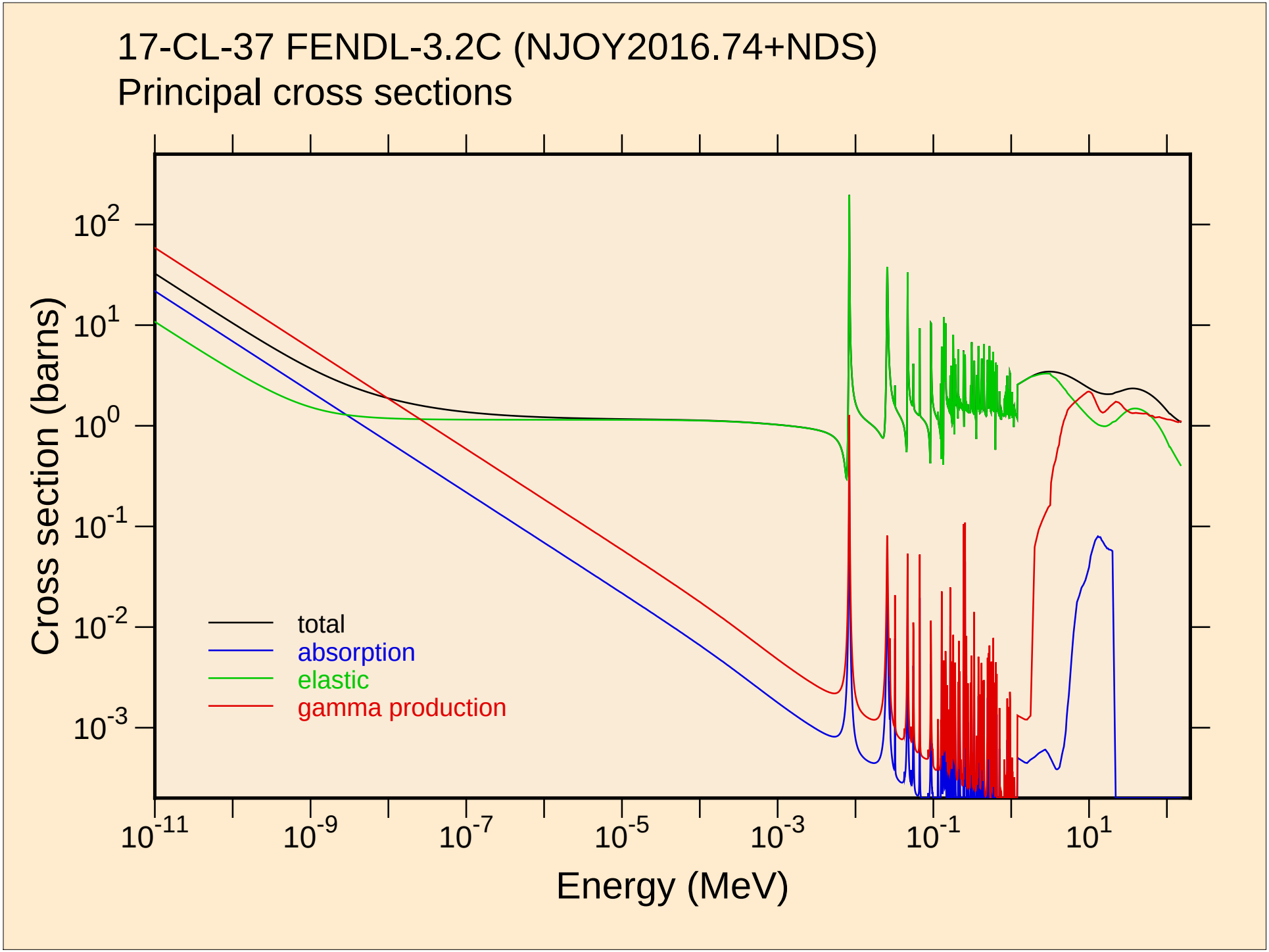
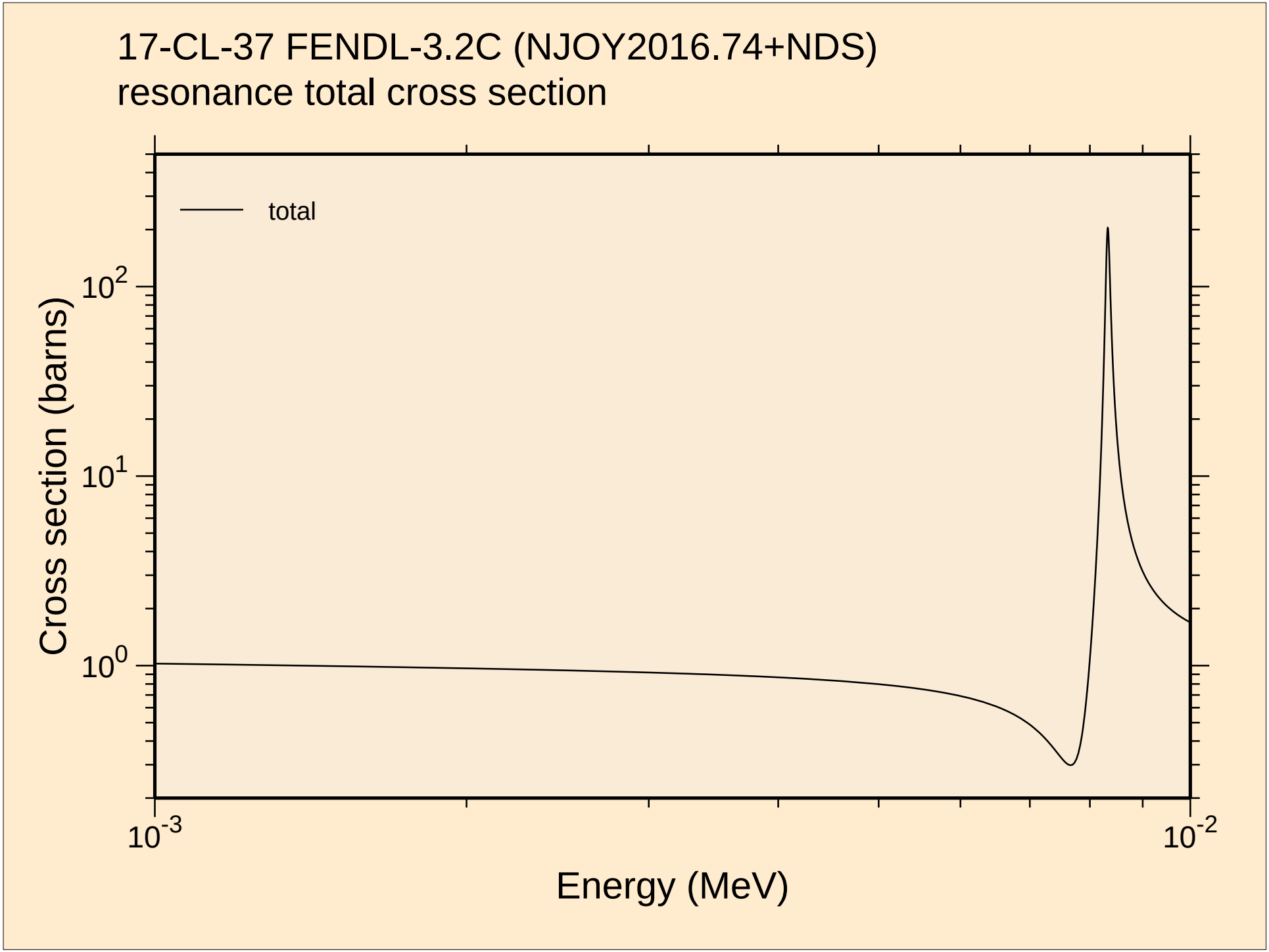
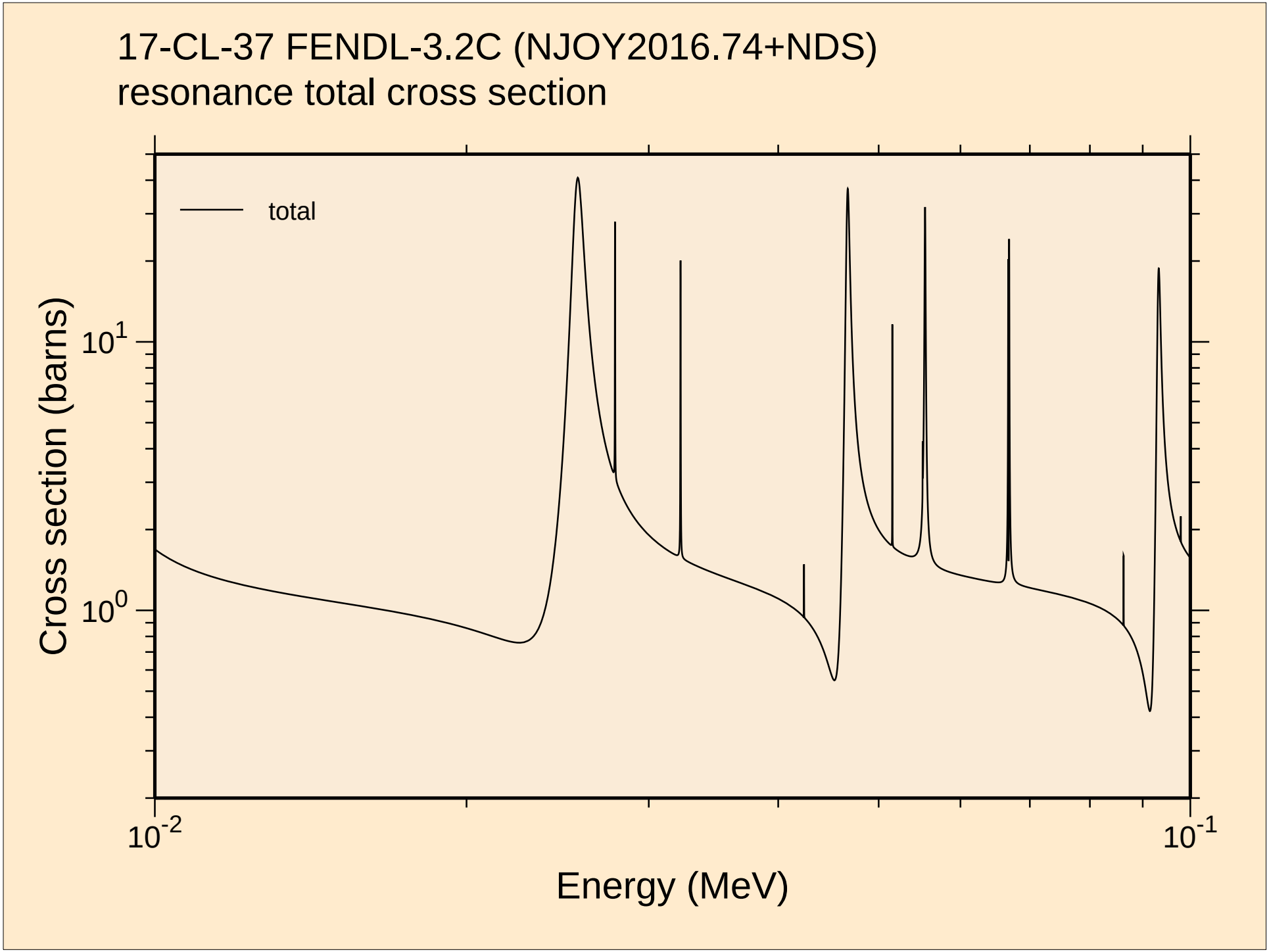
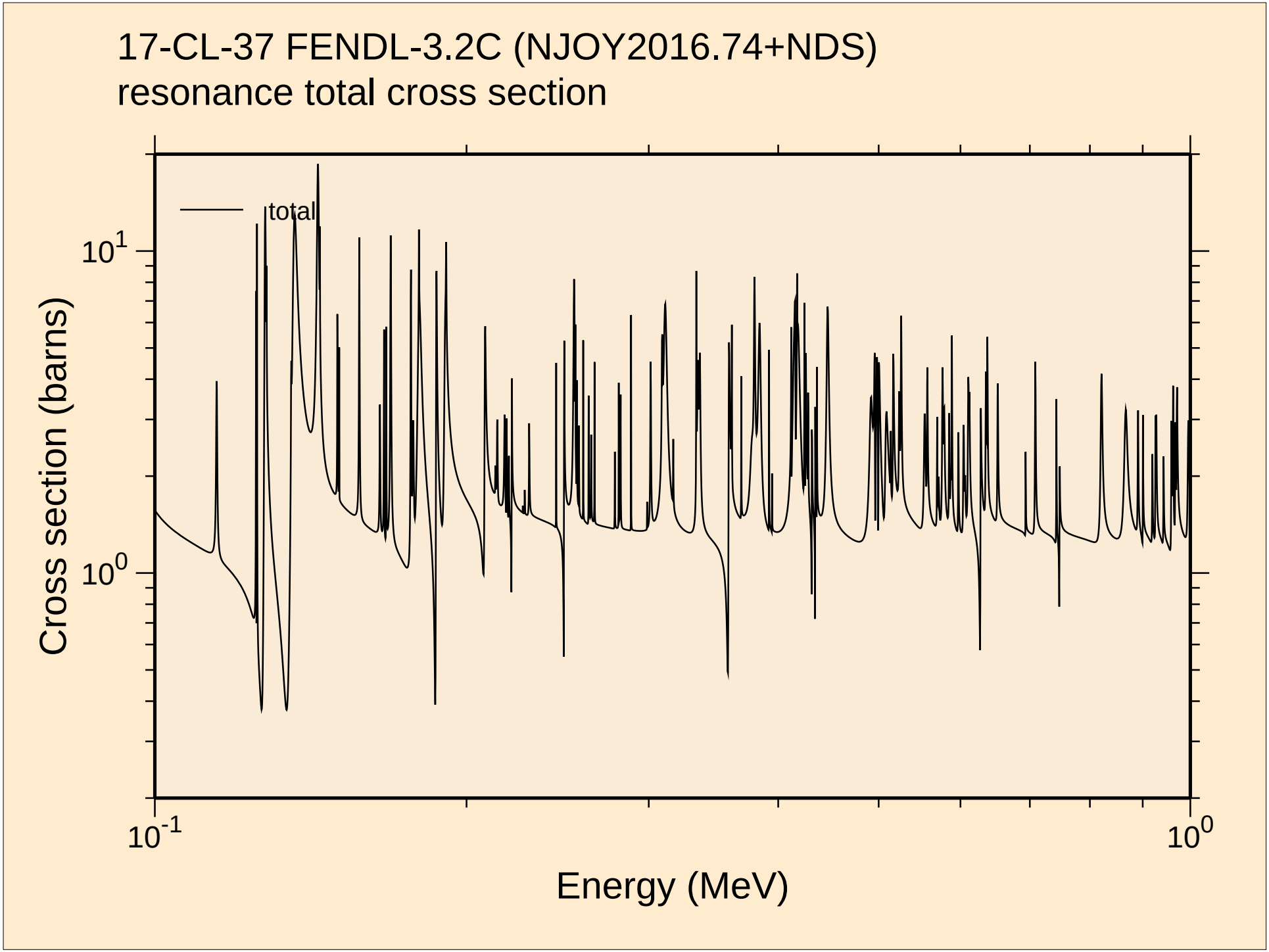
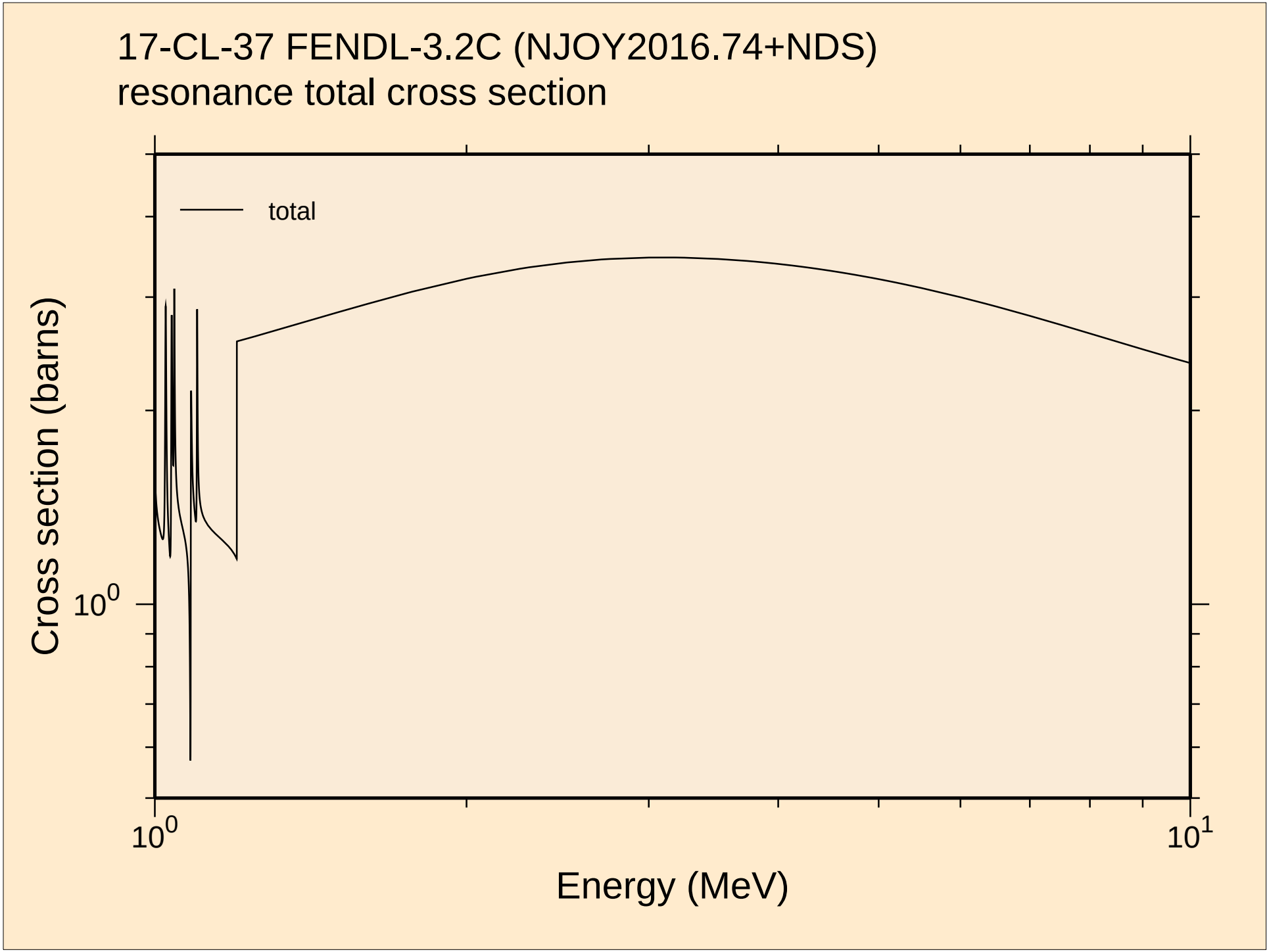
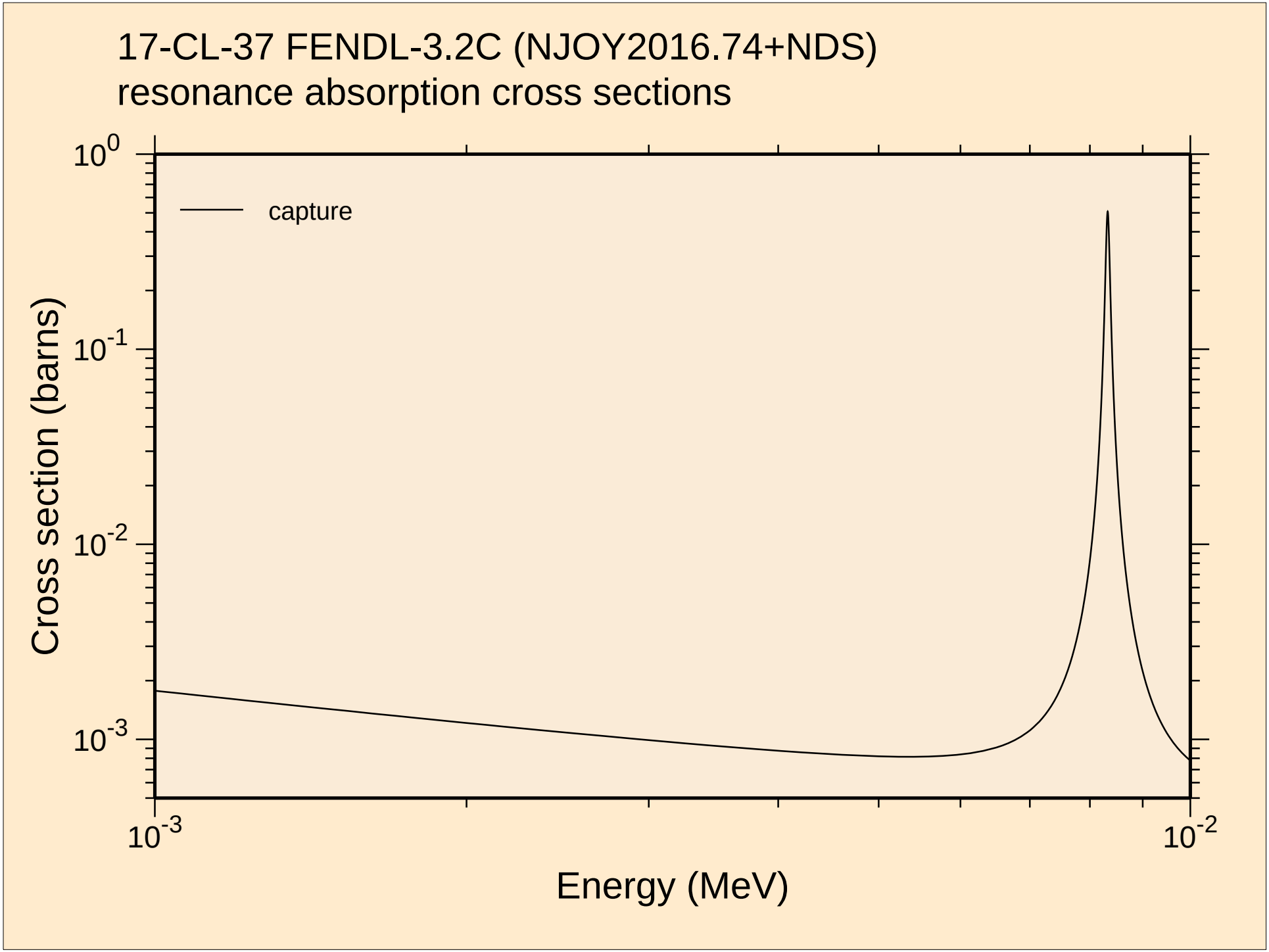

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^0
10^{-3}
10^{-2}
Energy (MeV)

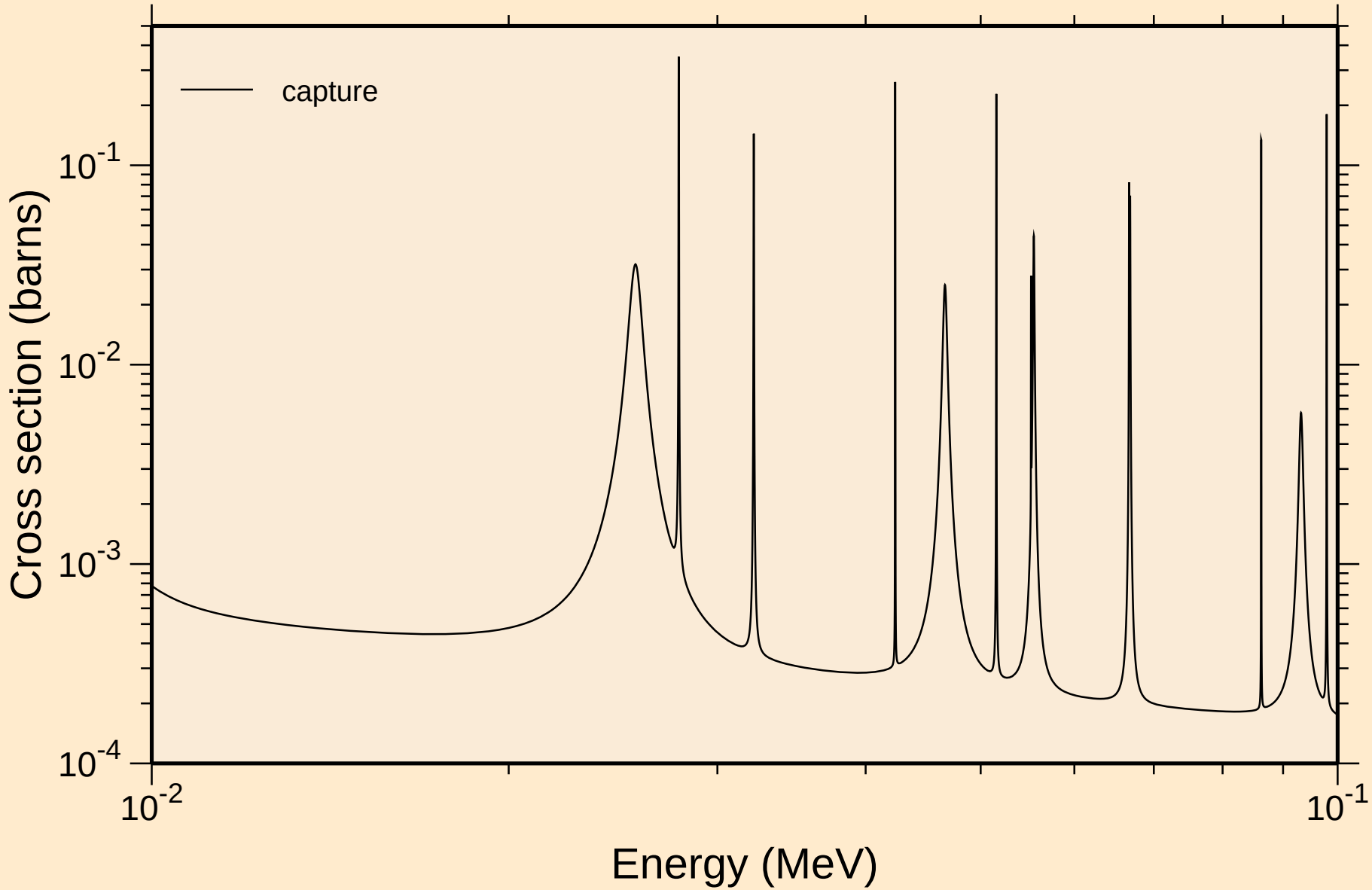

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance total cross section
total
Cross section (barns)
10^1
10^0
10^{-2}
10^{-1}
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance total cross section
total
Cross section (barns)
10^1
10^0
10^{-1}
10^0
Energy (MeV)

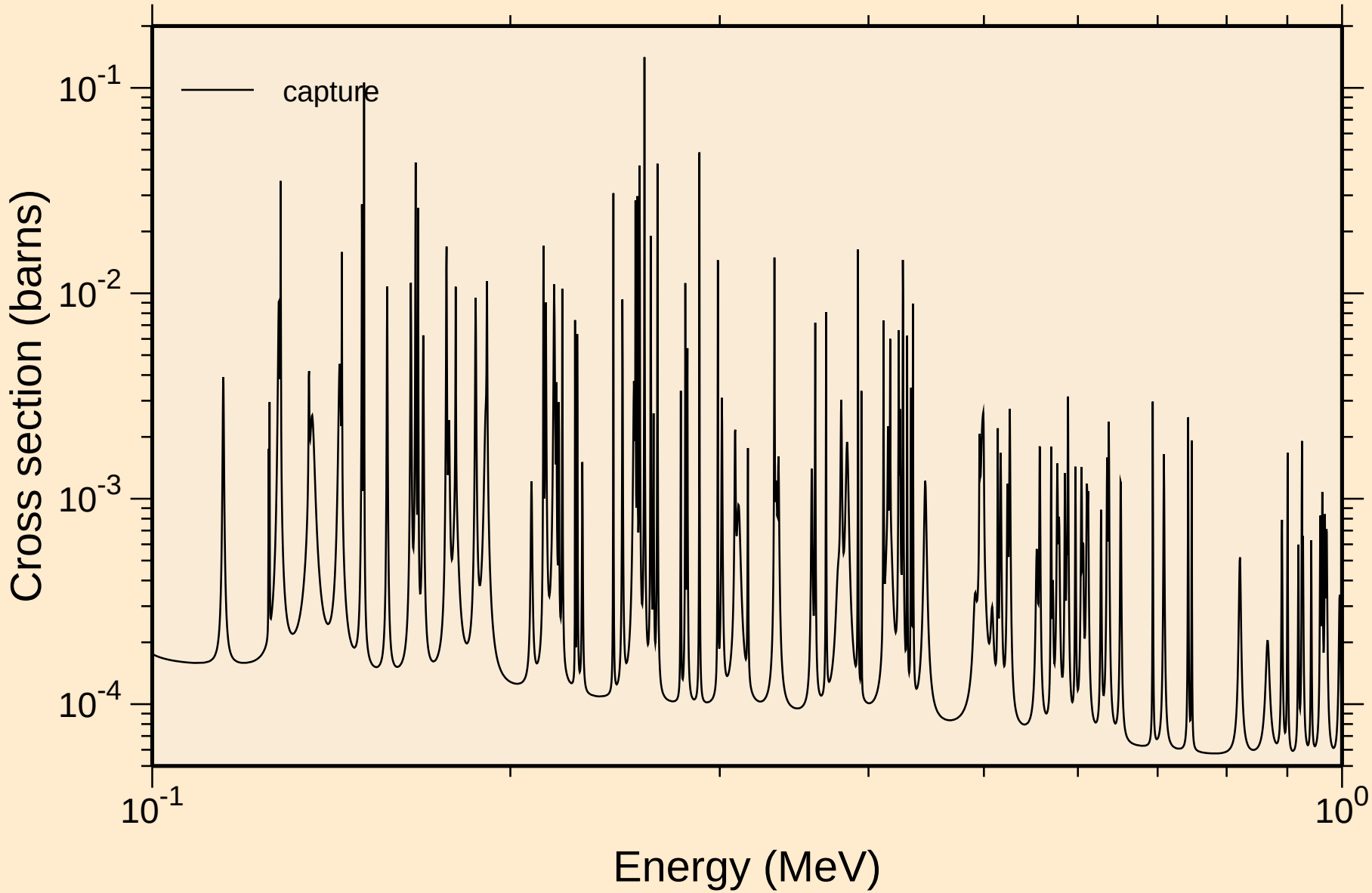

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance total cross section
total
Cross section (barns)
10^0
10^0
10^1
Energy (MeV)

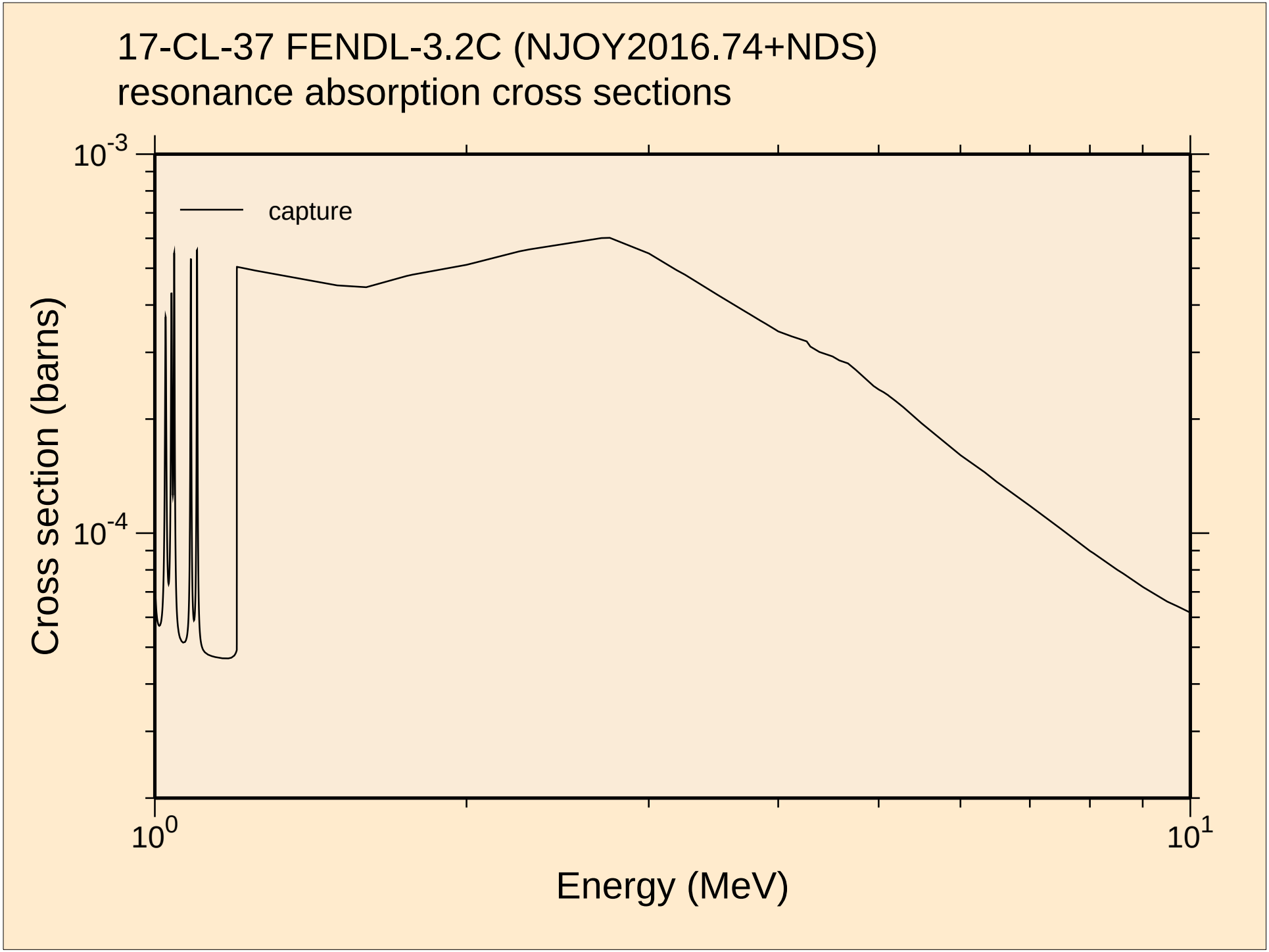

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance absorption cross sections
capture
Cross section (barns)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-3
10^-2

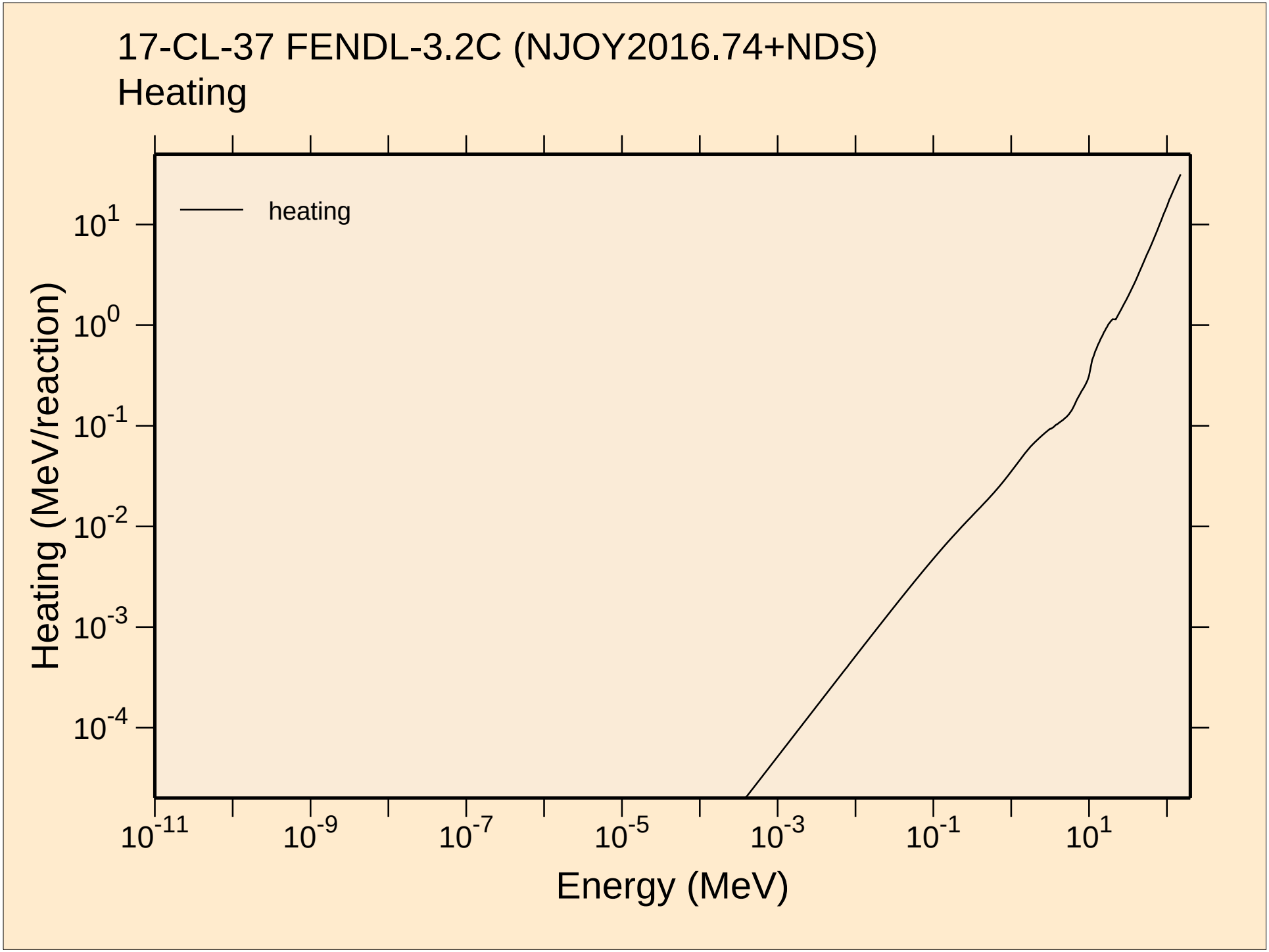
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance absorption cross sections

