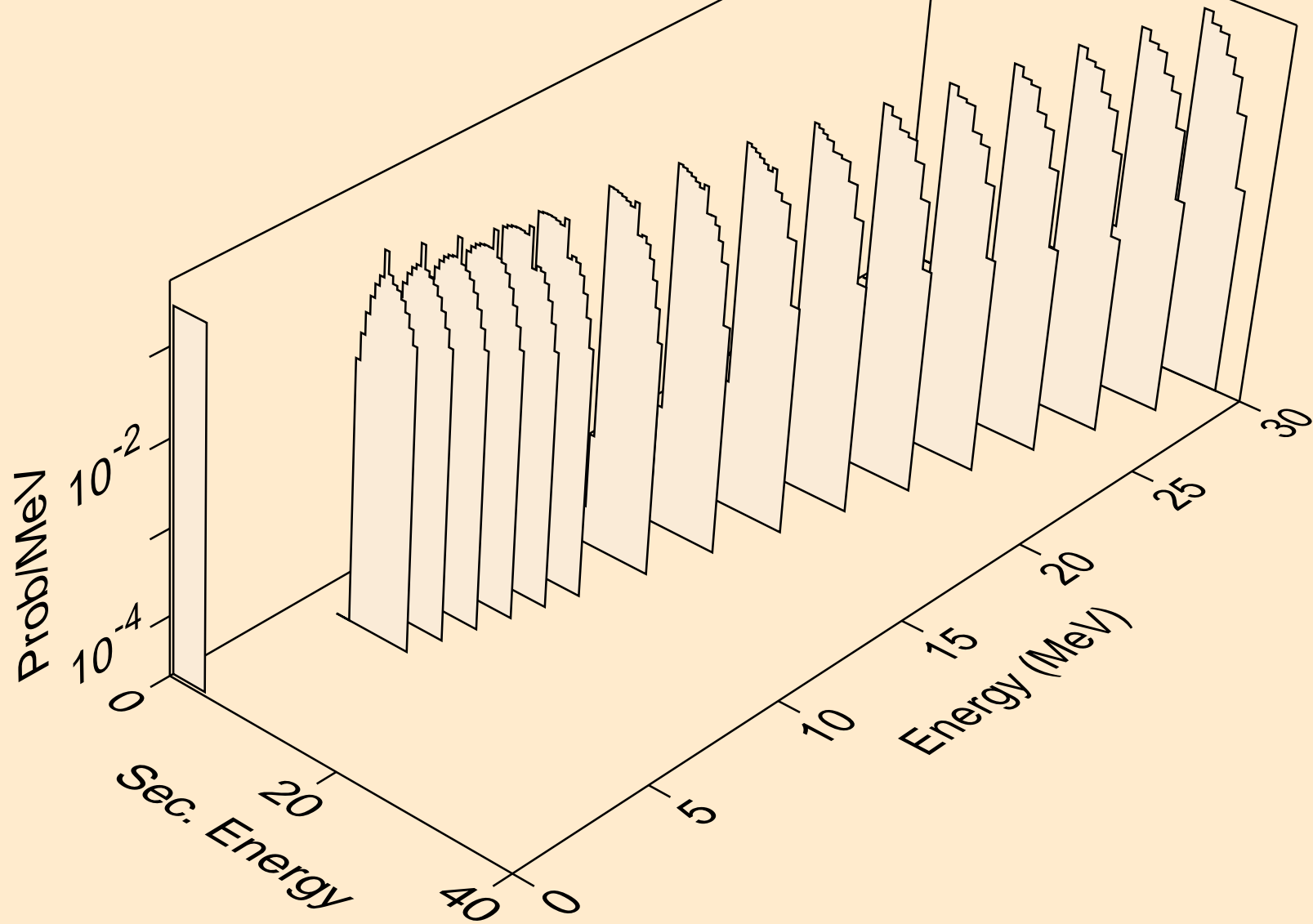
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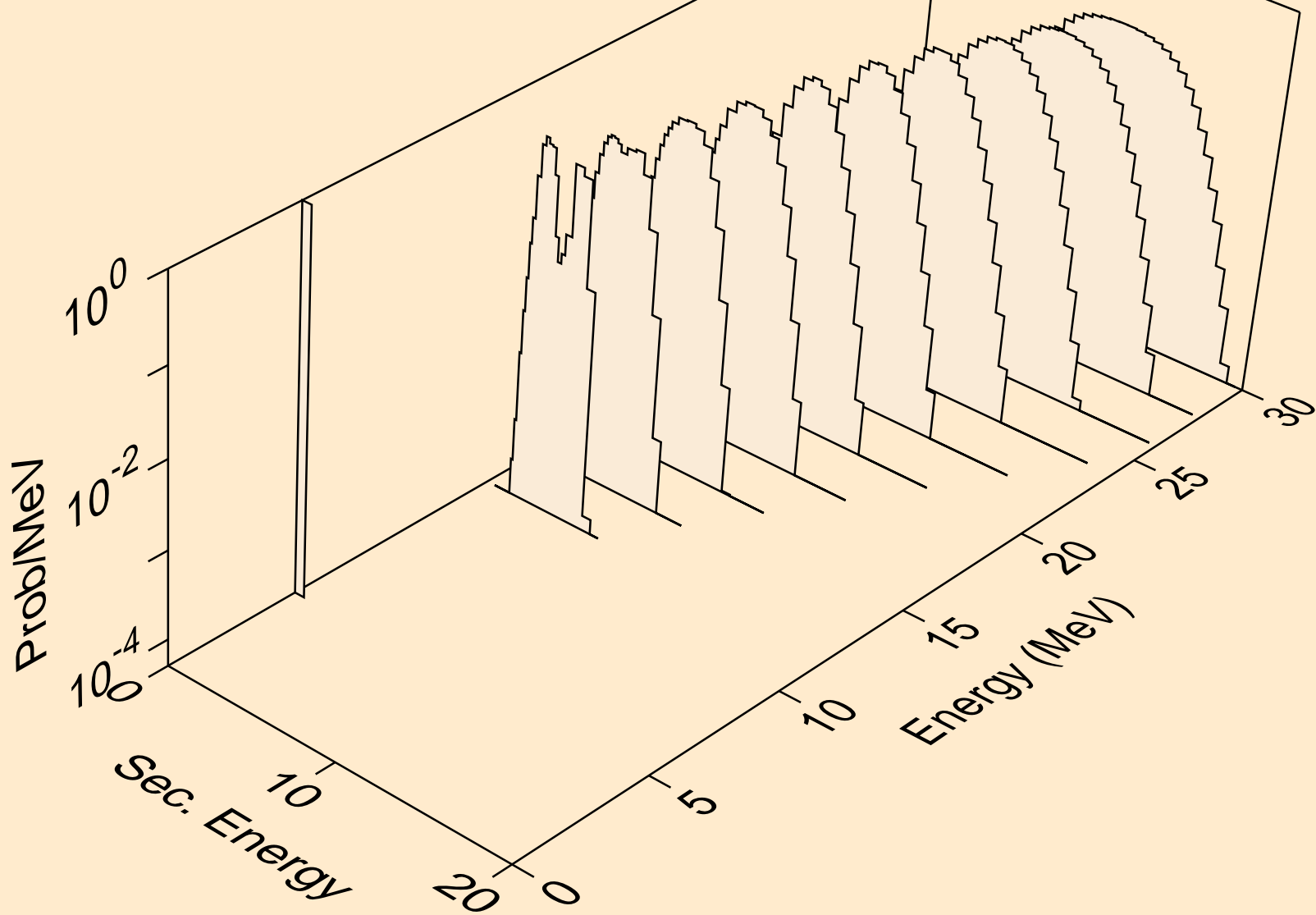
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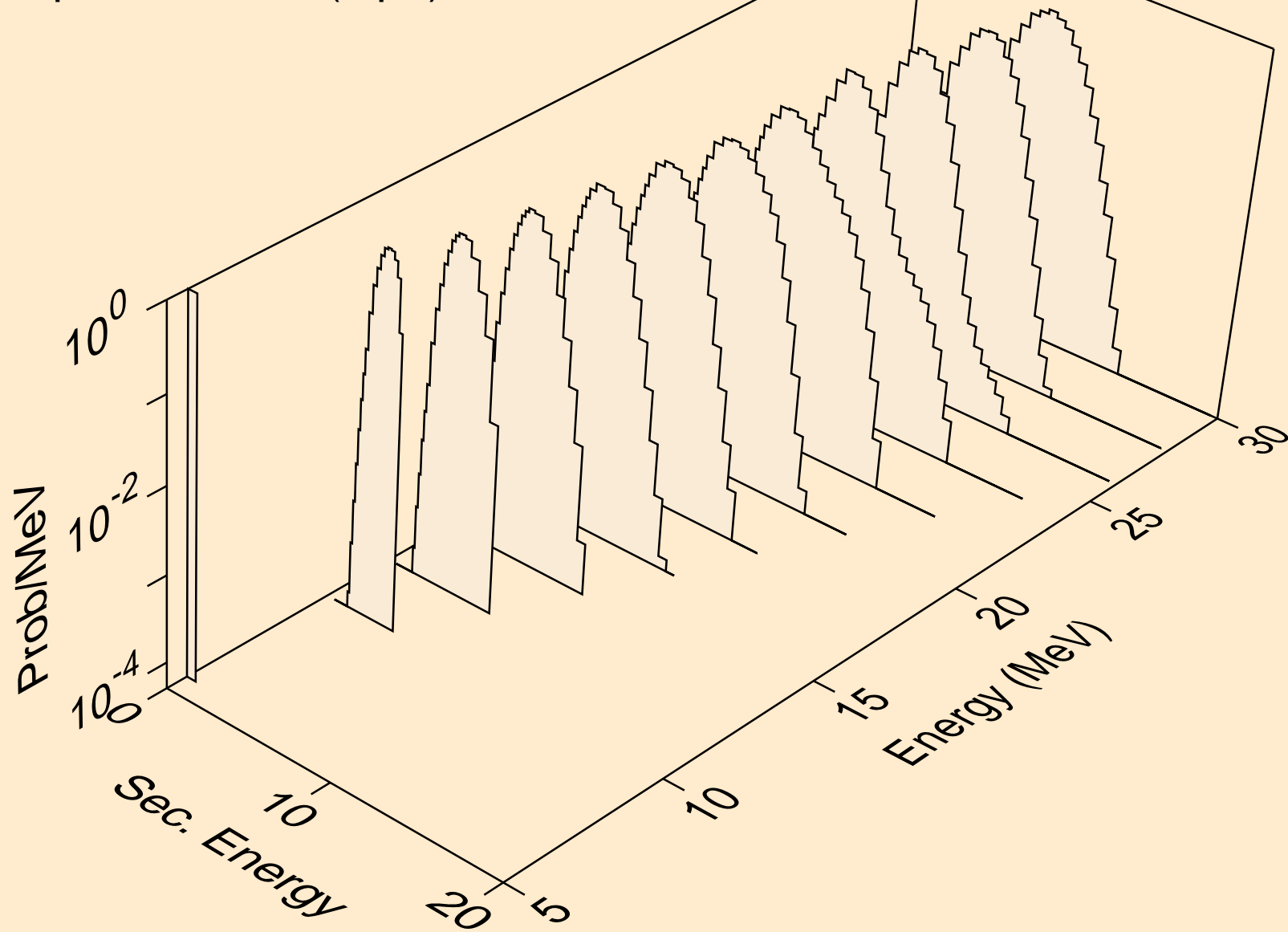
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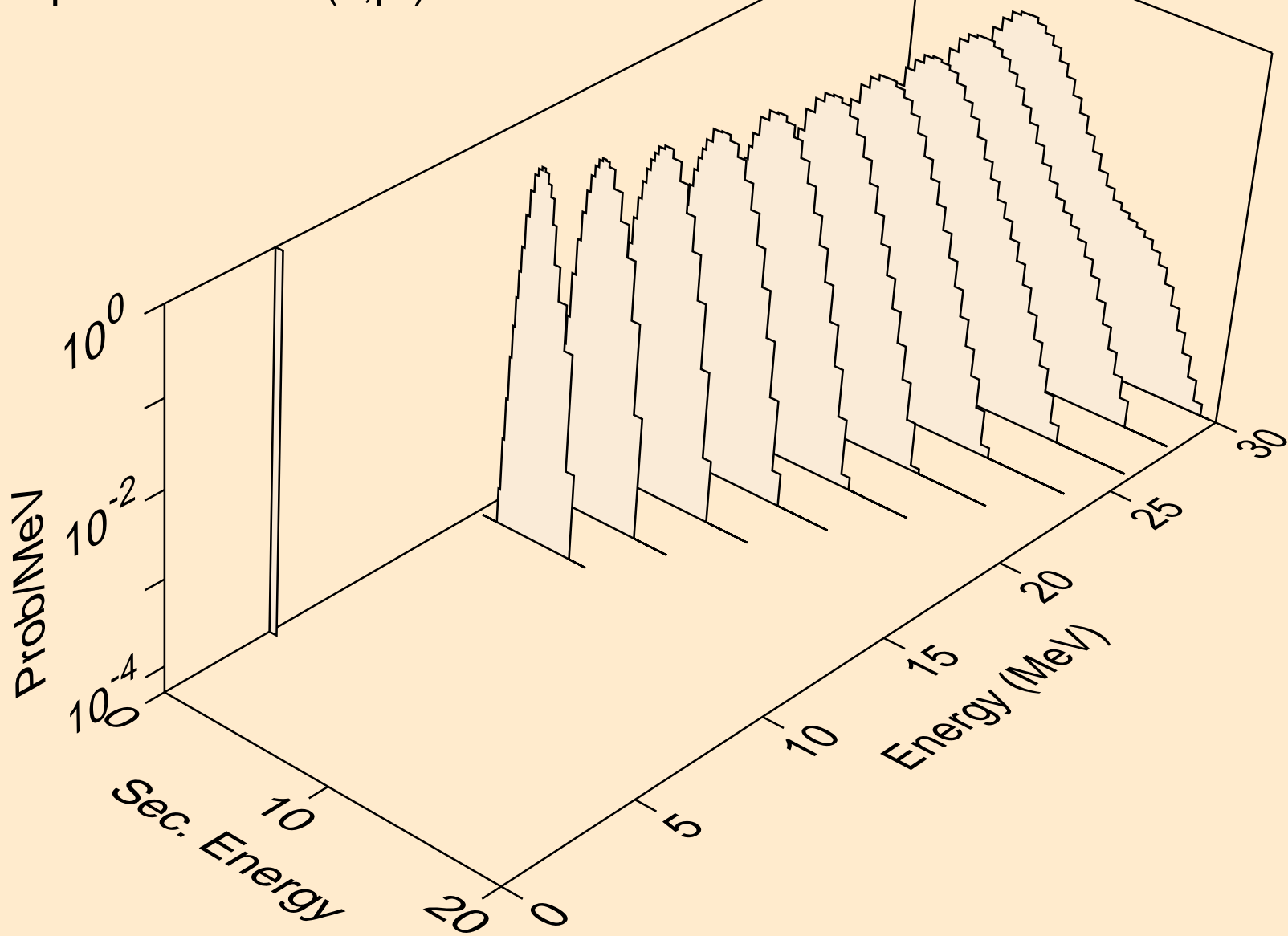
