PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Principal cross sections

- total
- absorption
- elastic
- gamma production

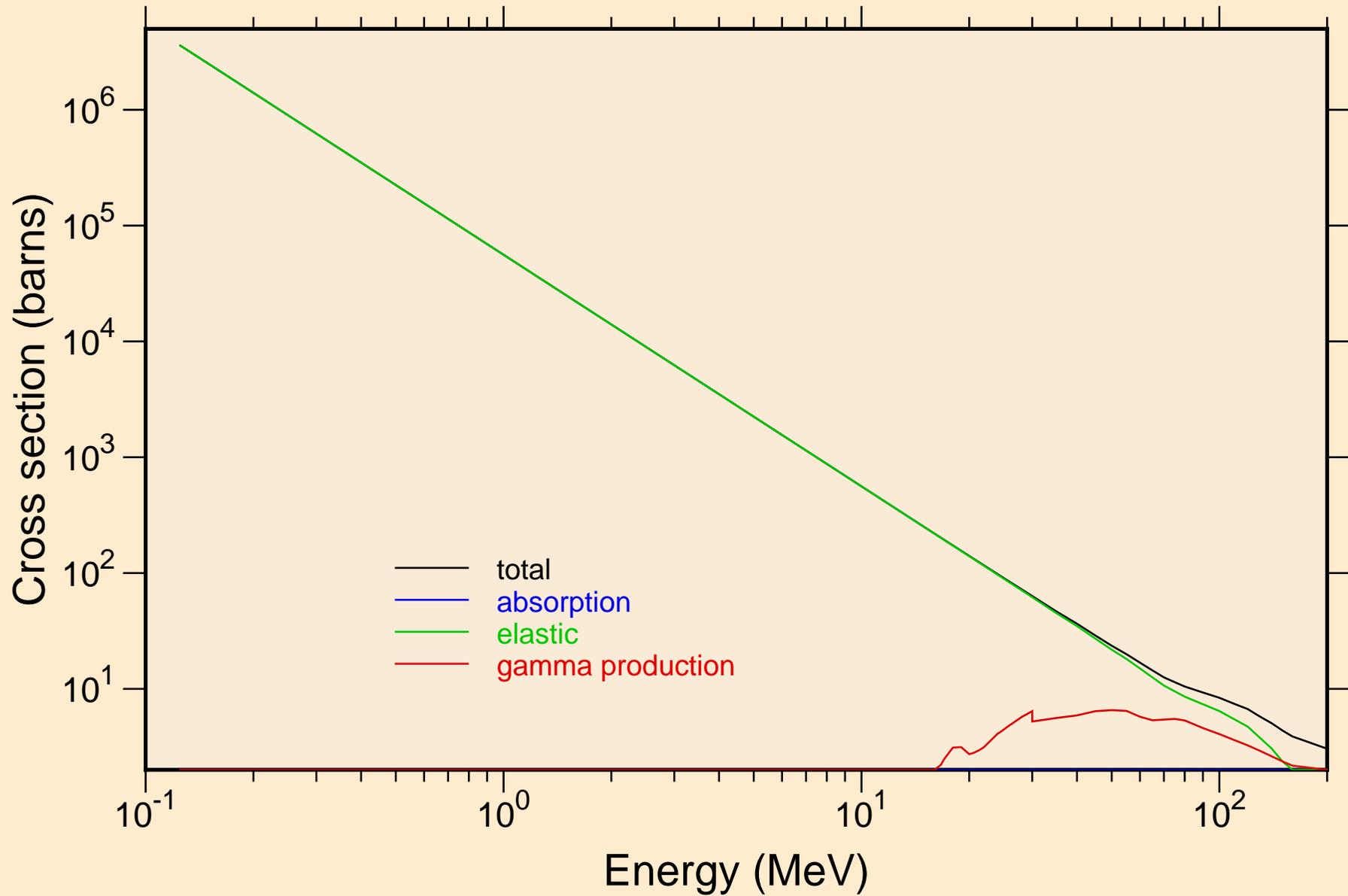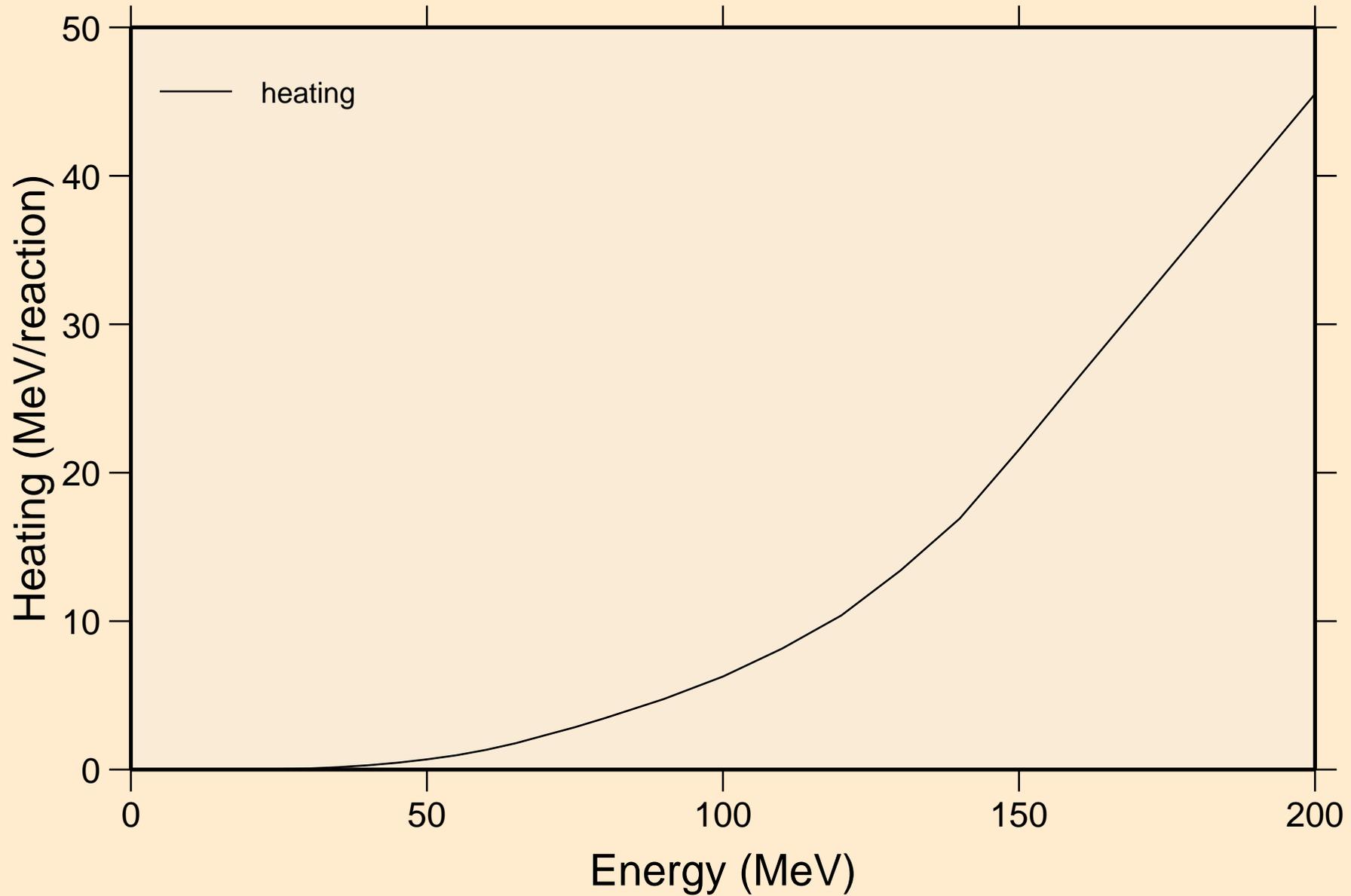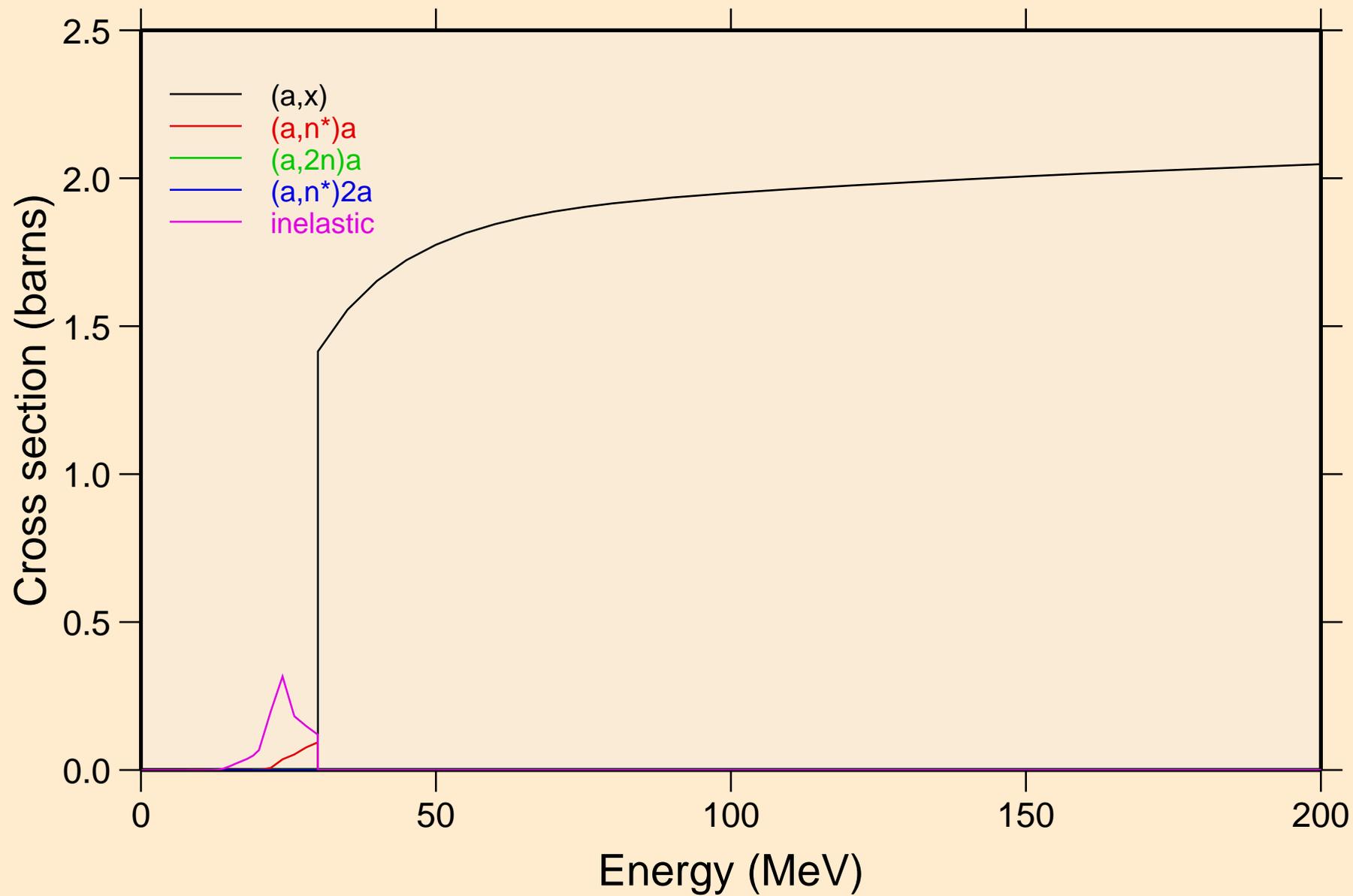PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Heating

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Principal cross sections

- total
- absorption
- elastic
- gamma production

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Heating

— heating

Heating (MeV/reaction)

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Threshold reactions

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

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

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Threshold reactions

Legend:
- (a,2a)
- (a,pa)
- (a,da)
- (a,2p)
- (a,pd)
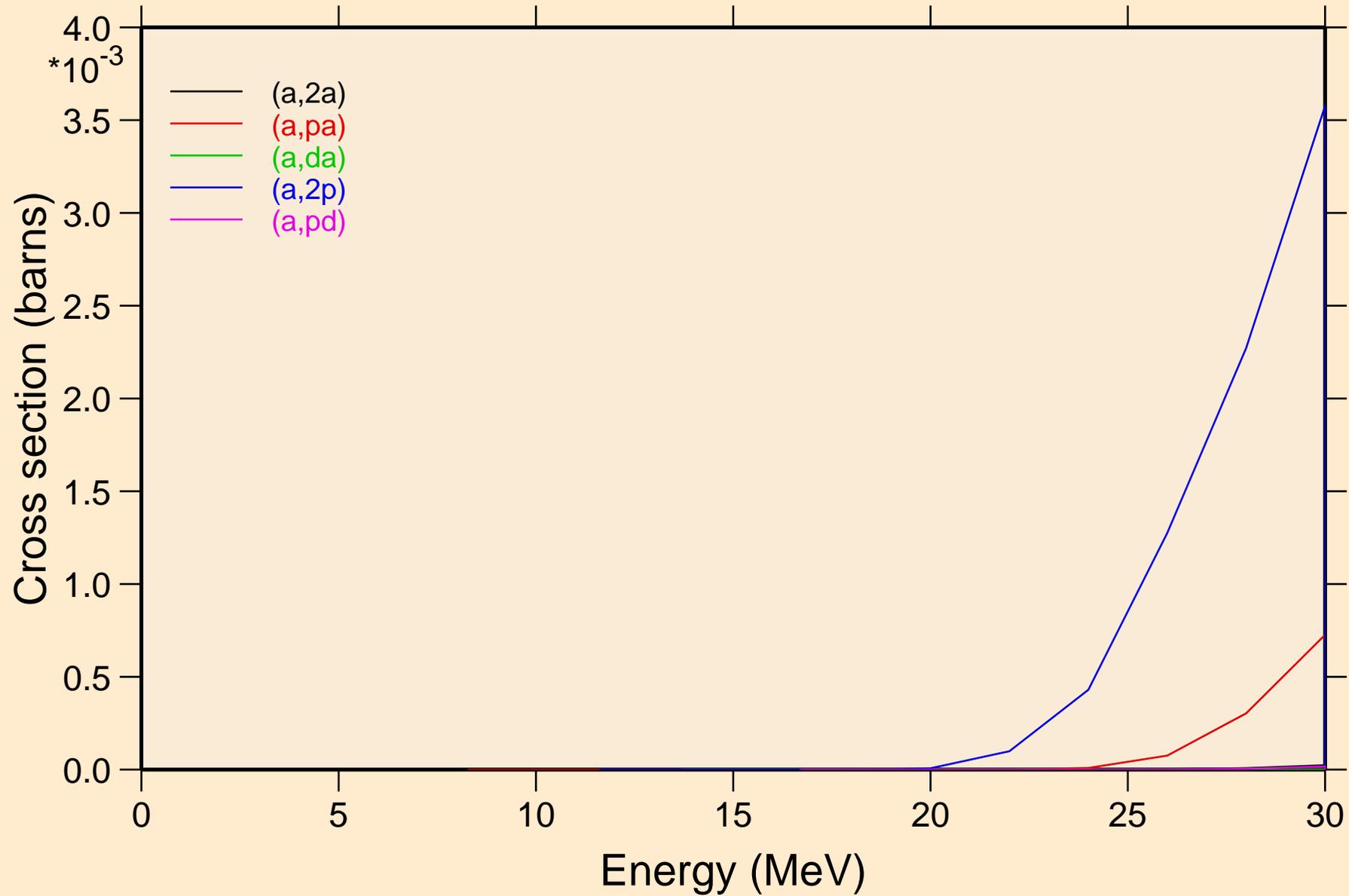
X-axis: Energy (MeV)
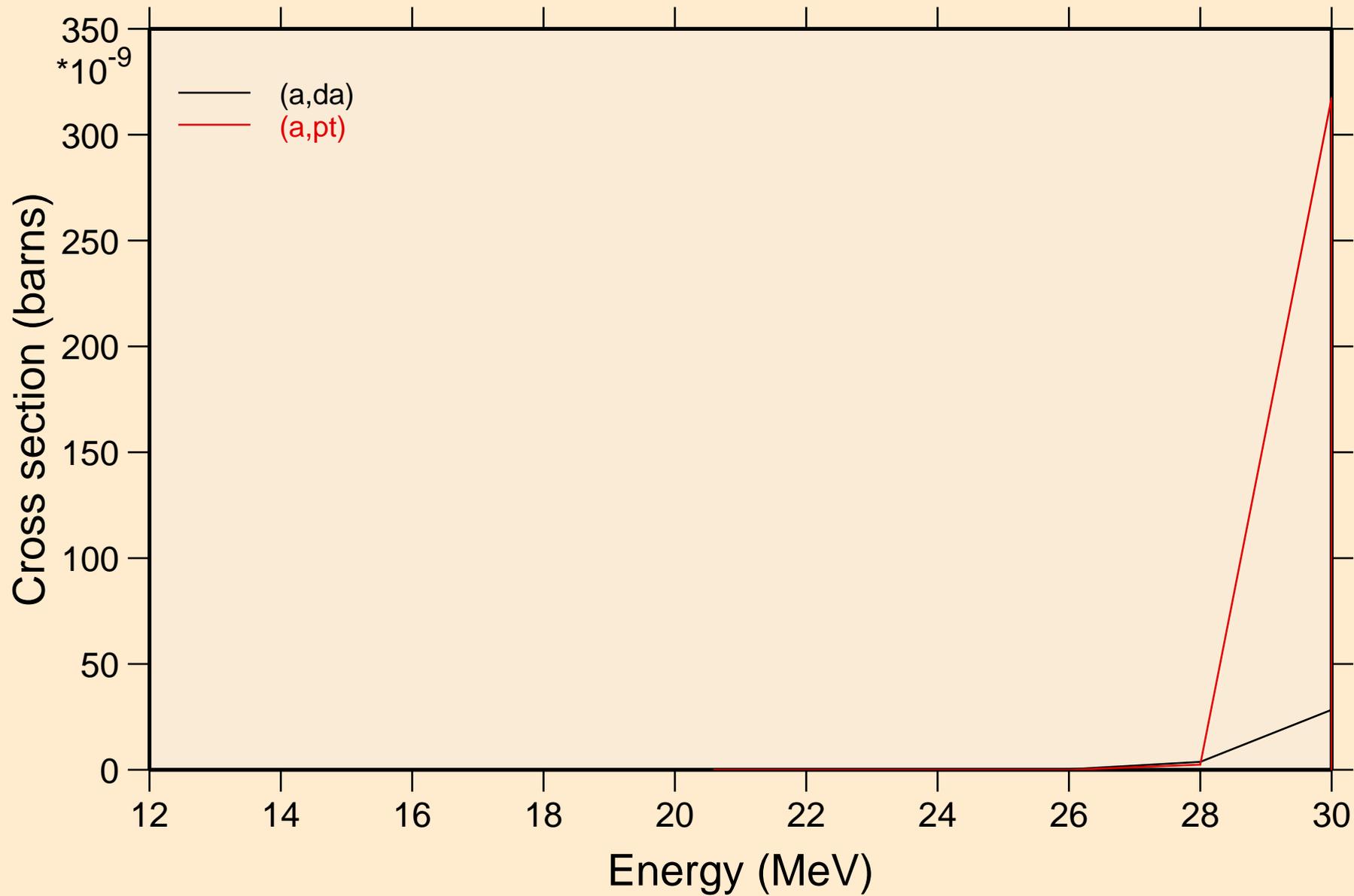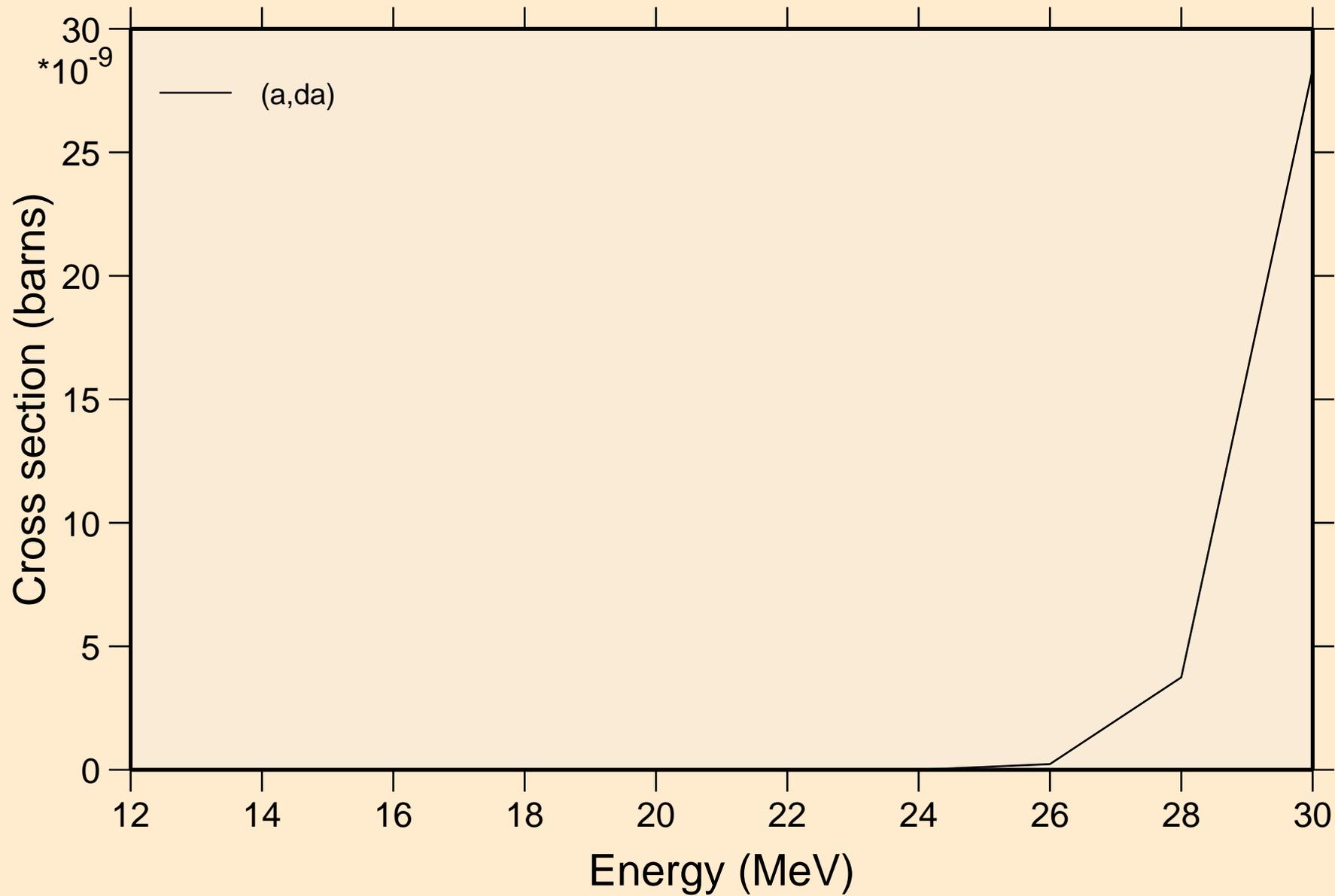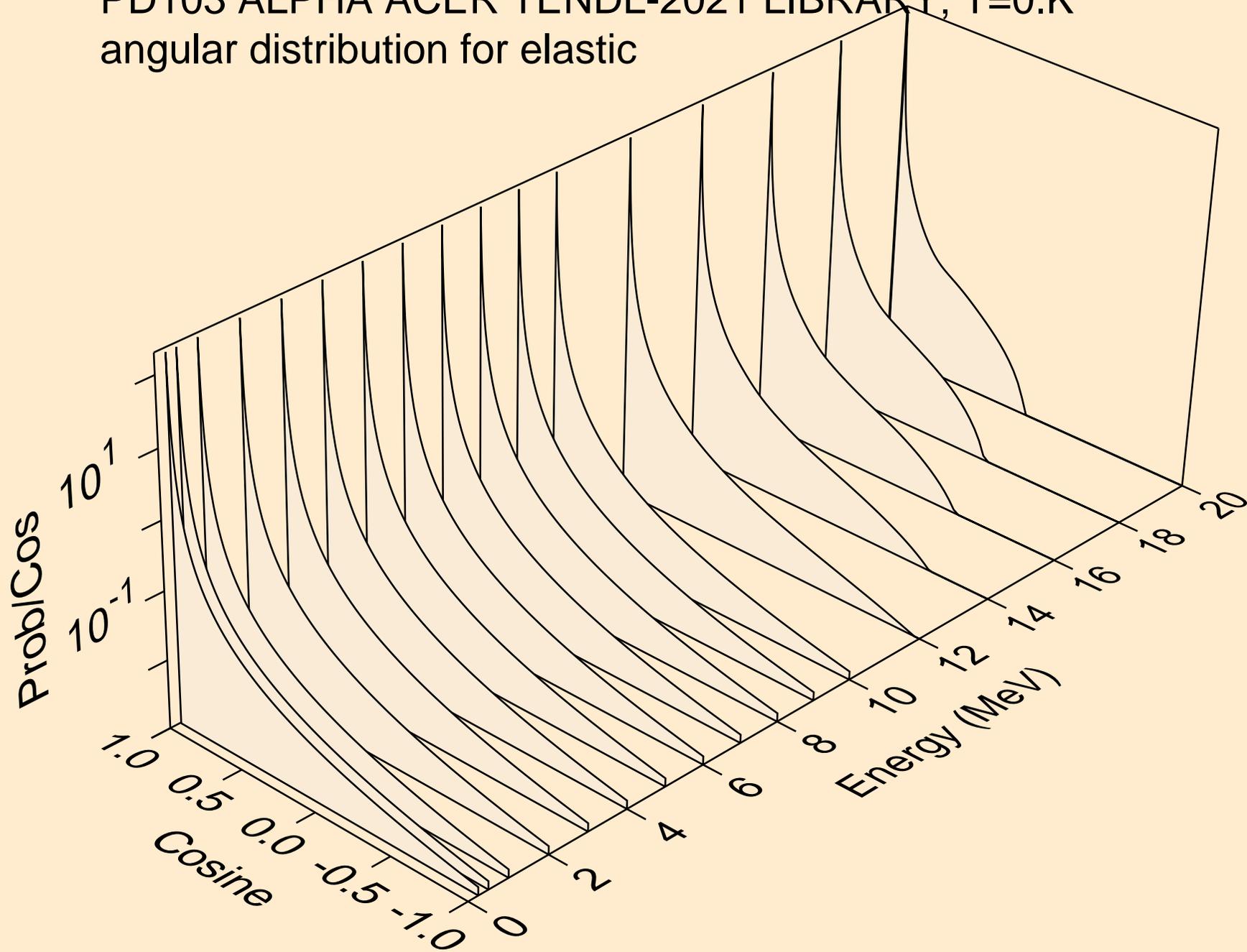Y-axis: Cross section (barns), ×10⁻³

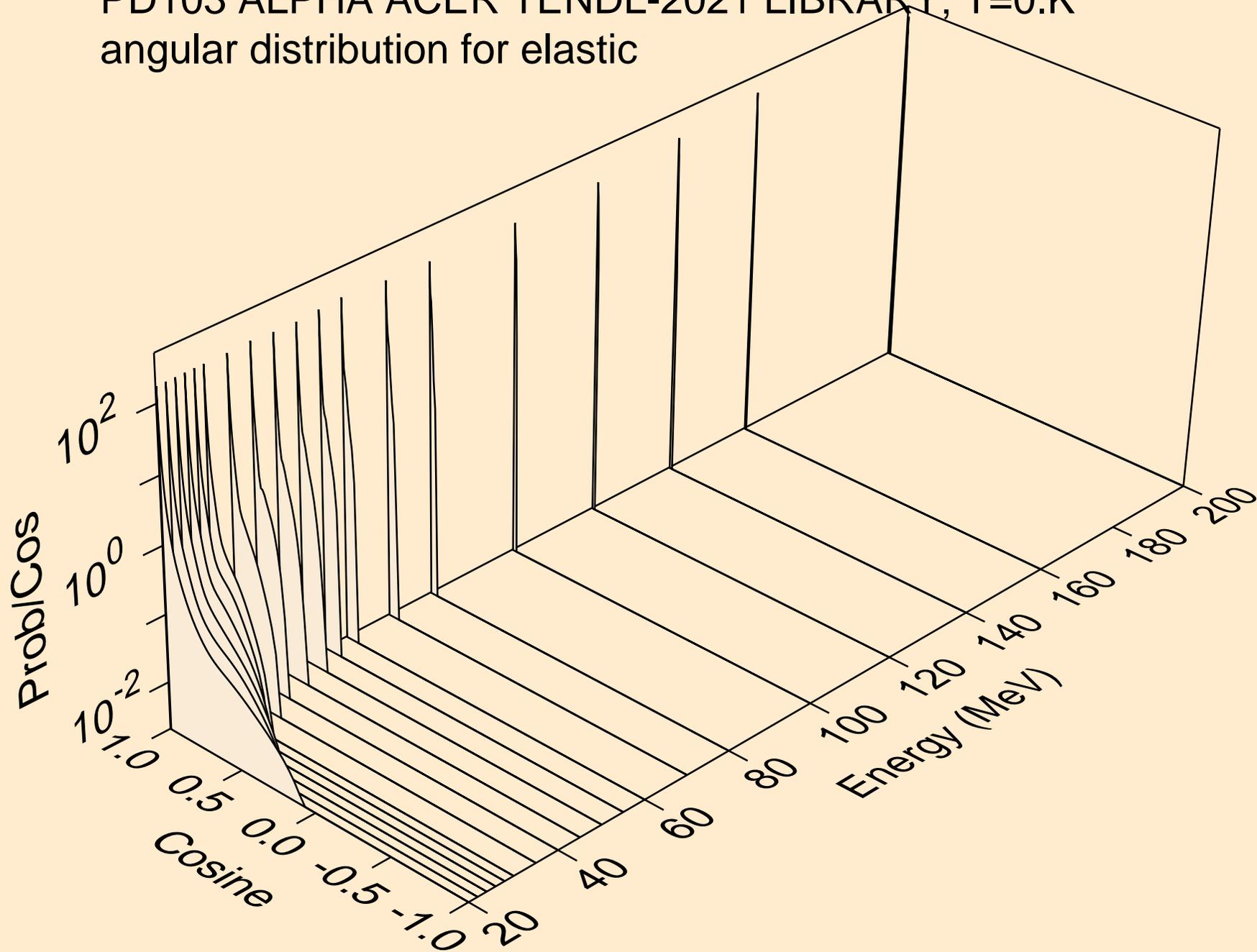PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Threshold reactions

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
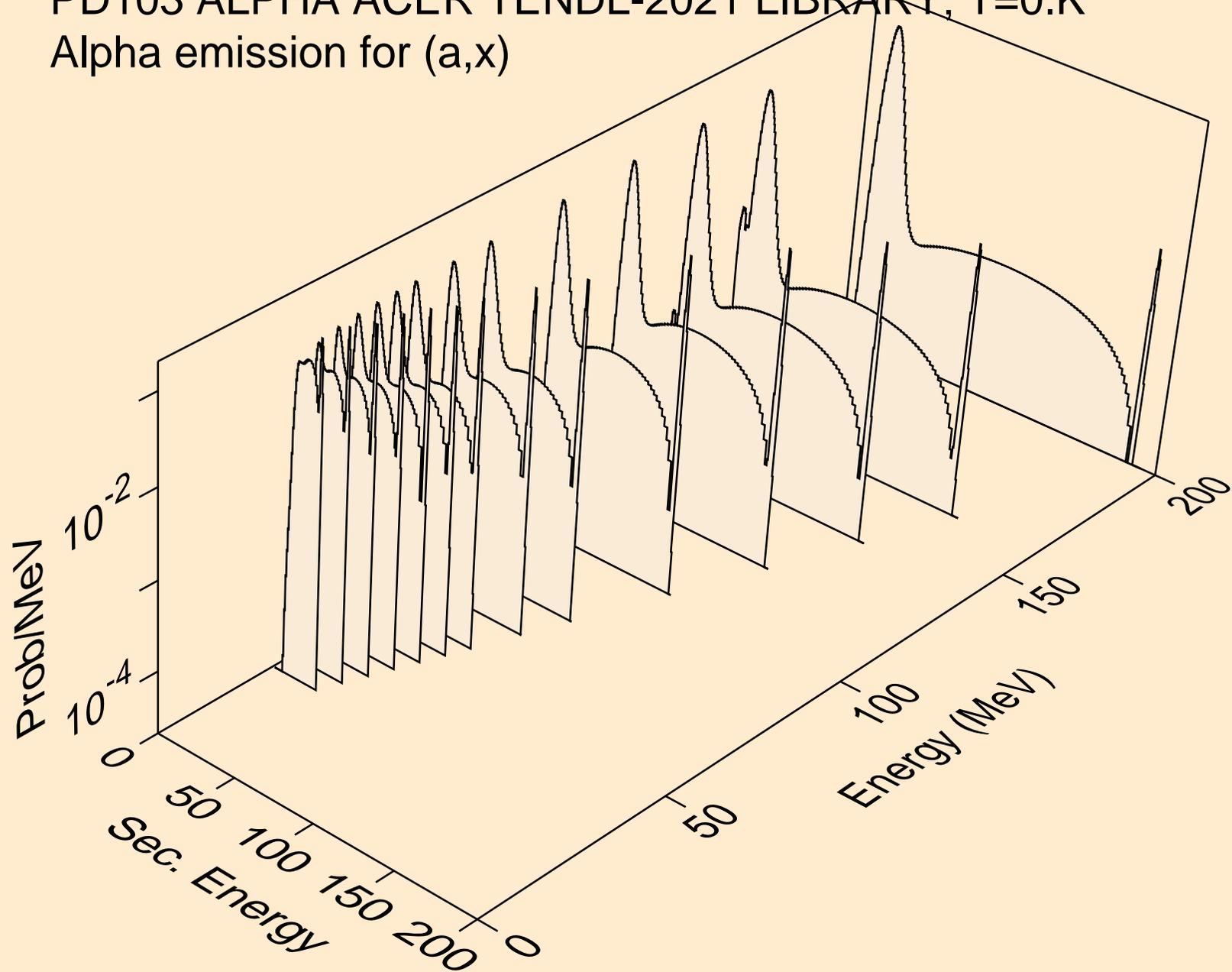Threshold reactions

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
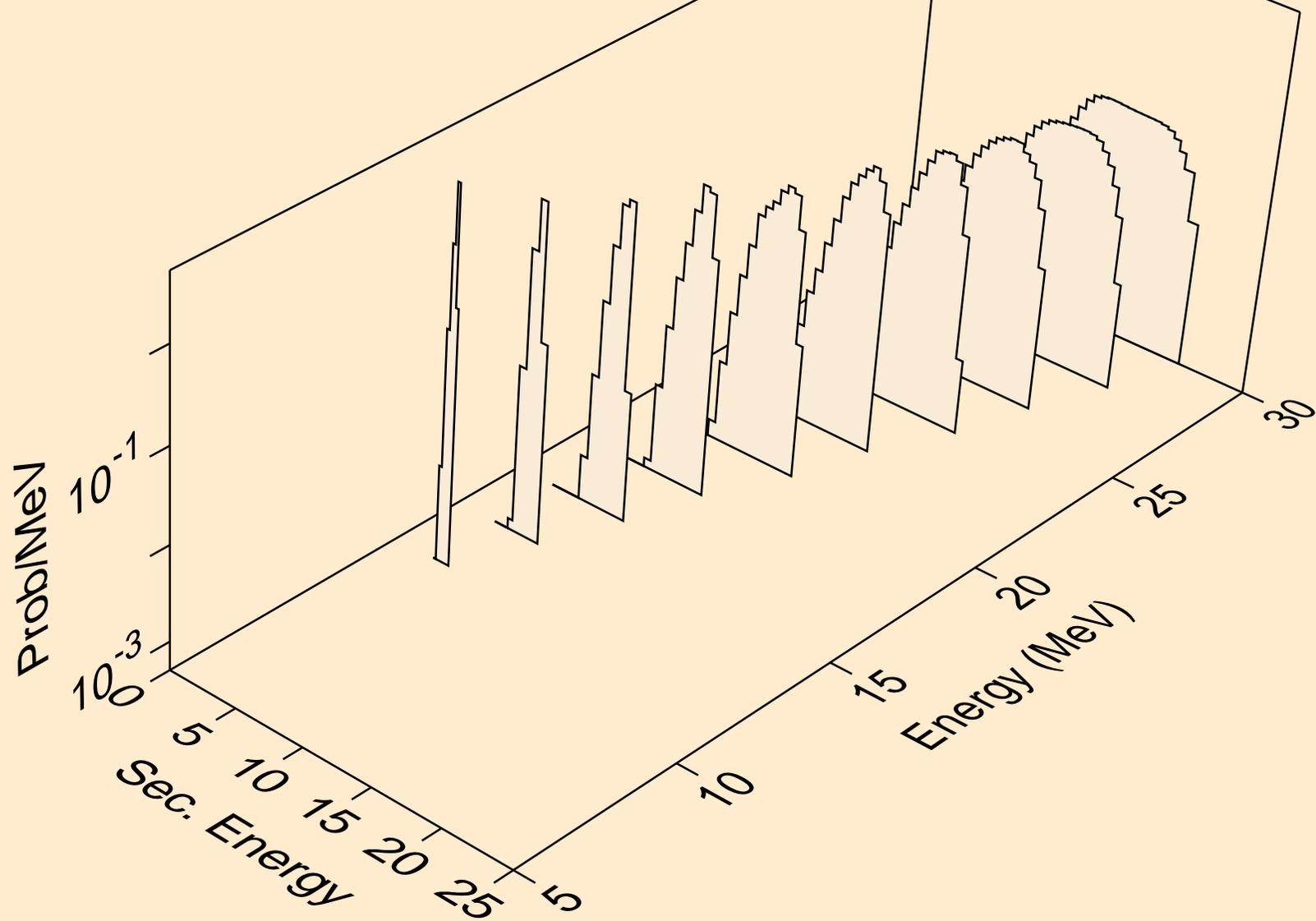angular distribution for elastic

