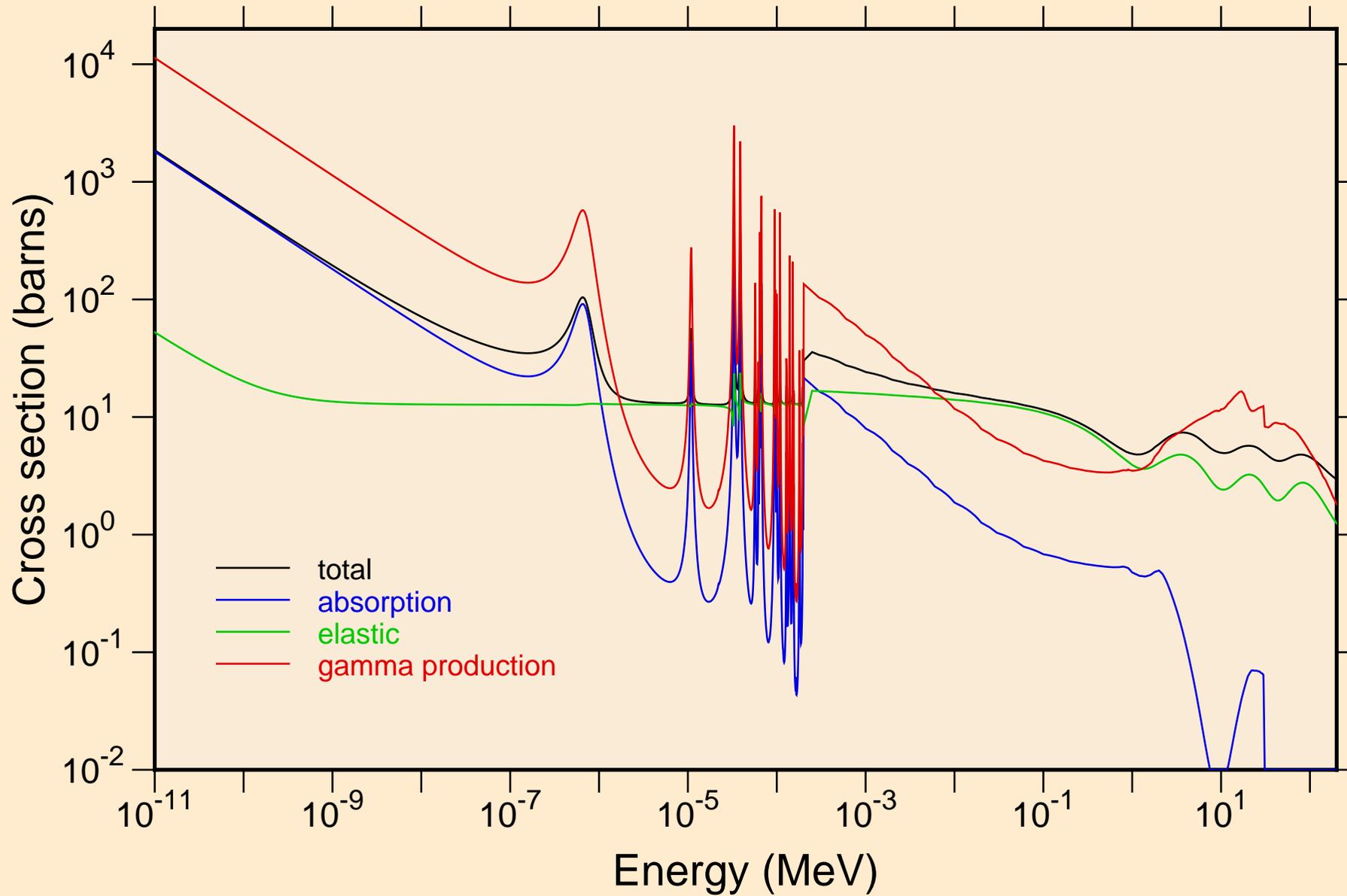PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Principal cross sections

Cross section (barns) vs Energy (MeV)

- total
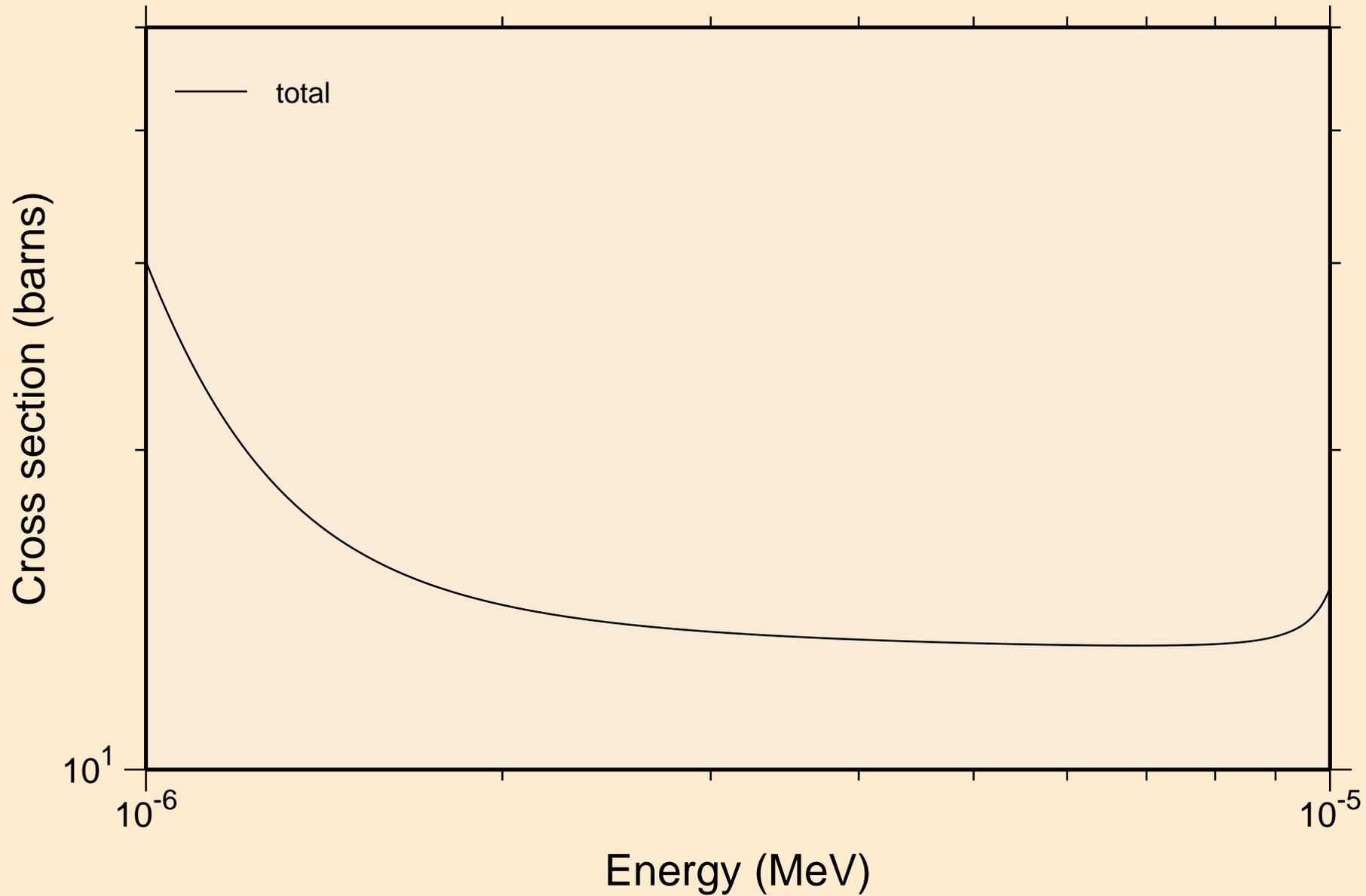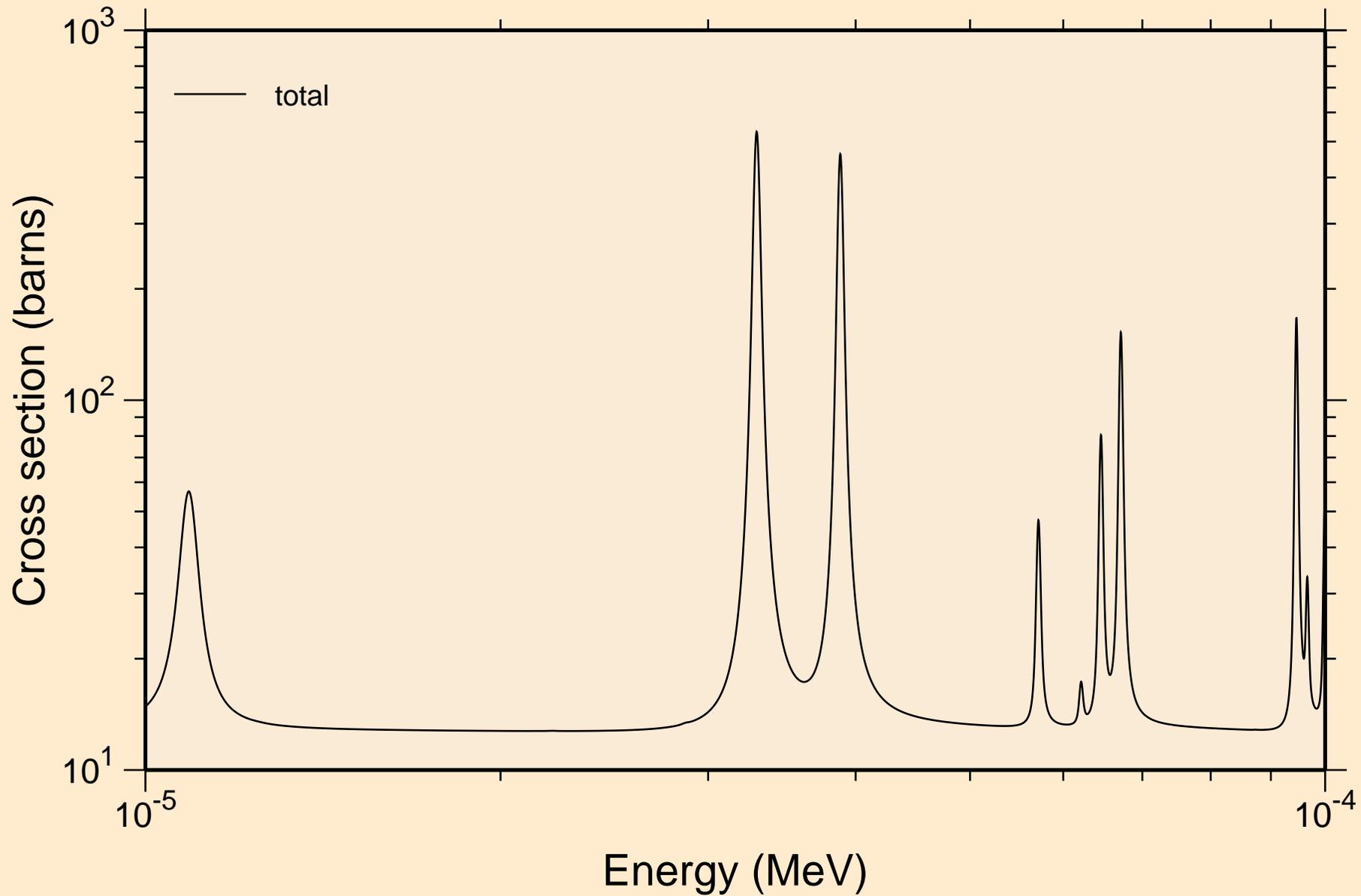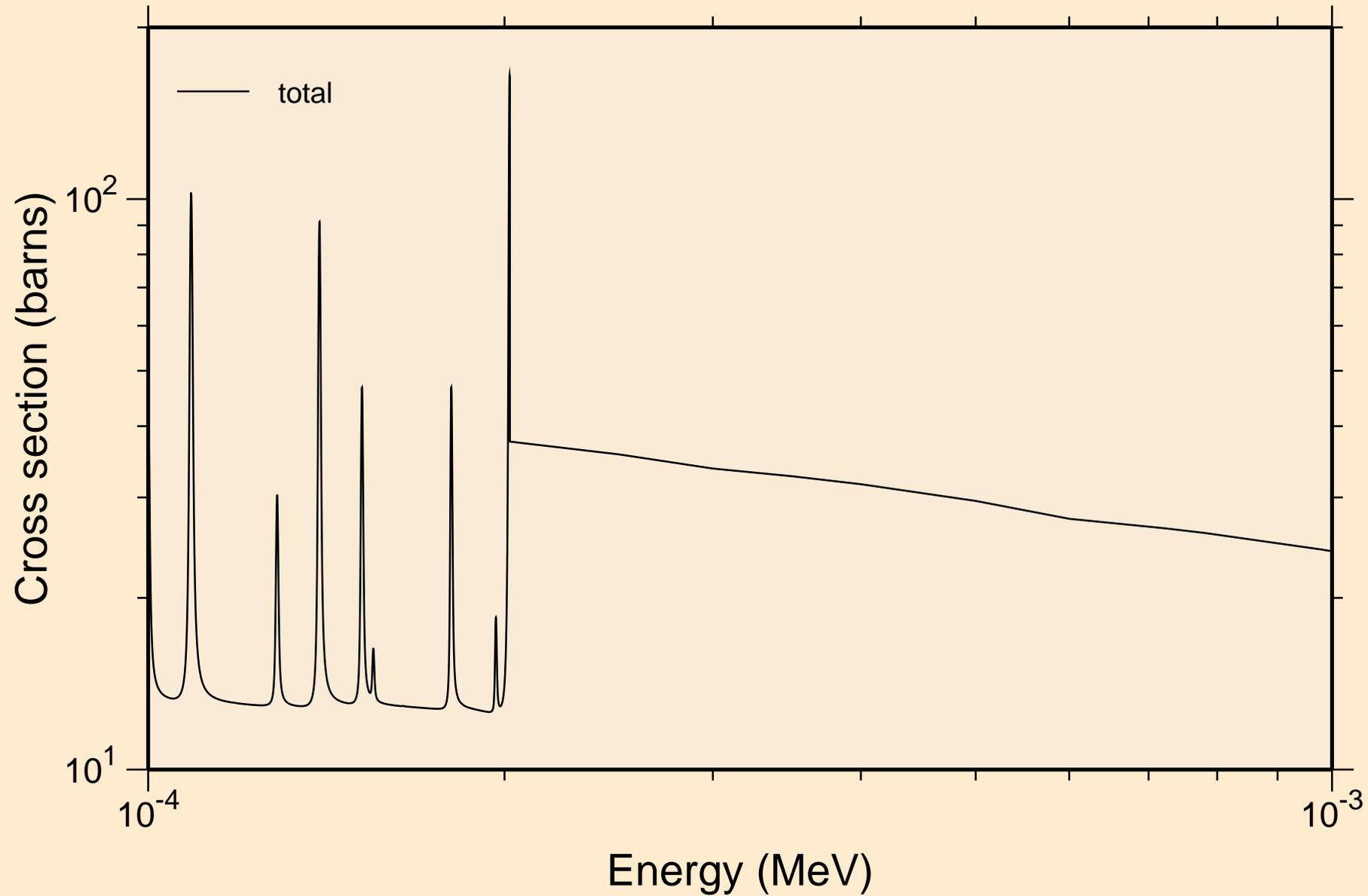- absorption
- elastic
- gamma production

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance total cross section

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
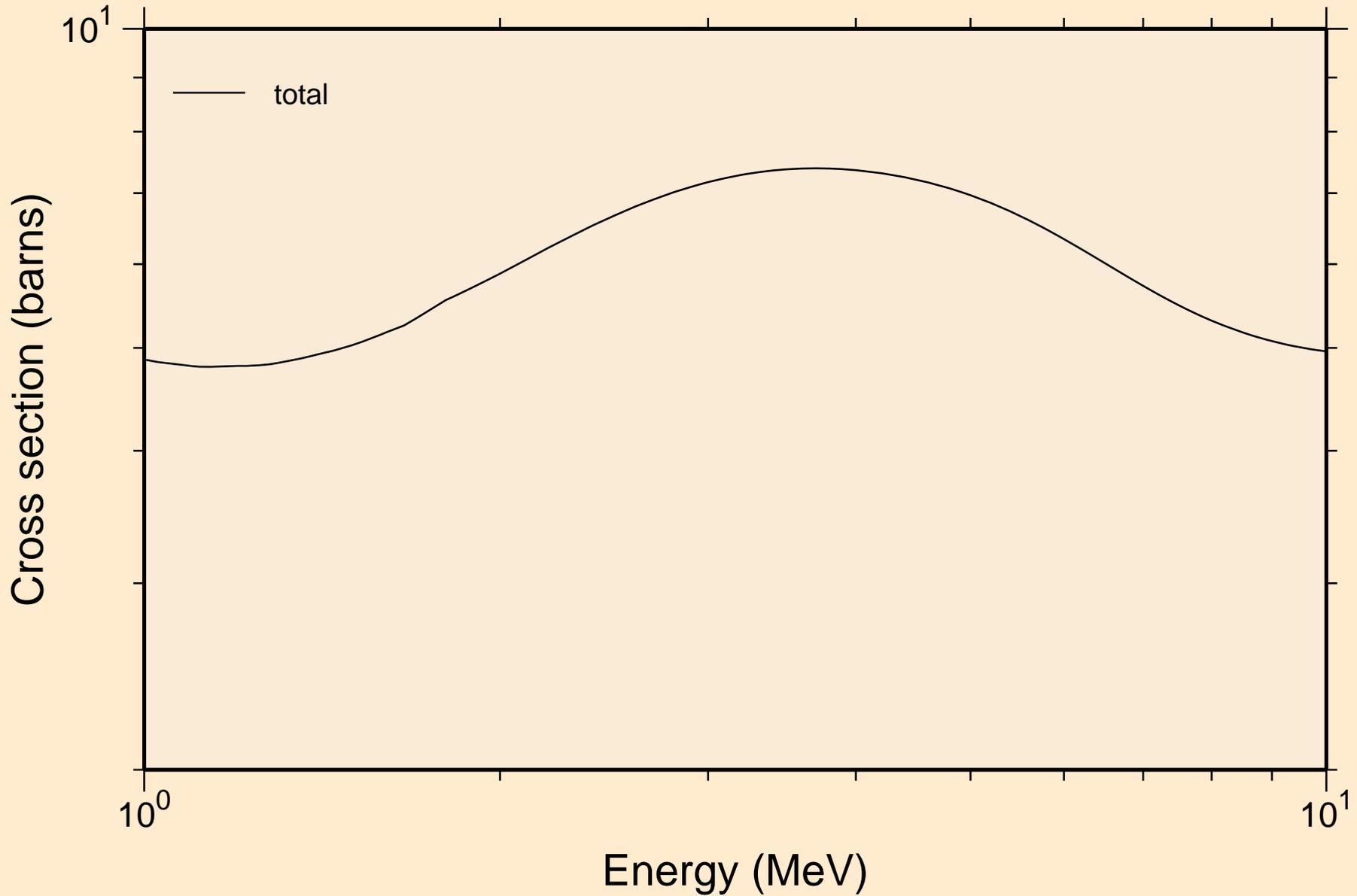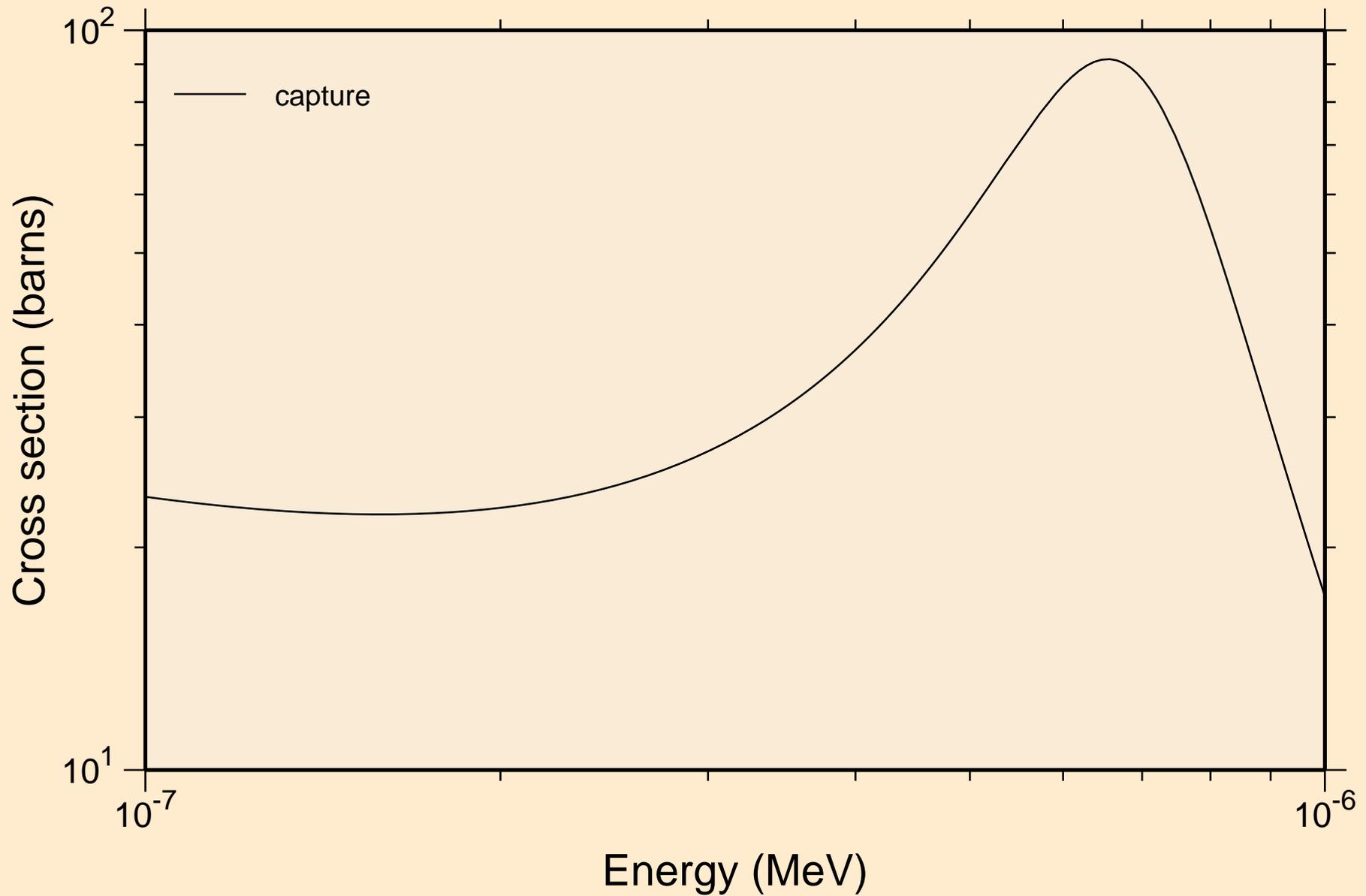resonance total cross section

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
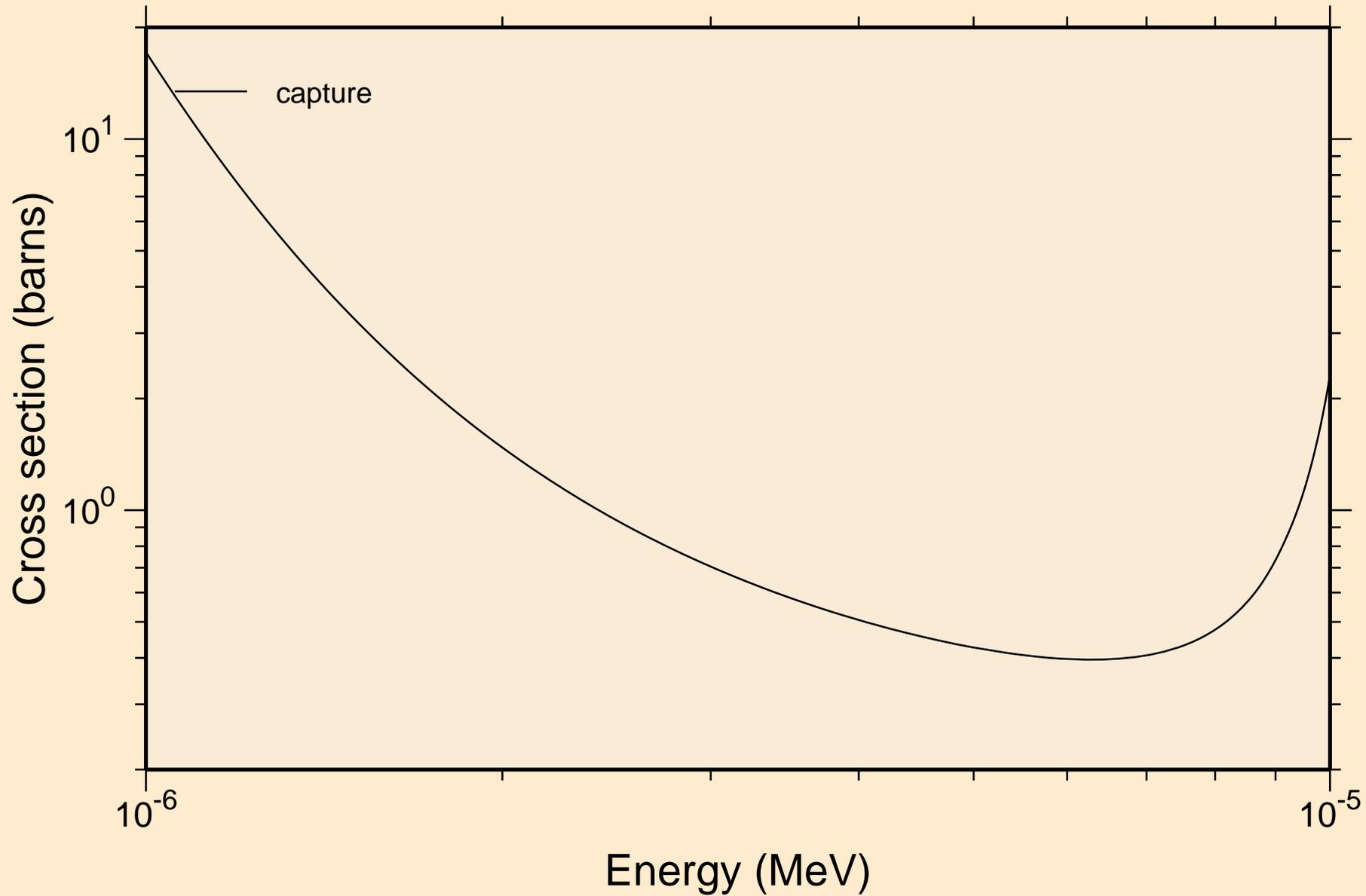resonance total cross section

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance total cross section

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance absorption cross sections

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance absorption cross sections
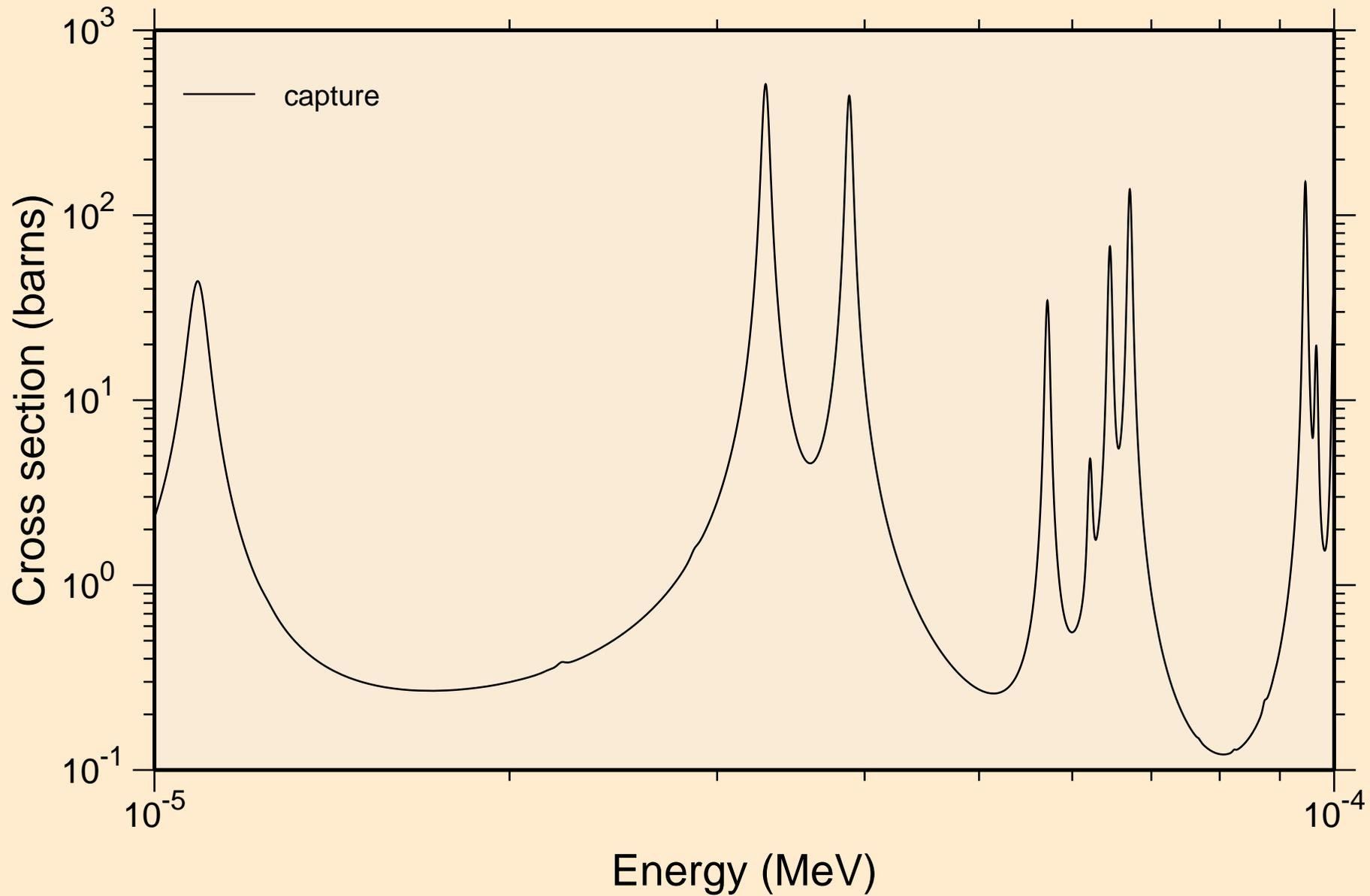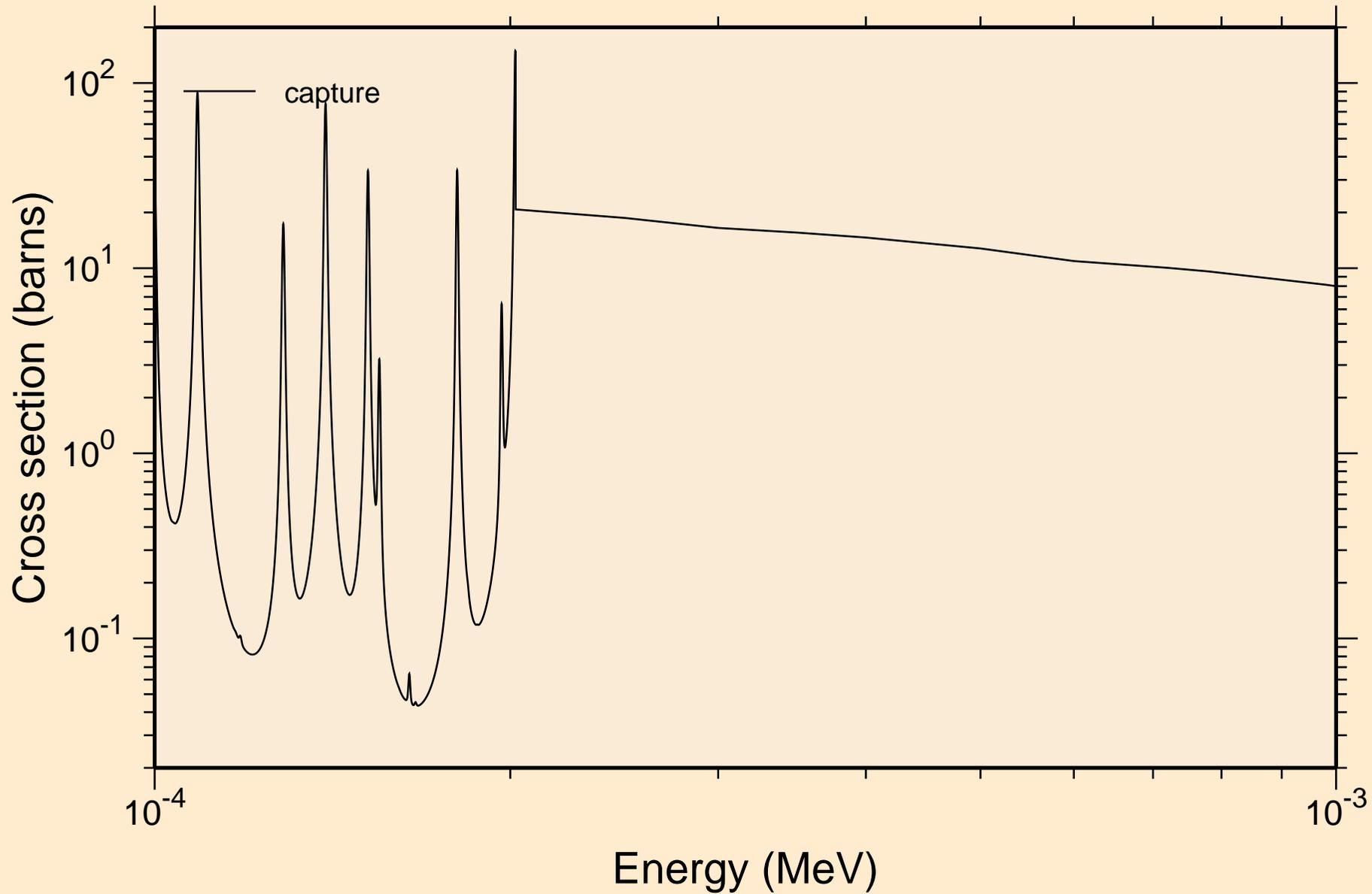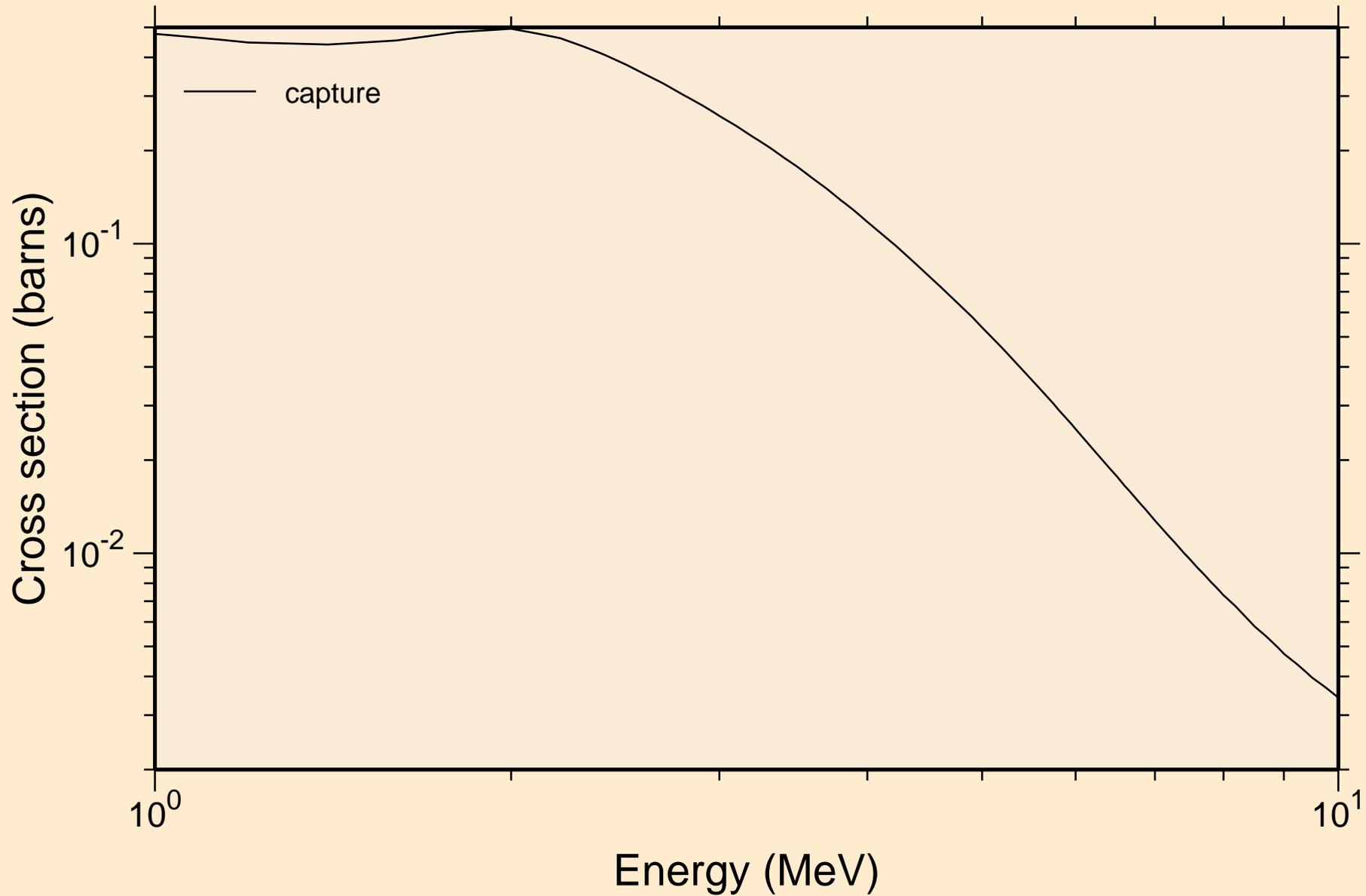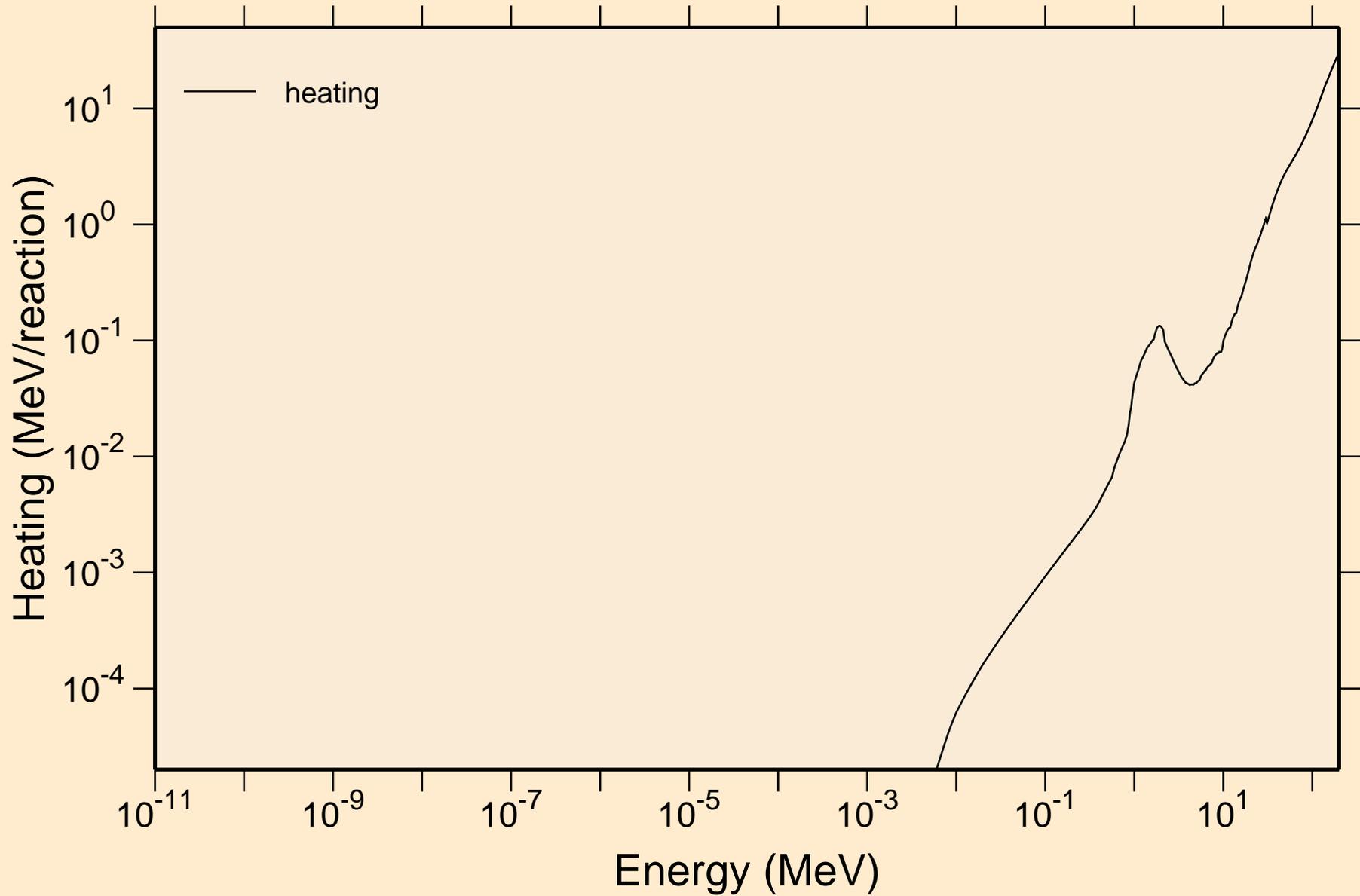
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance absorption cross sections

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
resonance absorption cross sections

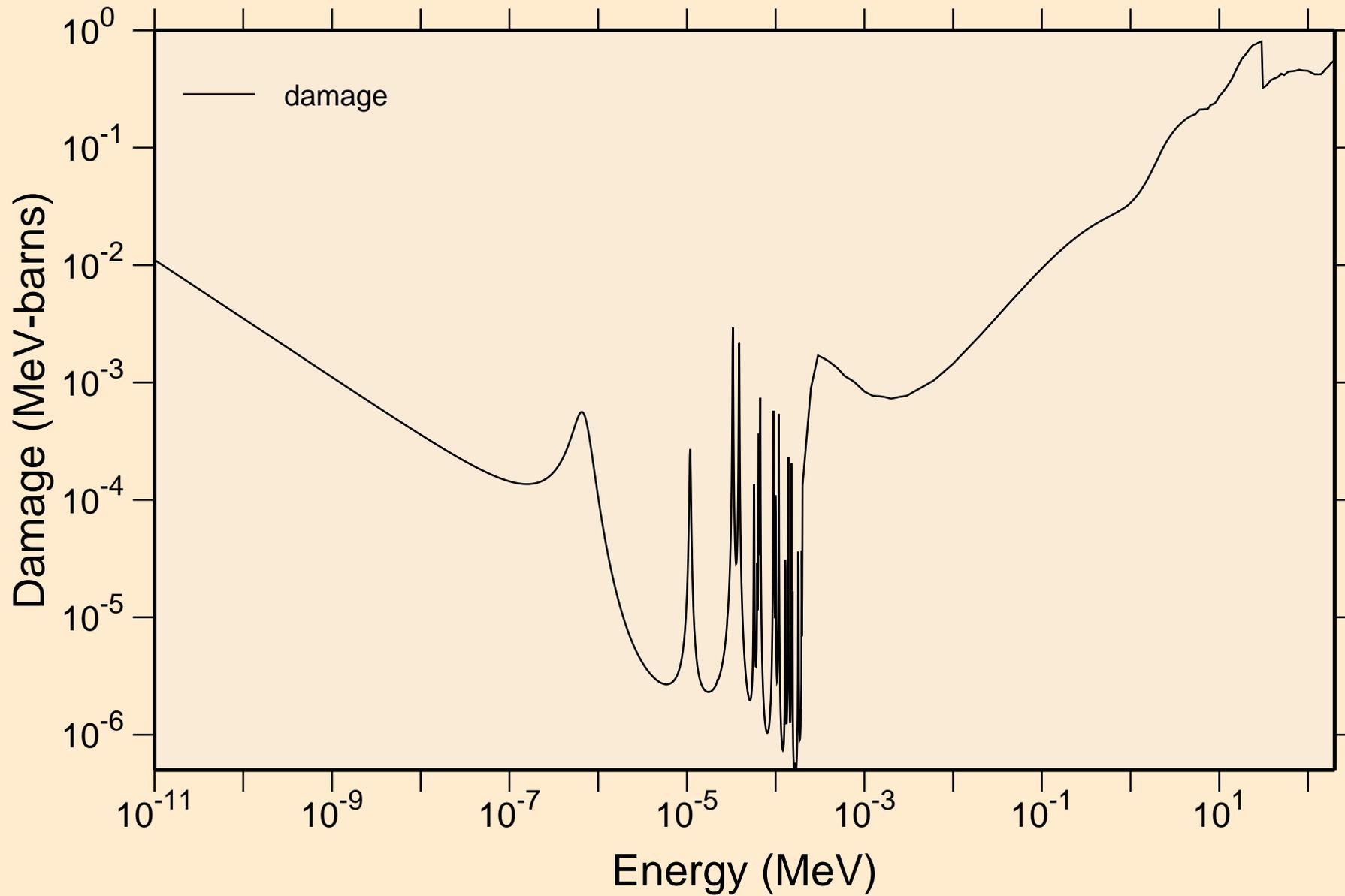capture

Cross section (barns)

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
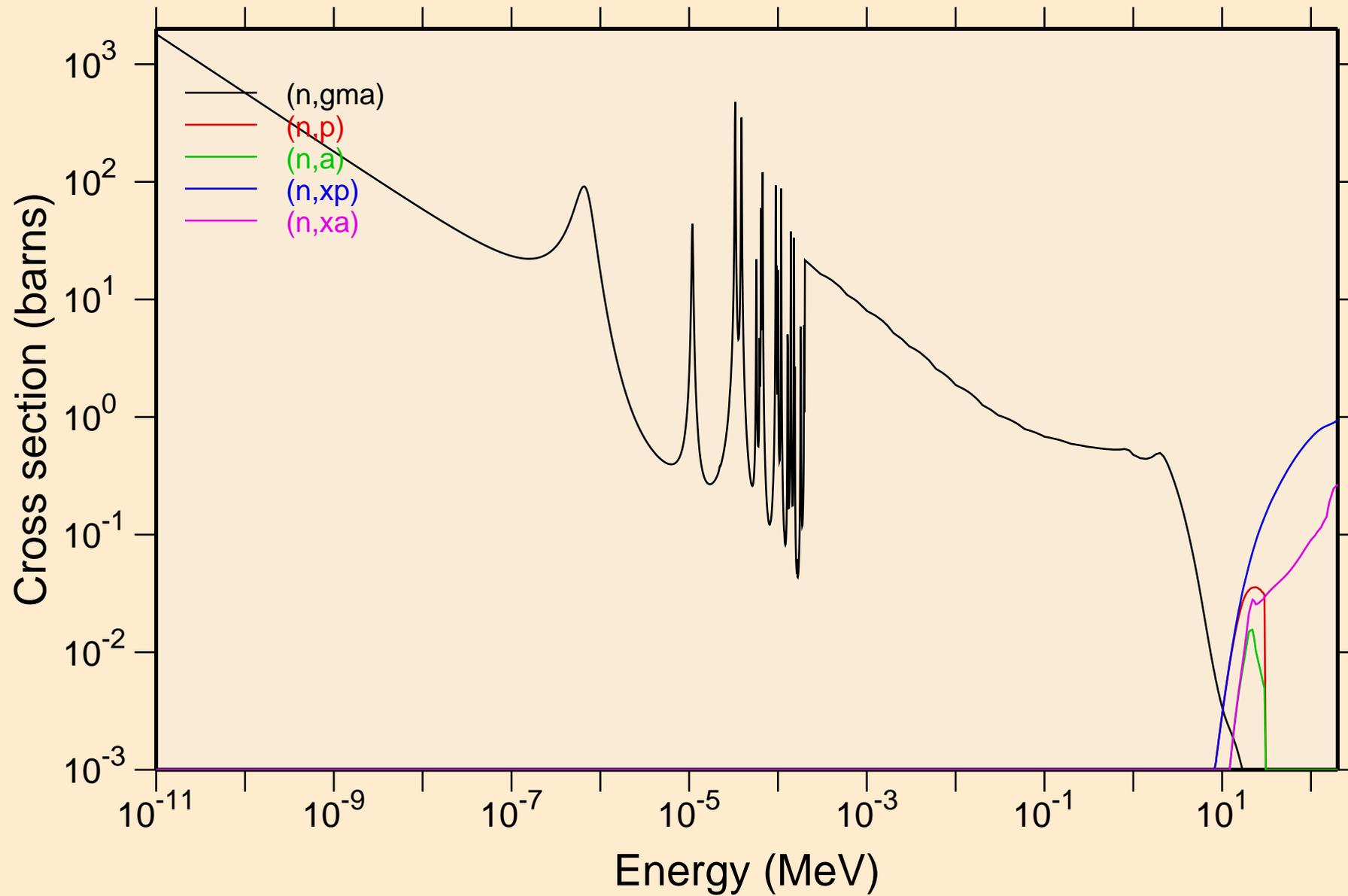resonance absorption cross sections
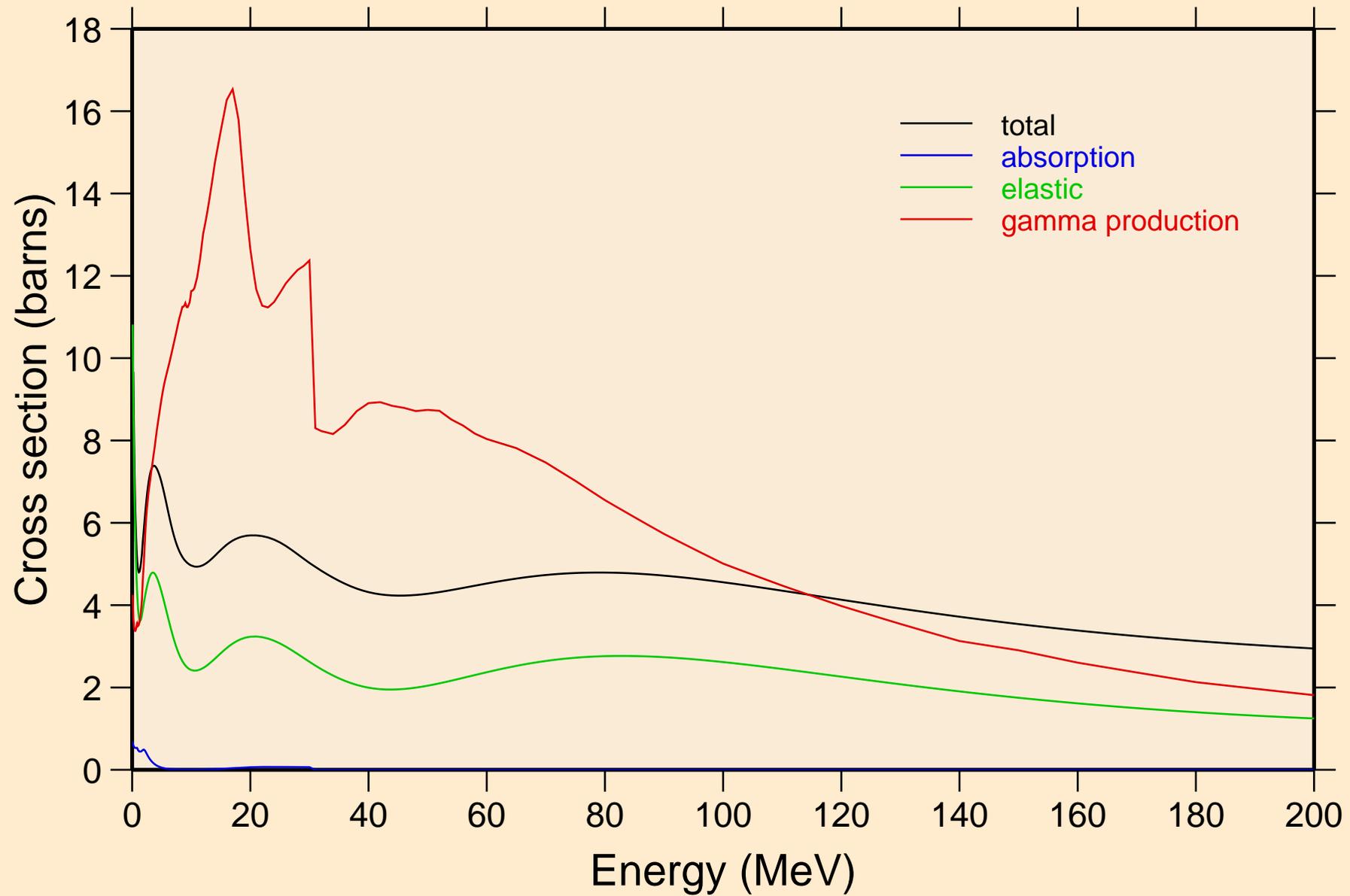
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Heating

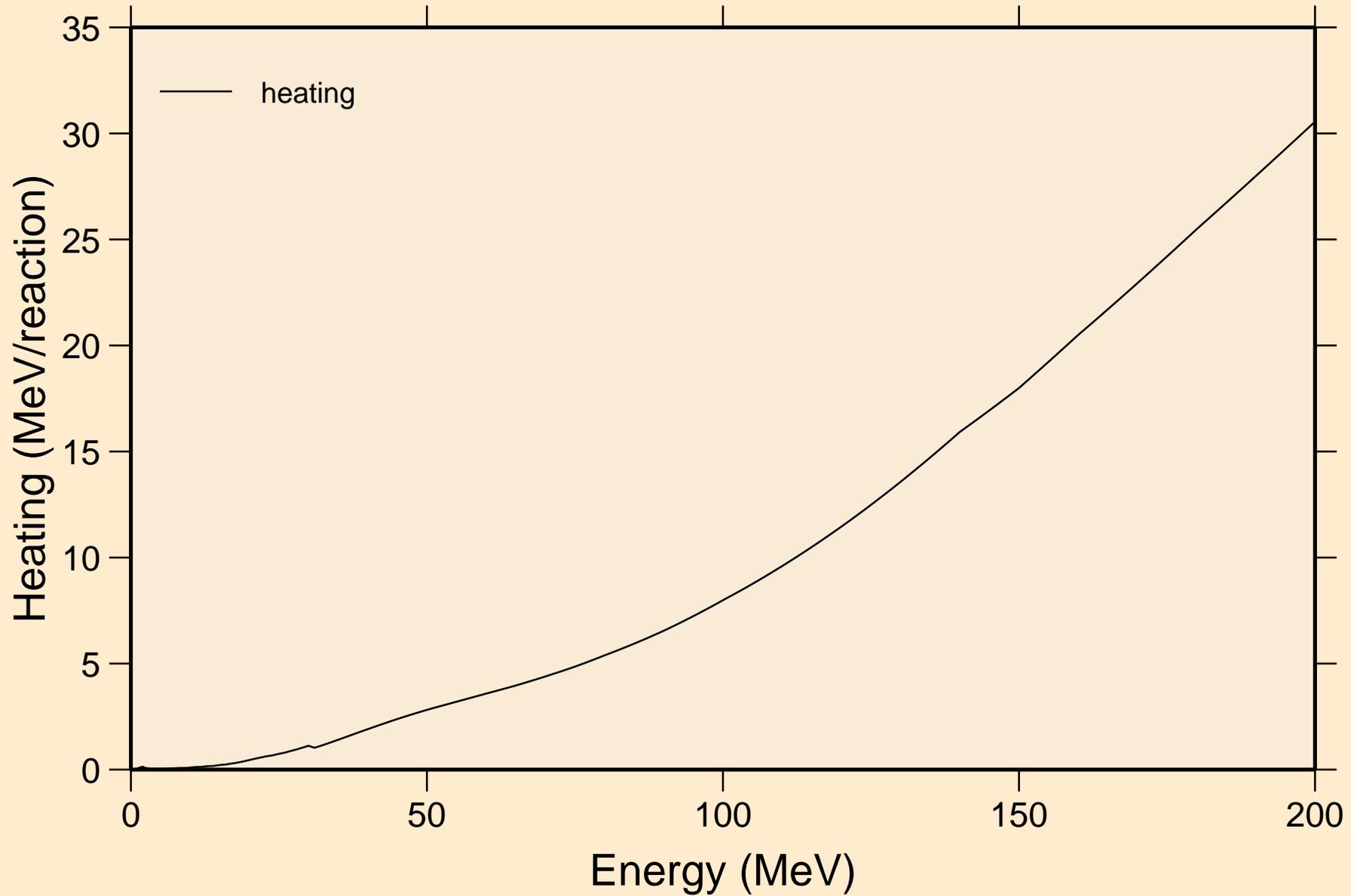PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Damage

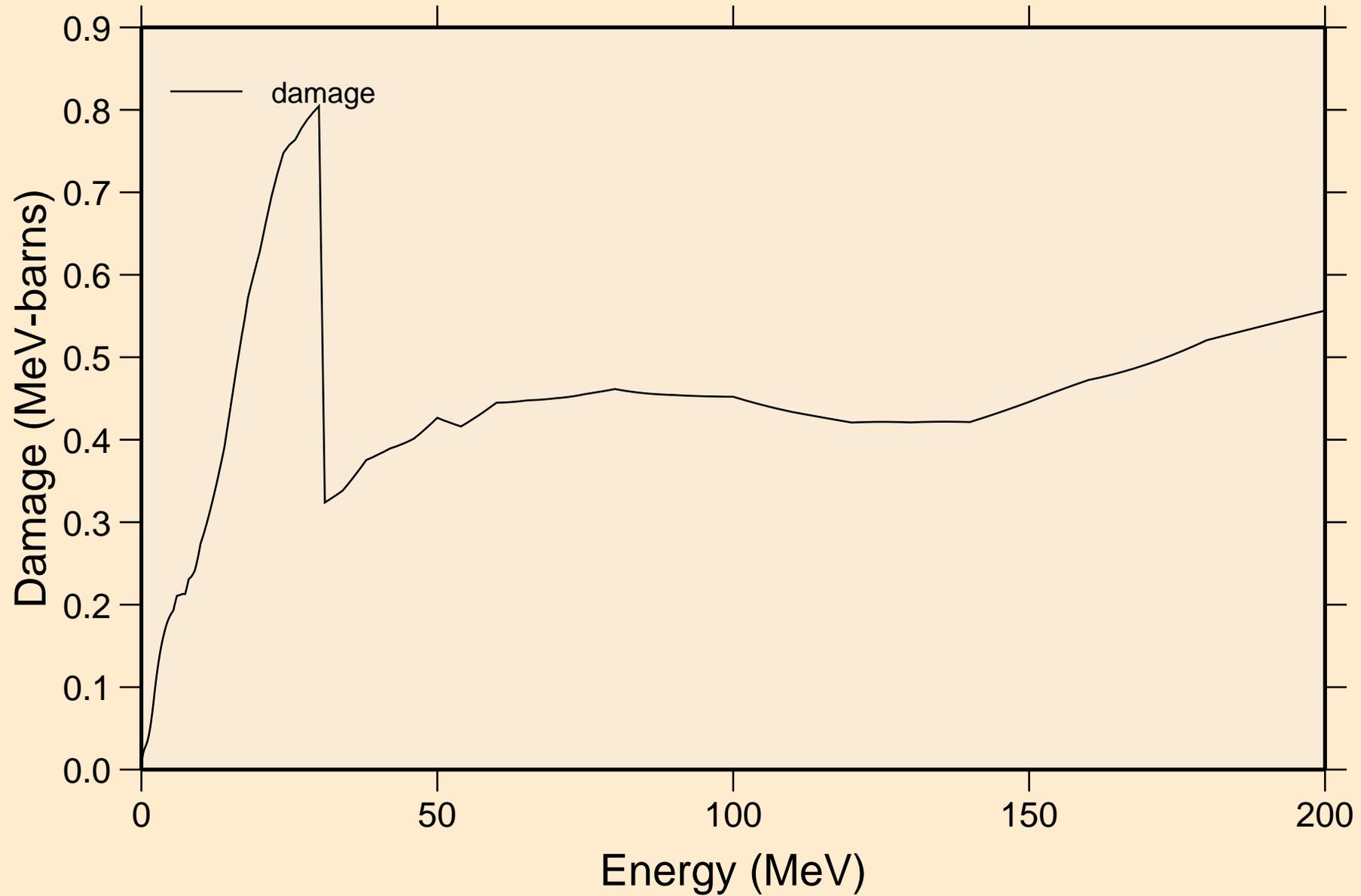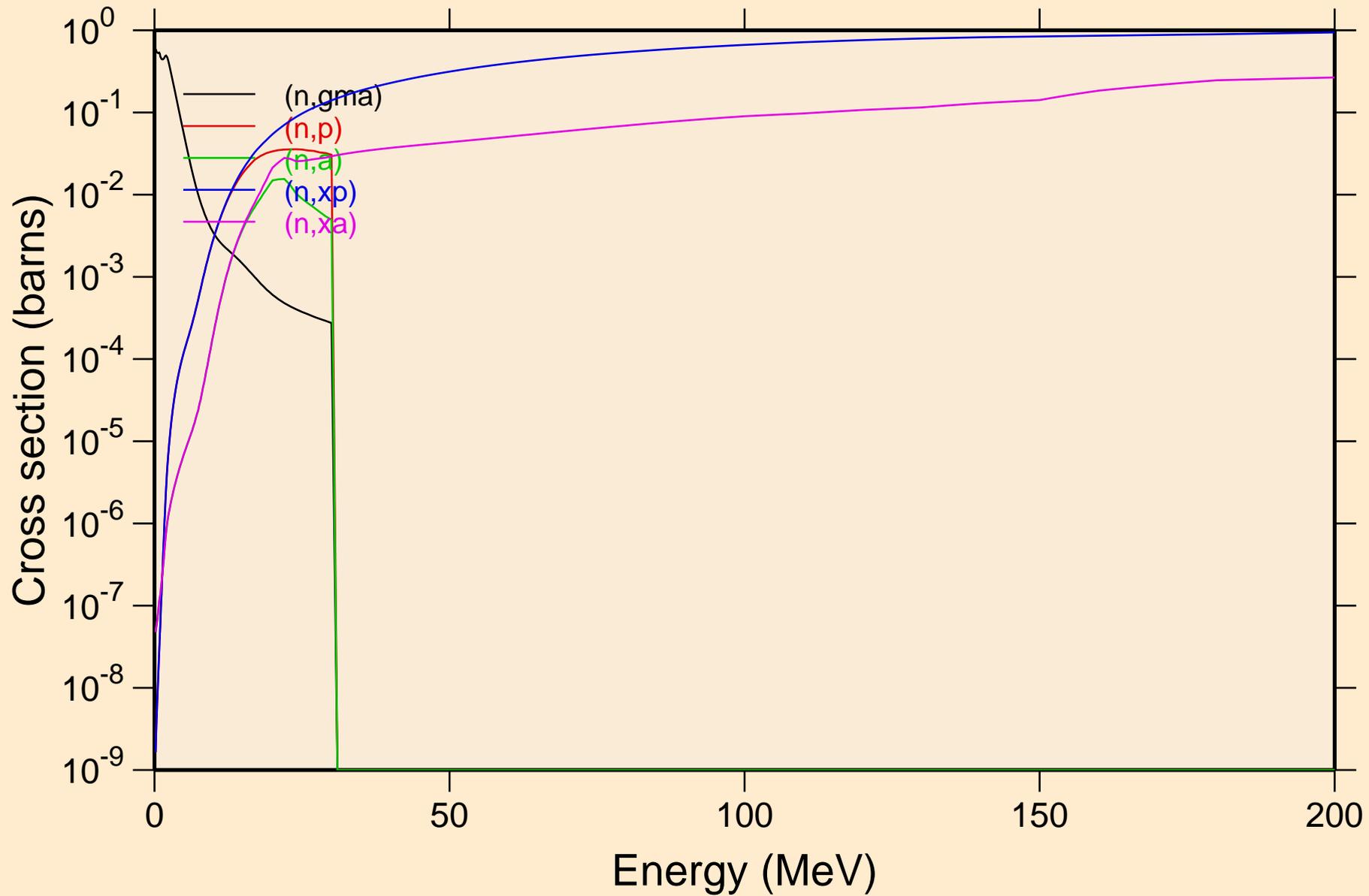PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Non-threshold reactions

(n,gma)
(n,p)
(n,a)
(n,xp)
(n,xa)

Cross section (barns)

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Principal cross sections

- total
- absorption
- elastic
- gamma production

Cross section (barns) vs Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
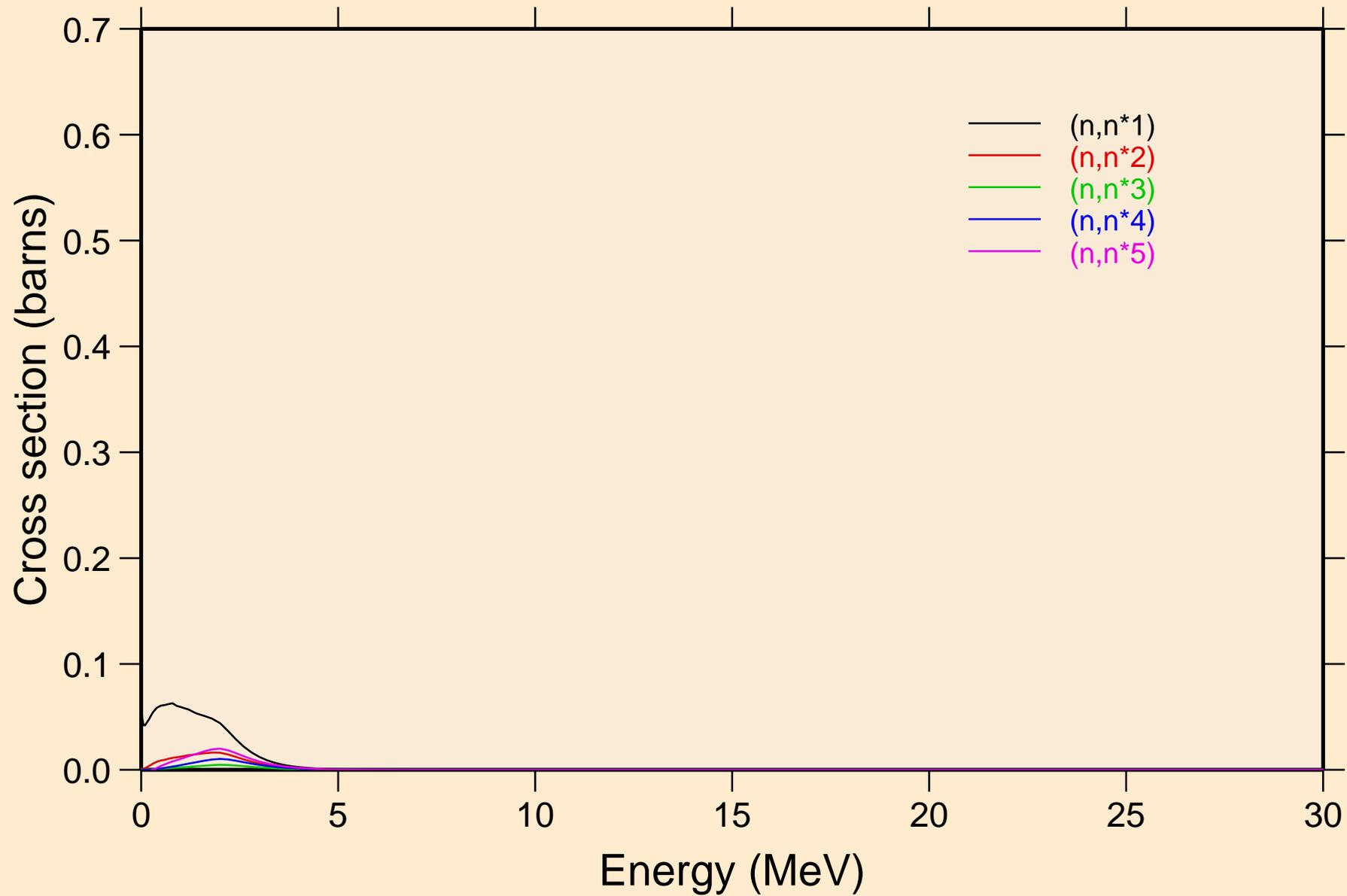Heating

heating

Energy (MeV)

Heating (MeV/reaction)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Damage

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Non-threshold reactions

- (n,gma)
- (n,p)
- (n,a)
- (n,xp)
- (n,xa)

Cross section (barns) vs Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

Legend:
- (n,n*1)
- (n,n*2)
- (n,n*3)
- (n,n*4)
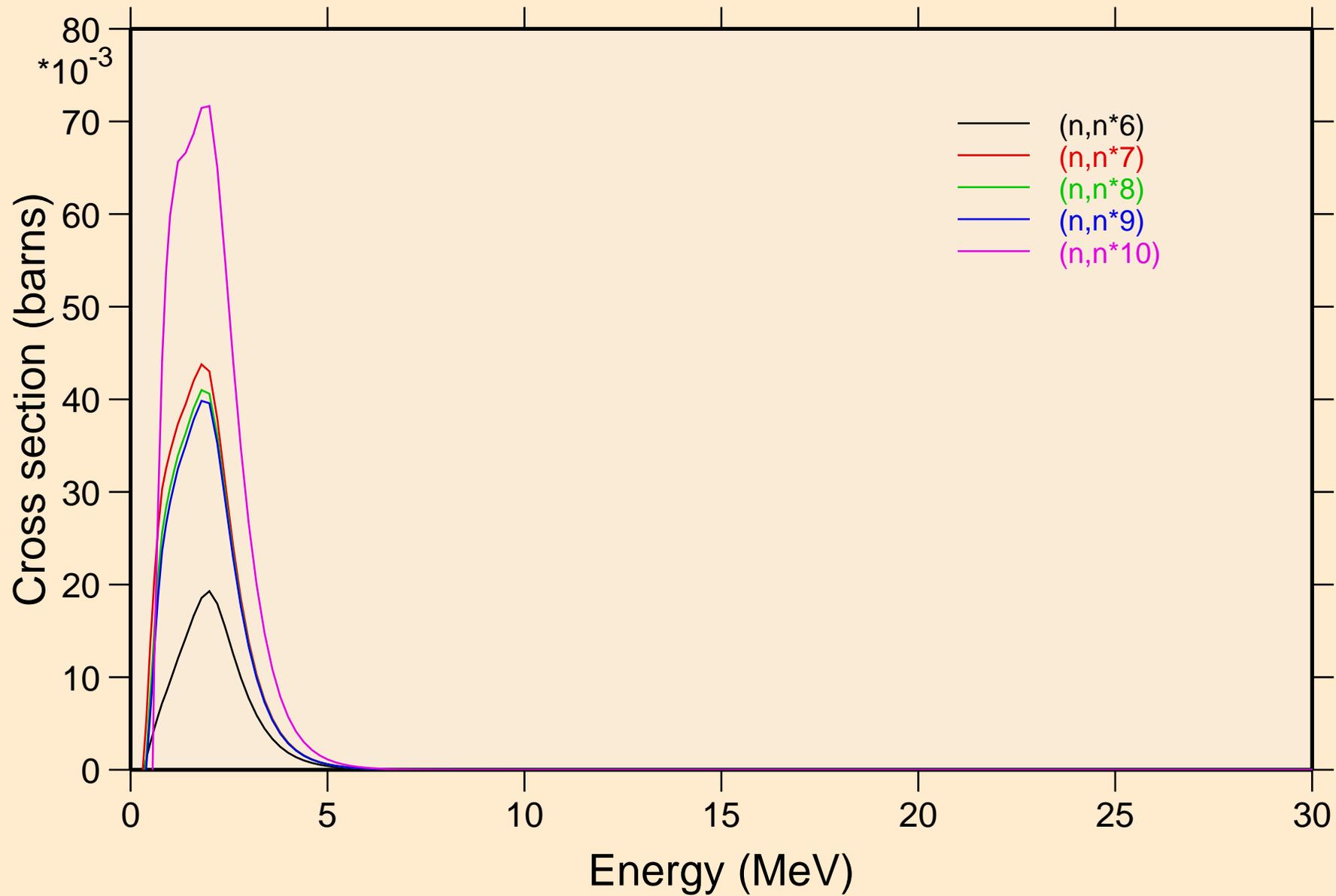- (n,n*5)