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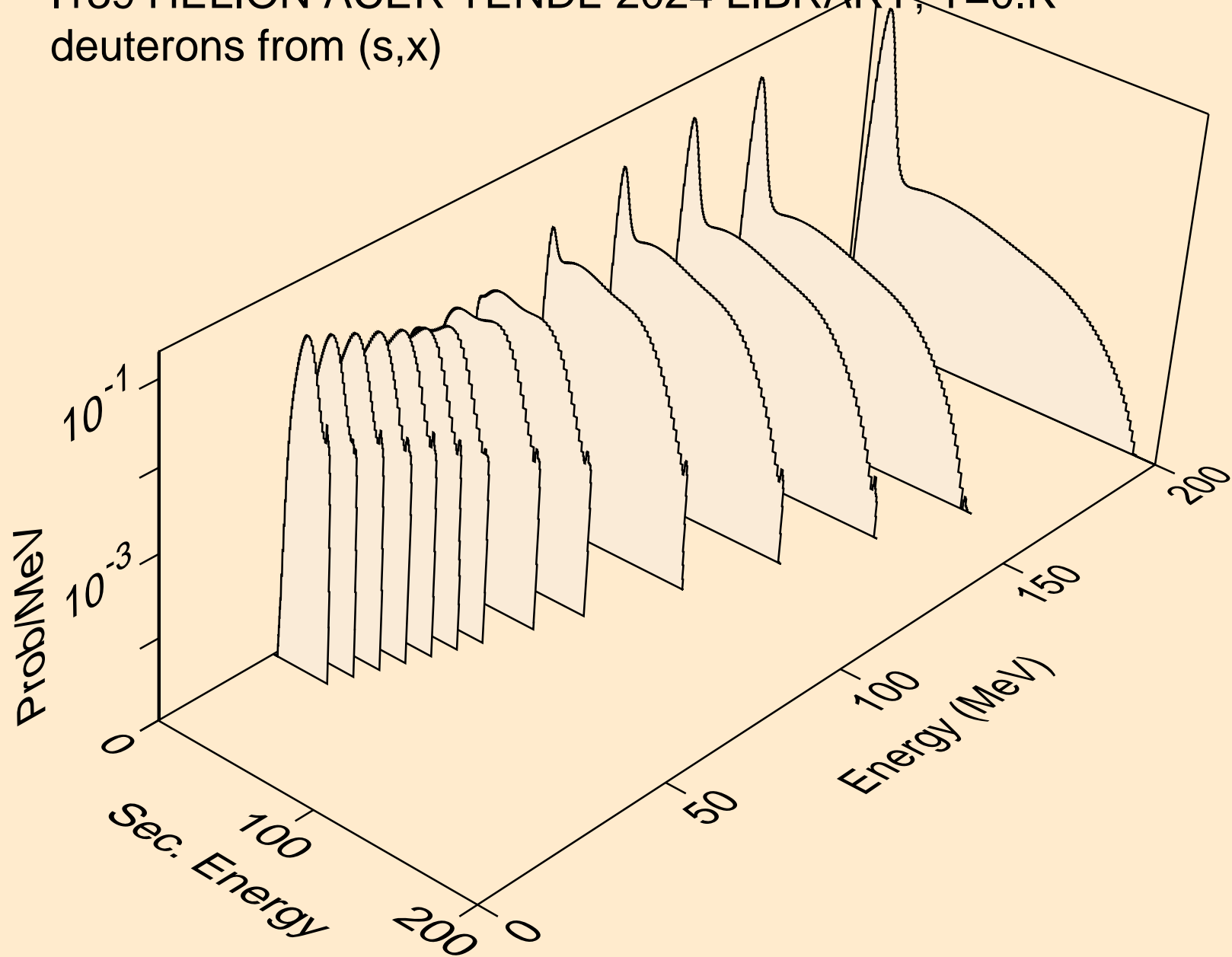
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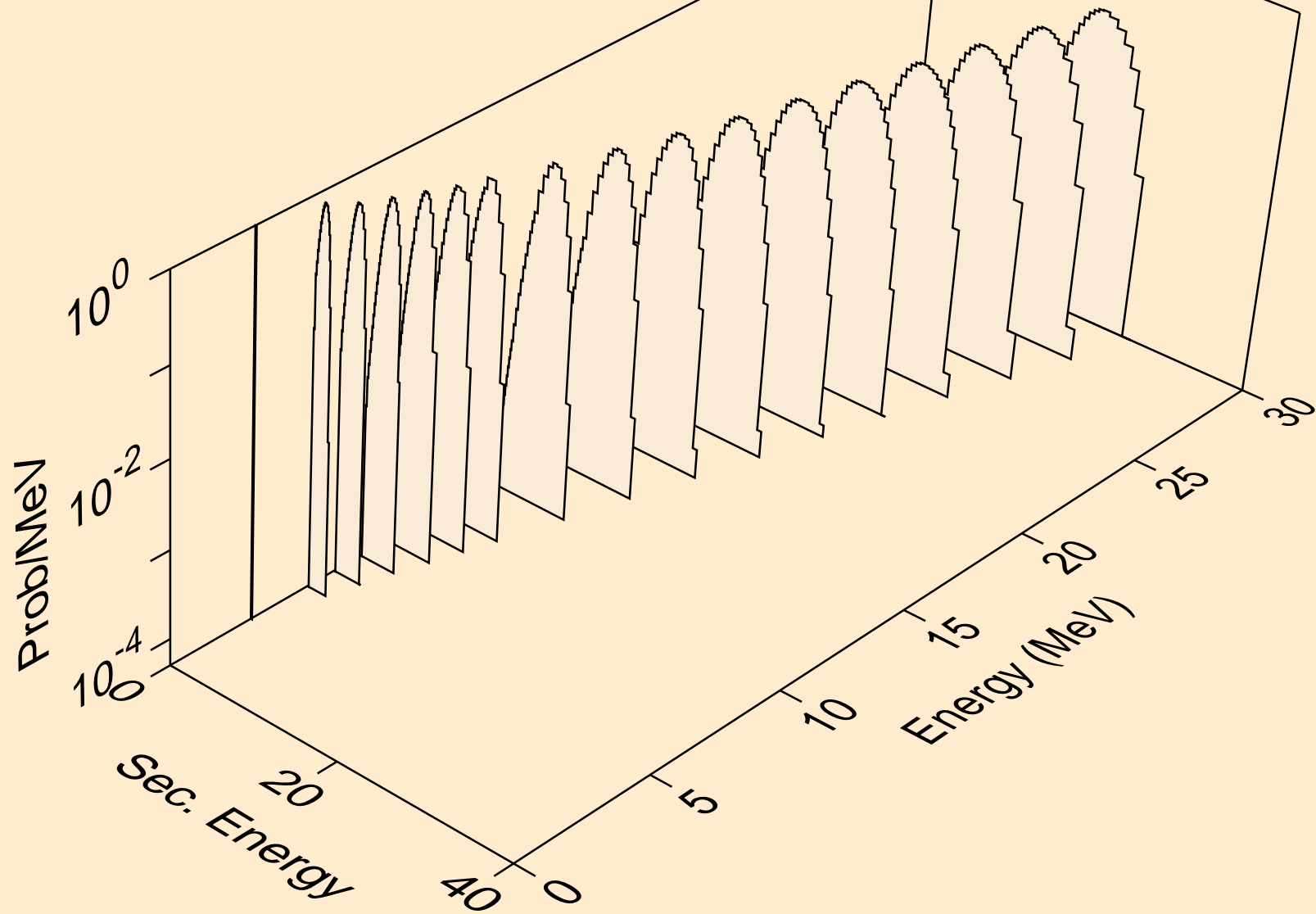
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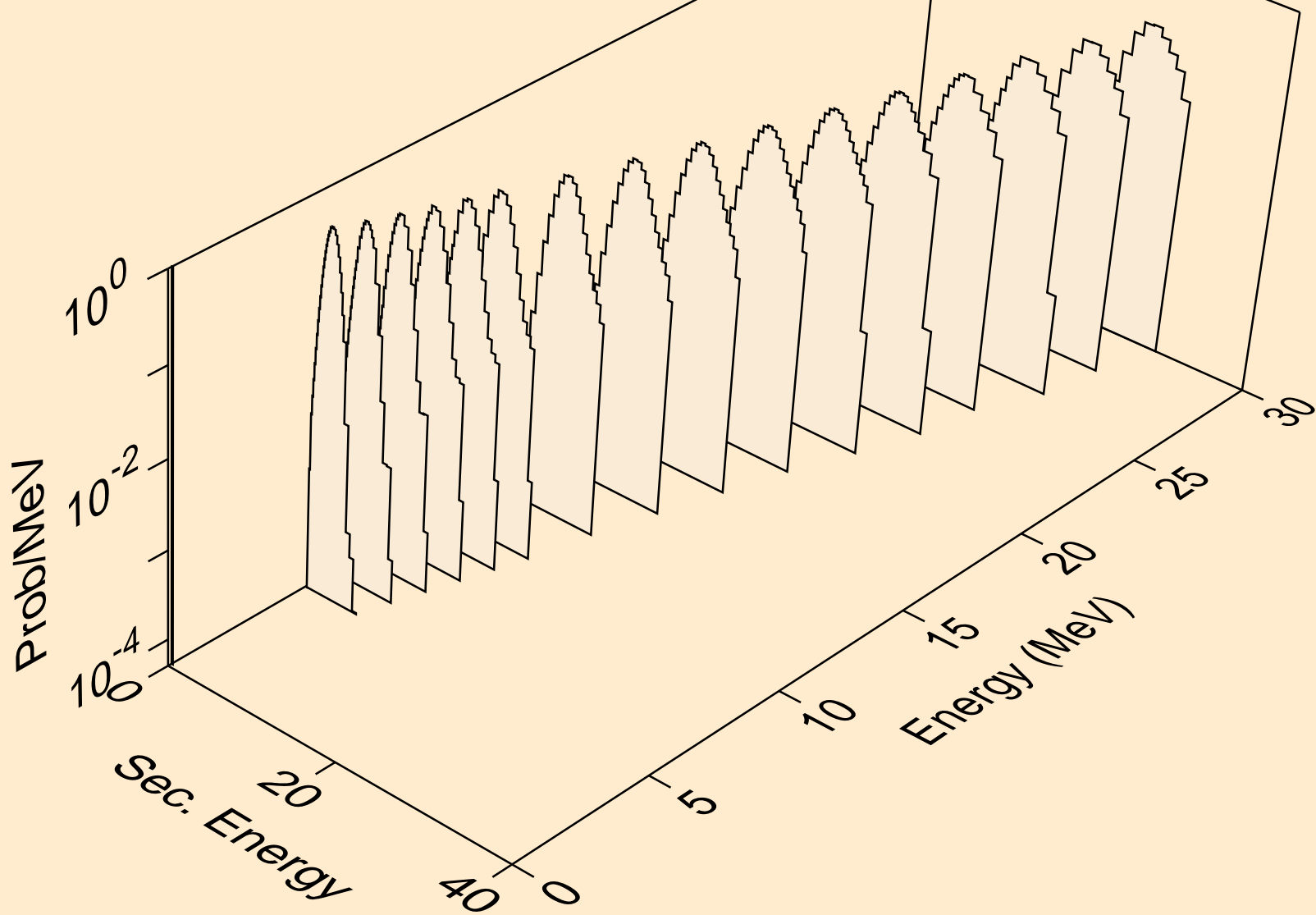
