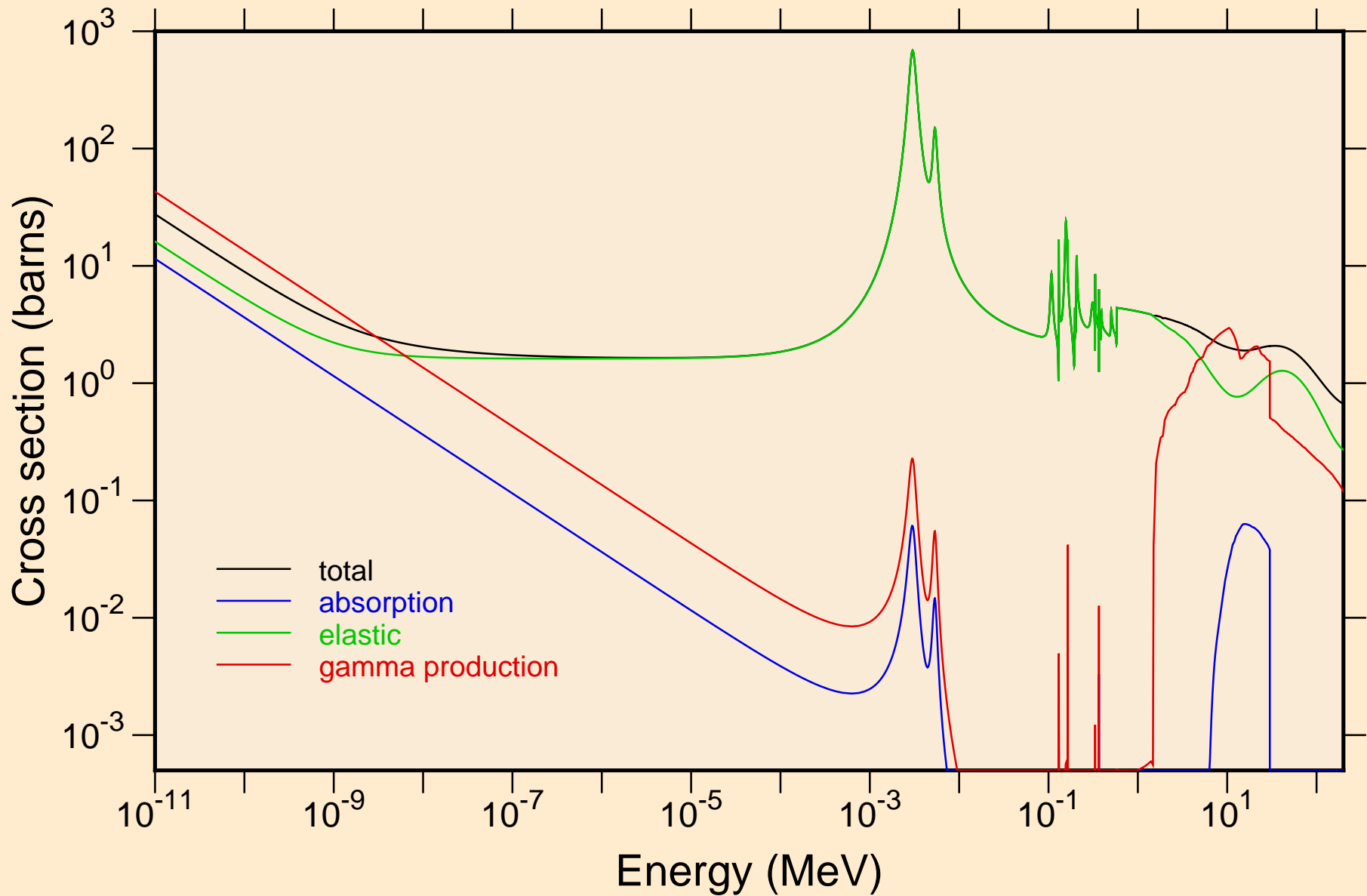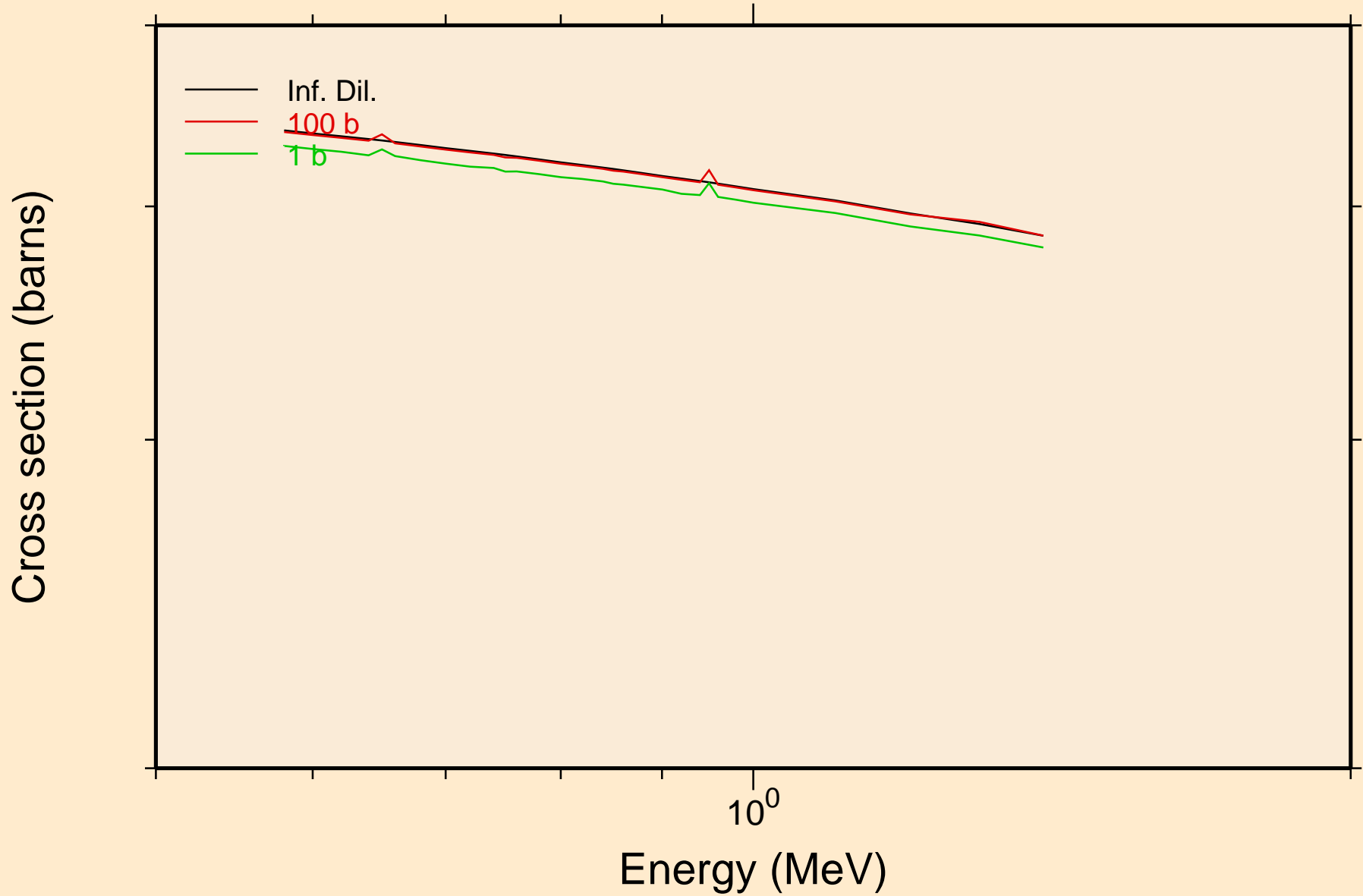MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Principal cross sections

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
UR total cross section

- Inf. Dil.
- 100 b
- 1 b

Cross section (barns)

Energy (MeV)

$10^0$

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
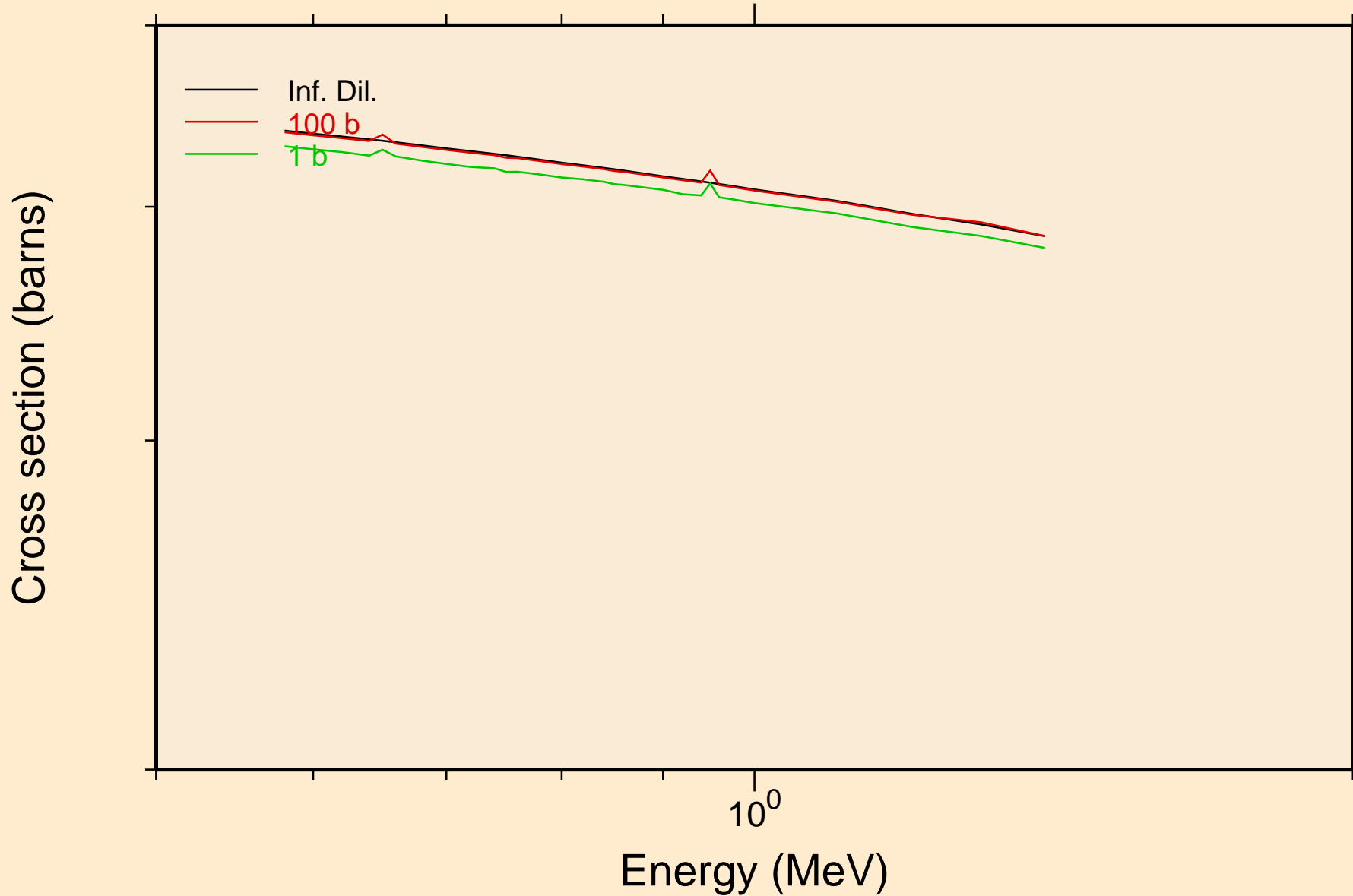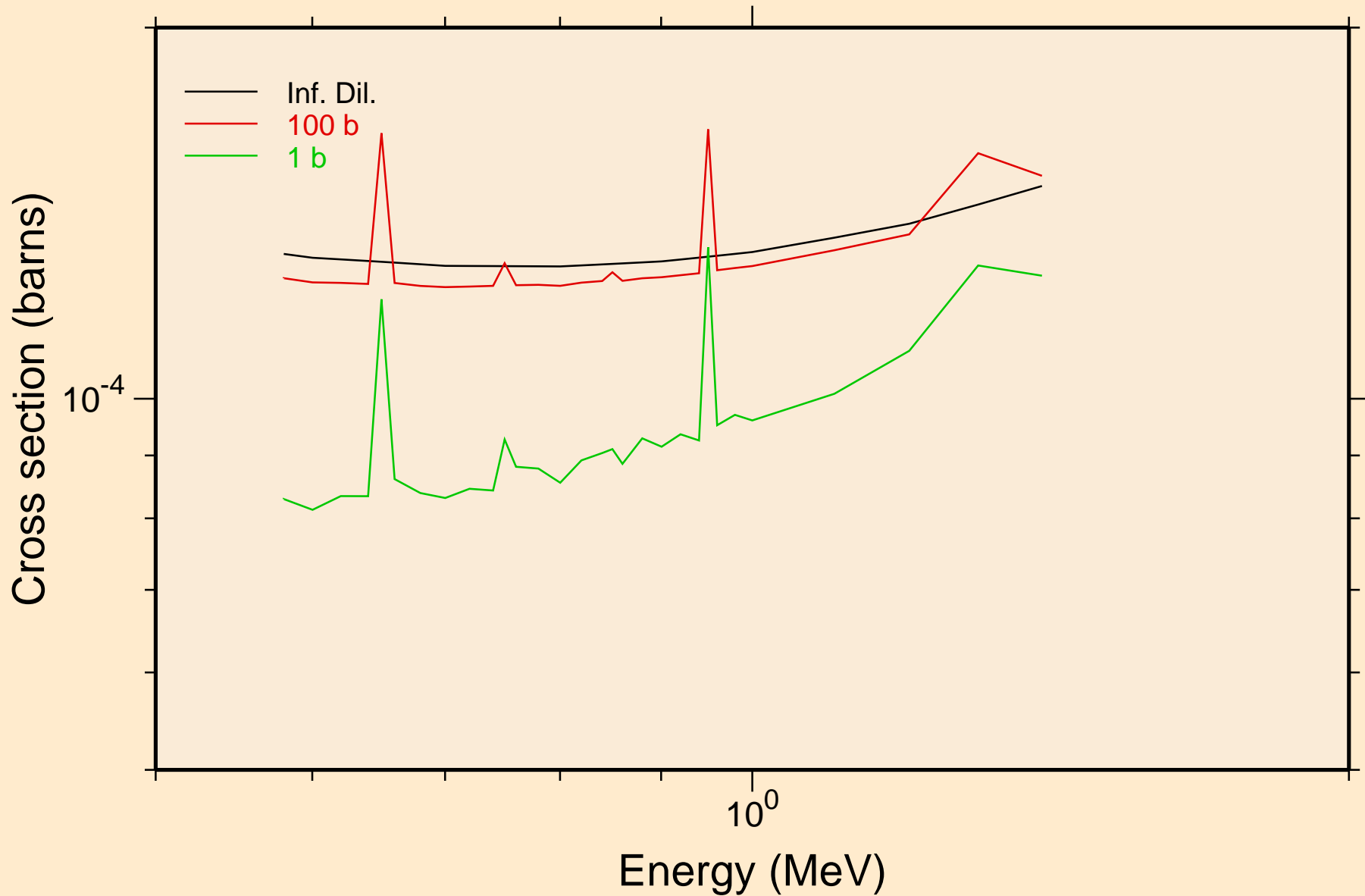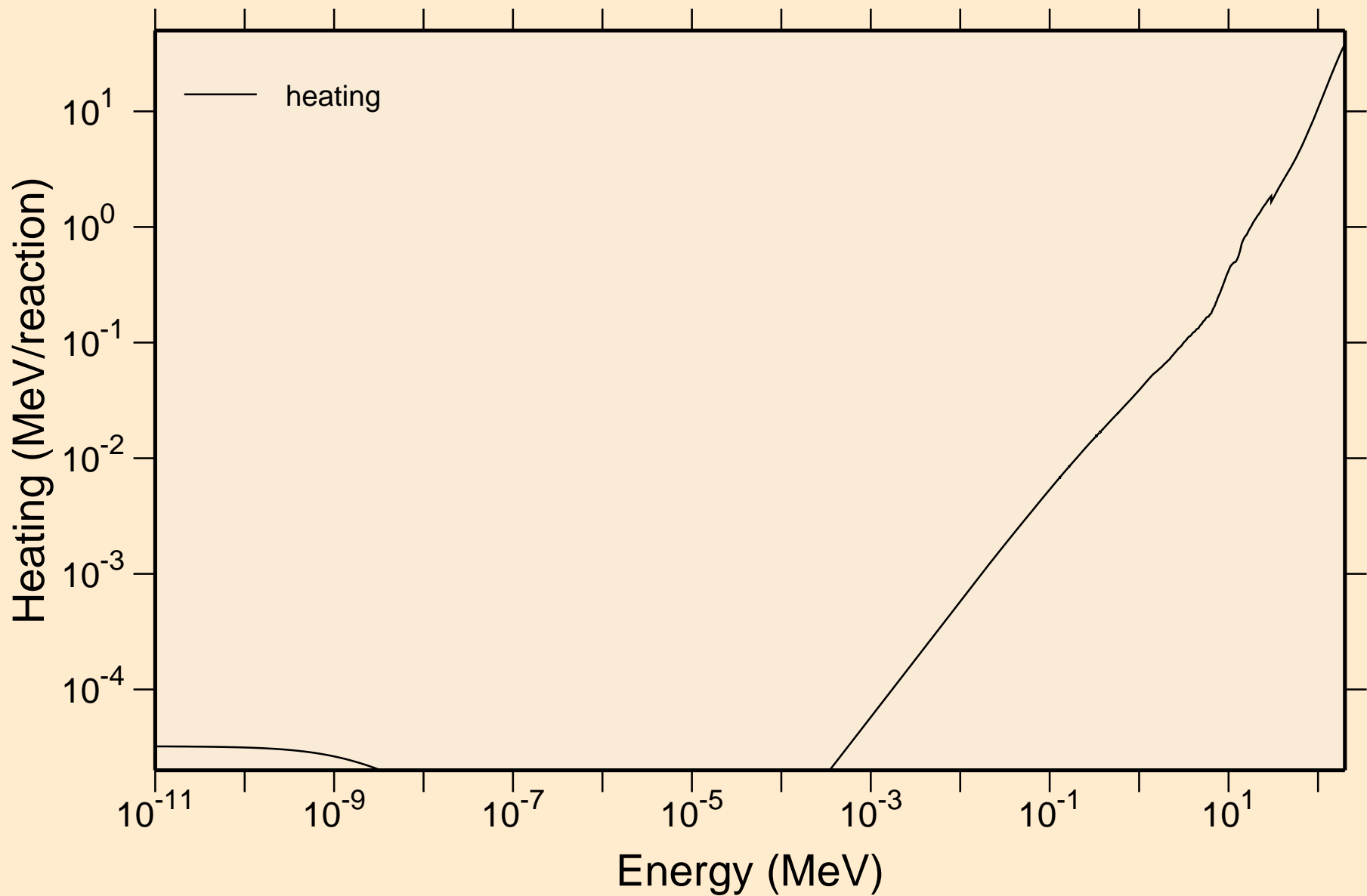UR elastic cross section

Legend:
- Inf. Dil.
- 100 b
- 1 b

Cross section (barns)
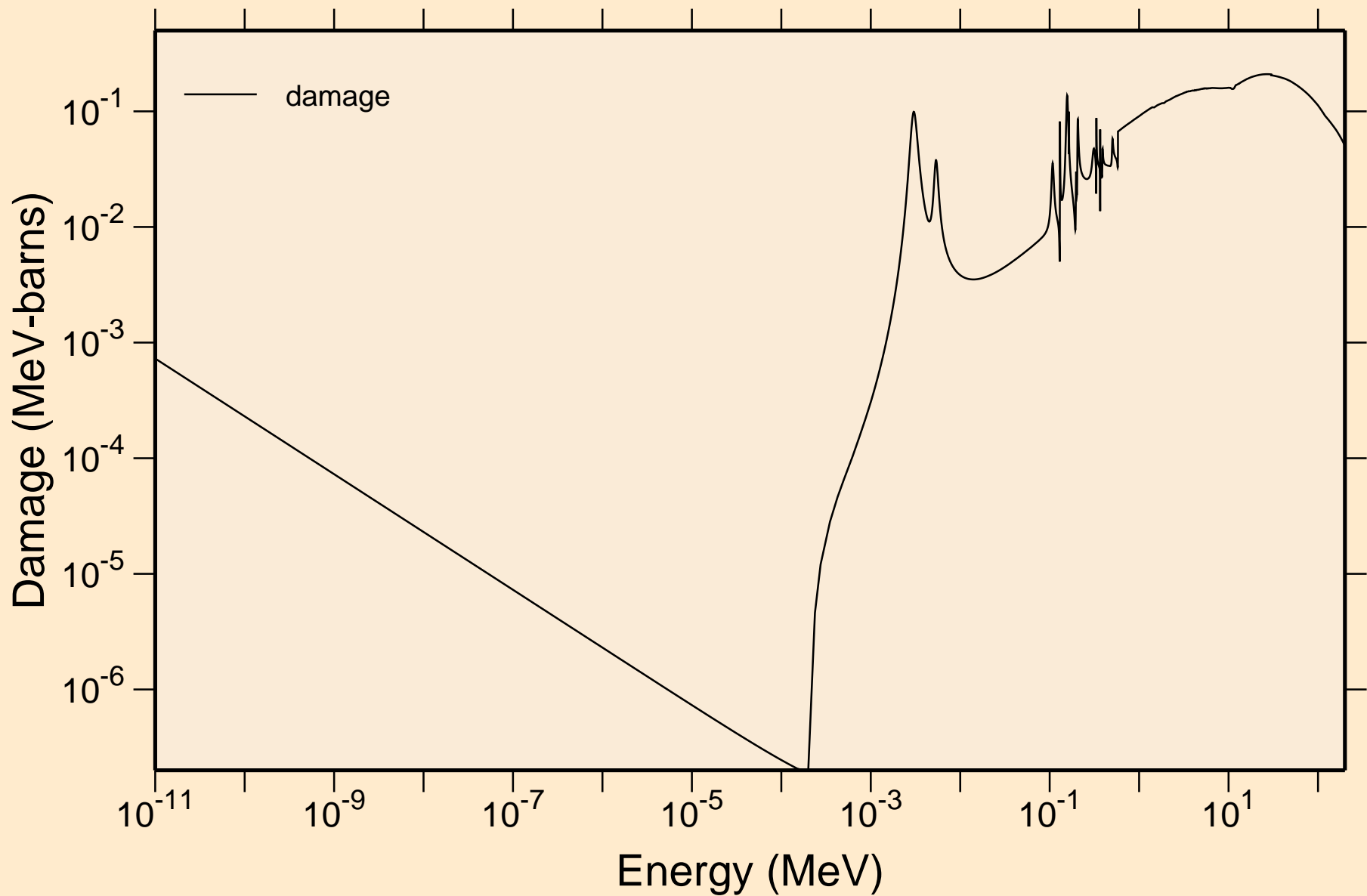
Energy (MeV)

$10^0$

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
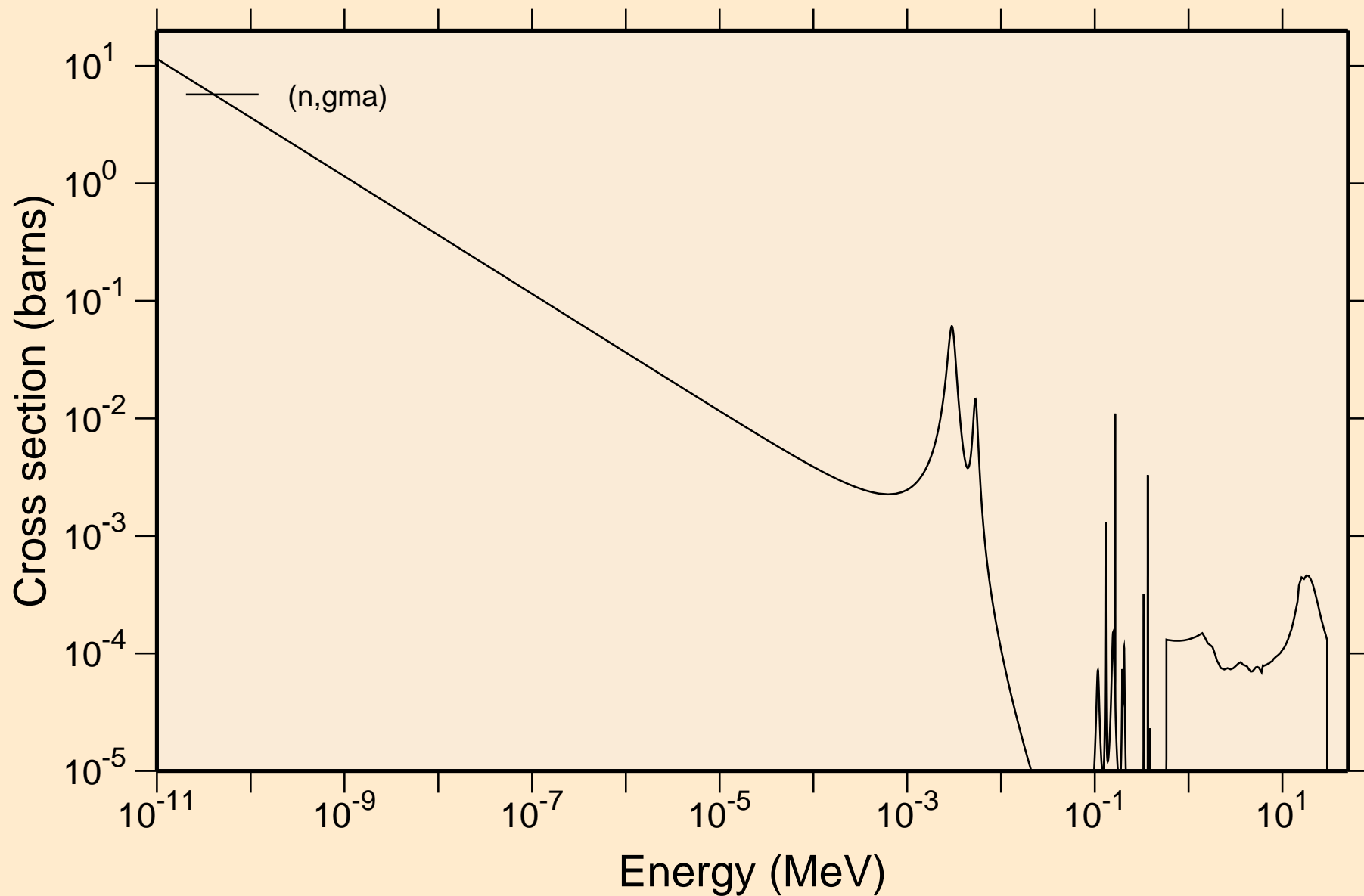UR capture cross section

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
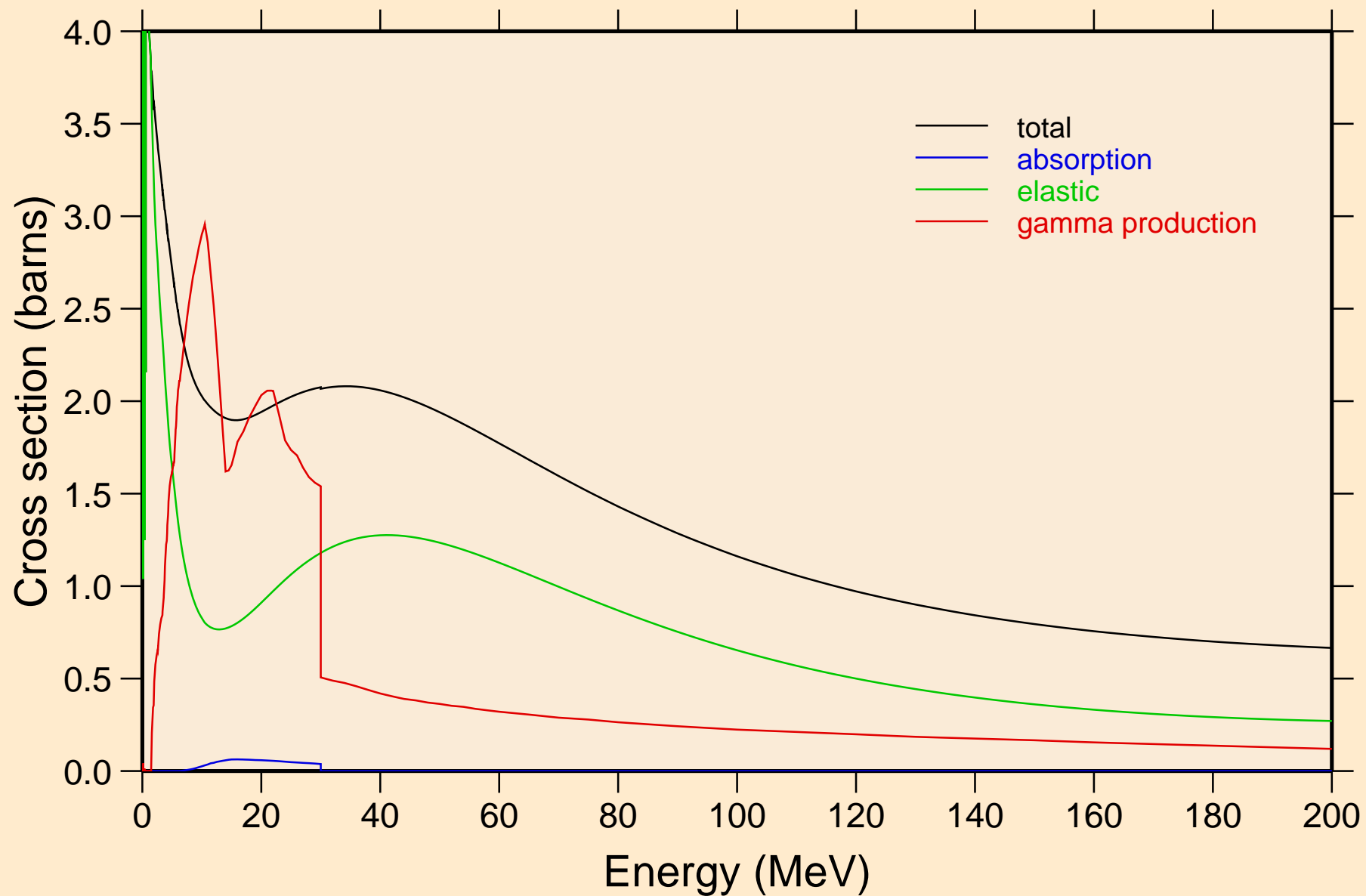Heating

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Damage

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Non-threshold reactions

(n,gma)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Principal cross sections

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Heating

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Damage

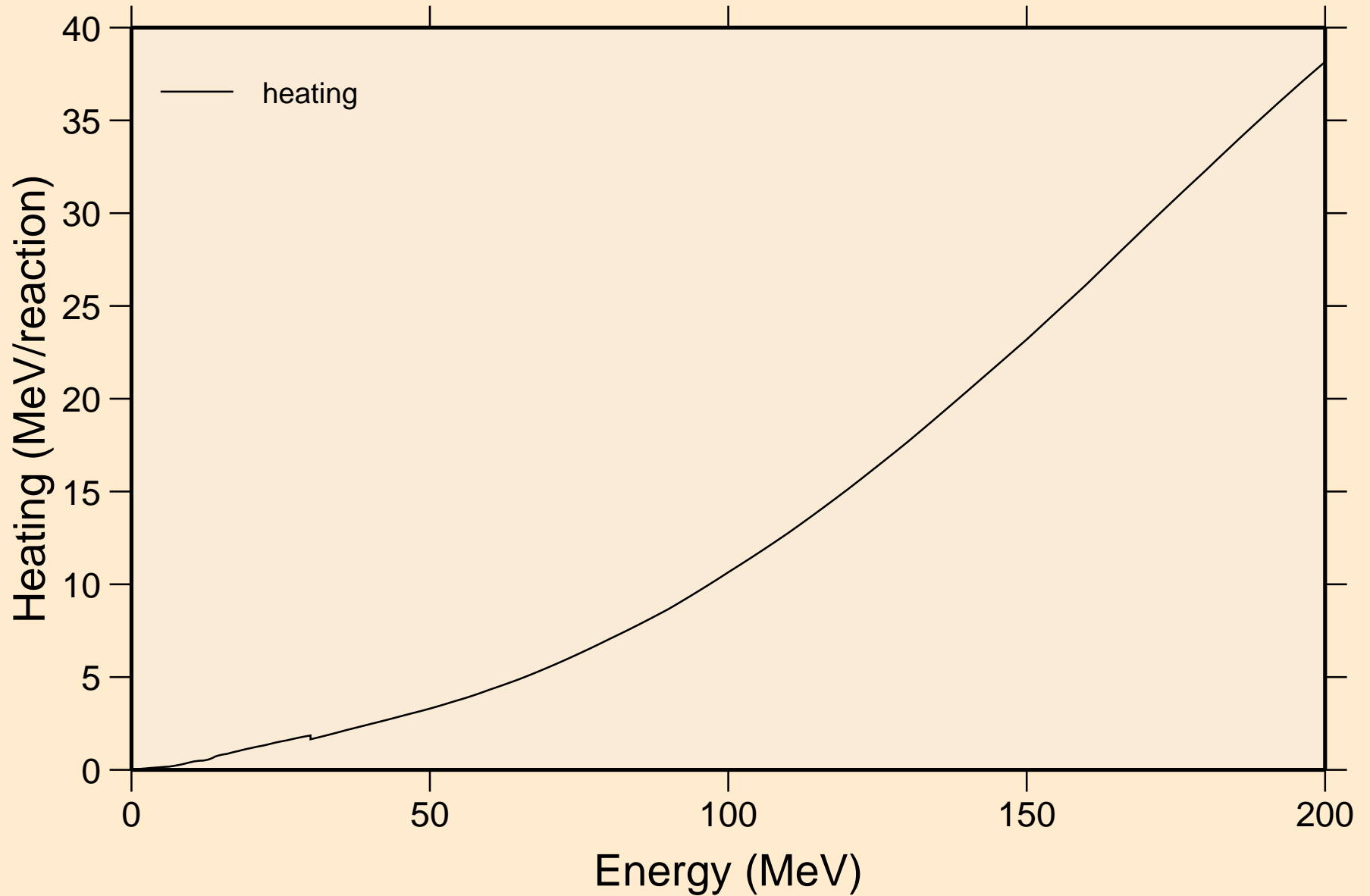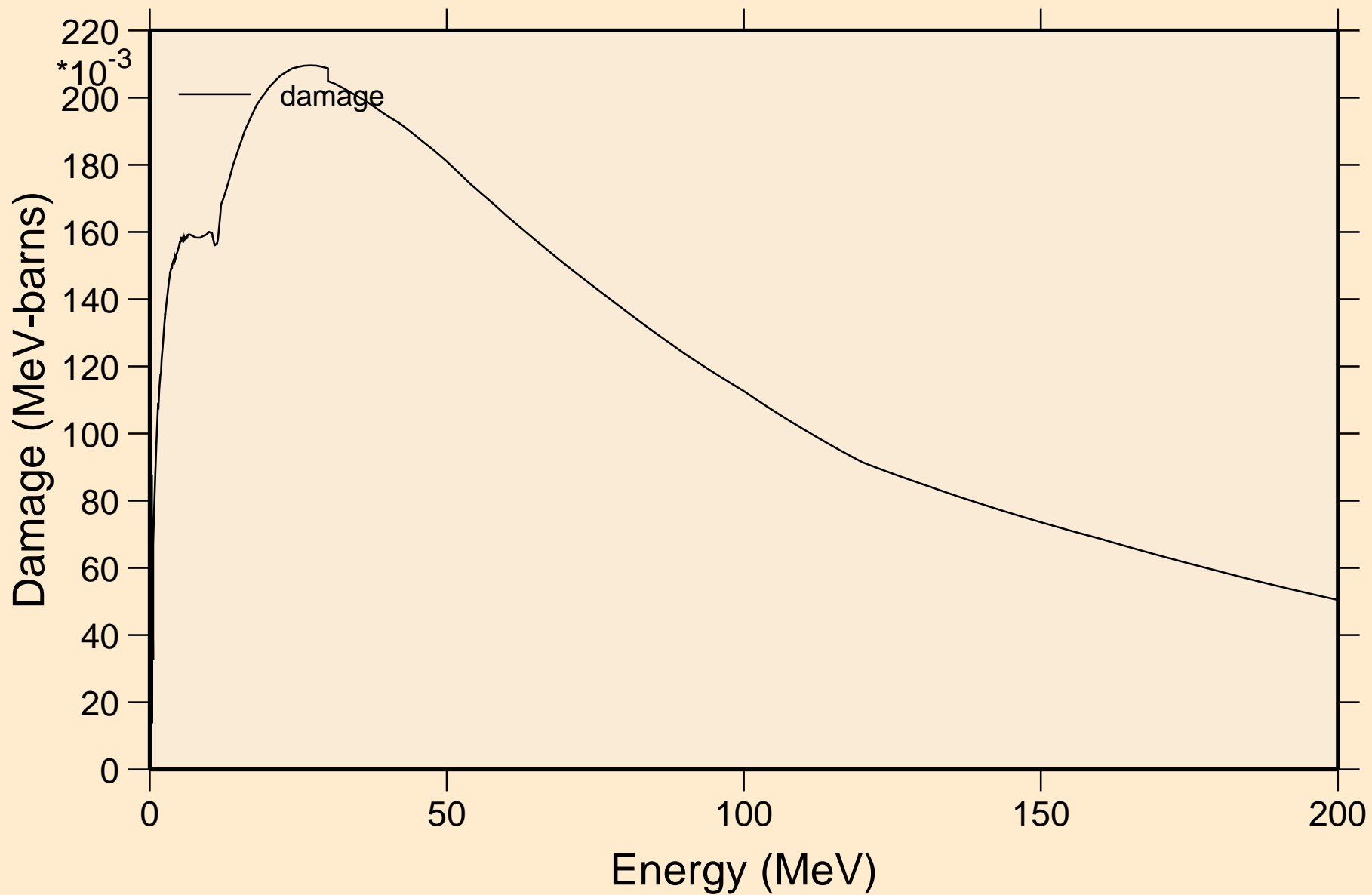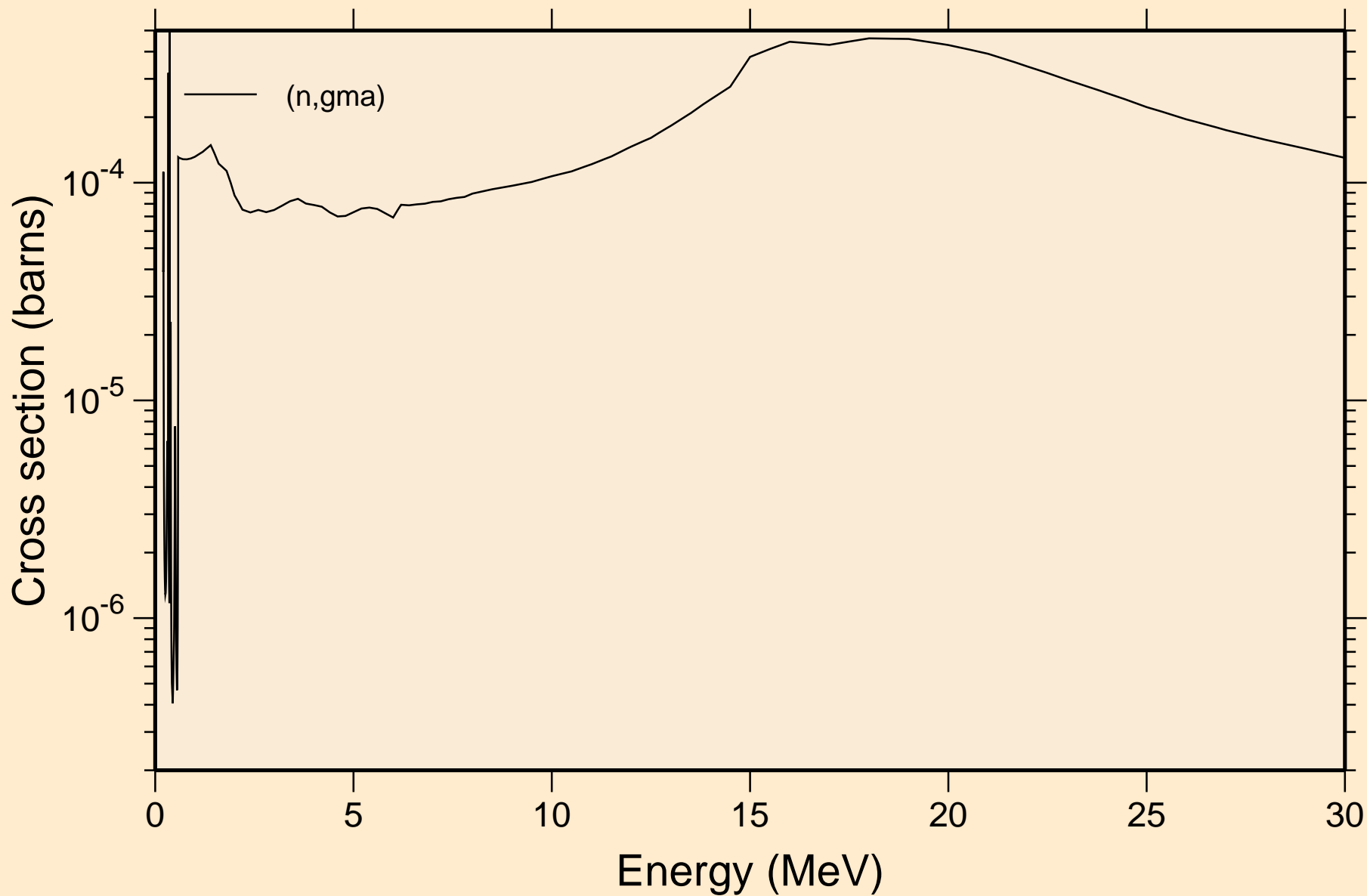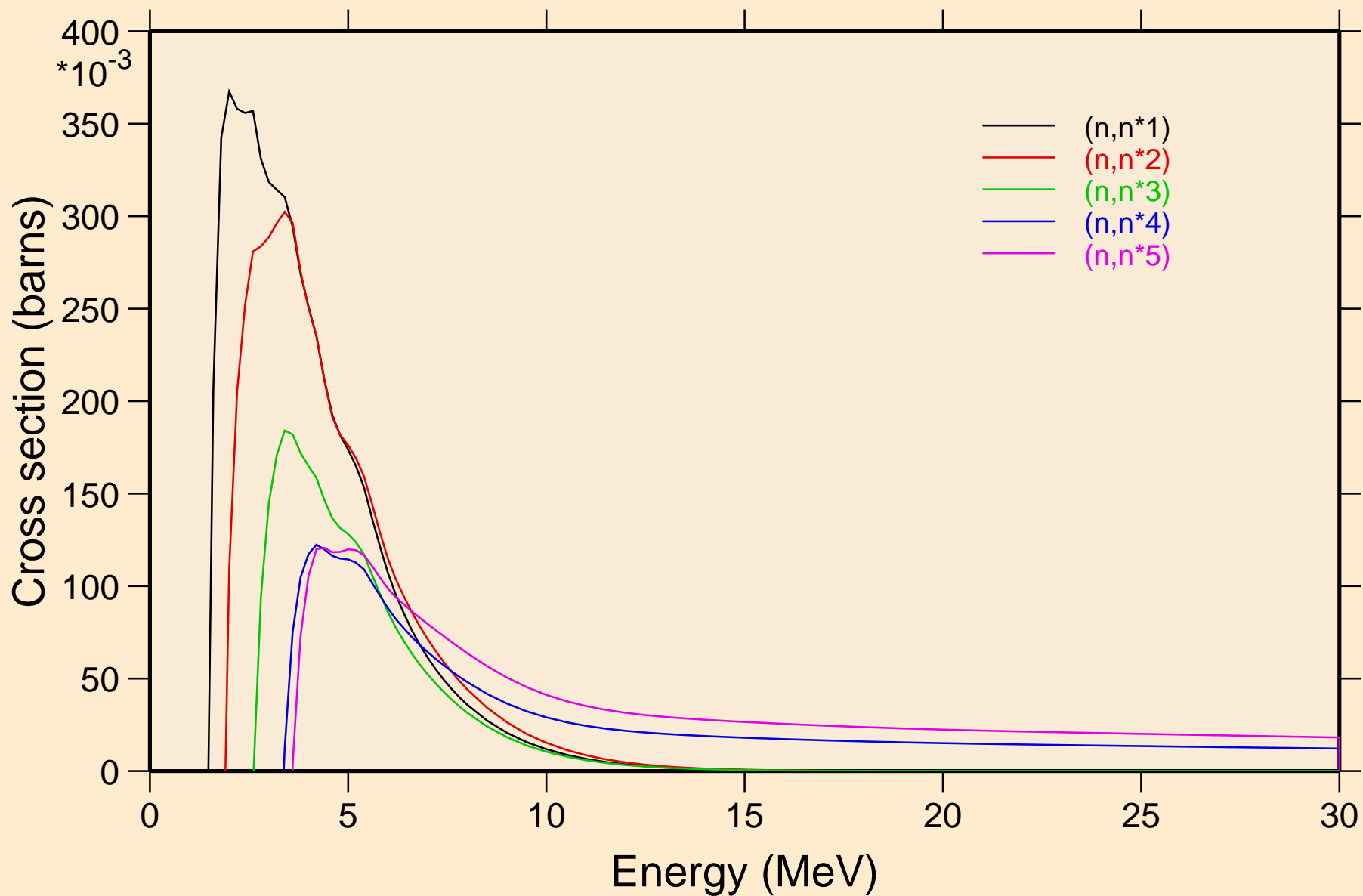MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Non-threshold reactions

(n,gma)

Cross section (barns)

$10^{-4}$

$10^{-5}$
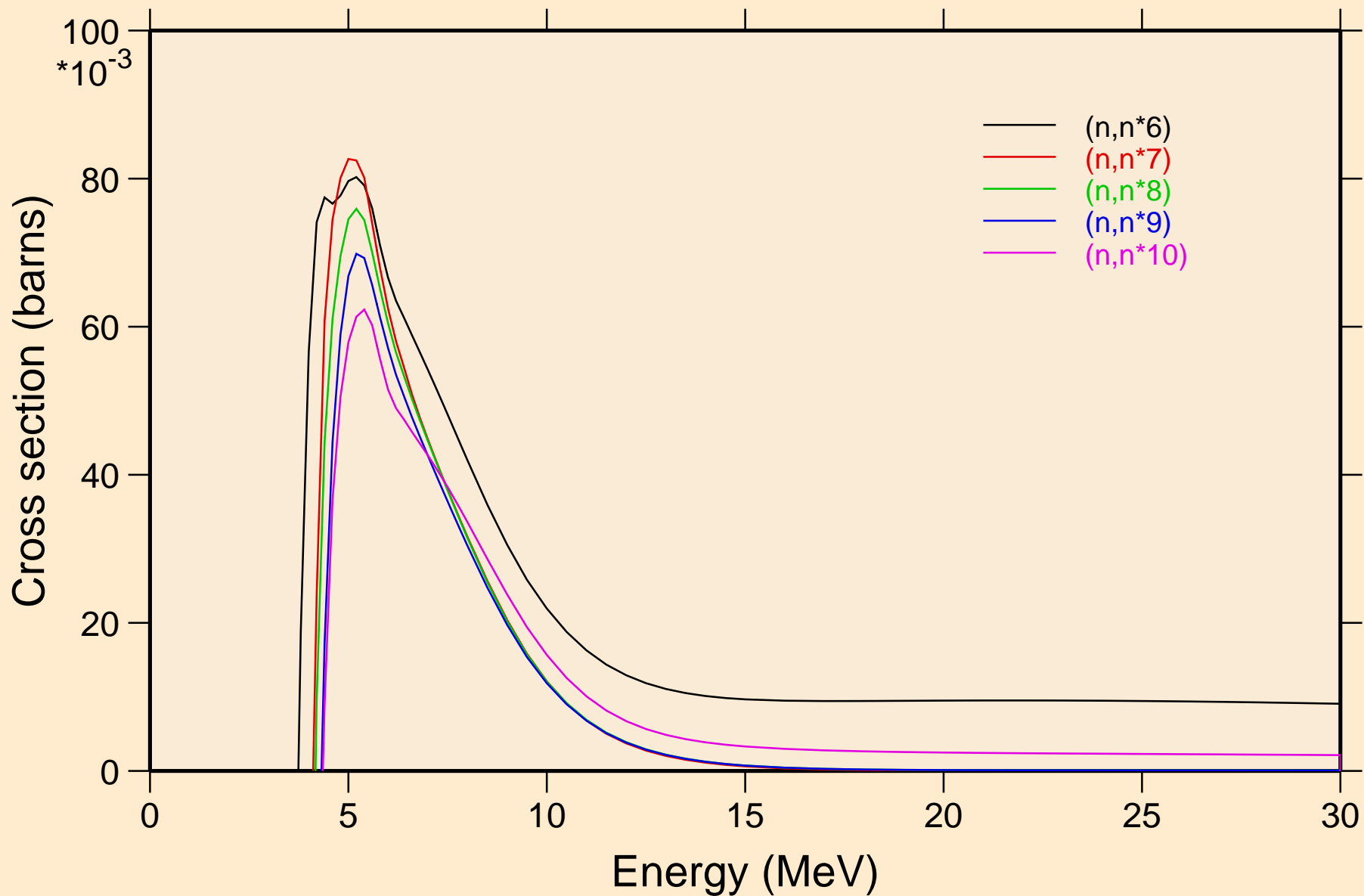
$10^{-6}$

Energy (MeV)
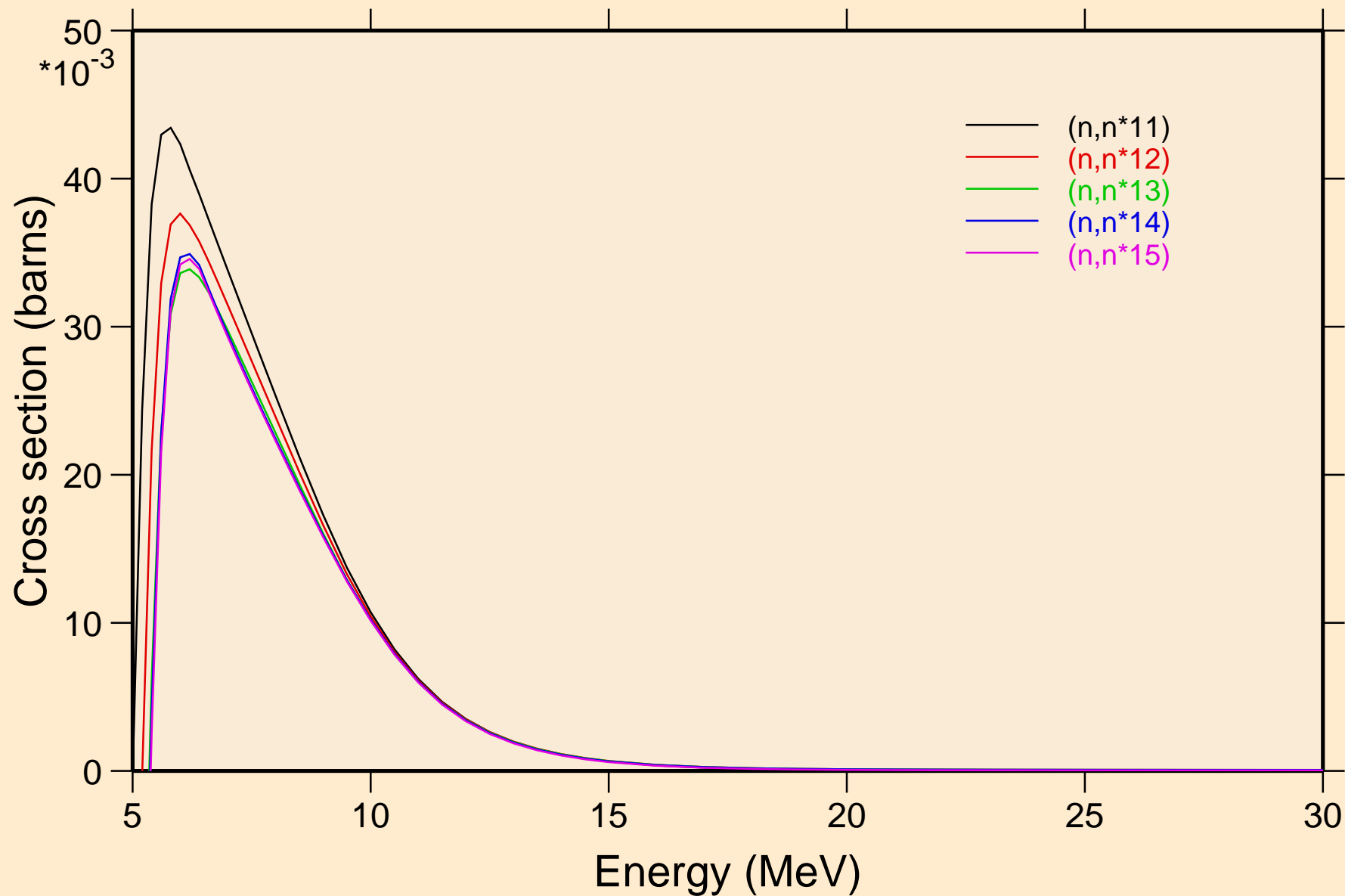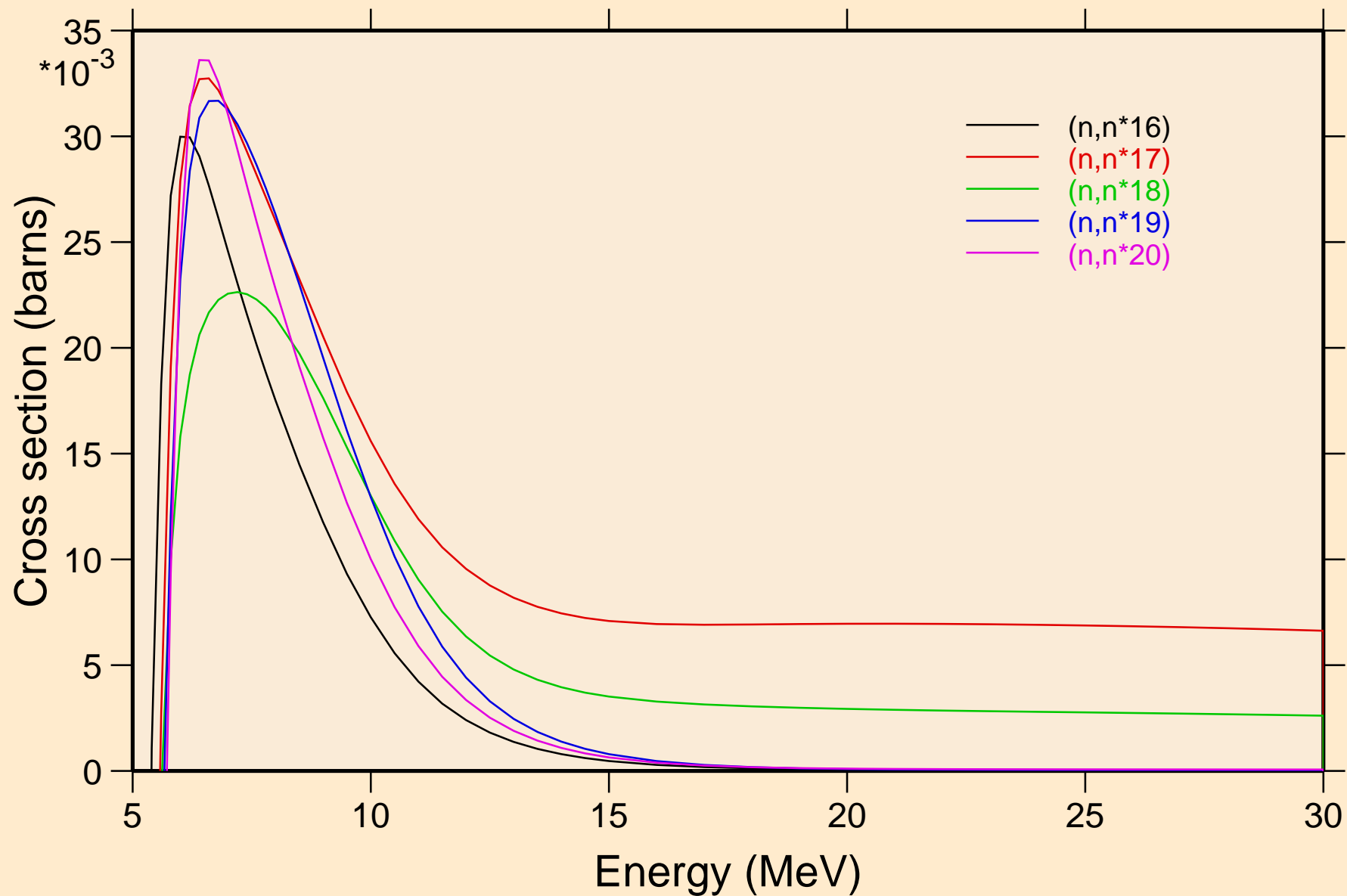
0    5    10    15    20    25    30

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Inelastic levels

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Inelastic levels

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
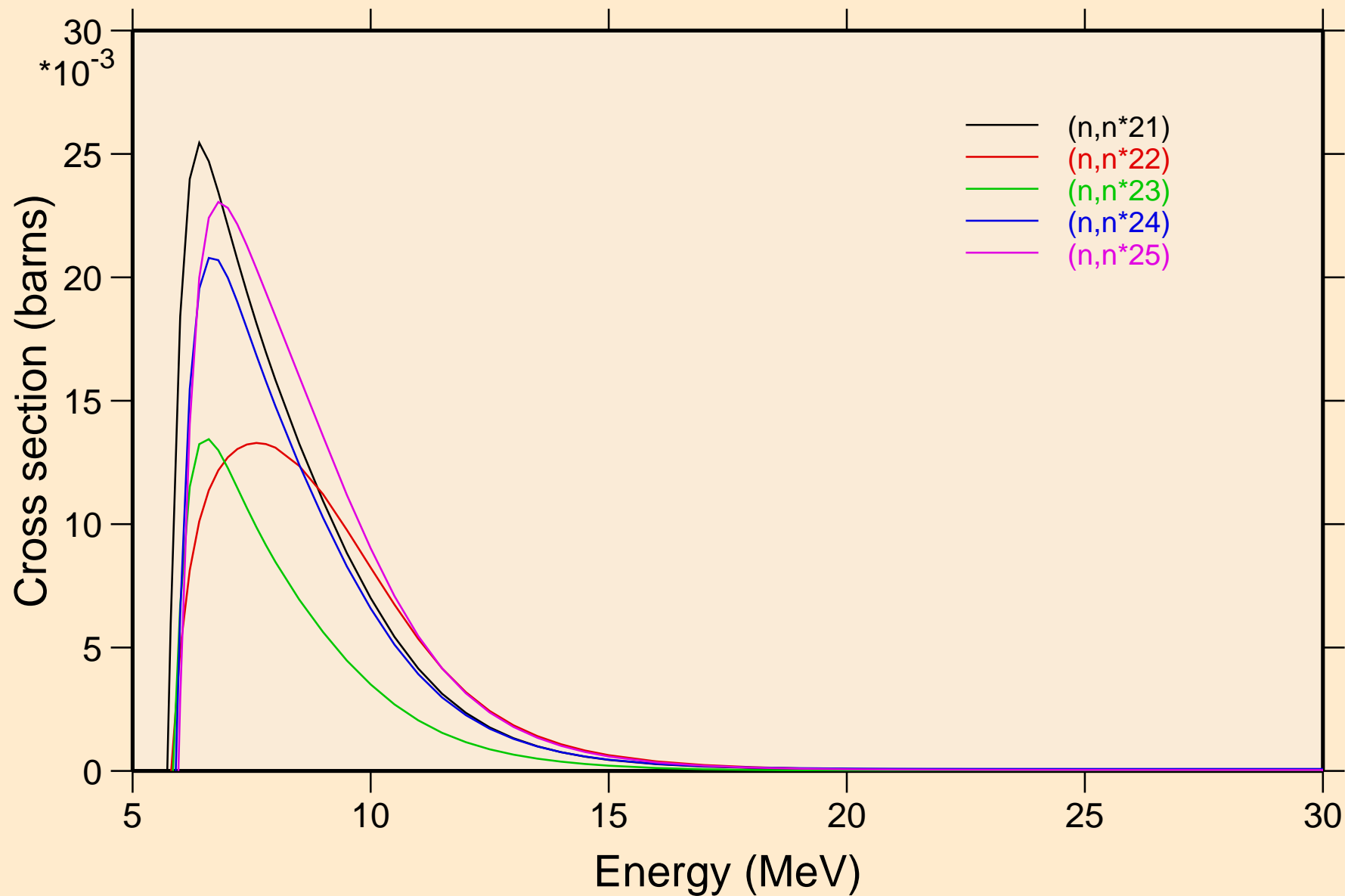Inelastic levels
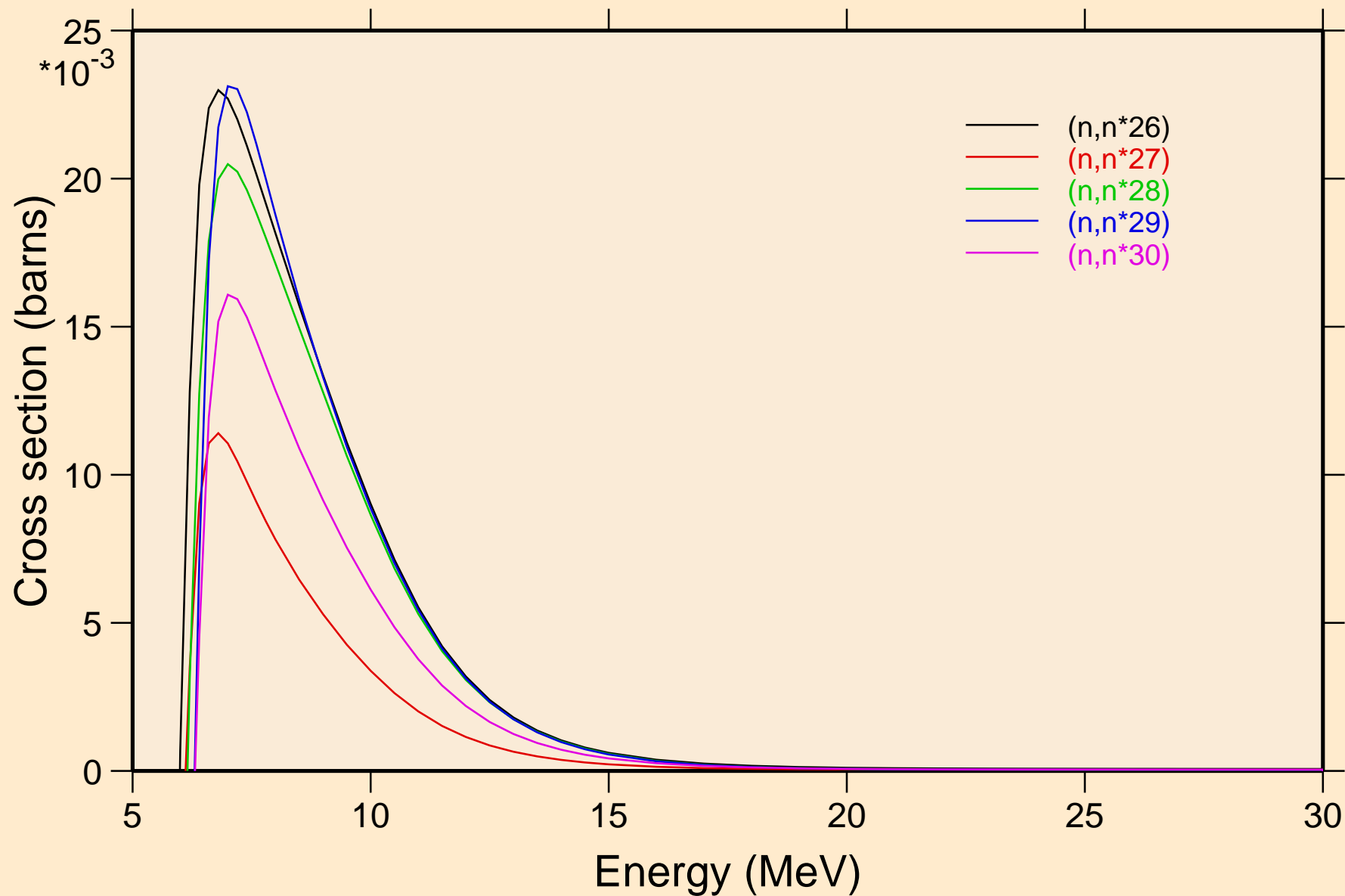
MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Inelastic levels

