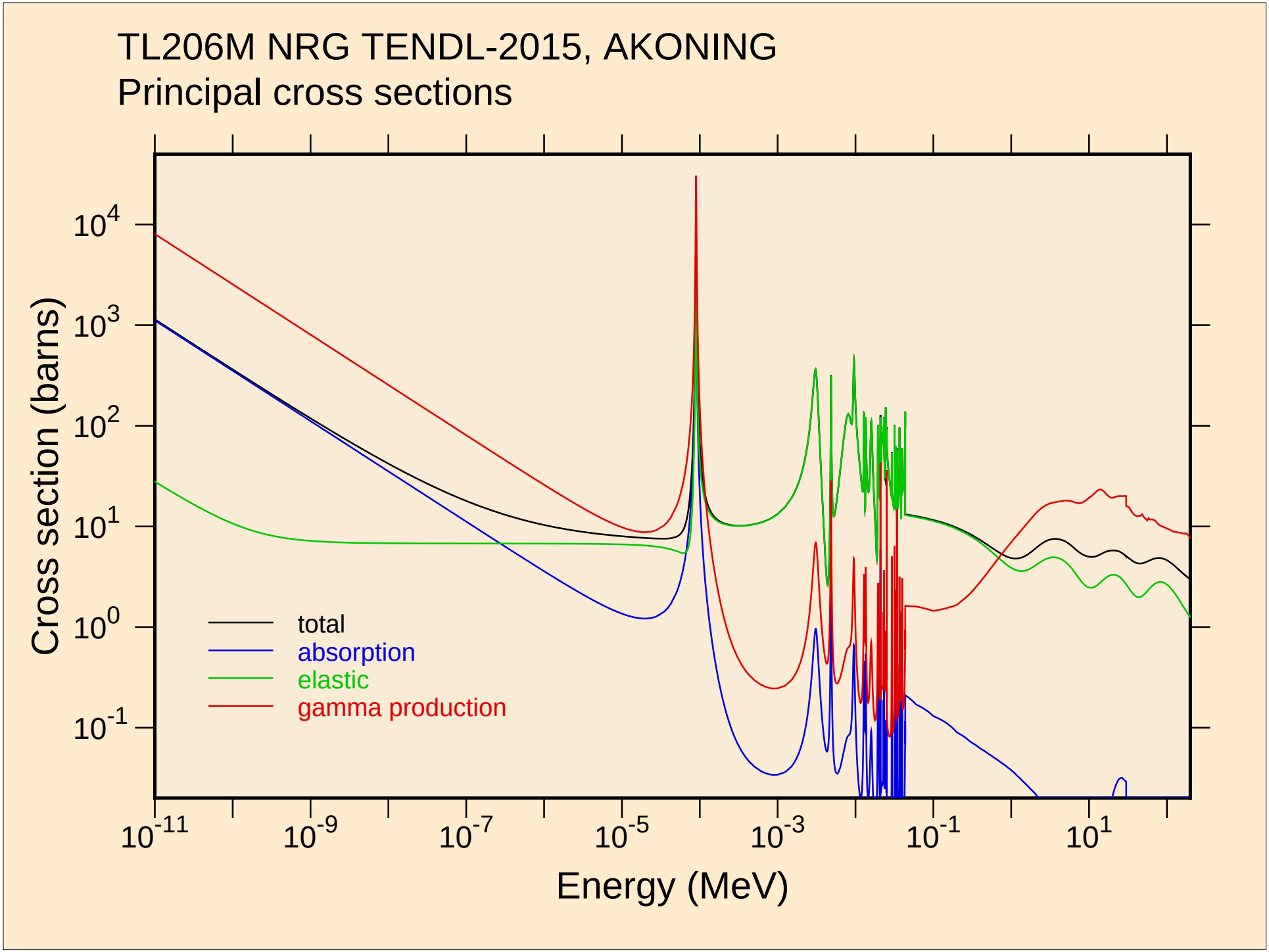
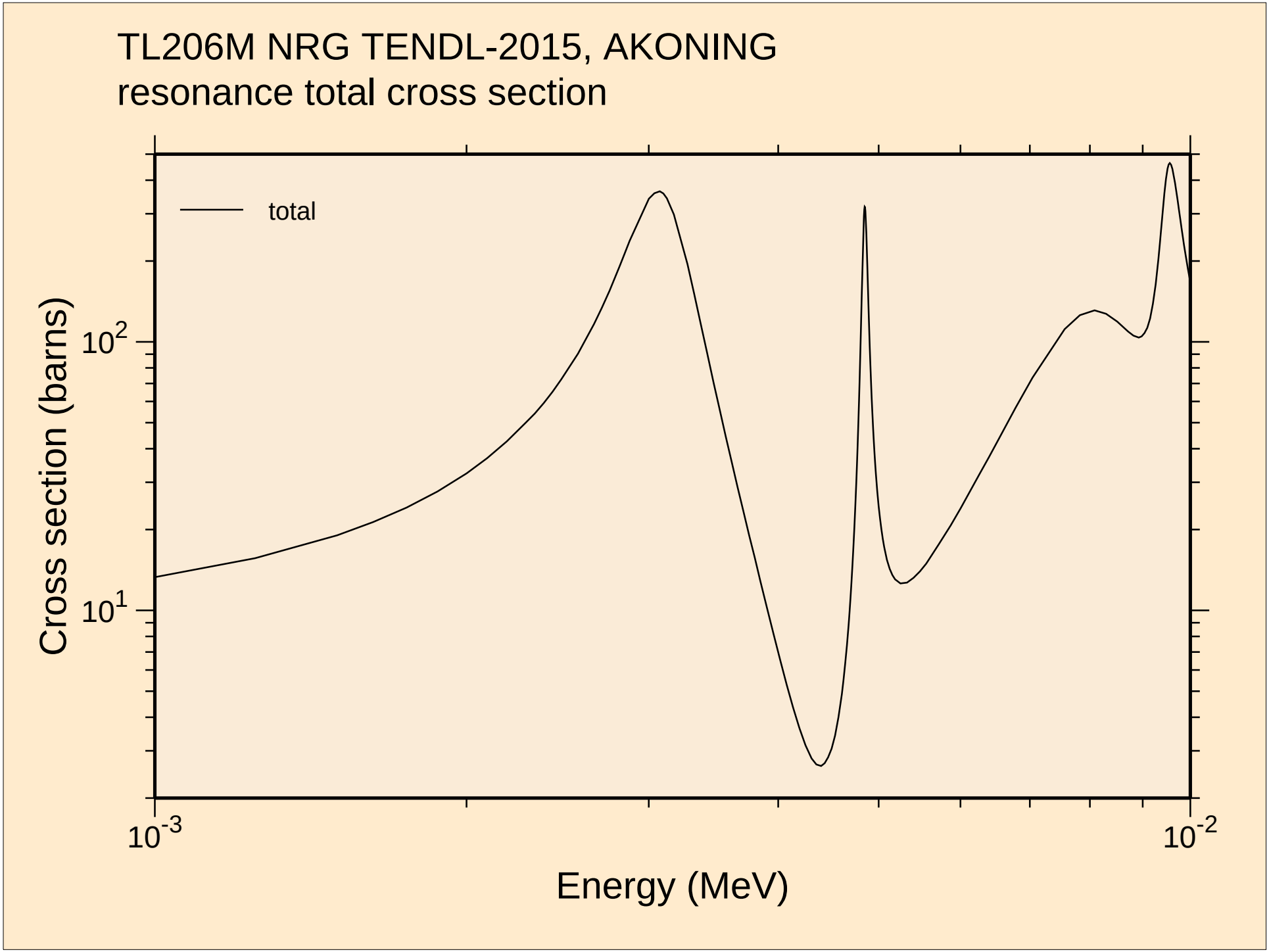
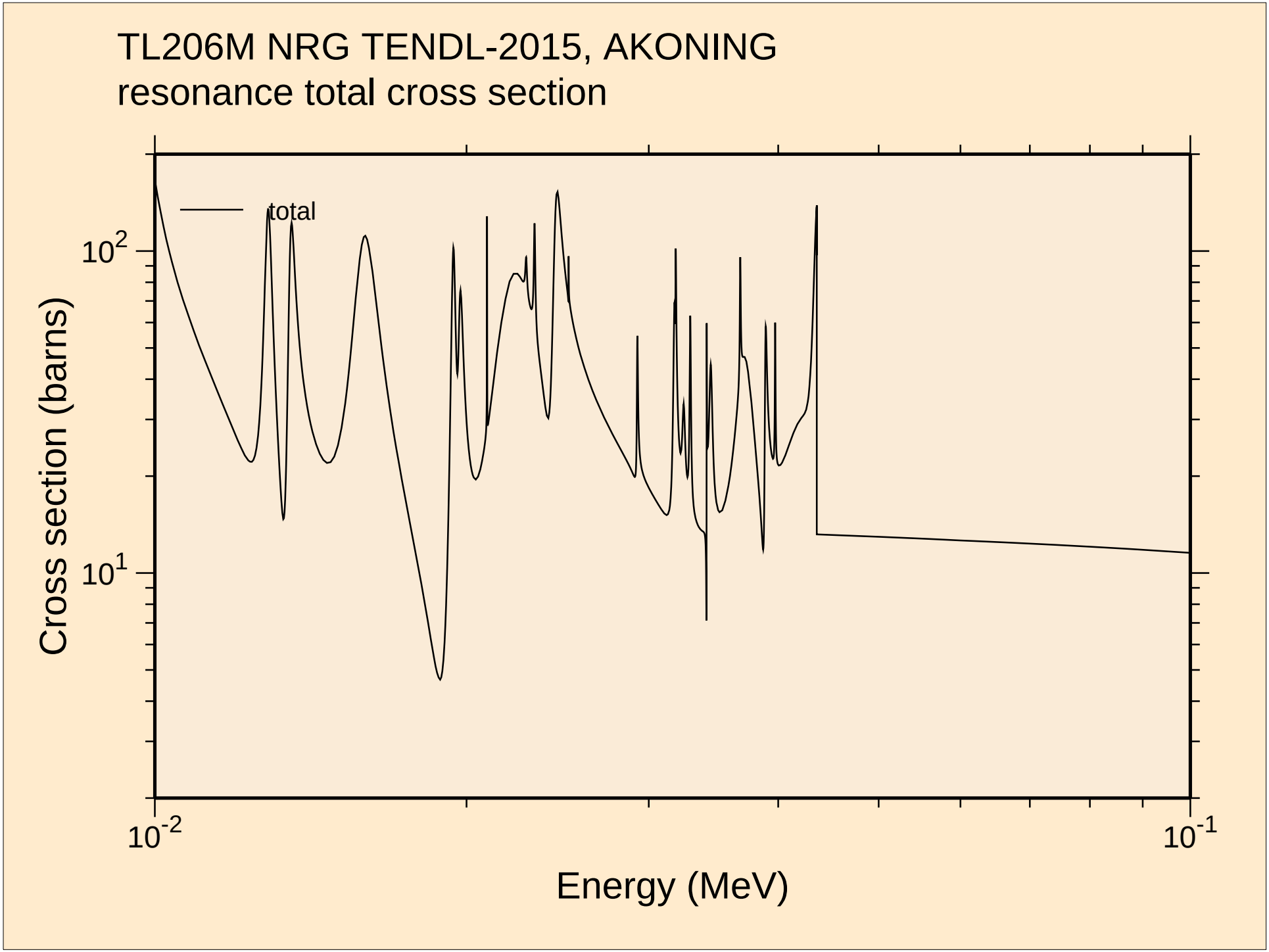
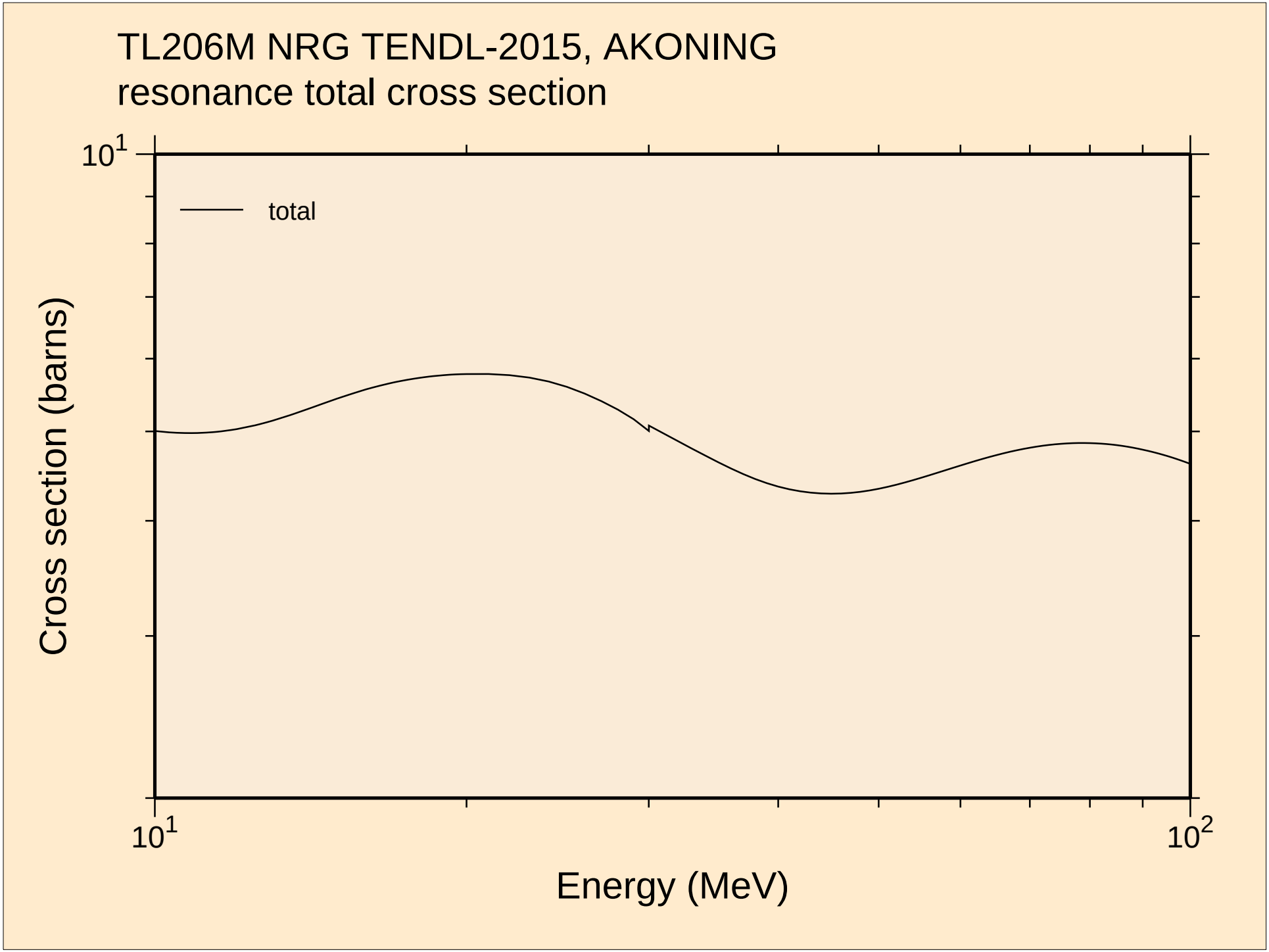
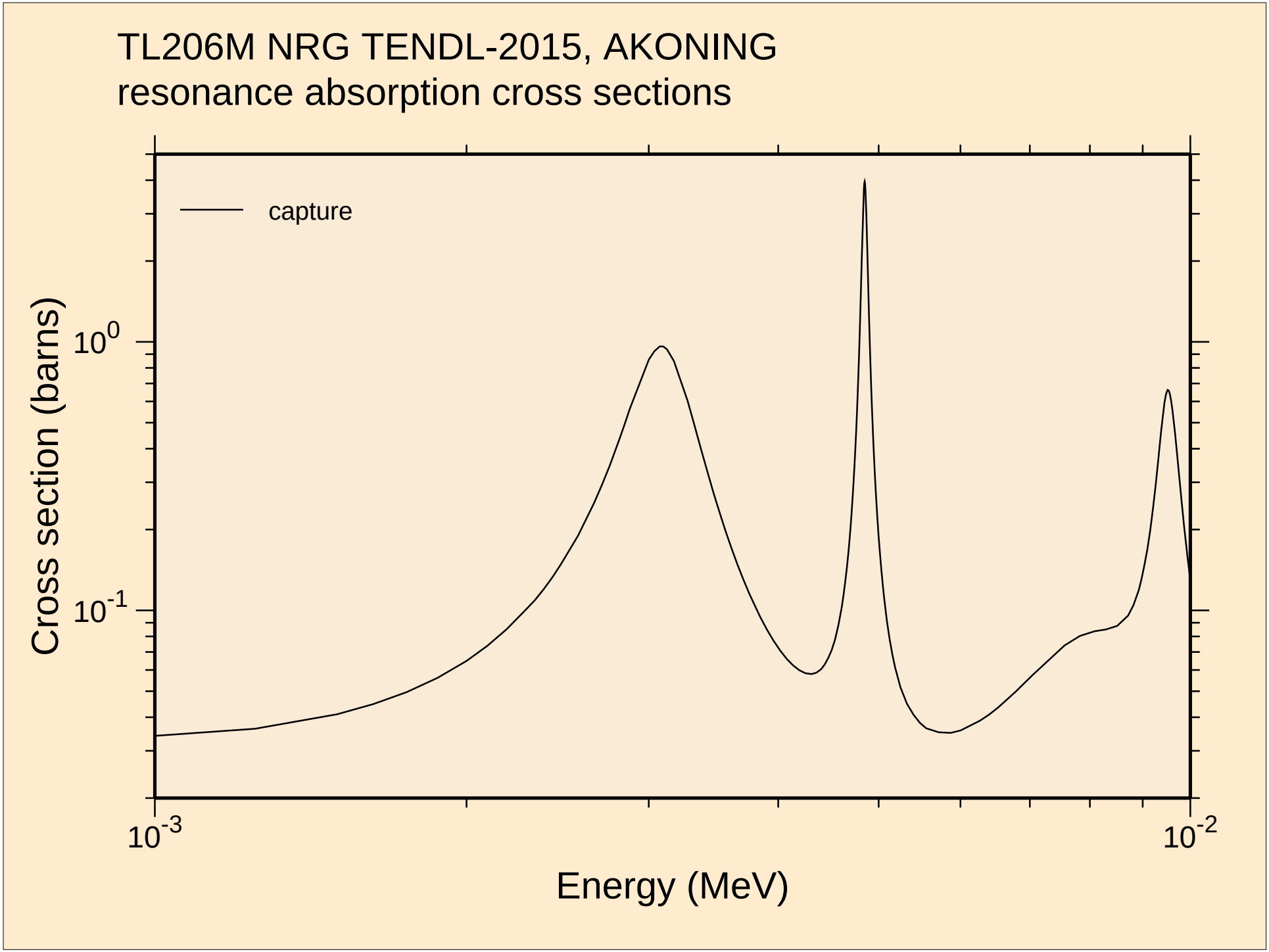
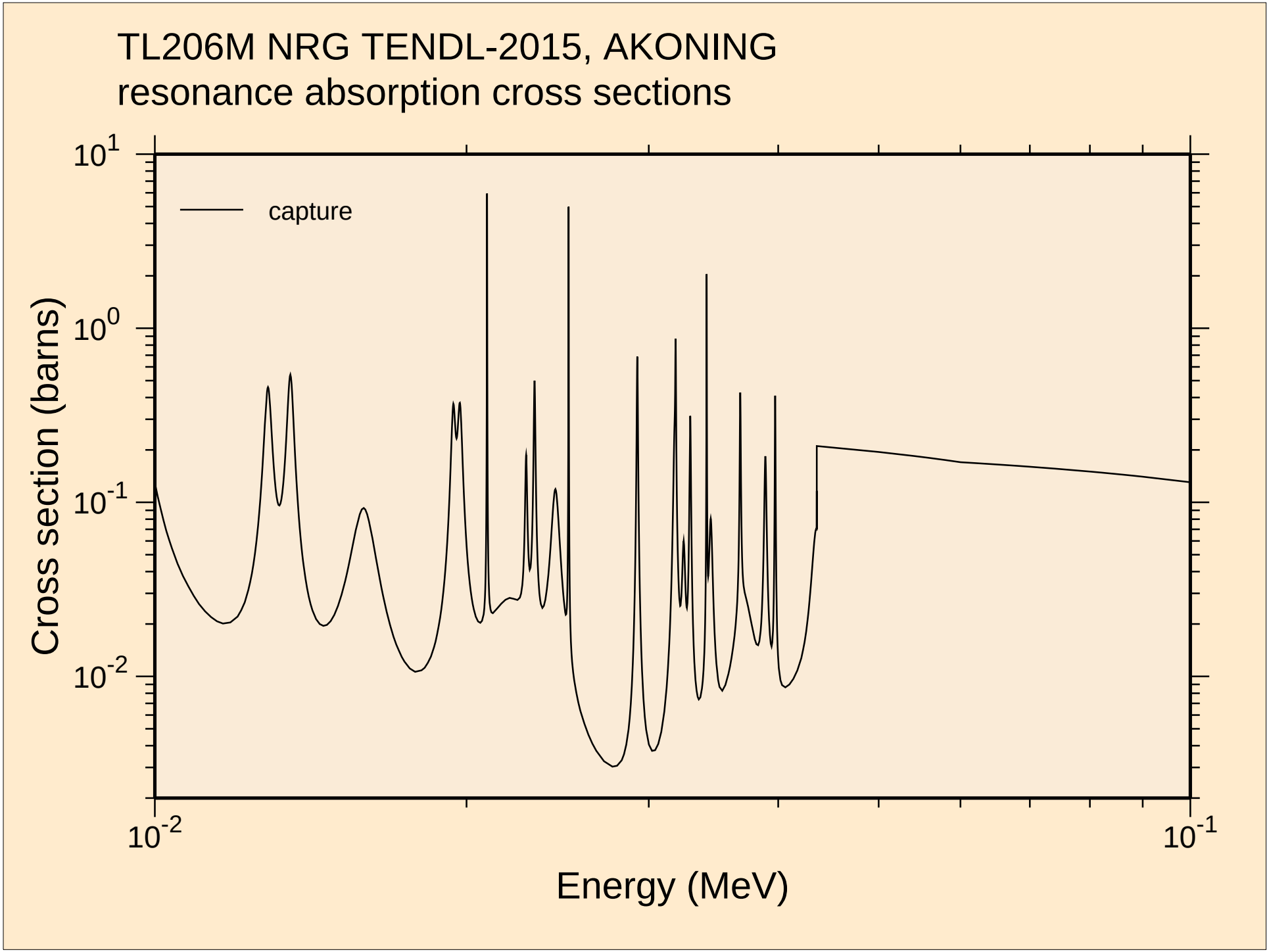

TL206M NRG TENDL-2015, AKONING
Principal cross sections
Cross section (barns)
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
total
absorption
elastic
gamma production
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)

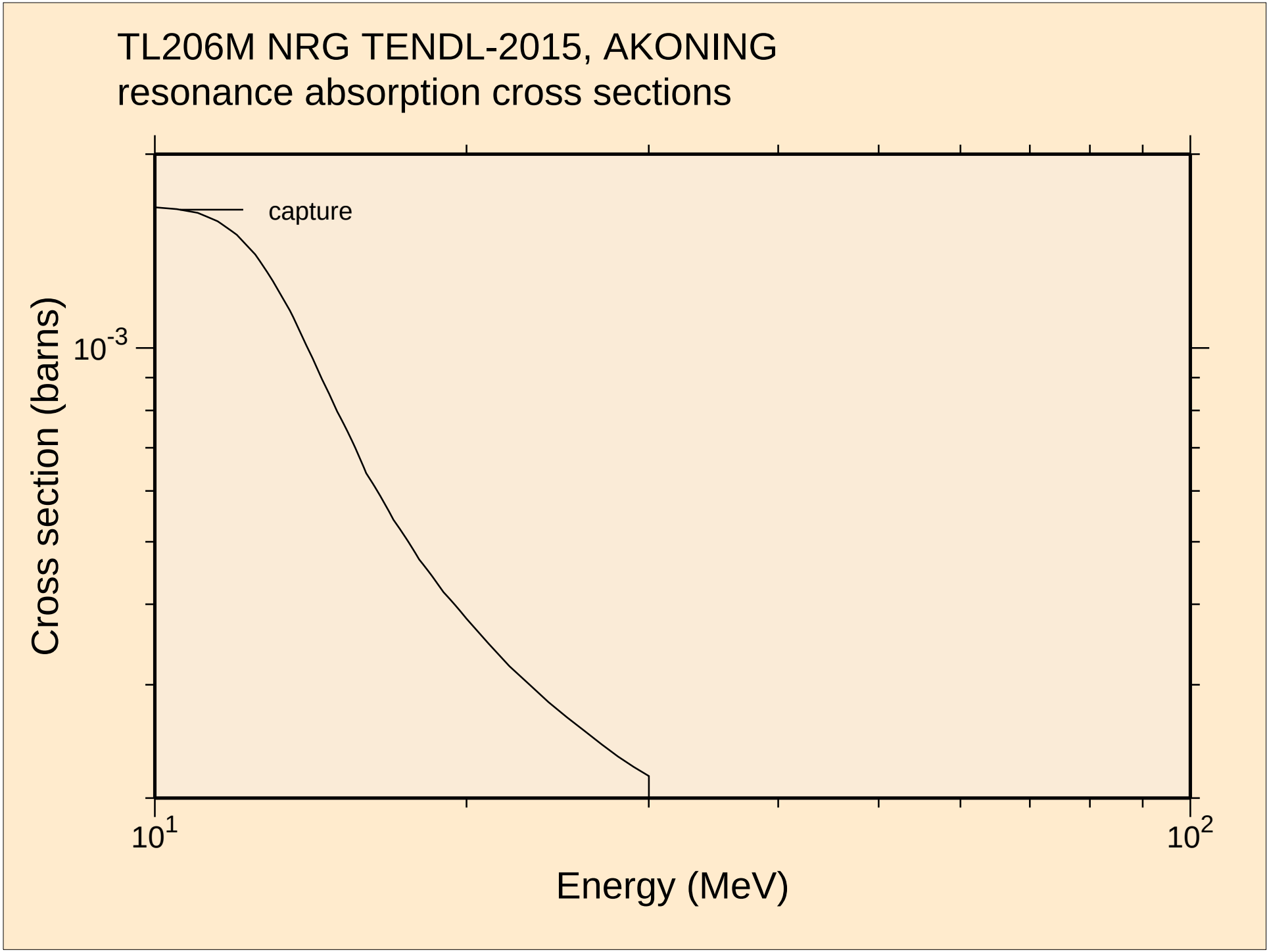

TL206M NRG TENDL-2015, AKONING
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^-3
10^-2
Energy (MeV)

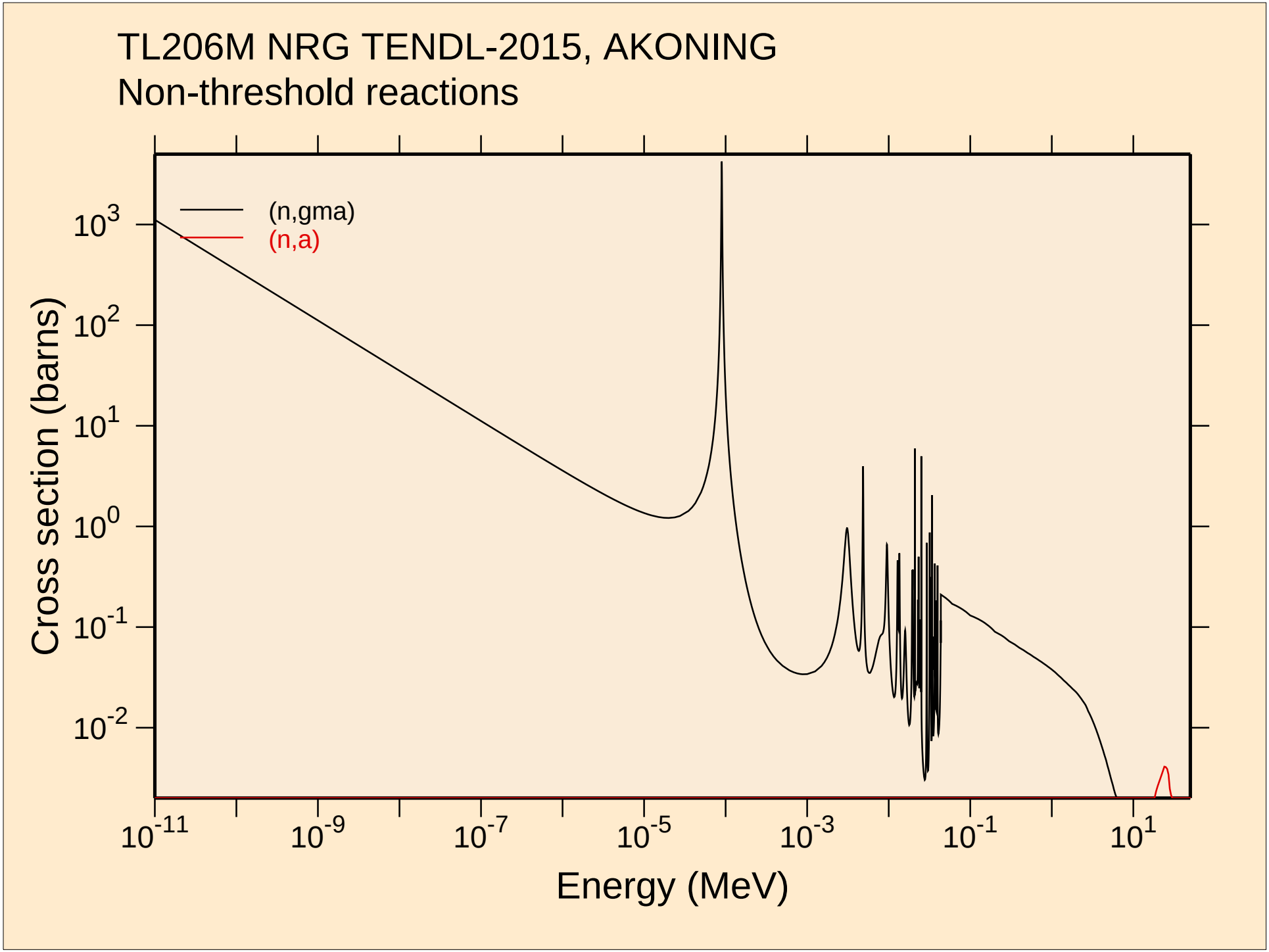

TL206M NRG TENDL-2015, AKONING
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^-2
10^-1
Energy (MeV)

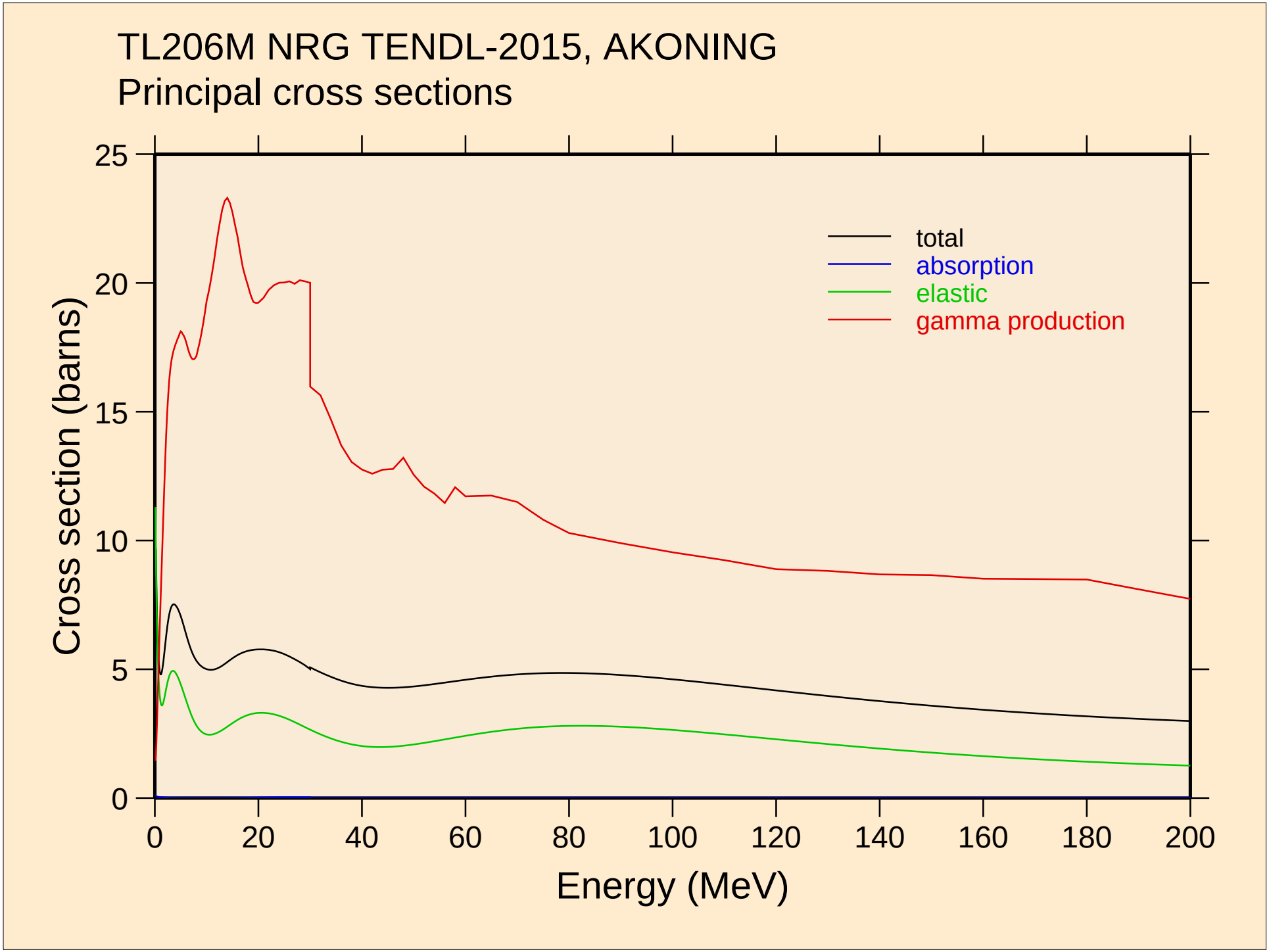

TL206M NRG TENDL-2015, AKONING
resonance total cross section
10^1
total
Cross section (barns)
10^1
10^2
Energy (MeV)

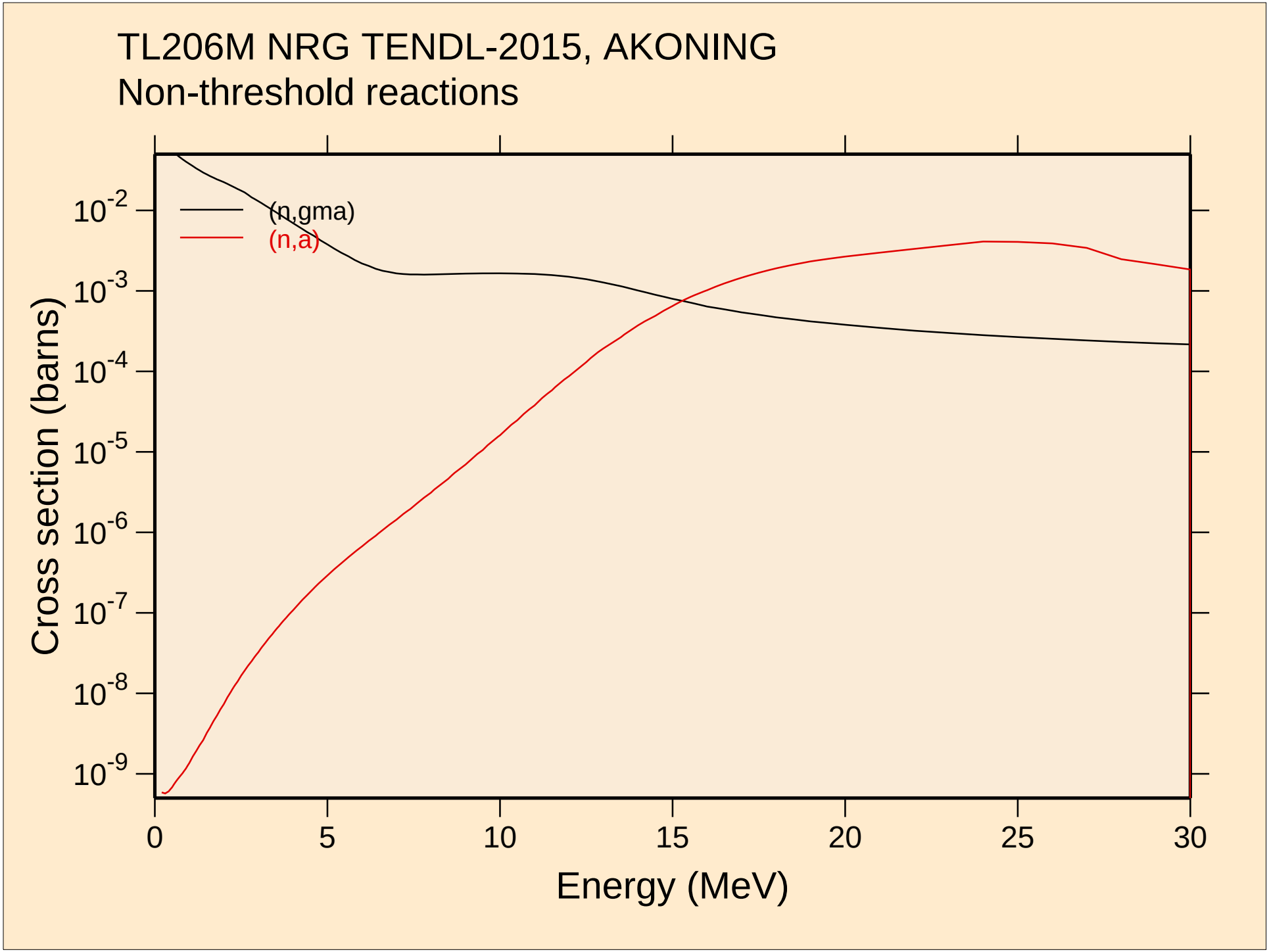

TL206M NRG TENDL-2015, AKONING
resonance absorption cross sections
capture
Cross section (barns)
10^0
10^-1
10^-3
10^-2
Energy (MeV)

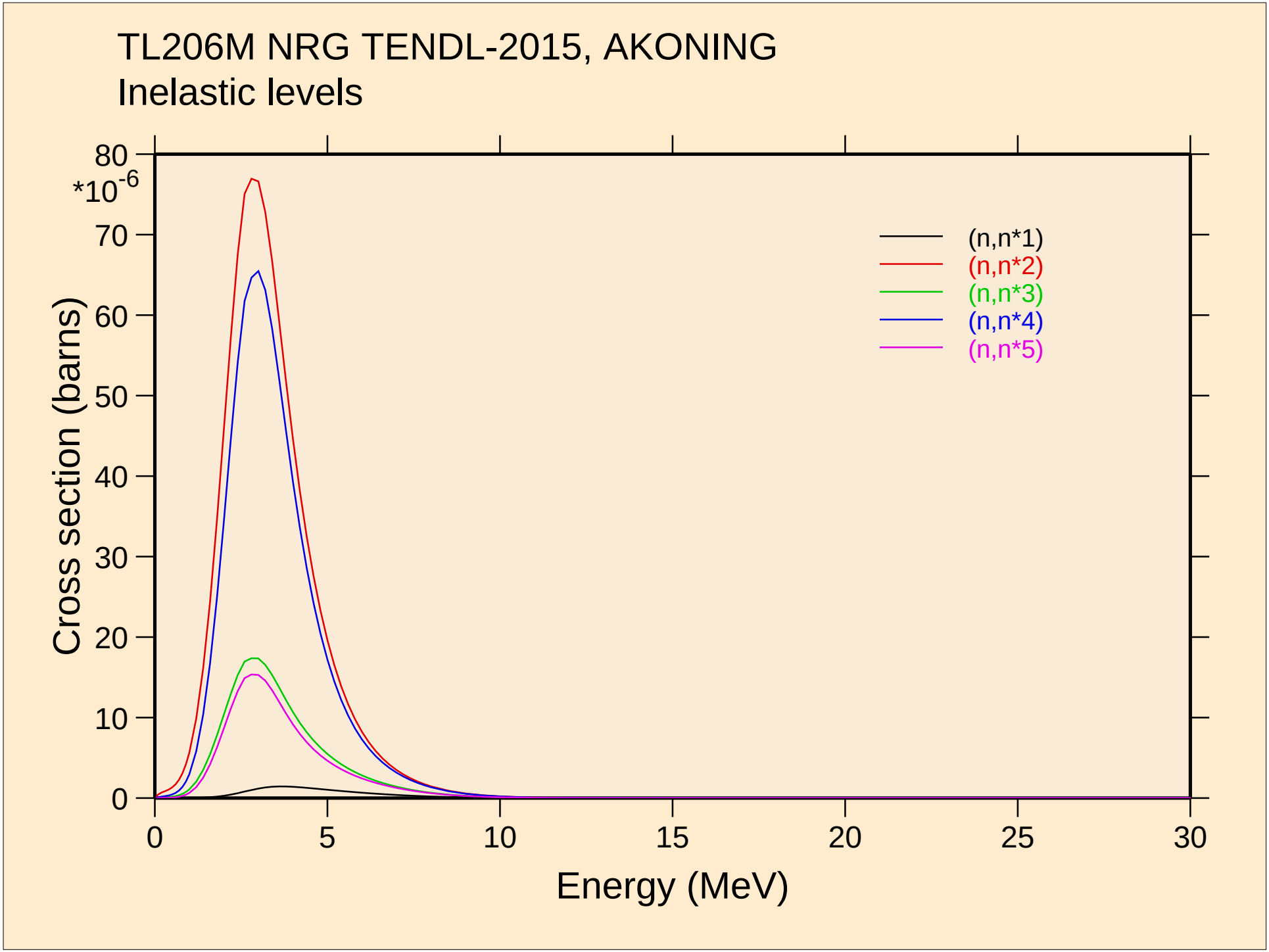

TL206M NRG TENDL-2015, AKONING
resonance absorption cross sections
capture
Cross section (barns)
10^1
10^0
10^-1
10^-2
10^-2
10^-1
Energy (MeV)

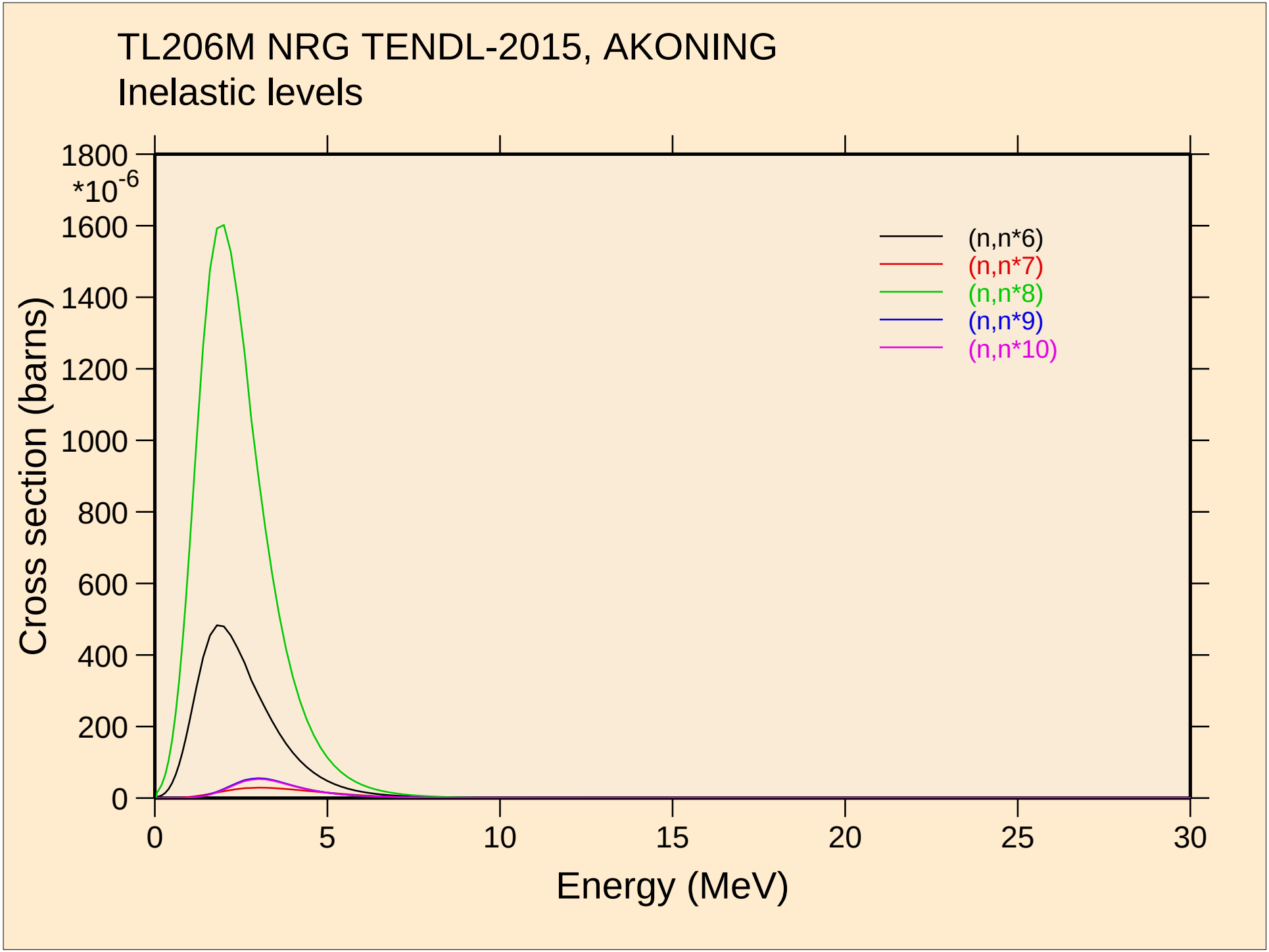

TL206M NRG TENDL-2015, AKONING
resonance absorption cross sections
capture
Cross section (barns)
10-3
101
102
Energy (MeV)

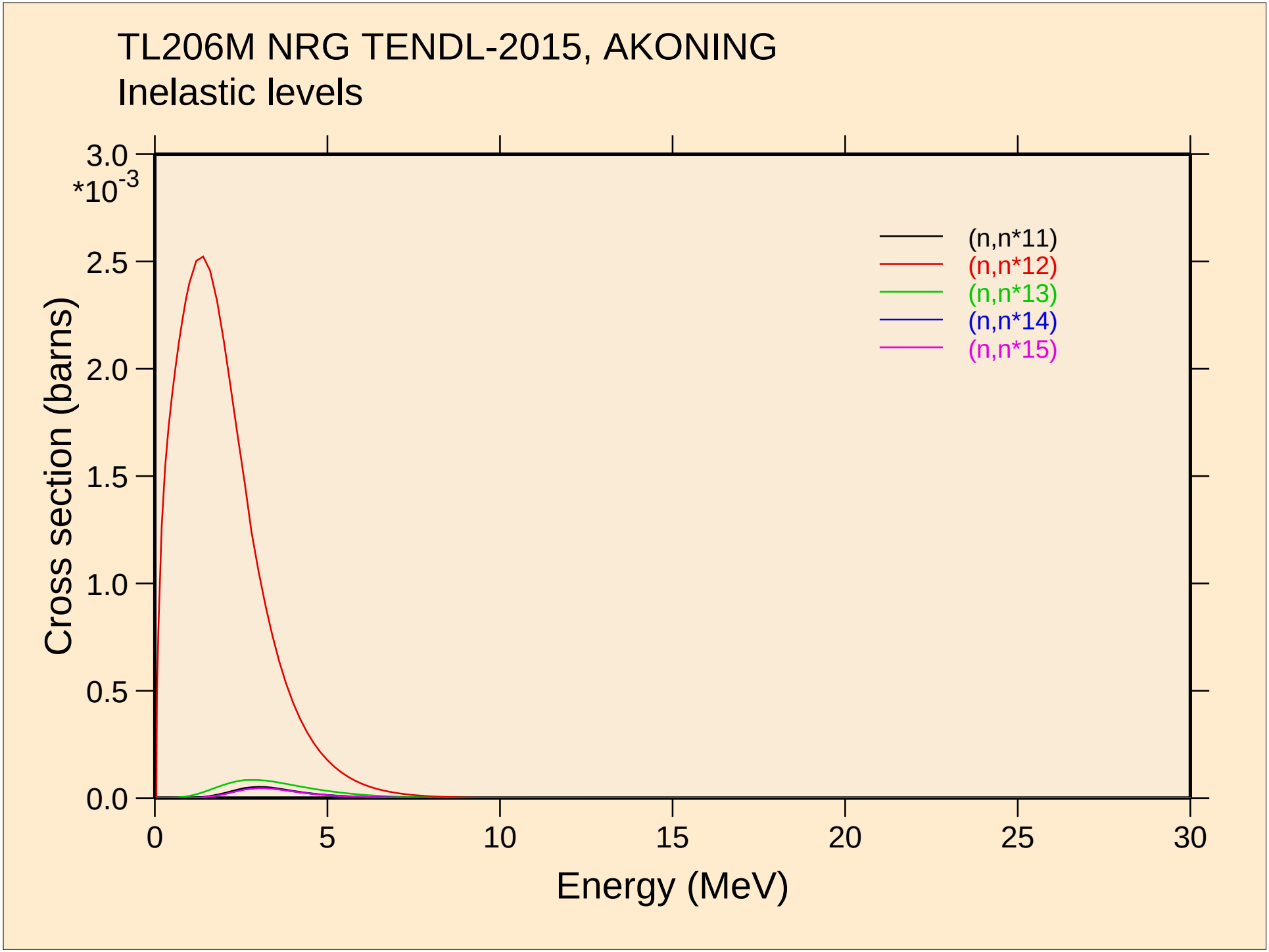

TL206M NRG TENDL-2015, AKONING
Non-threshold reactions
(n,gma)
(n,a)
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

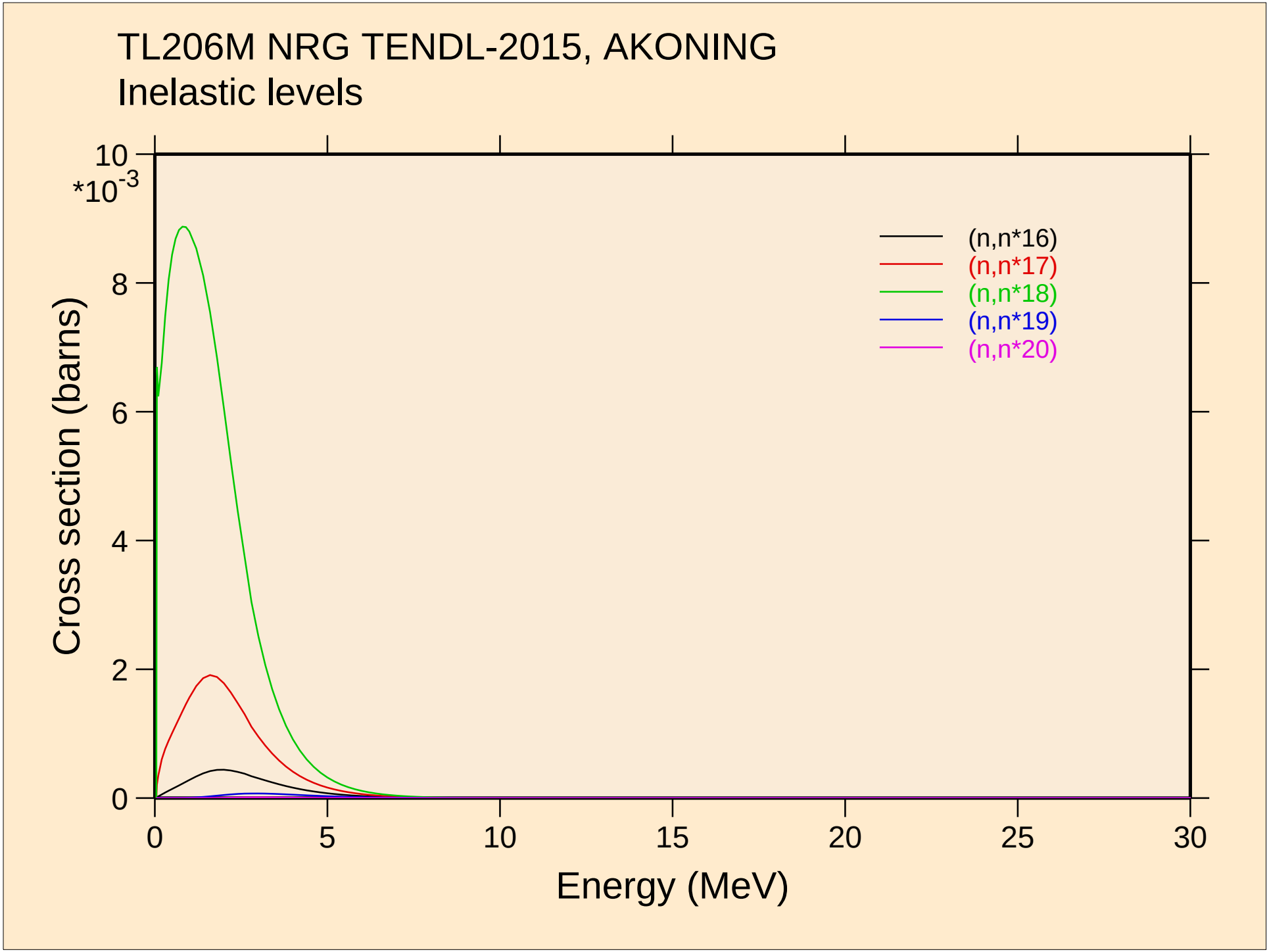

TL206M NRG TENDL-2015, AKONING
Principal cross sections
Cross section (barns)
Energy (MeV)
0
5
10
15
20
25
0
20
40
60
80
100
120
140
160
180
200
total
absorption
elastic
gamma production

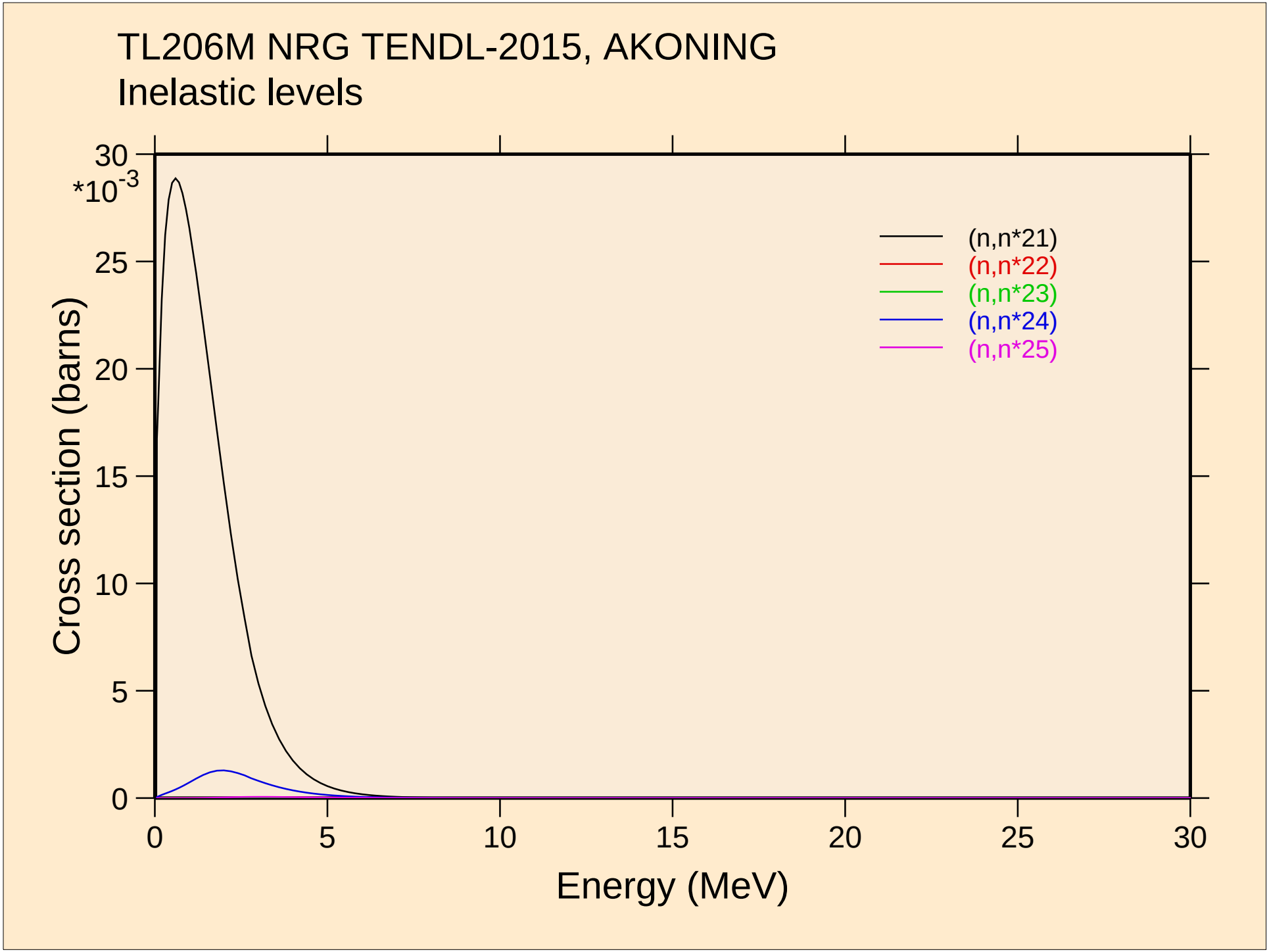

TL206M NRG TENDL-2015, AKONING
Non-threshold reactions
(n,gma)
(n,a)
Cross section (barns)
10-2
10-3
10-4
10-5
10-6
10-7
10-8
10-9
0
5
10
15
20
25
30
Energy (MeV)

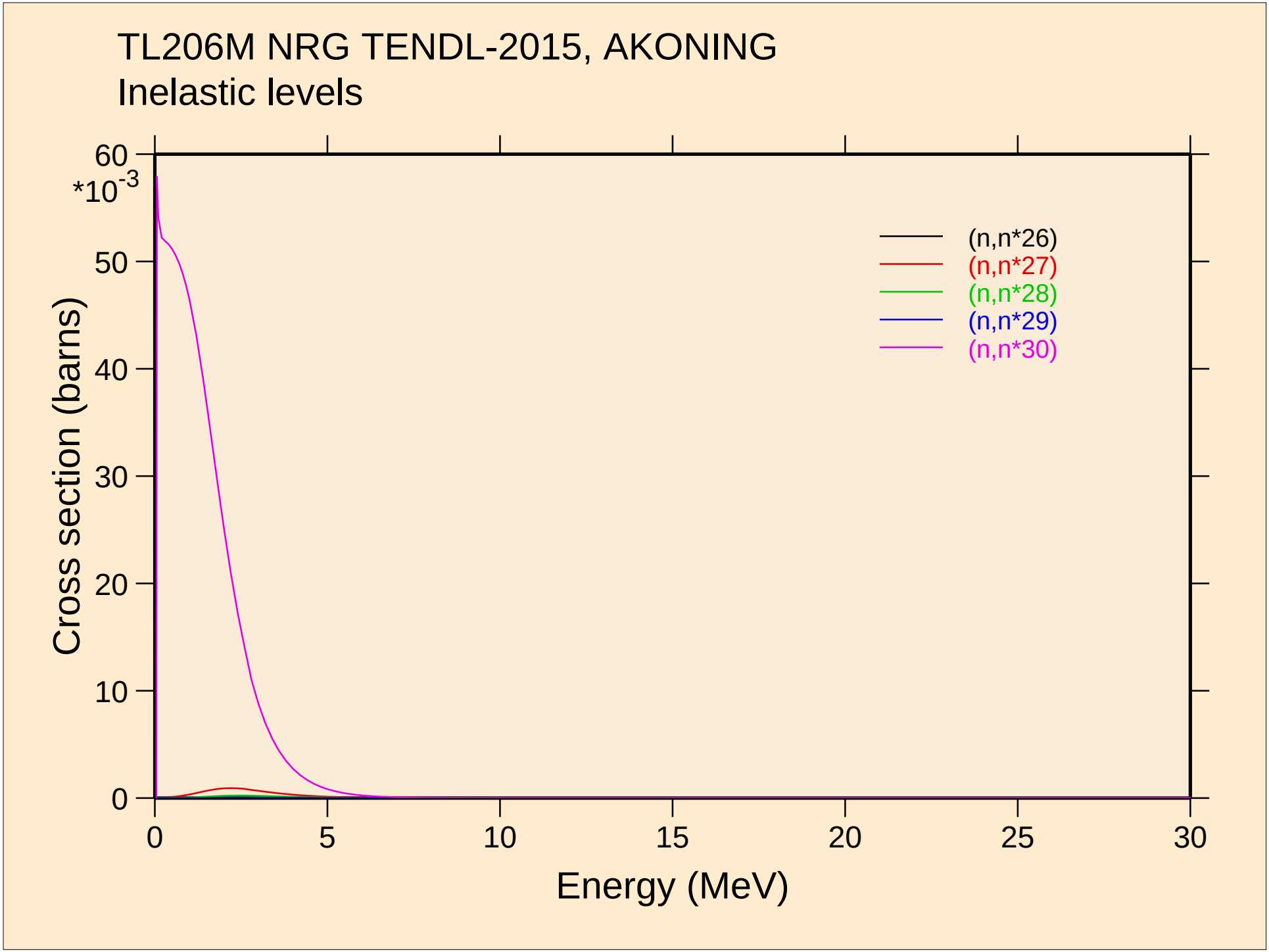

TL206M NRG TENDL-2015, AKONING
Inelastic levels
Cross section (barns)
*10-6
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

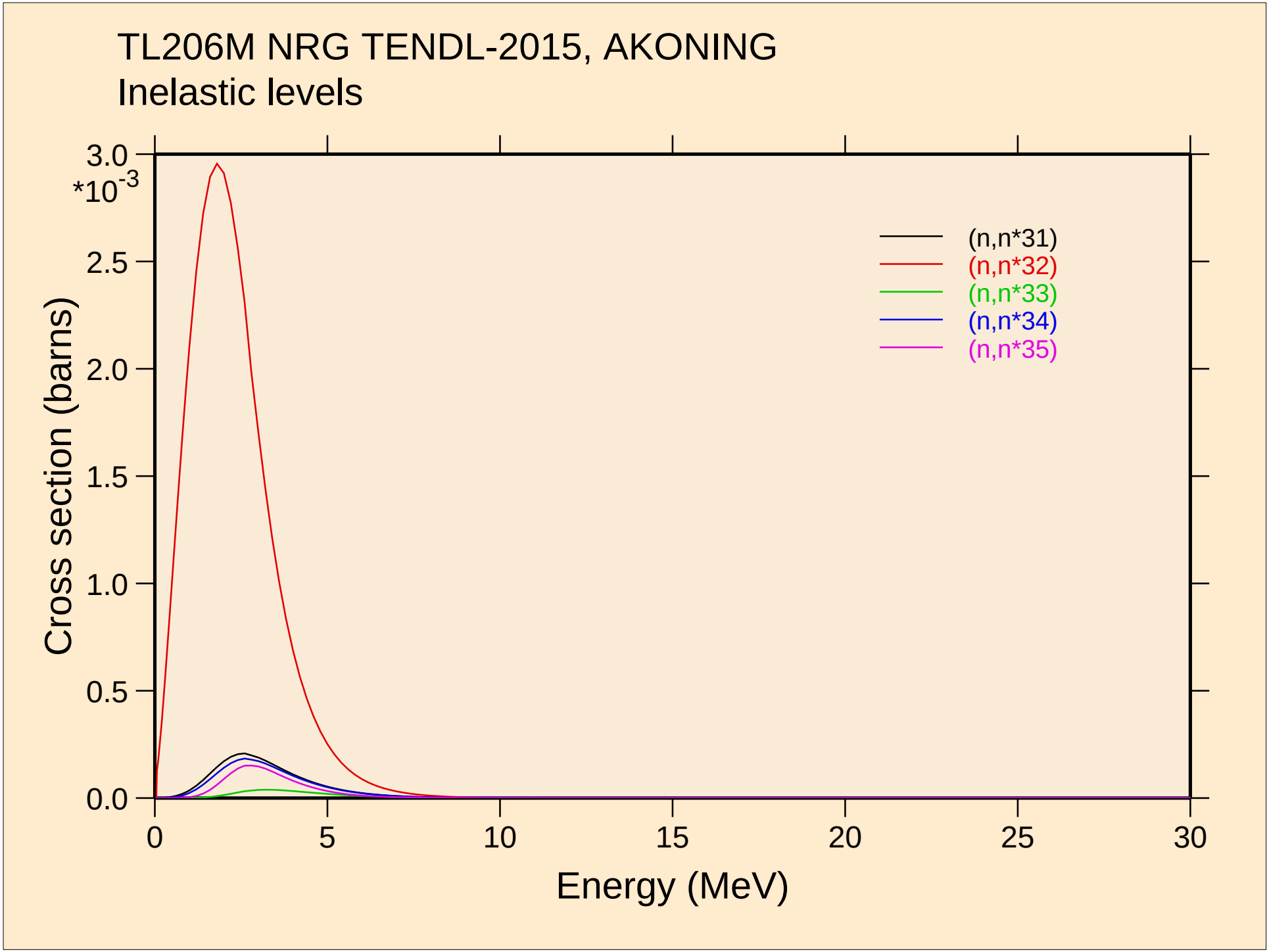

TL206M NRG TENDL-2015, AKONING
Inelastic levels
Cross section (barns)
*10-6
1800
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

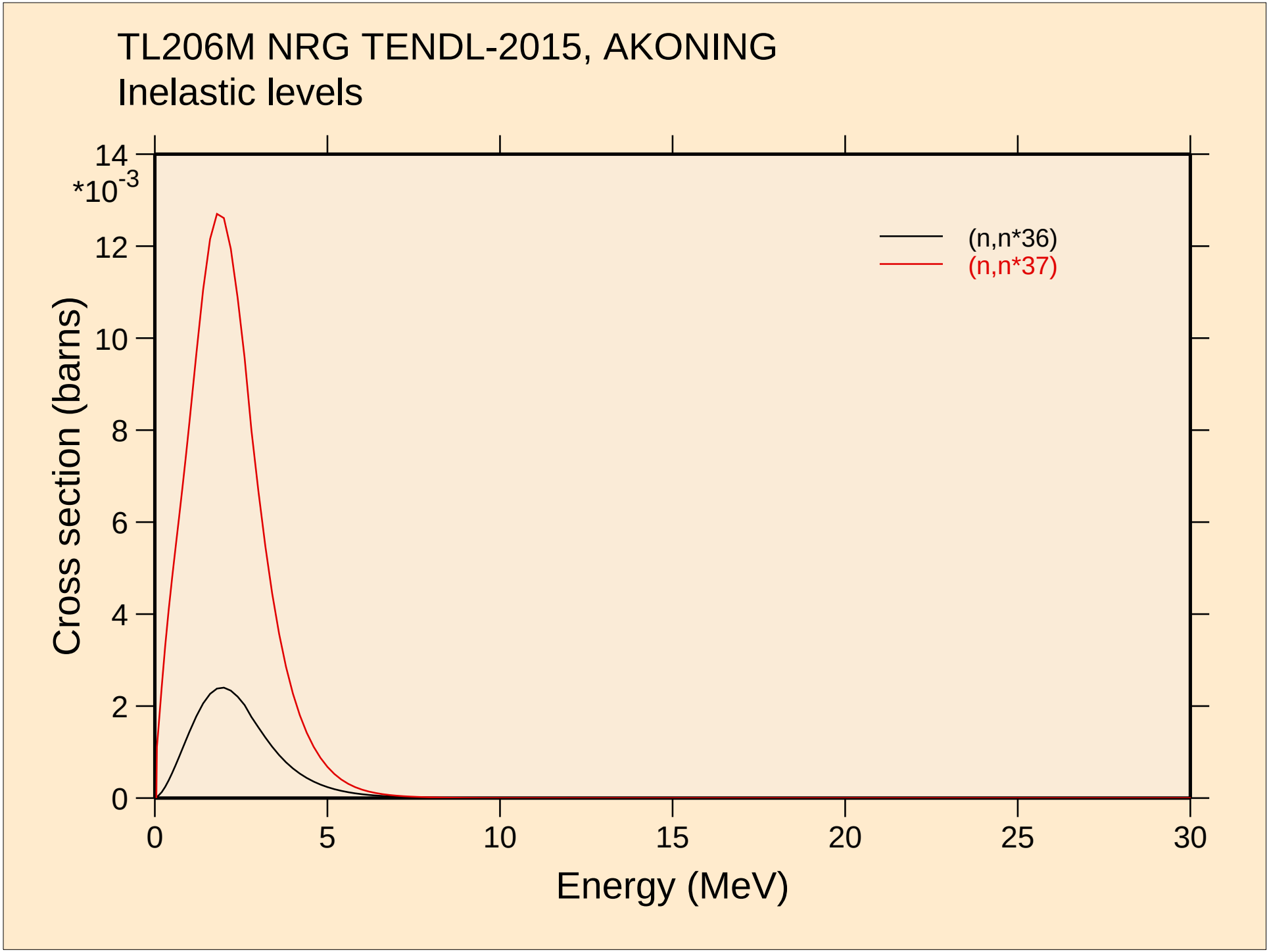

TL206M NRG TENDL-2015, AKONING
Inelastic levels
3.0
*10-3
2.5
2.0
1.5
1.0
0.5
0.0
Cross section (barns)
0
5
10
15
20
25
30
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

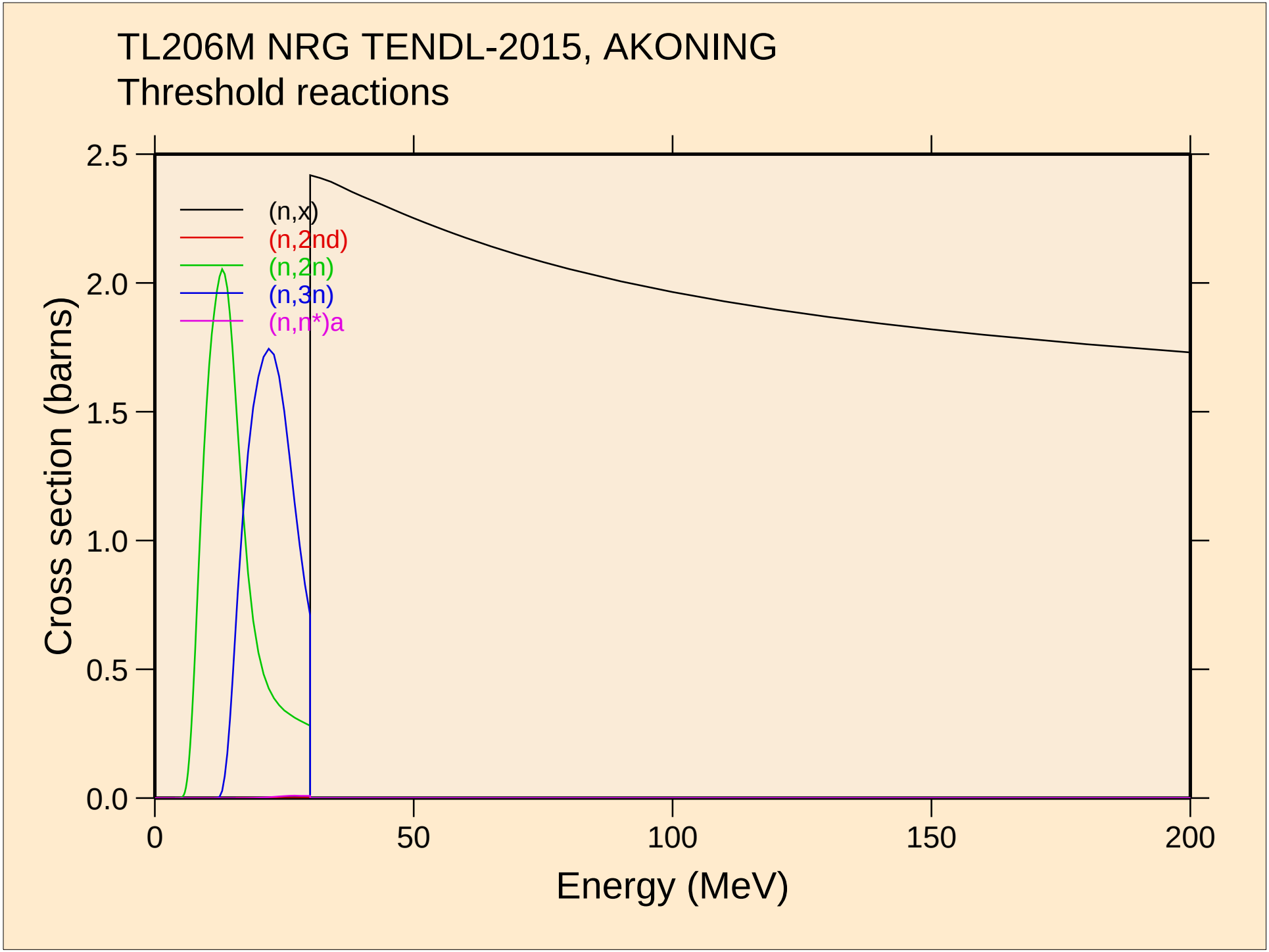

TL206M NRG TENDL-2015, AKONING
Inelastic levels
10
*10-3
8
6
4
2
0
Cross section (barns)
0
5
10
15
20
25
30
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

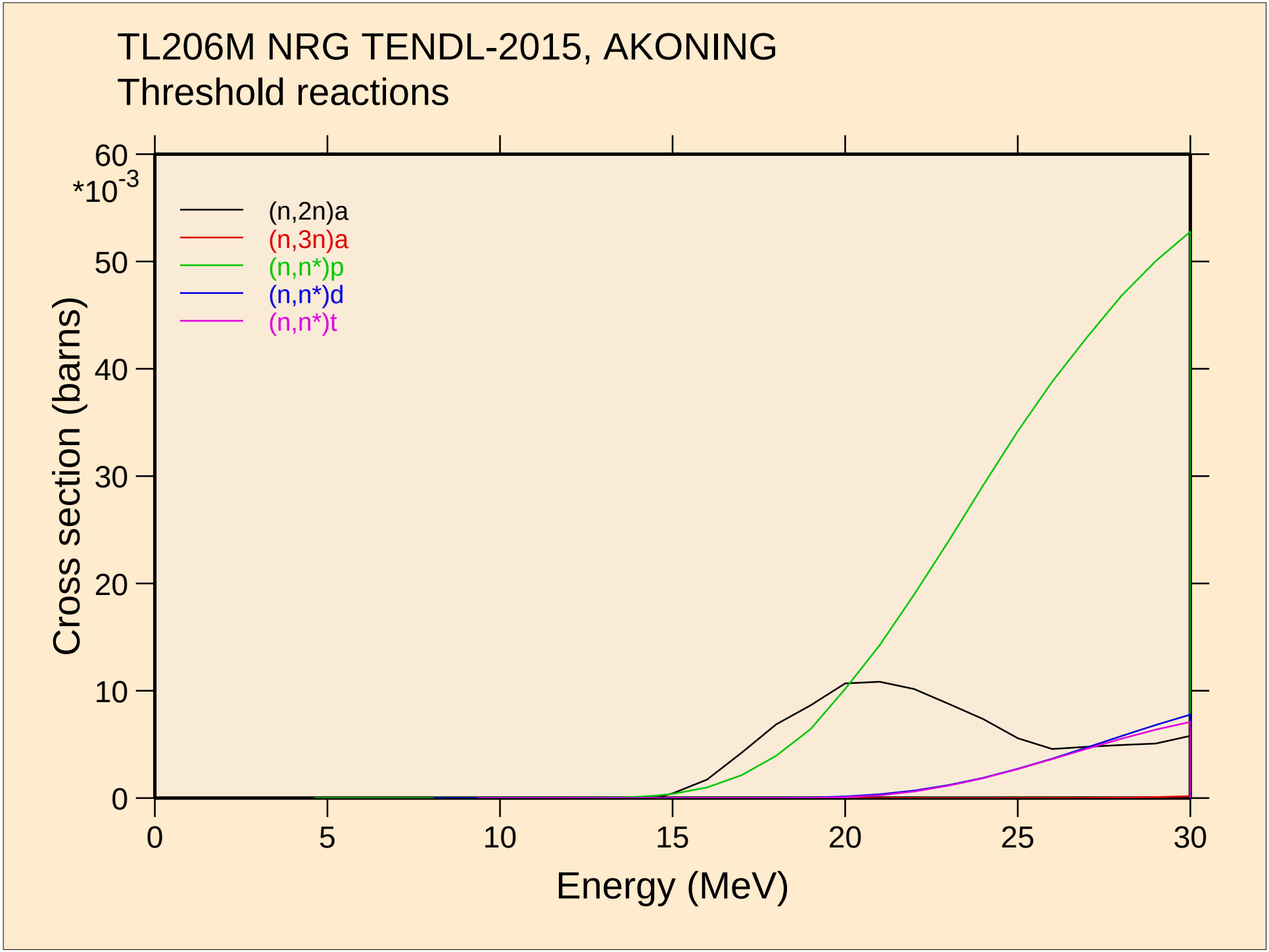

TL206M NRG TENDL-2015, AKONING
Inelastic levels
Cross section (barns)
*10-3
30
25
20
15
10
5
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

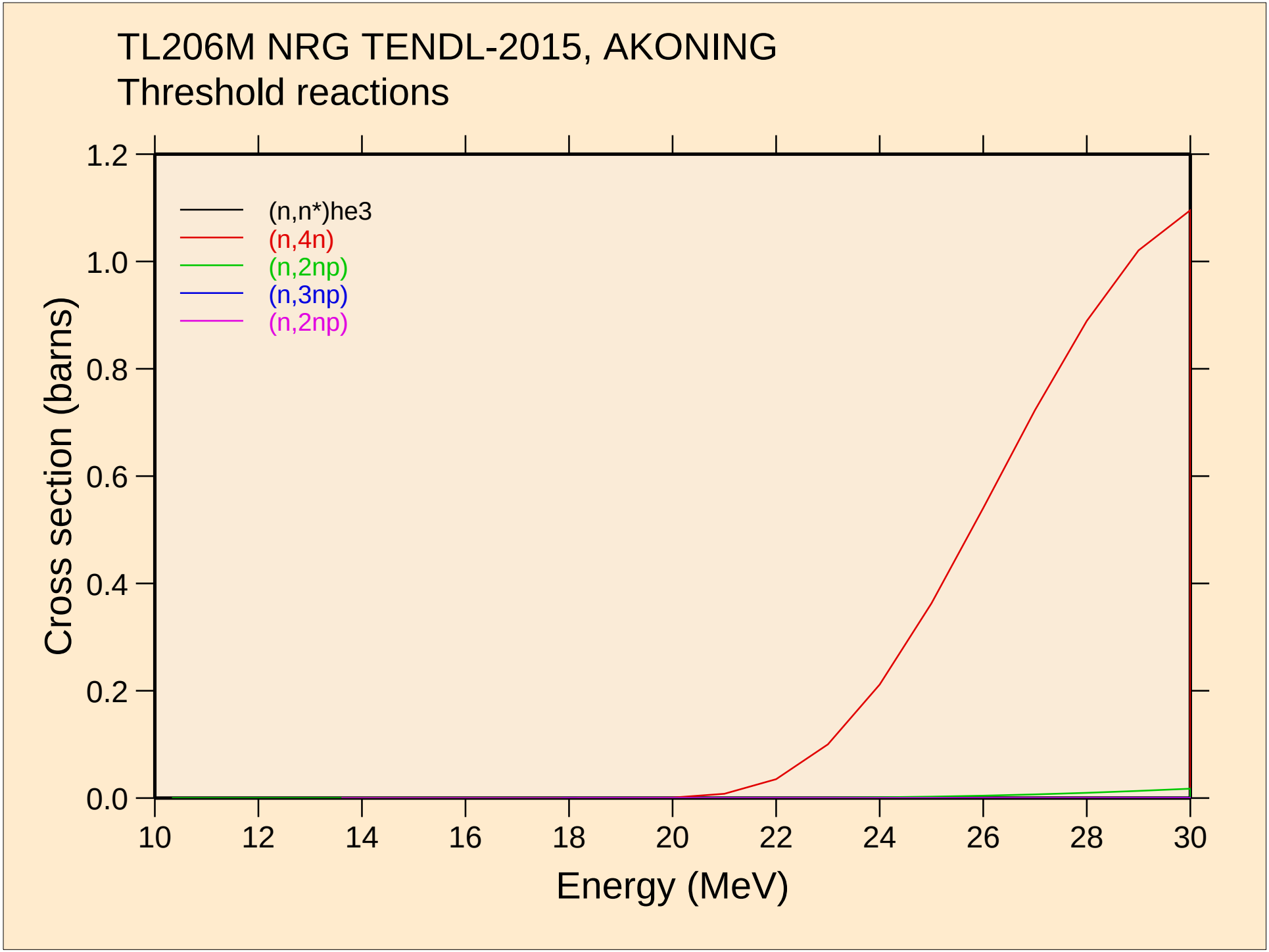

TL206M NRG TENDL-2015, AKONING
Inelastic levels
60
*10-3
50
40
30
20
10
0
Cross section (barns)
0
5
10
15
20
25
30
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