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
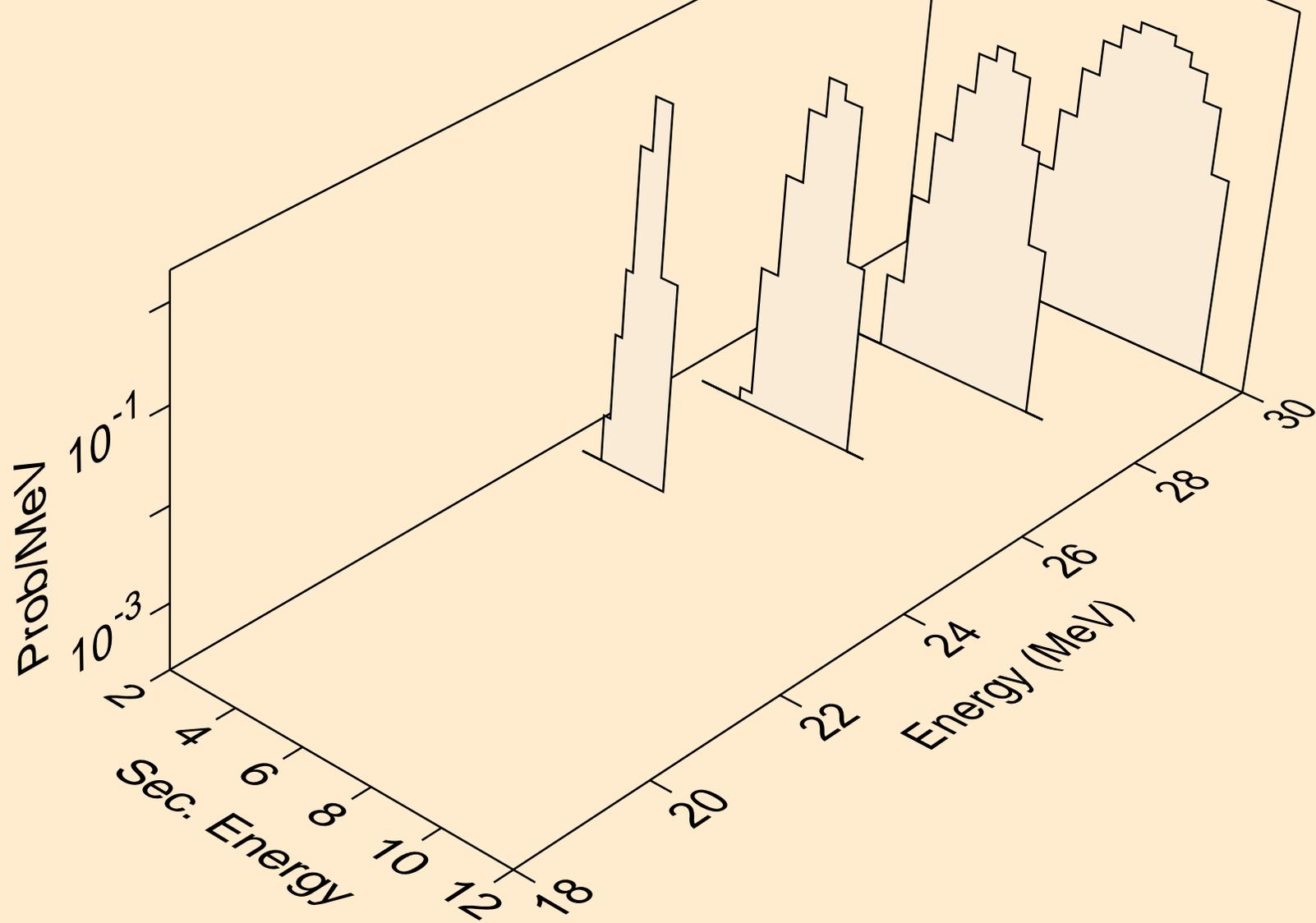angular distribution for elastic

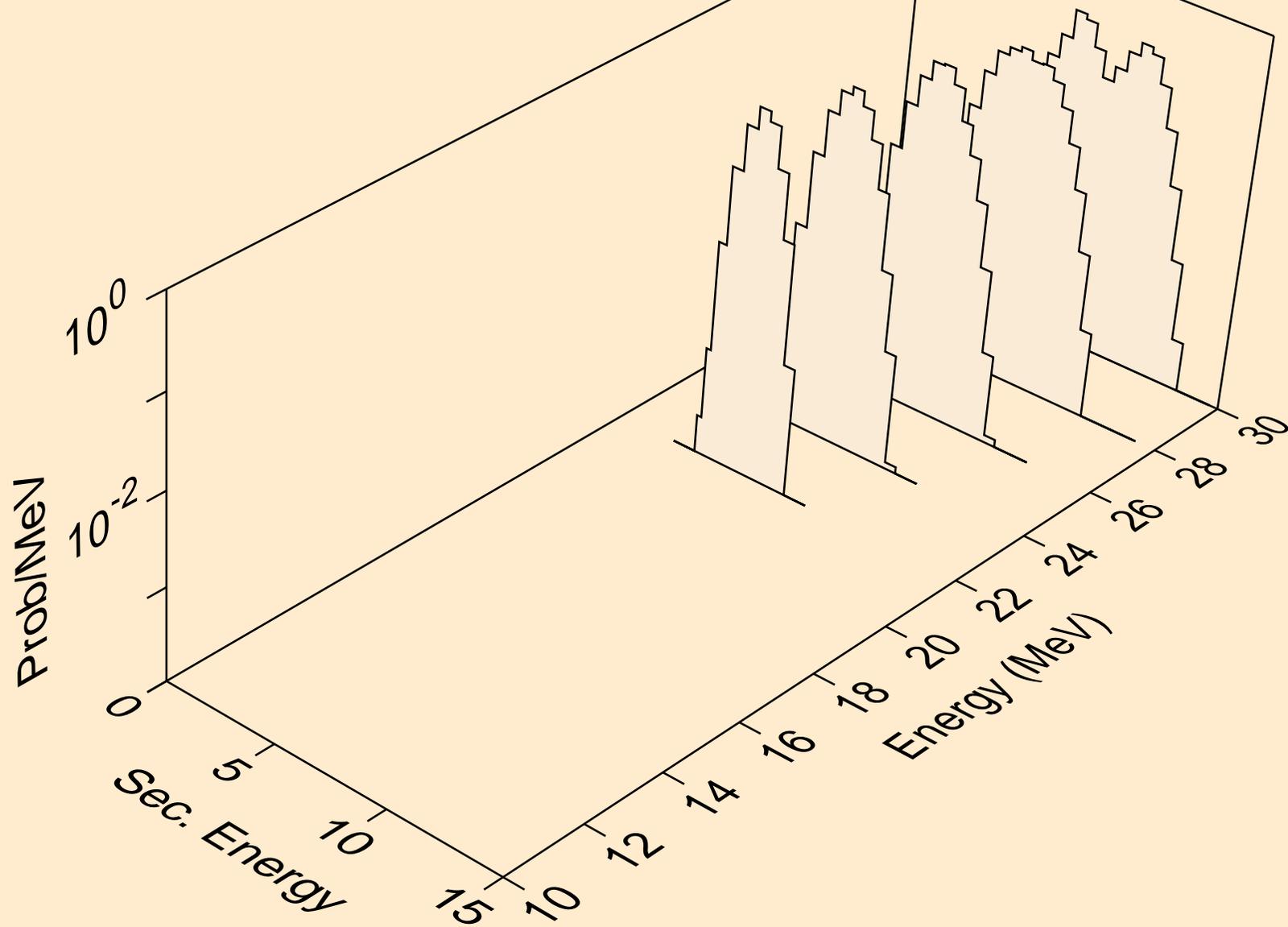PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Alpha emission for (a,x)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Alpha emission for (a,n*)a

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Alpha emission for (a,2n)a

Prob/MeV

10^{-1}

10^{-3}

Sec. Energy

2 4 6 8 10 12

18 20 22 24 26 28 30

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Alpha emission for (a,n*)2a

Prob/MeV

10^0

10^{-2}

0

Sec. Energy

5

10

15

10

12

14

16

18

20

22

24

26

28

30

Energy (MeV)

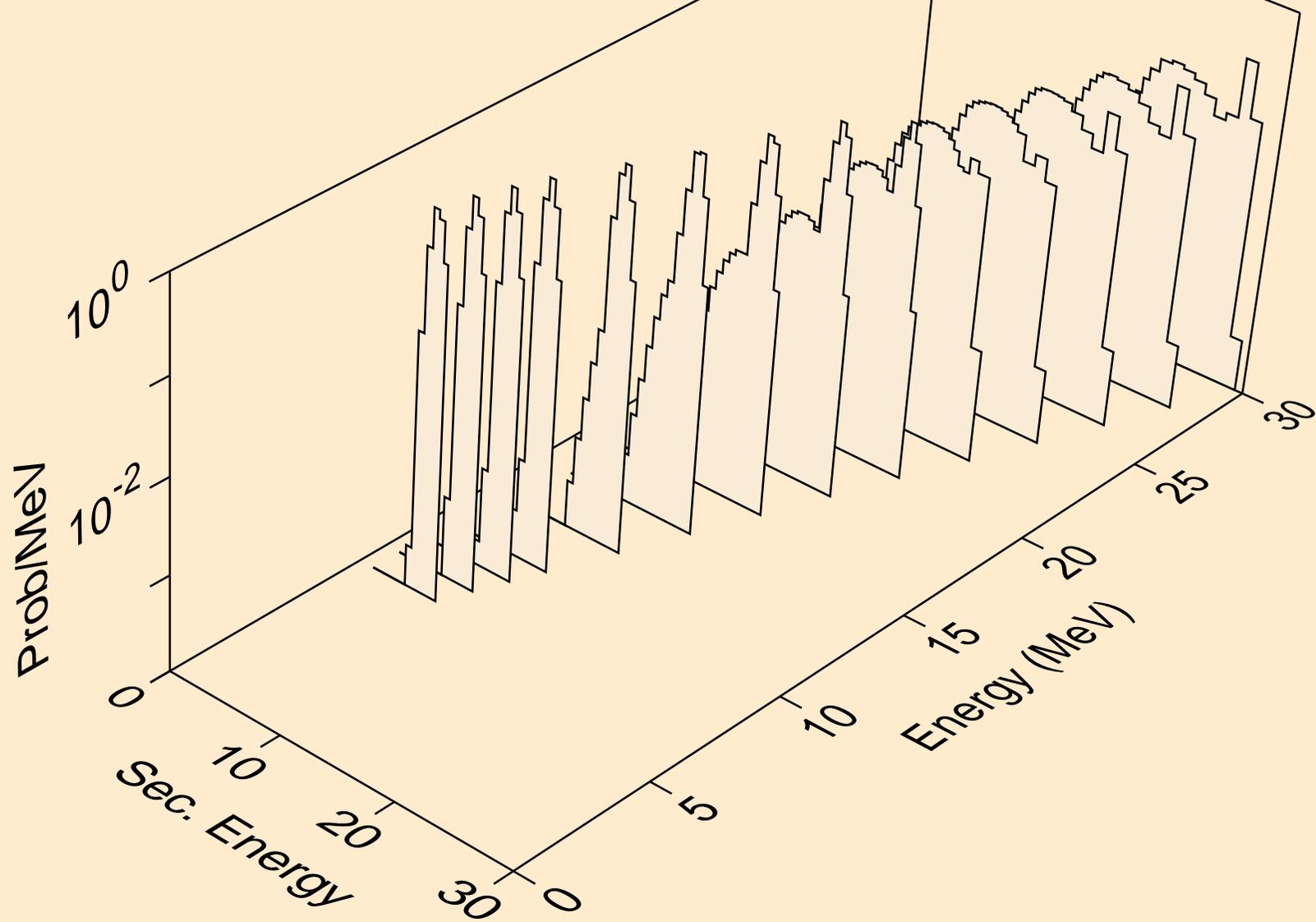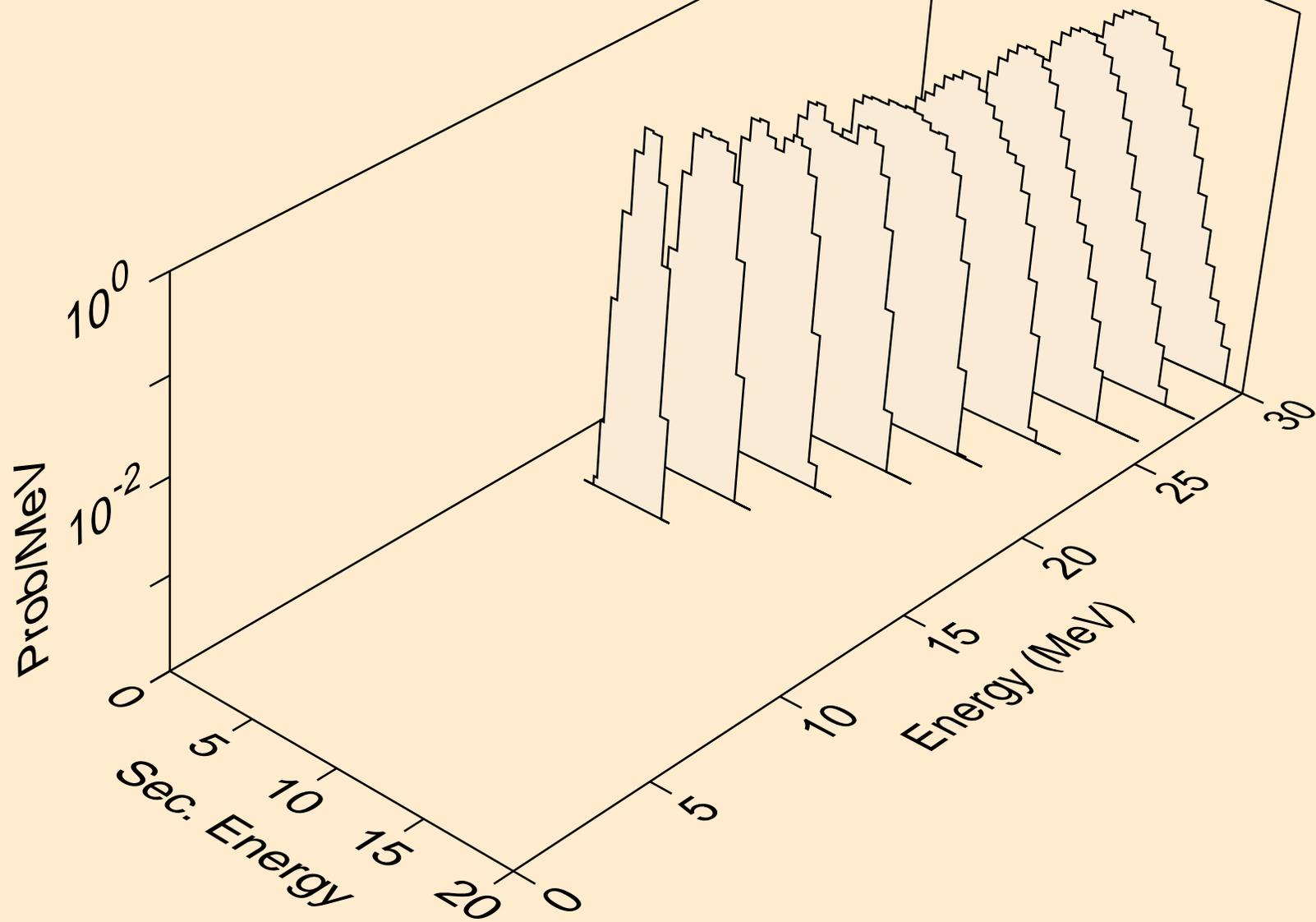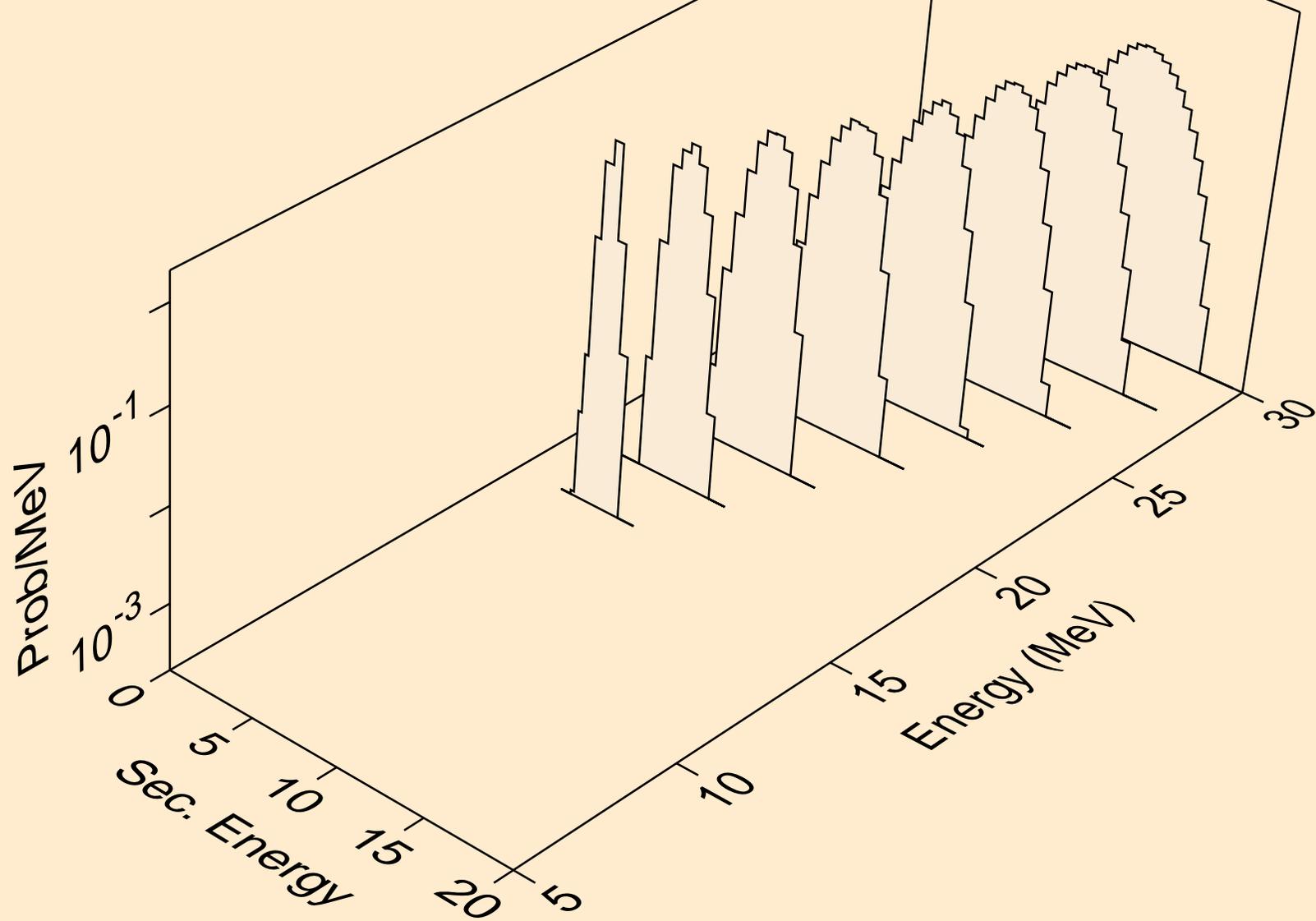PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
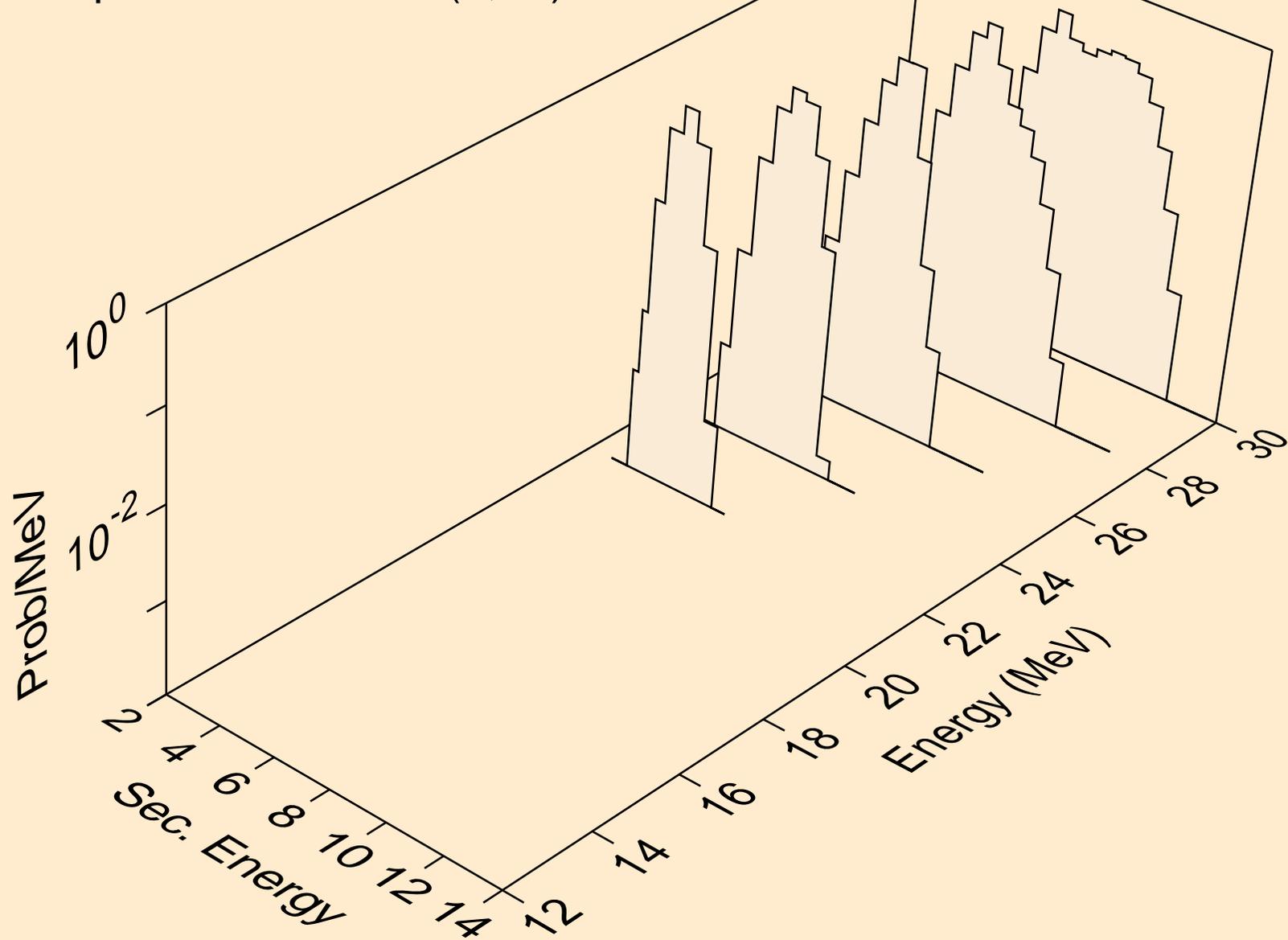Alpha emission for inelastic

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
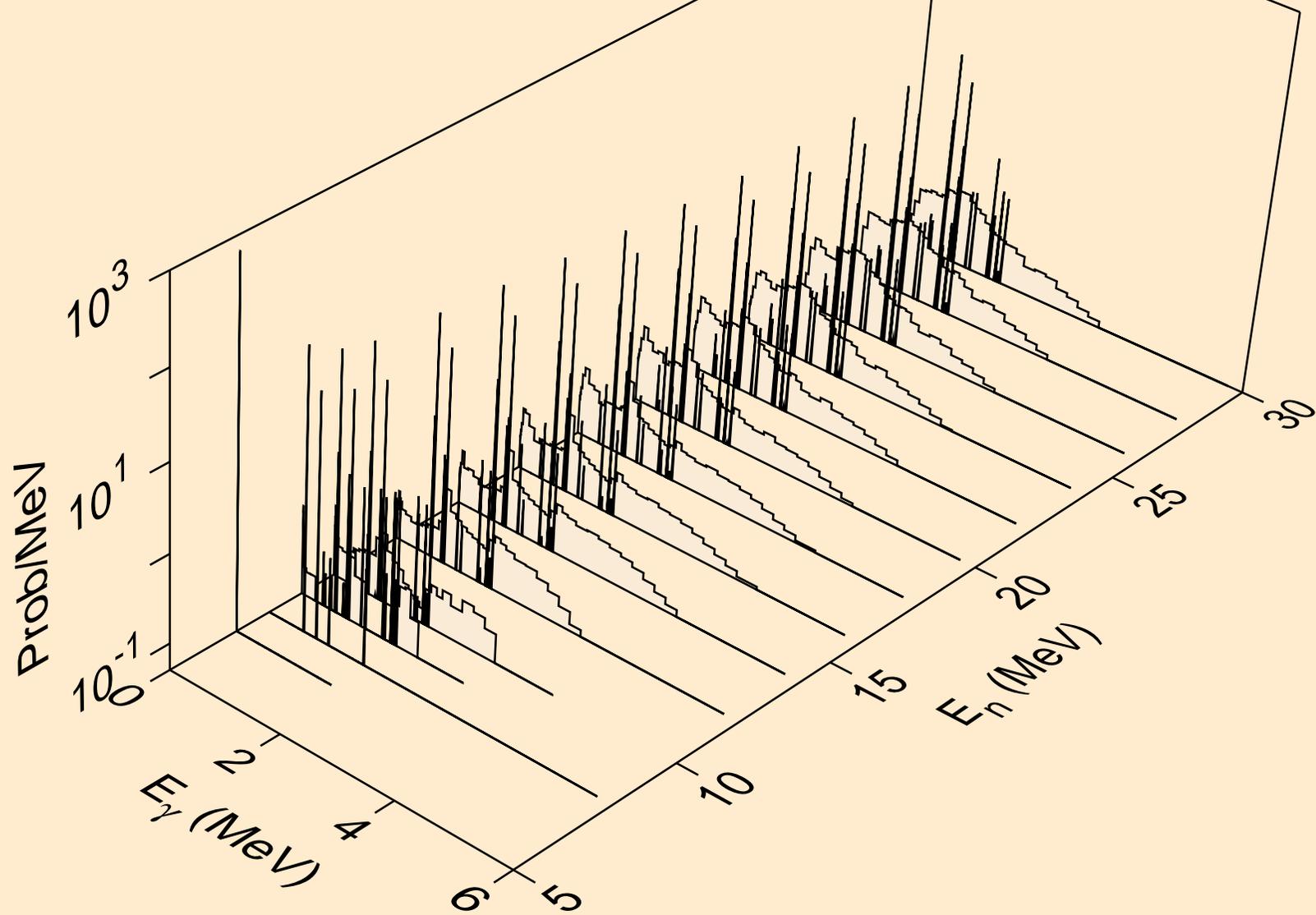Alpha emission for (a,2a)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
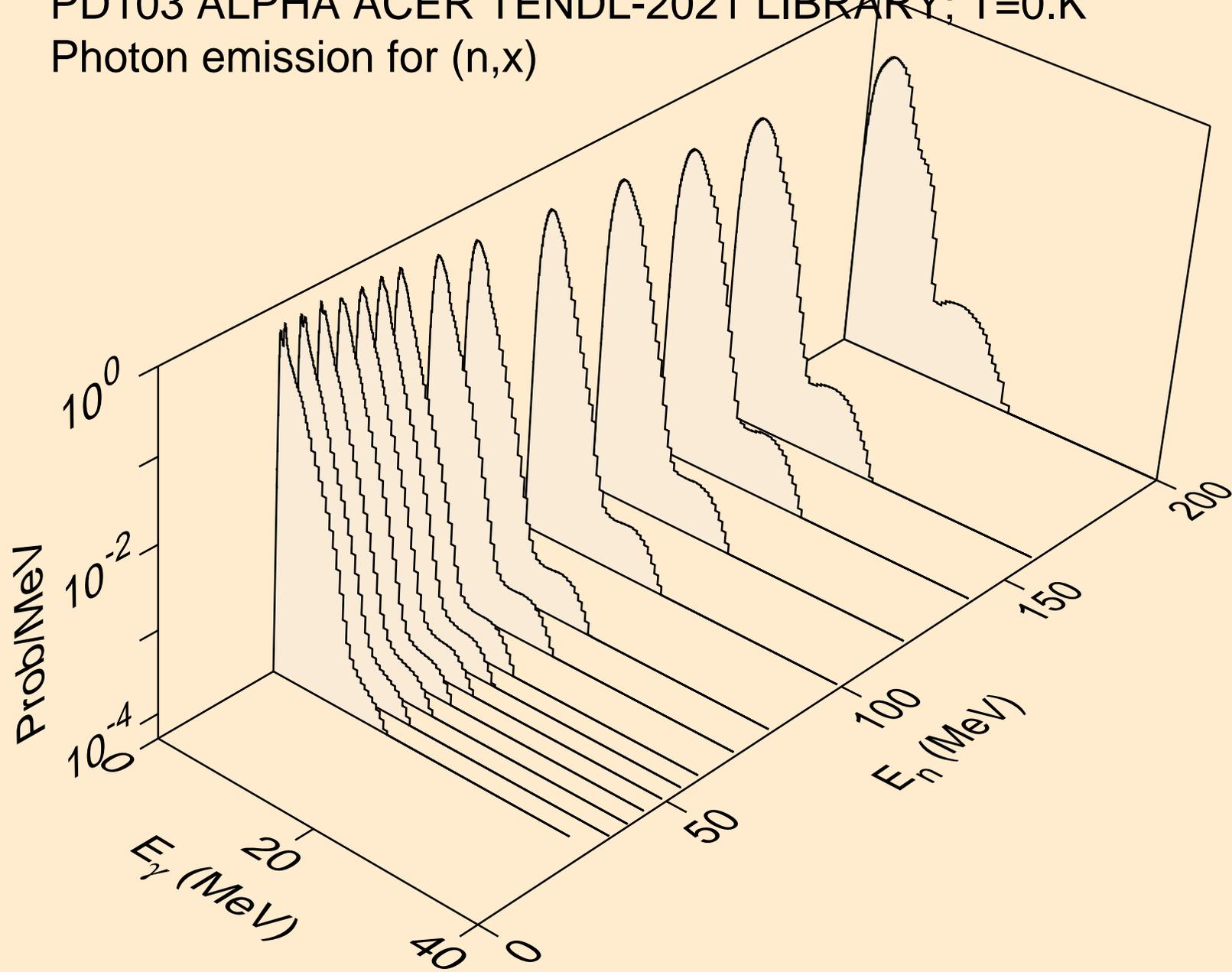Alpha emission for (a,pa)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
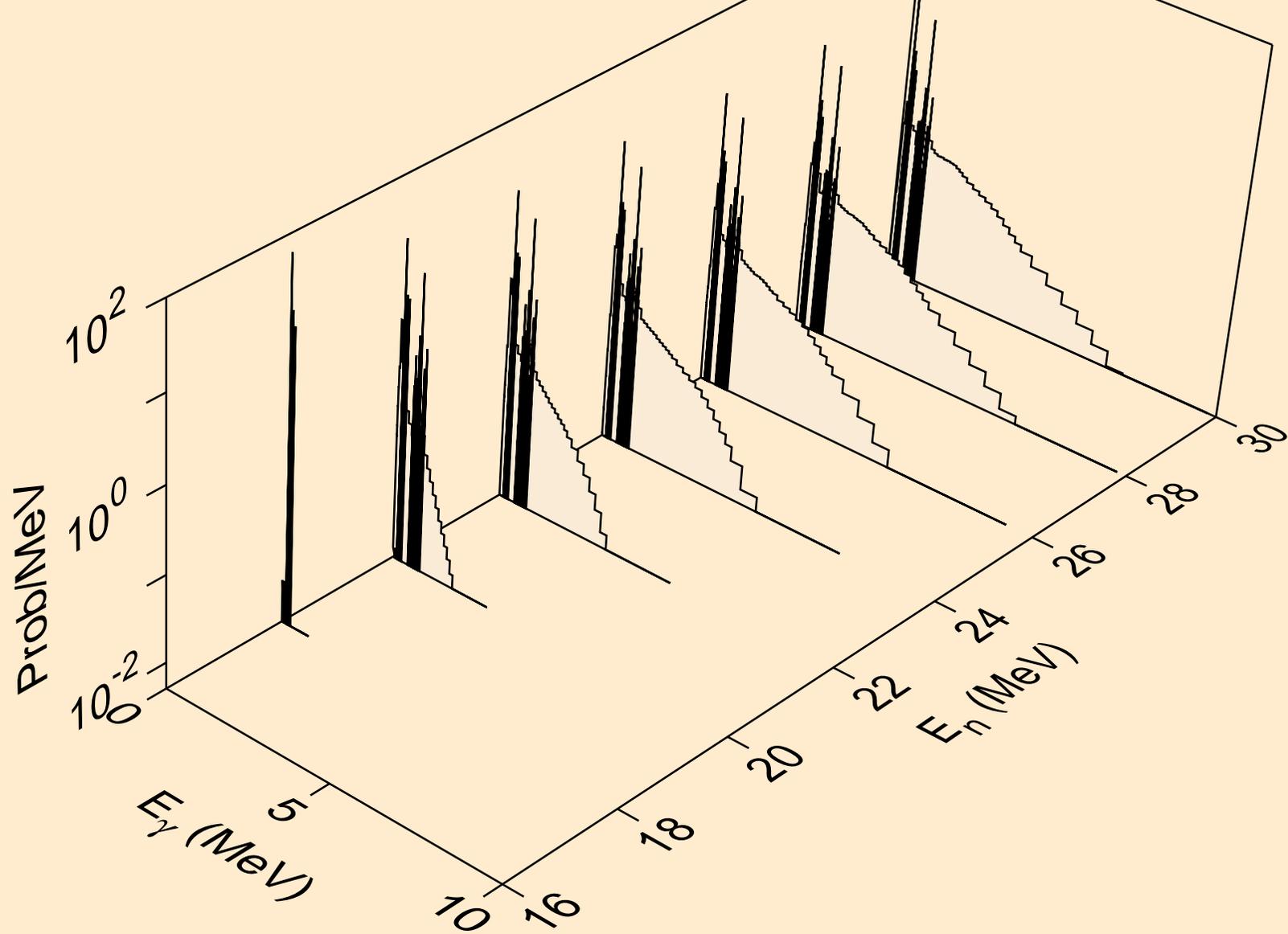Alpha emission for (a,da)