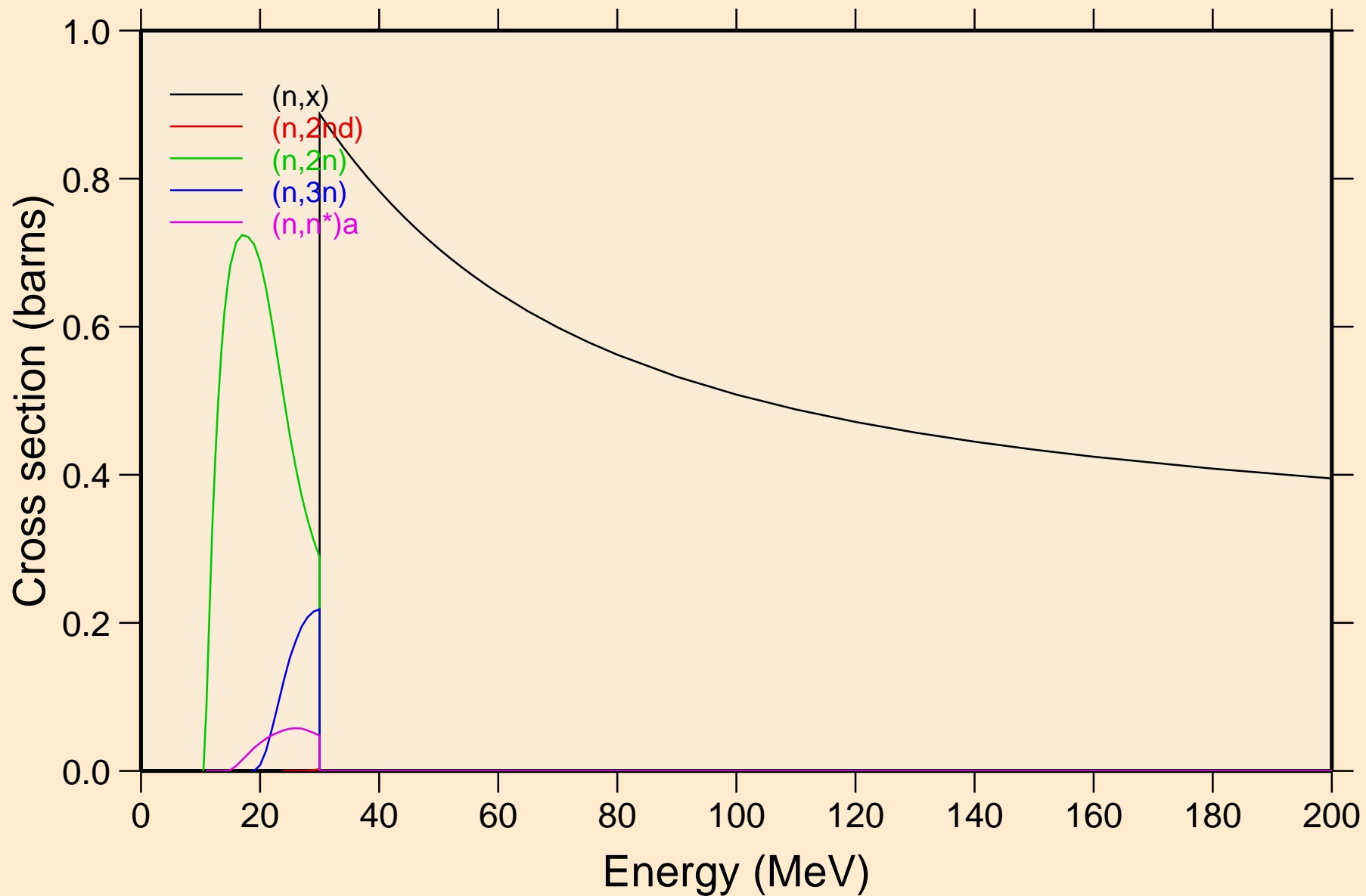MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
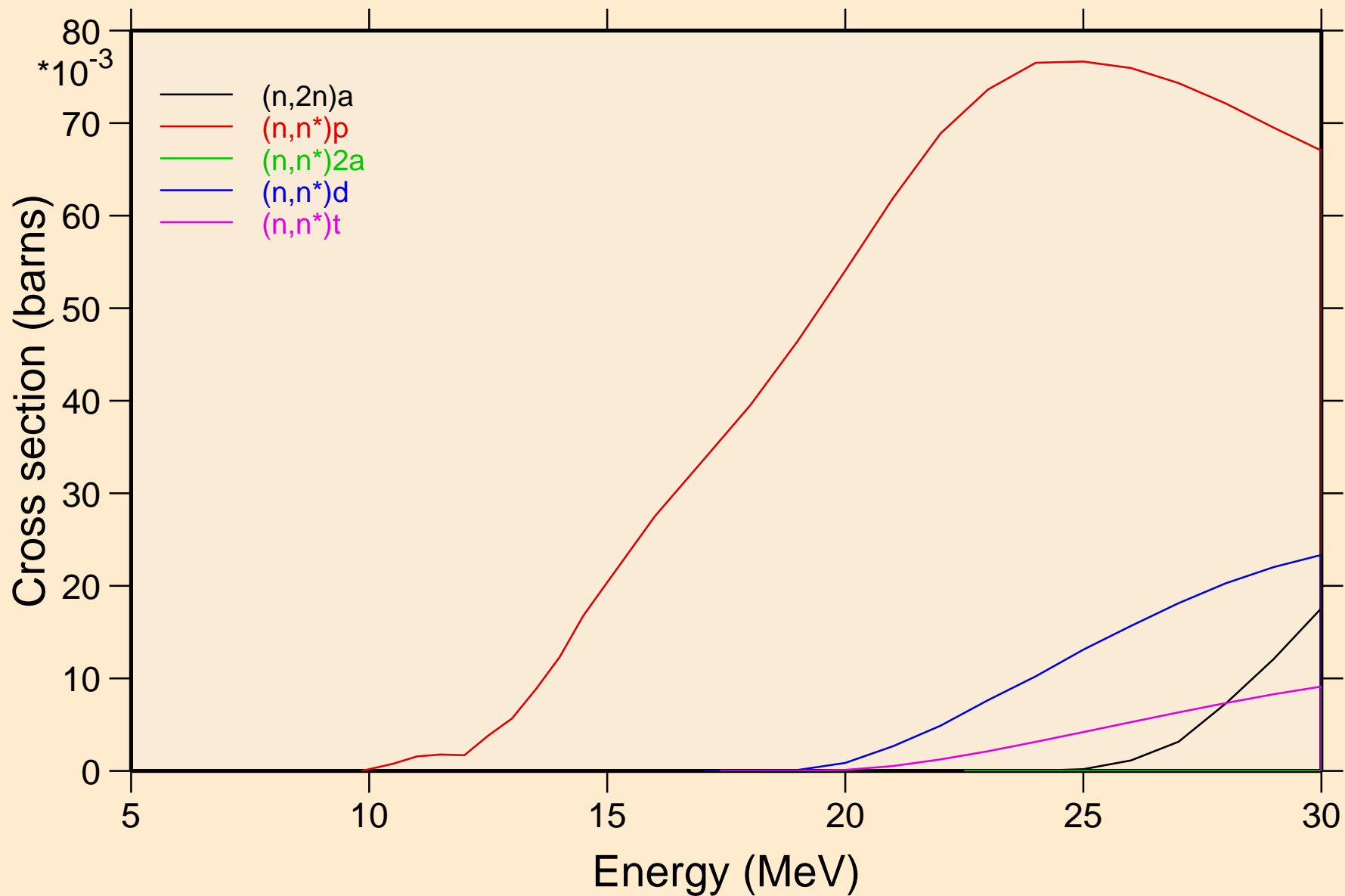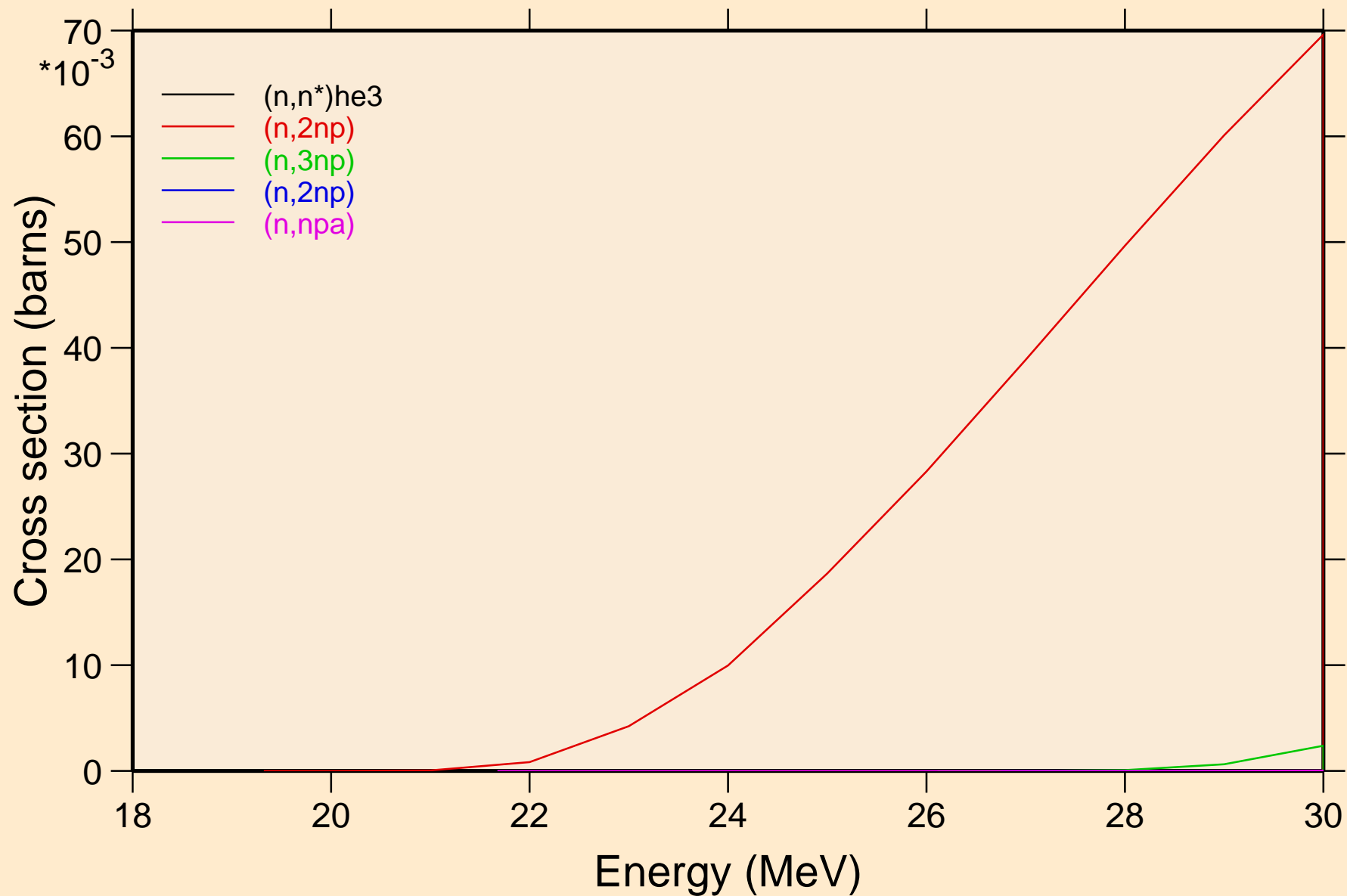Inelastic levels

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Inelastic levels

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

Cross section (barns) vs Energy (MeV)

Legend:
- (n,2n)a
- (n,n*)p
- (n,n*)2a
- (n,n*)d
- (n,n*)t

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

Legend:
- (n,n*)he3
- (n,2np)
- (n,3np)
- (n,2np)
- (n,npa)

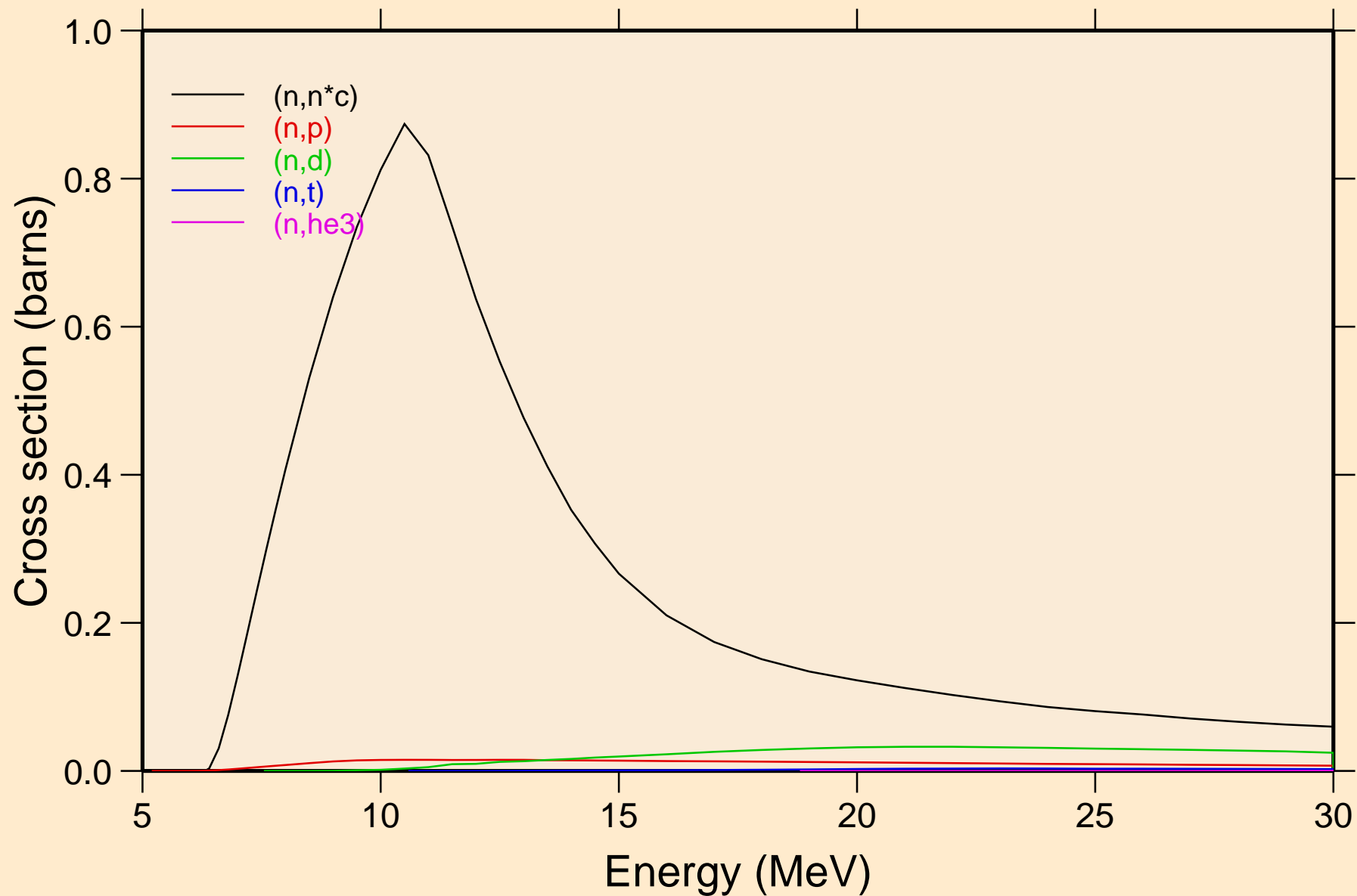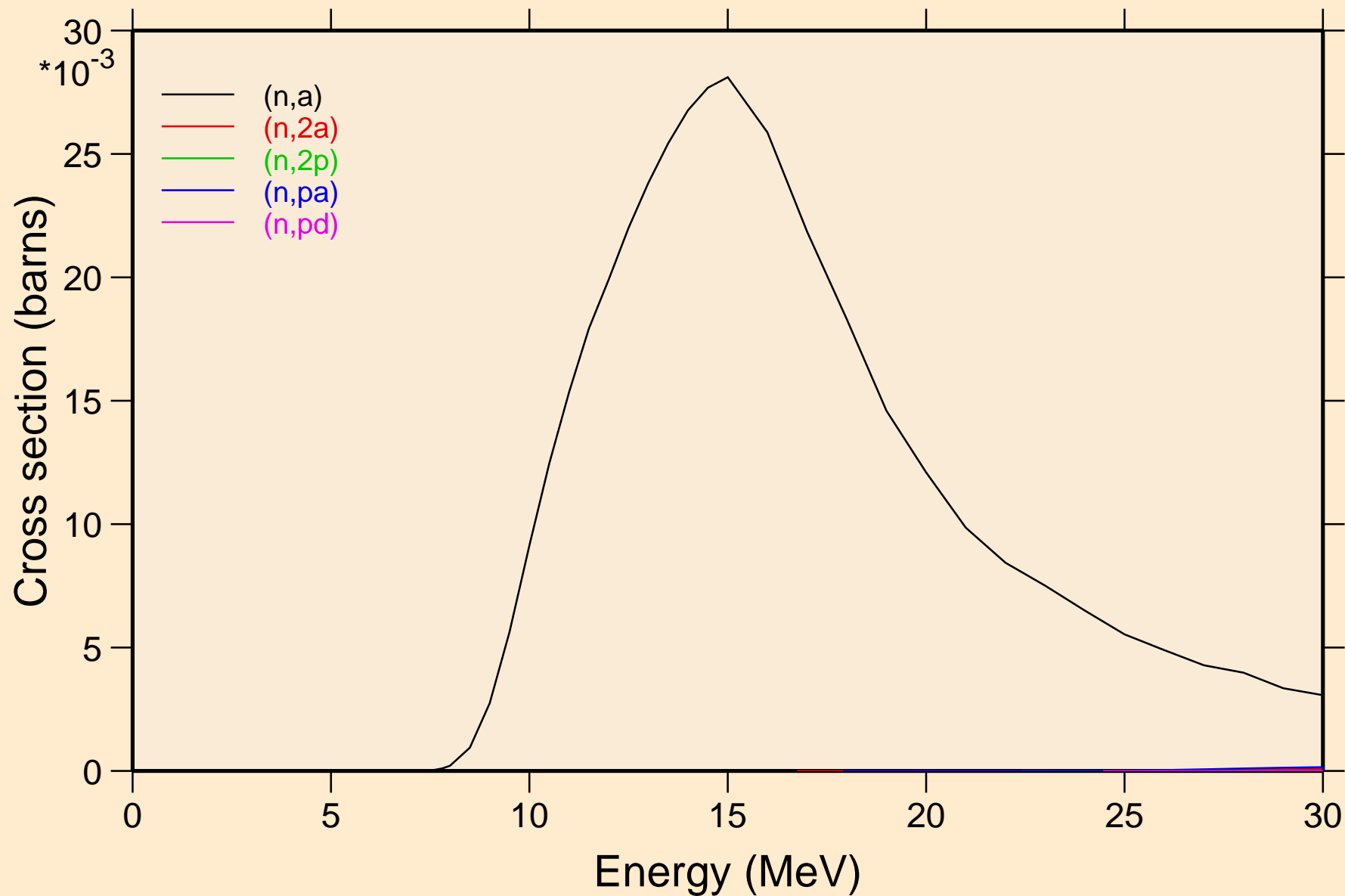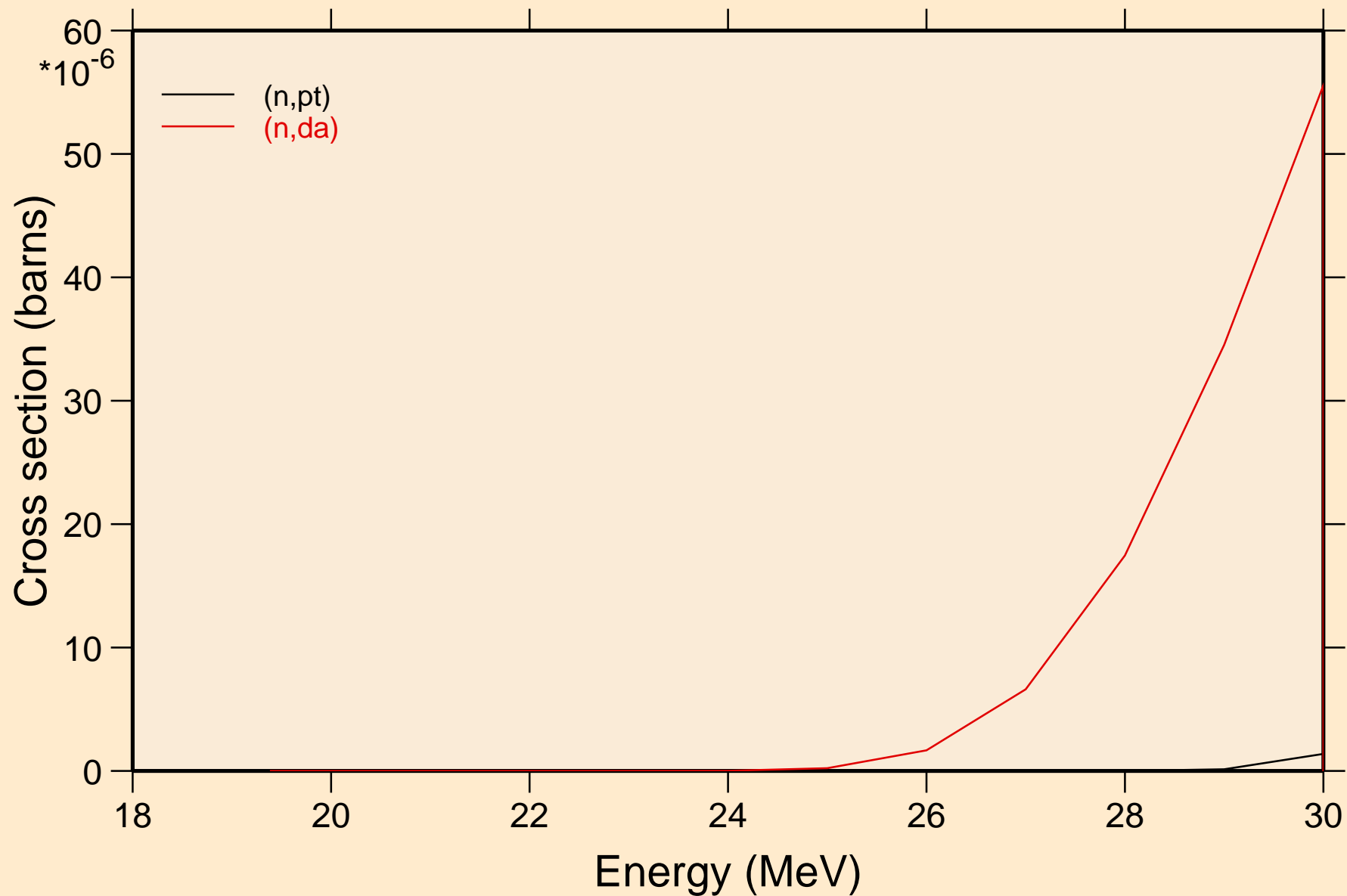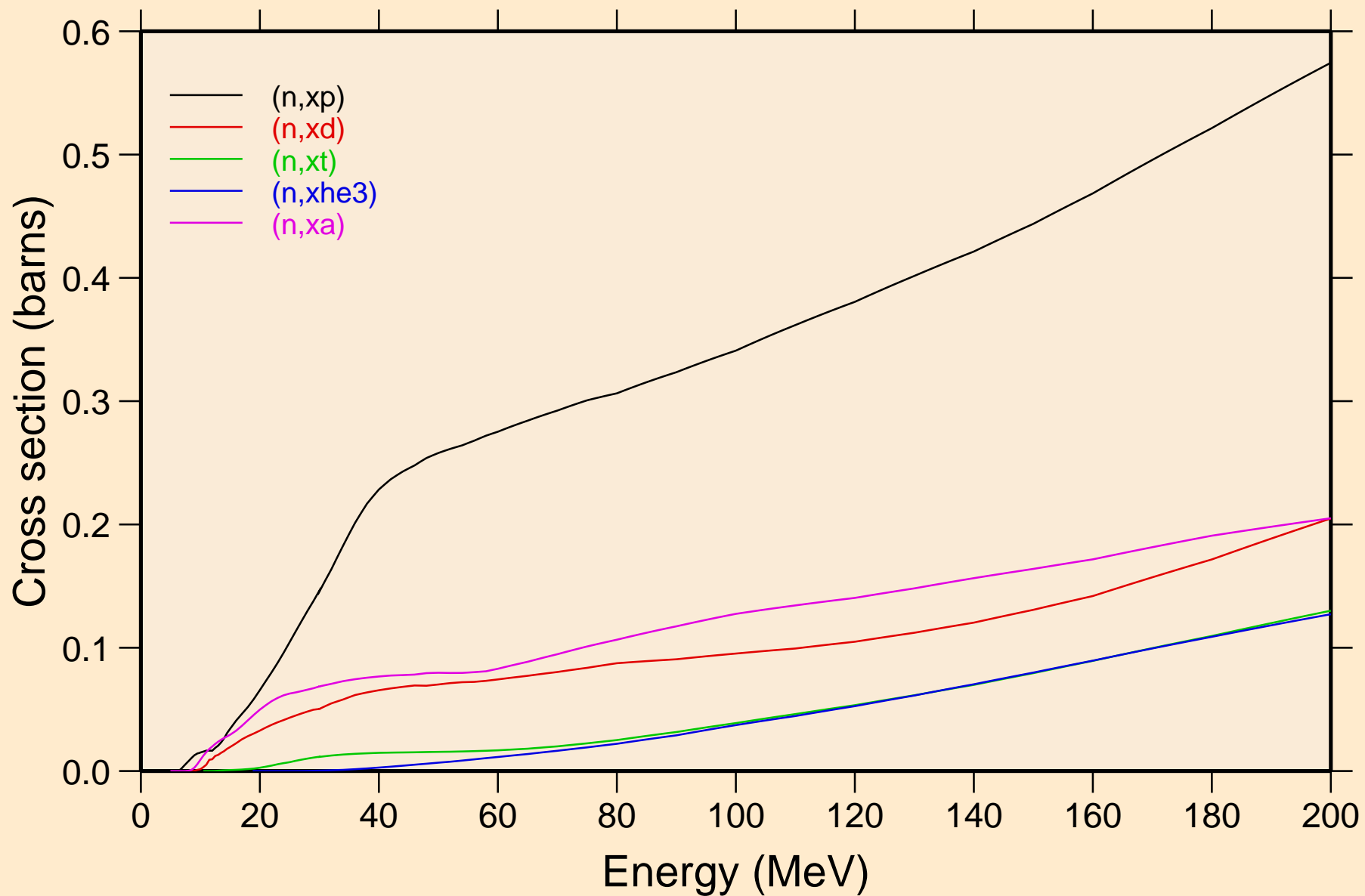Y-axis: Cross section (barns) *10⁻³
X-axis: Energy (MeV)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

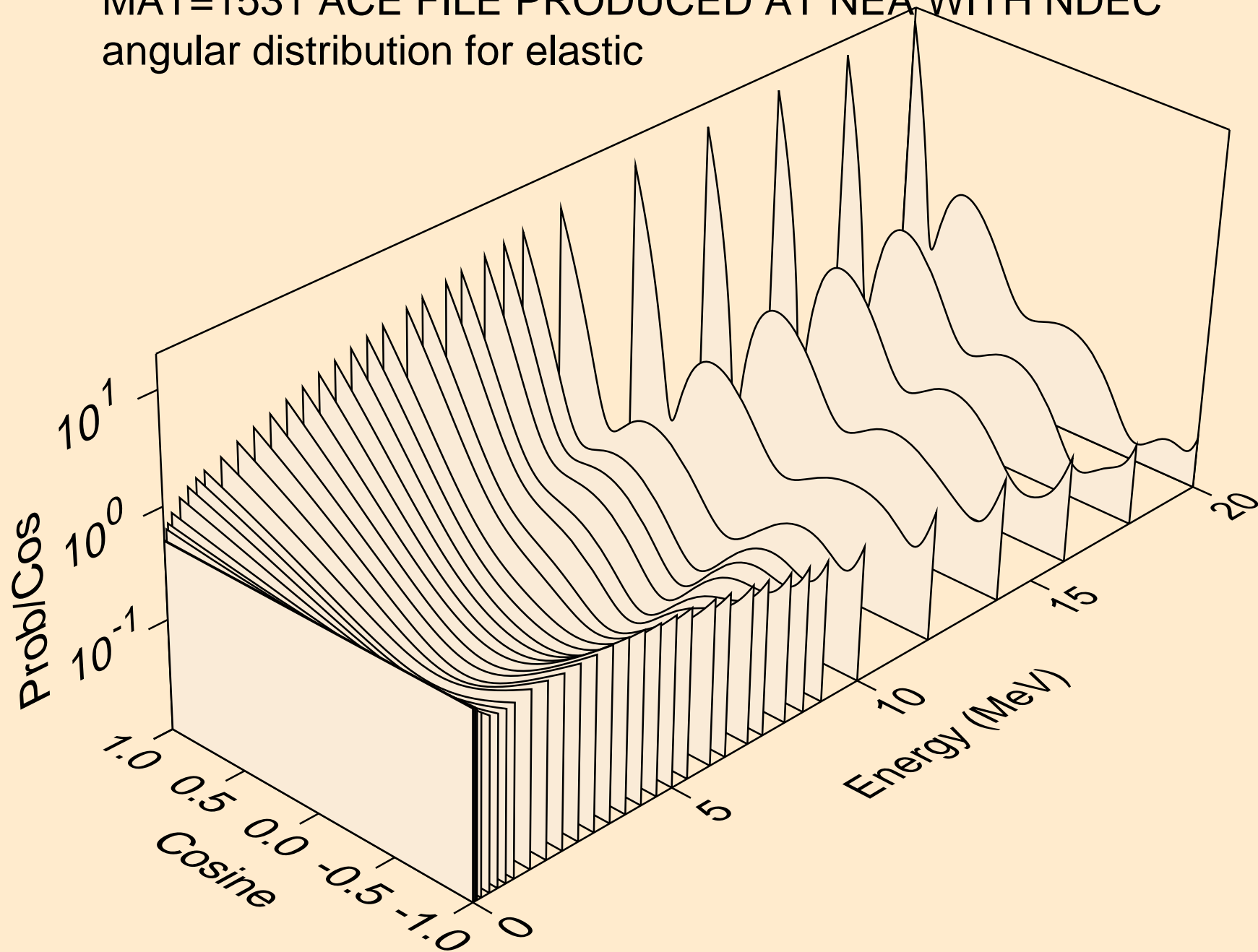MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

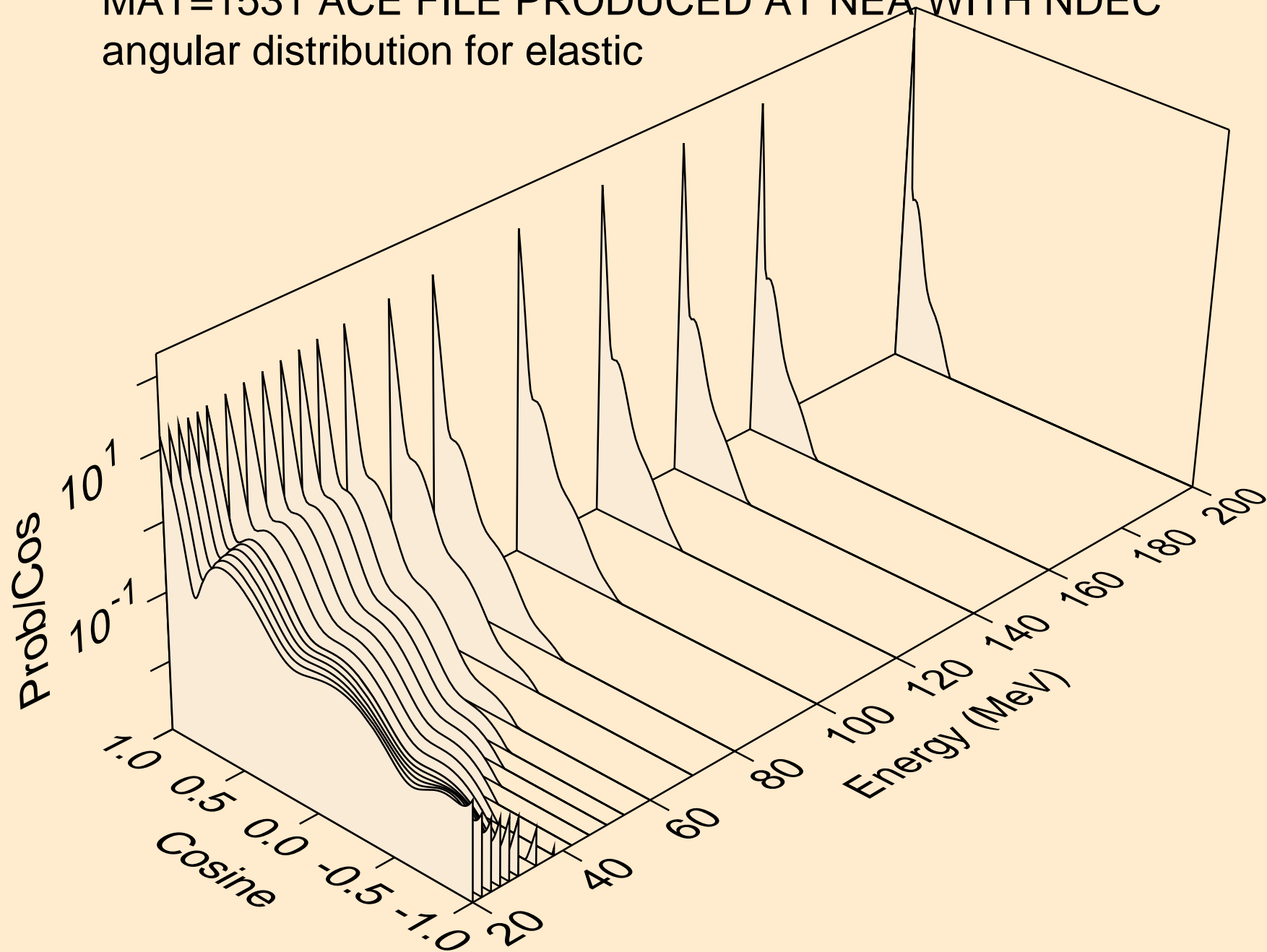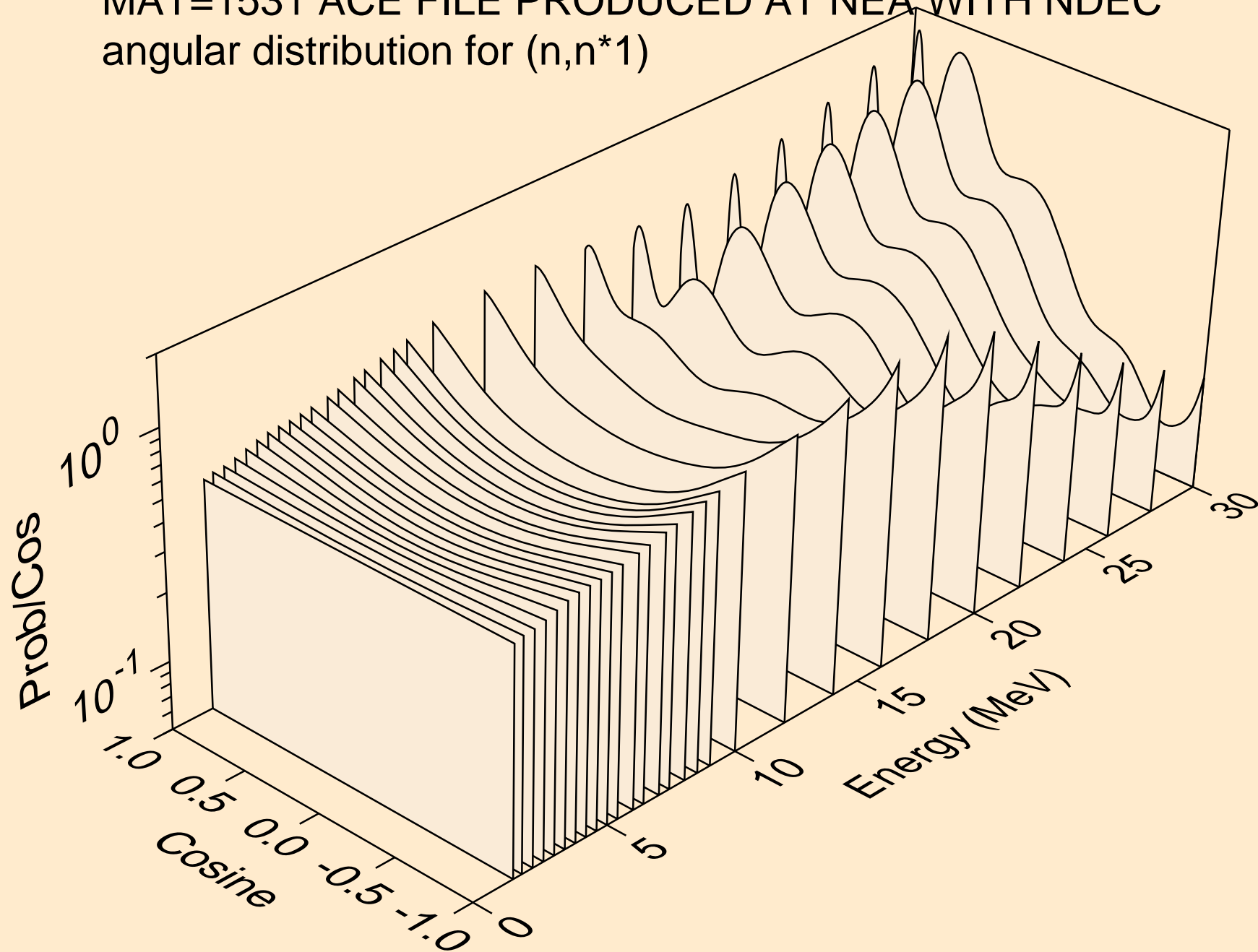MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Threshold reactions

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
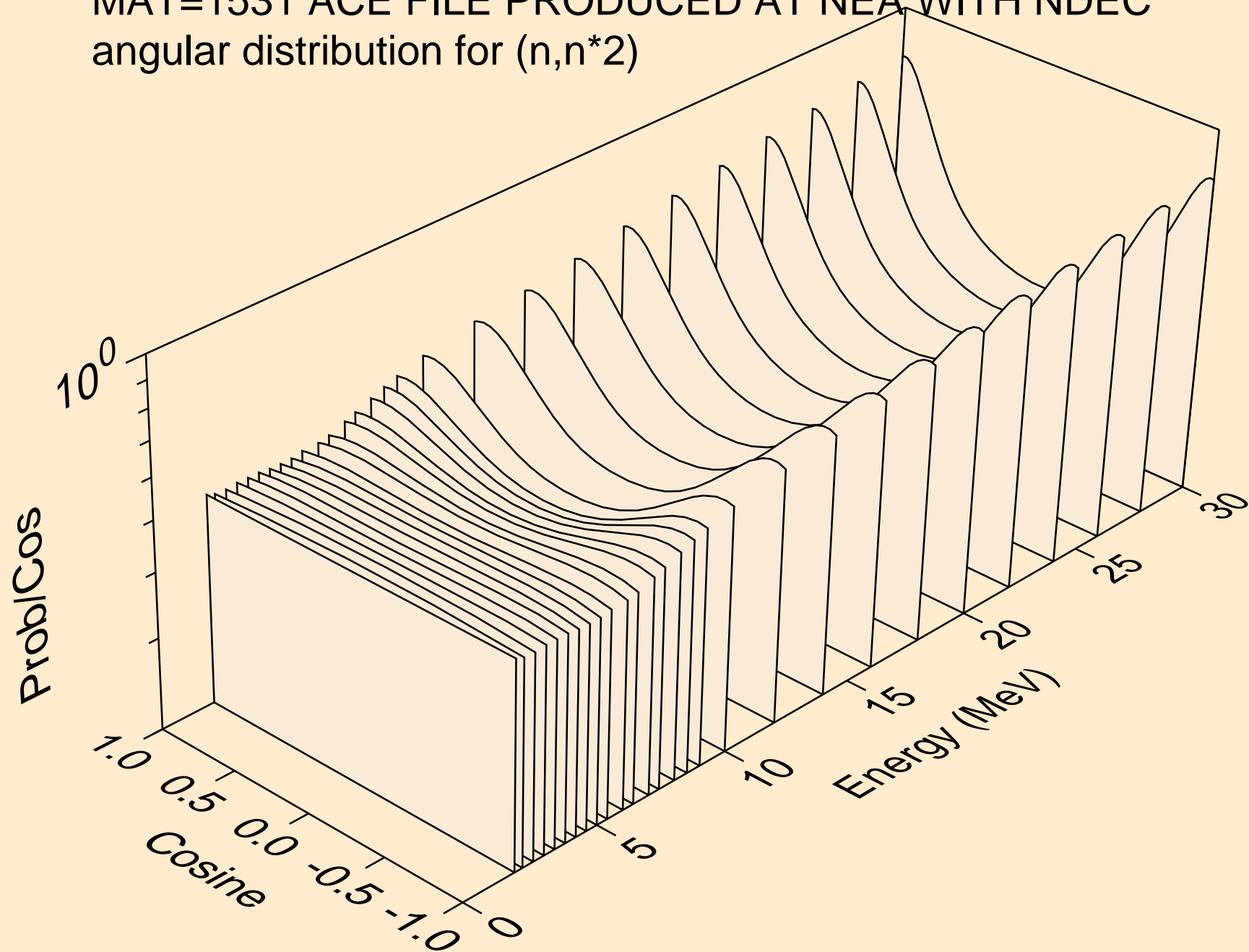angular distribution for elastic

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
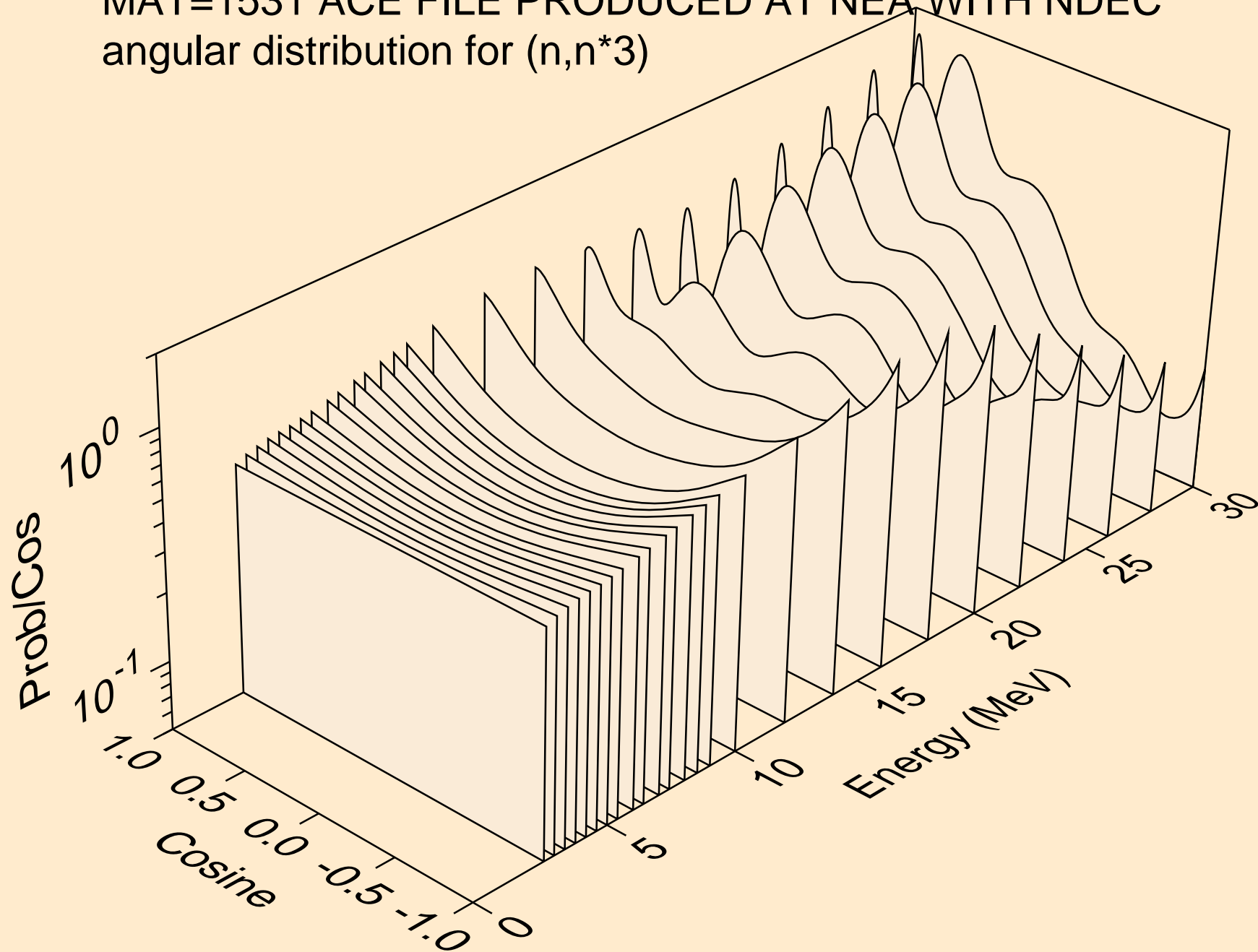angular distribution for elastic

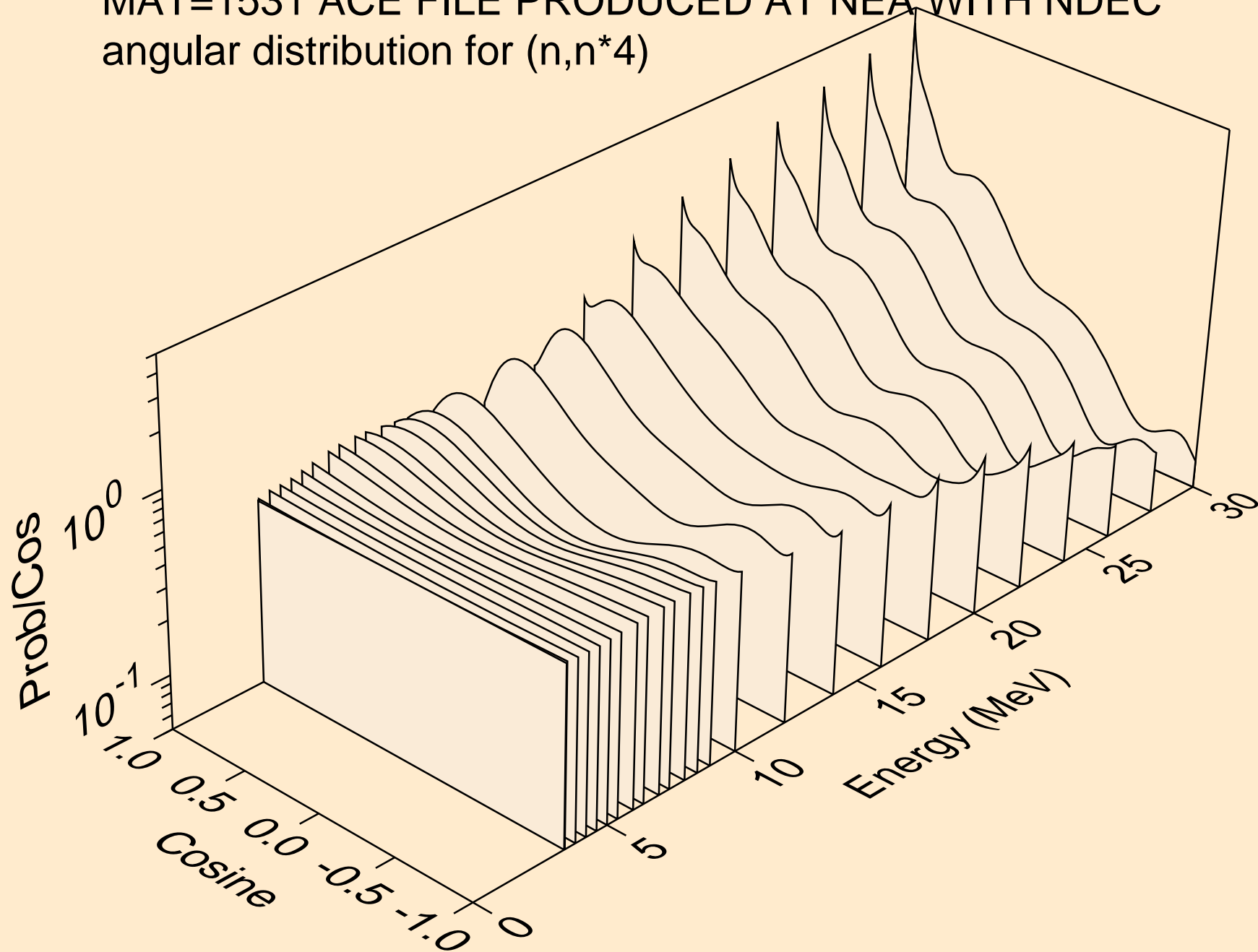MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*1)

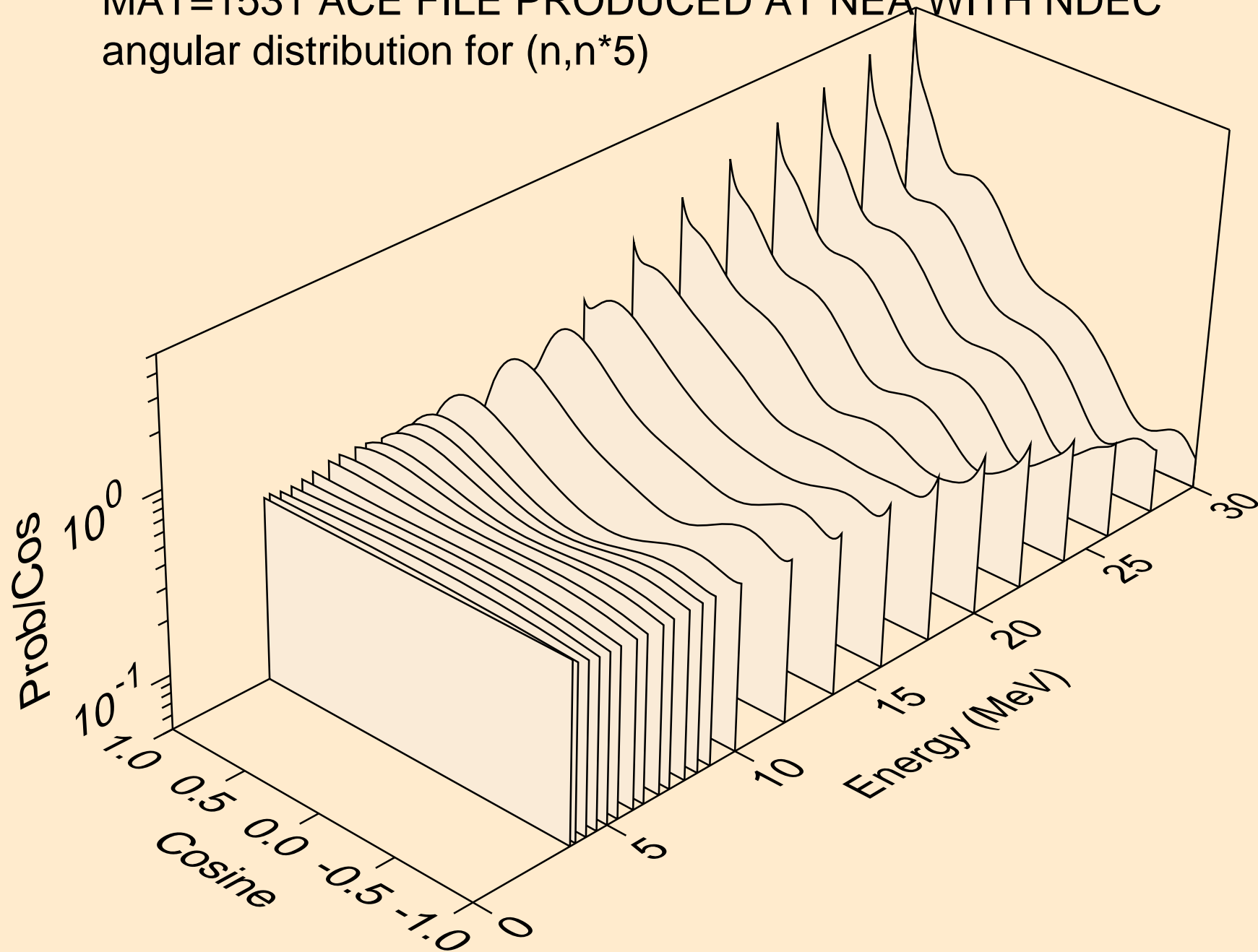MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*2)

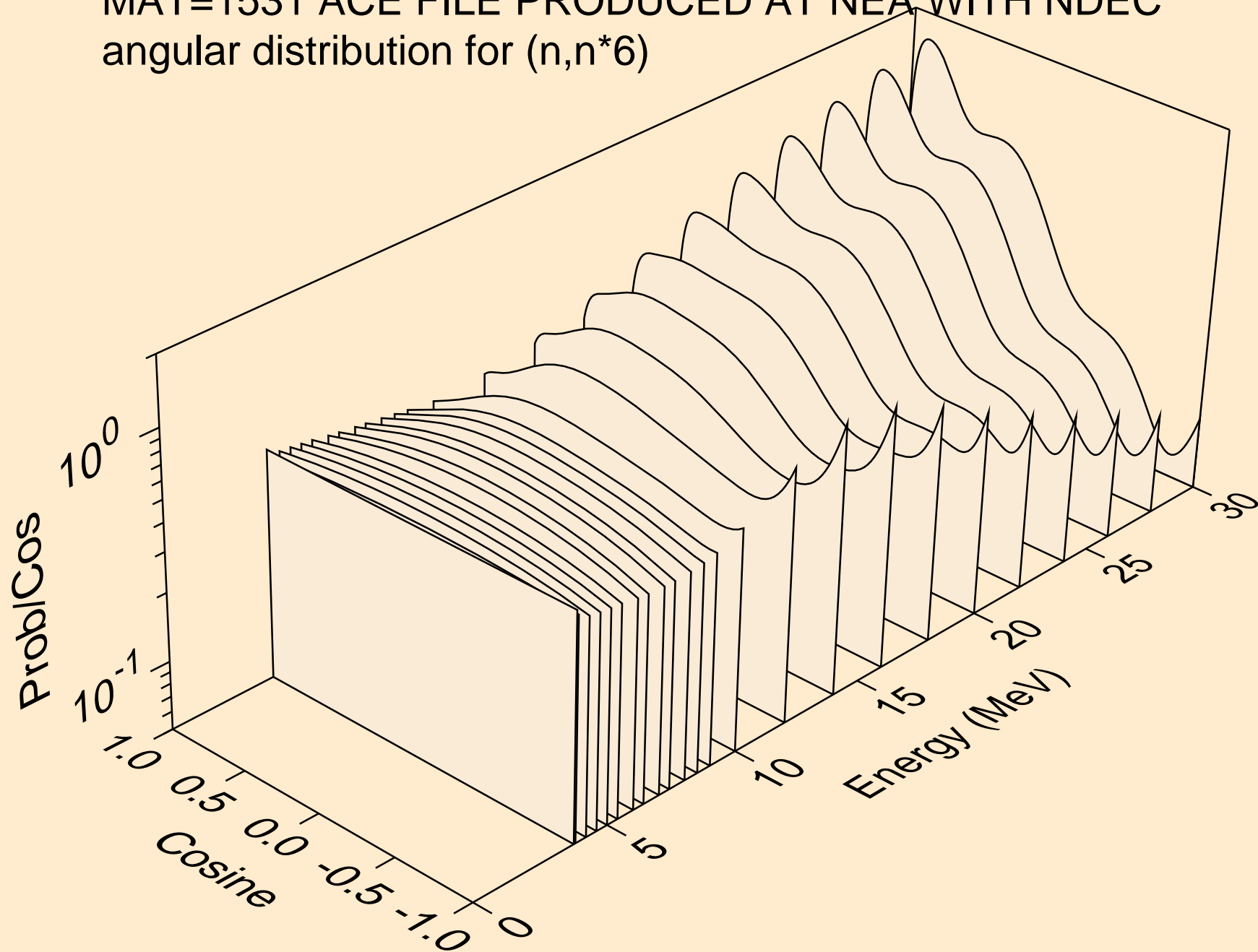MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*3)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*4)

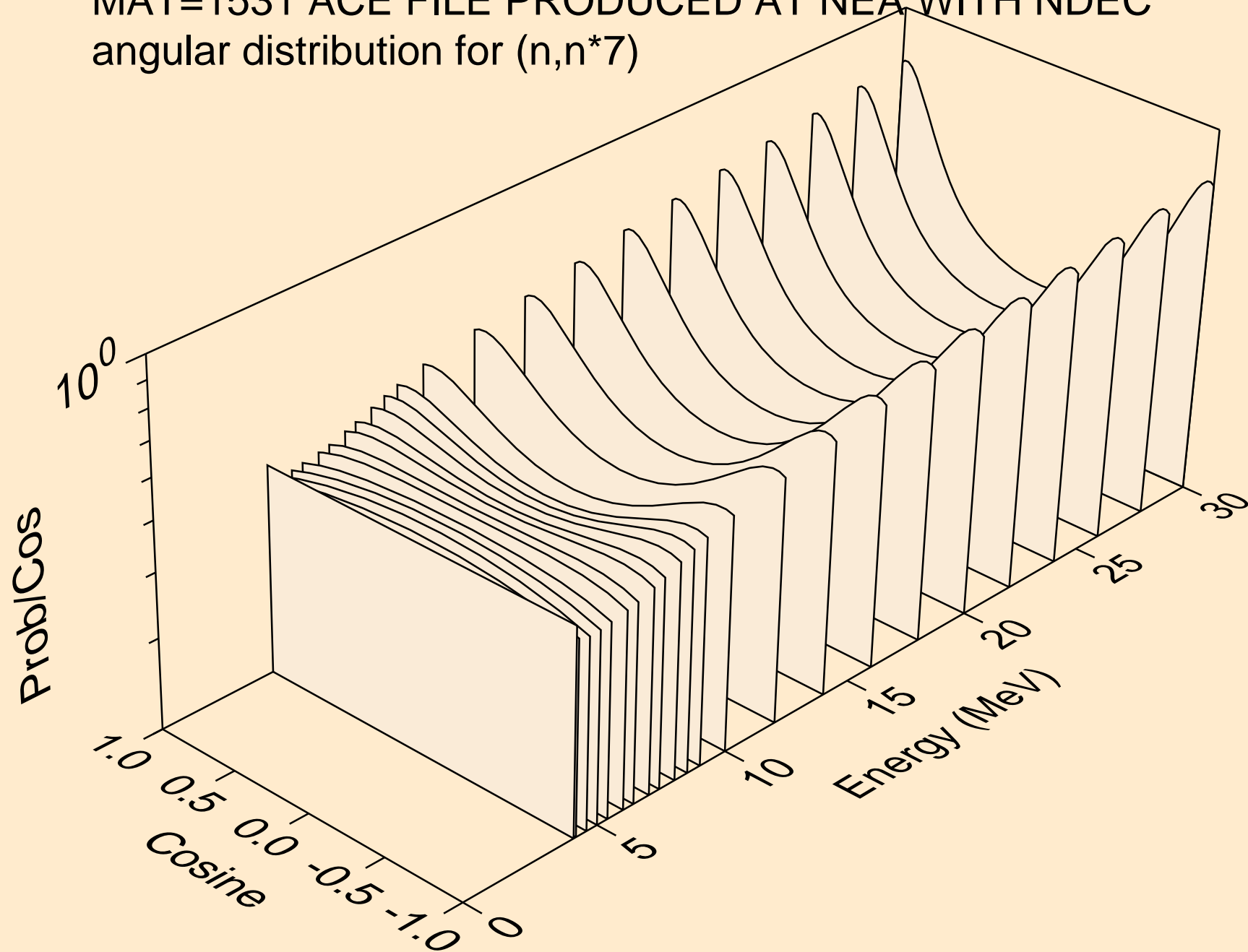MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*5)

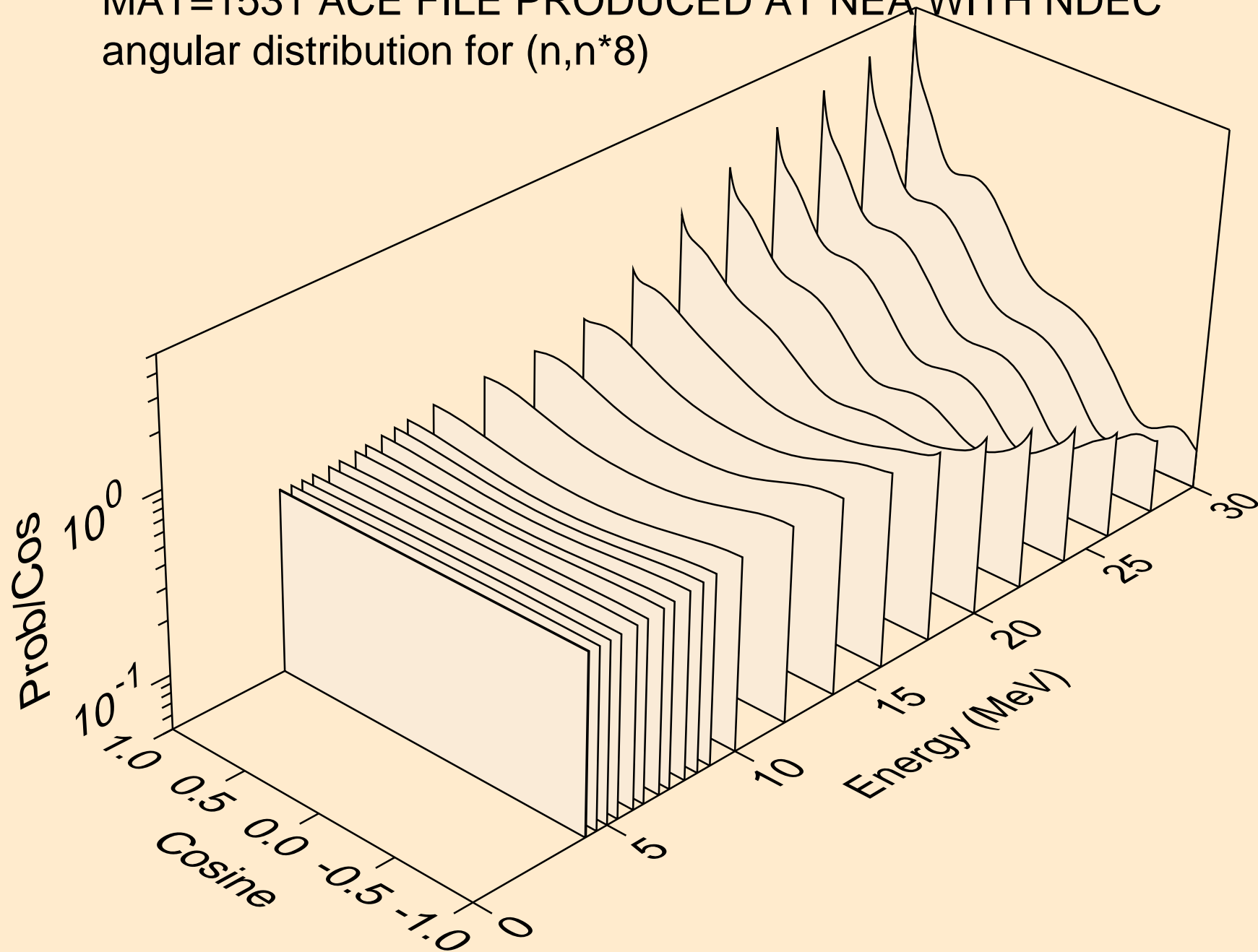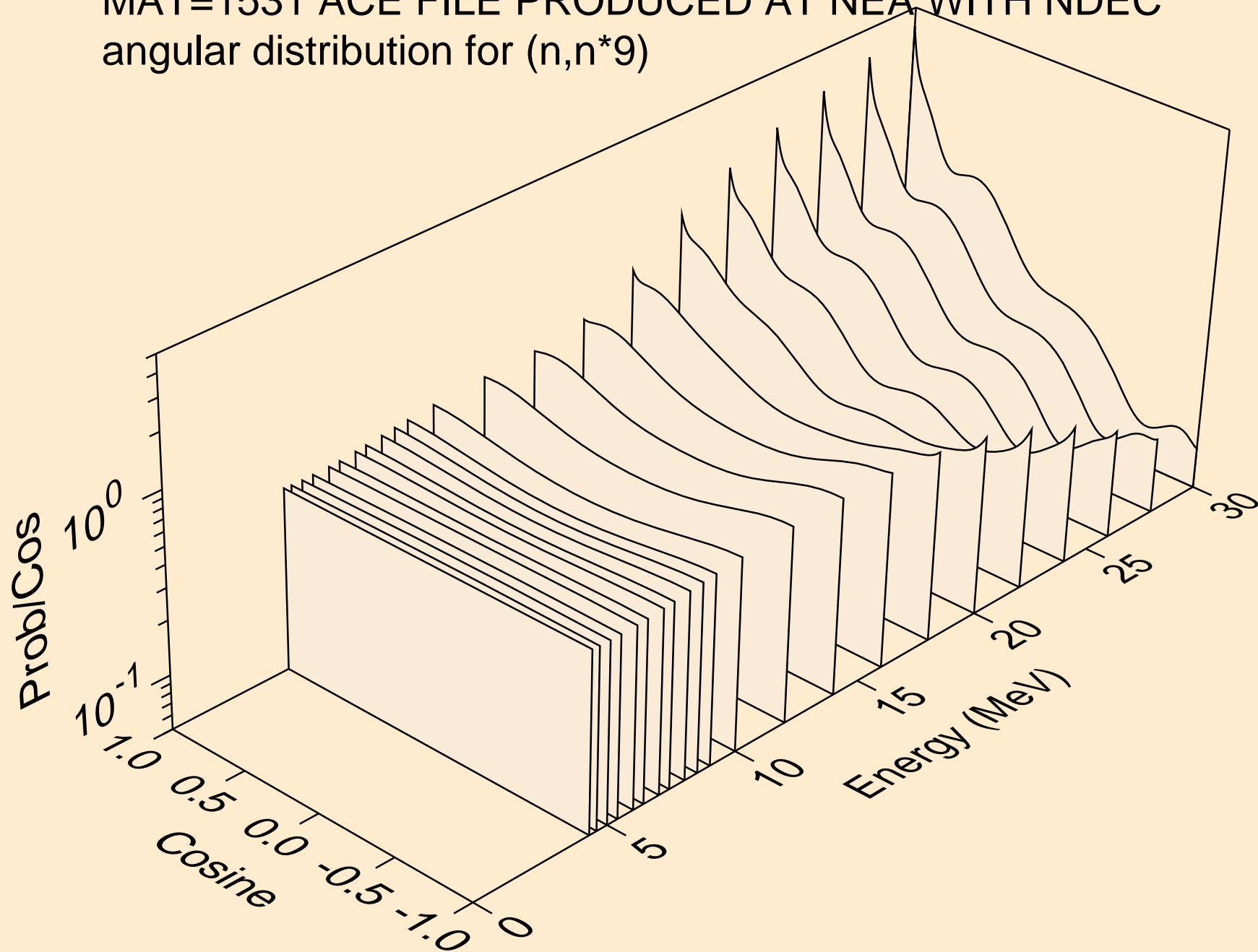MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*6)