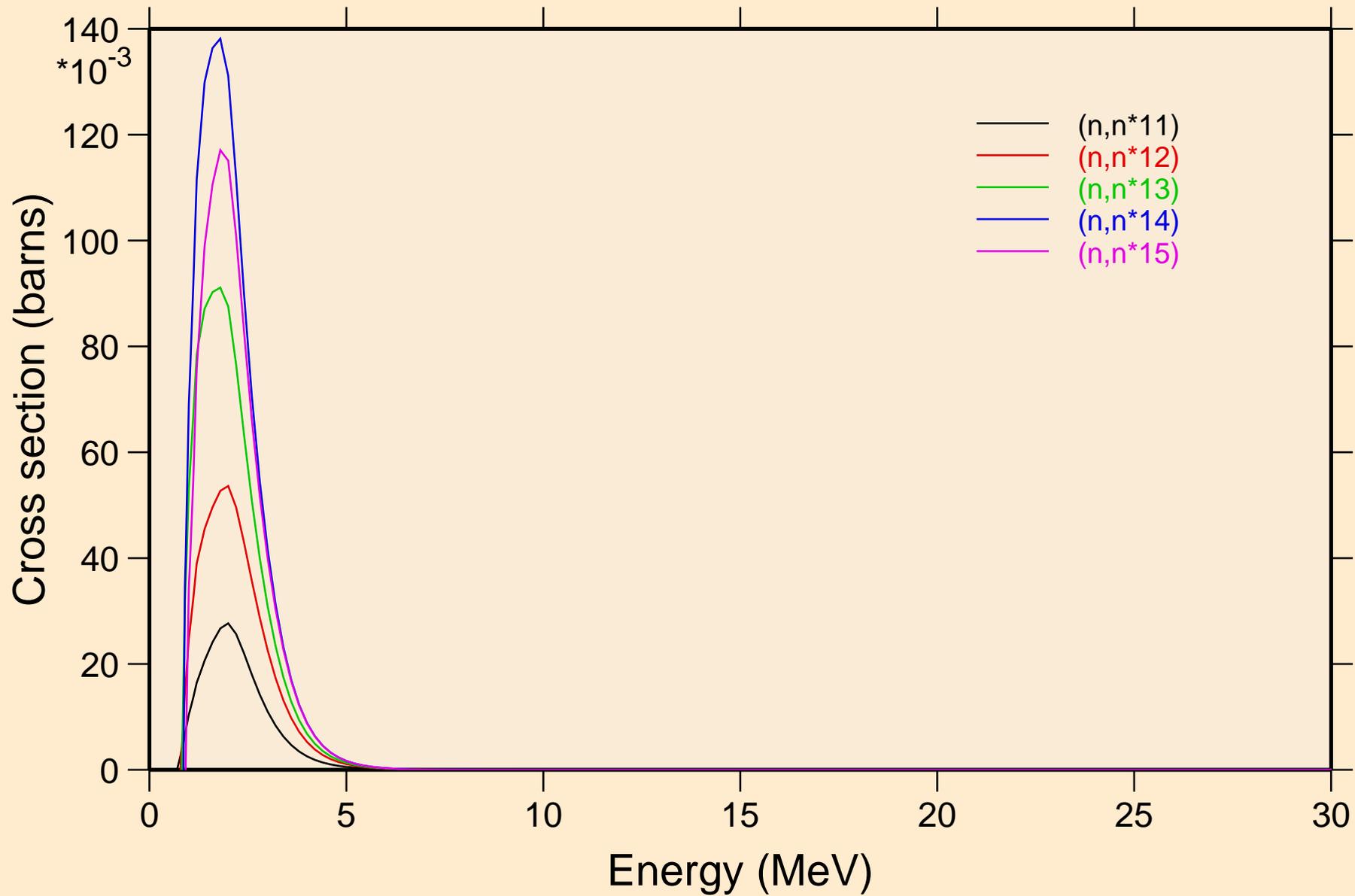Y-axis: Cross section (barns)
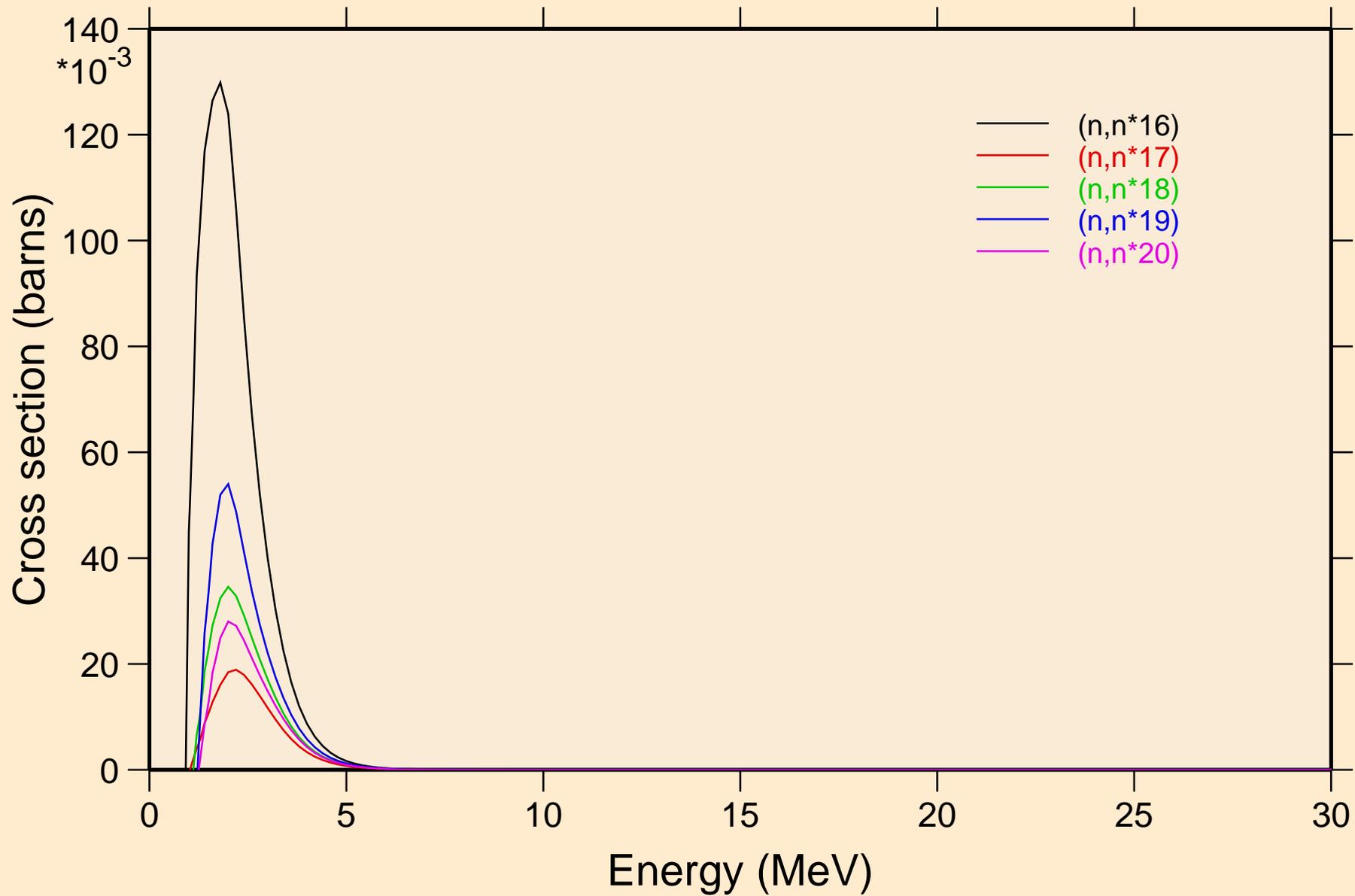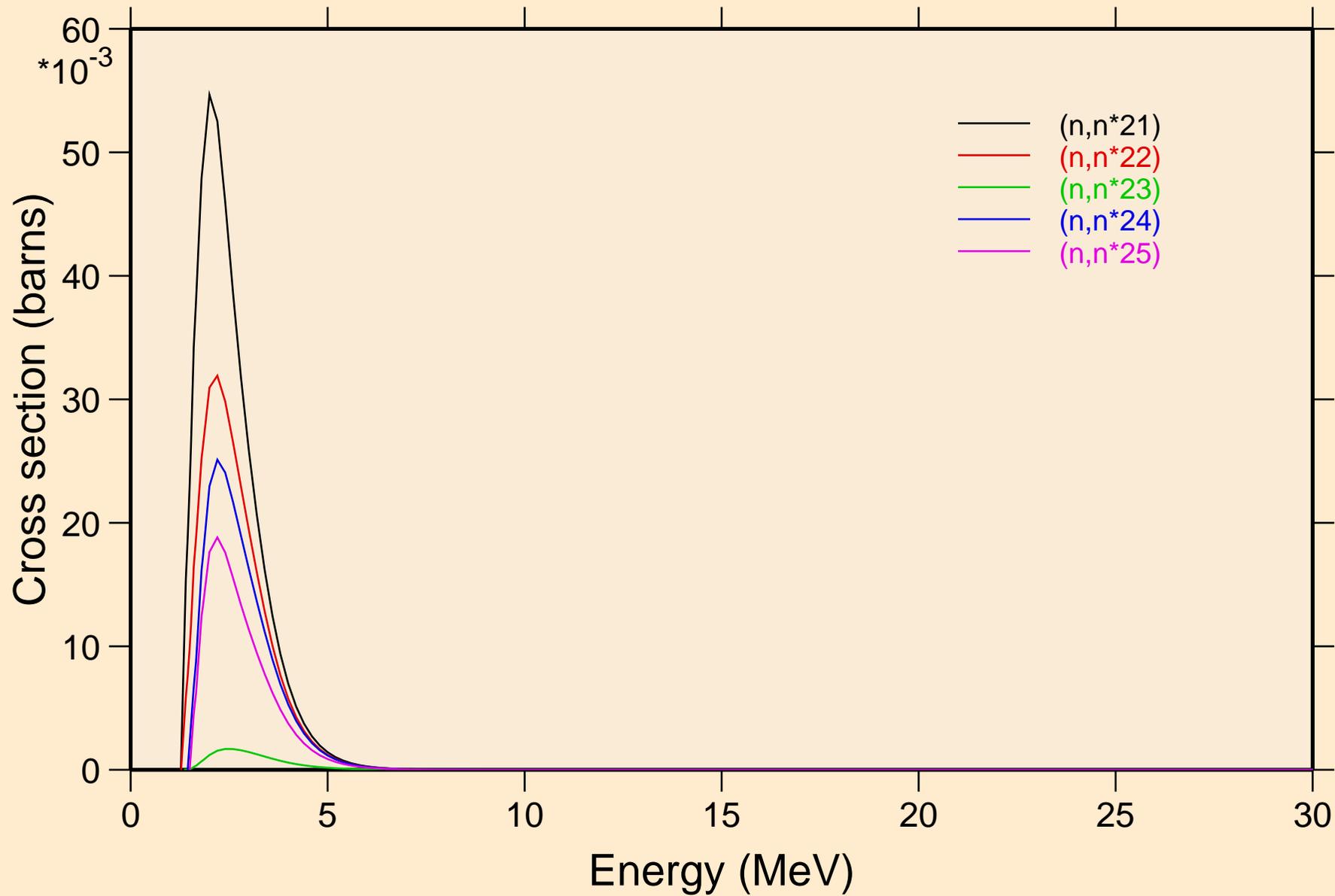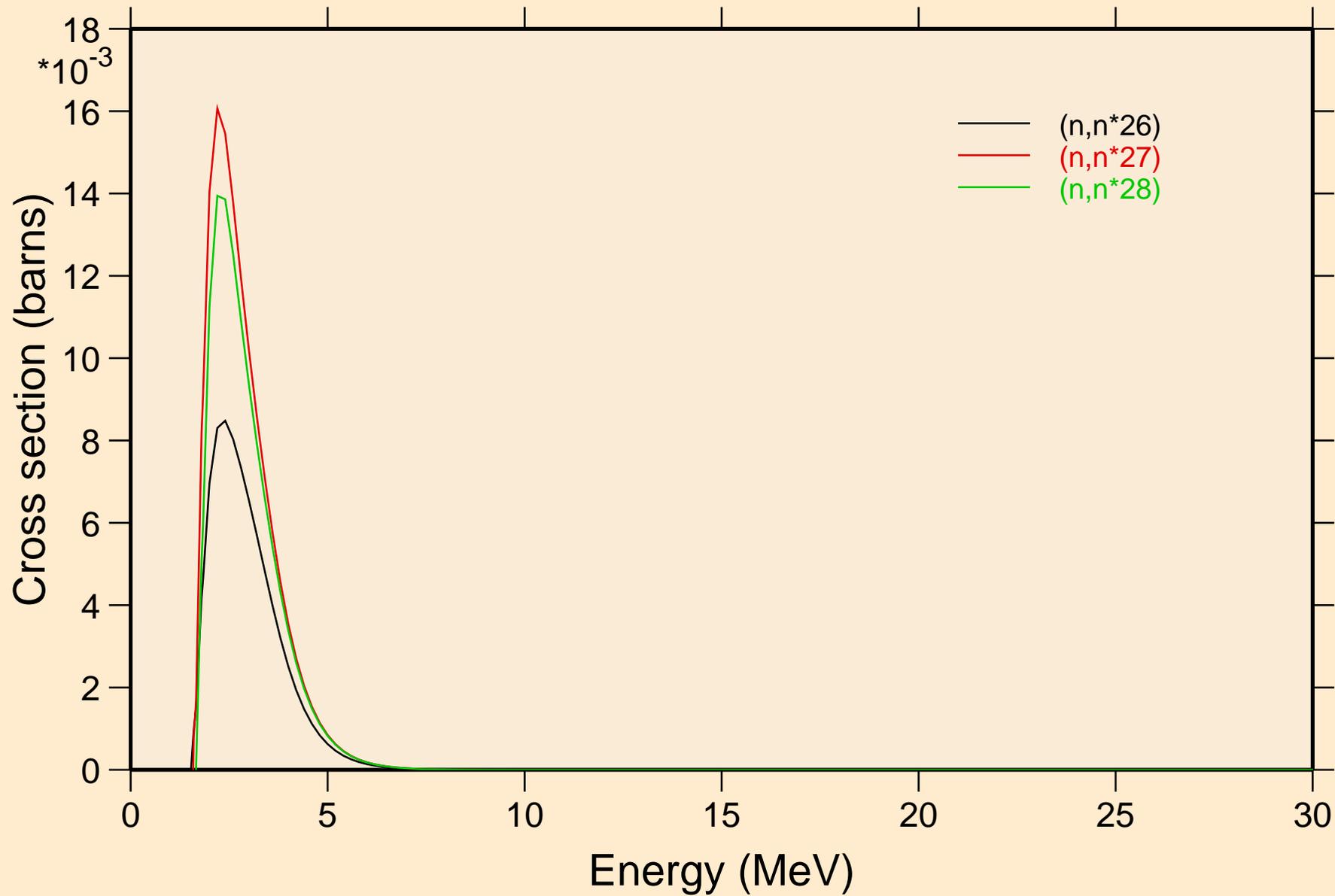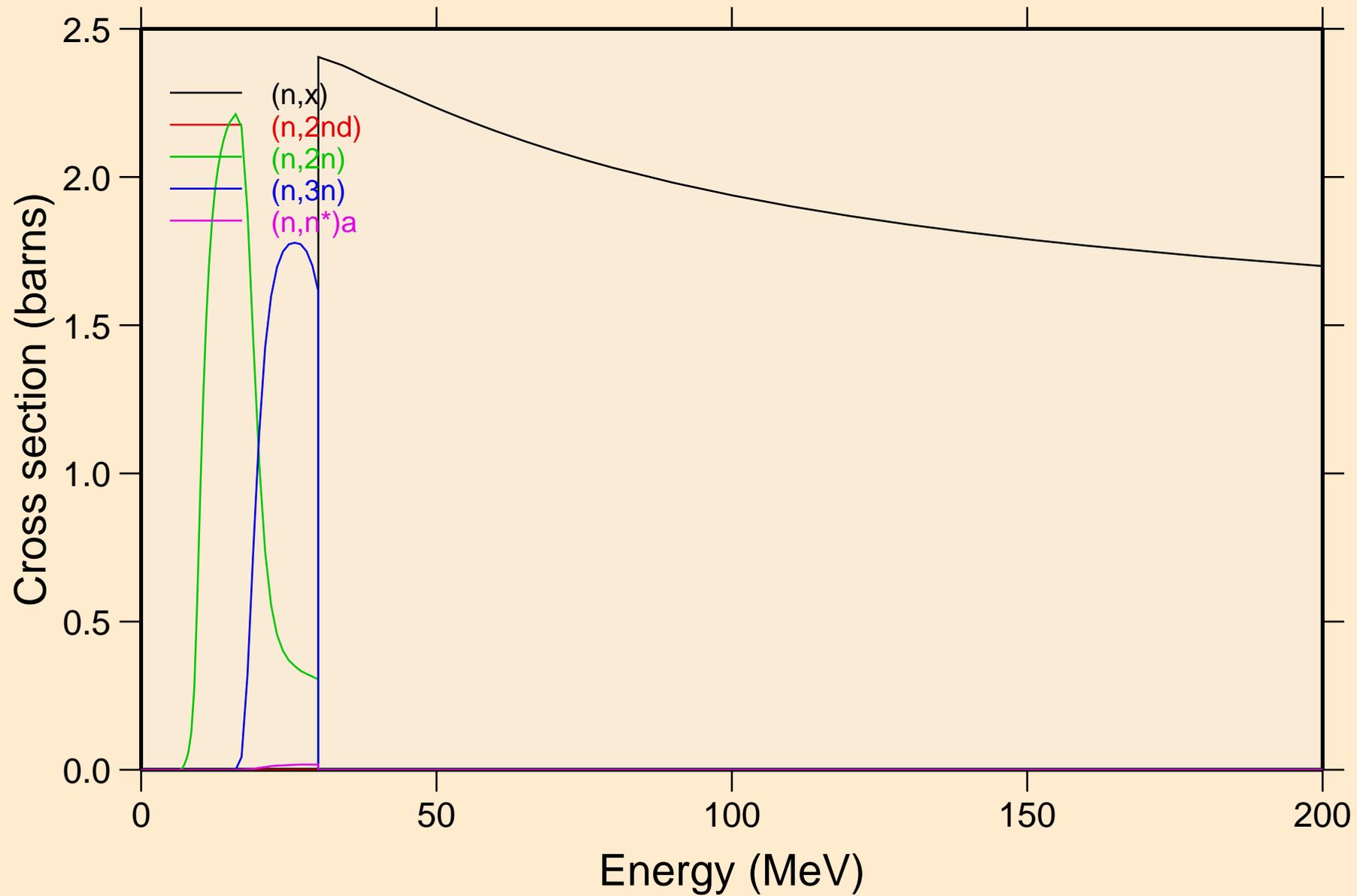X-axis: Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

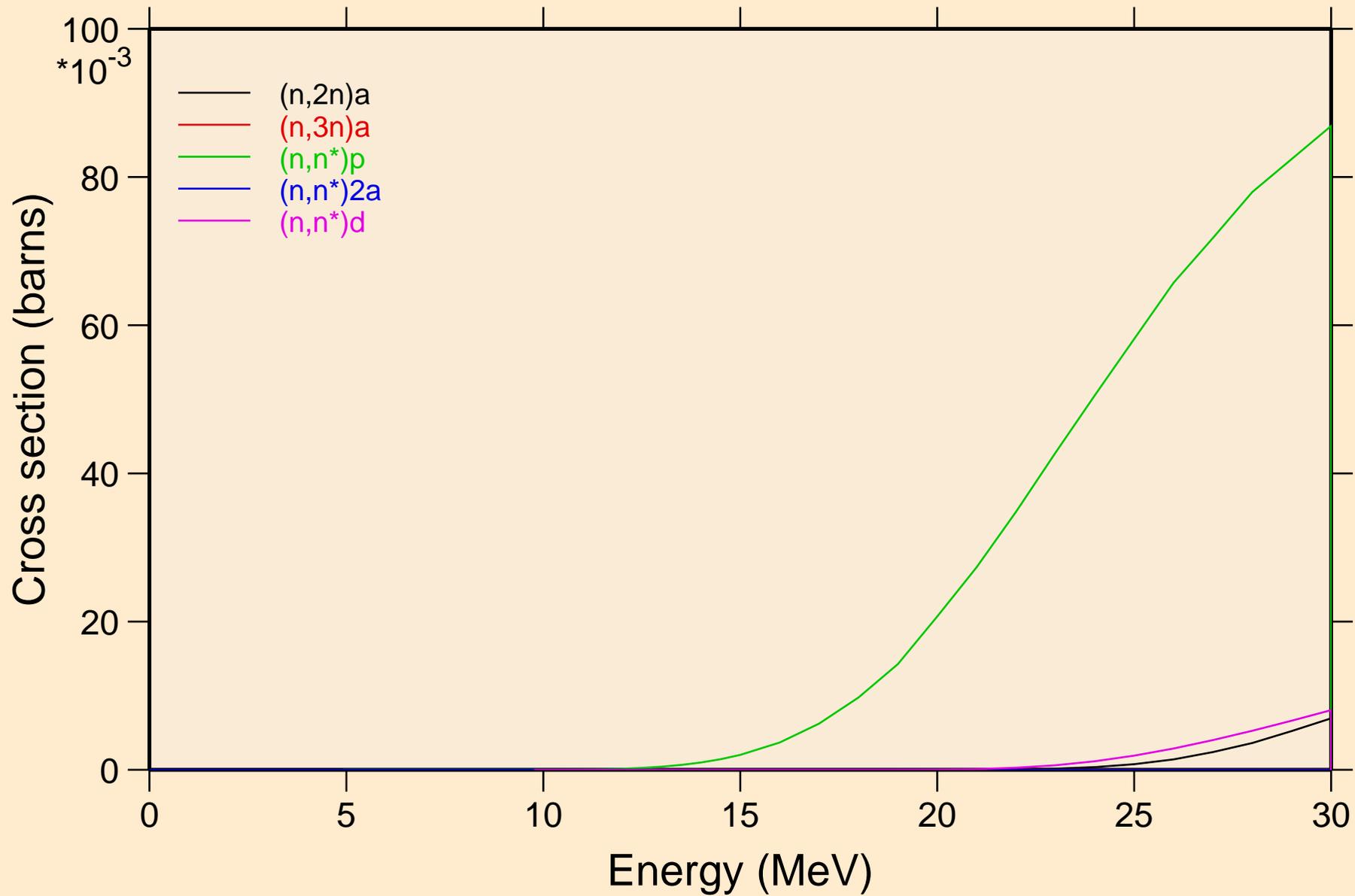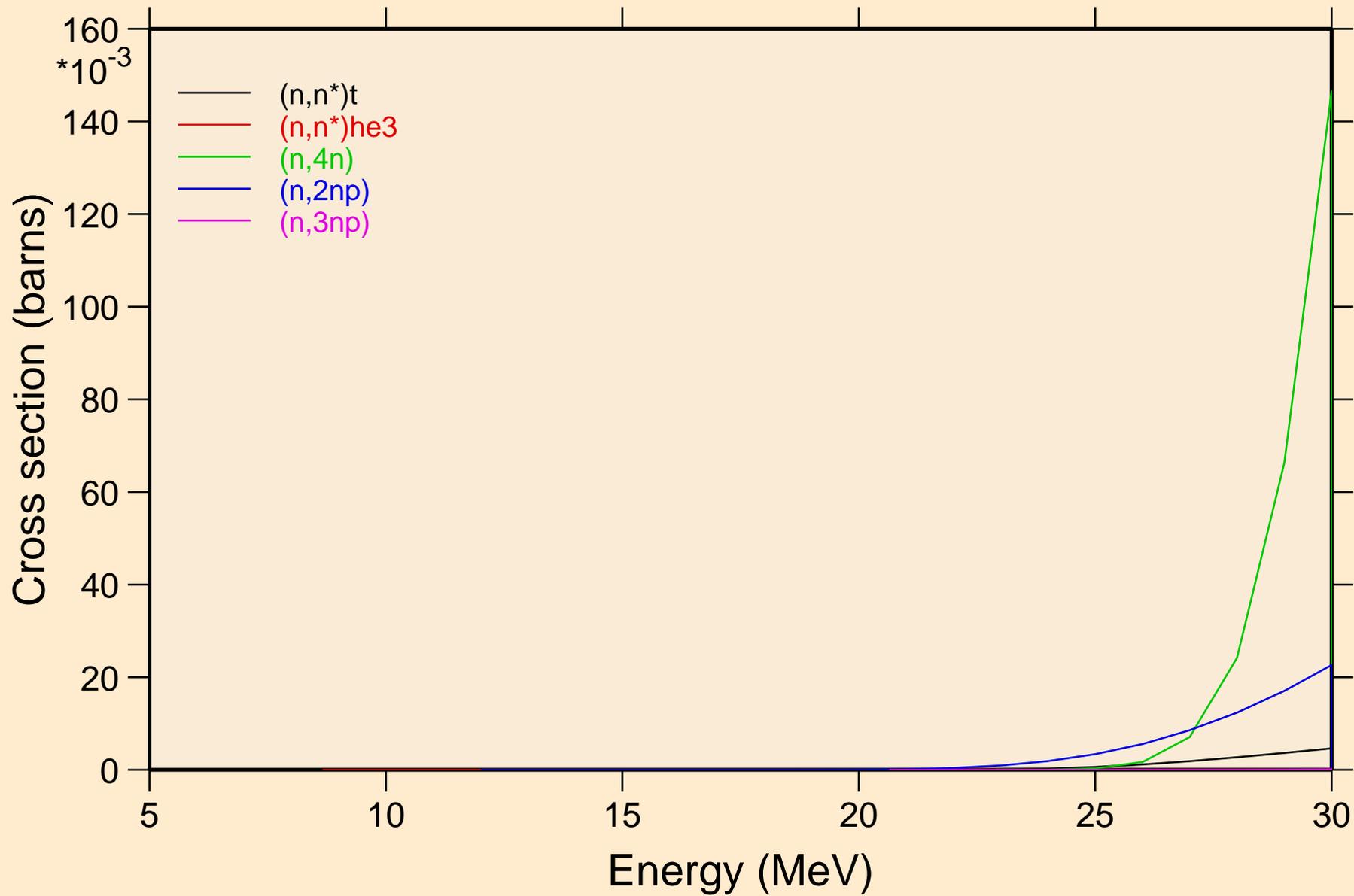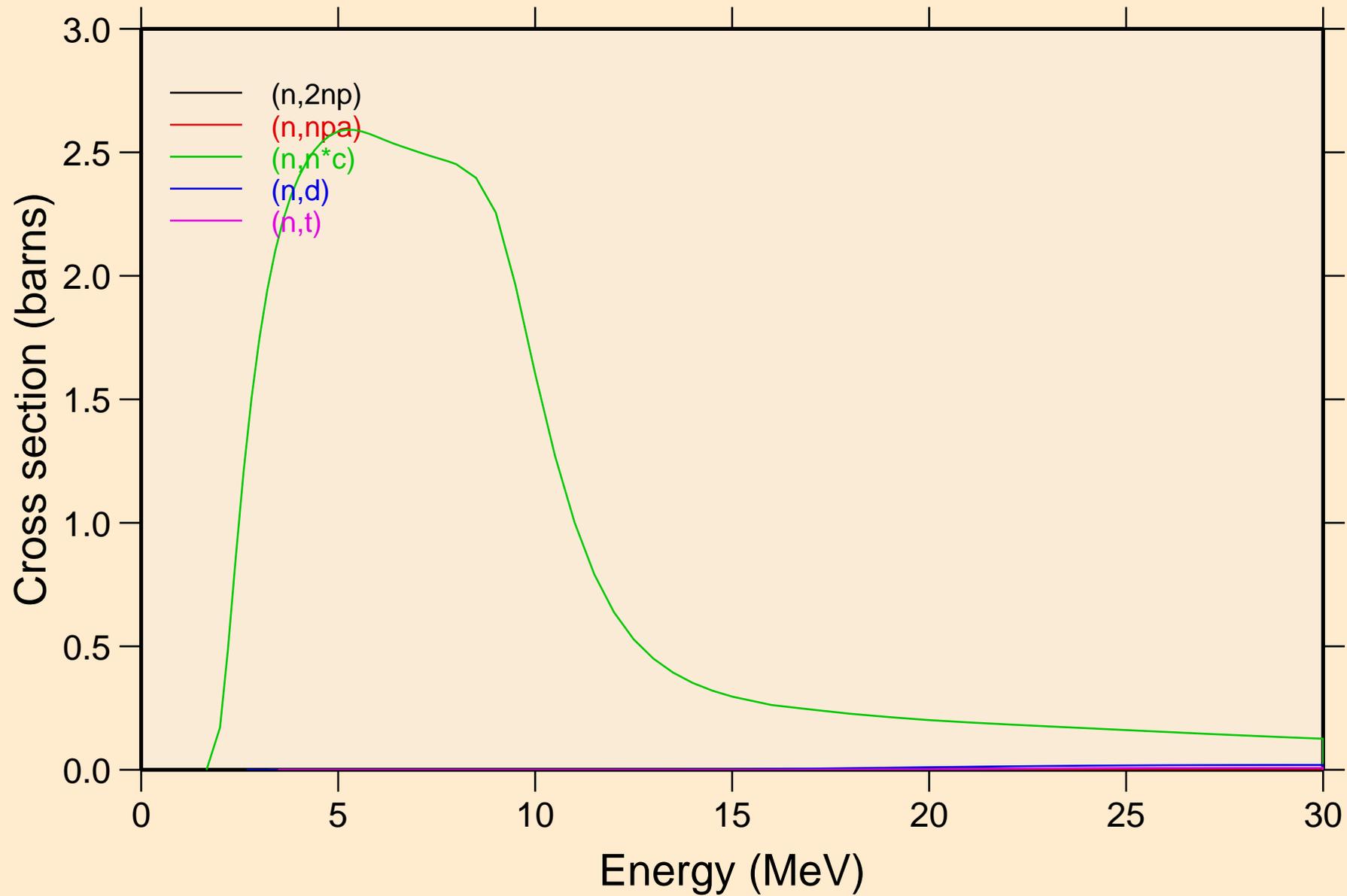PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

Cross section (barns)

140
*10⁻³
120
100
80
60
40
20
0

(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

Cross section (barns)

*10⁻³

Energy (MeV)

(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Inelastic levels

Cross section (barns) vs Energy (MeV)

(n,n*26)
(n,n*27)
(n,n*28)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Legend:
- (n,x) — black
- (n,2nd) — red
- (n,2n) — green
- (n,3n) — blue
- (n,n*)a — magenta

X-axis: Energy (MeV)
Y-axis: Cross section (barns)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Cross section (barns)

$*10^{-3}$

— (n,2n)a
— (n,3n)a
— (n,n*)p
— (n,n*)2a
— (n,n*)d

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Legend:
- (n,n*)t
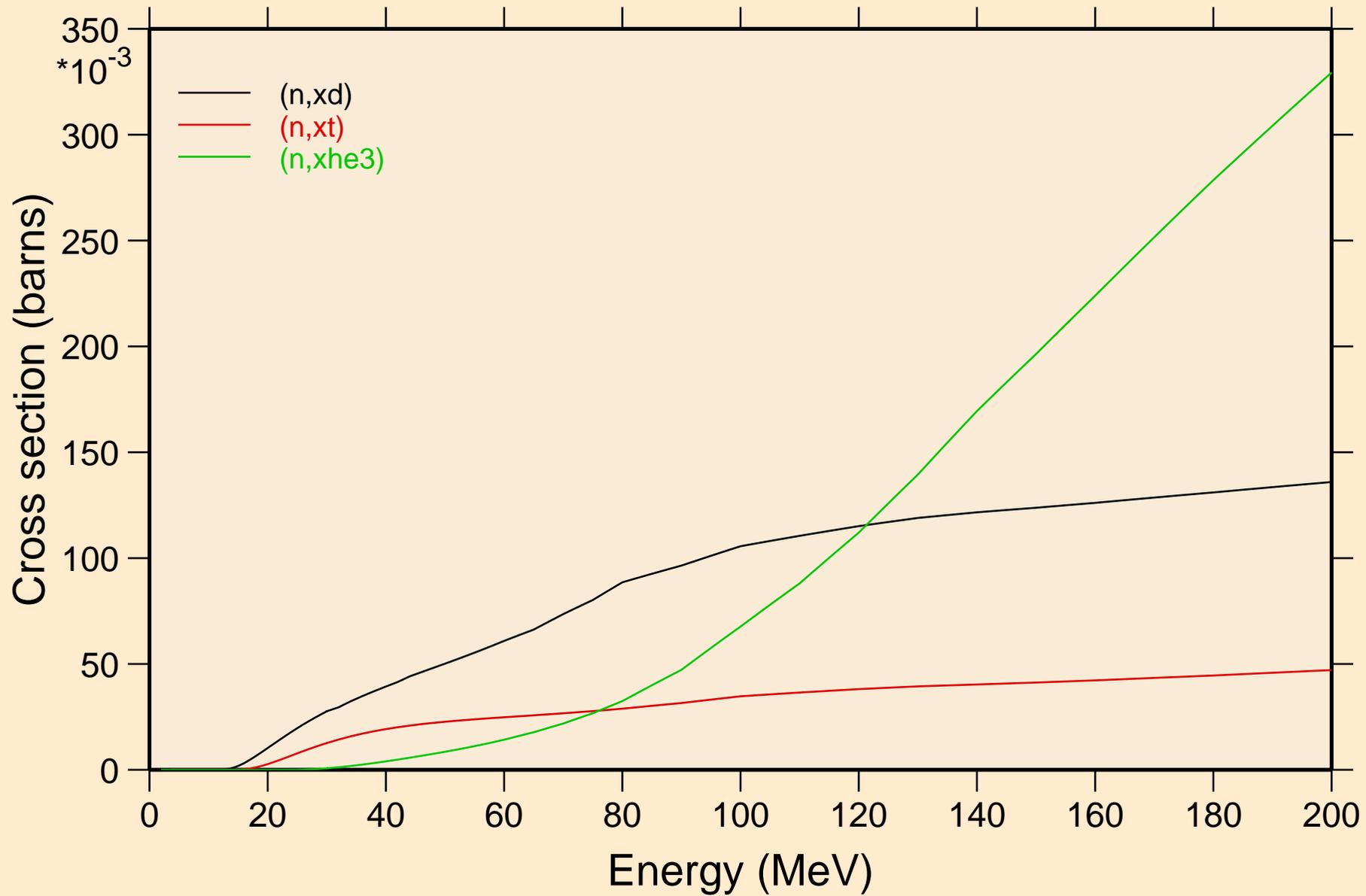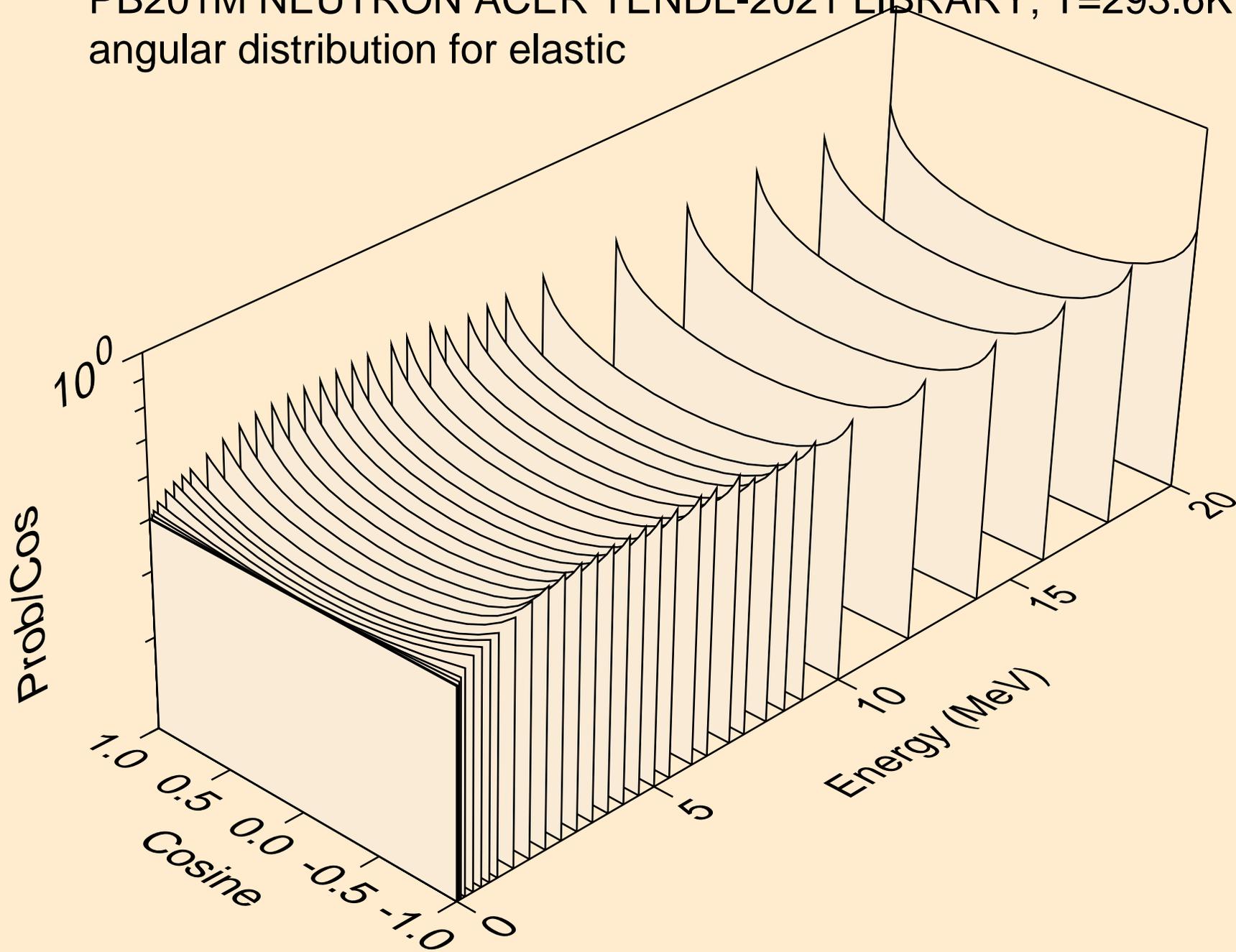- (n,n*)he3
- (n,4n)
- (n,2np)
- (n,3np)

Cross section (barns), *10⁻³ vs Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Cross section (barns)

700 *10^{-6}
600
500
400
300
200
100
0

—— (n,he3)
—— (n,2a)
—— (n,2p)
—— (n,pa)
—— (n,pd)

Energy (MeV)

0   5   10   15   20   25   30

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Cross section (barns)

*10^{-9}

140

120

100

80

60

40

20

0

0   5   10   15   20   25   30

Energy (MeV)

——— (n,pt)
——— (n,da)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Threshold reactions

Cross section (barns) vs Energy (MeV)

Legend:
- (n,xd) — black
- (n,xt) — red
- (n,xhe3) — green

Y-axis: Cross section (barns), $\times 10^{-3}$, ranging 0 to 350
X-axis: Energy (MeV), ranging 0 to 200

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for elastic

ProbICos

Cosine

1.0 0.5 0.0 -0.5 -1.0 0

Energy (MeV)