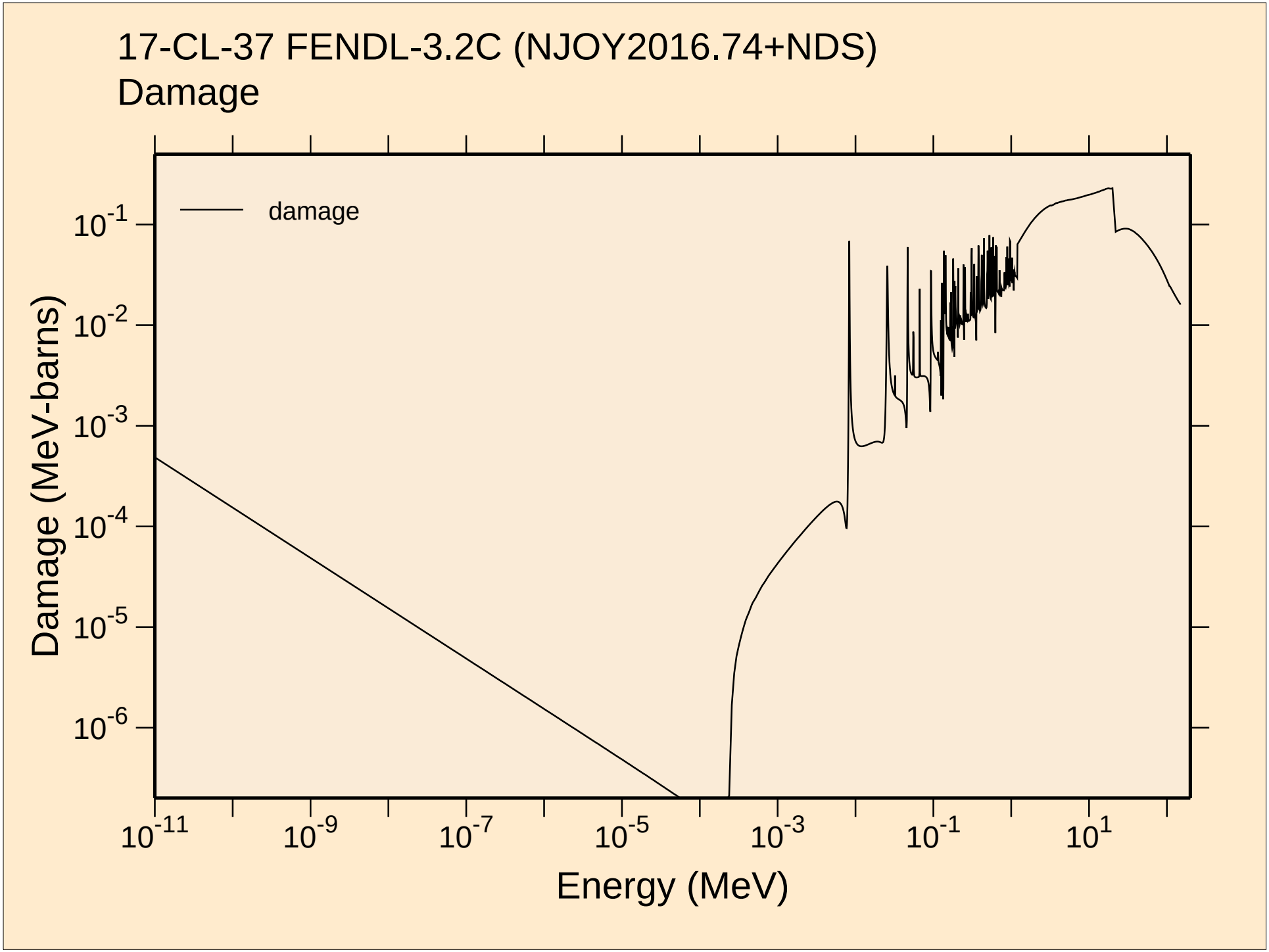


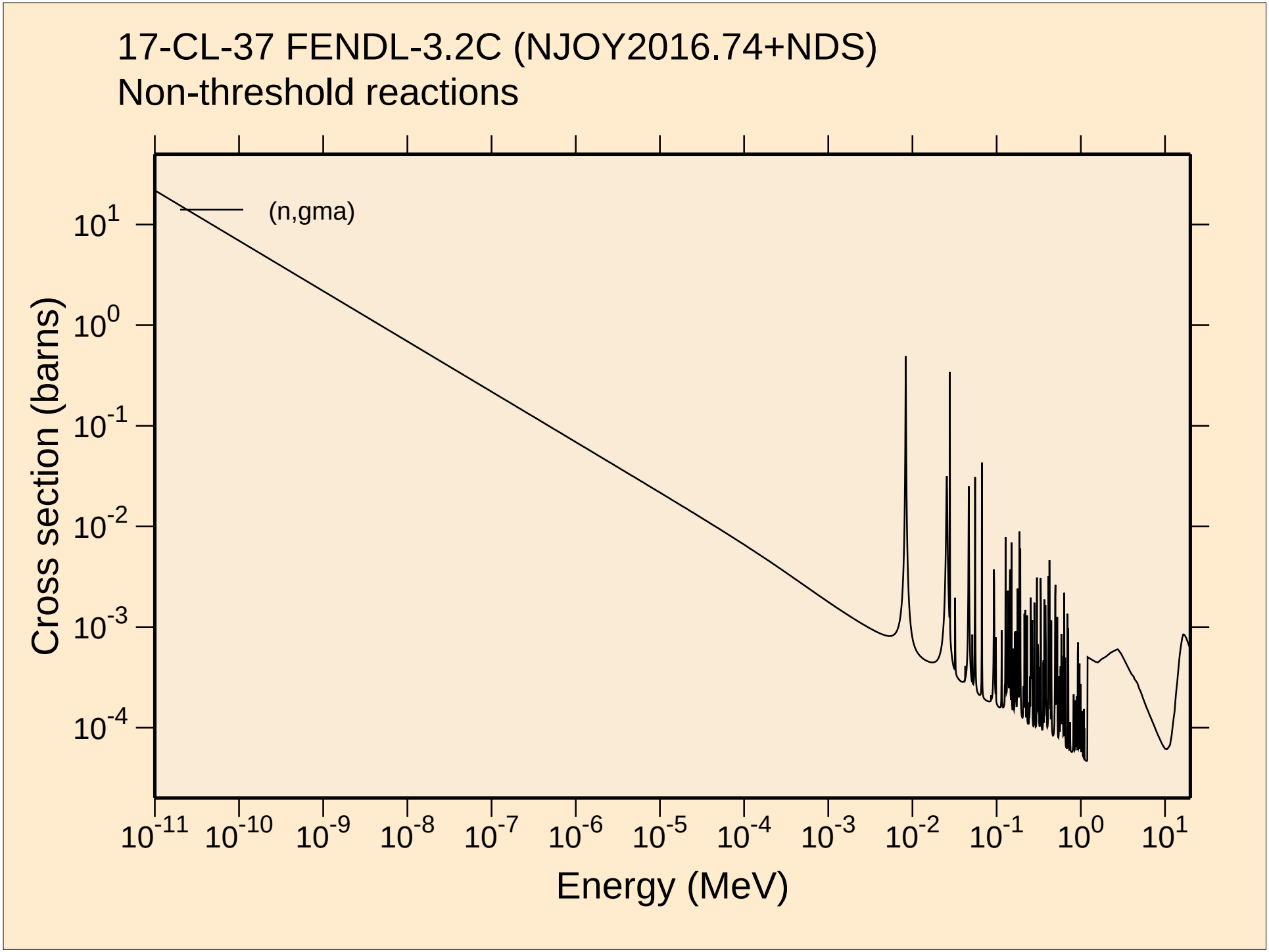
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance absorption cross sections

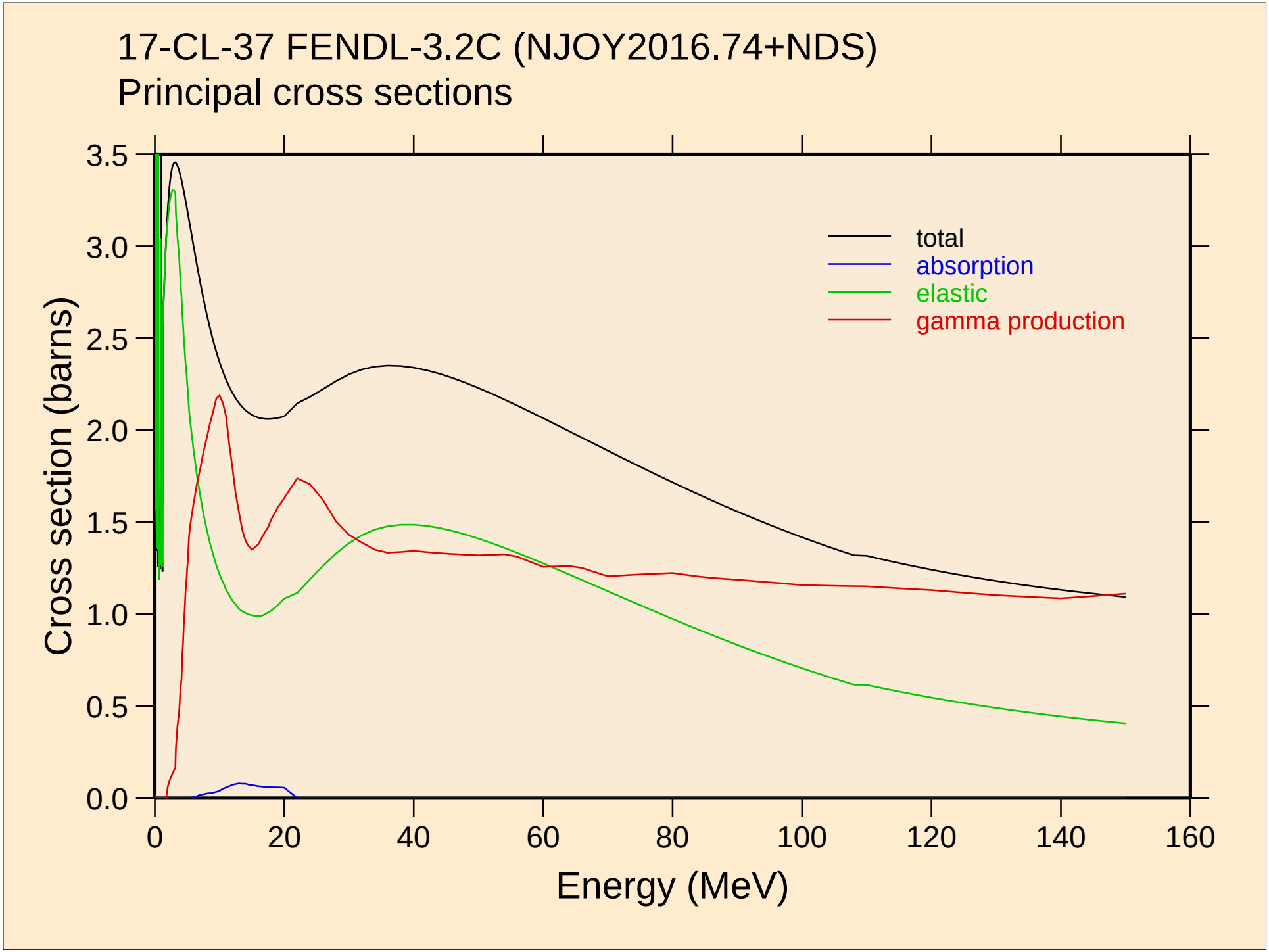


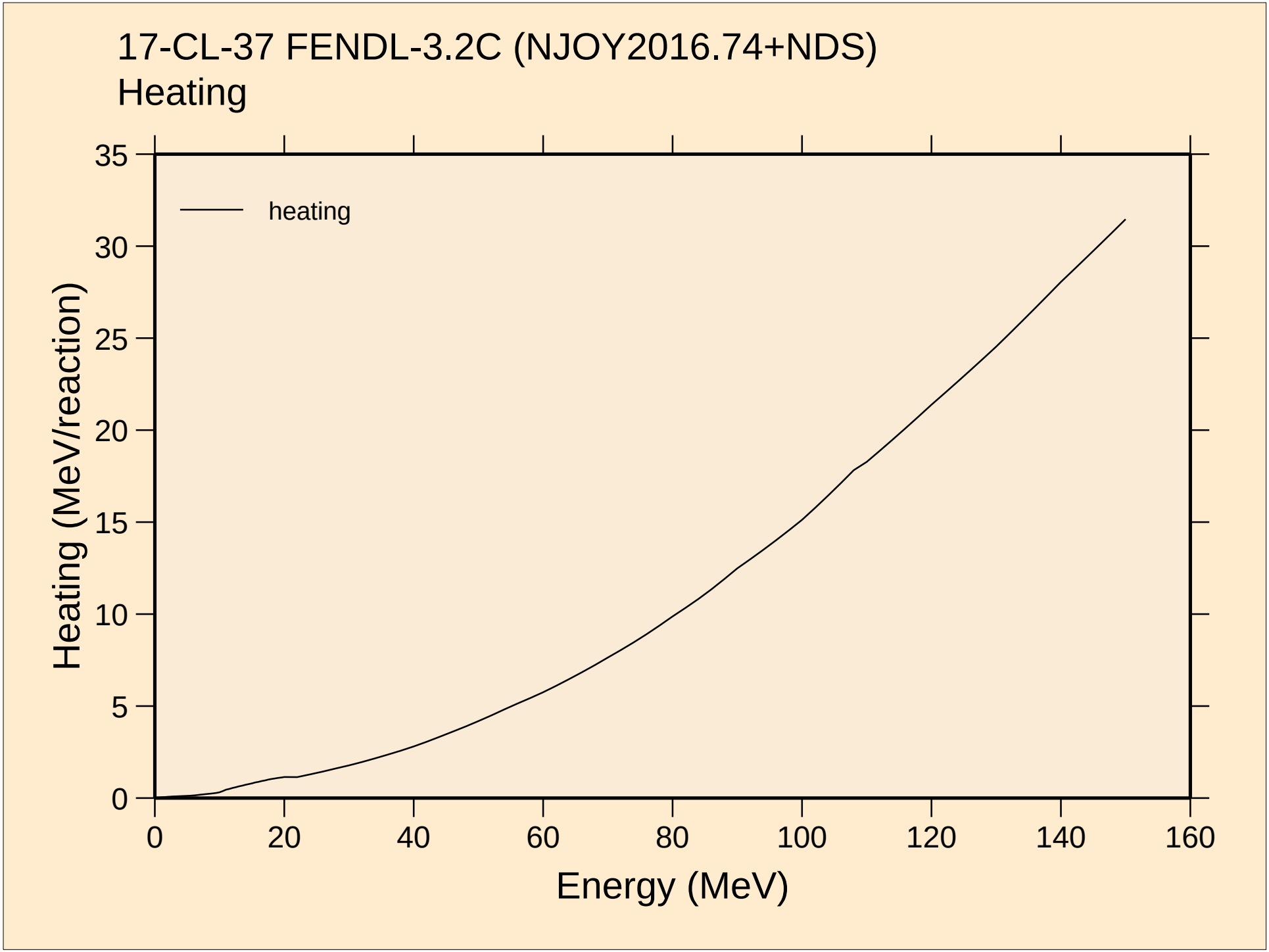

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
resonance absorption cross sections
capture
Cross section (barns)
10-3
10-4
100
101
Energy (MeV)

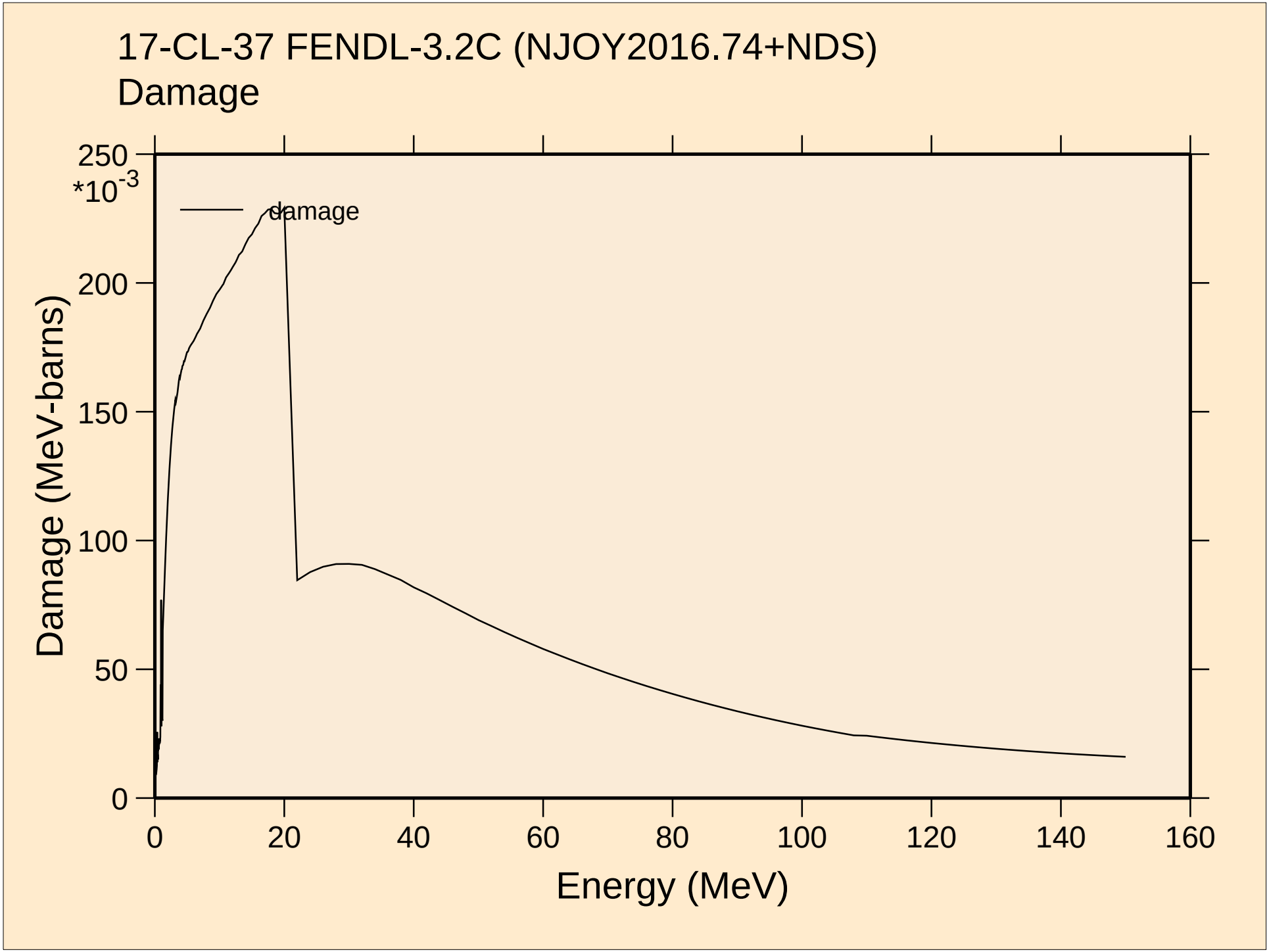

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

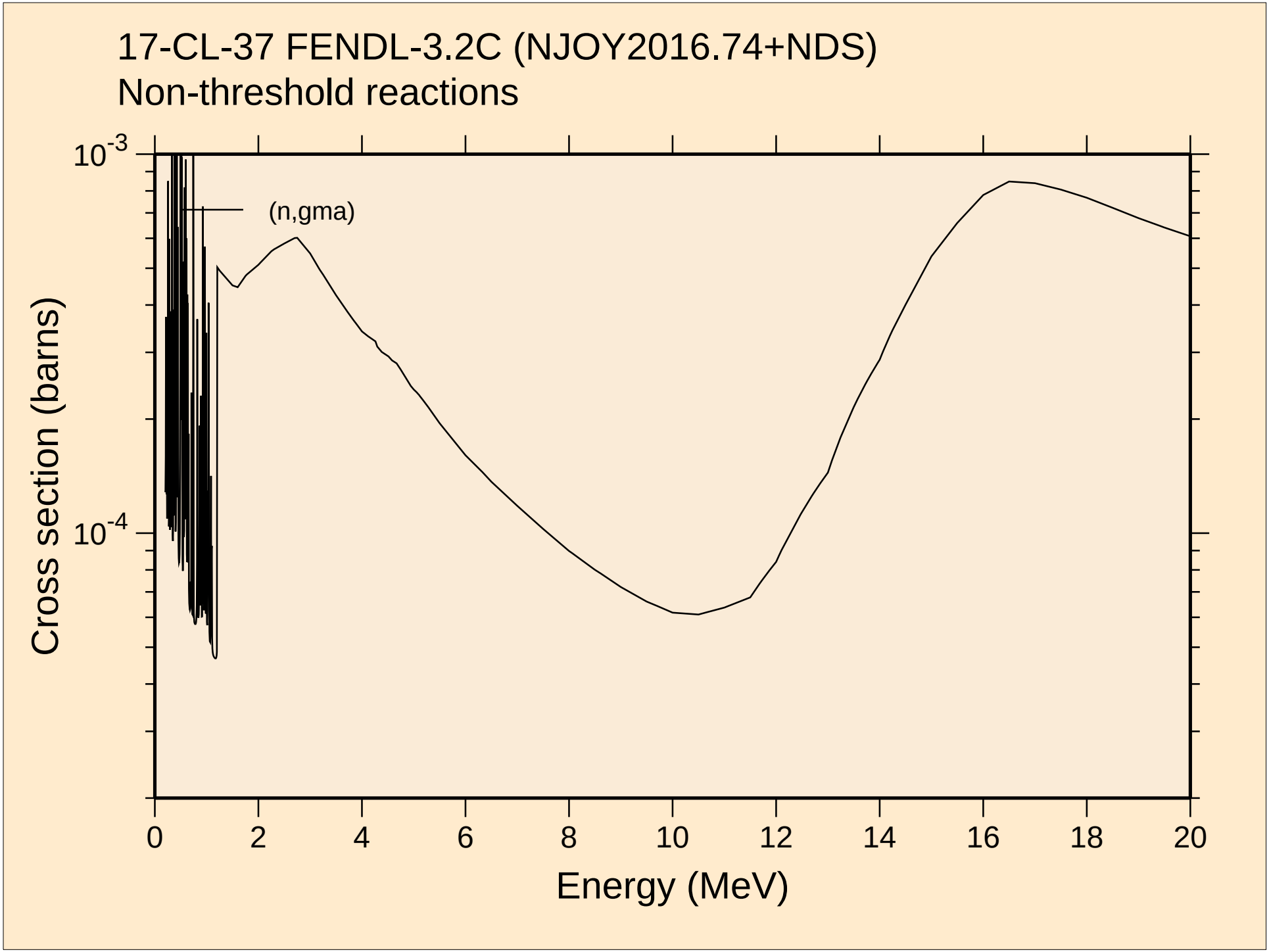

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10-1
10-2
10-3
10-4
10-5
10-6
10-11
10-9
10-7
10-5
10-3
10-1
101

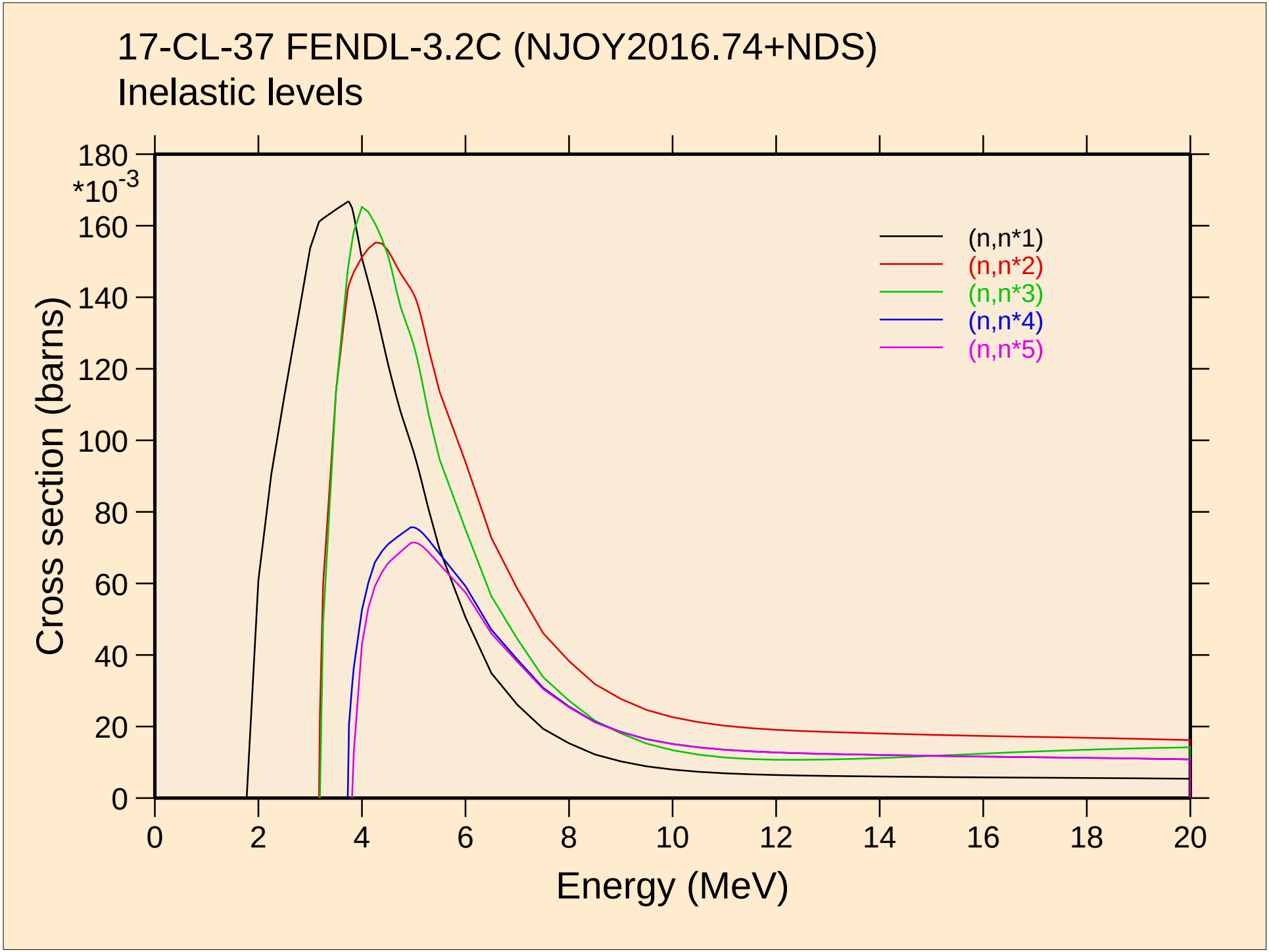

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Non-threshold reactions
(n,gma)
Cross section (barns)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

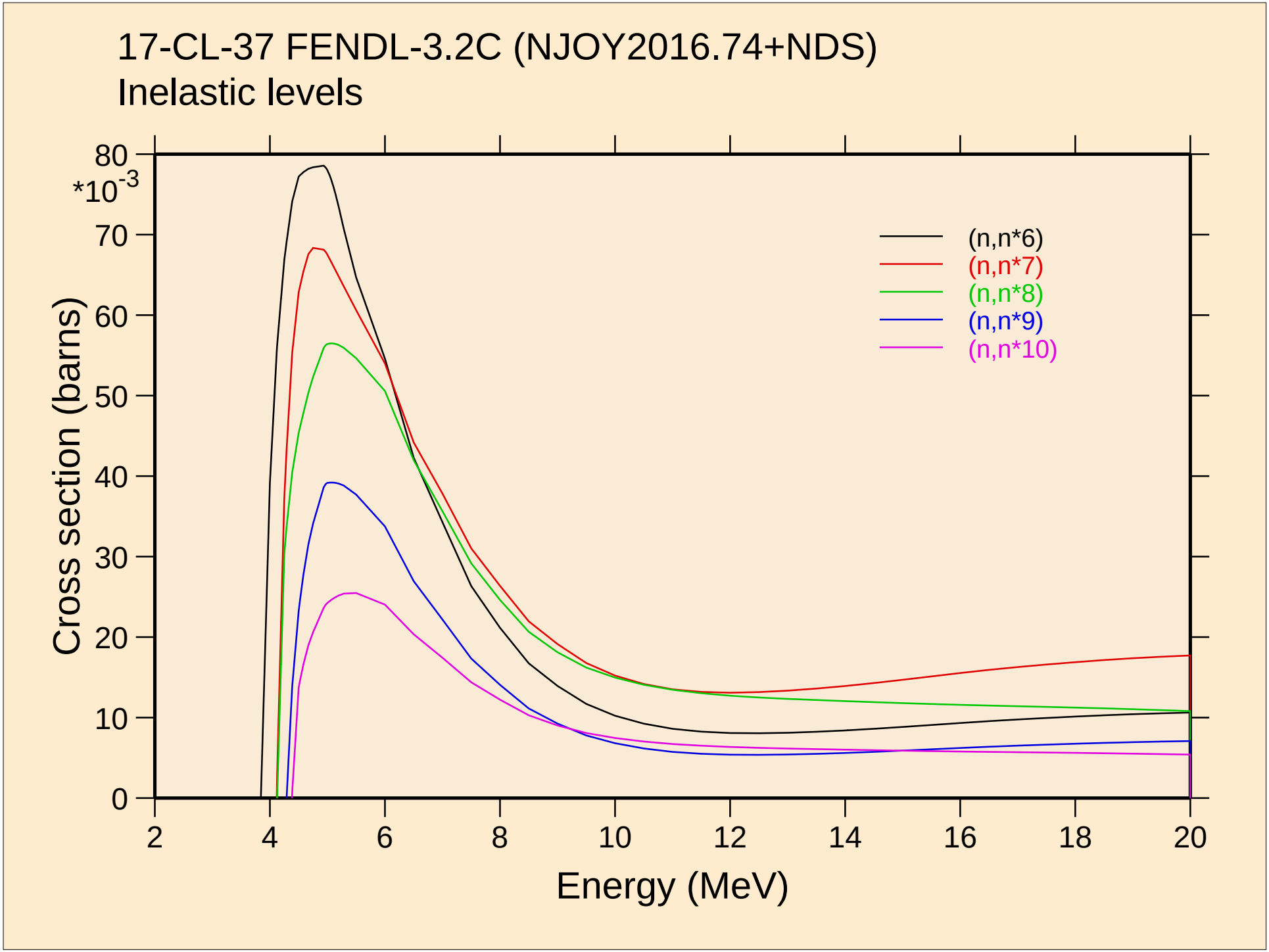

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
20
40
60
80
100
120
140
160

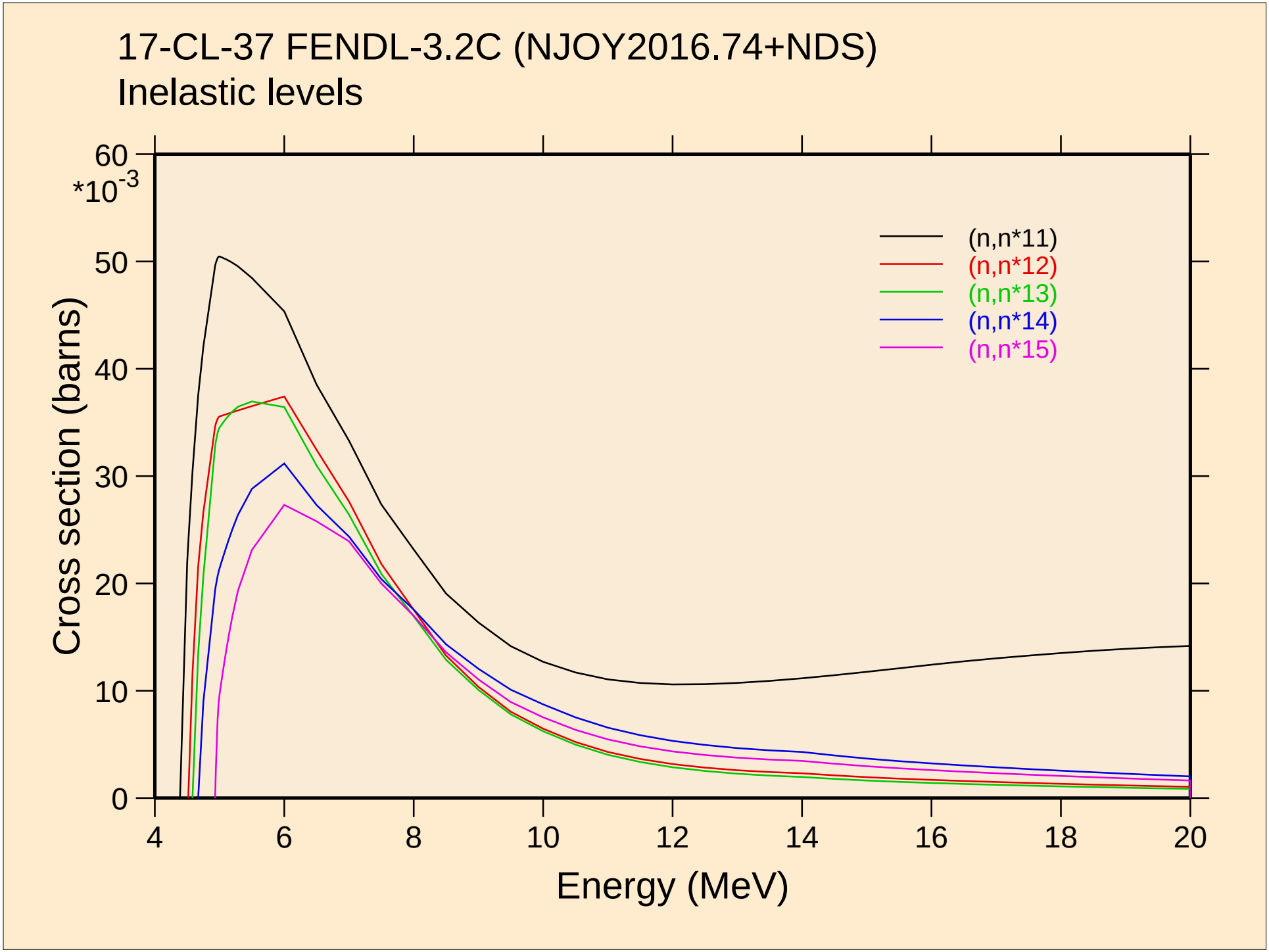

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
5
10
15
20
25
30
35
0
20
40
60
80
100
120
140
160

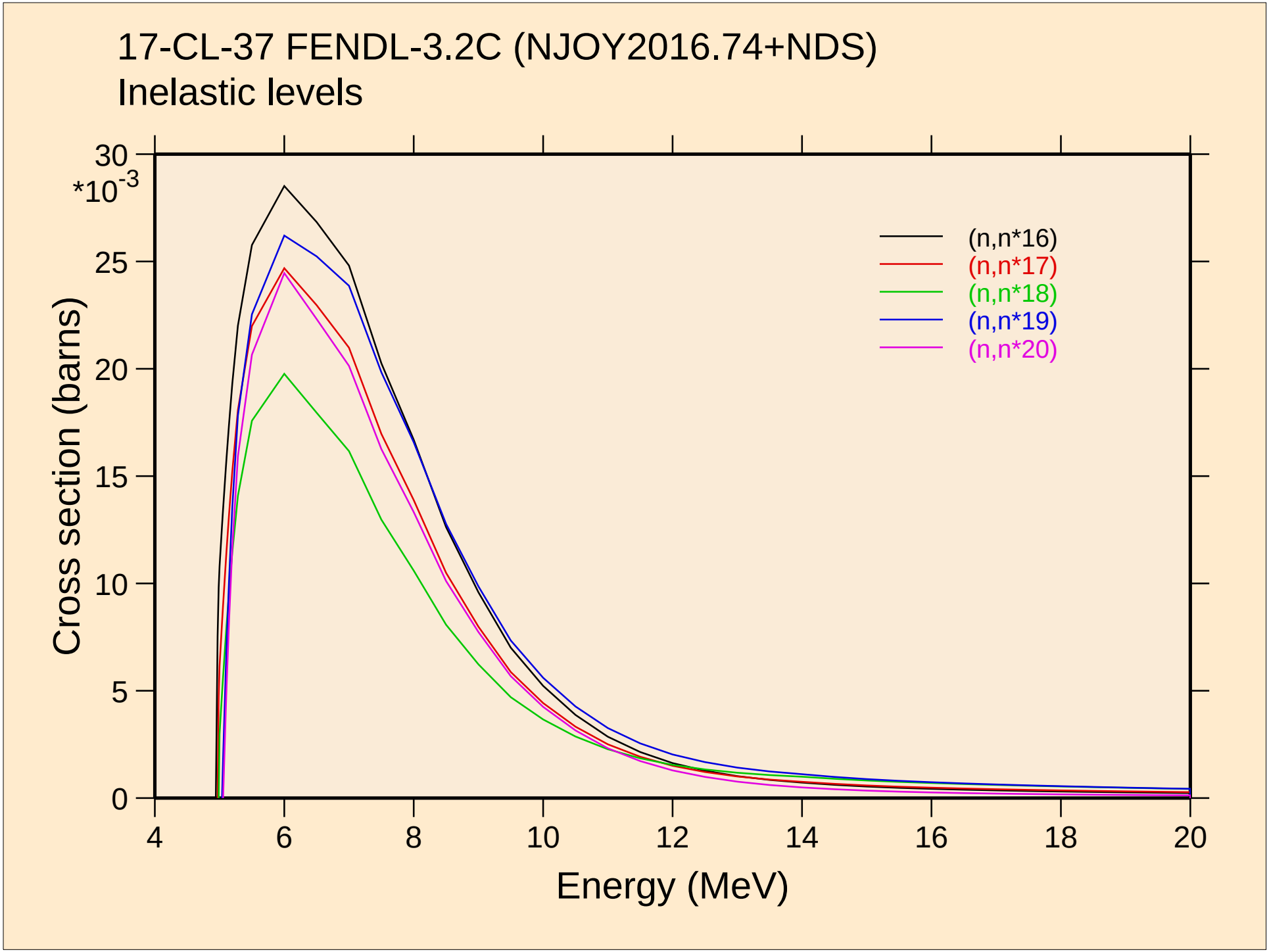

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Damage
damage
*10-3
250
200
150
100
50
0
Damage (MeV-barns)
0
20
40
60
80
100
120
140
160
Energy (MeV)

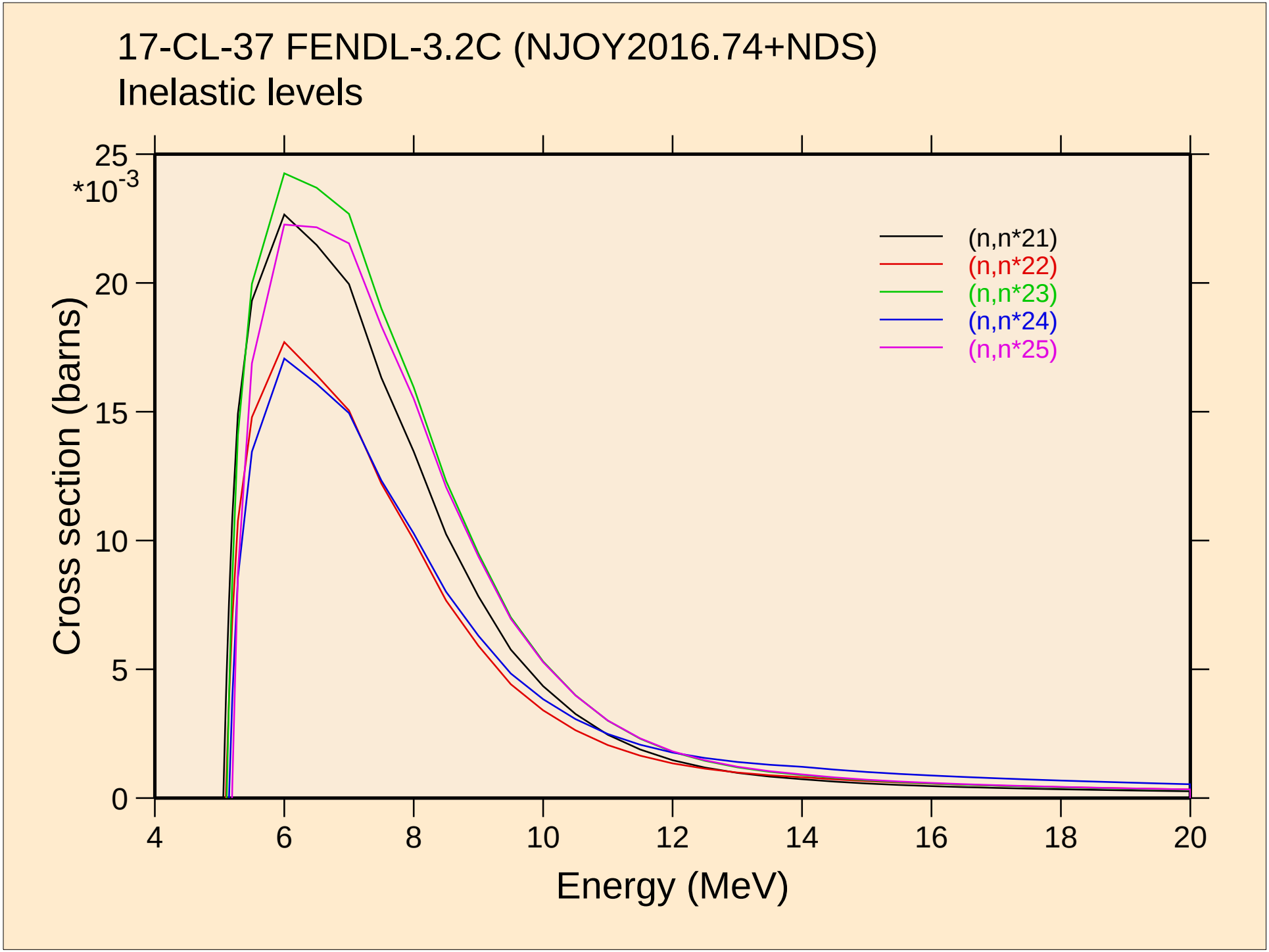

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Non-threshold reactions
(n,gma)
Cross section (barns)
10-3
10-4
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

