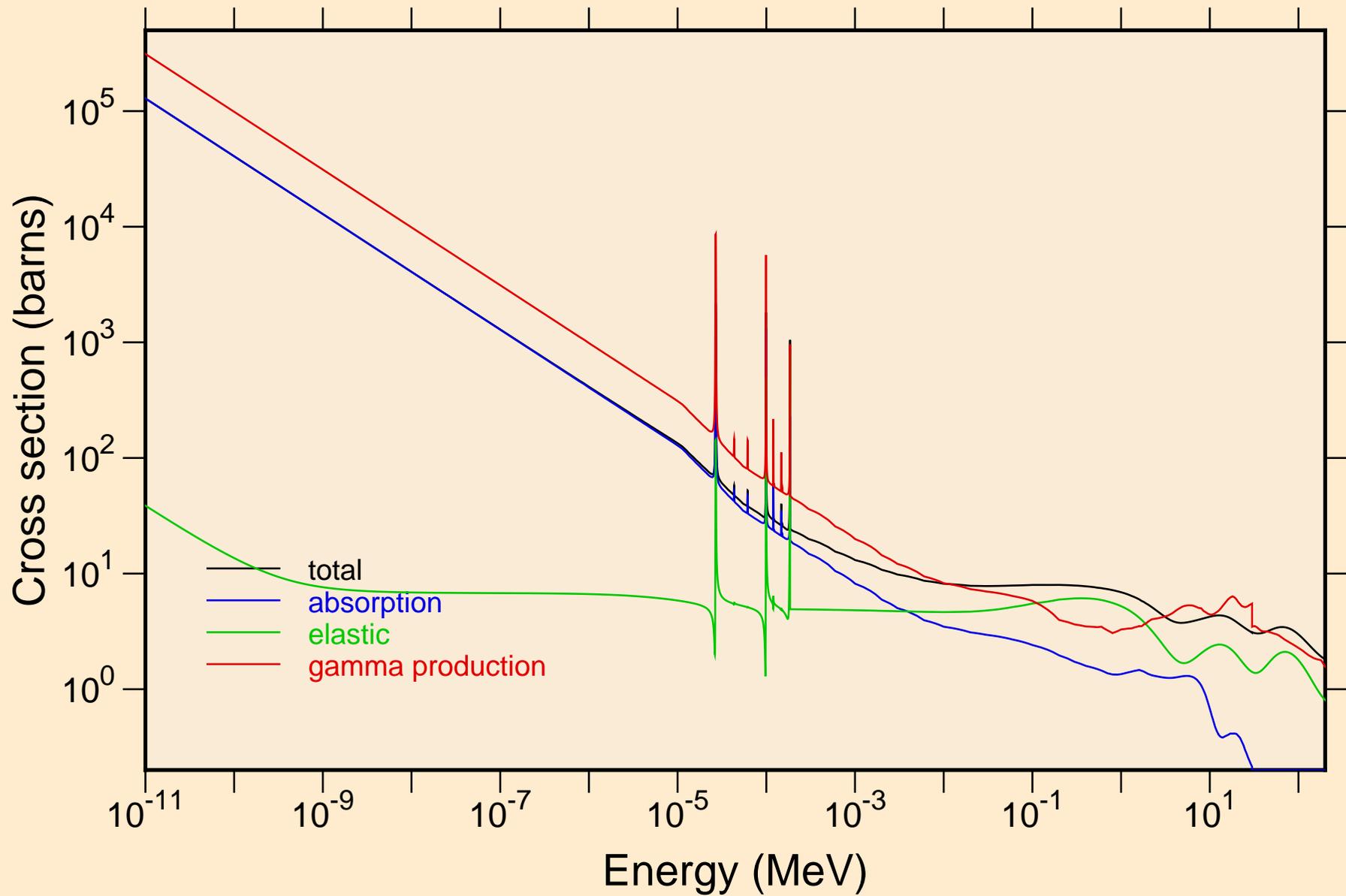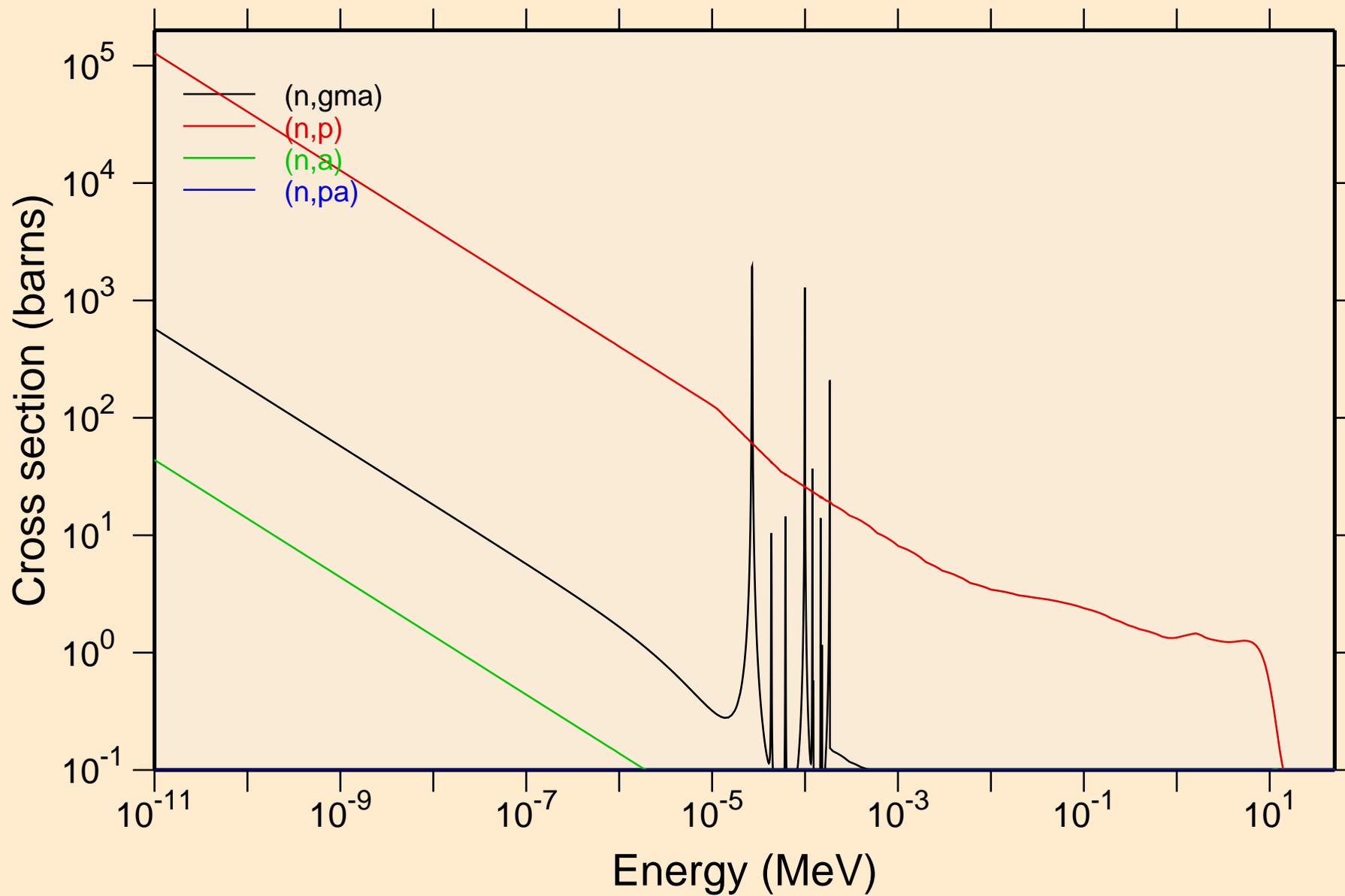N-IN105M NRG TENDL-2017, AKONING
Principal cross sections

N-IN105M NRG TENDL-2017, AKONING
Non-threshold reactions

Legend:
- (n,gma) — black
- (n,p) — red
- (n,a) — green
- (n,pa) — blue

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

N-IN105M NRG TENDL-2017, AKONING
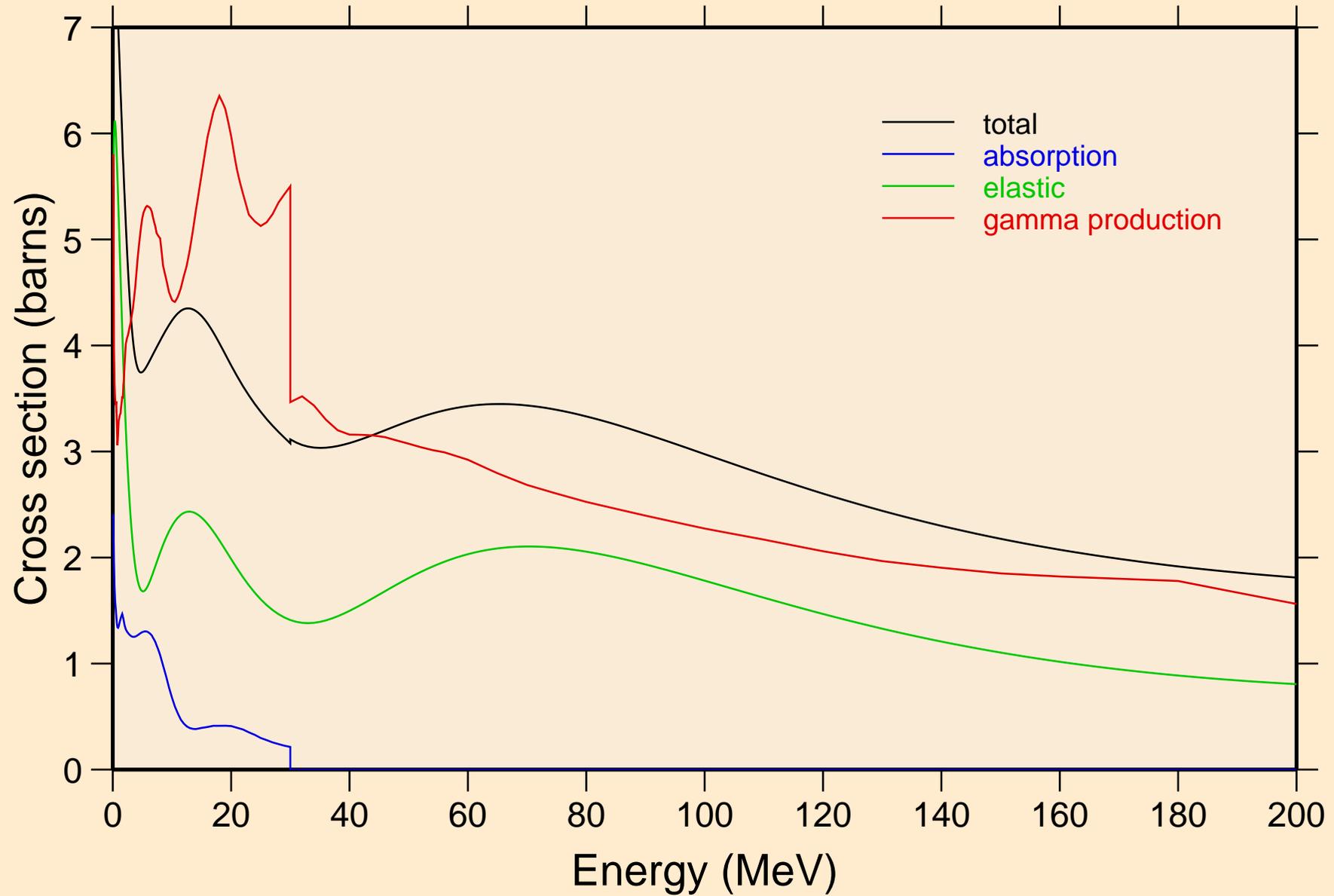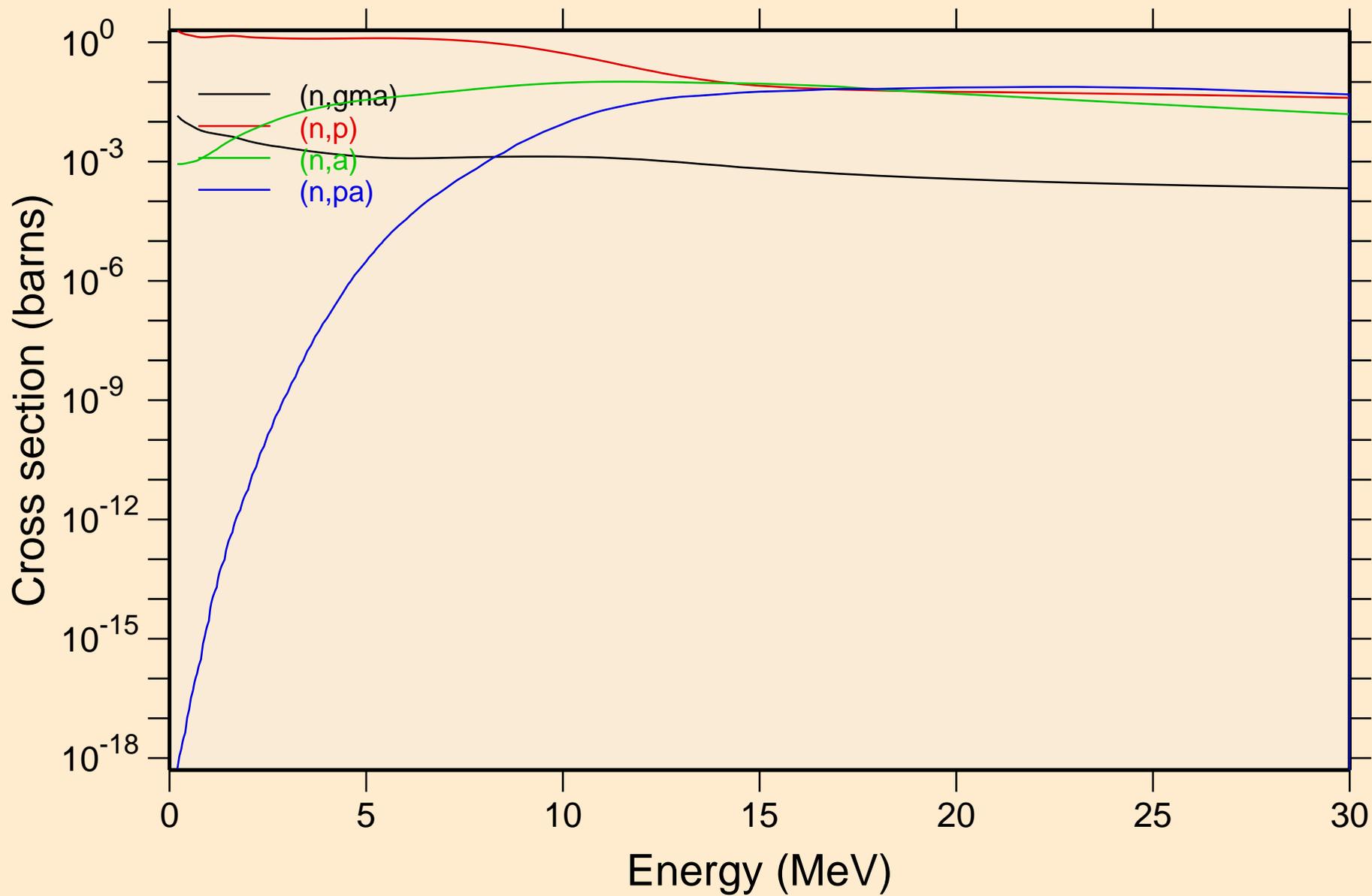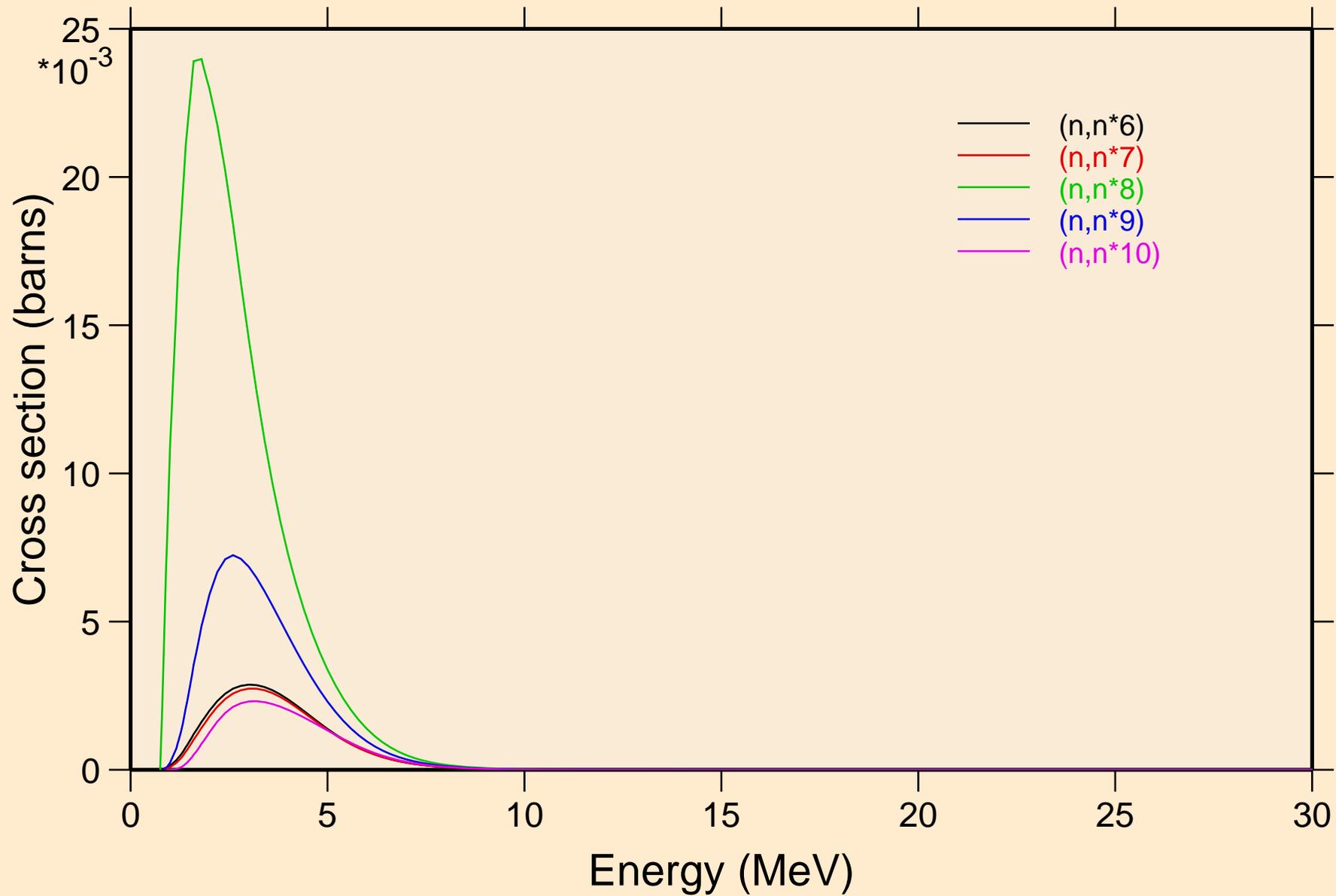Principal cross sections

- total
- absorption
- elastic
- gamma production

N-IN105M NRG TENDL-2017, AKONING
Non-threshold reactions

Cross section (barns)

Energy (MeV)

(n,gma)
(n,p)
(n,a)
(n,pa)

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels
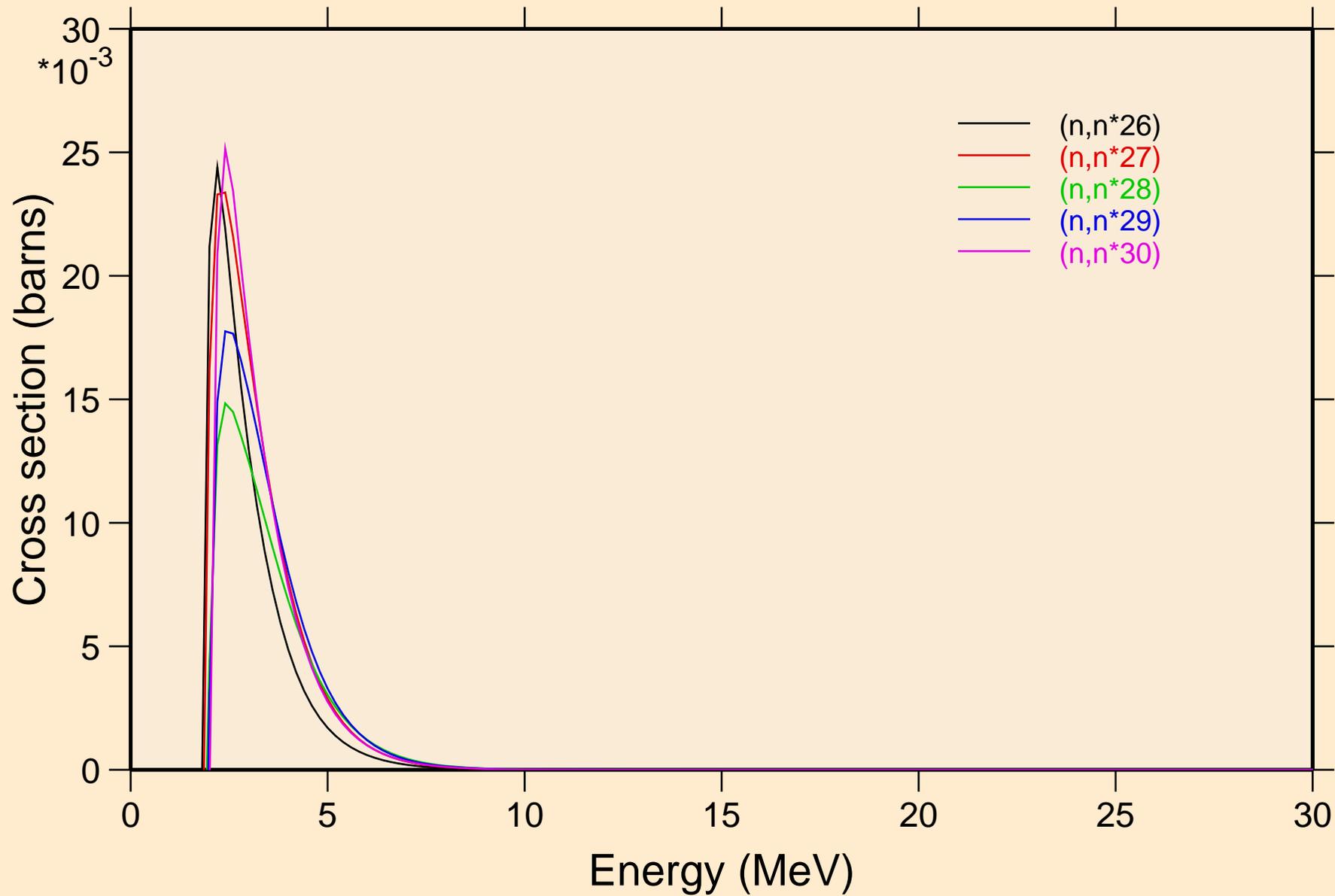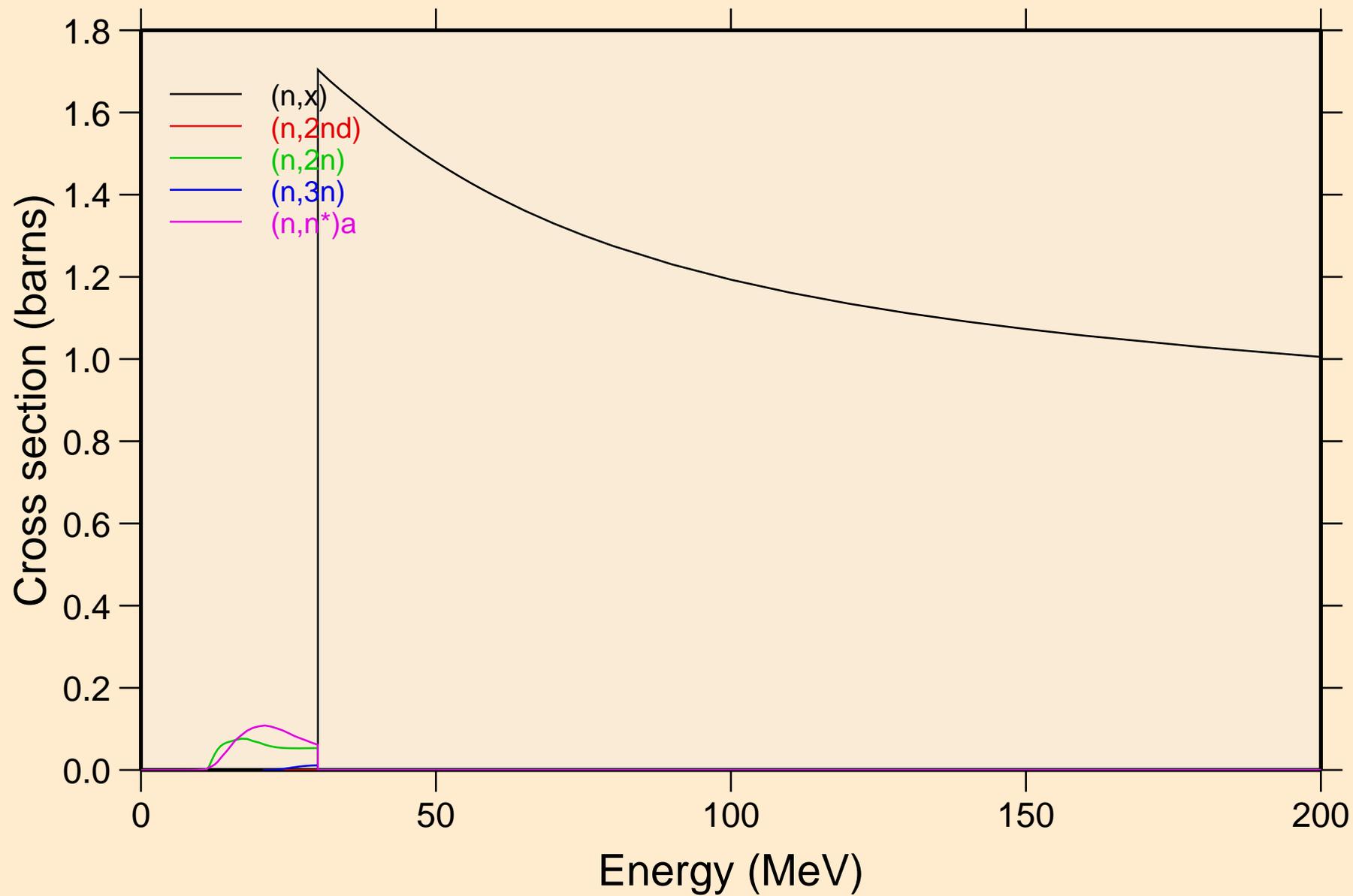
Cross section (barns)

*10^{-3}

(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels

Legend:
- (n,n*11)
- (n,n*12)
- (n,n*13)
- (n,n*14)
- (n,n*15)

X-axis: Energy (MeV)
Y-axis: Cross section (barns) $\times 10^{-3}$

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels

Cross section (barns)

$*10^{-3}$

Energy (MeV)

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

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels

Cross section (barns)

Energy (MeV)

*10^{-3}

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

N-IN105M NRG TENDL-2017, AKONING
Inelastic levels

*10^{-3}

Cross section (barns)

Energy (MeV)

(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

N-IN105M NRG TENDL-2017, AKONING
Threshold reactions

Legend:
- (n,x)
- (n,2nd)
- (n,2n)
- (n,3n)
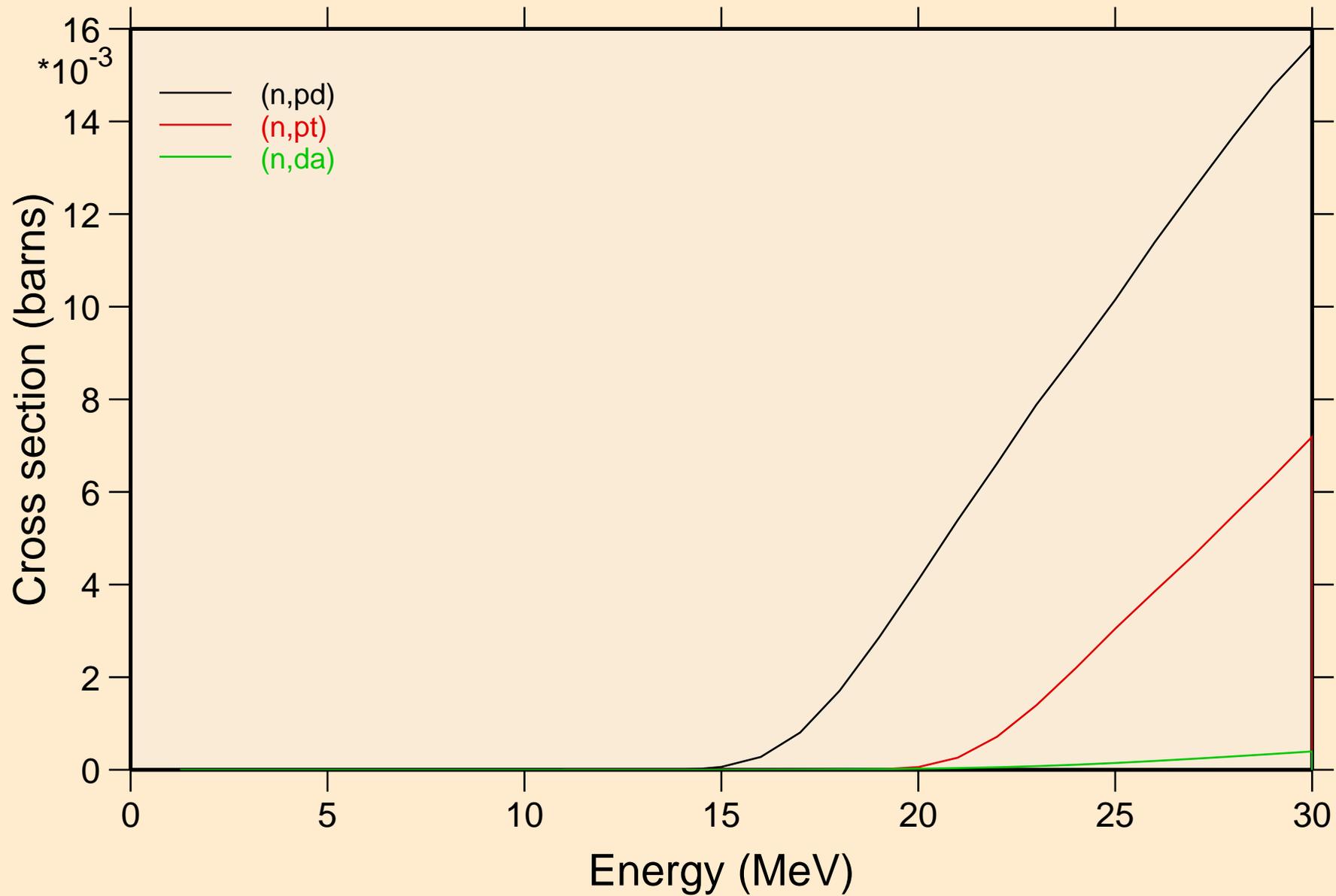- (n,n*)a

N-IN105M NRG TENDL-2017, AKONING
Threshold reactions

N-IN105M NRG TENDL-2017, AKONING
Threshold reactions

N-IN105M NRG TENDL-2017, AKONING
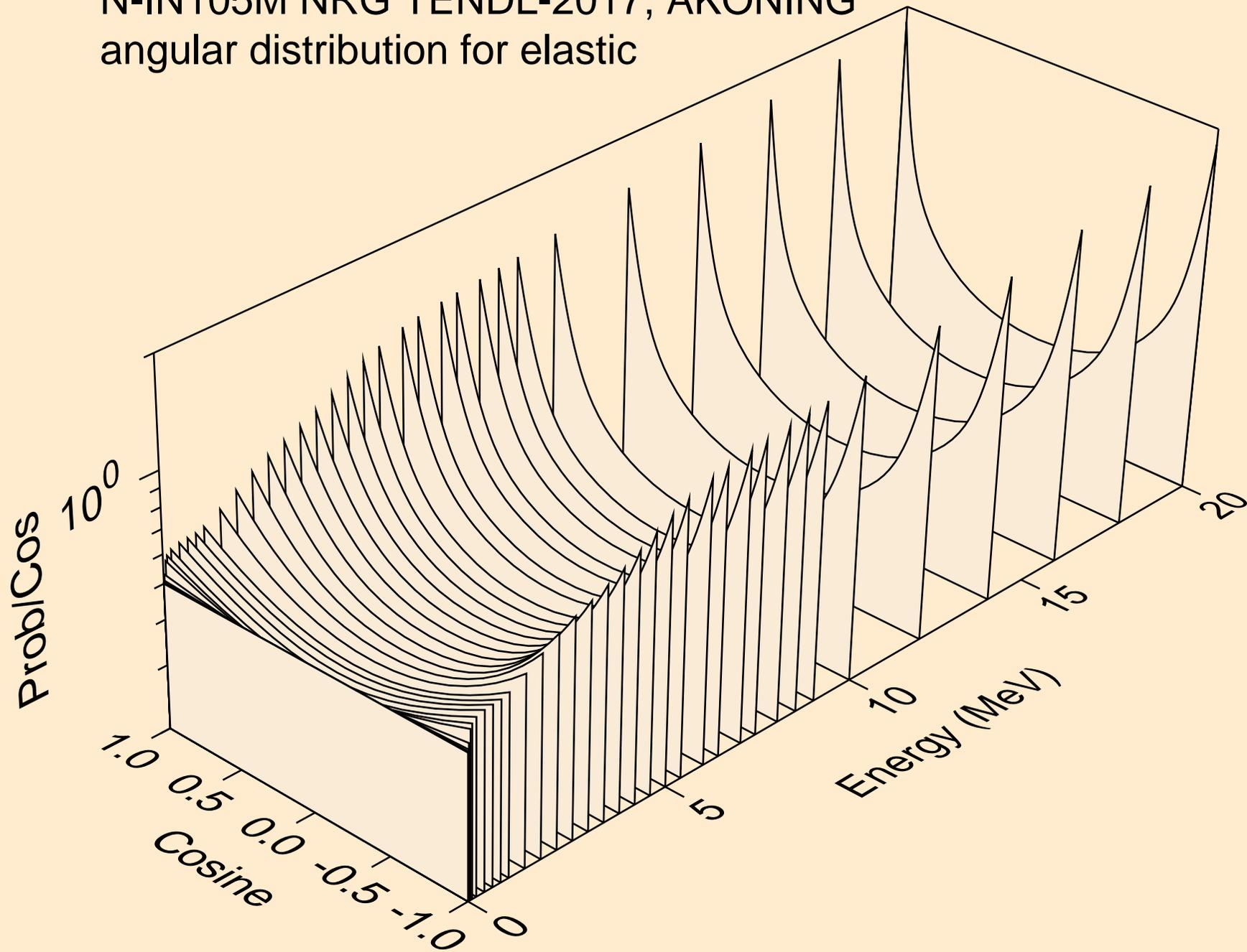Threshold reactions

Legend:
- (n,2np) — black
- (n,npa) — red
- (n,n*c) — green
- (n,d) — blue
- (n,t) — magenta

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

N-IN105M NRG TENDL-2017, AKONING
Threshold reactions

Cross section (barns) — *10⁻³

Legend:
- (n,he3) — black
- (n,2a) — red
- (n,3a) — green
- (n,2p) — blue
- (n,d2a) — magenta

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
Threshold reactions

- (n,pd)
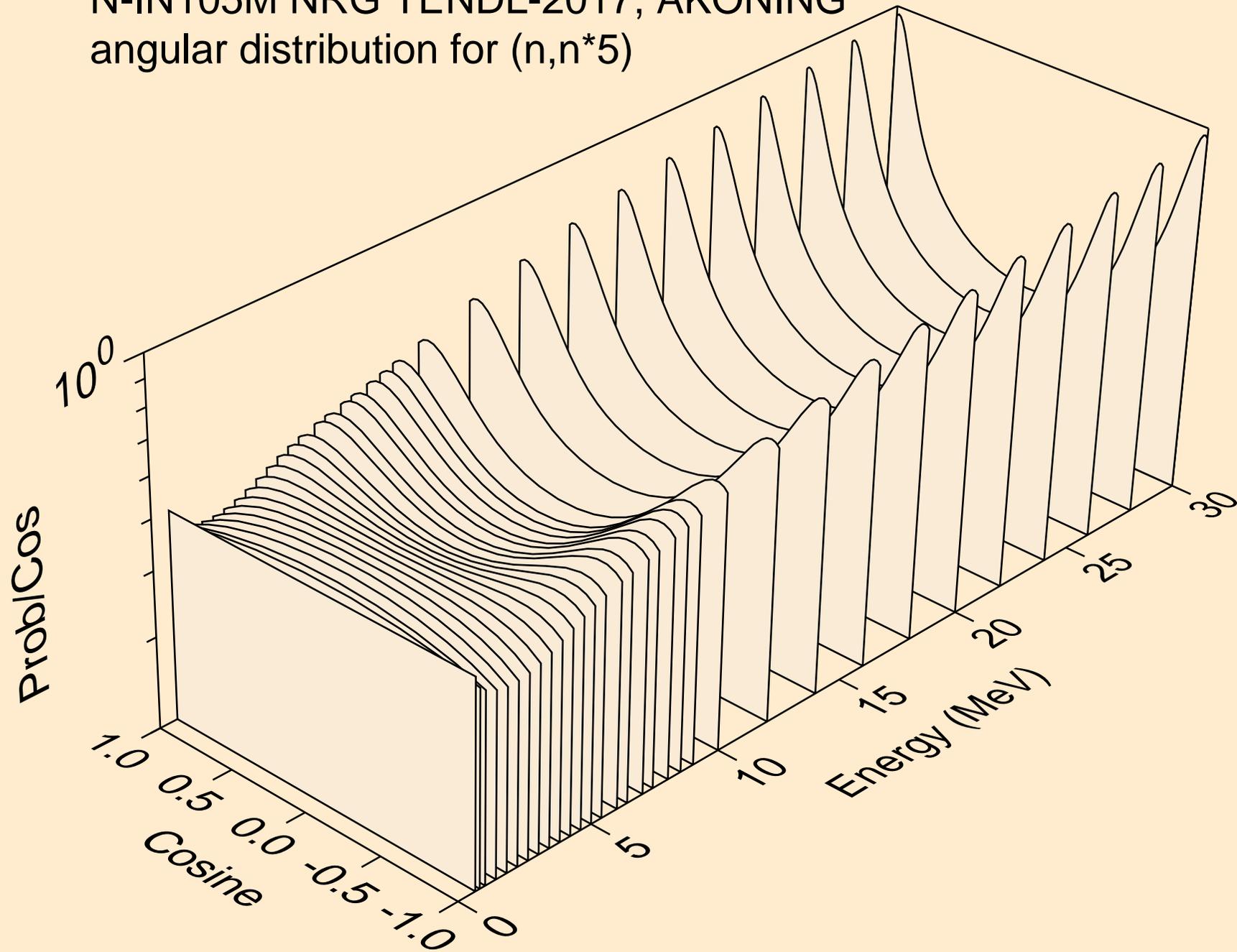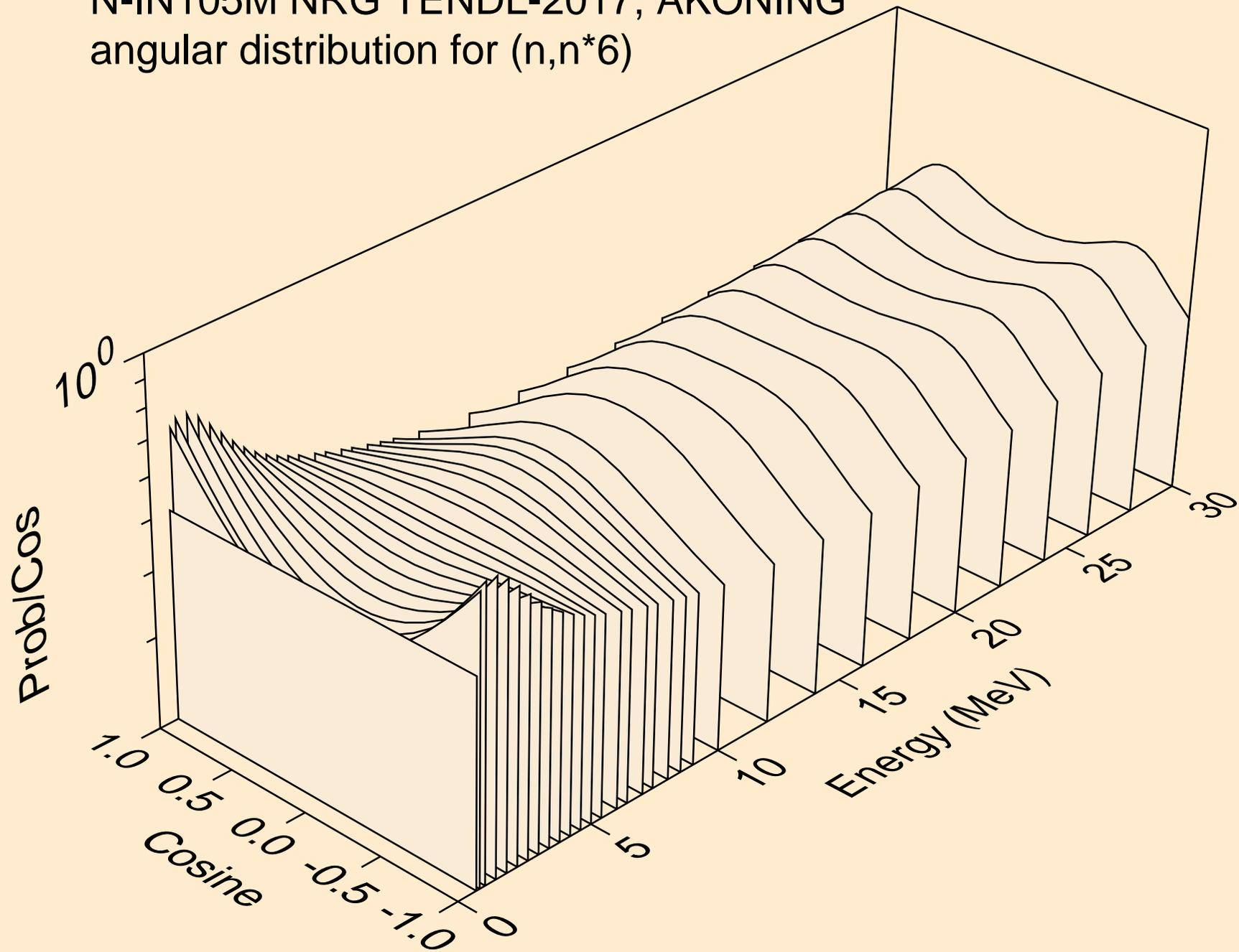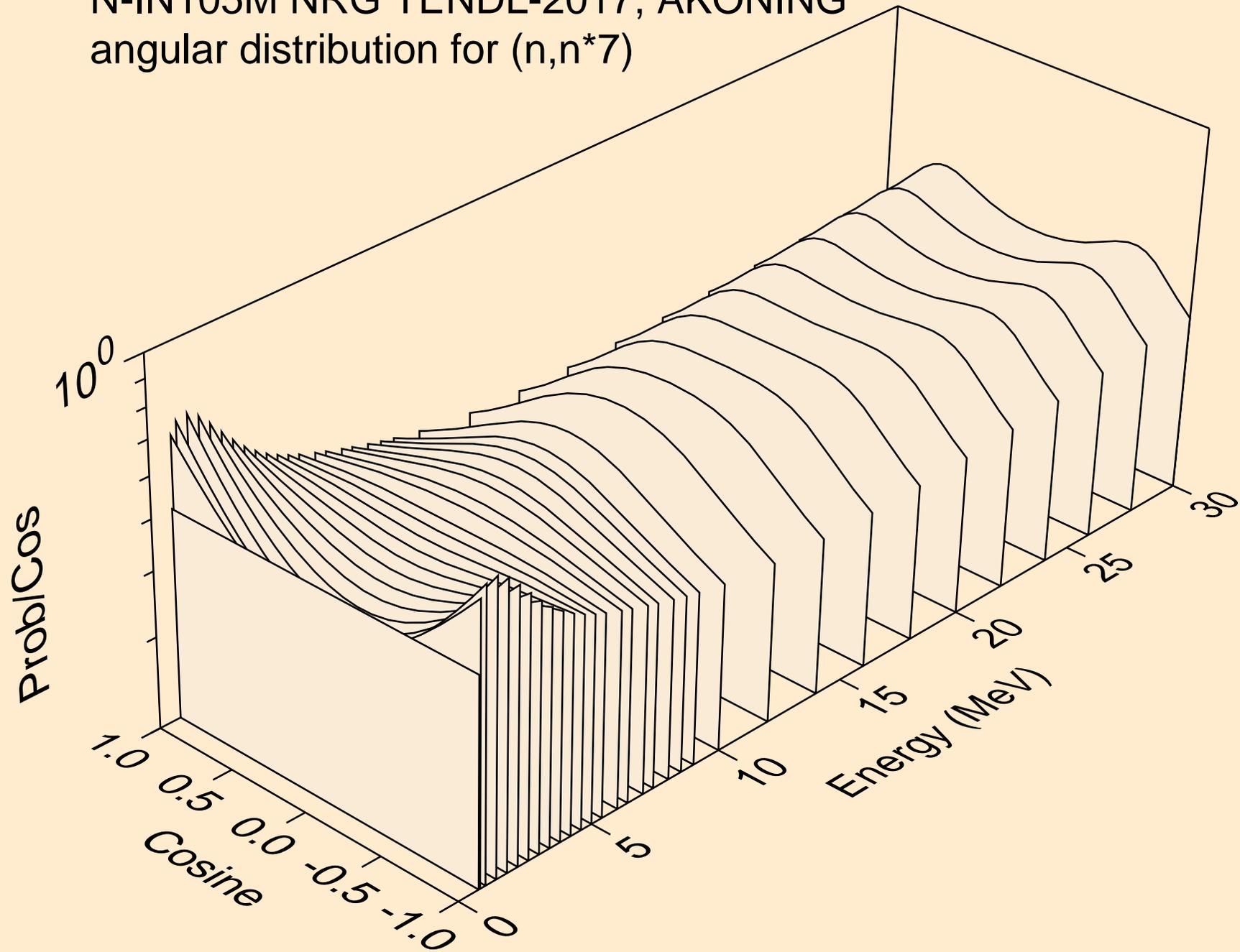- (n,pt)
- (n,da)

Cross section (barns)

Energy (MeV)
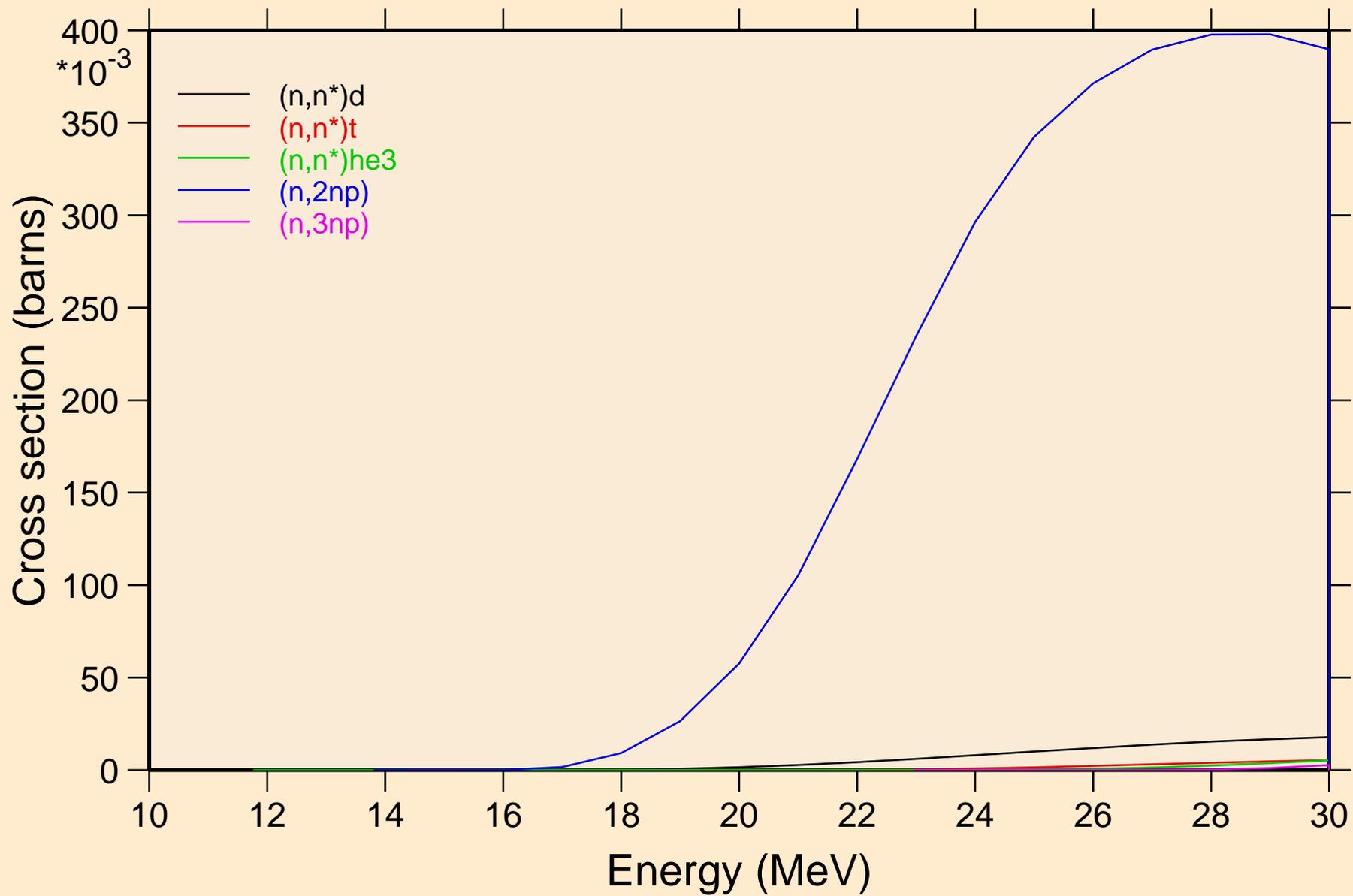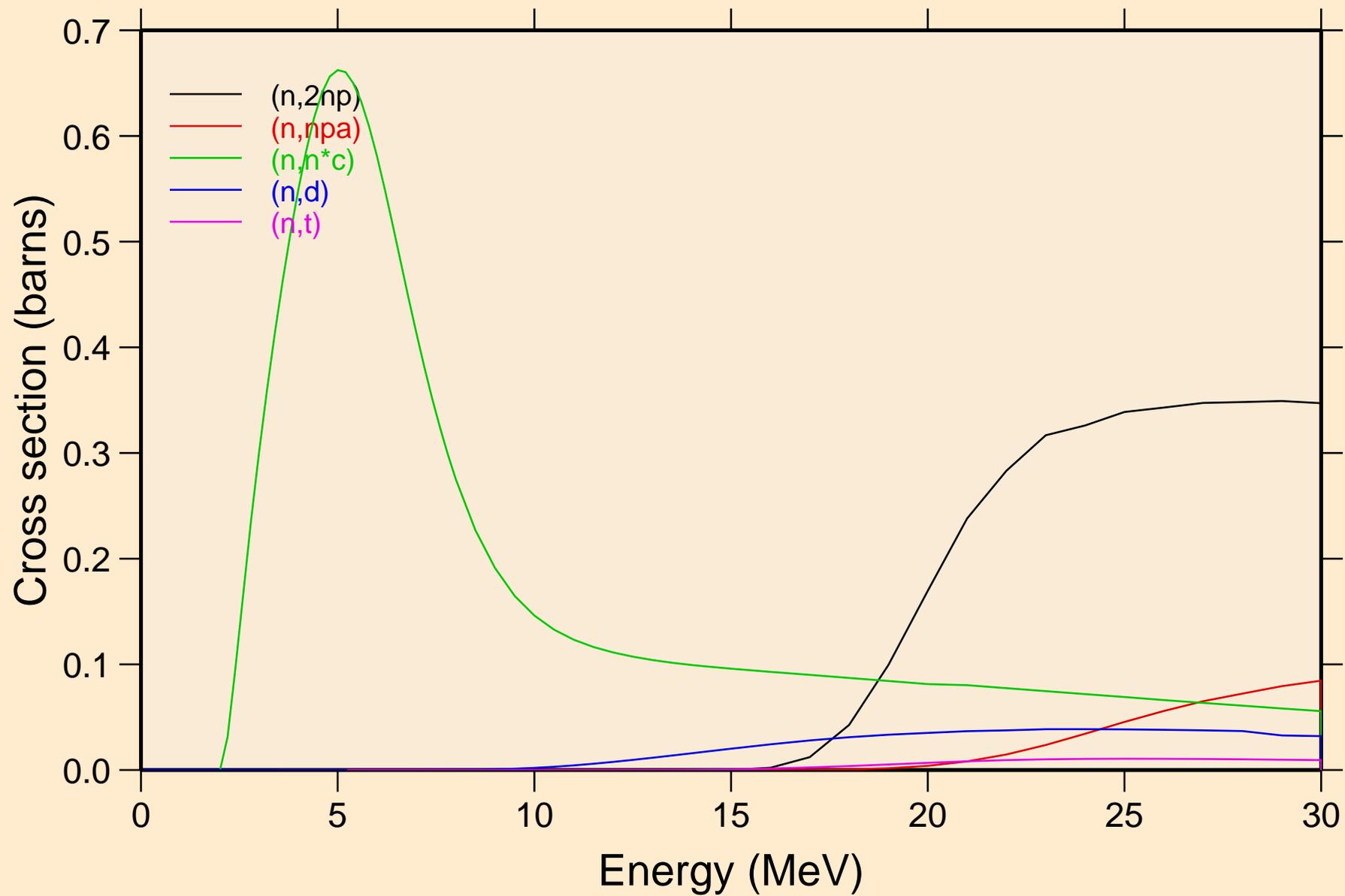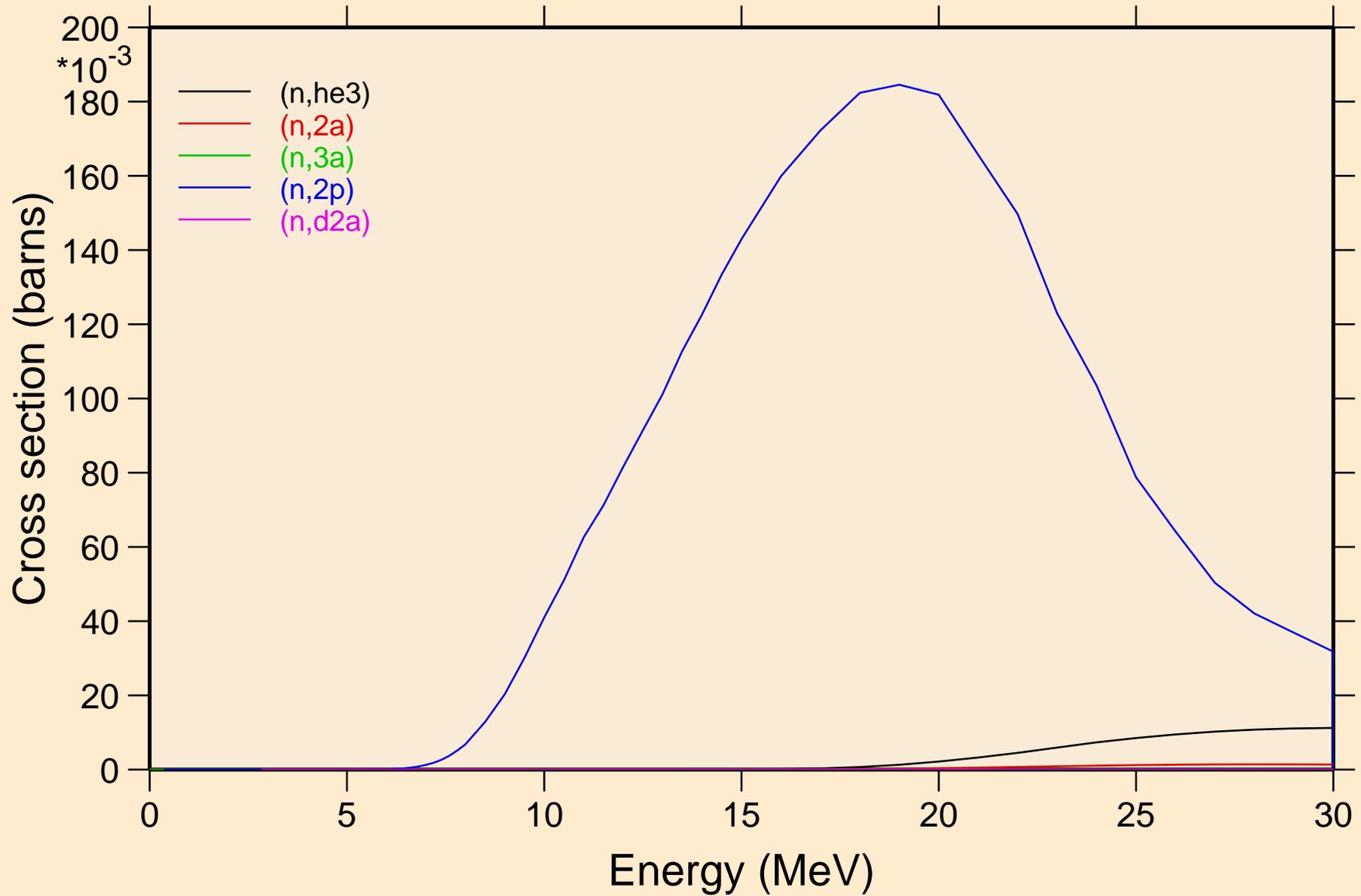
N-IN105M NRG TENDL-2017, AKONING
angular distribution for elastic

