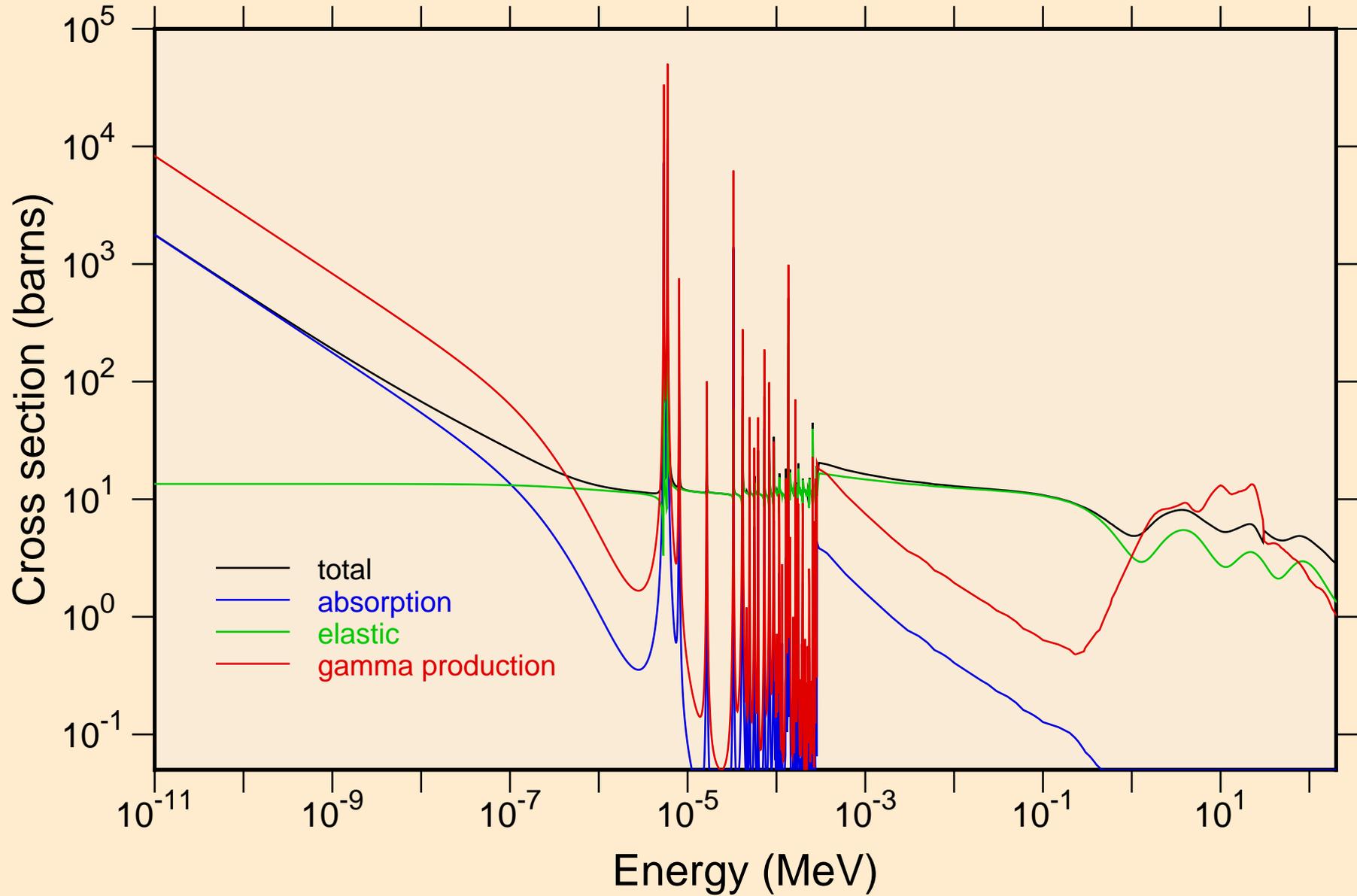RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Principal cross sections

Cross section (barns) vs Energy (MeV)

Legend:
- total (black)
- absorption (blue)
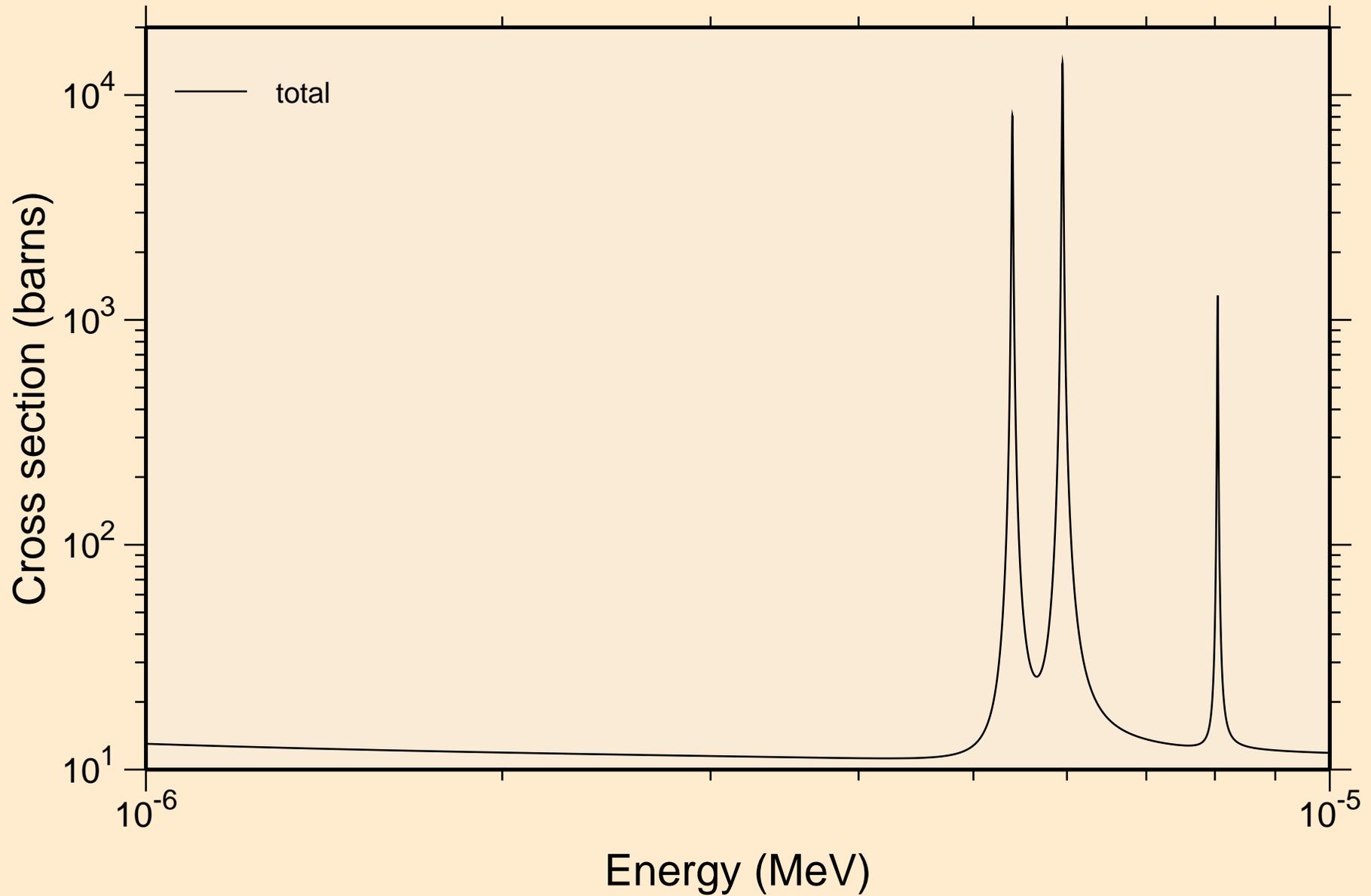- elastic (green)
- gamma production (red)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
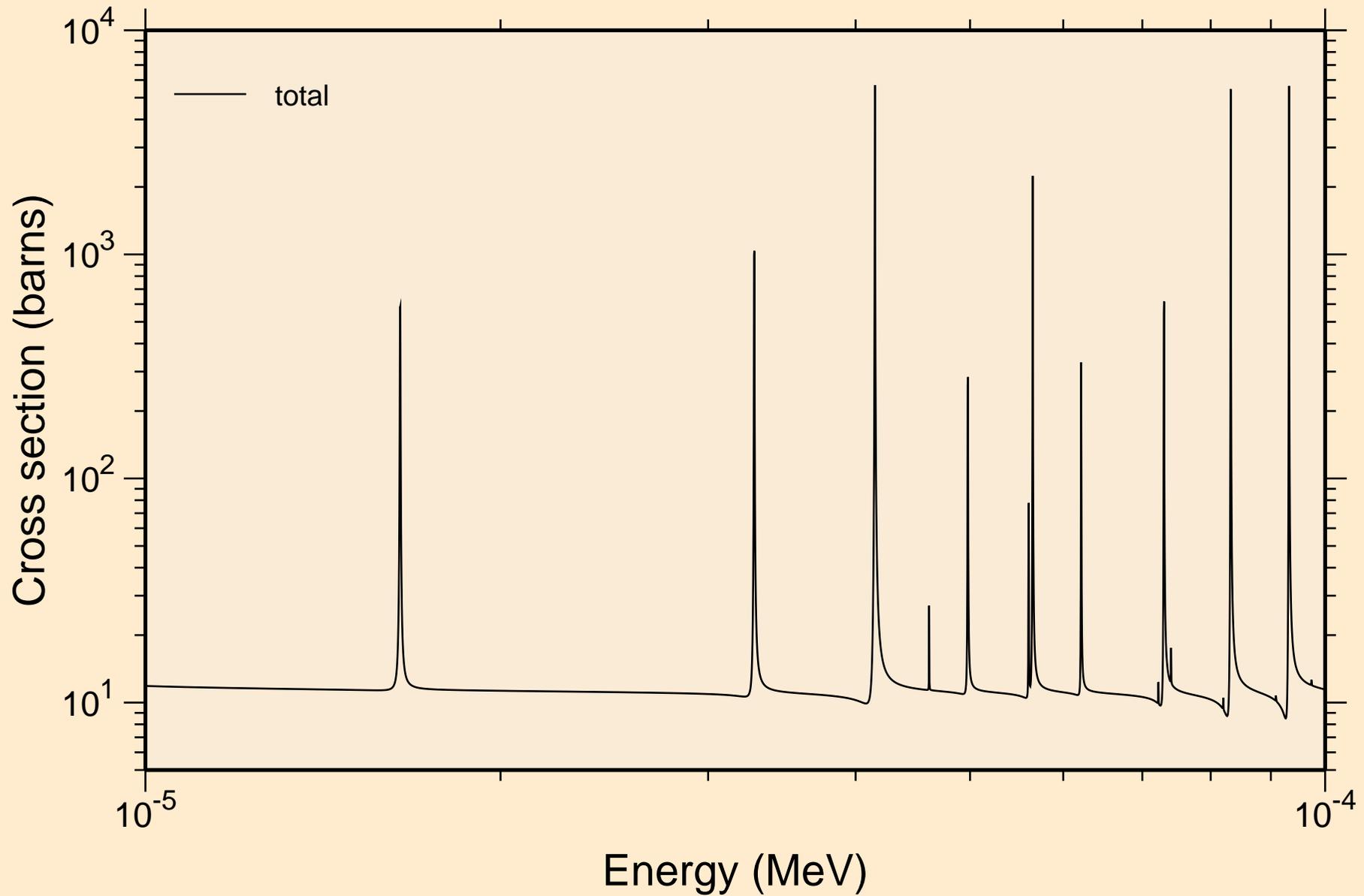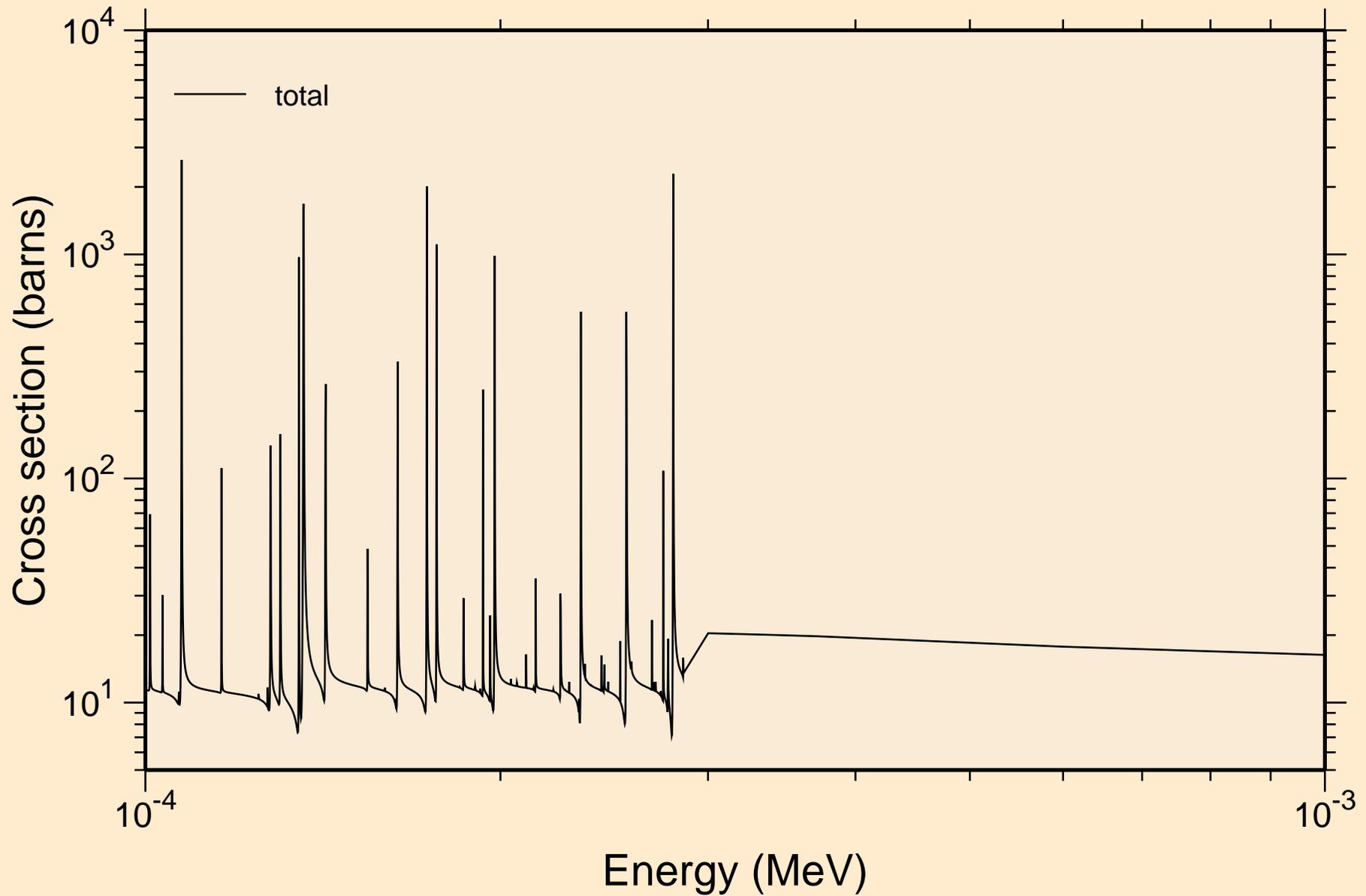resonance total cross section

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
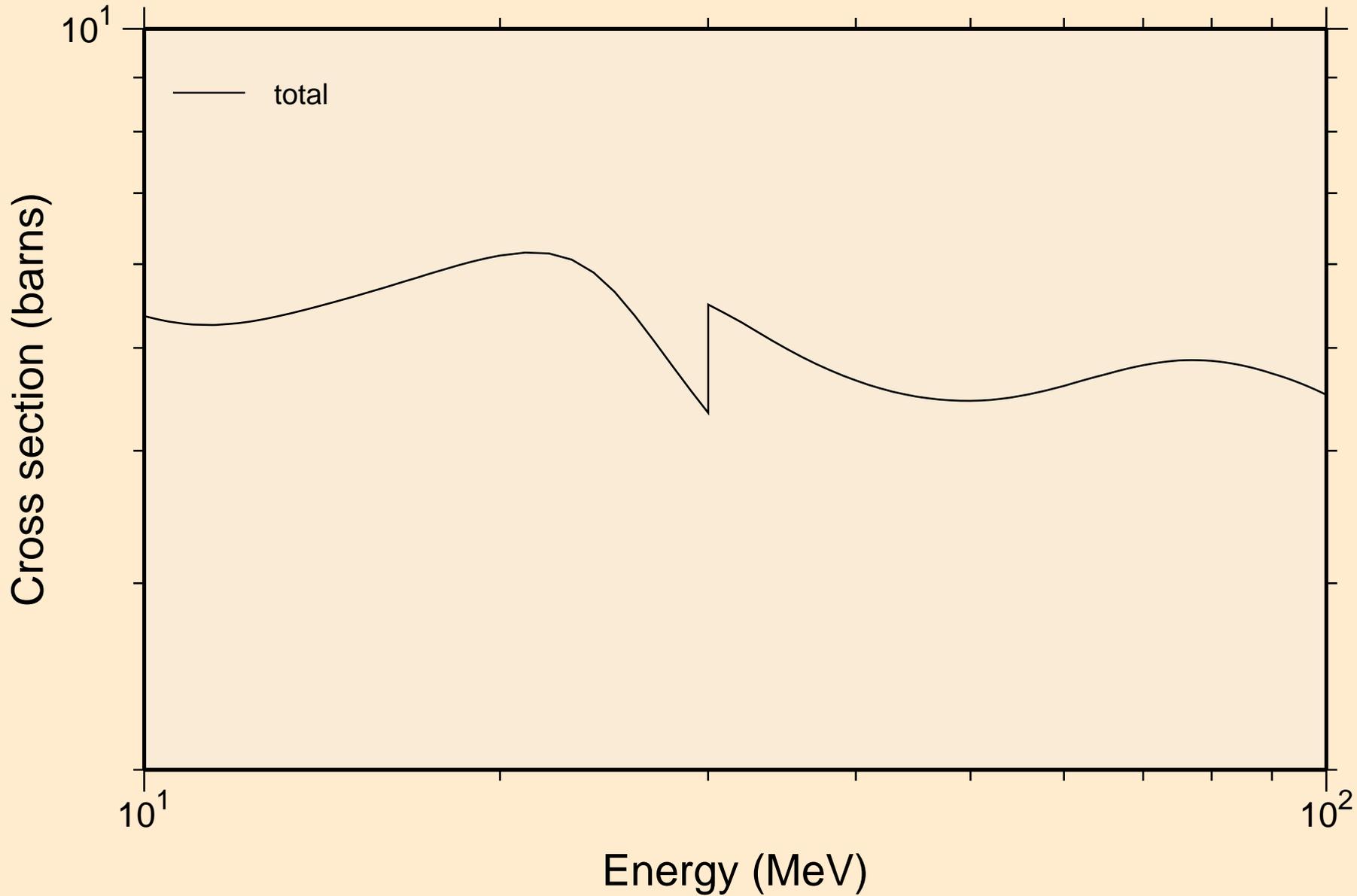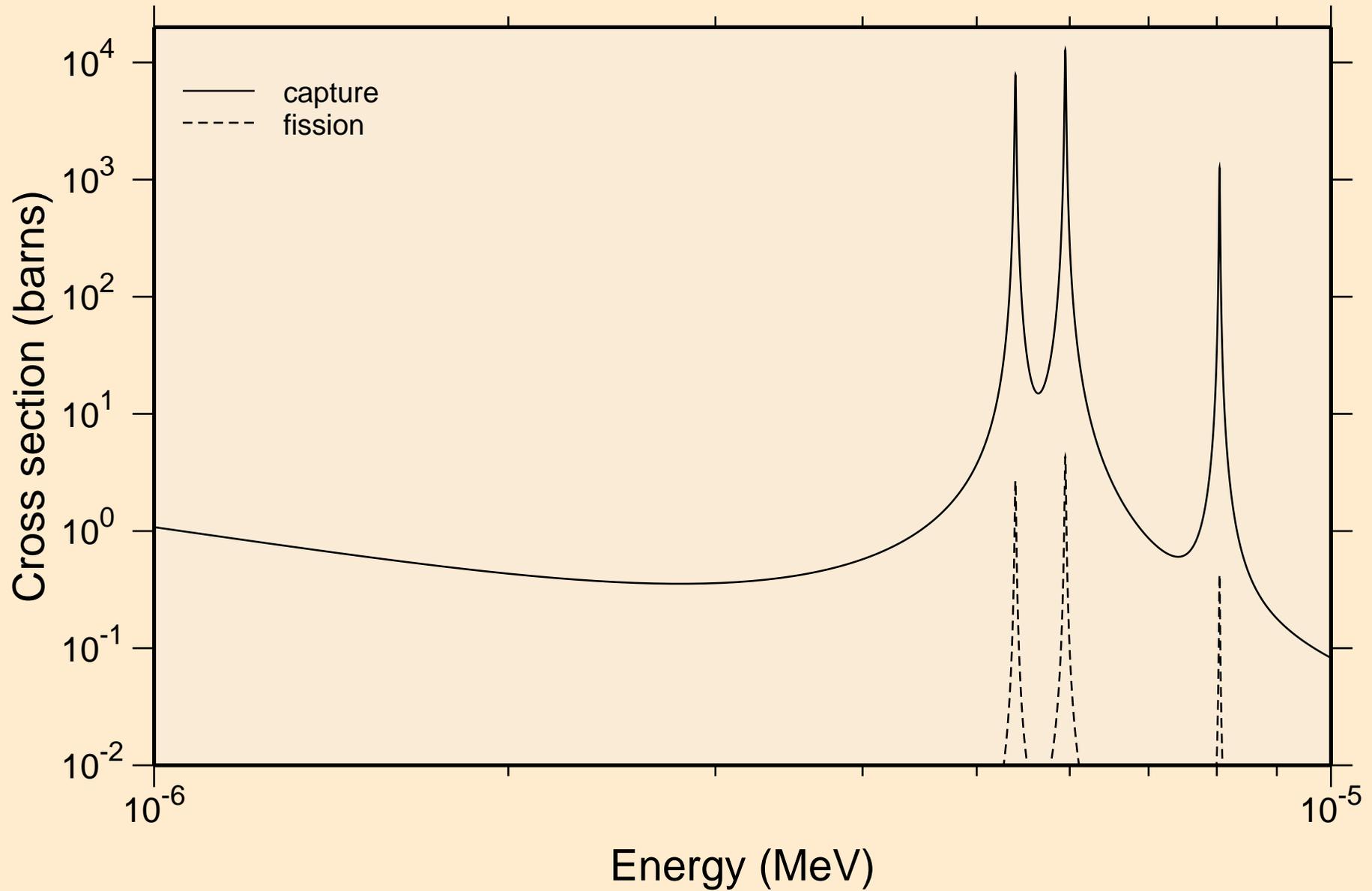resonance total cross section

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
resonance total cross section

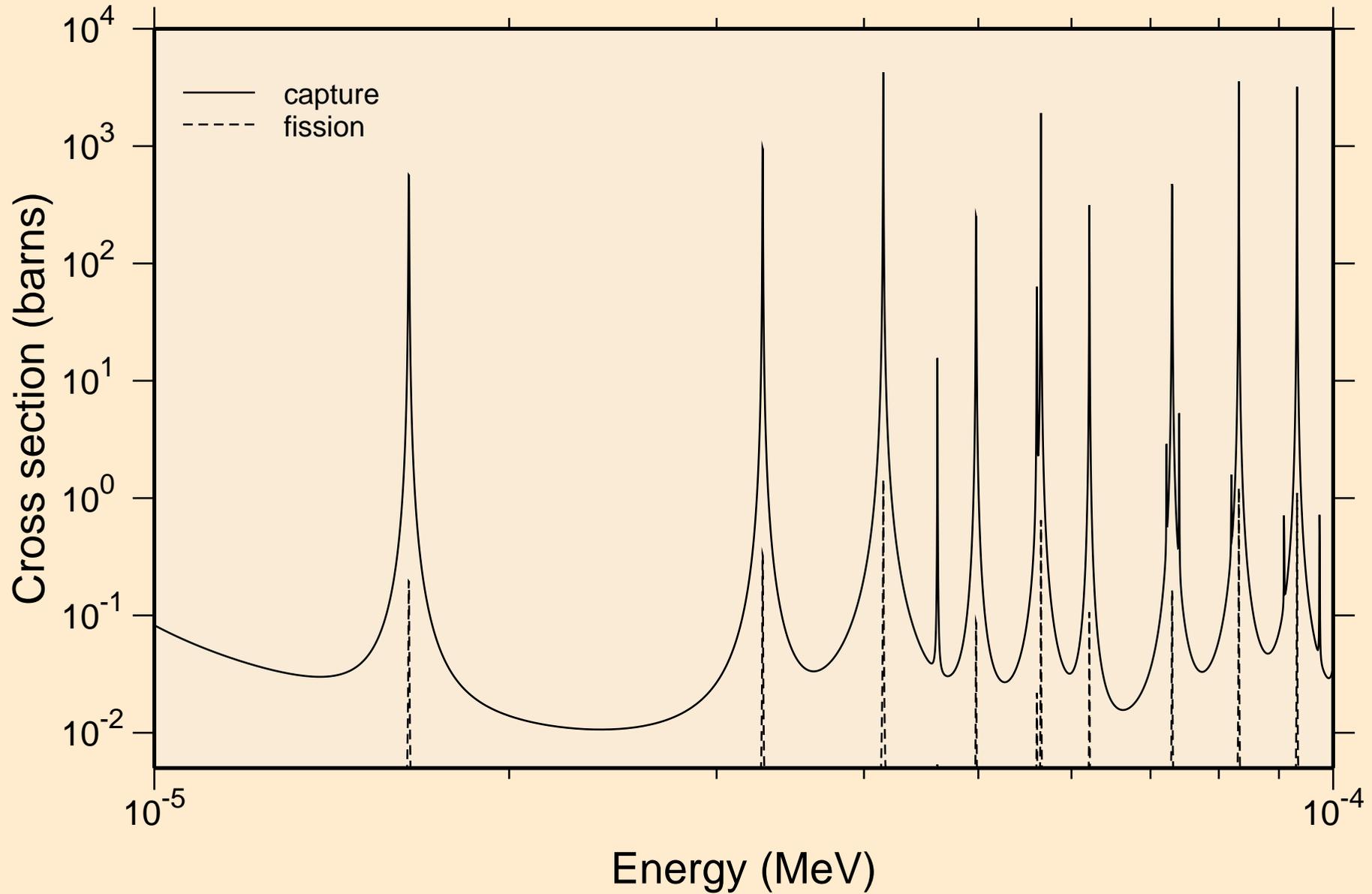RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
resonance total cross section

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
resonance absorption cross sections

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
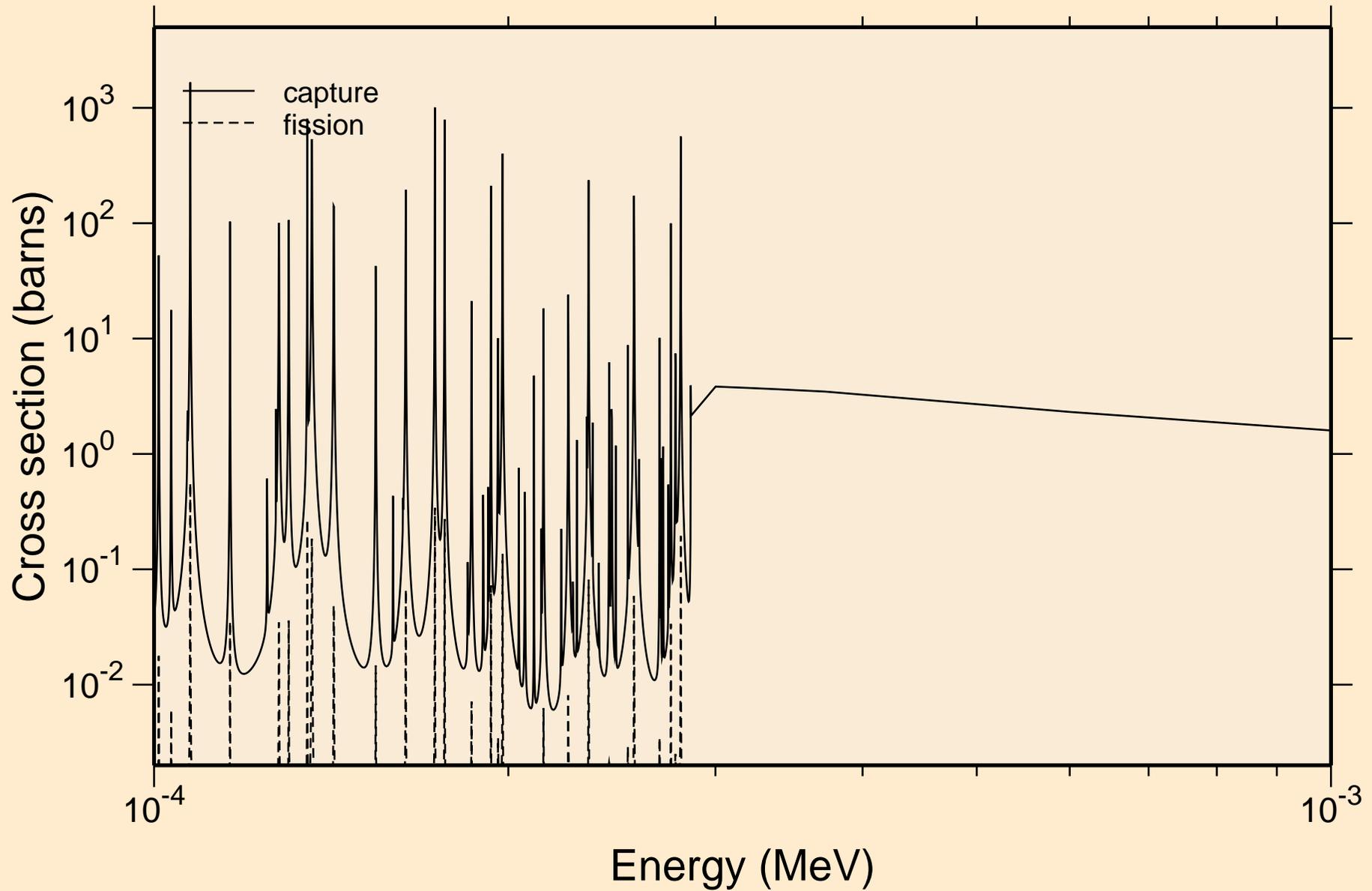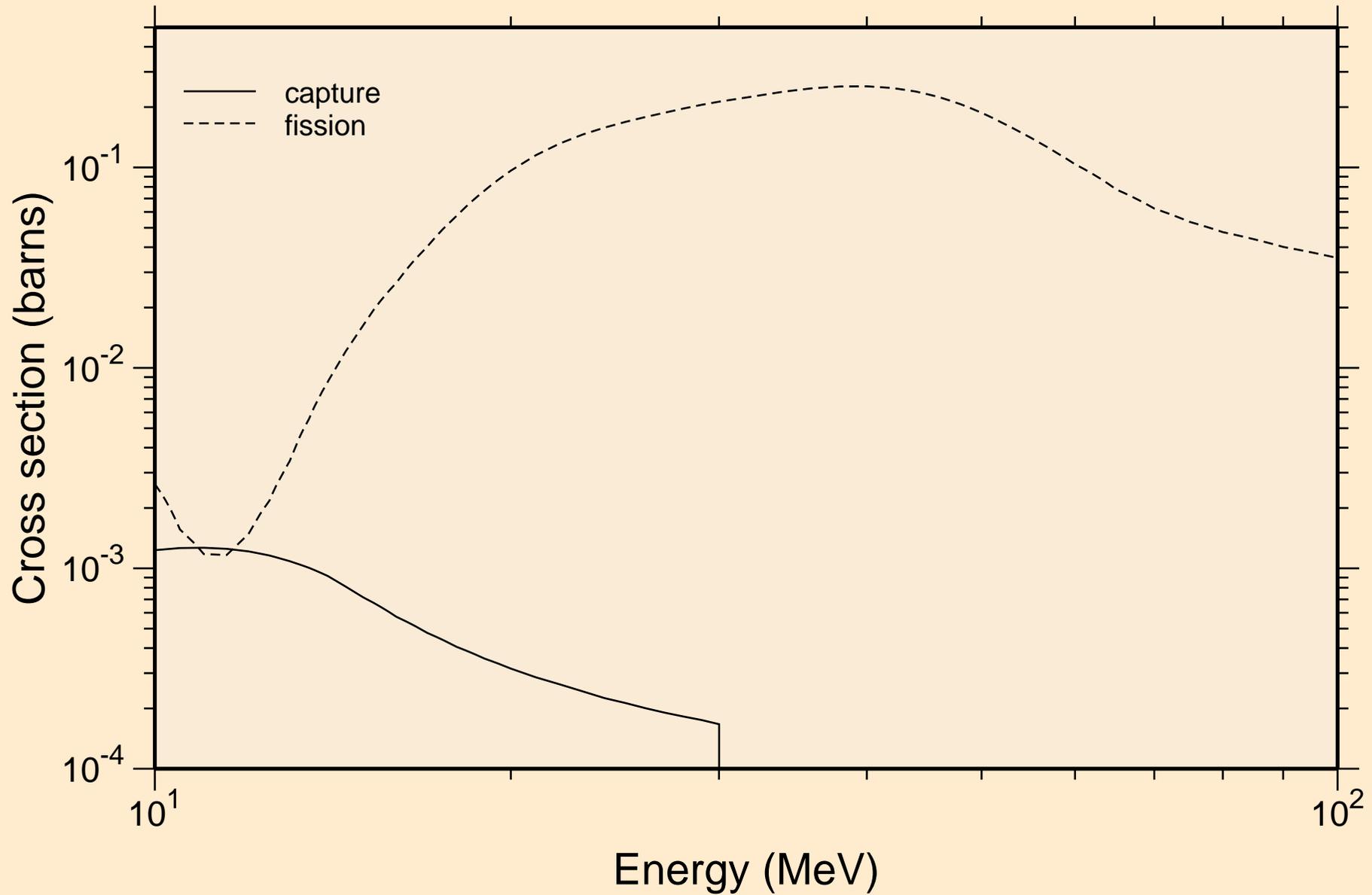resonance absorption cross sections
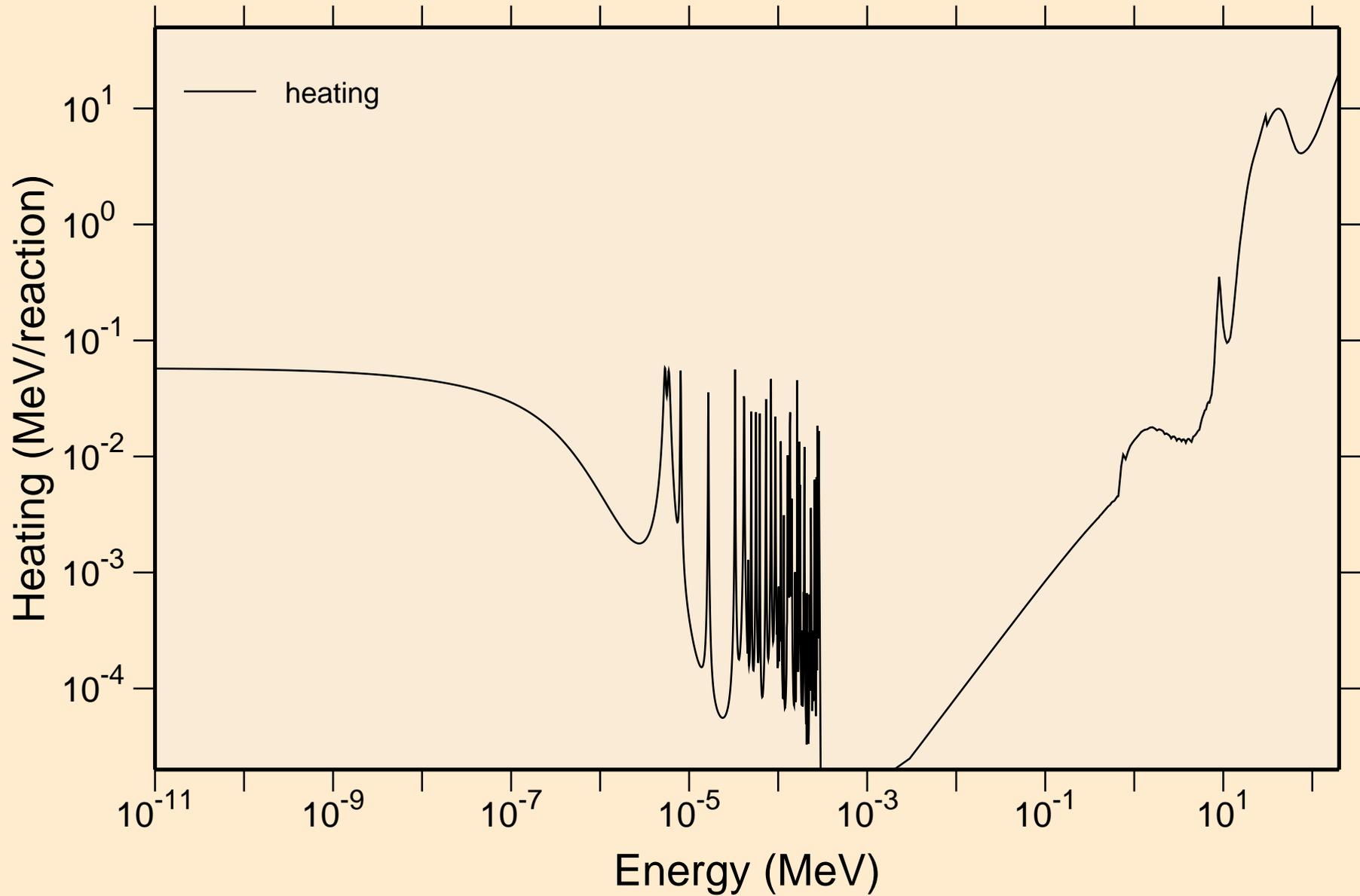
RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
resonance absorption cross sections

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
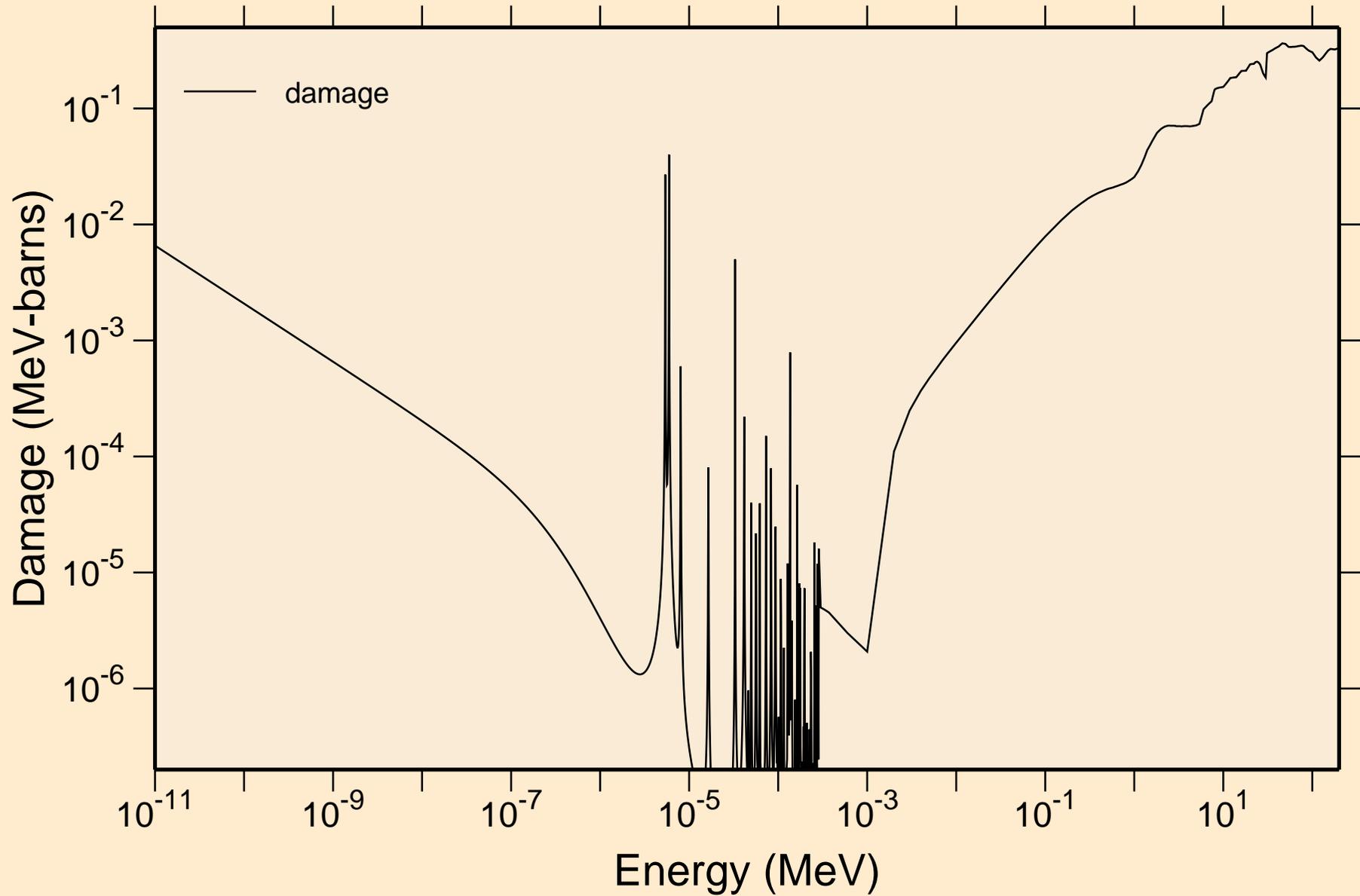resonance absorption cross sections

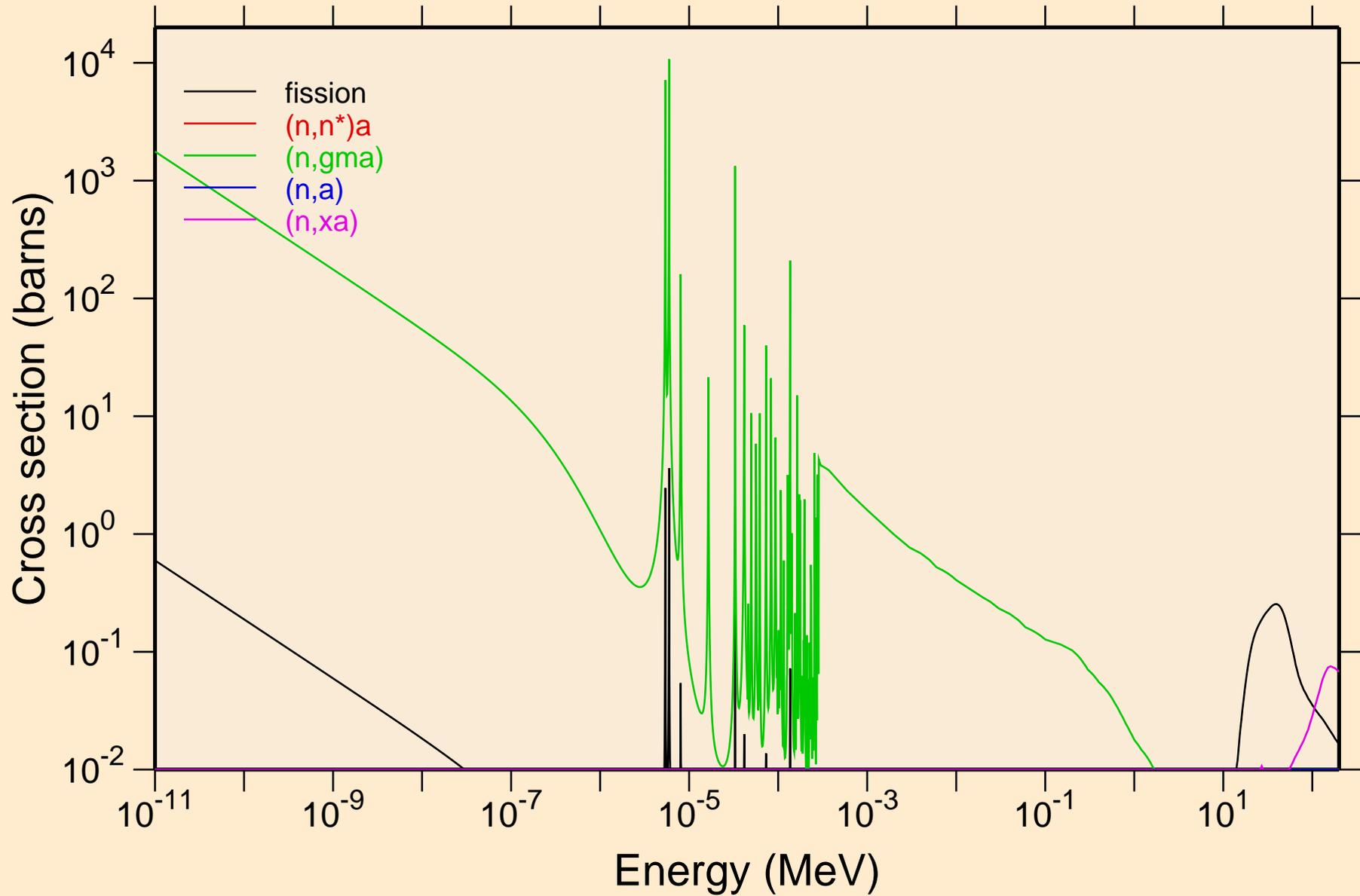RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Heating

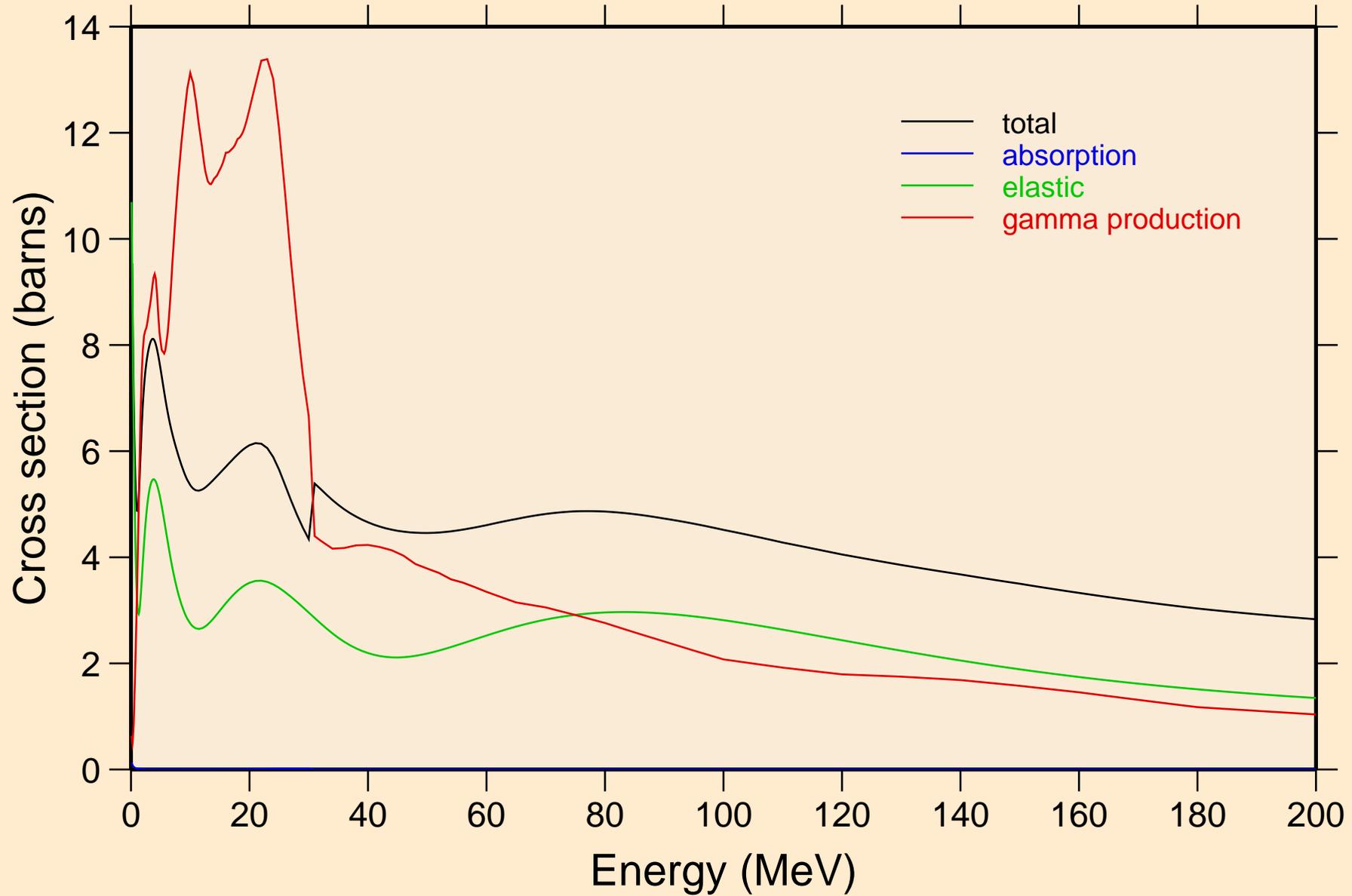RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Damage