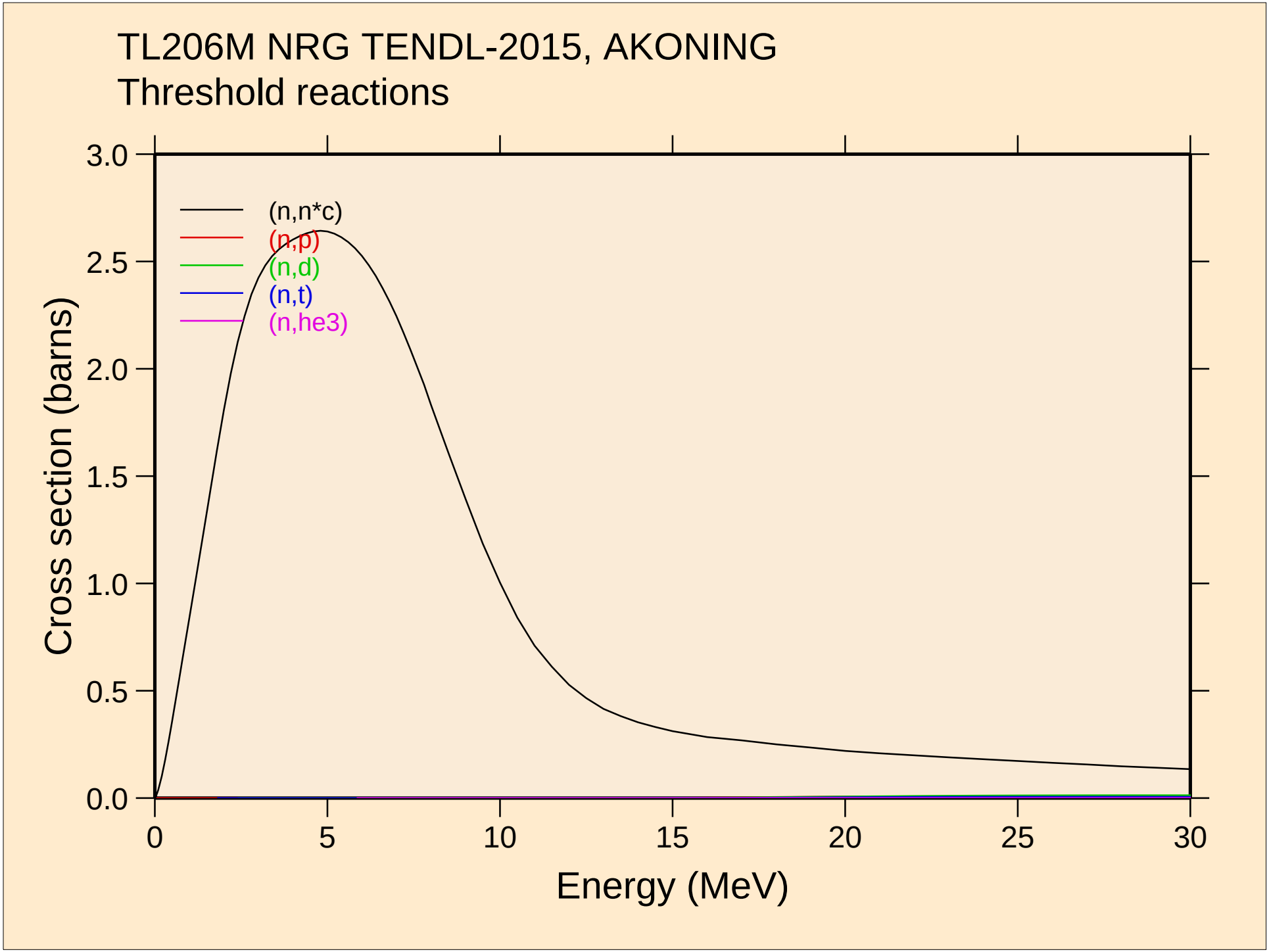

TL206M NRG TENDL-2015, AKONING
Inelastic levels
3.0
*10-3
2.5
2.0
1.5
1.0
0.5
0.0
Cross section (barns)
0
5
10
15
20
25
30
Energy (MeV)
(n,n*31)
(n,n*32)
(n,n*33)
(n,n*34)
(n,n*35)

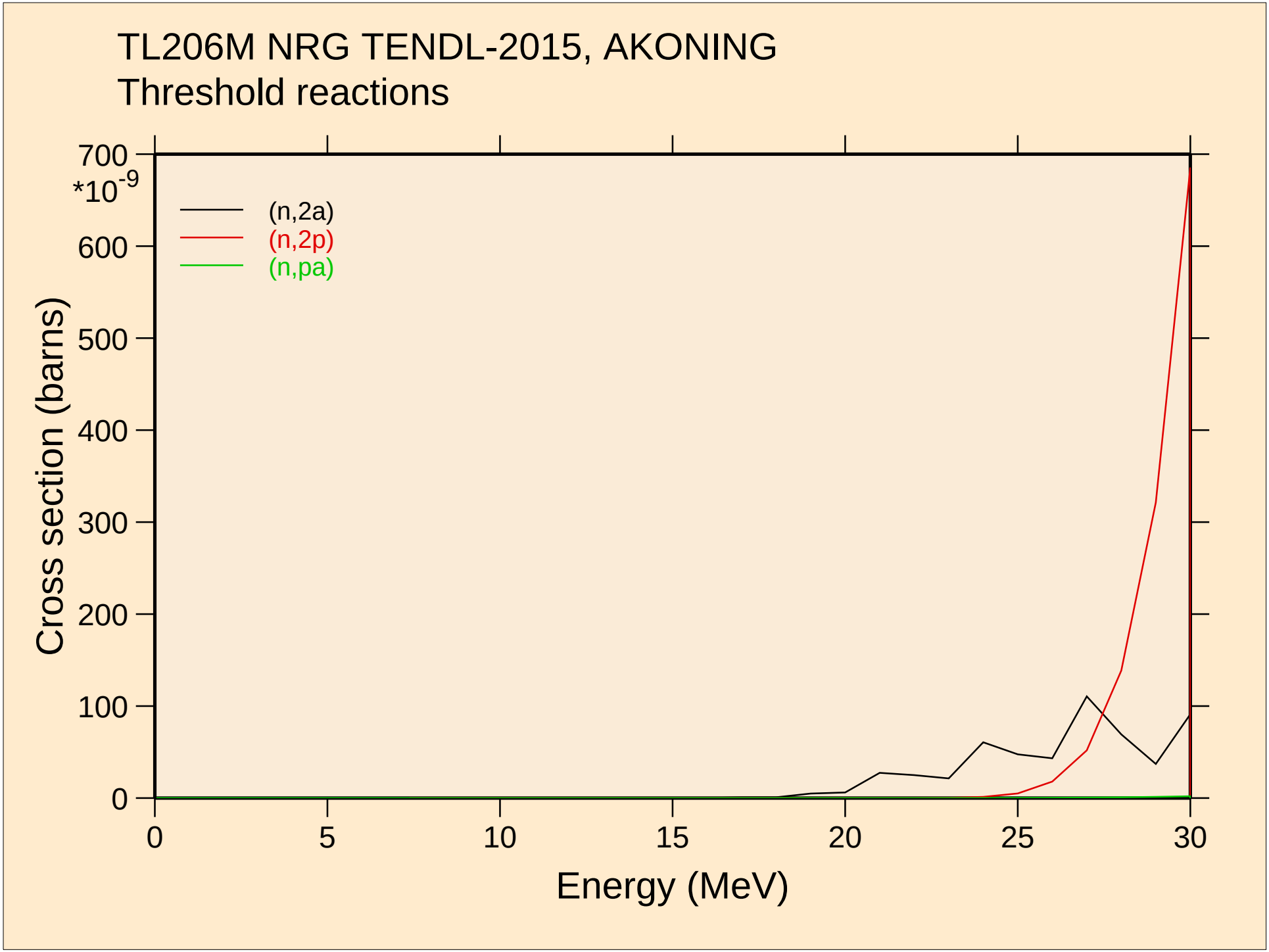

TL206M NRG TENDL-2015, AKONING
Inelastic levels
*10-3
14
12
10
8
6
4
2
0
Cross section (barns)
0
5
10
15
20
25
30
Energy (MeV)
(n,n*36)
(n,n*37)

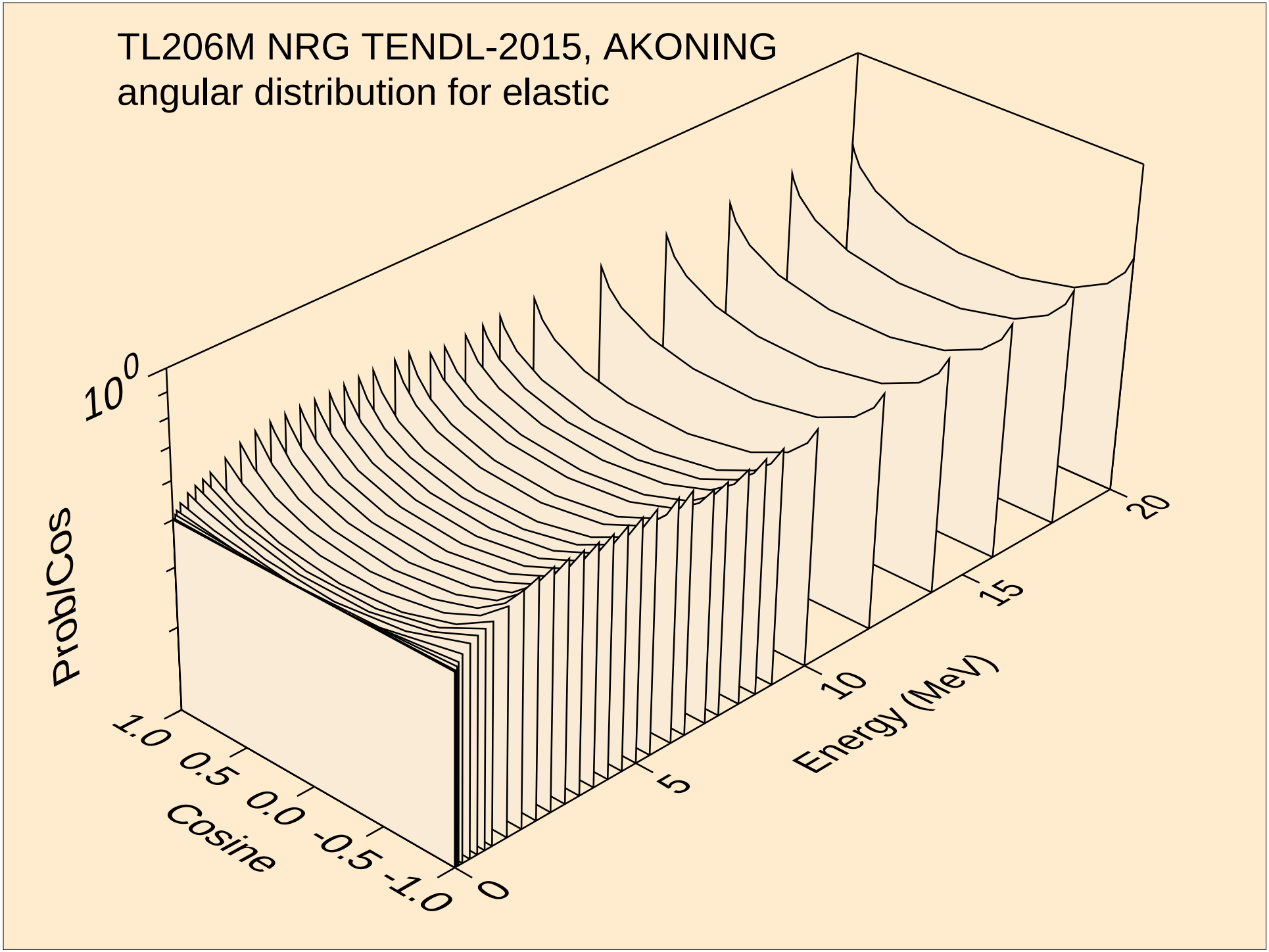

TL206M NRG TENDL-2015, AKONING
Threshold reactions
(n,x)
(n,2nd)
(n,2n)
(n,3n)
(n,n*)a
Cross section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
0
50
100
150
200
Energy (MeV)

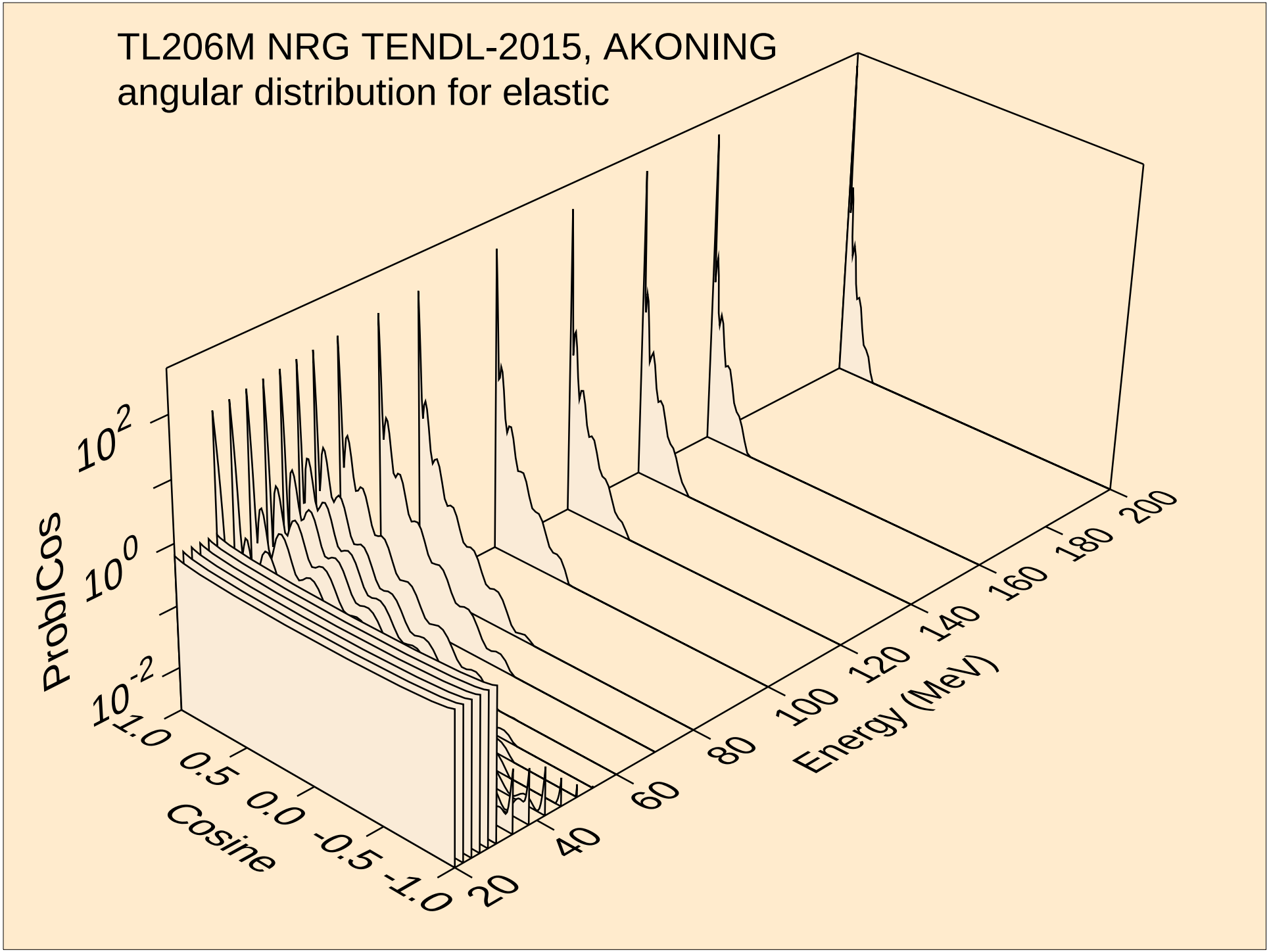

TL206M NRG TENDL-2015, AKONING
Threshold reactions
*10-3
60
50
40
30
20
10
0
Cross section (barns)
(n,2n)a
(n,3n)a
(n,n*)p
(n,n*)d
(n,n*)t
0
5
10
15
20
25
30
Energy (MeV)

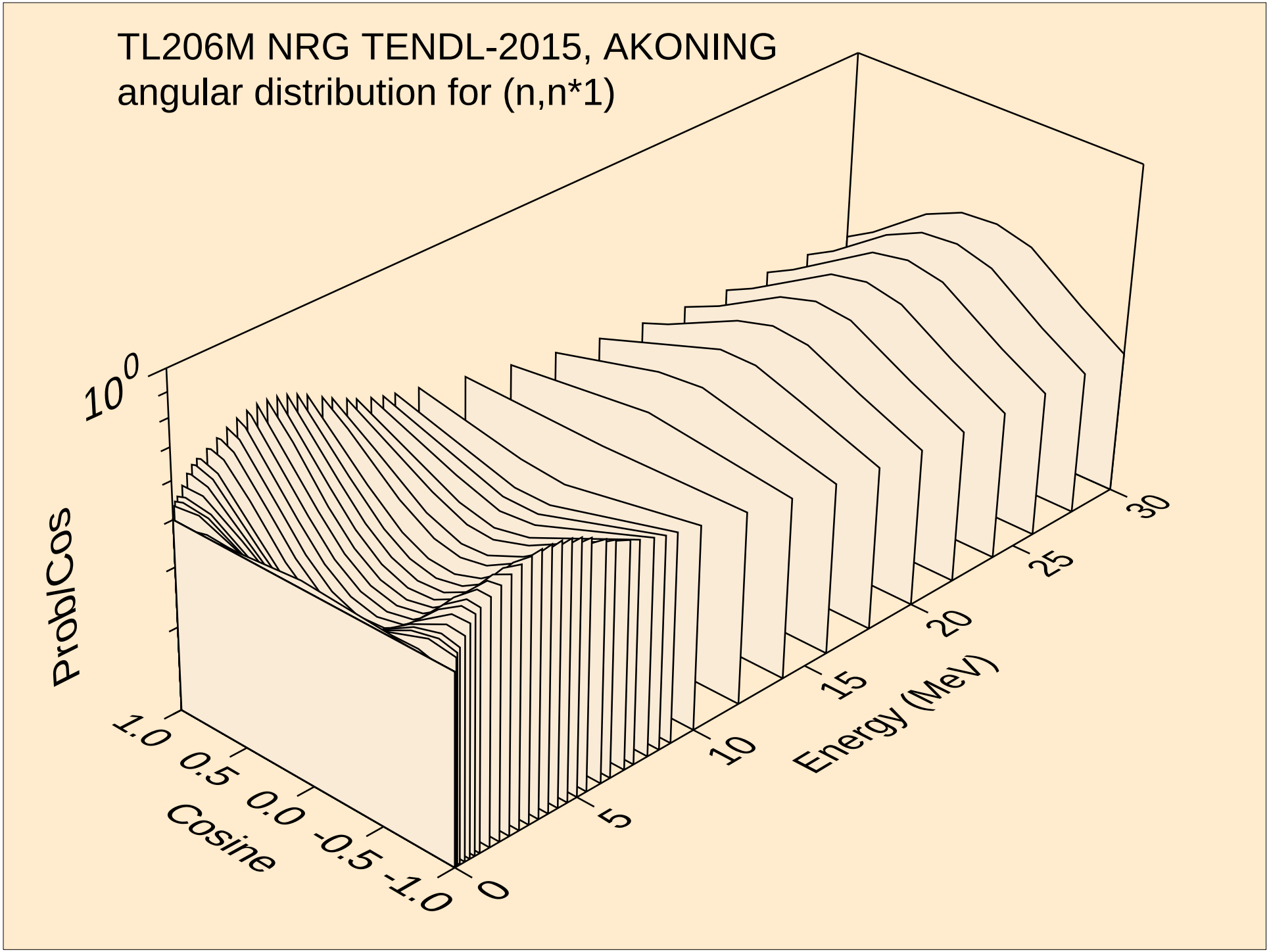

TL206M NRG TENDL-2015, AKONING
Threshold reactions
(n,n*)he3
(n,4n)
(n,2np)
(n,3np)
(n,2np)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
10
12
14
16
18
20
22
24
26
28
30

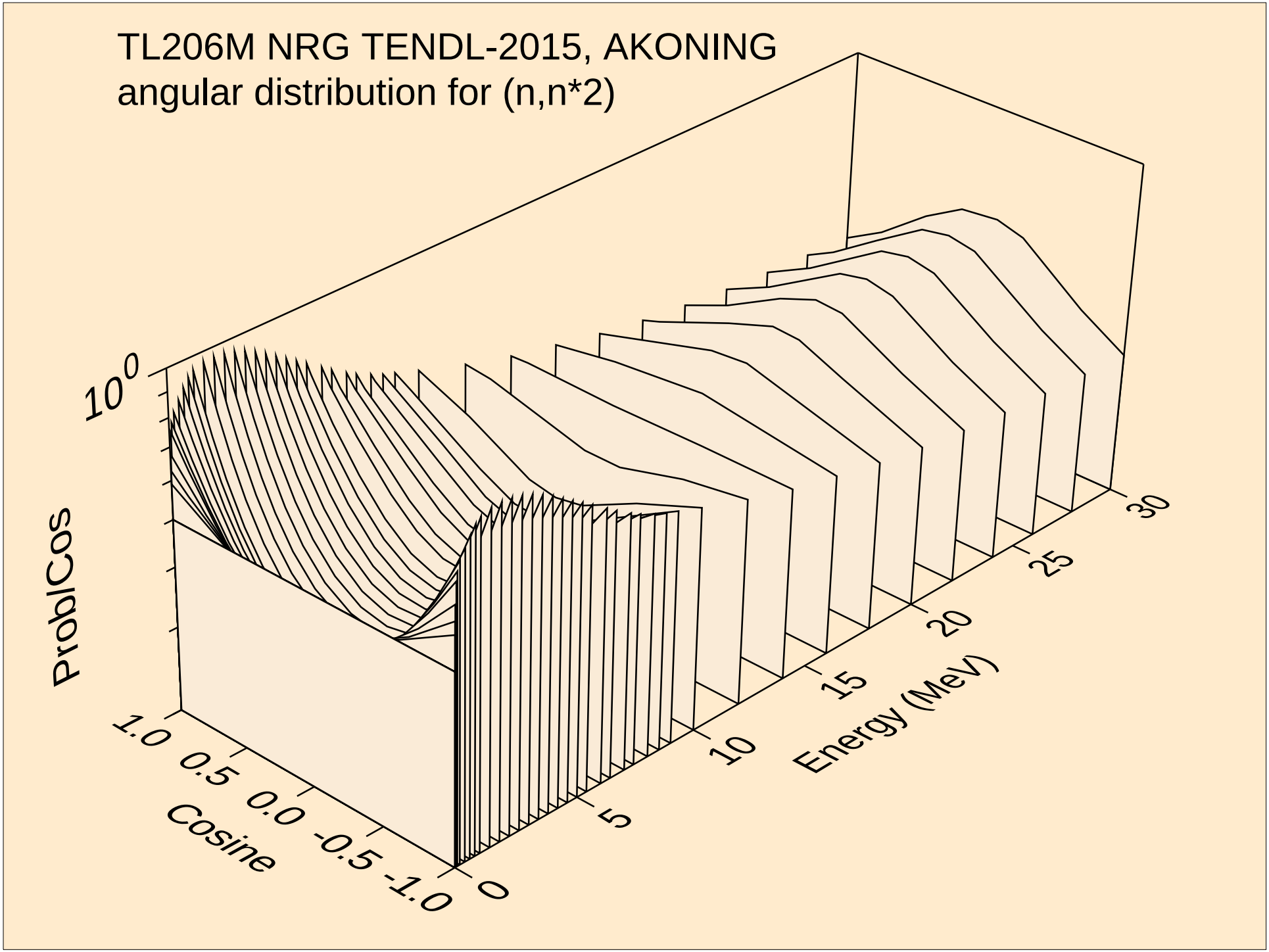

TL206M NRG TENDL-2015, AKONING
Threshold reactions
Cross section (barns)
Energy (MeV)
(n,n*c)
(n,p)
(n,d)
(n,t)
(n,he3)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
5
10
15
20
25
30

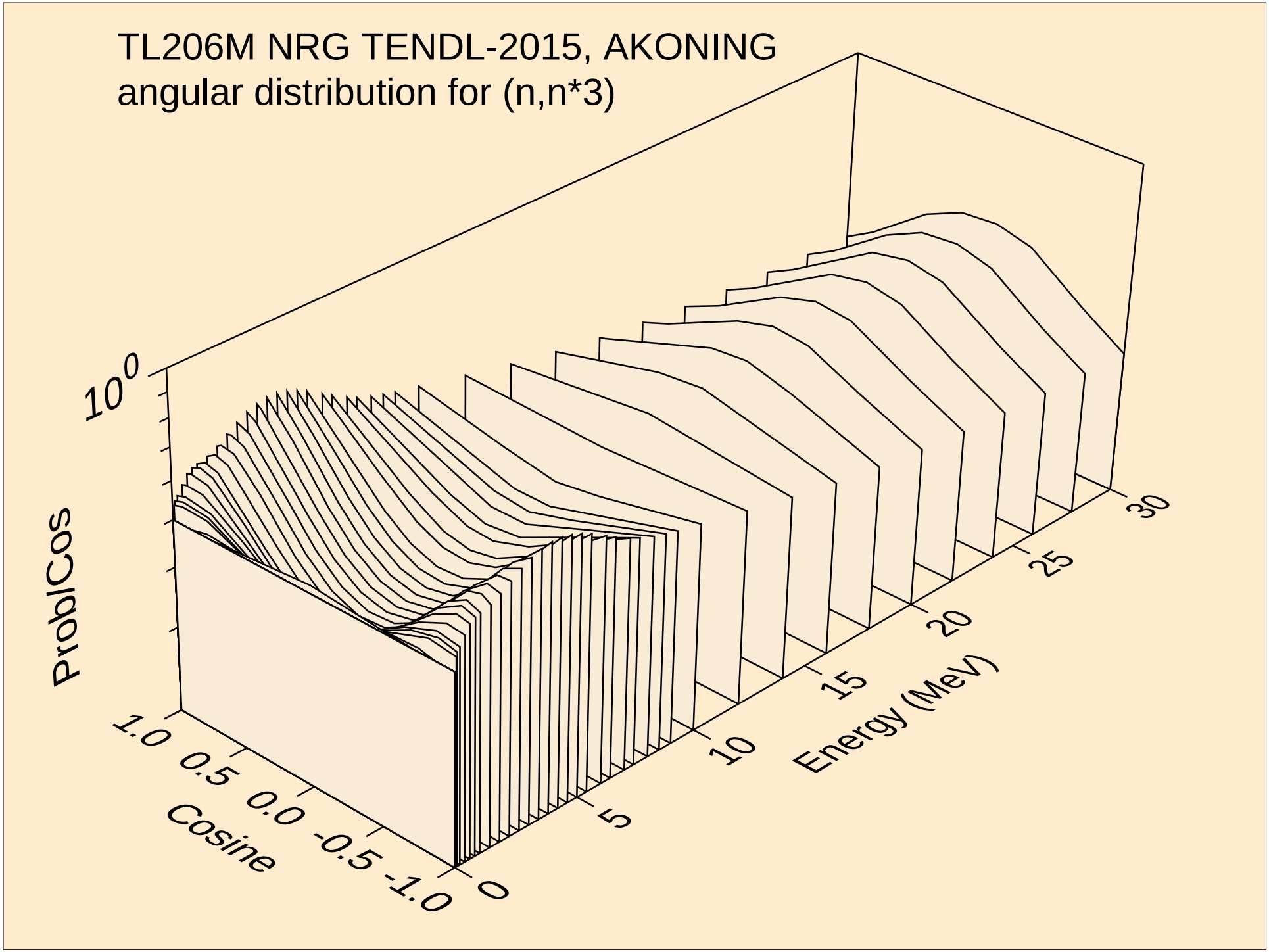

TL206M NRG TENDL-2015, AKONING
Threshold reactions
*10-9
(n,2a)
(n,2p)
(n,pa)
Cross section (barns)
700
600
500
400
300
200
100
0
0
5
10
15
20
25
30
Energy (MeV)

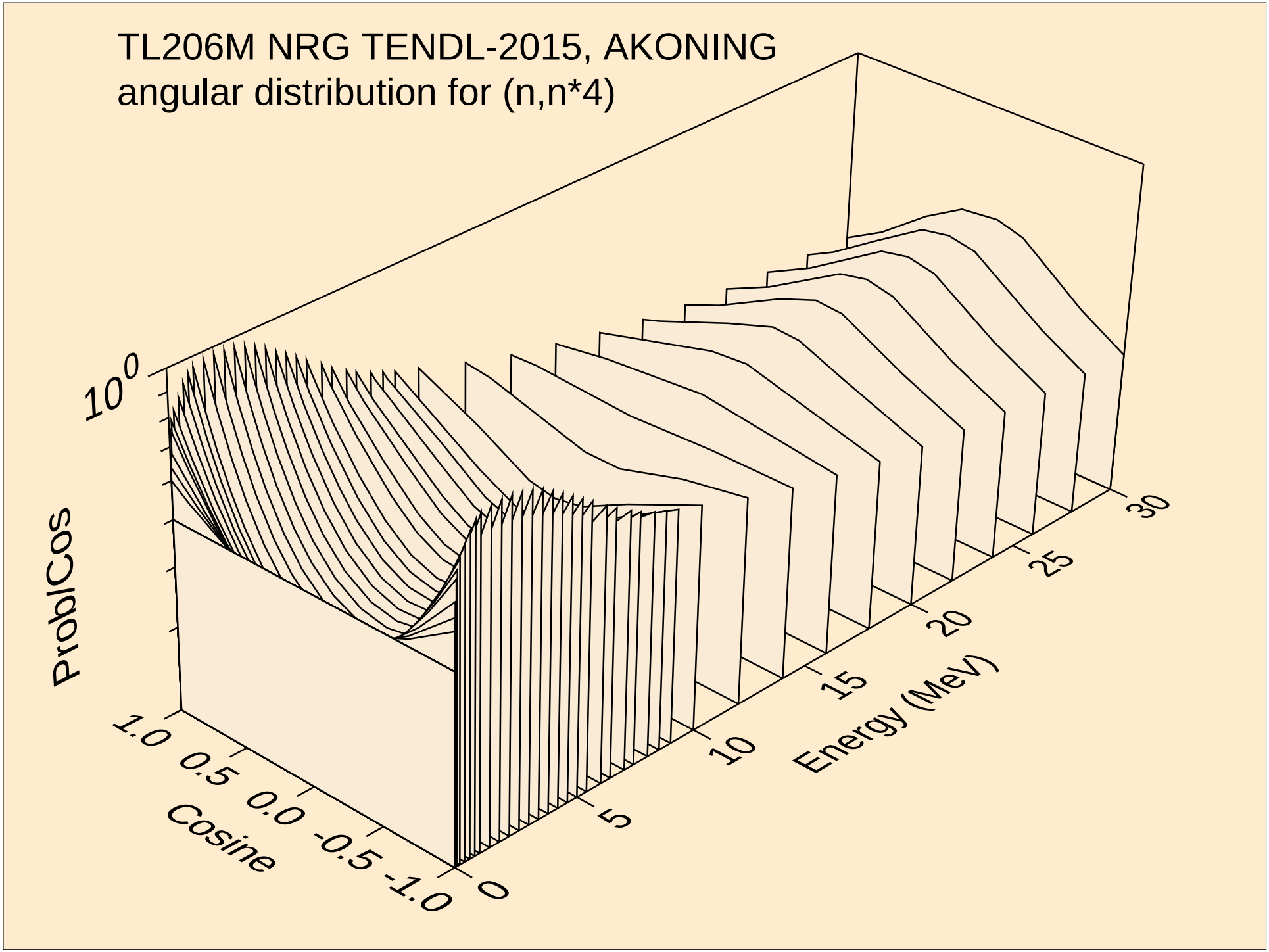

TL206M NRG TENDL-2015, AKONING
angular distribution for elastic
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

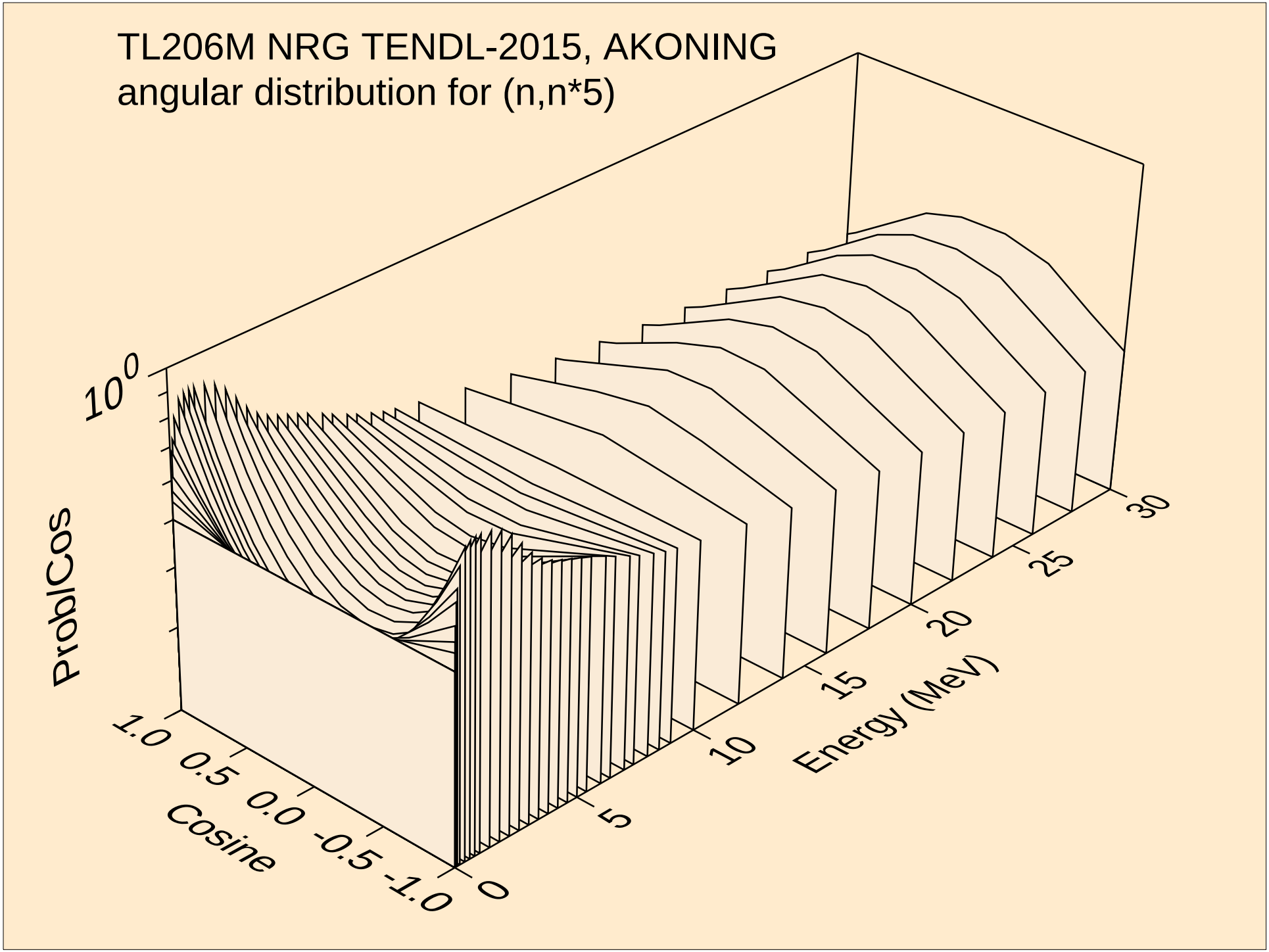

TL206M NRG TENDL-2015, AKONING
angular distribution for elastic
ProbCos
10^{2}
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

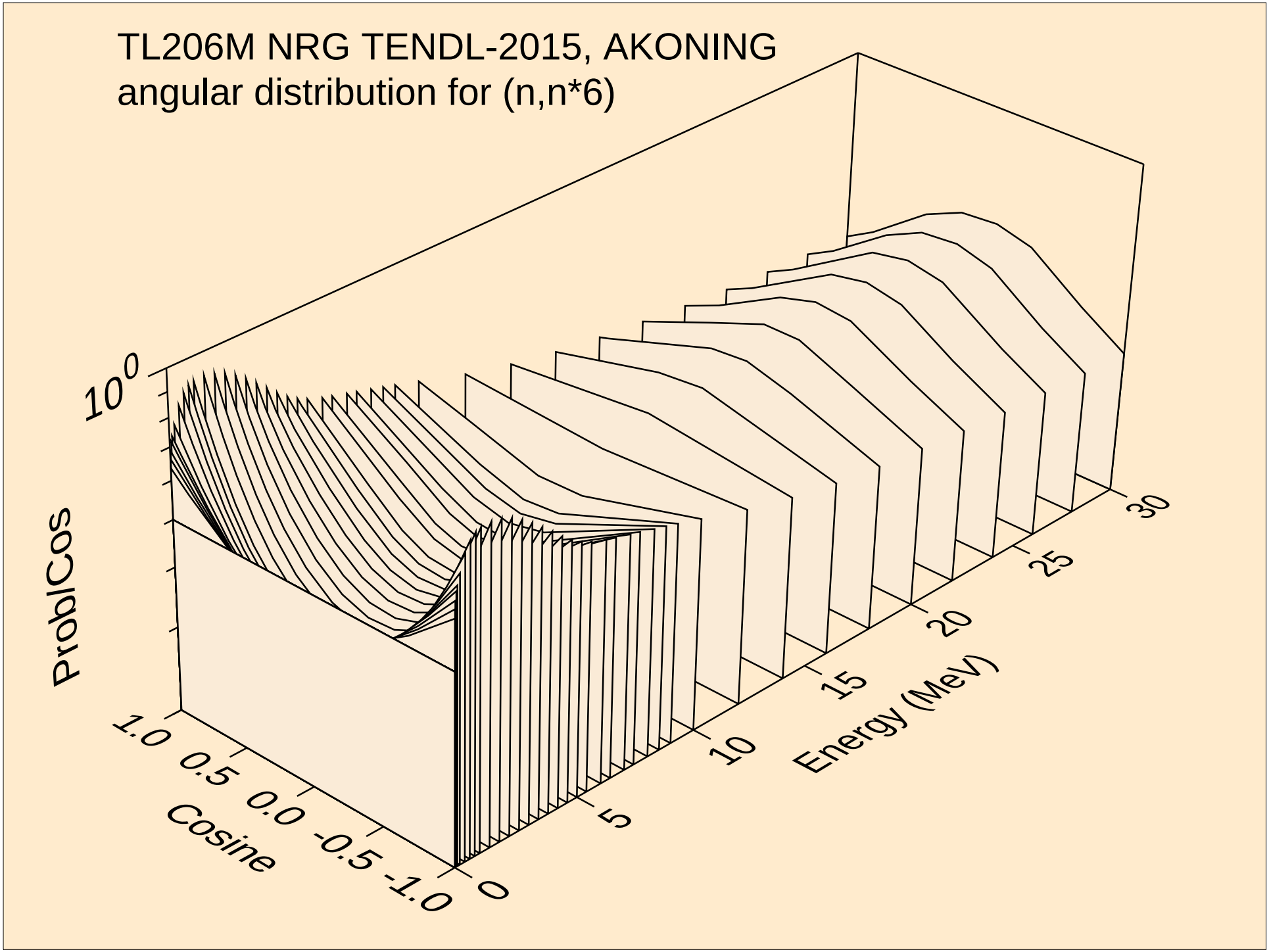

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*1)
ProbICos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30

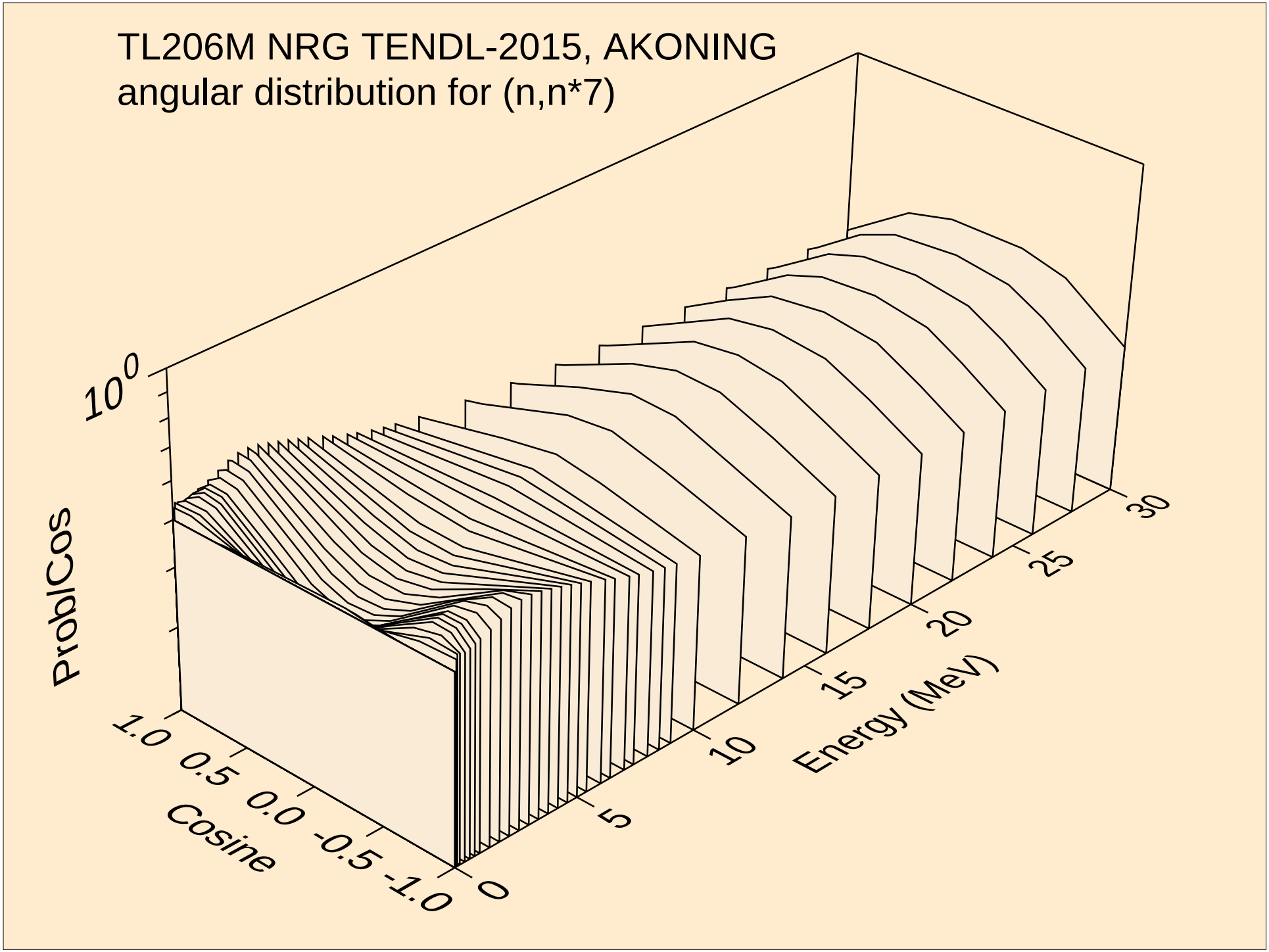

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*2)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

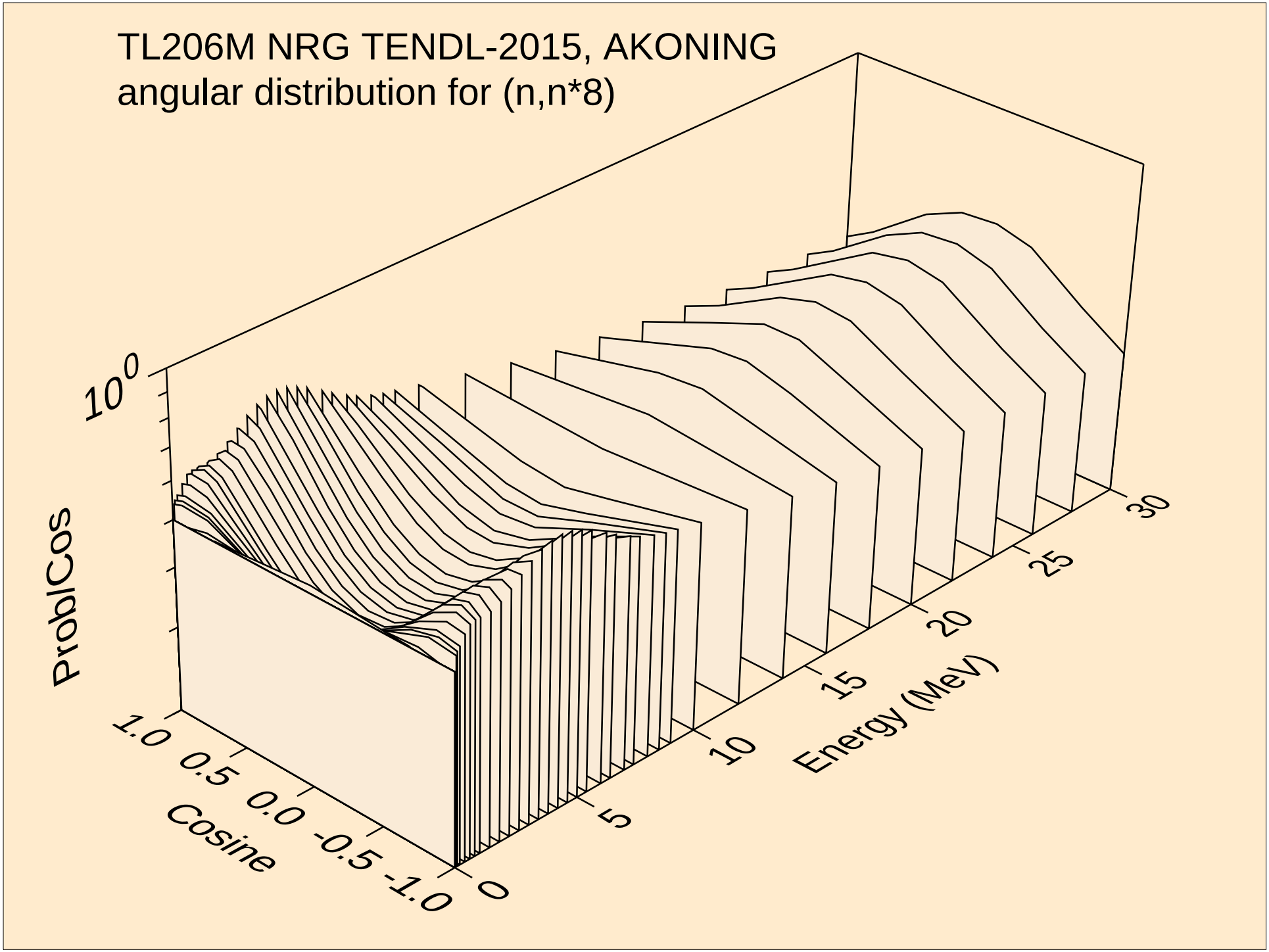

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*3)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

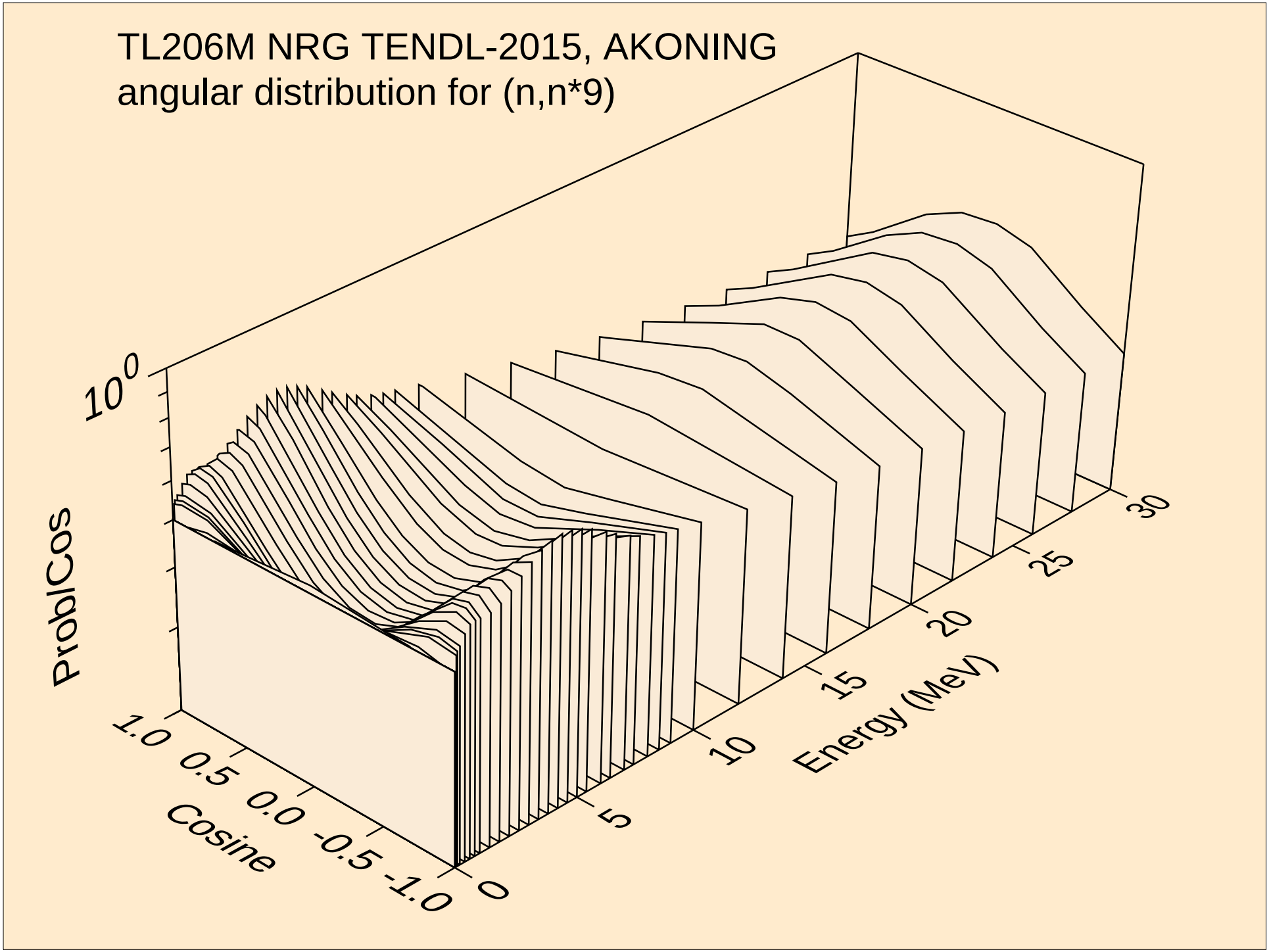

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*4)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

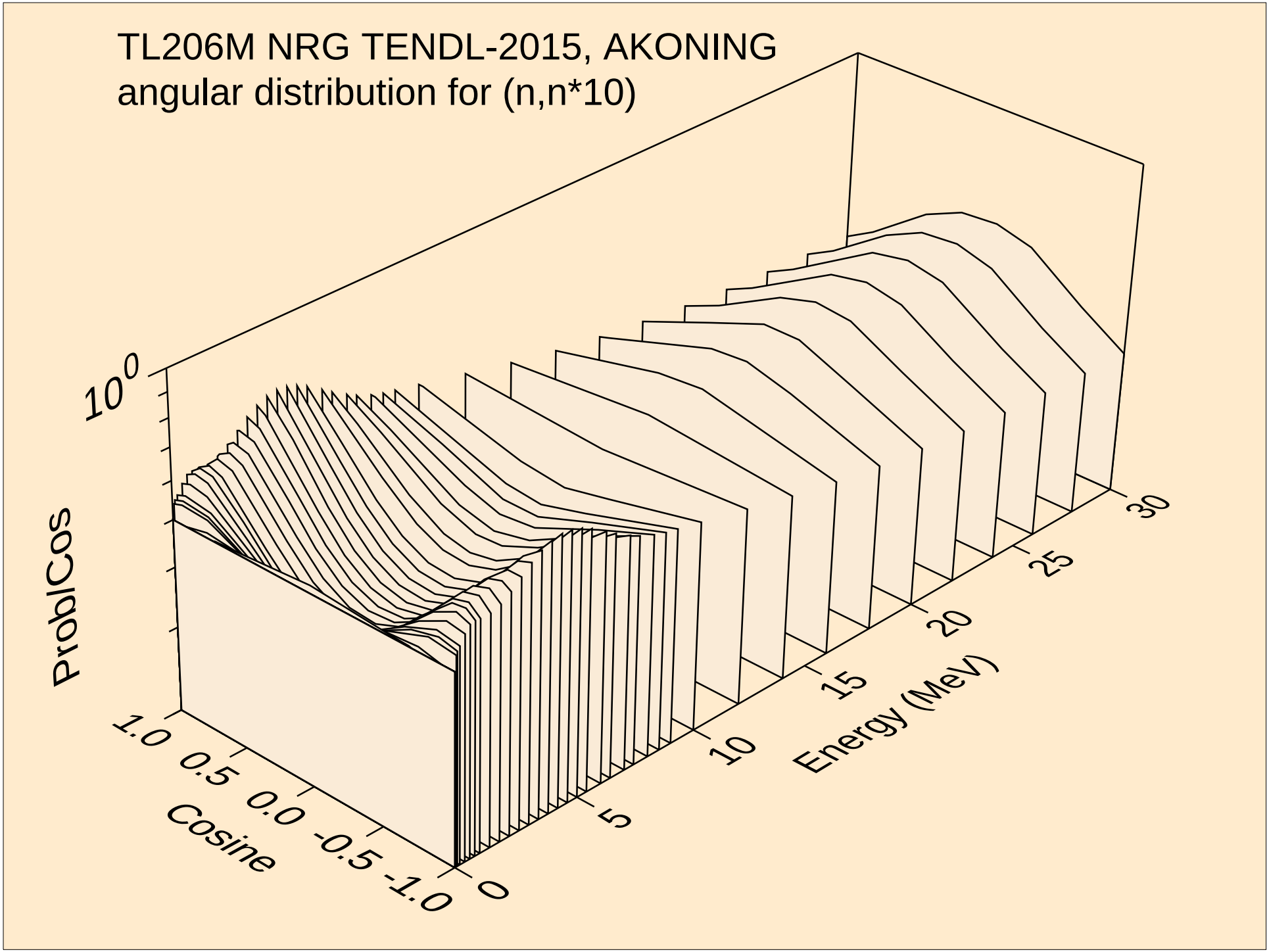

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*5)
ProbICos
10^0
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30

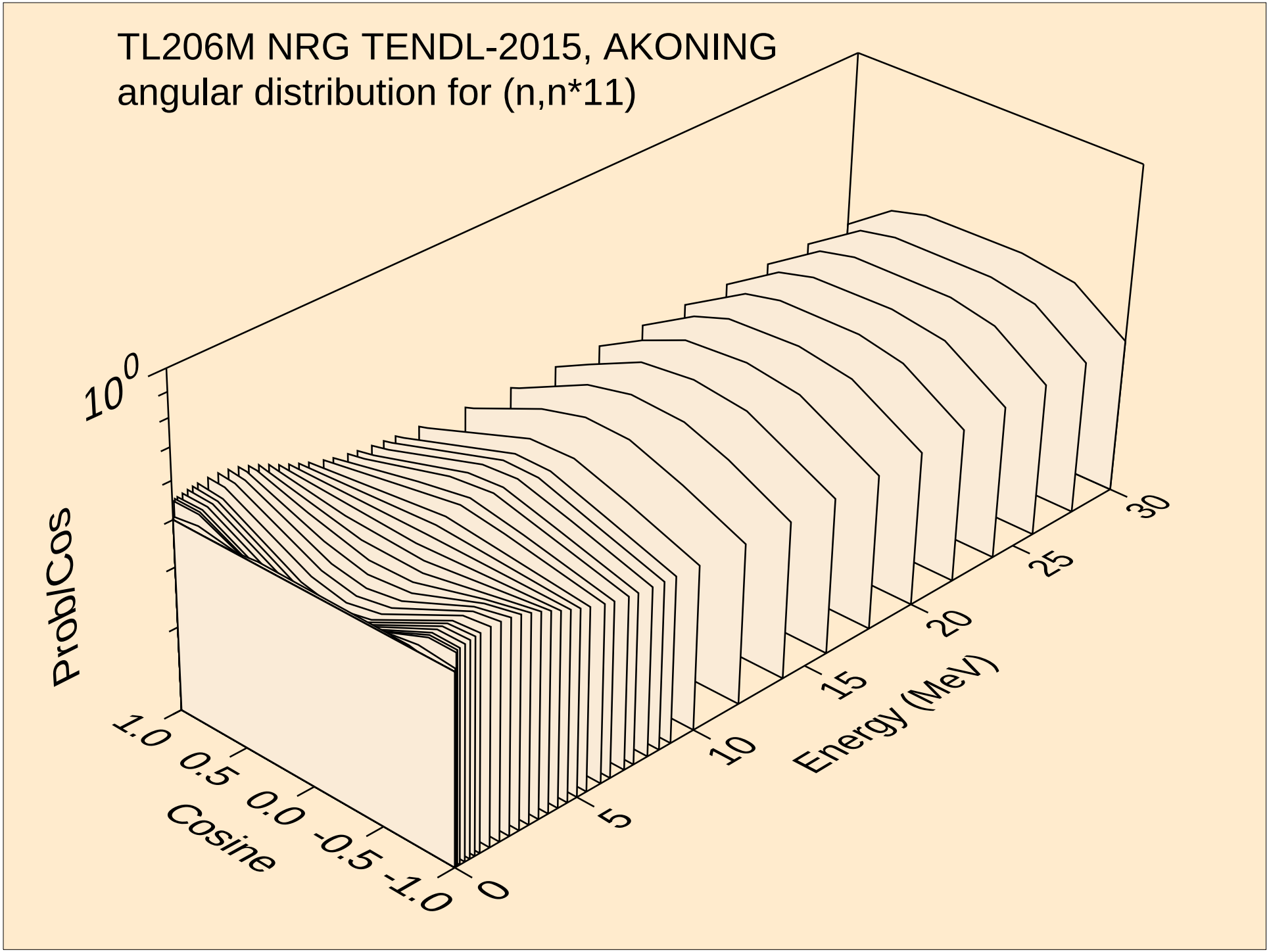

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*6)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

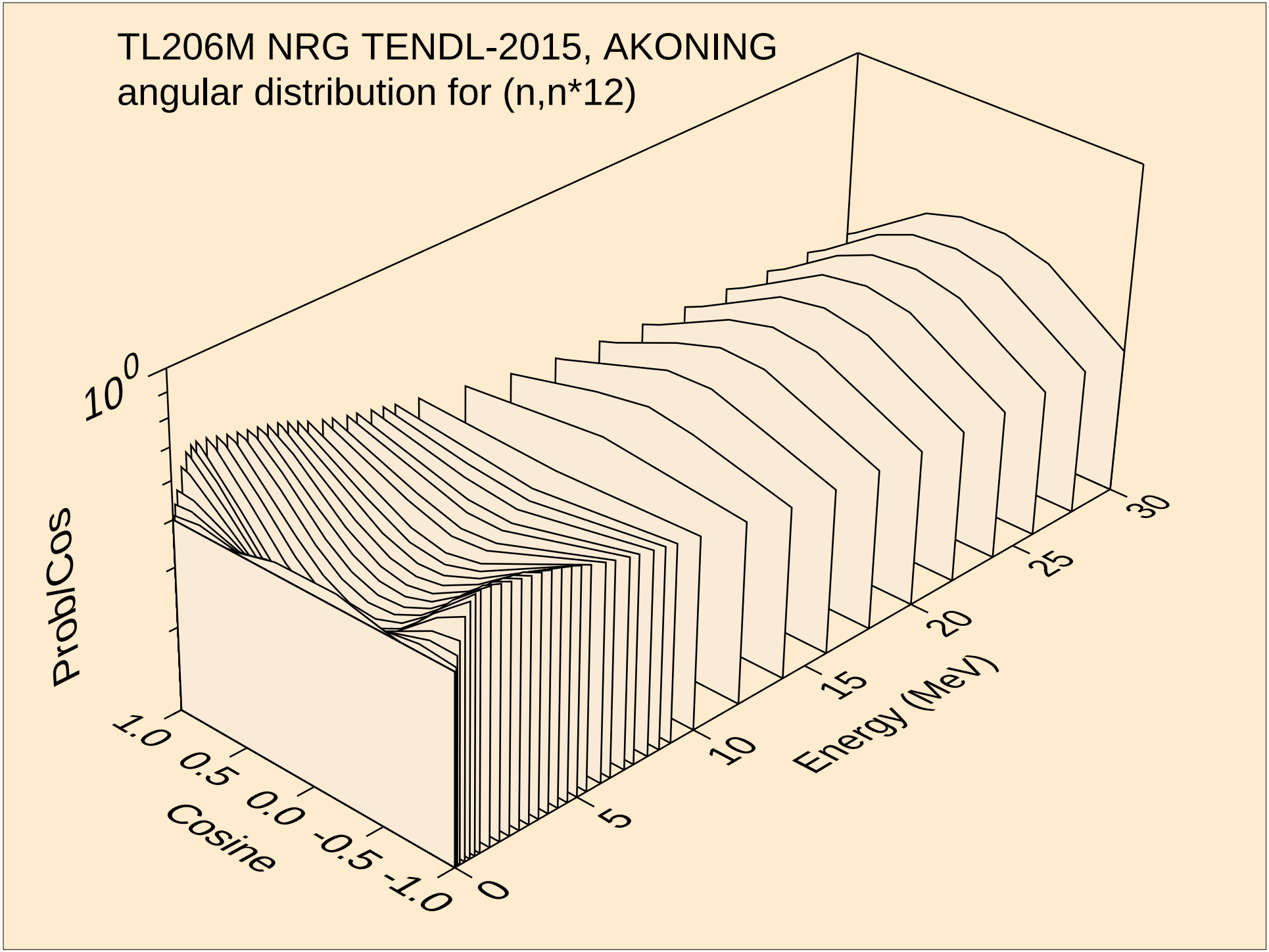

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*7)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

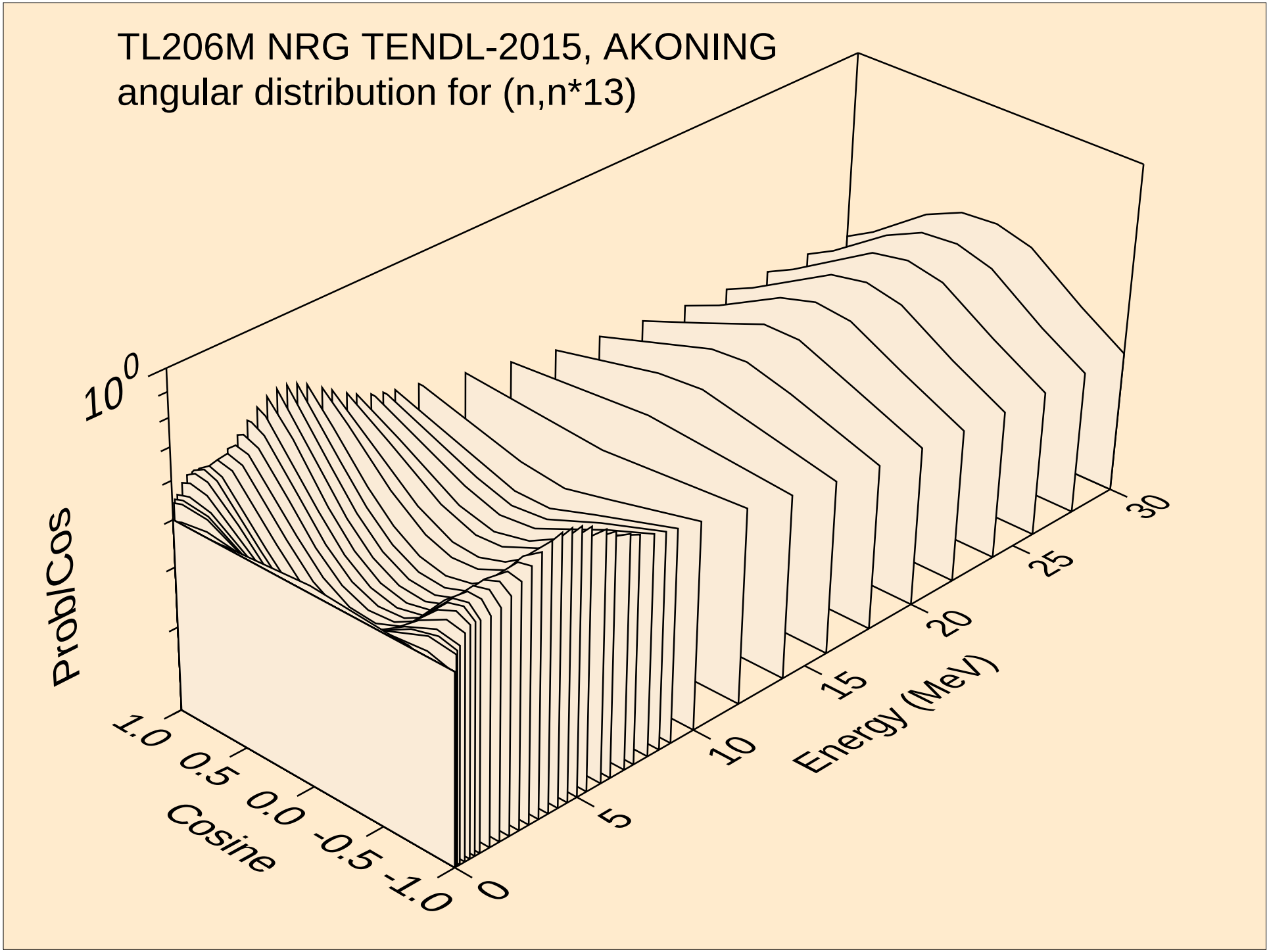

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*8)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

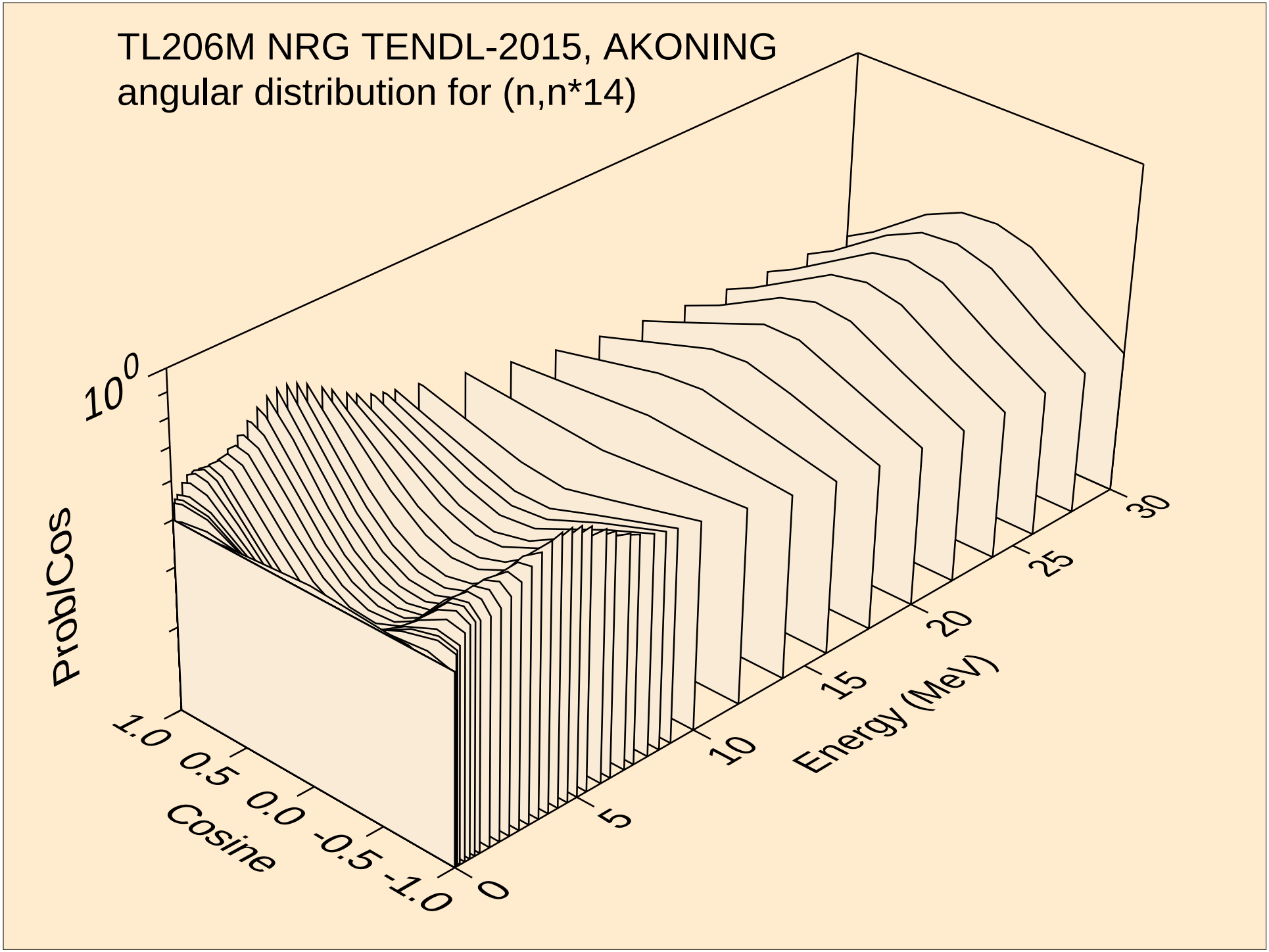

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*9)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

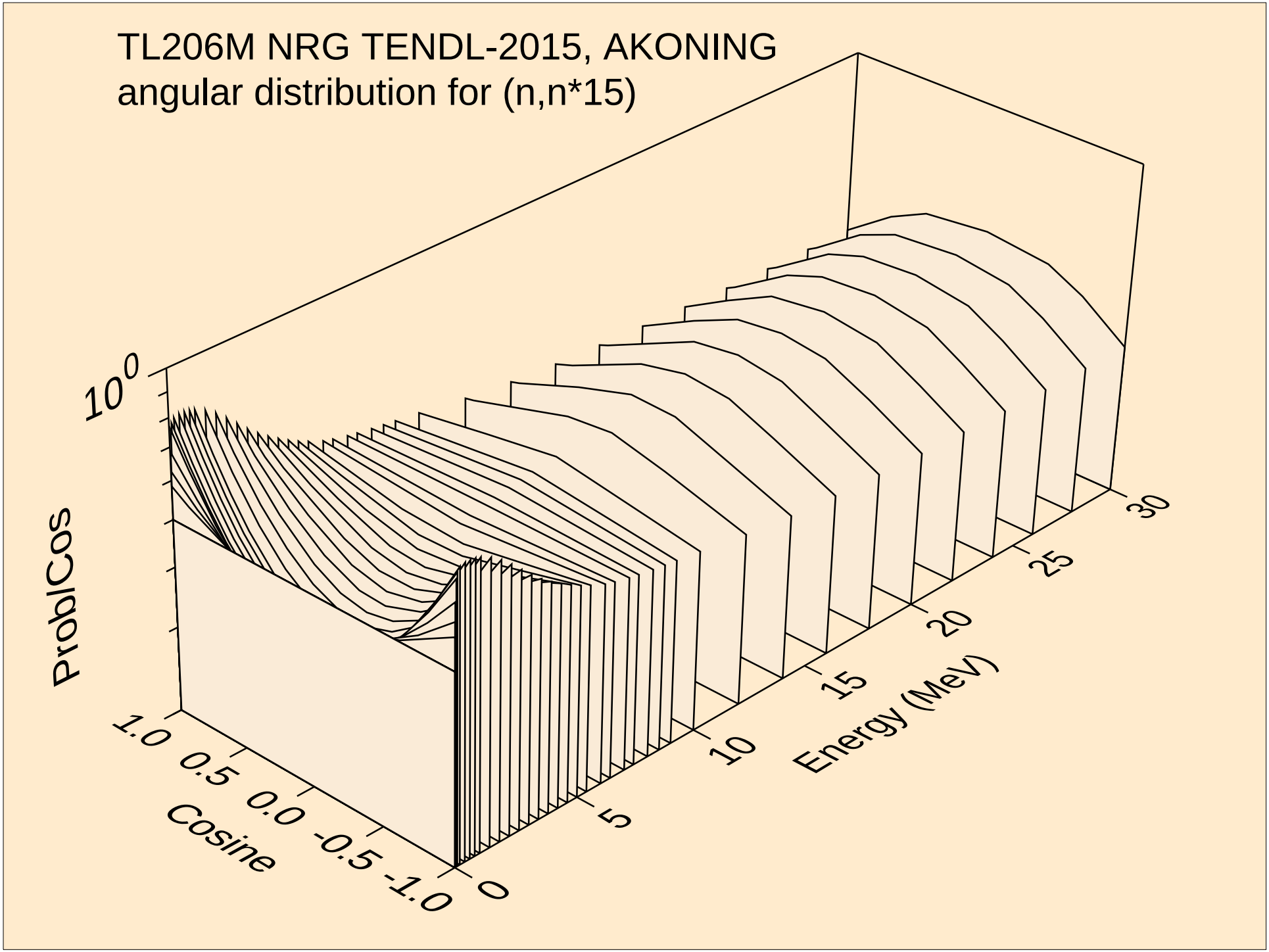

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*10)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

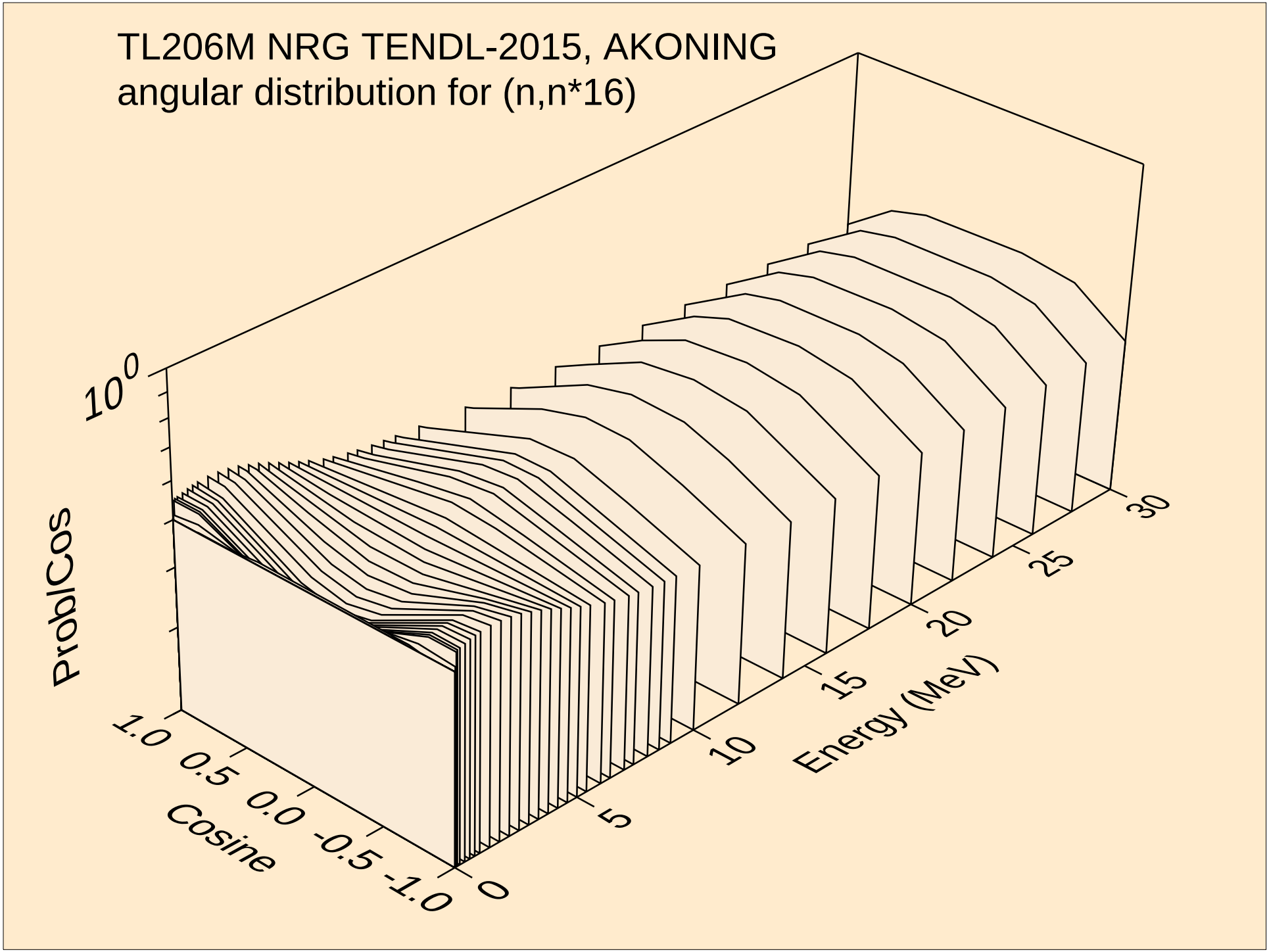

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*11)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

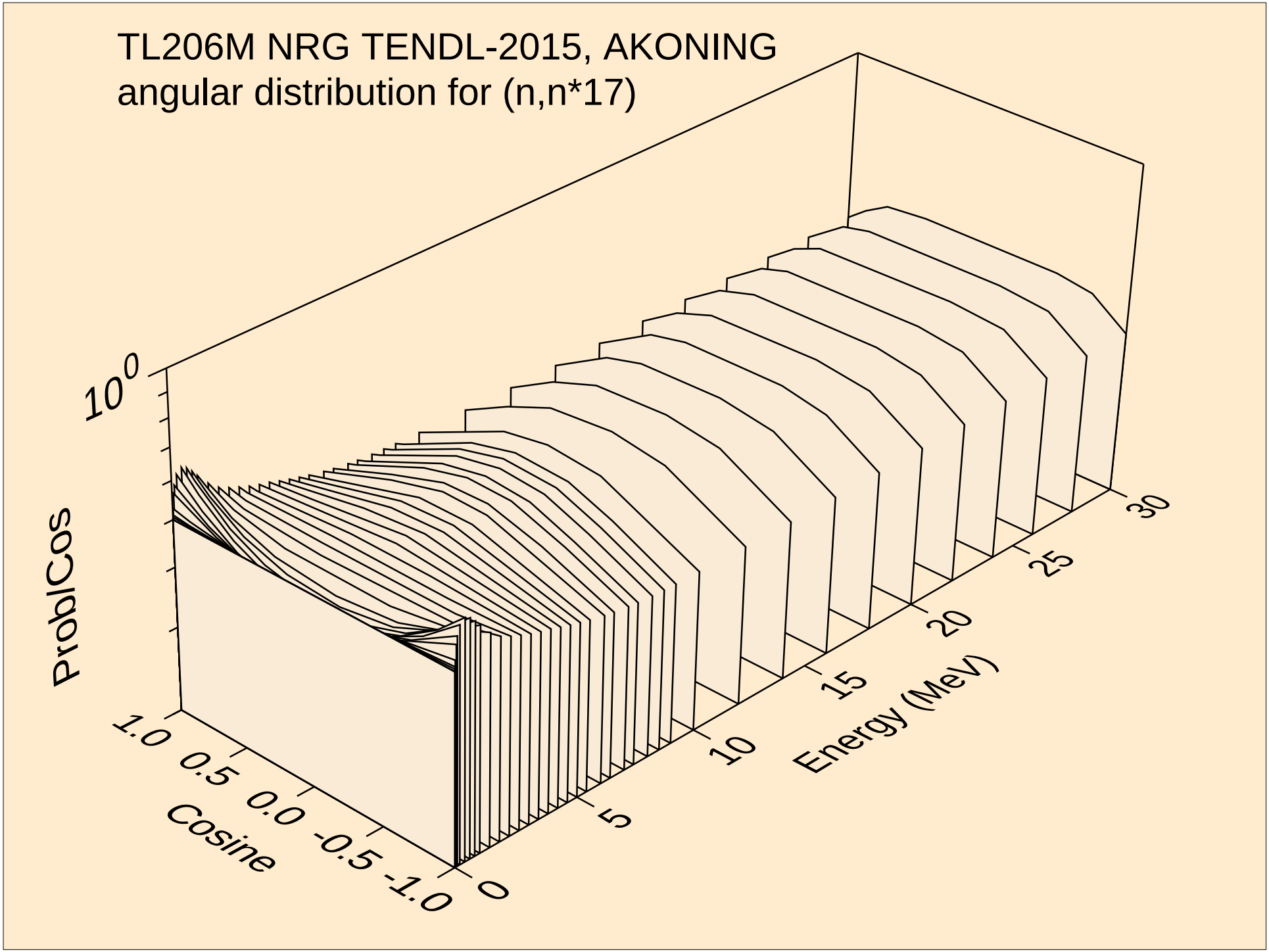

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*12)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