10^0

5

10

15

20

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
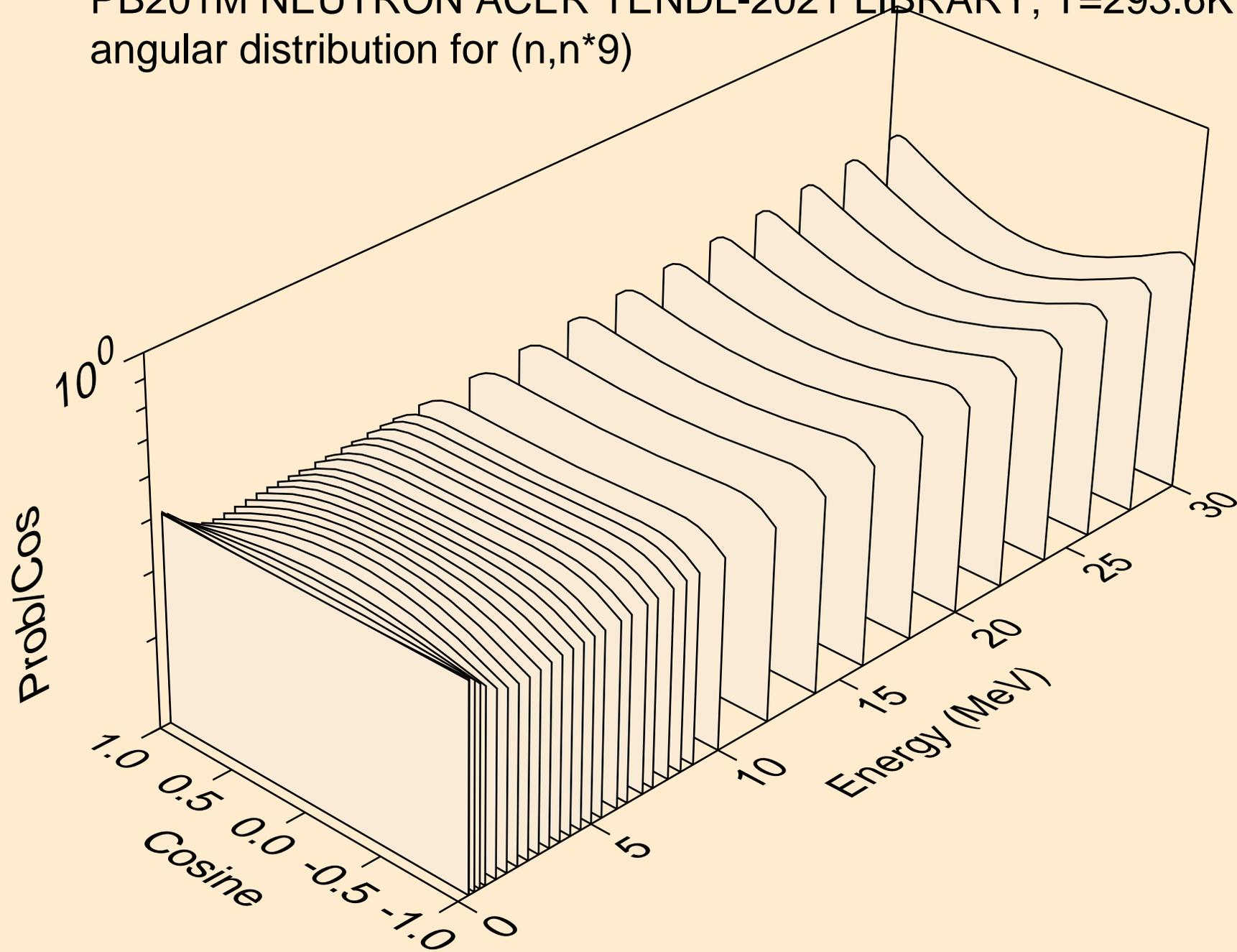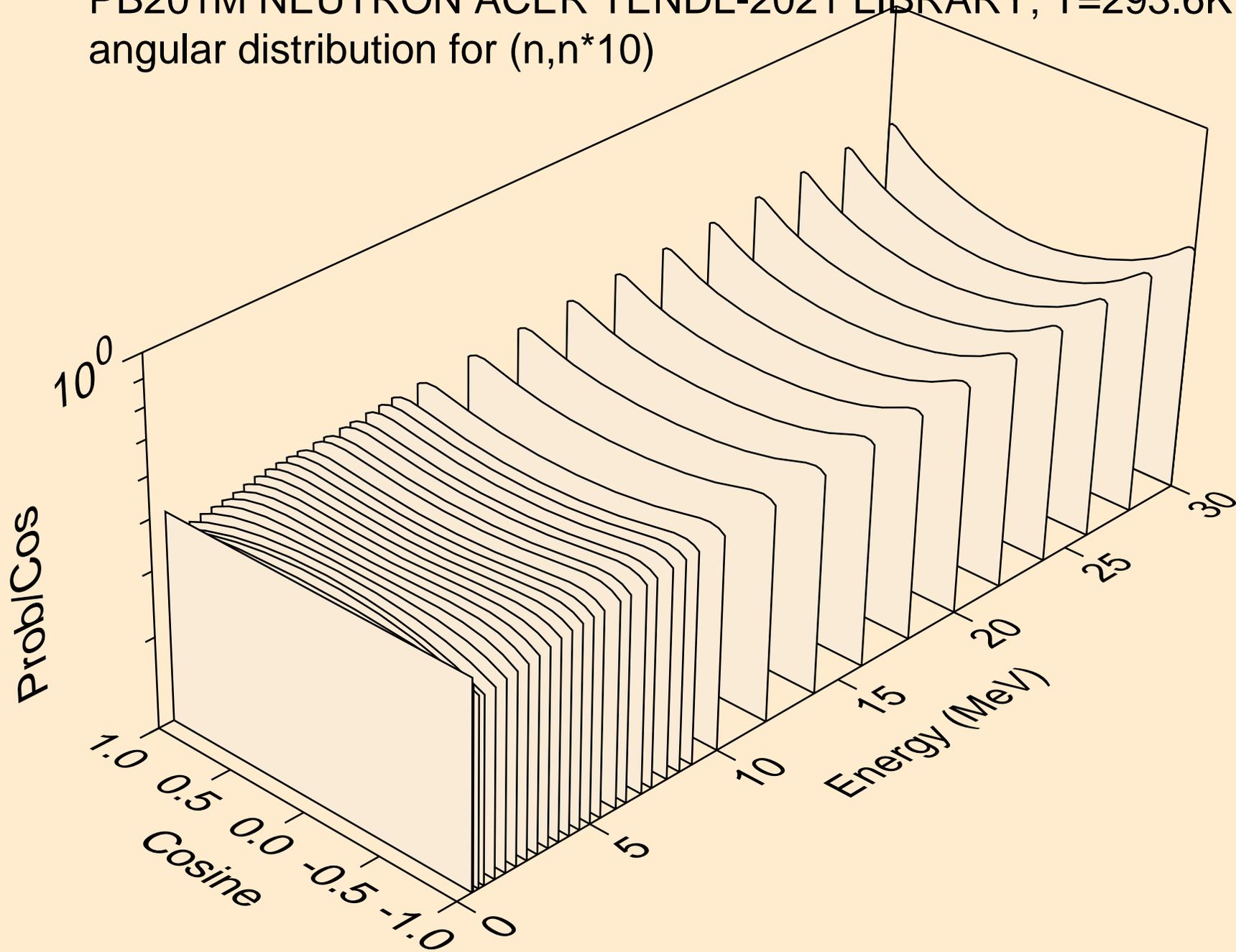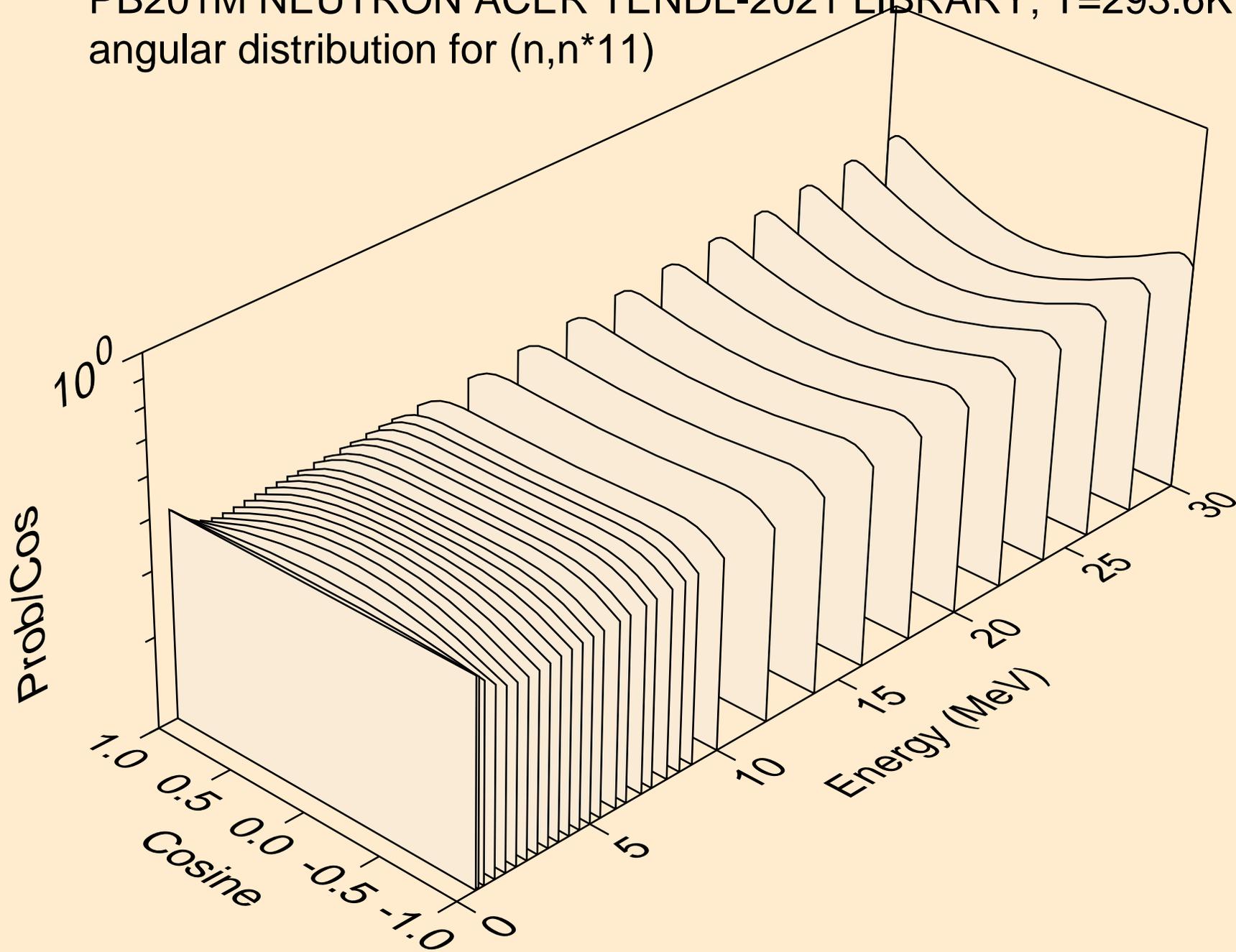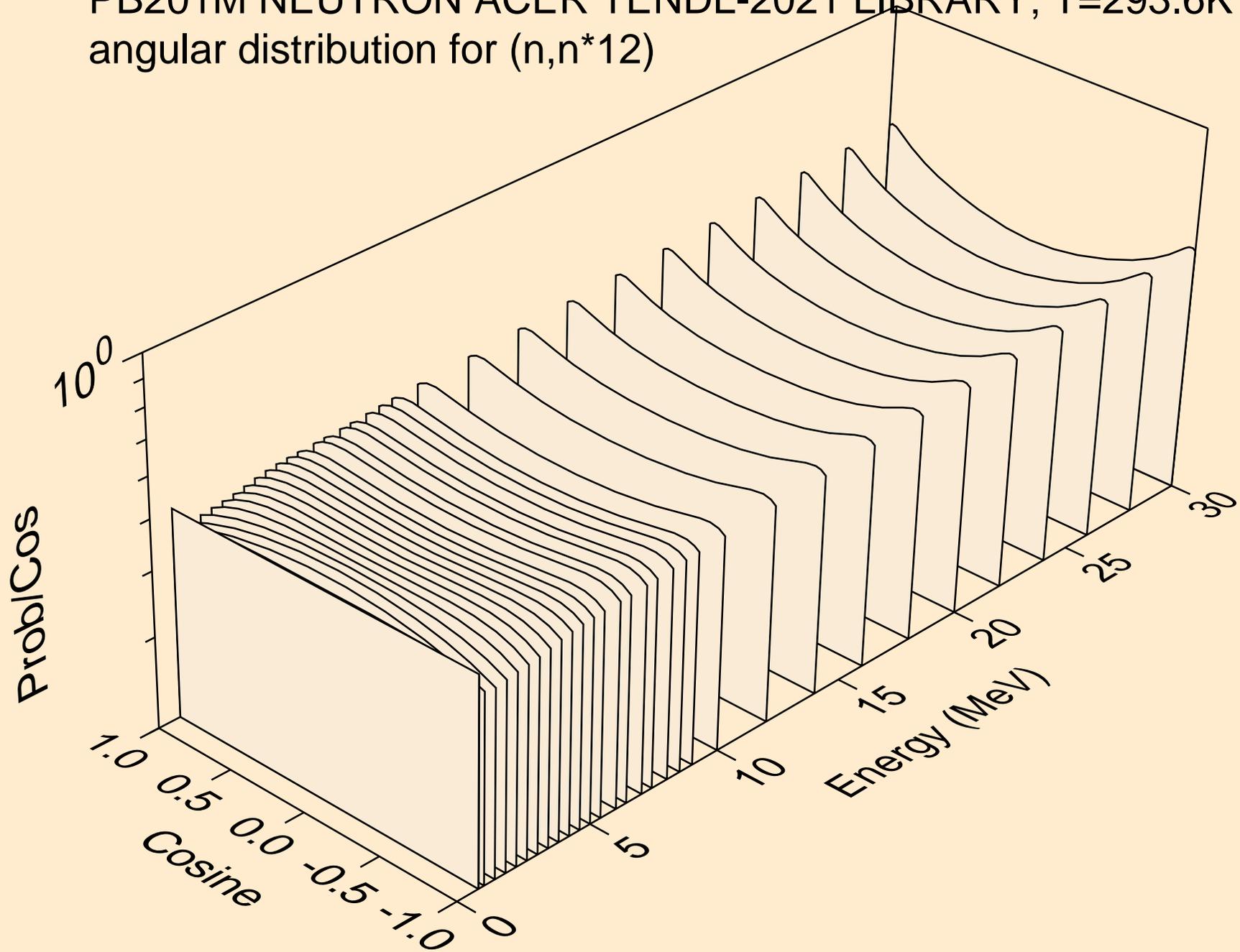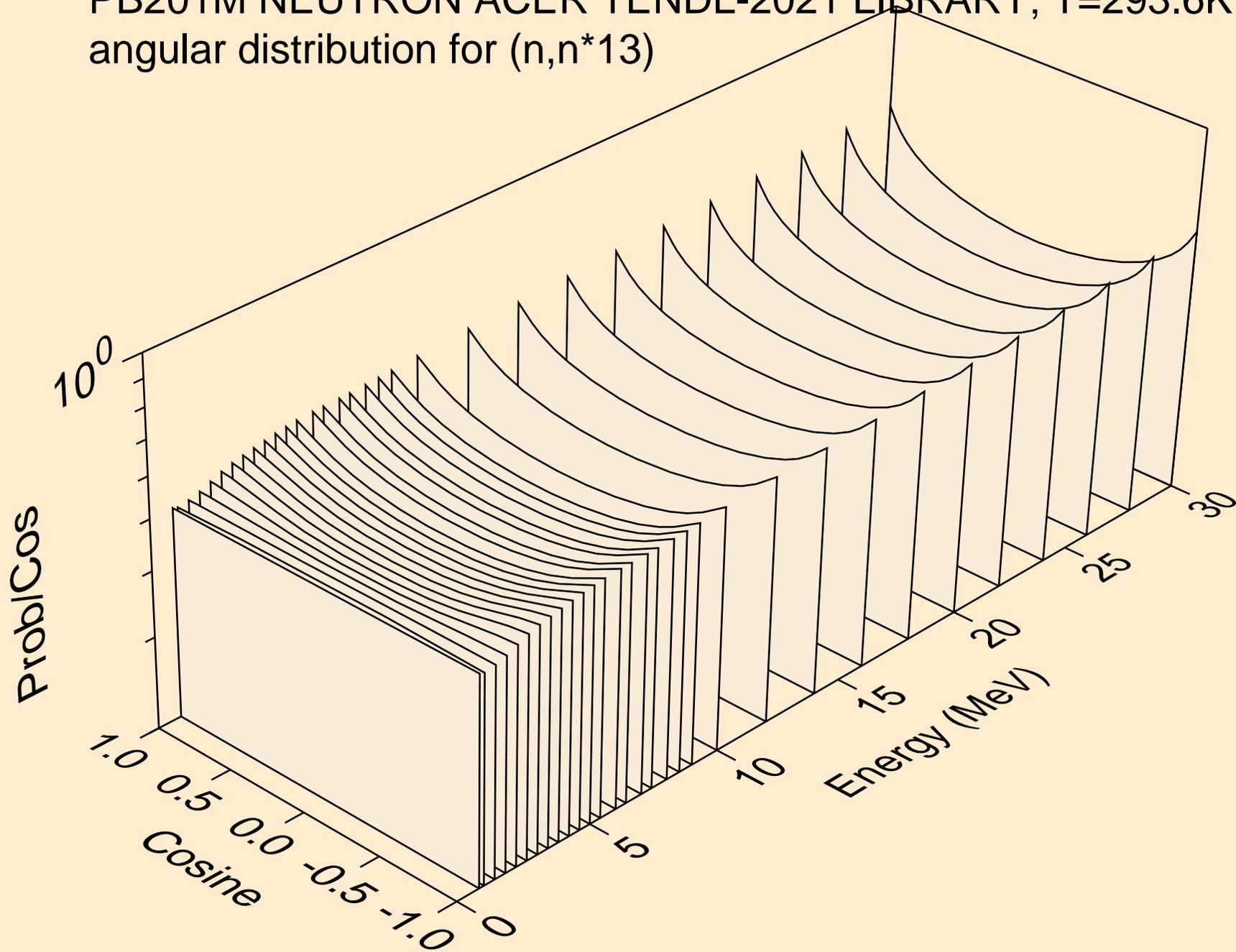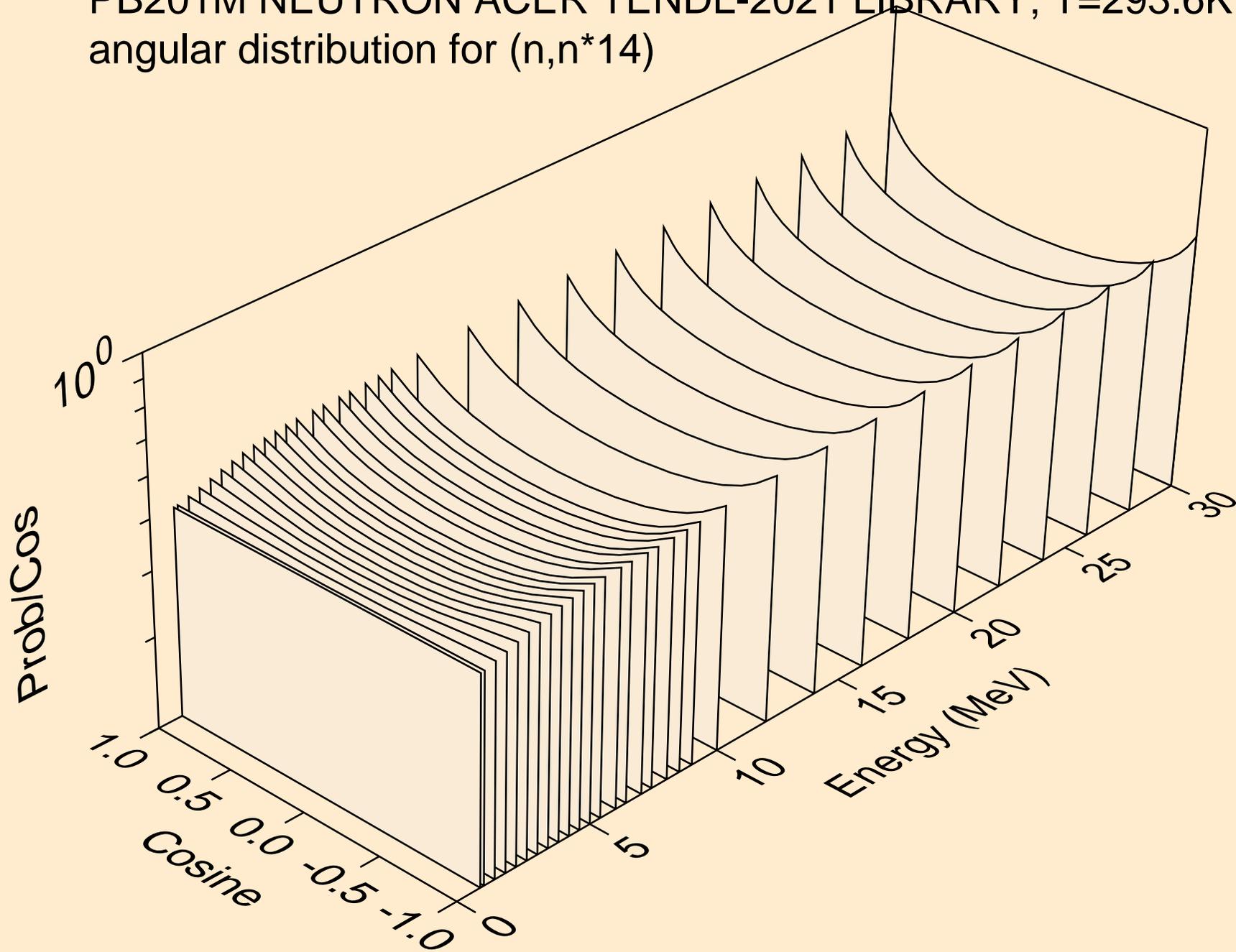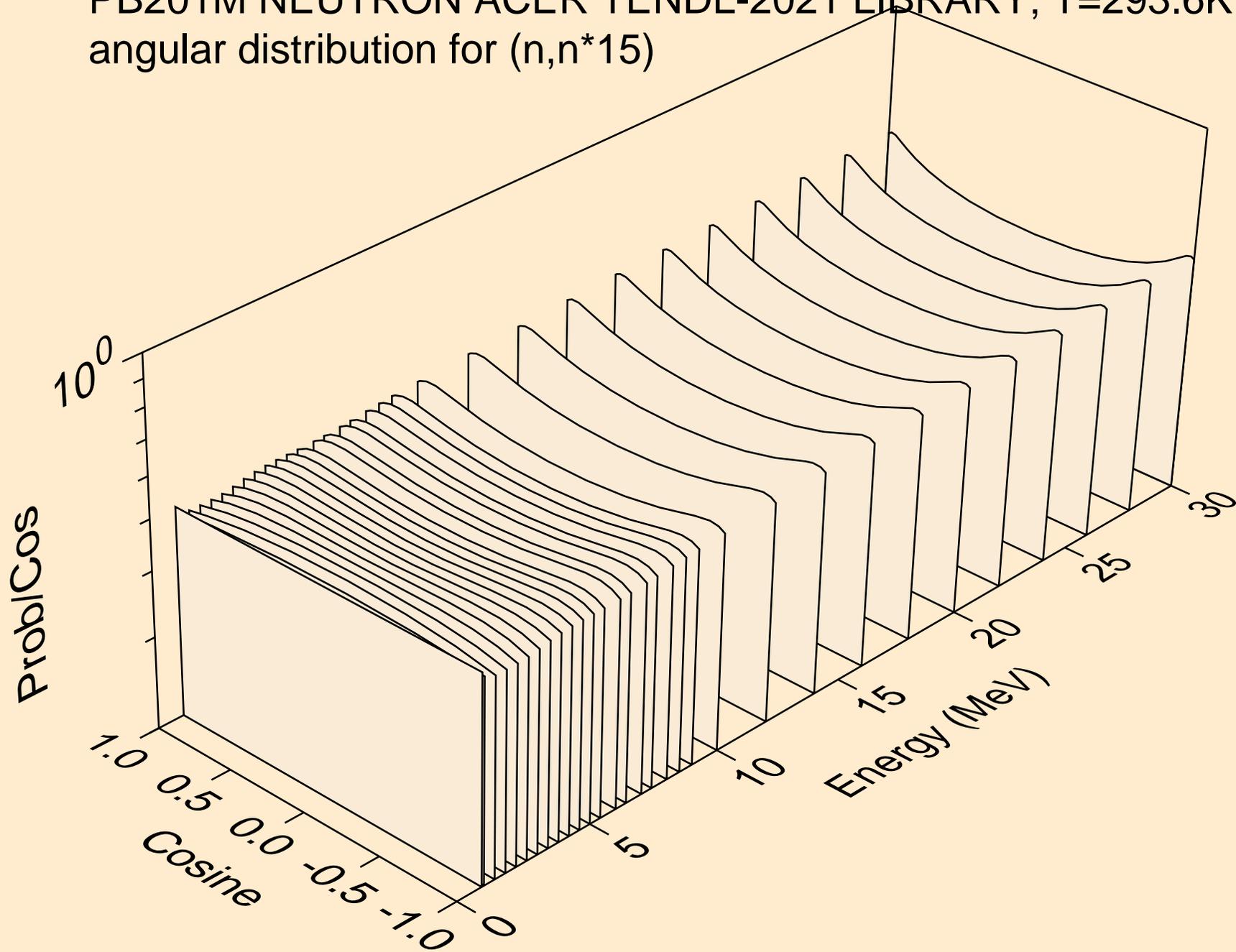angular distribution for elastic
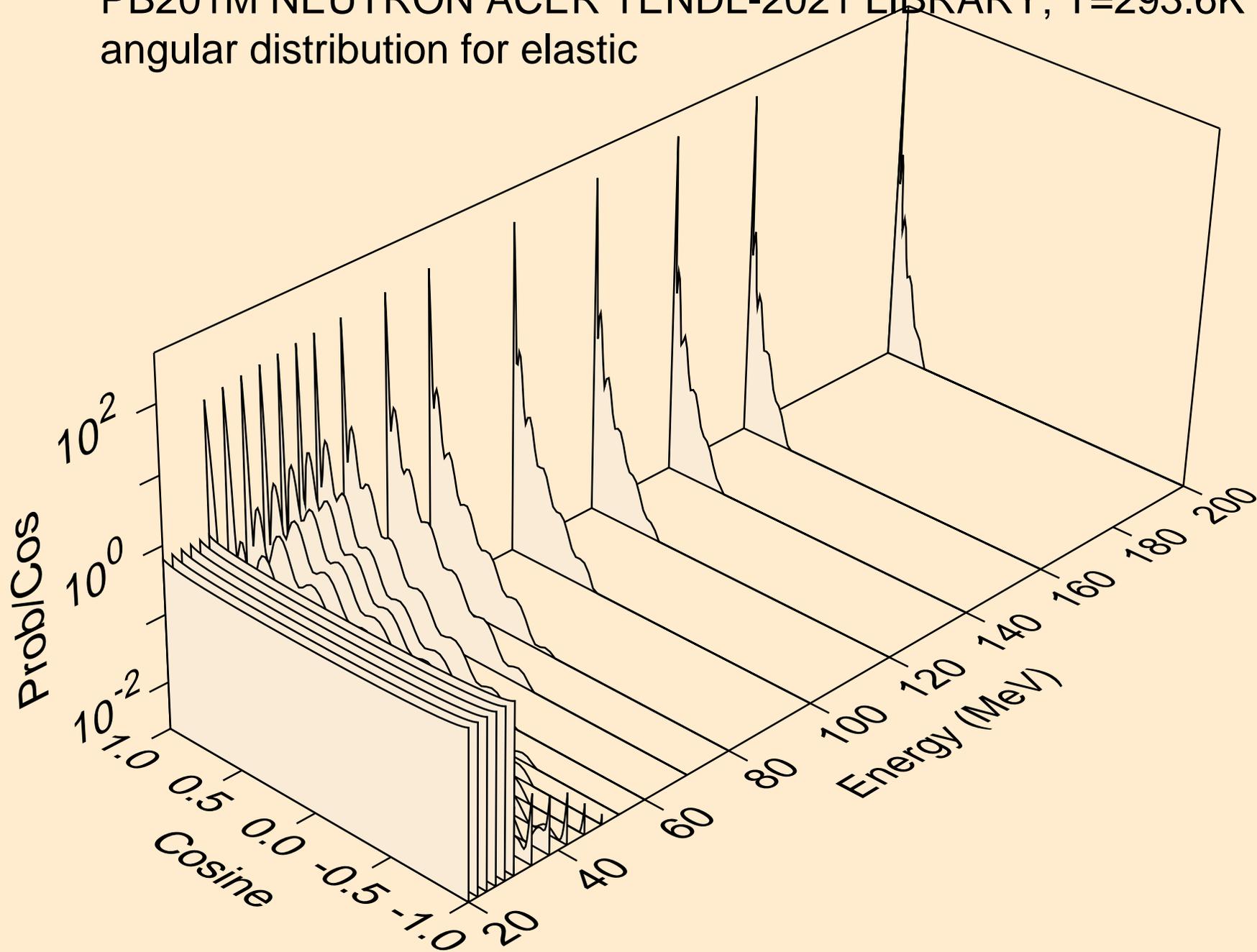
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*1)
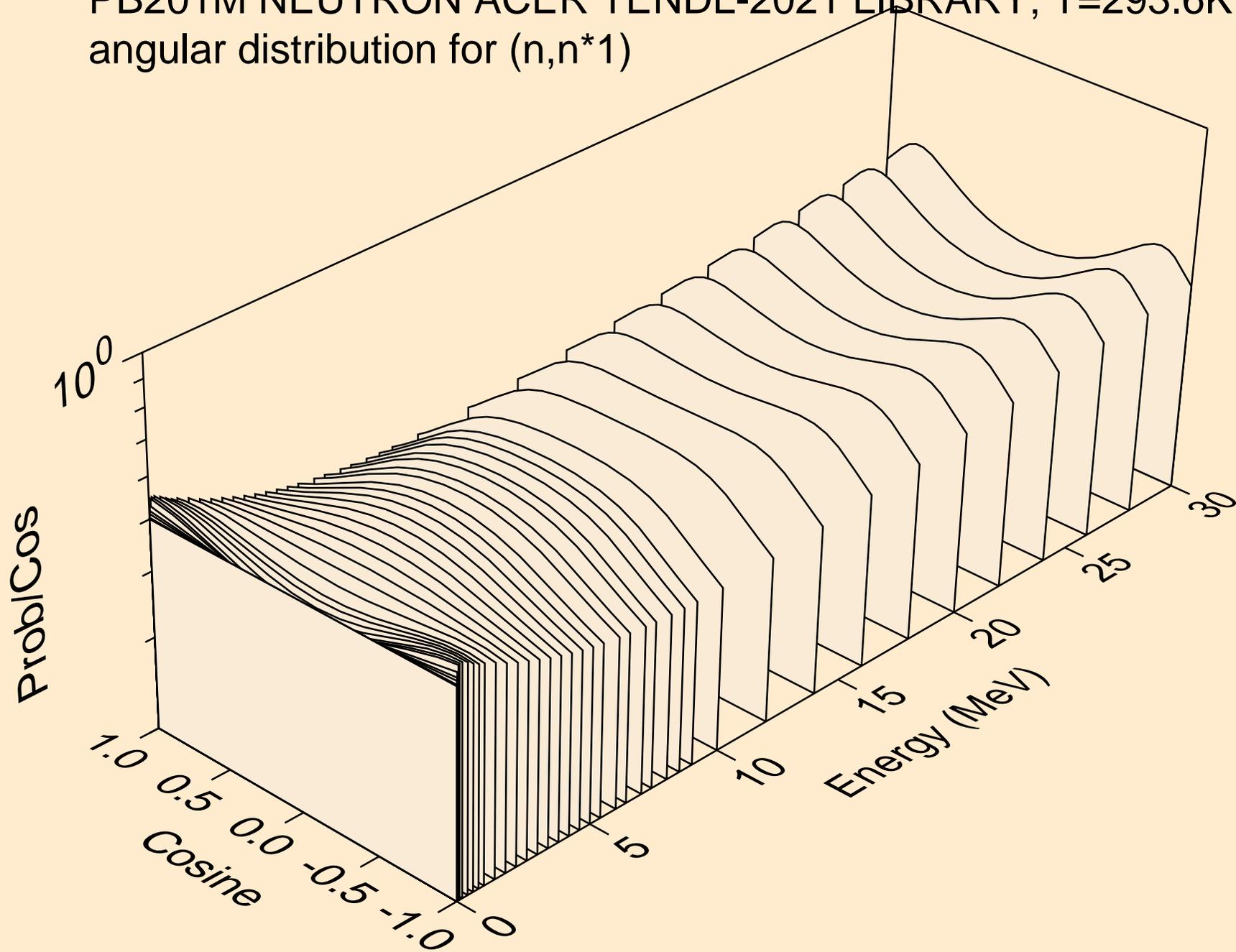
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*2)
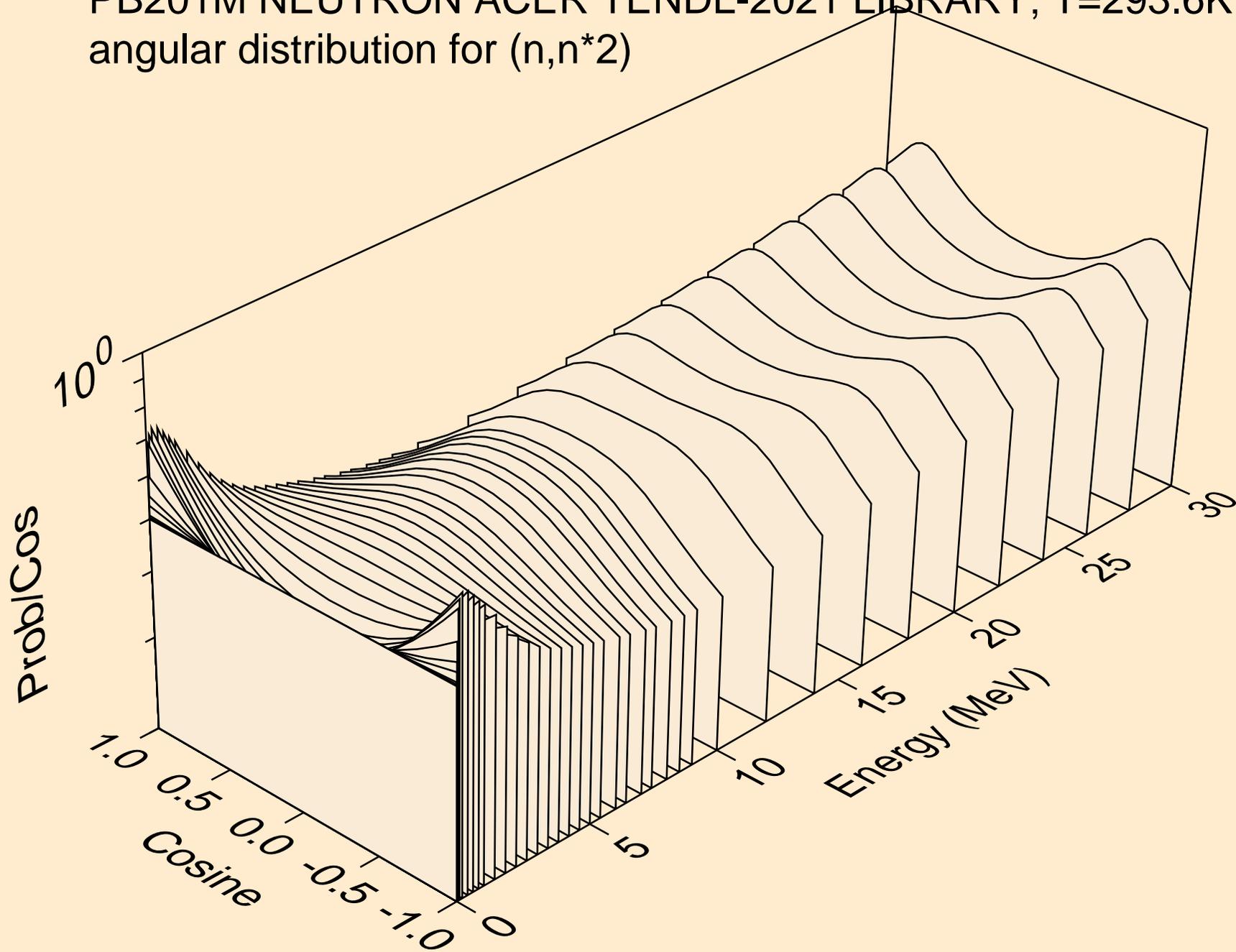
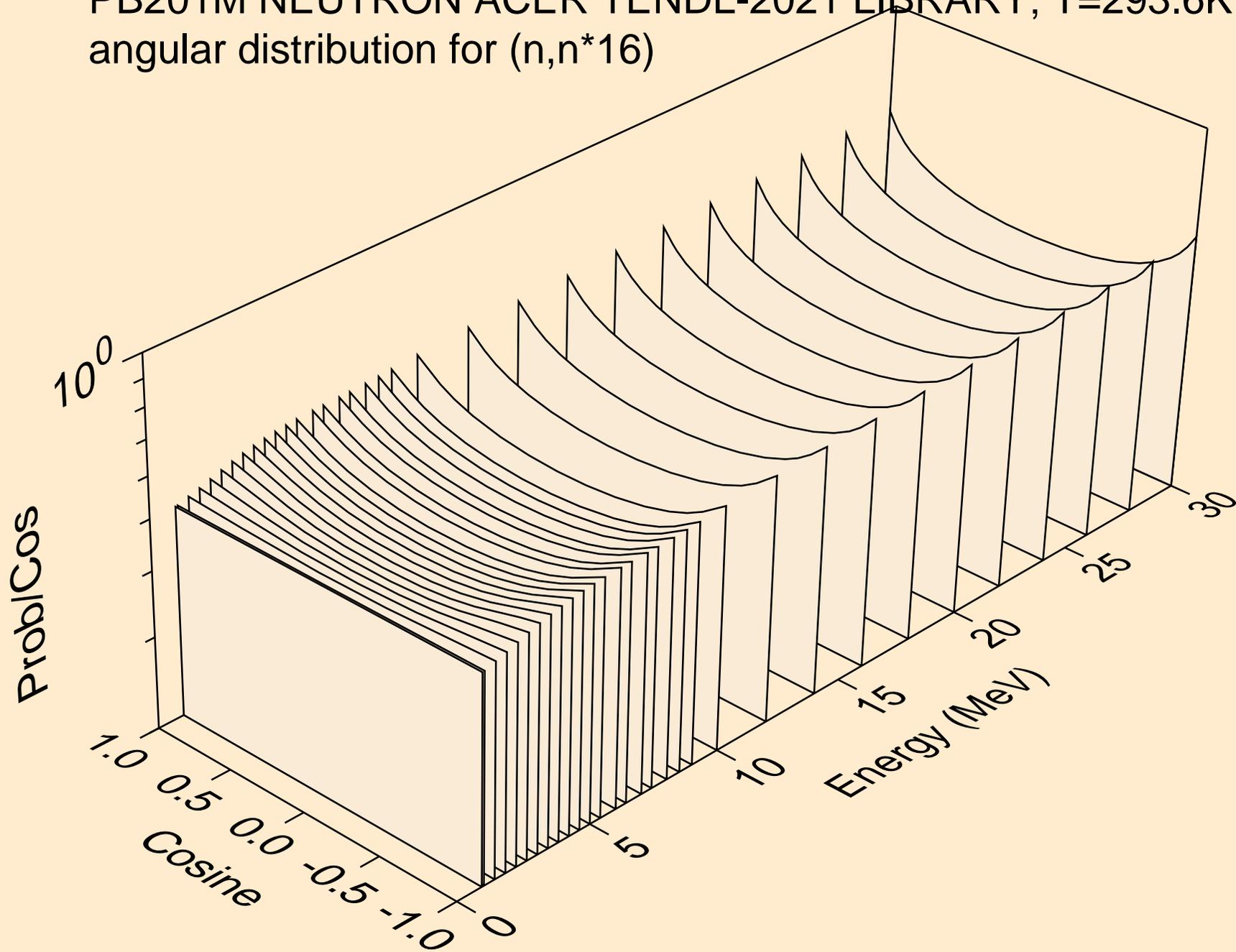PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*3)
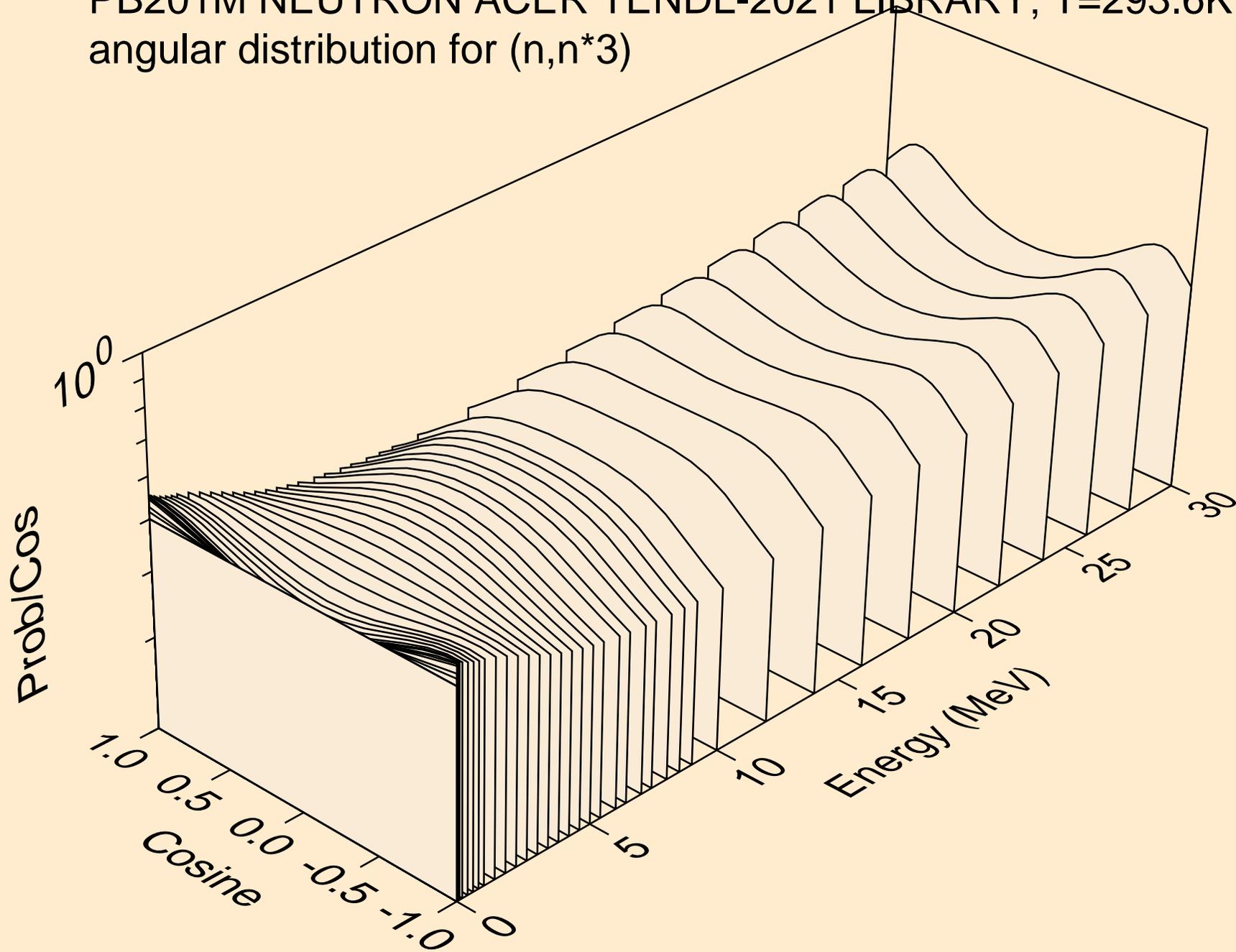
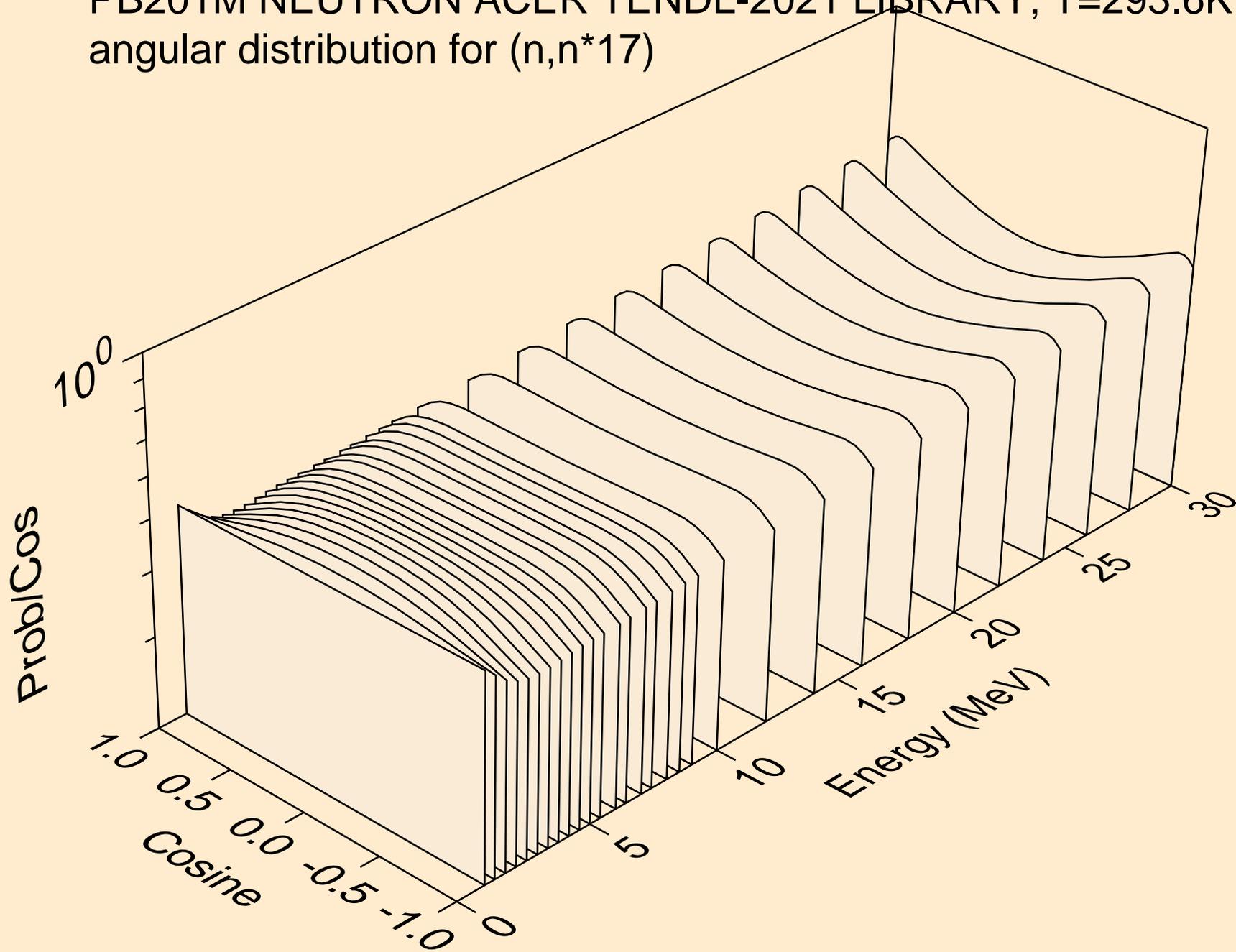PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*4)
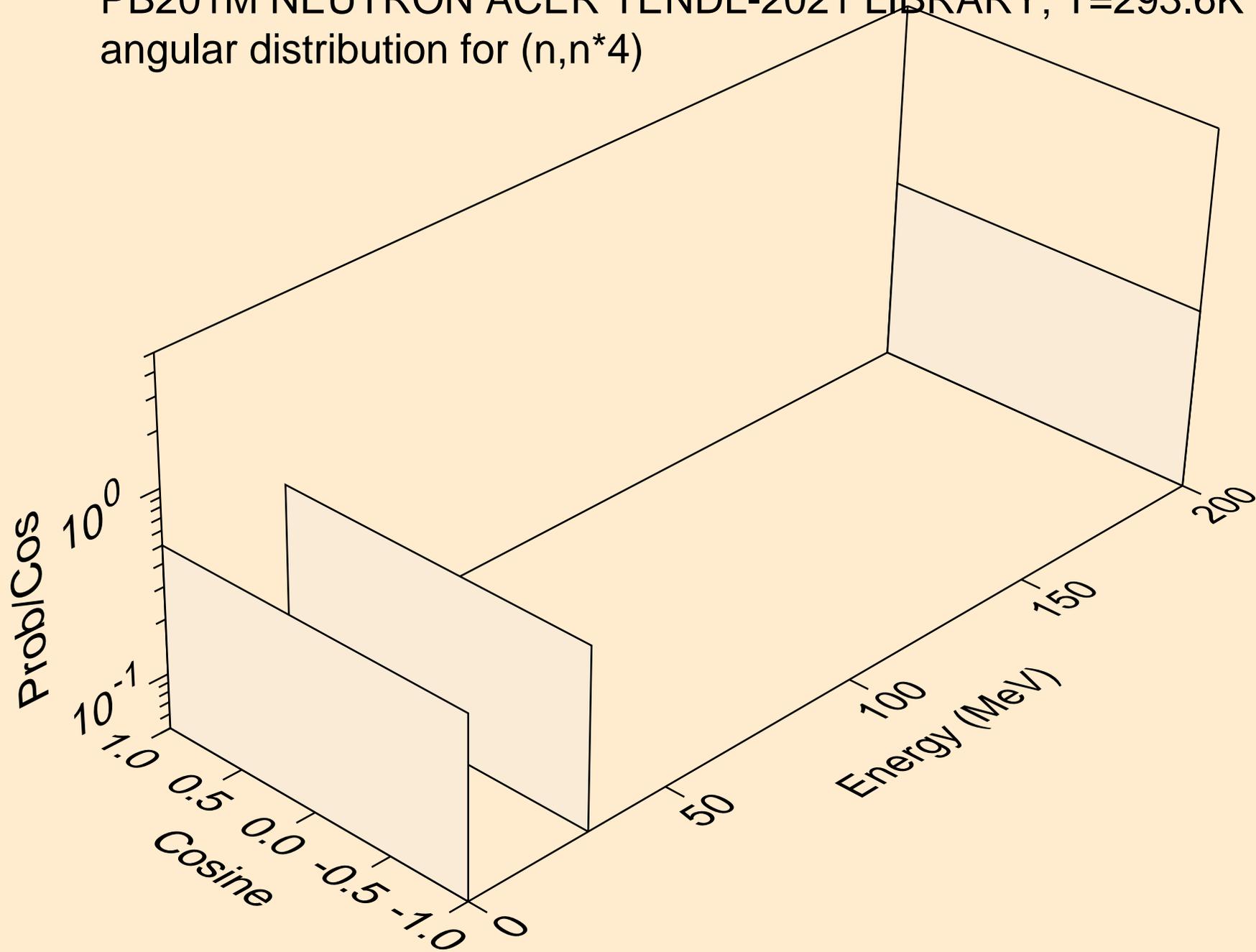
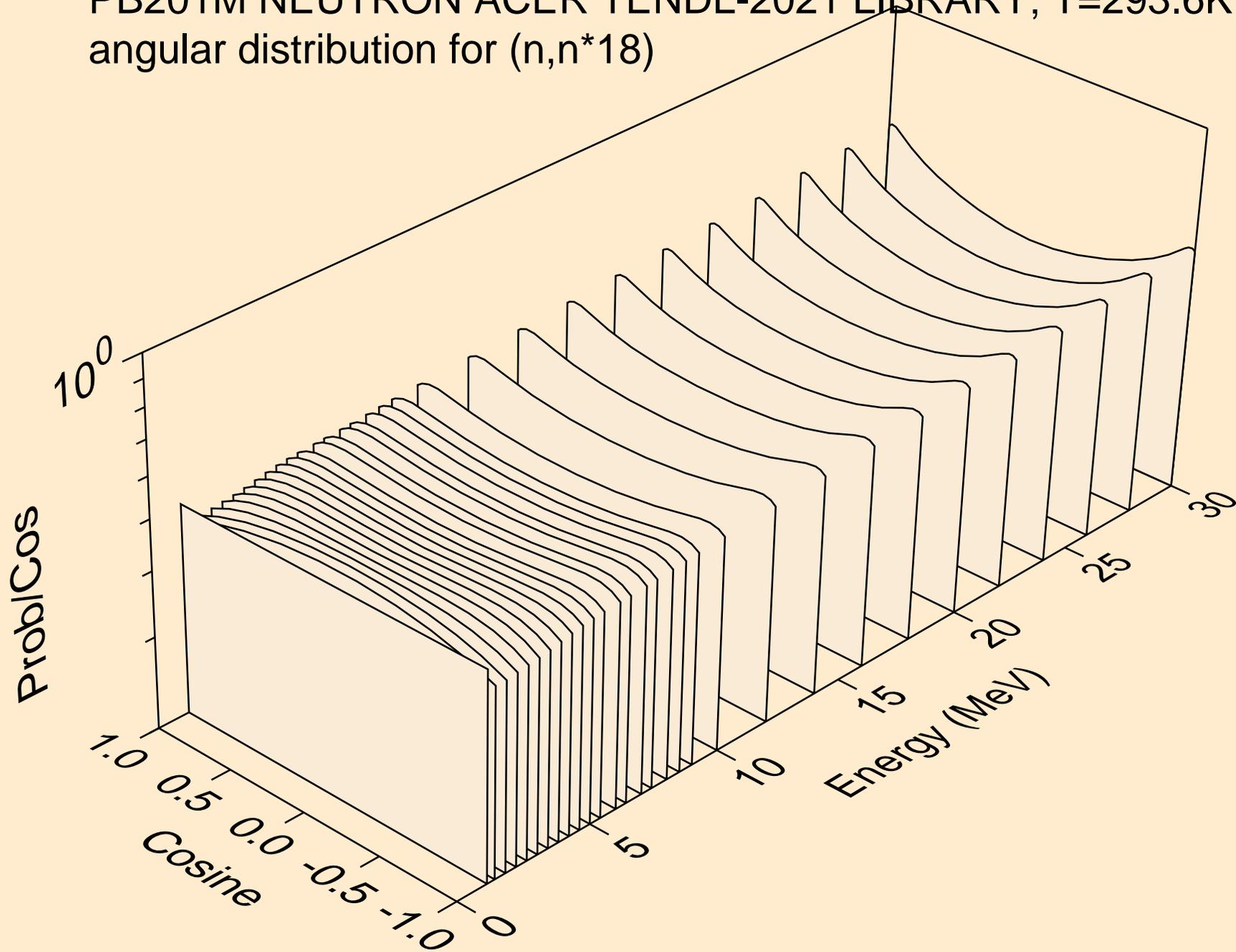PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*5)
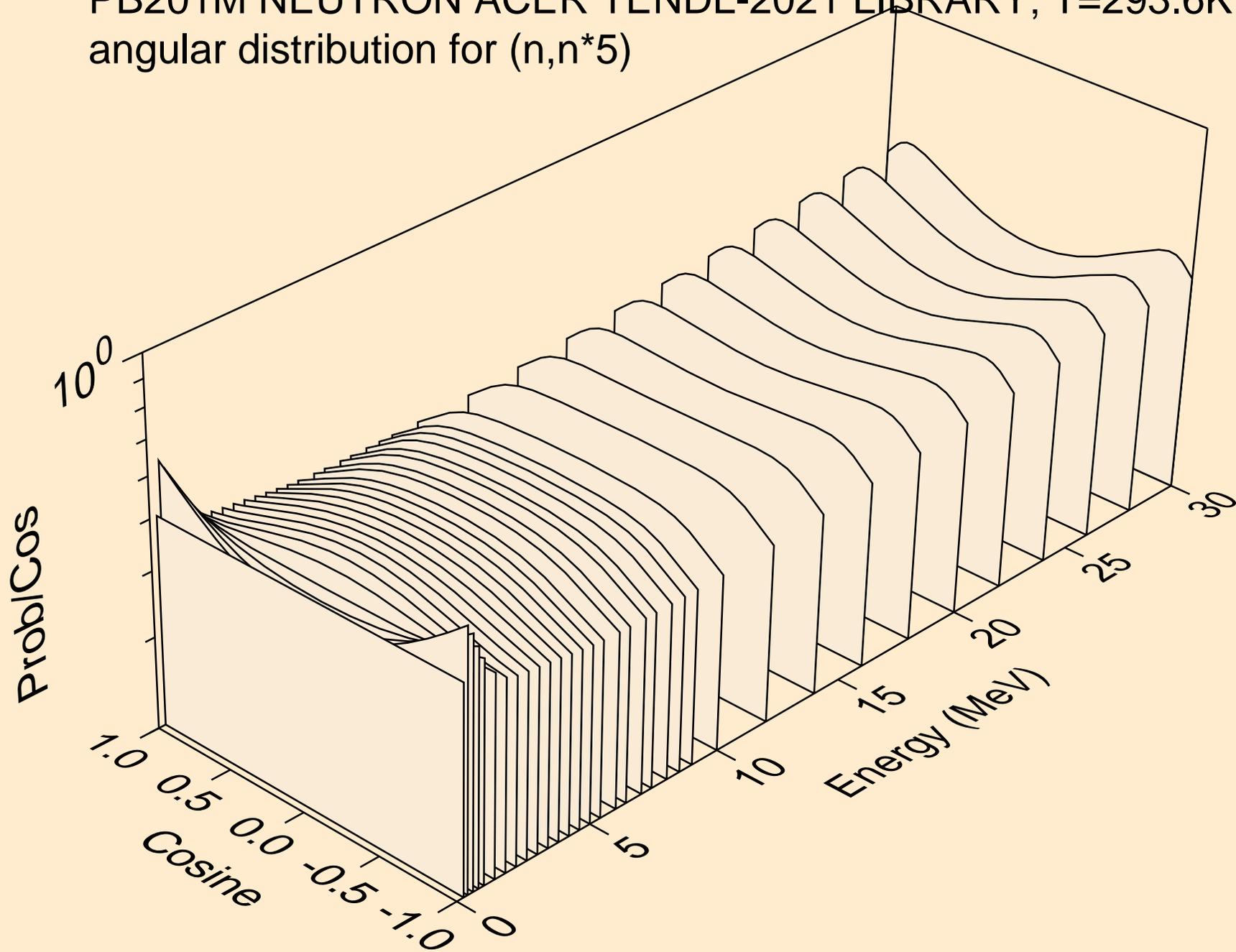
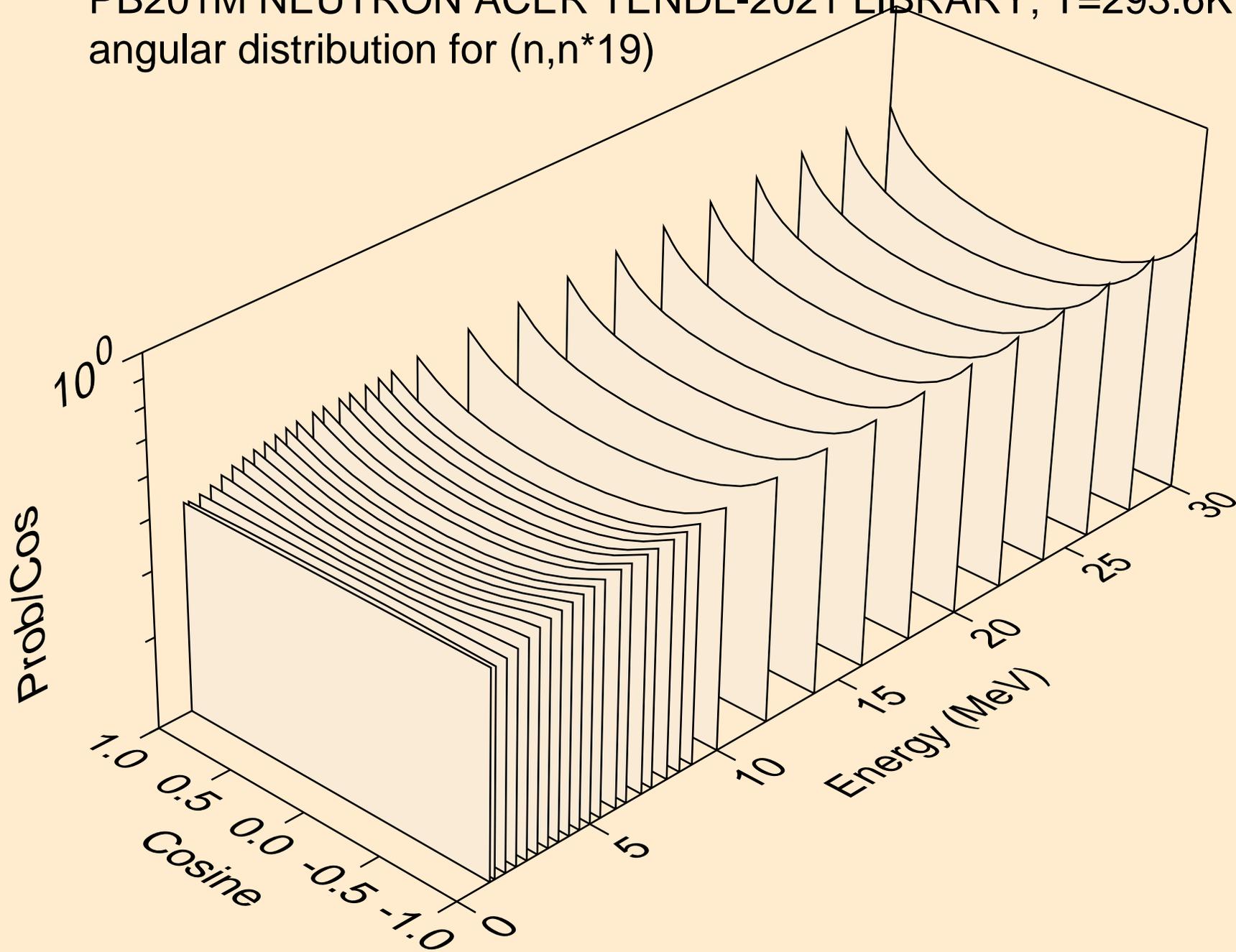PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*6)
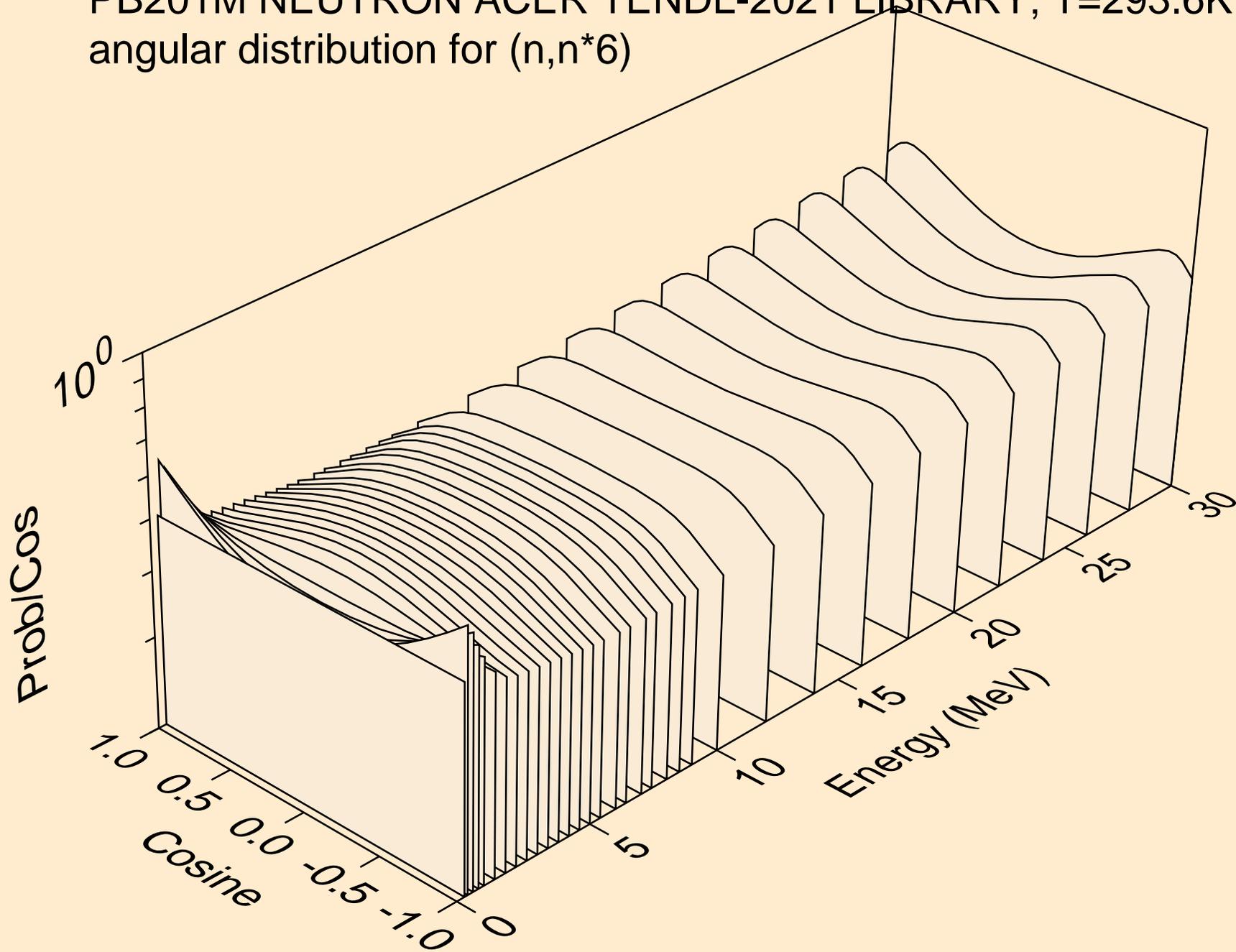
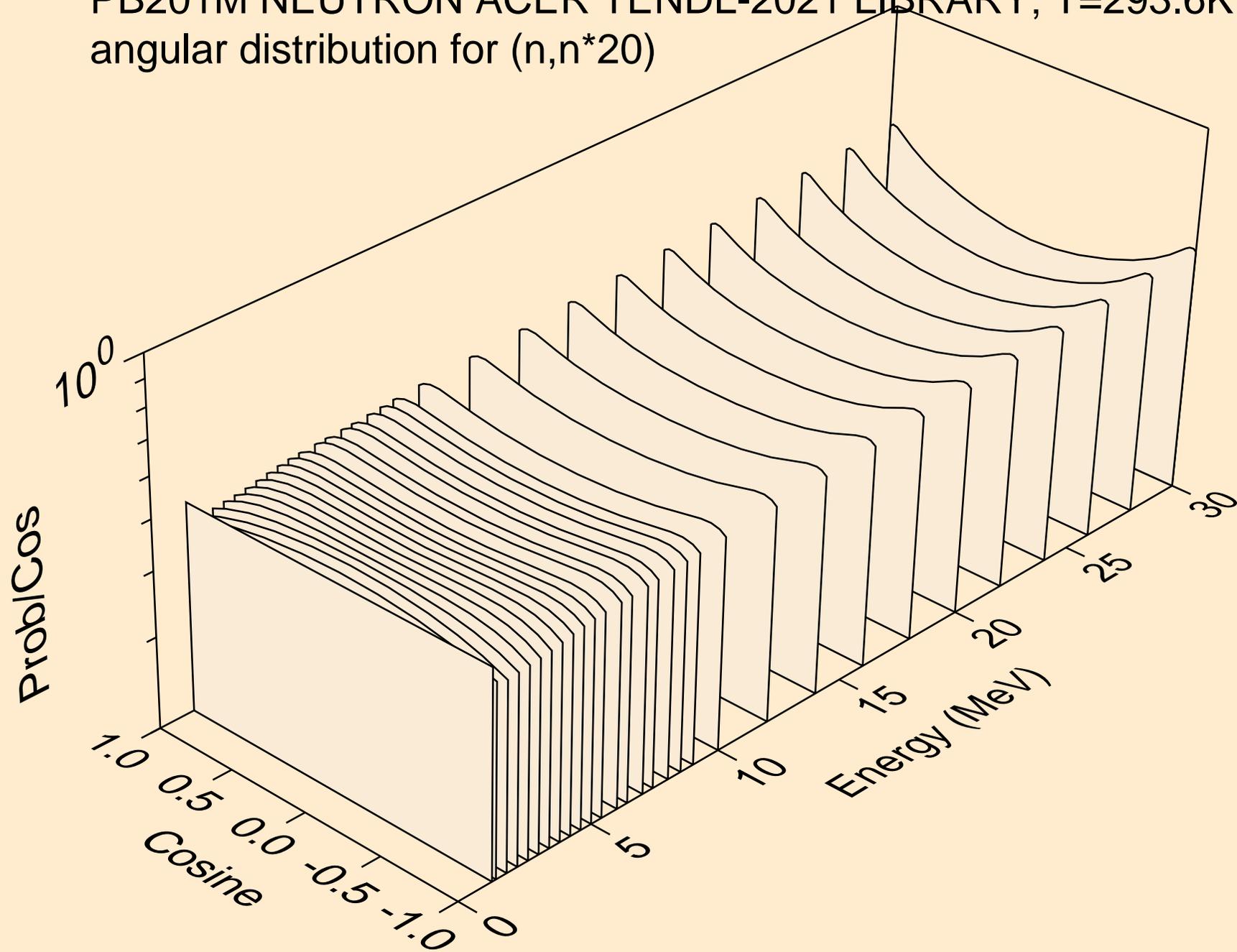PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*7)
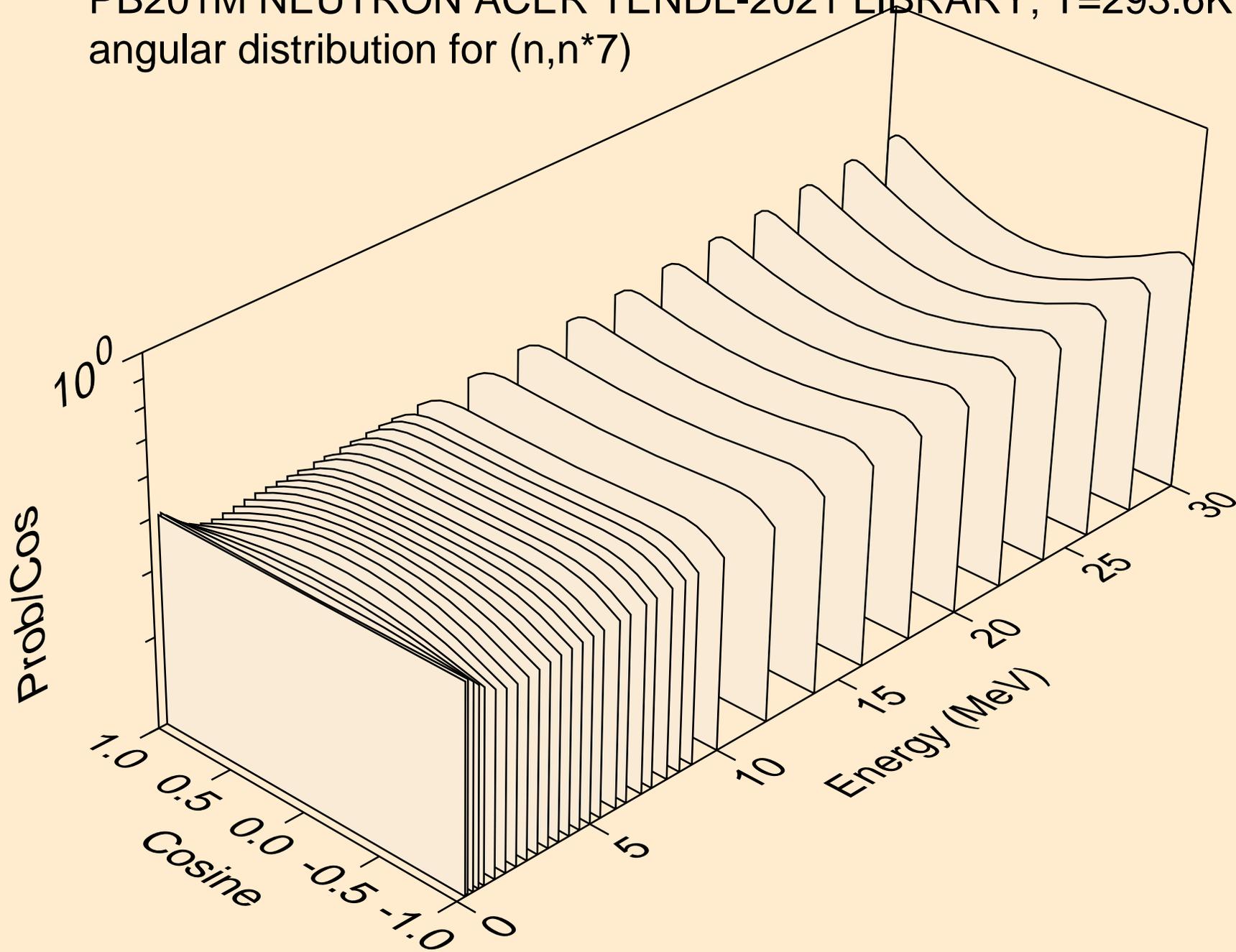
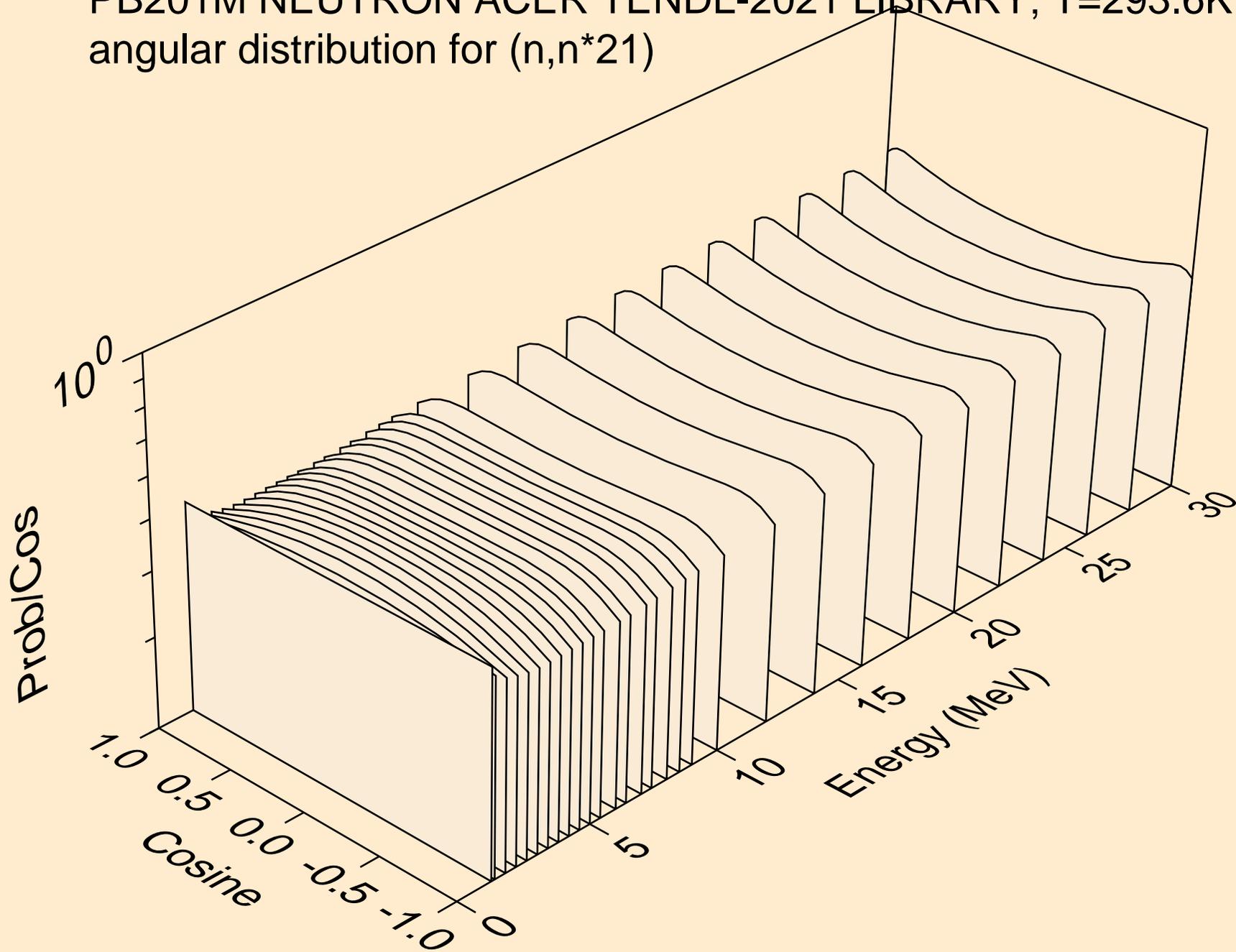PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*8)
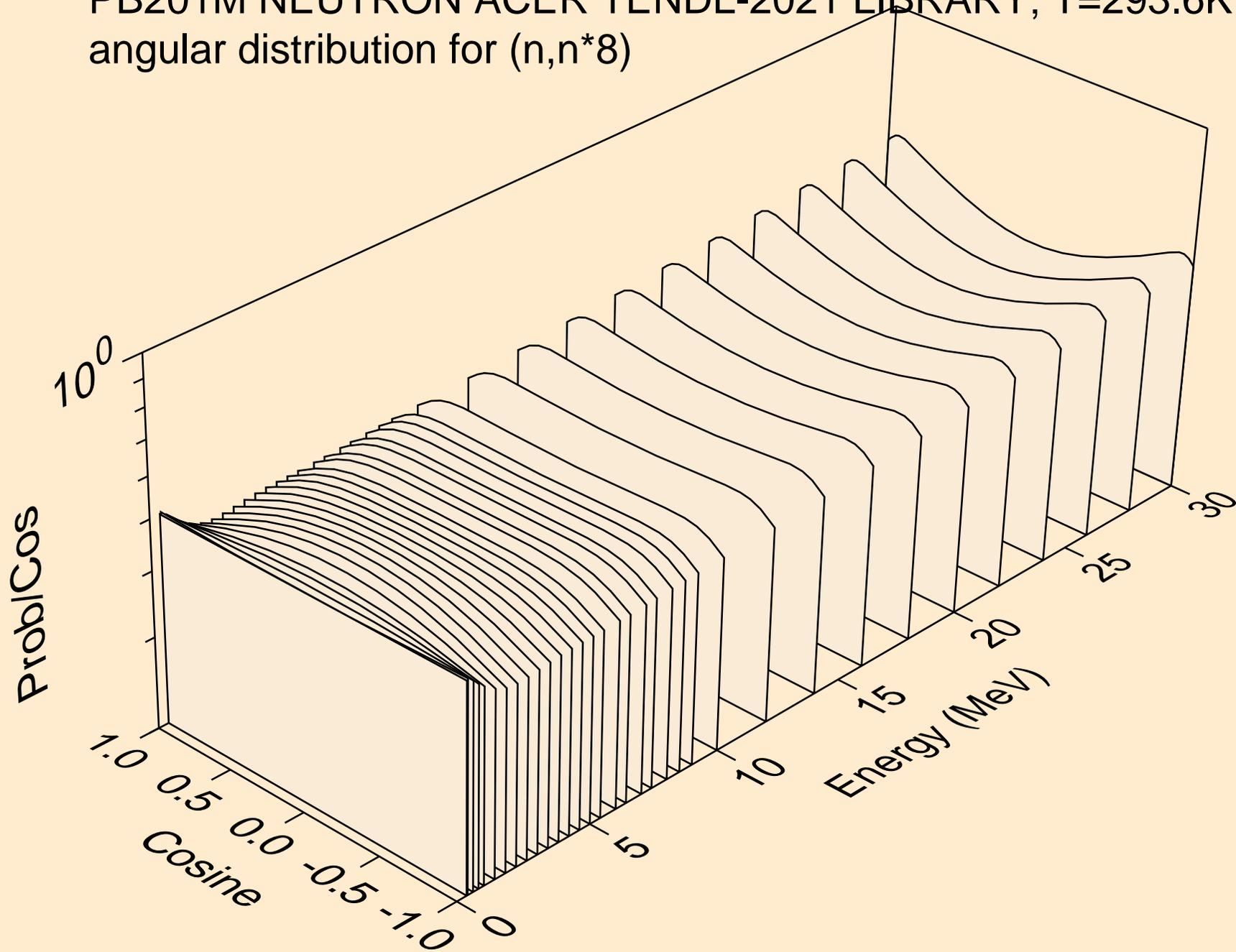
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
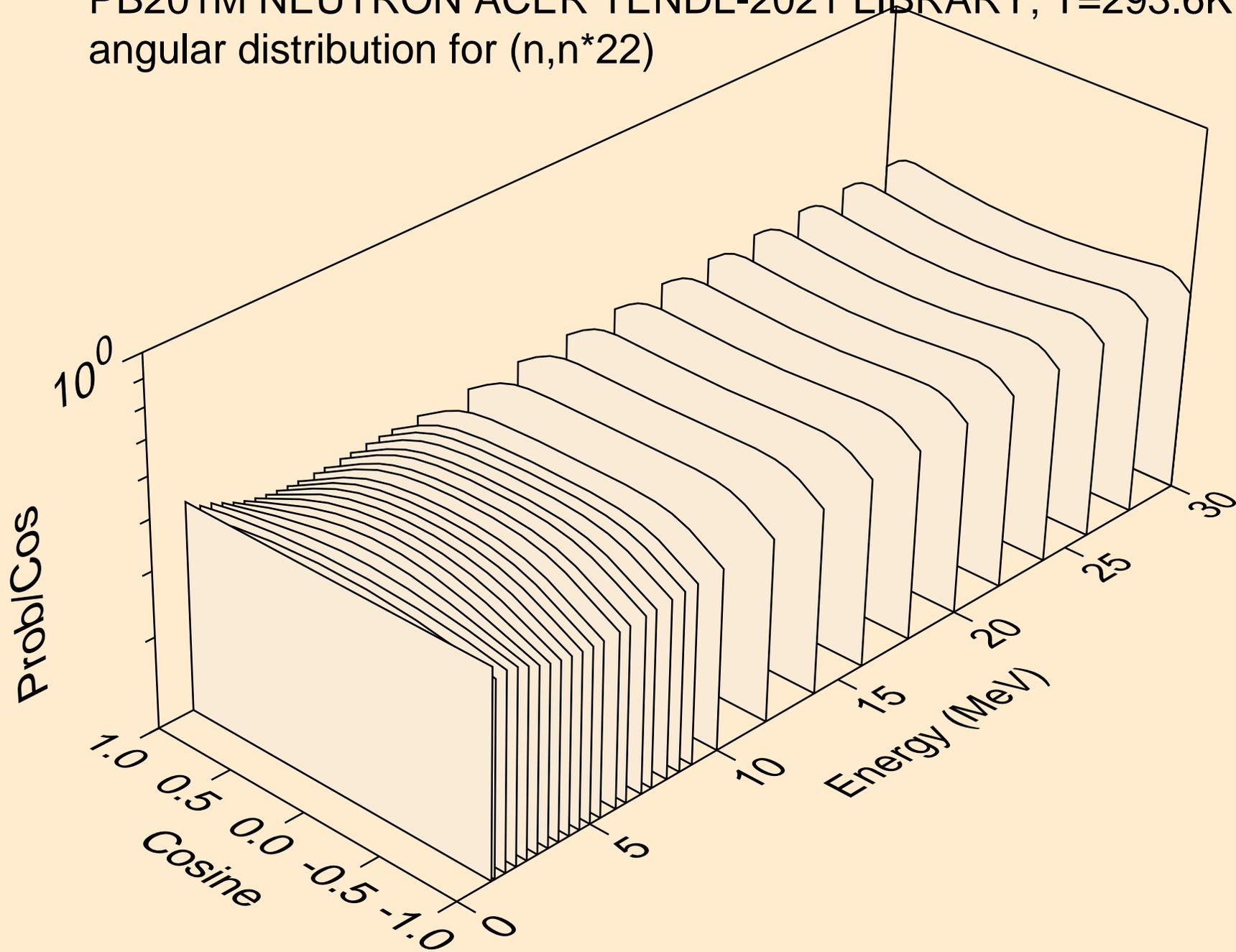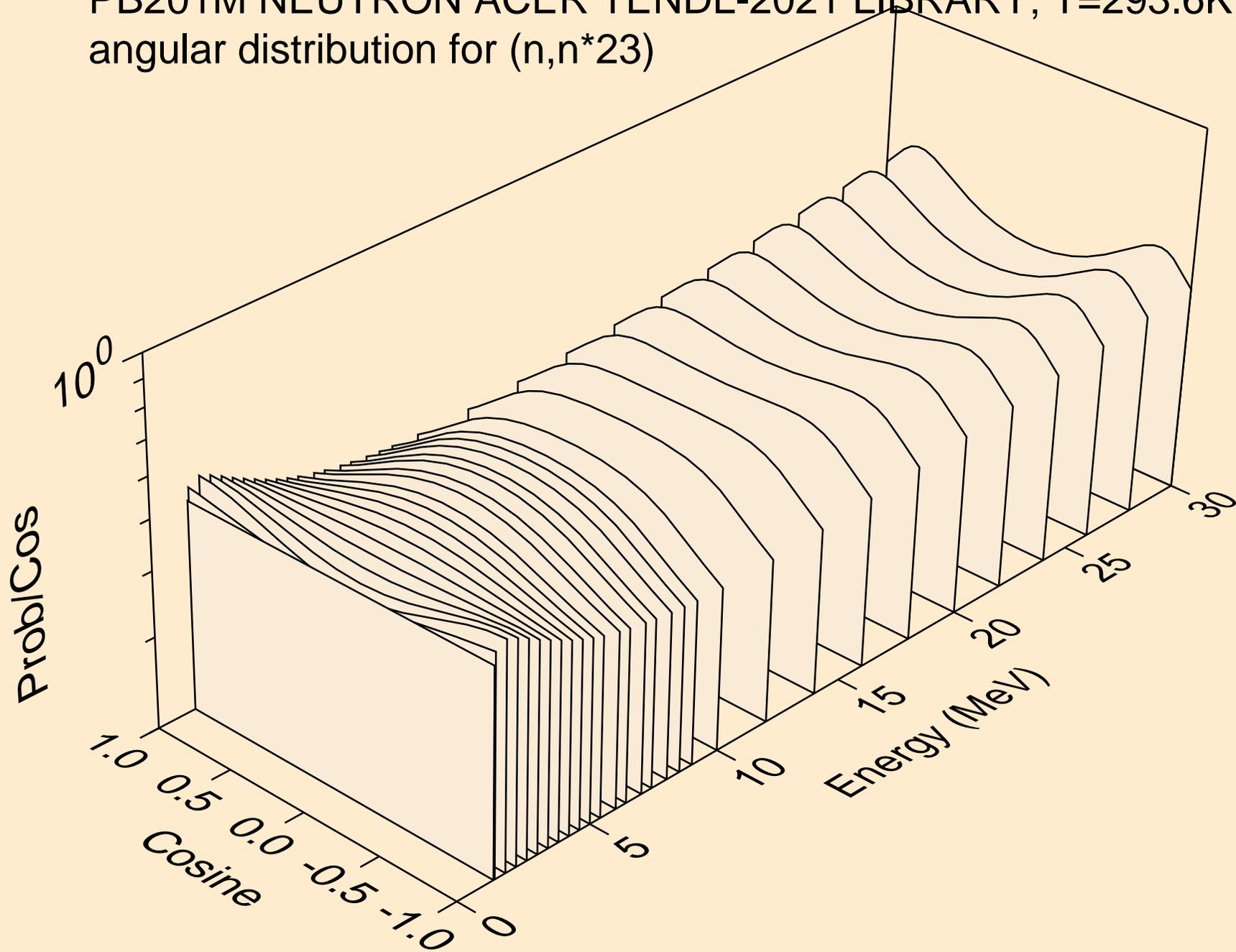angular distribution for (n,n*9)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*10)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
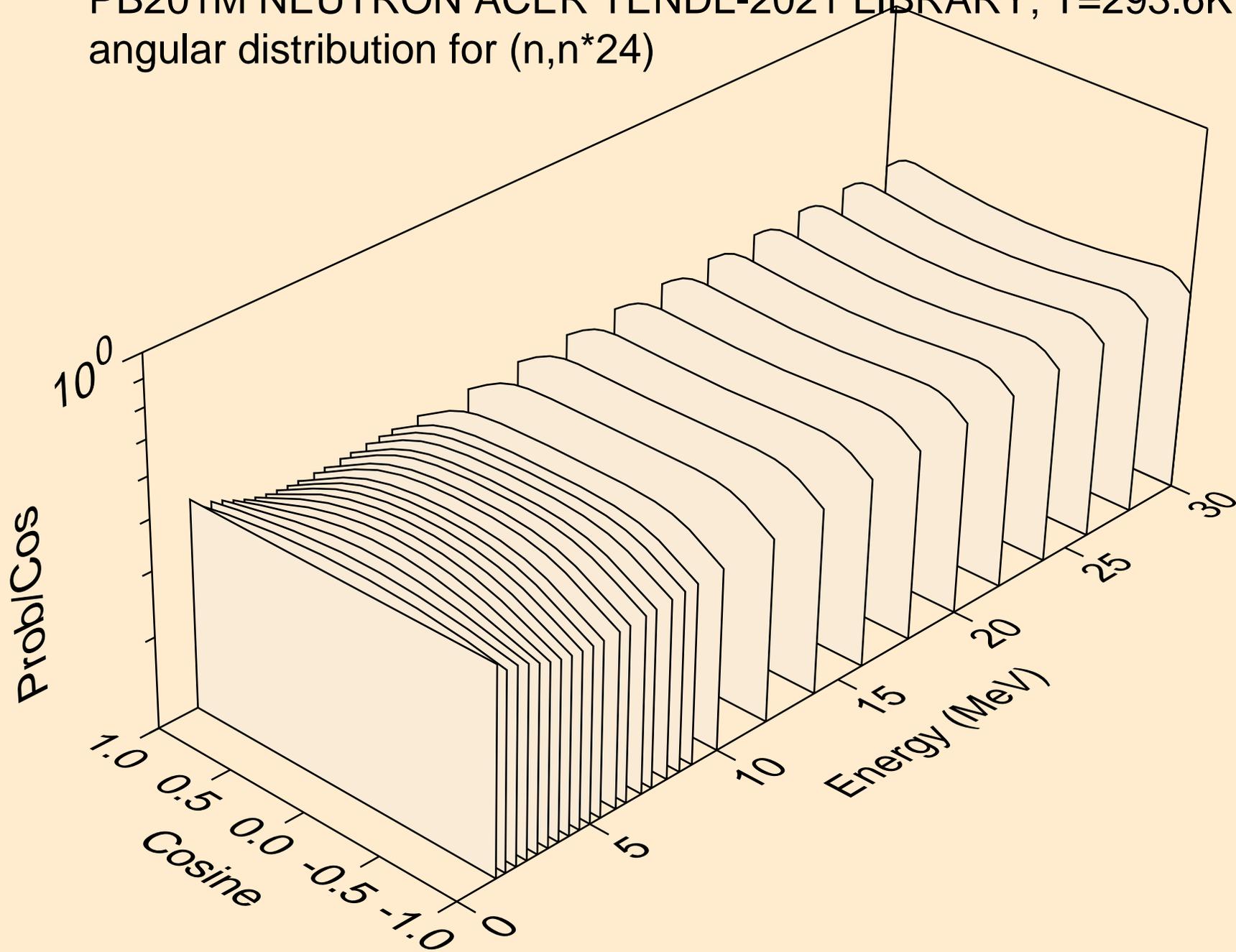angular distribution for (n,n*11)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*12)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*13)
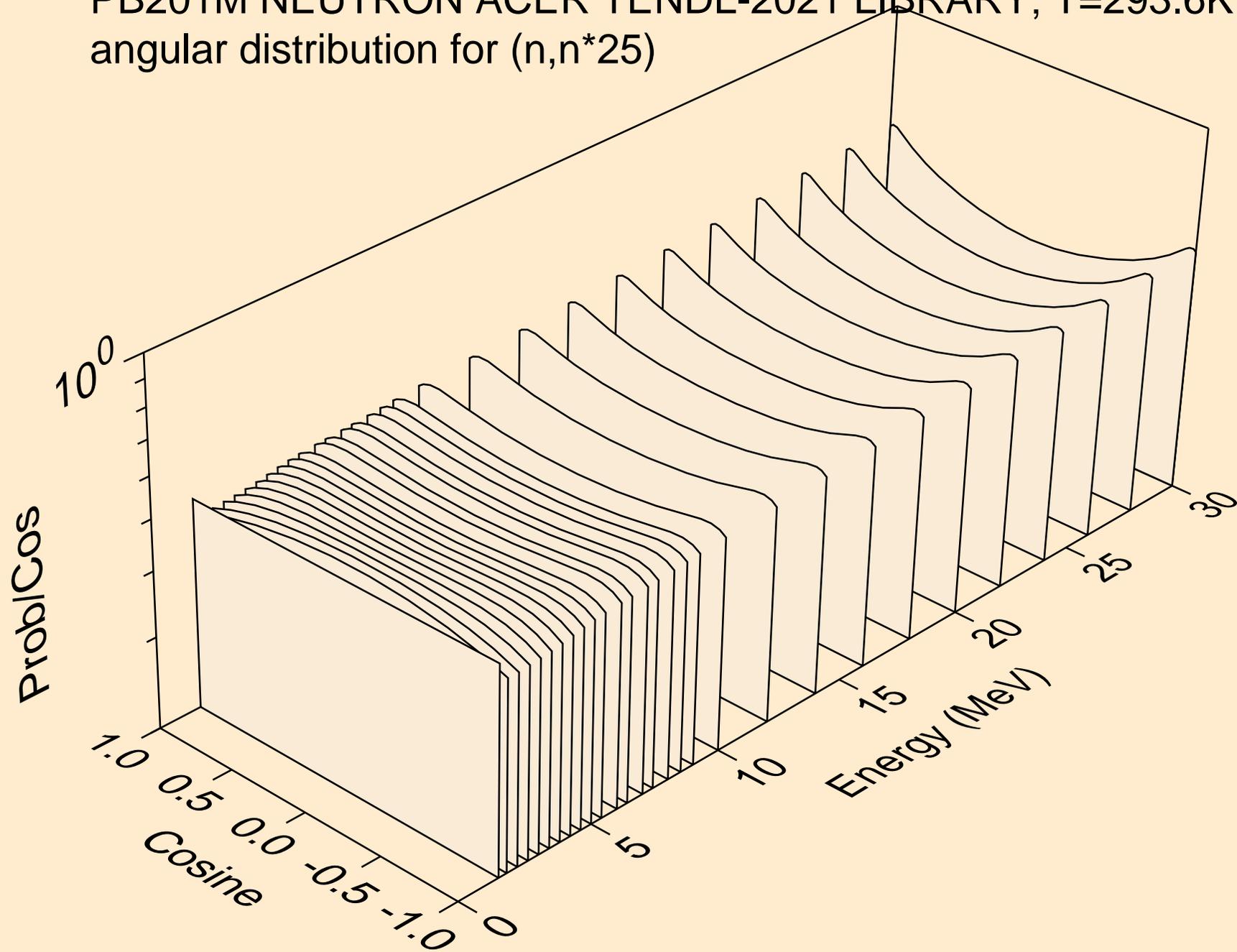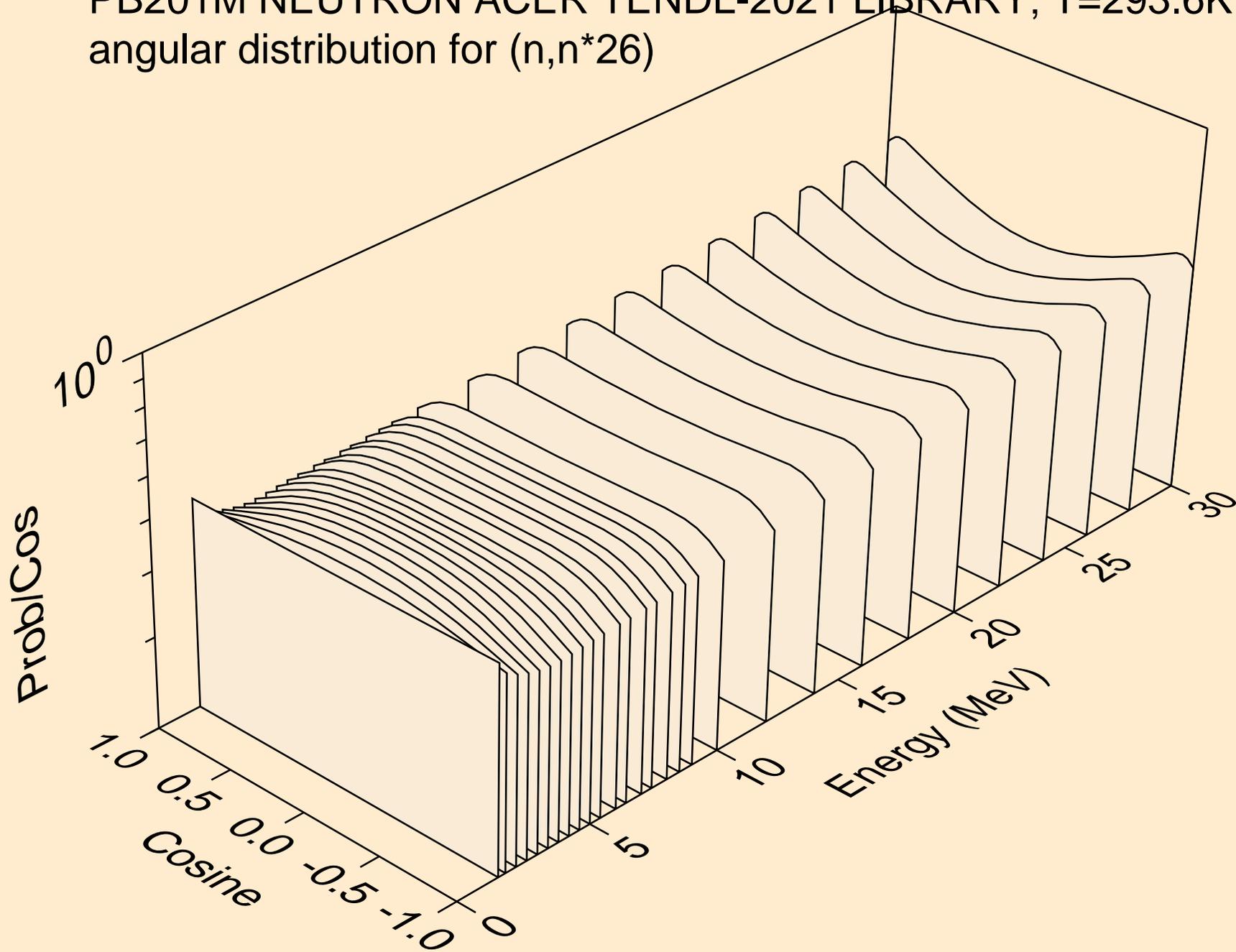
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
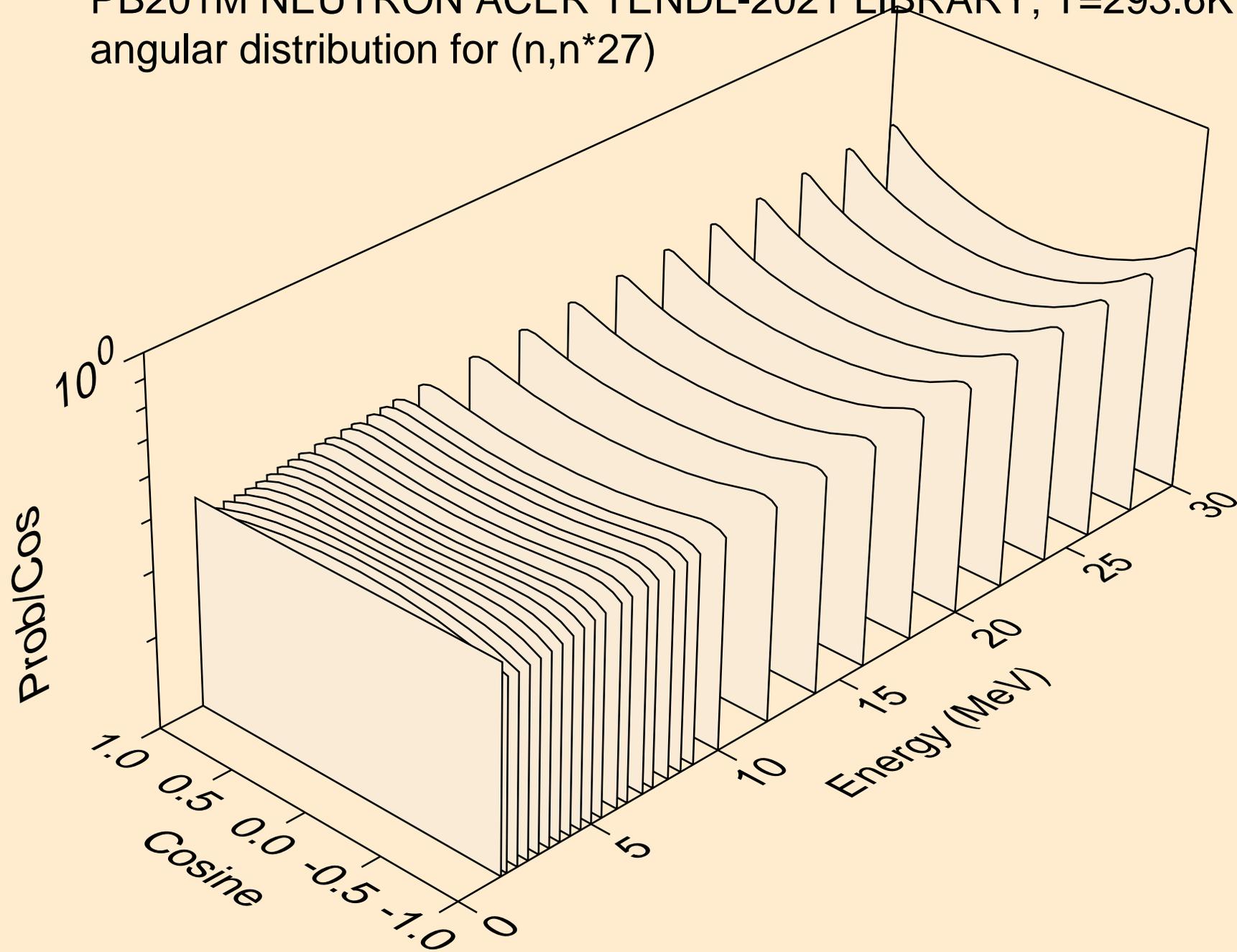angular distribution for (n,n*14)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
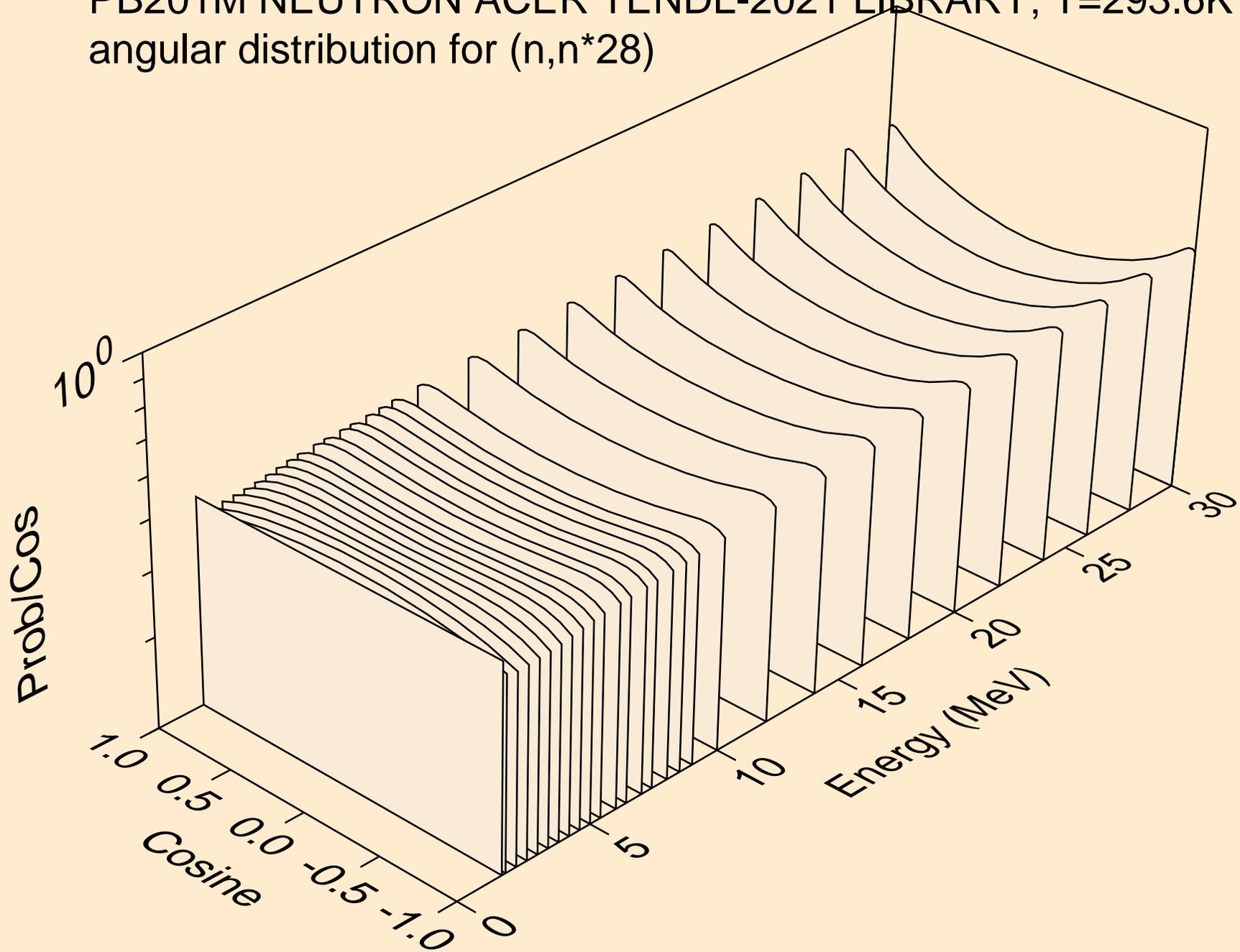angular distribution for (n,n*15)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
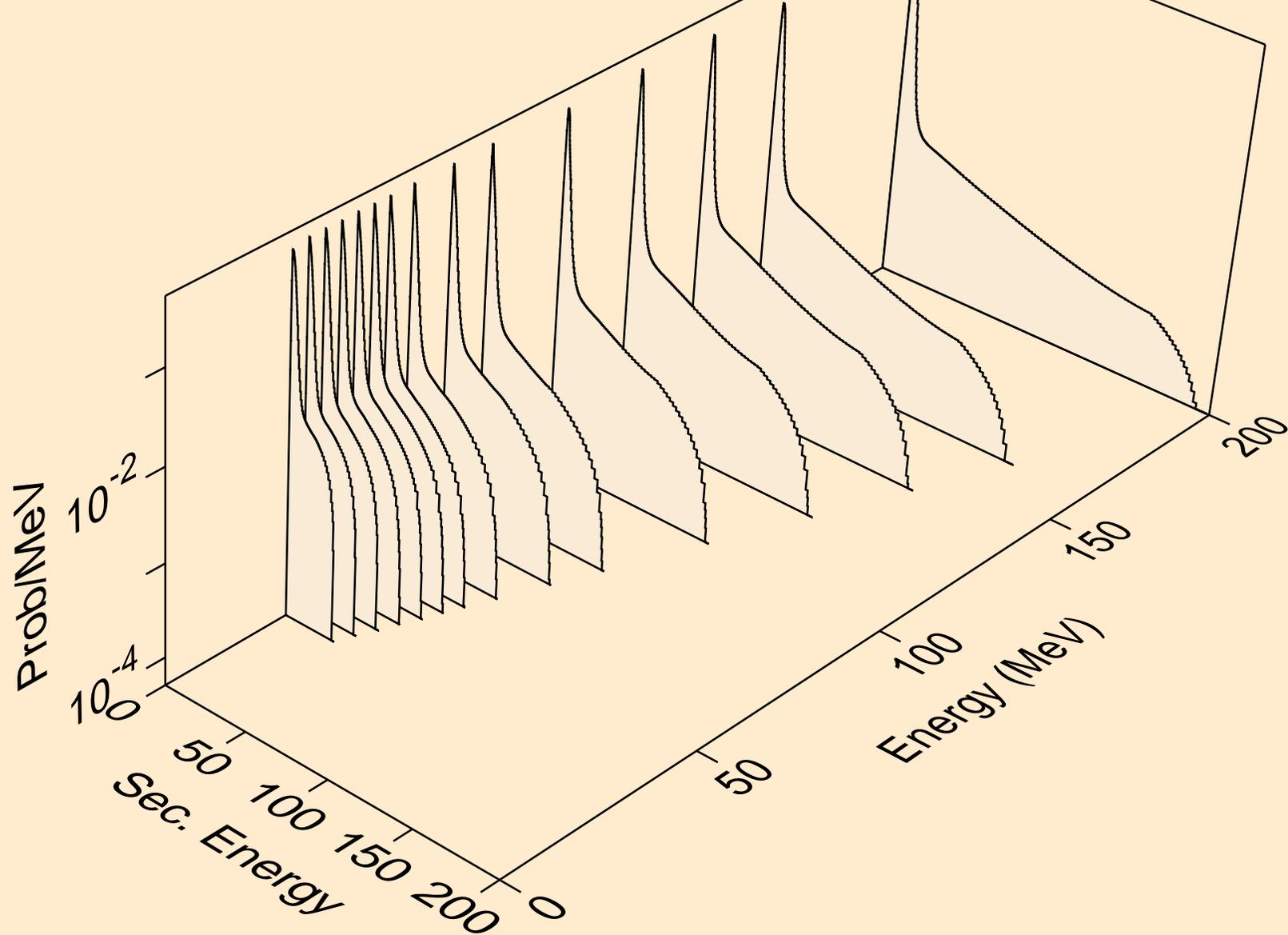angular distribution for (n,n*16)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*17)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*18)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*19)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*20)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
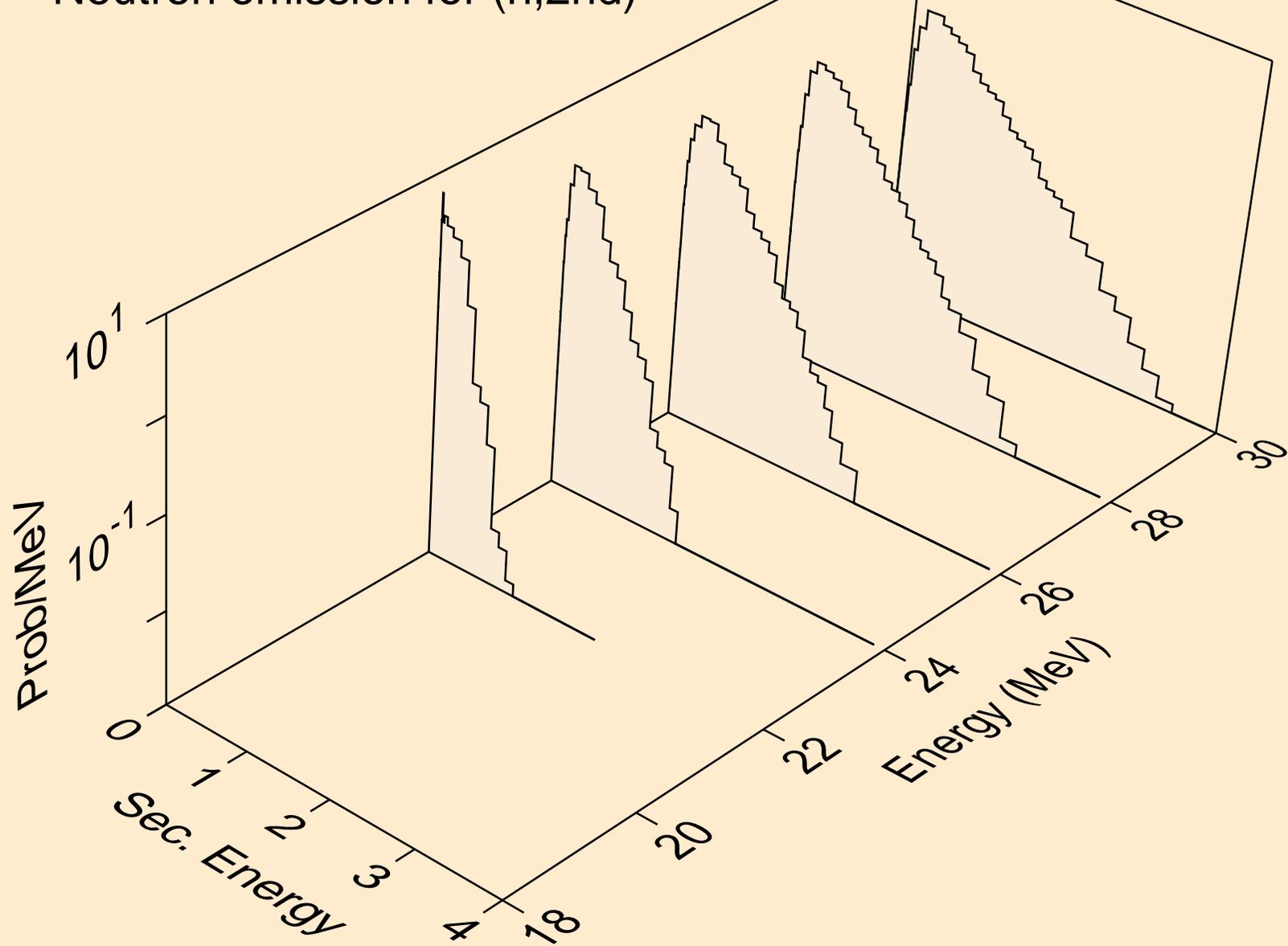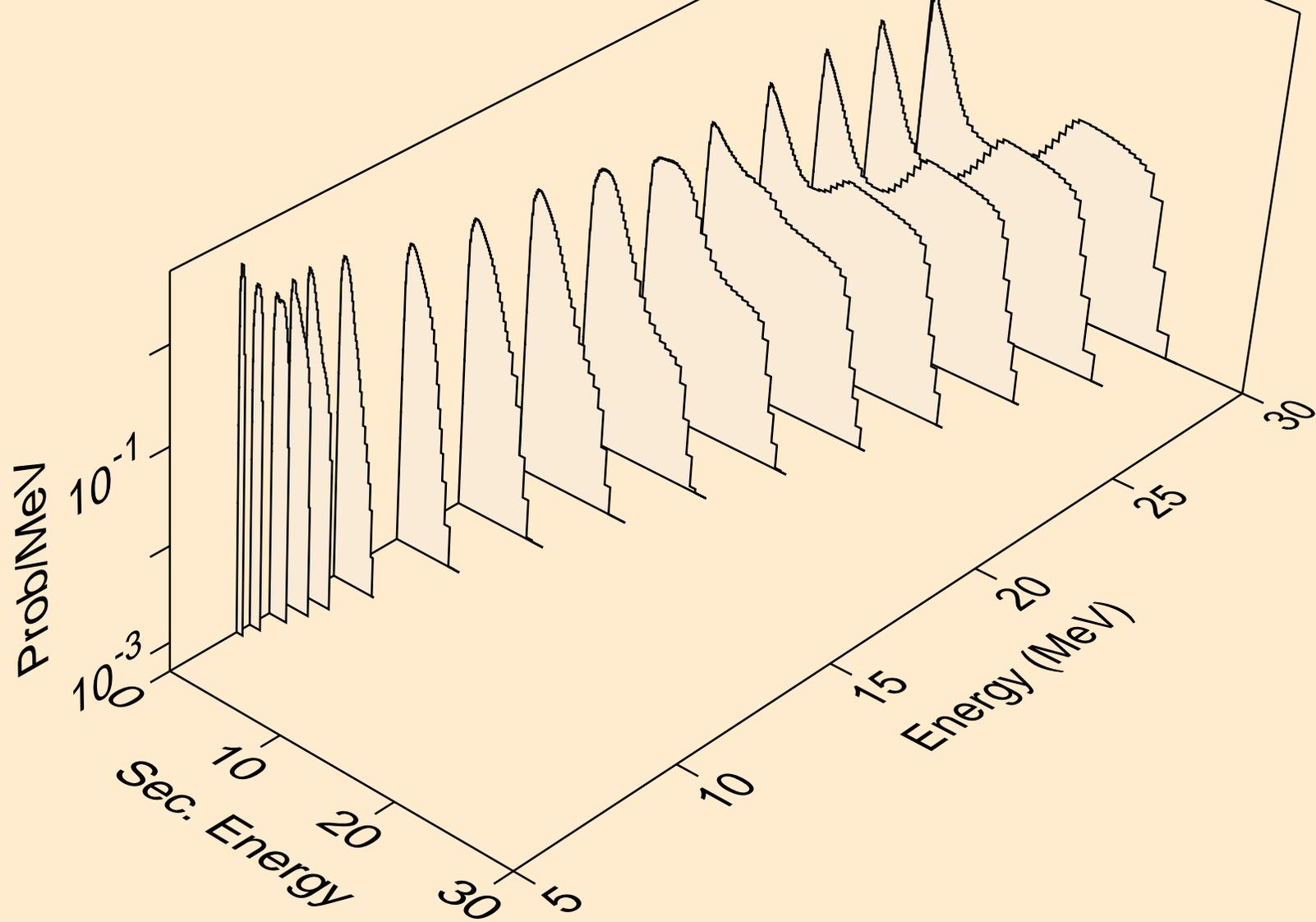angular distribution for (n,n*21)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
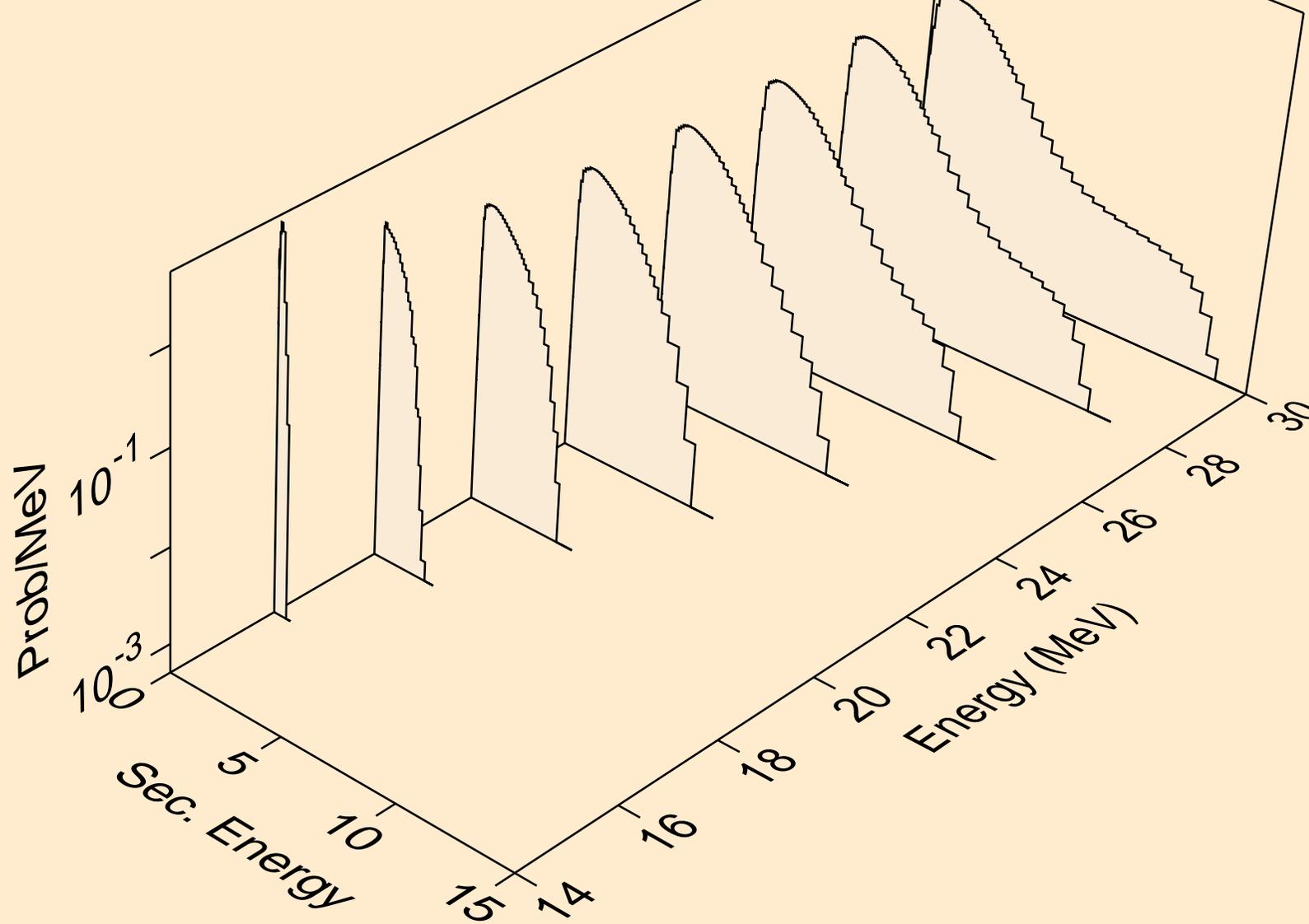angular distribution for (n,n*22)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*23)

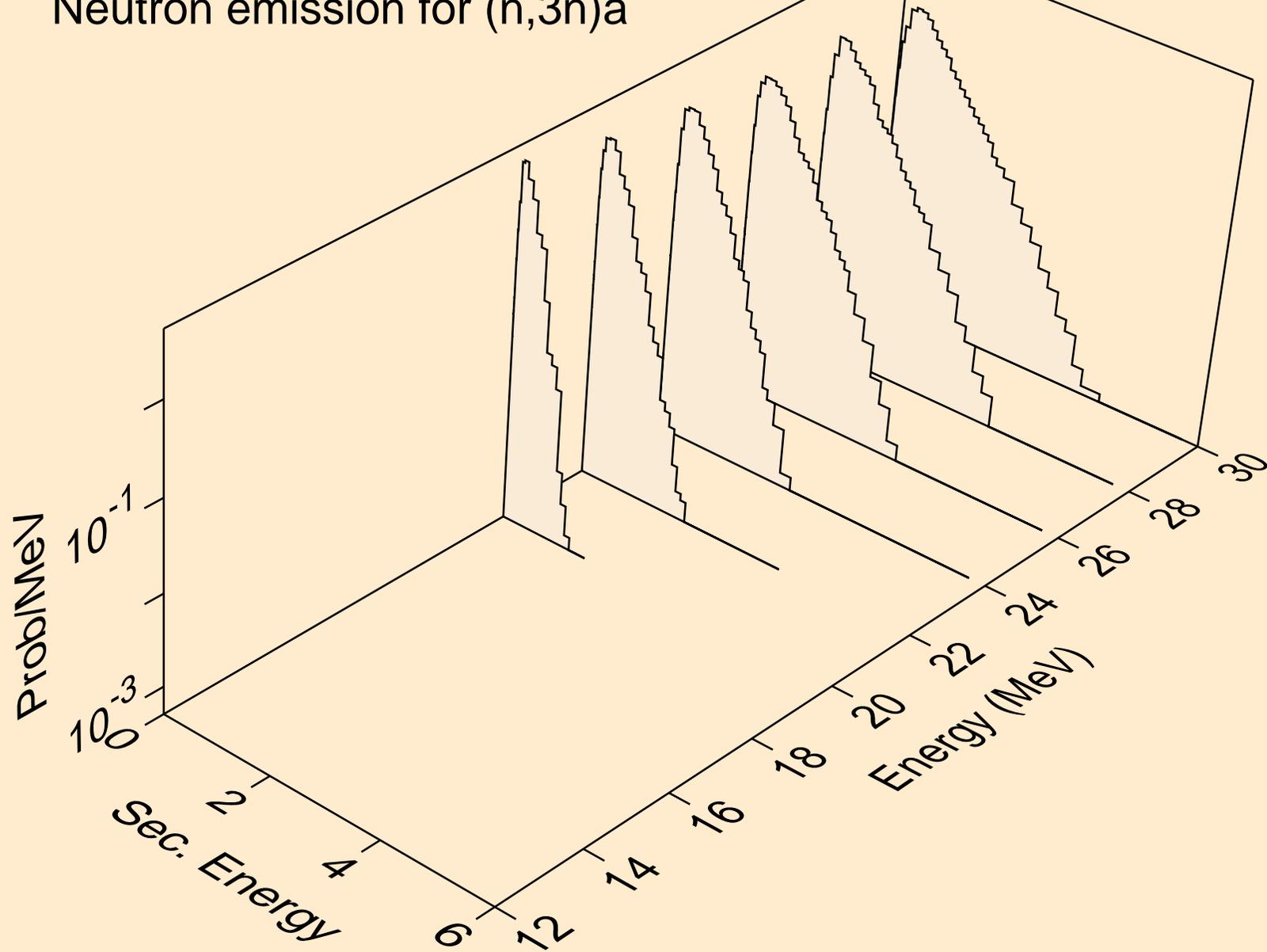PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*24)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*25)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*26)

ProbICos

Cosine

1.0 0.5 0.0 -0.5 -1.0

Energy (MeV)