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Non-threshold reactions

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Principal cross sections

- total
- absorption
- elastic
- gamma production

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Heating

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Damage

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
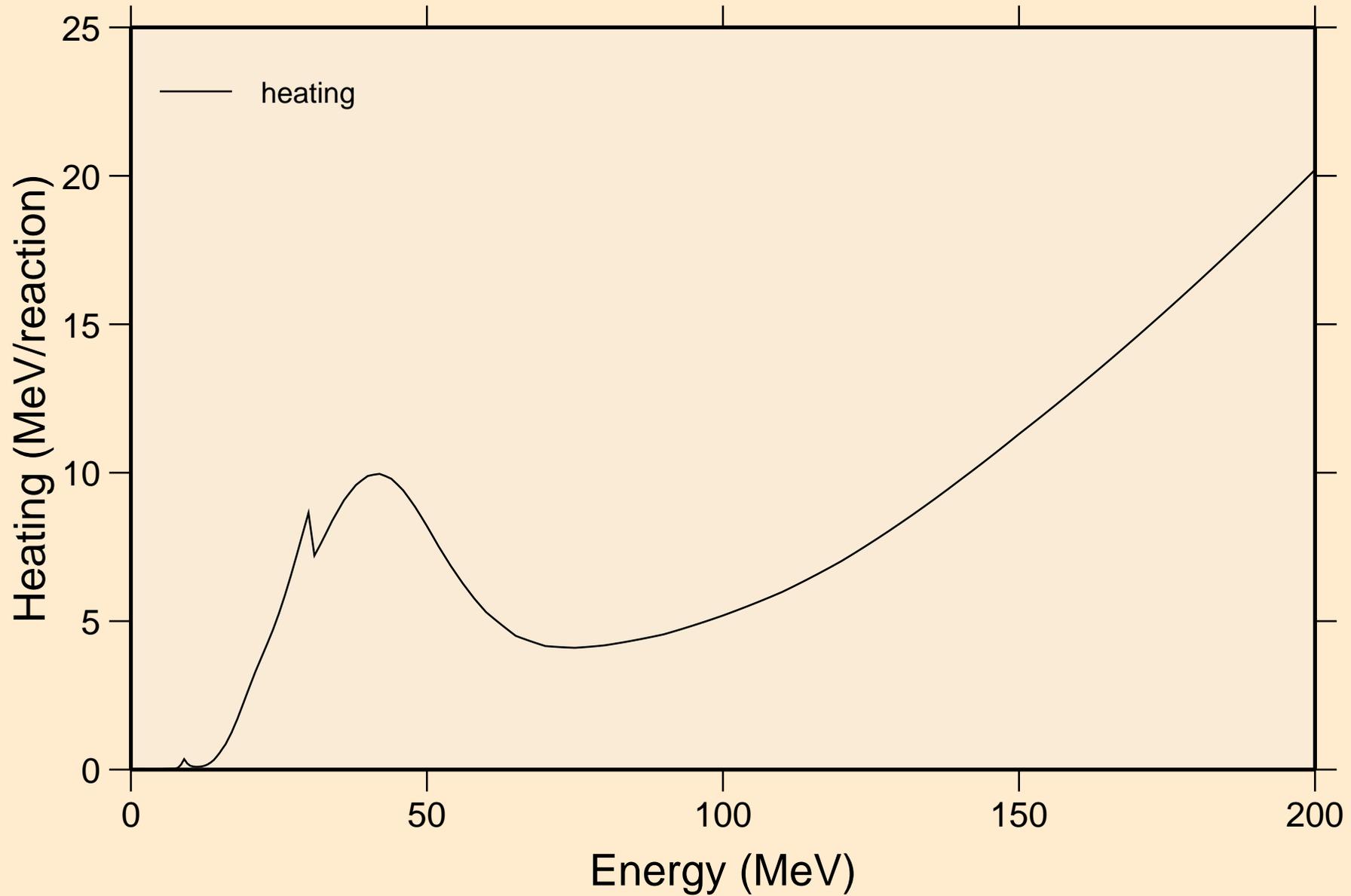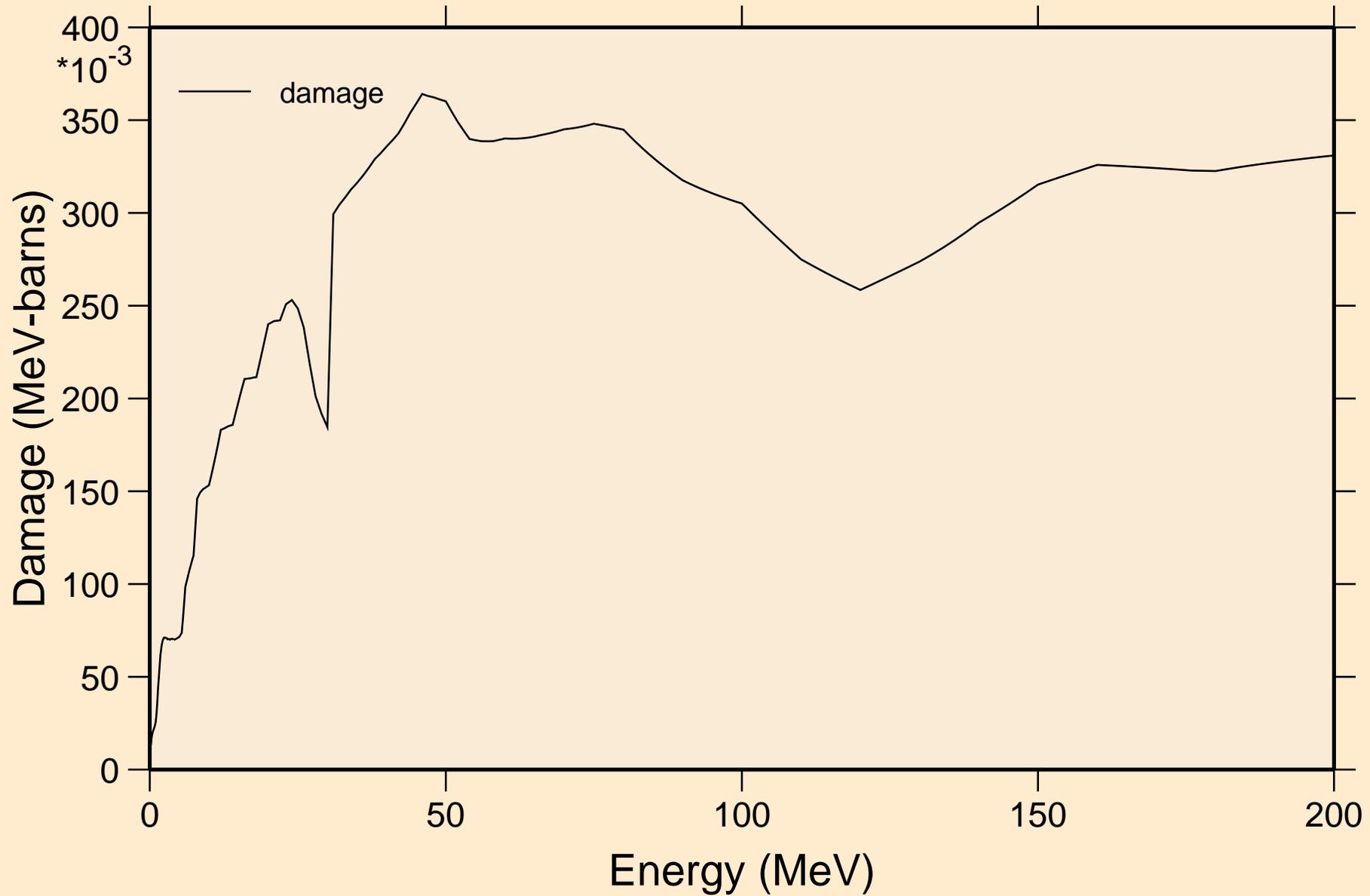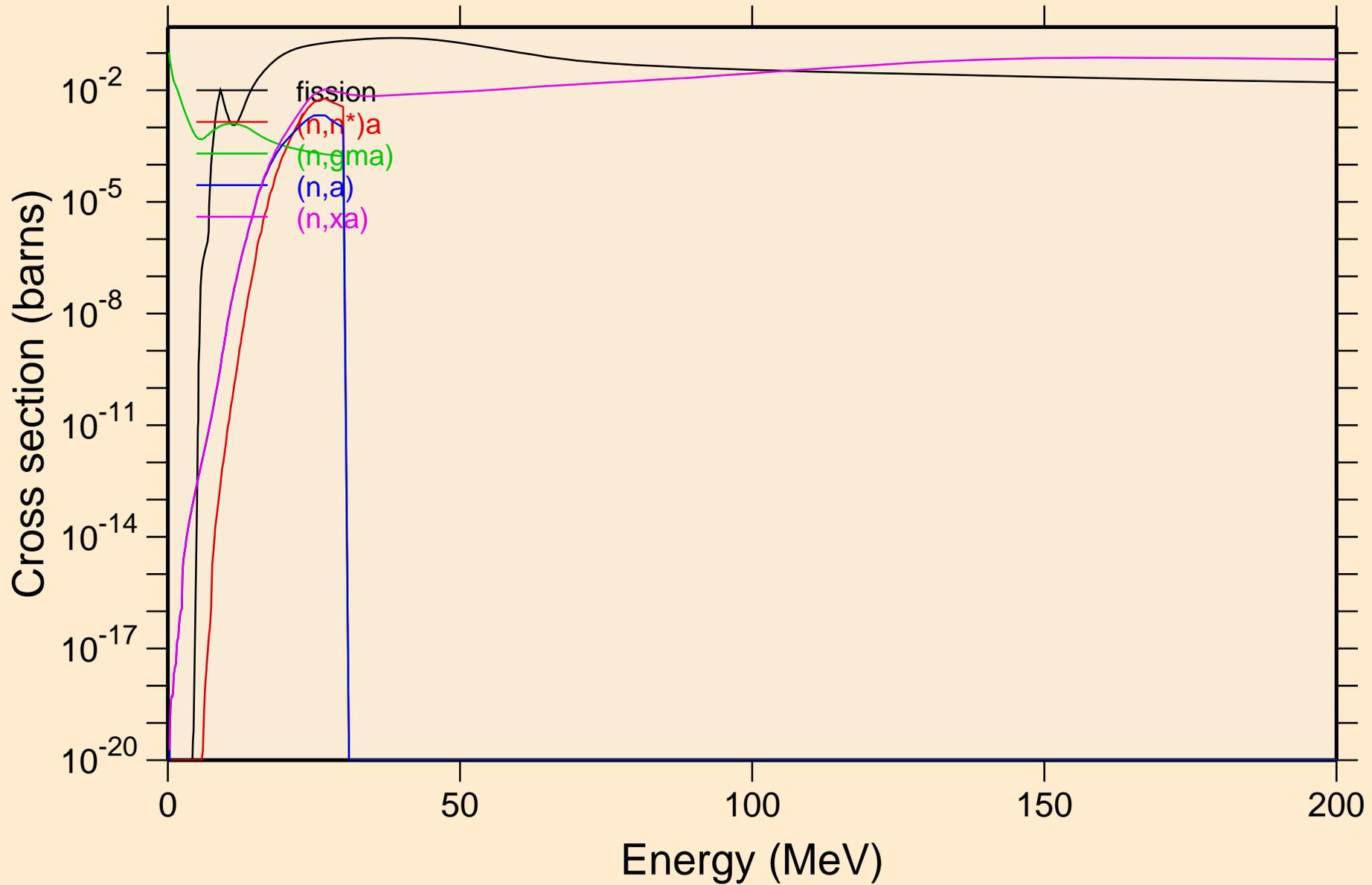Non-threshold reactions

fission
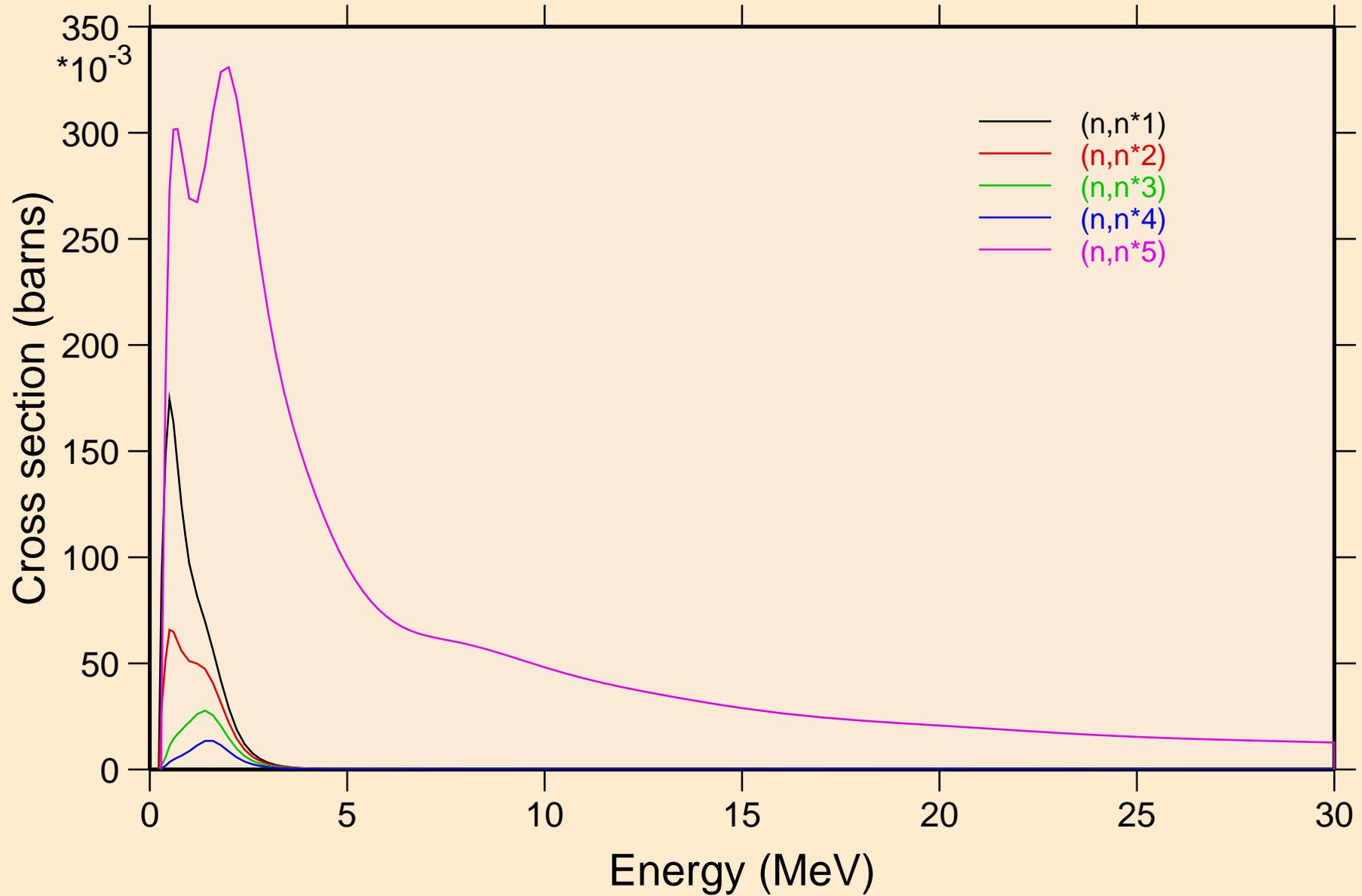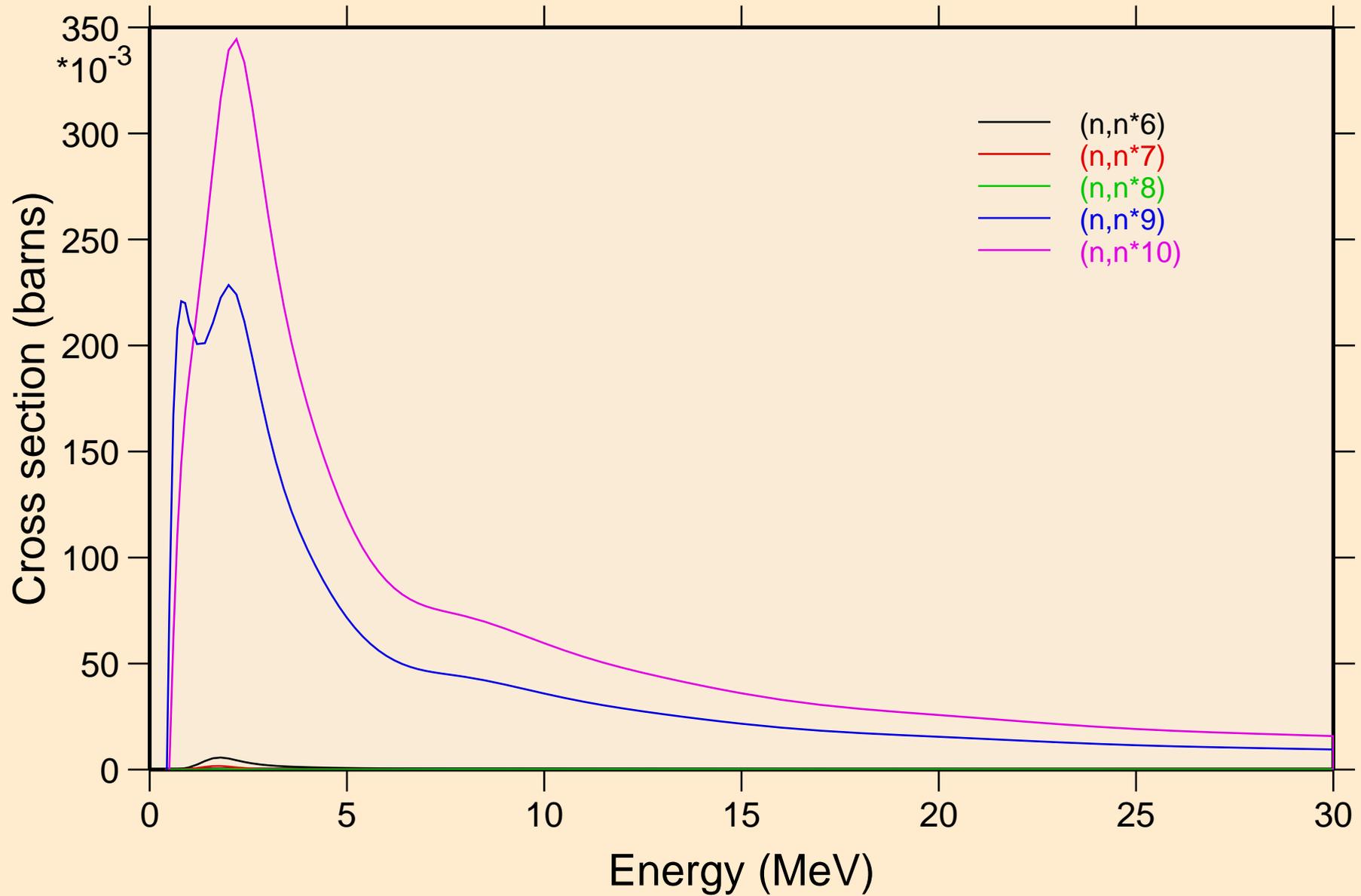(n,n*)a
(n,gma)
(n,a)
(n,xa)

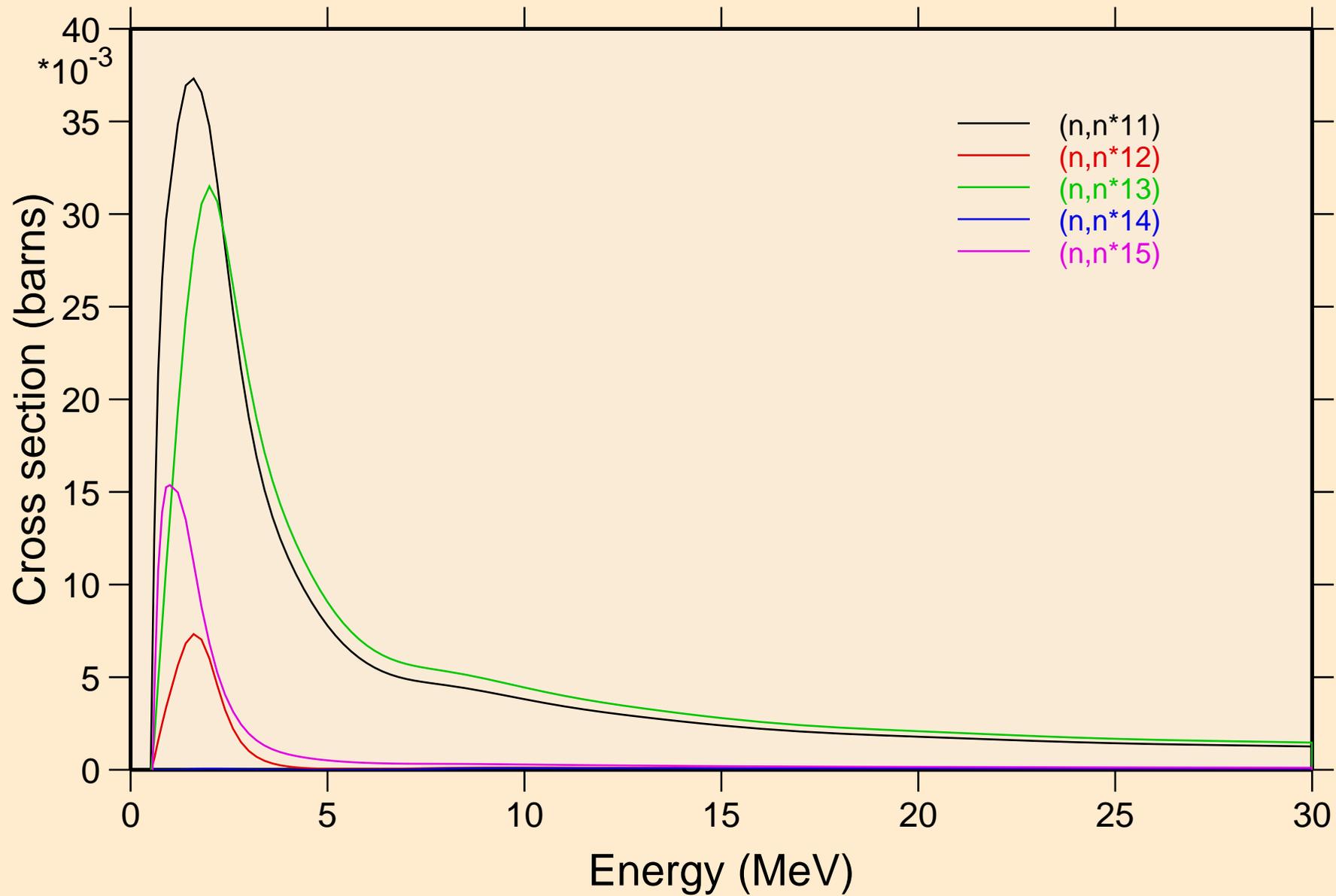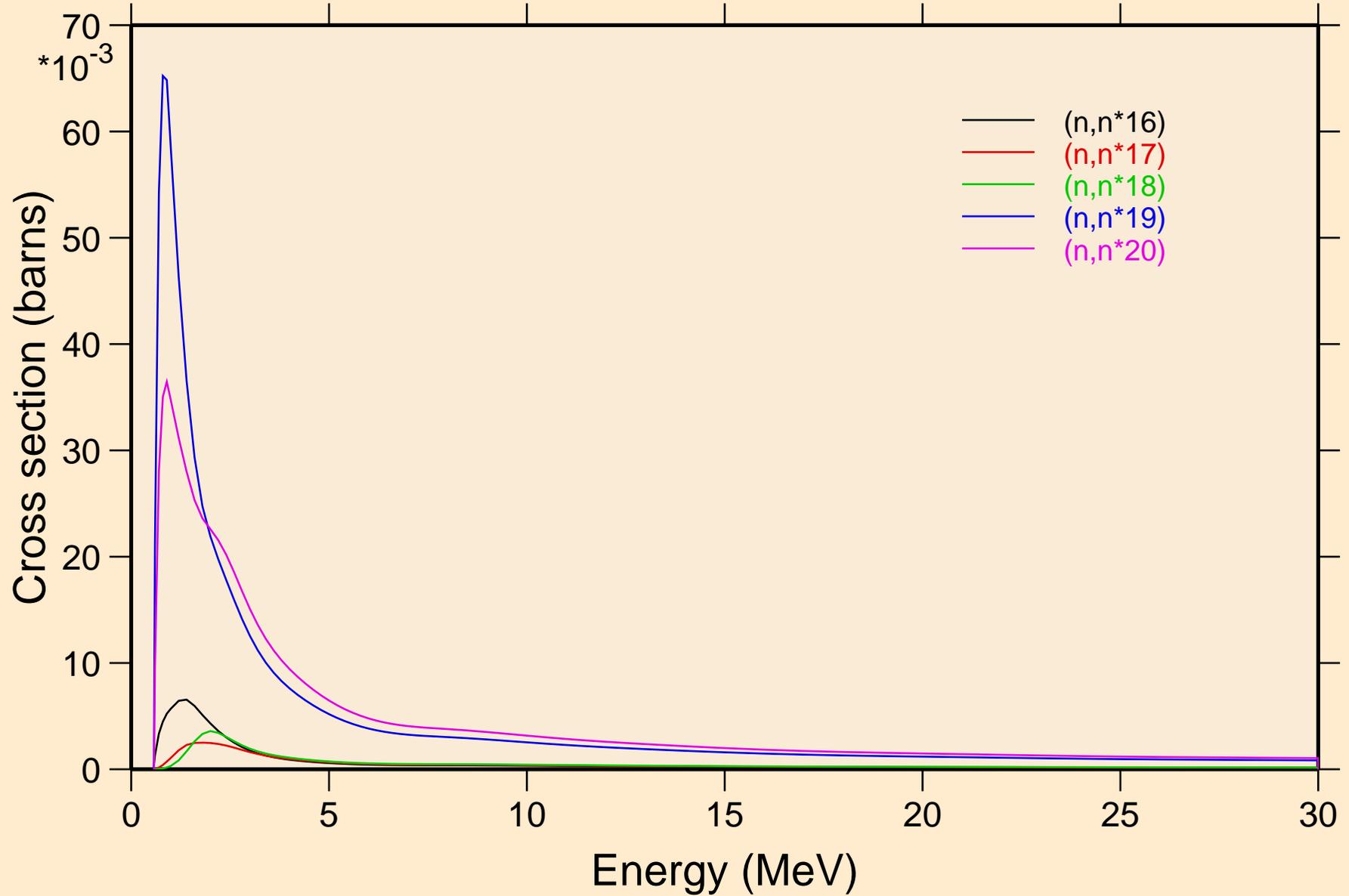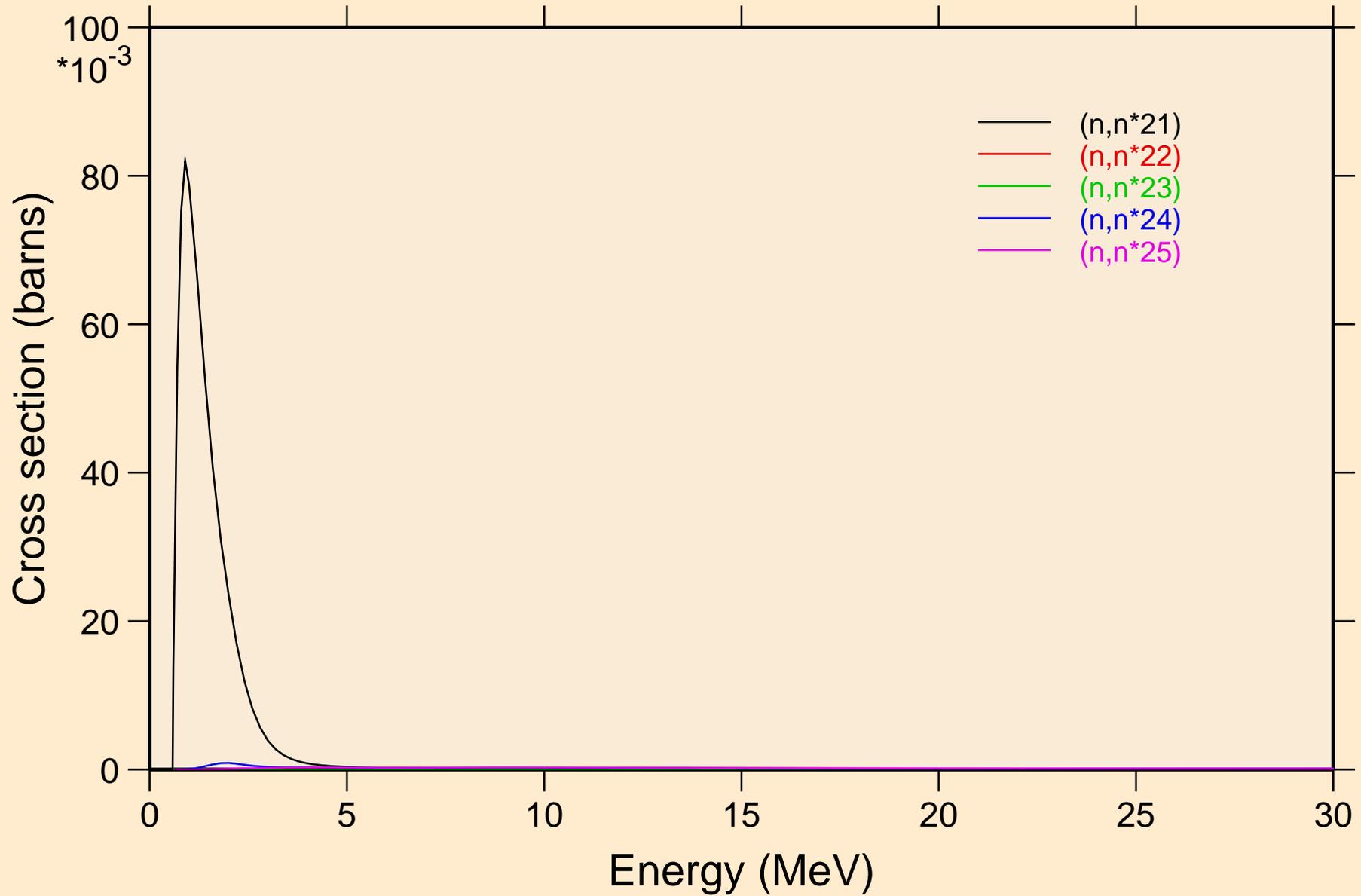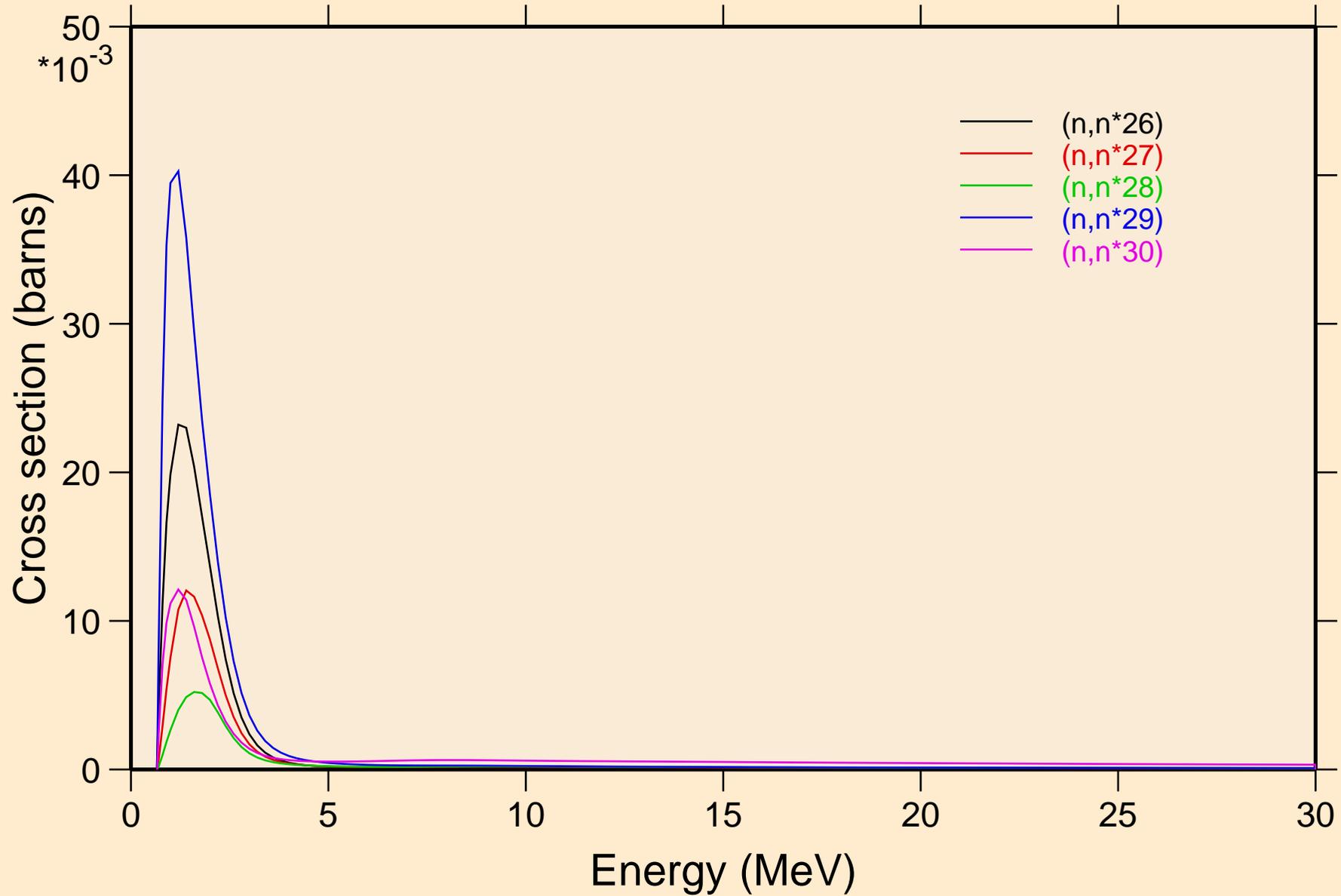Cross section (barns)

Energy (MeV)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

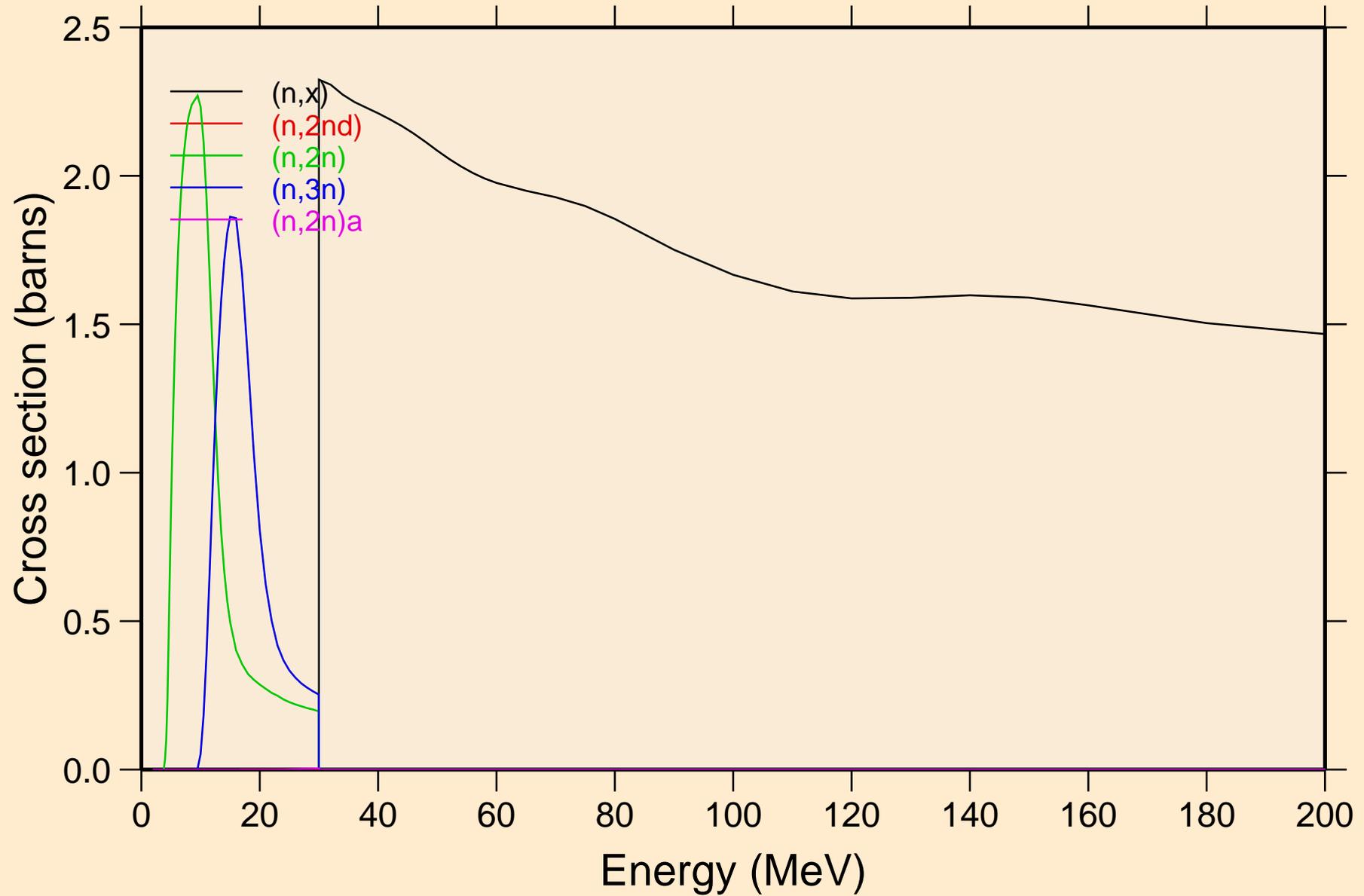RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

Cross section (barns) vs Energy (MeV)

- (n,n*11) — black
- (n,n*12) — red
- (n,n*13) — green
- (n,n*14) — blue
- (n,n*15) — magenta

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

Cross section (barns) vs Energy (MeV)

Legend:
- (n,n*16)
- (n,n*17)
- (n,n*18)
- (n,n*19)
- (n,n*20)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Inelastic levels

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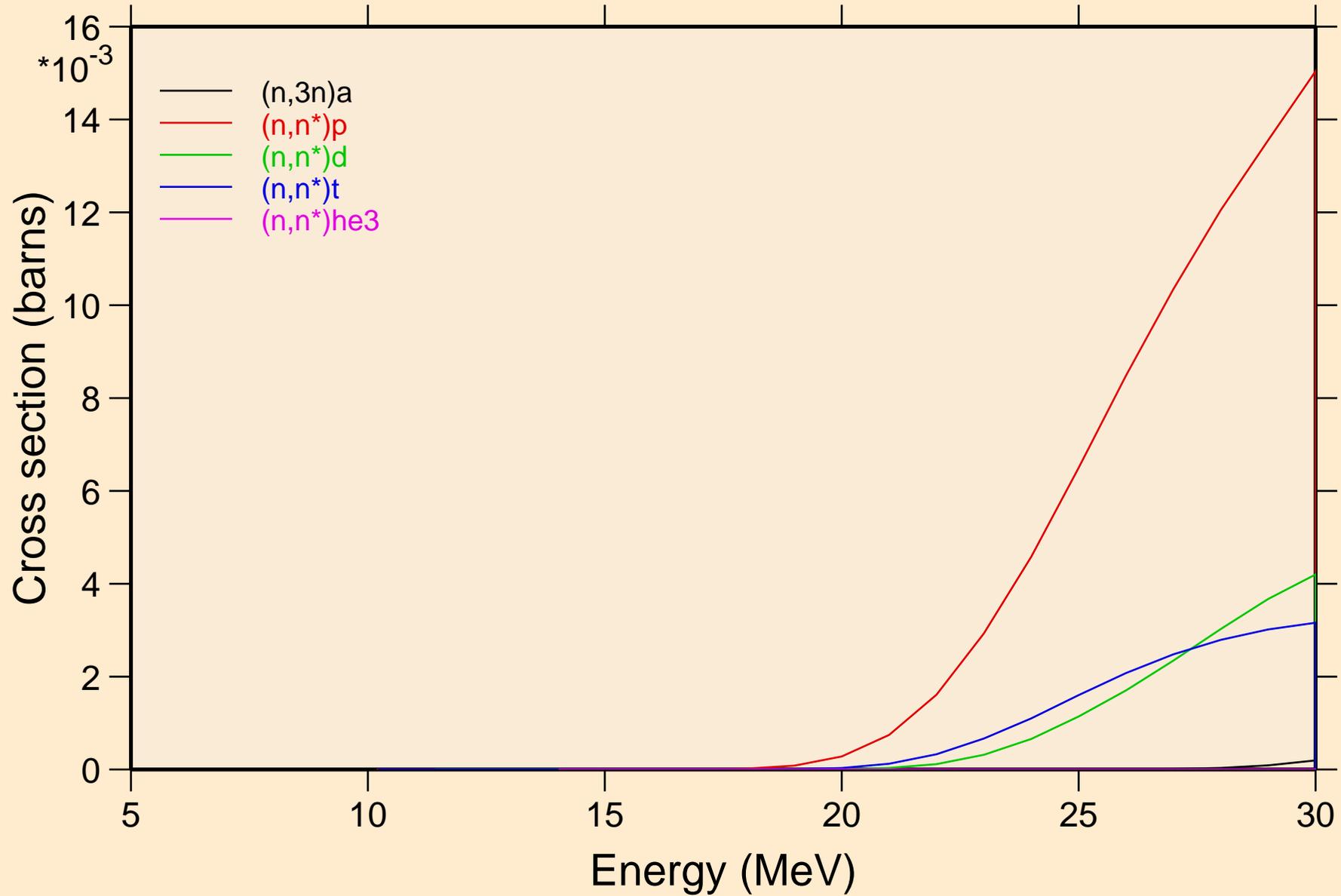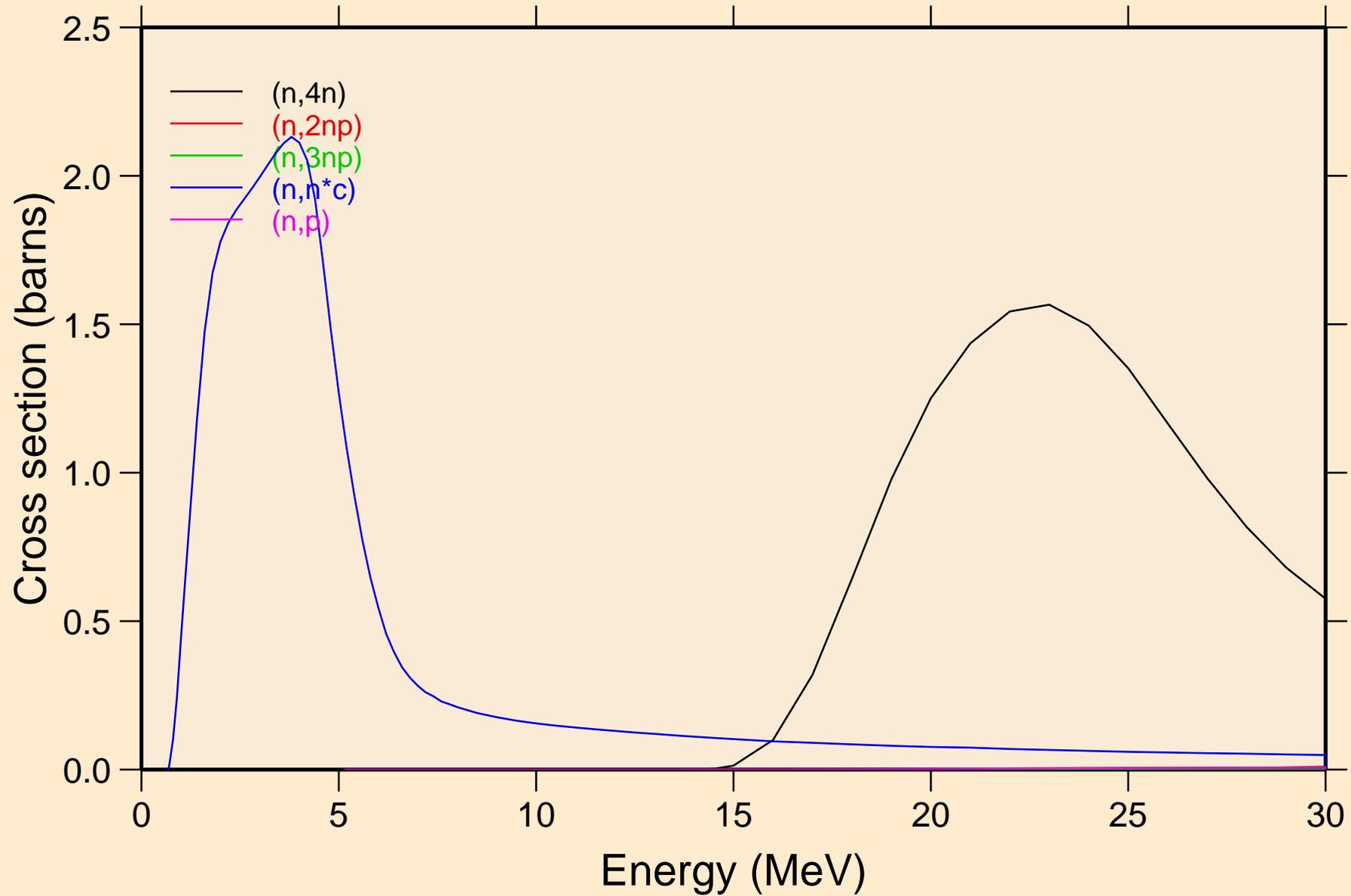(n,n*28)
(n,n*29)
(n,n*30)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions

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

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

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions

Legend:
- (n,3n)a
- (n,n*)p
- (n,n*)d
- (n,n*)t
- (n,n*)he3

Cross section (barns), *10⁻³

Energy (MeV)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions

Legend:
- (n,4n)
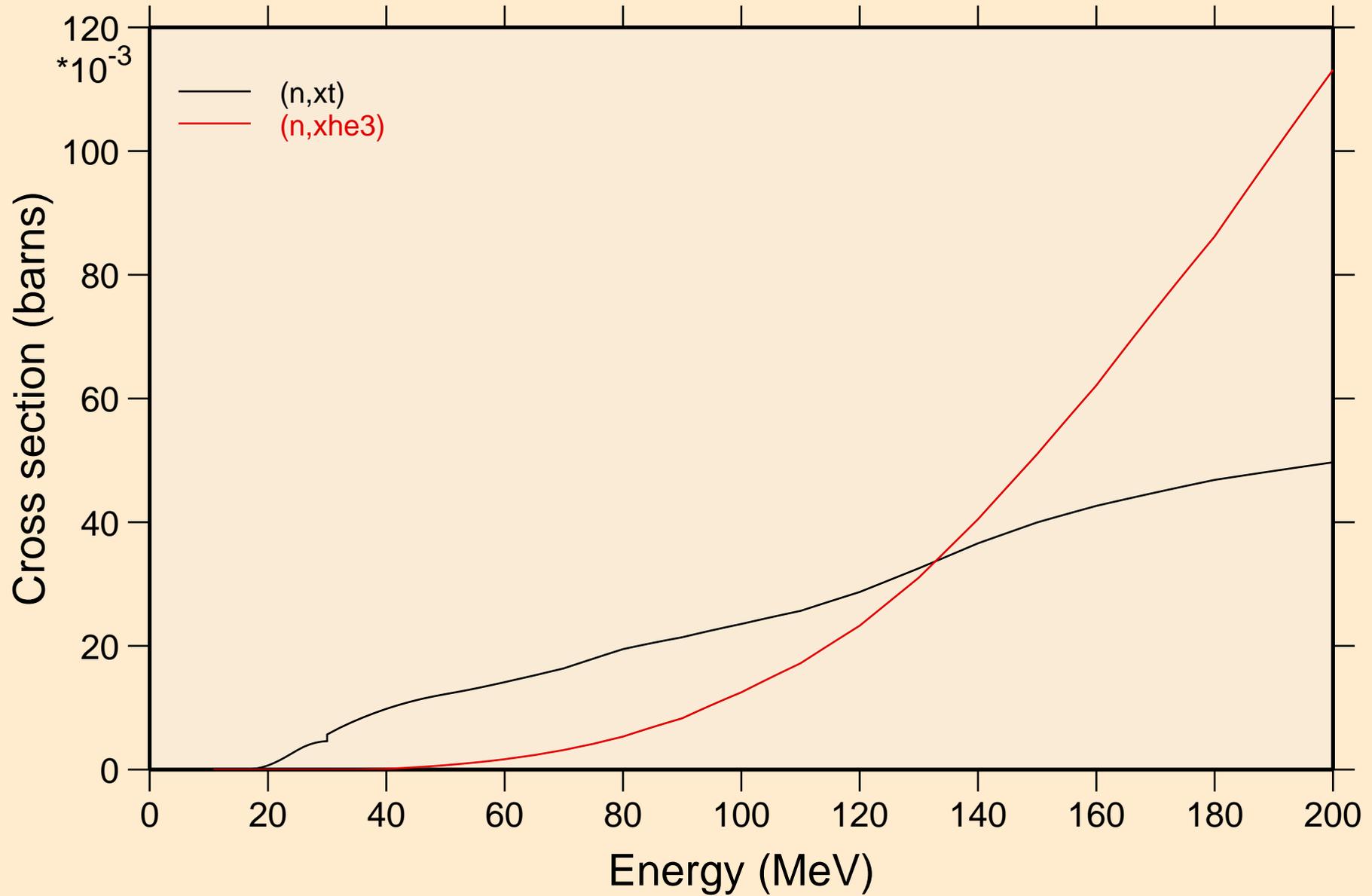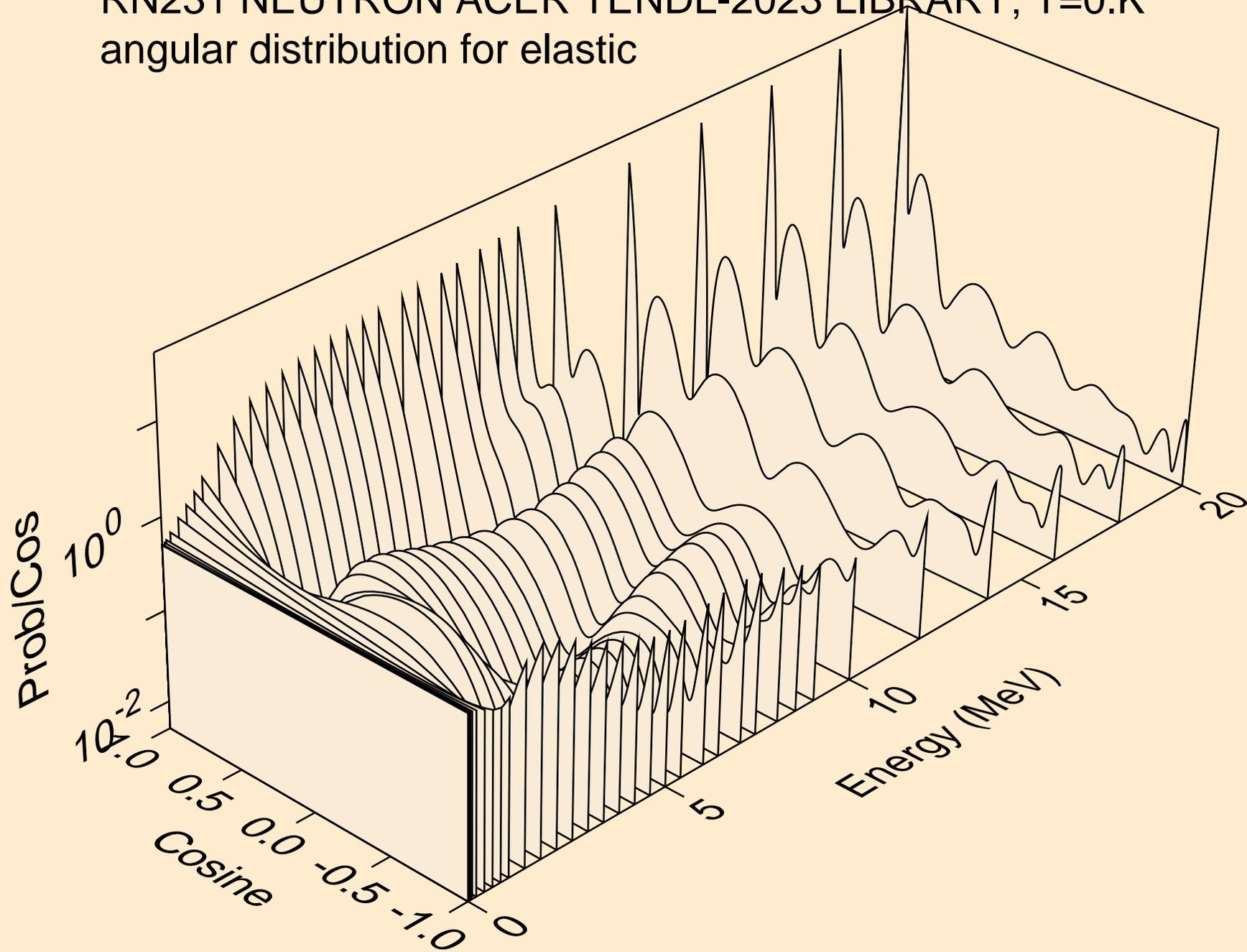- (n,2np)
- (n,3np)
- (n,n*c)
- (n,p)

Cross section (barns) vs Energy (MeV)

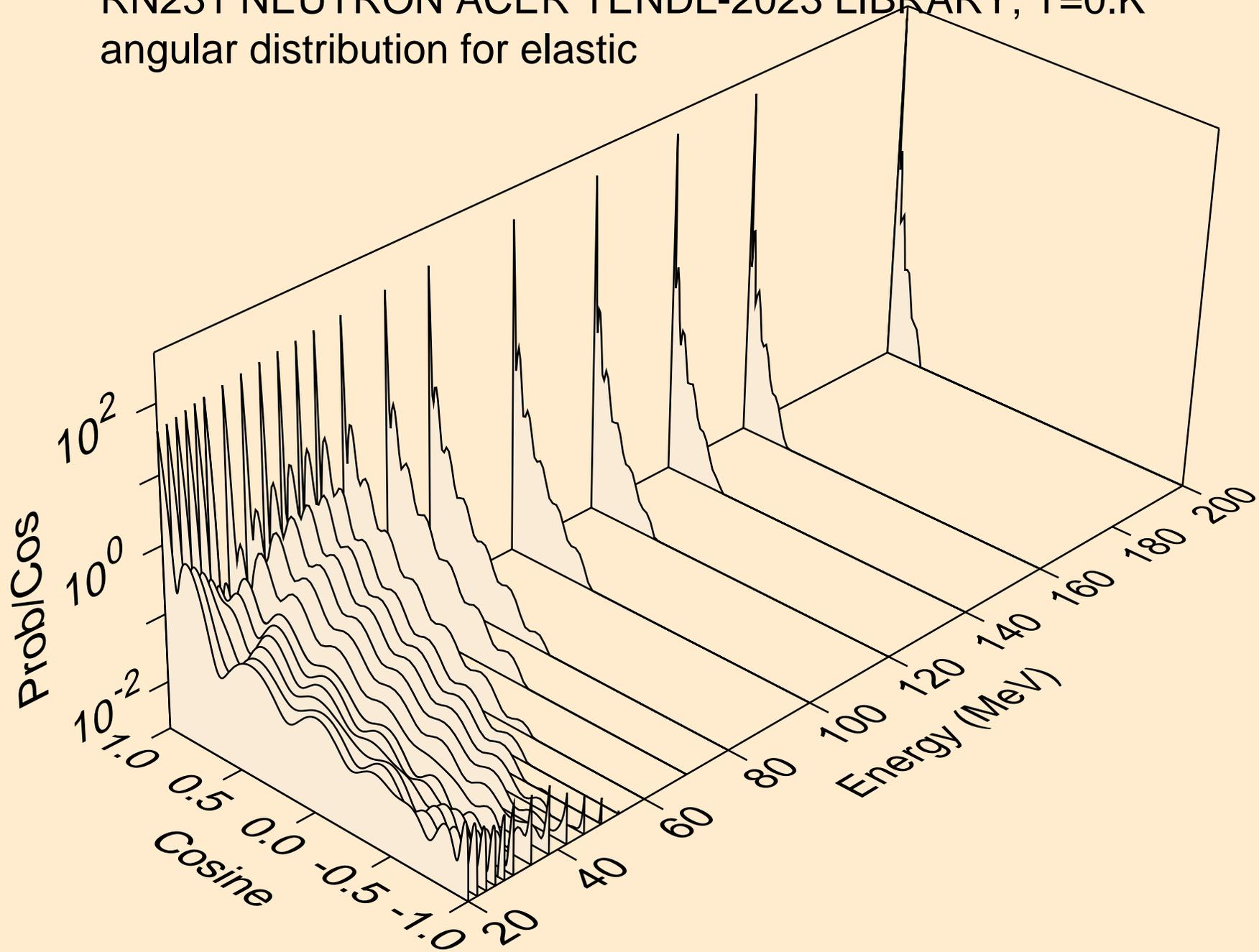RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions

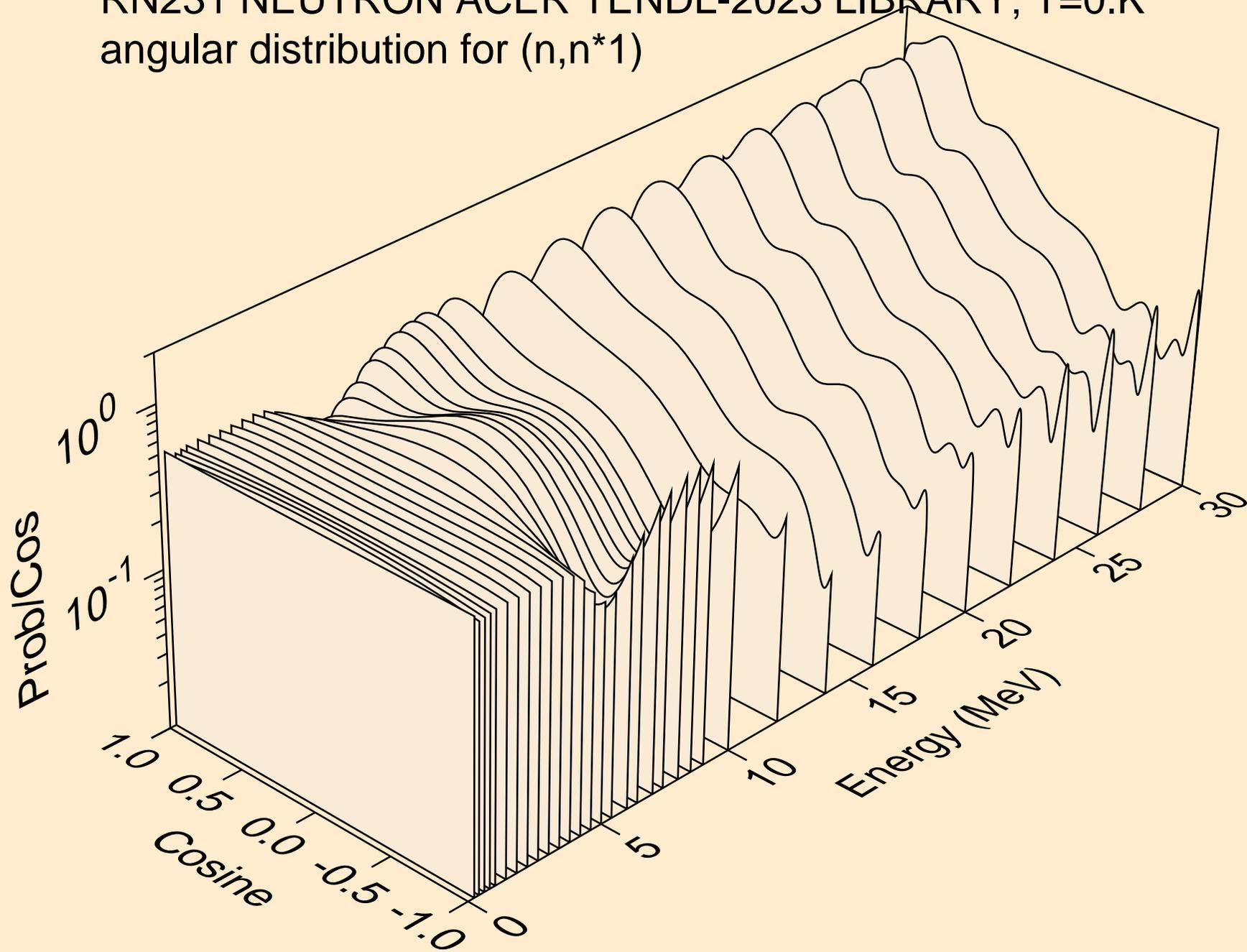RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
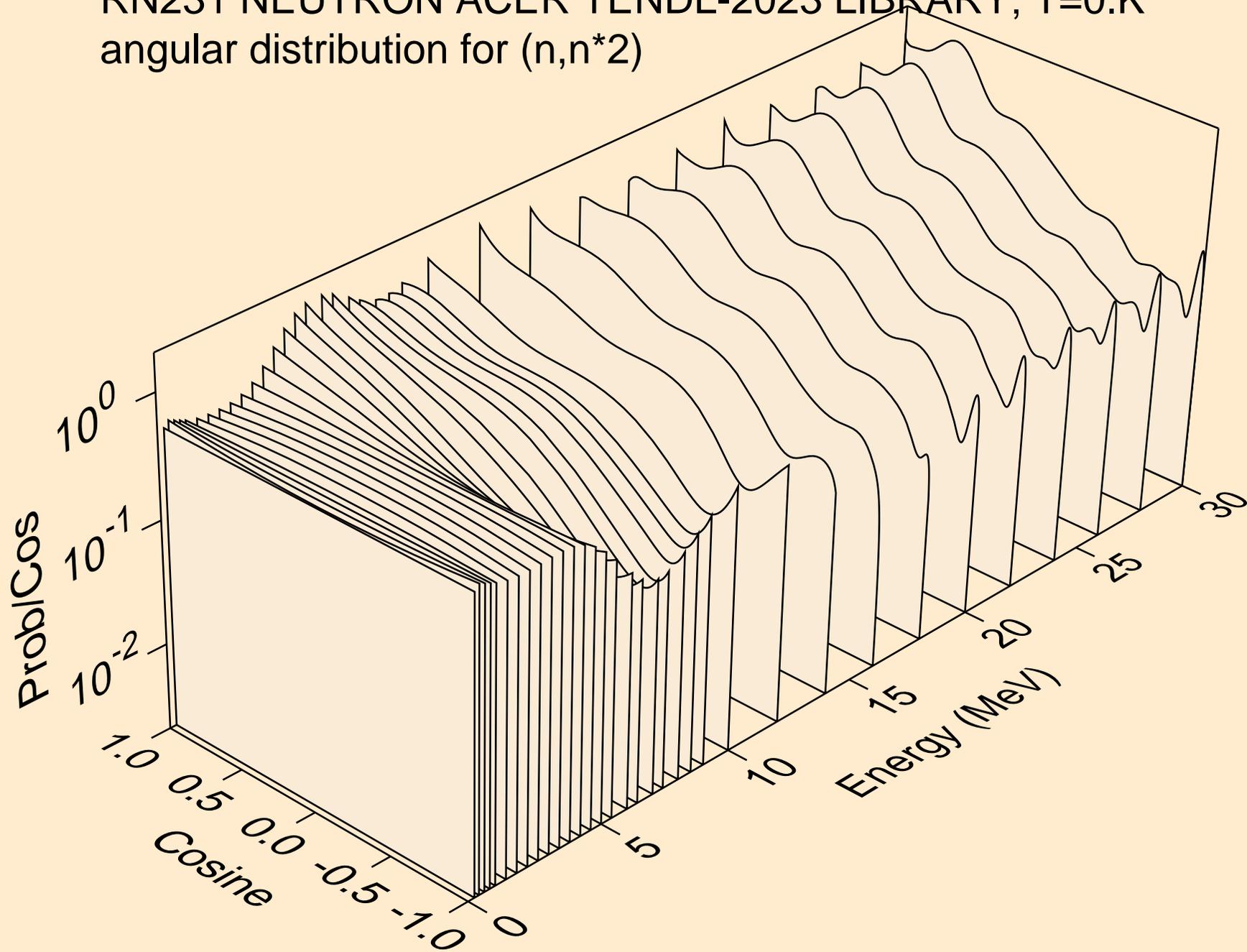angular distribution for elastic