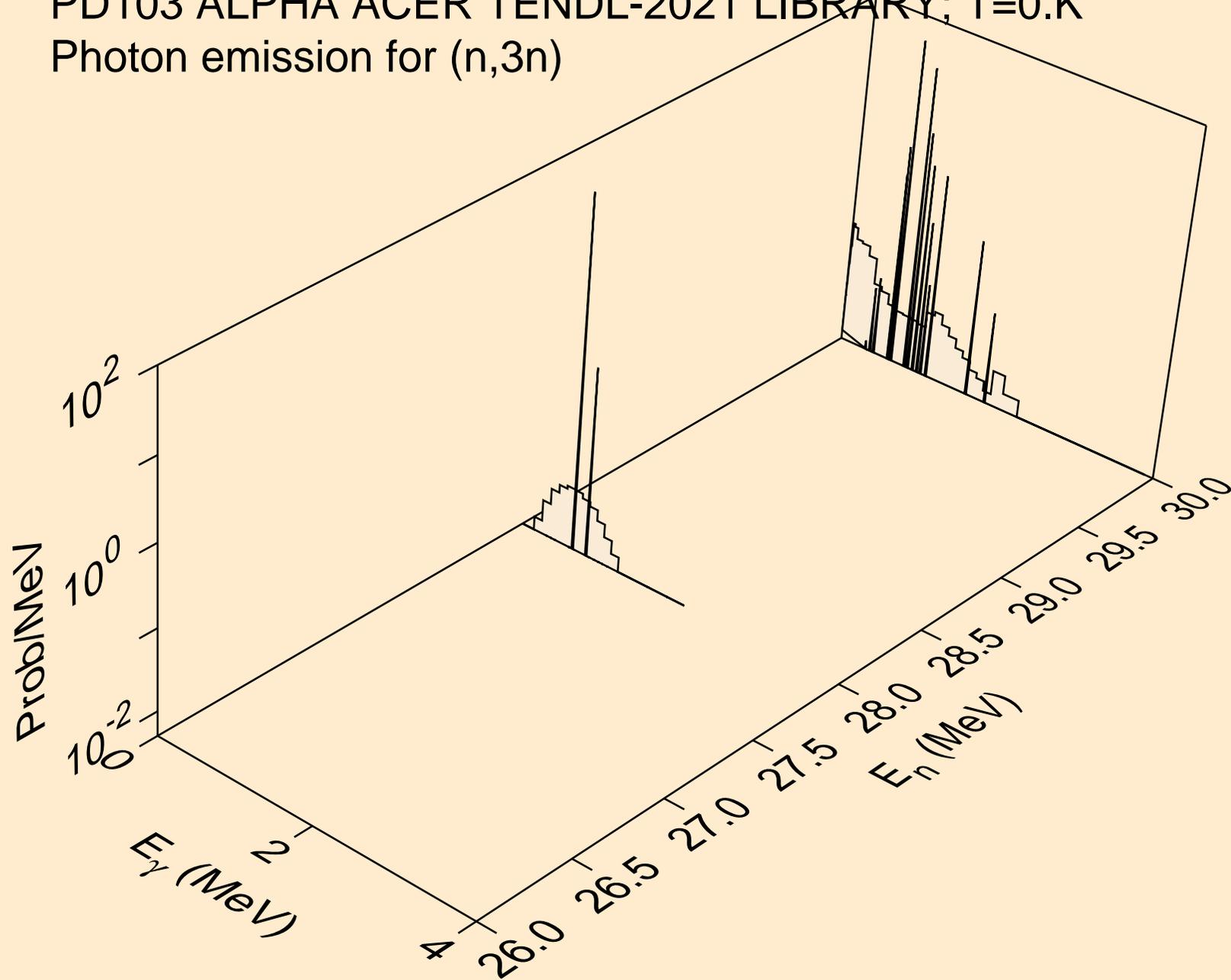PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (z,n)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
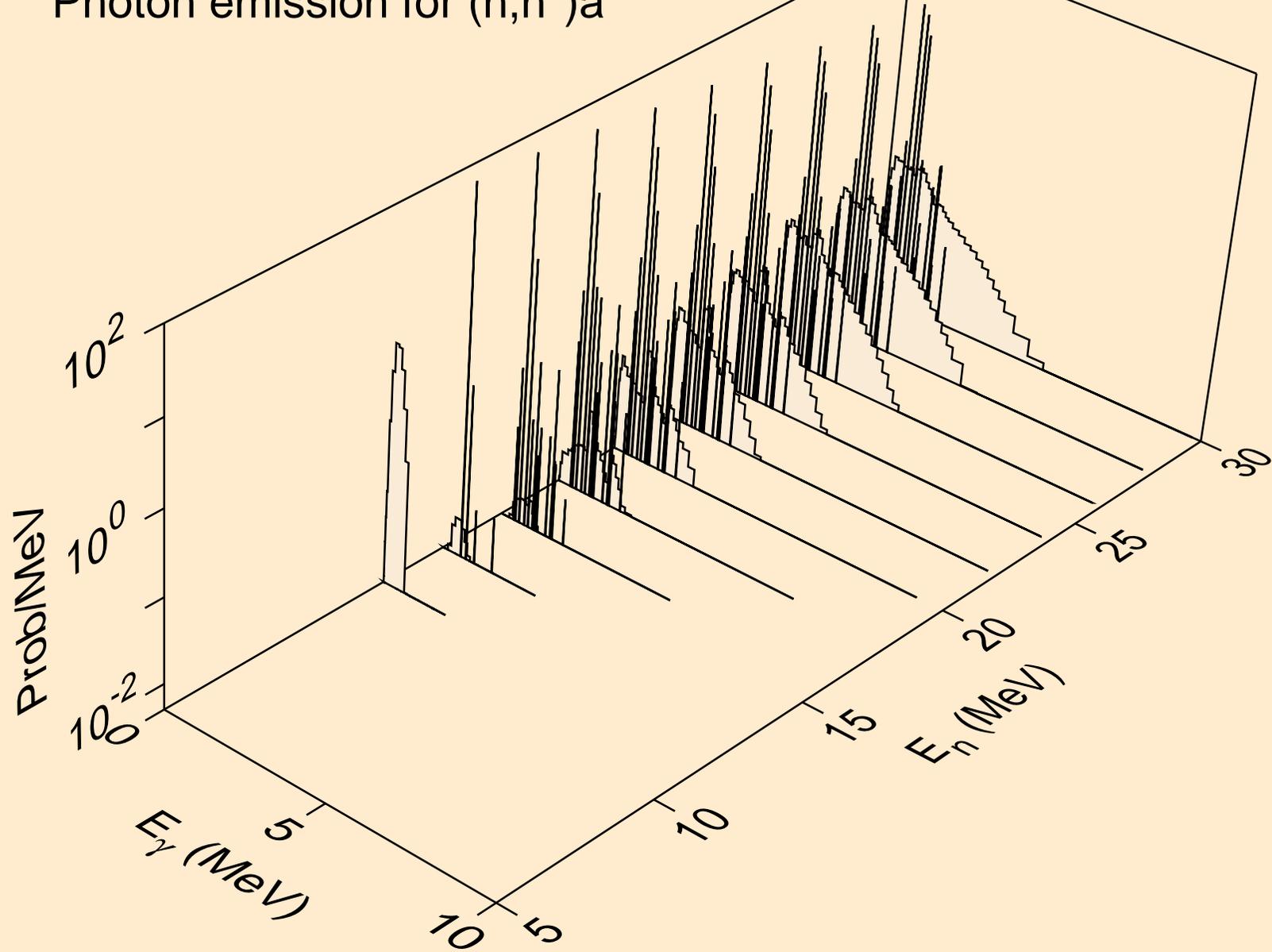Photon emission for (n,x)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
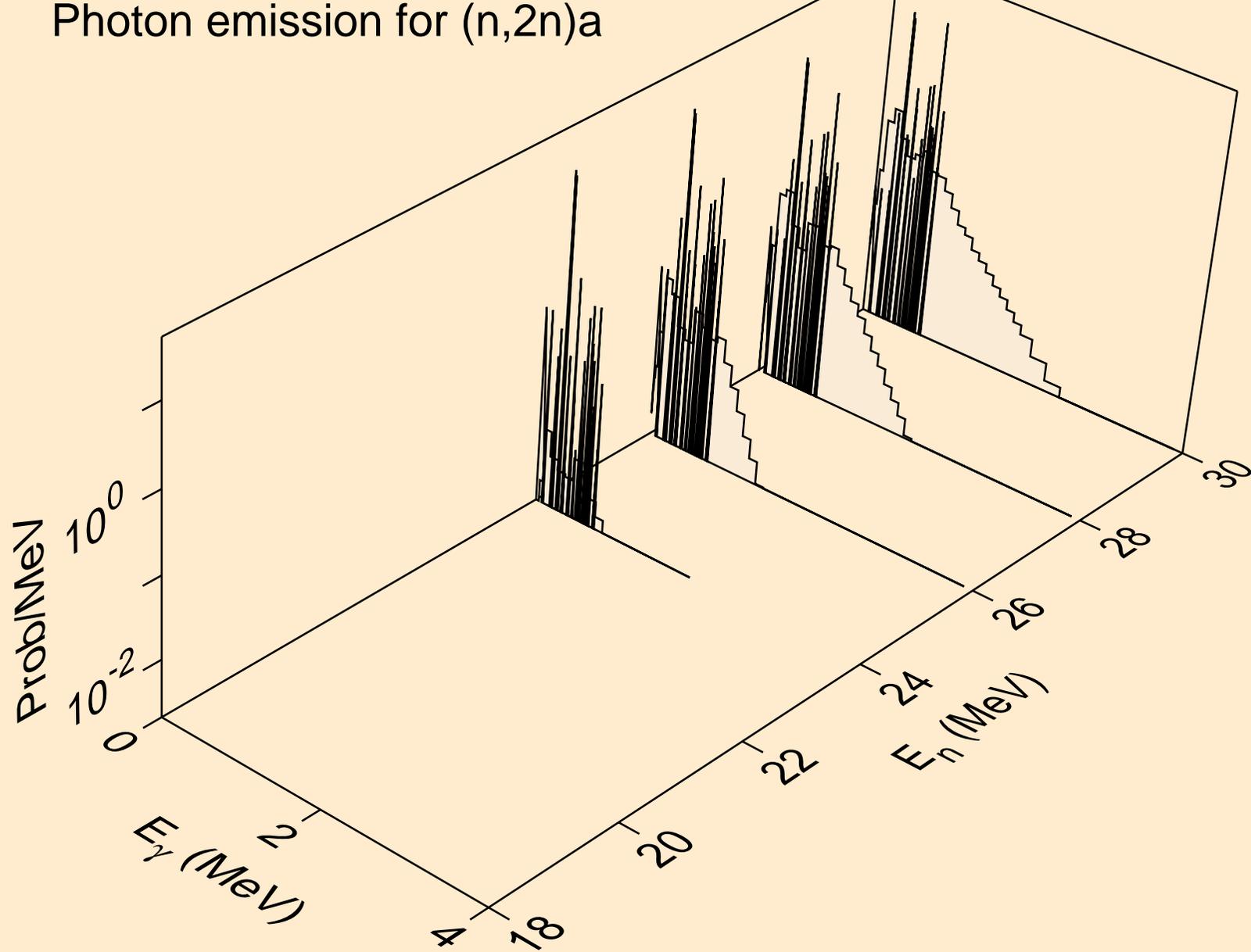Photon emission for (n,2n)

ProbIMeV

10^2

10^0

10^{-2}

E_γ (MeV)

5

10

16

18

20

22

24

26

28

30

E_n (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,3n)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,n*)a

E_γ (MeV)

E_n (MeV)

Prob/MeV

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,2n)a

Prob/MeV

10^0

10^{-2}

0

E_γ (MeV)

2

4

18

20

22

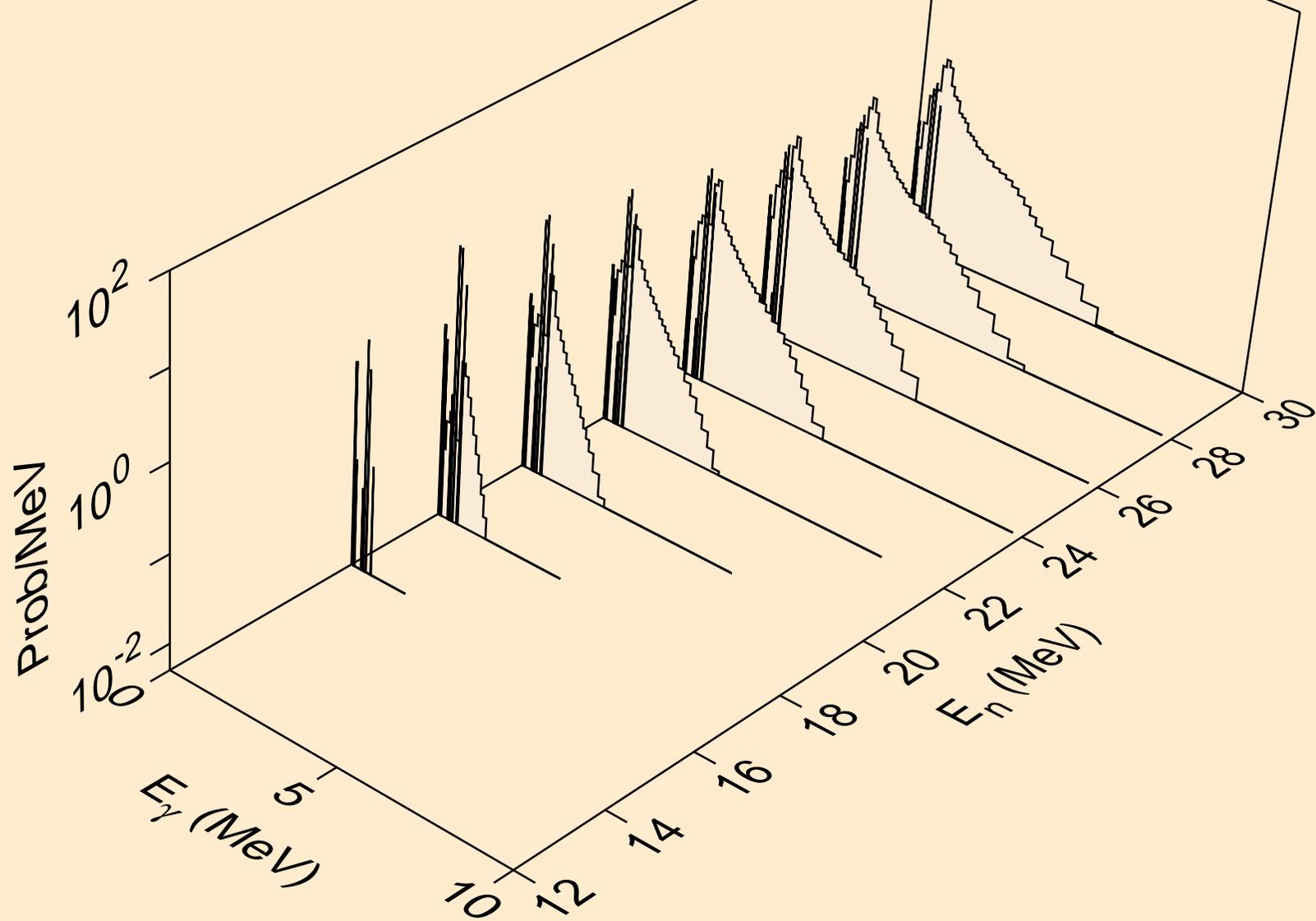24

26

28

30

E_n (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
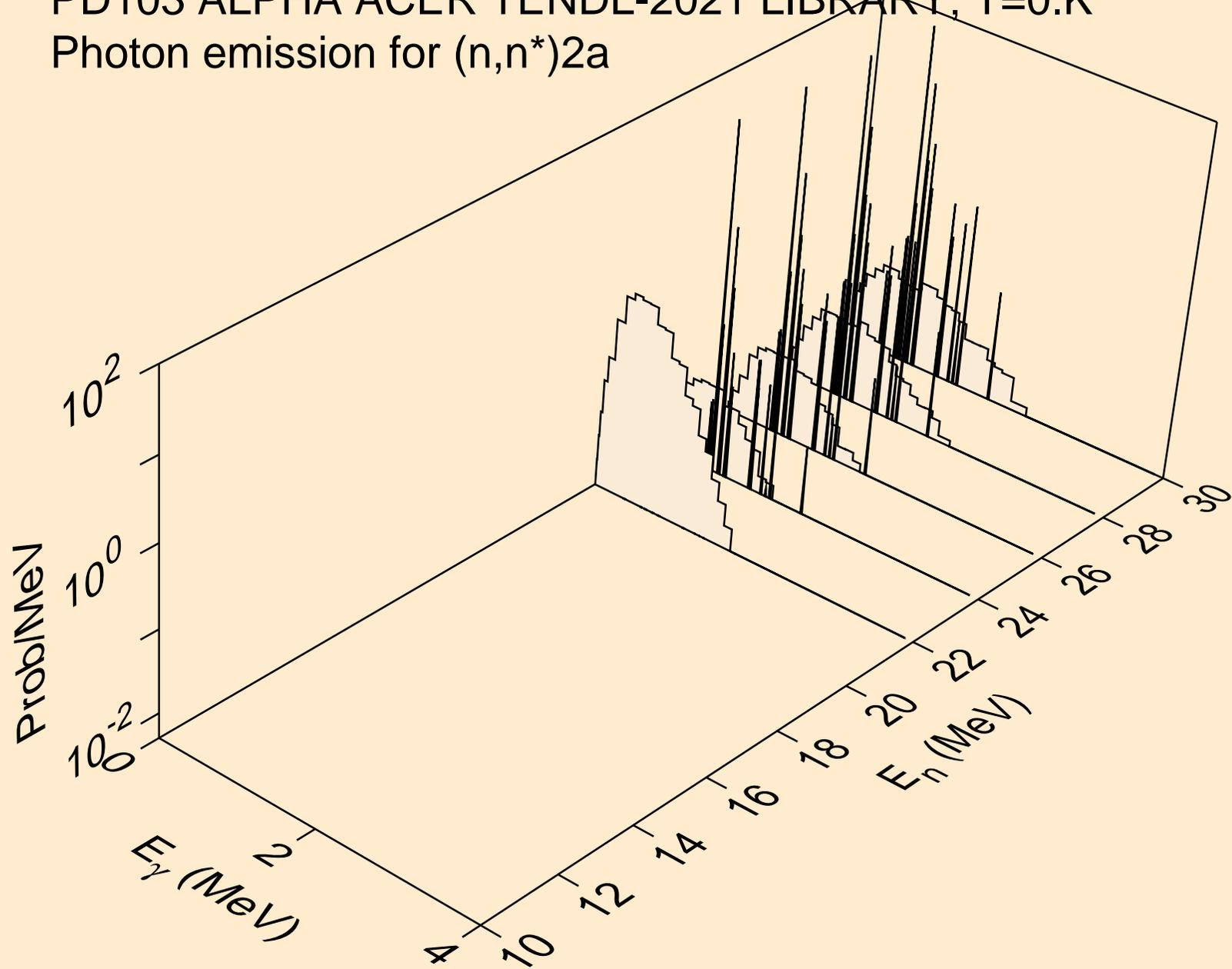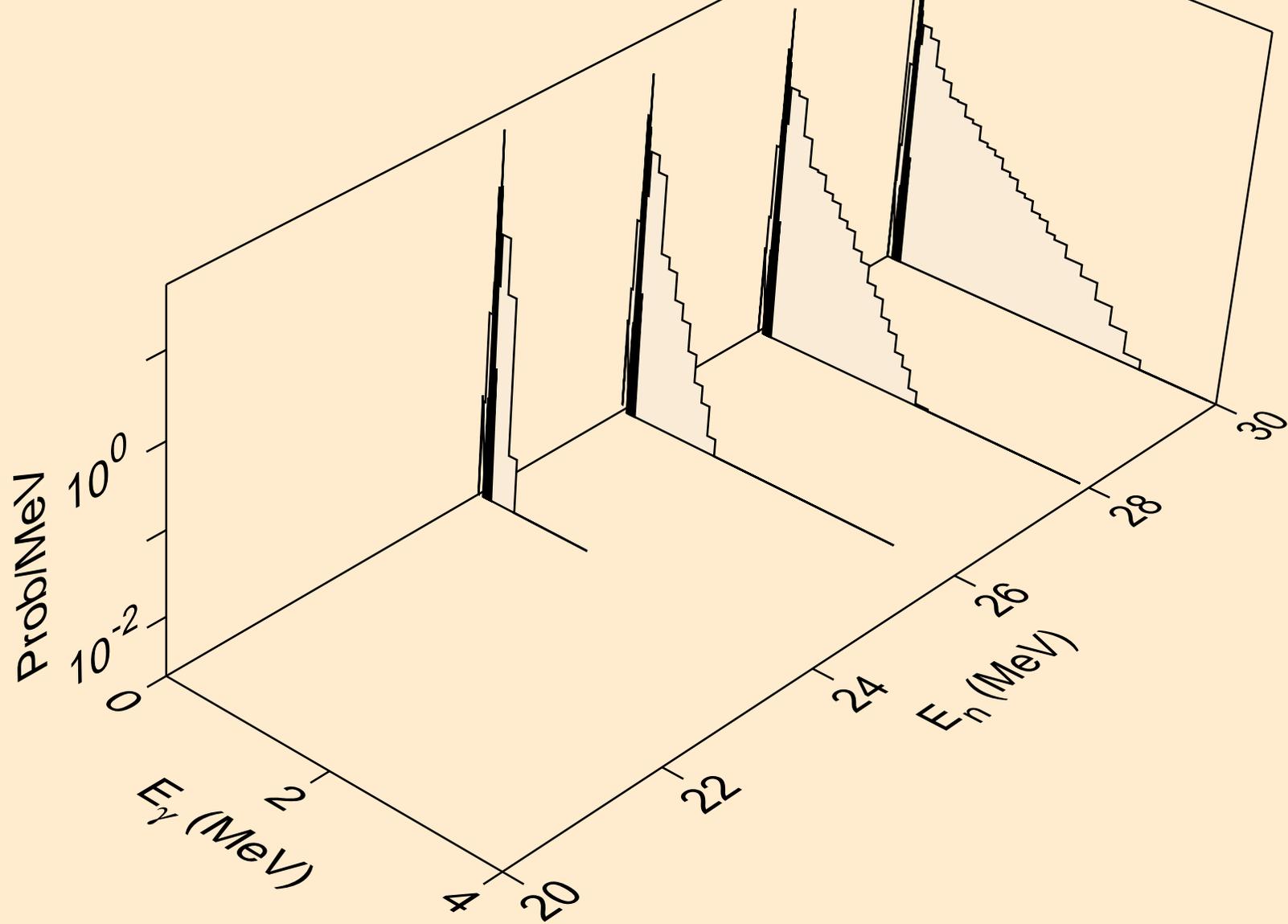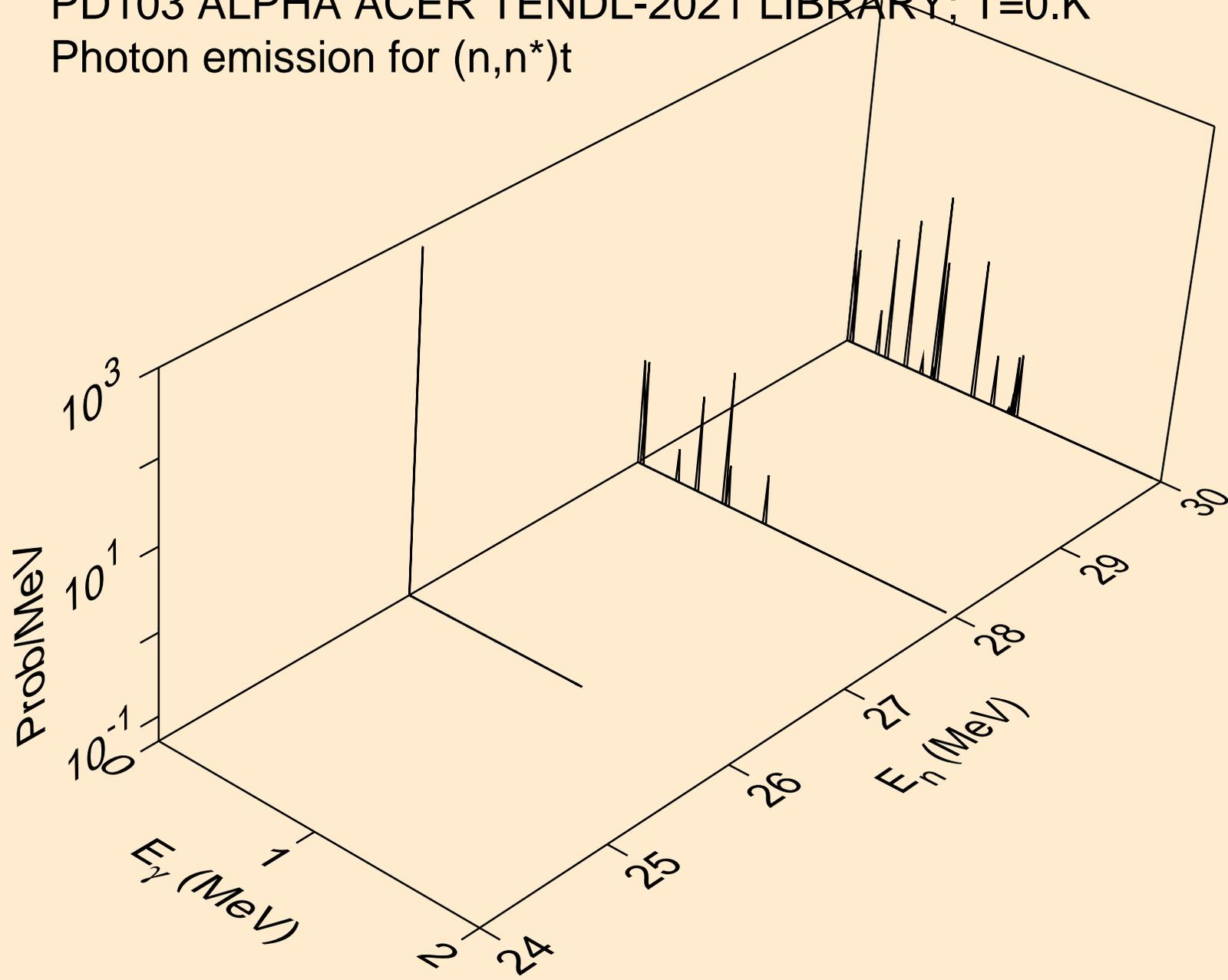Photon emission for (n,n*)p

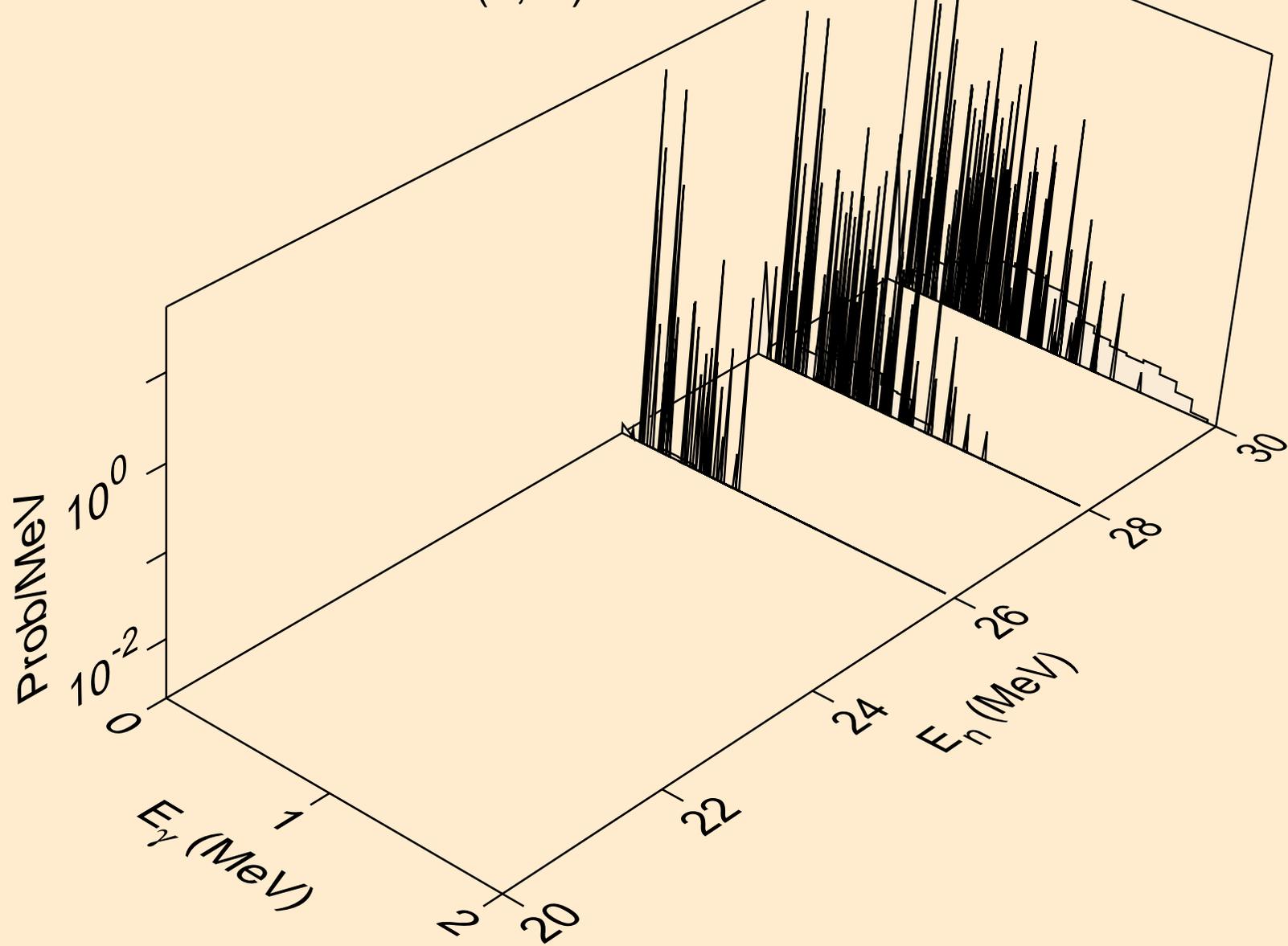PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,n*)2a

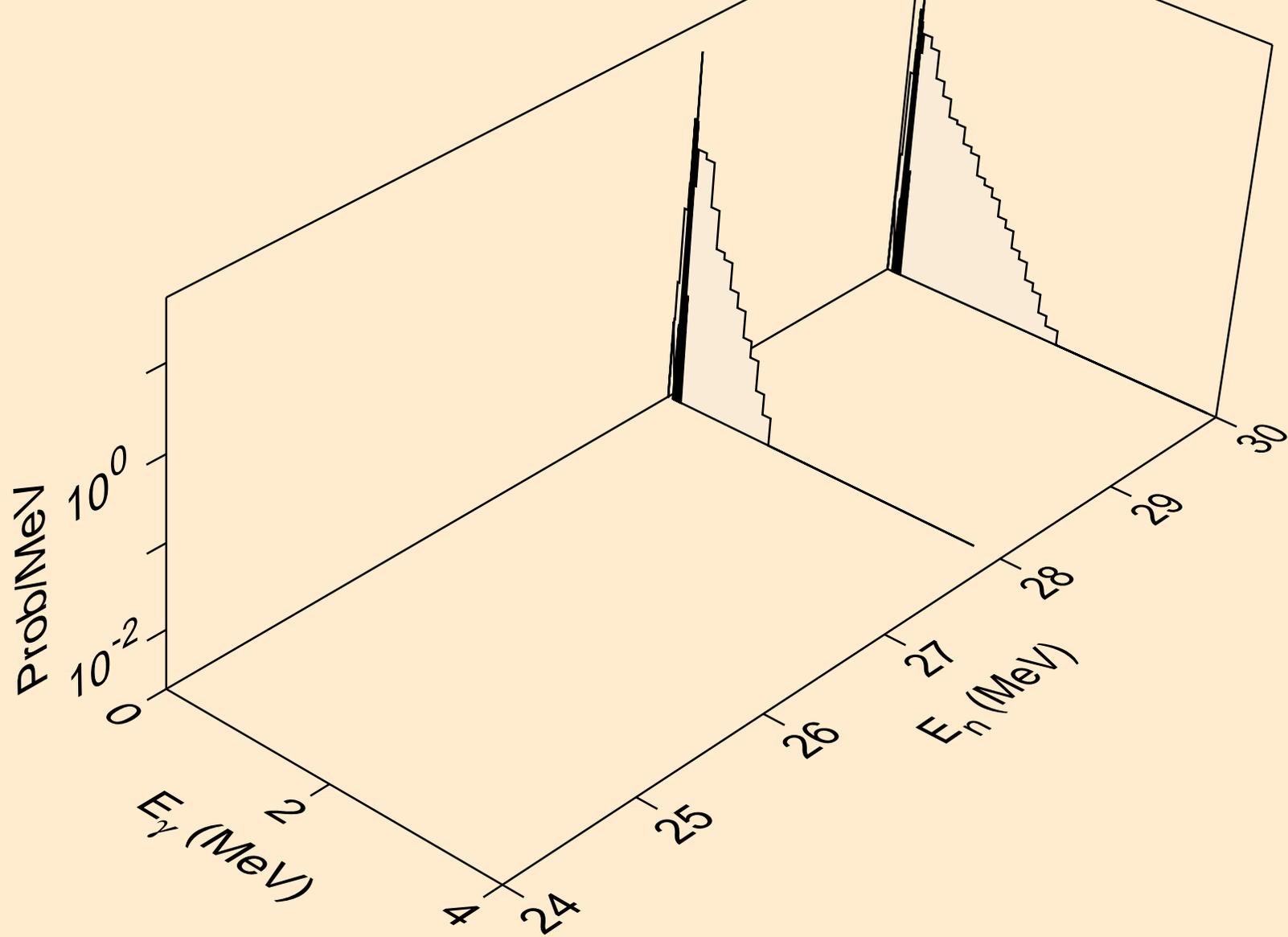PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,n*)d

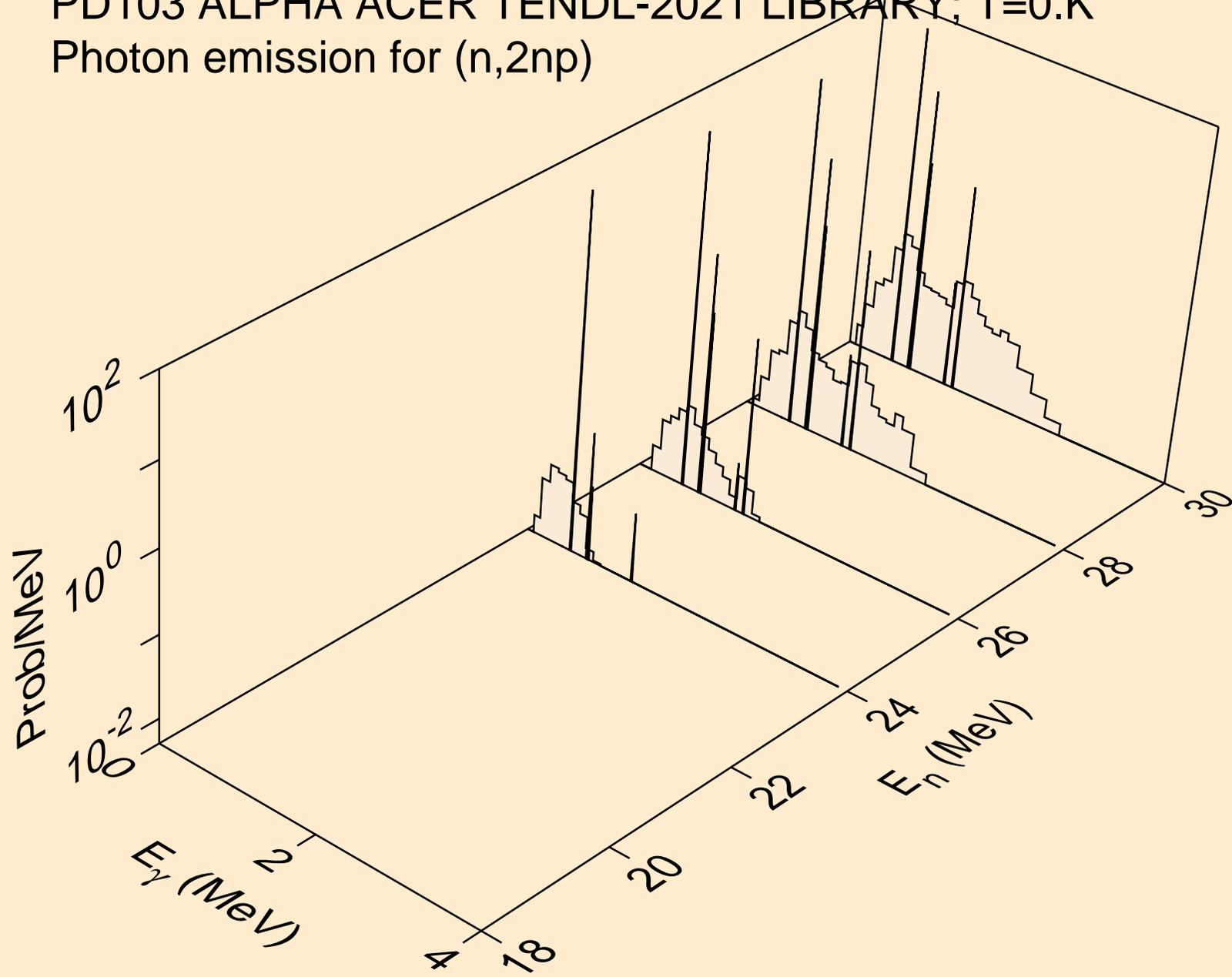PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,n*)t

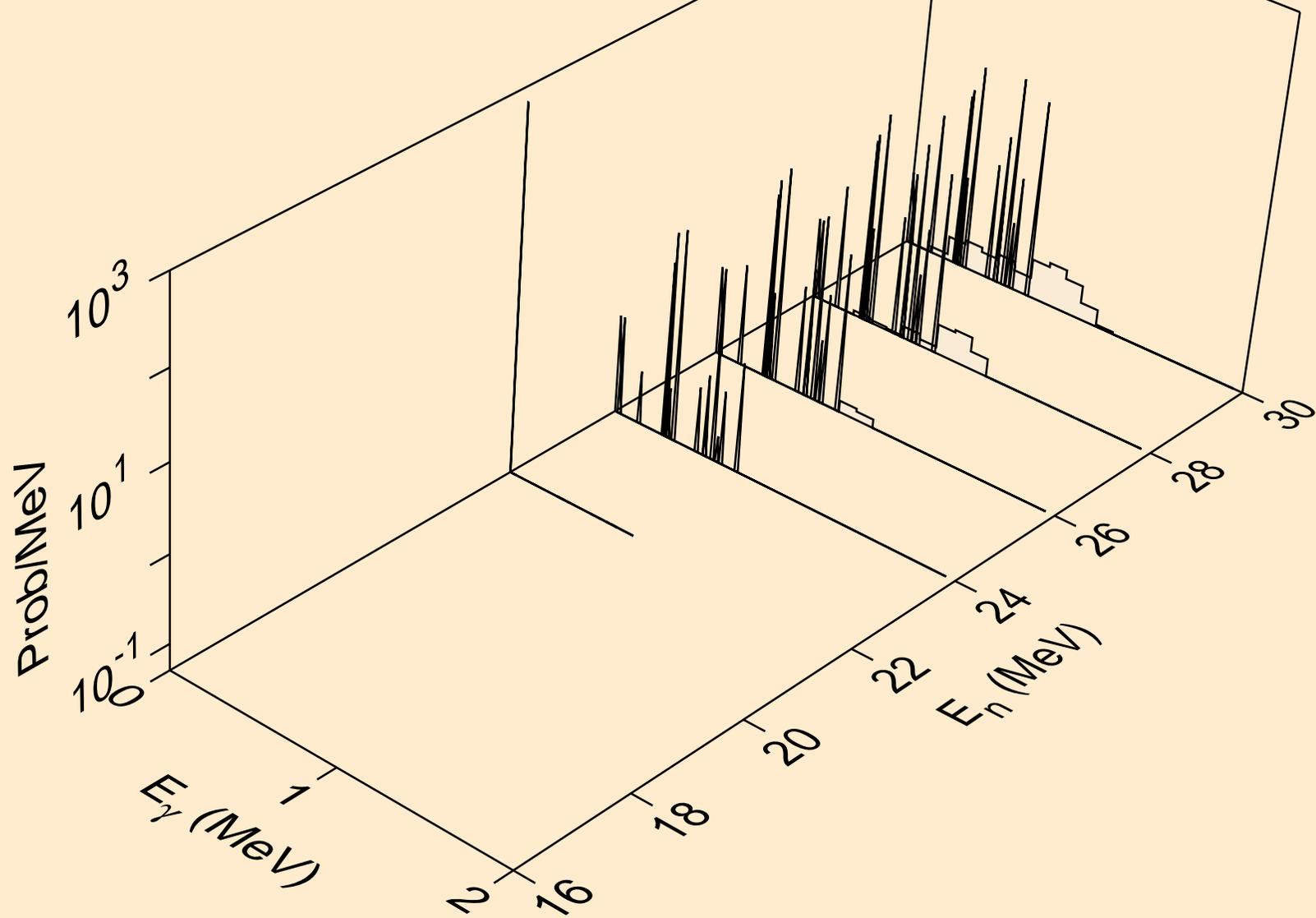PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,n*)he3