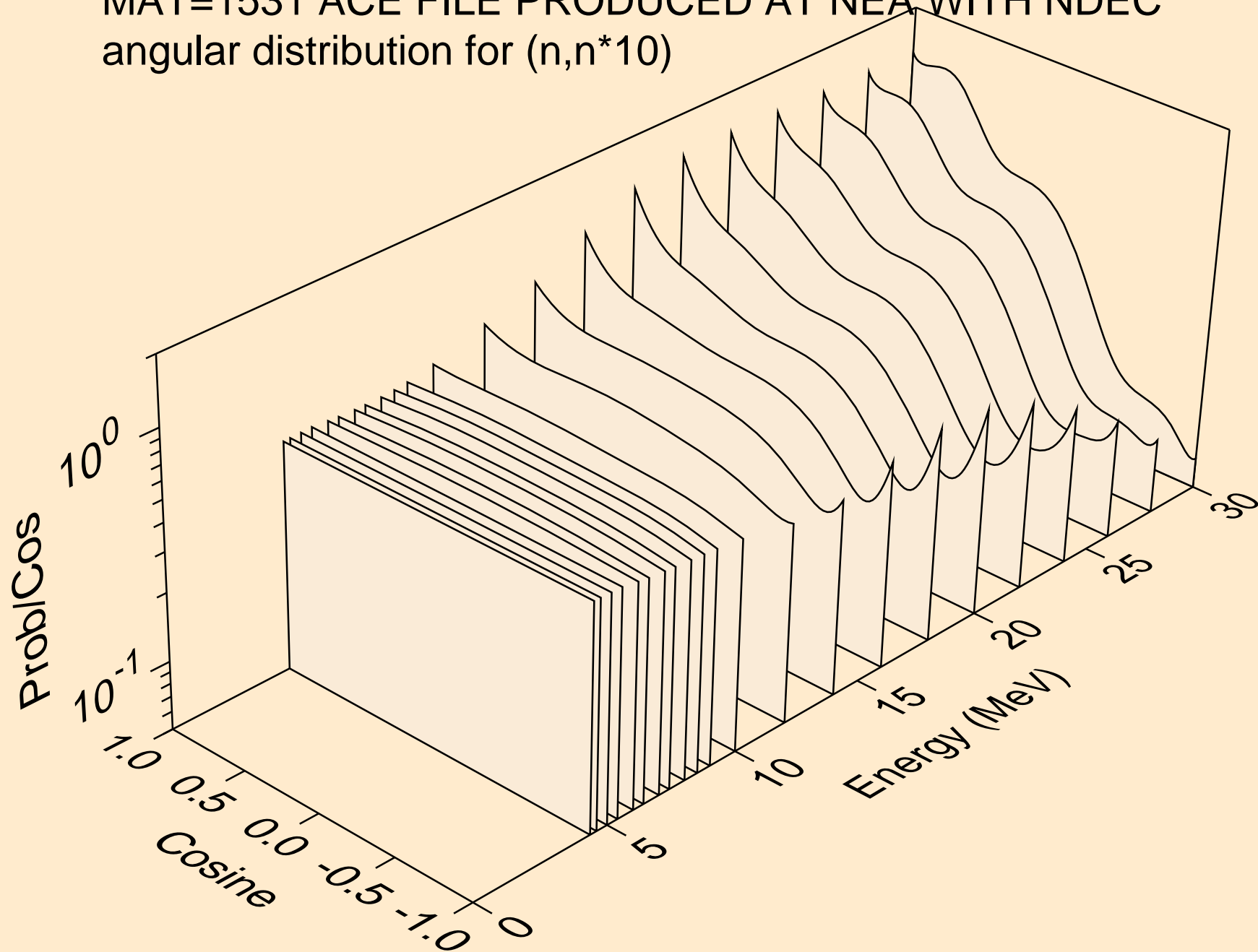MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*7)

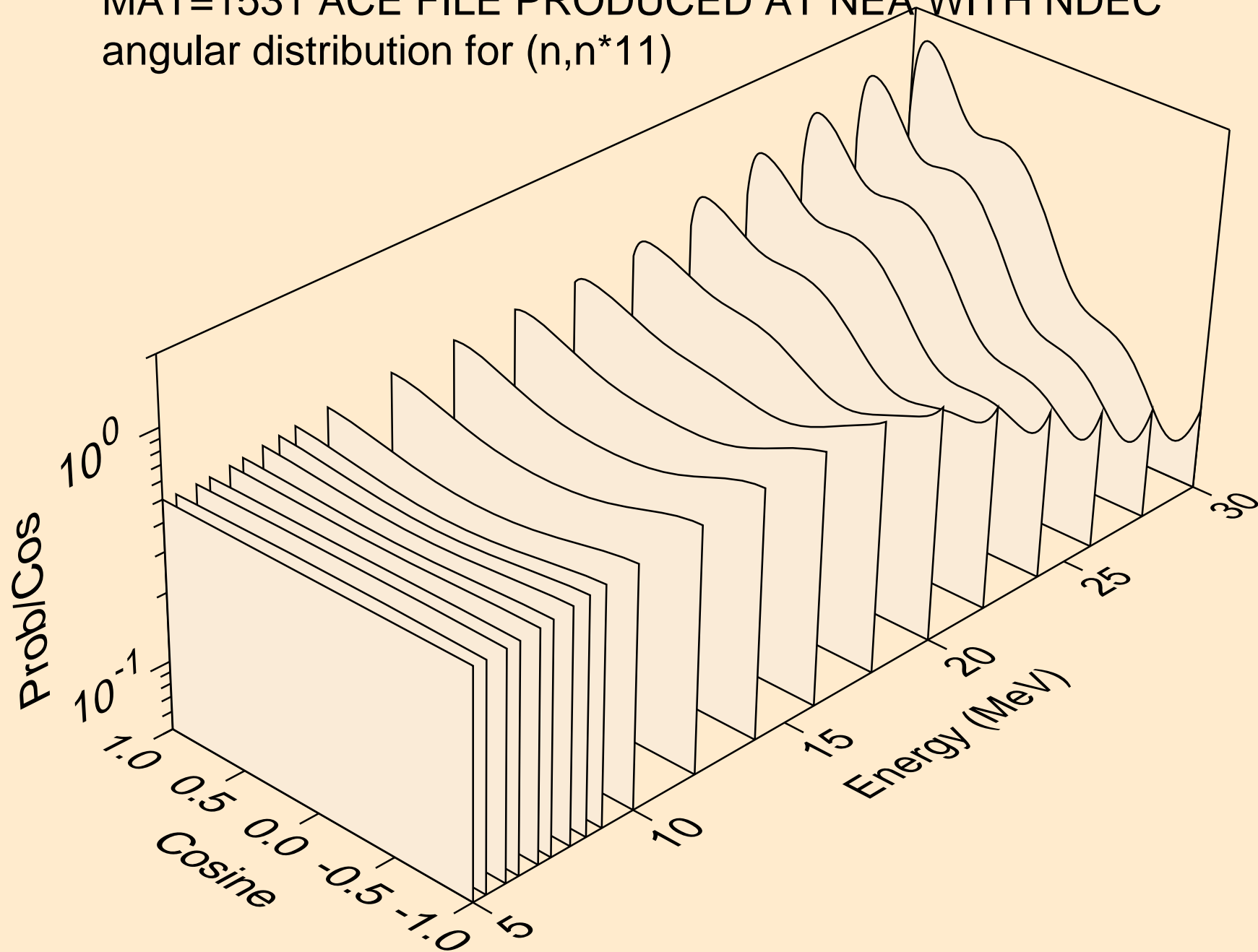MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*8)

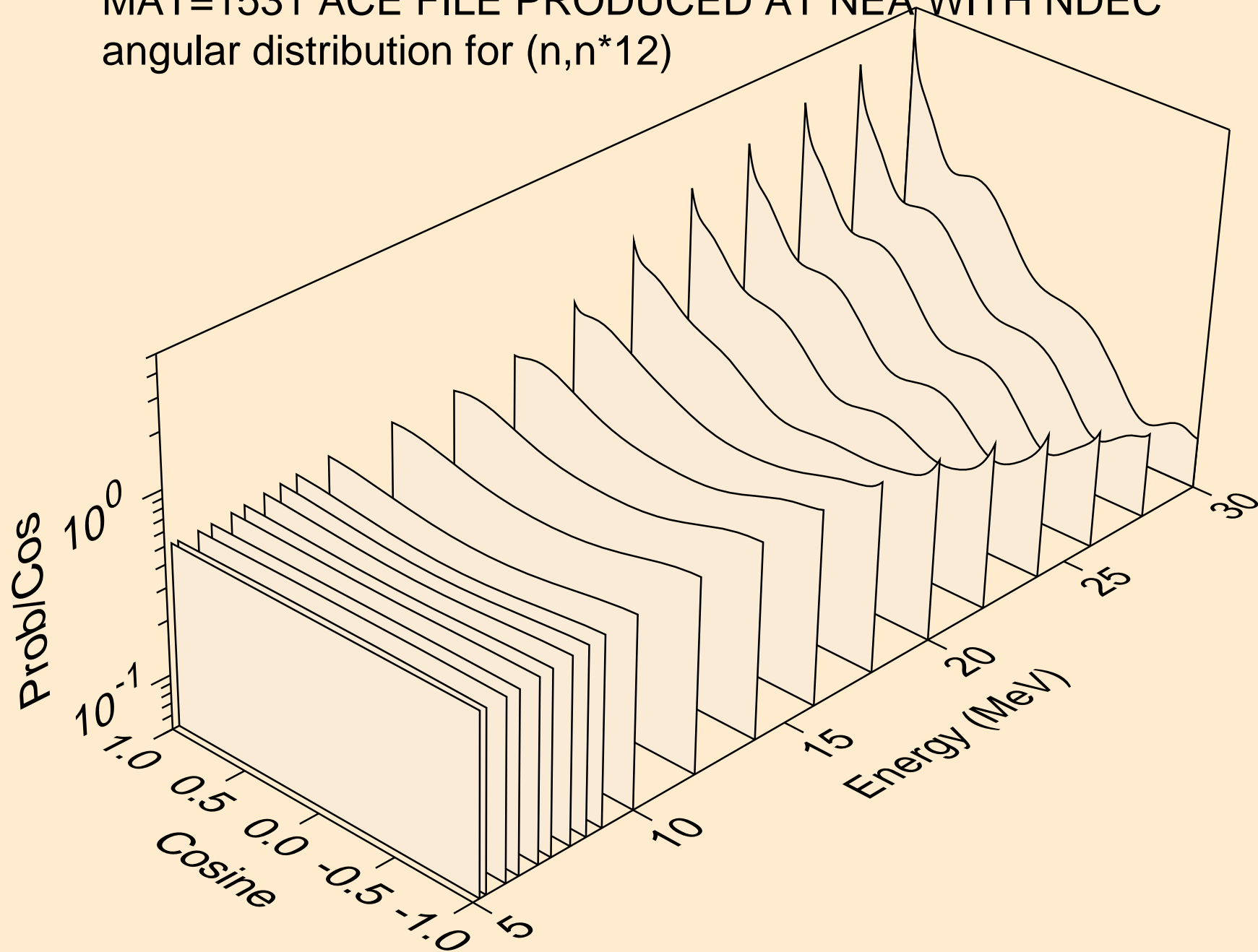MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*9)

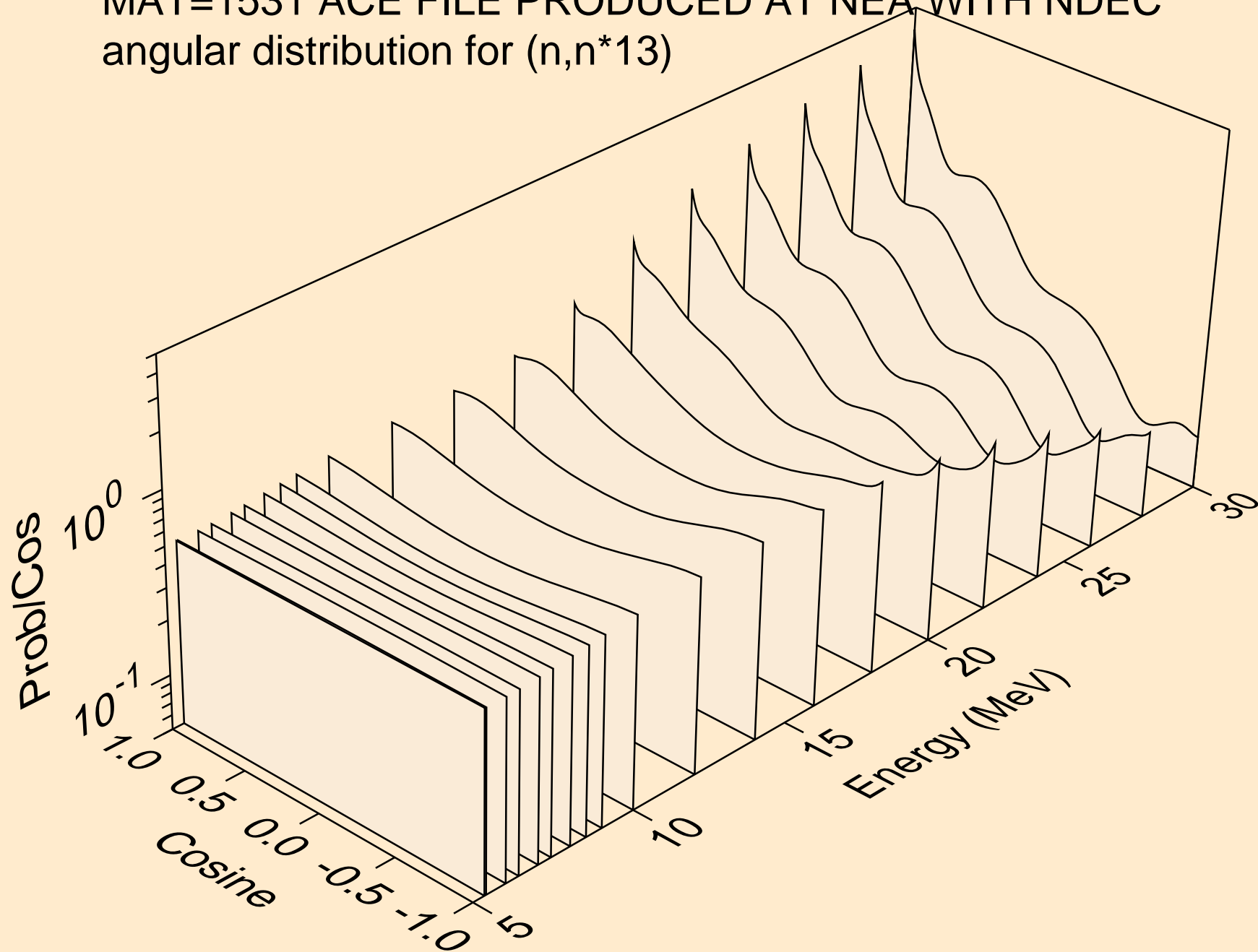MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*10)

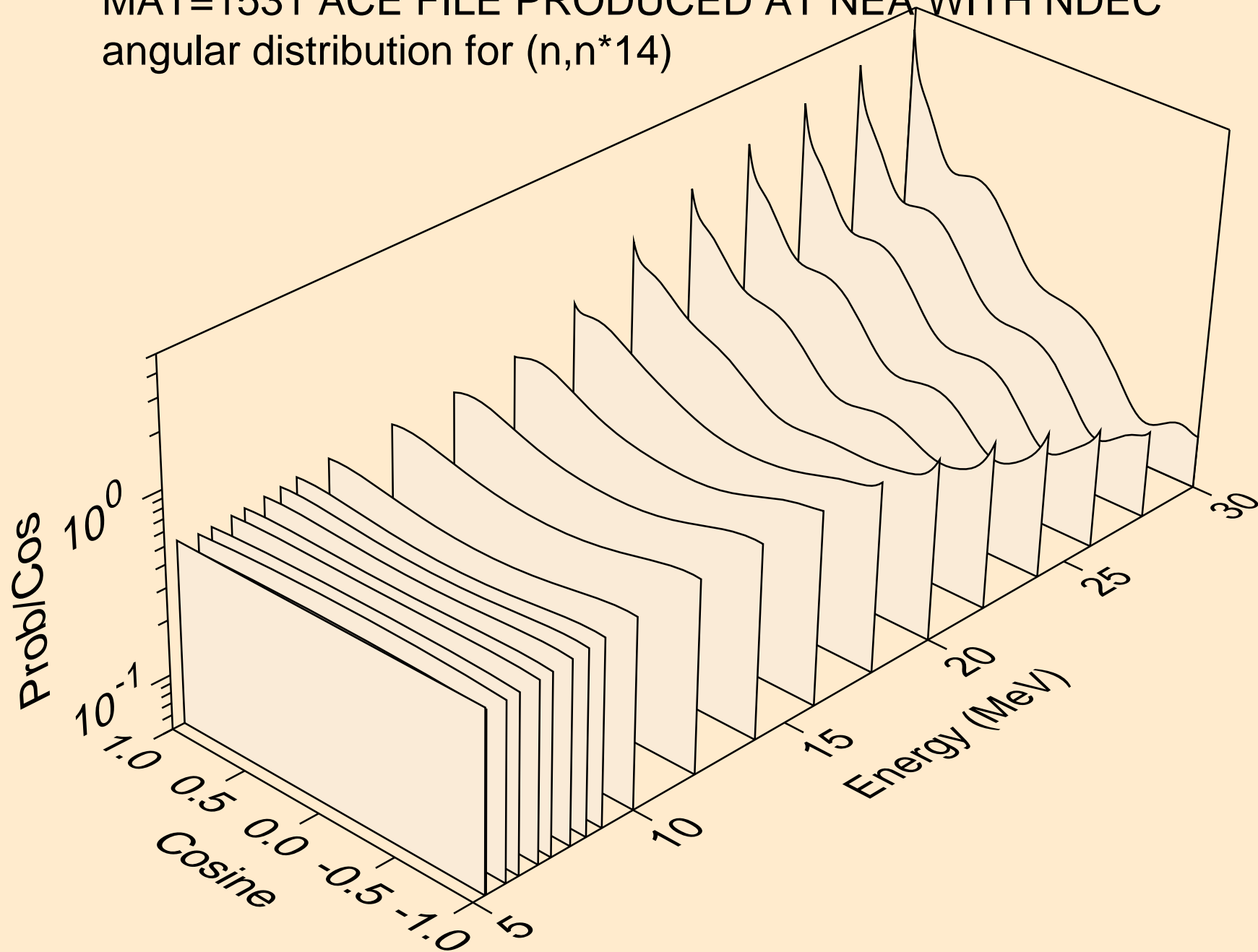MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*11)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*12)

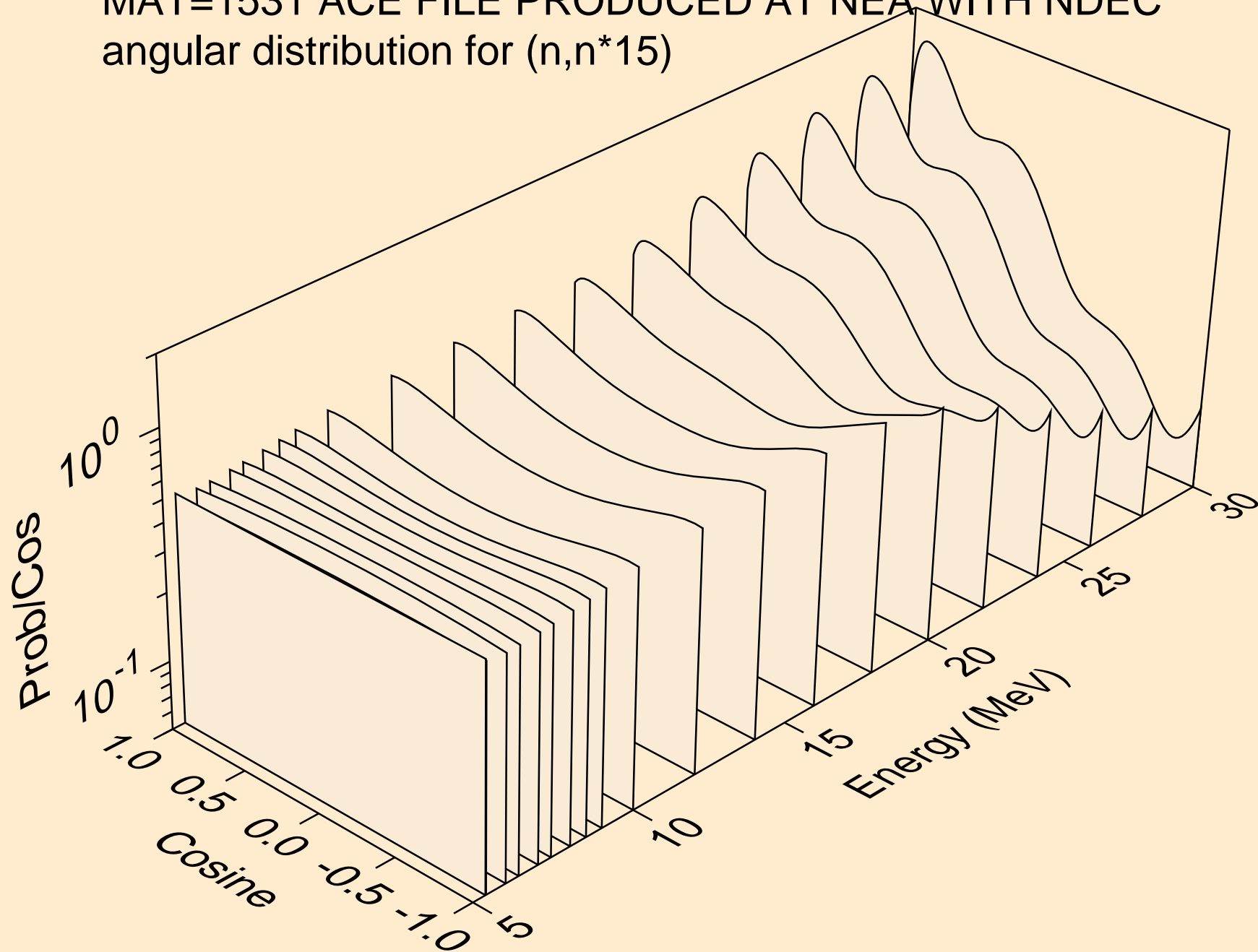MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*13)

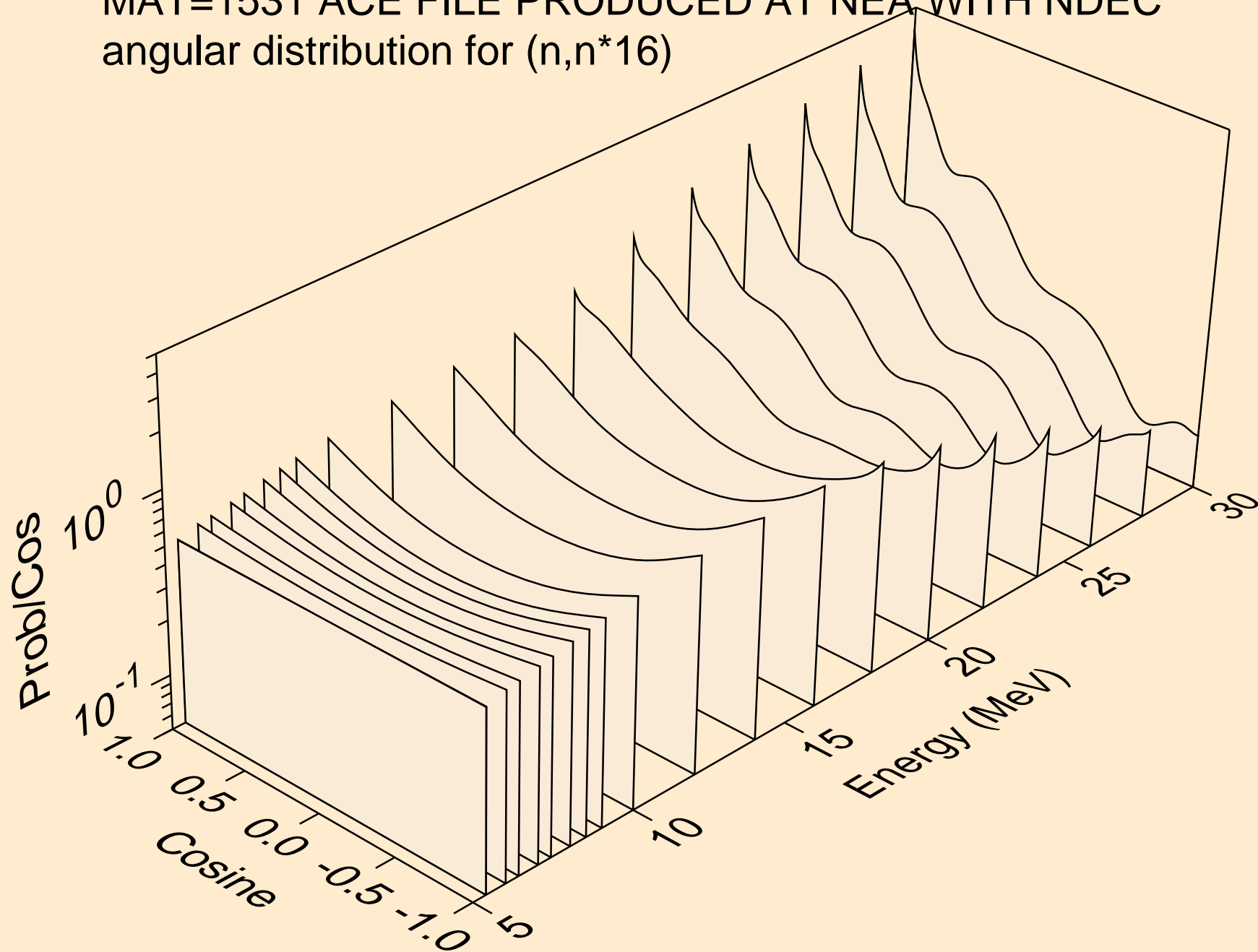MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*14)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
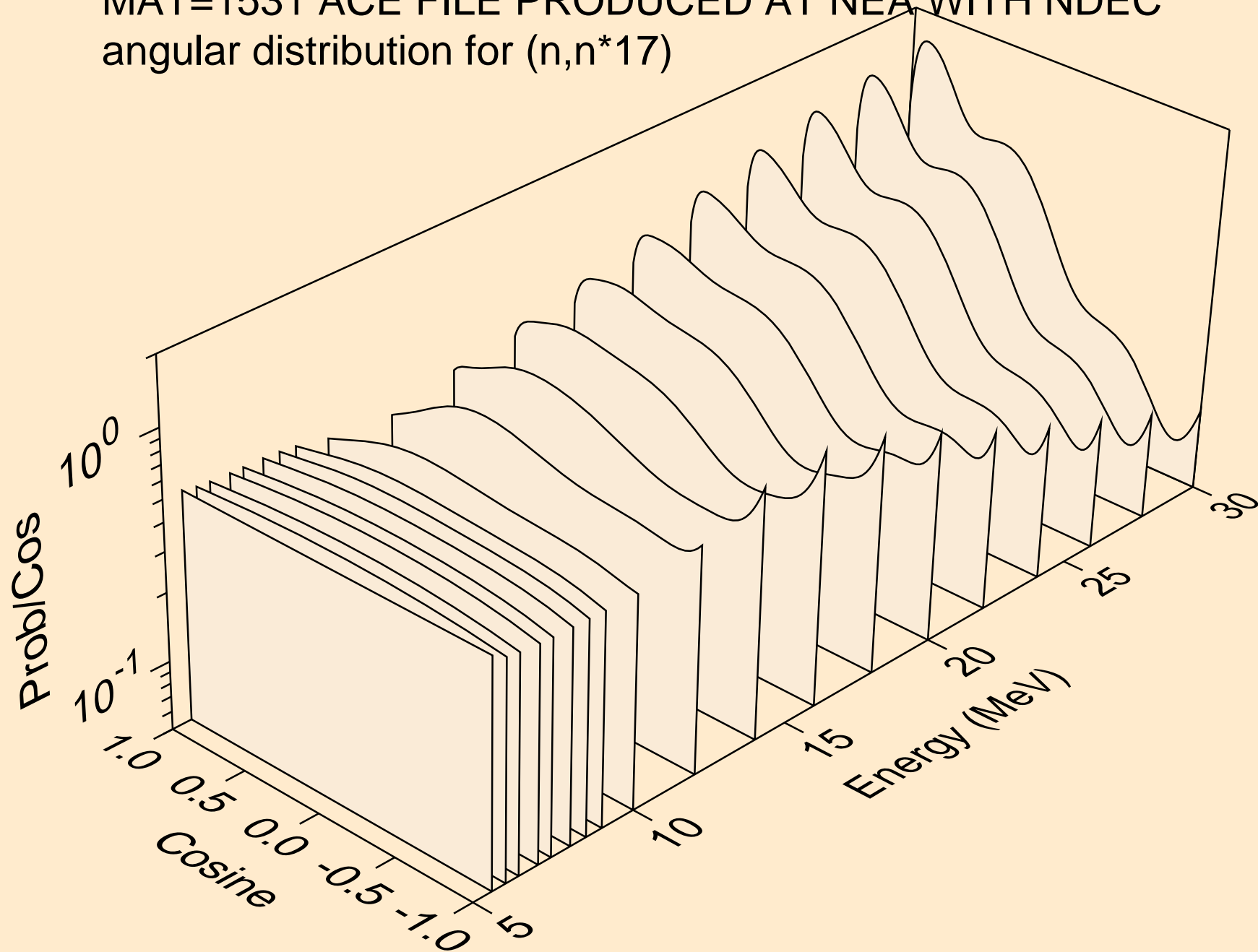angular distribution for (n,n*15)

ProbICos

Cosine

Energy (MeV)

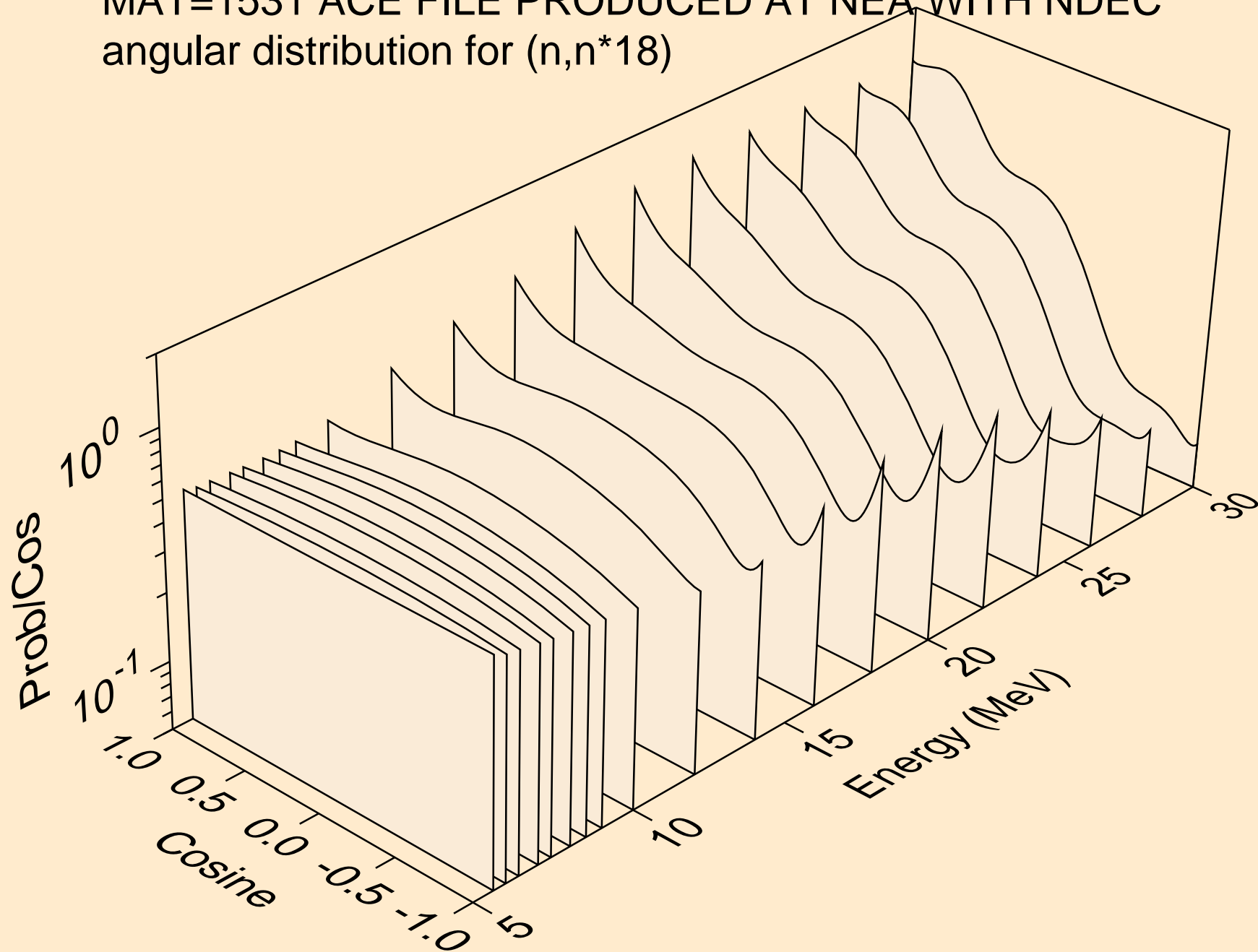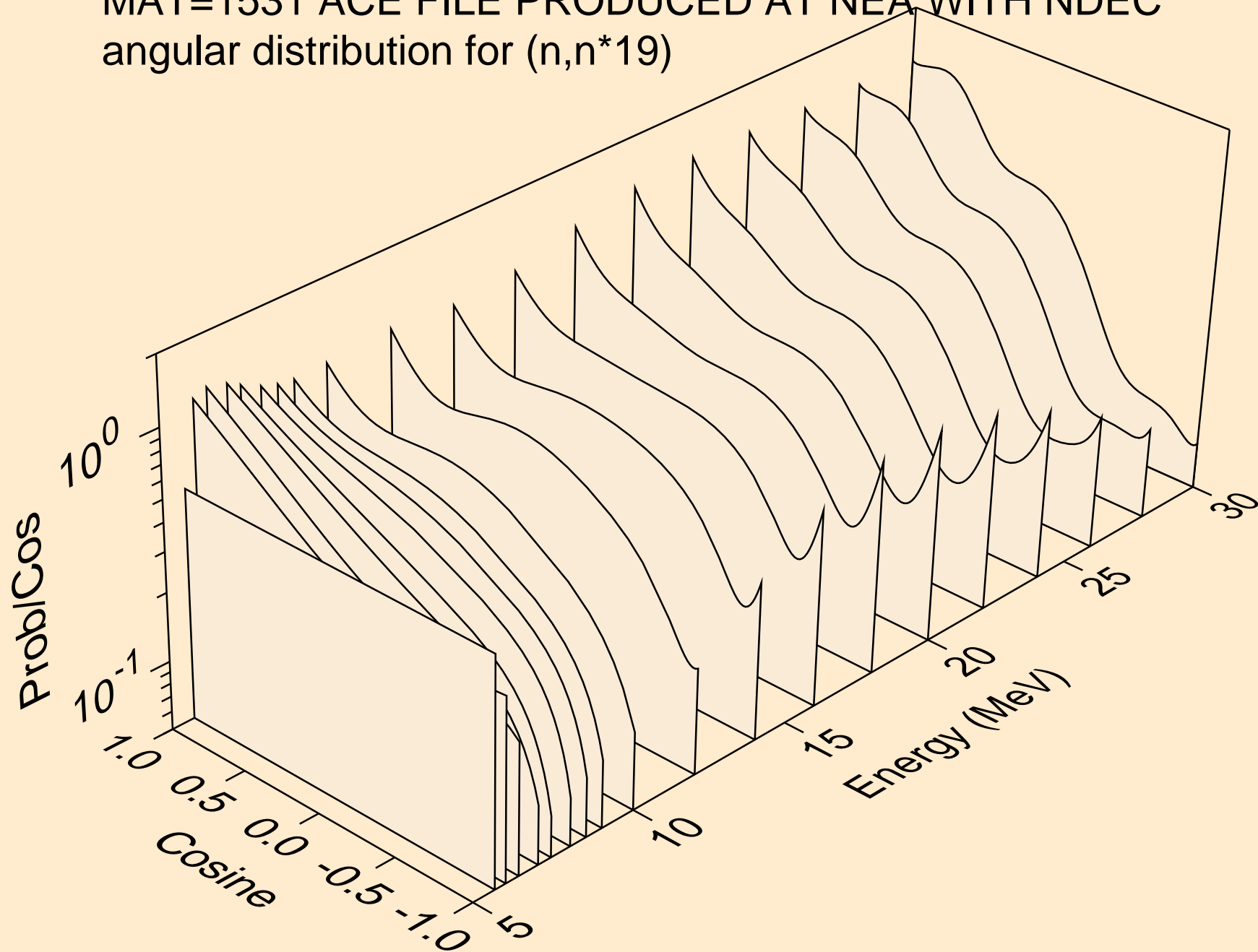MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*16)

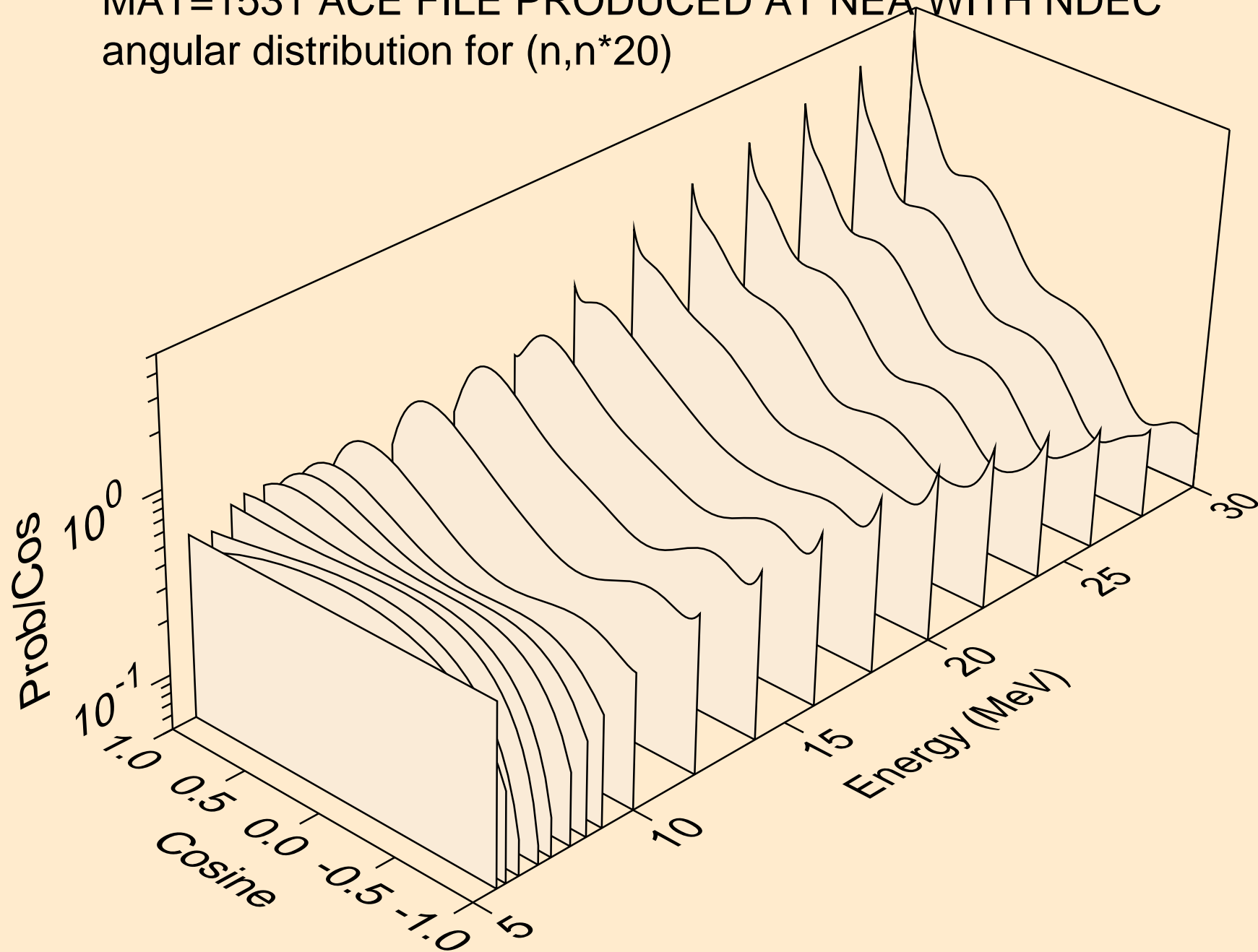MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*17)

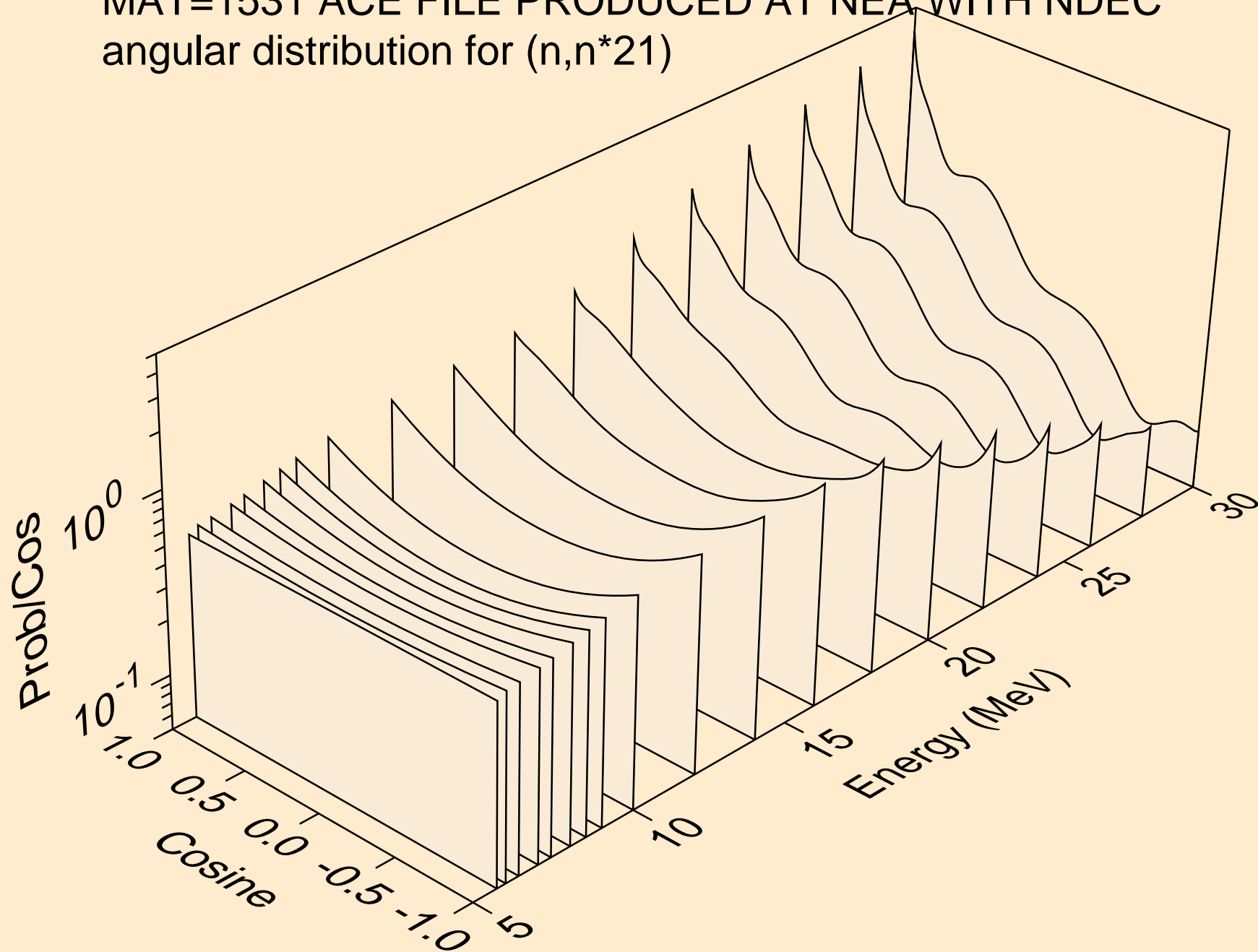MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*18)

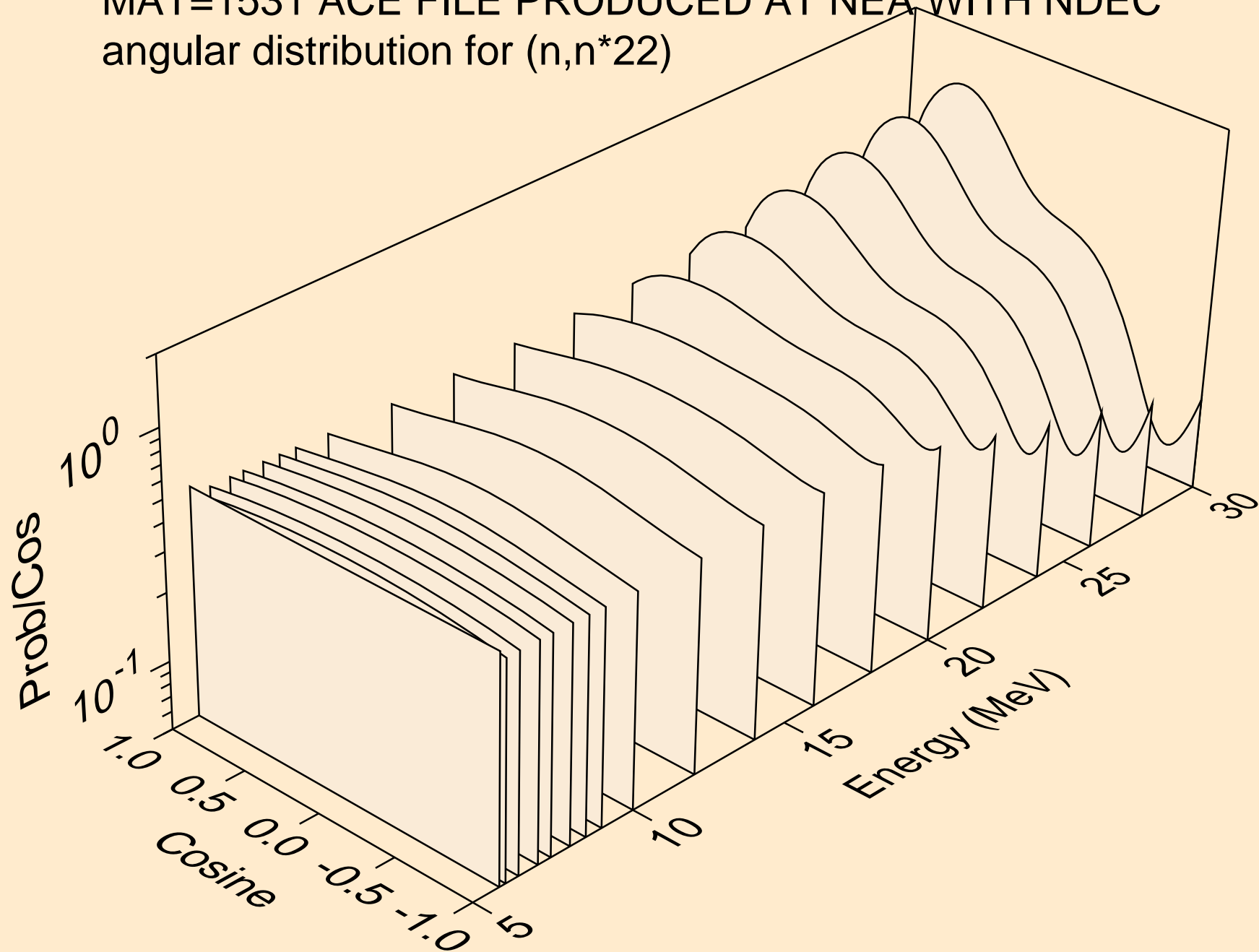MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*19)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*20)

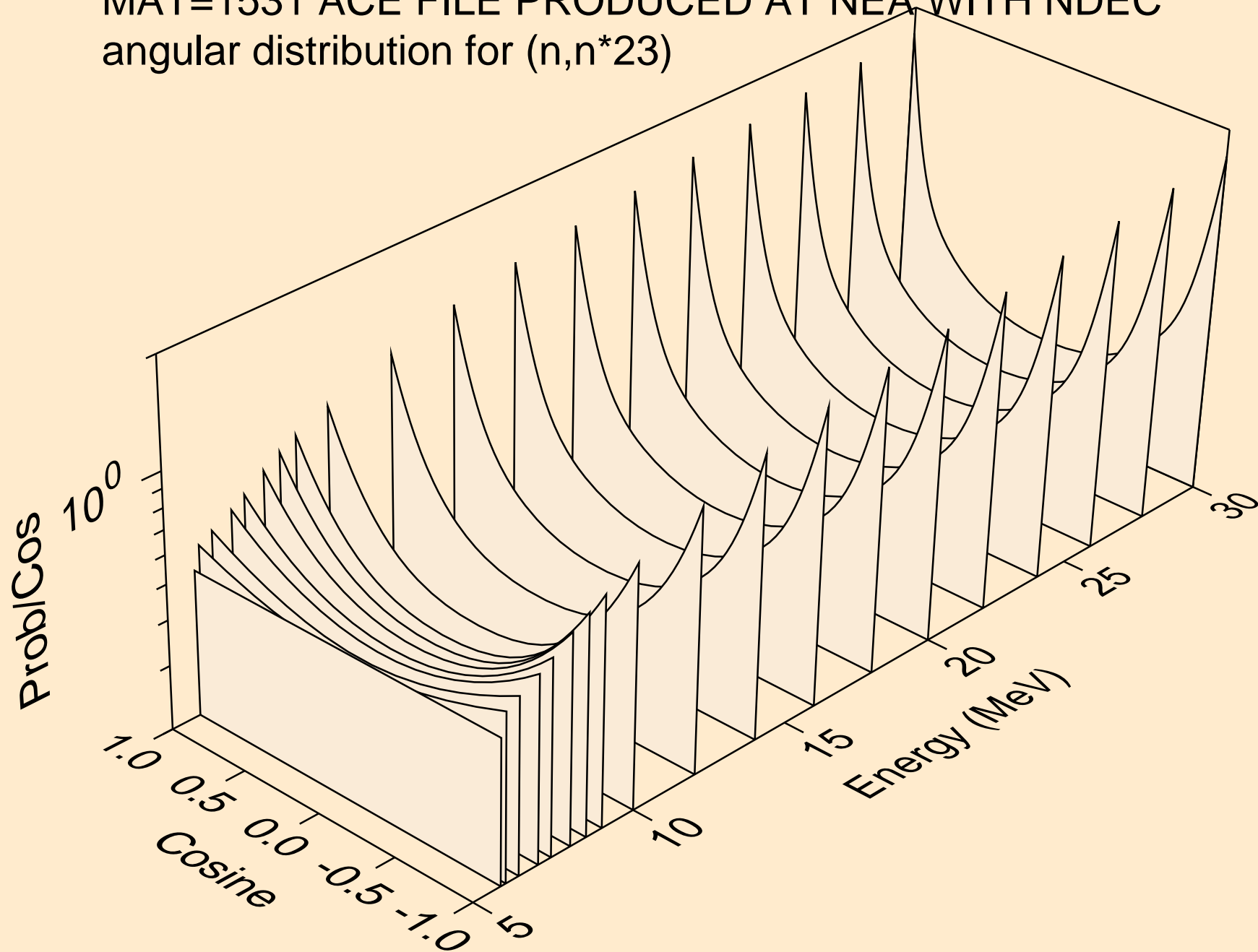MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*21)

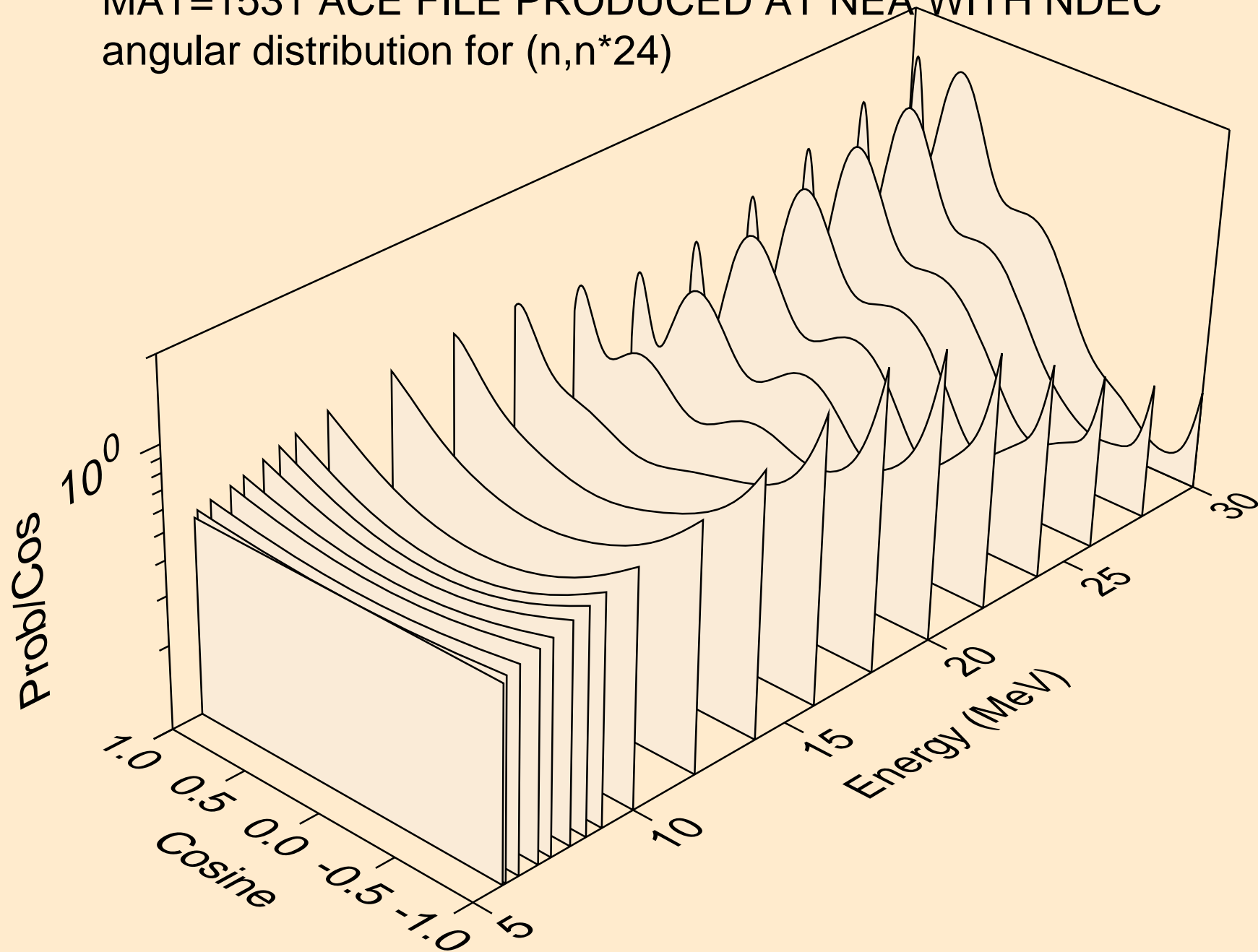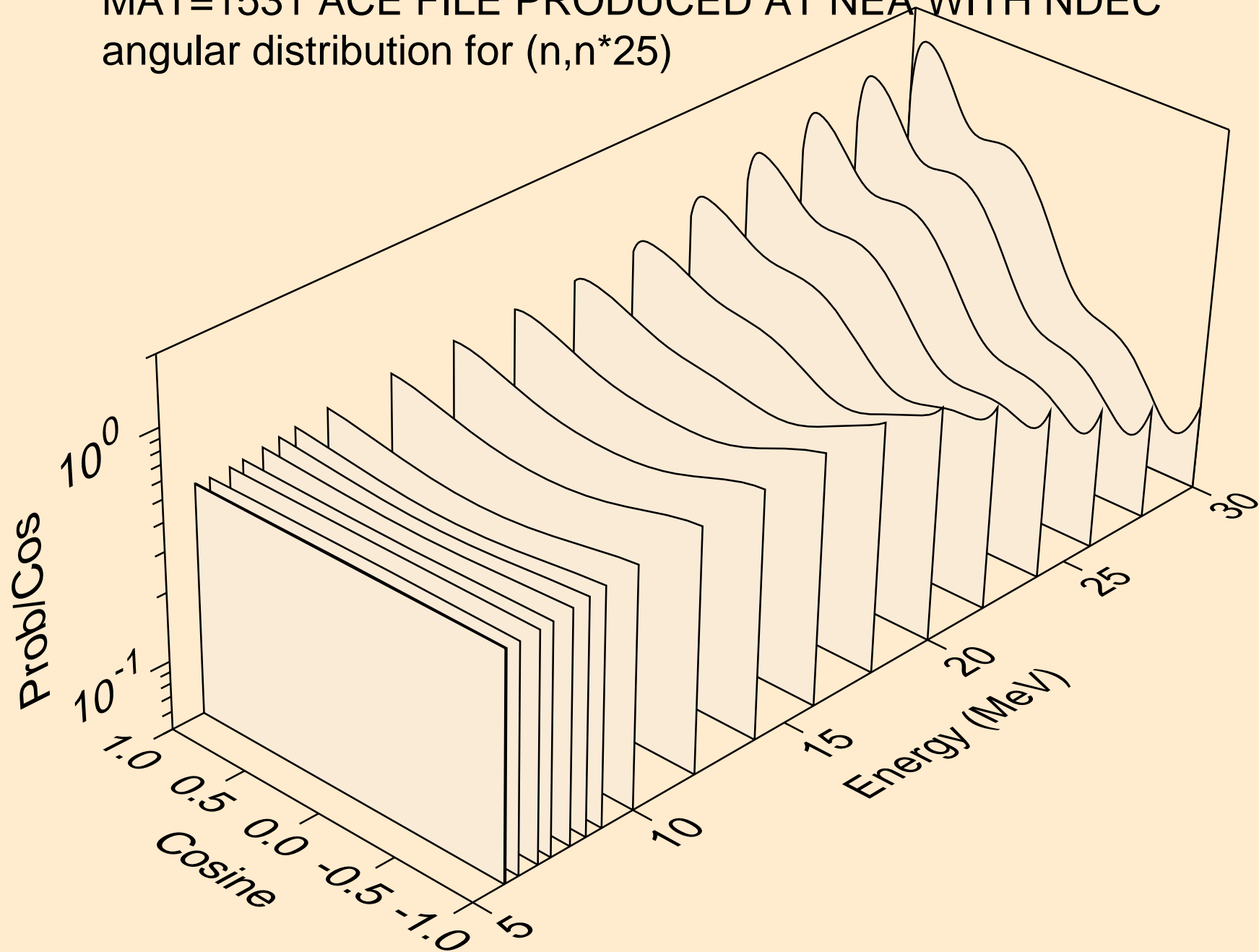MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*22)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
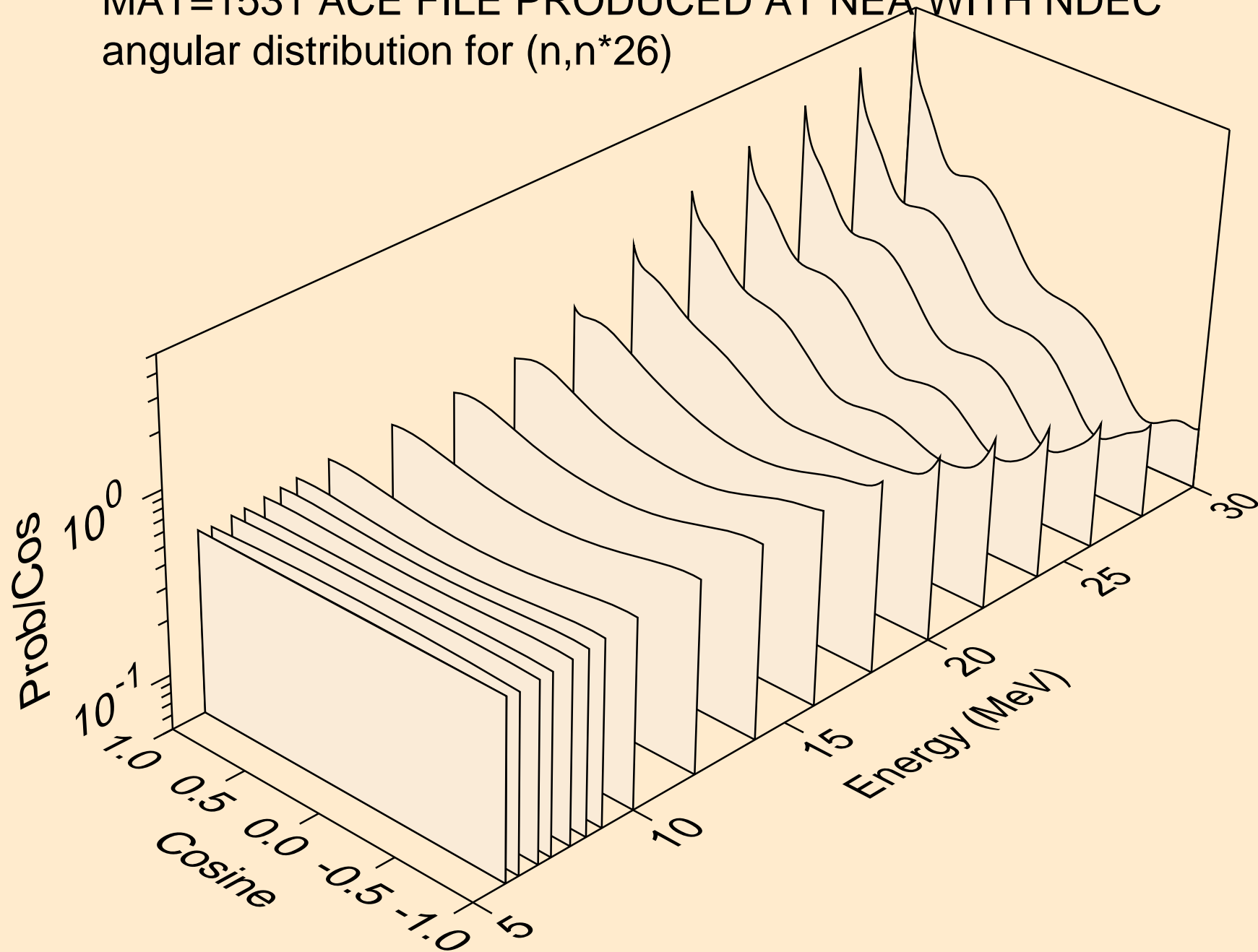angular distribution for (n,n*23)