N-IN105M NRG TENDL-2017, AKONING
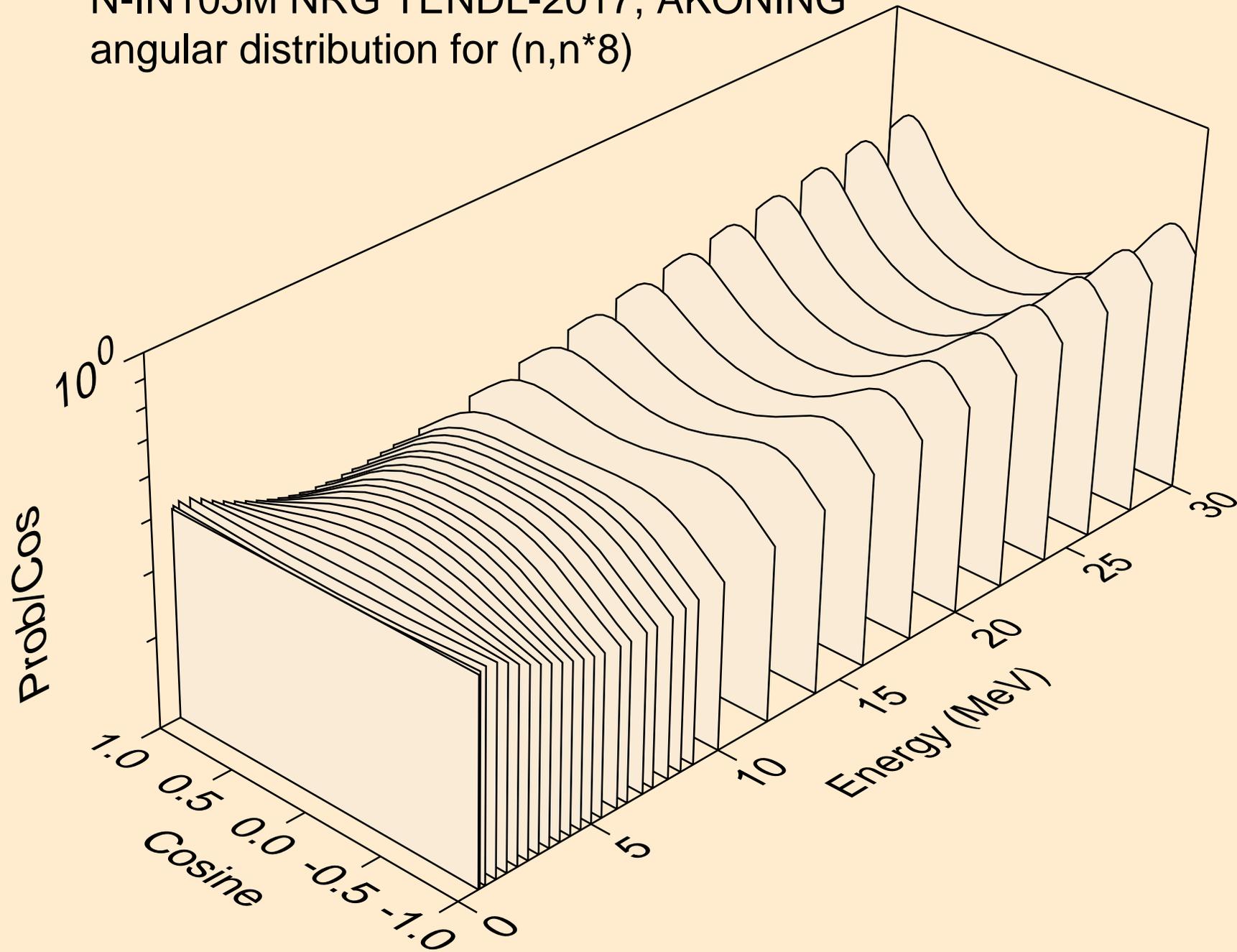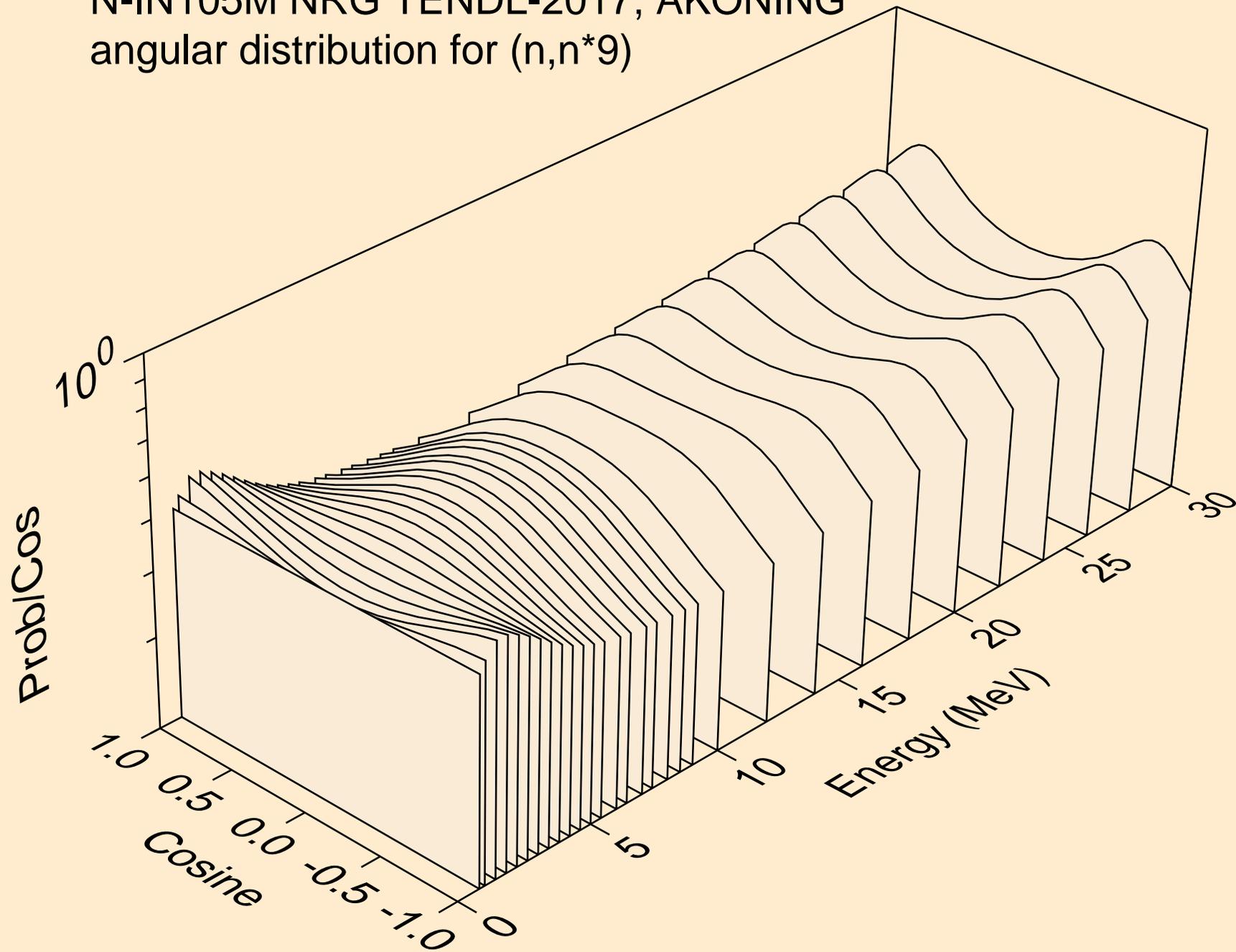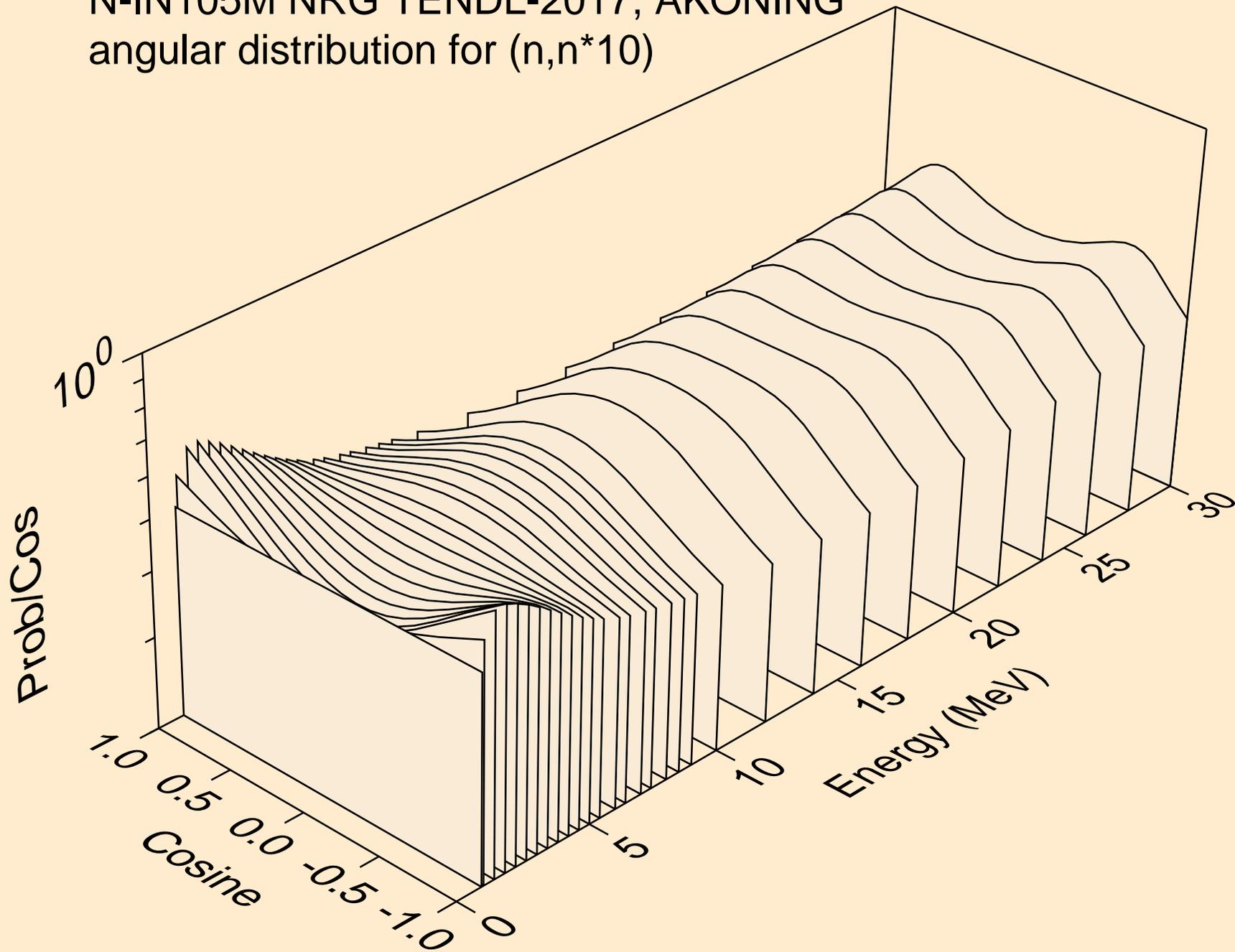angular distribution for elastic
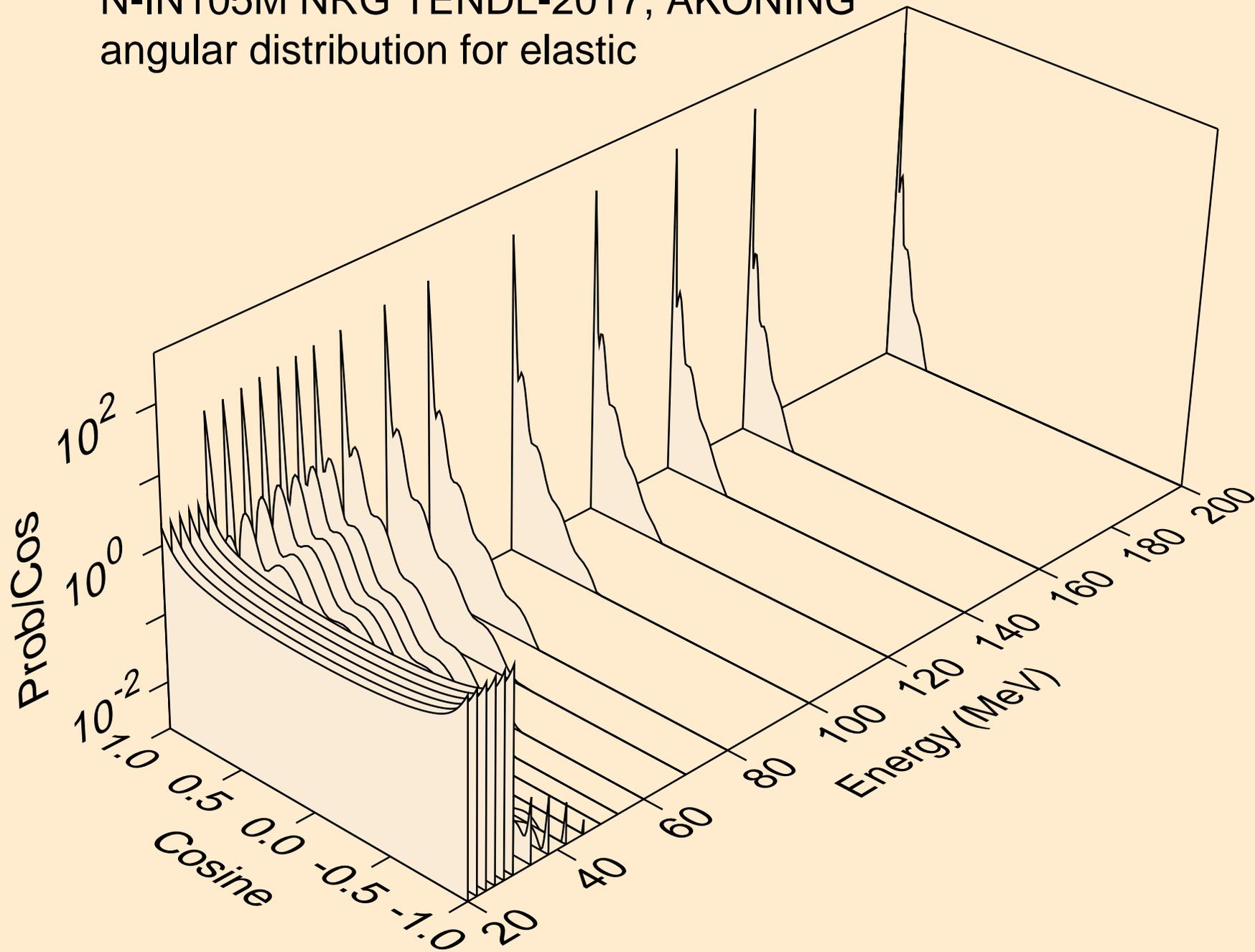
N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*1)
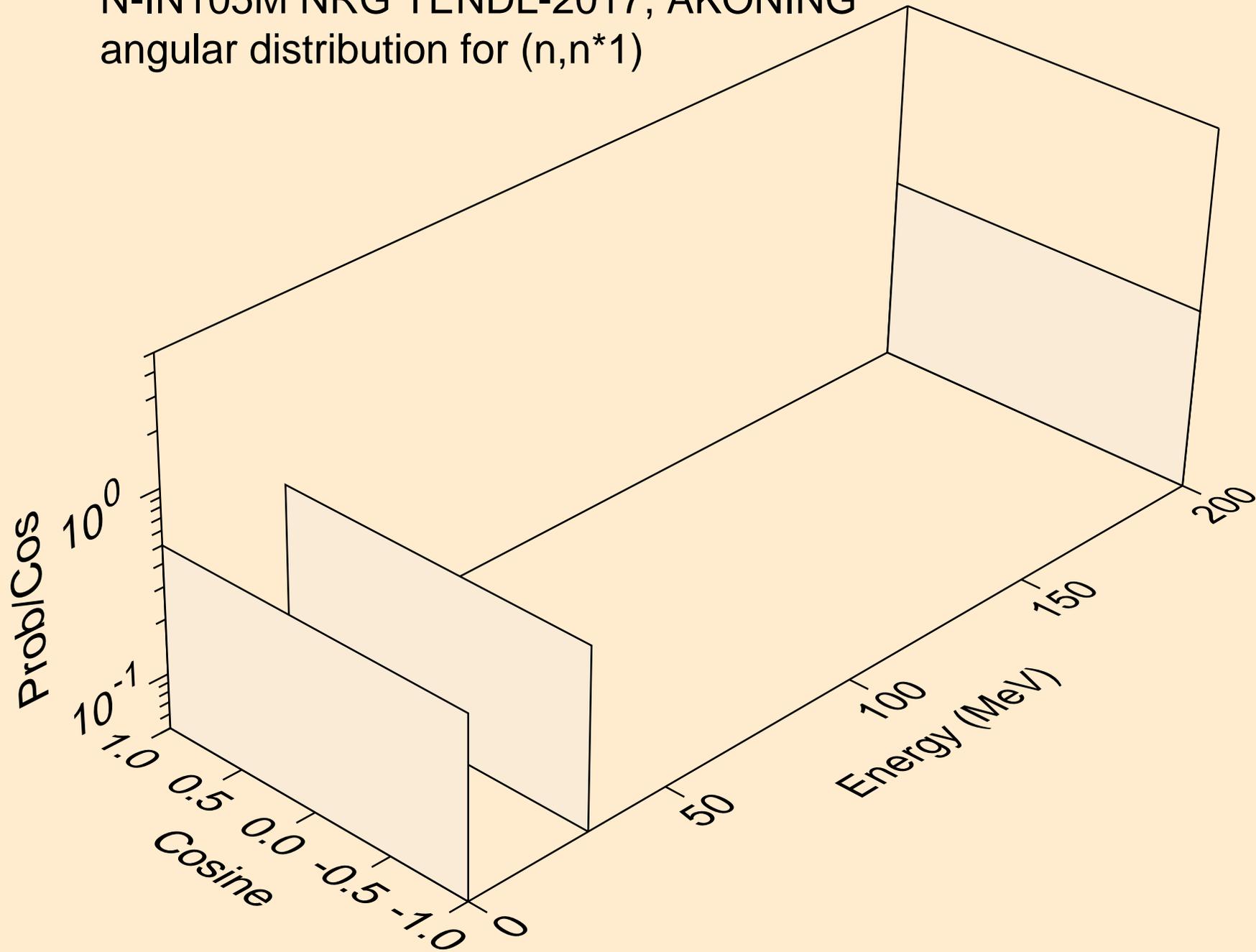
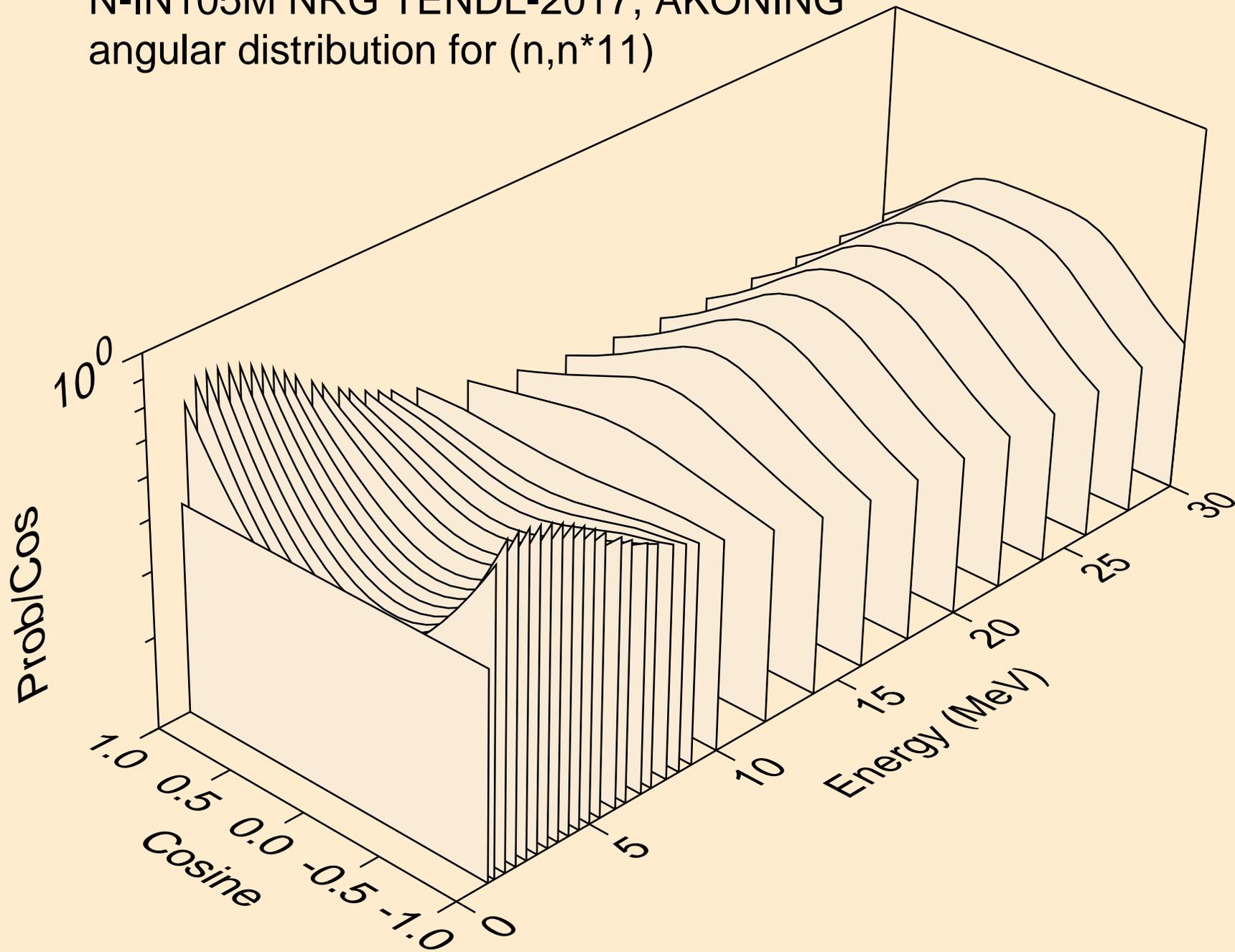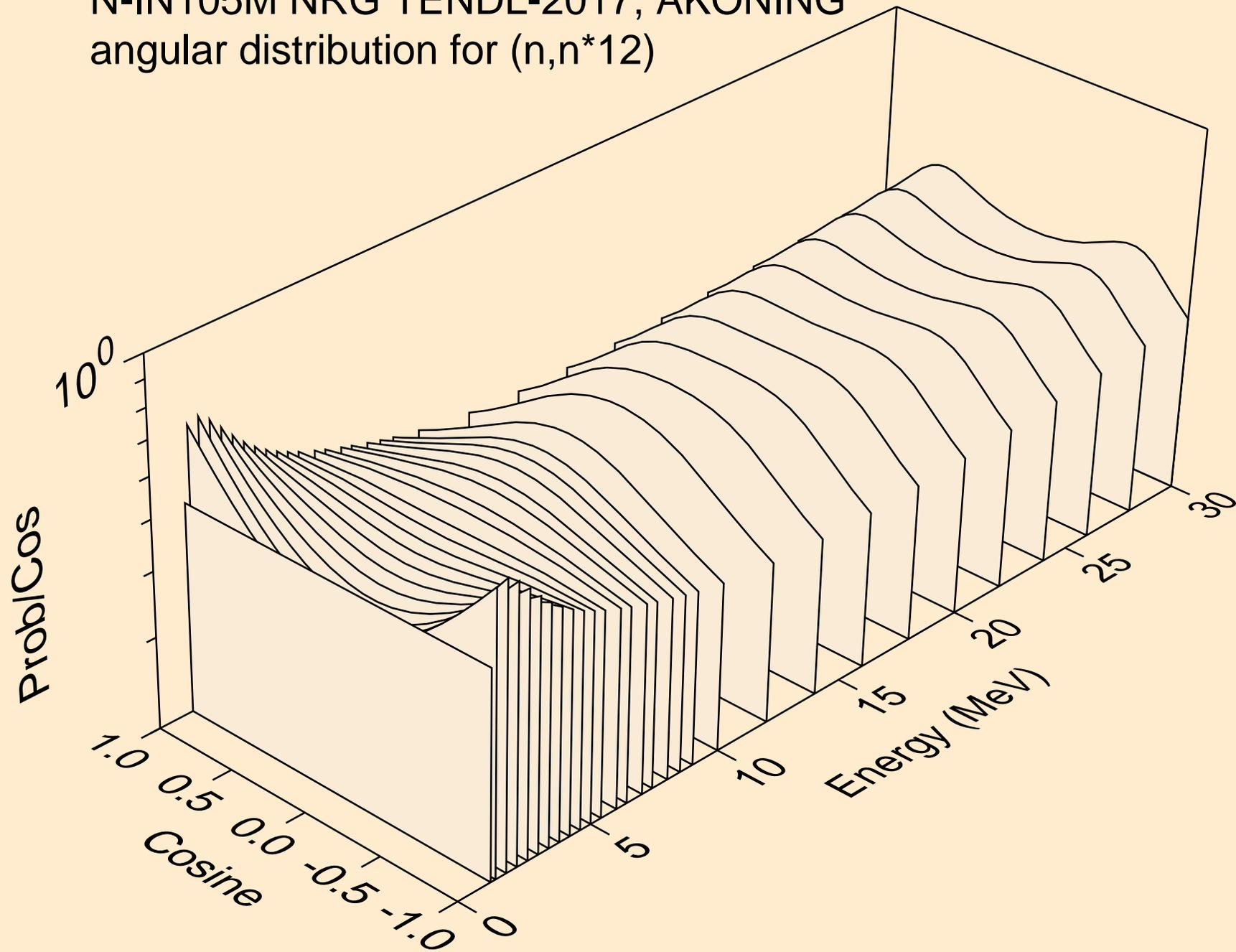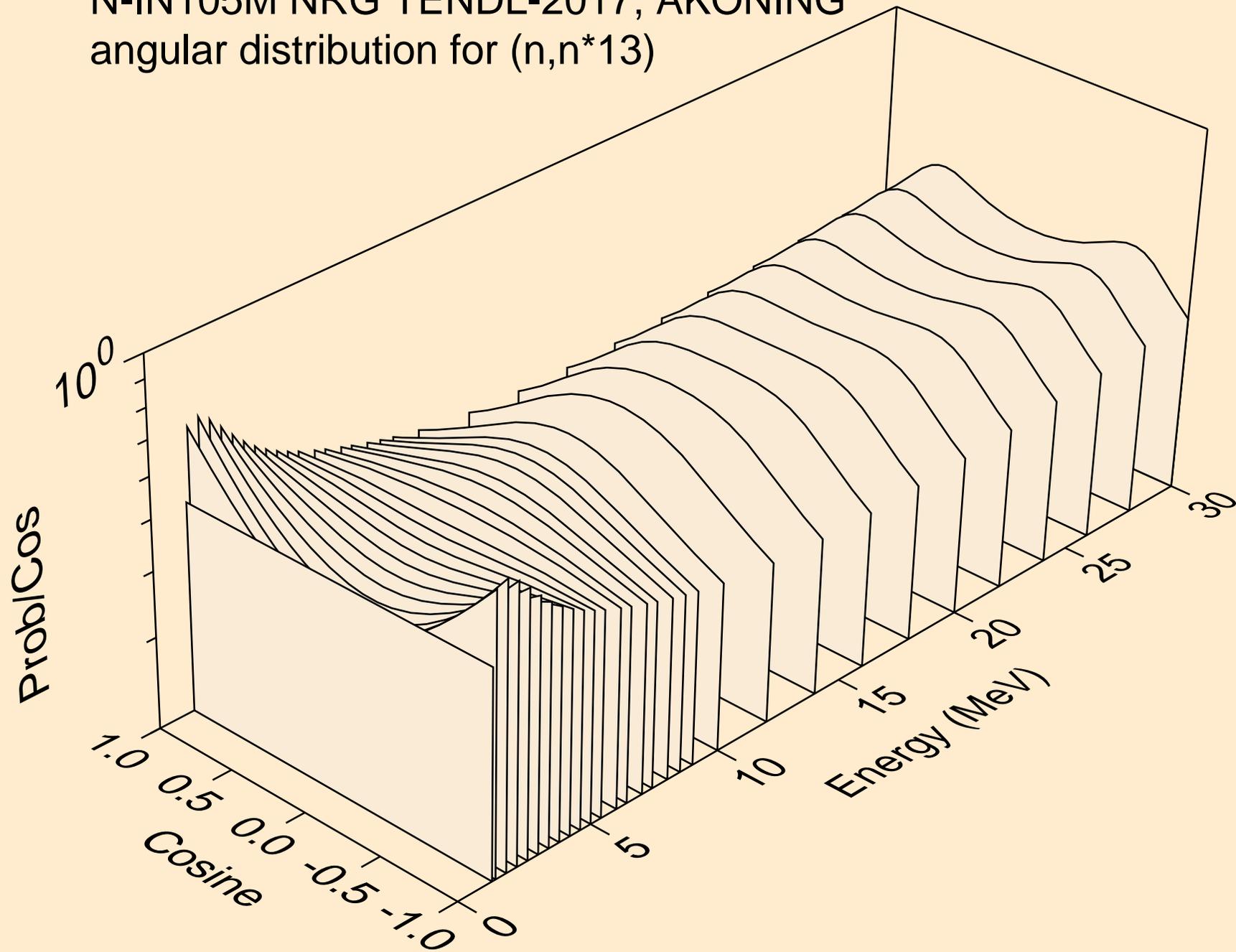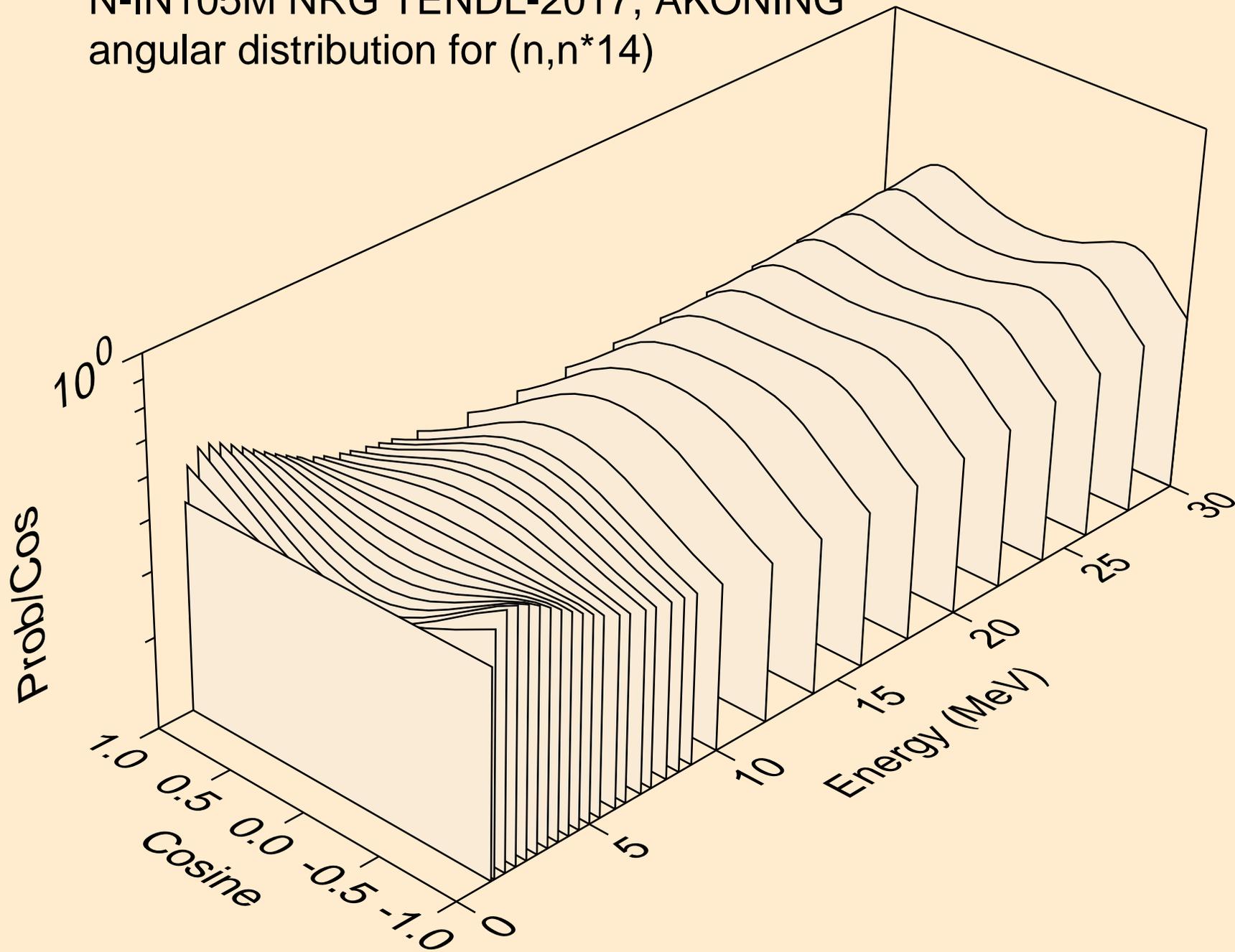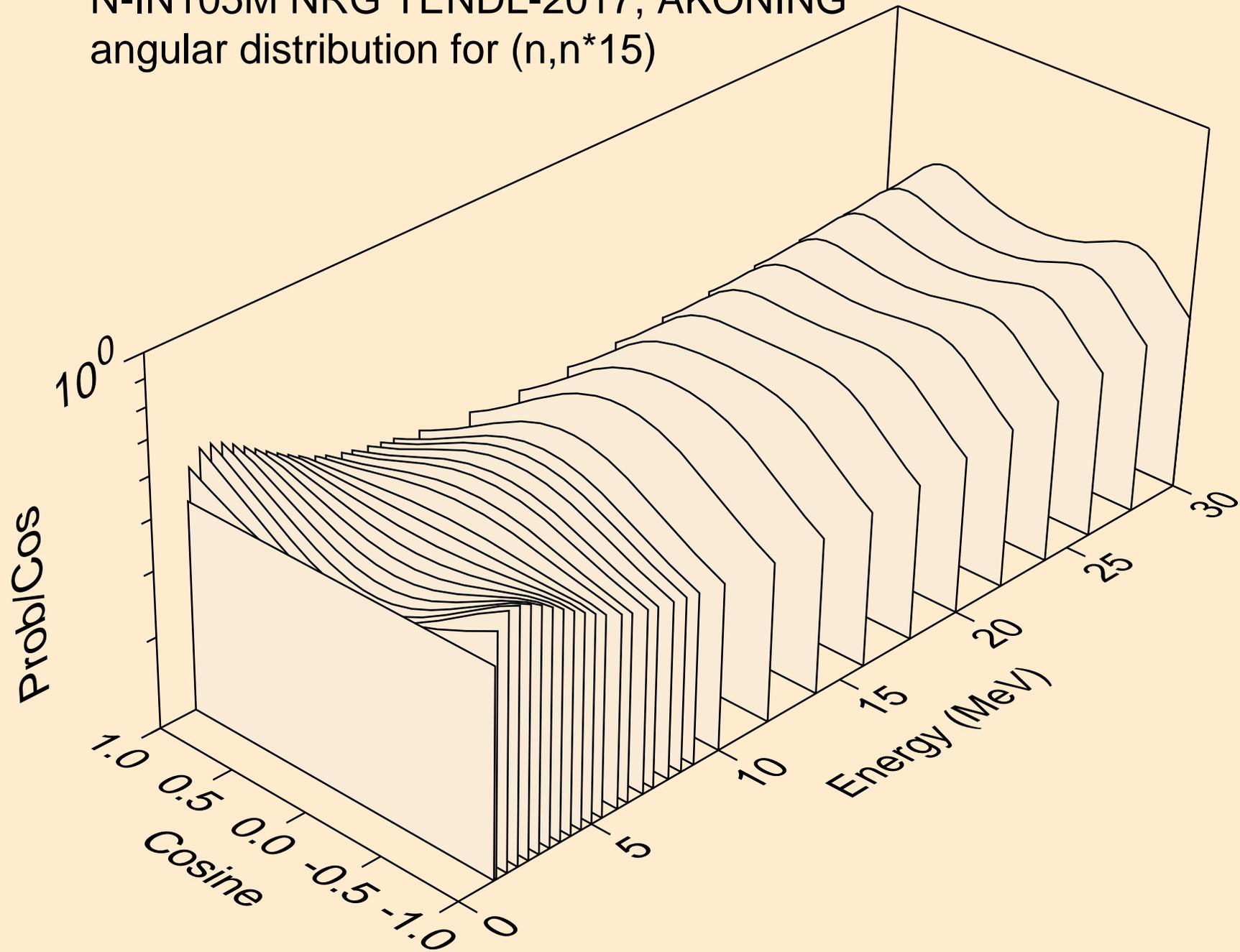N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*2)
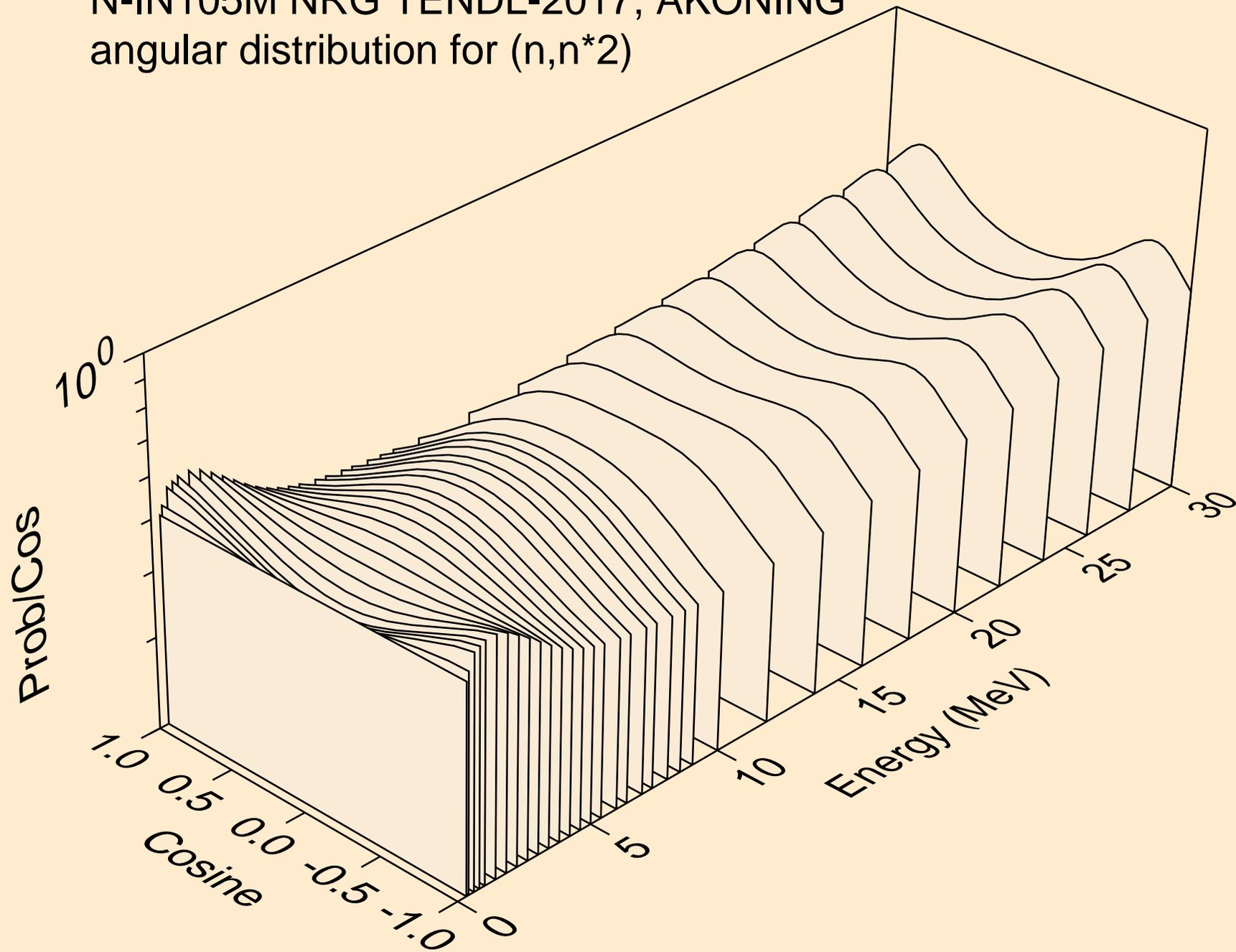
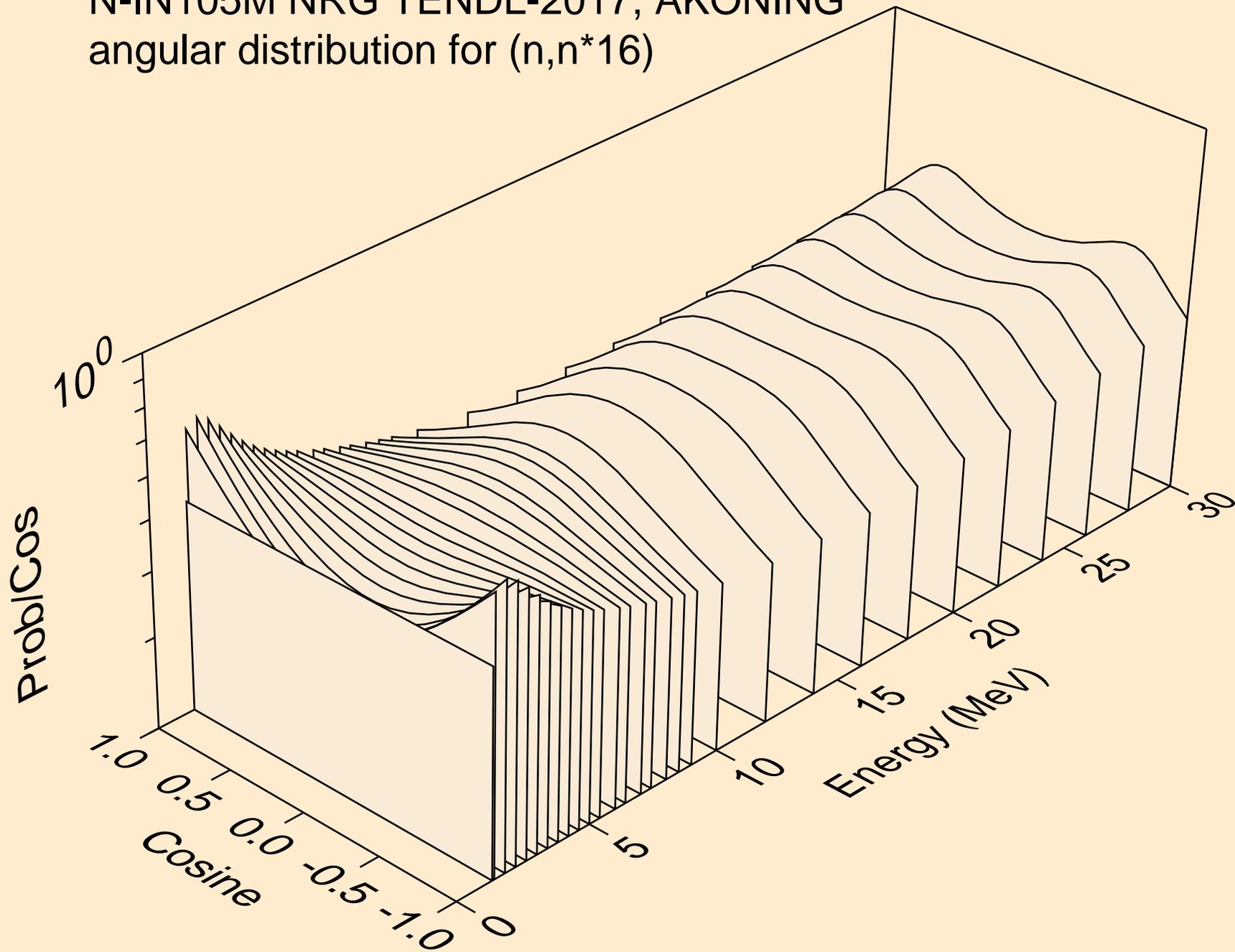N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*3)
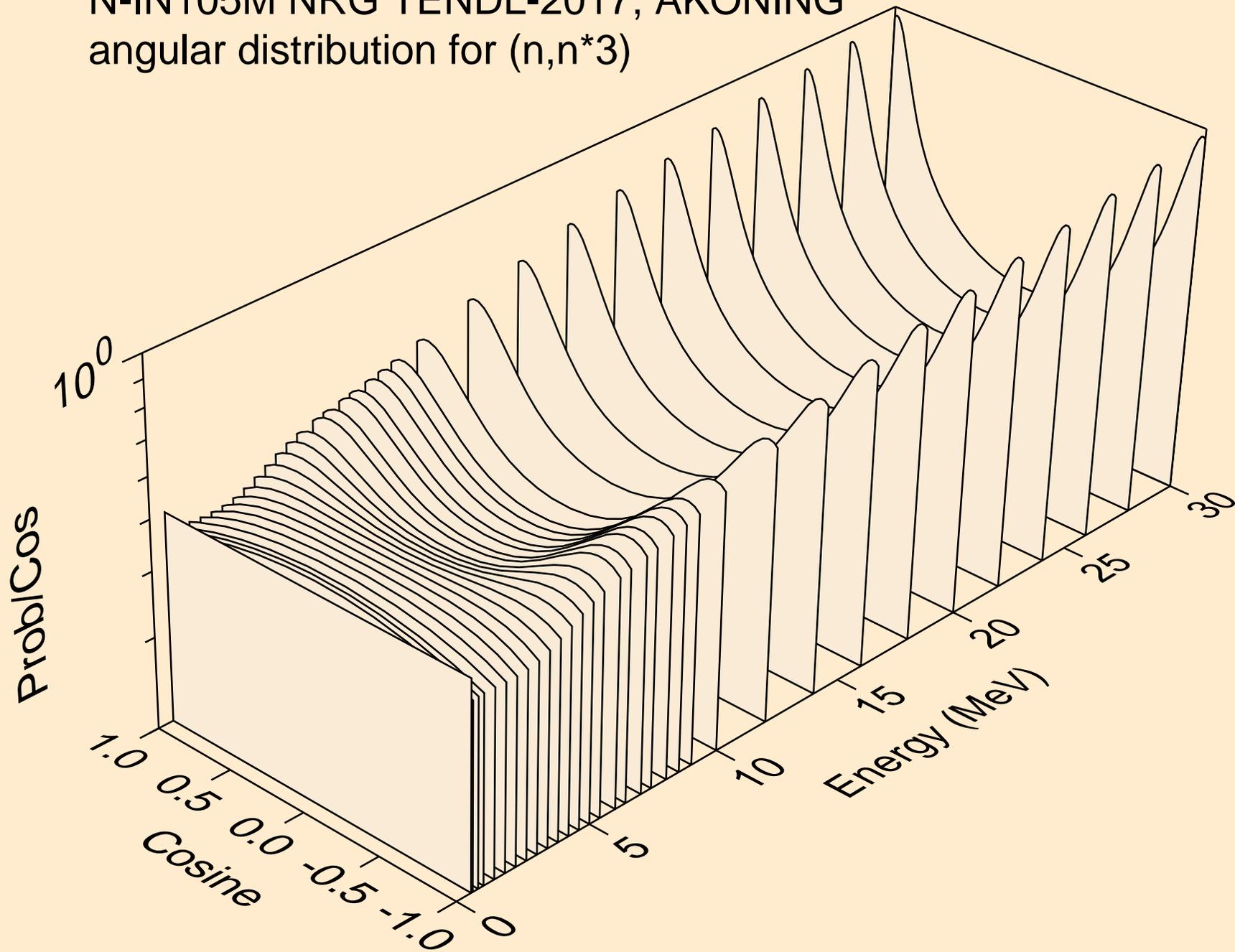
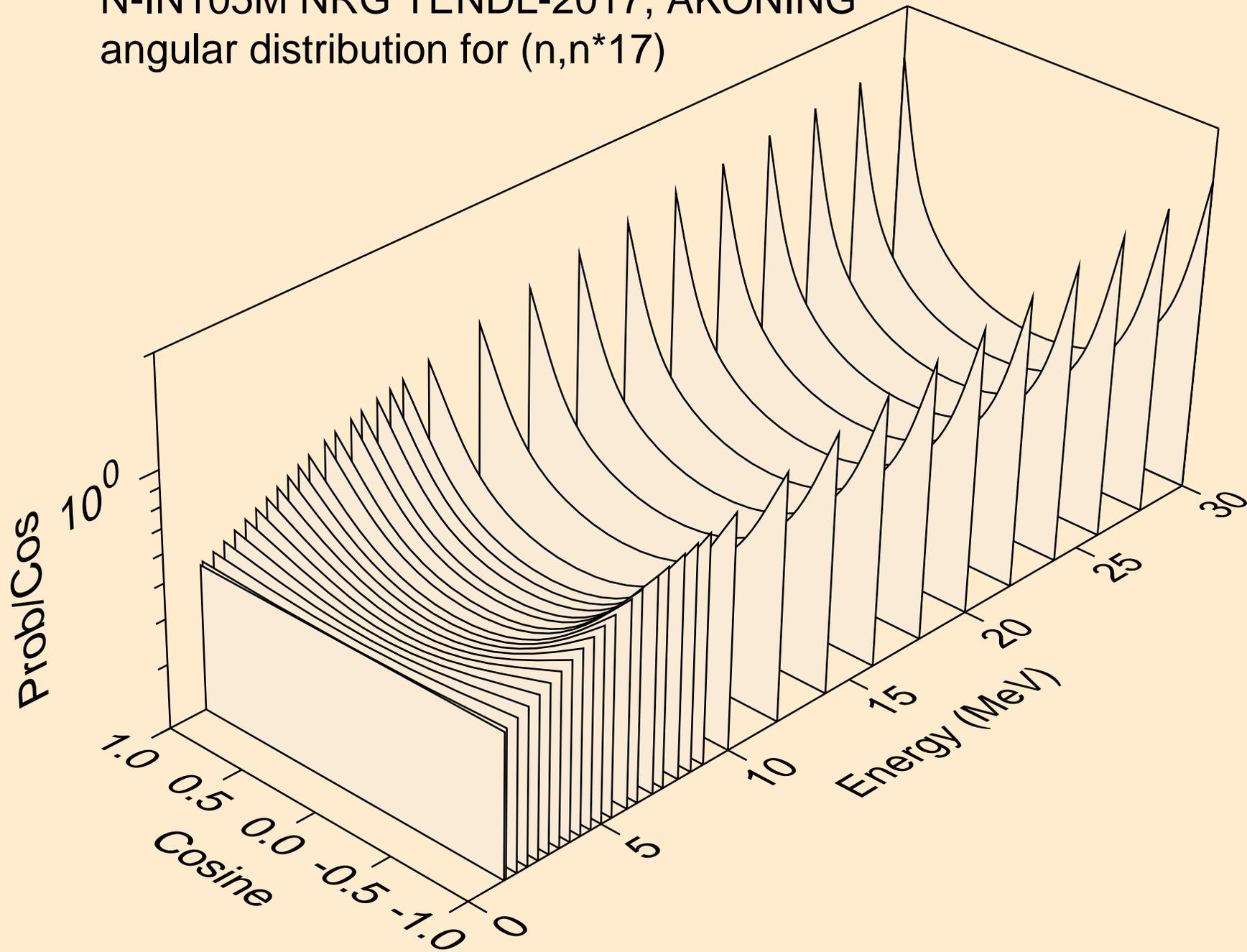N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*4)
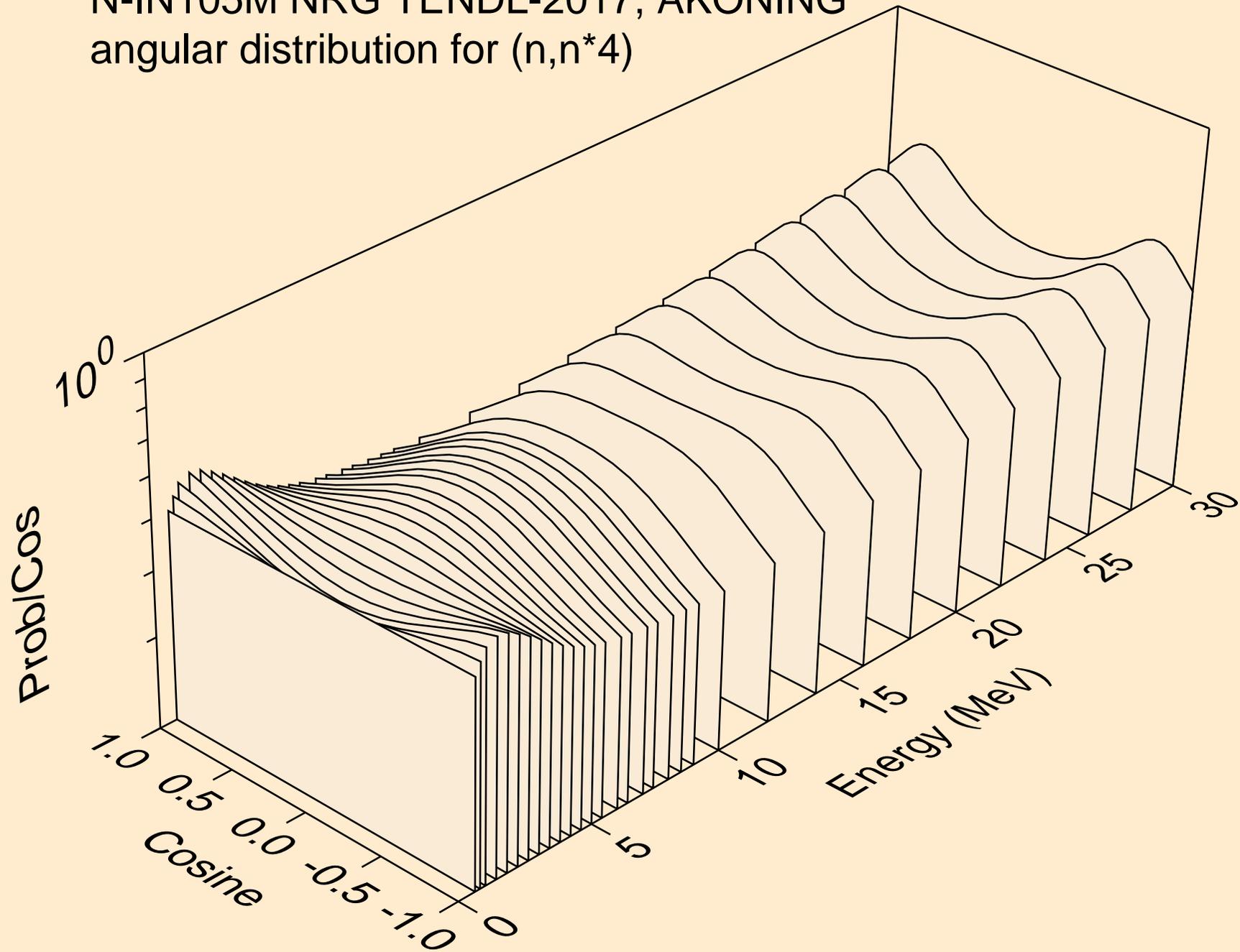
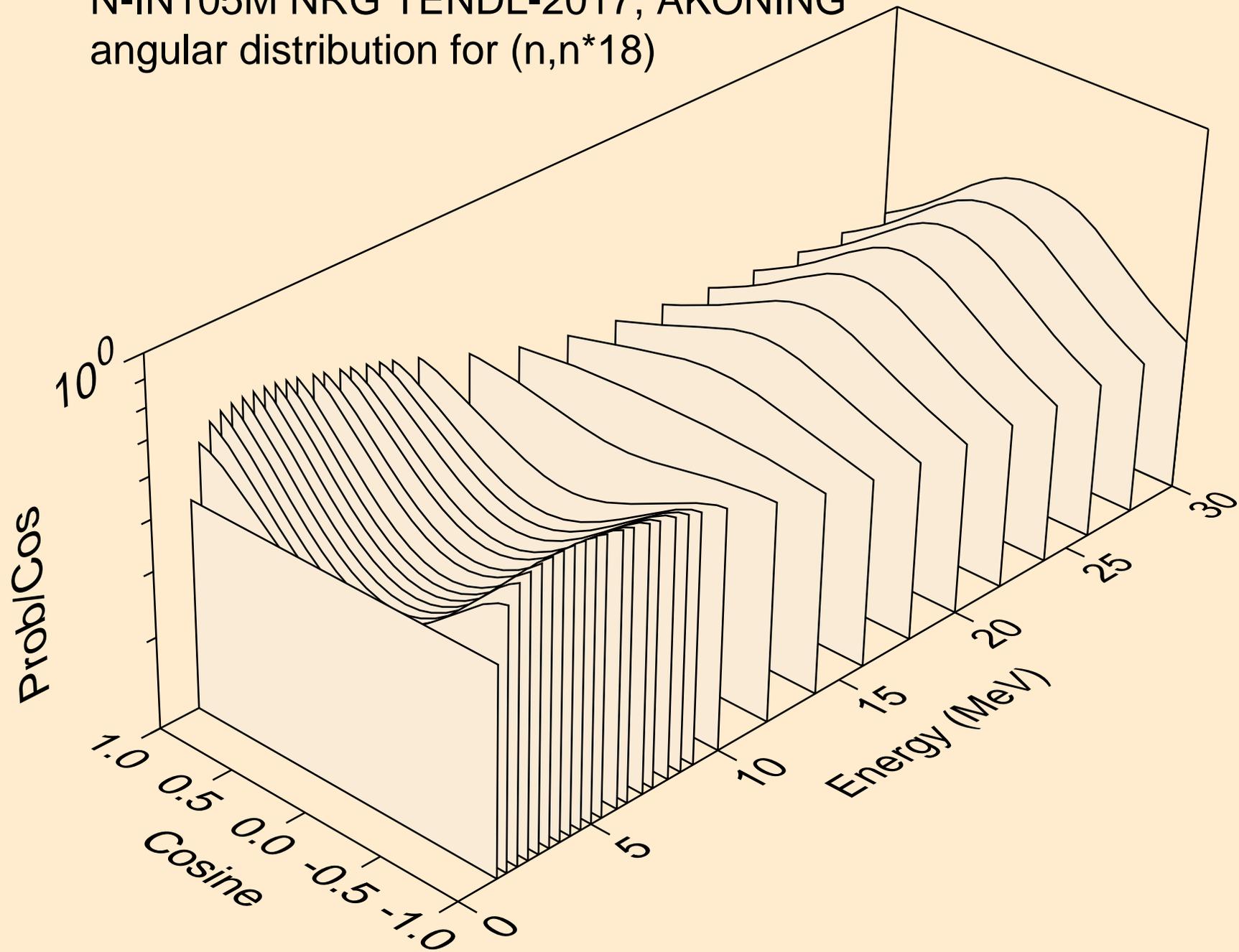N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*5)

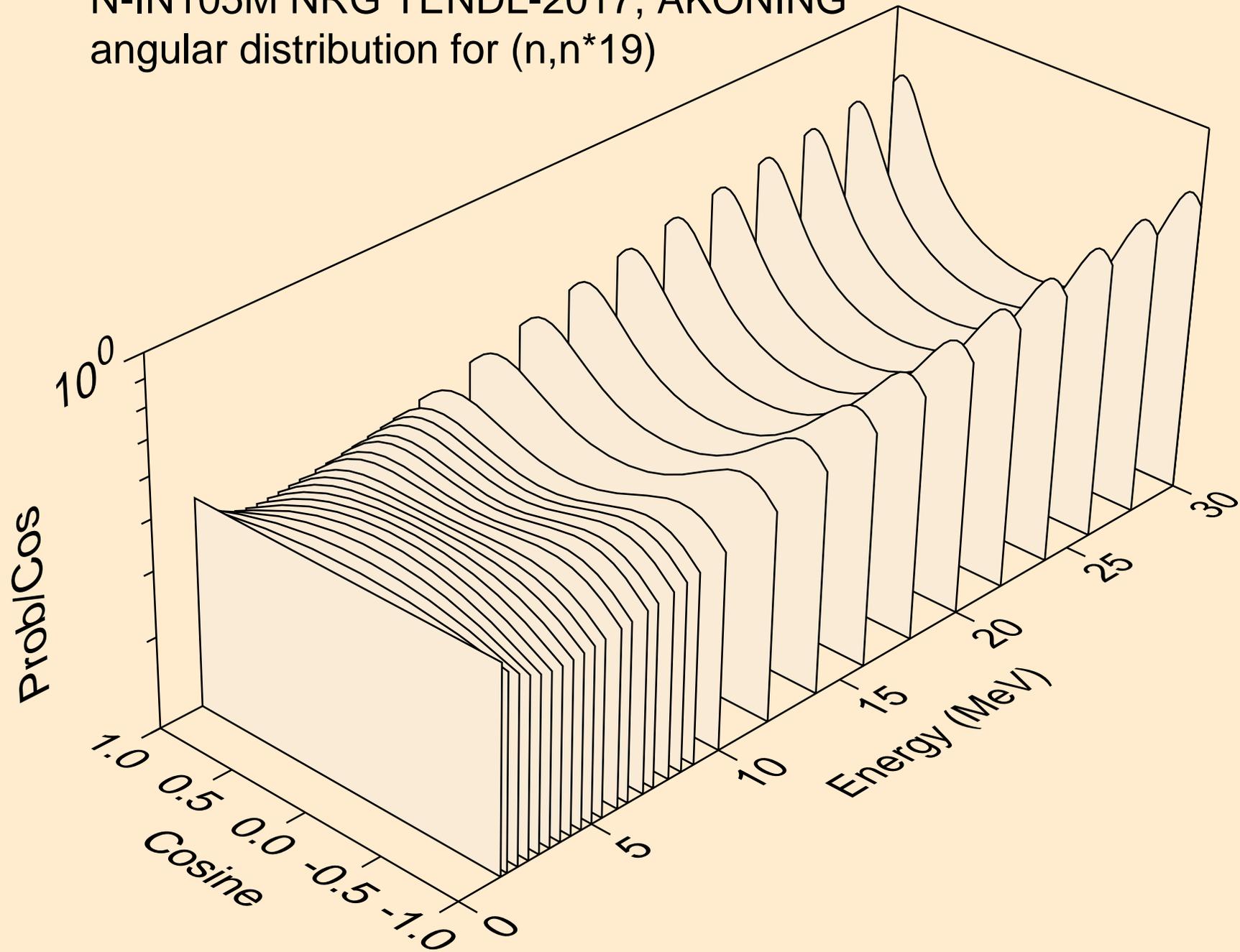N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*6)

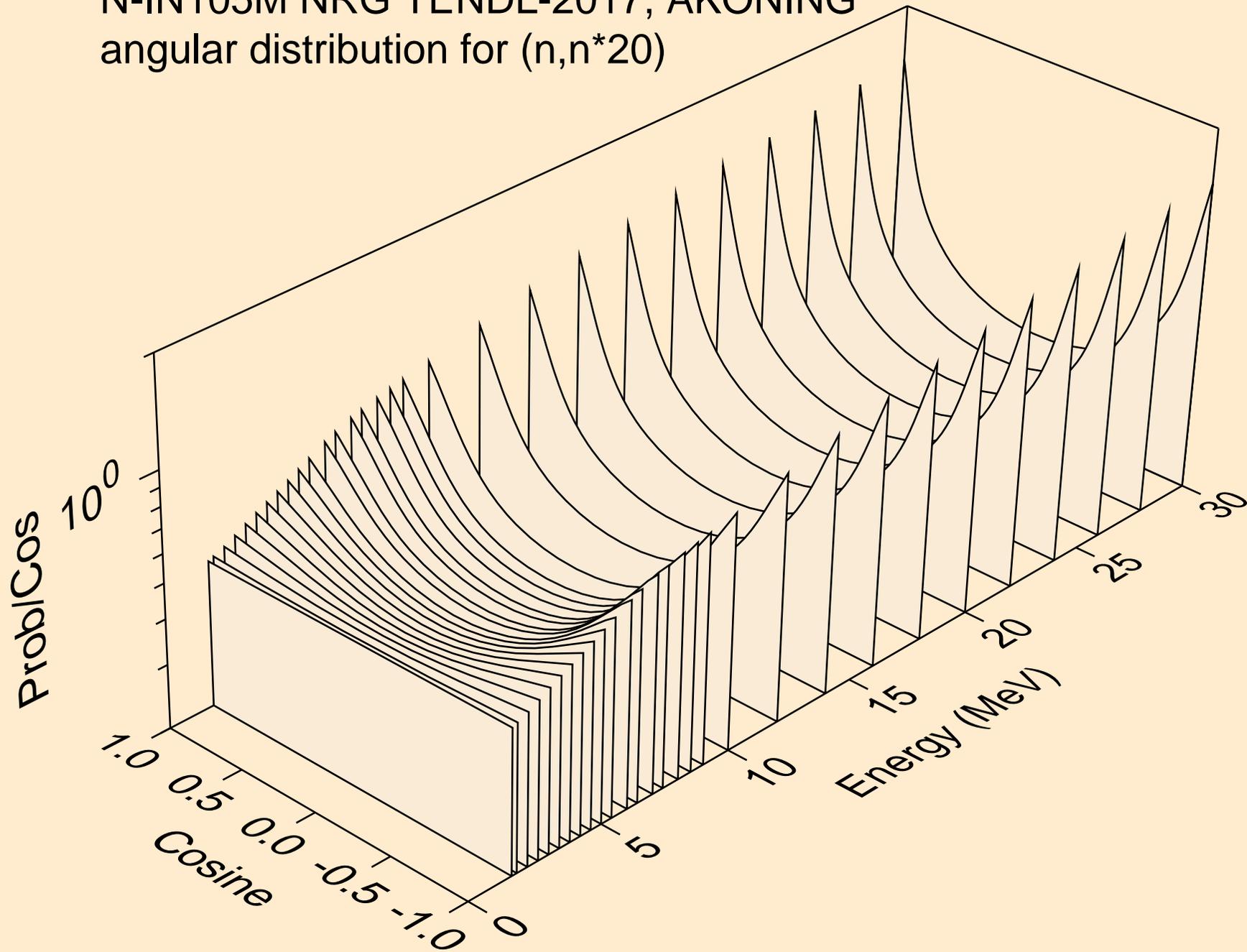N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*7)

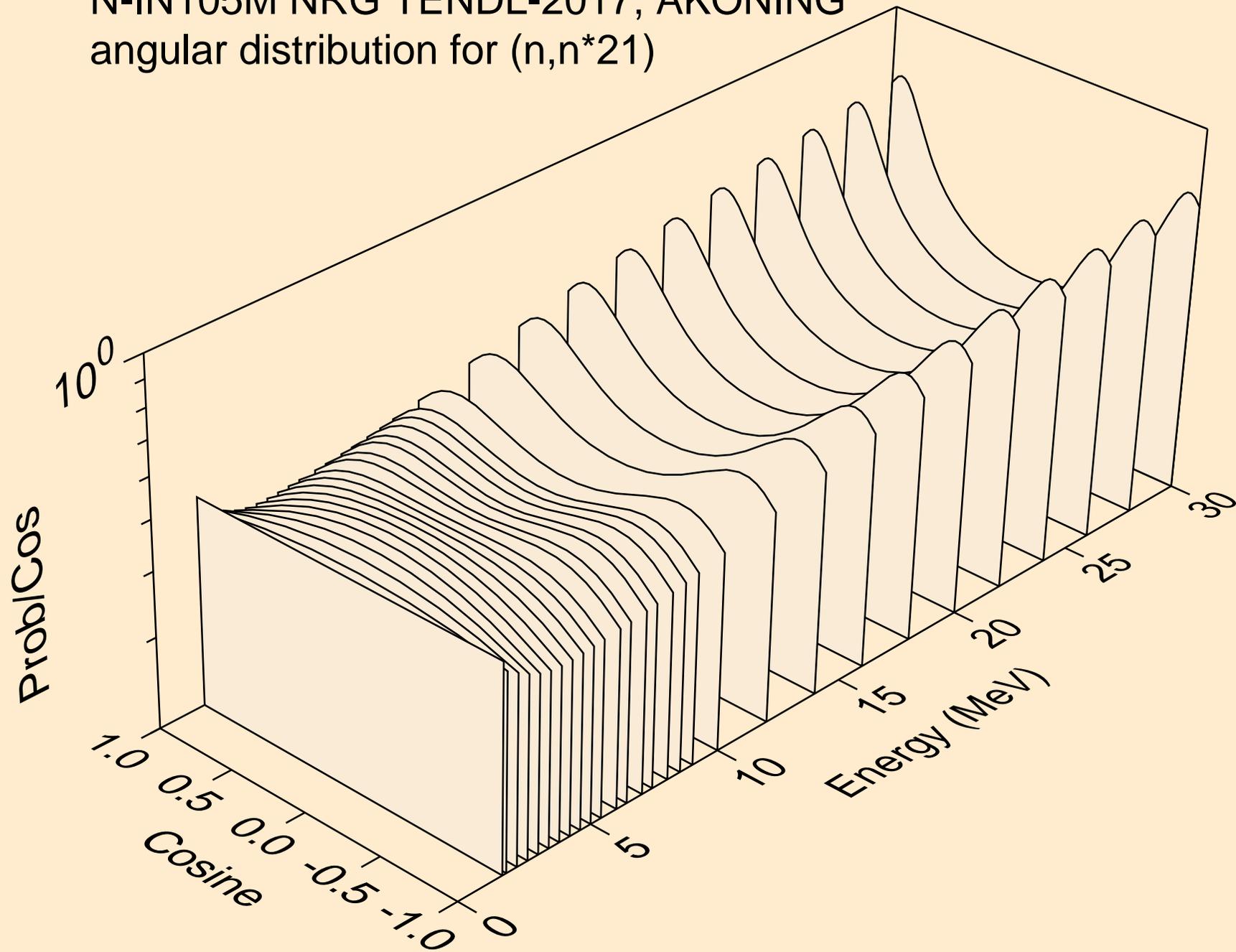N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*8)

N-IN105M NRG TENDL-2017, AKONING
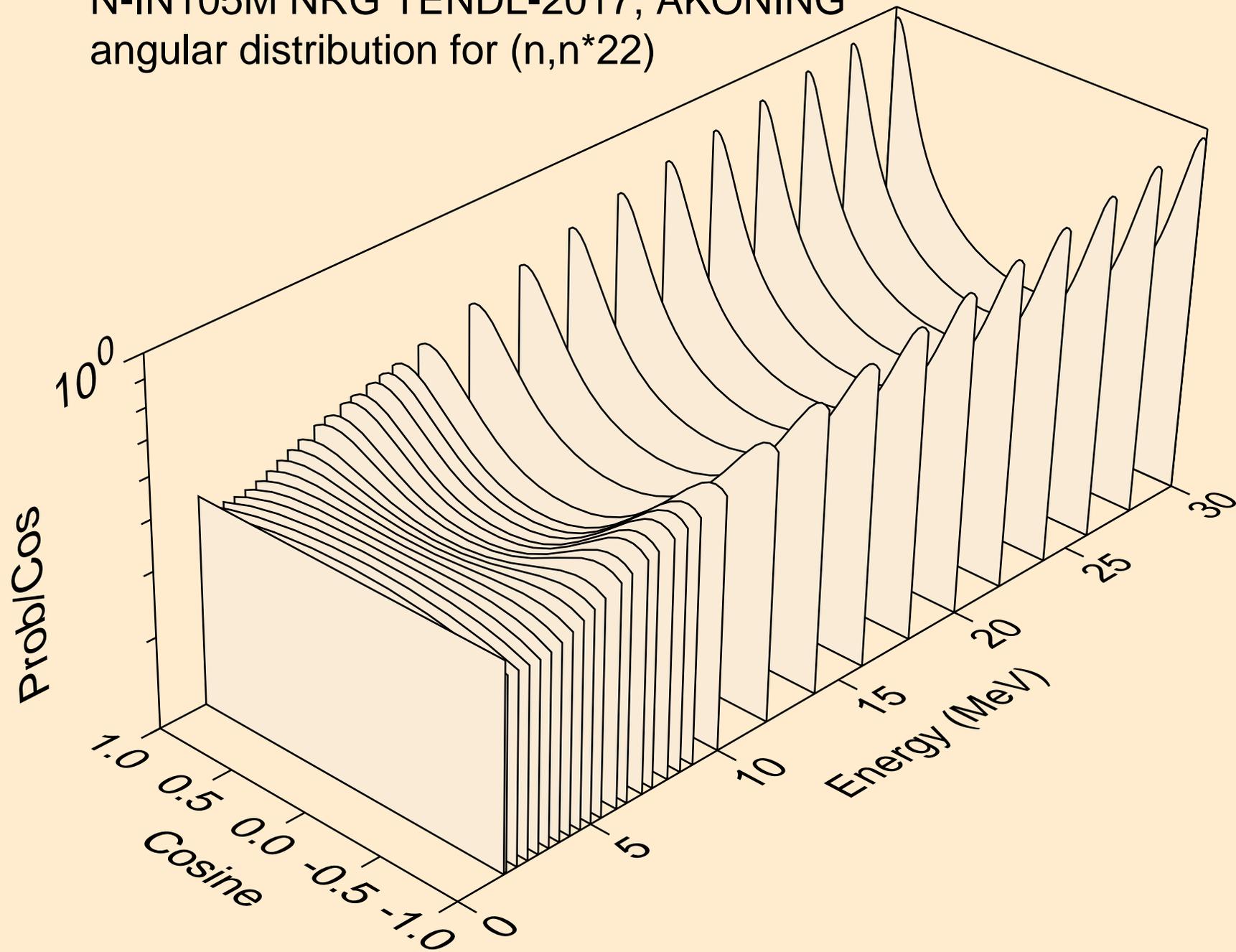angular distribution for (n,n*9)

N-IN105M NRG TENDL-2017, AKONING
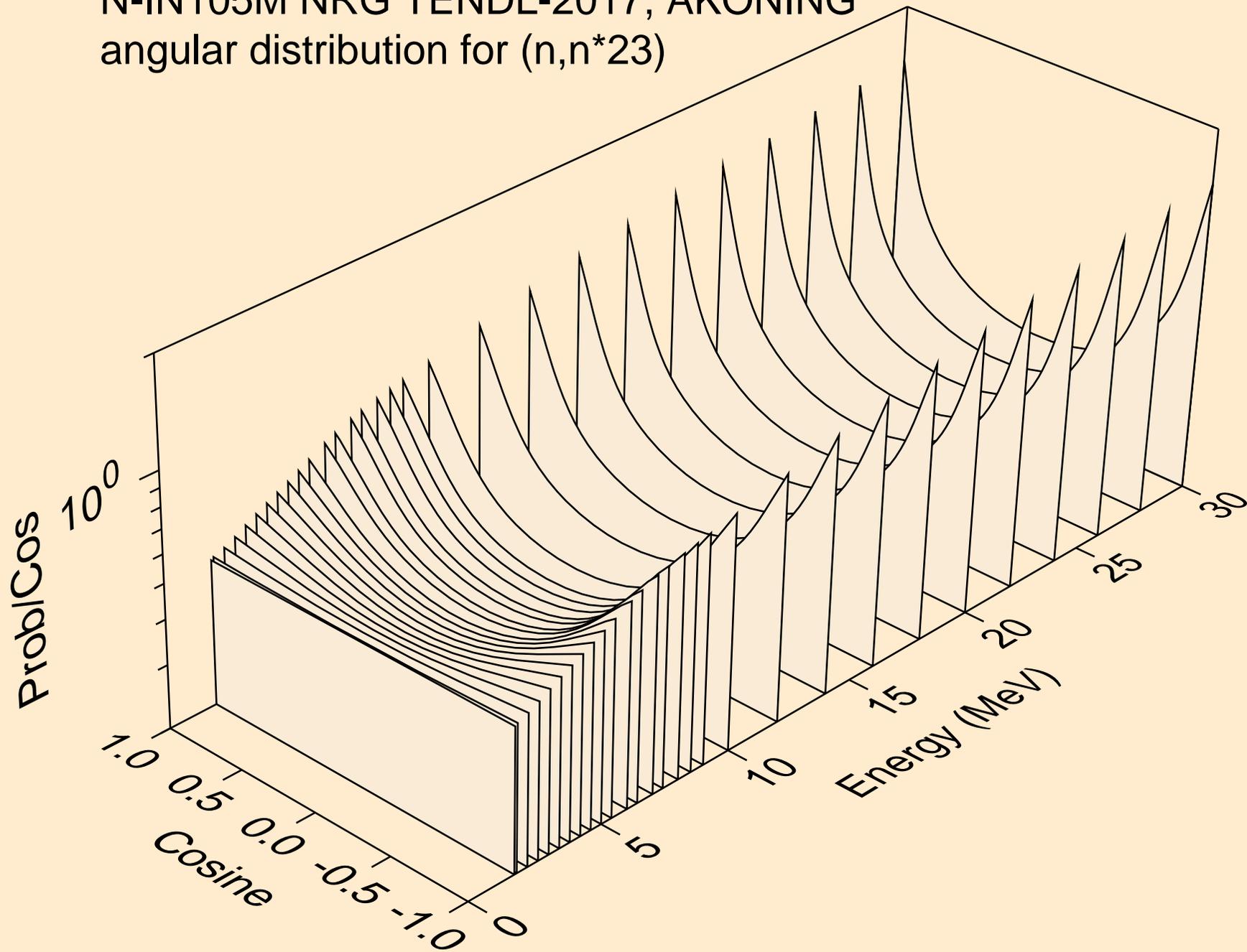angular distribution for (n,n*10)

N-IN105M NRG TENDL-2017, AKONING
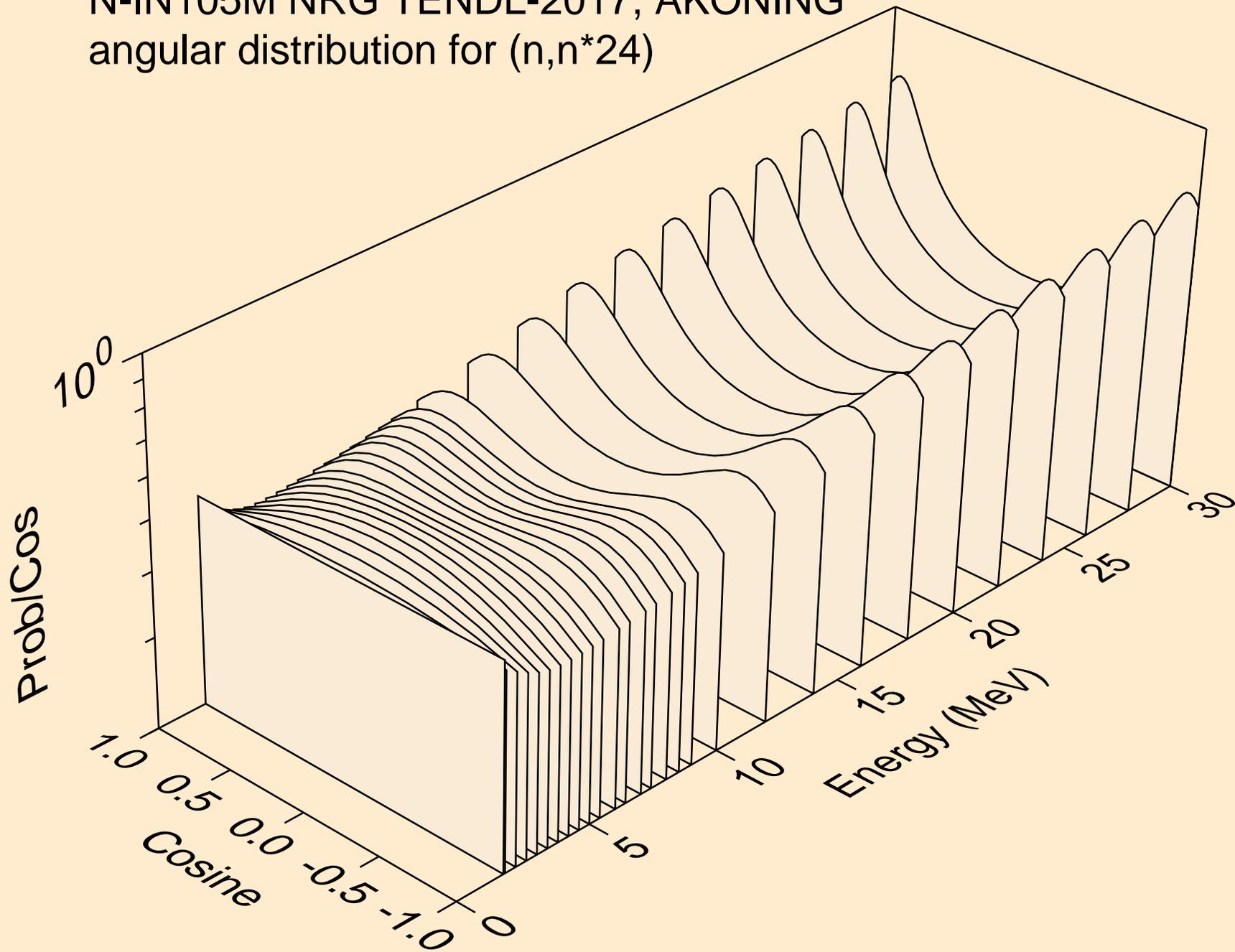angular distribution for (n,n*11)

N-IN105M NRG TENDL-2017, AKONING
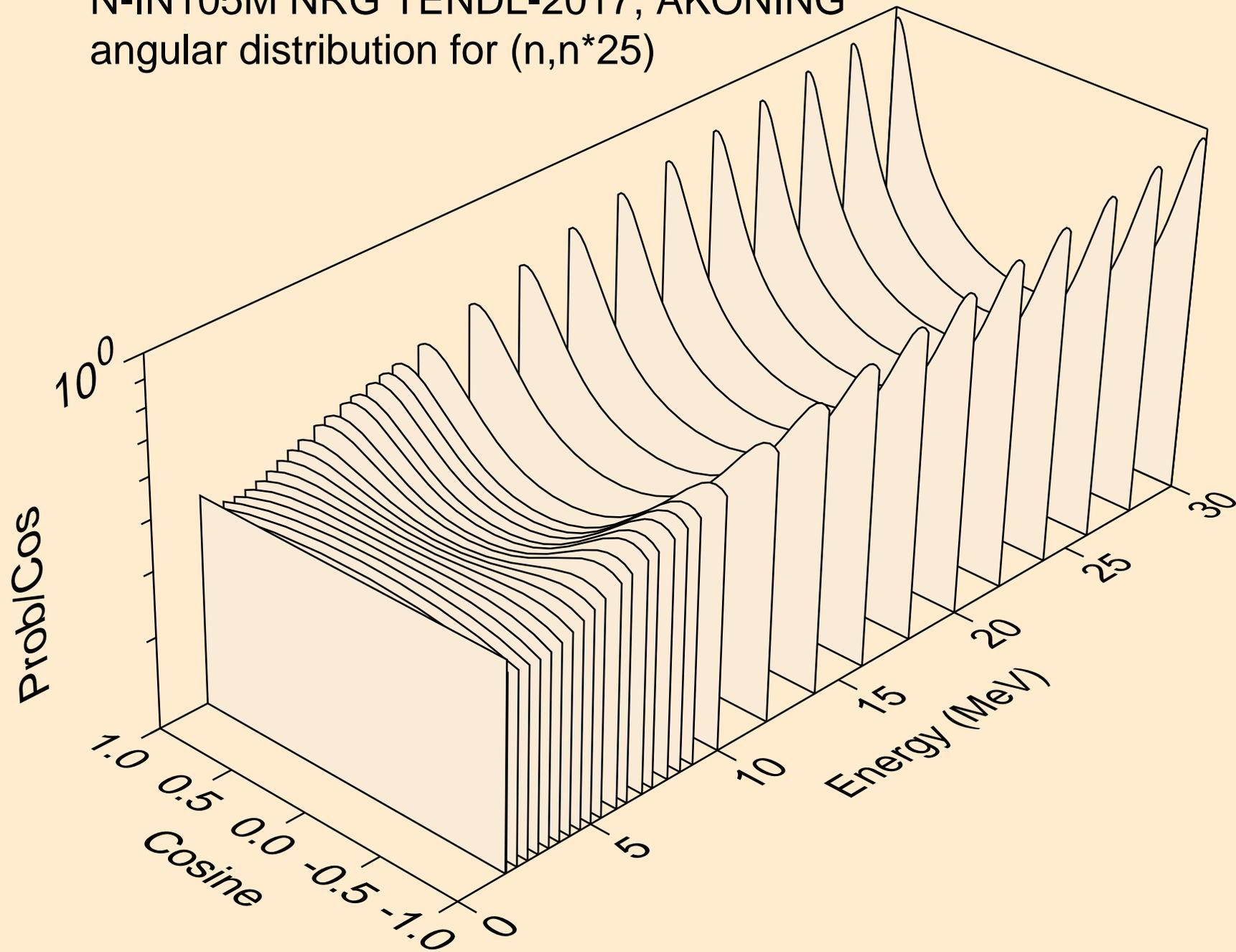angular distribution for (n,n*12)

N-IN105M NRG TENDL-2017, AKONING
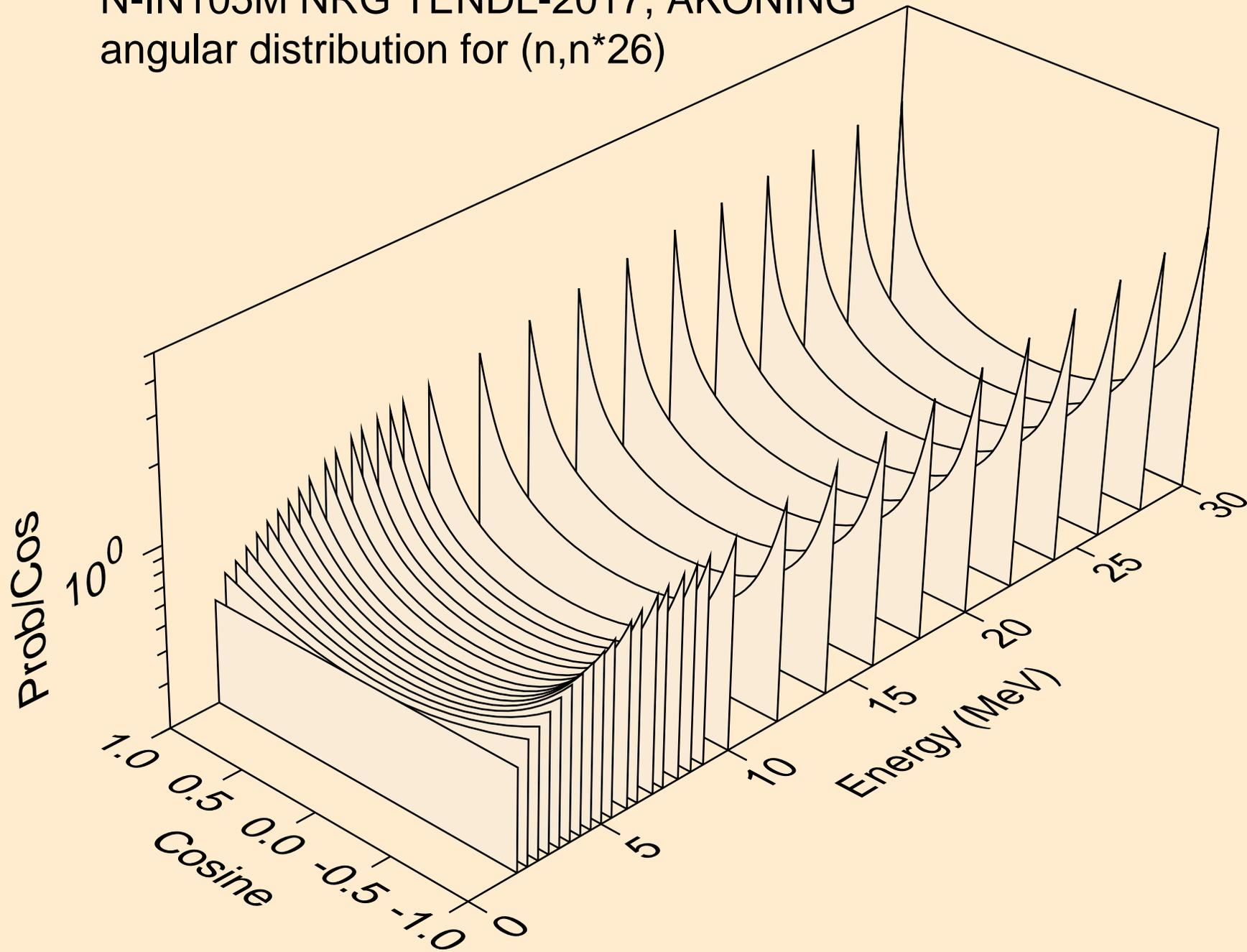angular distribution for (n,n*13)

N-IN105M NRG TENDL-2017, AKONING
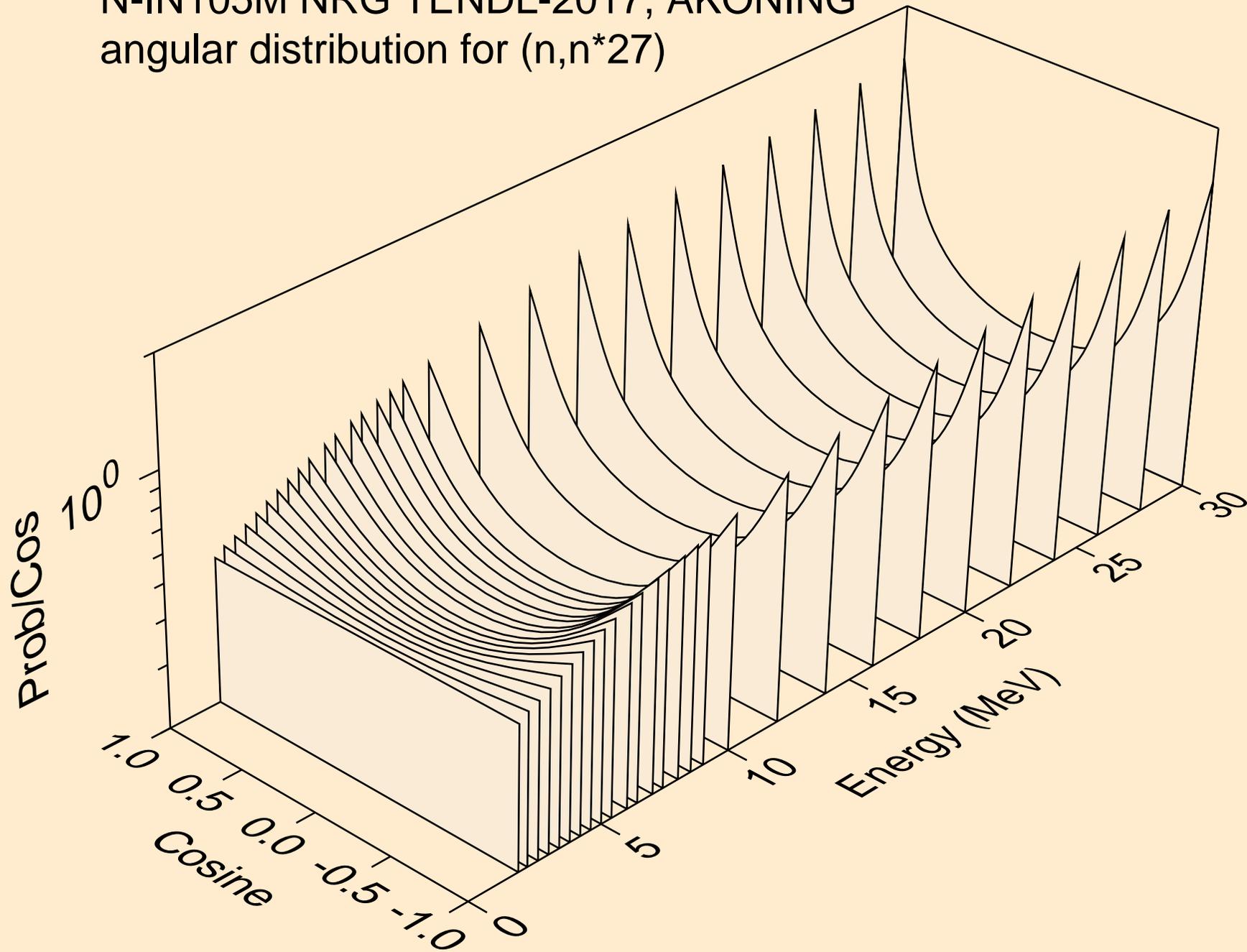angular distribution for (n,n*14)