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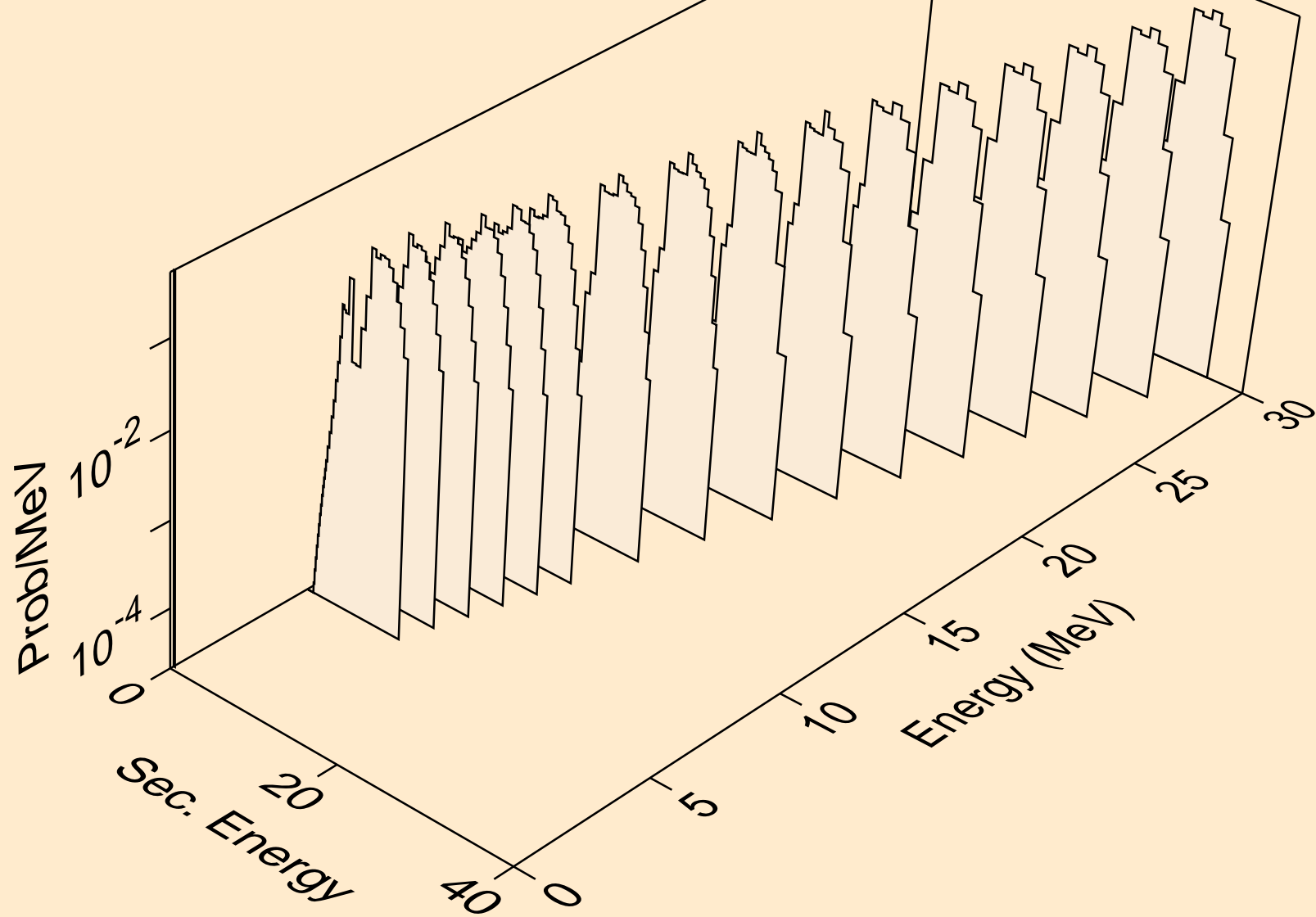
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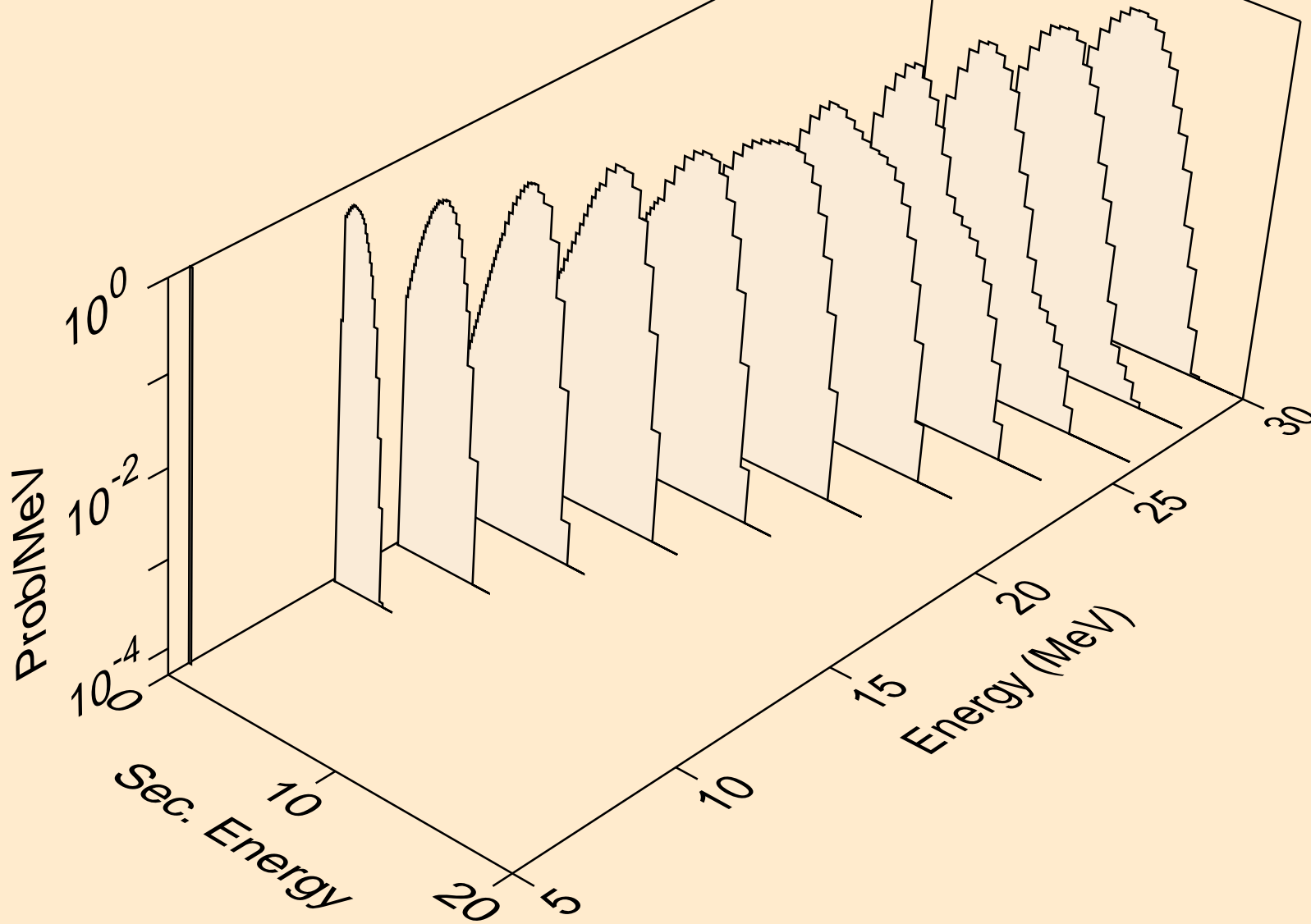
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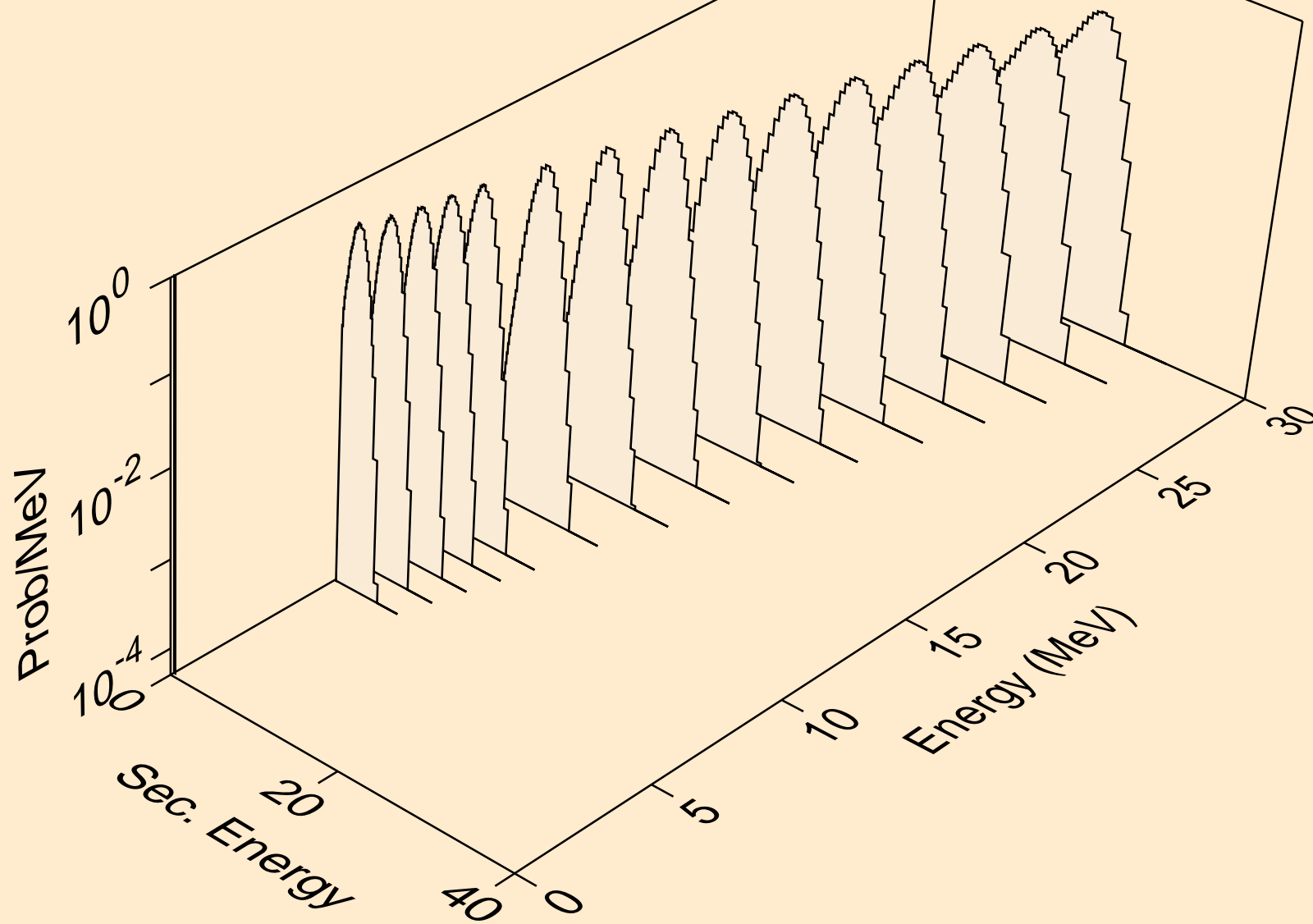