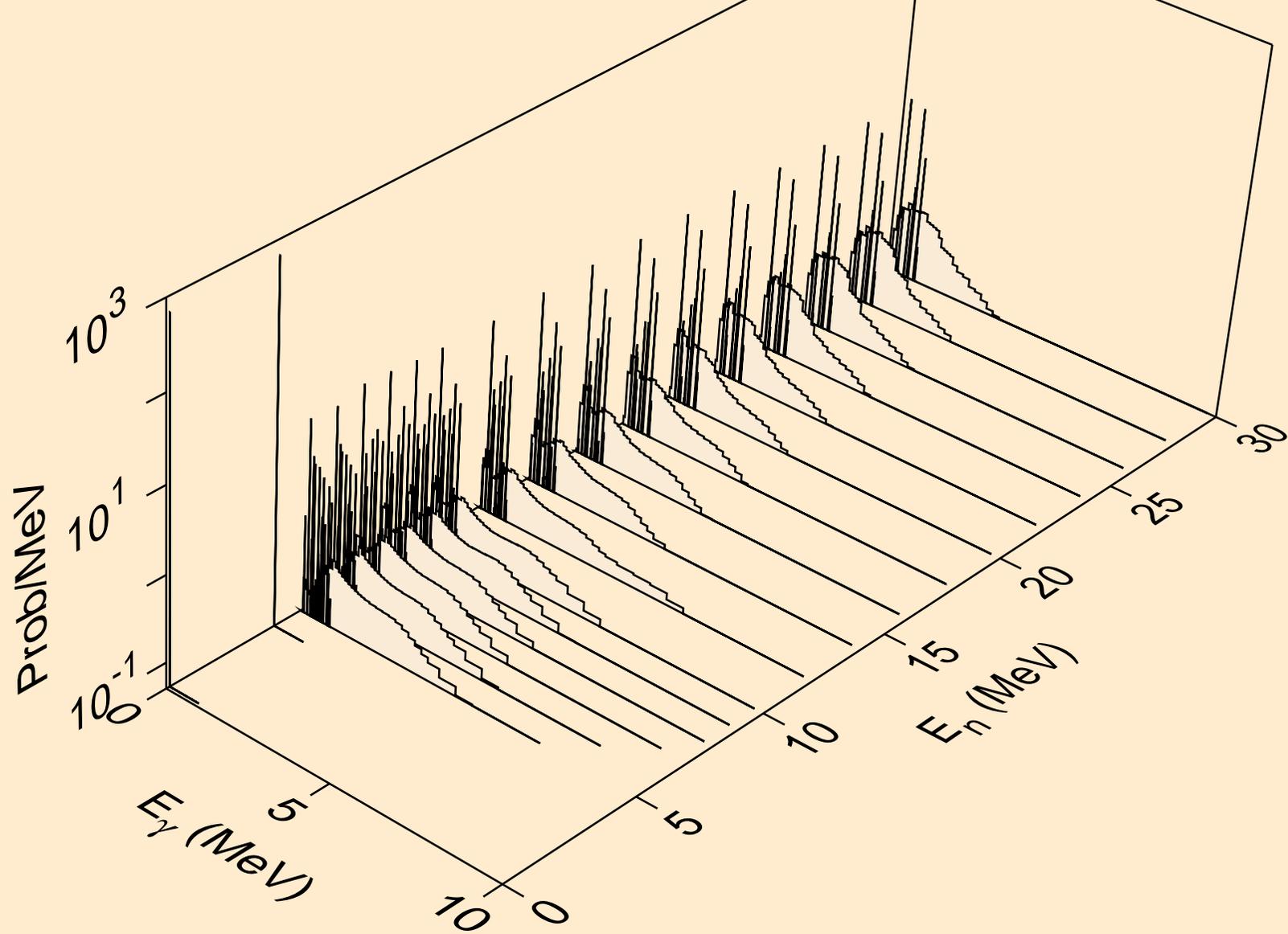PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,2np)

Prob/MeV

10^0

10^{-2}

E_γ (MeV)

E_n (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,2np)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,npa)

Prob/MeV

10^3

10^1

10^{-1}

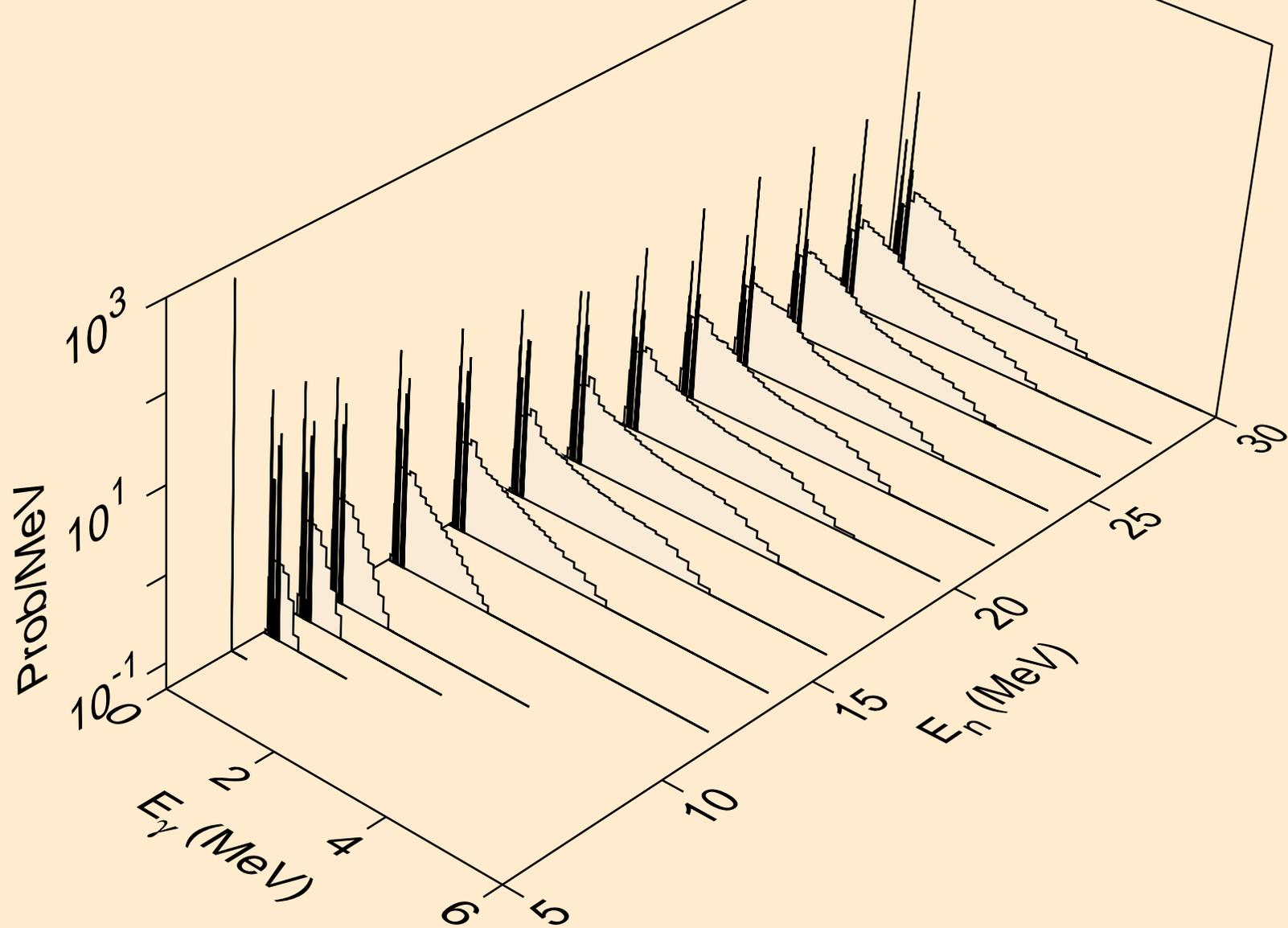E_γ (MeV)

1

2

16

18

20

22

24

26

28

30

E_n (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,gma)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,p)

Prob/MeV

10^3

10^1

10^{-1}

10^0

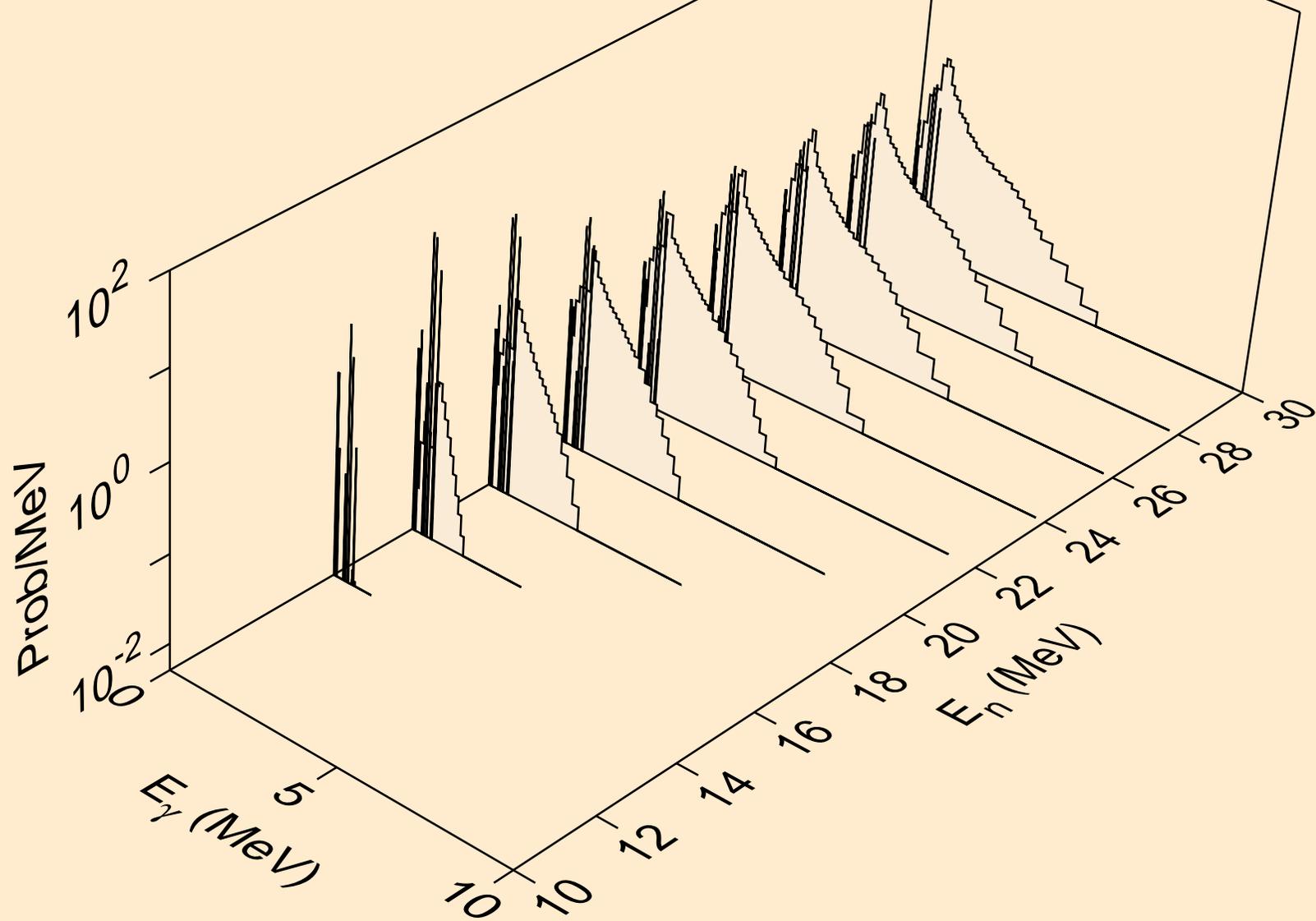E_γ (MeV)

2

4

6
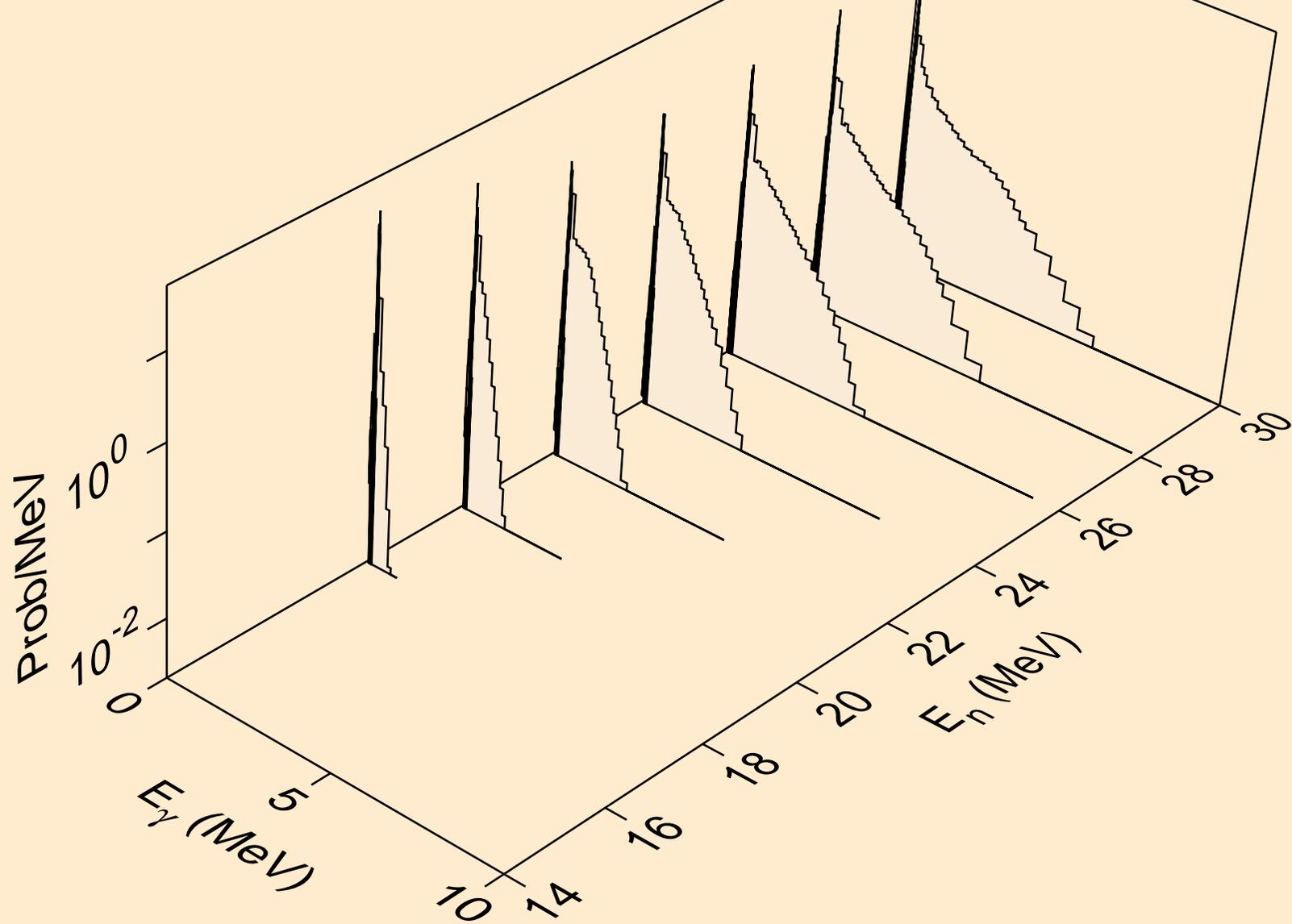
5

10

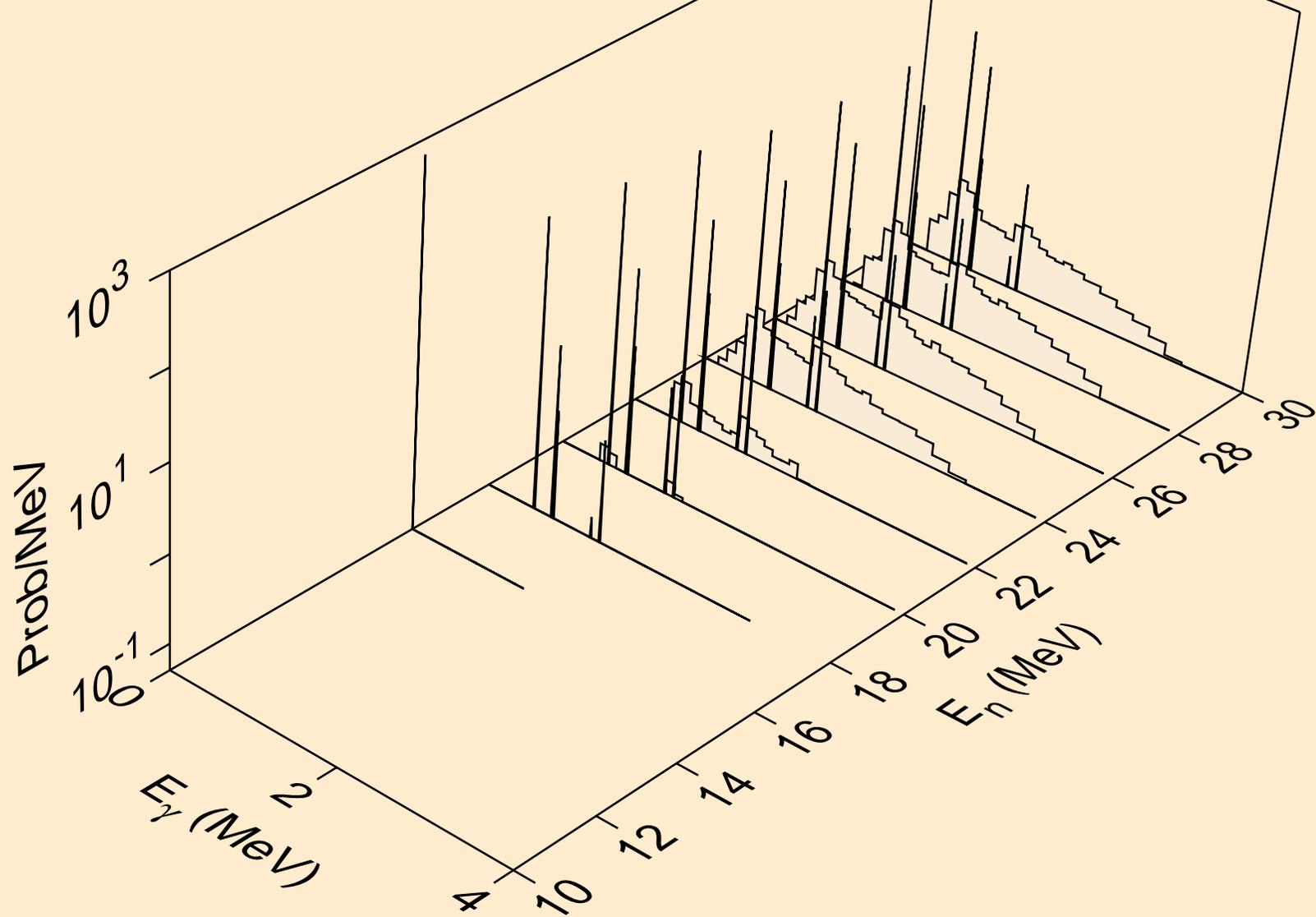15

20

25

30

E_n (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
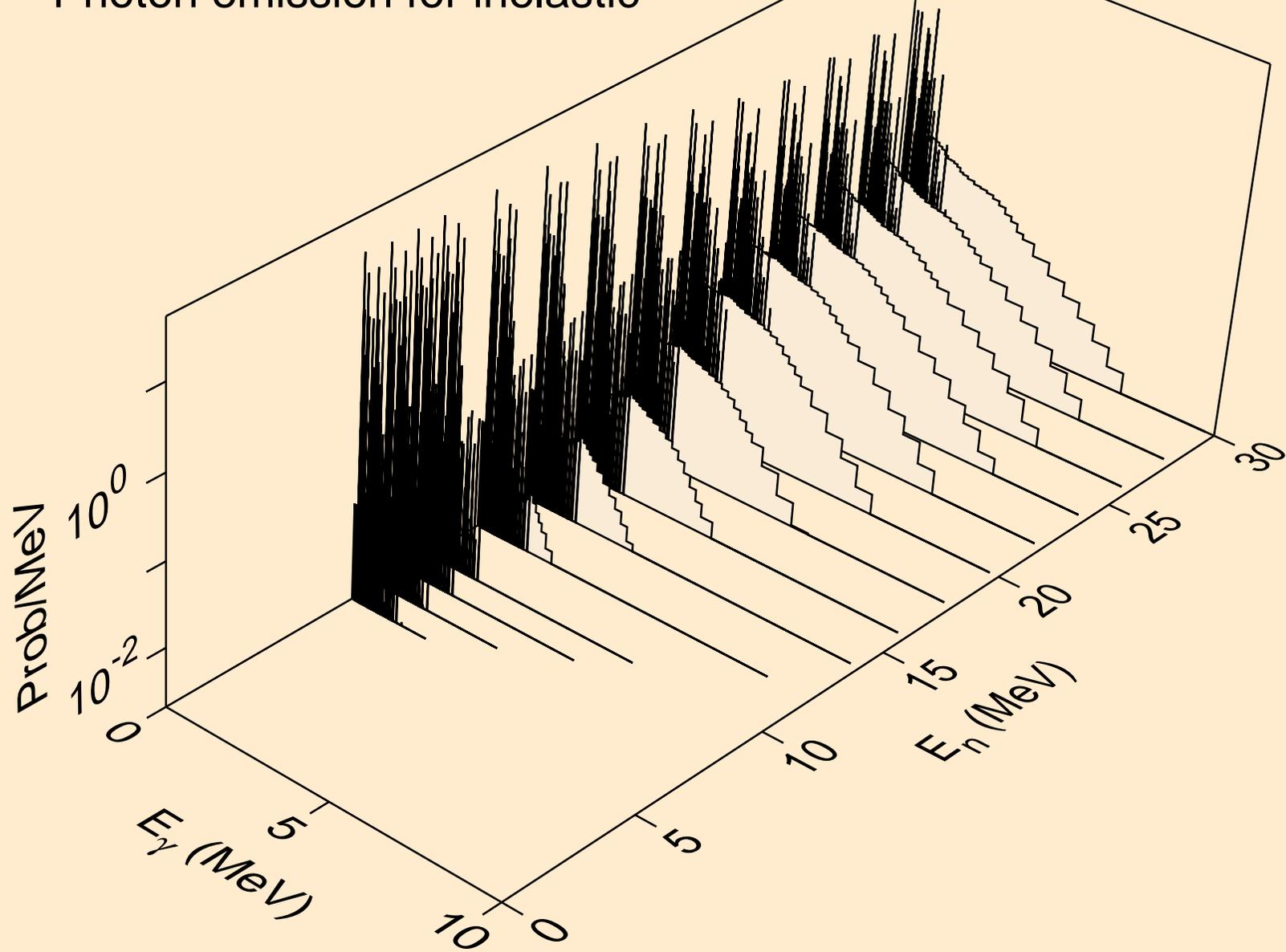Photon emission for (n,d)

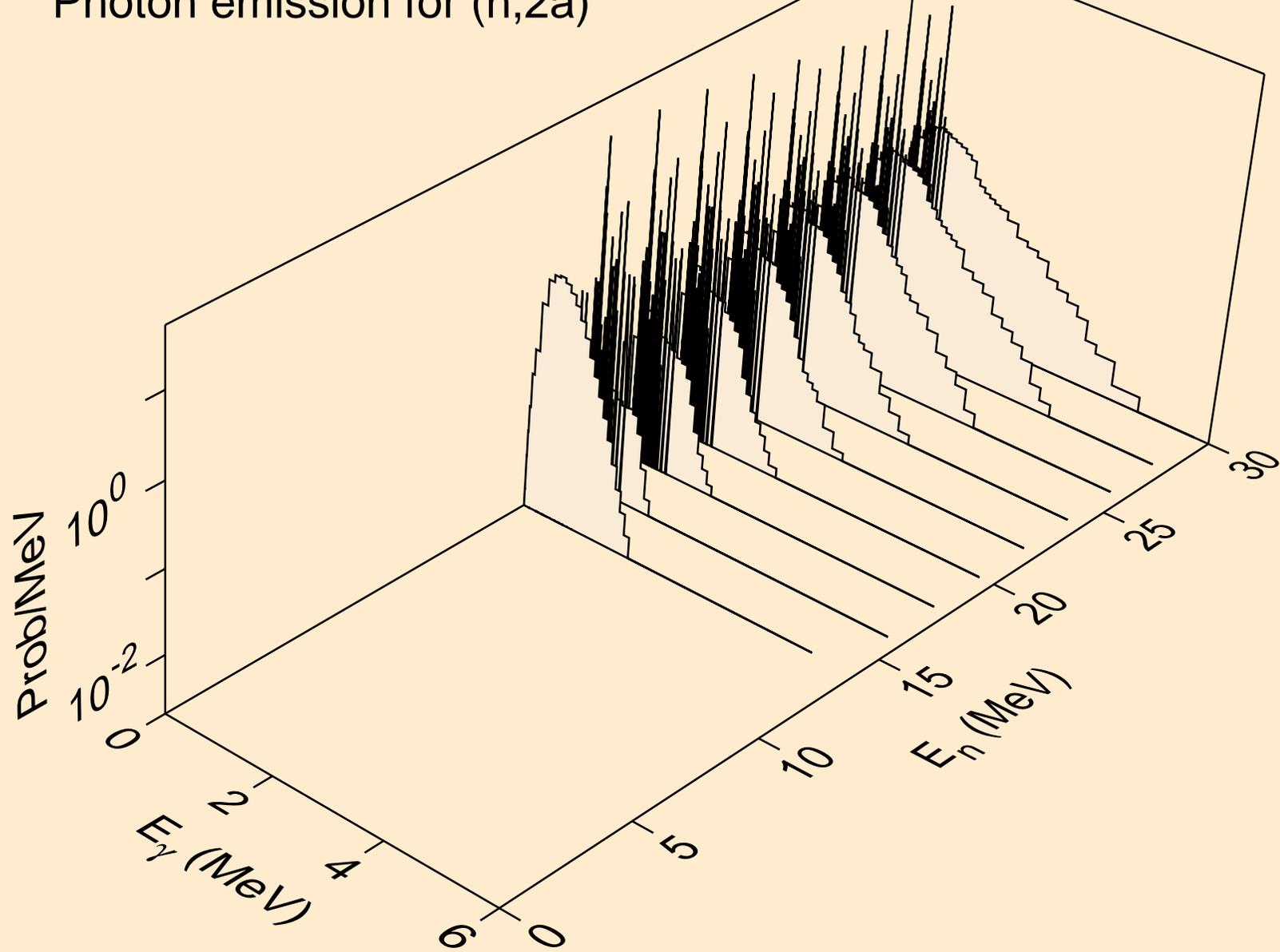PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,t)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
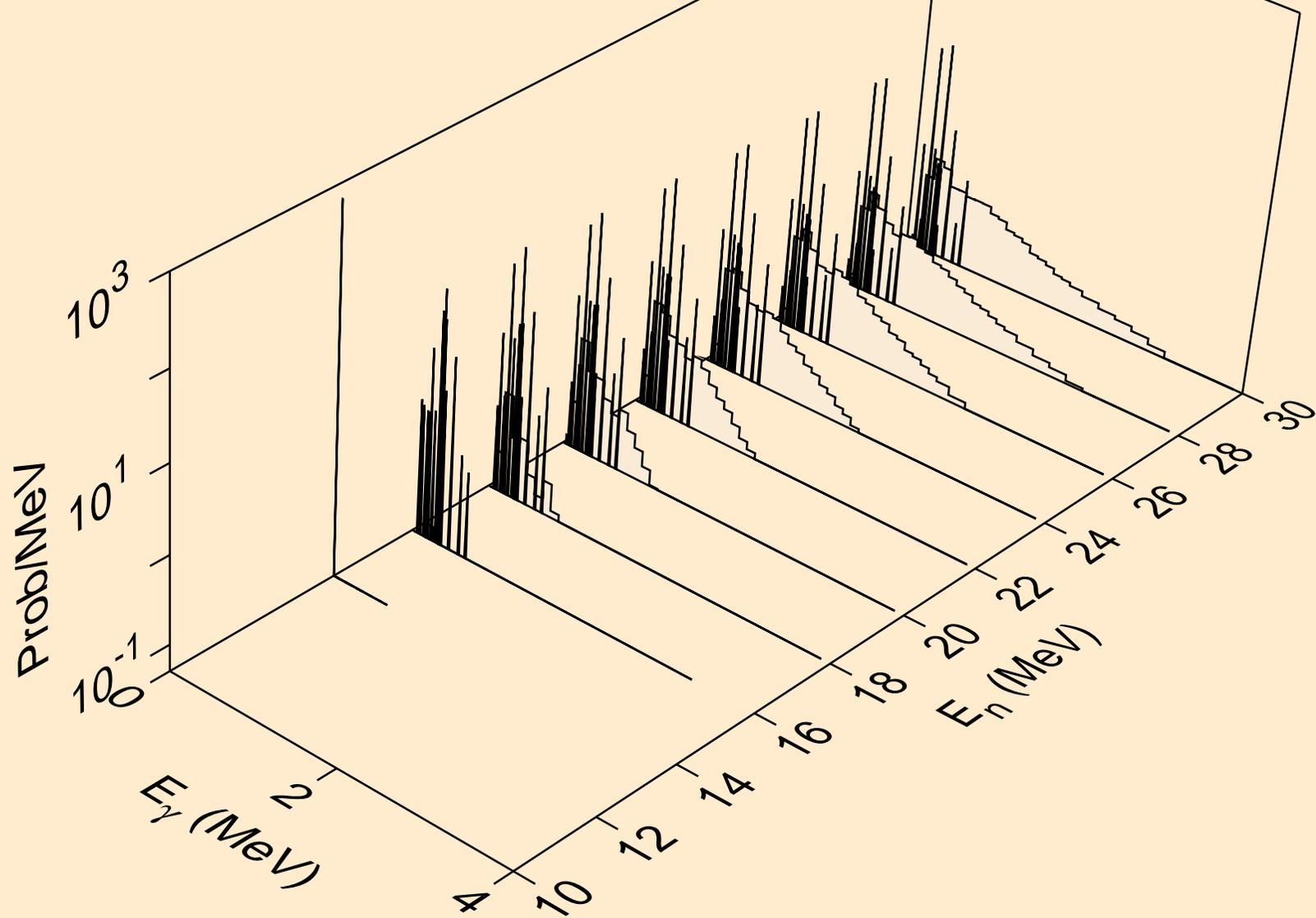Photon emission for (n,he3)

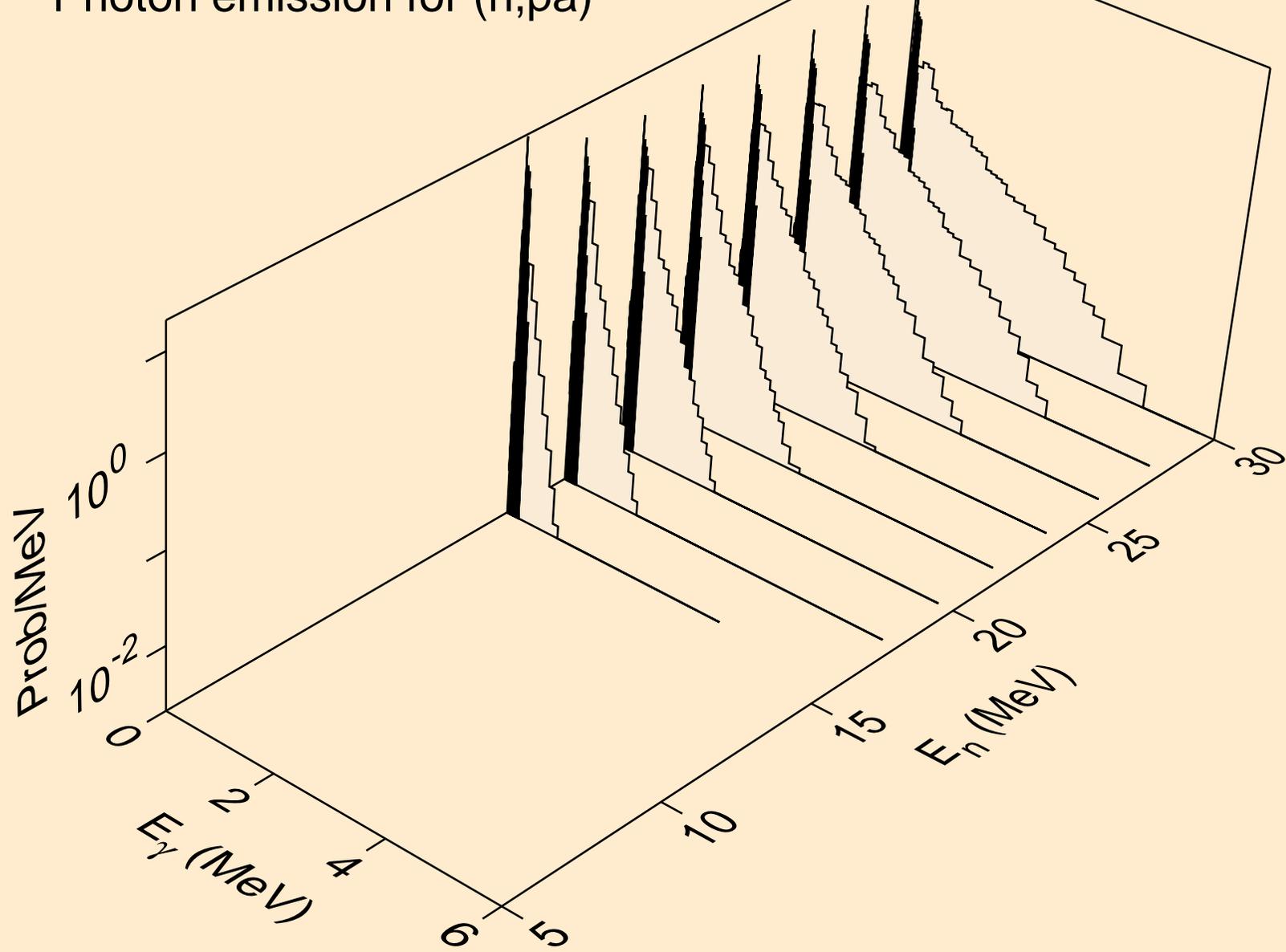PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for inelastic

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
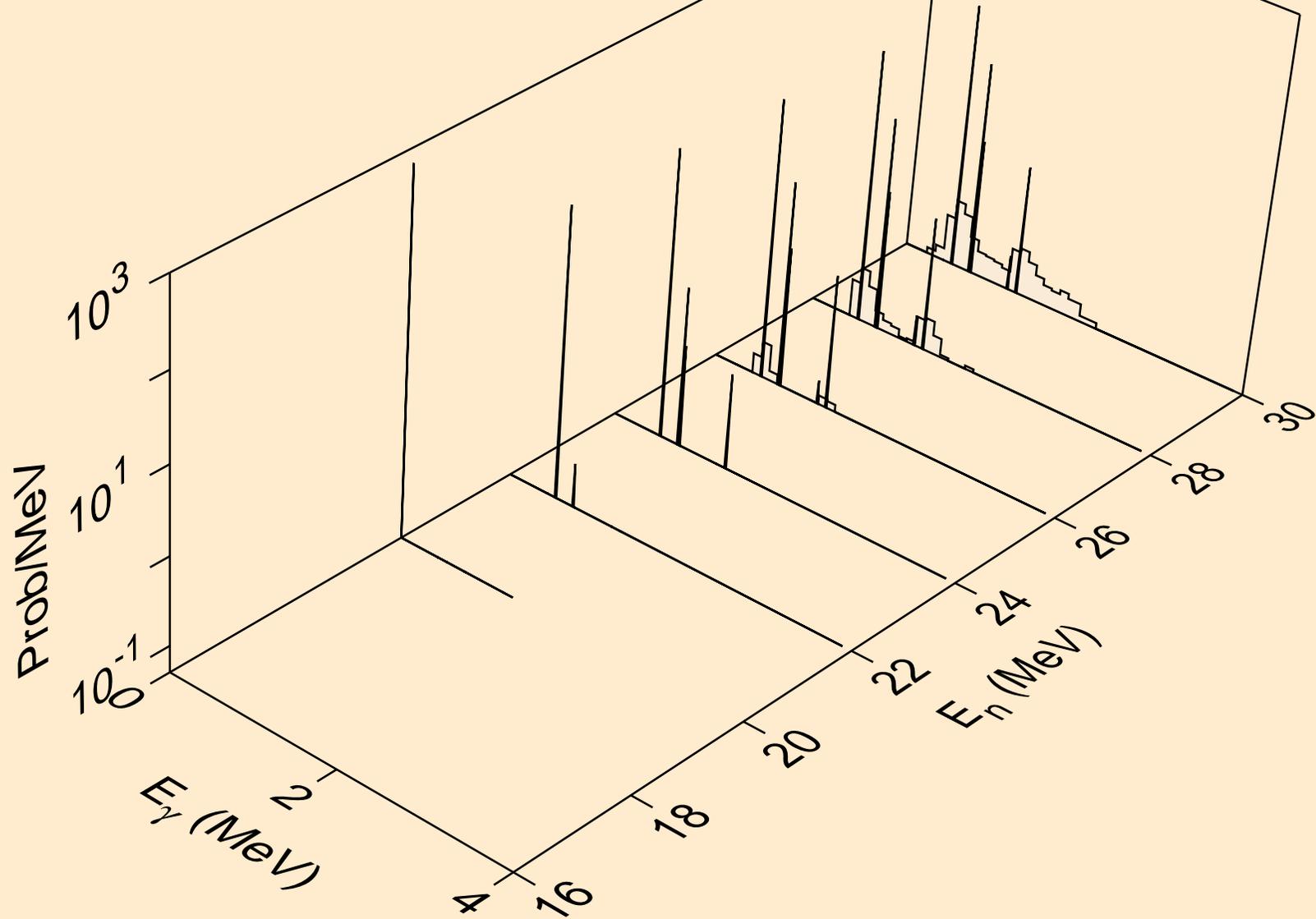Photon emission for (n,2a)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
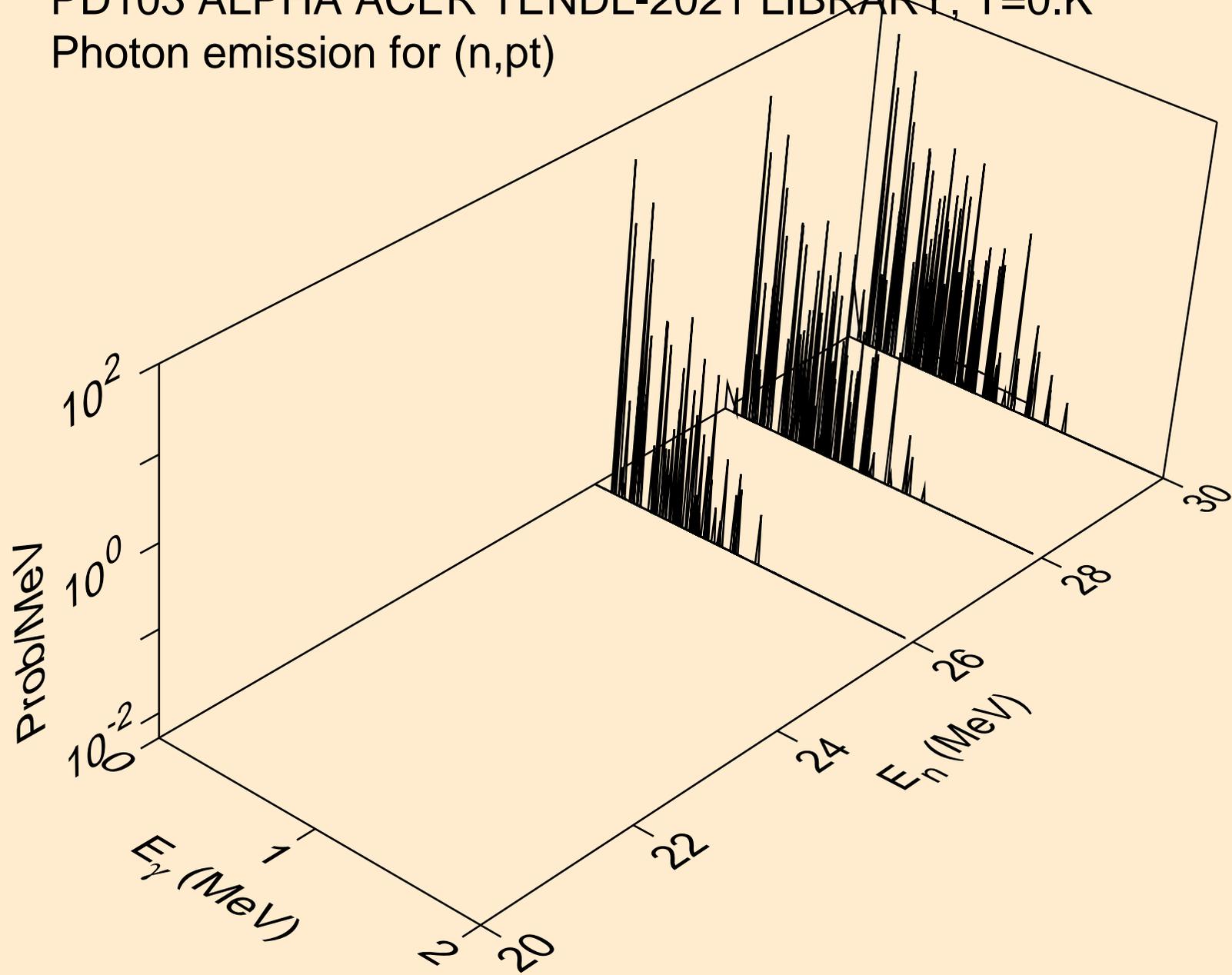Photon emission for (n,2p)