N-IN105M NRG TENDL-2017, AKONING
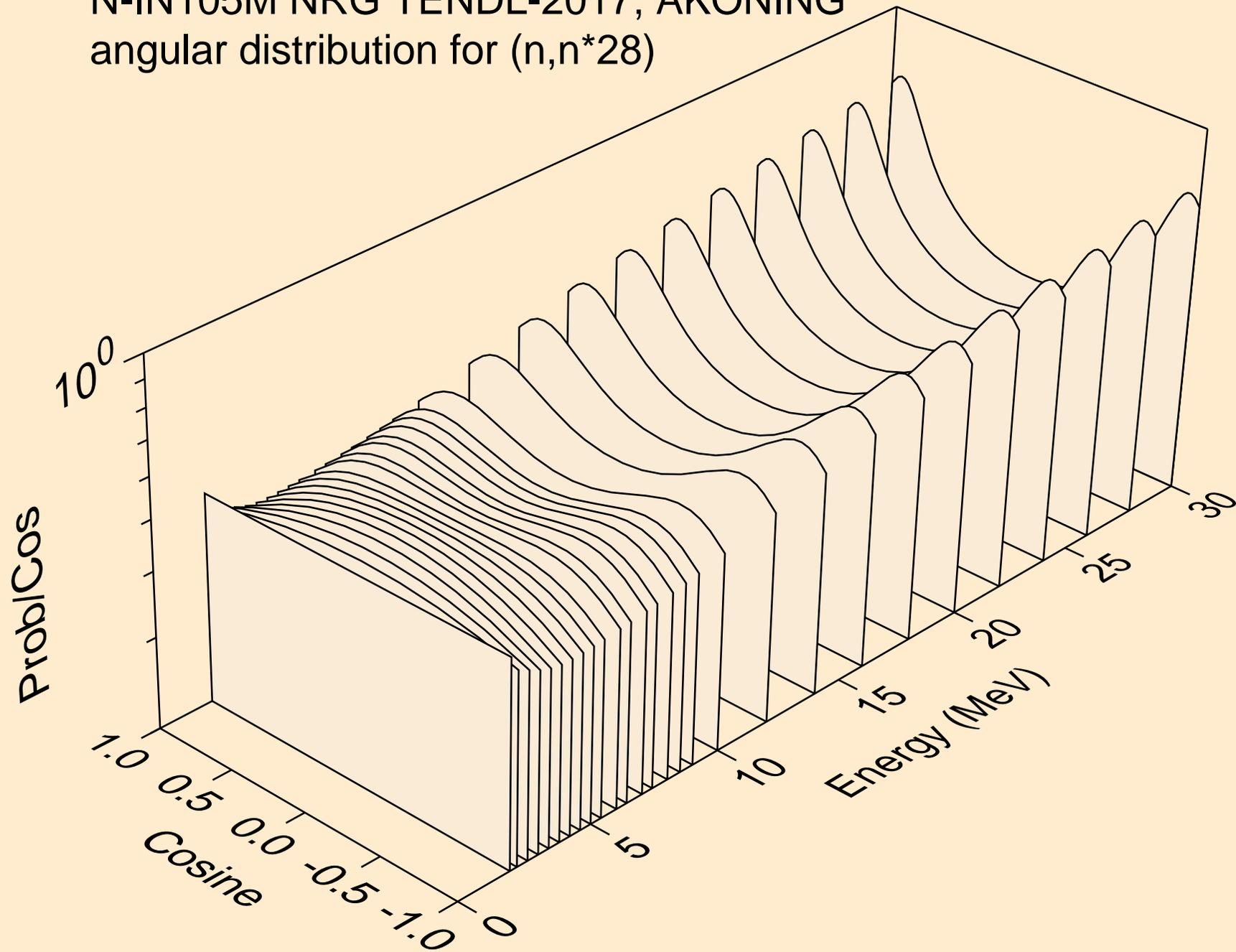angular distribution for (n,n*15)

N-IN105M NRG TENDL-2017, AKONING
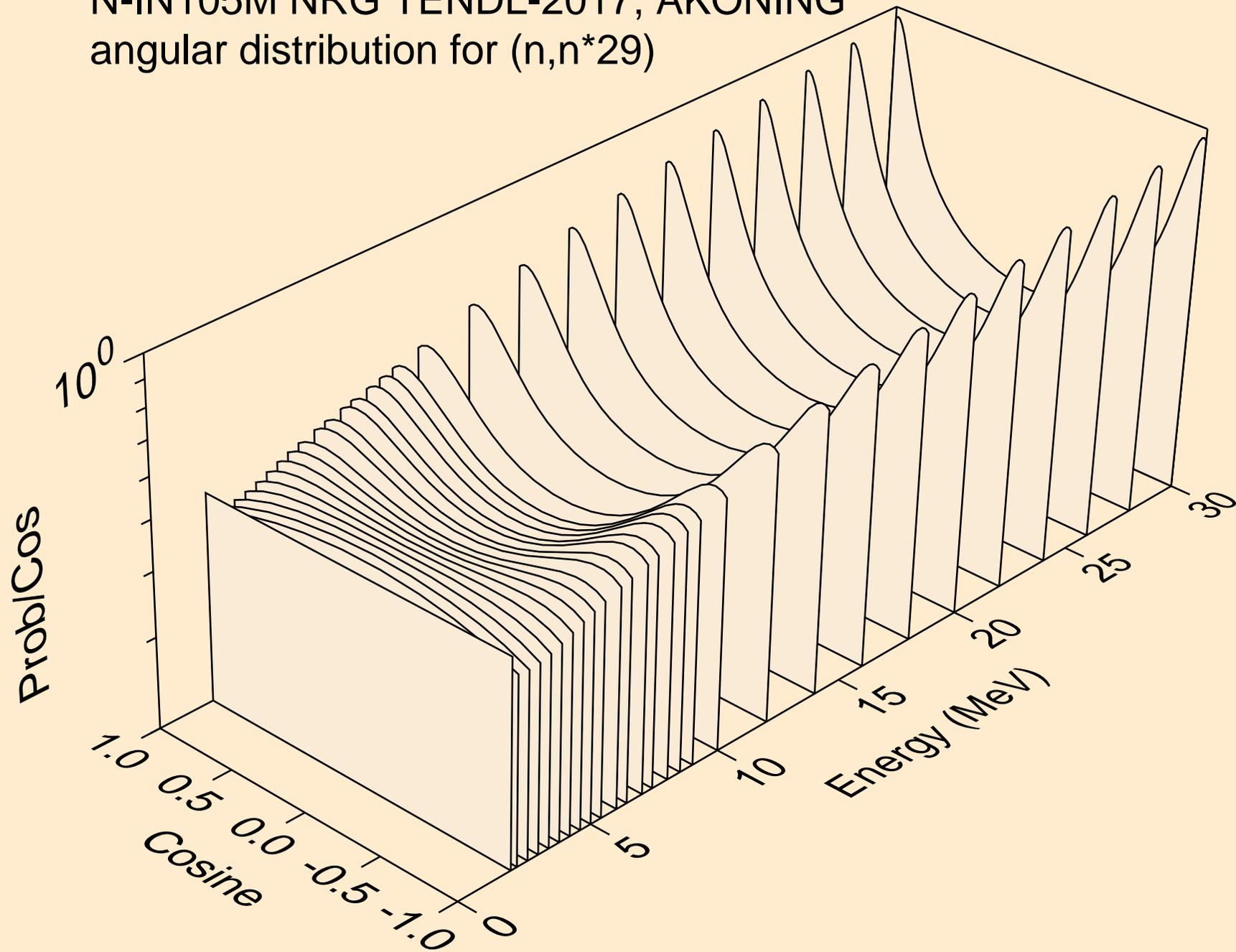angular distribution for (n,n*16)

N-IN105M NRG TENDL-2017, AKONING
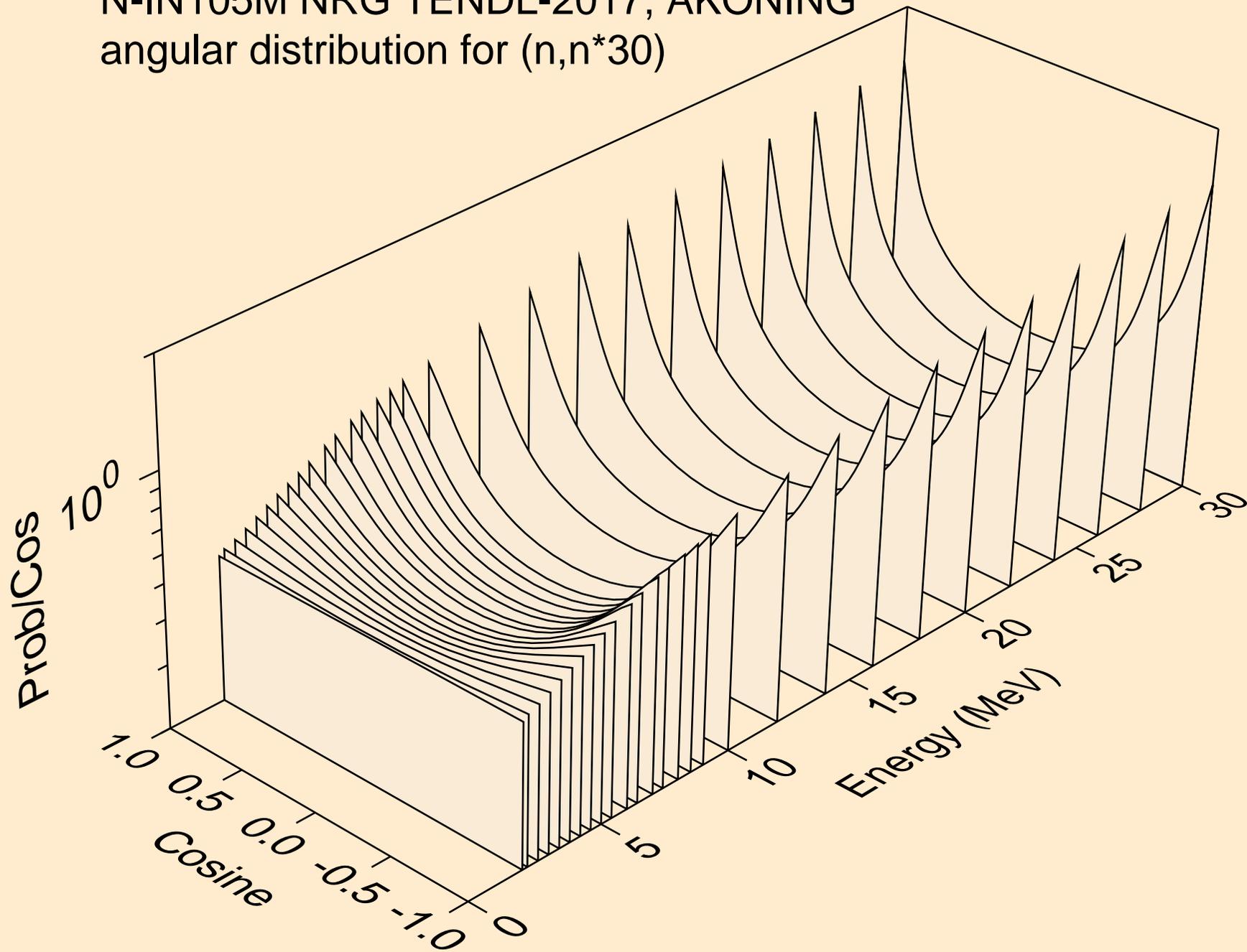angular distribution for (n,n*17)

N-IN105M NRG TENDL-2017, AKONING
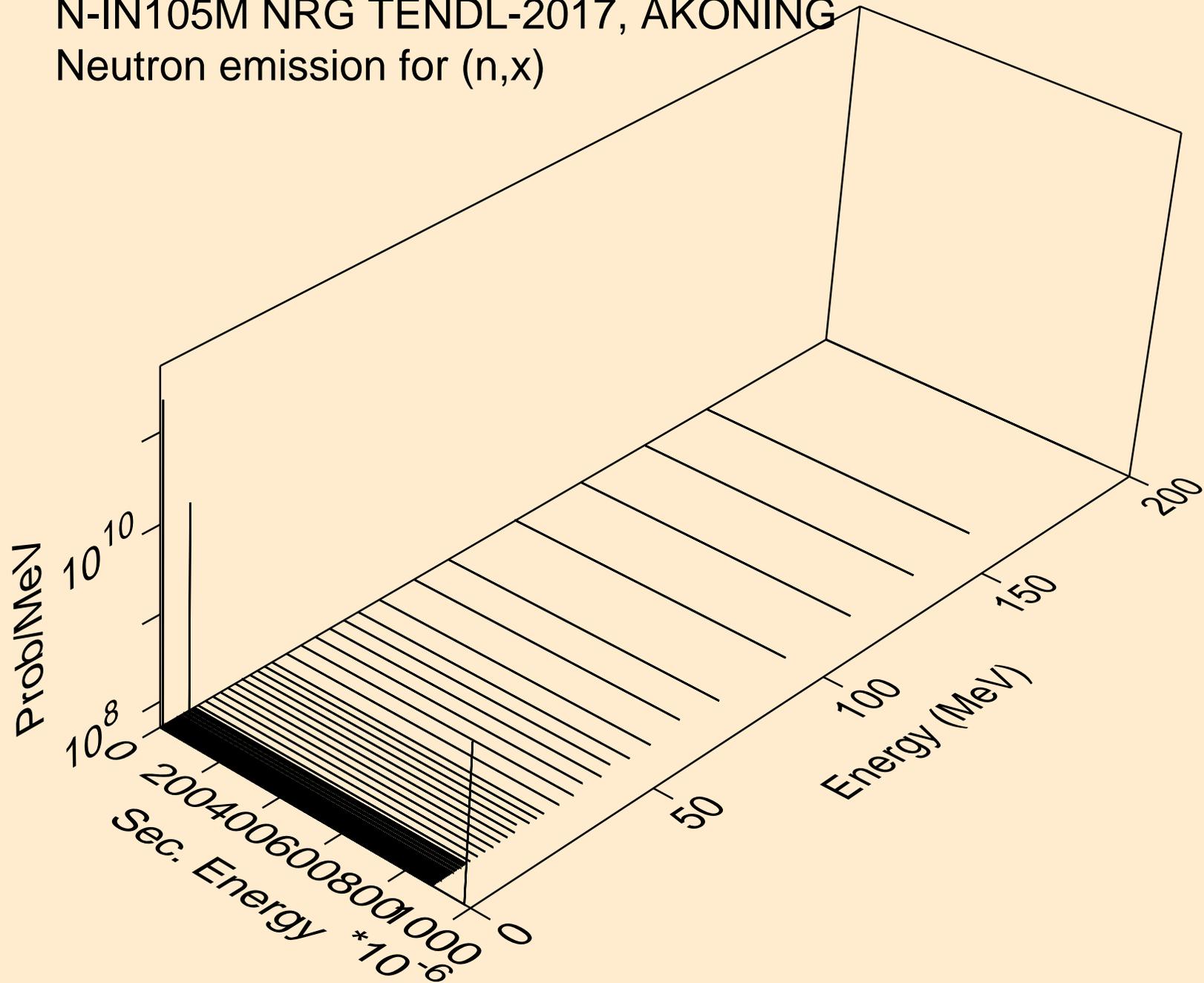angular distribution for (n,n*18)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*19)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*20)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*21)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*22)

N-IN105M NRG TENDL-2017, AKONING
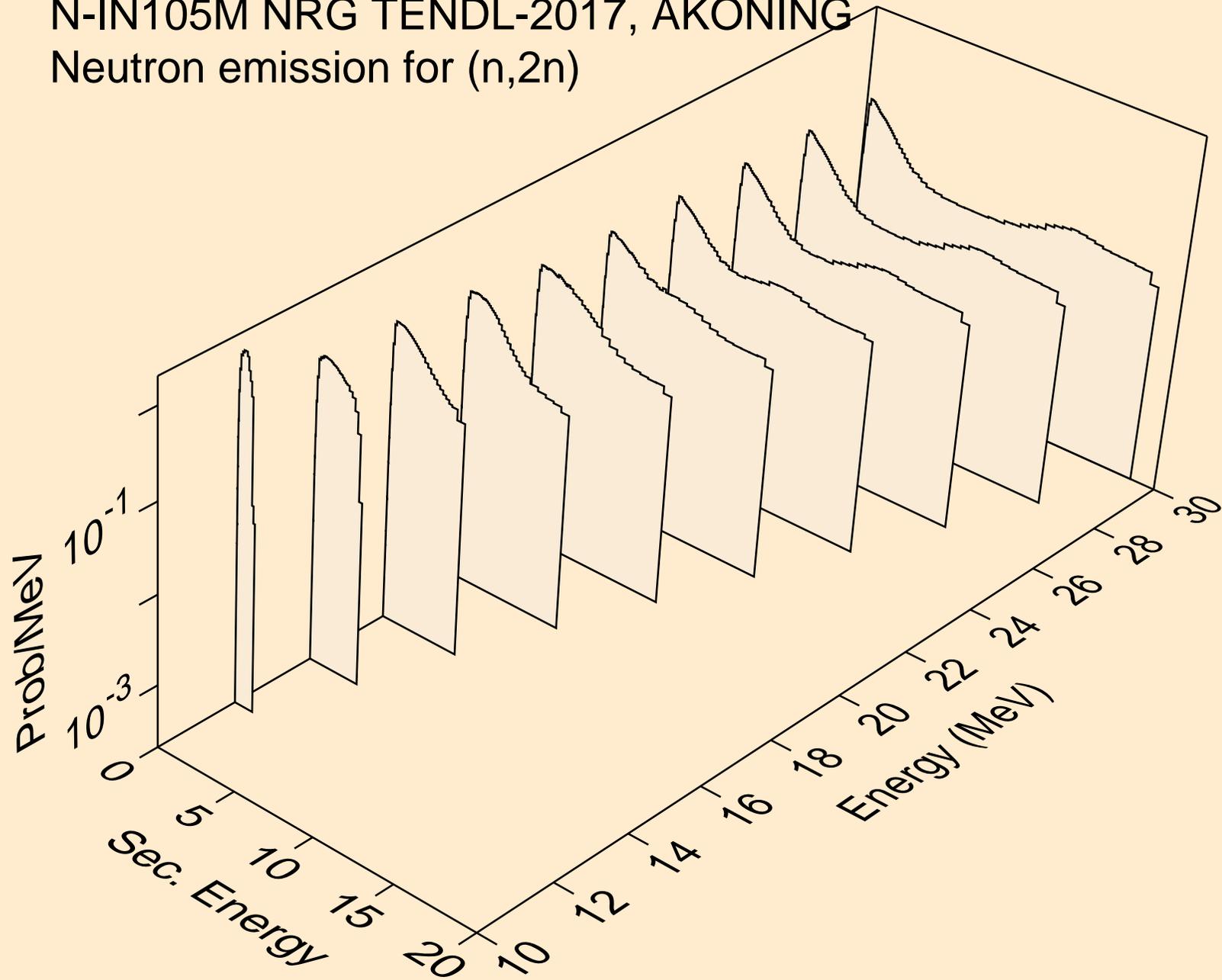angular distribution for (n,n*23)

N-IN105M NRG TENDL-2017, AKONING
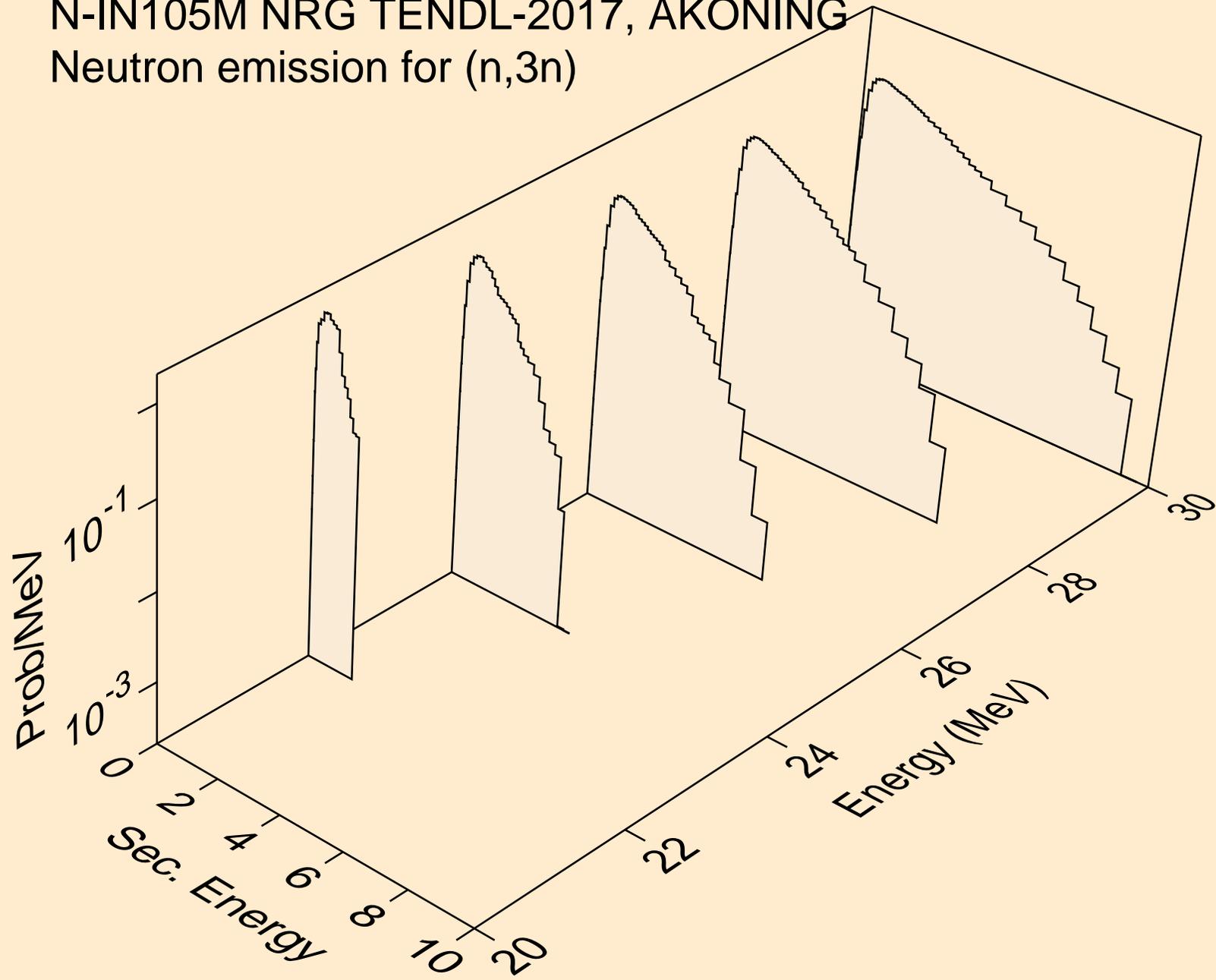angular distribution for (n,n*24)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*25)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*26)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*27)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*28)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*29)

N-IN105M NRG TENDL-2017, AKONING
angular distribution for (n,n*30)

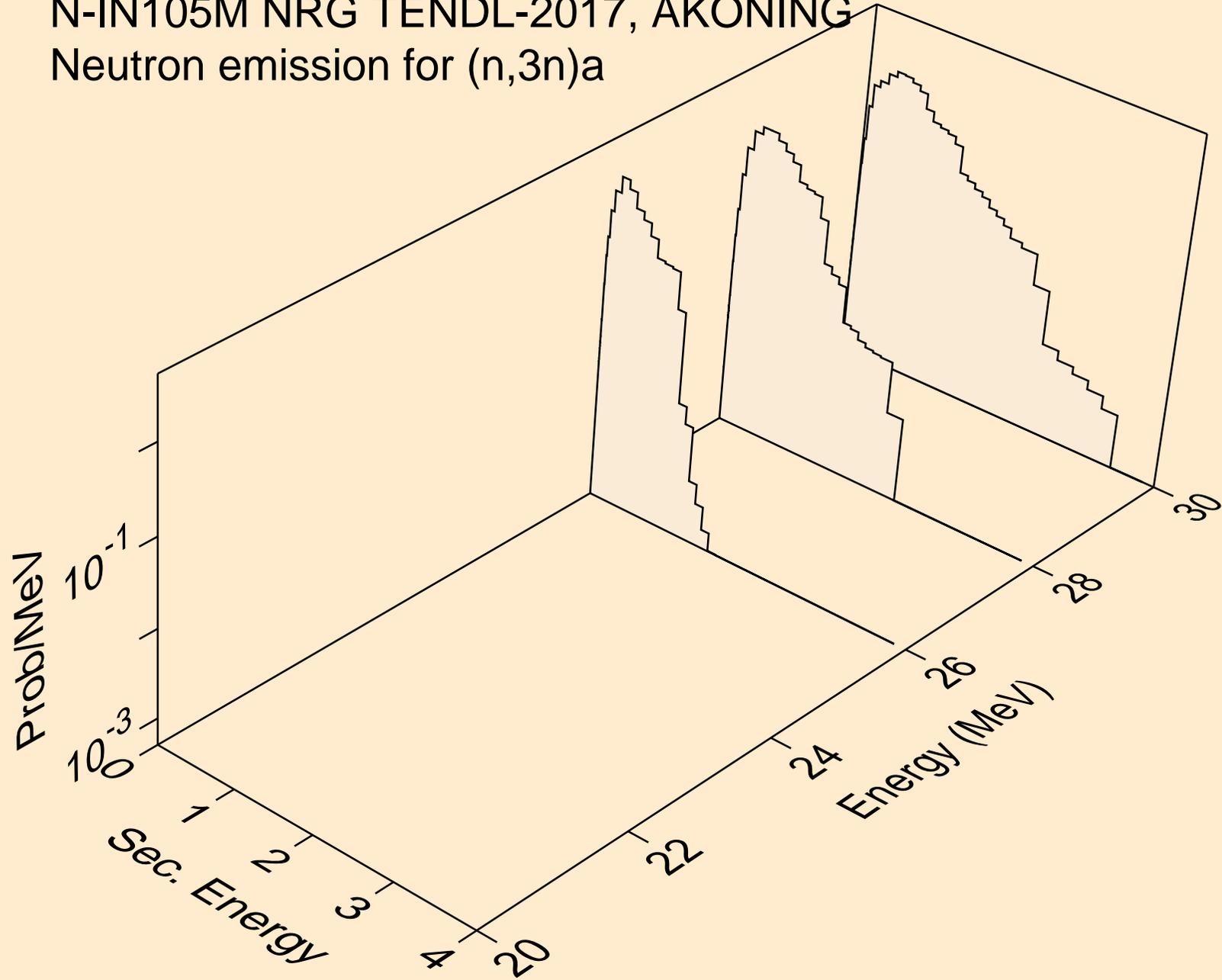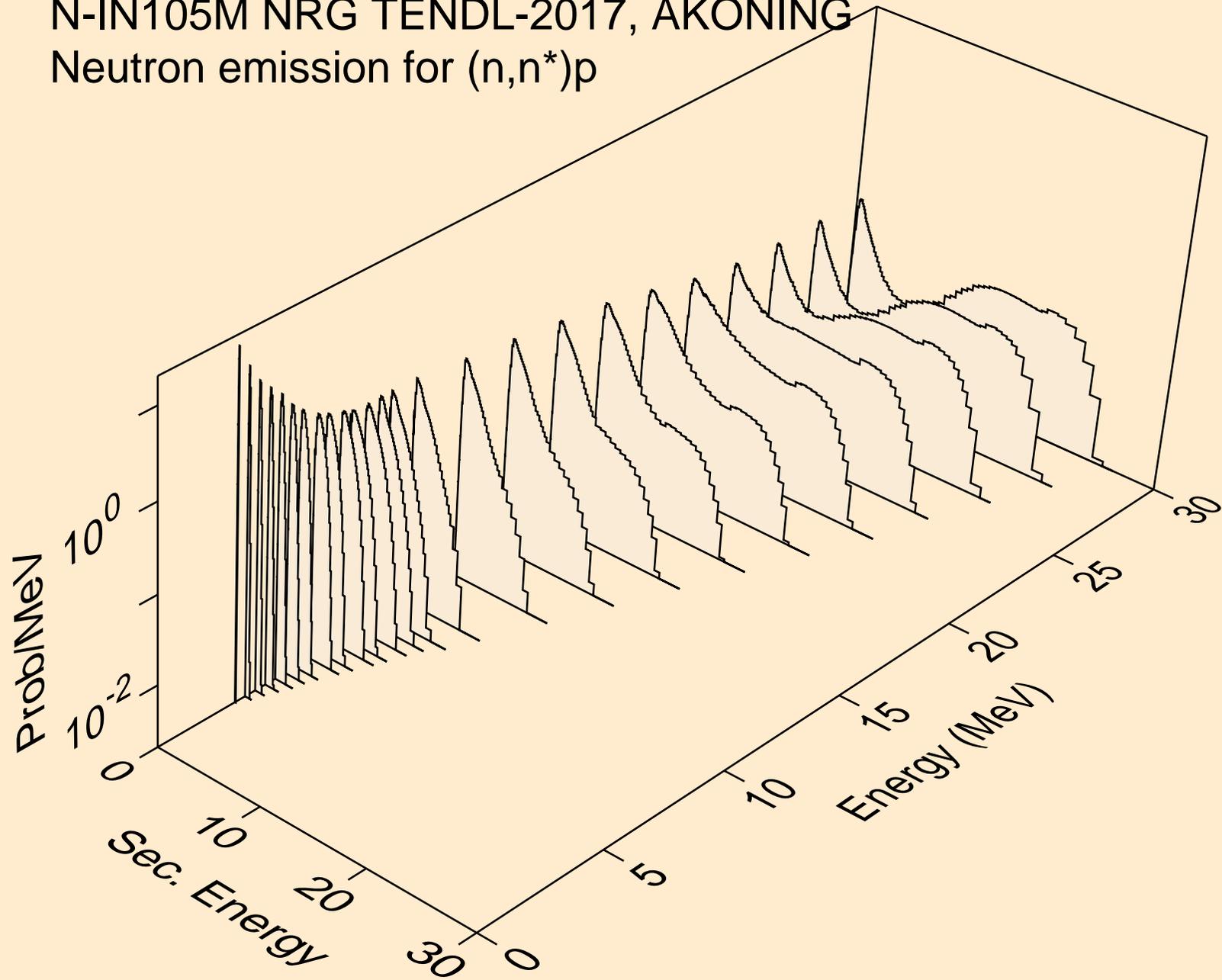N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,x)
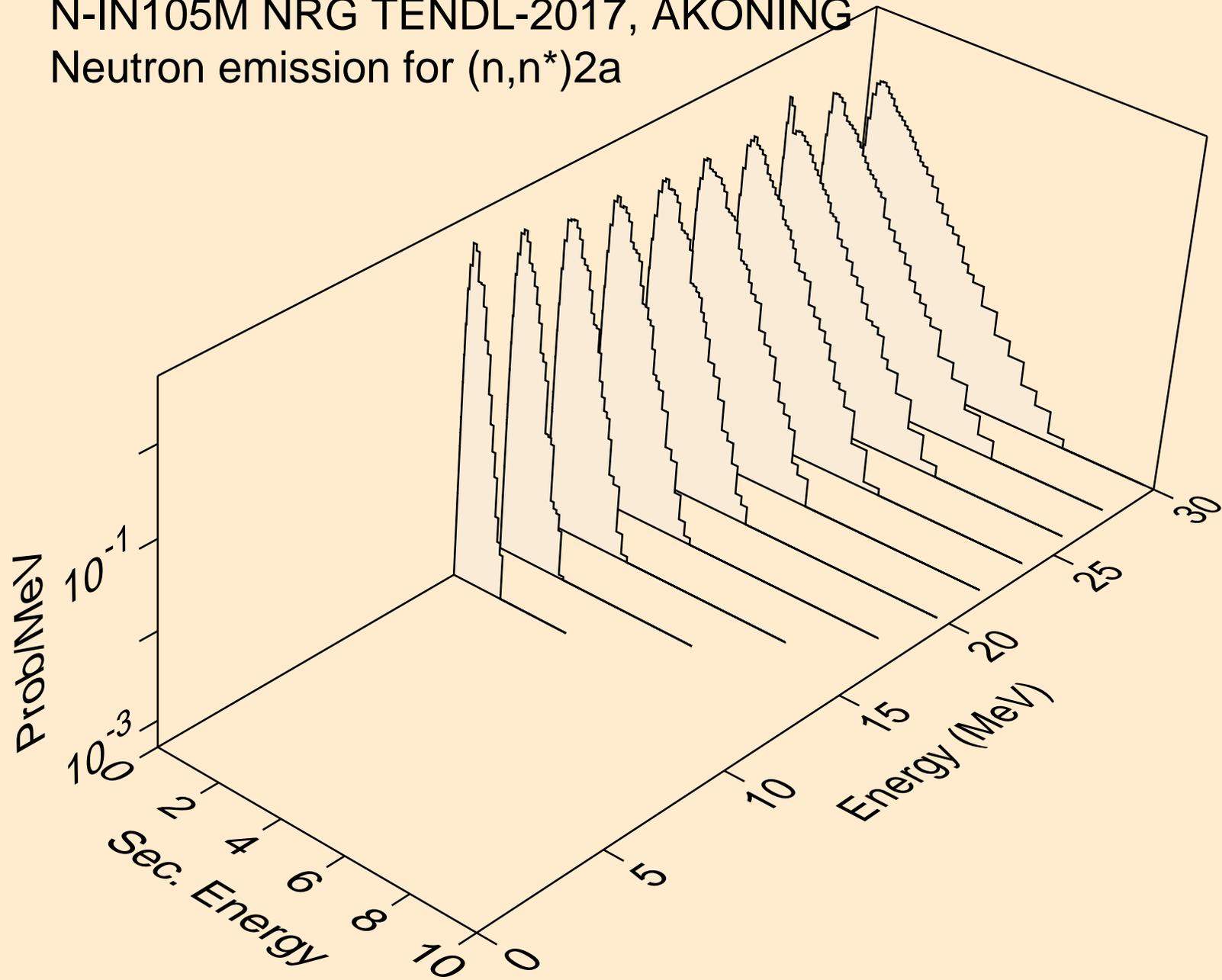
Prob/MeV

Energy (MeV)

Sec. Energy *10⁻⁶

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2nd)

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2n)

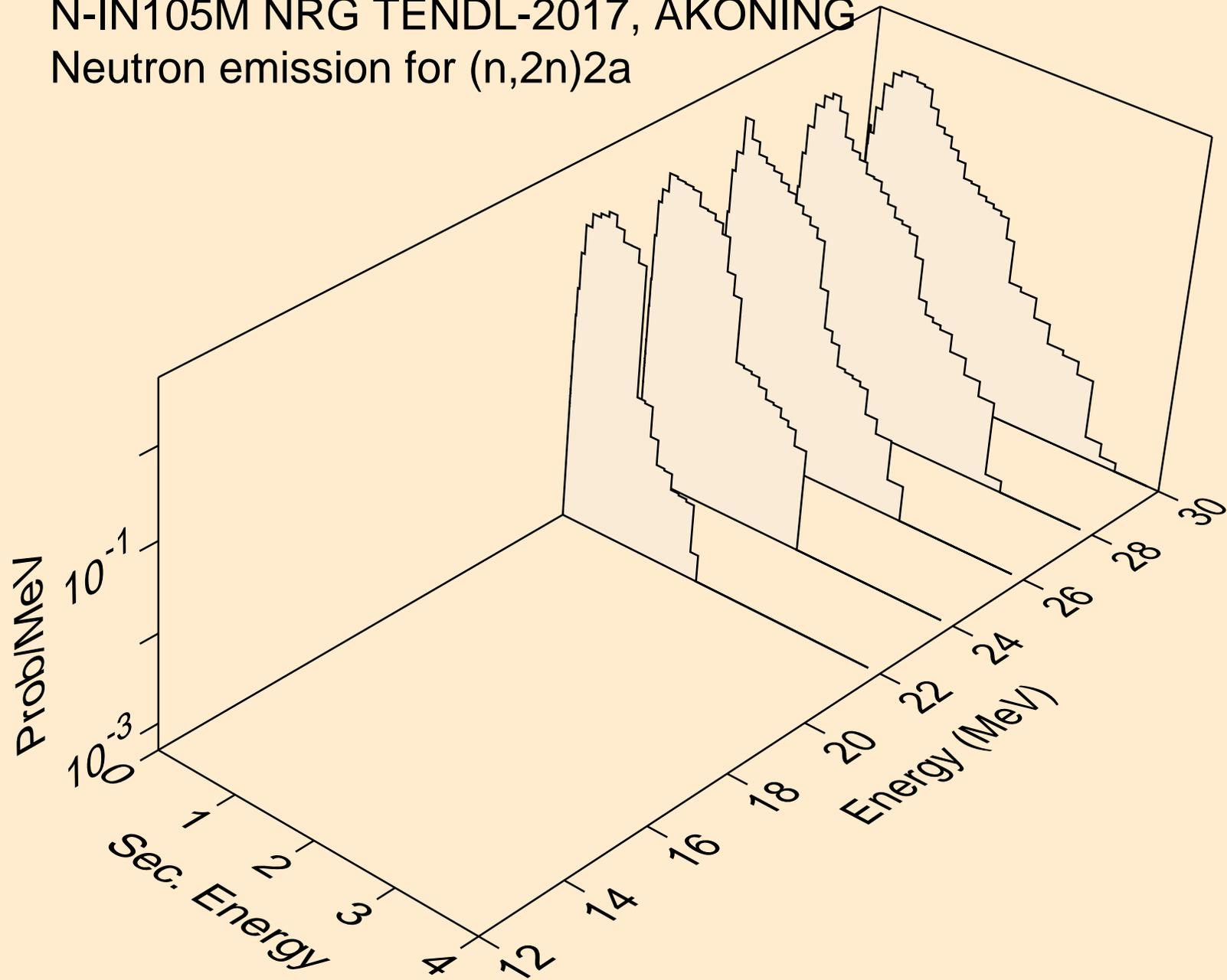N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,3n)

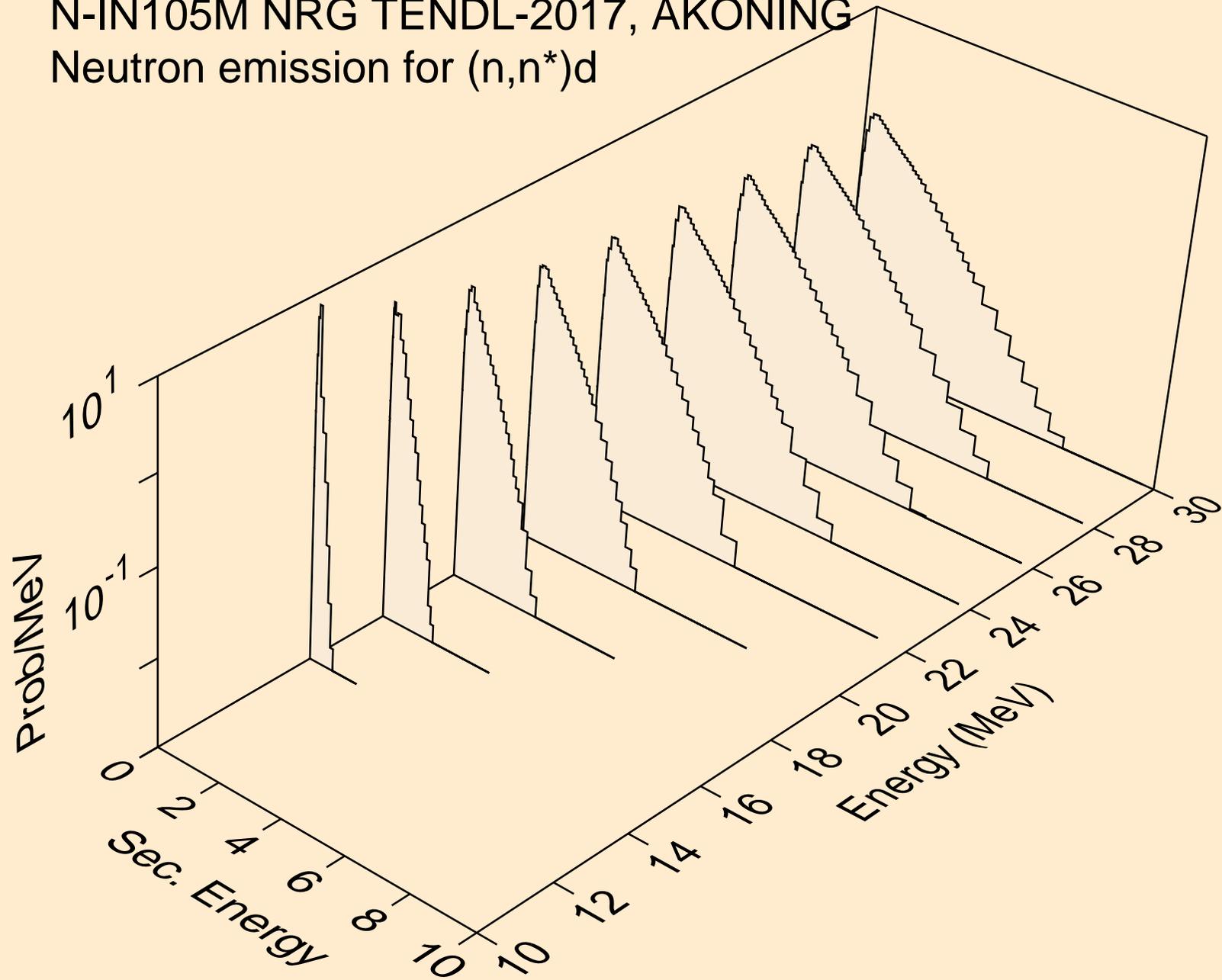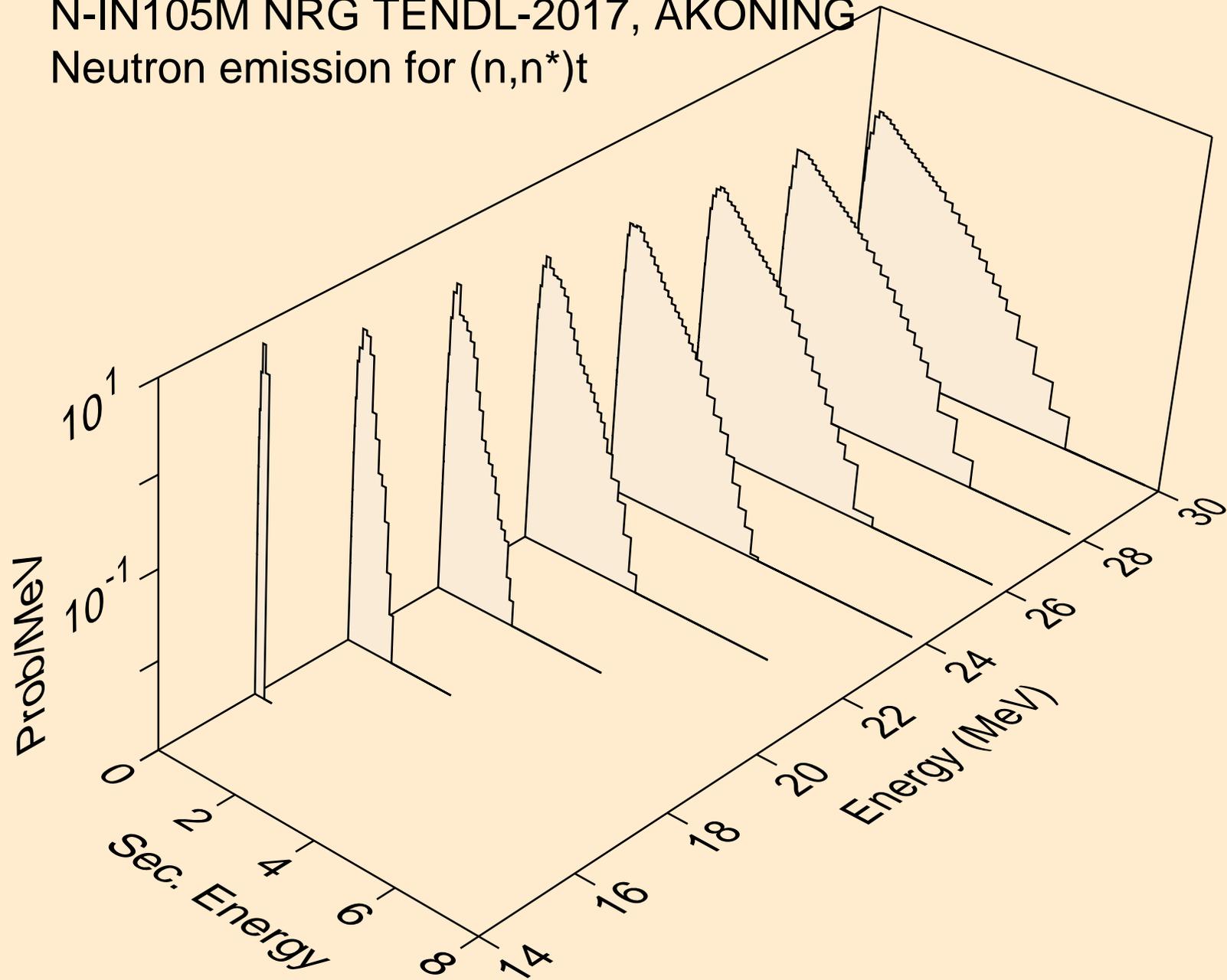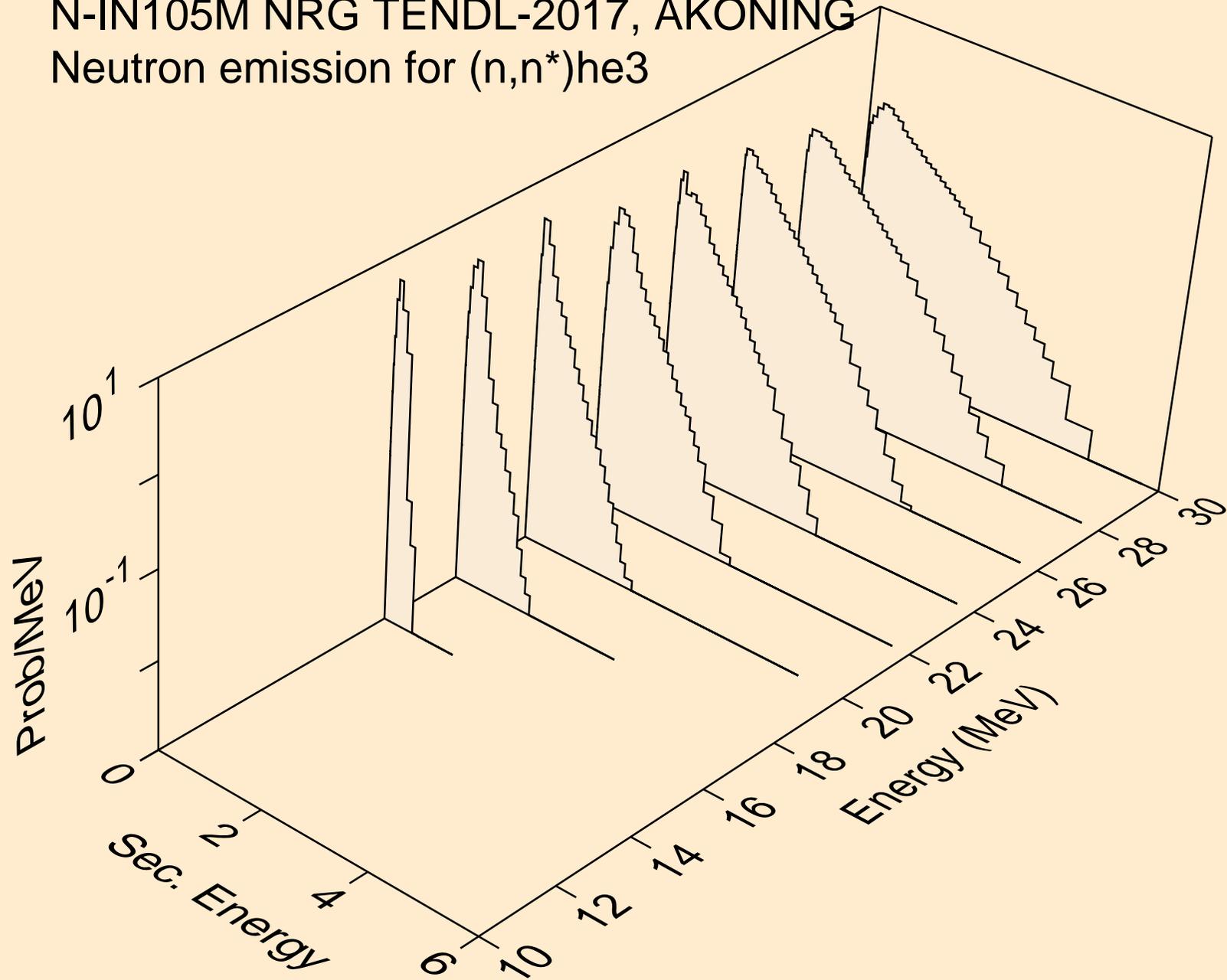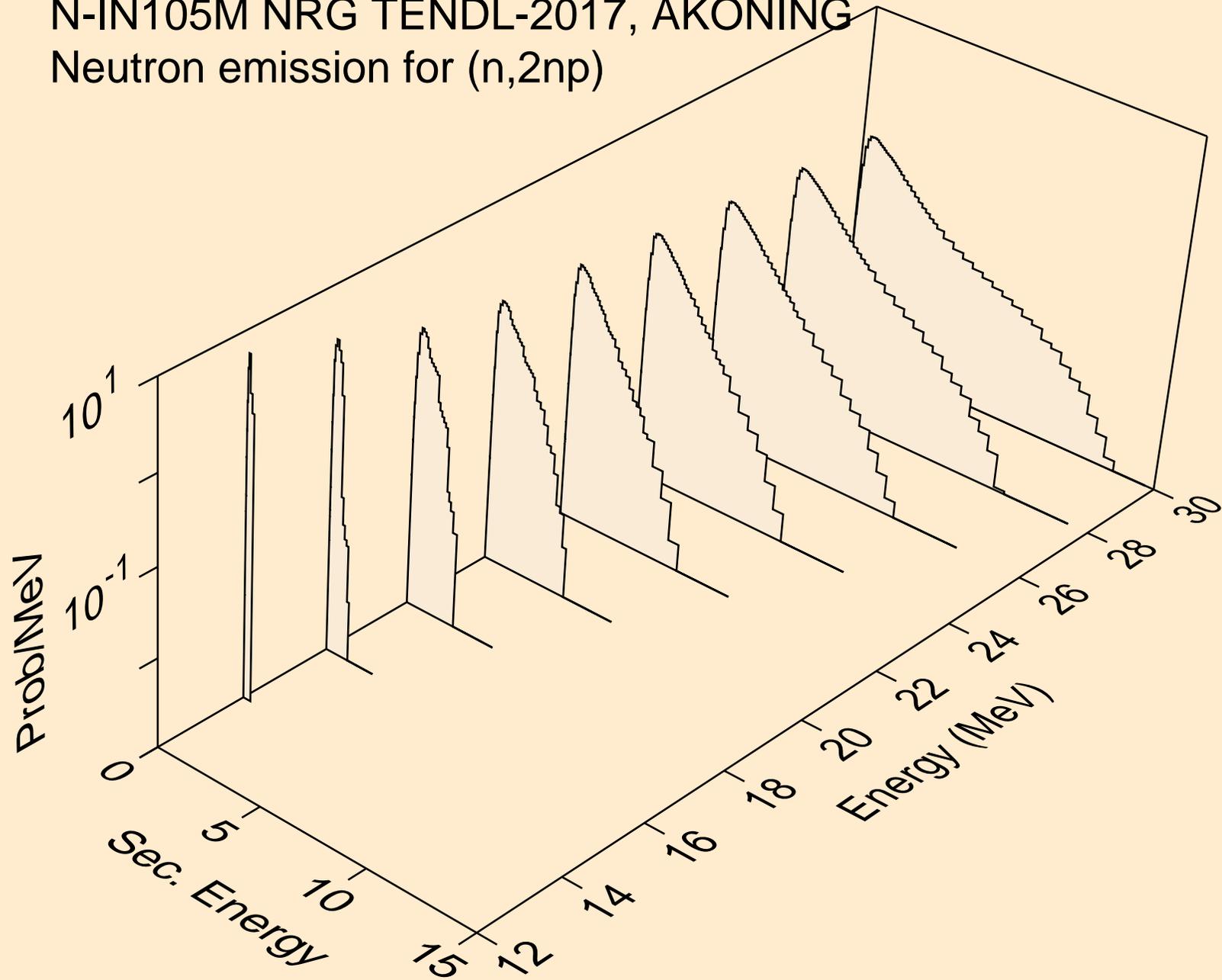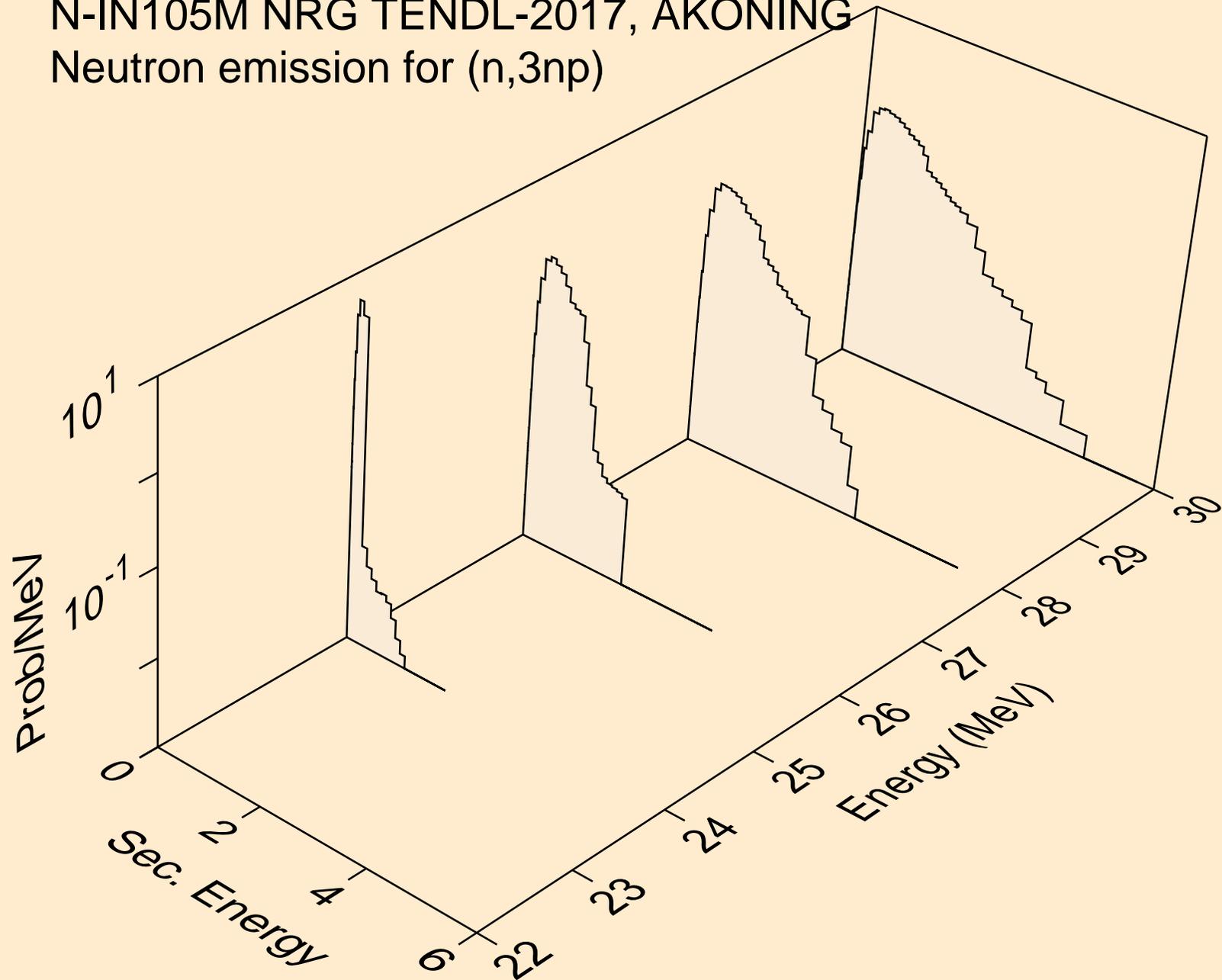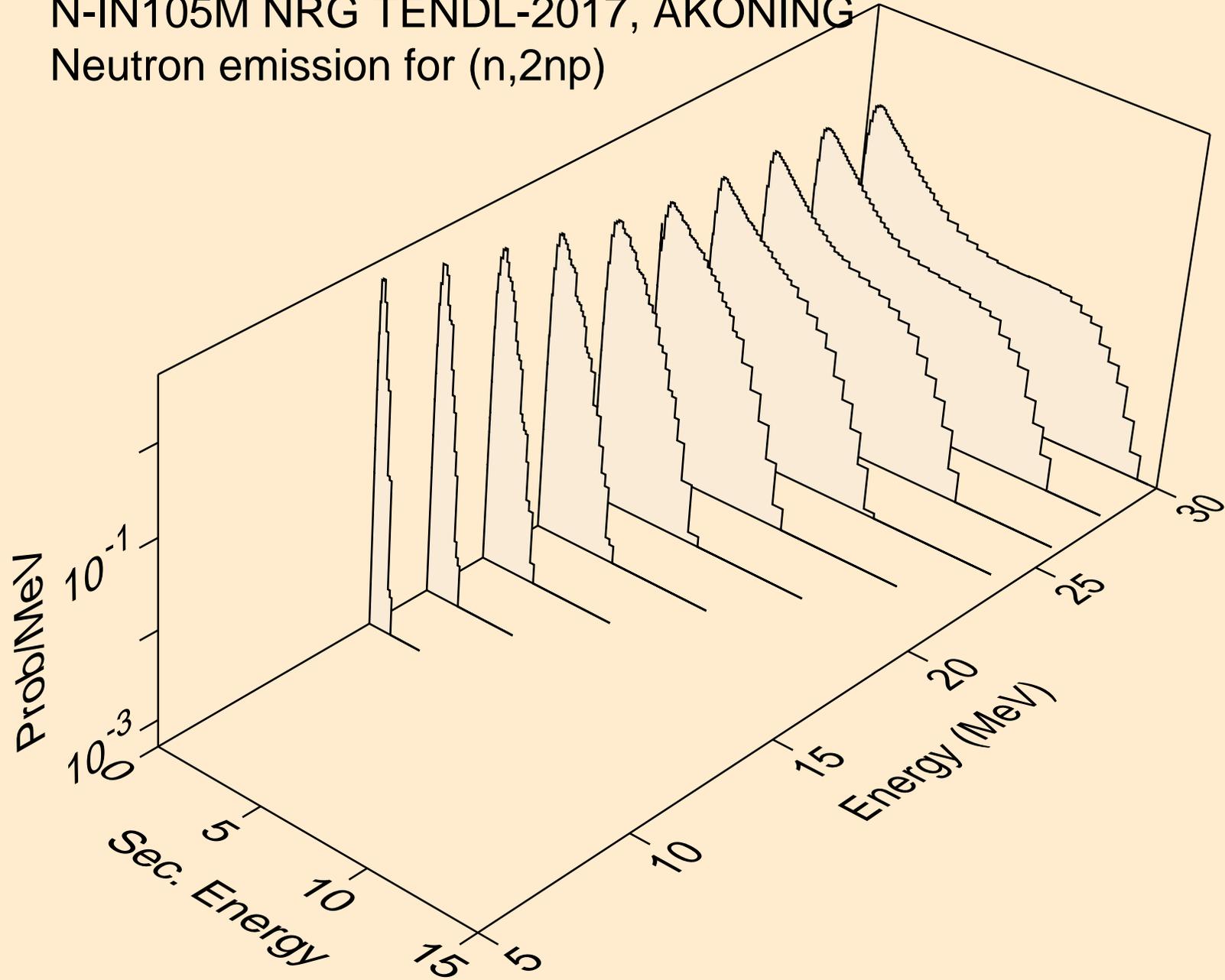N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)a

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2n)a

ProbMeV
10^{-1}
10^{-3}
10^{0}

Sec. Energy
2 4 6 8 10

Energy (MeV)
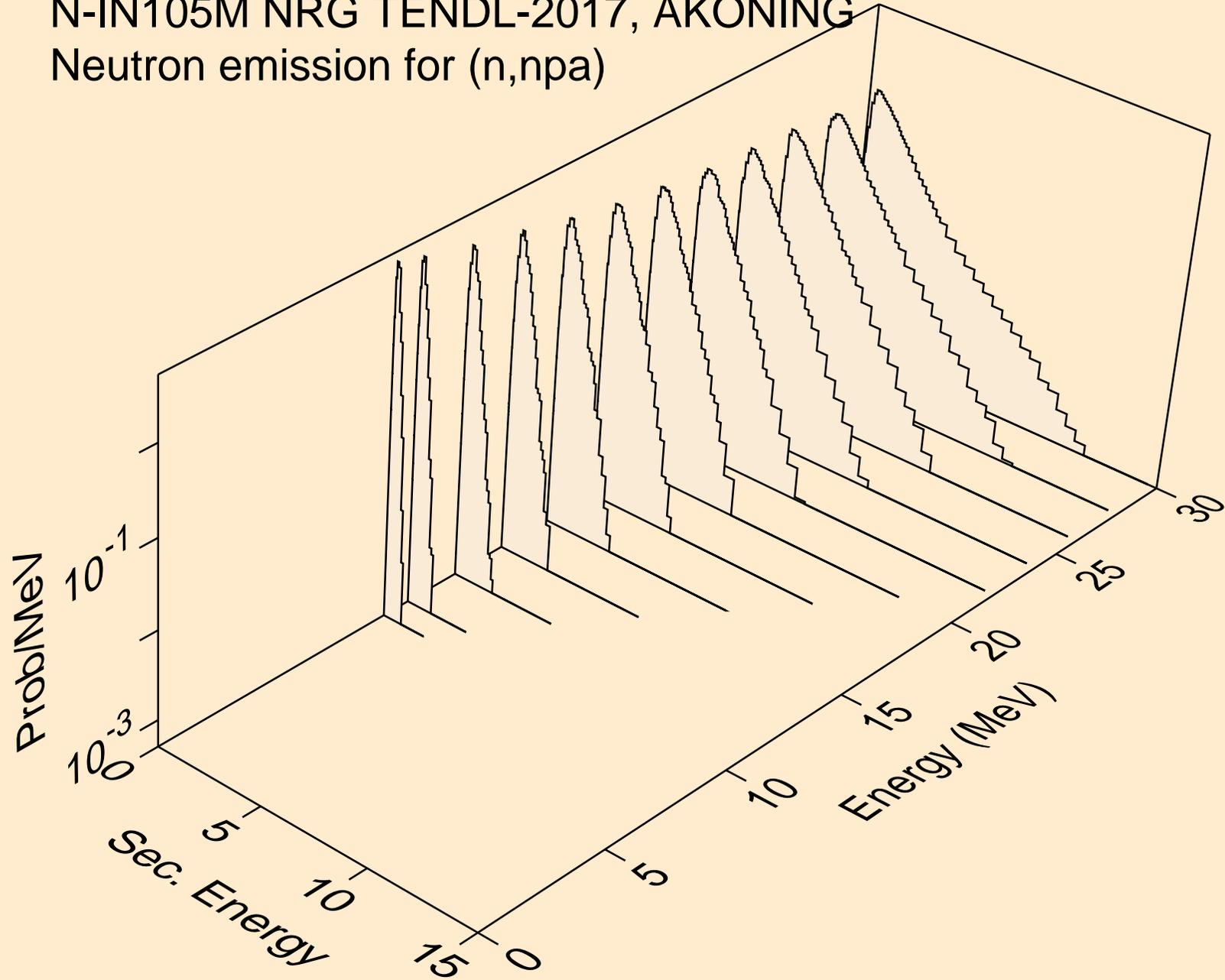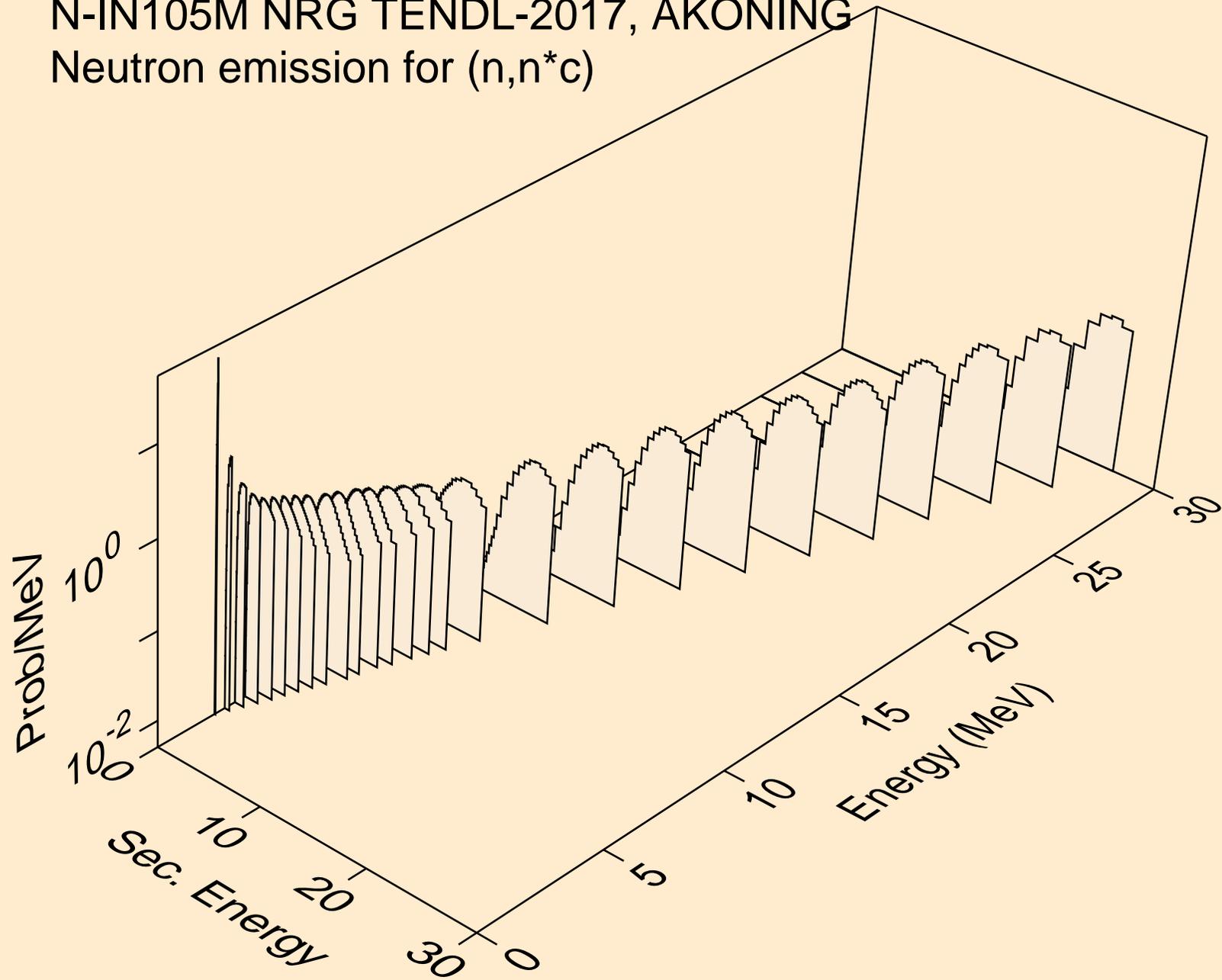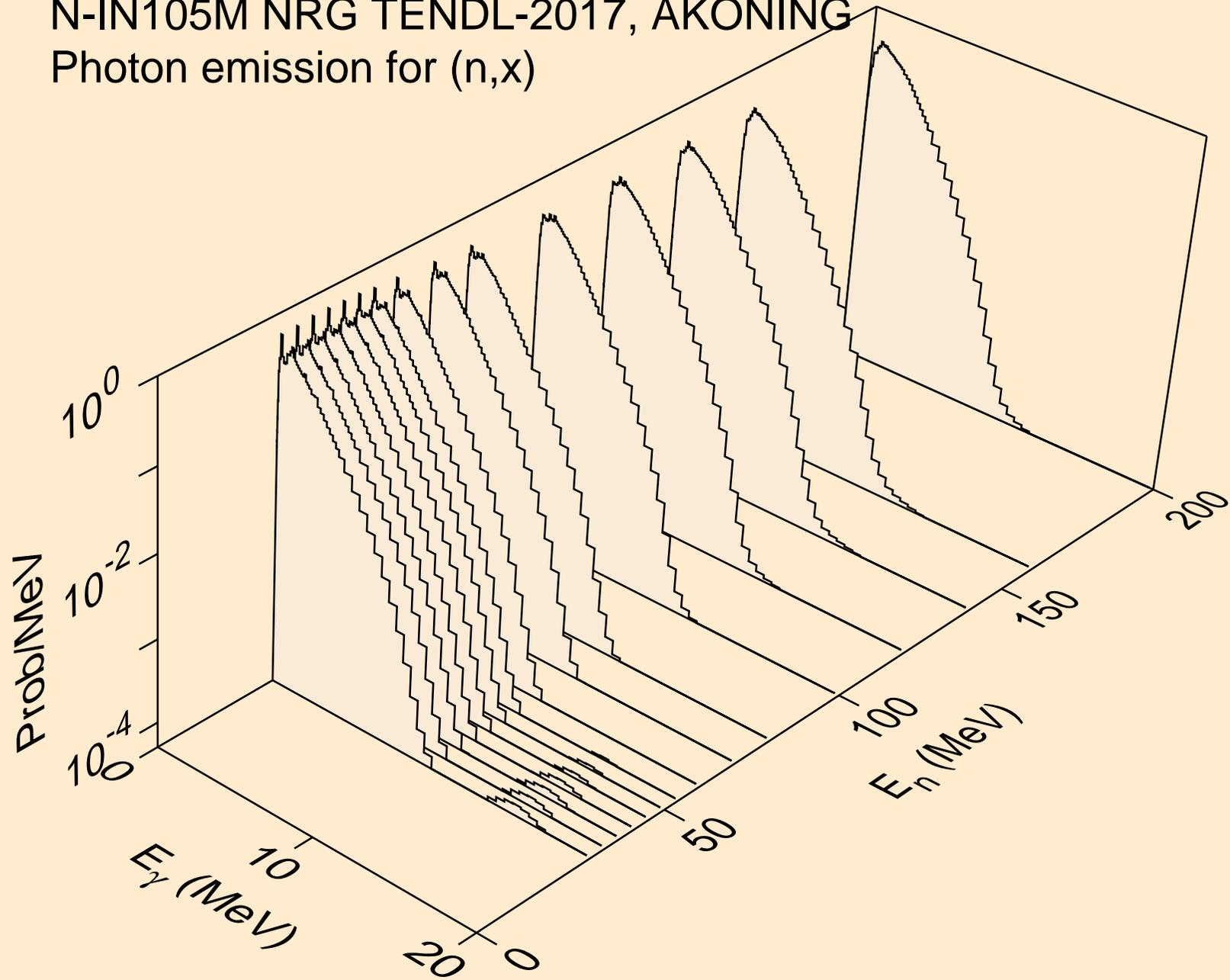10 12 14 16 18 20 22 24 26 28 30

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,3n)a

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)p

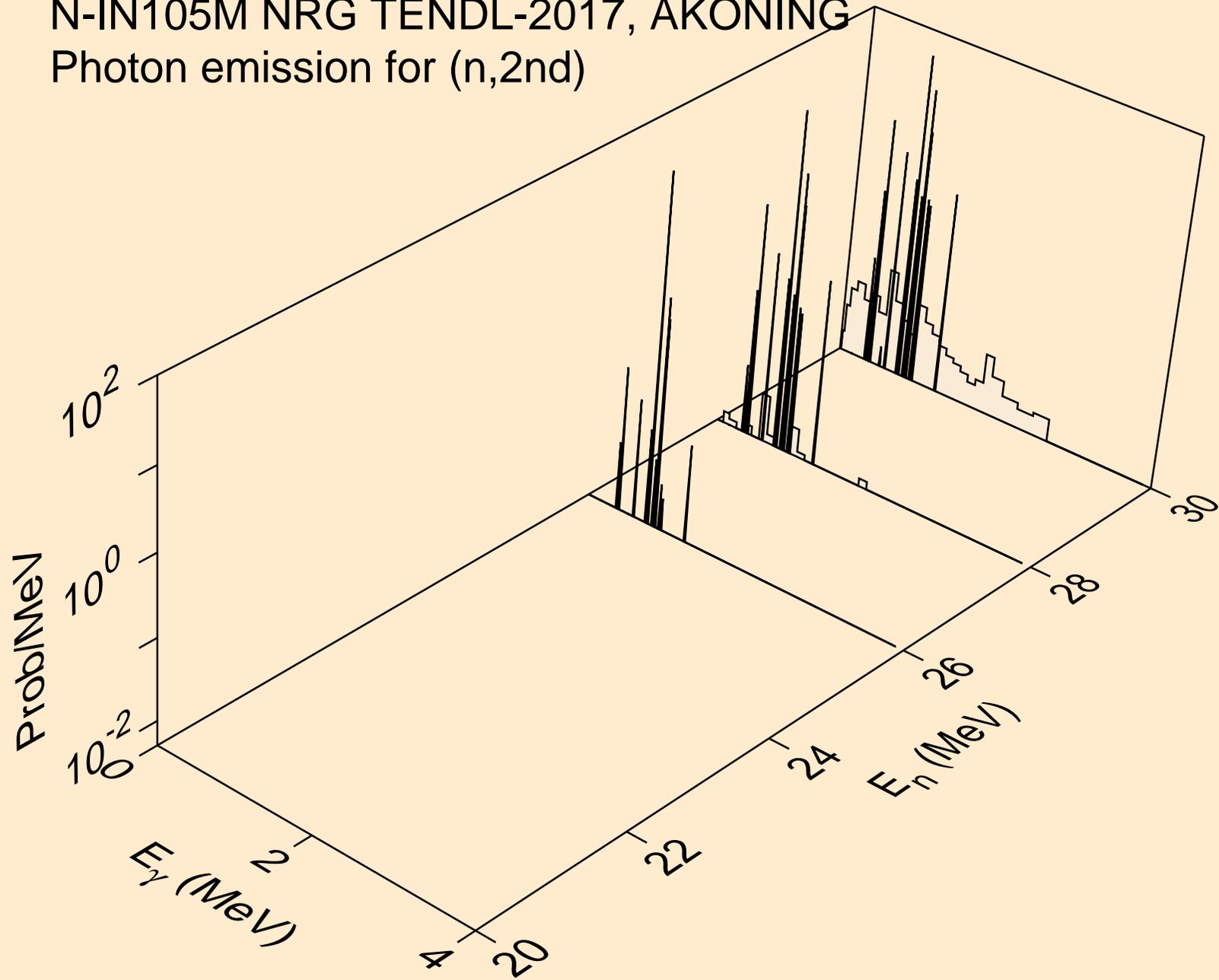N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)2a