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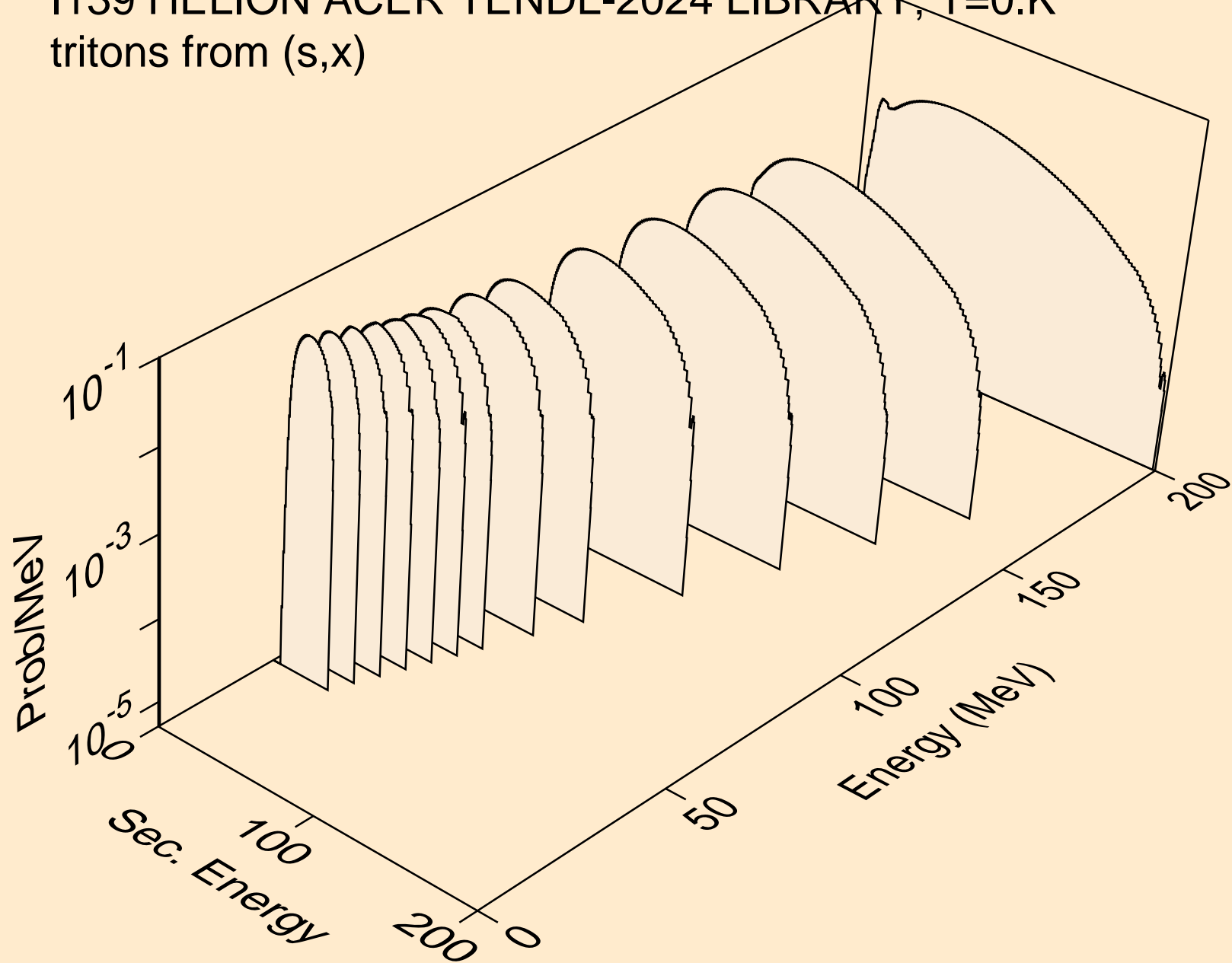
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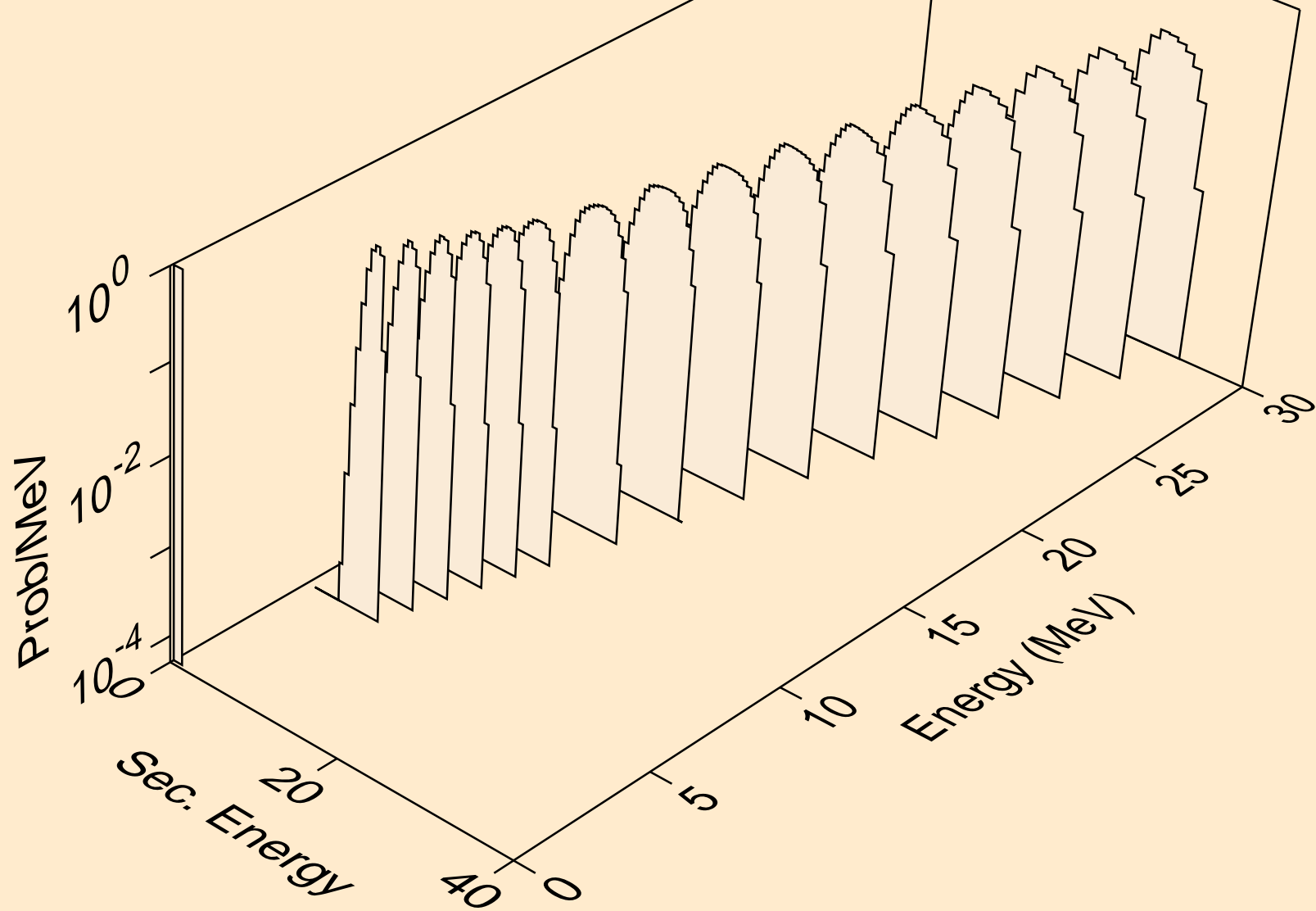
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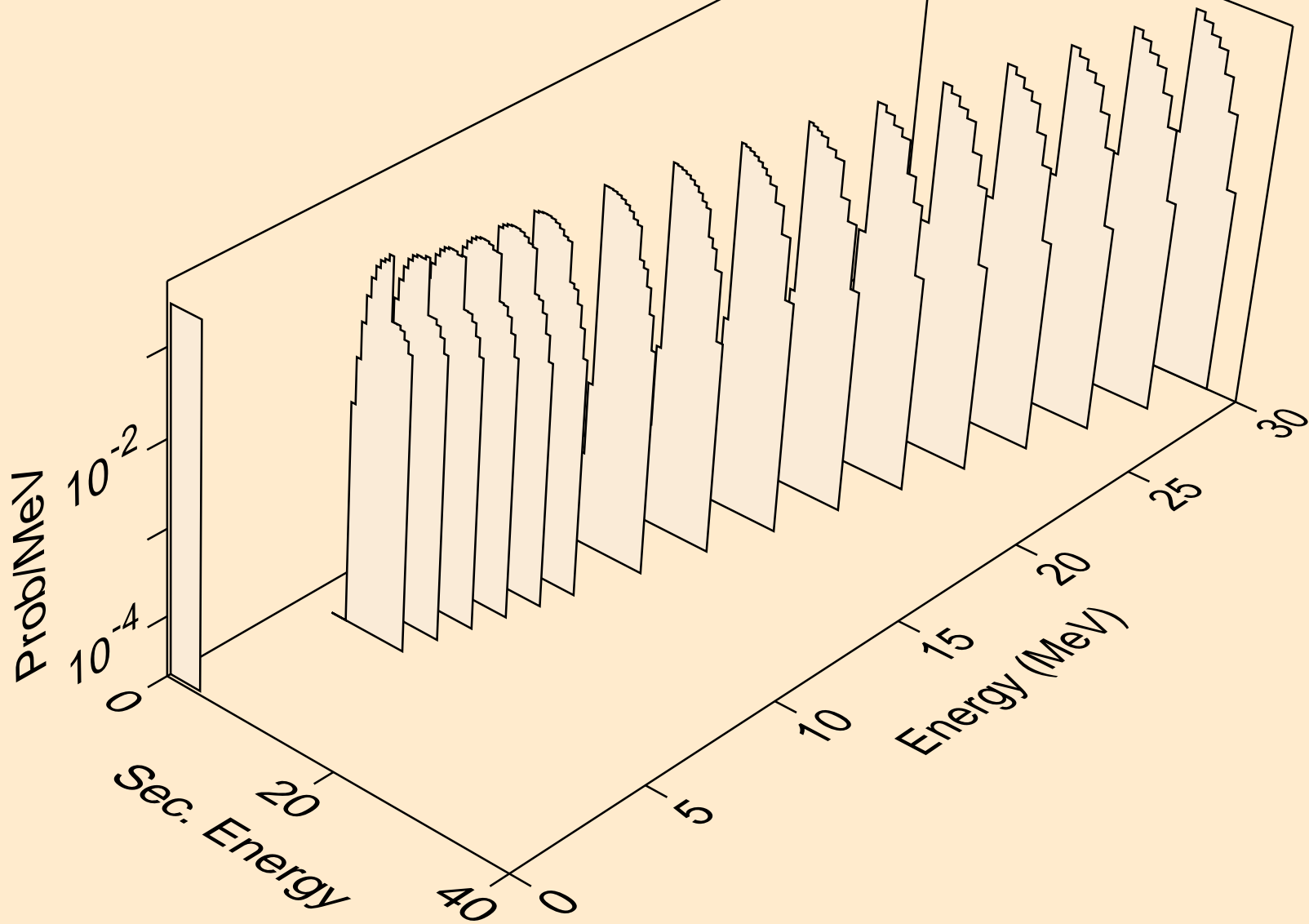
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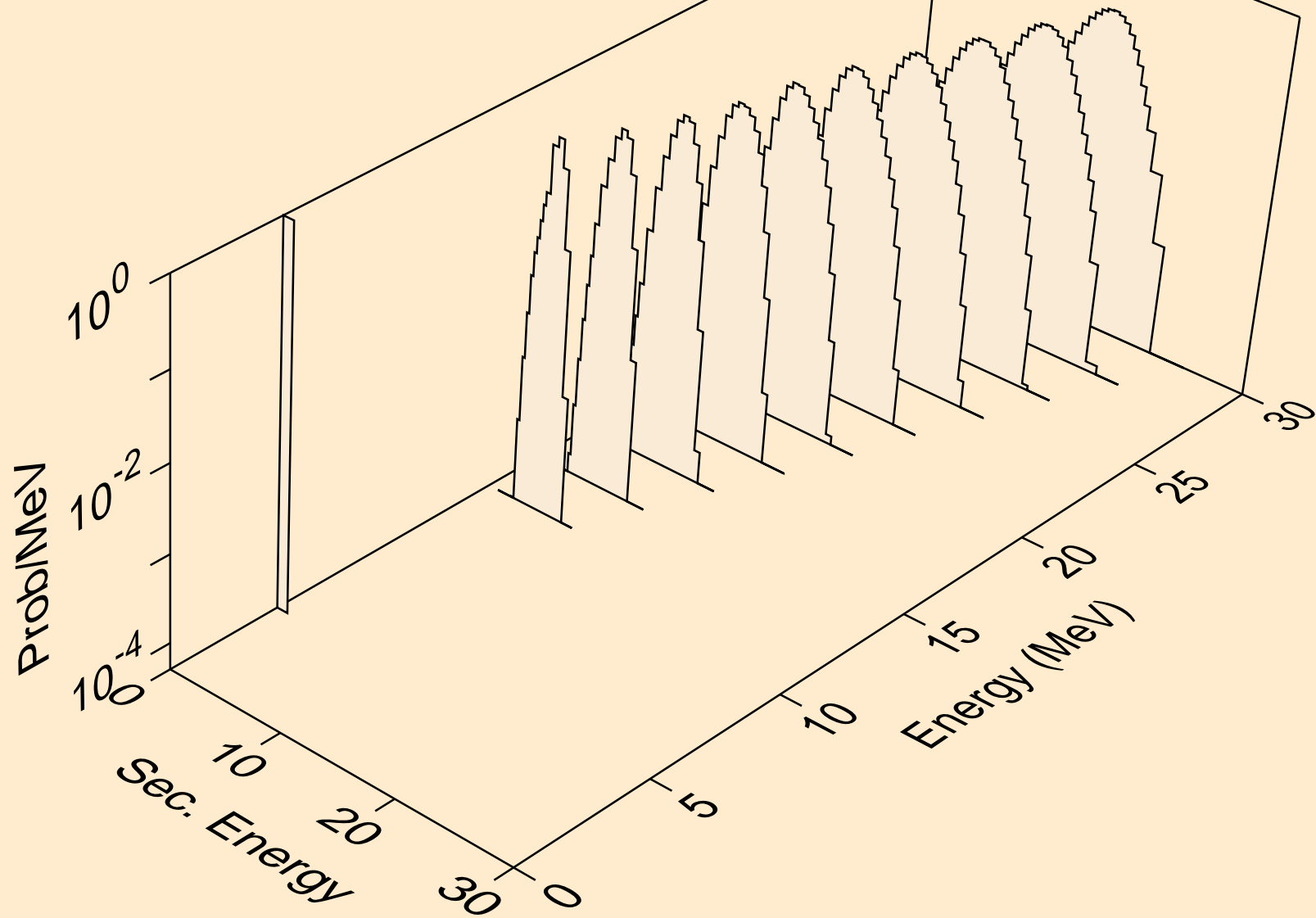