5 10 15 20 25 30

10^0

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
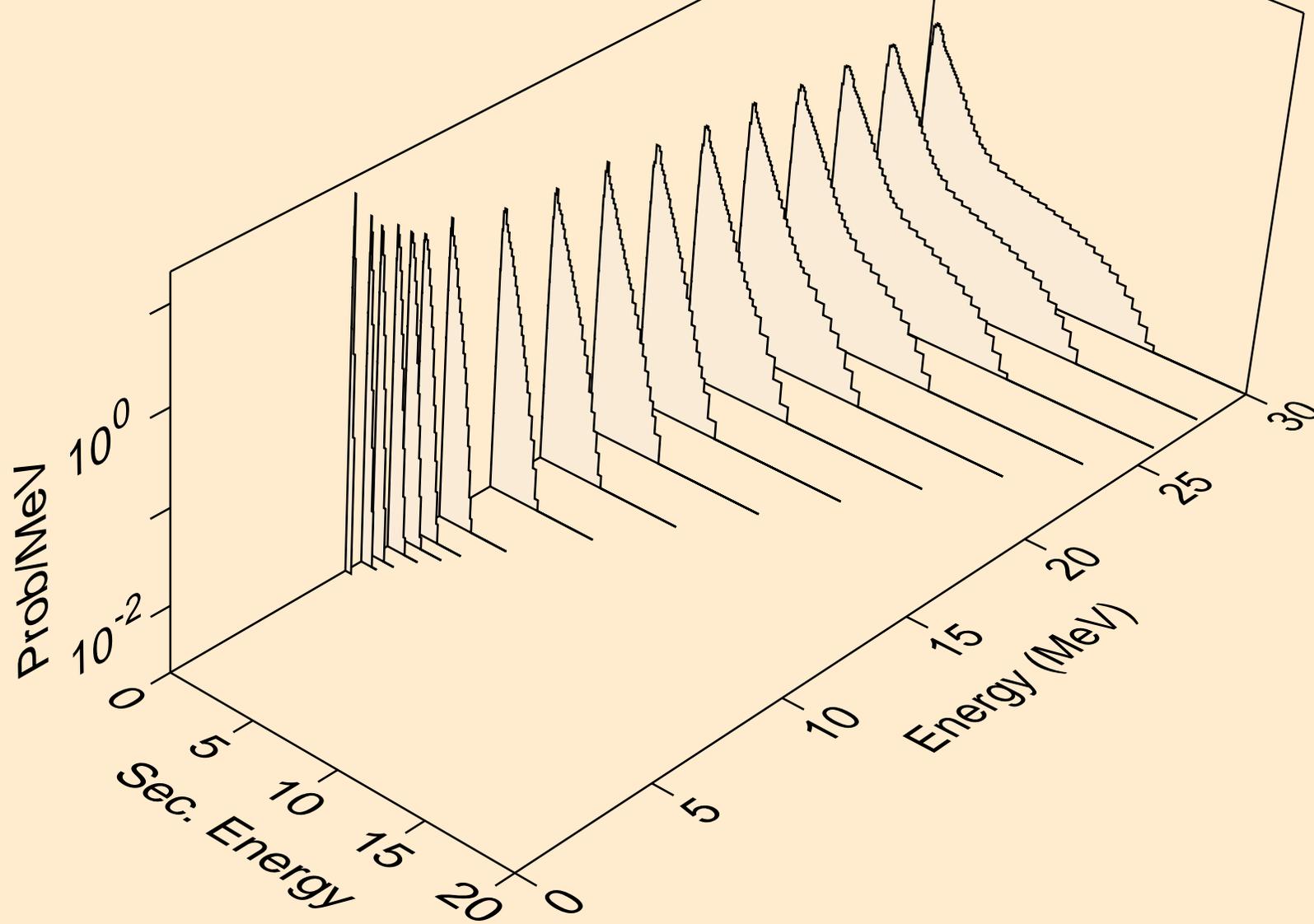angular distribution for (n,n*27)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
angular distribution for (n,n*28)

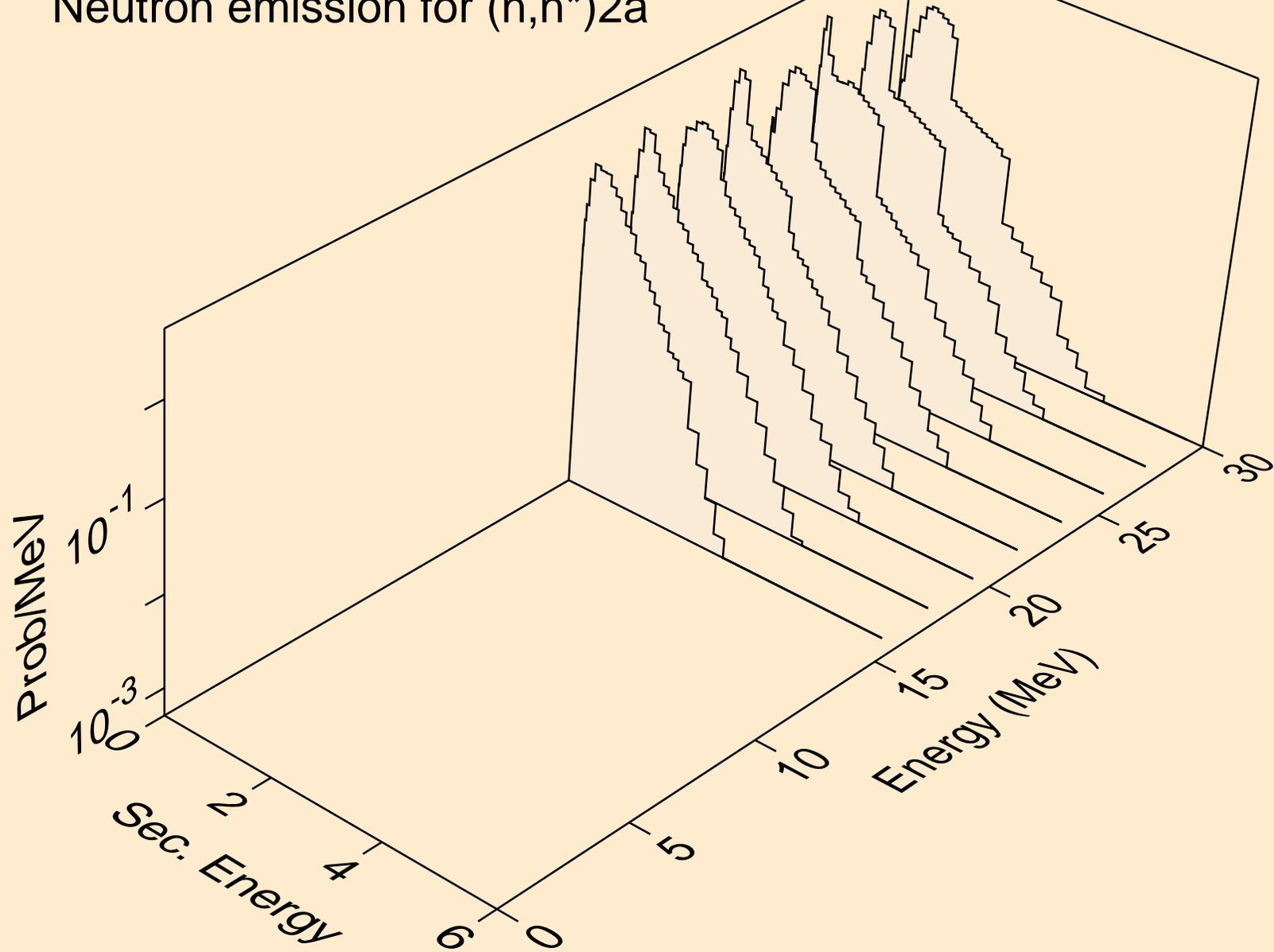PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
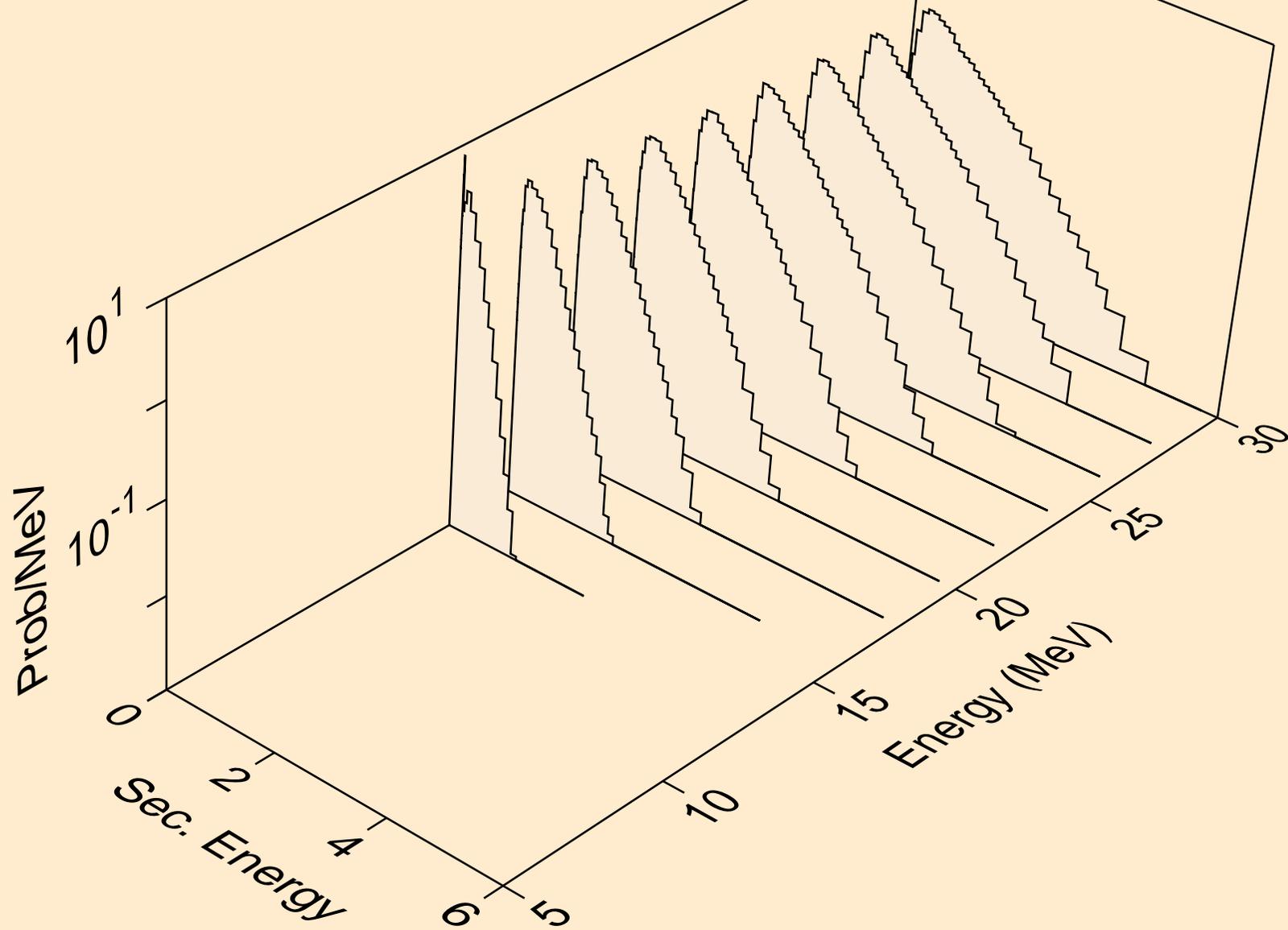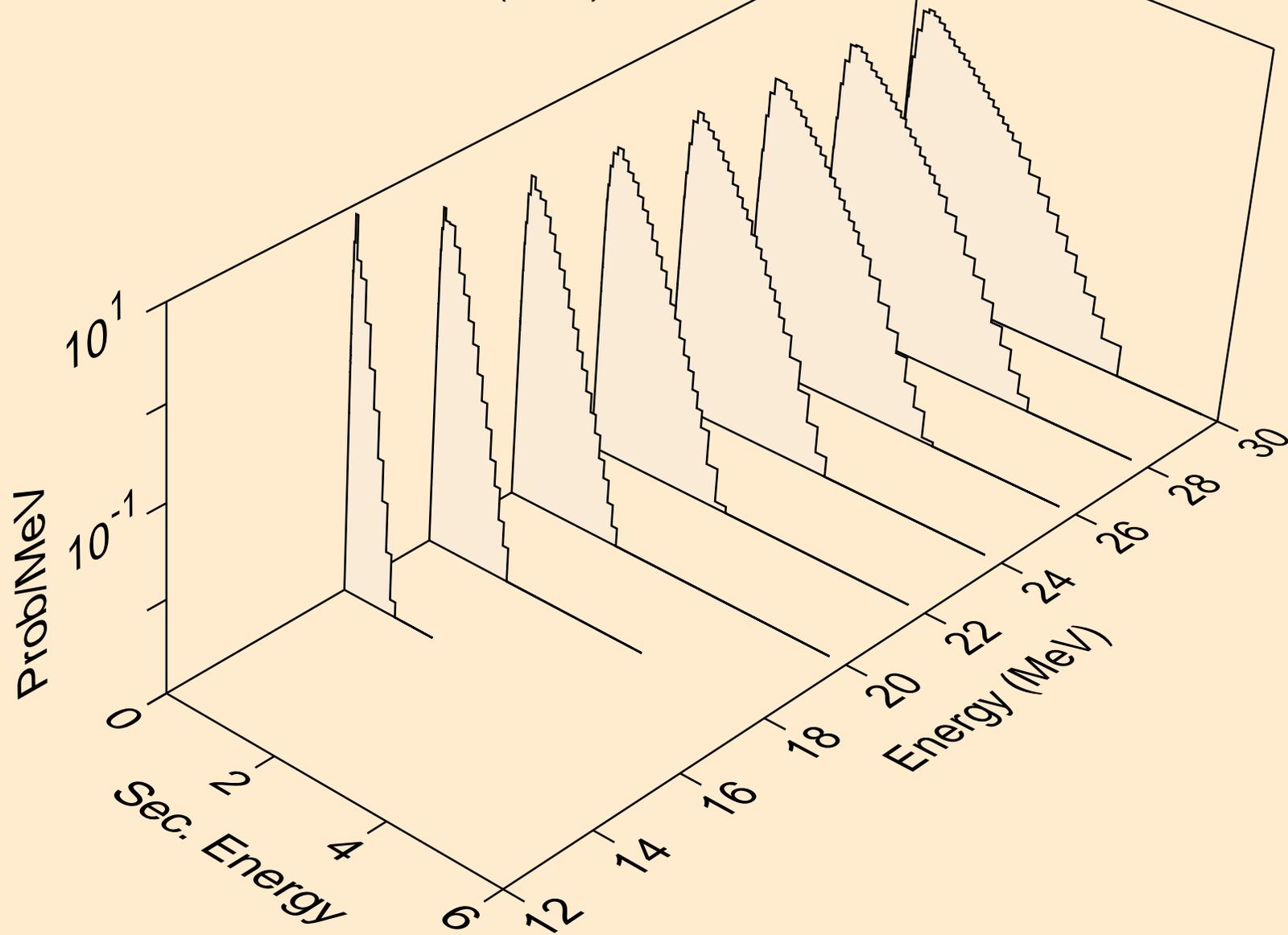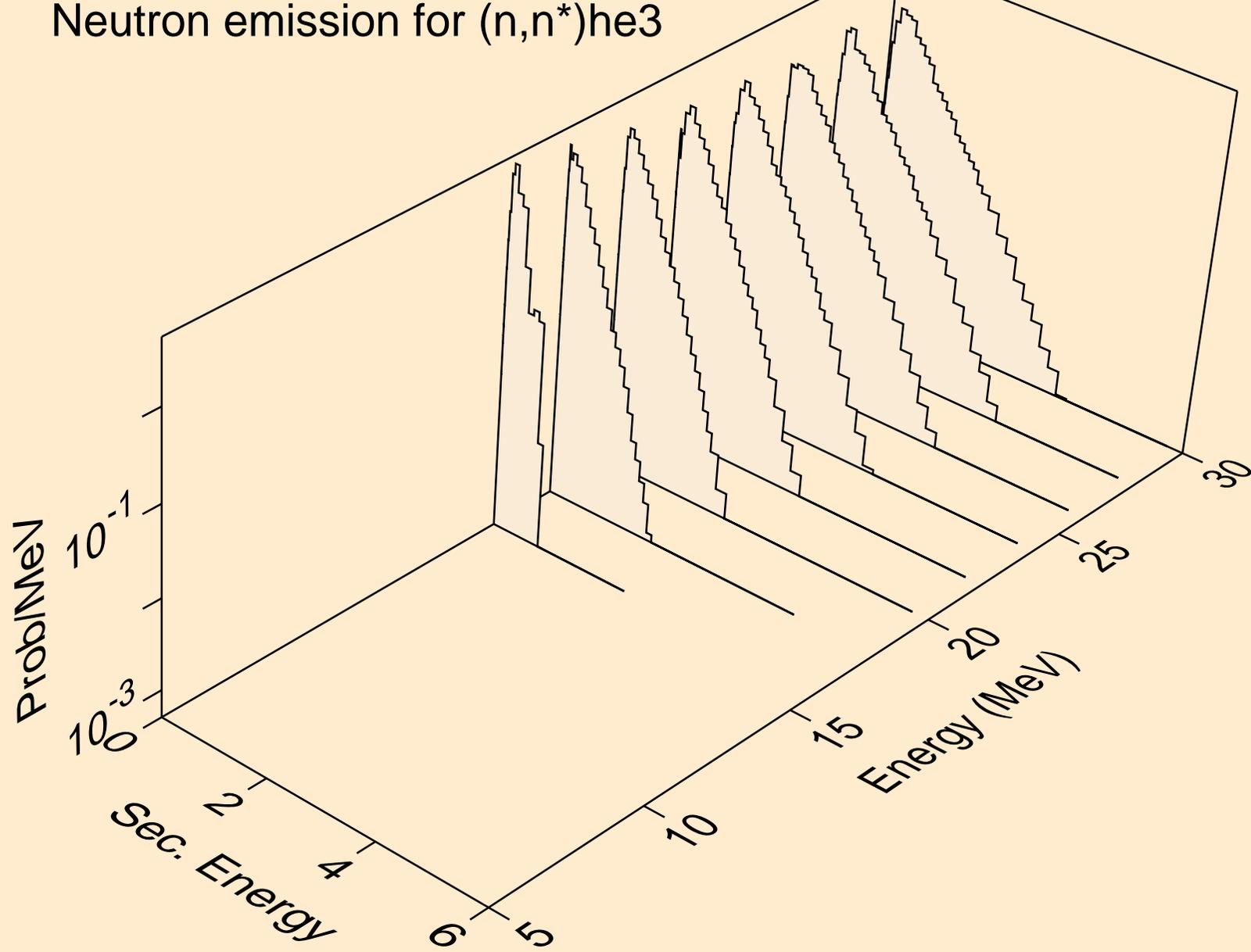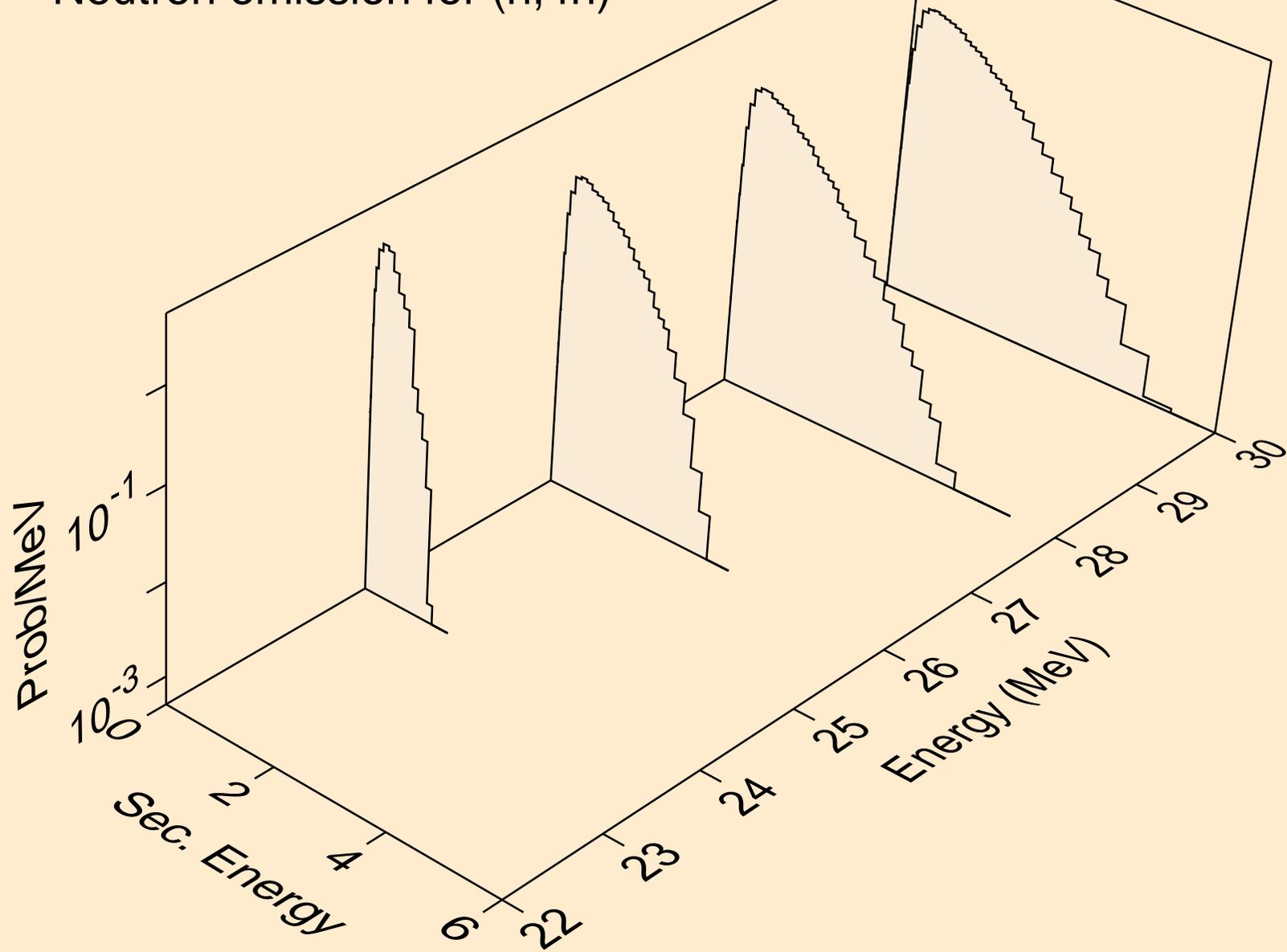Neutron emission for (n,x)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,2nd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,2n)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,3n)

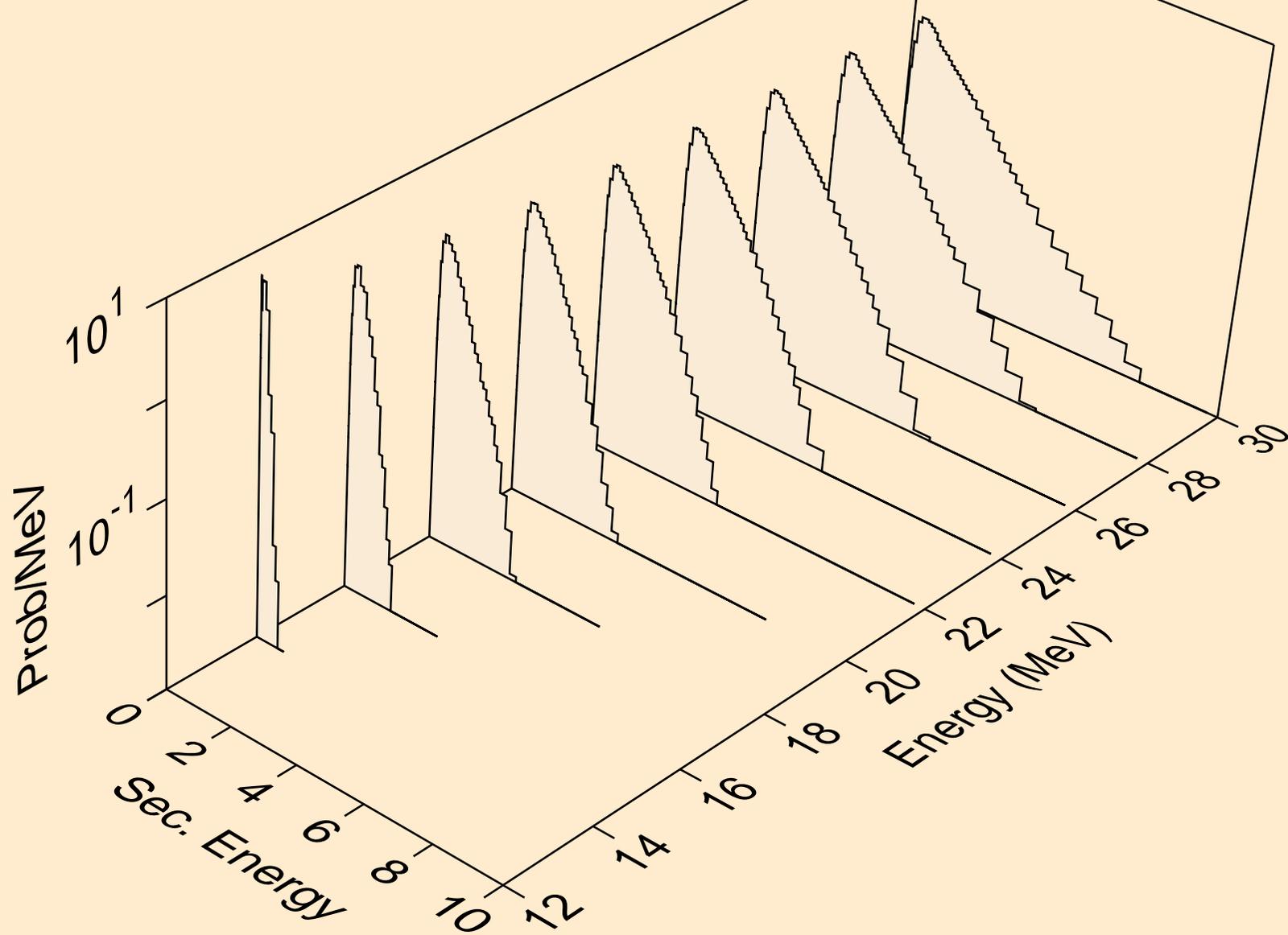PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
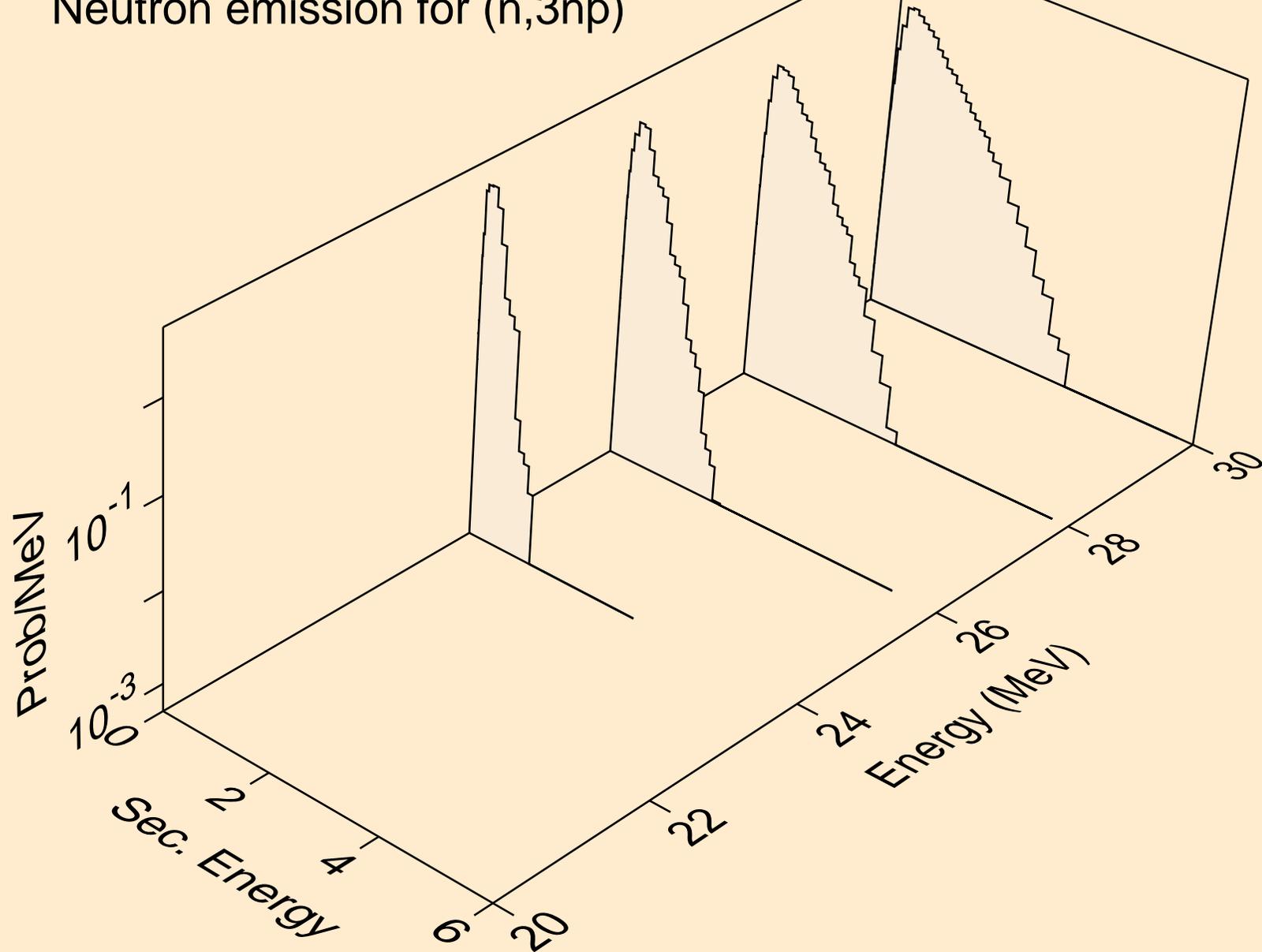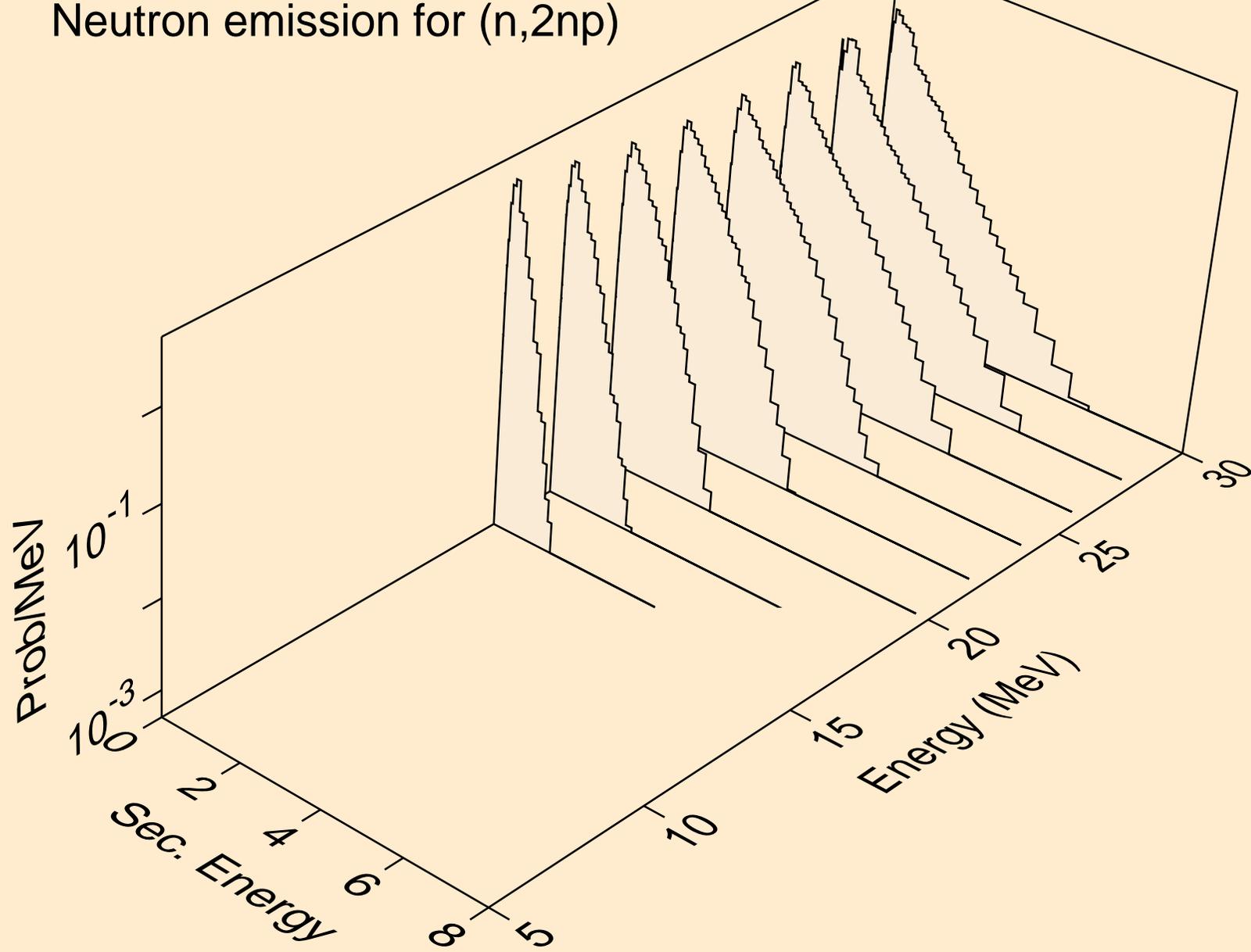Neutron emission for (n,n*)a

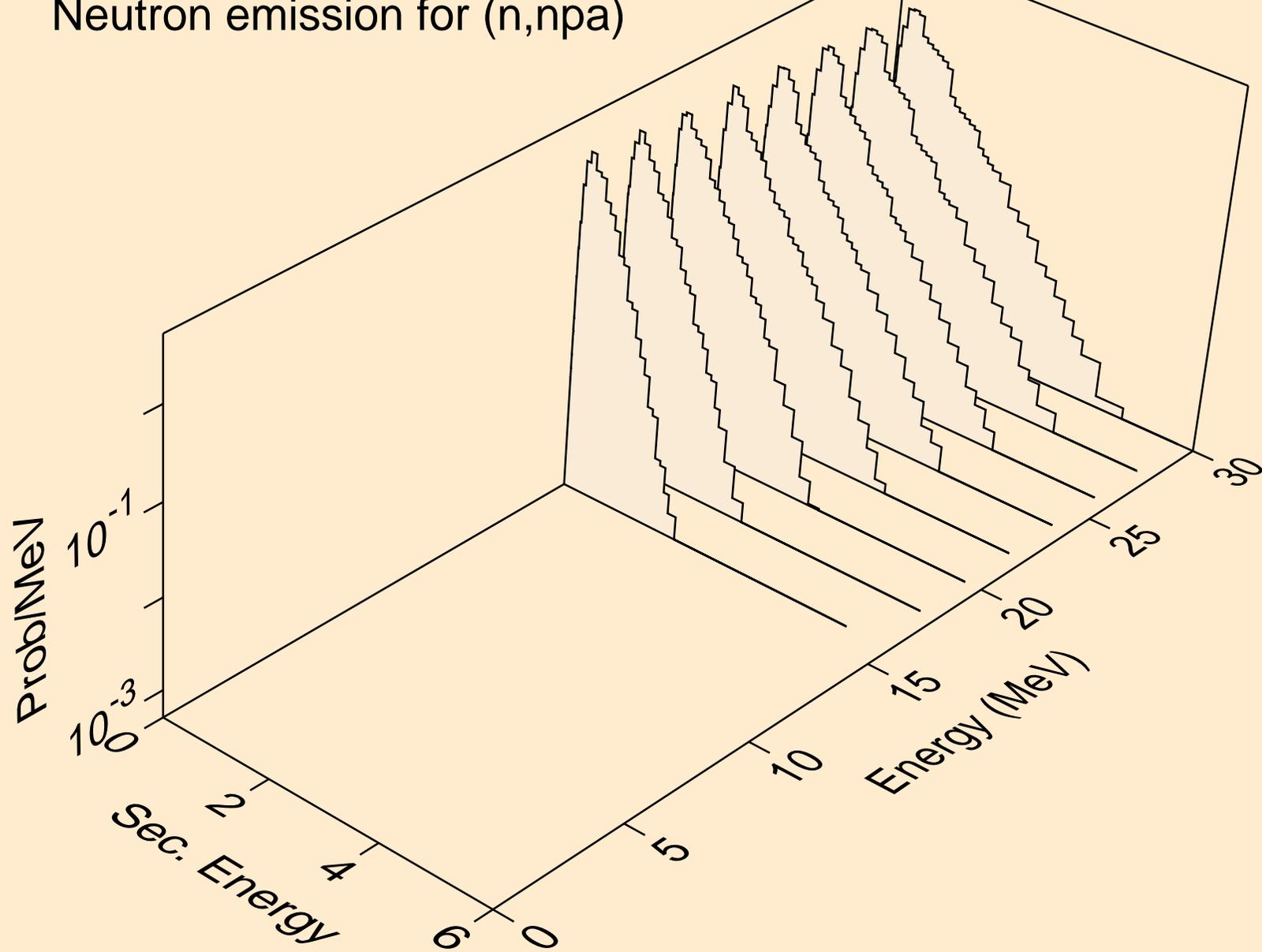PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,2n)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
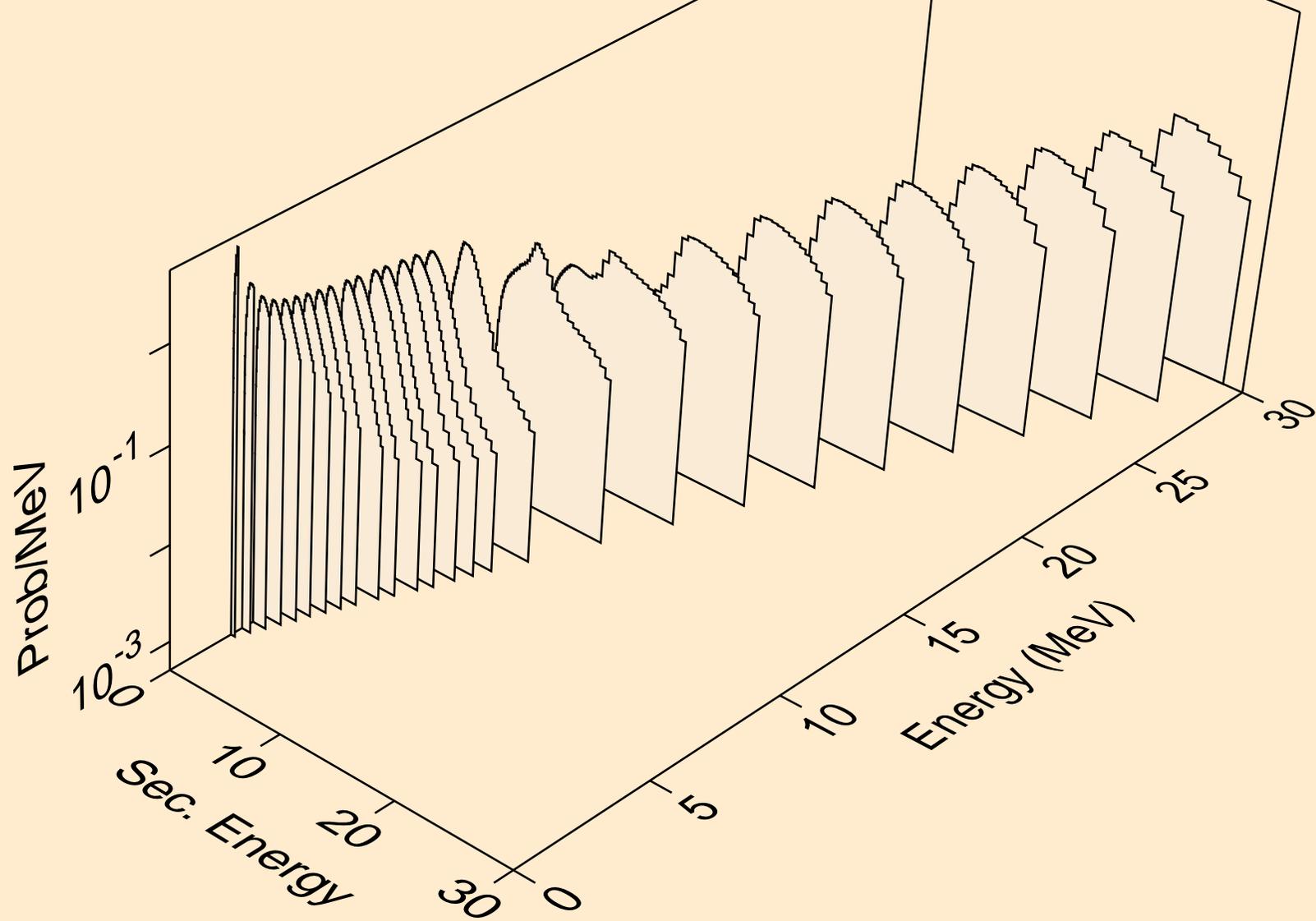Neutron emission for (n,3n)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,n*)p

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,n*)2a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
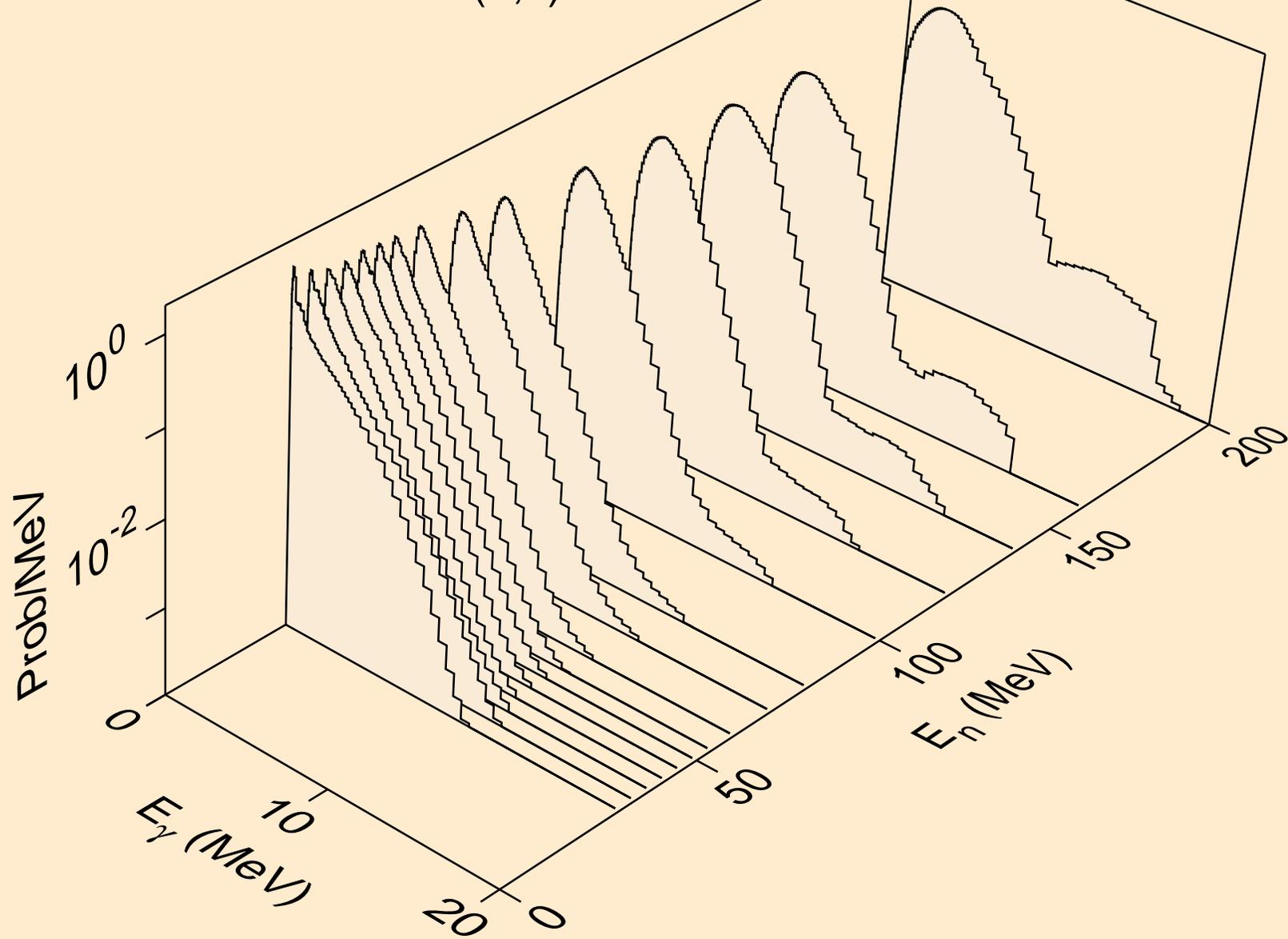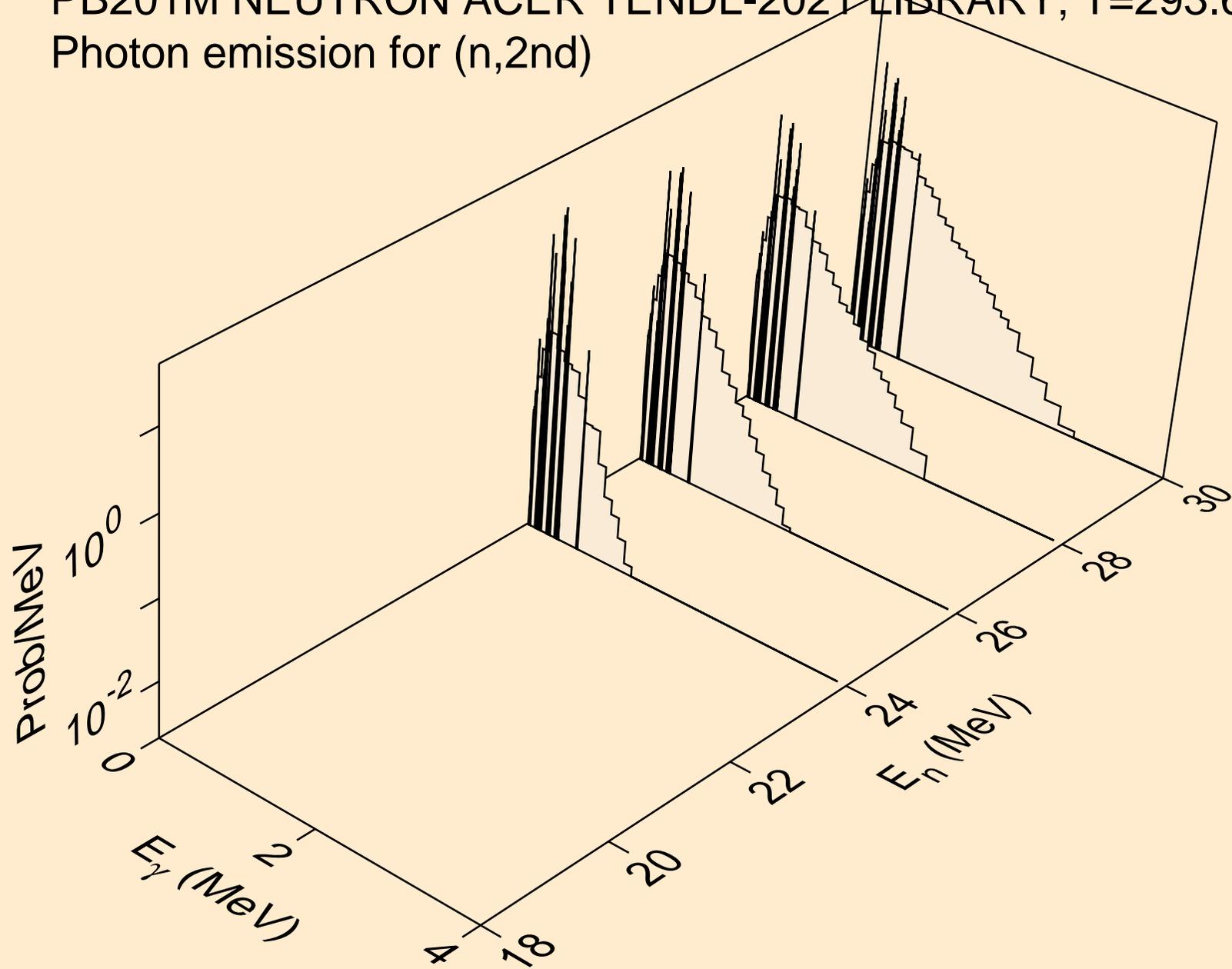Neutron emission for (n,n*)d

Prob/MeV

Sec. Energy

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,n*)t

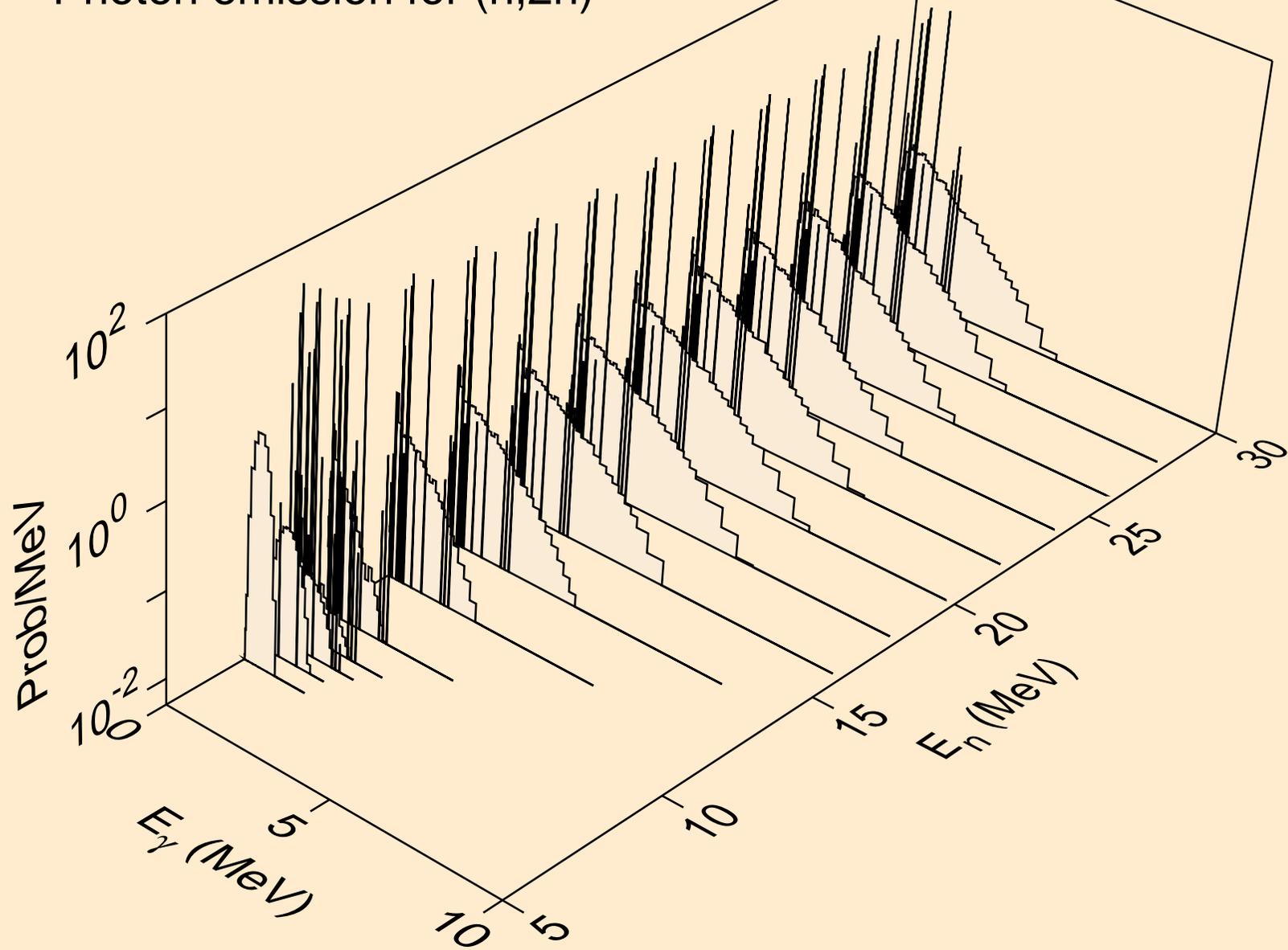PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,n*)he3

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,4n)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,2np)
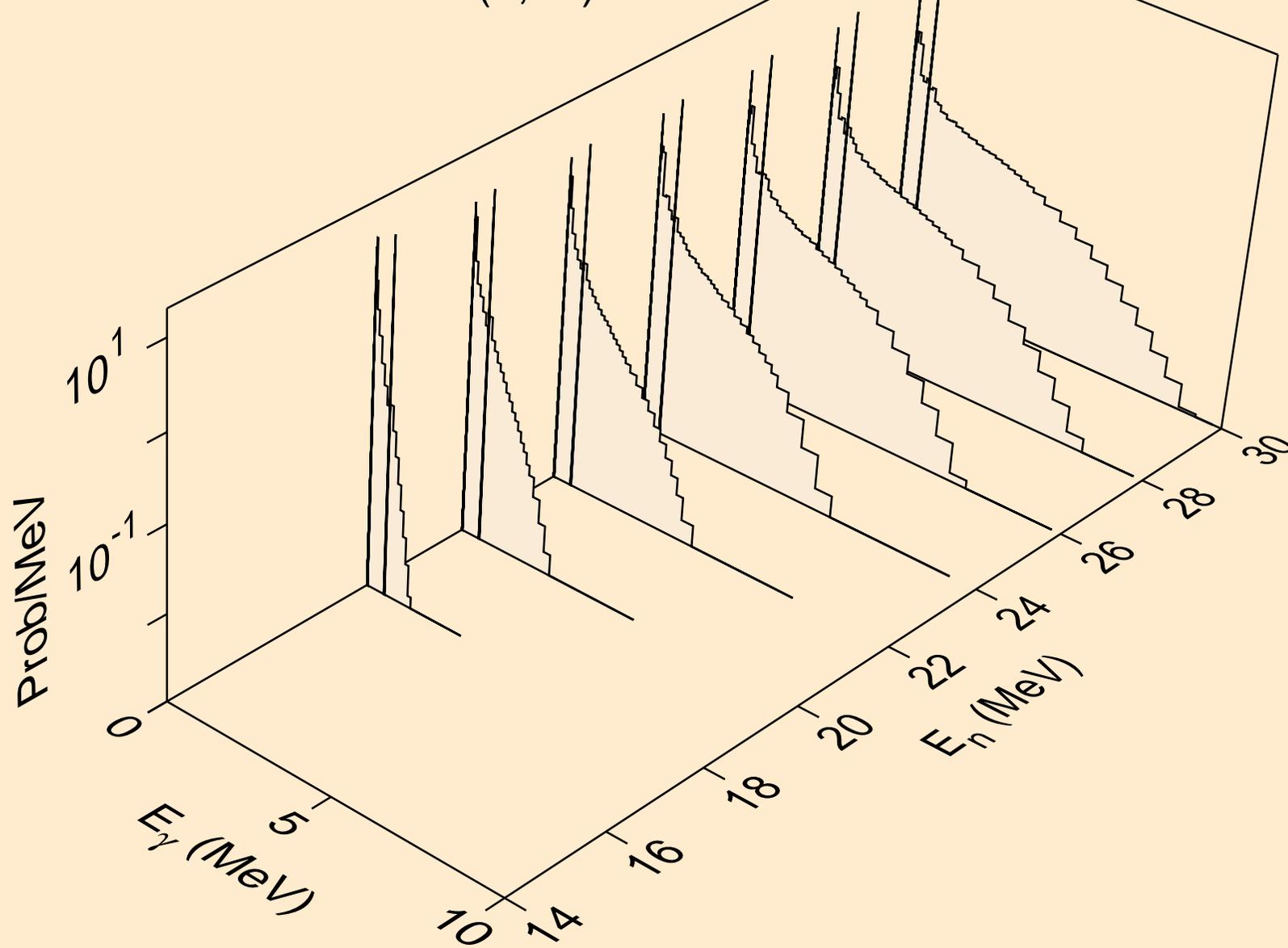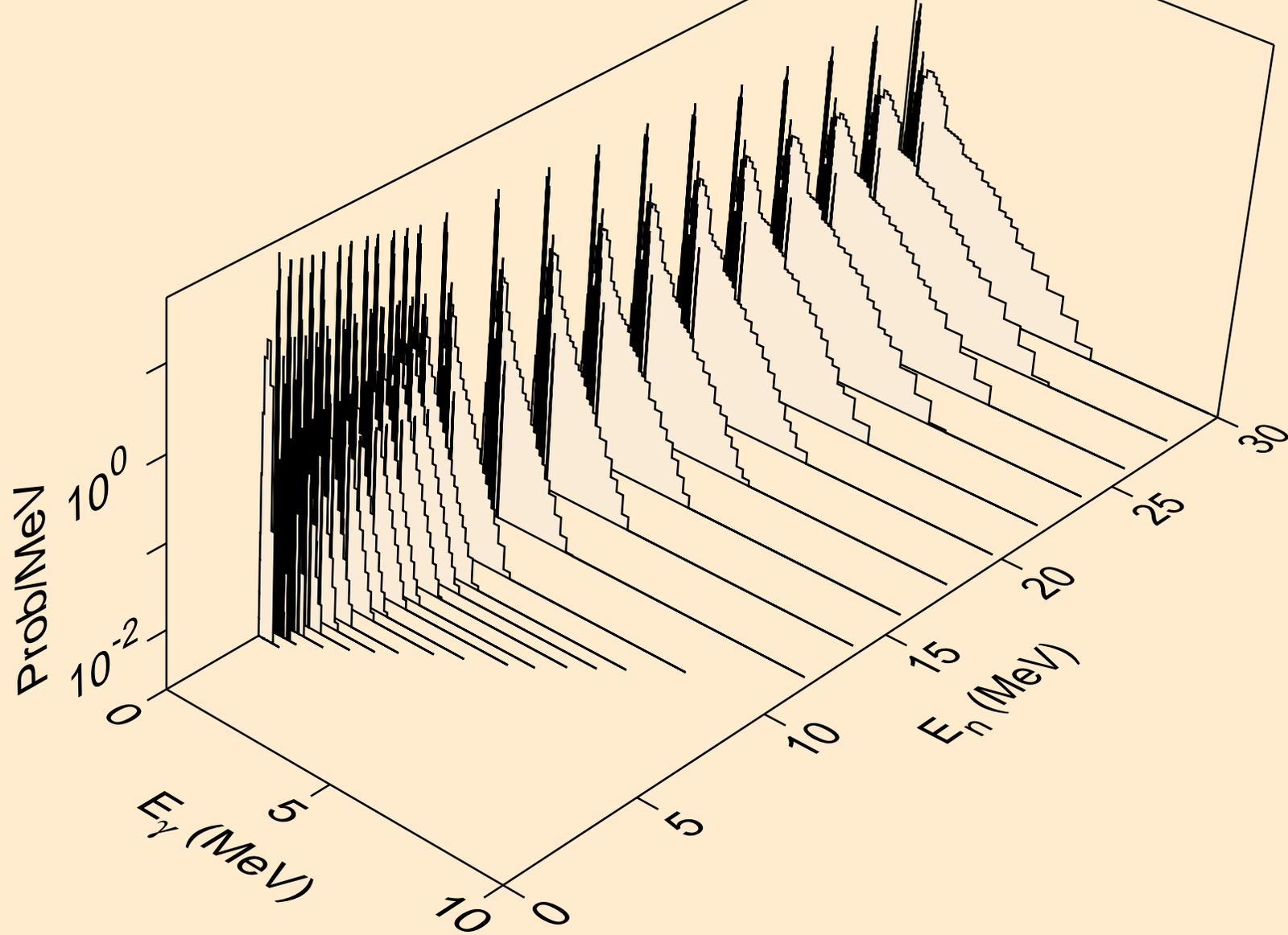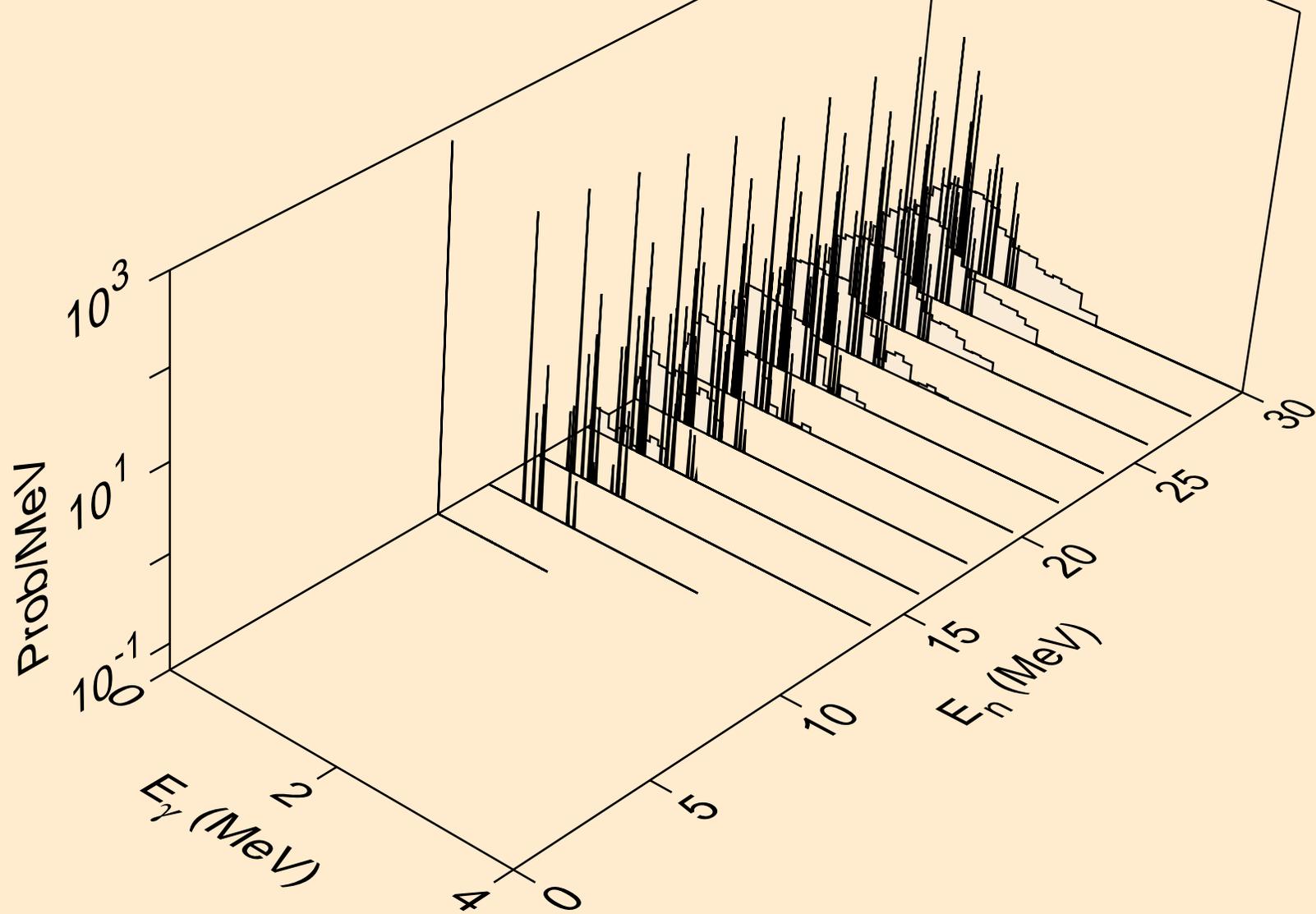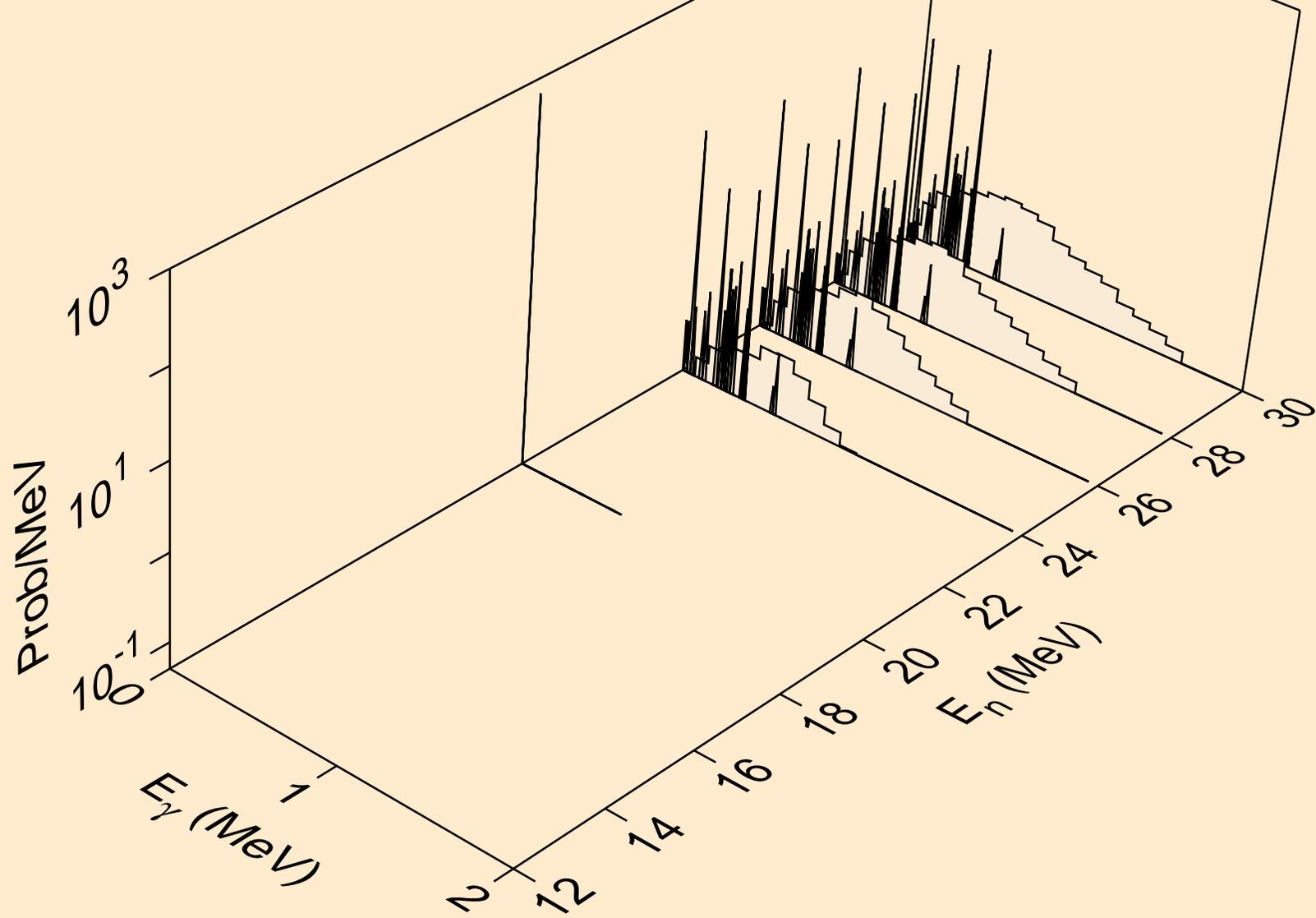
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,3np)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,2np)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,npa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Neutron emission for (n,n*c)

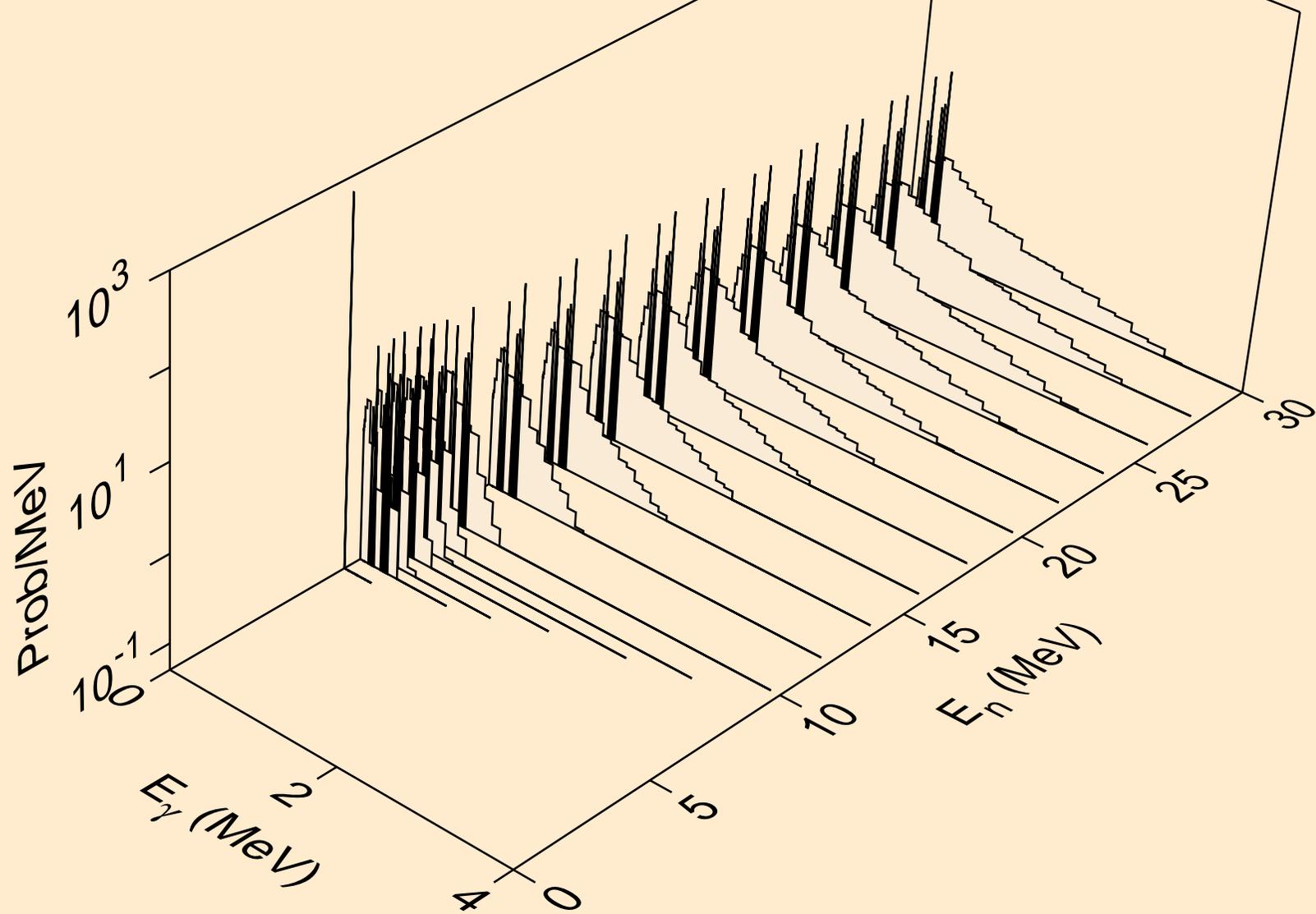PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,x)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
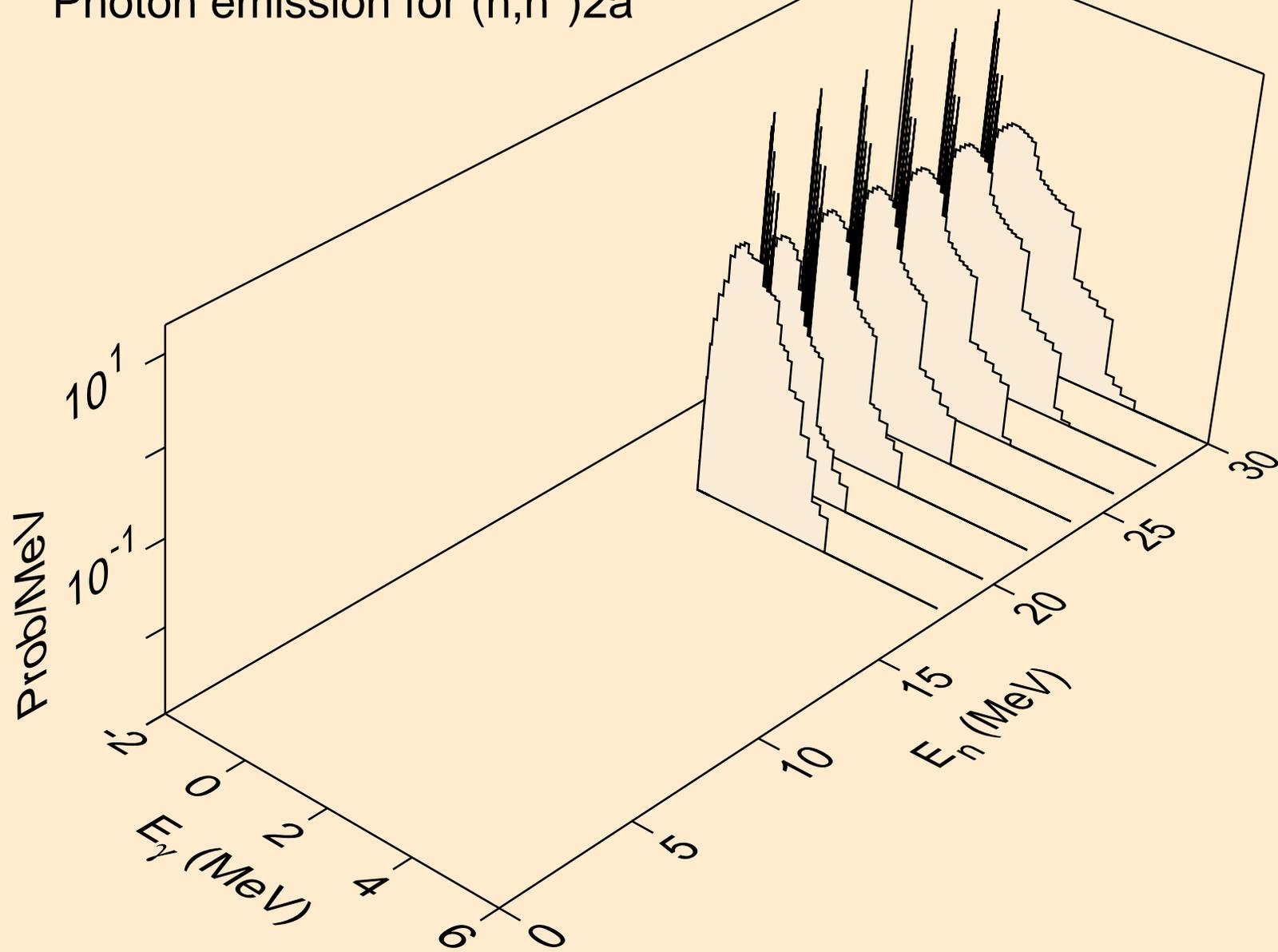Photon emission for (n,2nd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,2n)

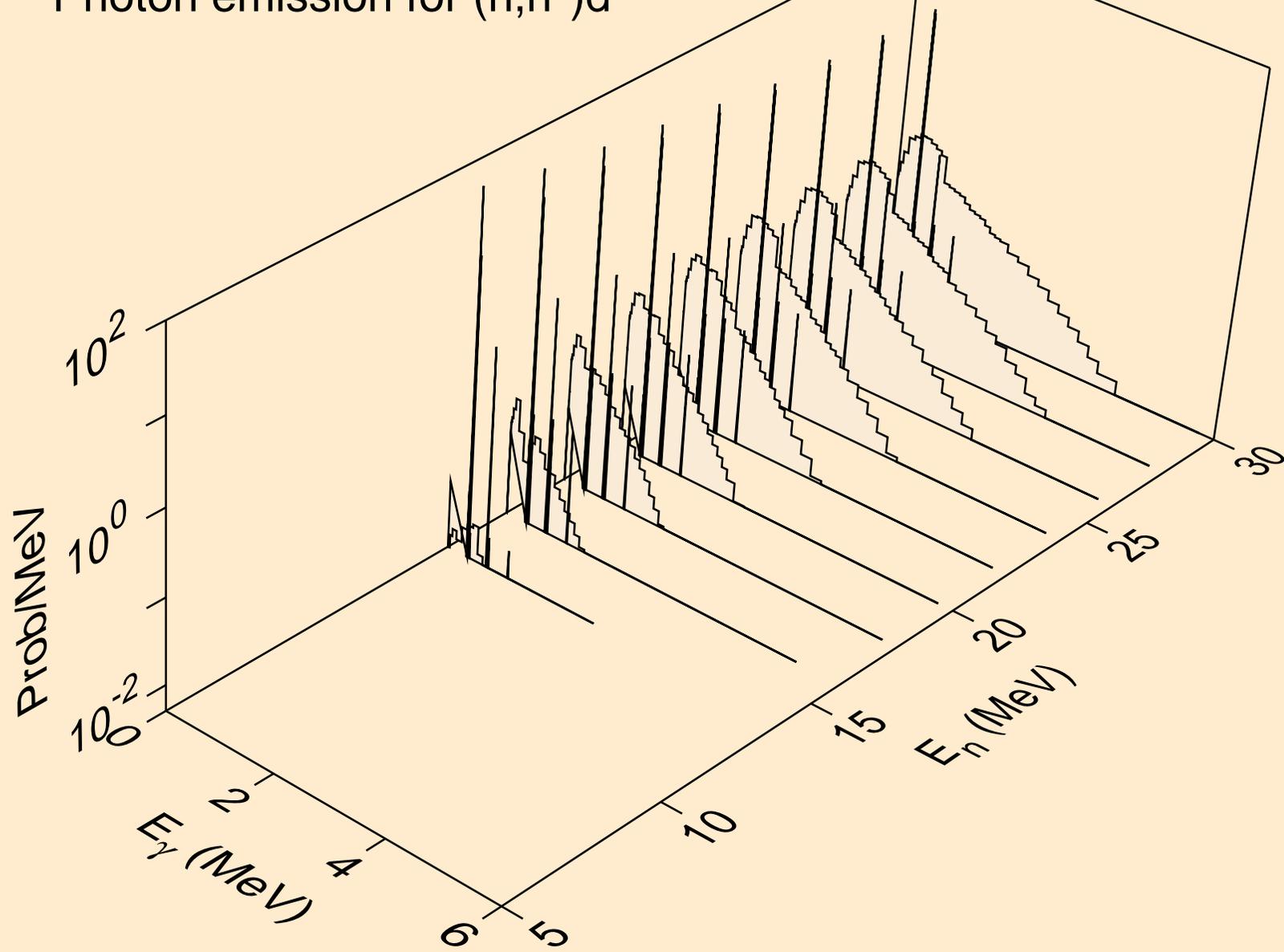PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,3n)