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
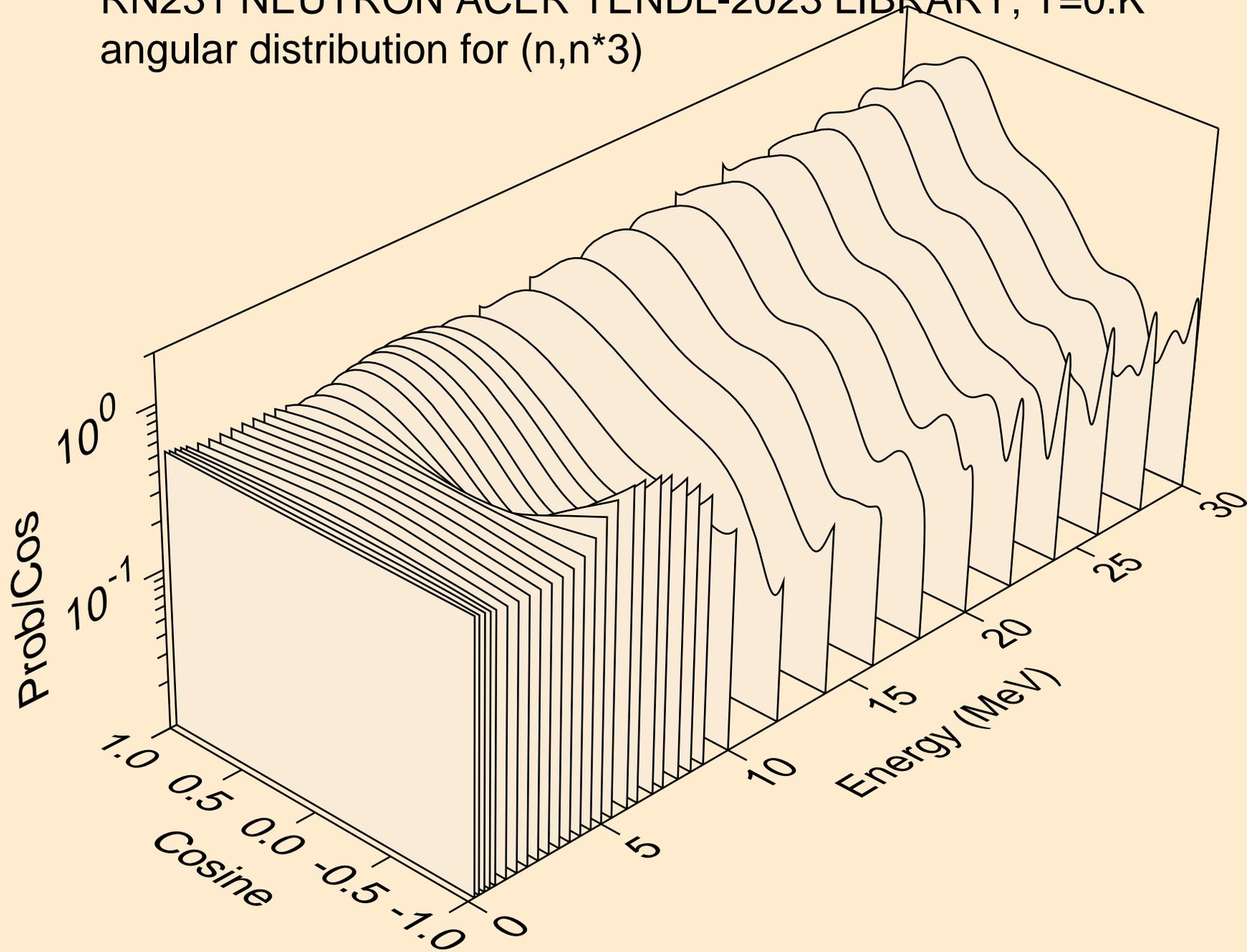angular distribution for elastic

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
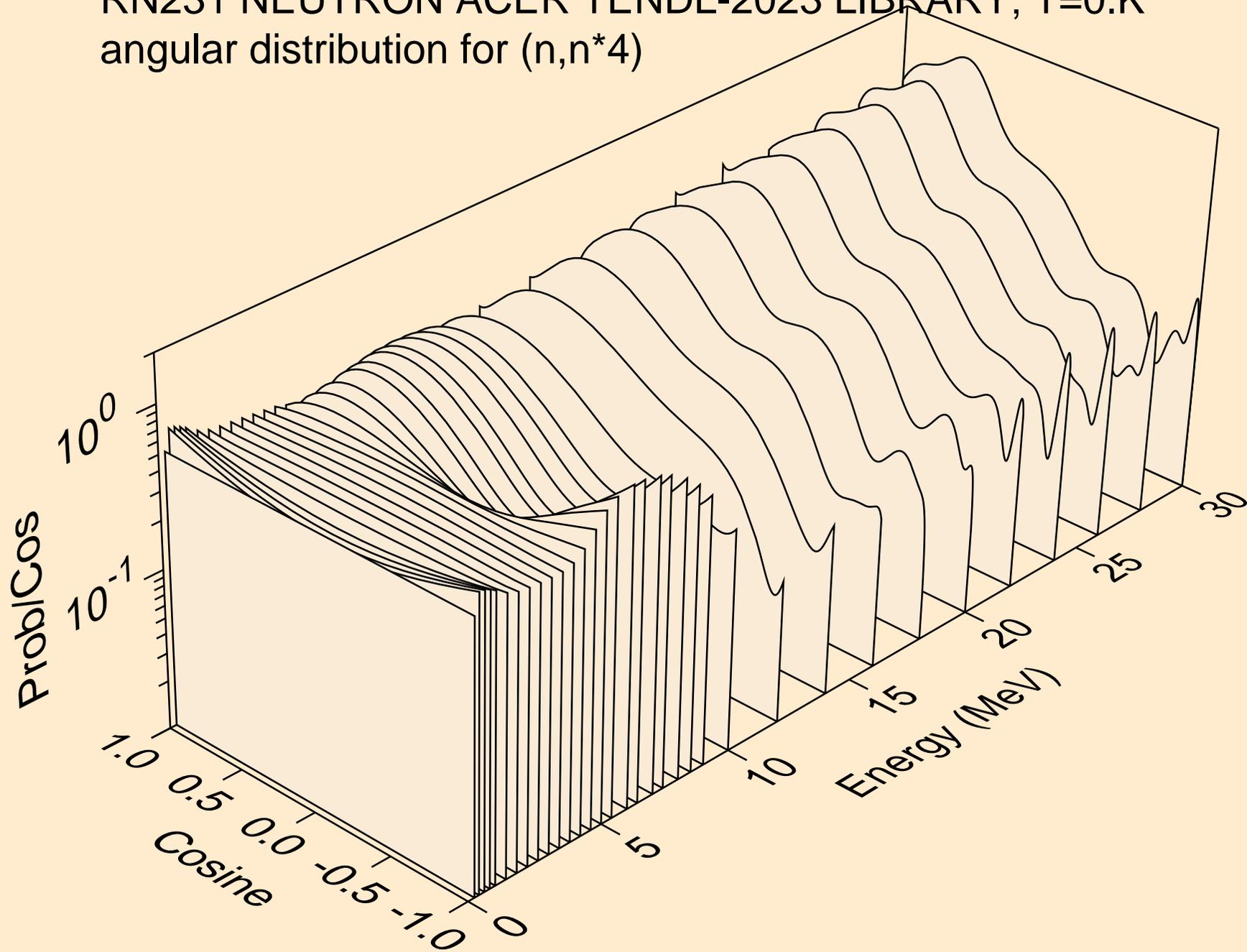angular distribution for (n,n*1)
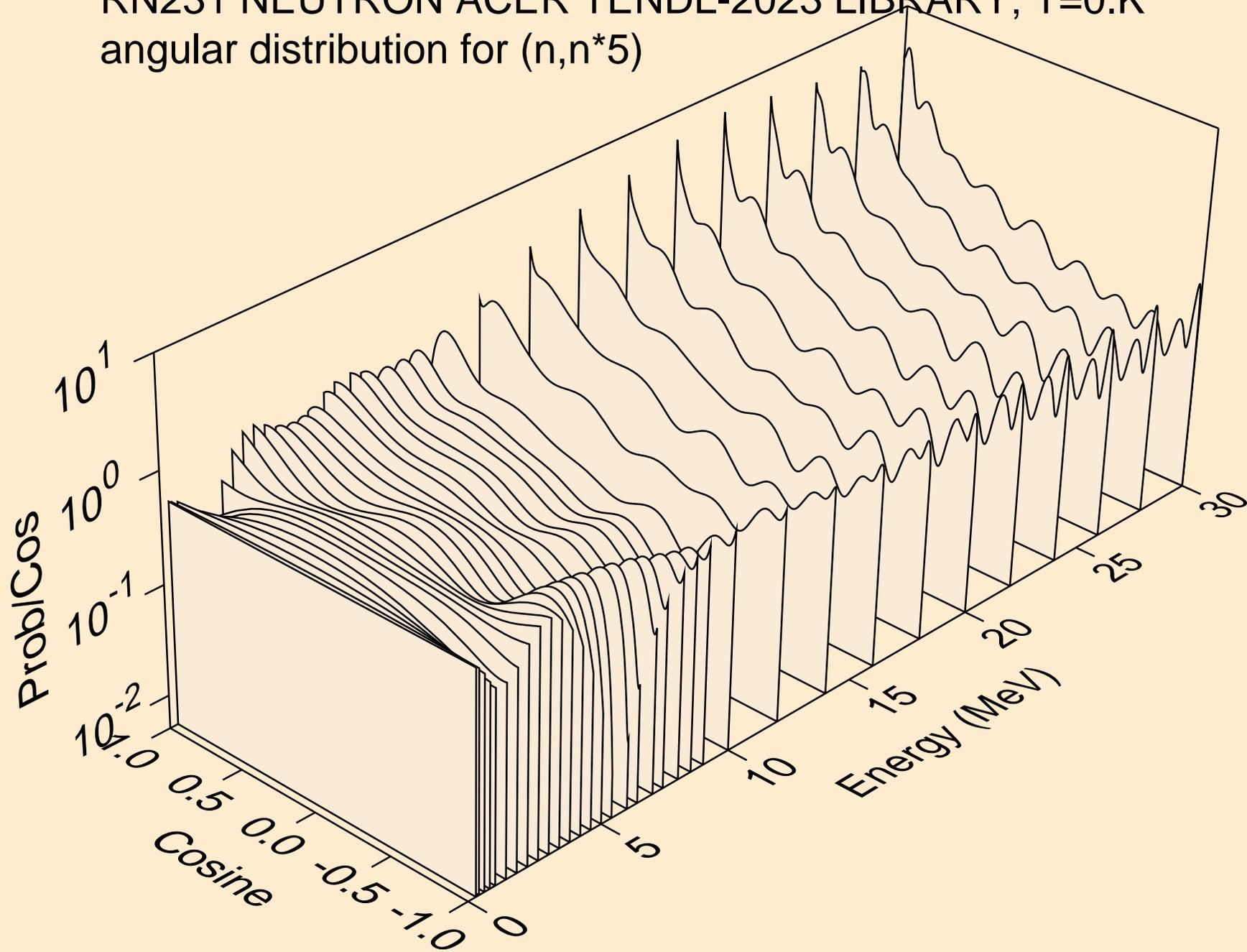
ProbICos

Cosine

Energy (MeV)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*2)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
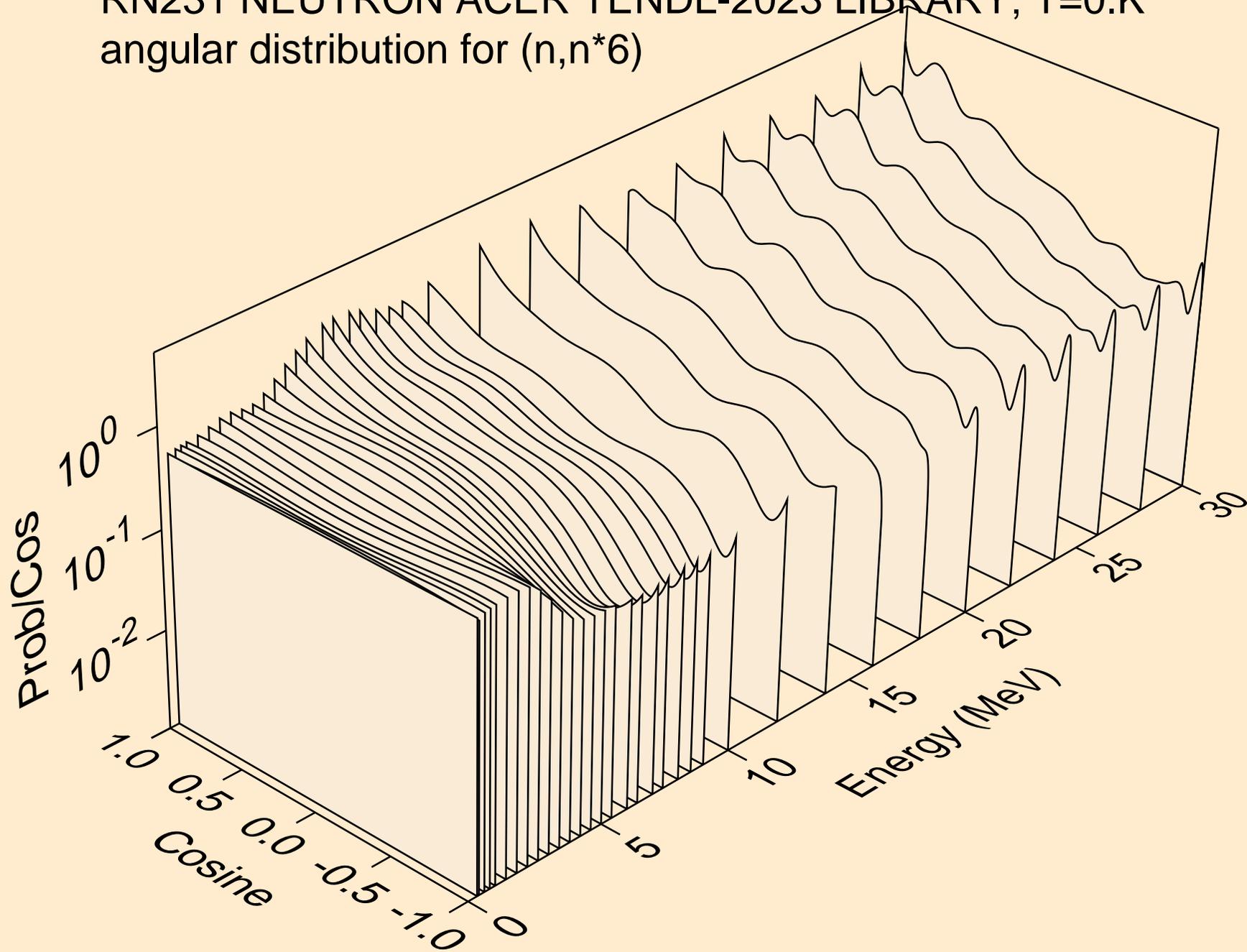angular distribution for (n,n*3)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
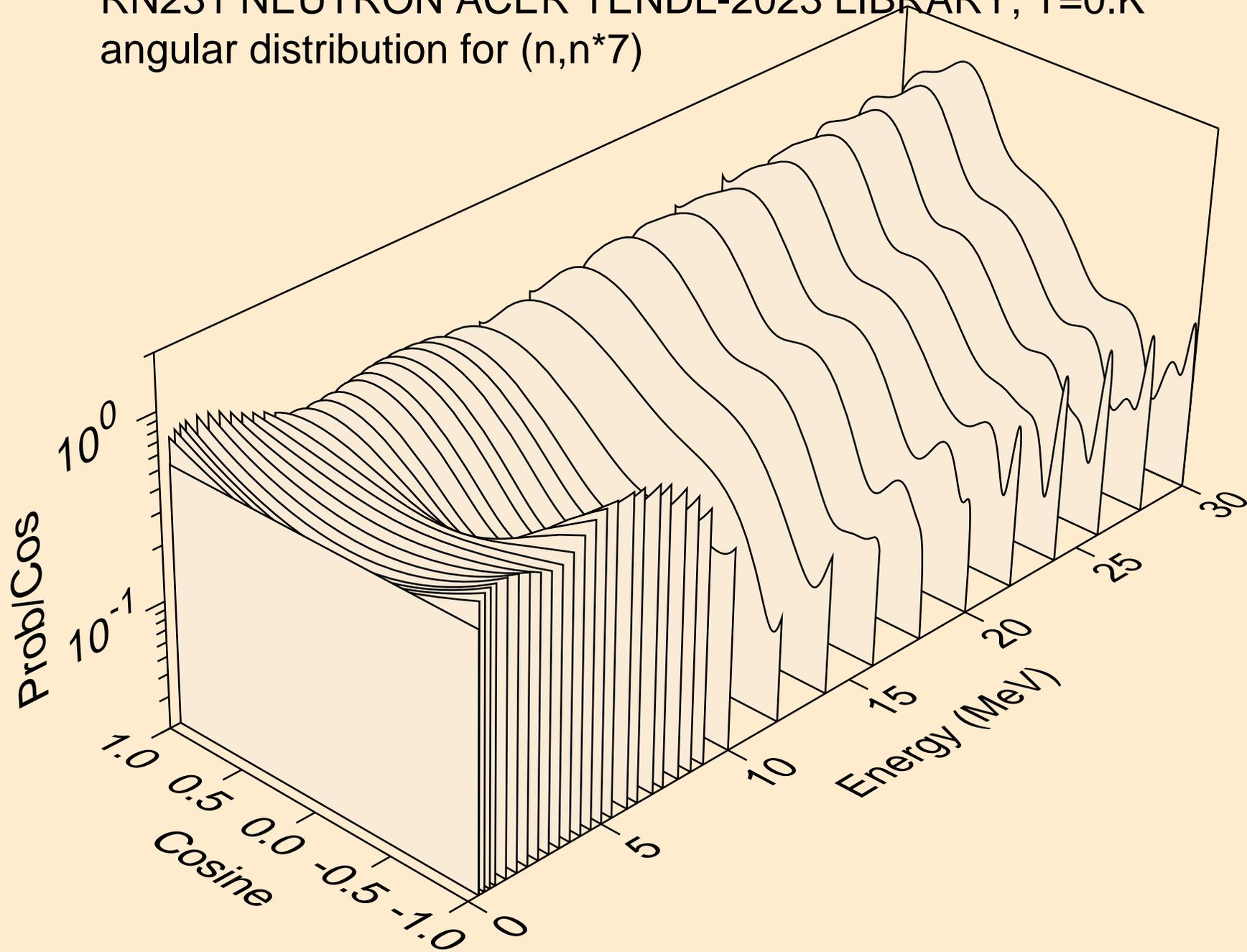angular distribution for (n,n*4)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
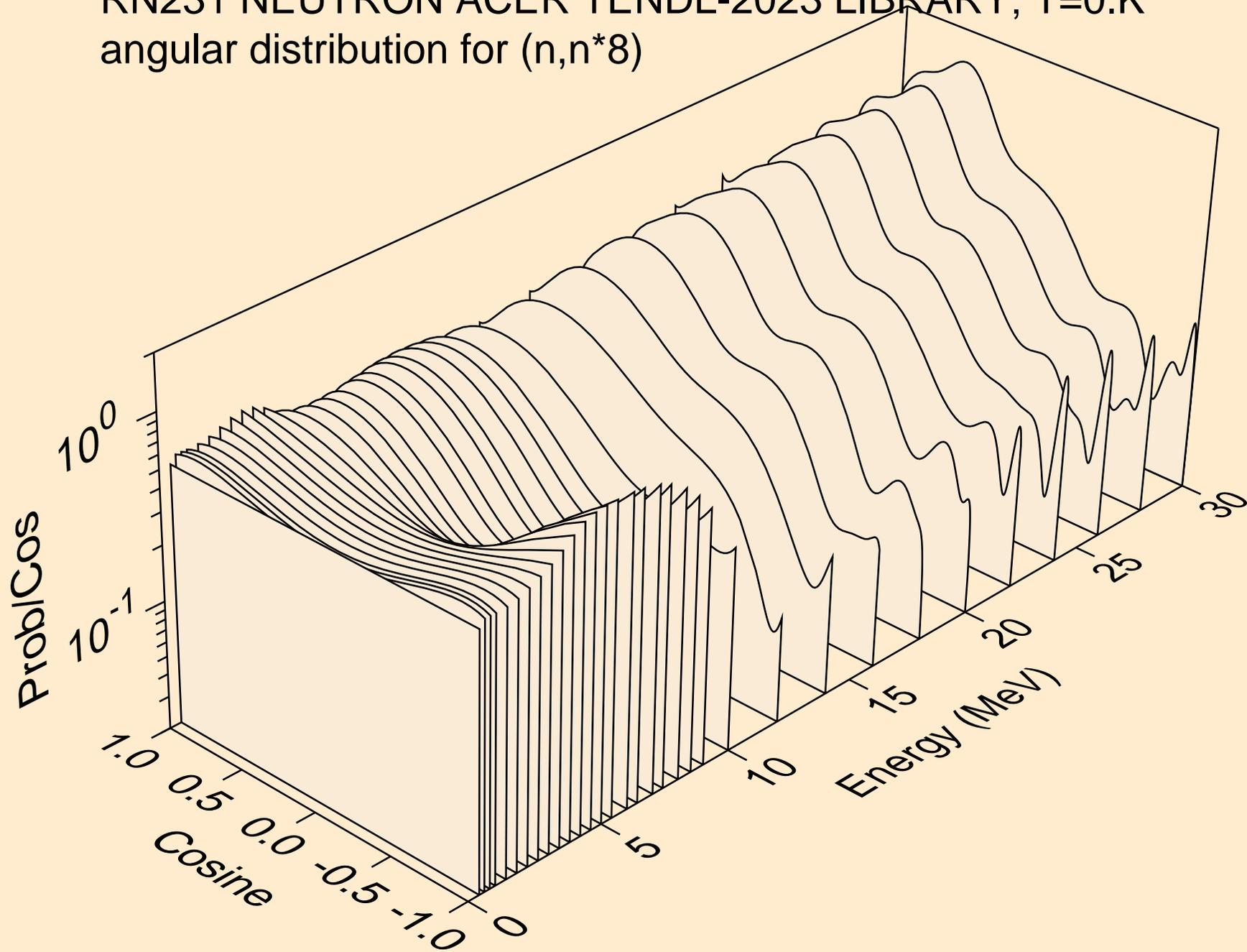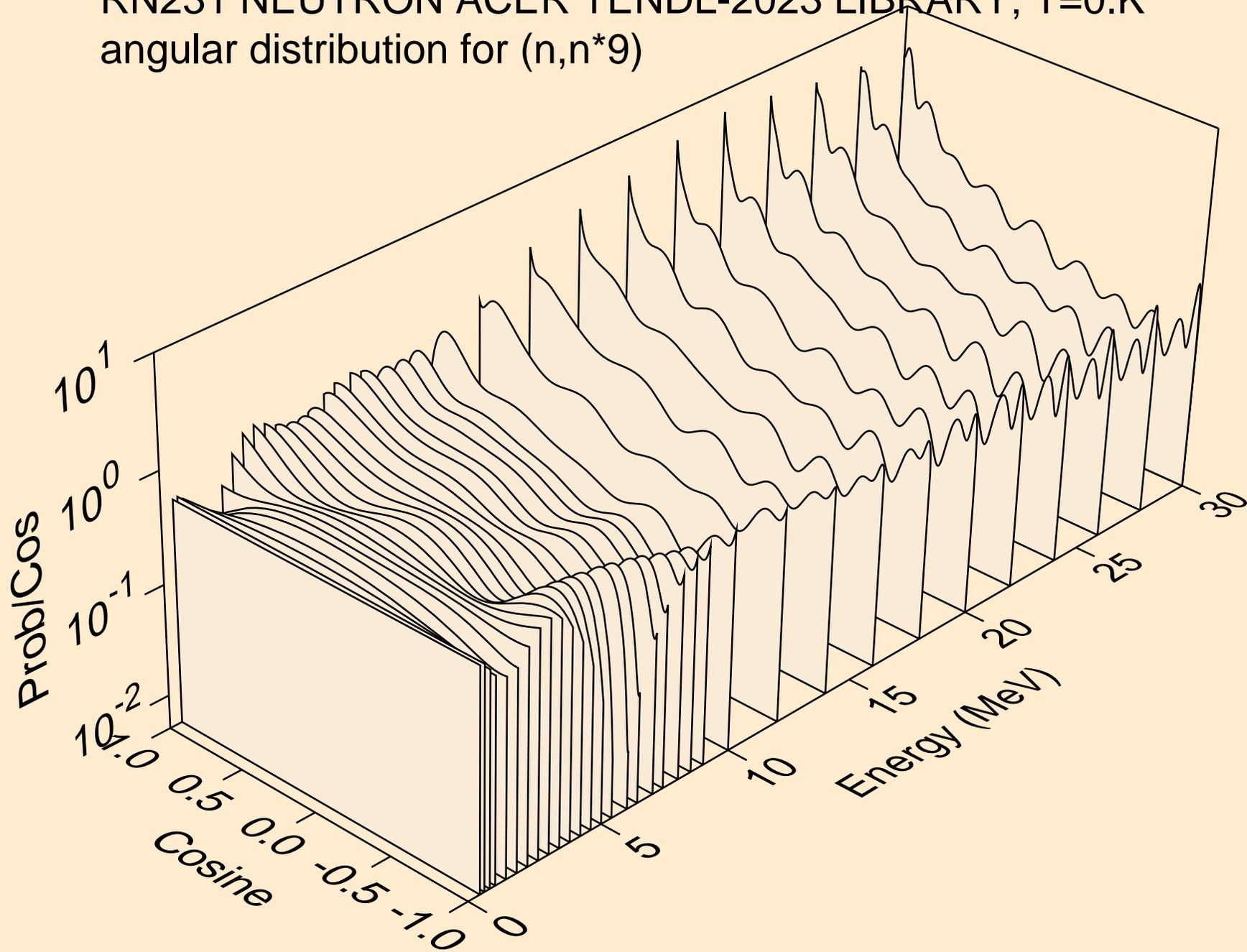angular distribution for (n,n*5)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*6)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
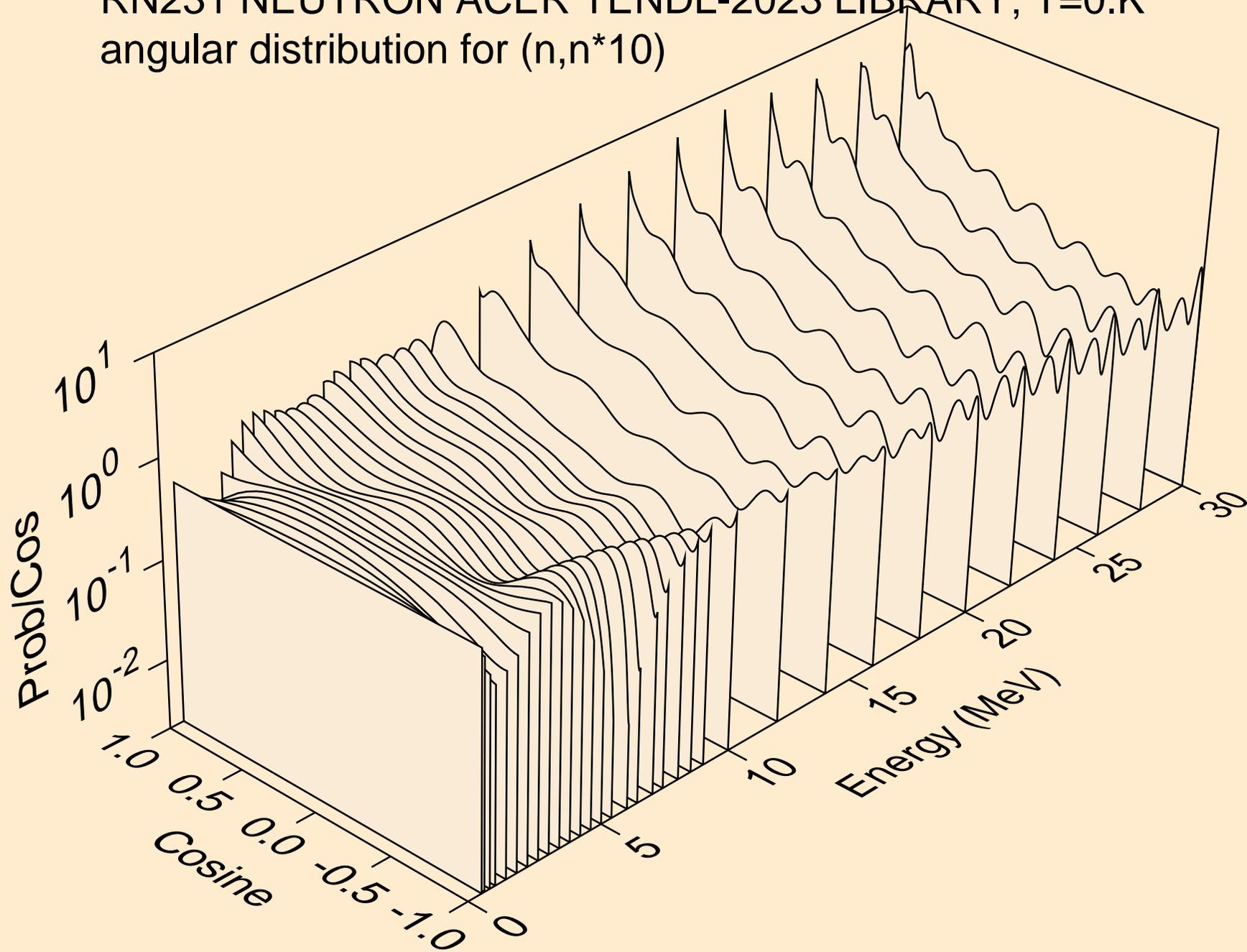angular distribution for (n,n*7)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
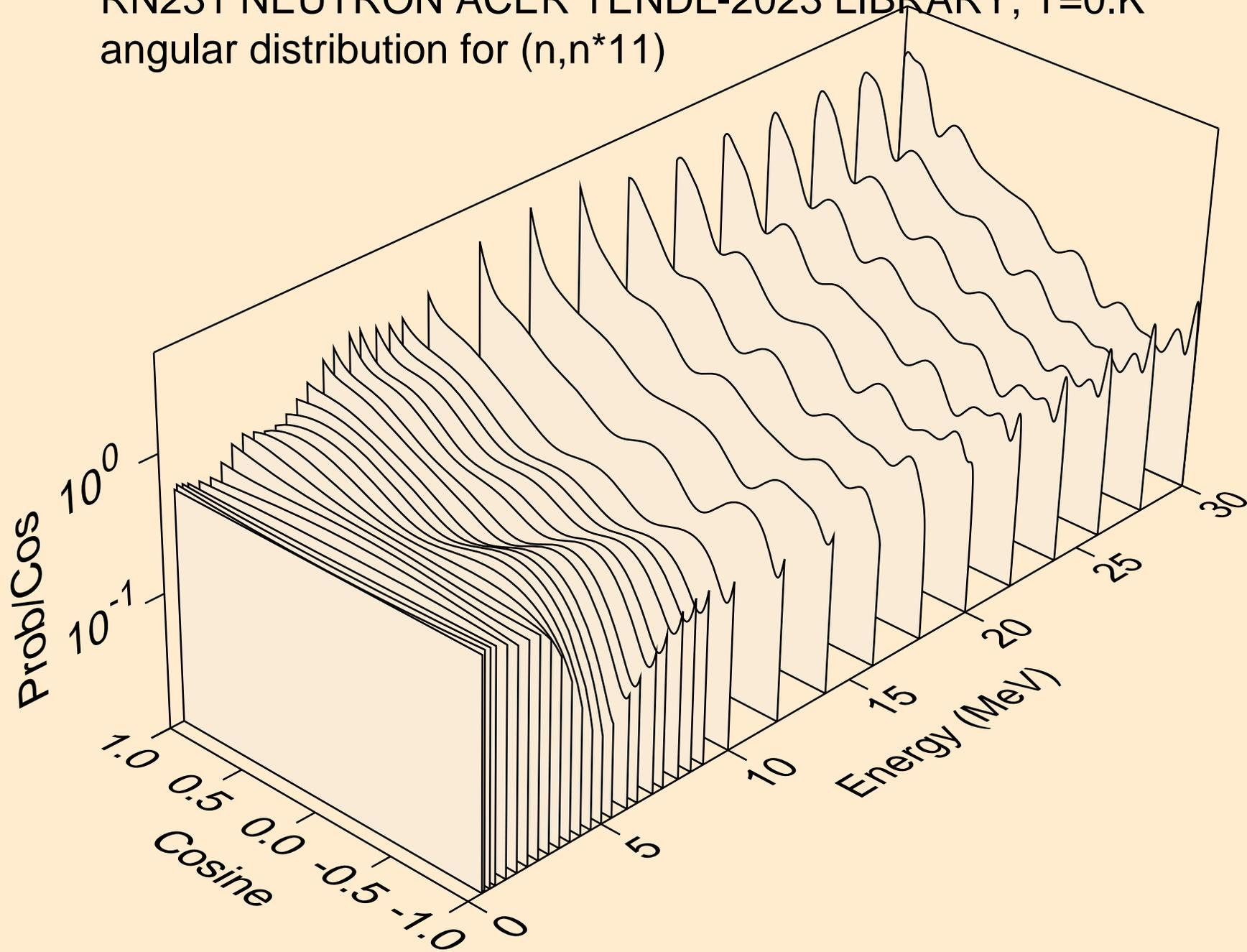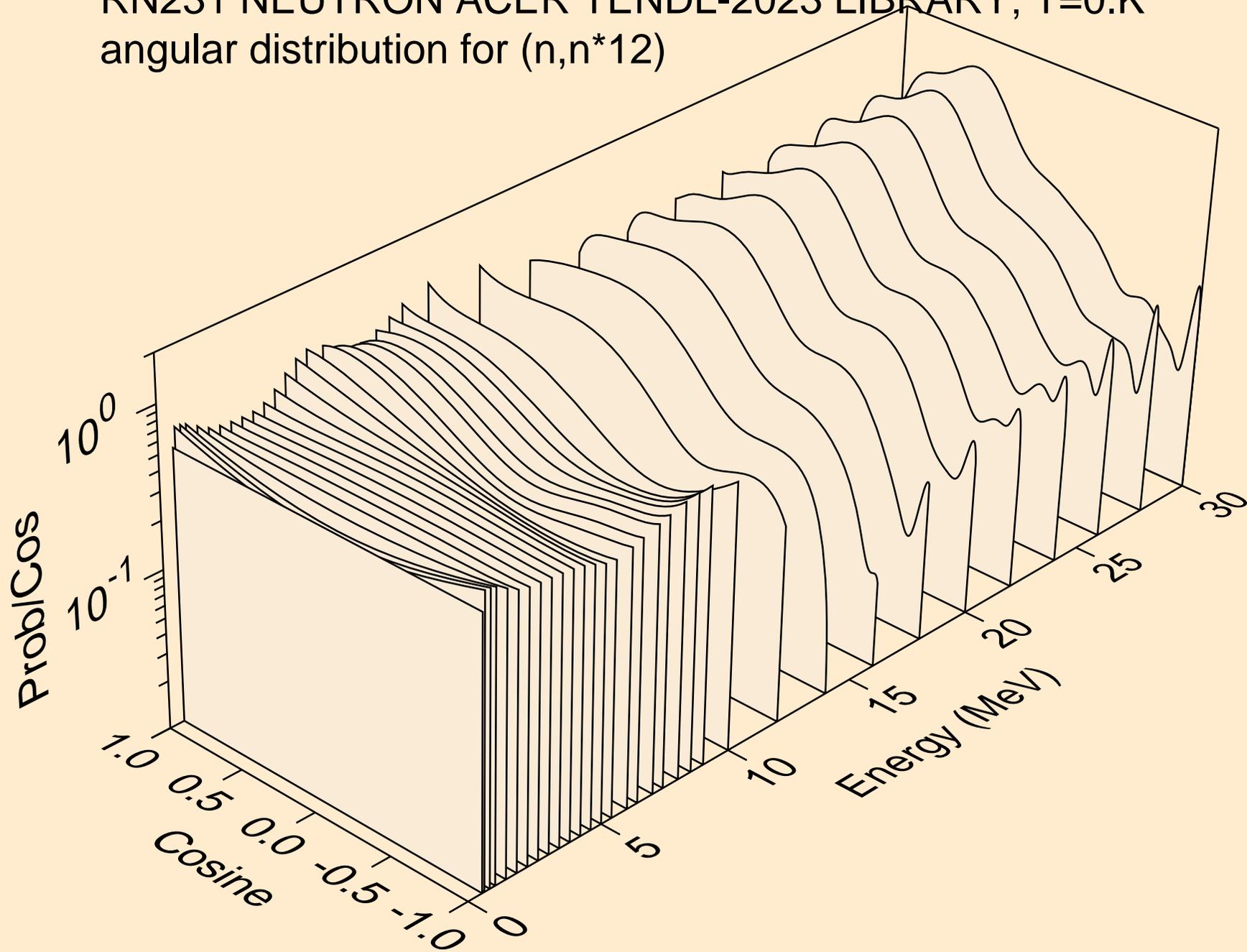angular distribution for (n,n*8)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*9)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
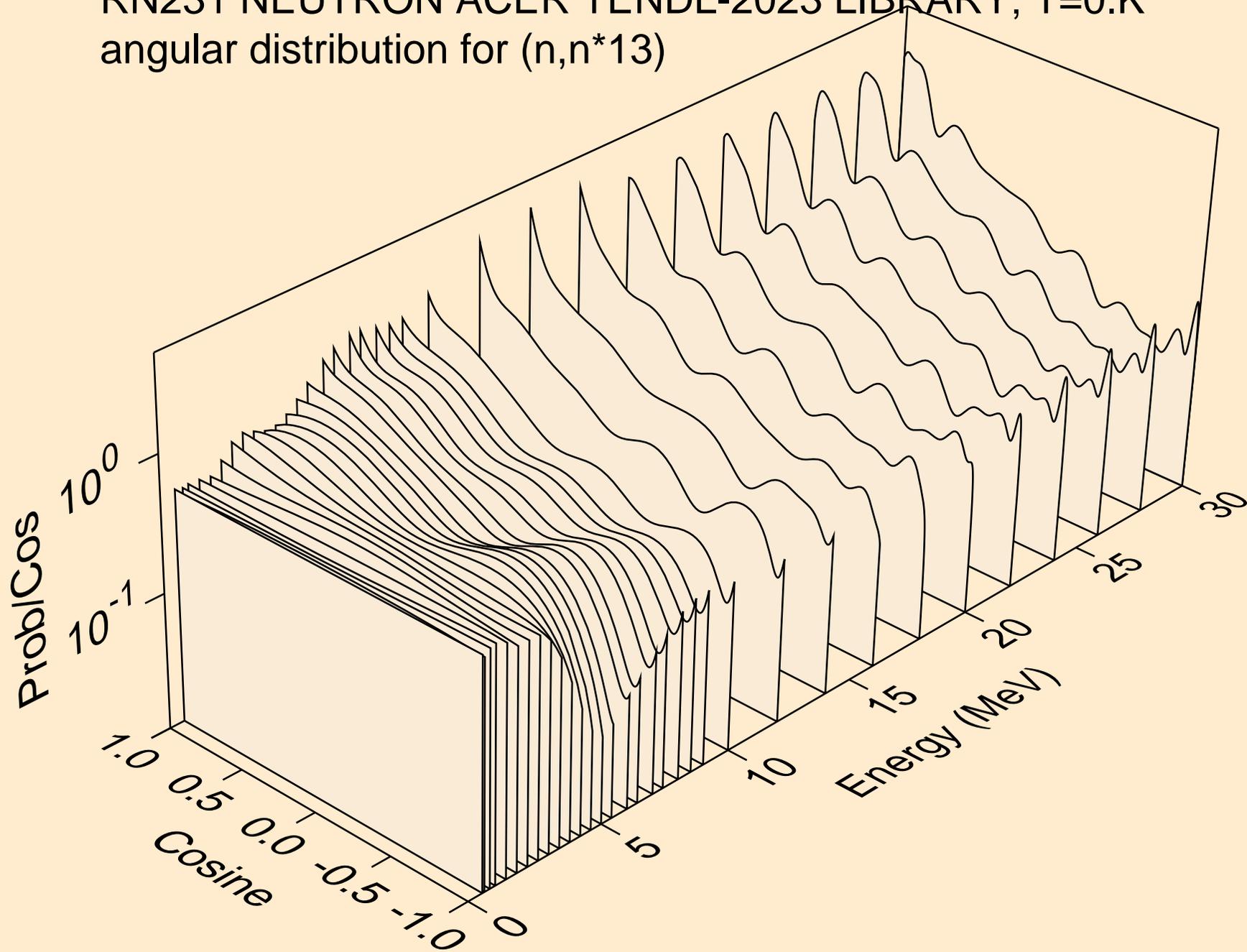angular distribution for (n,n*10)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
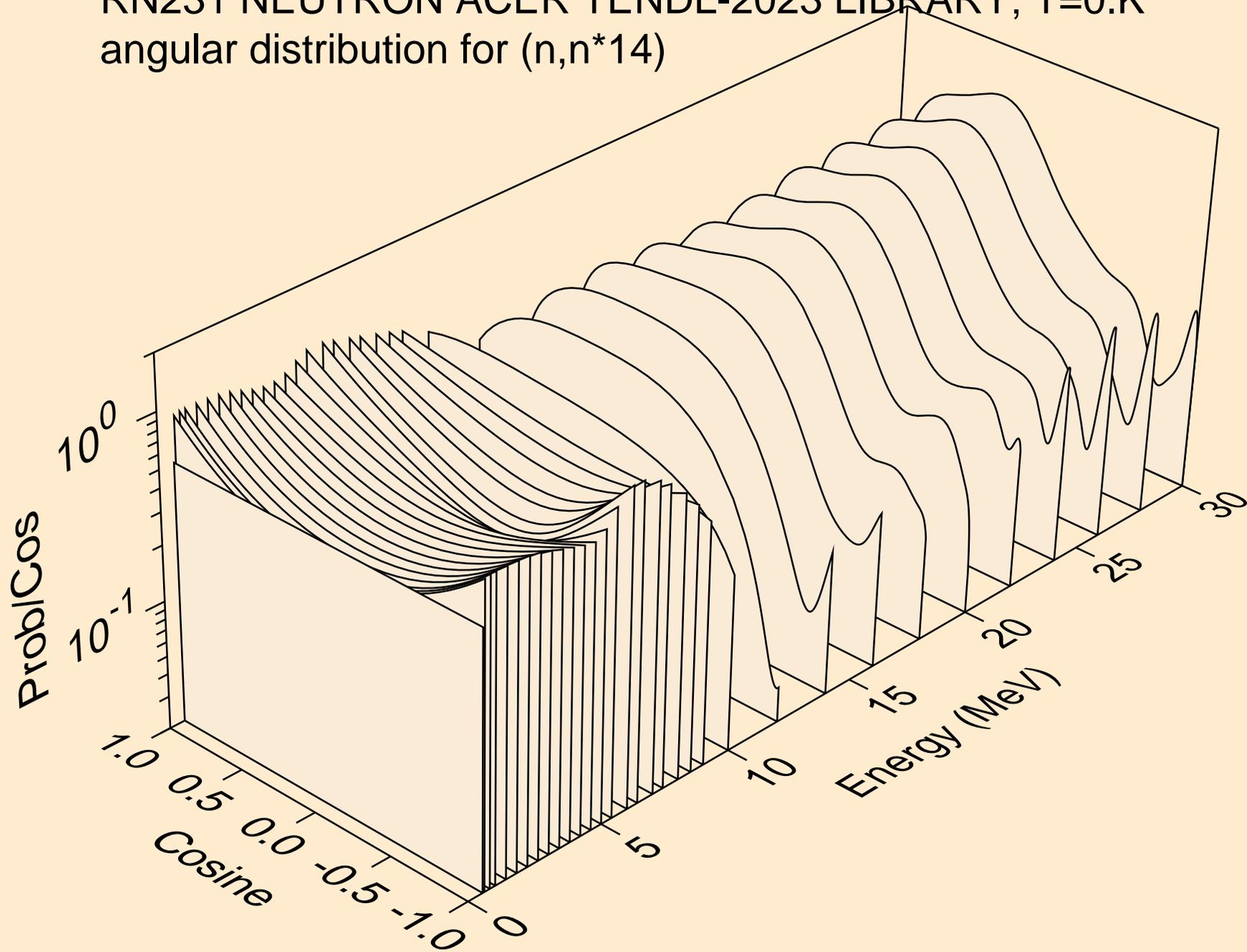angular distribution for (n,n*11)

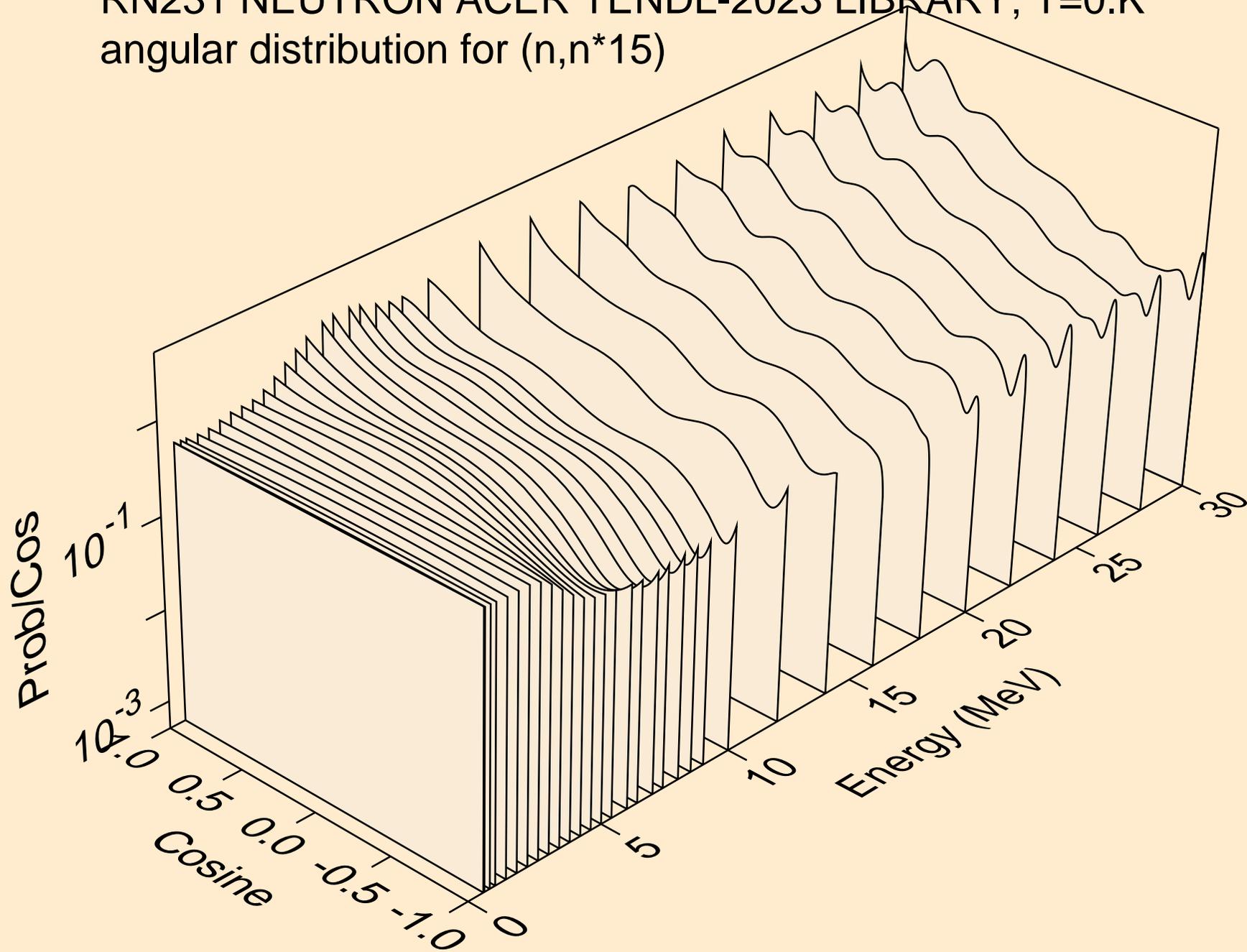RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*12)

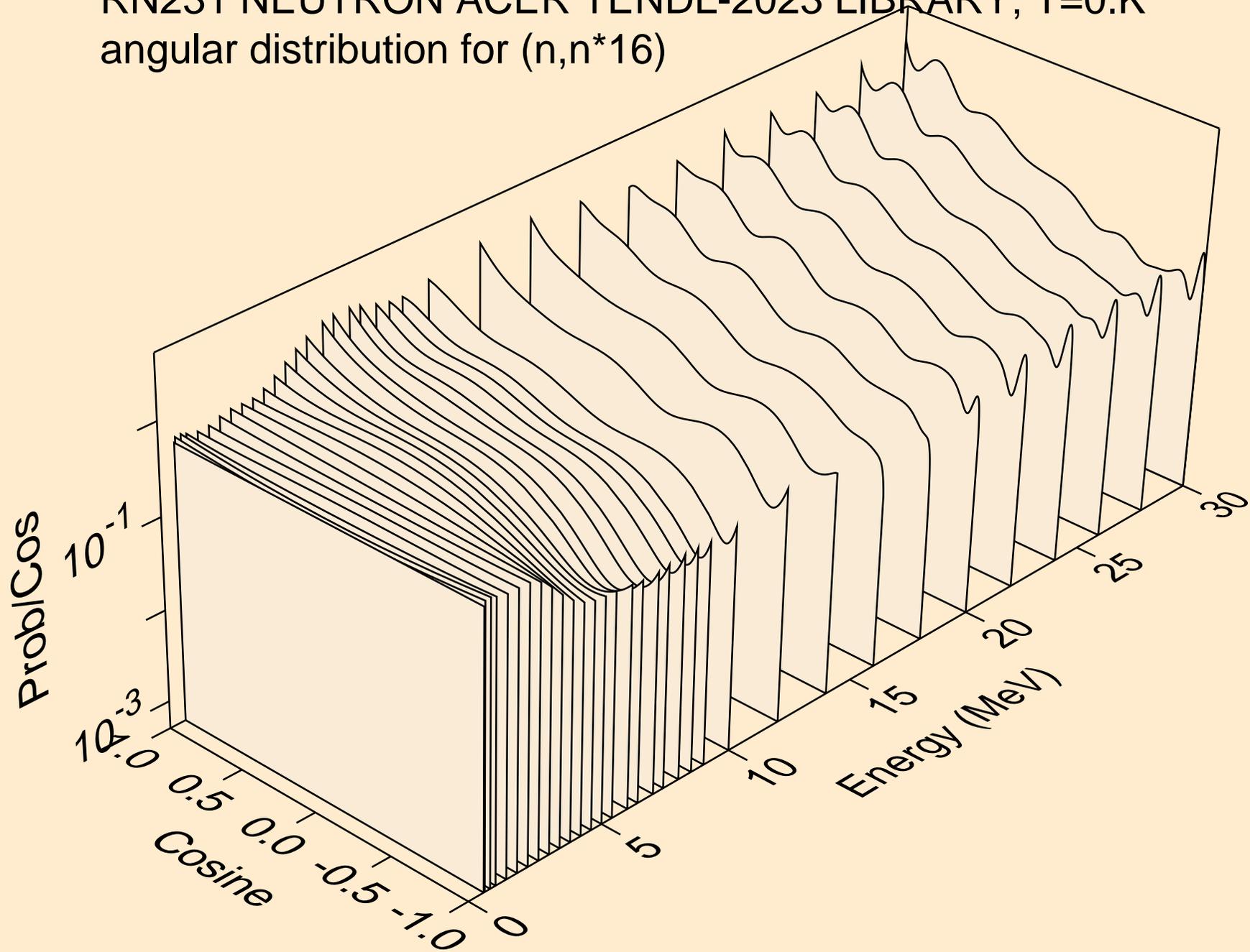RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*13)

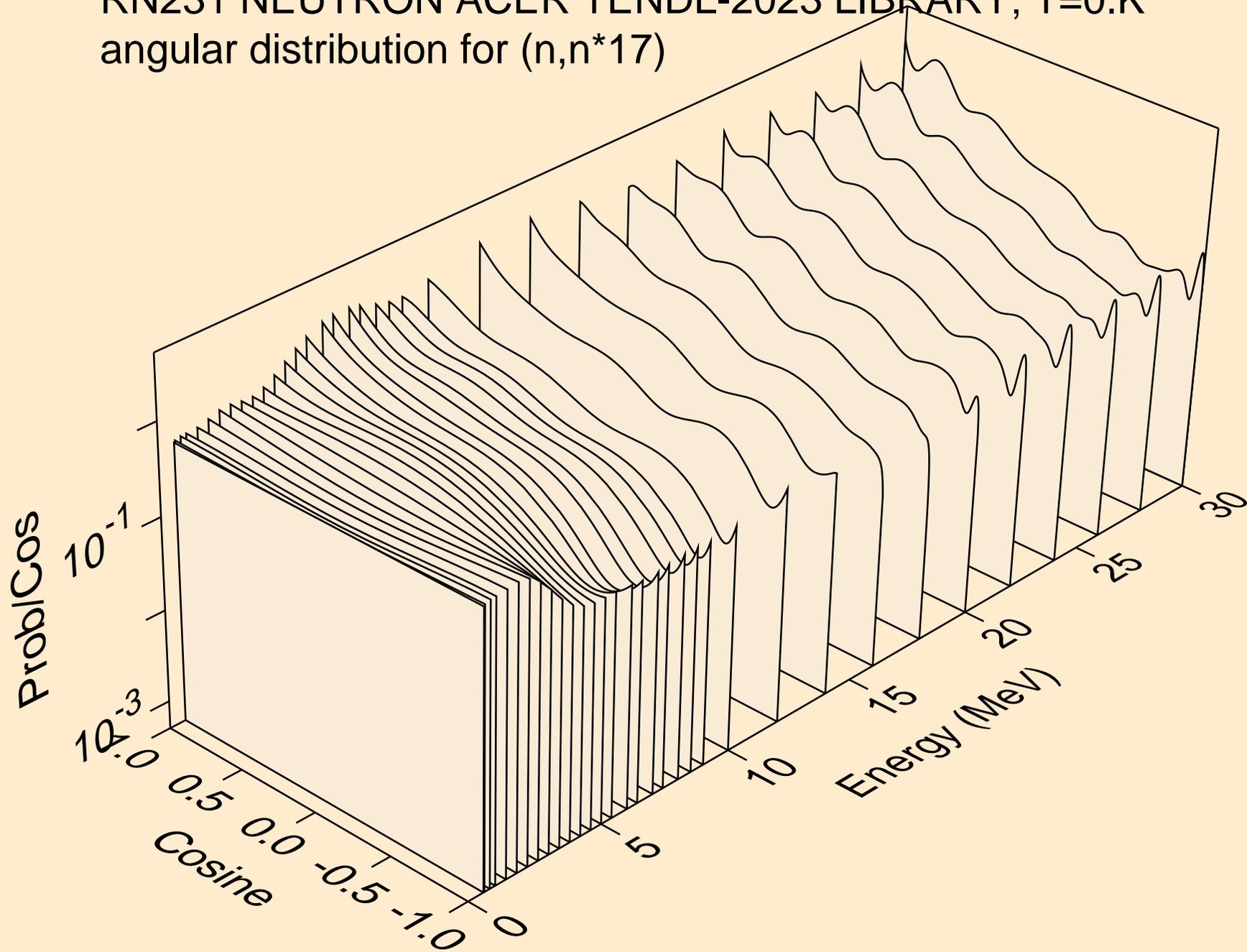RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*14)

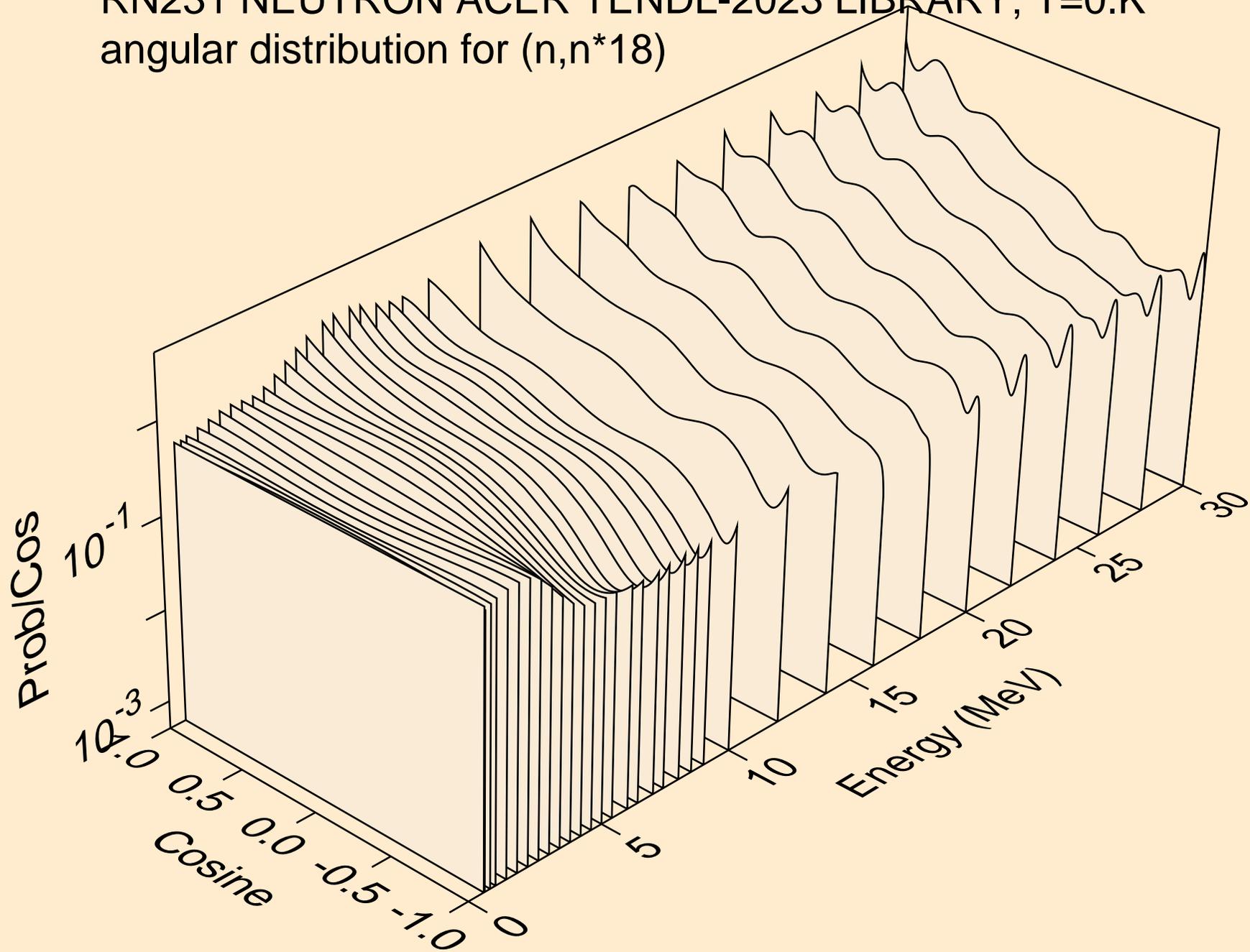RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*15)