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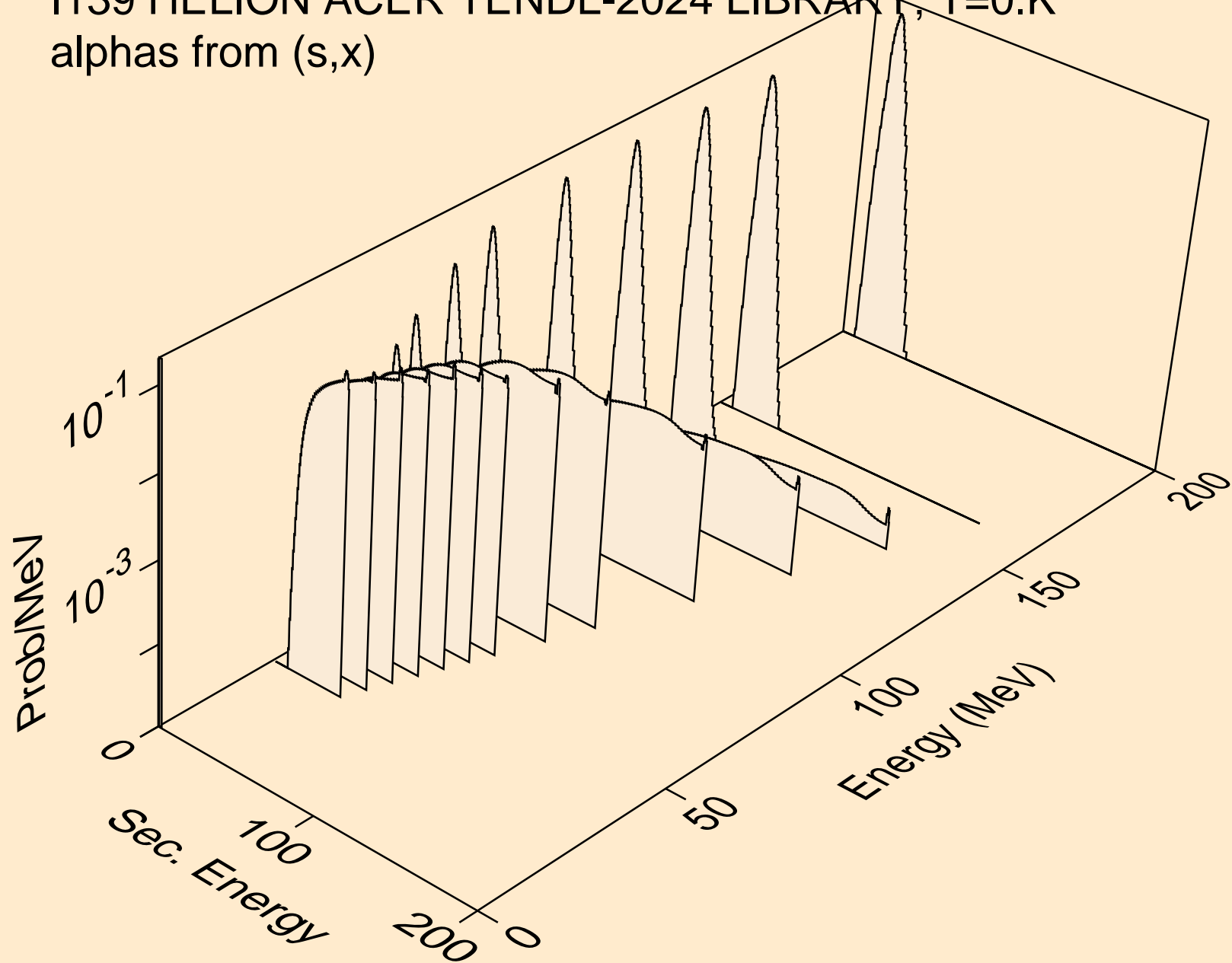
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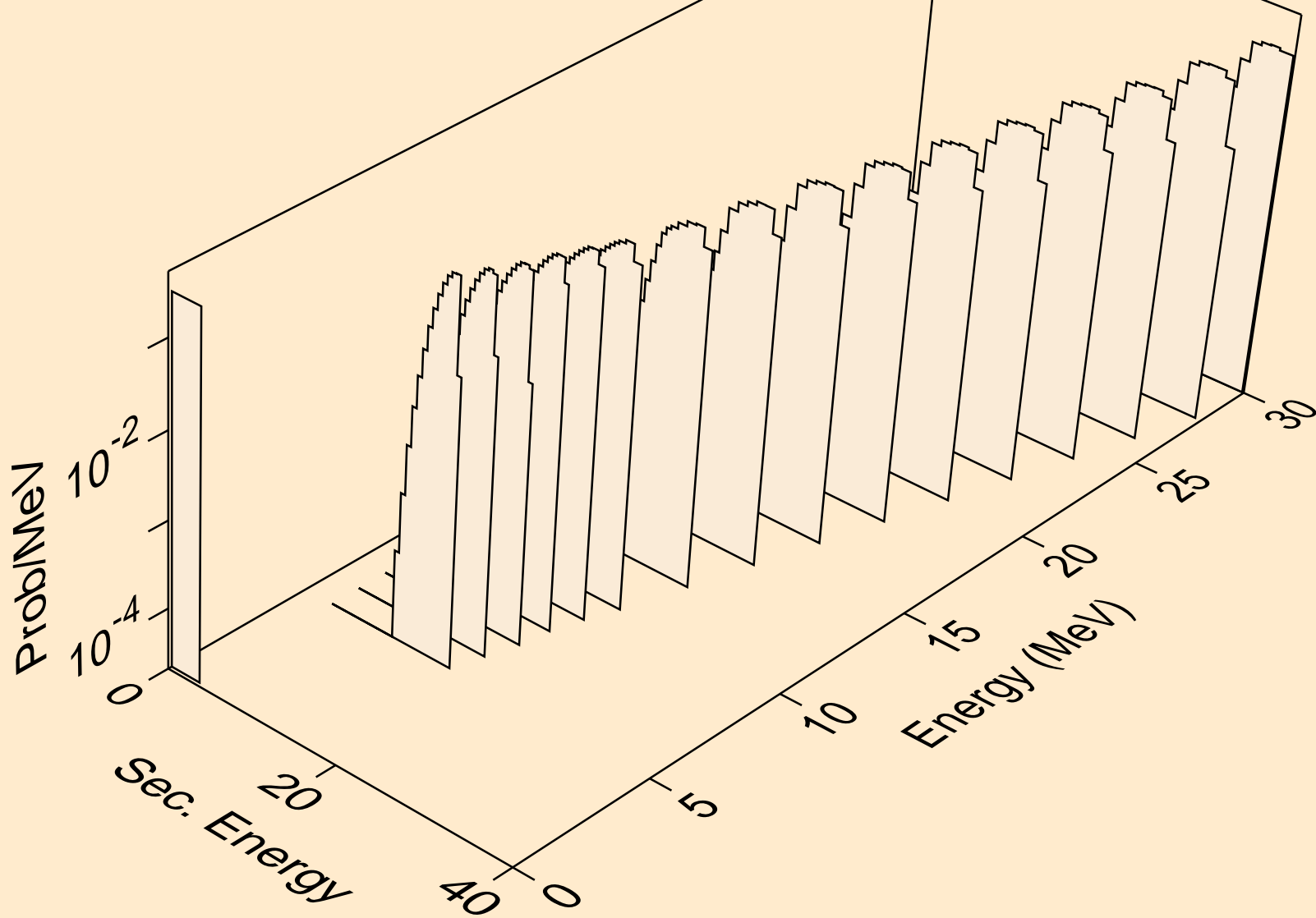
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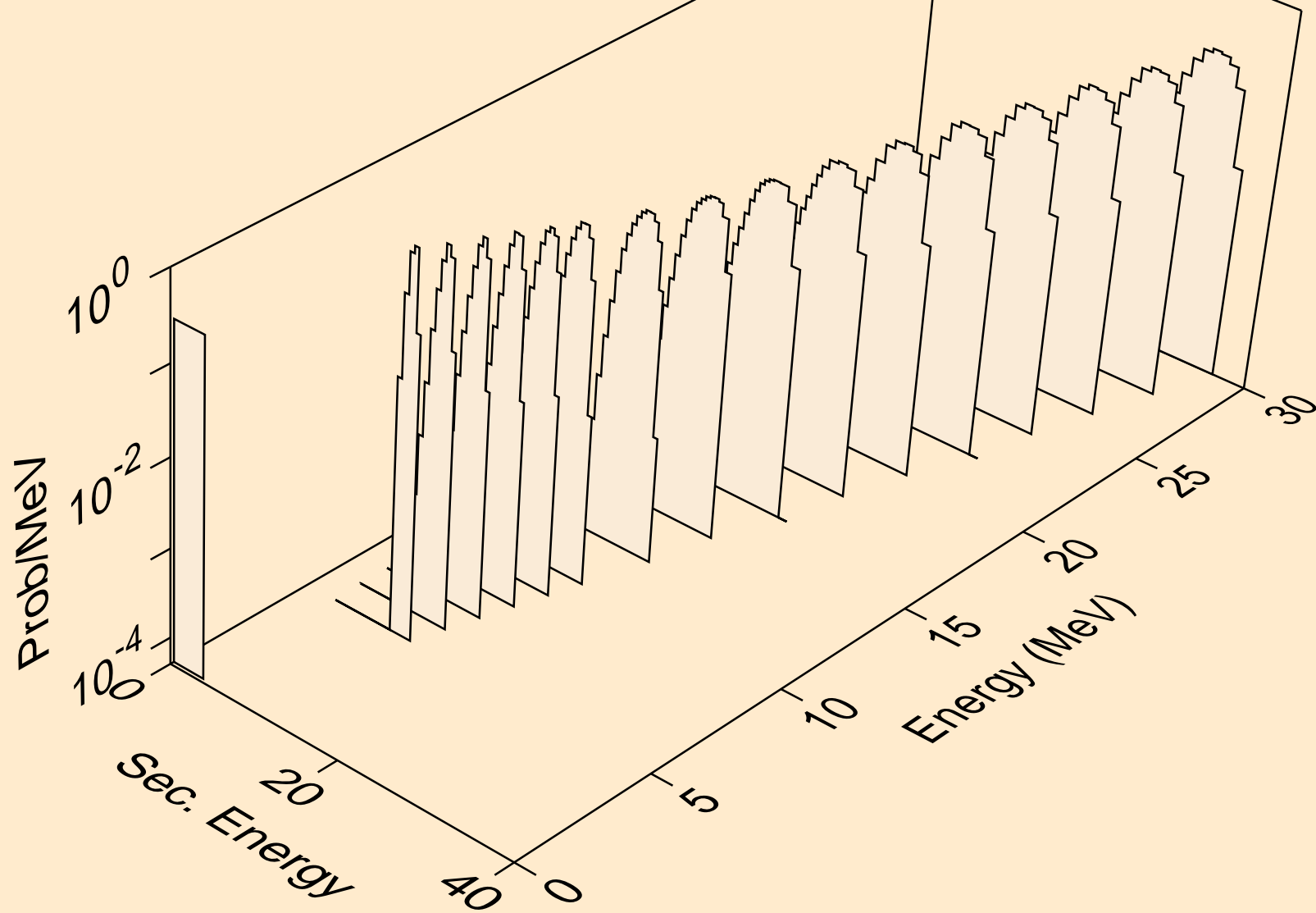