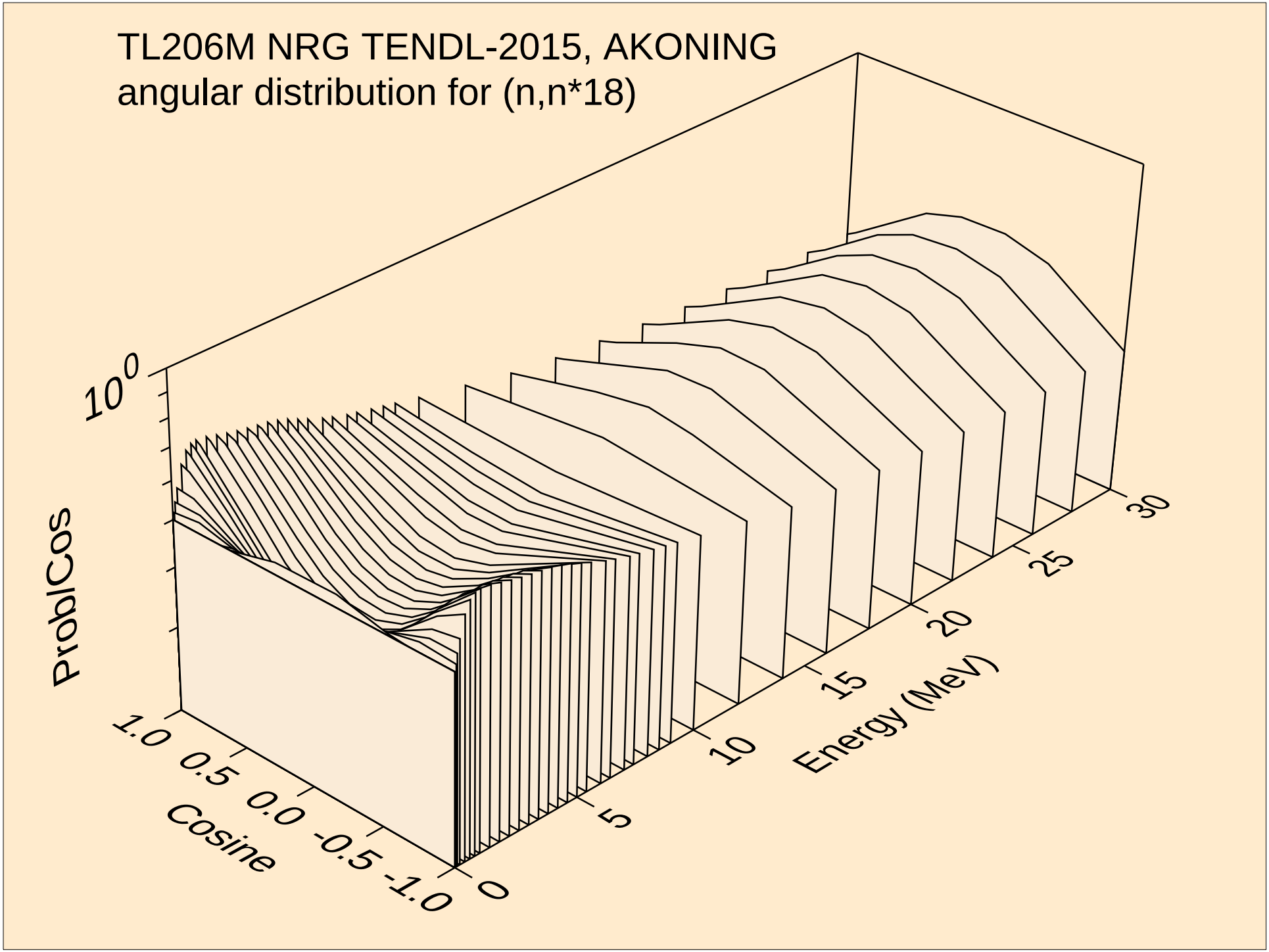

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*13)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

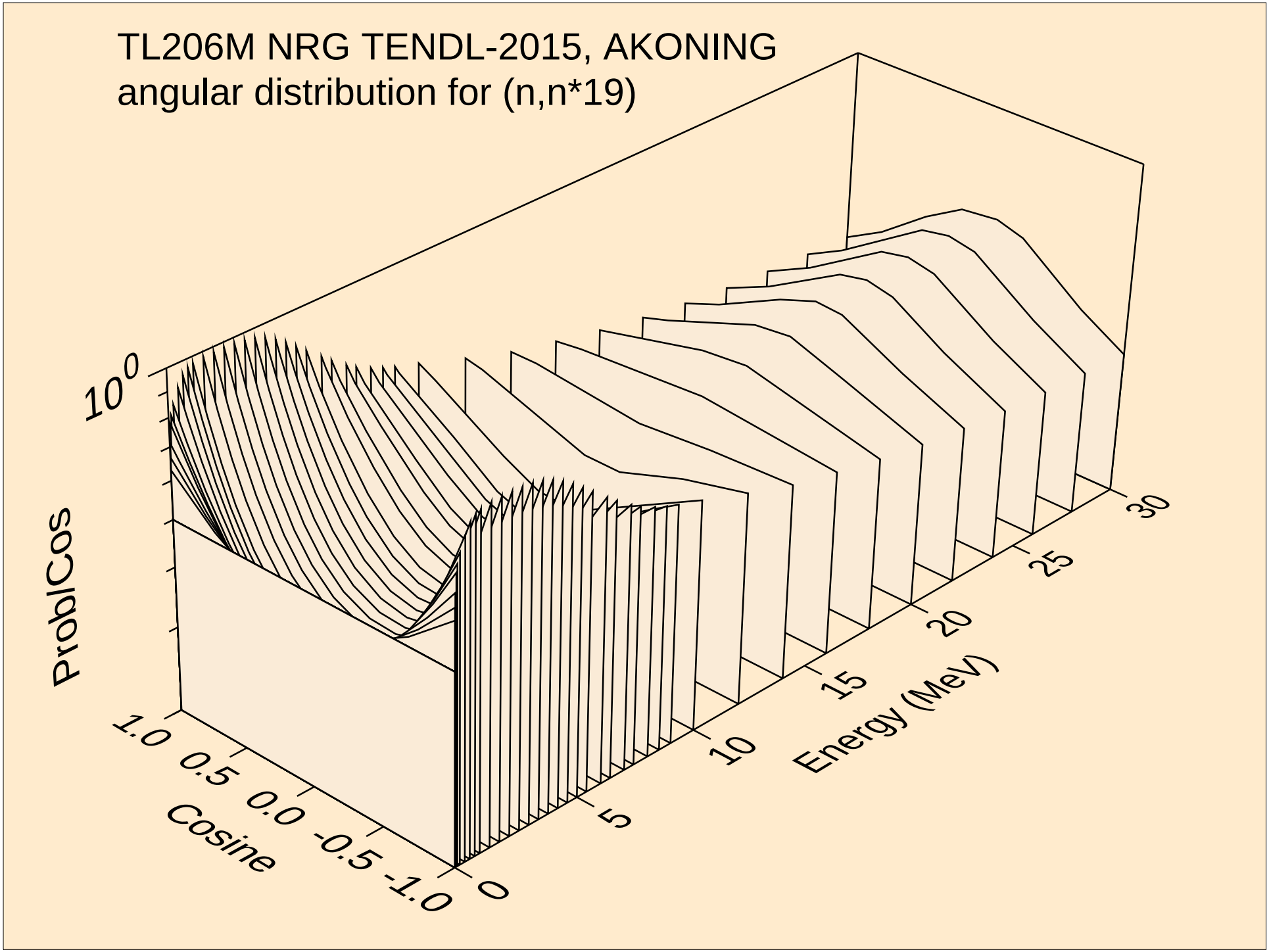

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*14)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

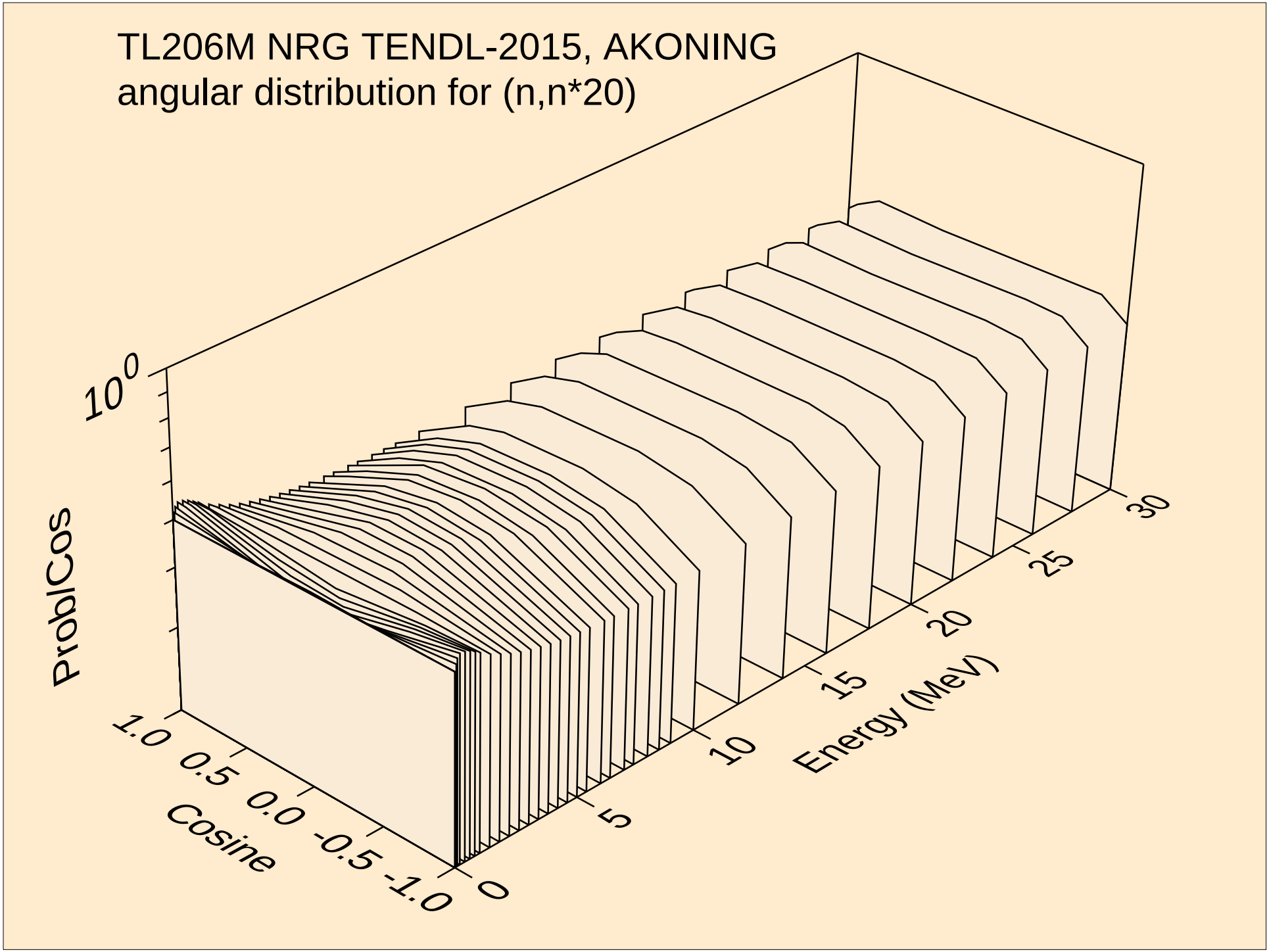

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*15)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

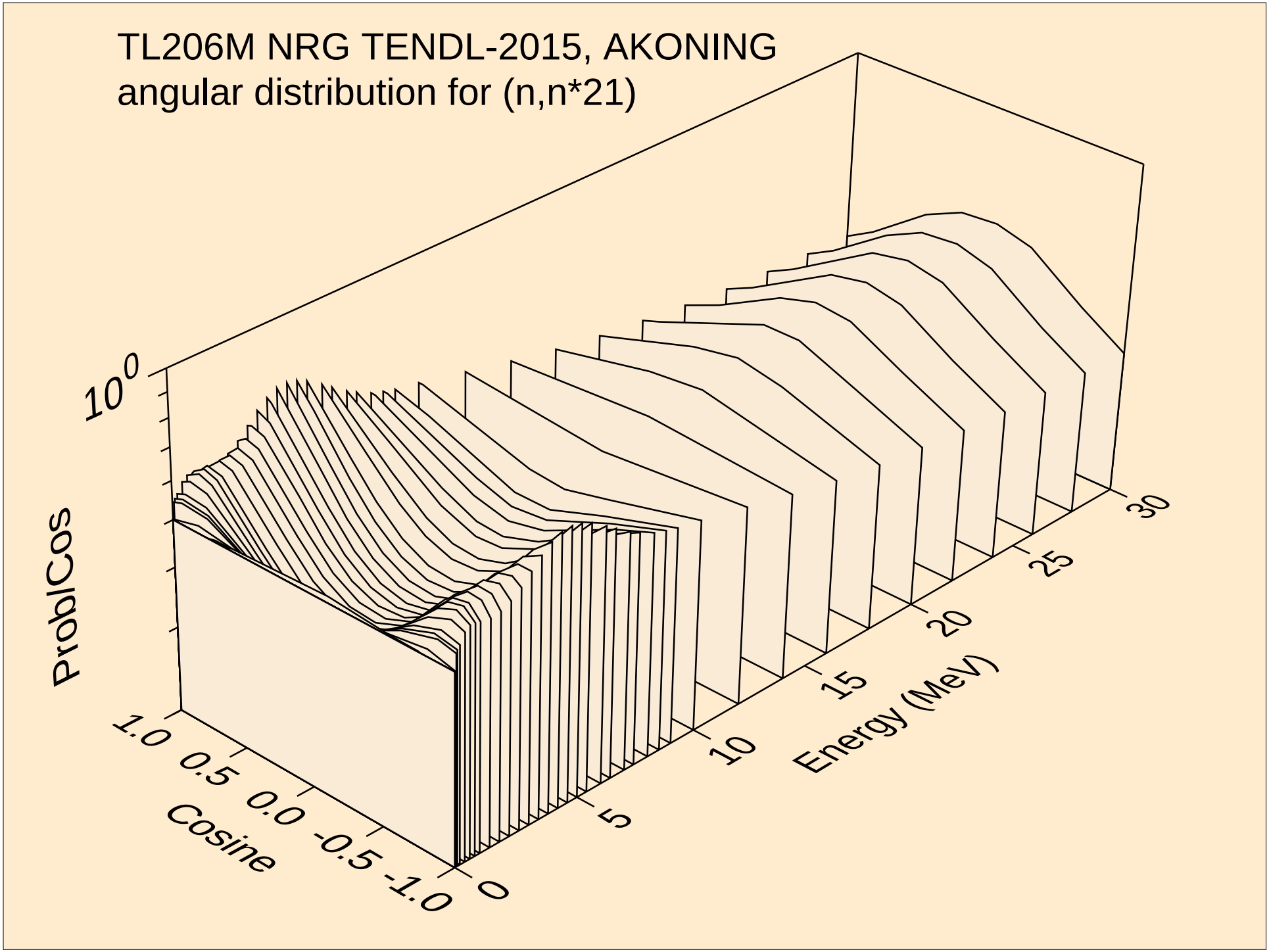

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*16)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

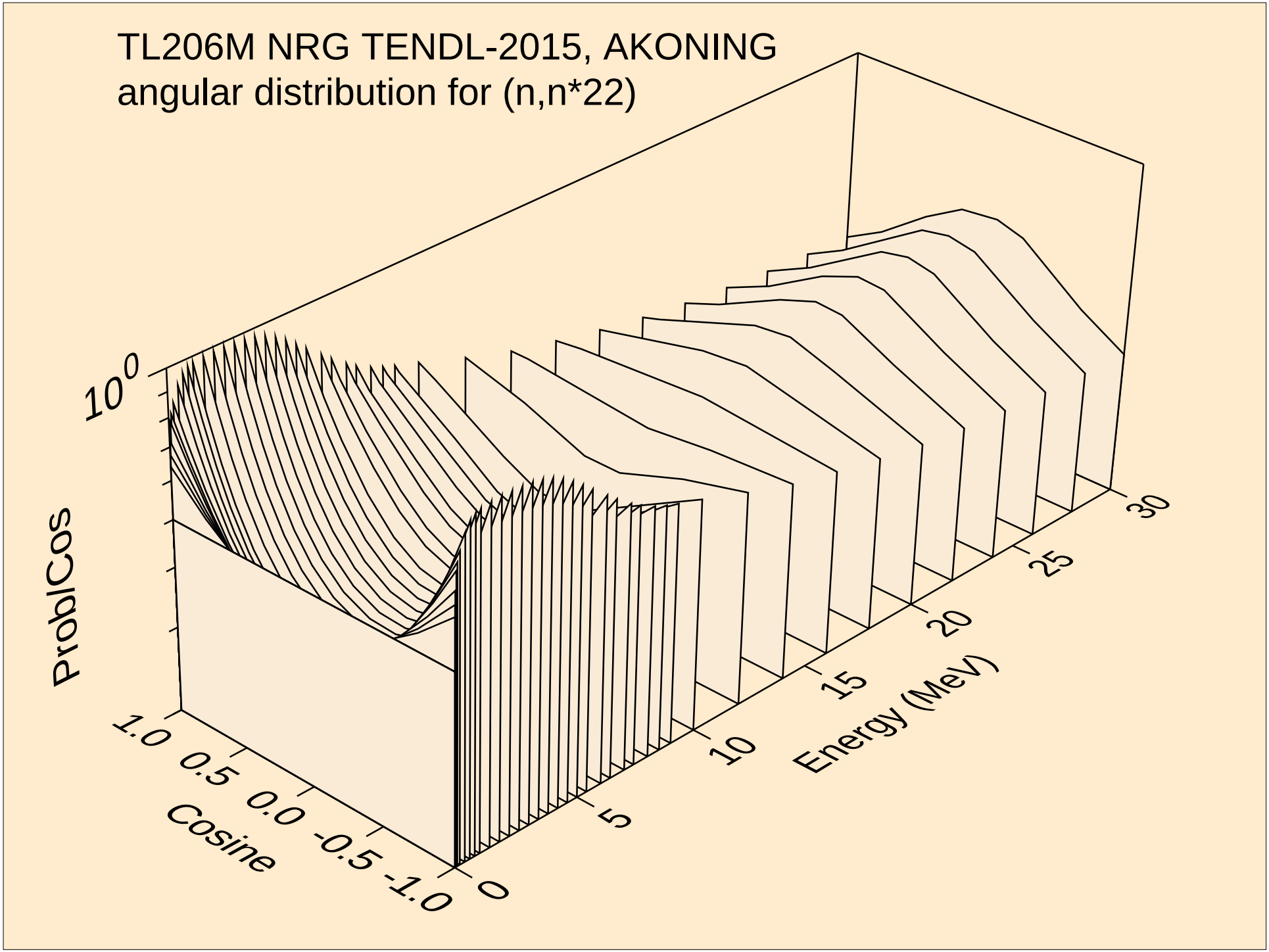

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*17)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

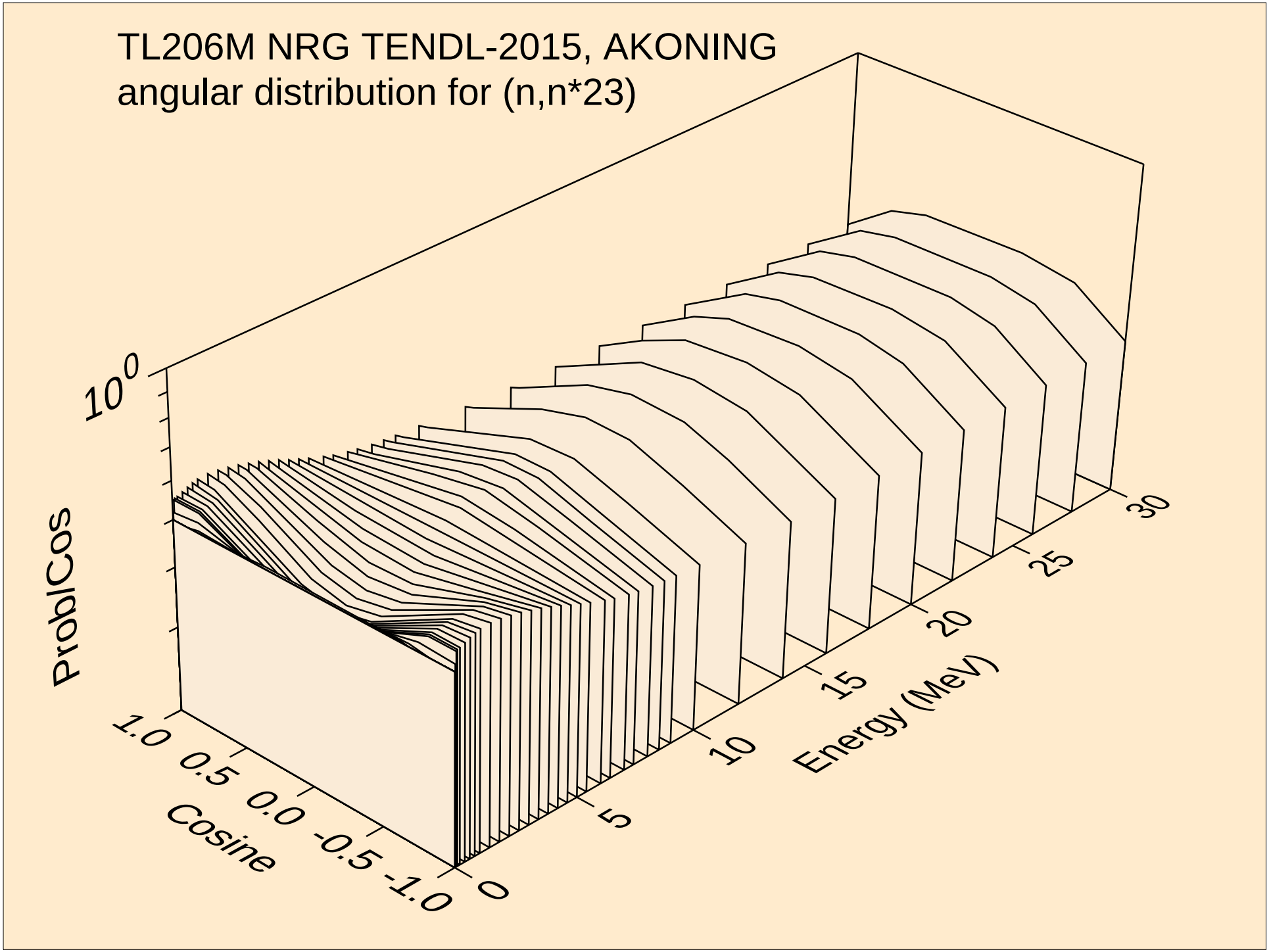

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*18)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

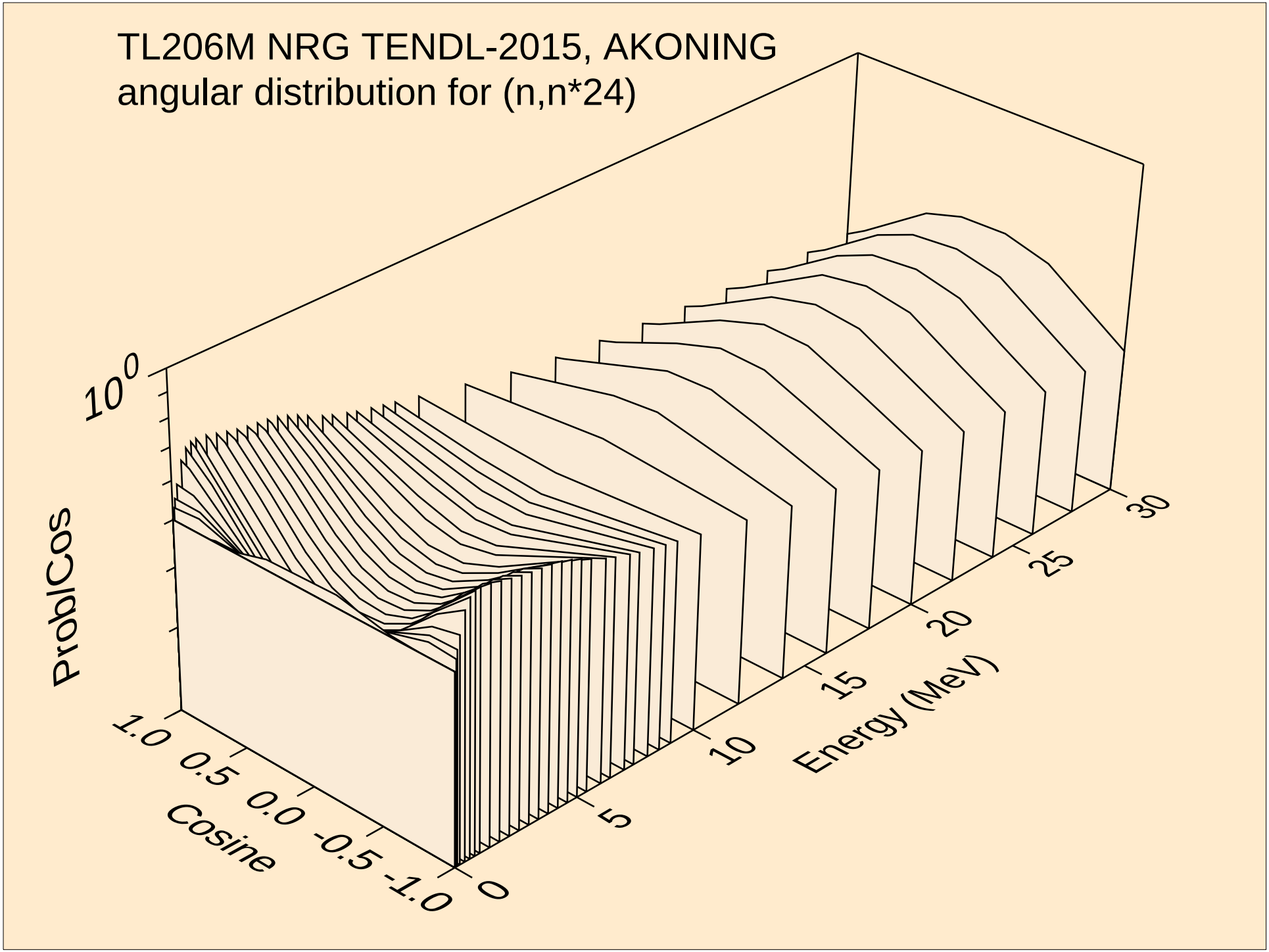

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*19)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

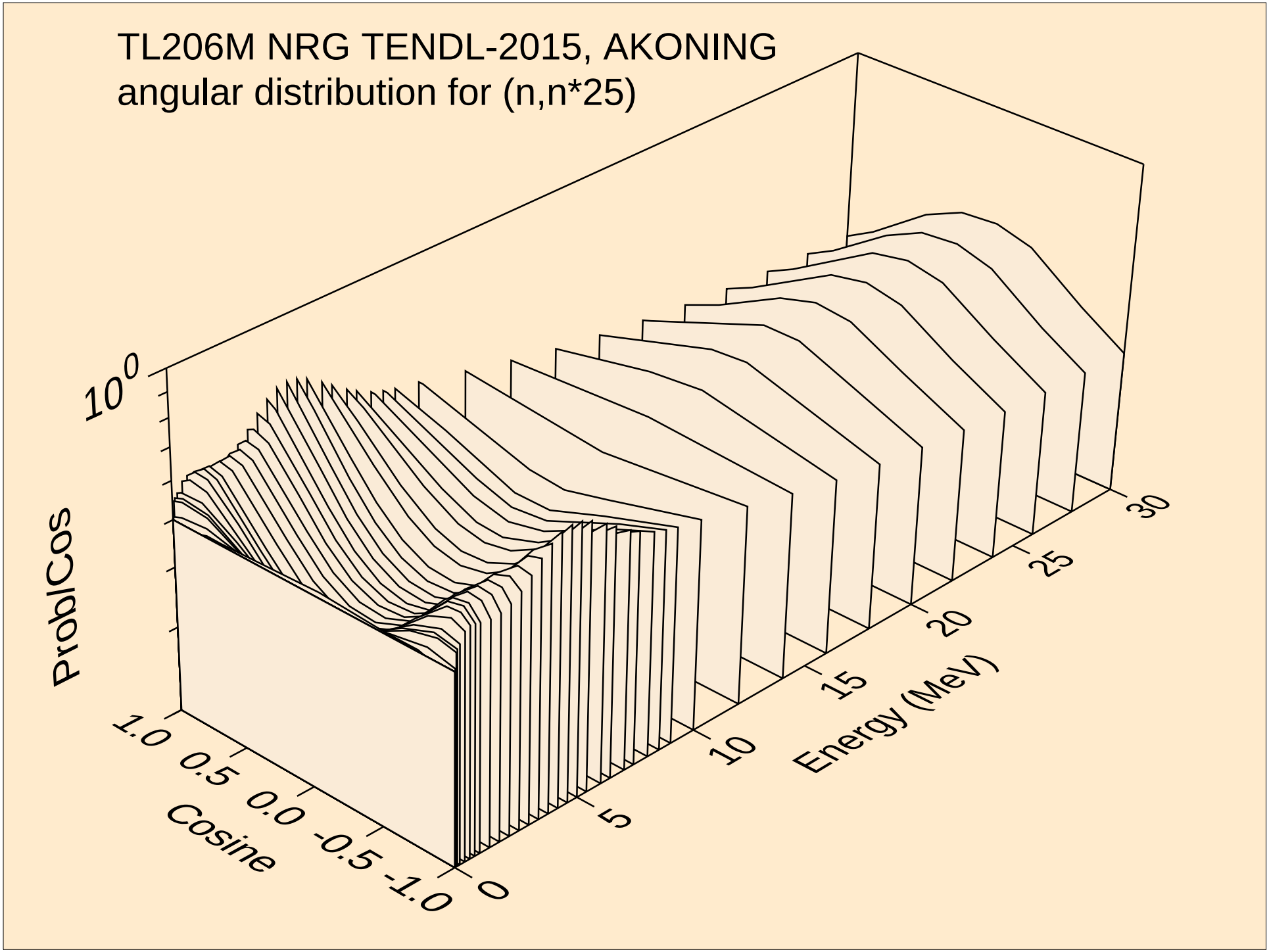

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*20)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

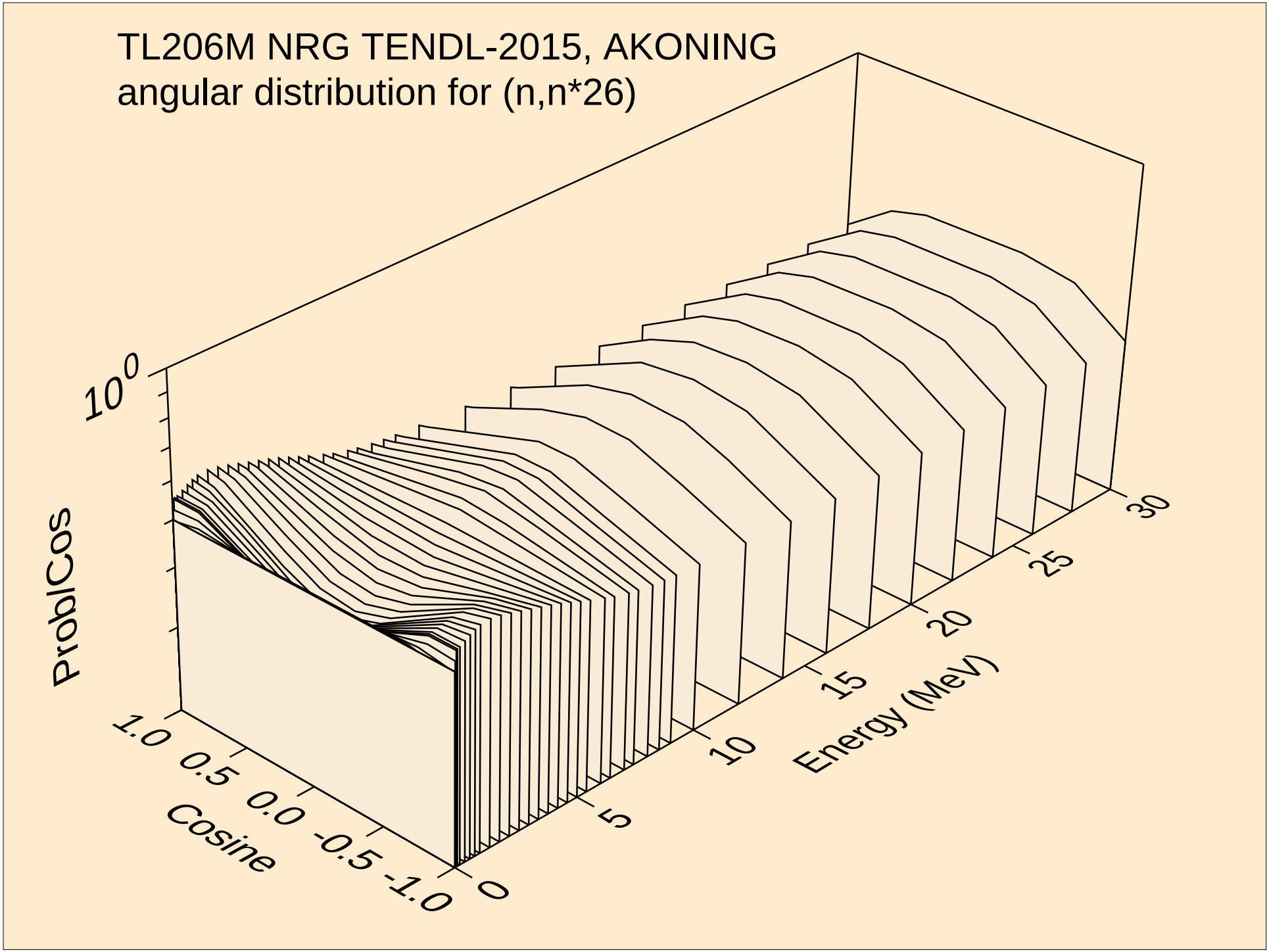

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*21)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

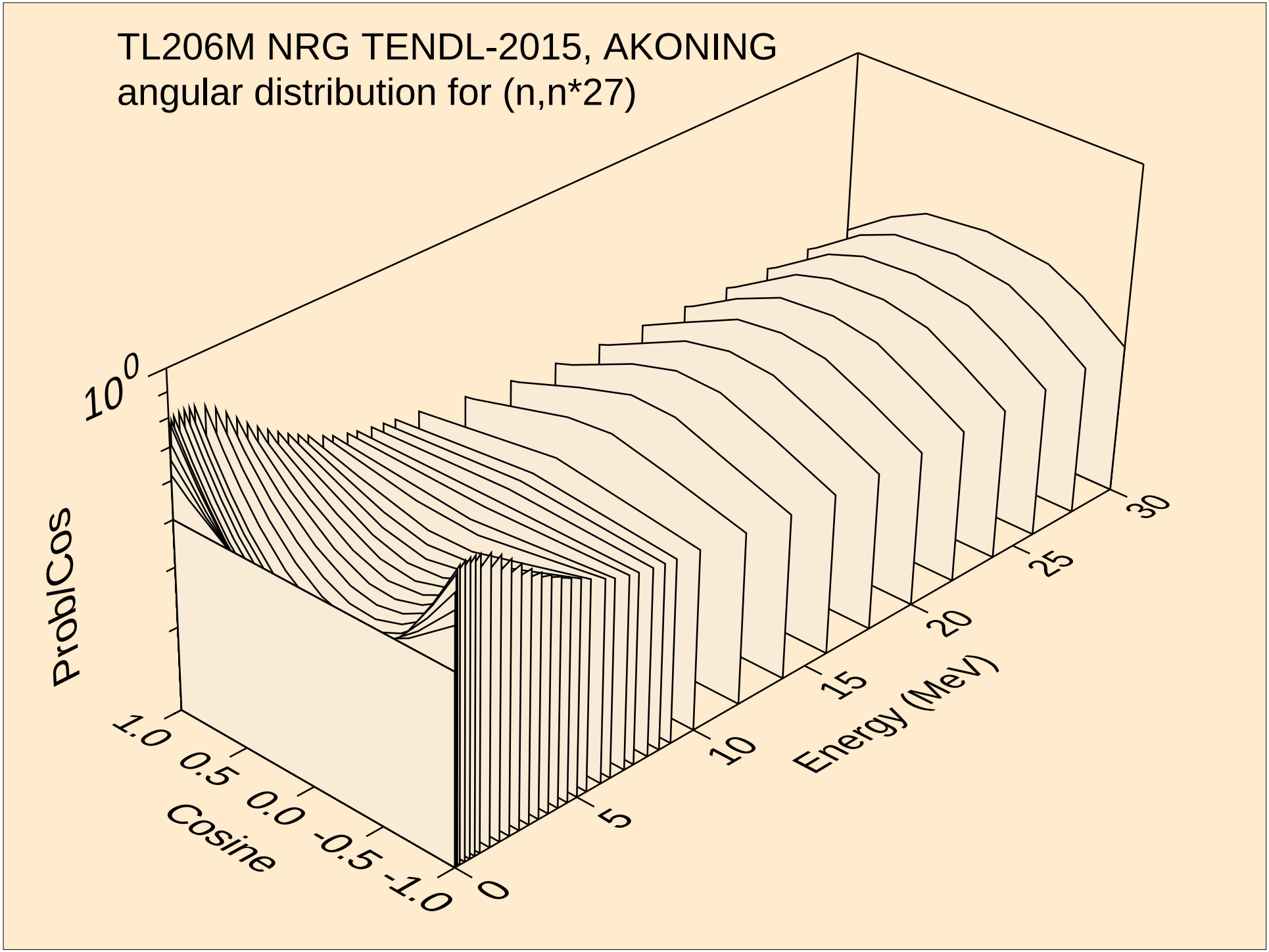

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*22)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

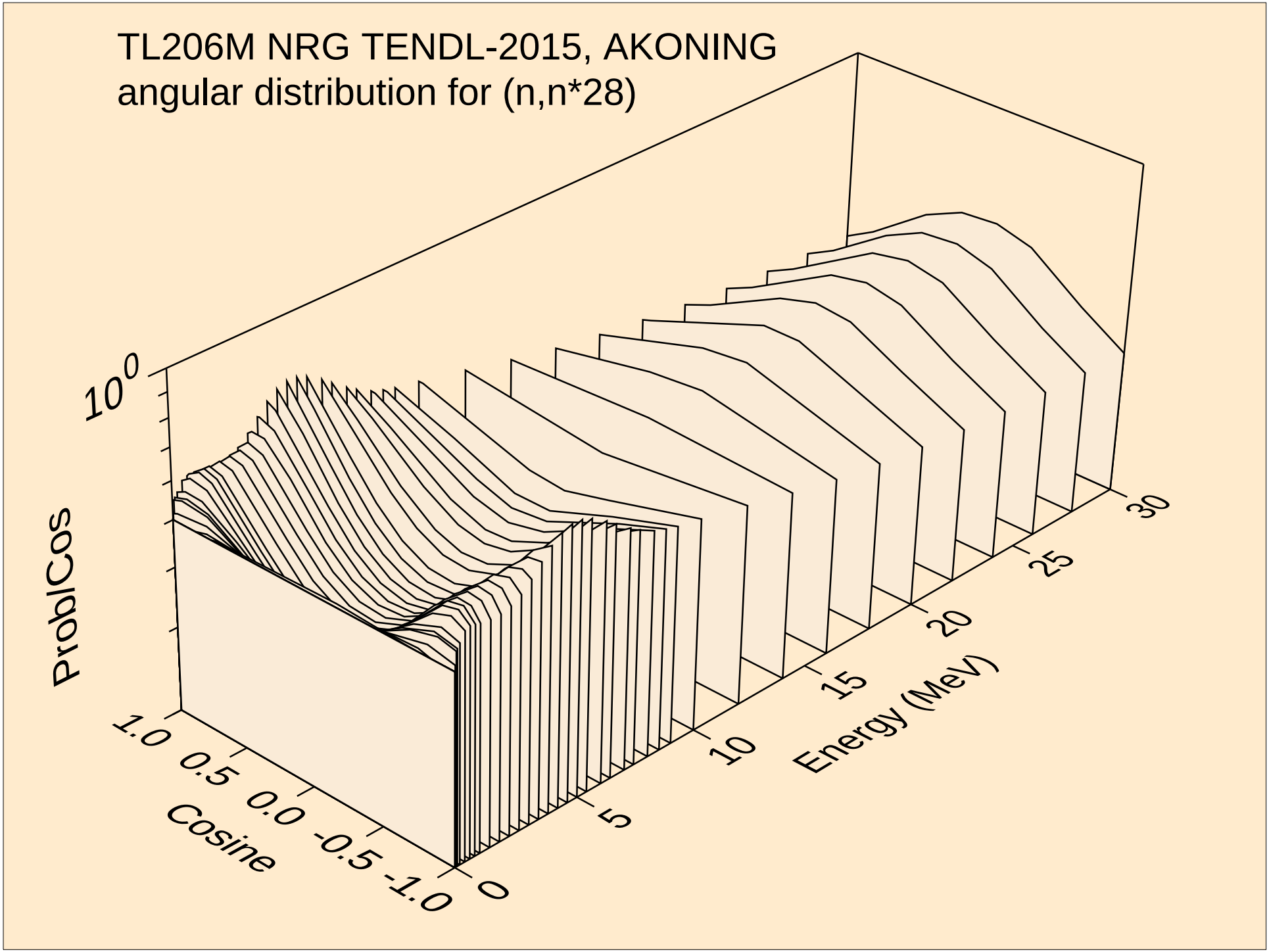

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*23)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

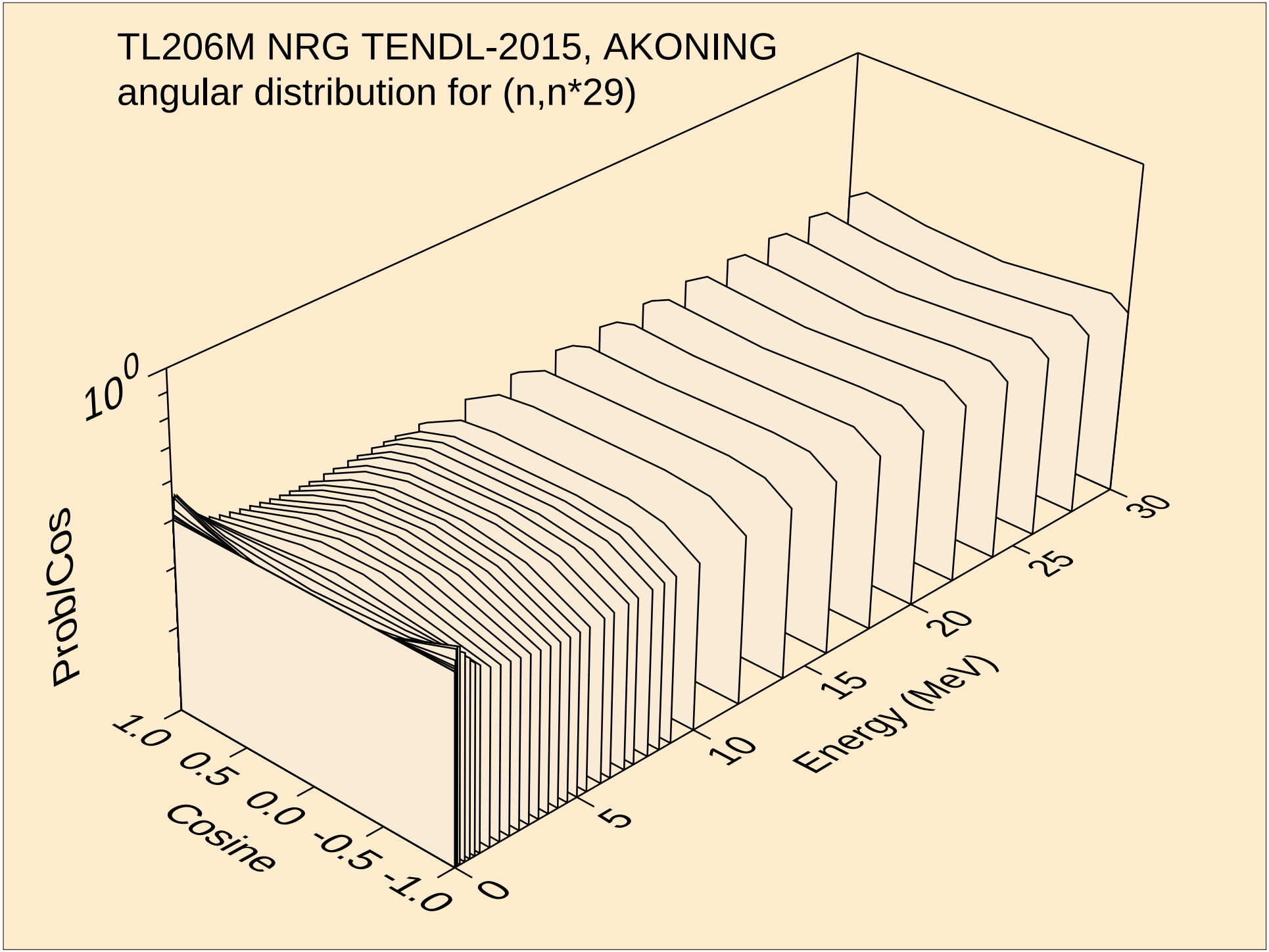

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*24)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

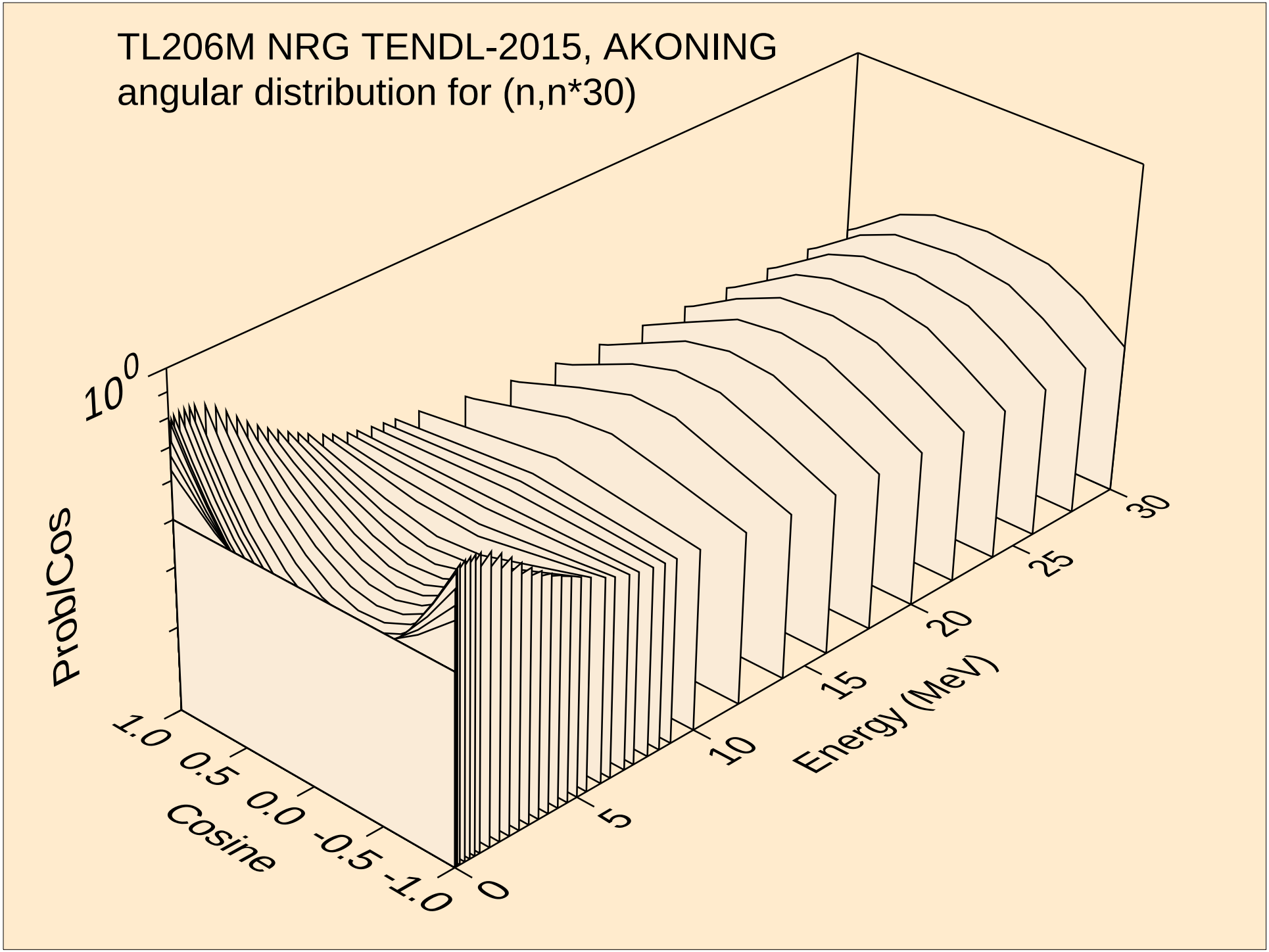

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*25)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

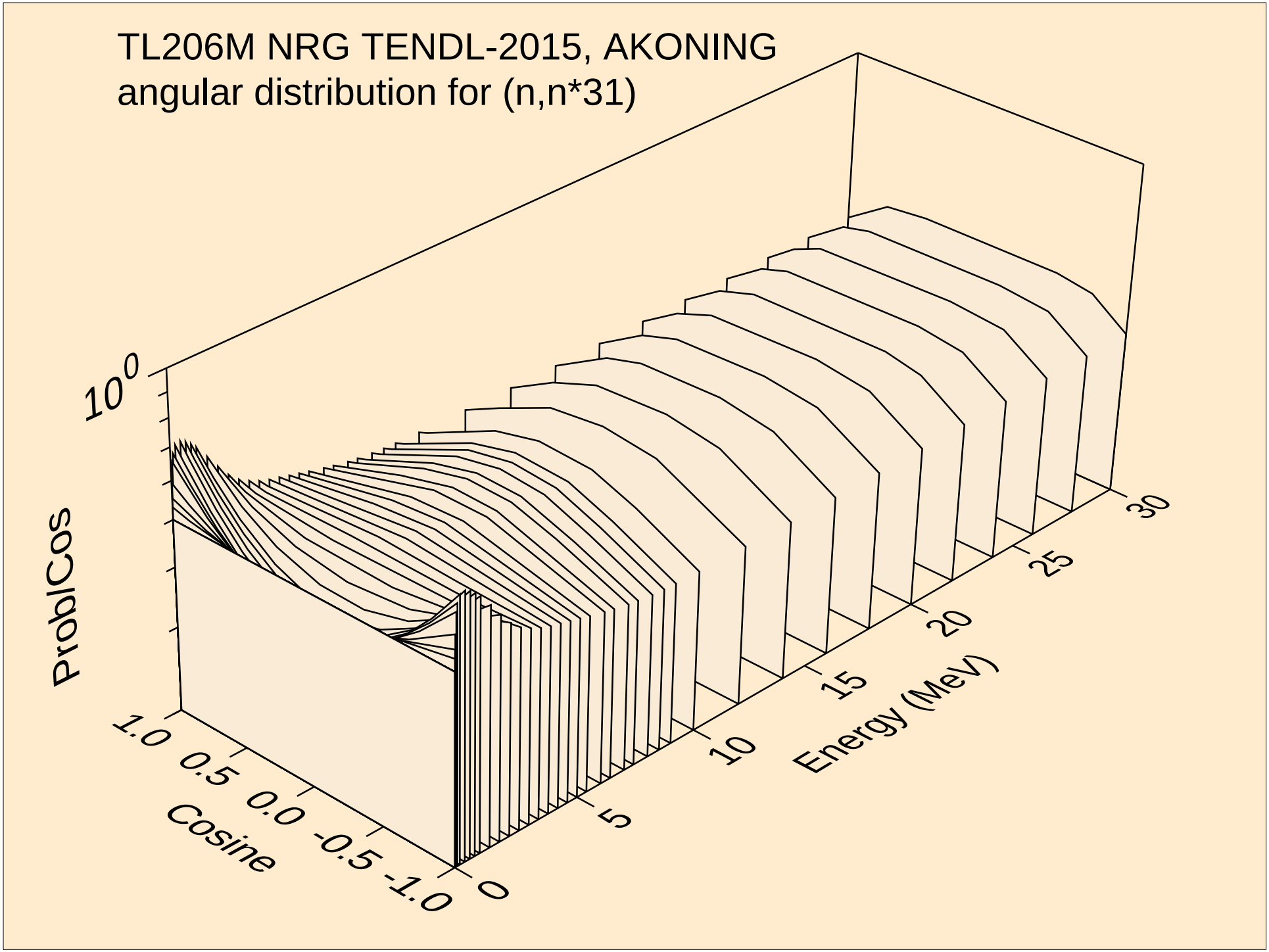

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*26)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

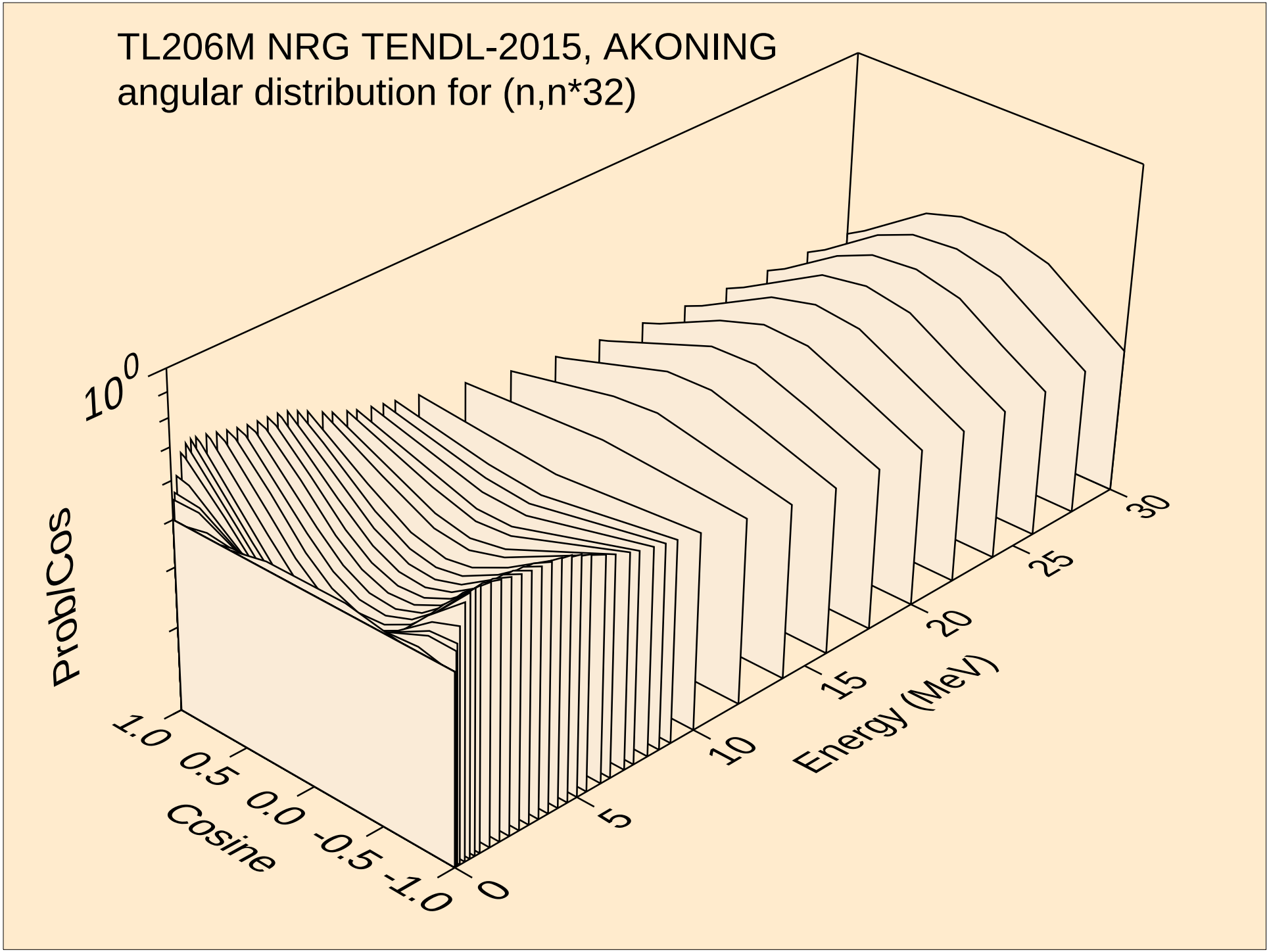

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*27)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

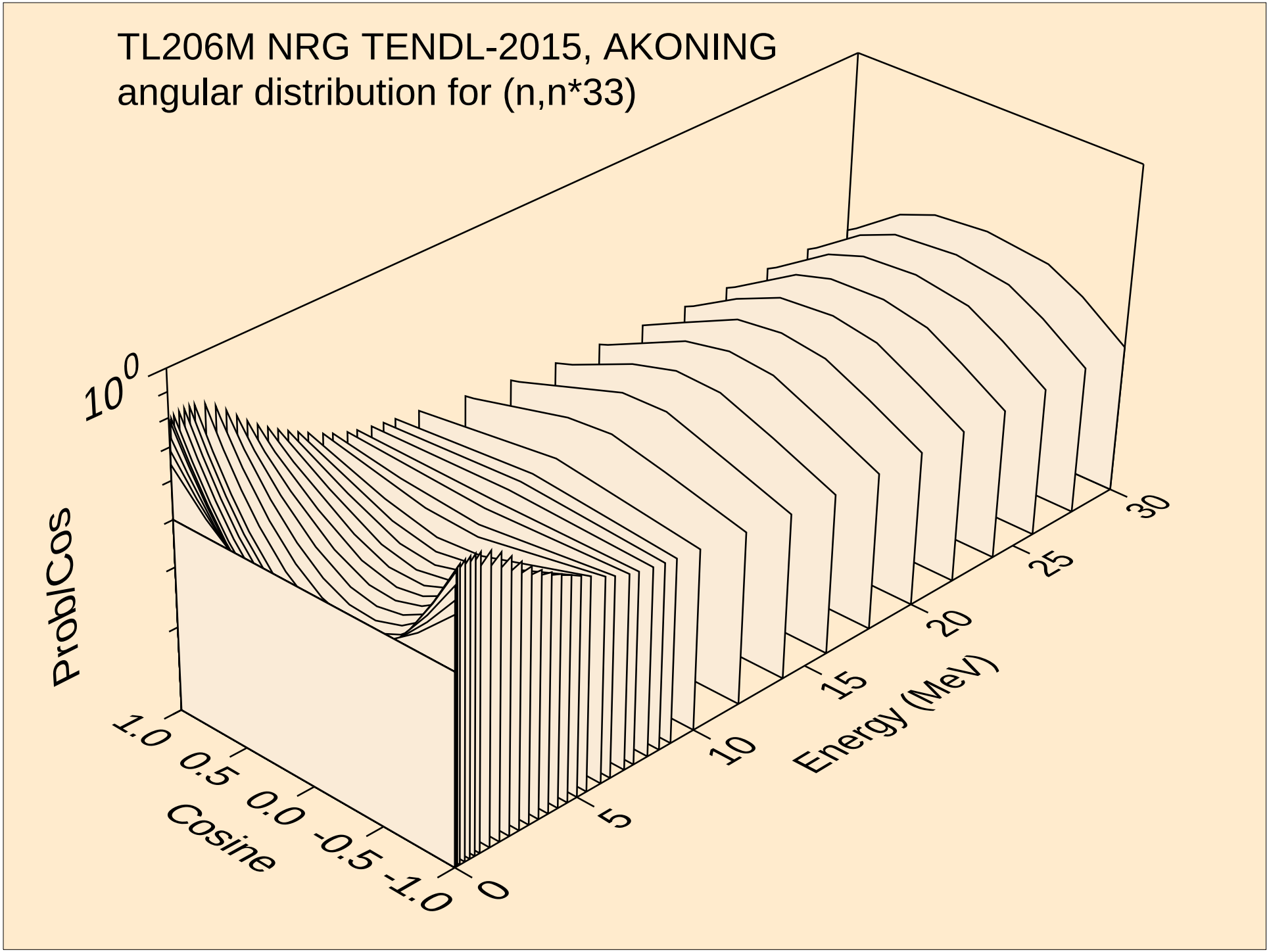

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*28)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

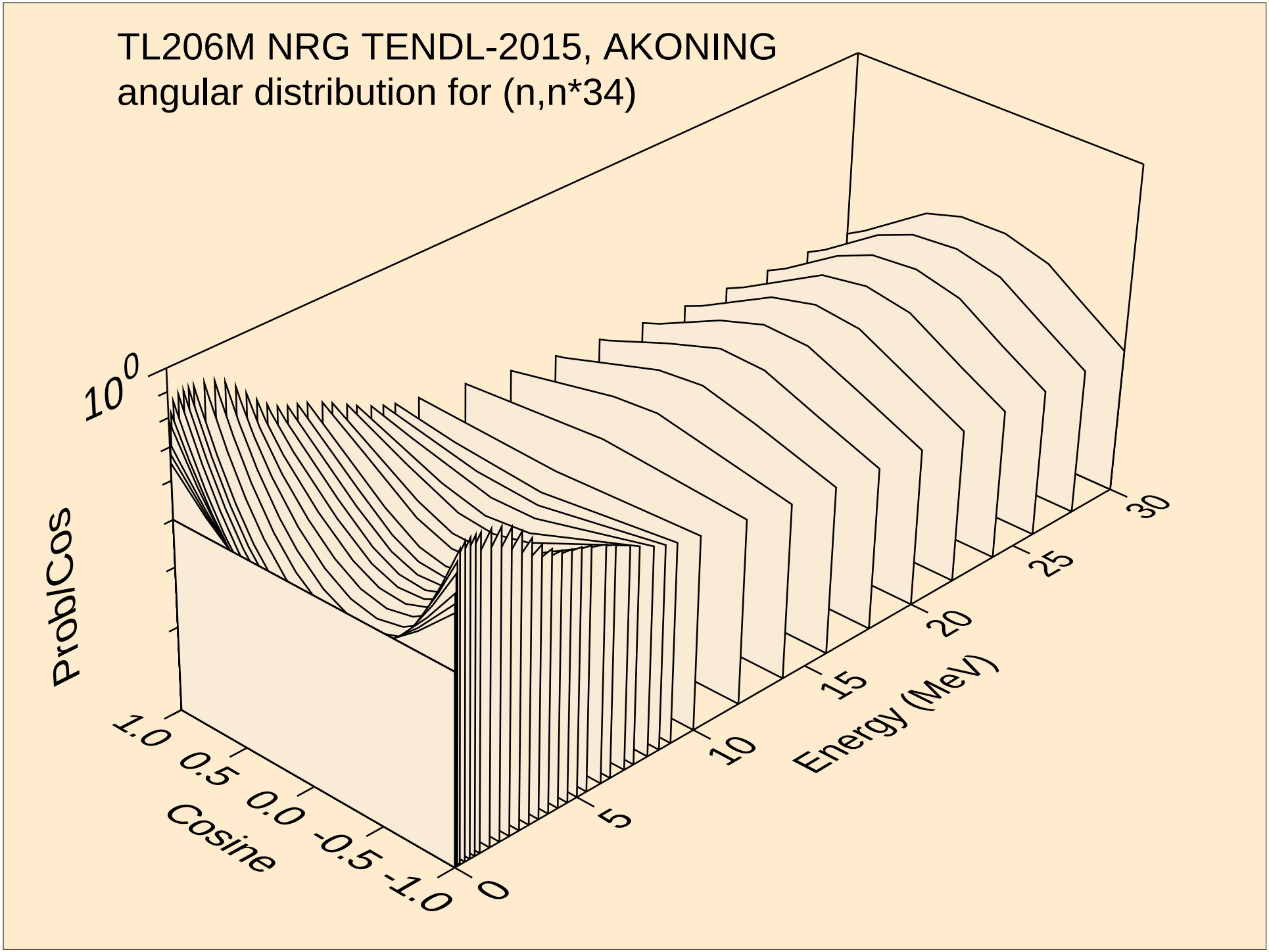

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*29)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

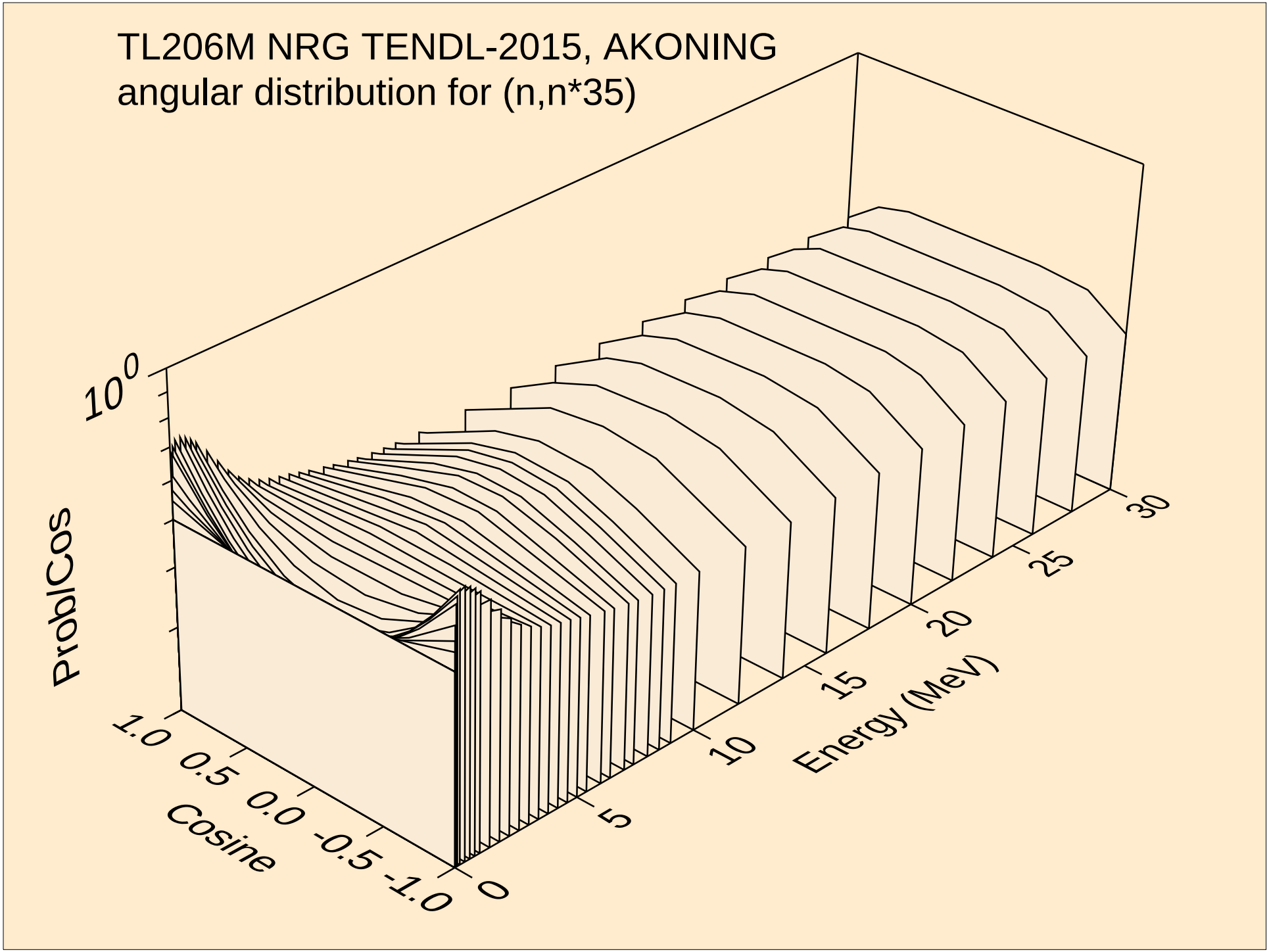

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*30)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

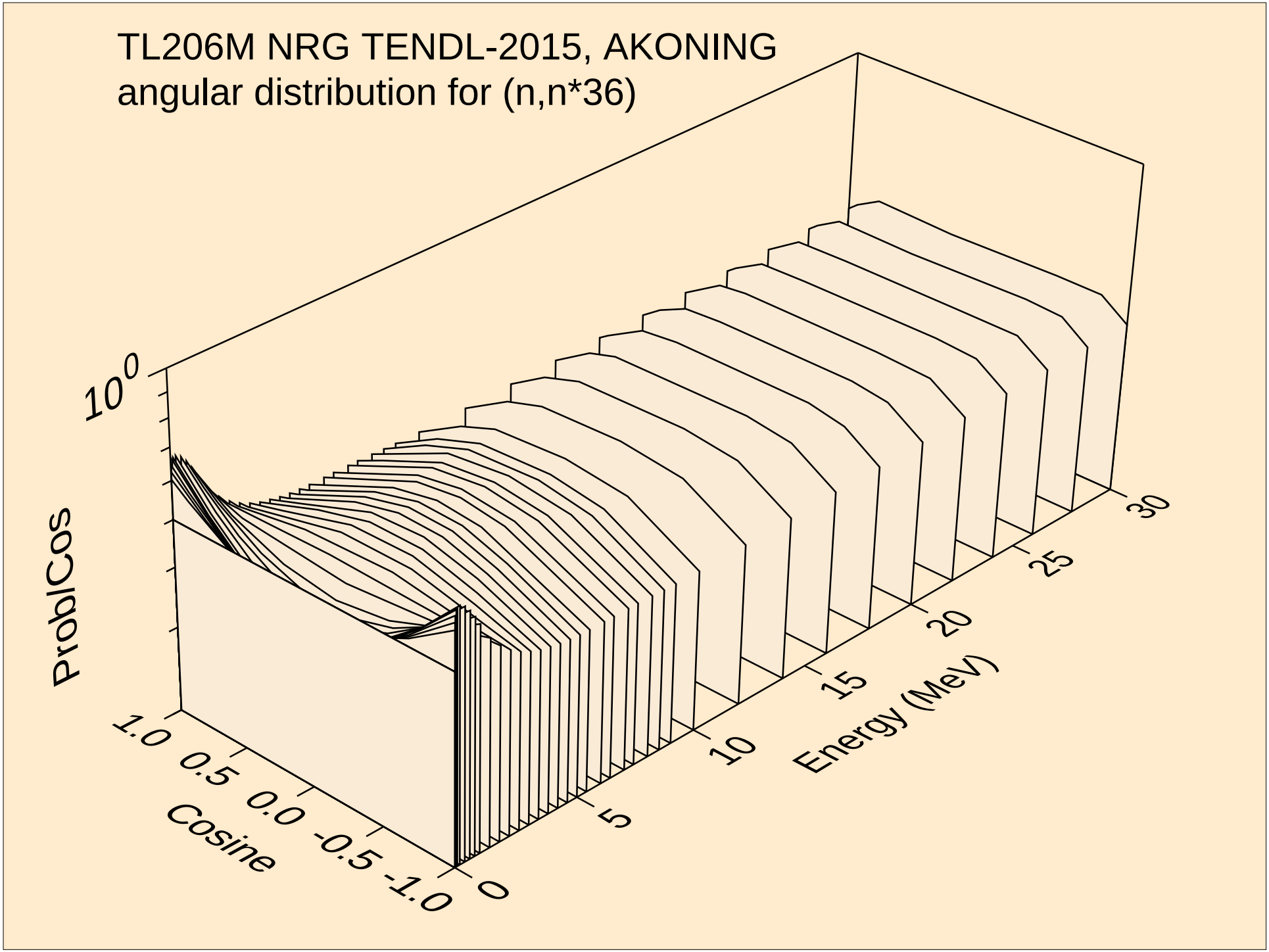

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*31)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

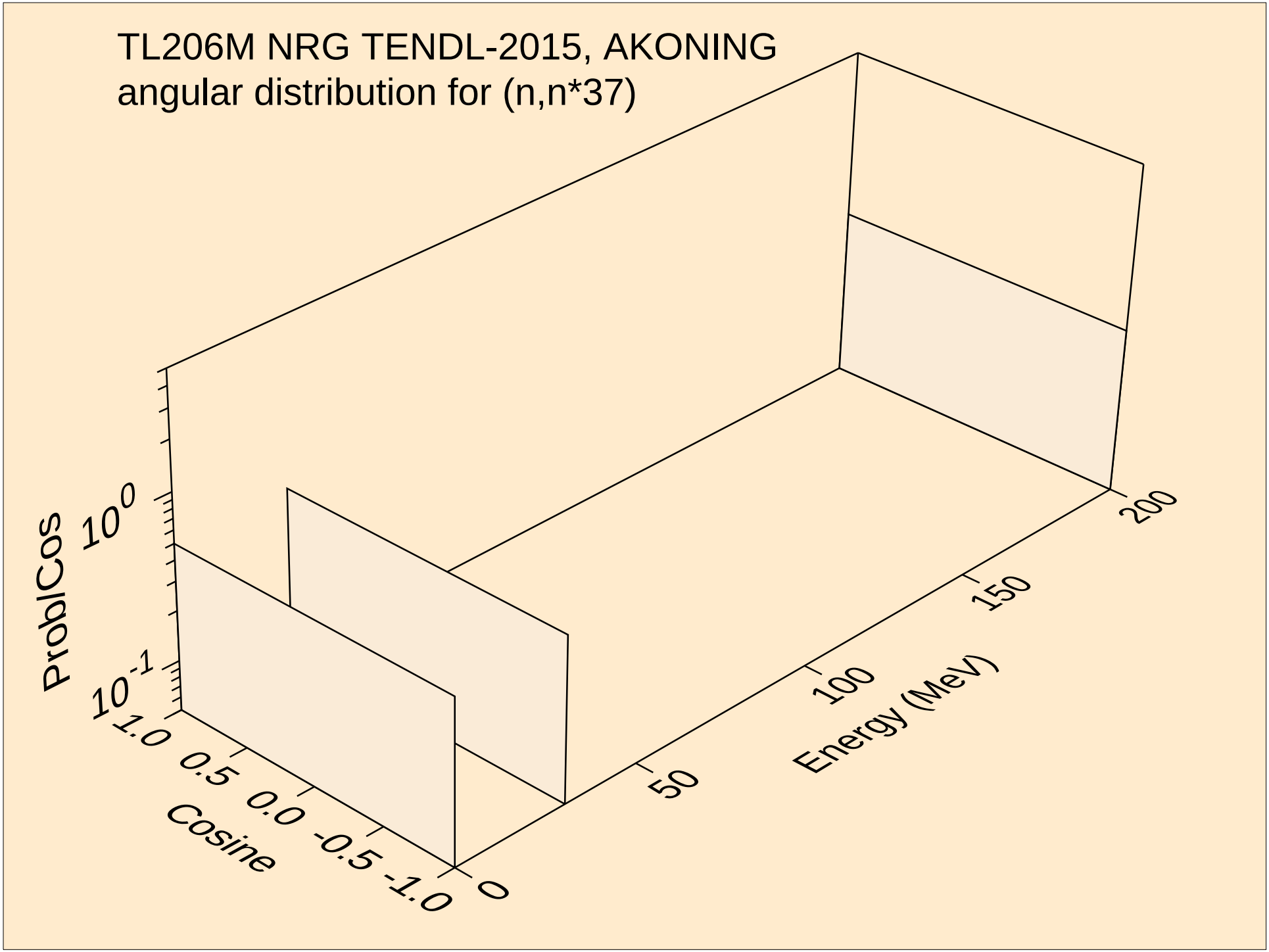

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*32)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

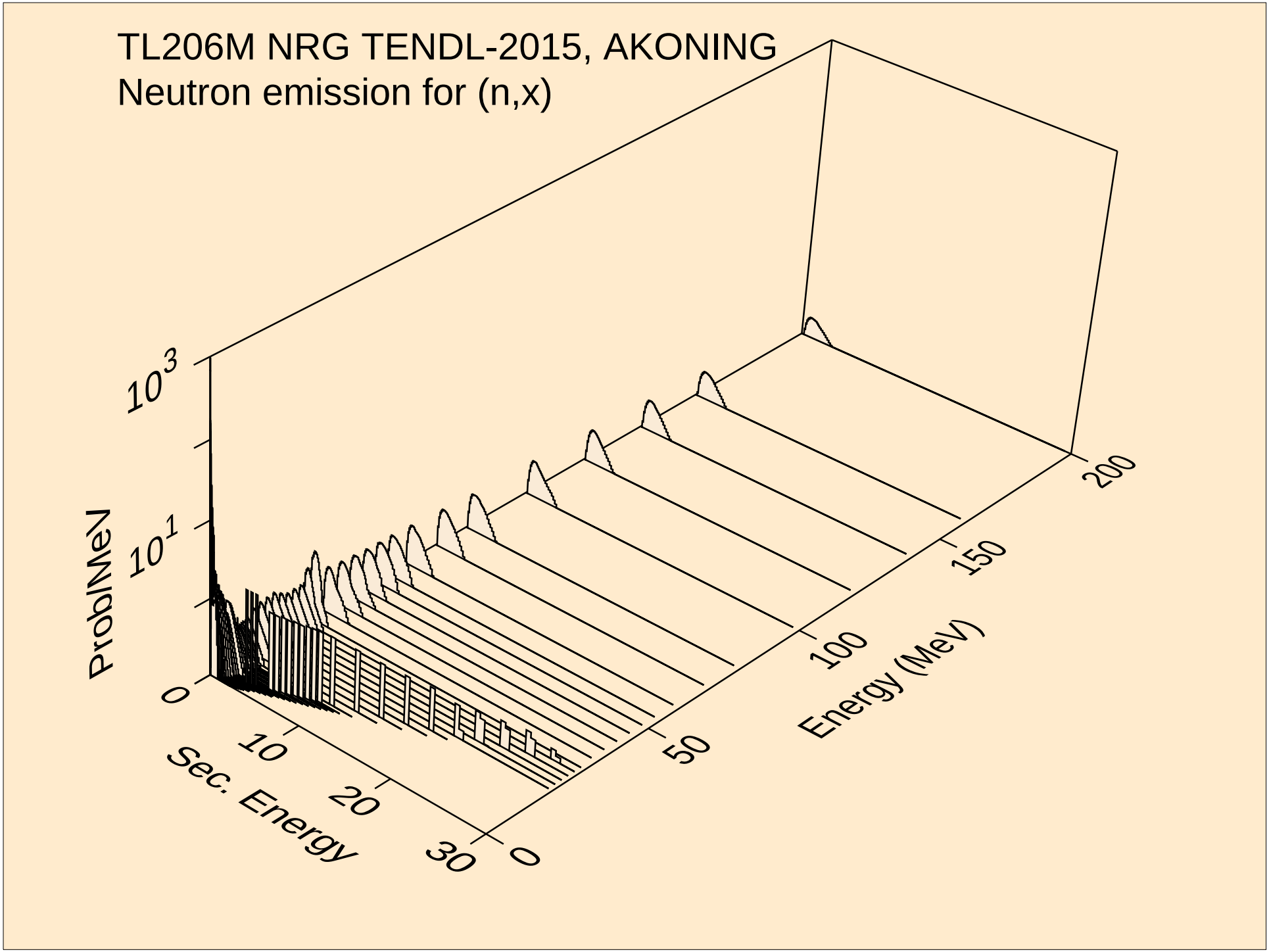

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*33)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

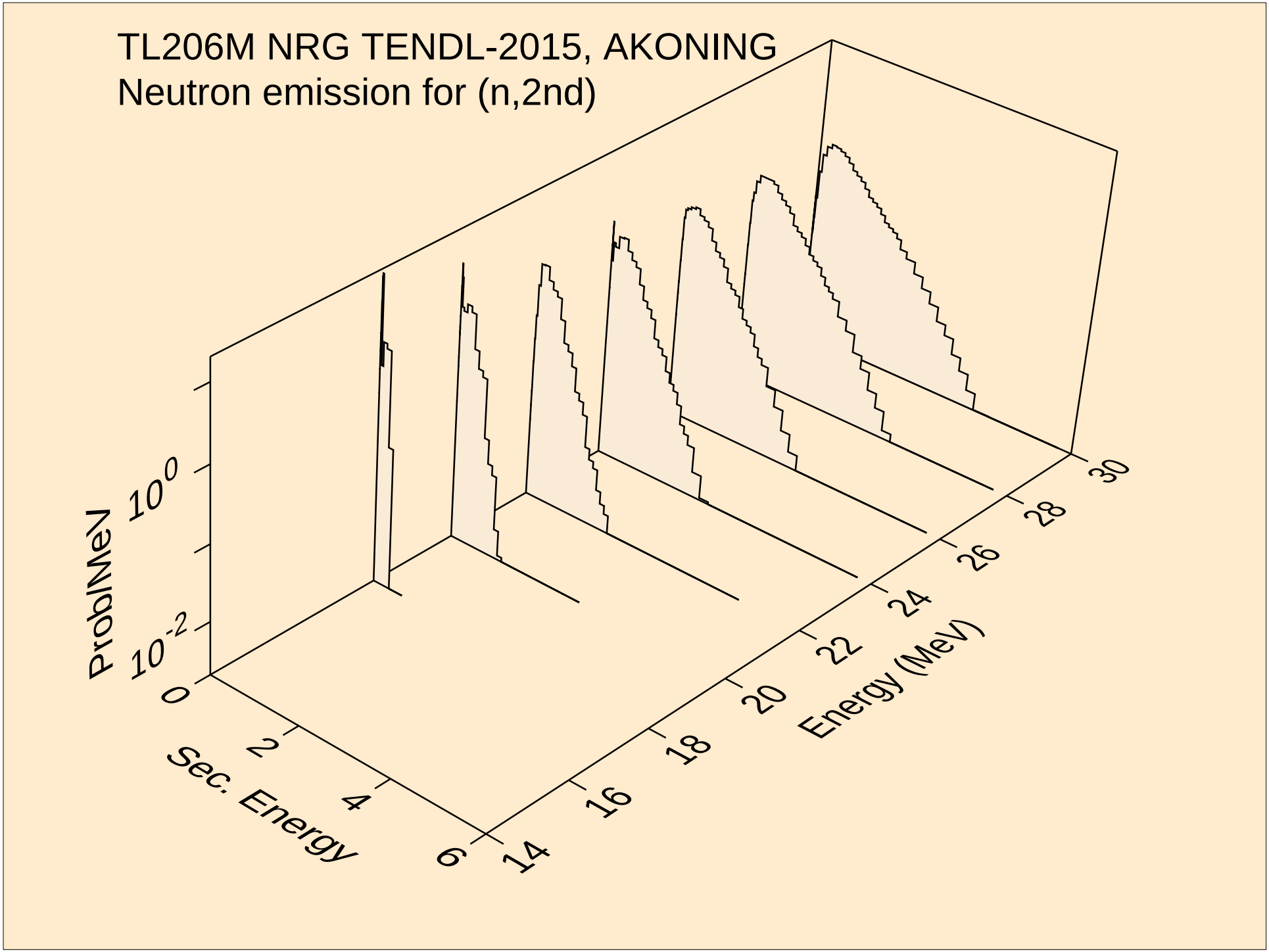

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*34)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