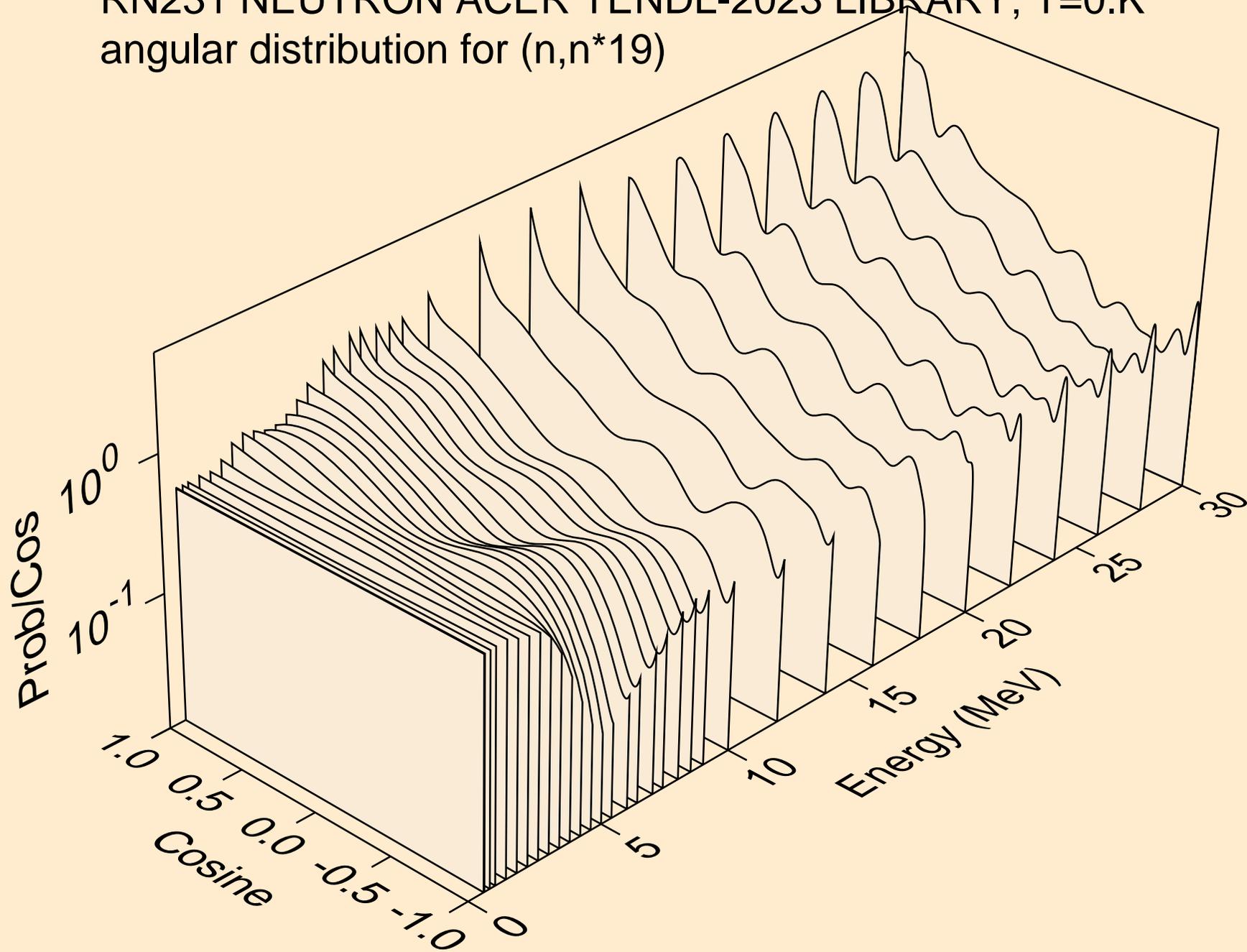RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*16)

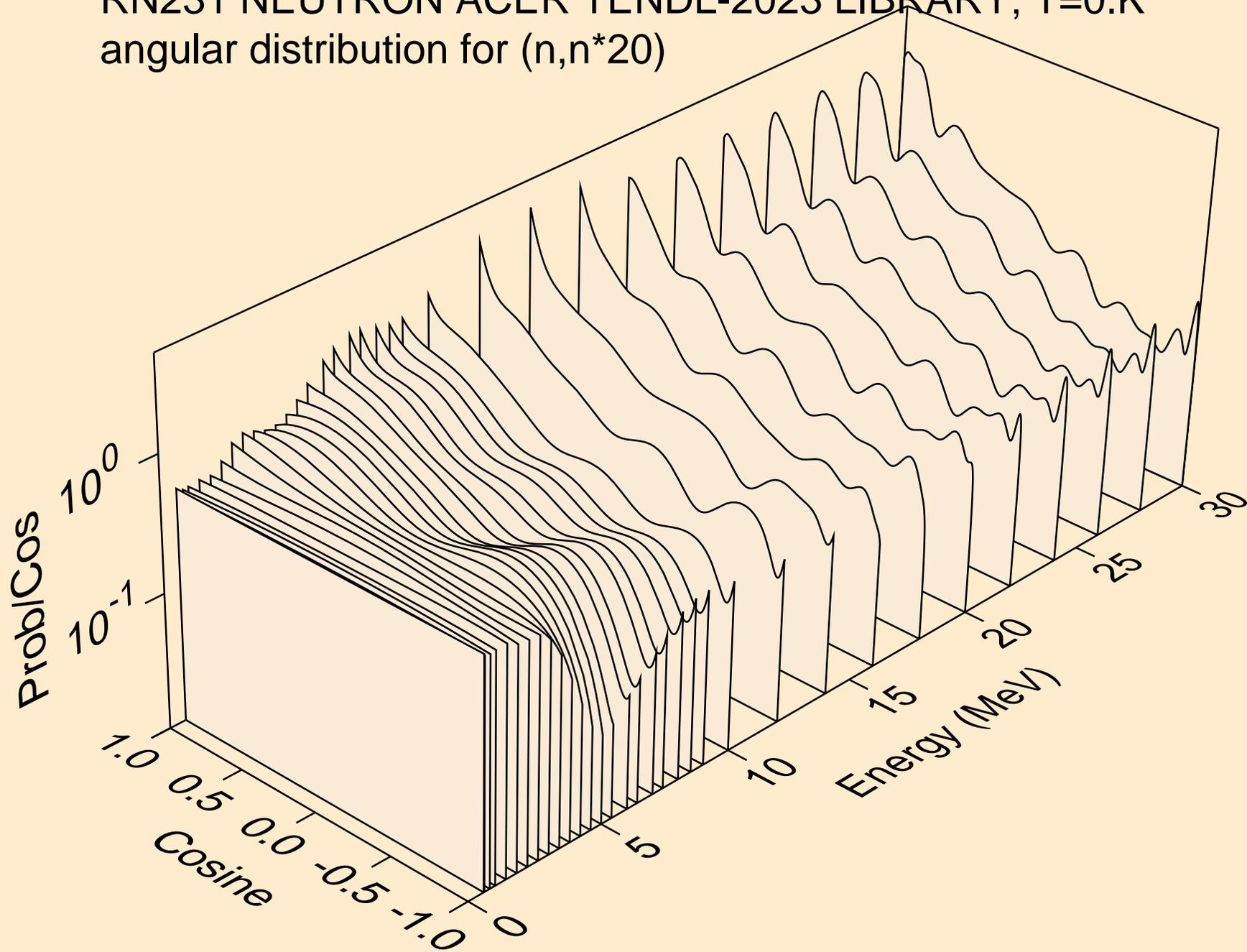RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*17)

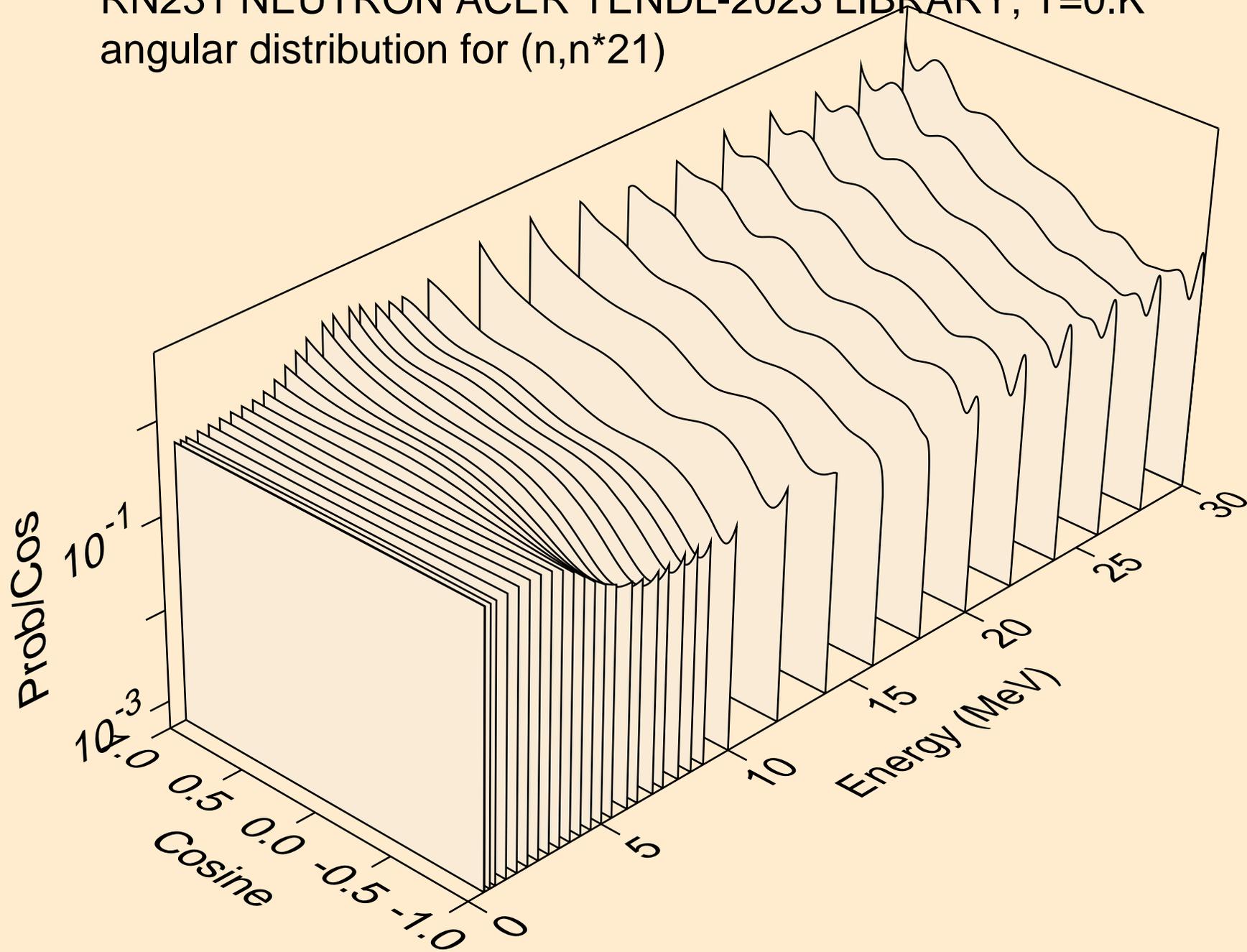RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*18)

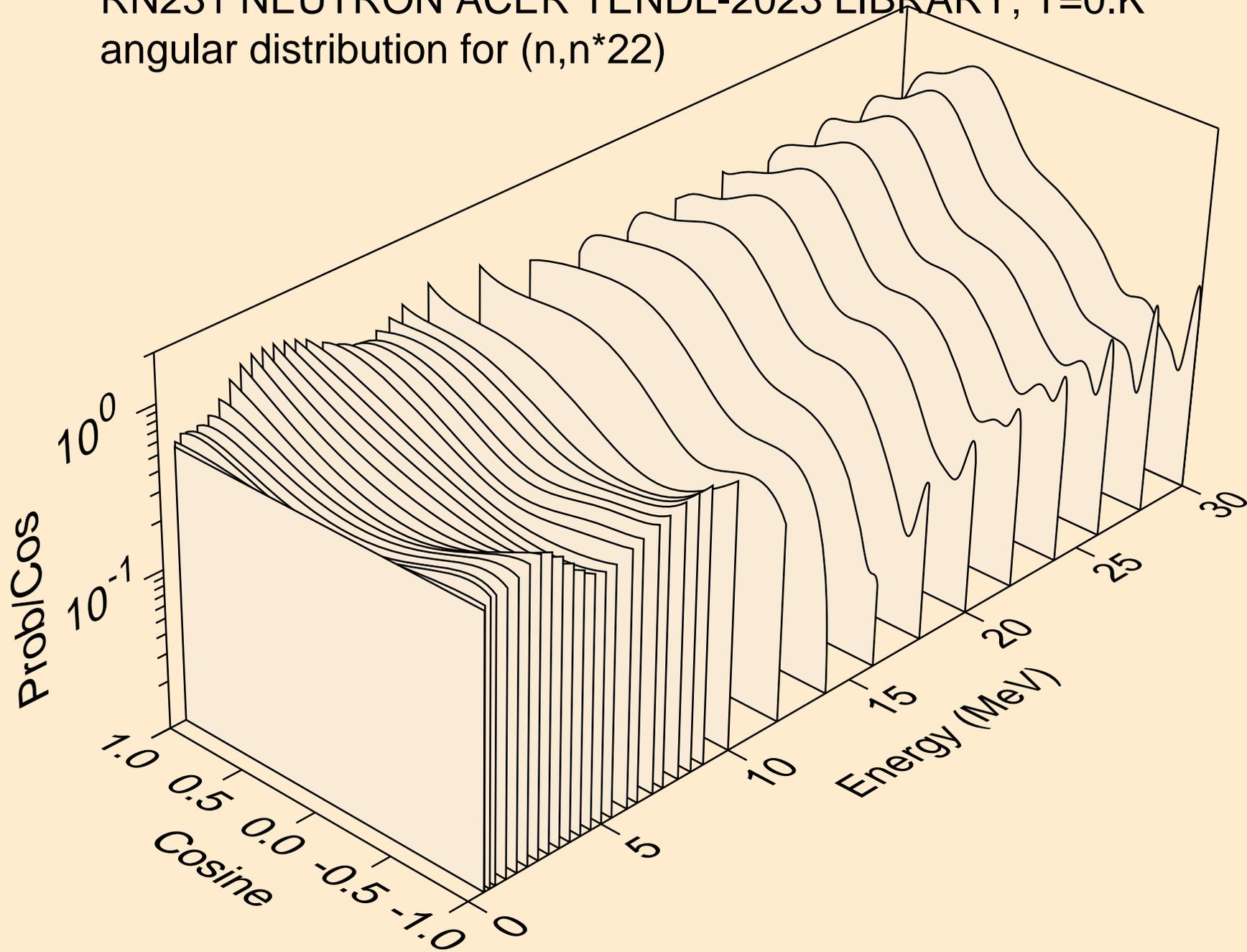RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*19)

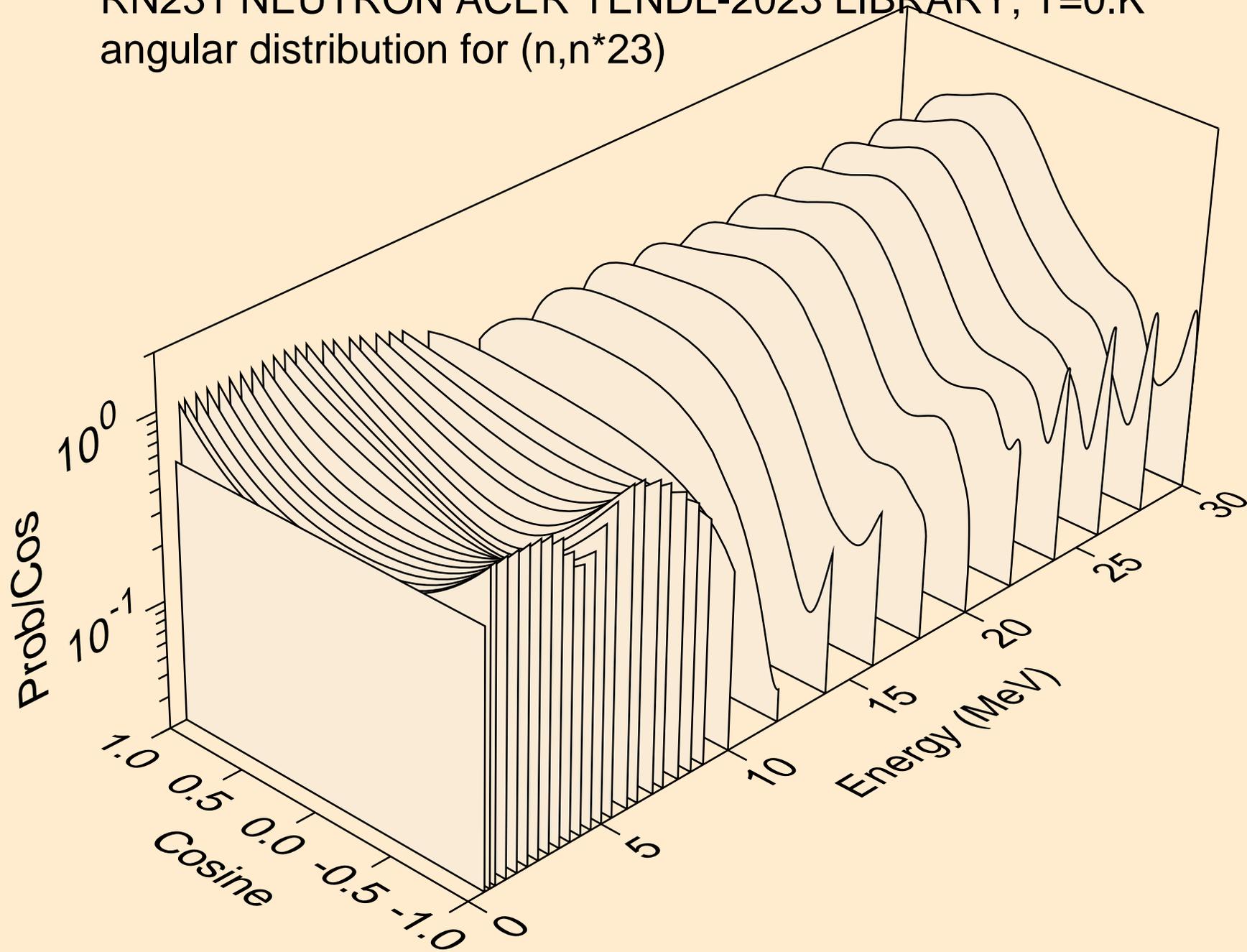RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*20)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
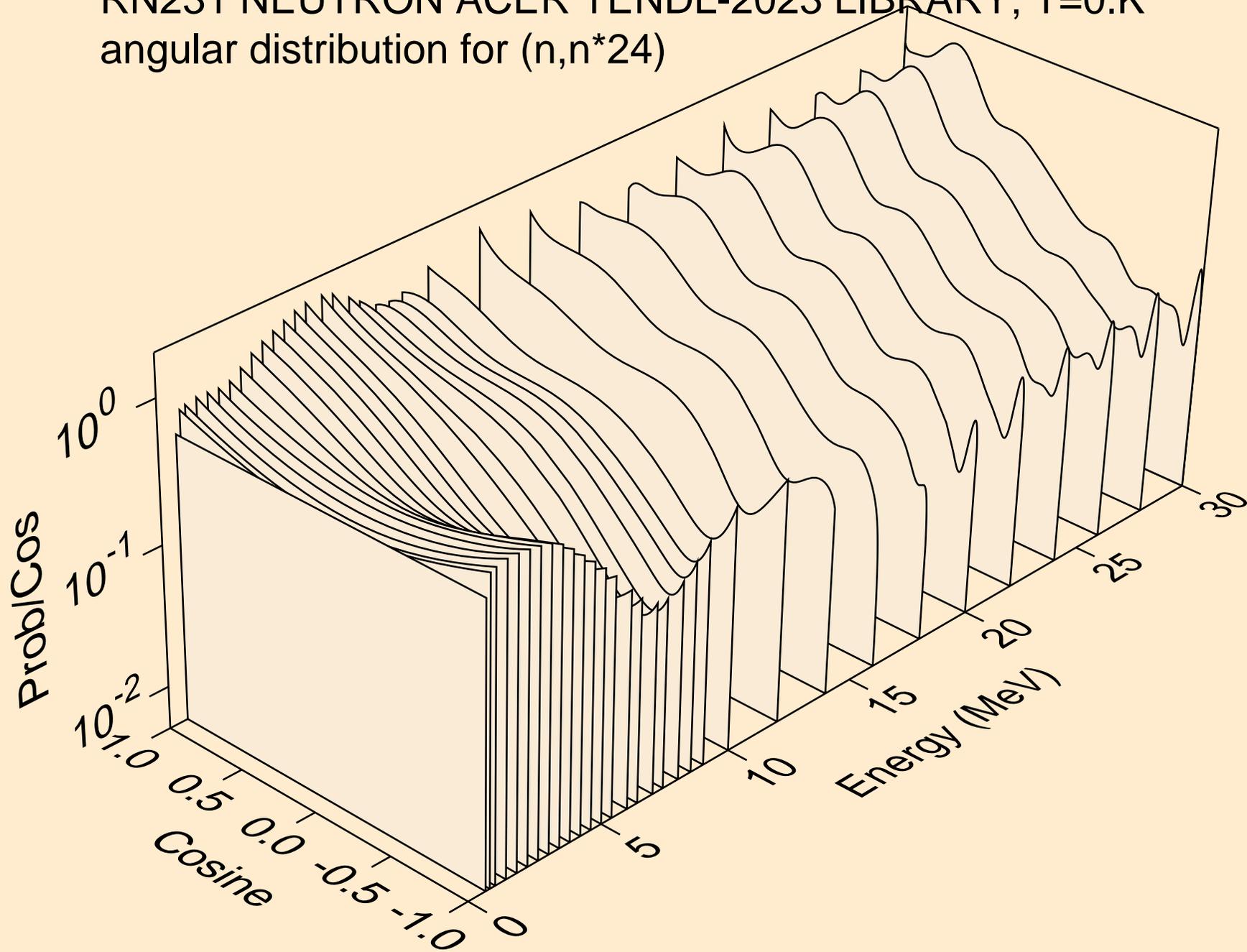angular distribution for (n,n*21)

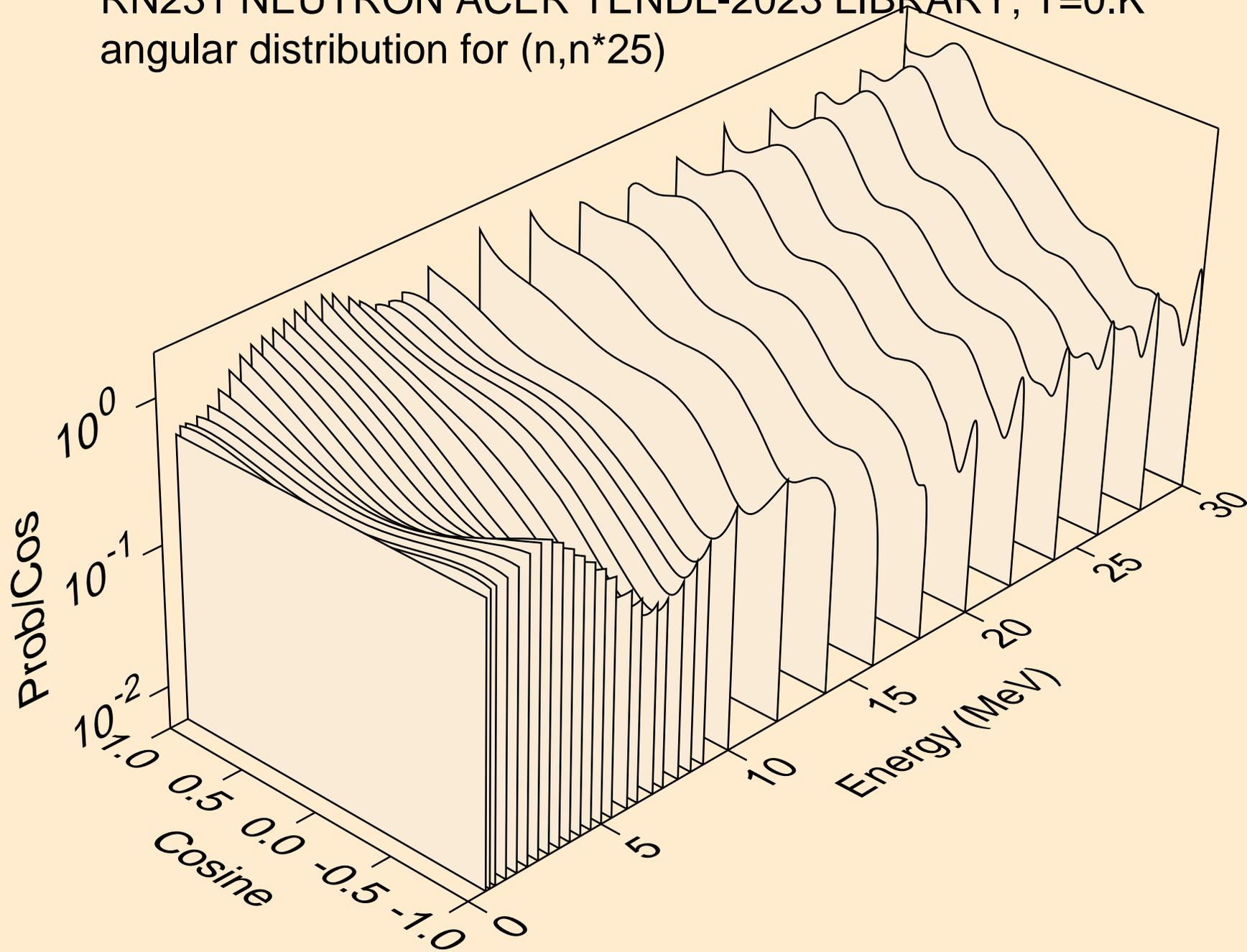RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for (n,n*22)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
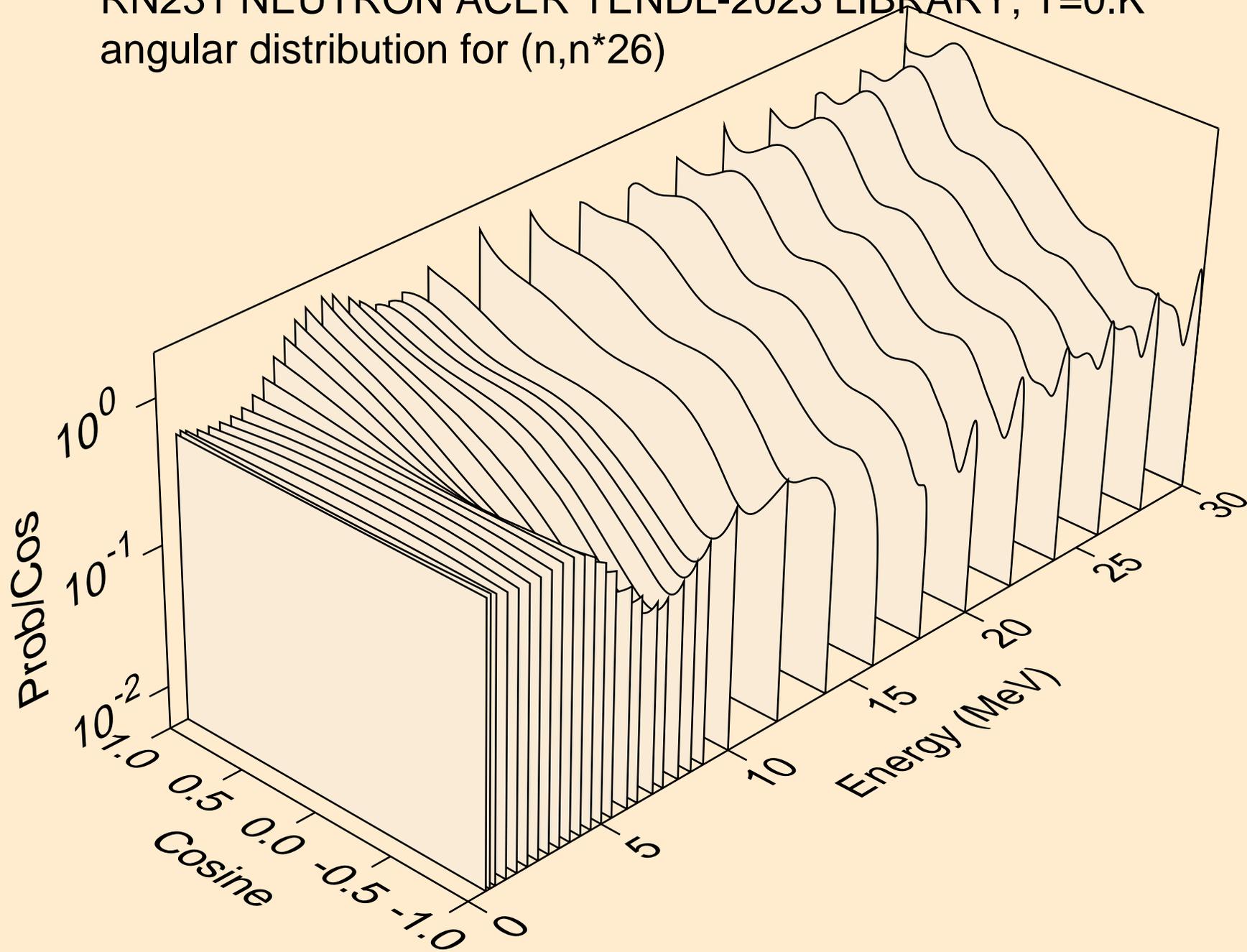angular distribution for (n,n*23)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
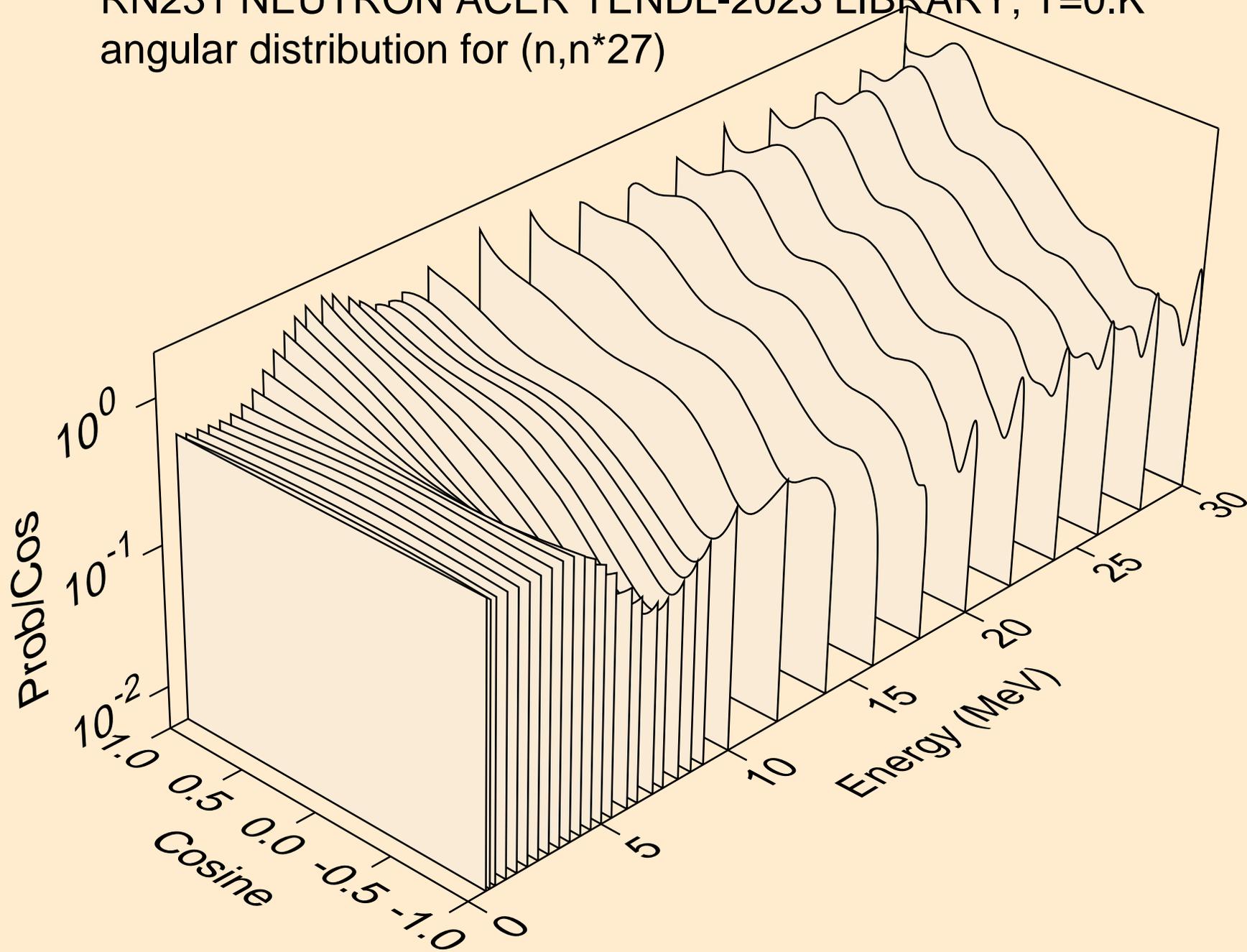angular distribution for (n,n*24)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
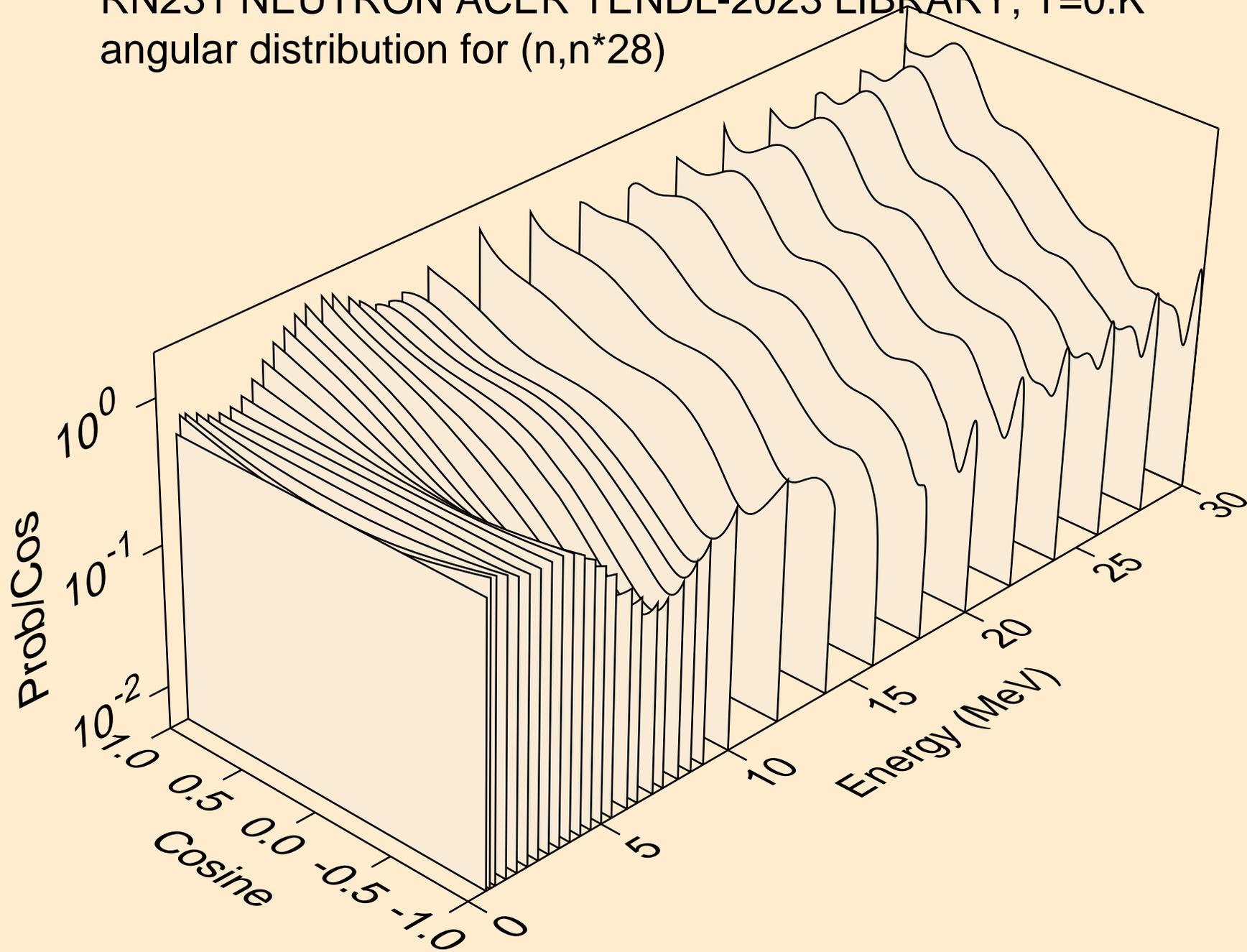angular distribution for (n,n*25)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
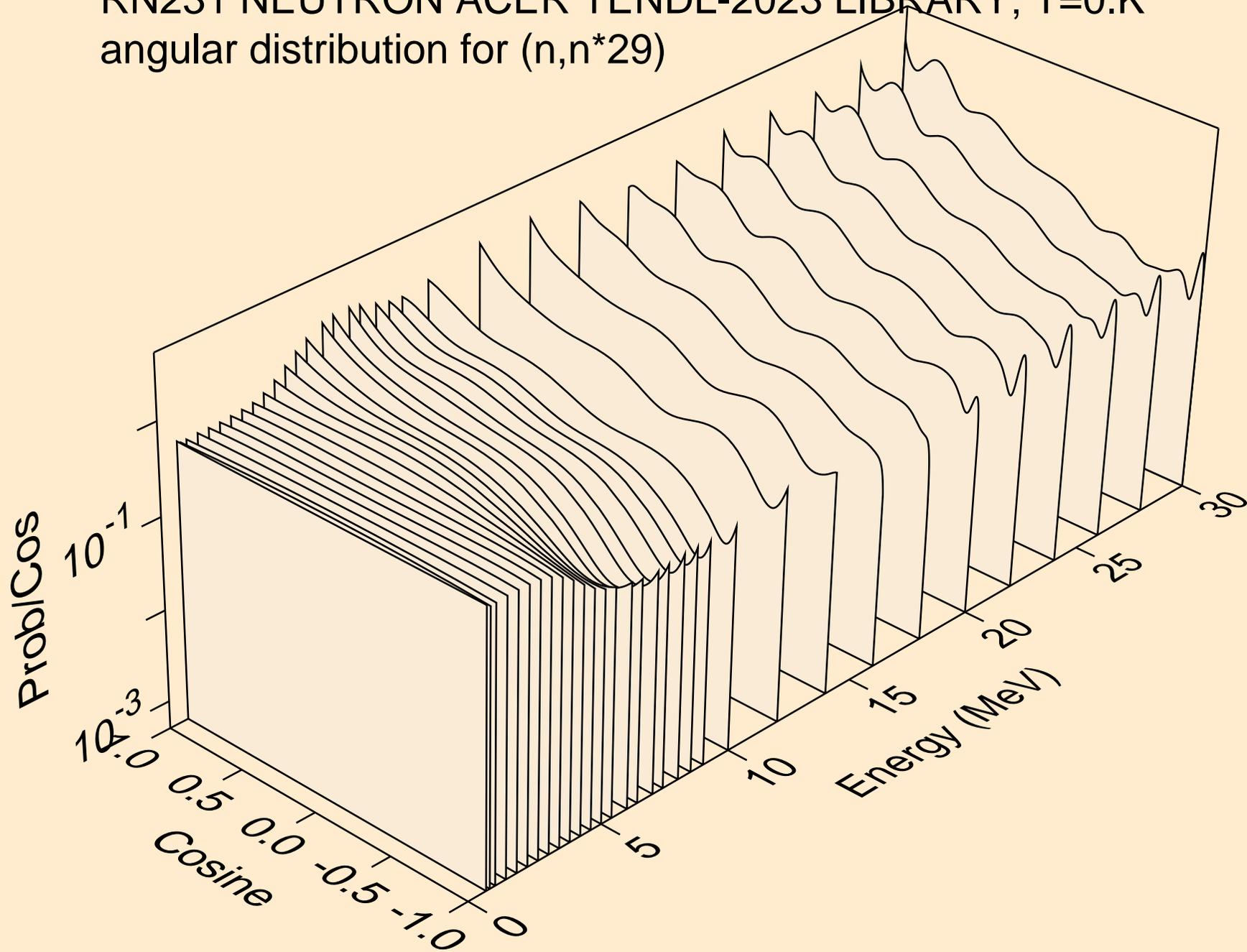angular distribution for (n,n*26)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
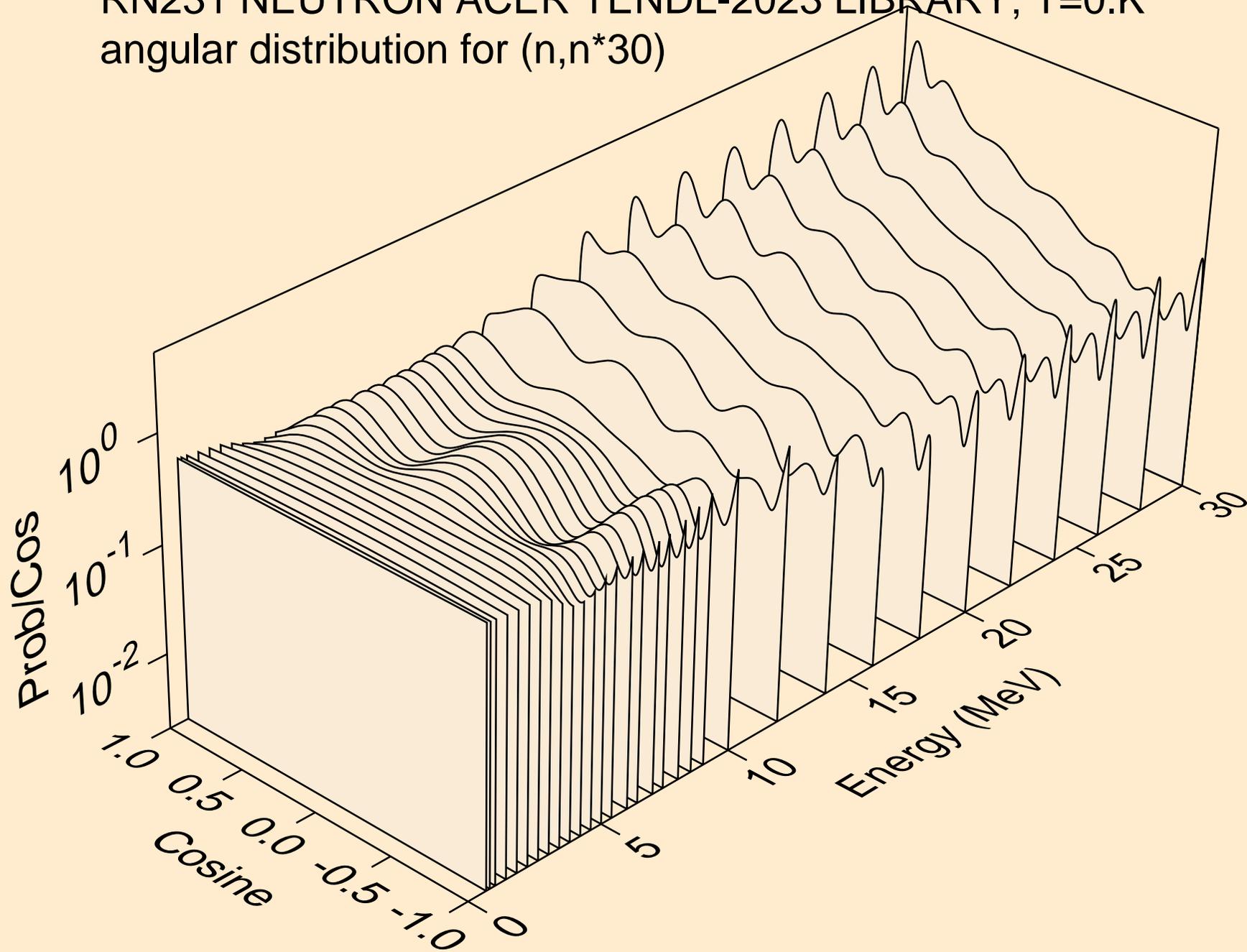angular distribution for (n,n*27)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
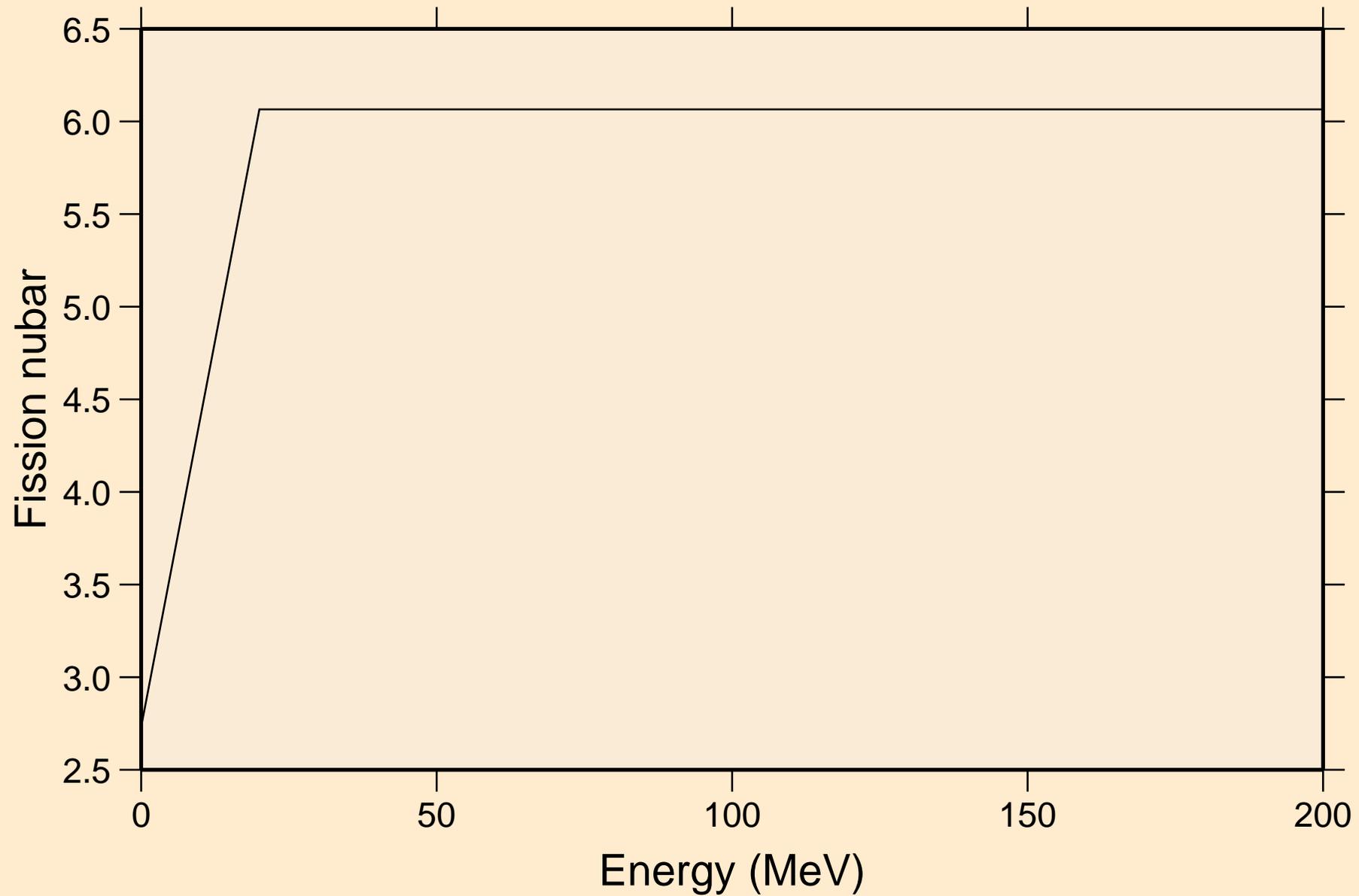angular distribution for (n,n*28)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
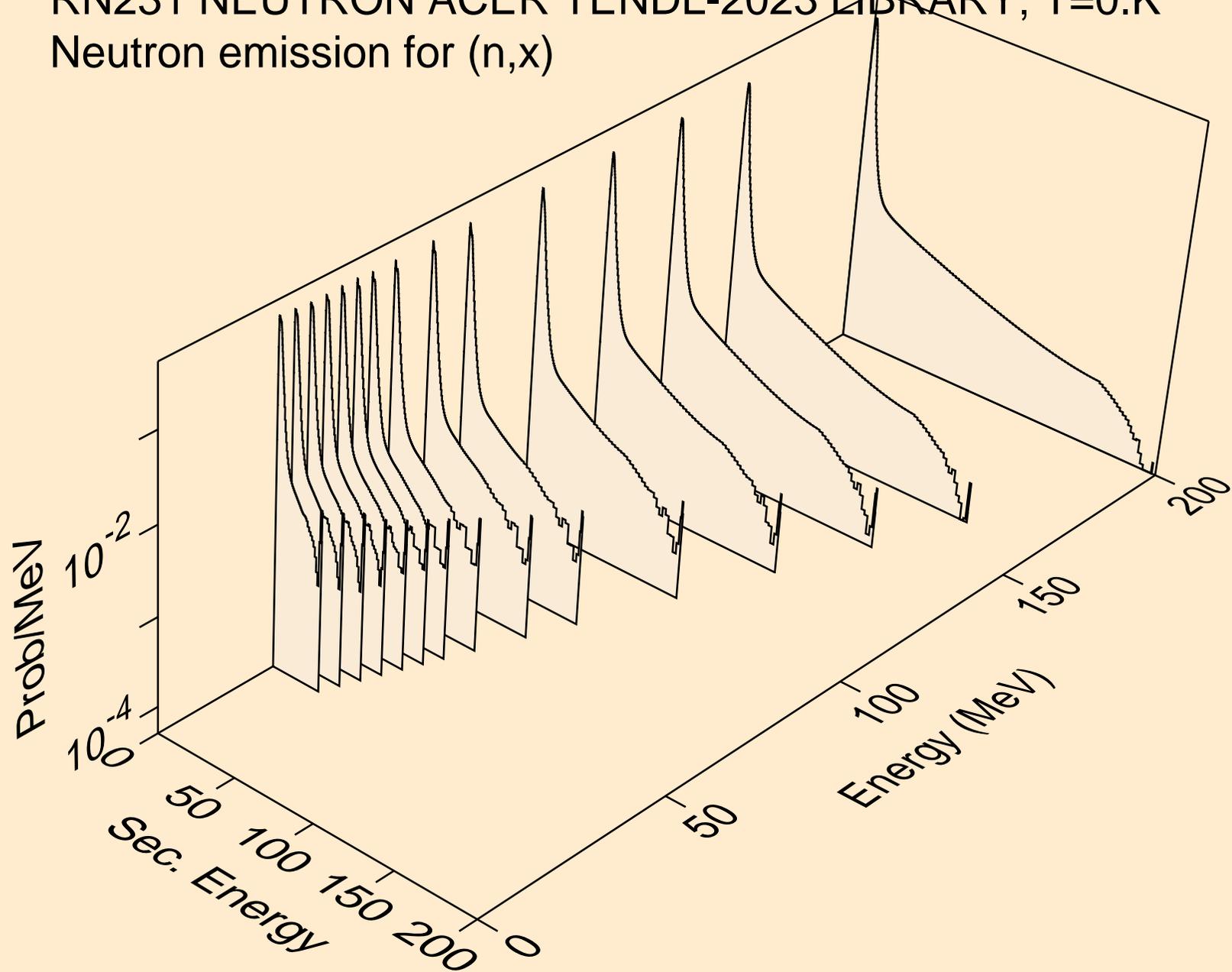angular distribution for (n,n*29)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
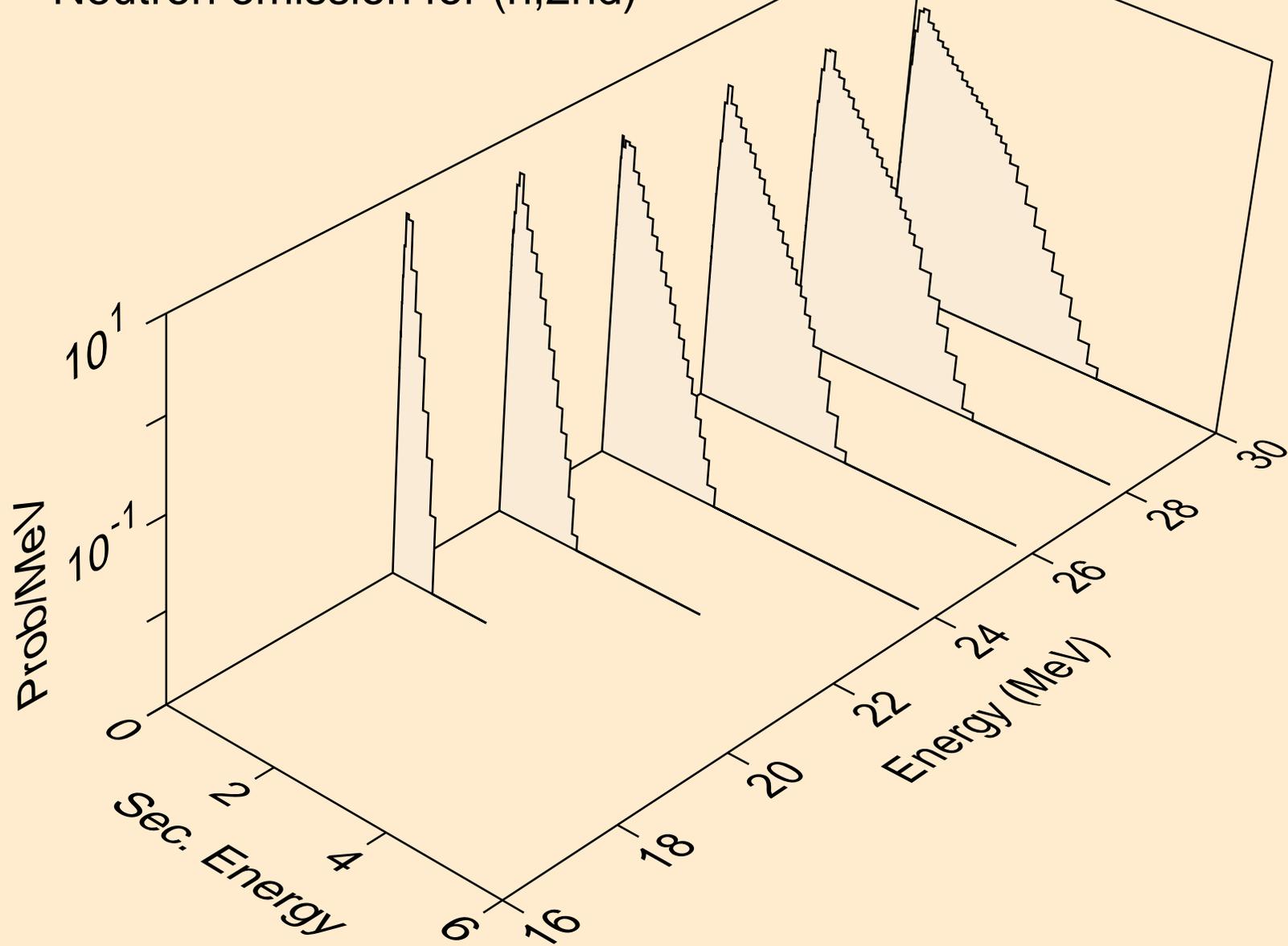angular distribution for (n,n*30)