Prob/MeV

10^3

10^1

10^{-1}

10^0

E_γ (MeV)

2

4

E_n (MeV)

10 12 14 16 18 20 22 24 26 28 30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,pa)

Prob/MeV

10^0

10^{-2}

E_γ (MeV)

0
2
4
6

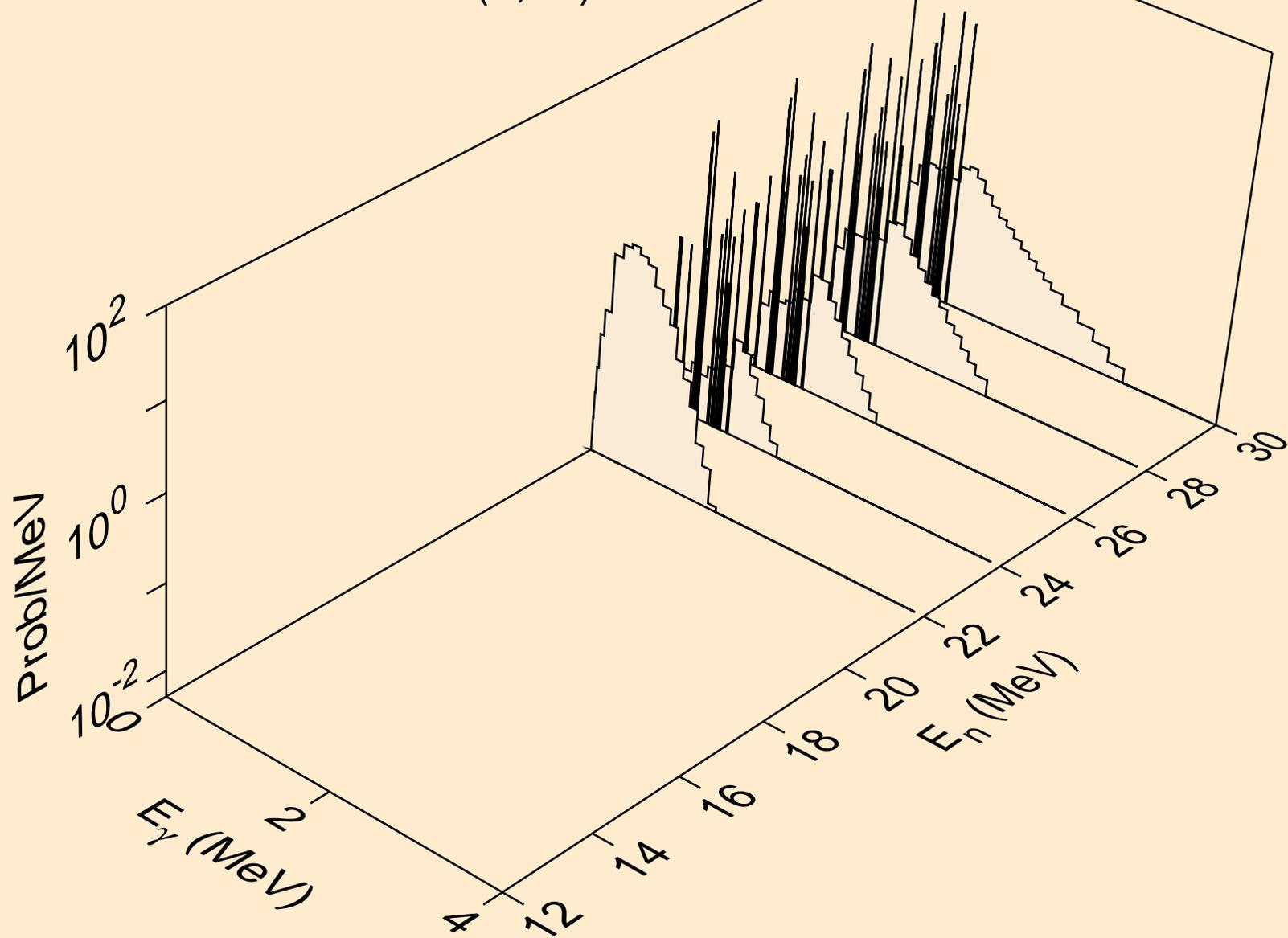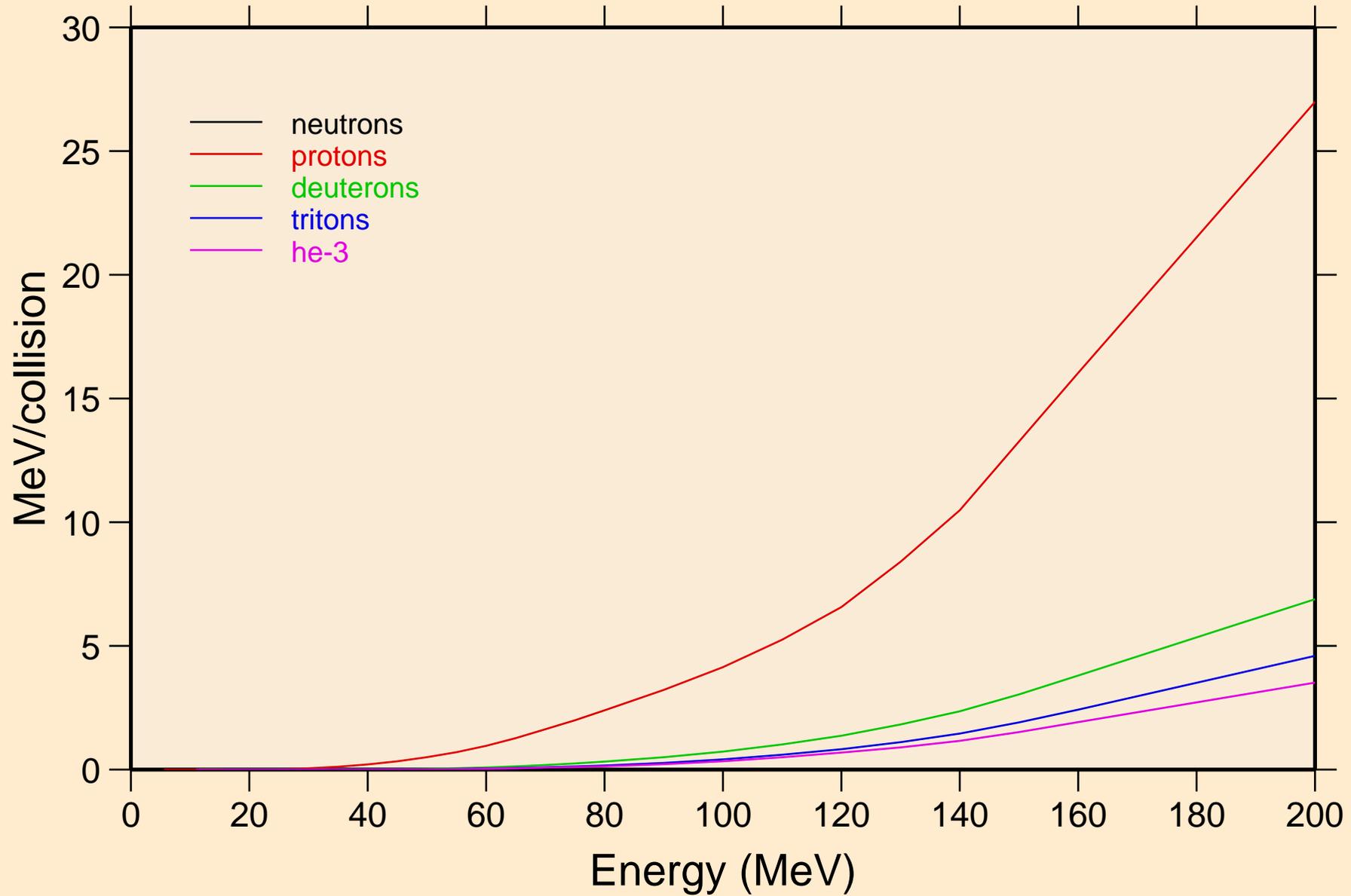E_n (MeV)

5
10
15
20
25
30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,pd)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Photon emission for (n,pt)

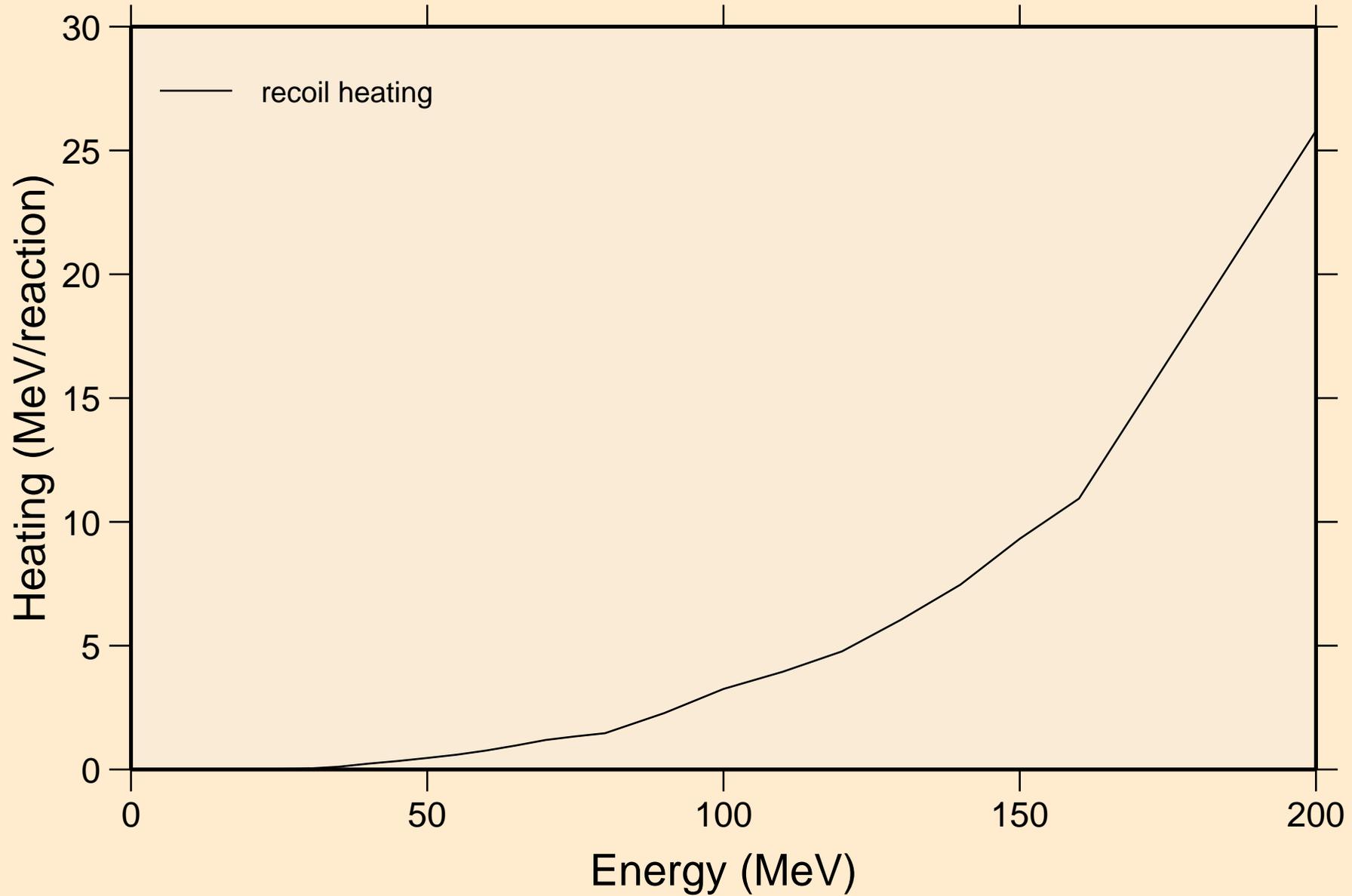PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
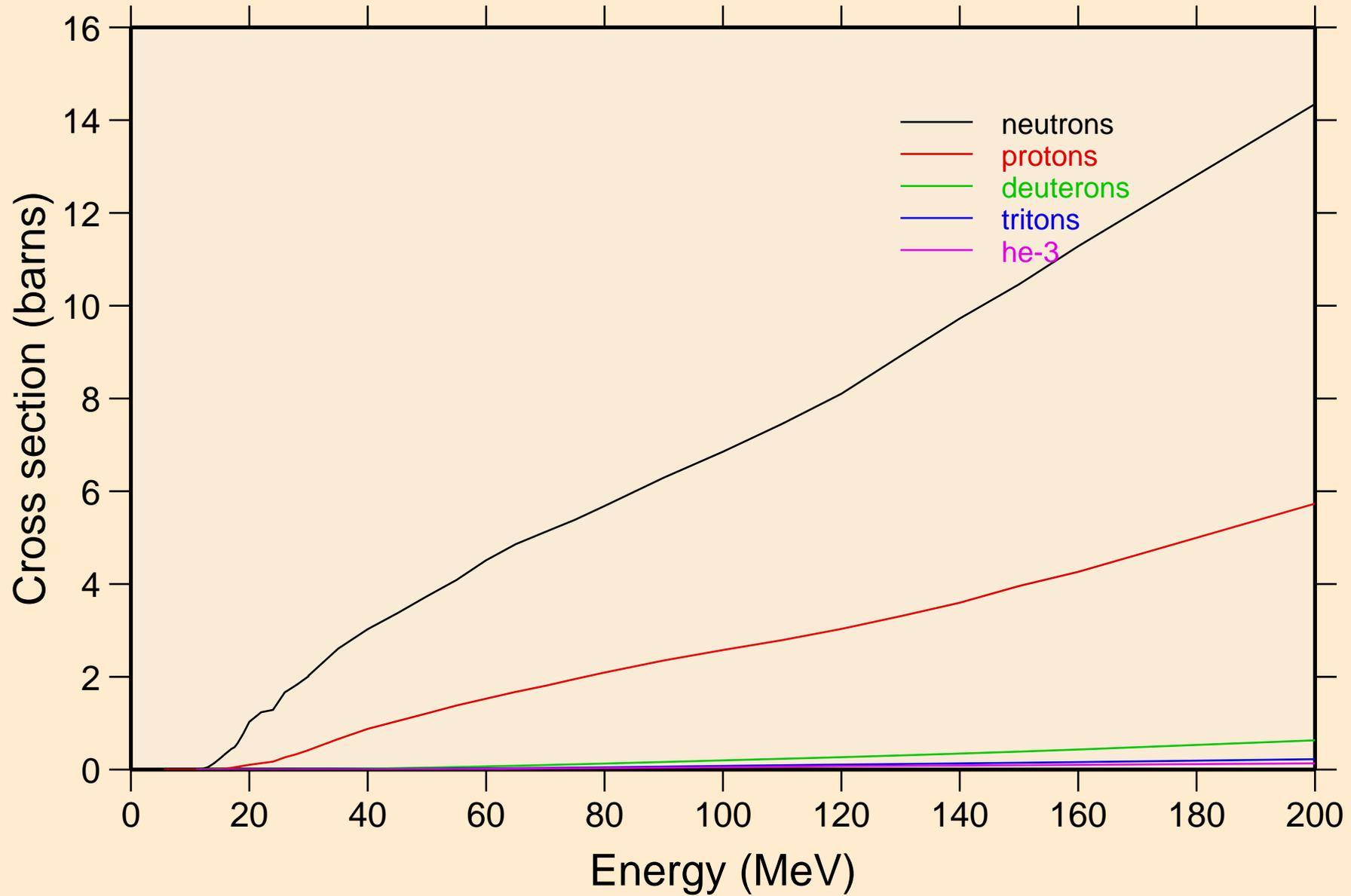Photon emission for (n,da)

E_γ (MeV)

E_n (MeV)

Prob/MeV

10^2

10^0

10^{-2}

10^0

2

4

12

14

16

18

20

22

24

26

28

30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Particle heating contributions

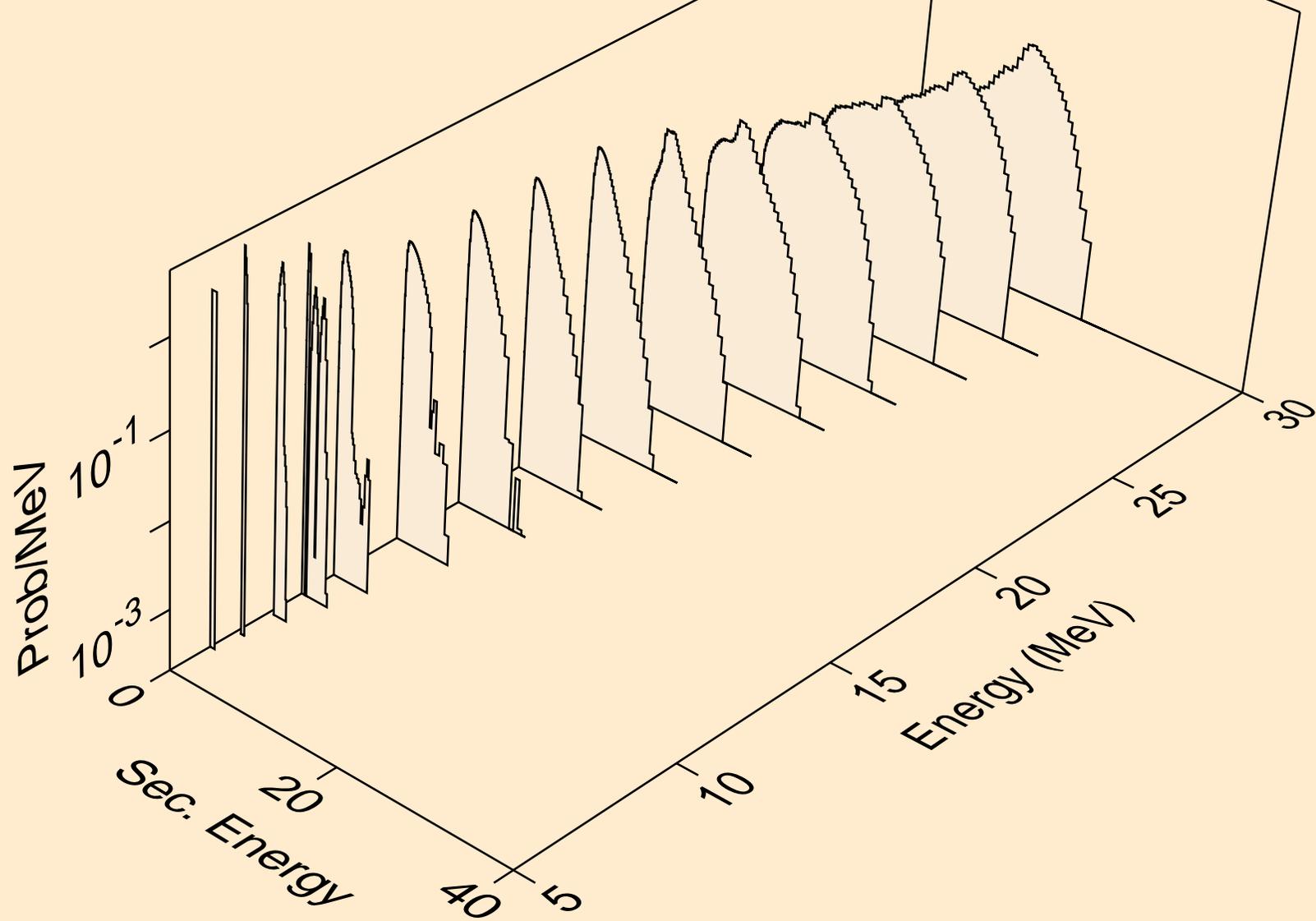neutrons
protons
deuterons
tritons
he-3

MeV/collision

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Recoil Heating

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
Particle production cross sections

neutrons
protons
deuterons
tritons
he-3

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,n)

Prob/MeV

10^{-1}

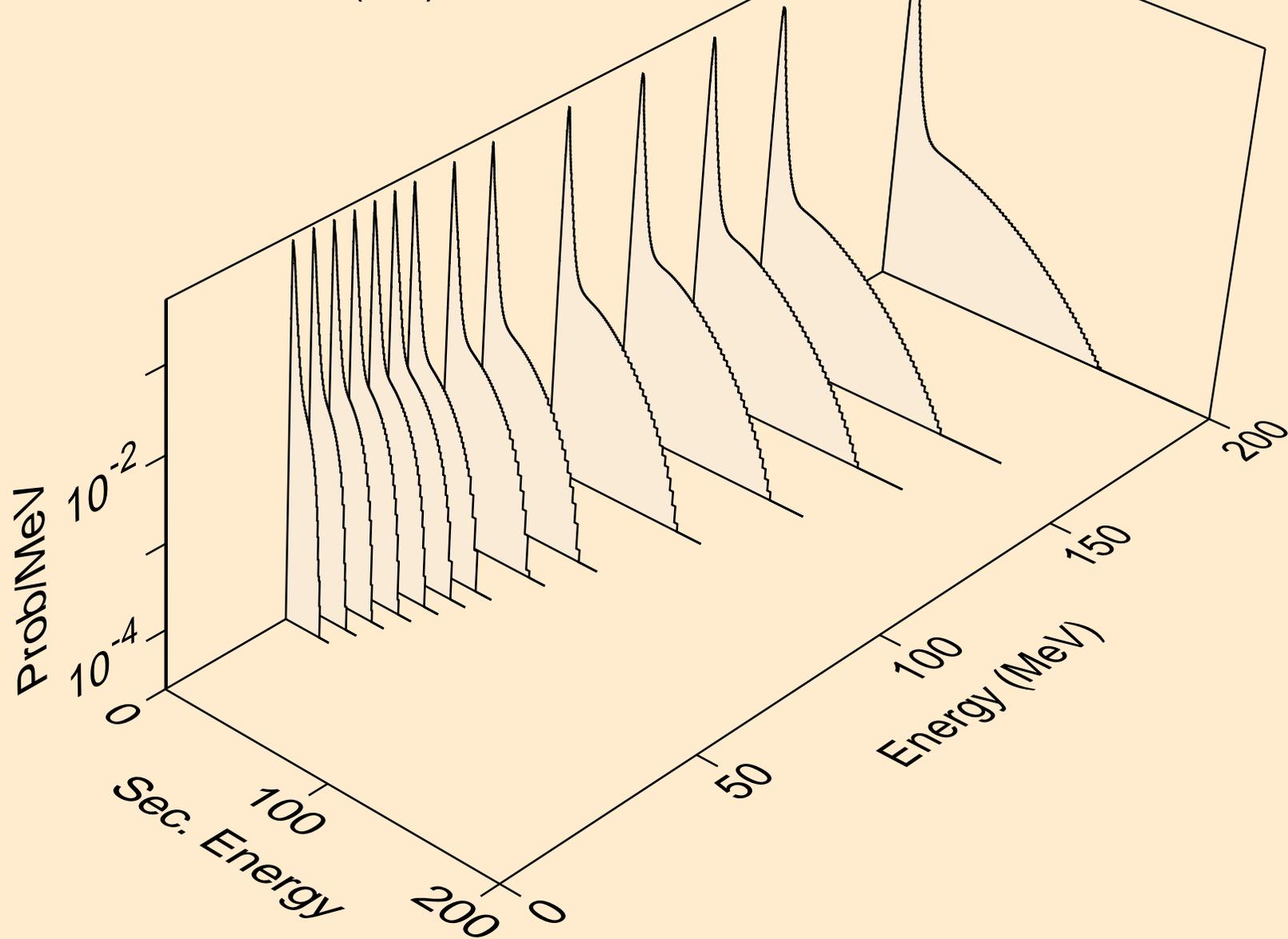10^{-3}

0

Sec. Energy
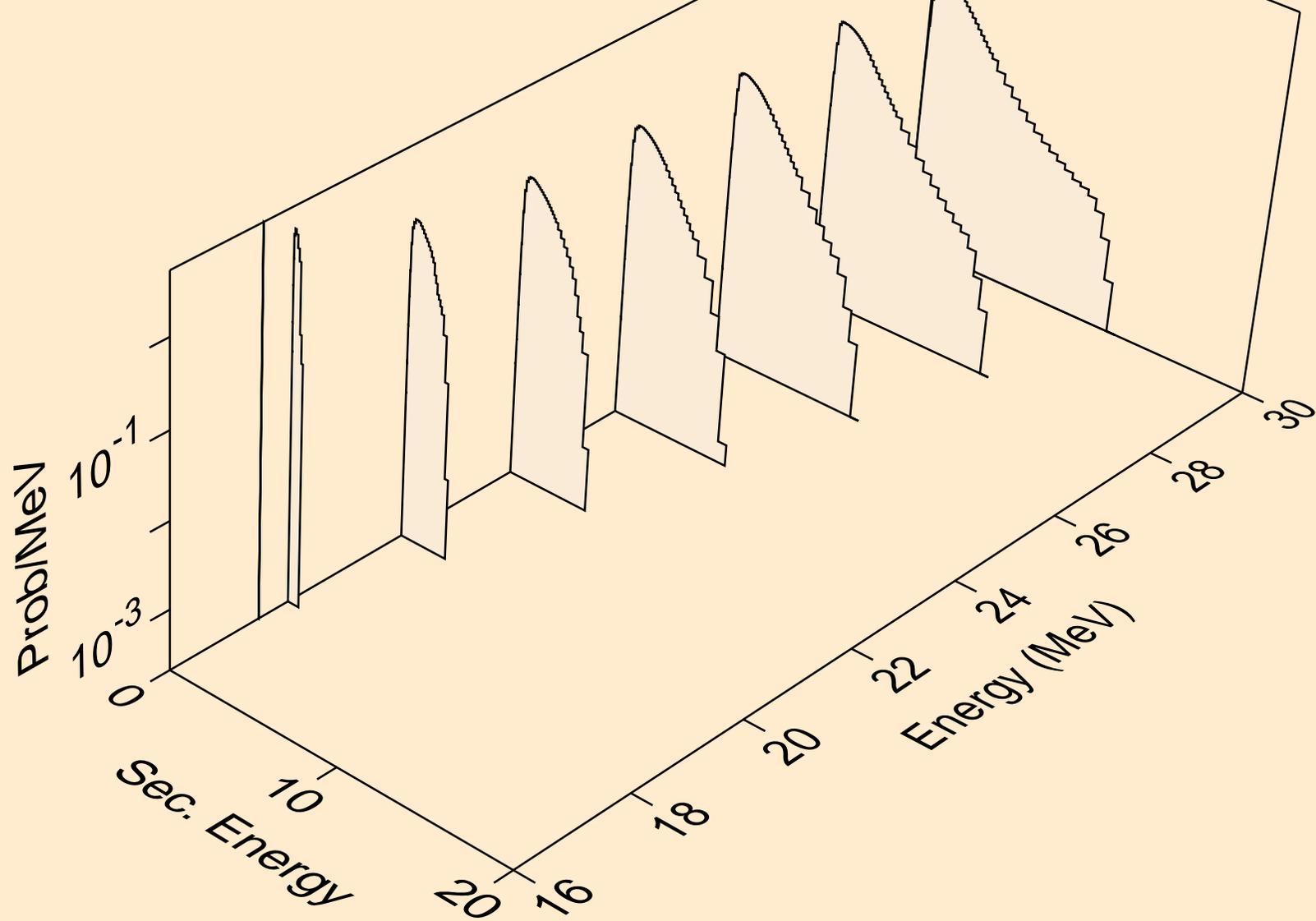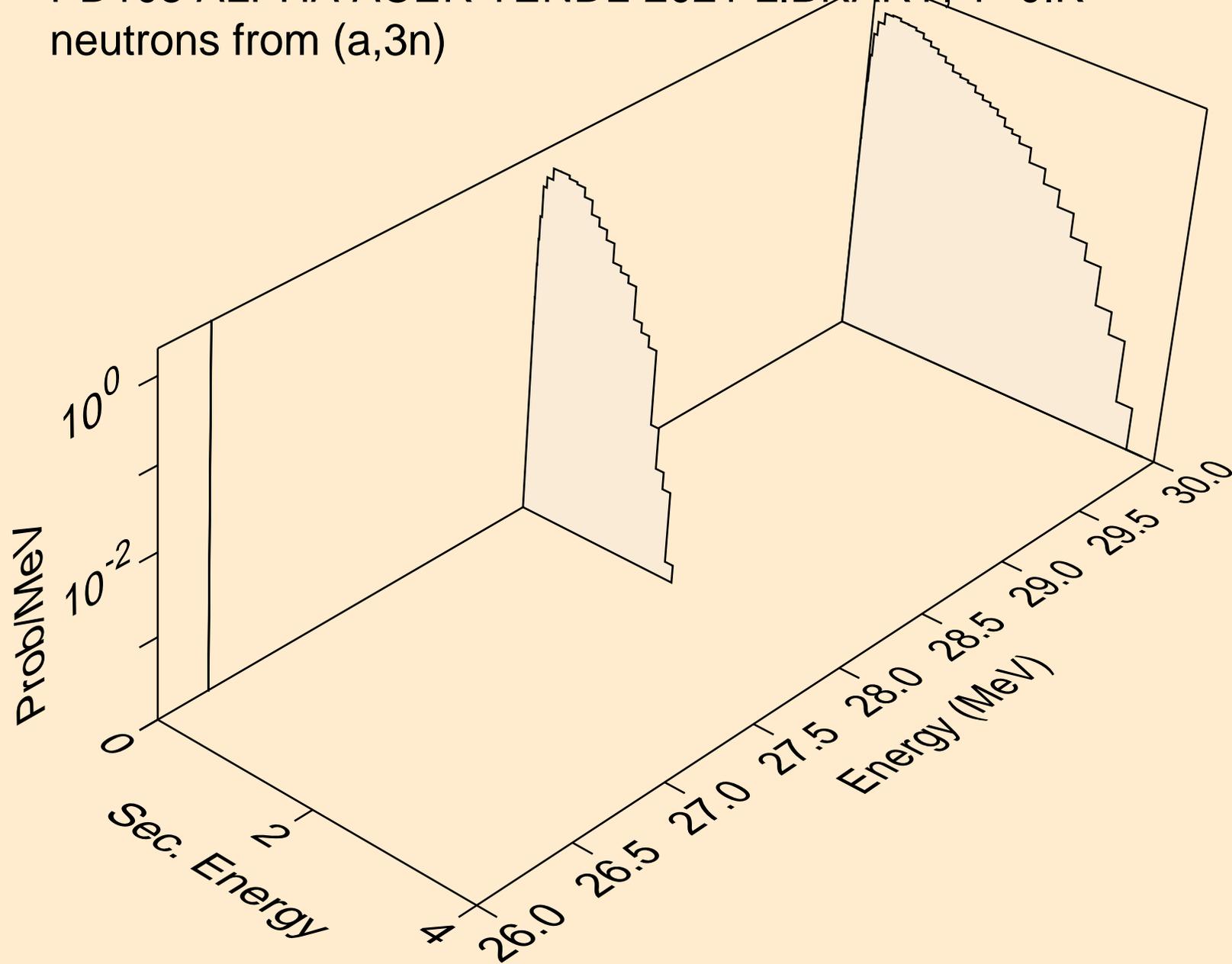
20

40

Energy (MeV)