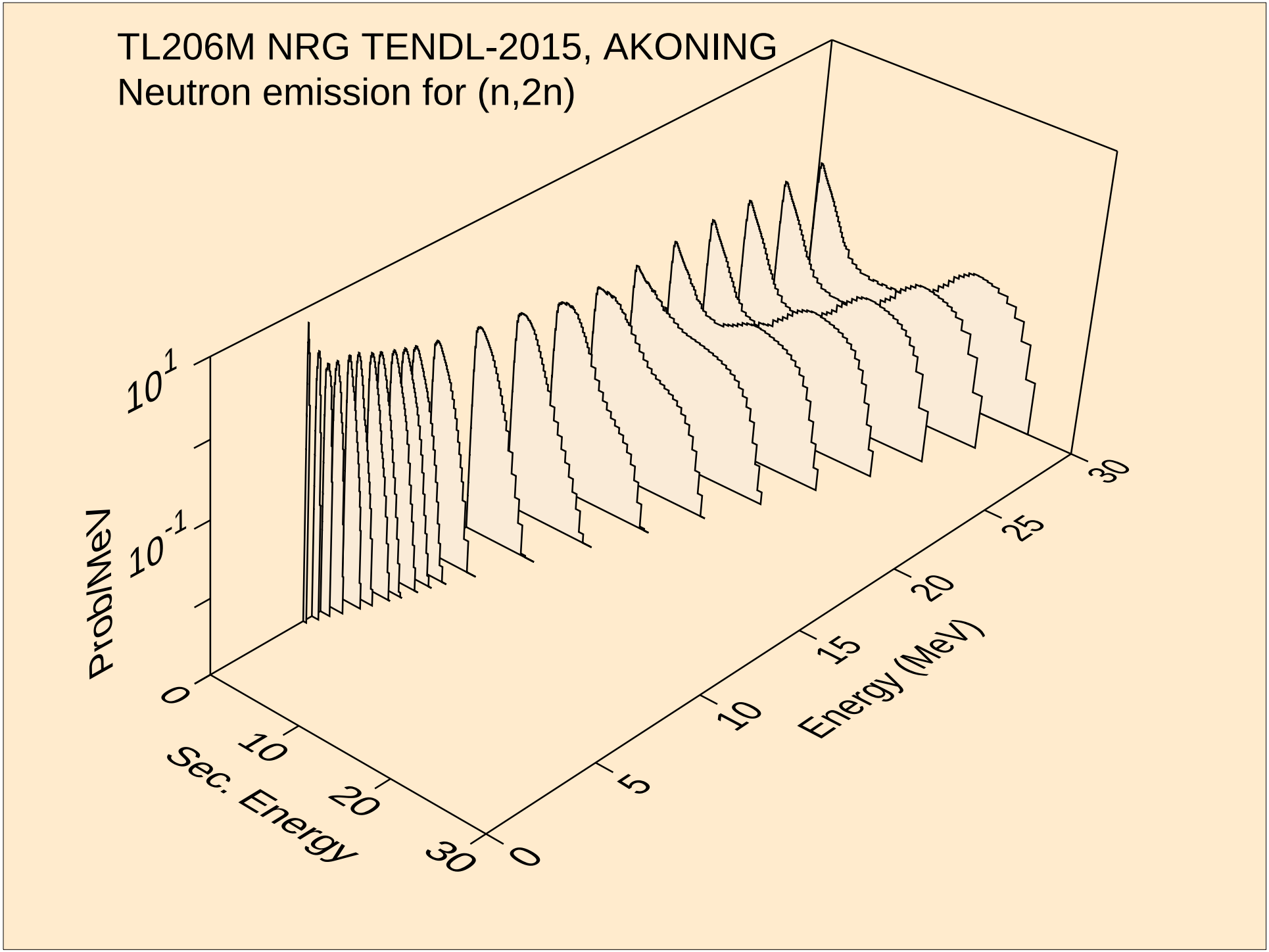

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*35)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

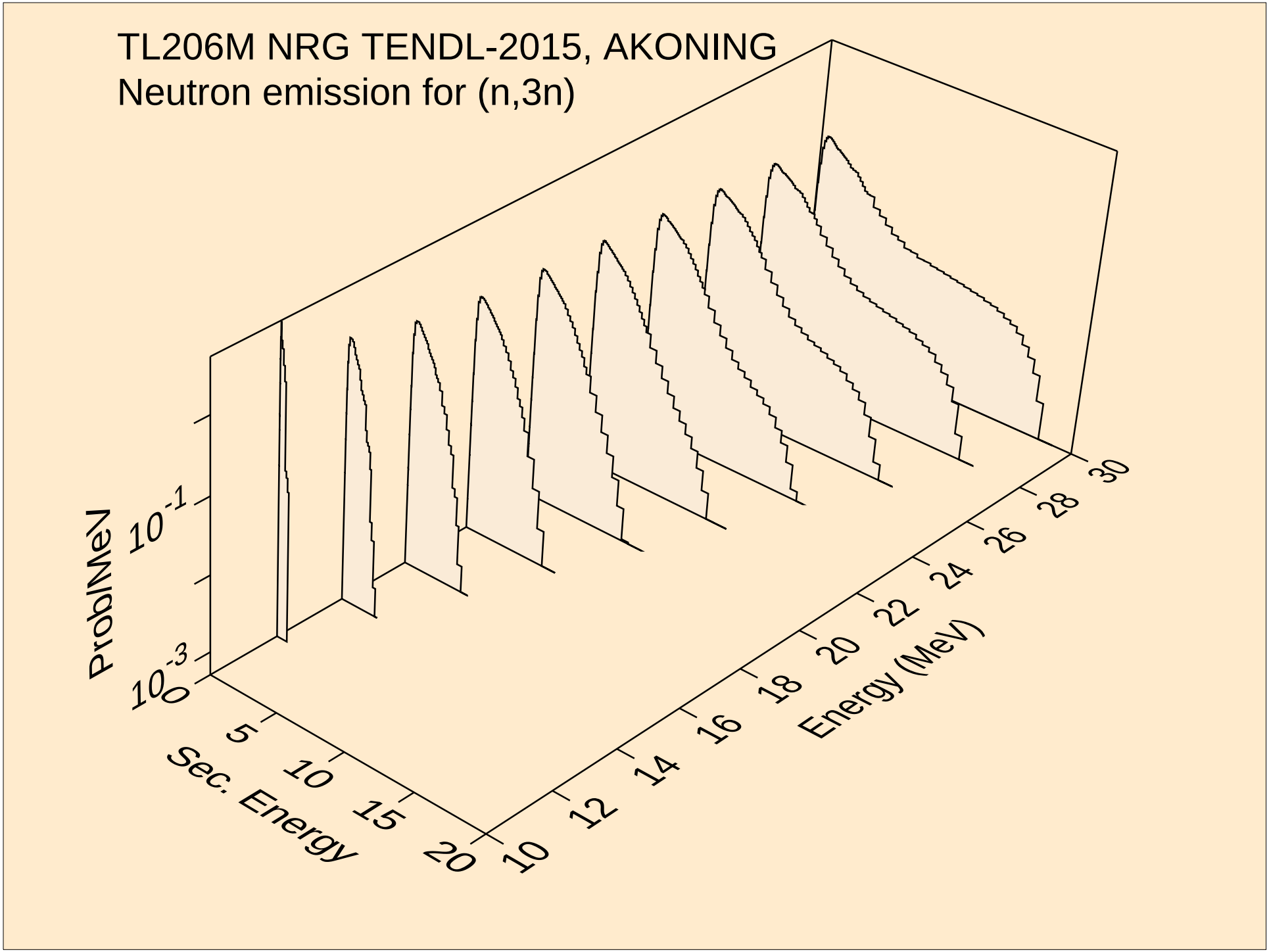

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*36)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

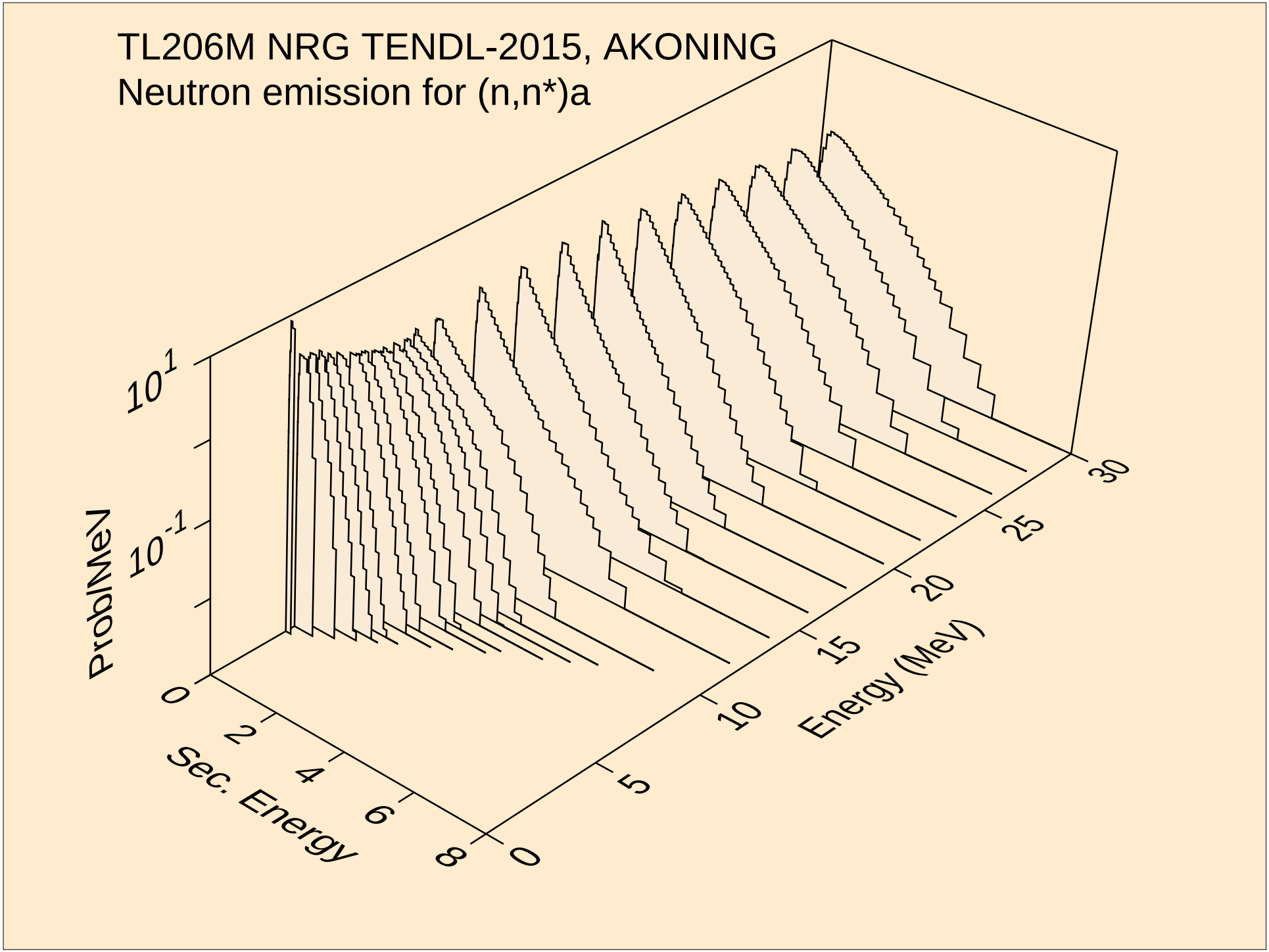

TL206M NRG TENDL-2015, AKONING
angular distribution for (n,n*37)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
50
100
150
200
Energy (MeV)

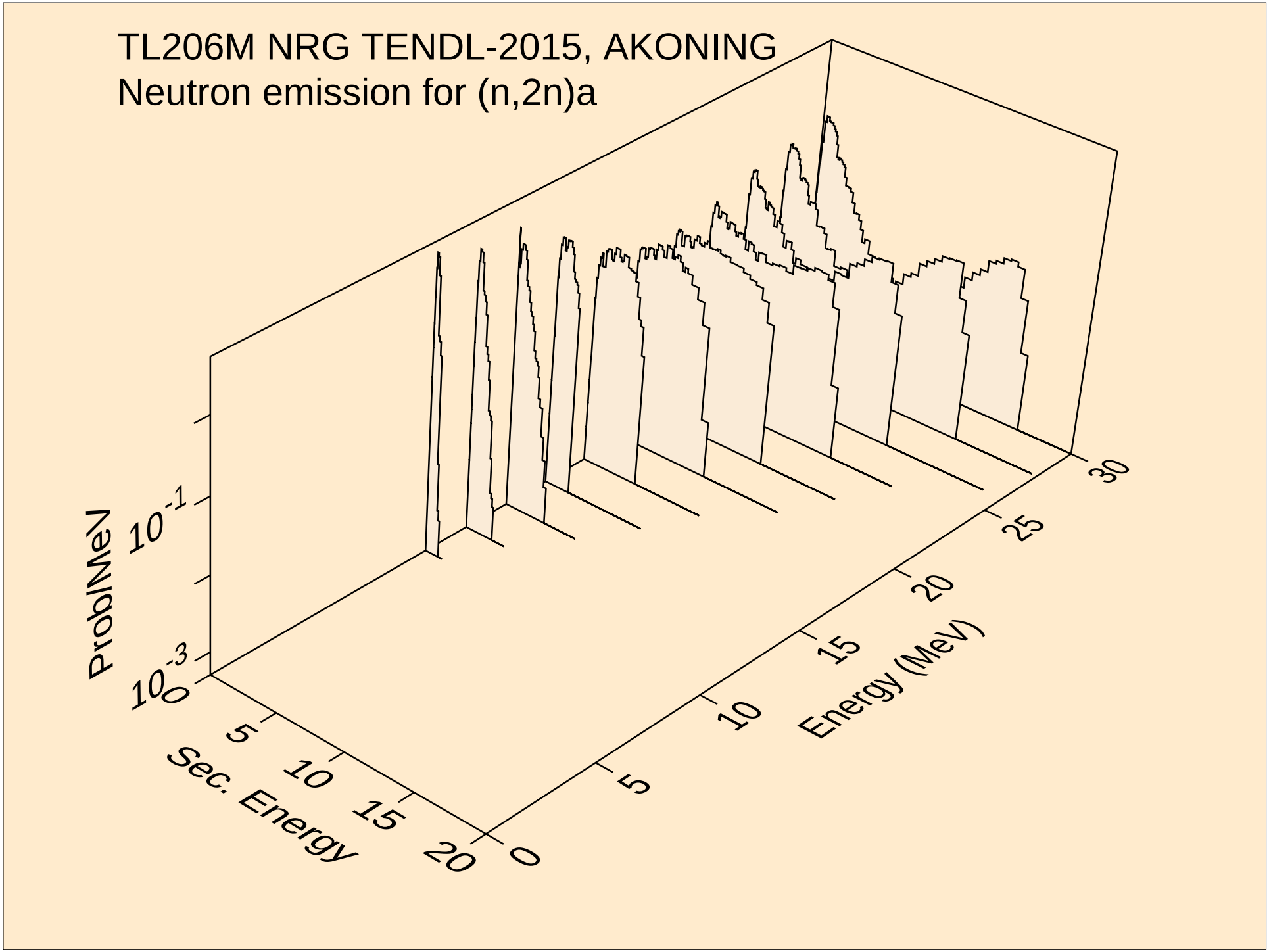

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,x)
Prob/MeV
10^3
10^1
0
10
20
30
Sec. Energy
0
50
100
150
200
Energy (MeV)

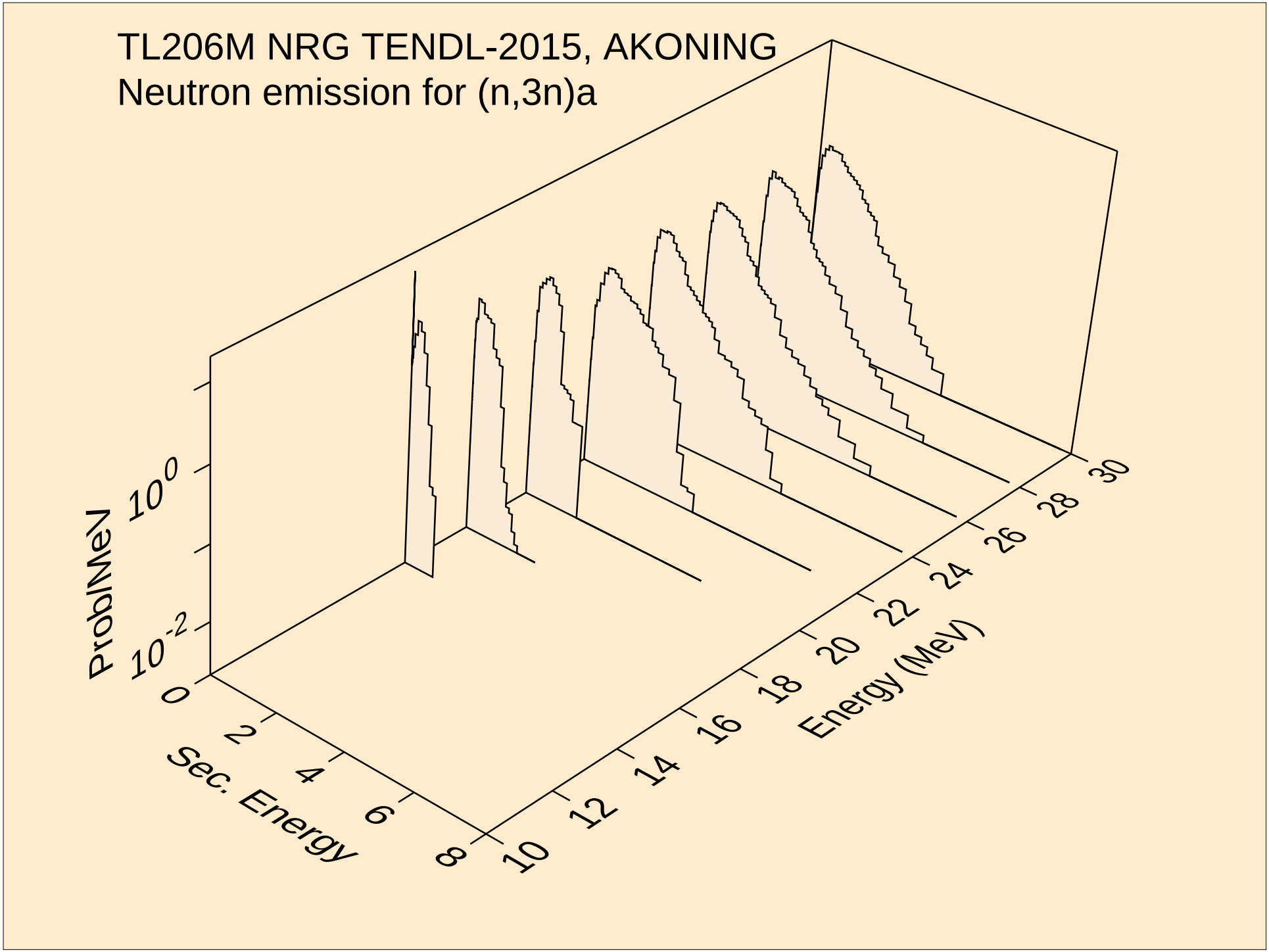

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,2nd)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
Sec. Energy
14
16
18
20
22
24
26
28
30
Energy (MeV)

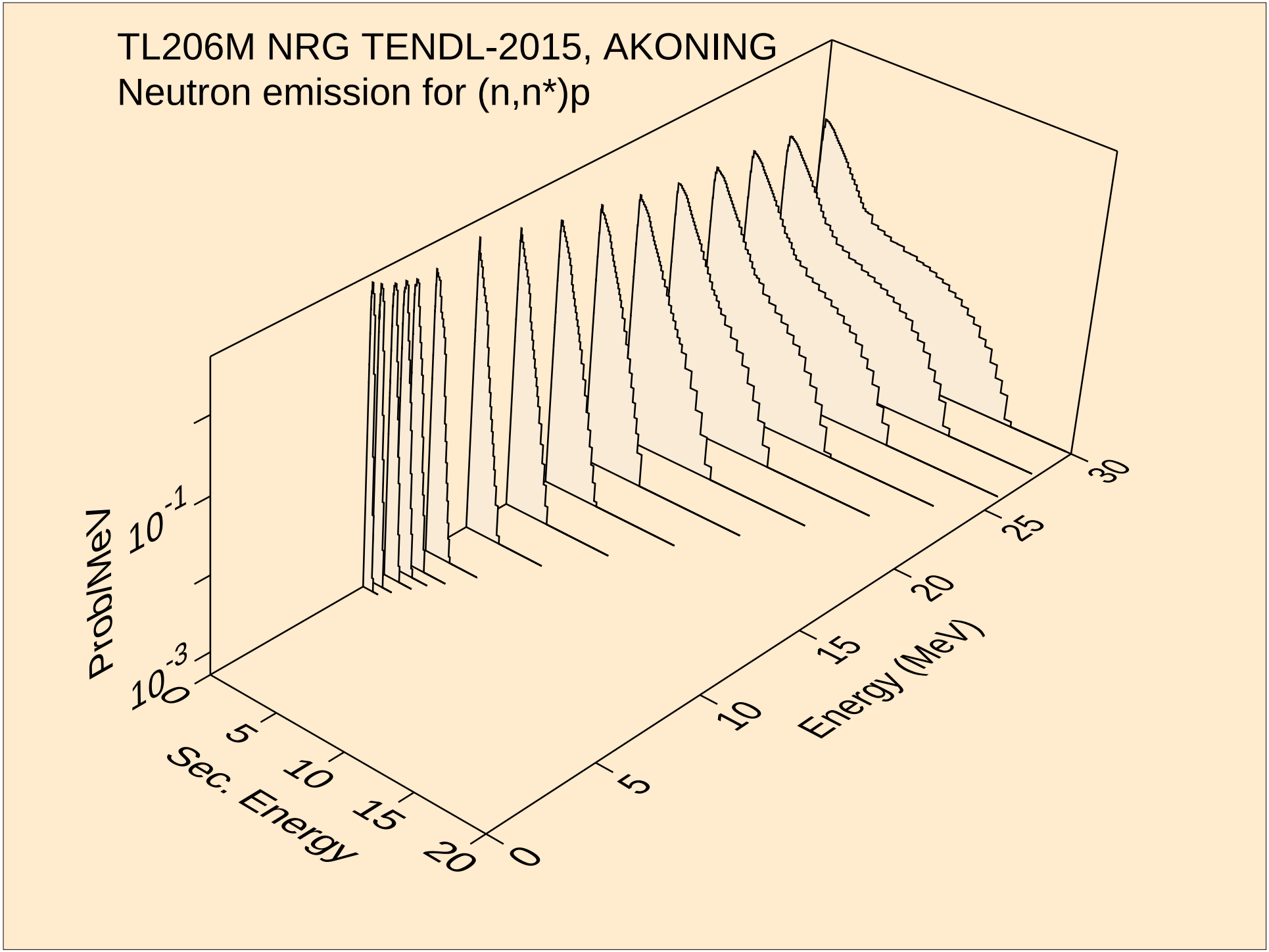

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,2n)
Prob/MeV
10^{1}
10^{-1}
0
10
20
30
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

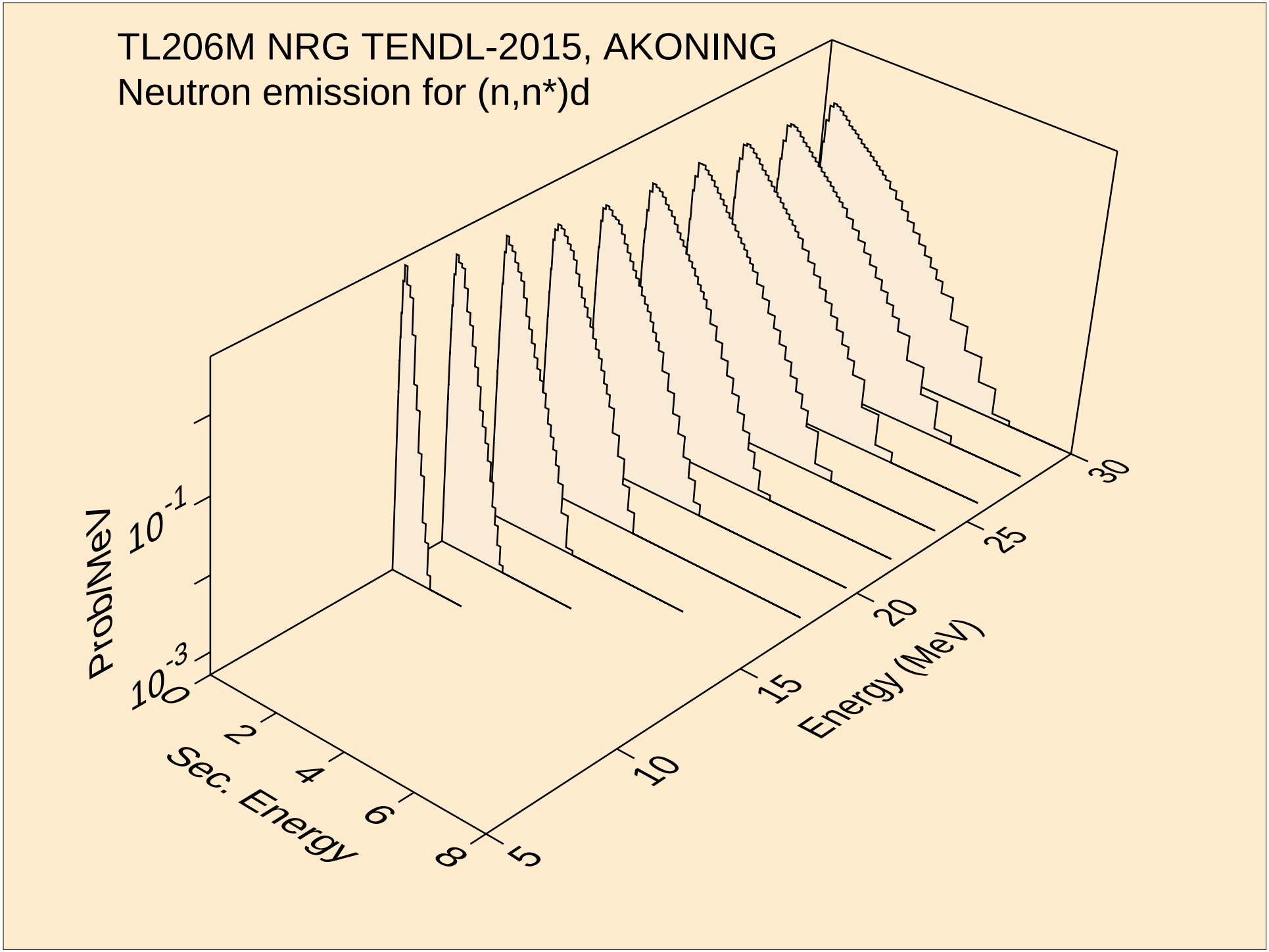

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,3n)
Prob/MeV
10^-1
10^-3
0
5
10
15
20
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

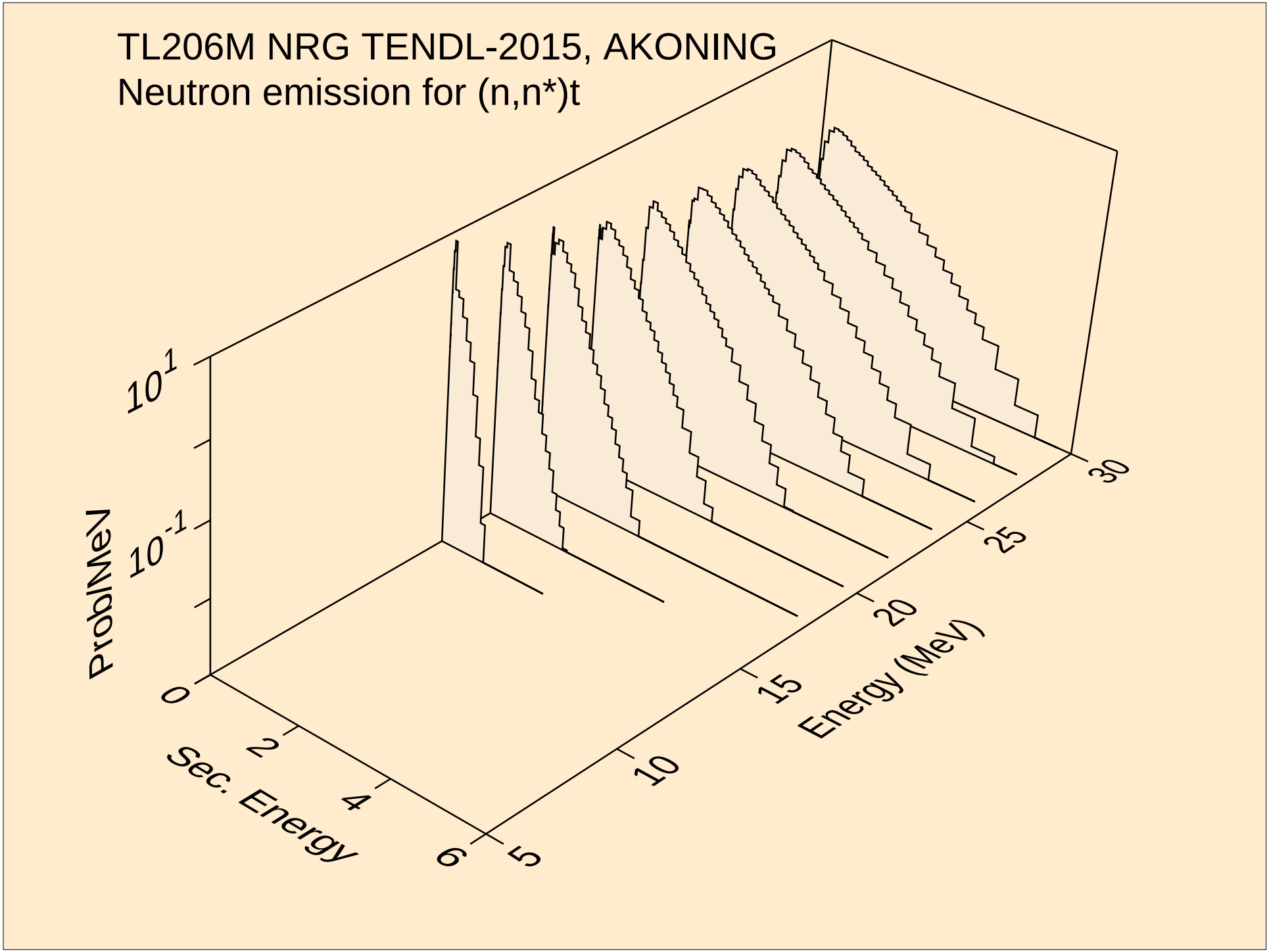

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*)a
Prob/MeV
10^1
10^-1
0
Sec. Energy
2
4
6
8
0
5
10
15
20
25
30
Energy (MeV)

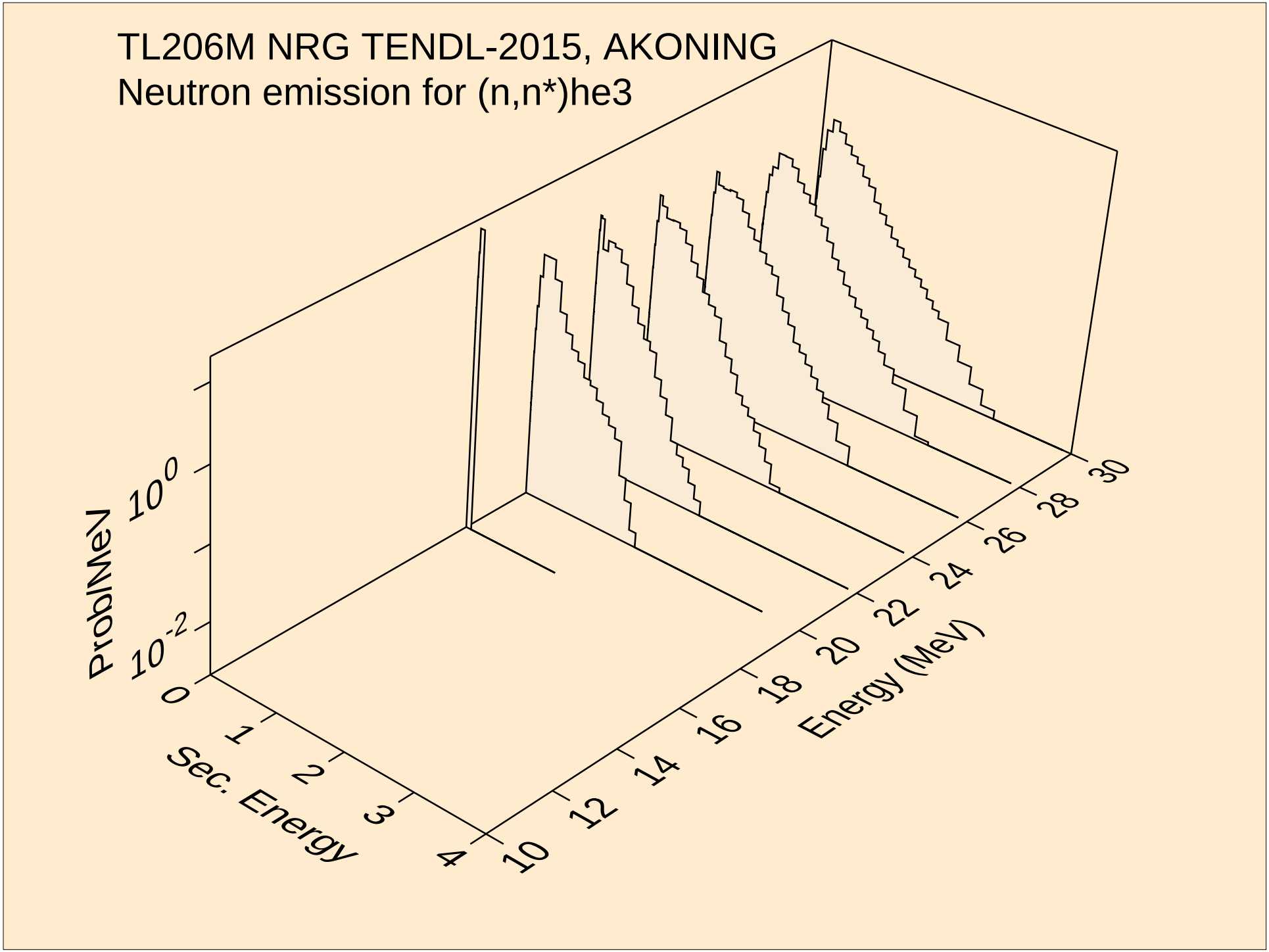

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,2n)a
Prob/MeV
10-1
10-3
0
5
10
15
20
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

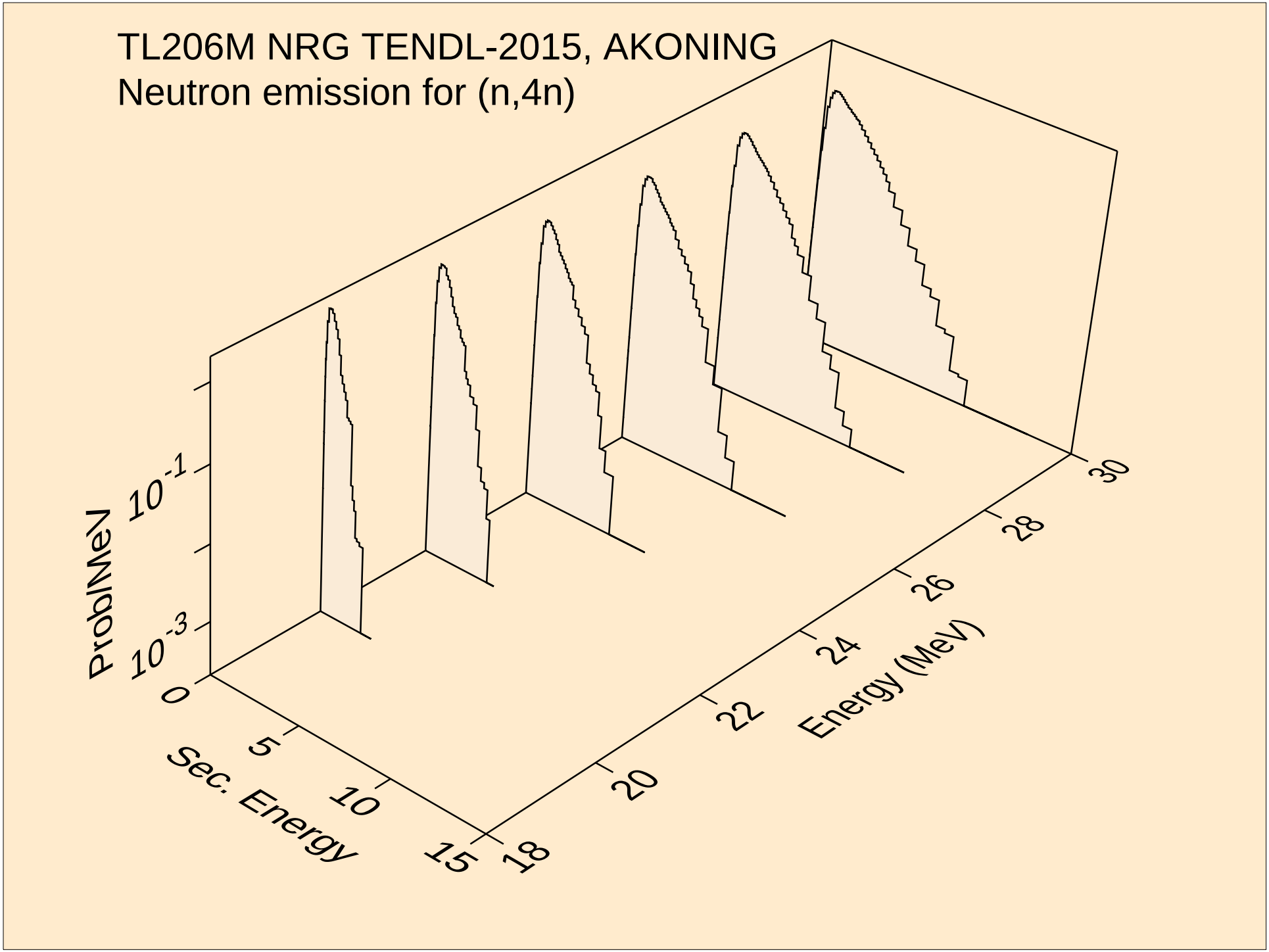

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,3n)a
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
8
10
Sec. Energy
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

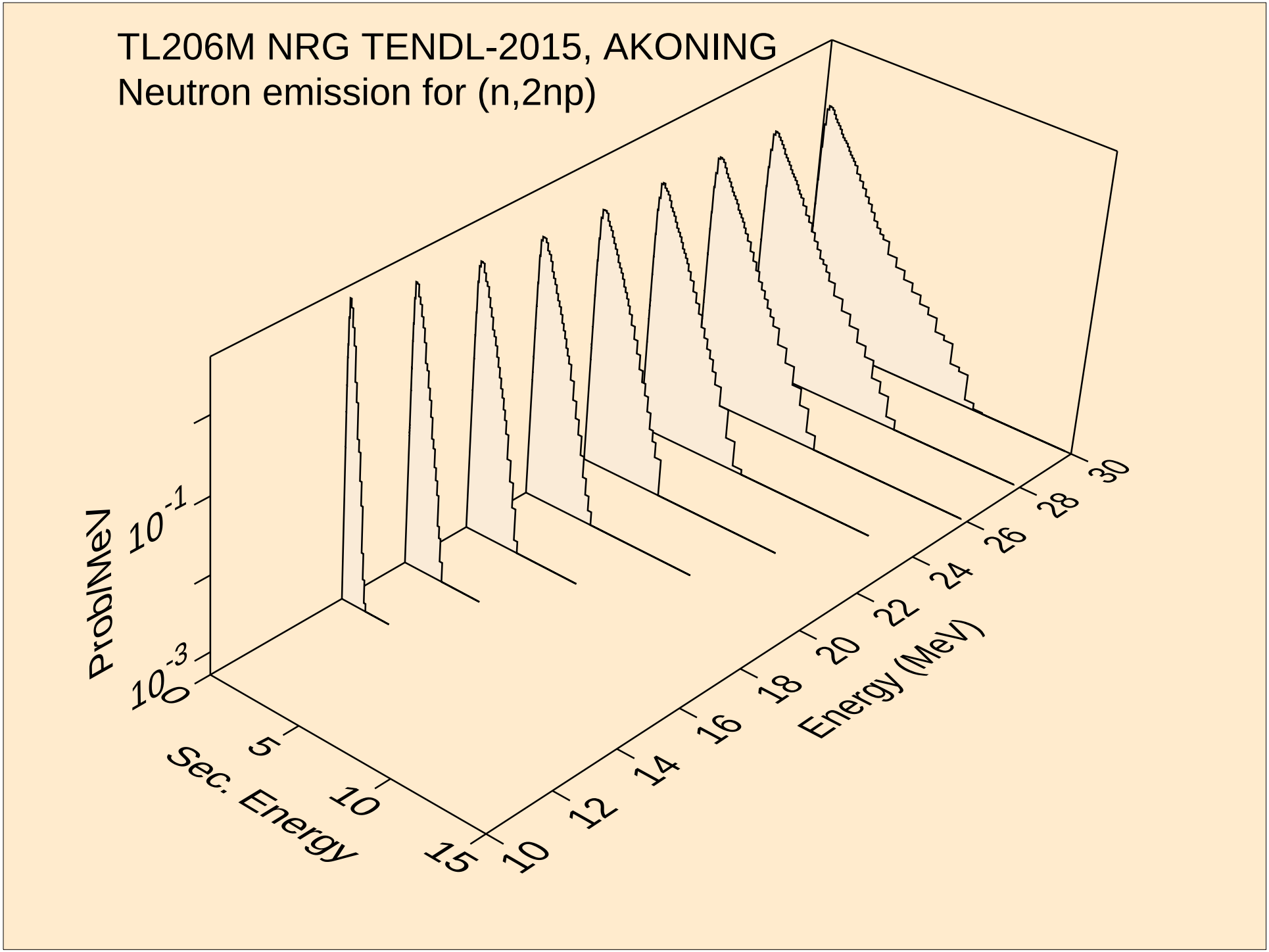

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*)p
Prob/MeV
10-1
10-3
0
5
10
15
20
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

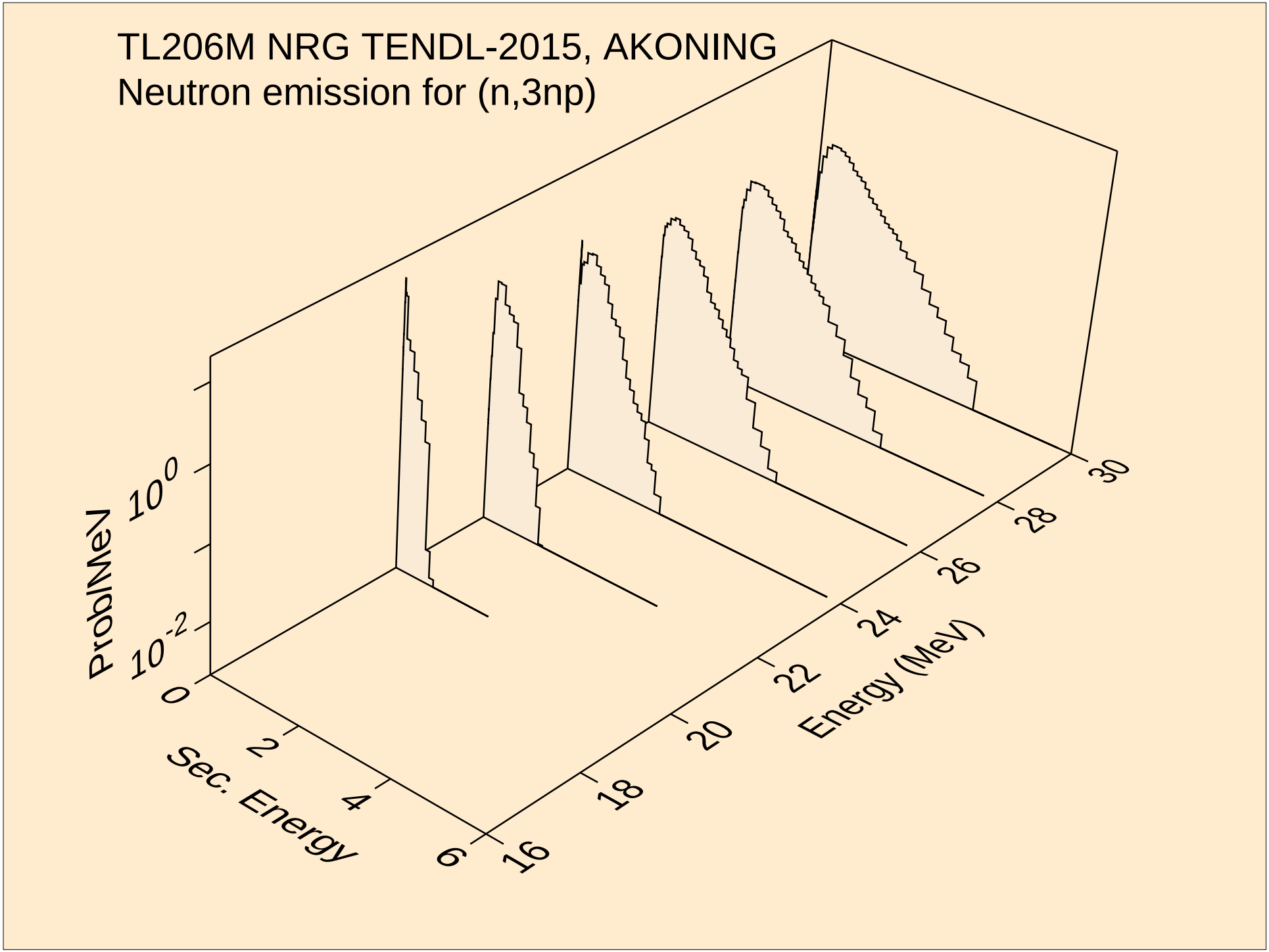

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*)d
Prob/MeV
10-1
10-3
0
2
4
6
8
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

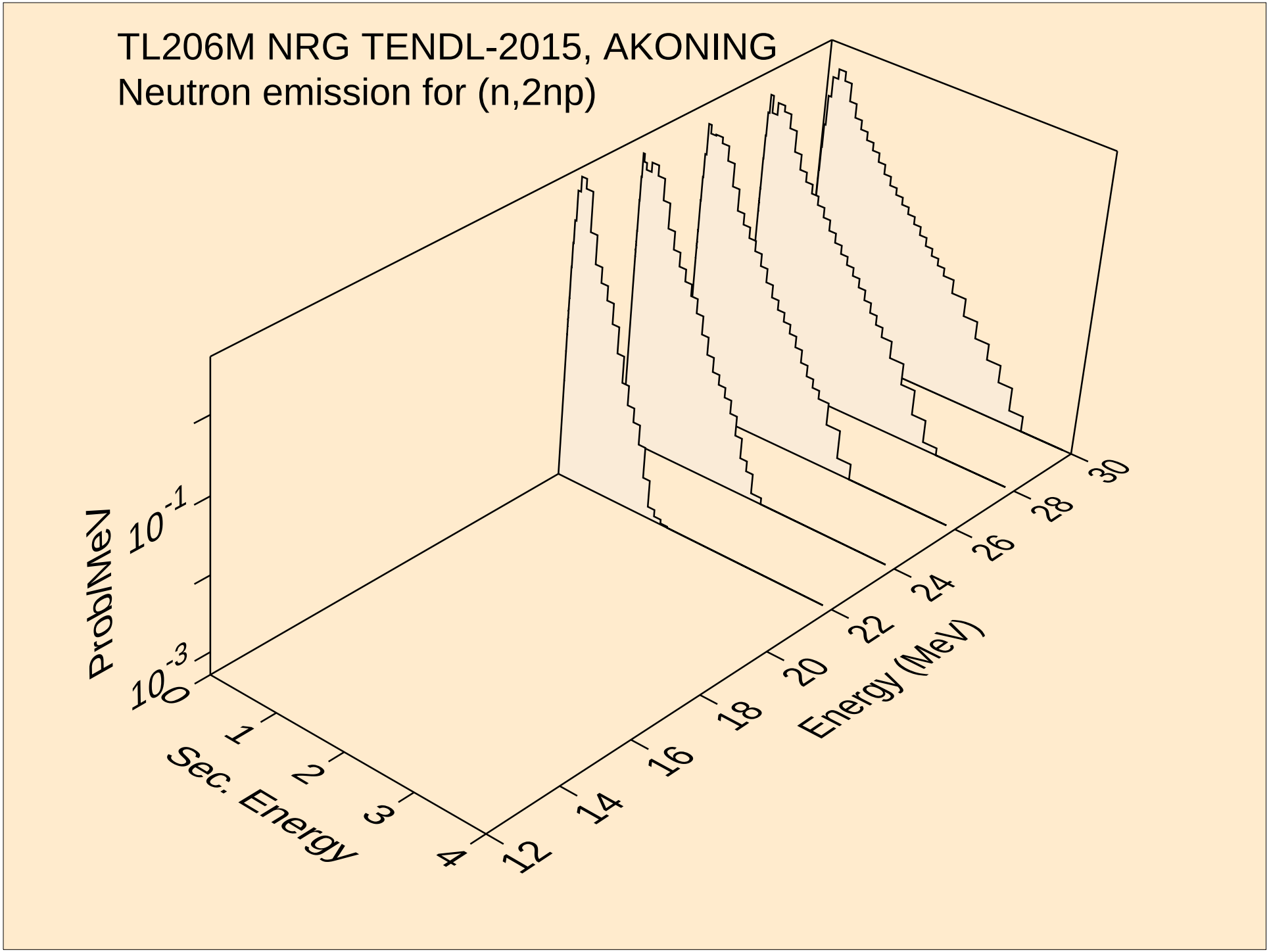

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*)t
Prob/MeV
10^1
10^-1
0
2
4
6
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

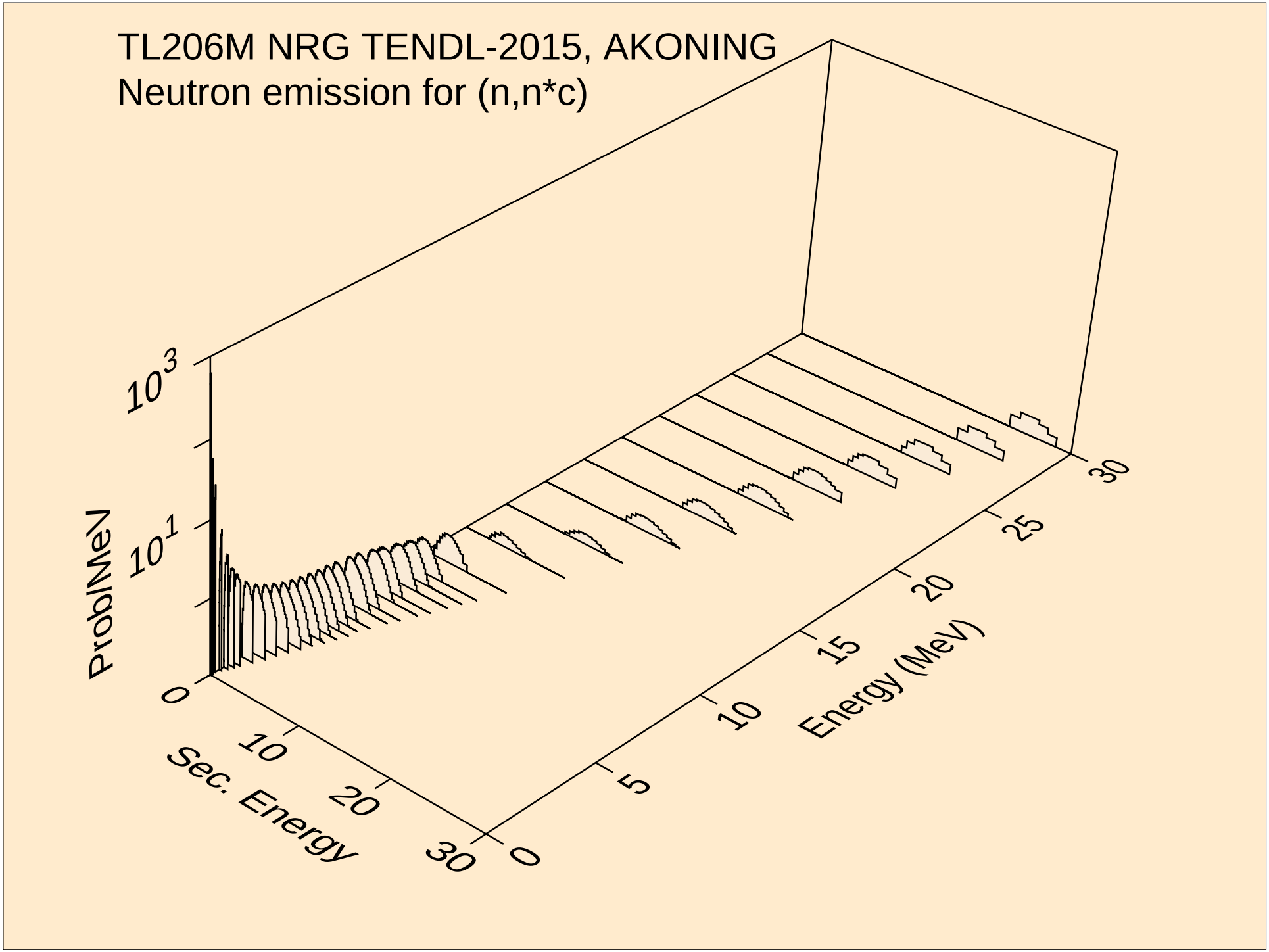

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*)he3
Prob/MeV
10^{0}
10^{-2}
0
1
2
3
4
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

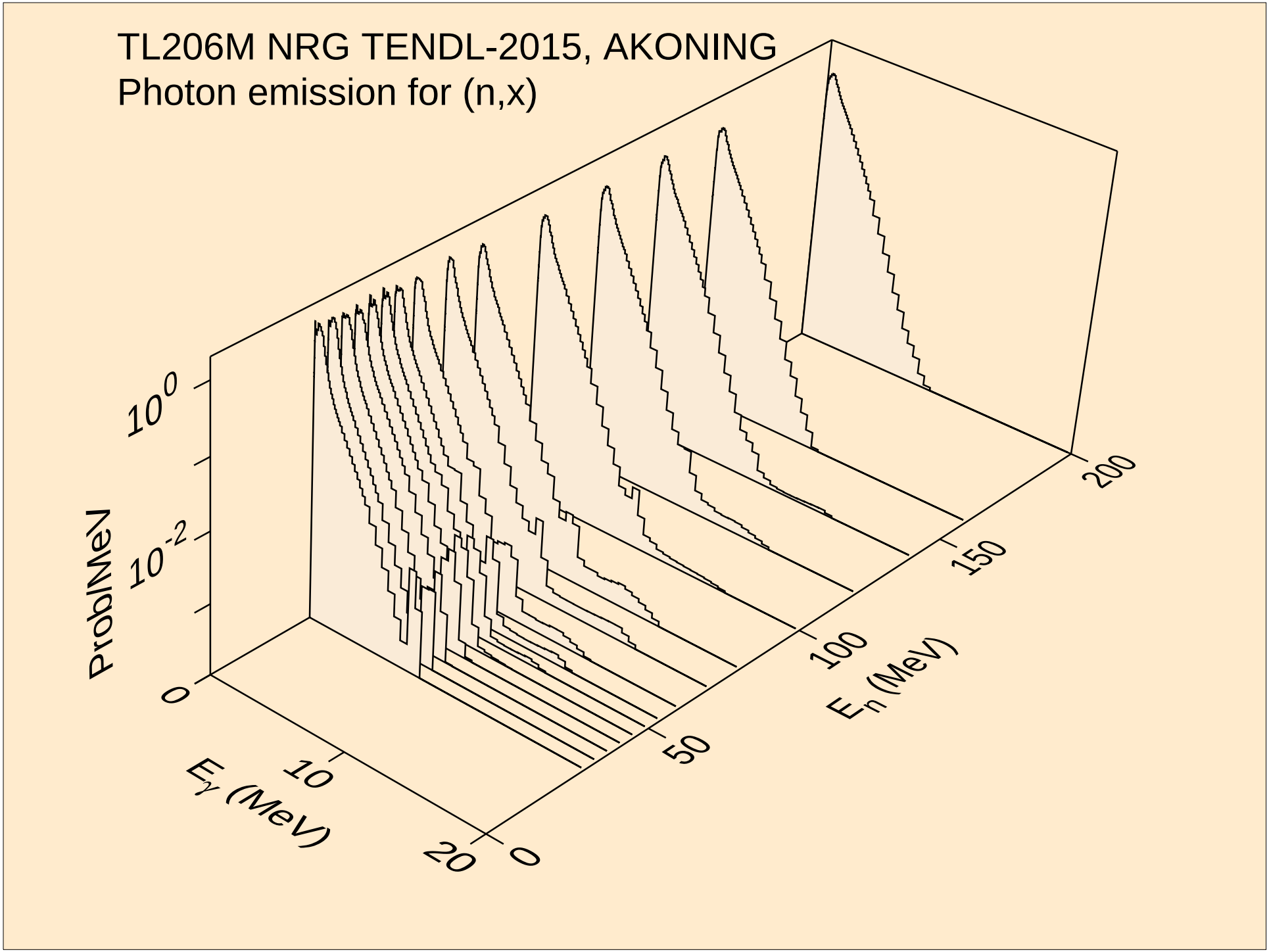

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,4n)
Prob/MeV
10-1
10-3
0
5
10
15
18
Sec. Energy
20
22
24
26
28
30
Energy (MeV)

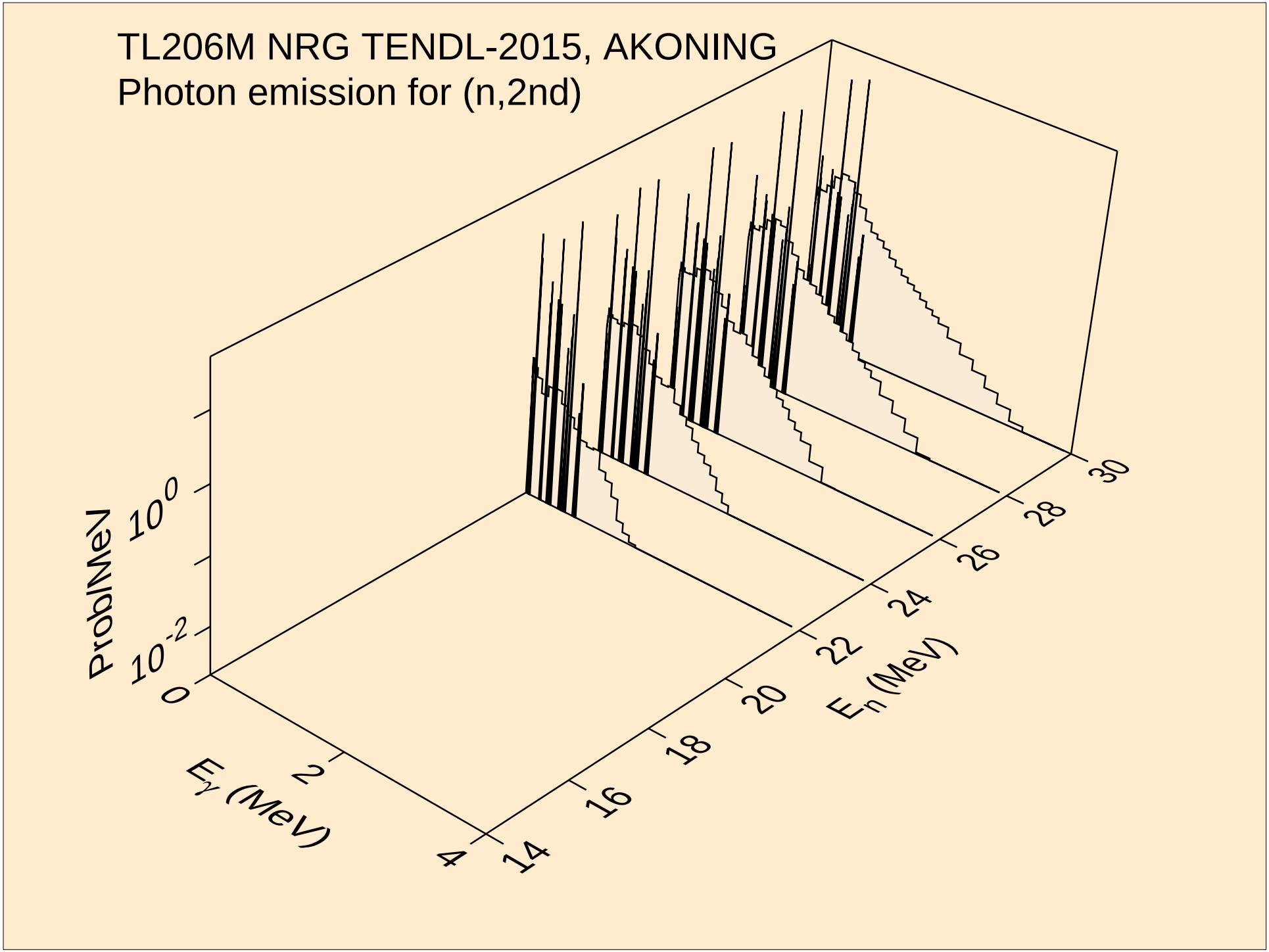

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,2np)
Prob/MeV
10^-1
10^-3
0
5
10
15
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

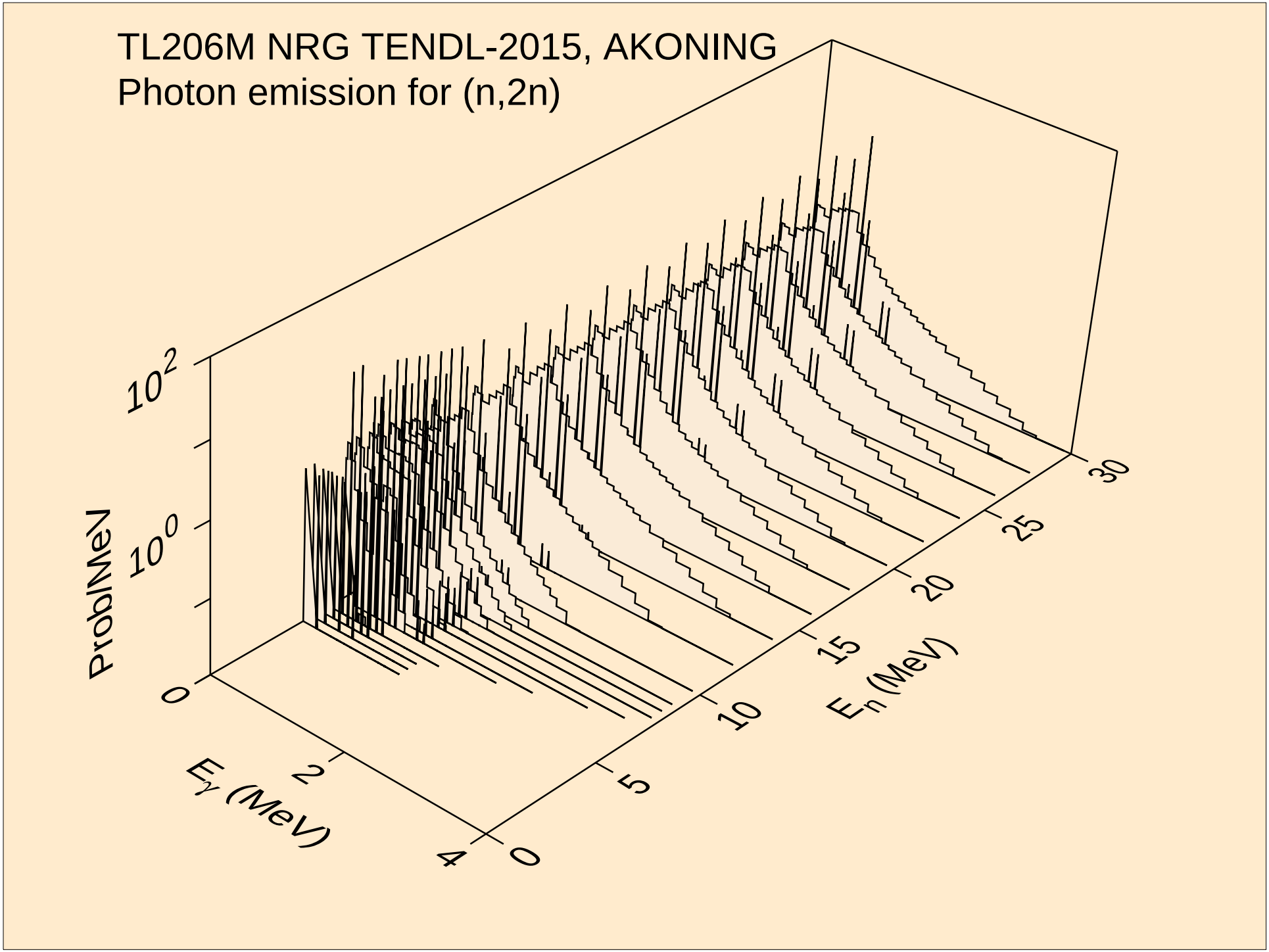

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,3np)
Prob/MeV
10^0
10^-2
0
2
4
6
Sec. Energy
16
18
20
22
24
26
28
30
Energy (MeV)

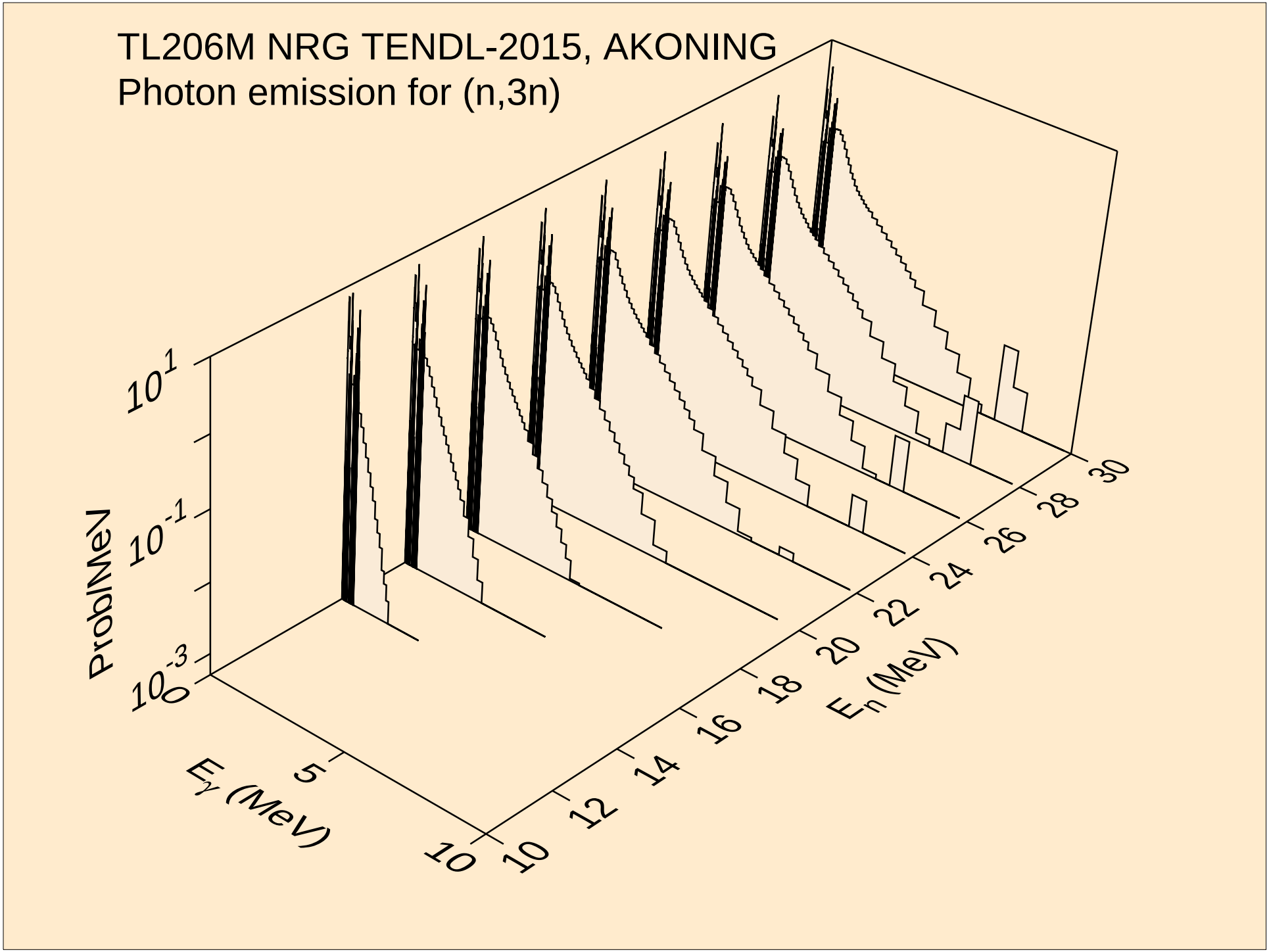

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,2np)
Prob/MeV
10-1
10-3
0
1
2
3
4
Sec. Energy
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

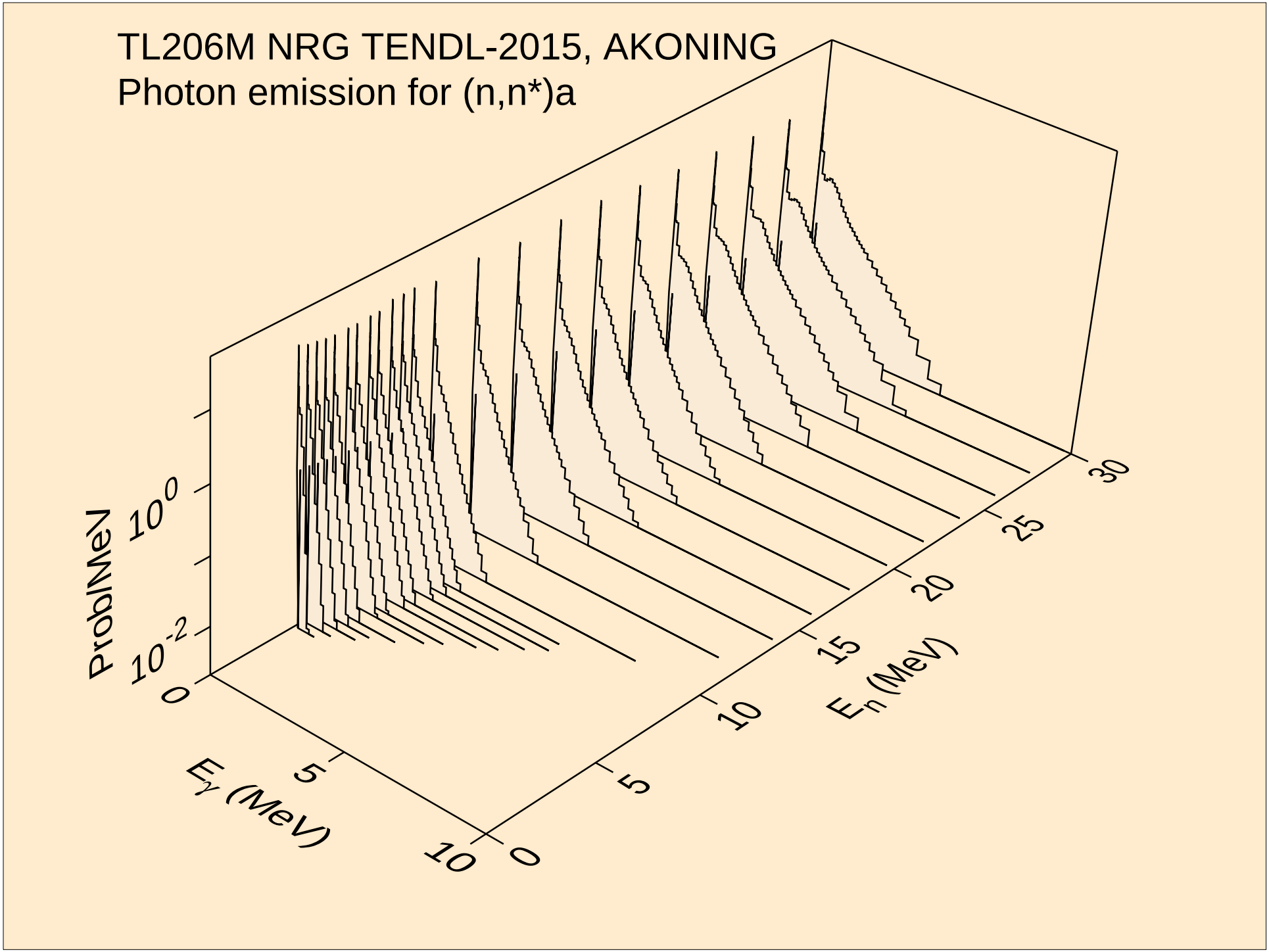

TL206M NRG TENDL-2015, AKONING
Neutron emission for (n,n*c)
Prob/MeV
10^3
10^1
0
10
20
30
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

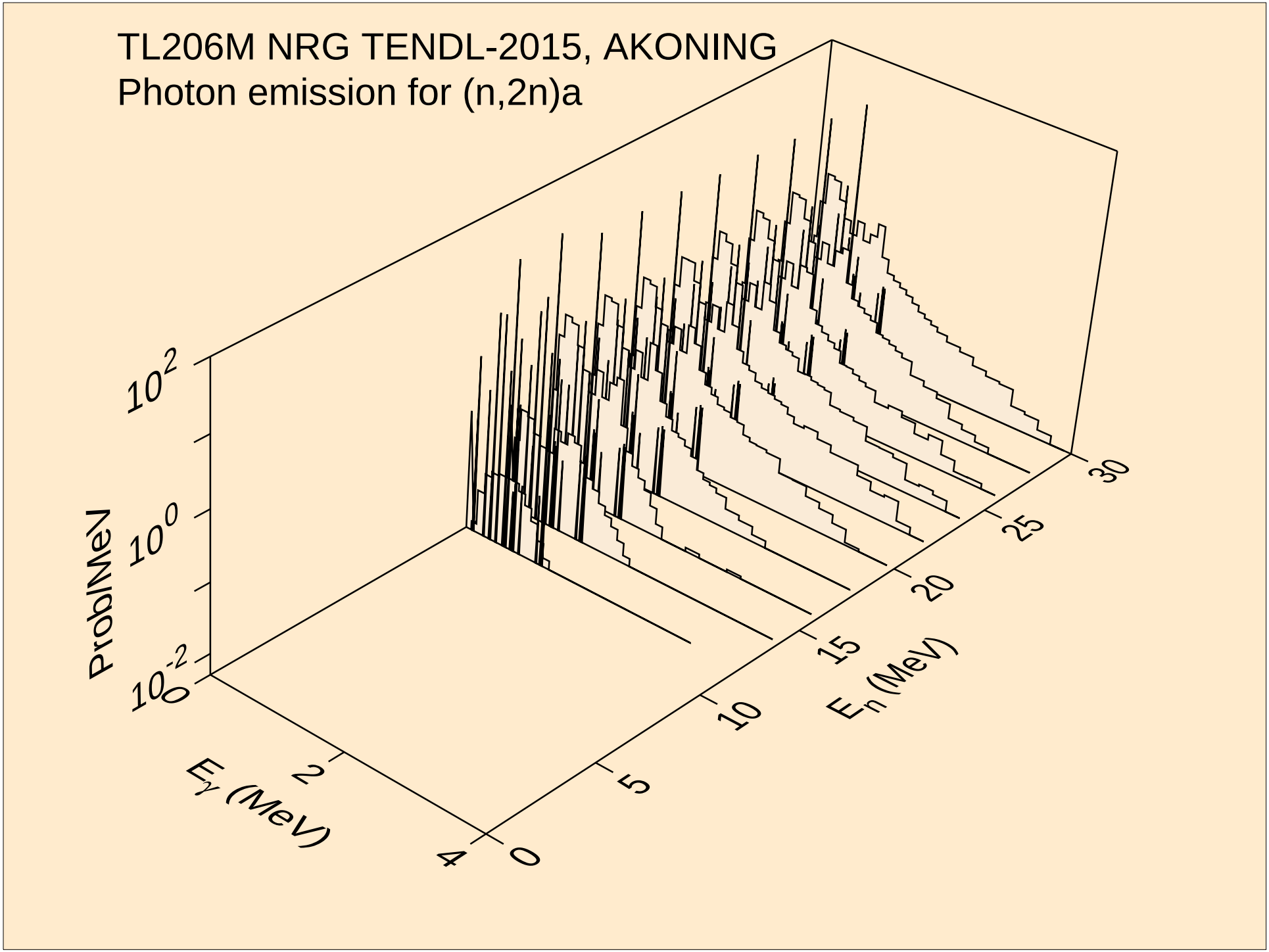

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,x)
Prob/MeV
10^0
10^{-2}
0
10
20
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

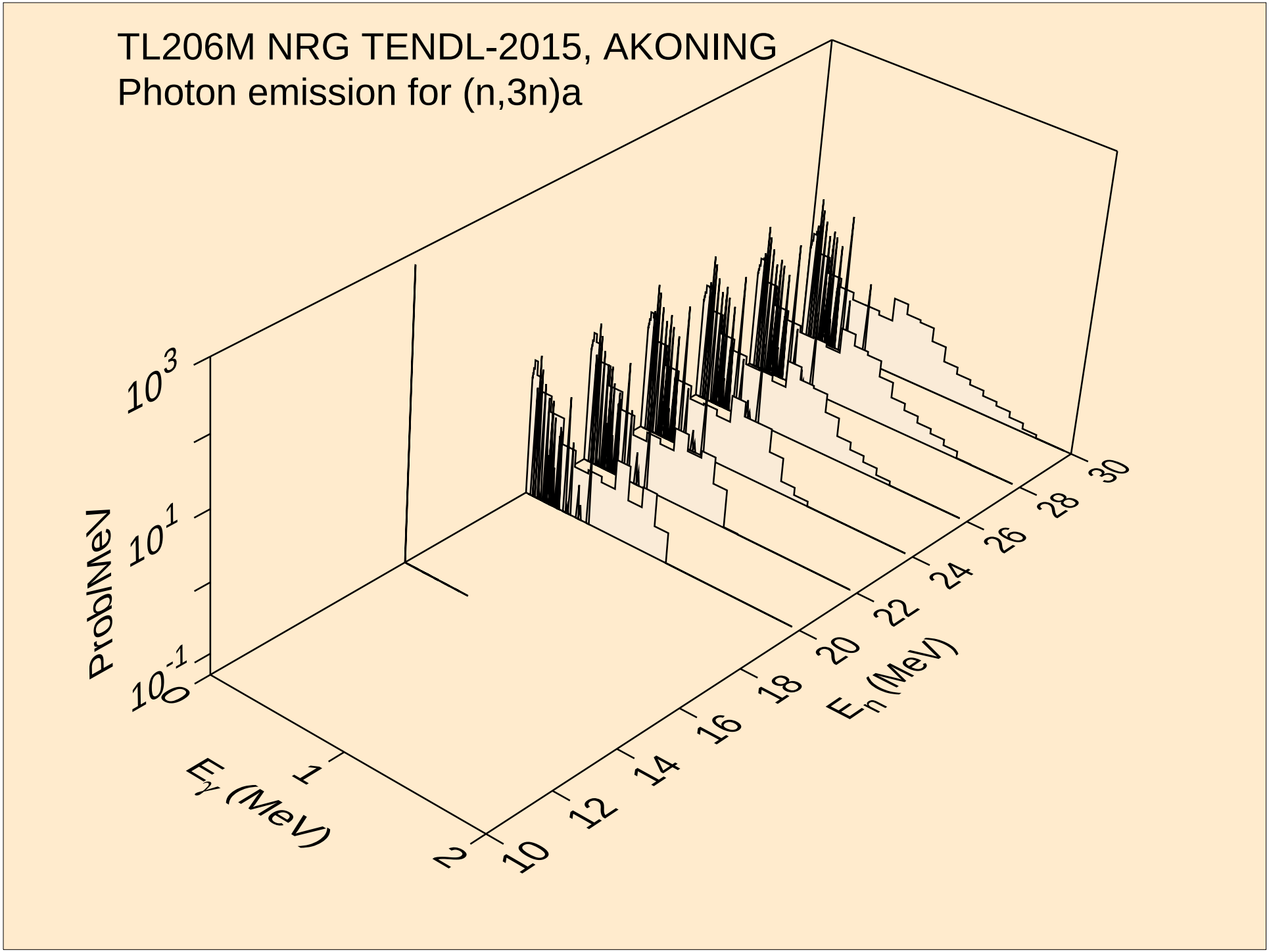

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2nd)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
2
4
14
16
18
20
22
24
26
28
30
E_n (MeV)