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2n)2a

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)d

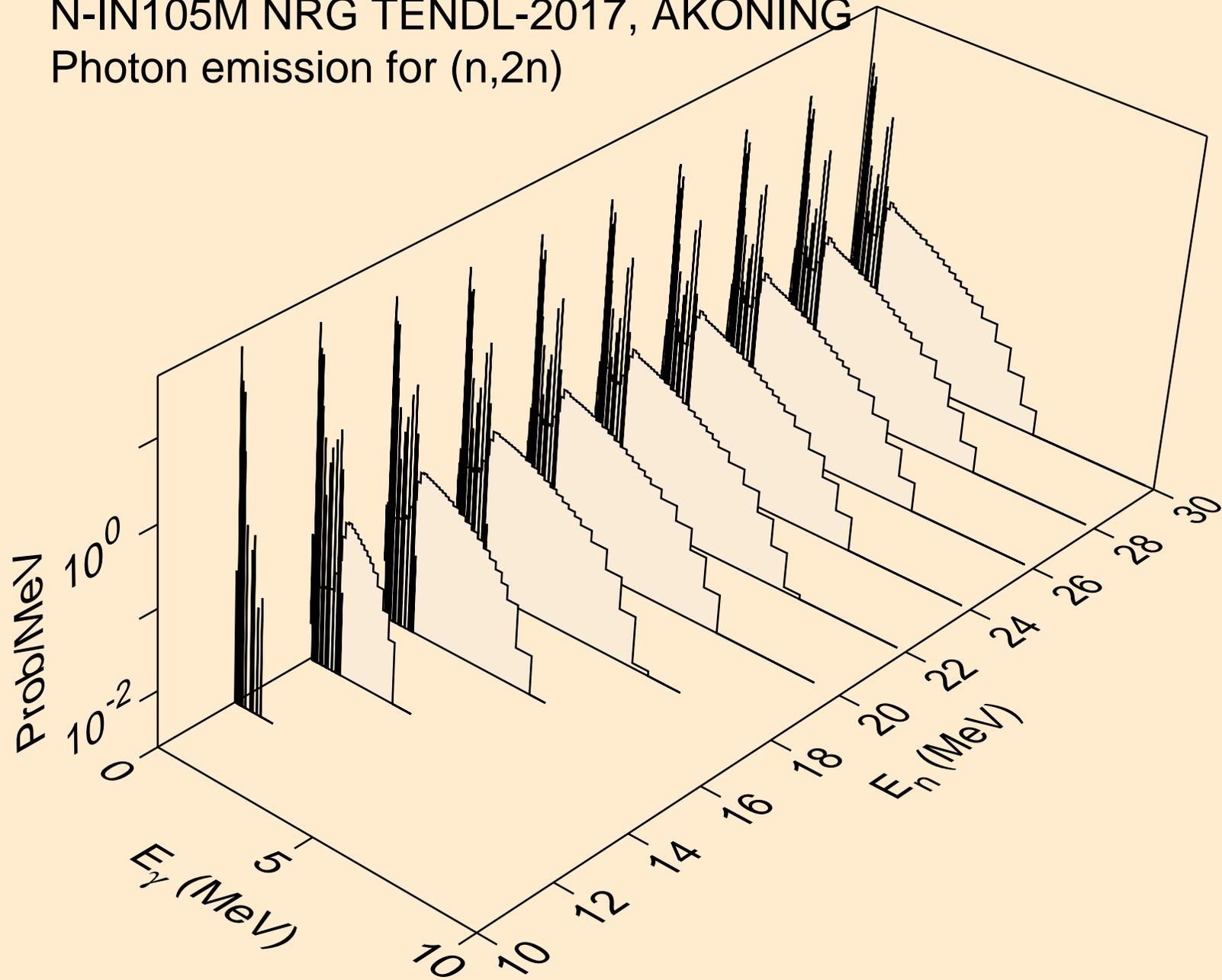N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)t
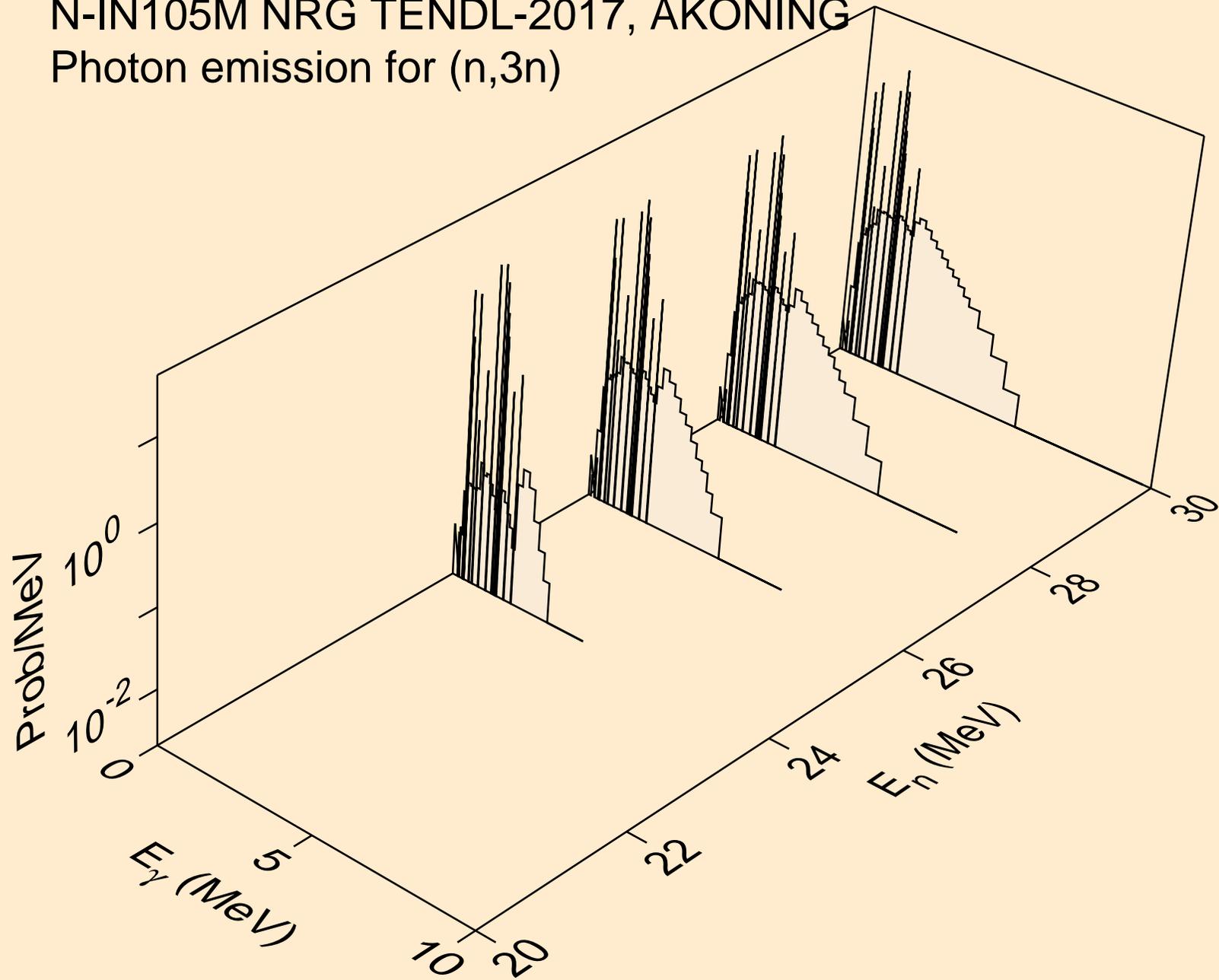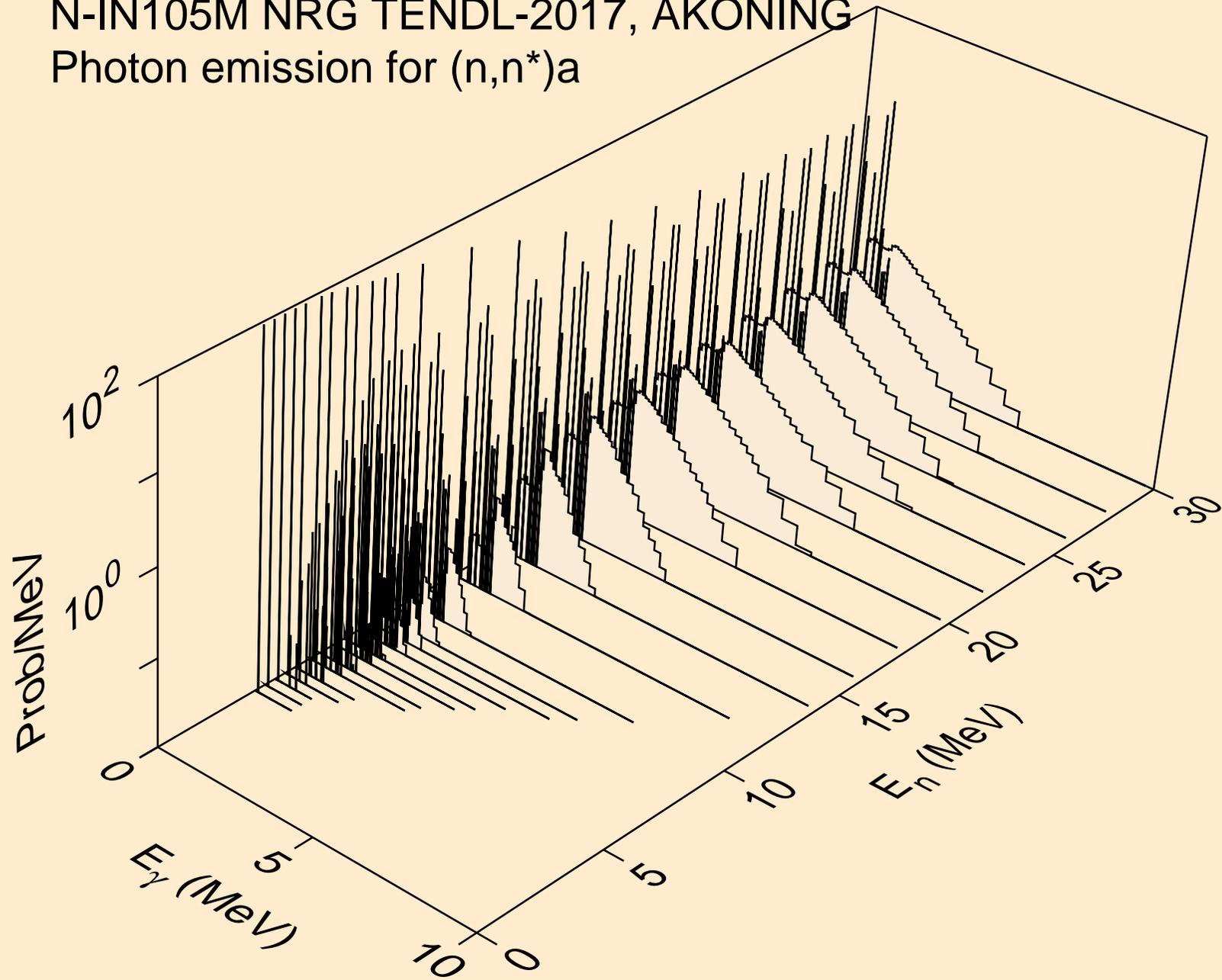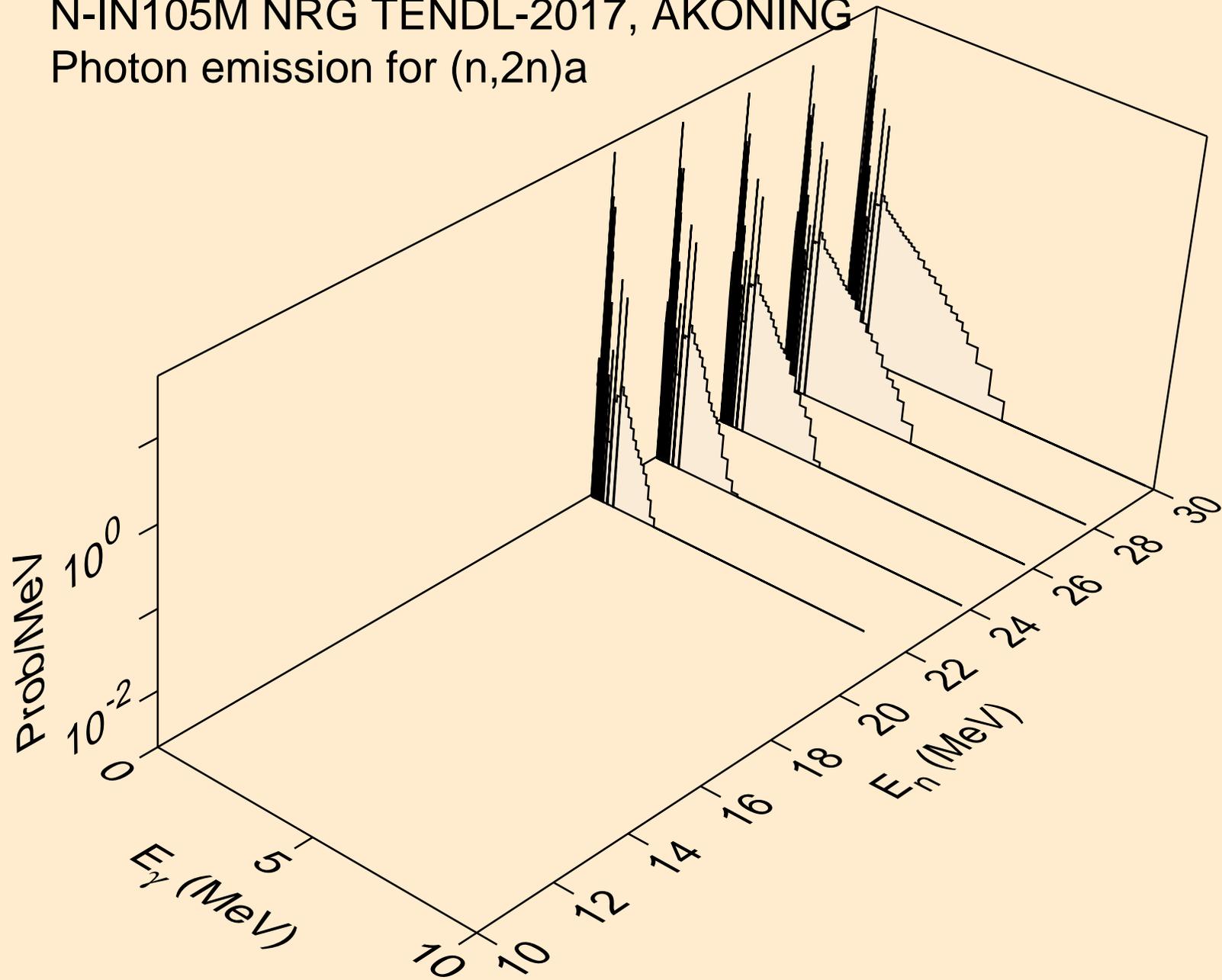
N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*)he3

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2np)

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,3np)

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,2np)

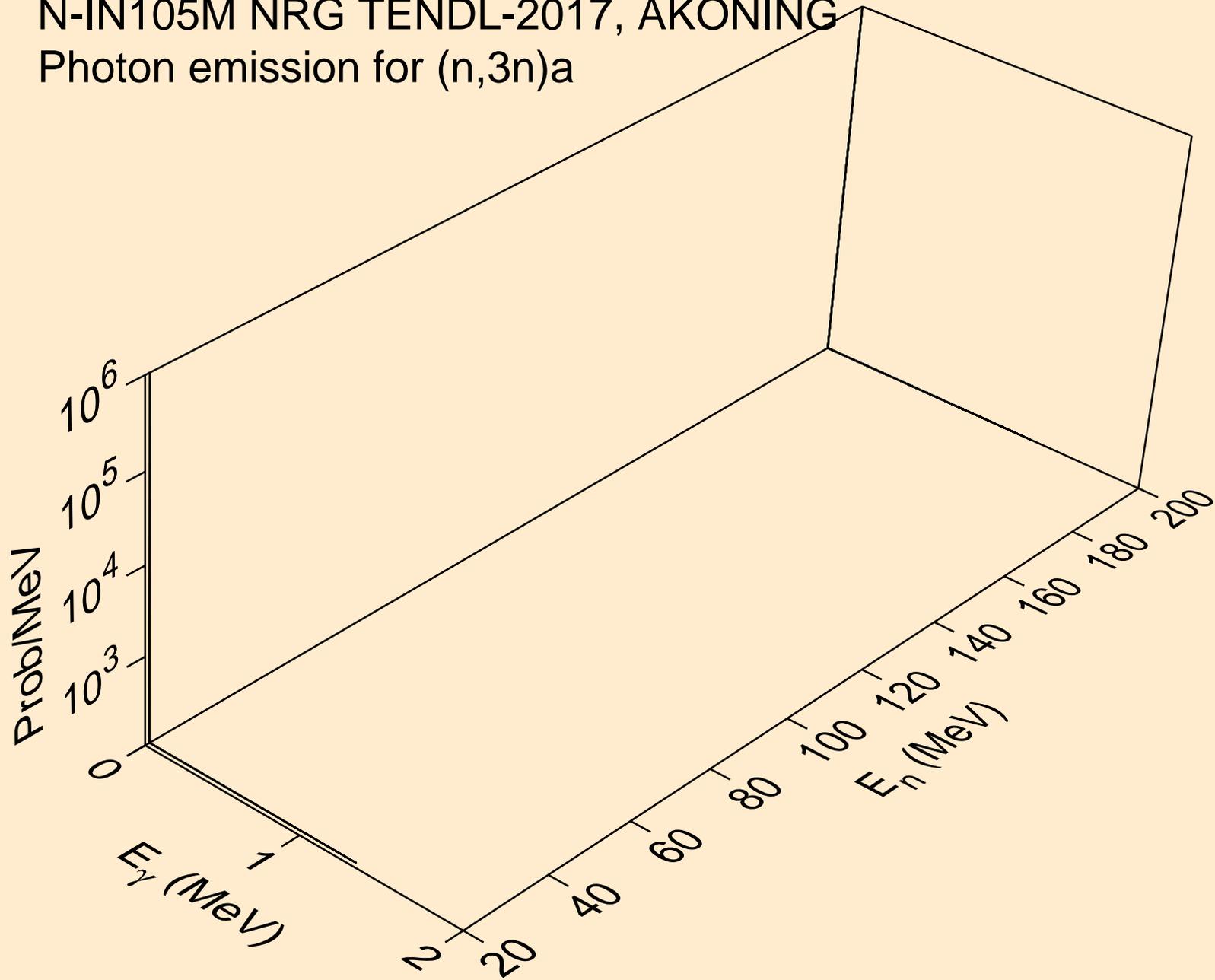N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,npa)

N-IN105M NRG TENDL-2017, AKONING
Neutron emission for (n,n*c)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,x)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,2nd)
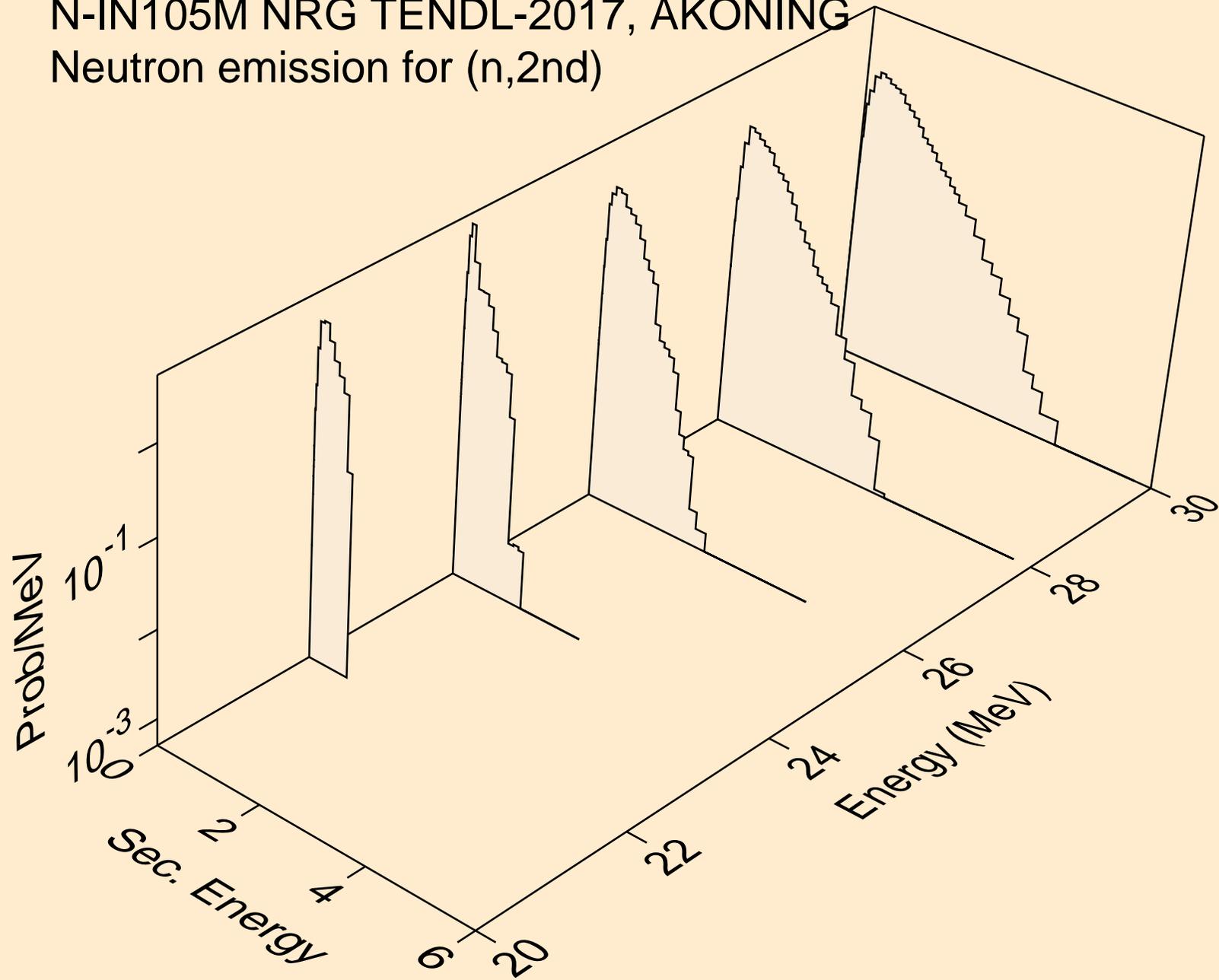
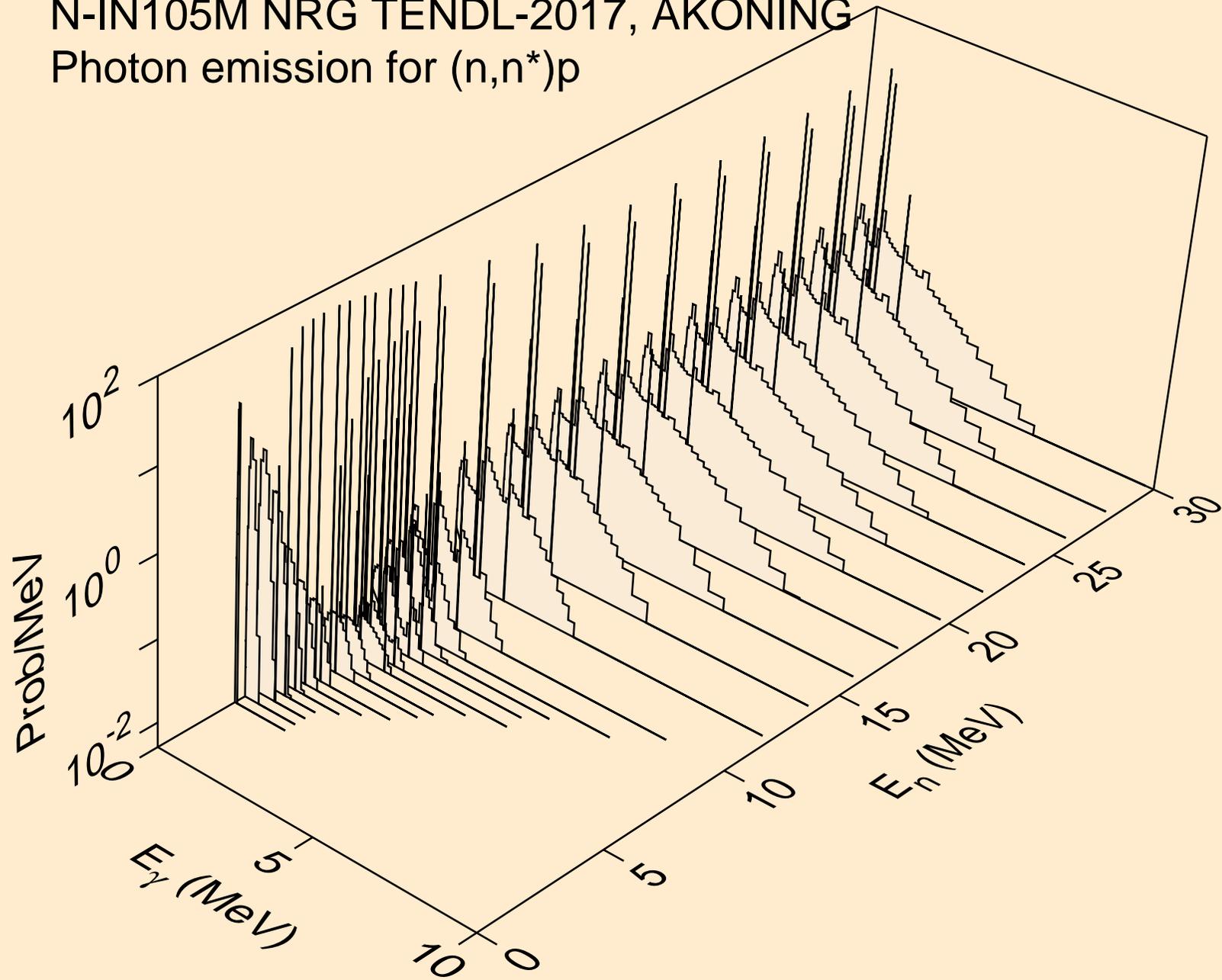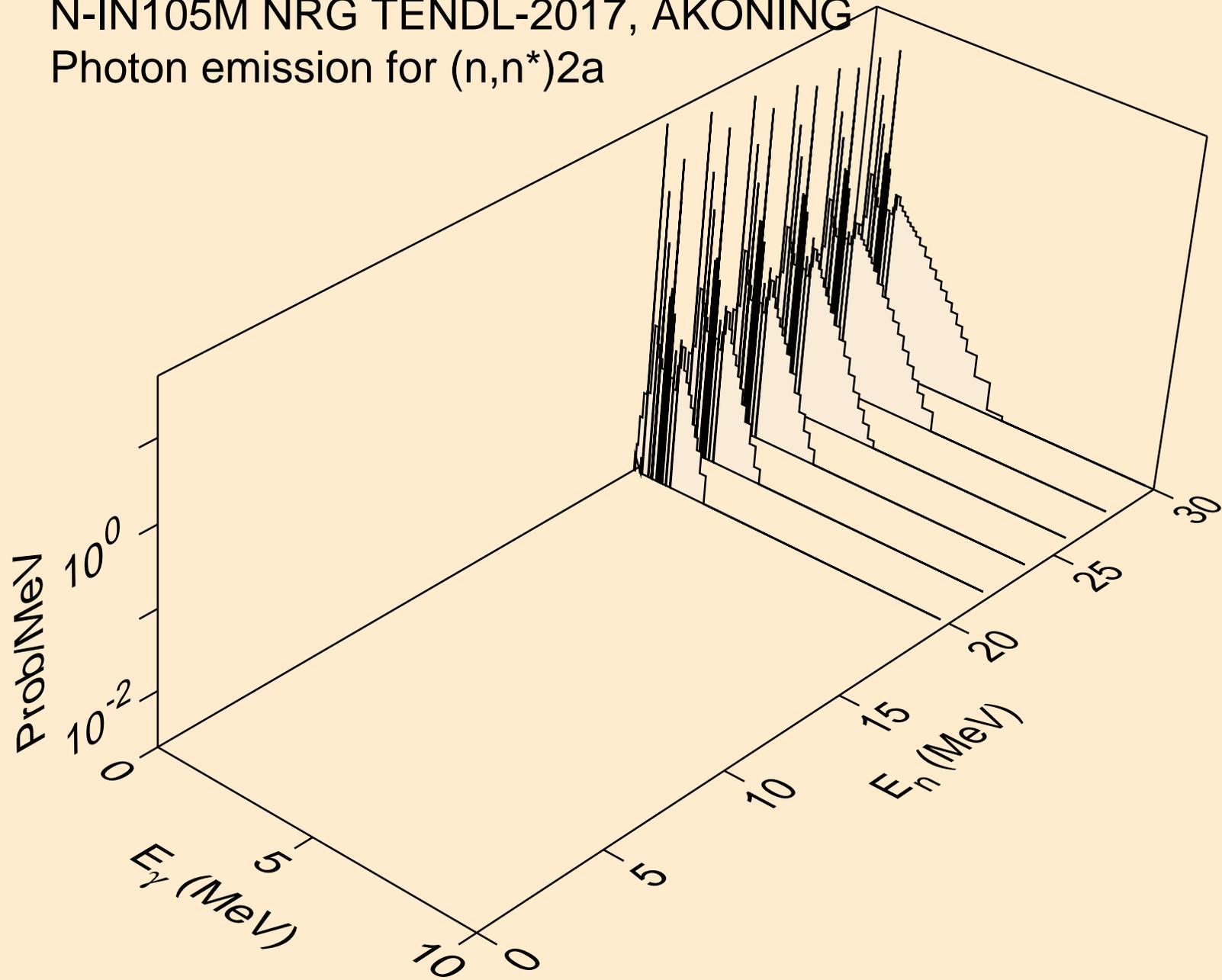N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,2n)

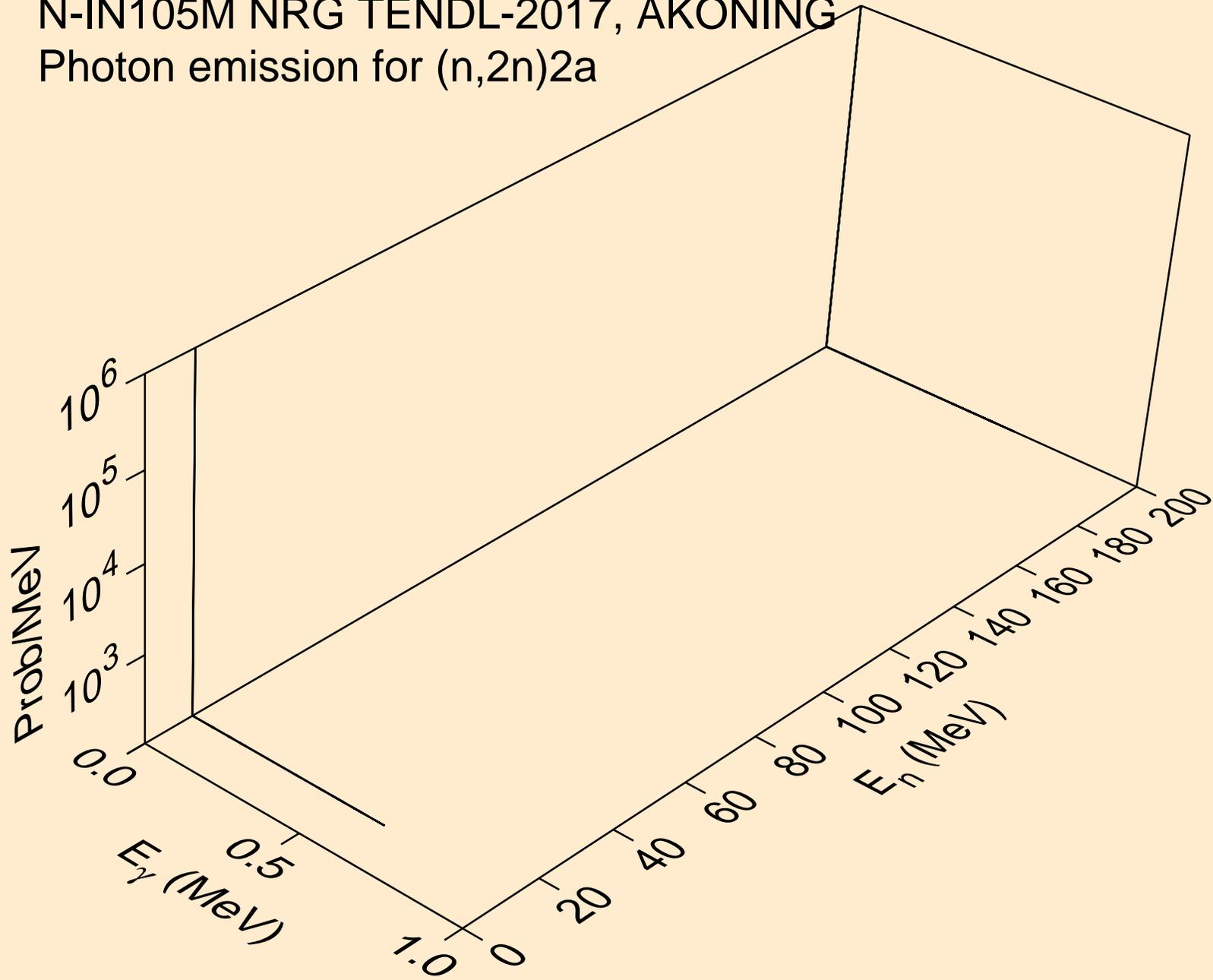N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,3n)

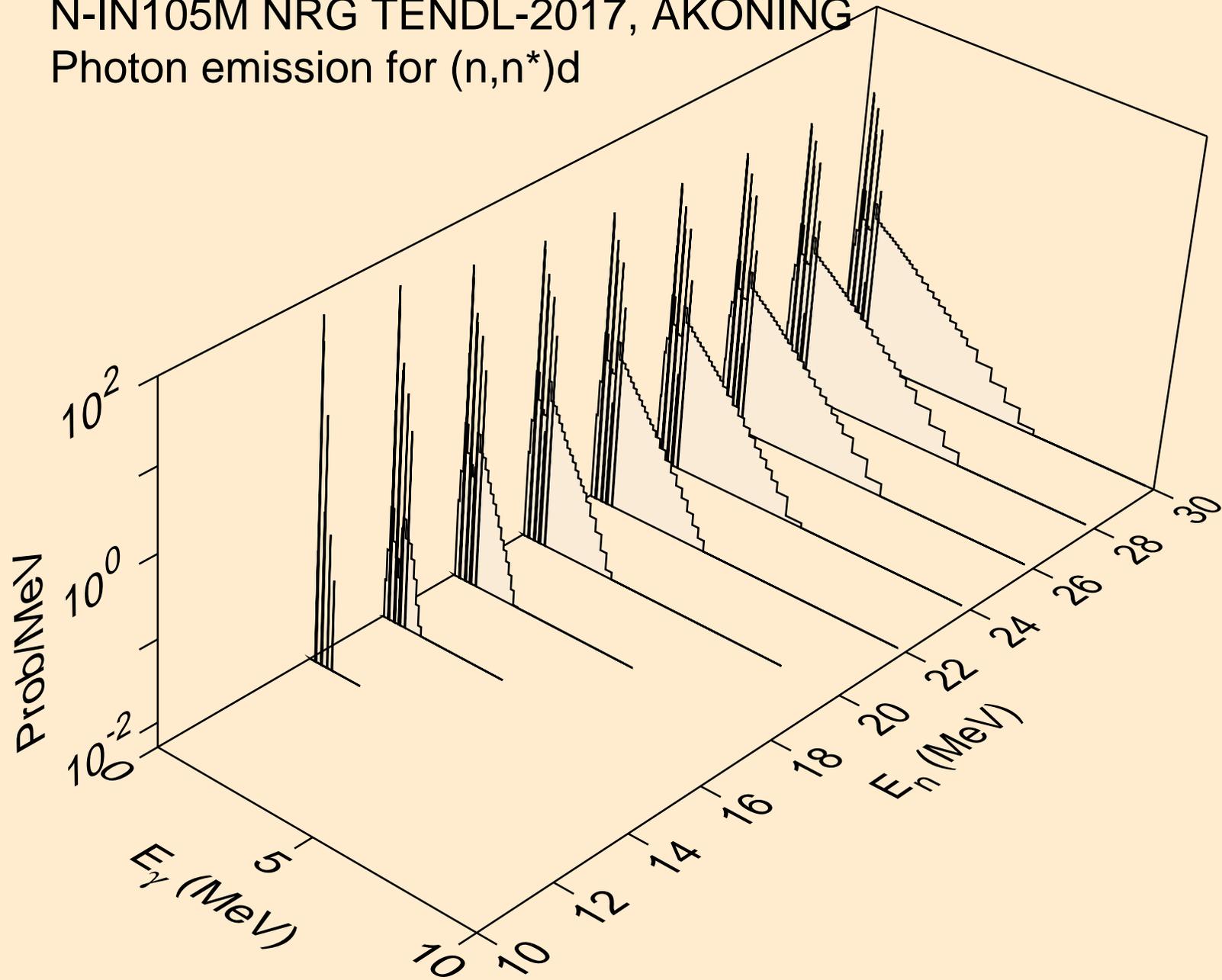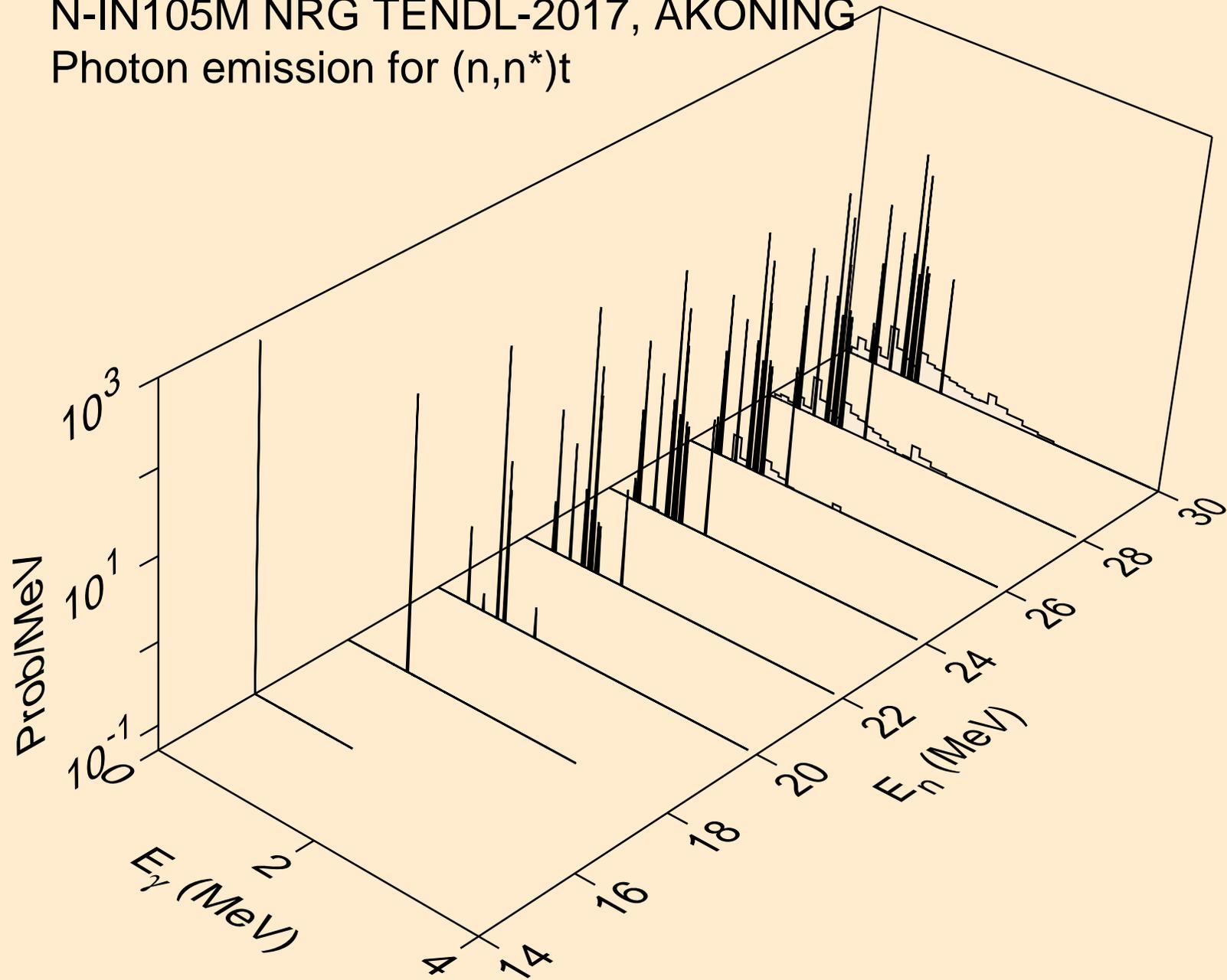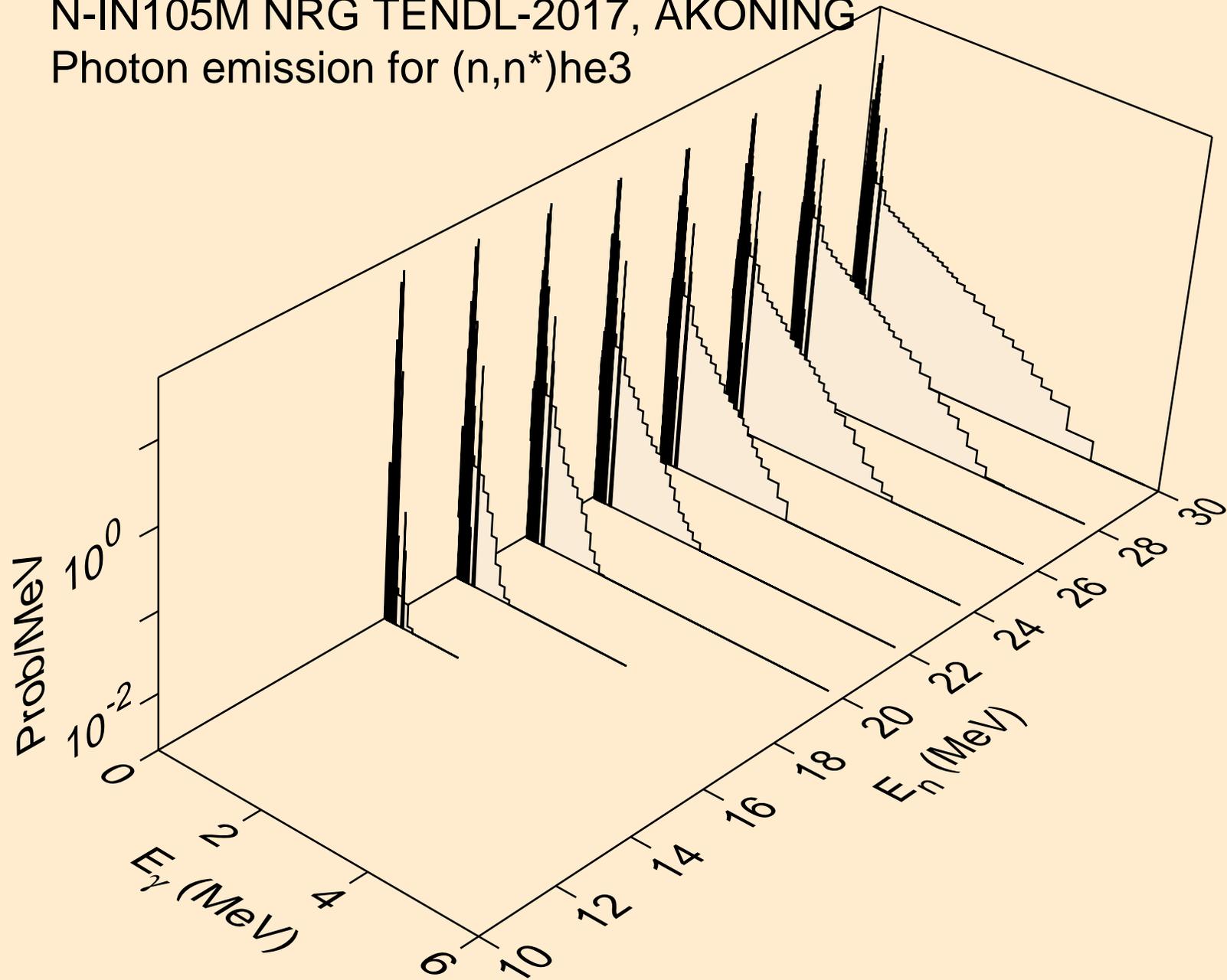N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)a

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,2n)a

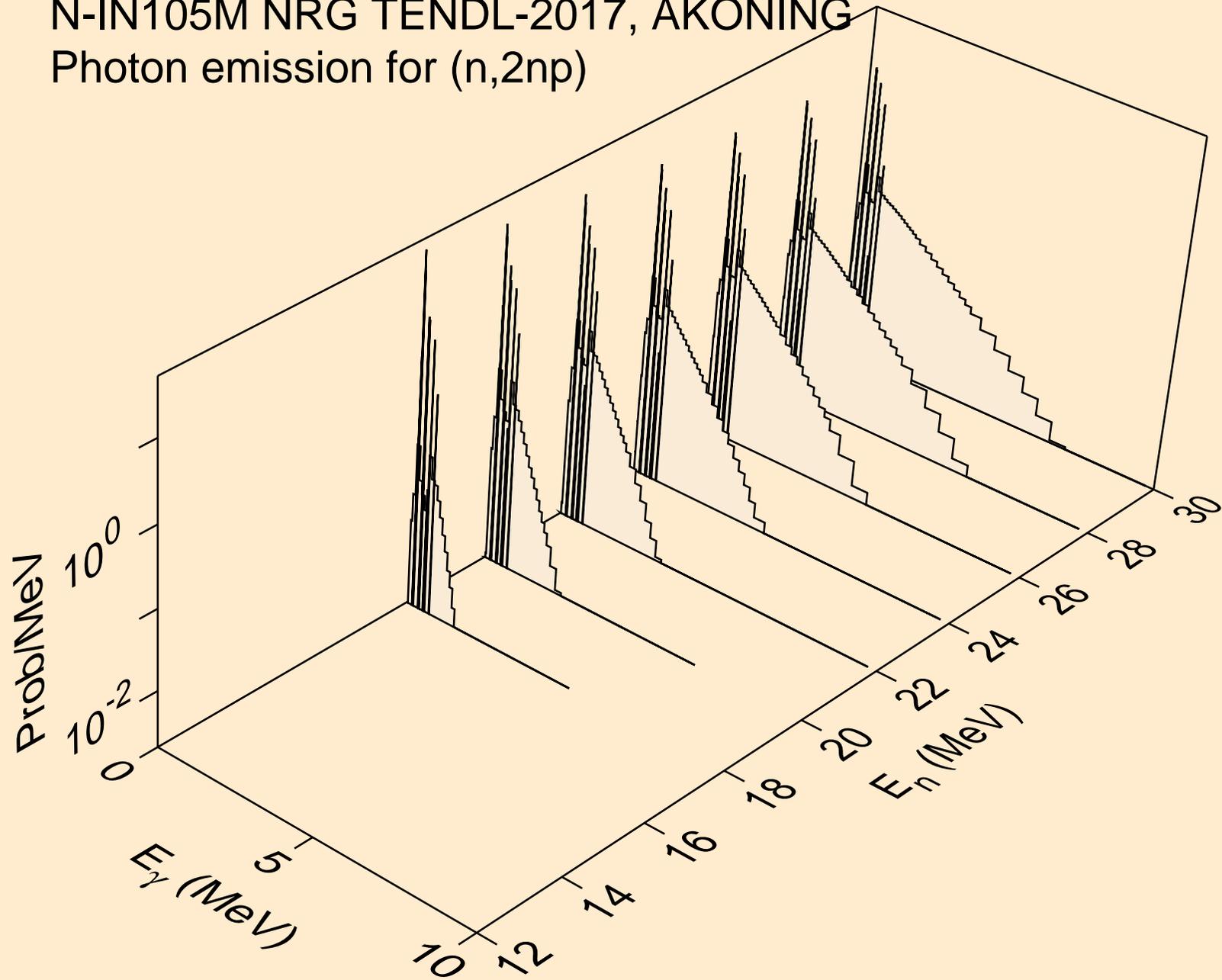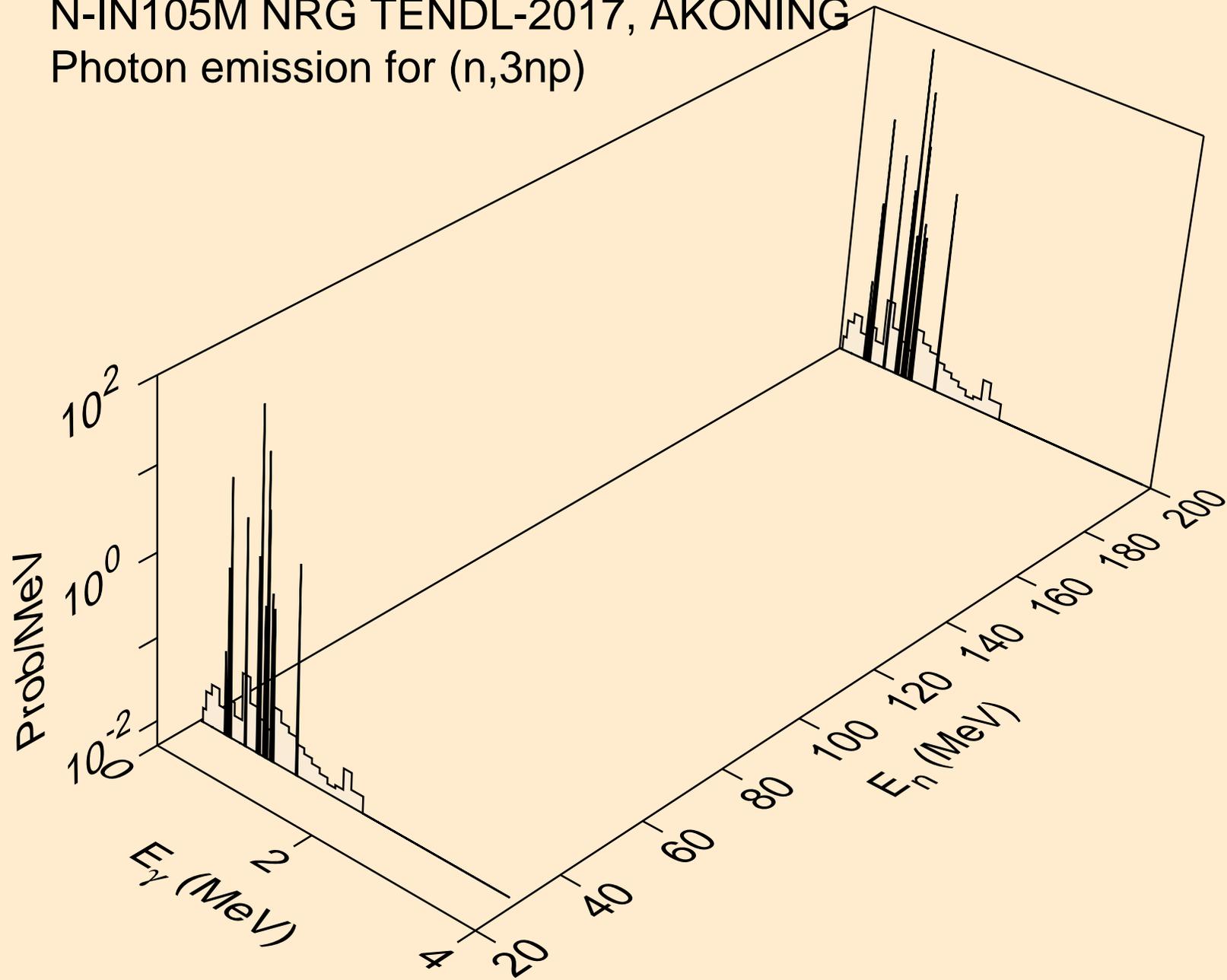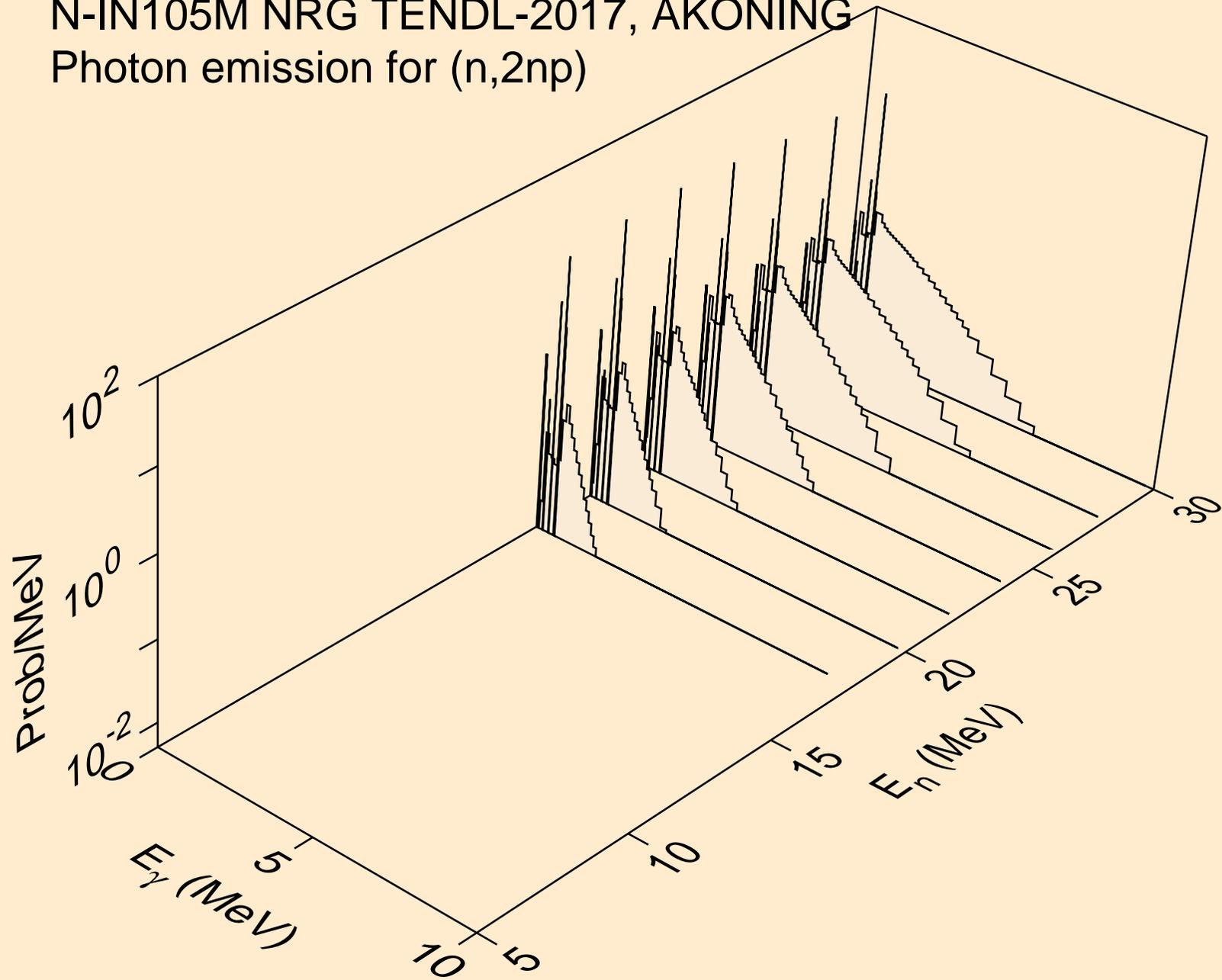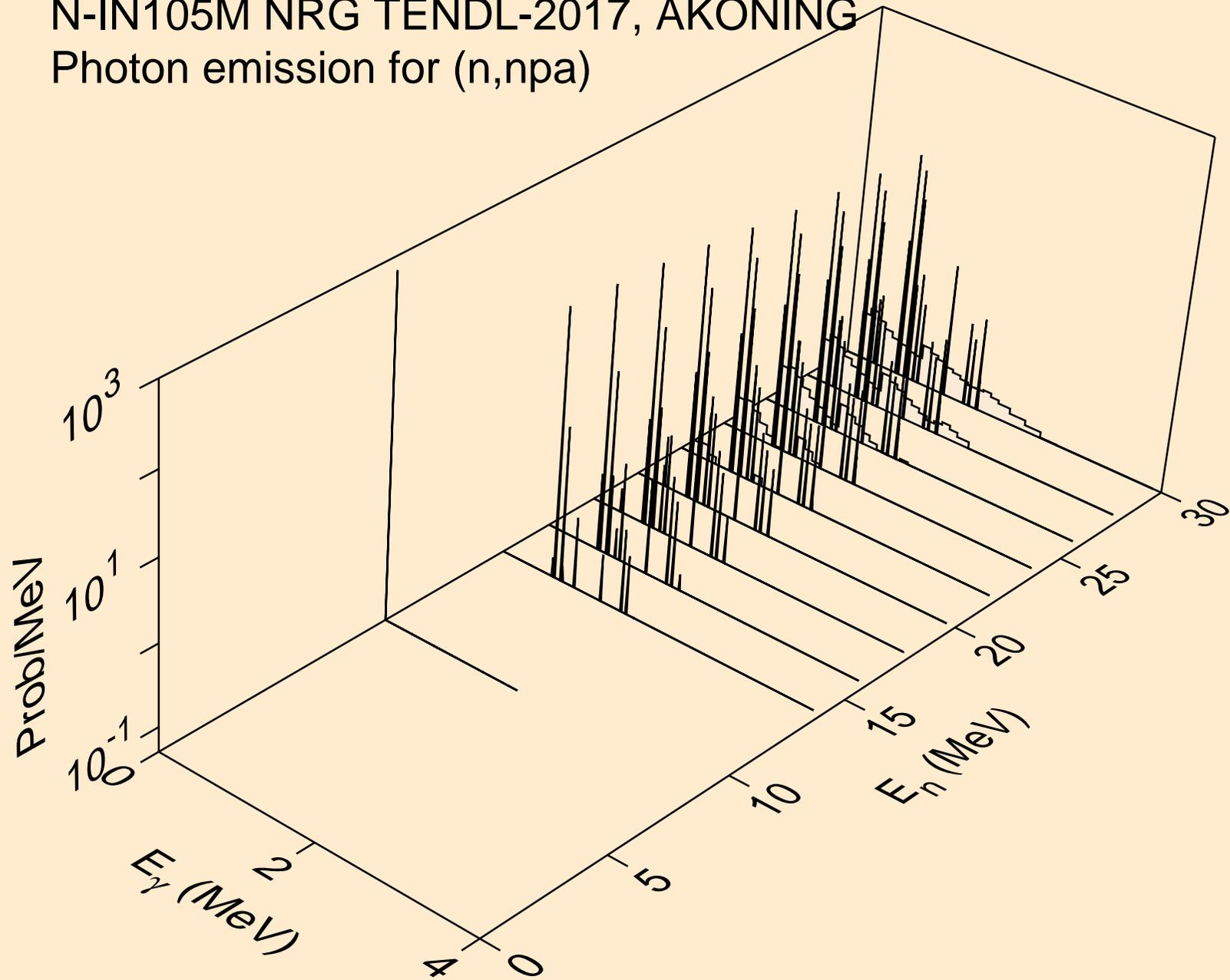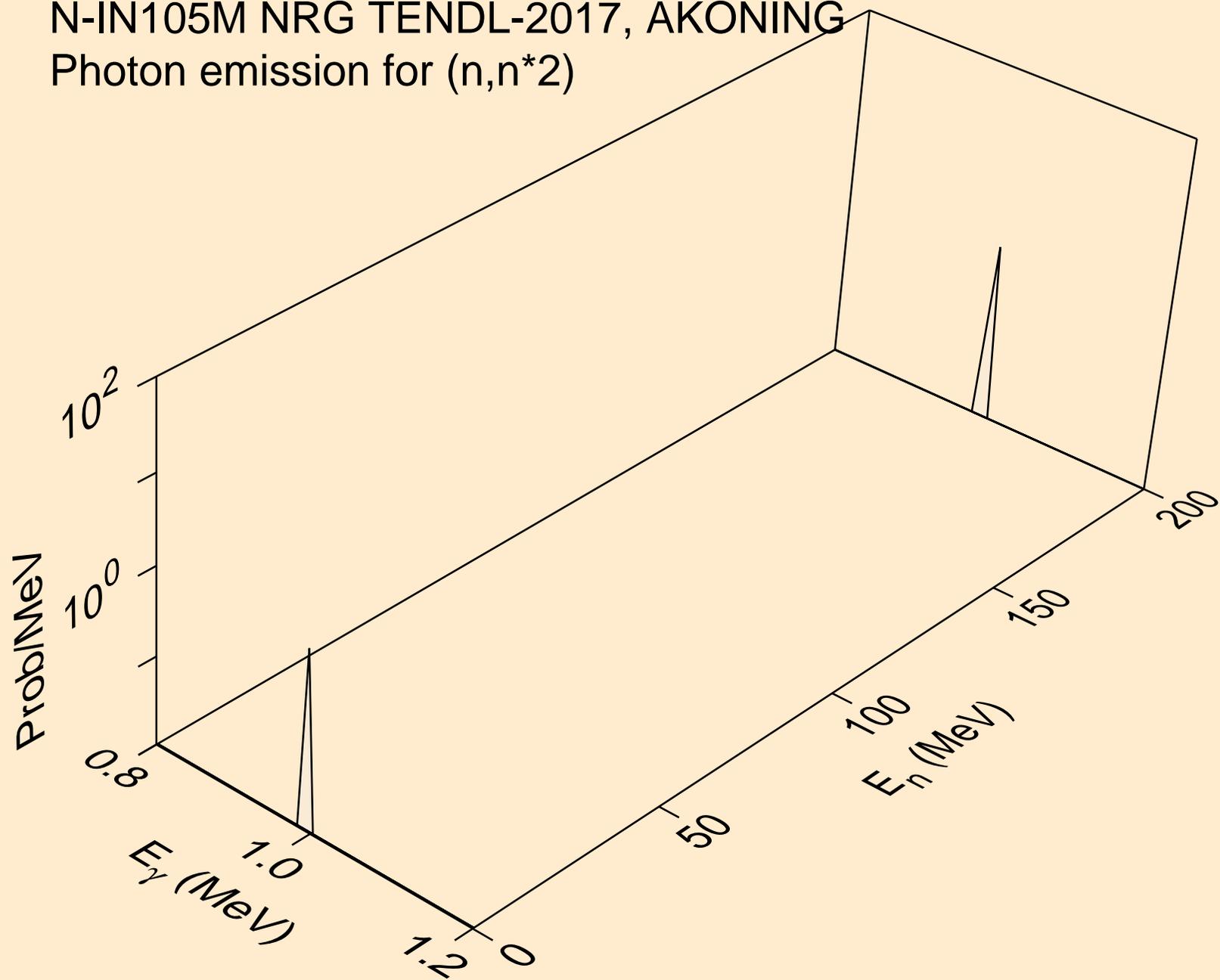N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,3n)a

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)p

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)2a

N-IN105M NRG TENDL-2017, AKONING
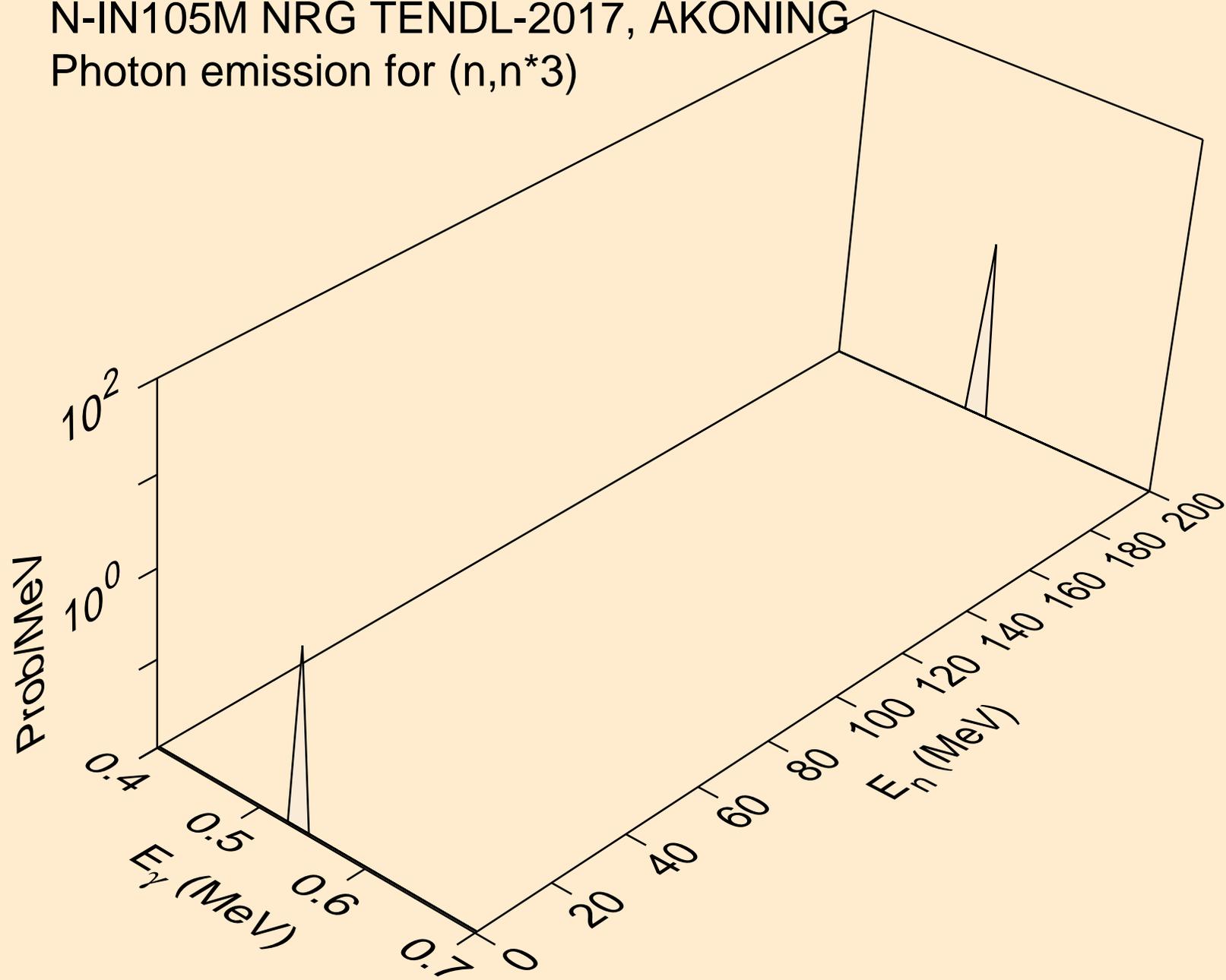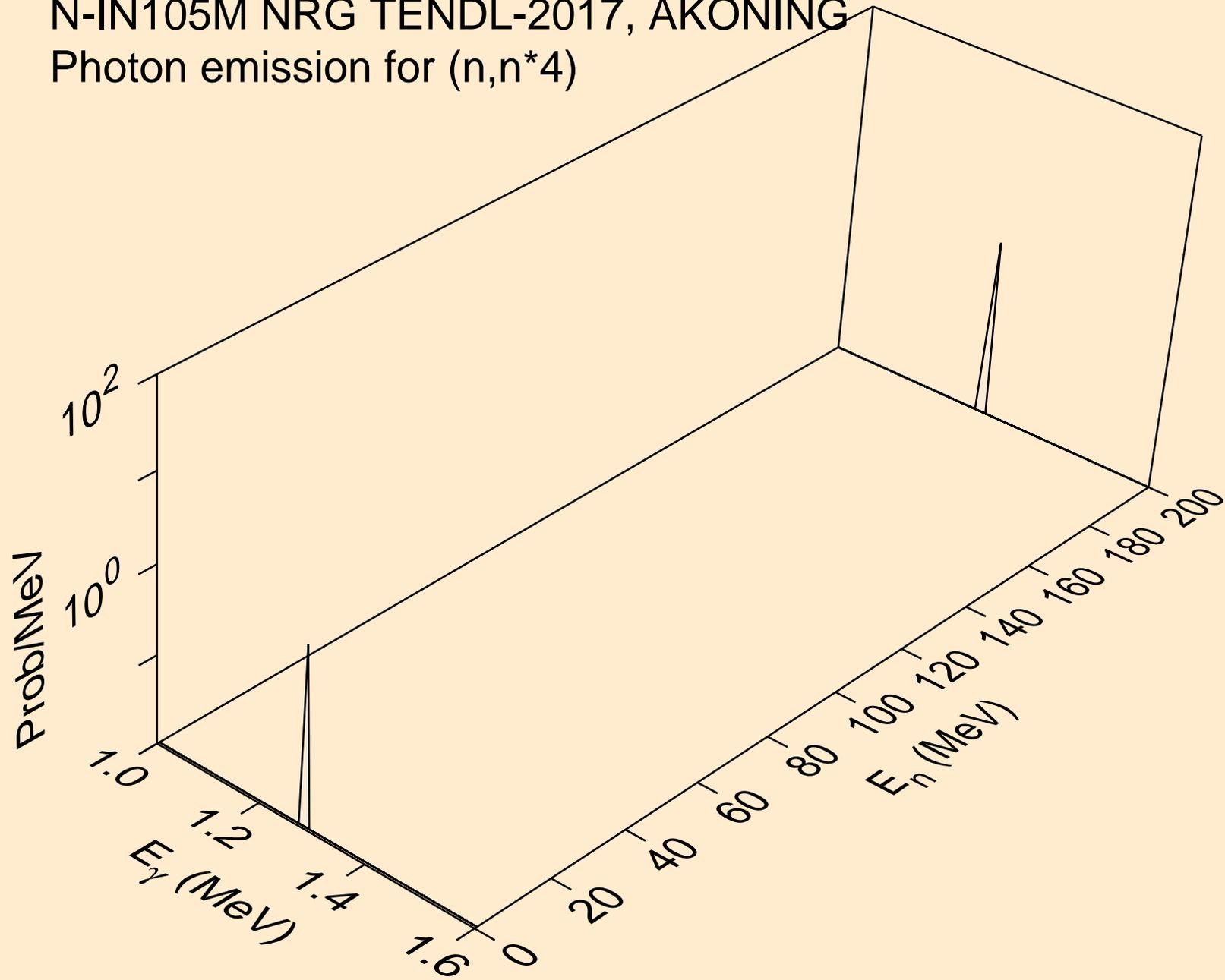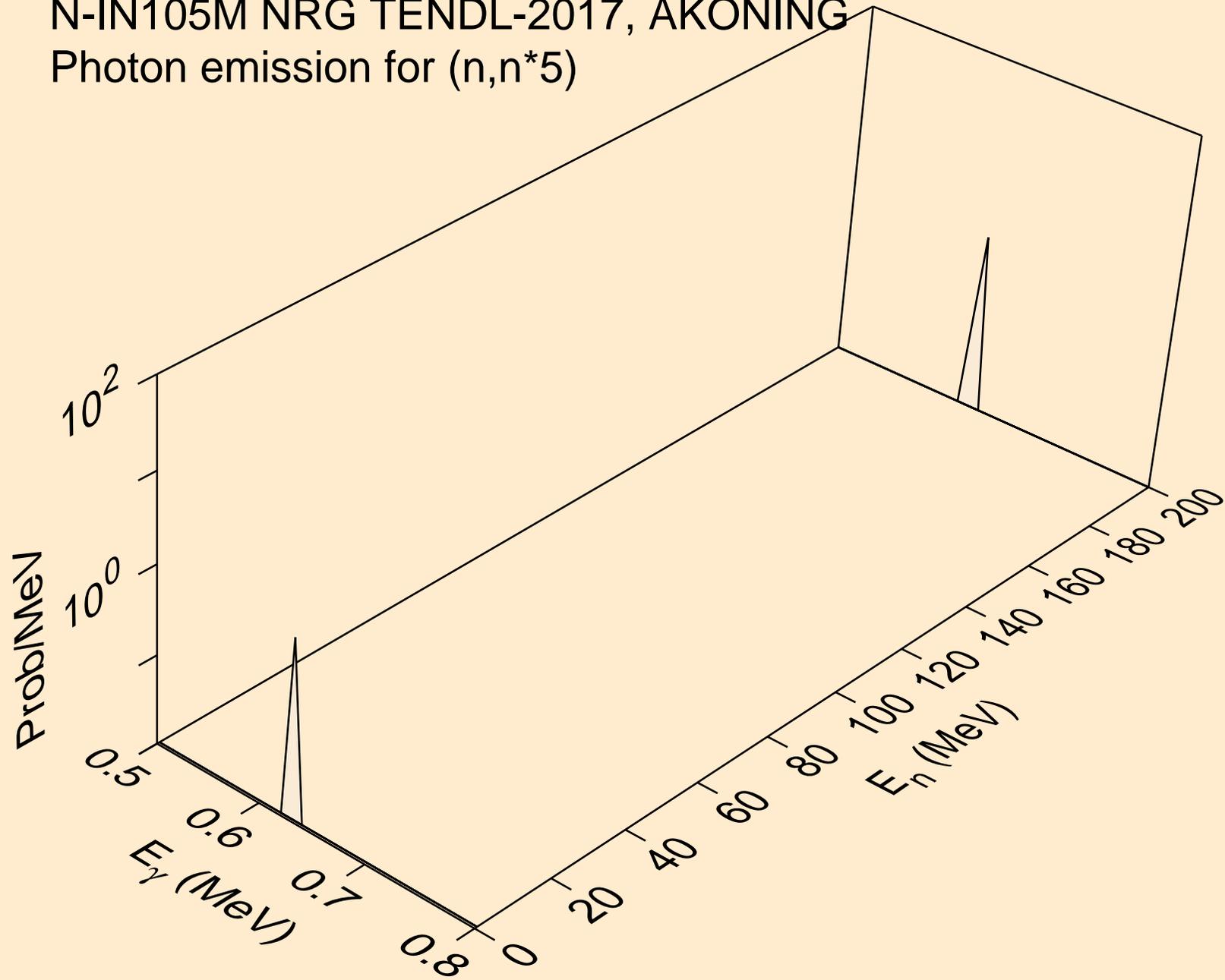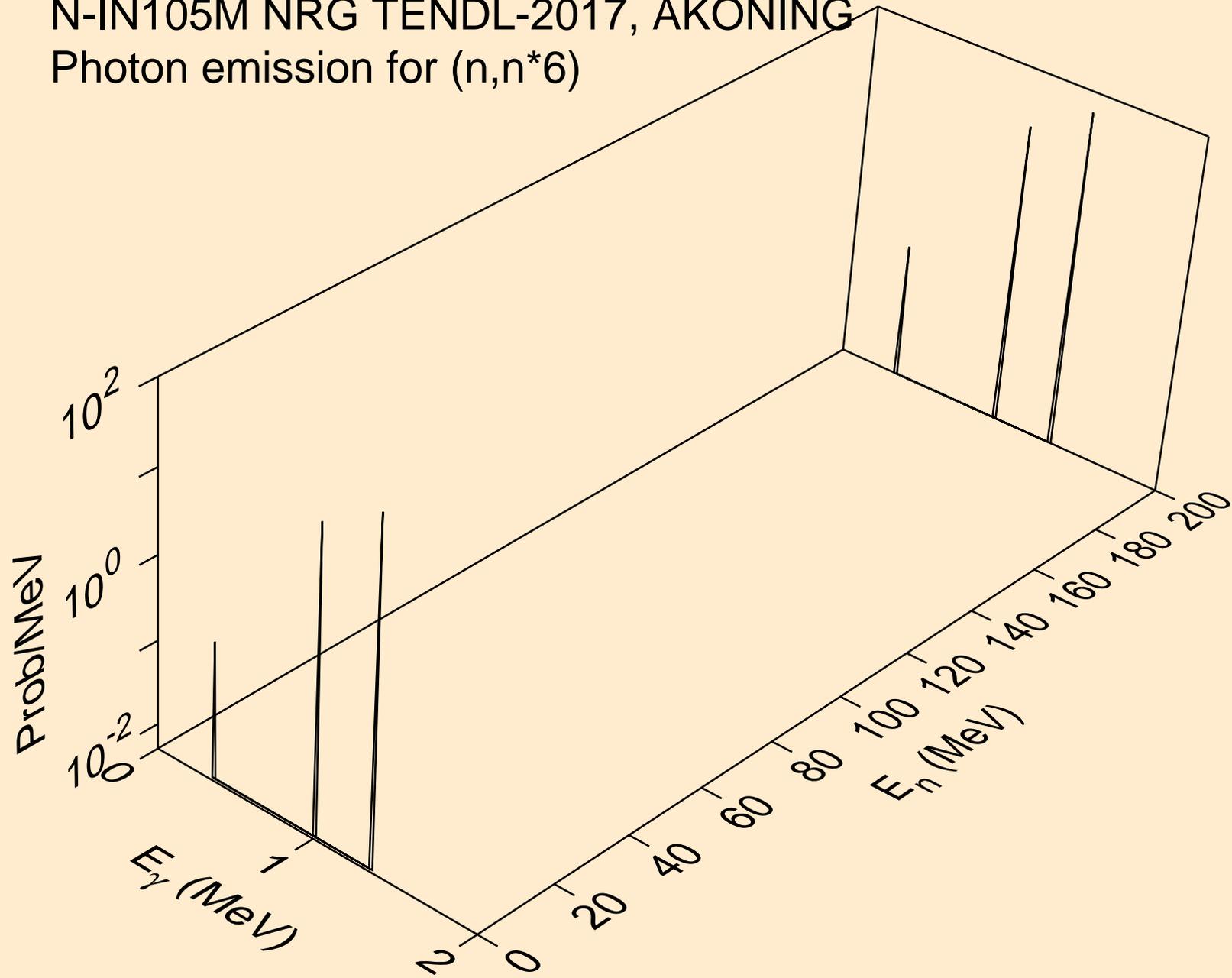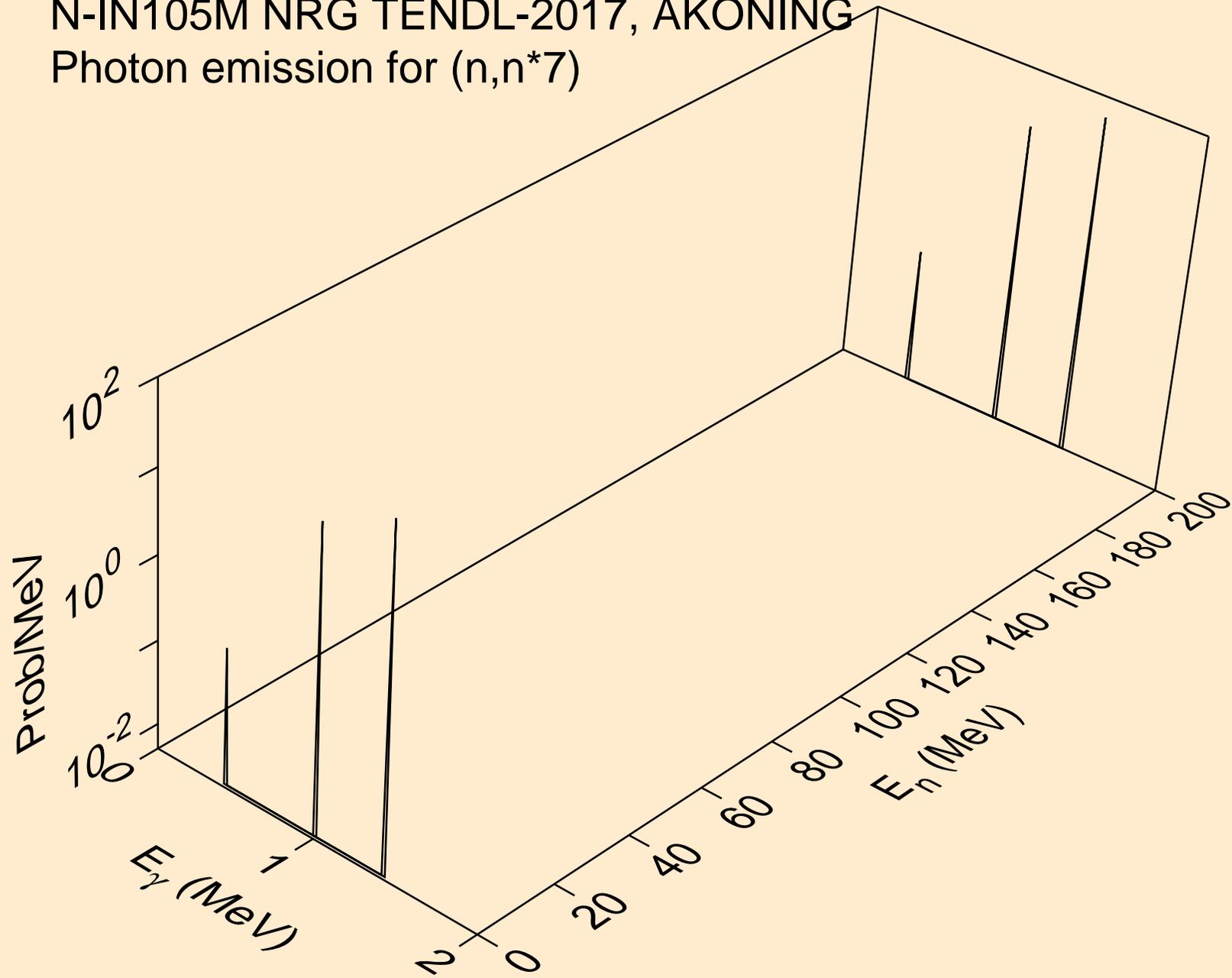Photon emission for (n,2n)2a