ProbICos

$10^0$

Cosine

Energy (MeV)

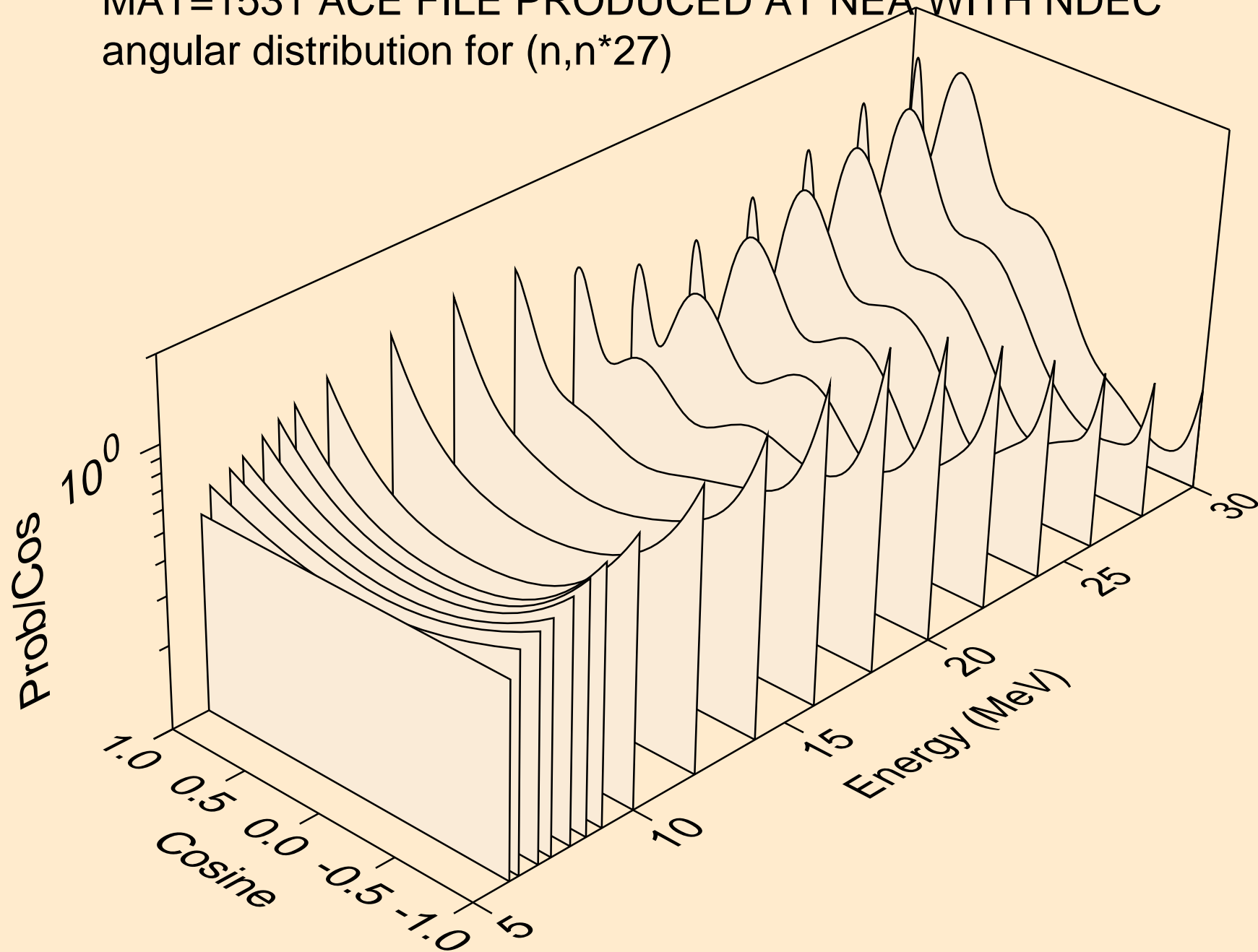MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*24)

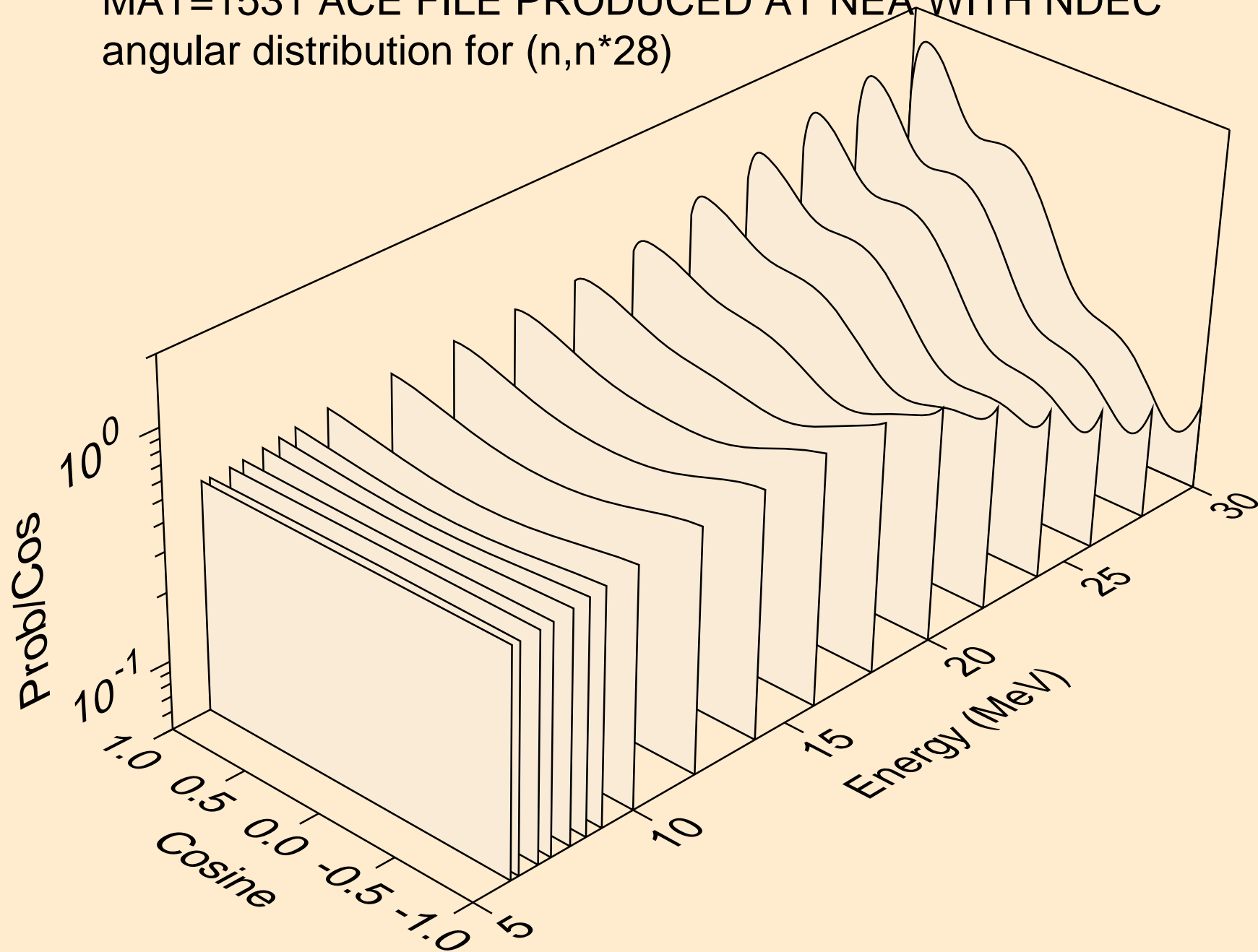MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*25)

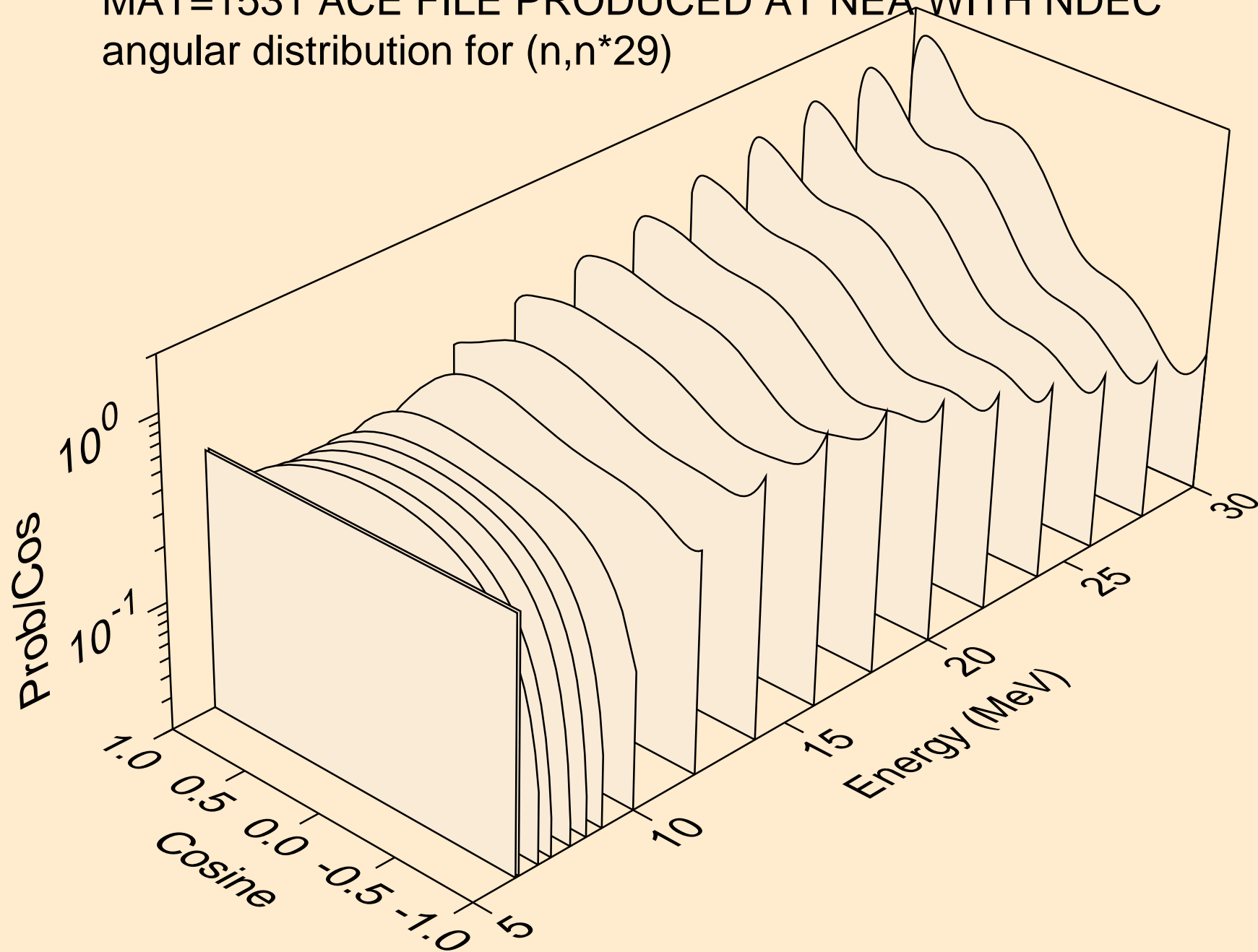MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*26)

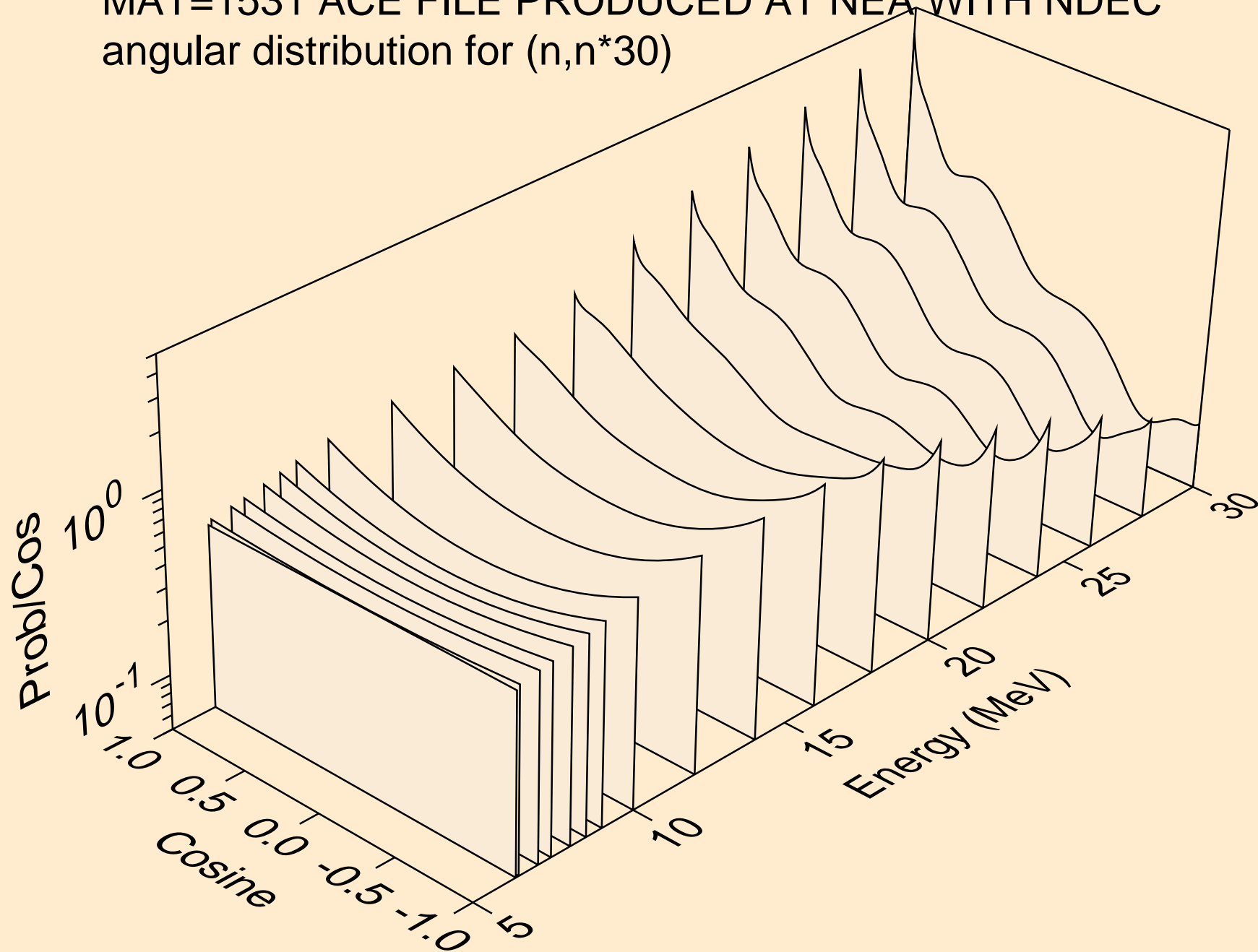MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*27)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*28)

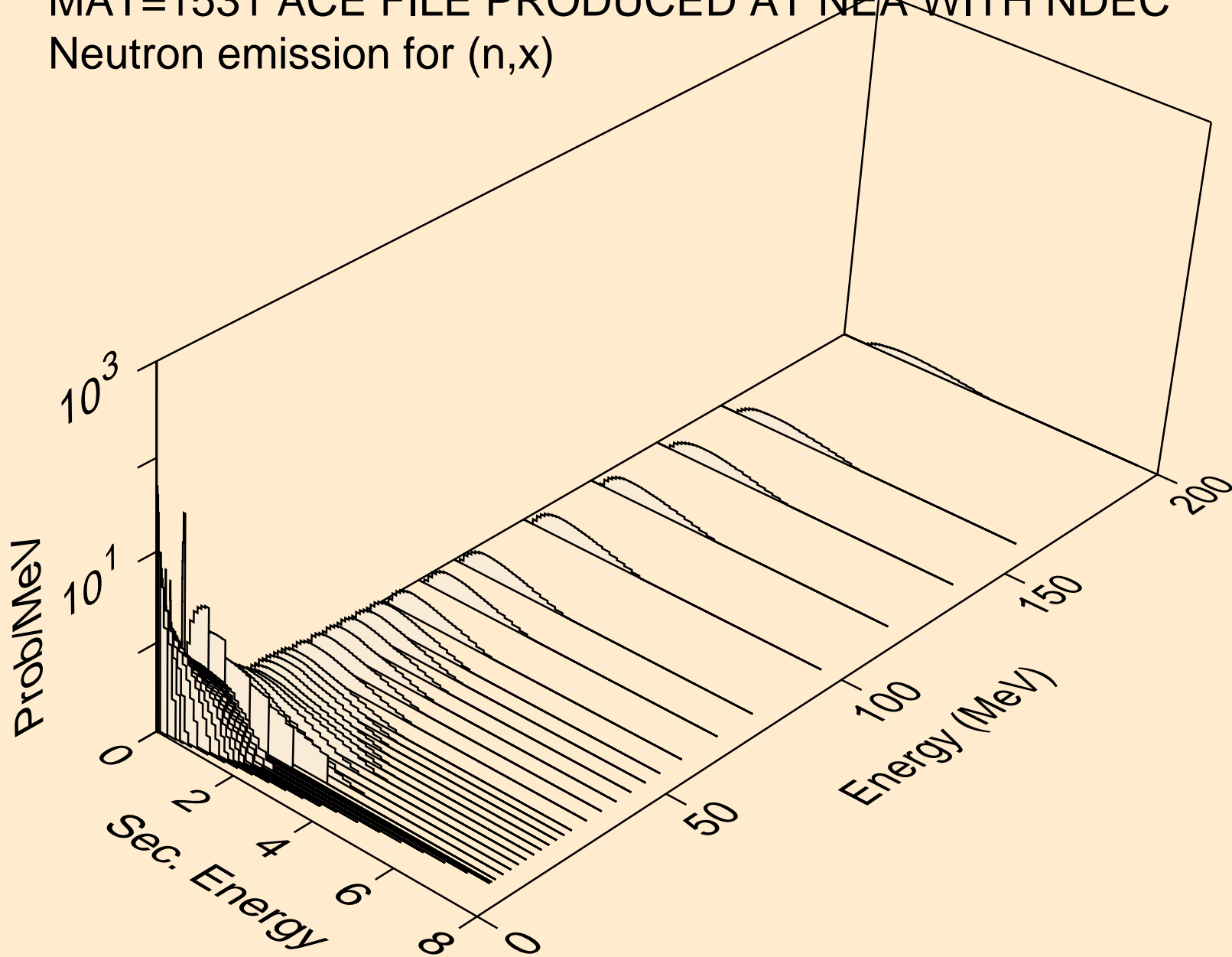MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
angular distribution for (n,n*29)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
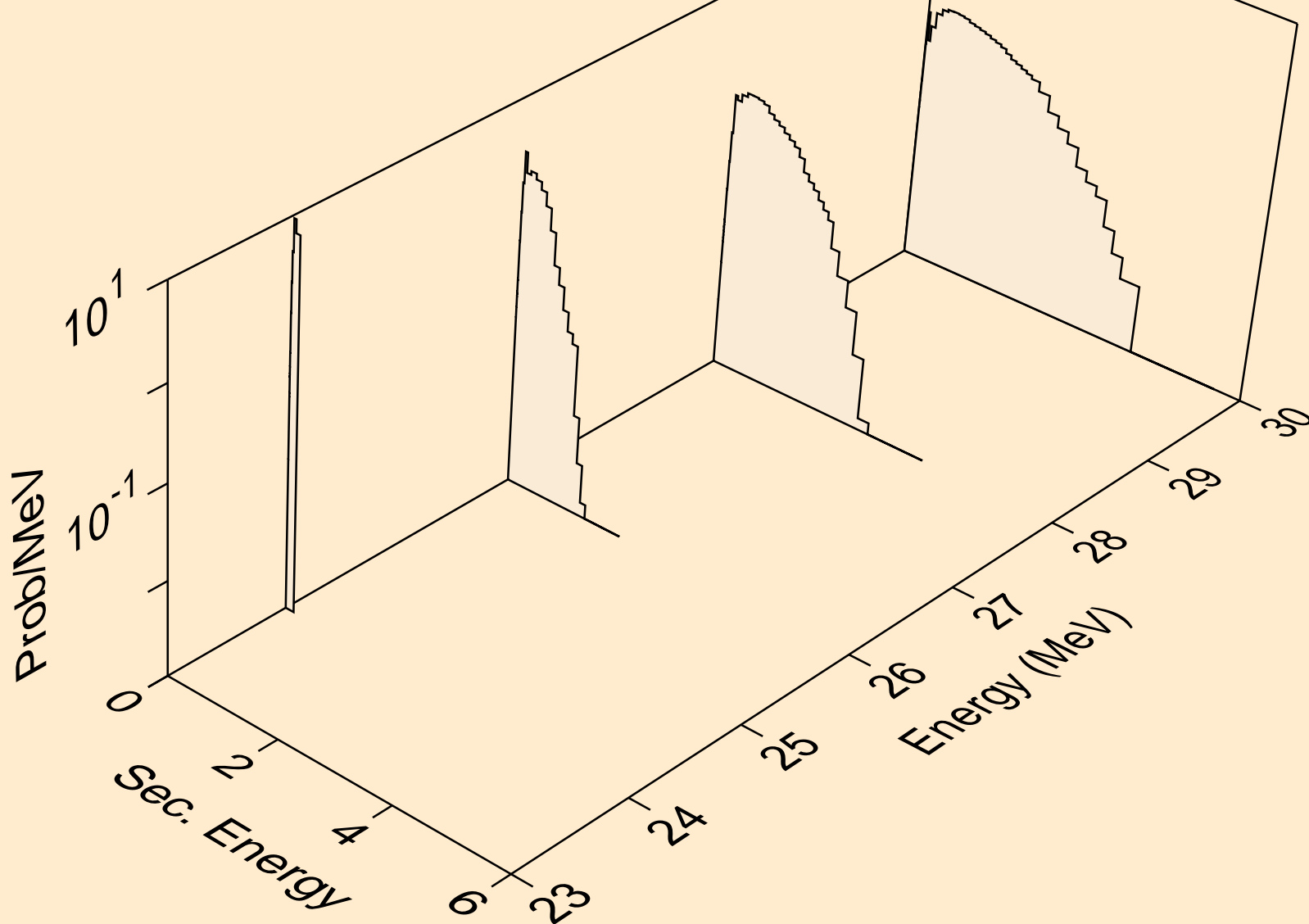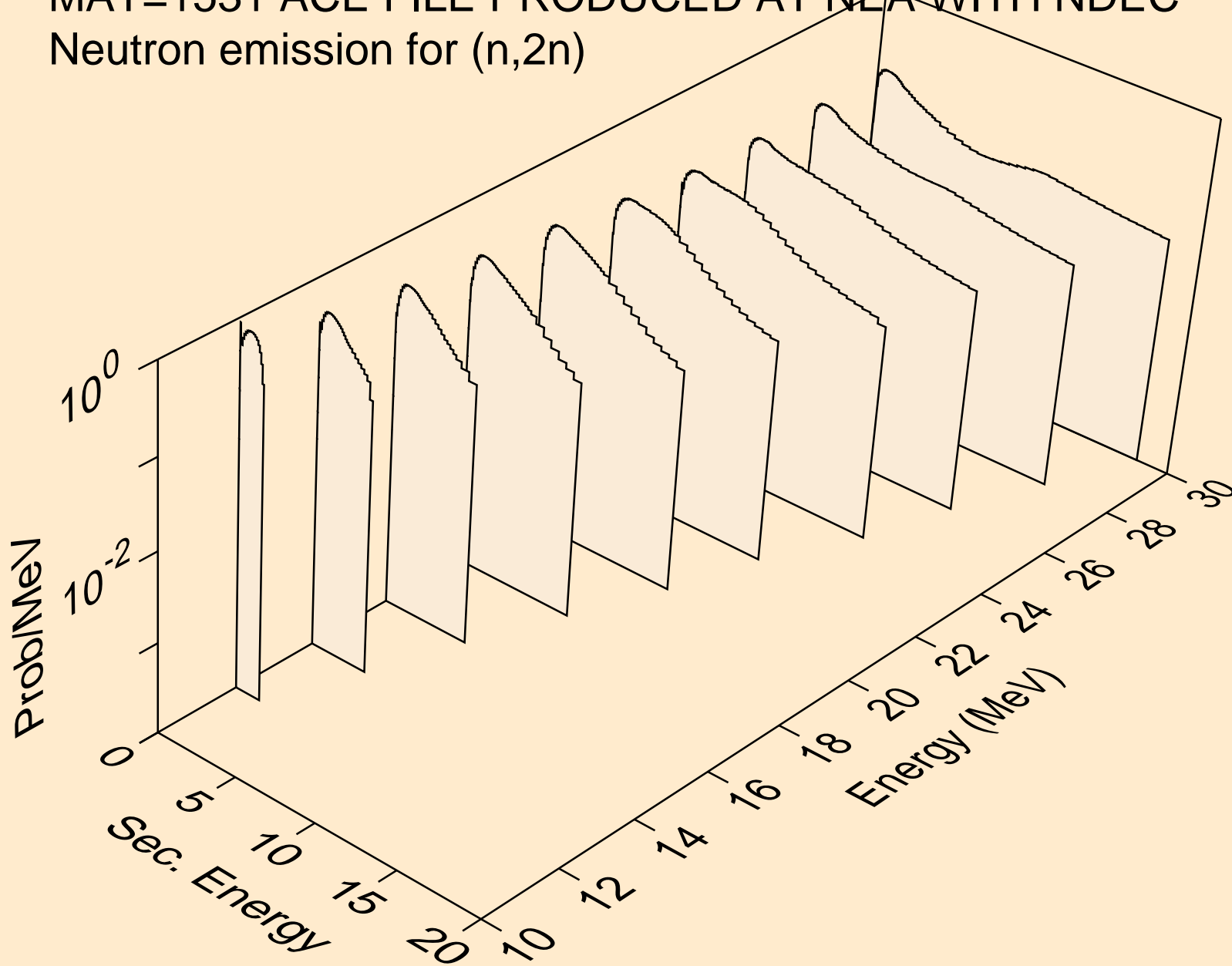angular distribution for (n,n*30)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
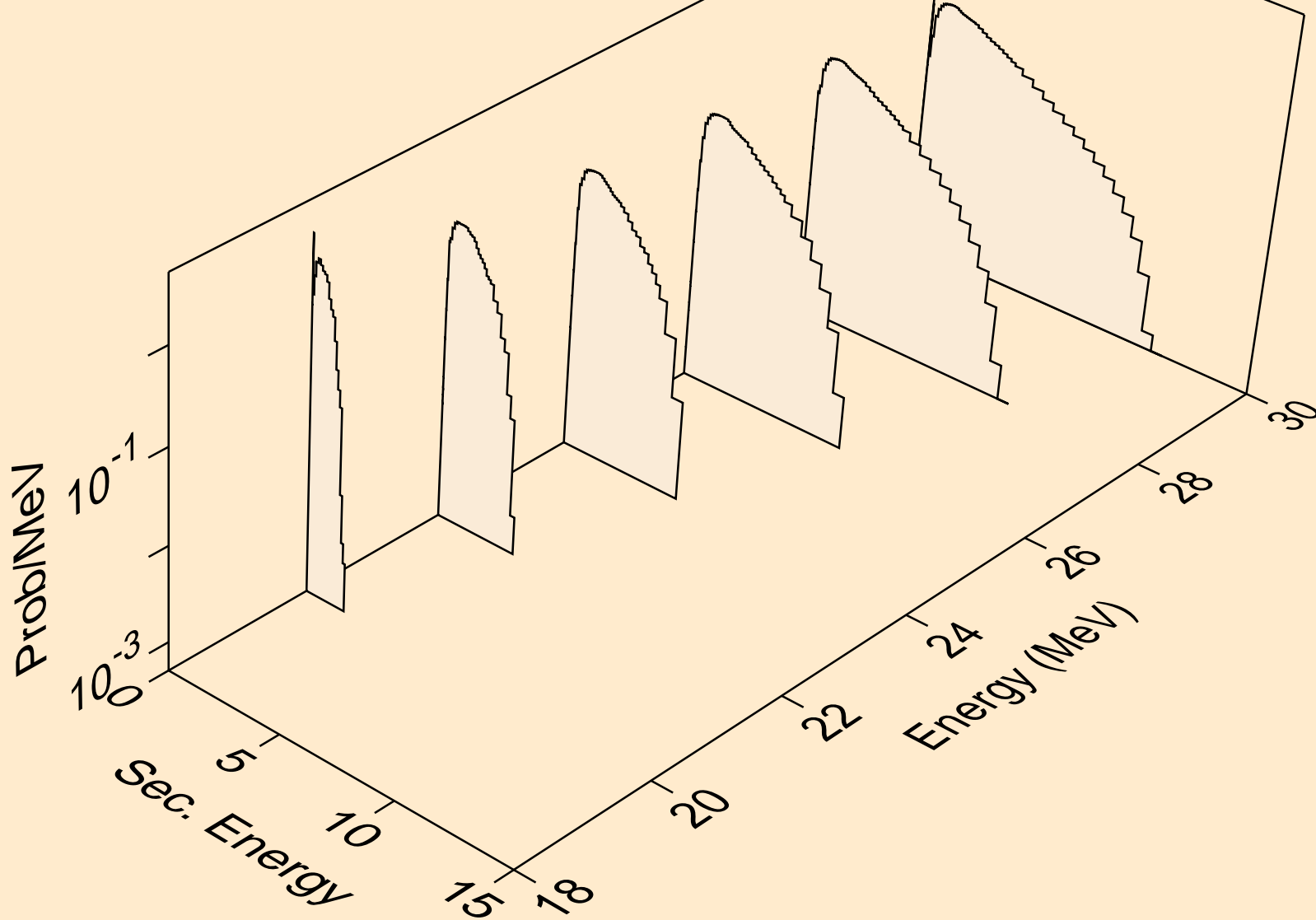Neutron emission for (n,x)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
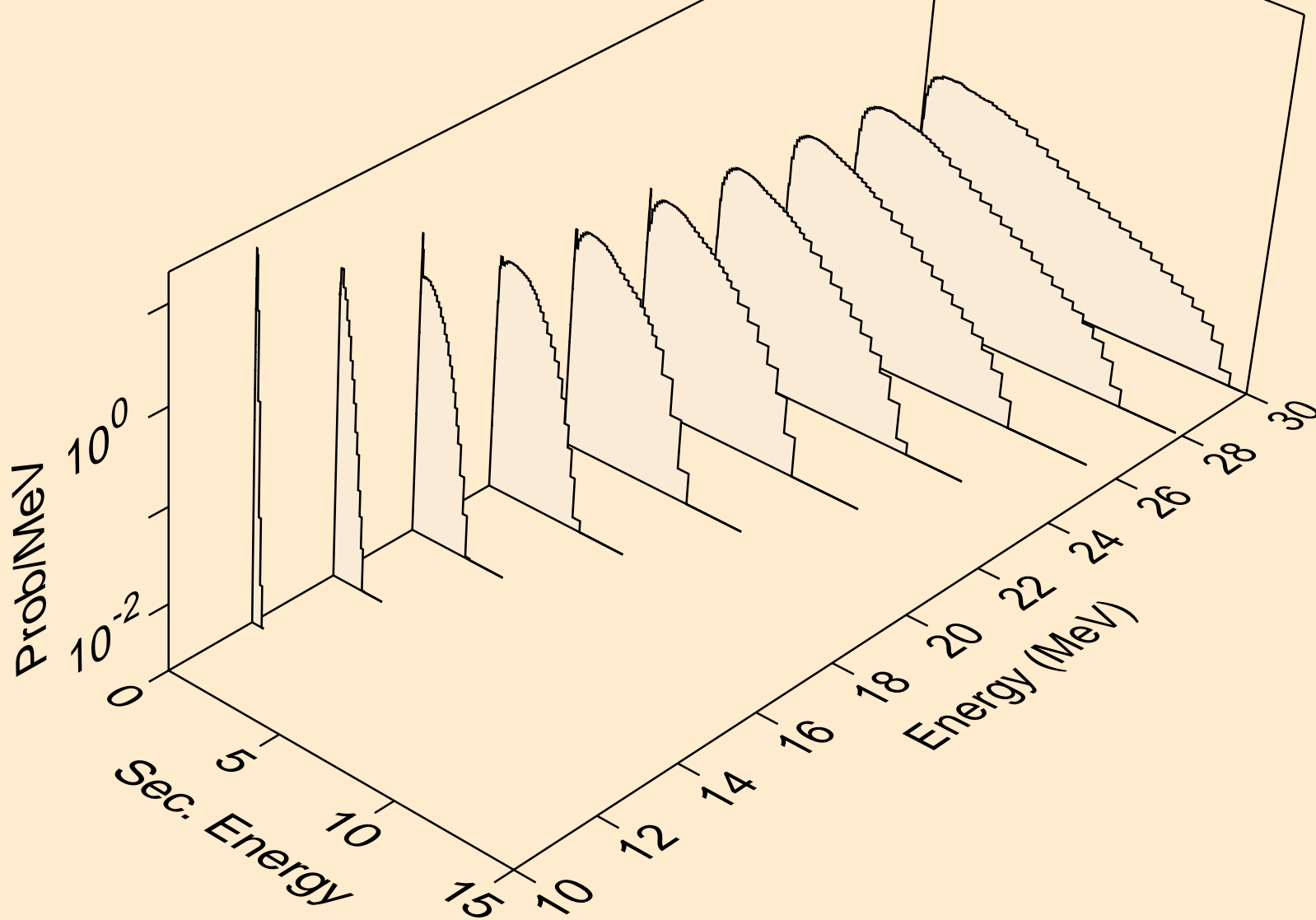Neutron emission for (n,2nd)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
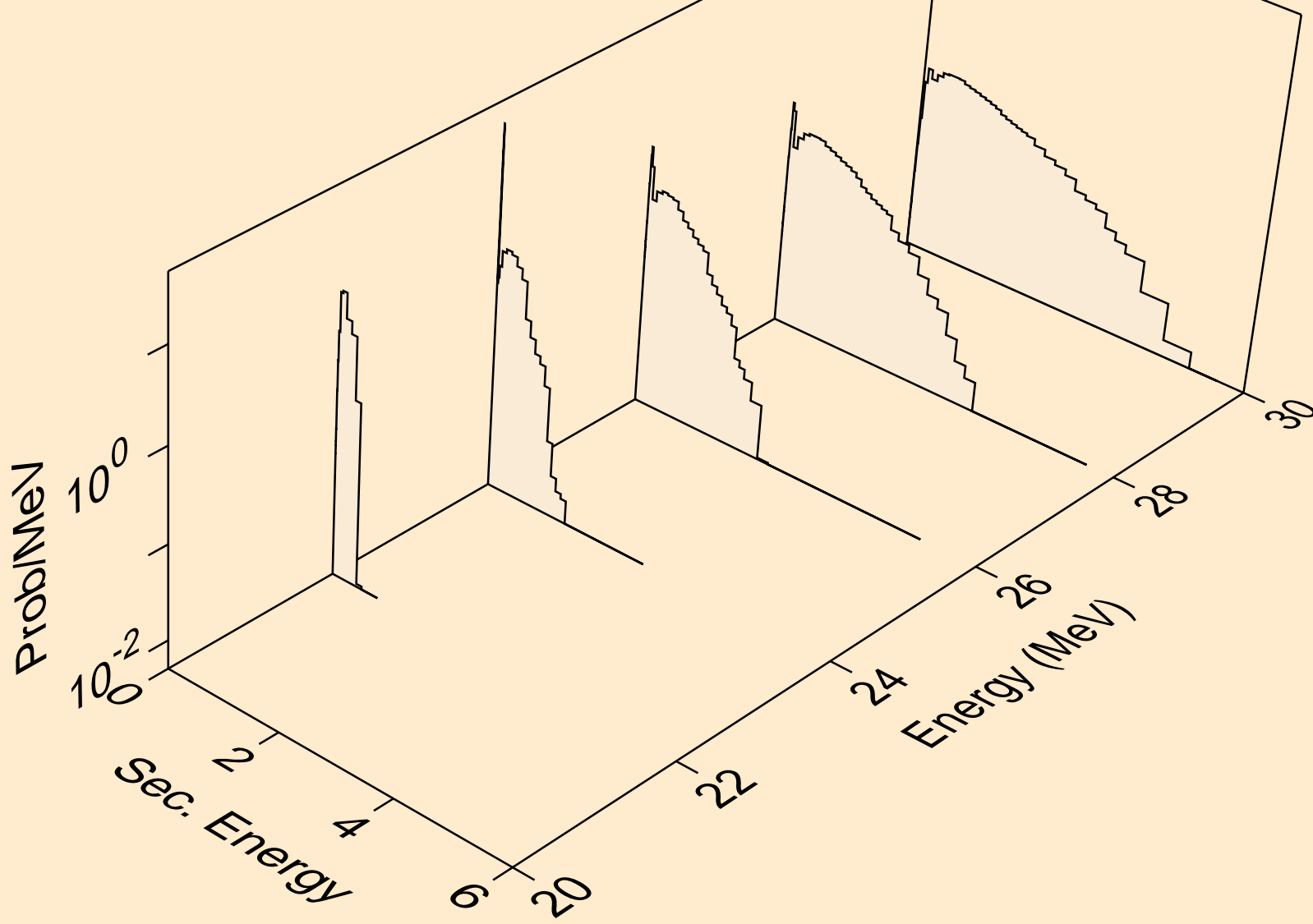Neutron emission for (n,2n)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
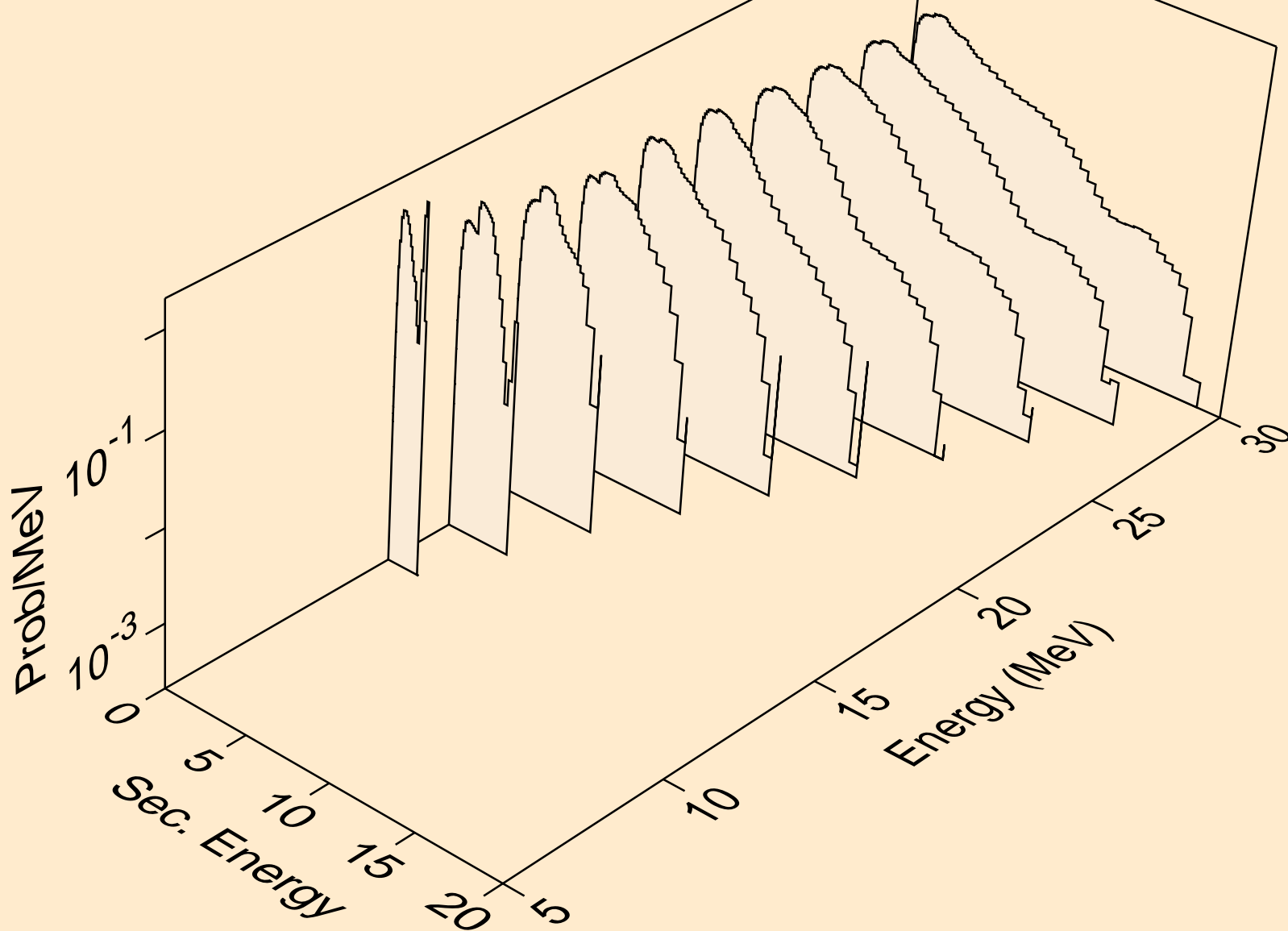Neutron emission for (n,3n)

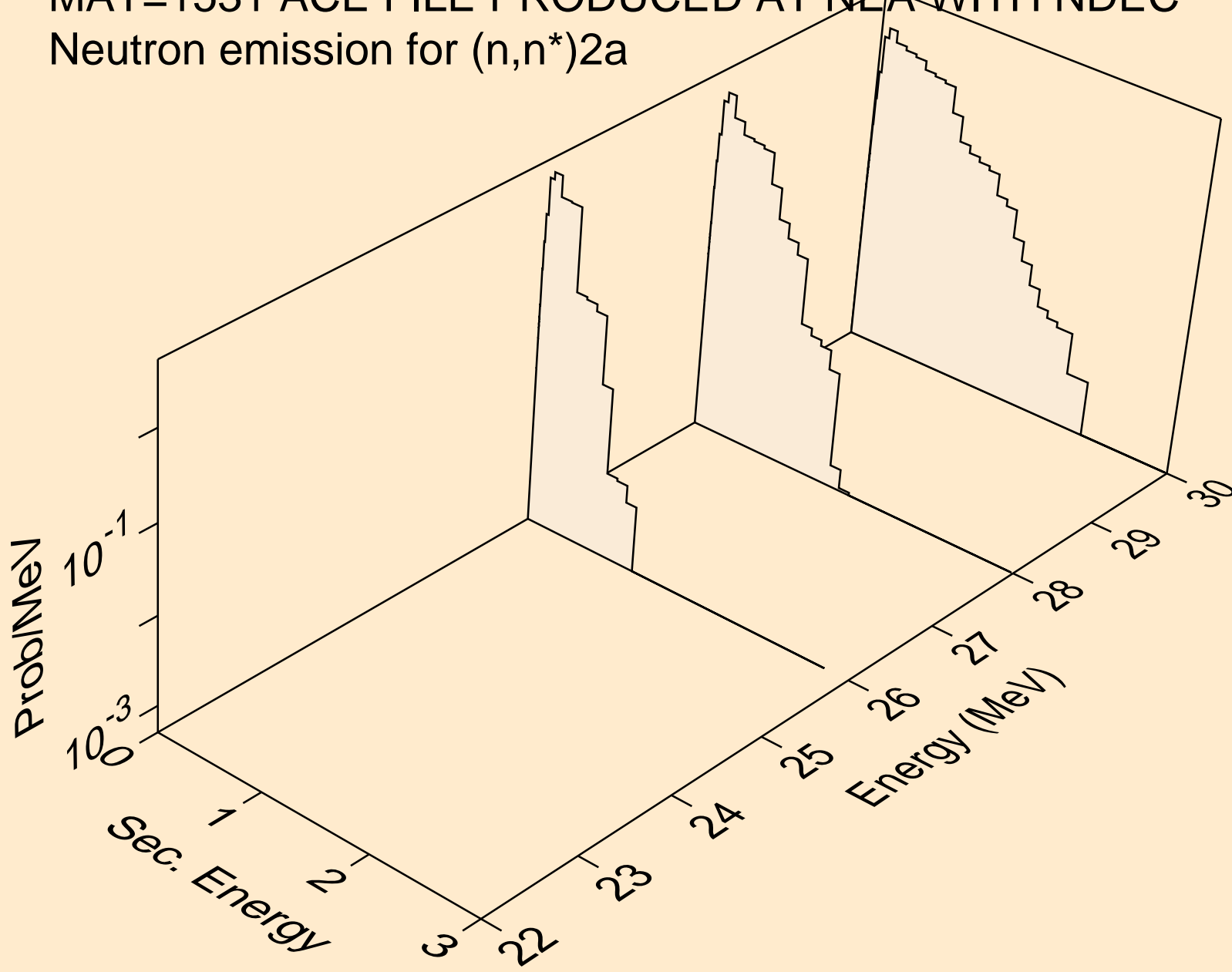MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)a

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,2n)a

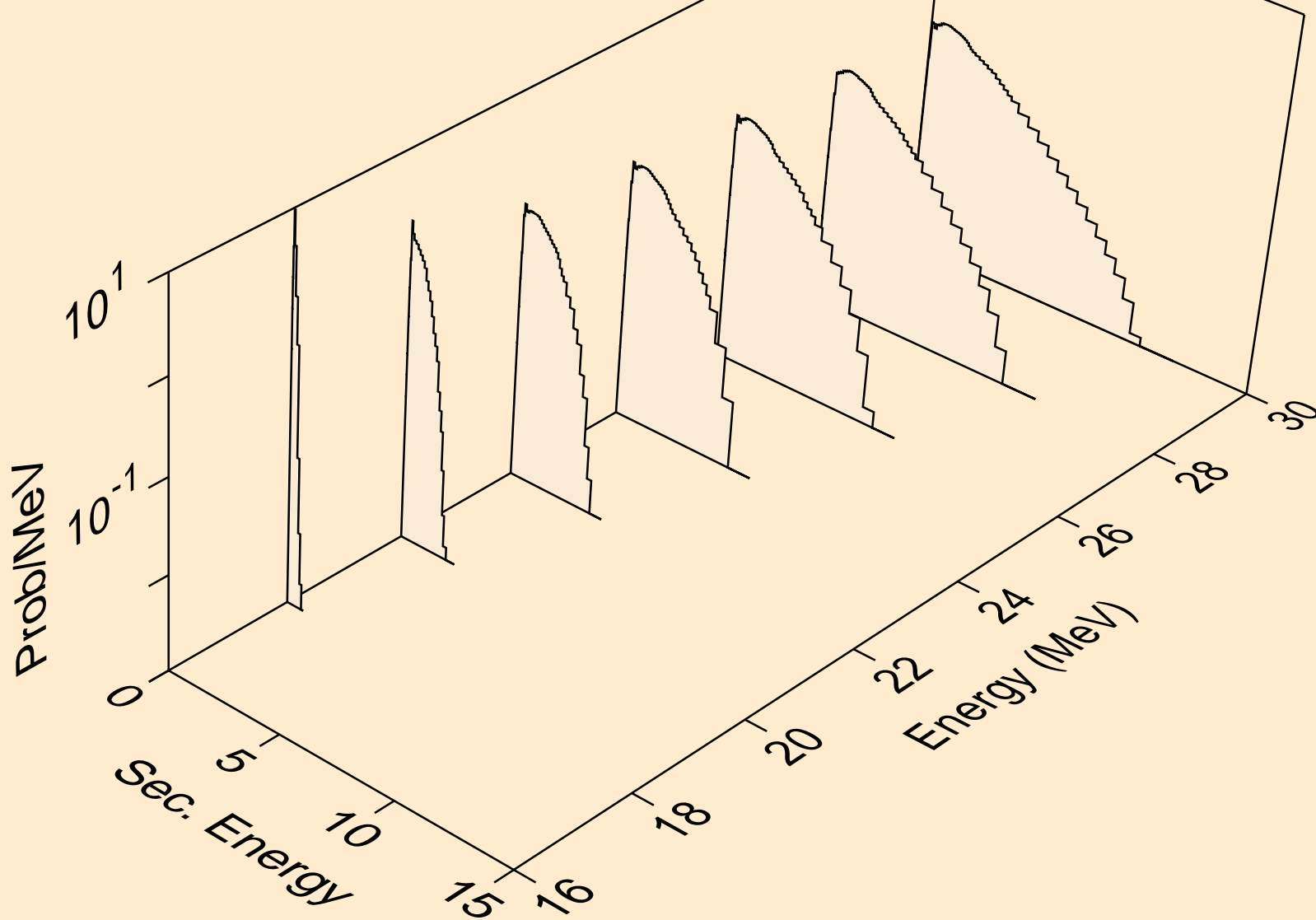MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)p

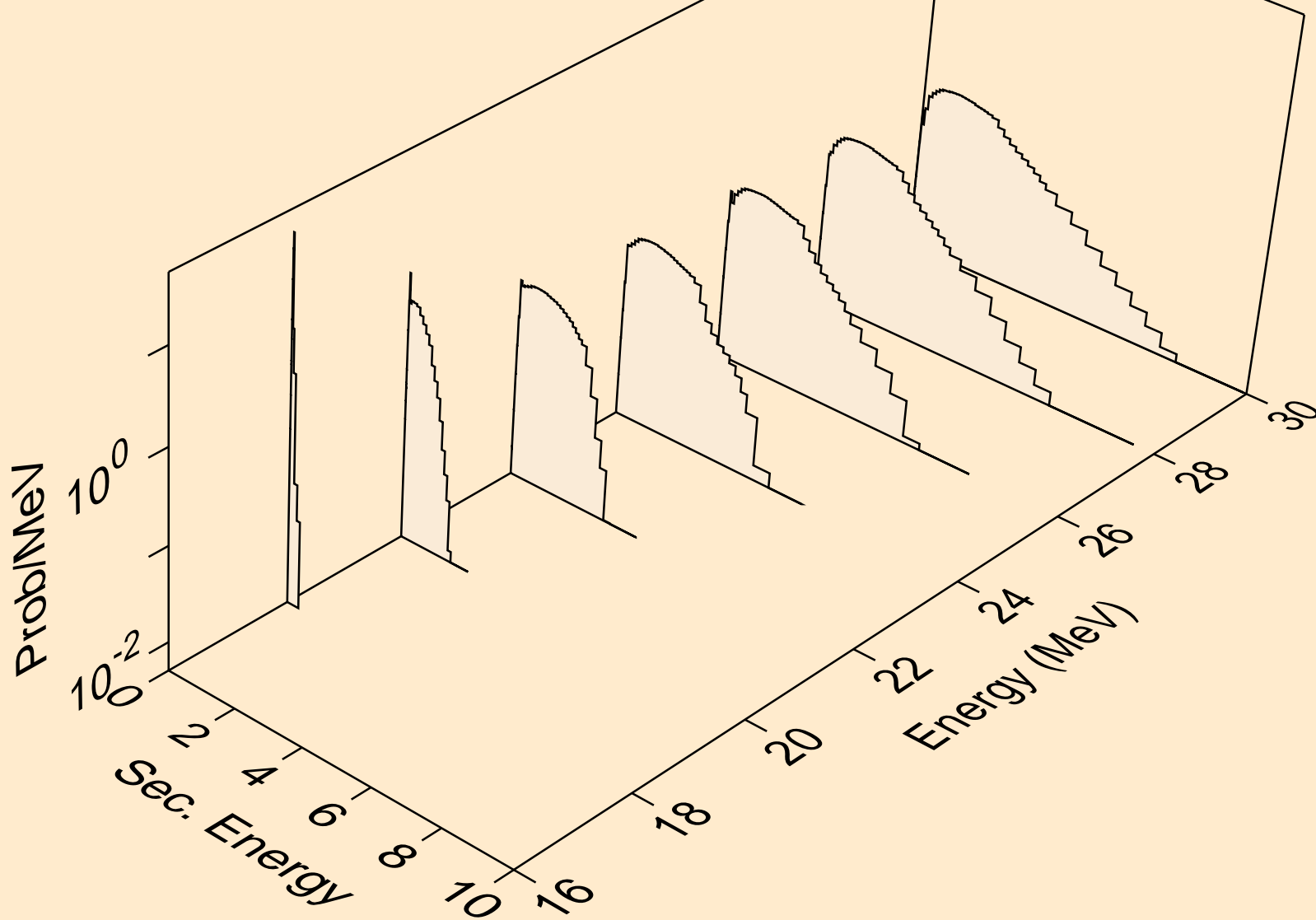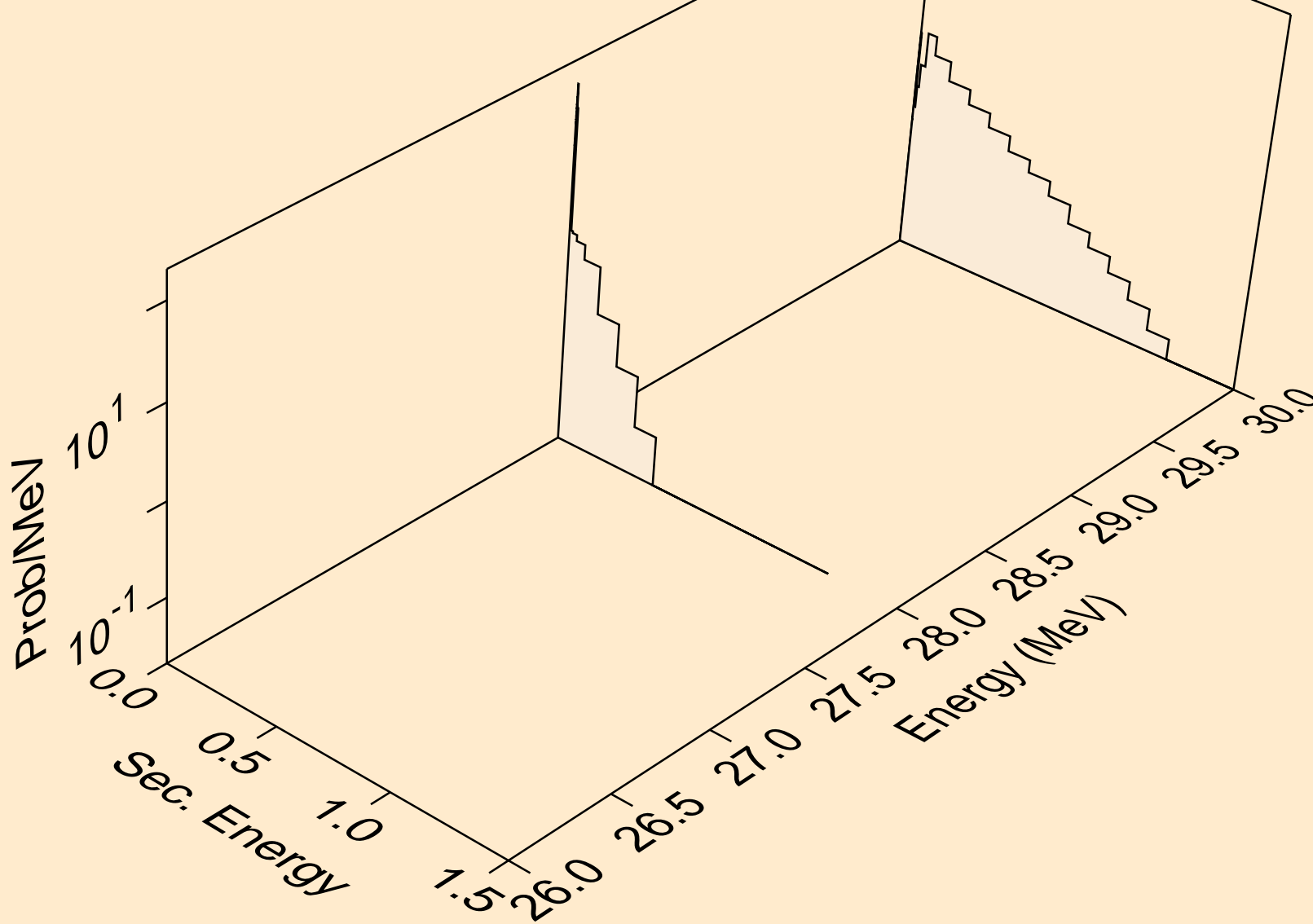MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)2a

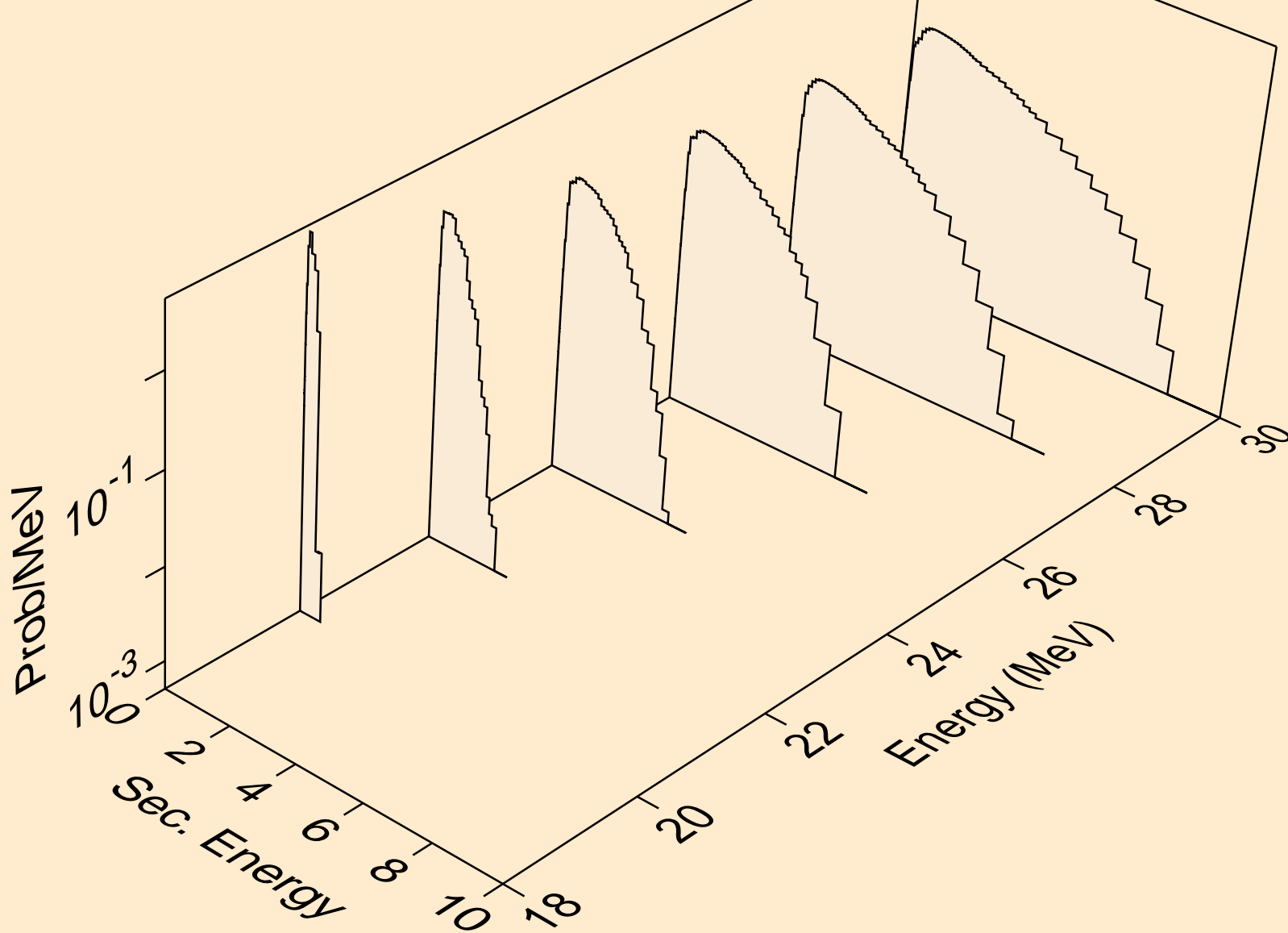MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)d

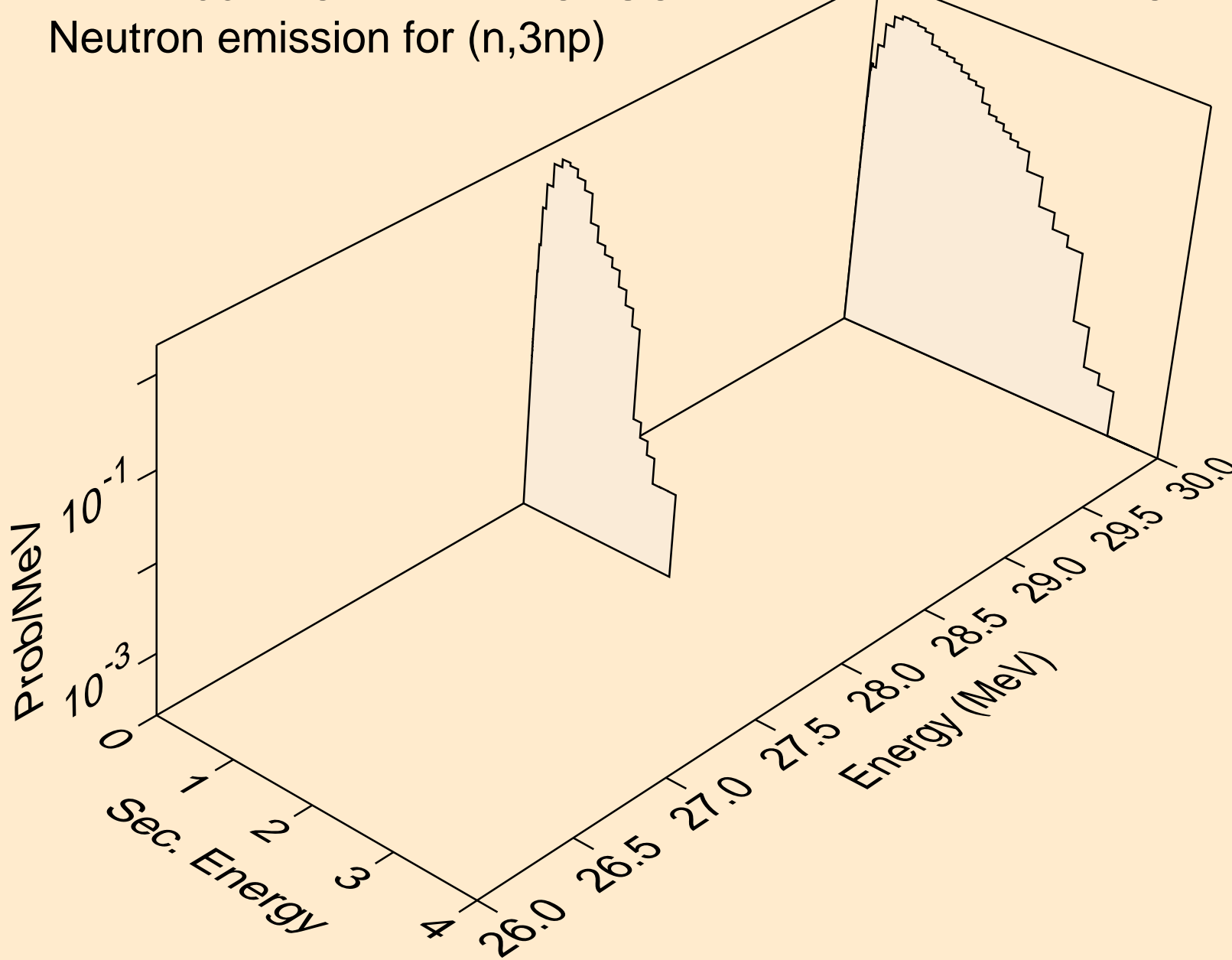MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)t