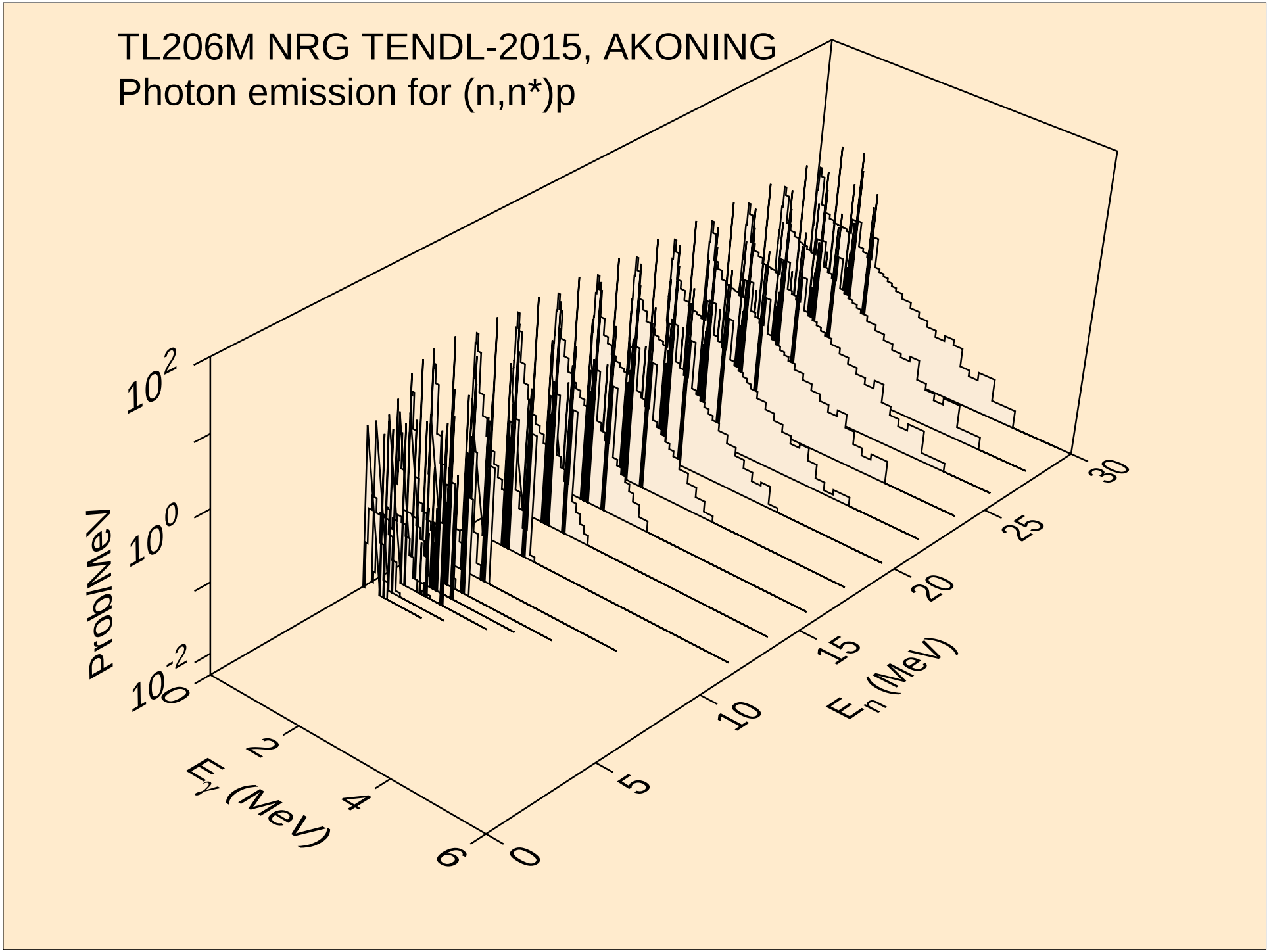

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2n)
Prob/MeV
10^2
10^0
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

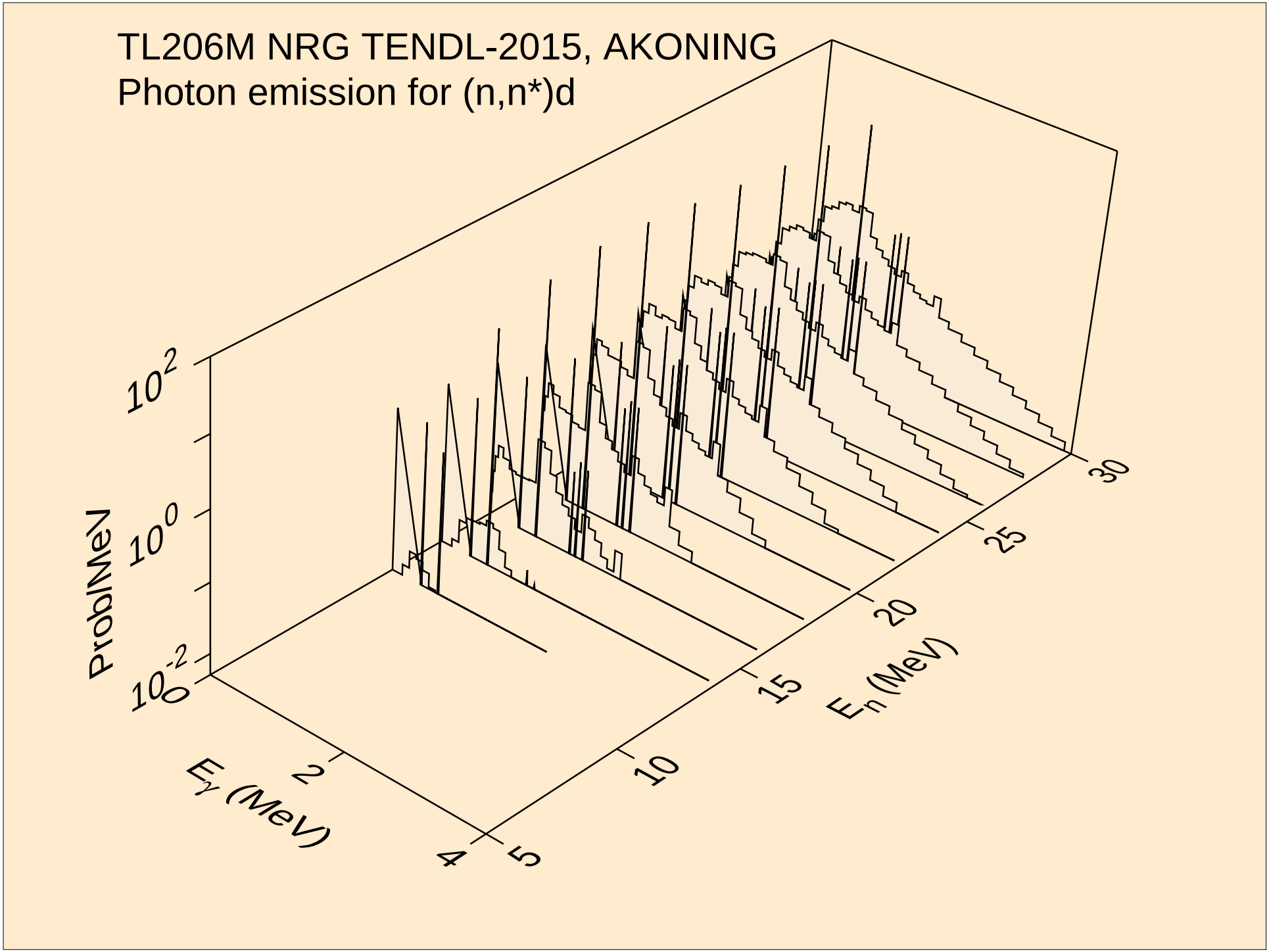

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,3n)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
5
10
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

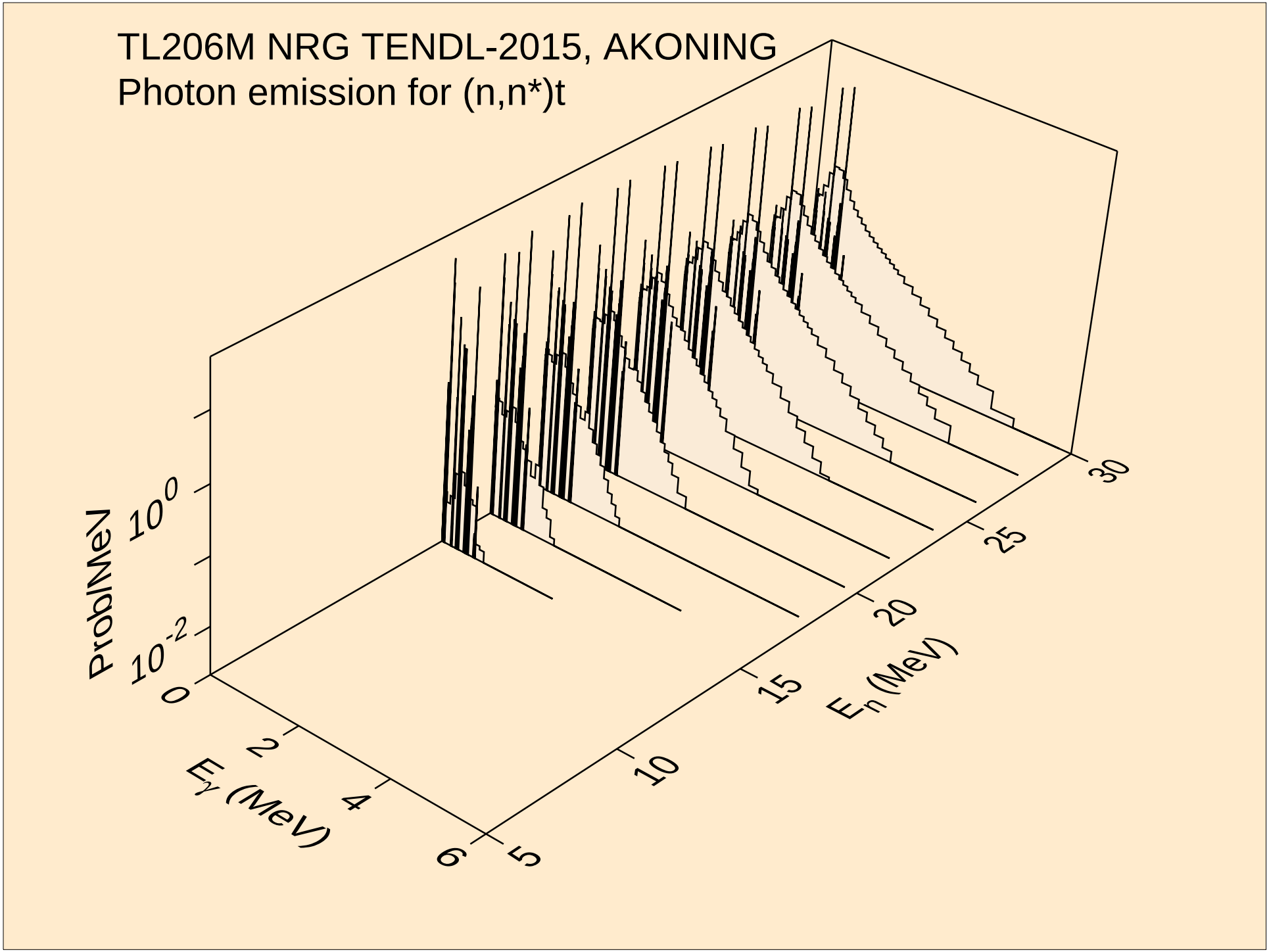

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*)a
Prob/MeV
10^0
10^-2
0
5
10
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

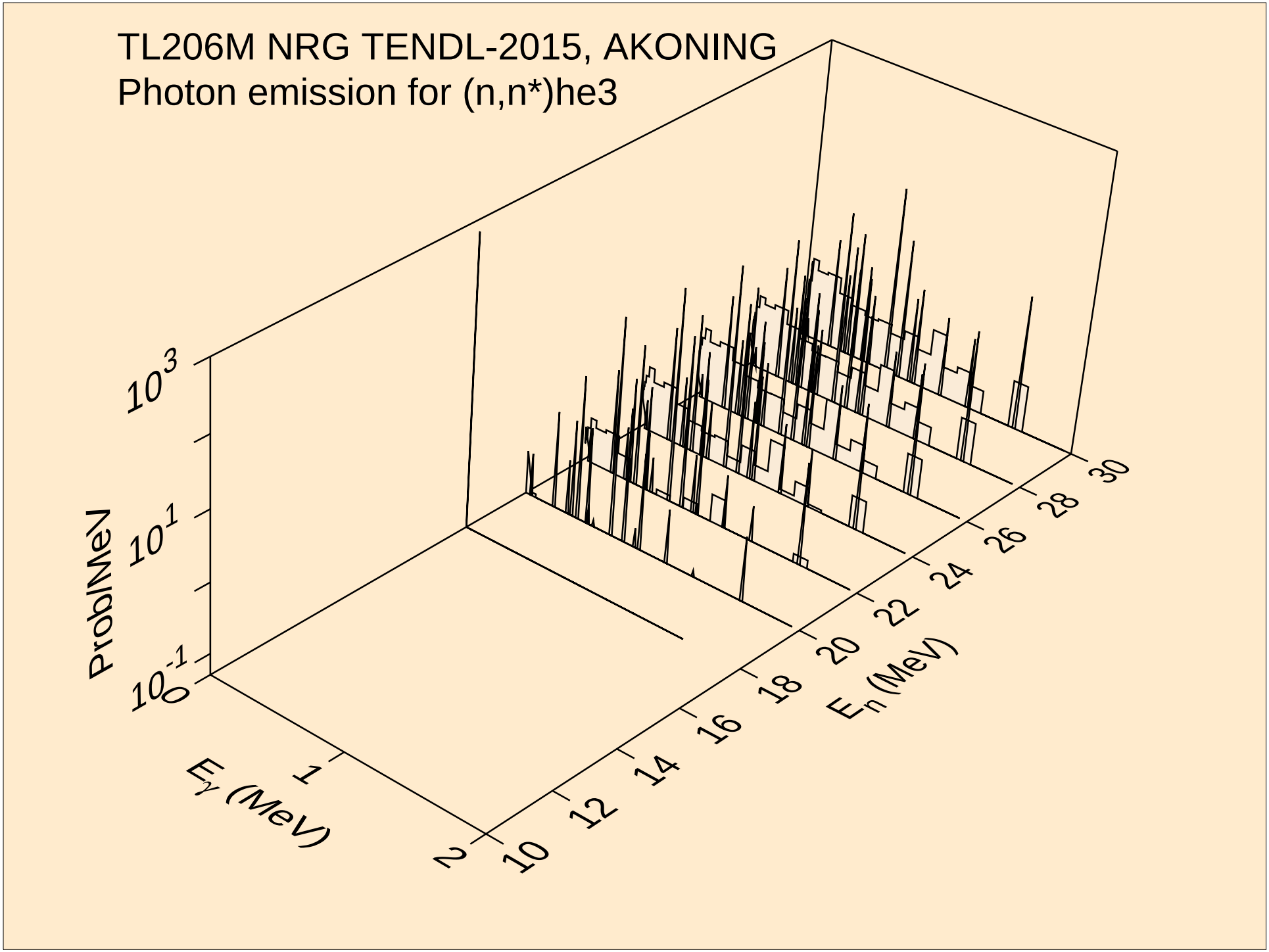

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2n)a
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
5
10
15
20
25
30

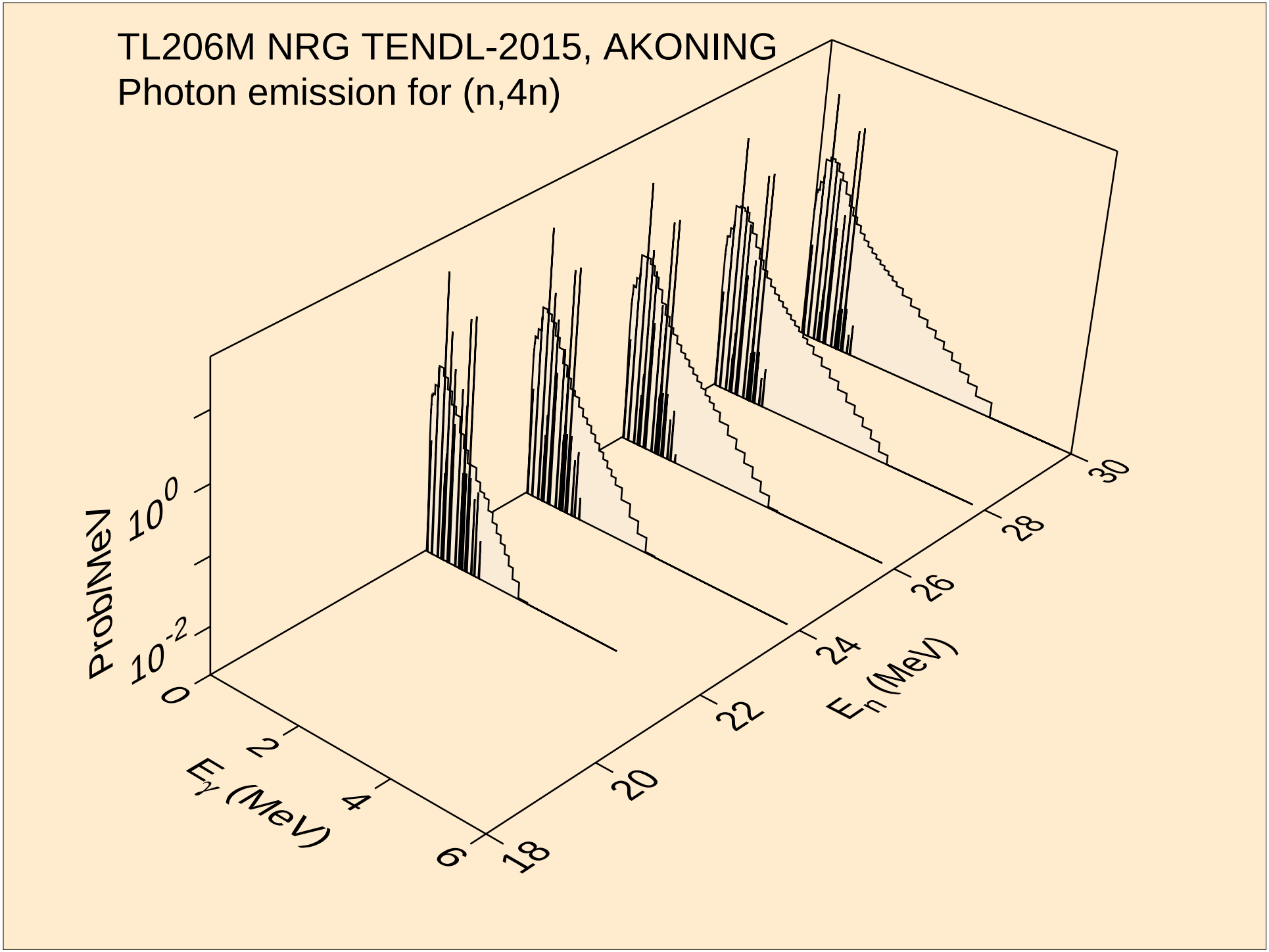

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,3n)a
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

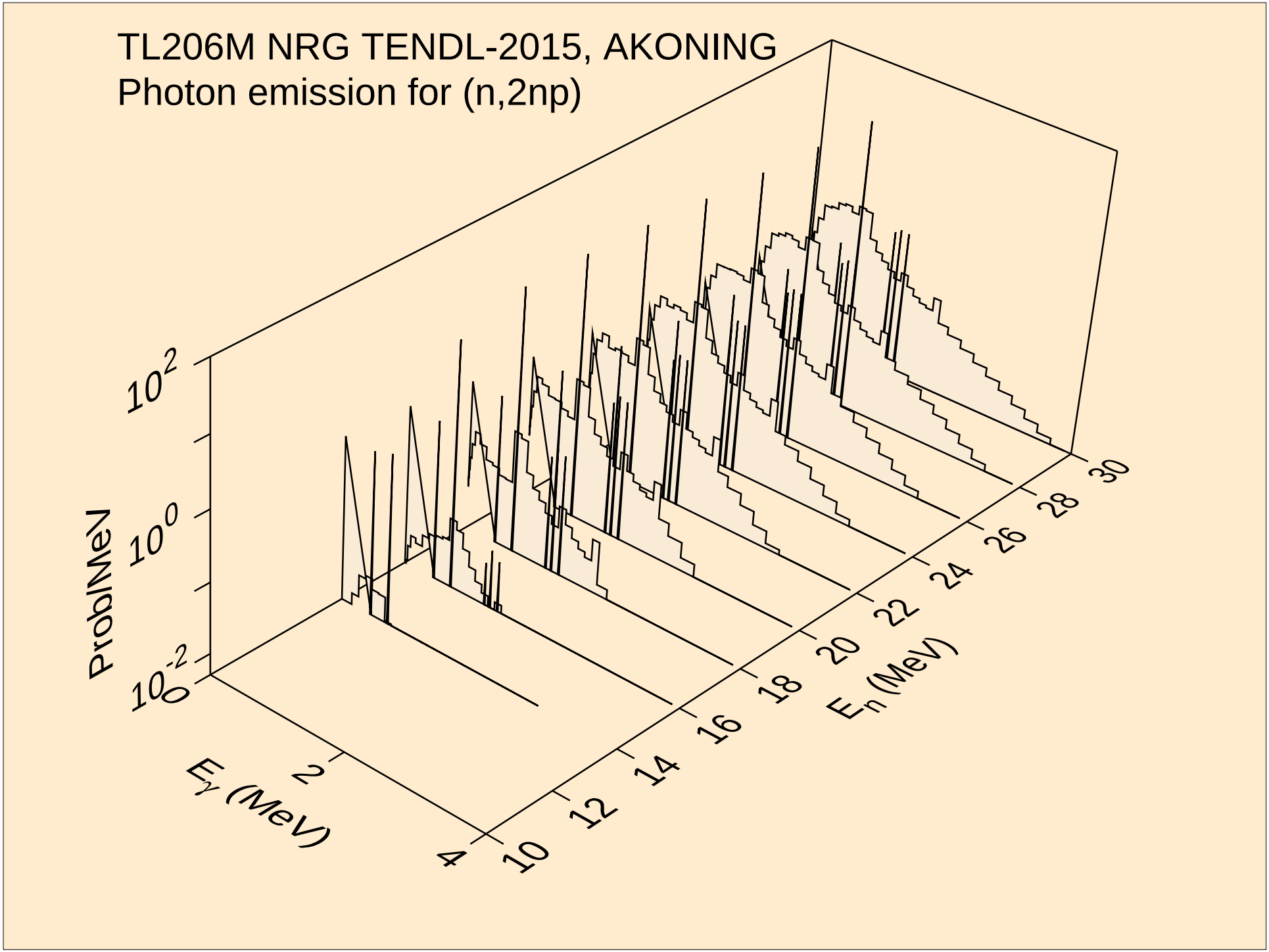

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*)p
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
5
10
15
20
25
30

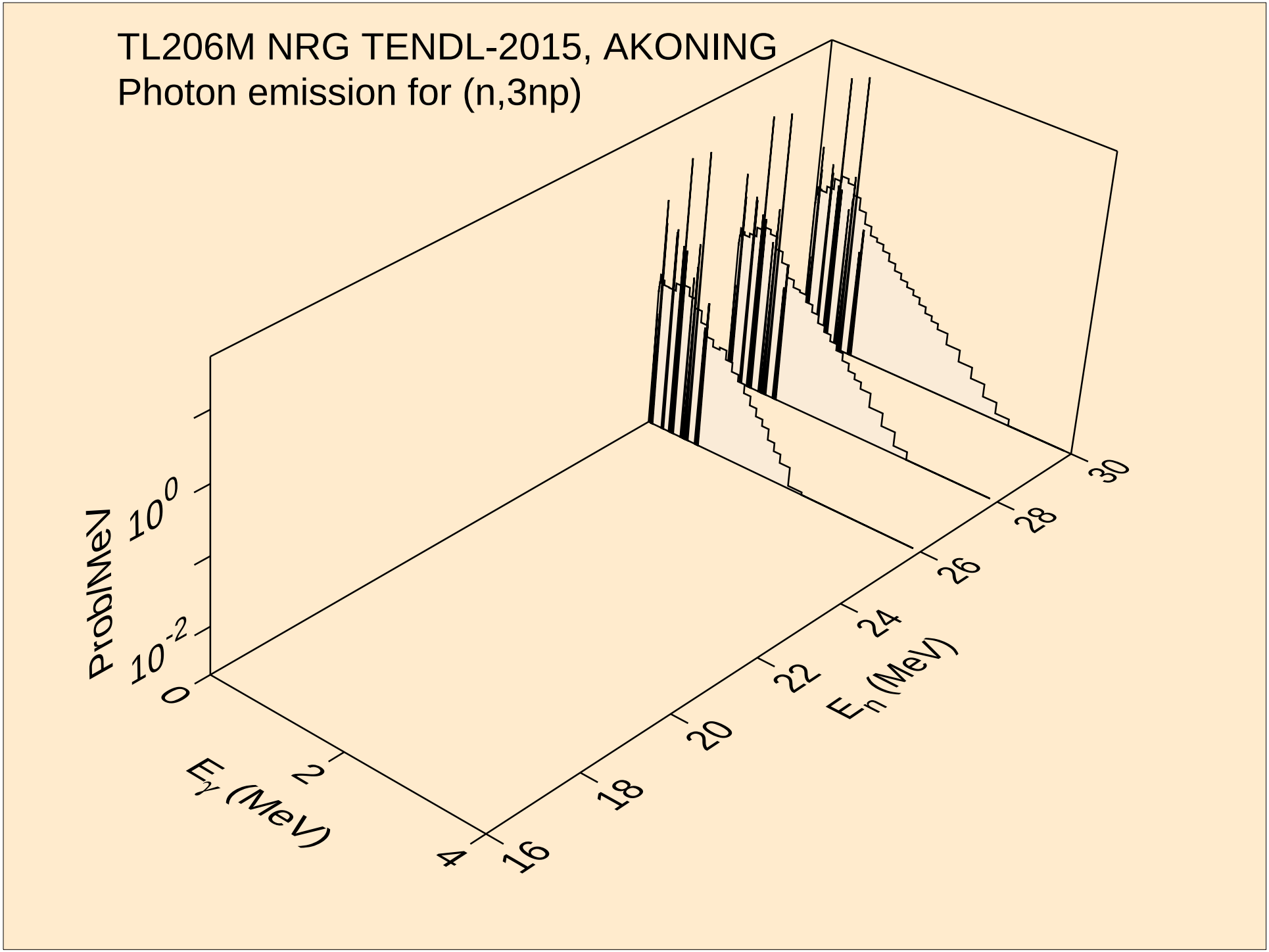

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*)d
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
2
4
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

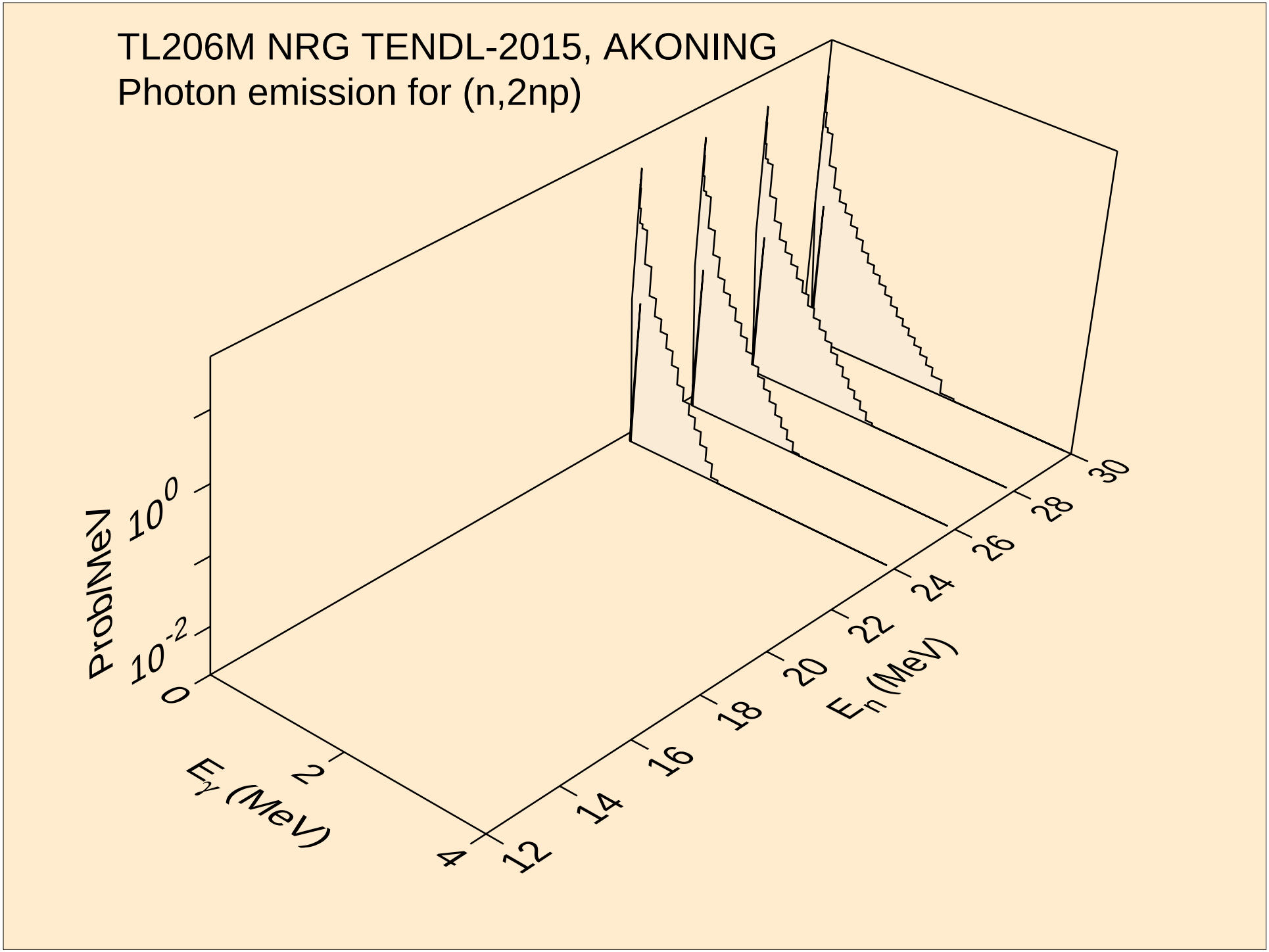

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*)t
Prob/MeV
10^0
10^-2
0
2
4
6
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

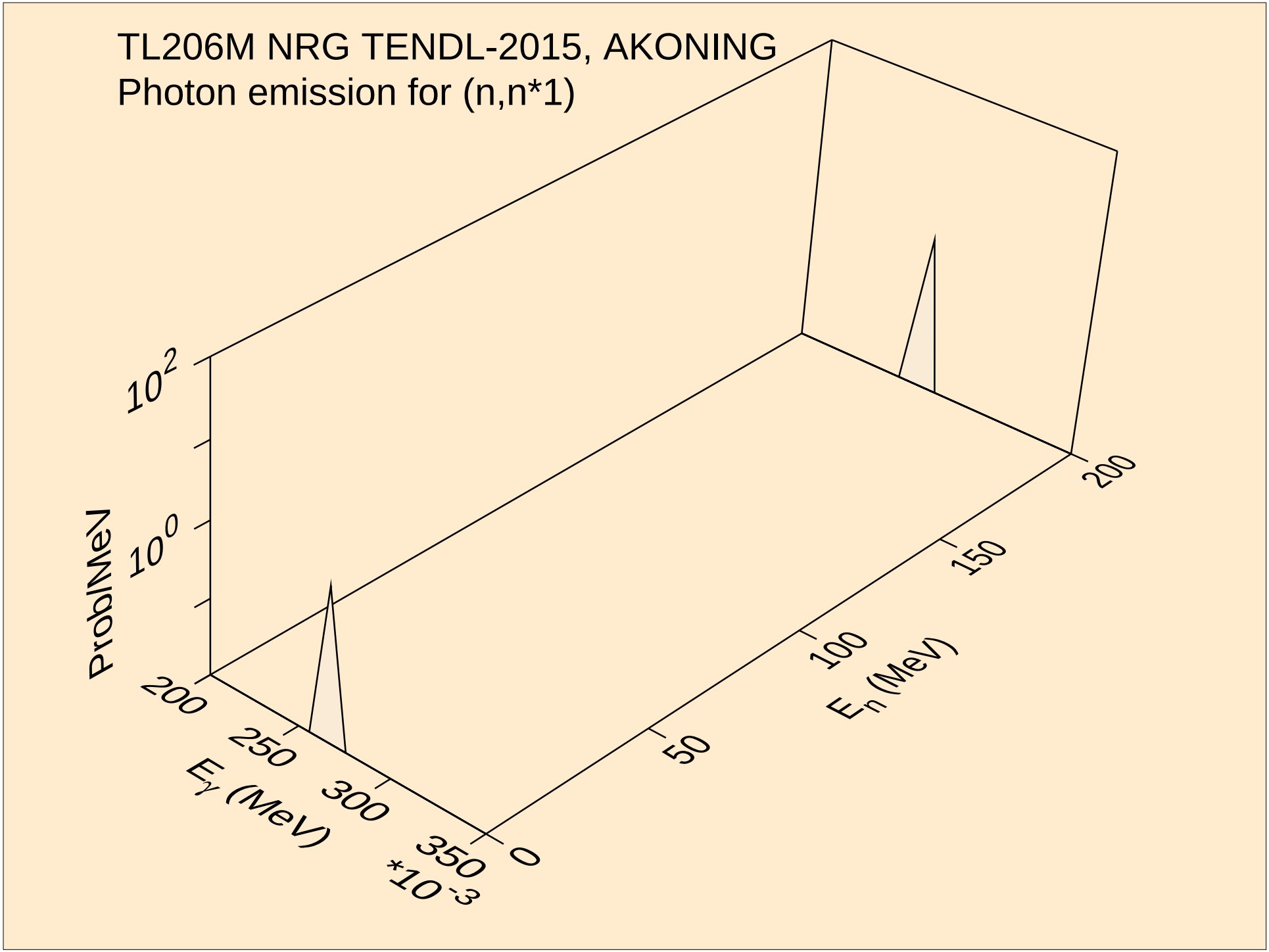

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*)he3
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

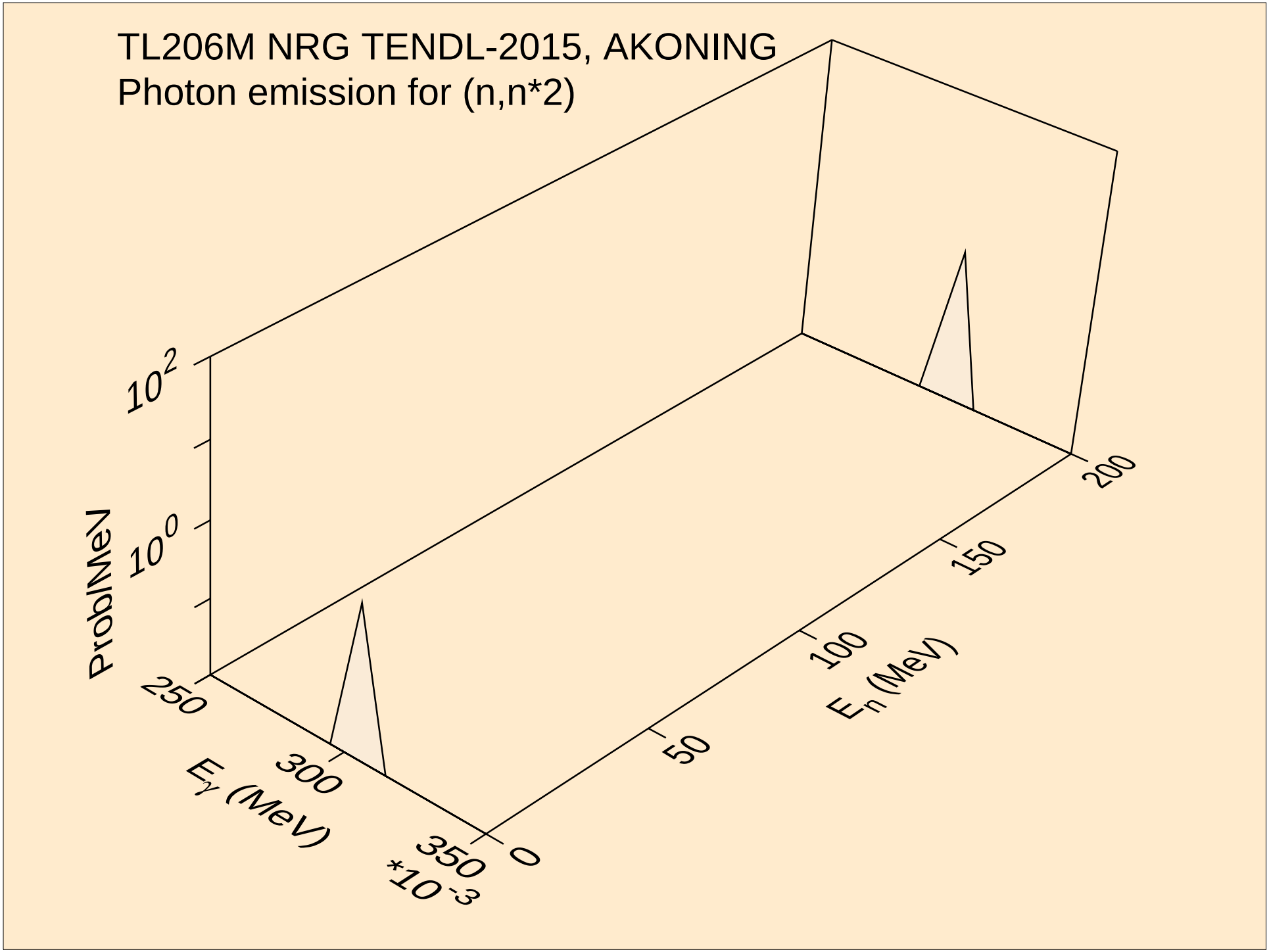

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,4n)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
18
20
22
24
26
28
30
E_n (MeV)

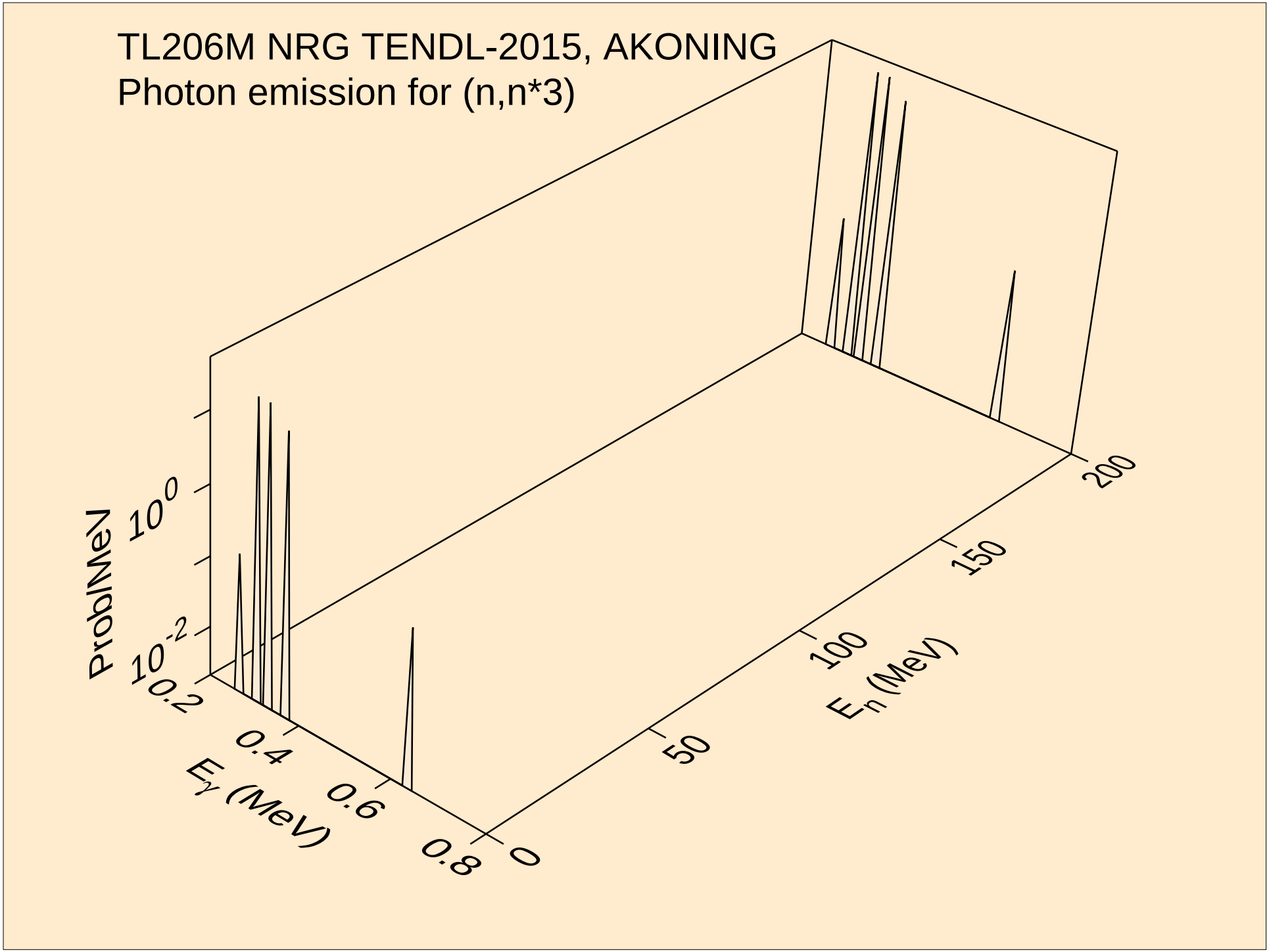

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2np)
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
2
4
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

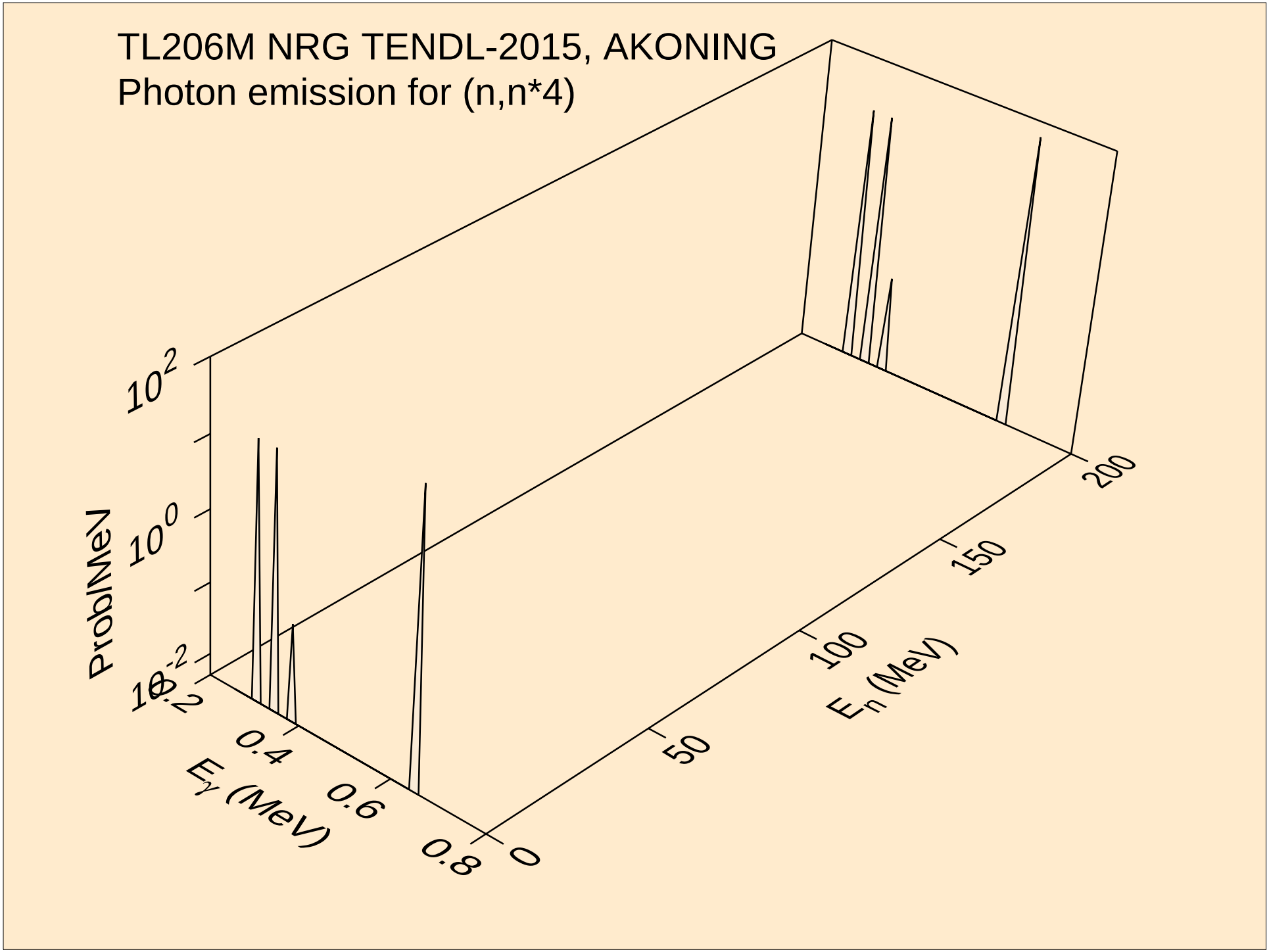

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,3np)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
2
4
16
18
20
22
24
26
28
30
E_n (MeV)

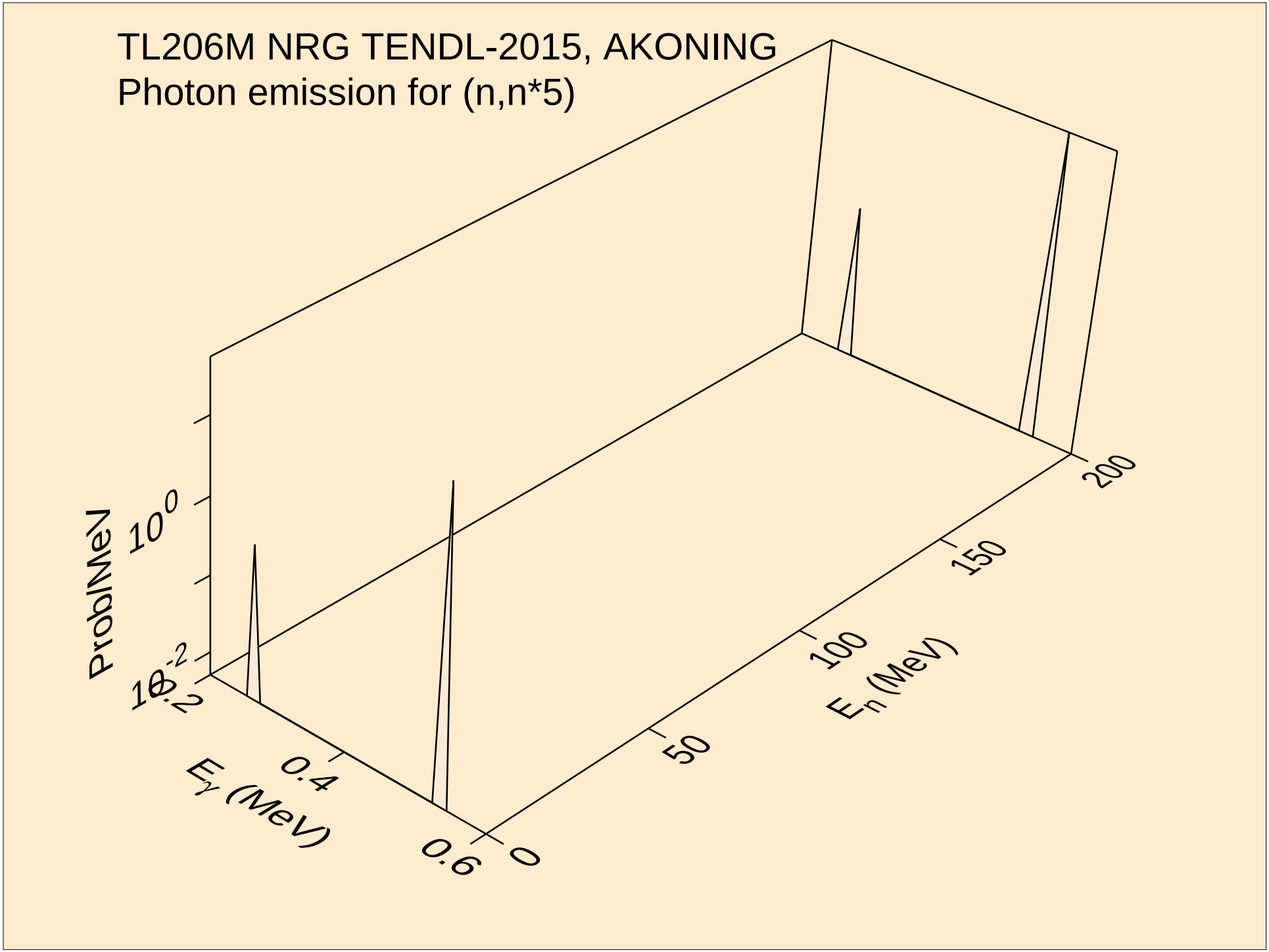

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2np)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
2
4
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

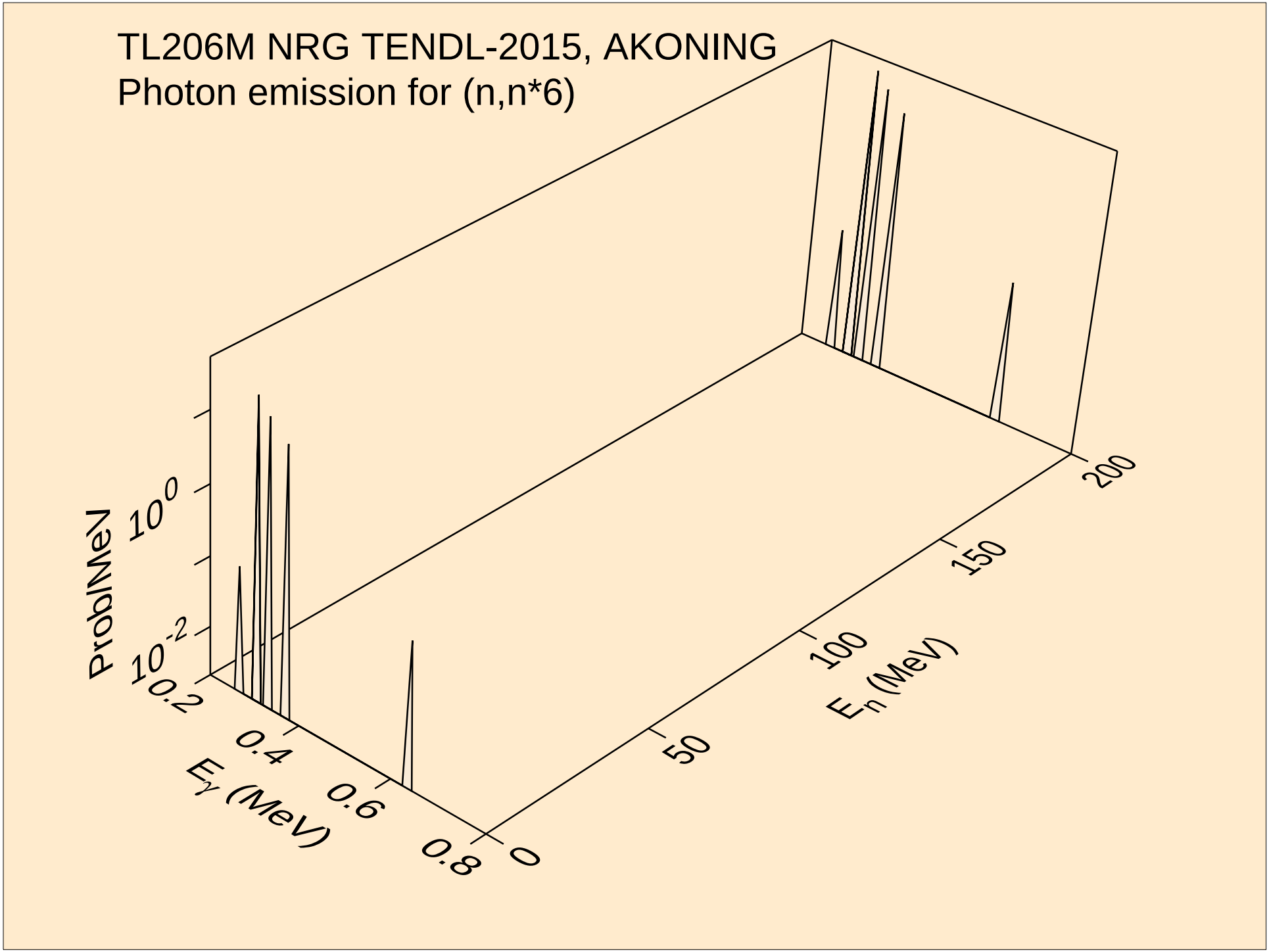

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*1)
Prob/MeV
10^2
10^0
200
250
300
350
E_γ (MeV)
*10 -3
0
50
100
150
200
E_n (MeV)

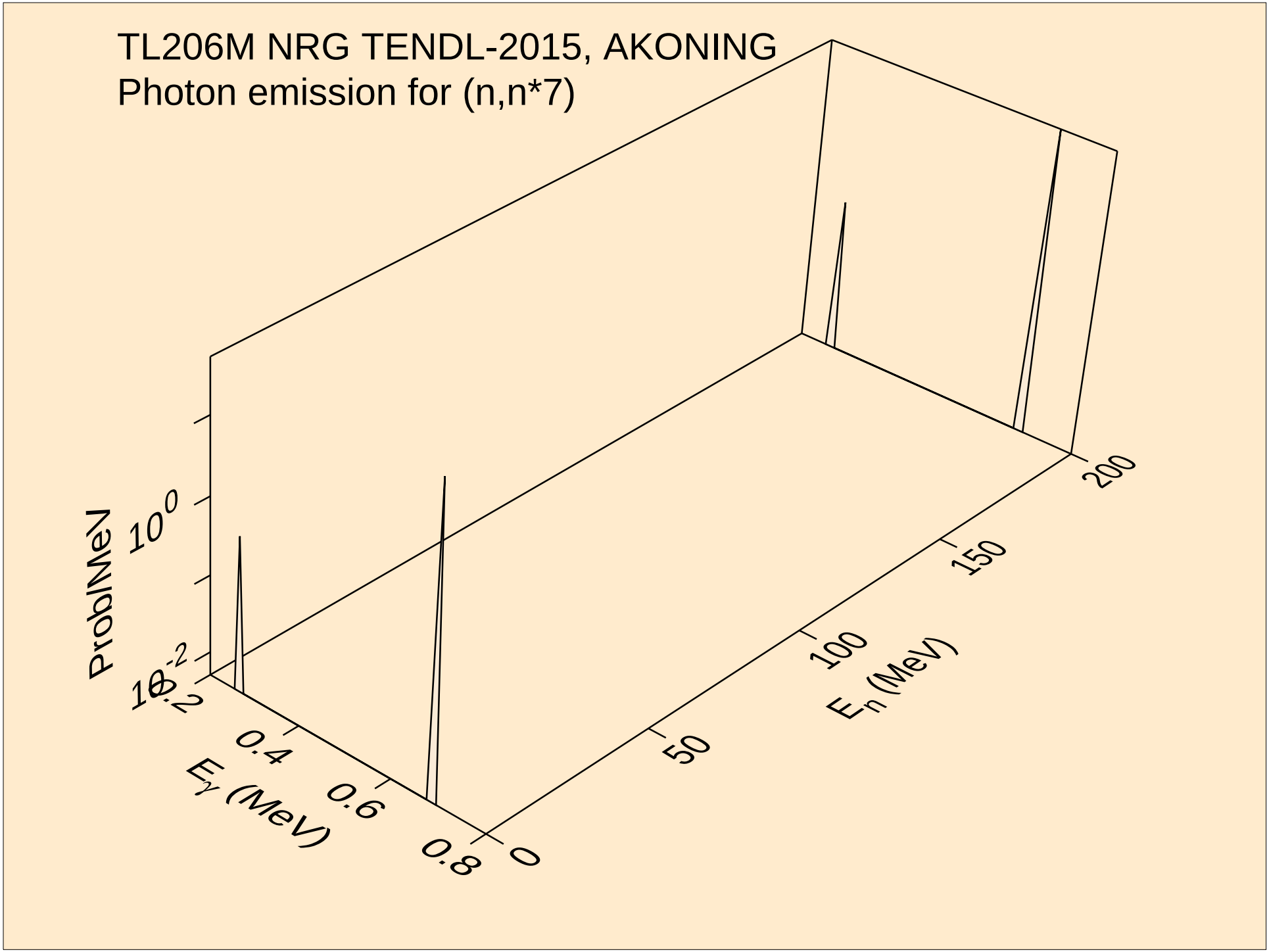

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*2)
Prob/MeV
10^2
10^0
250
300
350
E_γ (MeV)
*10 -3
0
50
100
150
200
E_n (MeV)

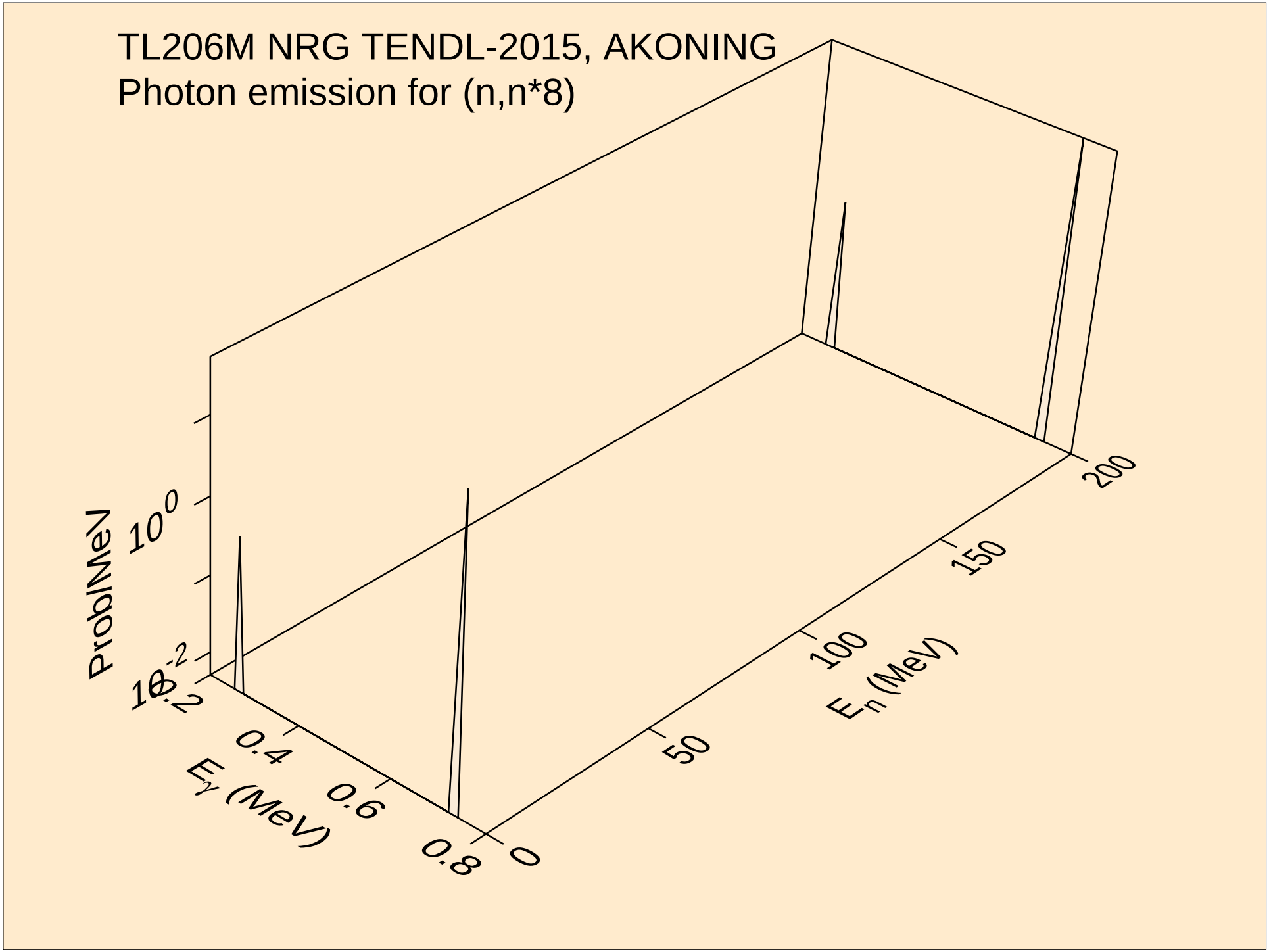

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*3)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

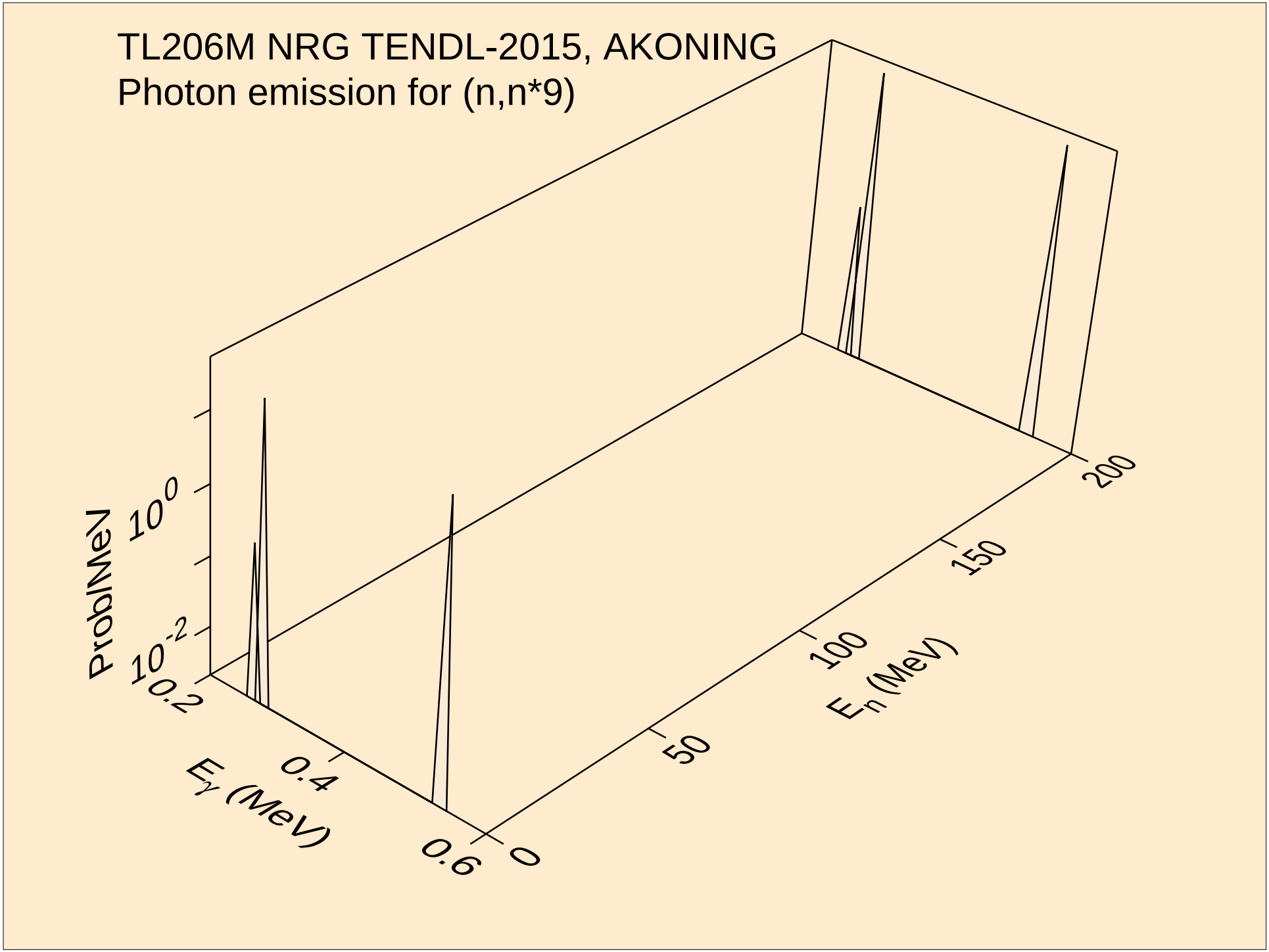

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*4)
Prob/MeV
10^{2}
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

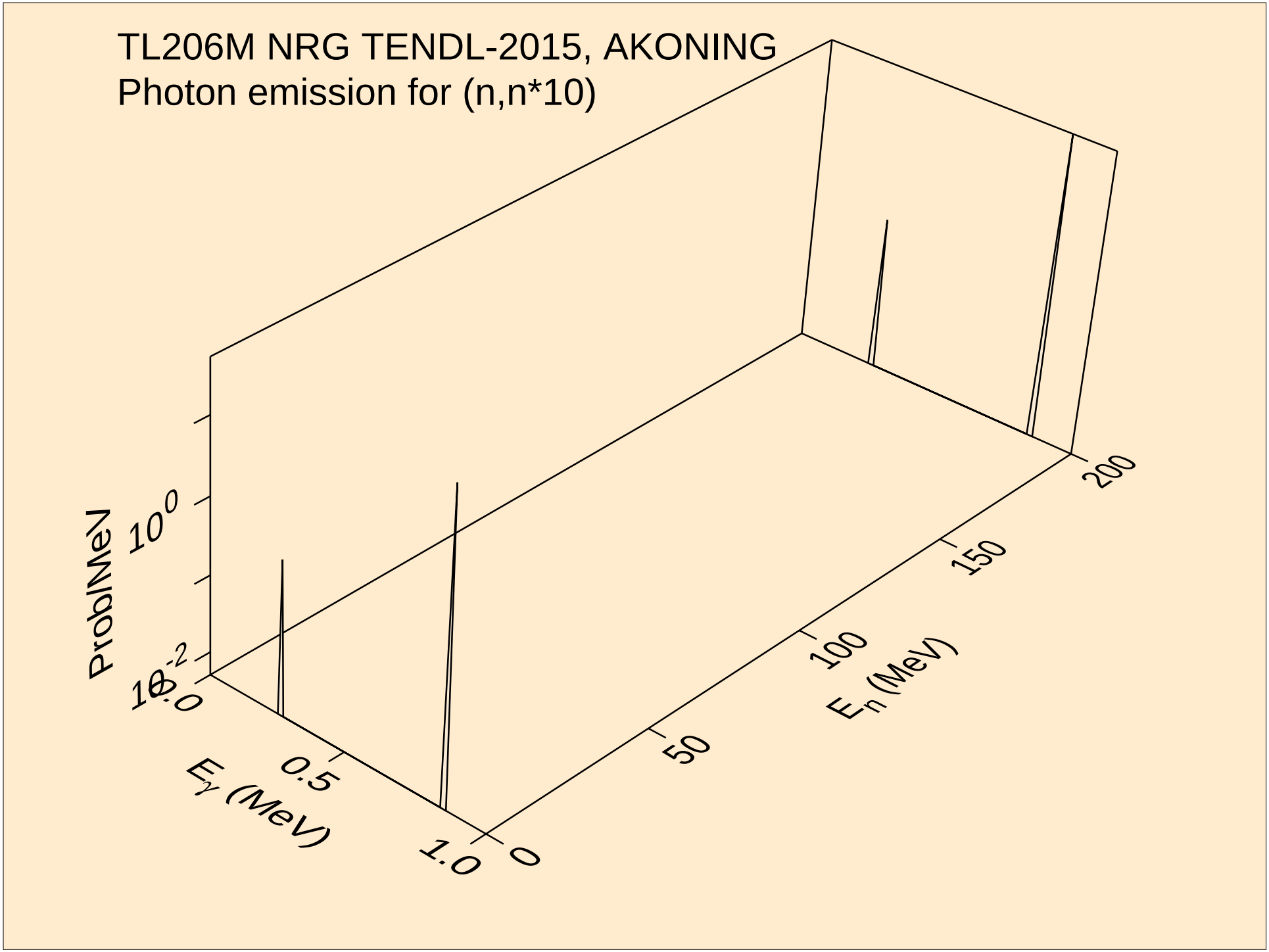

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*5)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

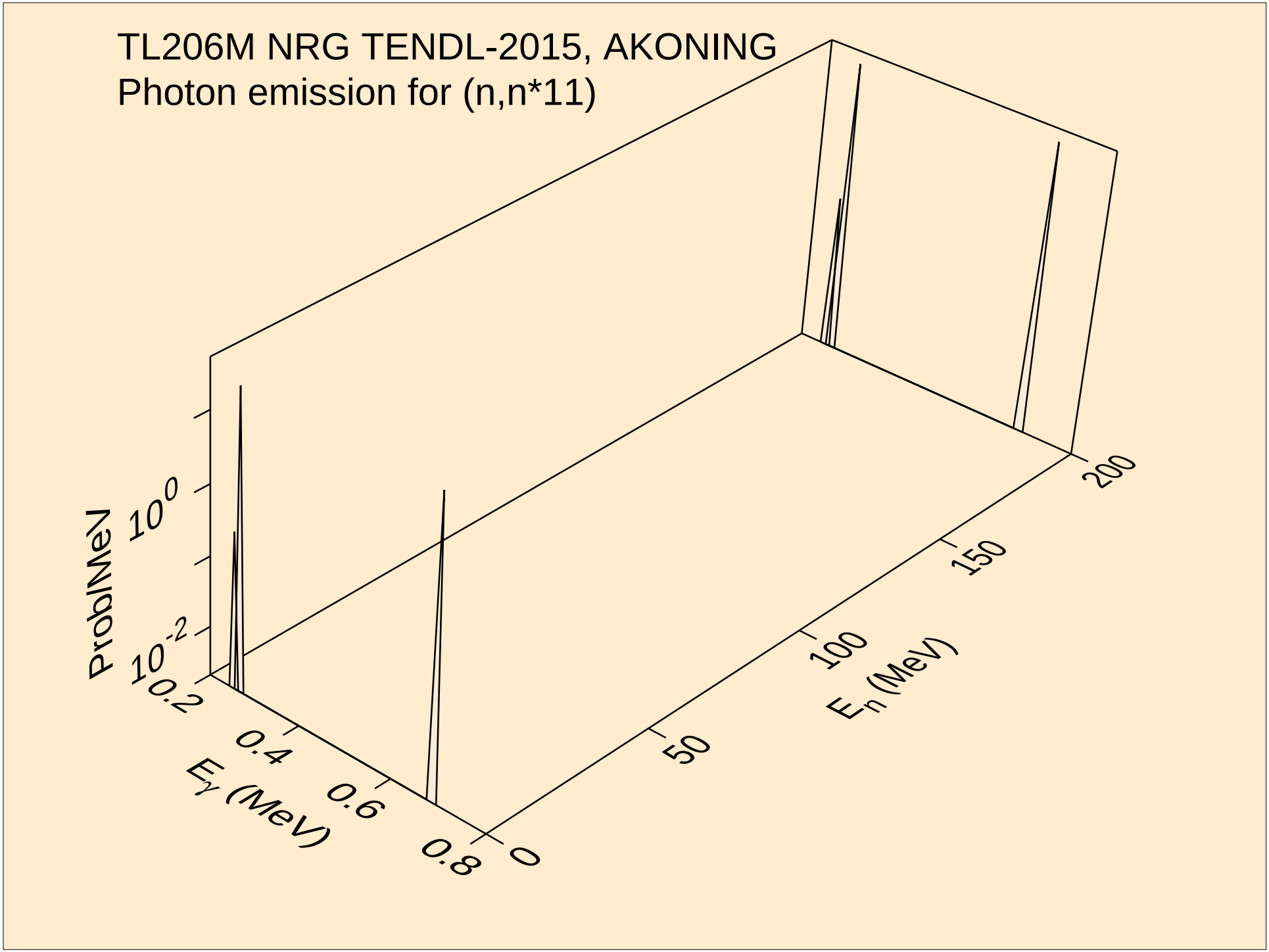

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*6)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

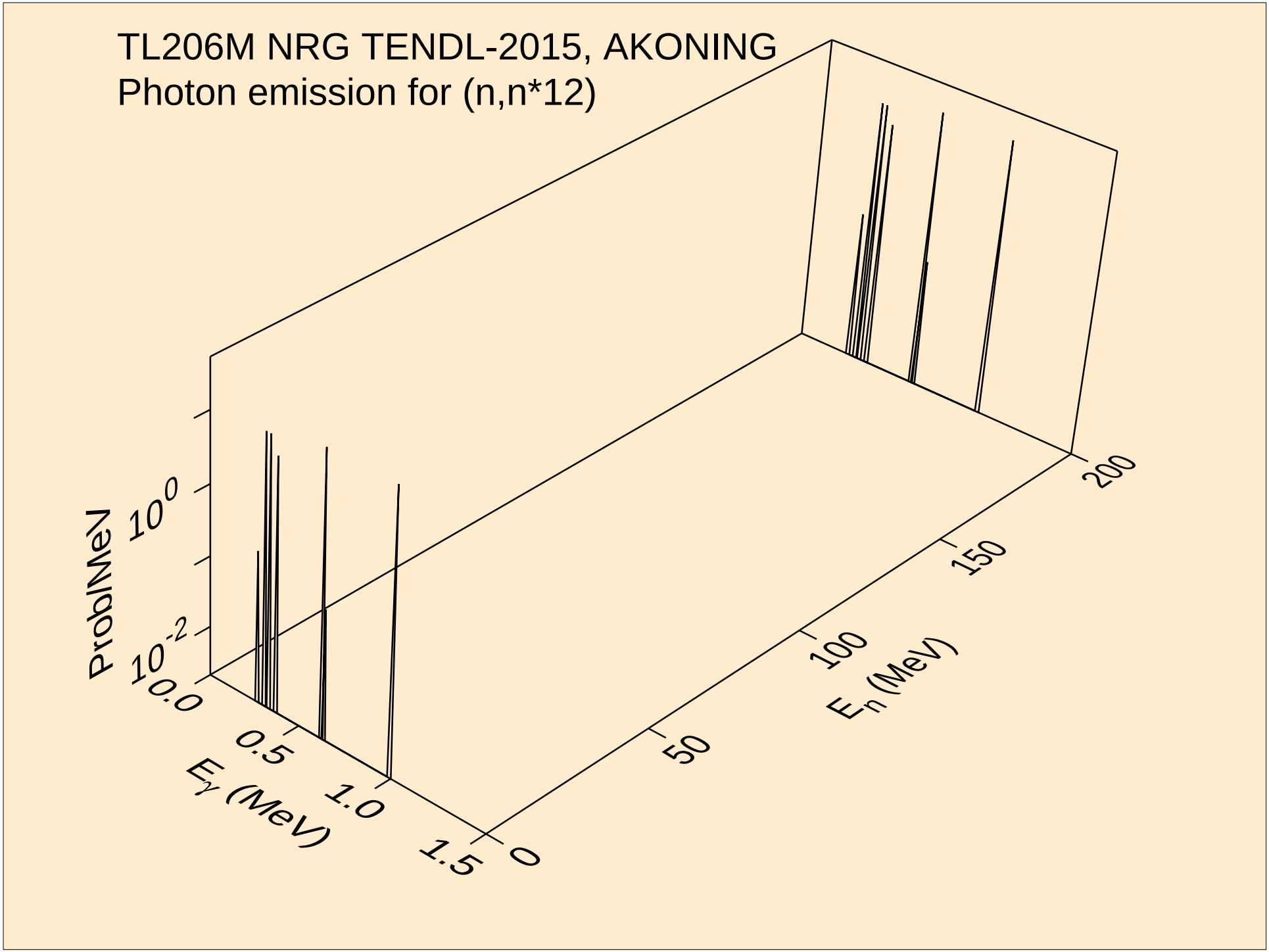

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*7)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

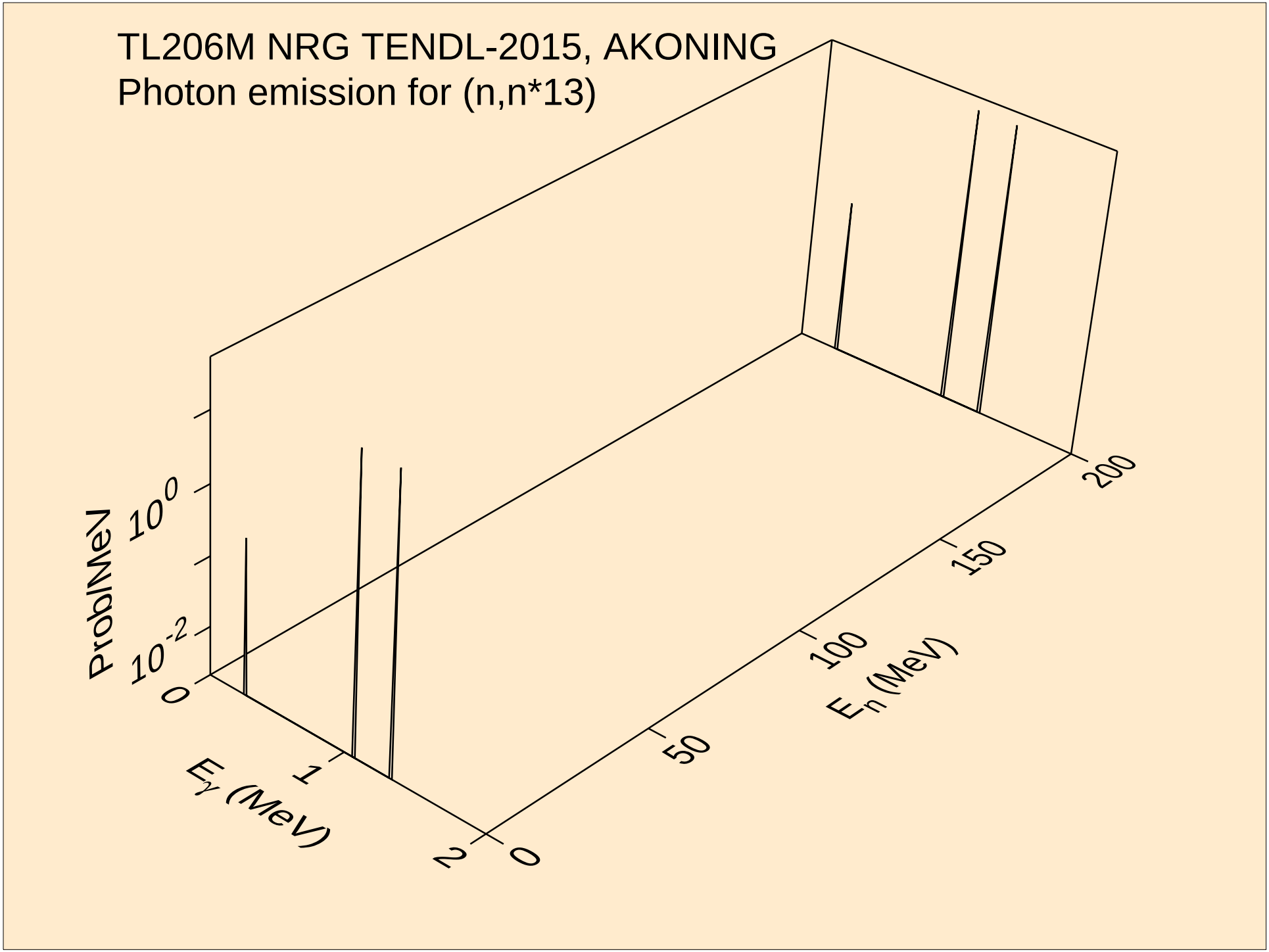

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*8)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