5

10

15

20

25

30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
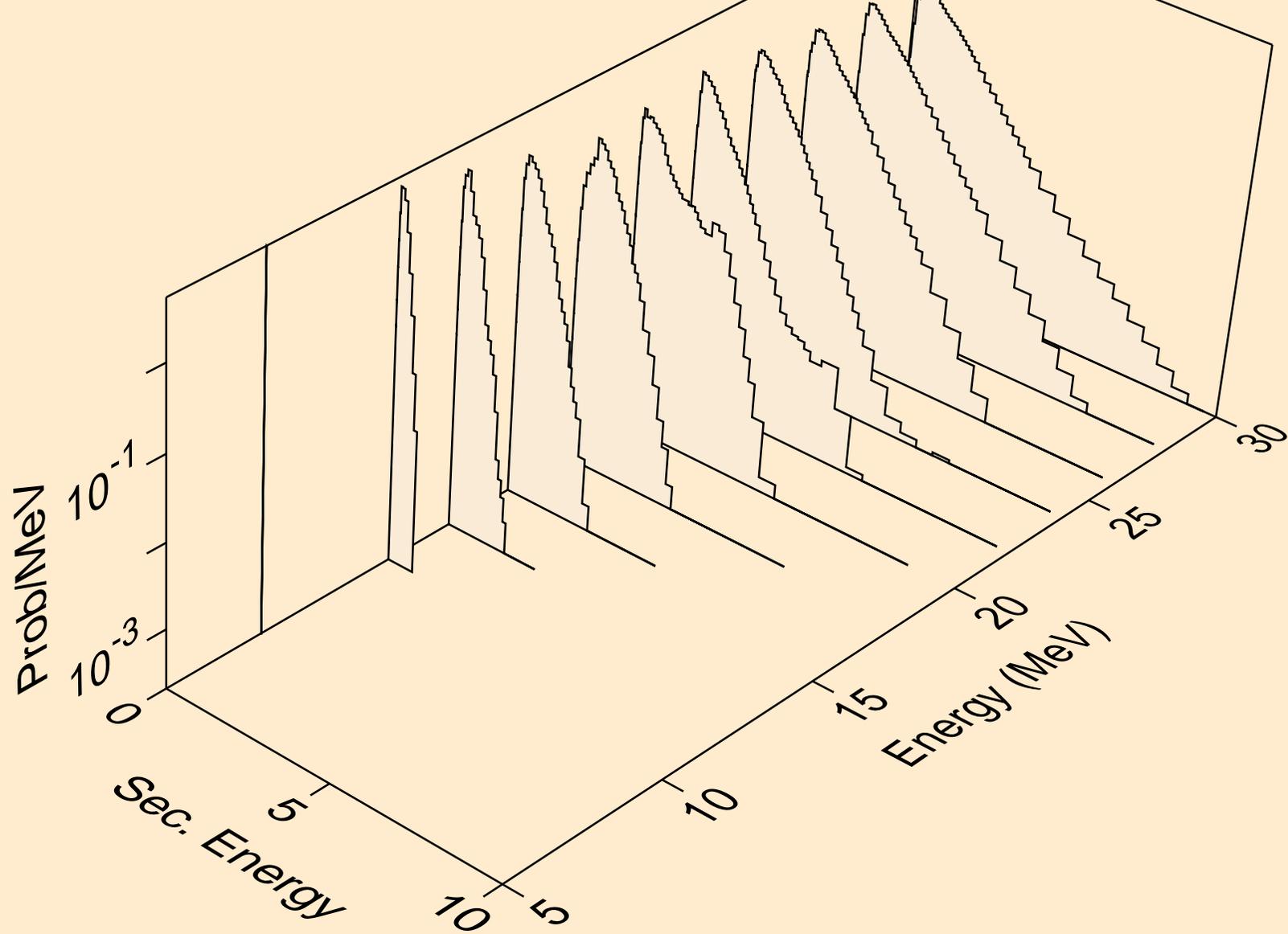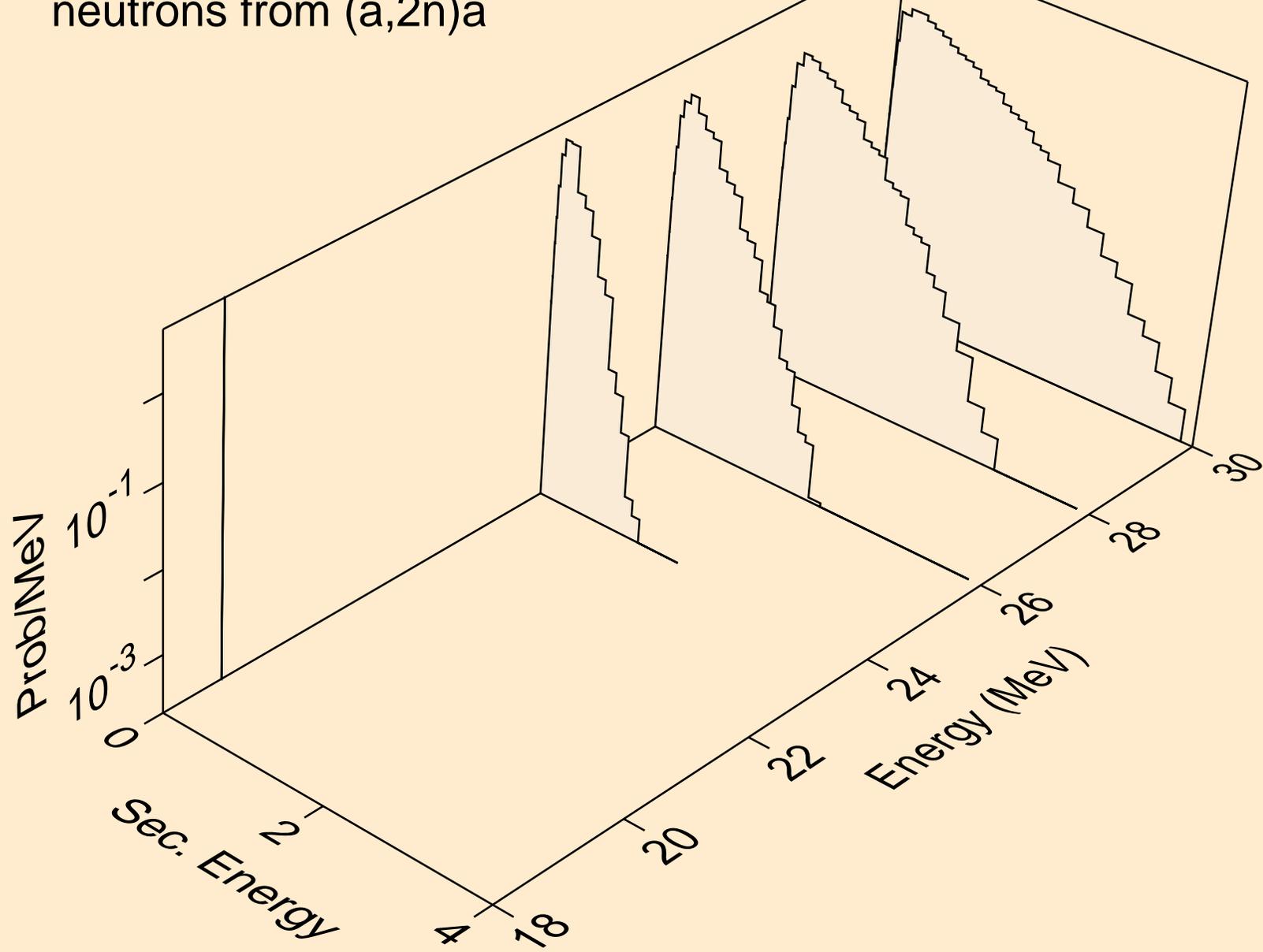neutrons from (a,x)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,2n)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
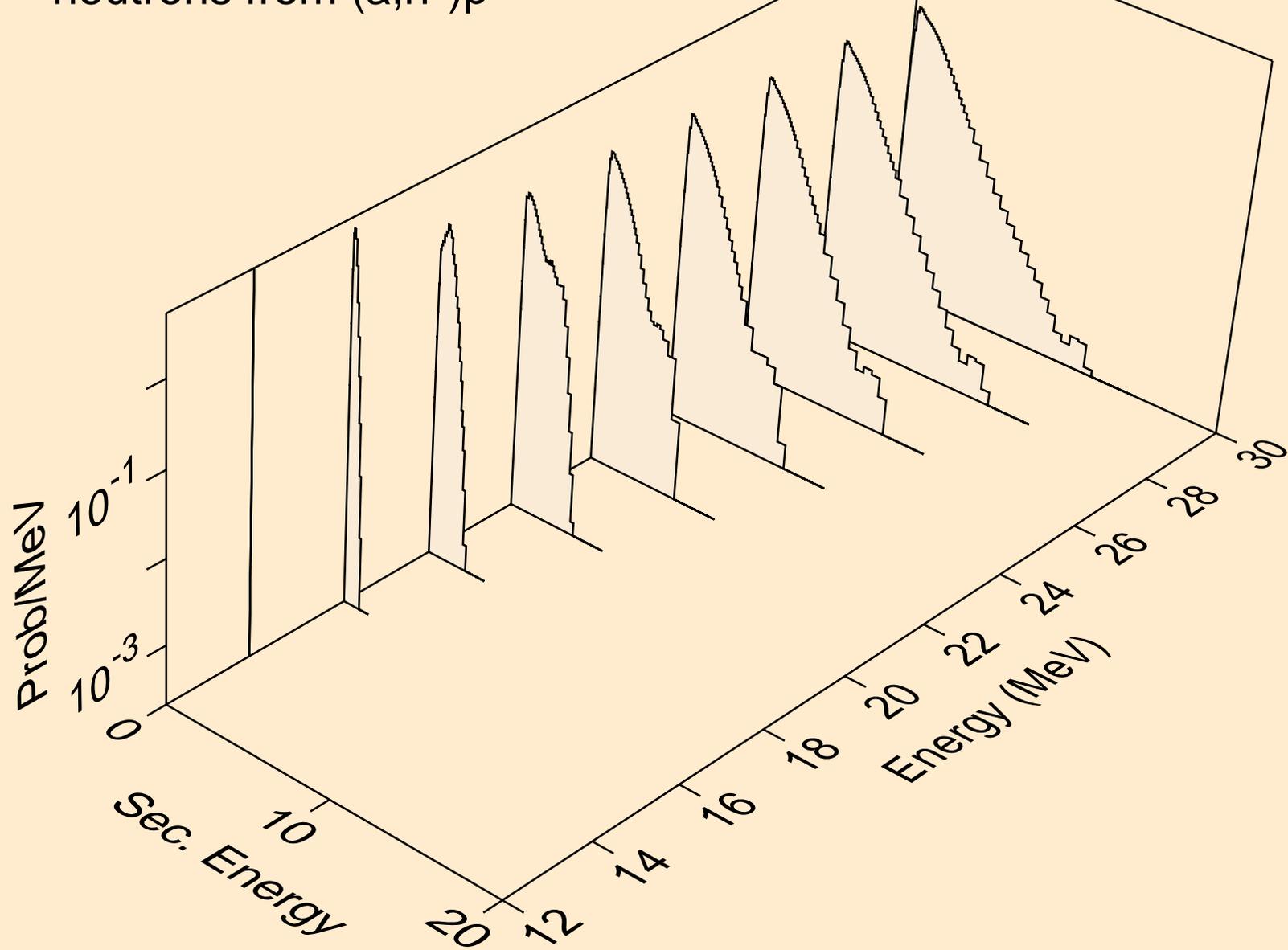neutrons from (a,3n)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
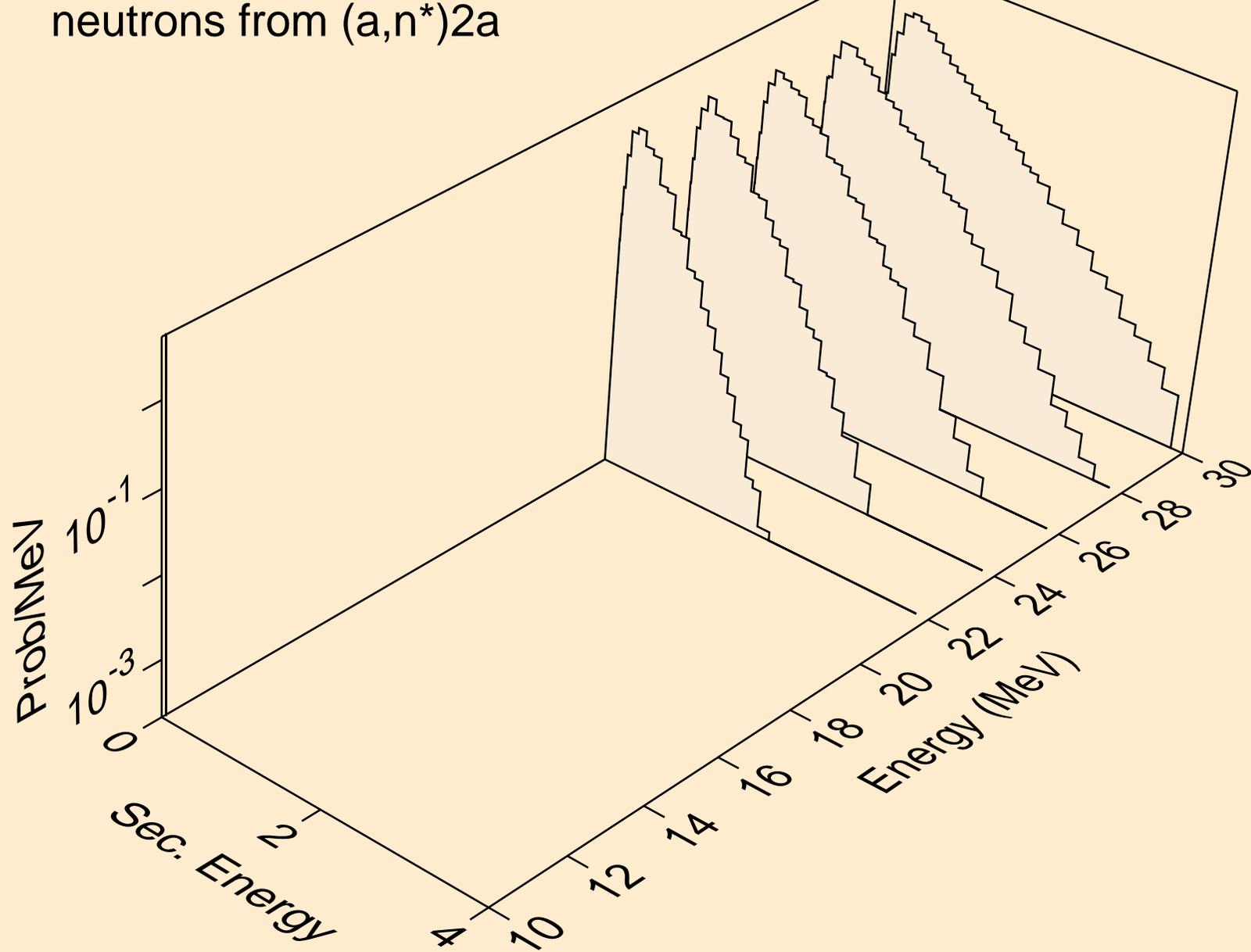neutrons from (a,n*)a

Prob/MeV

10^{-1}

10^{-3}

0

Sec. Energy

5

10

5

10

15

20

25

30

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,2n)a

Prob/MeV

10^{-1}

10^{-3}

0

Sec. Energy

2

4

Energy (MeV)

18

20

22

24

26

28

30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,n*)p

Prob/MeV

10^{-1}

10^{-3}

0

10

20

Sec. Energy

12

14
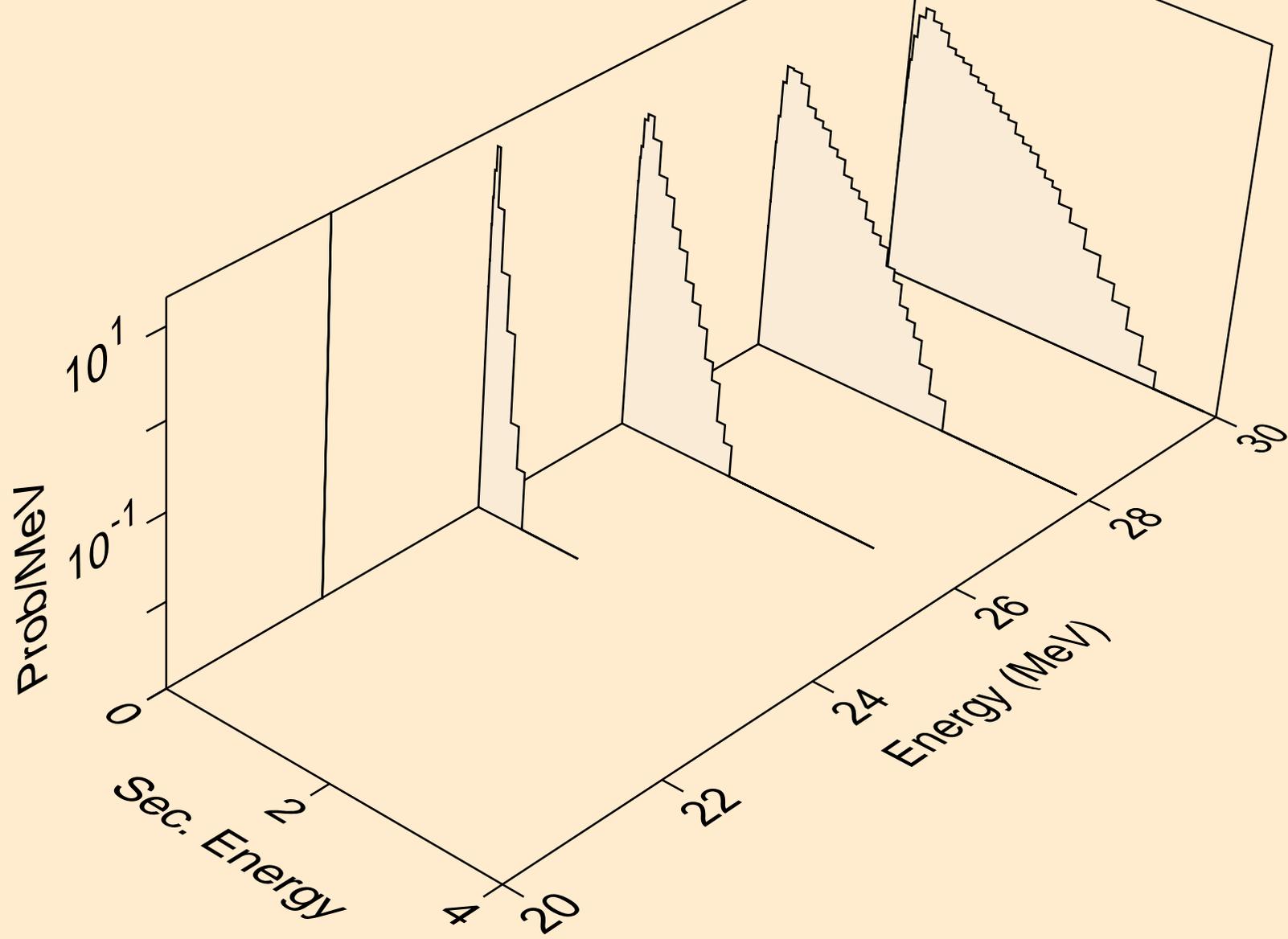
16

18

20
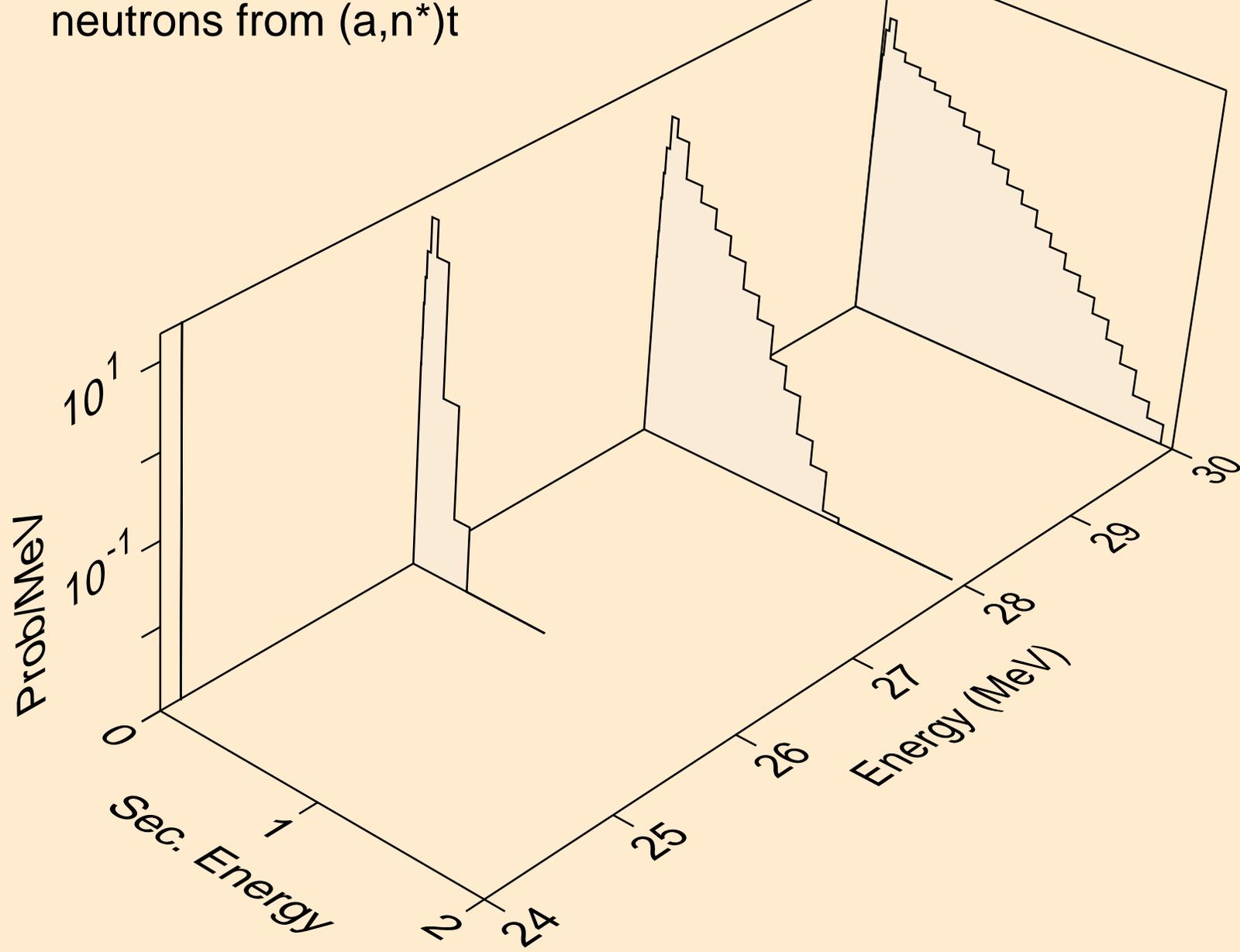
22

24

26

28

30

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
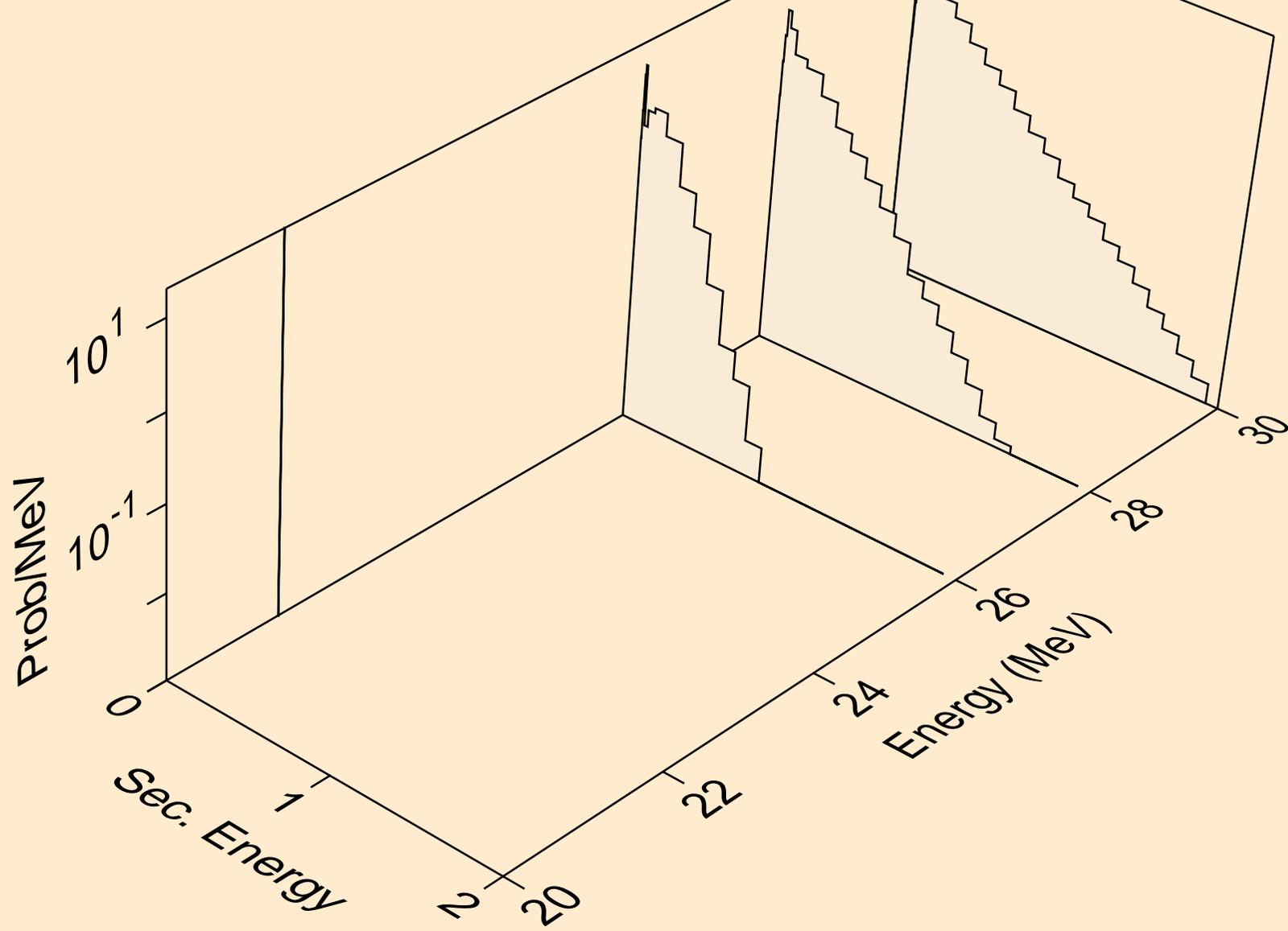neutrons from (a,n*)2a

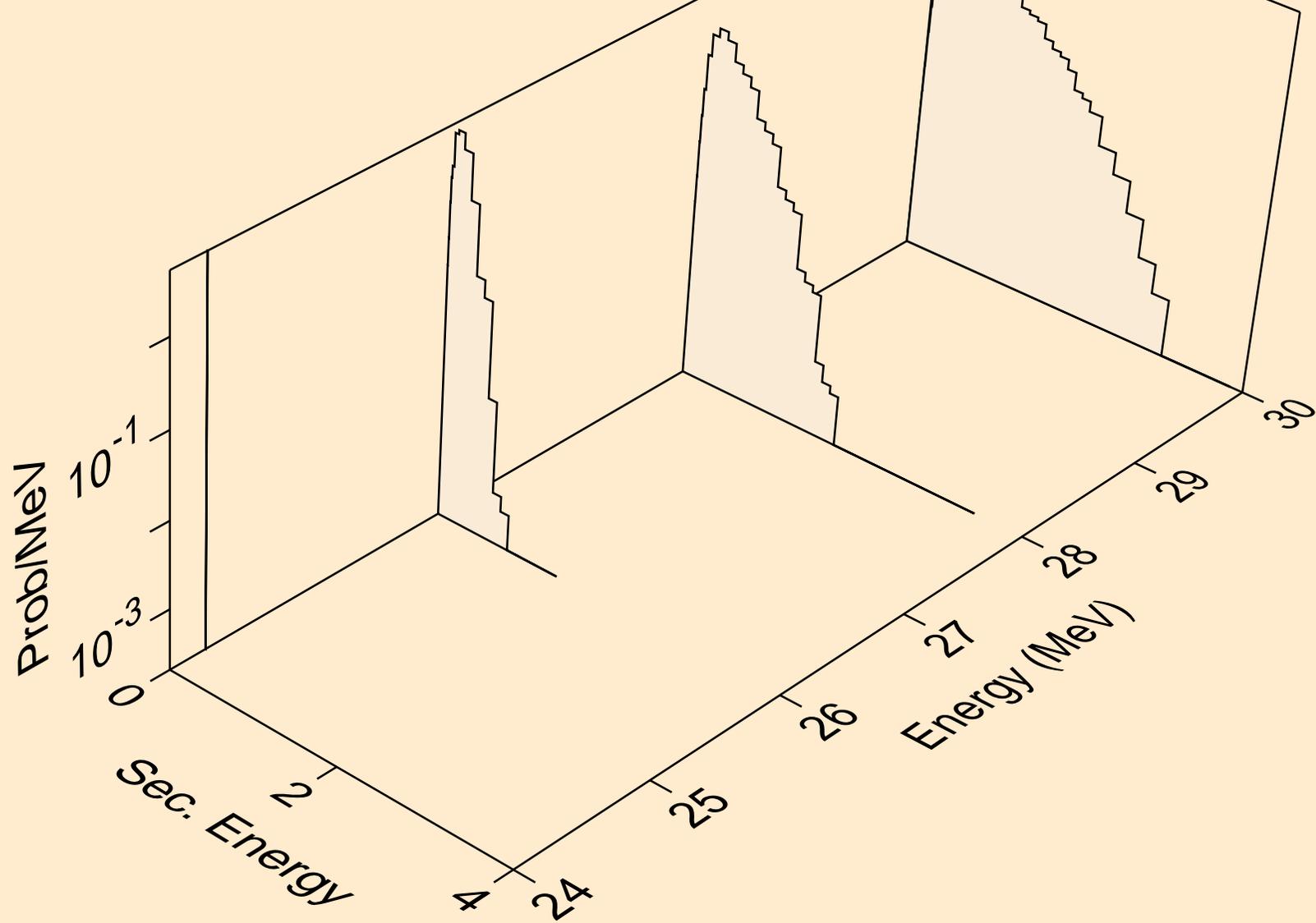PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,n*)d

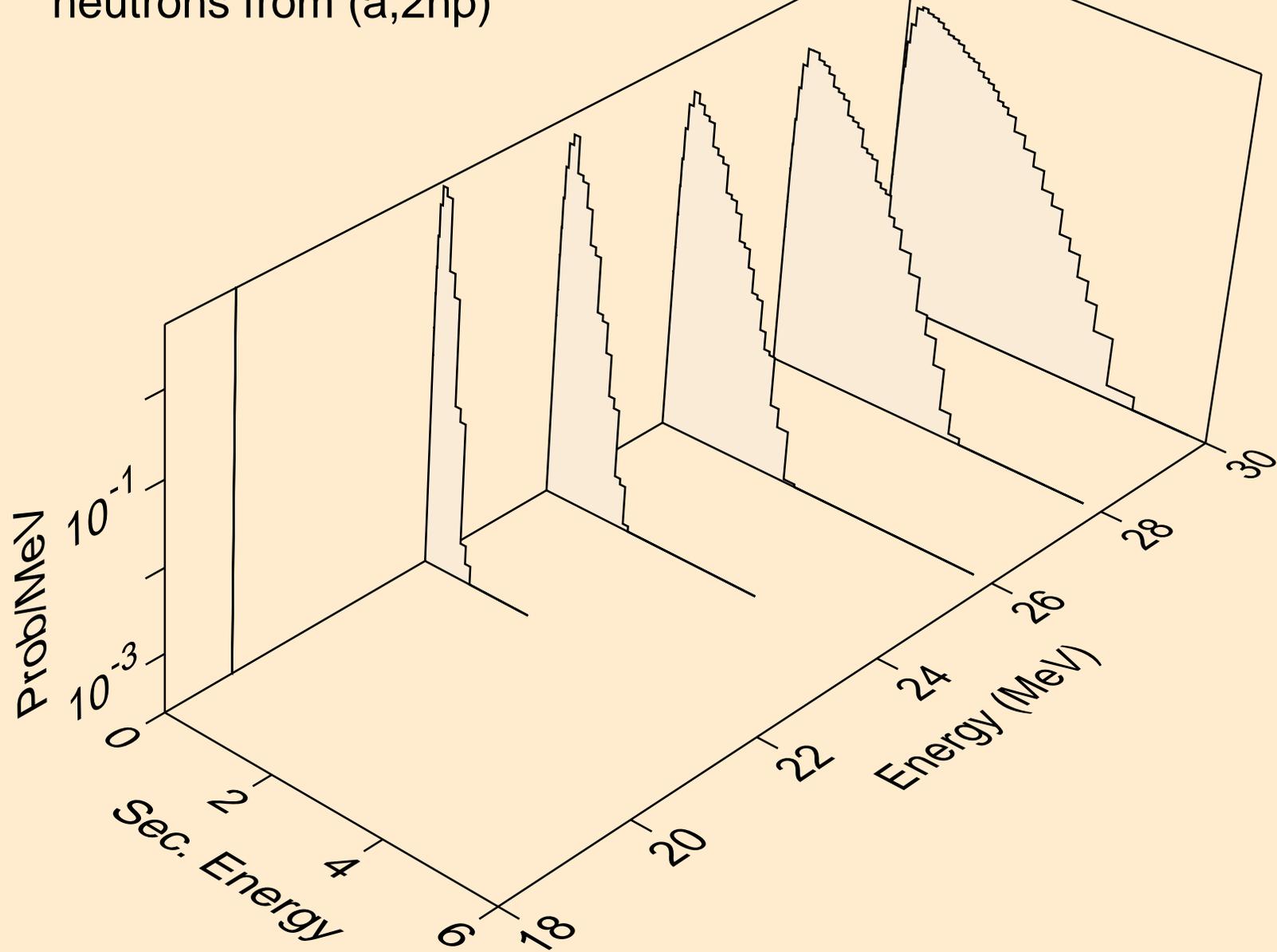PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,n*)t

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
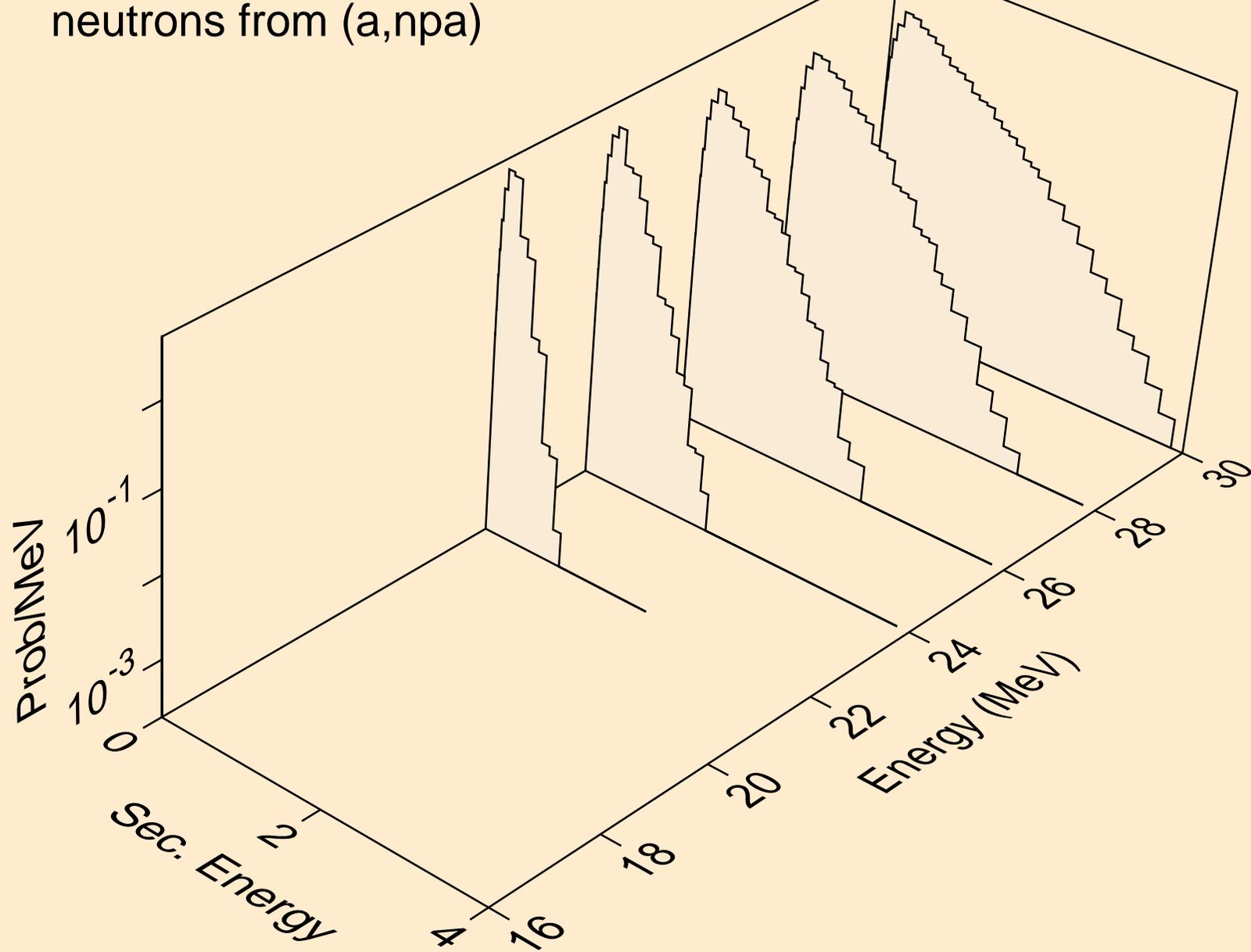neutrons from (a,n*)he3

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
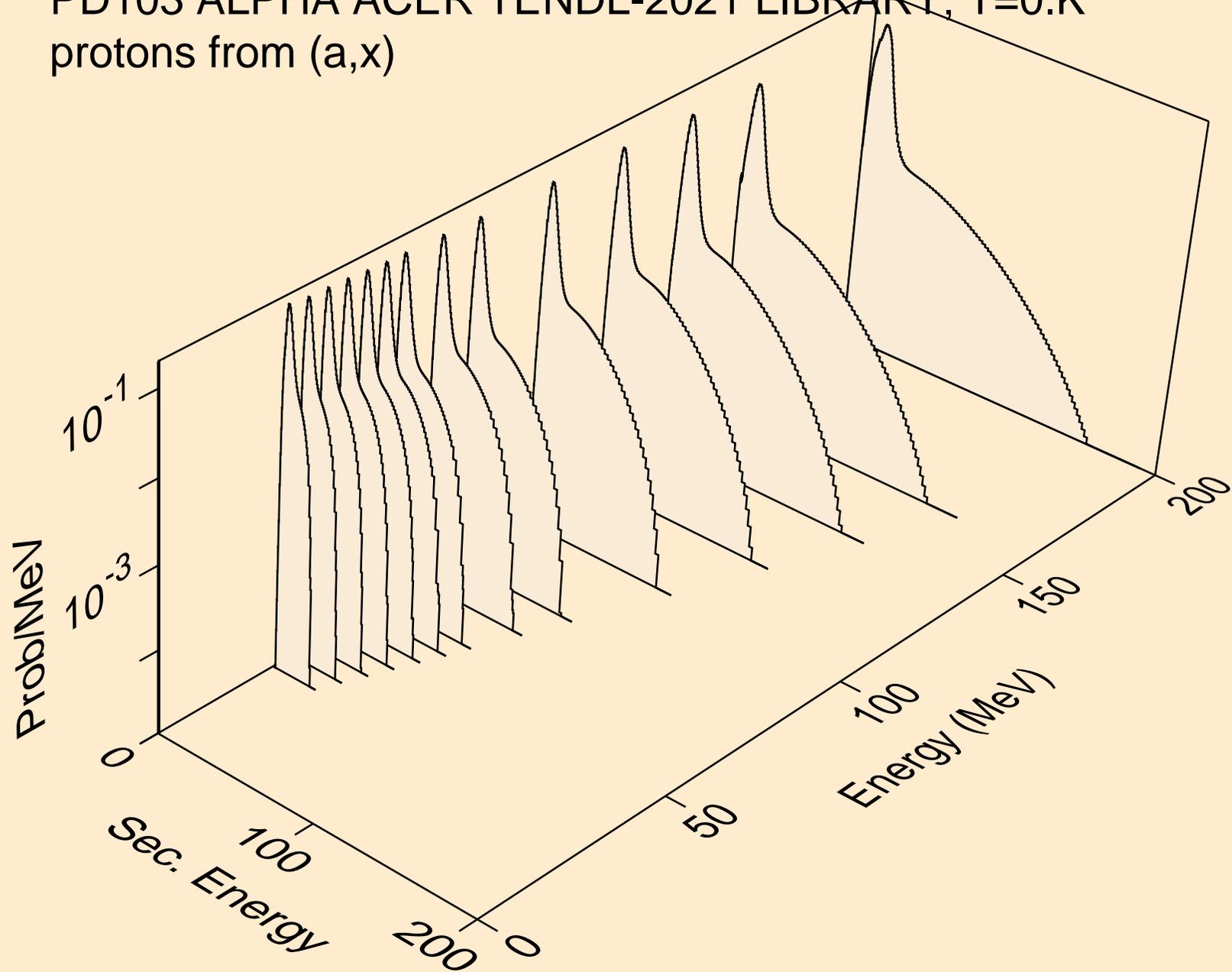neutrons from (a,2np)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
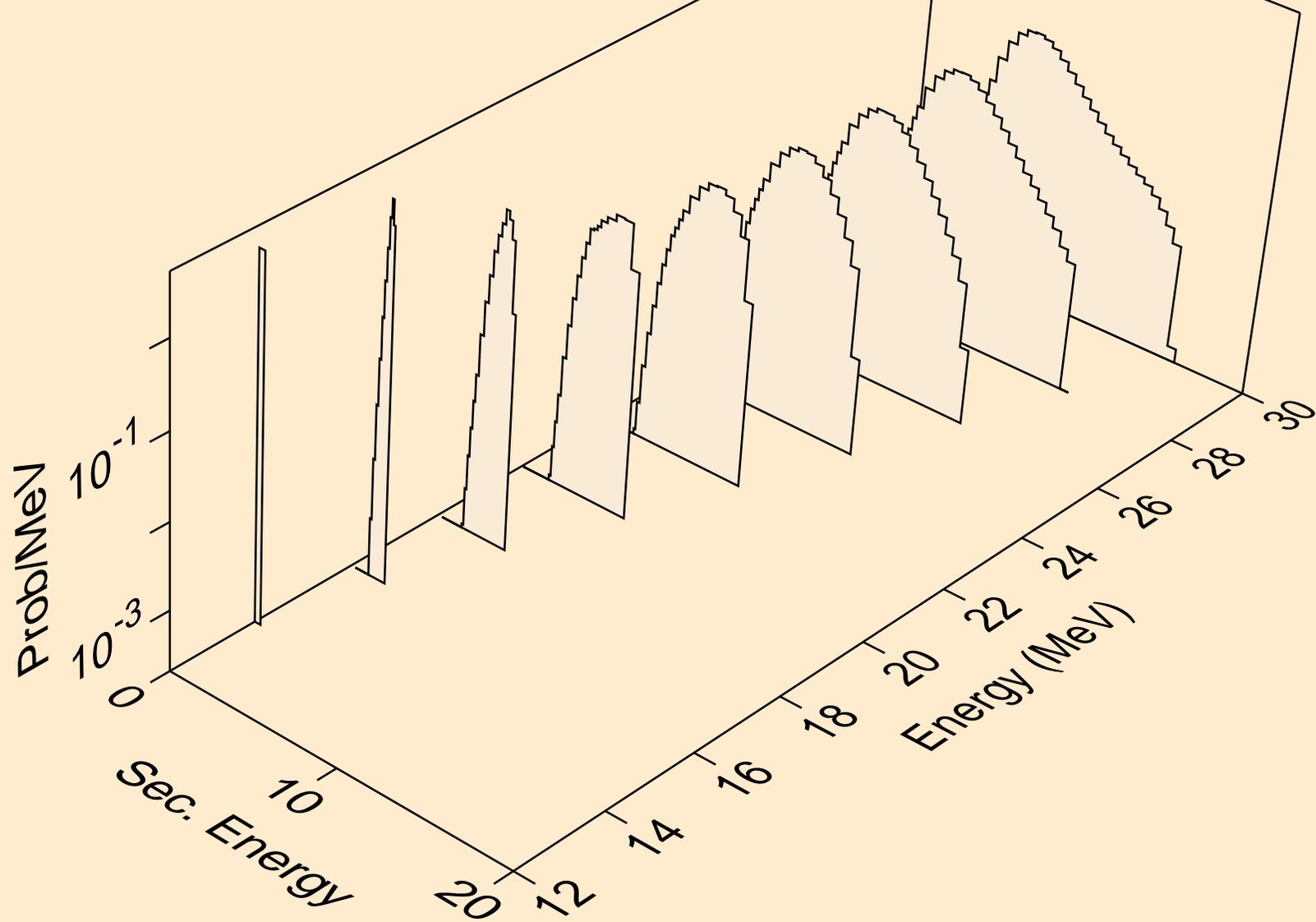neutrons from (a,2np)