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)d

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)t

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*)he3

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,2np)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,3np)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,2np)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,npa)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*2)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*3)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*4)

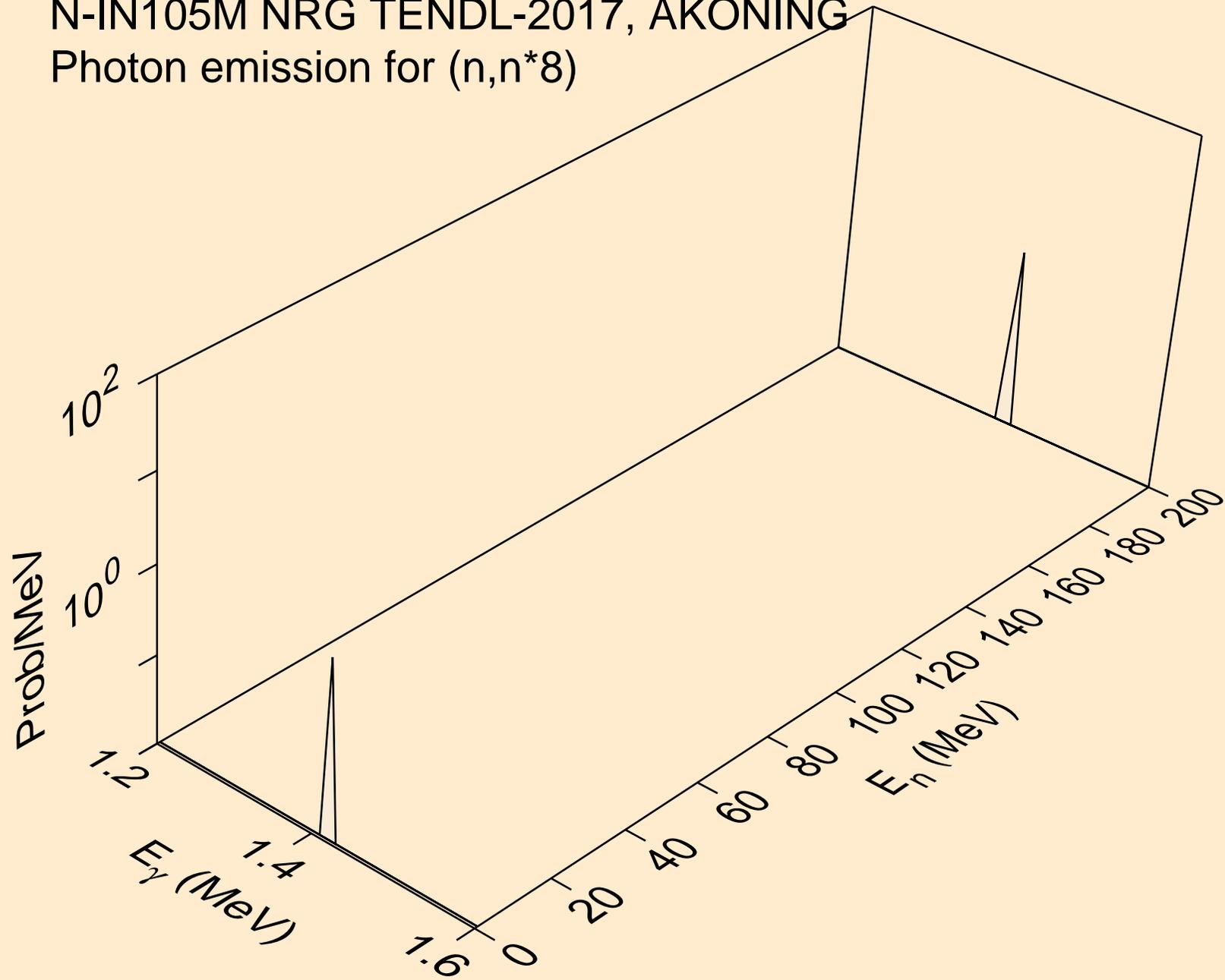N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*5)

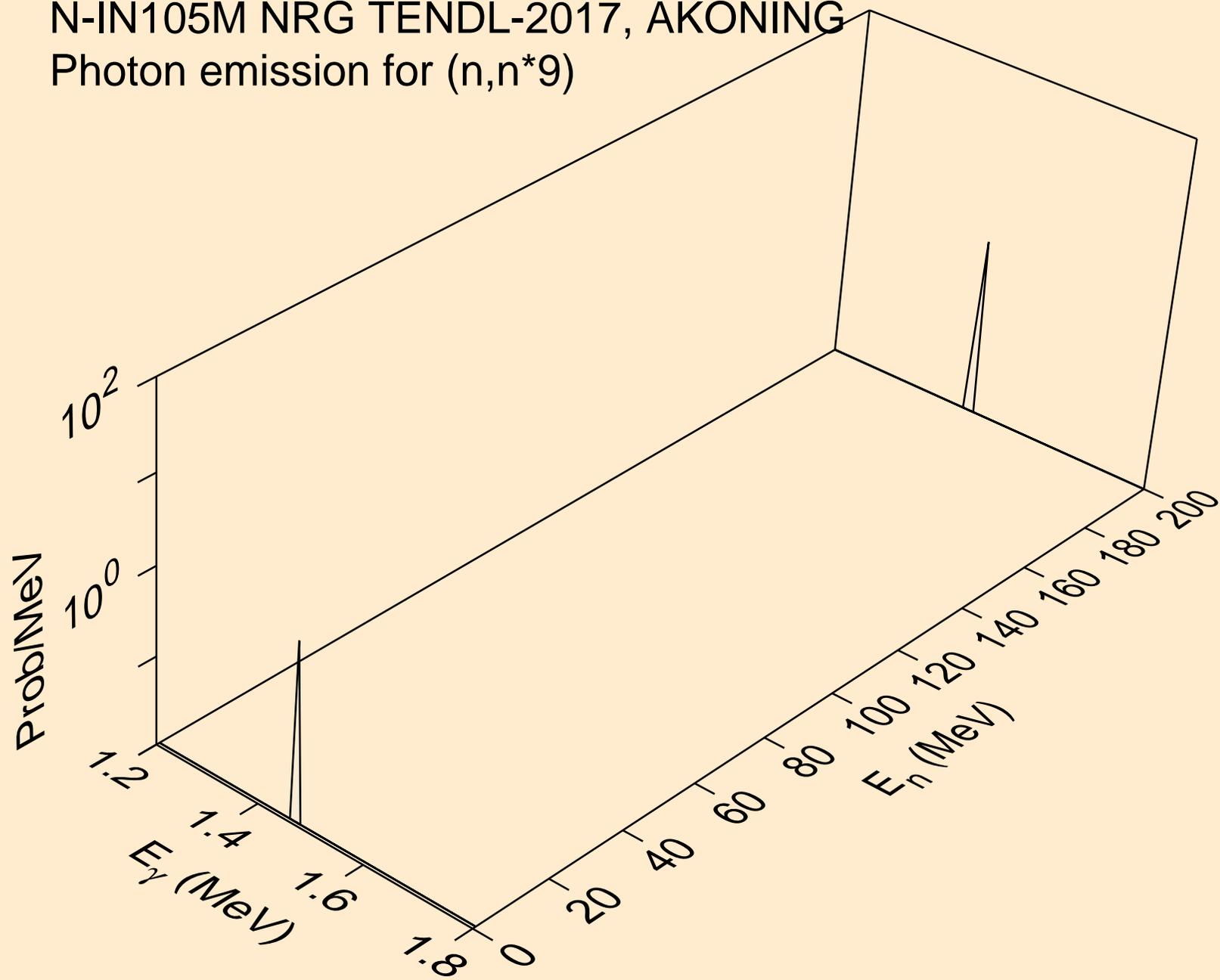N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*6)

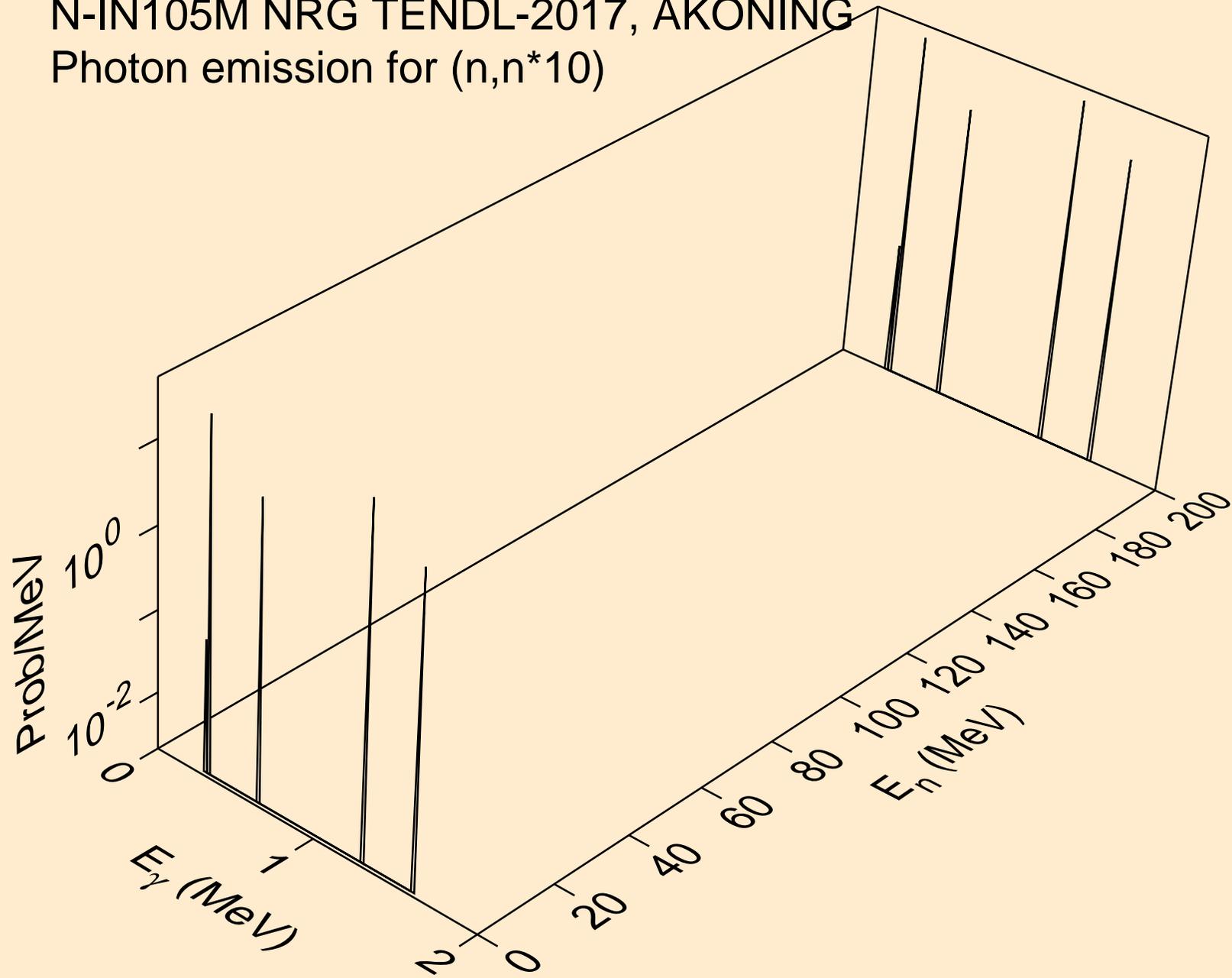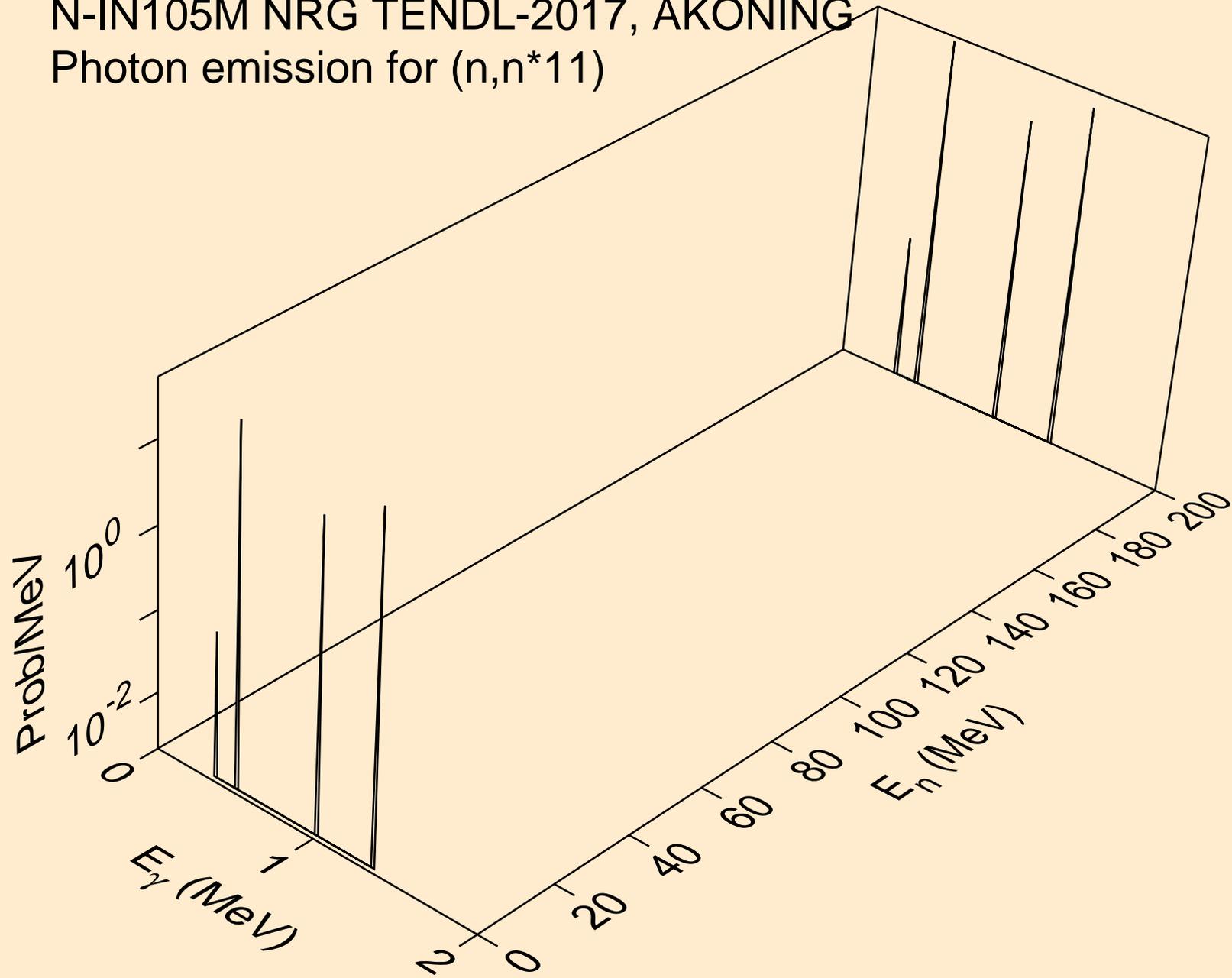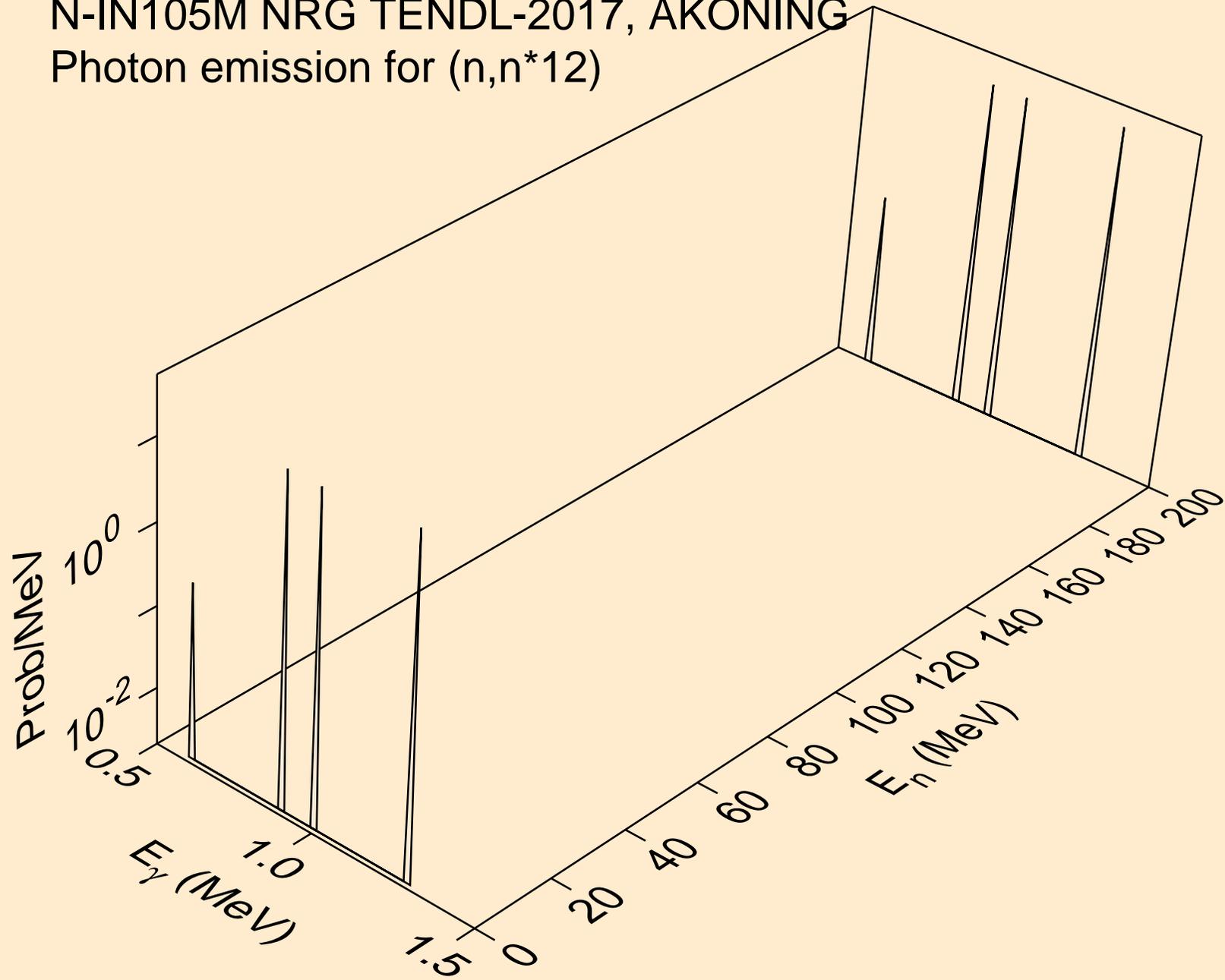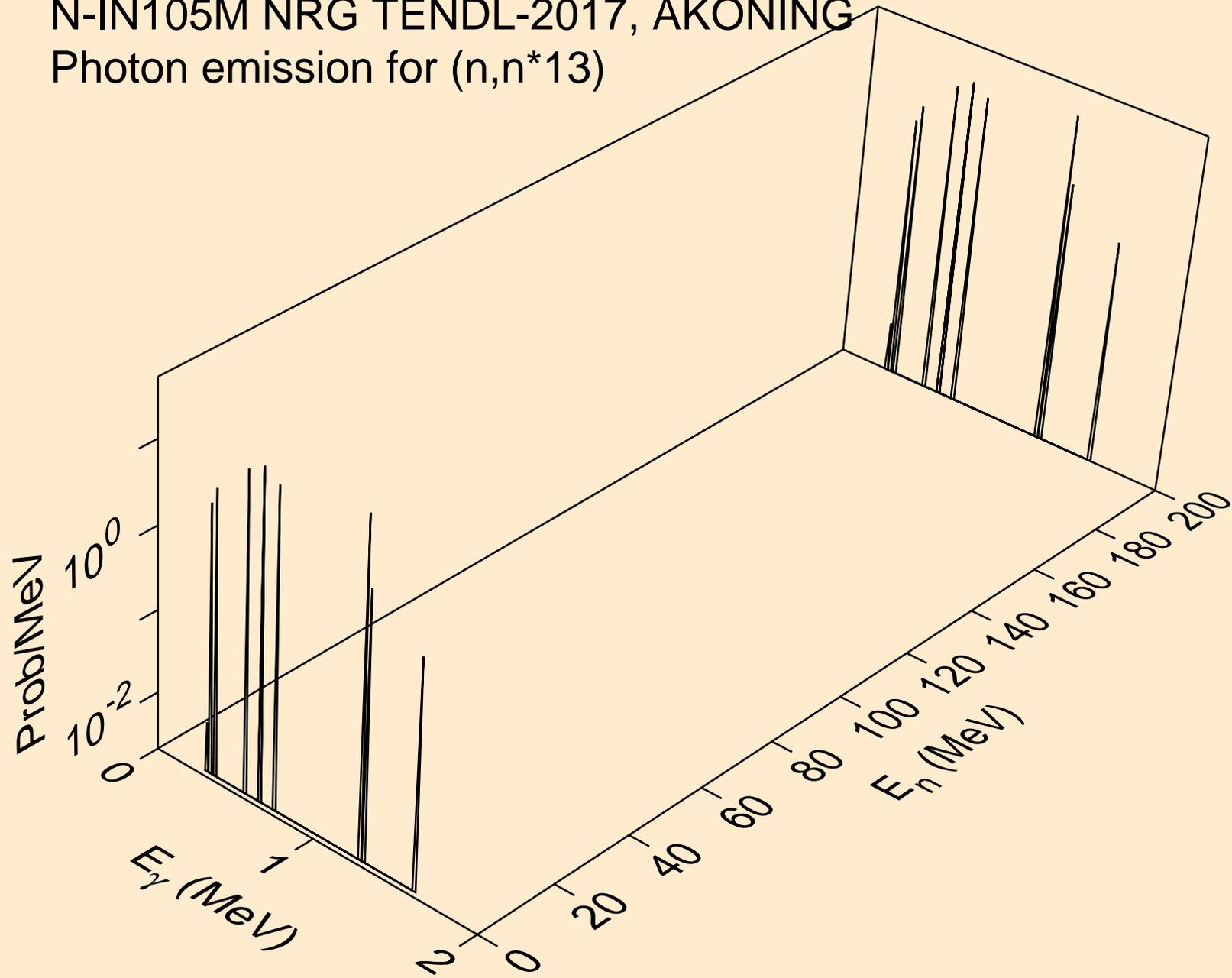N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*7)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*8)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*9)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*10)

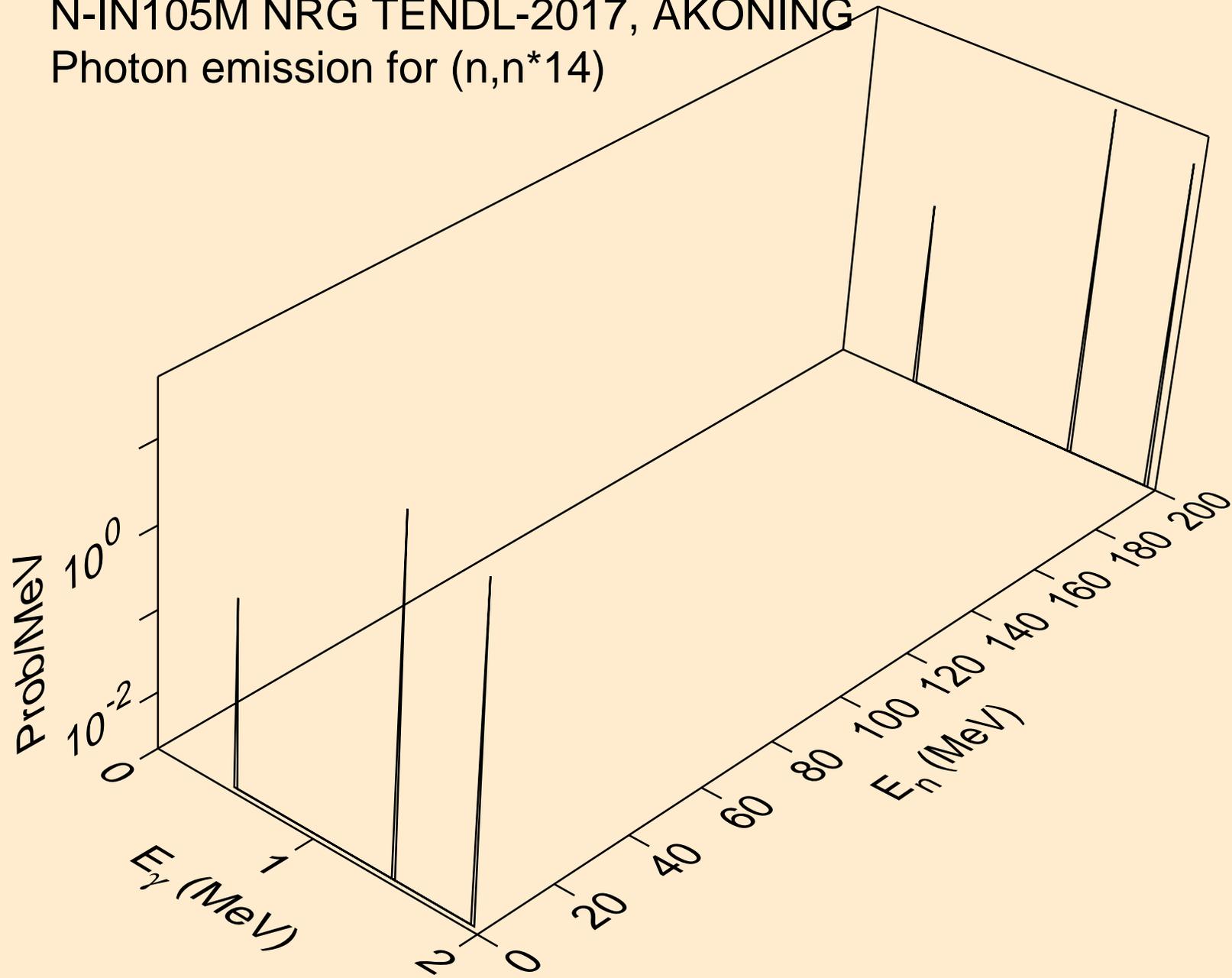N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*11)

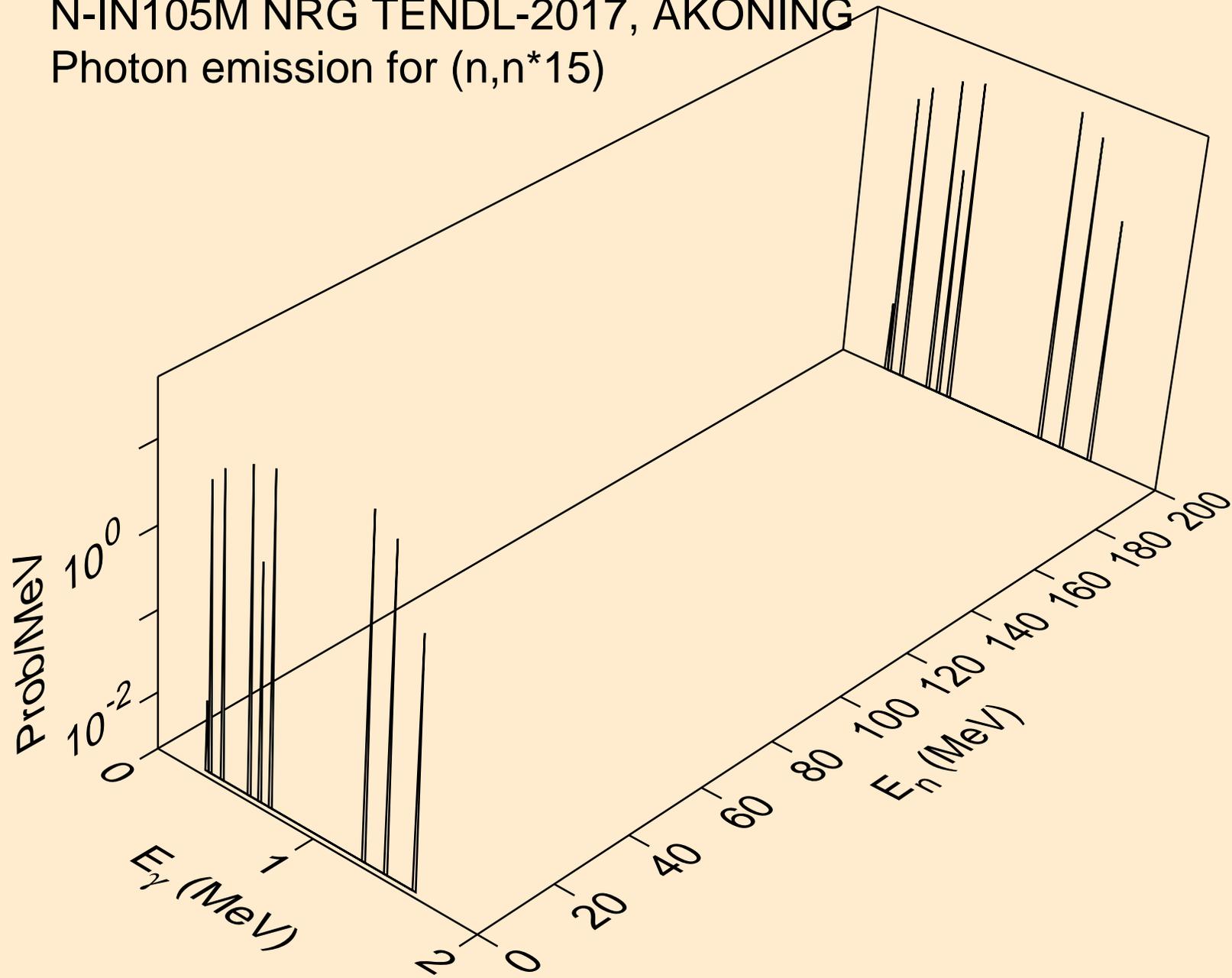N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*12)

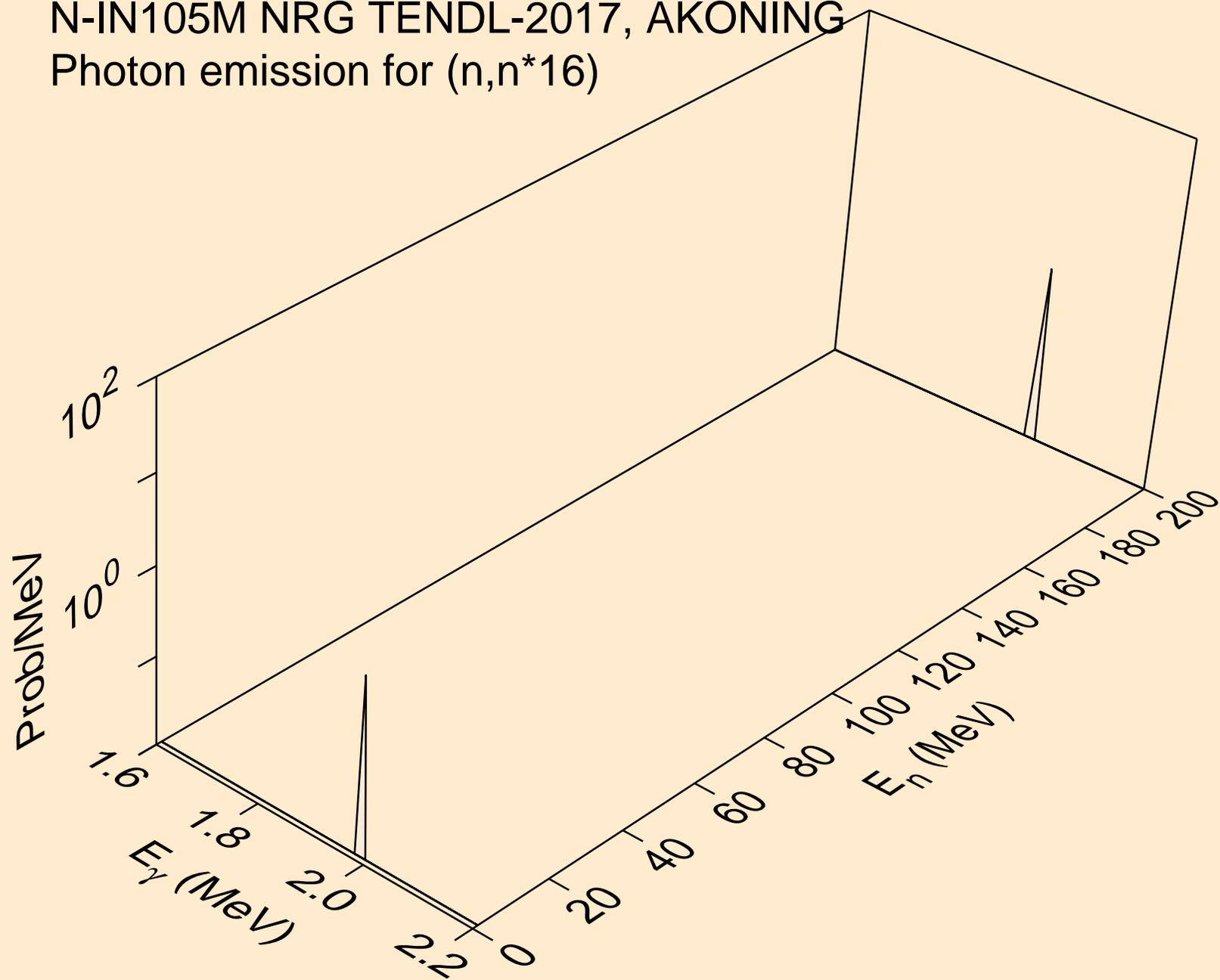N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*13)

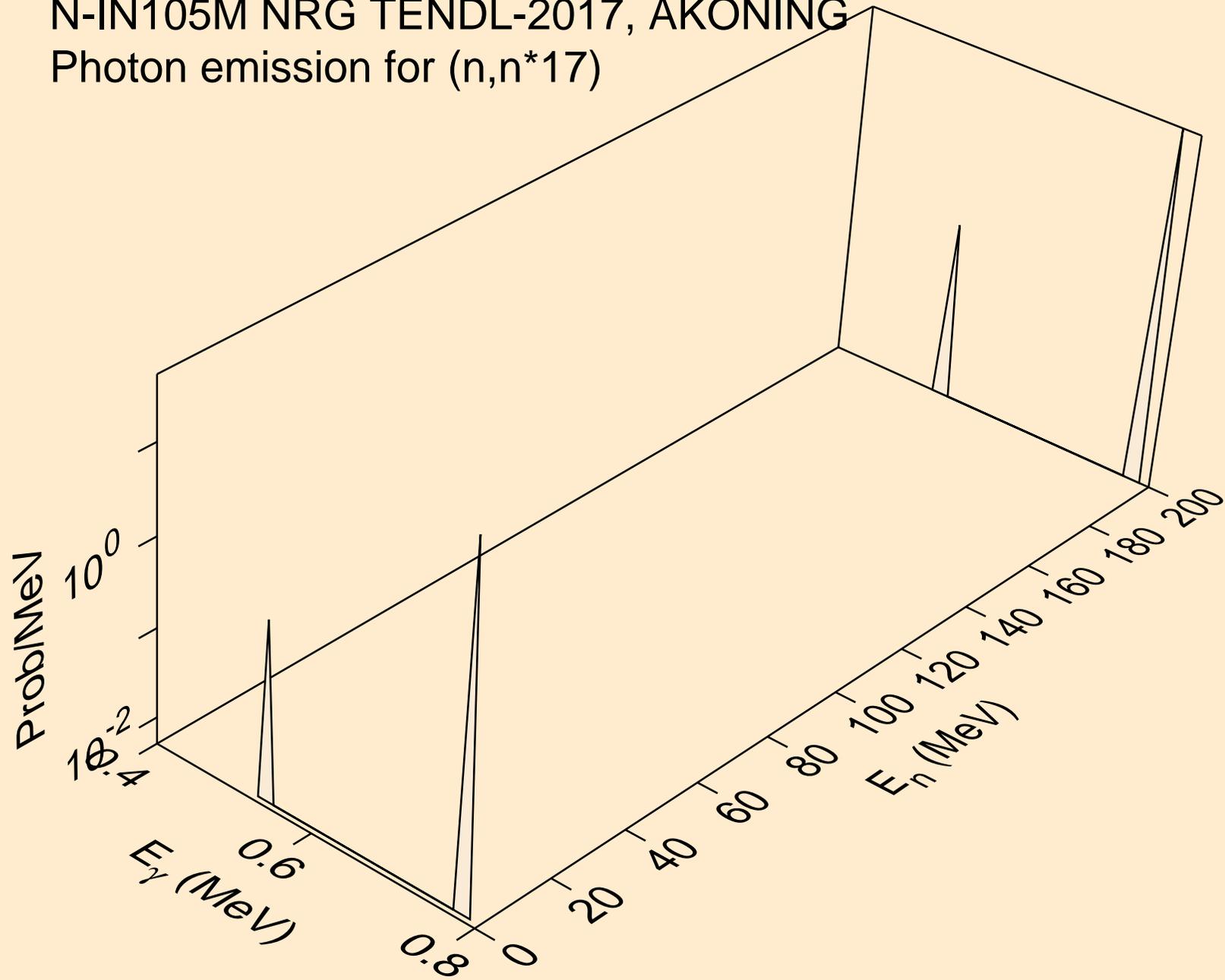N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*14)

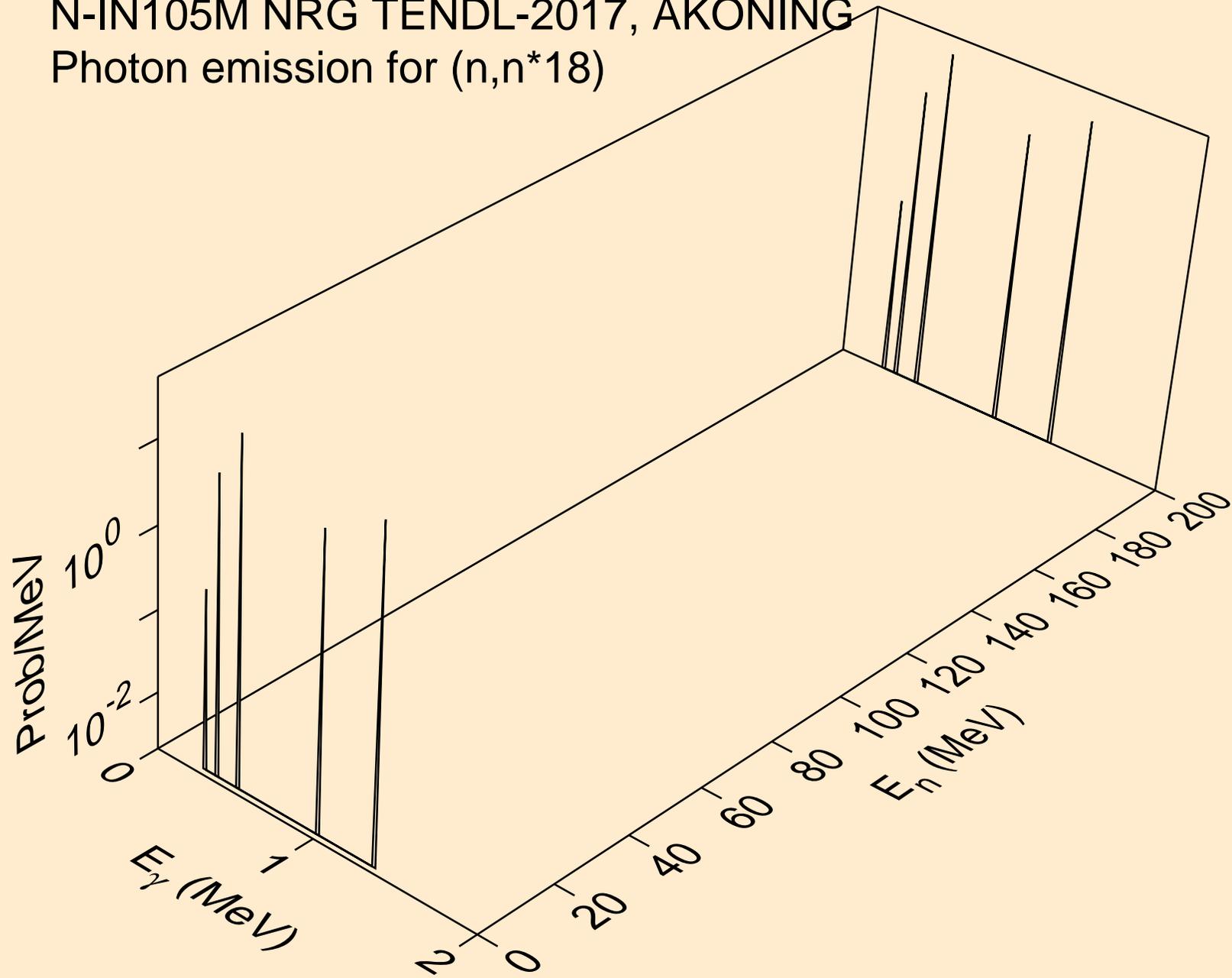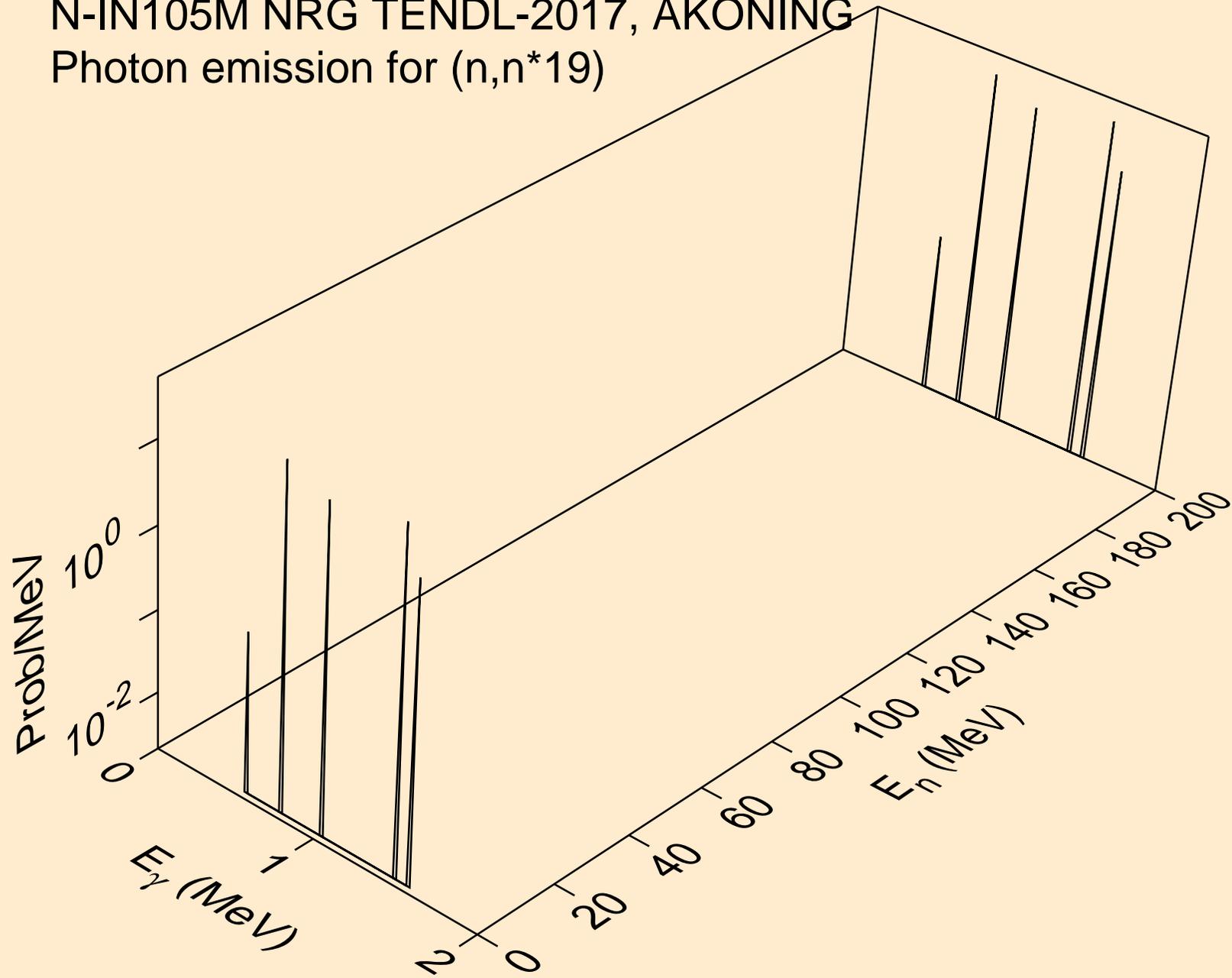N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*15)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*16)

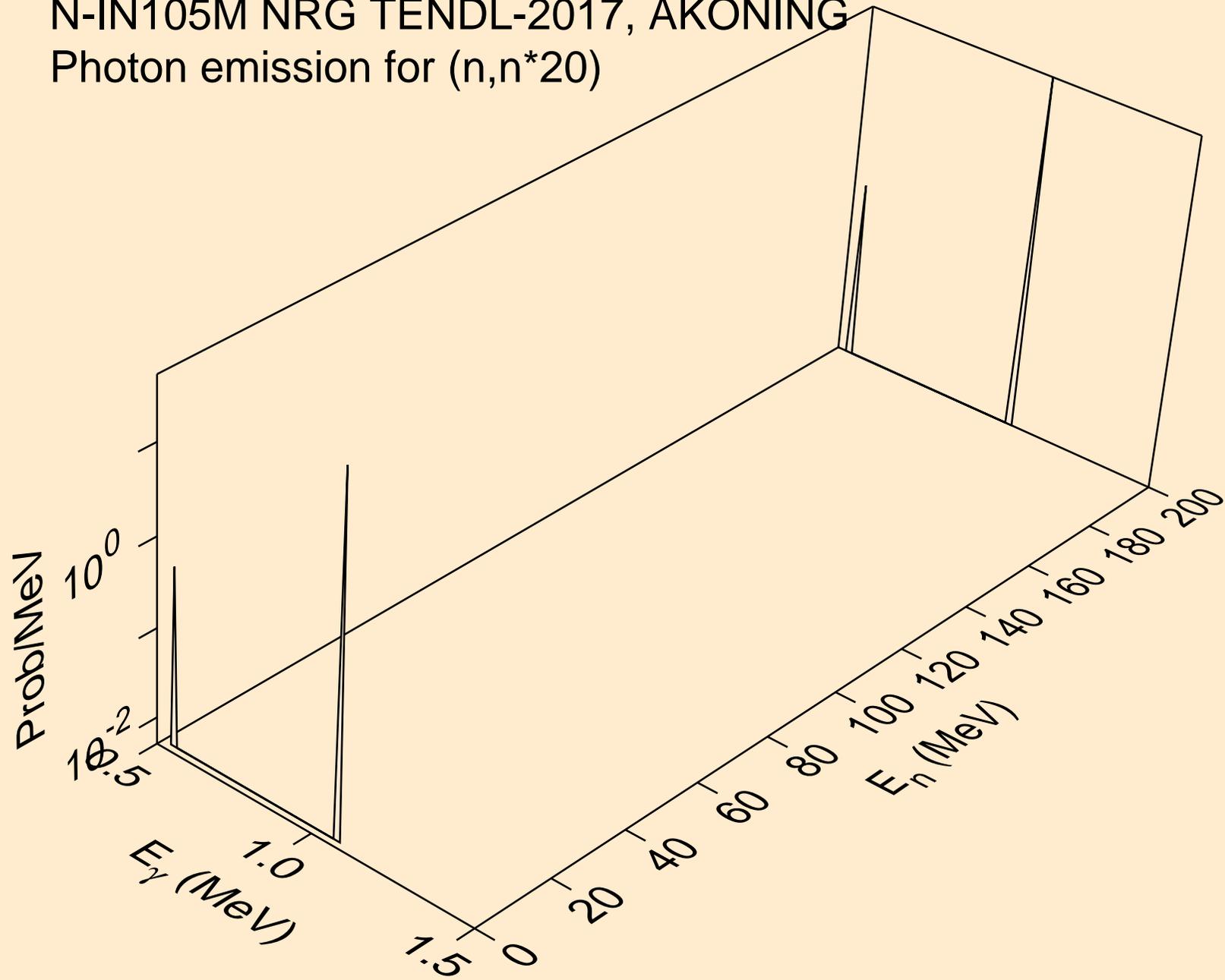N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*17)

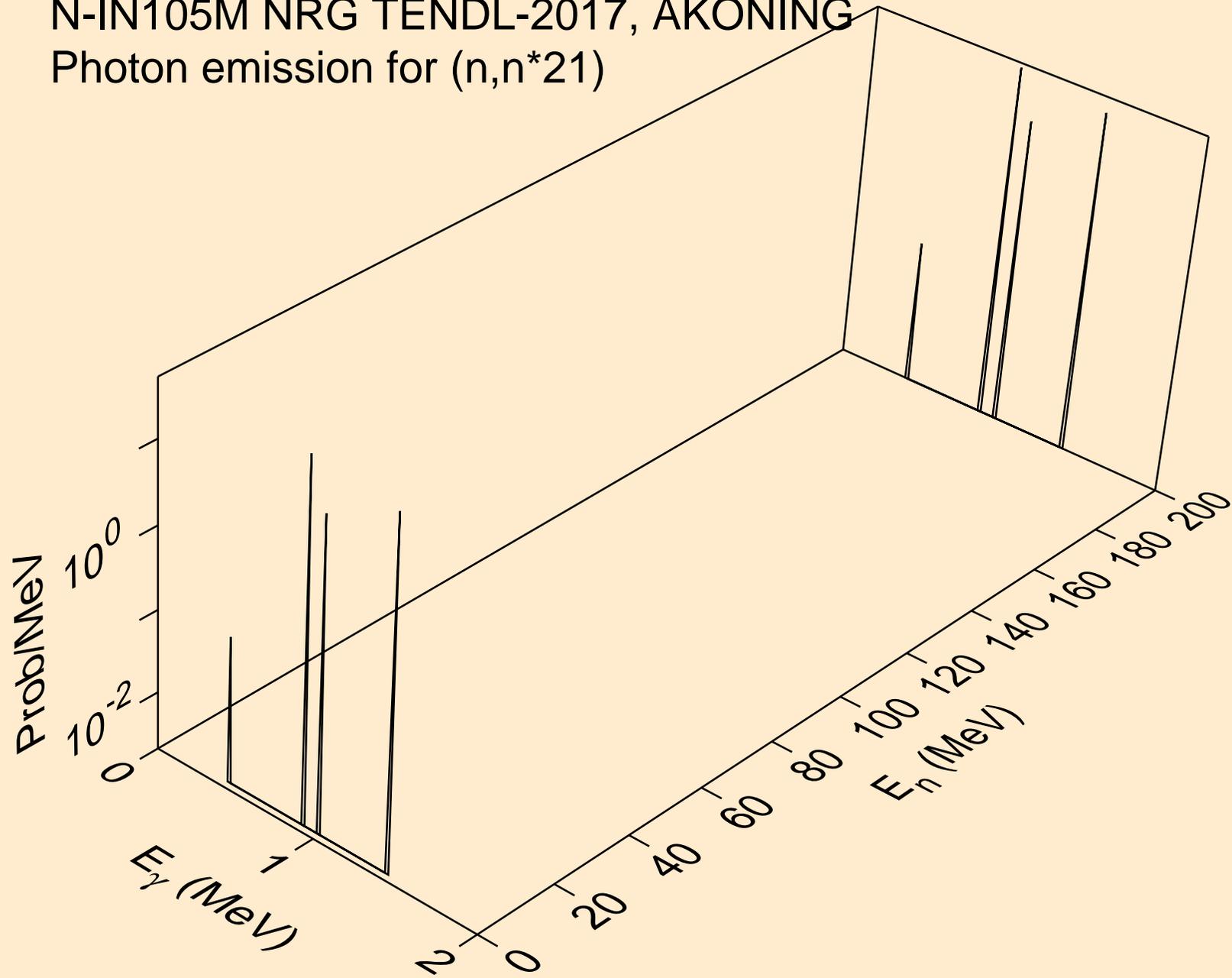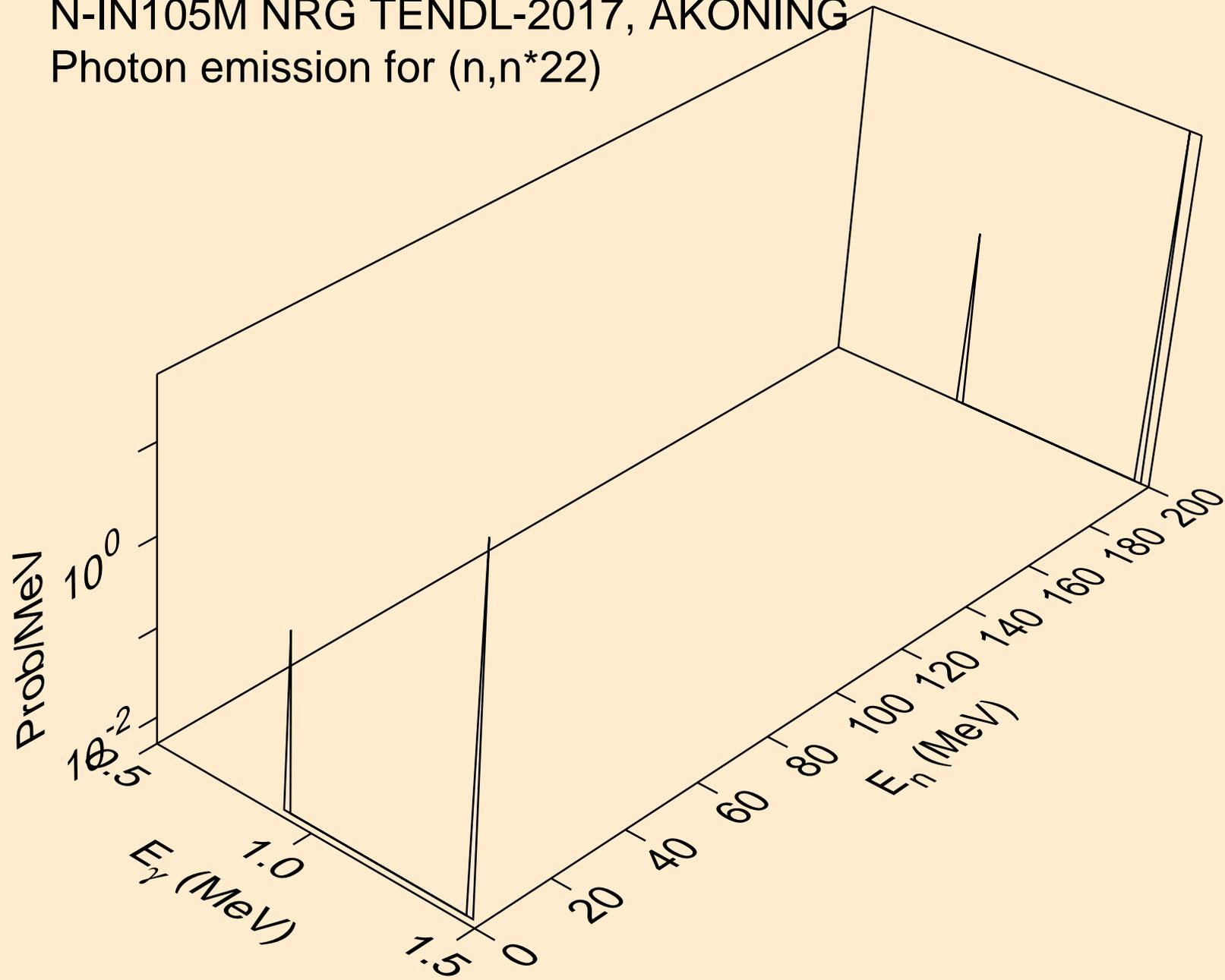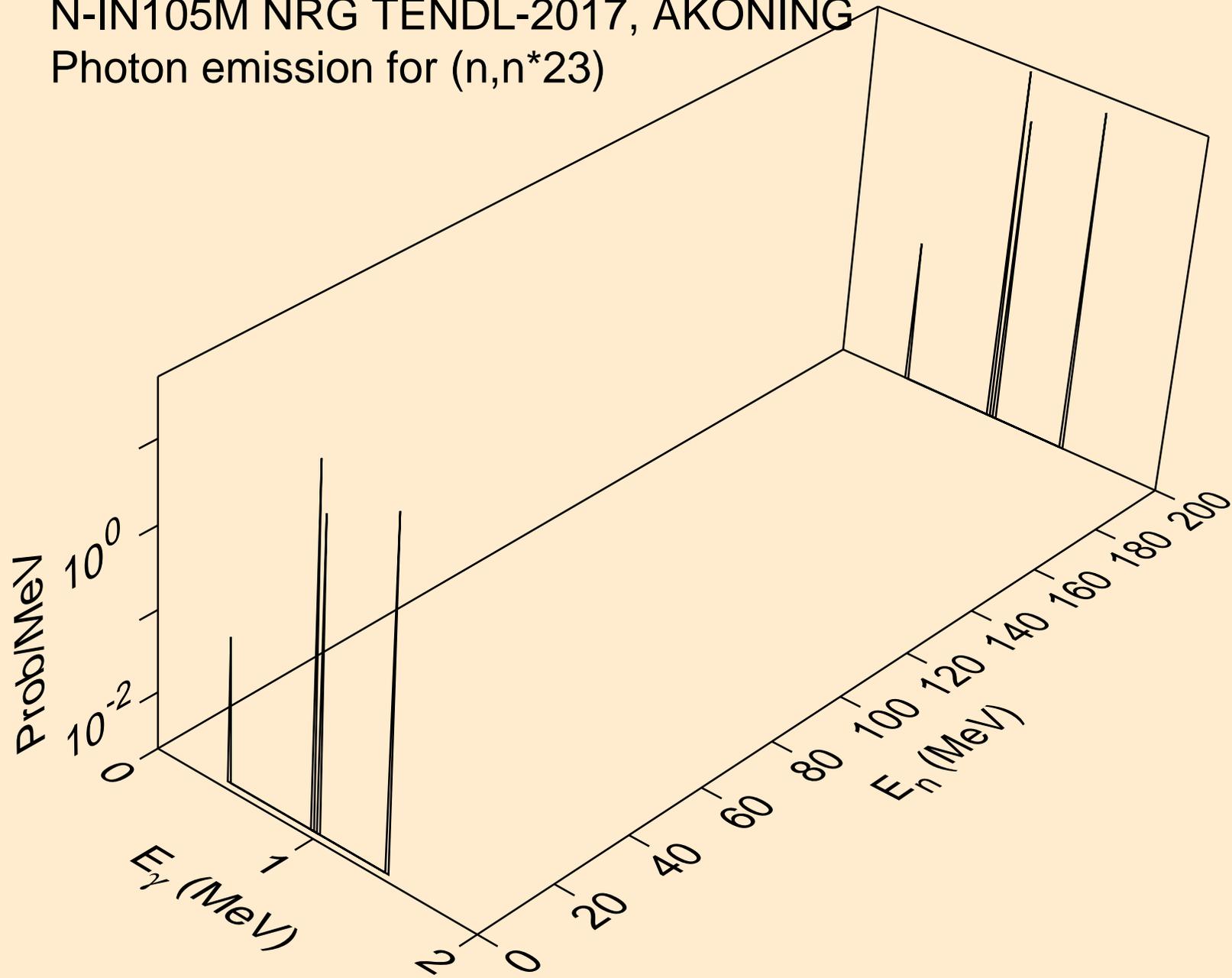N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*18)

Prob/MeV

10^0

10^{-2}

E_γ (MeV)

E_n (MeV)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*19)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*20)

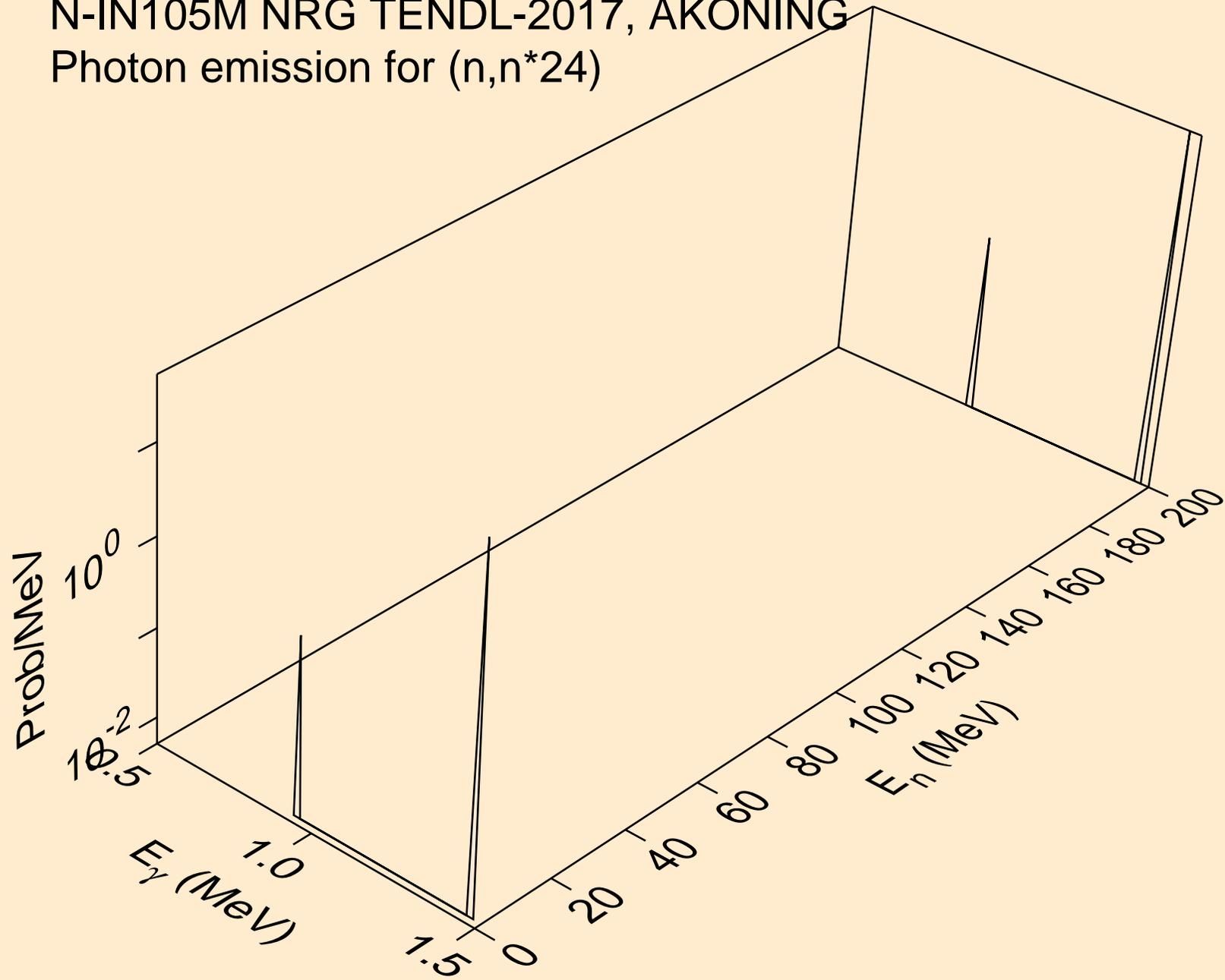N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*21)

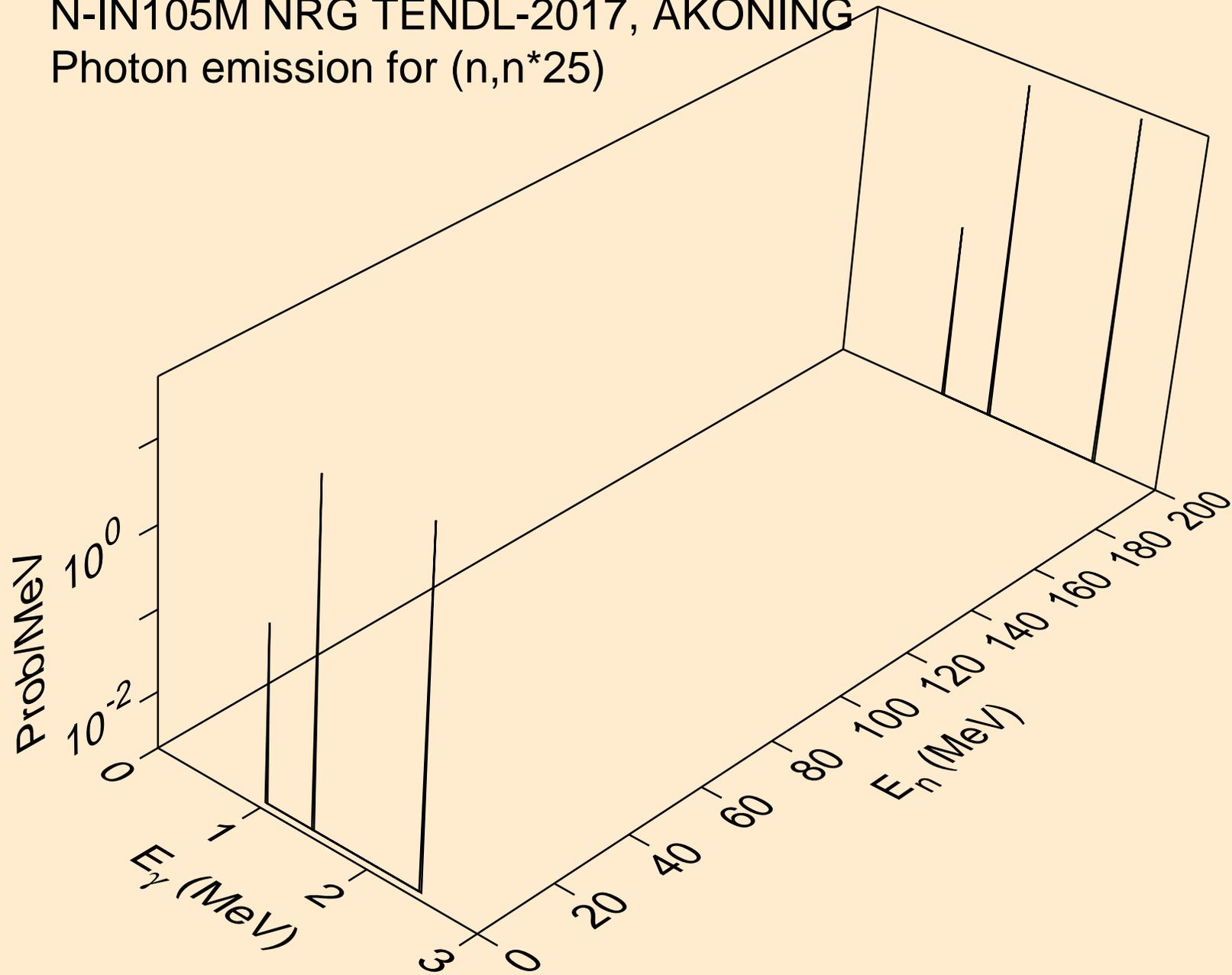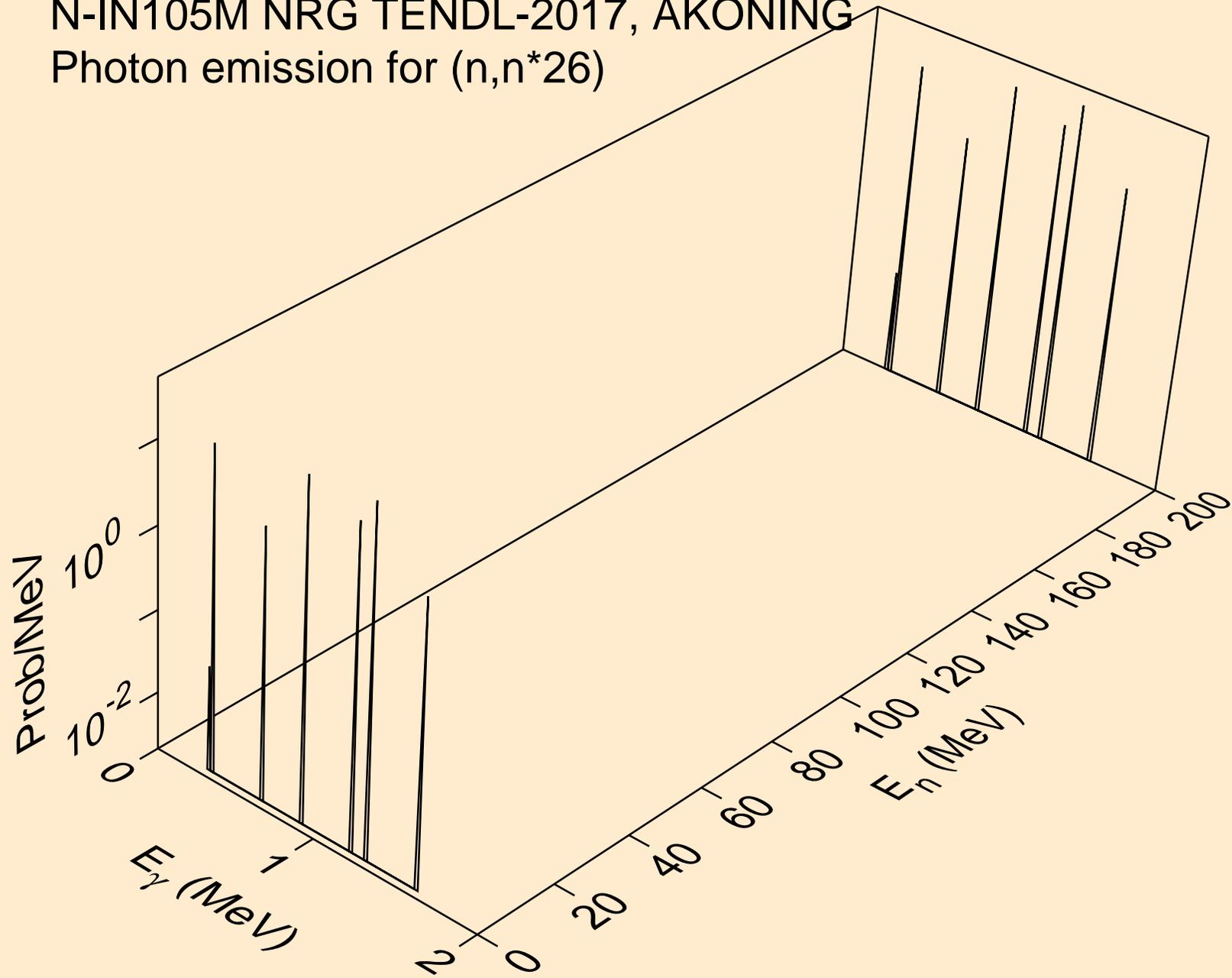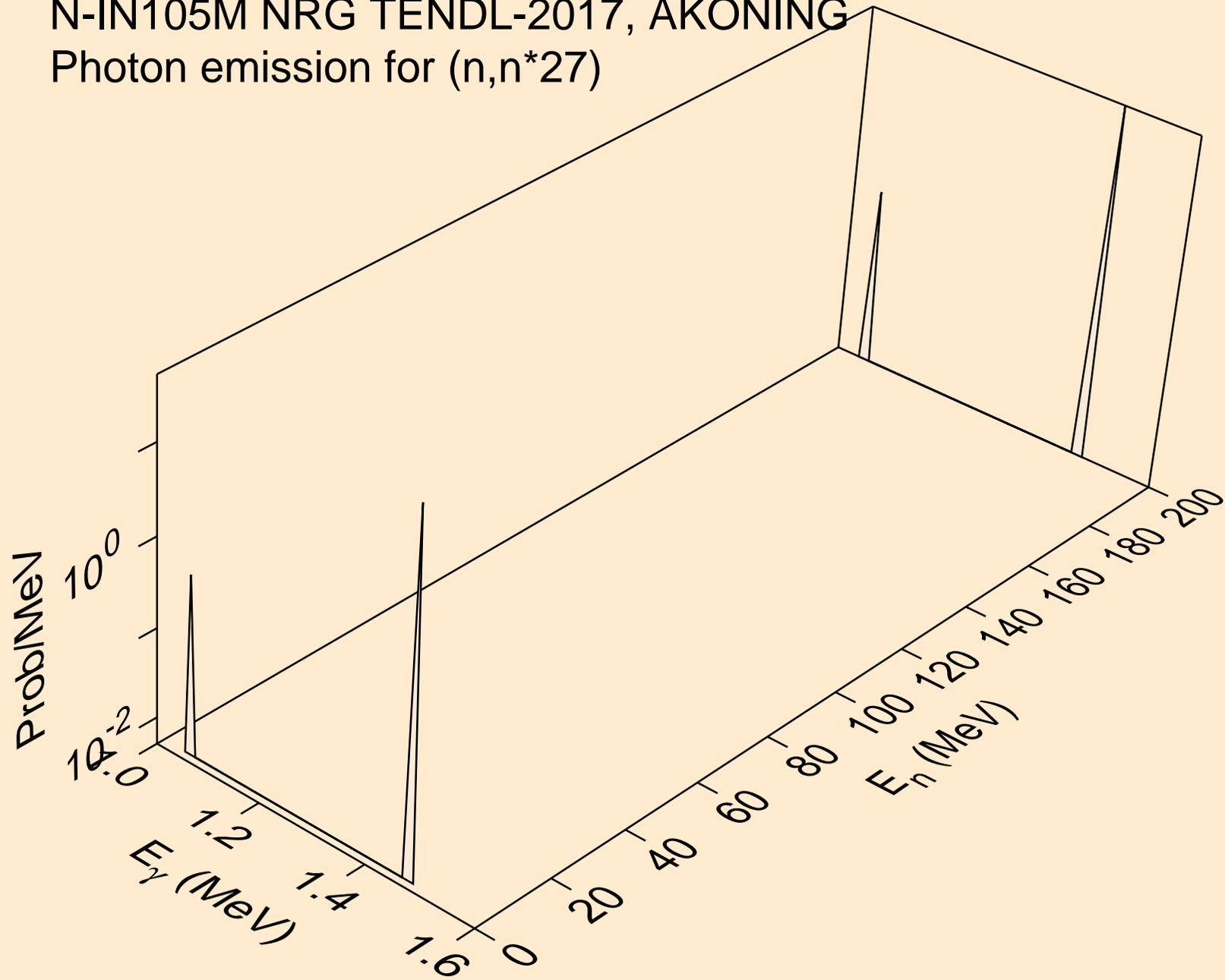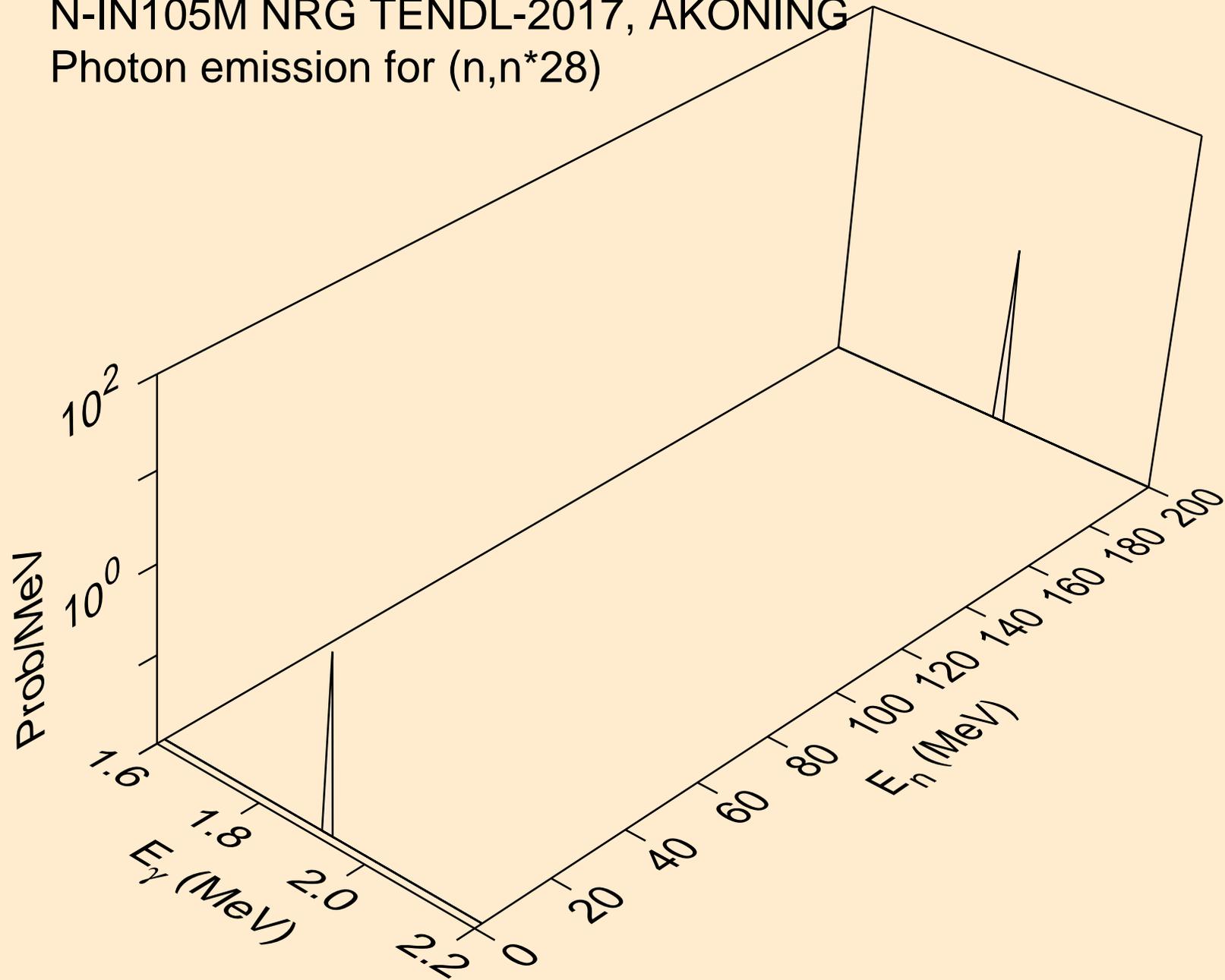N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*22)
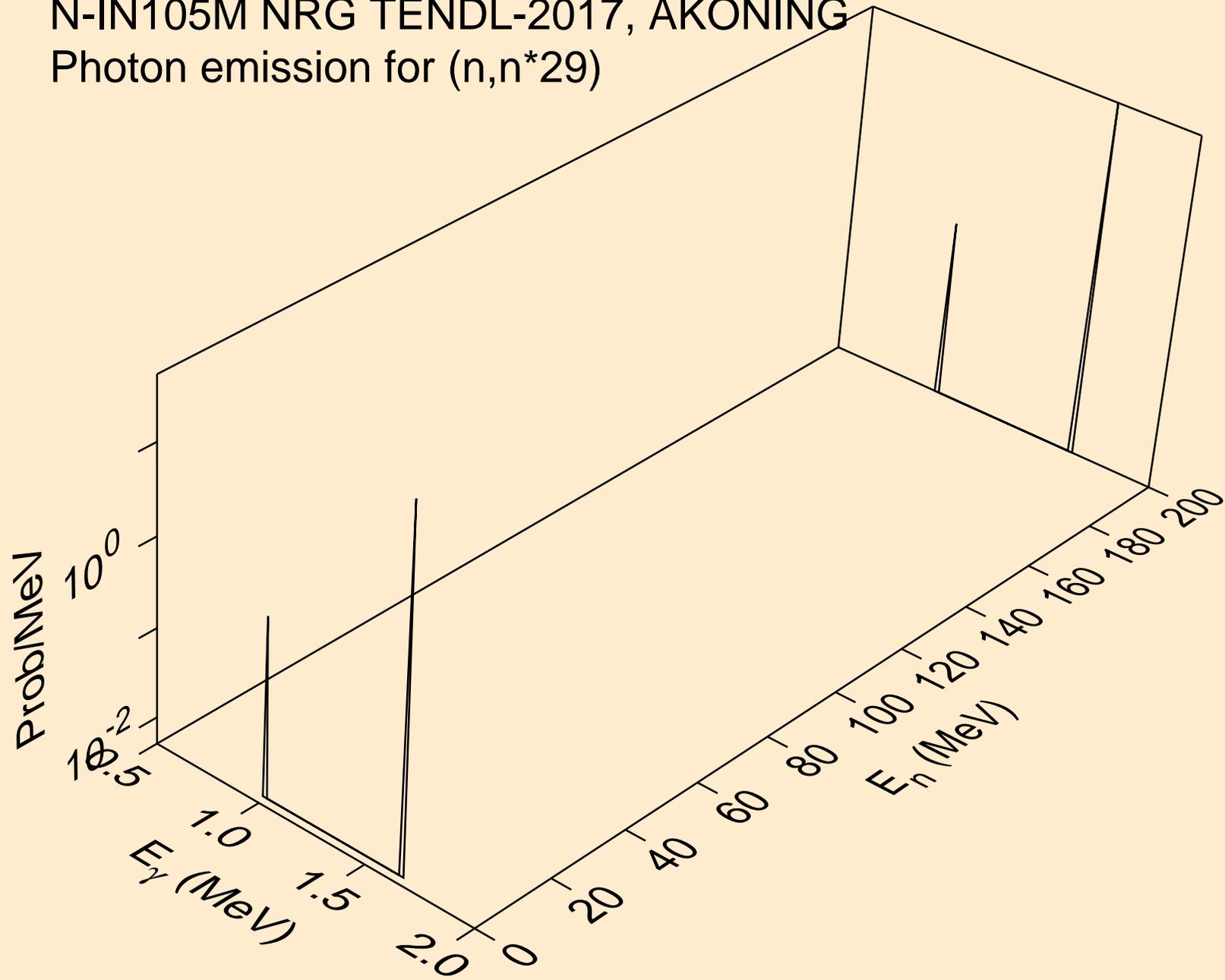
E_γ (MeV)