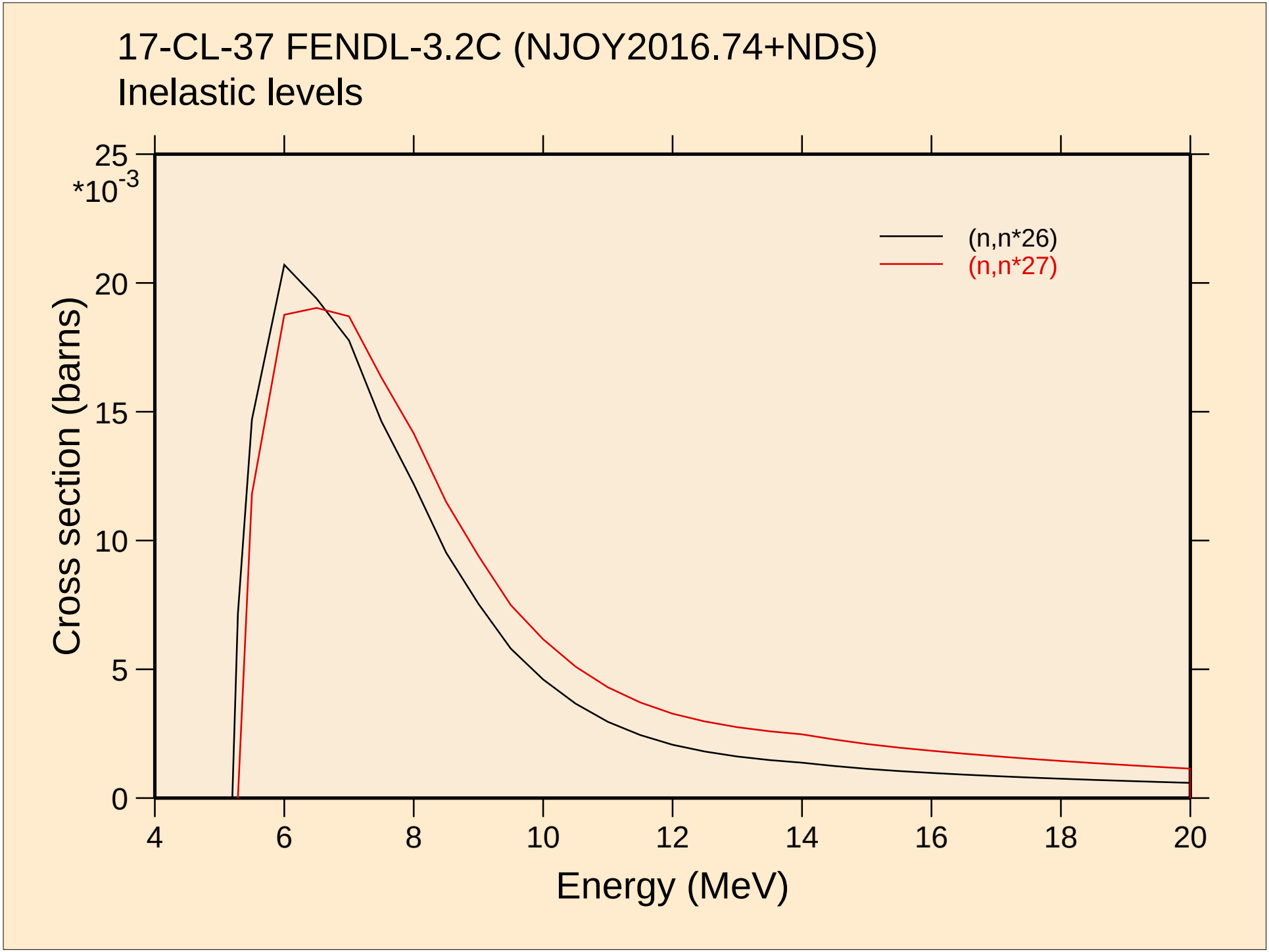

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
Cross section (barns)
*10-3
180
160
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

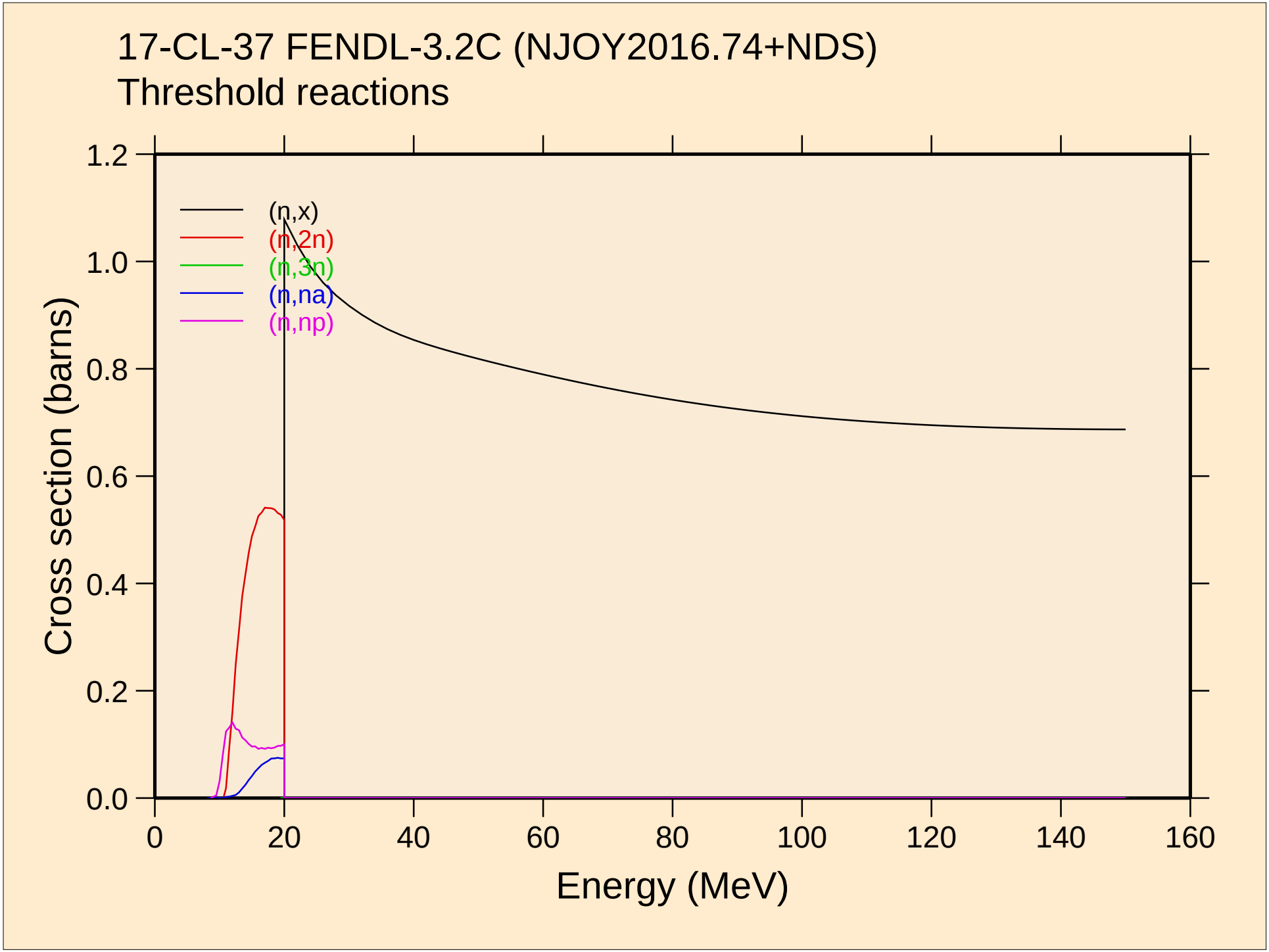

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
Cross section (barns)
*10-3
80
70
60
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

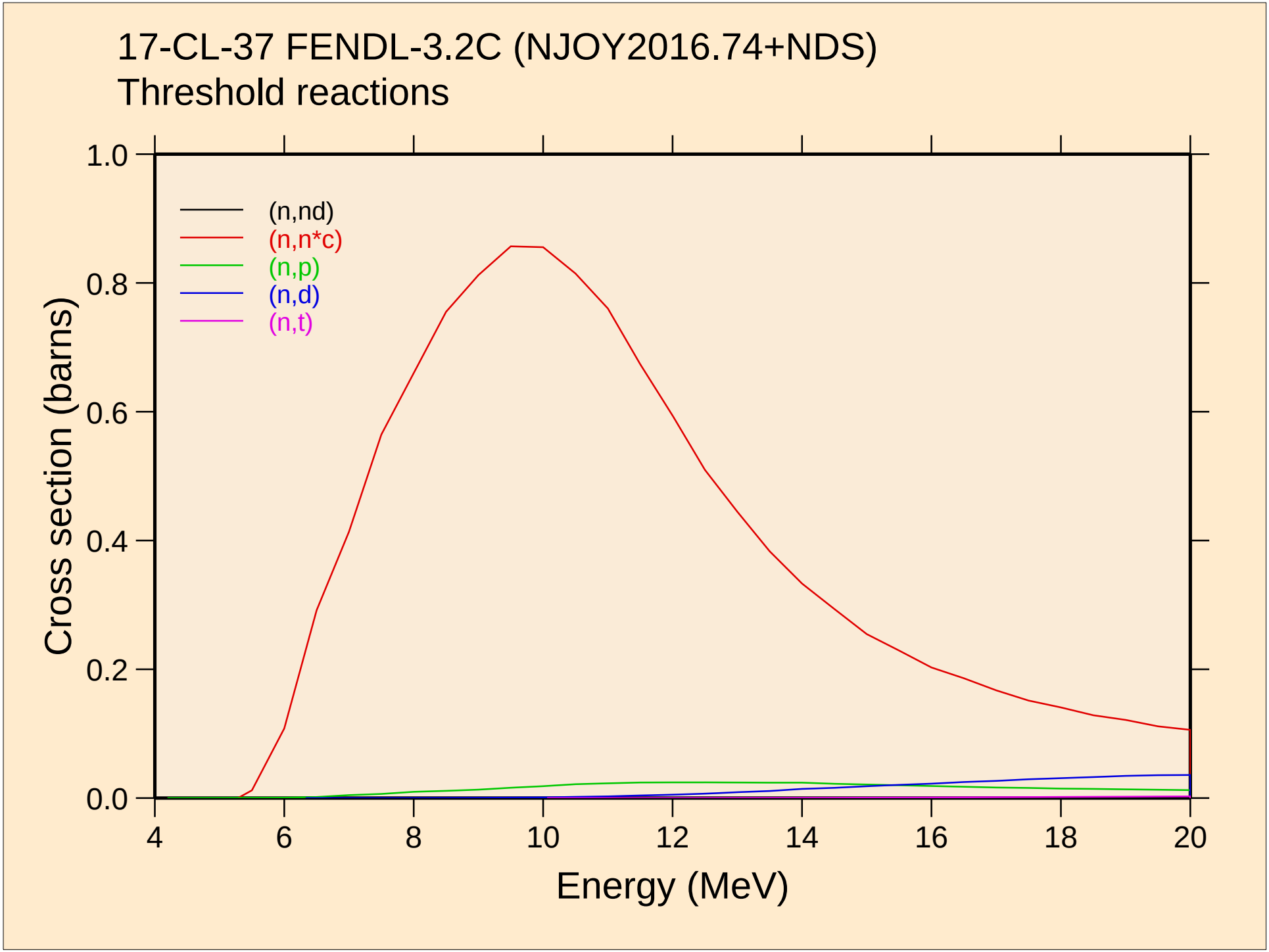

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
*10-3
60
50
40
30
20
10
0
Cross section (barns)
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

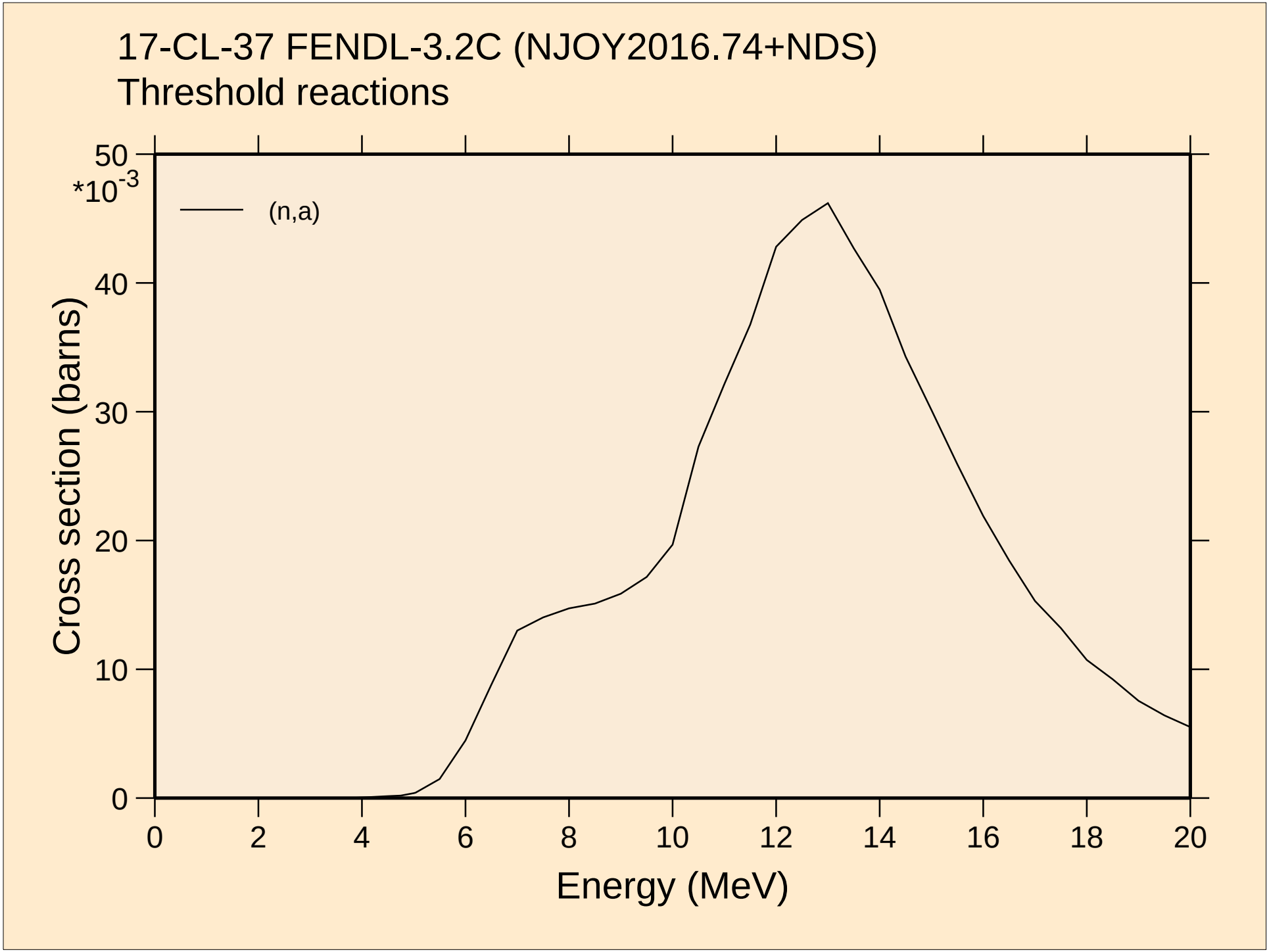

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
Cross section (barns)
*10^-3
30
25
20
15
10
5
0
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

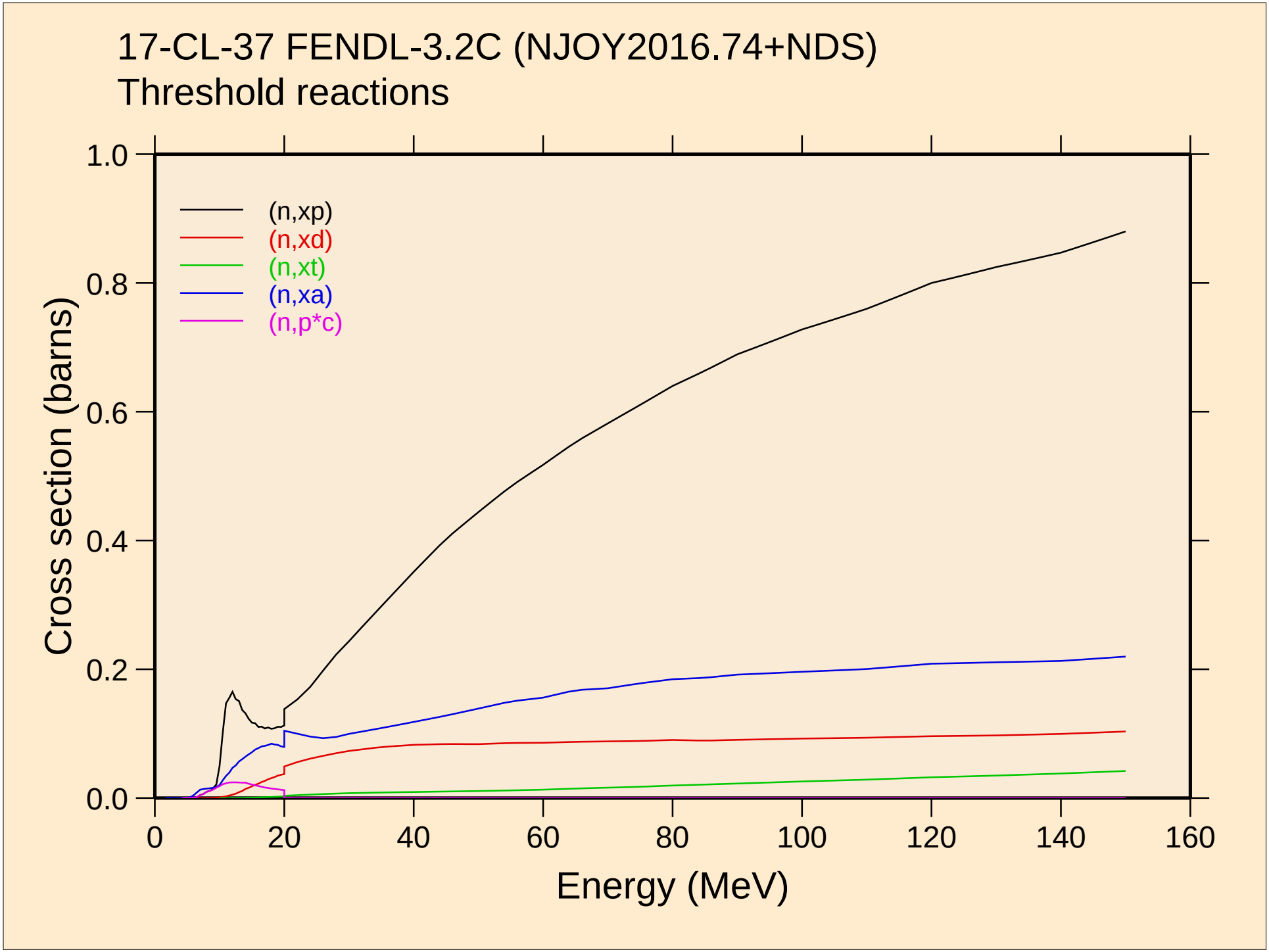

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
Cross section (barns)
*10^-3
25
20
15
10
5
0
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

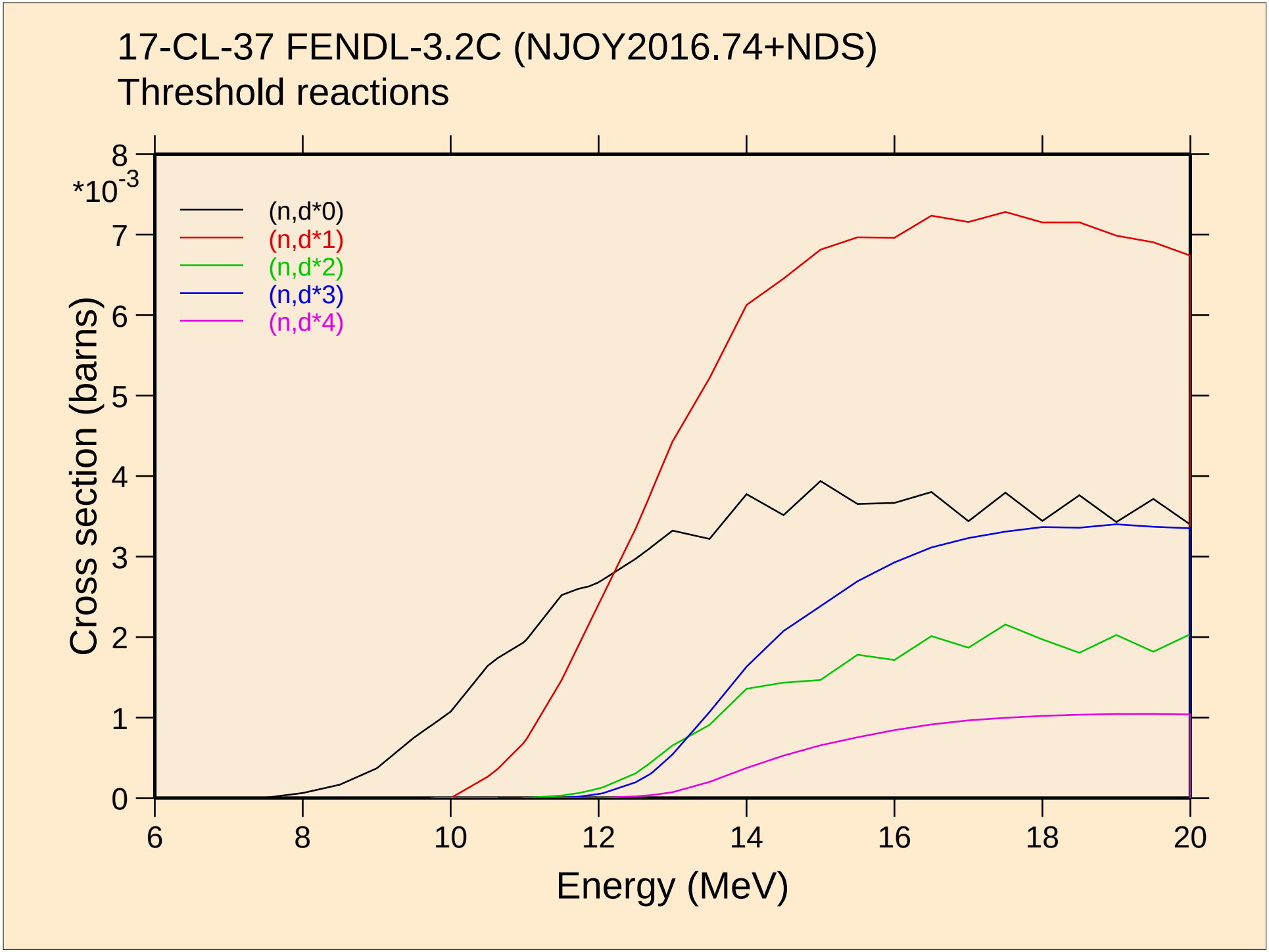

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Inelastic levels
*10-3
25
20
15
10
5
0
Cross section (barns)
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*26)
(n,n*27)

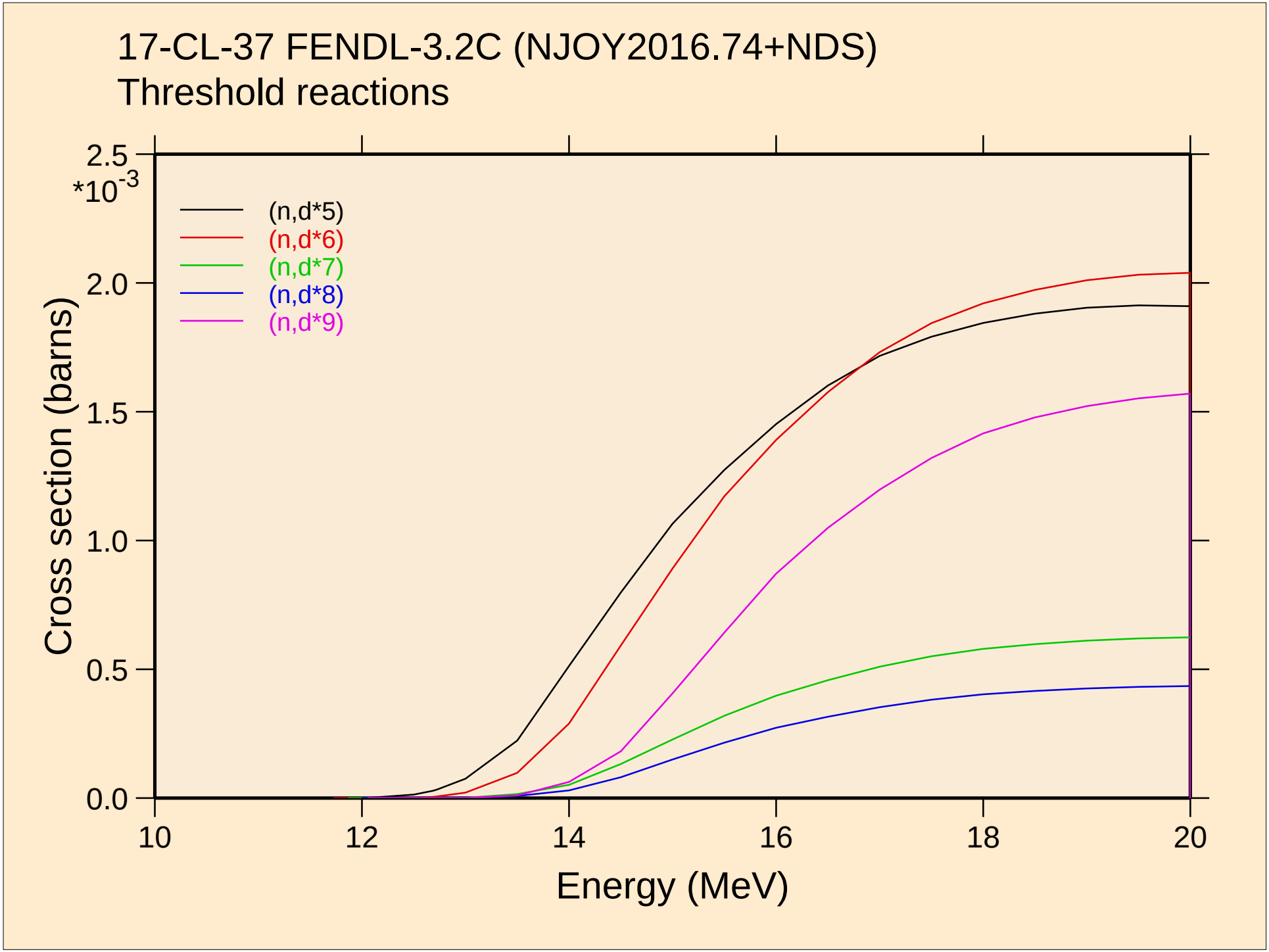

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,x)
(n,2n)
(n,3n)
(n,na)
(n,np)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
20
40
60
80
100
120
140
160

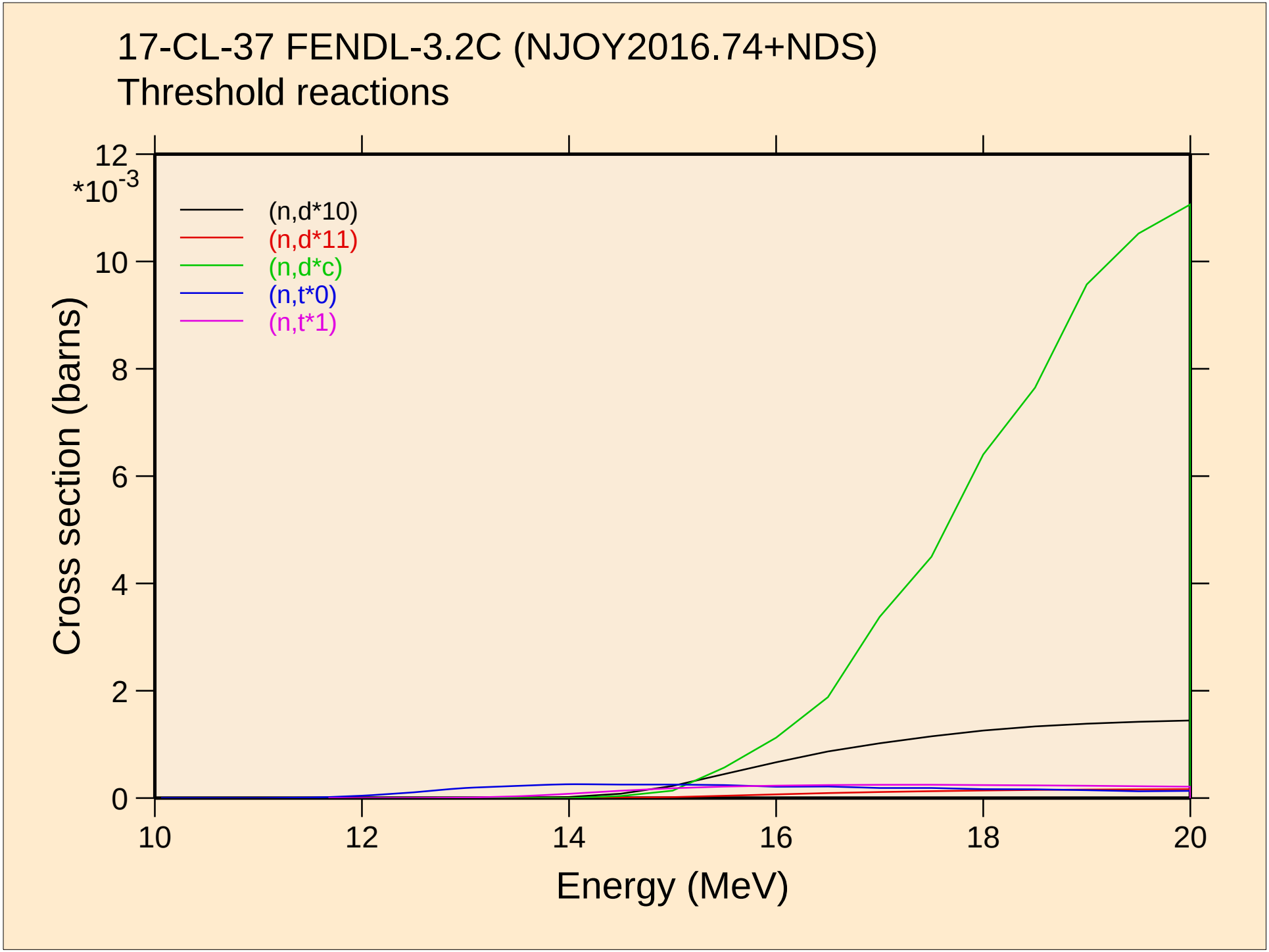

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,nd)
(n,n*c)
(n,p)
(n,d)
(n,t)
Cross section (barns)
Energy (MeV)
1.0
0.8
0.6
0.4
0.2
0.0
4
6
8
10
12
14
16
18
20

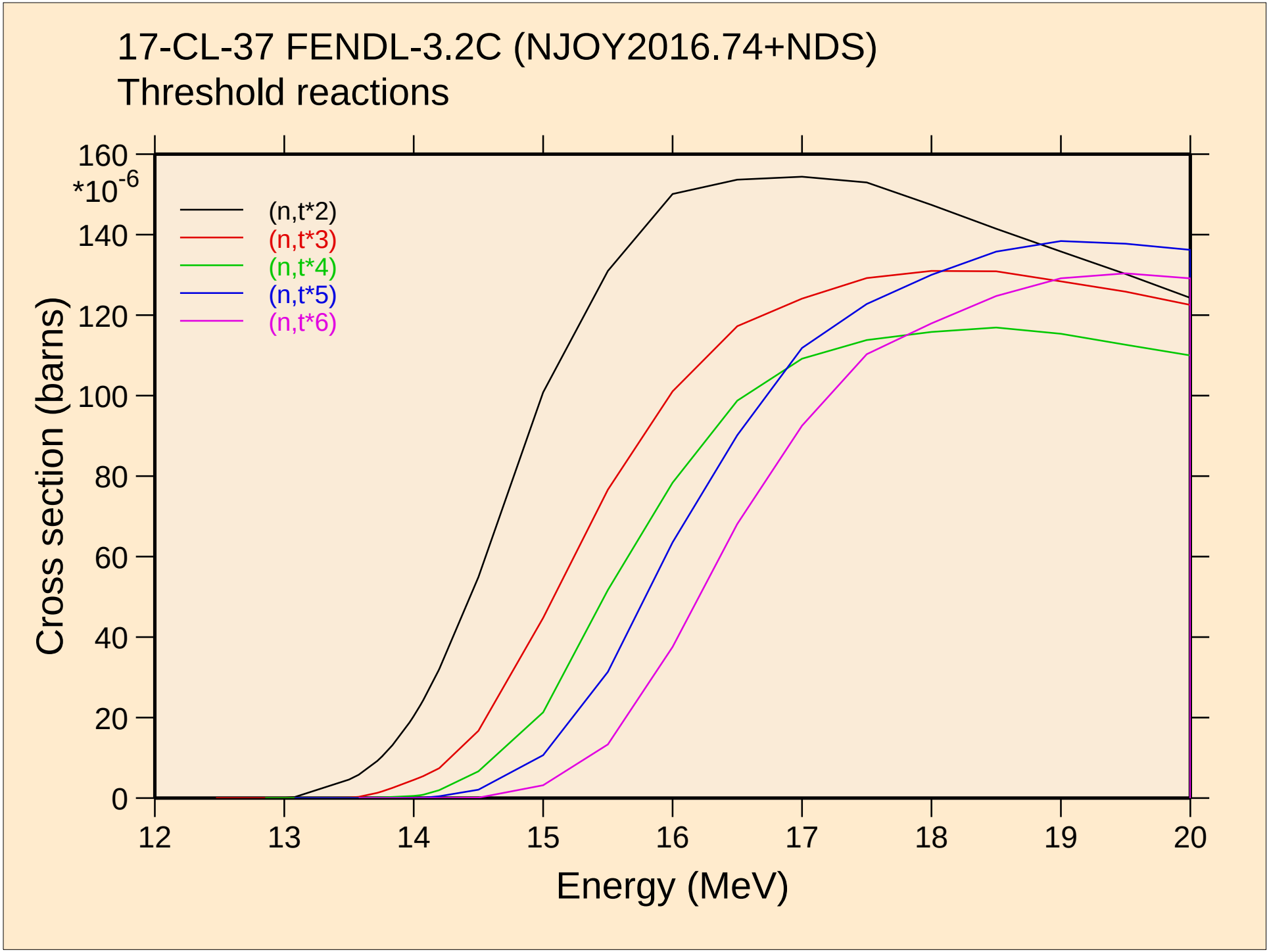

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,a)
*10-3
Cross section (barns)
Energy (MeV)
0
10
20
30
40
50
0
2
4
6
8
10
12
14
16
18
20

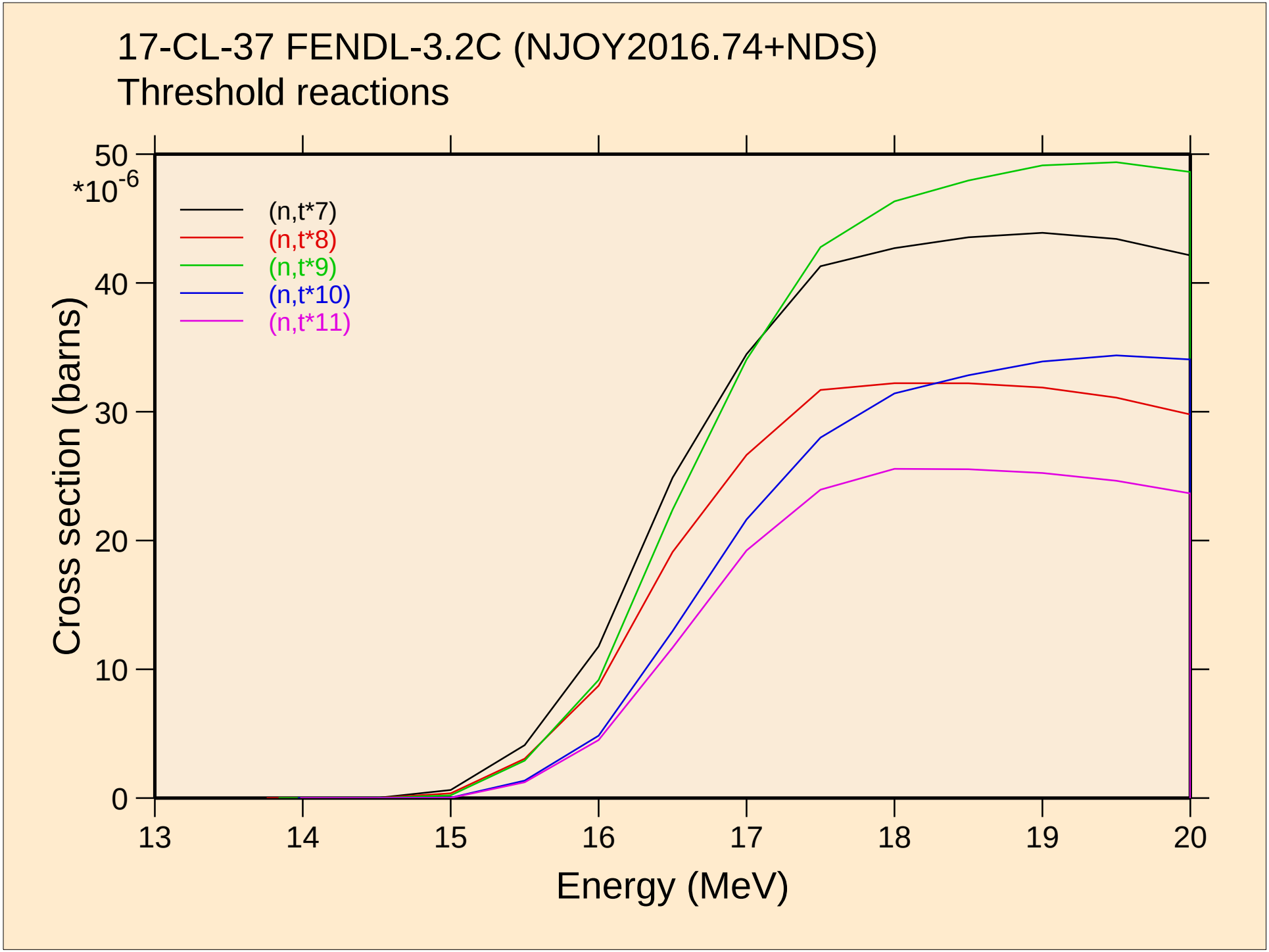

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,xp)
(n,xd)
(n,xt)
(n,xa)
(n,p*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
120
140
160

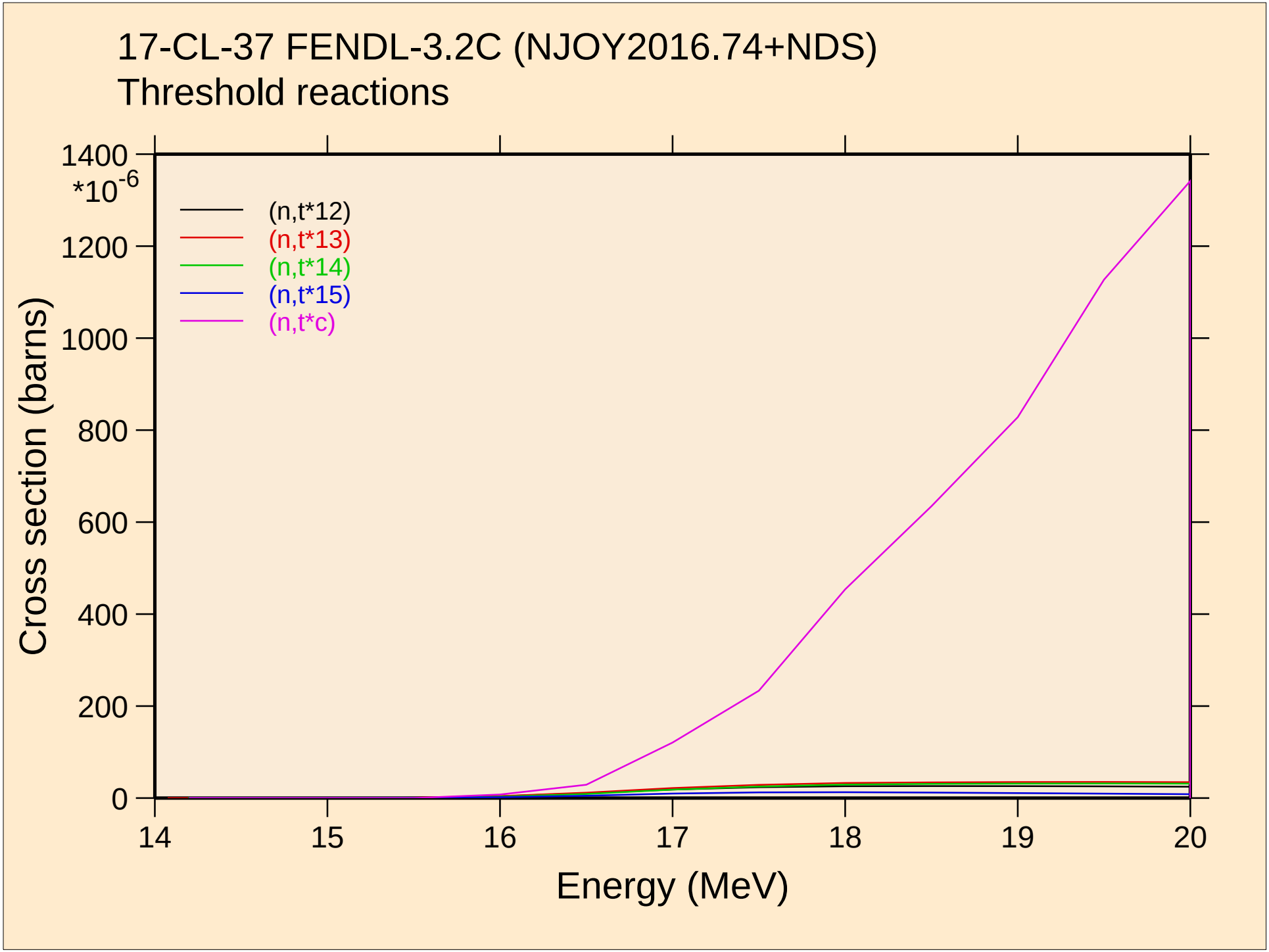

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
*10-3
(n,d*0)
(n,d*1)
(n,d*2)
(n,d*3)
(n,d*4)
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
8
6
8
10
12
14
16
18
20