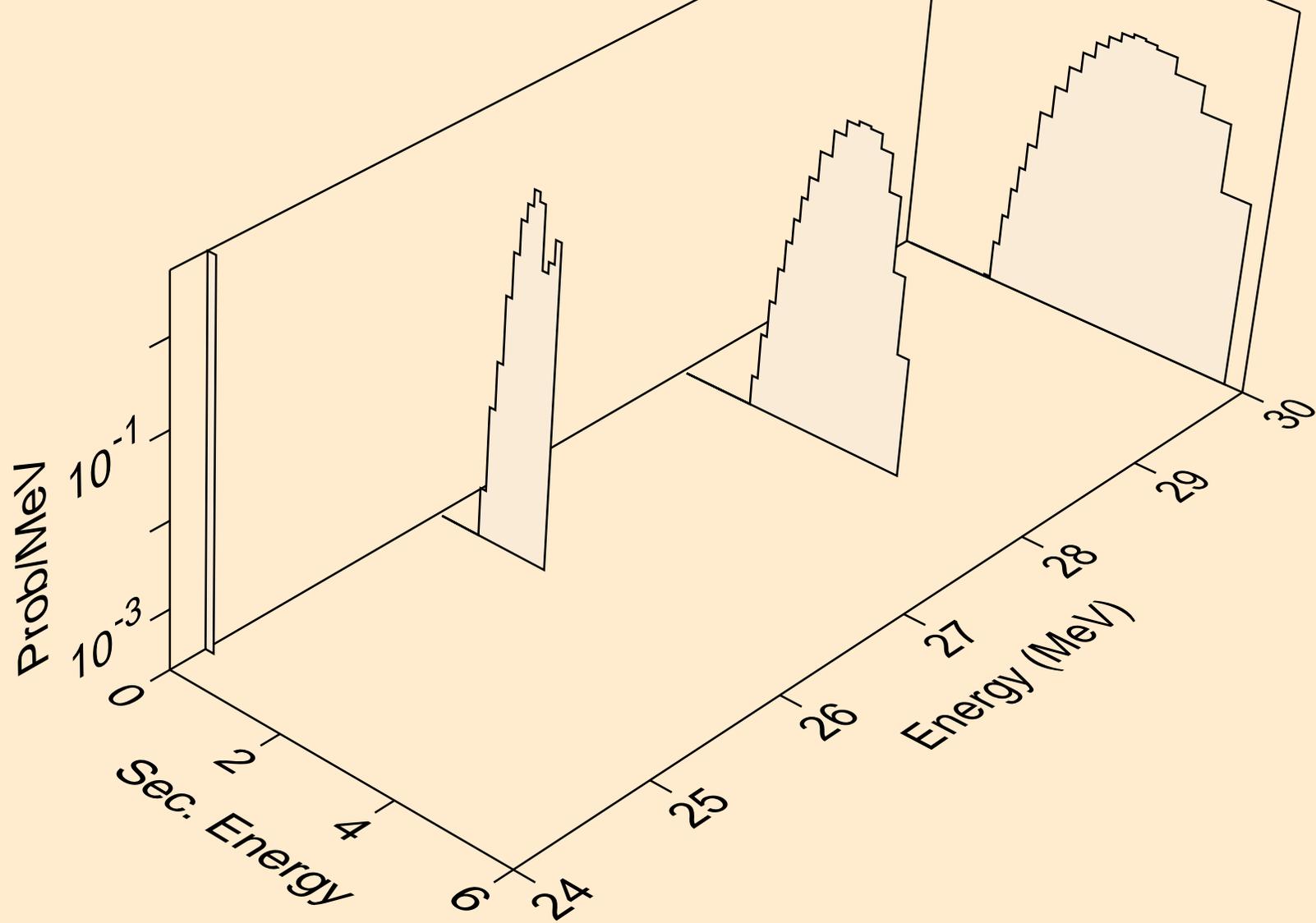PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
neutrons from (a,npa)

Prob/MeV

10^{-1}

10^{-3}

0

Sec. Energy

2

4

16

18

20

22

24

26

28

30

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
protons from (a,x)

ProblMeV

10^{-1}

10^{-3}

0

Sec. Energy

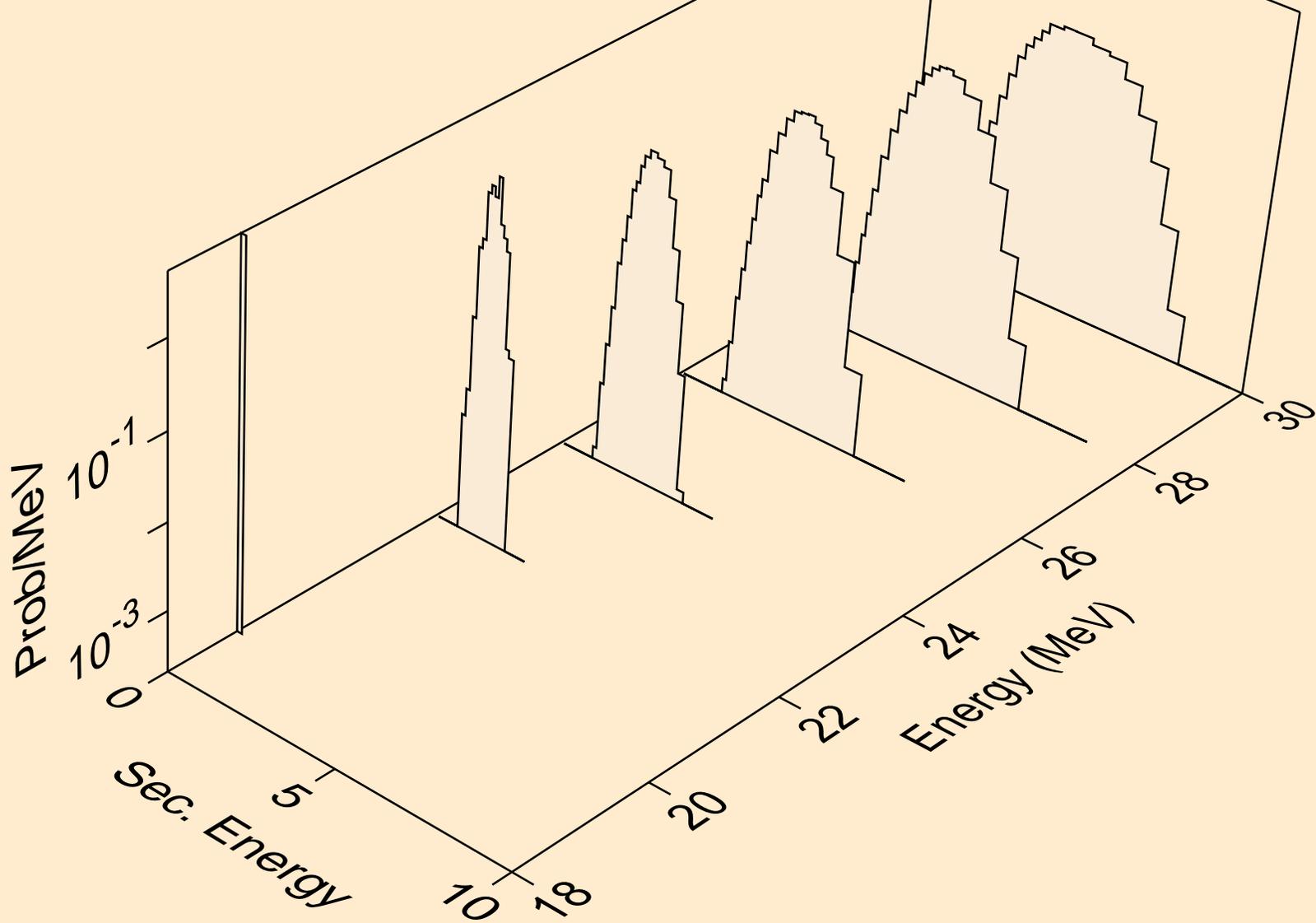100

200

0

50

100

150

200

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
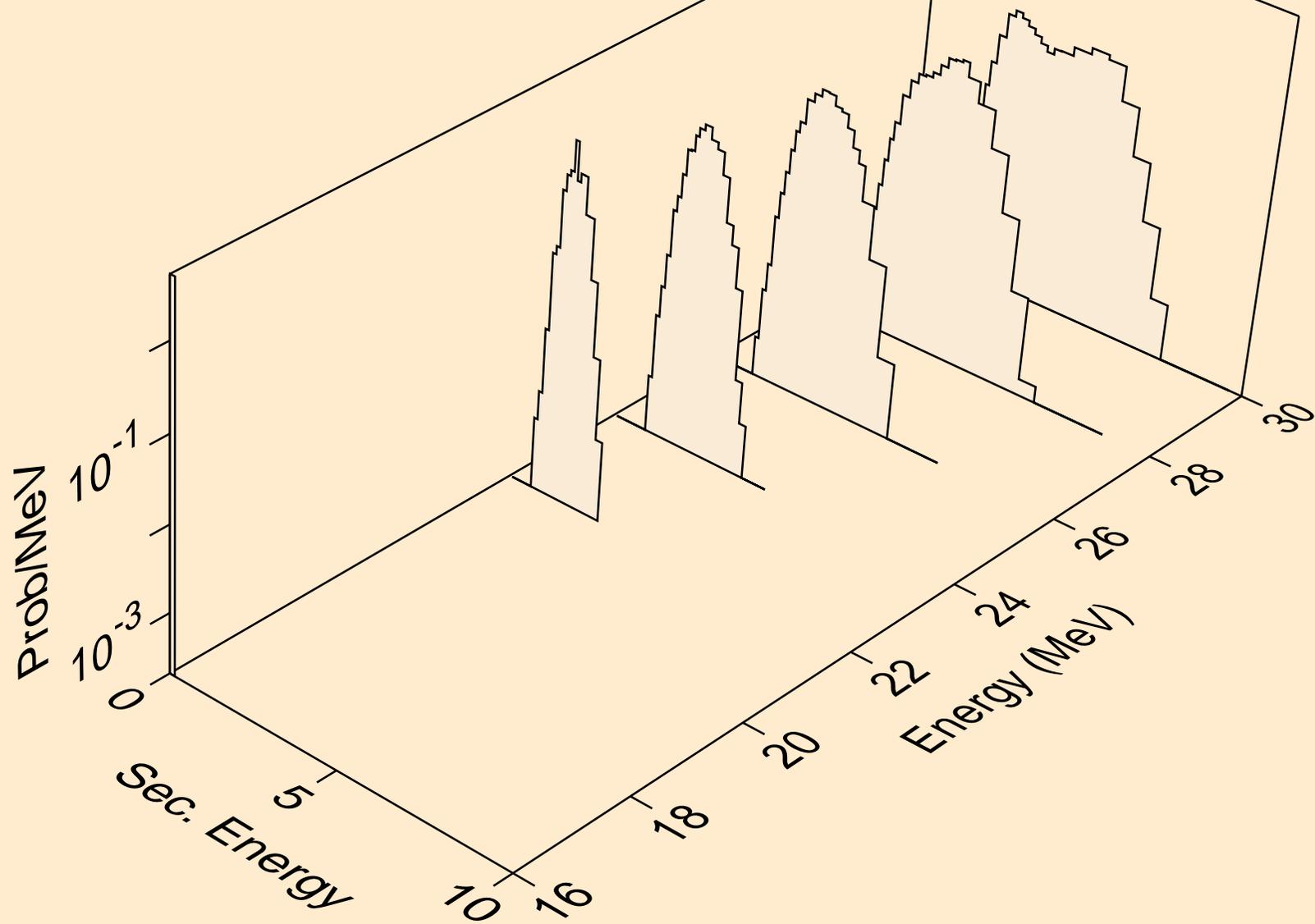protons from (a,n*)p

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
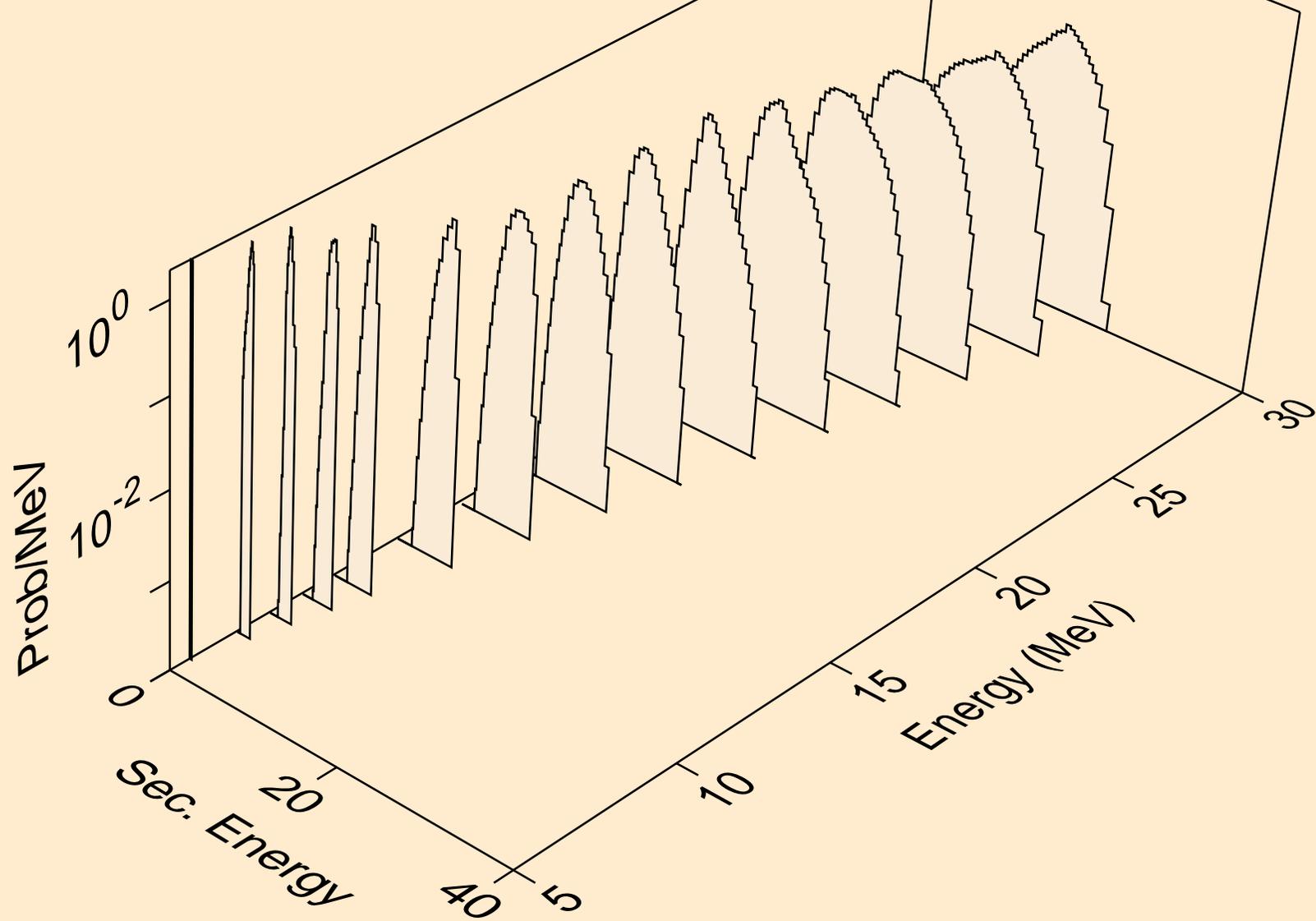protons from (a,2np)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
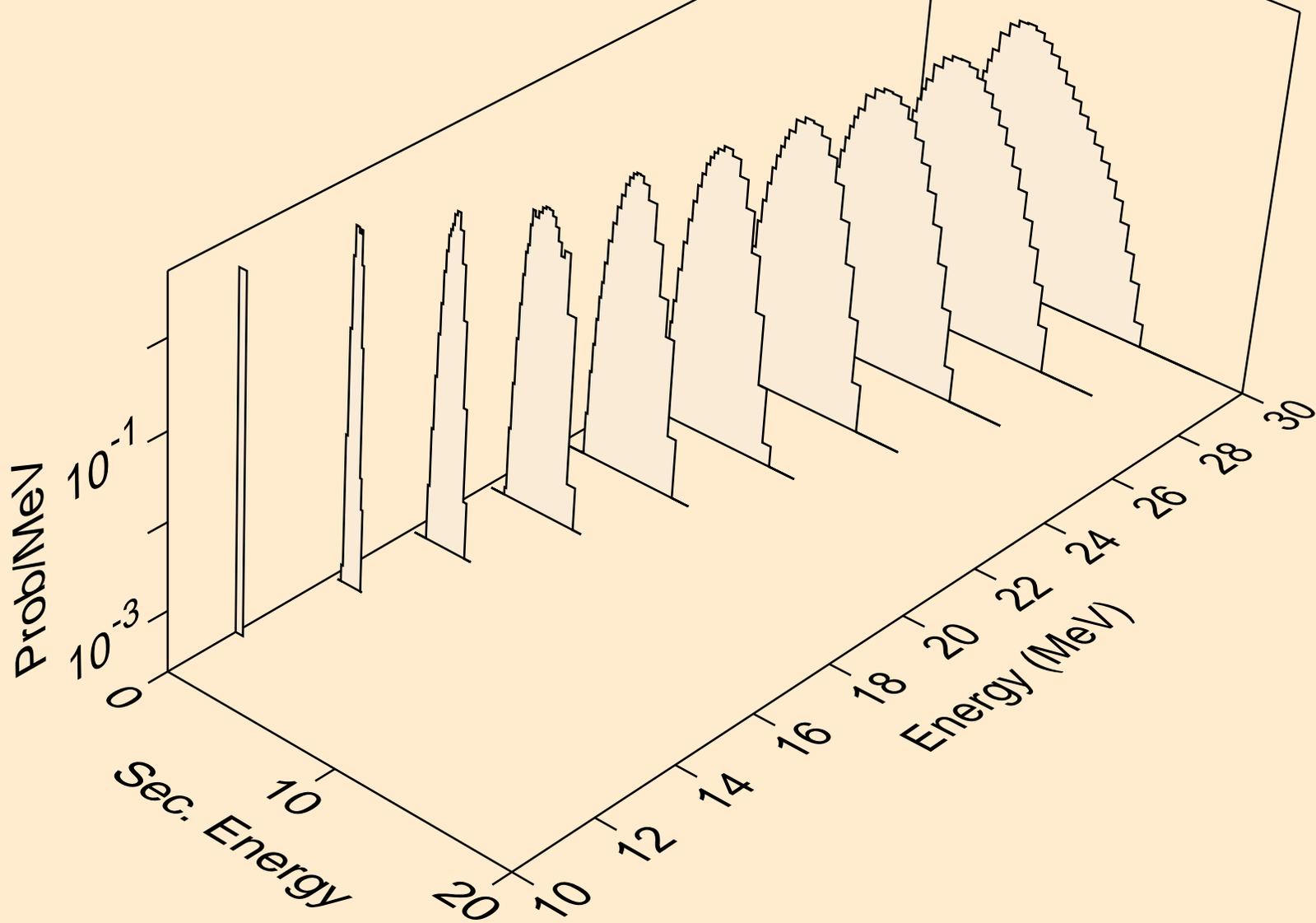protons from (a,2np)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
protons from (a,npa)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
protons from (a,p)

Prob/MeV

10^0

10^{-2}

0

Sec. Energy

20
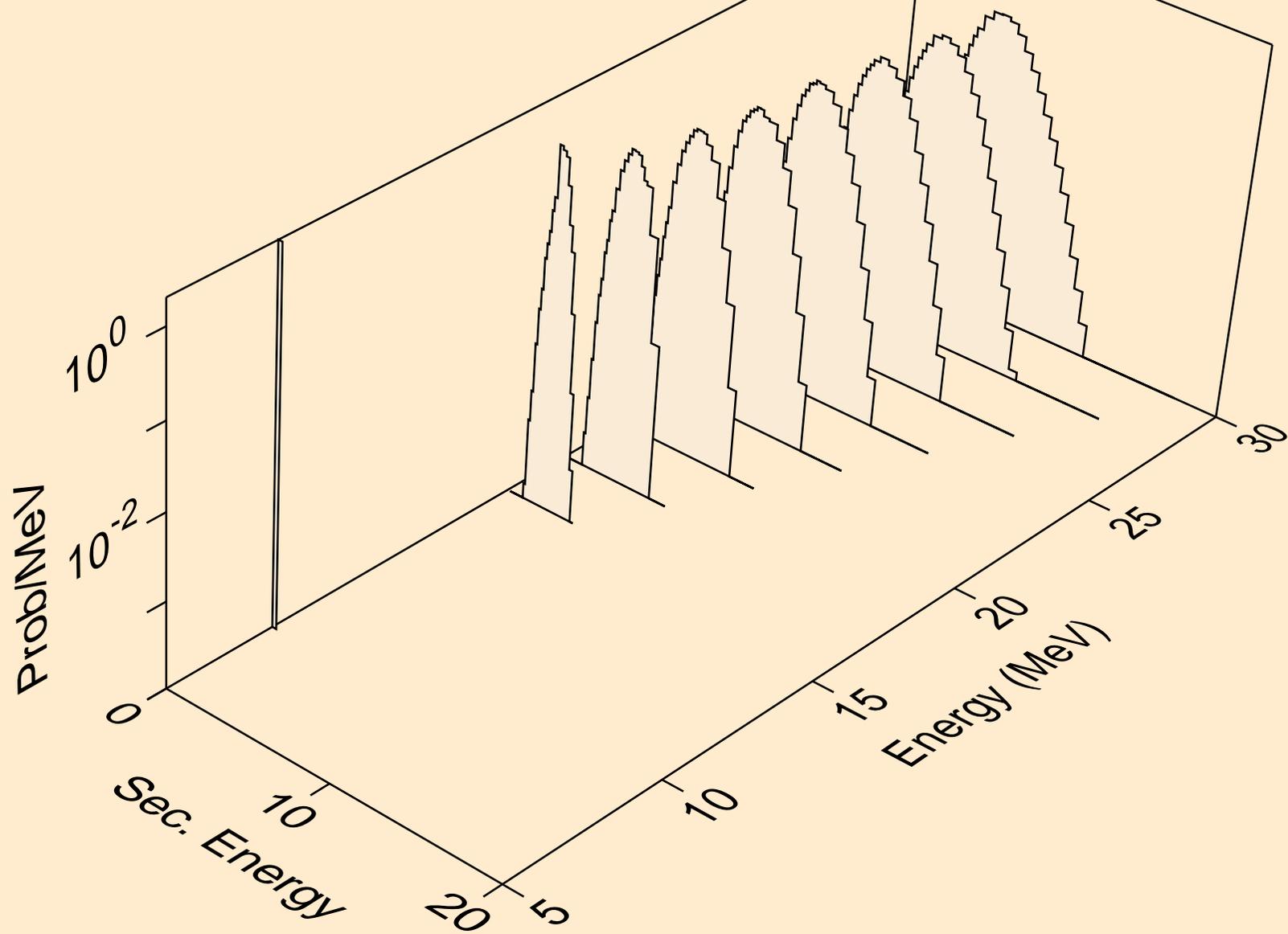
40
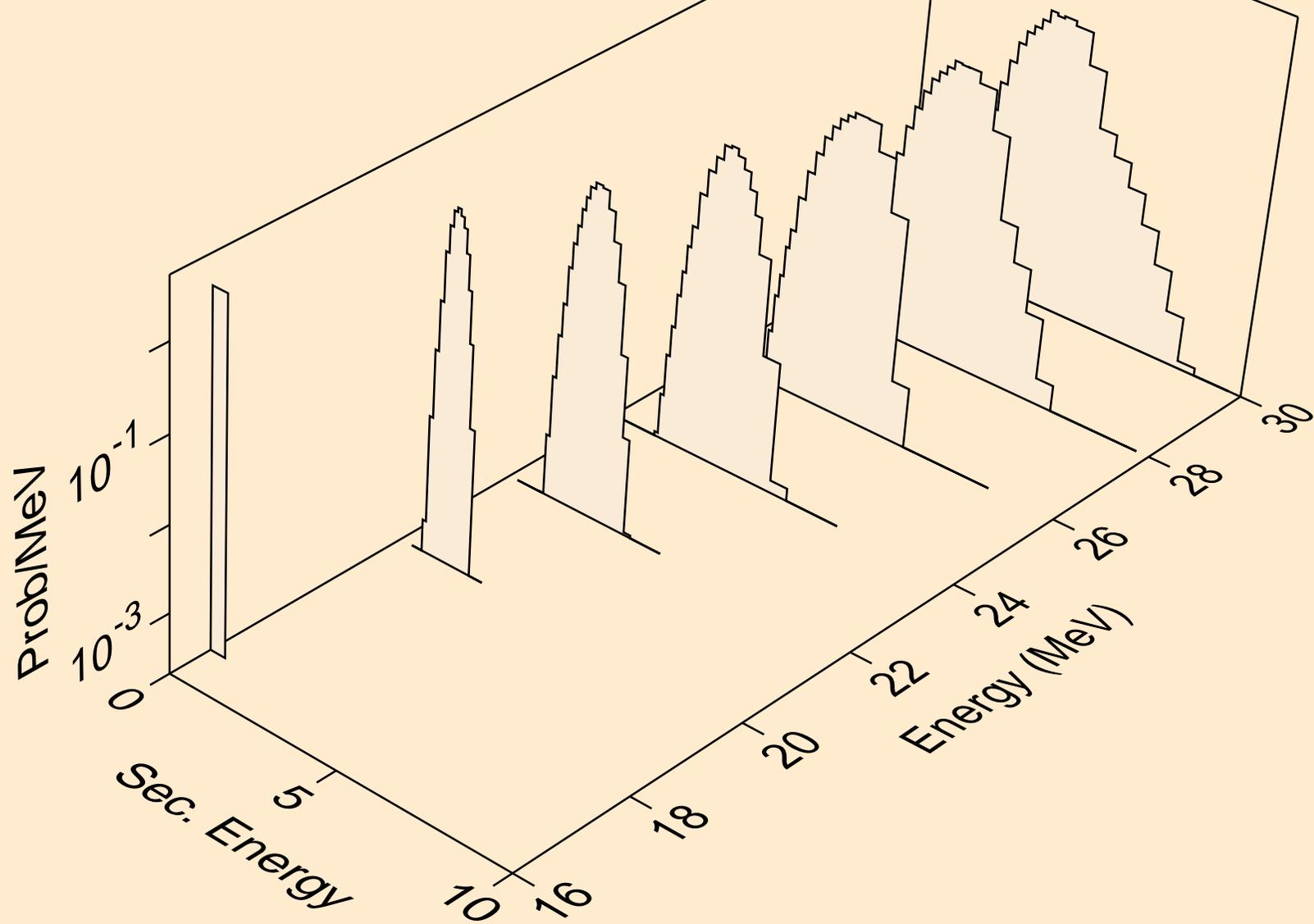
Energy (MeV)

5

10

15

20

25

30

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
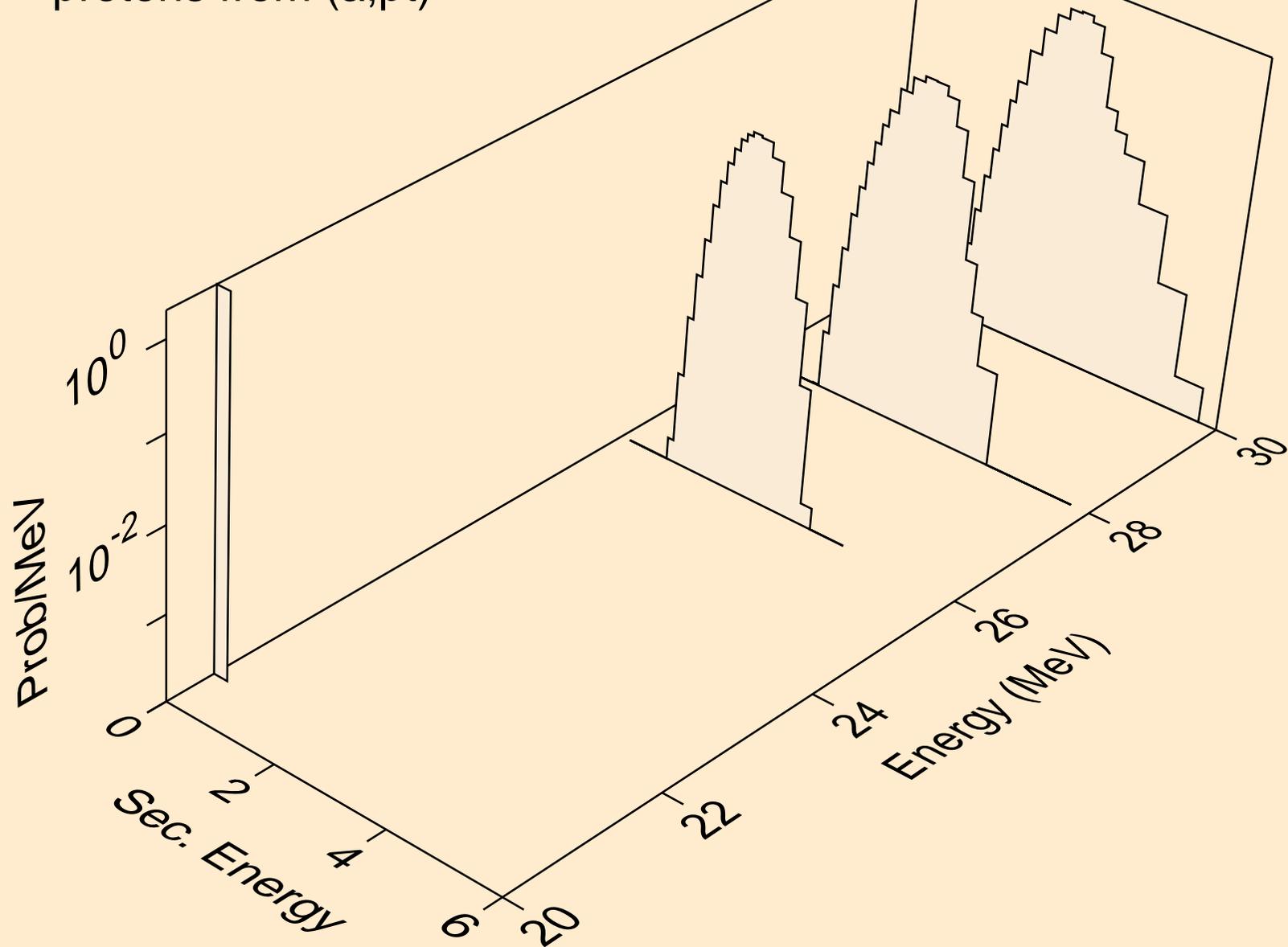protons from (a,2p)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
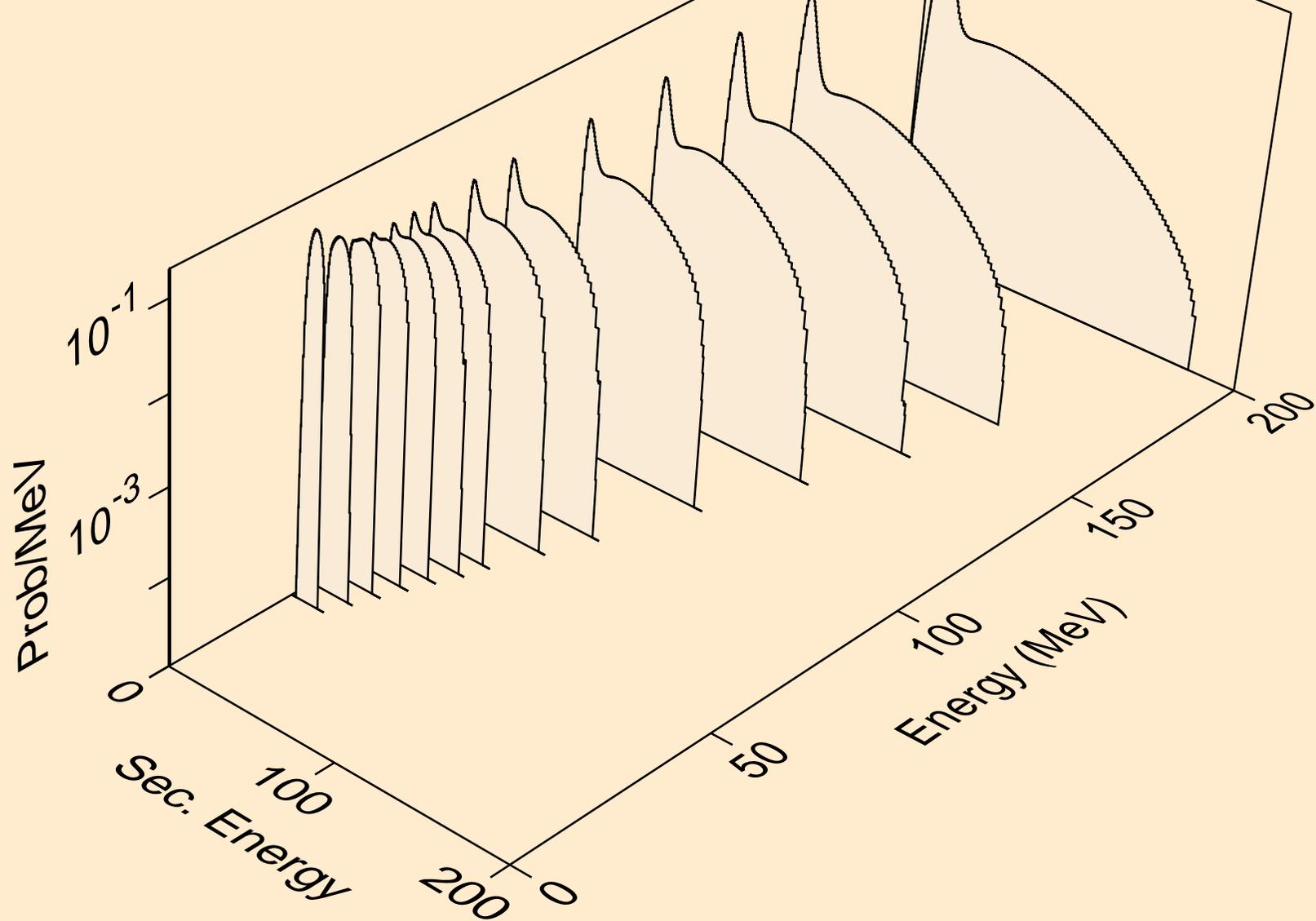protons from (a,pa)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
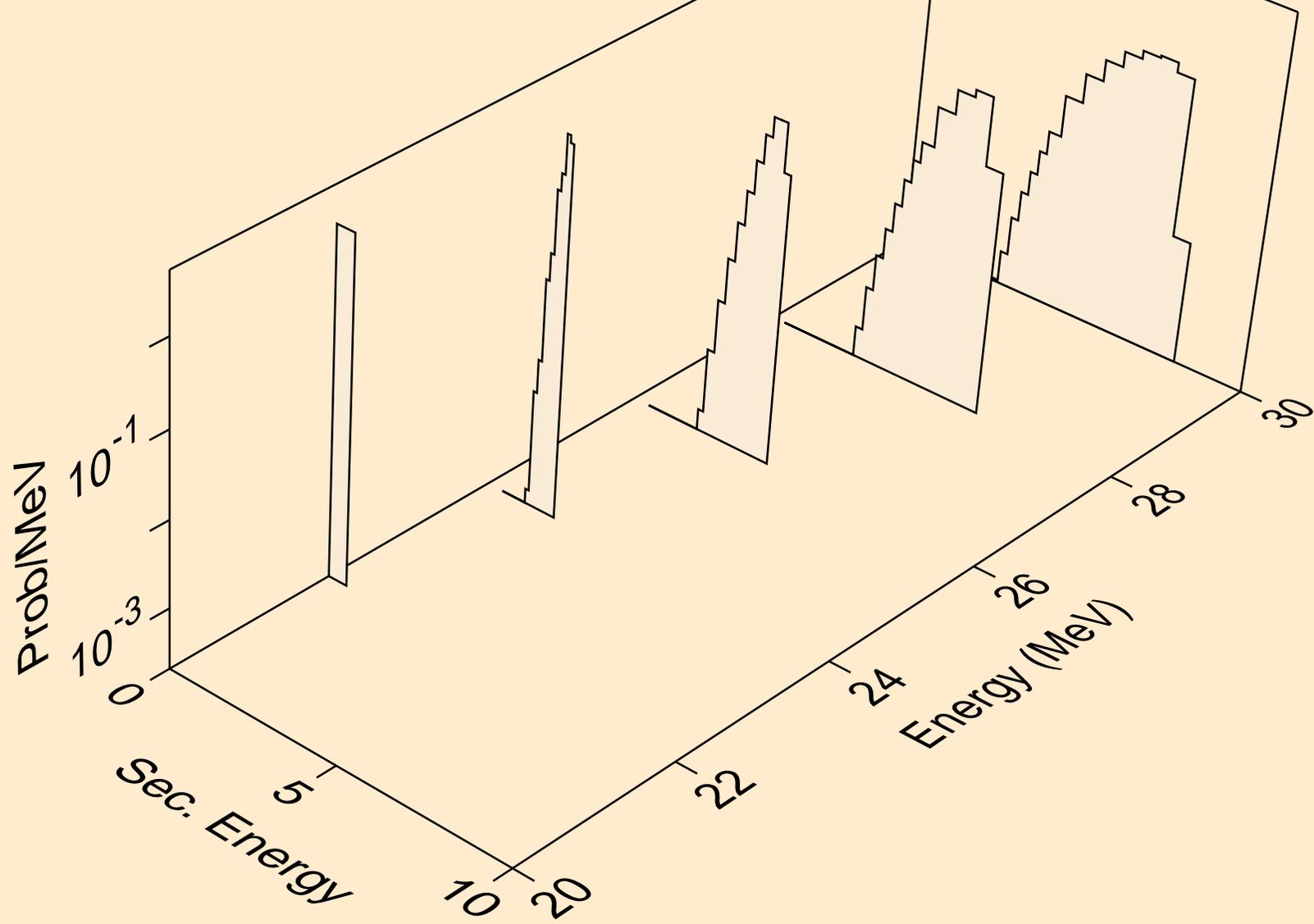protons from (a,pd)