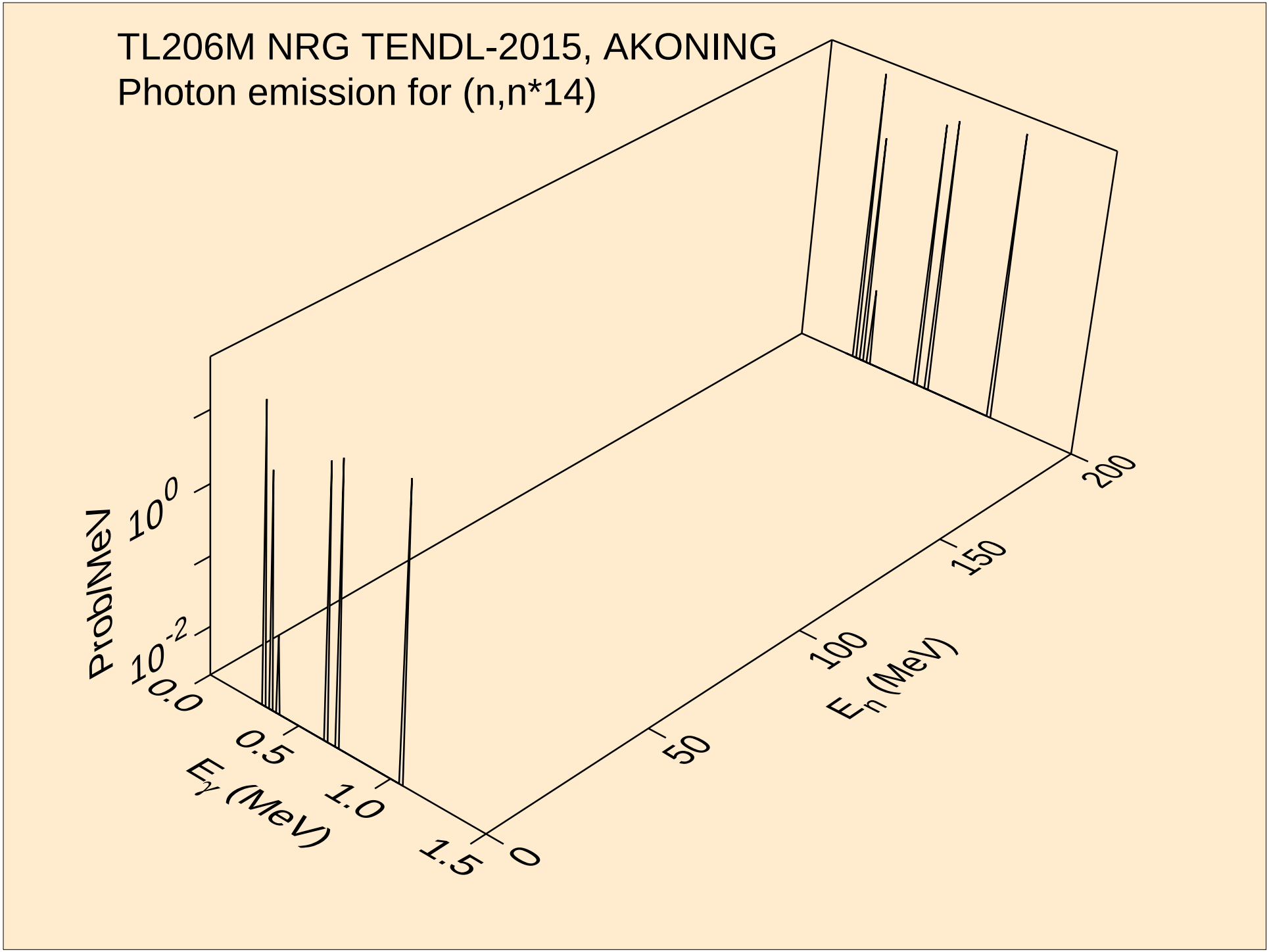

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*9)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

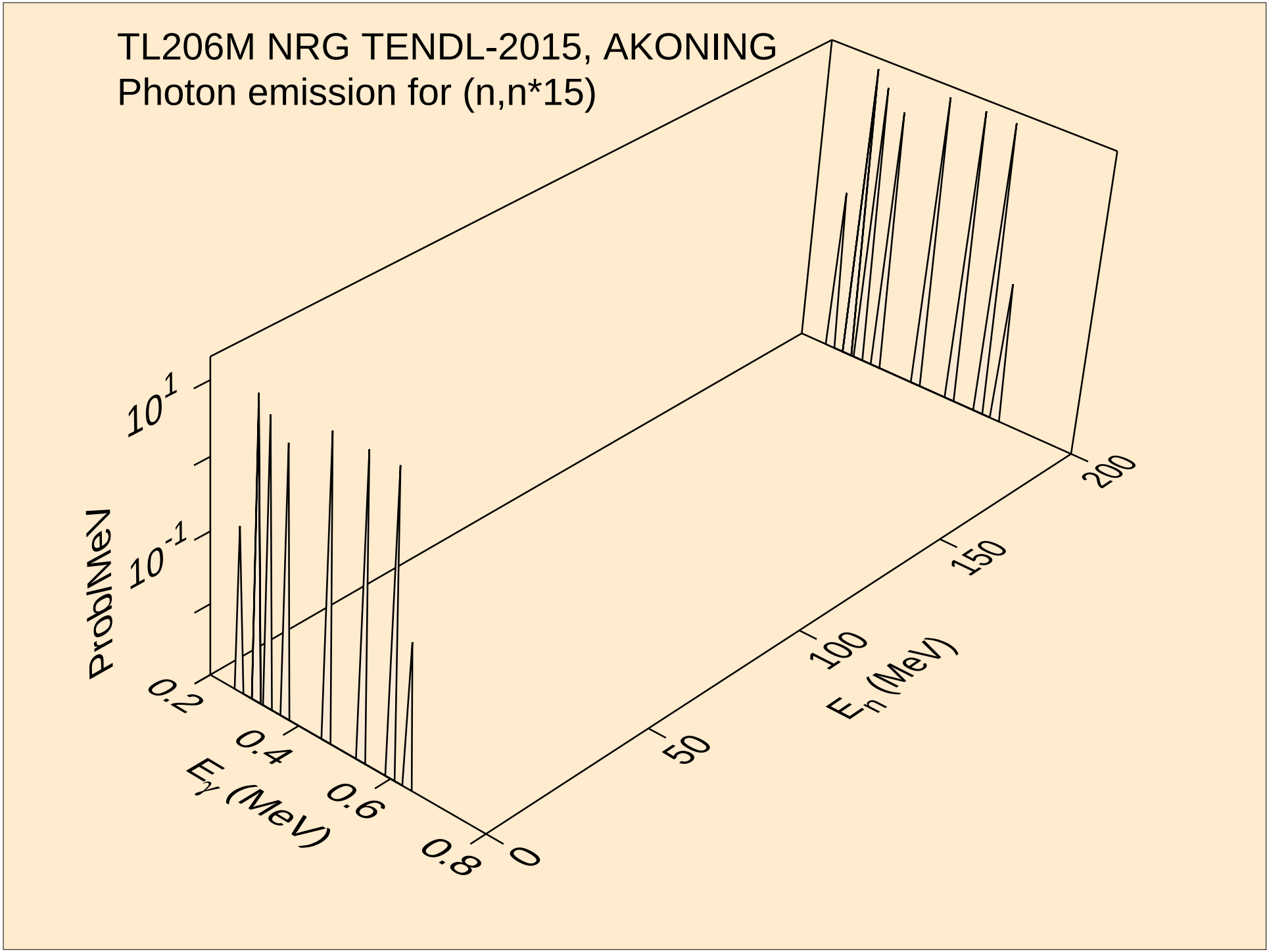

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*10)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

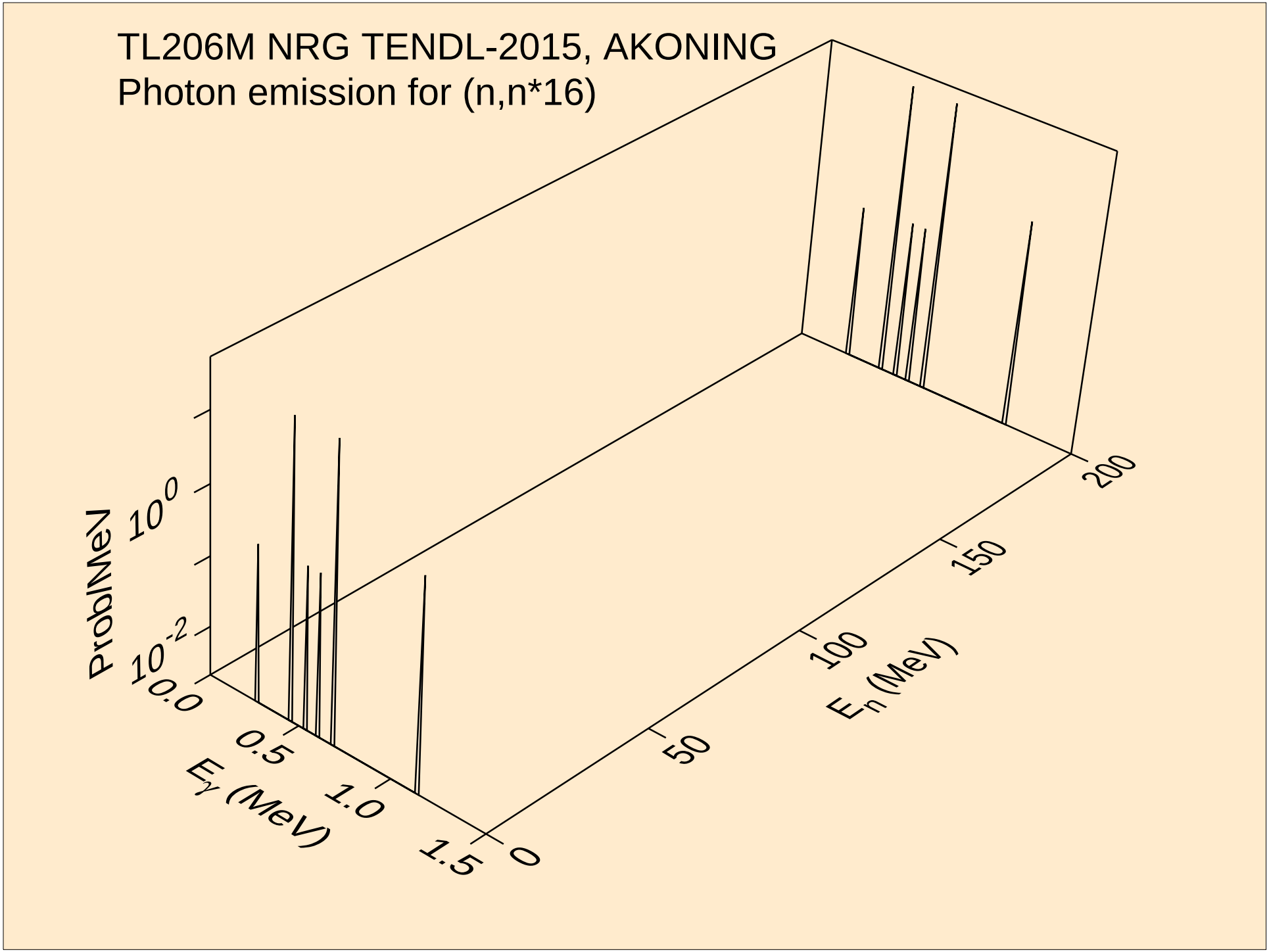

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*11)
Prob/MeV
10^{0}
10^{-2}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

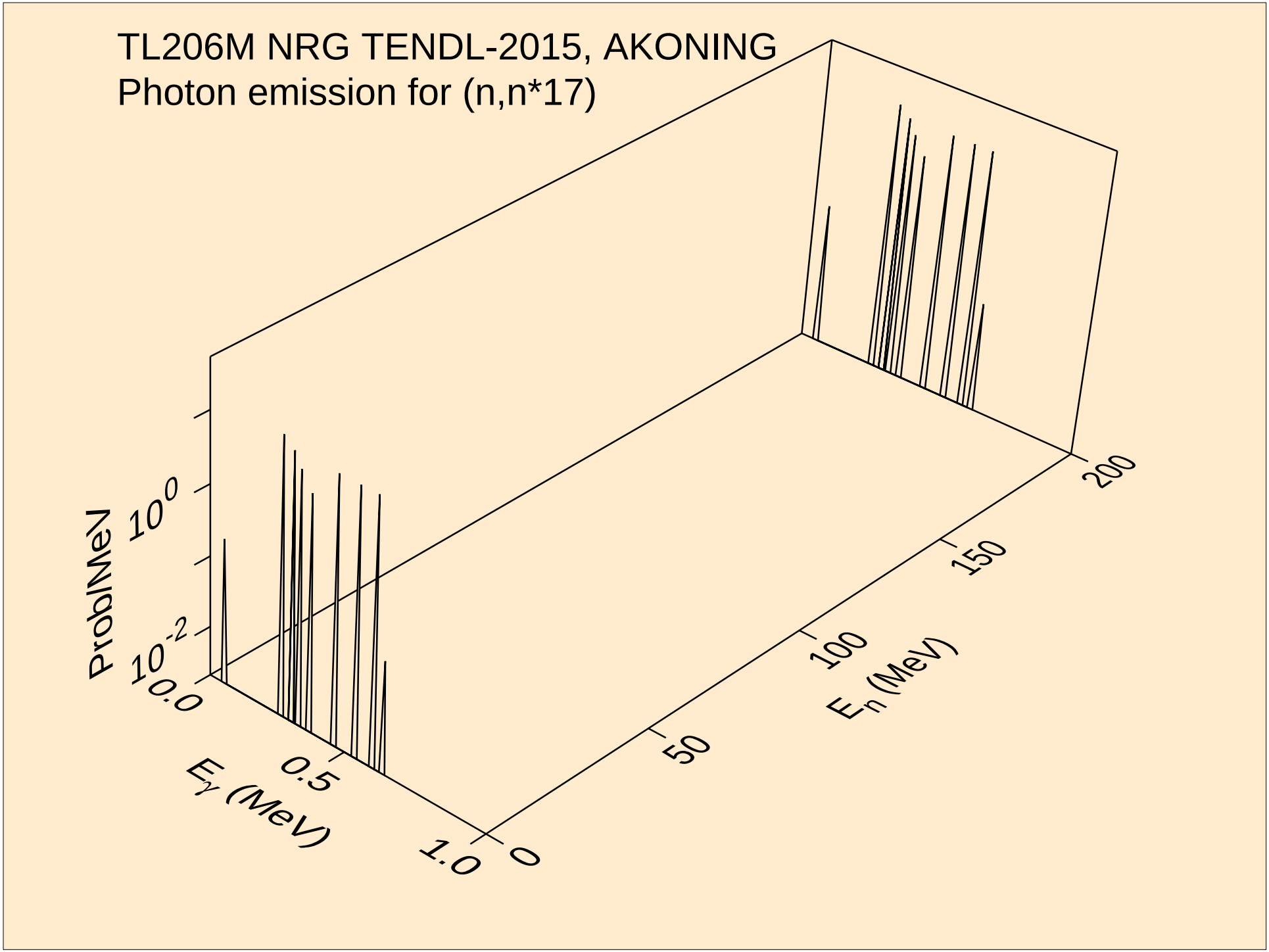

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*12)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

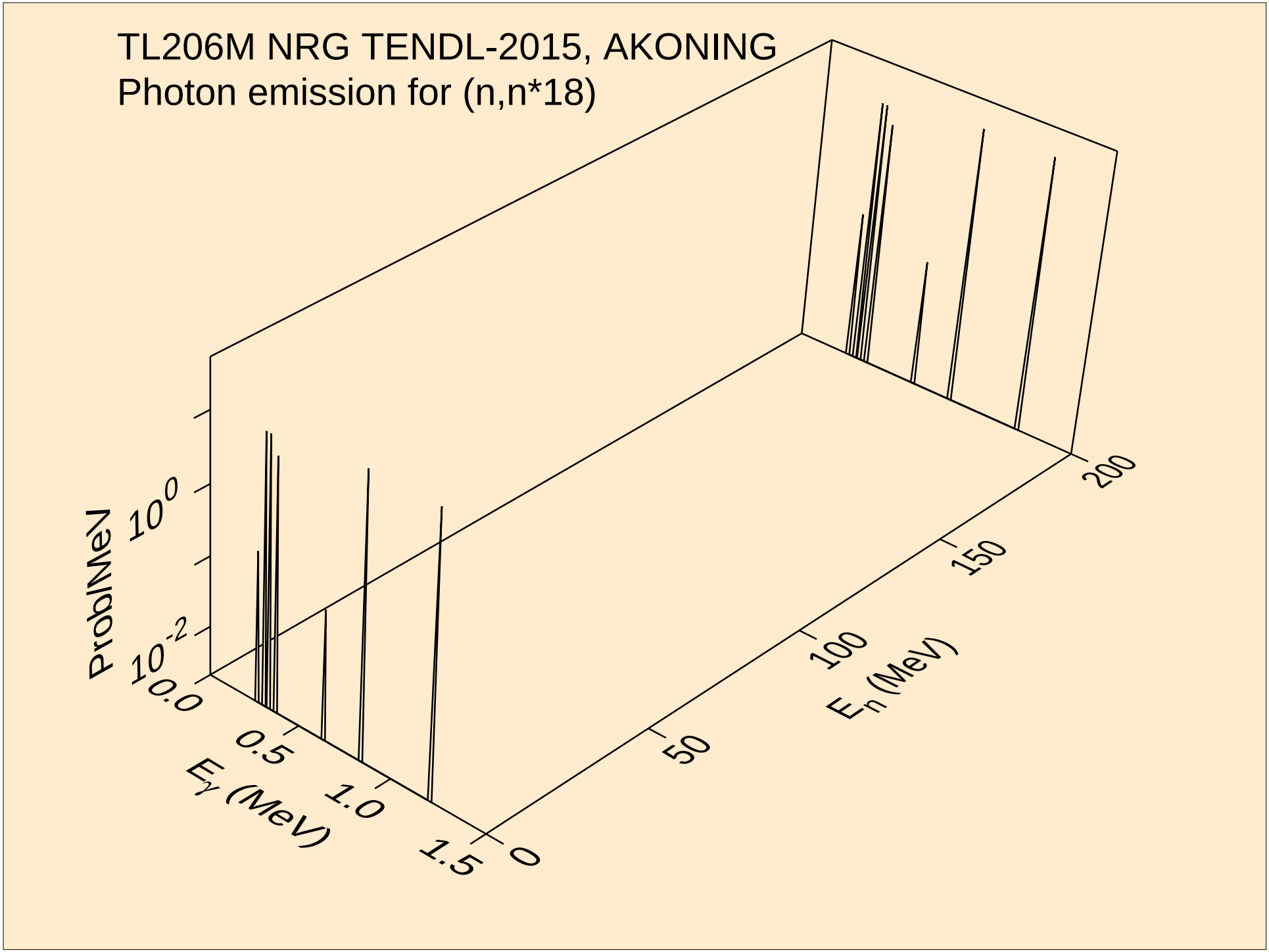

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*13)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

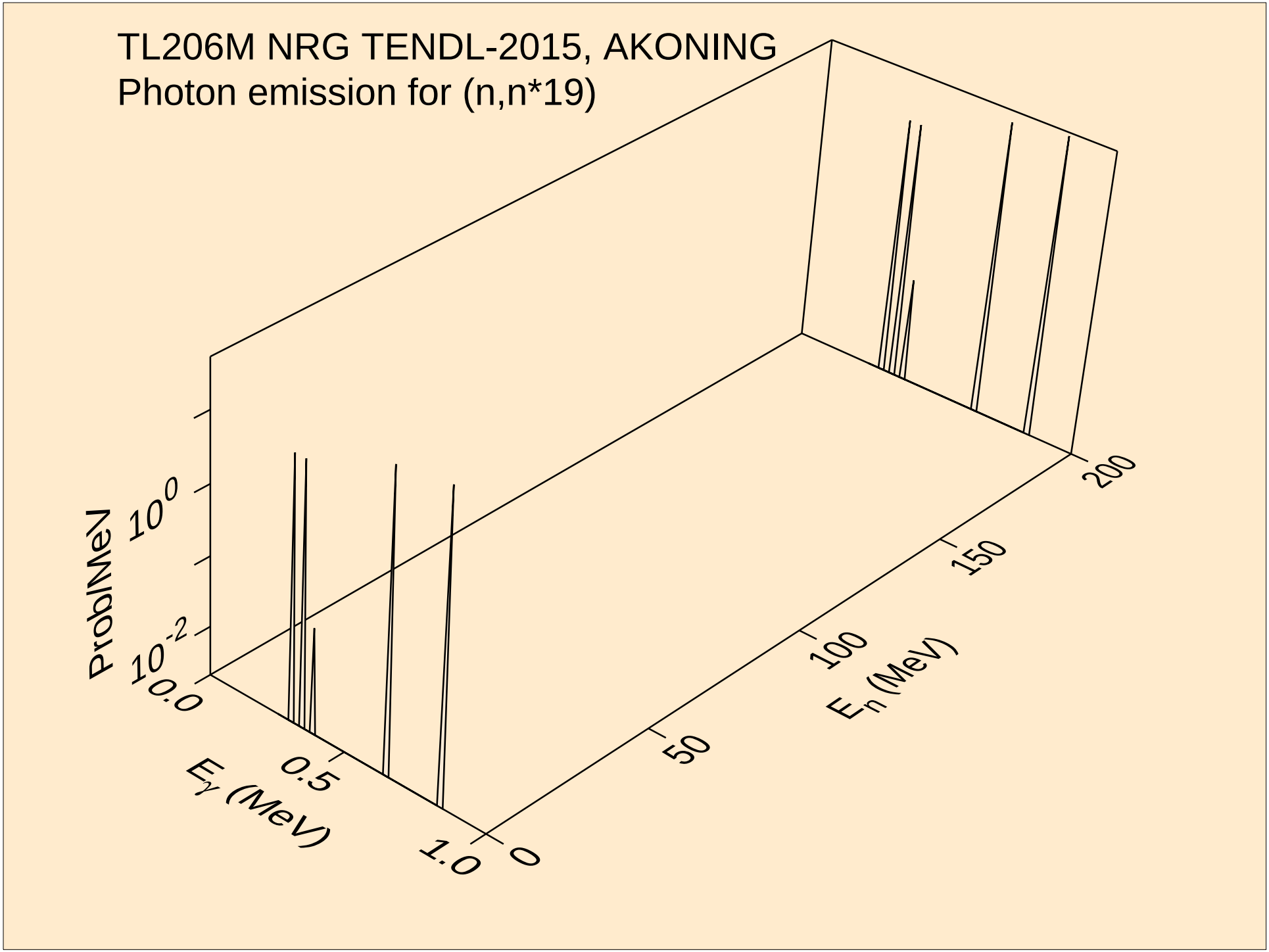

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*14)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

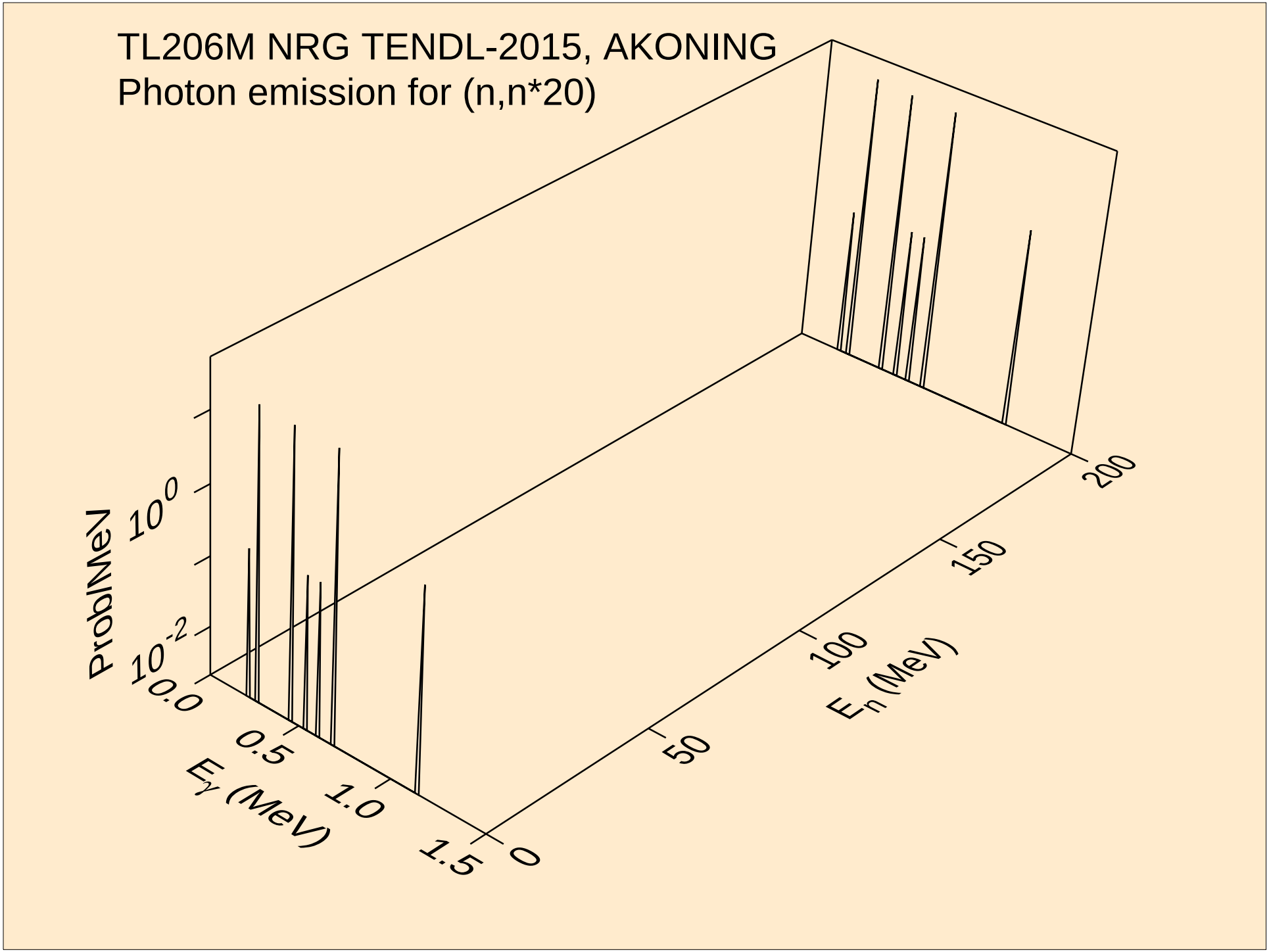

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*15)
Prob/MeV
10^{1}
10^{-1}
0.2
0.4
0.6
0.8
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

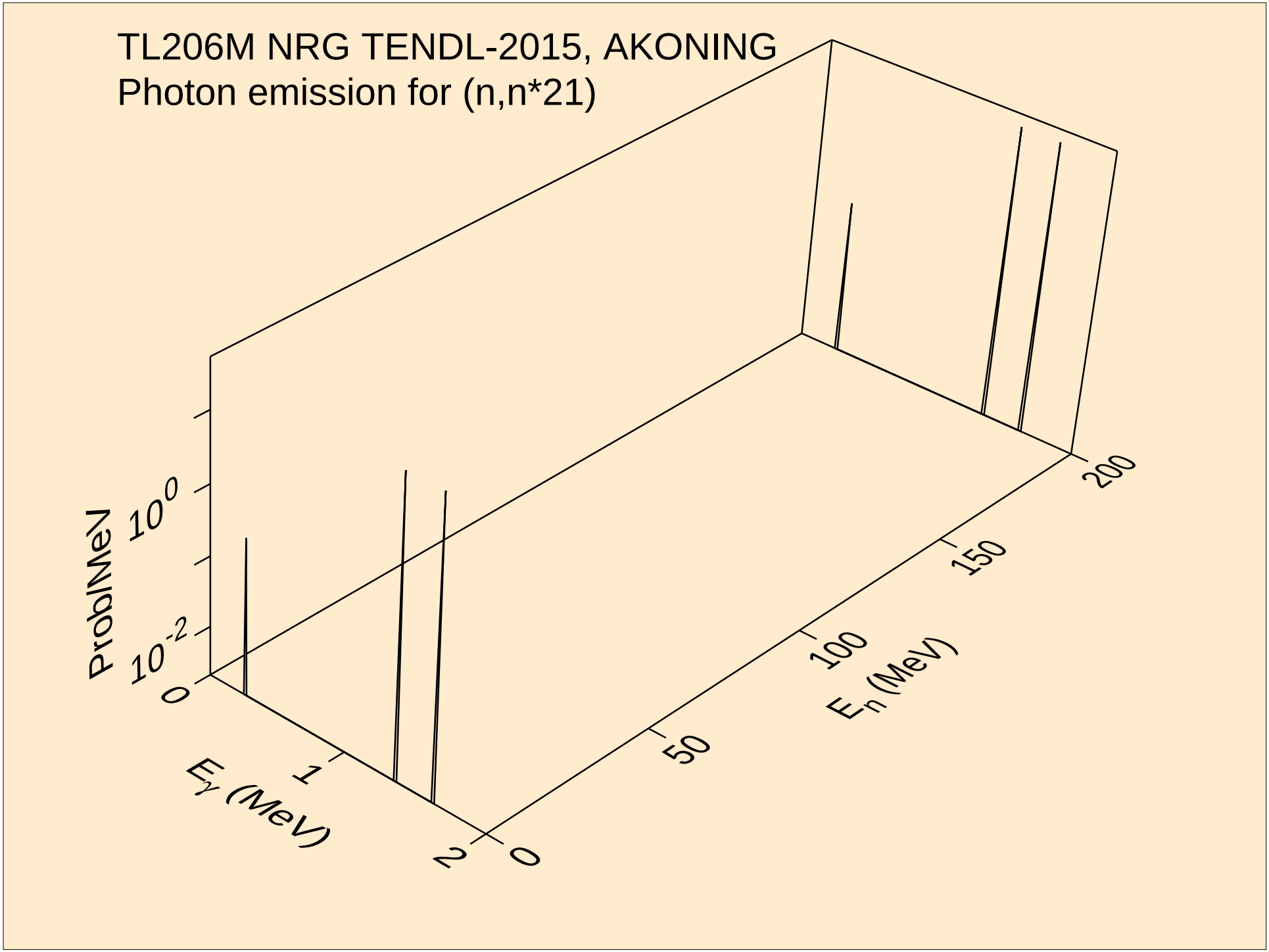

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*16)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

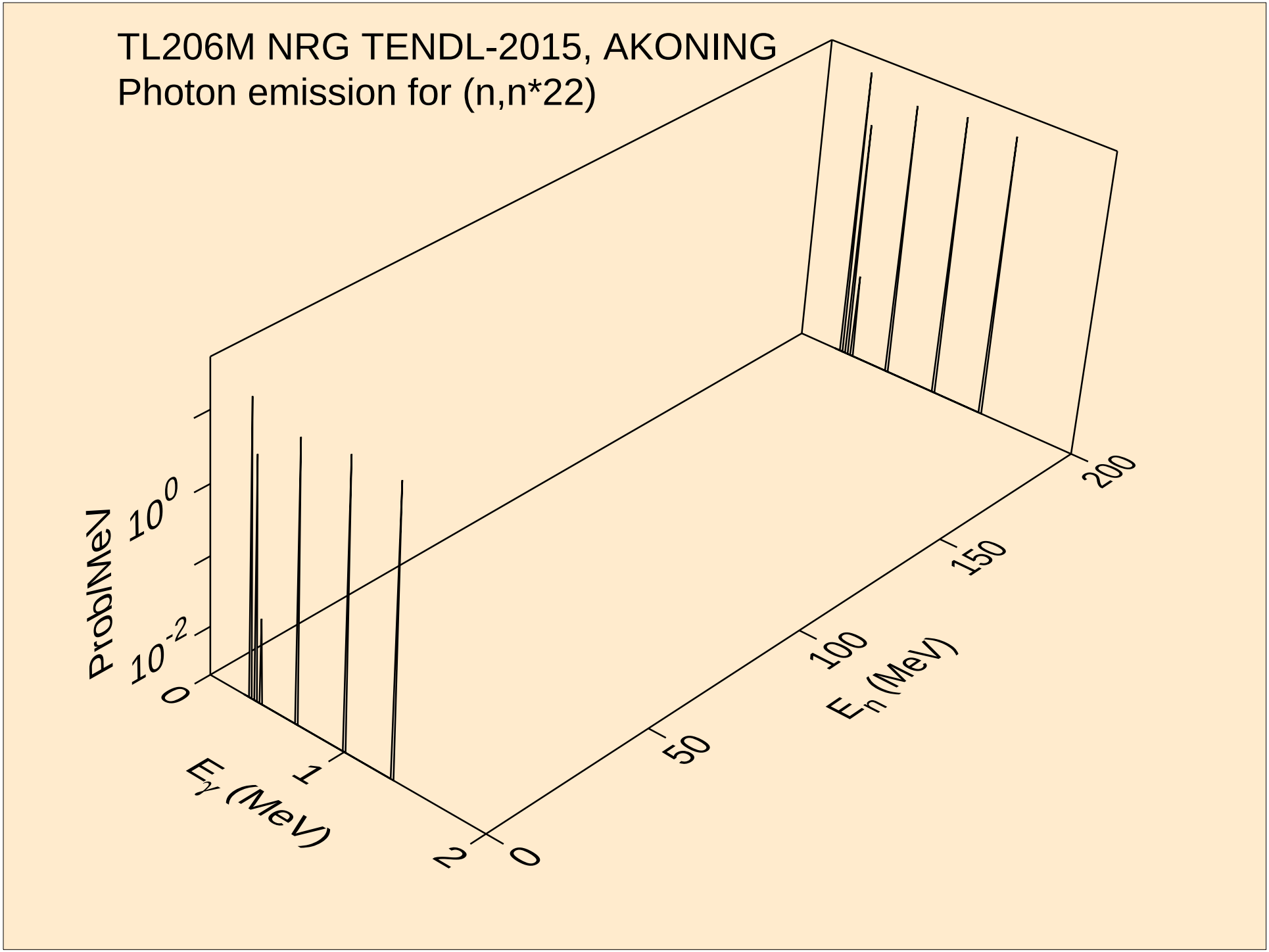

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*17)
Prob/MeV
10^0
10^-2
0.0
0.5
1.0
Eγ (MeV)
0
50
100
150
200
En (MeV)

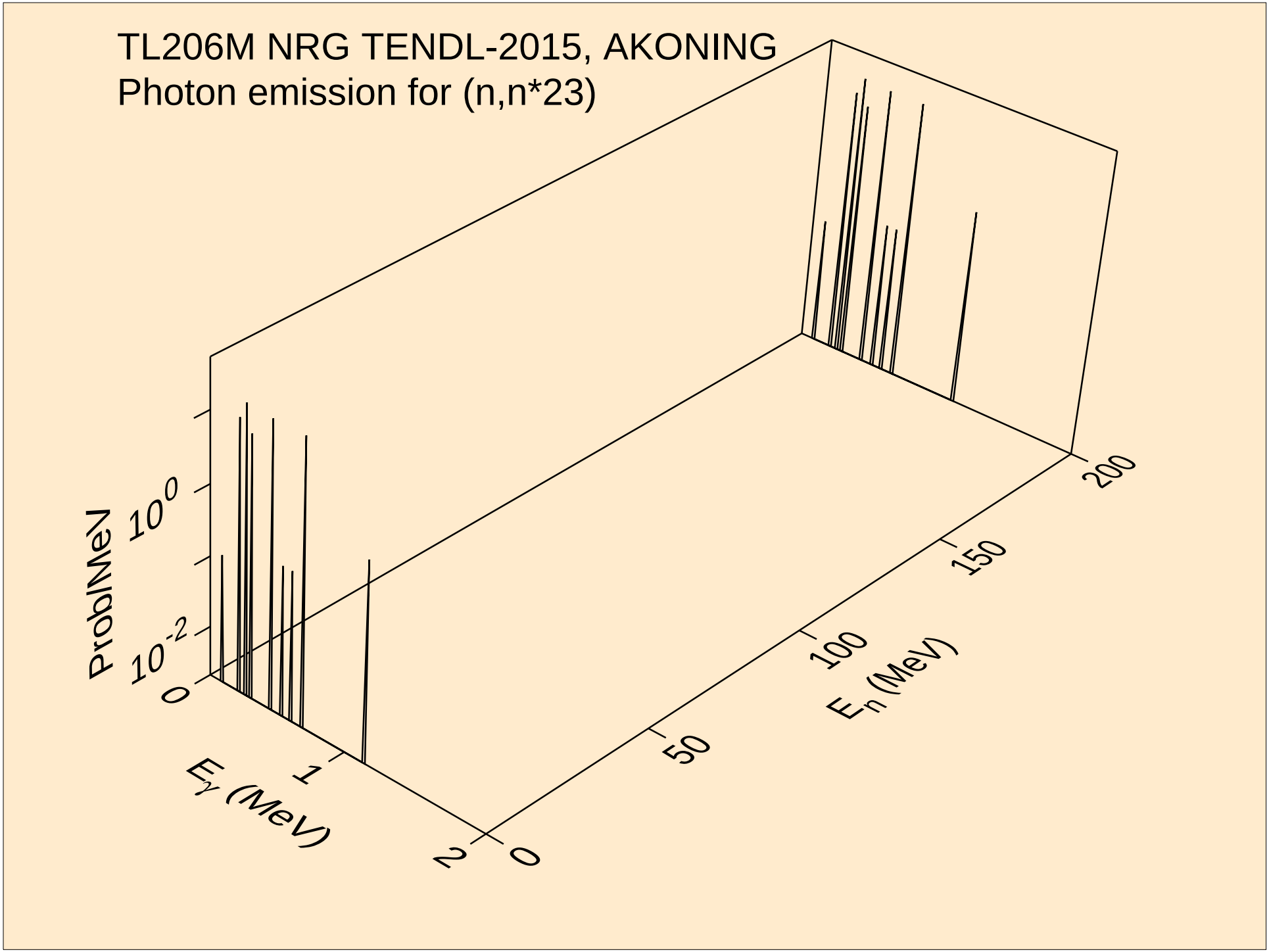

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*18)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

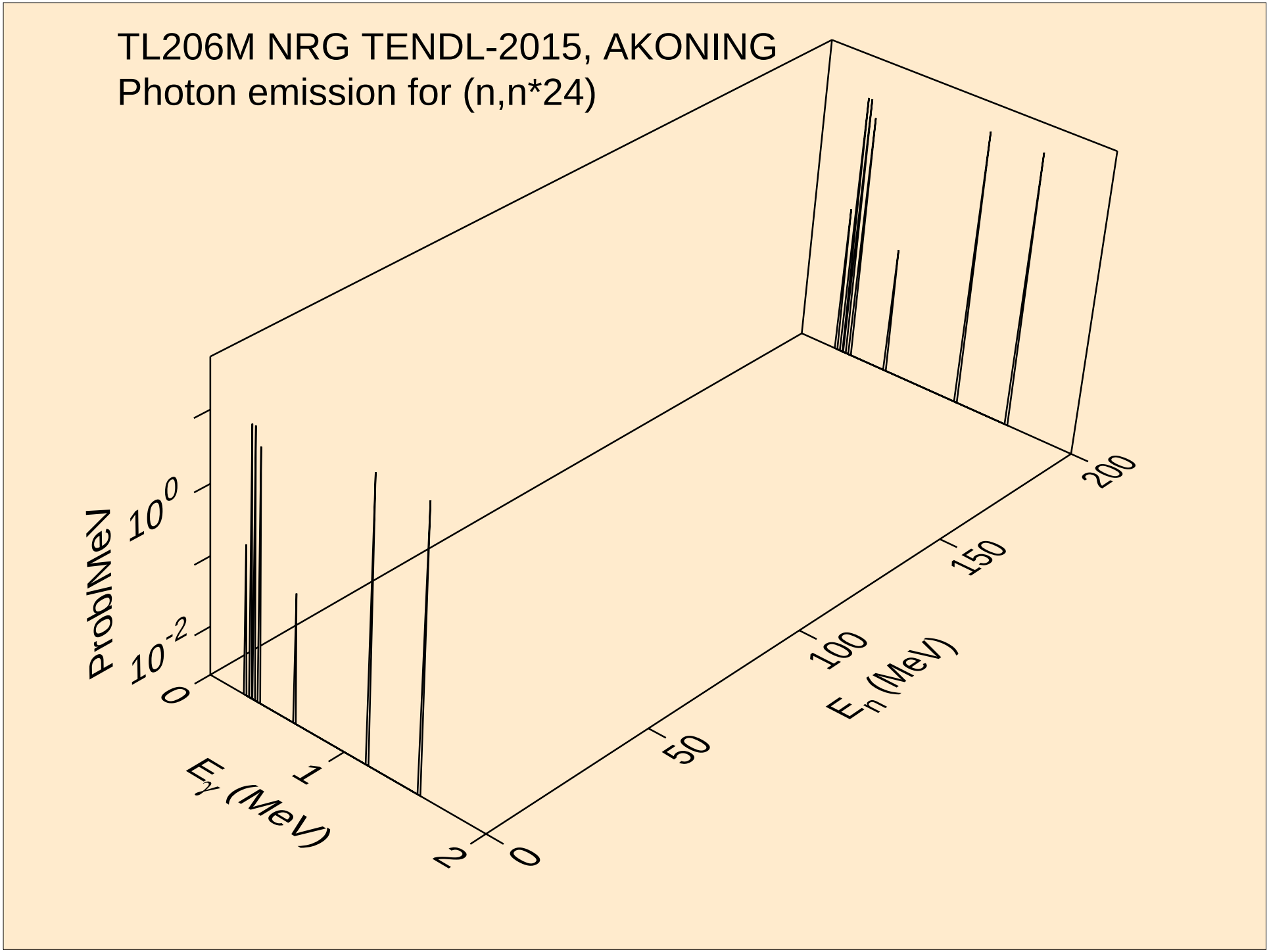

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*19)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

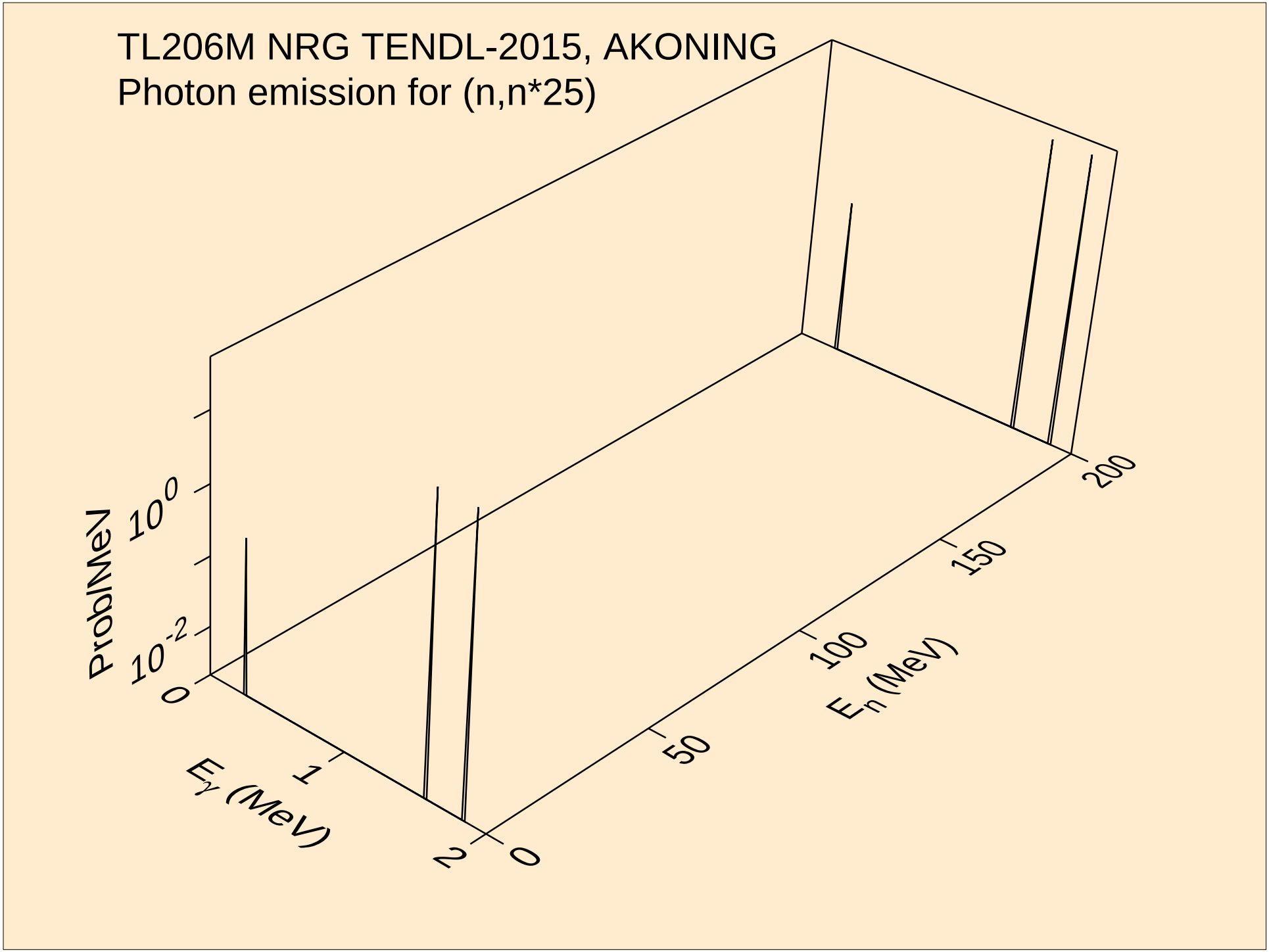

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*20)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

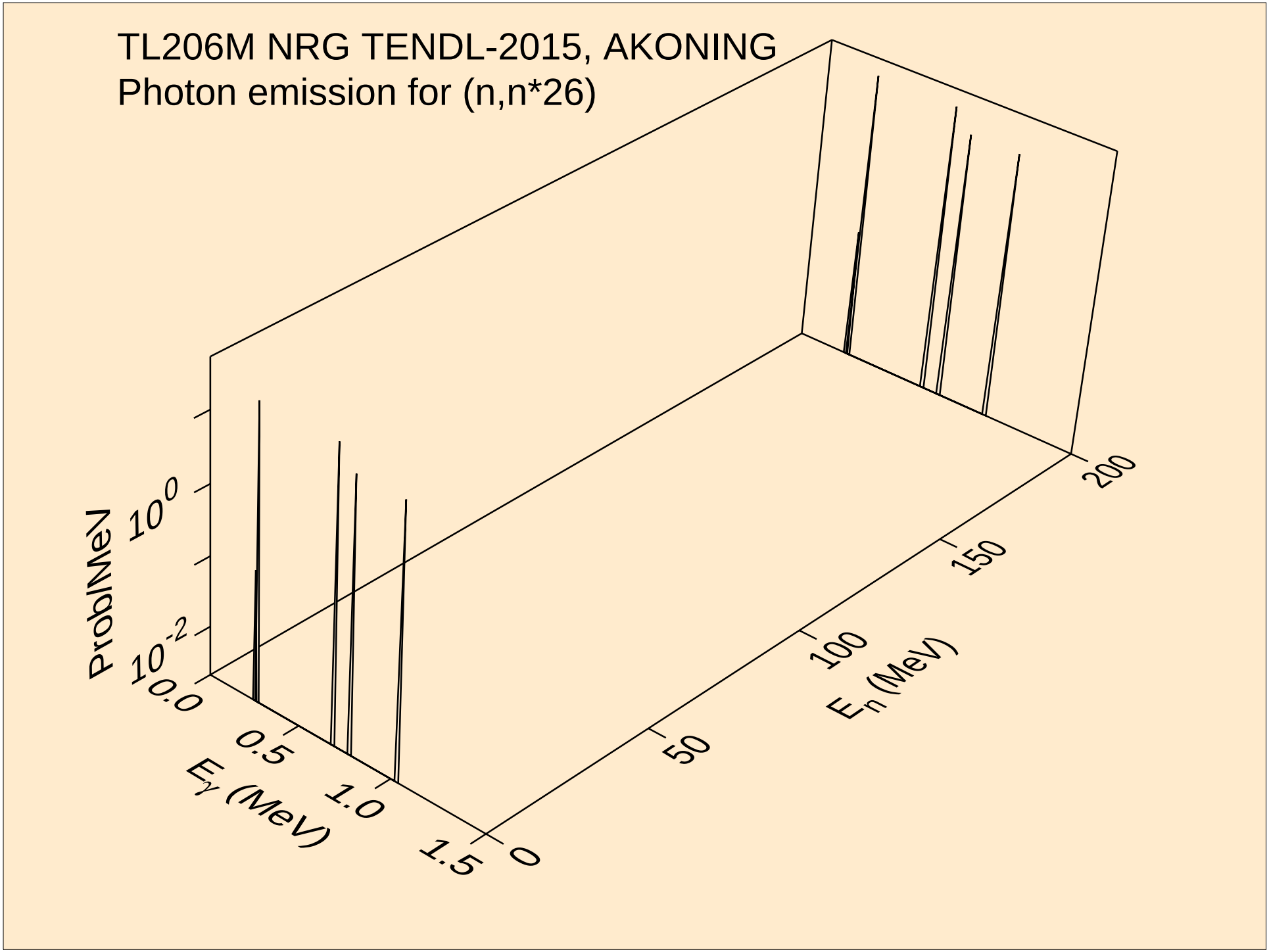

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*21)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

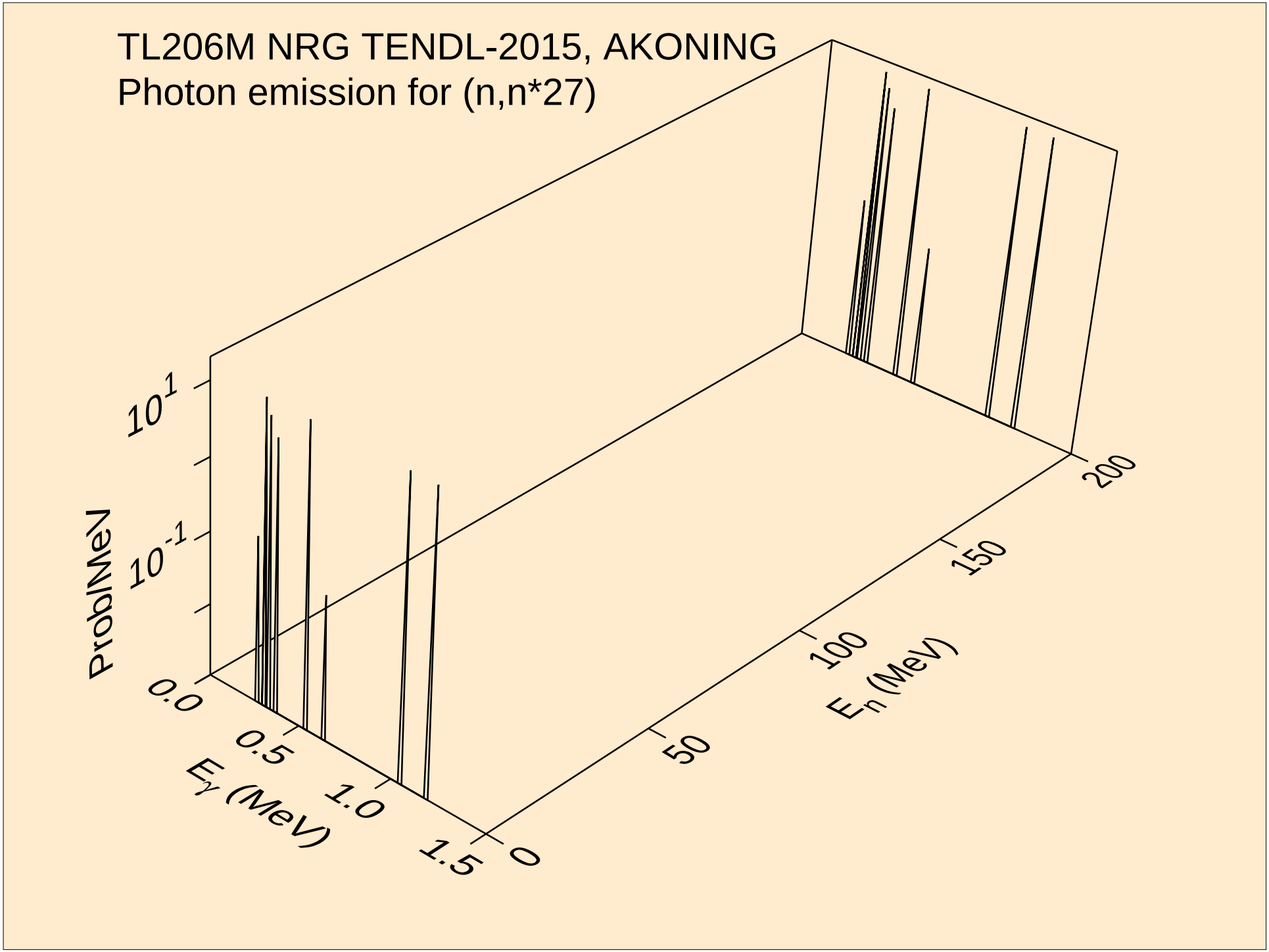

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*22)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

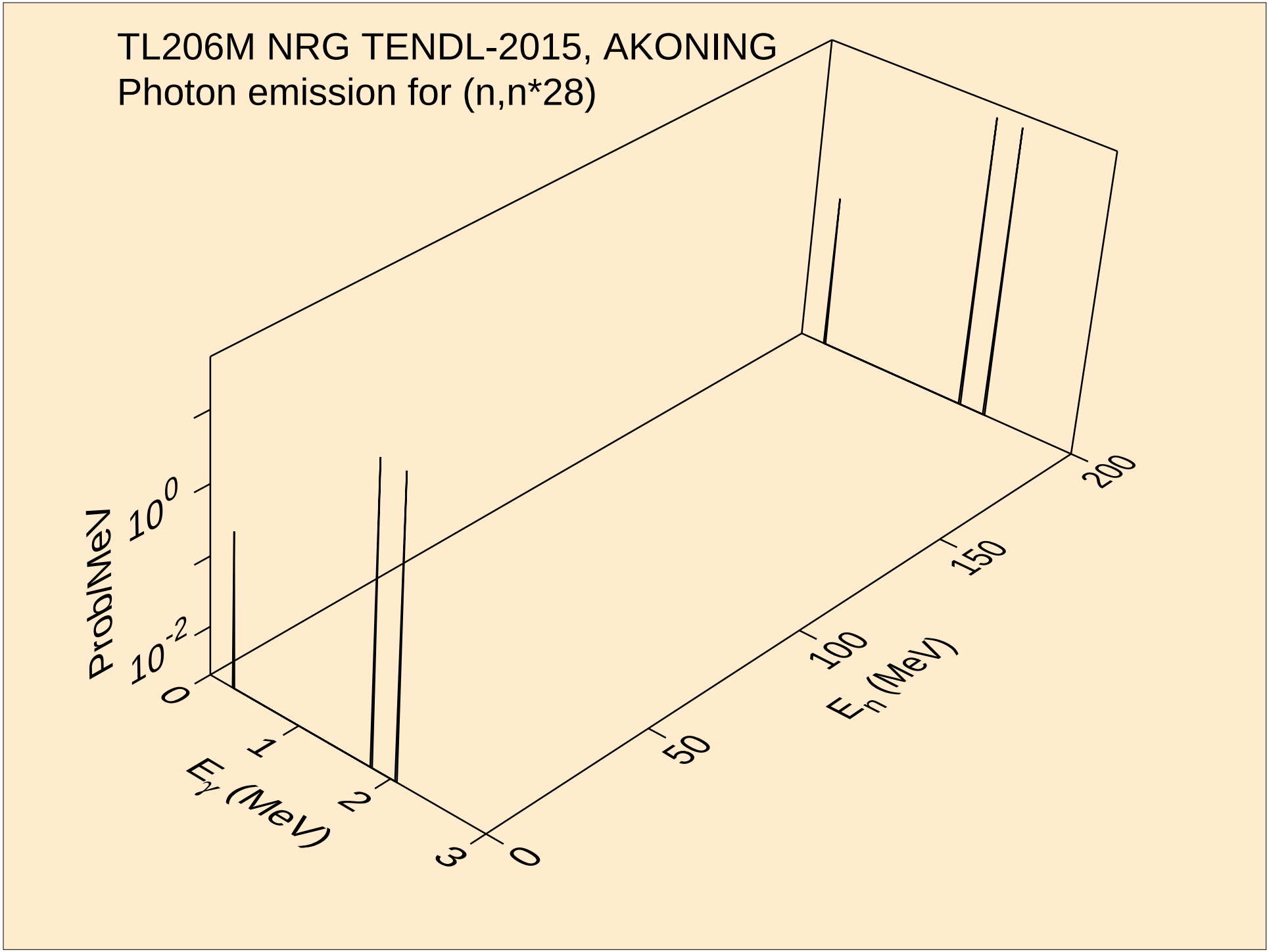

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*23)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

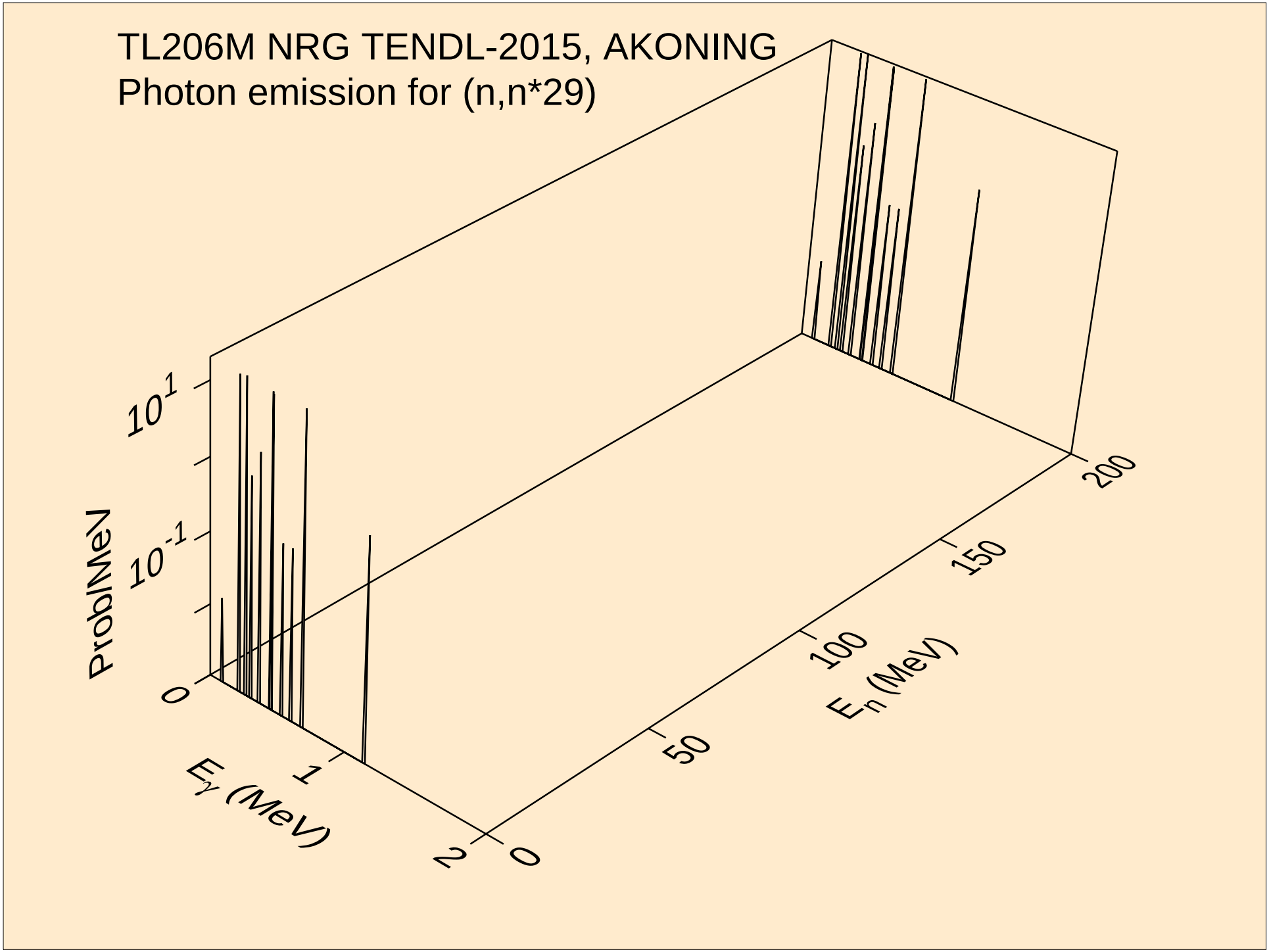

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*24)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

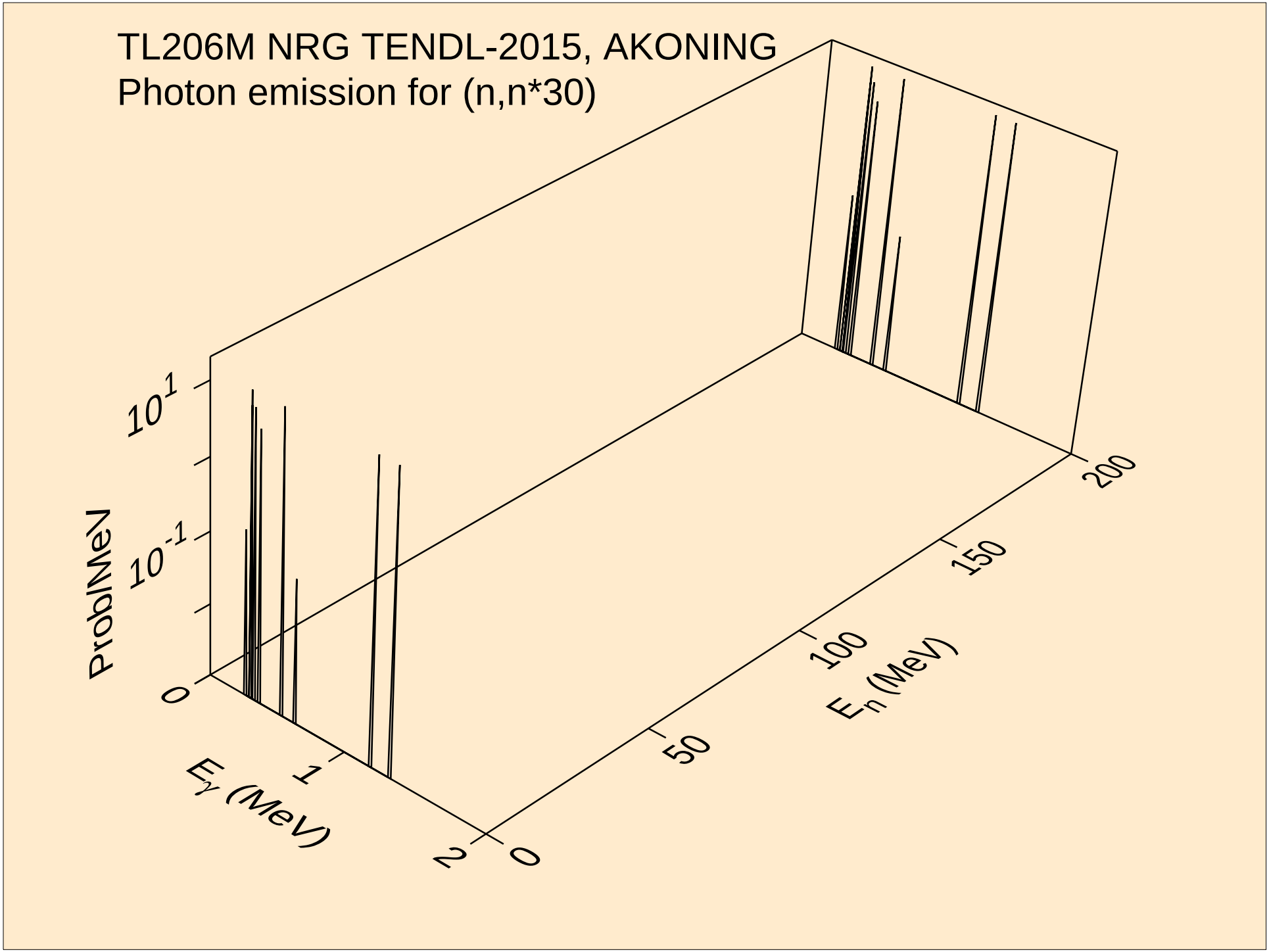

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*25)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

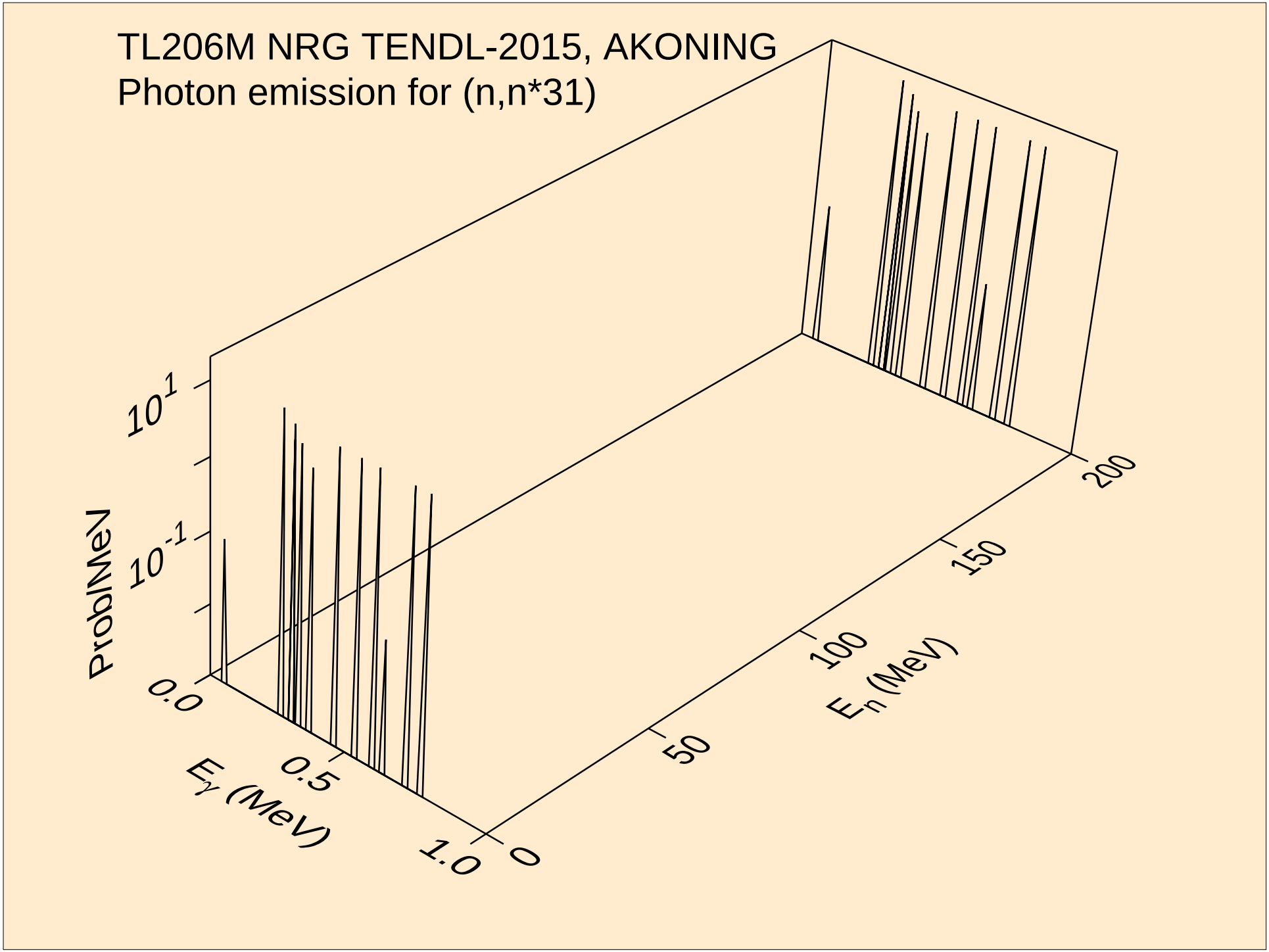

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*26)
Prob/MeV
10^{0}
10^{-2}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

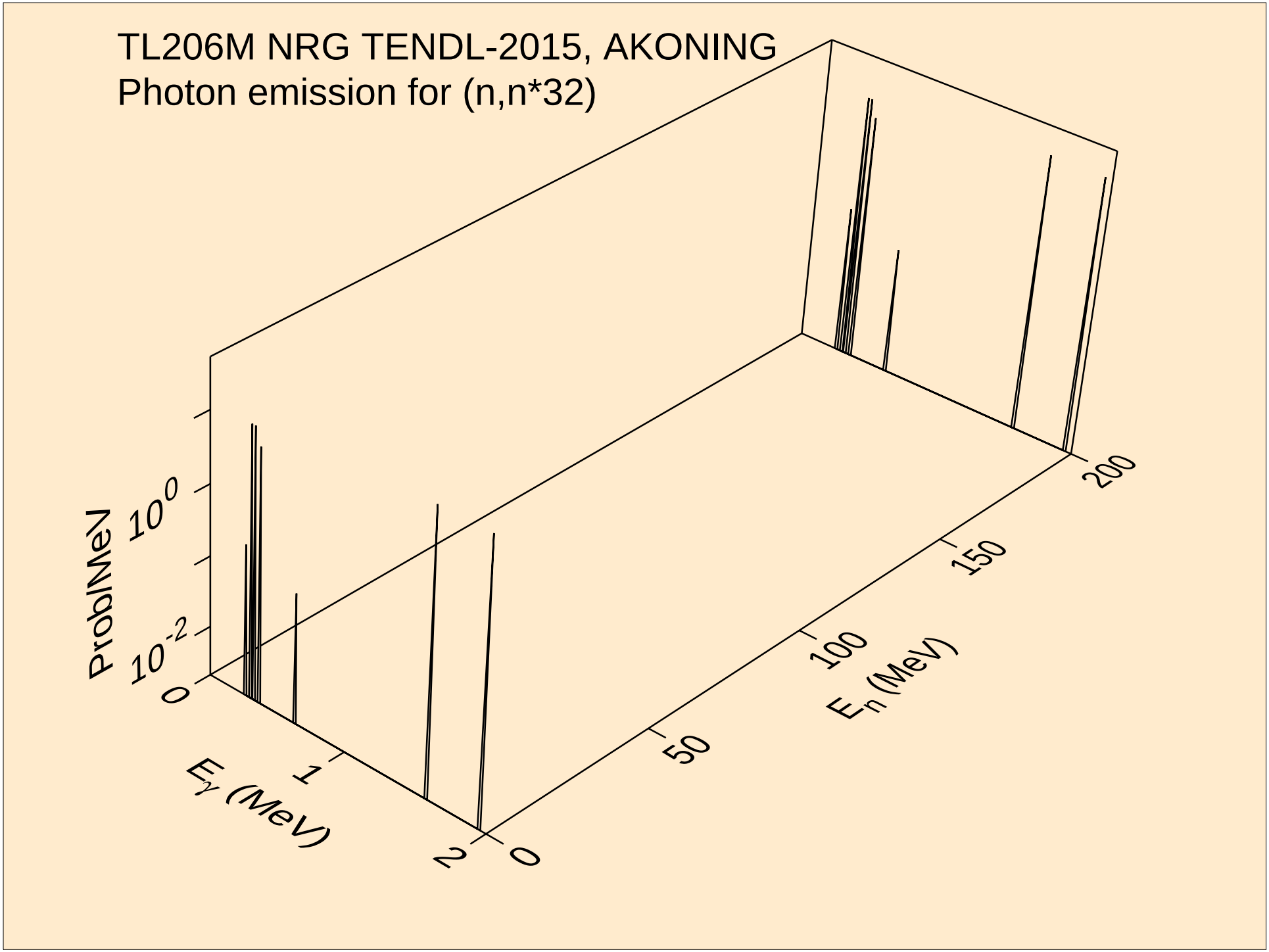

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*27)
Prob/MeV
10^{1}
10^{-1}
0.0
0.5
1.0
1.5
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

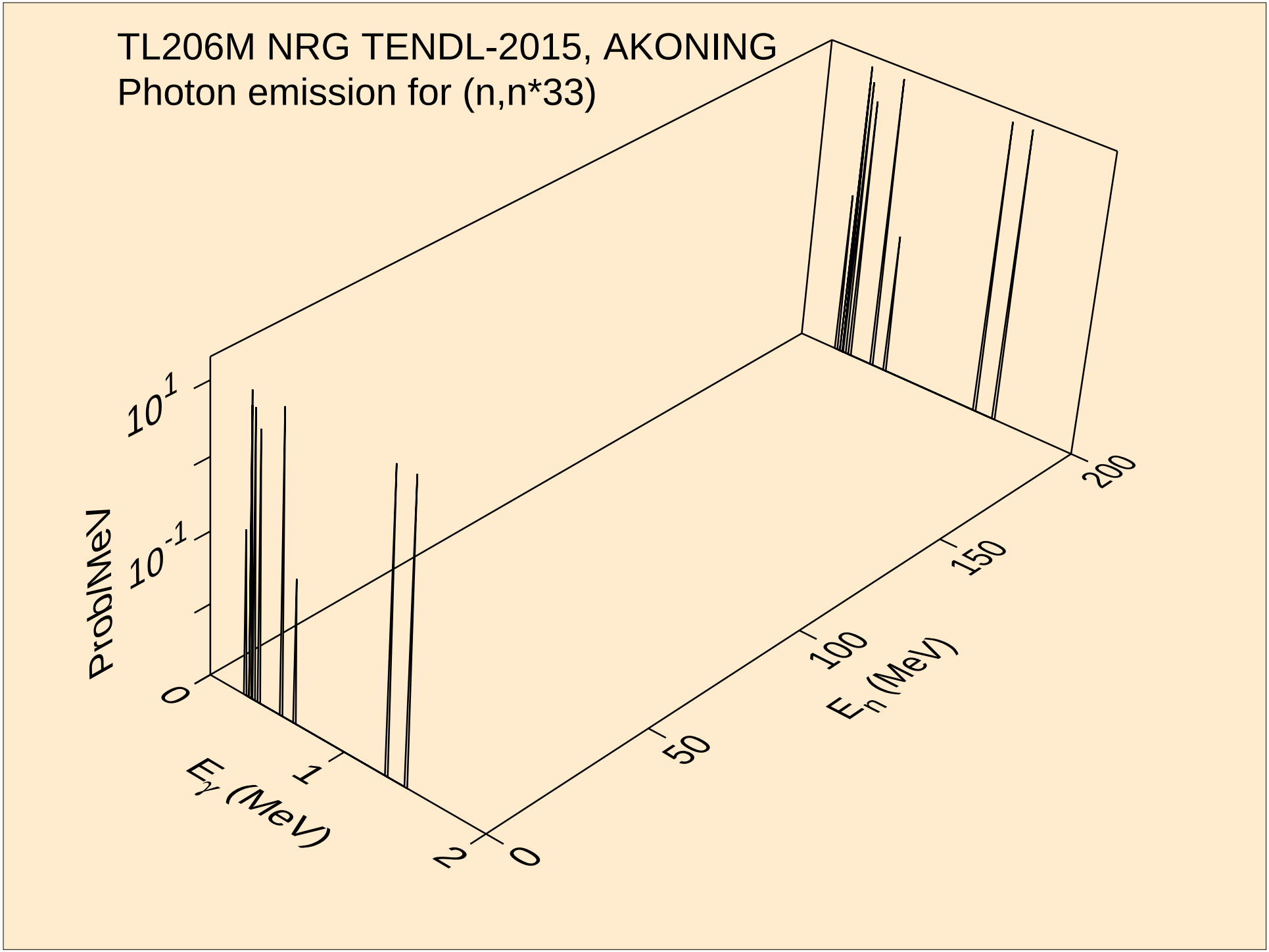

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*28)
Prob/MeV
10^0
10^-2
0
1
2
3
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

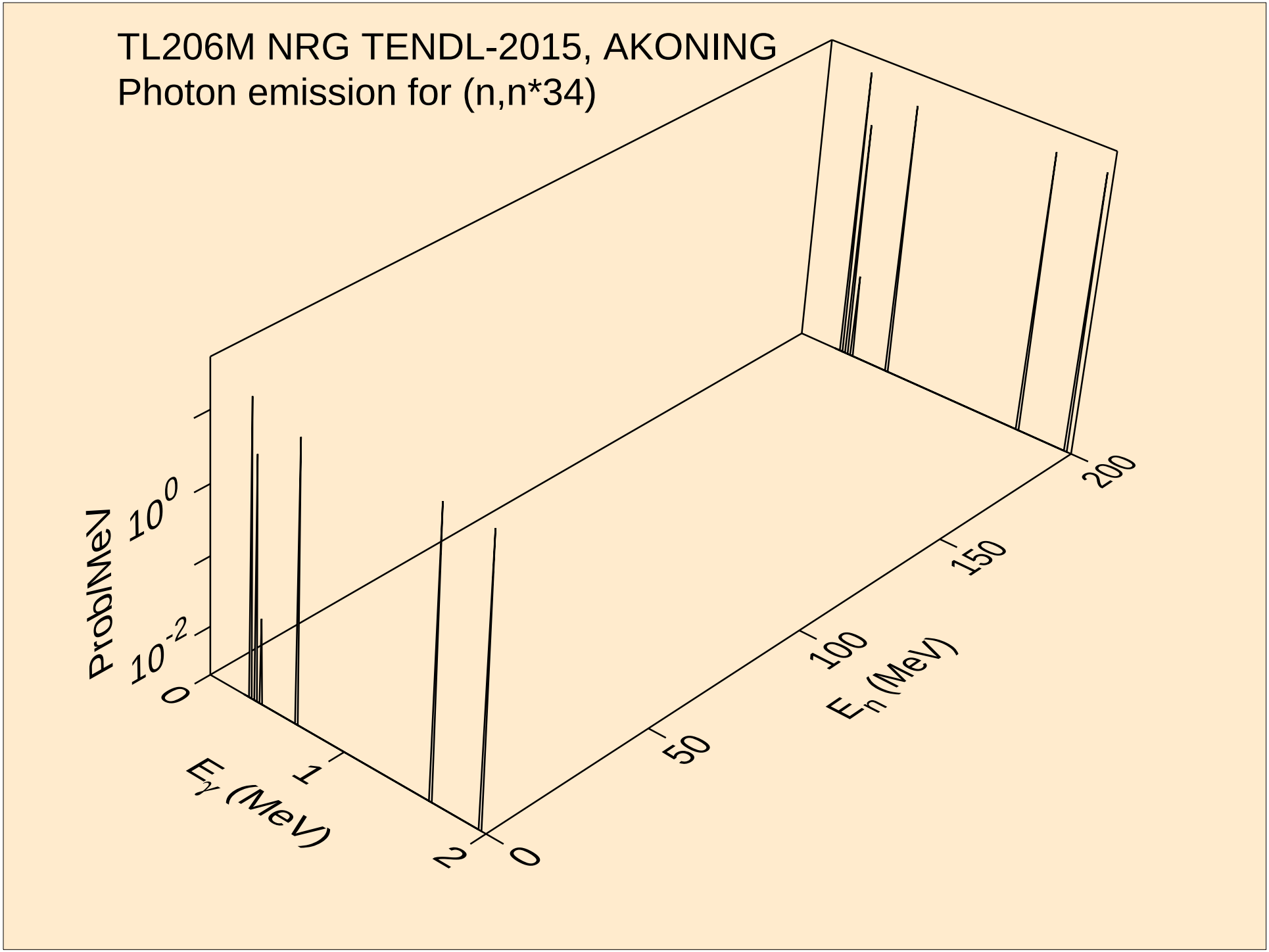

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*29)
Prob/MeV
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

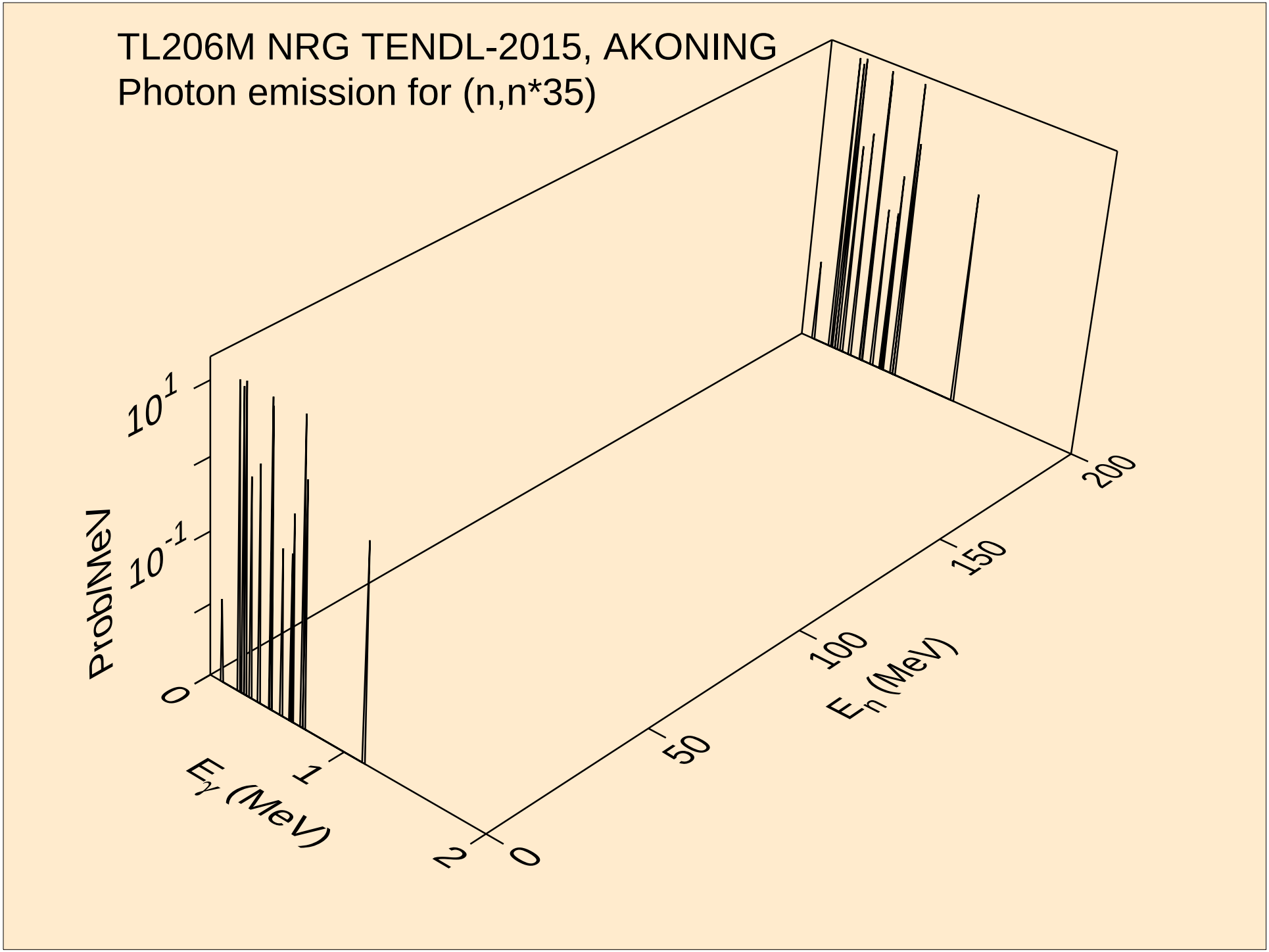

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*30)
Prob/MeV
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