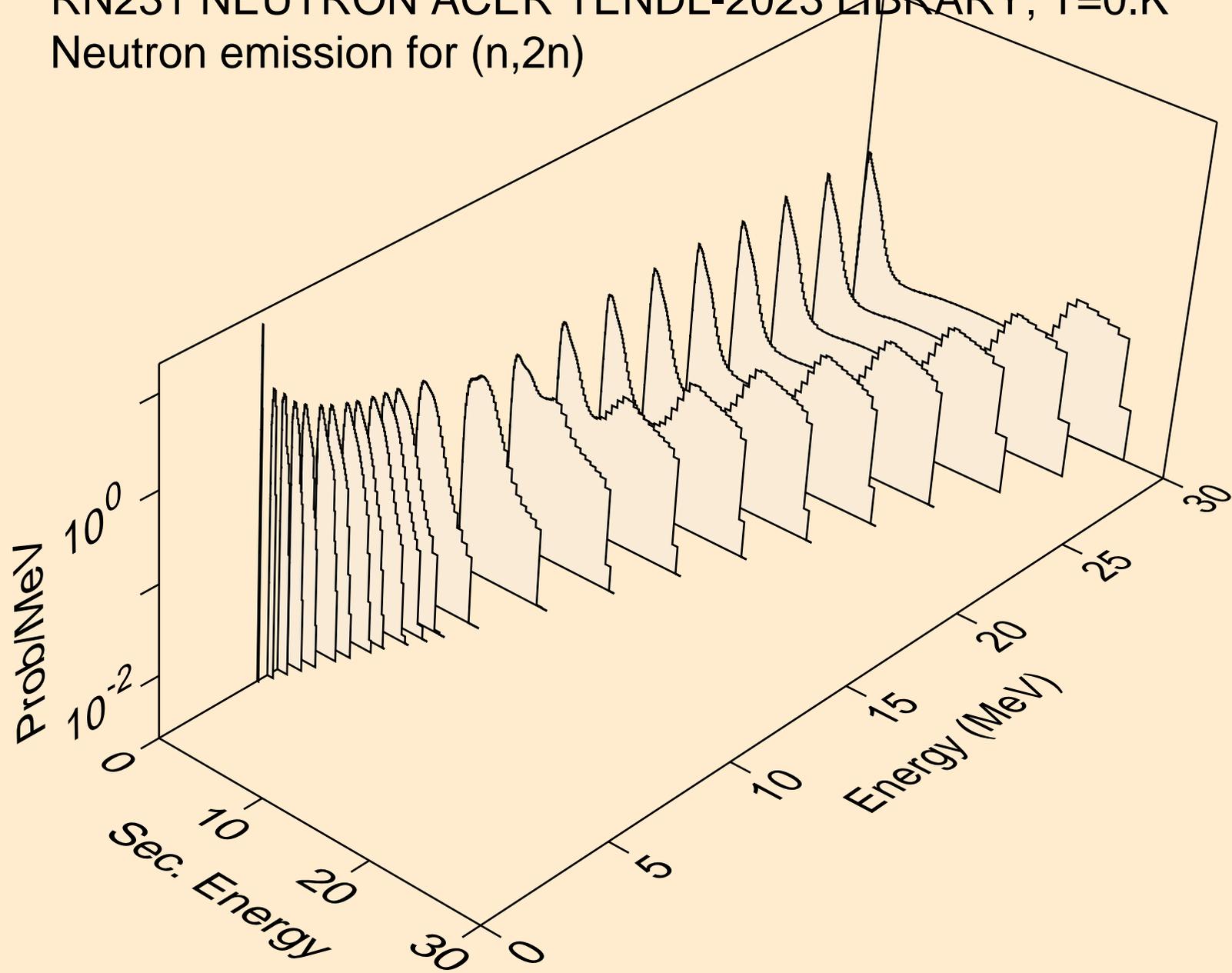RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Total fission nubar

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
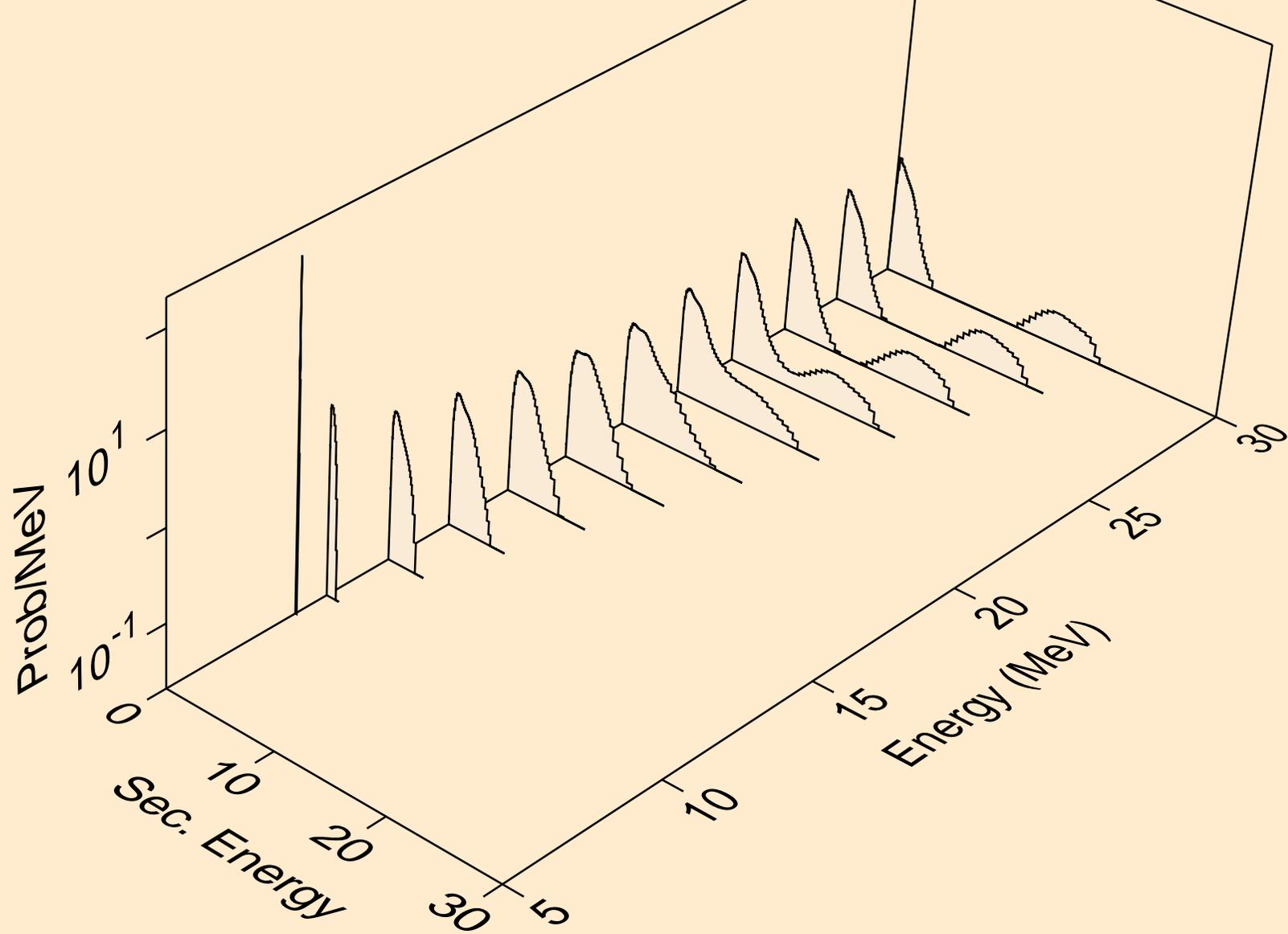Neutron emission for (n,x)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
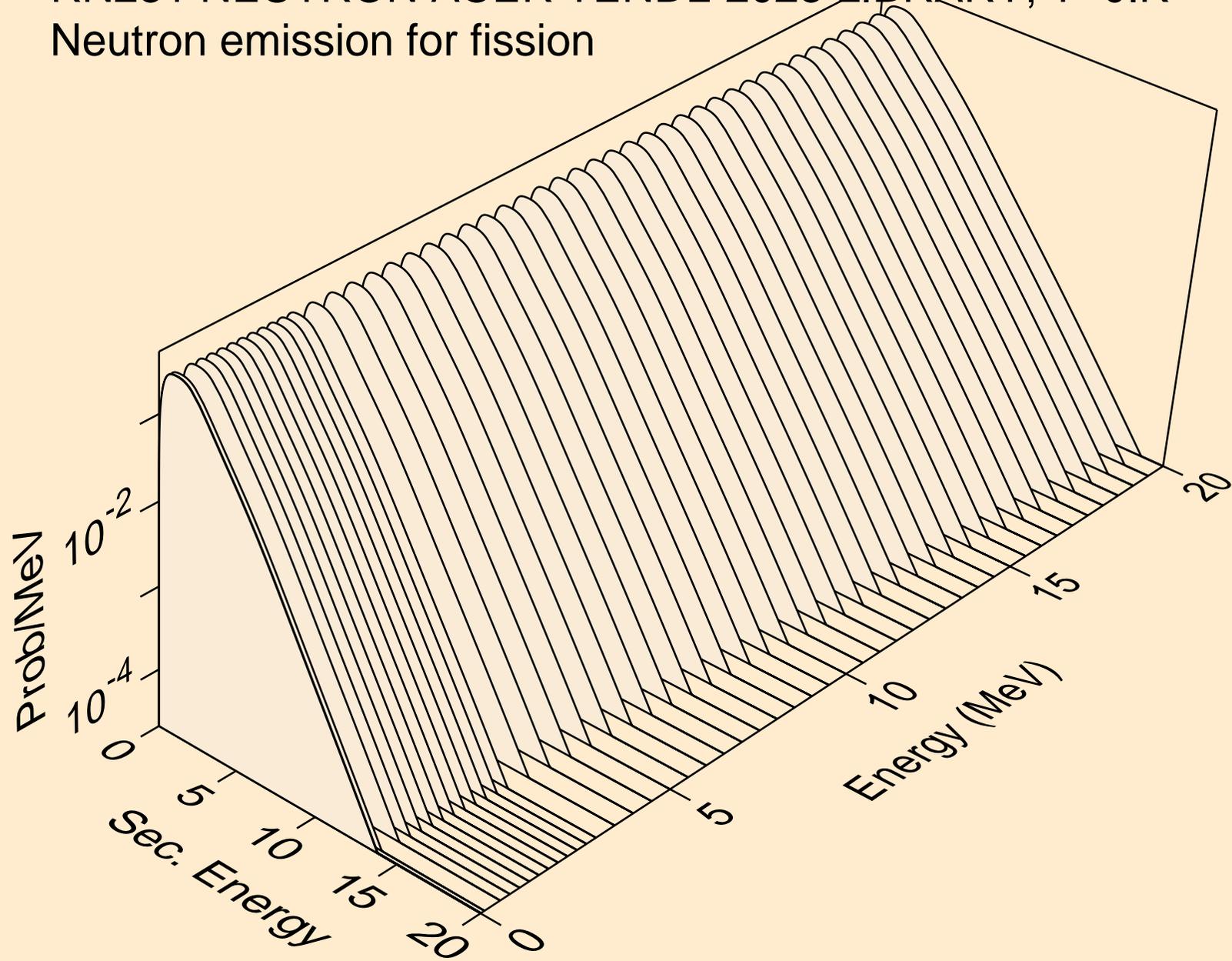Neutron emission for (n,2nd)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
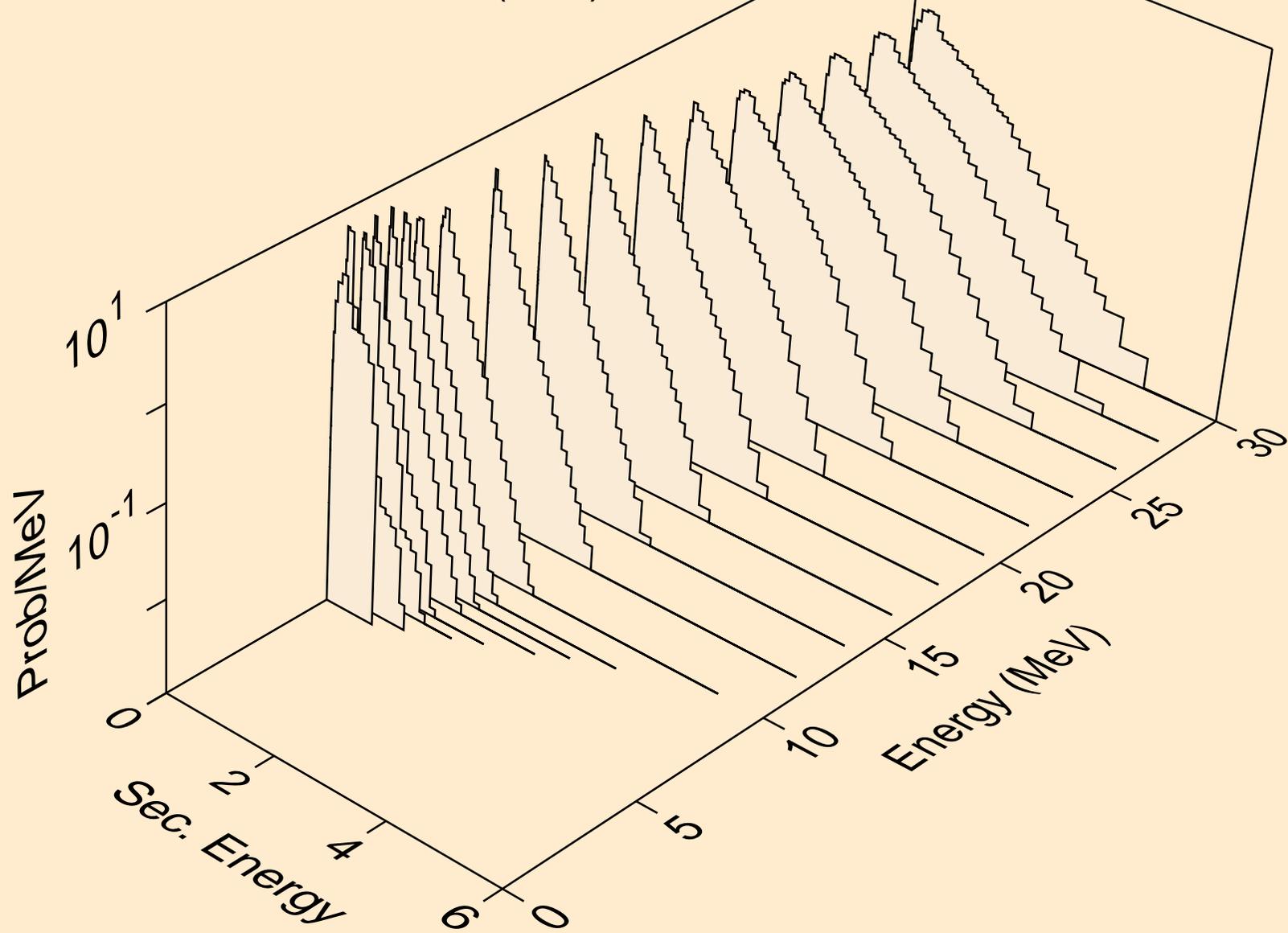Neutron emission for (n,2n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
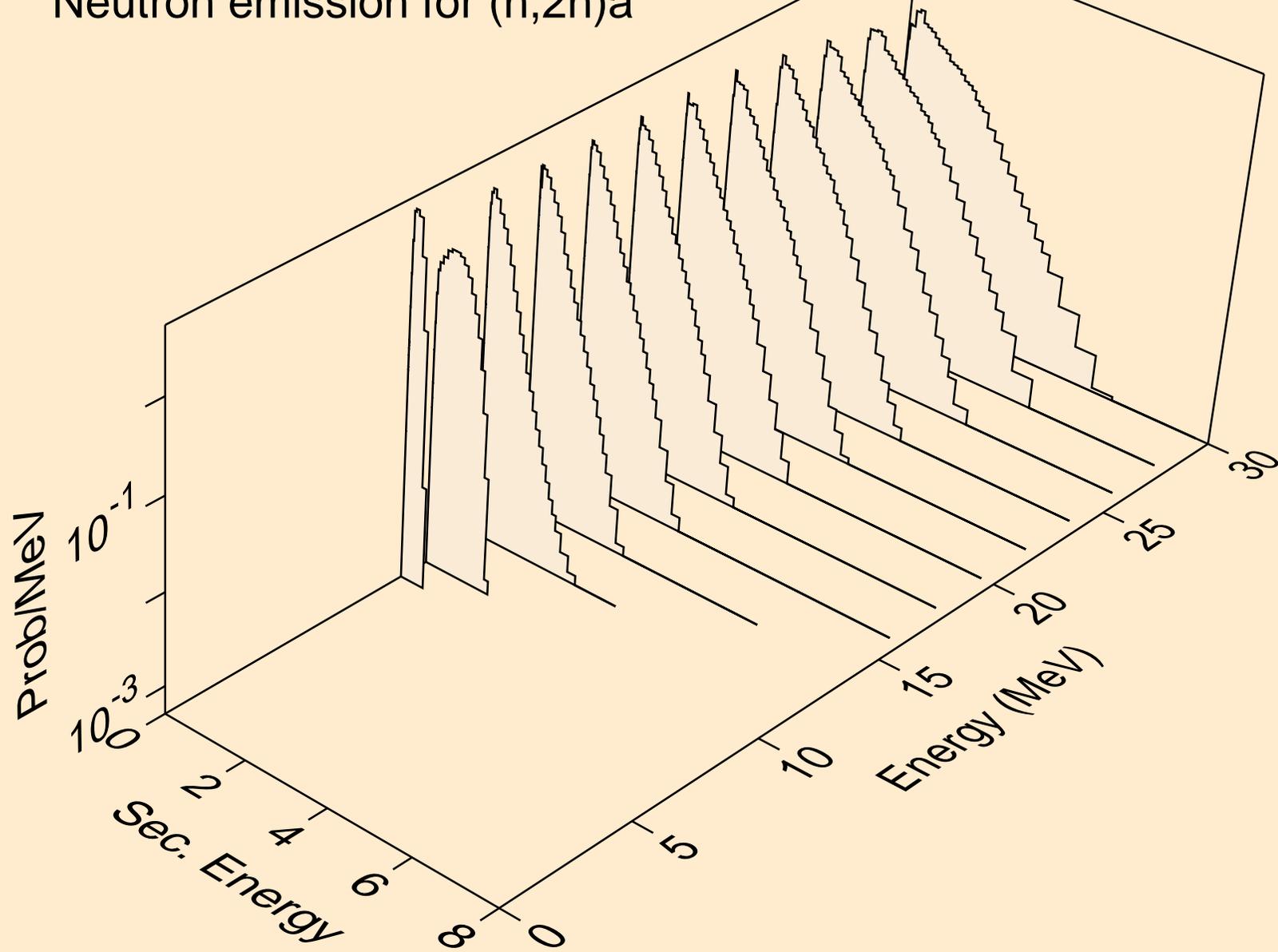Neutron emission for (n,3n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
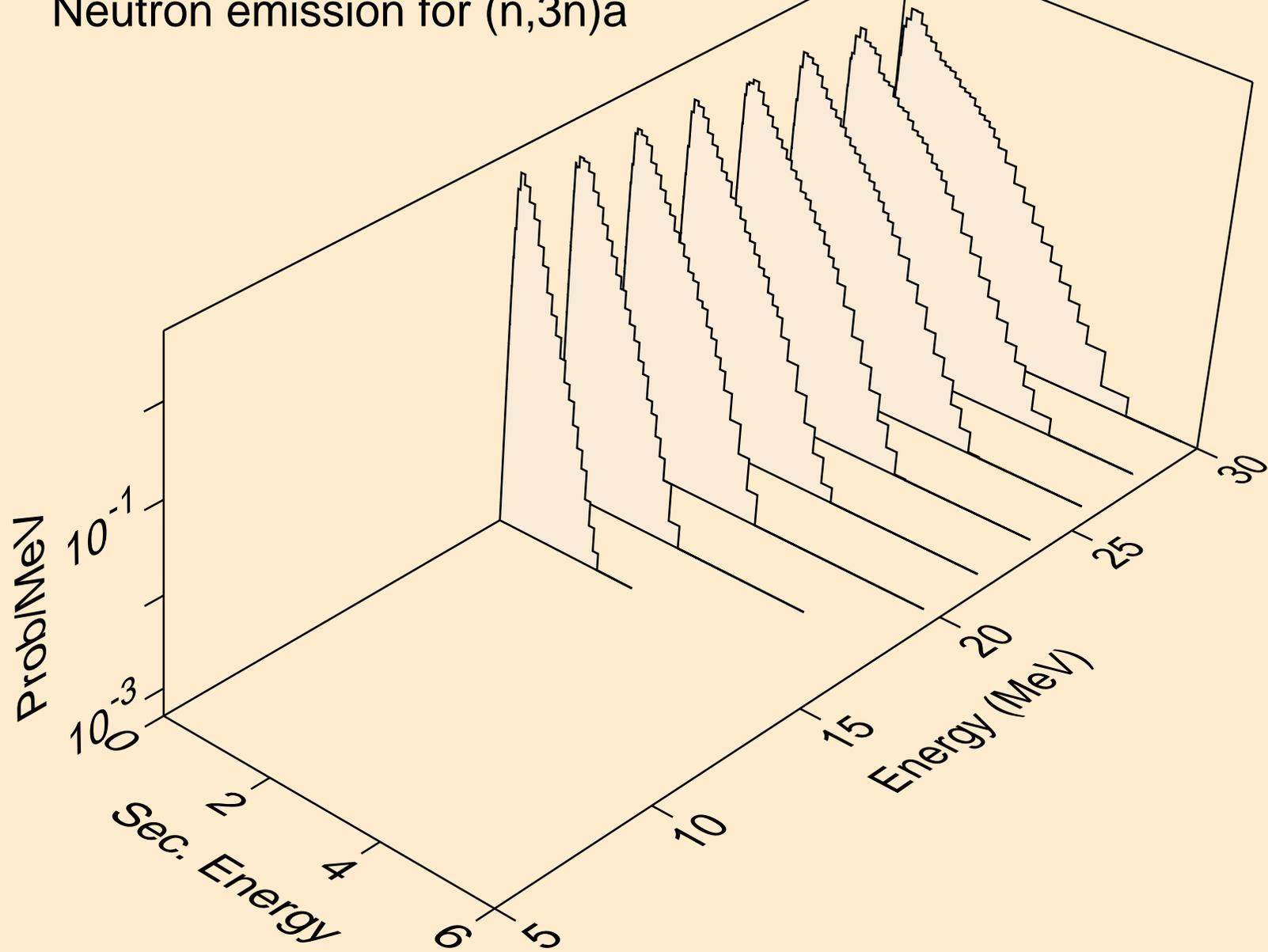Neutron emission for fission

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
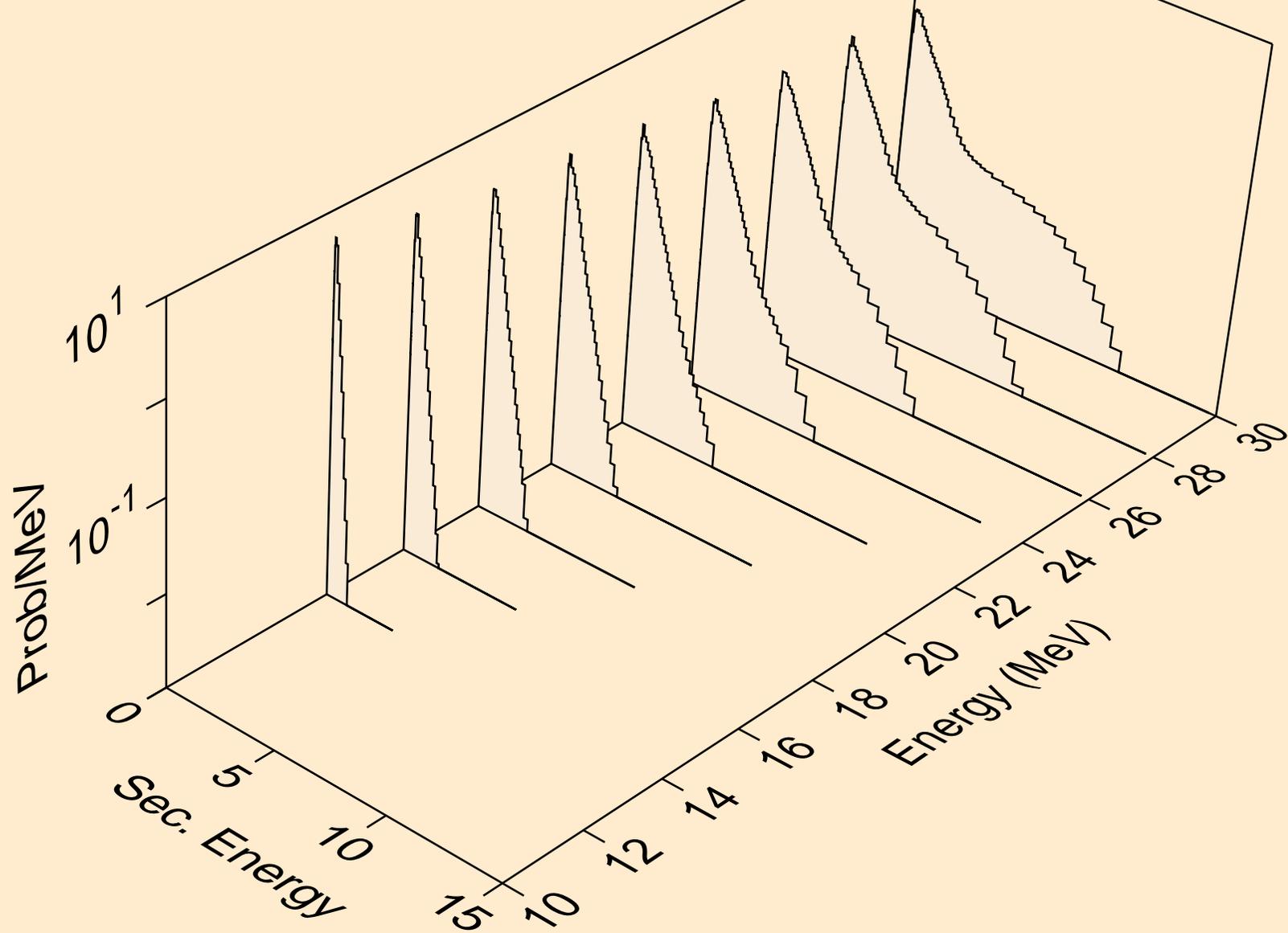Neutron emission for (n,n*)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
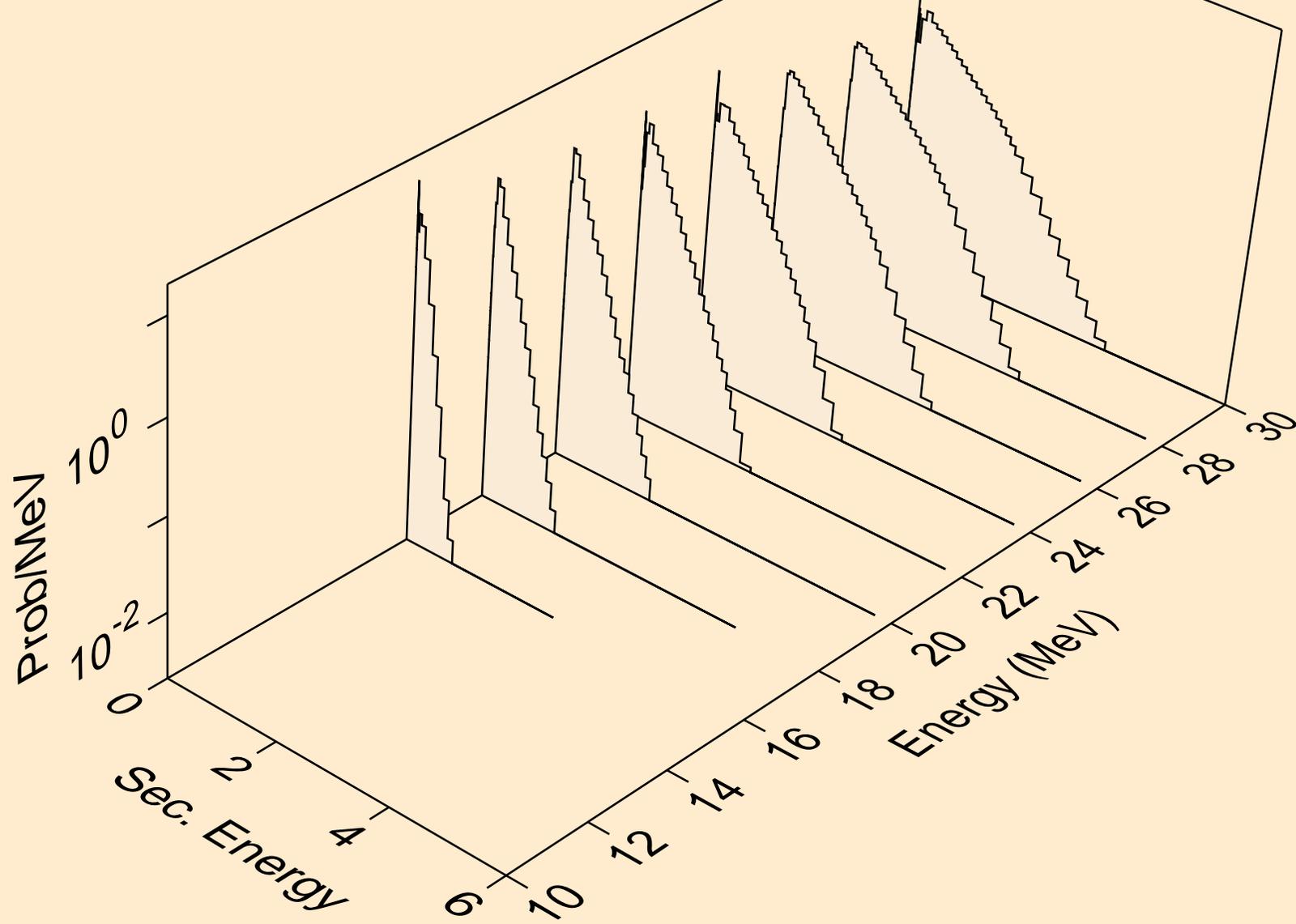Neutron emission for (n,2n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
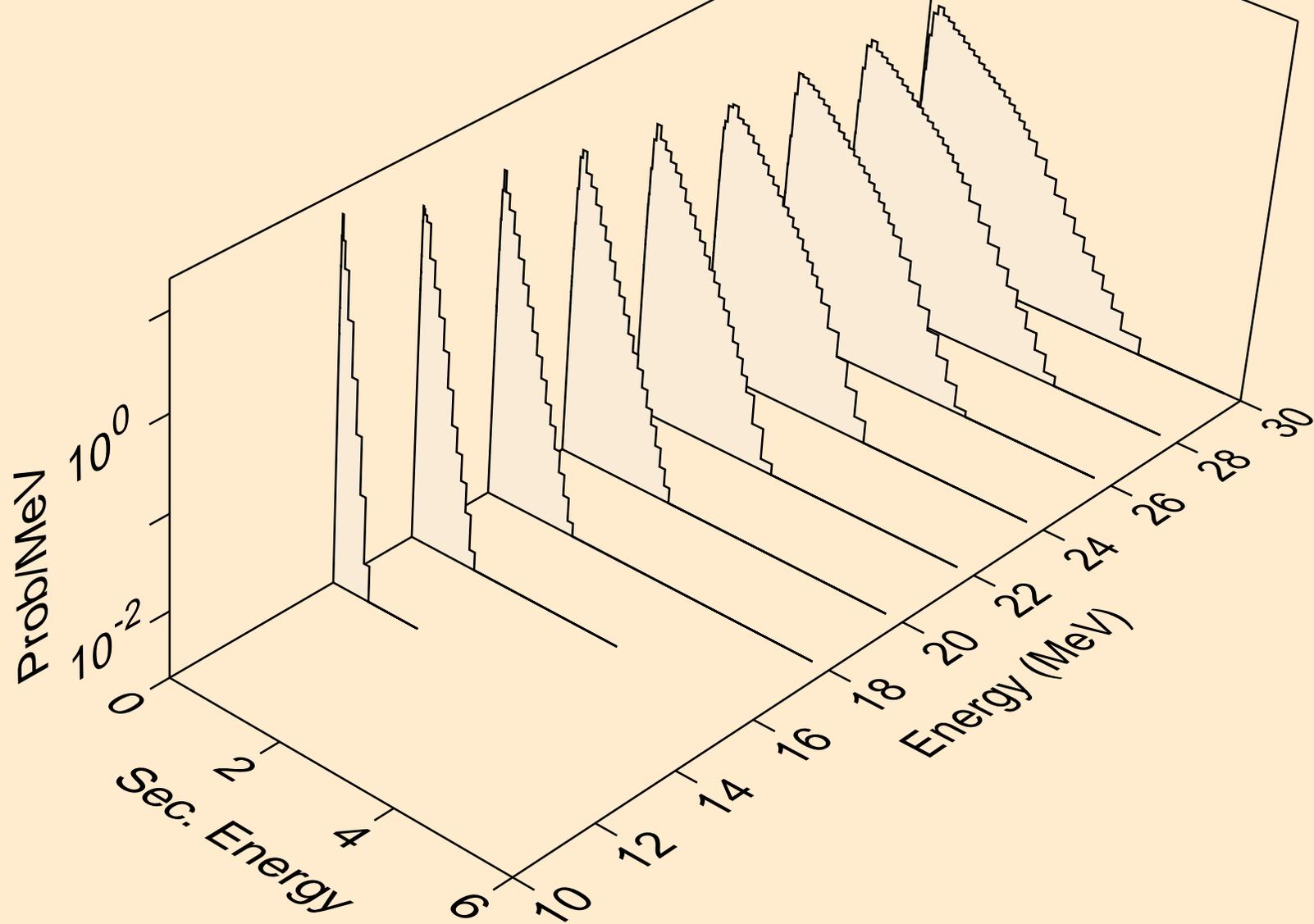Neutron emission for (n,3n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
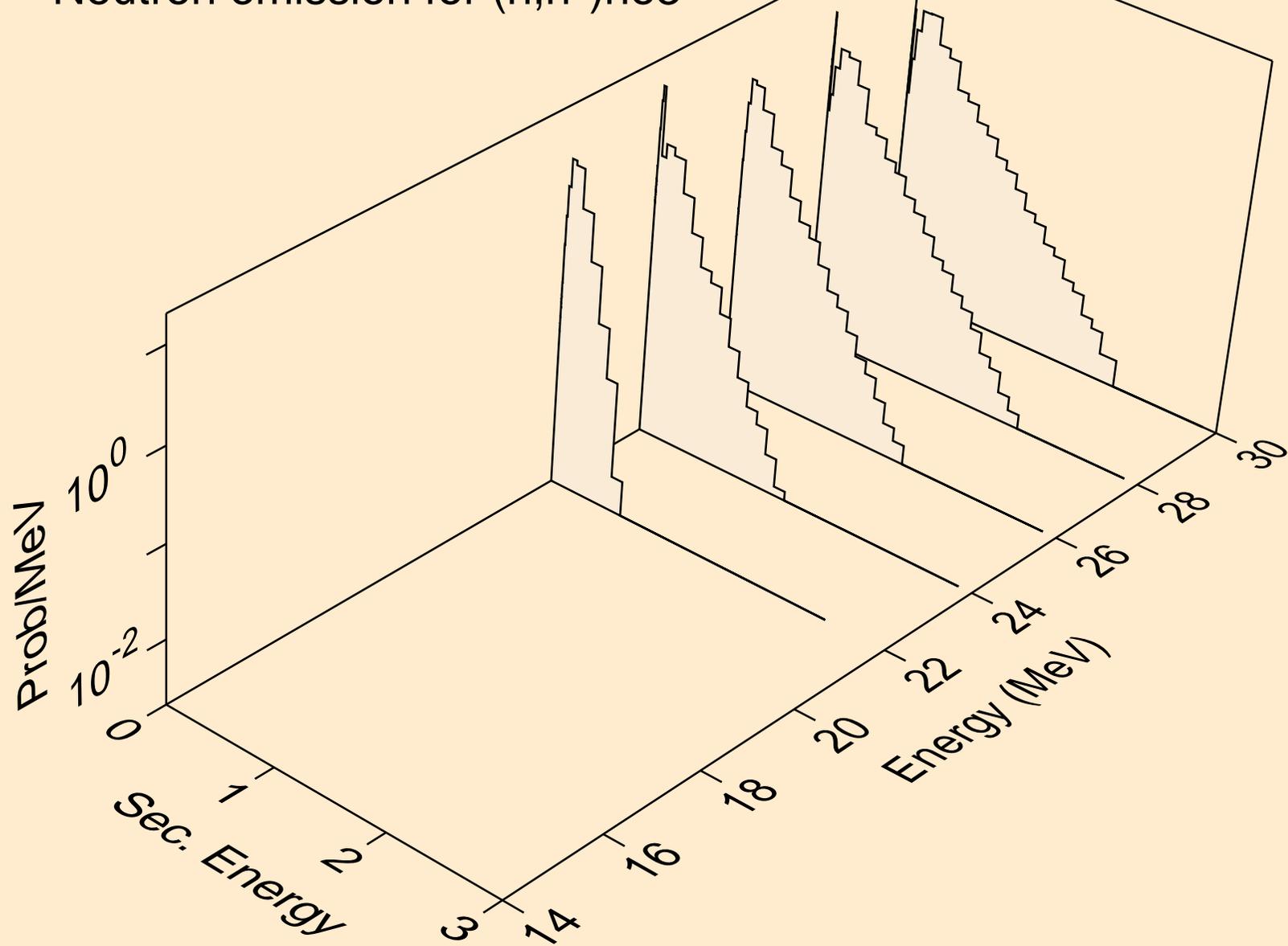Neutron emission for (n,n*)p

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
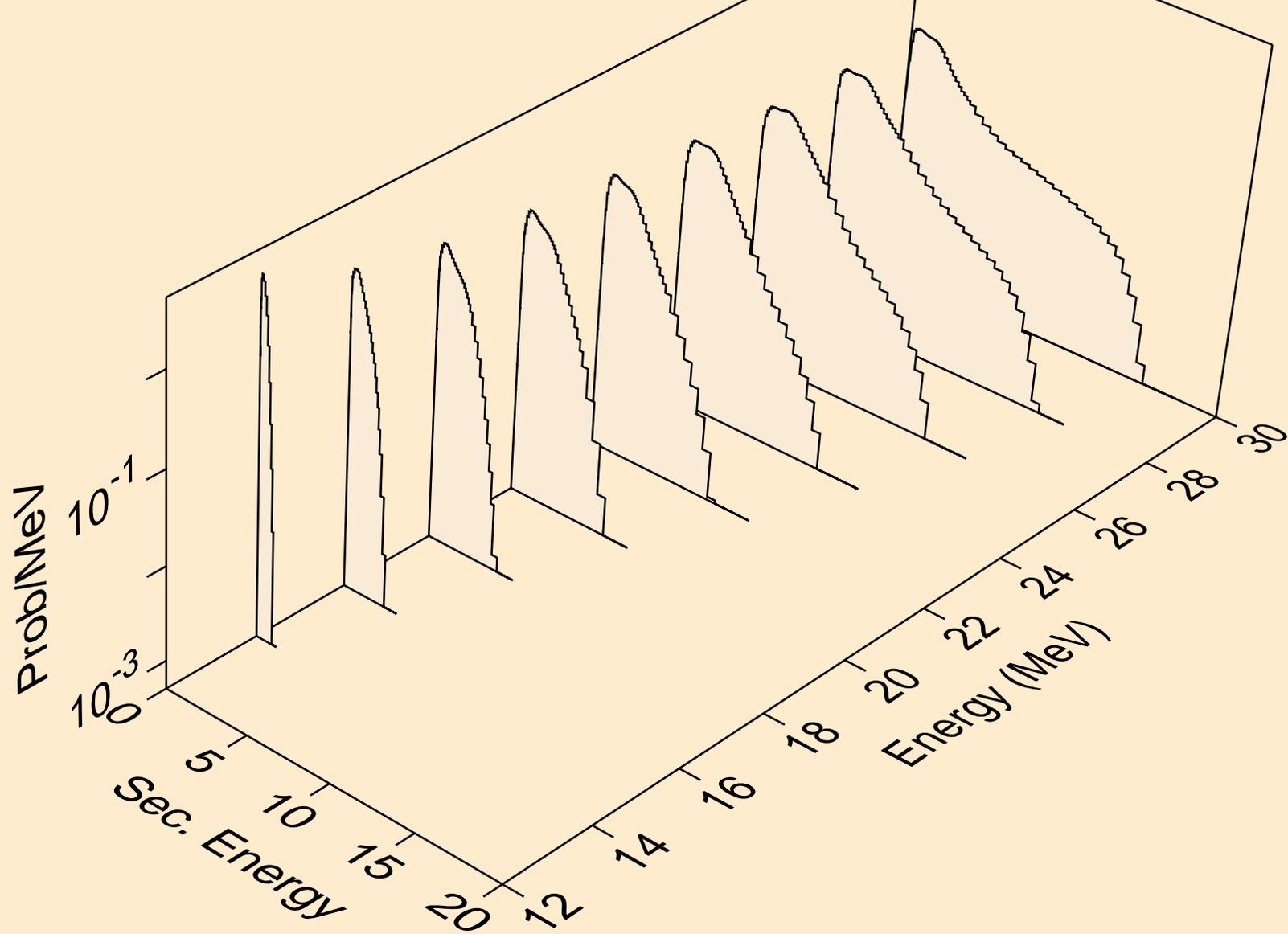Neutron emission for (n,n*)d

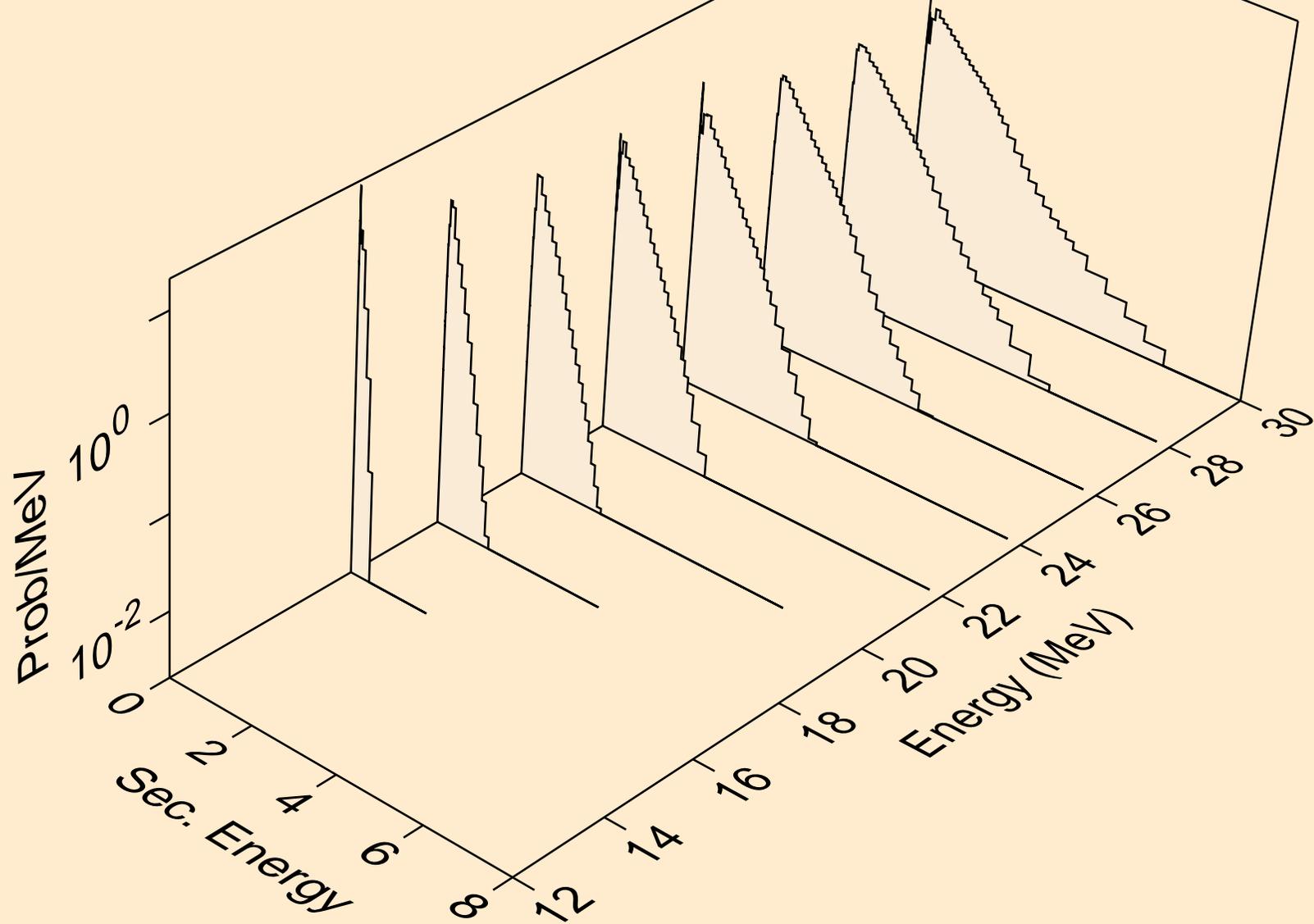RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Neutron emission for (n,n*)t

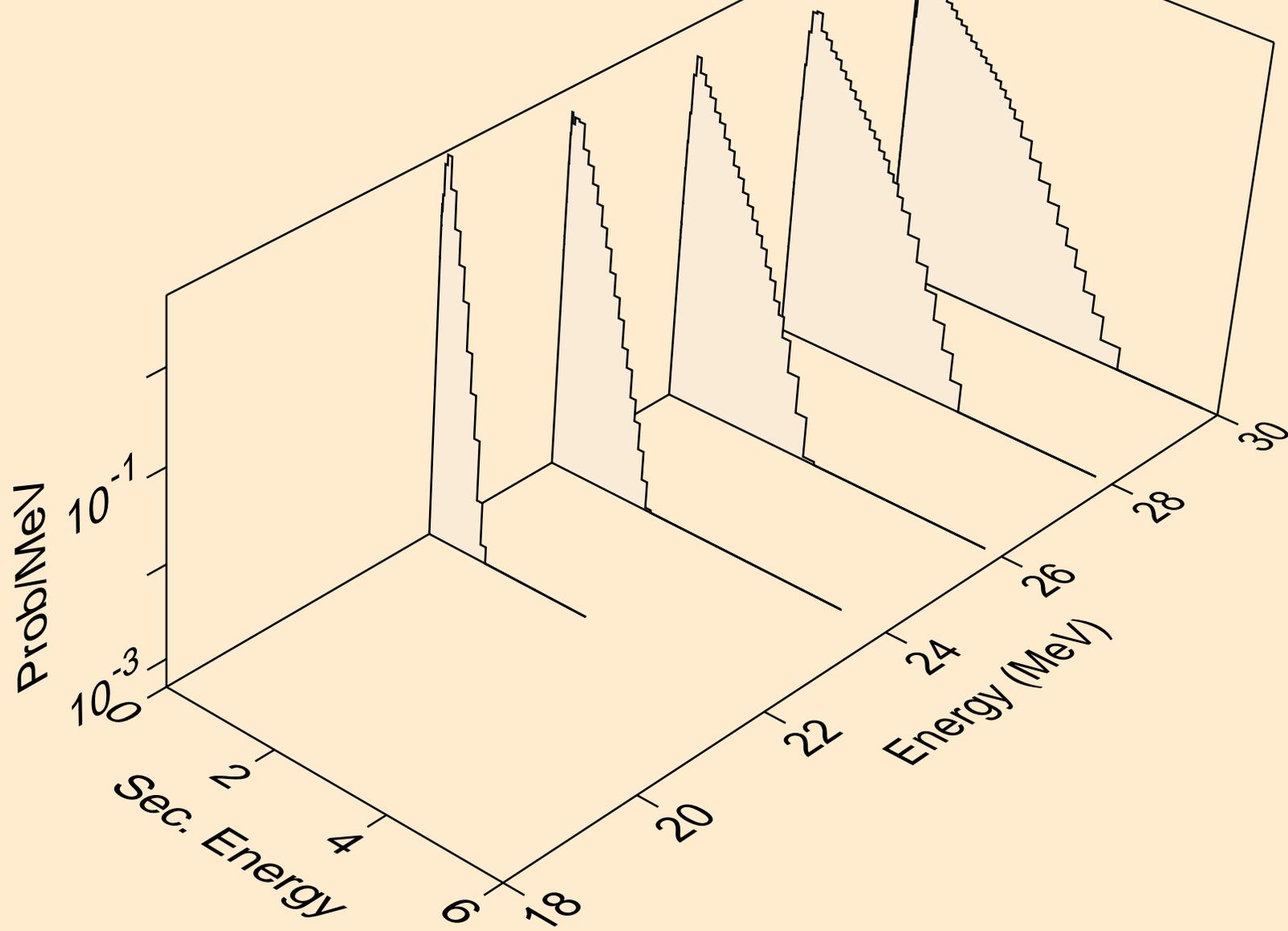RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Neutron emission for (n,n*)he3

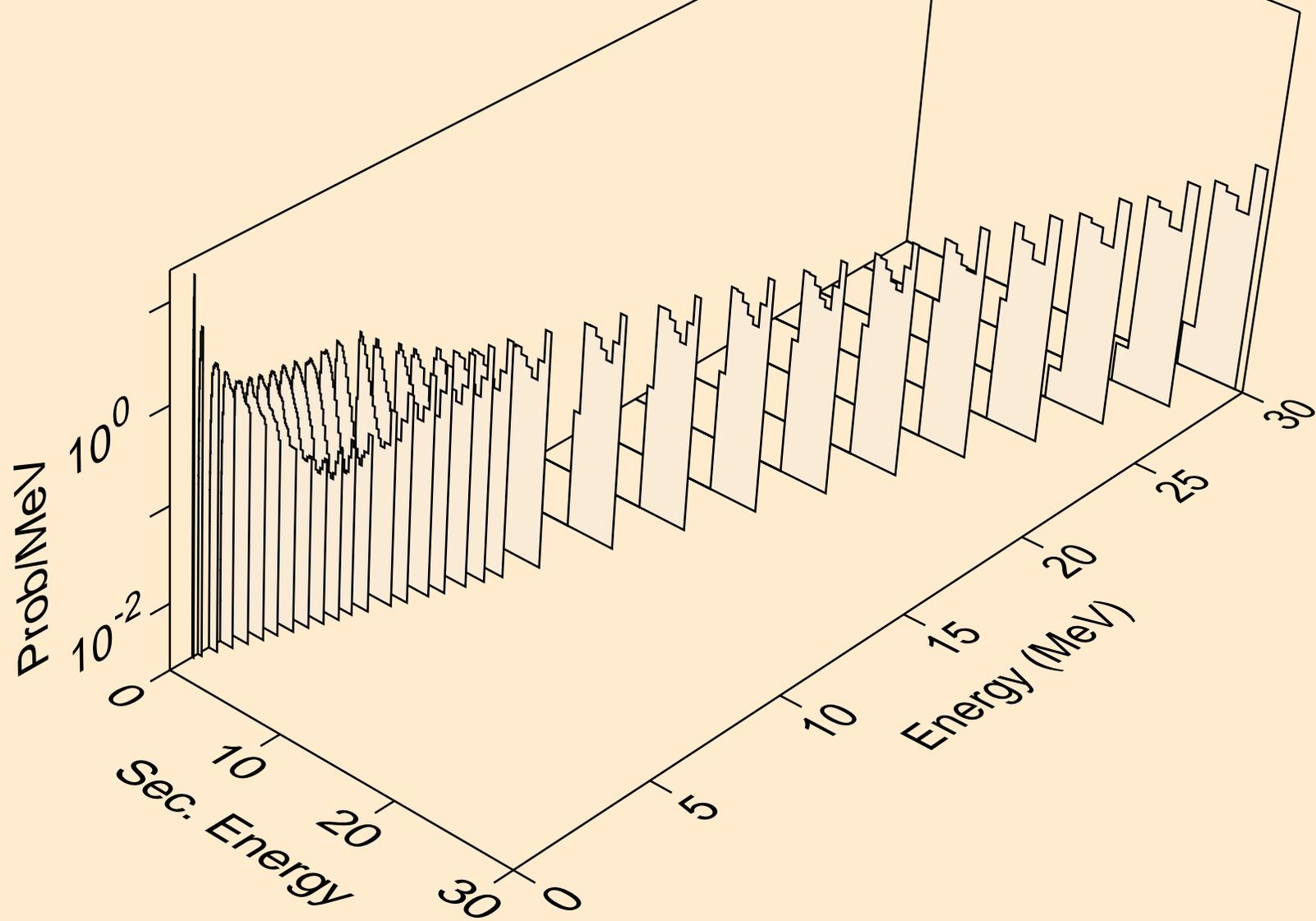RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Neutron emission for (n,4n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Neutron emission for (n,2np)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
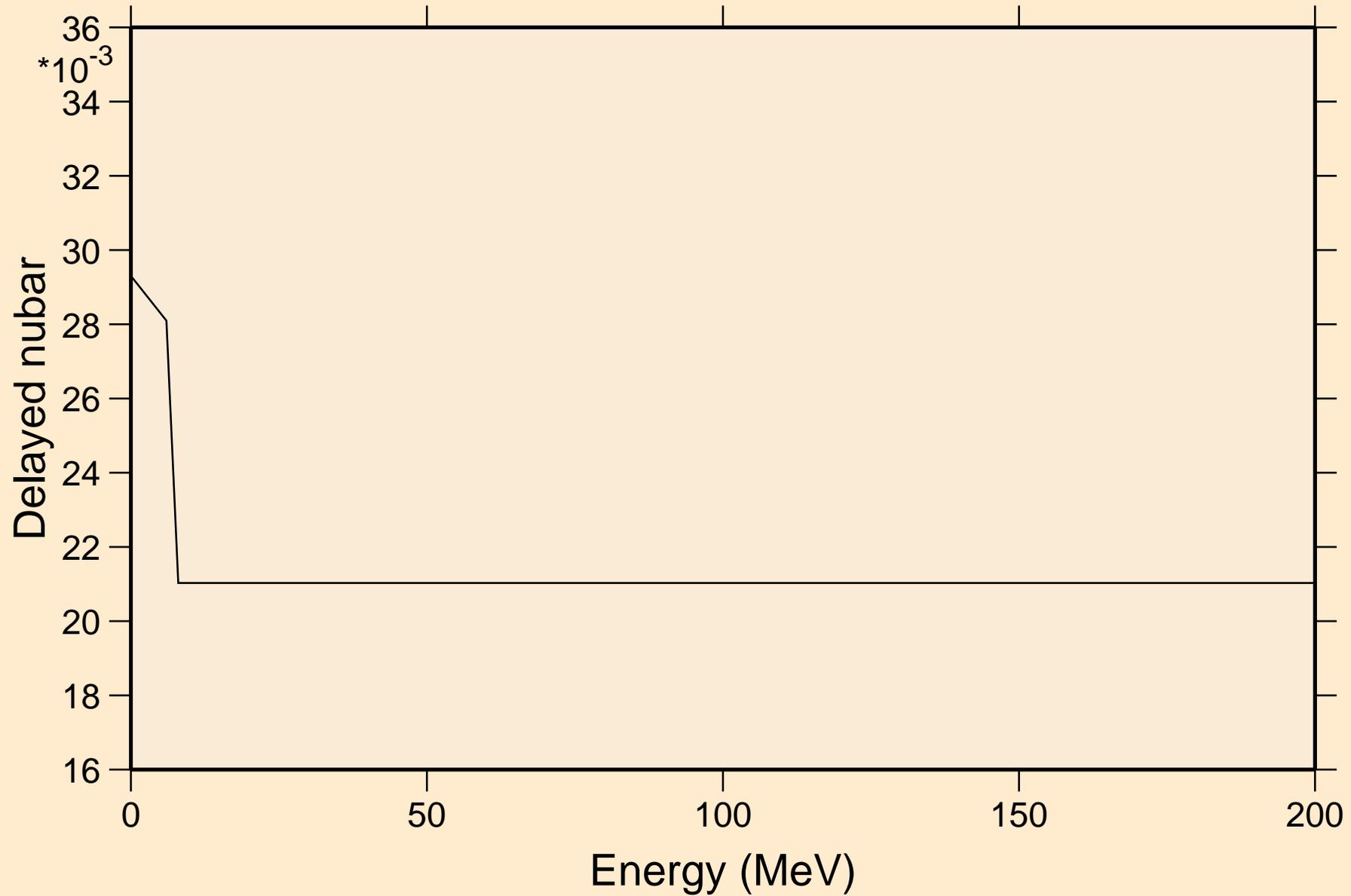Neutron emission for (n,3np)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
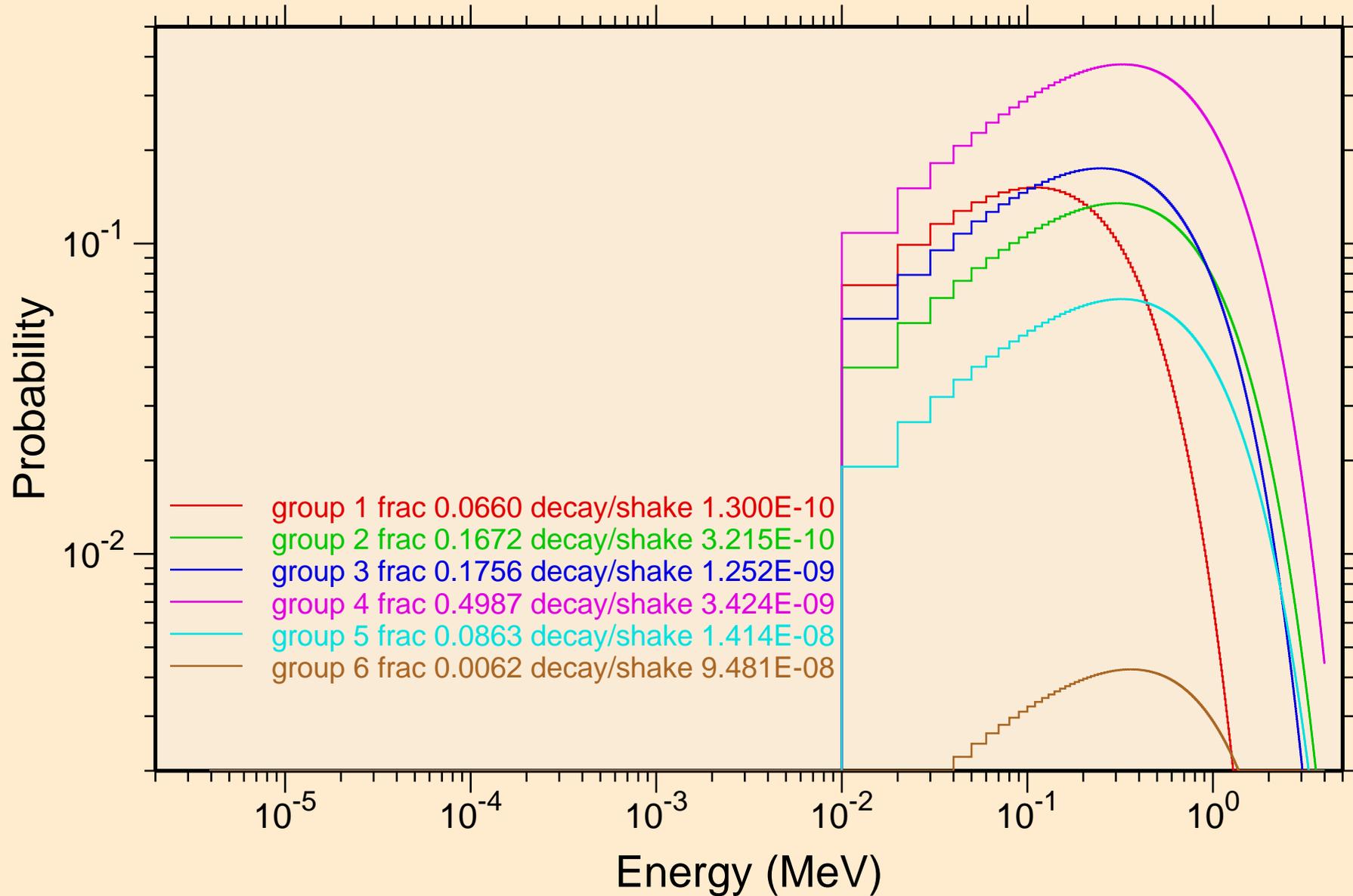Neutron emission for (n,n*c)