E_n (MeV)

Prob/MeV

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*23)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*24)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*25)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*26)

N-IN105M NRG TENDL-2017, AKONING
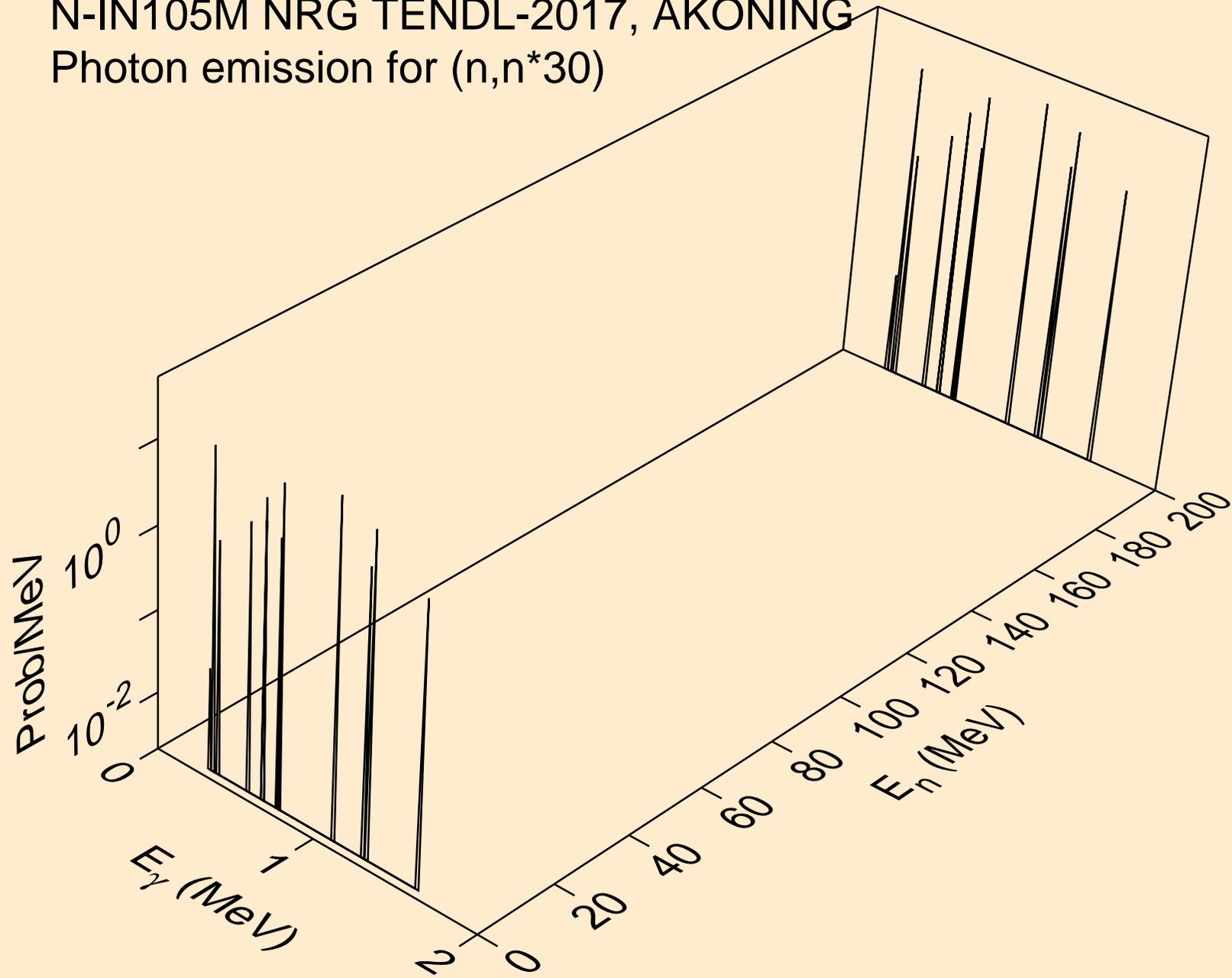Photon emission for (n,n*27)

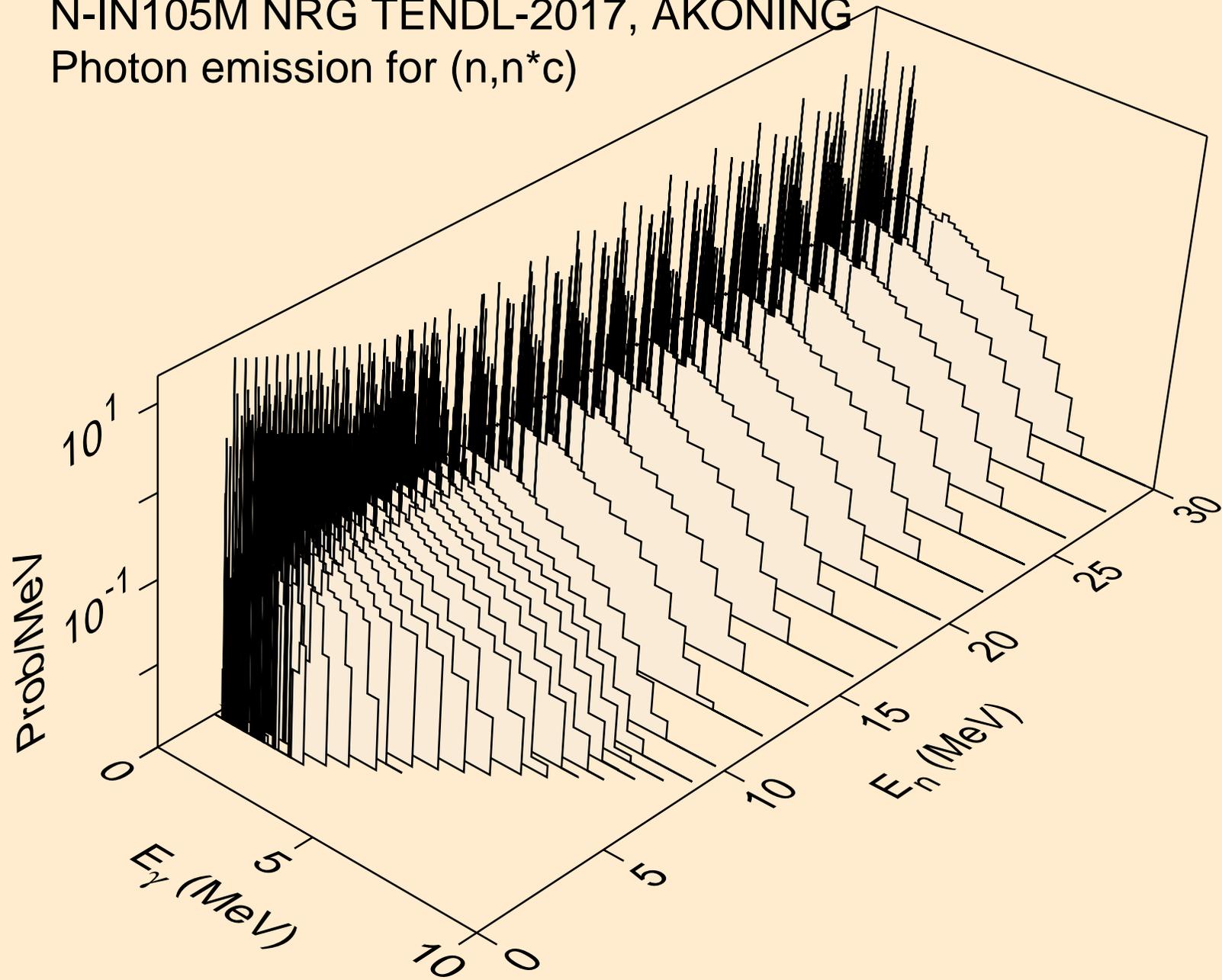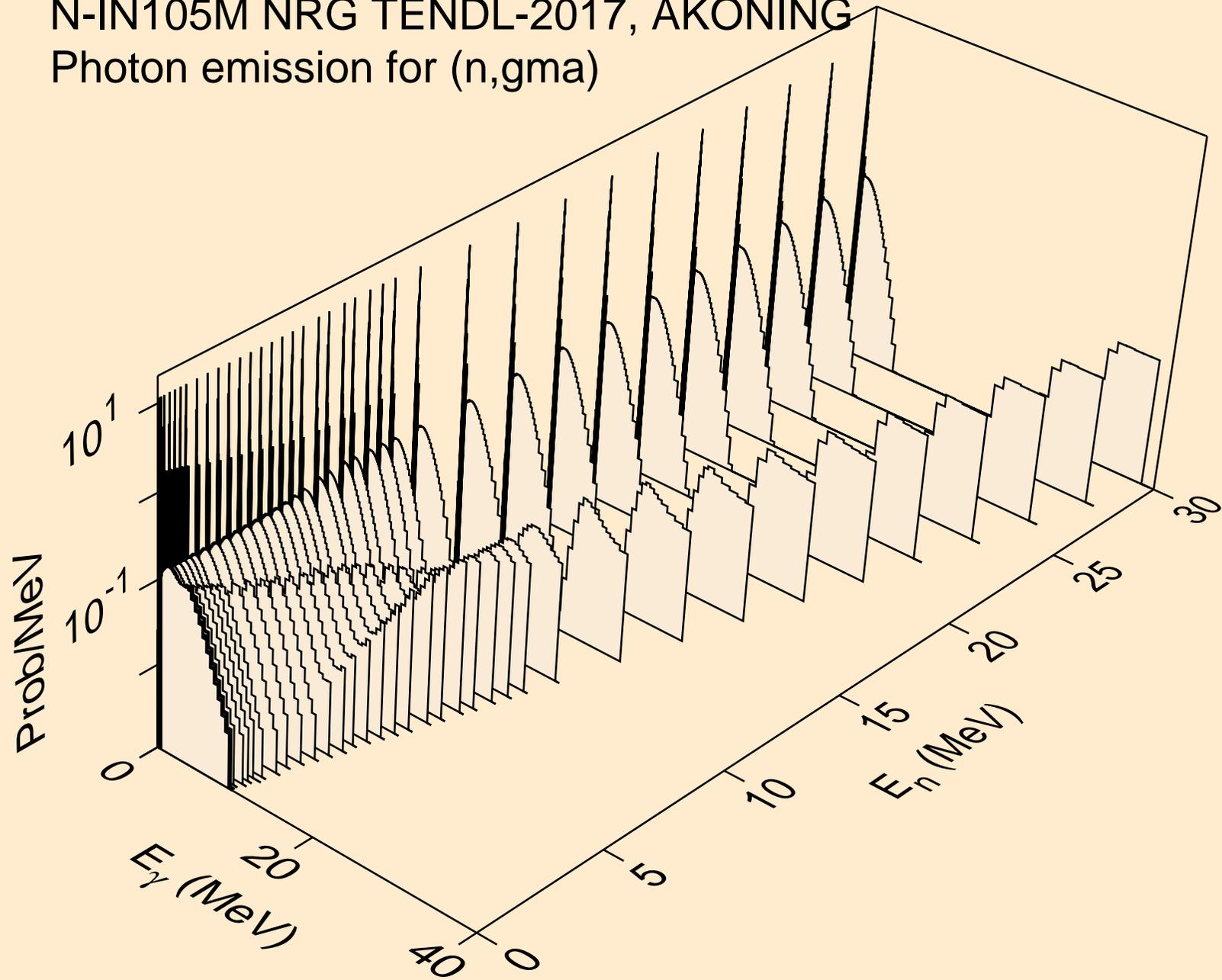N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*28)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*29)

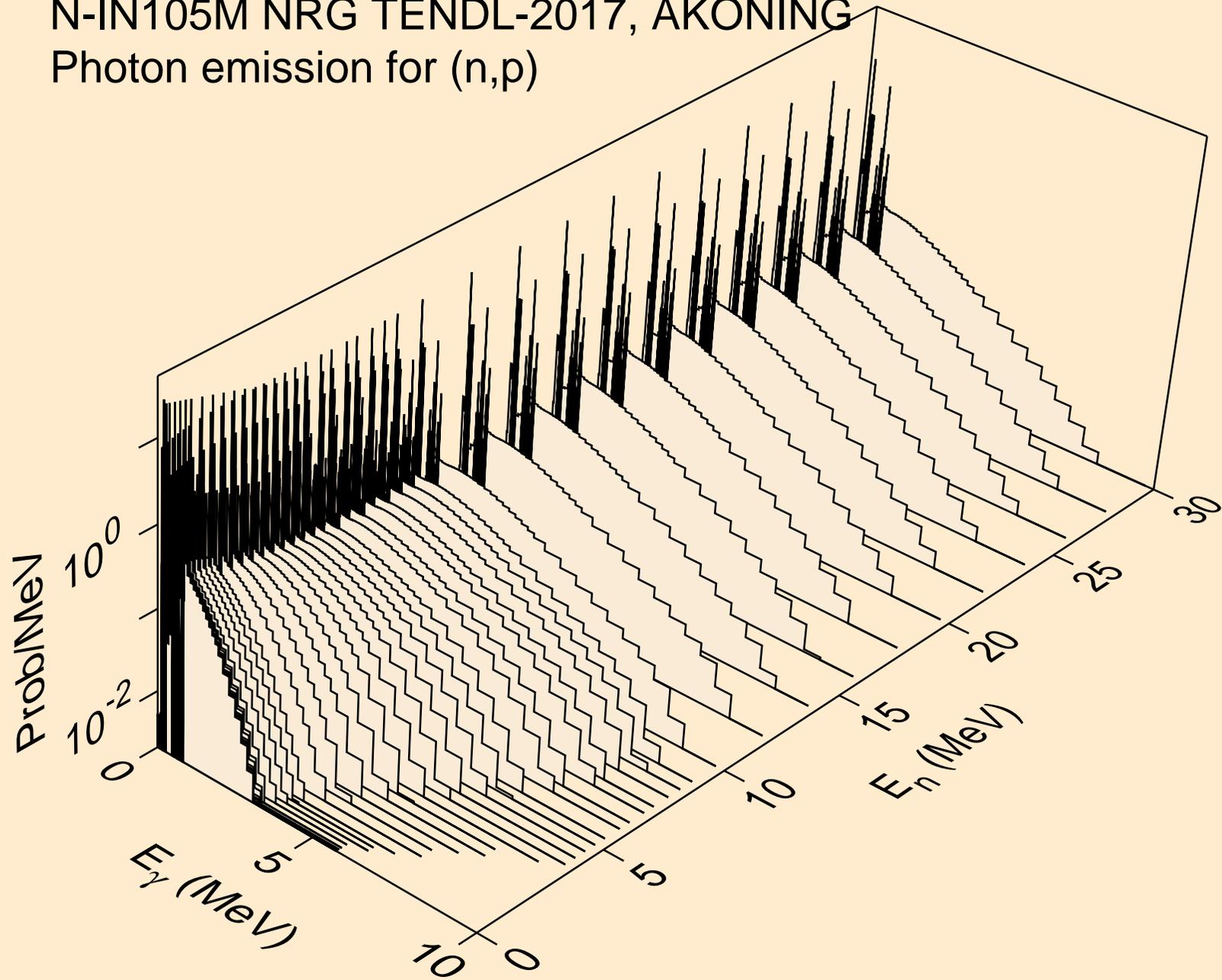N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*30)

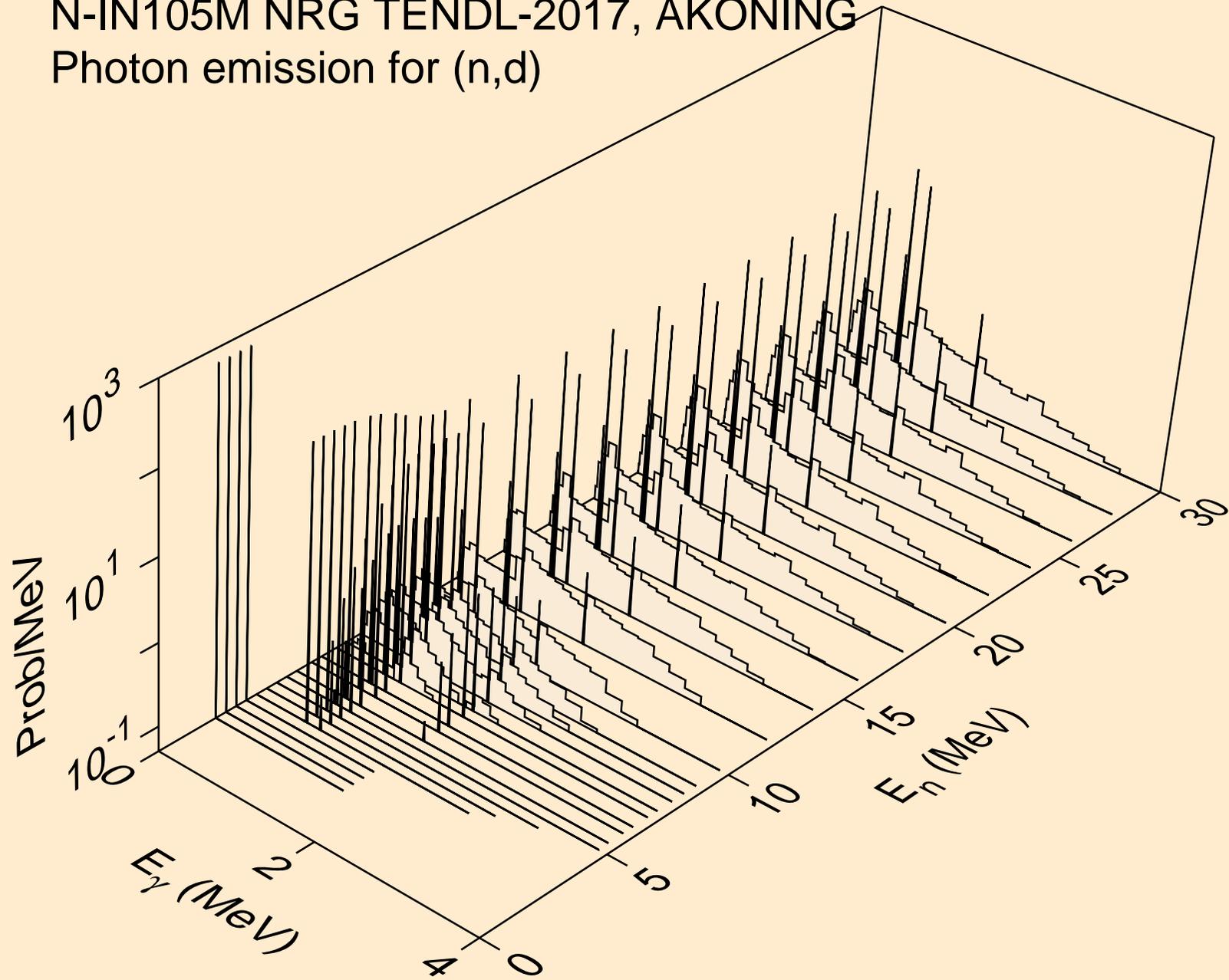N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,n*c)

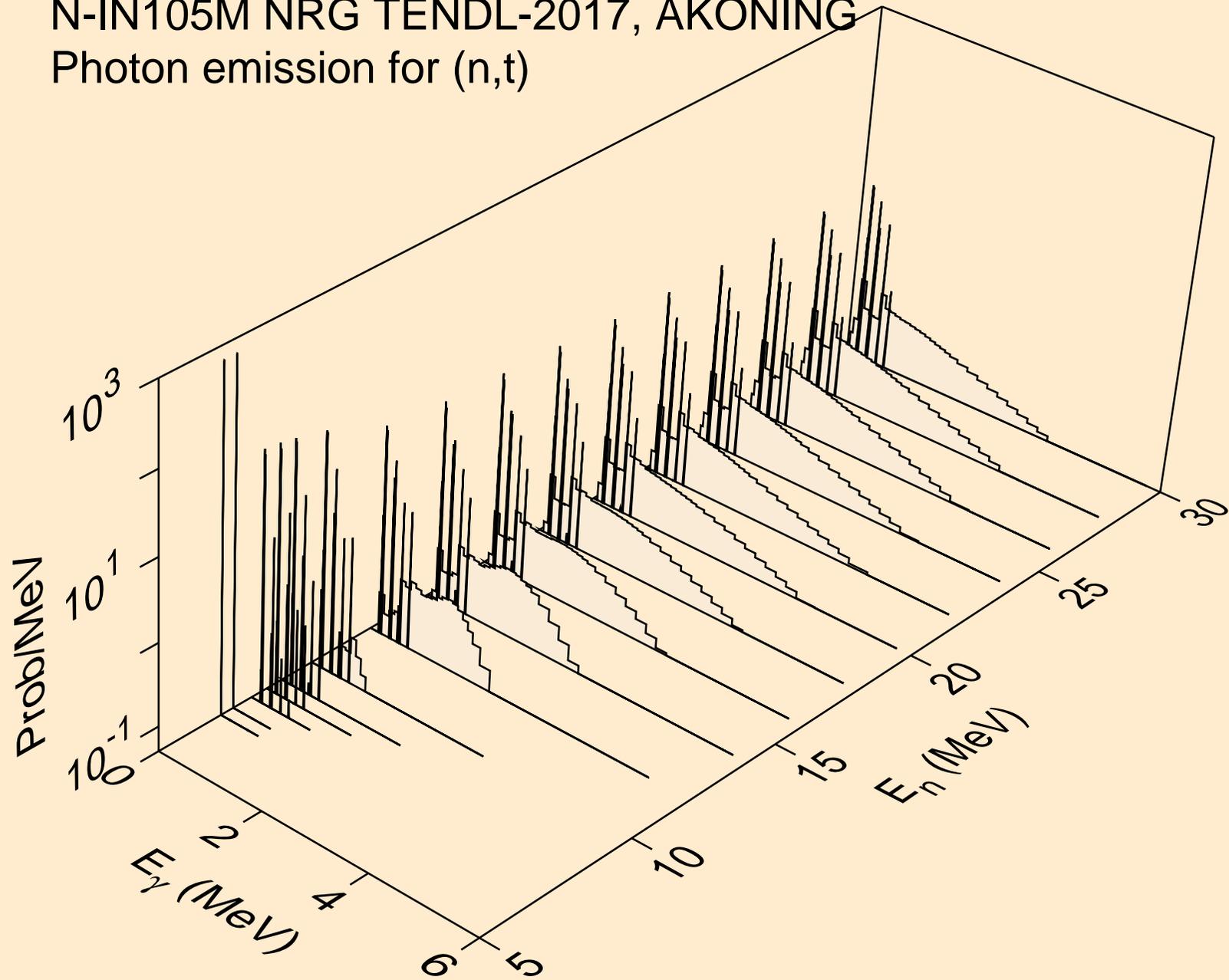N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,gma)

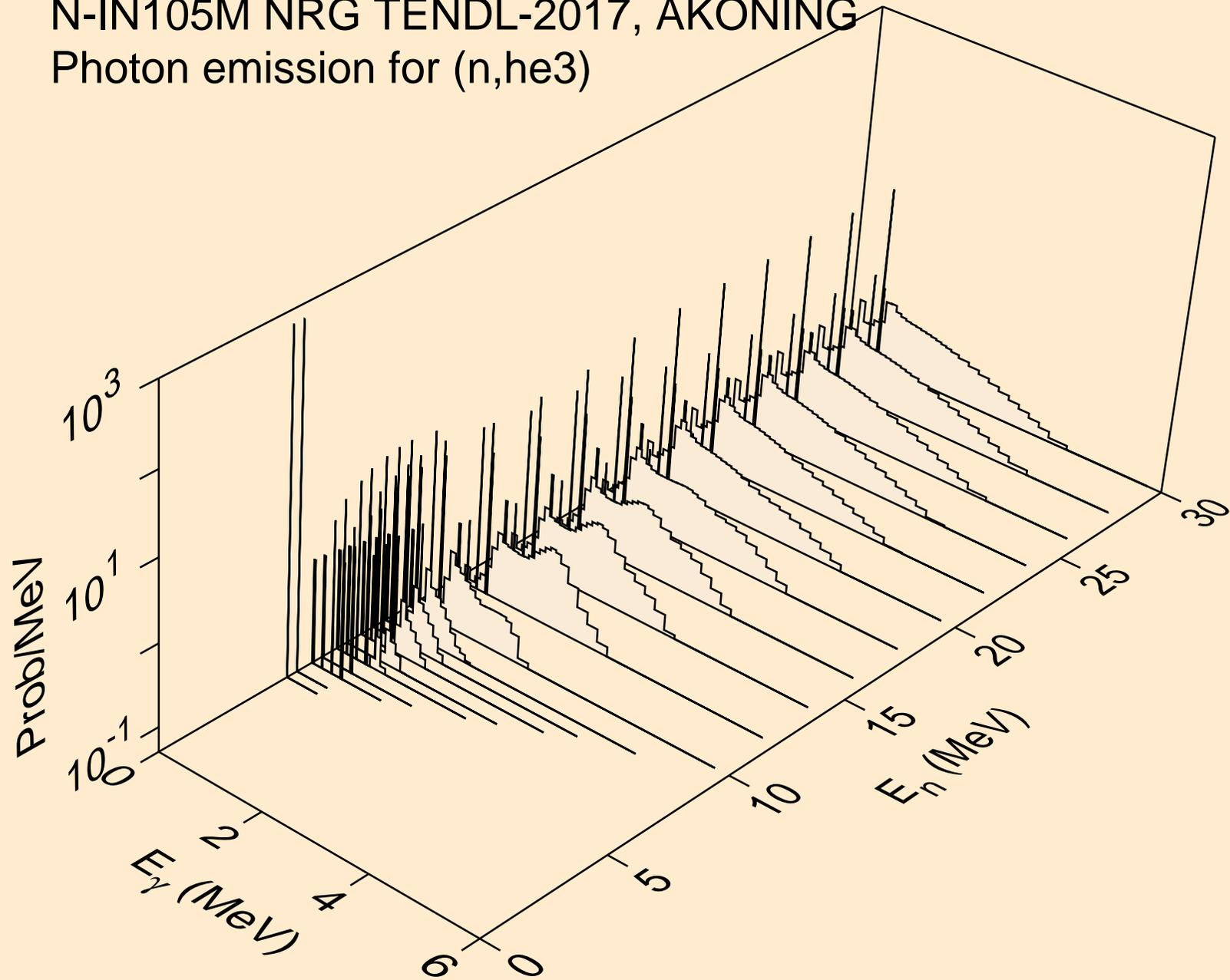N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,p)

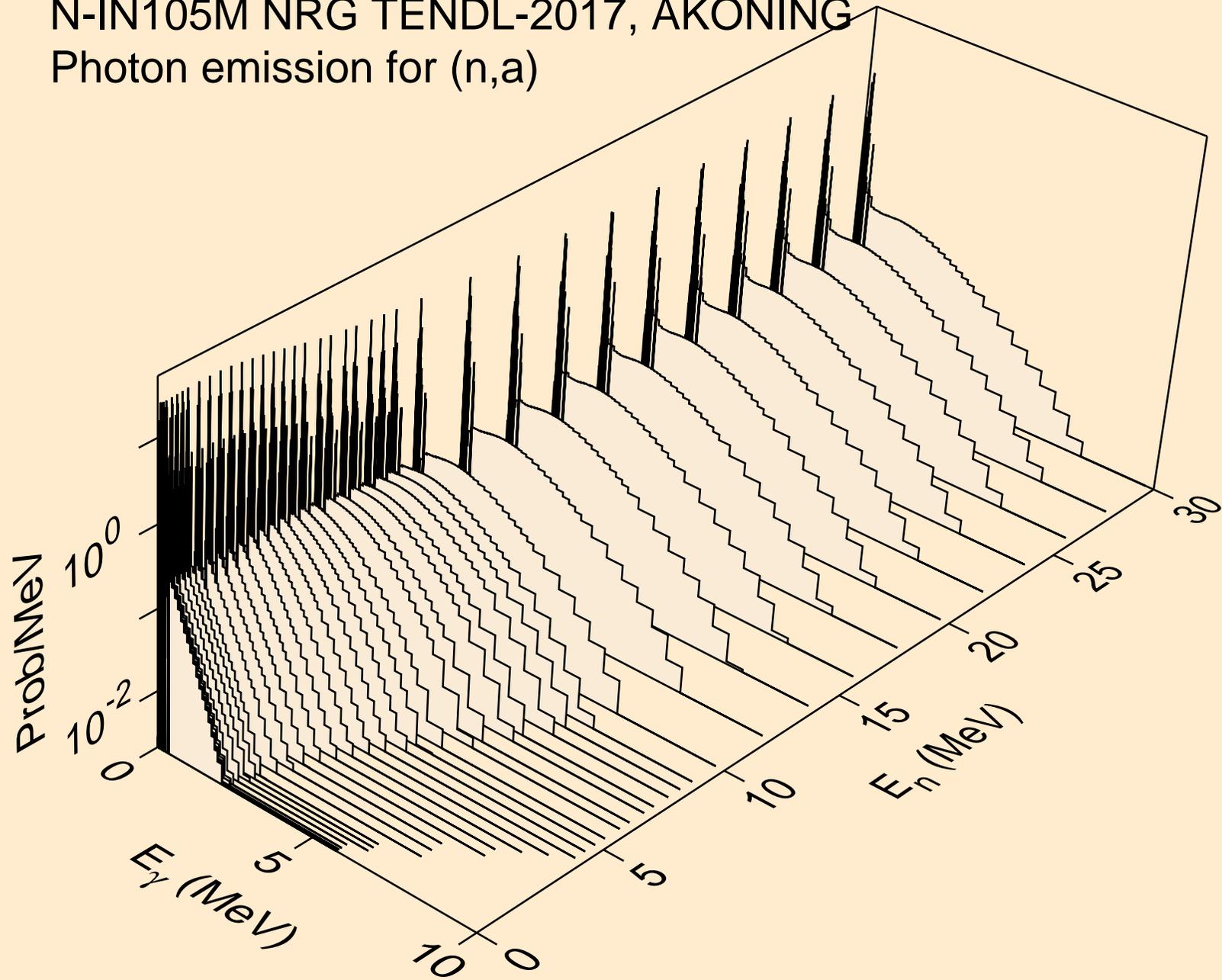N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,d)

N-IN105M NRG TENDL-2017, AKONING
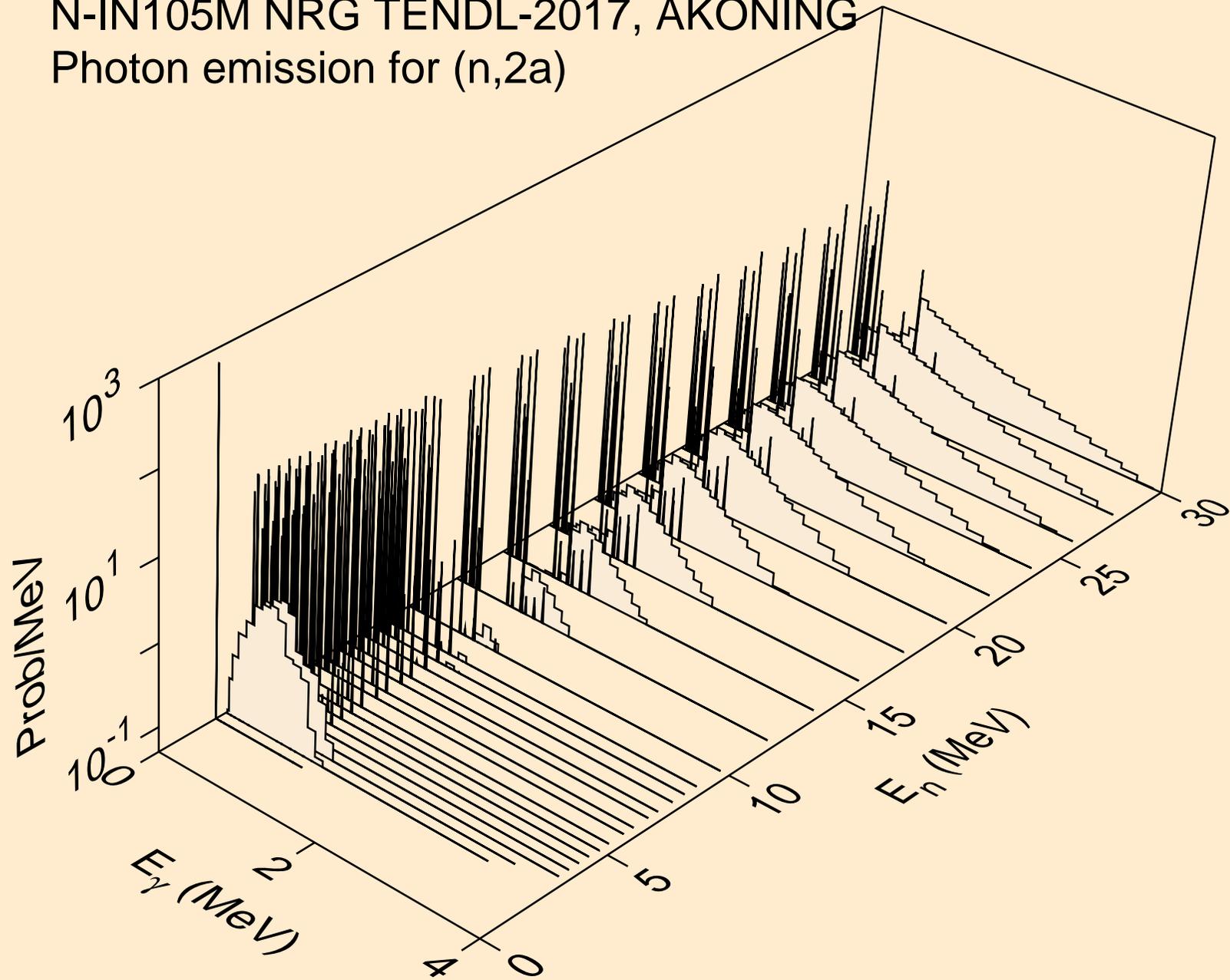Photon emission for (n,t)

N-IN105M NRG TENDL-2017, AKONING
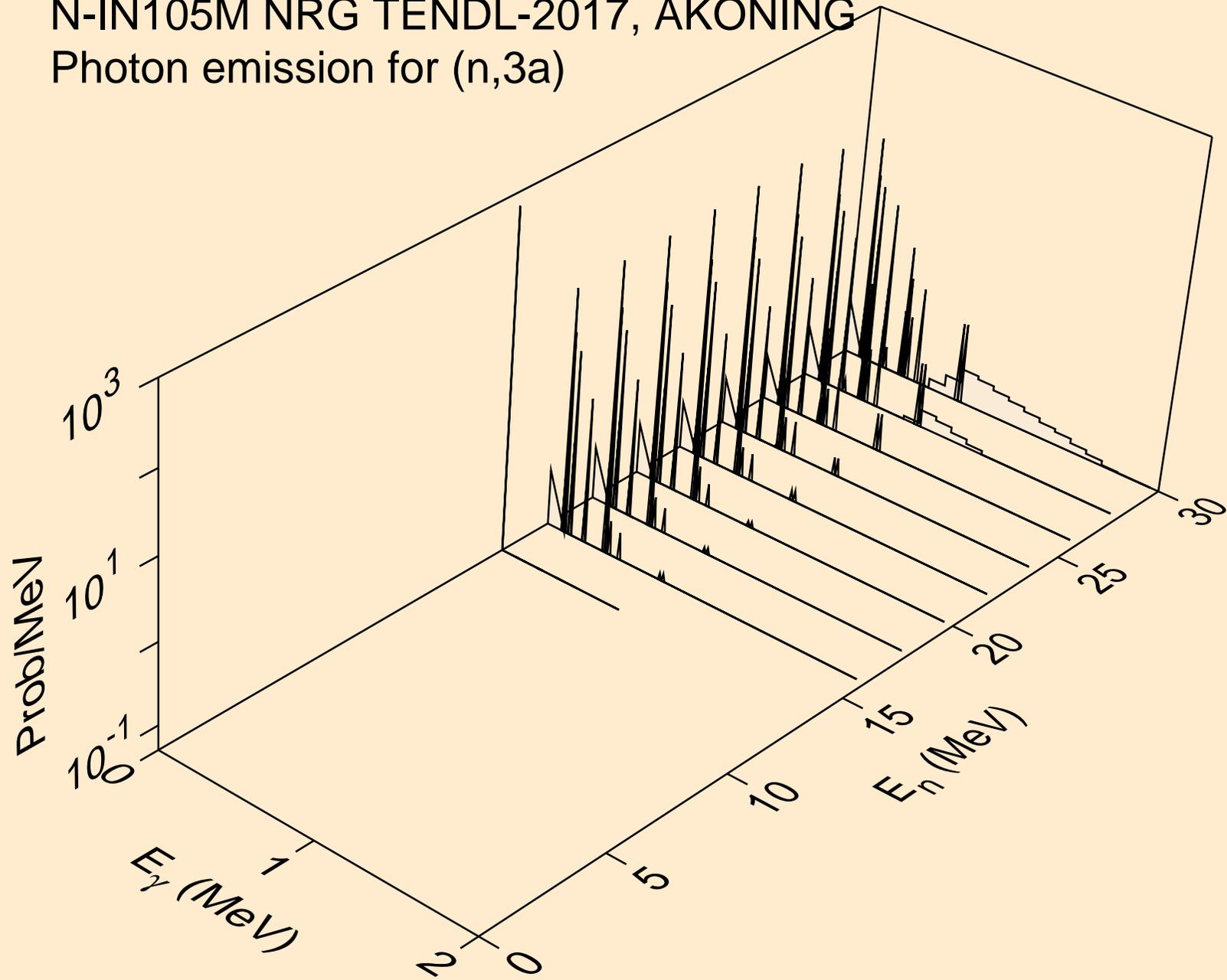Photon emission for (n,he3)

N-IN105M NRG TENDL-2017, AKONING
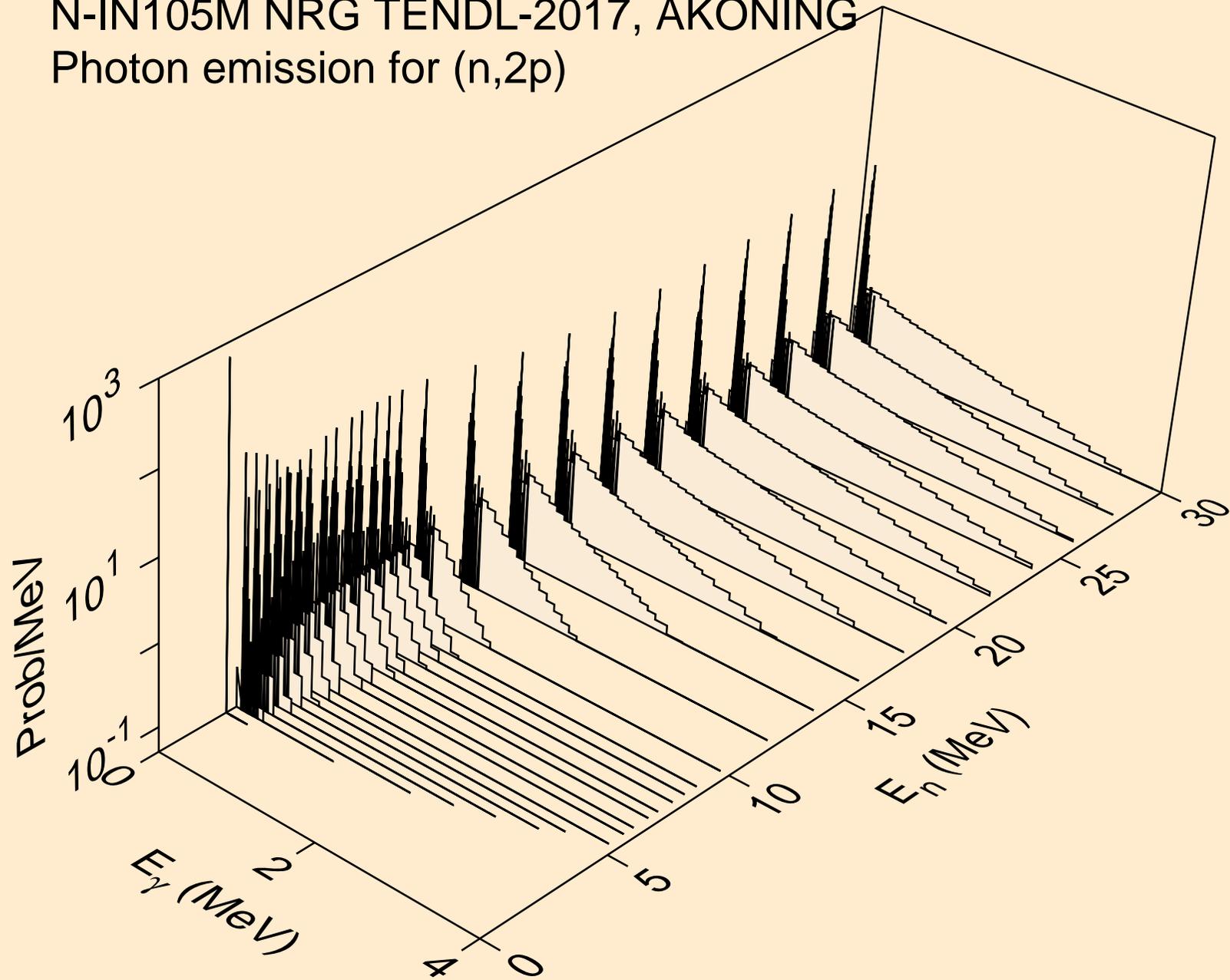Photon emission for (n,a)

N-IN105M NRG TENDL-2017, AKONING
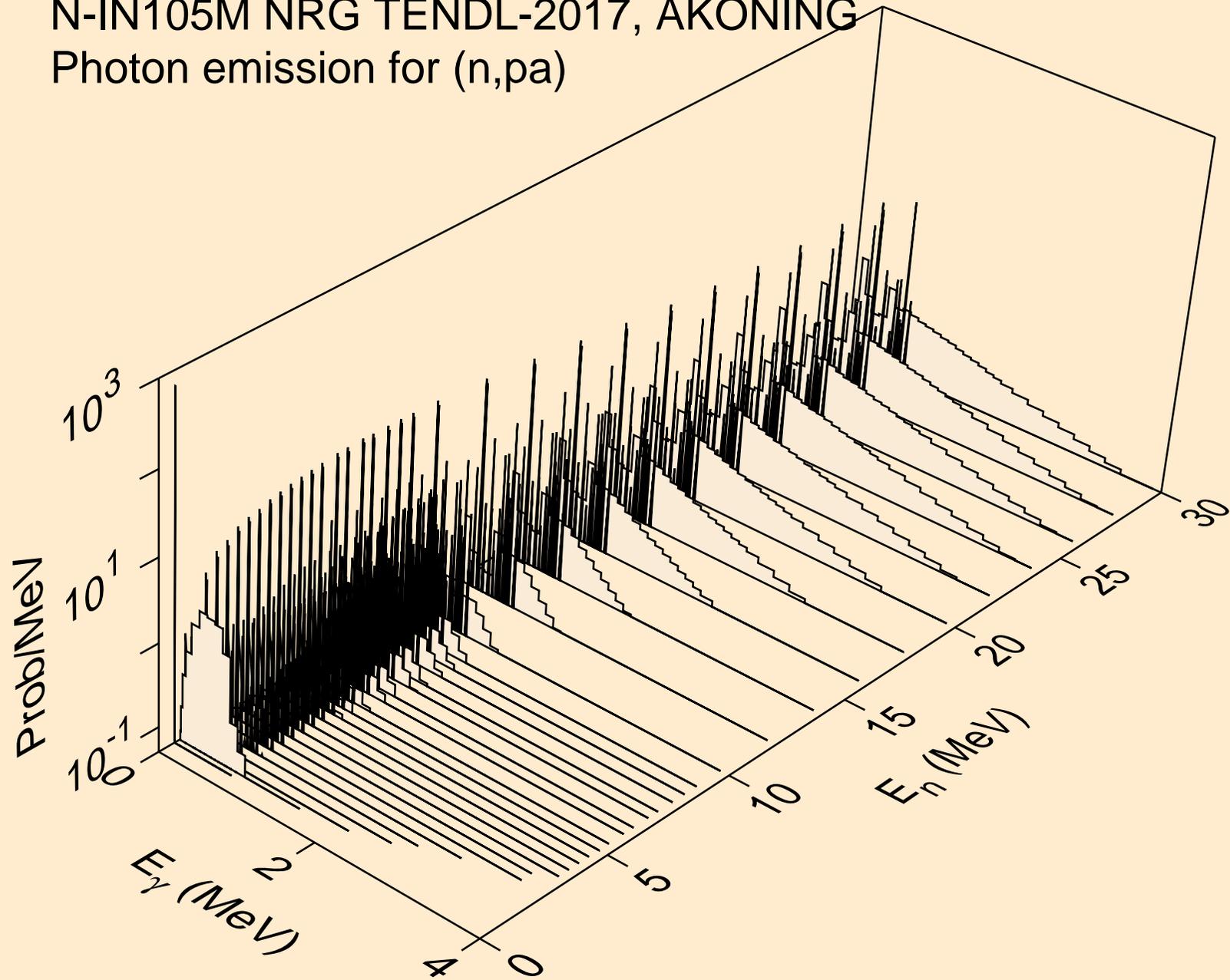Photon emission for (n,2a)

N-IN105M NRG TENDL-2017, AKONING
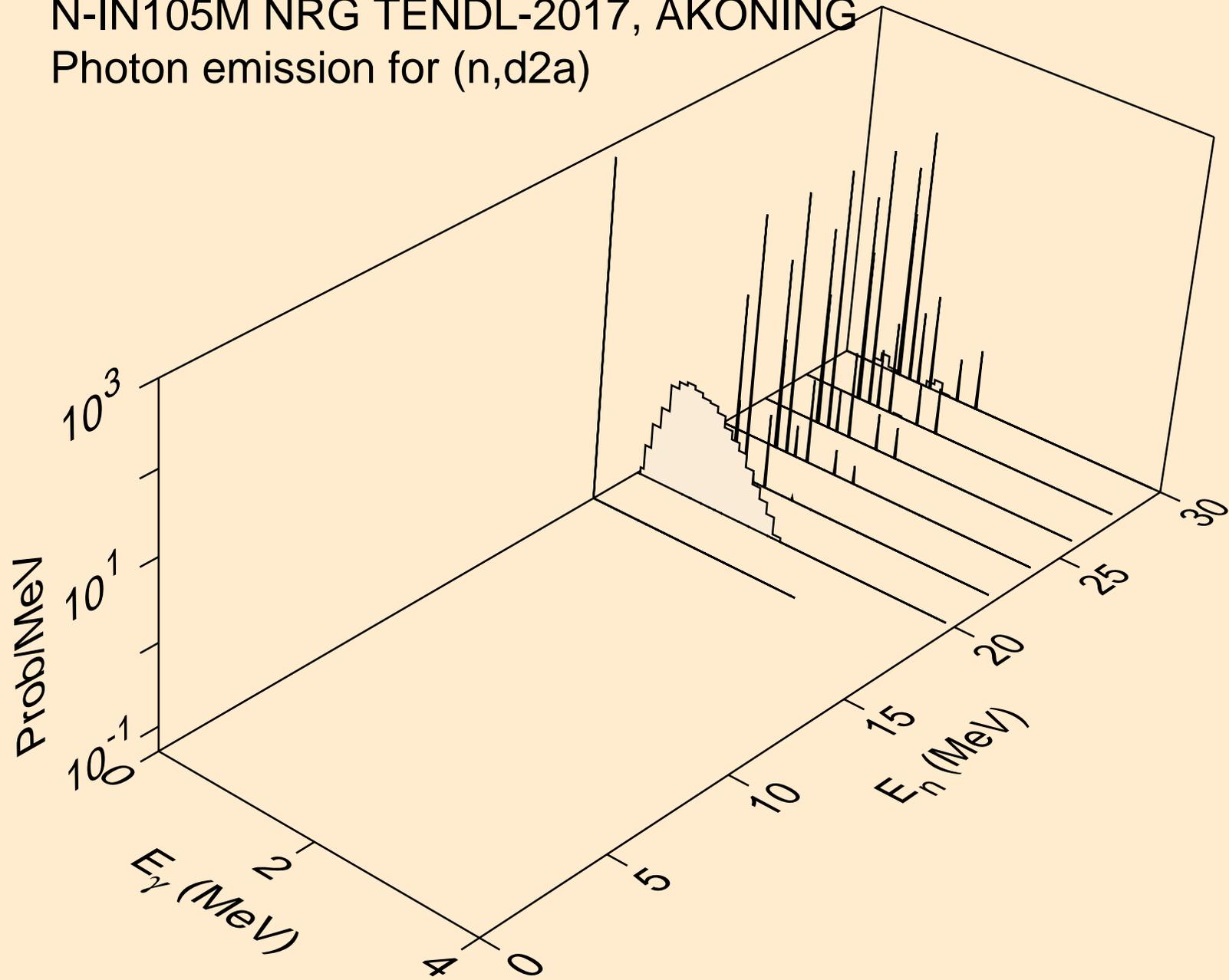Photon emission for (n,3a)

N-IN105M NRG TENDL-2017, AKONING
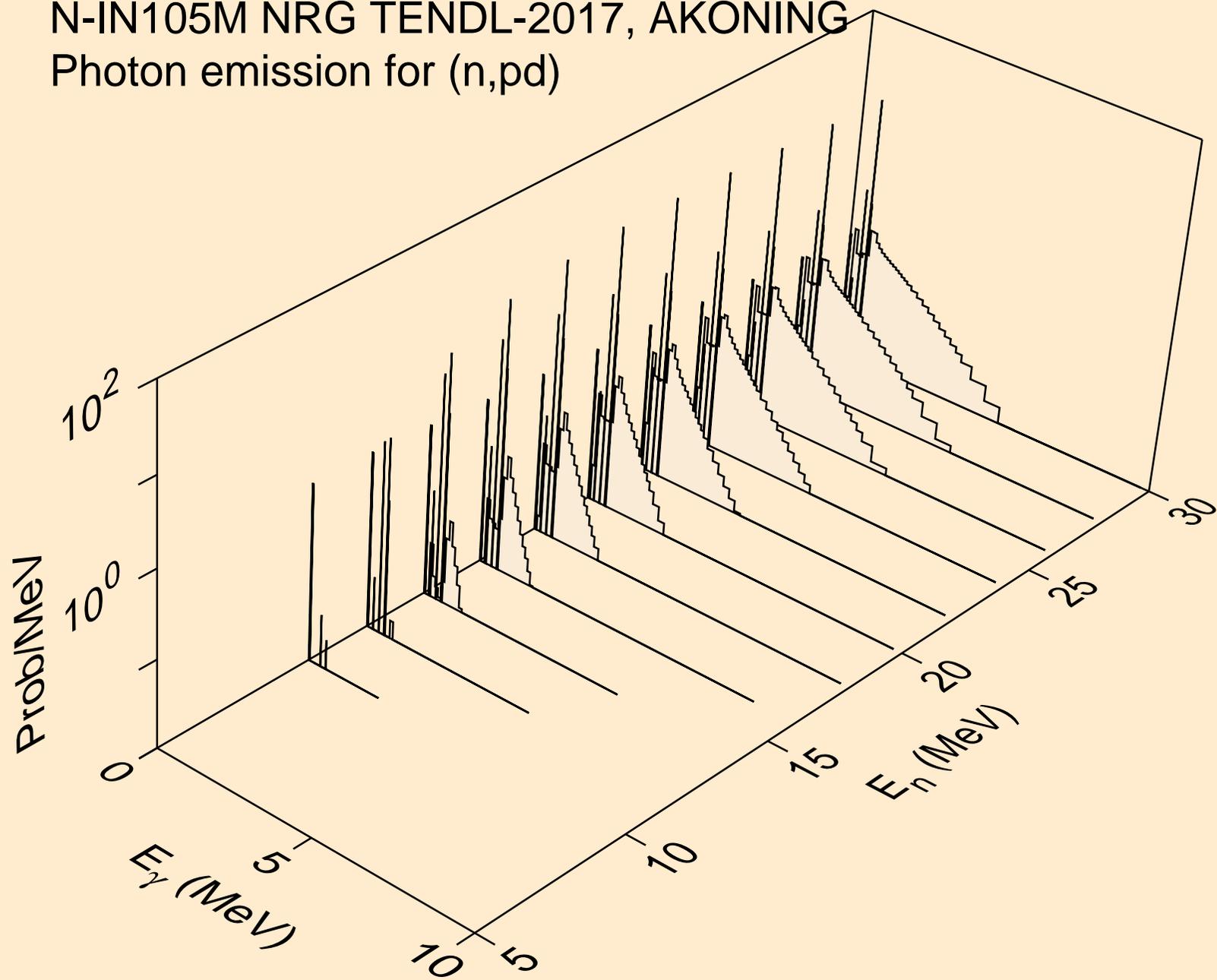Photon emission for (n,2p)

N-IN105M NRG TENDL-2017, AKONING
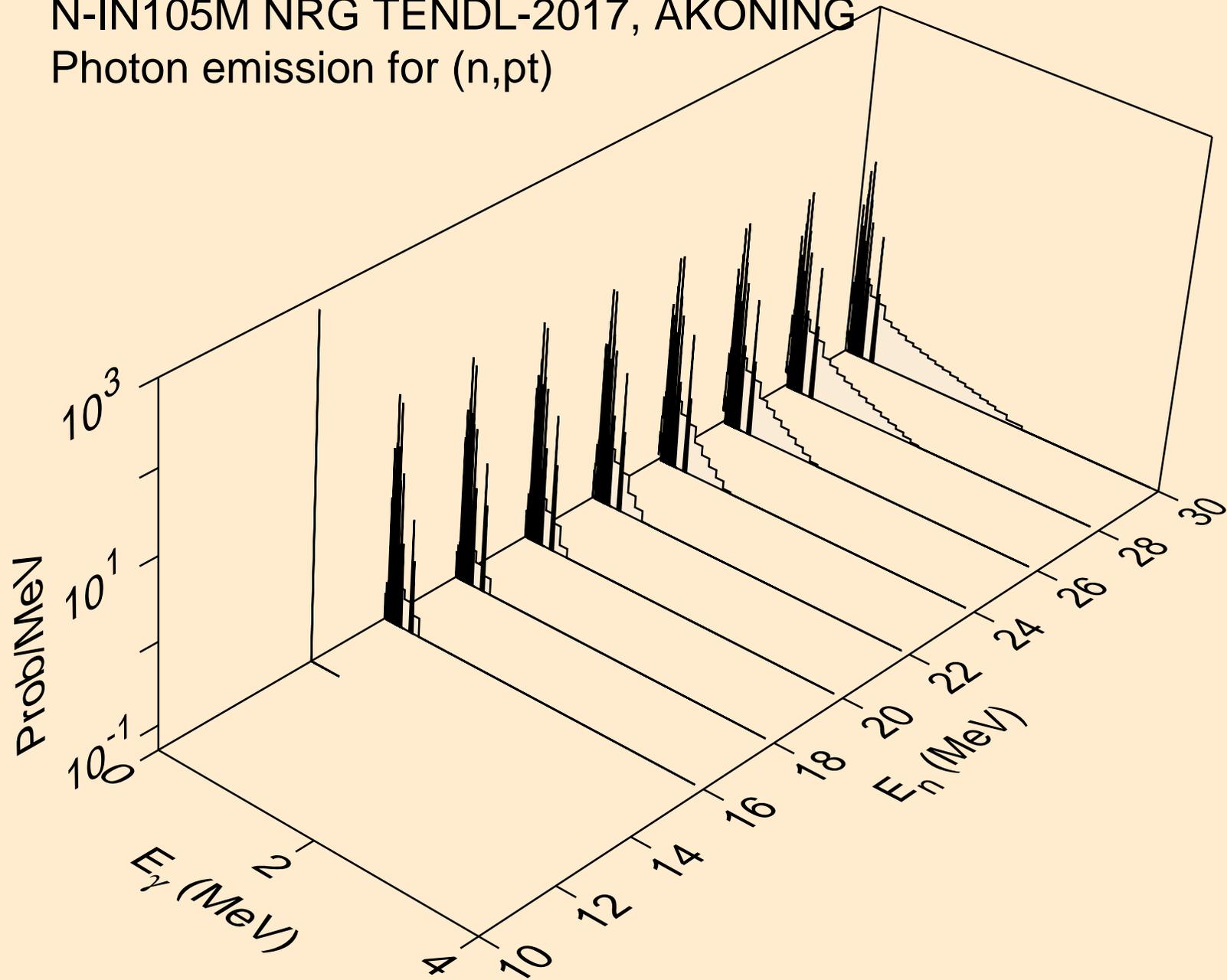Photon emission for (n,pa)

N-IN105M NRG TENDL-2017, AKONING
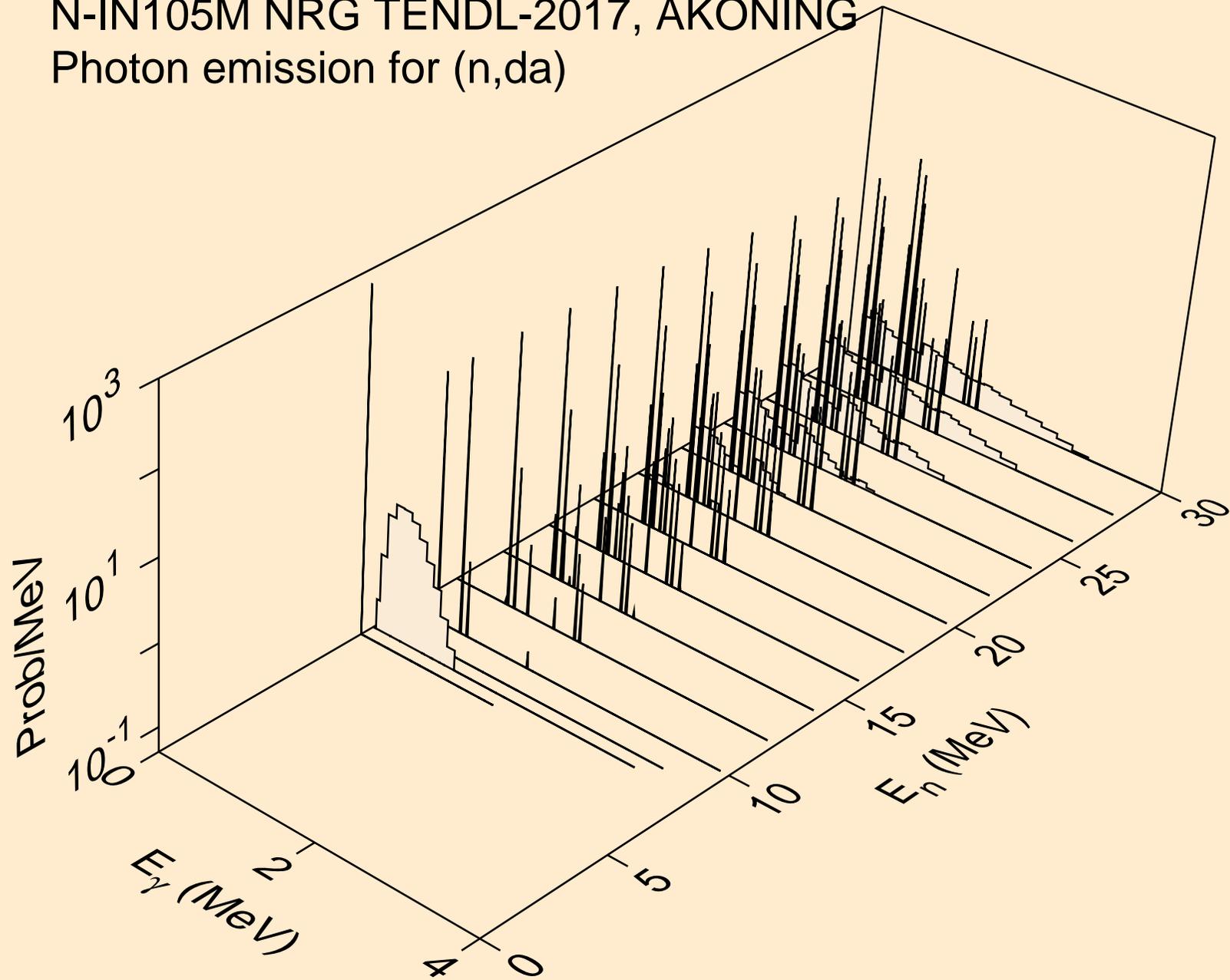Photon emission for (n,d2a)

N-IN105M NRG TENDL-2017, AKONING
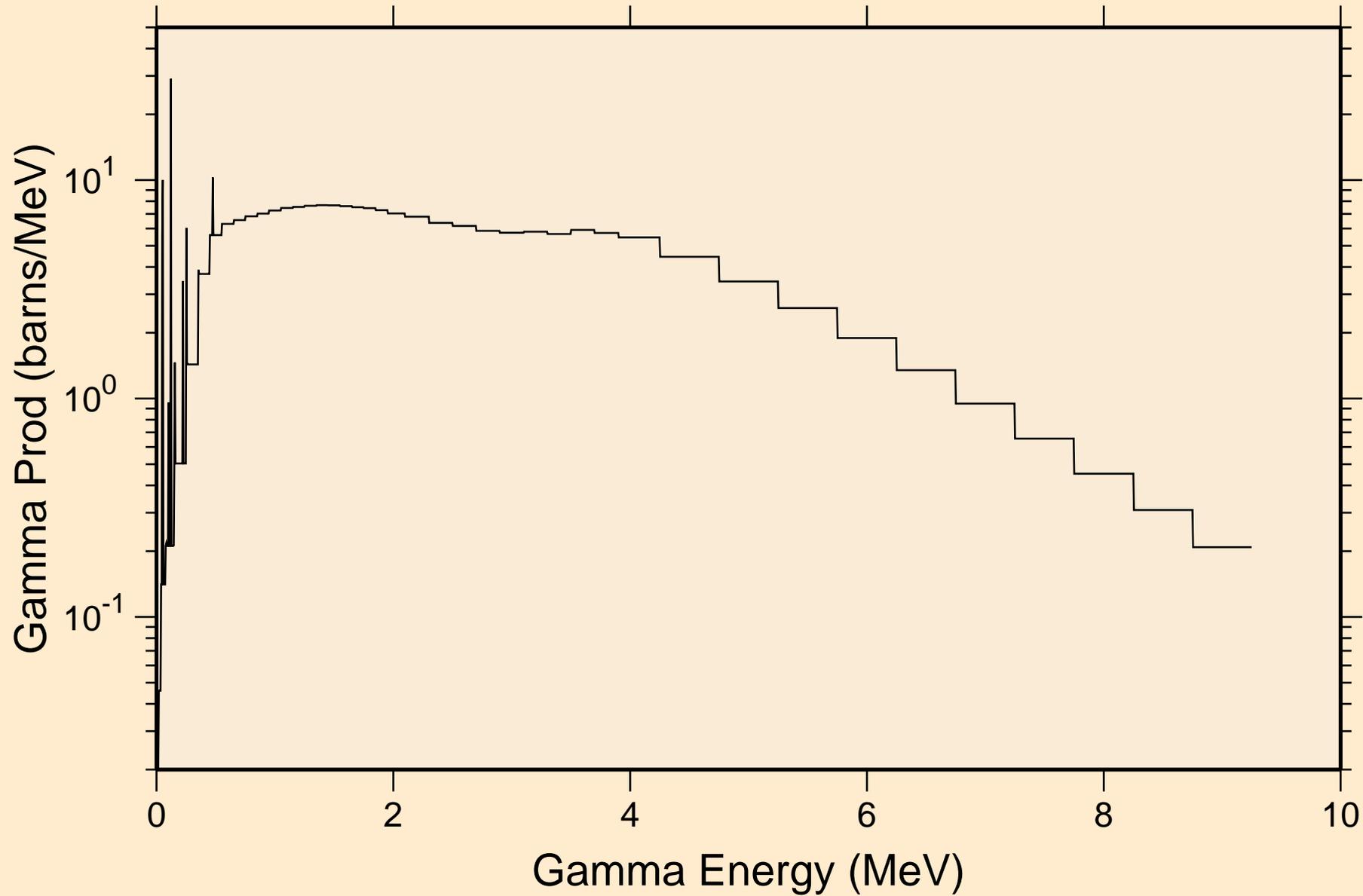Photon emission for (n,pd)

N-IN105M NRG TENDL-2017, AKONING
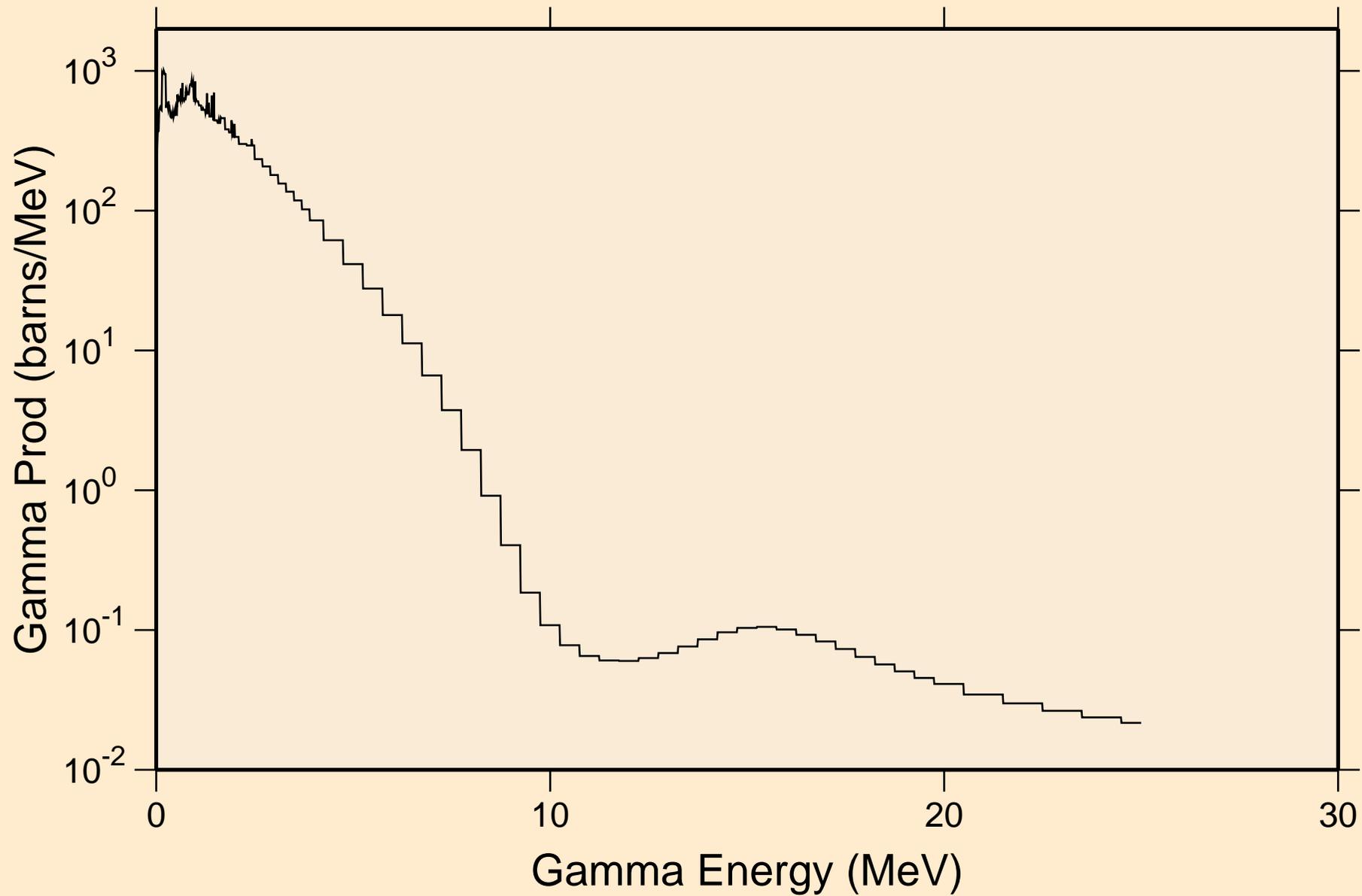Photon emission for (n,pt)