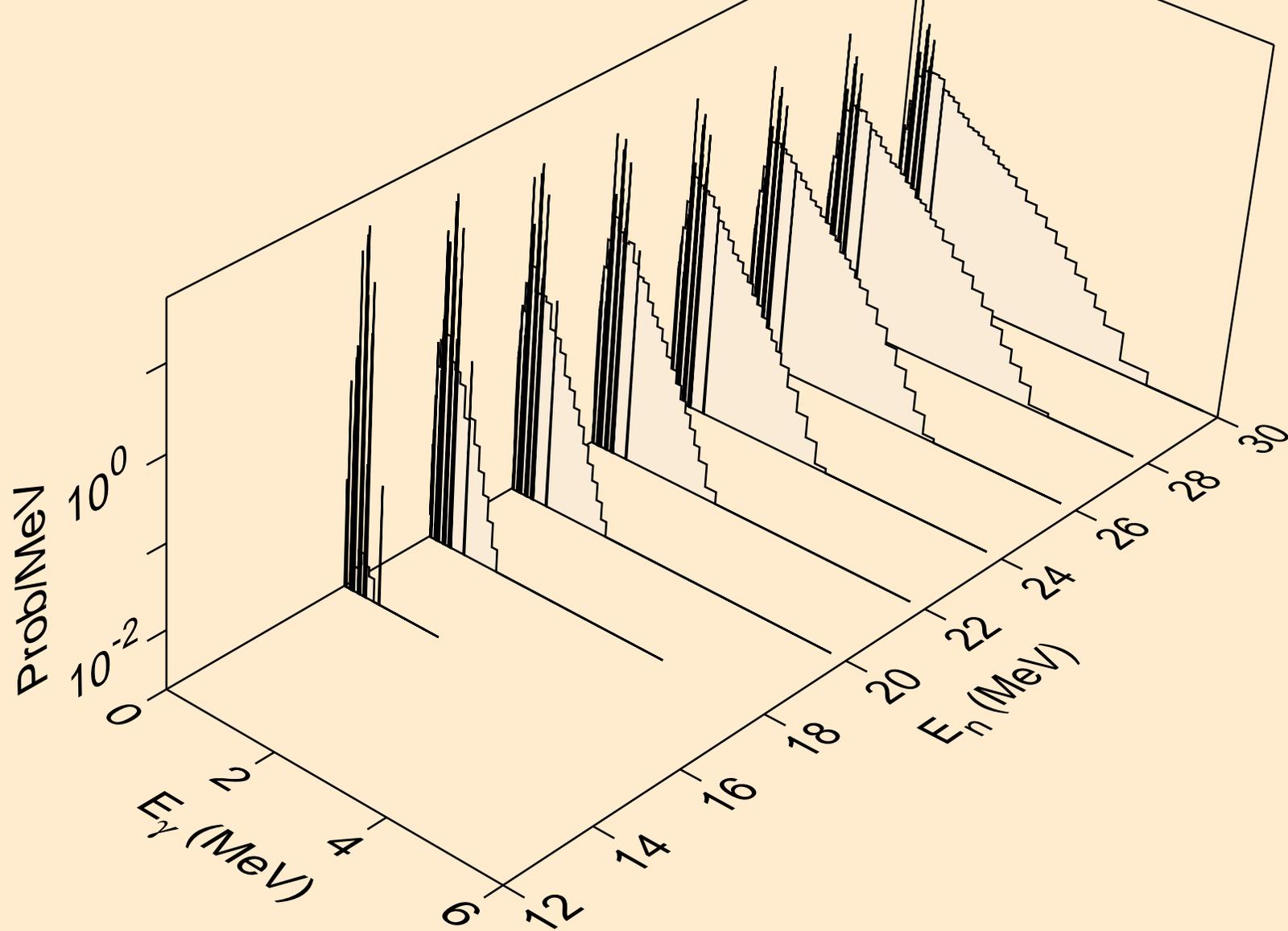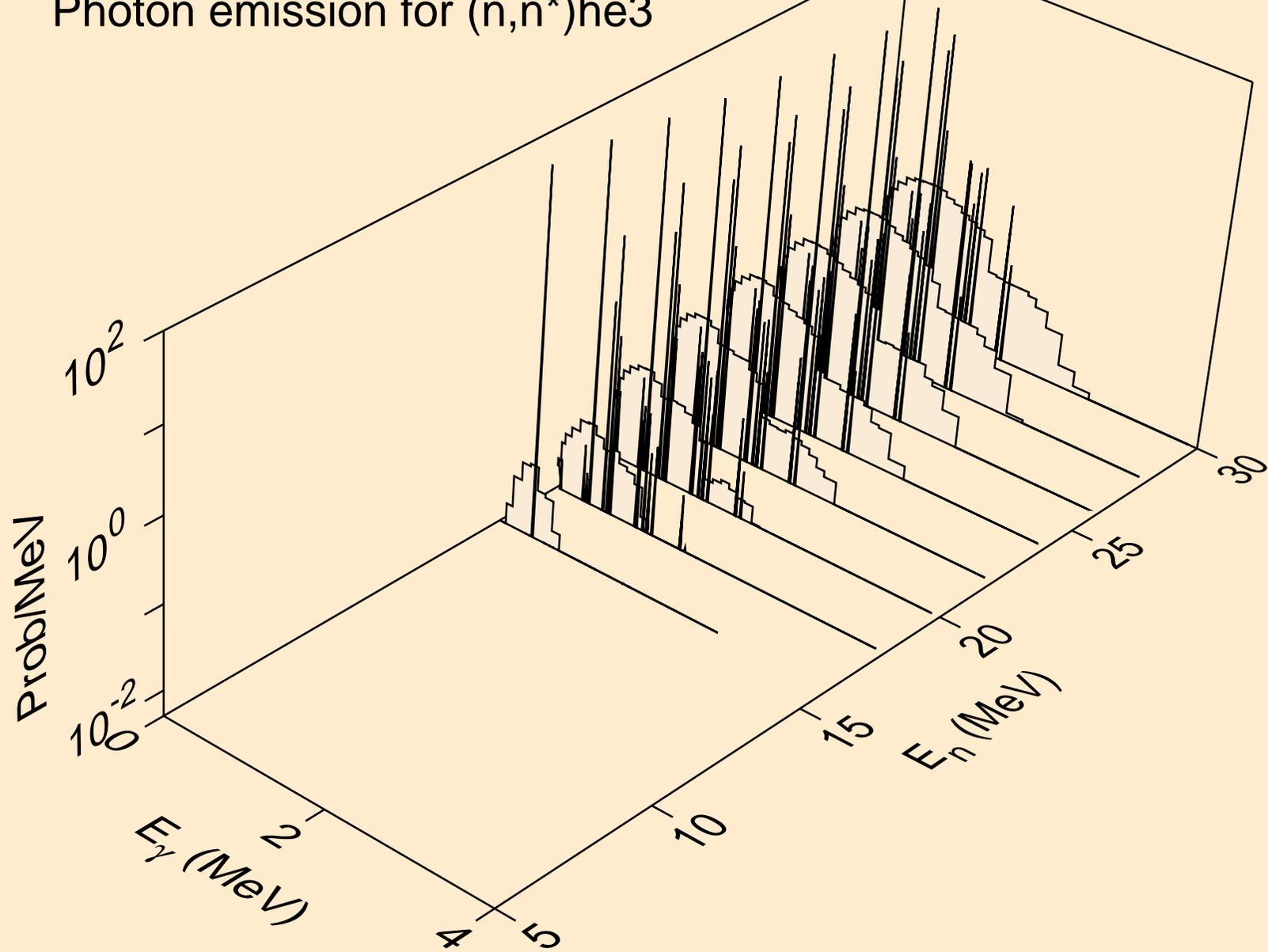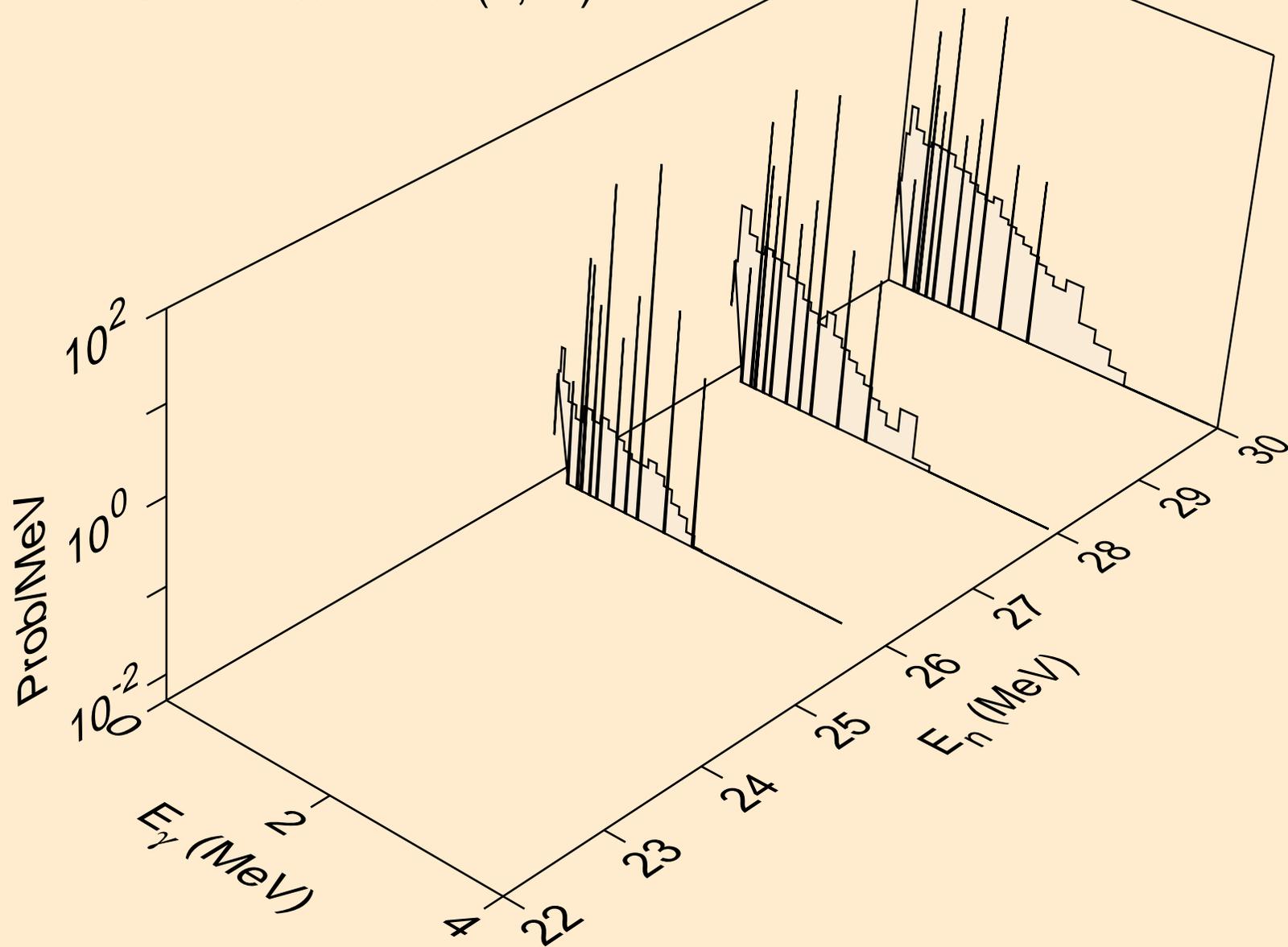PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,2n)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,3n)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)p

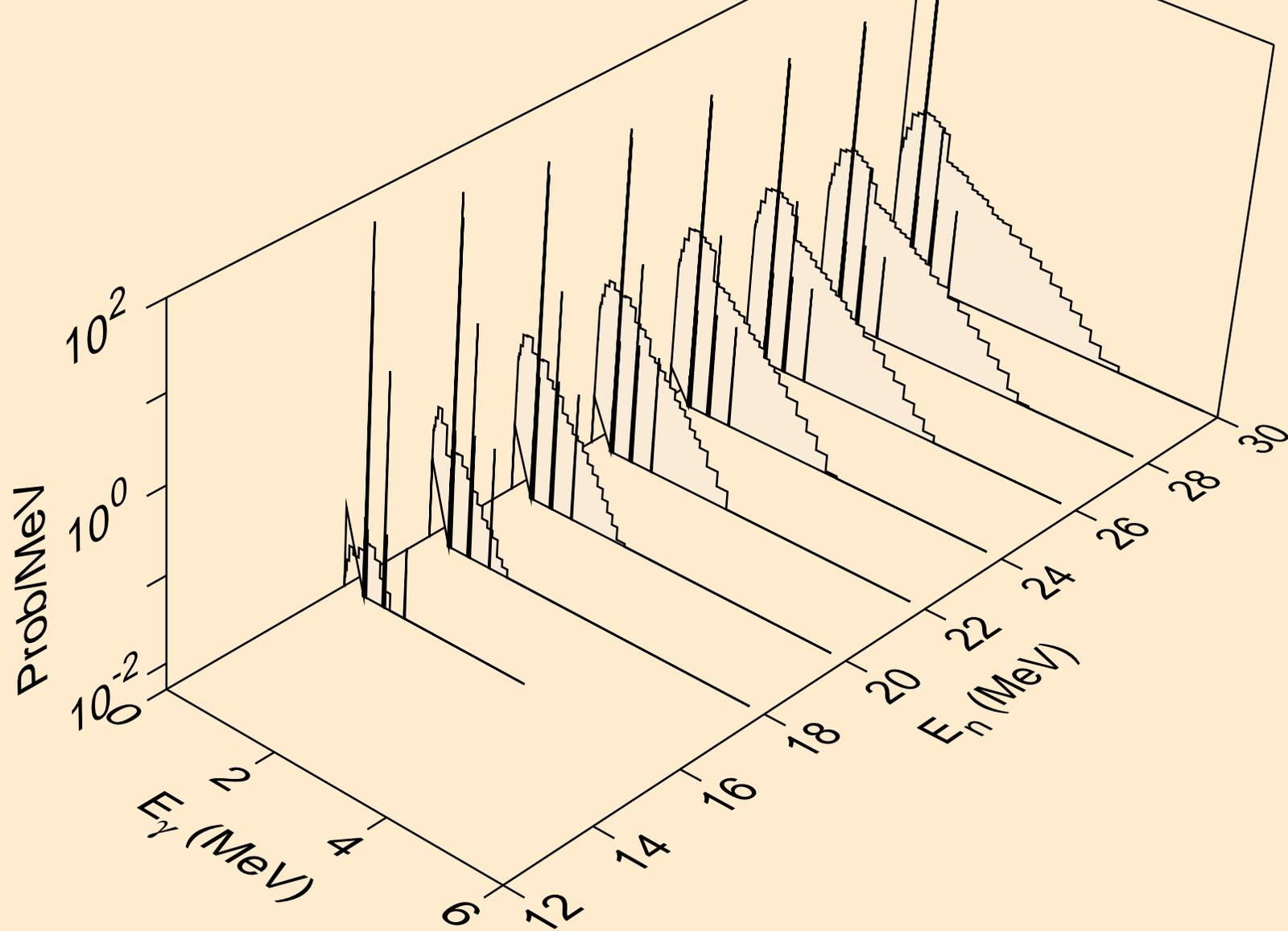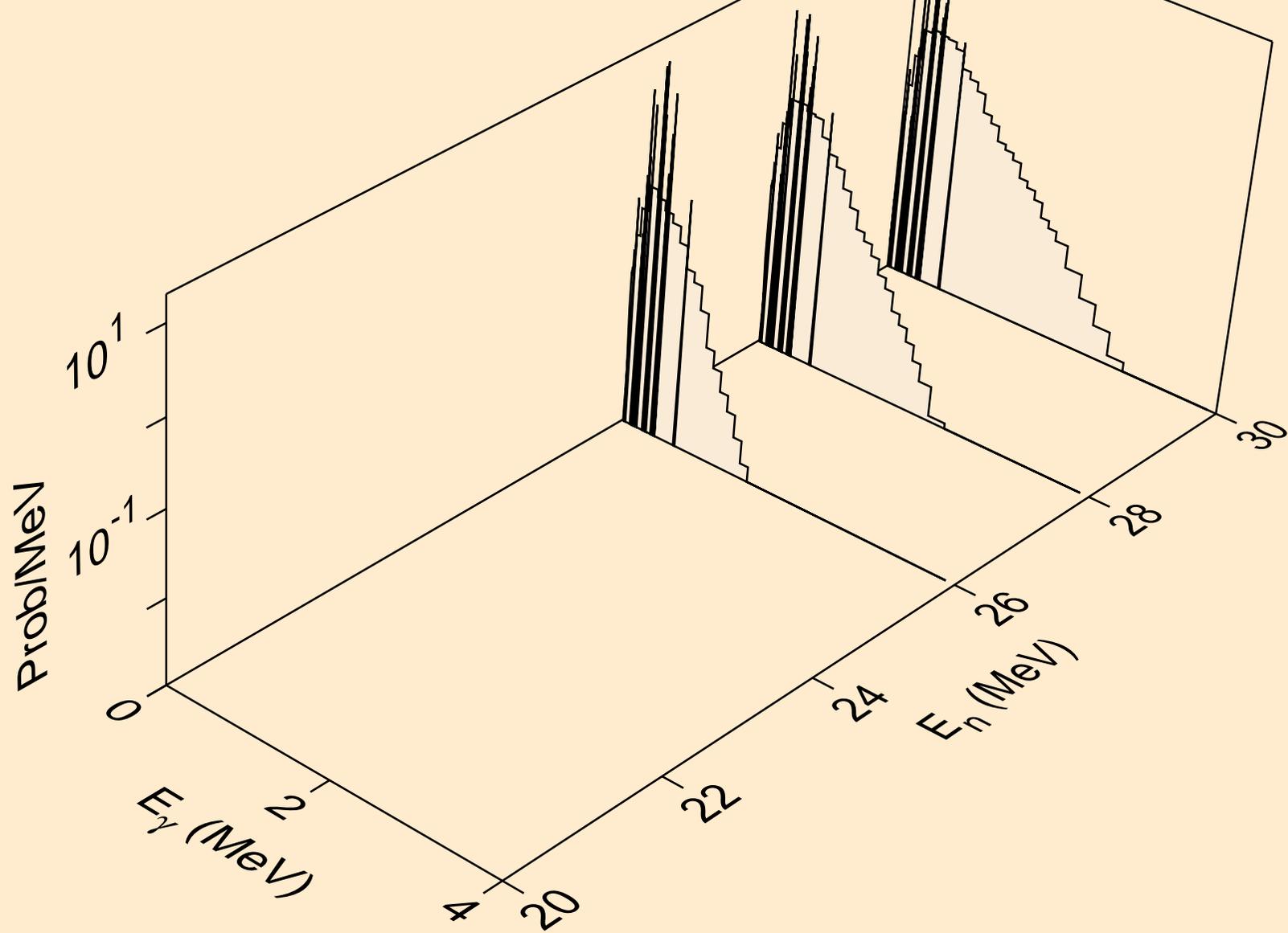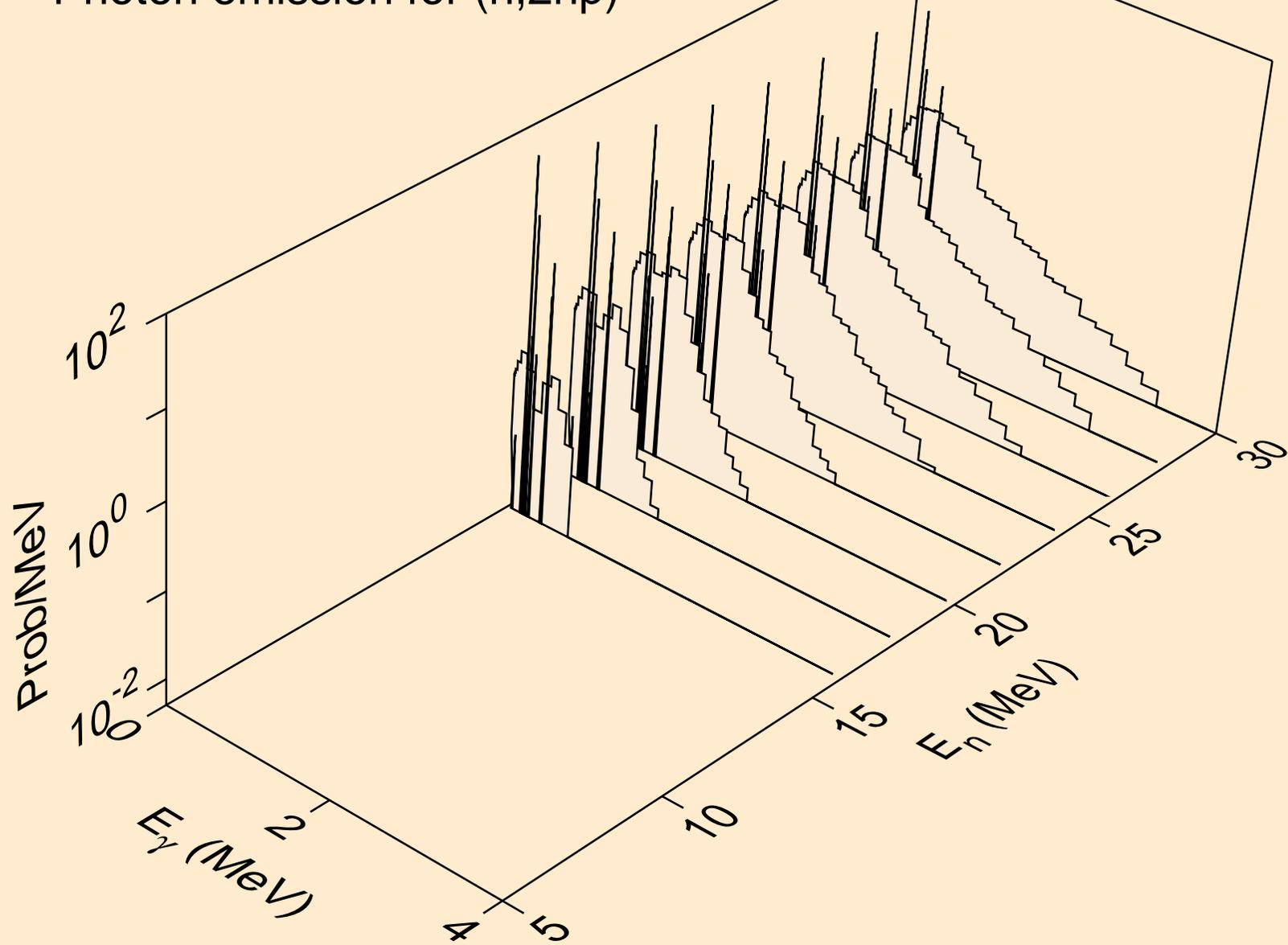PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)2a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)d

ProbMeV

10^2

10^0

10^{-2}

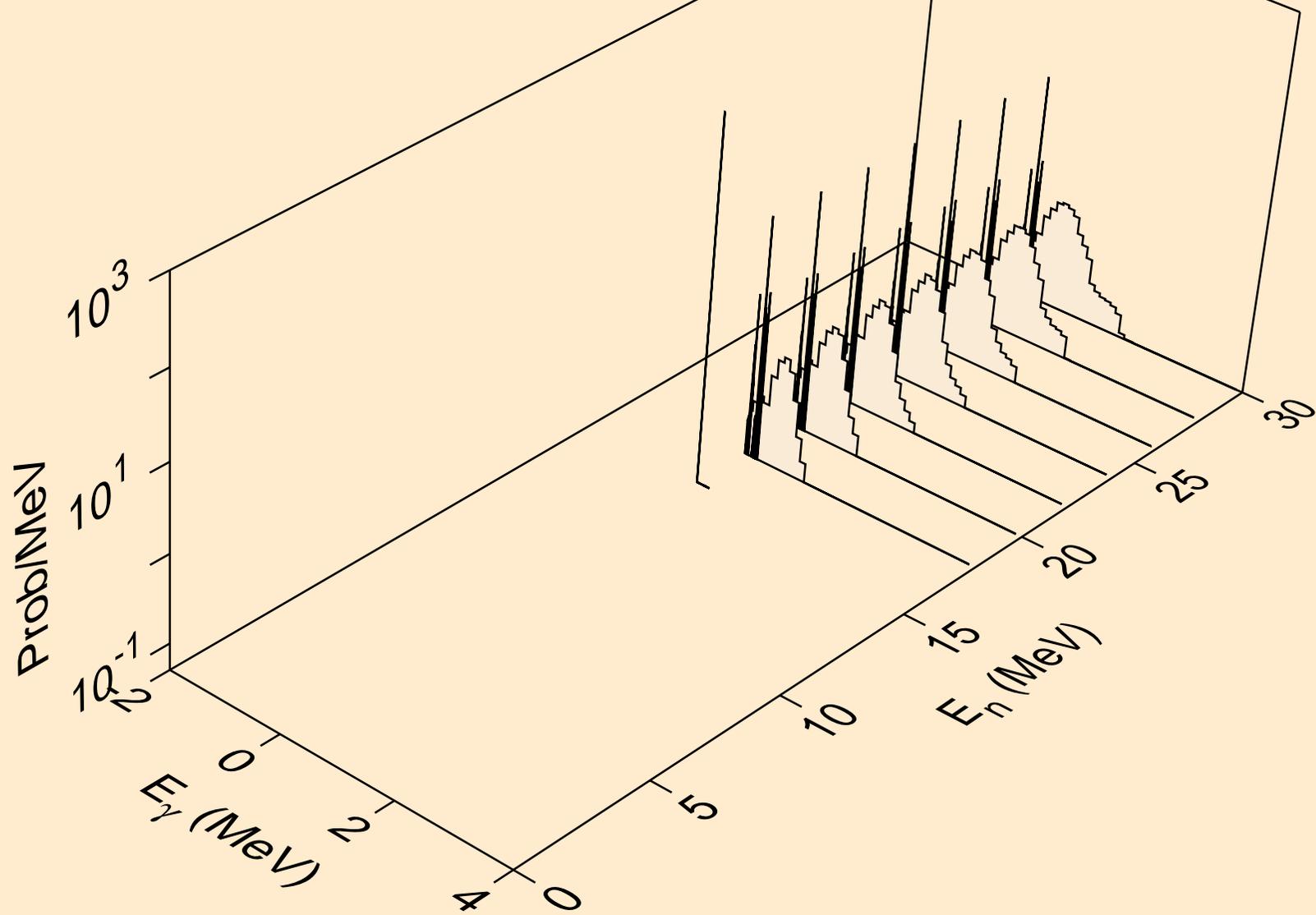E_γ (MeV)

2

4

6

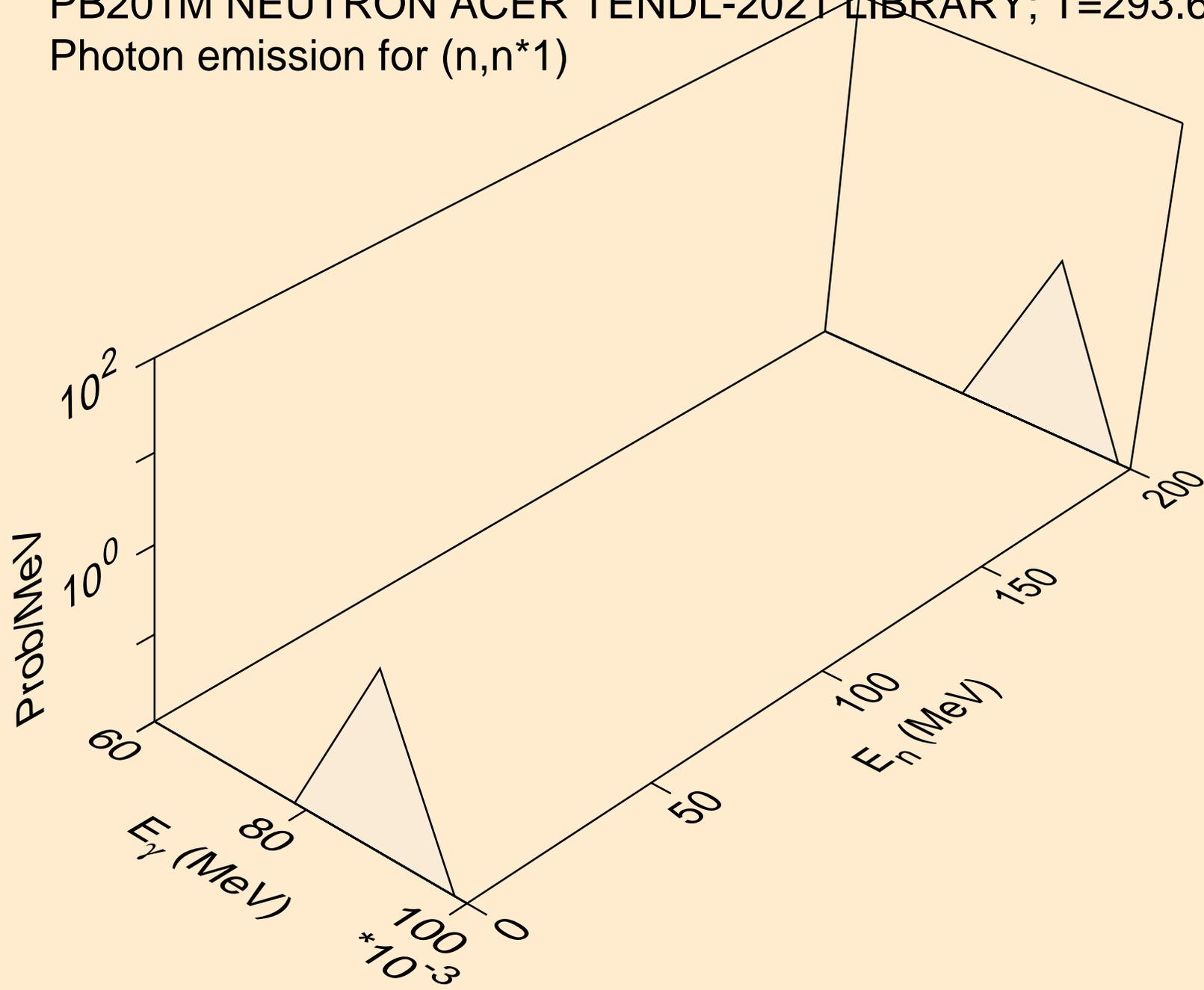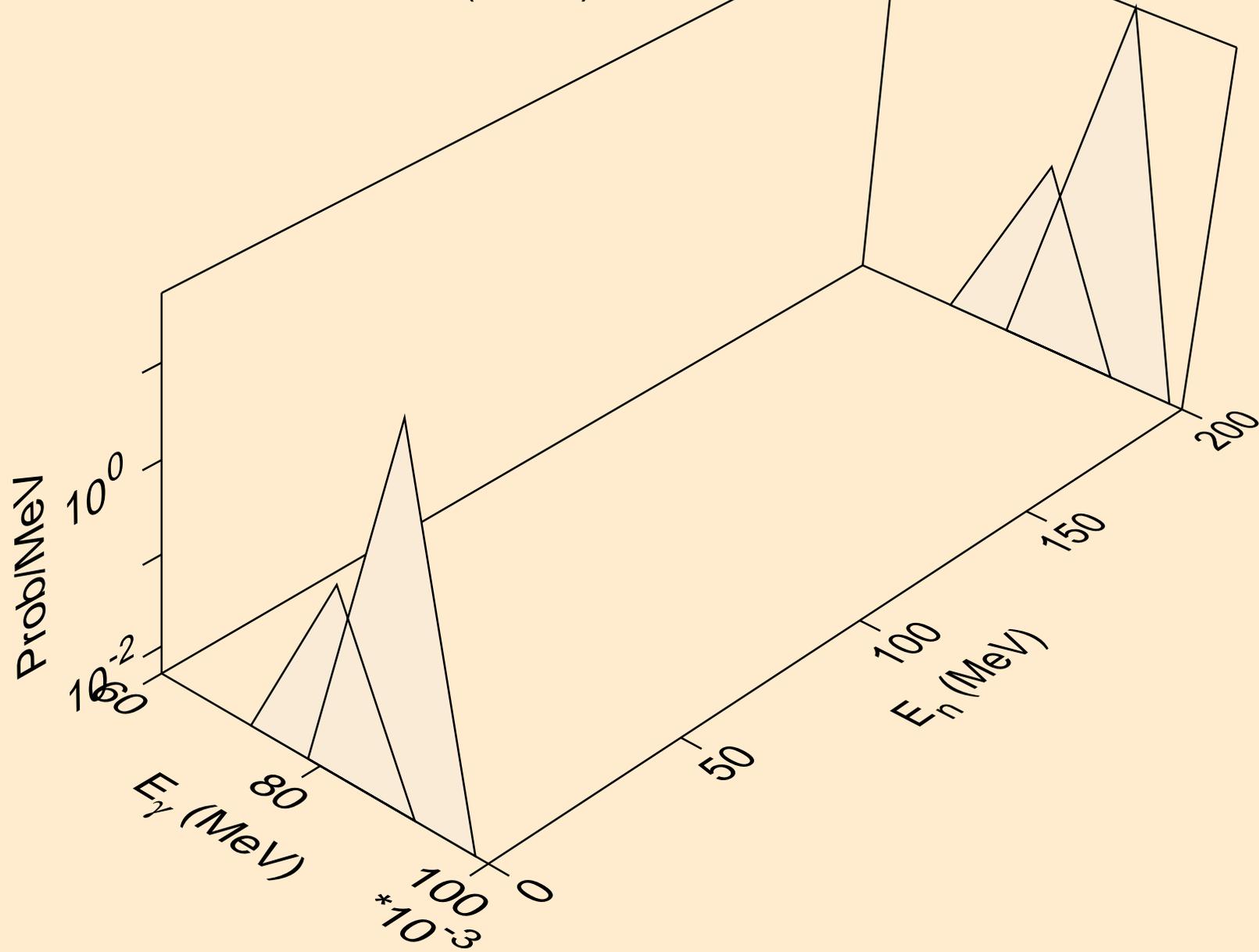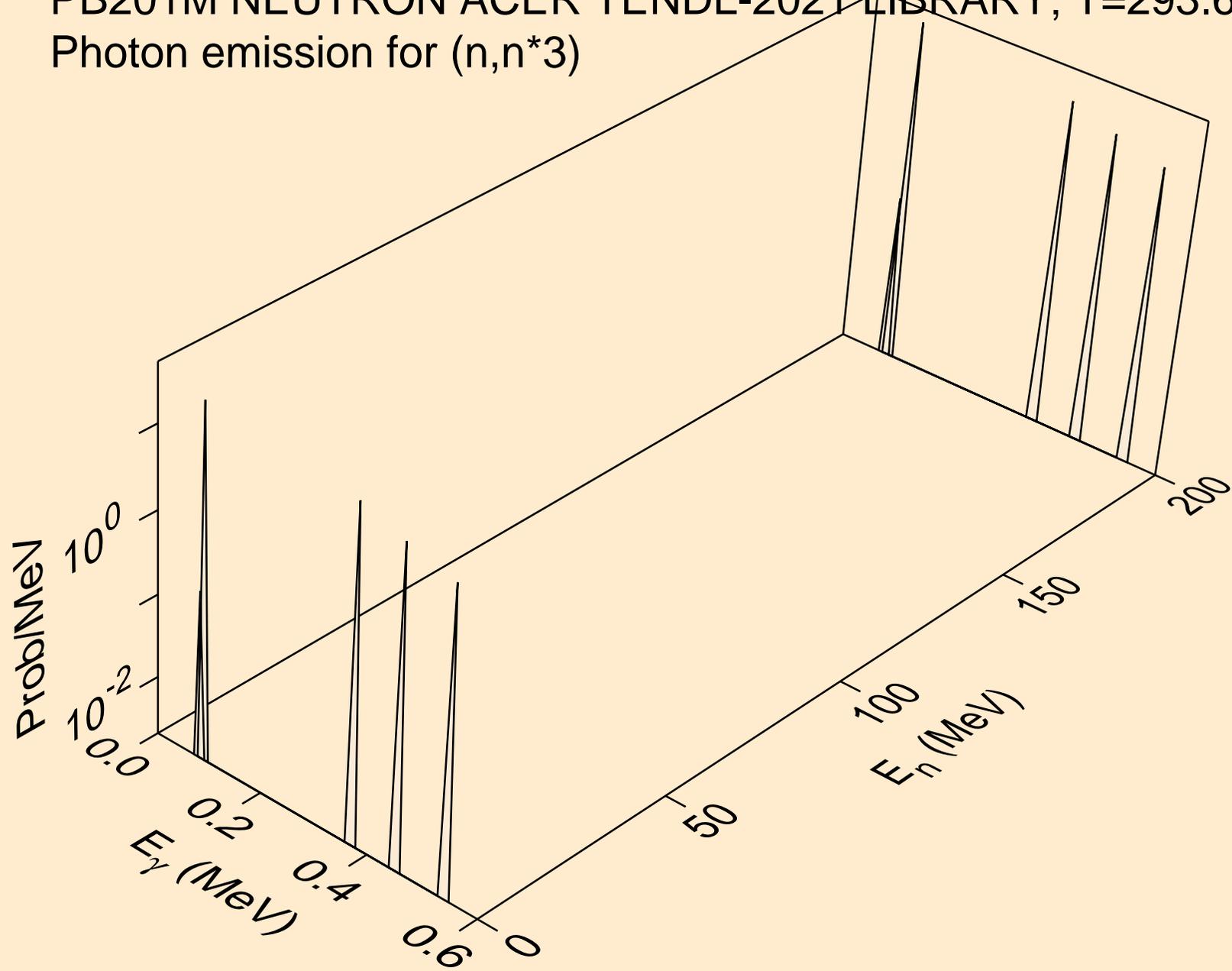5

10

15

20

25

30

E_n (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)t

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*)he3

Prob/MeV

10^2

10^0

10^{-2}

E_γ (MeV)

2

4

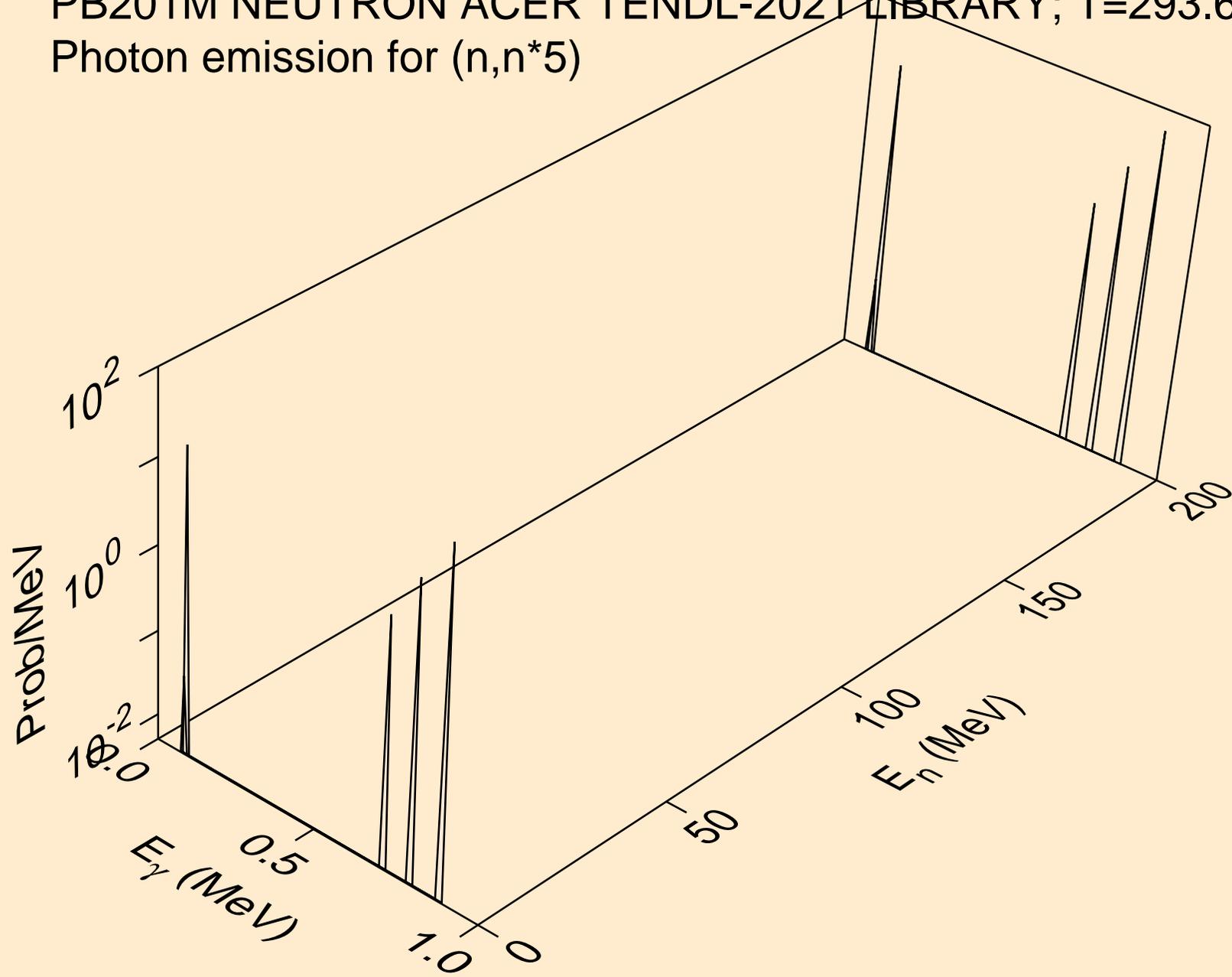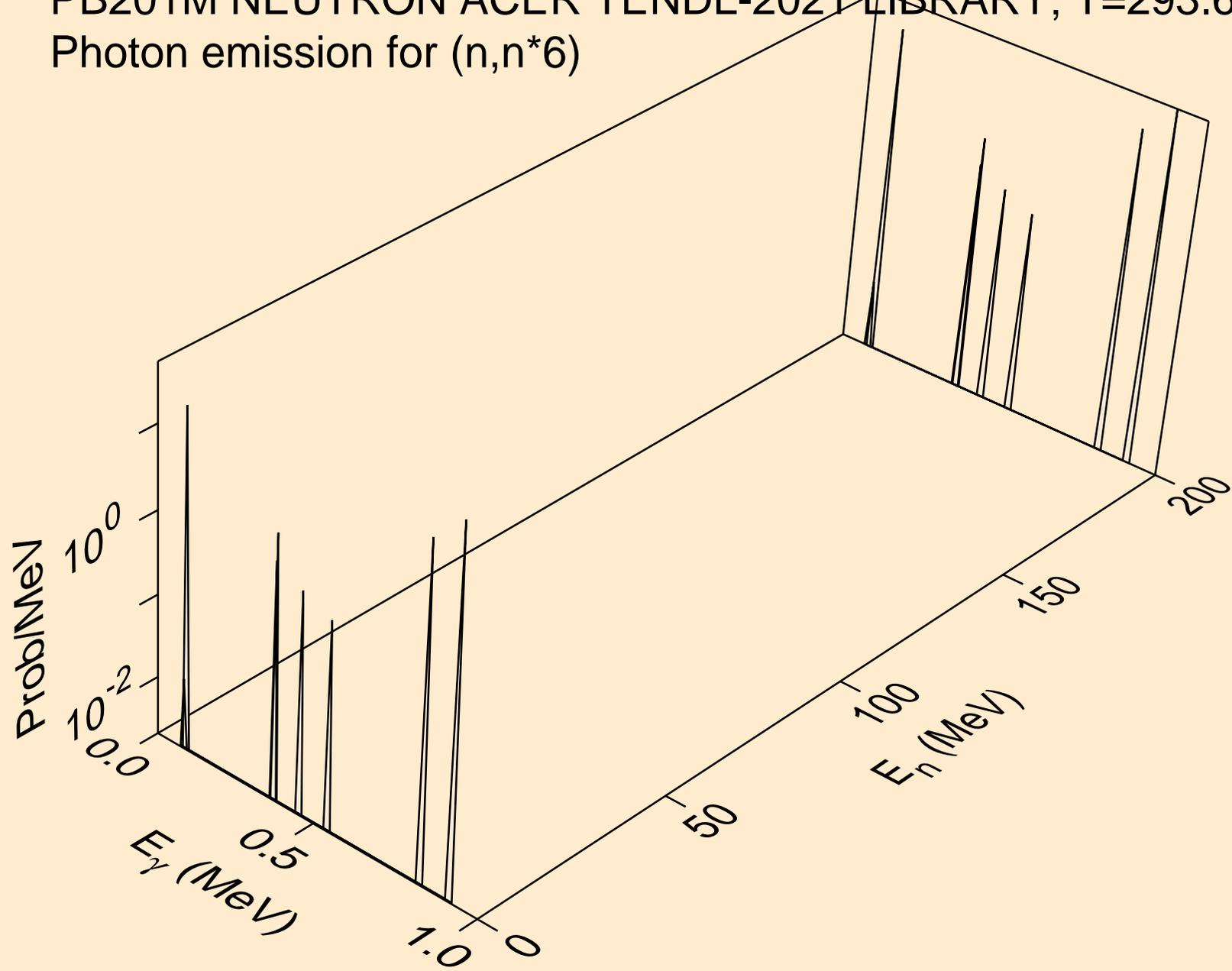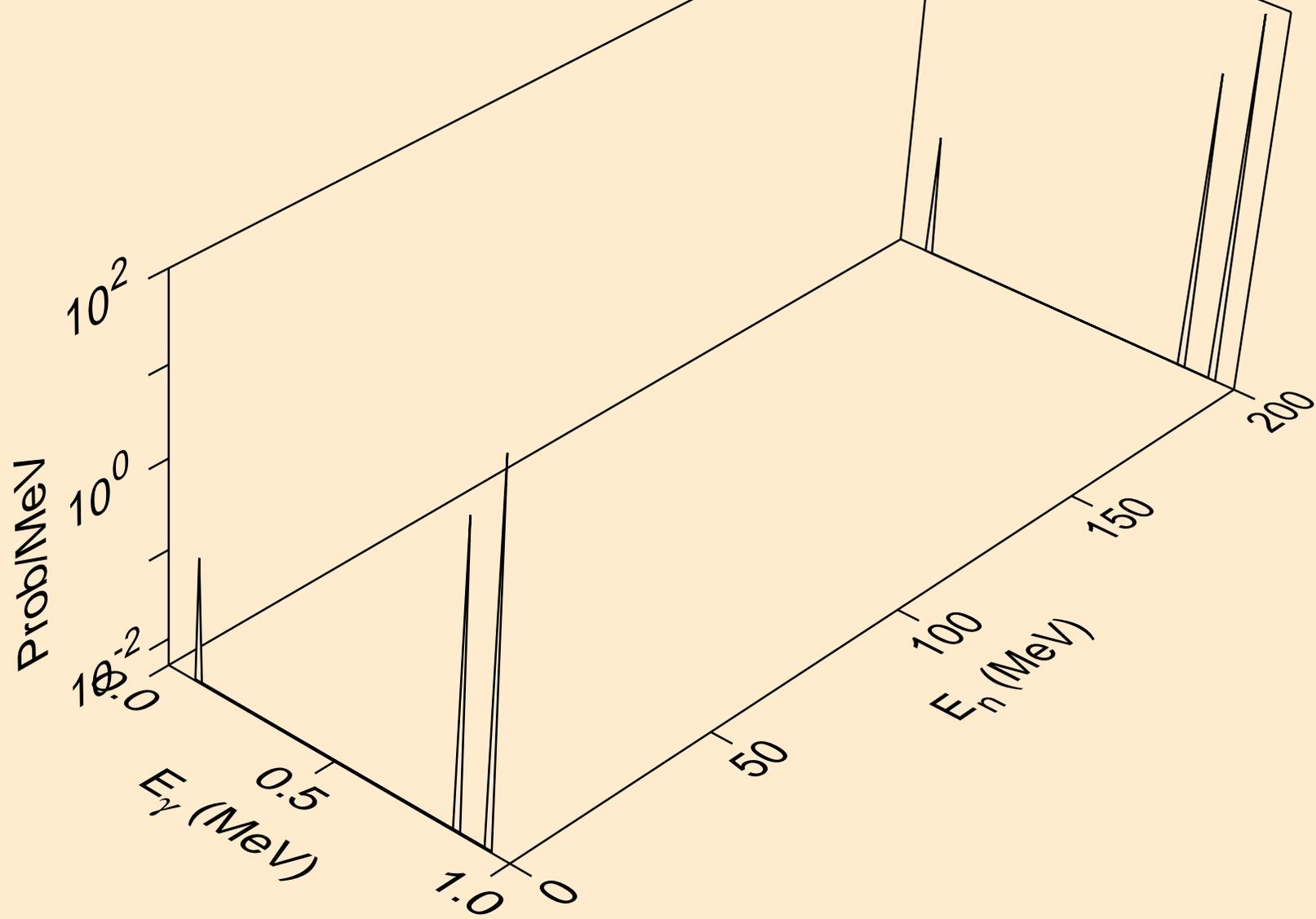5

10

15

20

25

30

E_n (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,4n)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,2np)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,3np)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,2np)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
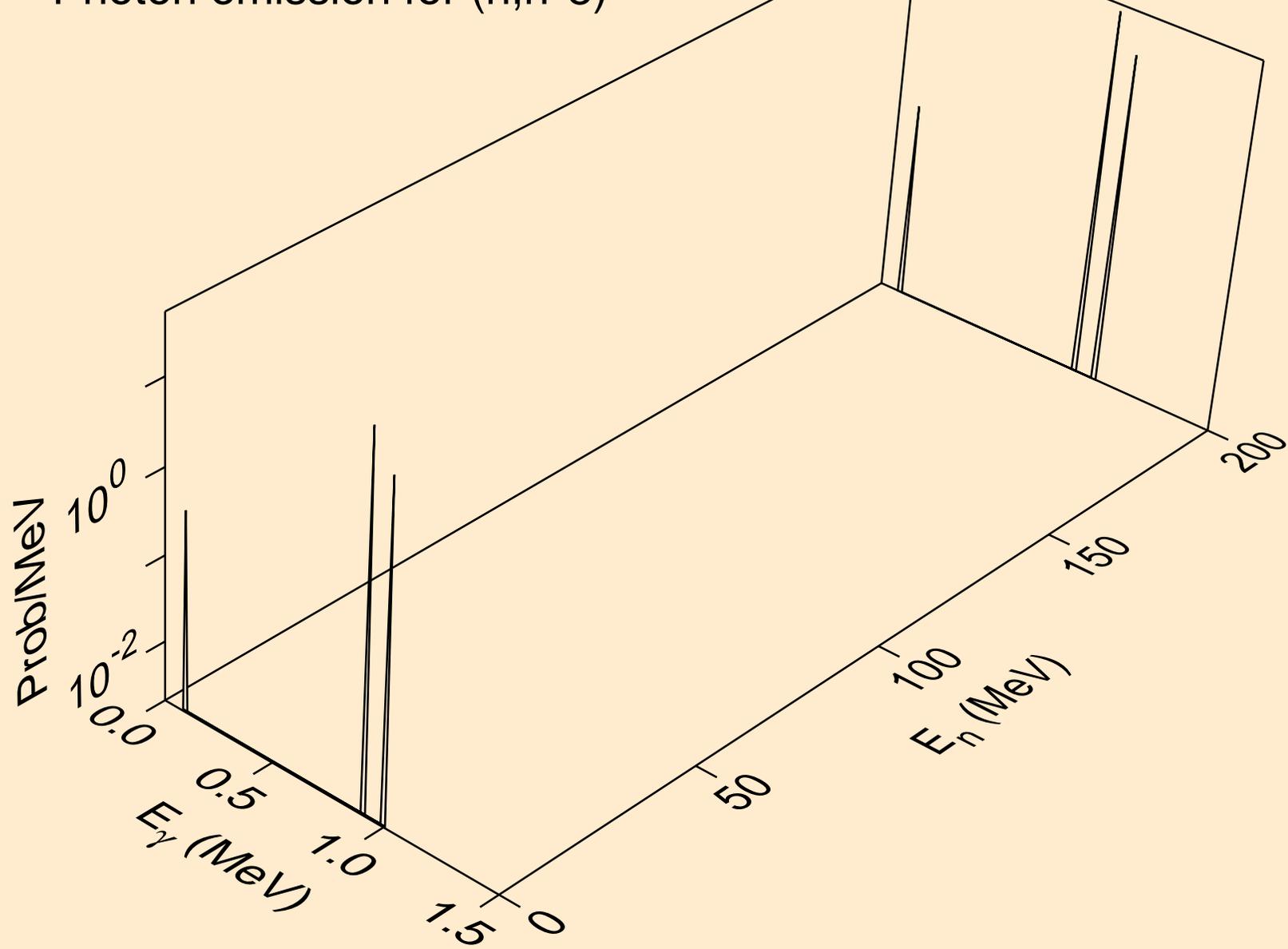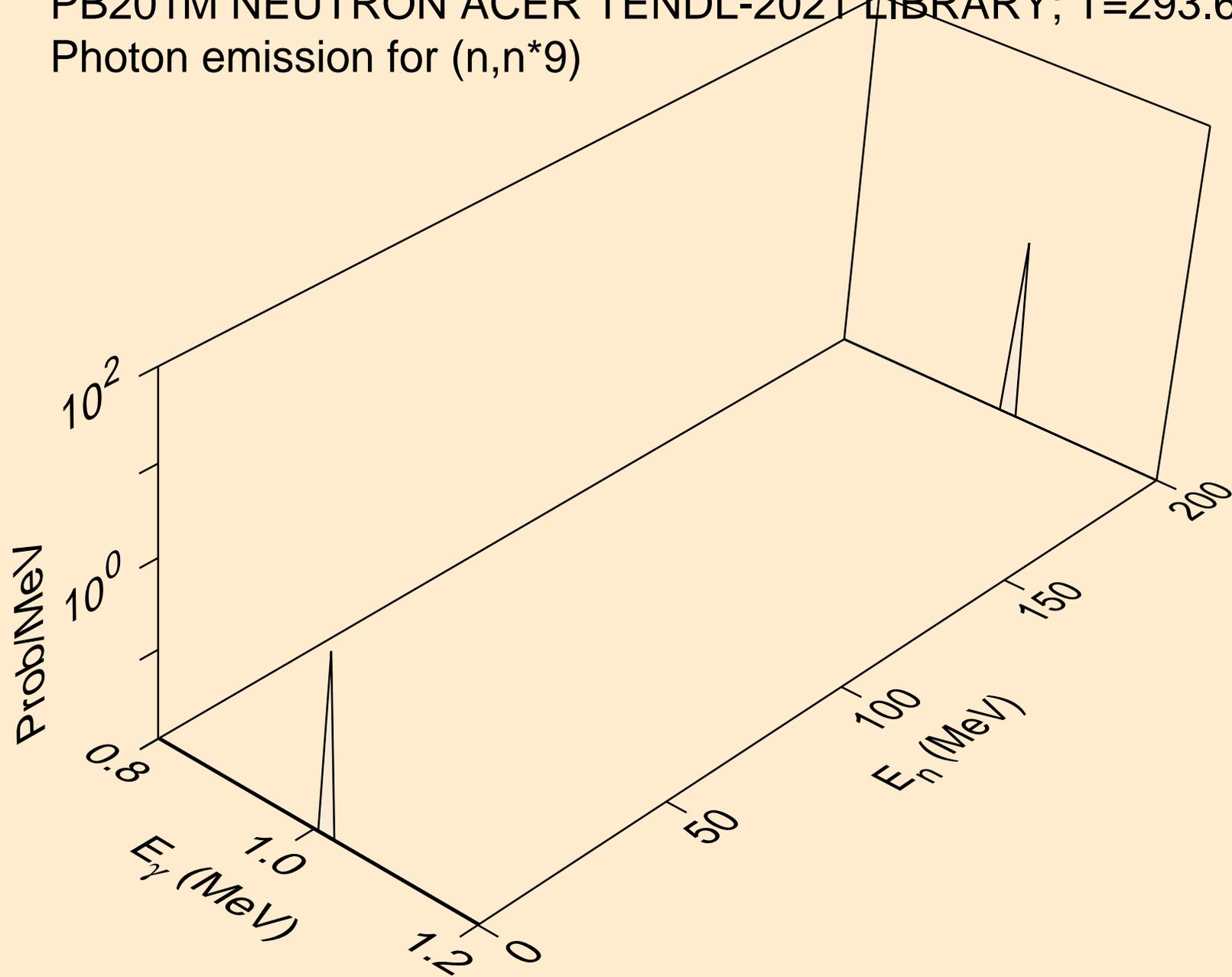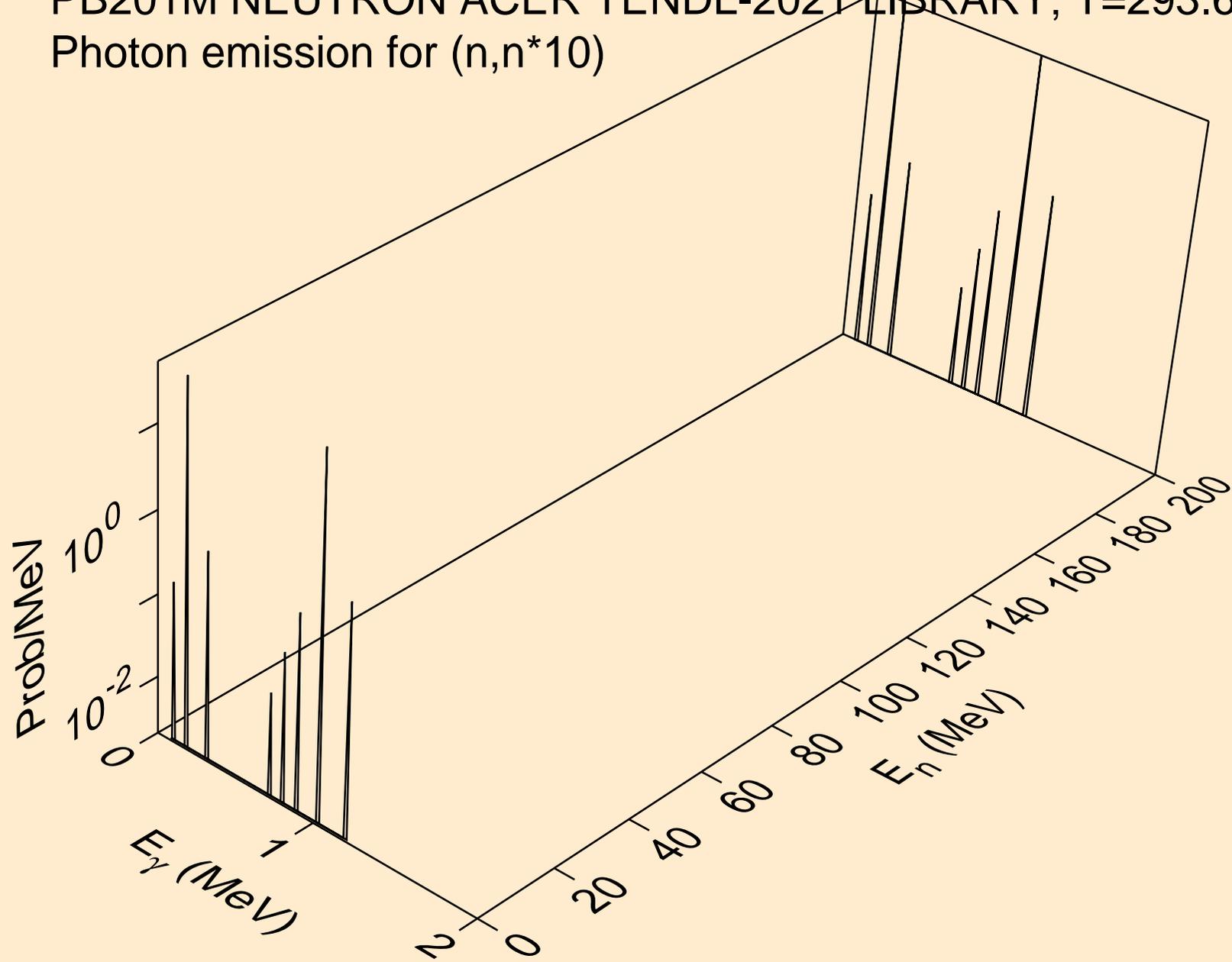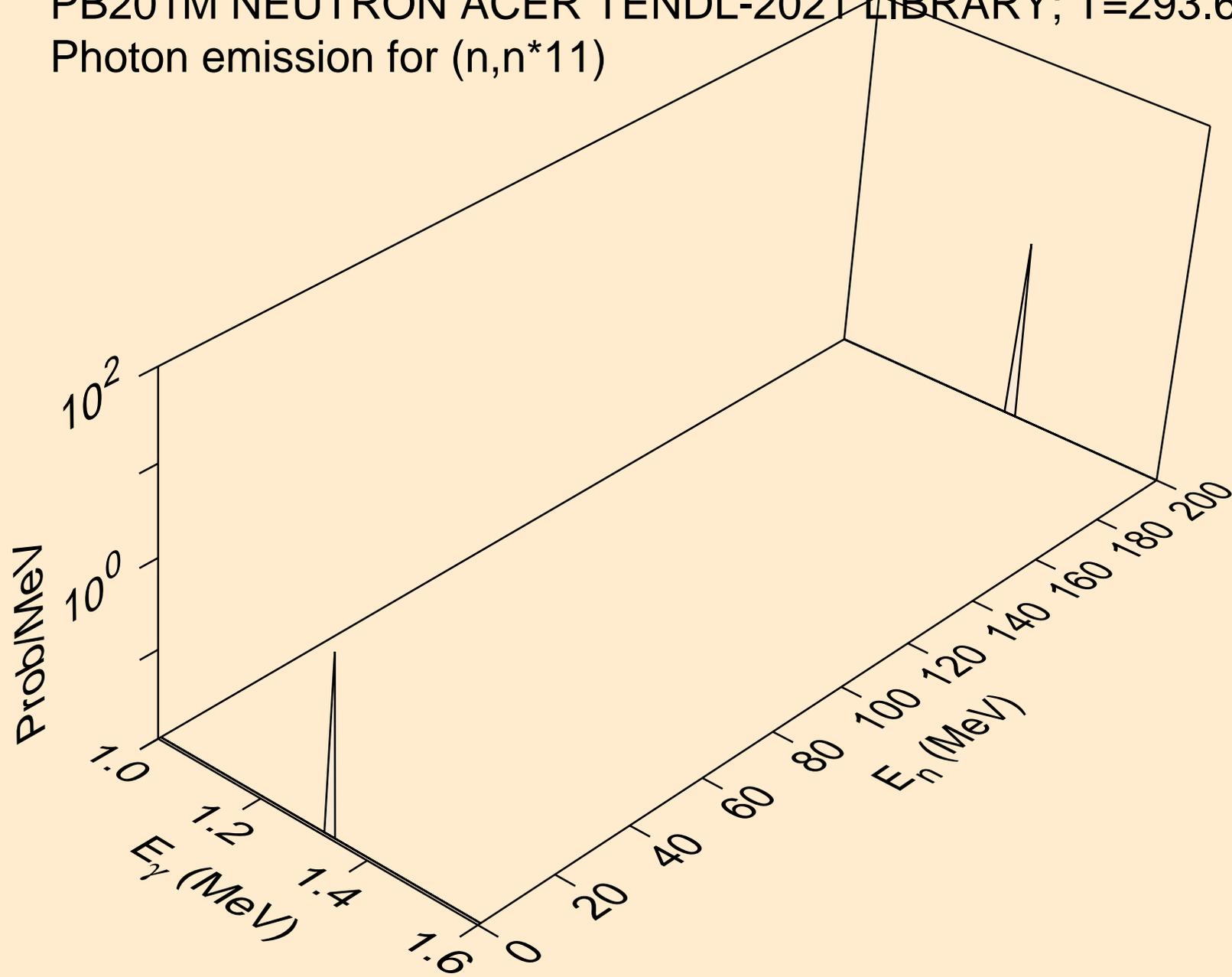Photon emission for (n,npa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*1)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*2)

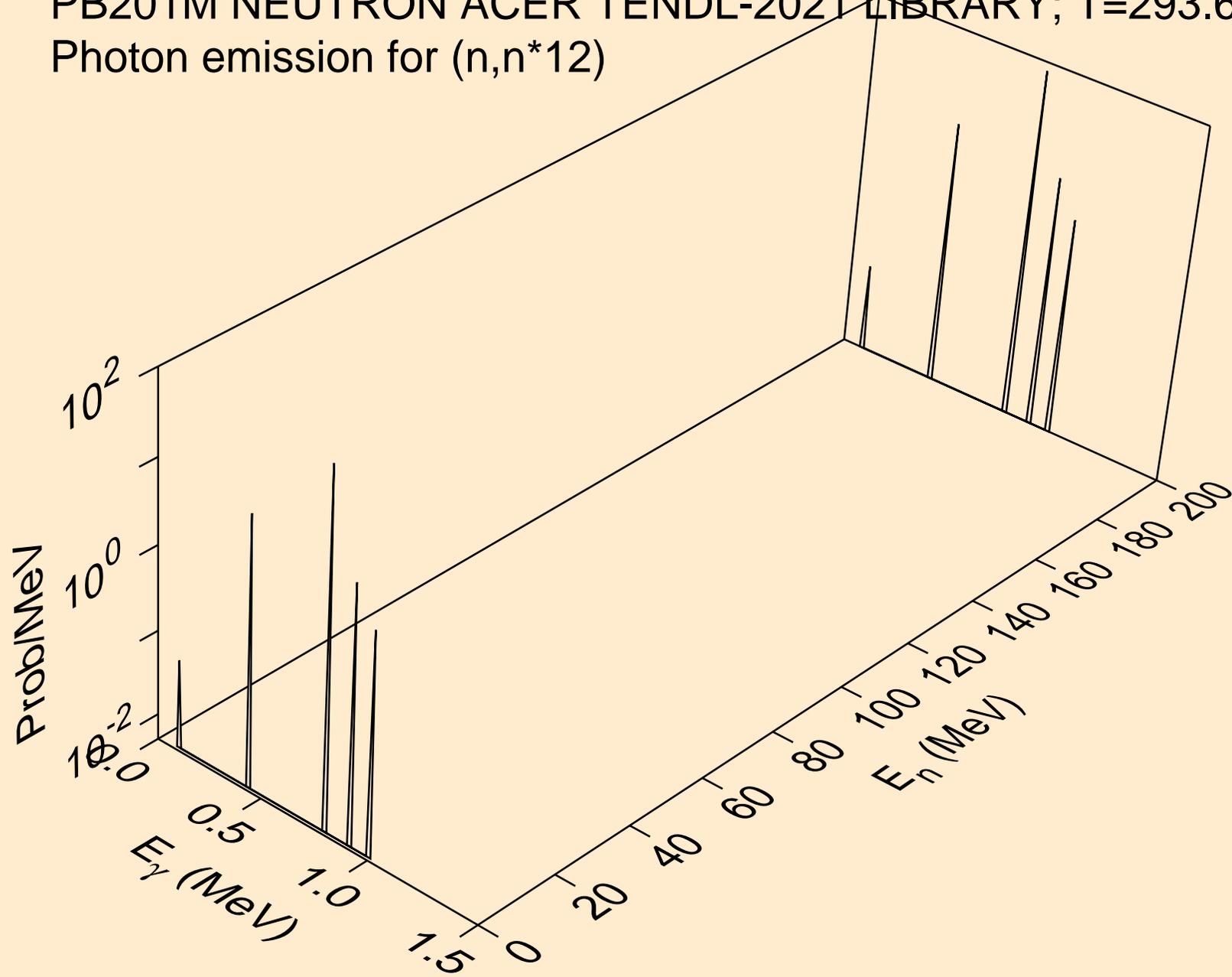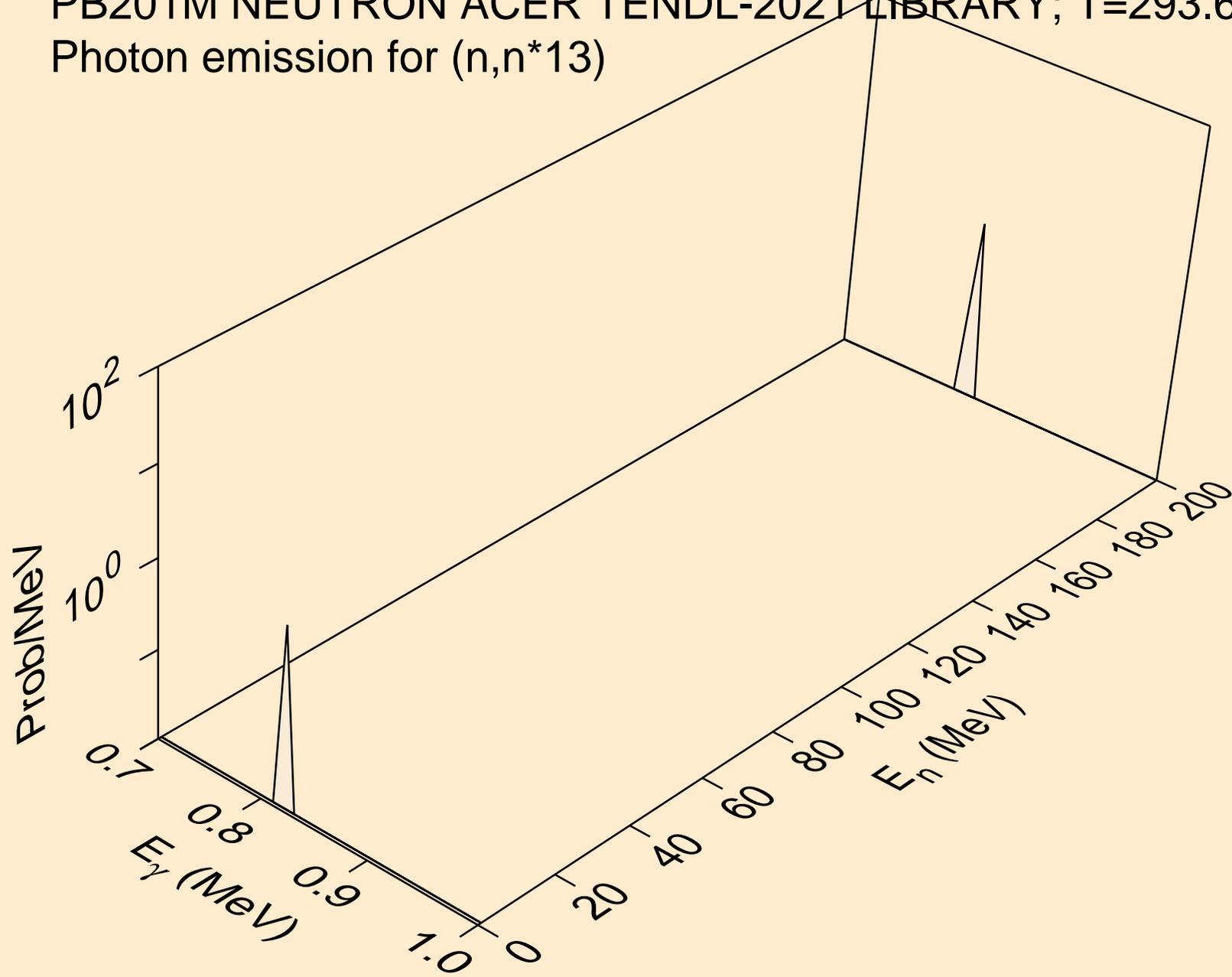PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*3)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*5)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*6)
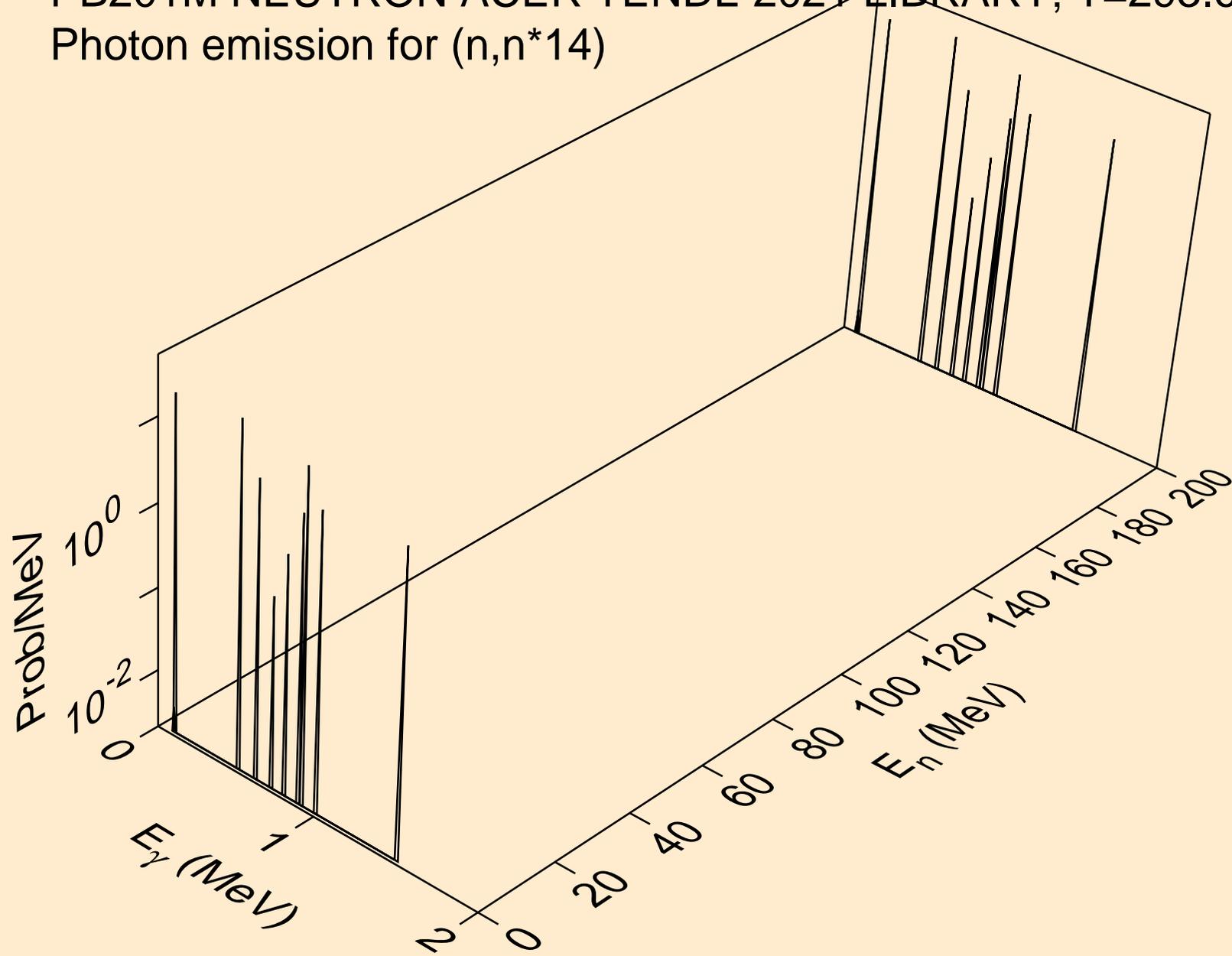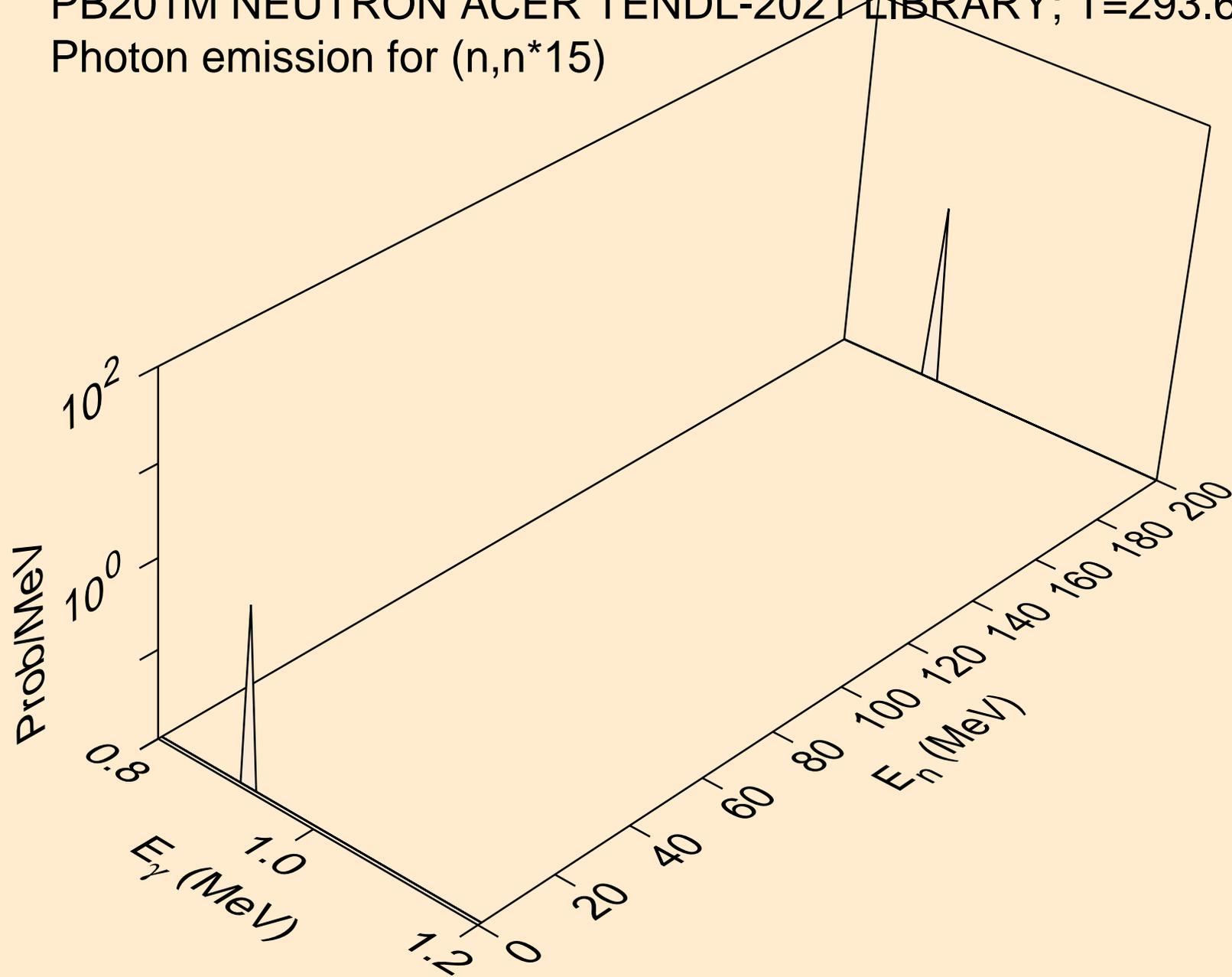
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*7)
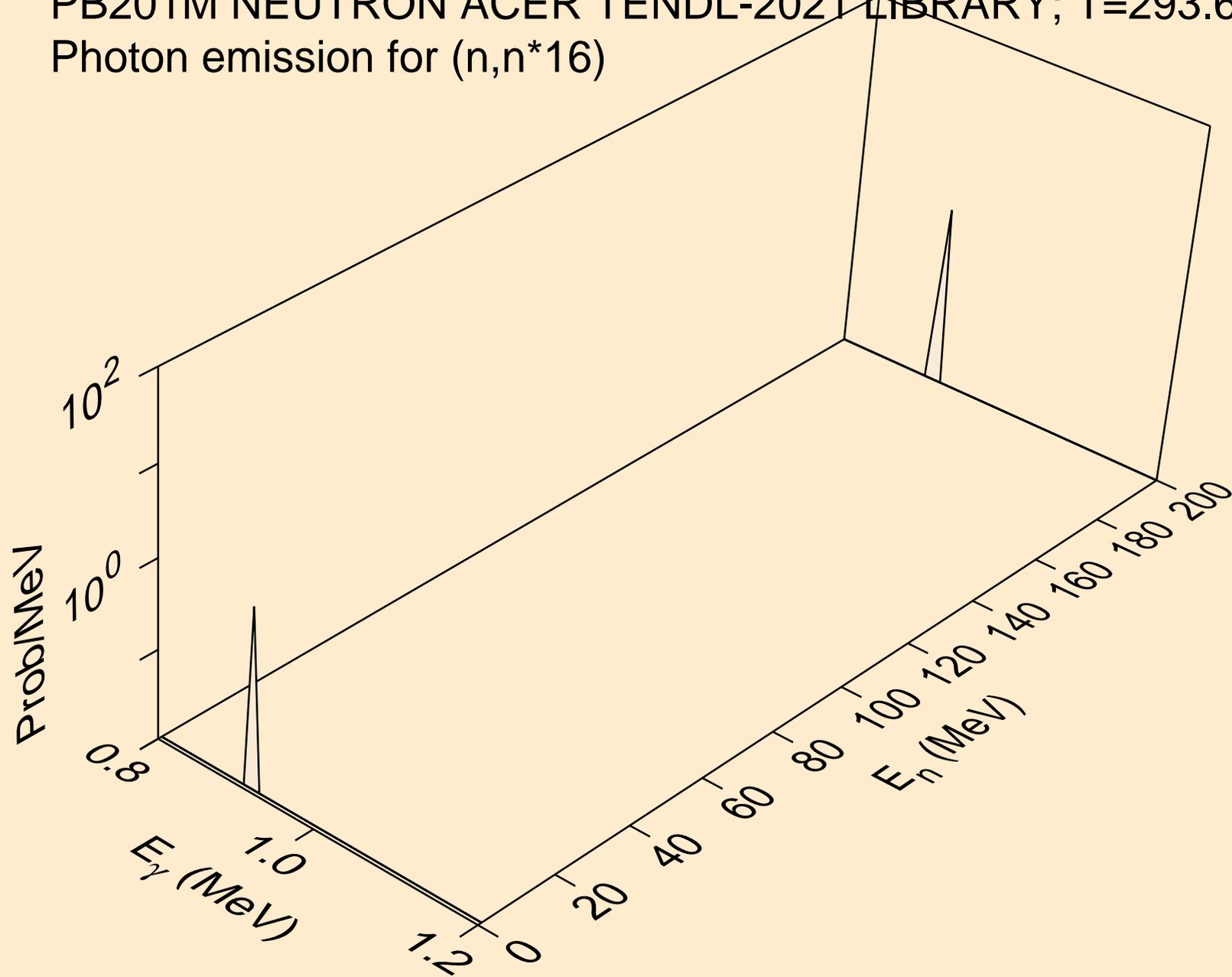
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*8)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*9)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*10)