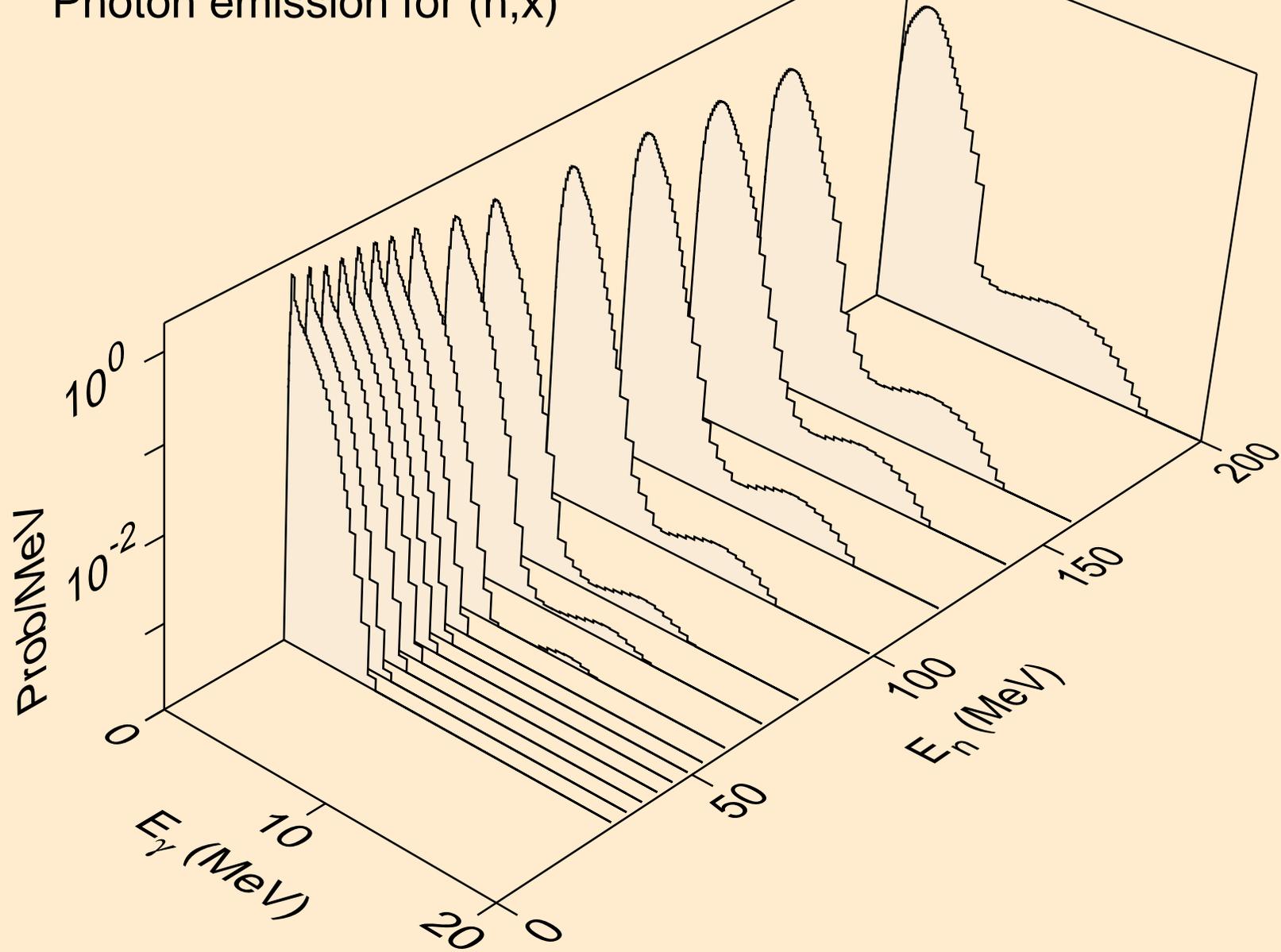RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
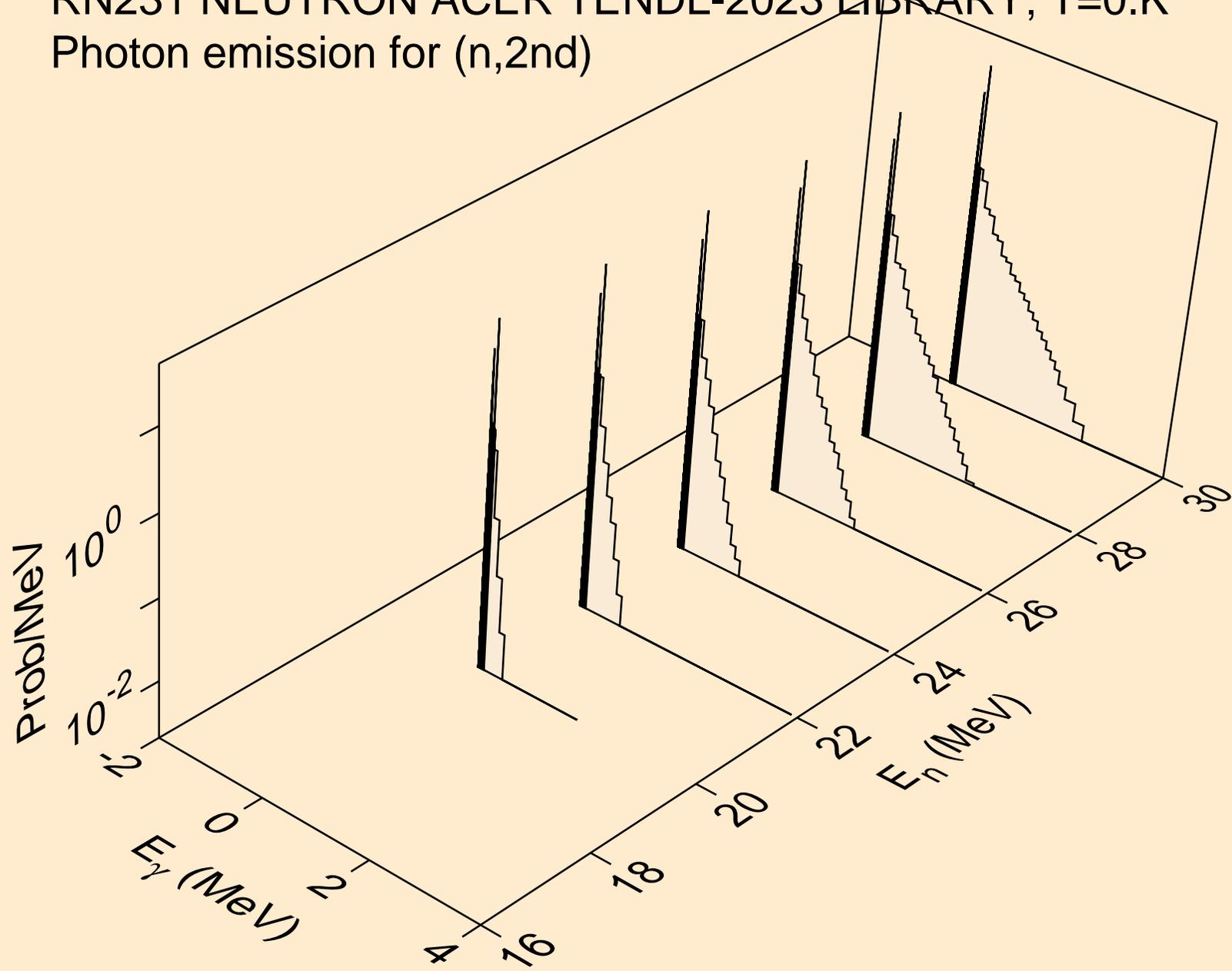Delayed nubar

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Delayed neutron spectra

group 1 frac 0.0660 decay/shake 1.300E-10
group 2 frac 0.1672 decay/shake 3.215E-10
group 3 frac 0.1756 decay/shake 1.252E-09
group 4 frac 0.4987 decay/shake 3.424E-09
group 5 frac 0.0863 decay/shake 1.414E-08
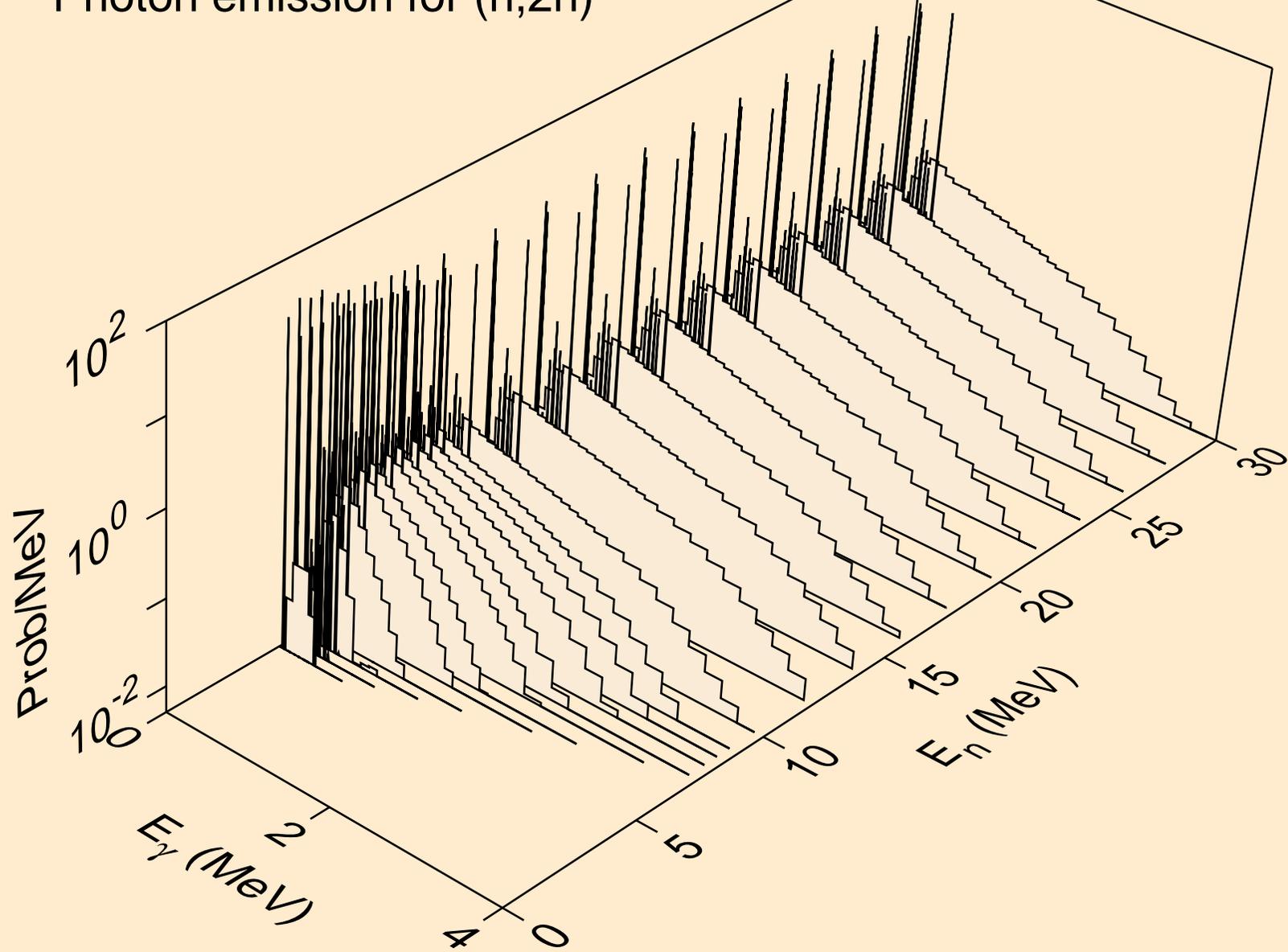group 6 frac 0.0062 decay/shake 9.481E-08

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
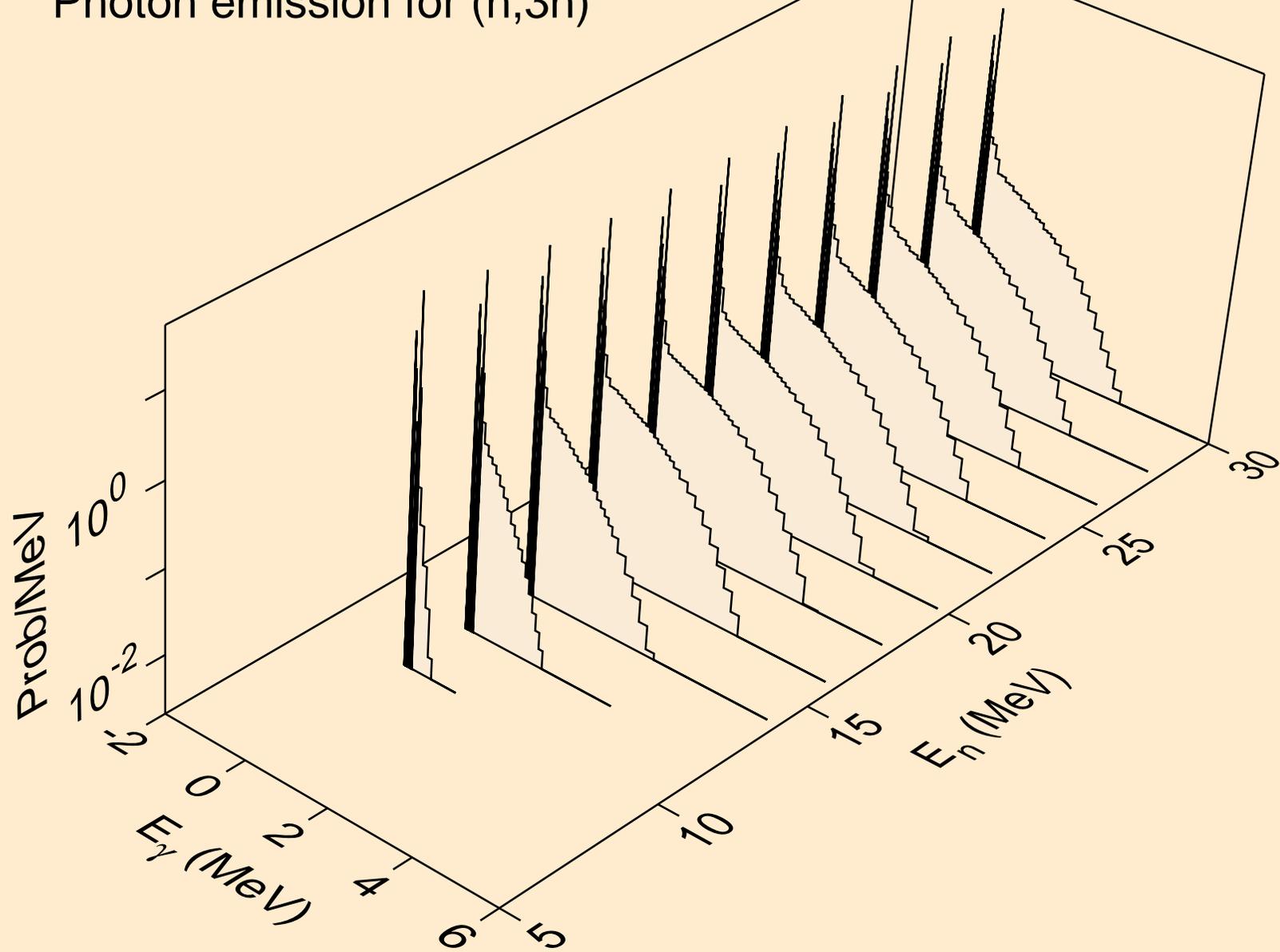Photon emission for (n,x)

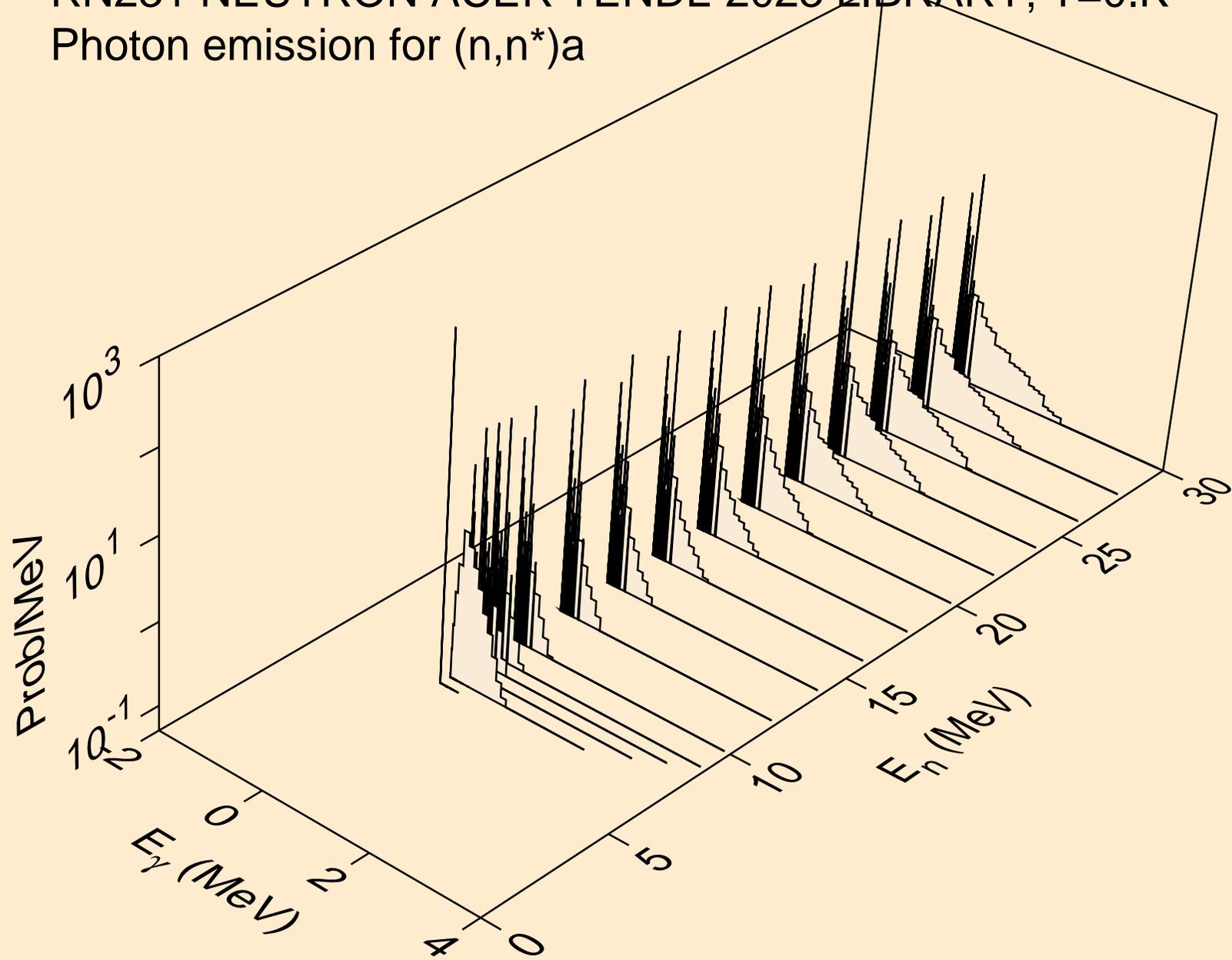RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,2nd)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
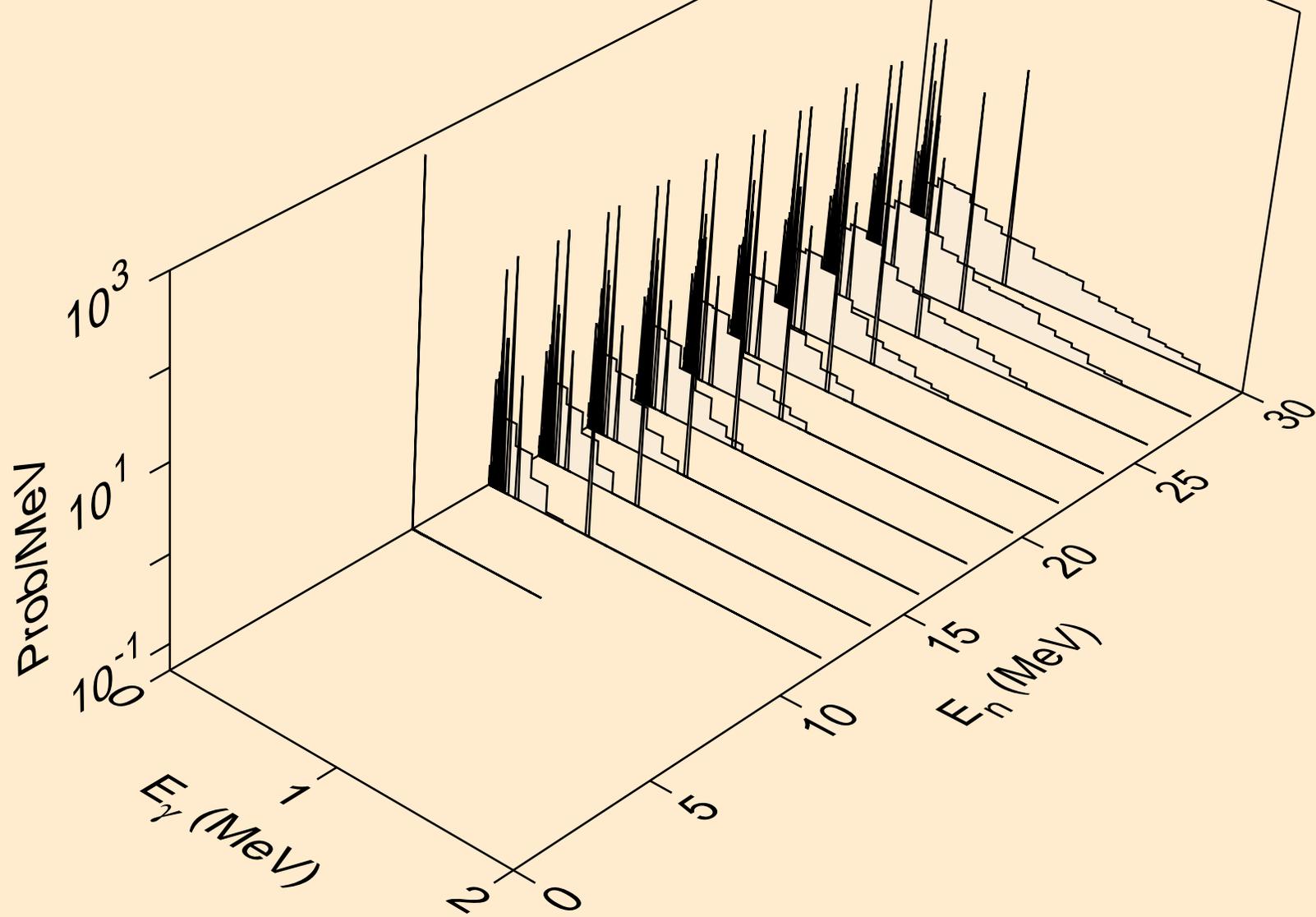Photon emission for (n,2n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
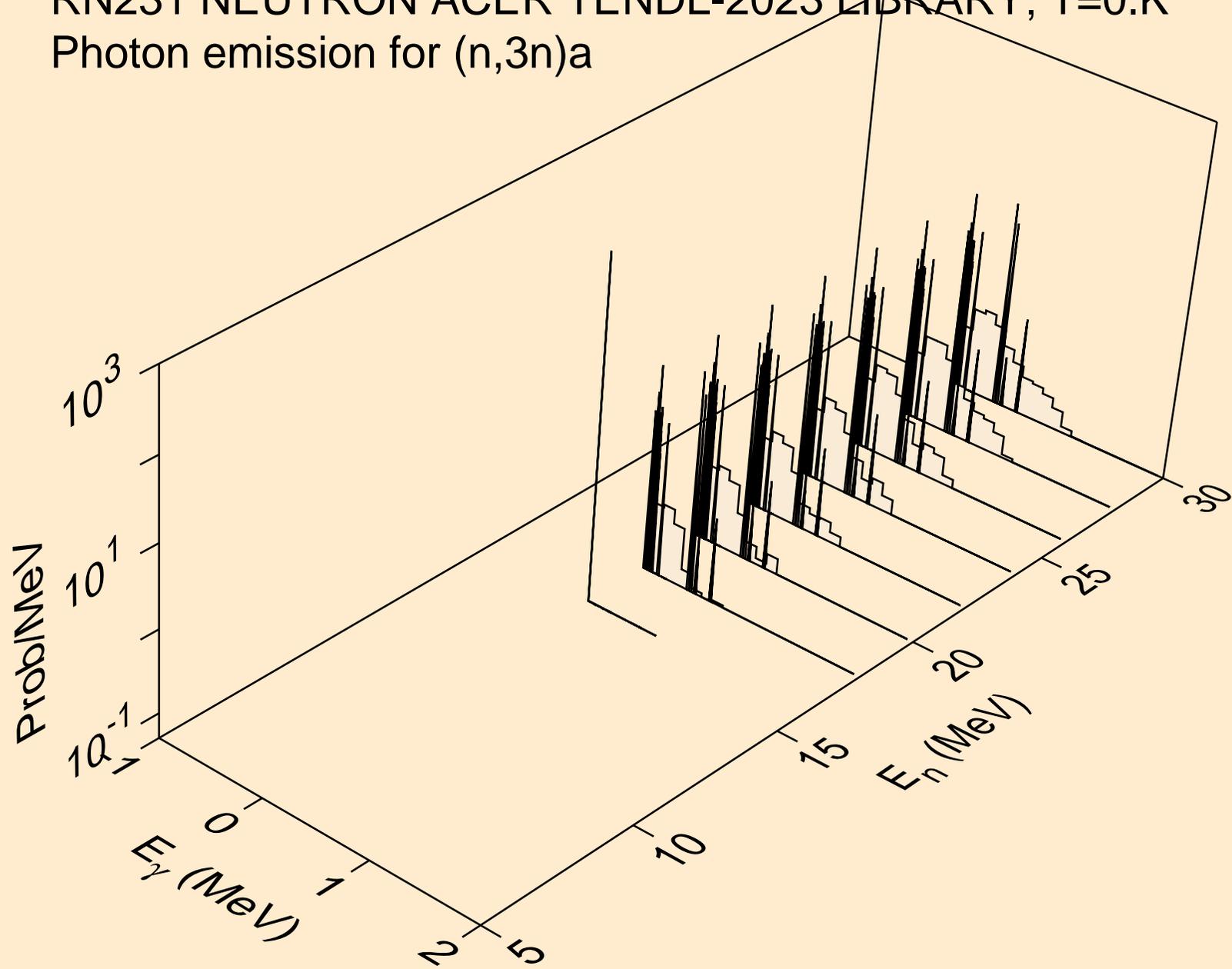Photon emission for (n,3n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
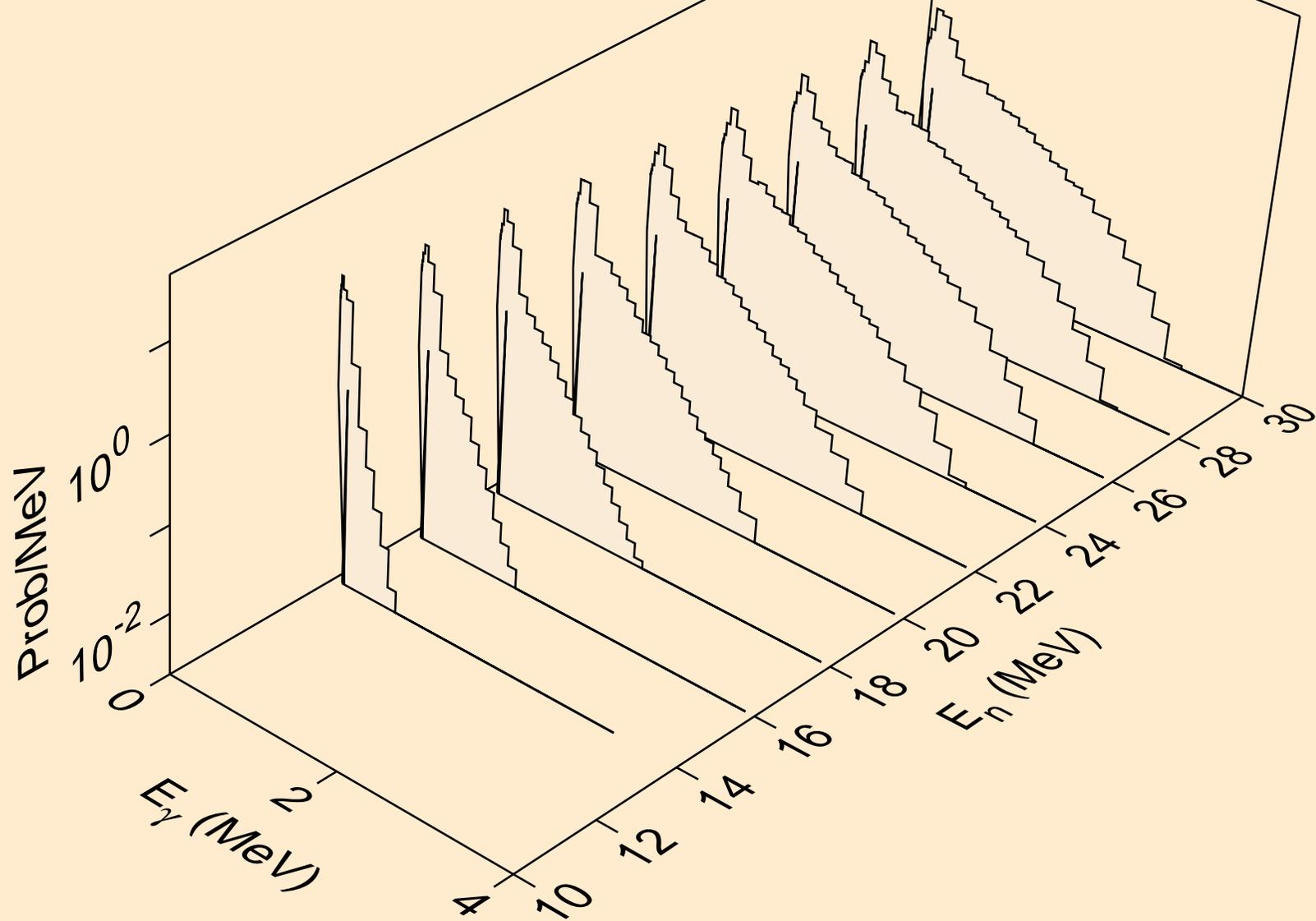Photon emission for (n,n*)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
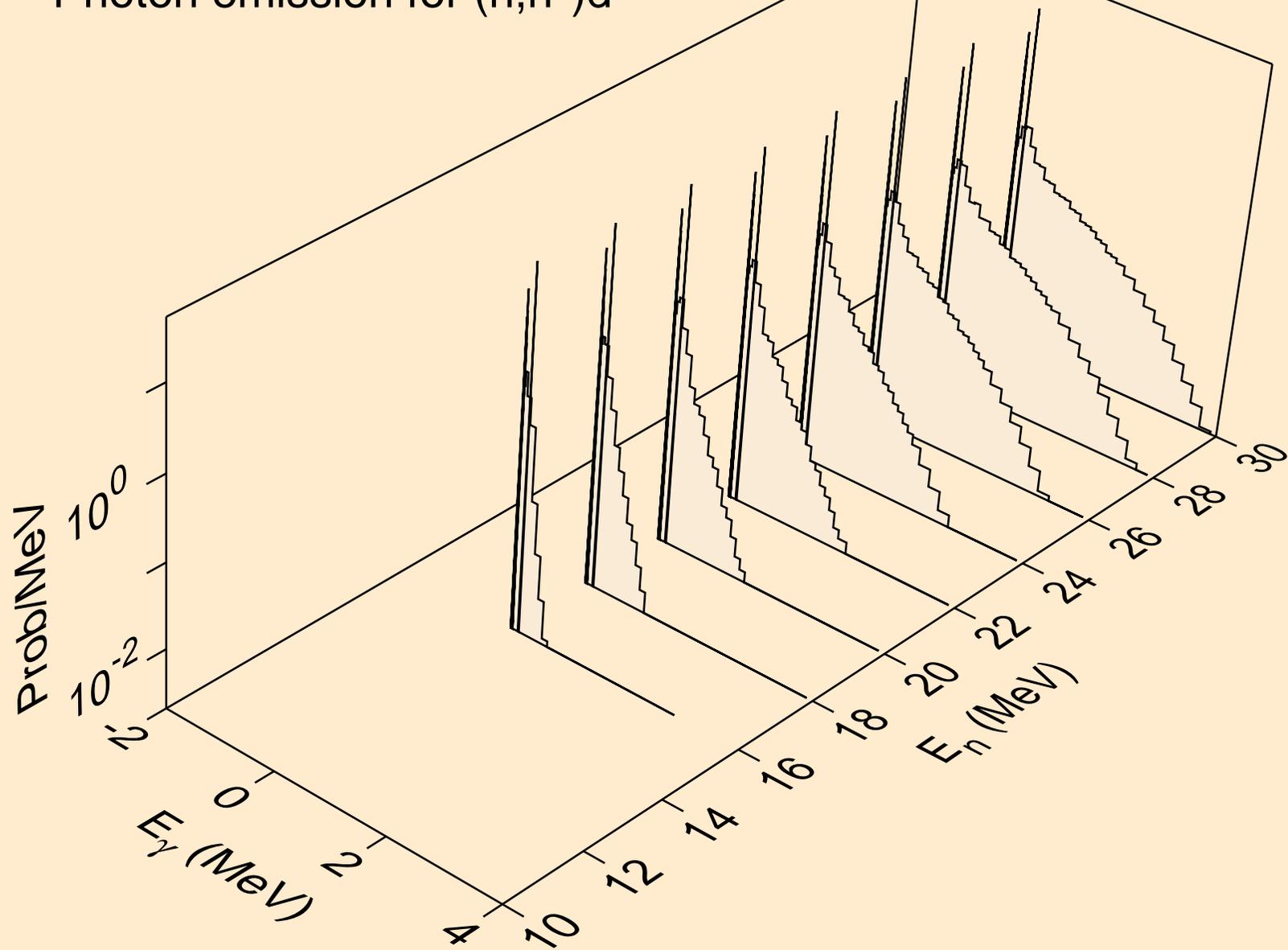Photon emission for (n,2n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
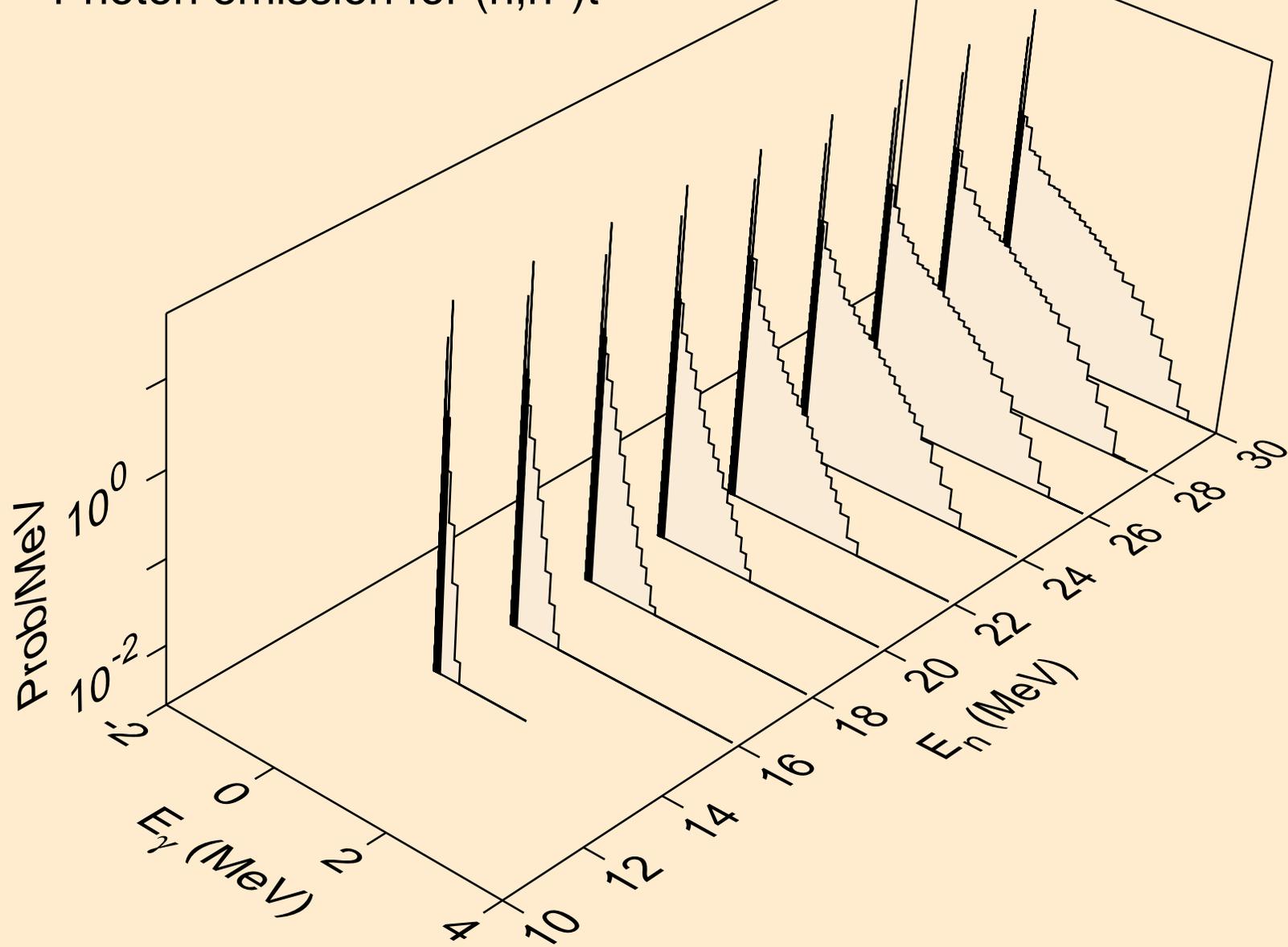Photon emission for (n,3n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
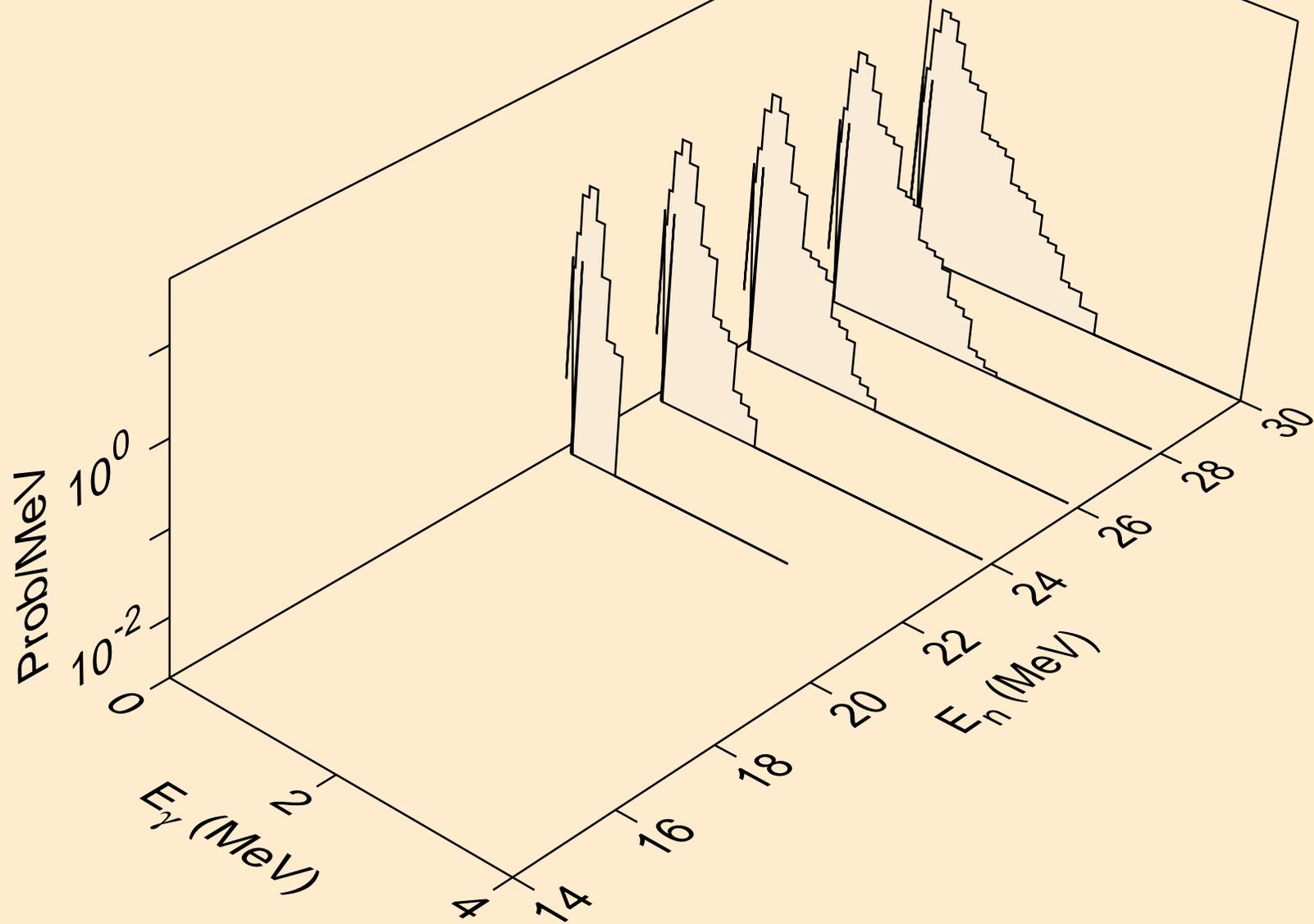Photon emission for (n,n*)p

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
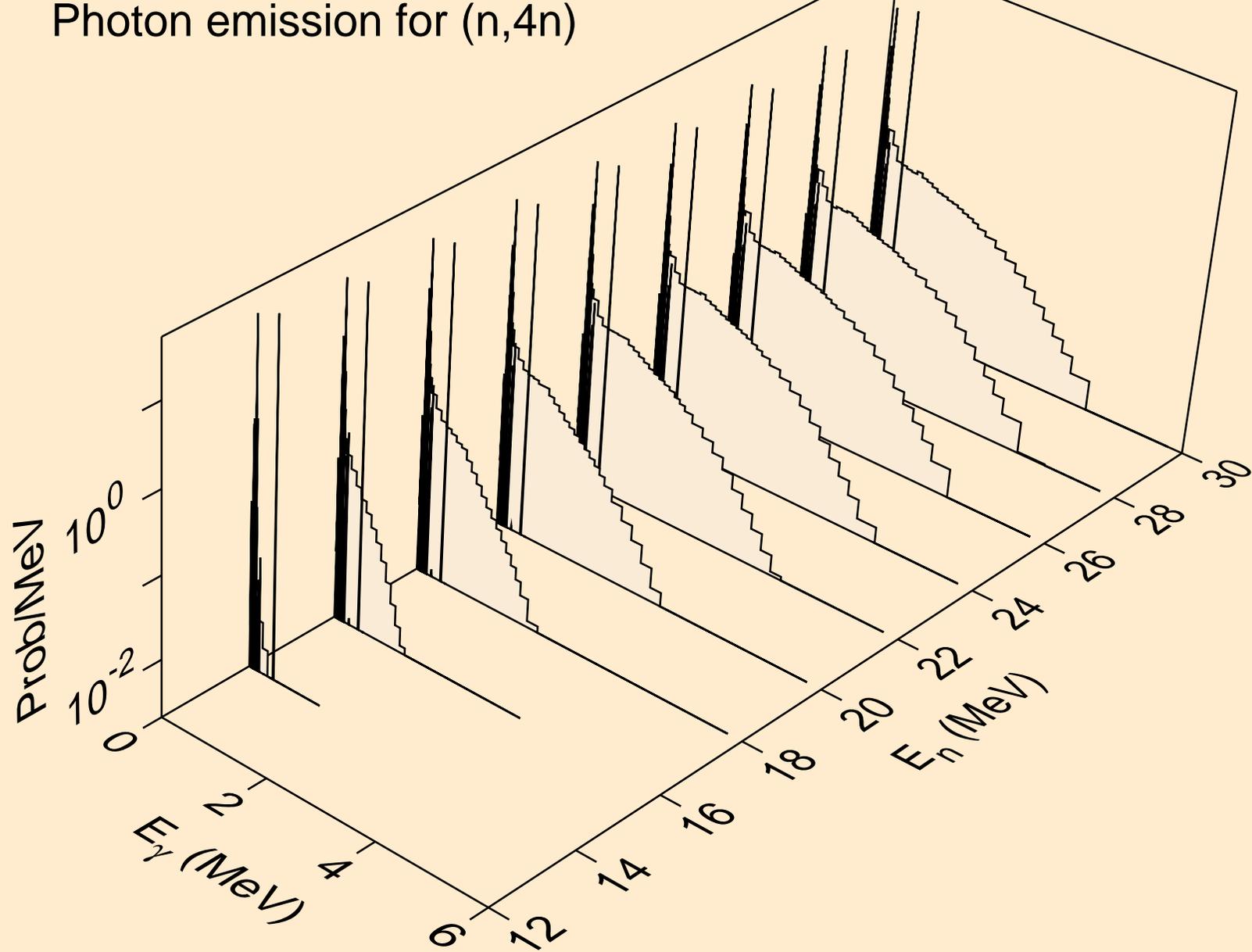Photon emission for (n,n*)d

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
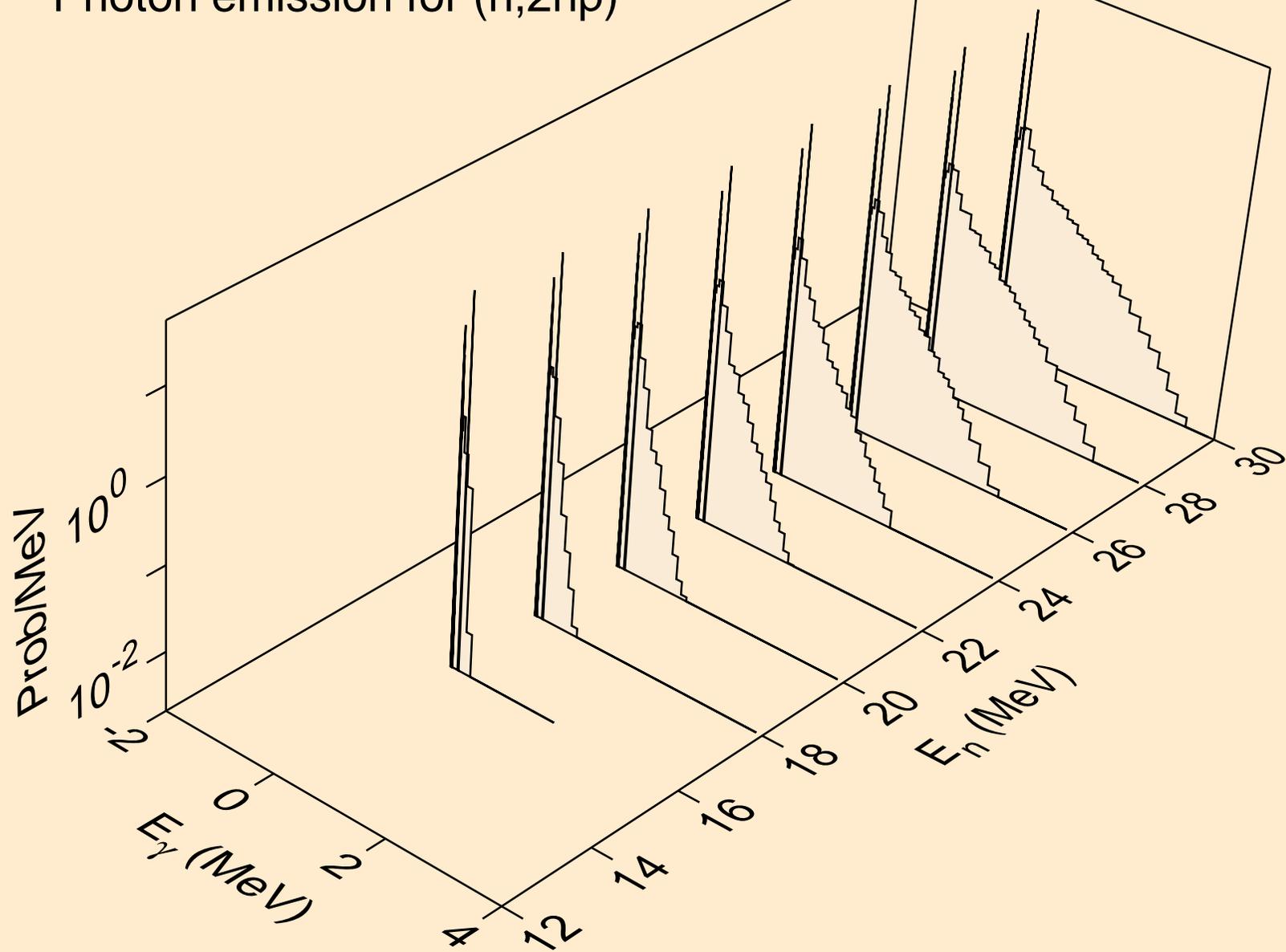Photon emission for (n,n*)t

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
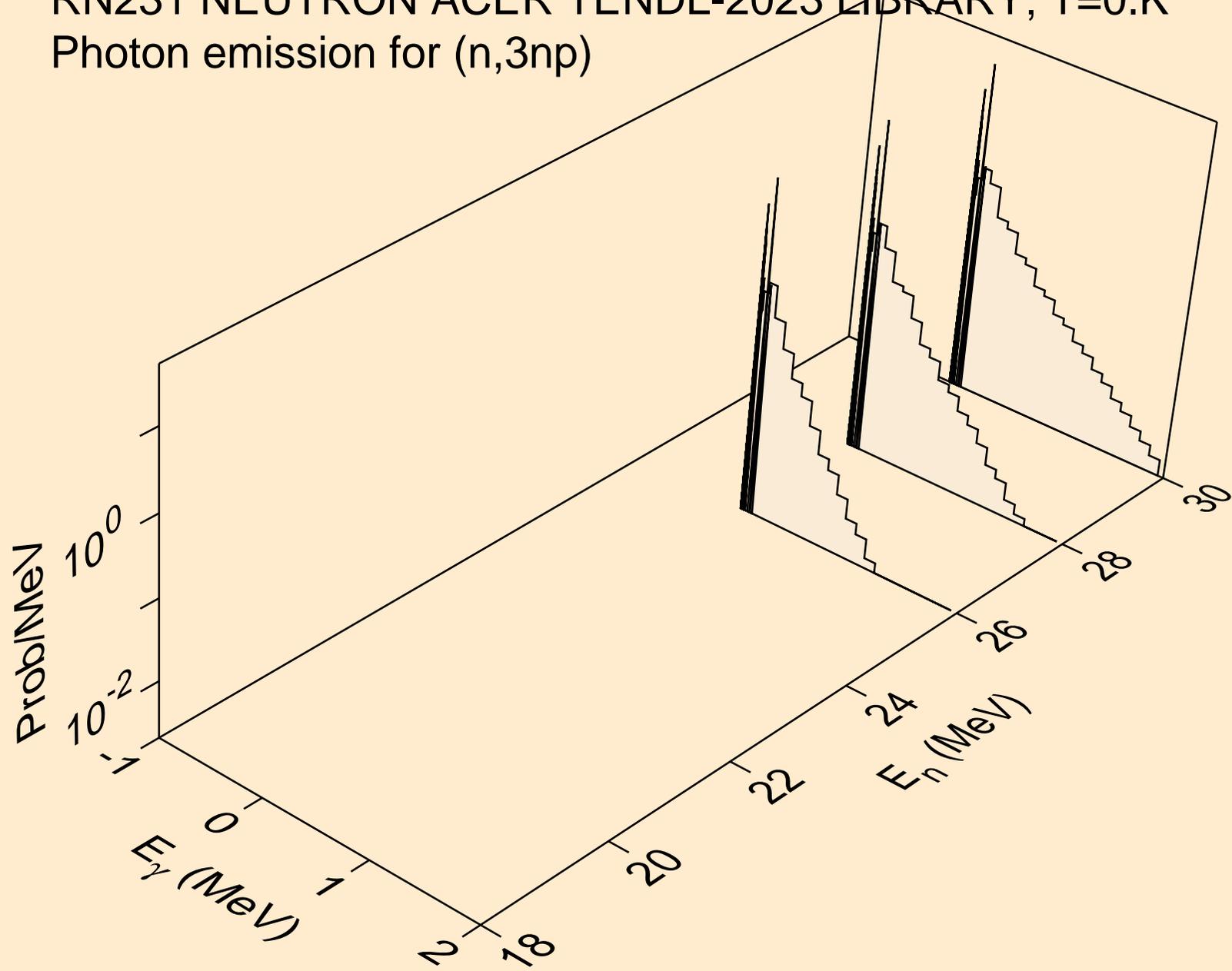Photon emission for (n,n*)he3