N-IN105M NRG TENDL-2017, AKONING
Photon emission for (n,da)

N-IN105M NRG TENDL-2017, AKONING
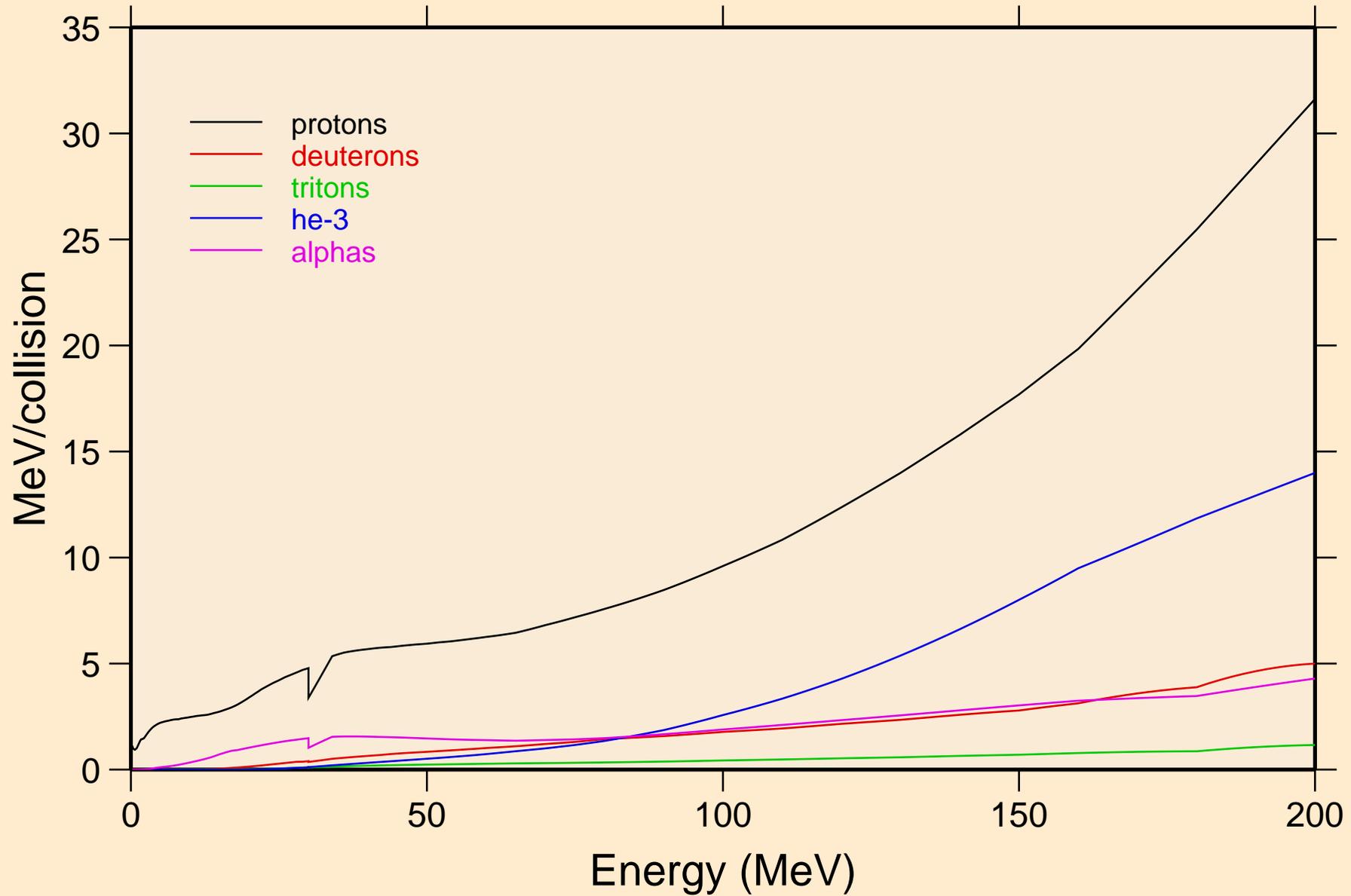thermal capture photon spectrum

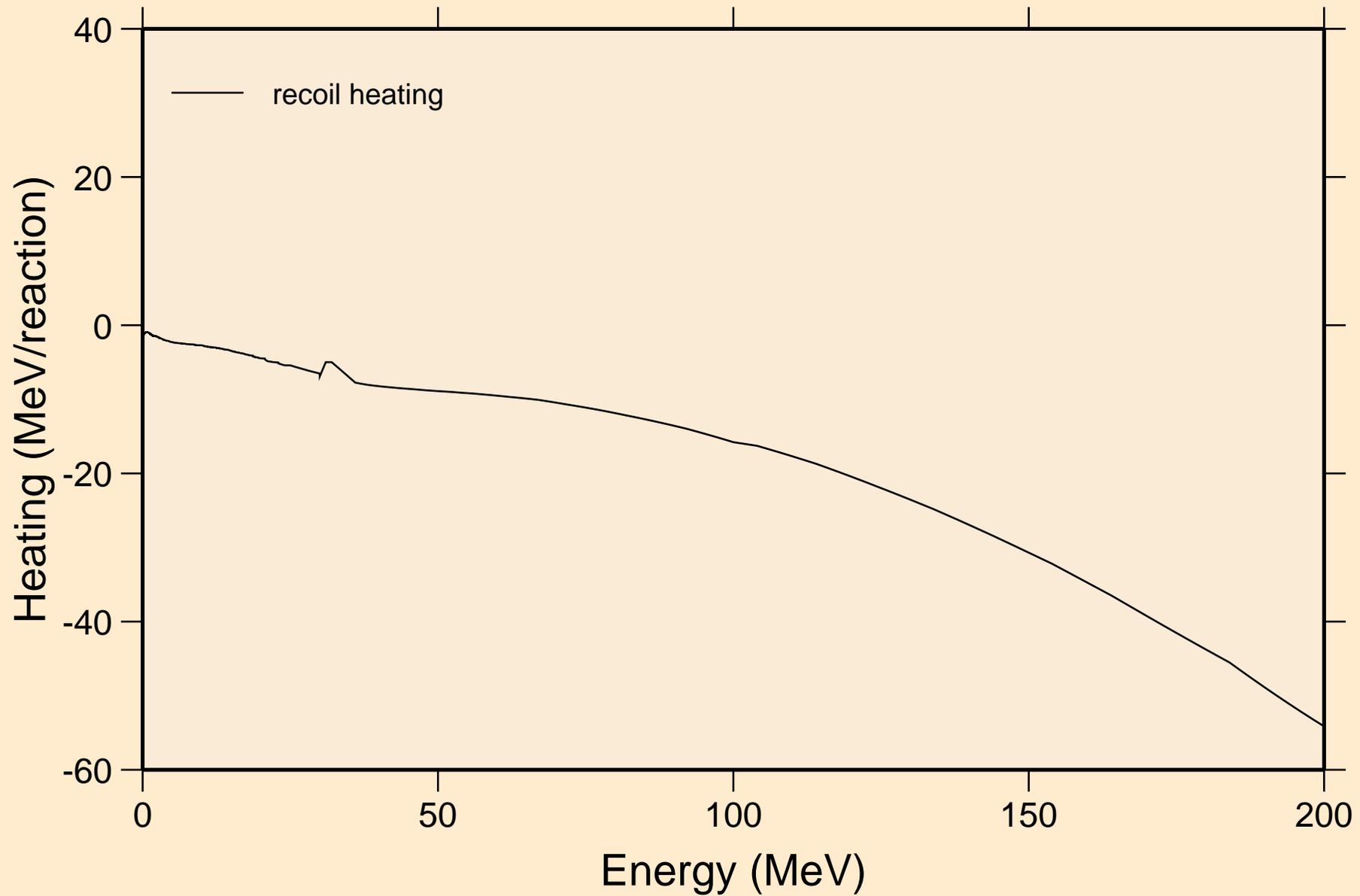N-IN105M NRG TENDL-2017, AKONING
14 MeV photon spectrum

N-IN105M NRG TENDL-2017, AKONING
Particle heating contributions

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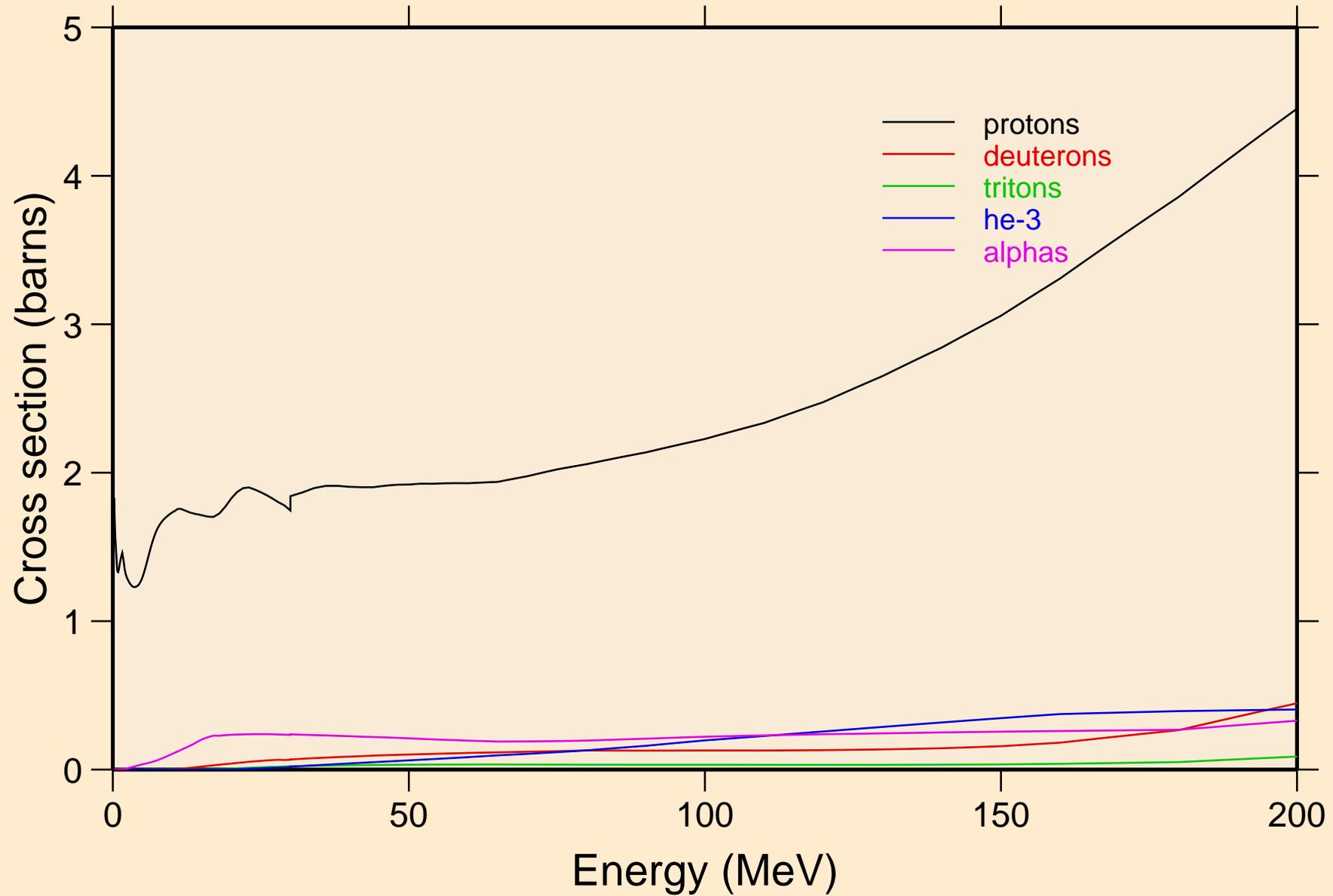- alphas

MeV/collision vs Energy (MeV)
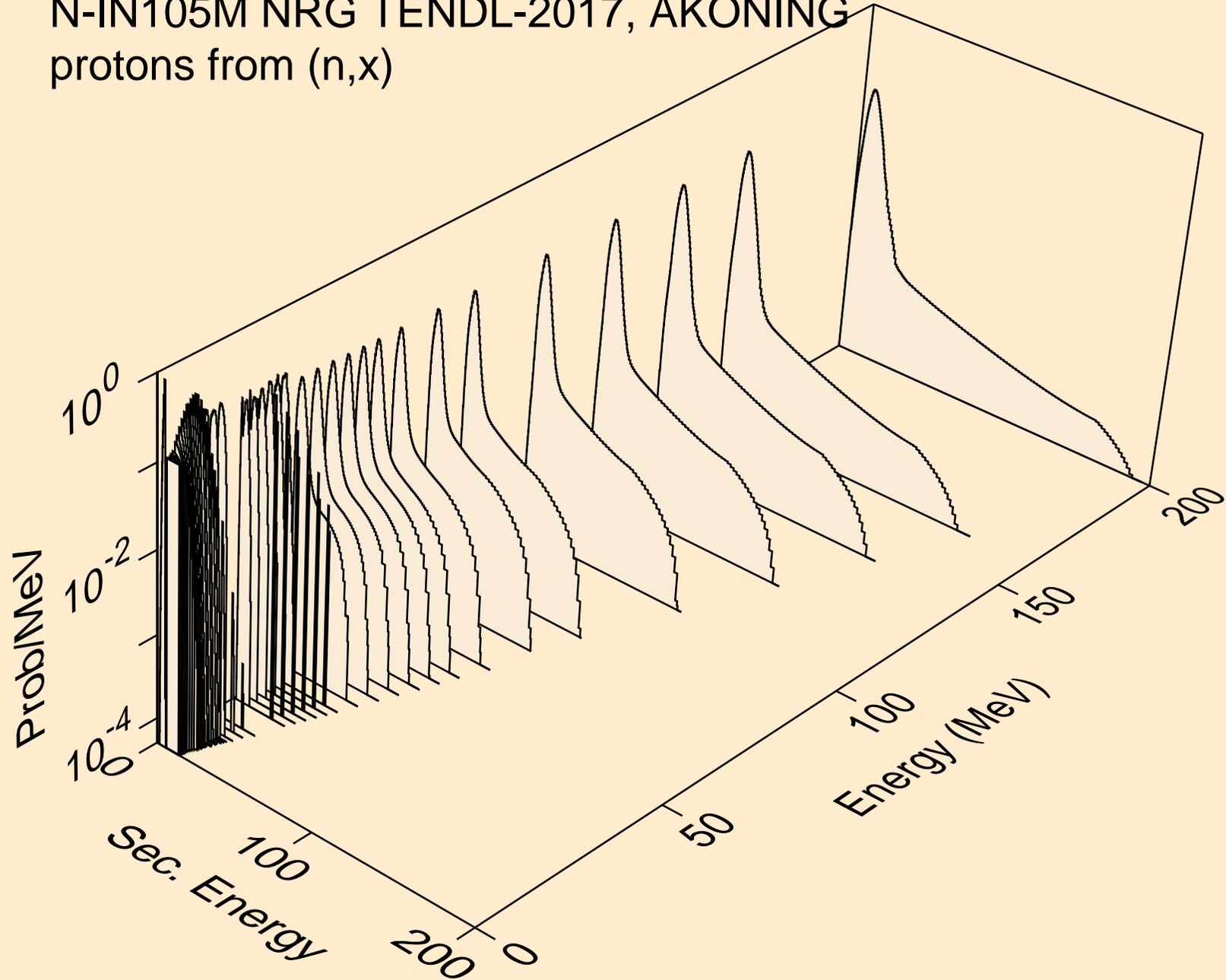
N-IN105M NRG TENDL-2017, AKONING
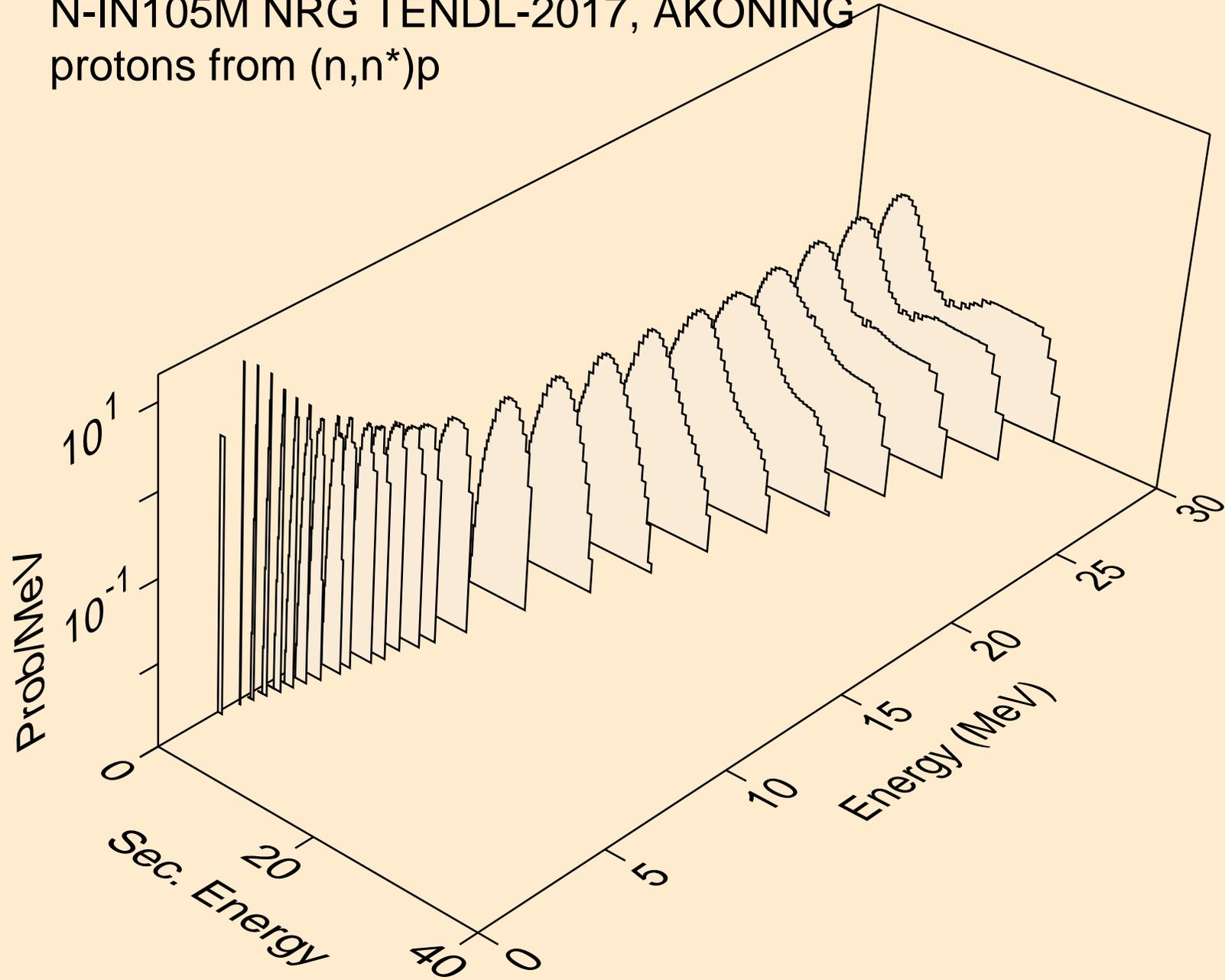Recoil Heating

N-IN105M NRG TENDL-2017, AKONING
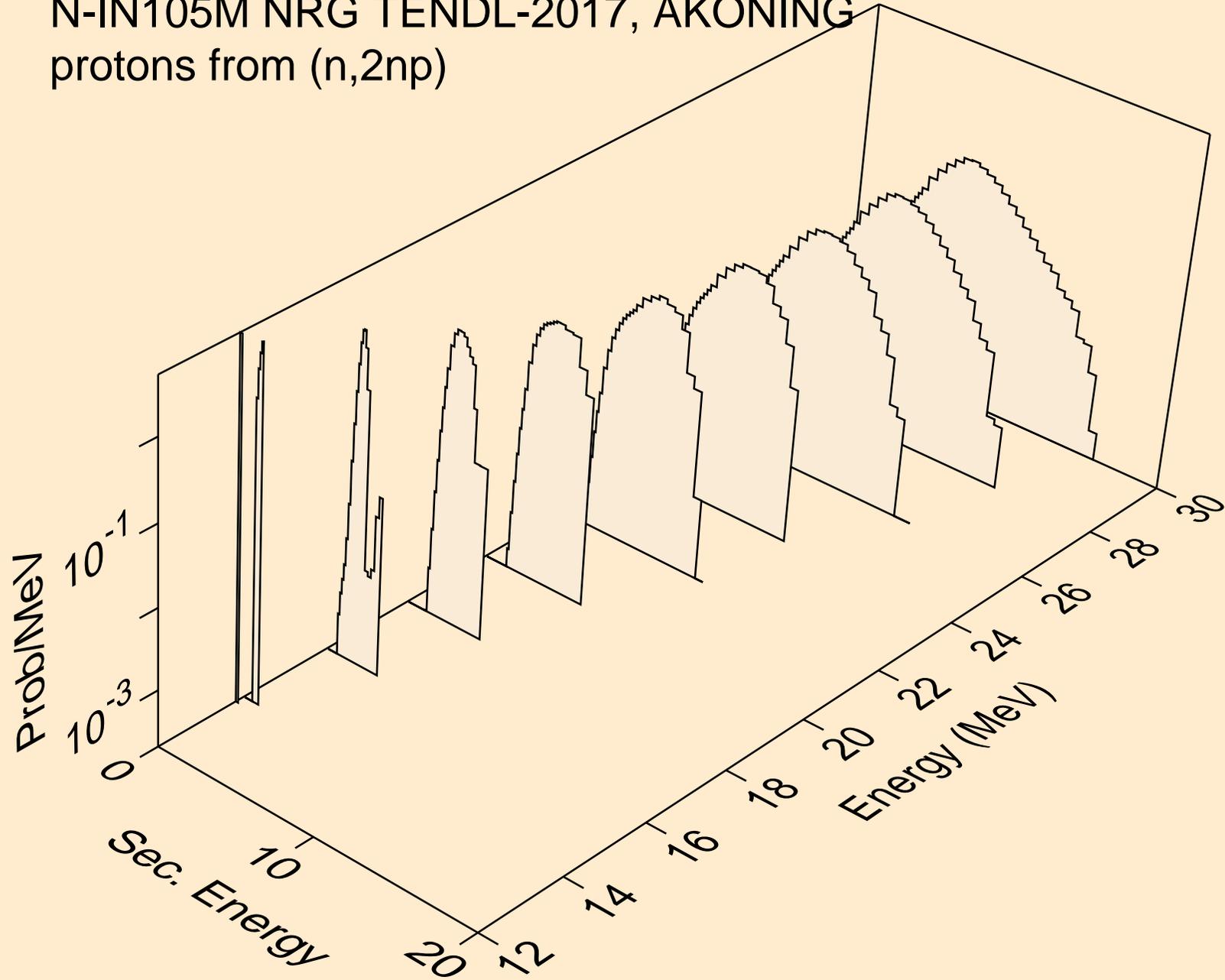Particle production cross sections
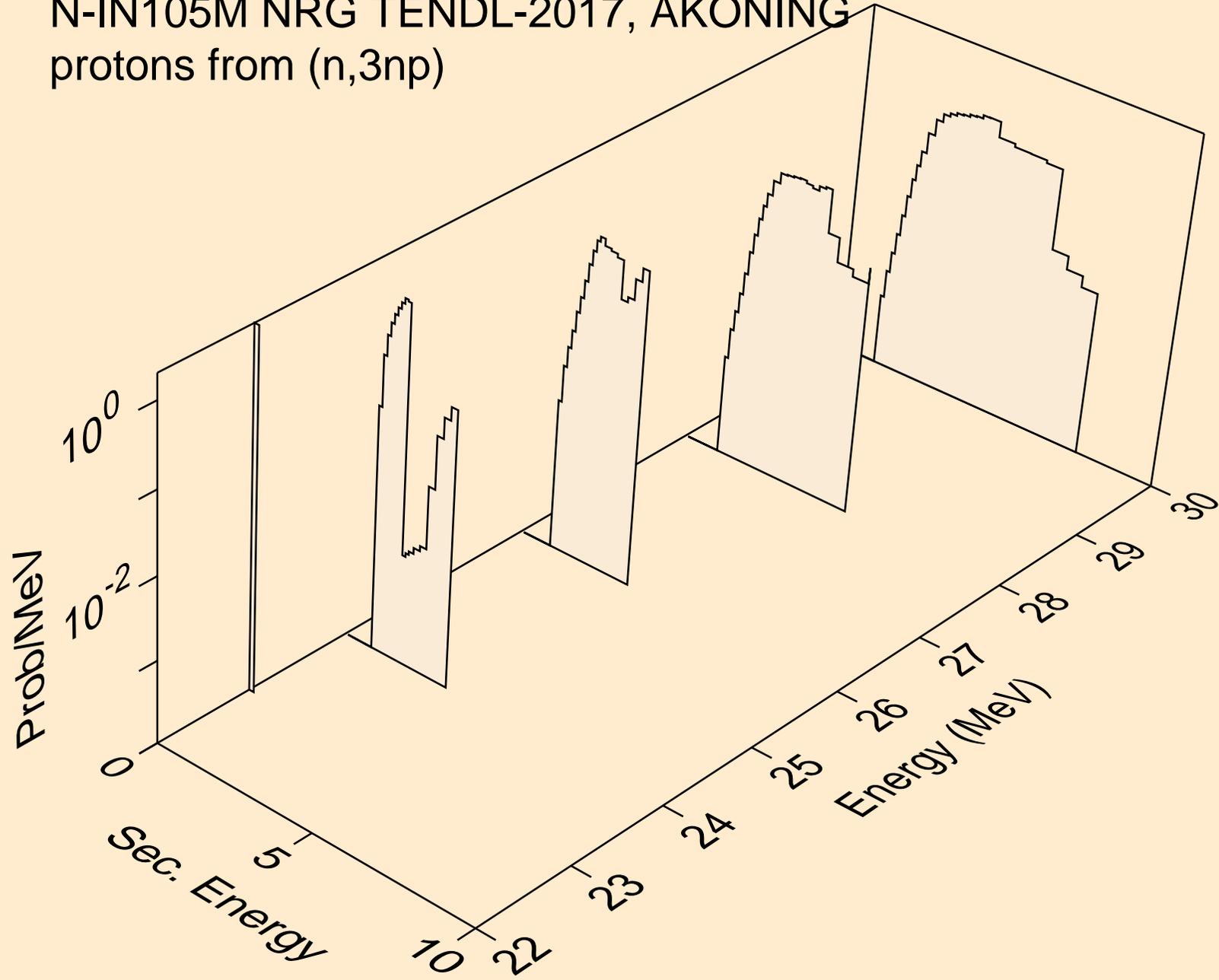
N-IN105M NRG TENDL-2017, AKONING
protons from (n,x)

N-IN105M NRG TENDL-2017, AKONING
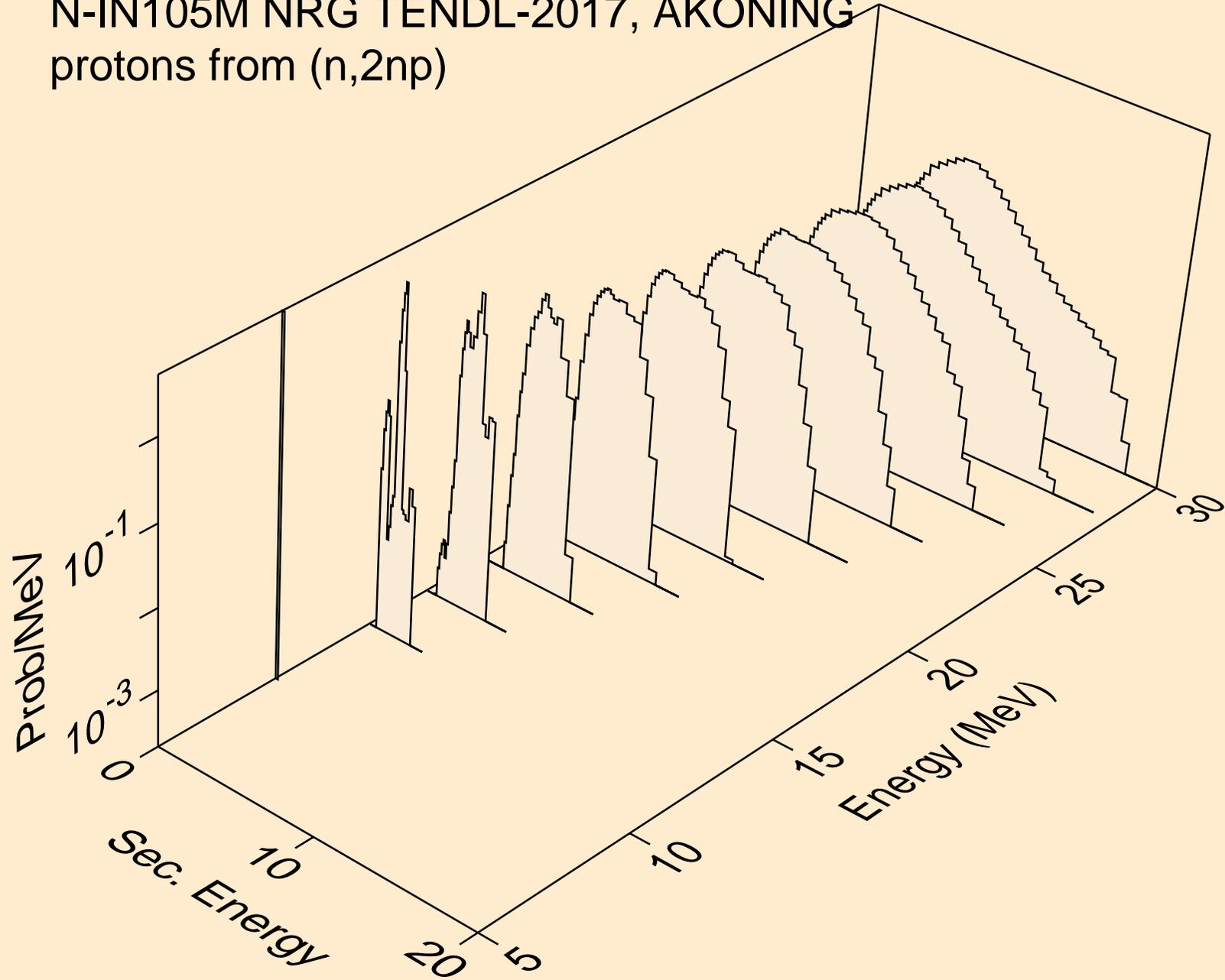protons from (n,n*)p

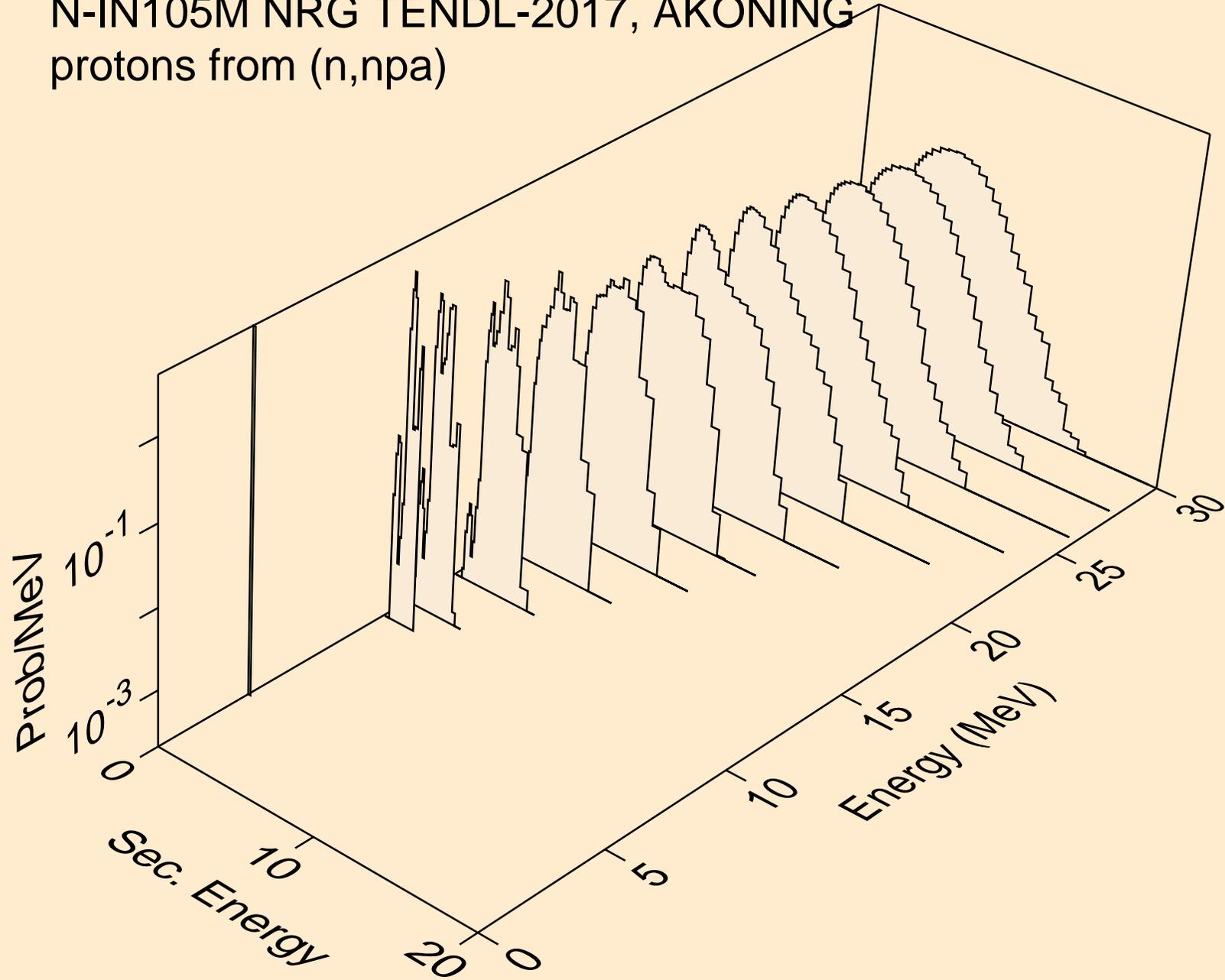N-IN105M NRG TENDL-2017, AKONING
protons from (n,2np)

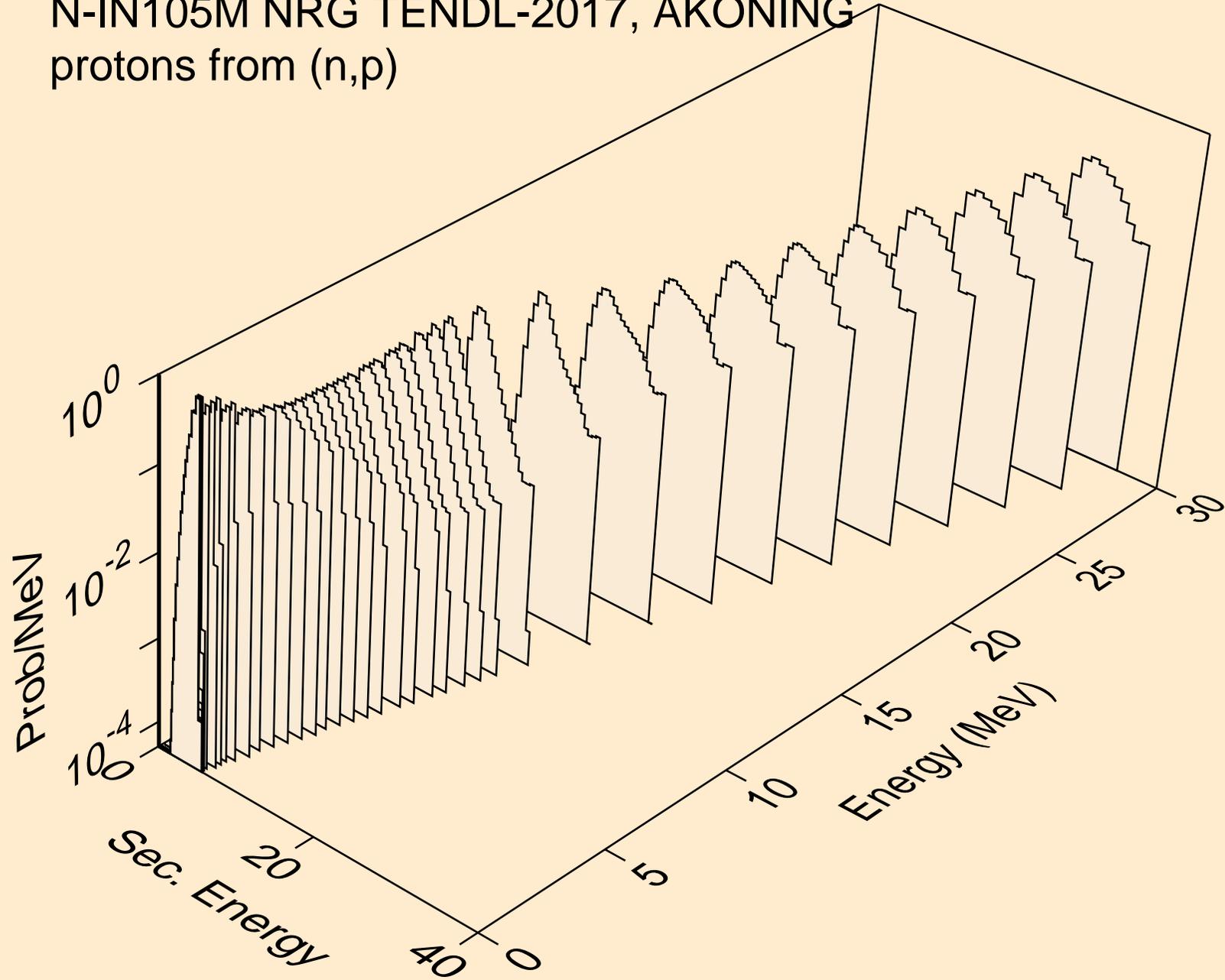N-IN105M NRG TENDL-2017, AKONING
protons from (n,3np)

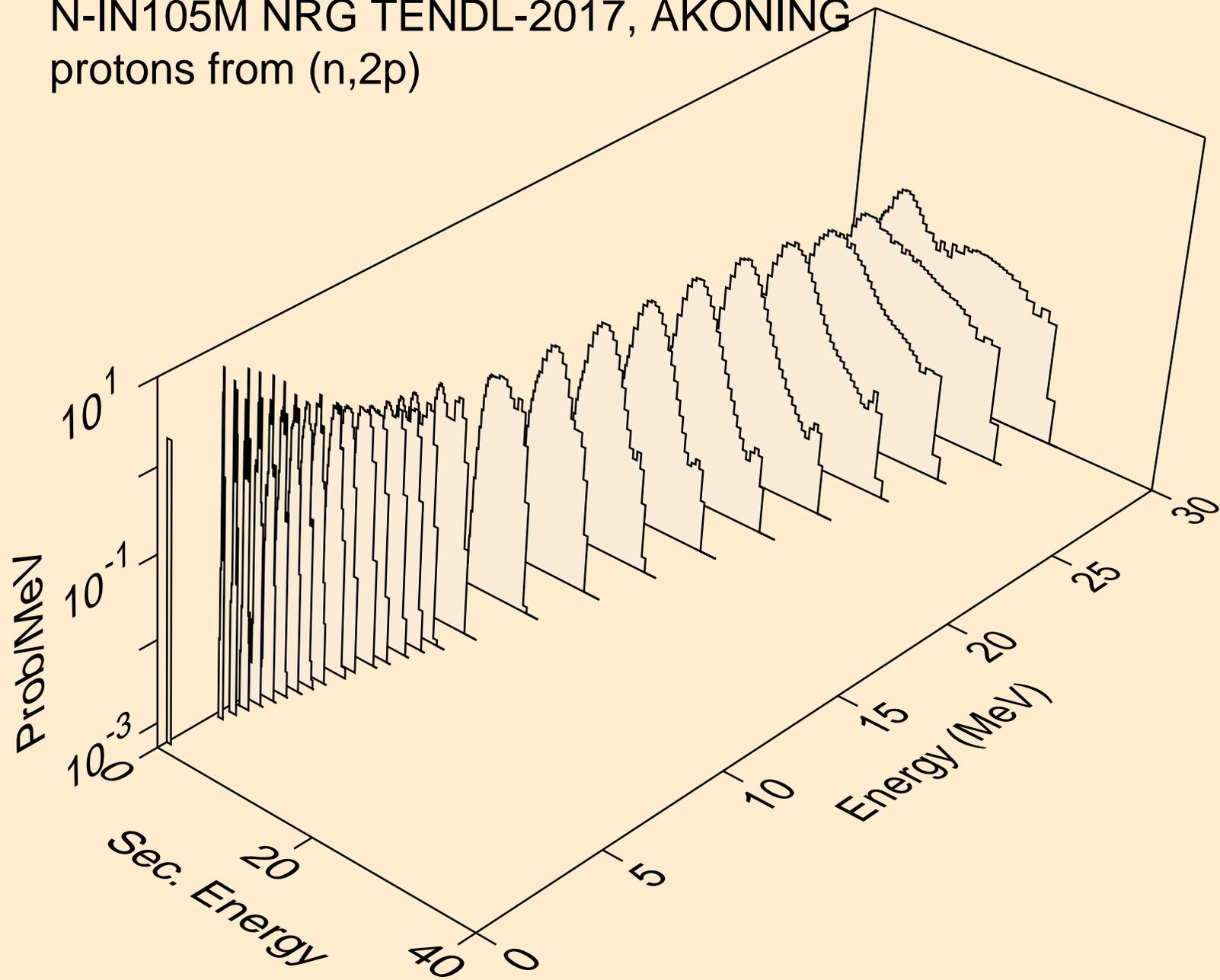N-IN105M NRG TENDL-2017, AKONING
protons from (n,2np)

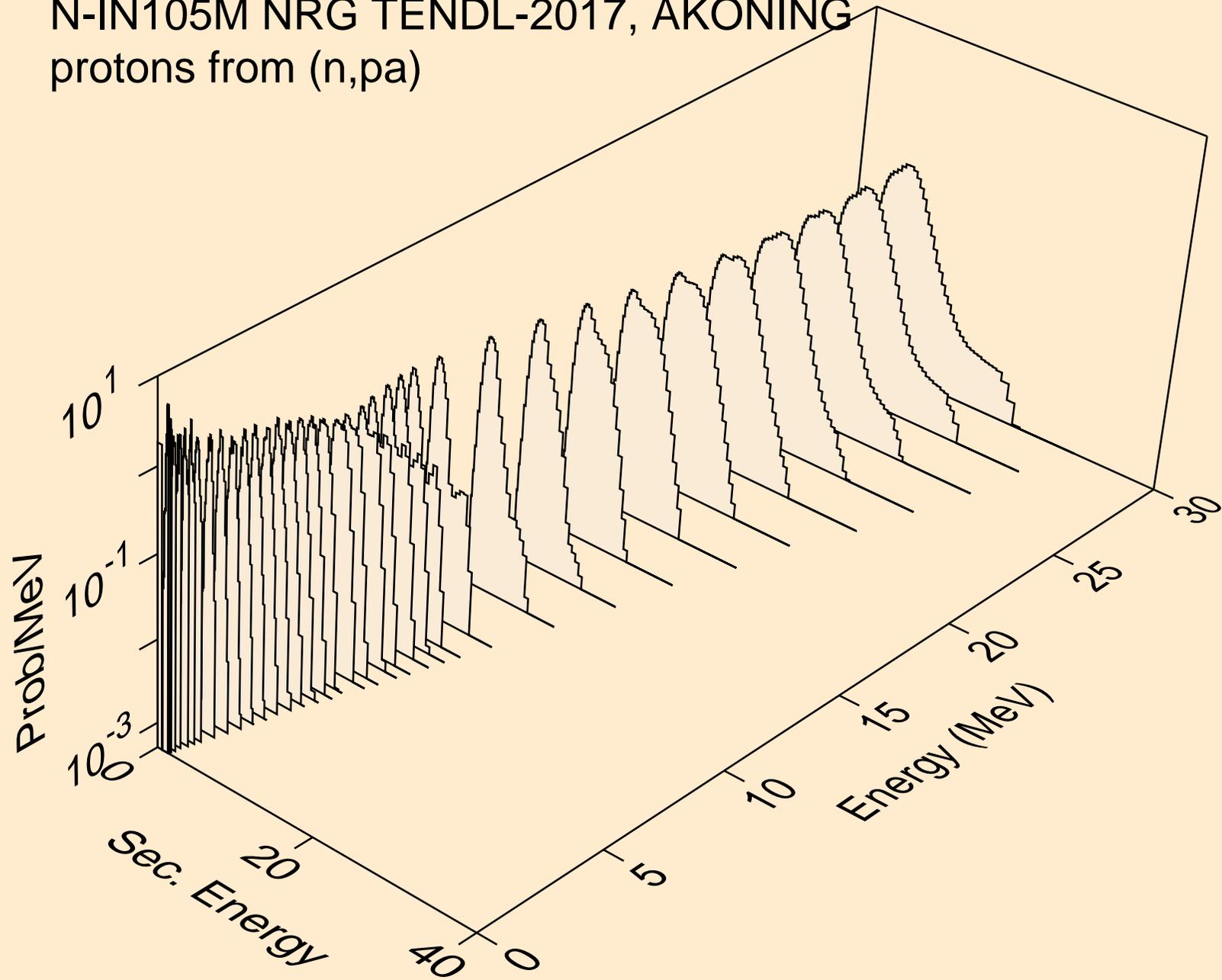N-IN105M NRG TENDL-2017, AKONING
protons from (n,npa)
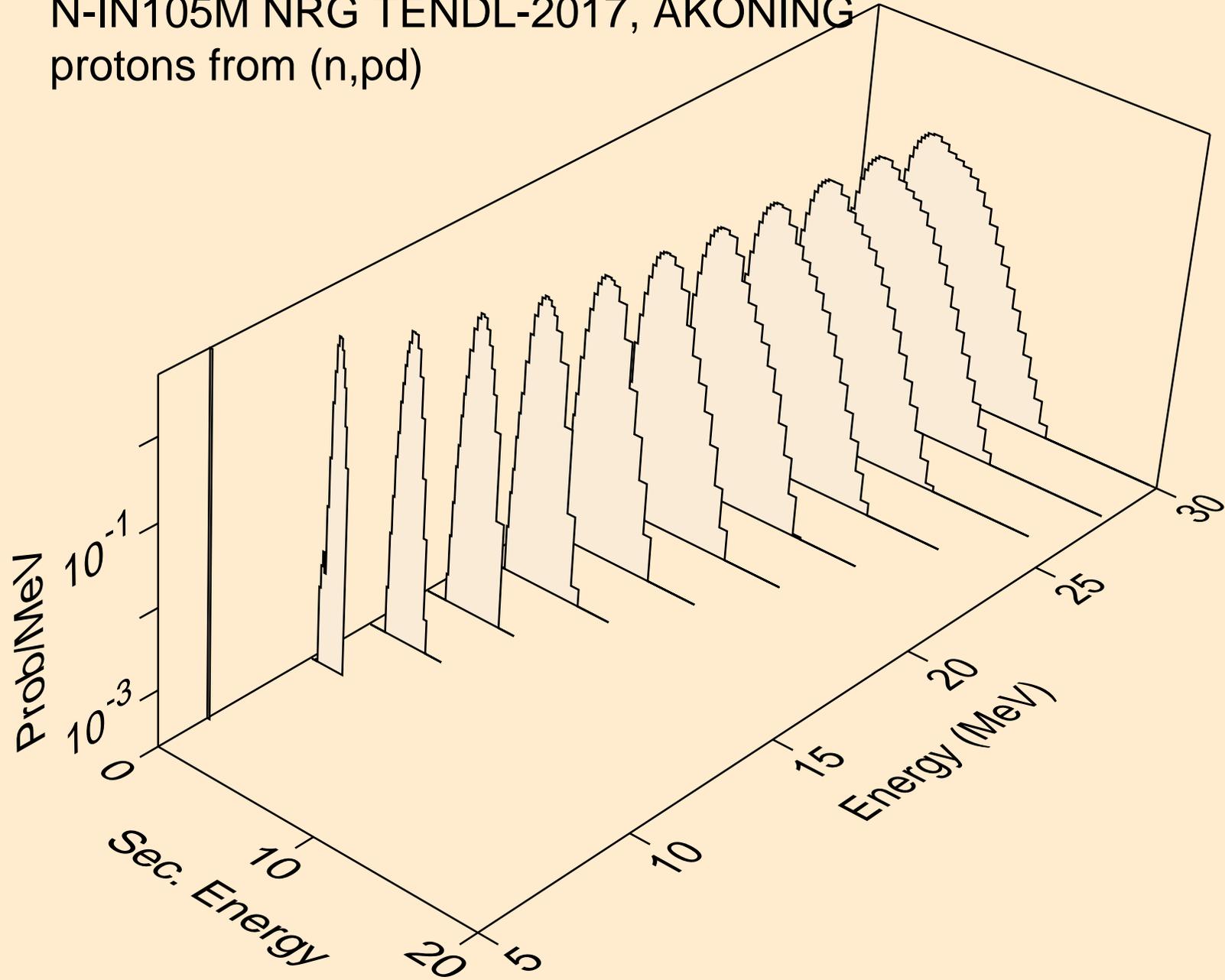
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protons from (n,p)
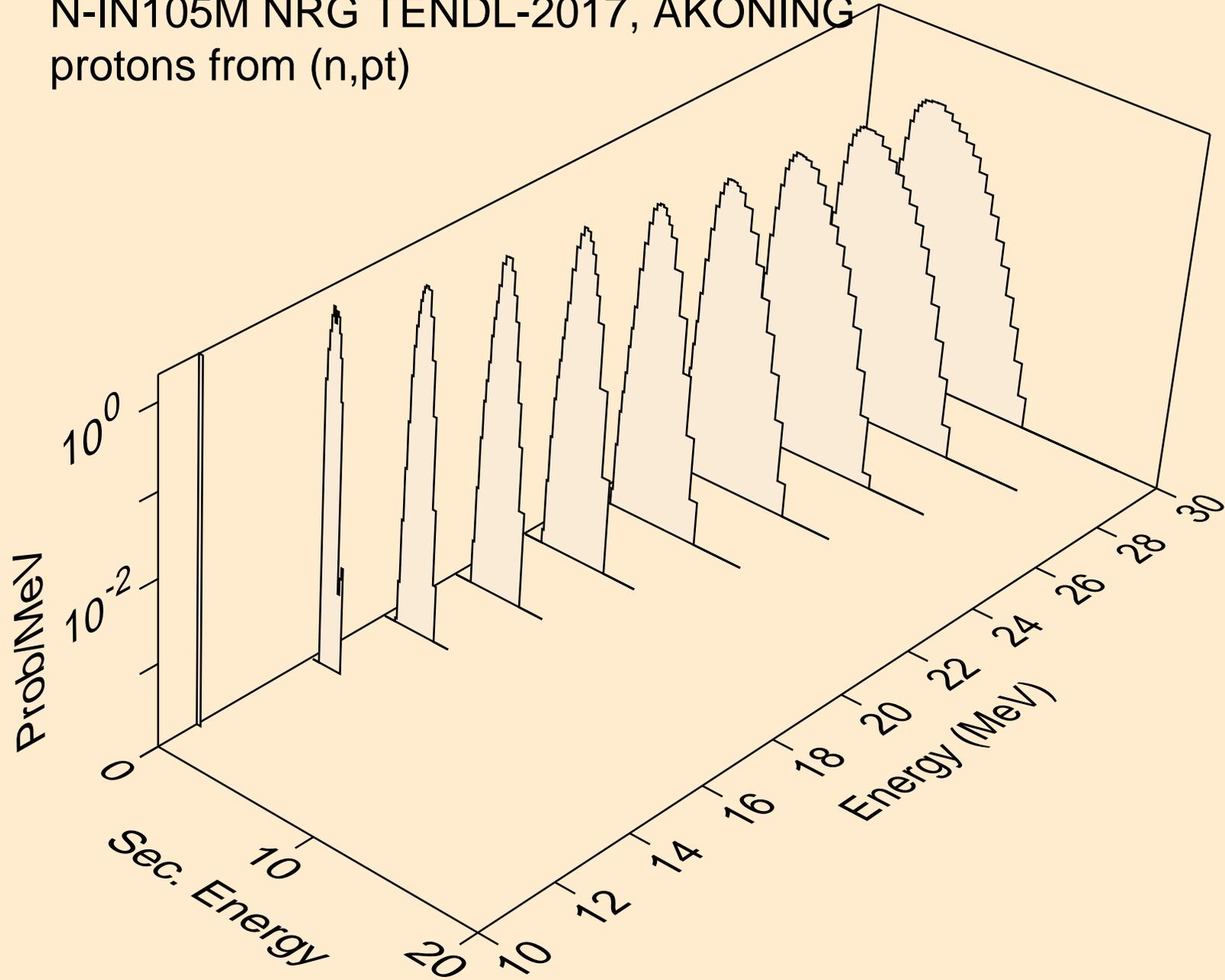
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protons from (n,2p)
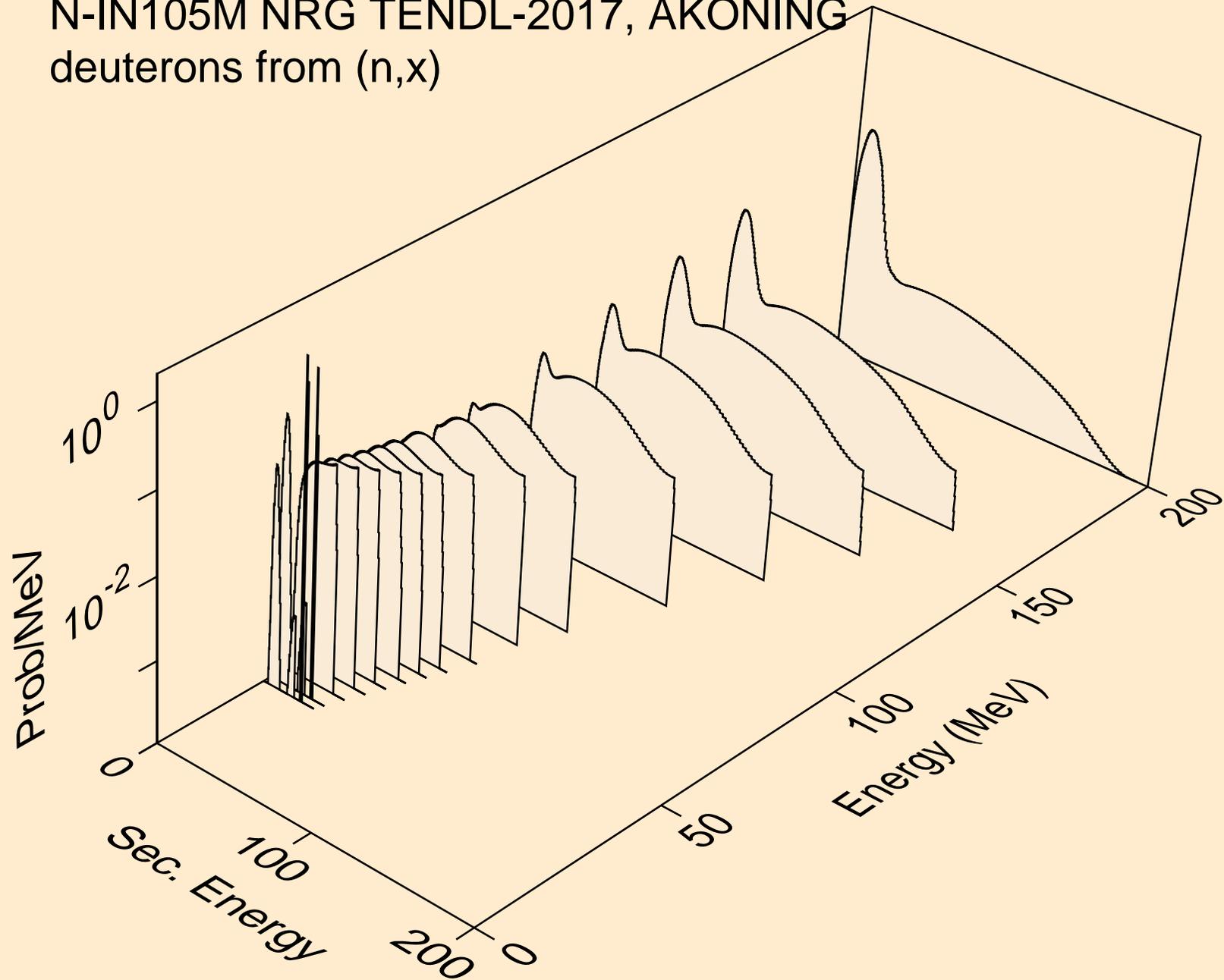
N-IN105M NRG TENDL-2017, AKONING
protons from (n,pa)

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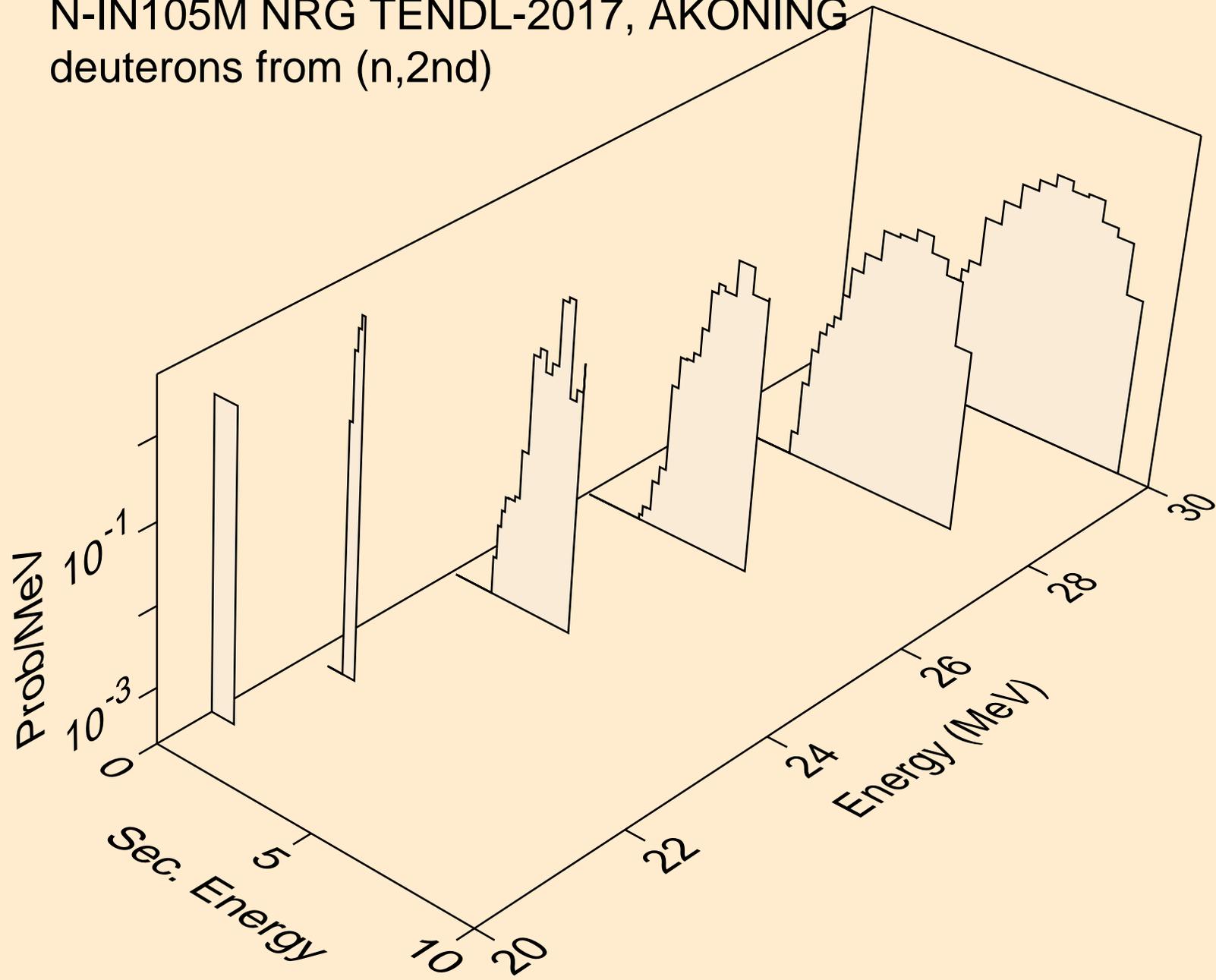protons from (n,pd)

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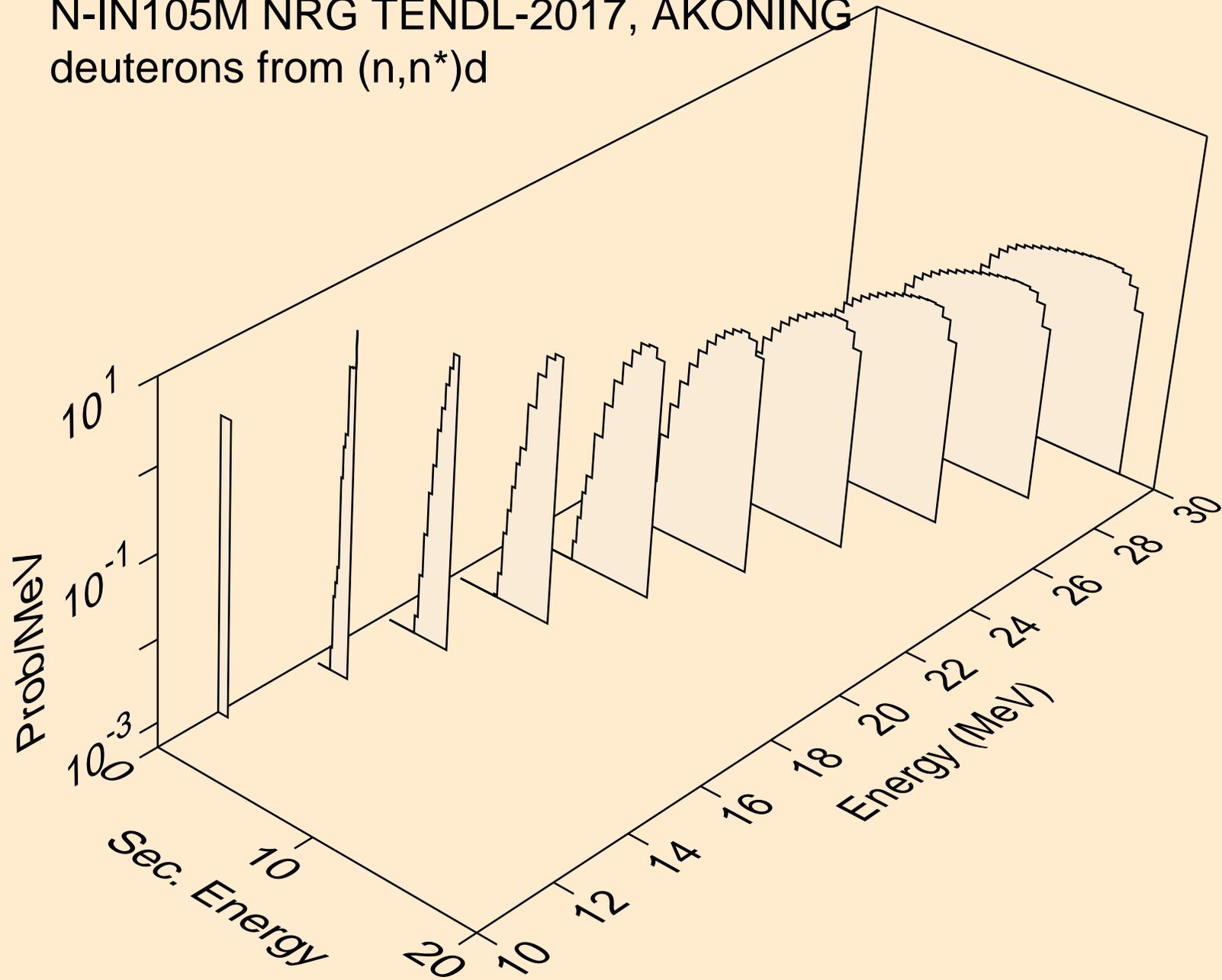protons from (n,pt)

Prob/MeV

Sec. Energy

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
deuterons from (n,x)

N-IN105M NRG TENDL-2017, AKONING
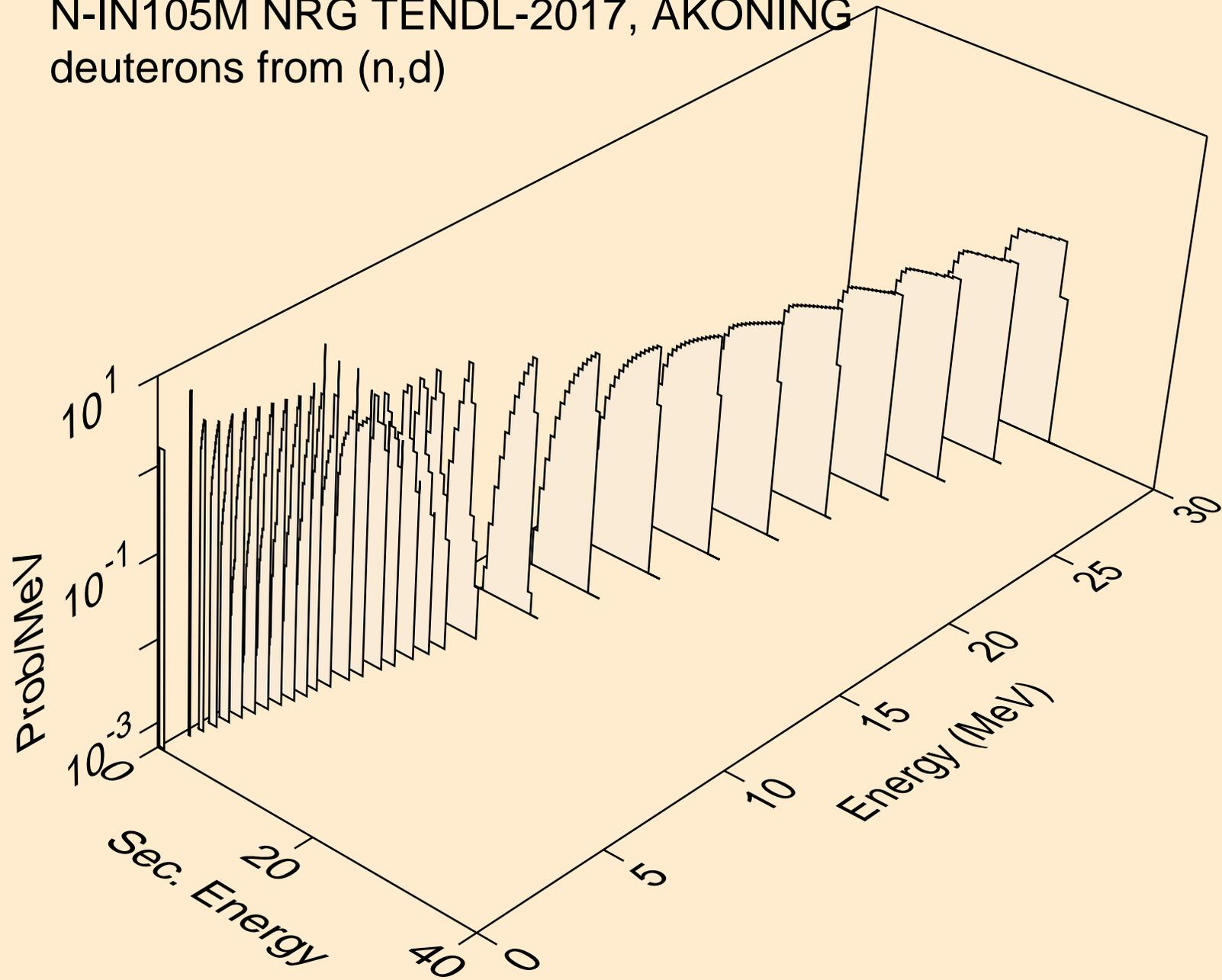deuterons from (n,2nd)
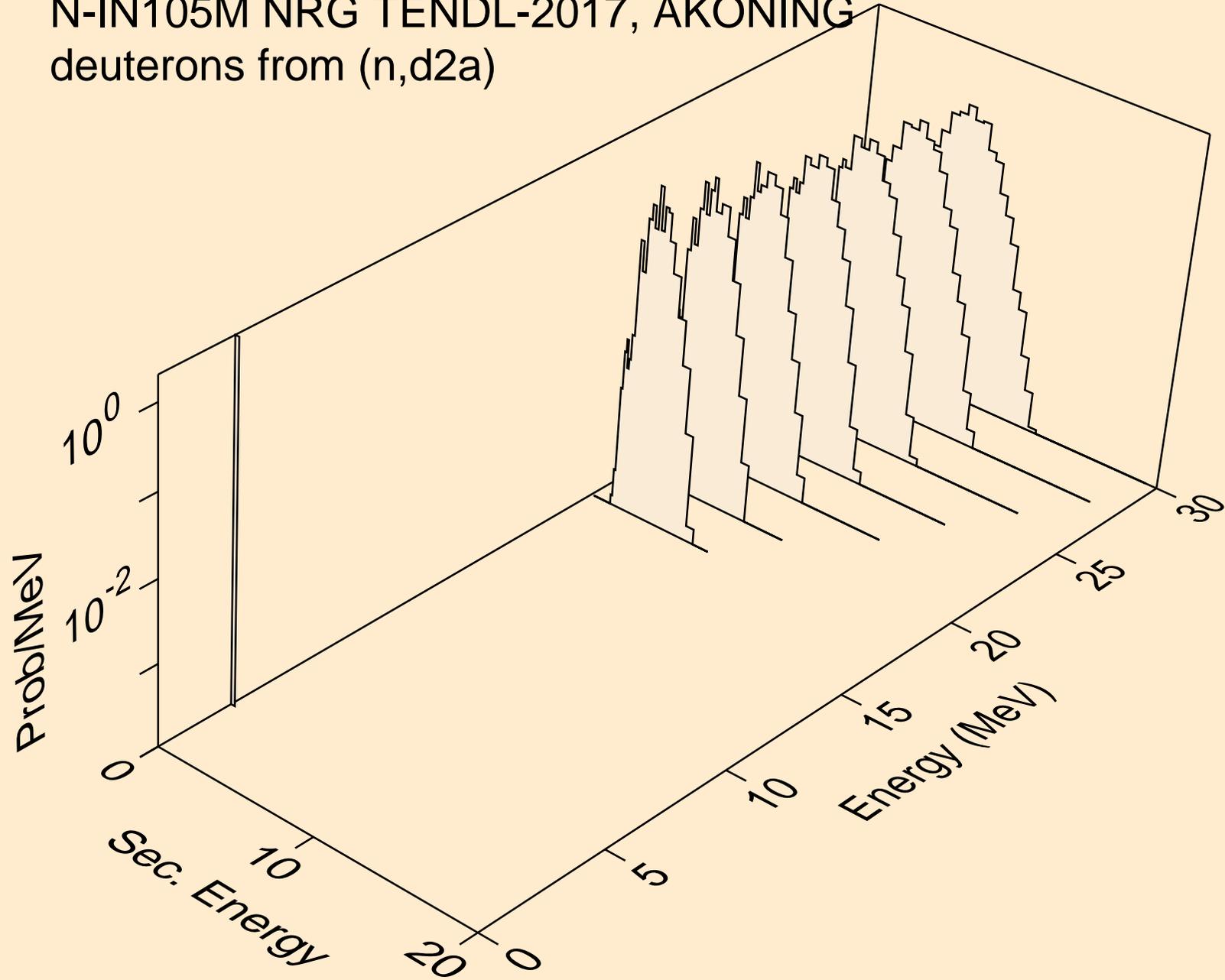
Prob/MeV

Sec. Energy

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
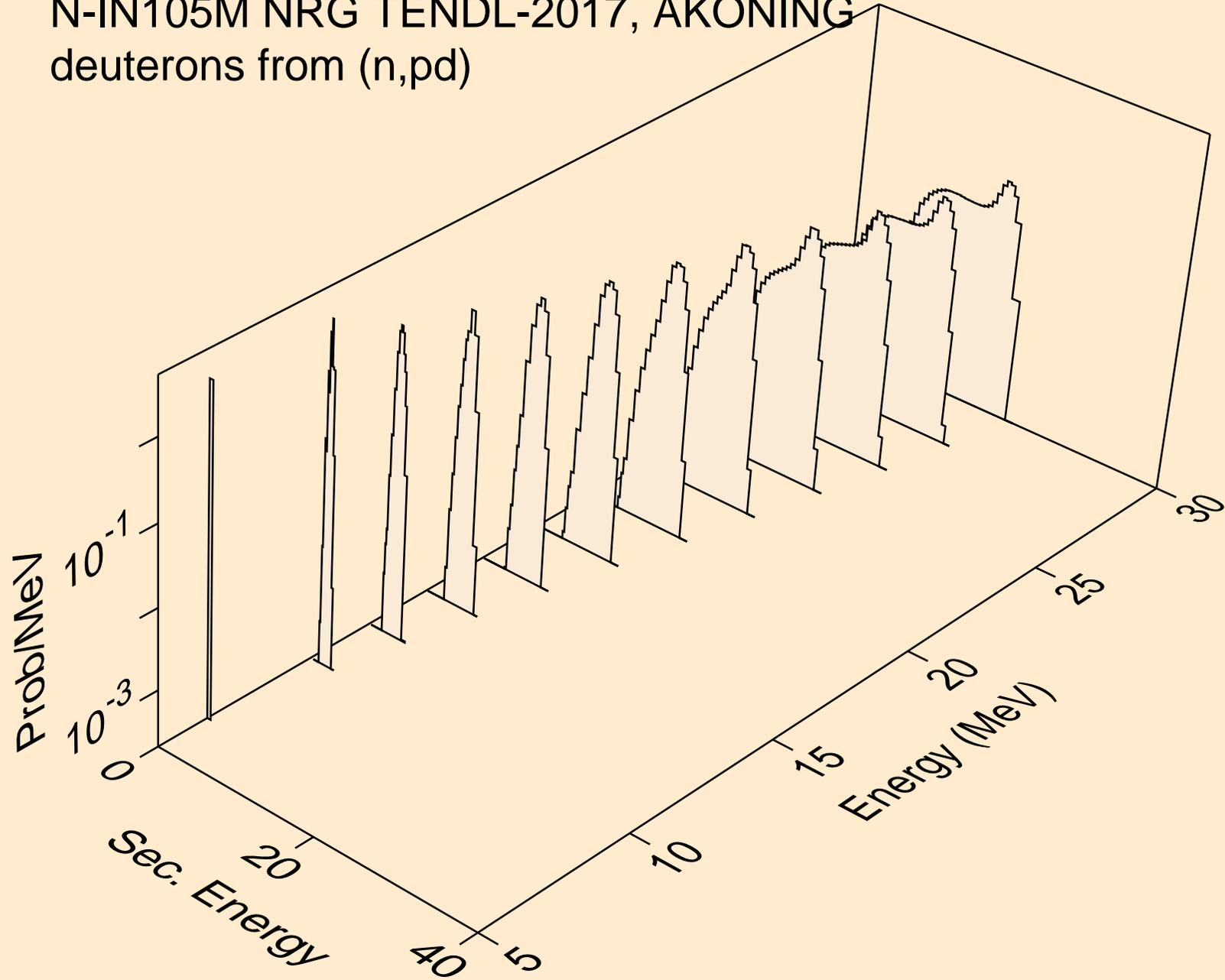deuterons from (n,n*)d