Prob/MeV

10^0
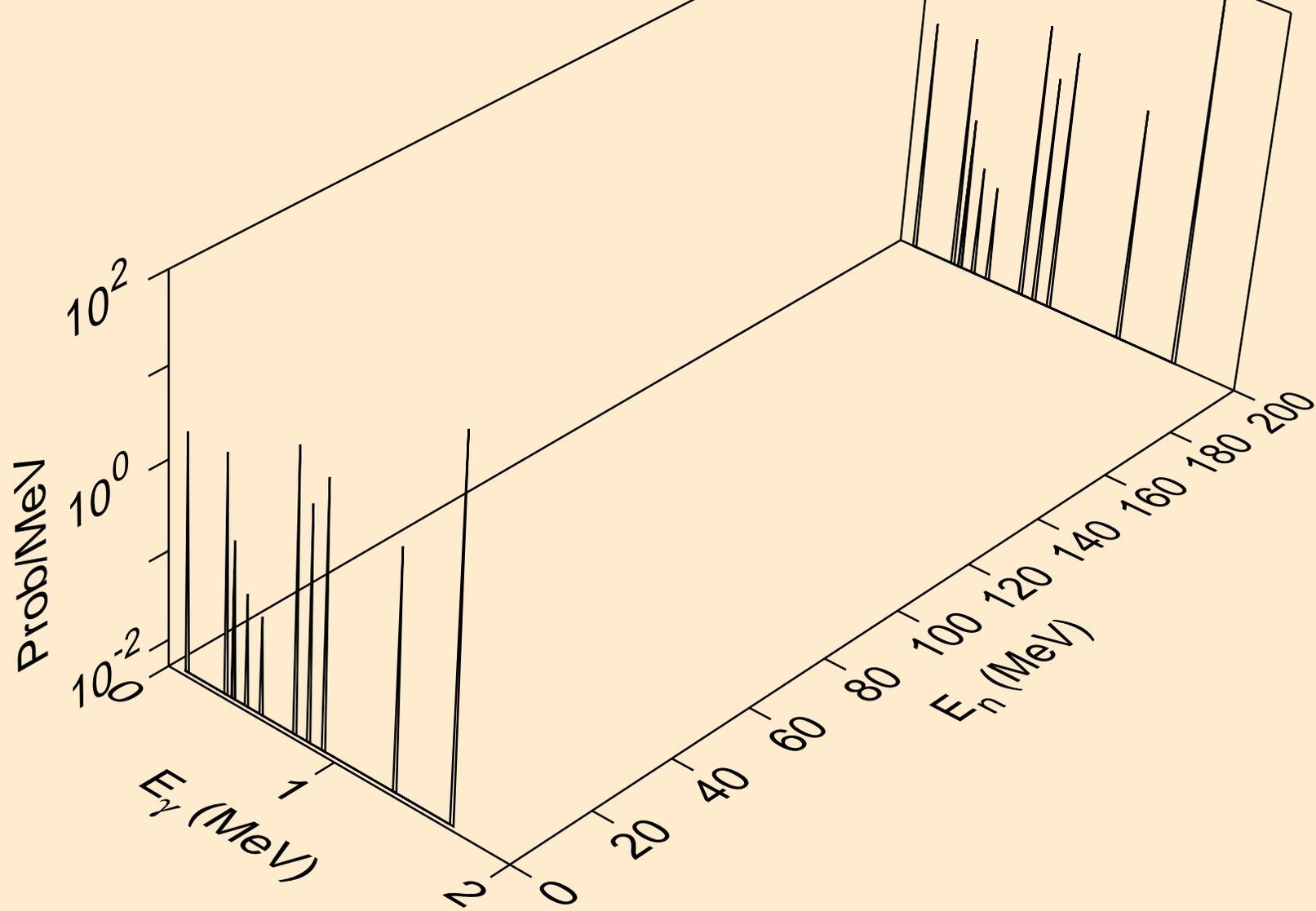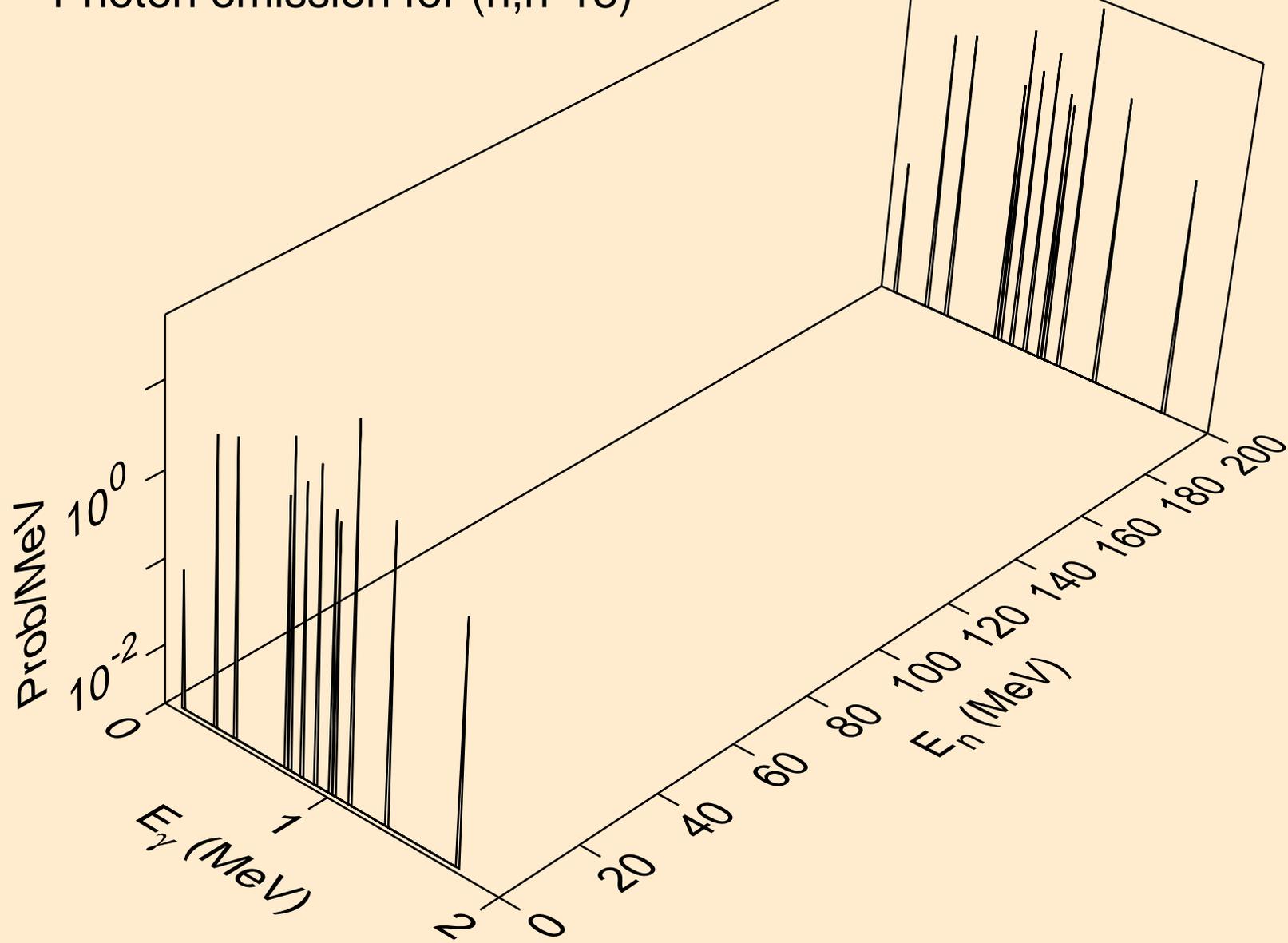
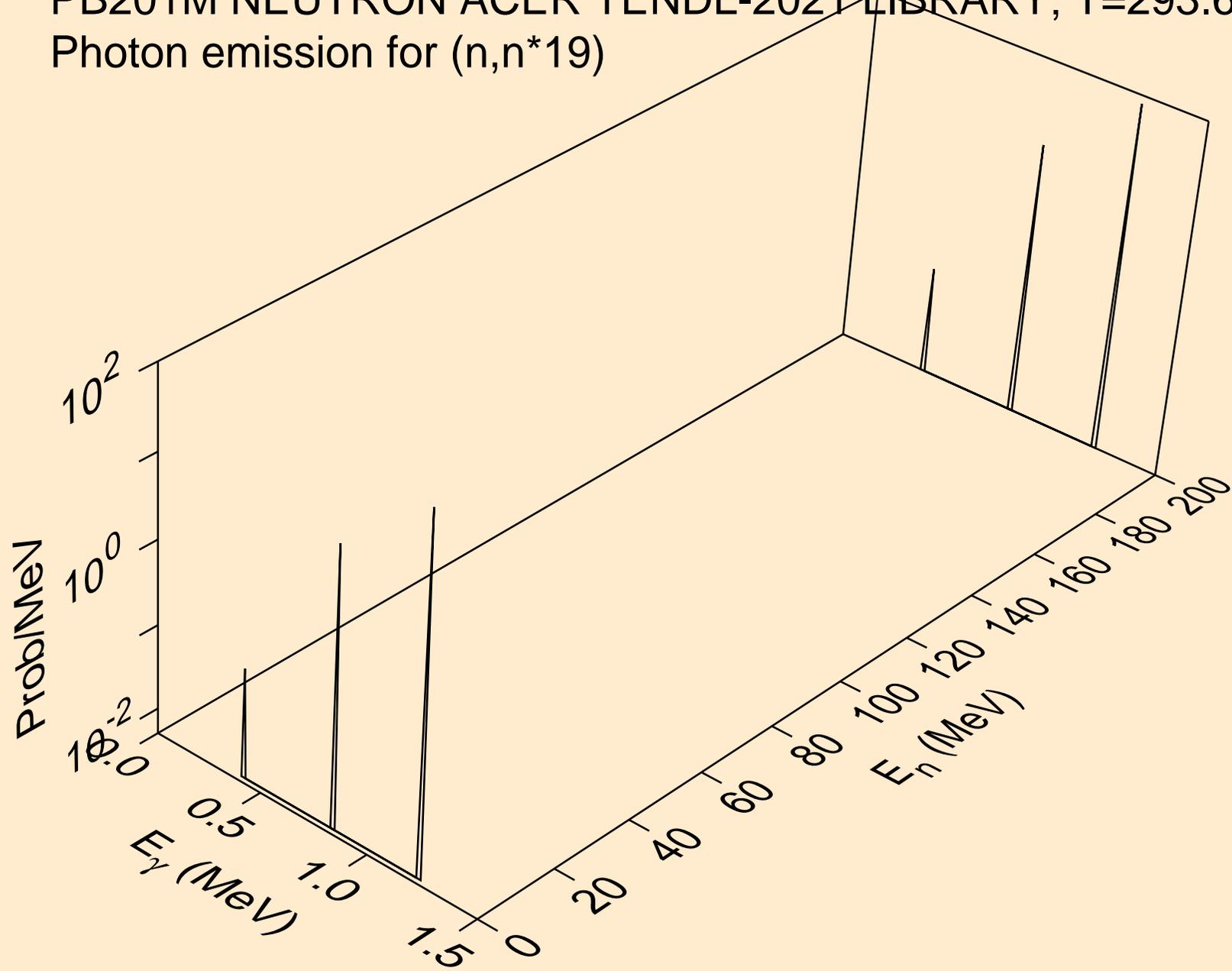10^{-2}

E_γ (MeV)

E_n (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*11)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*12)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
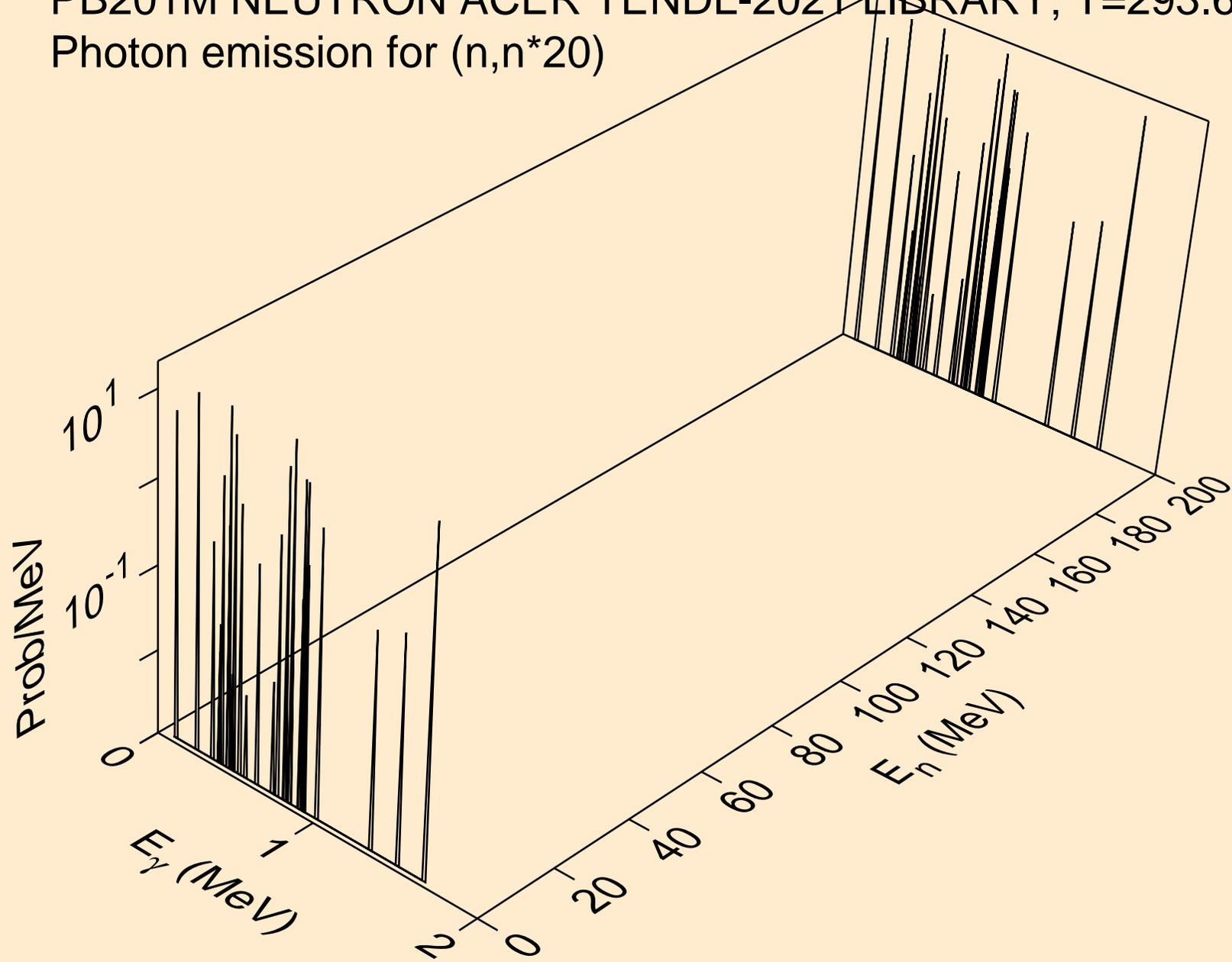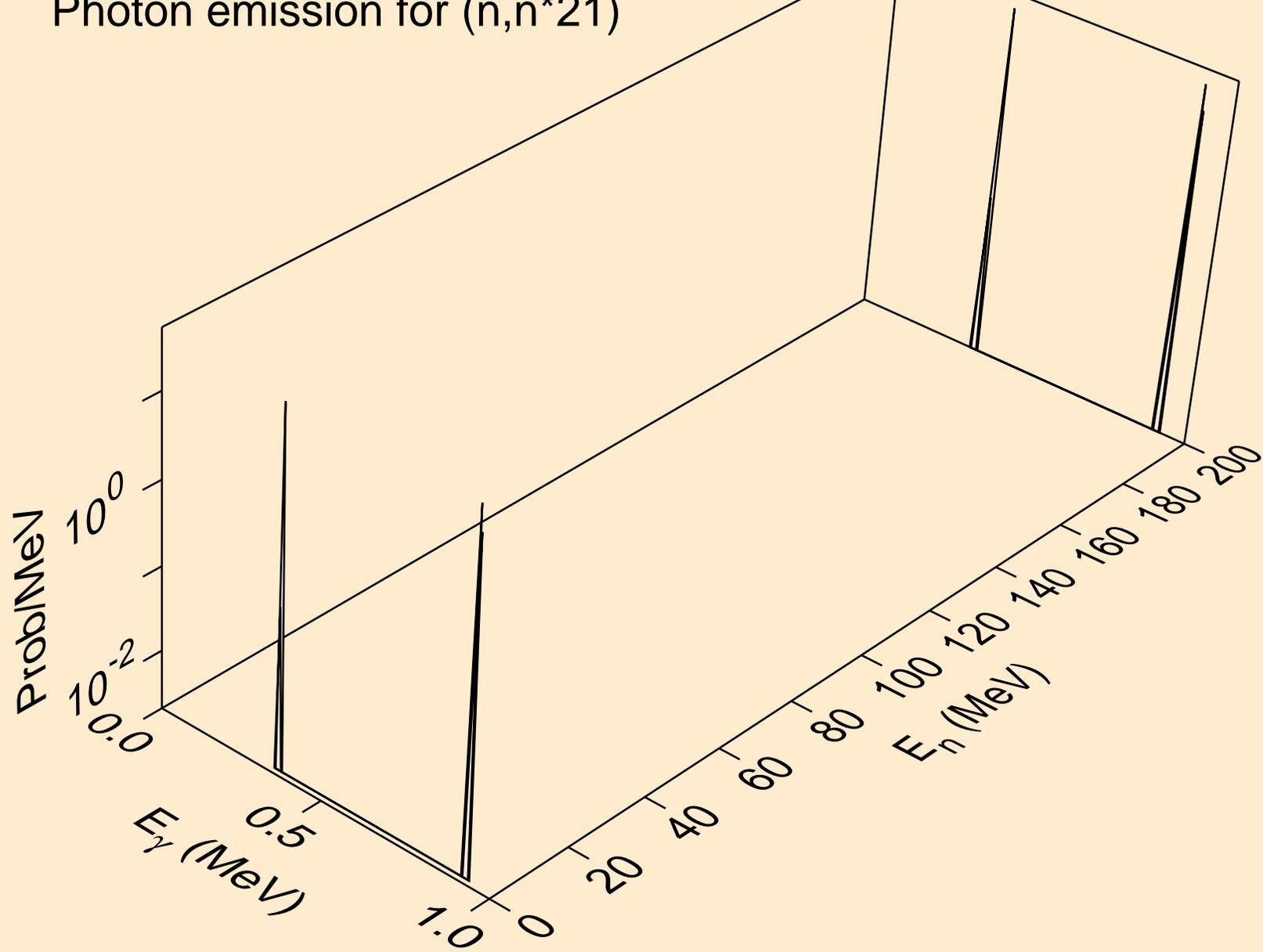Photon emission for (n,n*13)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
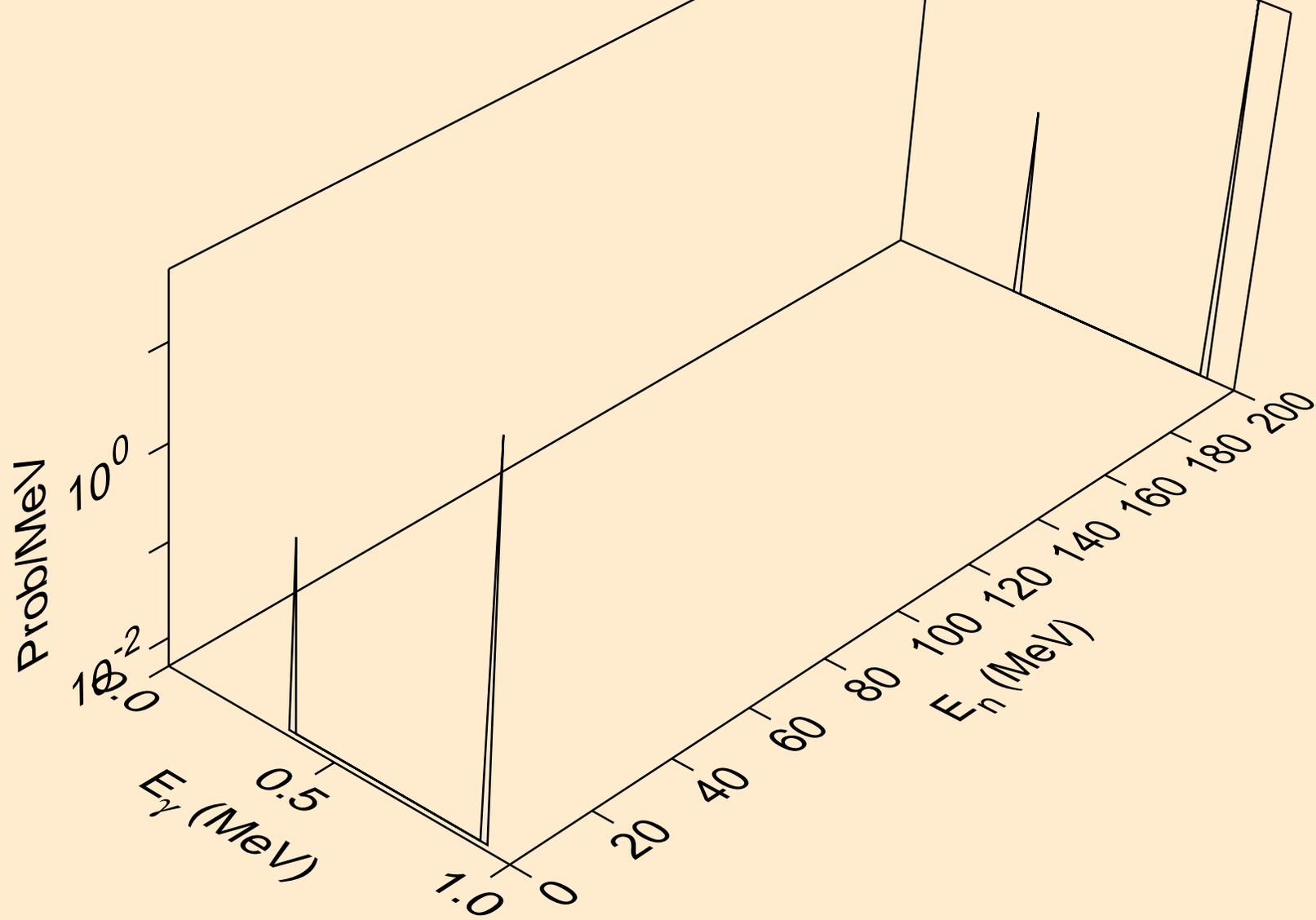Photon emission for (n,n*14)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*15)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*16)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*17)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*18)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*19)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
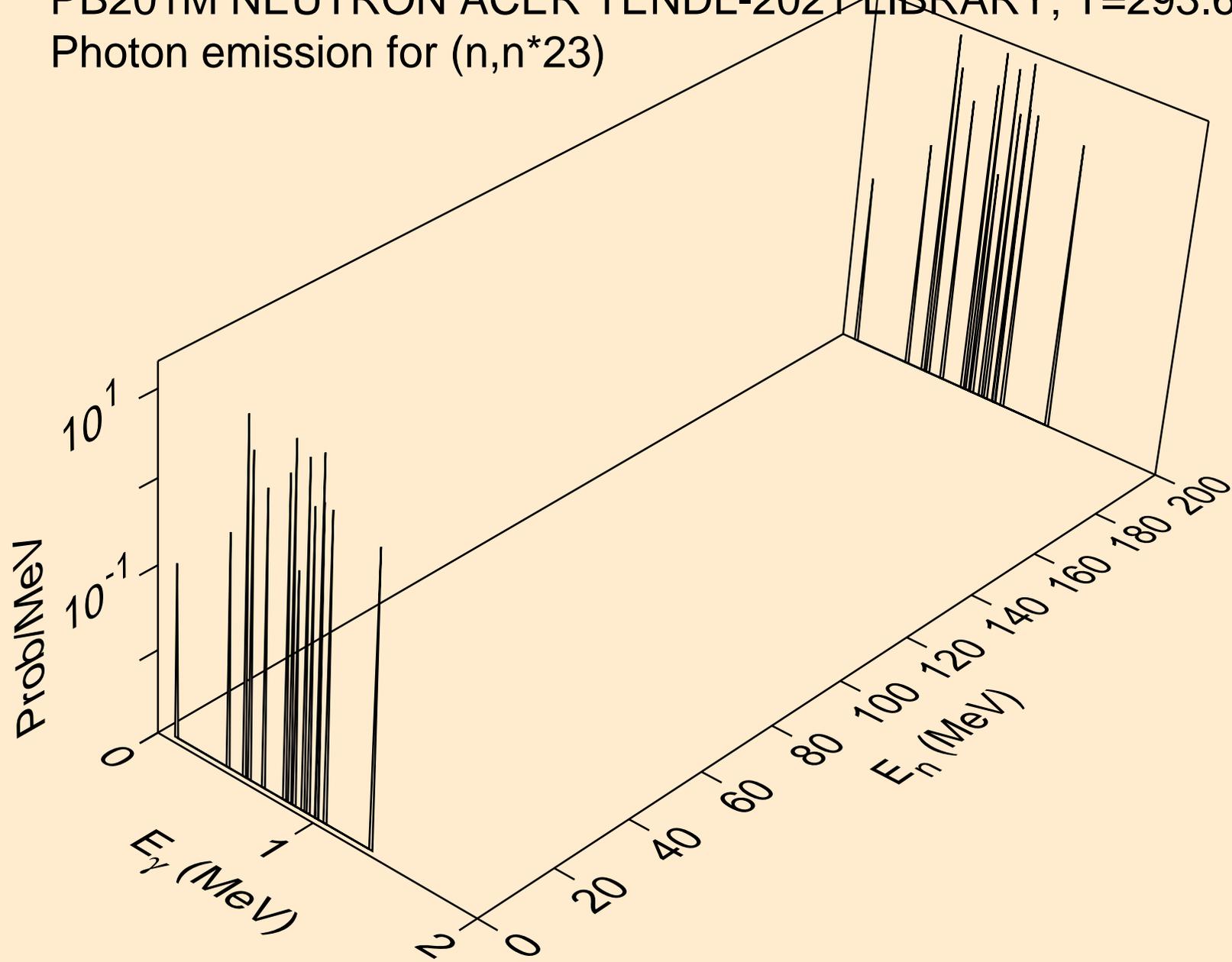Photon emission for (n,n*20)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
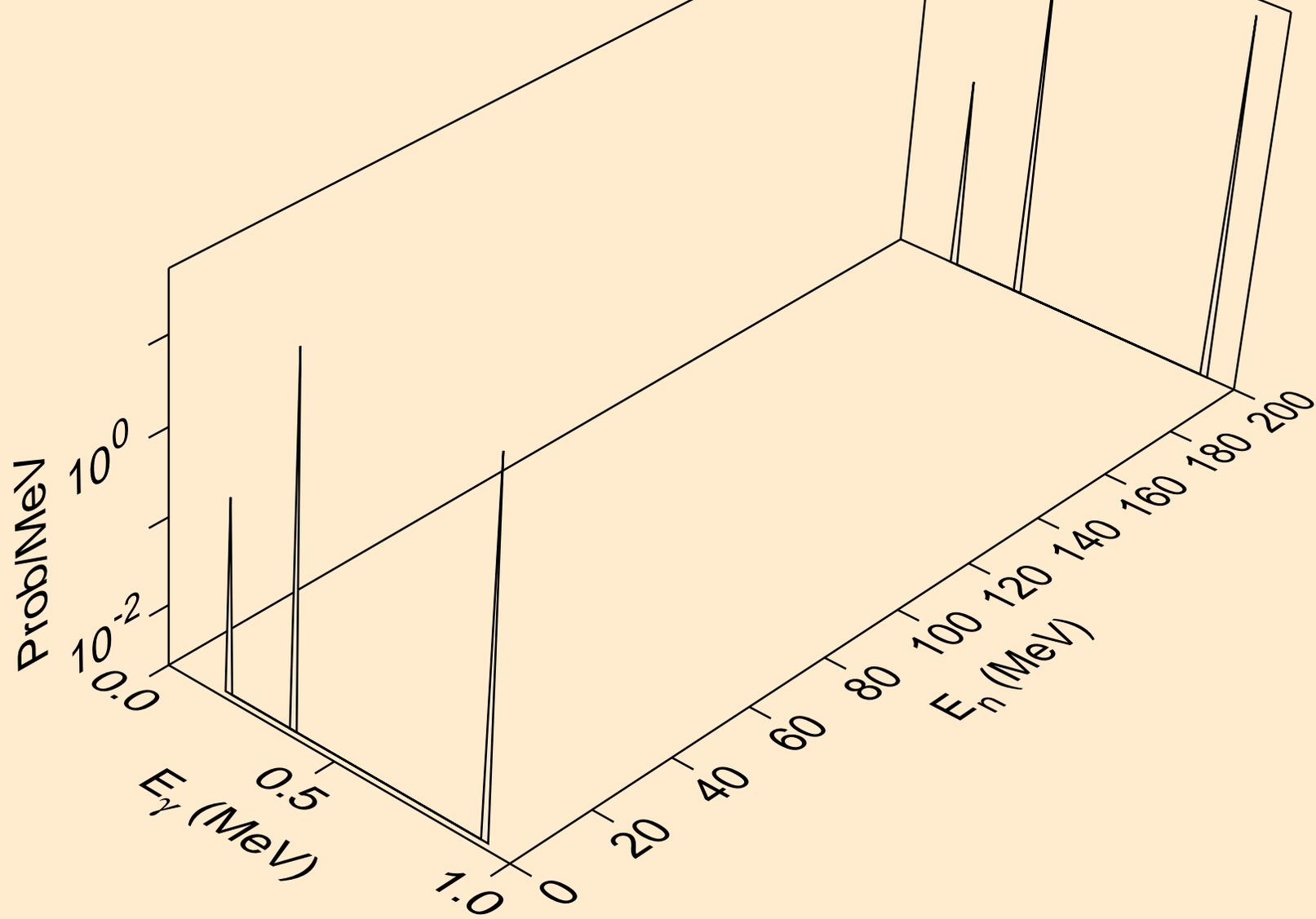Photon emission for (n,n*21)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
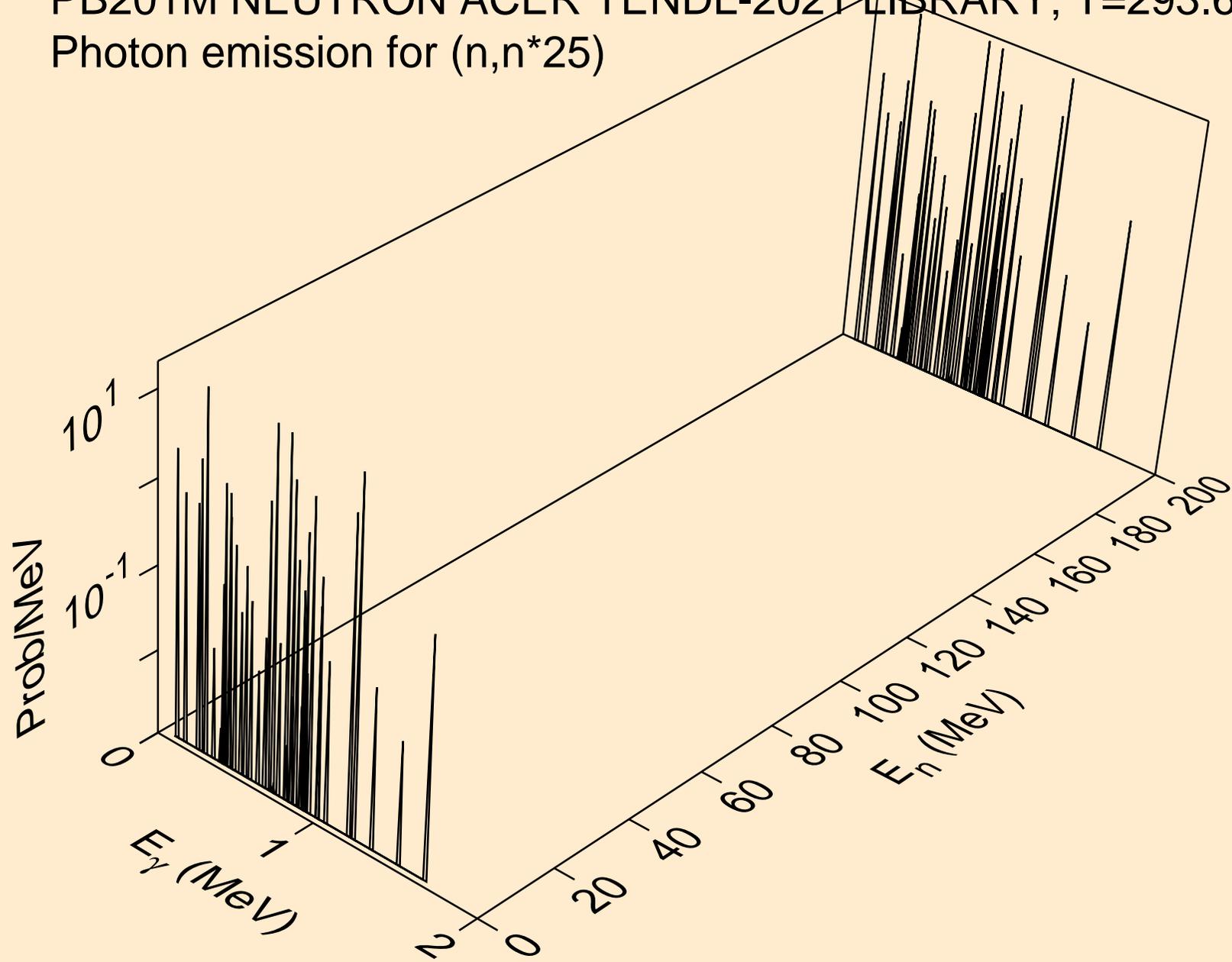Photon emission for (n,n*22)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
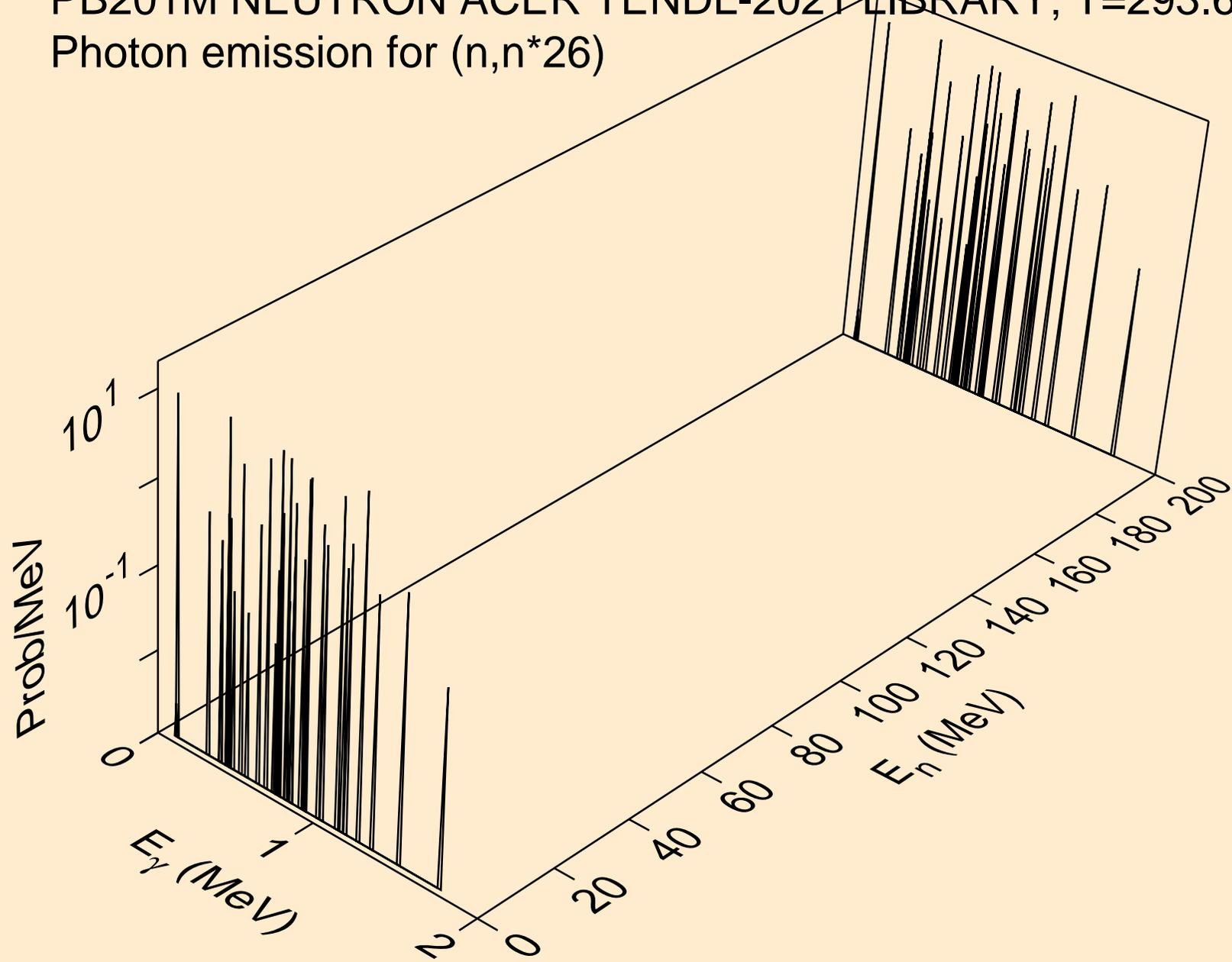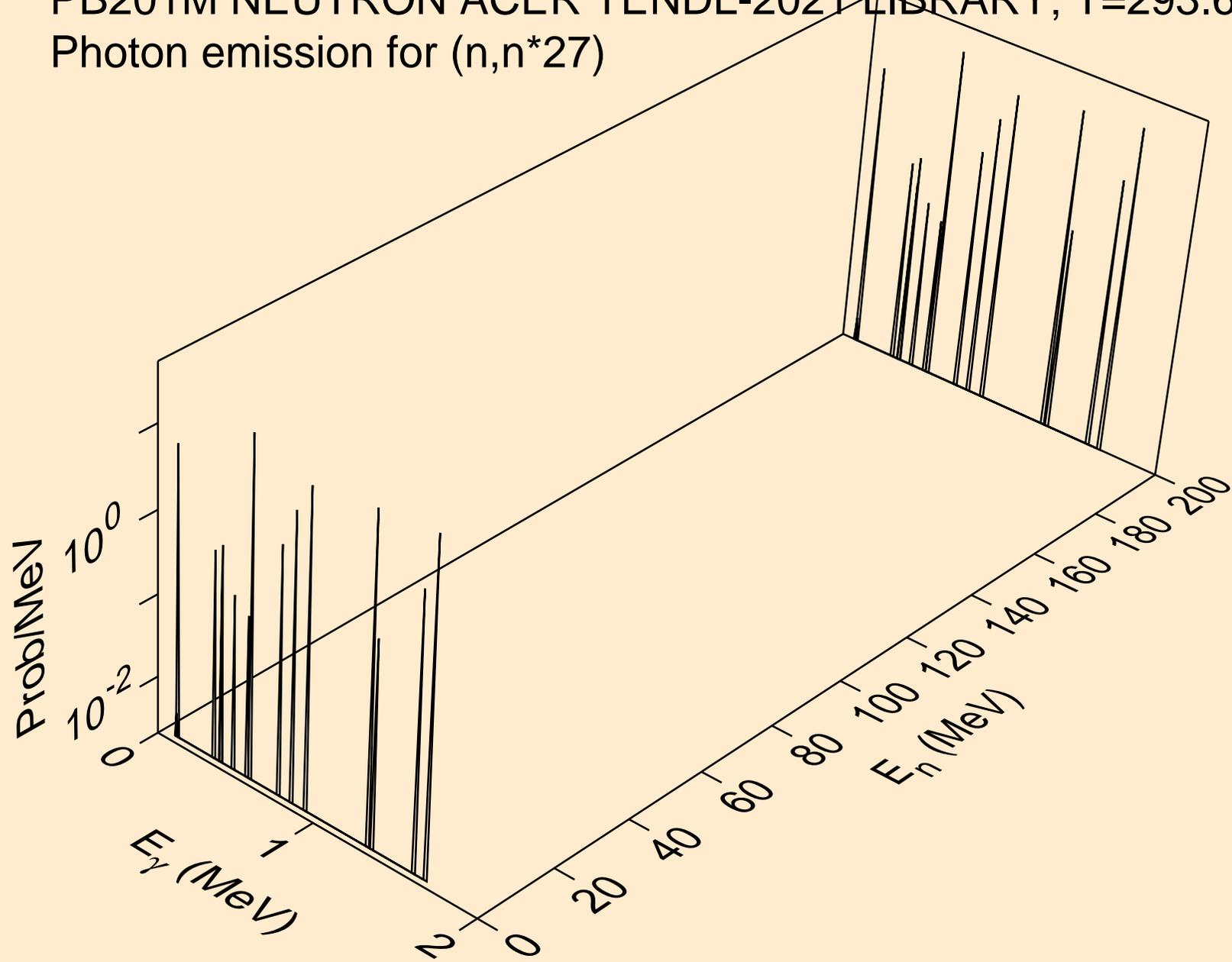Photon emission for (n,n*23)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*24)

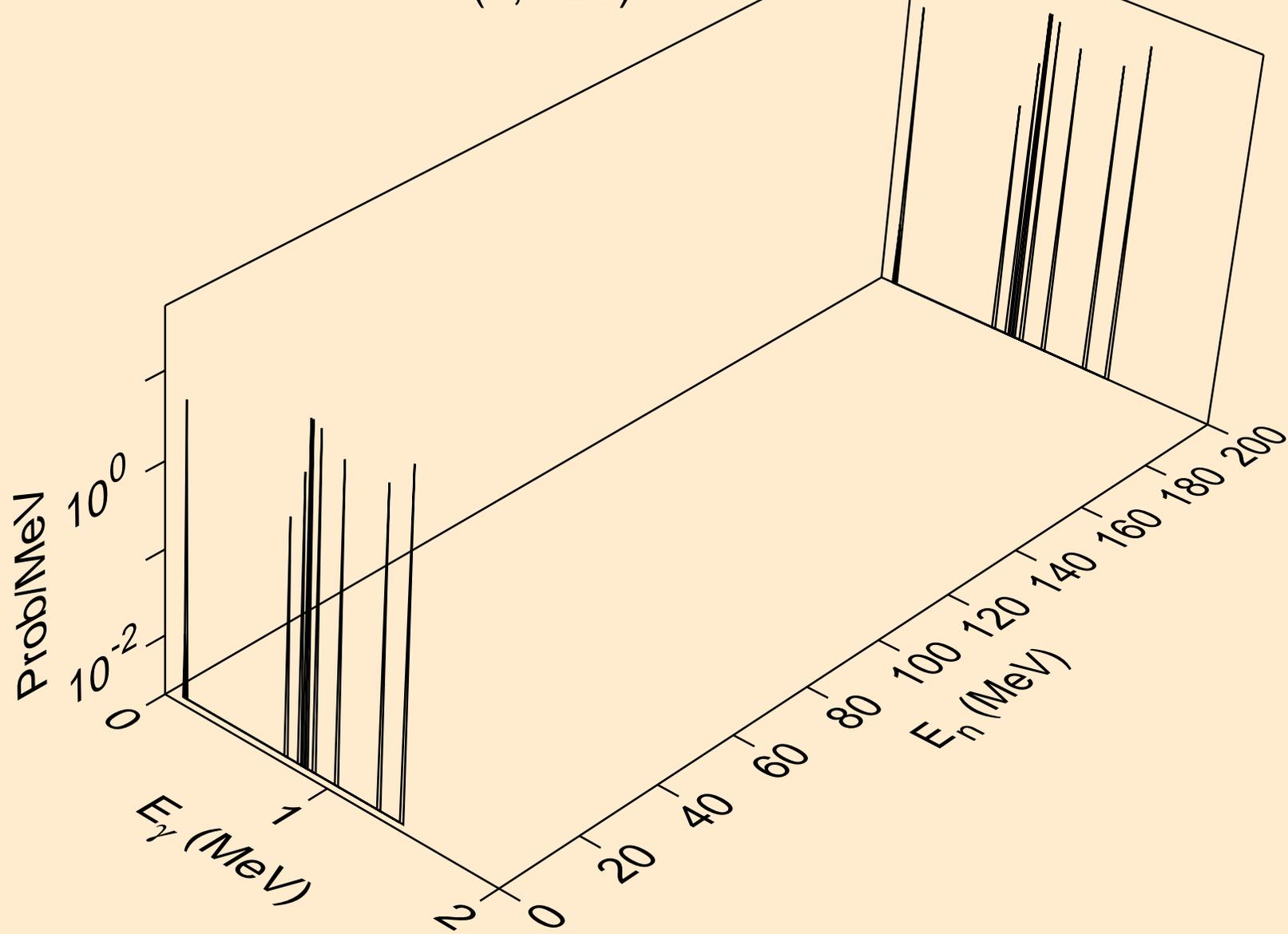PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*25)

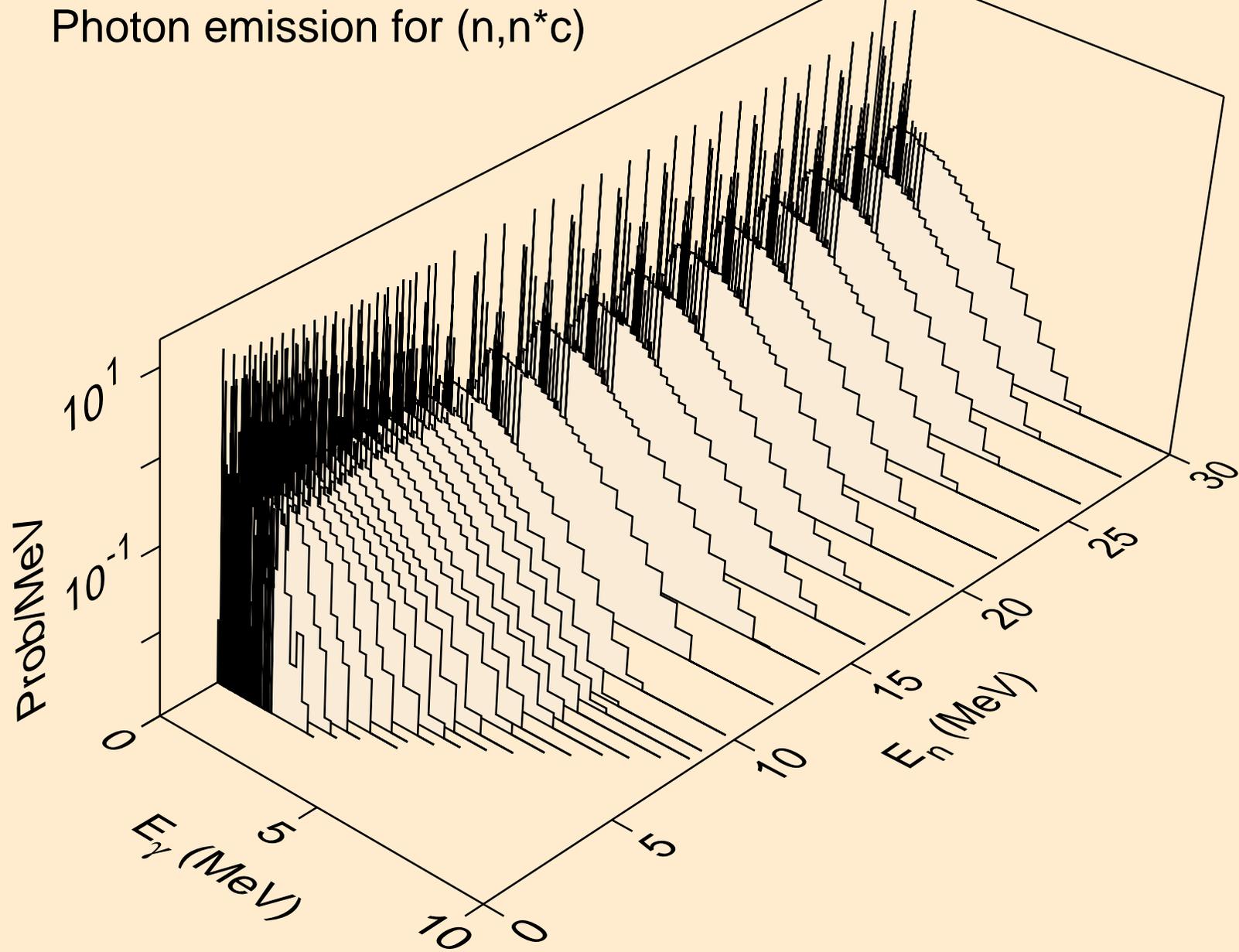PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*26)

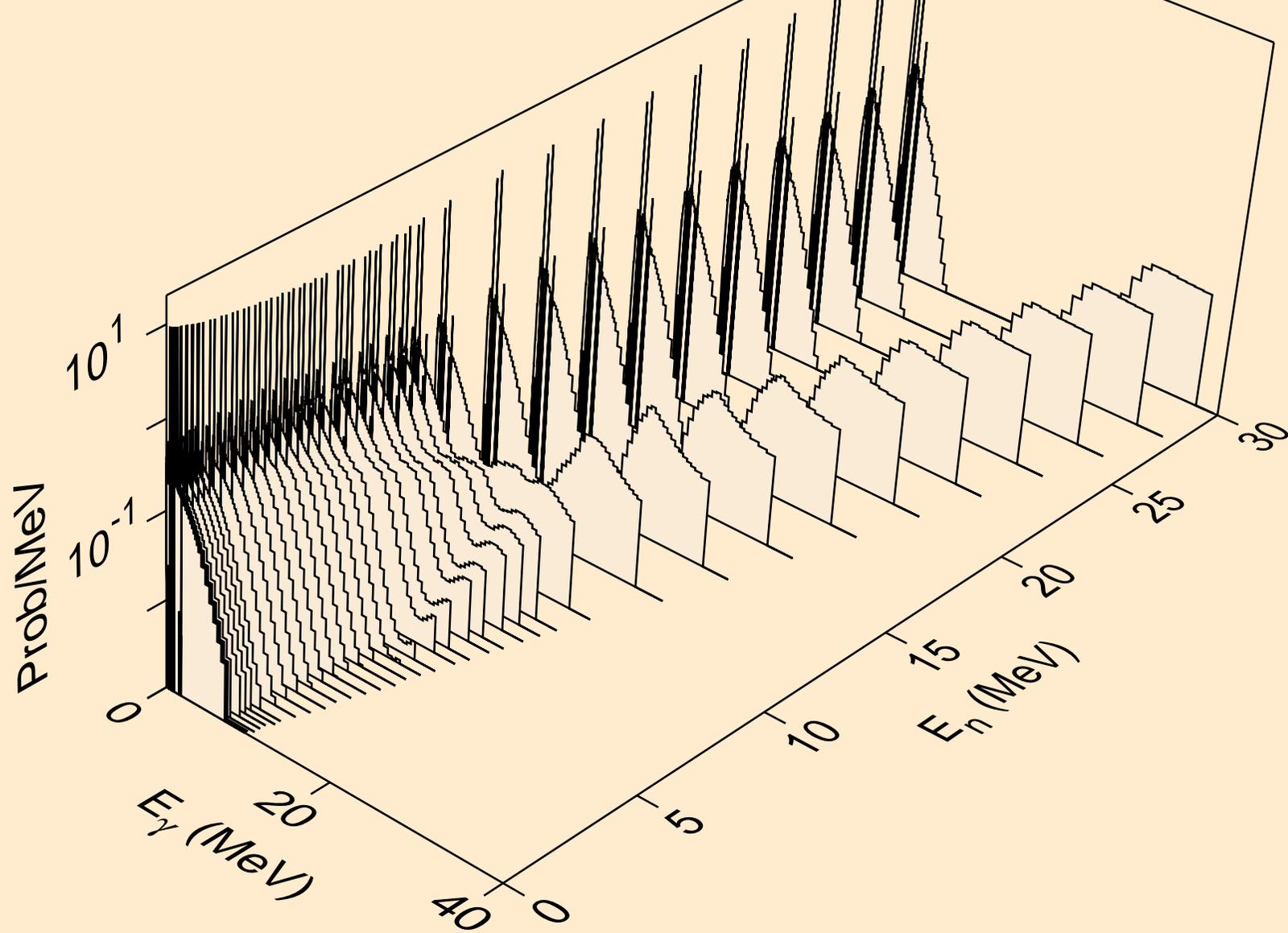PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*27)

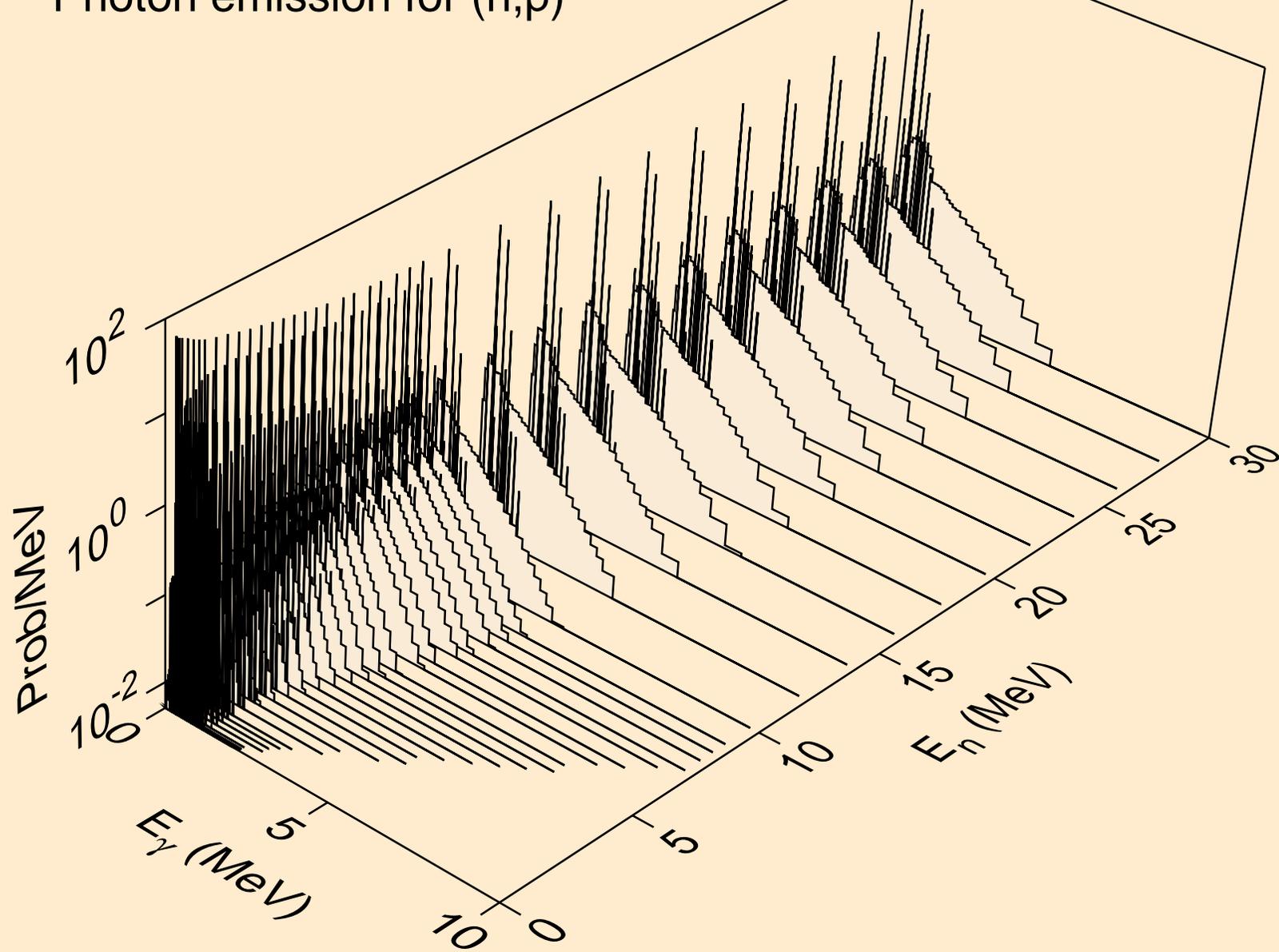PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*28)

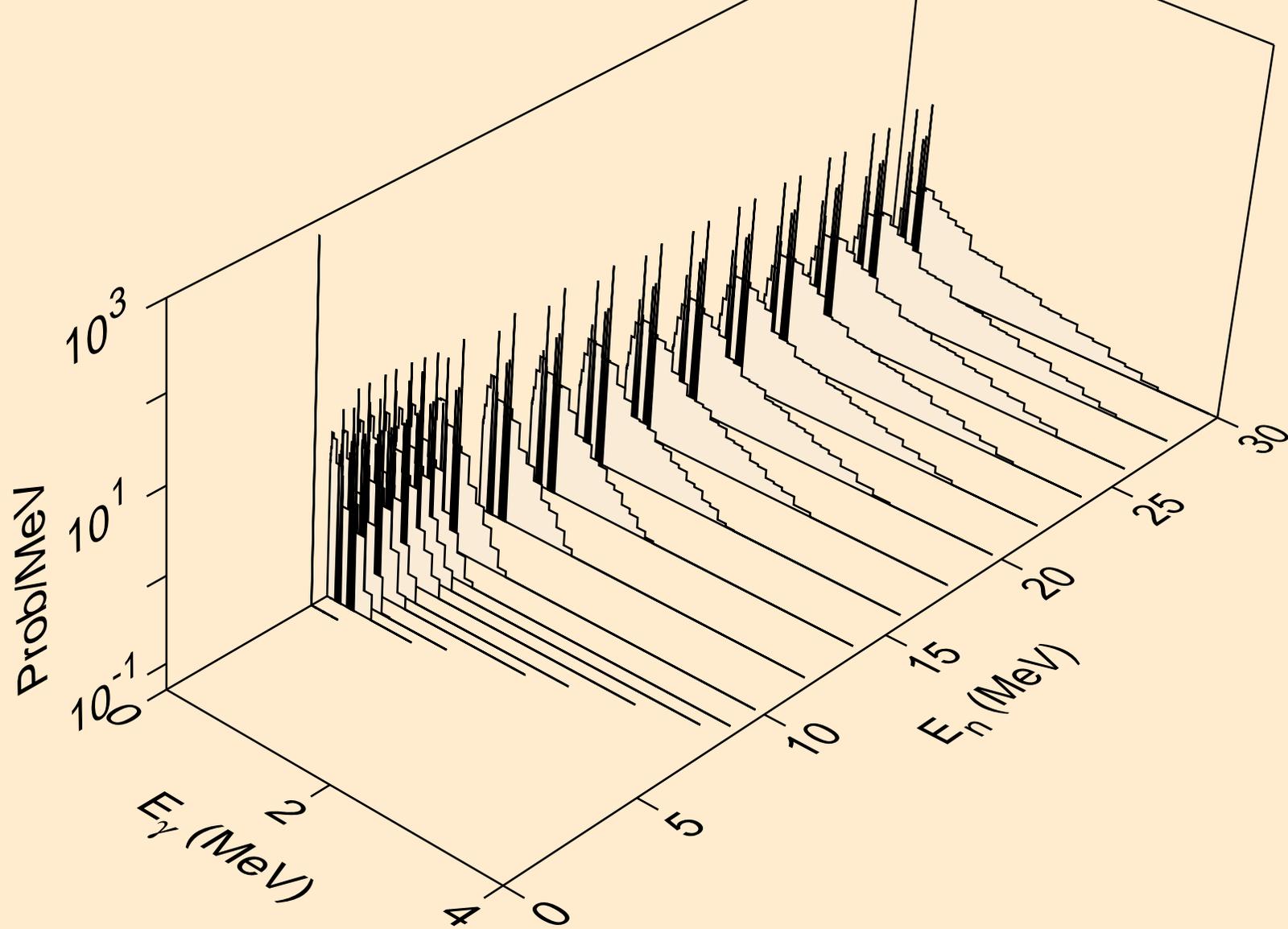PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,n*c)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
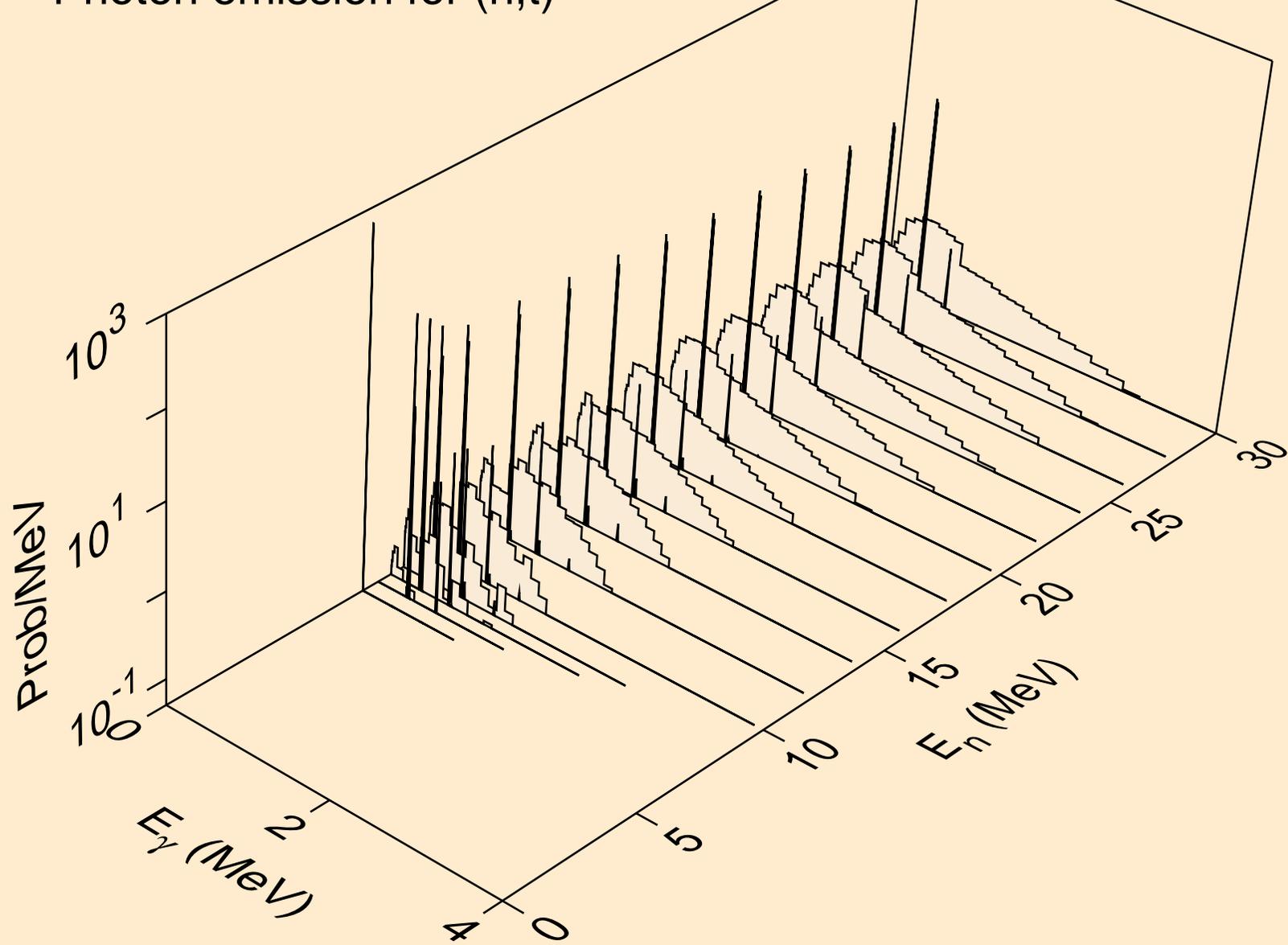Photon emission for (n,gma)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
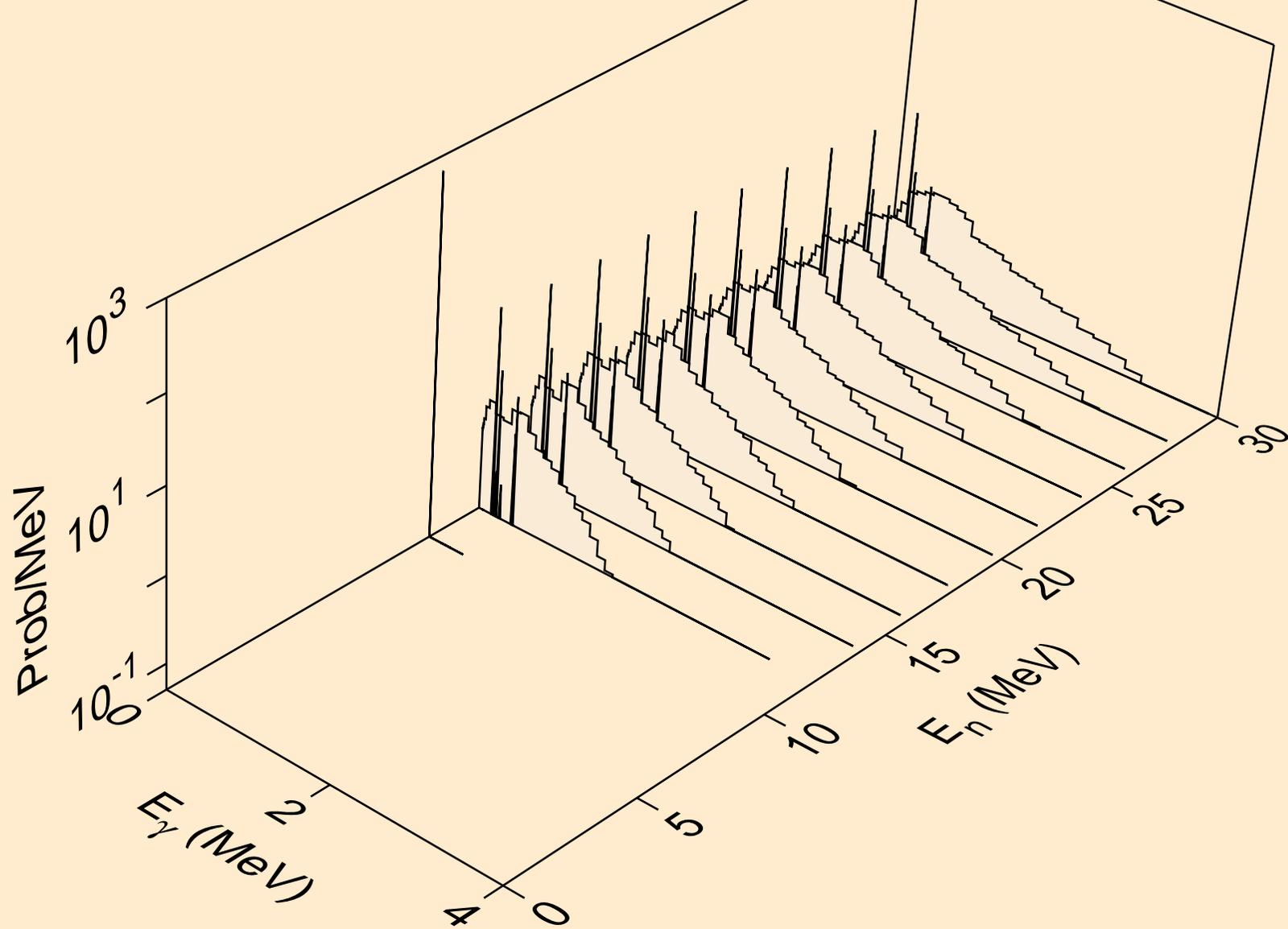Photon emission for (n,p)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
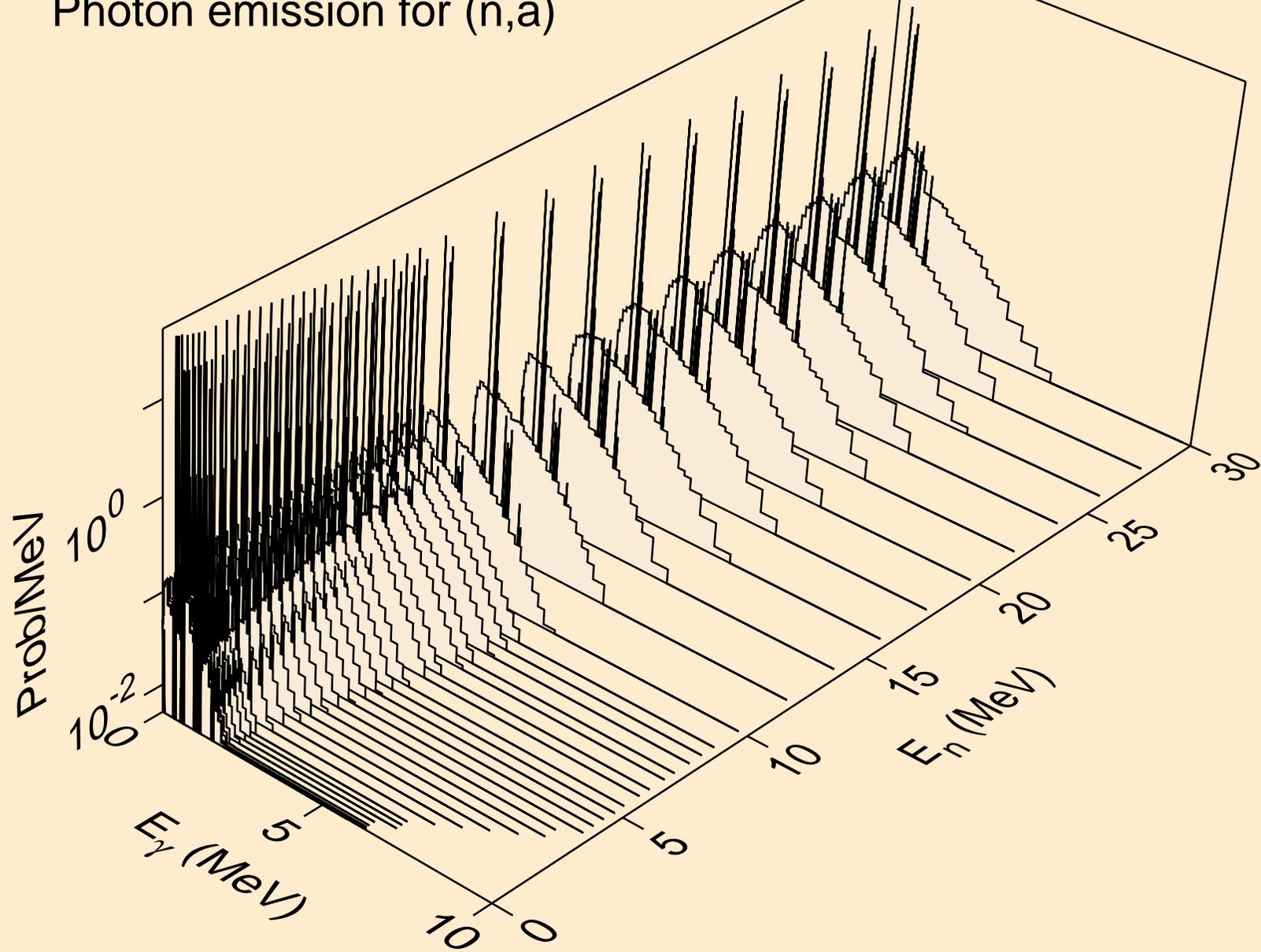Photon emission for (n,d)