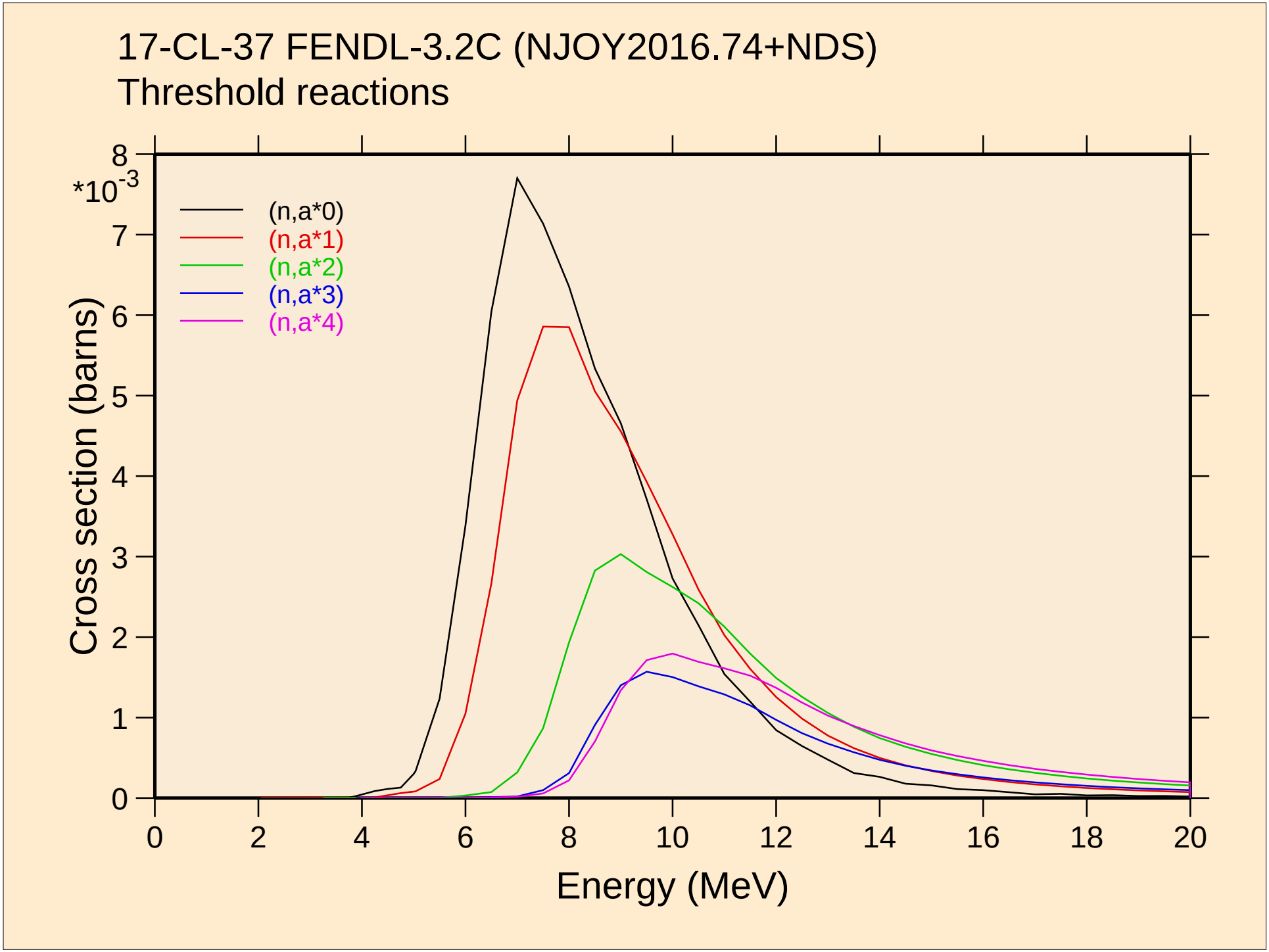

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,d*5)
(n,d*6)
(n,d*7)
(n,d*8)
(n,d*9)
*10-3
2.5
2.0
1.5
1.0
0.5
0.0
Cross section (barns)
10
12
14
16
18
20
Energy (MeV)

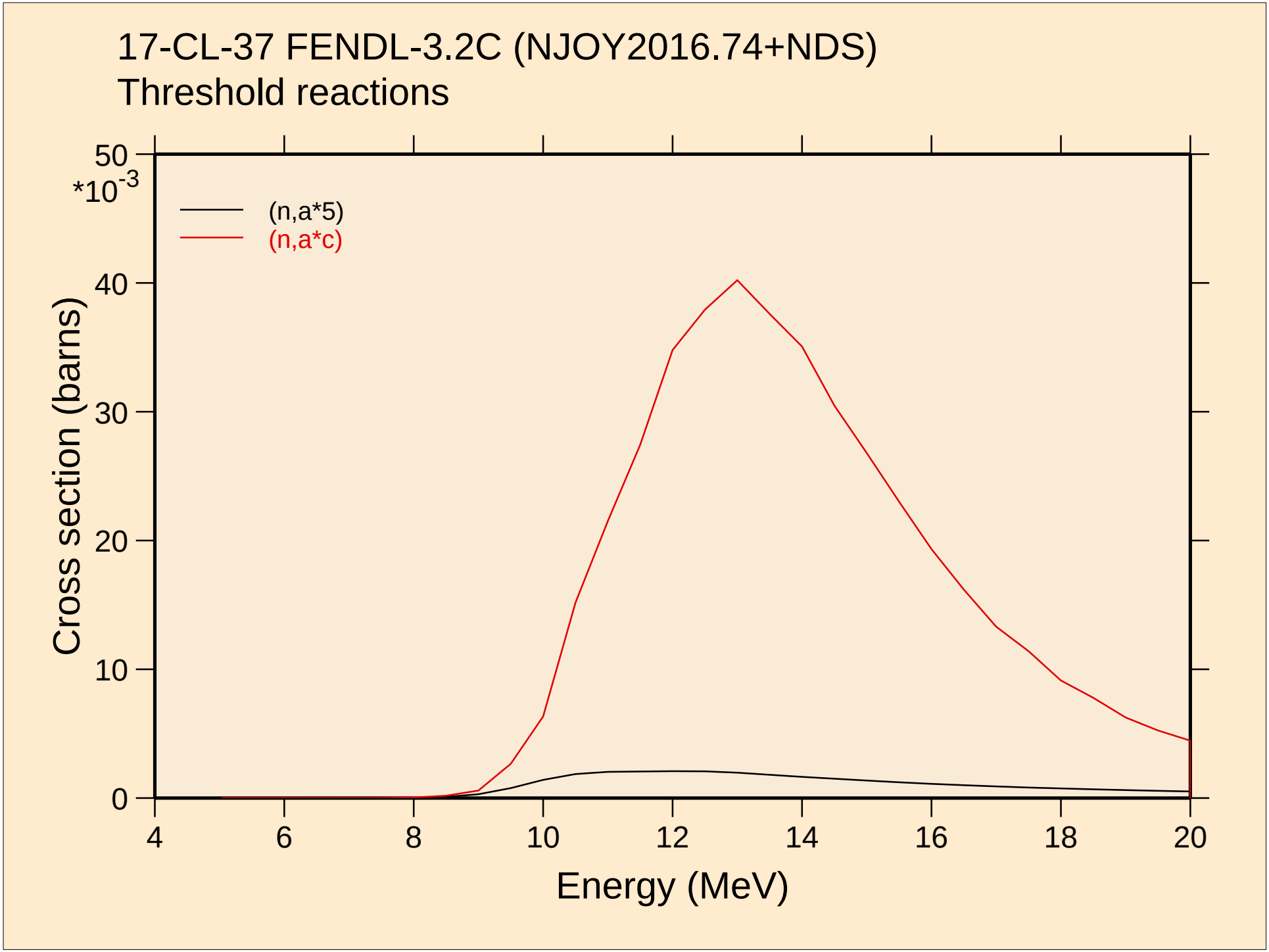

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
*10-3
(n,d*10)
(n,d*11)
(n,d*c)
(n,t*0)
(n,t*1)
Cross section (barns)
Energy (MeV)
0
2
4
6
8
10
12
10
12
14
16
18
20

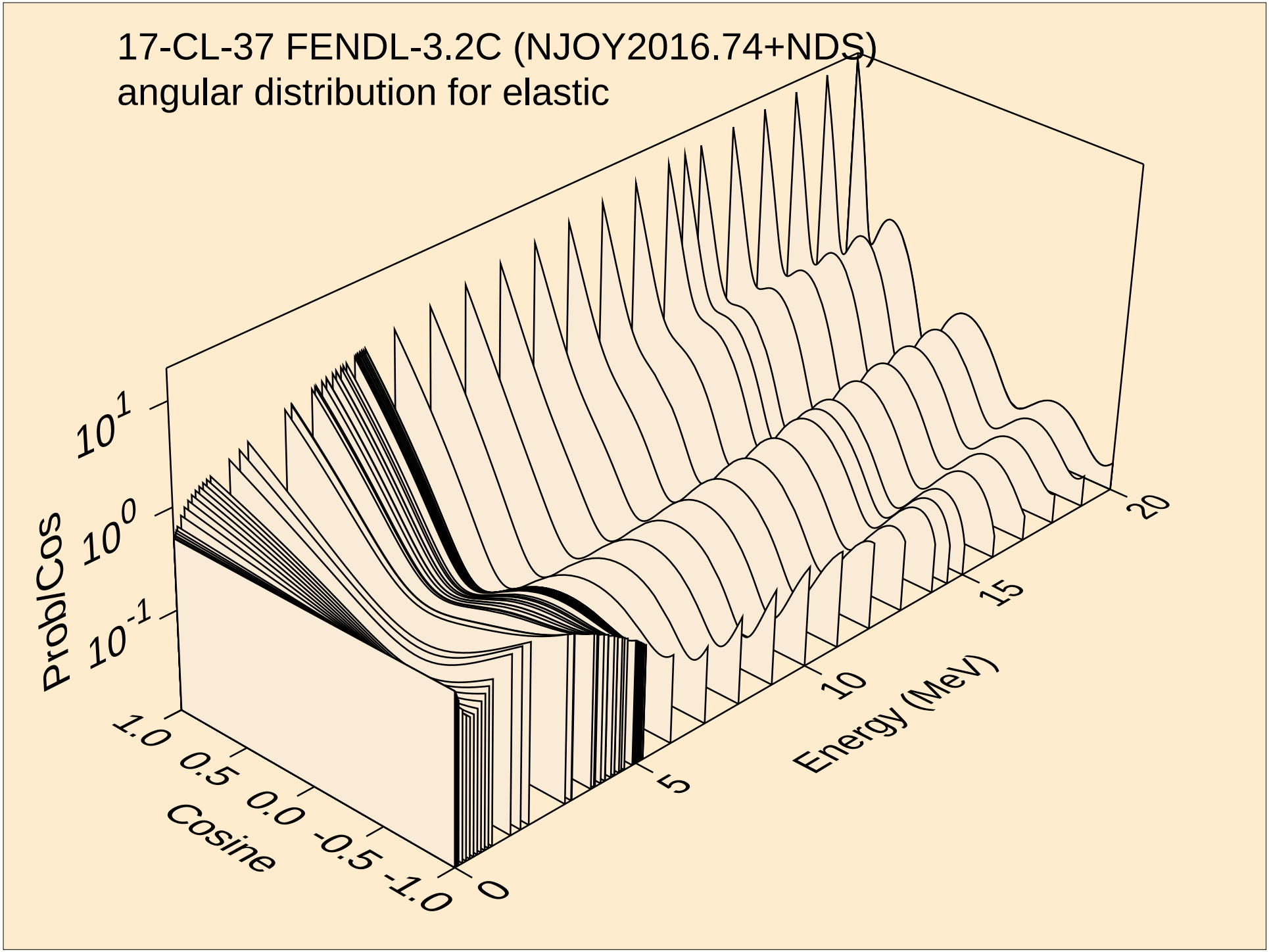

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
*10^-6
(n,t*2)
(n,t*3)
(n,t*4)
(n,t*5)
(n,t*6)
Cross section (barns)
Energy (MeV)
0
20
40
60
80
100
120
140
160
12
13
14
15
16
17
18
19
20

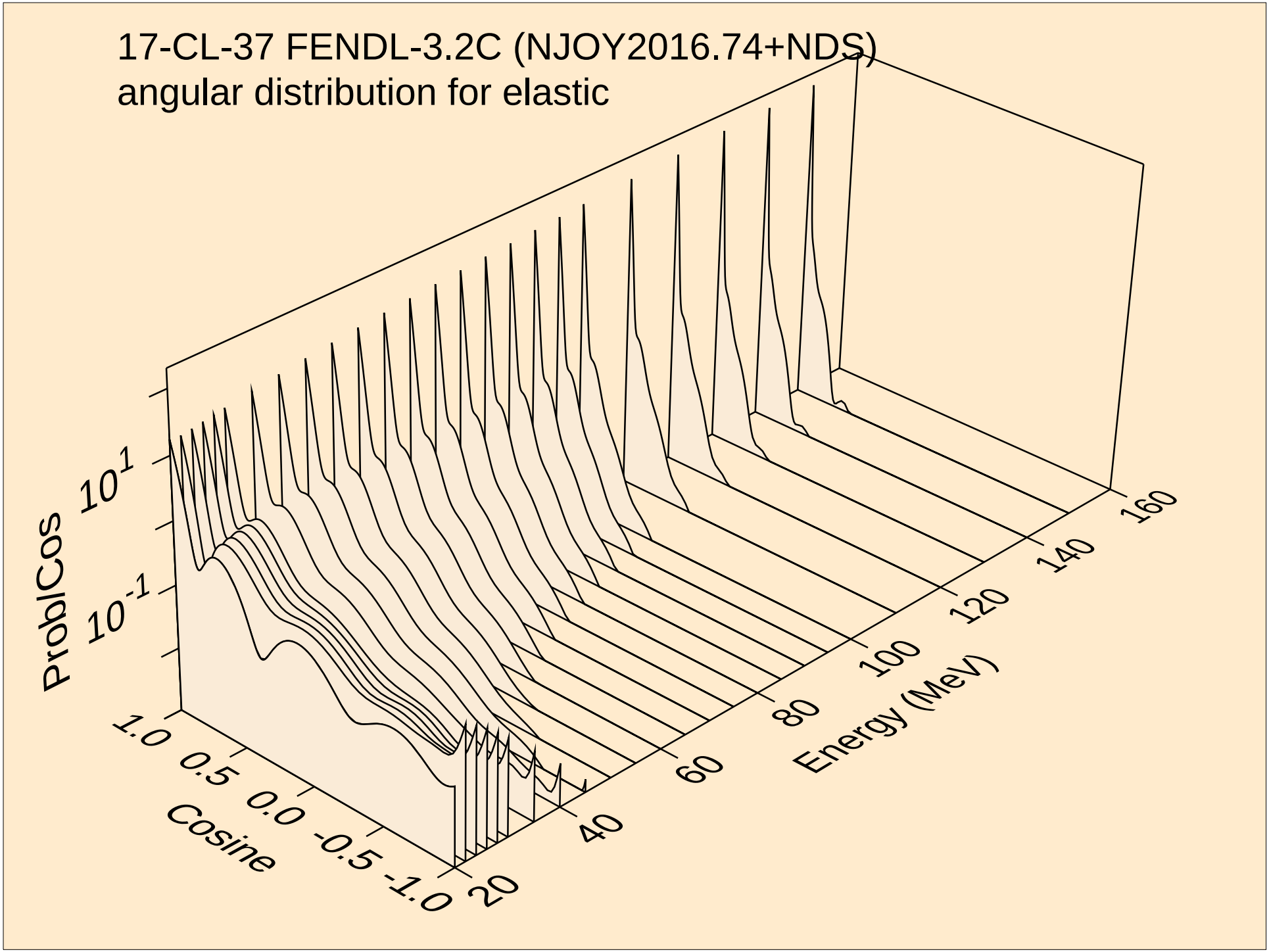

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
*10^-6
(n,t*7)
(n,t*8)
(n,t*9)
(n,t*10)
(n,t*11)
Cross section (barns)
Energy (MeV)
0
10
20
30
40
50
13
14
15
16
17
18
19
20

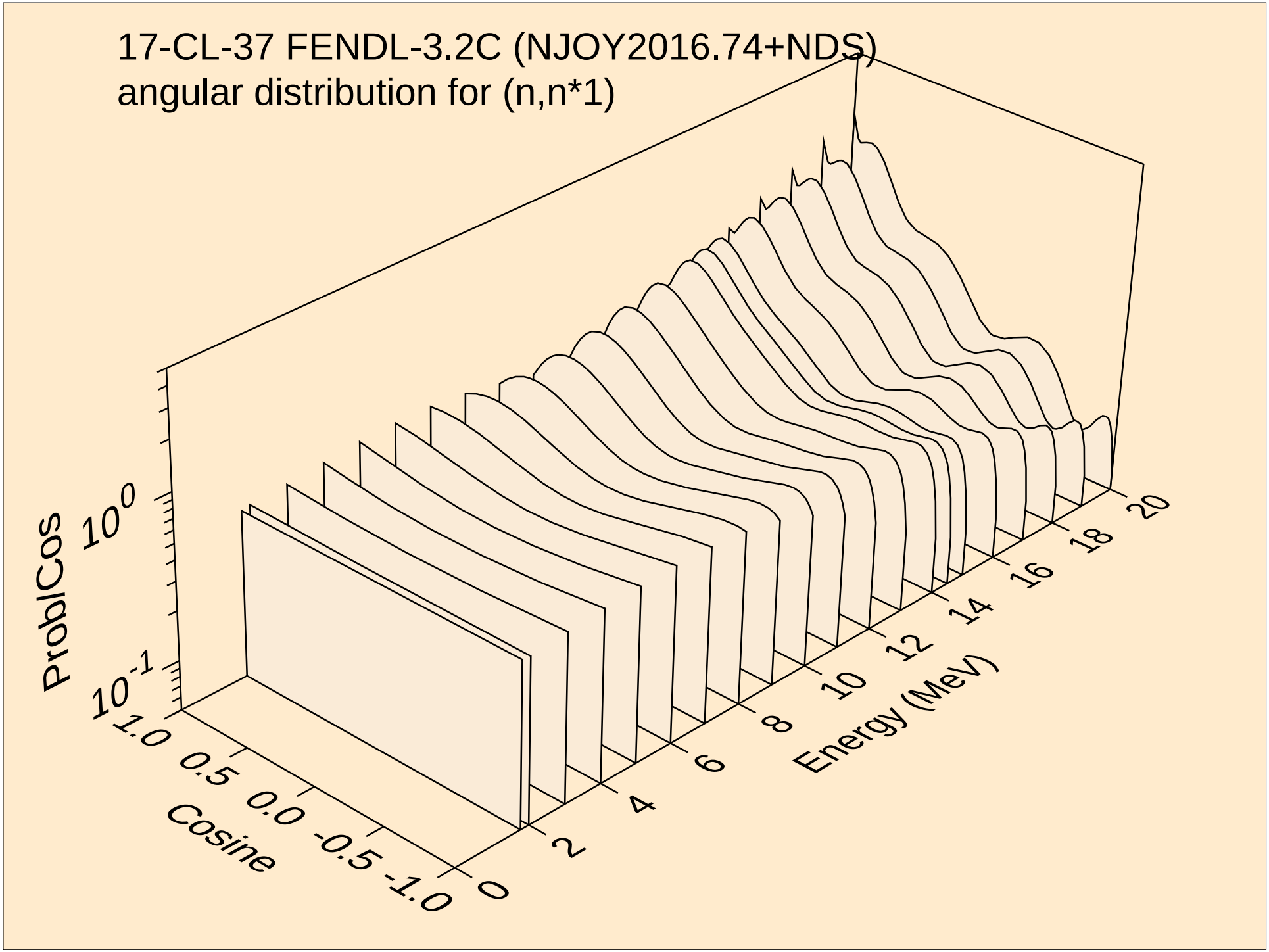

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
1400
*10-6
1200
1000
800
600
400
200
0
Cross section (barns)
(n,t*12)
(n,t*13)
(n,t*14)
(n,t*15)
(n,t*c)
14
15
16
17
18
19
20
Energy (MeV)

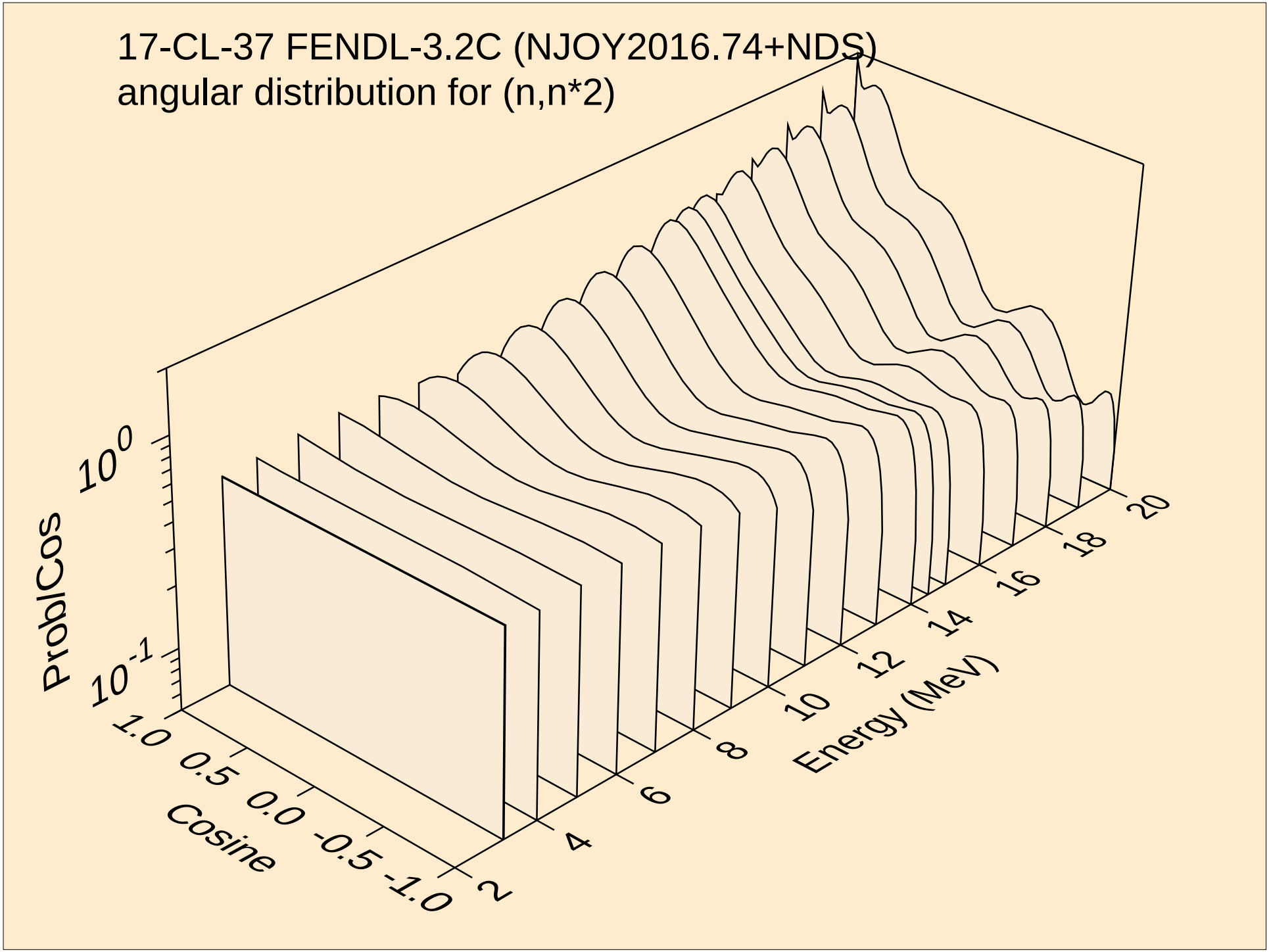

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
*10-3
(n,a*0)
(n,a*1)
(n,a*2)
(n,a*3)
(n,a*4)
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
8
0
2
4
6
8
10
12
14
16
18
20

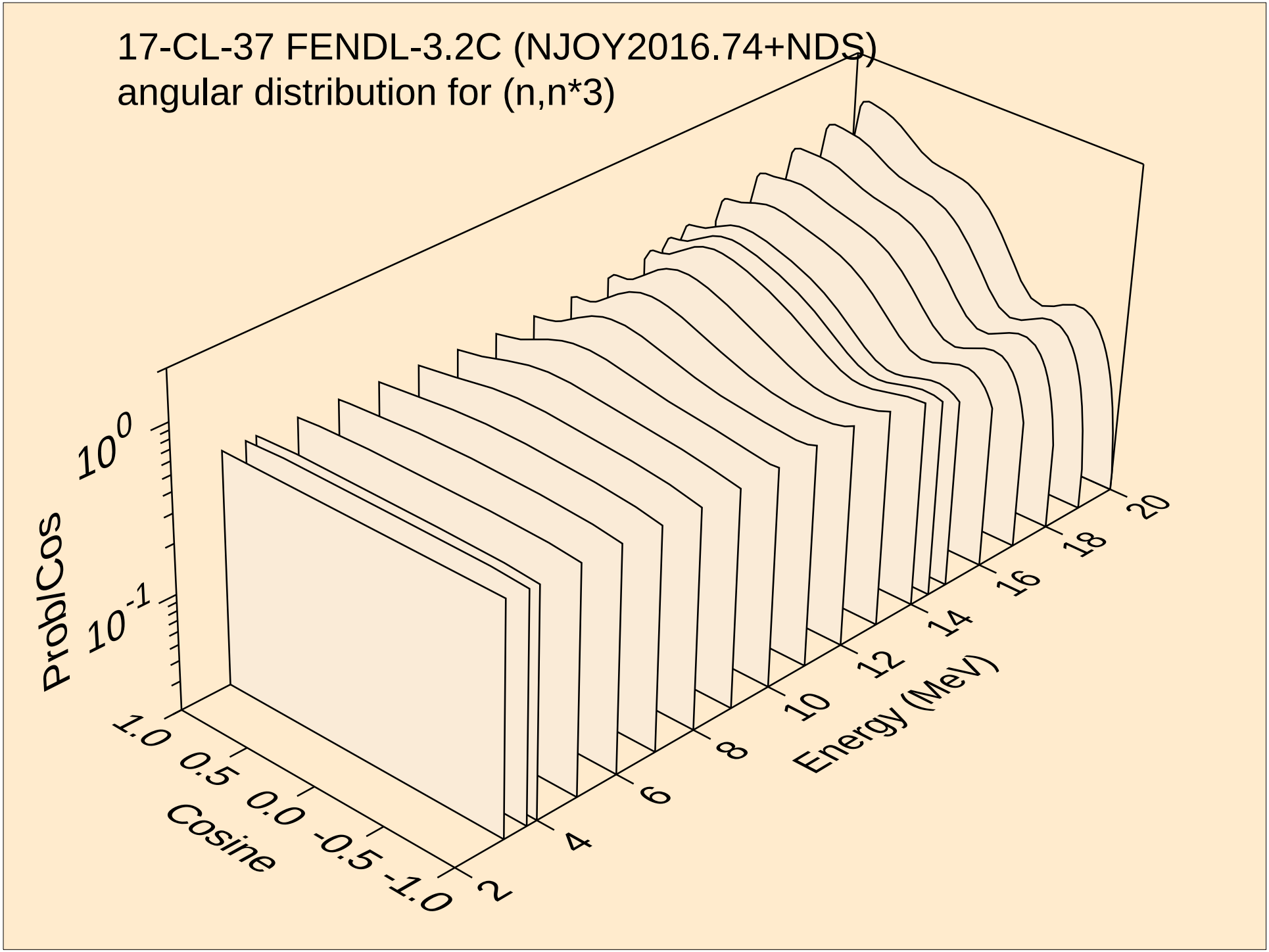

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
(n,a*5)
(n,a*c)
*10-3
Cross section (barns)
Energy (MeV)
0
10
20
30
40
50
4
6
8
10
12
14
16
18
20

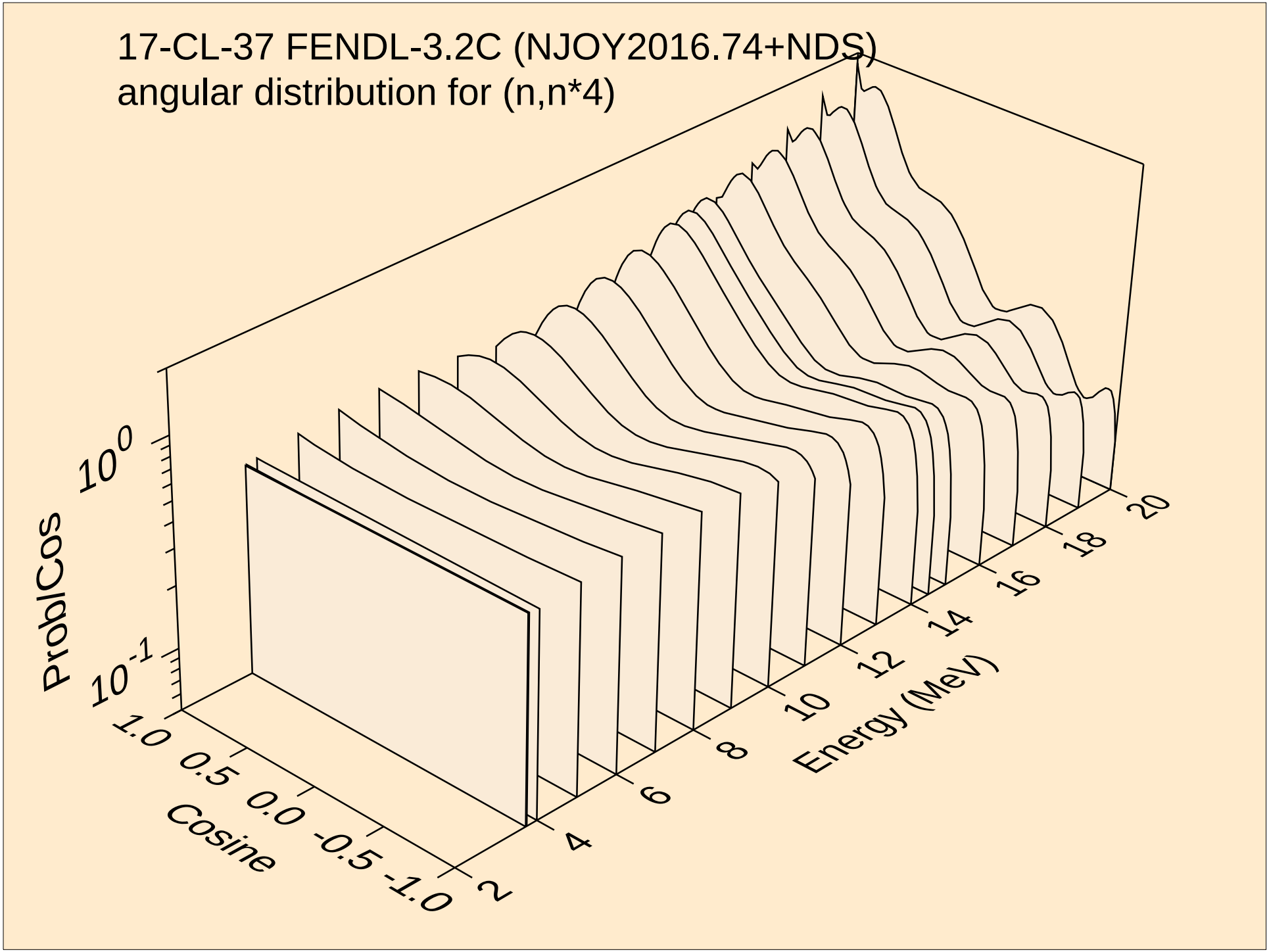

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for elastic
ProbCos
10^{1}
10^{0}
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20

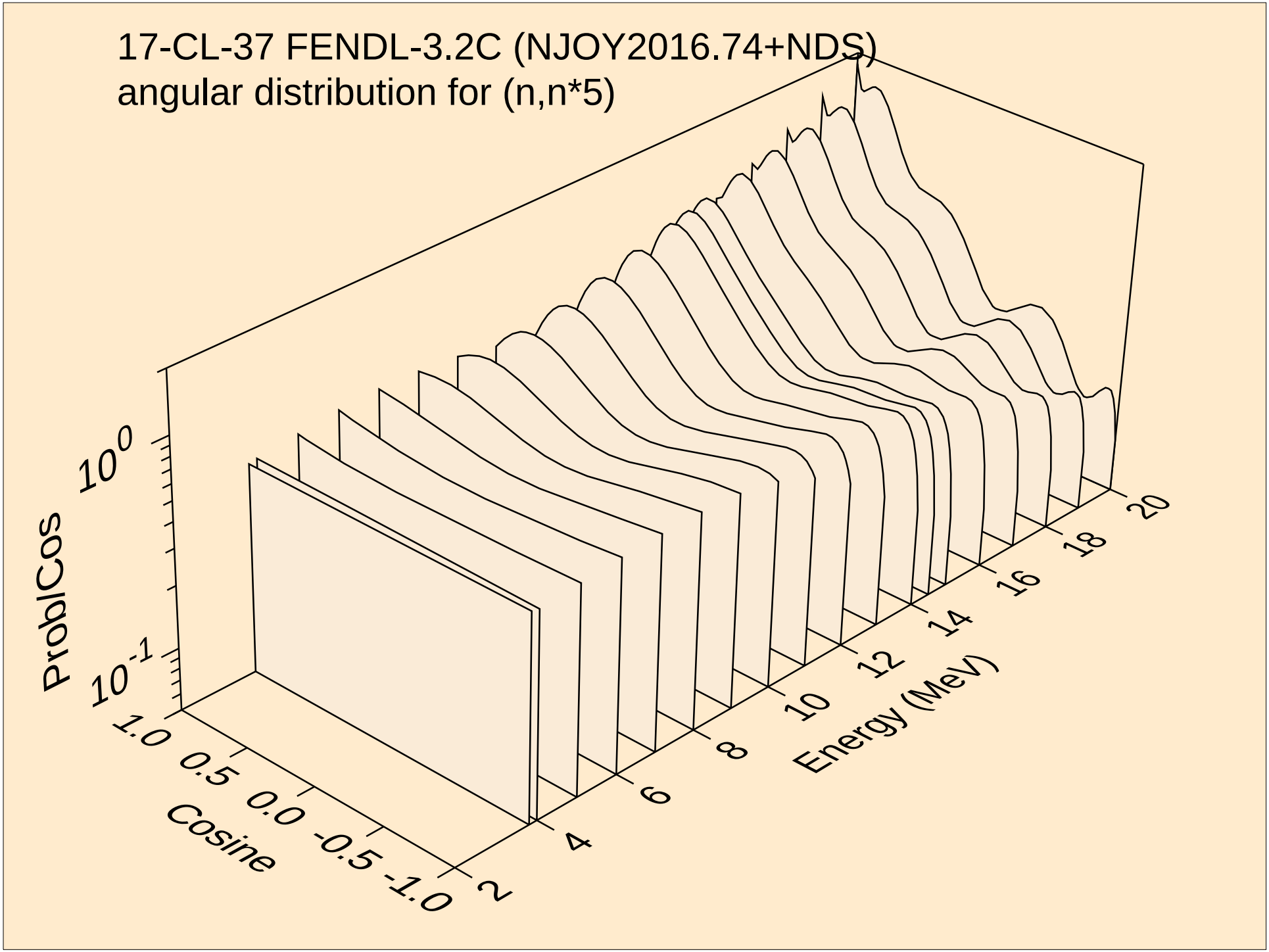

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for elastic
ProbCos
10^{1}
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
20
40
60
80
100
120
140
160

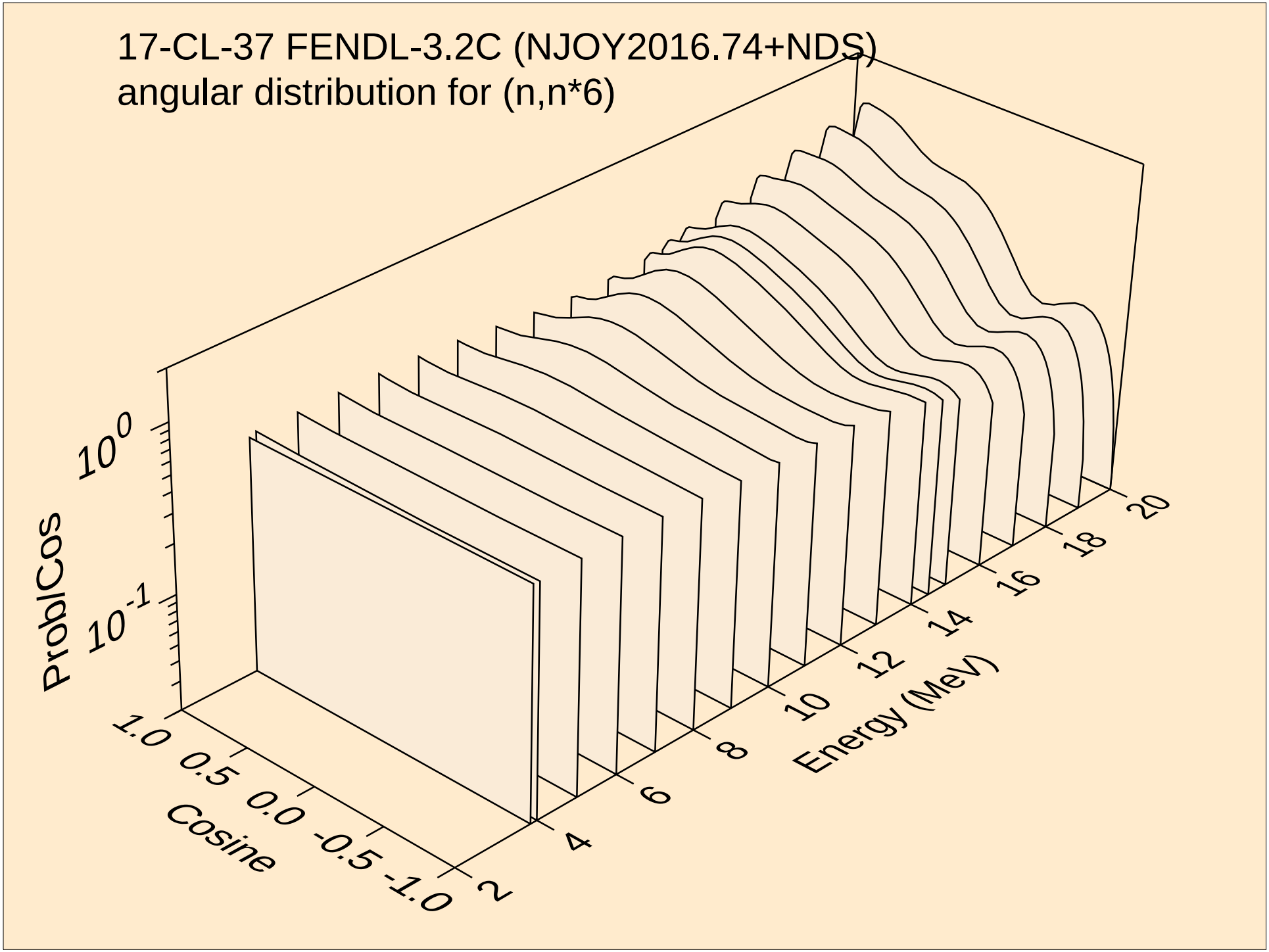

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*1)
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