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
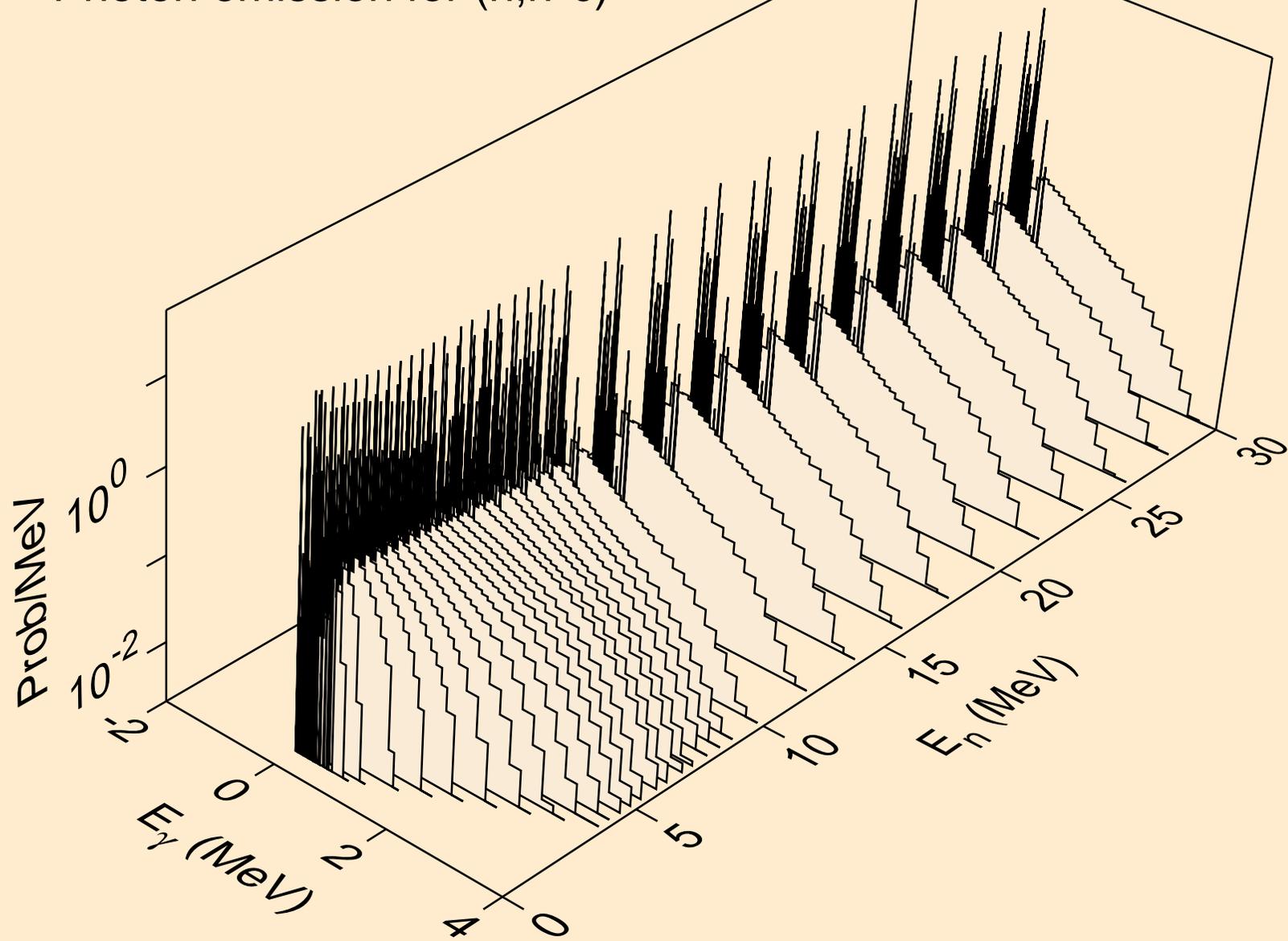Photon emission for (n,4n)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
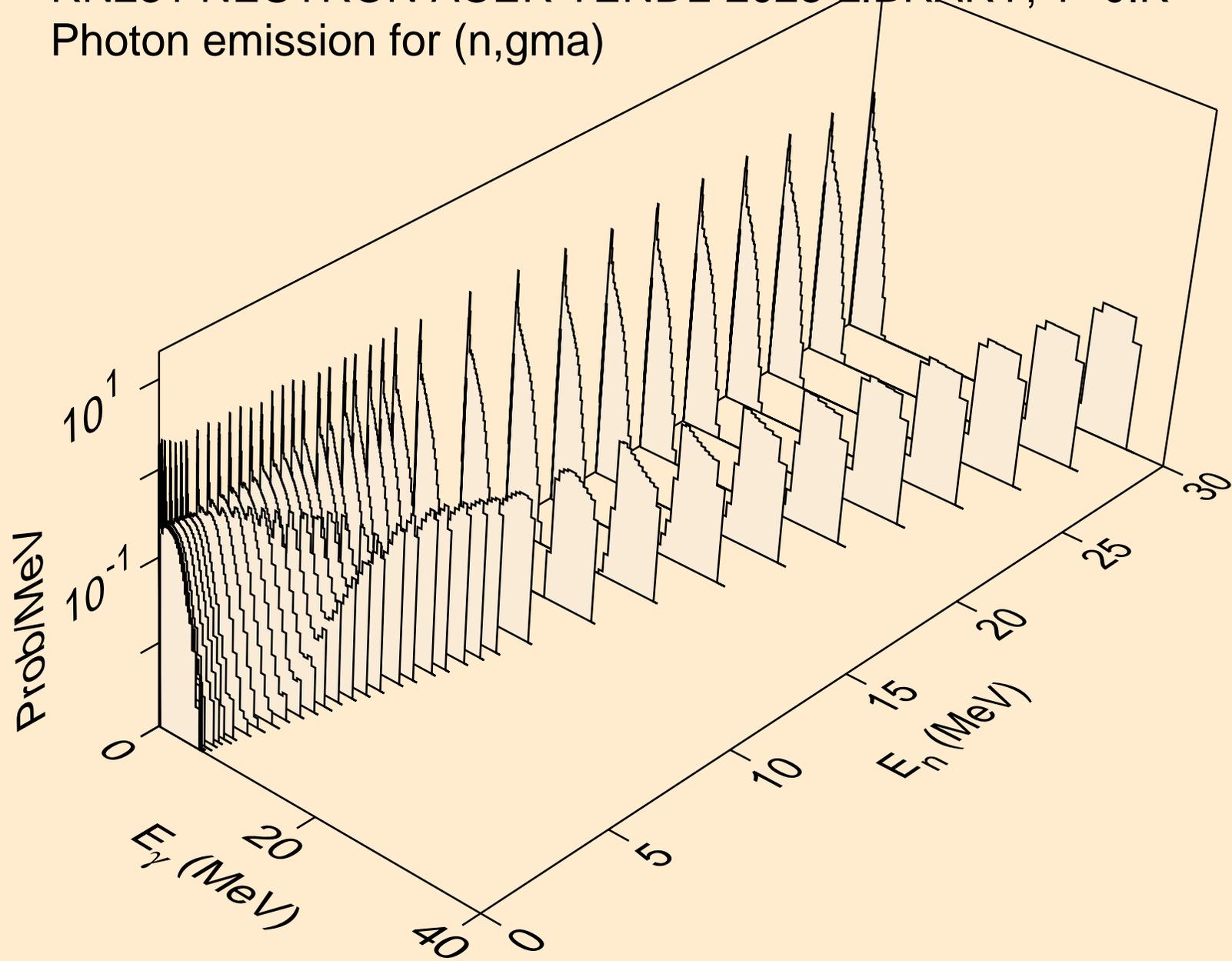Photon emission for (n,2np)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
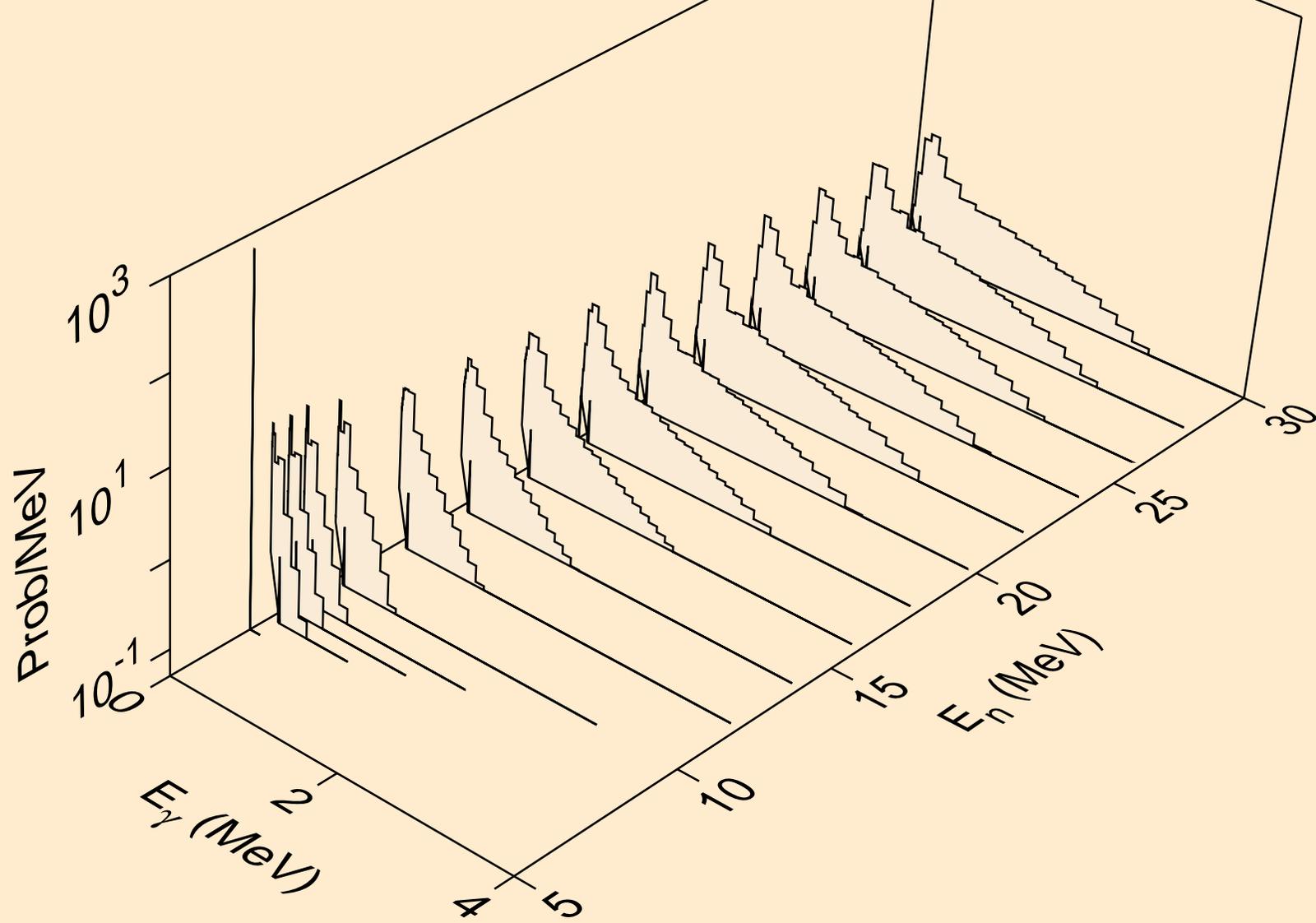Photon emission for (n,3np)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
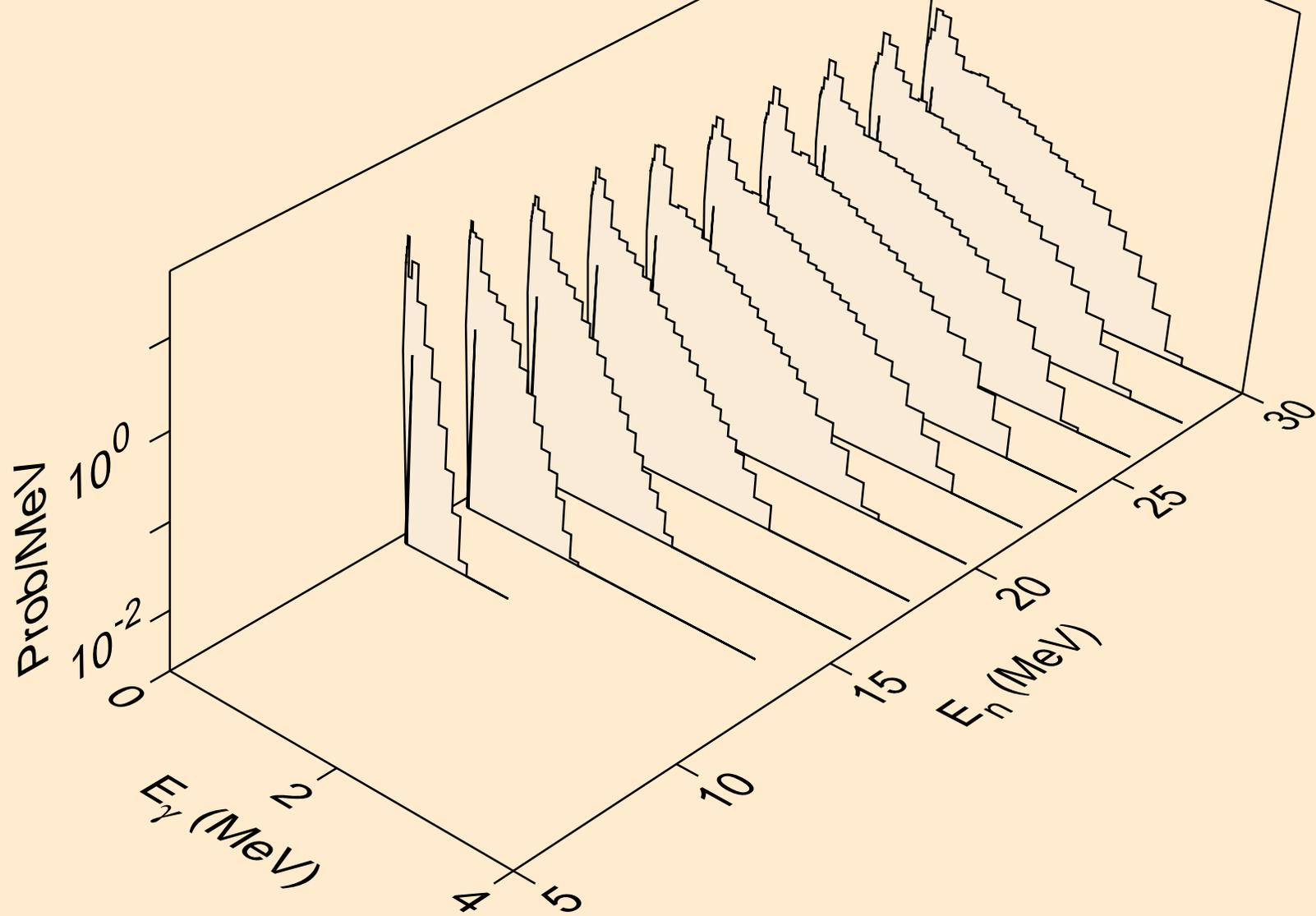Photon emission for (n,n*c)

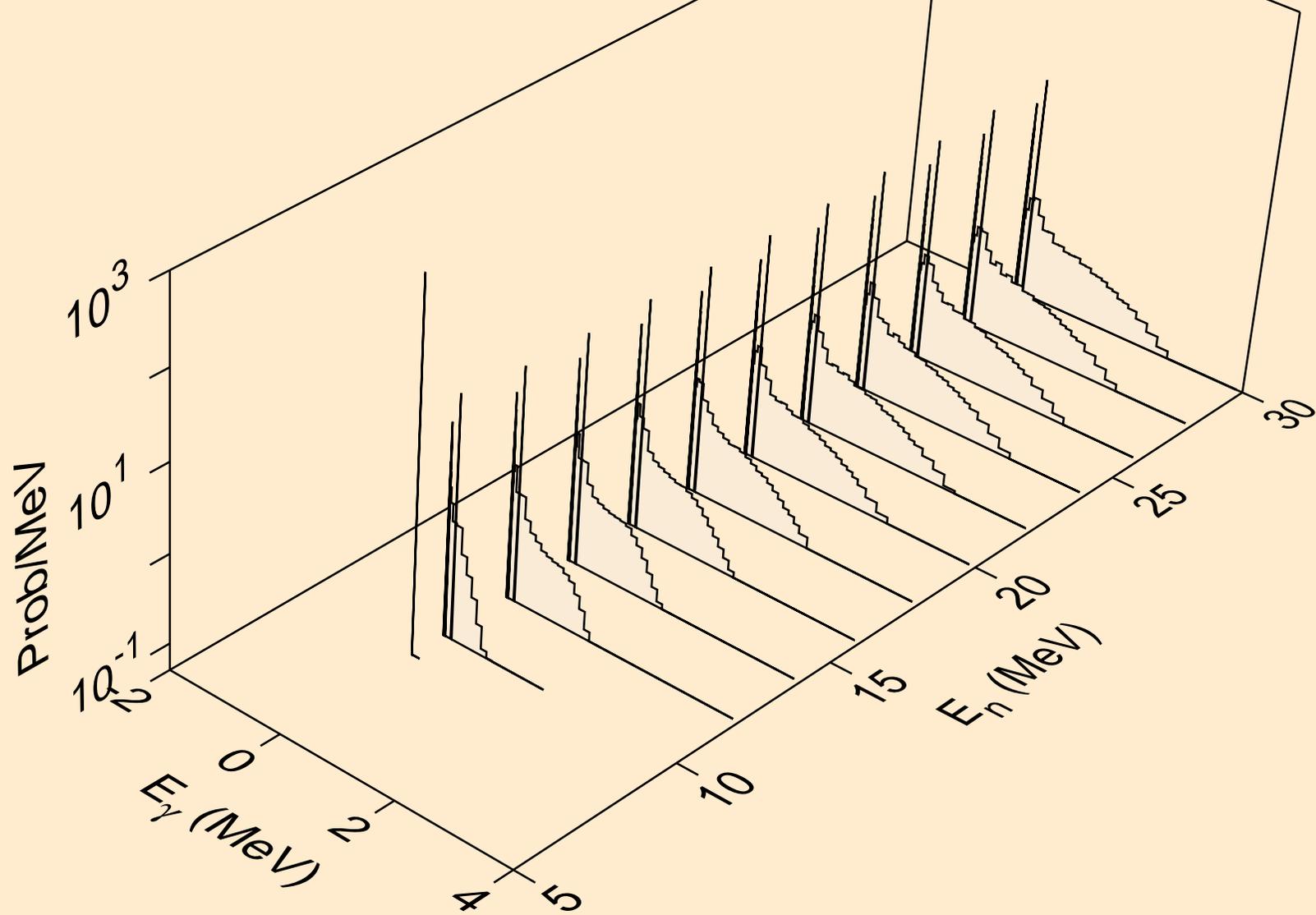RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,gma)

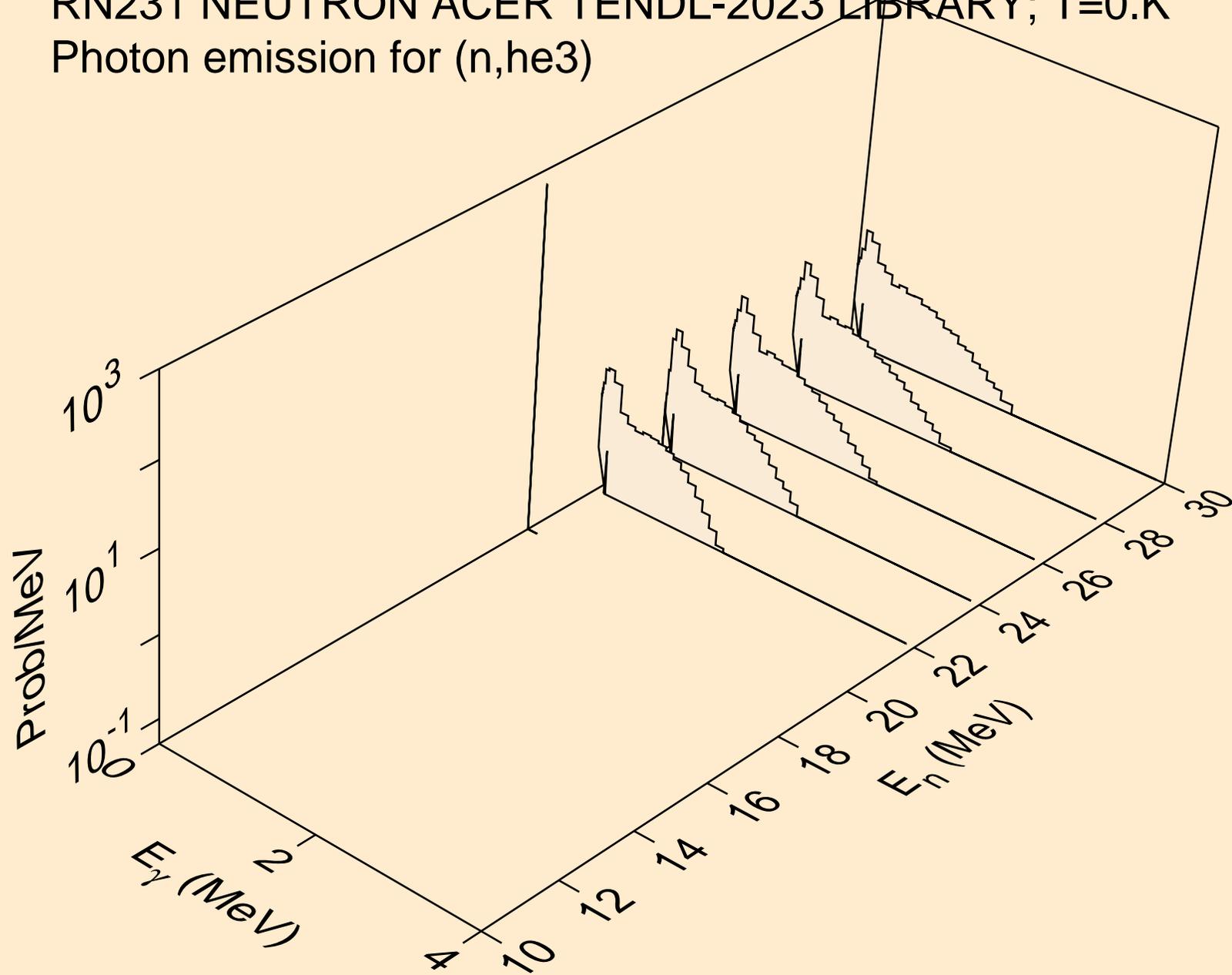RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,p)

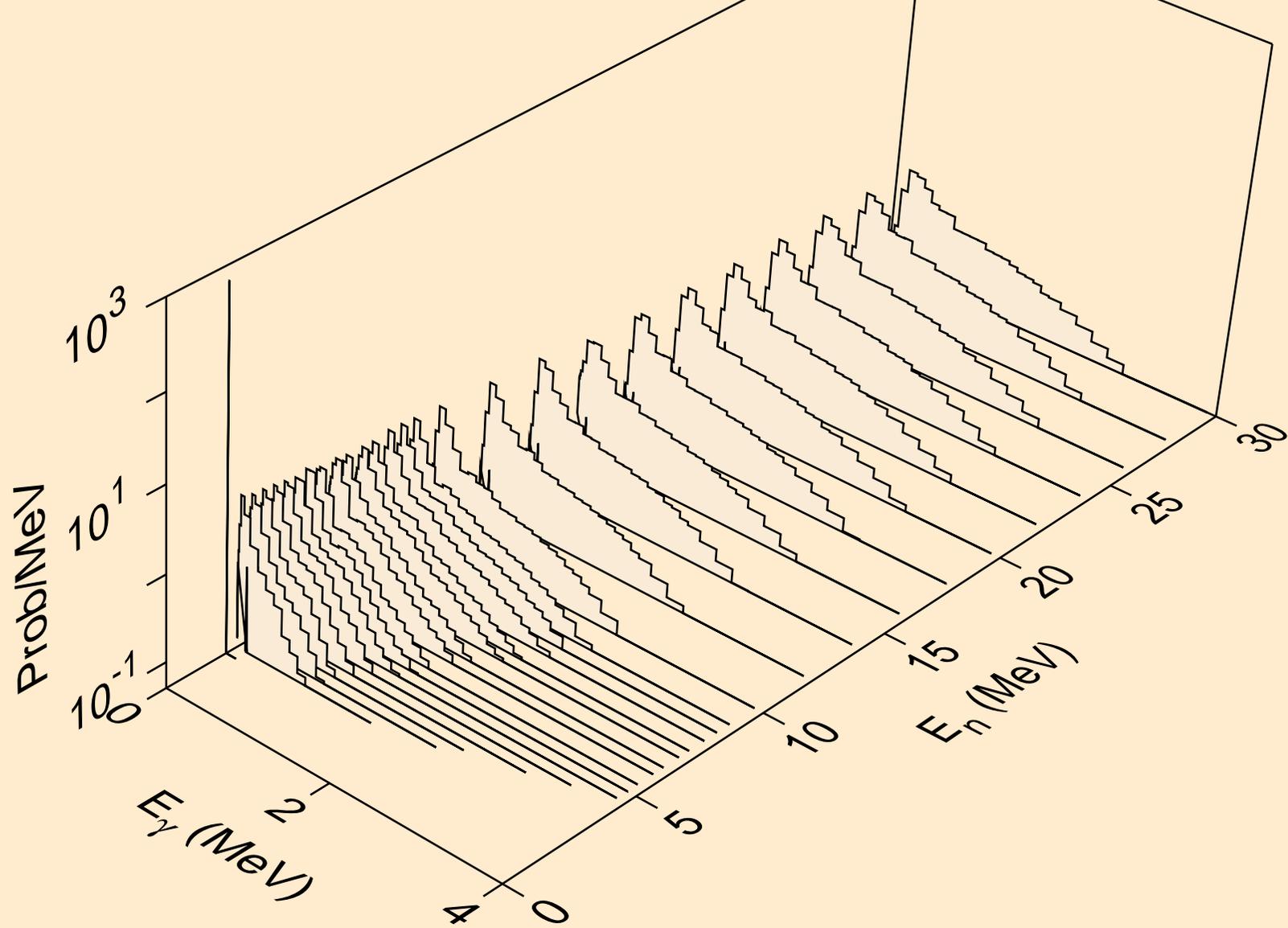RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,d)

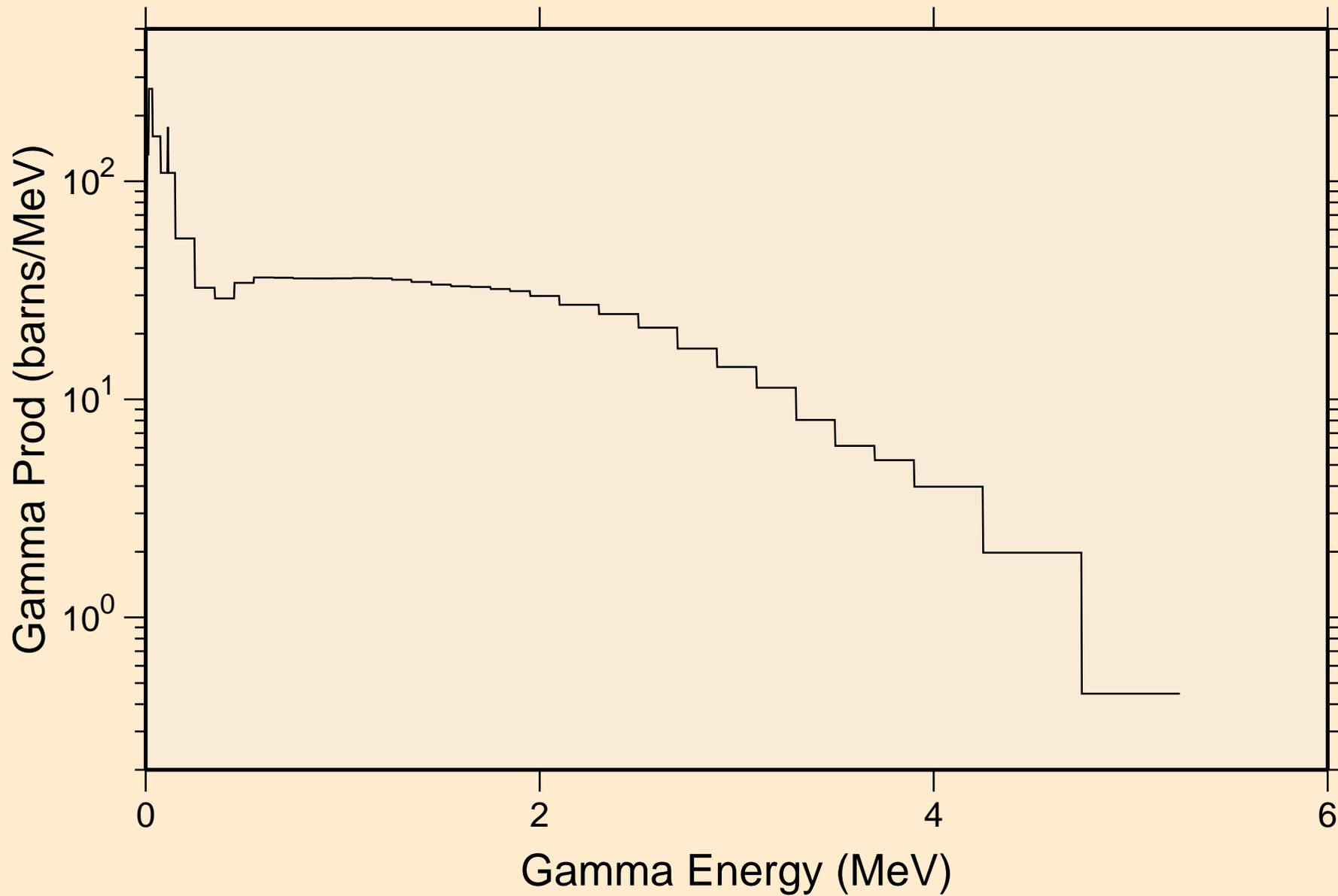RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,t)

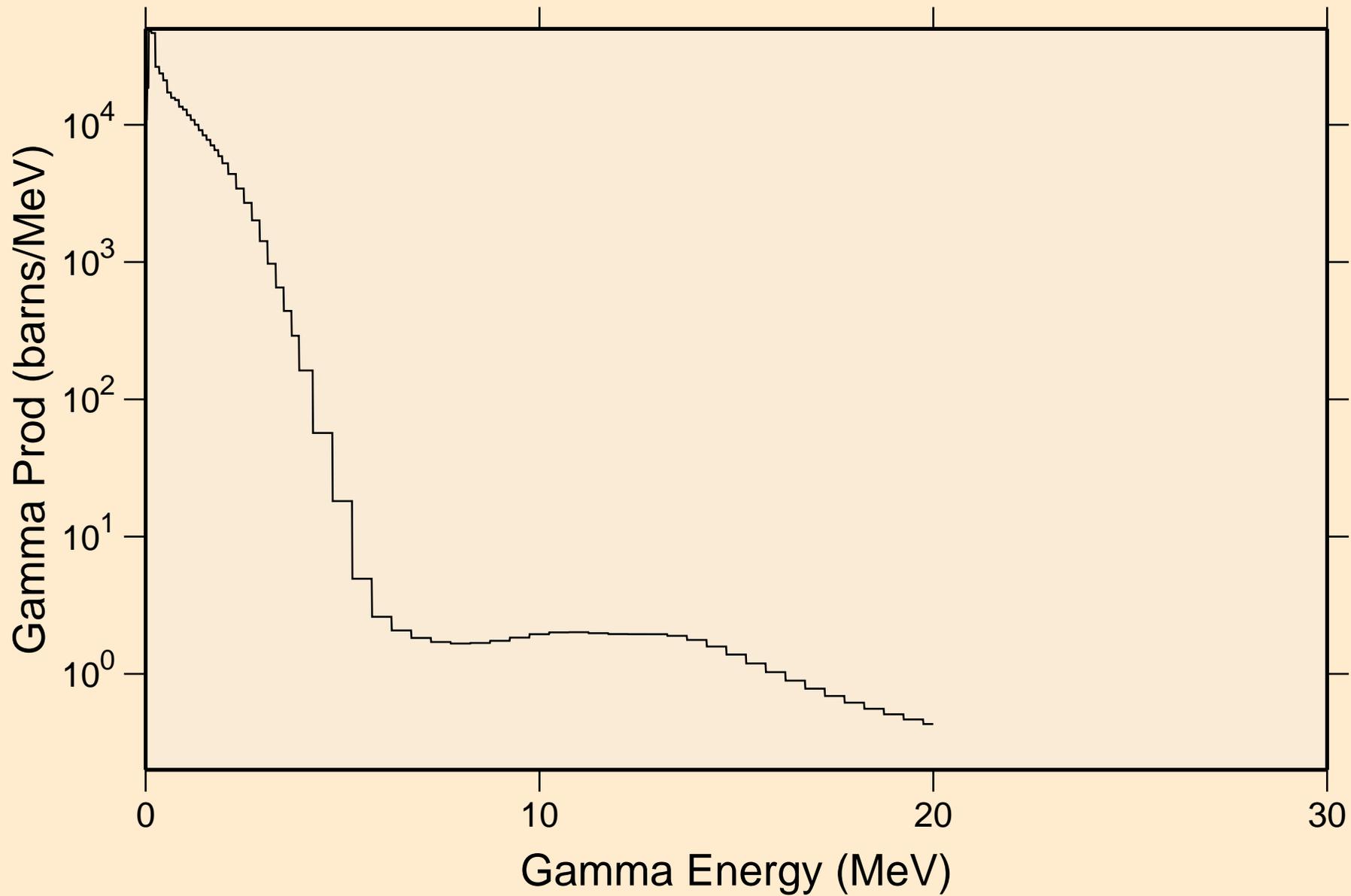RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,he3)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,a)

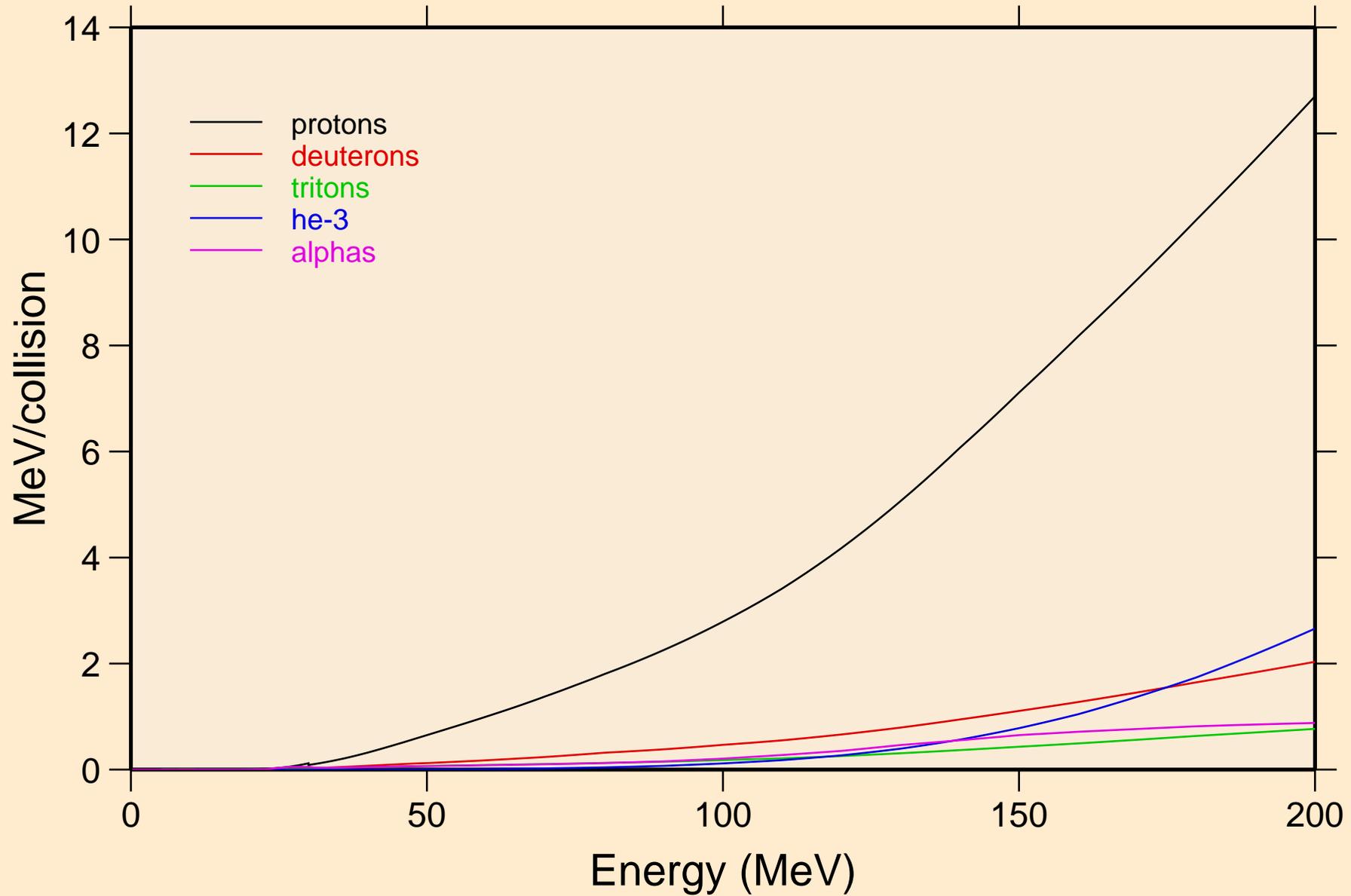RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
thermal capture photon spectrum

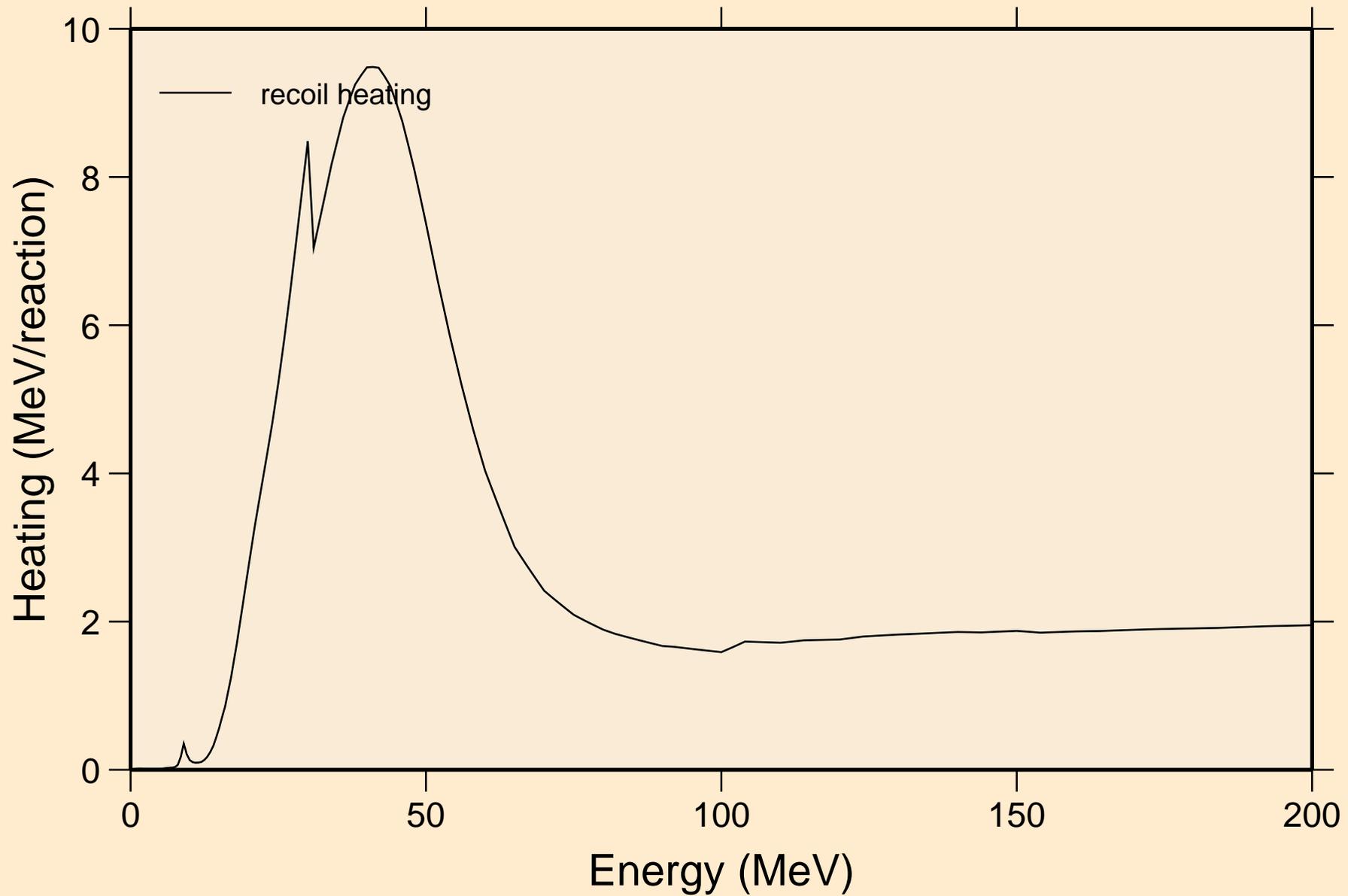RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
14 MeV photon spectrum

Gamma Prod (barns/MeV) vs Gamma Energy (MeV)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Particle heating contributions

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

MeV/collision

Energy (MeV)
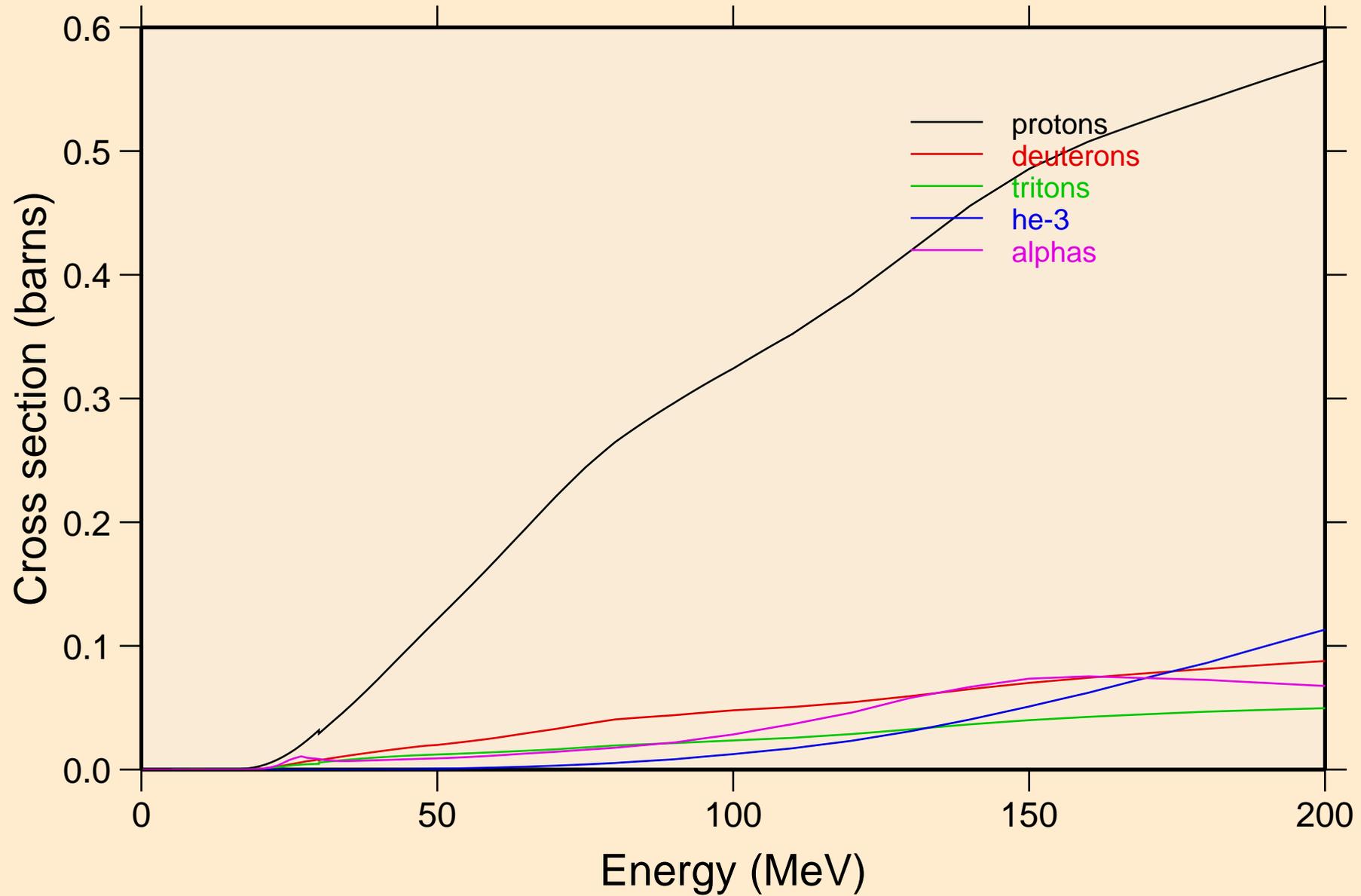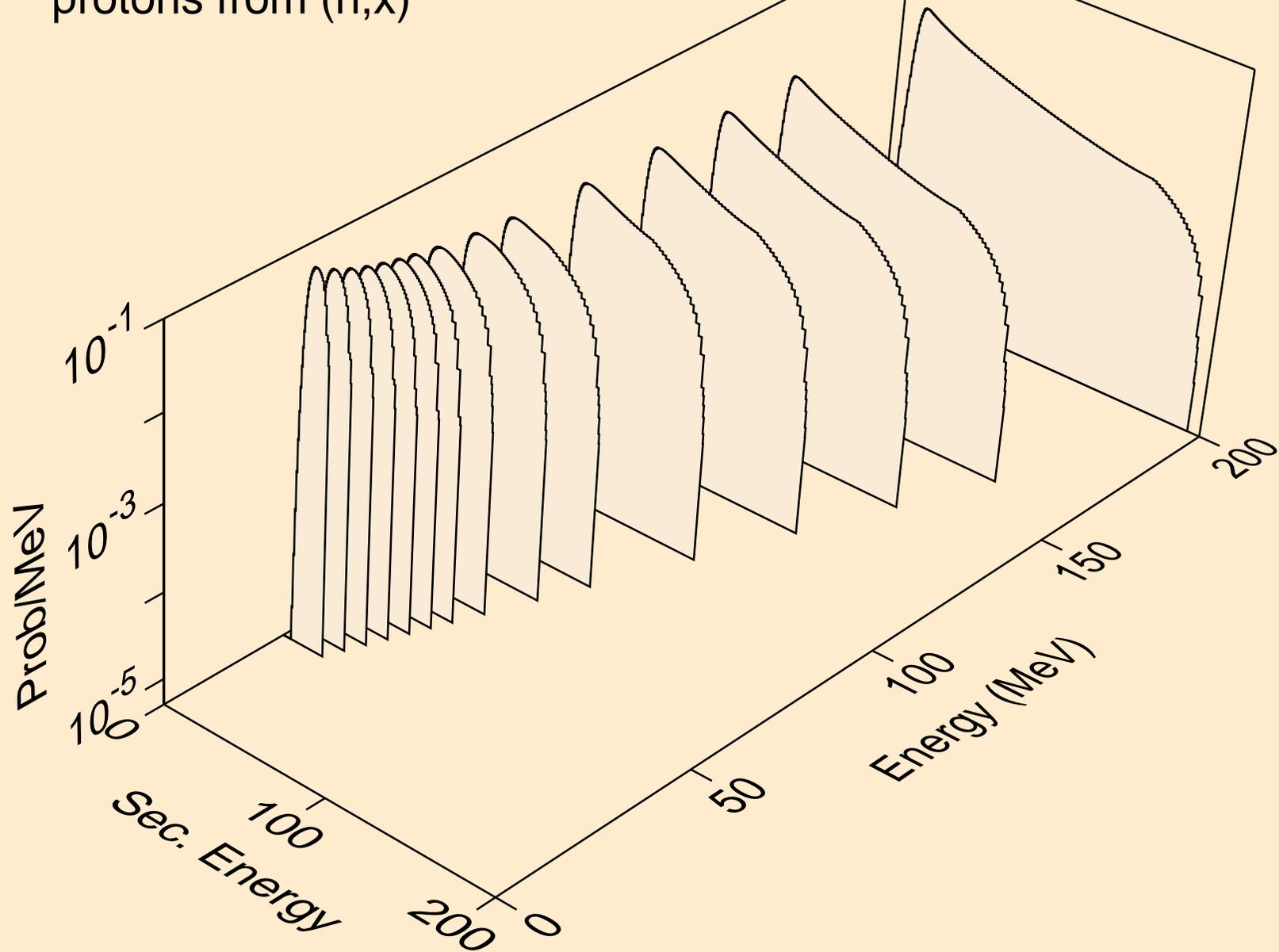
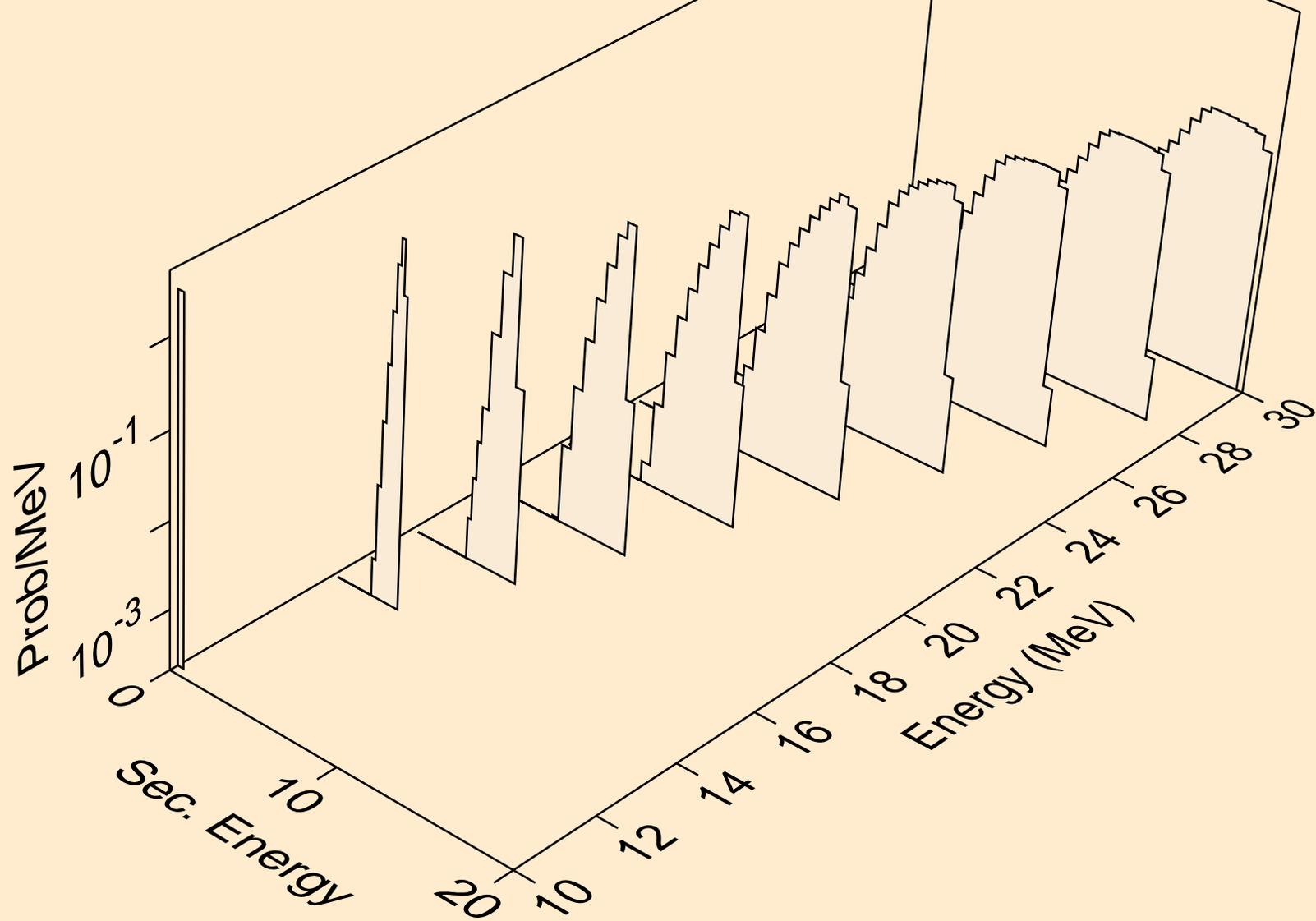RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
Recoil Heating

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
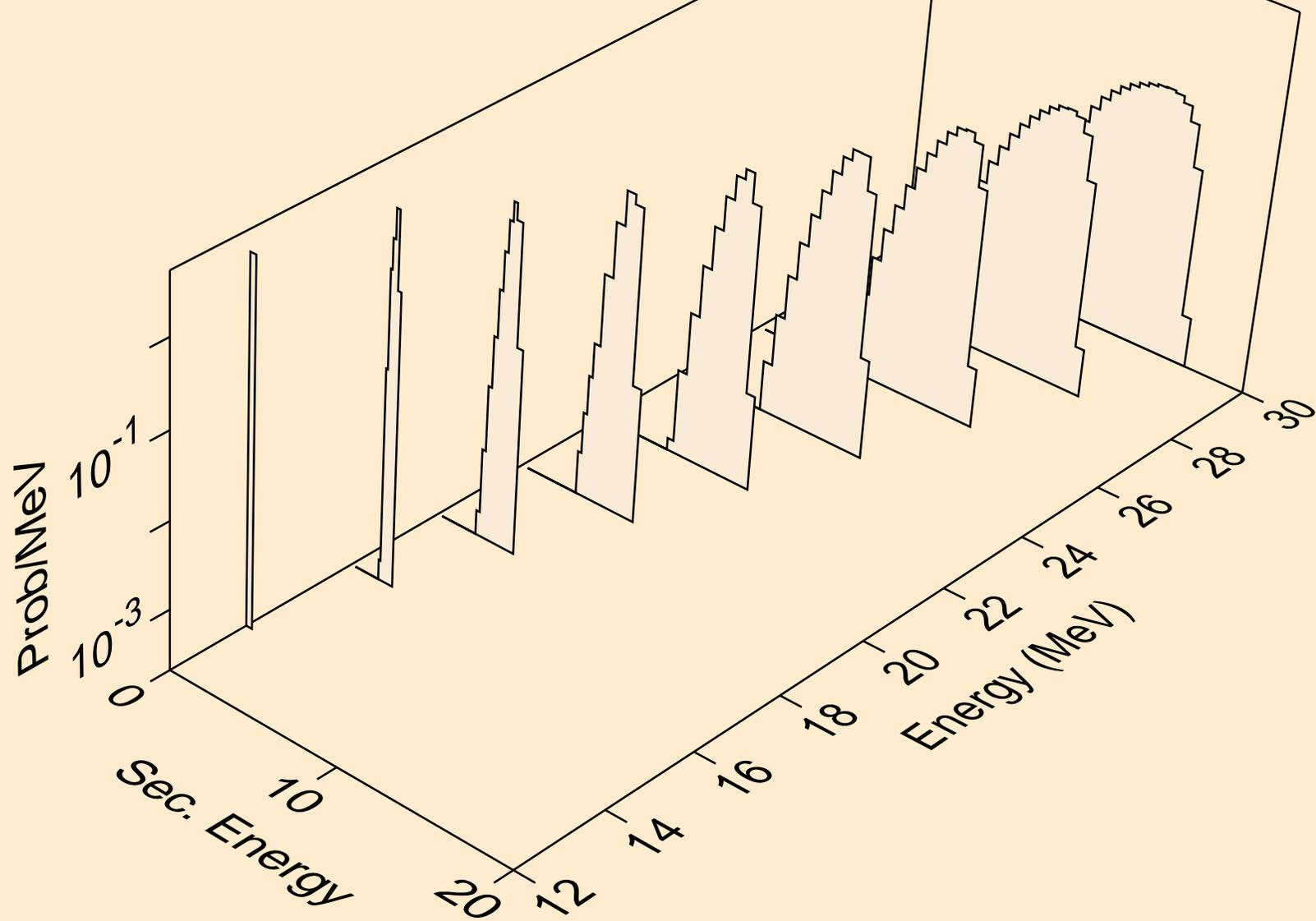Particle production cross sections

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
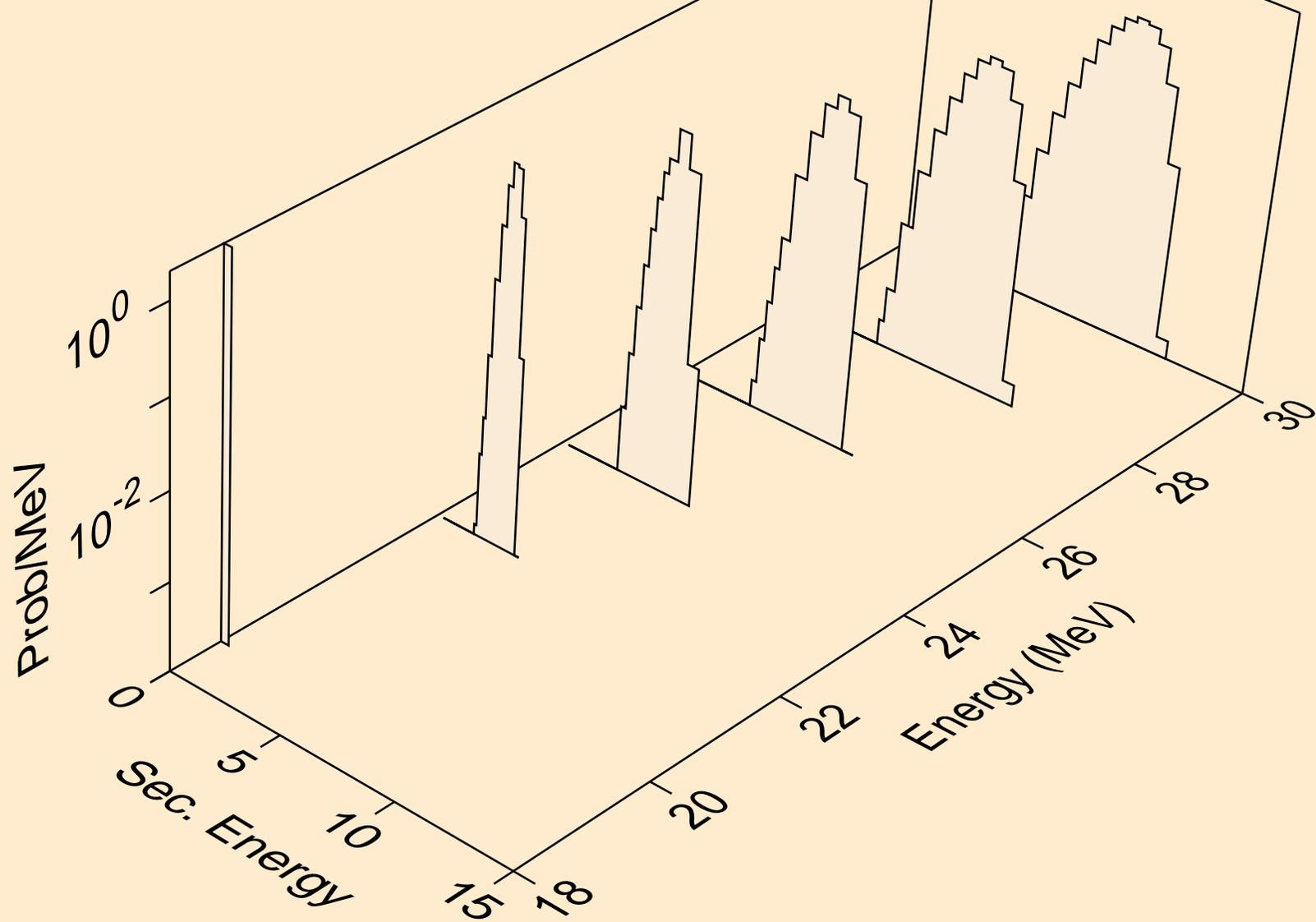protons from (n,x)