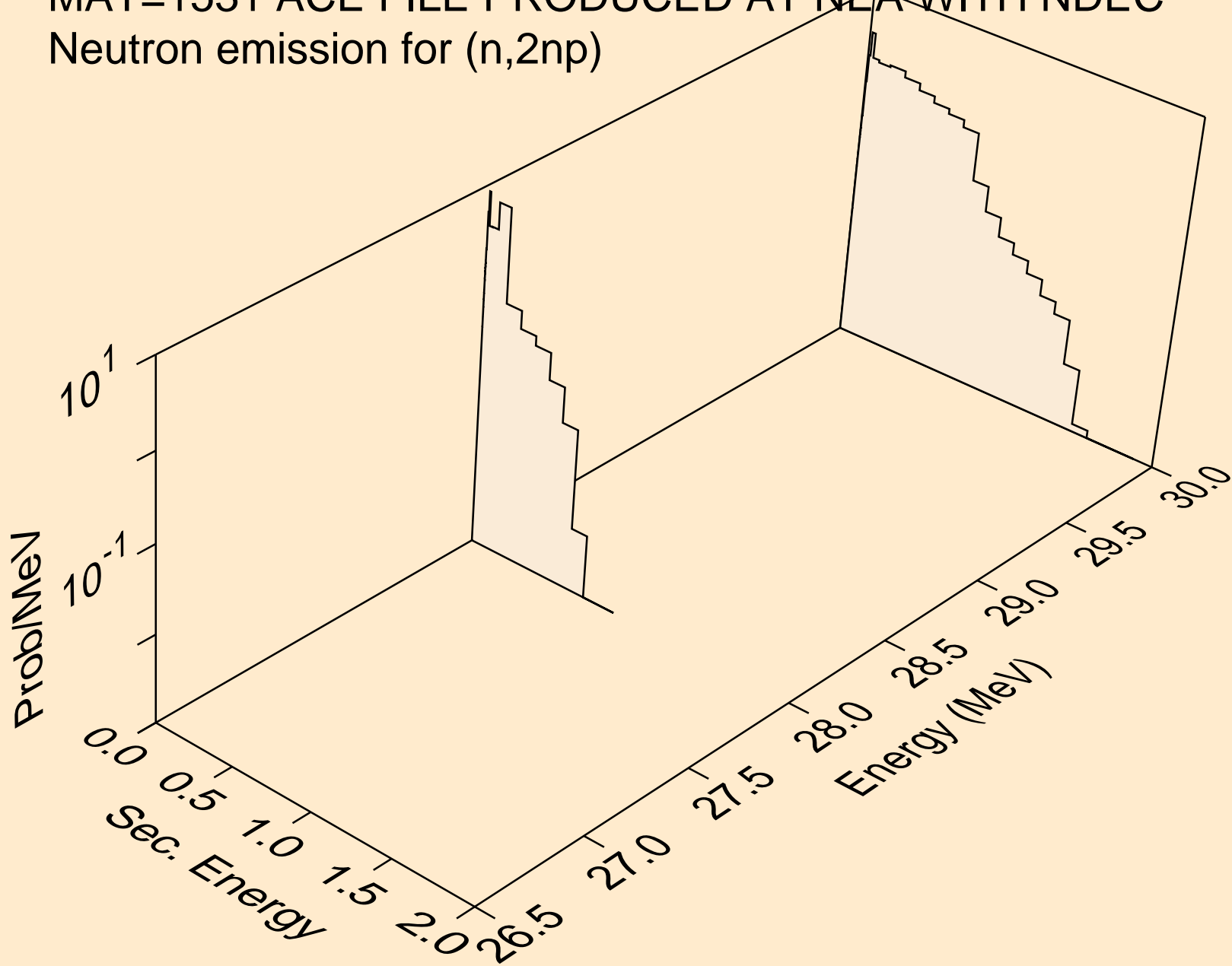MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,n*)he3

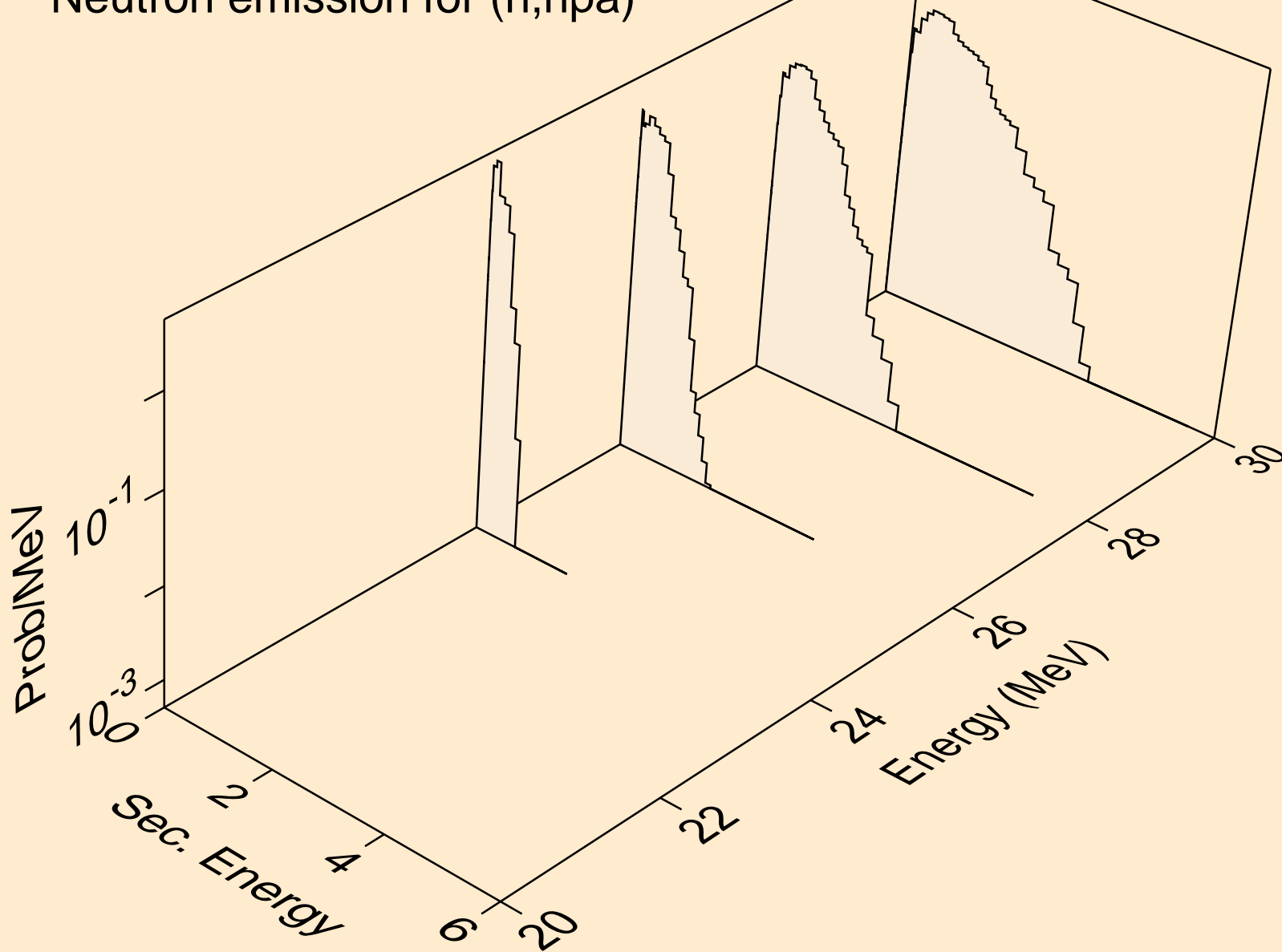MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,2np)

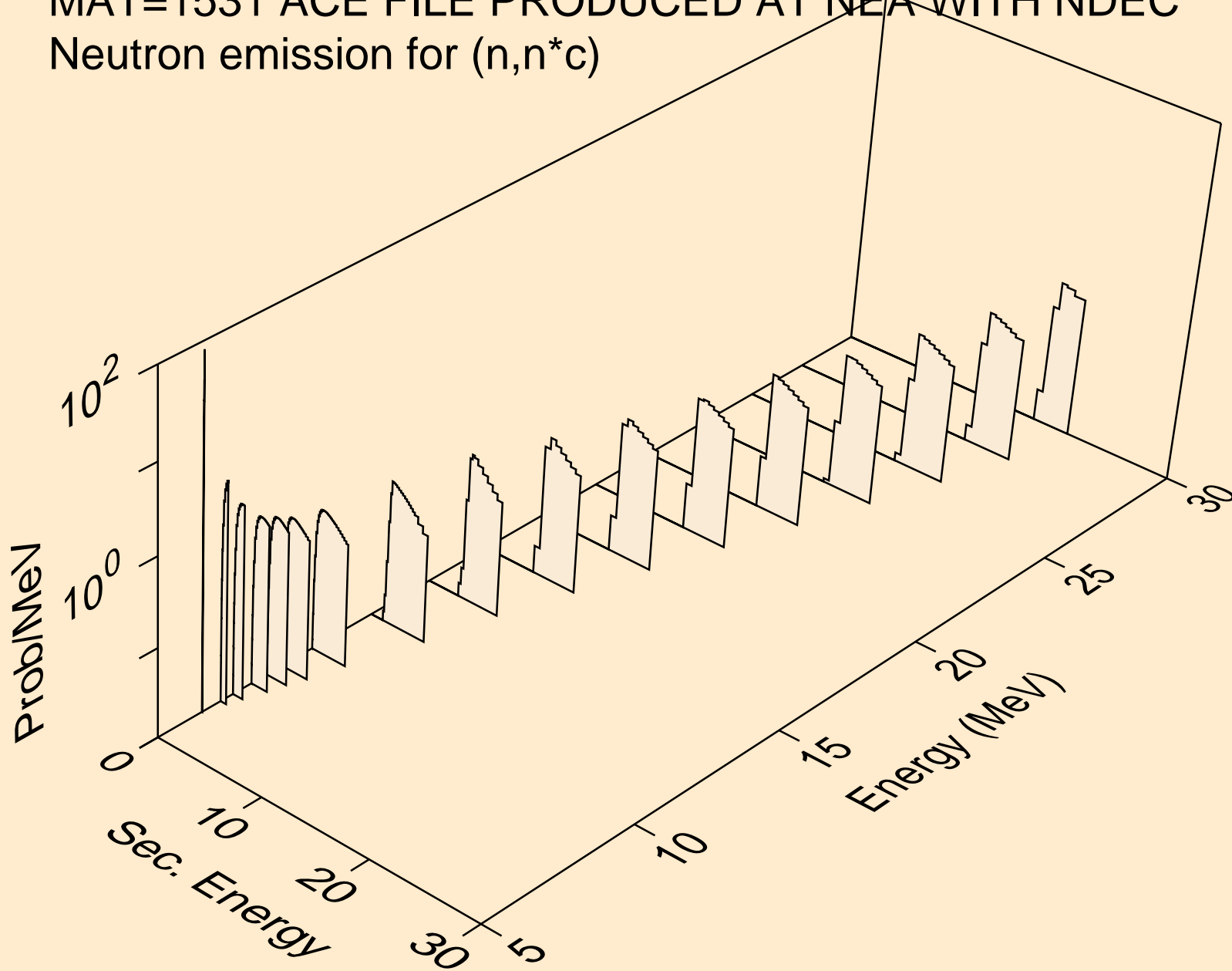MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,3np)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Neutron emission for (n,2np)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
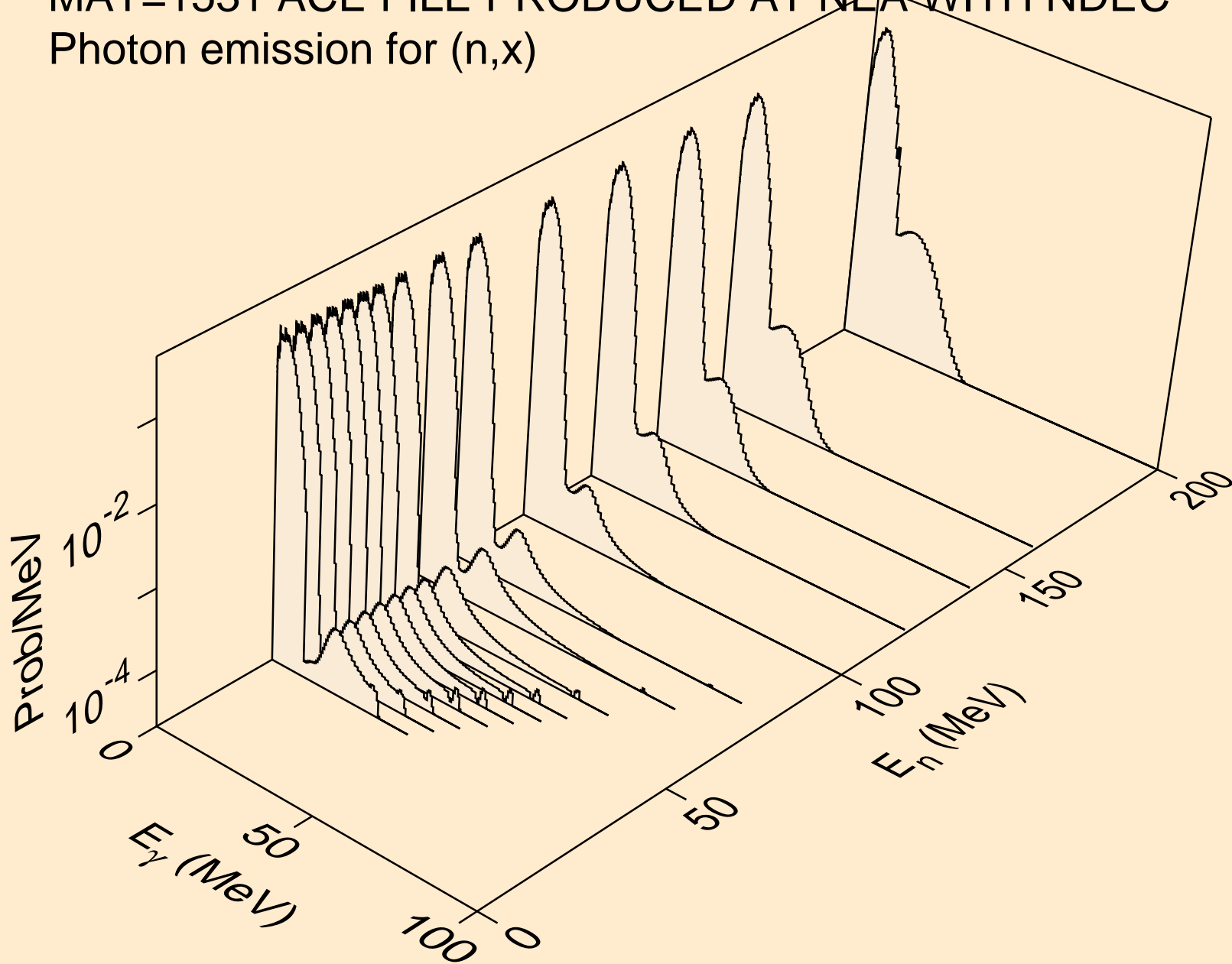Neutron emission for (n,npa)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
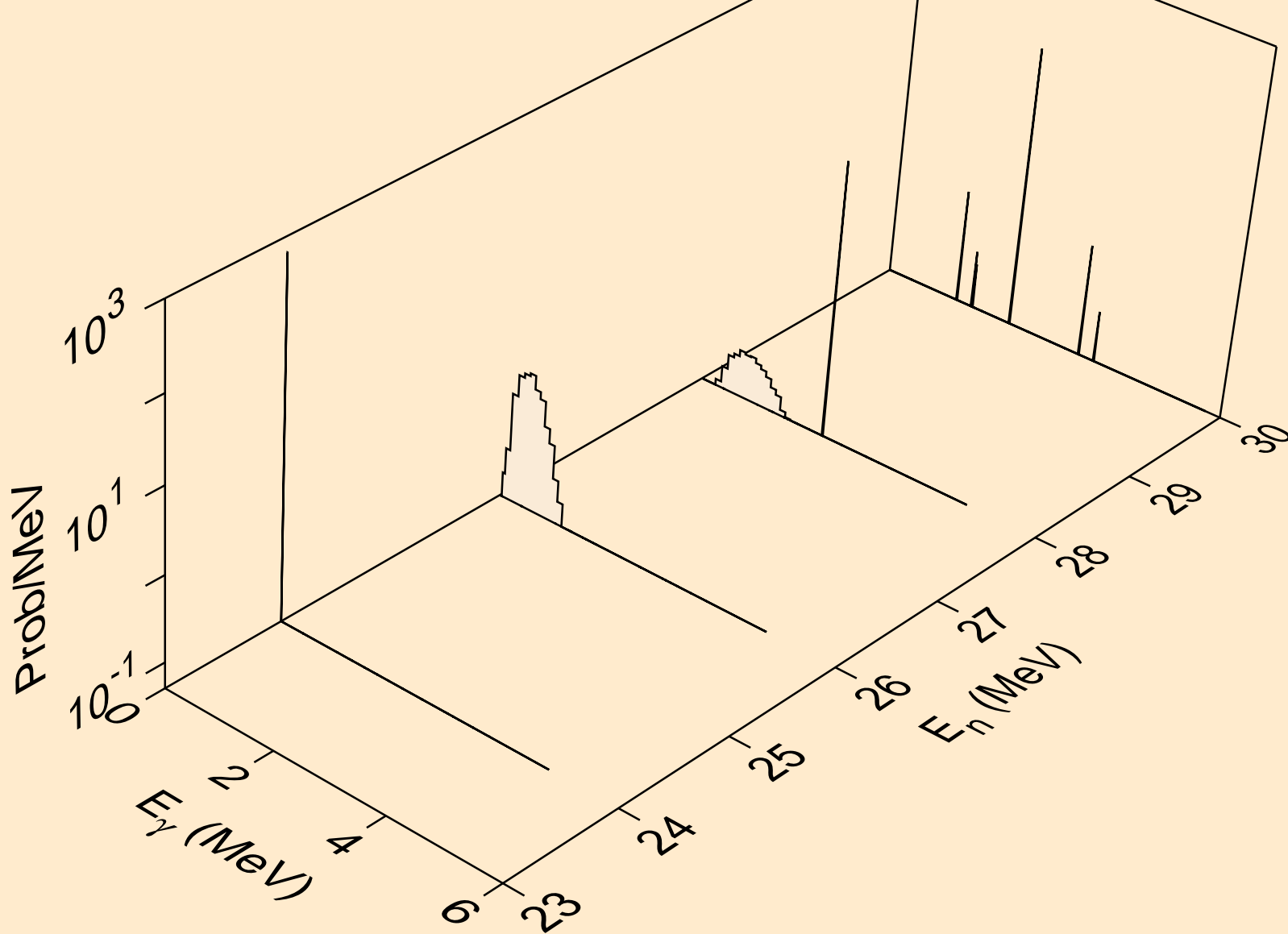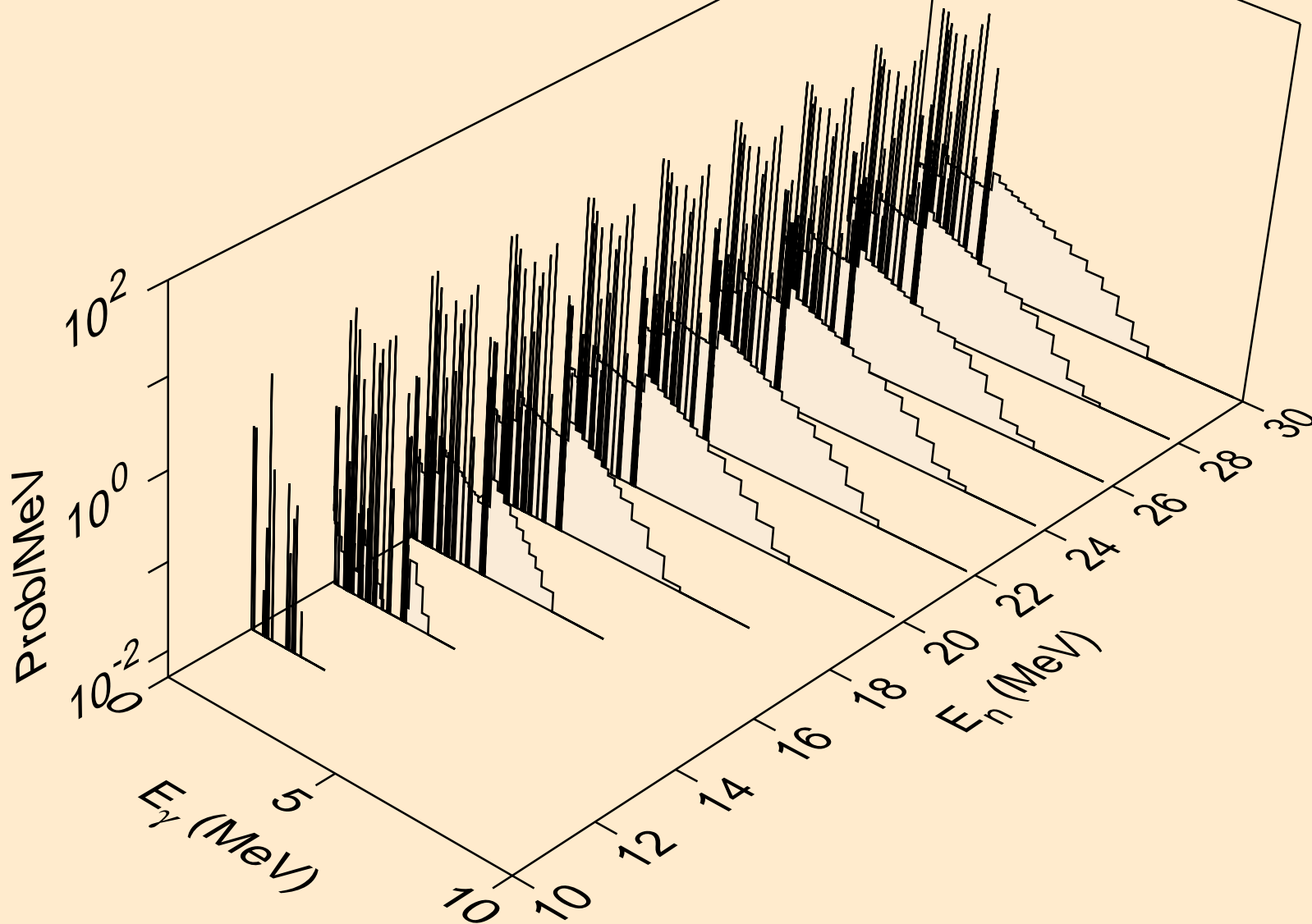Neutron emission for (n,n*c)

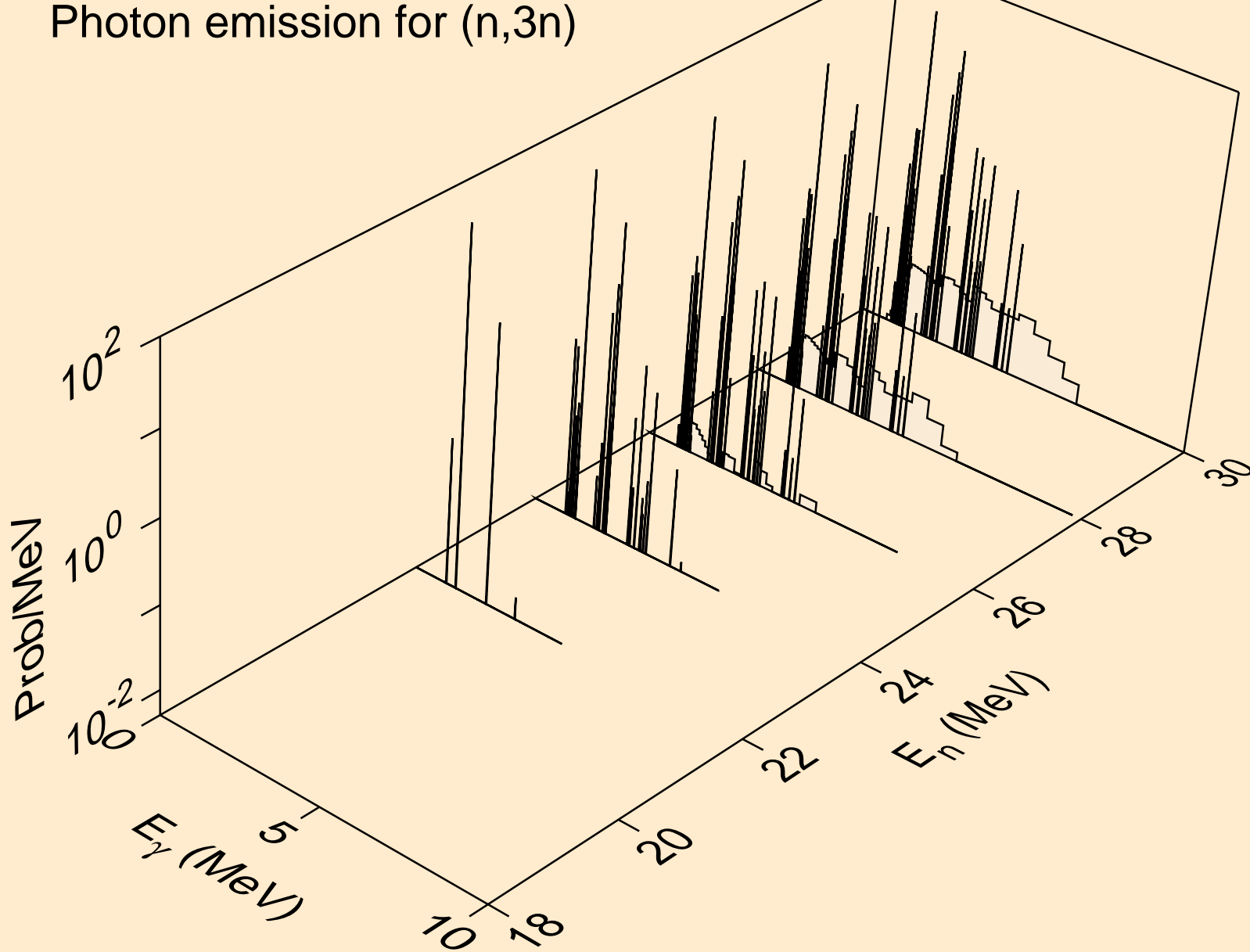MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,x)

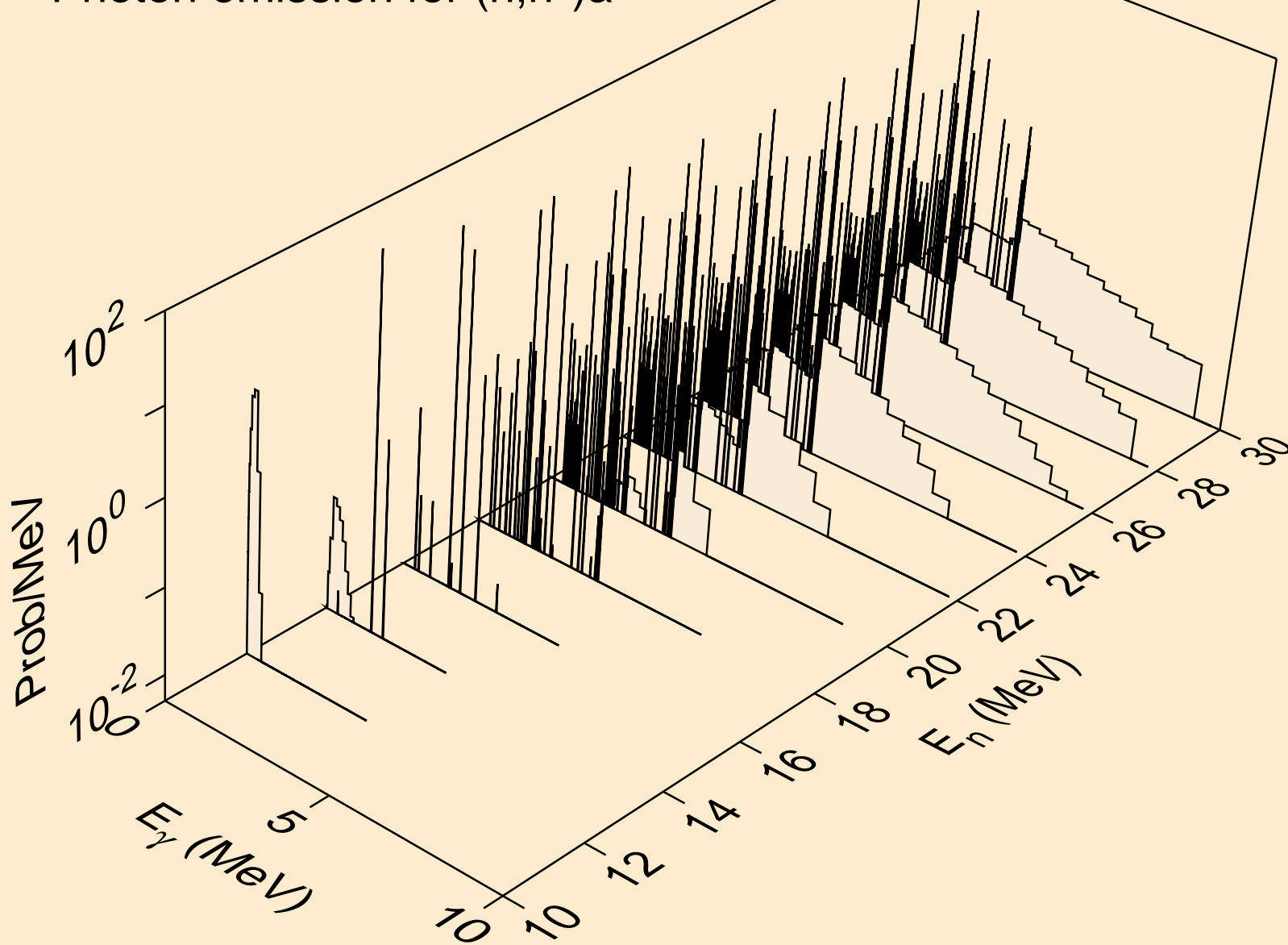MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,2nd)

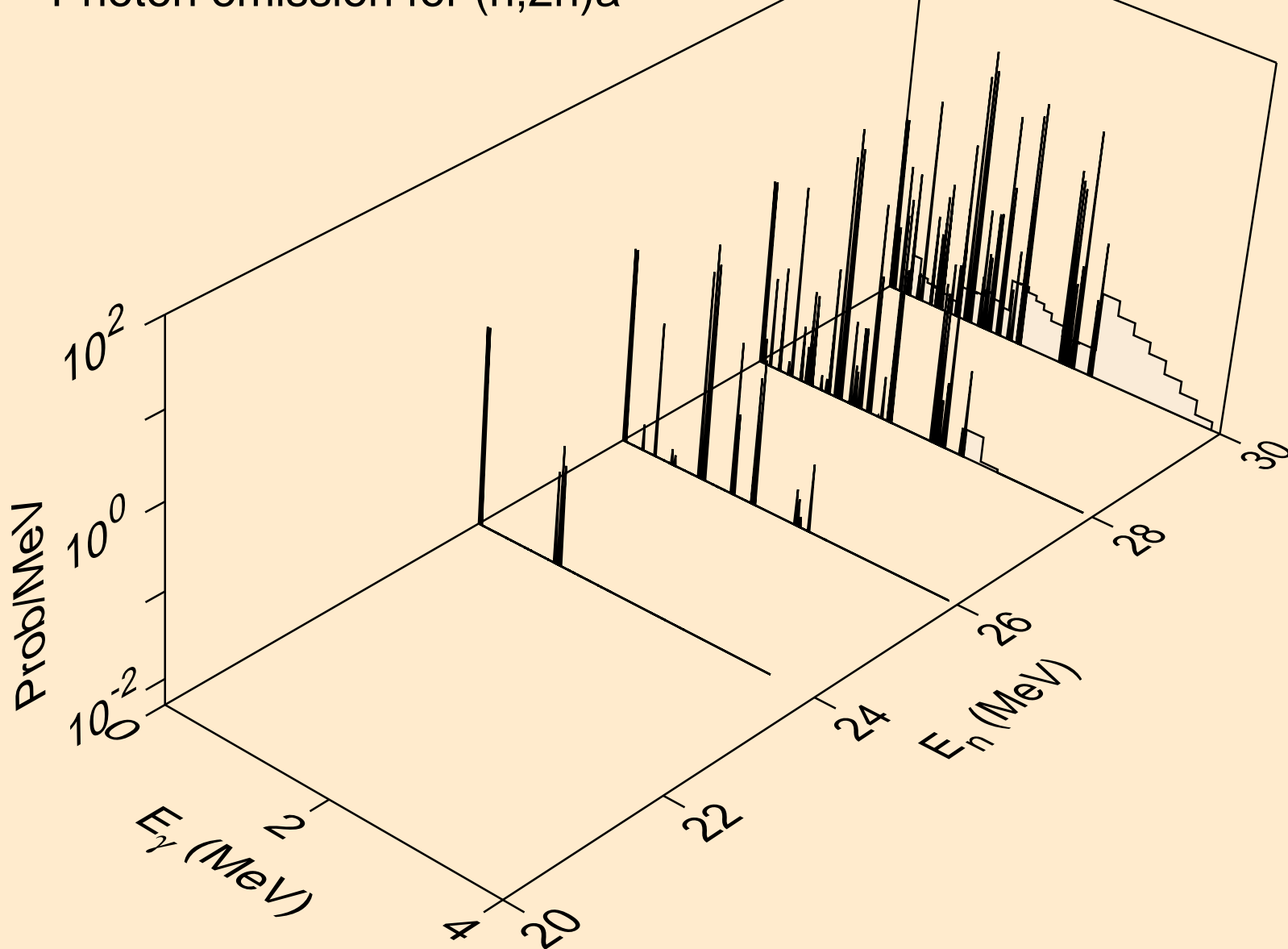MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,2n)

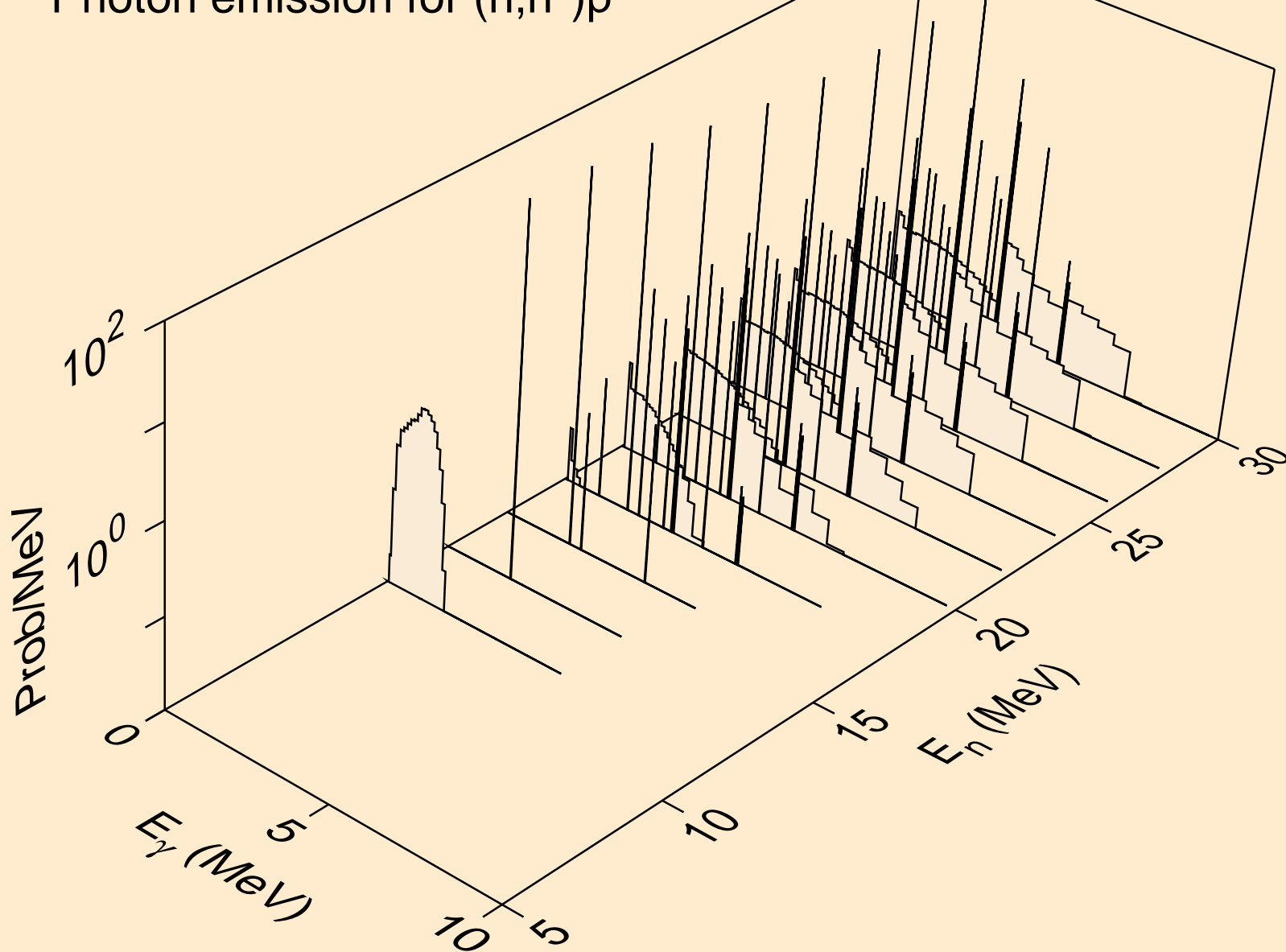MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,3n)

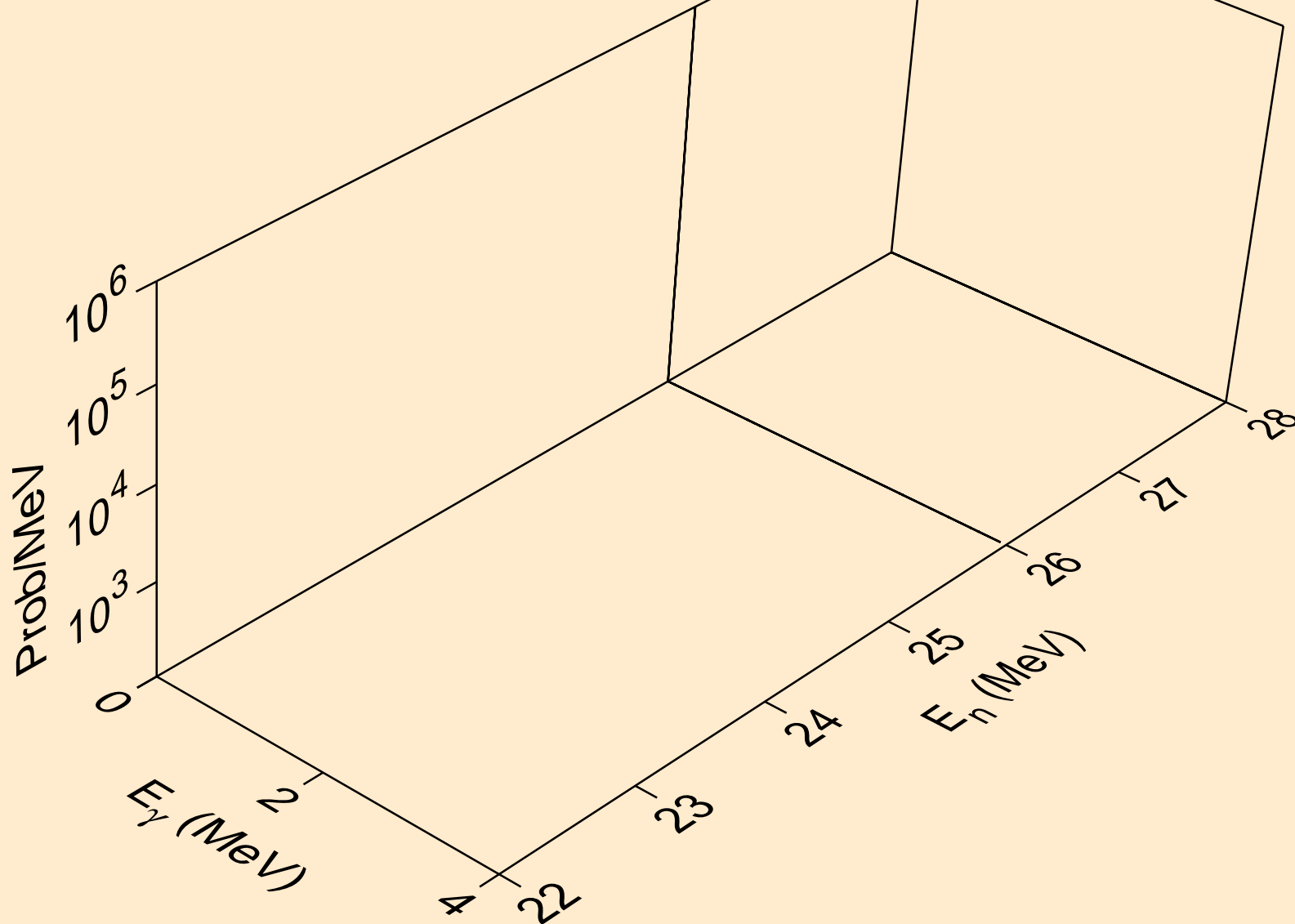MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,n*)a

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,2n)a

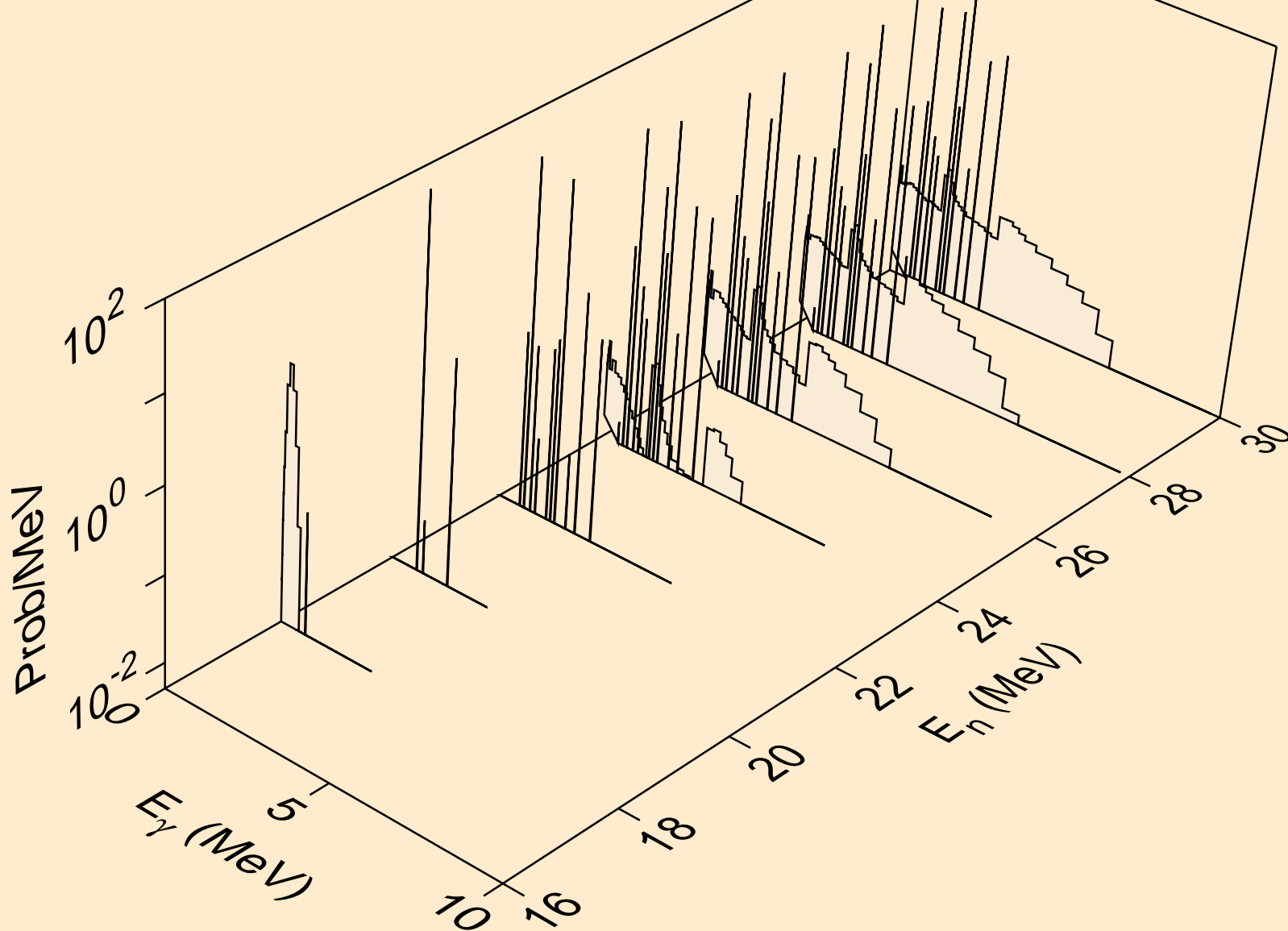MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC

Photon emission for (n,n*)p

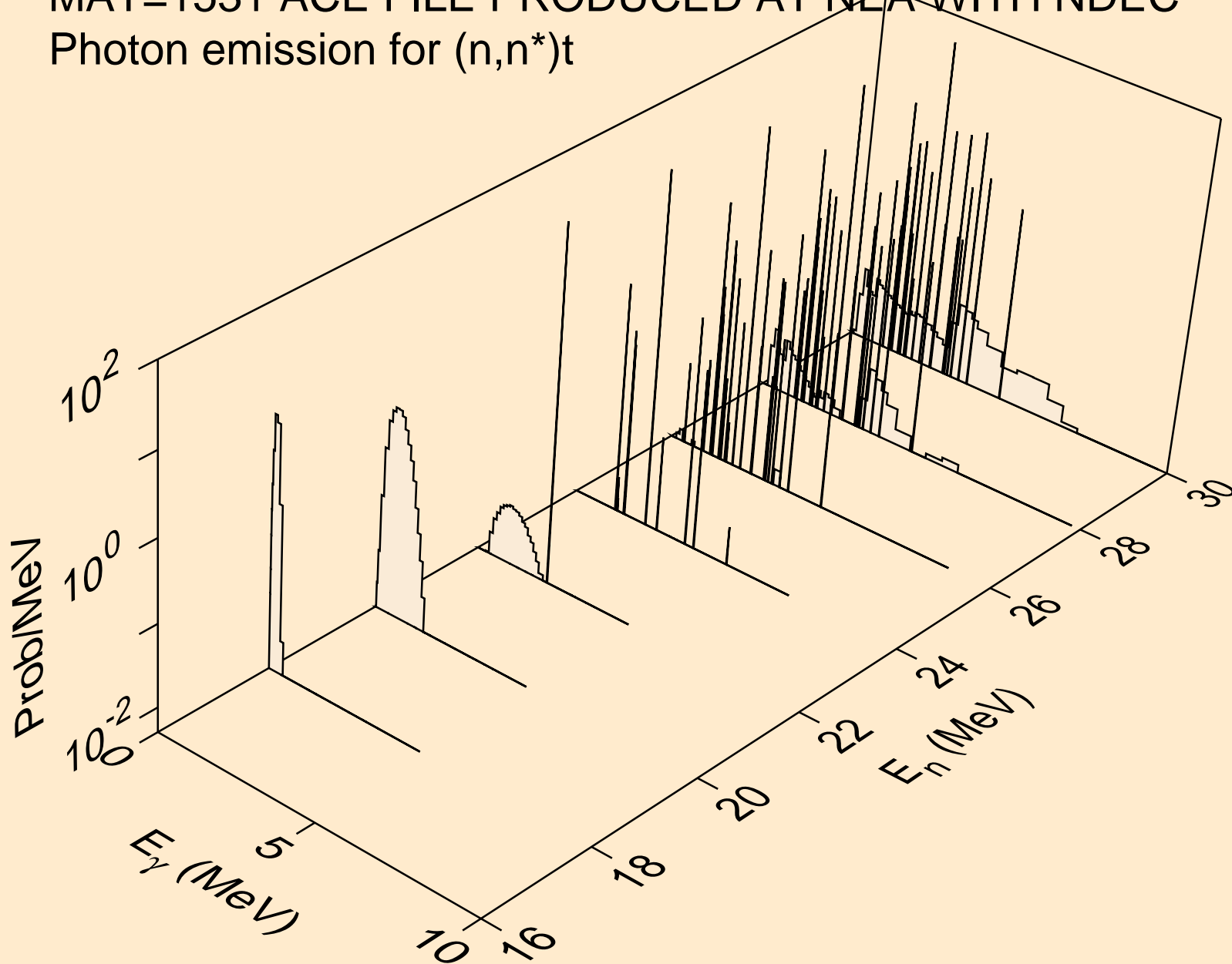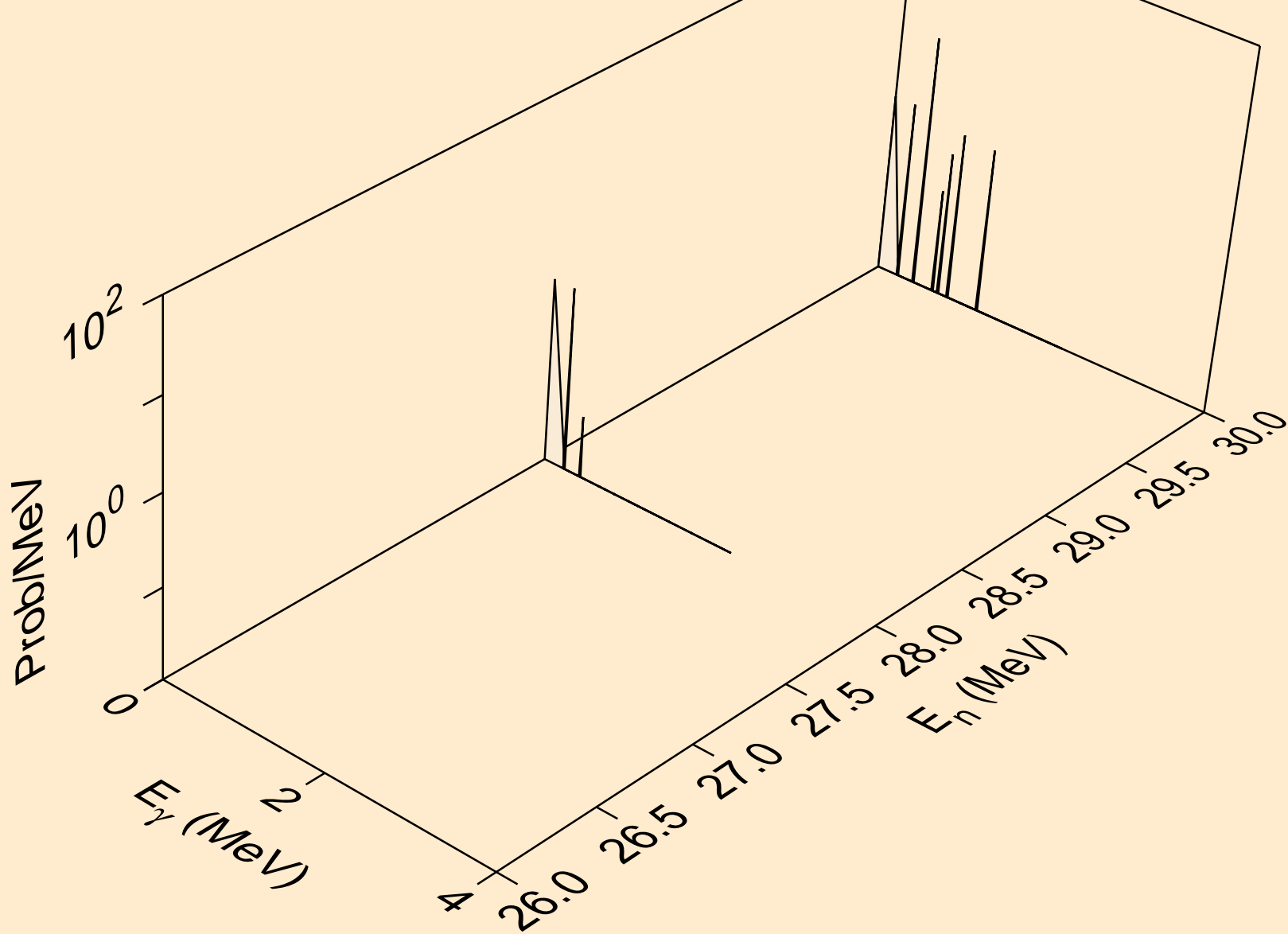MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,n*)2a

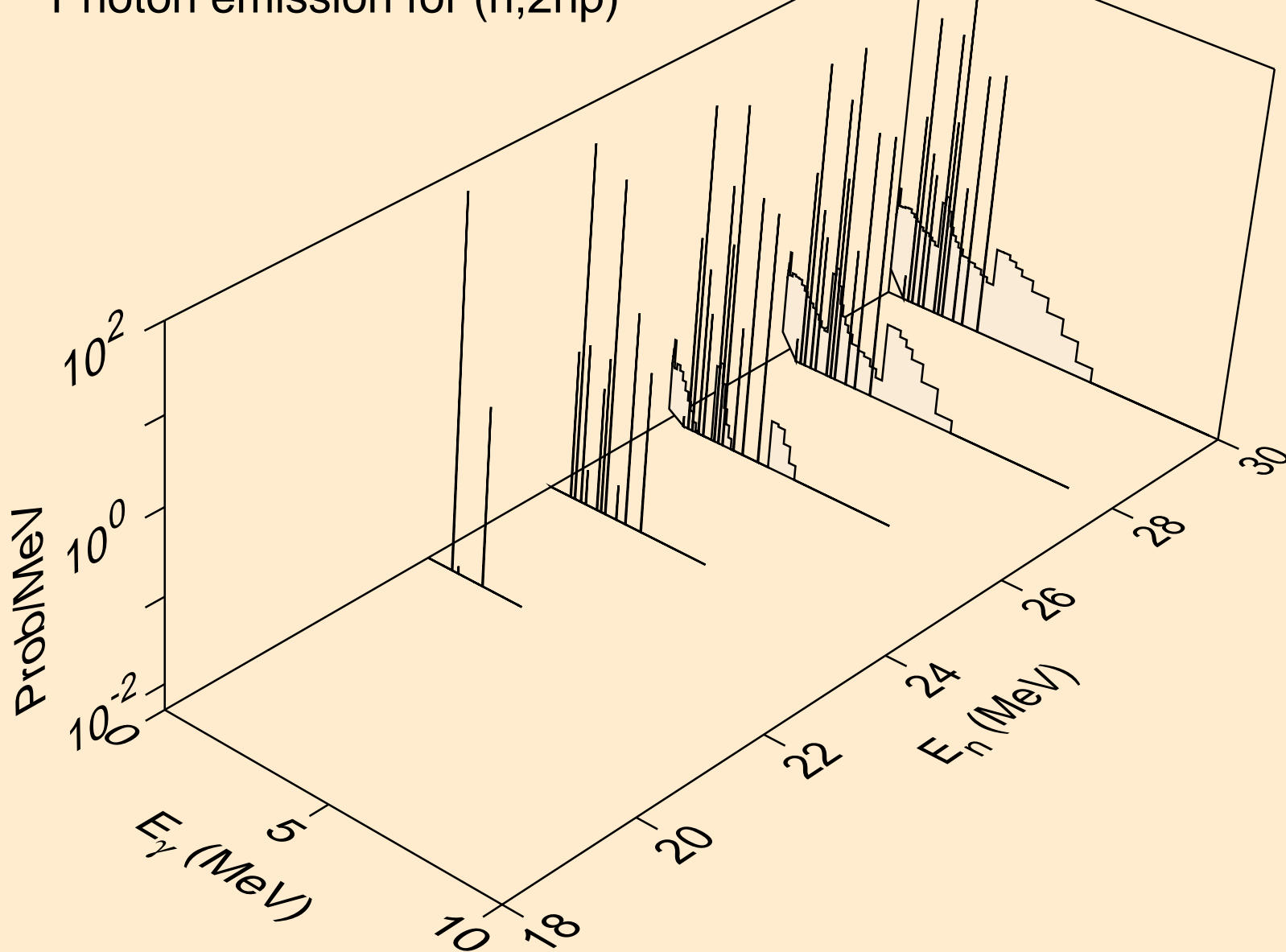MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,n*)d

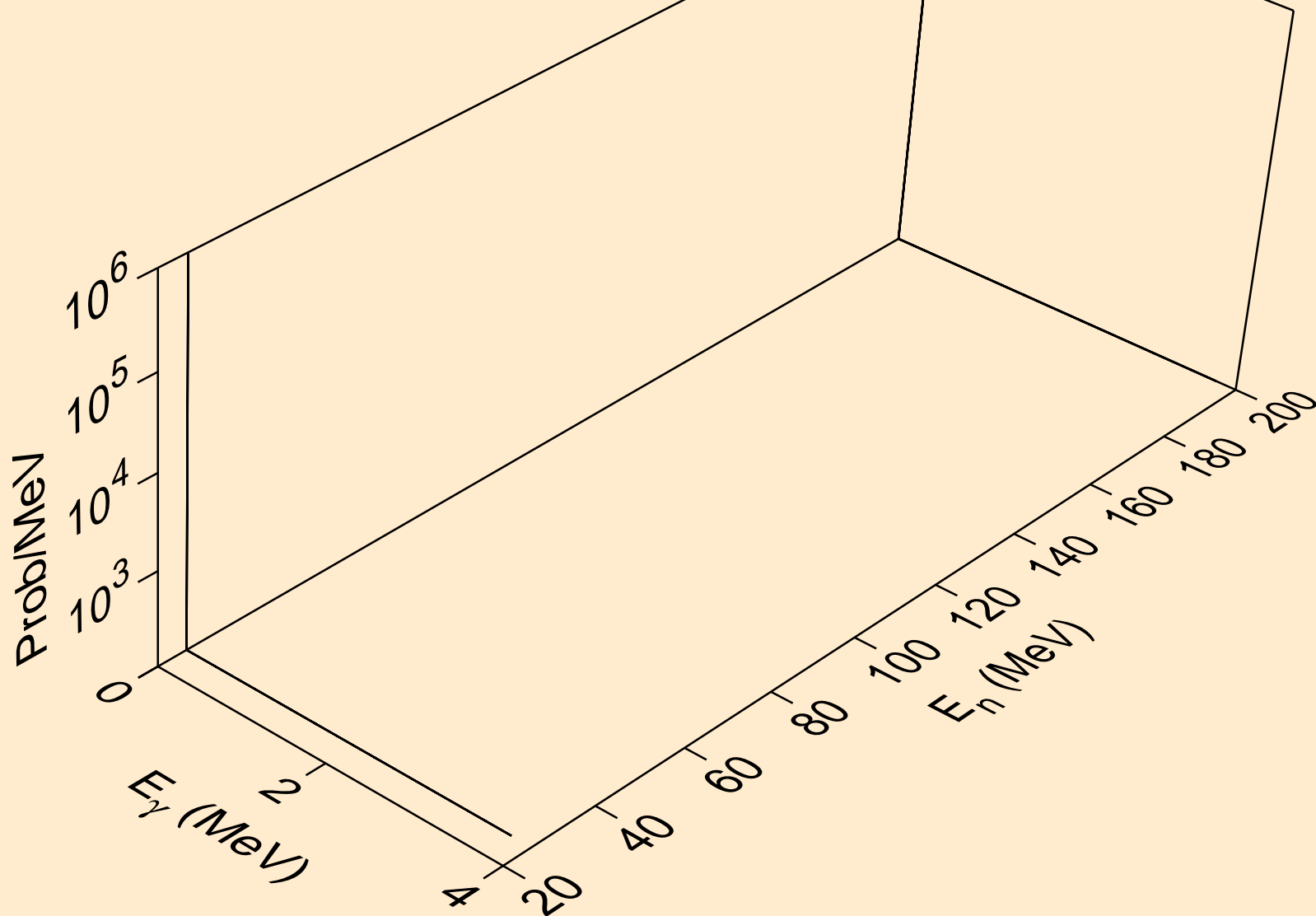MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,n*)t

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
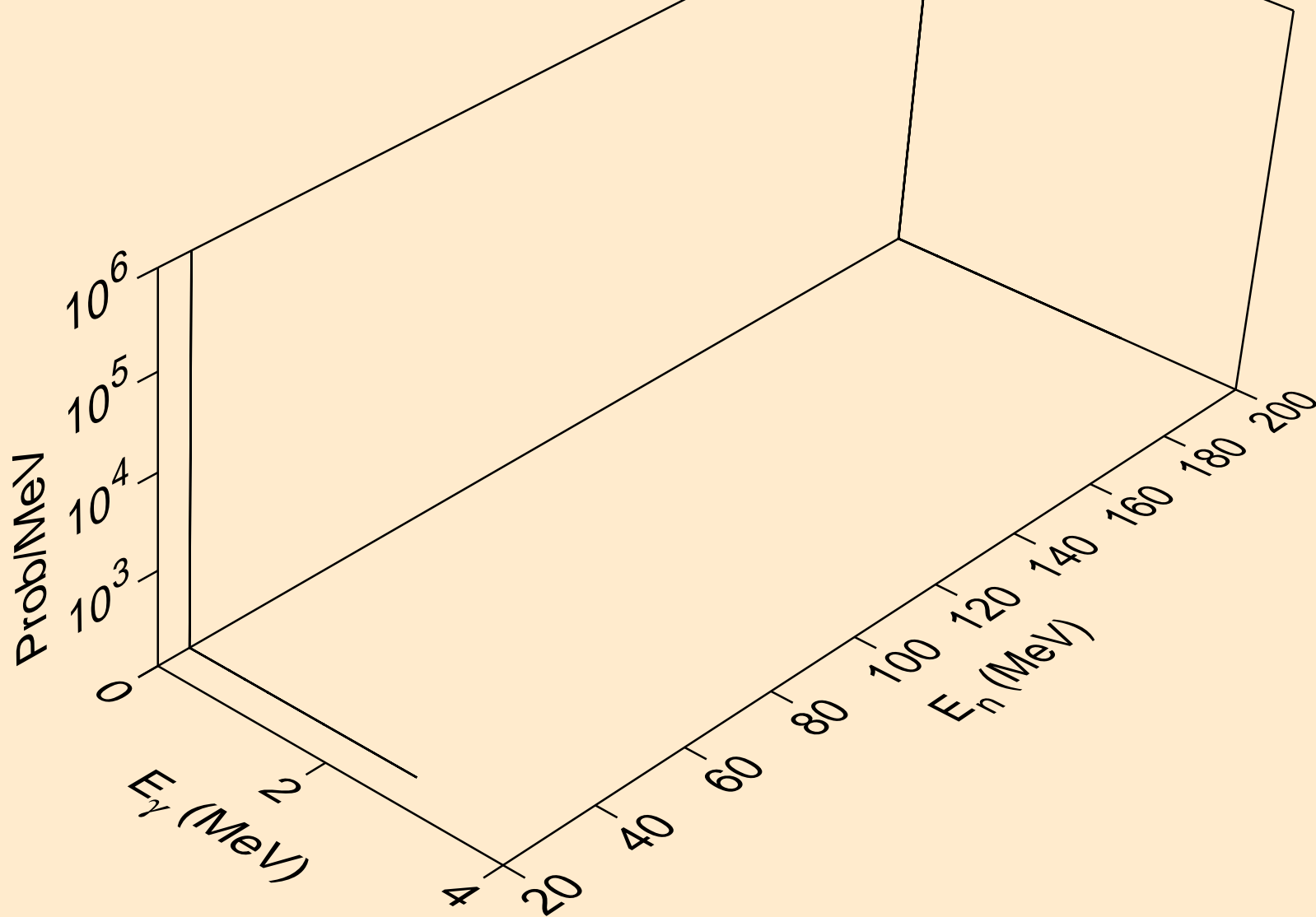Photon emission for (n,n*)he3