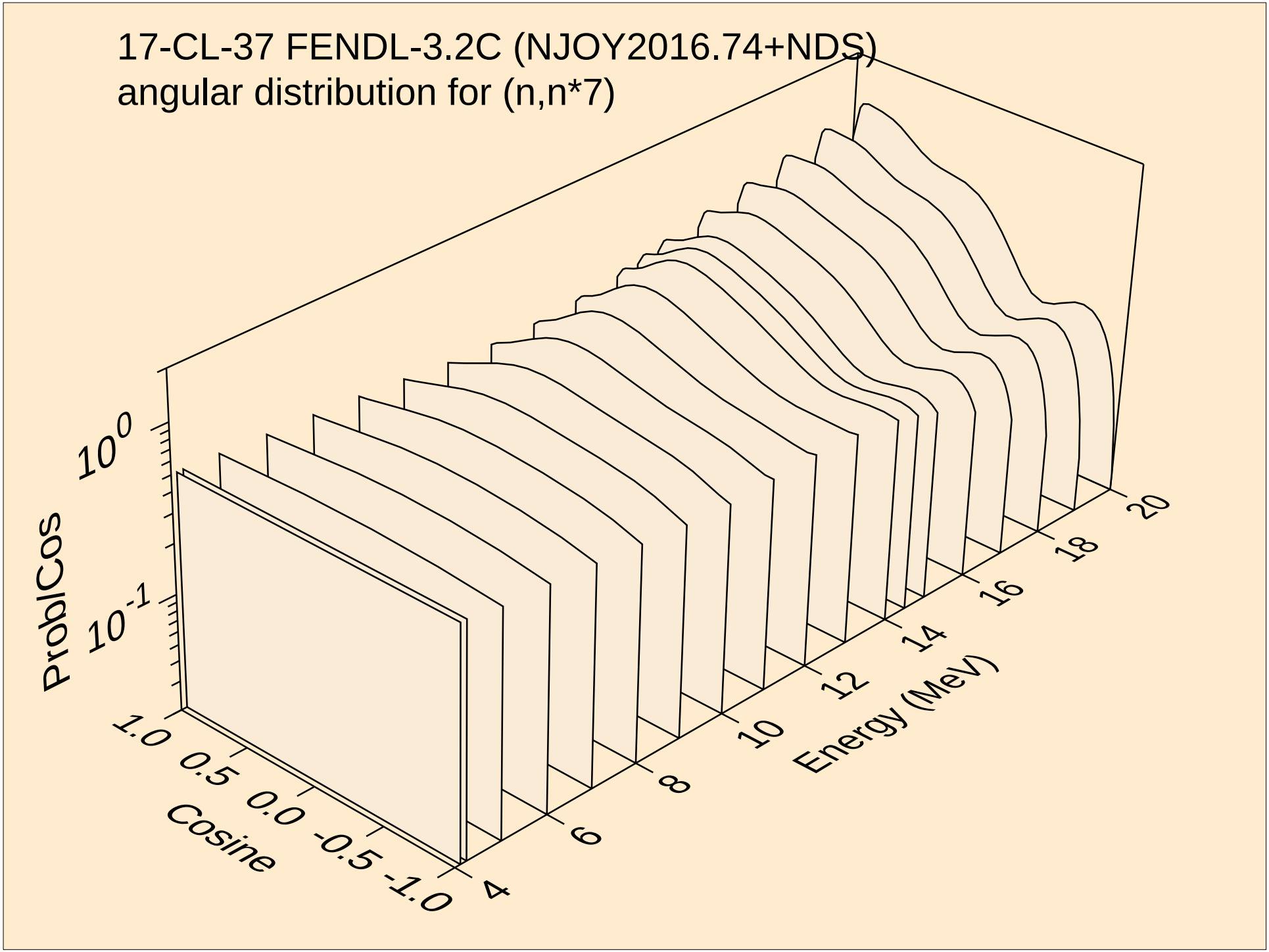

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*2)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

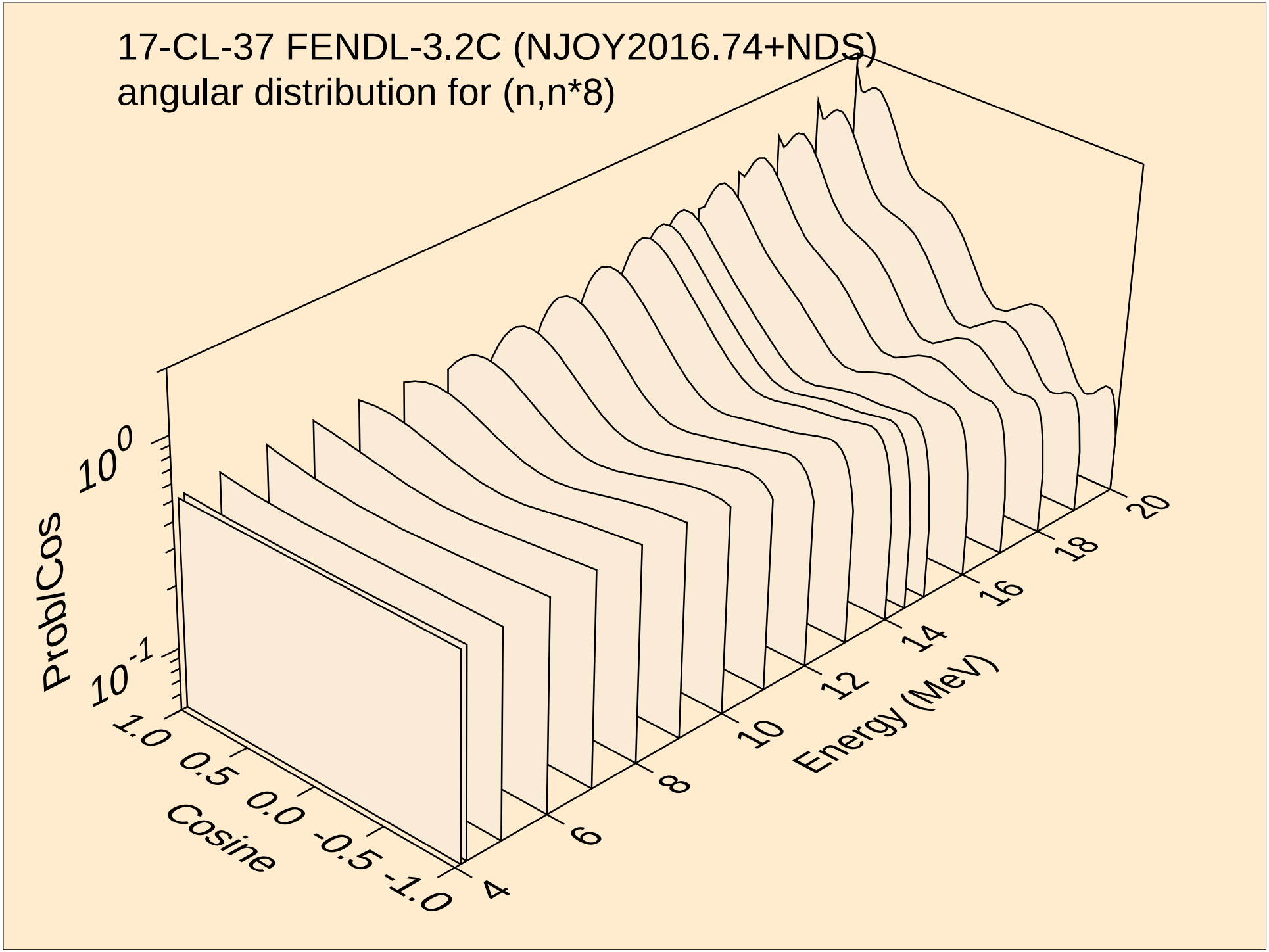

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*3)
Prob/Cos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
2
4
6
8
10
12
14
16
18
20

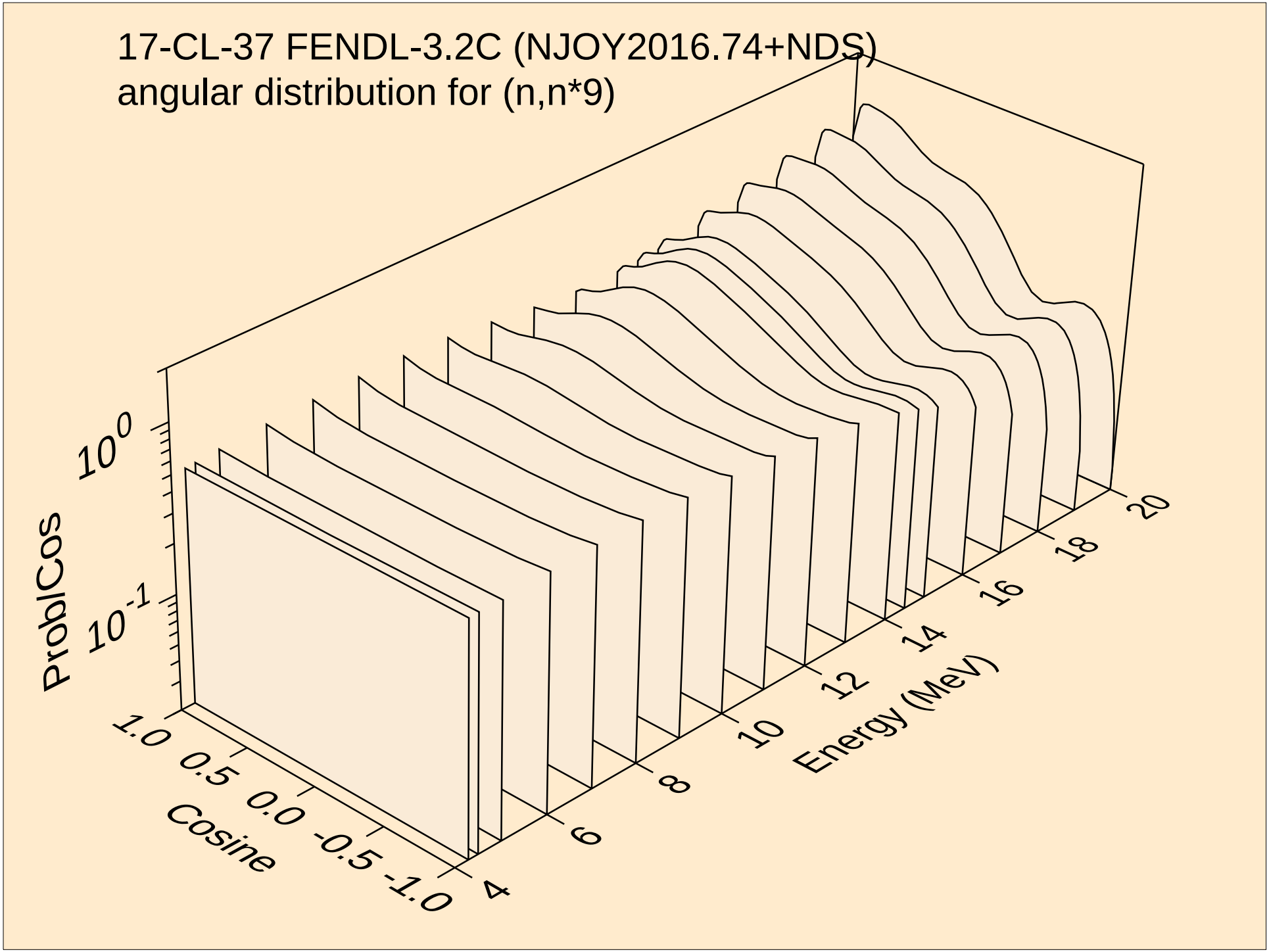

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*4)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

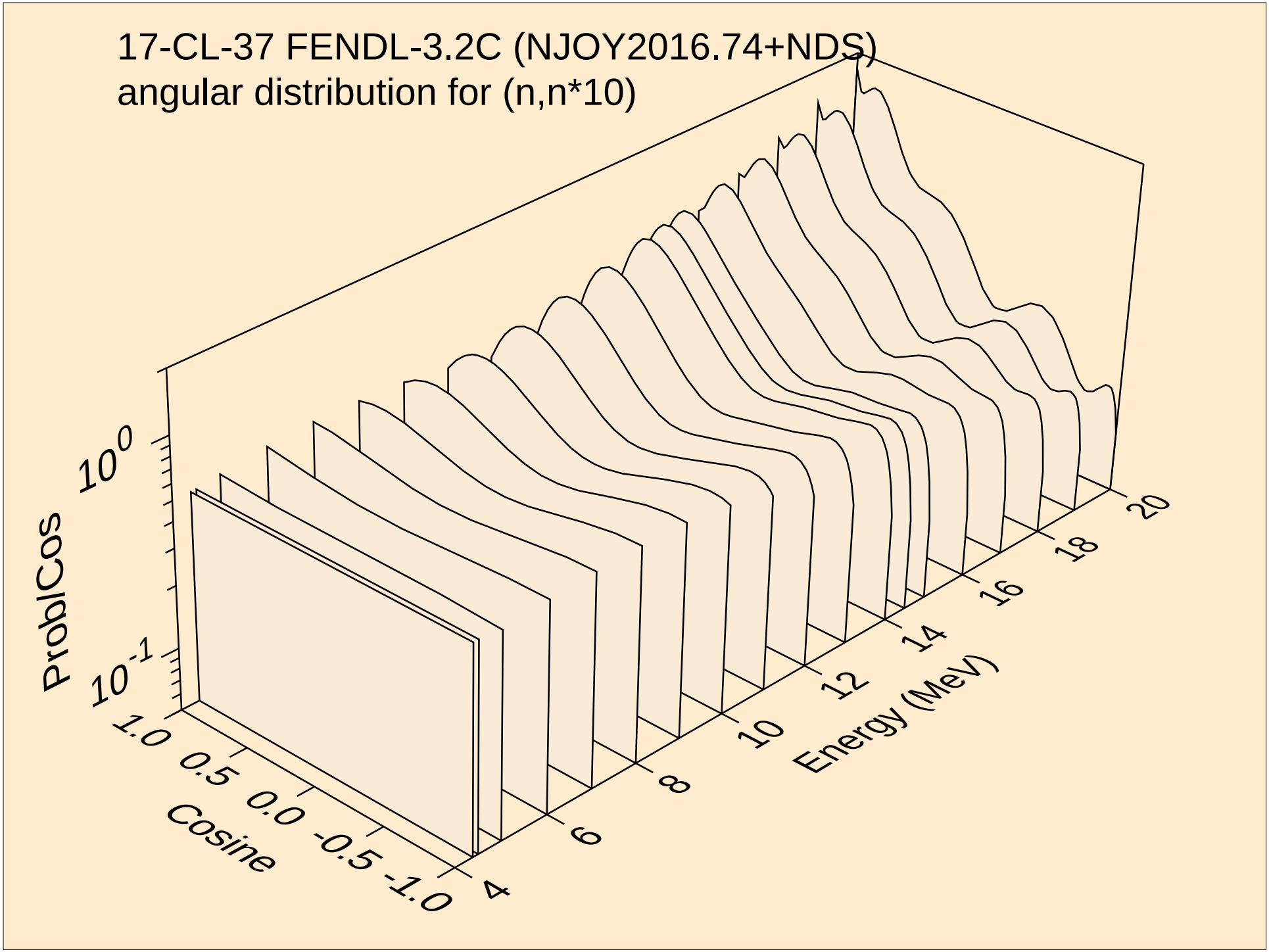

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*5)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

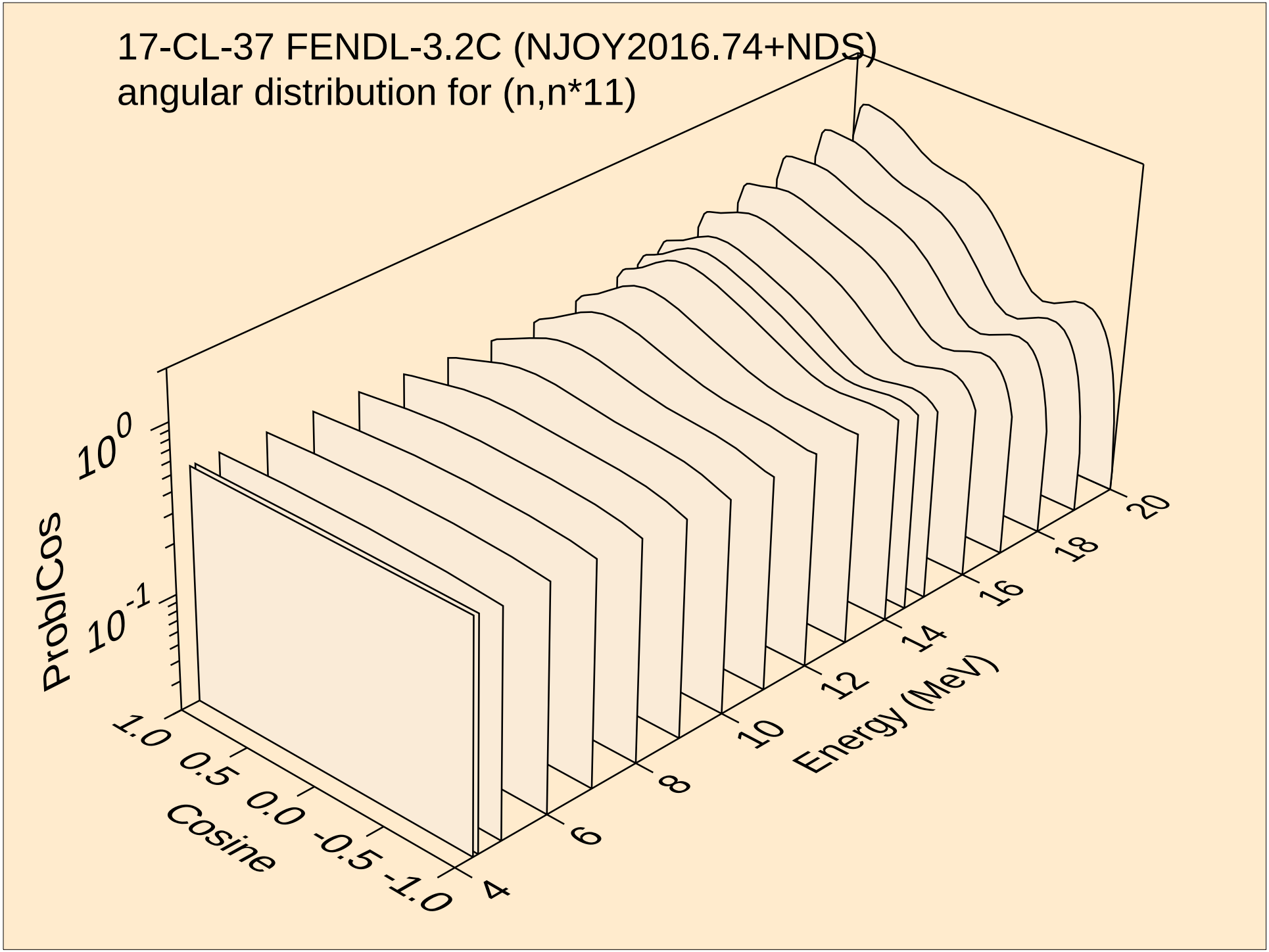

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*6)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

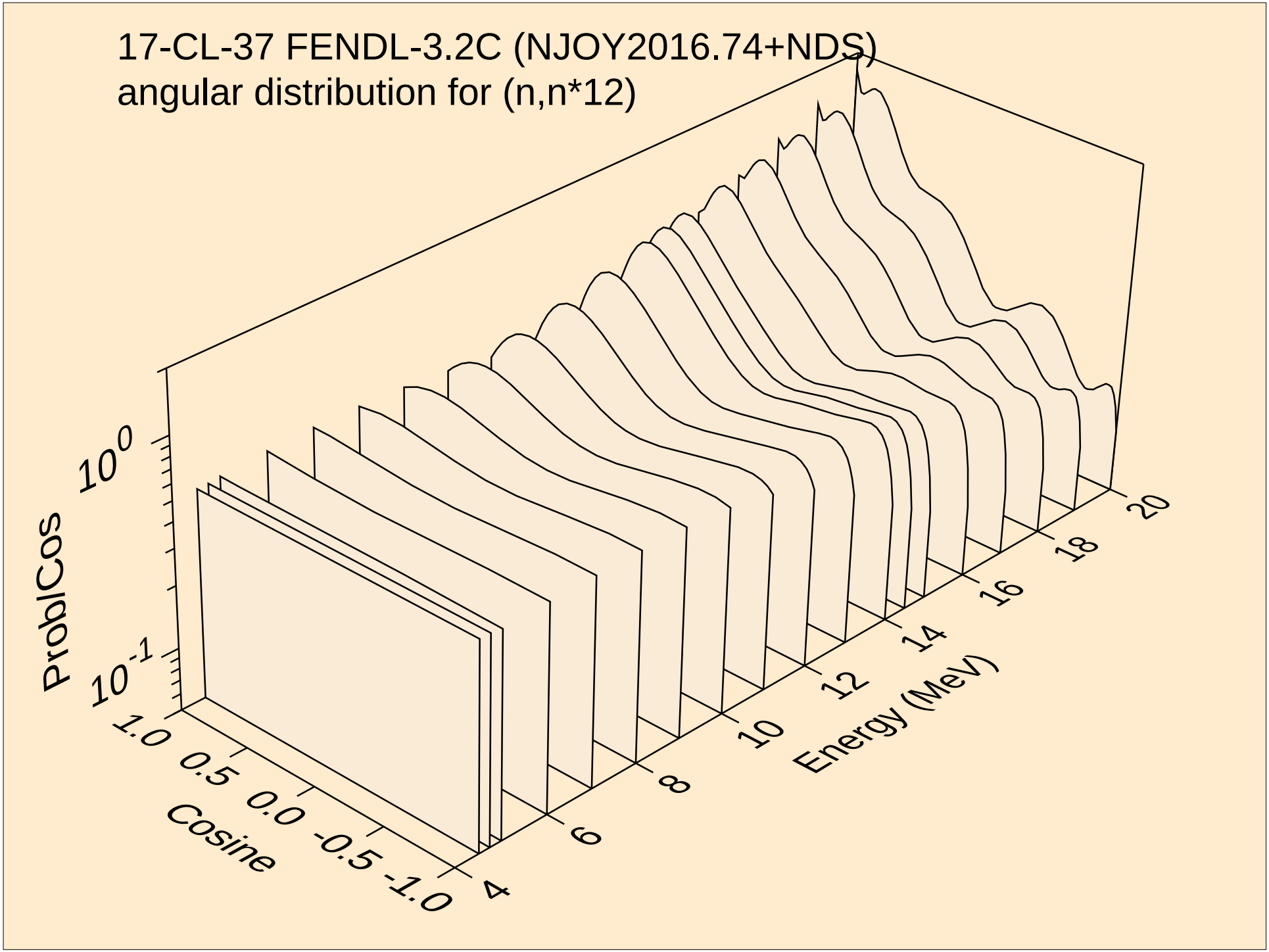

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*7)
Prob/Cos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
4
6
8
10
12
14
16
18
20

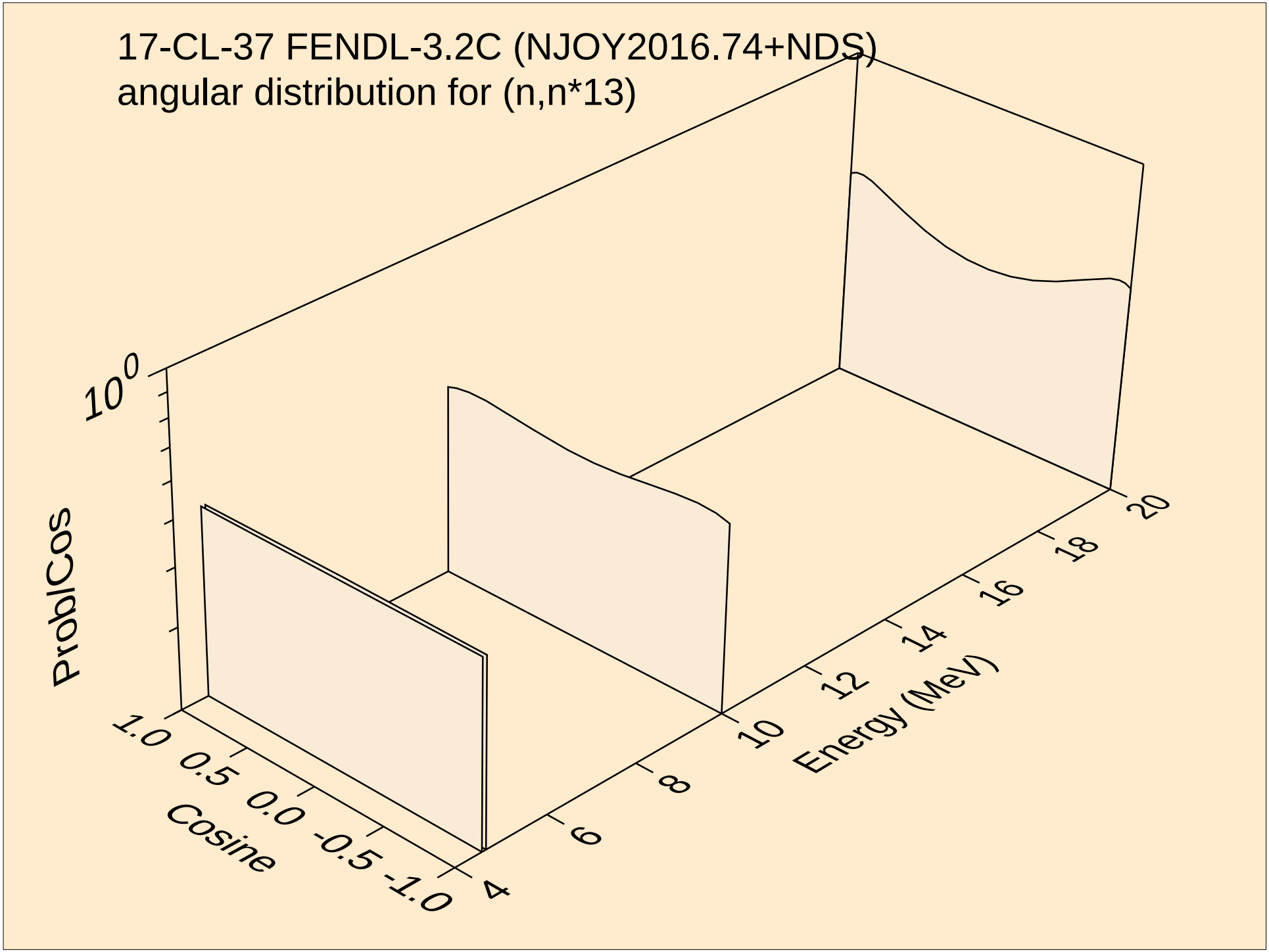

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*8)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

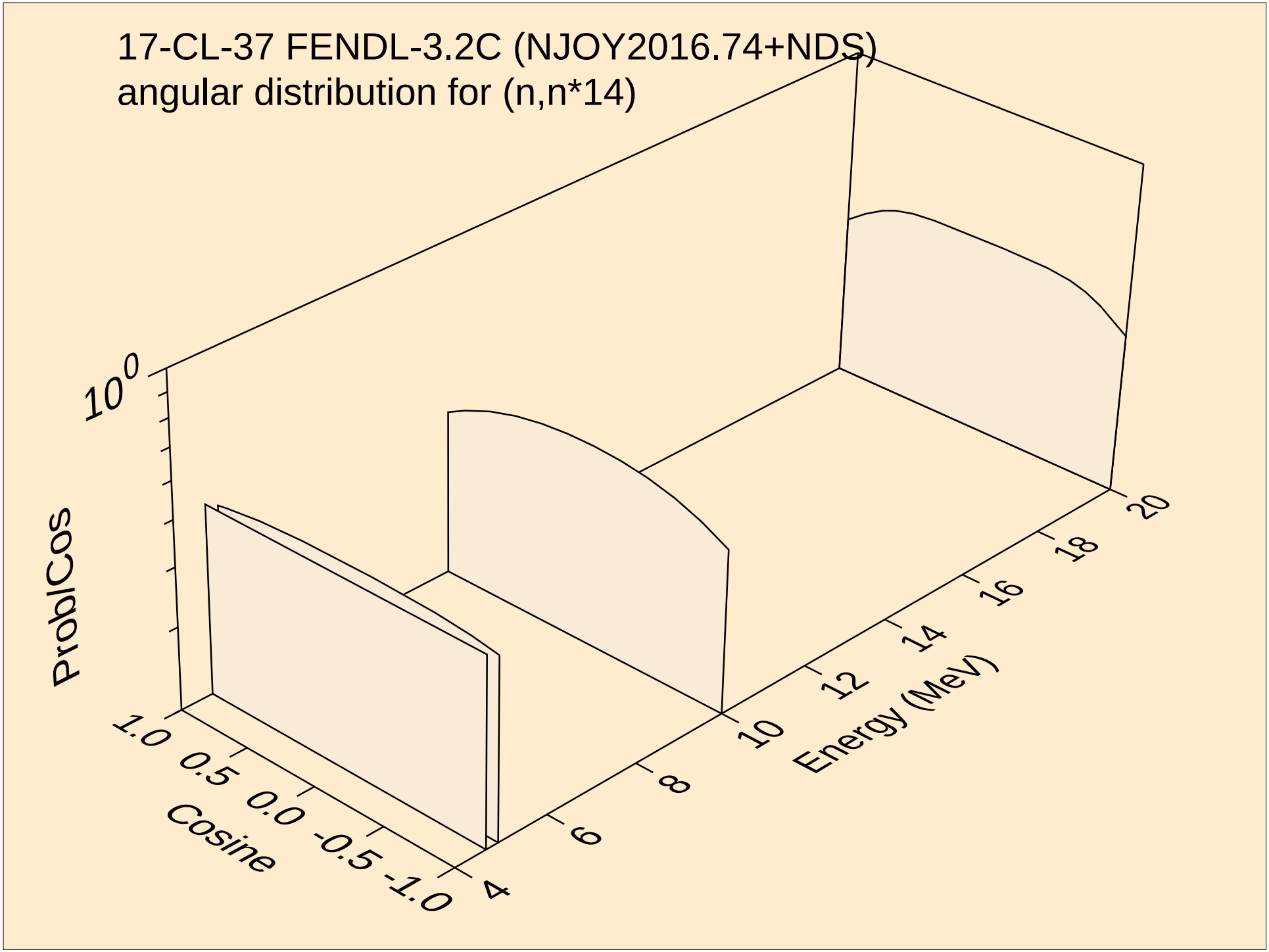

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*9)
Prob/Cos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
4
6
8
10
12
14
16
18
20

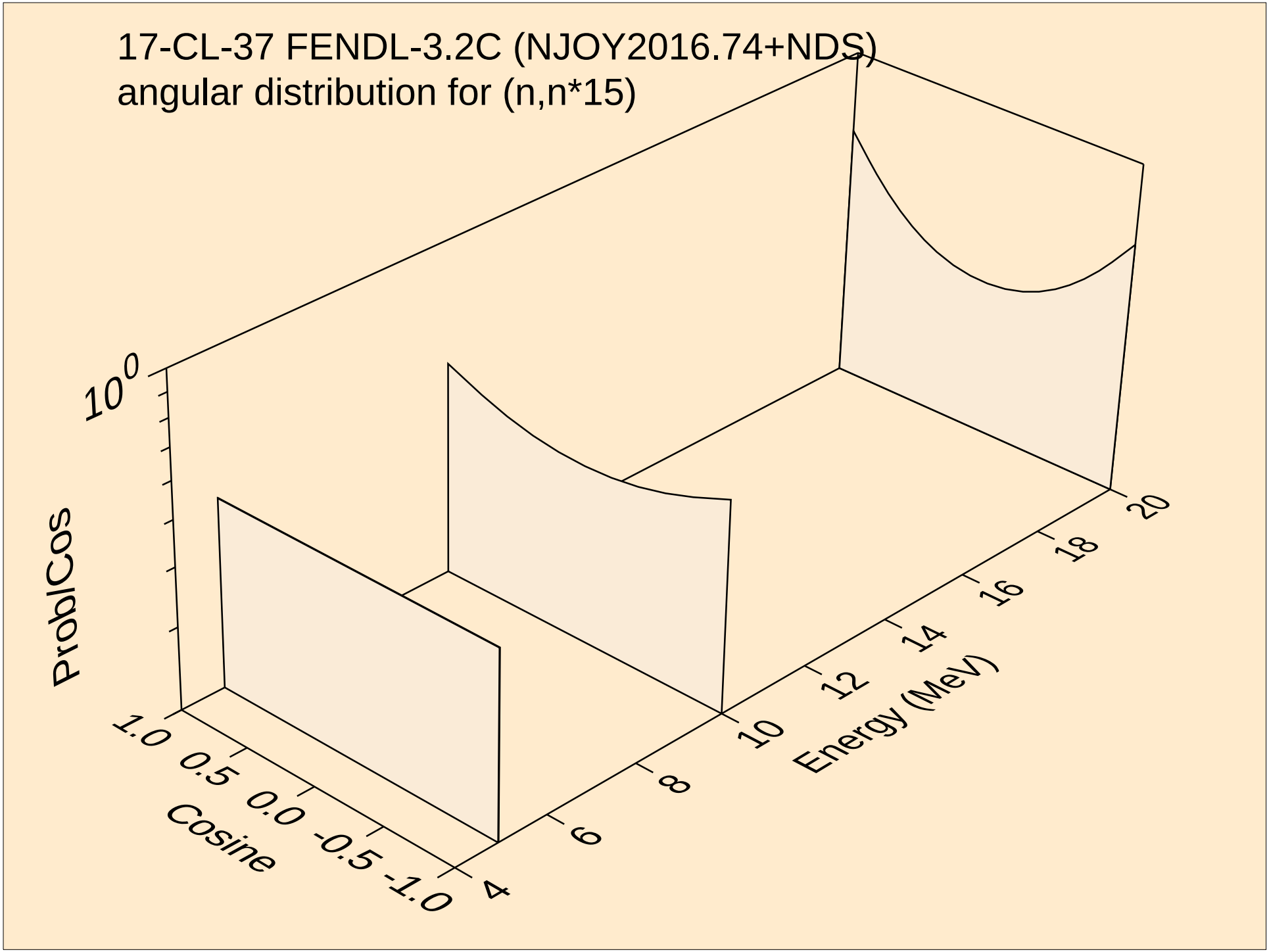

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*10)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

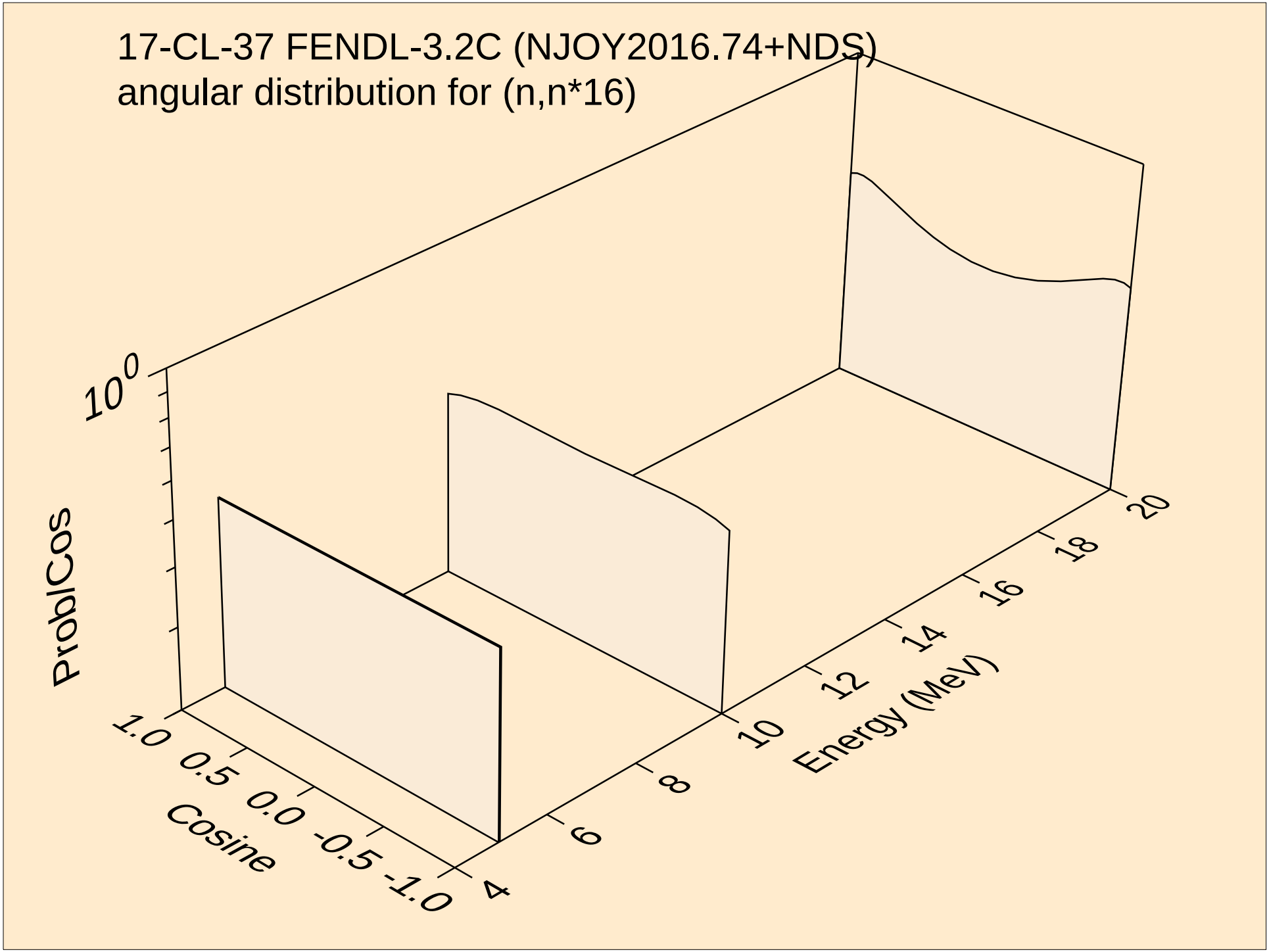

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*11)
Prob/Cos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
4
6
8
10
12
14
16
18
20