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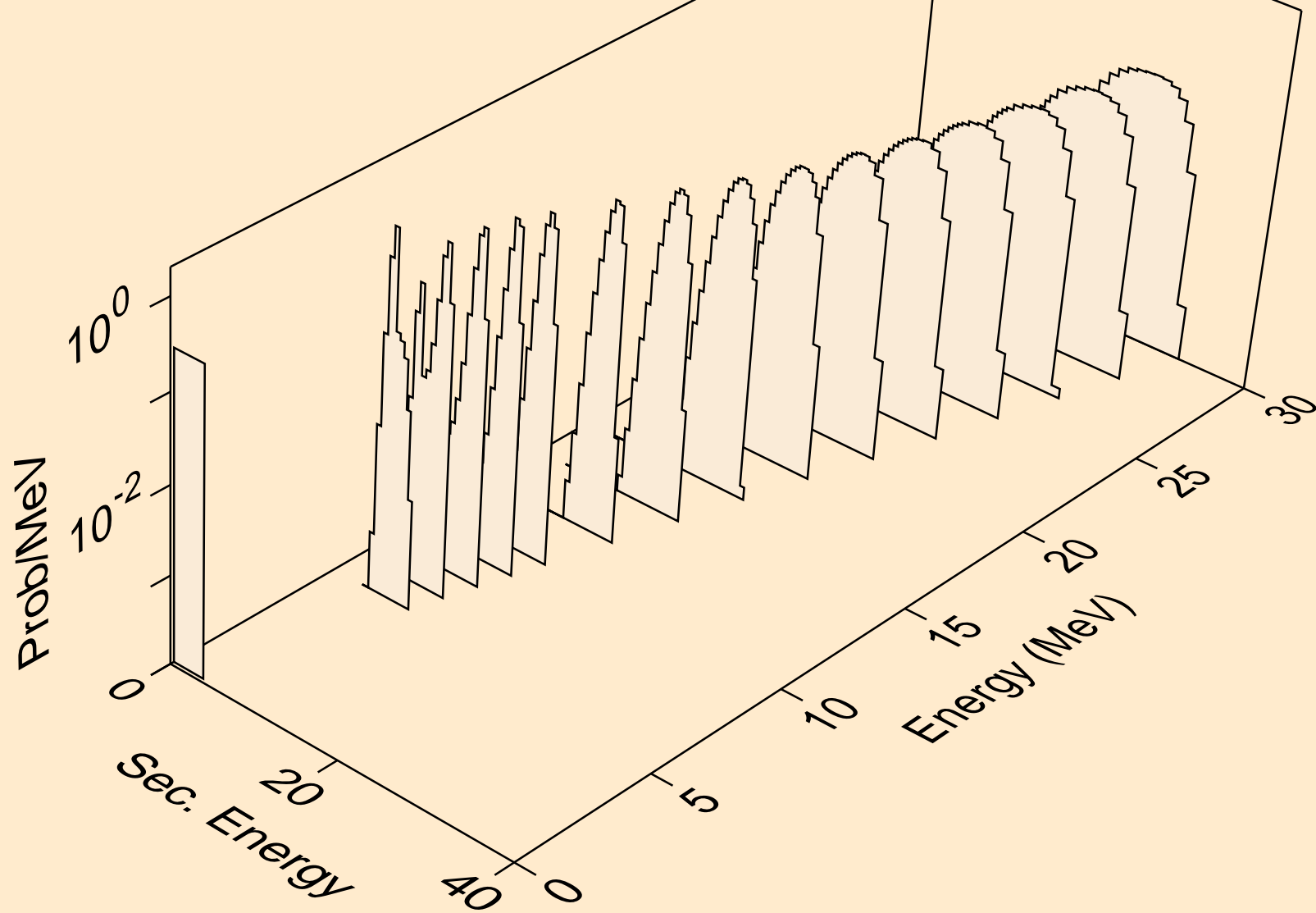
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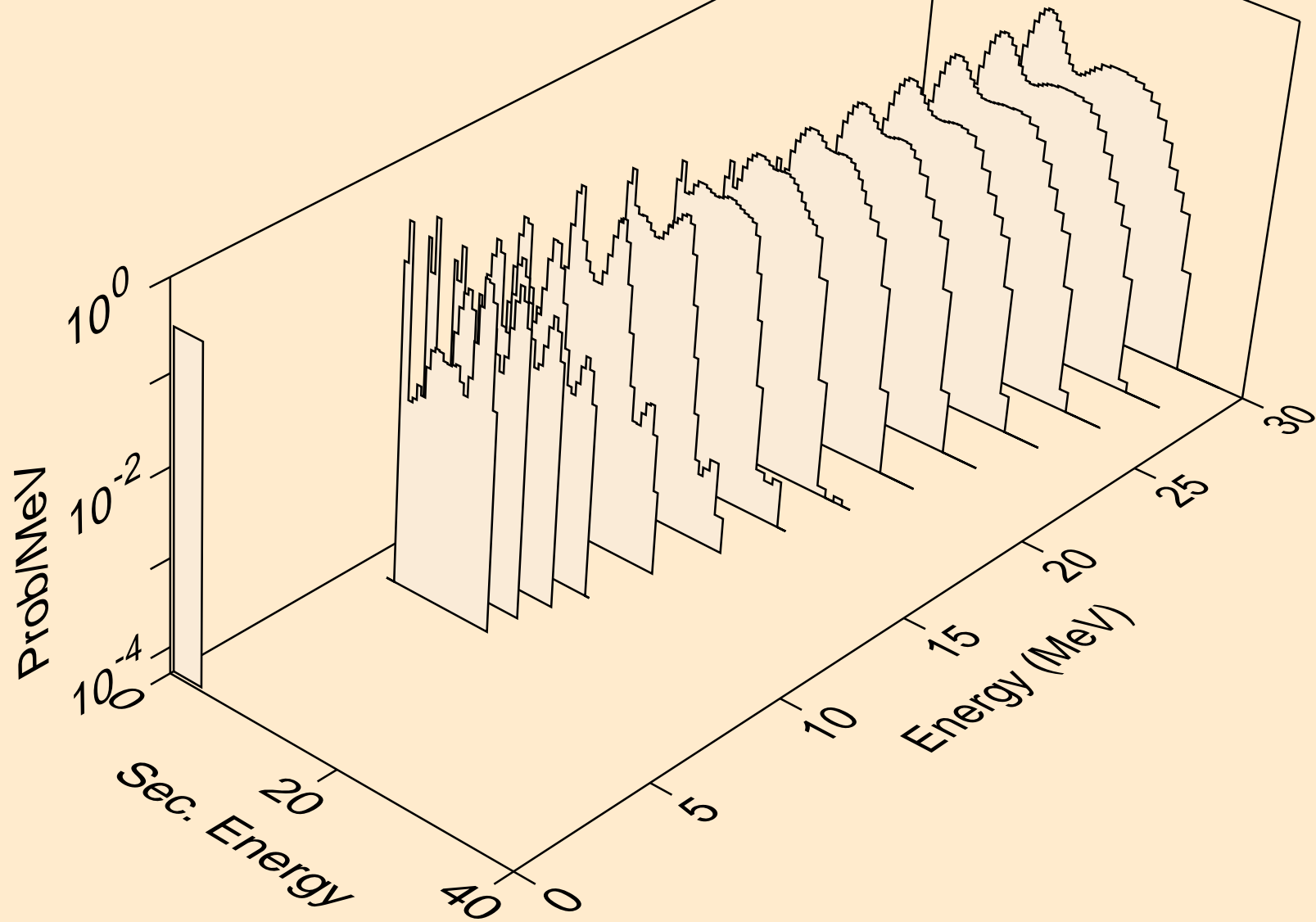
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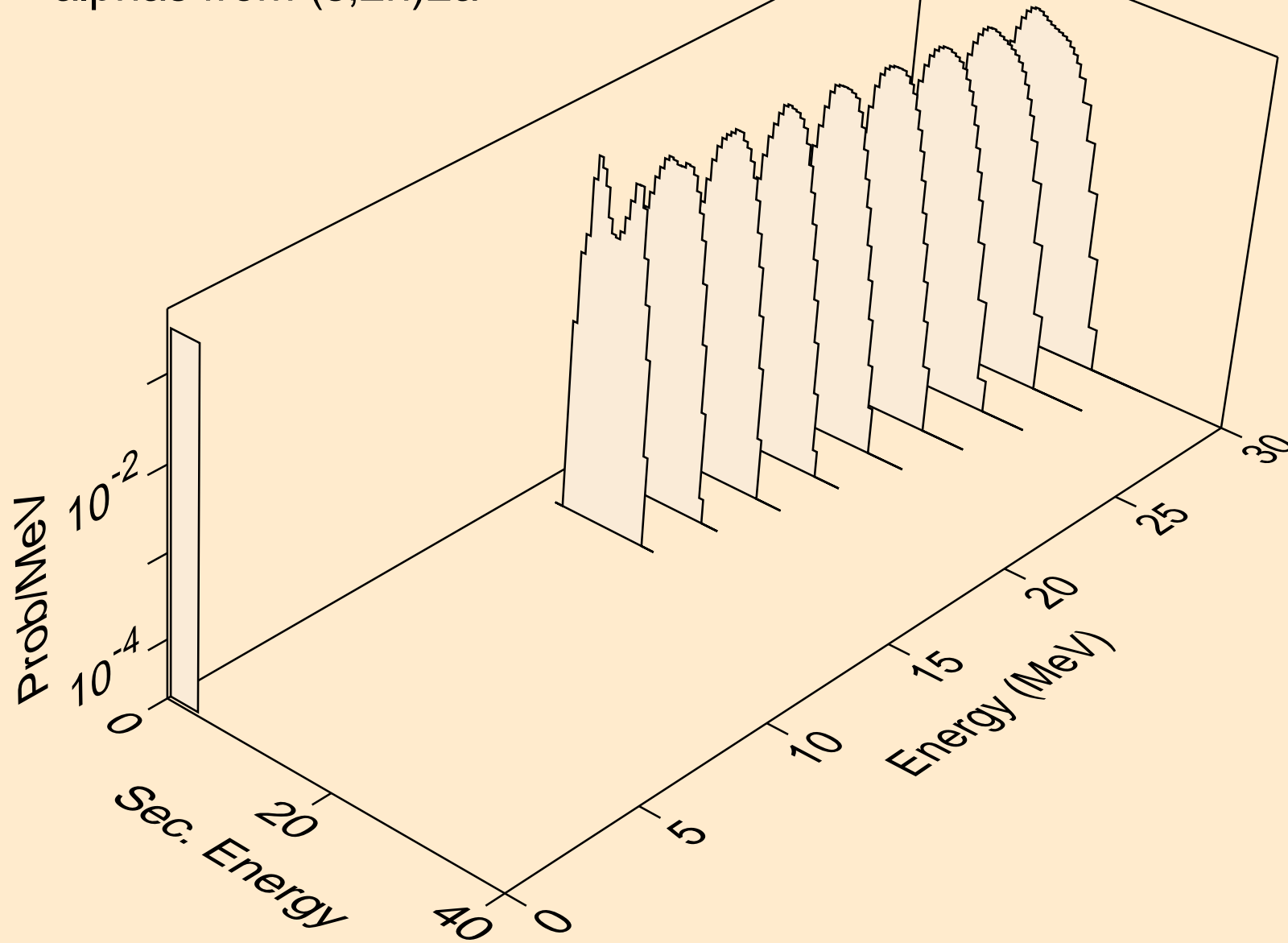