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
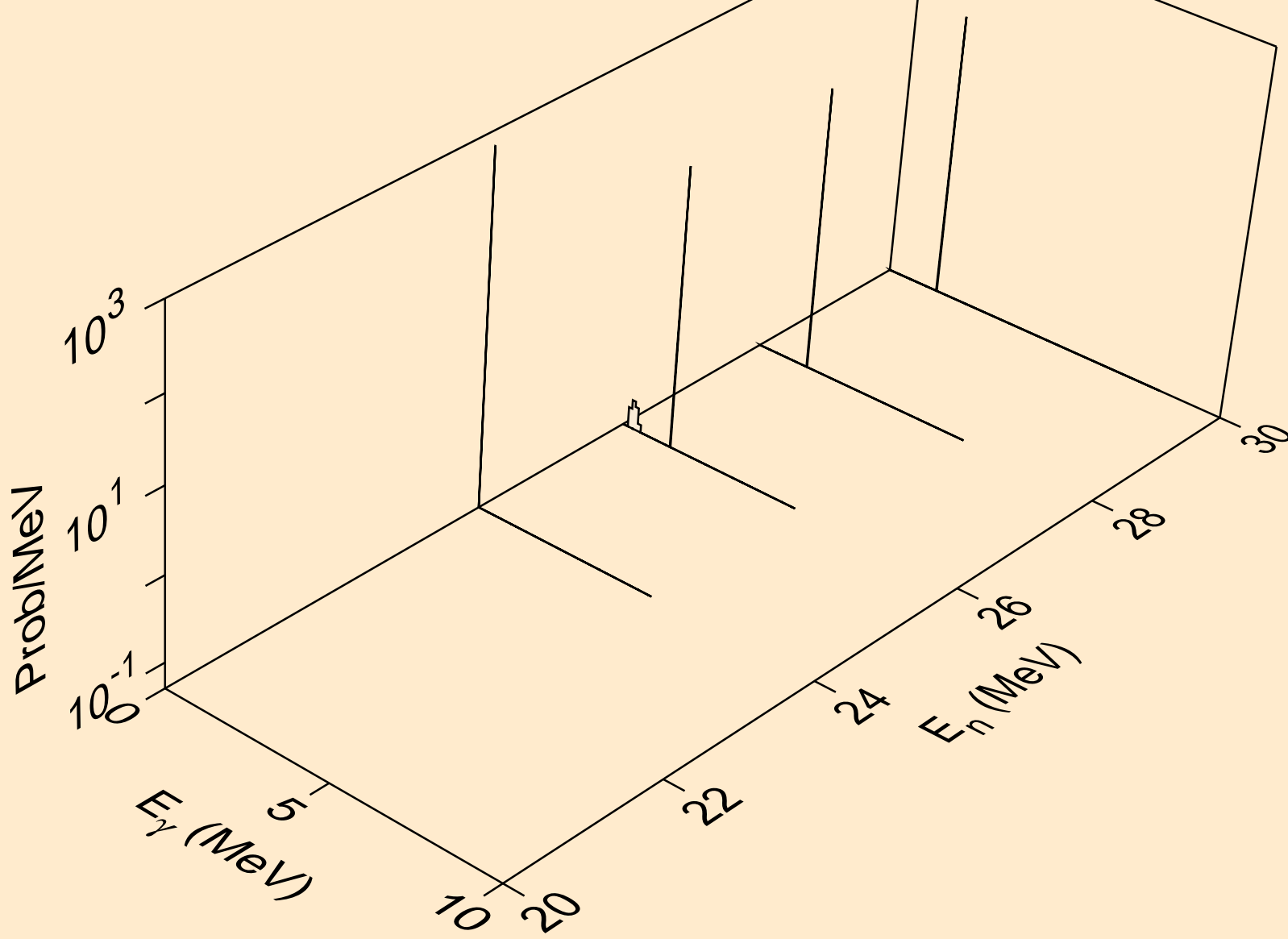Photon emission for (n,2np)

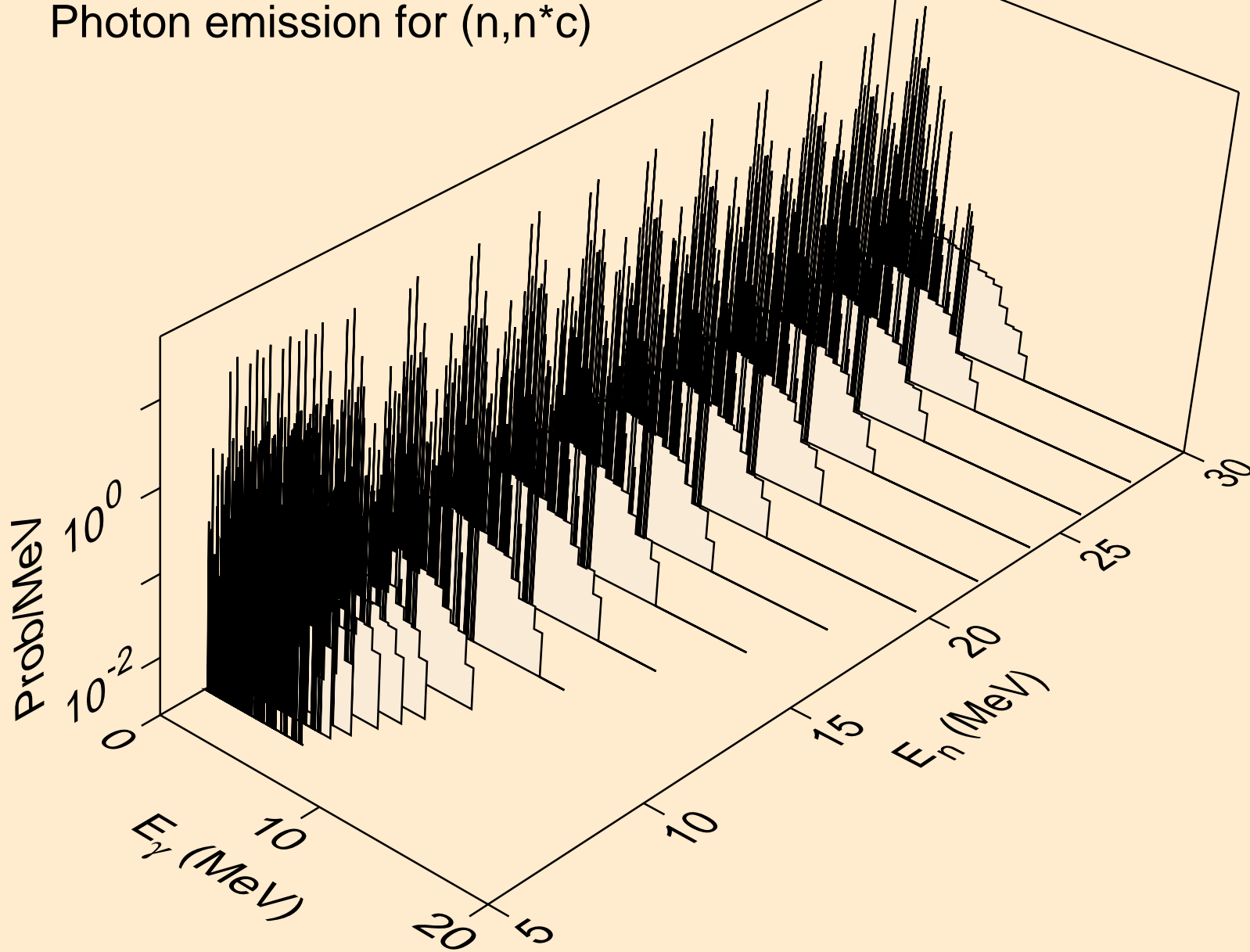MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,3np)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,2np)

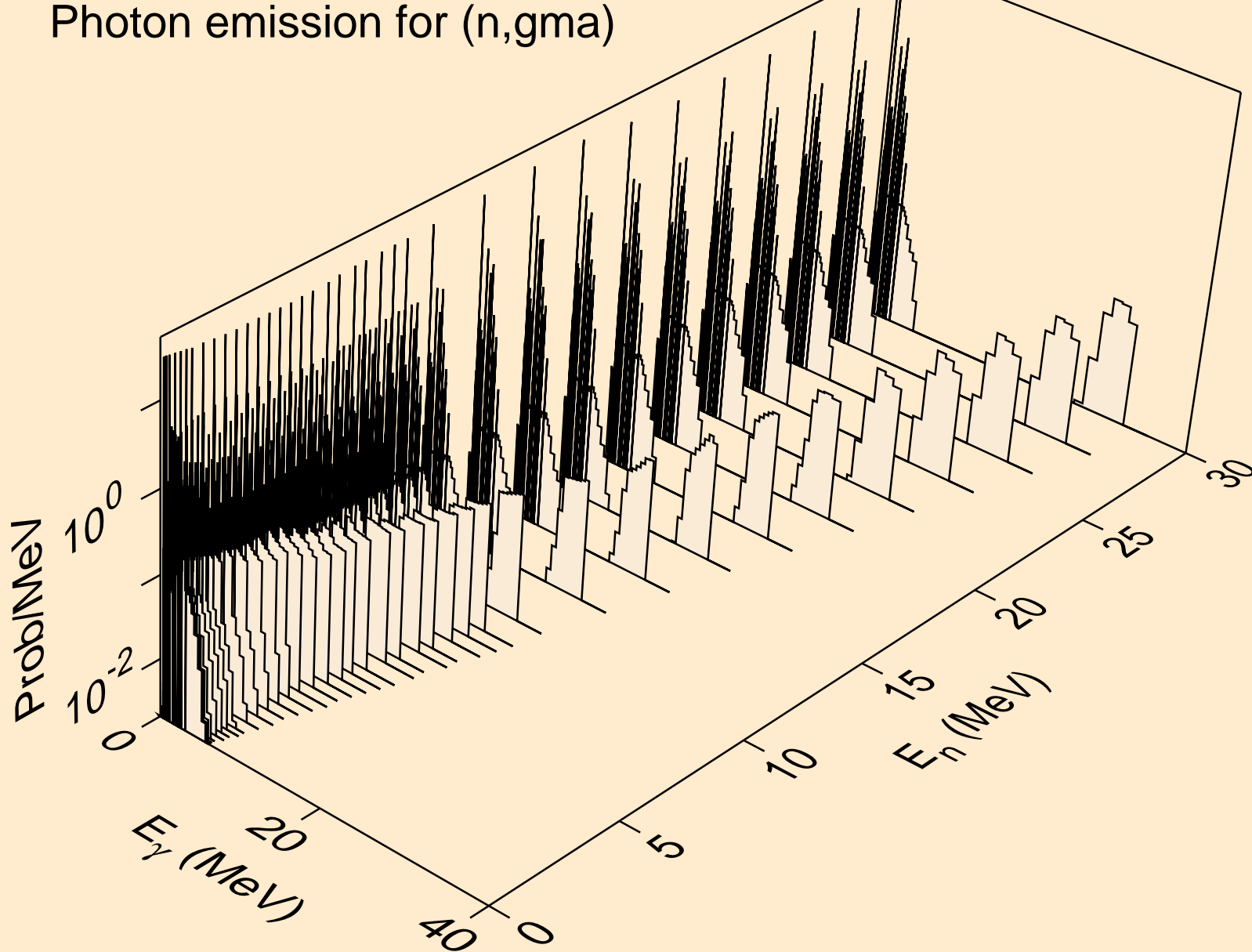MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,npa)

$E_\gamma$ (MeV)

$E_n$ (MeV)

Prob/MeV

$10^3$

$10^1$

$10^{-1}$

5

10

20

22

24

26

28

30

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
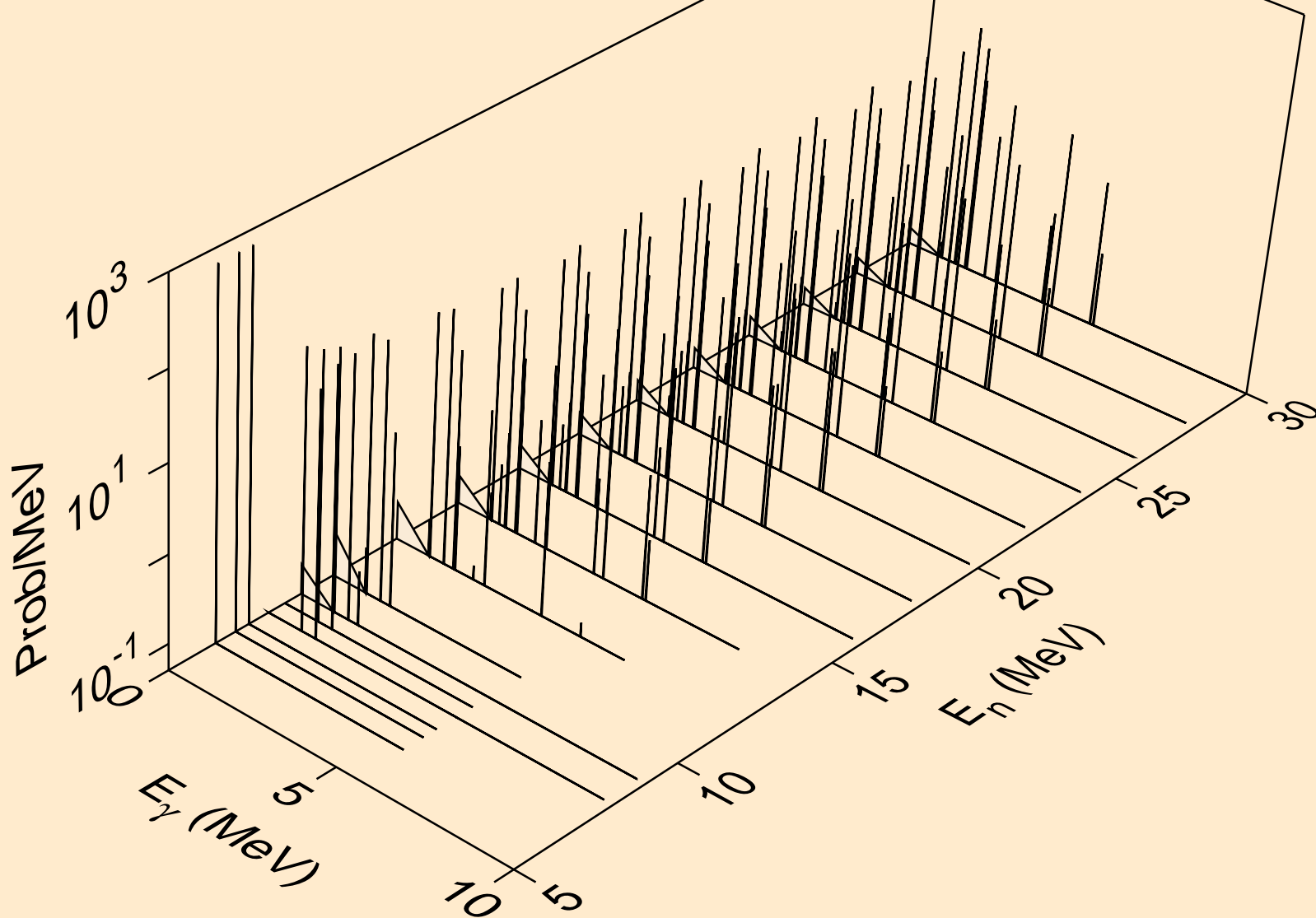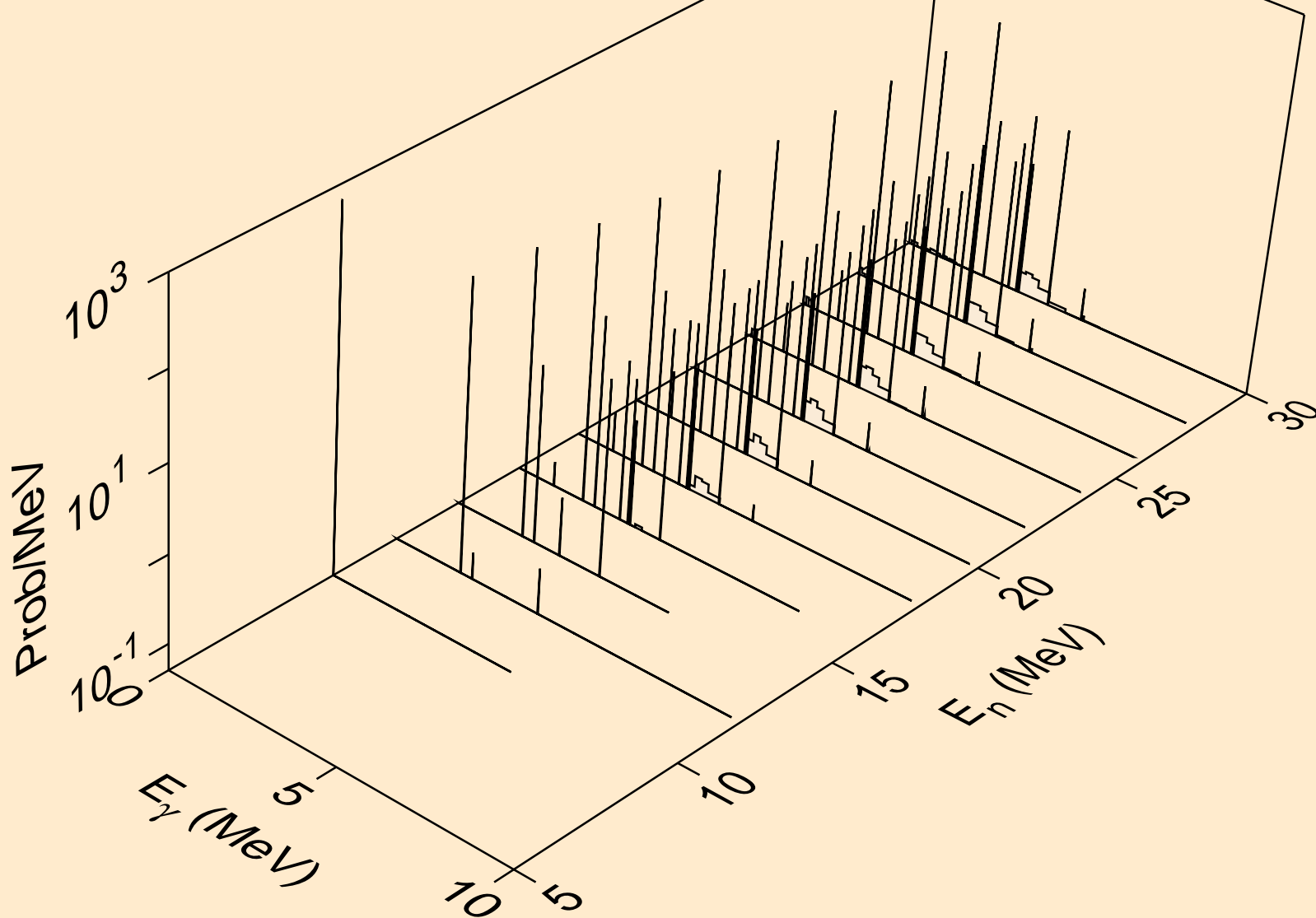Photon emission for (n,n*c)

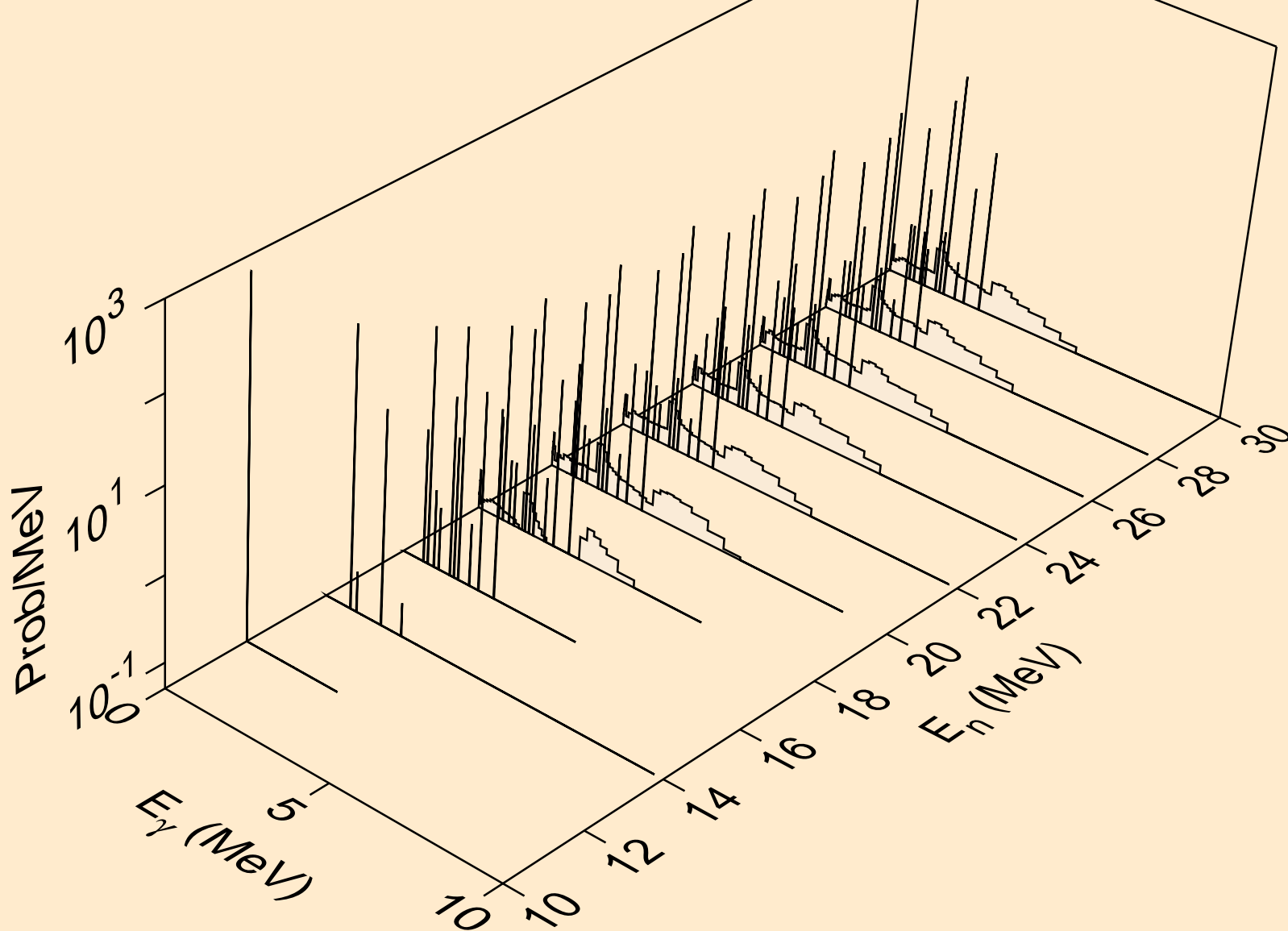MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
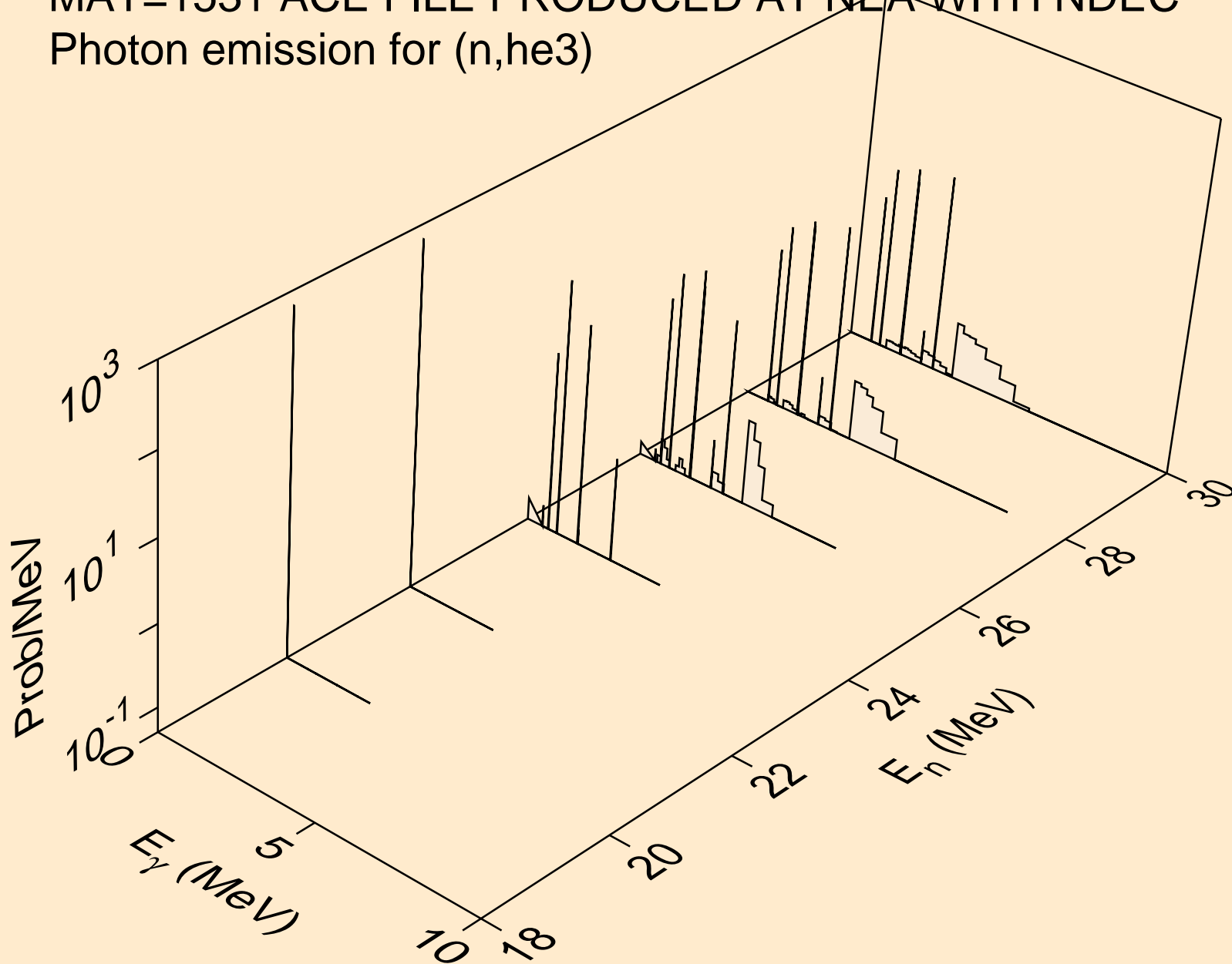Photon emission for (n,gma)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,p)

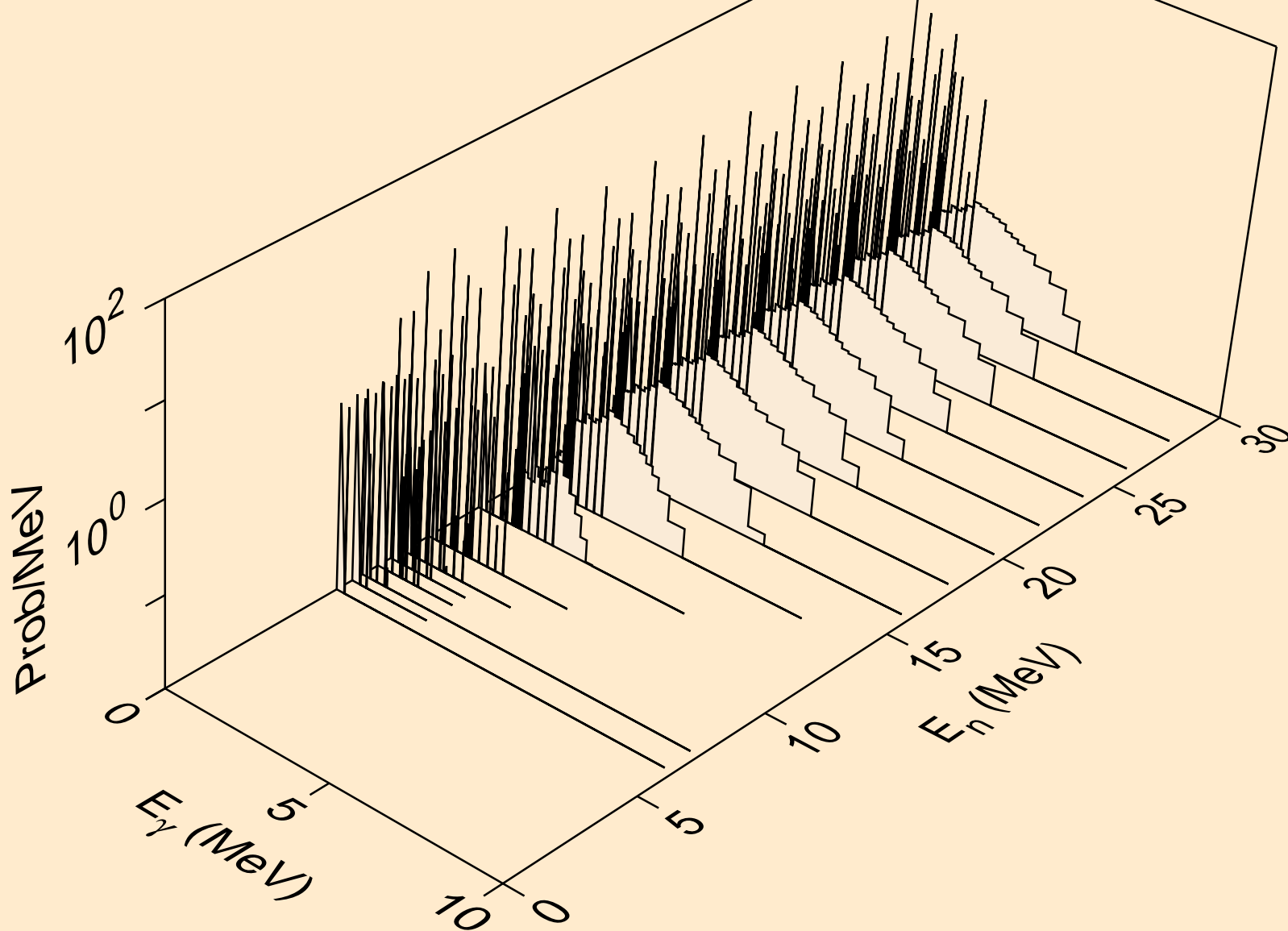MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,d)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC

Photon emission for (n,t)

ProbIMeV

$10^3$

$10^1$

$10^{-1}$

$10^0$

$E_\gamma$ (MeV)

5

10

10

12

14

16

18

20

22

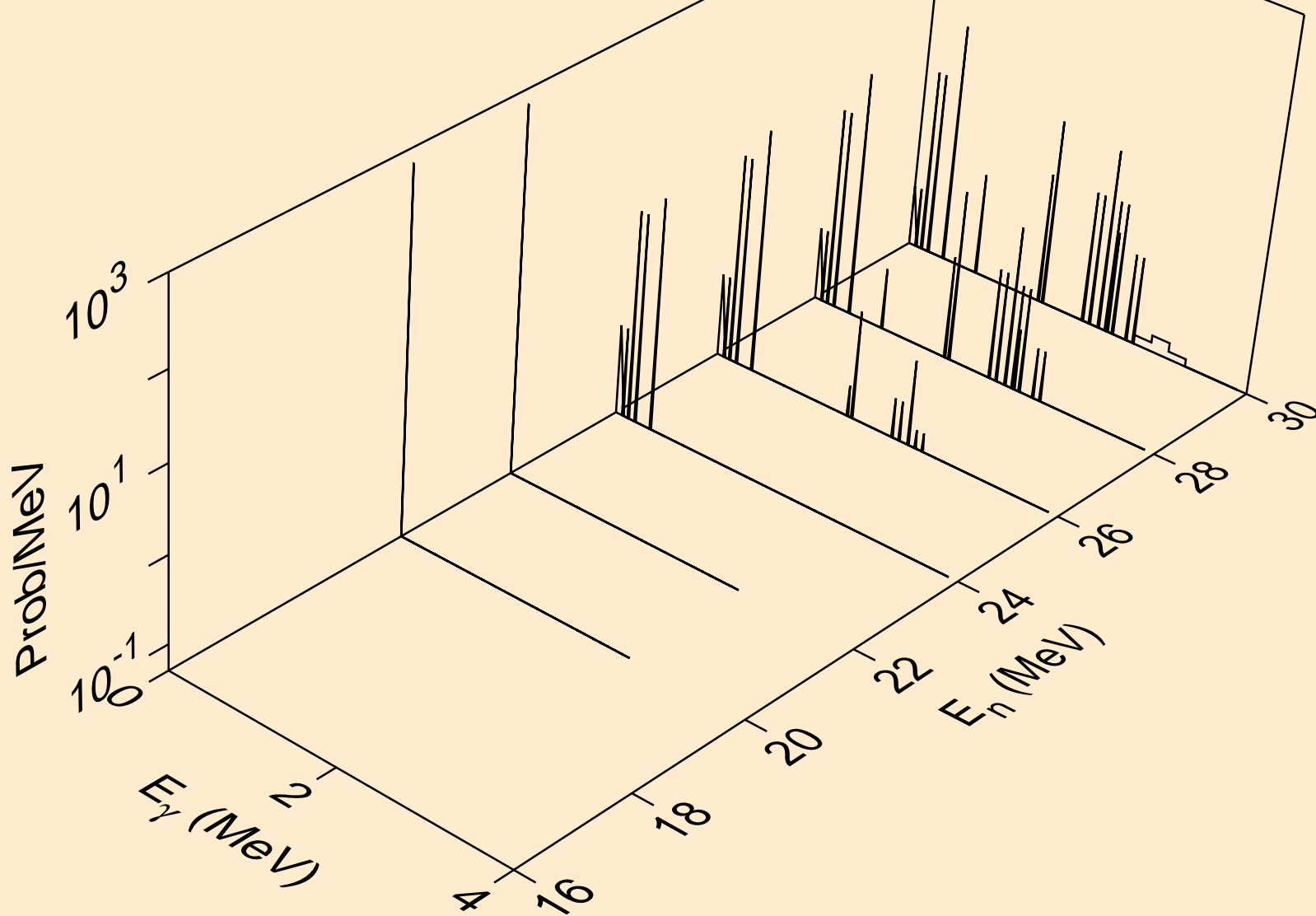24

26

28

30

$E_n$ (MeV)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
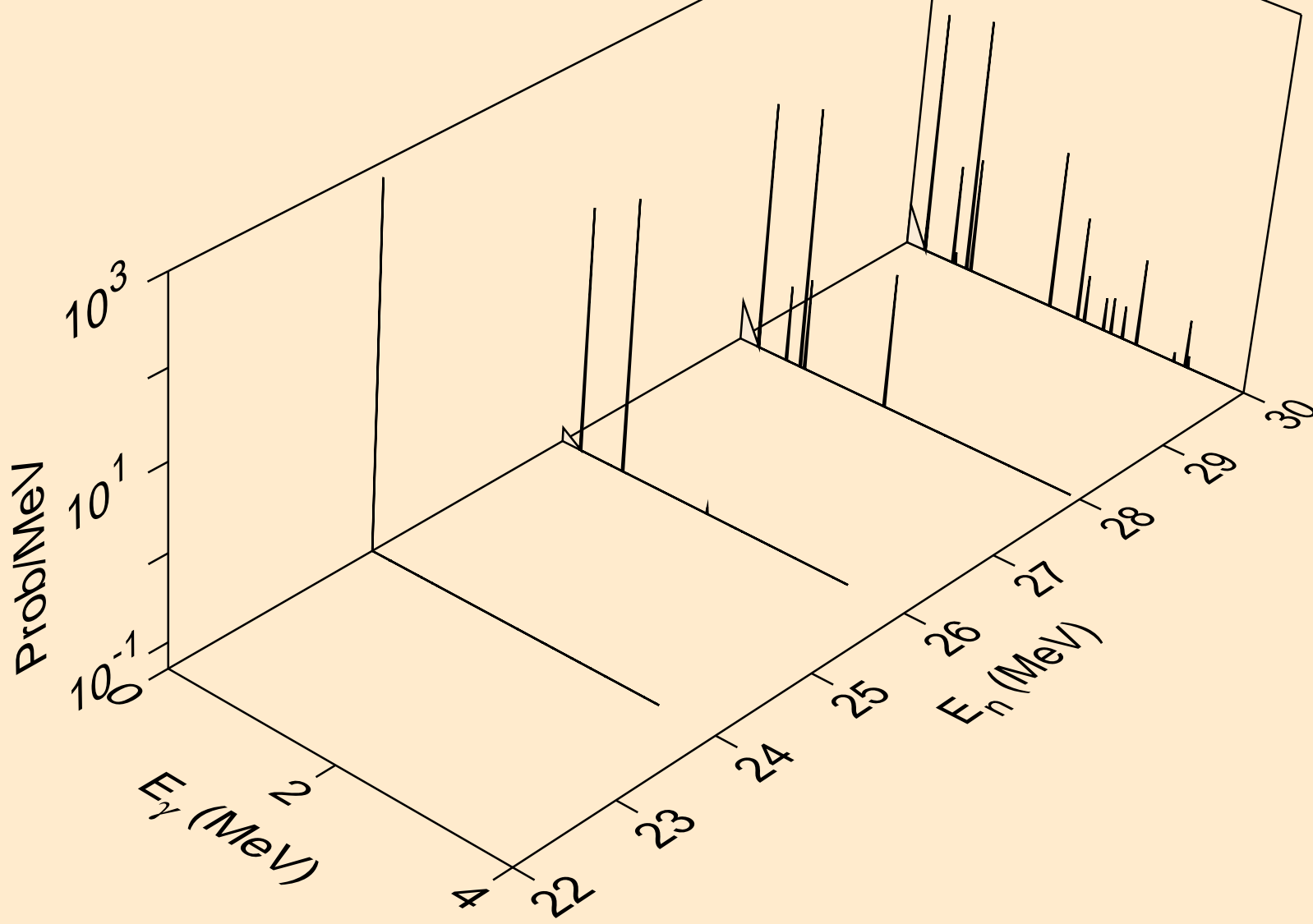Photon emission for (n,he3)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Photon emission for (n,a)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
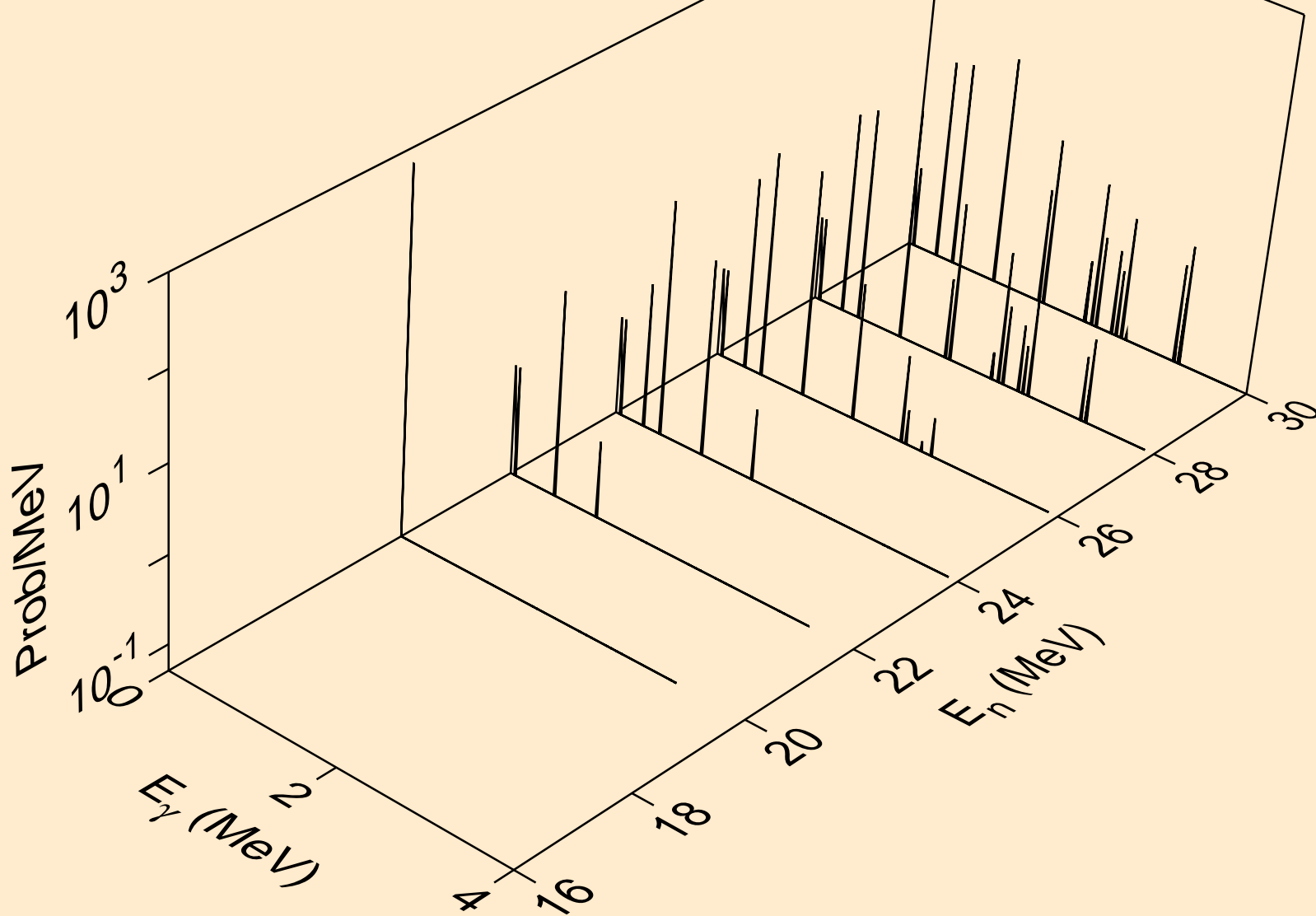Photon emission for (n,2a)

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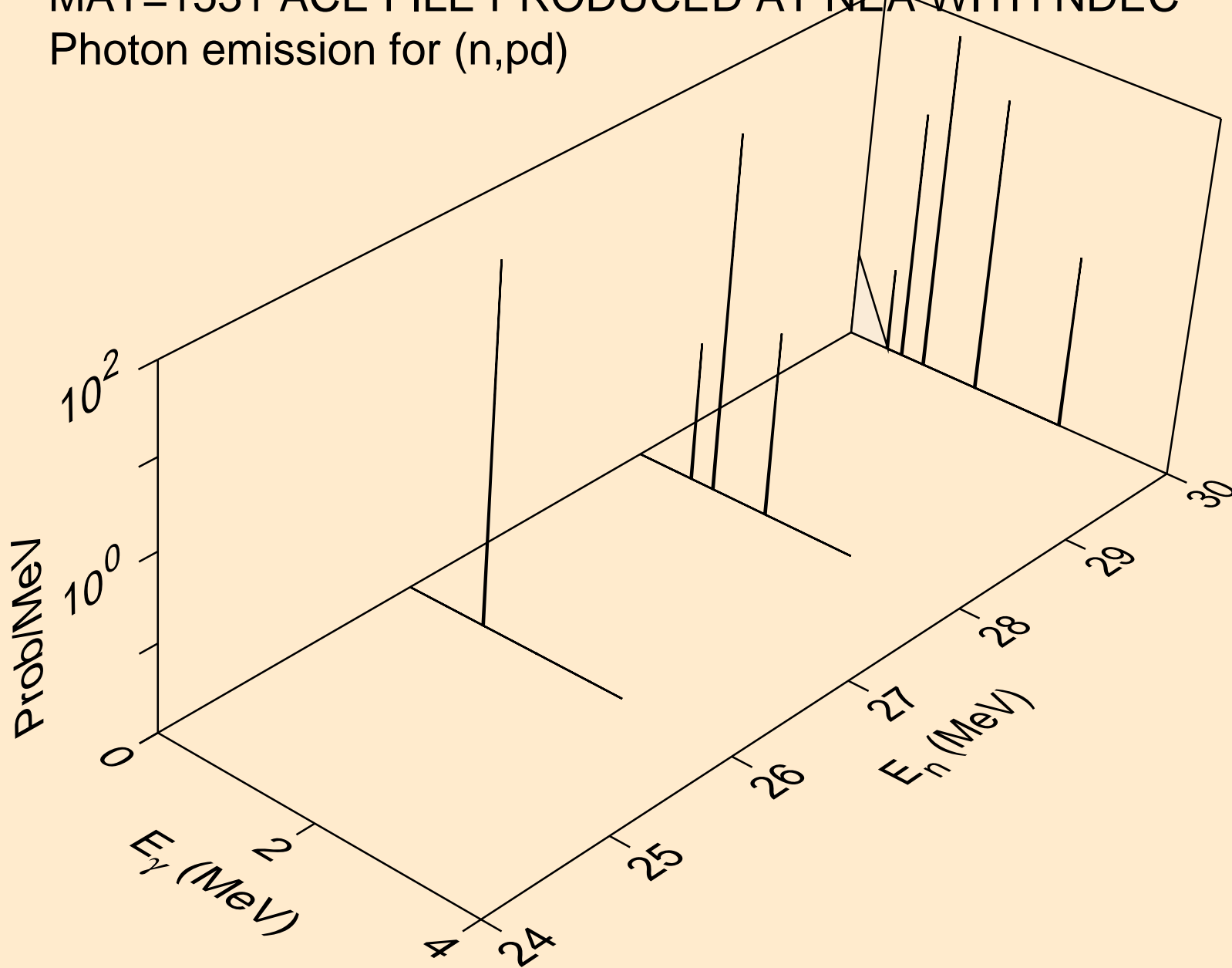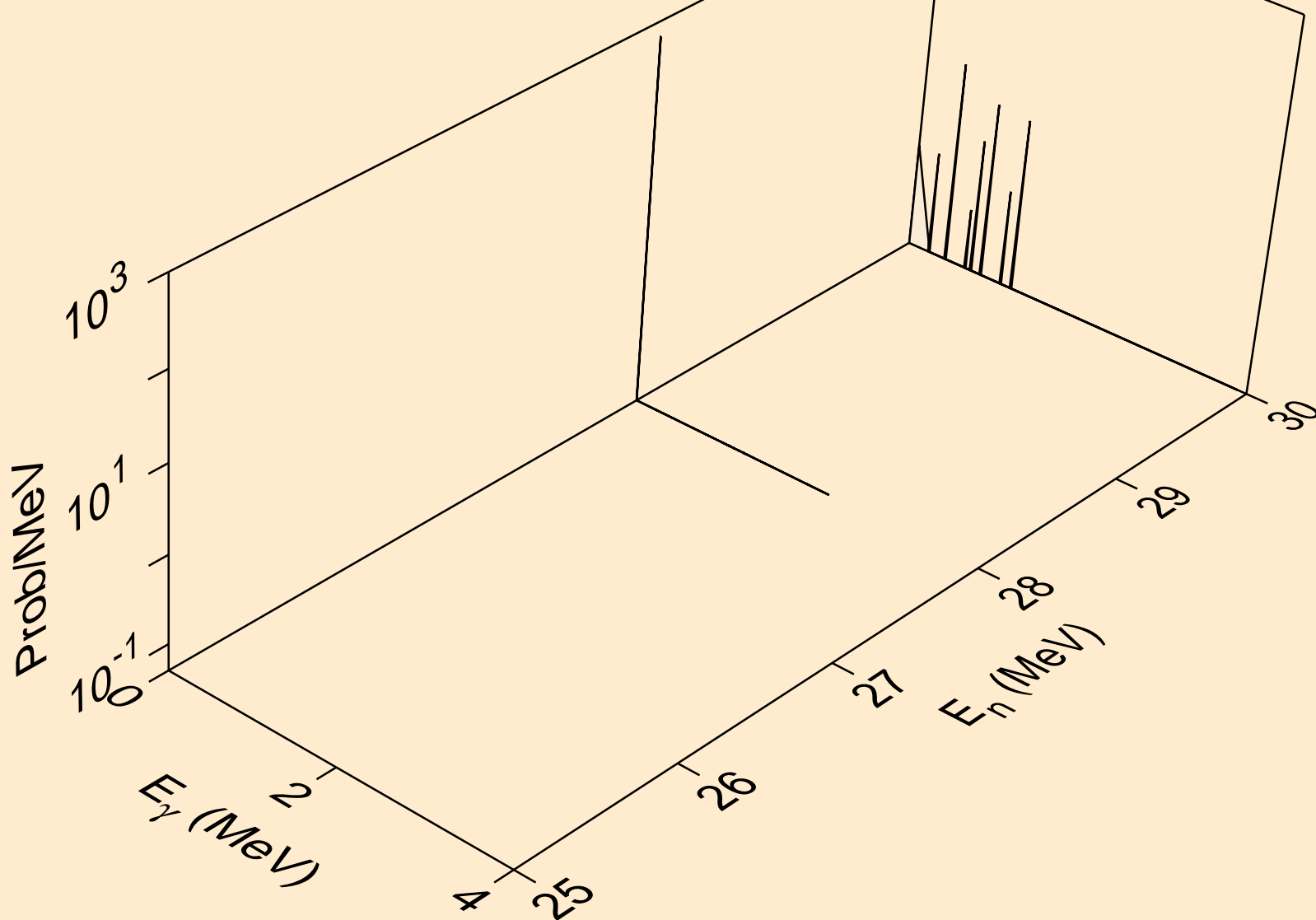Photon emission for (n,2p)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
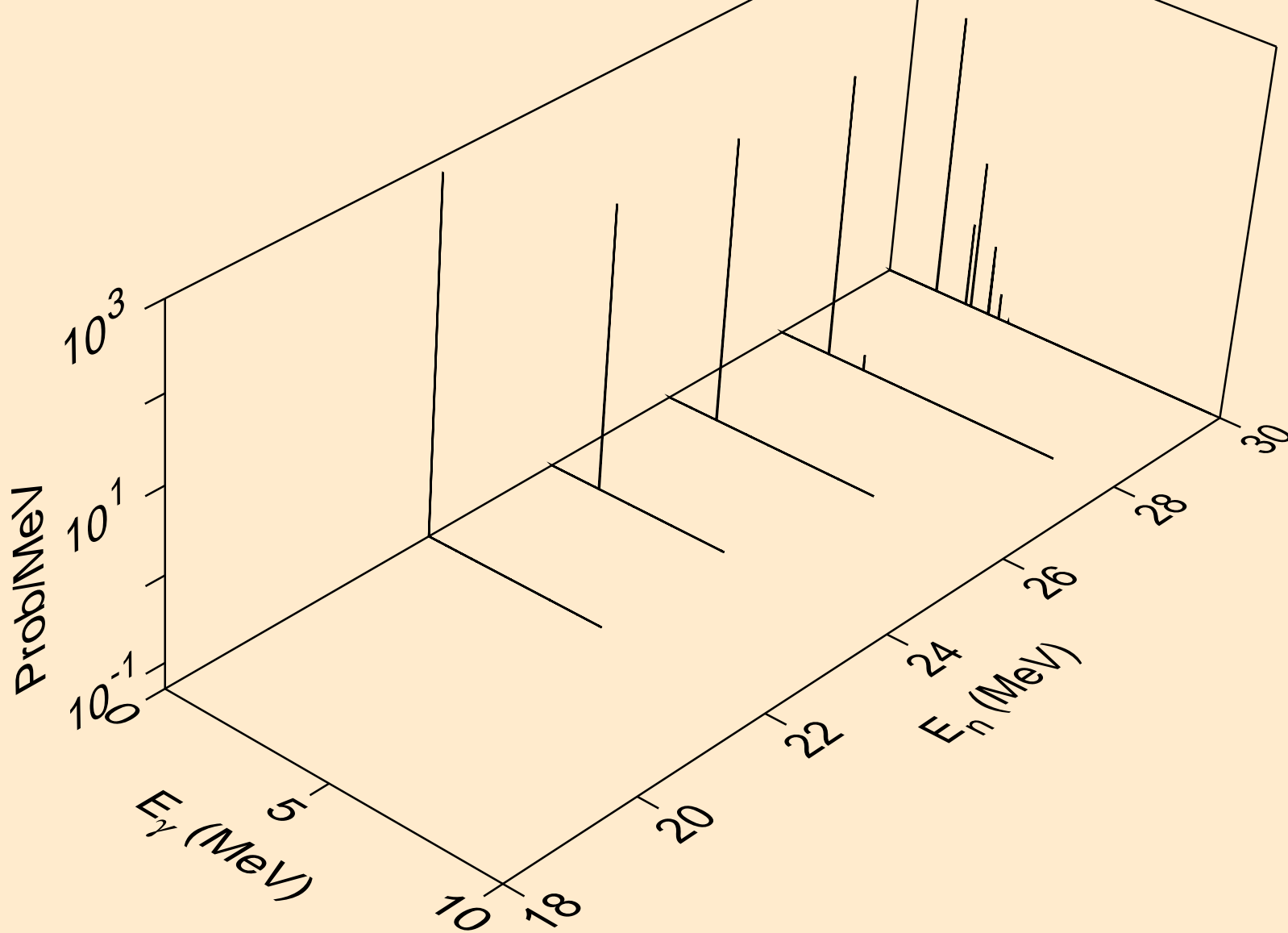Photon emission for (n,pa)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
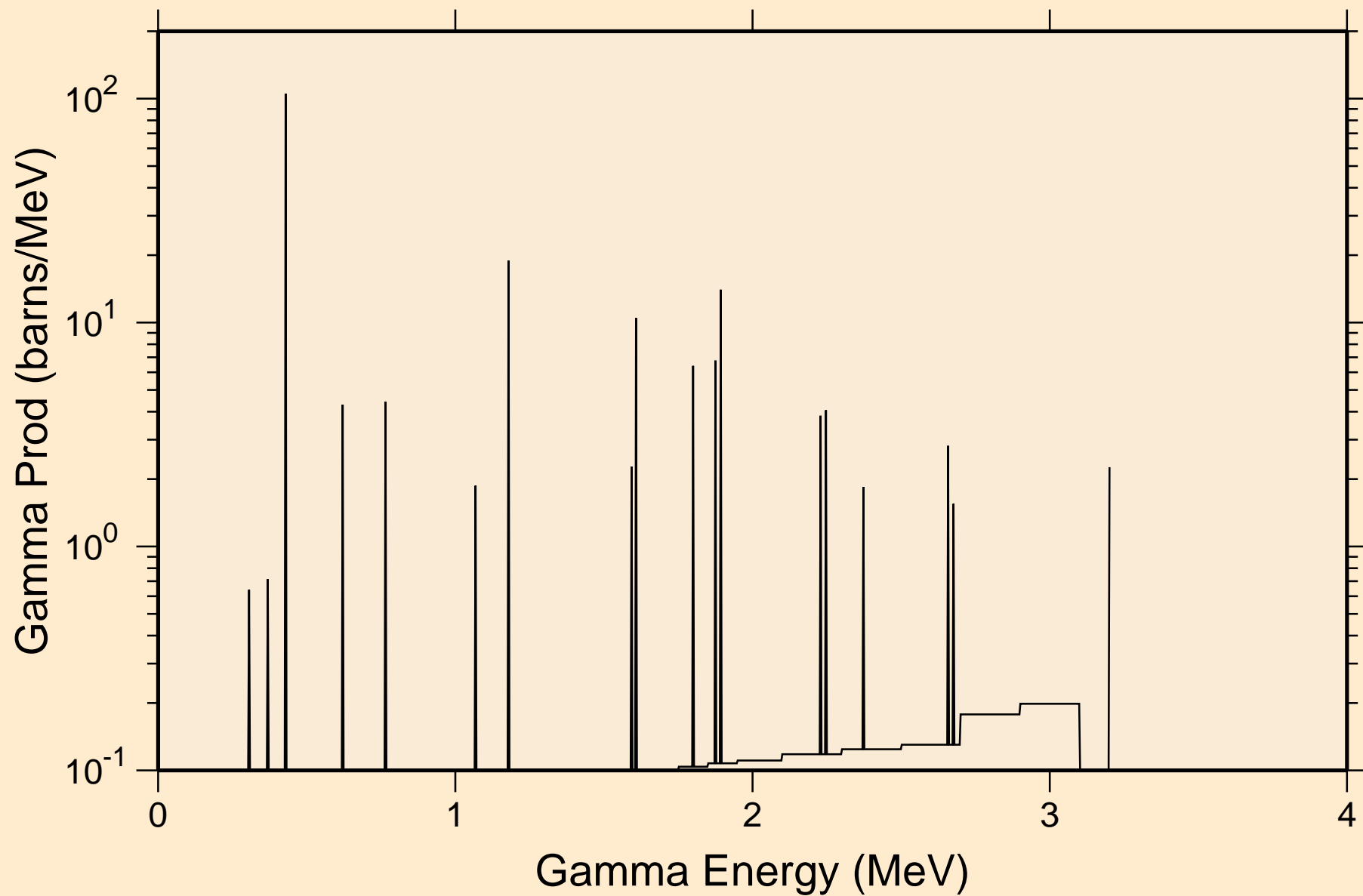Photon emission for (n,pd)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
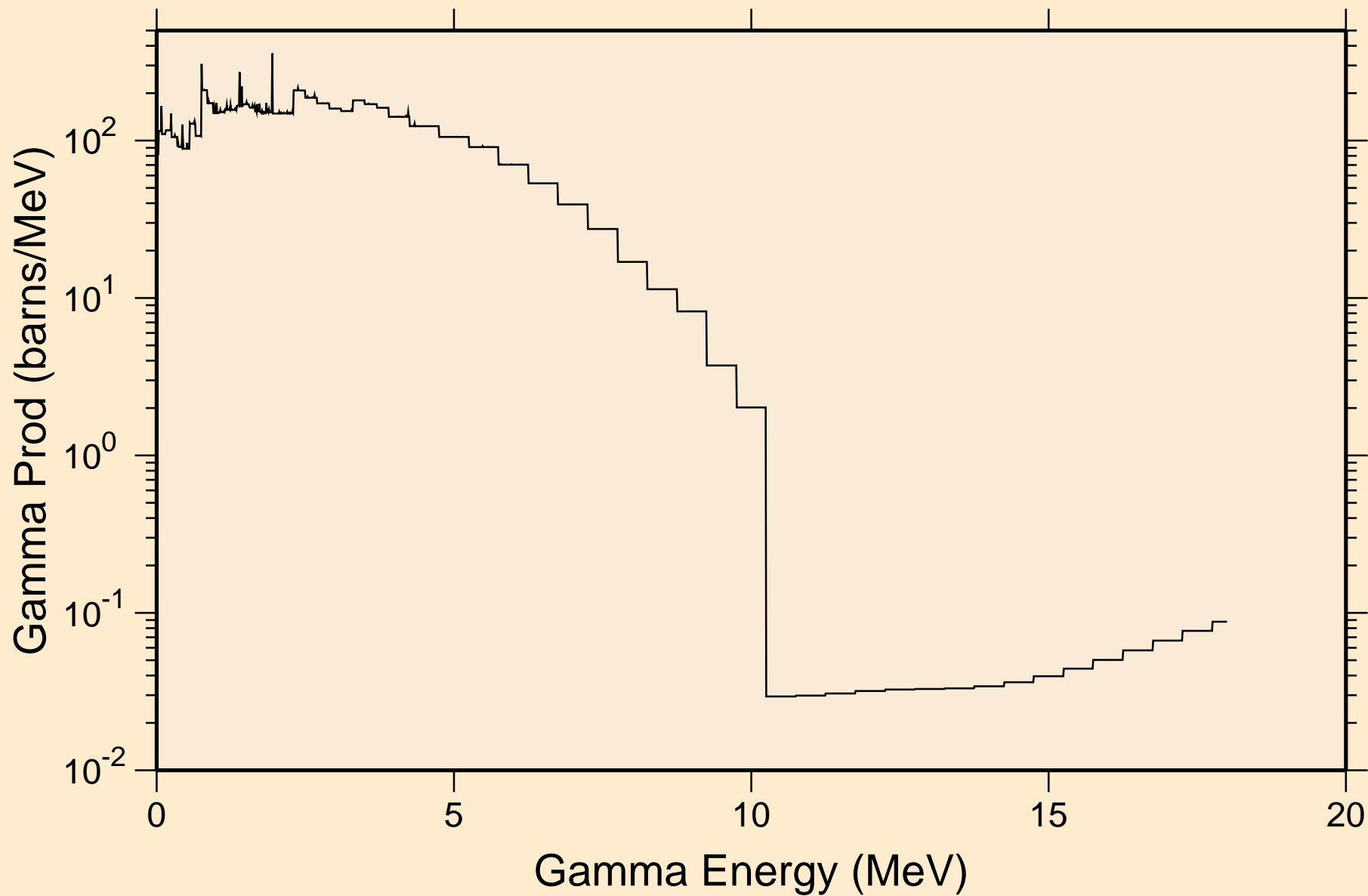Photon emission for (n,pt)