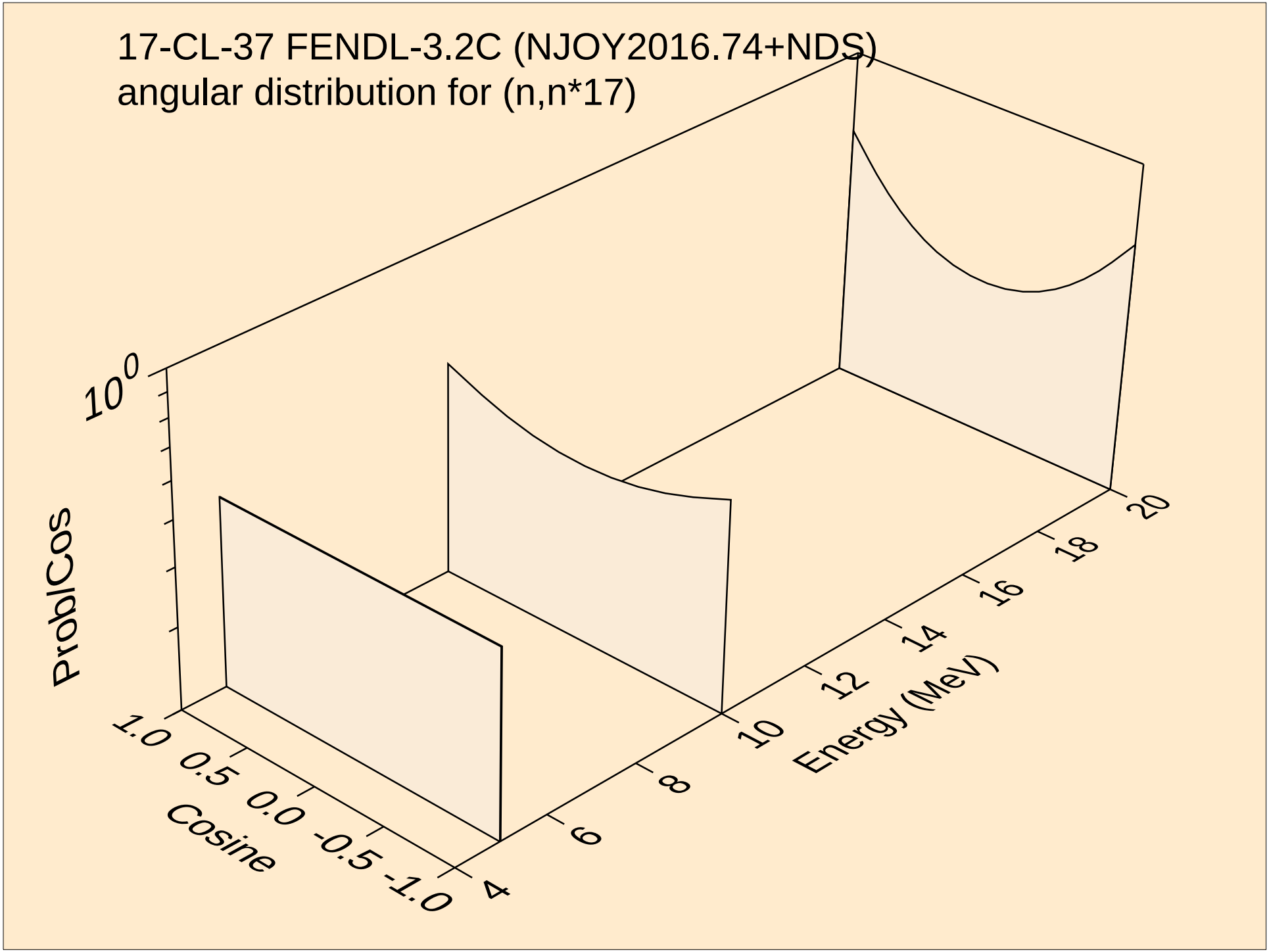

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*12)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

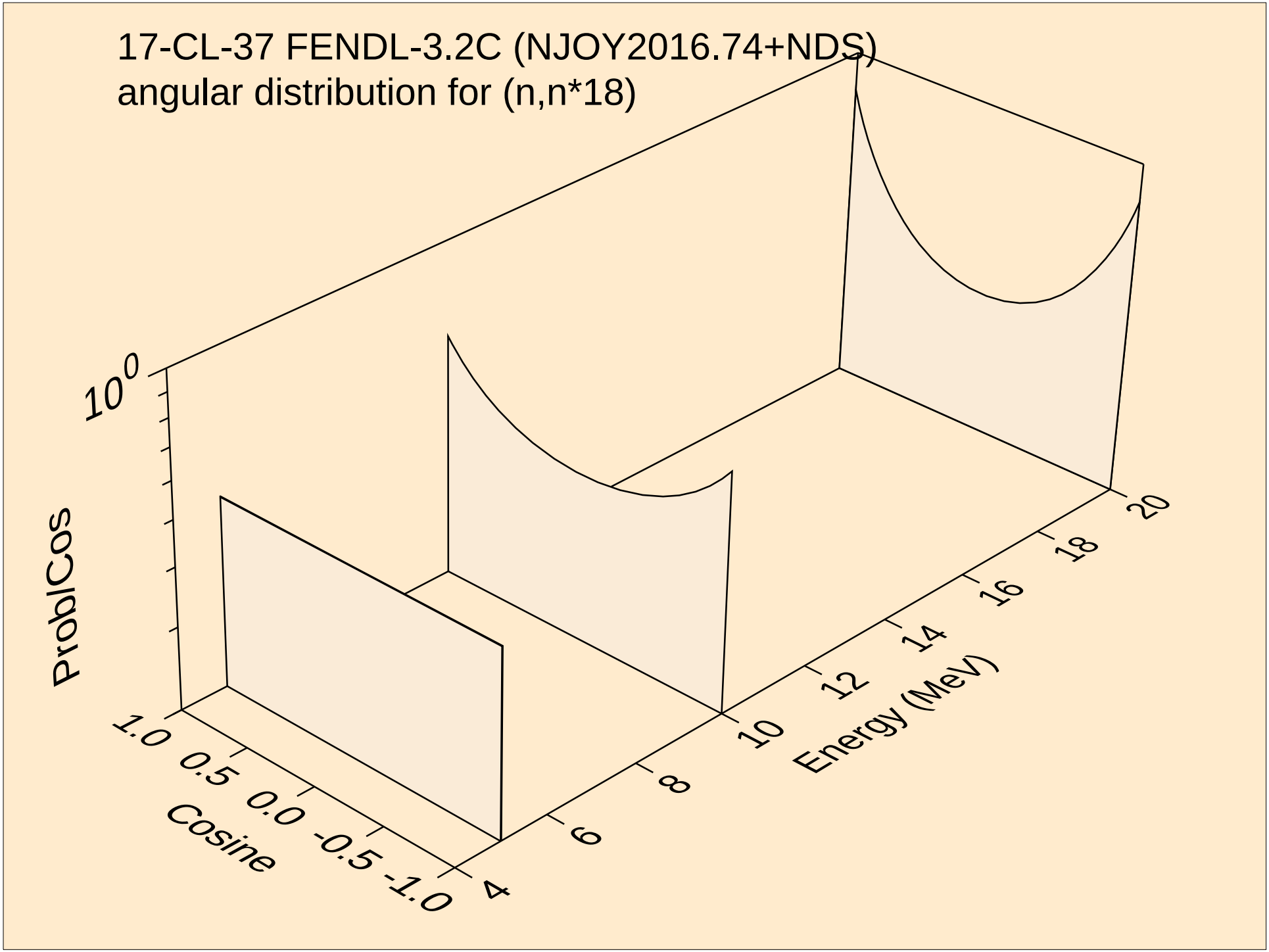

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*13)
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

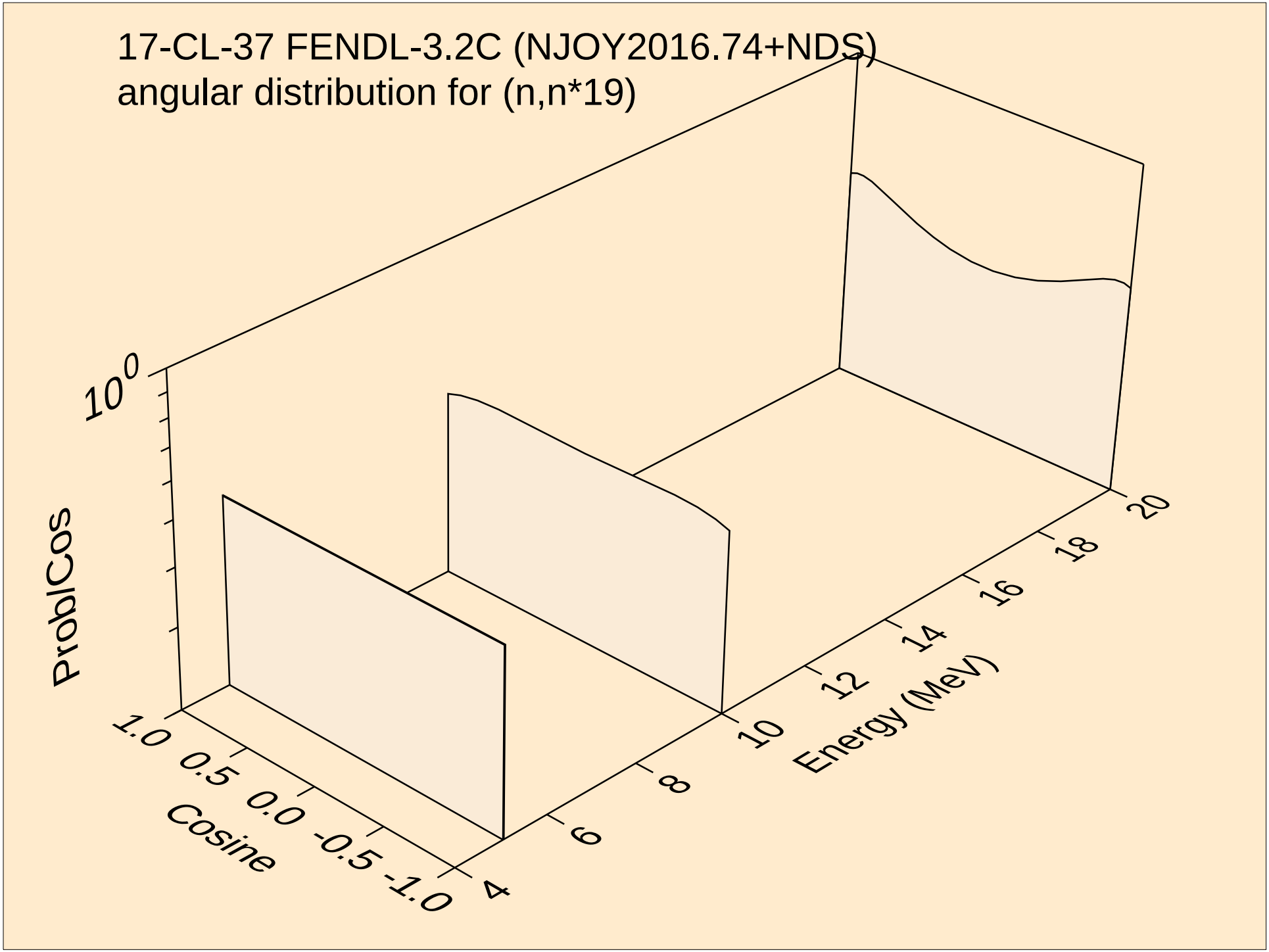

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*14)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

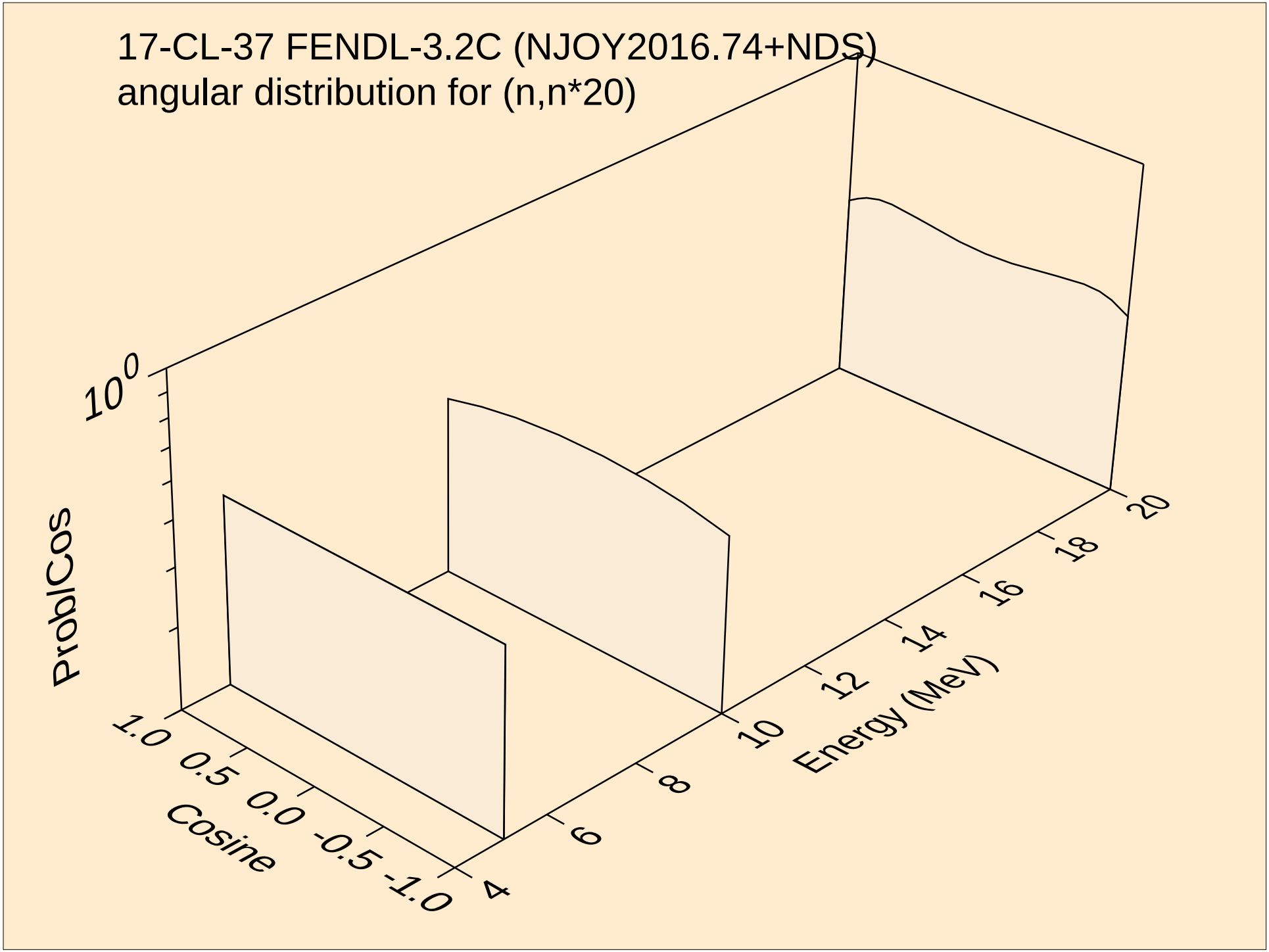

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*15)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

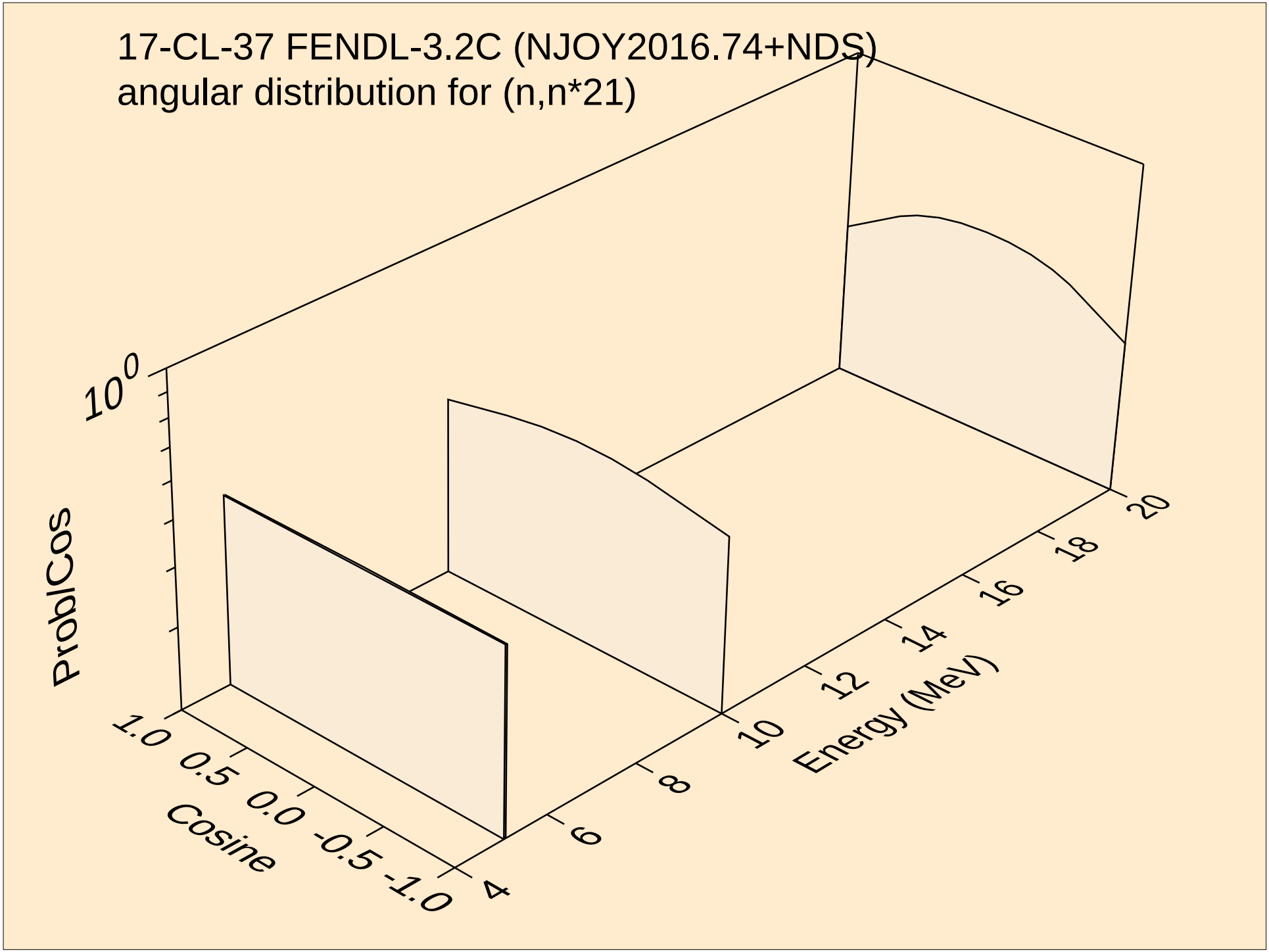

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*16)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

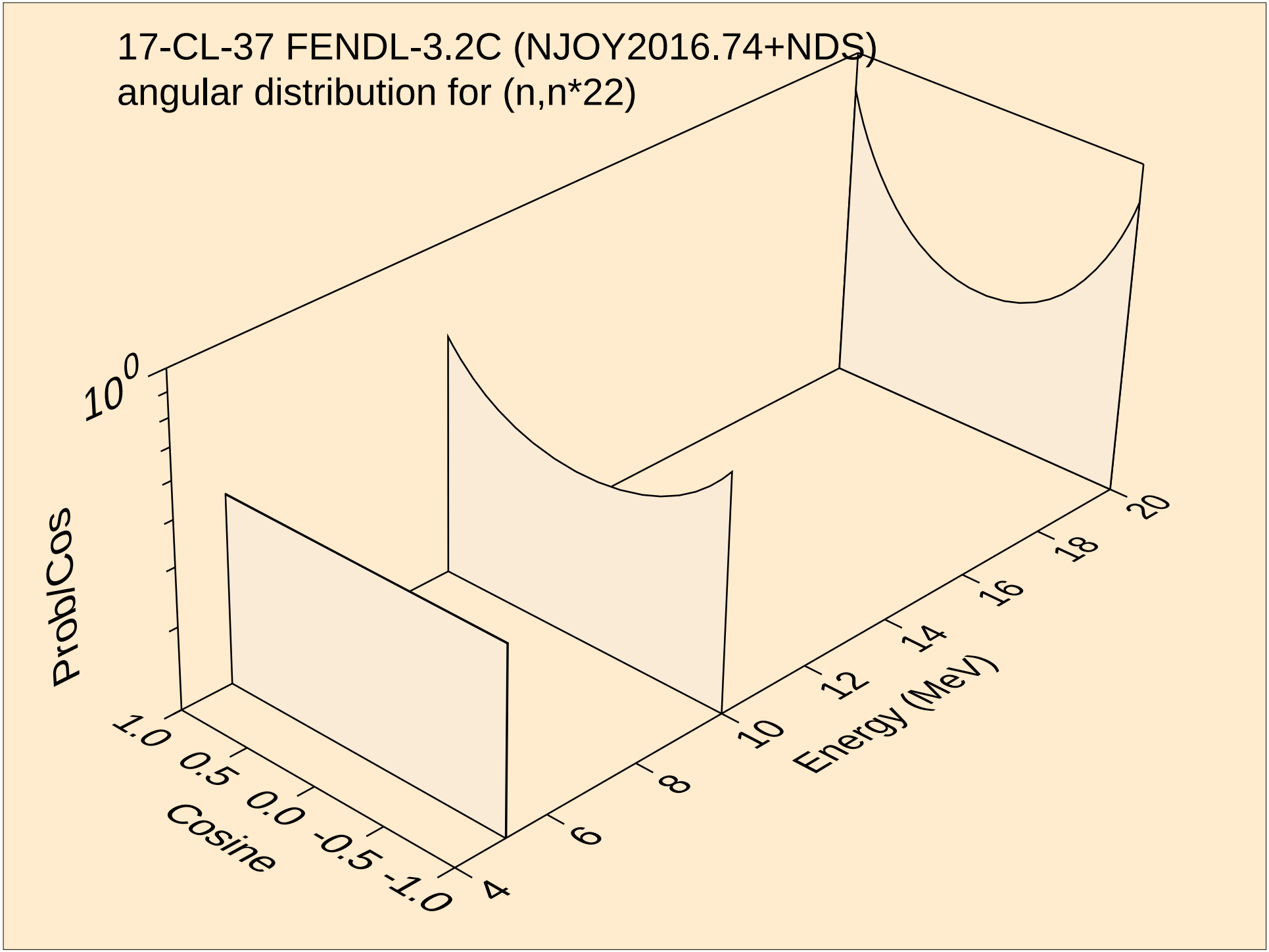

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*17)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

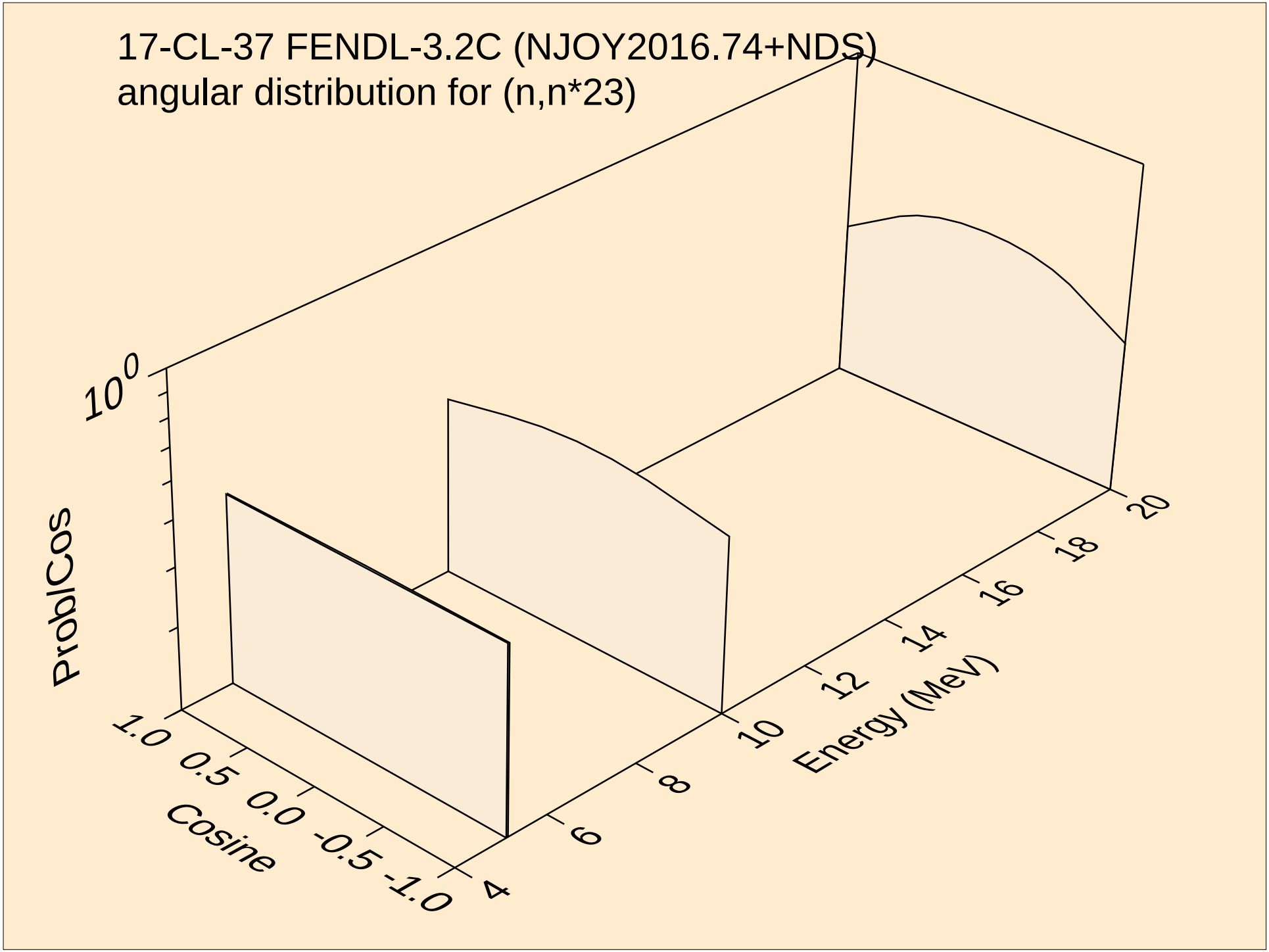

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*18)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

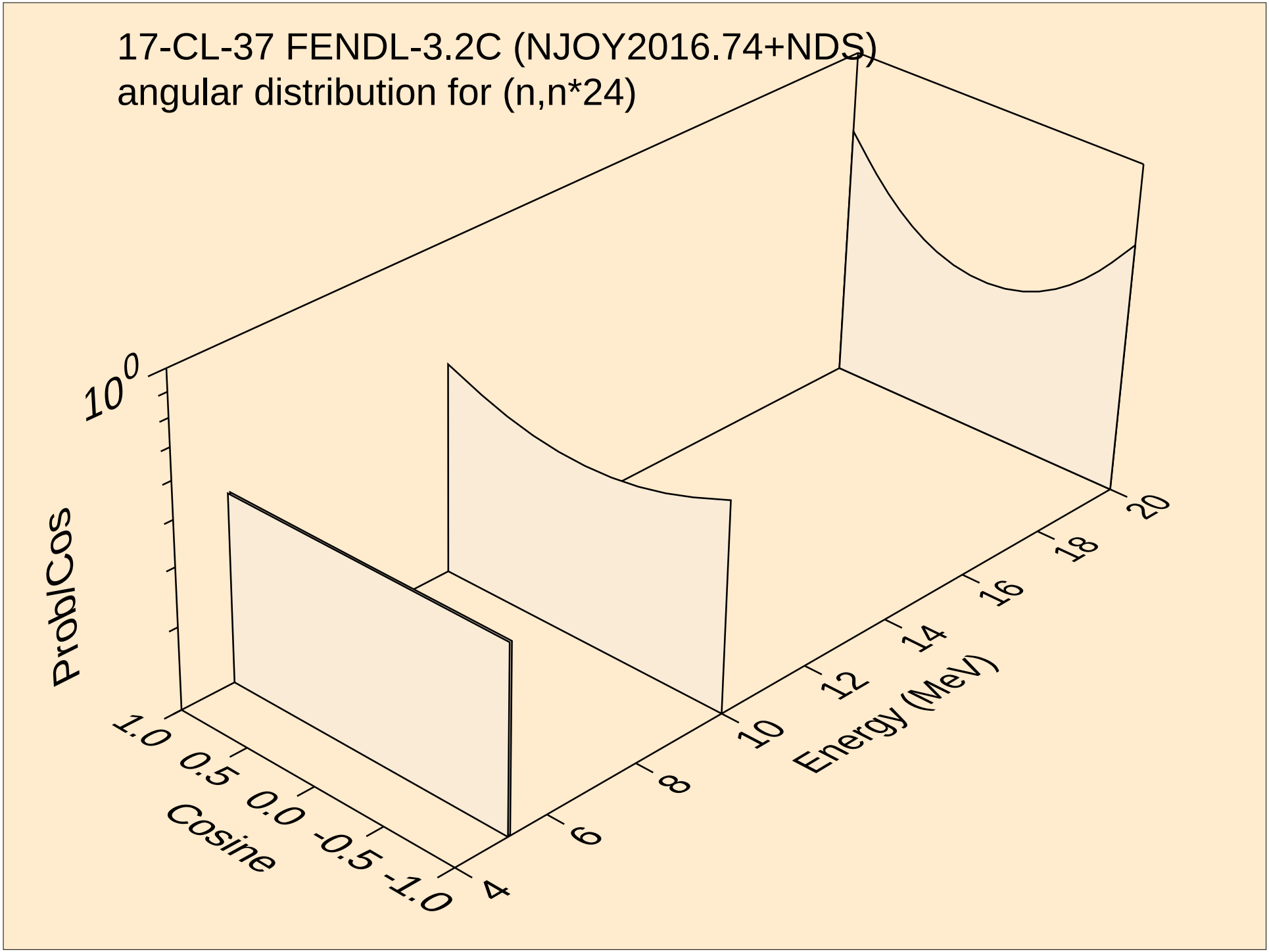

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*19)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

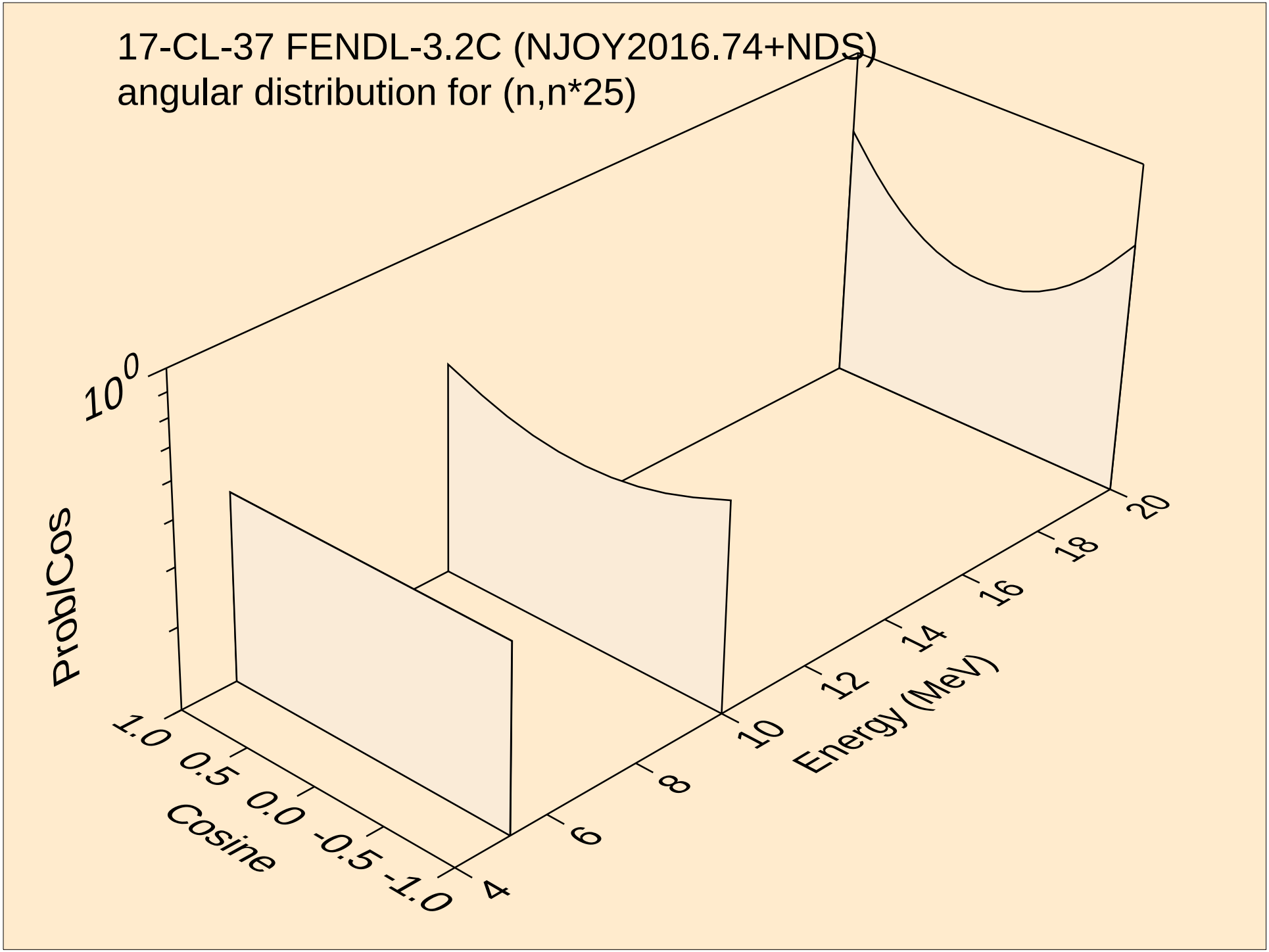

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*20)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

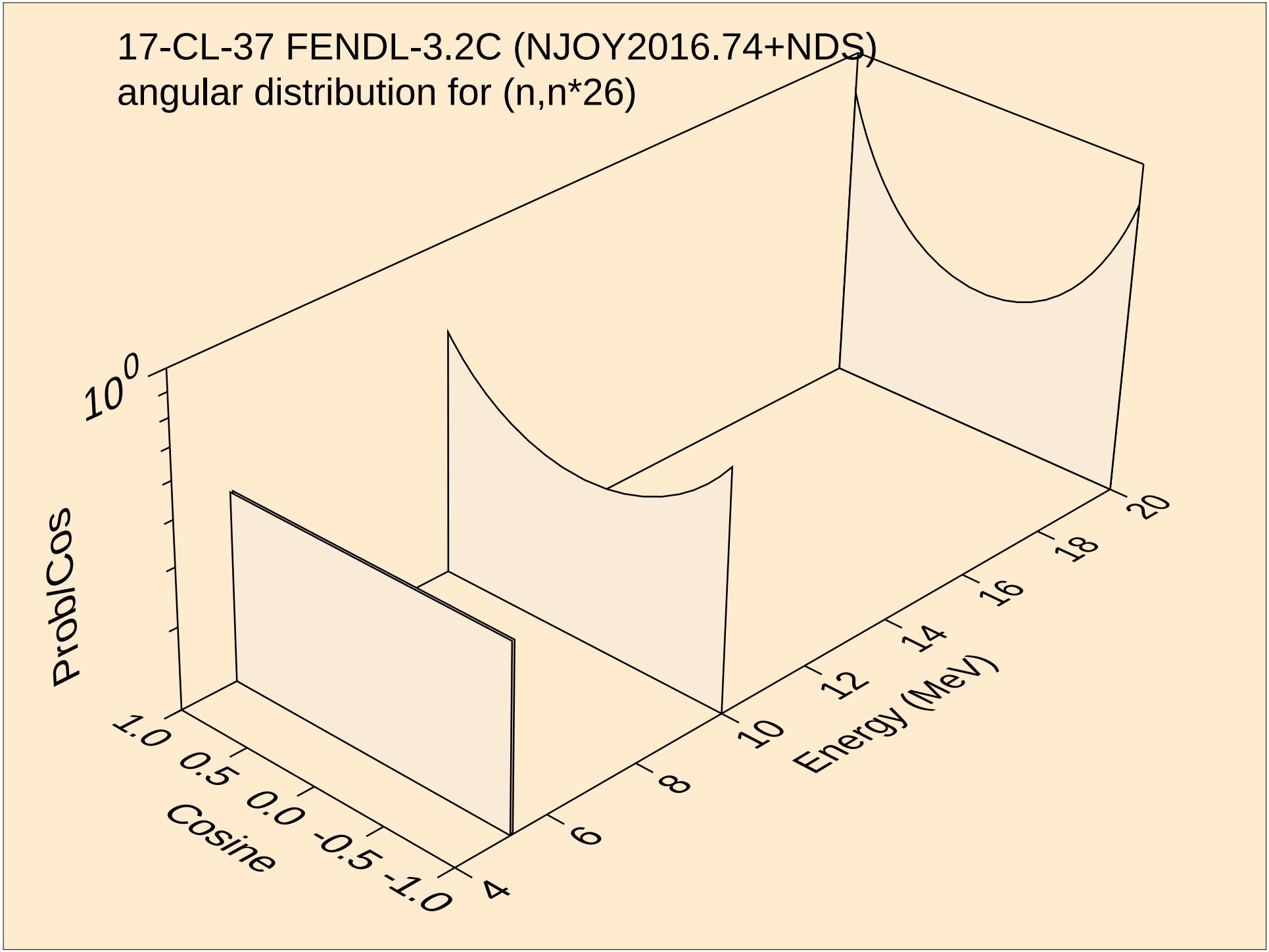

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*21)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

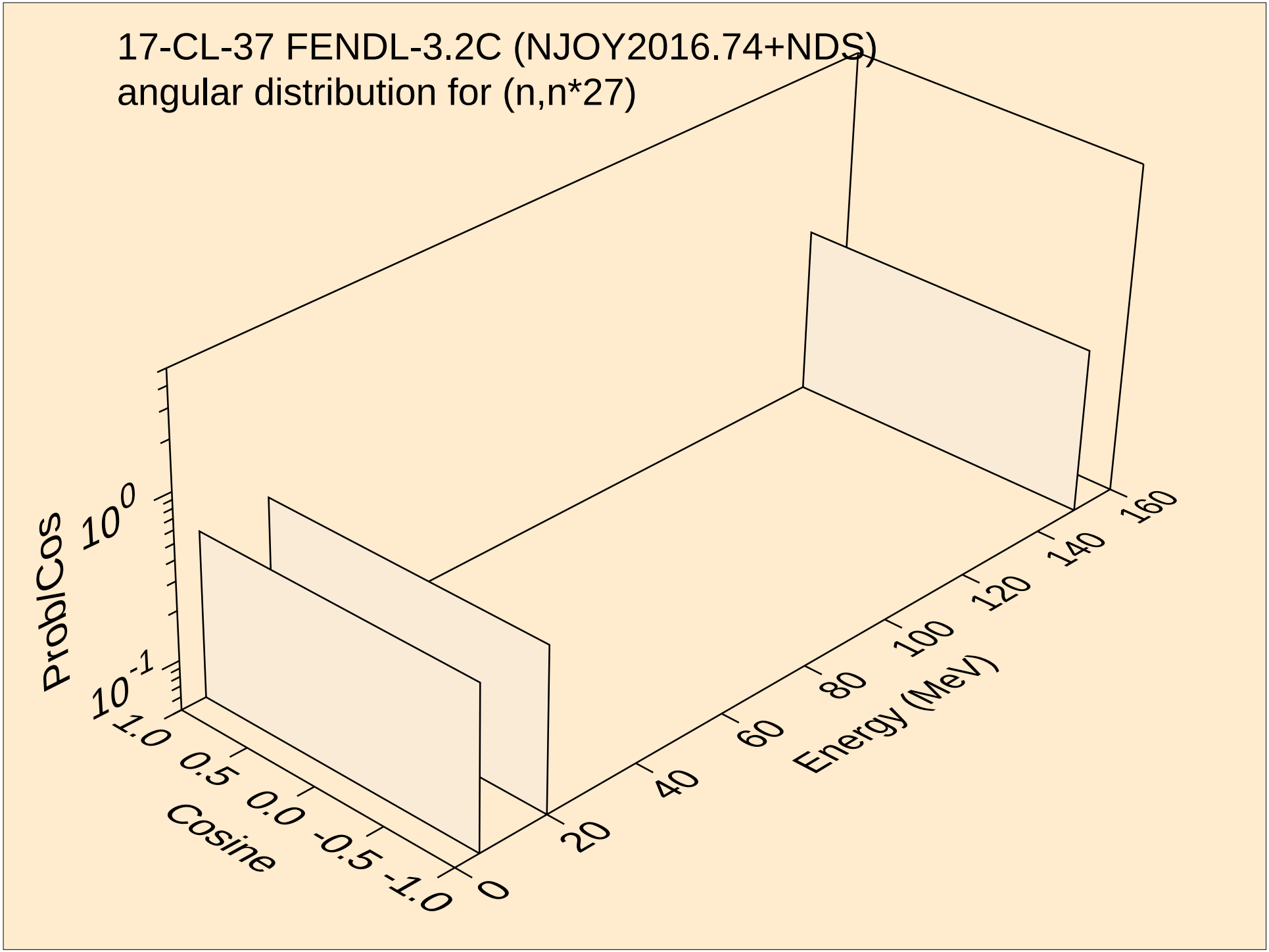

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*22)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