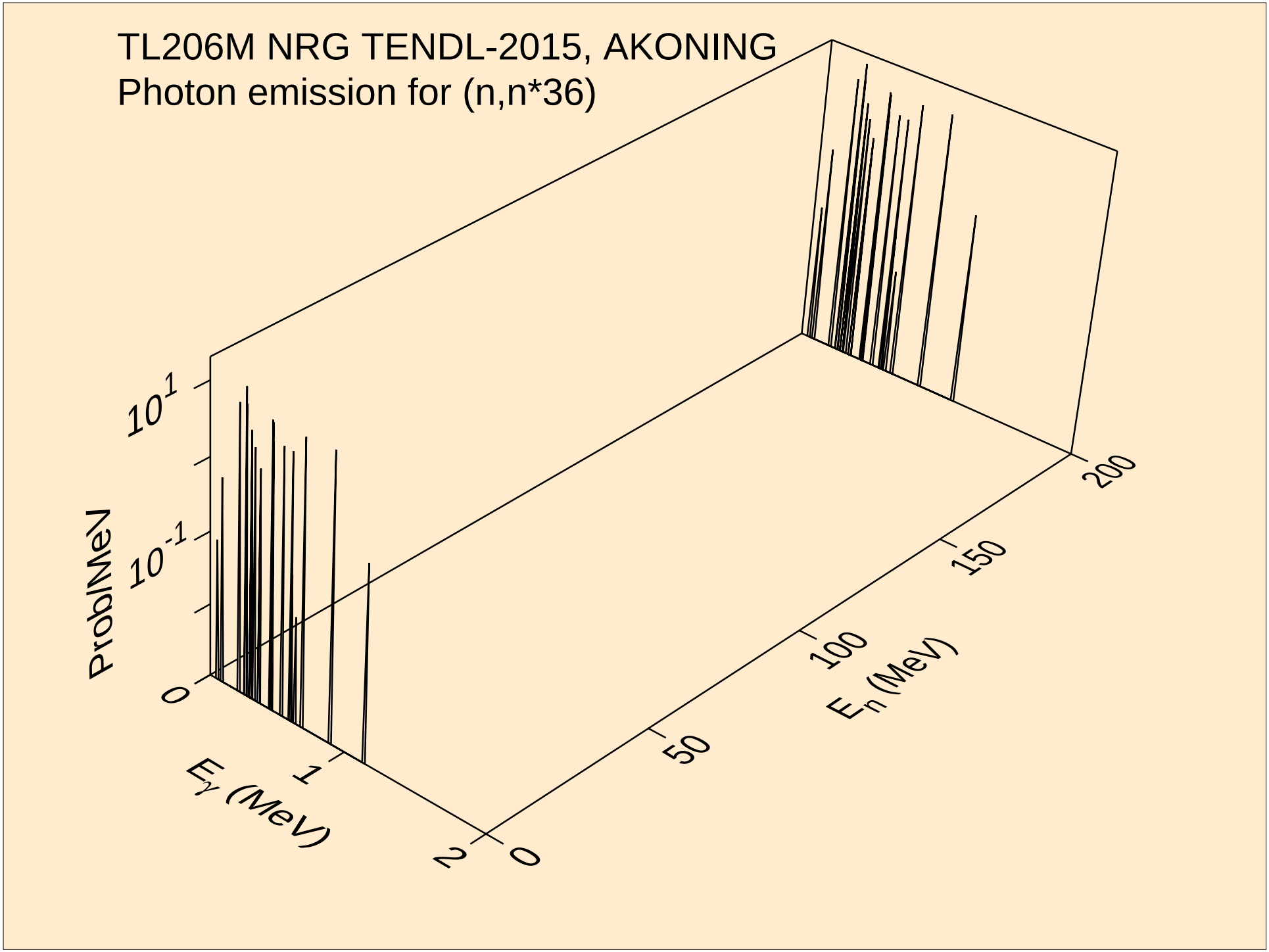

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*31)
Prob/MeV
10^{1}
10^{-1}
0.0
0.5
1.0
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

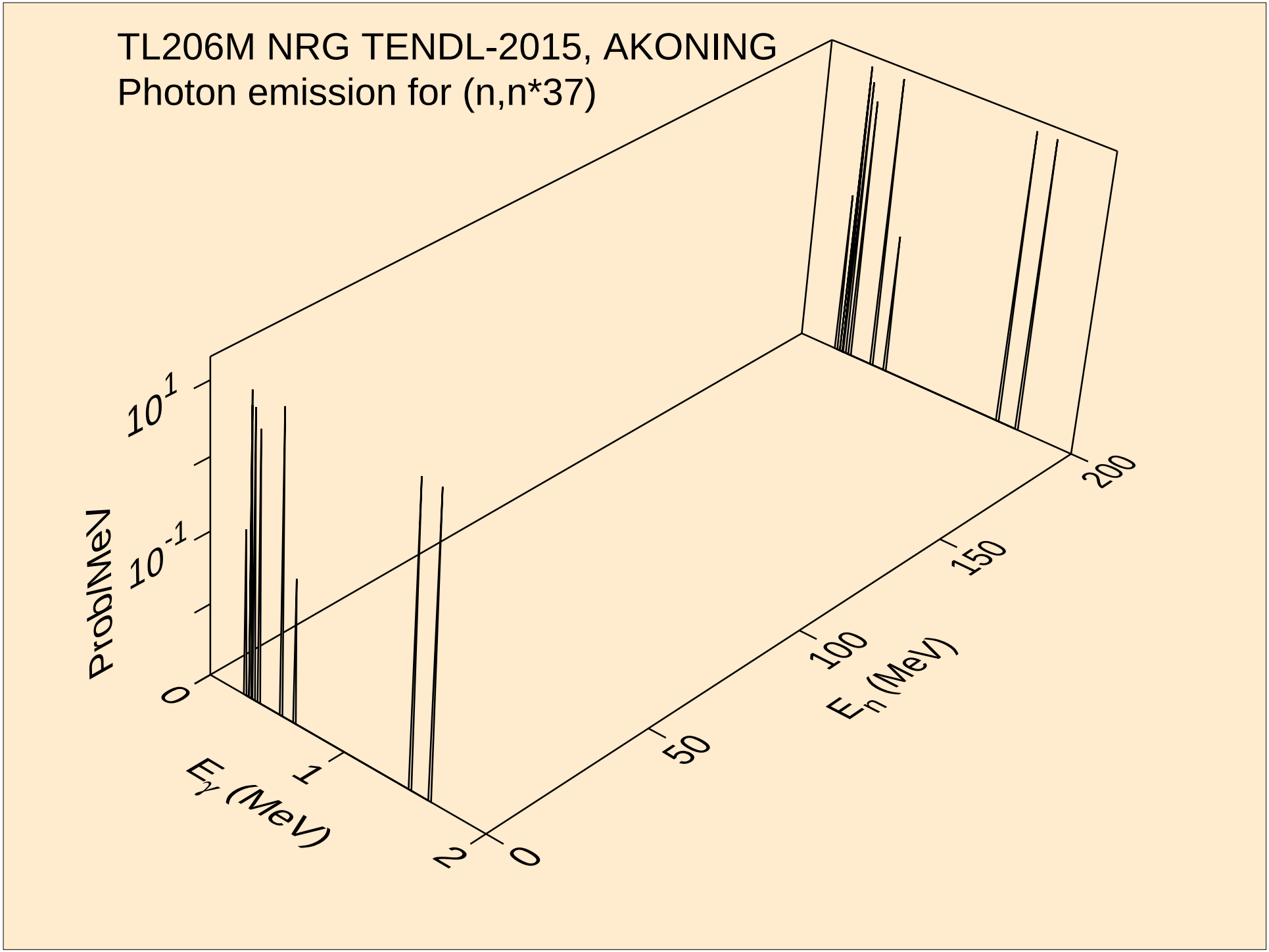

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*32)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
0
50
100
150
200
En (MeV)

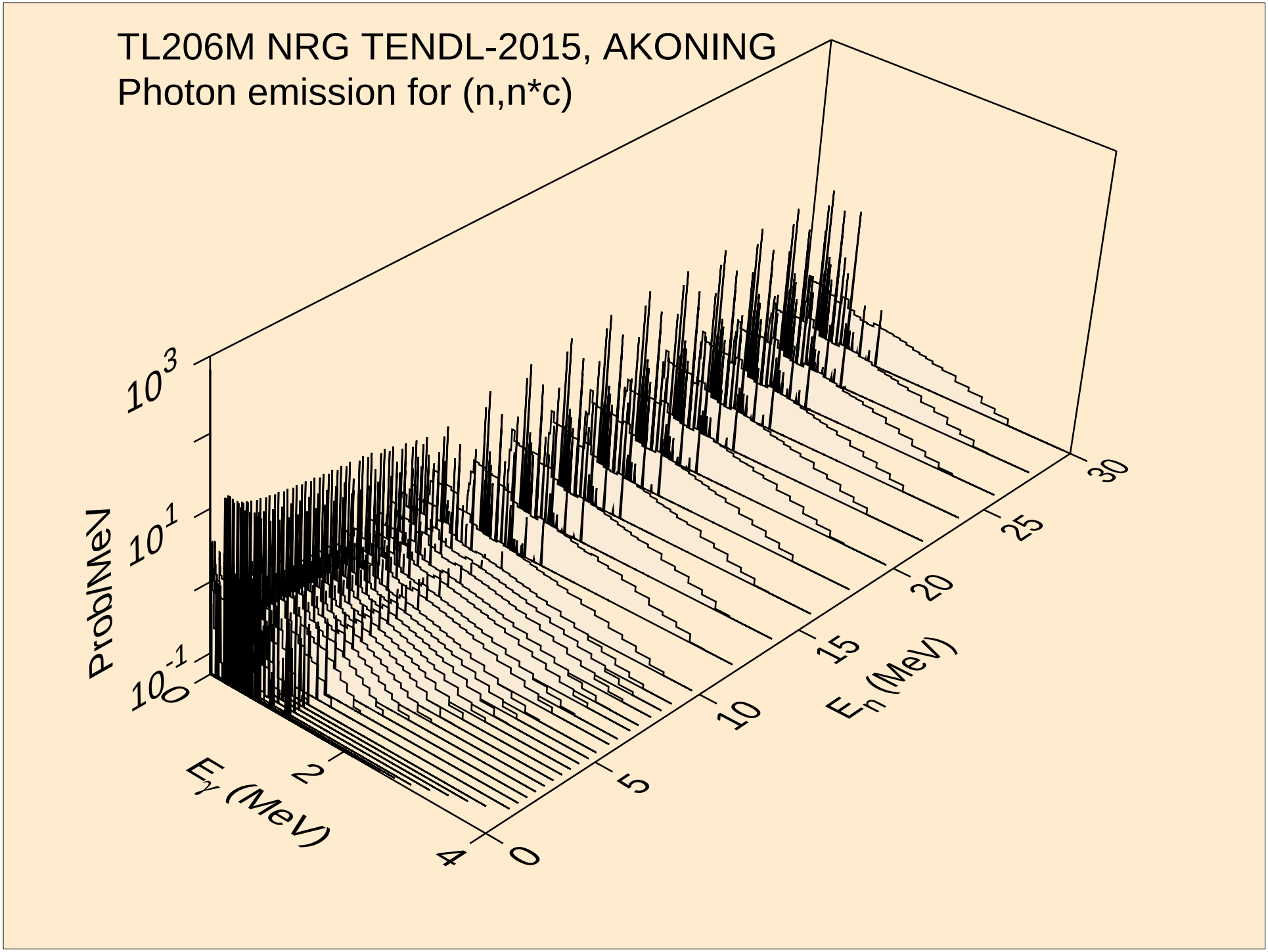

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*33)
Prob/MeV
10^{1}
10^{-1}
0
E_γ (MeV)
1
2
0
50
100
150
200
E_n (MeV)

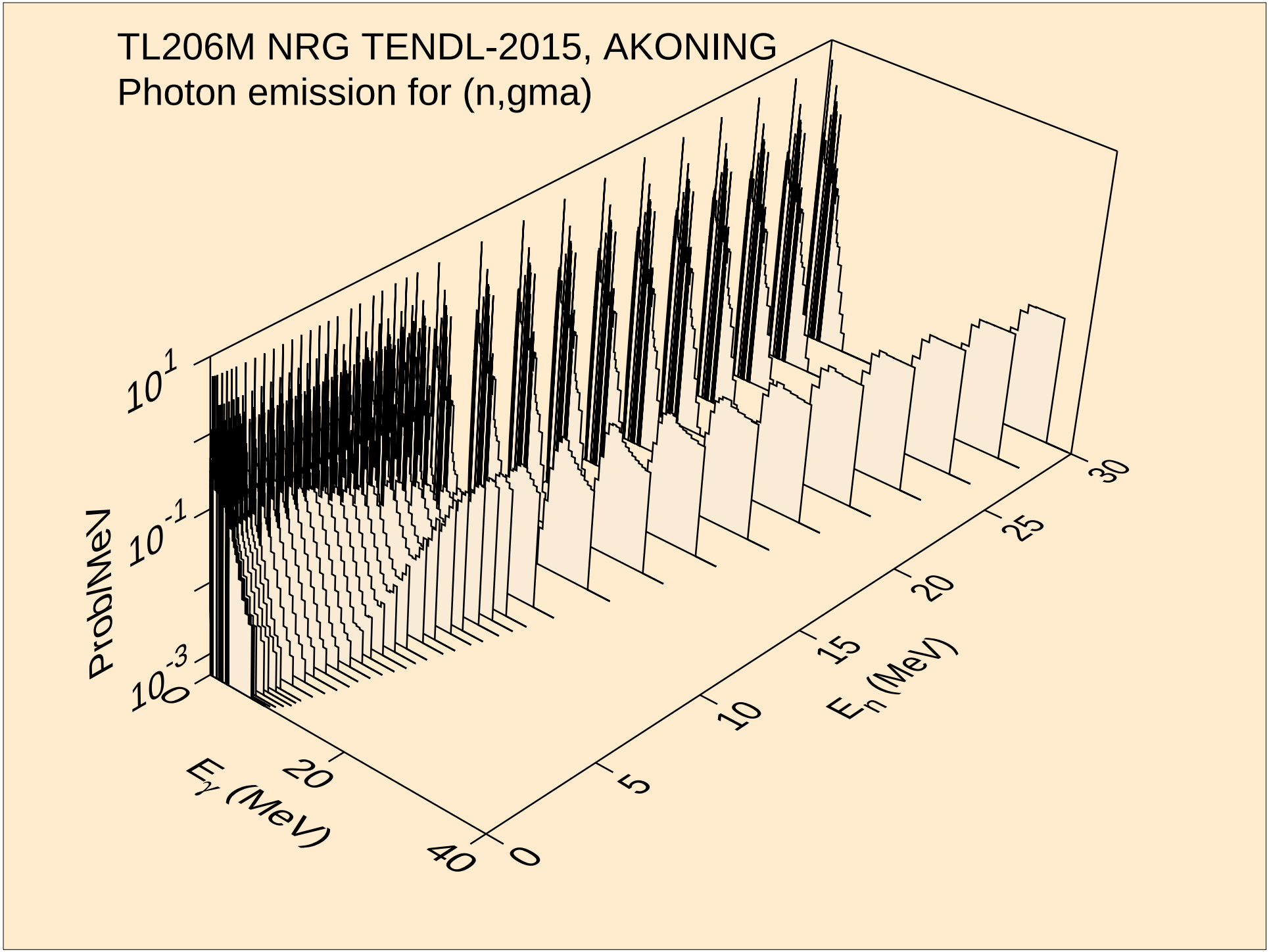

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*34)
Prob/MeV
10^0
10^-2
0
1
2
Eγ (MeV)
50
100
150
200
En (MeV)

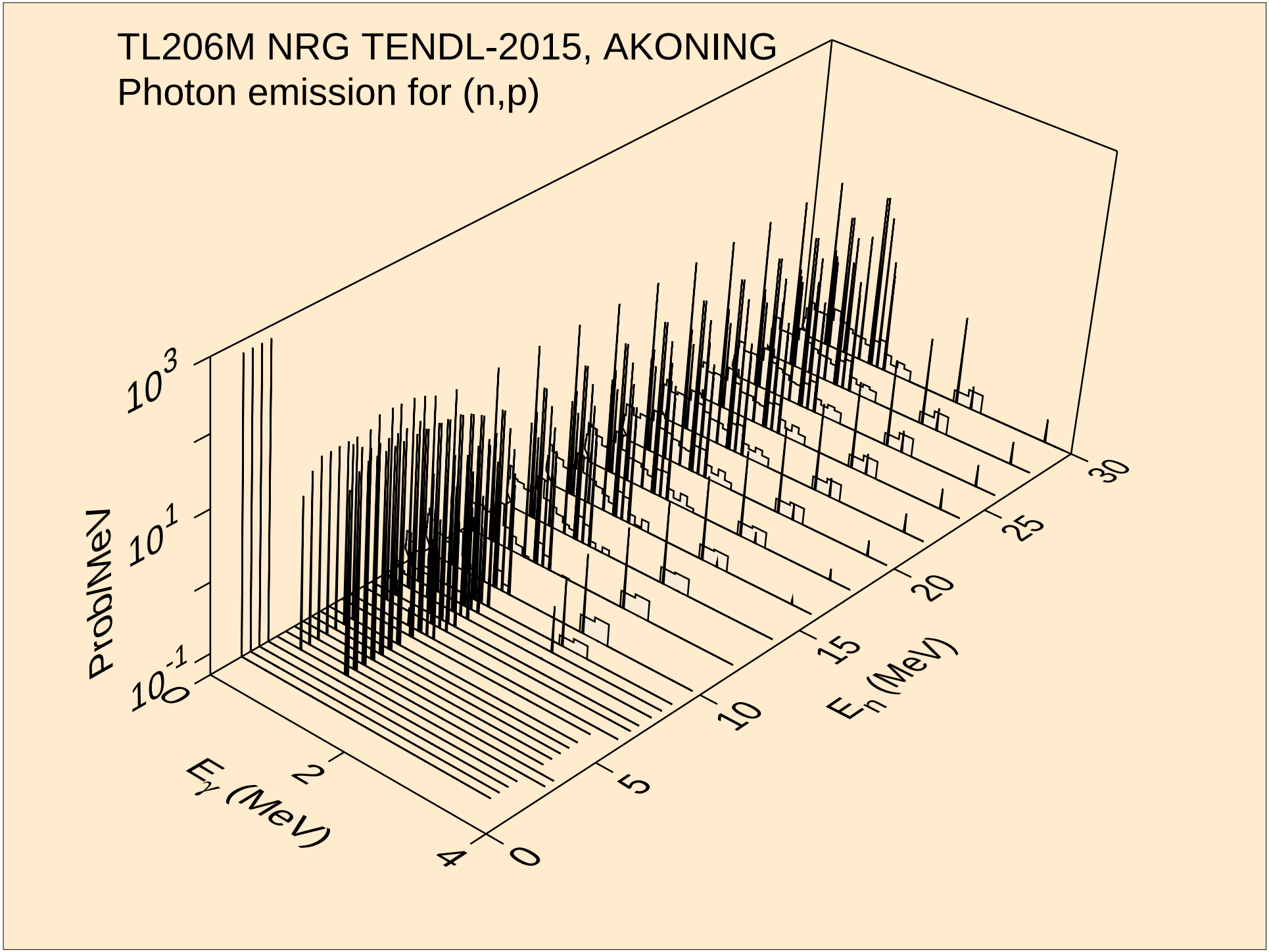

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*35)
Prob/MeV
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

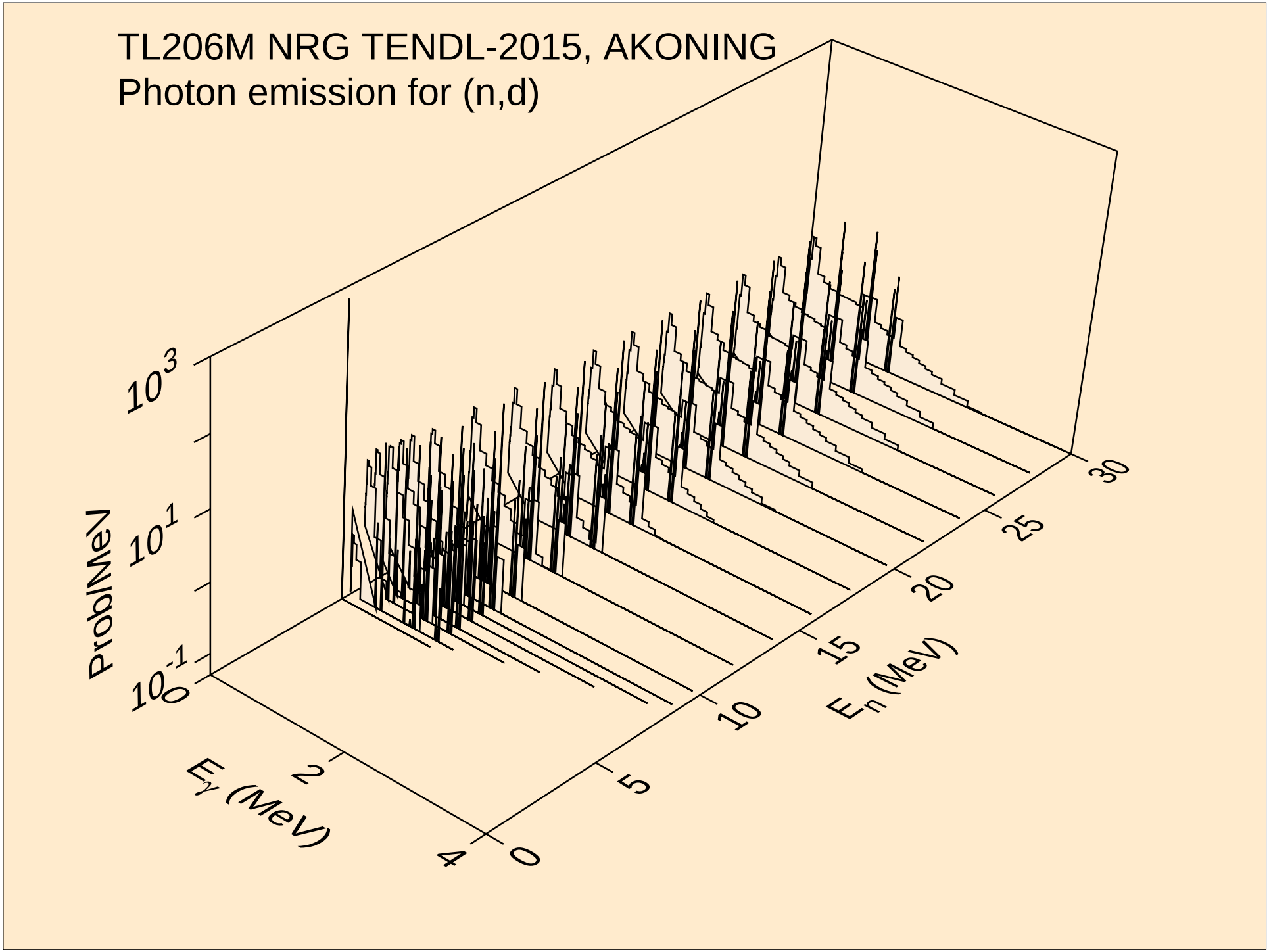

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*36)
Prob/MeV
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

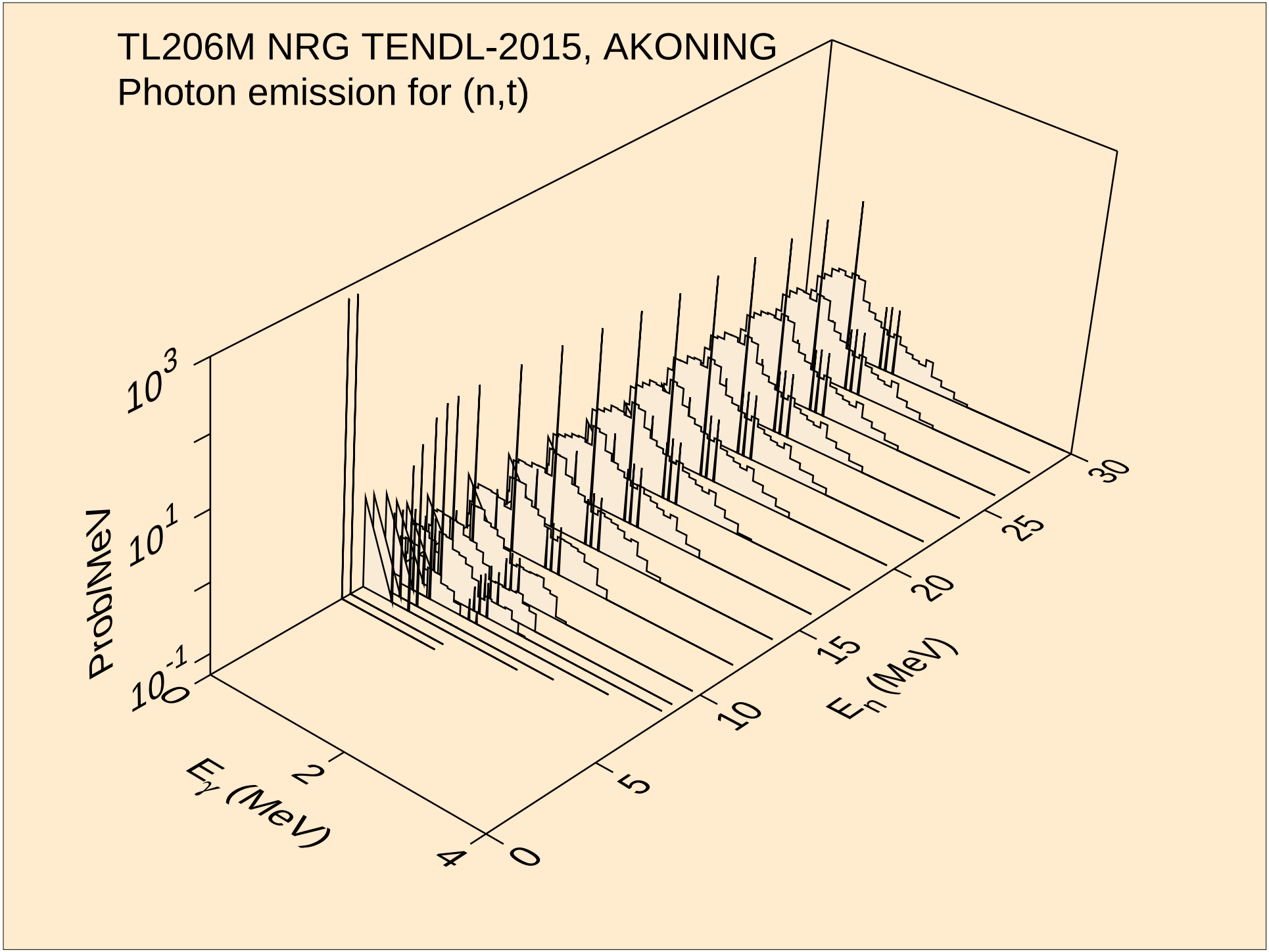

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*37)
Prob/MeV
10^{1}
10^{-1}
0
1
2
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

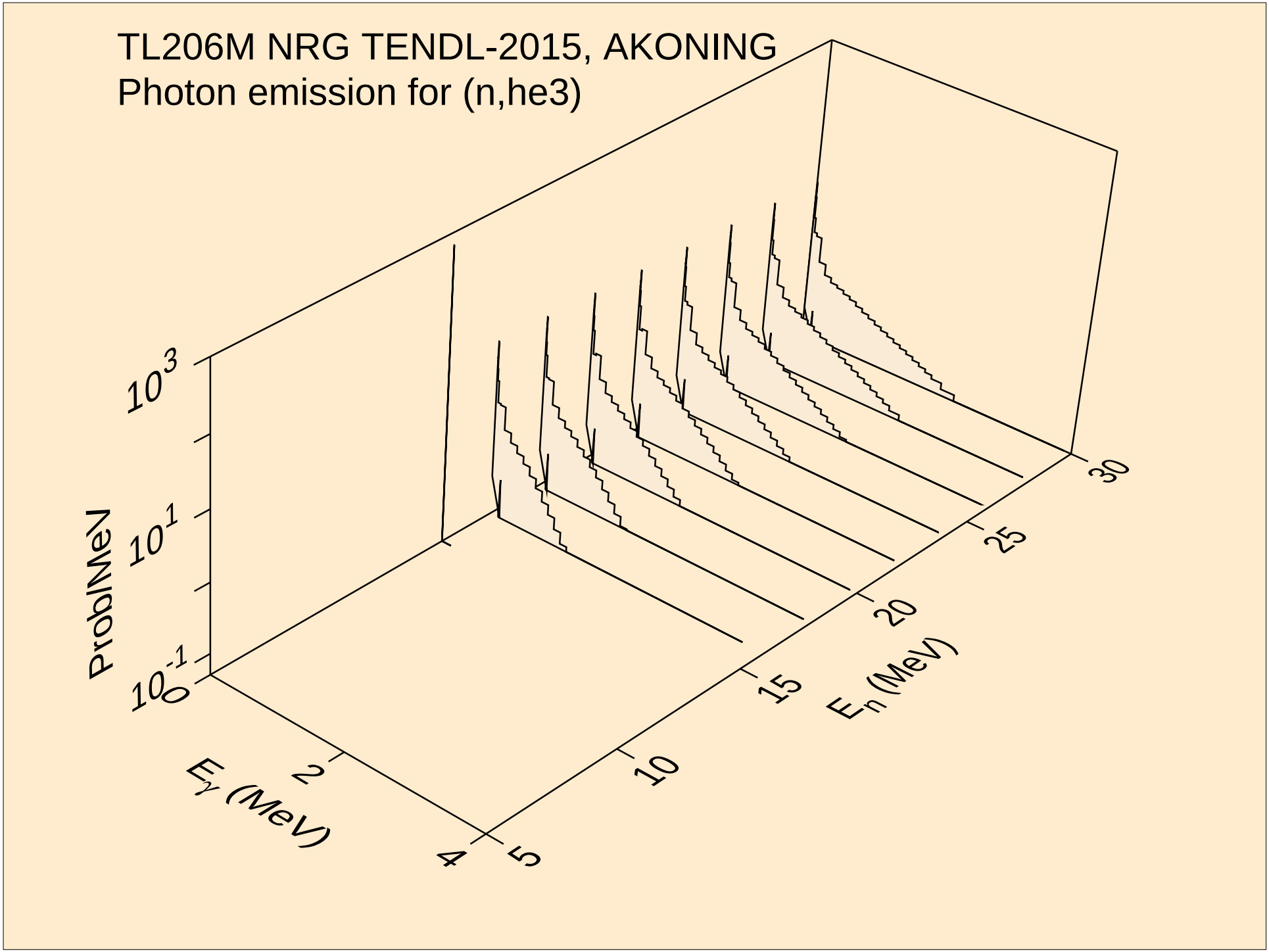

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,n*c)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

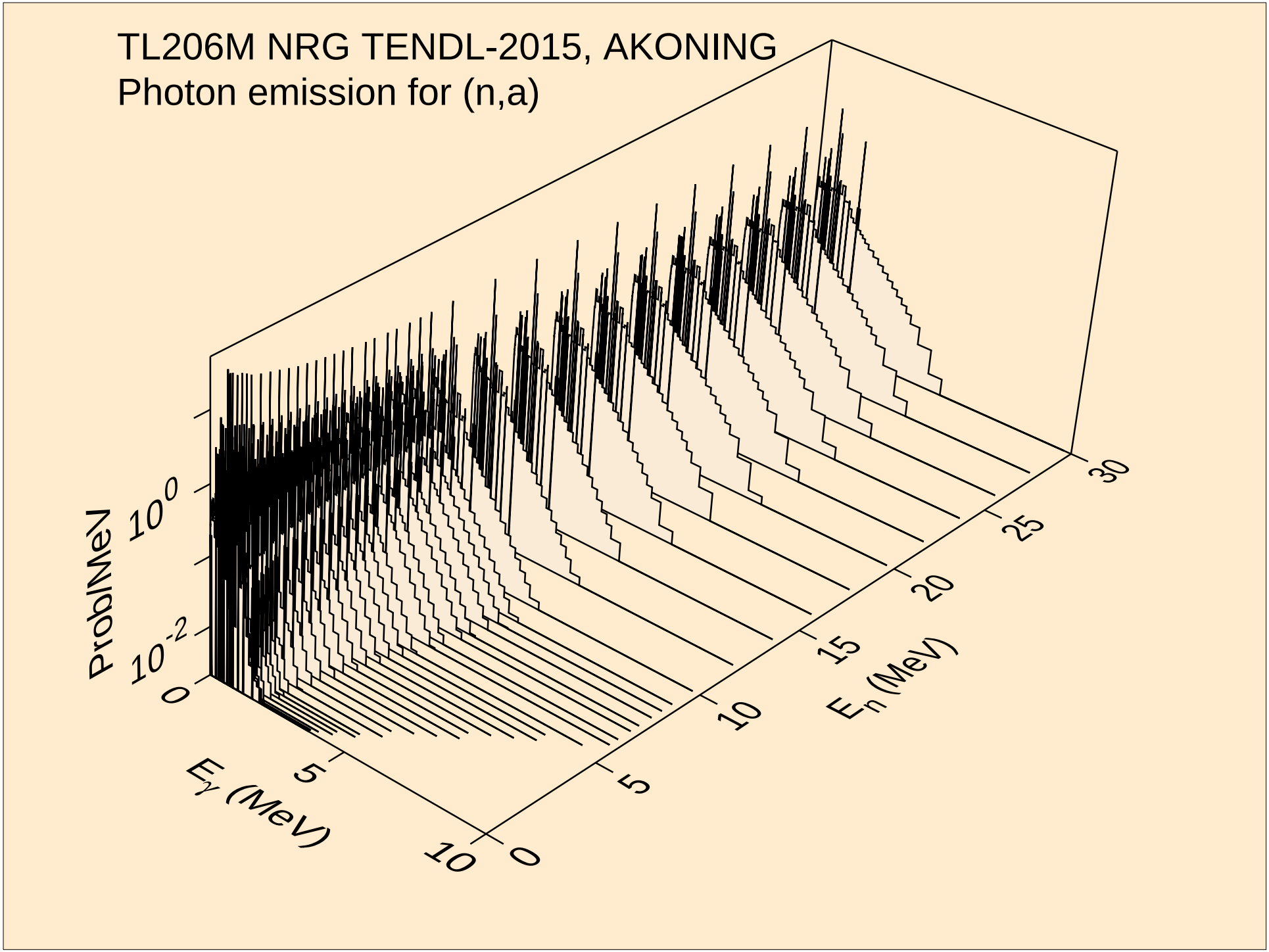

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,gma)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
20
40
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

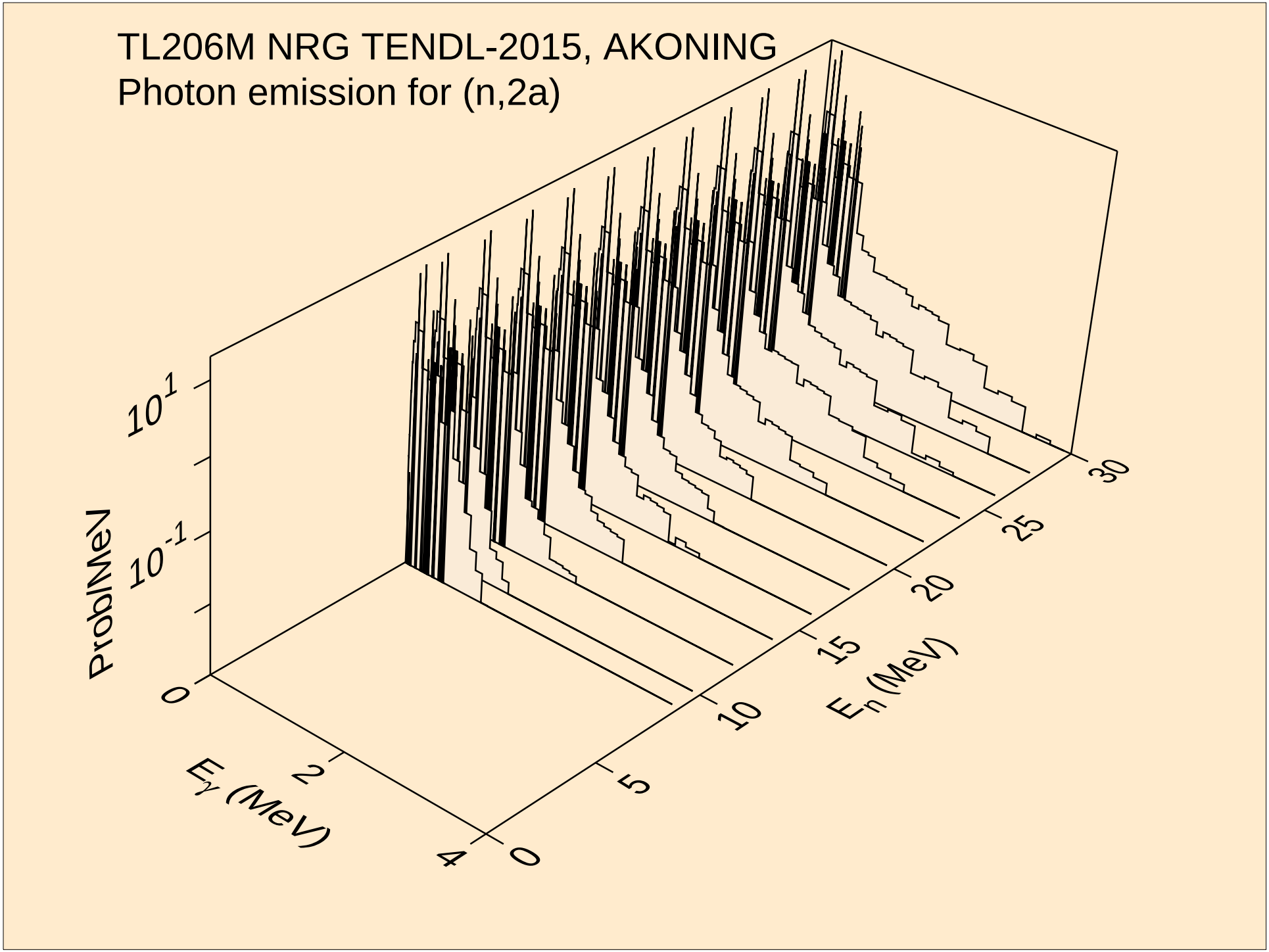

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,p)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

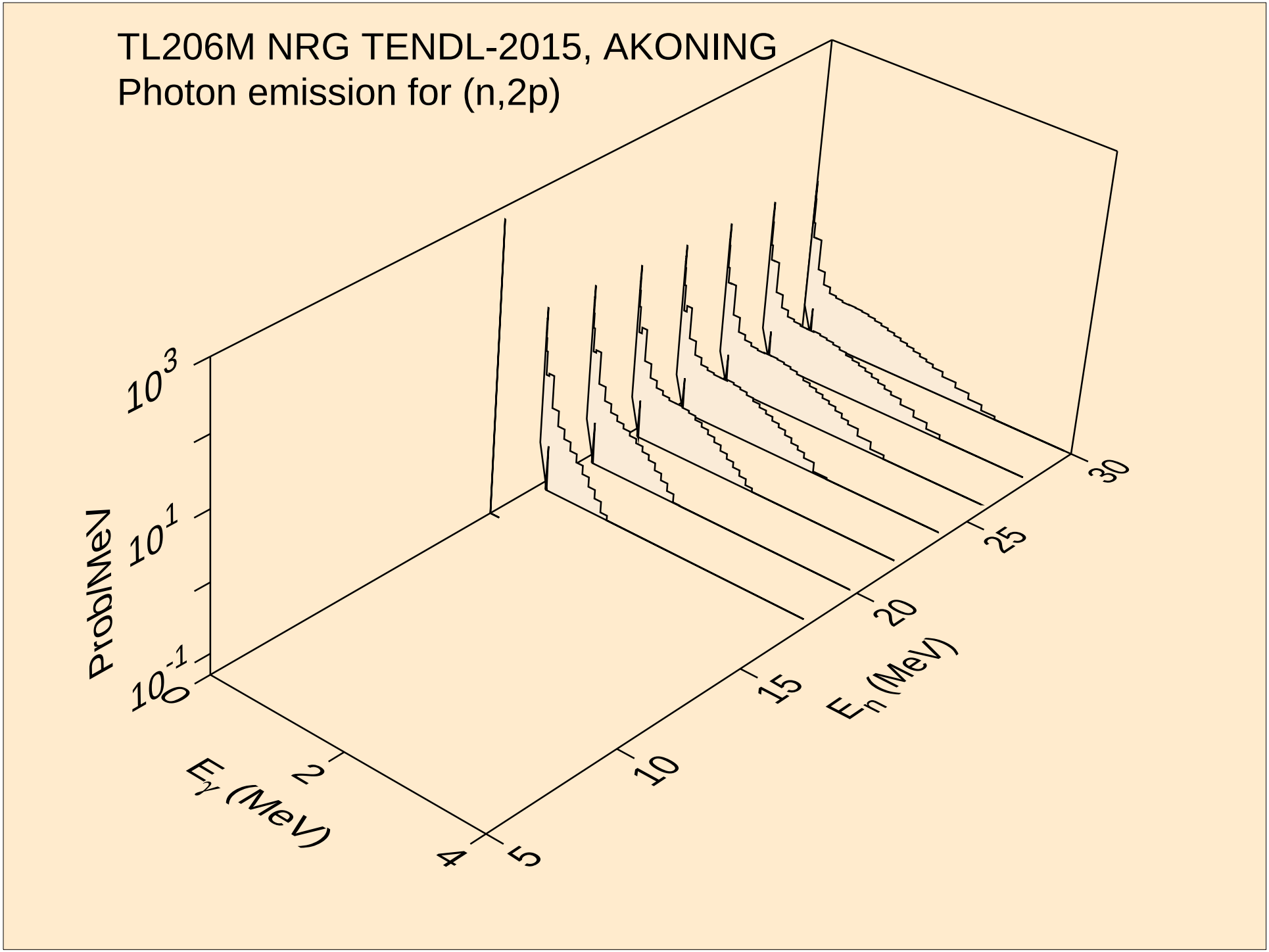

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,d)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

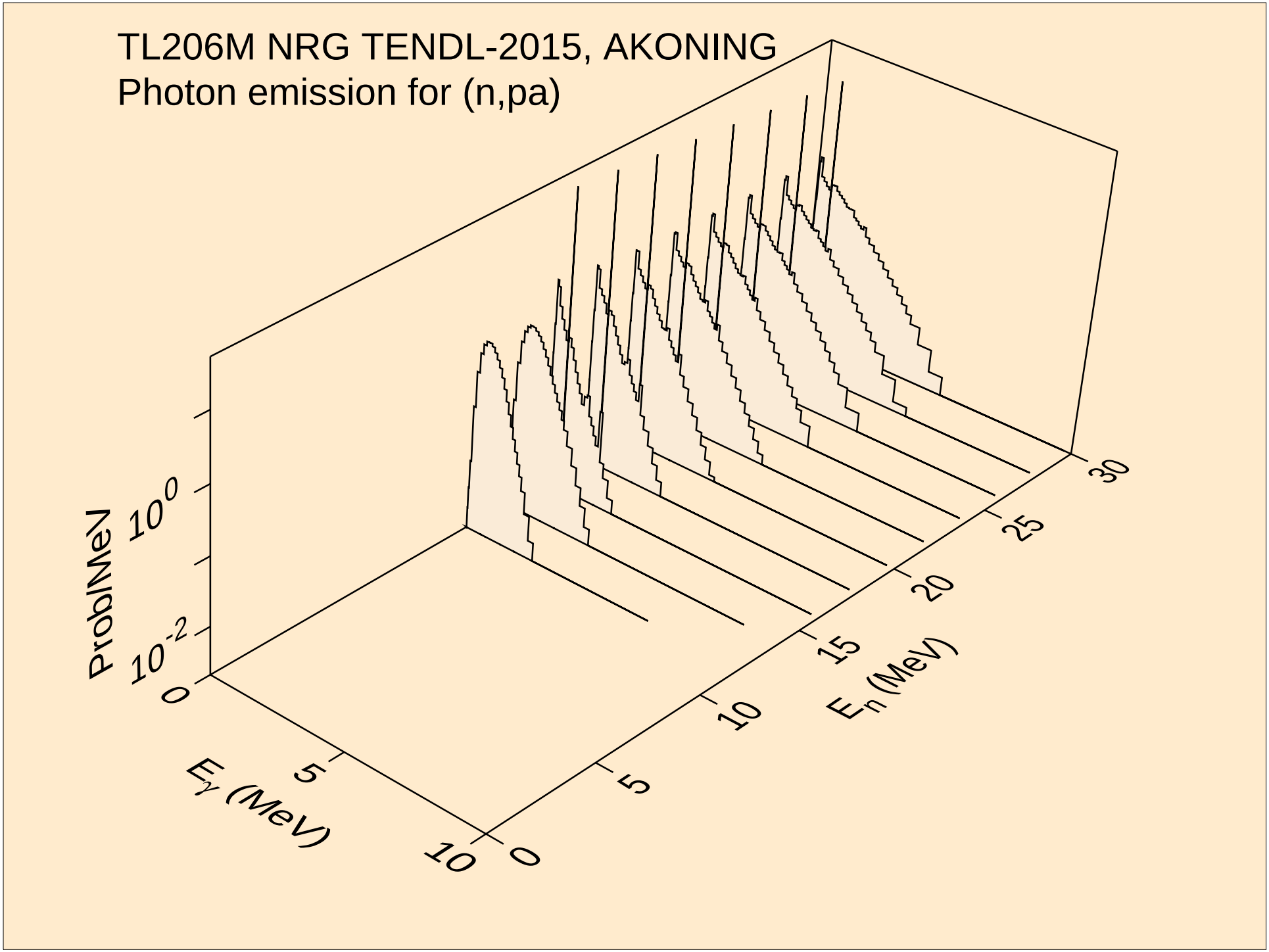

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,t)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

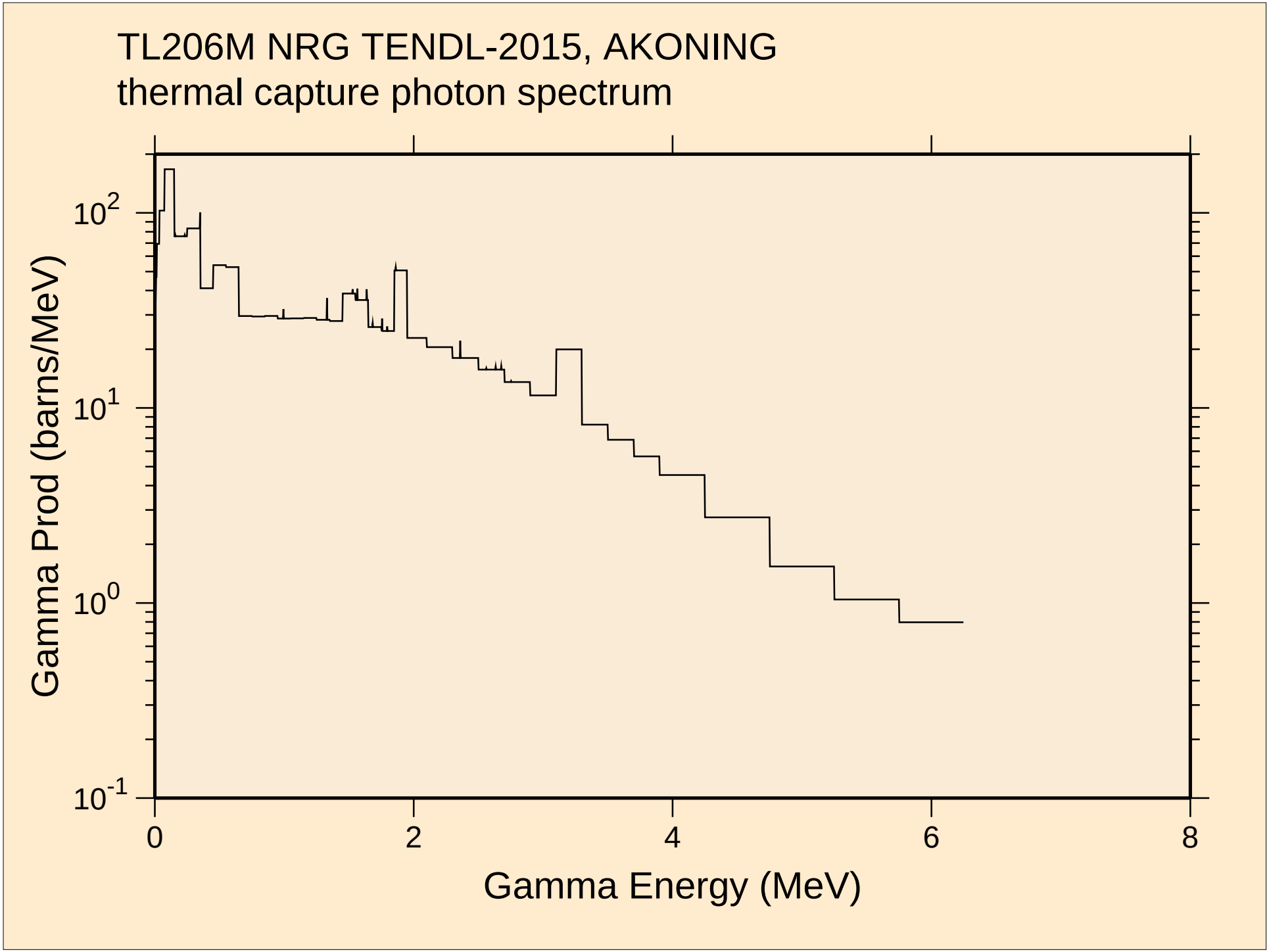

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,he3)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

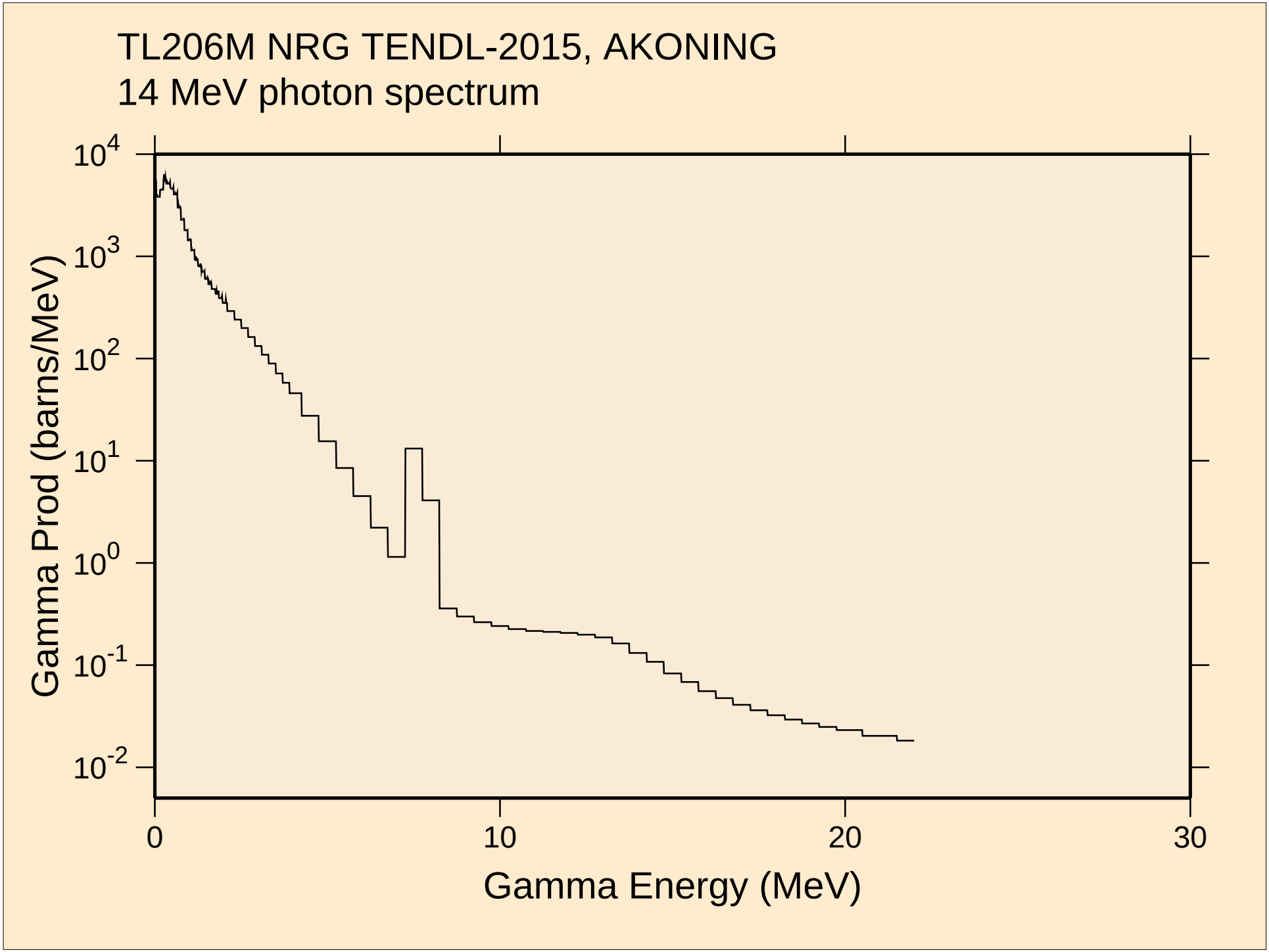

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,a)
Prob/MeV
10^0
10^-2
0
5
10
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

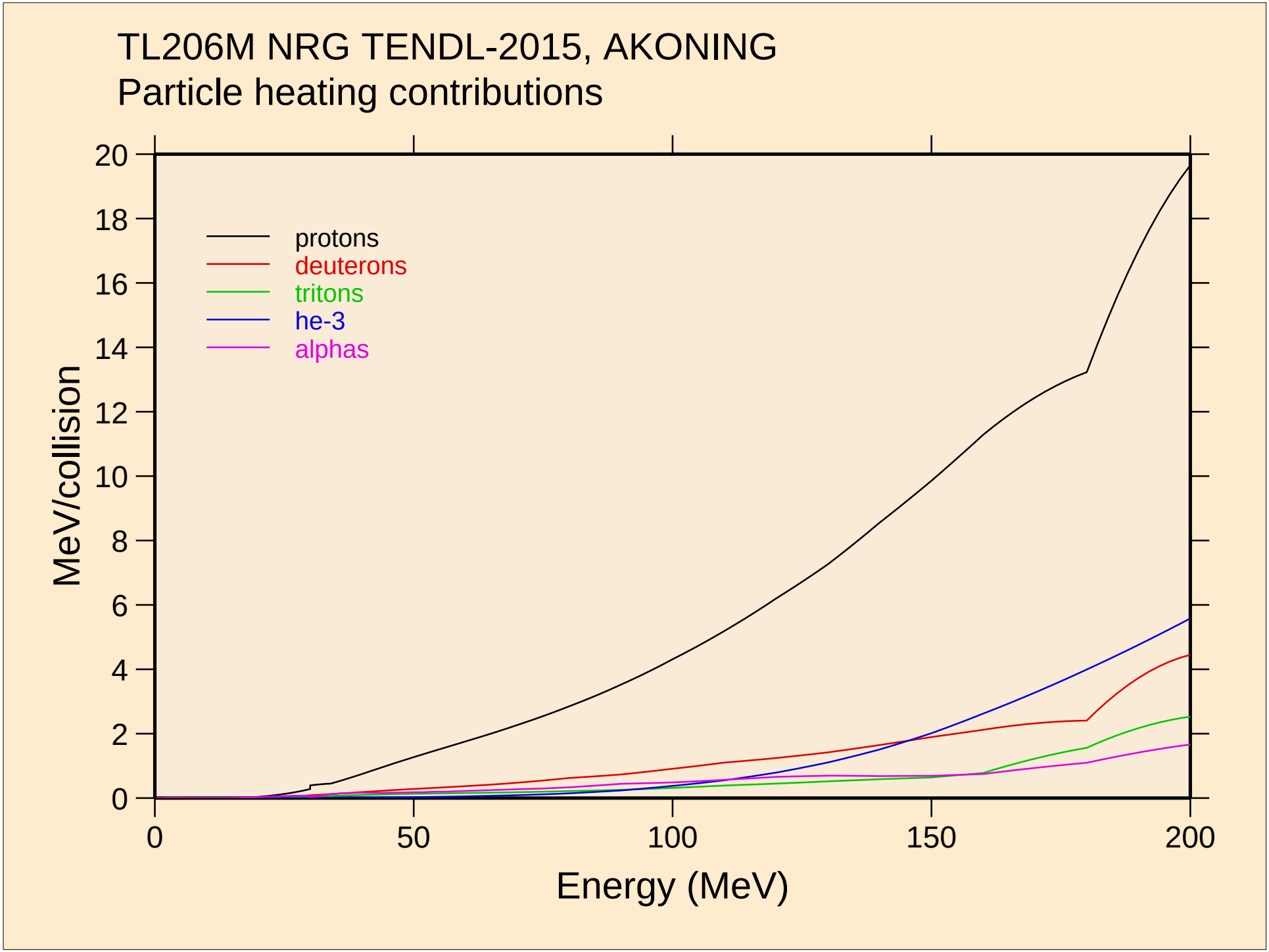

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2a)
Prob/MeV
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

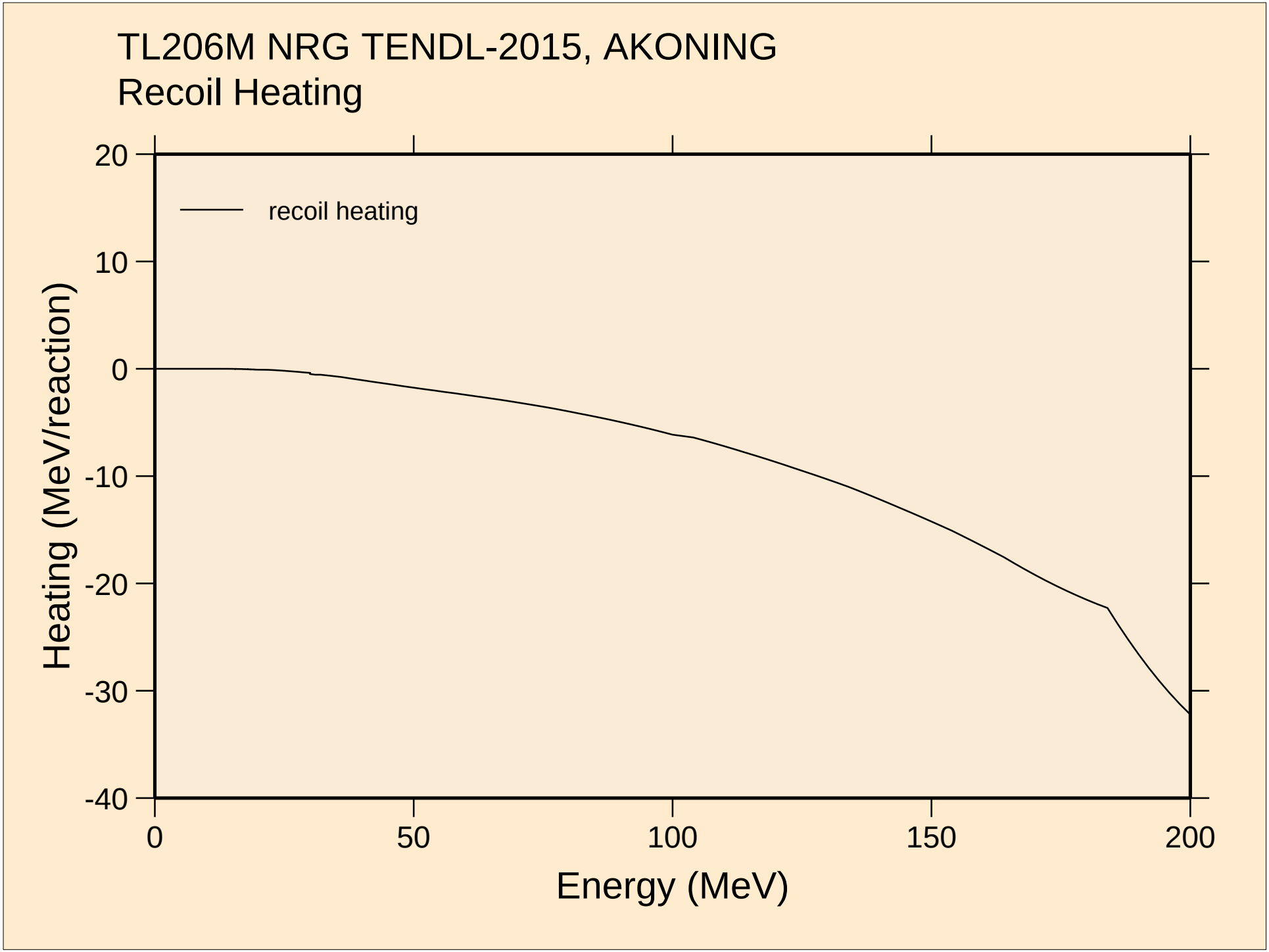

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,2p)
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

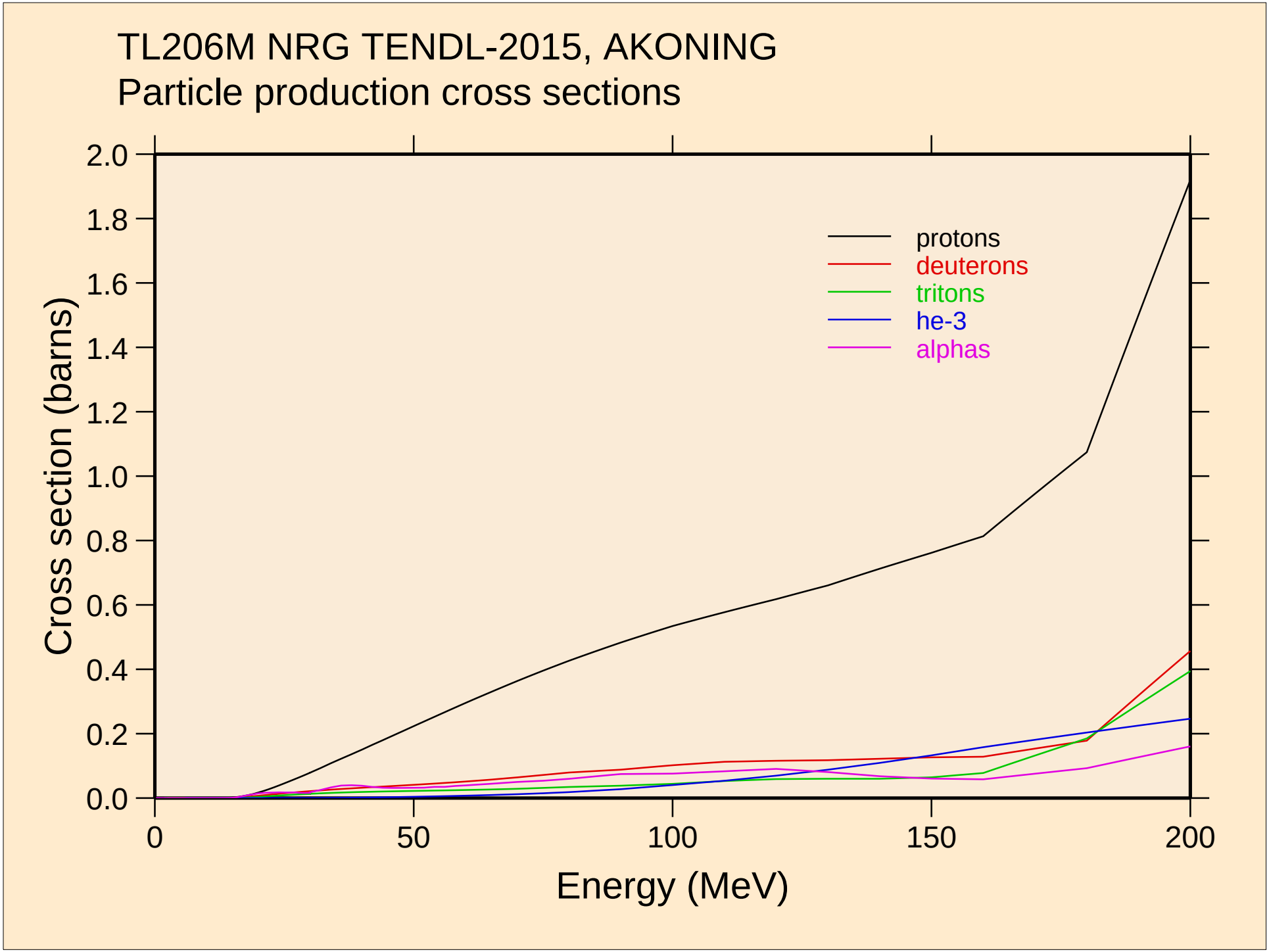

TL206M NRG TENDL-2015, AKONING
Photon emission for (n,pa)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
5
10
0
5
10
15
20
25
30
E_n (MeV)

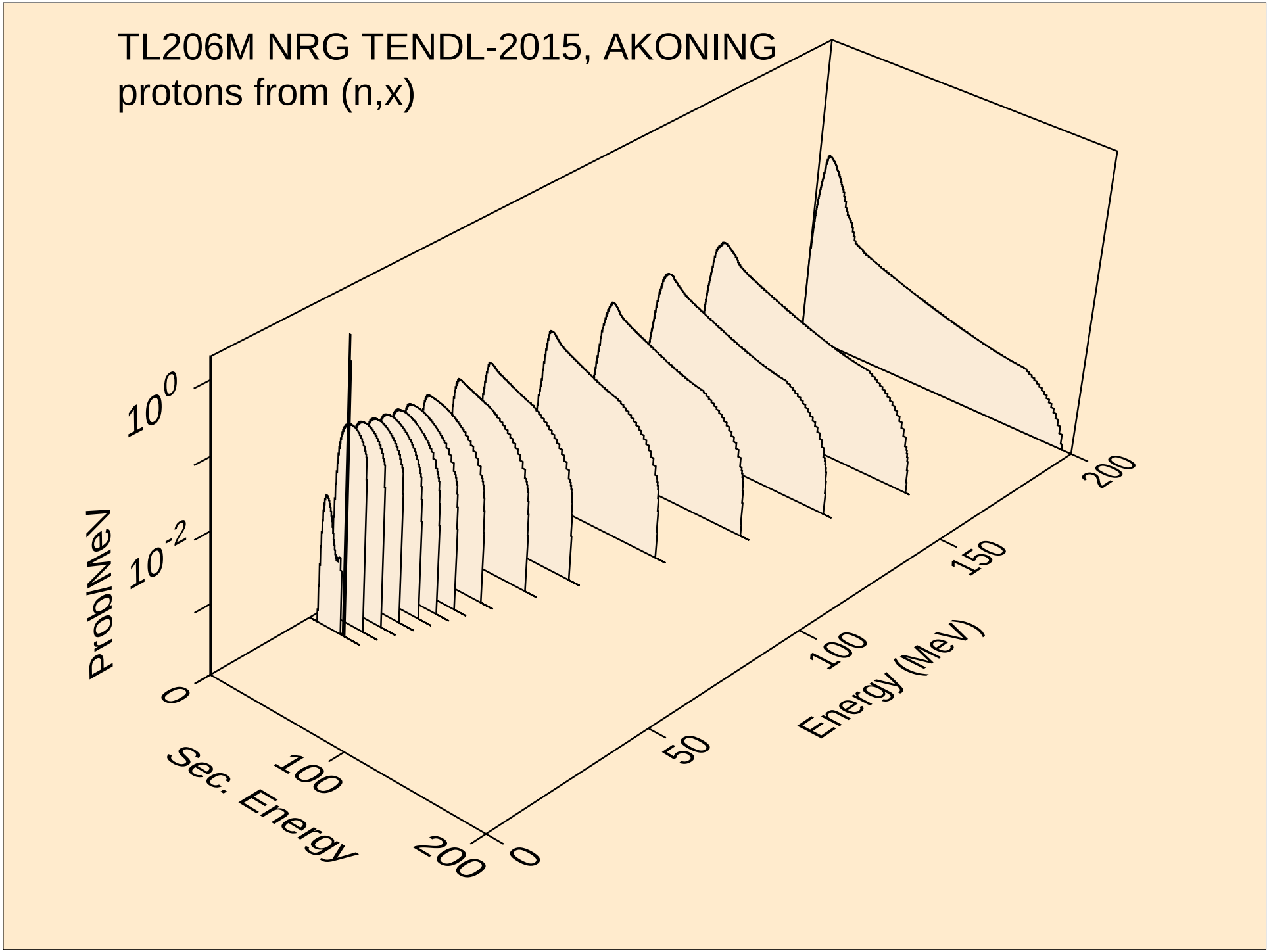

TL206M NRG TENDL-2015, AKONING
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^2
10^1
10^0
10^-1
0
2
4
6
8
Gamma Energy (MeV)

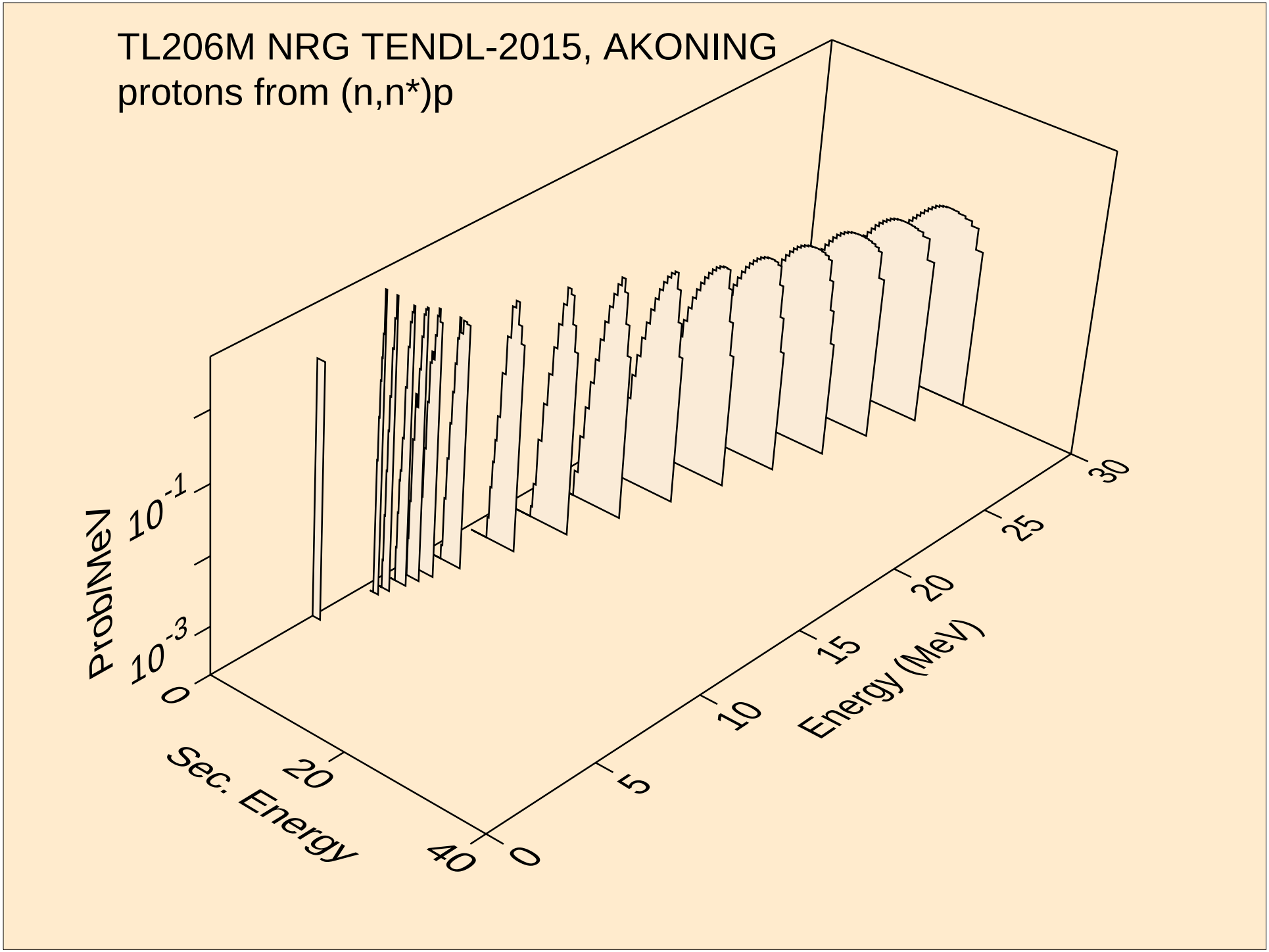

TL206M NRG TENDL-2015, AKONING
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^4
10^3
10^2
10^1
10^0
10^-1
10^-2
0
10
20
30
Gamma Energy (MeV)

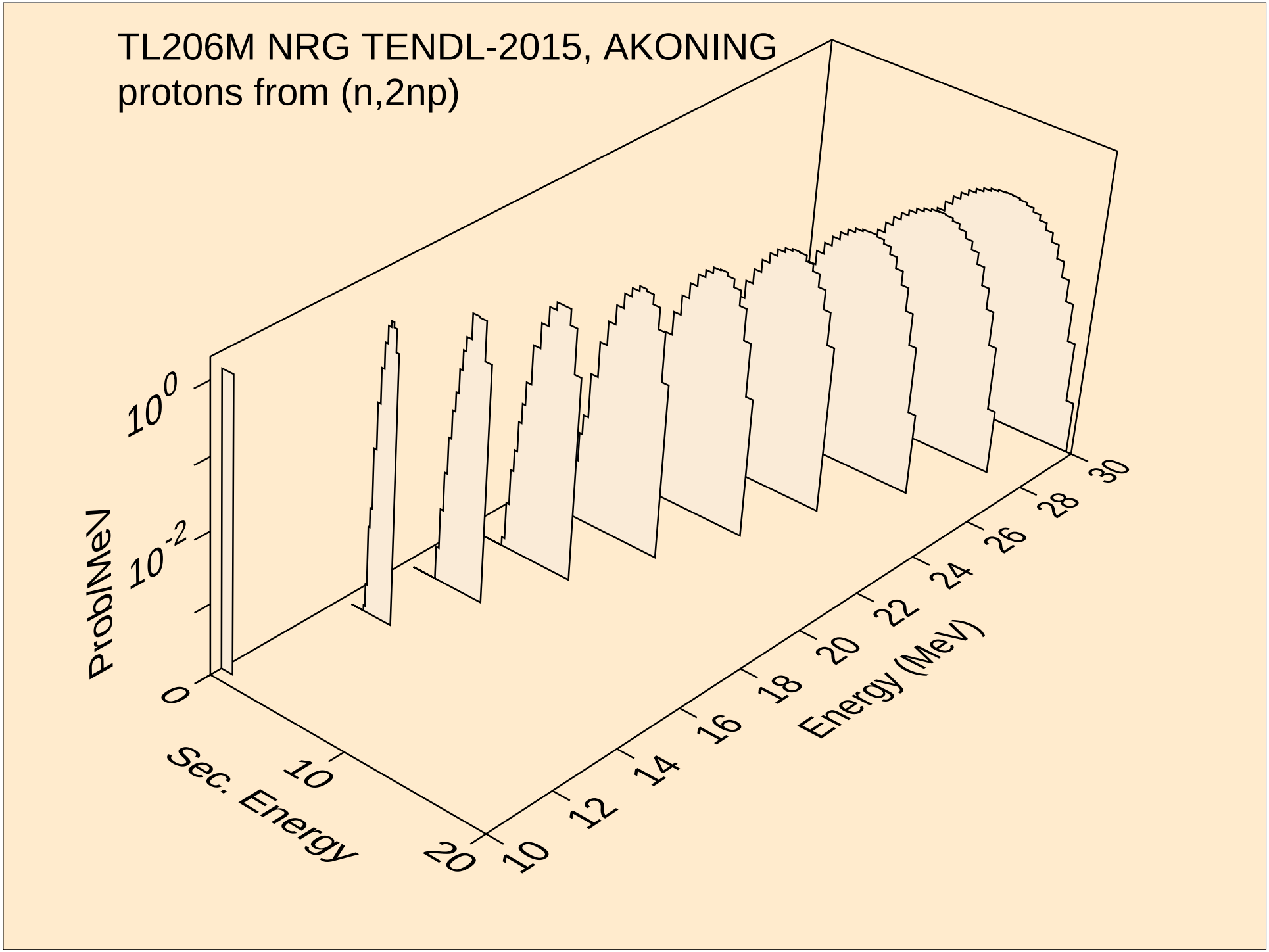

TL206M NRG TENDL-2015, AKONING
Particle heating contributions
protons
deuterons
tritons
he-3
alphas
MeV/collision
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20
0
50
100
150
200

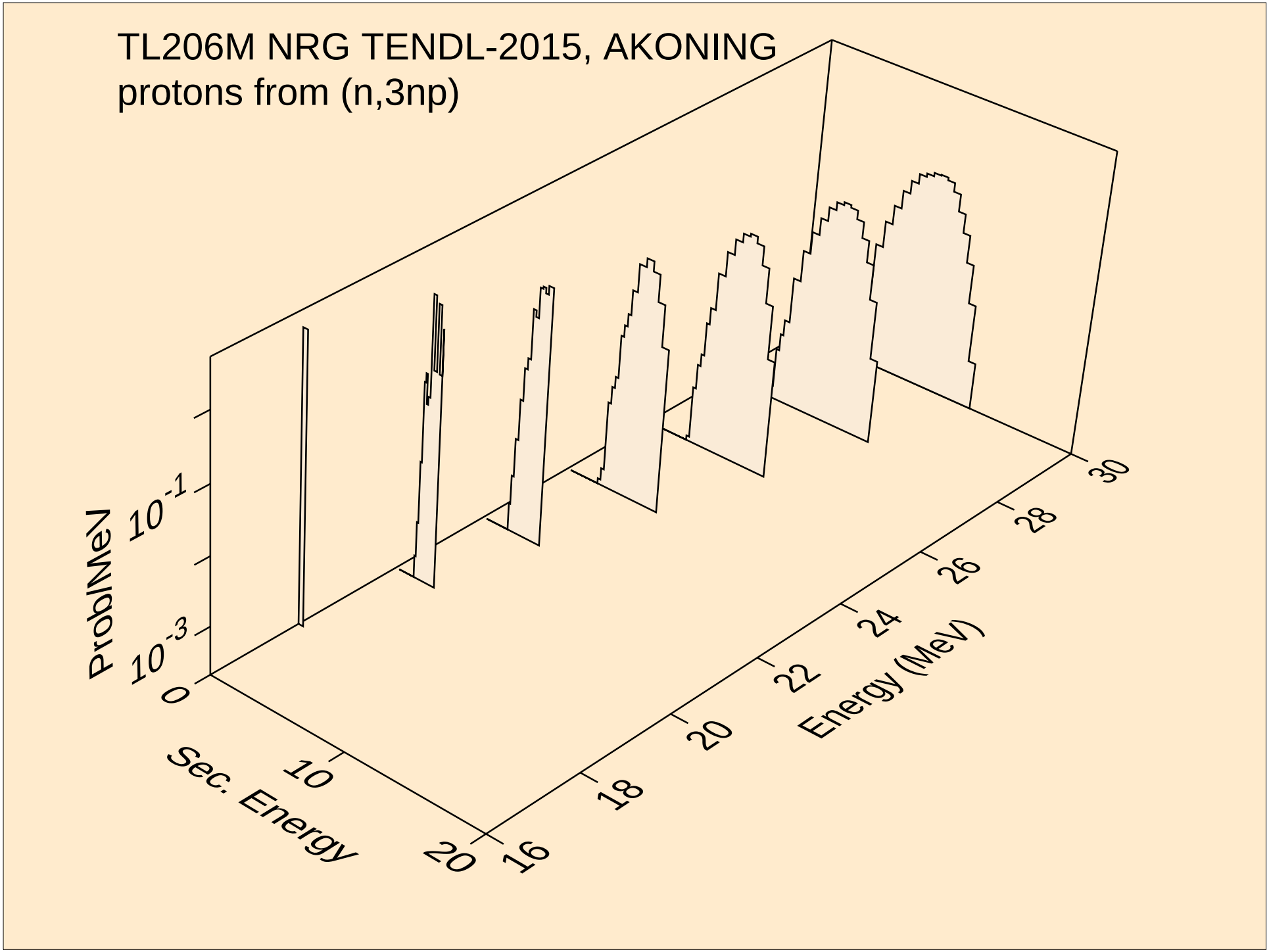

TL206M NRG TENDL-2015, AKONING
Recoil Heating
recoil heating
Heating (MeV/reaction)
20
10
0
-10
-20
-30
-40
0
50
100
150
200
Energy (MeV)