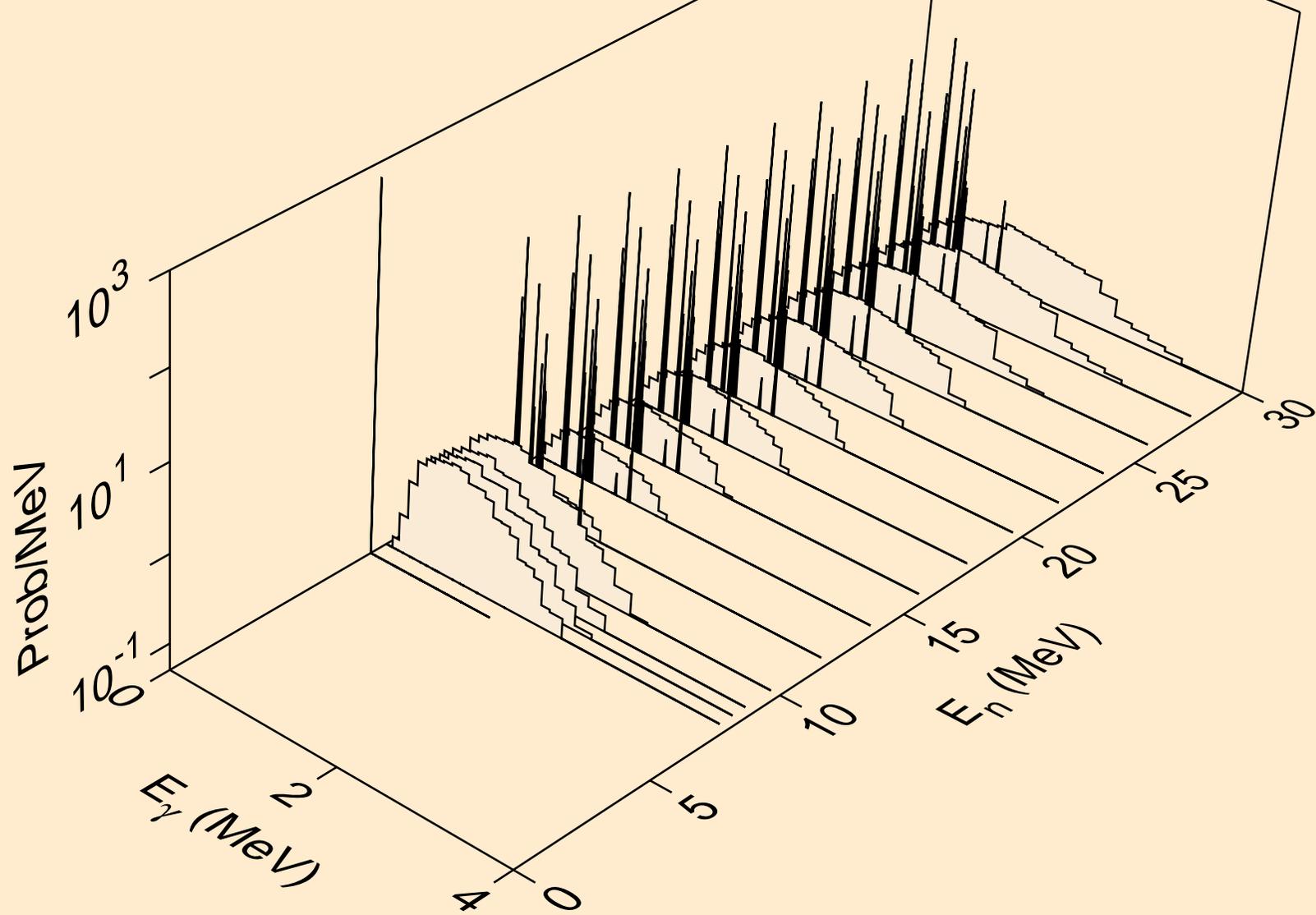PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,t)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
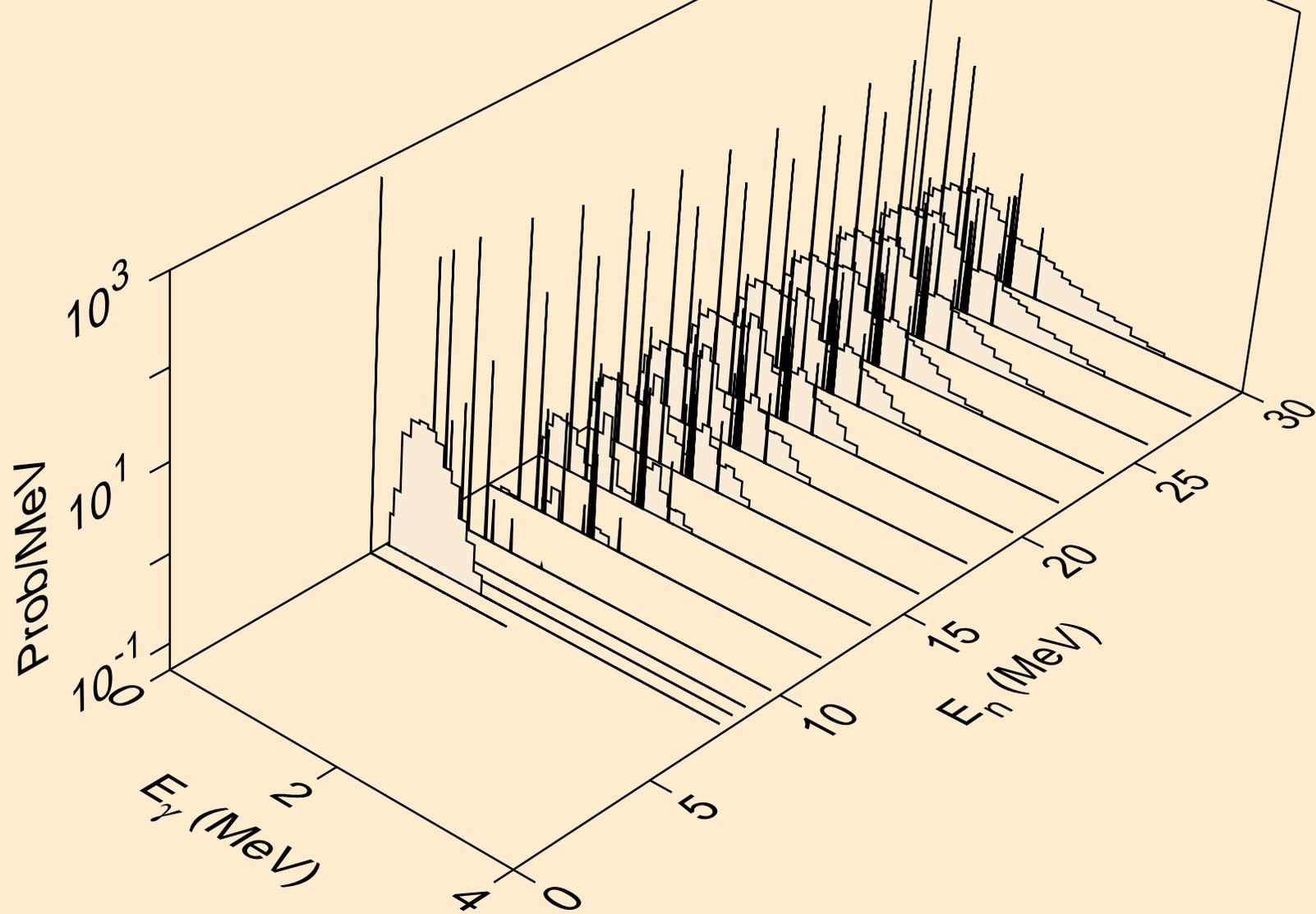Photon emission for (n,he3)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
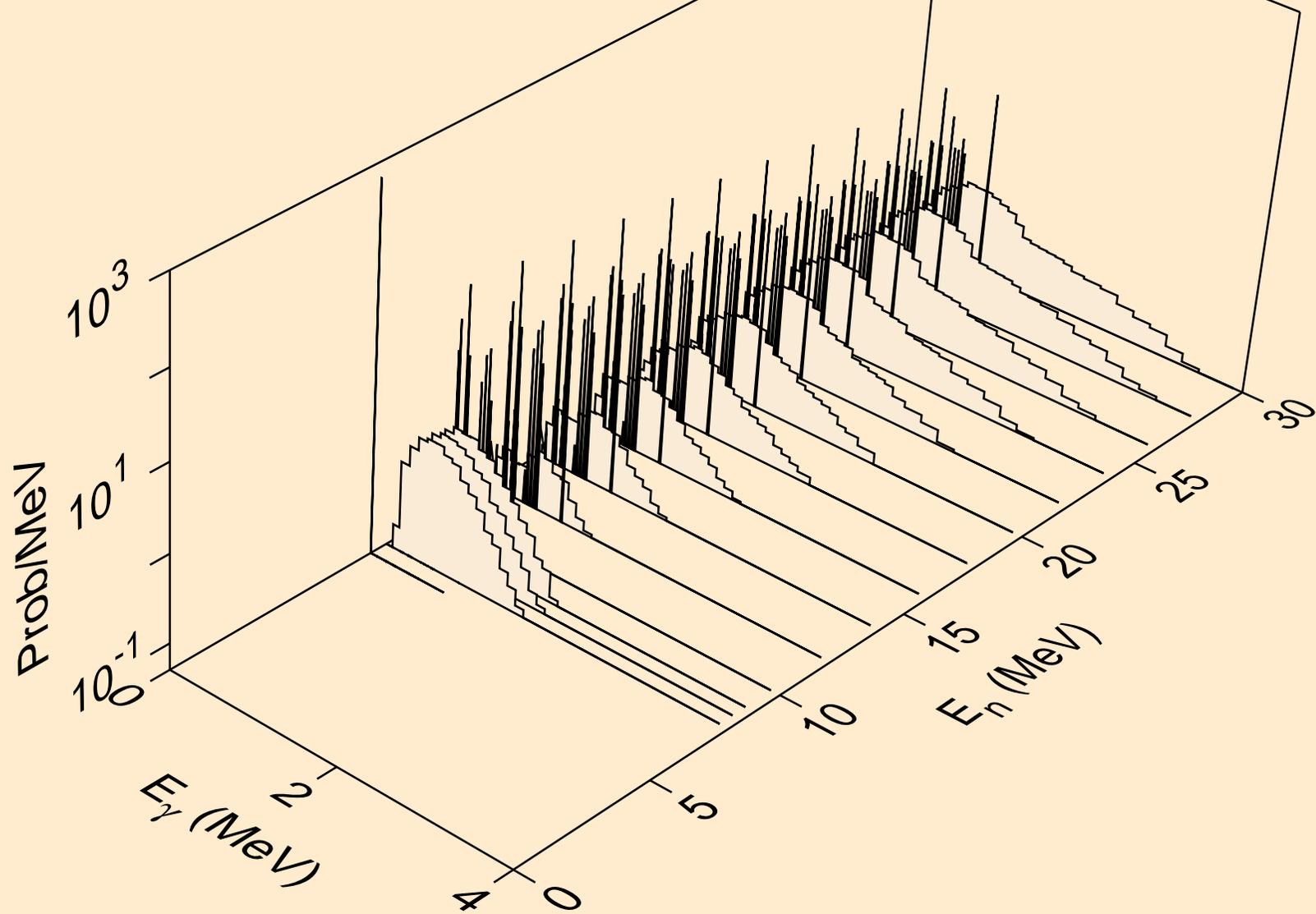Photon emission for (n,a)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
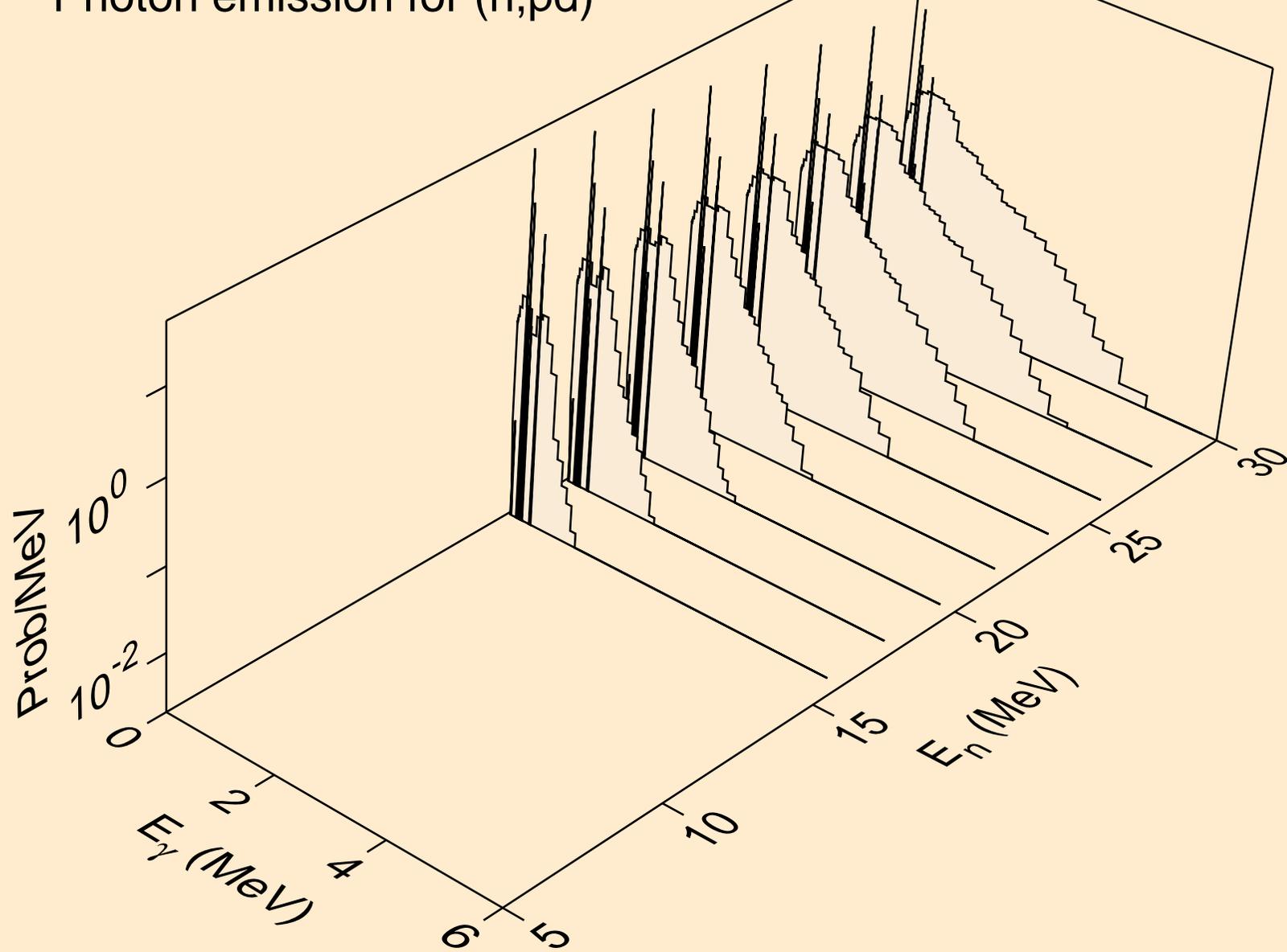Photon emission for (n,2a)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
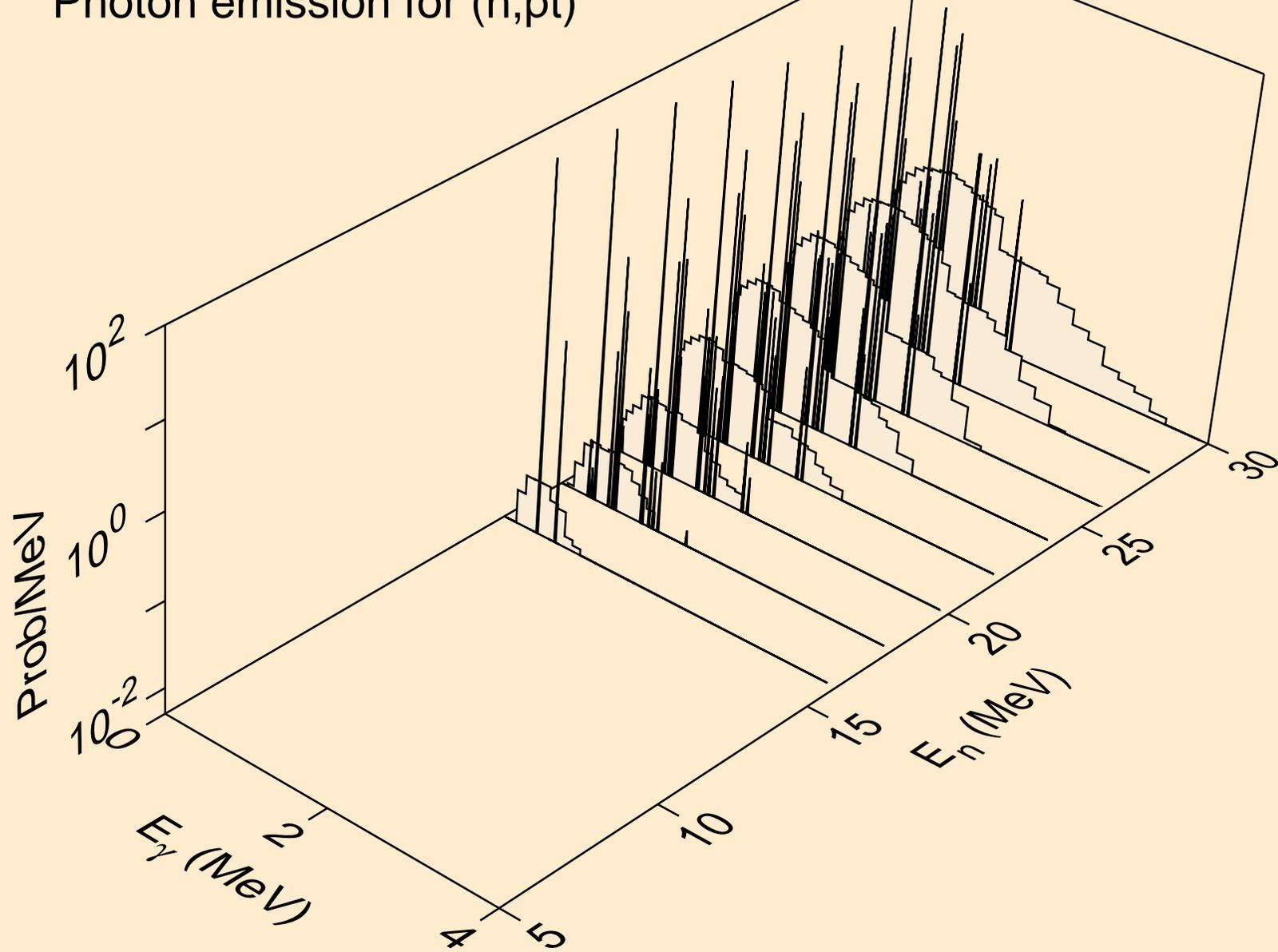Photon emission for (n,2p)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
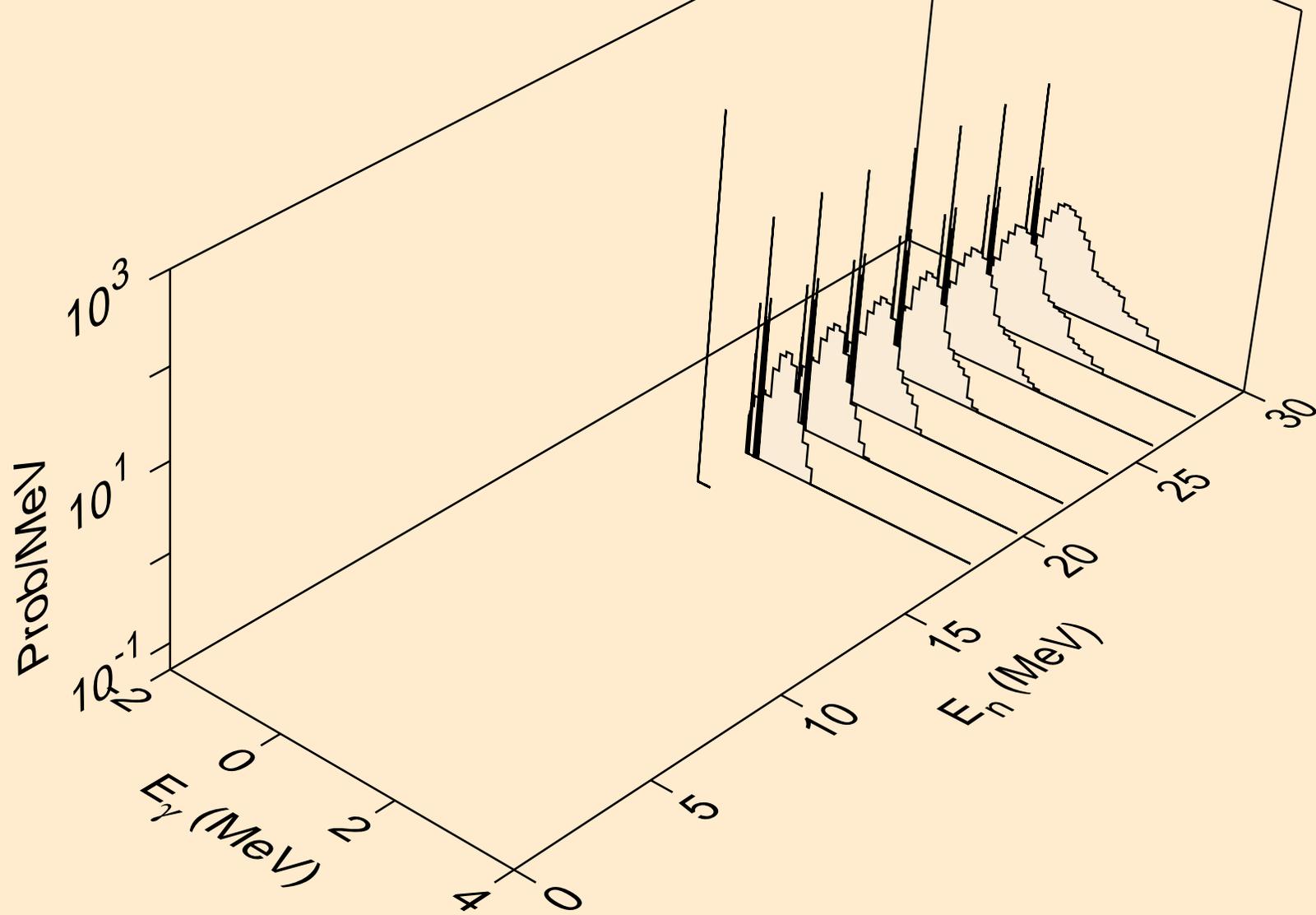Photon emission for (n,pa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
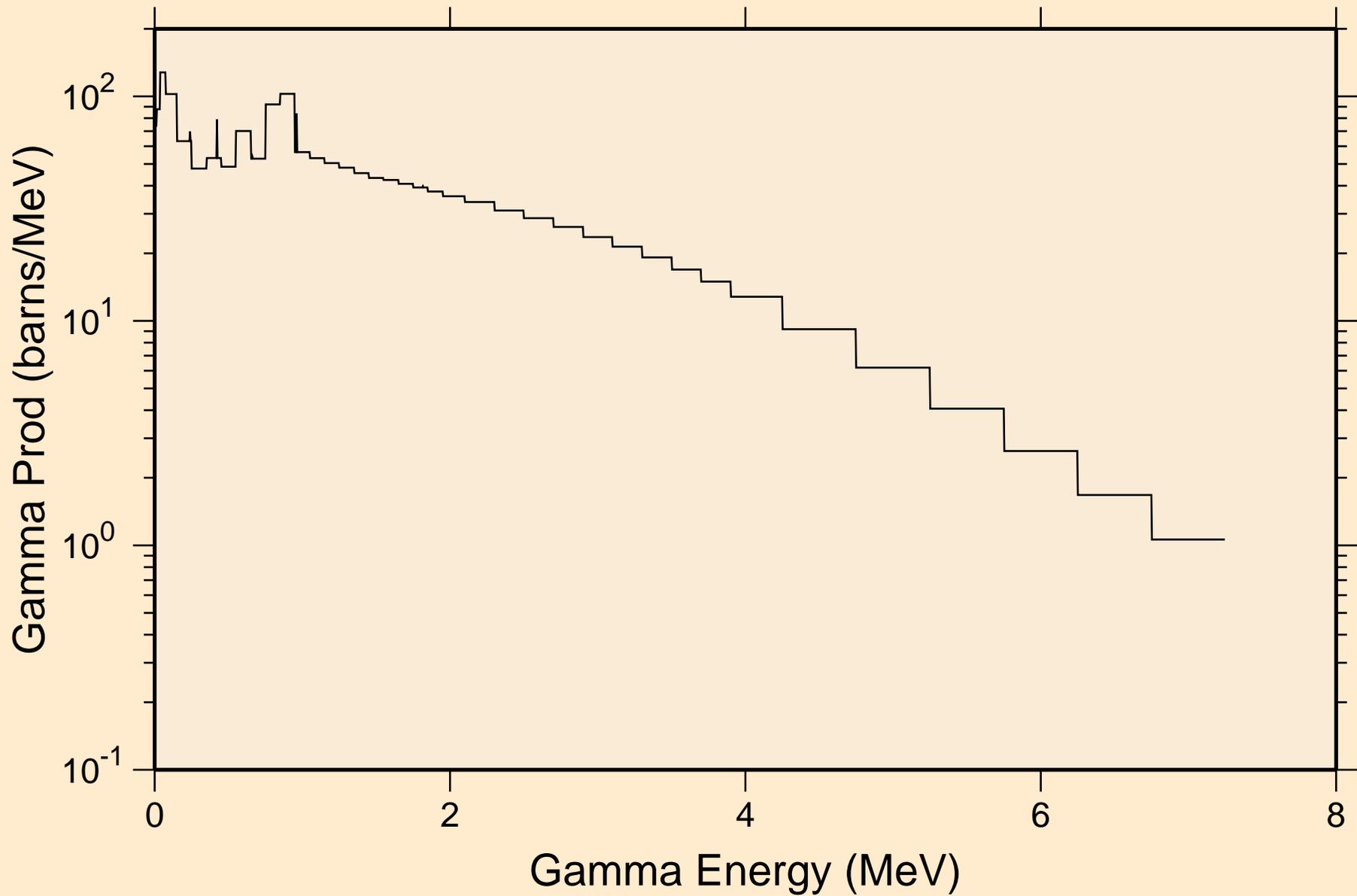Photon emission for (n,pd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
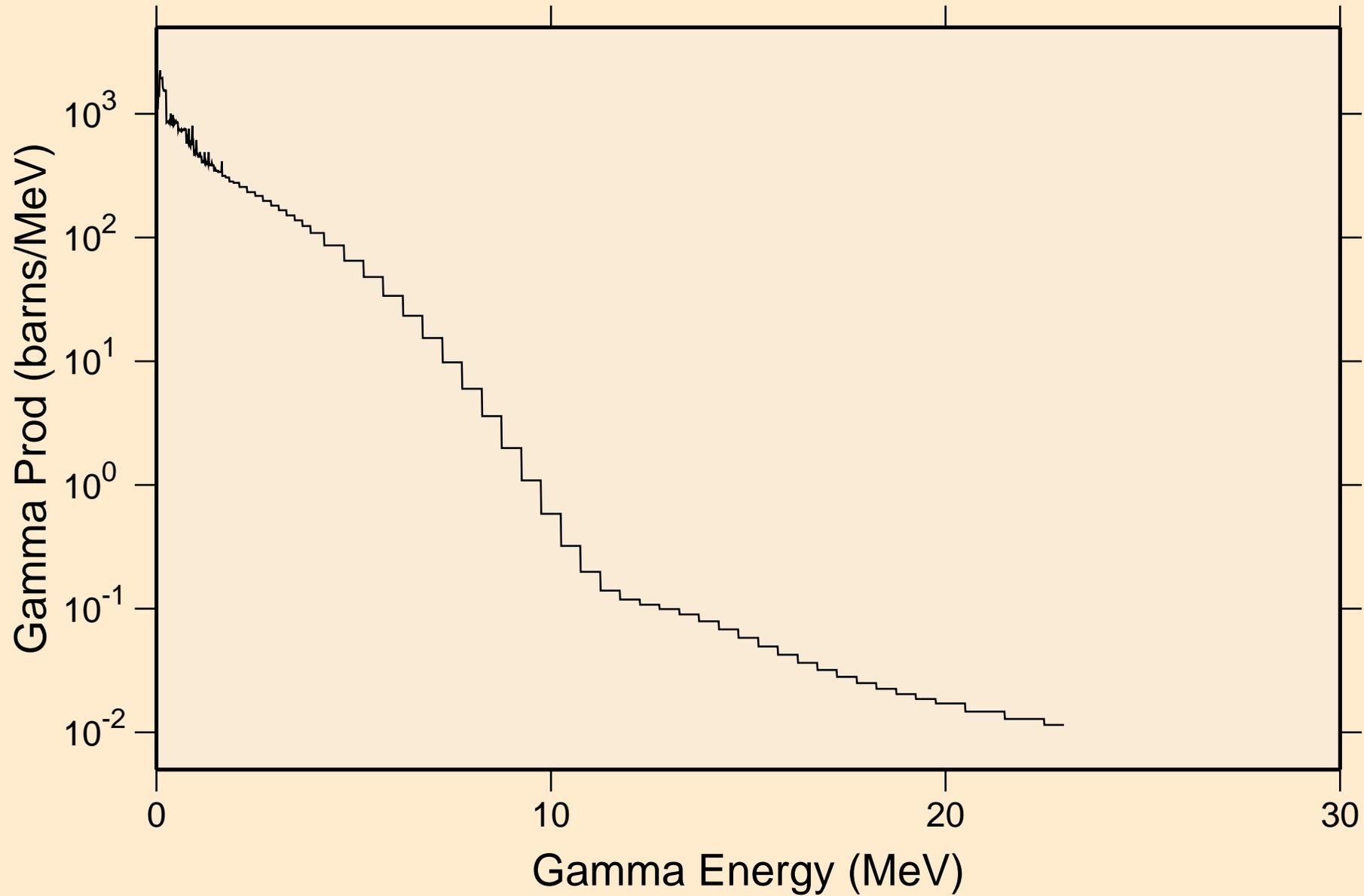Photon emission for (n,pt)

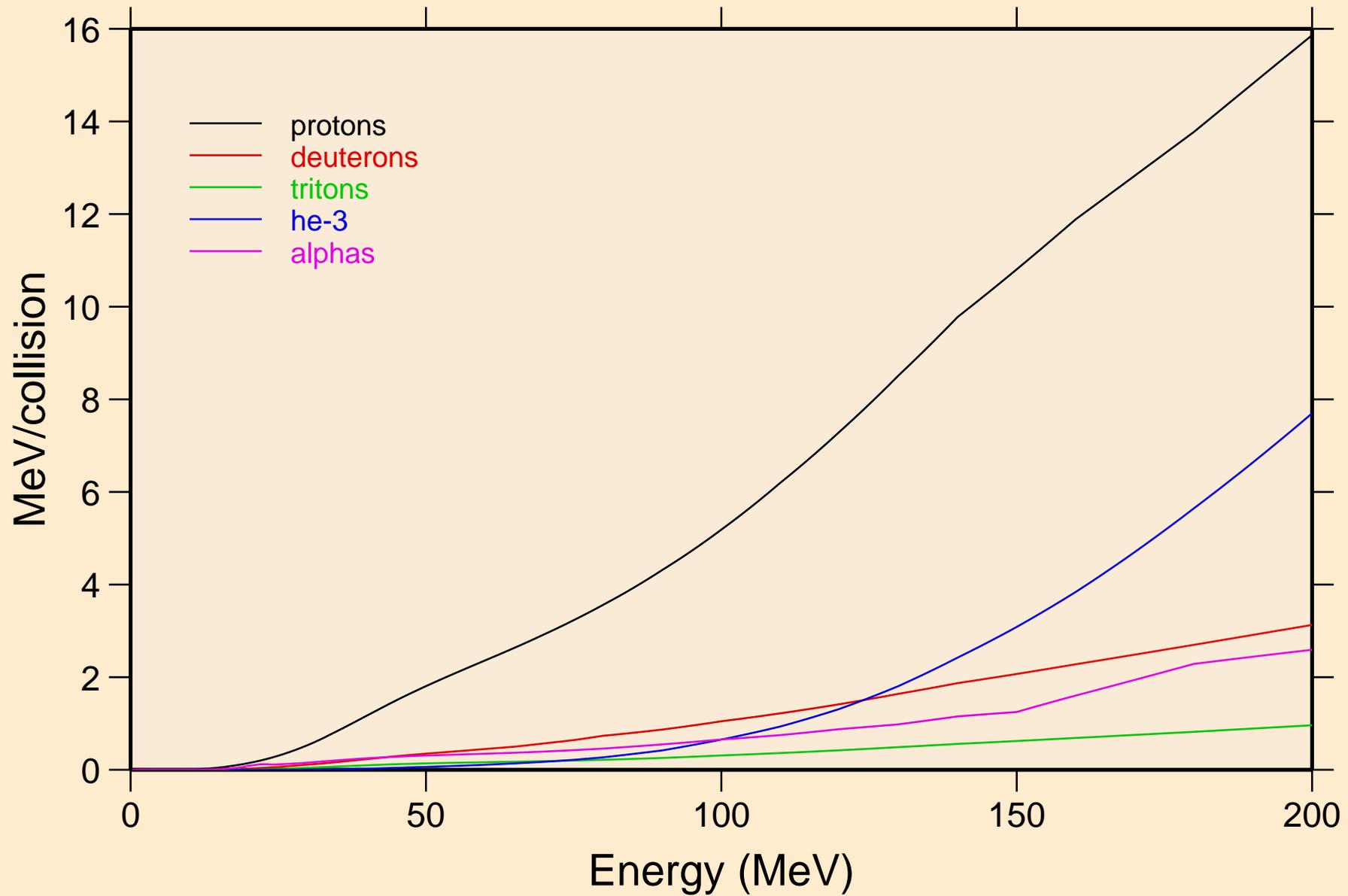PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Photon emission for (n,da)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
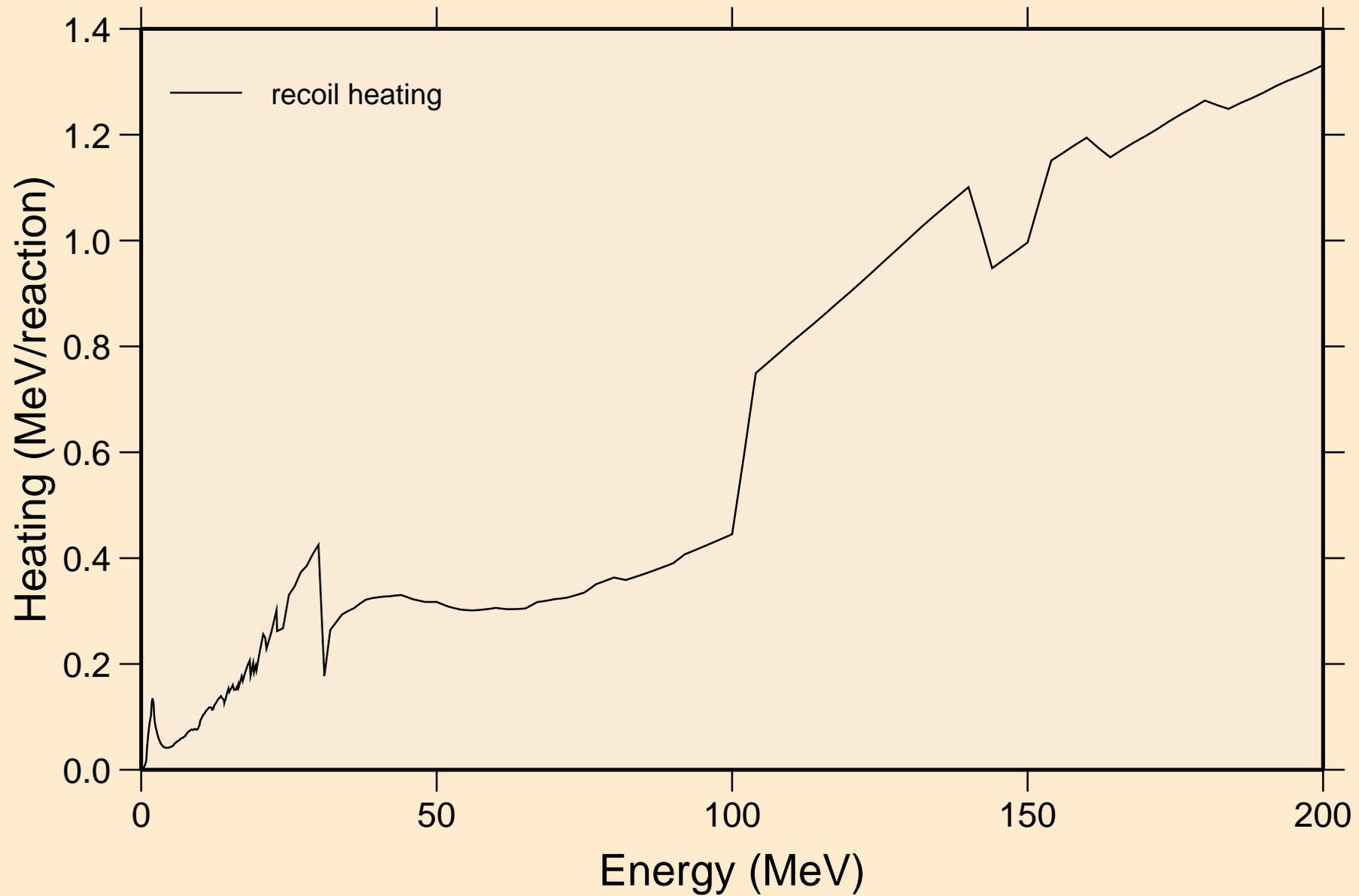thermal capture photon spectrum

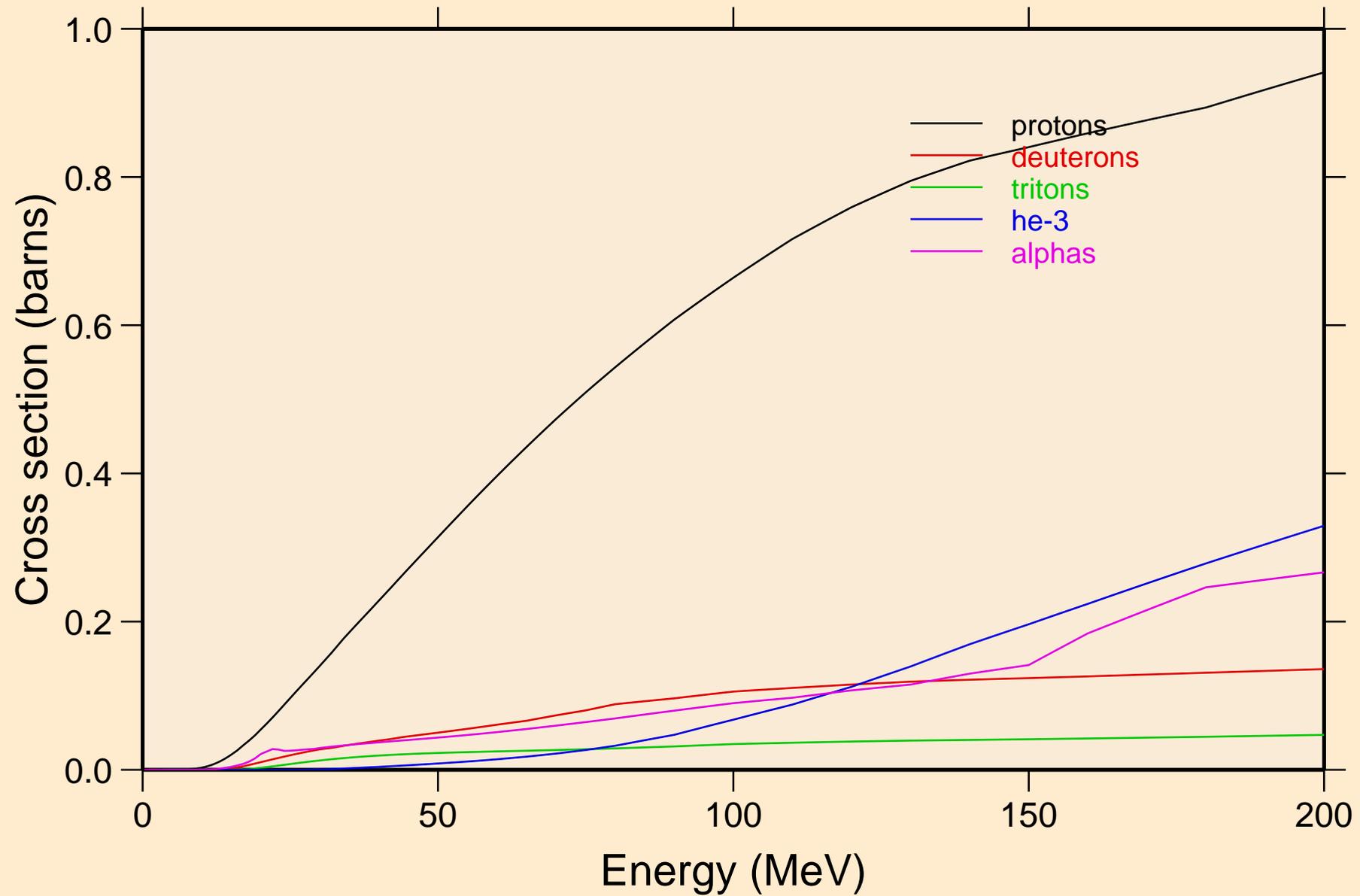PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
14 MeV photon spectrum

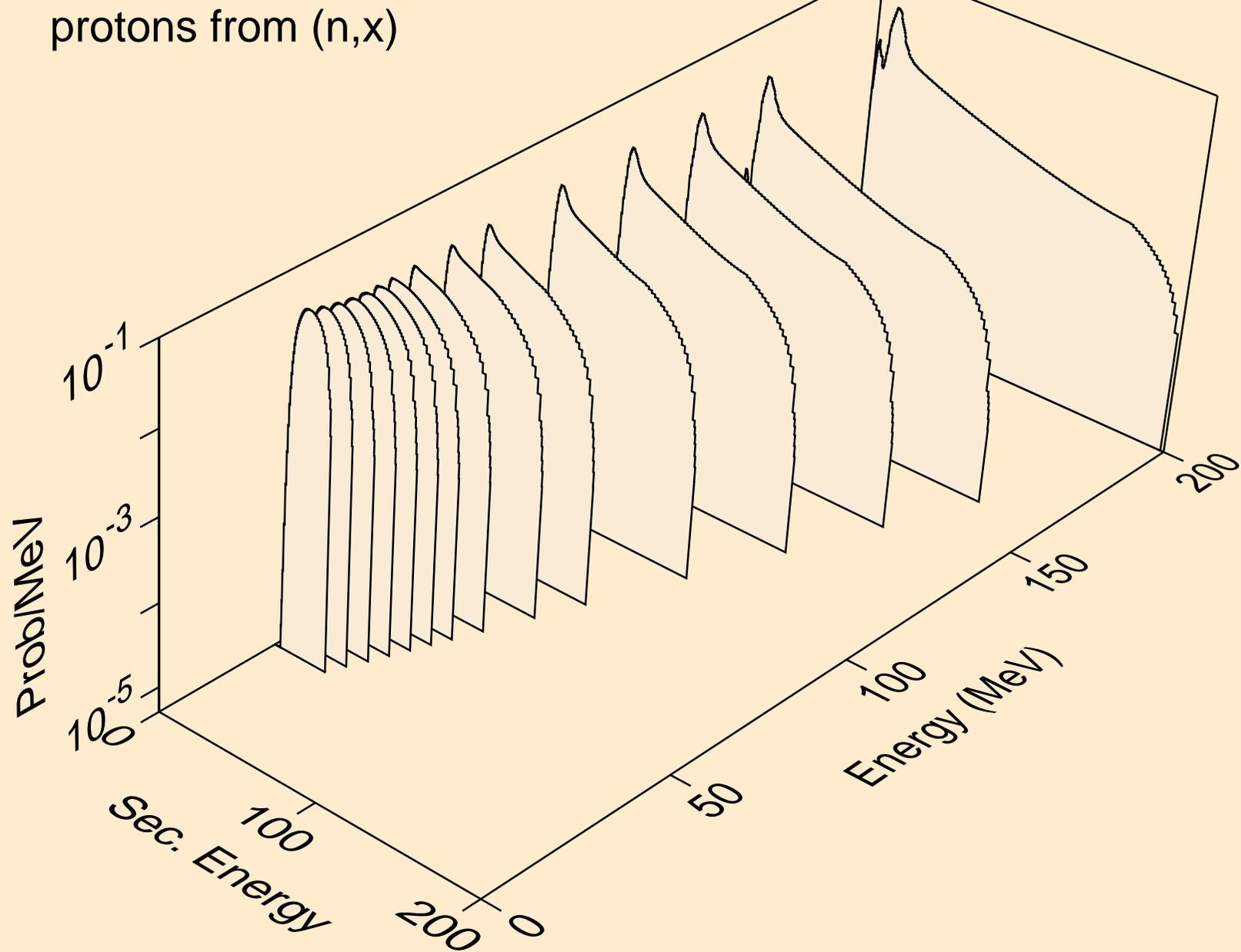PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Particle heating contributions

- protons
- deuterons
- tritons
- he-3
- alphas

MeV/collision

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
Recoil Heating

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
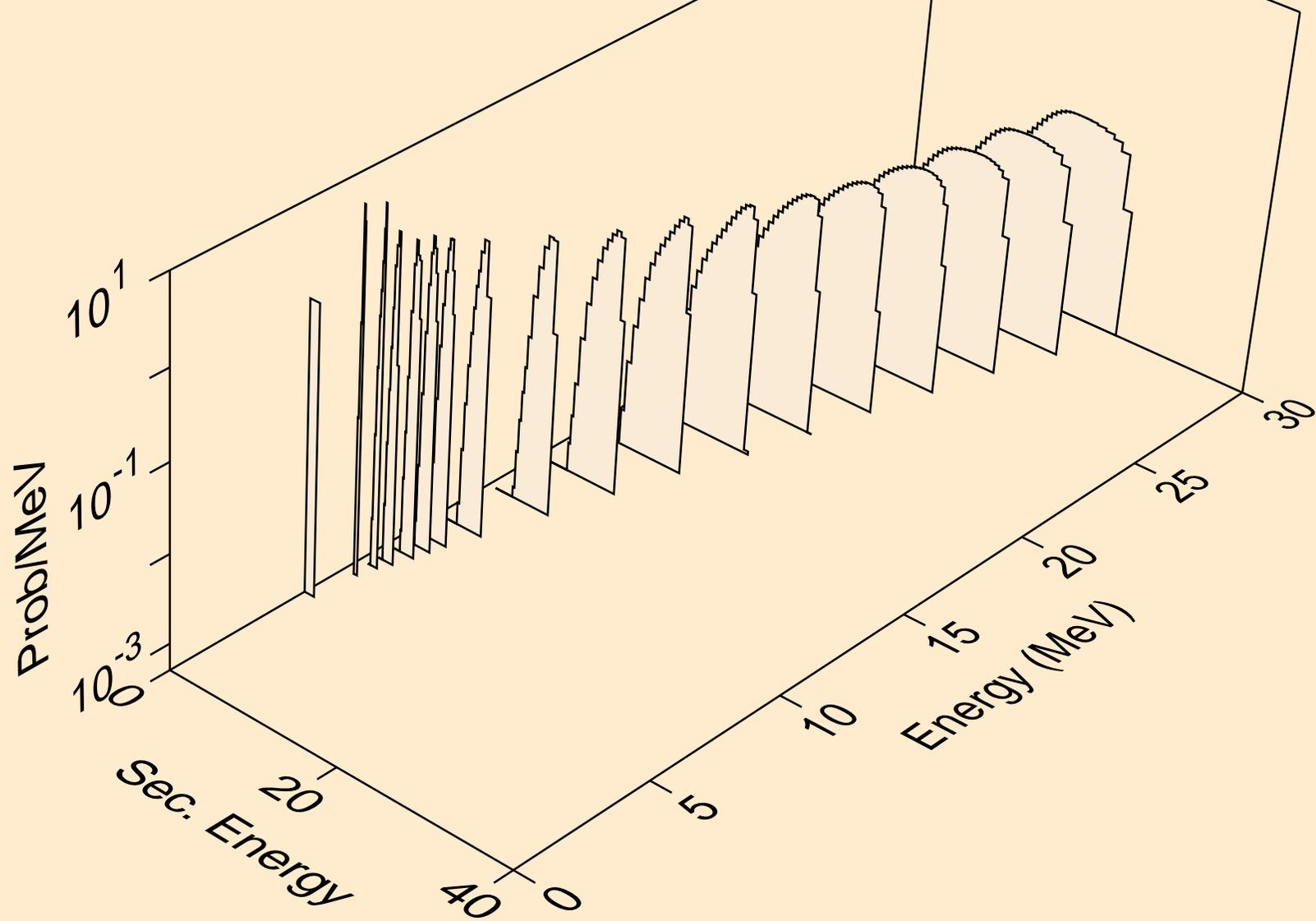Particle production cross sections
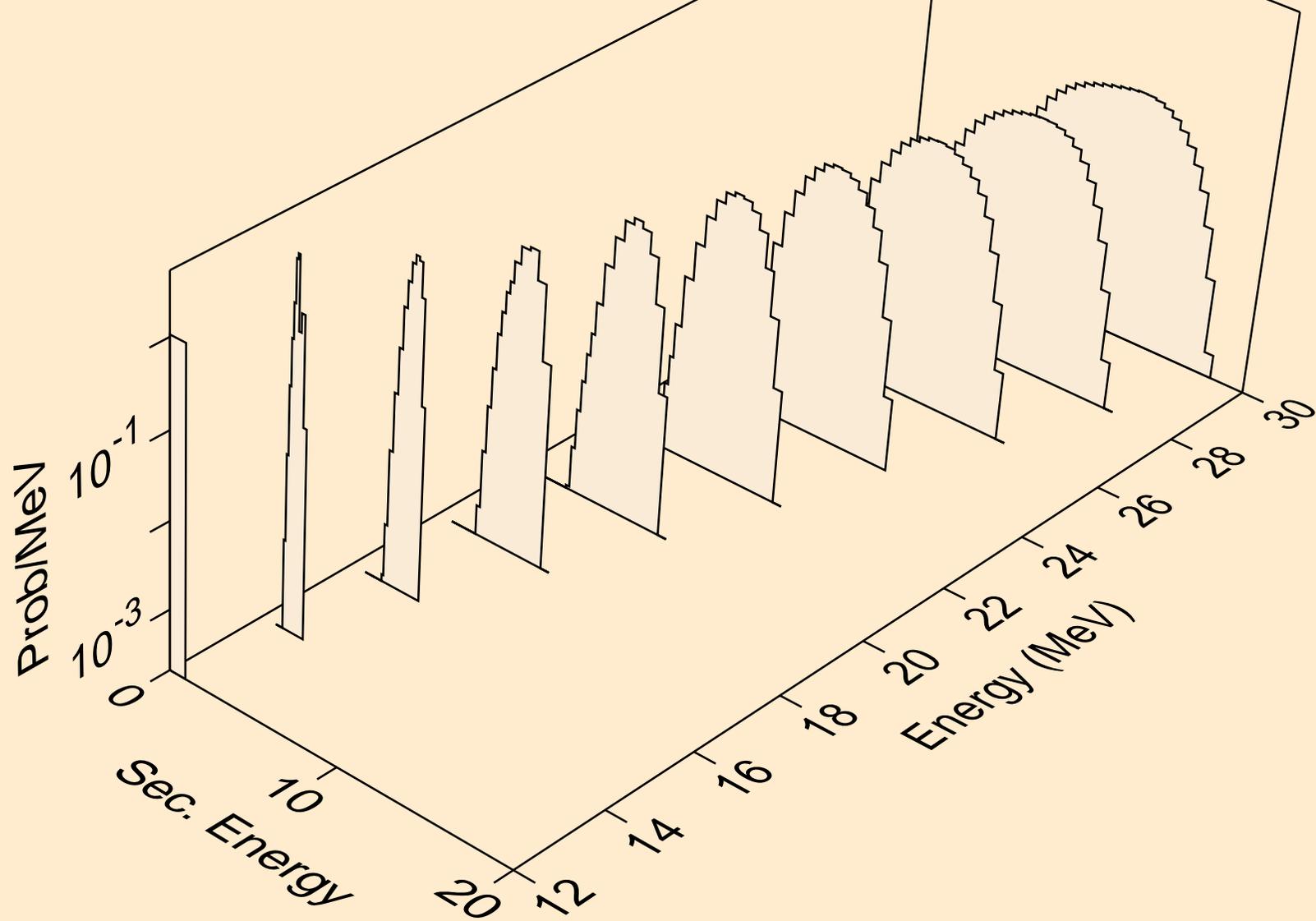
- protons
- deuterons
- tritons
- he-3
- alphas

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
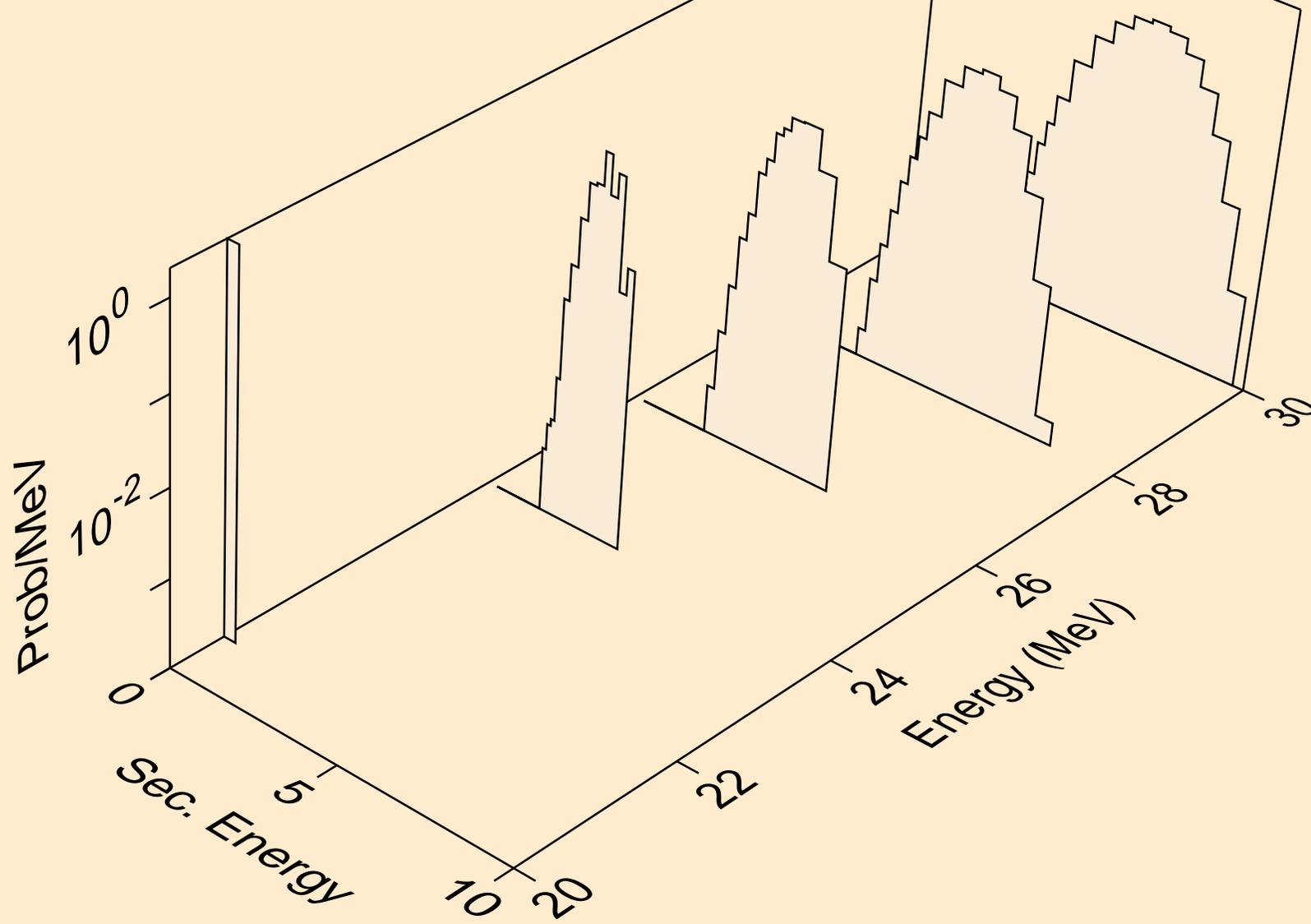protons from (n,x)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
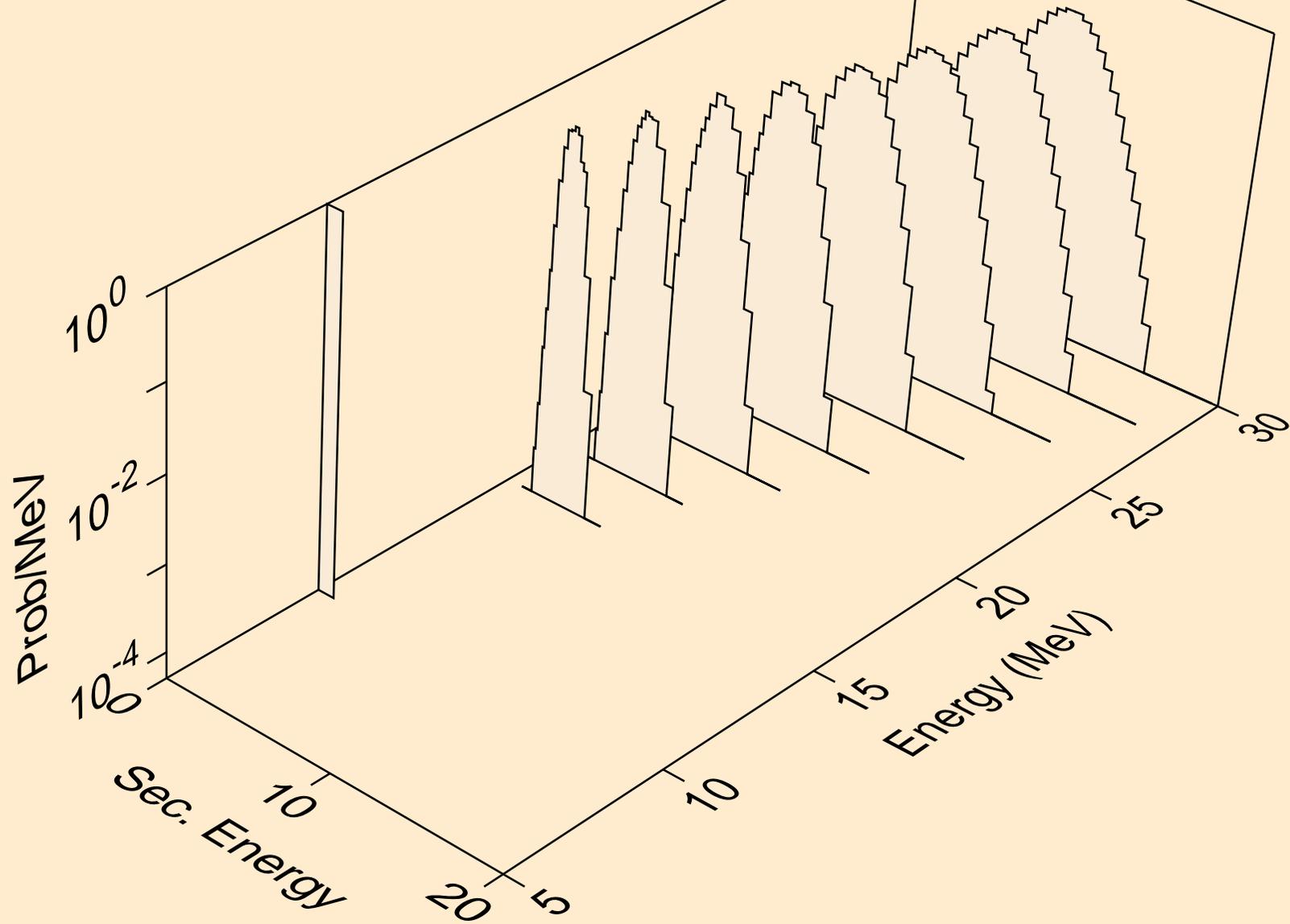protons from (n,n*)p

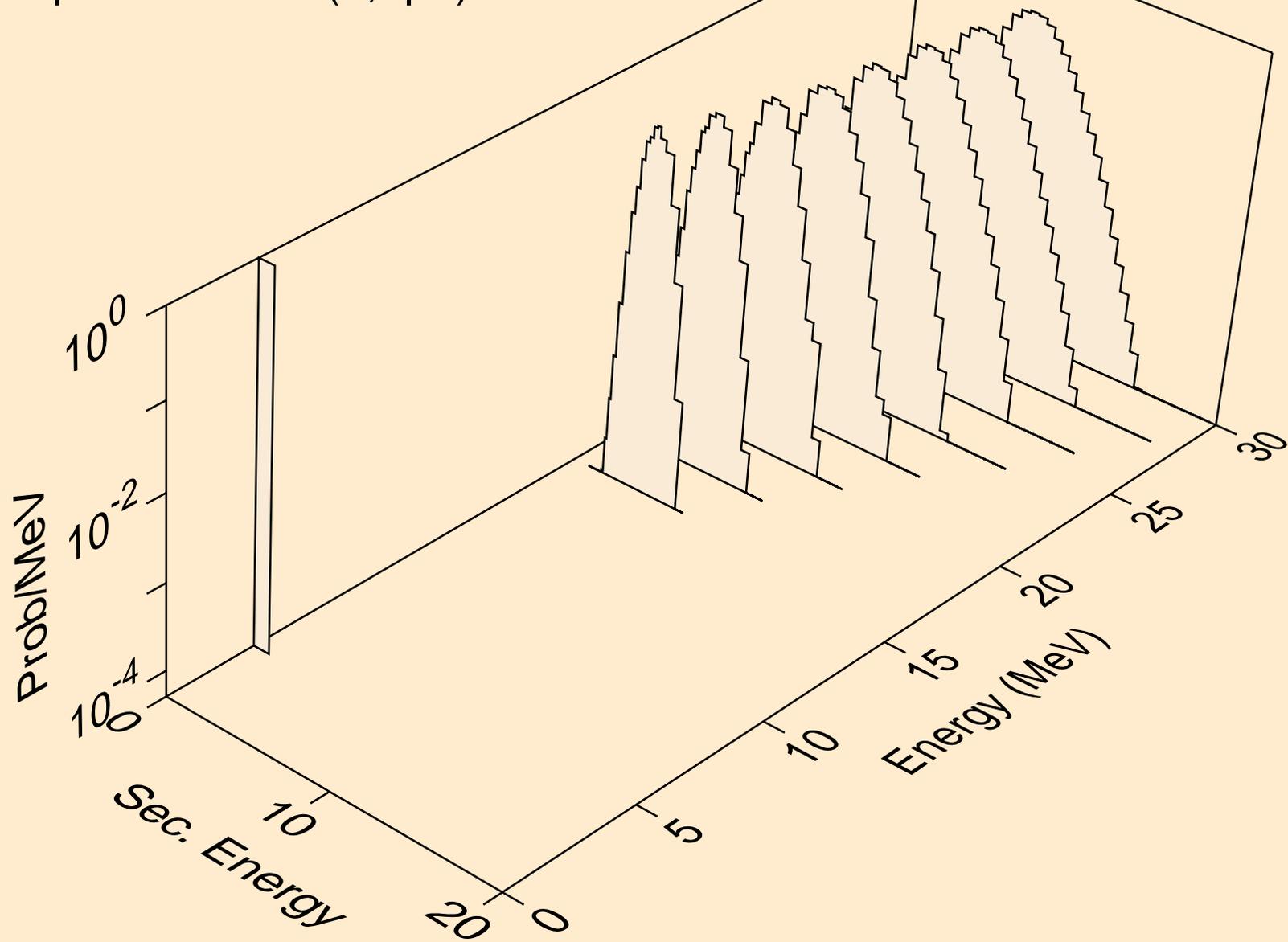PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
protons from (n,2np)

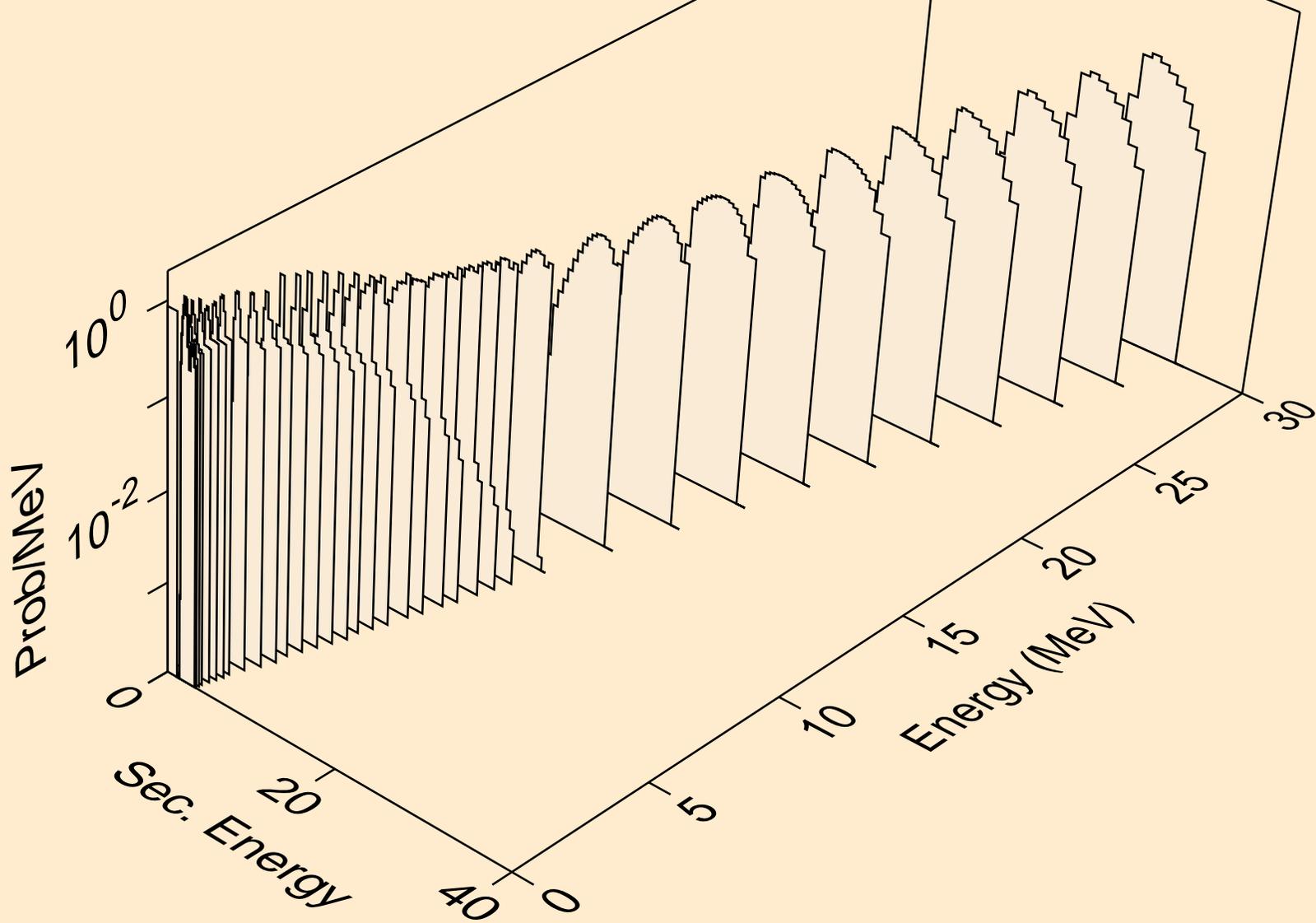PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
protons from (n,3np)

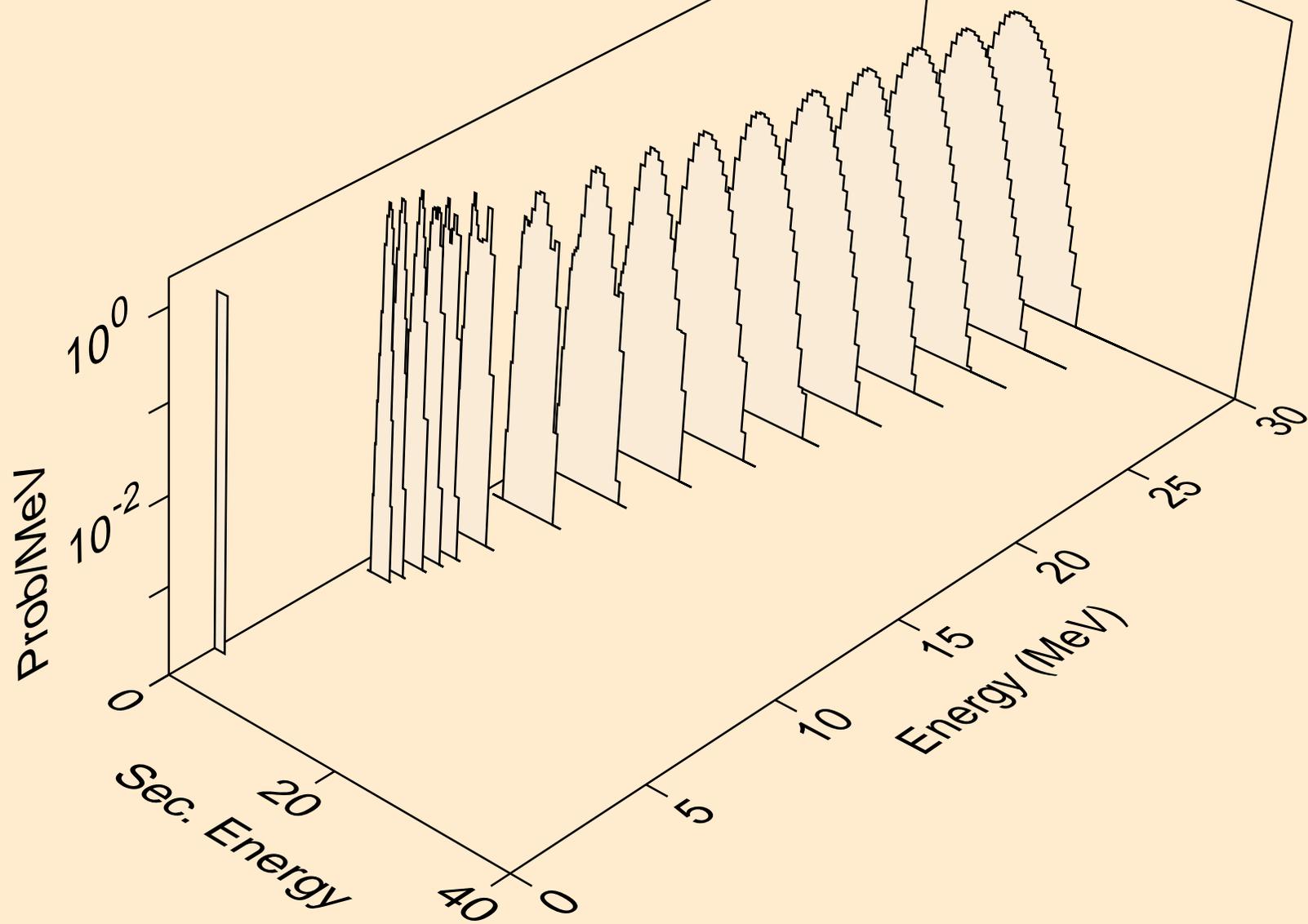PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
protons from (n,2np)

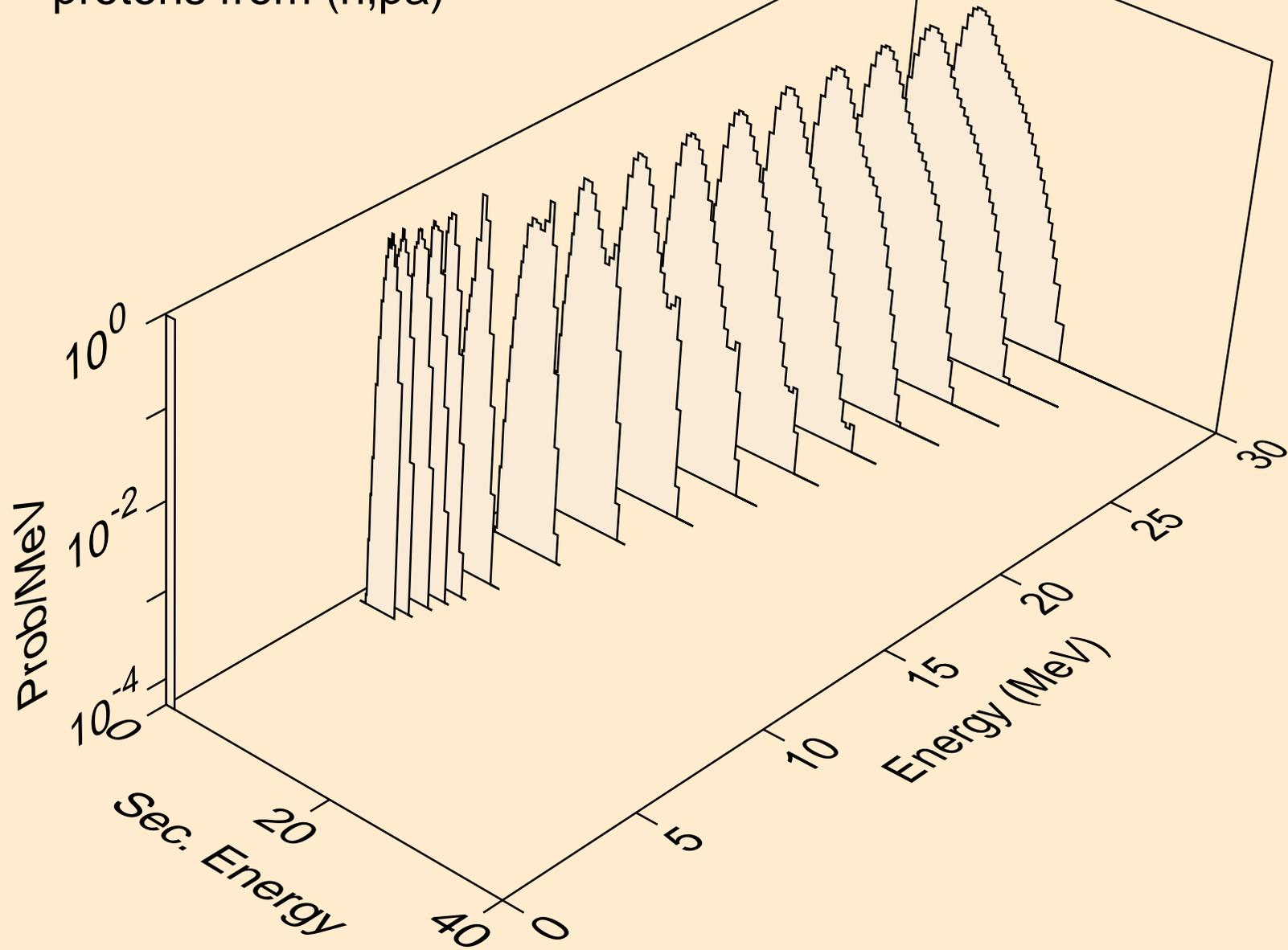PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
protons from (n,npa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
protons from (n,p)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
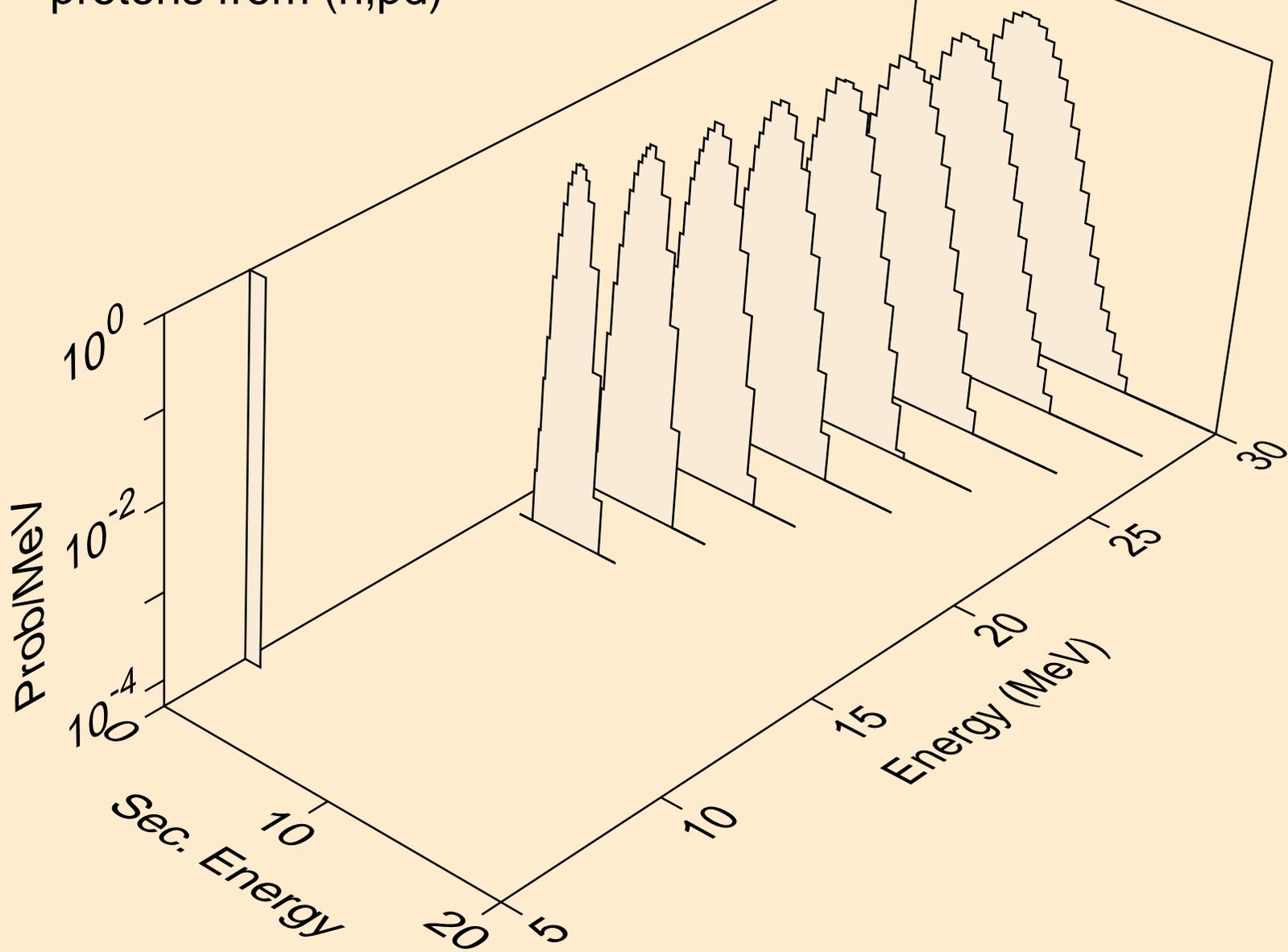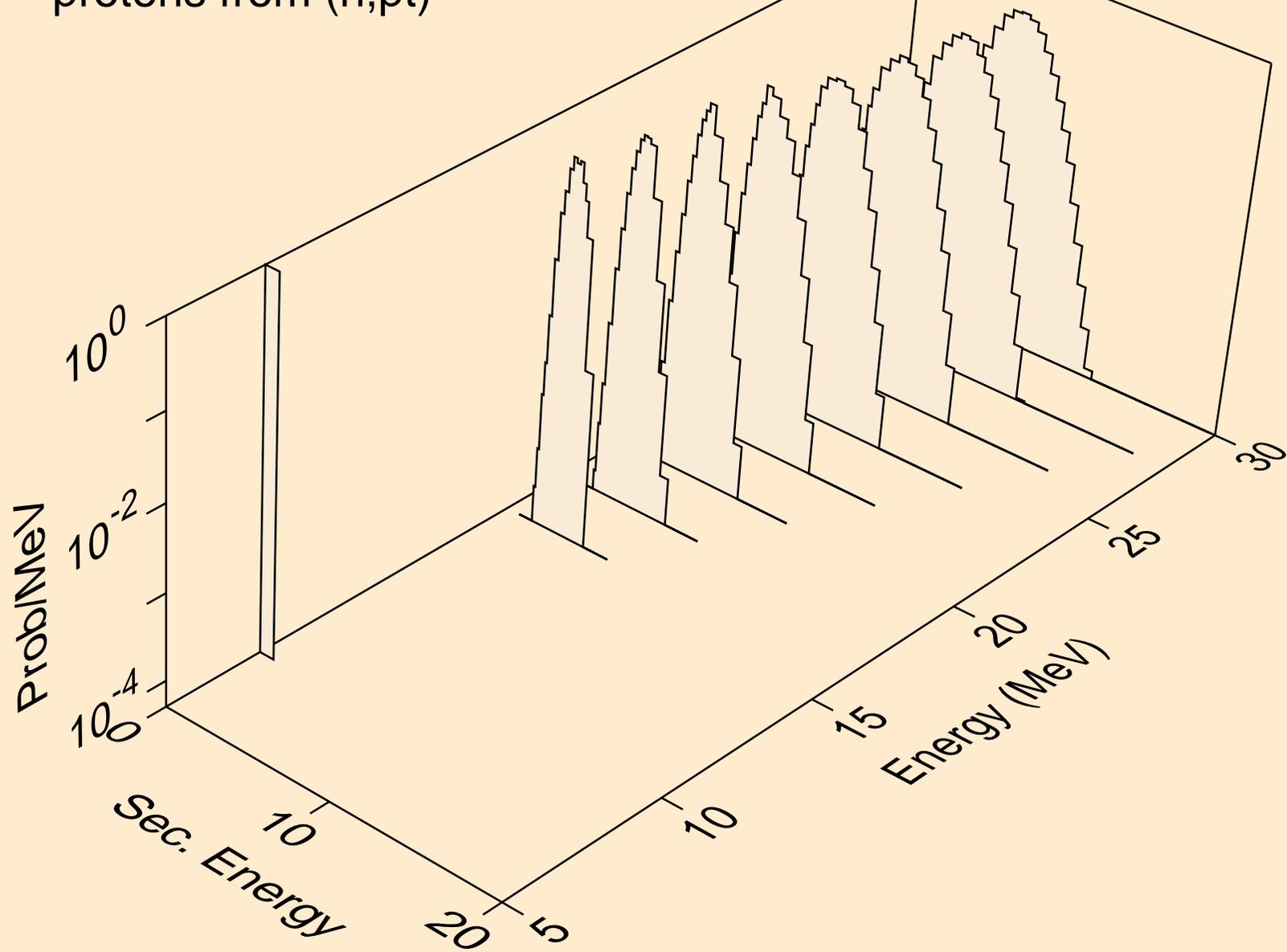protons from (n,2p)