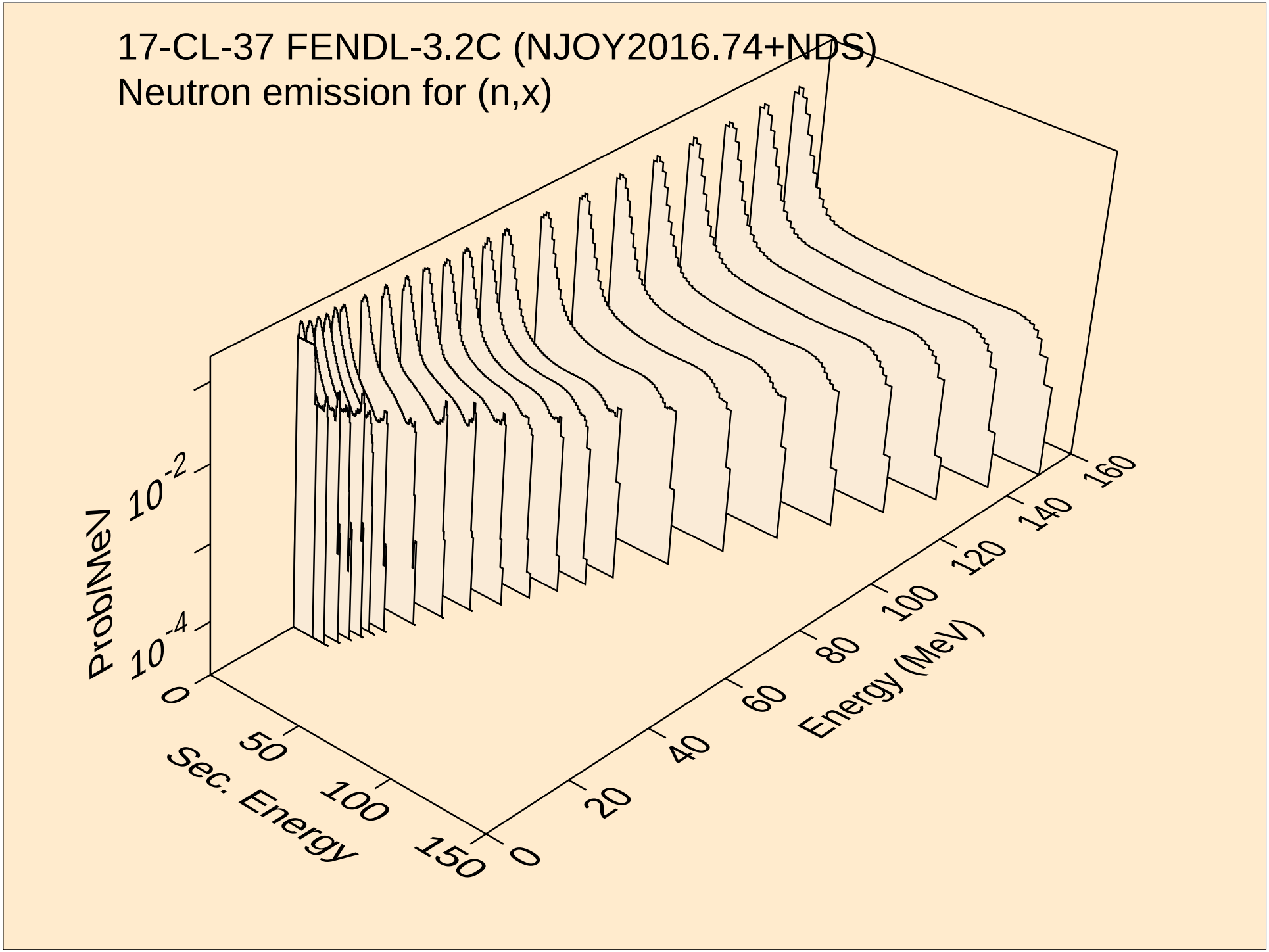

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*23)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

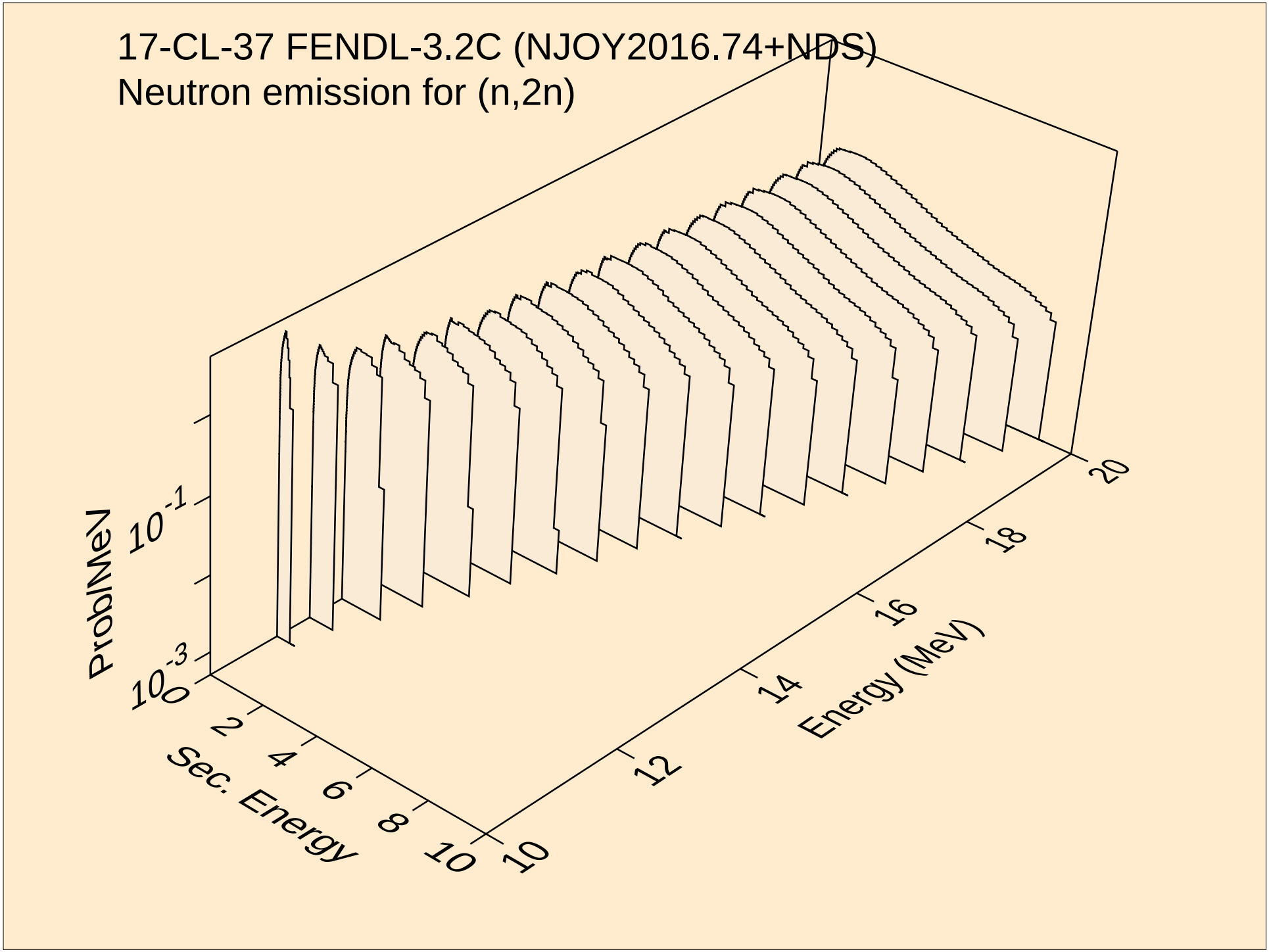

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*24)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

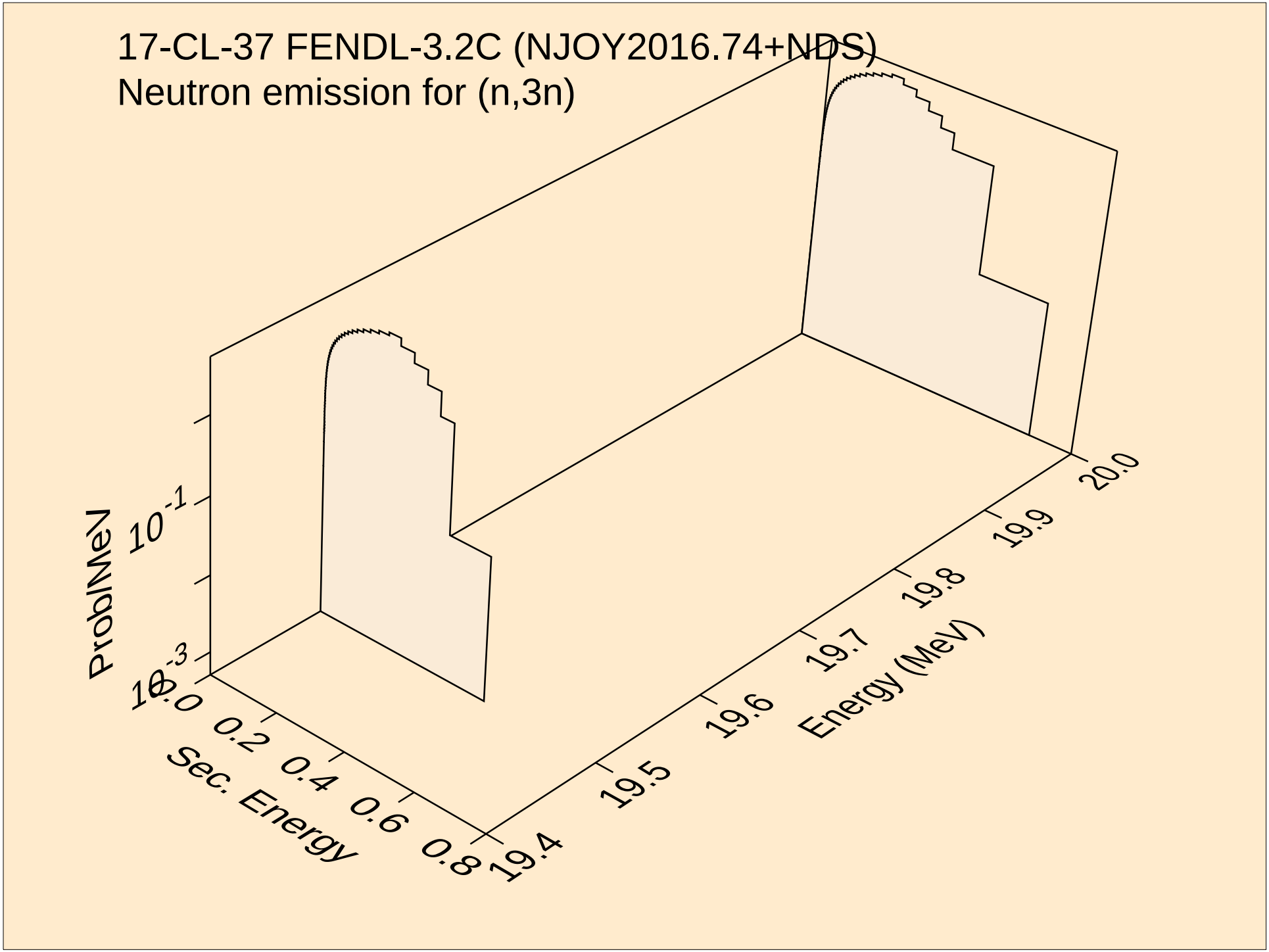

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*25)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

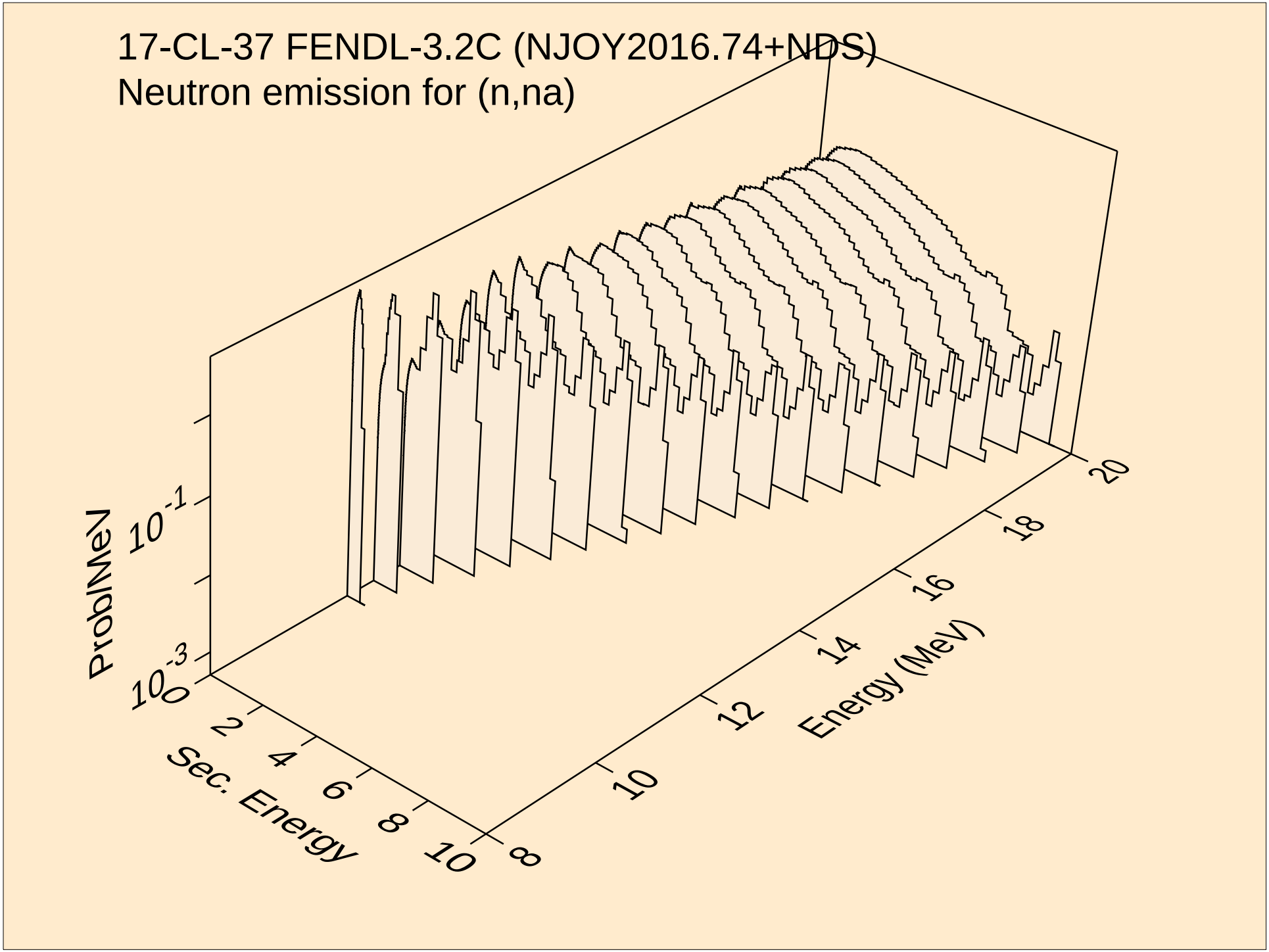

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*26)
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

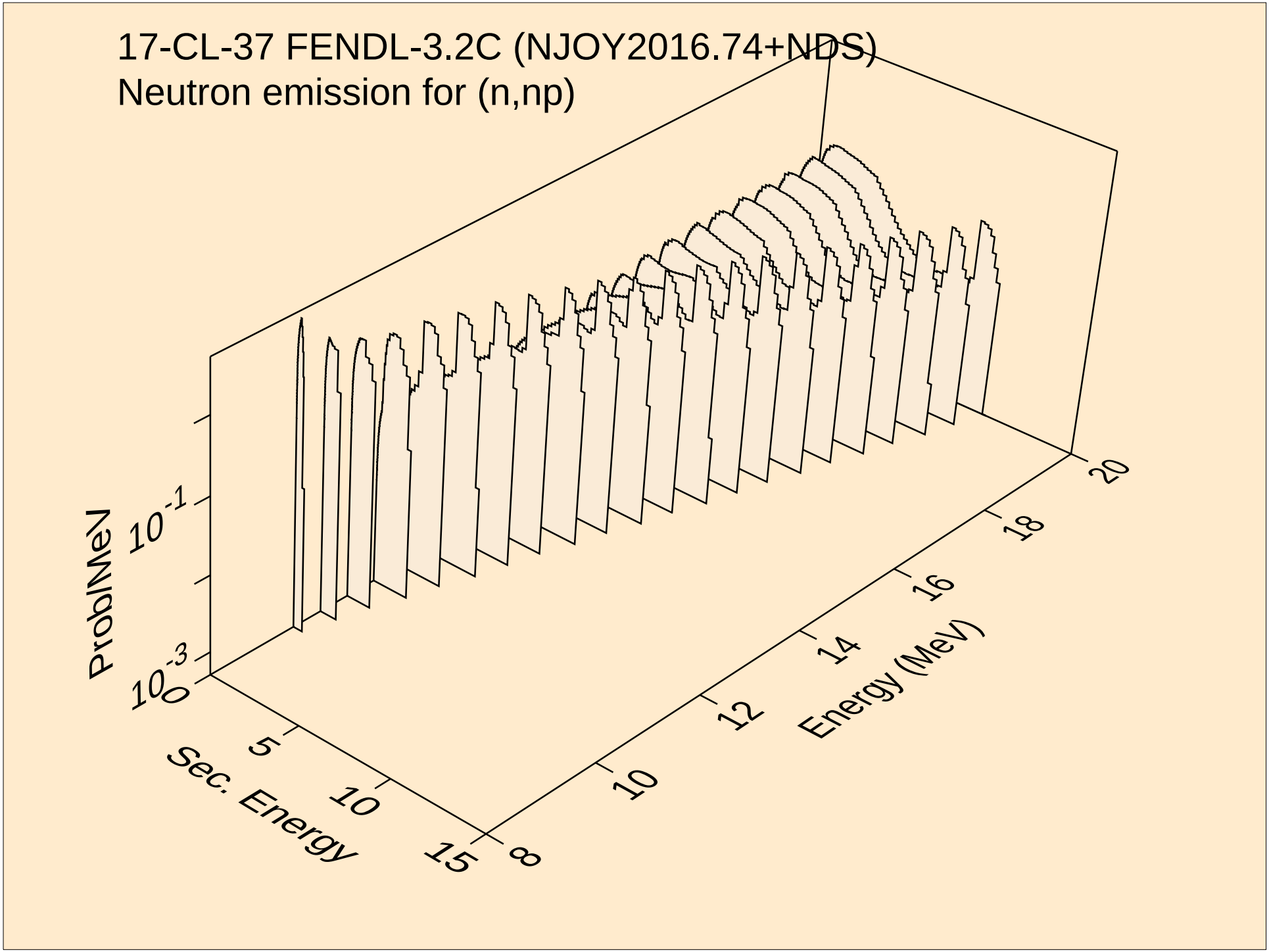

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,n*27)
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

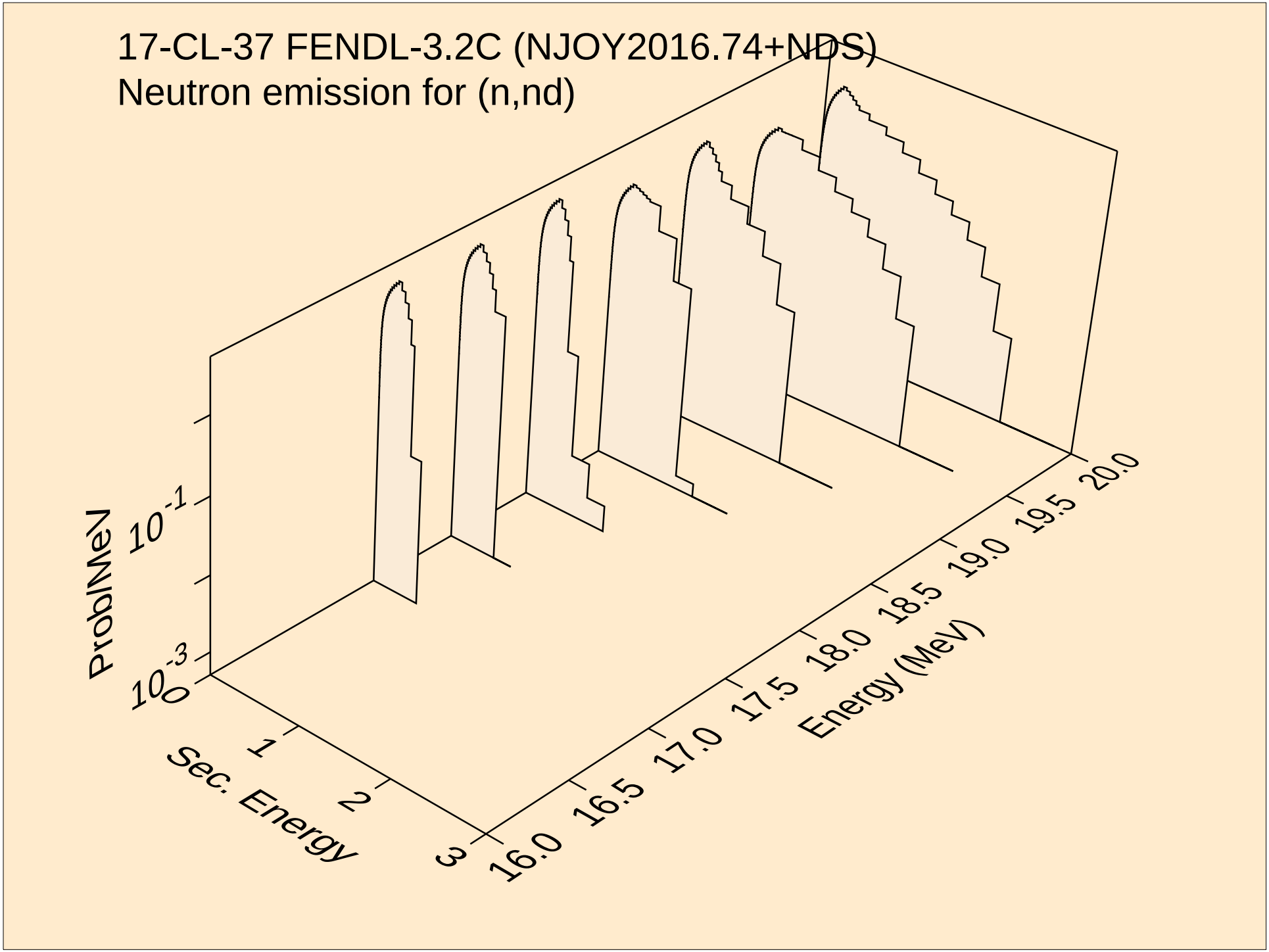

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,x)
Prob/MeV
10-2
10-4
0
50
100
150
Sec. Energy
0
20
40
60
80
100
120
140
160
Energy (MeV)

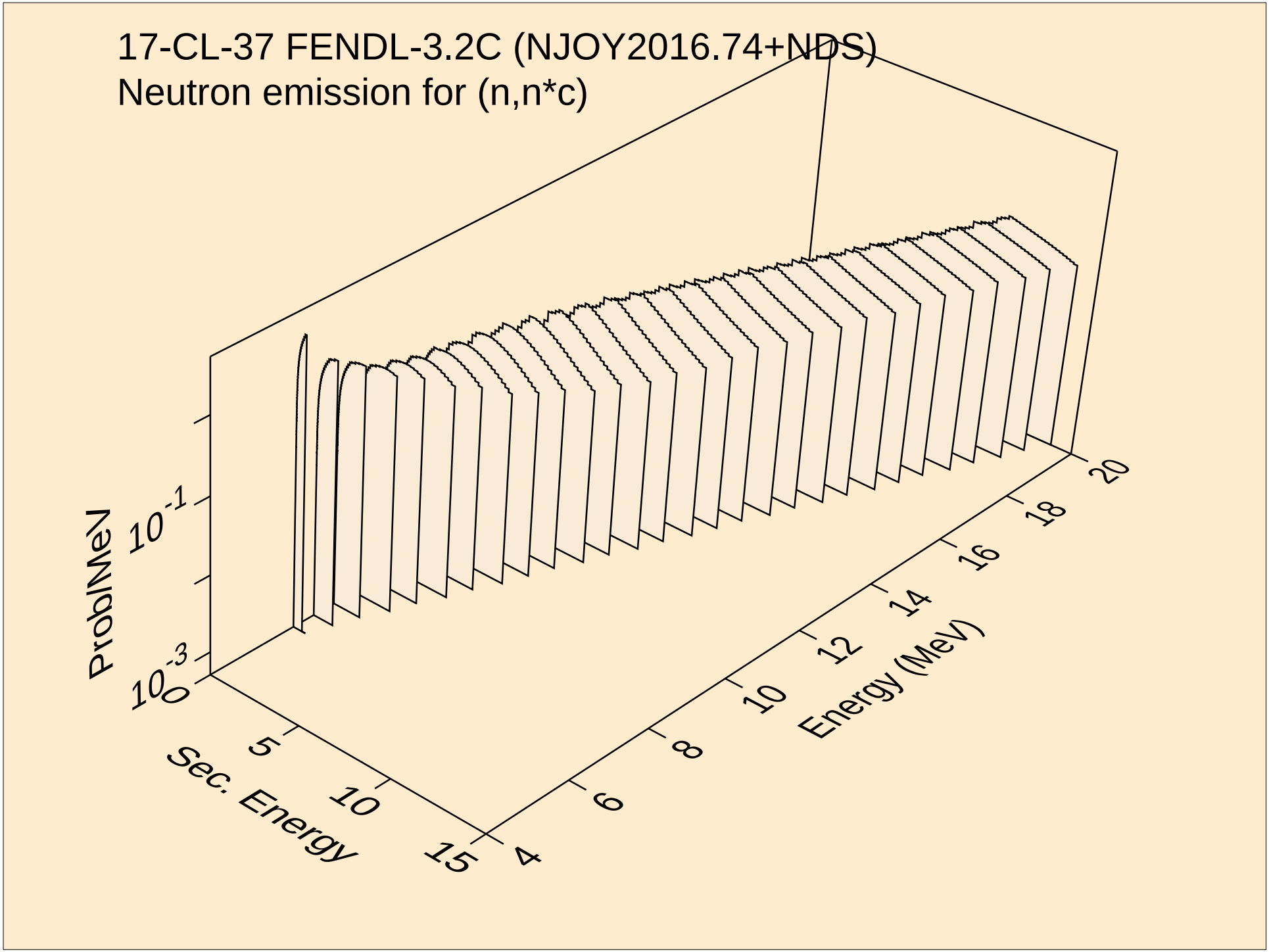

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,2n)
Prob/MeV
10^{-1}
10^{-3}
0
2
4
6
8
10
Sec. Energy
10
12
14
16
18
20
Energy (MeV)

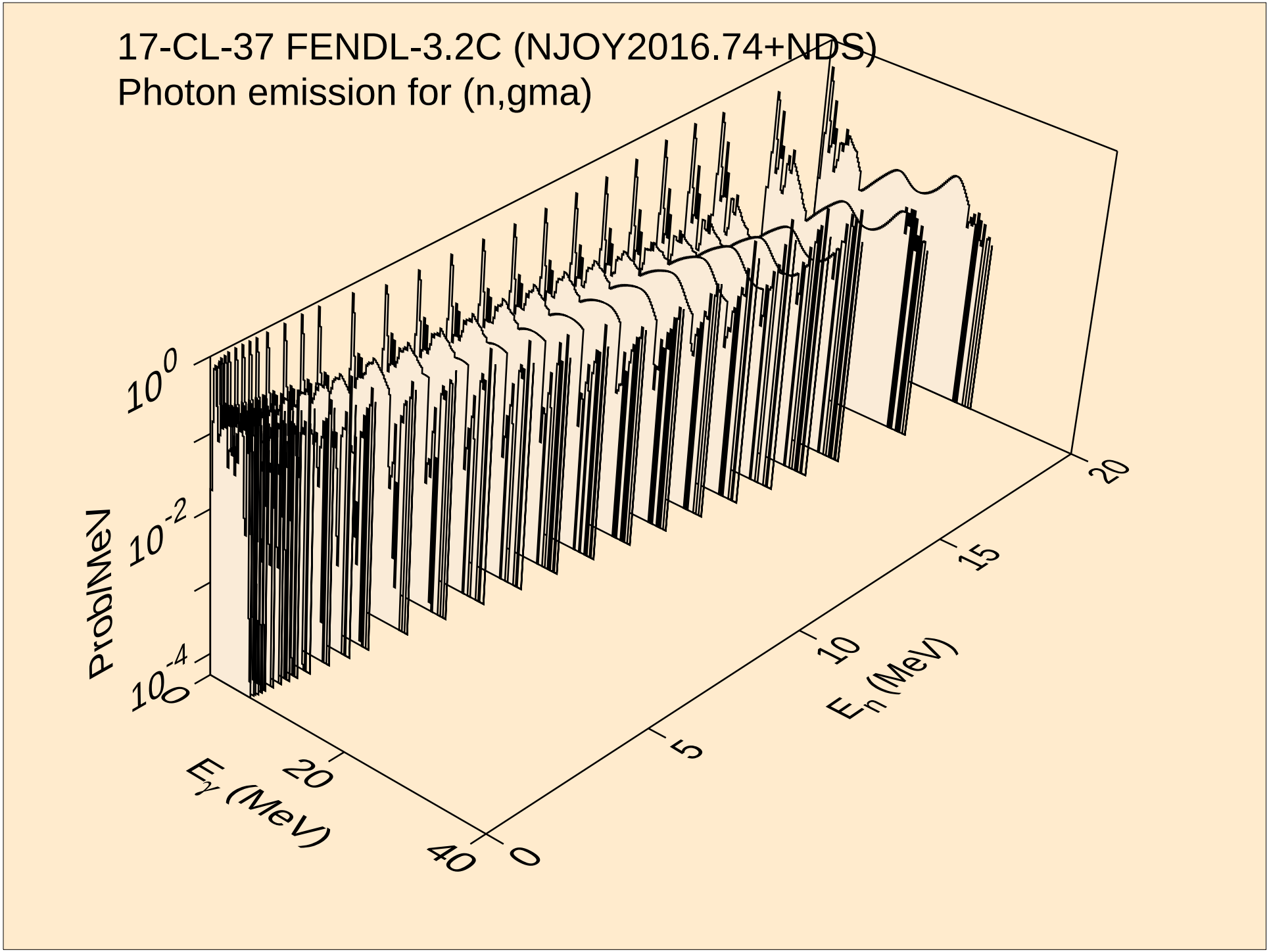

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,3n)
Prob/MeV
10^-1
10^-3
0.0
0.2
0.4
0.6
0.8
Sec. Energy
19.4
19.5
19.6
19.7
19.8
19.9
20.0
Energy (MeV)

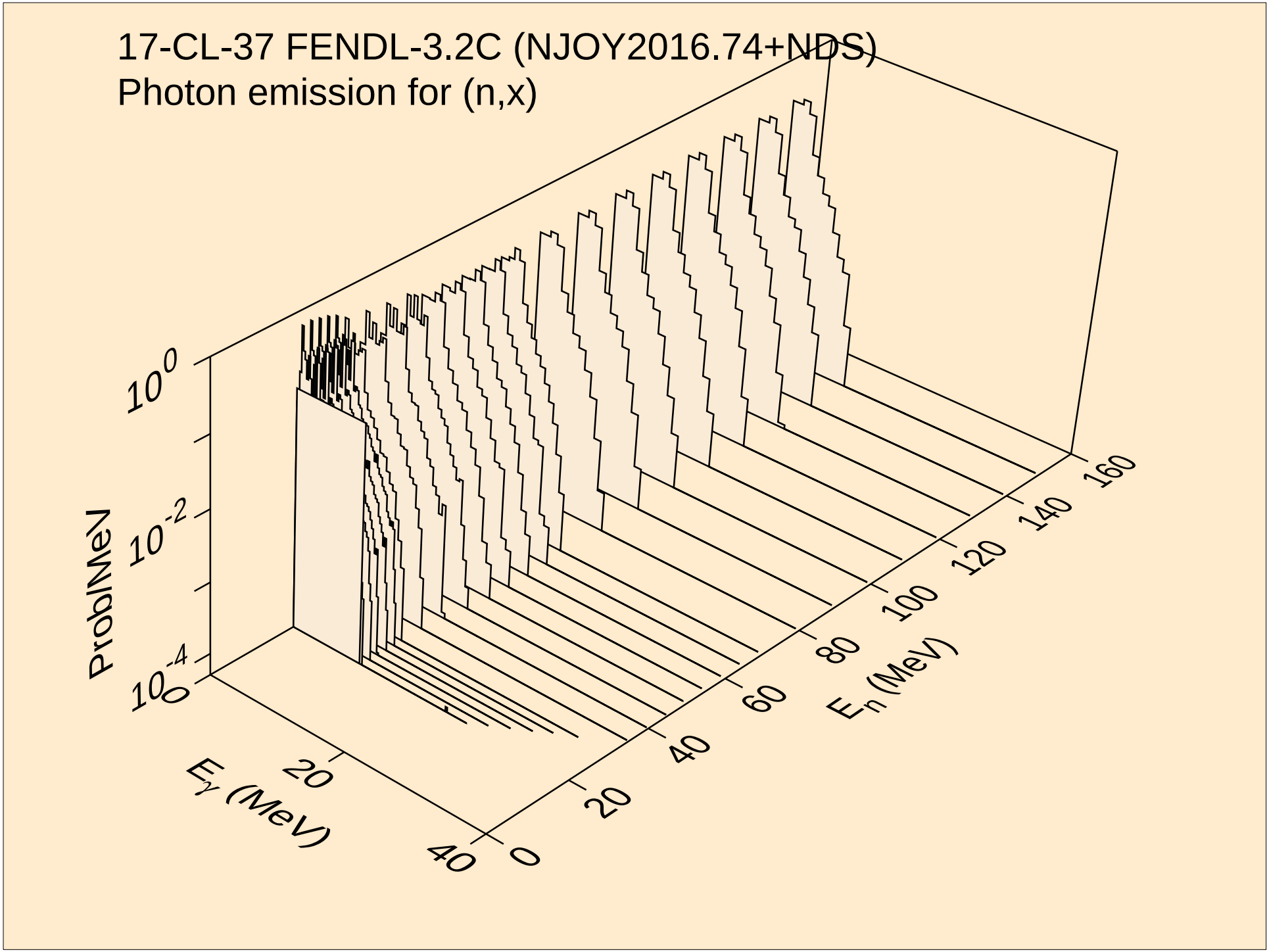

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,na)
Prob/MeV
10^-1
10^-3
Sec. Energy
0
2
4
6
8
10
Energy (MeV)
8
10
12
14
16
18
20

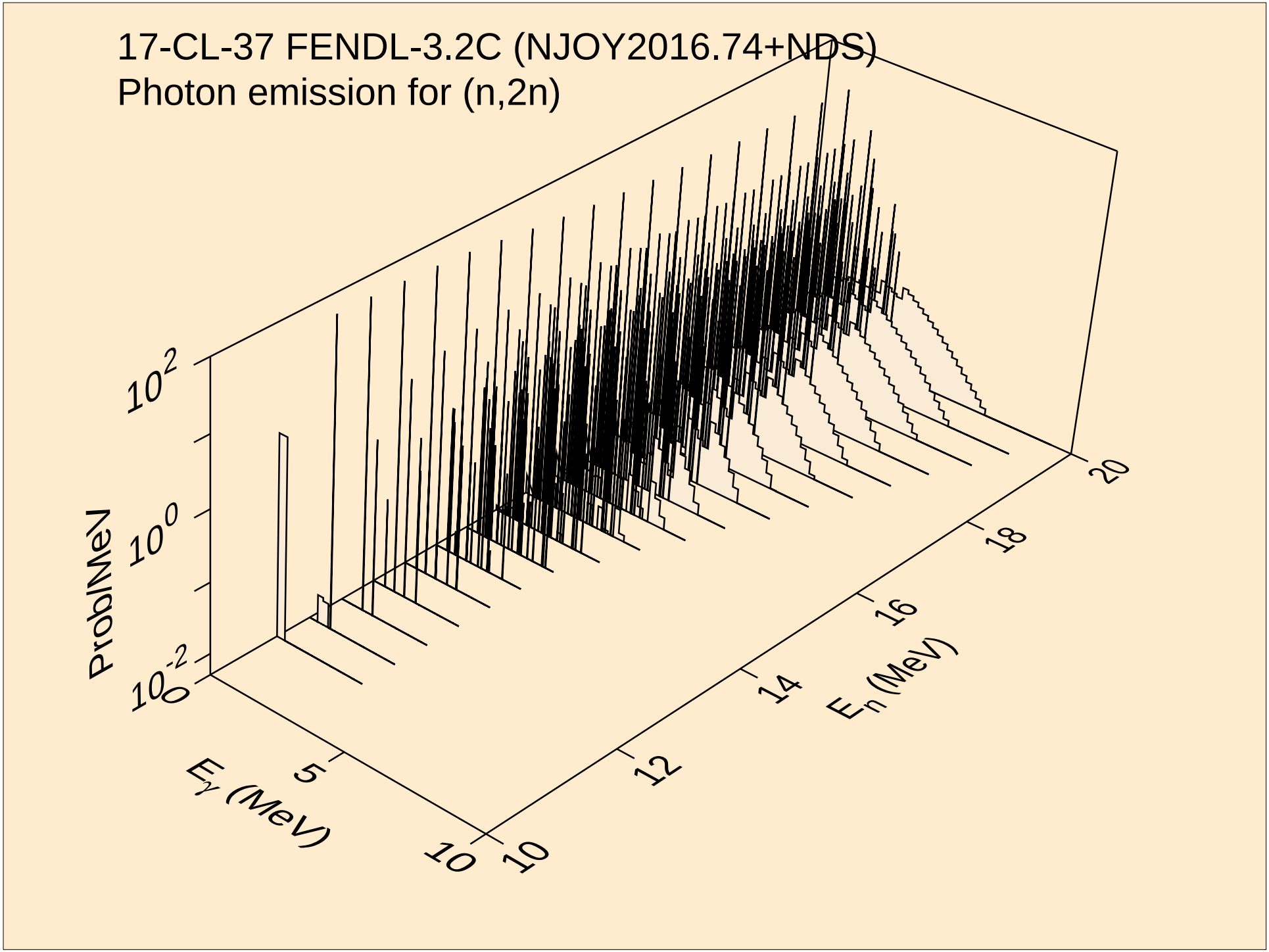

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,np)
Prob/MeV
10^-1
10^-3
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

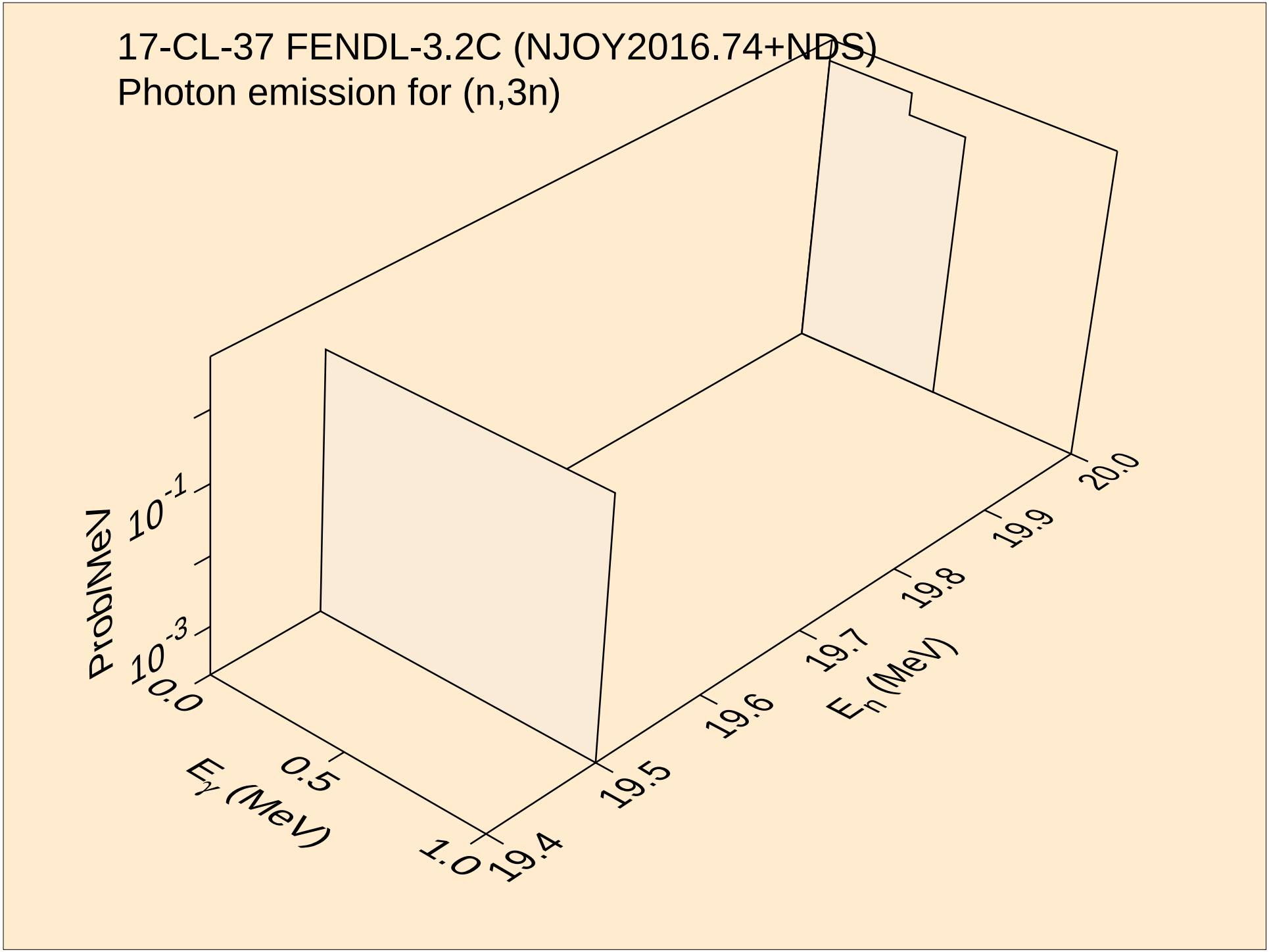

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,nd)
Prob/MeV
10^-1
10^-3
0
1
2
3
Sec. Energy
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
Energy (MeV)