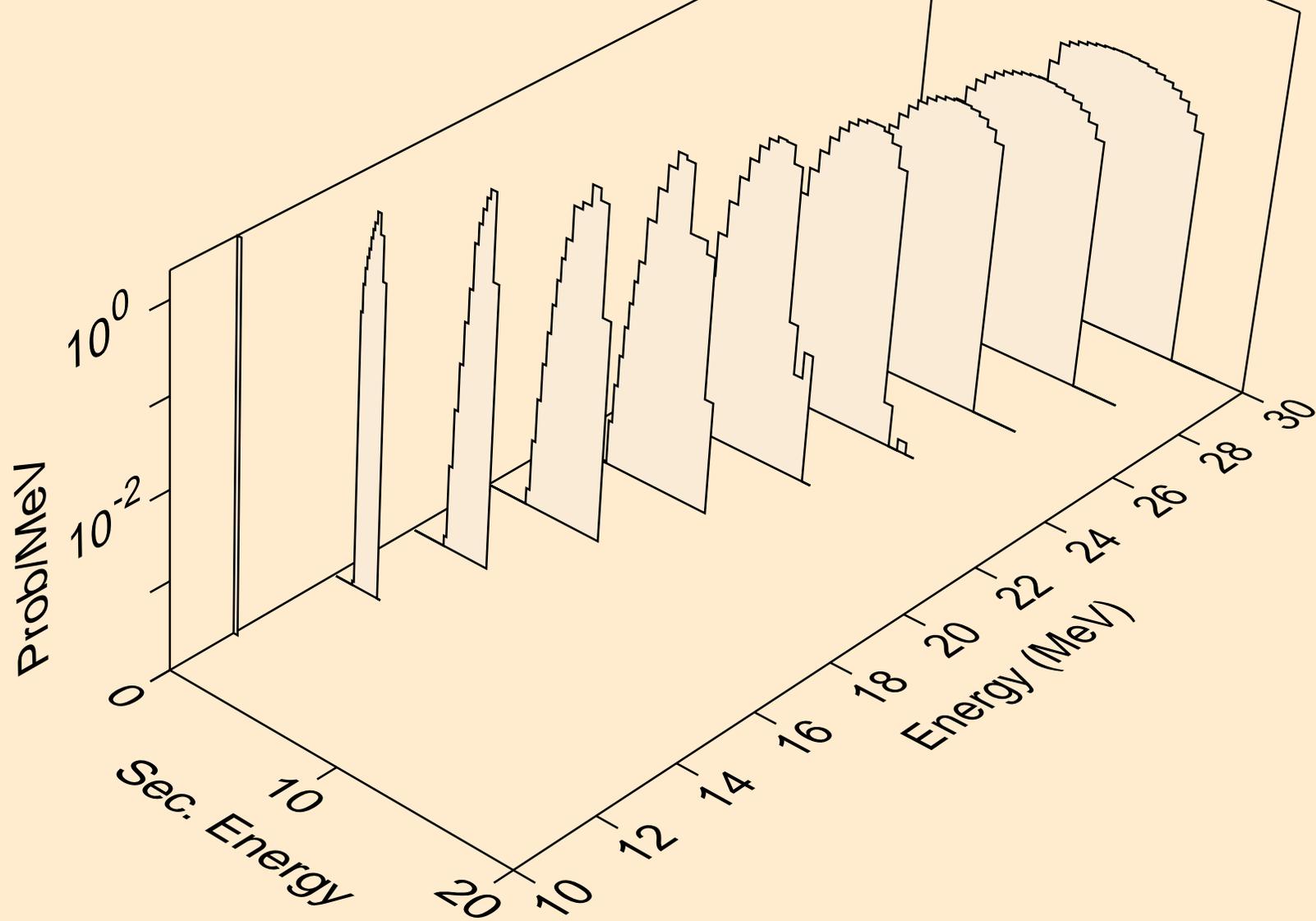PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
protons from (a,pt)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
deuterons from (a,x)

ProbMeV

10^{-1}

10^{-3}

0

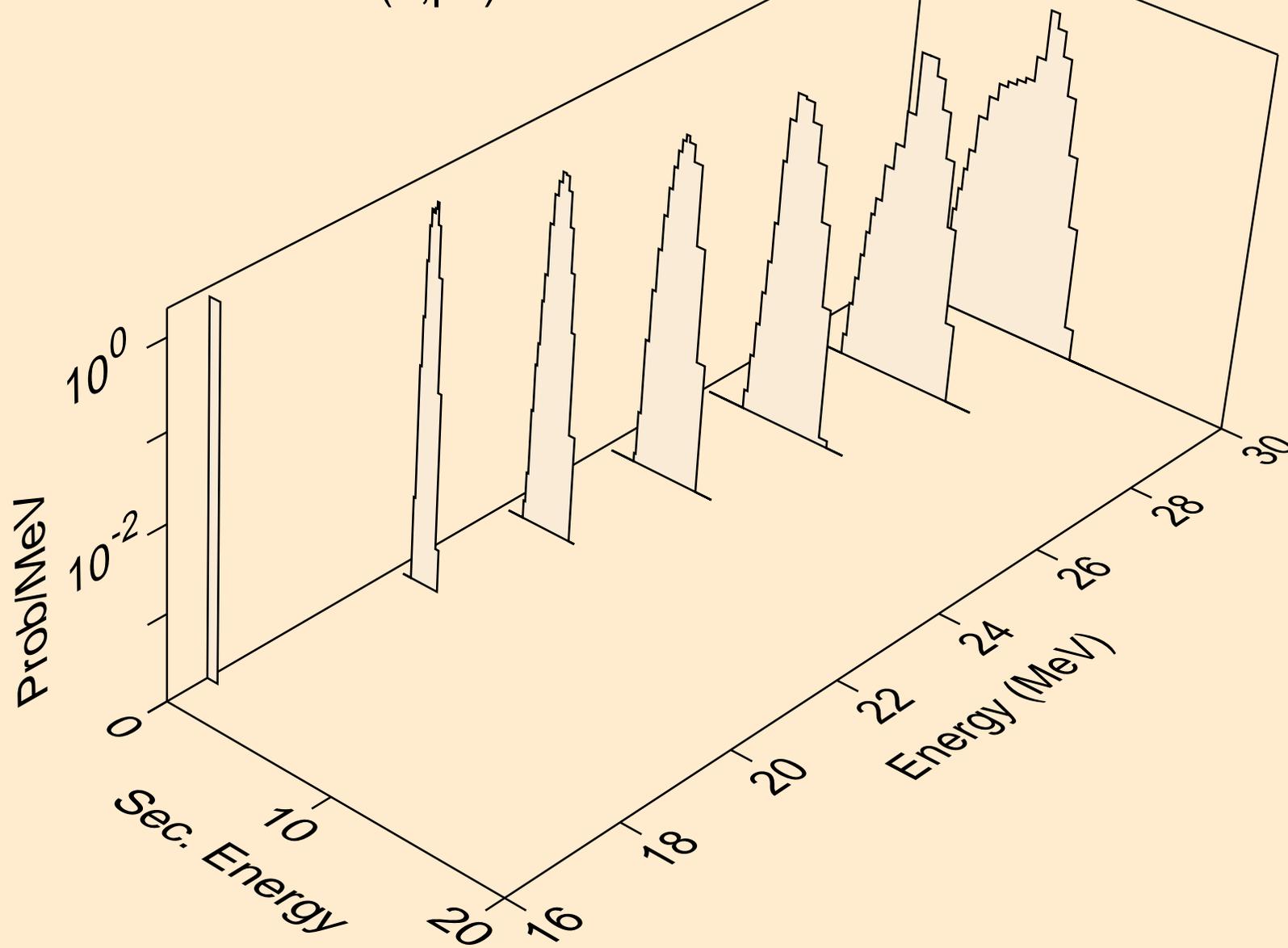Sec. Energy

100

200

Energy (MeV)

0

50

100

150

200

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
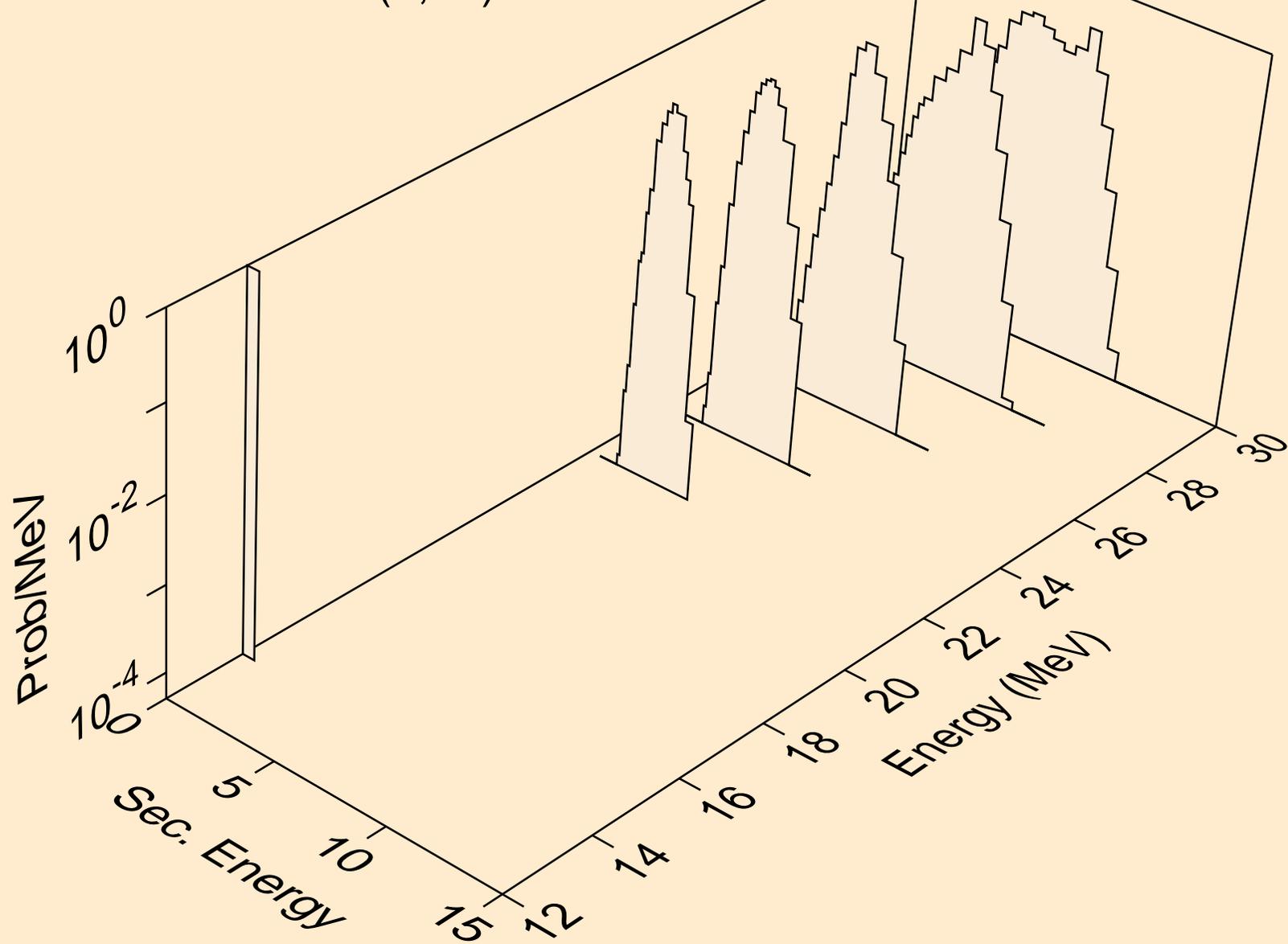deuterons from (a,n*)d

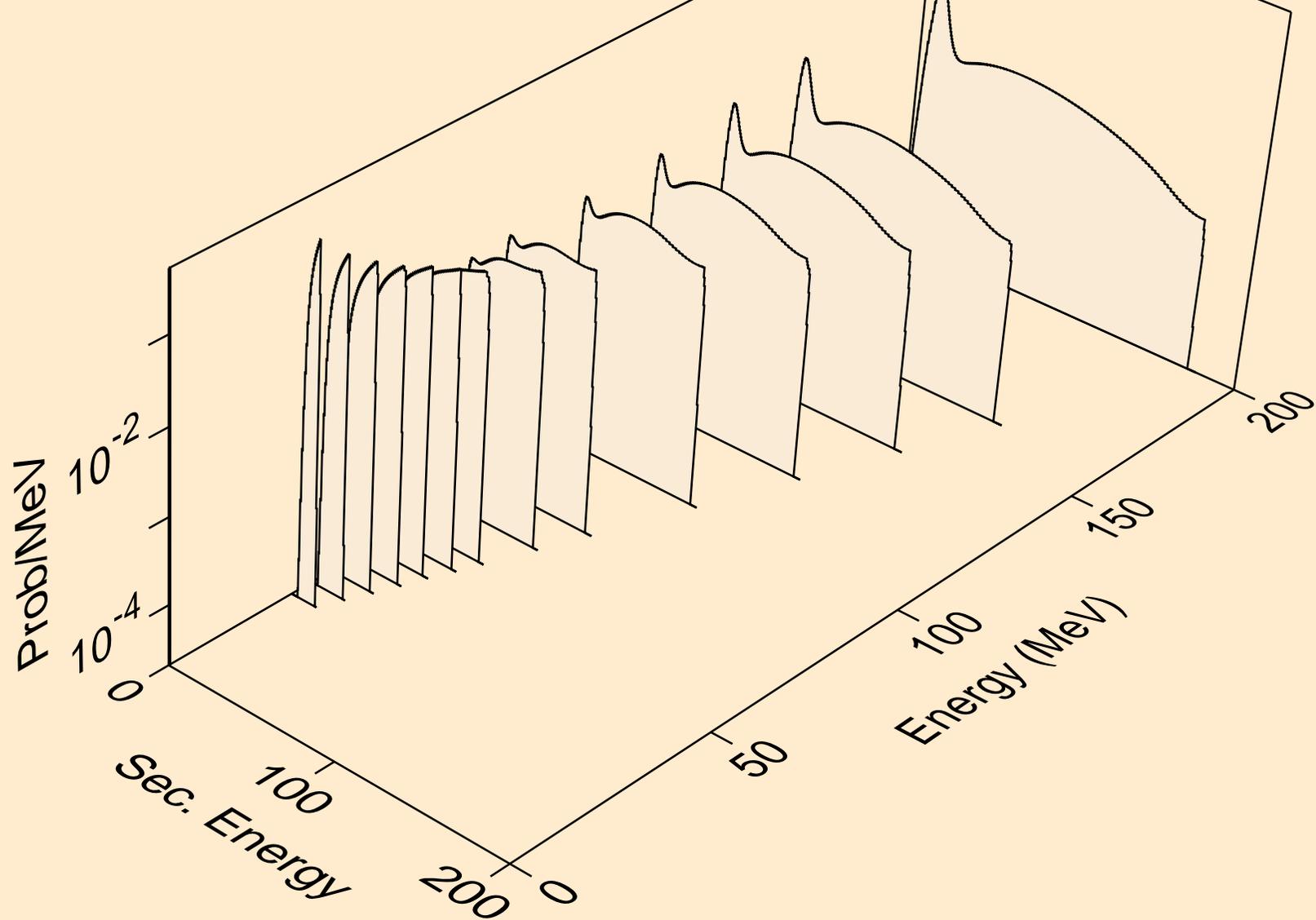PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
deuterons from (a,d)

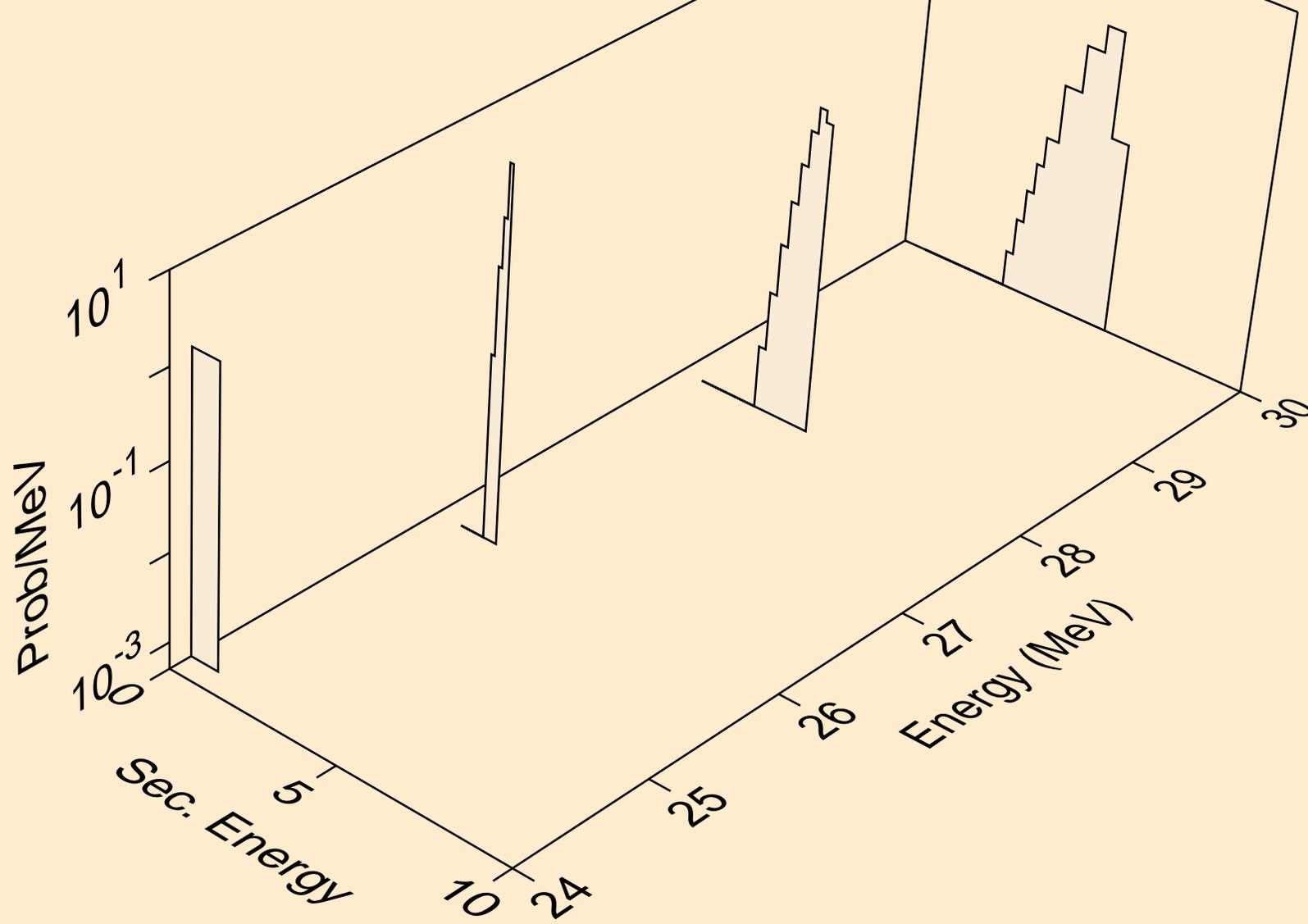PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
deuterons from (a,pd)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
deuterons from (a,da)

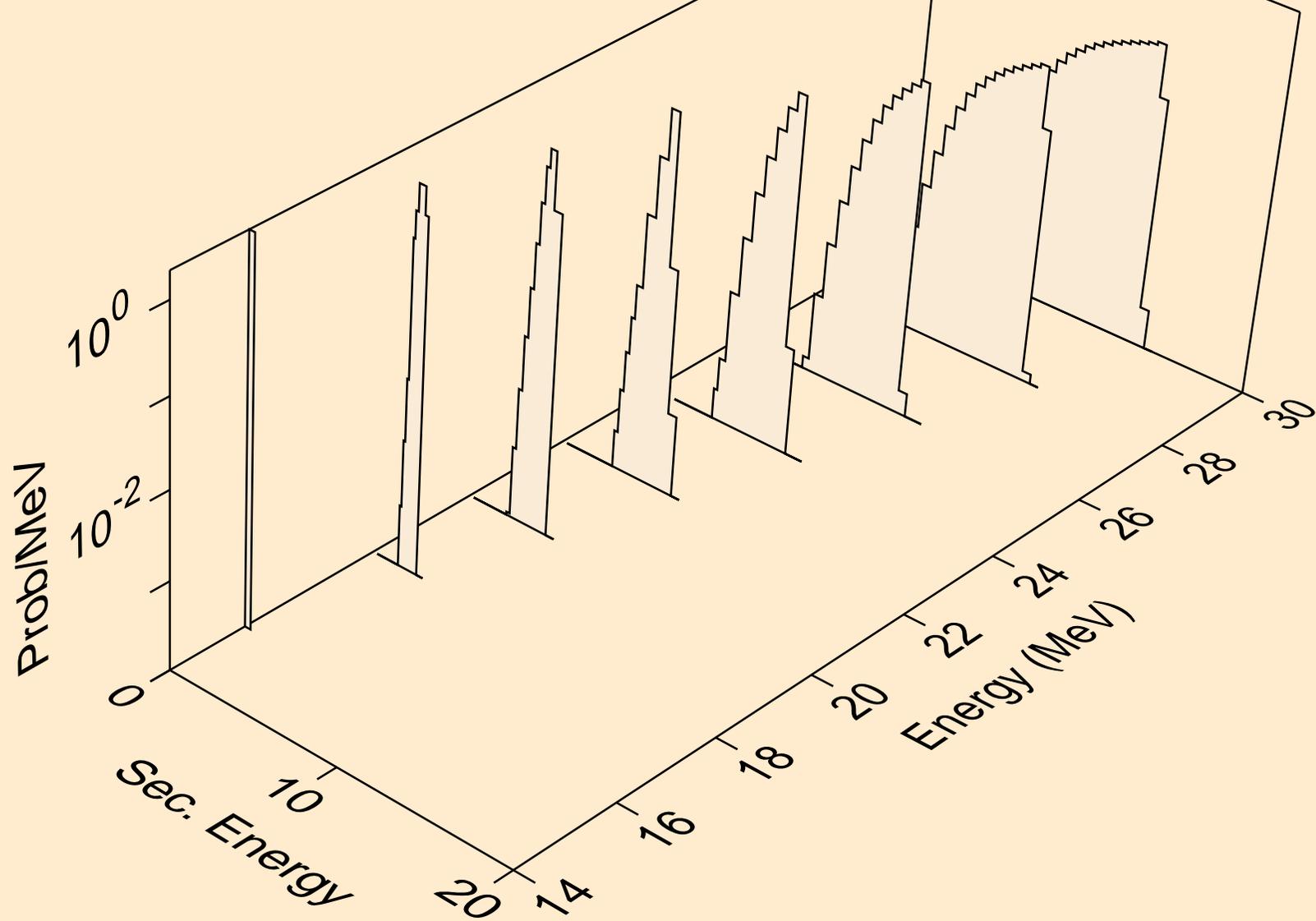PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
tritons from (a,x)

Prob/MeV

10^{-2}

10^{-4}
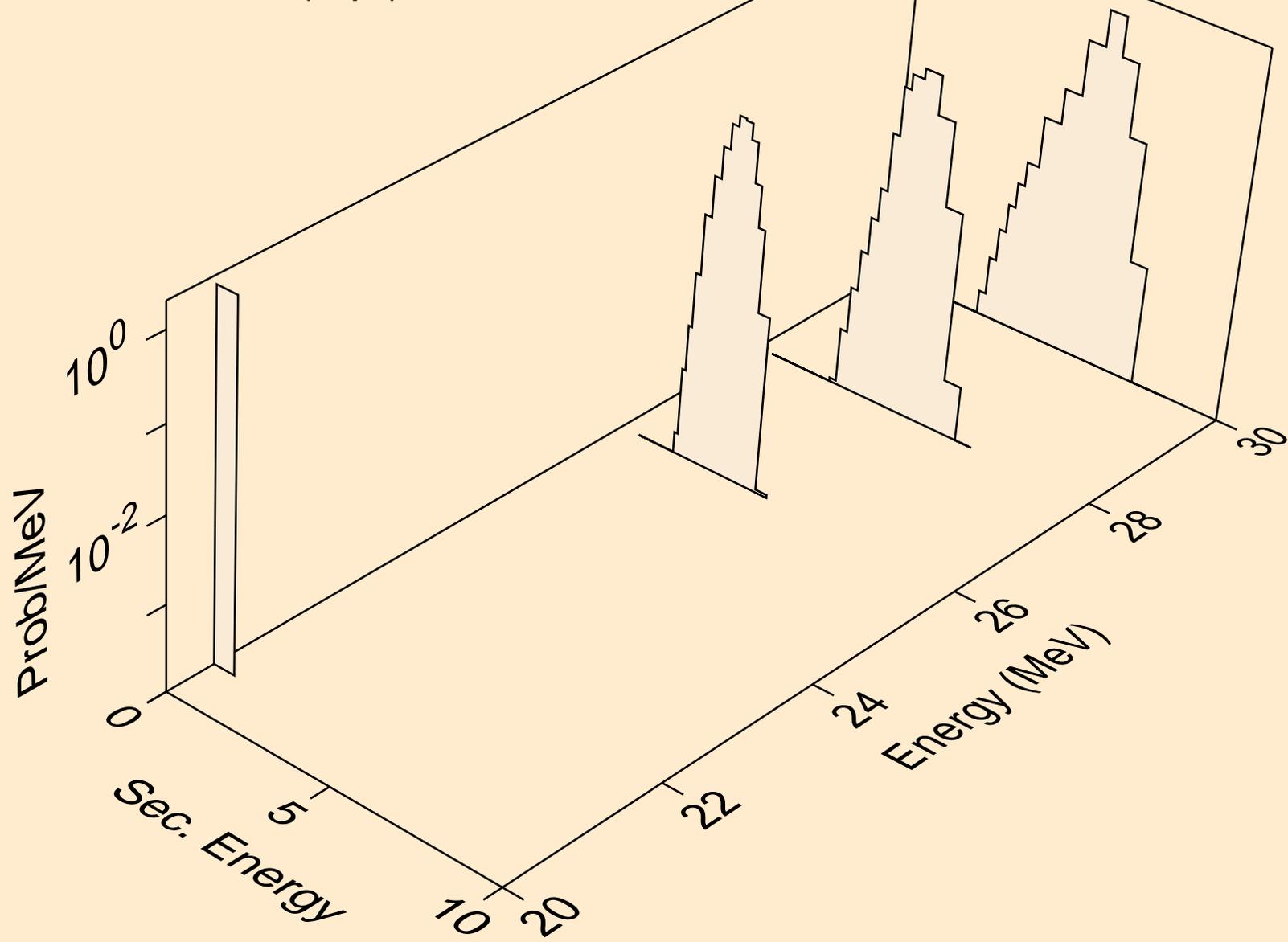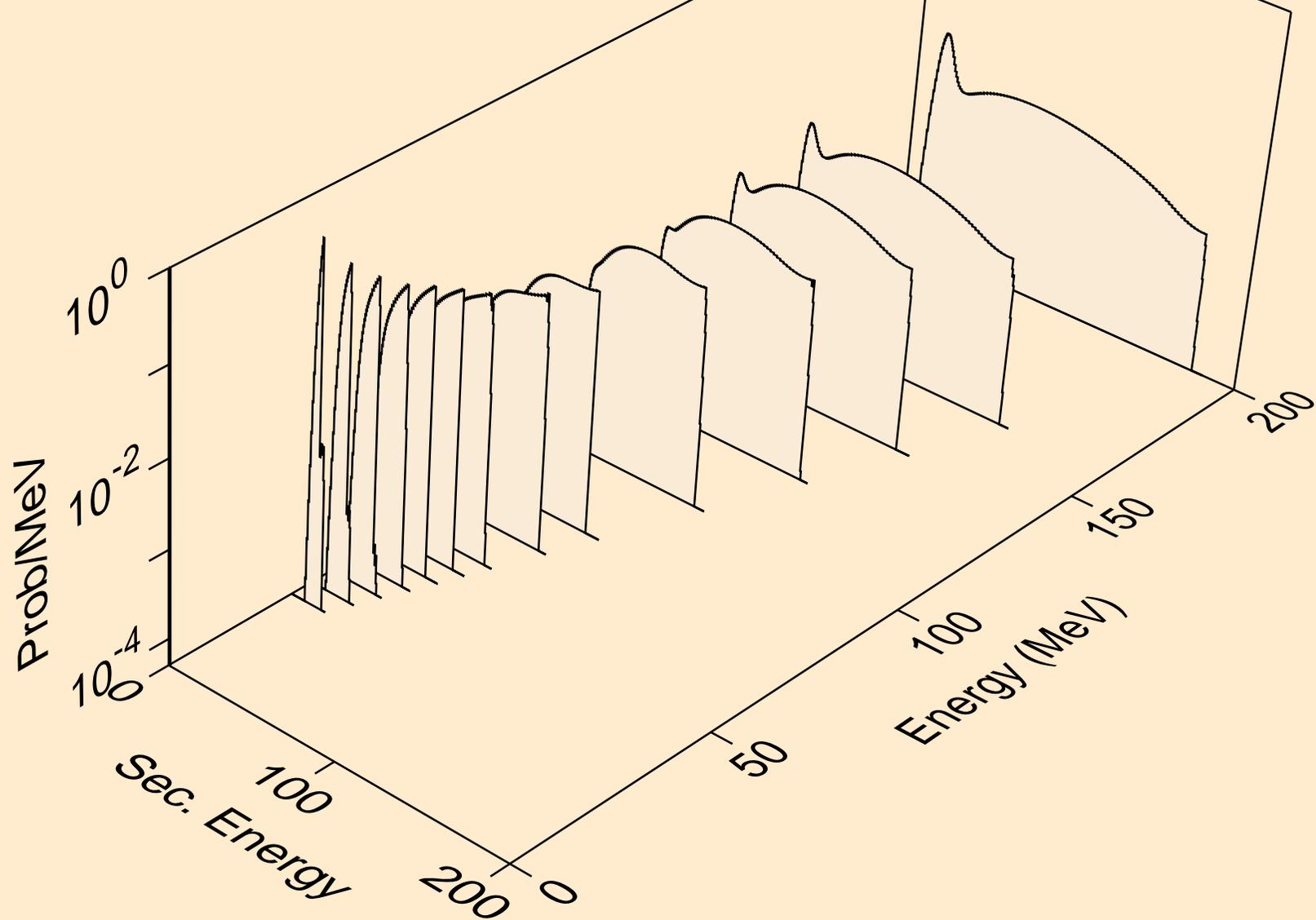
Sec. Energy

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
tritons from (a,n*)t

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
tritons from (a,t)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
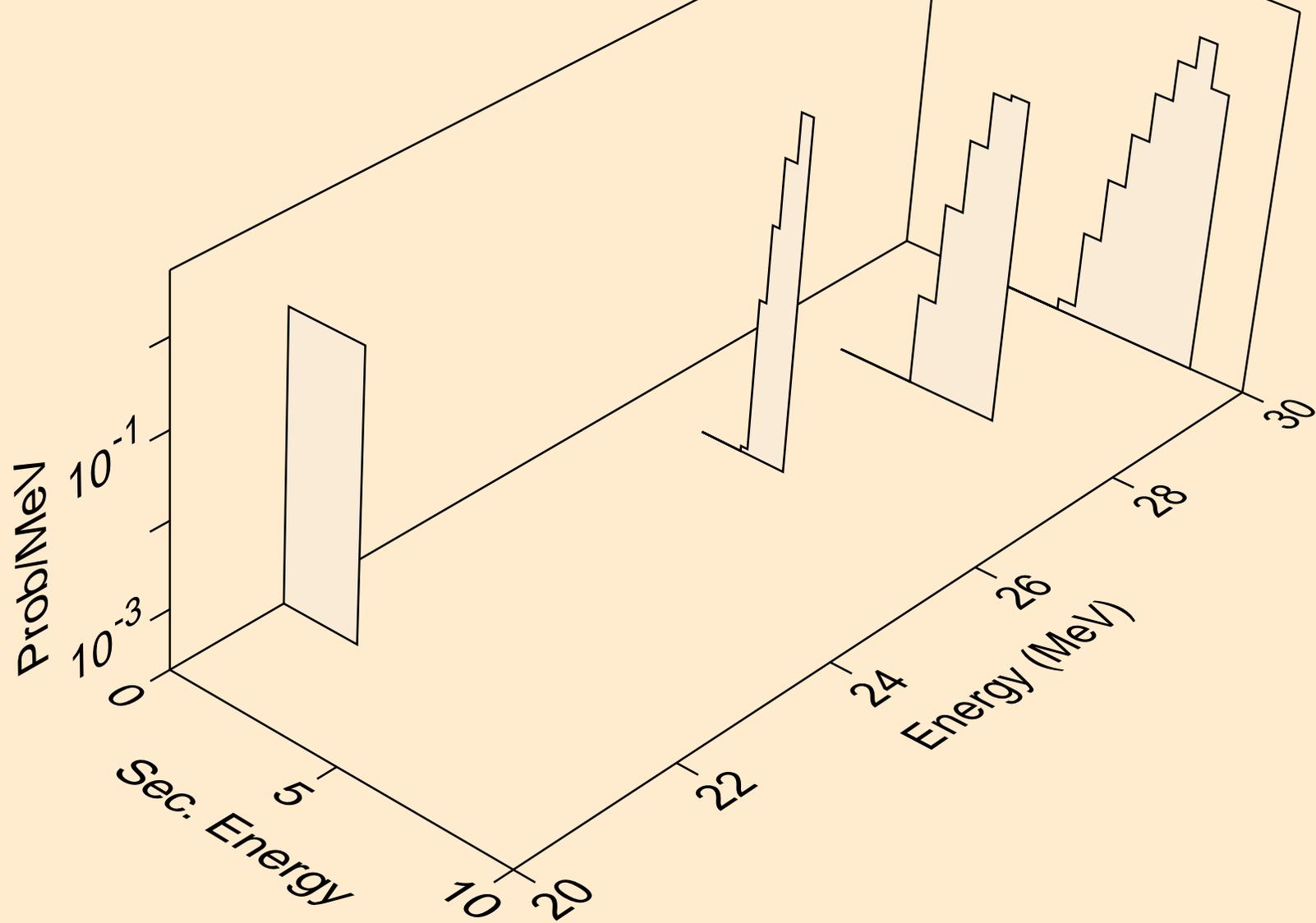tritons from (a,pt)

Prob/MeV

10^0

10^{-2}

Sec. Energy

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
he3s from (a,x)

Prob/MeV

10^0

10^{-2}

10^{-4}

Sec. Energy

100

200

0

50

100

150

200

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
he3s from (a,n*)he3

Prob/MeV

10^{-1}

10^{-3}

0

Sec. Energy

5

10

20

22

24

26

28

30

Energy (MeV)

PD103 ALPHA ACER TENDL-2021 LIBRARY; T=0.K
he3s from (a,he3)