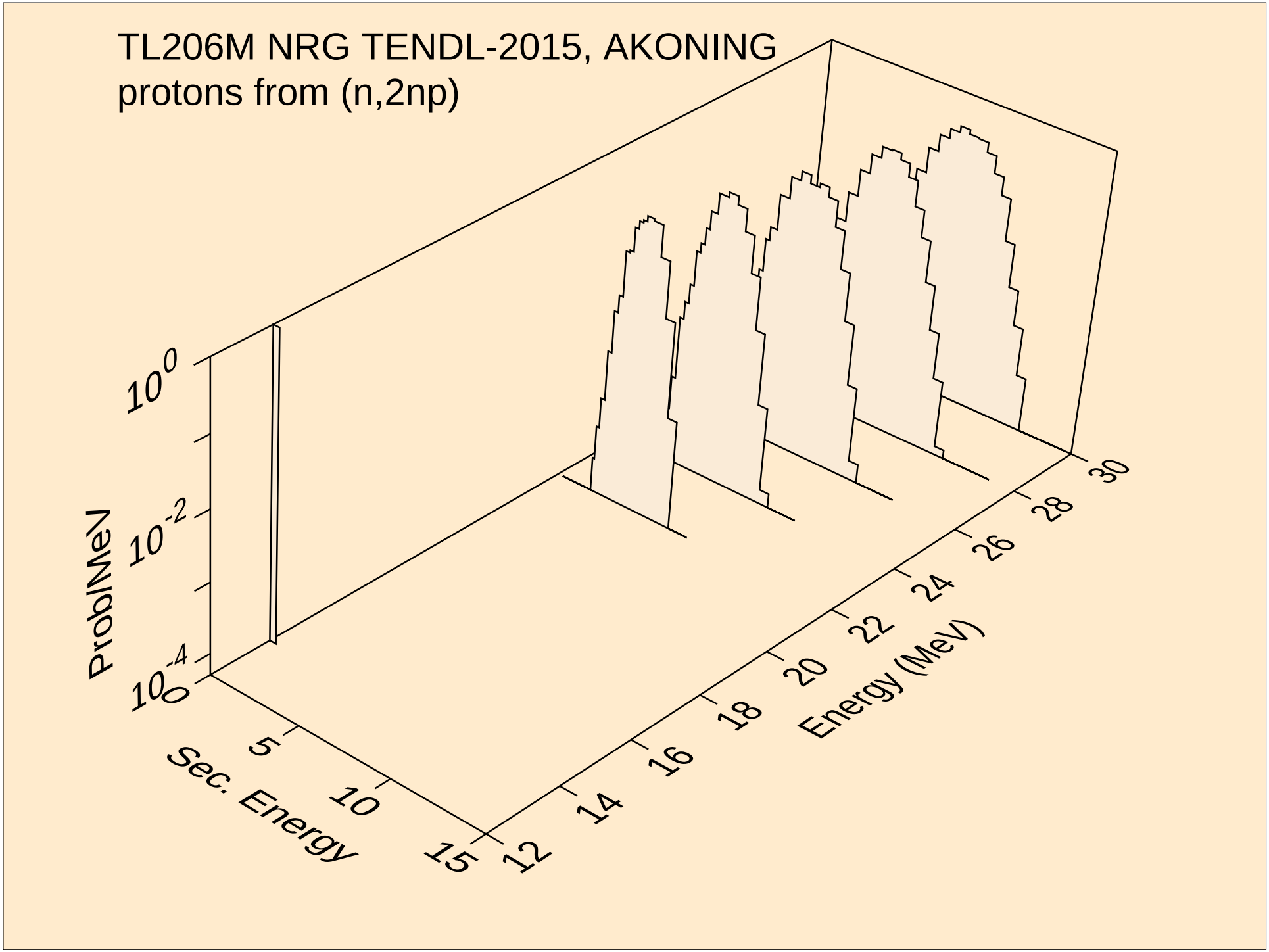

TL206M NRG TENDL-2015, AKONING
Particle production cross sections
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
0
50
100
150
200
protons
deuterons
tritons
he-3
alphas

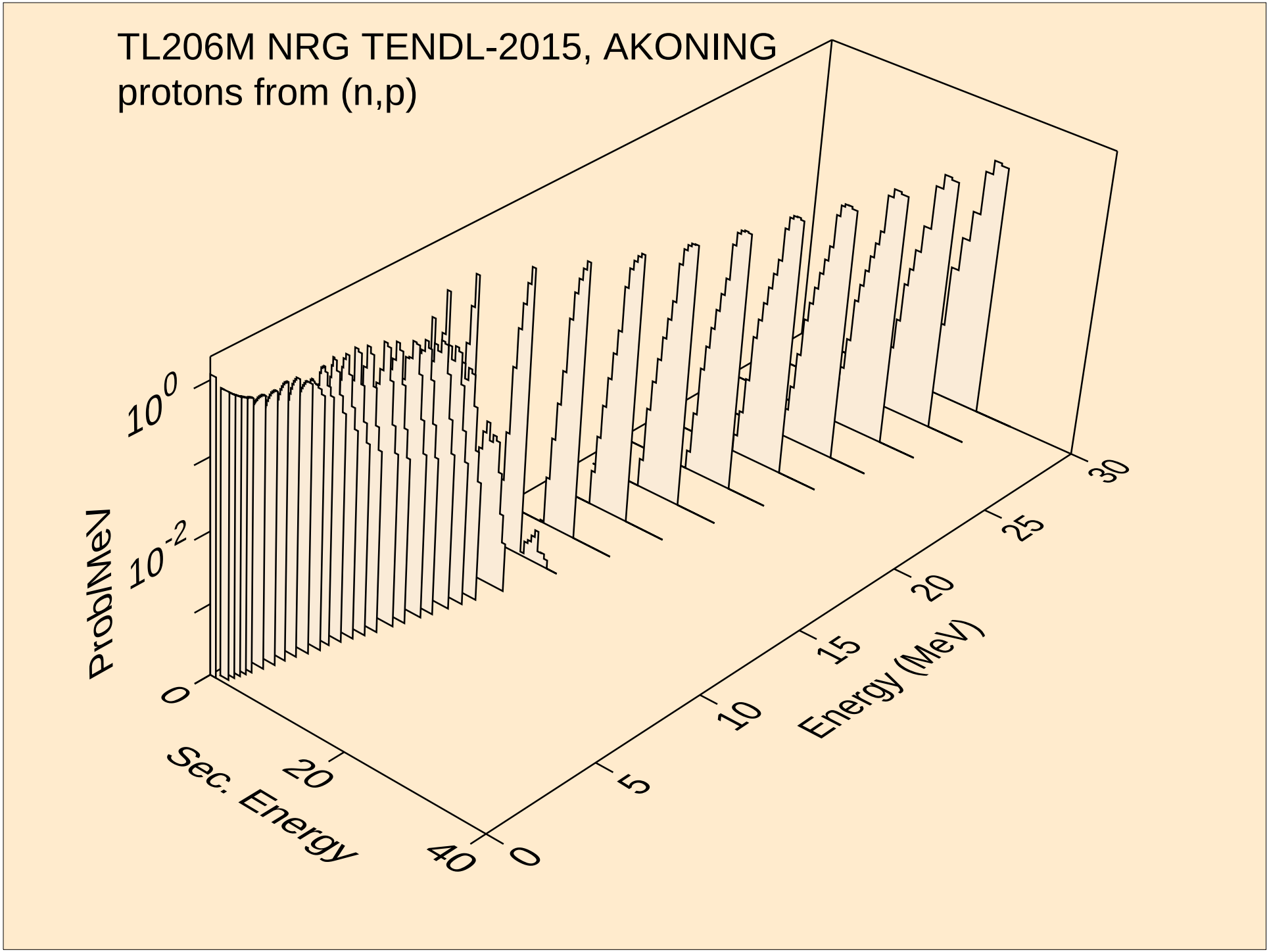

TL206M NRG TENDL-2015, AKONING
protons from (n,x)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)

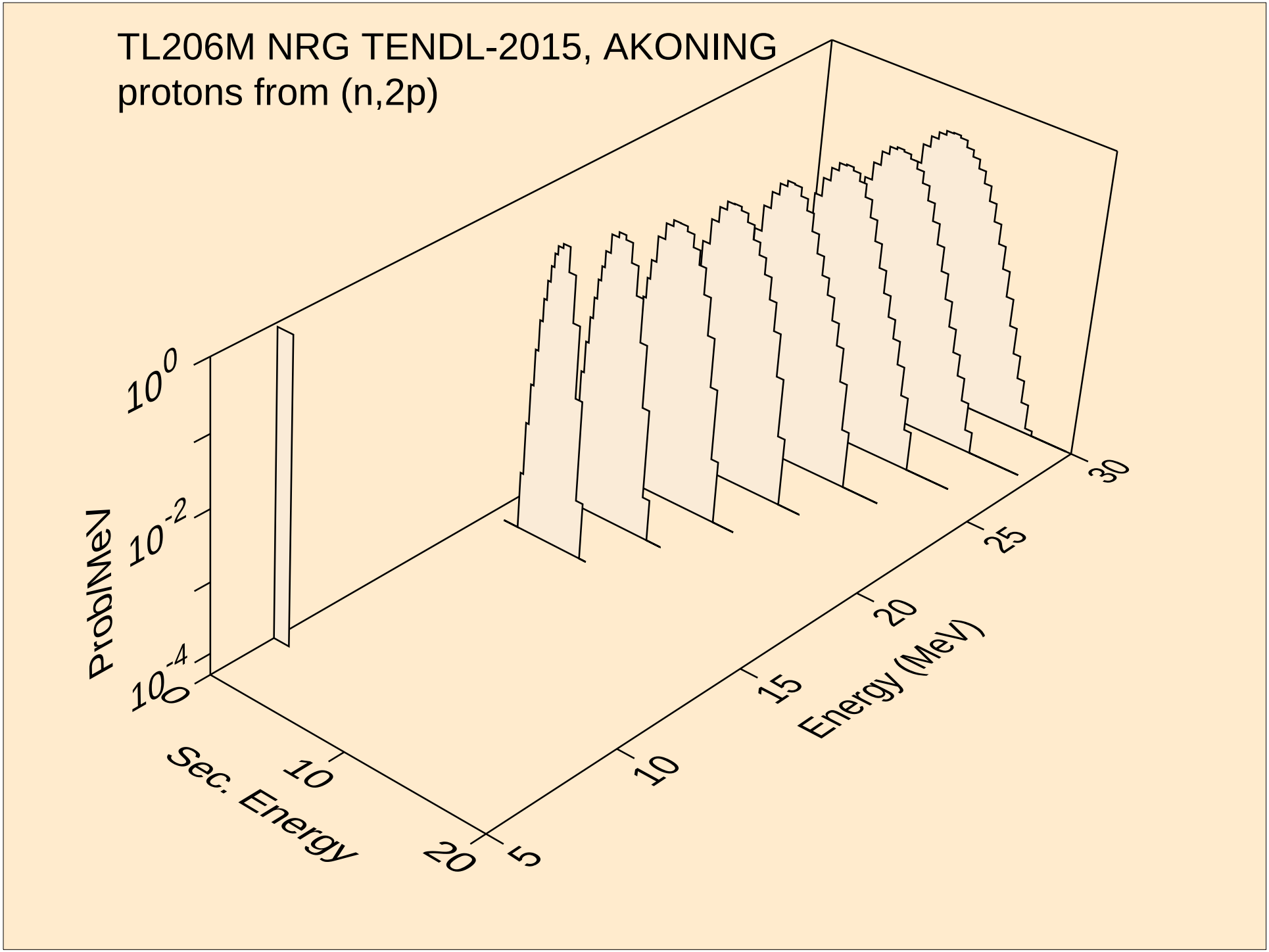

TL206M NRG TENDL-2015, AKONING
protons from (n,n*)p
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

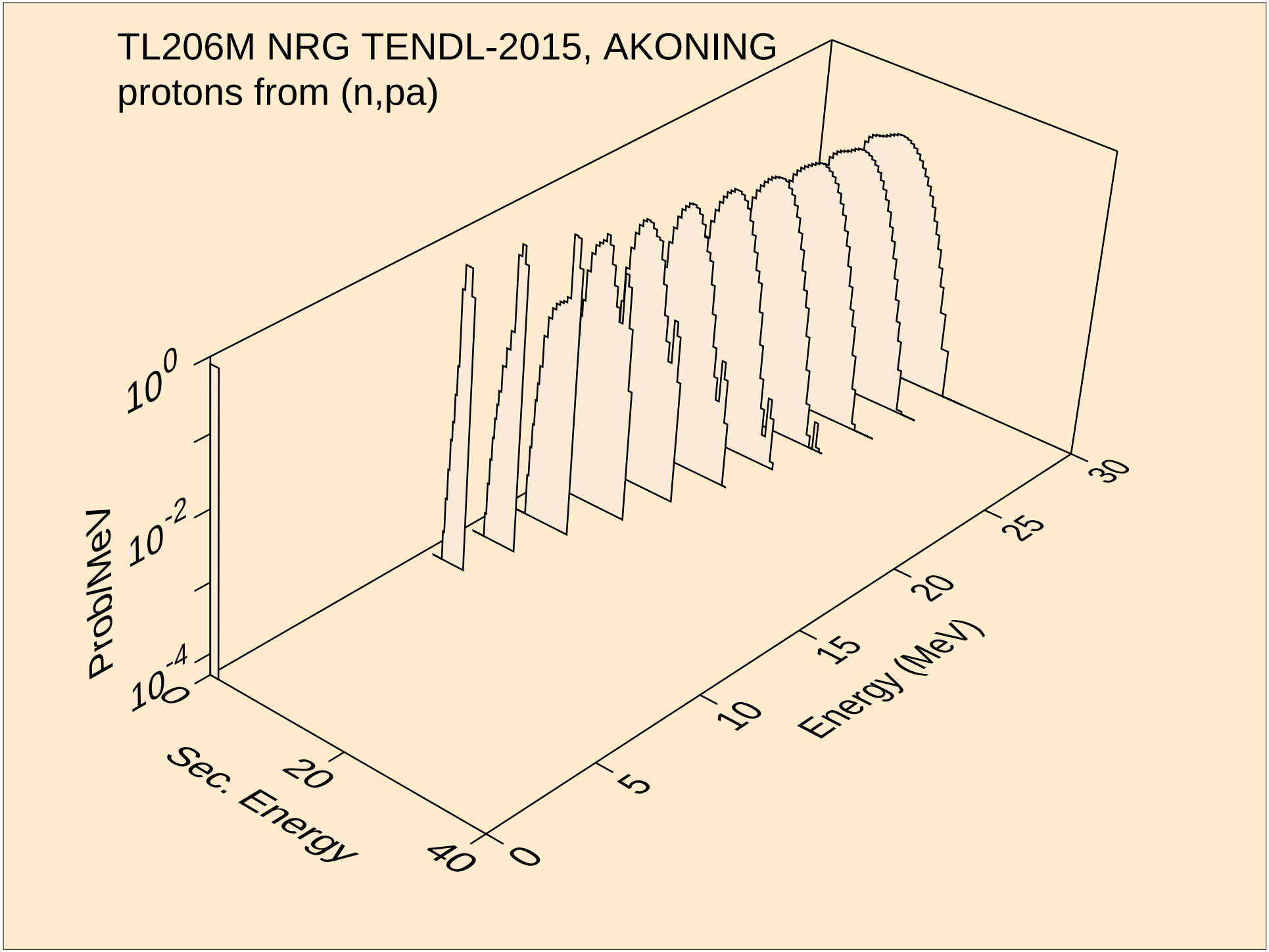

TL206M NRG TENDL-2015, AKONING
protons from (n,2np)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
10
20
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

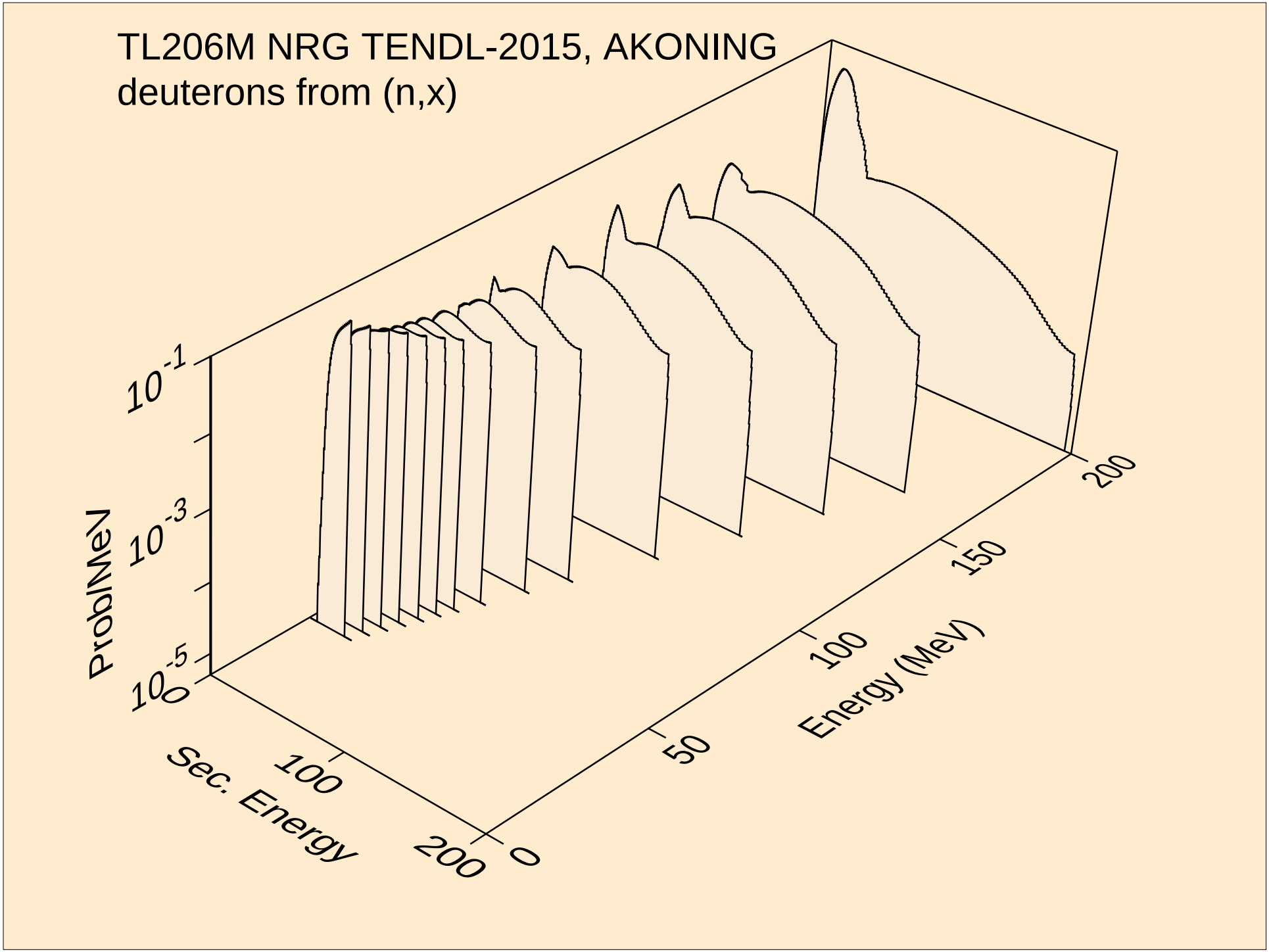

TL206M NRG TENDL-2015, AKONING
protons from (n,3np)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
16
18
20
22
24
26
28
30
Energy (MeV)

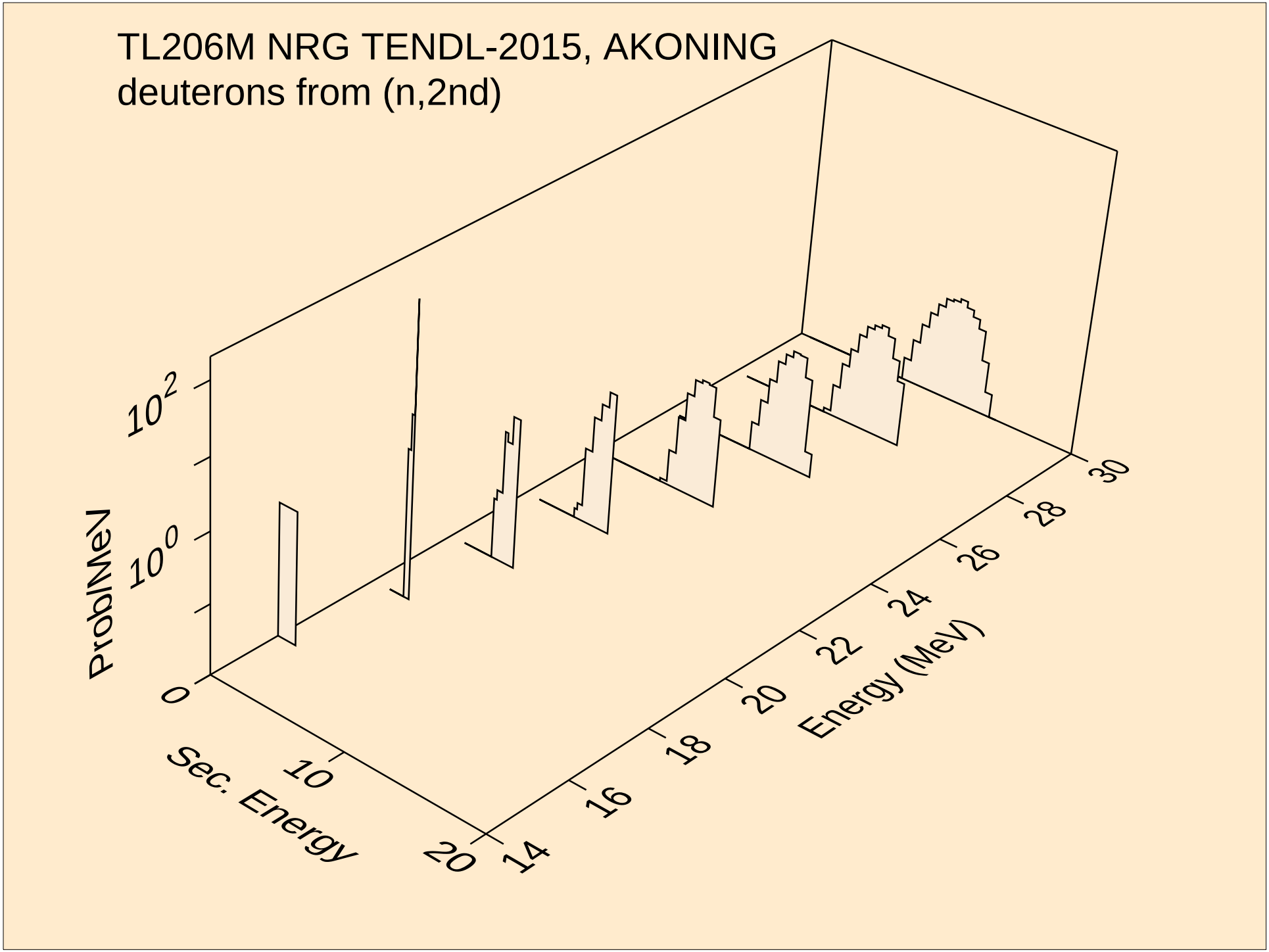

TL206M NRG TENDL-2015, AKONING
protons from (n,2np)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
5
10
15
Sec. Energy
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

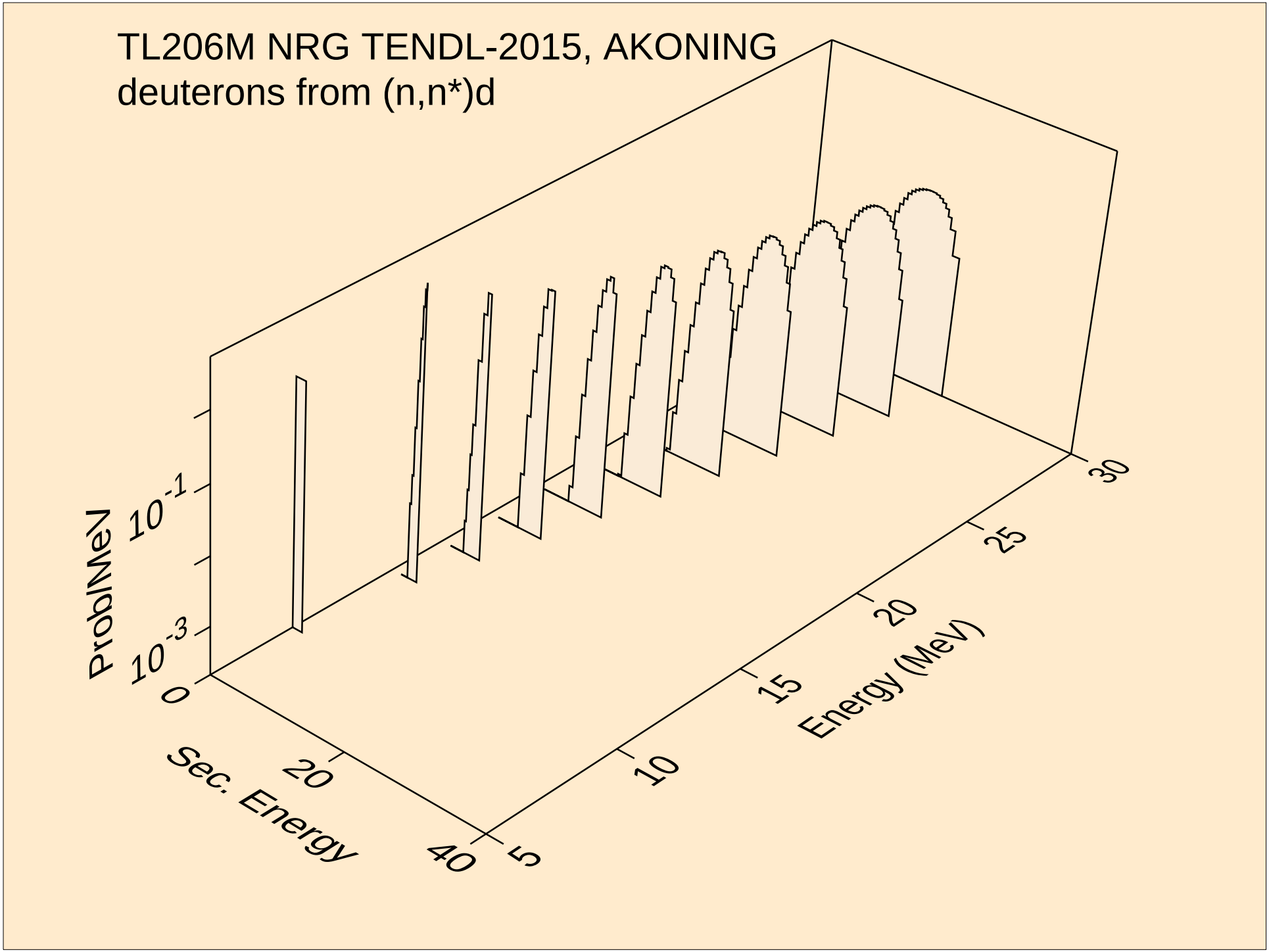

TL206M NRG TENDL-2015, AKONING
protons from (n,p)
Prob/MeV
10^0
10^-2
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

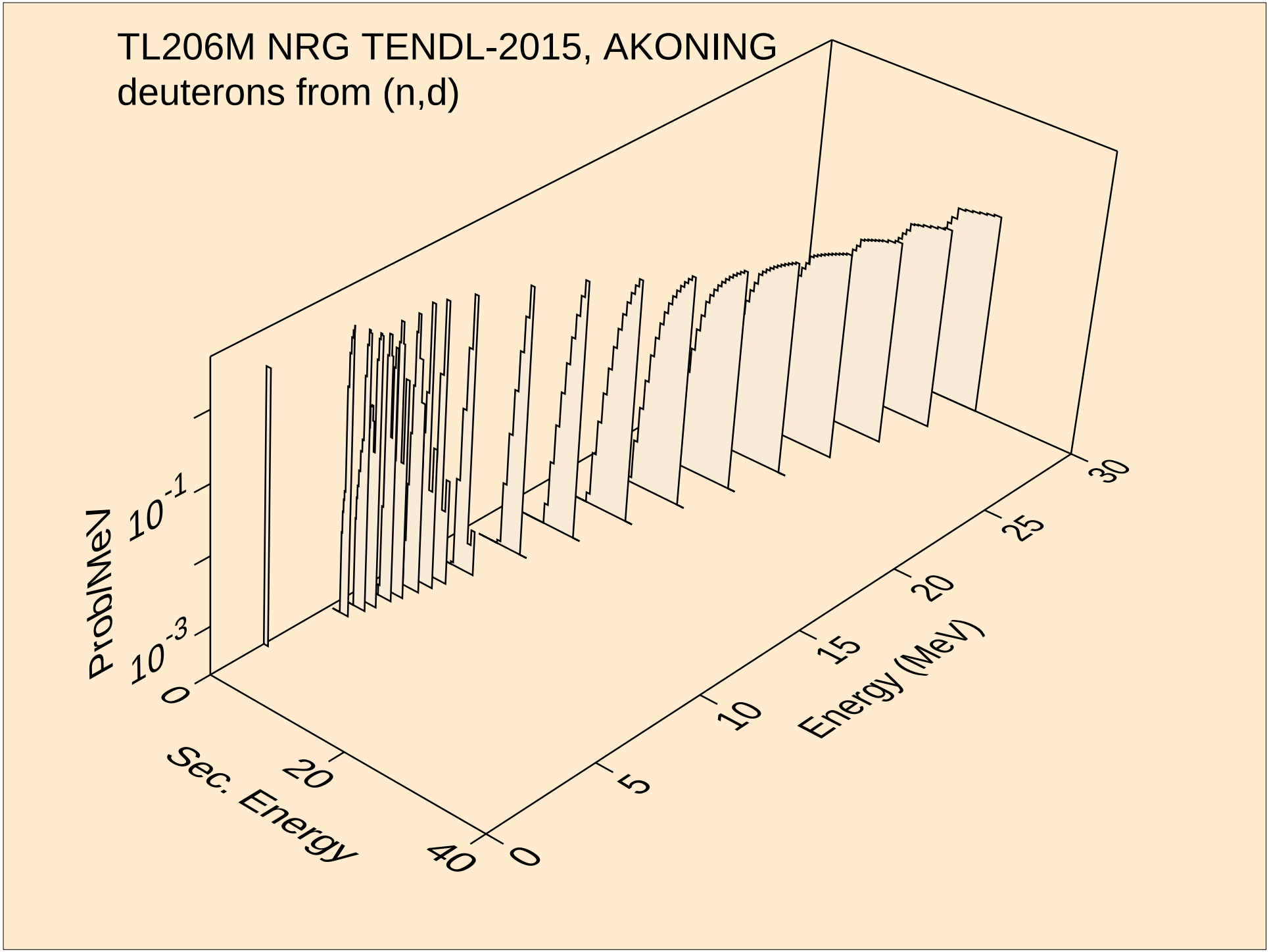

TL206M NRG TENDL-2015, AKONING
protons from (n,2p)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
Sec. Energy
10
20
5
10
15
20
25
30
Energy (MeV)

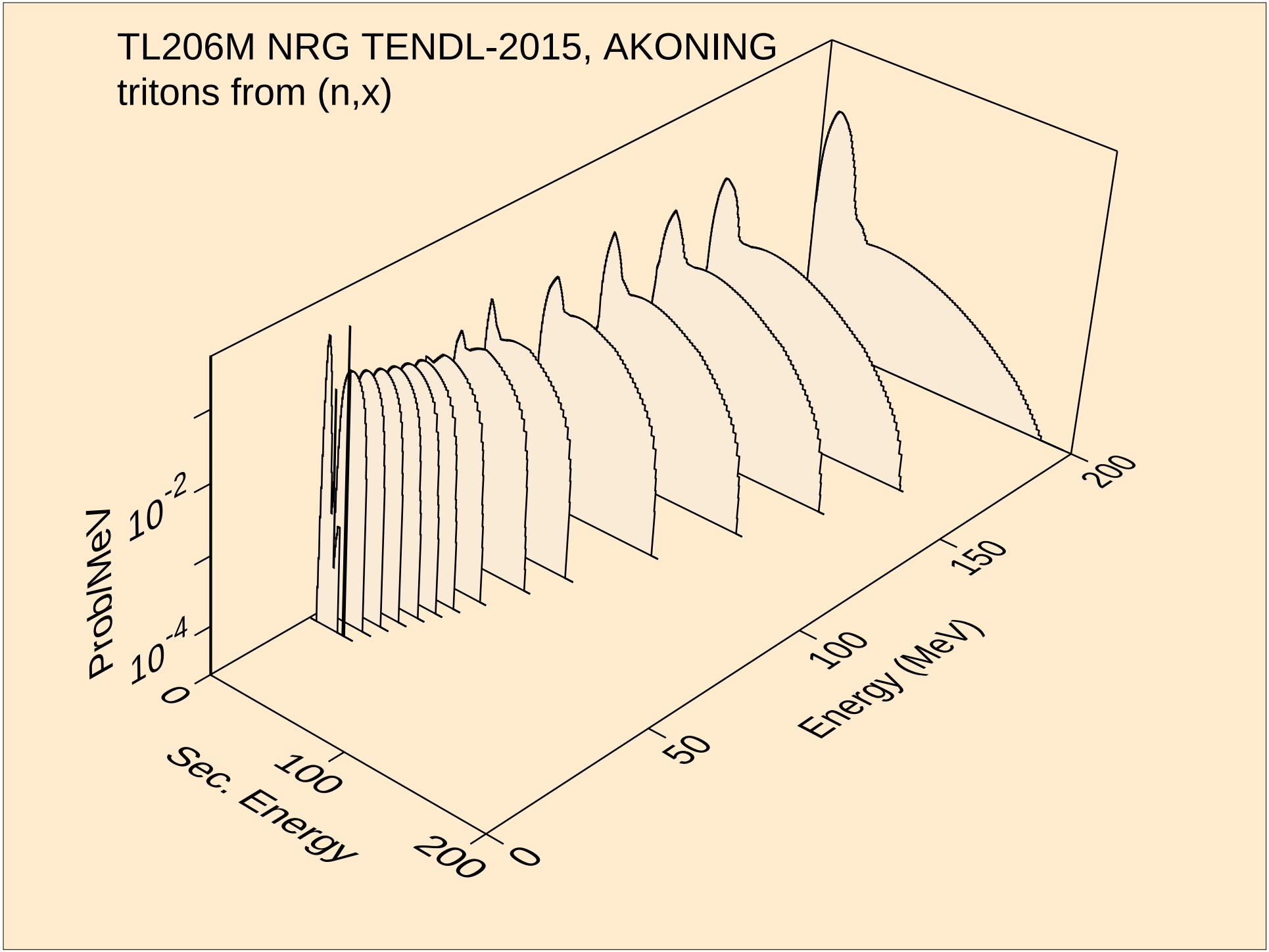

TL206M NRG TENDL-2015, AKONING
protons from (n,pa)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
0
20
40
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

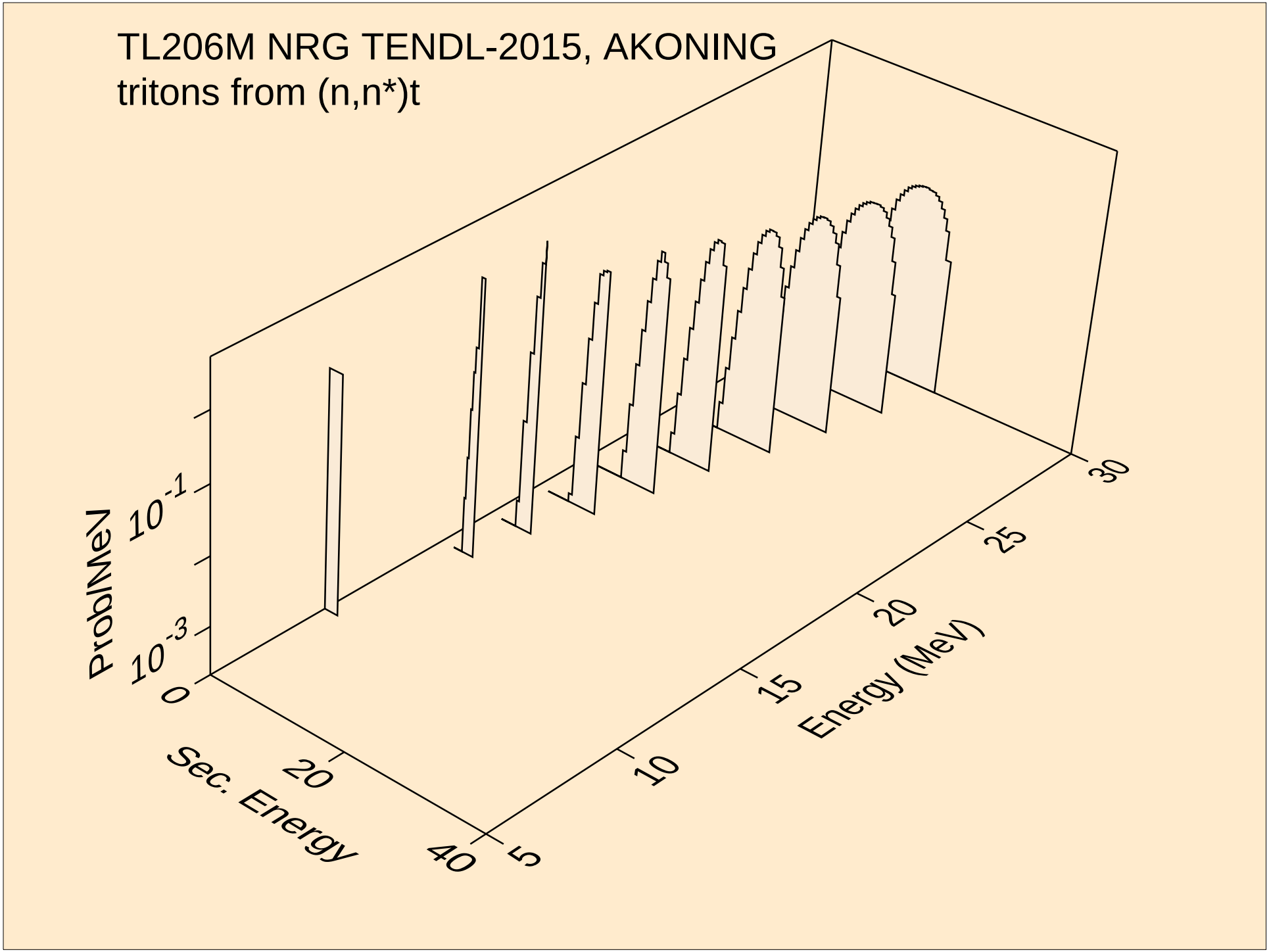

TL206M NRG TENDL-2015, AKONING
deuterons from (n,x)
Prob/MeV
10-1
10-3
10-5
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)

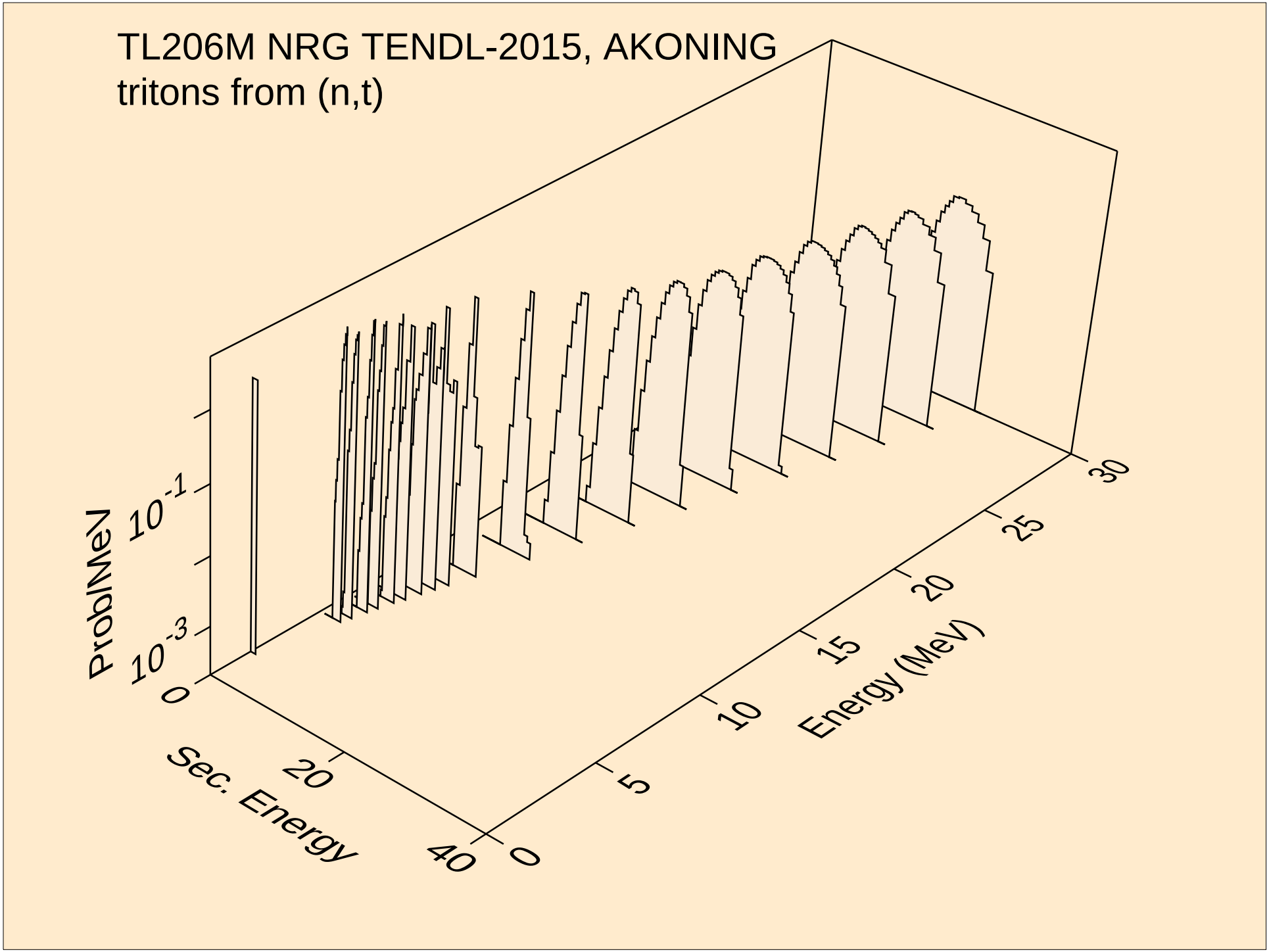

TL206M NRG TENDL-2015, AKONING
deuterons from (n,2nd)
Prob/MeV
10^2
10^0
0
Sec. Energy
10
20
14
16
18
20
22
24
26
28
30
Energy (MeV)

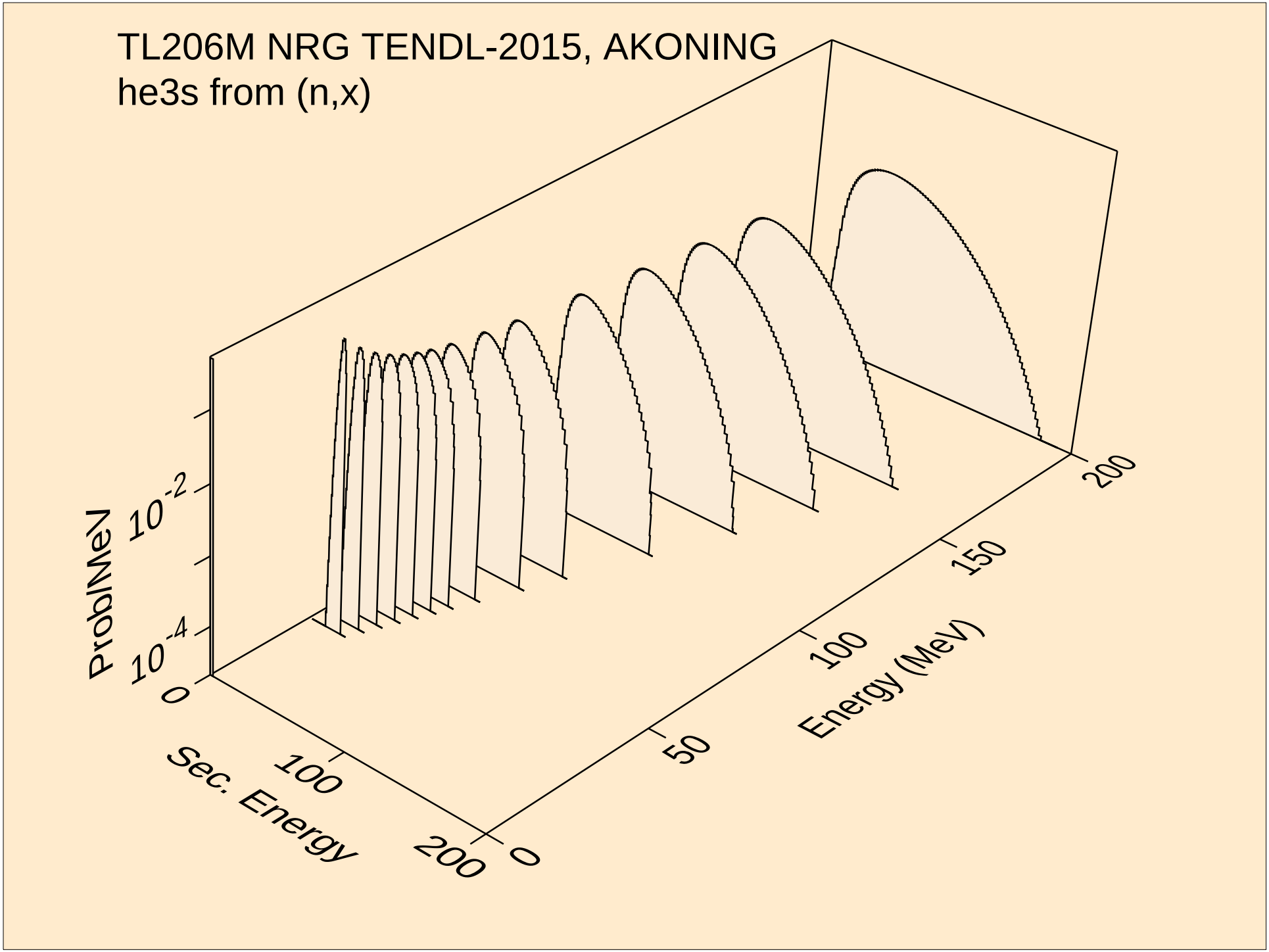

TL206M NRG TENDL-2015, AKONING
deuterons from (n,n*)d
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
5
10
15
20
25
30
Energy (MeV)

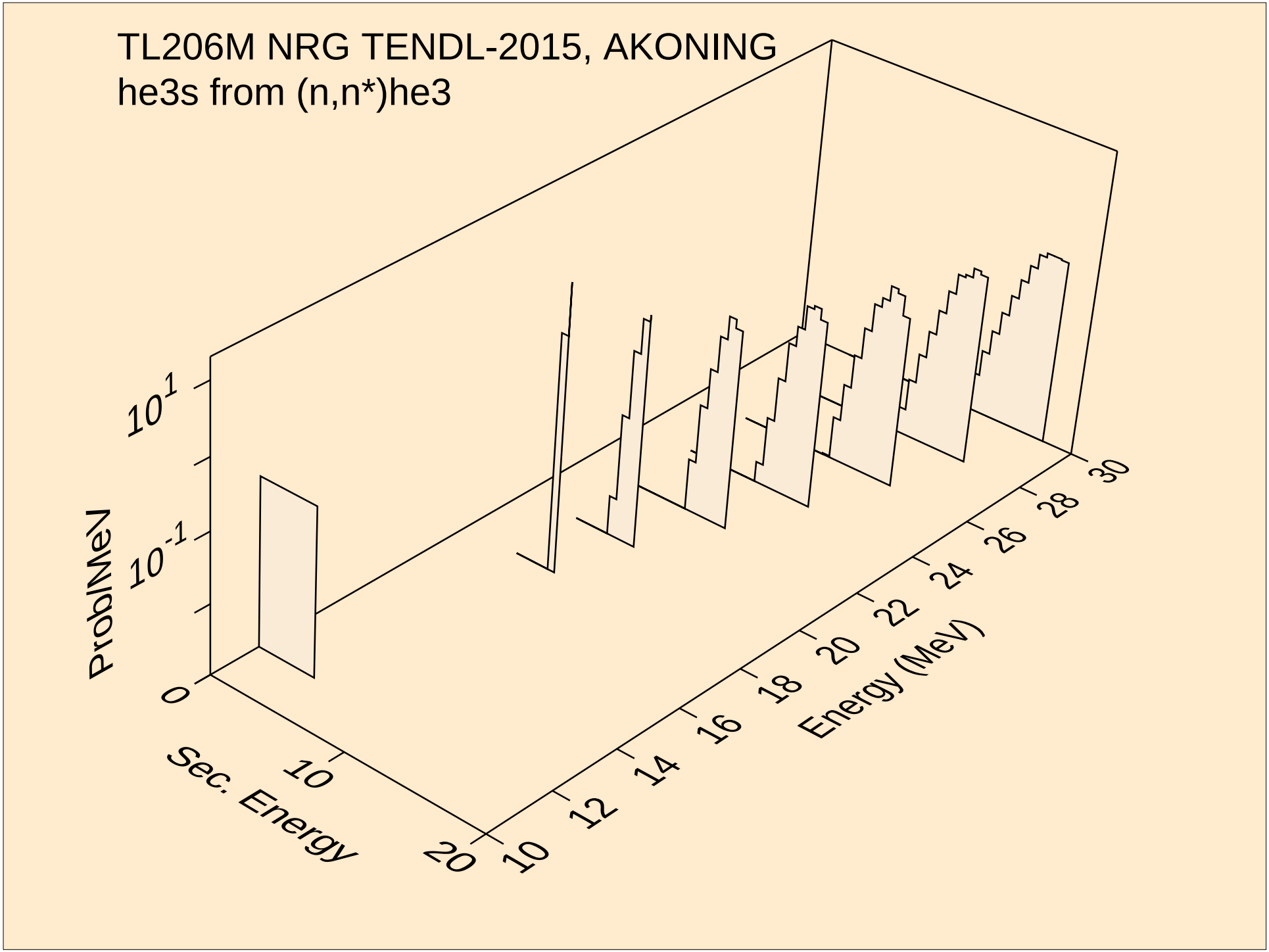

TL206M NRG TENDL-2015, AKONING
deuterons from (n,d)
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

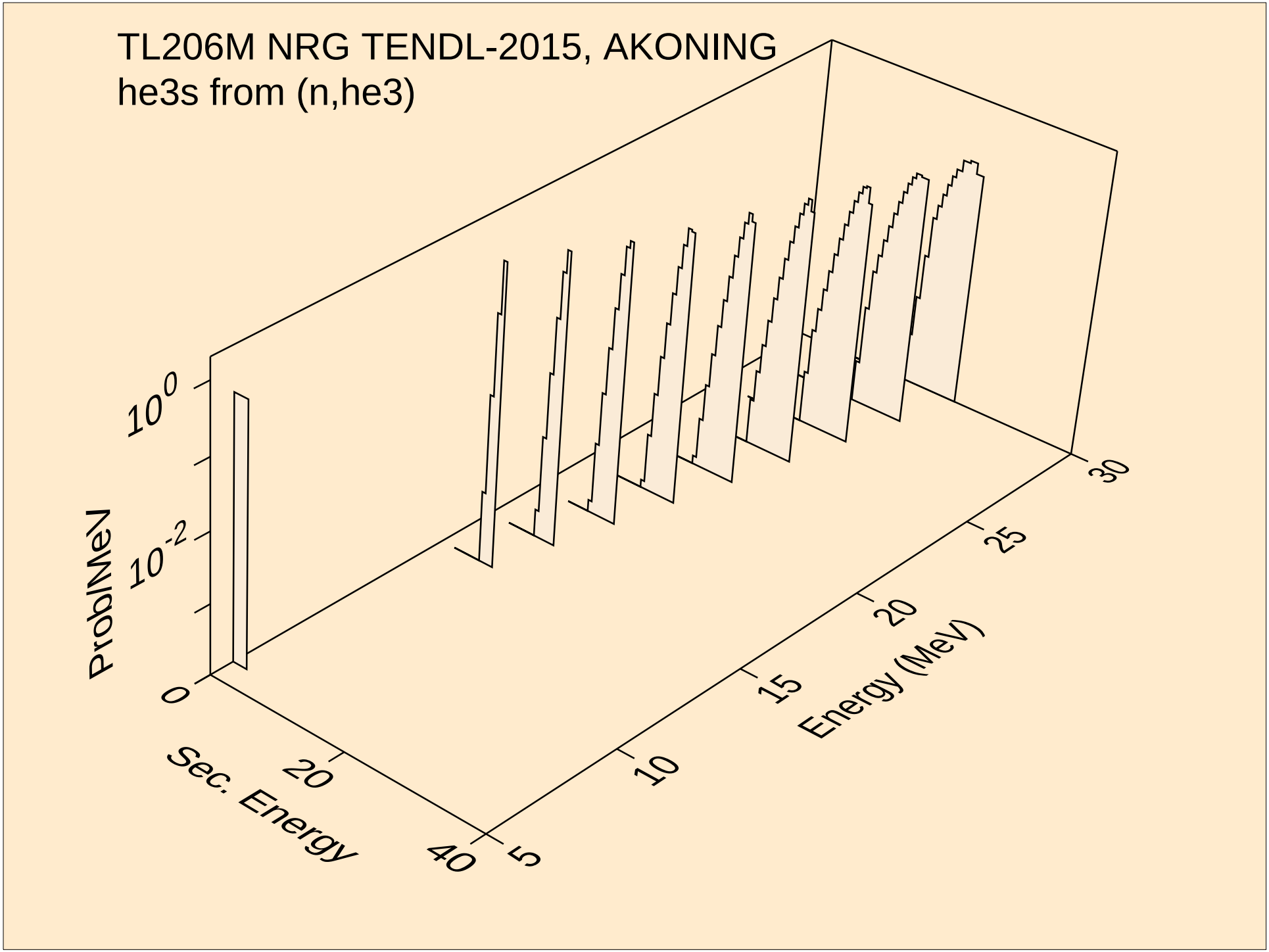

TL206M NRG TENDL-2015, AKONING
tritons from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)

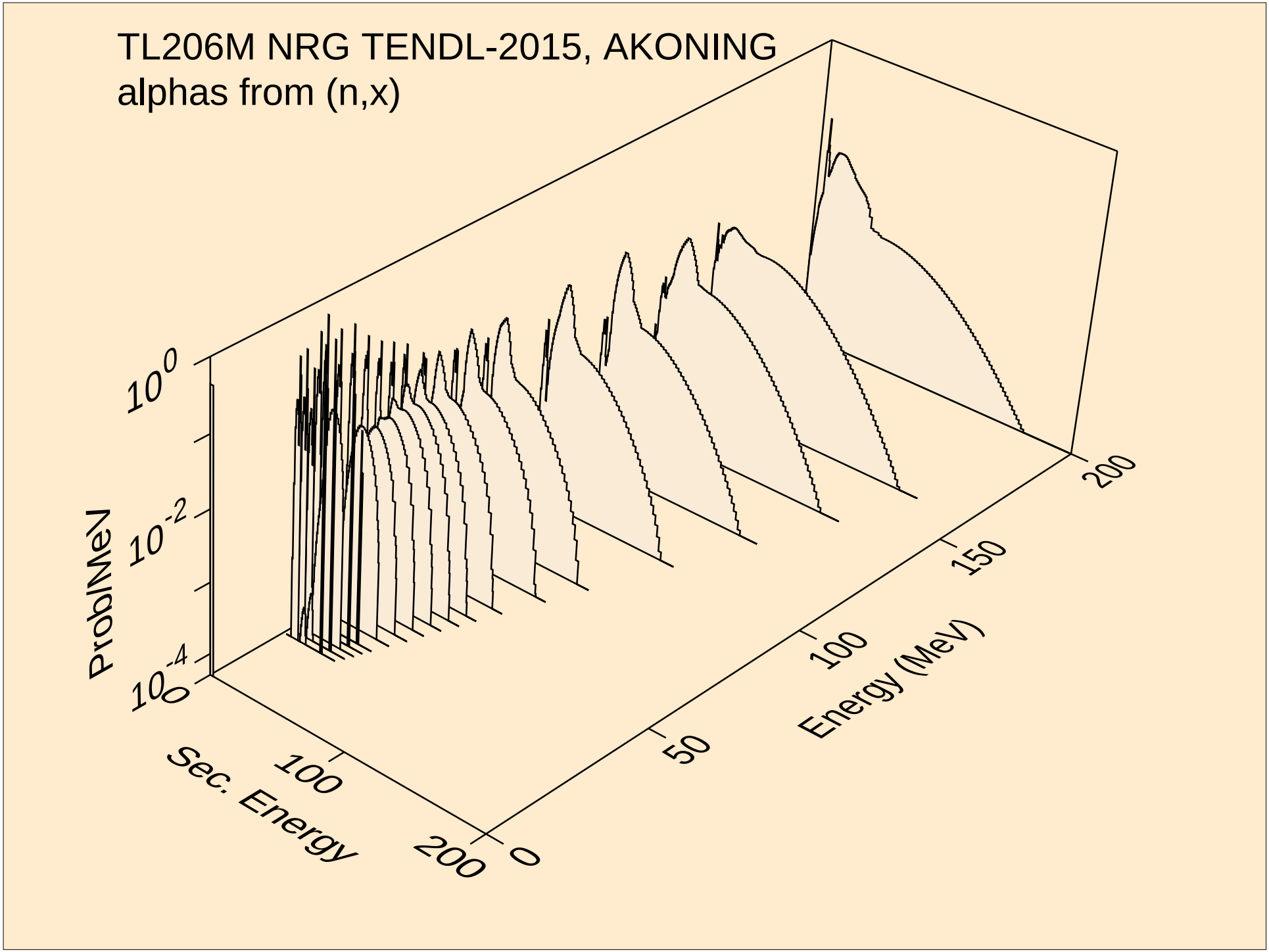

TL206M NRG TENDL-2015, AKONING
tritons from (n,n*)t
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
5
10
15
20
25
30
Energy (MeV)

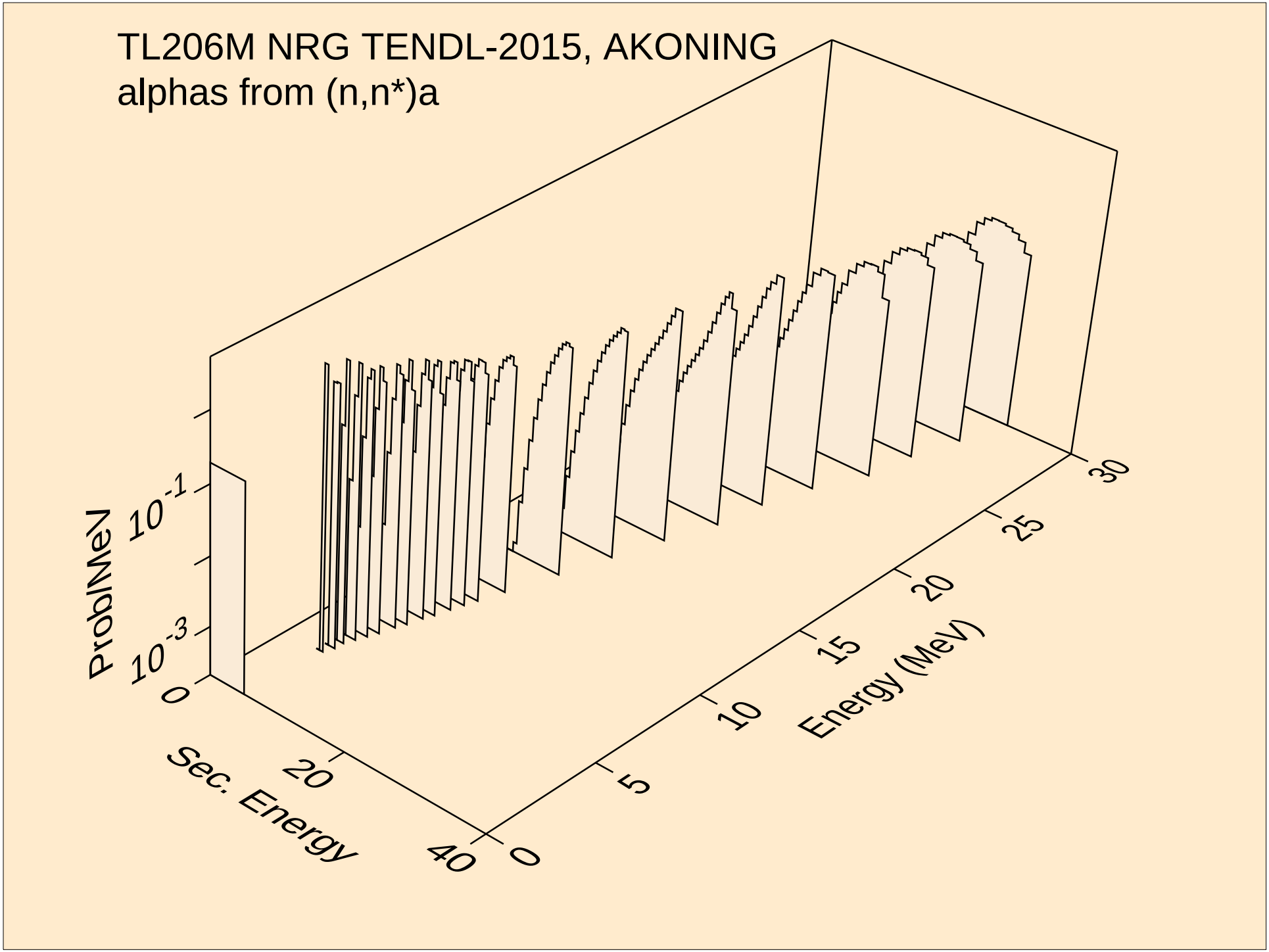

TL206M NRG TENDL-2015, AKONING
tritons from (n,t)
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

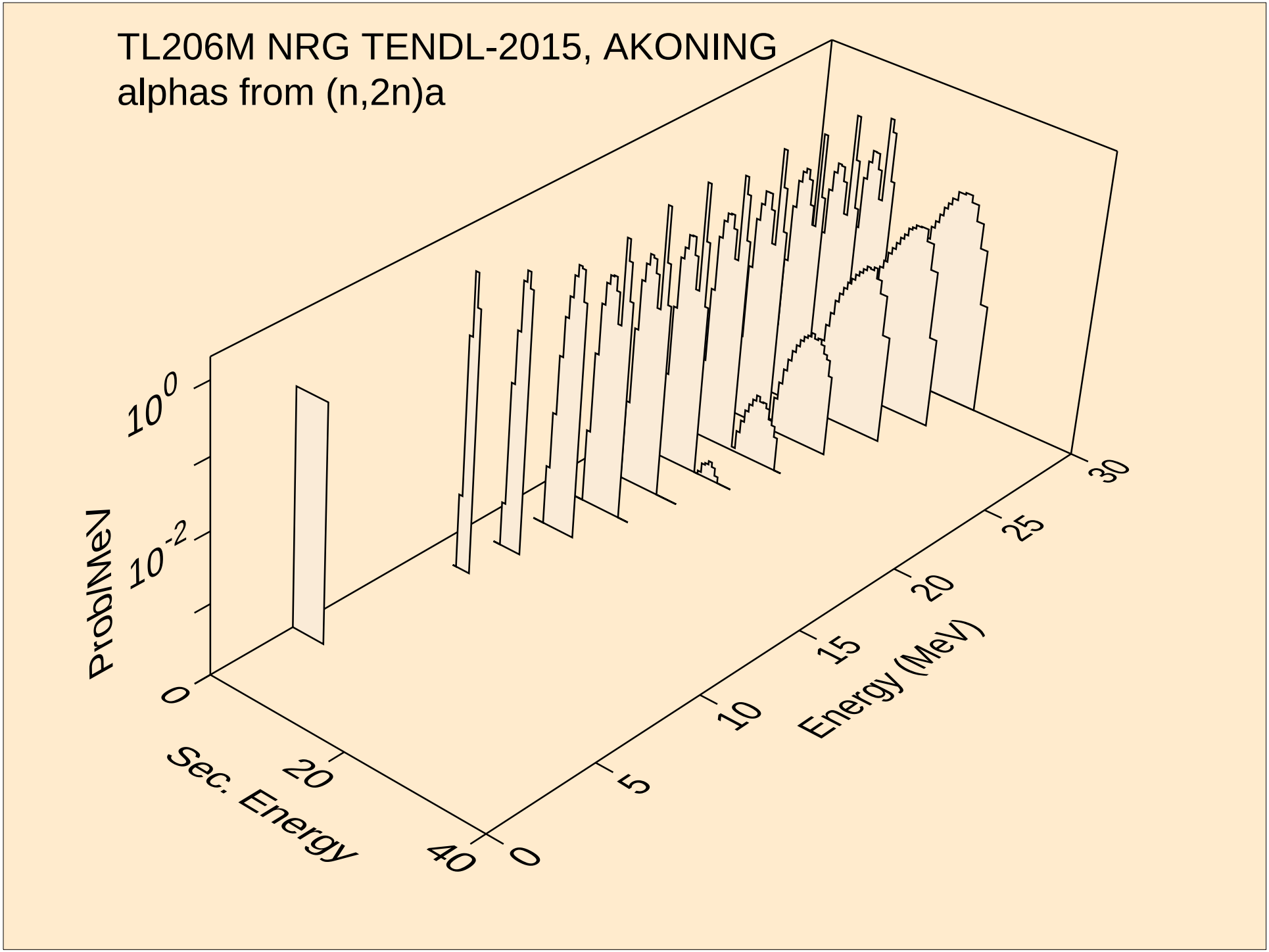

TL206M NRG TENDL-2015, AKONING
he3s from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)

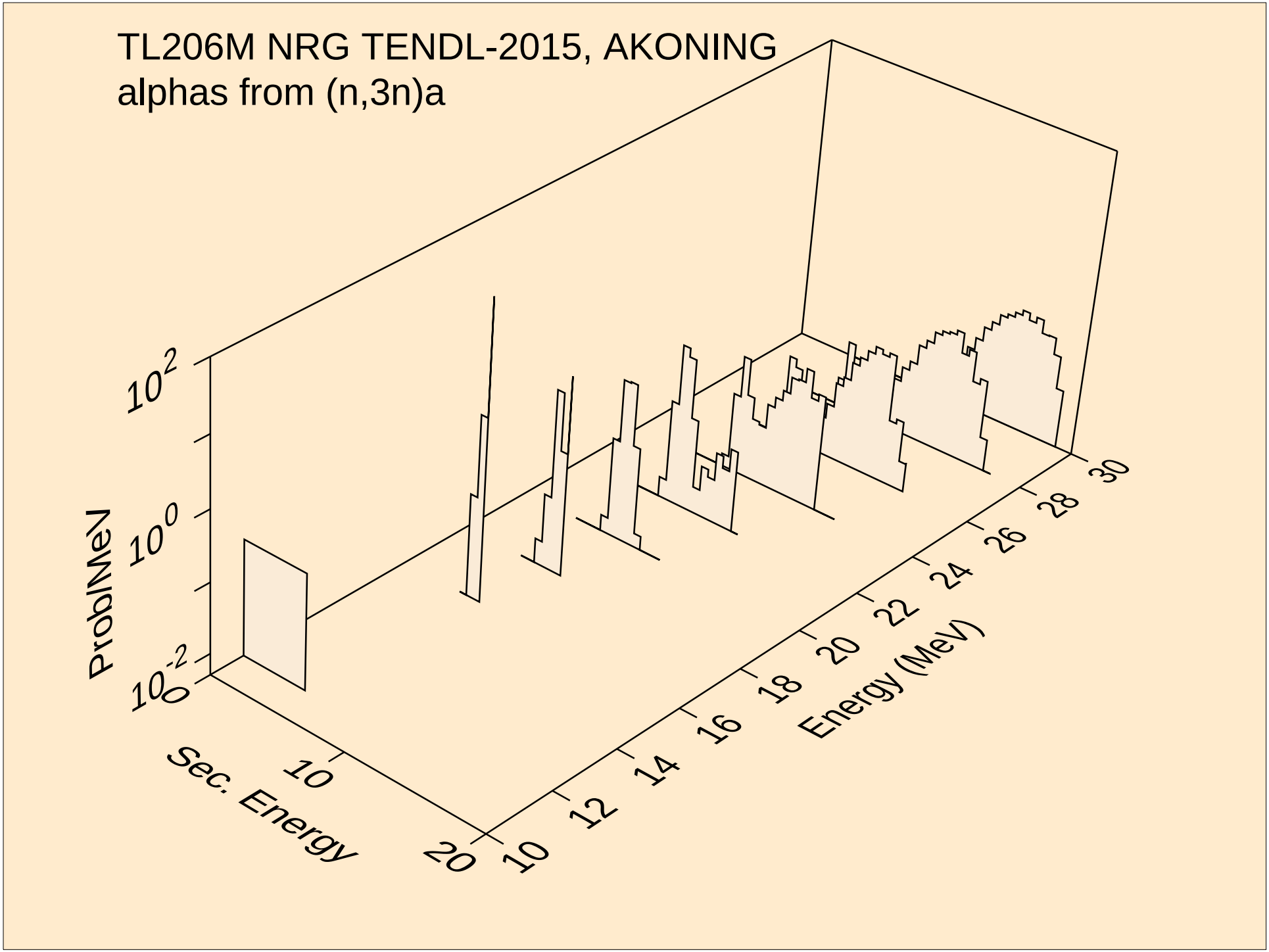

TL206M NRG TENDL-2015, AKONING
he3s from (n,n*)he3
Prob/MeV
10^1
10^-1
0
Sec. Energy
10
20
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

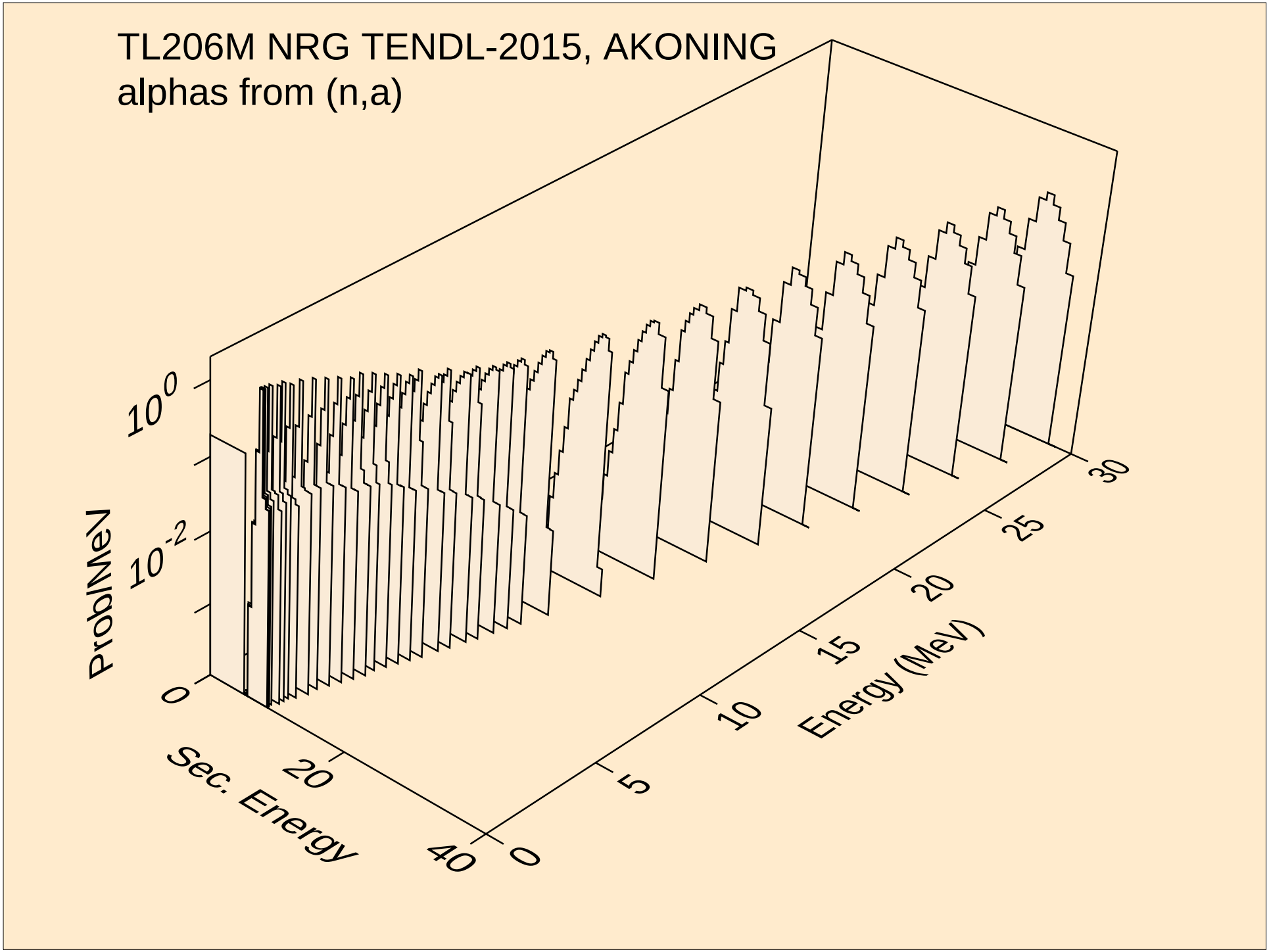

TL206M NRG TENDL-2015, AKONING
he3s from (n,he3)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
20
40
5
10
15
Energy (MeV)
20
25
30

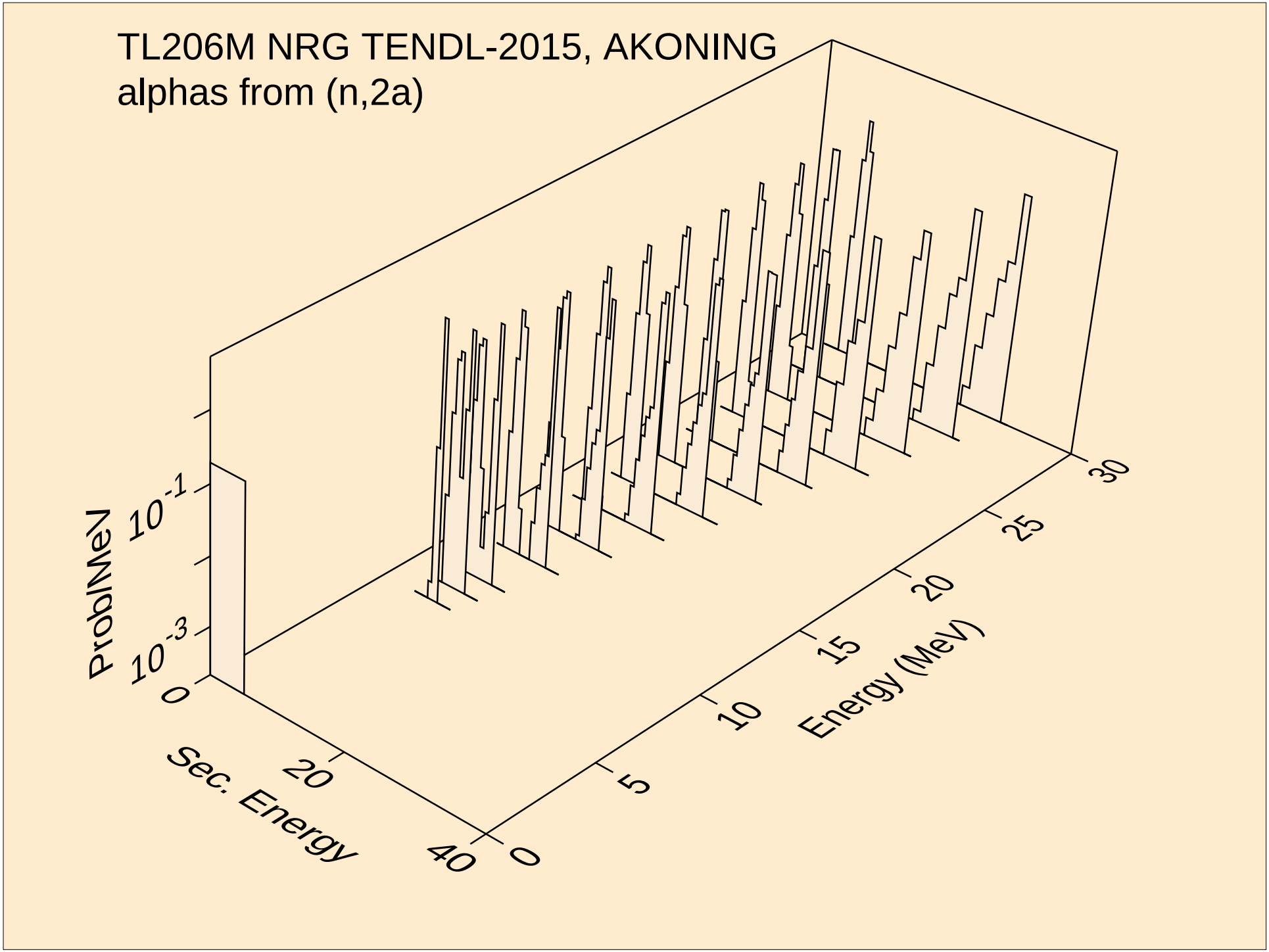

TL206M NRG TENDL-2015, AKONING
alphas from (n,x)
Prob/MeV
10^0
10^-2
10^-4
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)

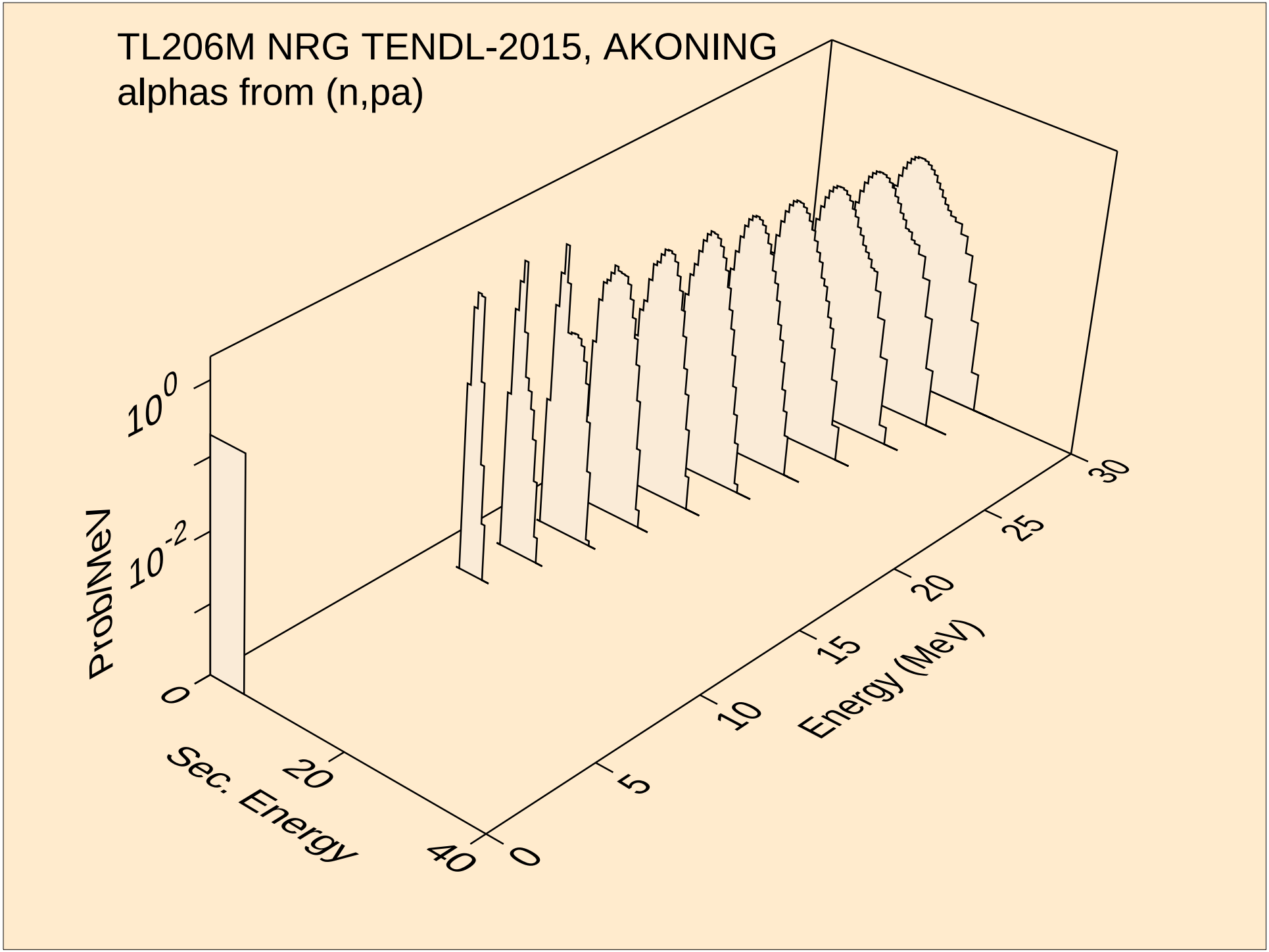

TL206M NRG TENDL-2015, AKONING
alphas from (n,n*)a
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)


TL206M NRG TENDL-2015, AKONING
alphas from (n,2n)a
Prob/MeV
10^0
10^-2
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)


TL206M NRG TENDL-2015, AKONING
alphas from (n,3n)a
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
Sec. Energy
10
20
Energy (MeV)
10
12
14
16
18
20
22
24
26
28
30


TL206M NRG TENDL-2015, AKONING
alphas from (n,a)
Prob/MeV
10^0
10^-2
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)


TL206M NRG TENDL-2015, AKONING
alphas from (n,2a)
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)


TL206M NRG TENDL-2015, AKONING
alphas from (n,pa)
Prob/MeV
10^0
10^-2
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)