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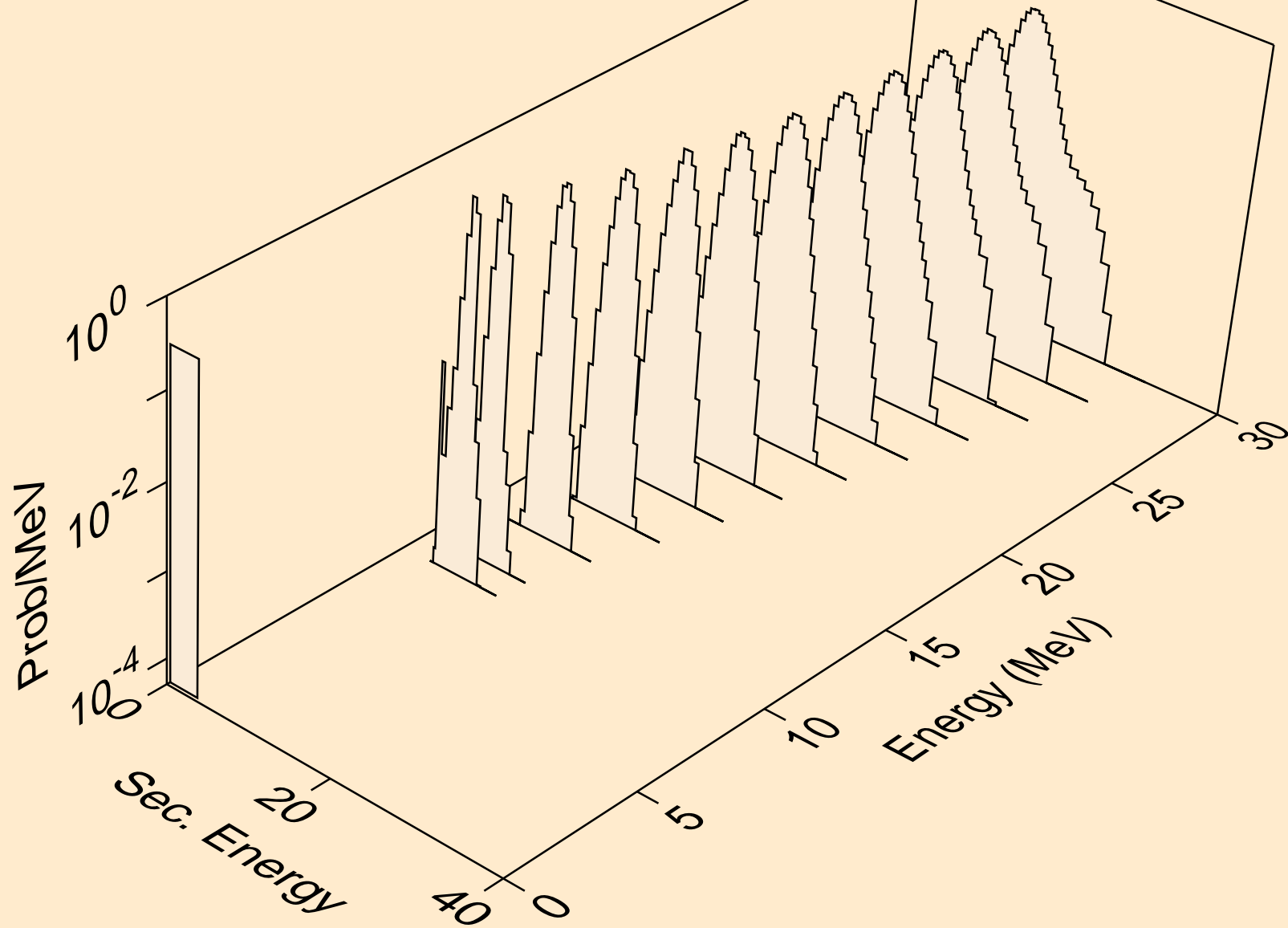
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alphas from (s,n\*)2a



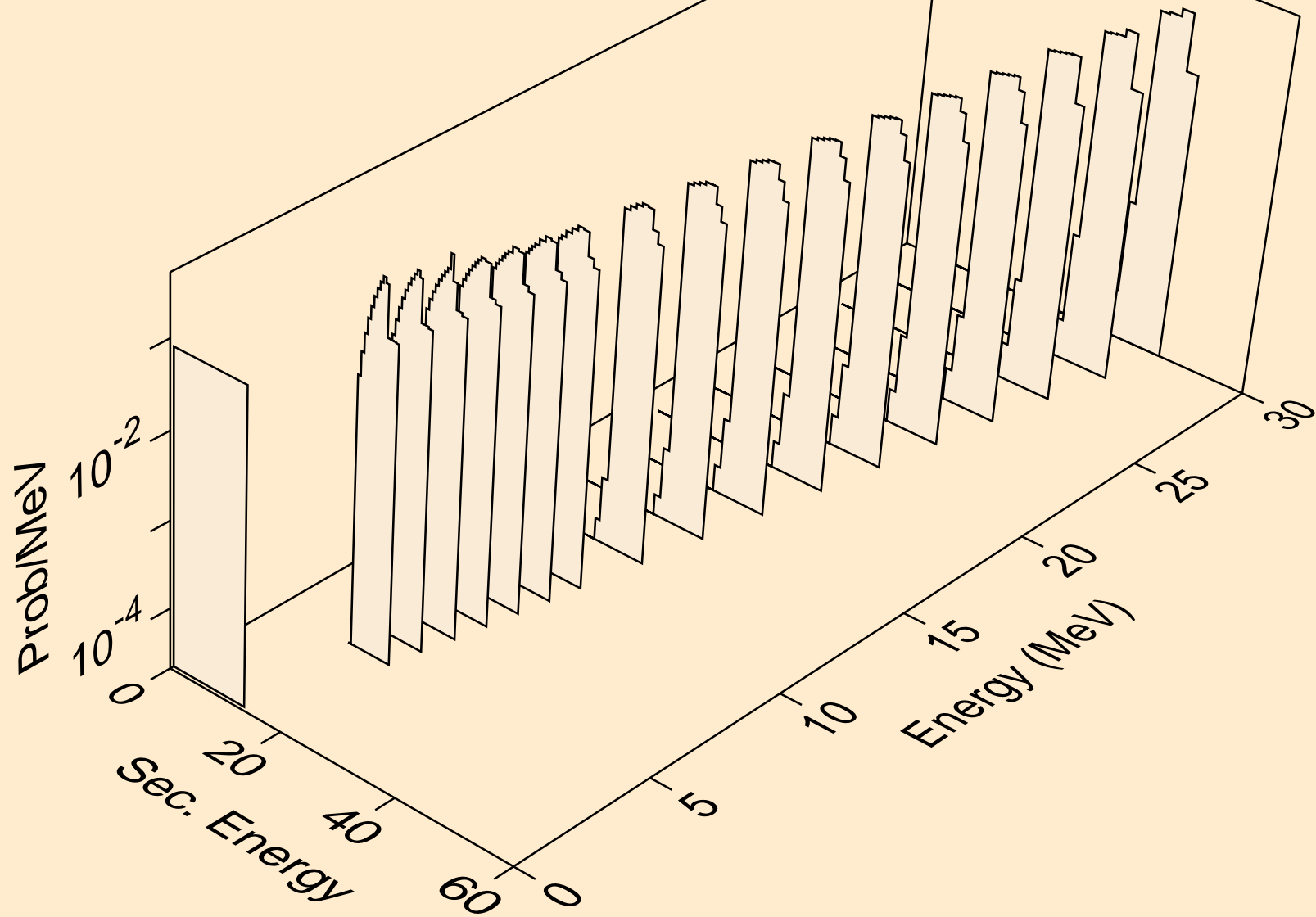
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alphas from (s,2n)2a



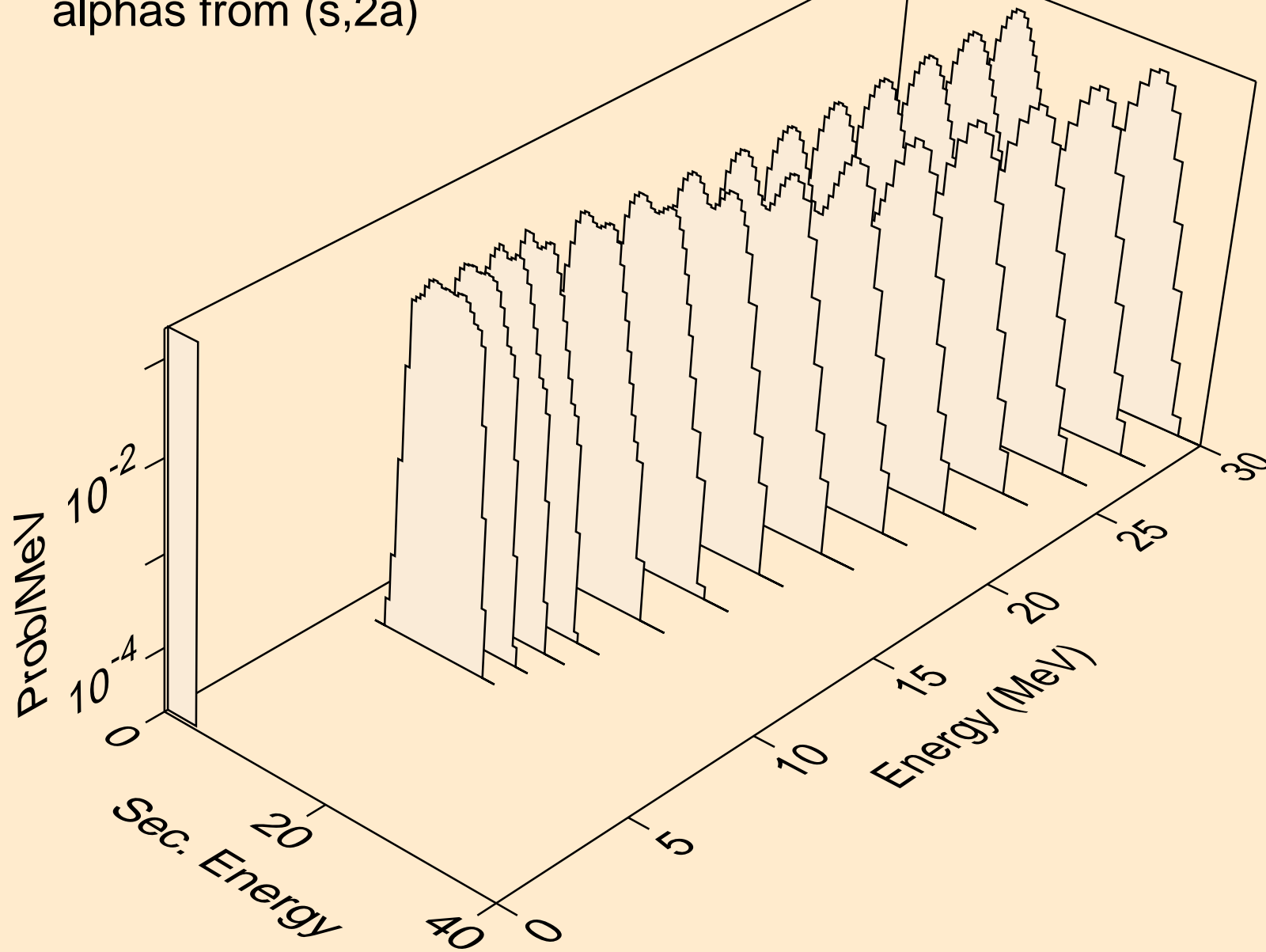
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alphas from (s,npa)



I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
alphas from (s,a)



I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
alphas from (s,2a)



I139 HELION ACER TENDL-2024 LIBRARY; T=0.K  
alphas from (s,da)