N-IN105M NRG TENDL-2017, AKONING
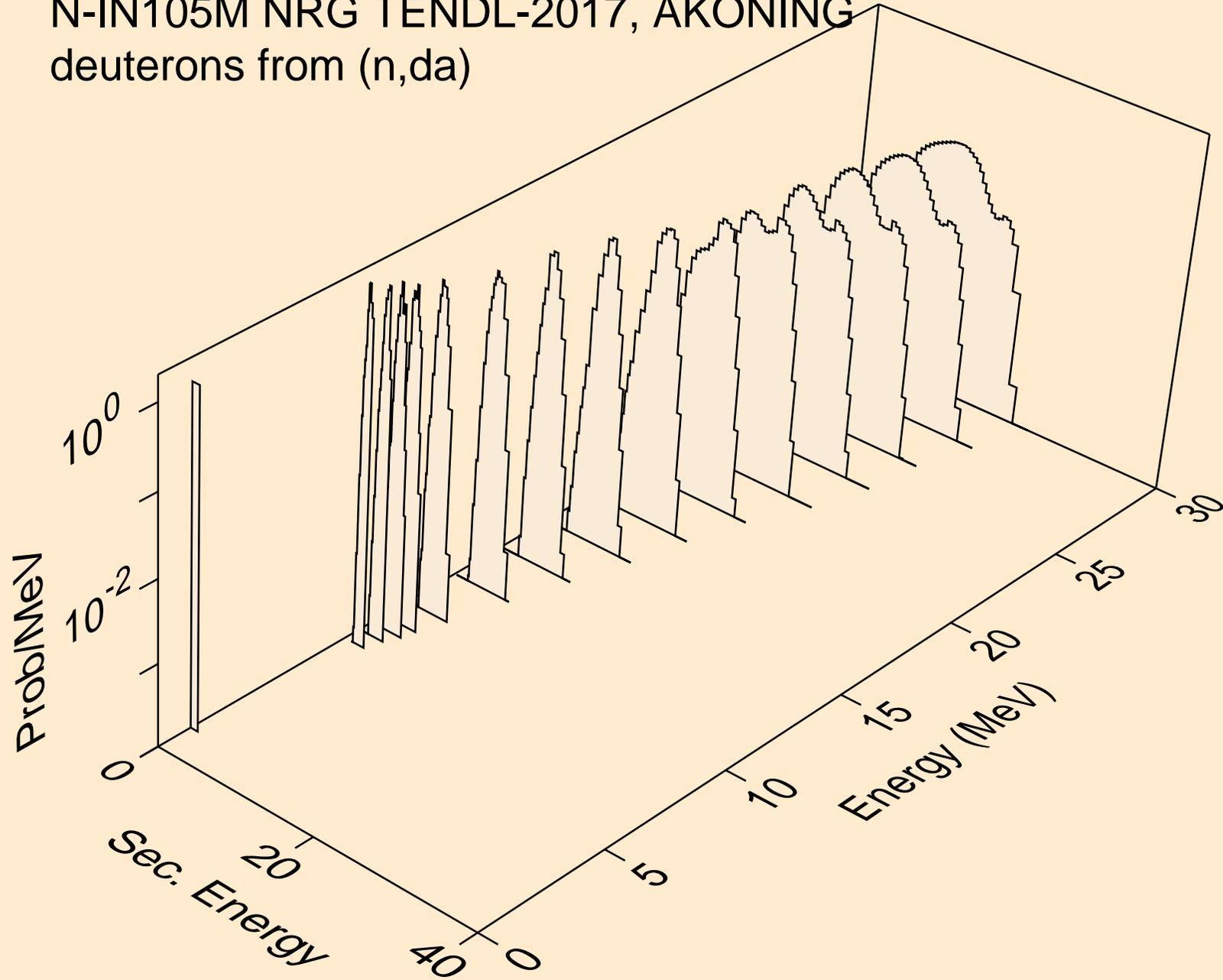deuterons from (n,d)

N-IN105M NRG TENDL-2017, AKONING
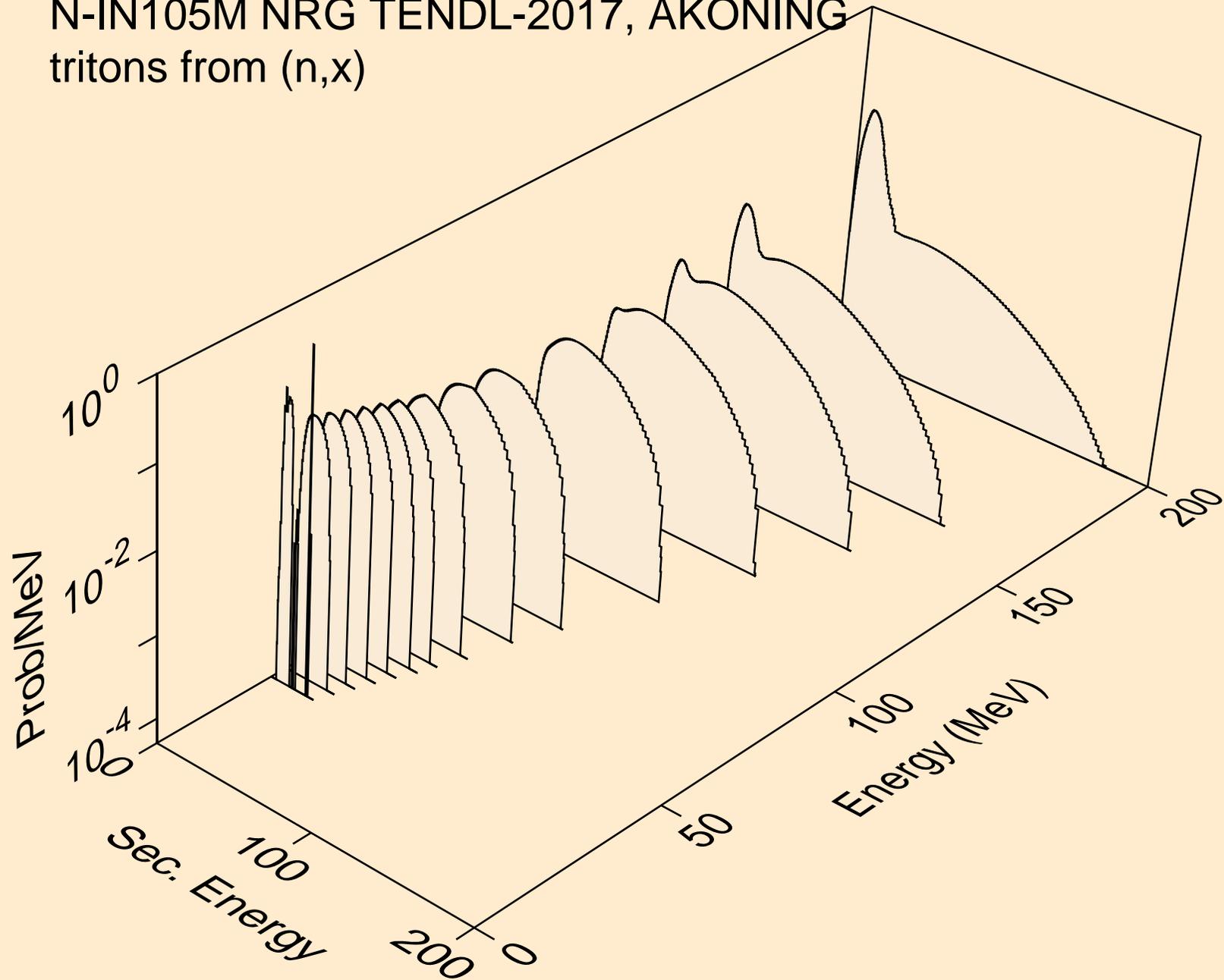deuterons from (n,d2a)

N-IN105M NRG TENDL-2017, AKONING
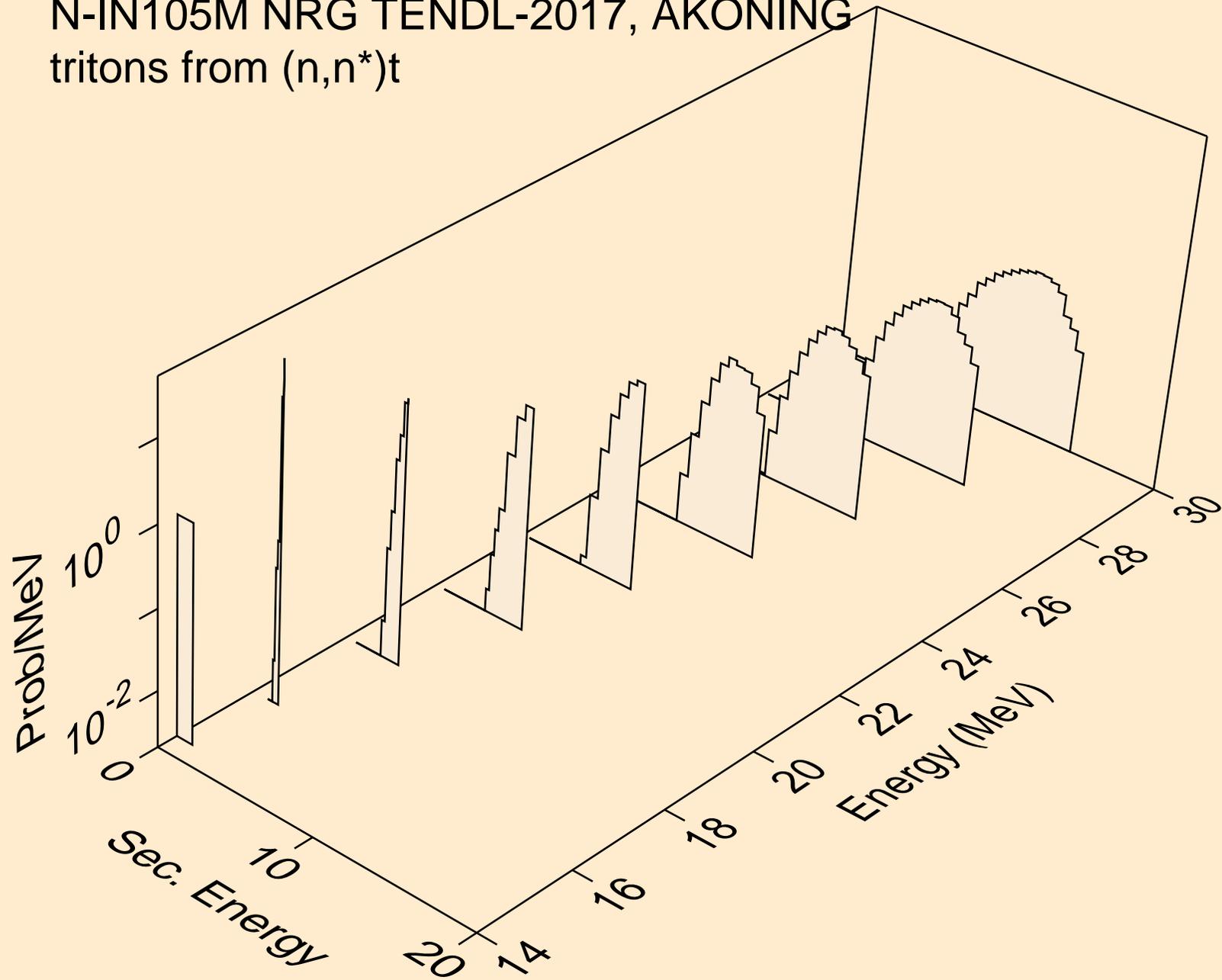deuterons from (n,pd)

N-IN105M NRG TENDL-2017, AKONING
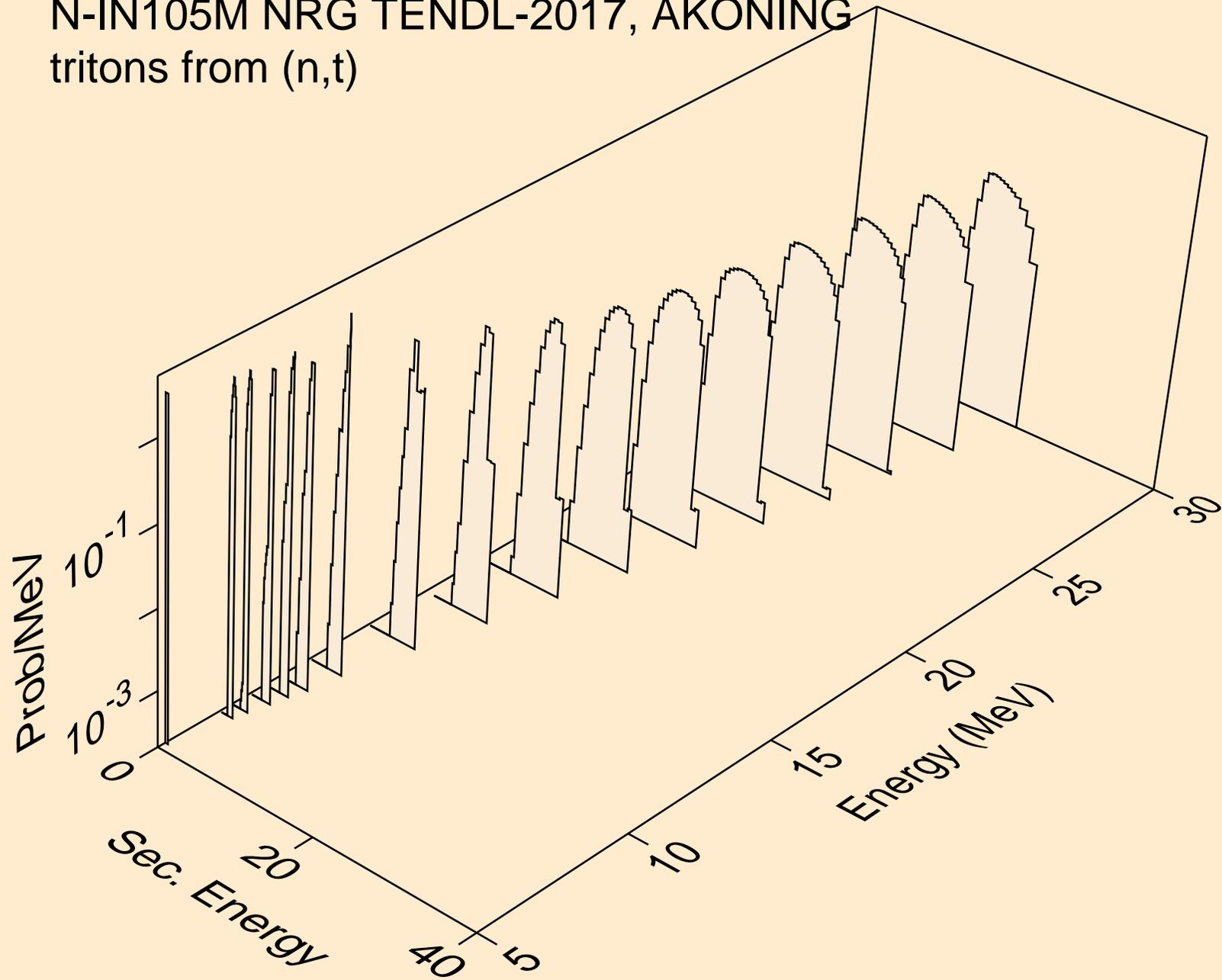deuterons from (n,da)

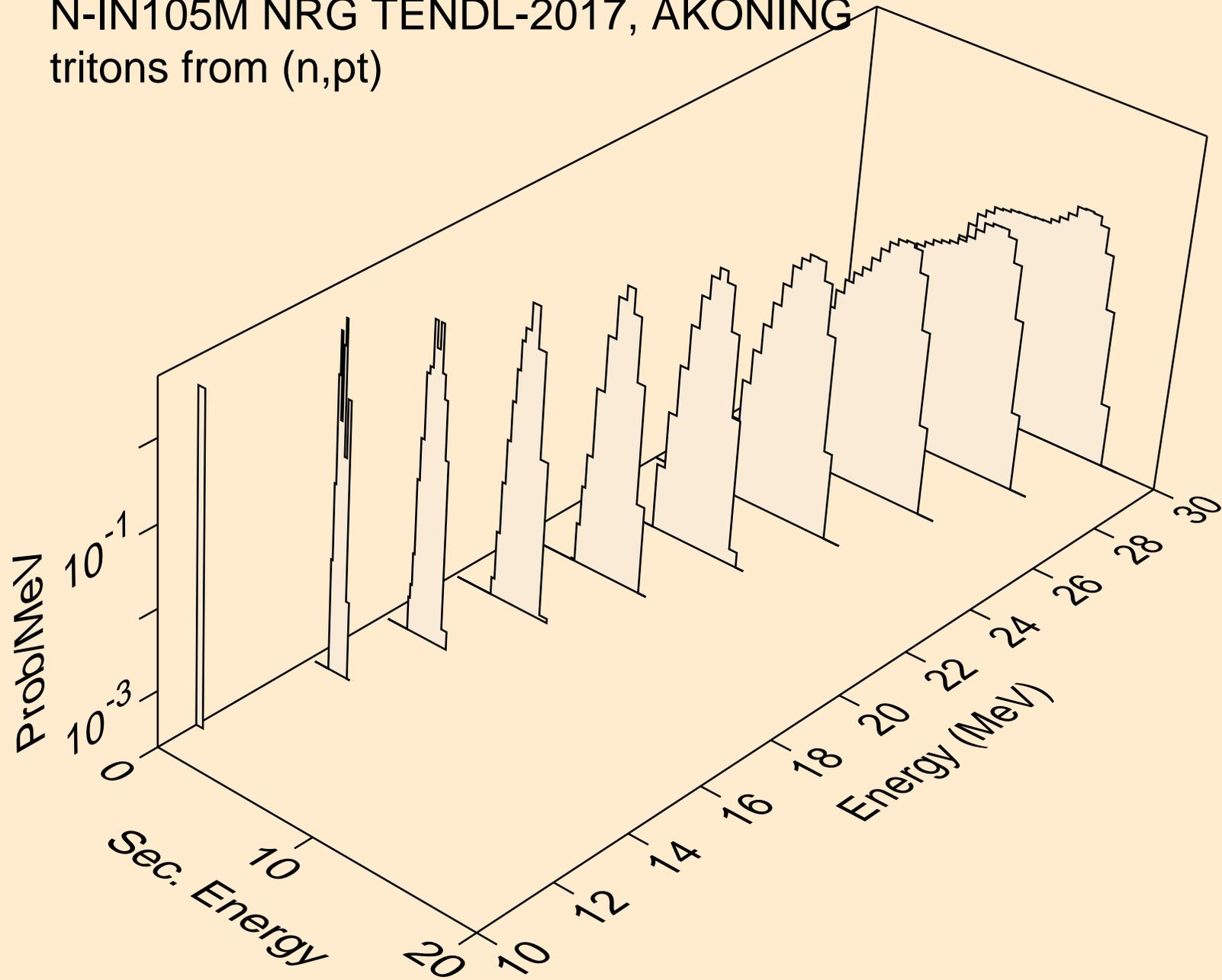N-IN105M NRG TENDL-2017, AKONING
tritons from (n,x)

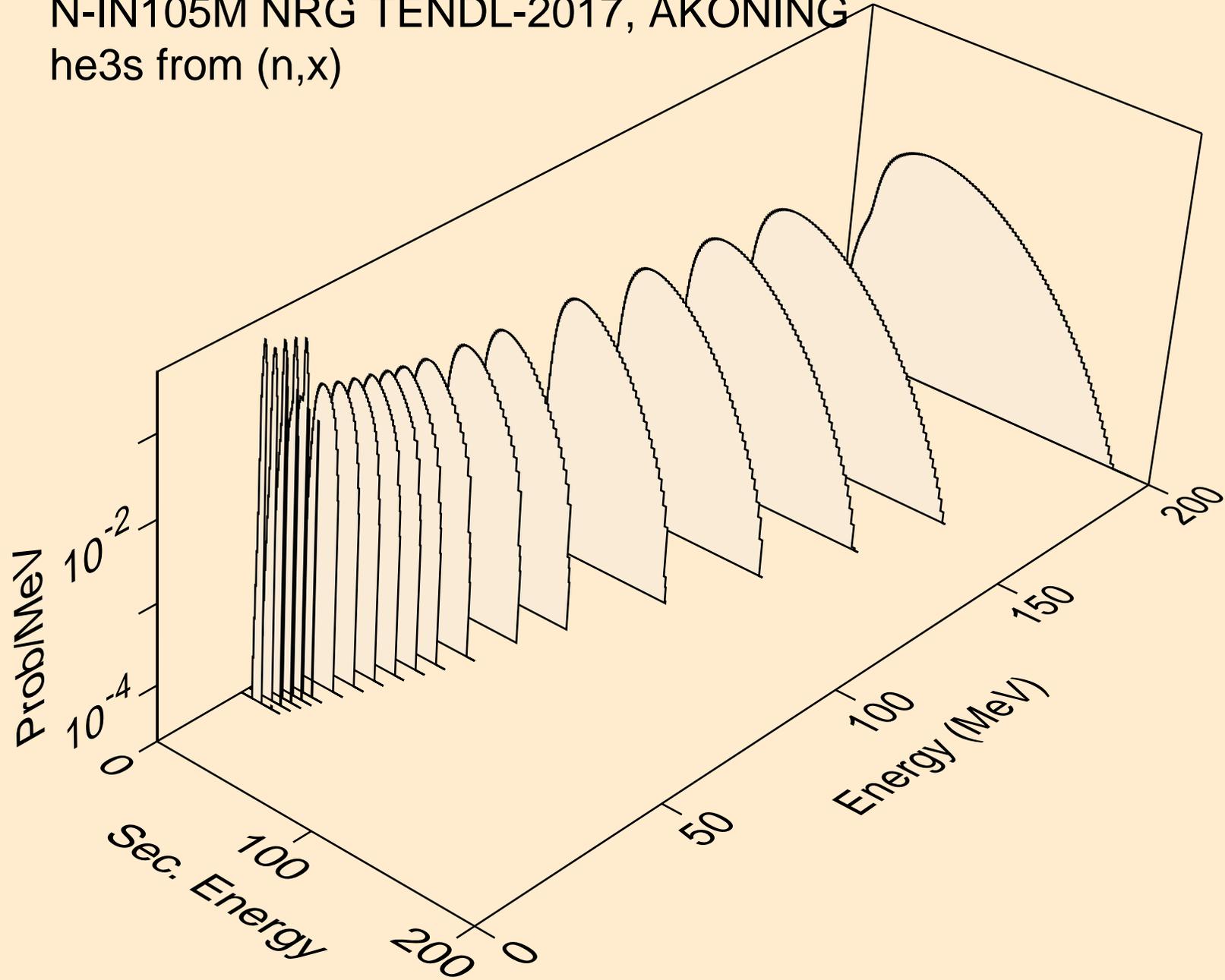N-IN105M NRG TENDL-2017, AKONING
tritons from (n,n*)t

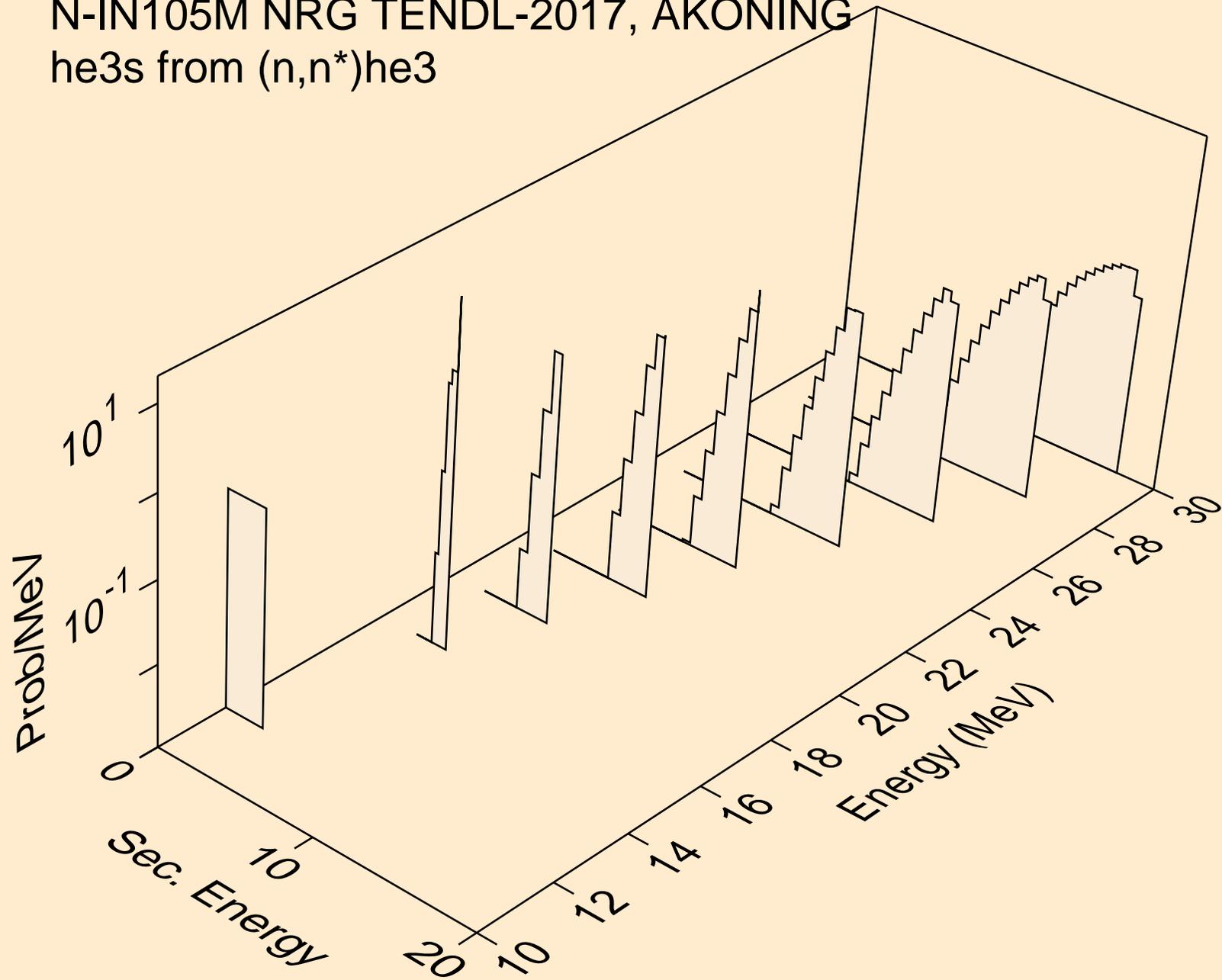N-IN105M NRG TENDL-2017, AKONING
tritons from (n,t)

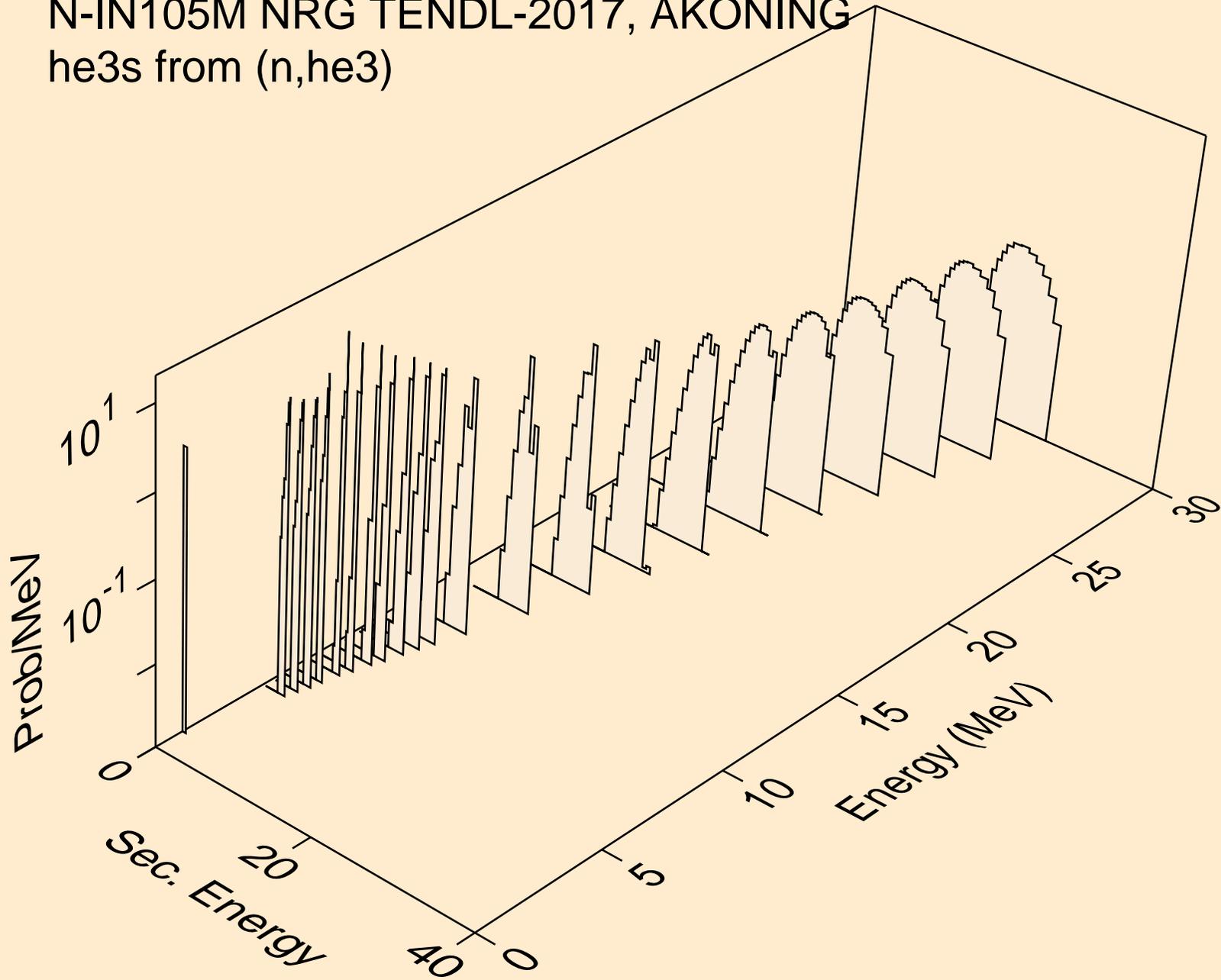N-IN105M NRG TENDL-2017, AKONING
tritons from (n,pt)

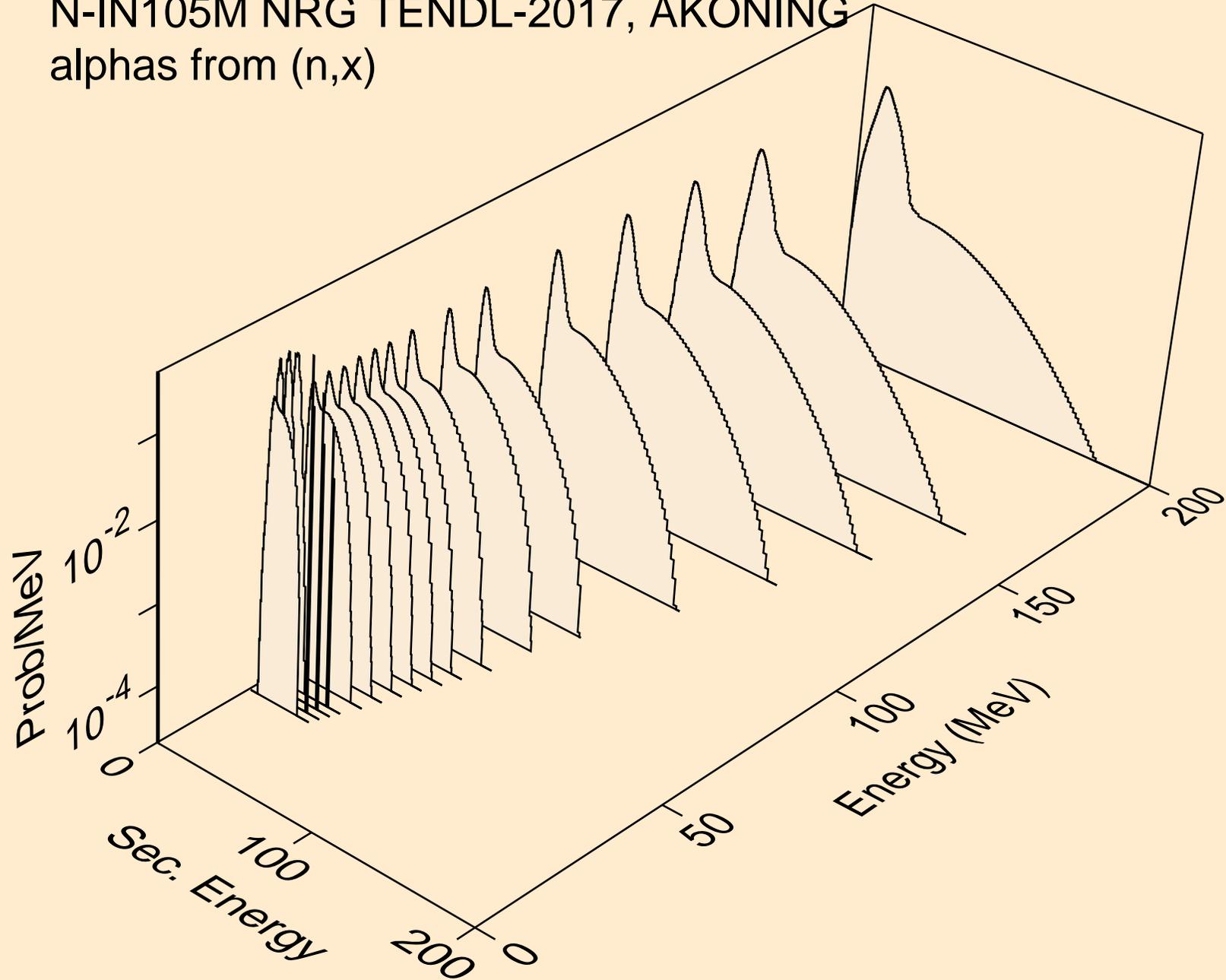N-IN105M NRG TENDL-2017, AKONING
he3s from (n,x)

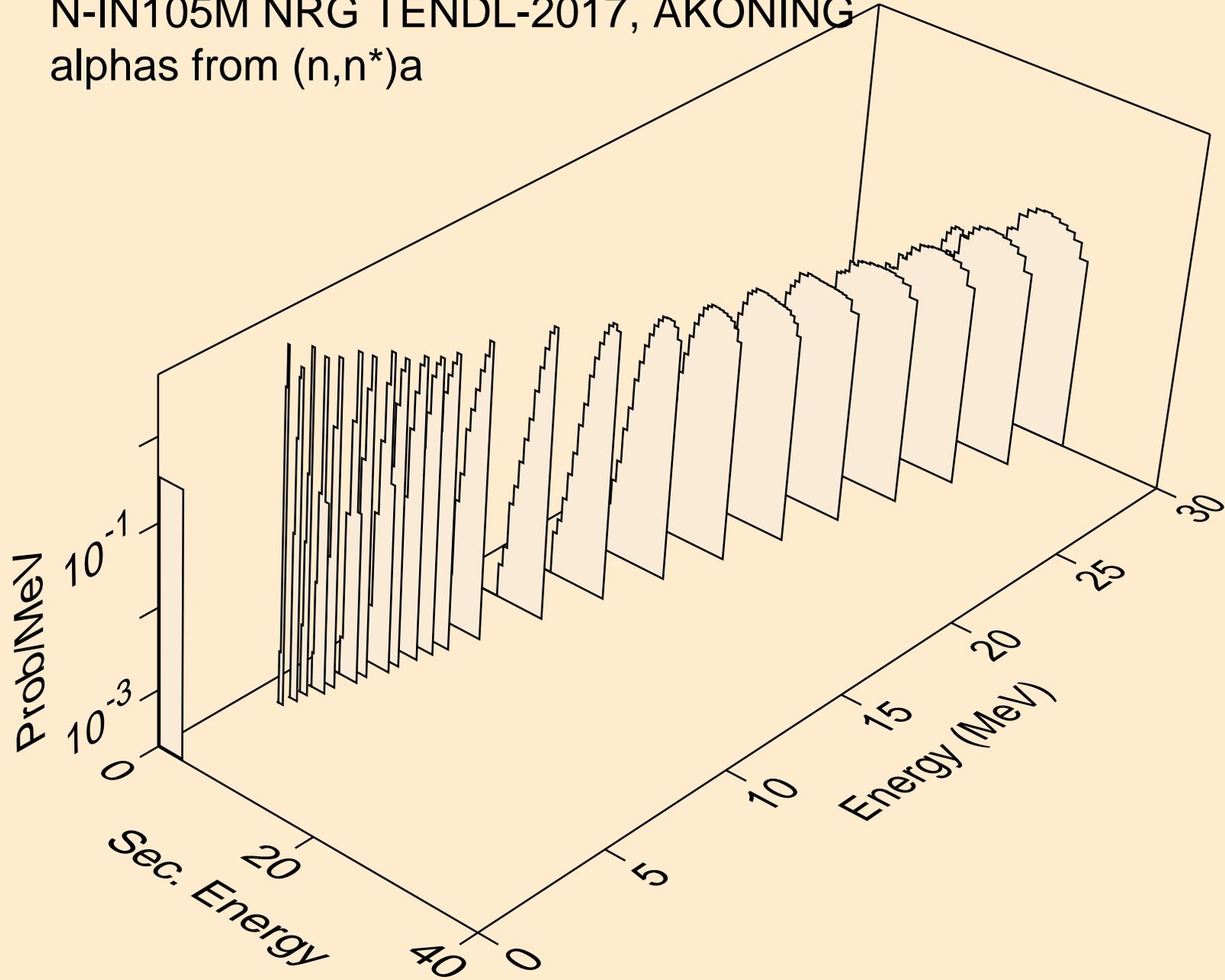N-IN105M NRG TENDL-2017, AKONING
he3s from (n,n*)he3

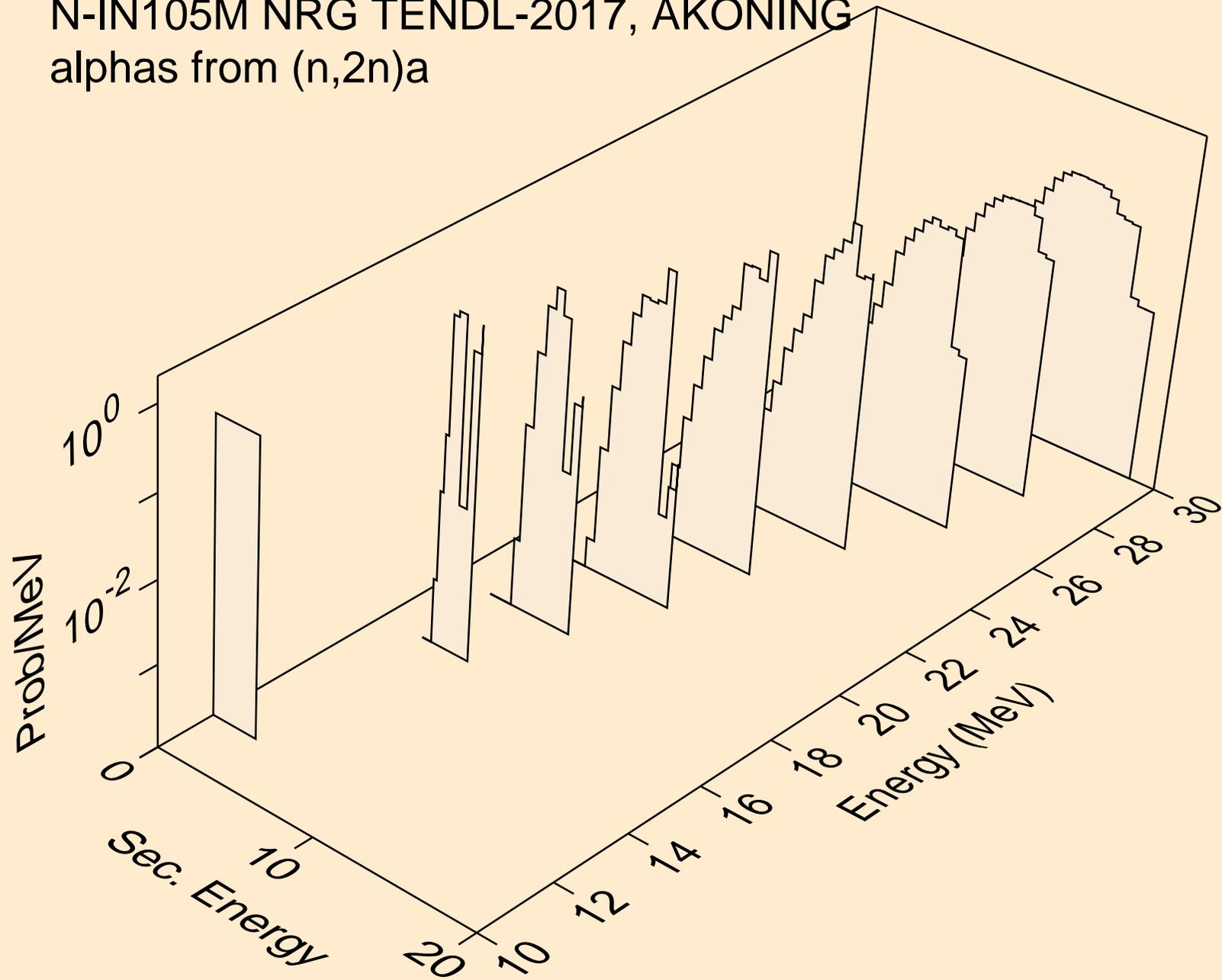N-IN105M NRG TENDL-2017, AKONING
he3s from (n,he3)

Prob/MeV

Sec. Energy

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,x)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,n*)a

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,2n)a

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,3n)a

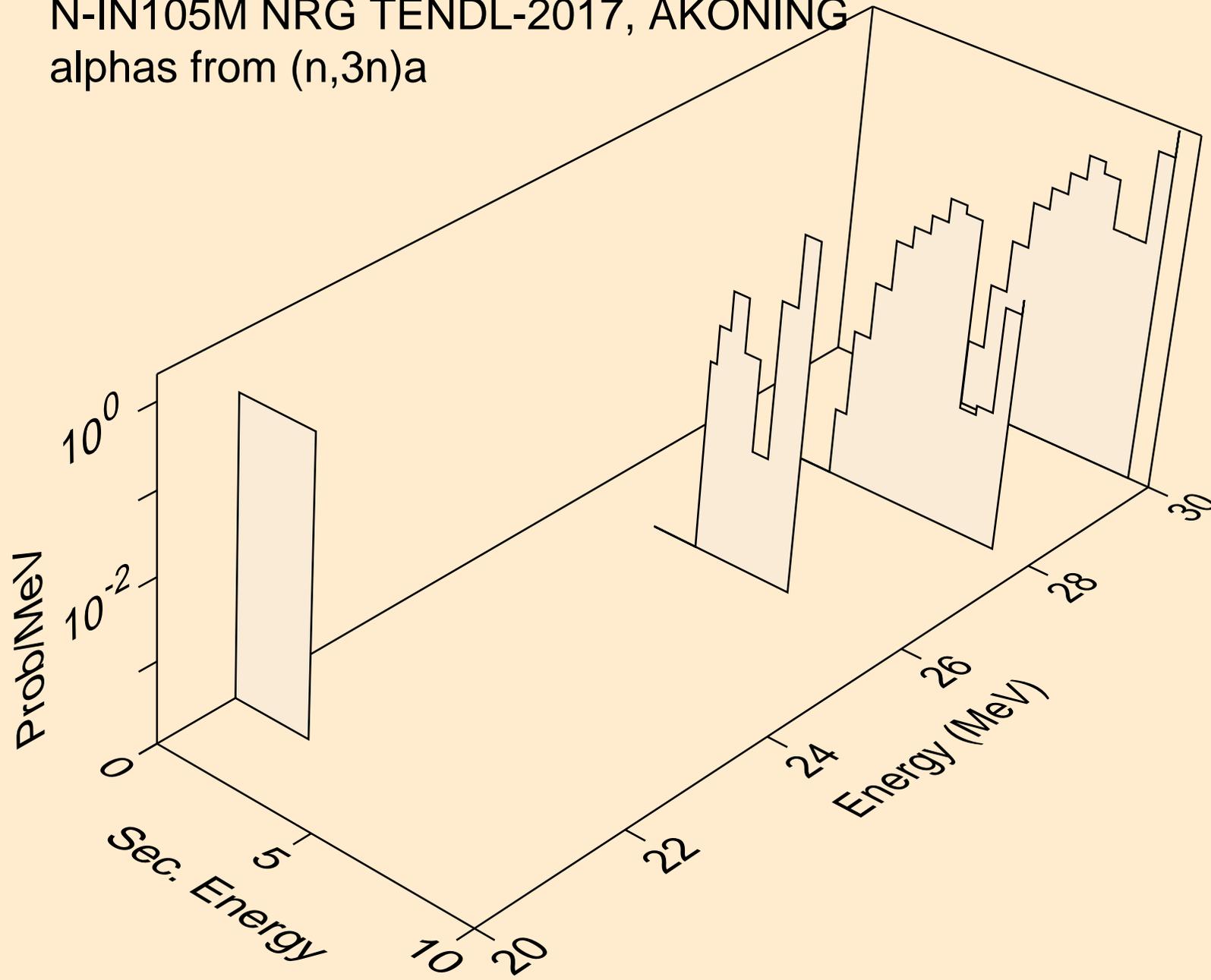N-IN105M NRG TENDL-2017, AKONING
alphas from (n,n*)2a

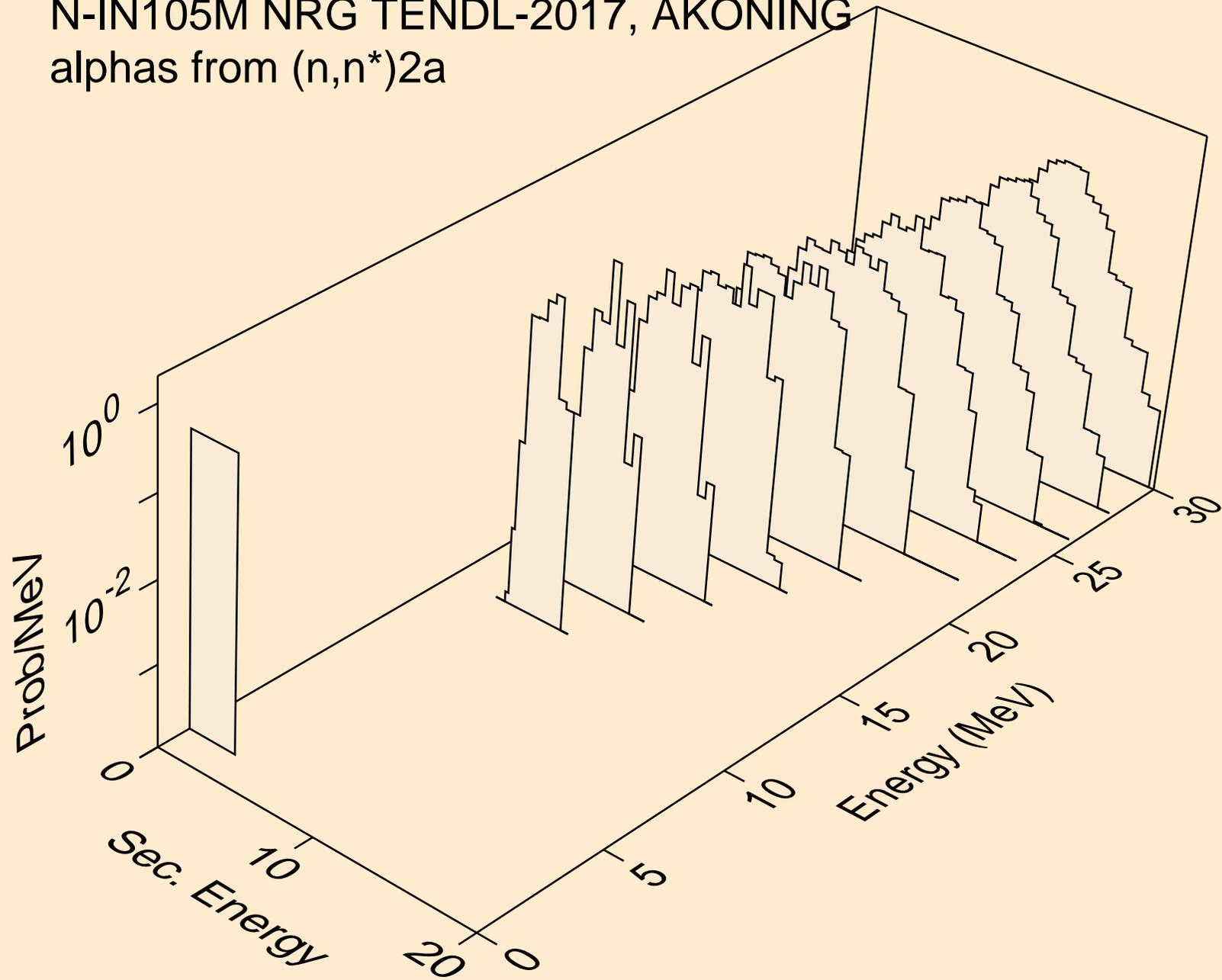N-IN105M NRG TENDL-2017, AKONING
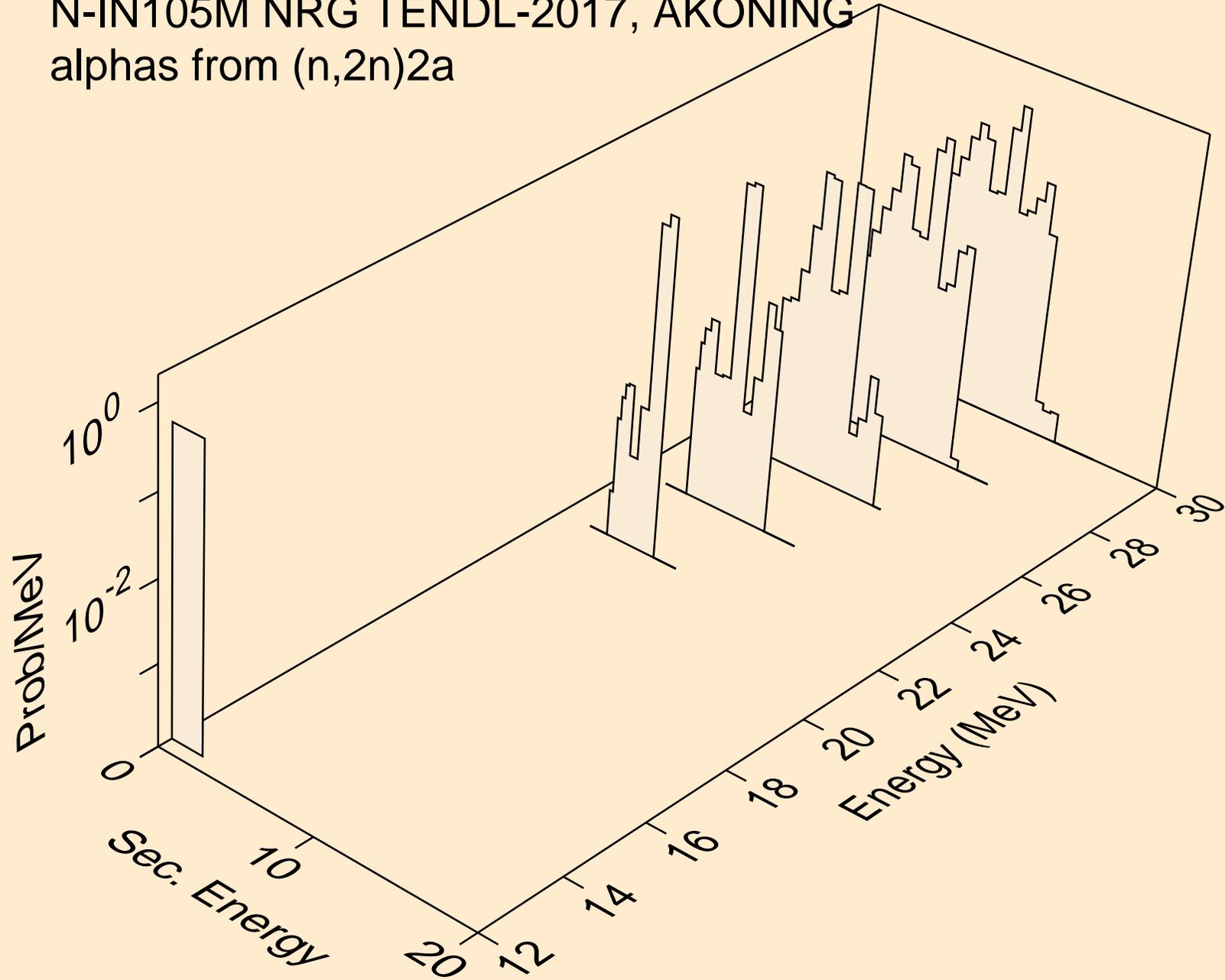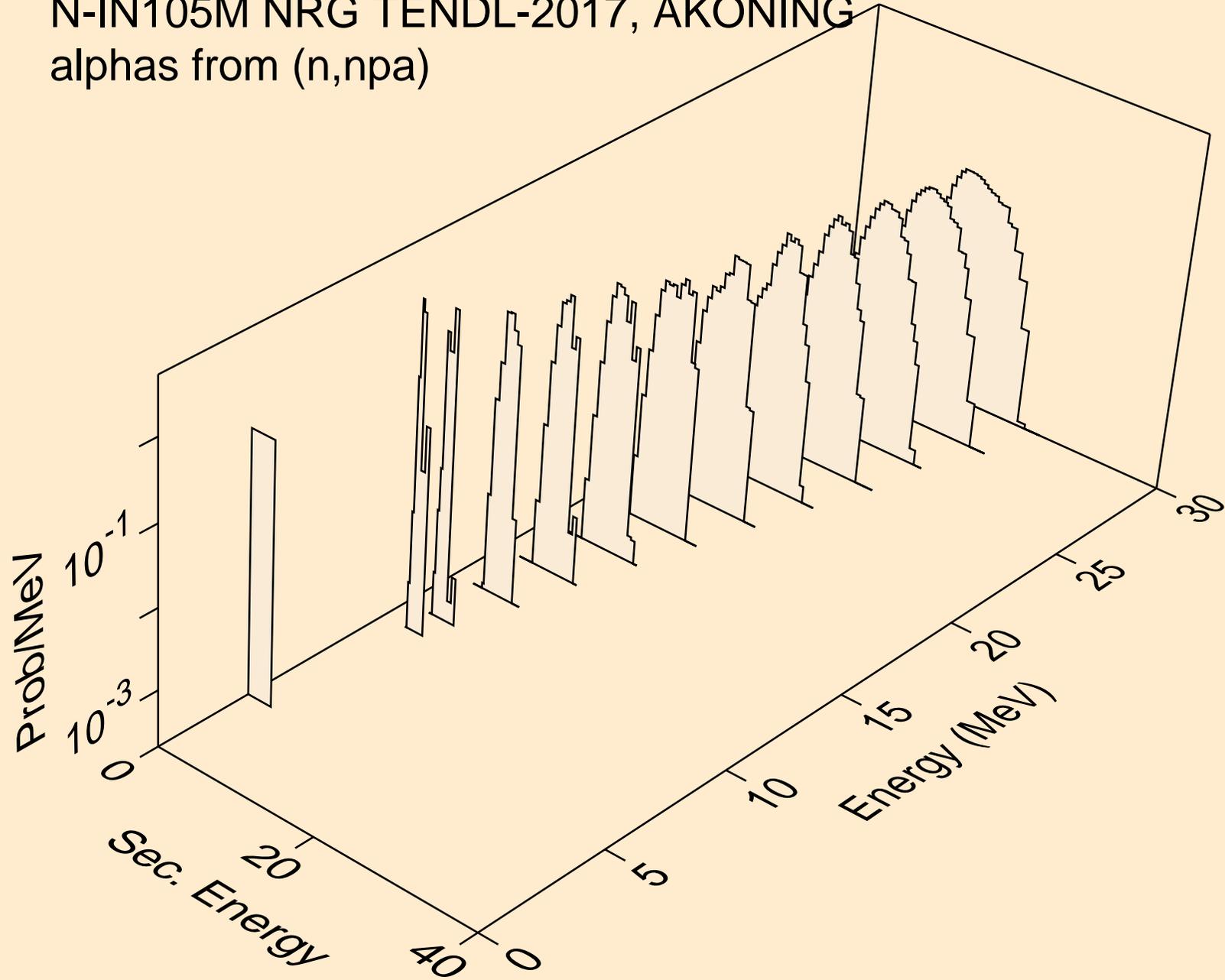alphas from (n,2n)2a

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,npa)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,a)
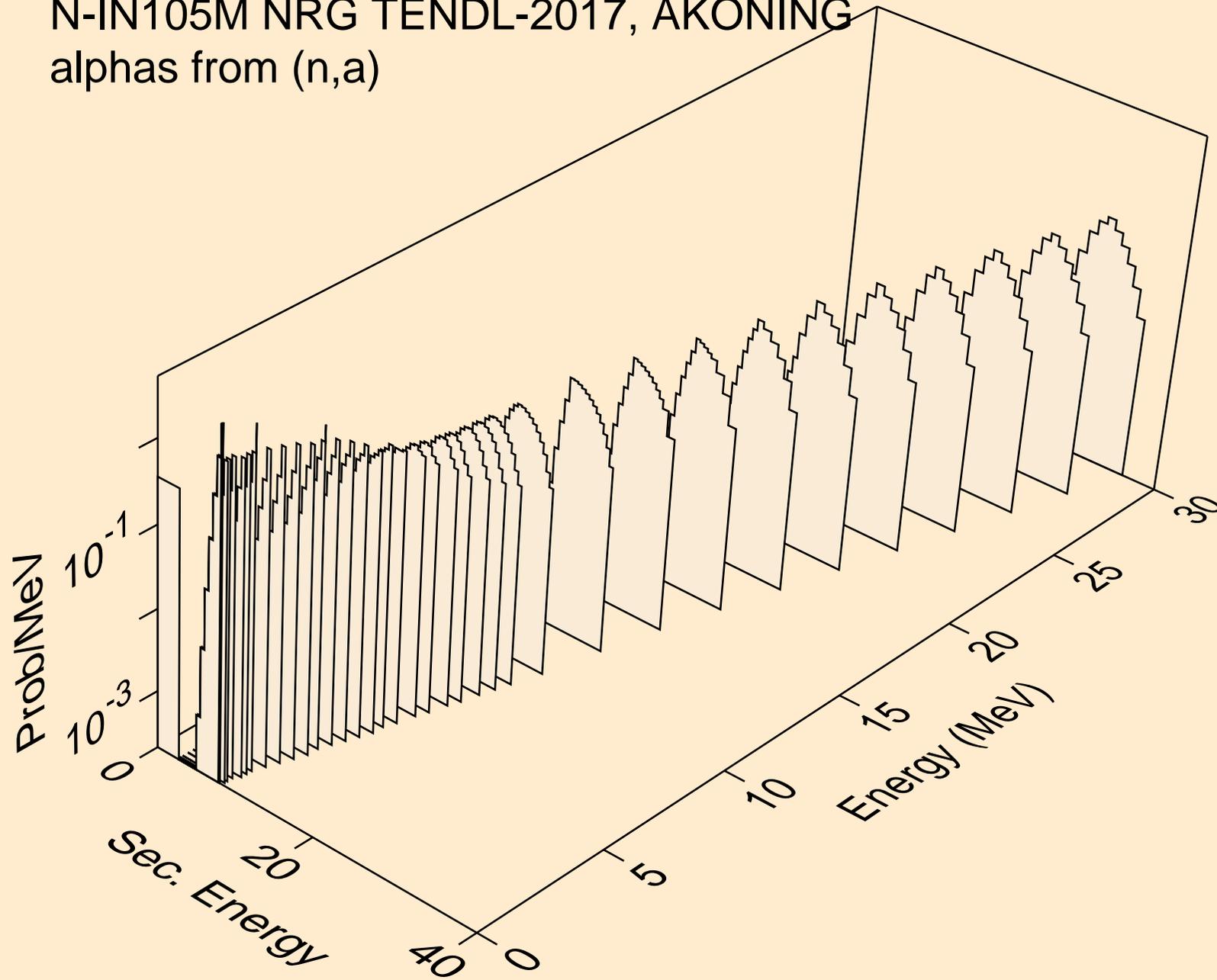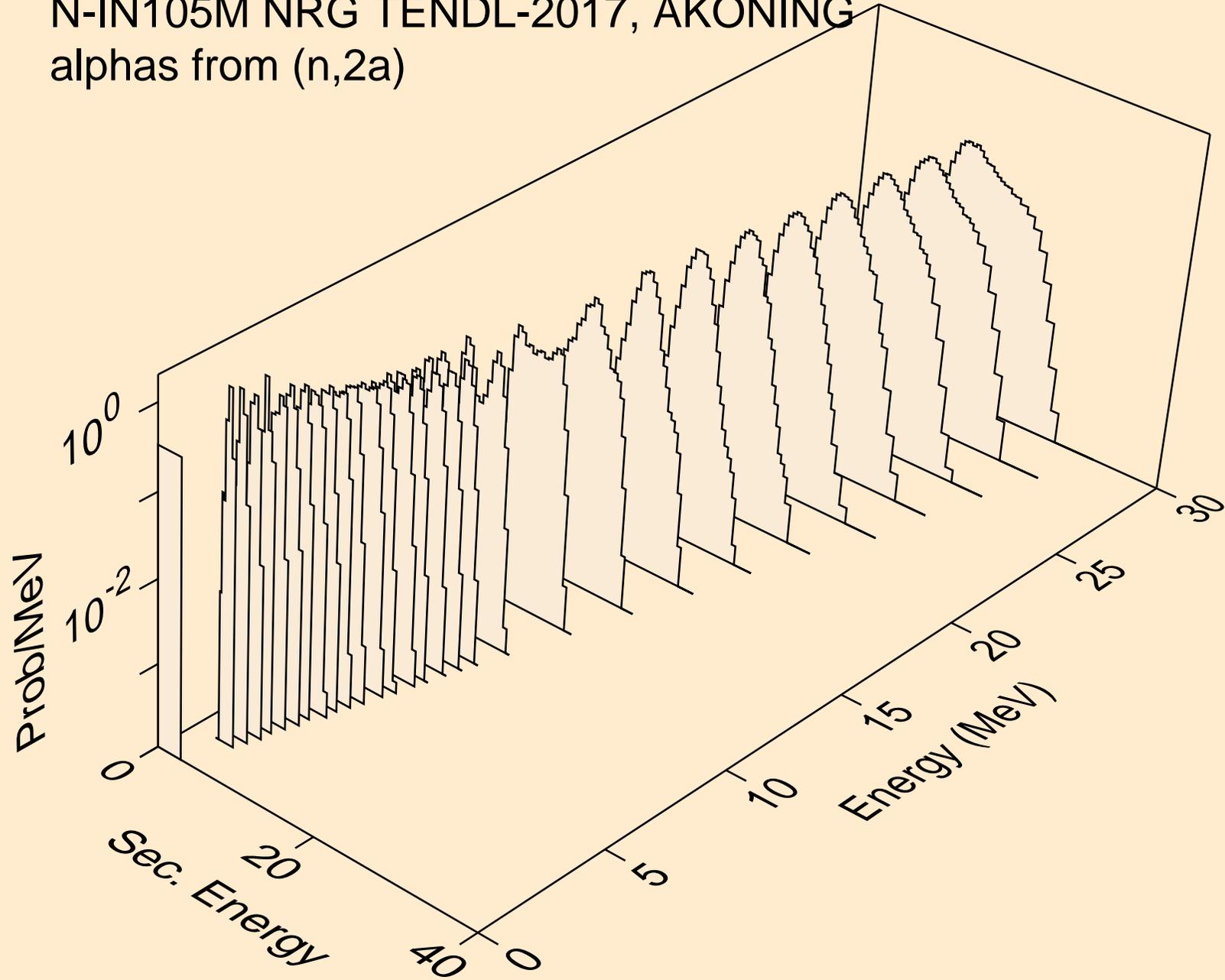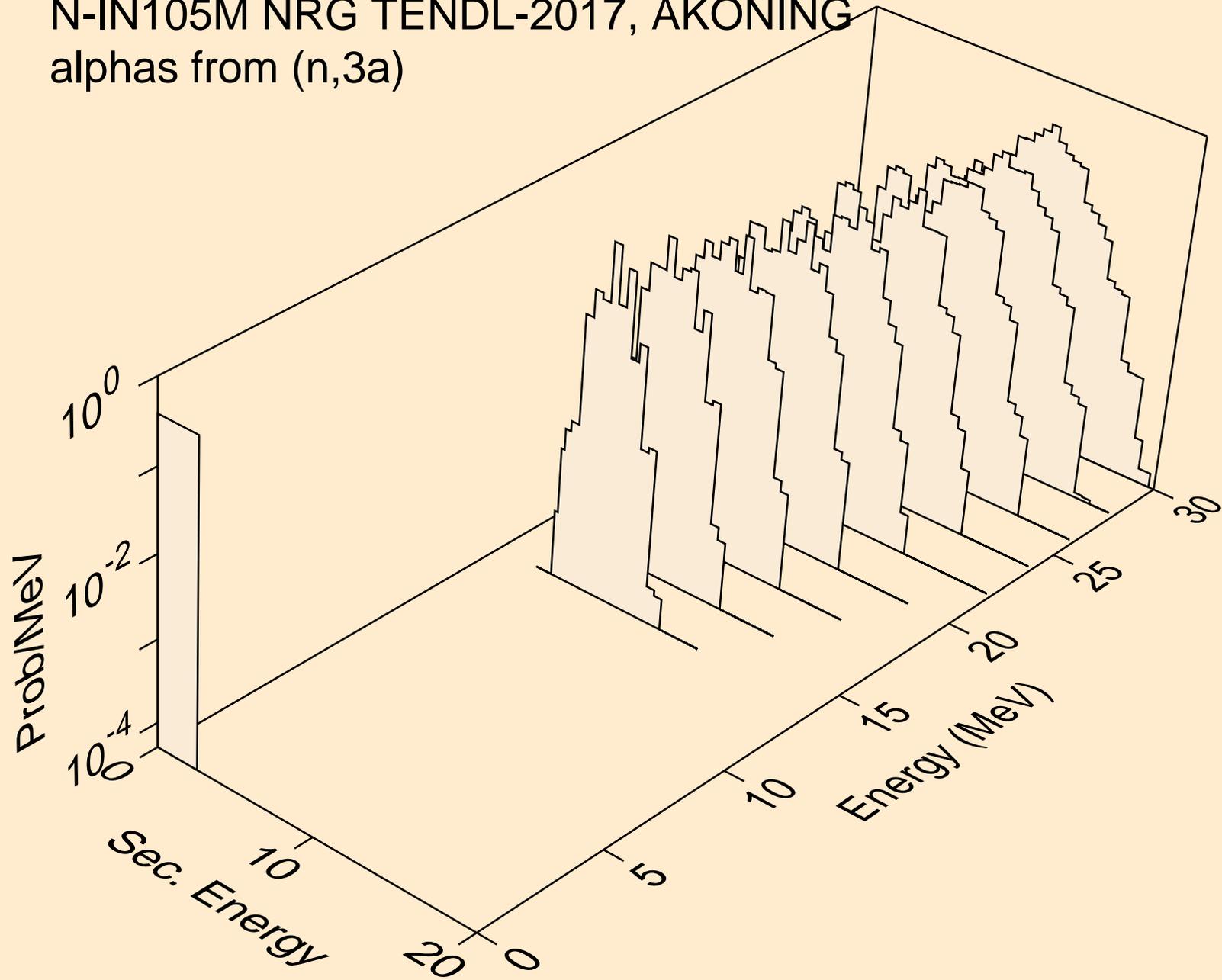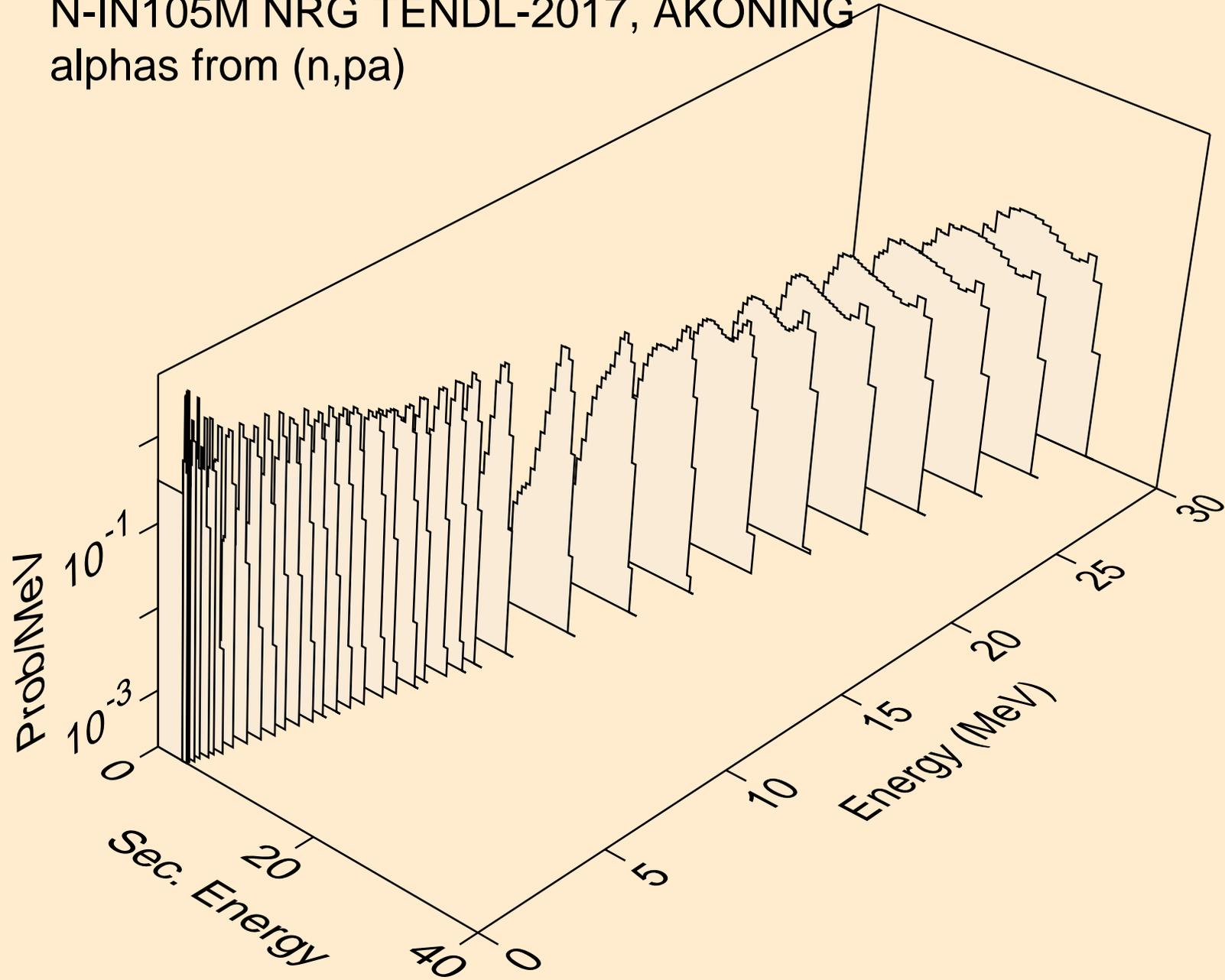
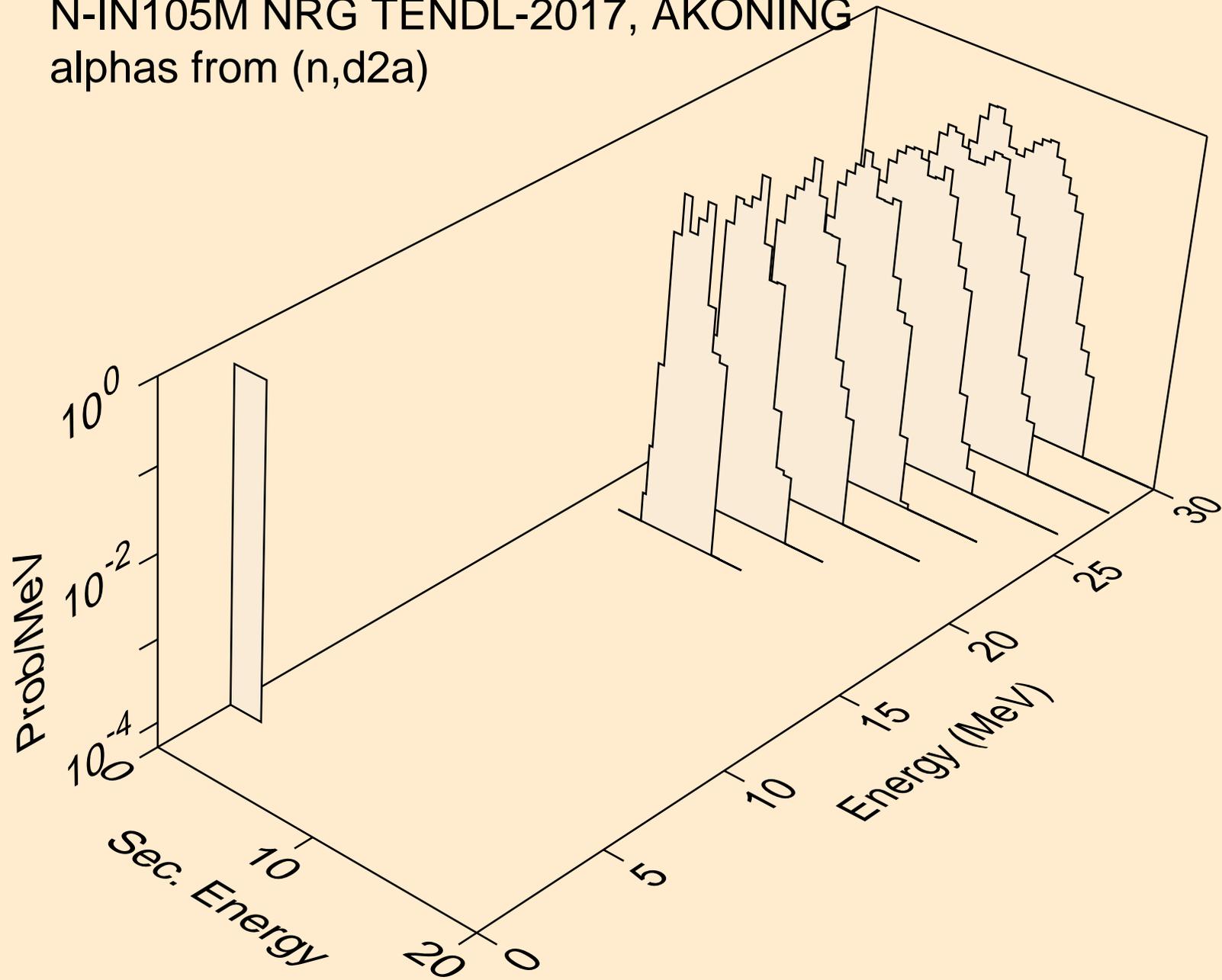N-IN105M NRG TENDL-2017, AKONING
alphas from (n,2a)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,3a)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,pa)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,d2a)

ProbiMeV

10^0

10^{-2}

10^{-4}

Sec. Energy

10

20

0

5

10

15

20

25

30

Energy (MeV)

N-IN105M NRG TENDL-2017, AKONING
alphas from (n,da)