ProbIMeV

Sec. Energy

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
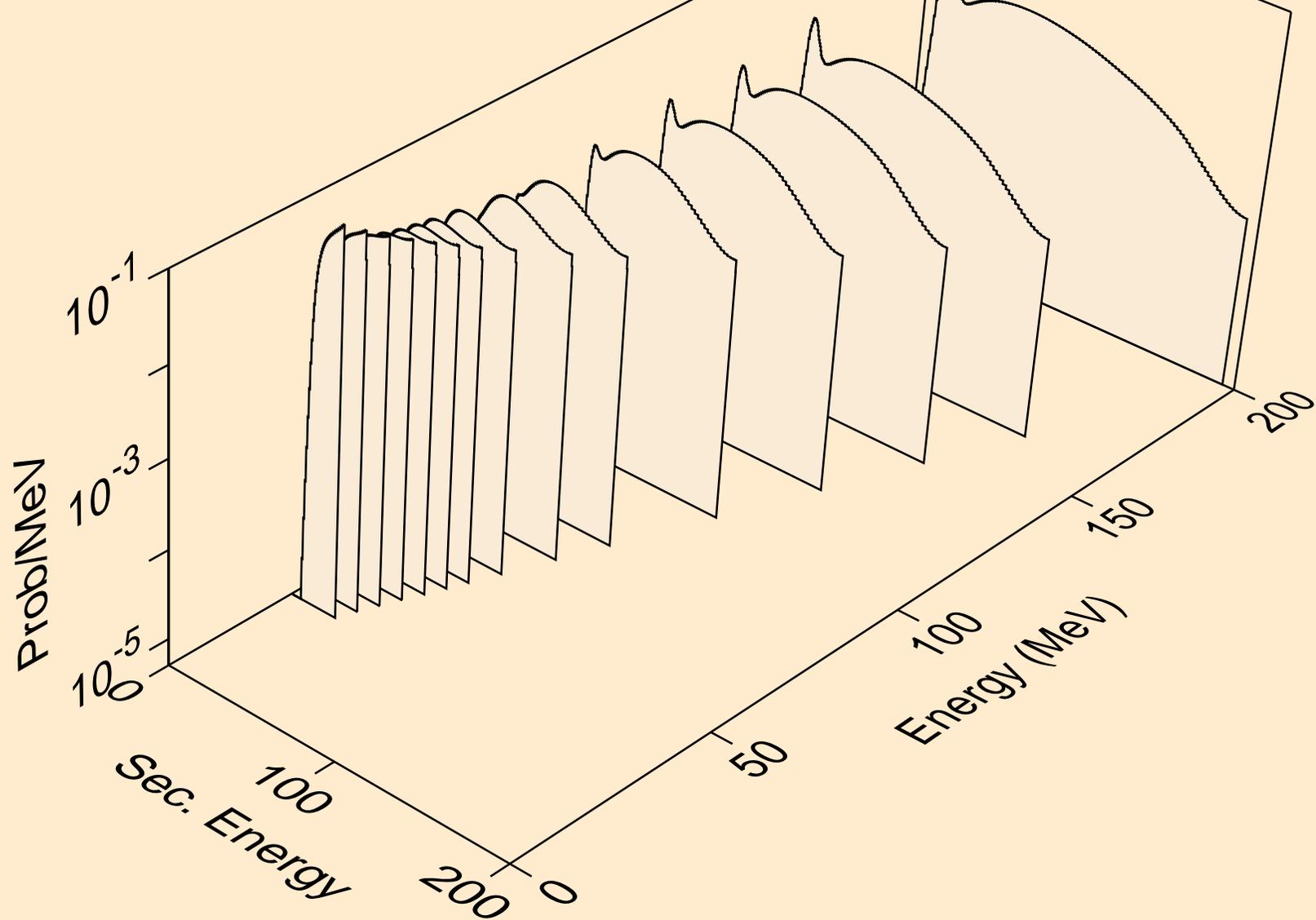protons from (n,pa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
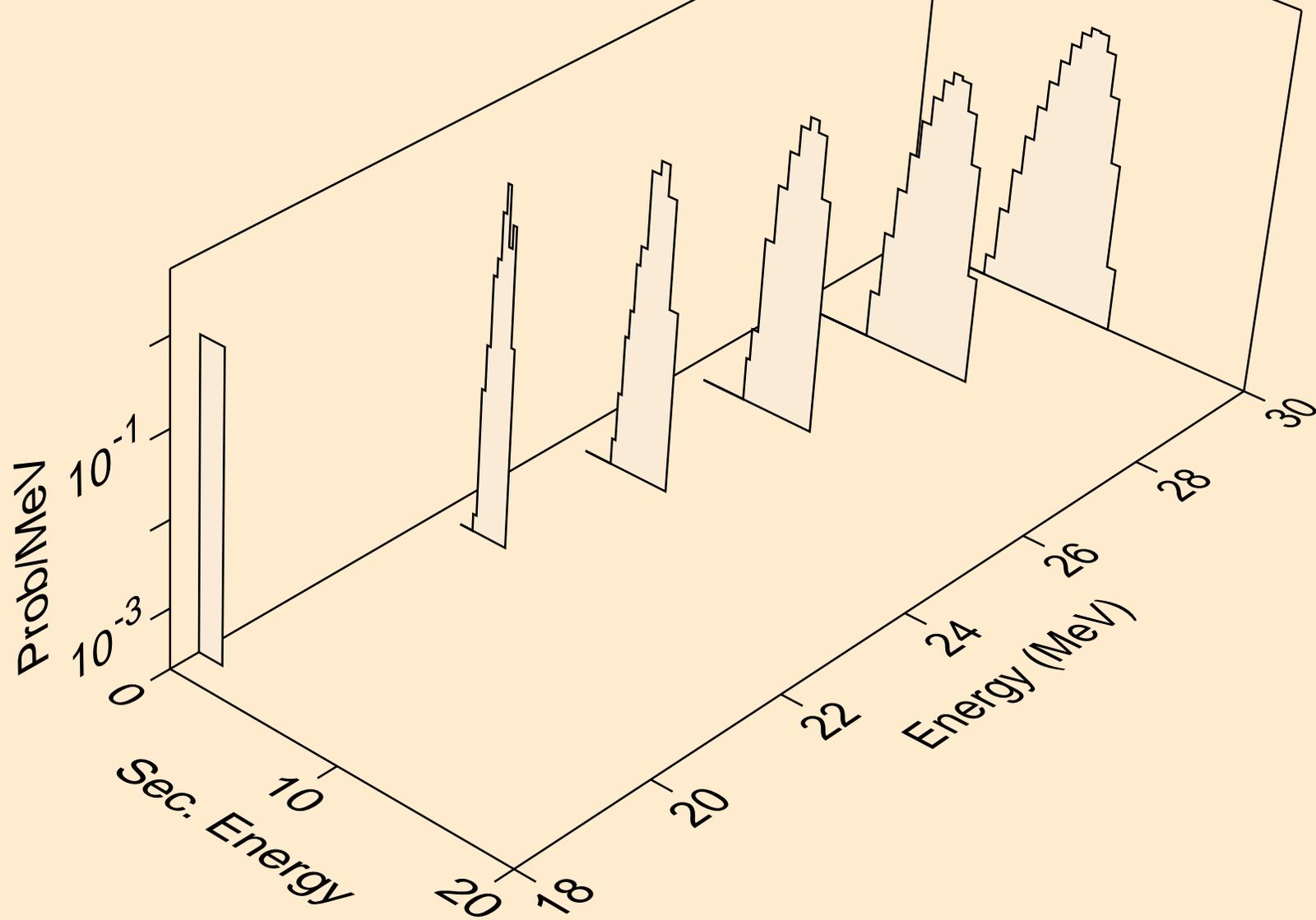protons from (n,pd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
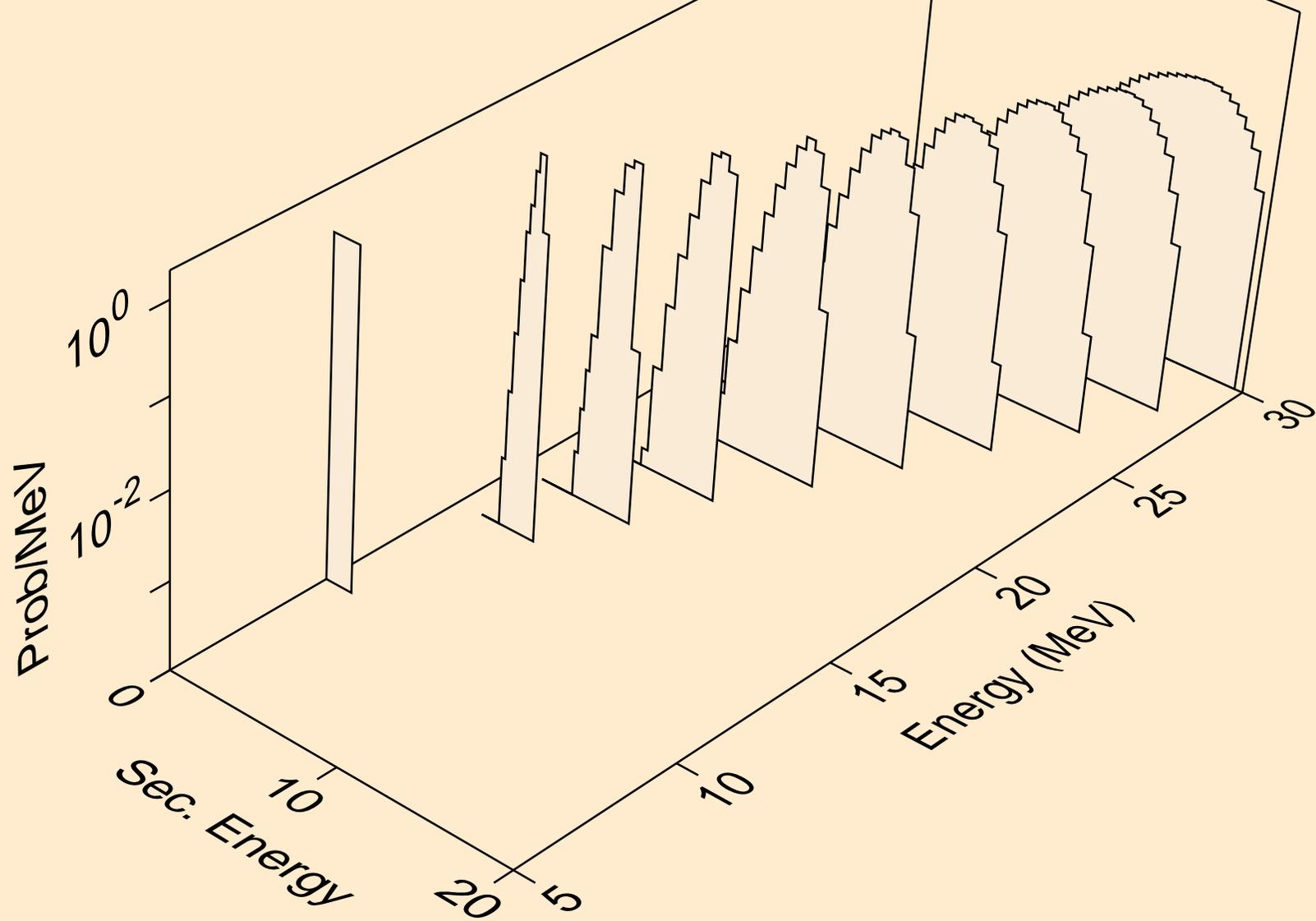protons from (n,pt)

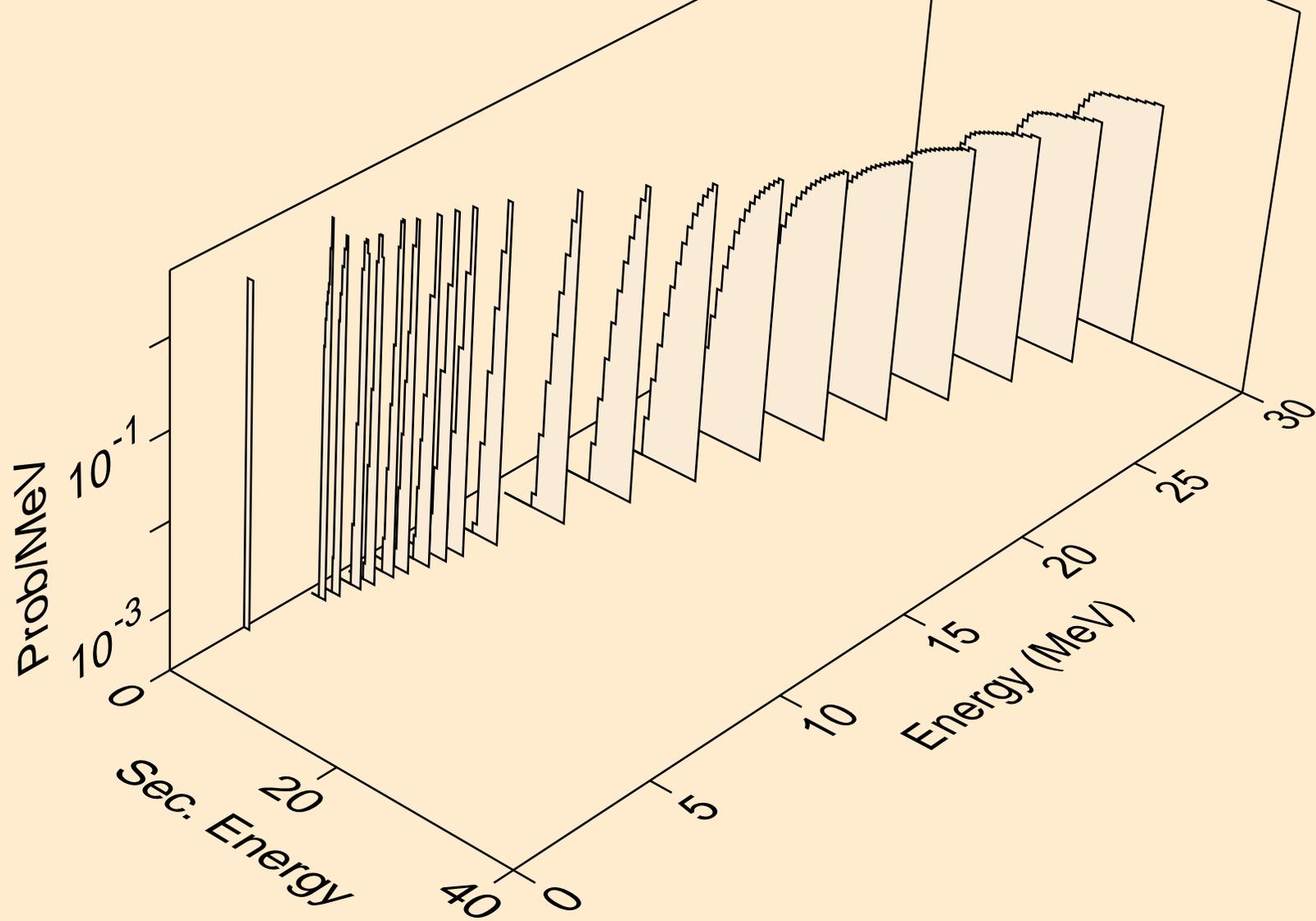PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
deuterons from (n,x)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
deuterons from (n,2nd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
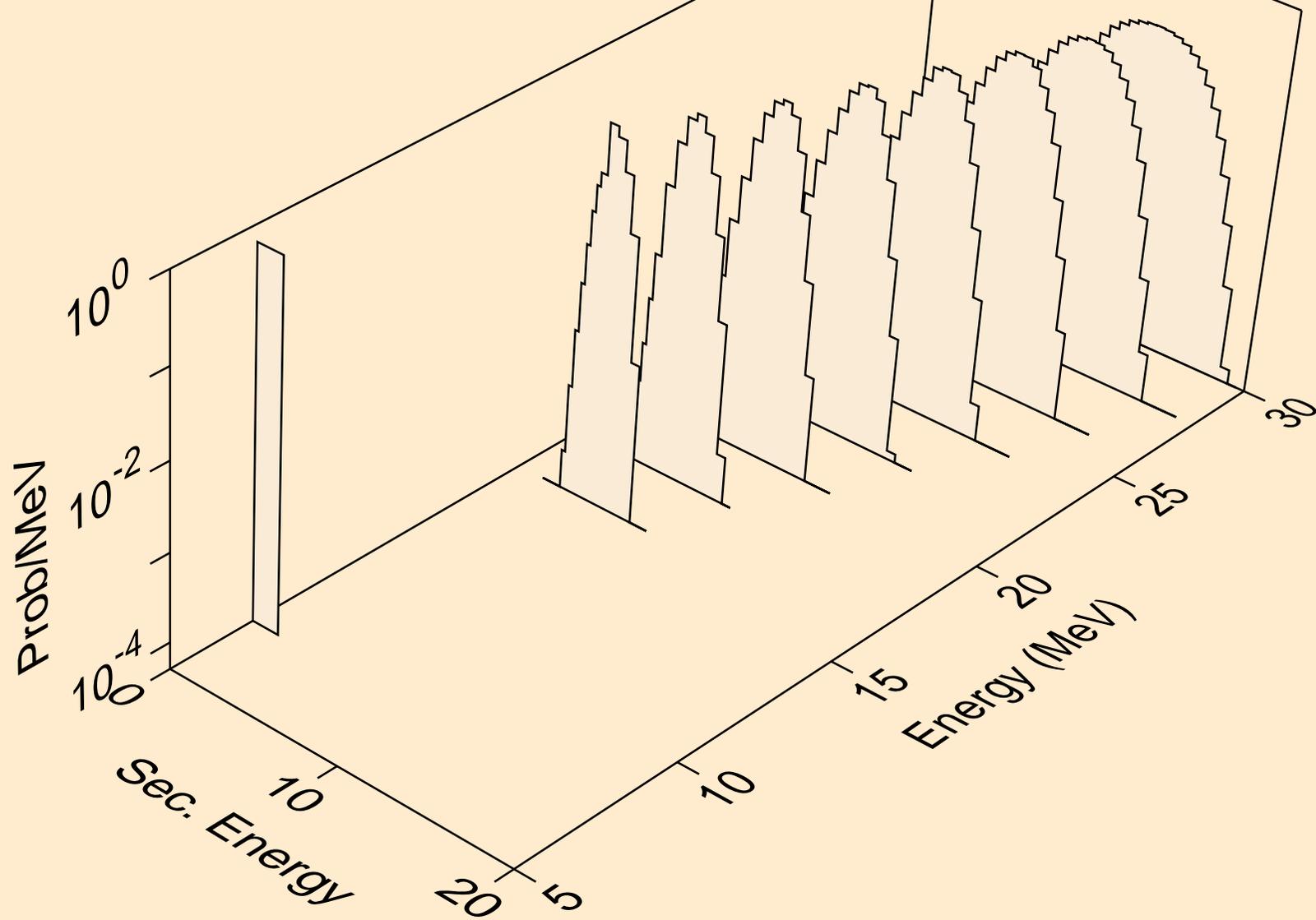deuterons from (n,n*)d

ProbMeV
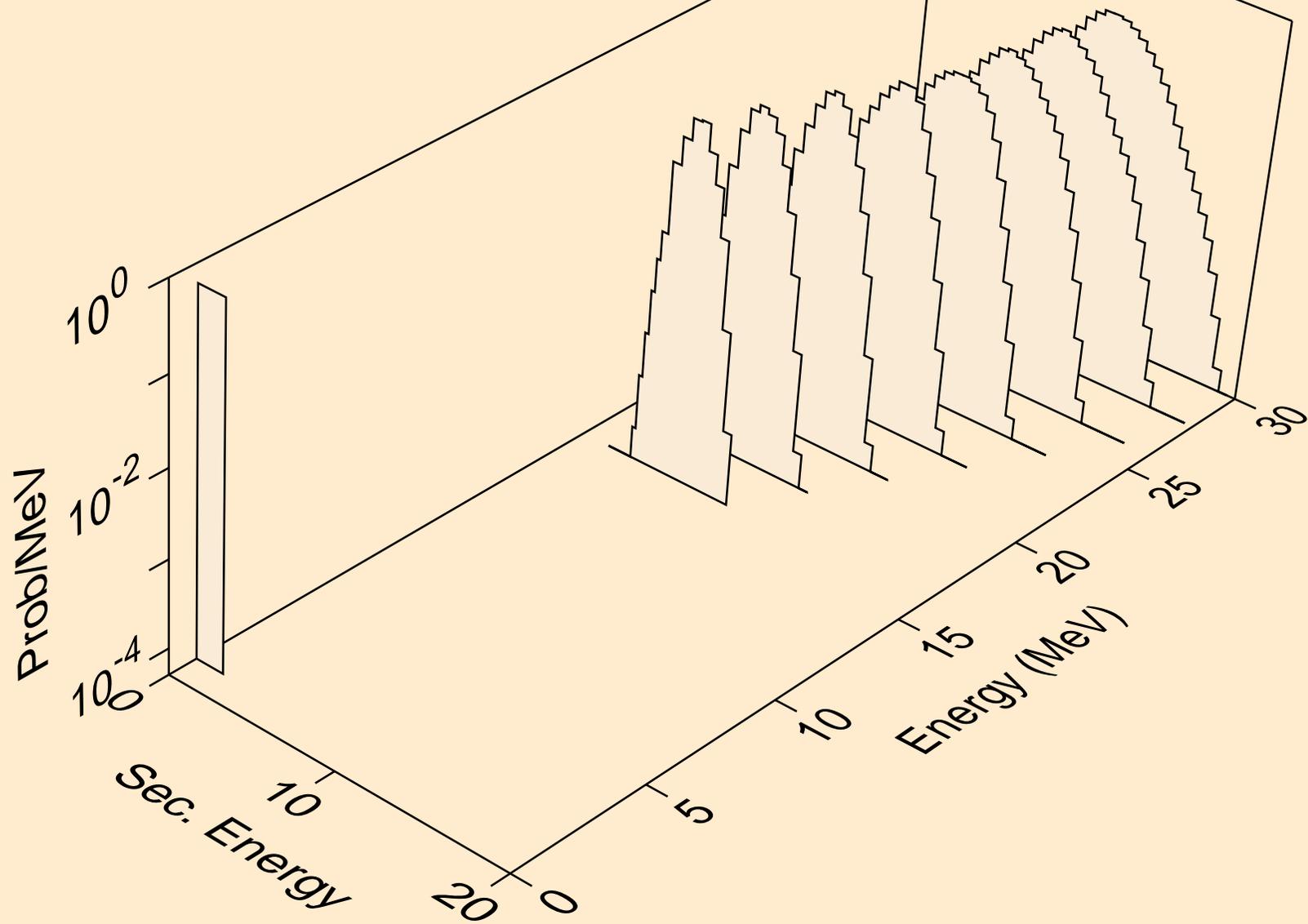
Sec. Energy

Energy (MeV)

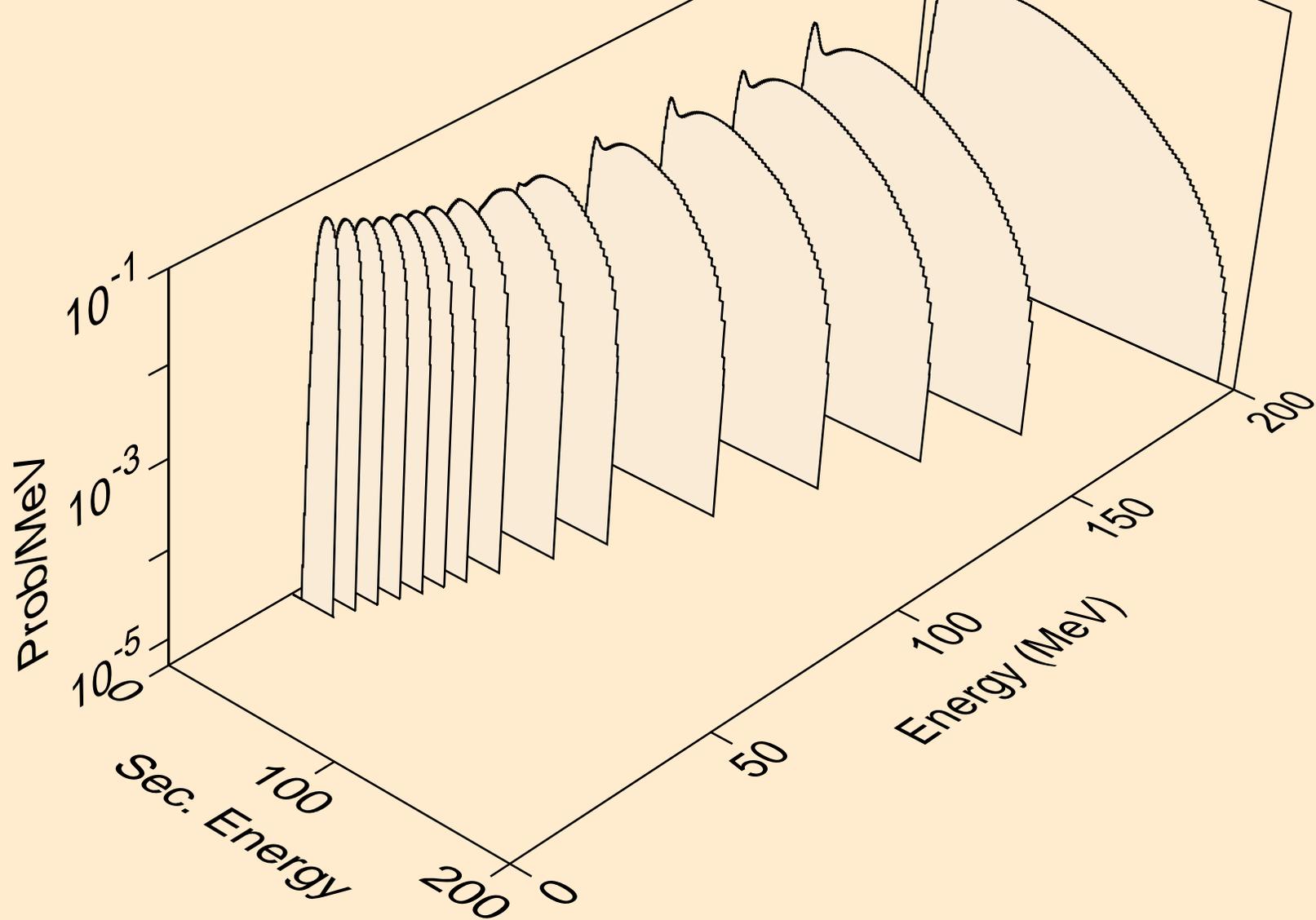PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
deuterons from (n,d)

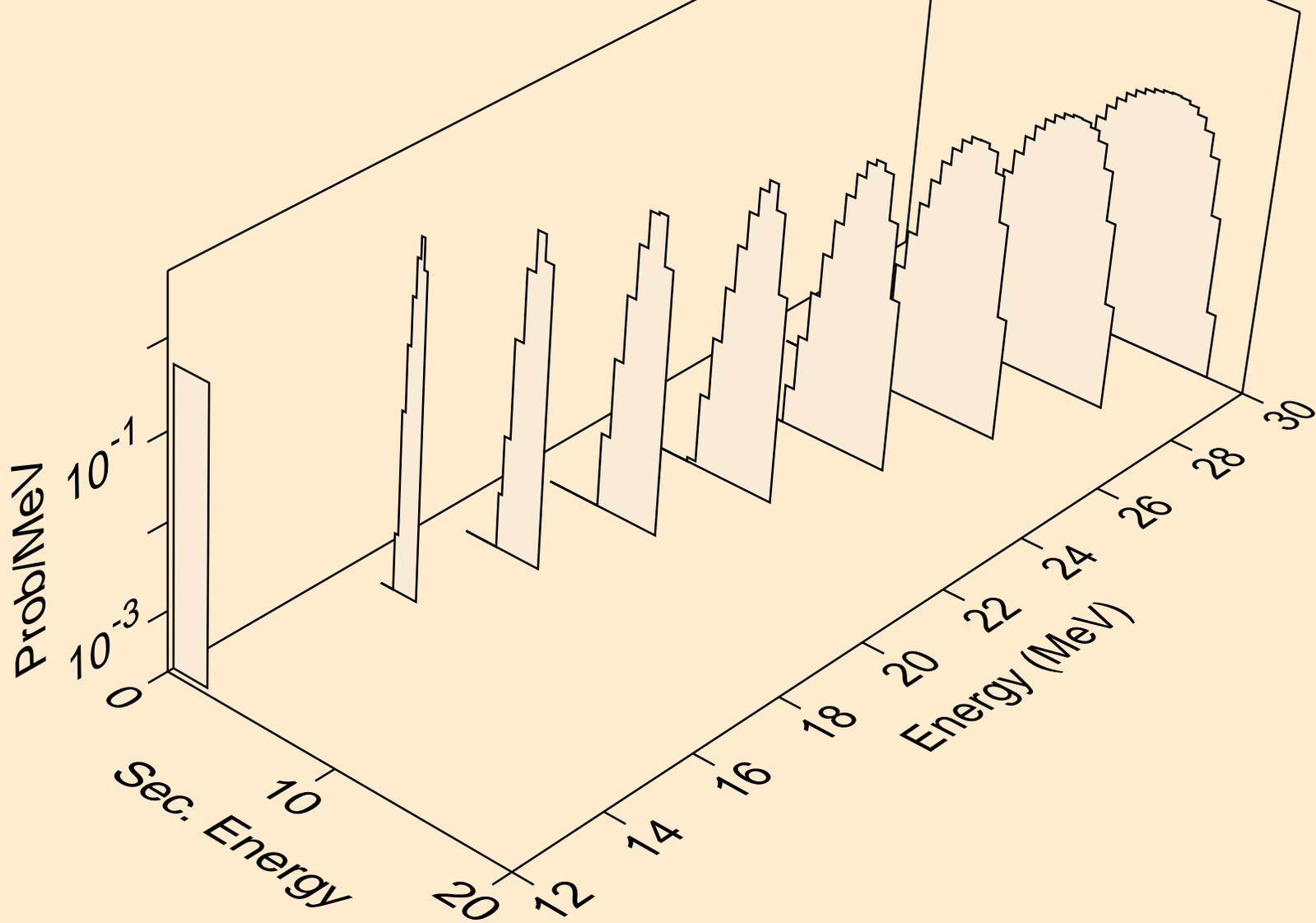PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
deuterons from (n,pd)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
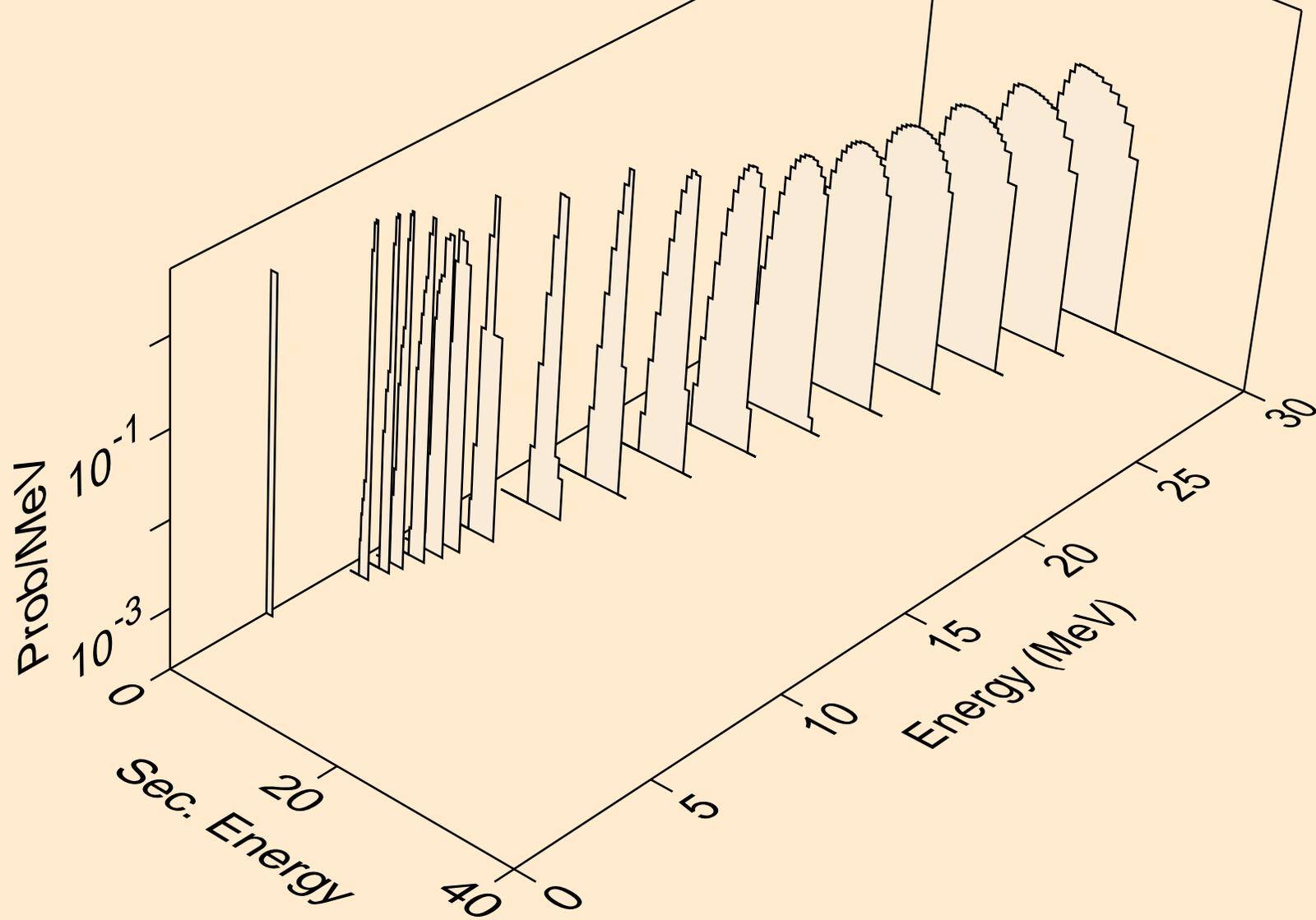deuterons from (n,da)

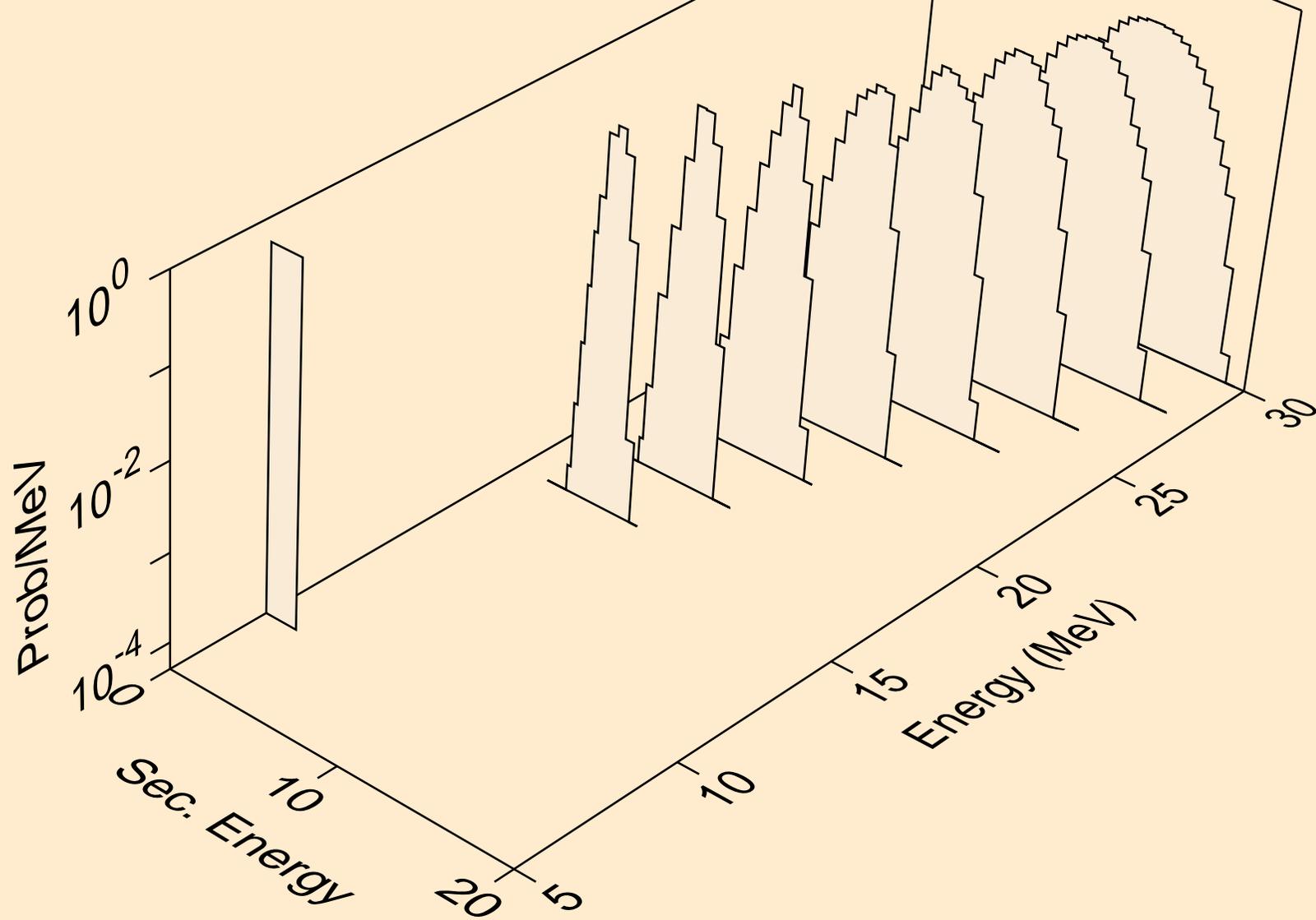PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
tritons from (n,x)

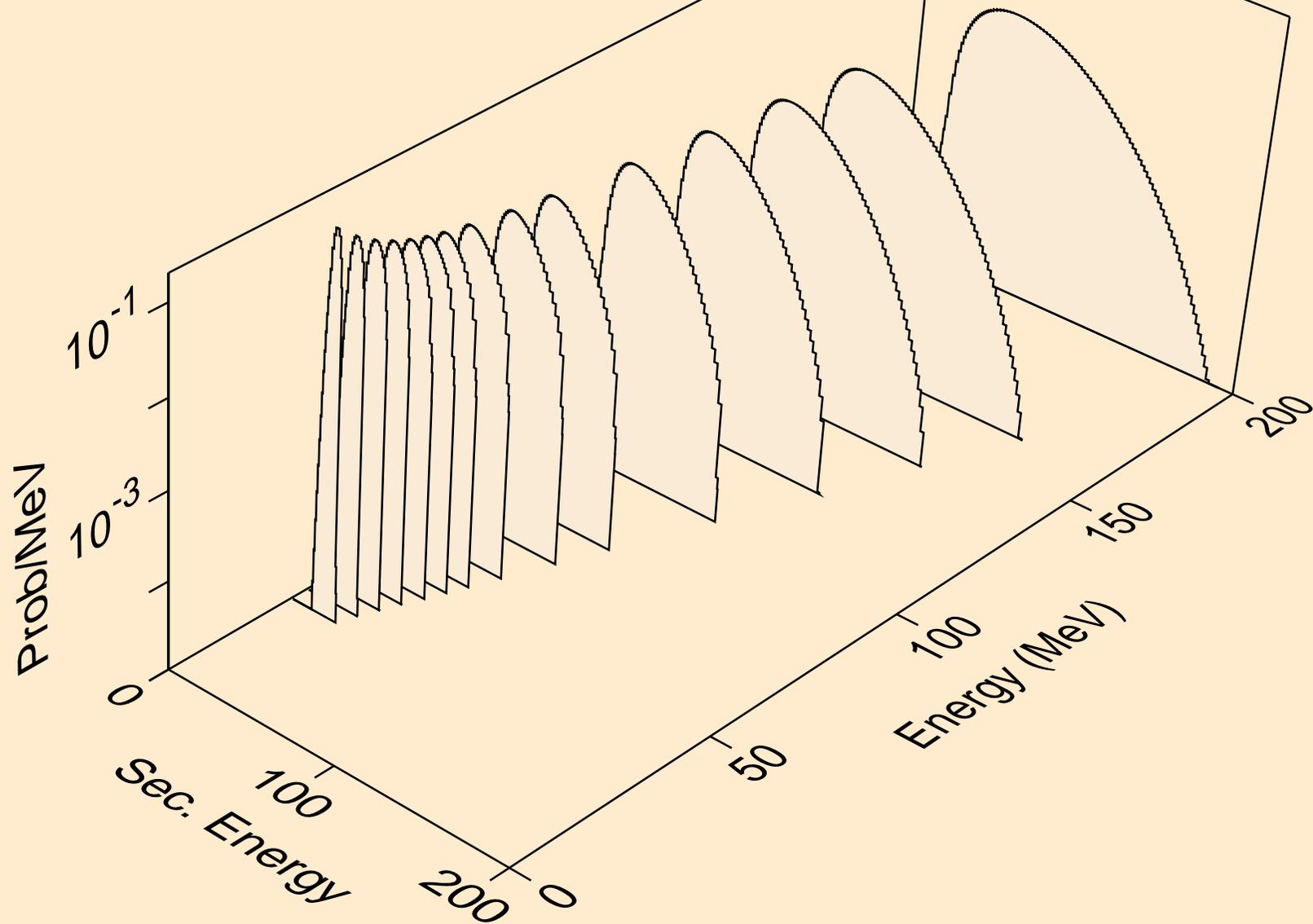PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
tritons from (n,n*)t

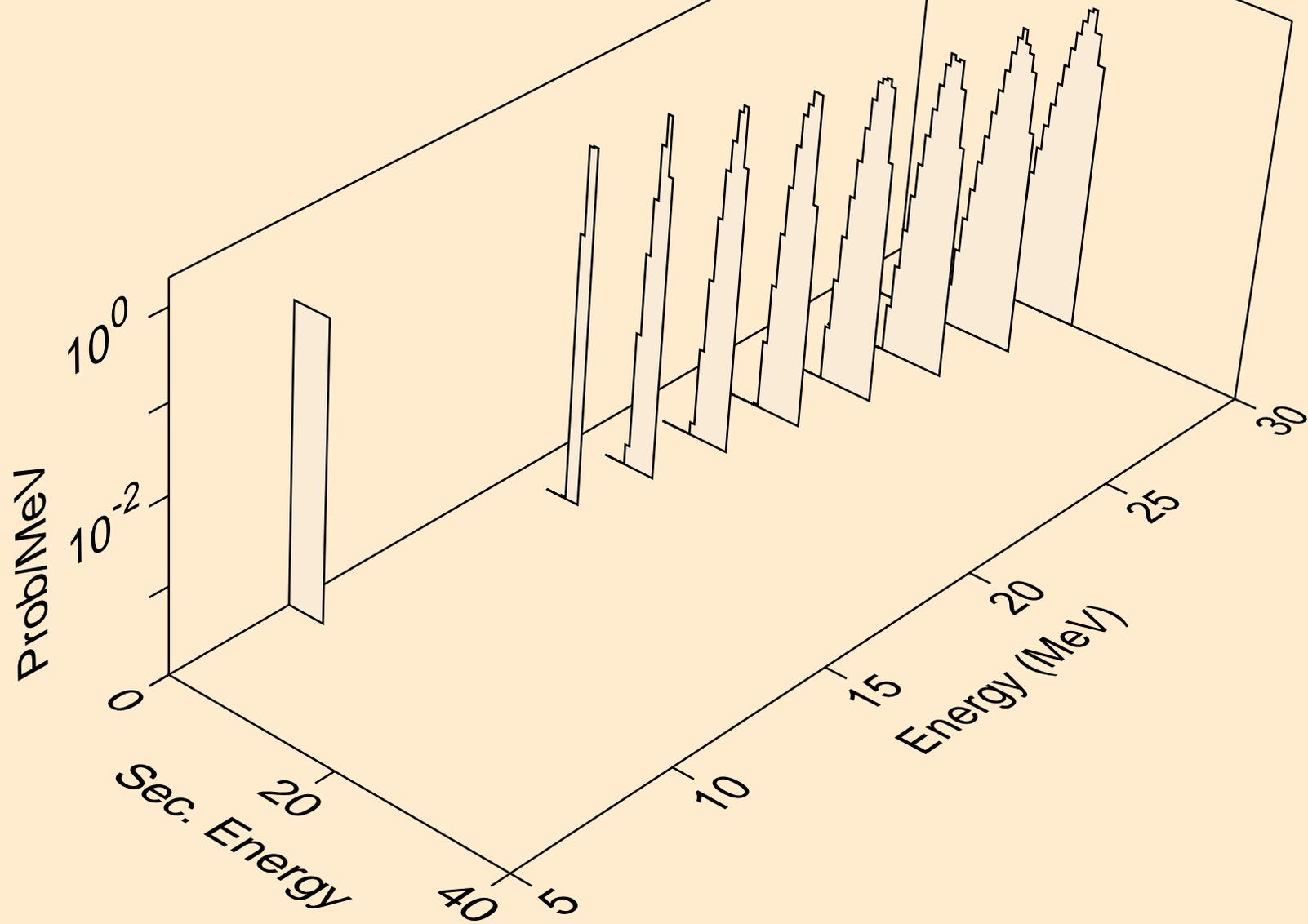PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
tritons from (n,t)

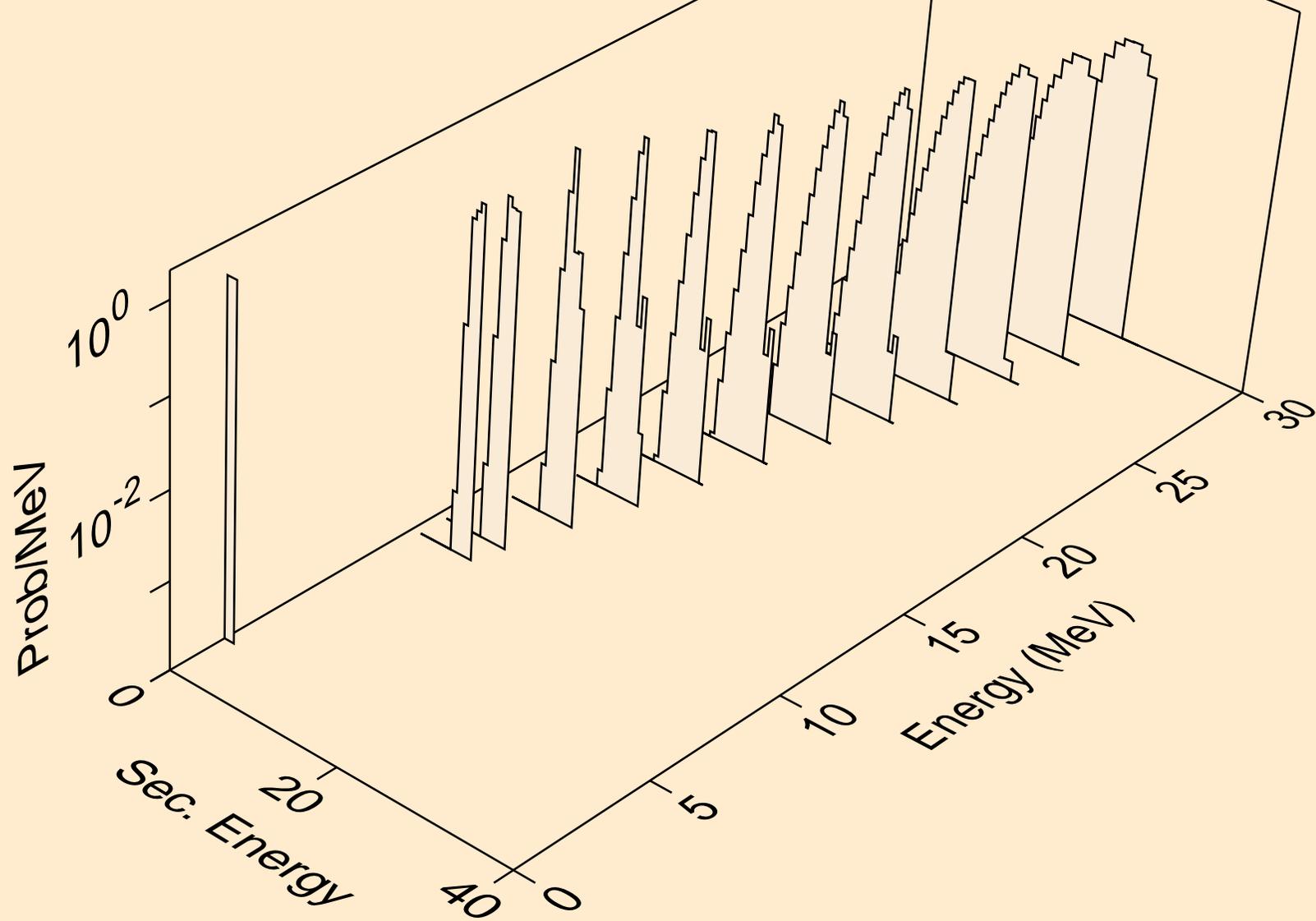PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
tritons from (n,pt)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
he3s from (n,x)

ProbMeV

10^{-1}

10^{-3}

0

Sec. Energy

100

200

Energy (MeV)

0

50

100

150

200

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
he3s from (n,n*)he3

ProbMeV

10^0

10^{-2}

0

Sec. Energy

20

40

5

10

15

20

25

30

Energy (MeV)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
he3s from (n,he3)

Prob/MeV

10^0

10^{-2}

Sec. Energy

Energy (MeV)

0   20   40

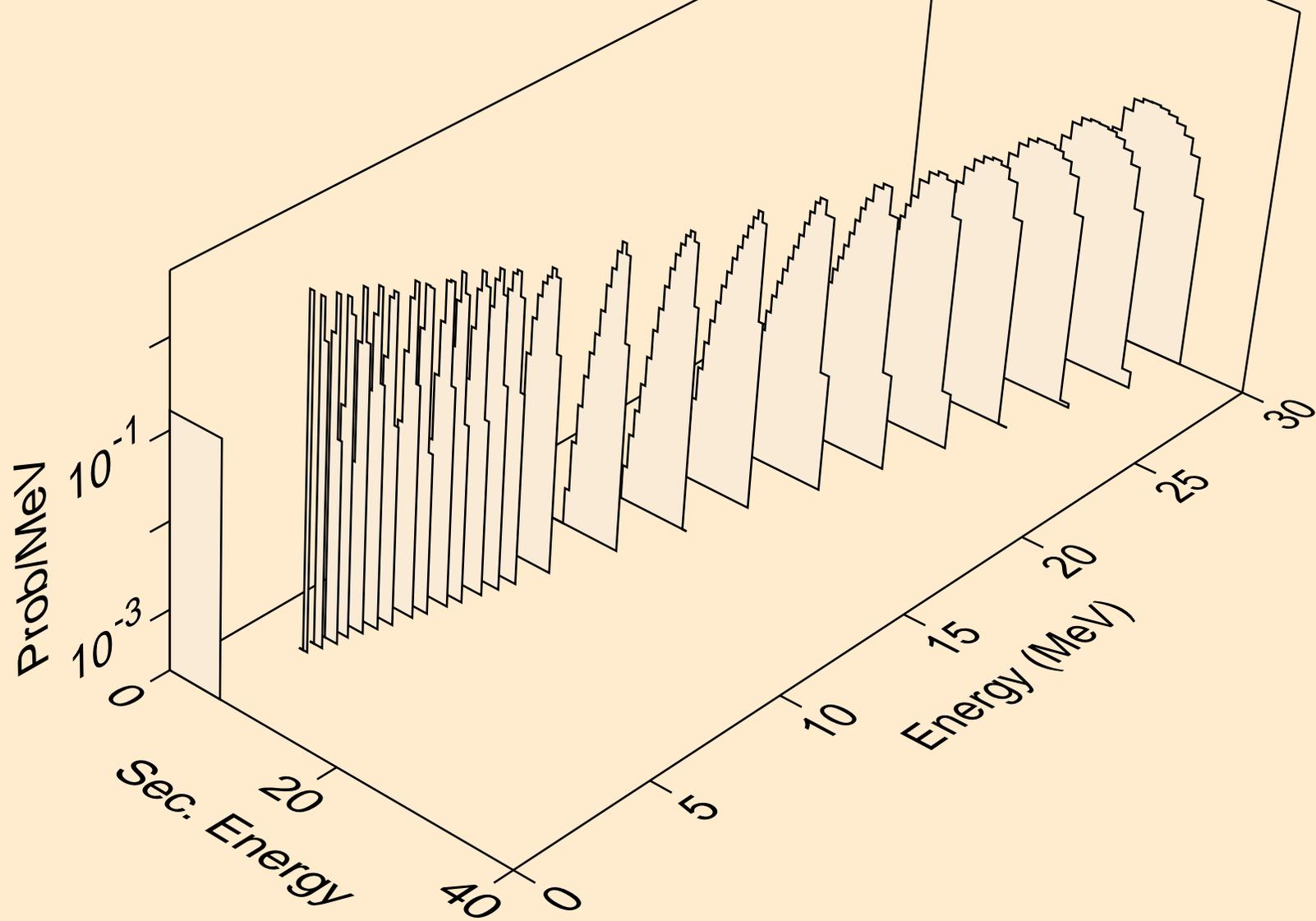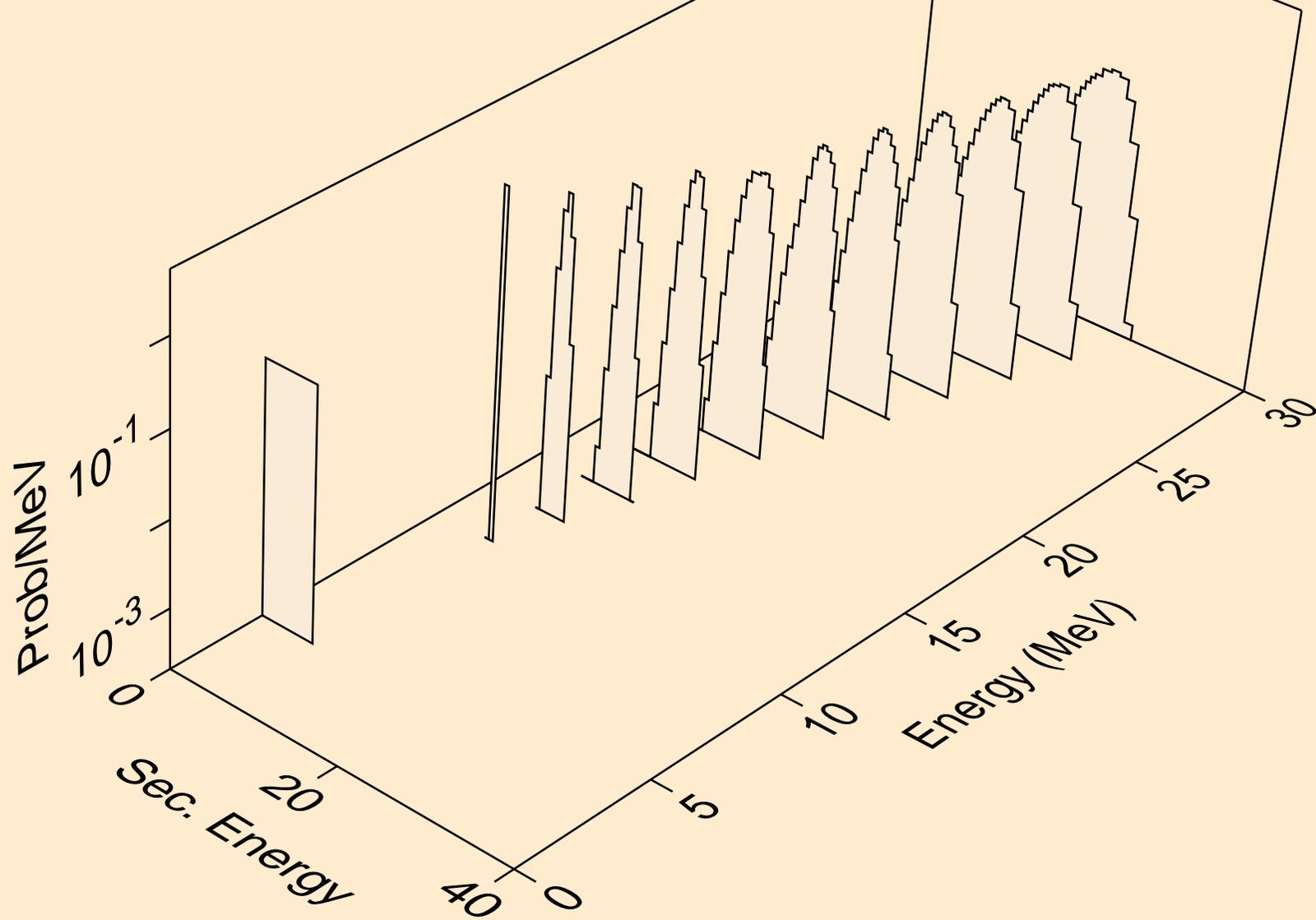0   5   10   15   20   25   30

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
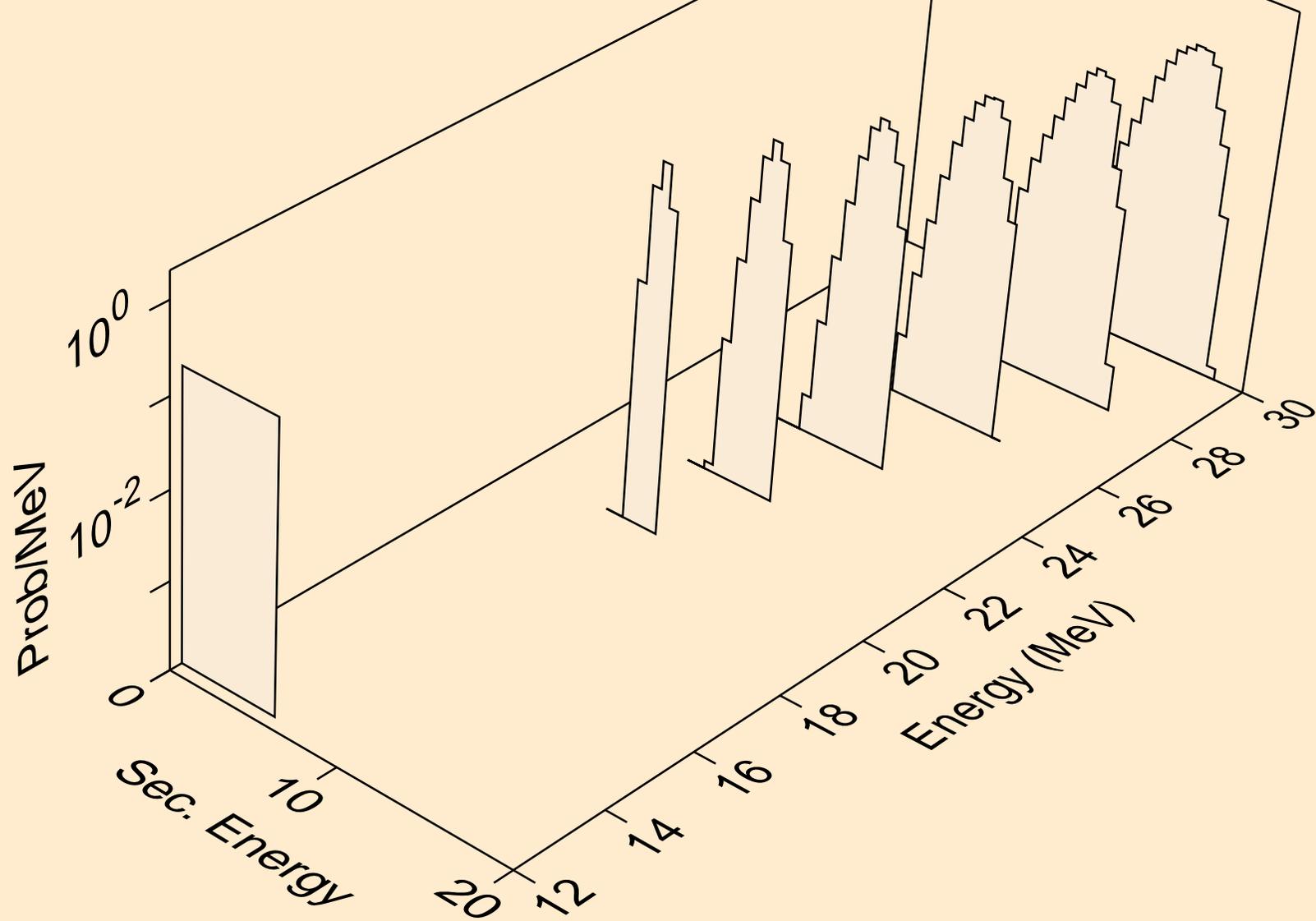alphas from (n,x)
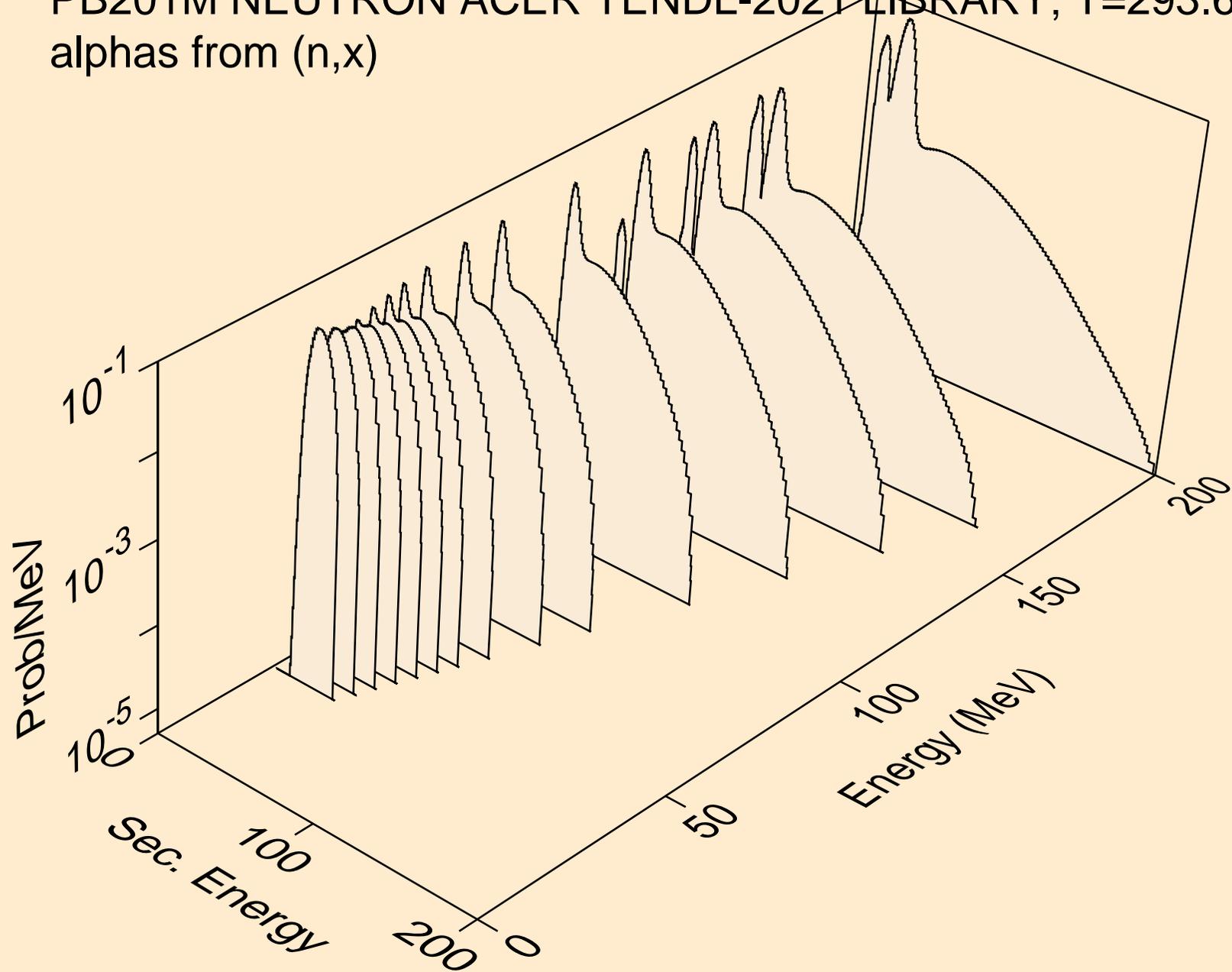
PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
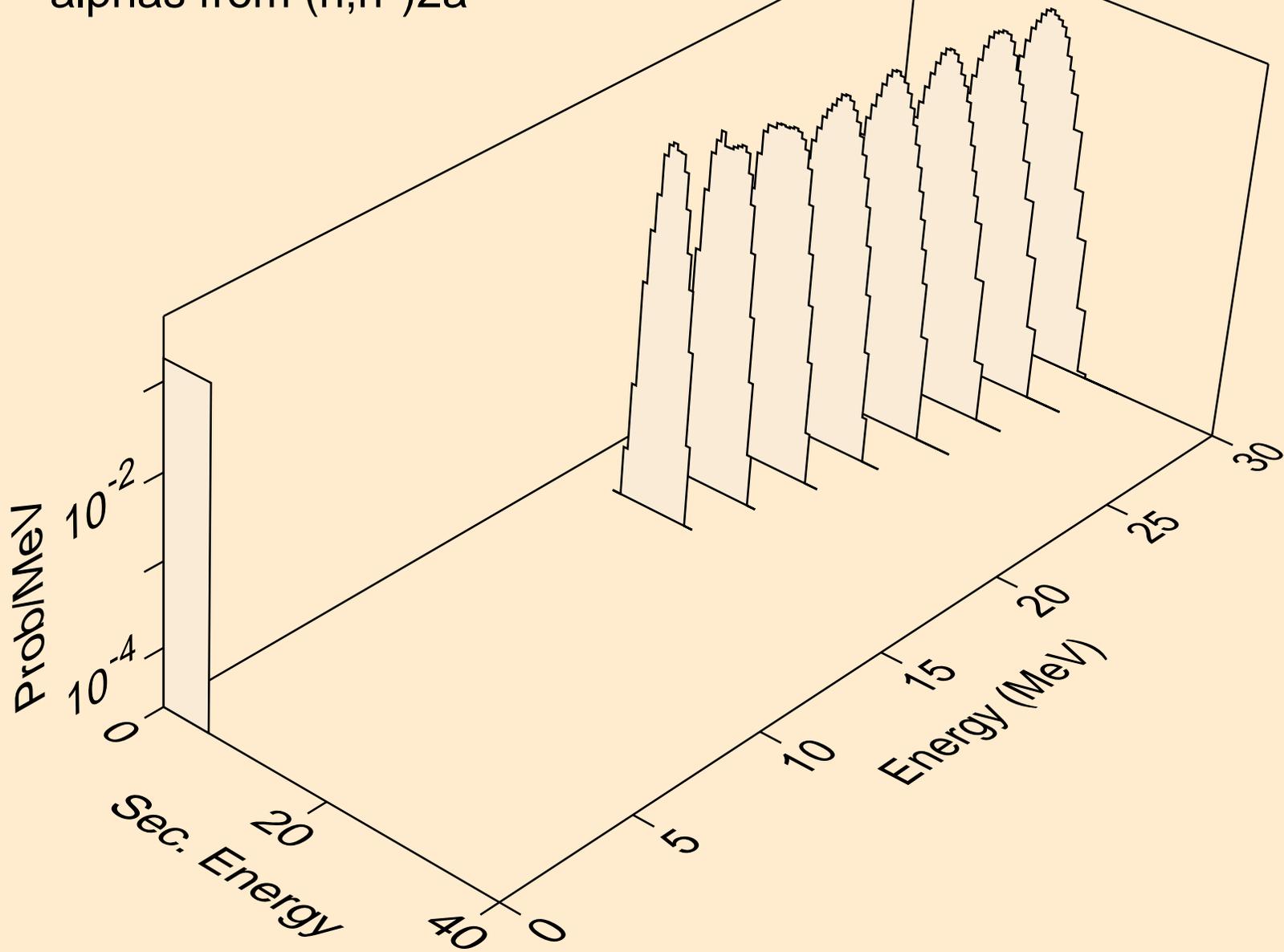alphas from (n,n*)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
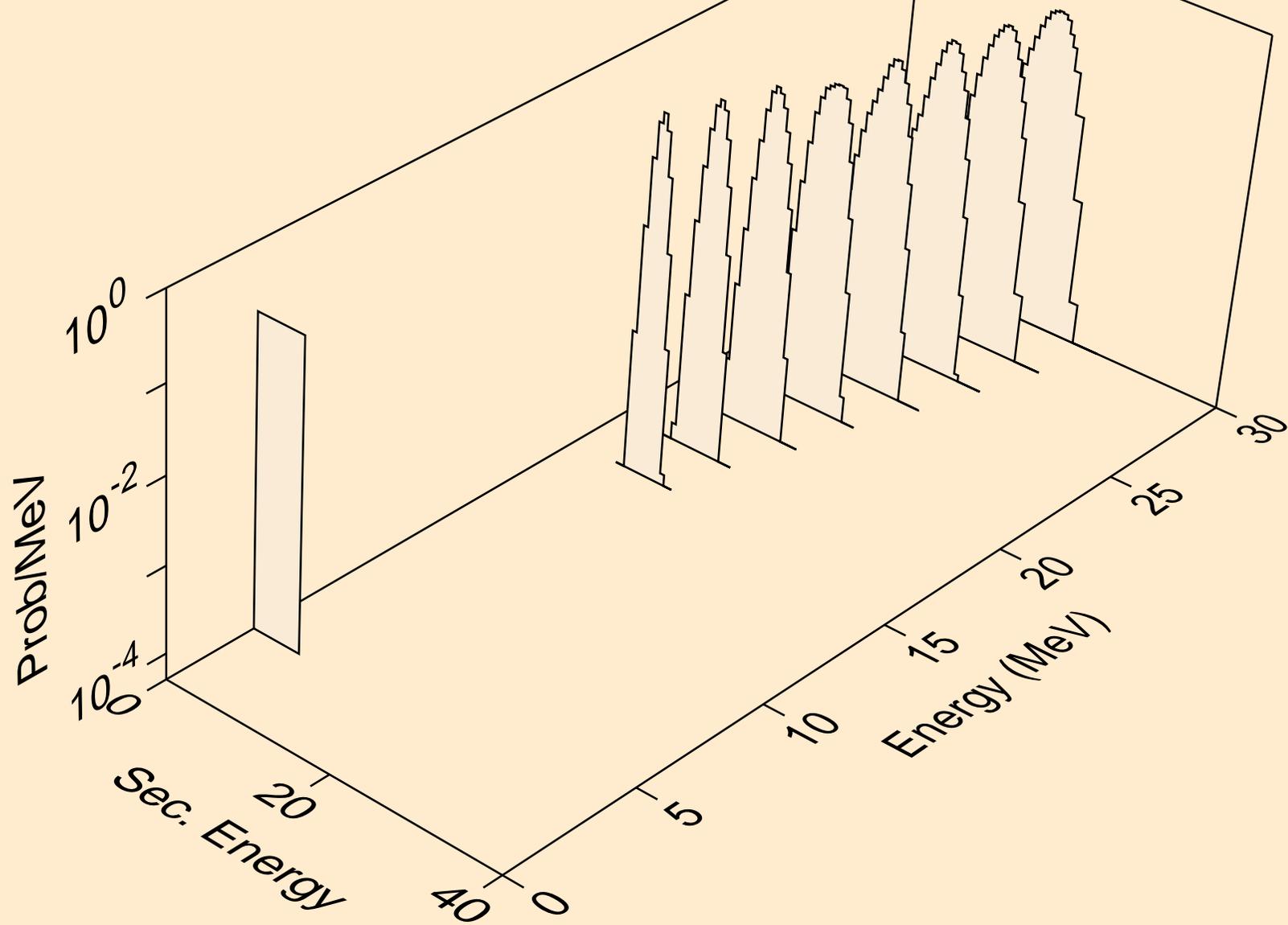alphas from (n,2n)a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
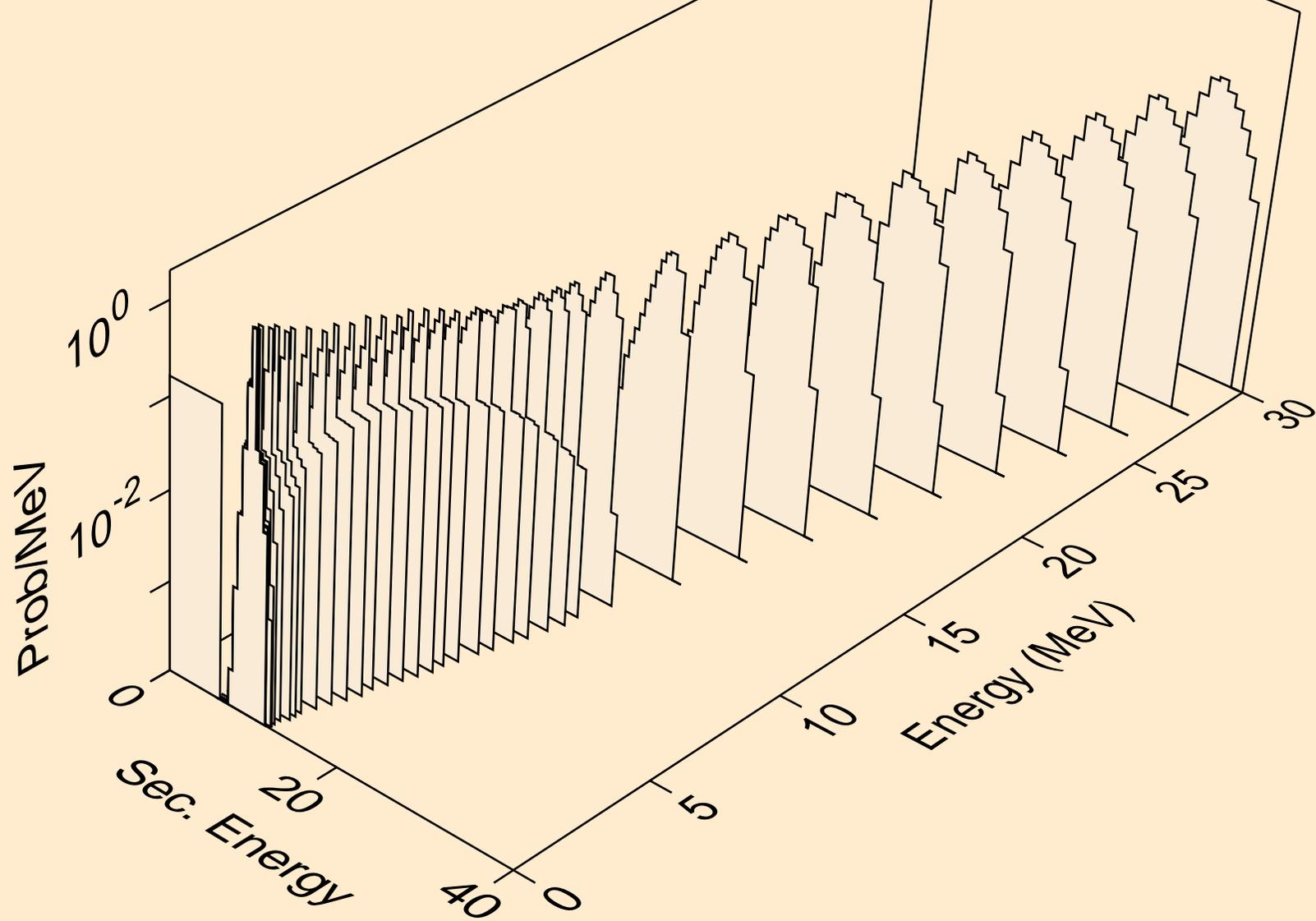alphas from (n,3n)a

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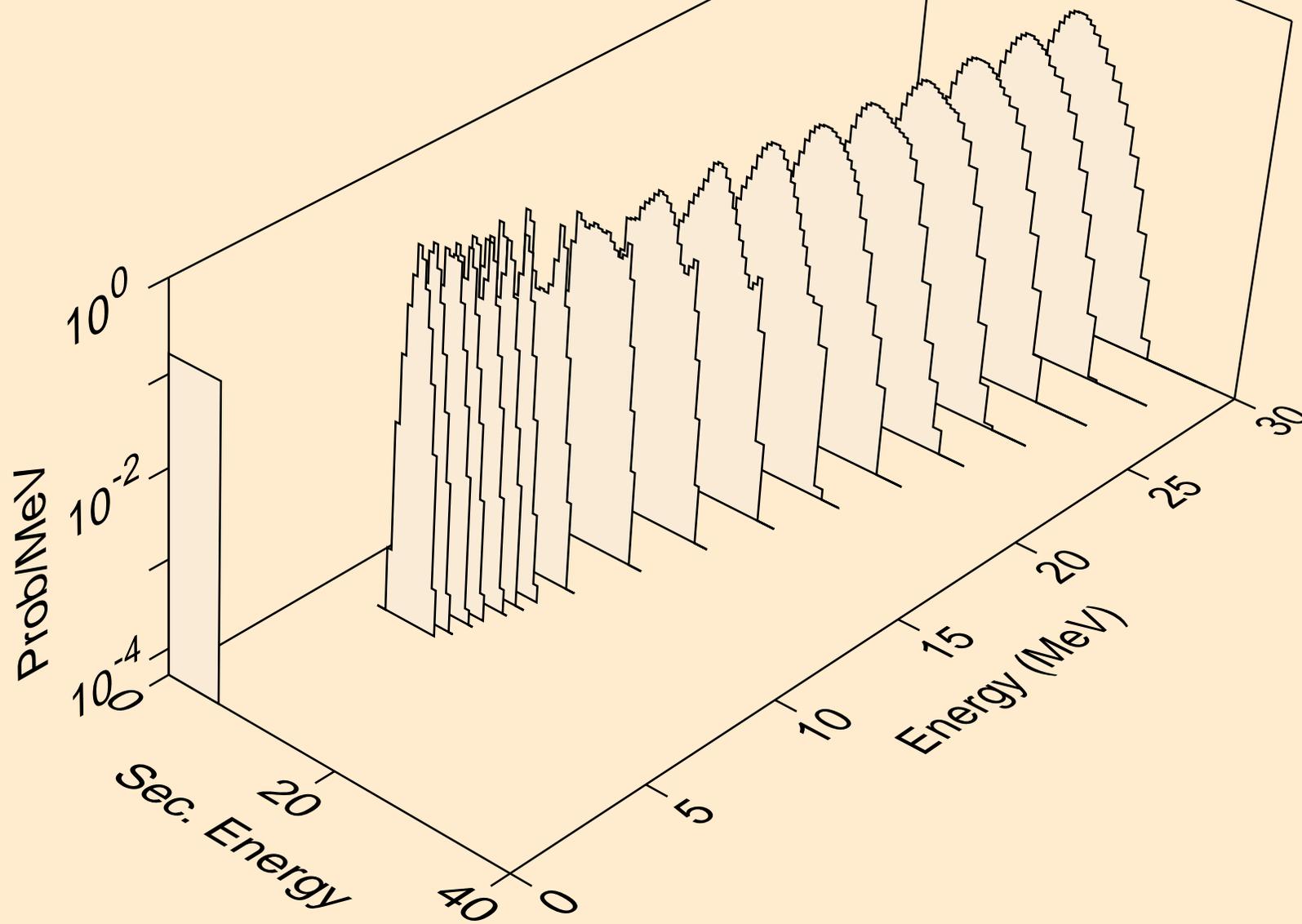alphas from (n,n*)2a

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
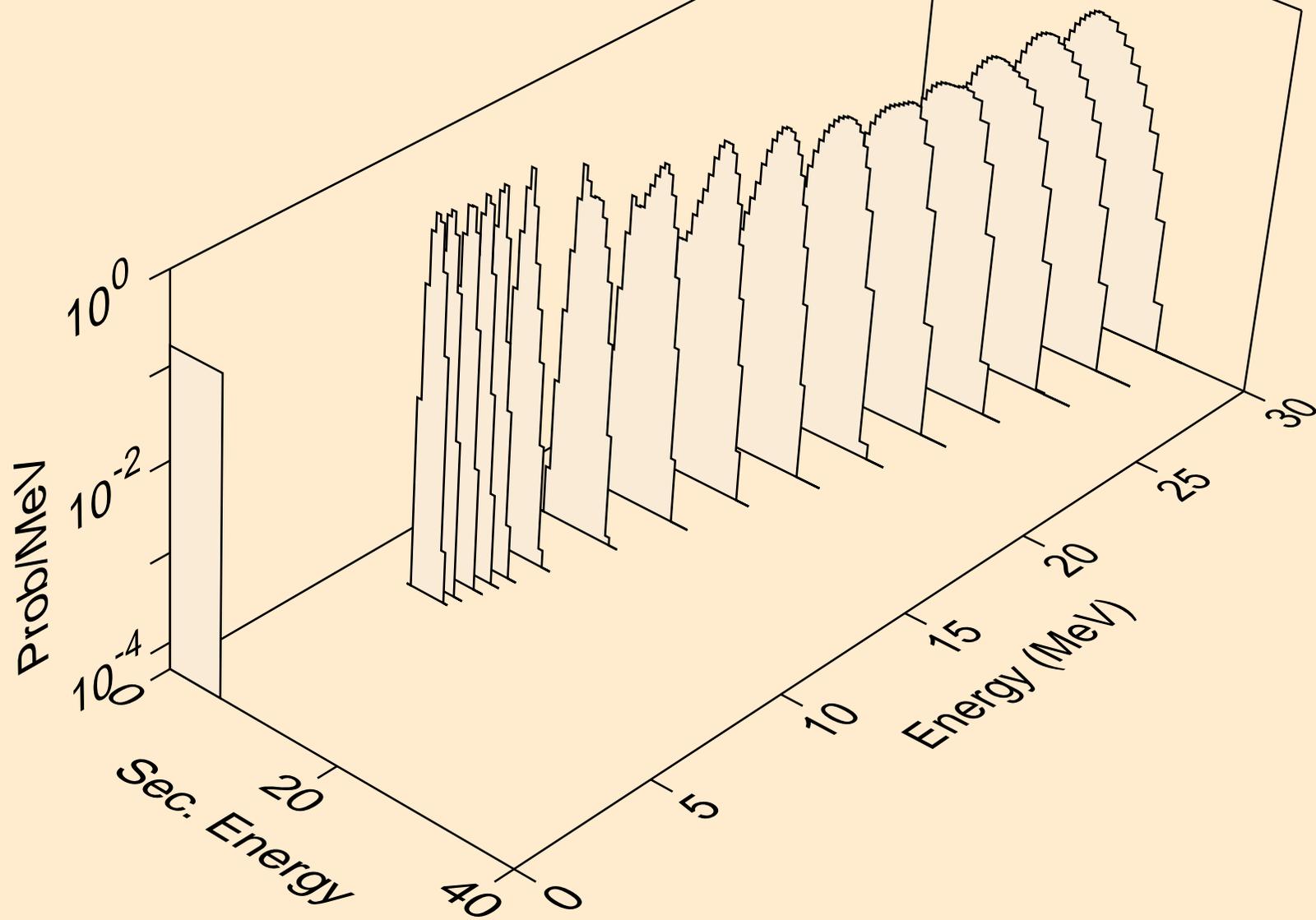alphas from (n,npa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
alphas from (n,a)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
alphas from (n,2a)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
alphas from (n,pa)

PB201M NEUTRON ACER TENDL-2021 LIBRARY; T=293.6K
alphas from (n,da)