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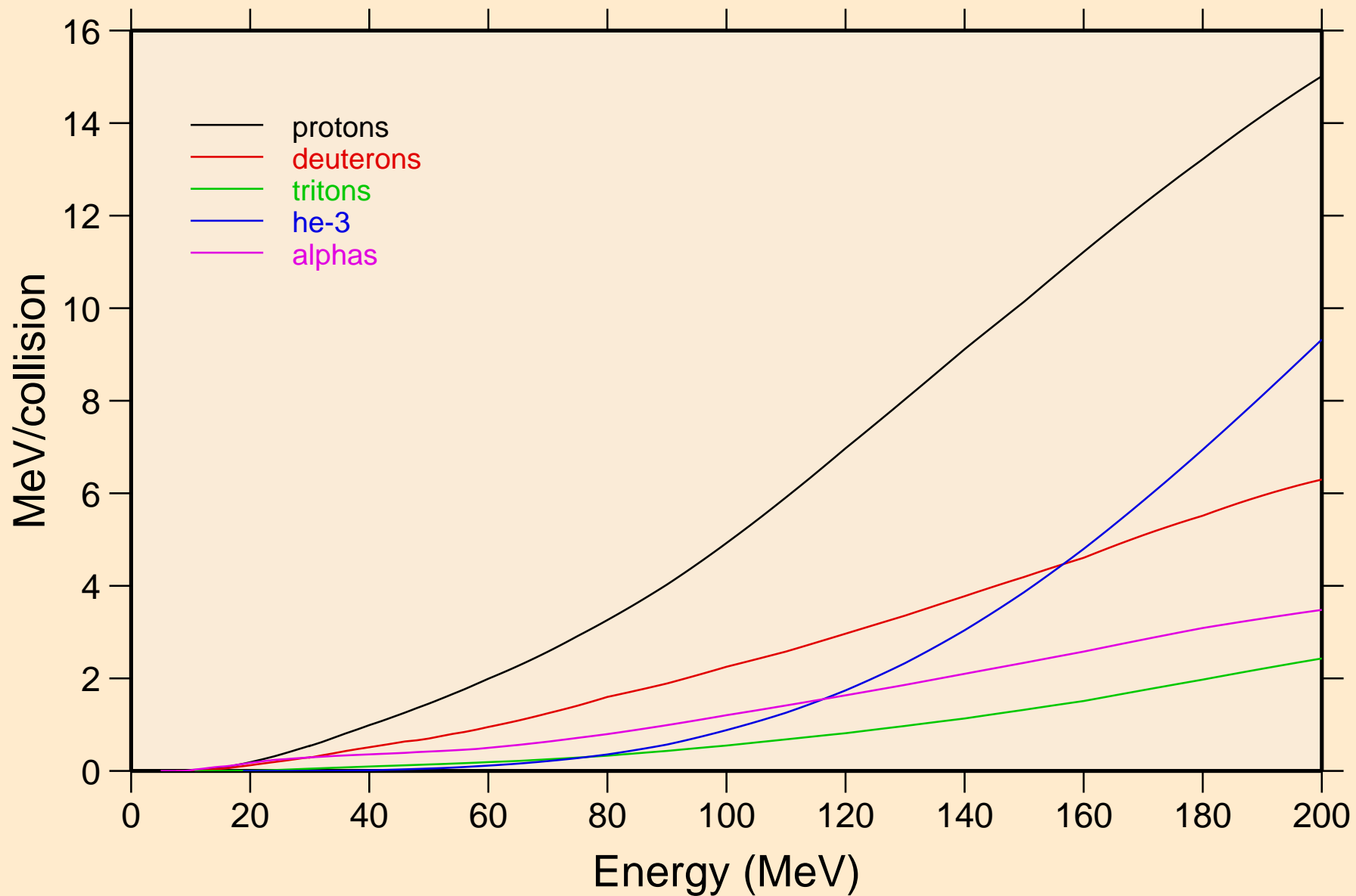Photon emission for (n,da)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
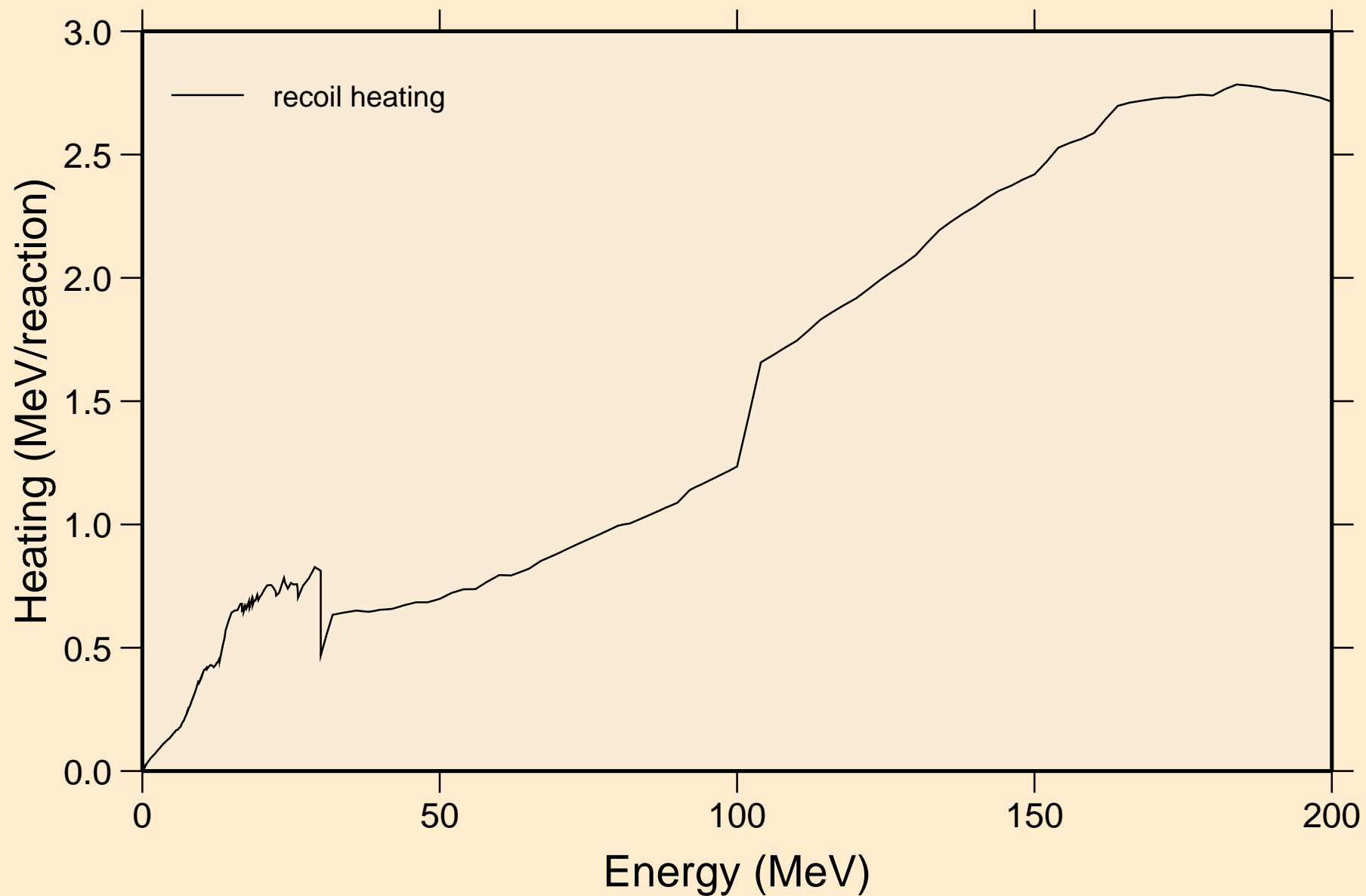thermal capture photon spectrum

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
14 MeV photon spectrum

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
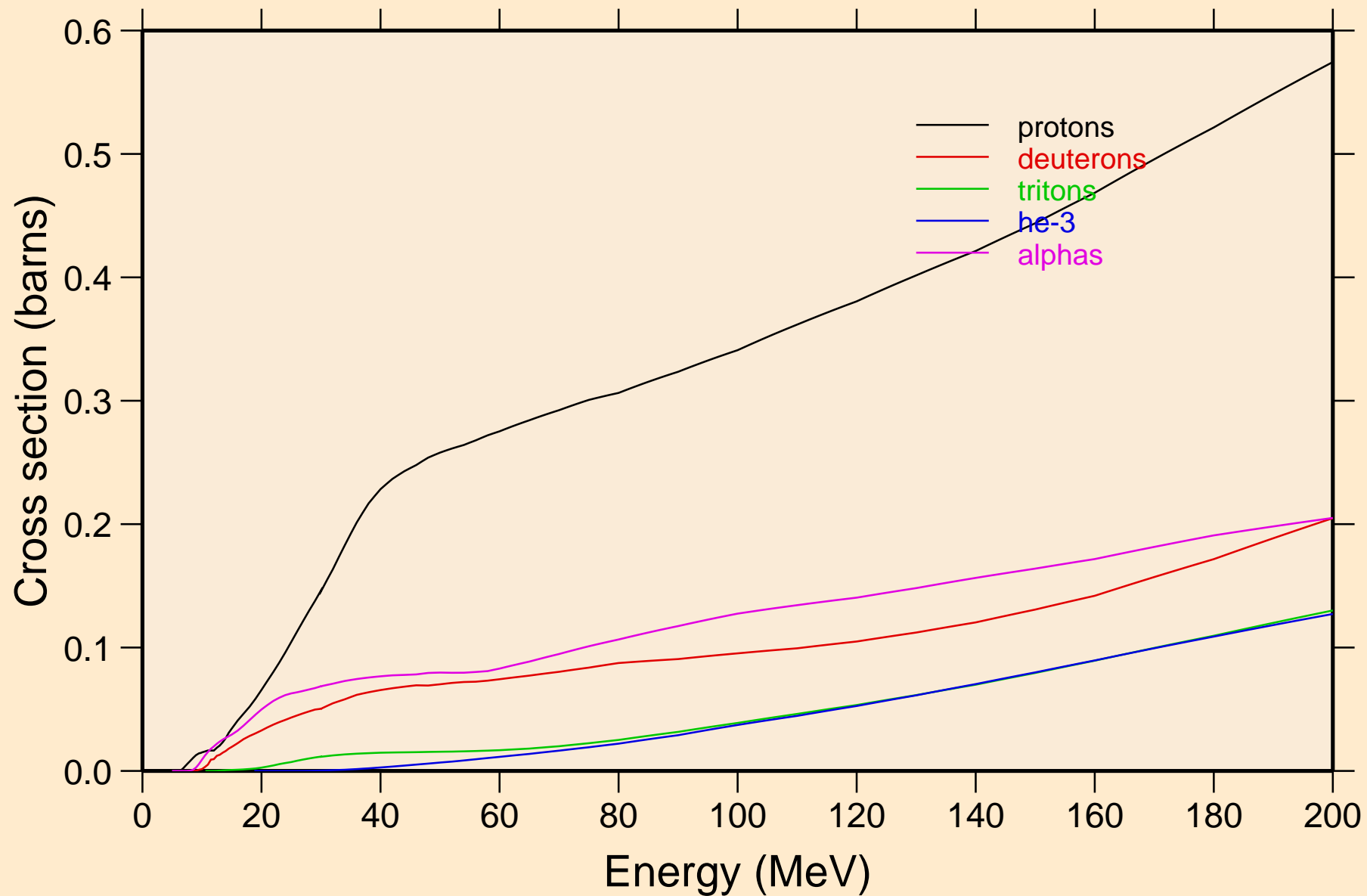Particle heating contributions

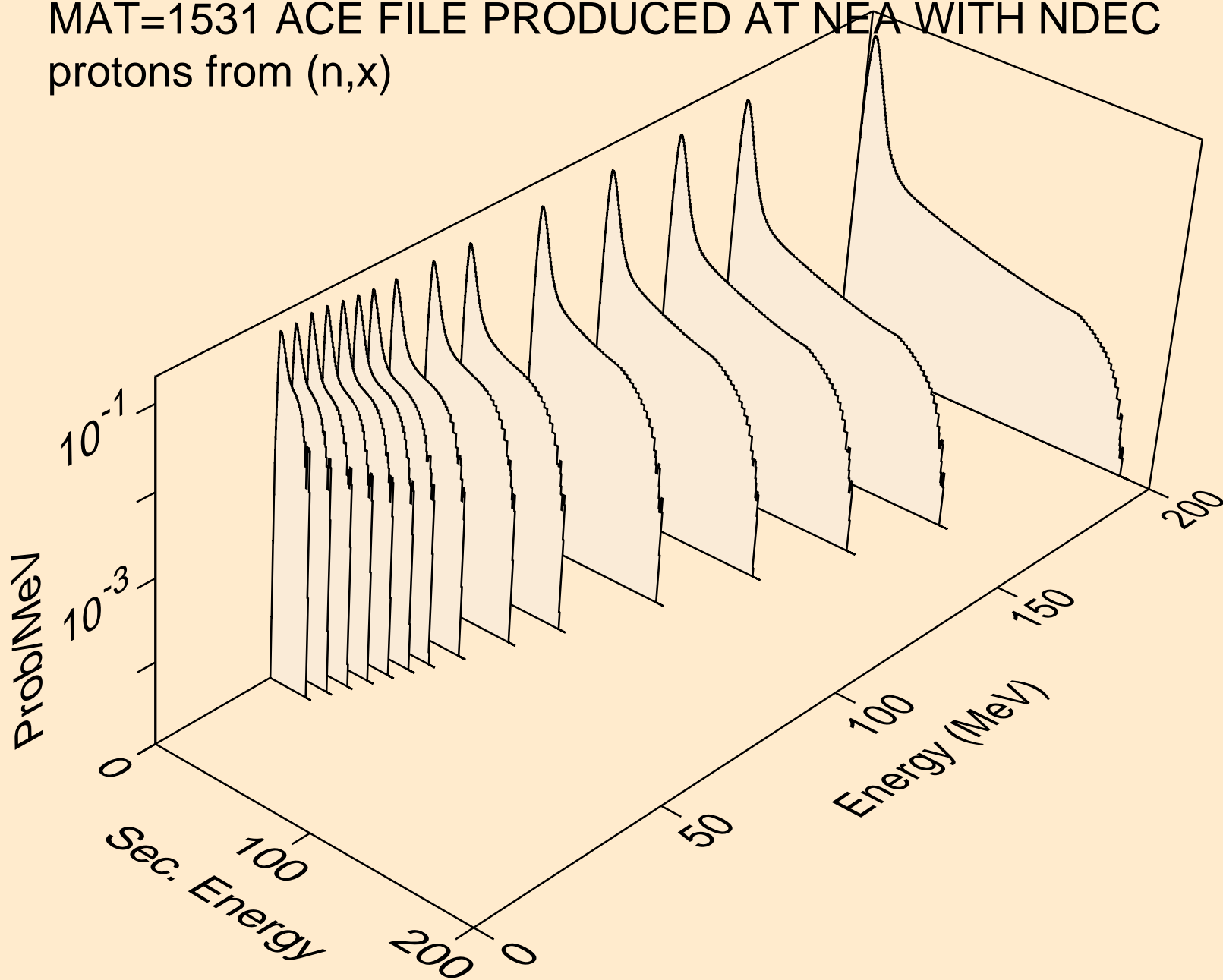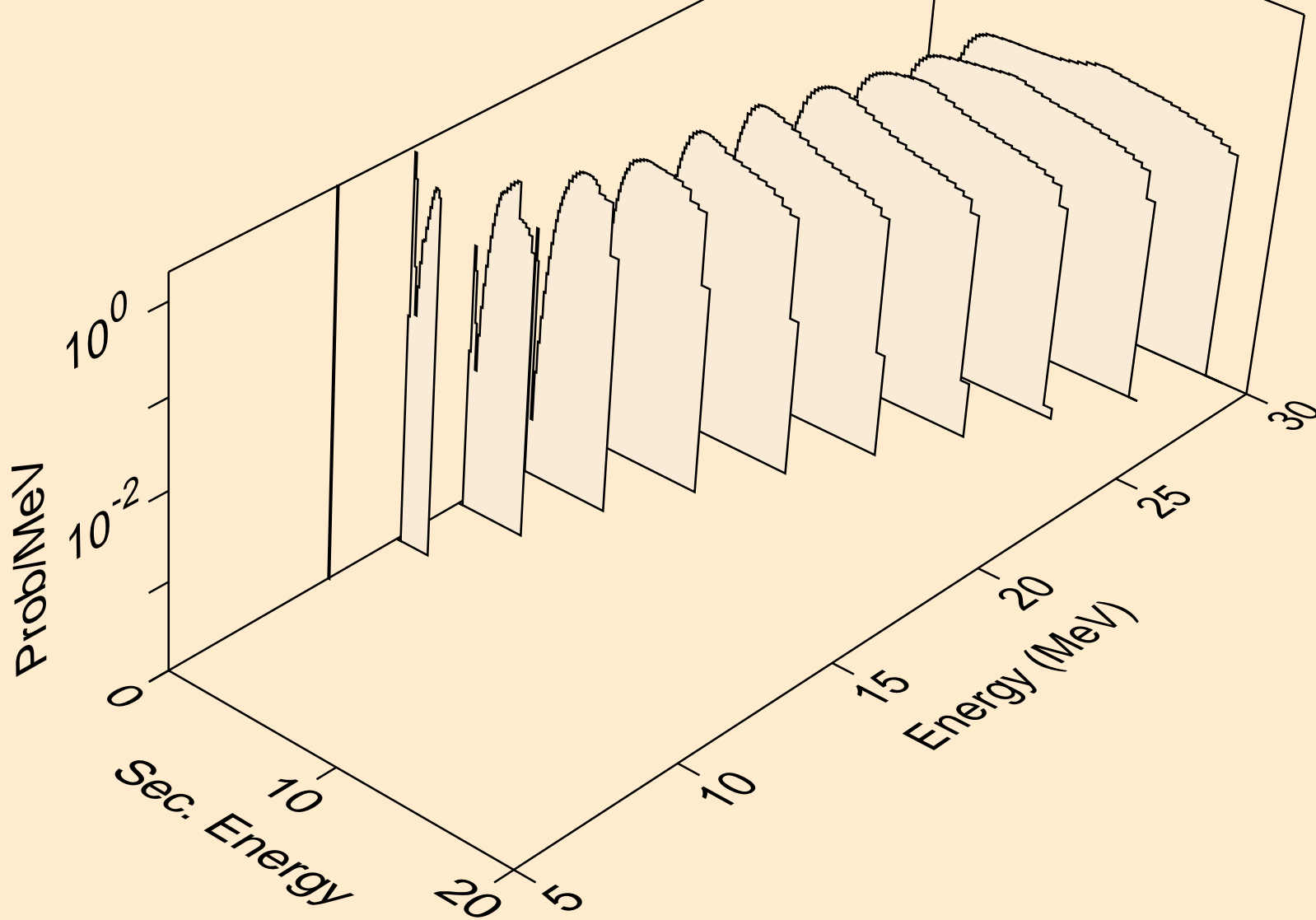MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Recoil Heating

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
Particle production cross sections

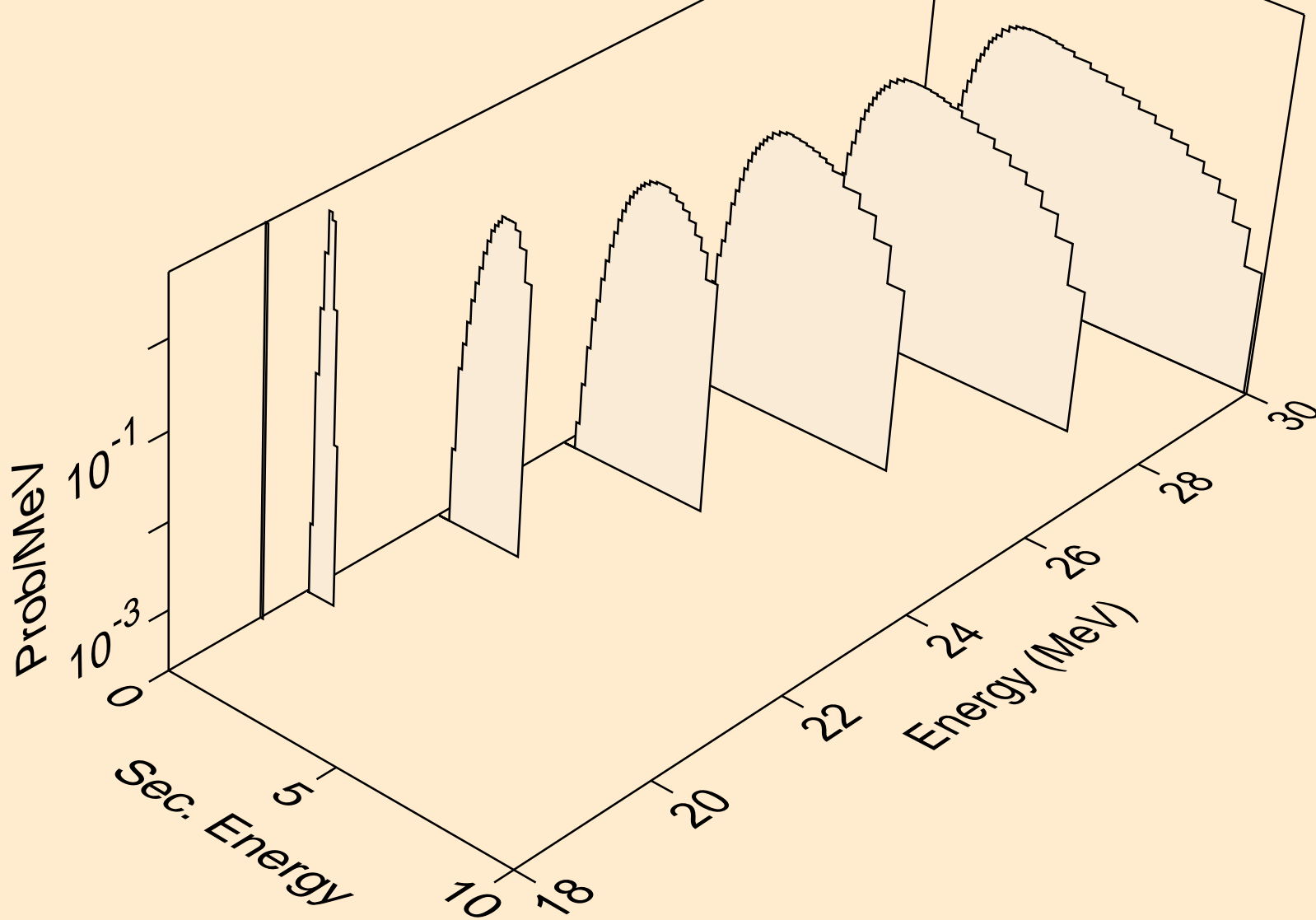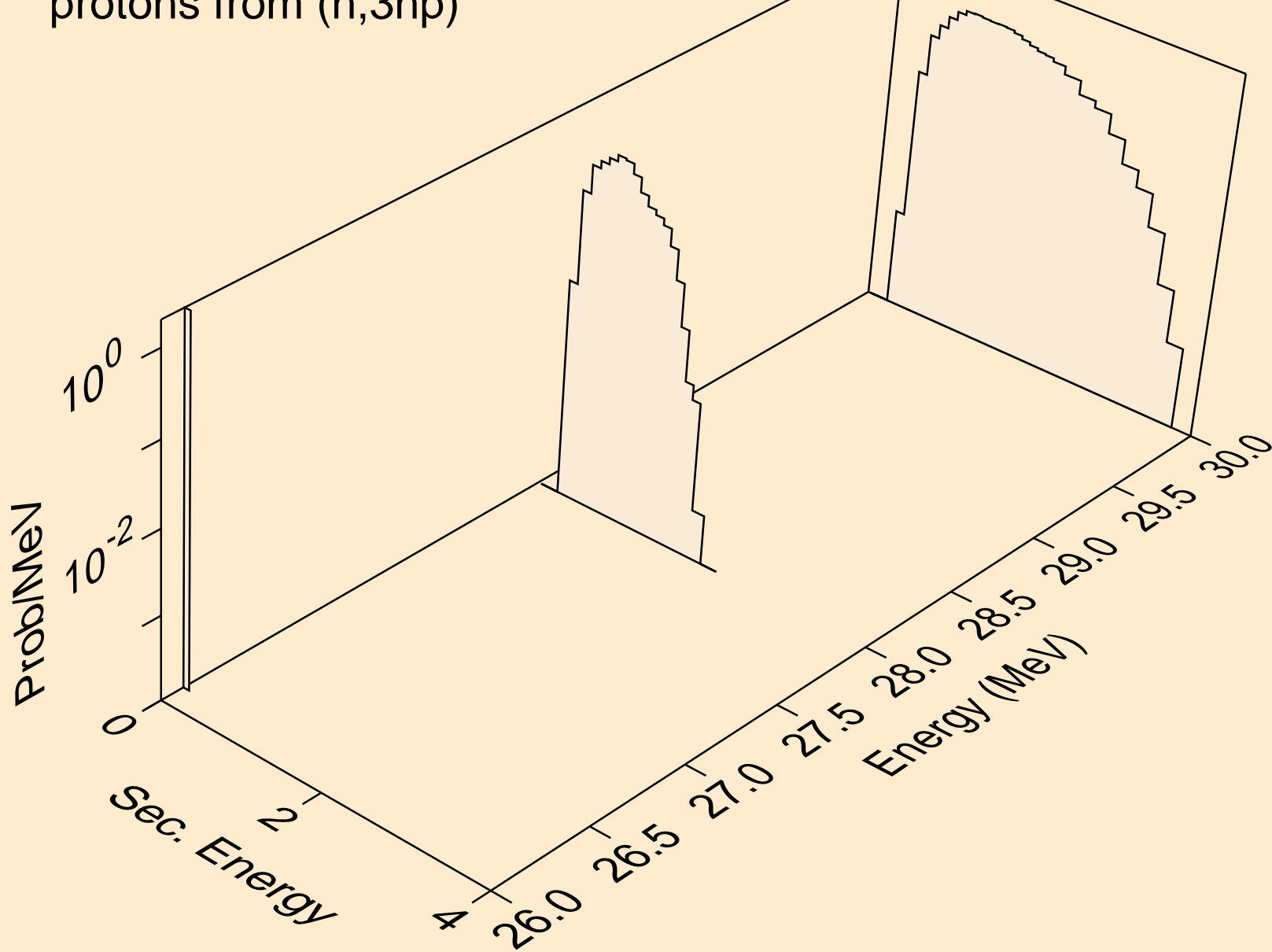MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,x)

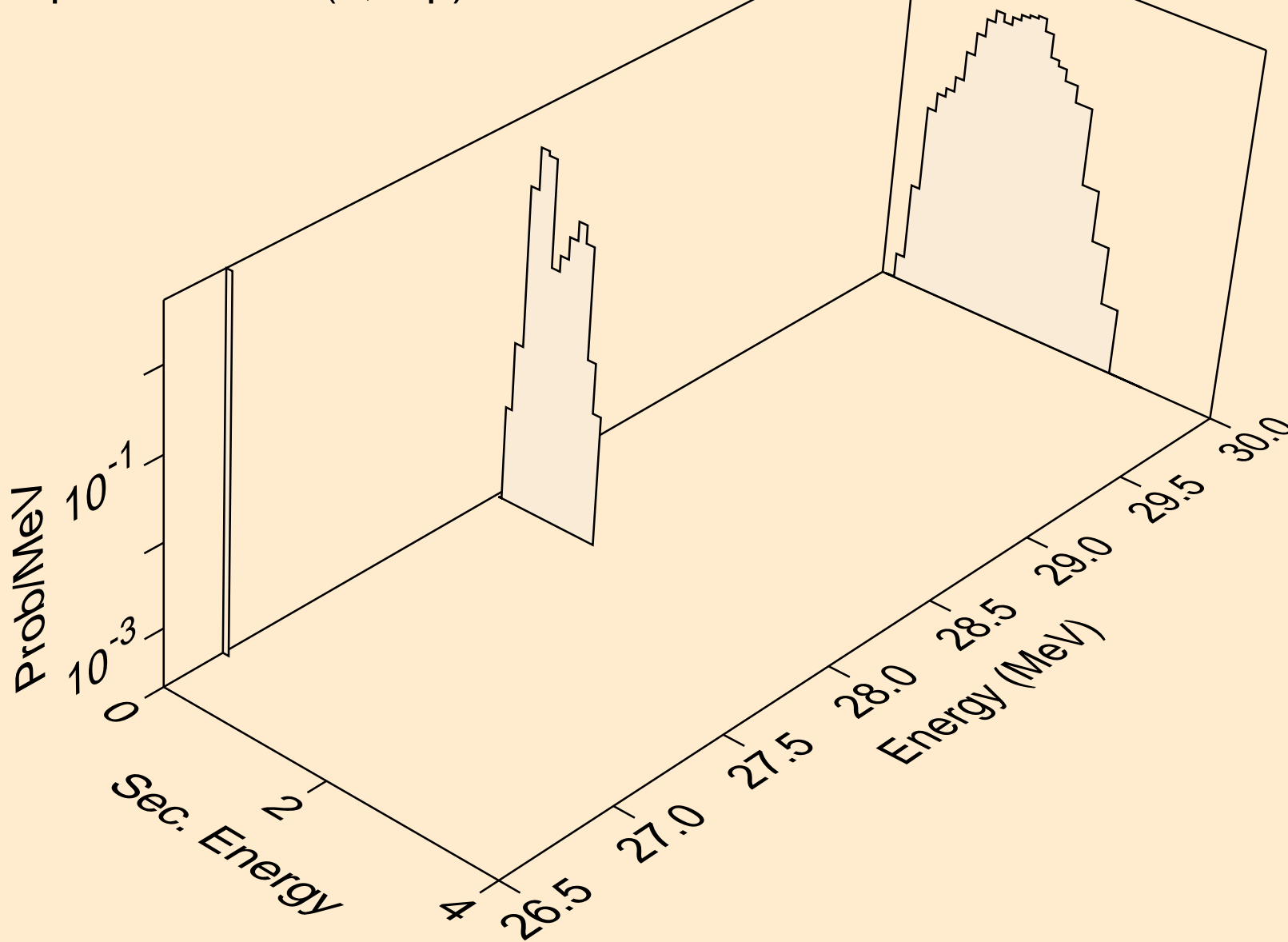MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,n*)p

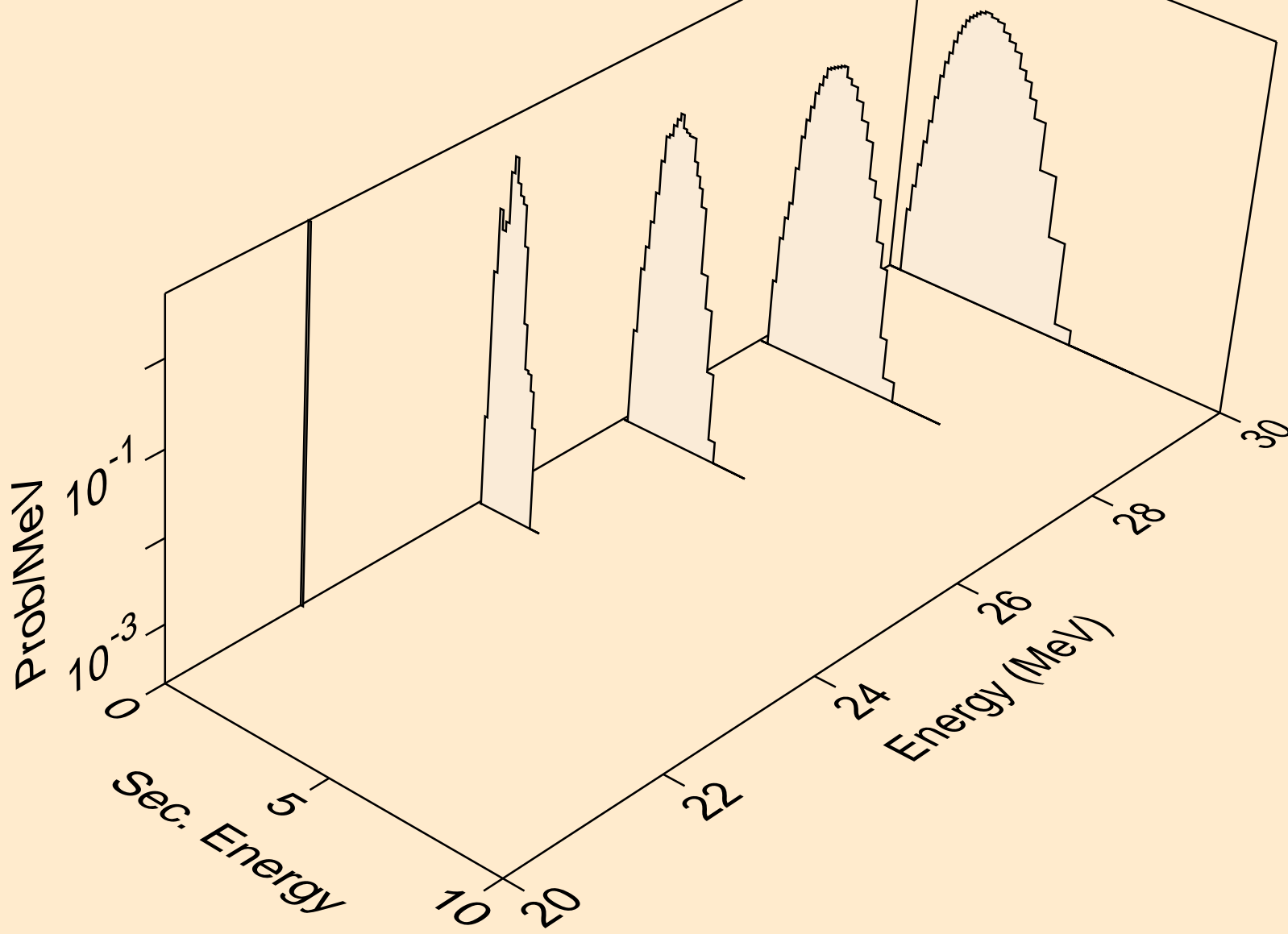MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,2np)

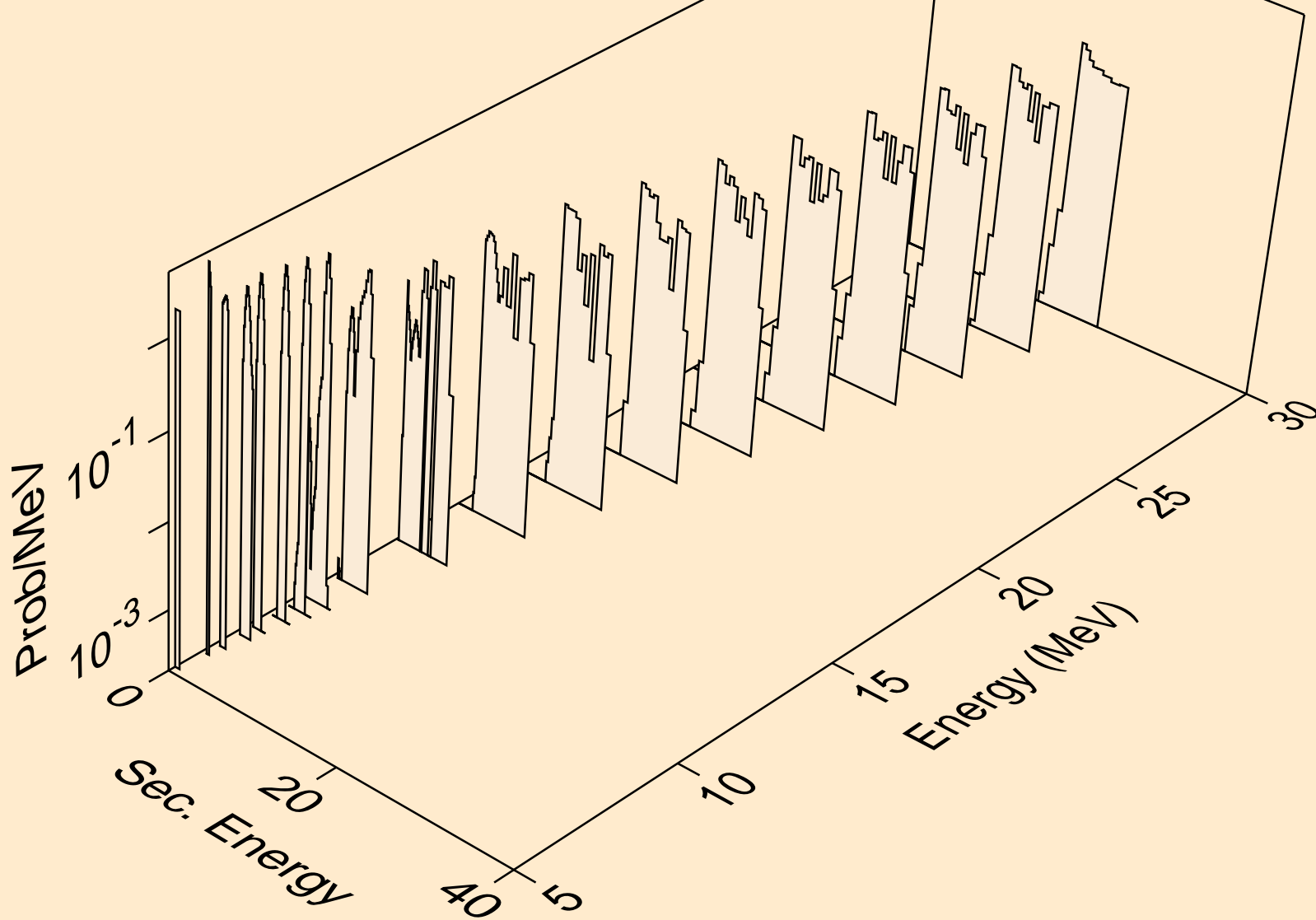MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,3np)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,2np)

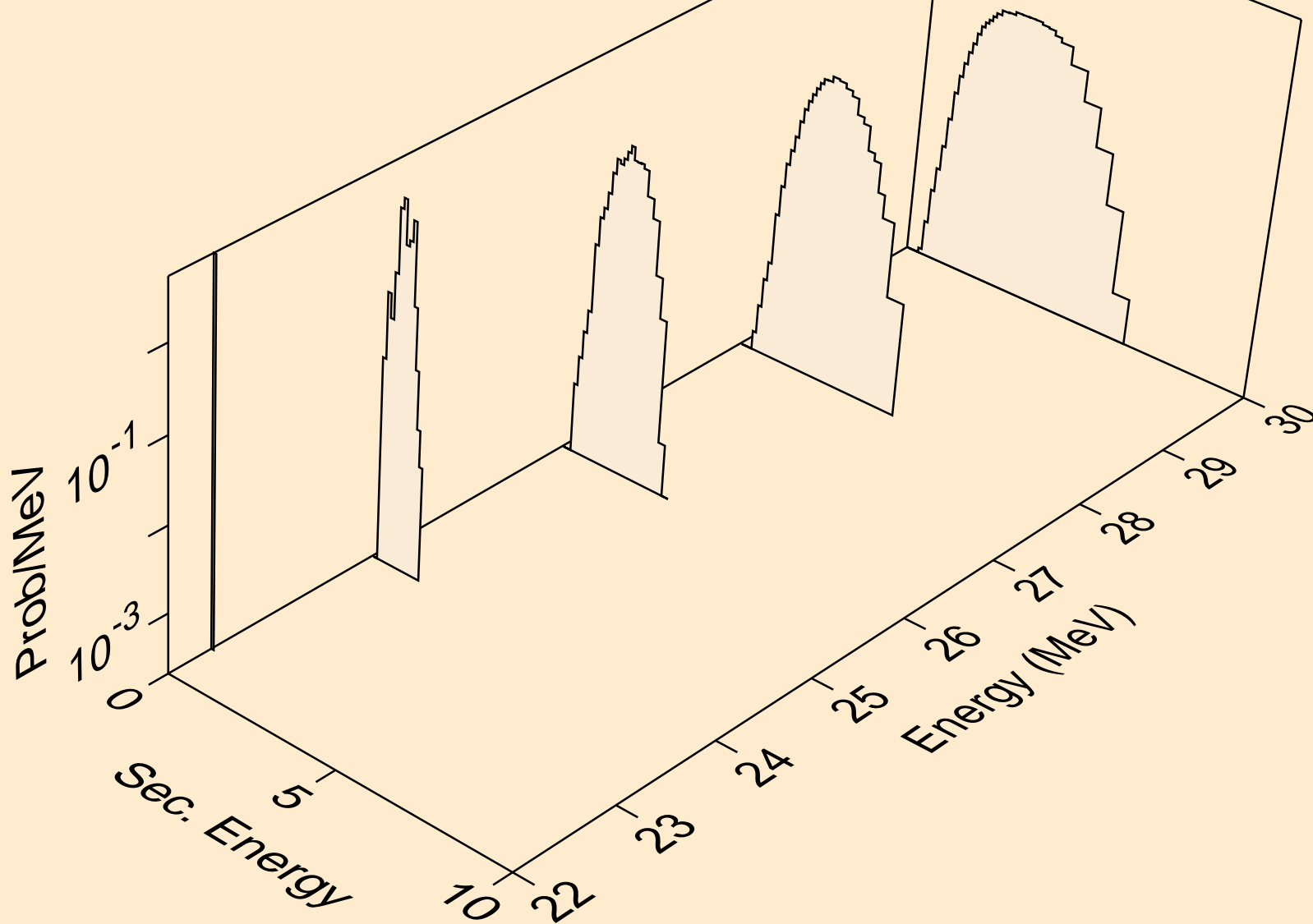MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
protons from (n,npa)

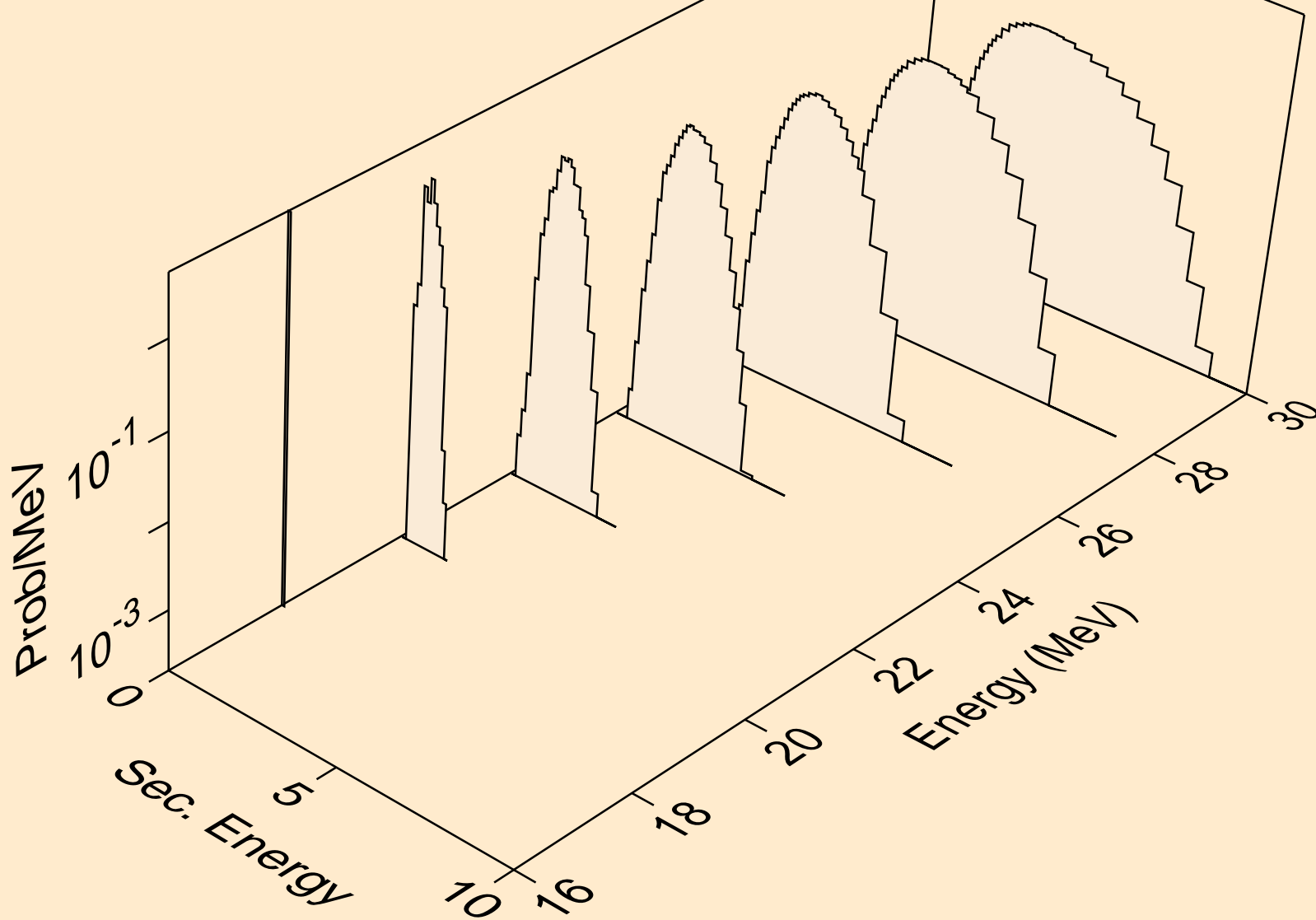MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
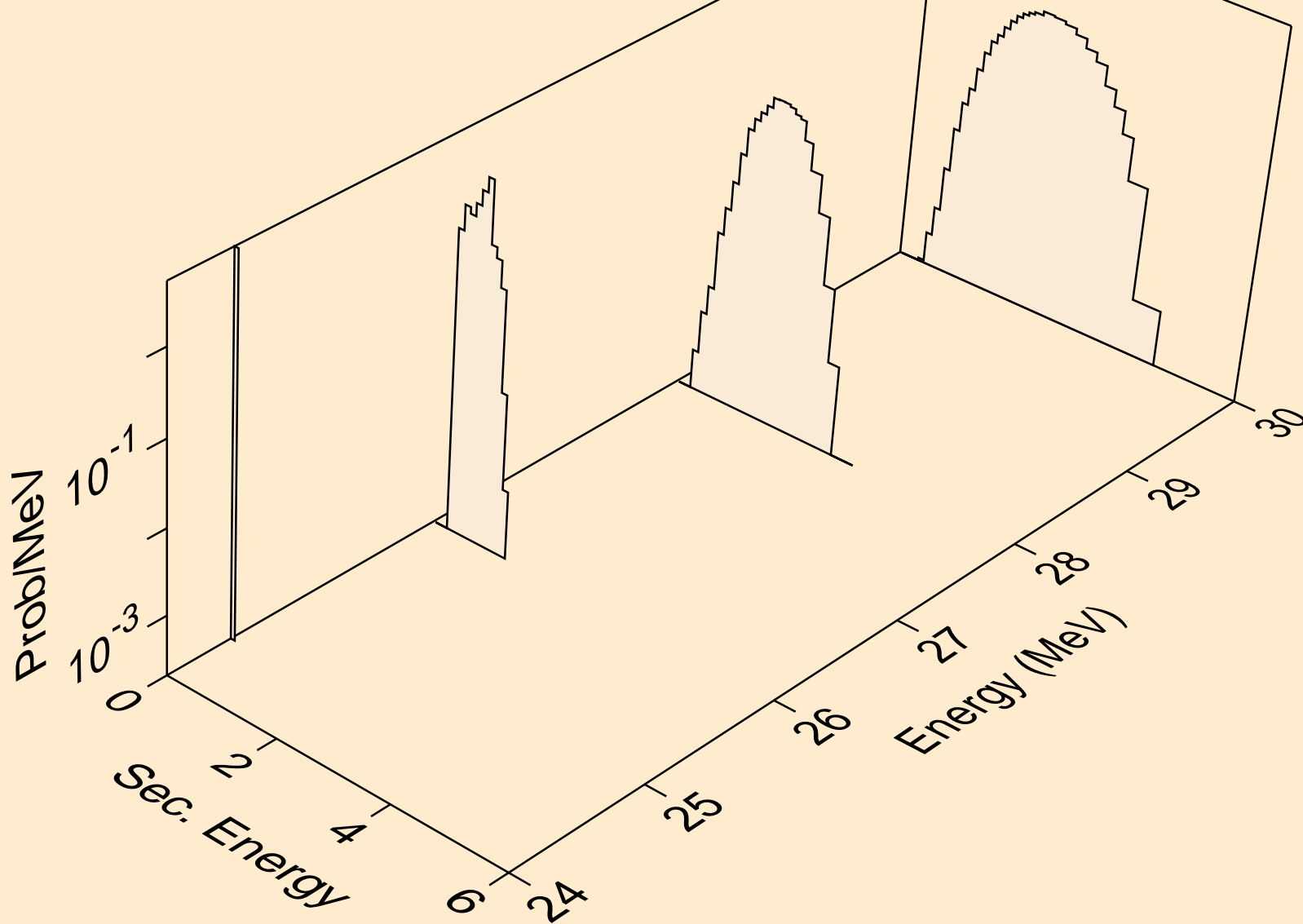protons from (n,p)

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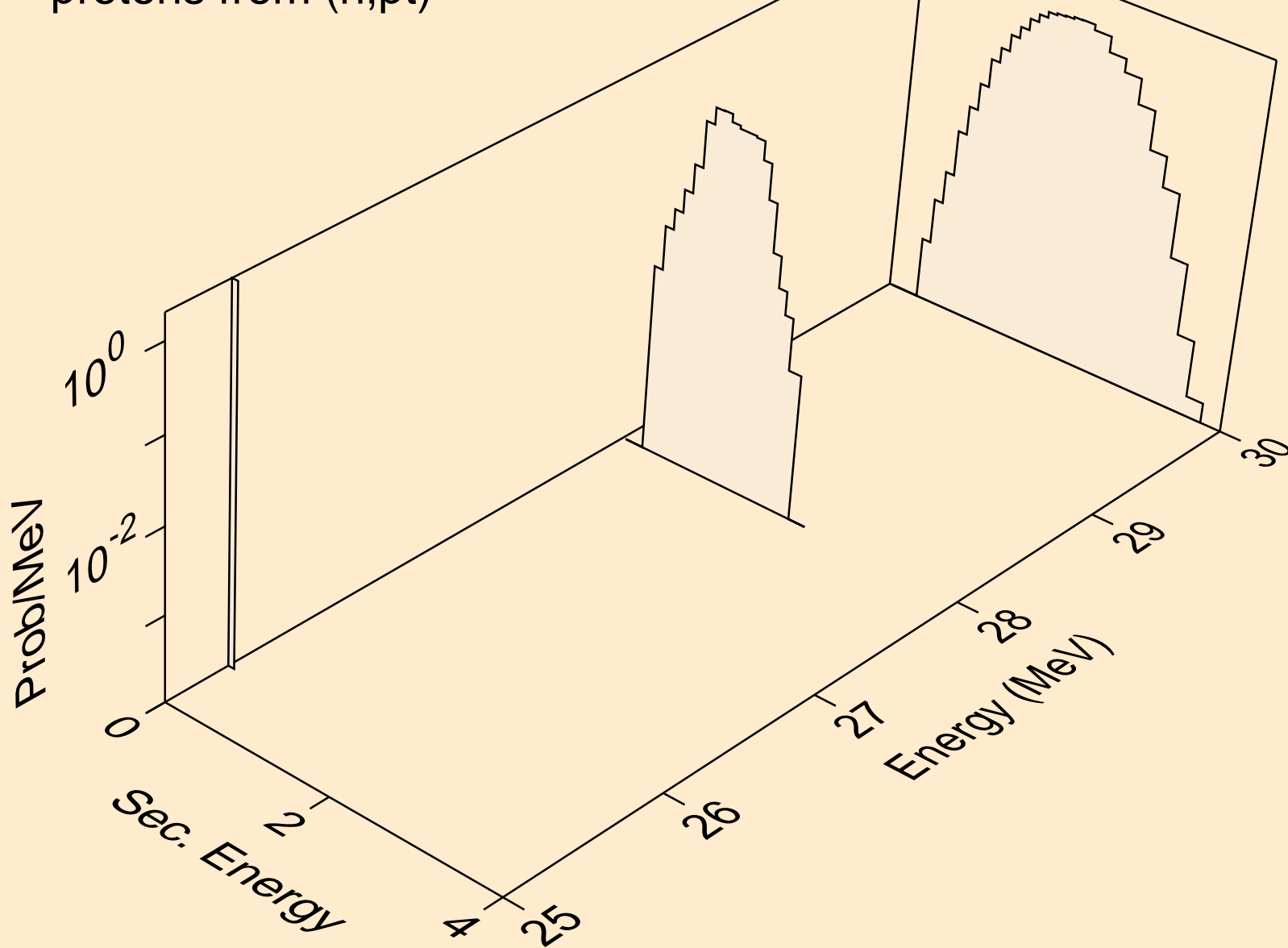protons from (n,2p)

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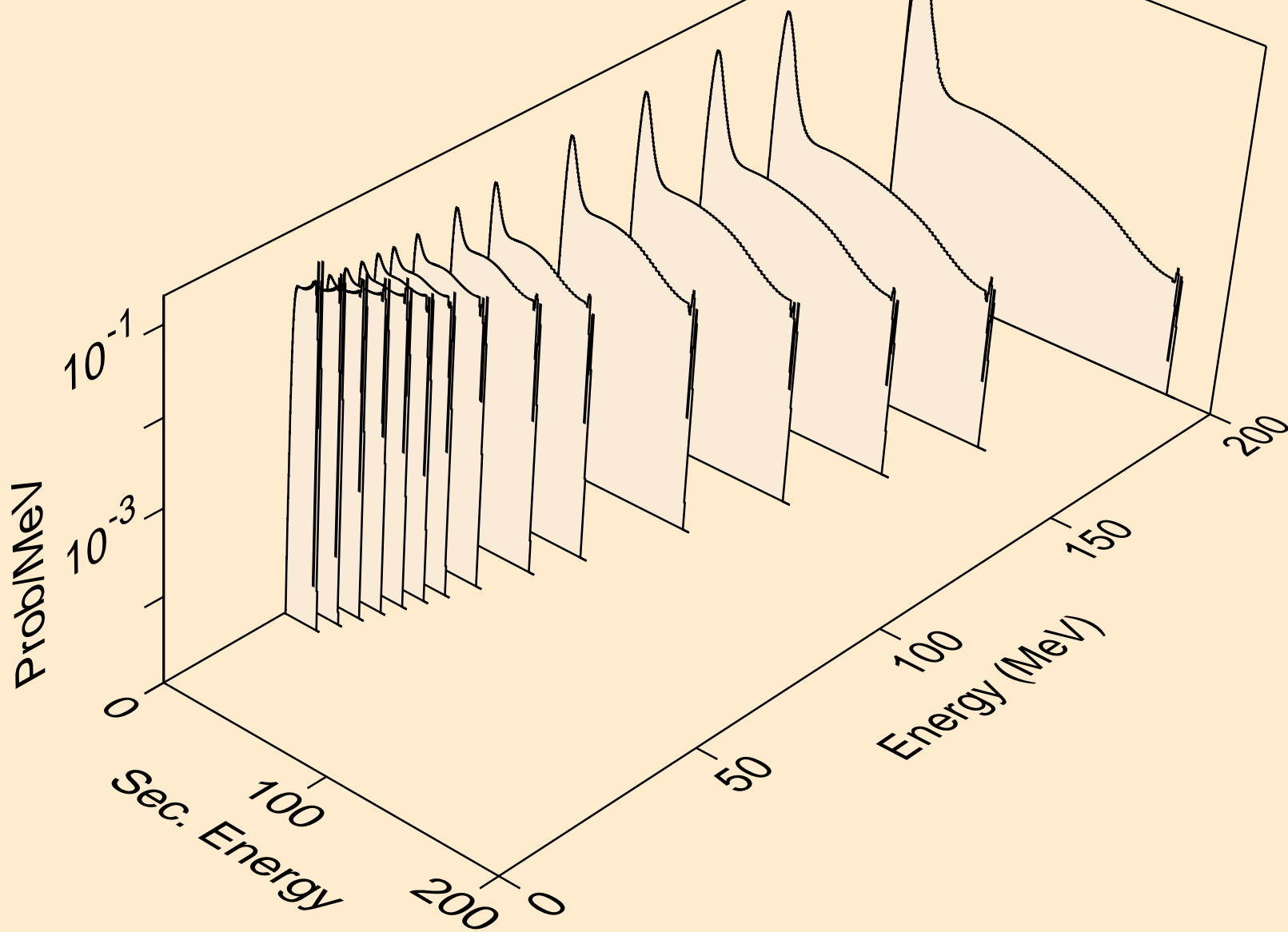protons from (n,pa)

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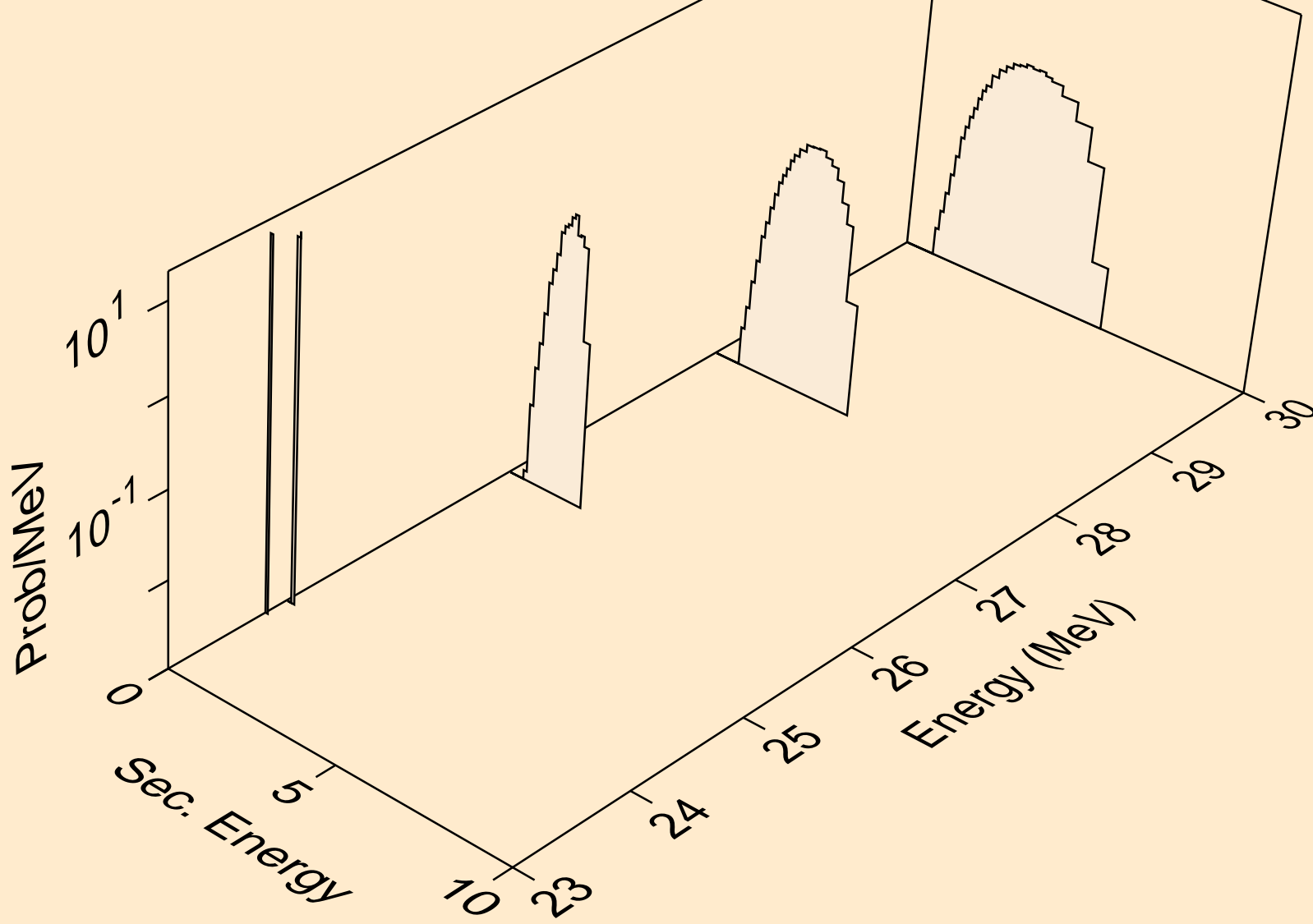protons from (n,pd)

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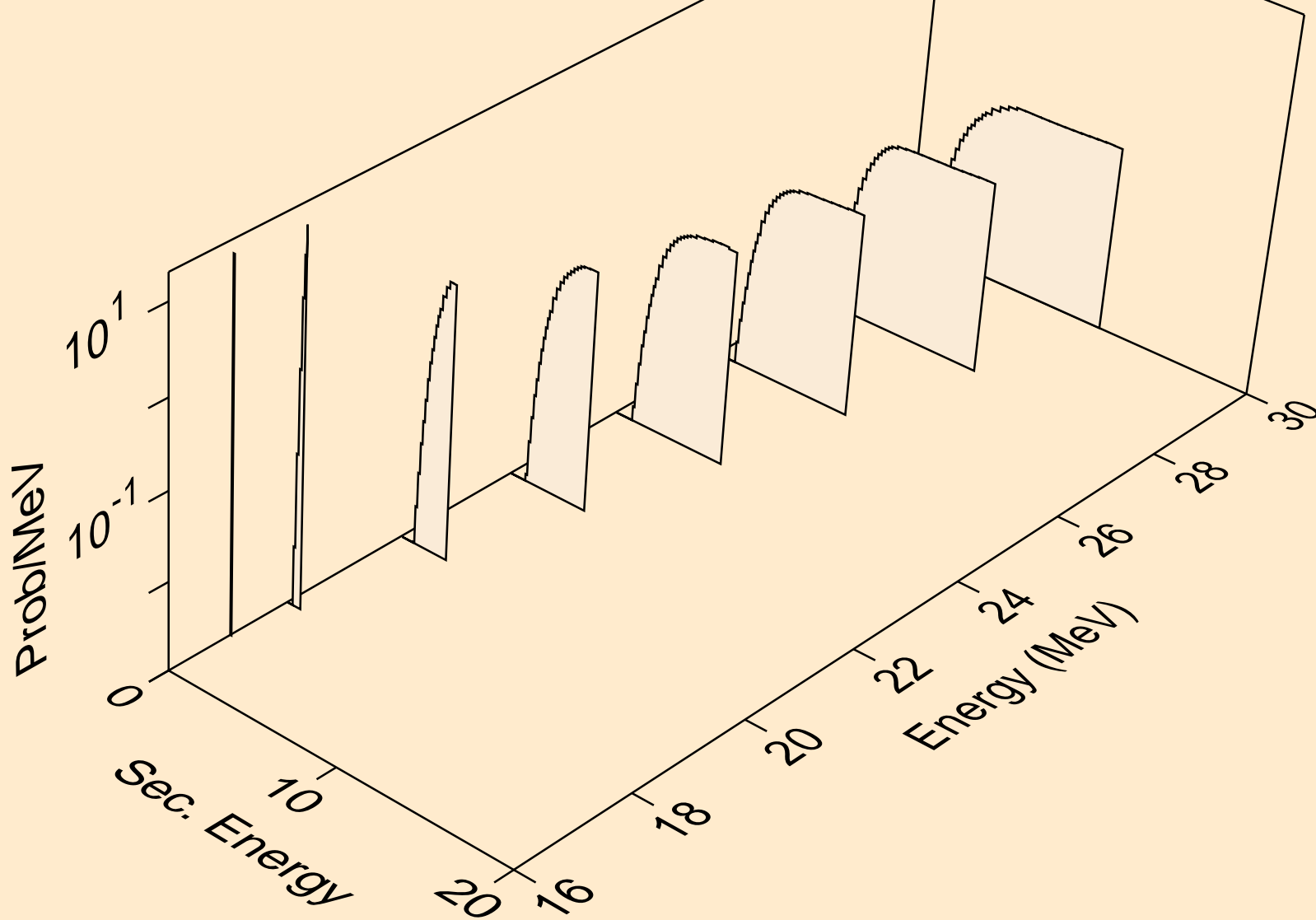protons from (n,pt)