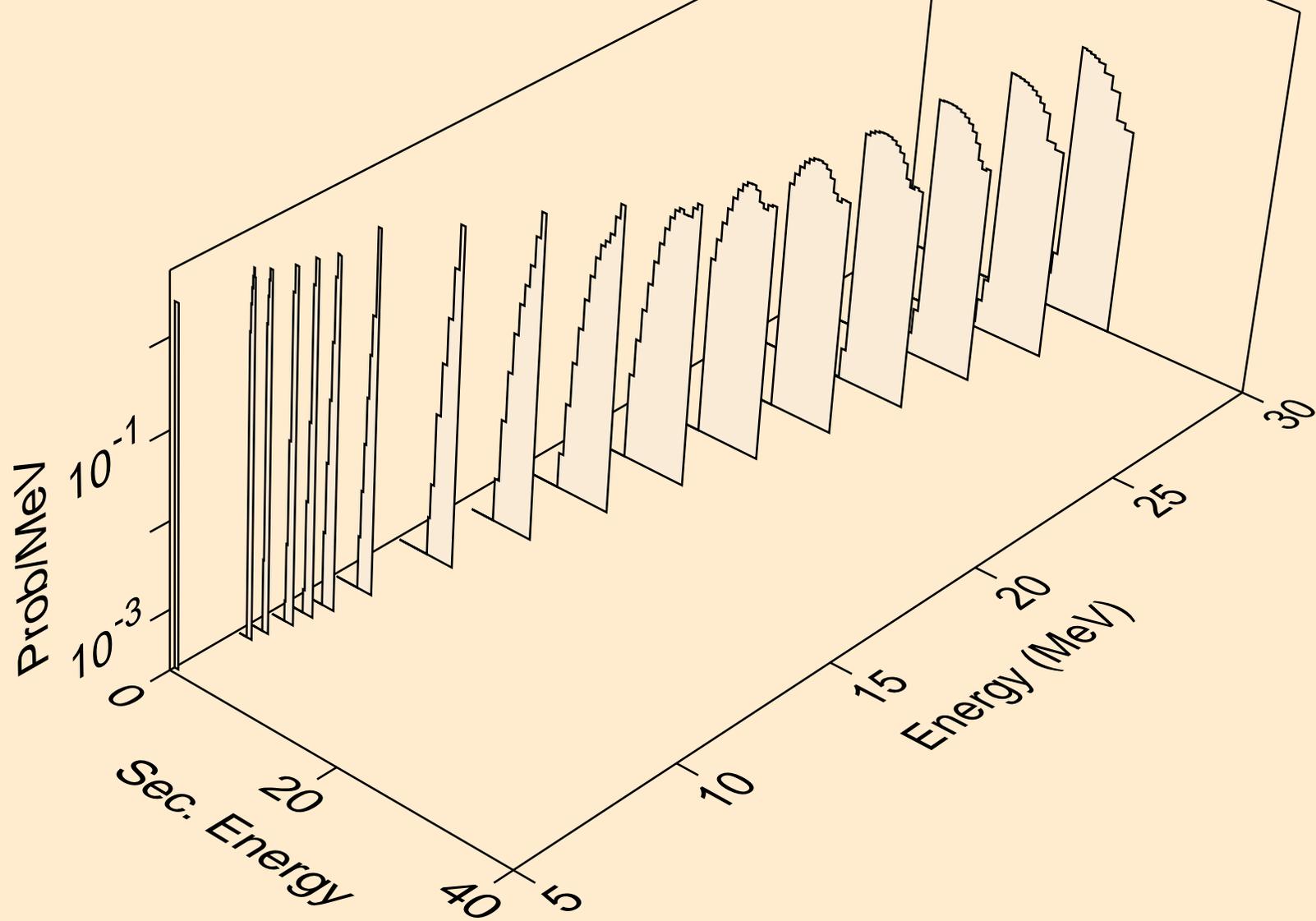RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
protons from (n,n*)p

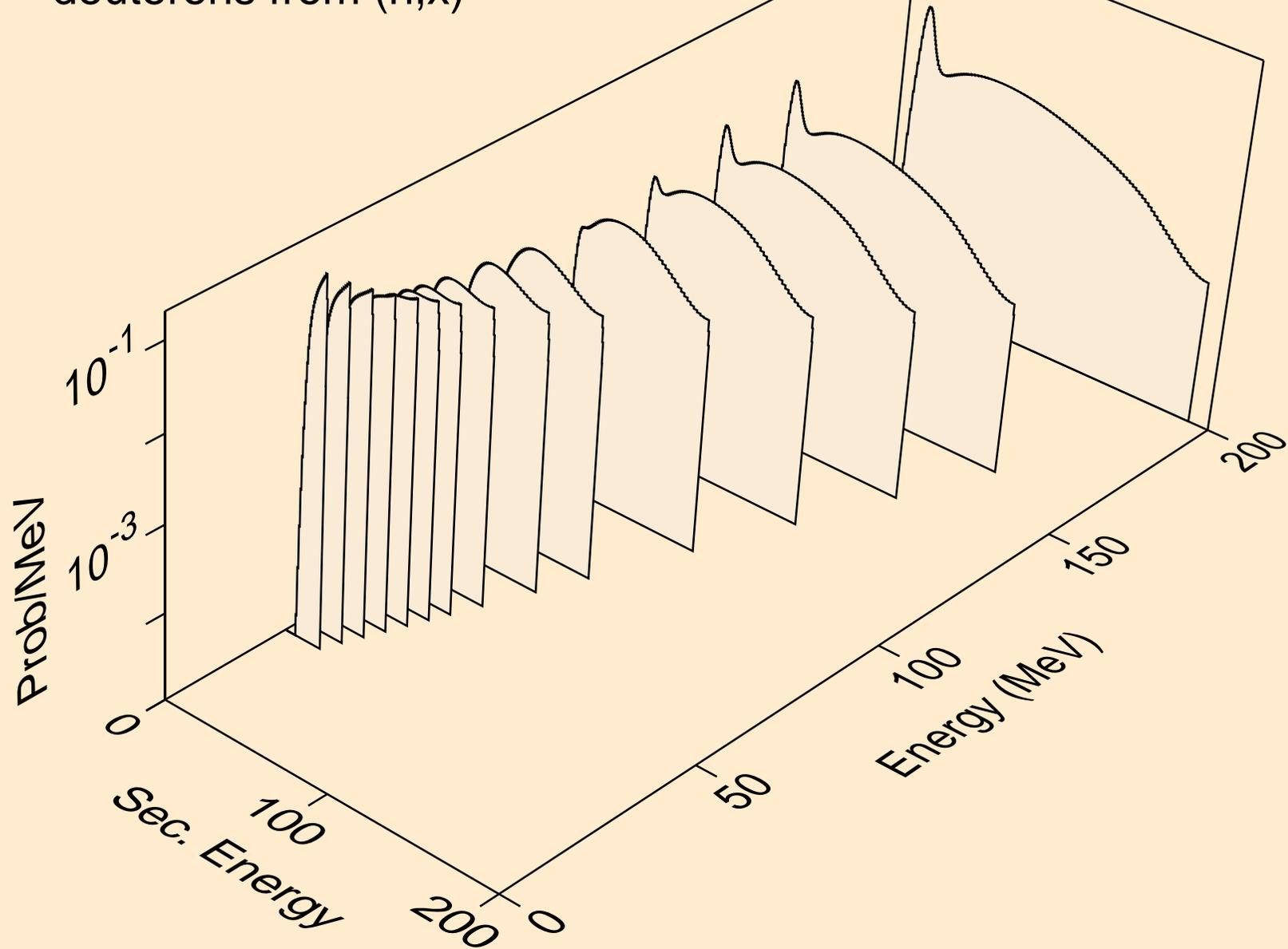RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
protons from (n,2np)

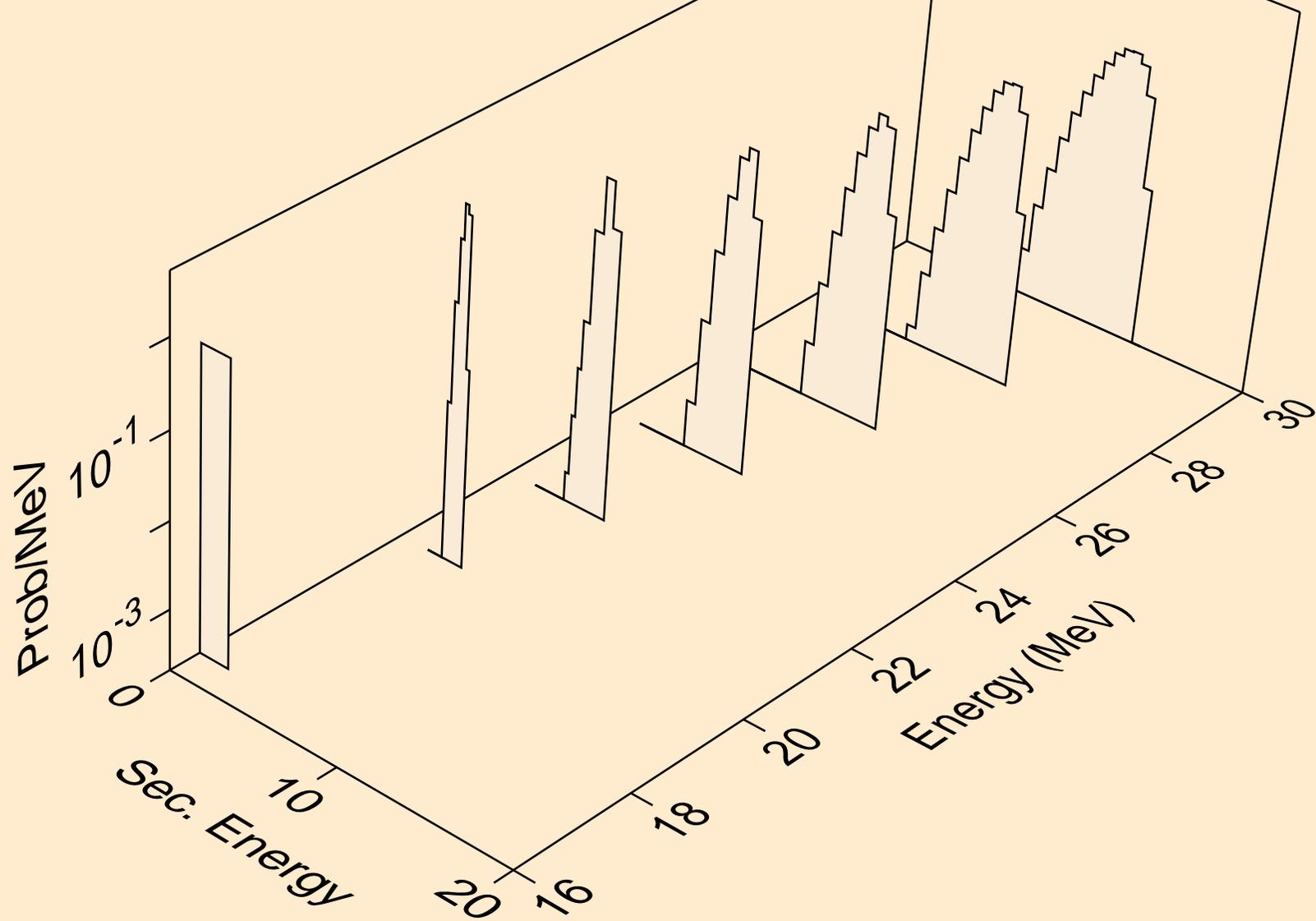RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
protons from (n,3np)

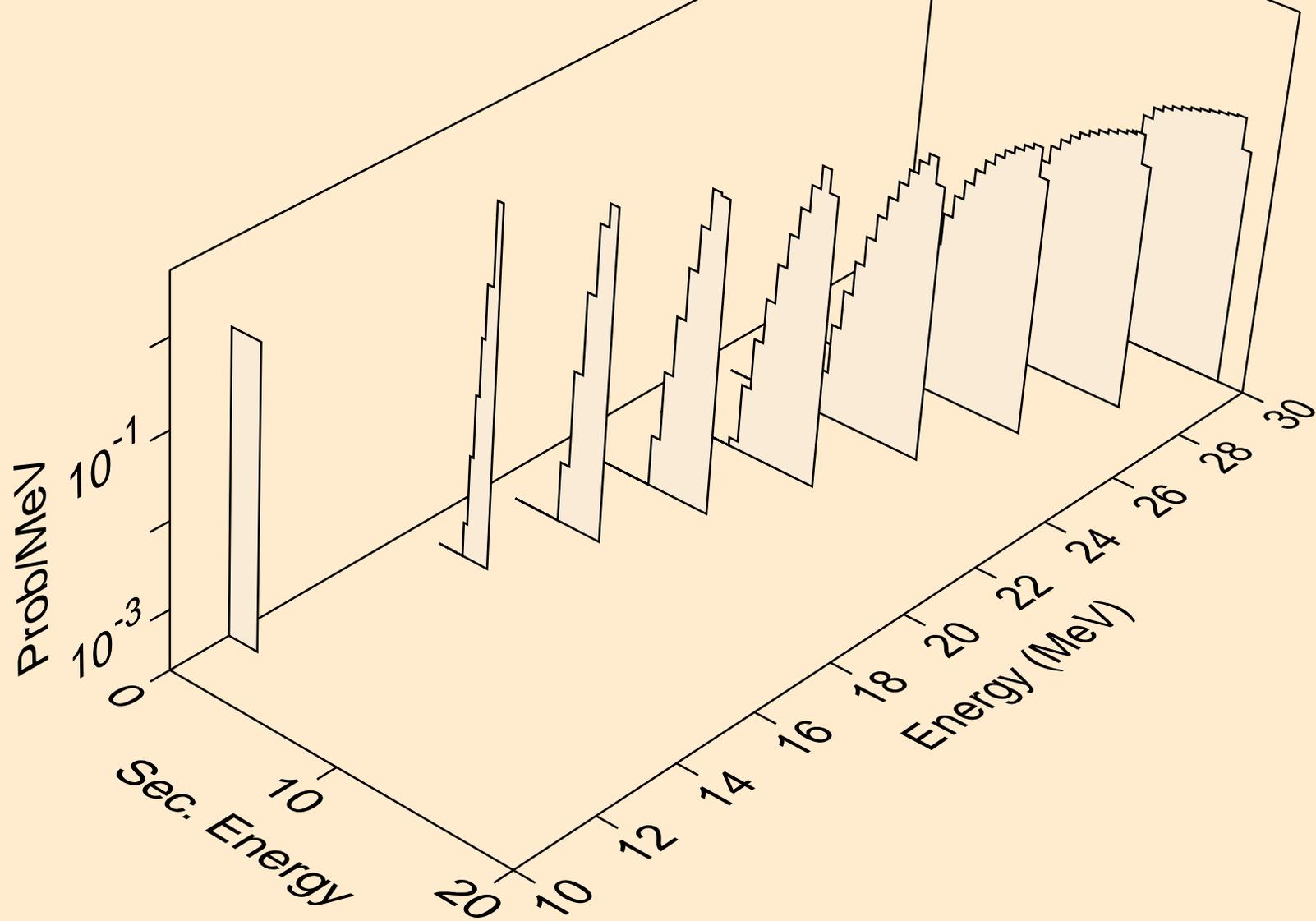RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
protons from (n,p)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
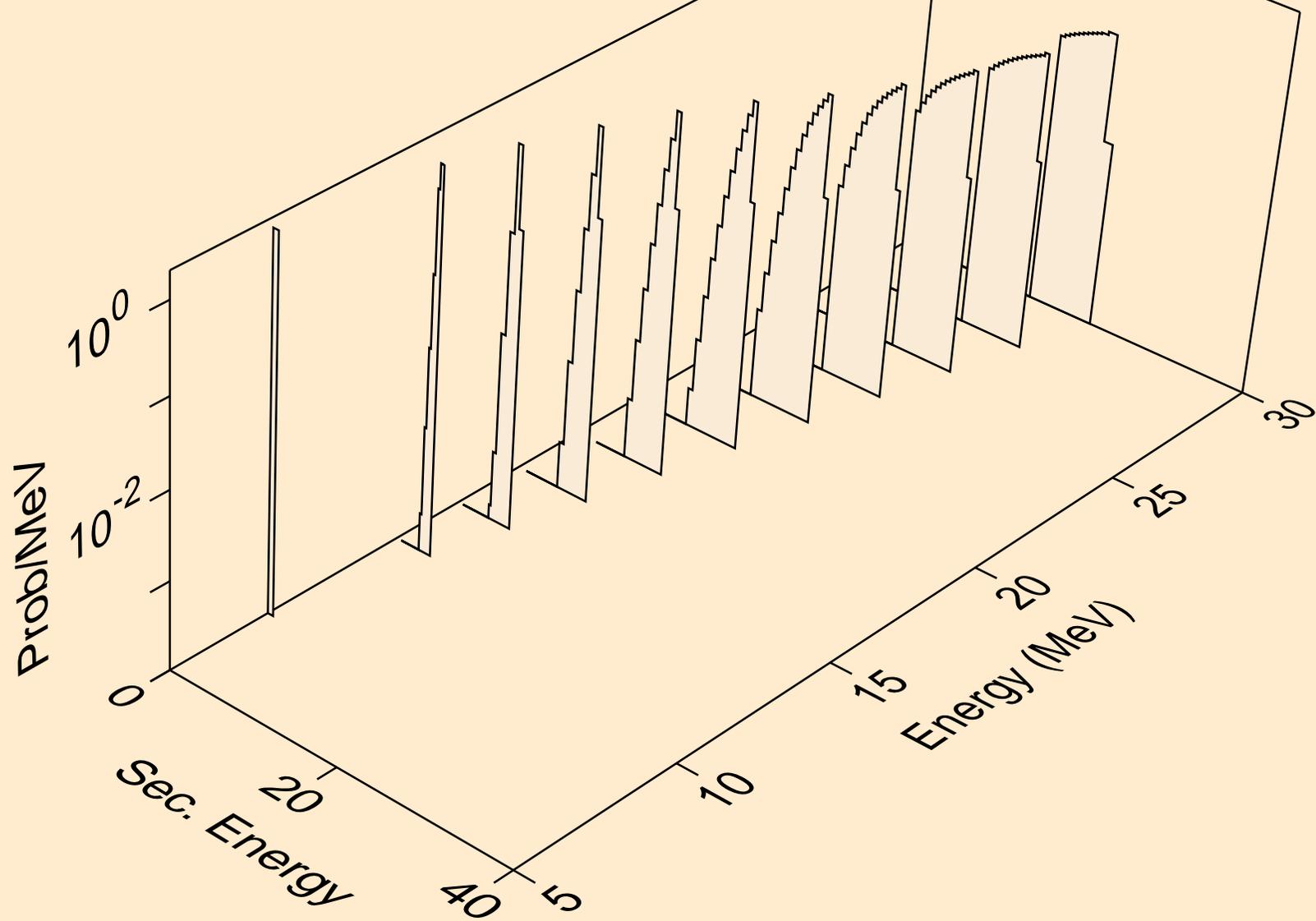deuterons from (n,x)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
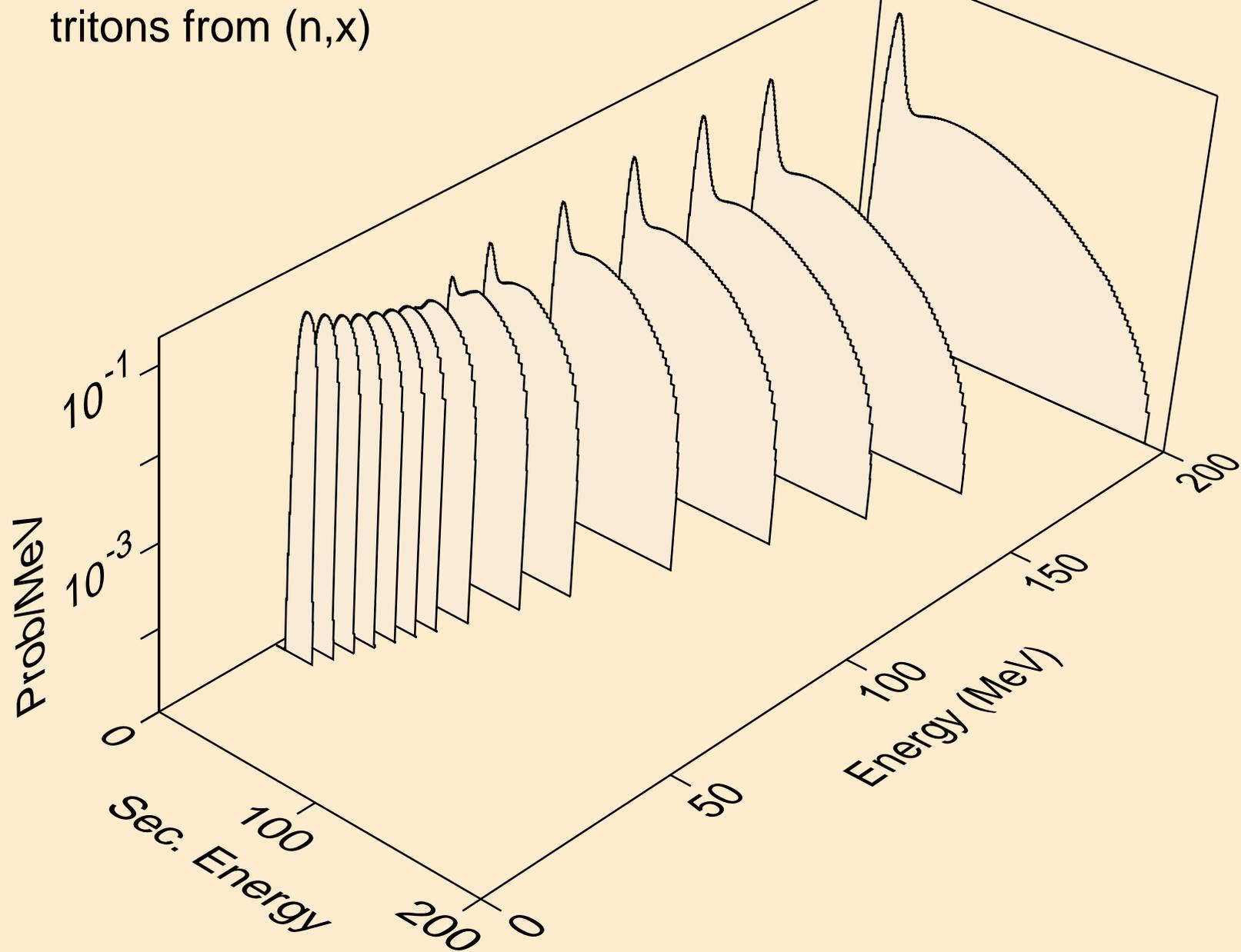deuterons from (n,2nd)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
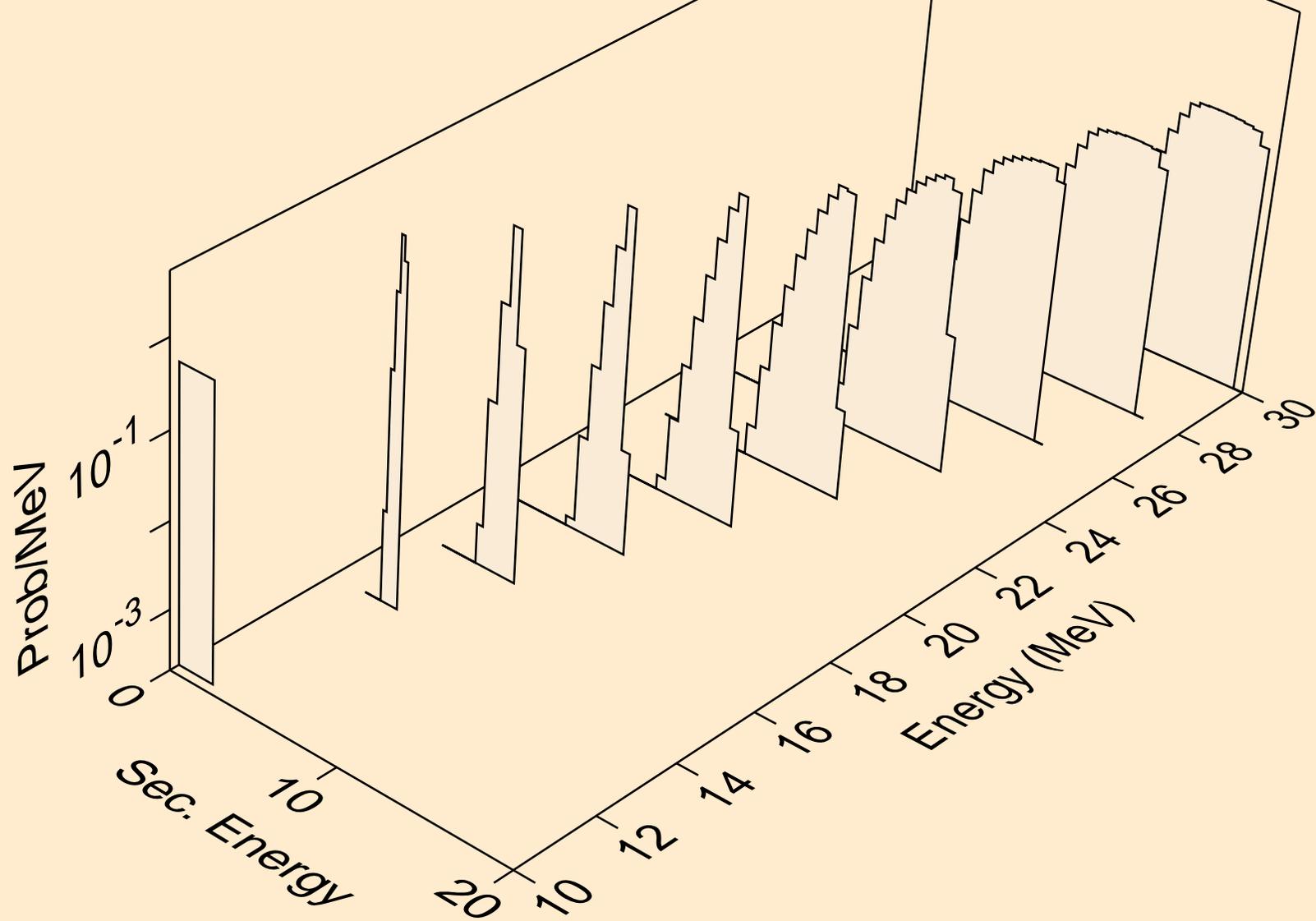deuterons from (n,n*)d

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
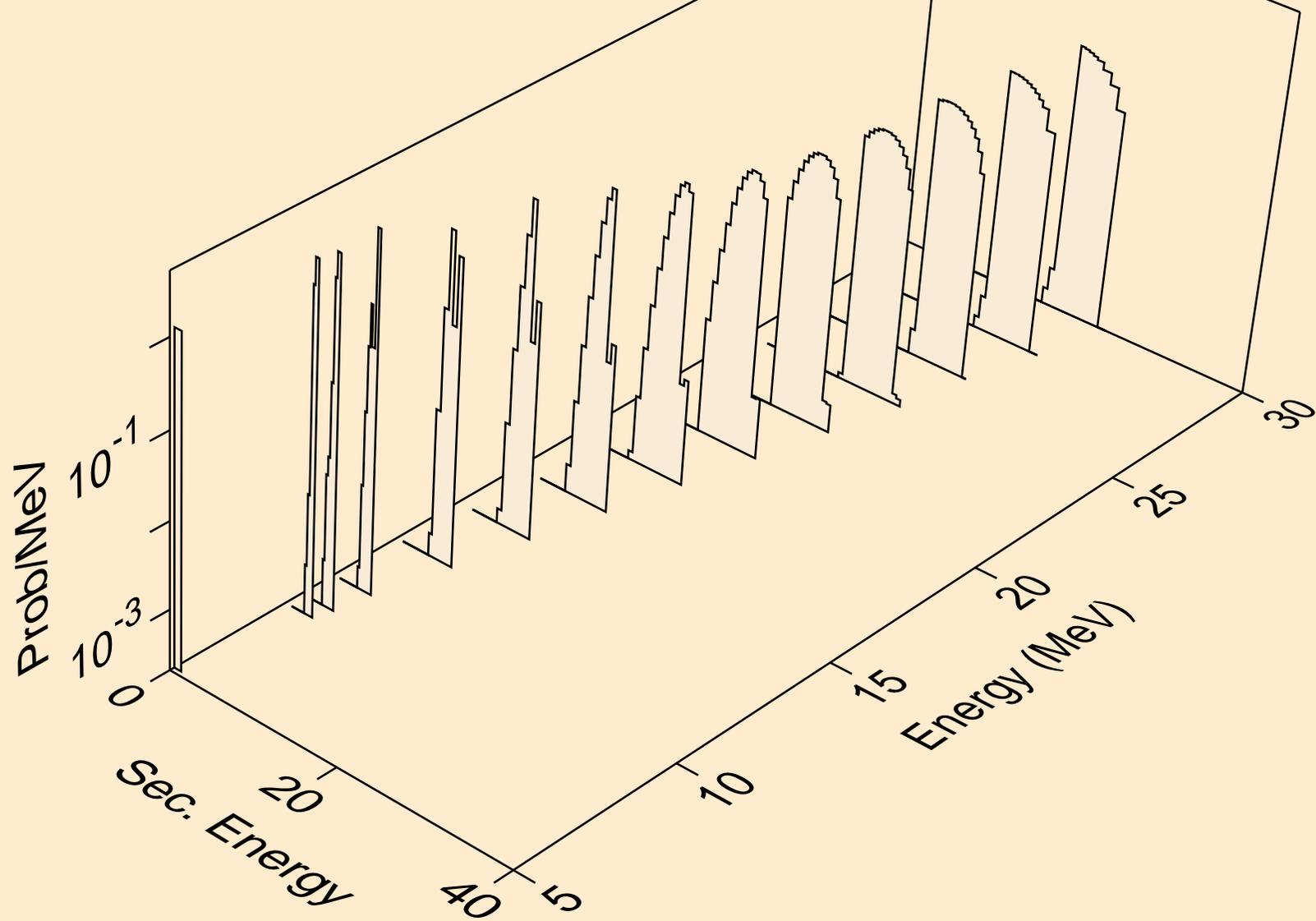deuterons from (n,d)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
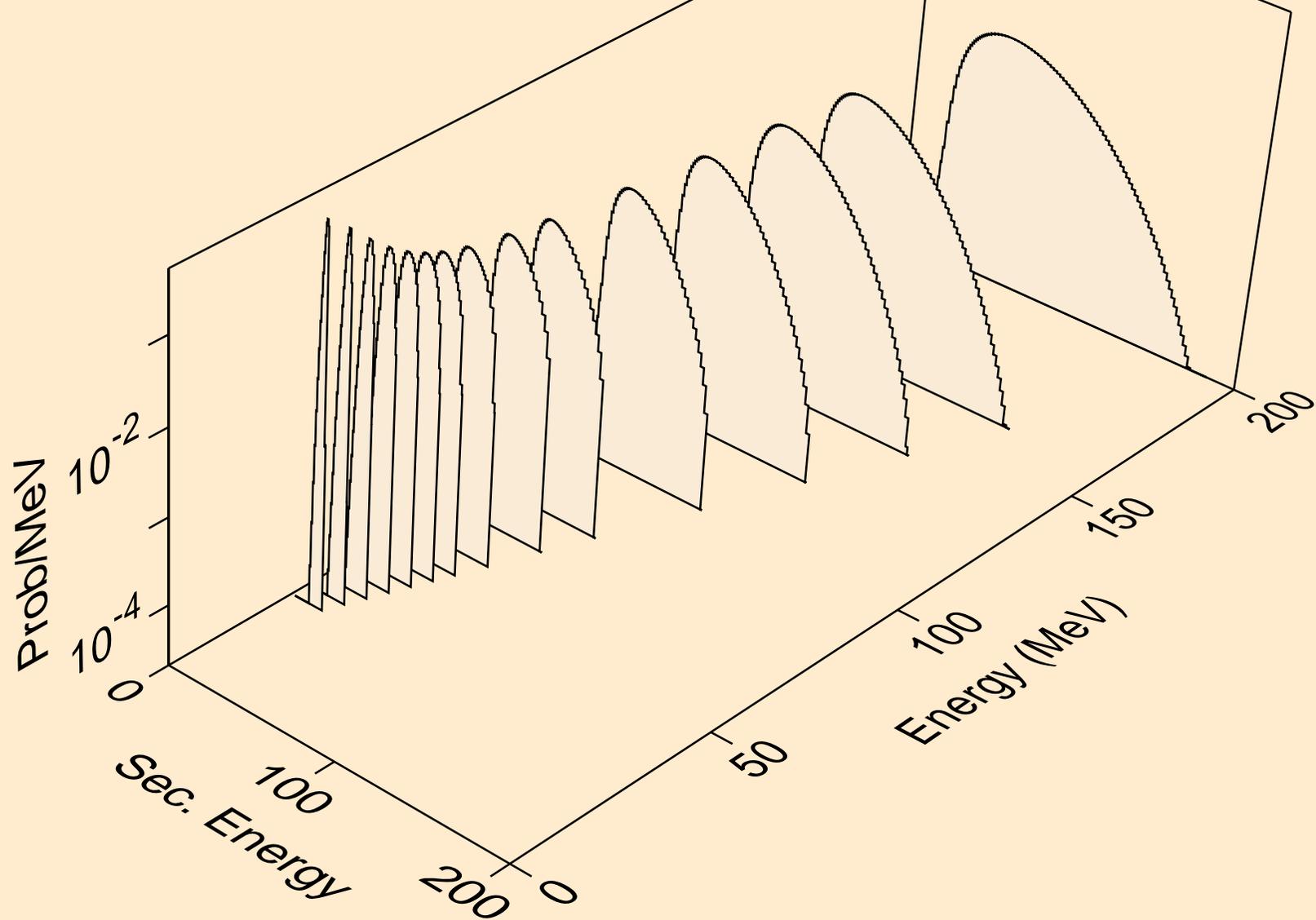tritons from (n,x)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
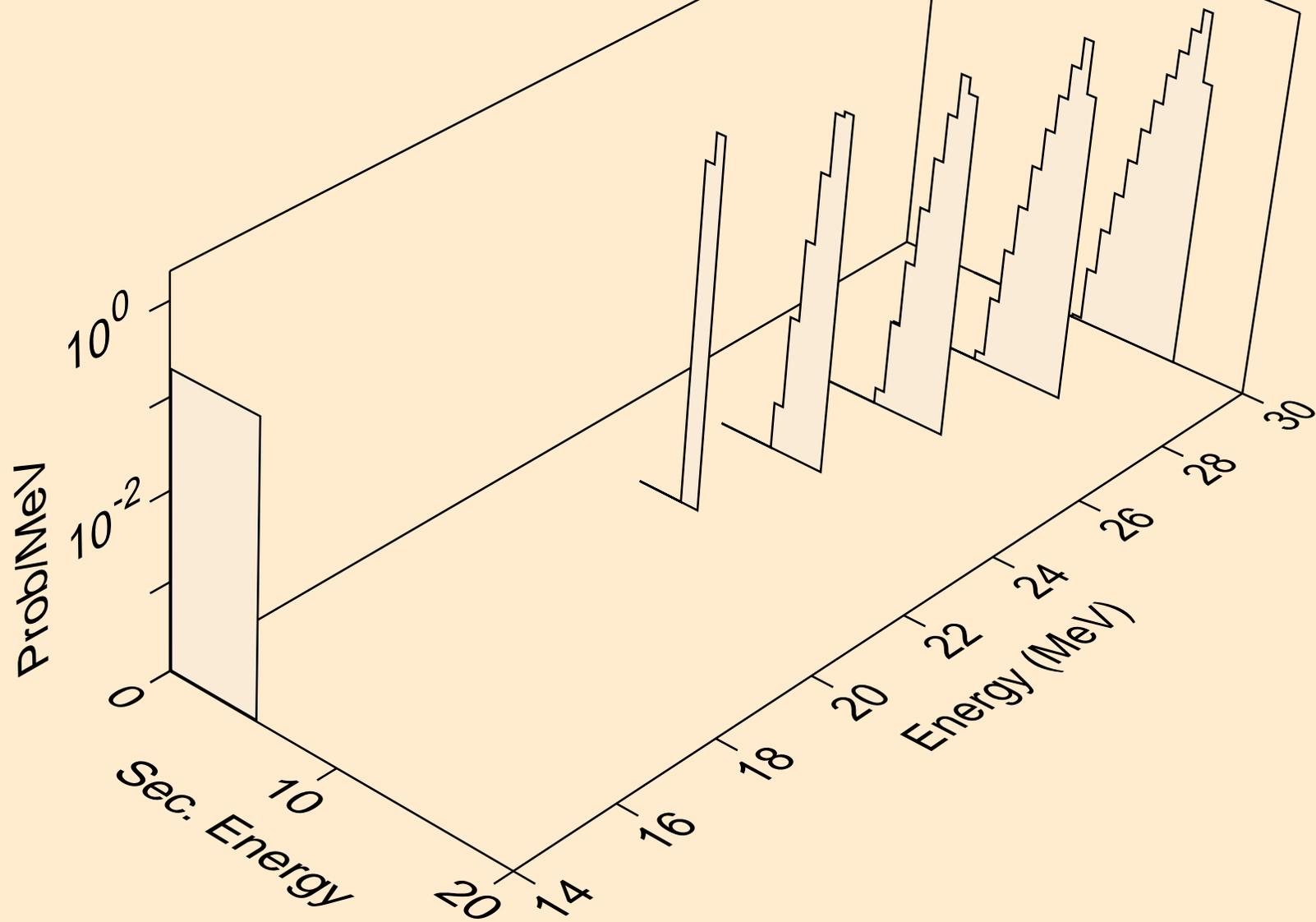tritons from (n,n*)t

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
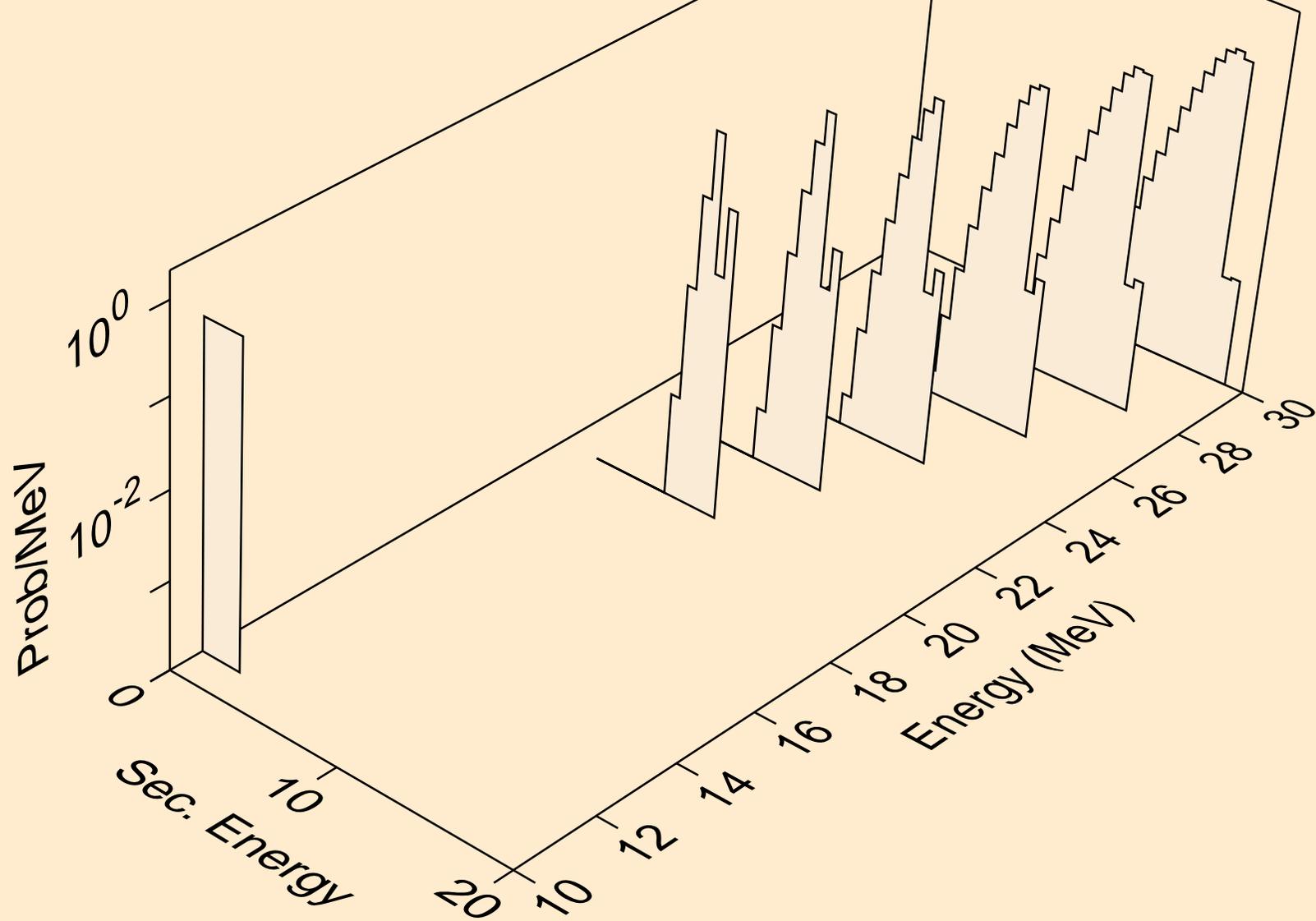tritons from (n,t)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
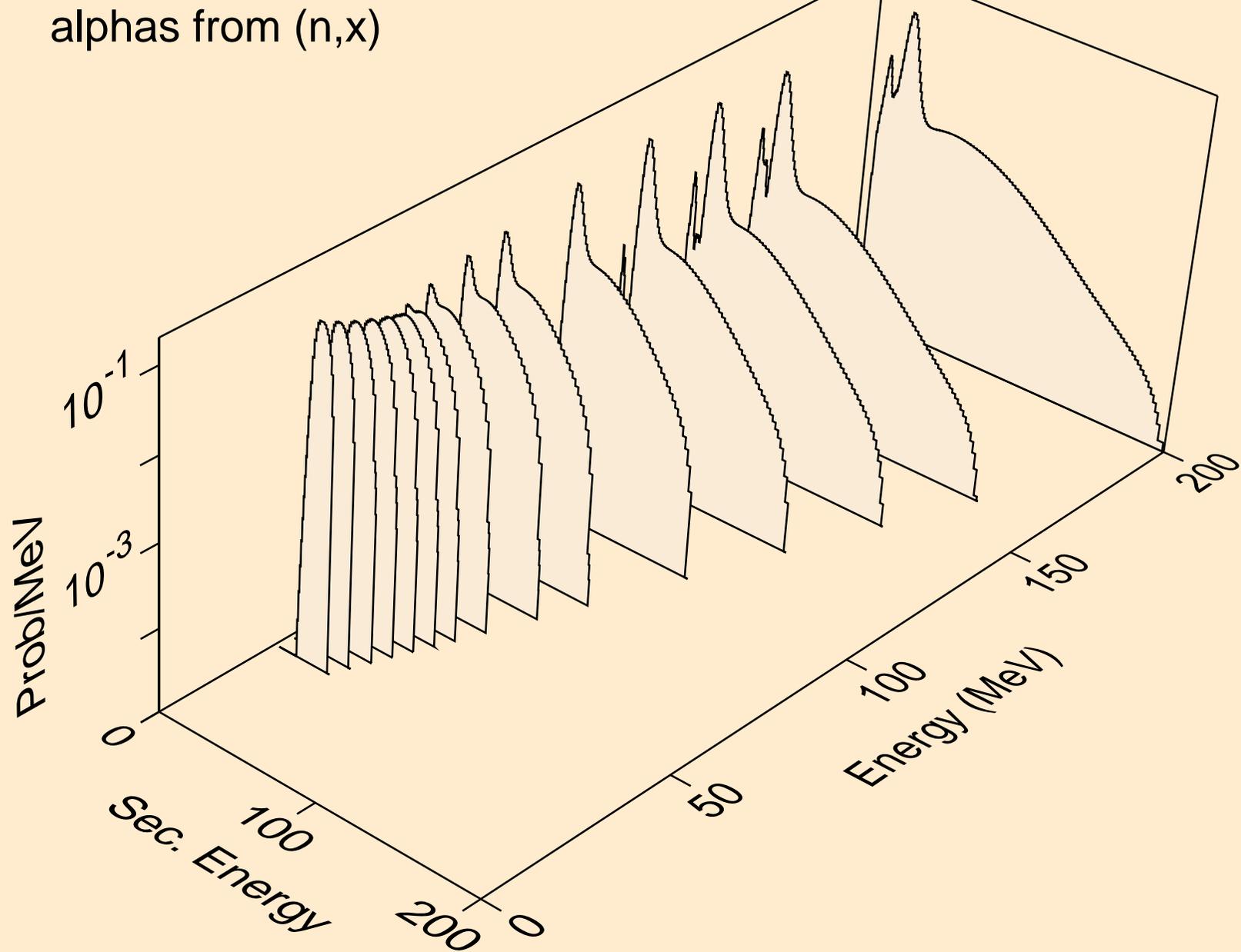he3s from (n,x)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
he3s from (n,n*)he3

Prob/MeV

10^0

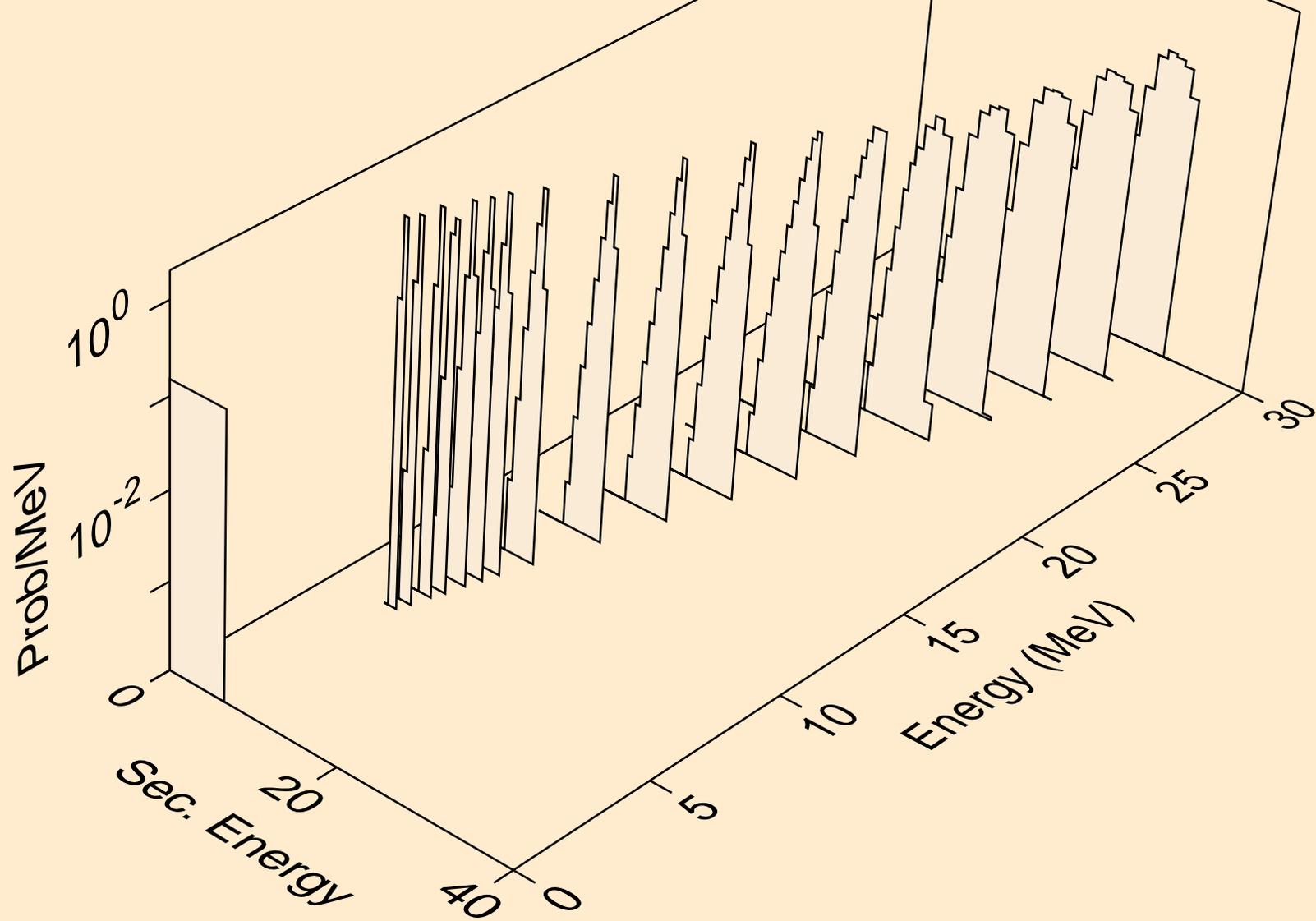10^{-2}

Sec. Energy

Energy (MeV)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
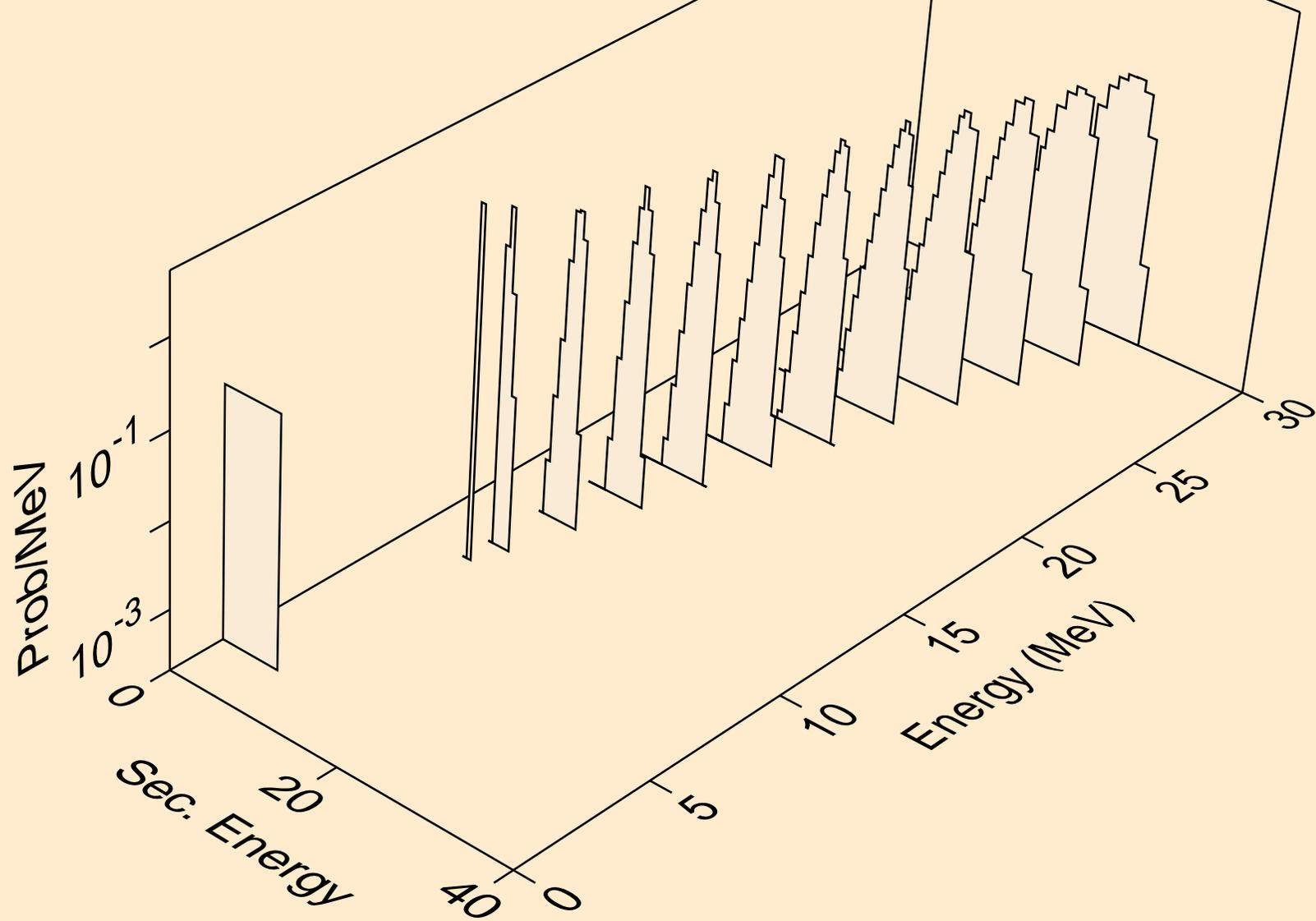he3s from (n,he3)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
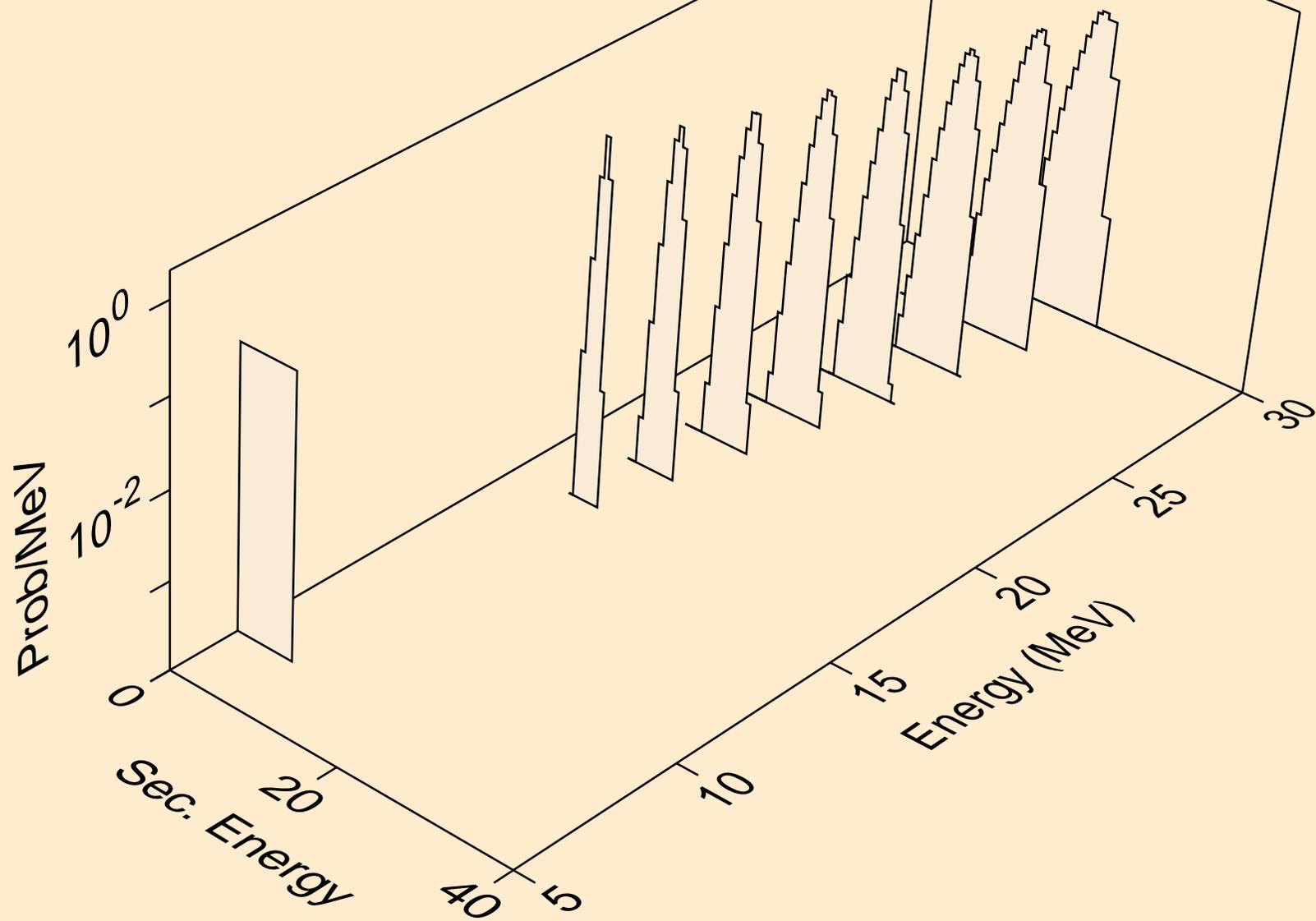alphas from (n,x)

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
alphas from (n,n*)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
alphas from (n,2n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
alphas from (n,3n)a

RN231 NEUTRON ACER TENDL-2023 LIBRARY; T=0.K
alphas from (n,a)