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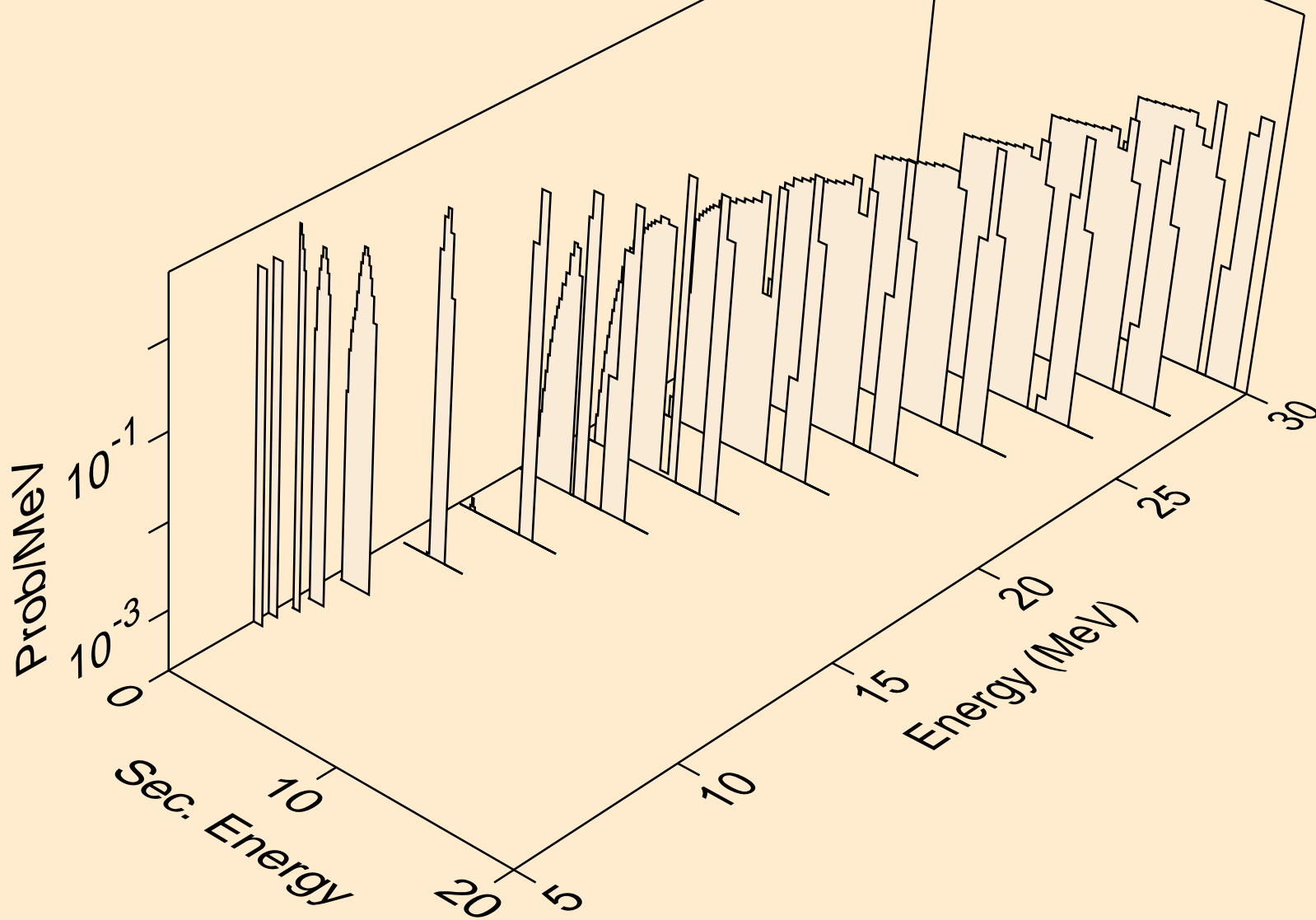deuterons from (n,x)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
deuterons from (n,2nd)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
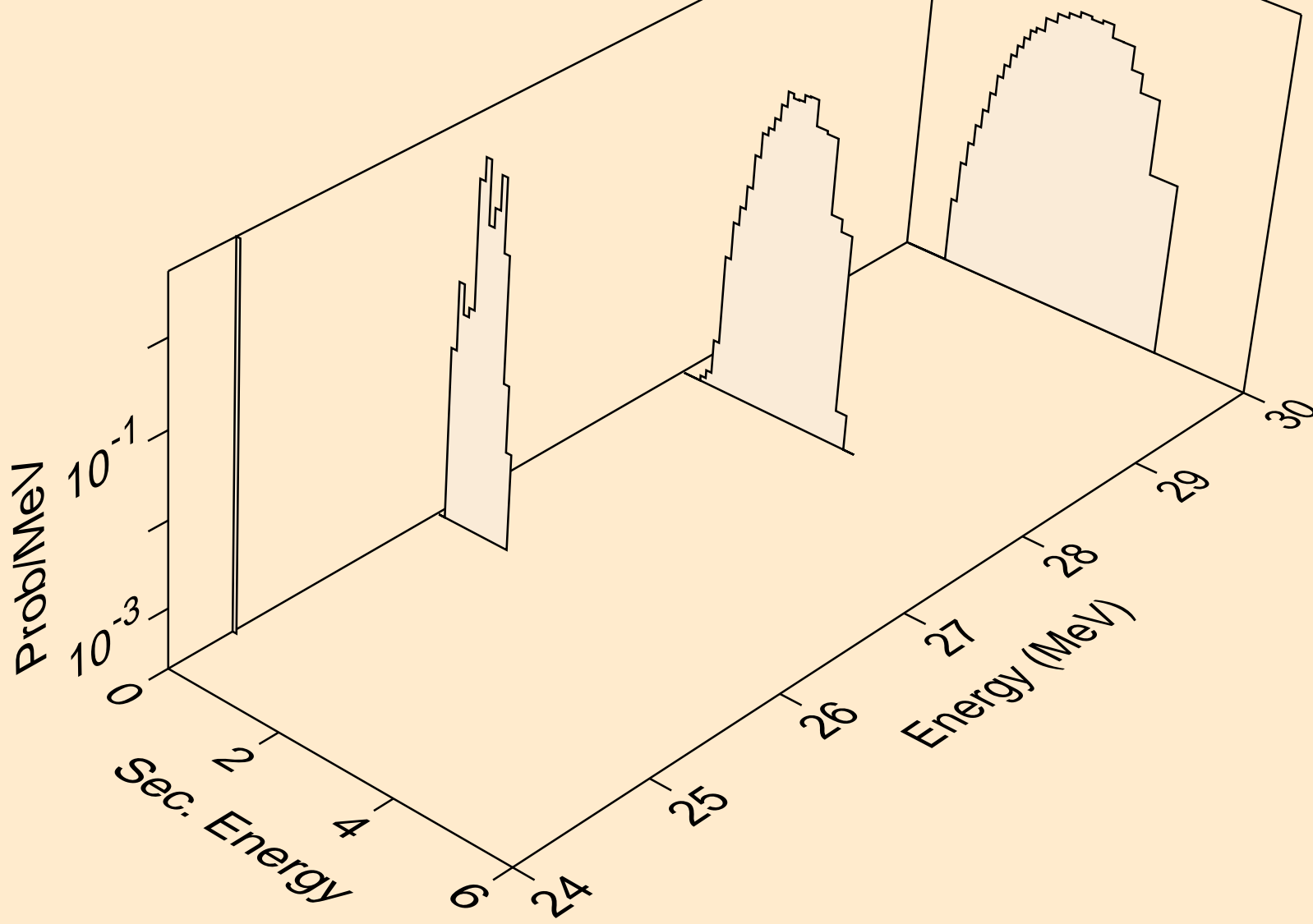deuterons from (n,n*)d

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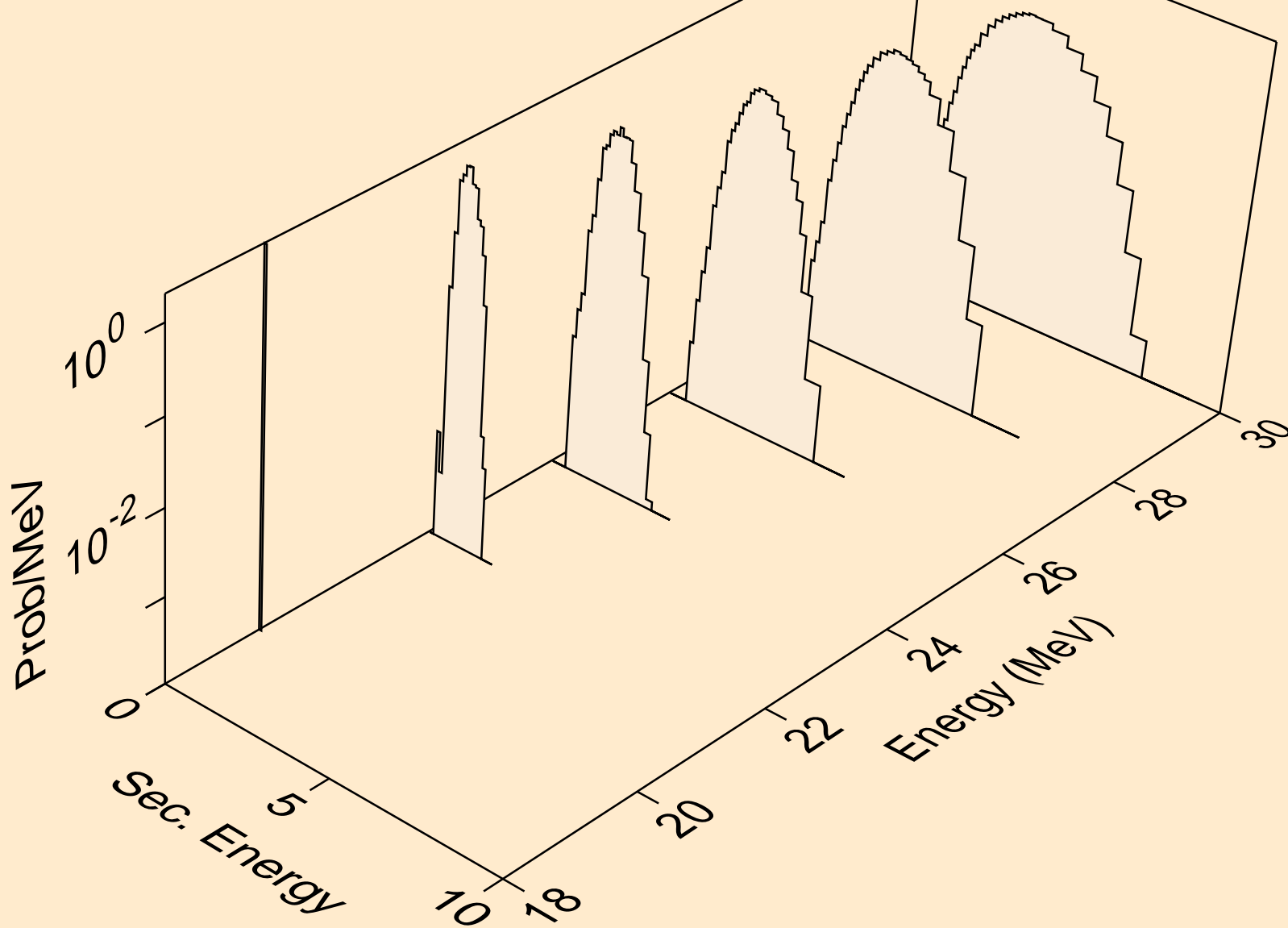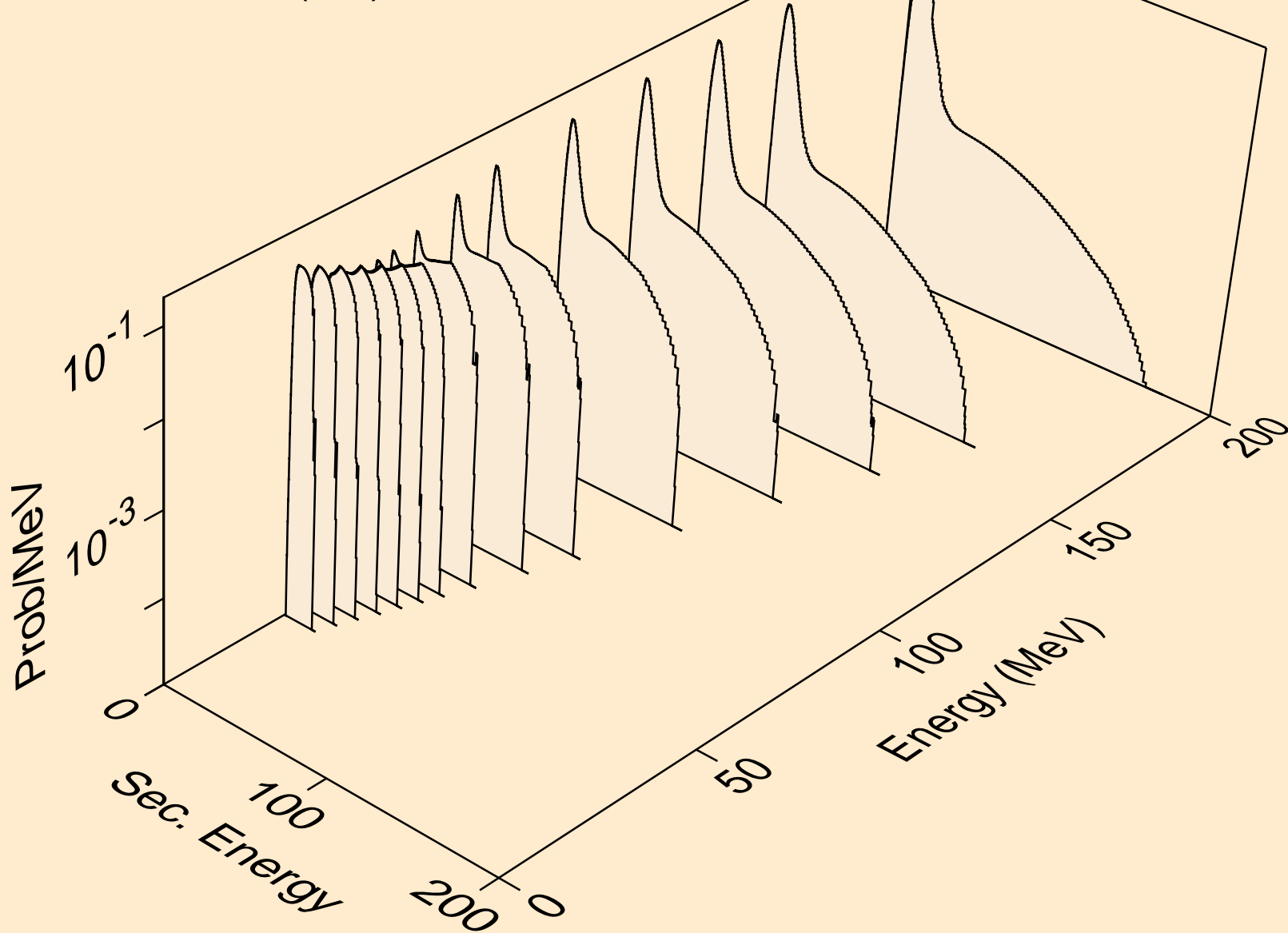deuterons from (n,d)

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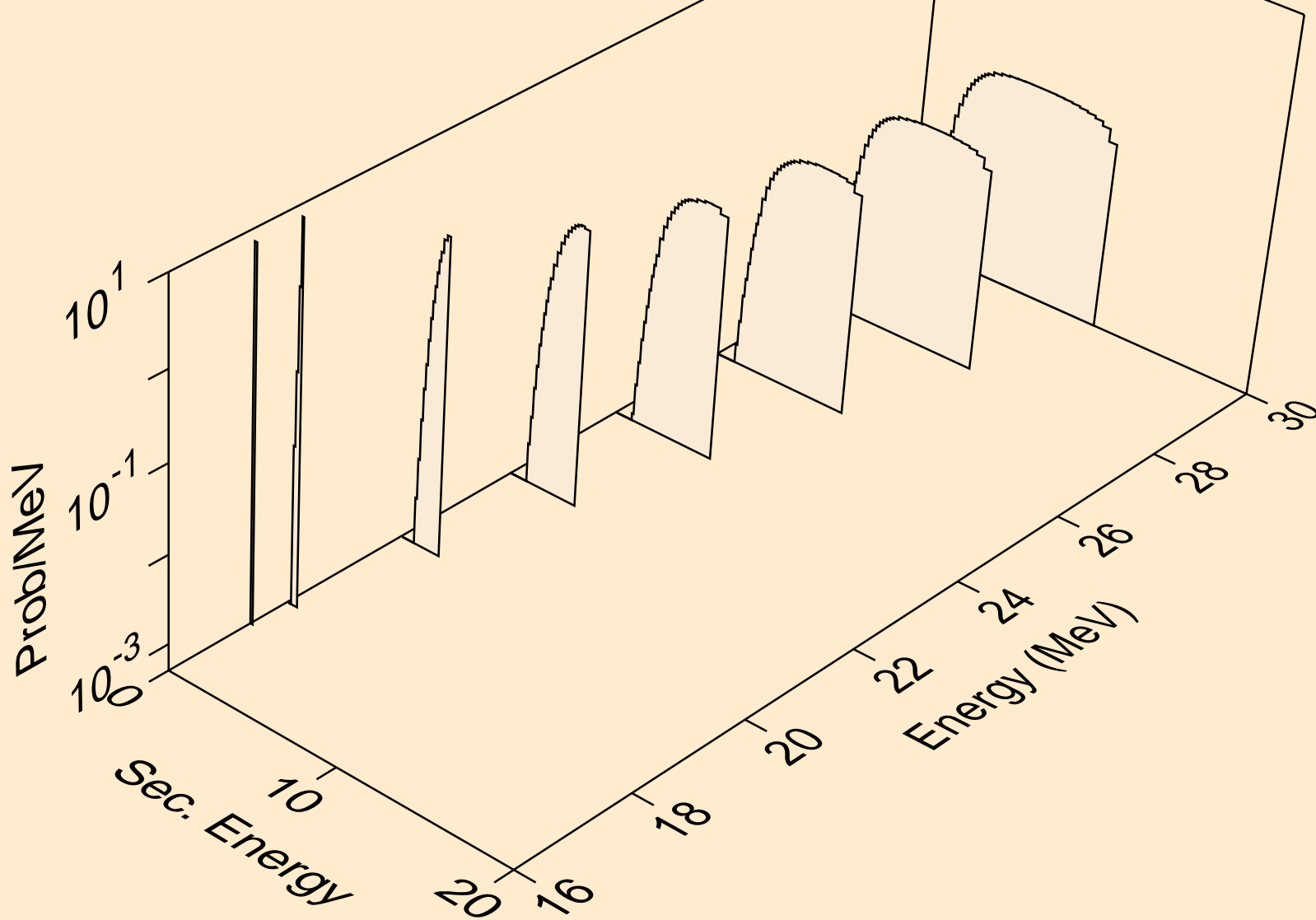deuterons from (n,pd)

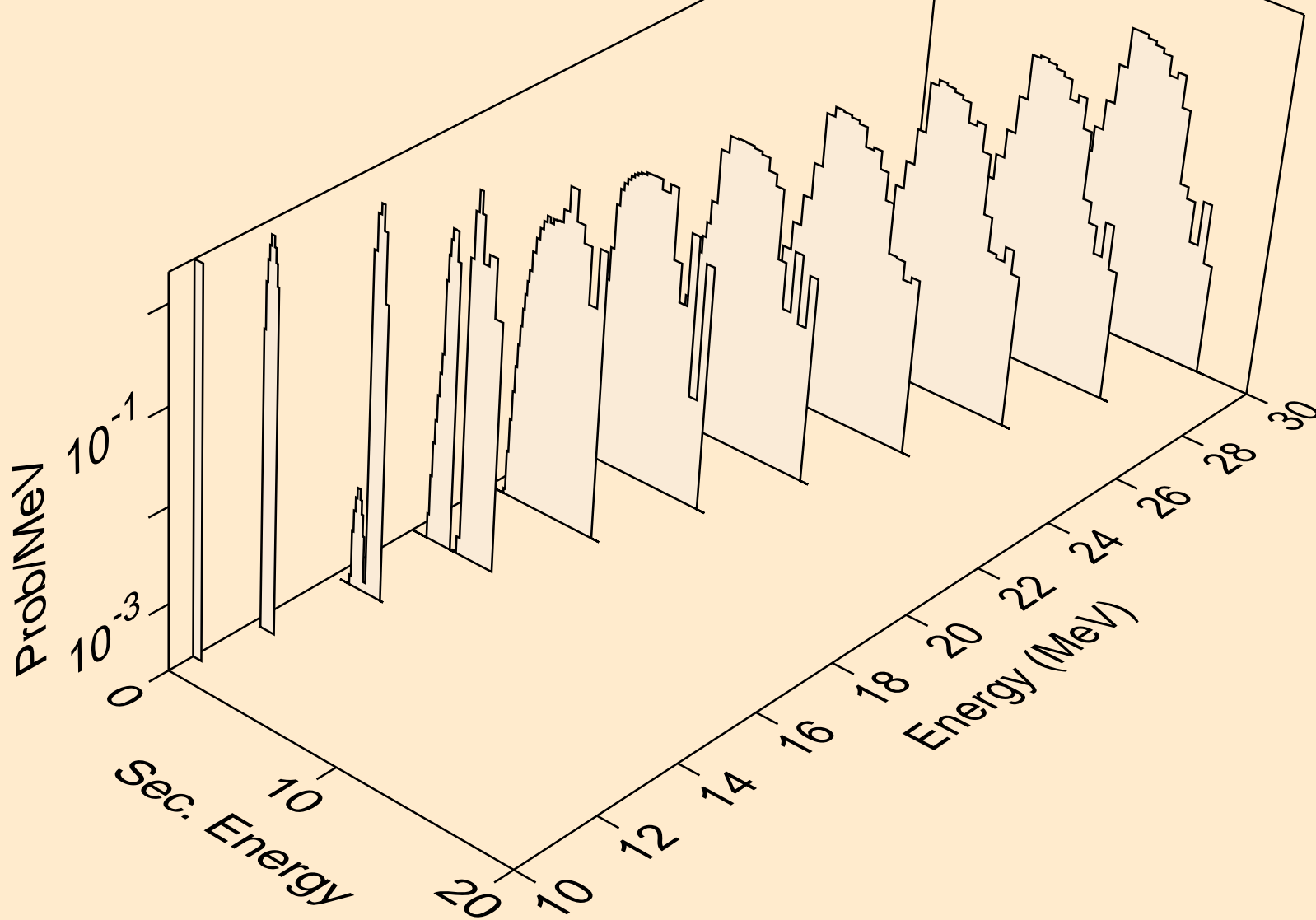MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
deuterons from (n,da)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
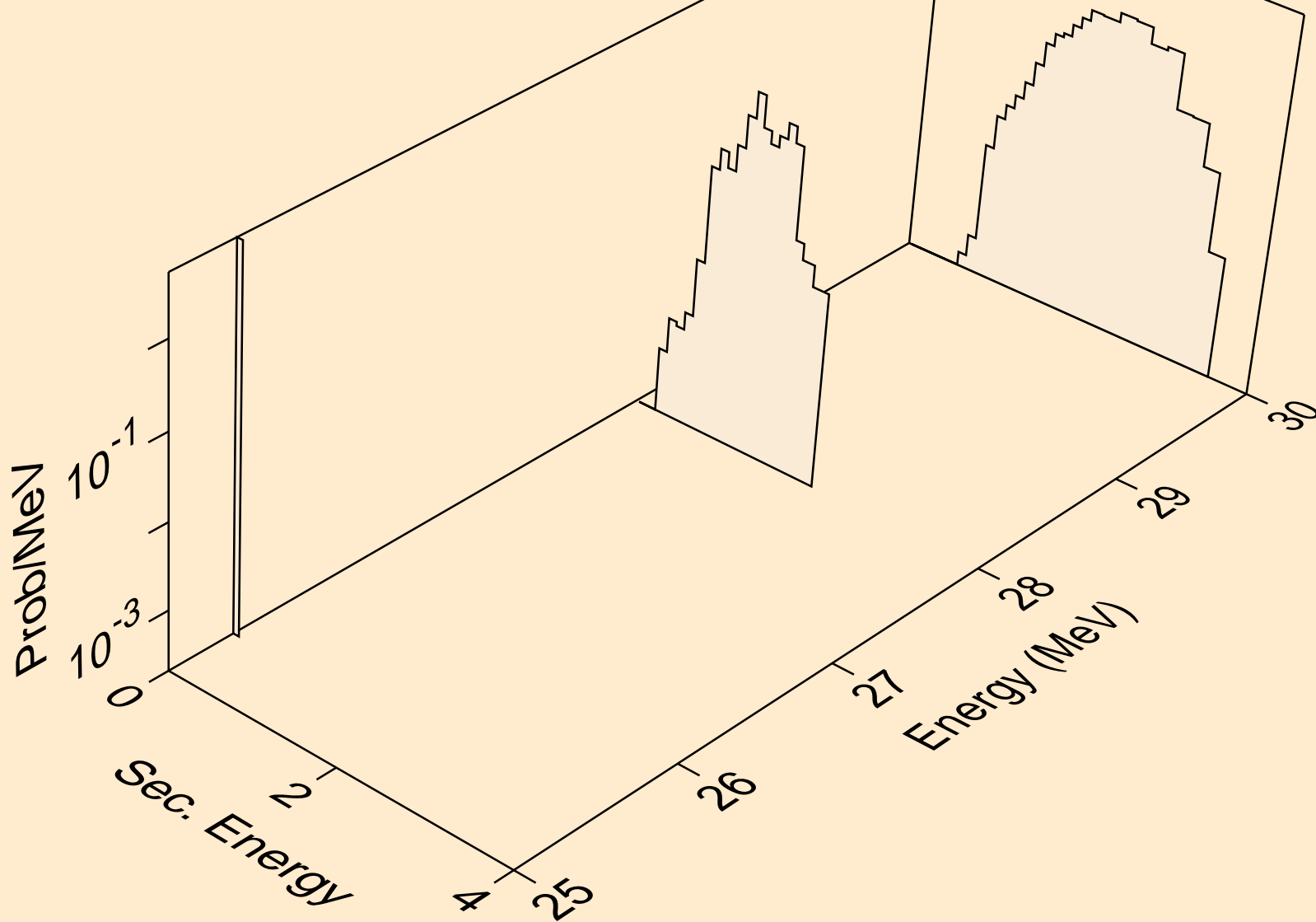tritons from (n,x)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
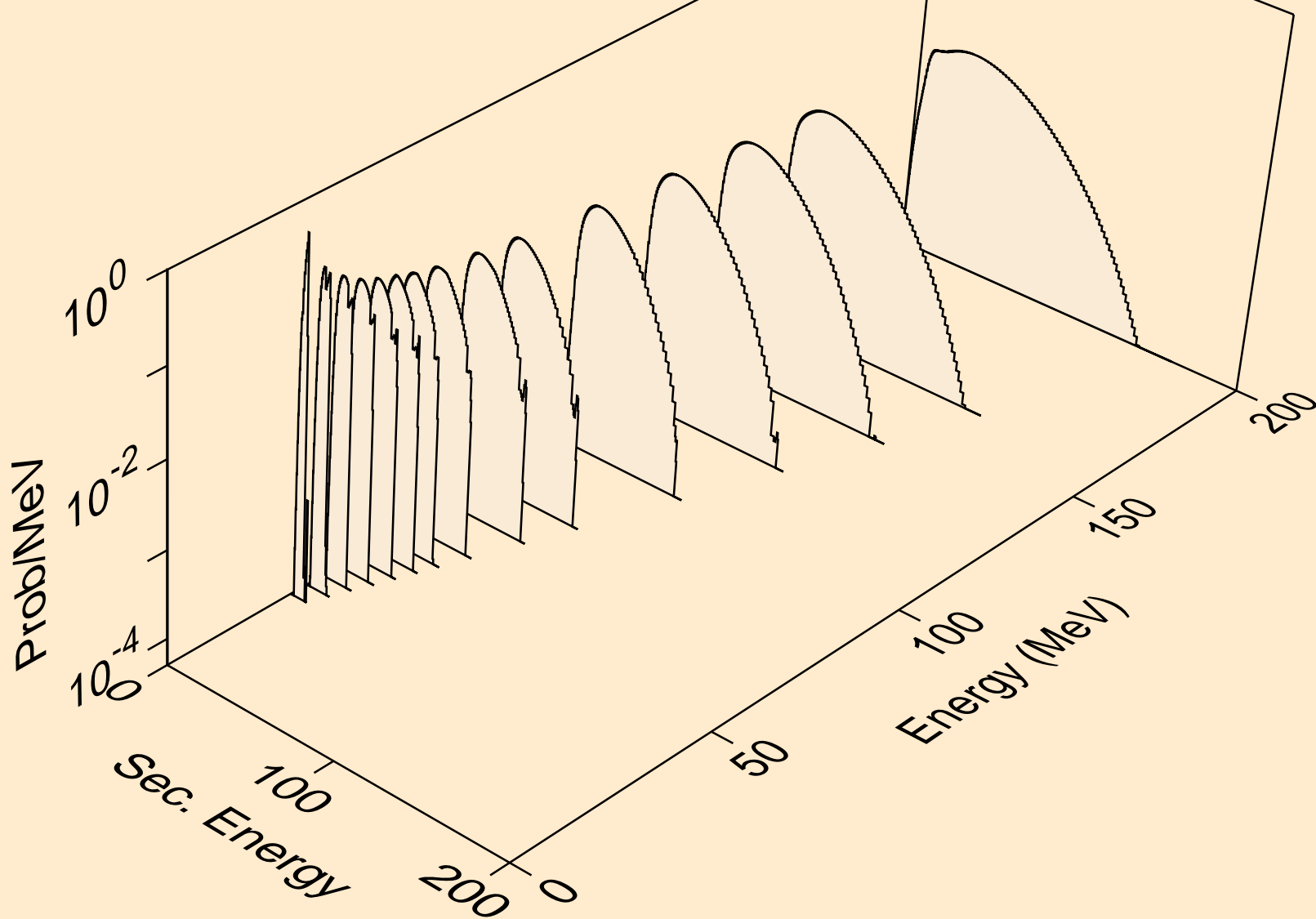tritons from (n,n*)t

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
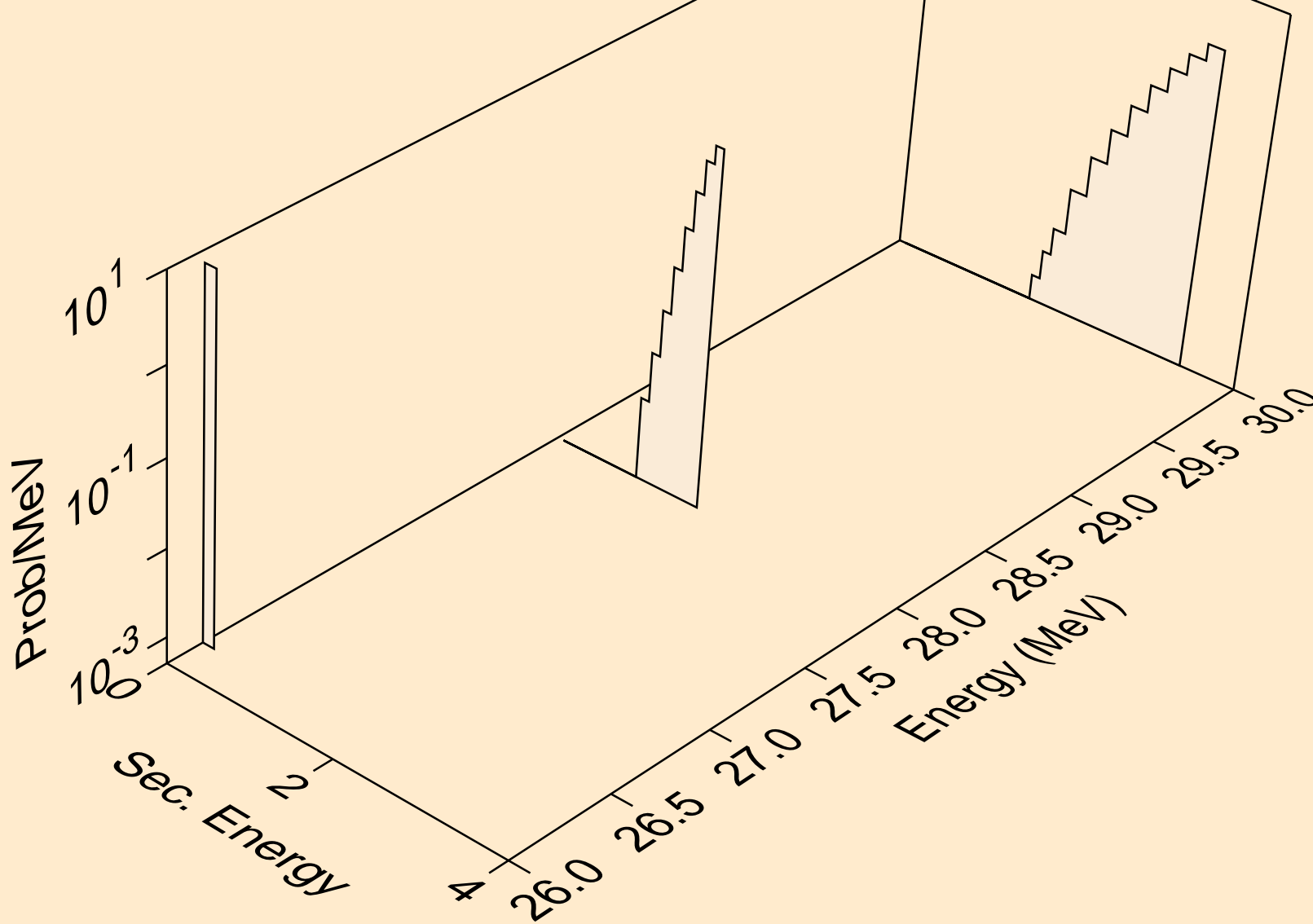tritons from (n,t)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
tritons from (n,pt)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
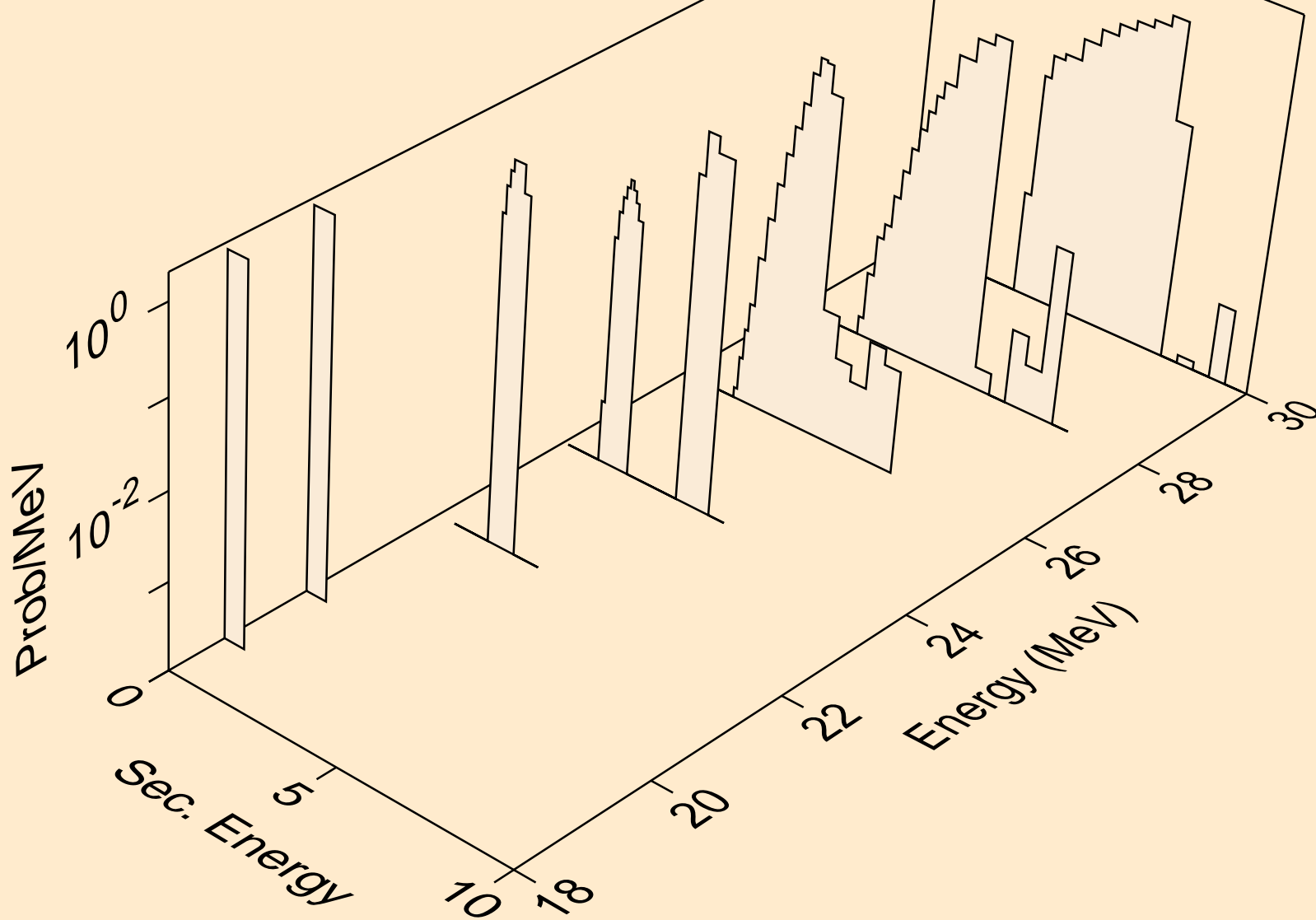he3s from (n,x)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
he3s from (n,n*)he3

ProbIMeV

$10^1$

$10^{-1}$

$10^{-3}$

Sec. Energy

2

4

Energy (MeV)

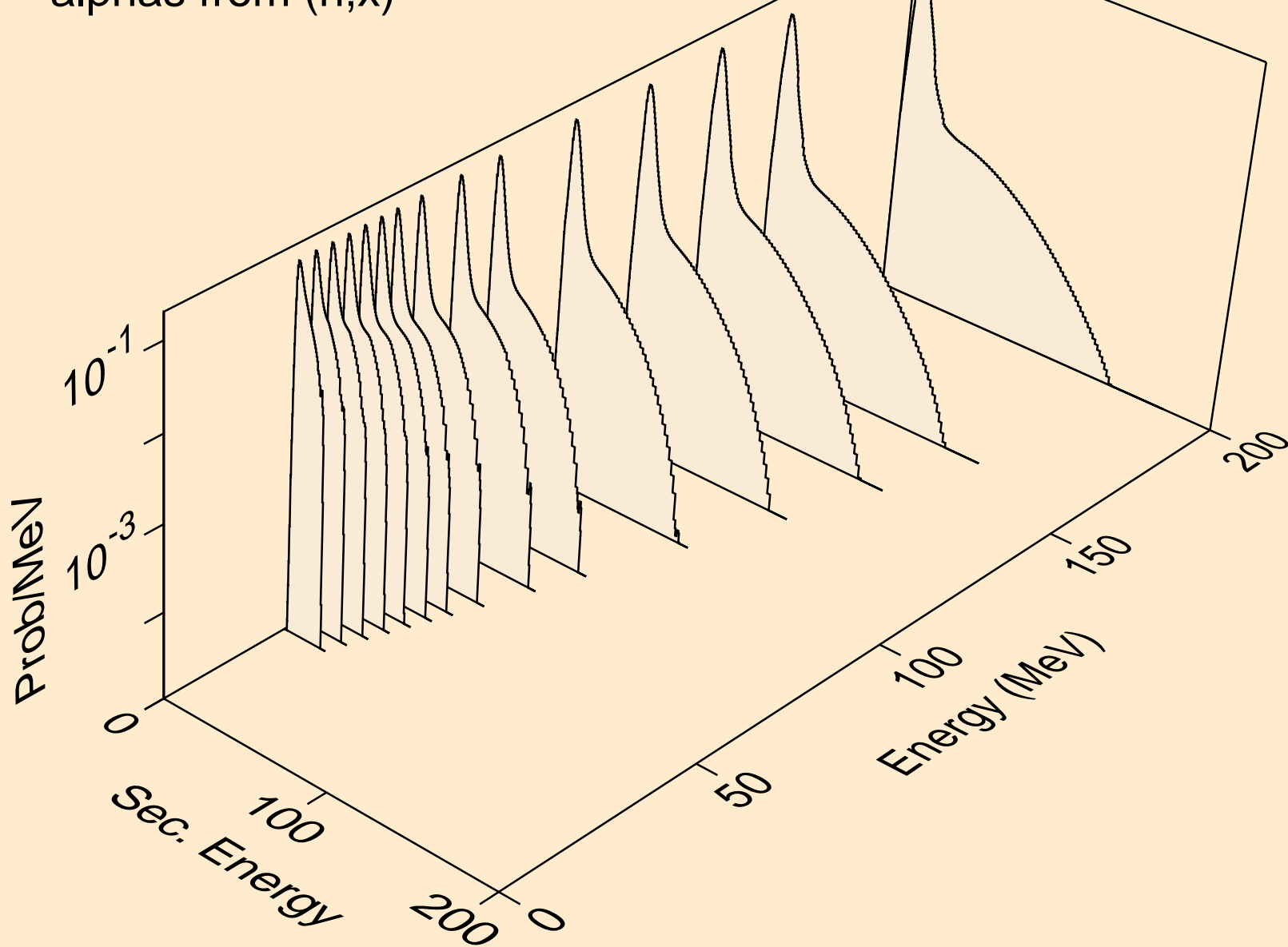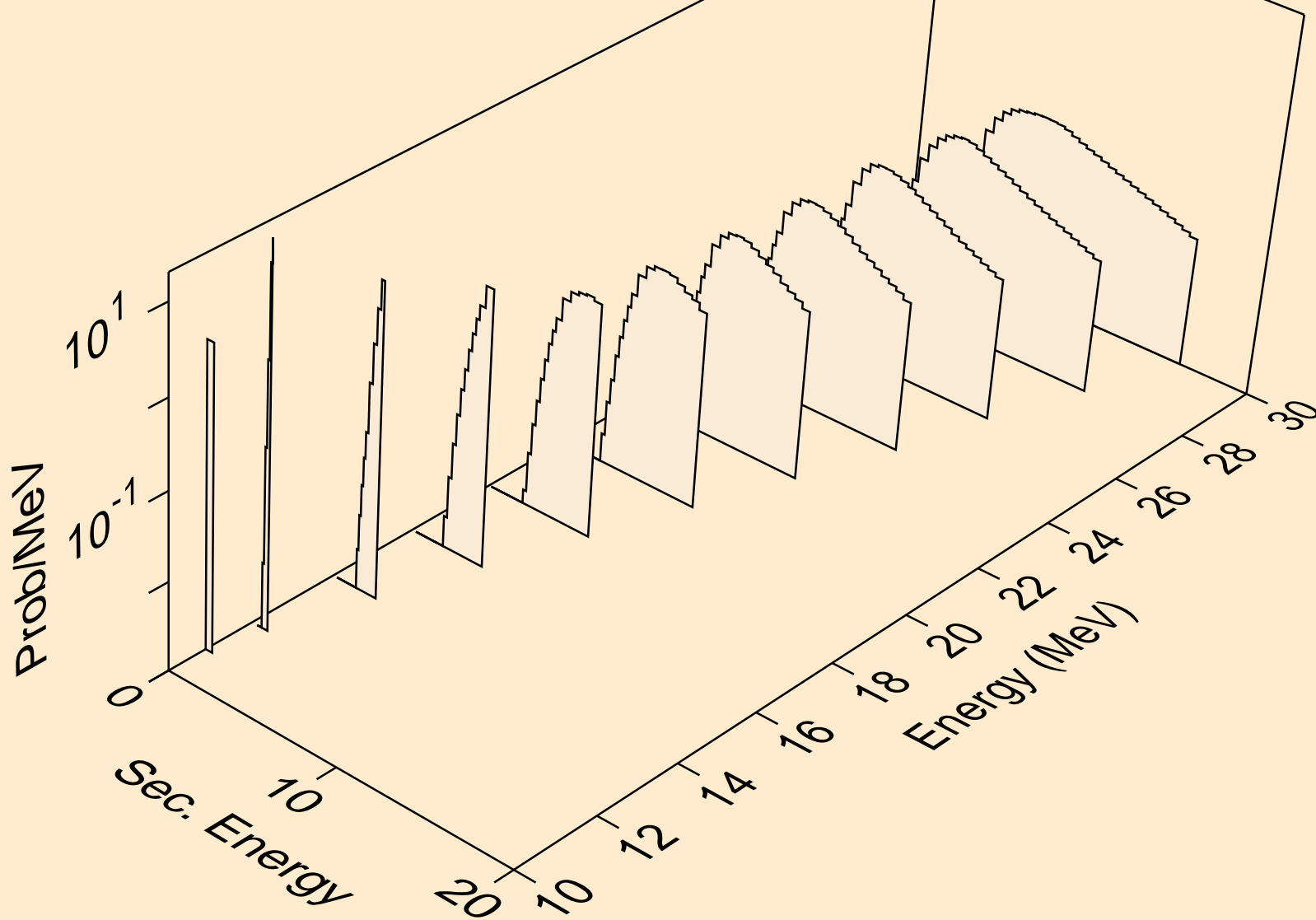26.0  26.5  27.0  27.5  28.0  28.5  29.0  29.5  30.0

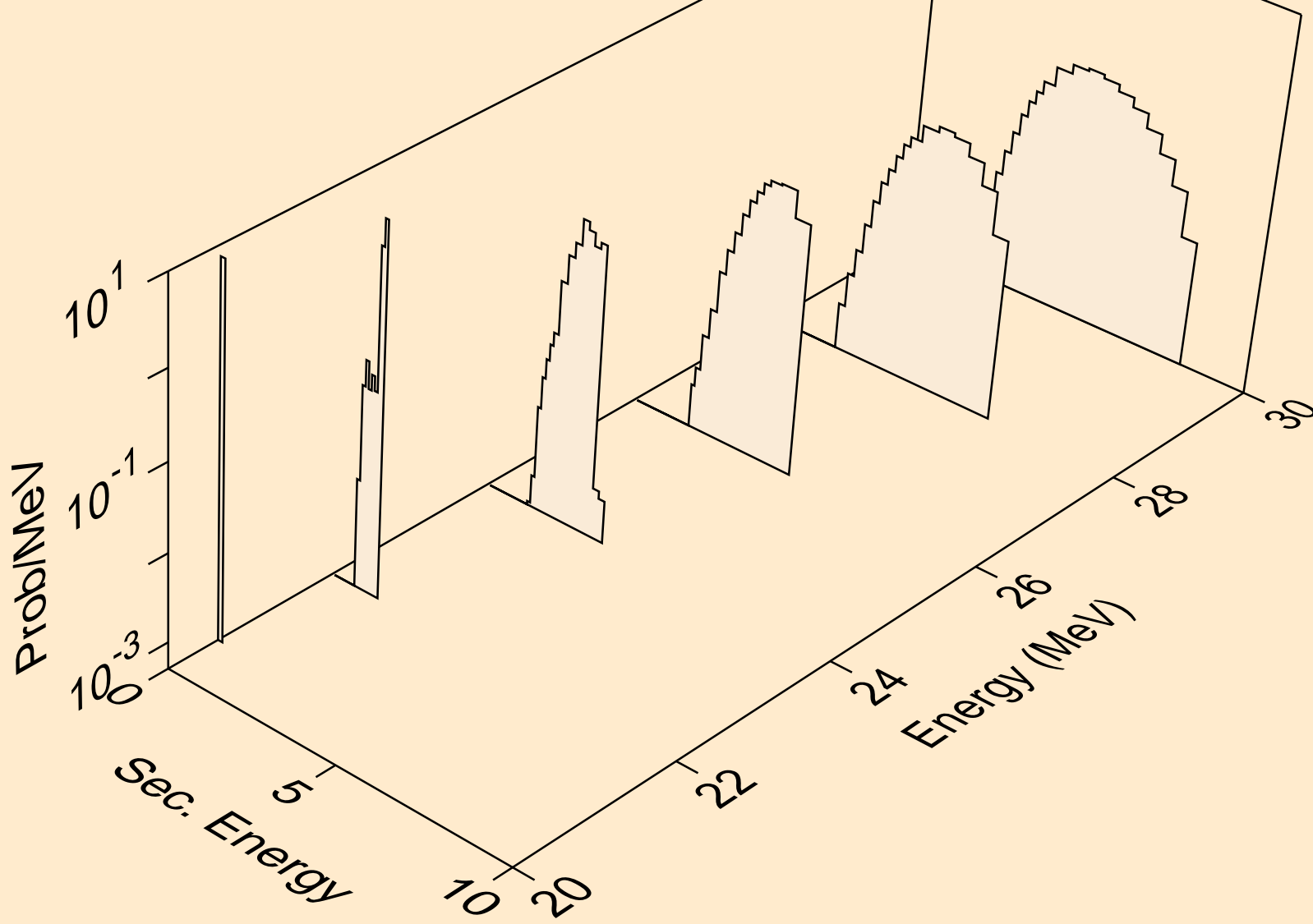MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
he3s from (n,he3)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,x)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,n*)a

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,2n)a

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,n*)2a

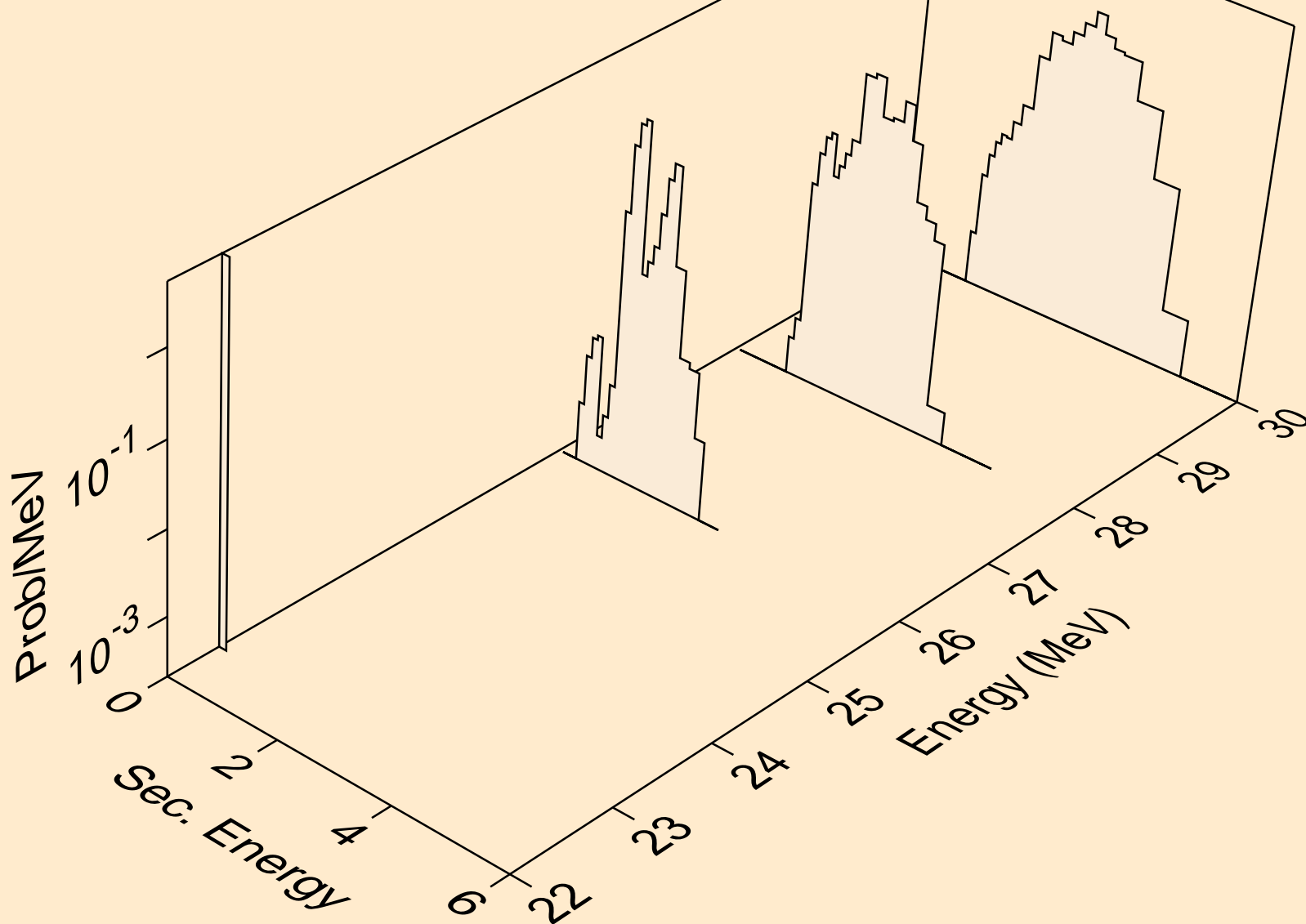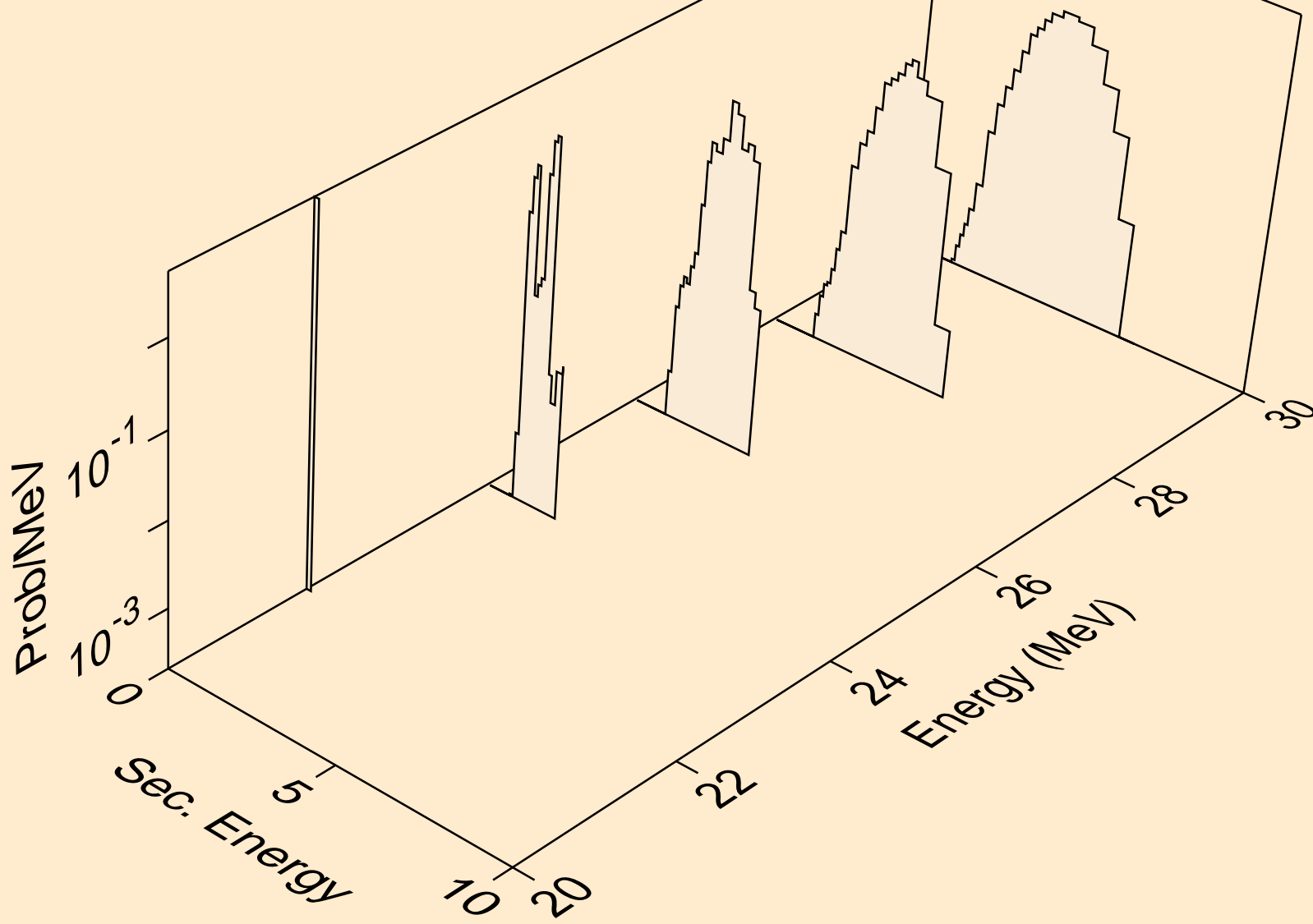MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,npa)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,a)
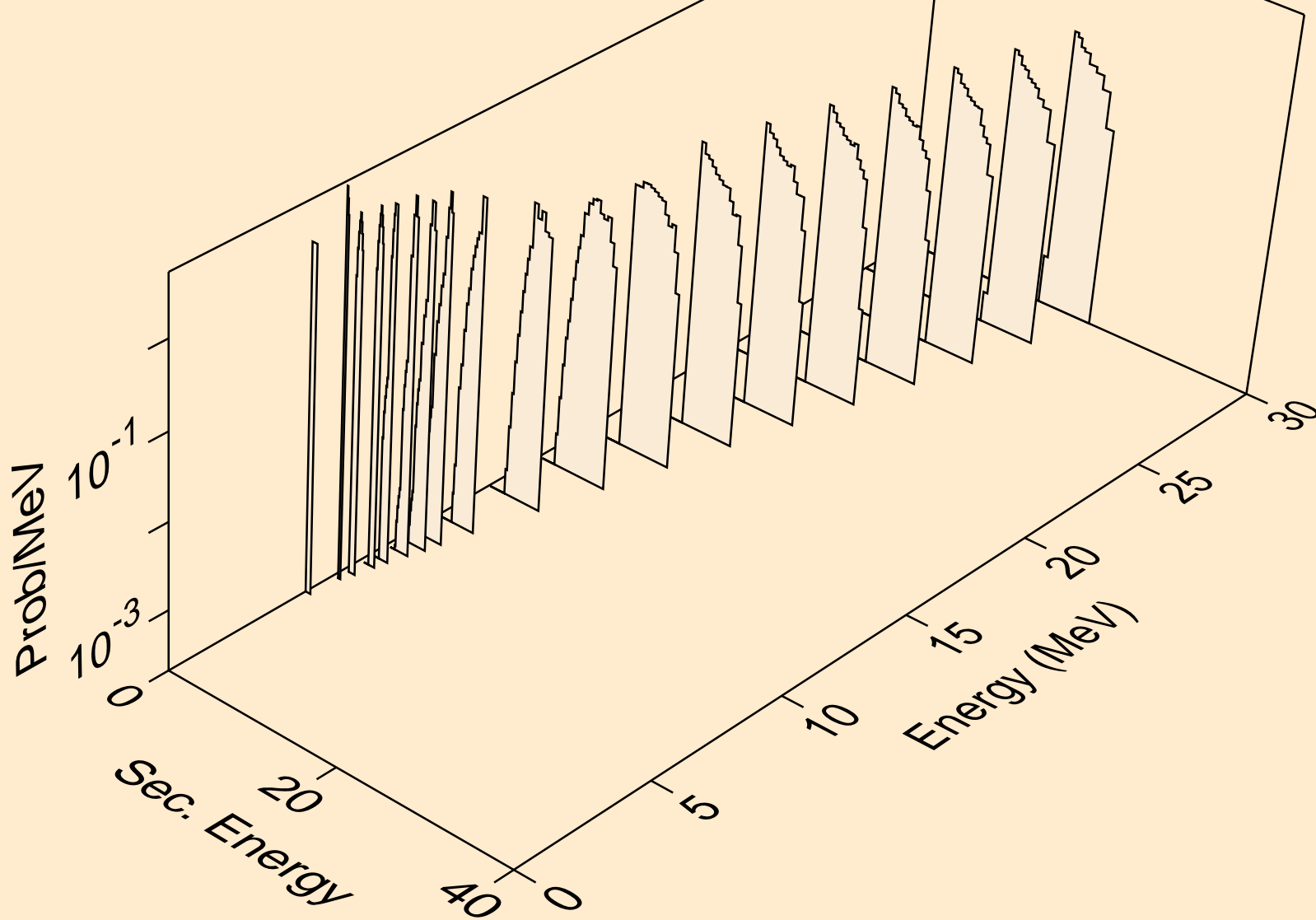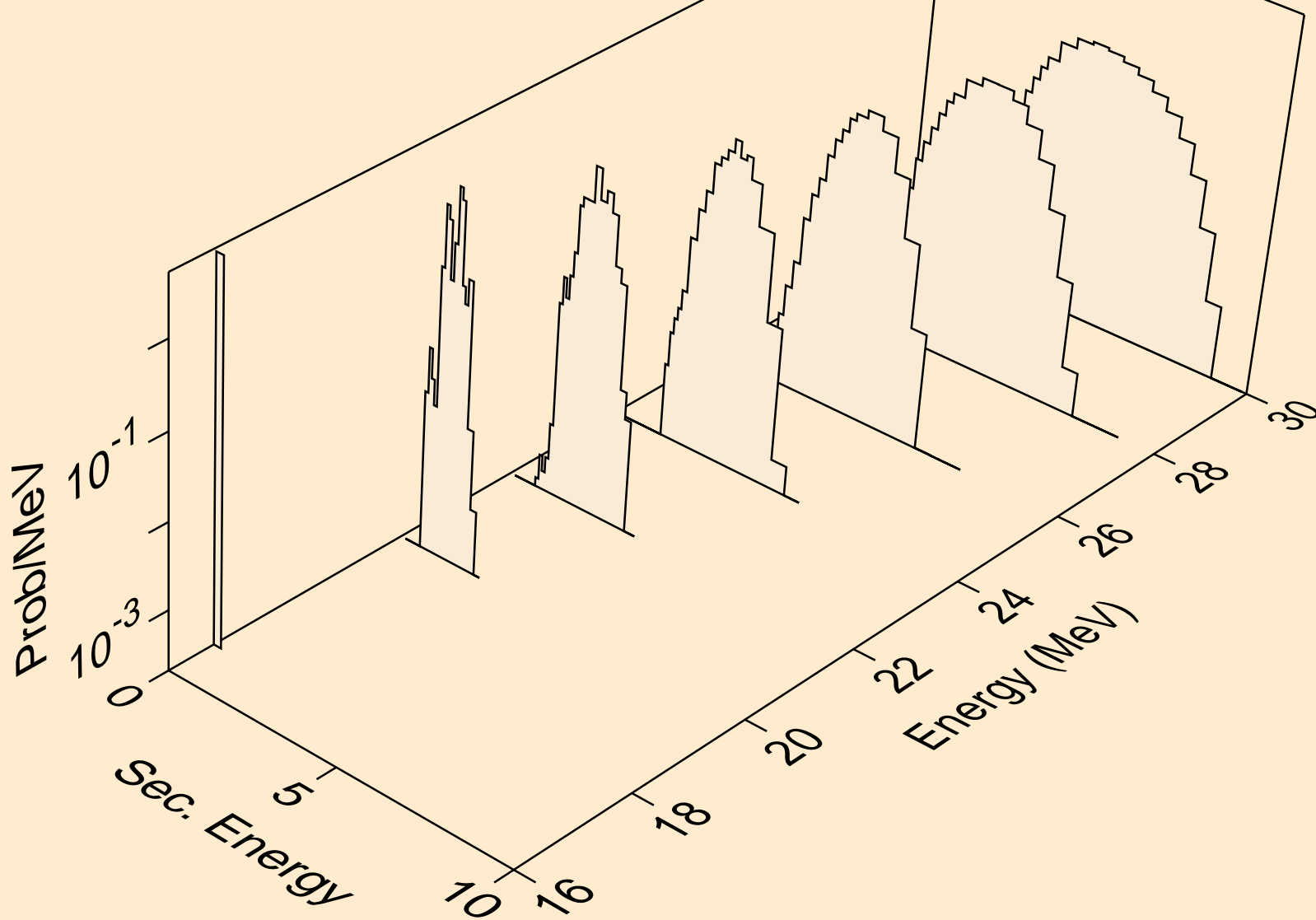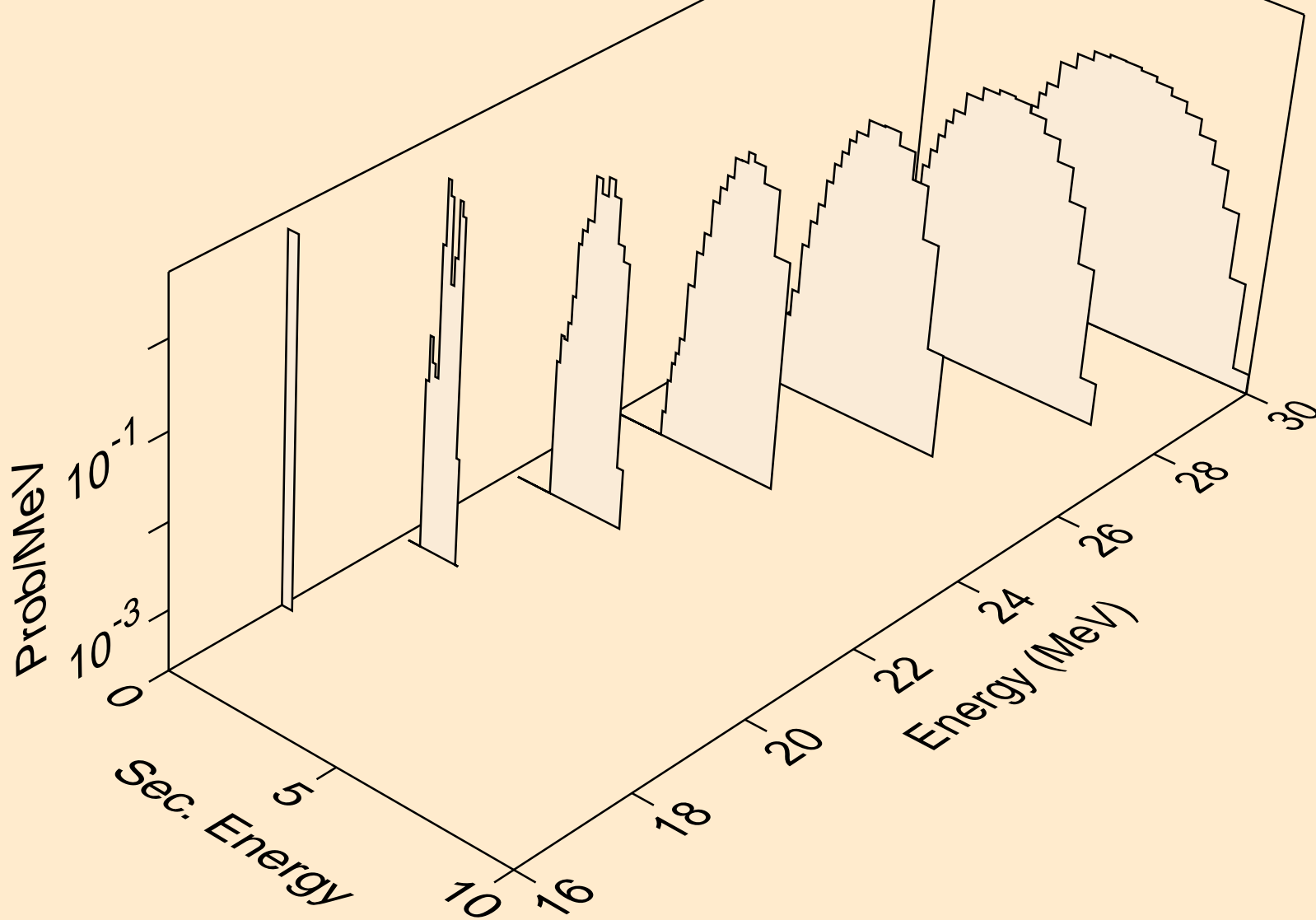
MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,2a)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,pa)

MAT=1531 ACE FILE PRODUCED AT NEA WITH NDEC
alphas from (n,da)