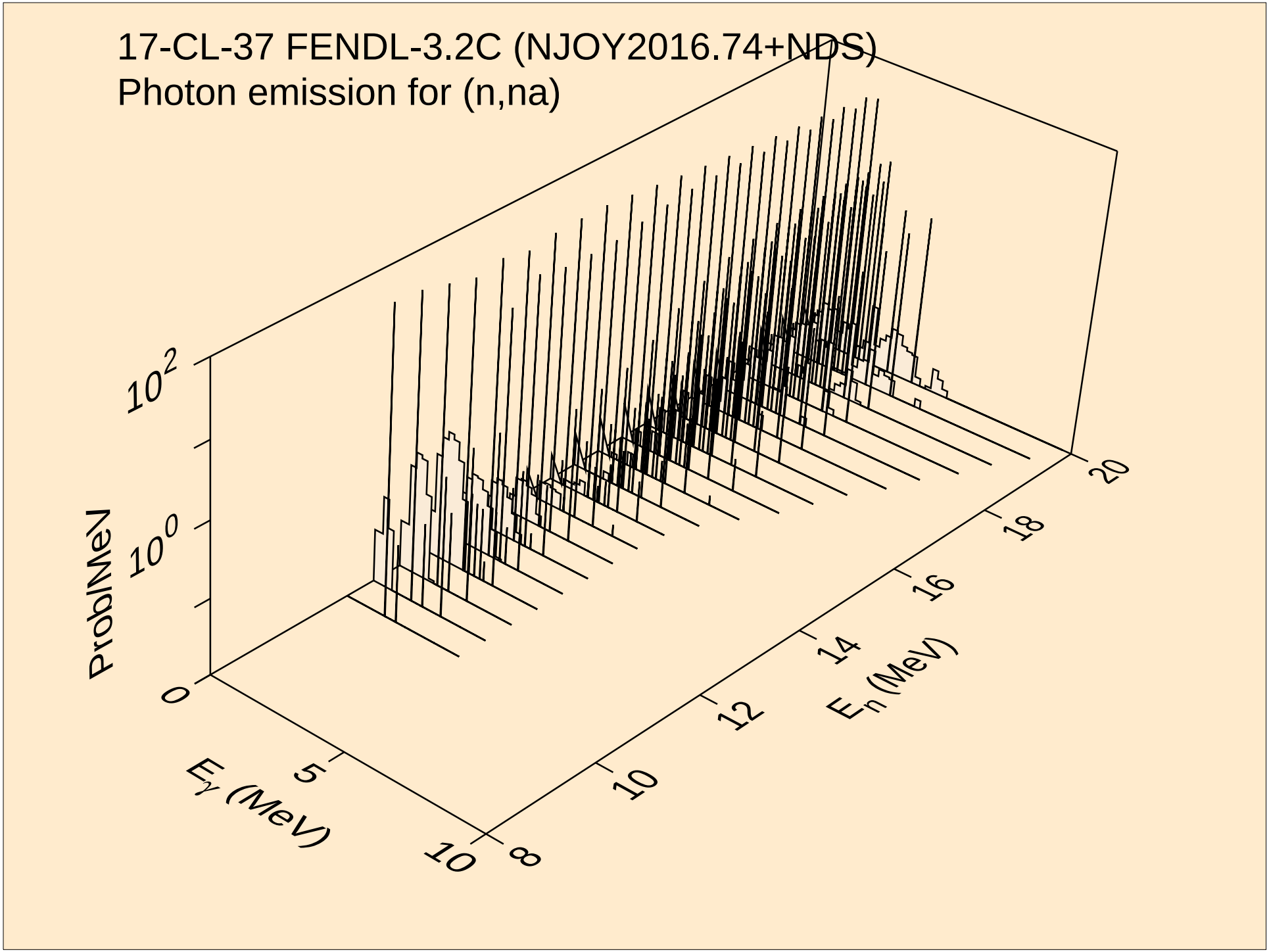

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Neutron emission for (n,n*c)
Prob/MeV
10^-1
10^-3
0
5
10
15
Sec. Energy
4
6
8
10
12
14
16
18
20
Energy (MeV)

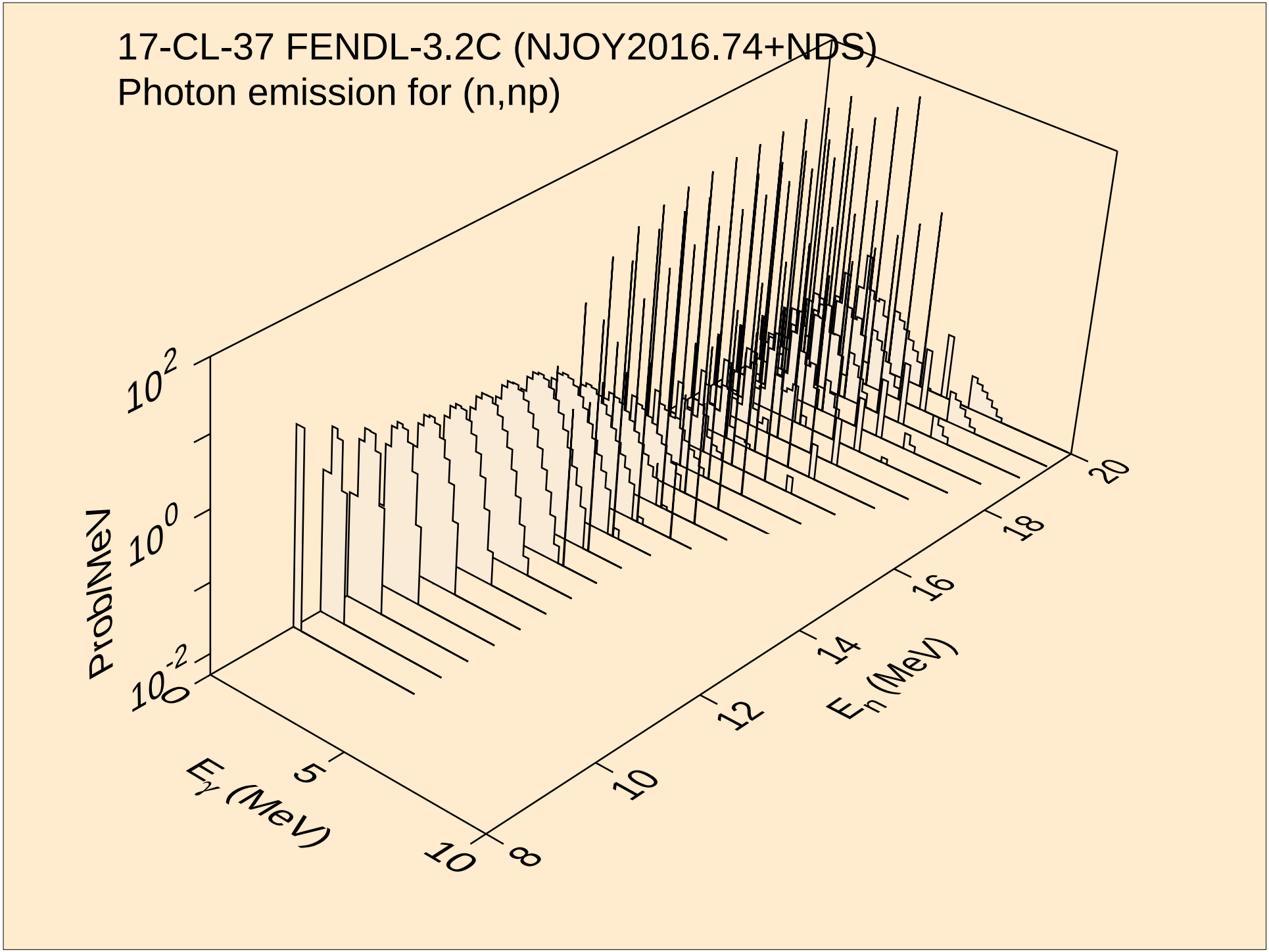

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,gma)
Prob/MeV
10^0
10^{-2}
10^{-4}
E_γ (MeV)
0
20
40
E_n (MeV)
0
5
10
15
20

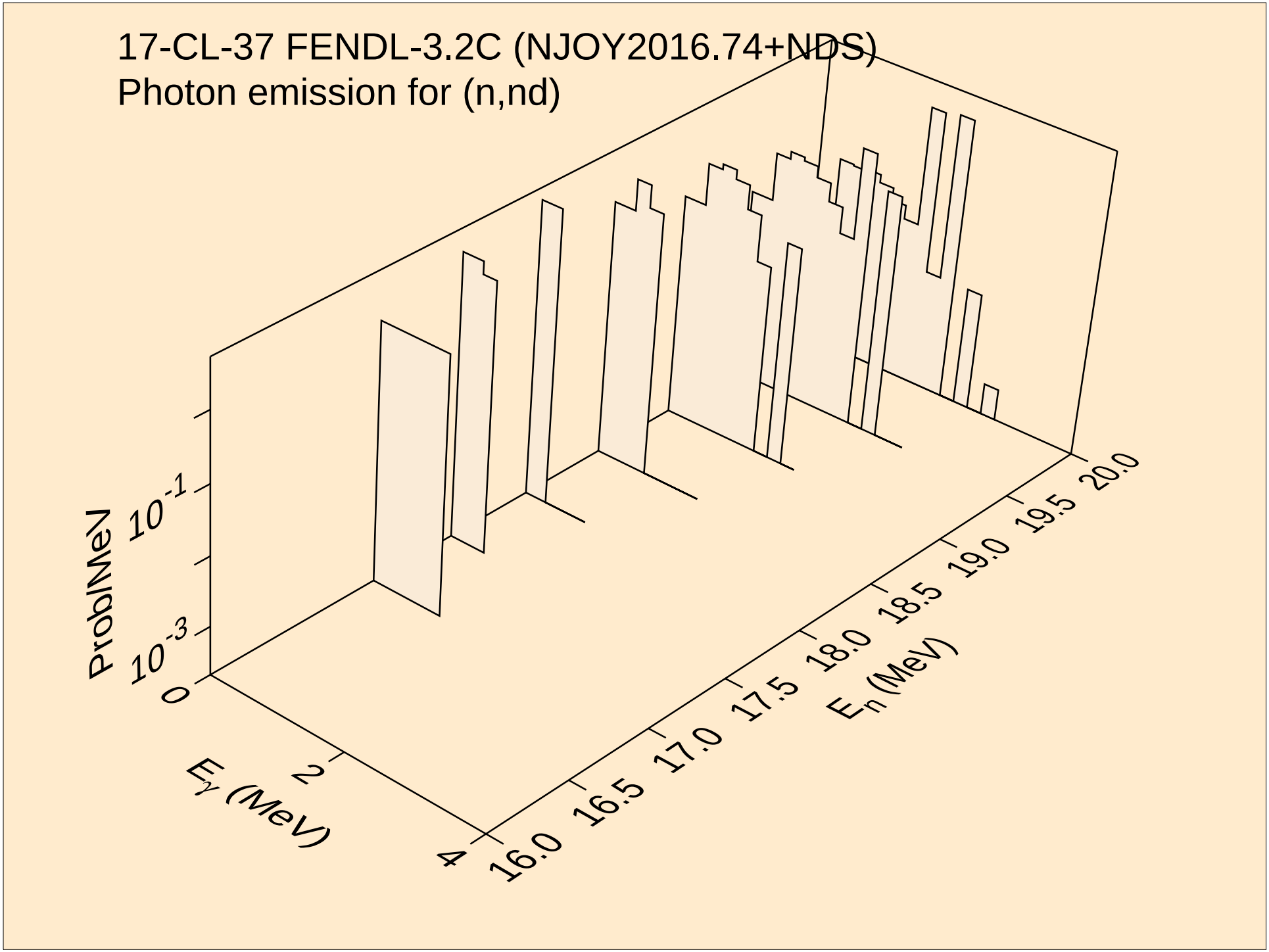

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,x)
Prob/MeV
10^0
10^{-2}
10^{-4}
E_γ (MeV)
0
20
40
E_n (MeV)
0
20
40
60
80
100
120
140
160


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,2n)
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
10
12
14
16
18
20
E_n (MeV)

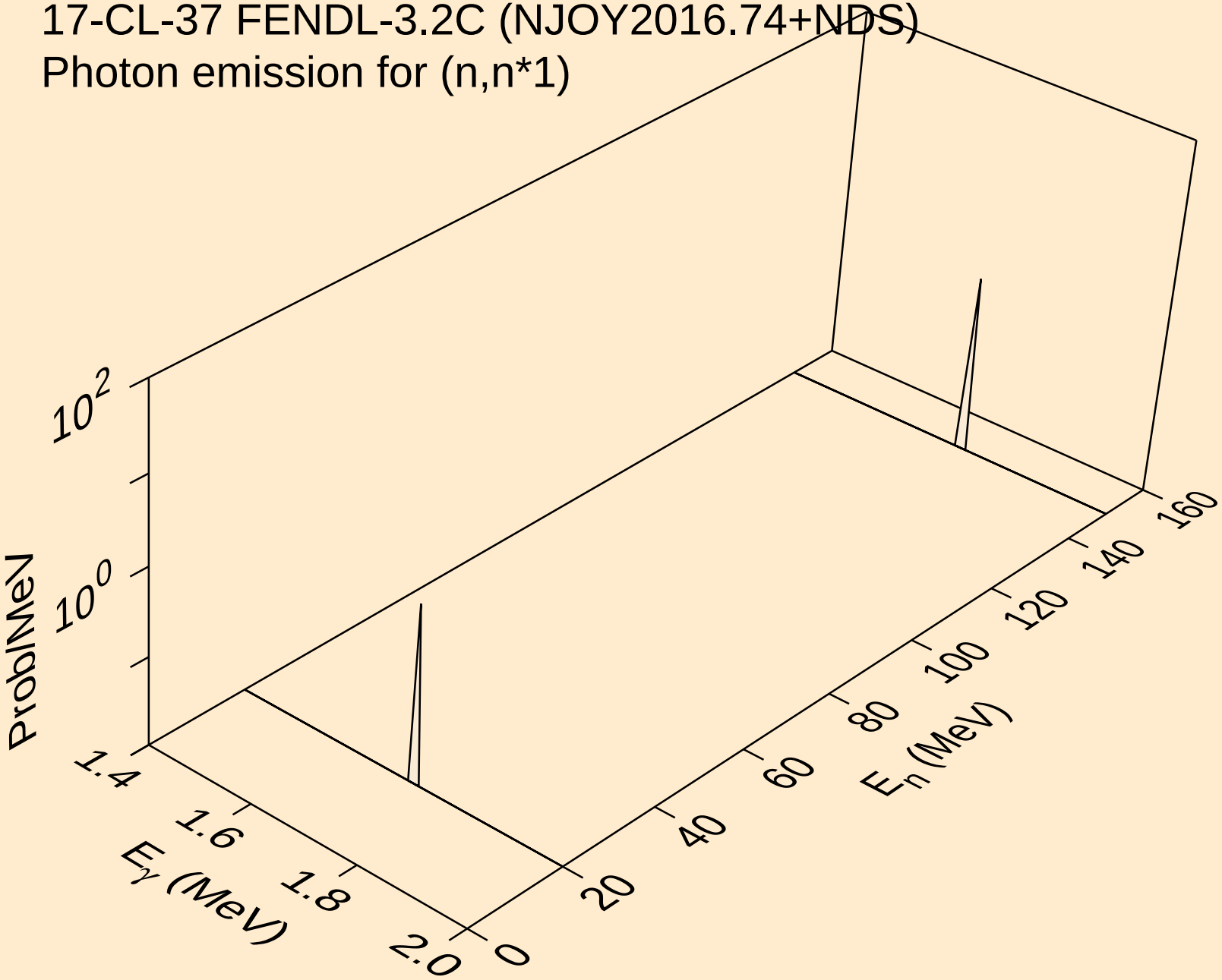

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,3n)
Prob/MeV
10^-1
10^-3
0.0
0.5
1.0
Eγ (MeV)
19.4
19.5
19.6
19.7
19.8
19.9
20.0
En (MeV)

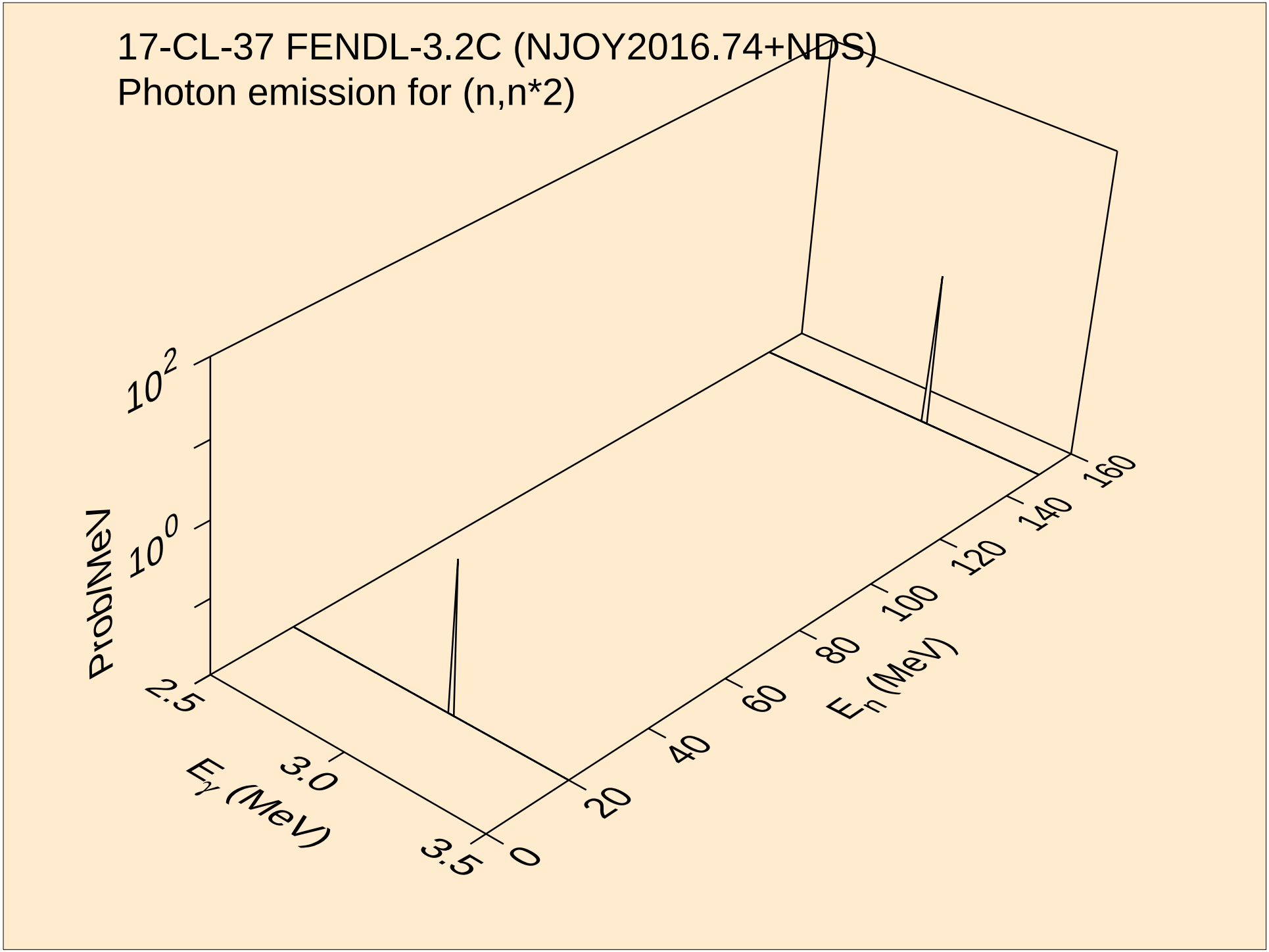

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,na)
Prob/MeV
10^2
10^0
0
5
10
E_γ (MeV)
8
10
12
14
16
18
20
E_n (MeV)

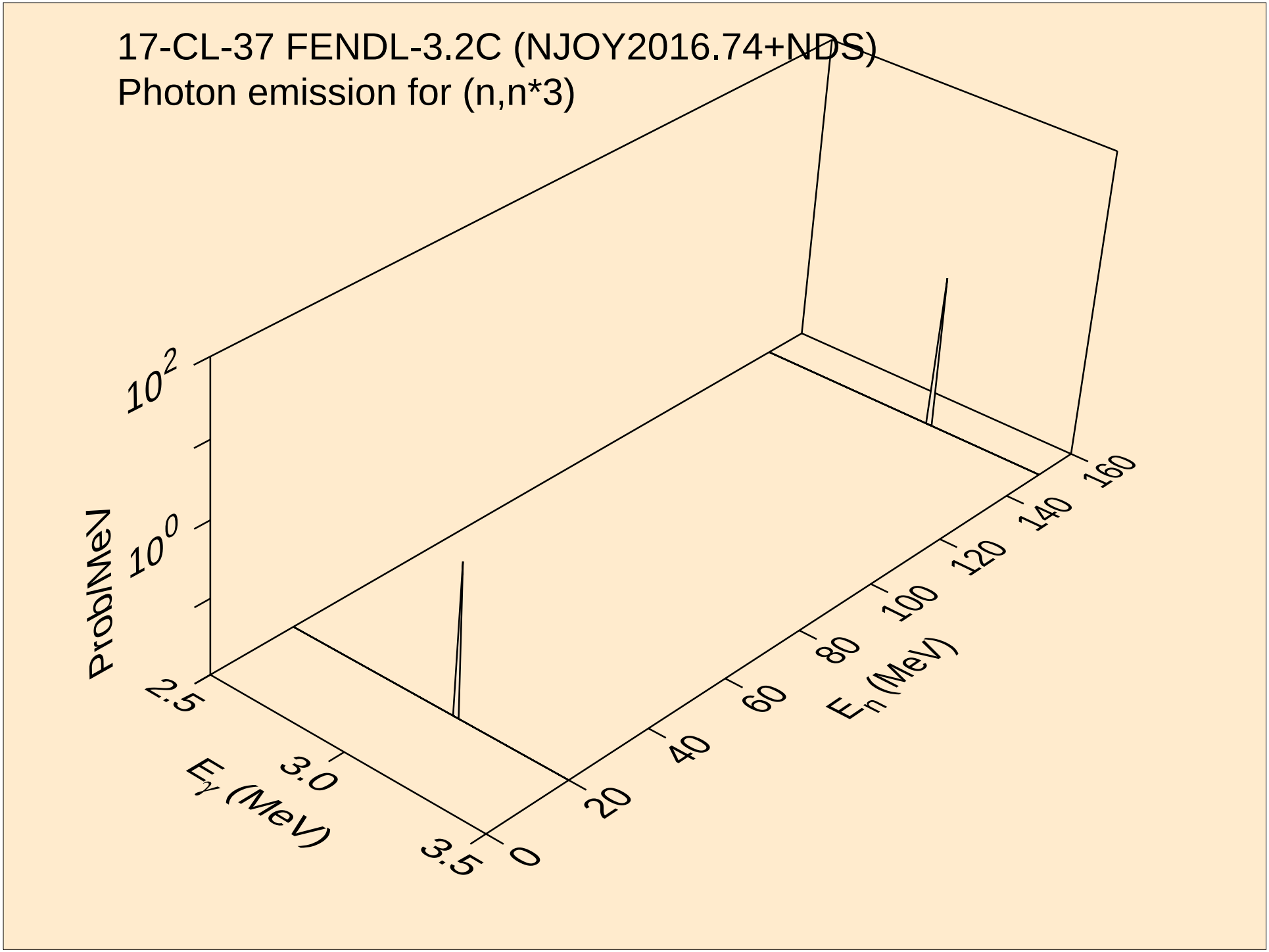

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,np)
Prob/MeV
10^2
10^0
10^{-2}
0
5
10
E_γ (MeV)
8
10
12
14
16
18
20
E_n (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,nd)
Prob/MeV
10^-1
10^-3
0
2
4
Eγ (MeV)
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
En (MeV)

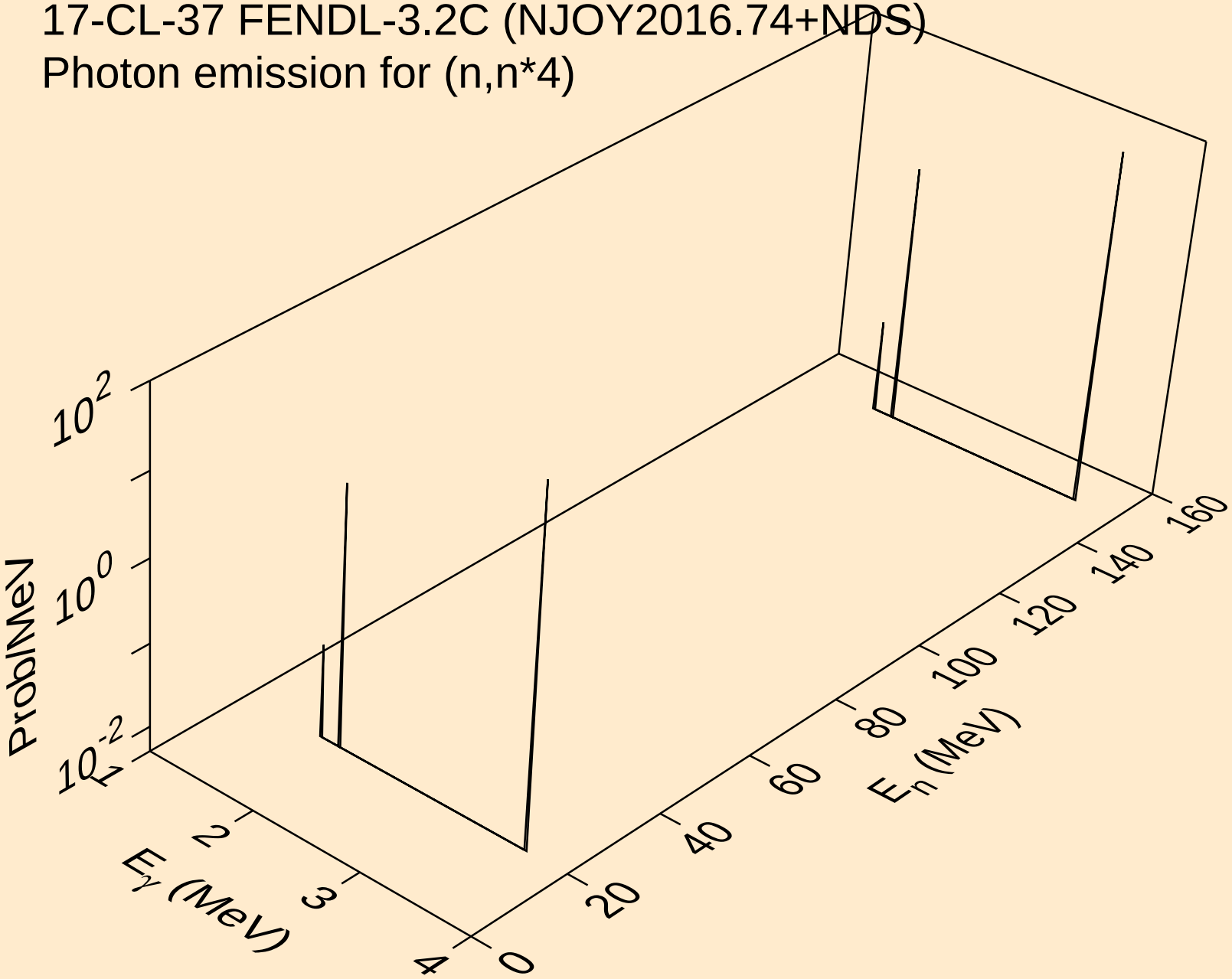
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*1)

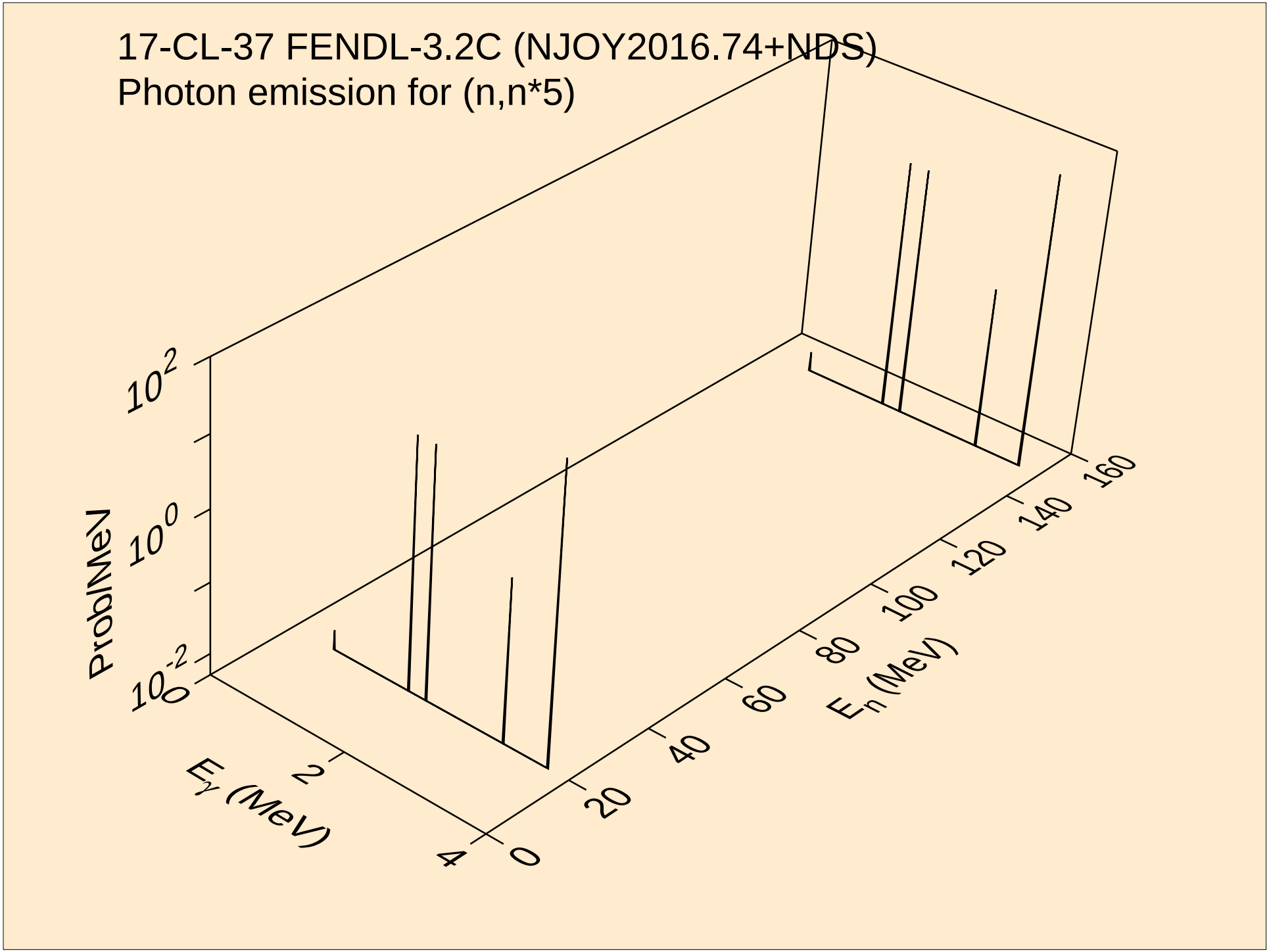


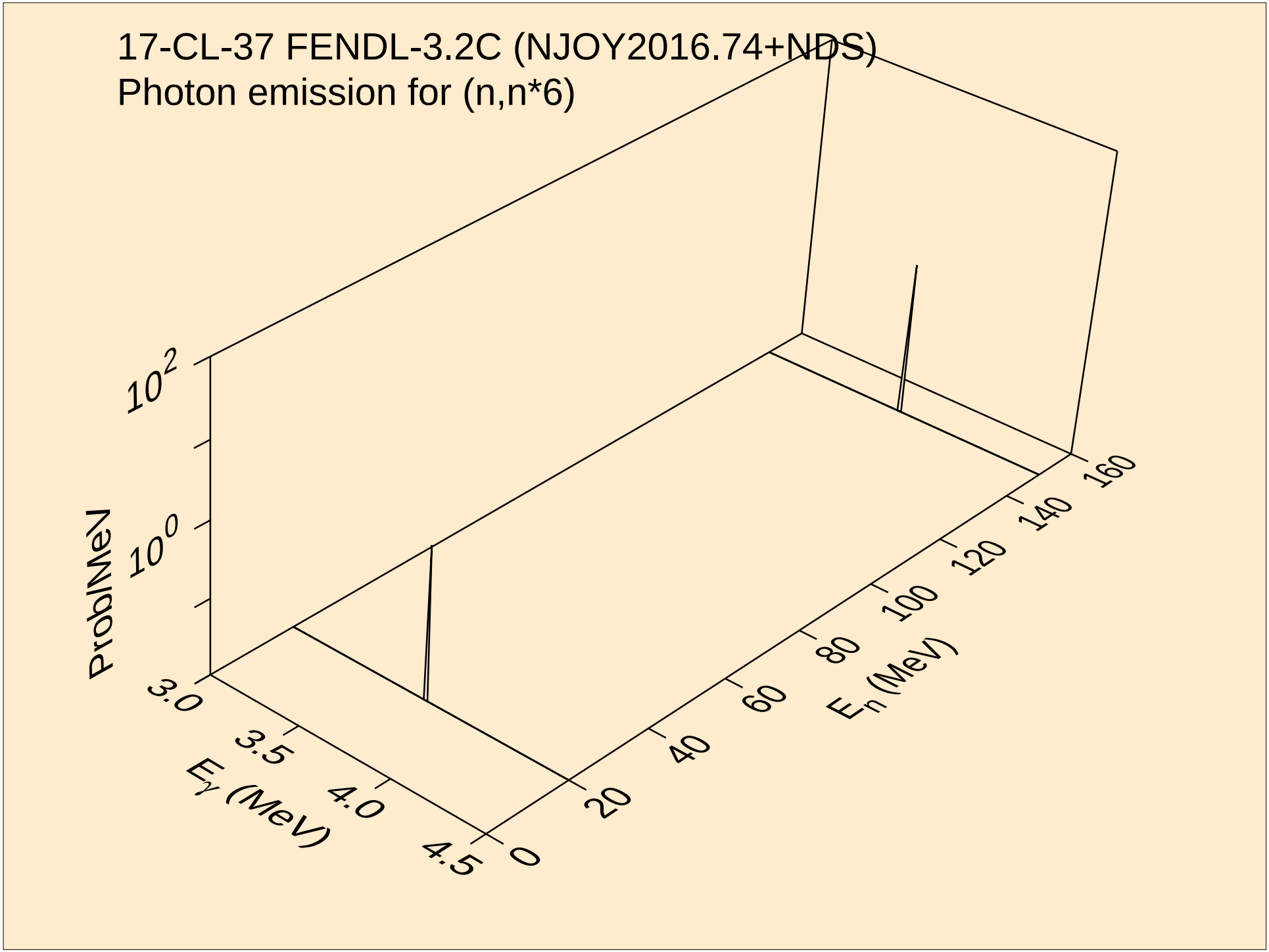

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*2)
Prob/MeV
10^2
10^0
2.5
3.0
3.5
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*3)
Prob/MeV
10^2
10^0
2.5
3.0
3.5
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

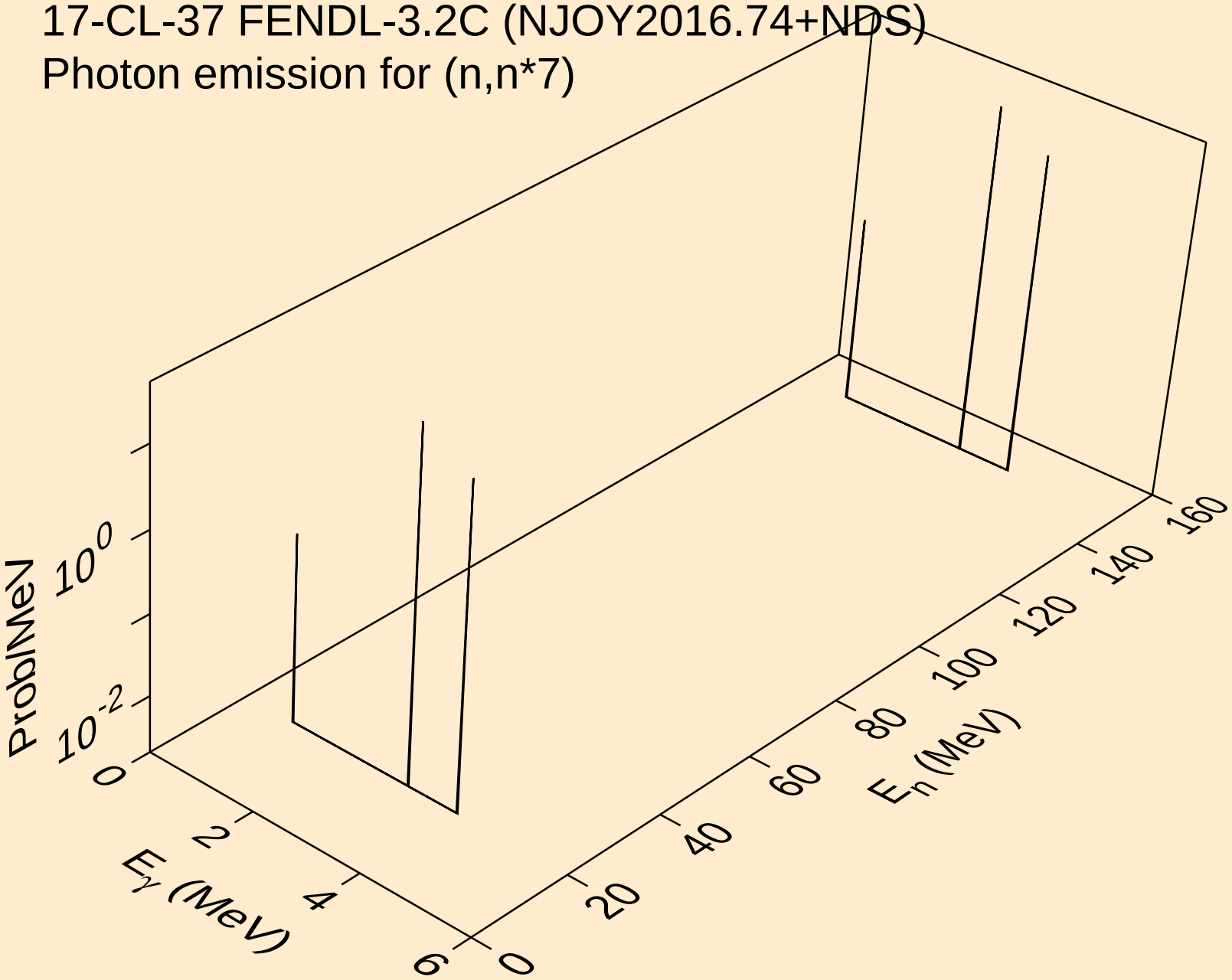
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*4)



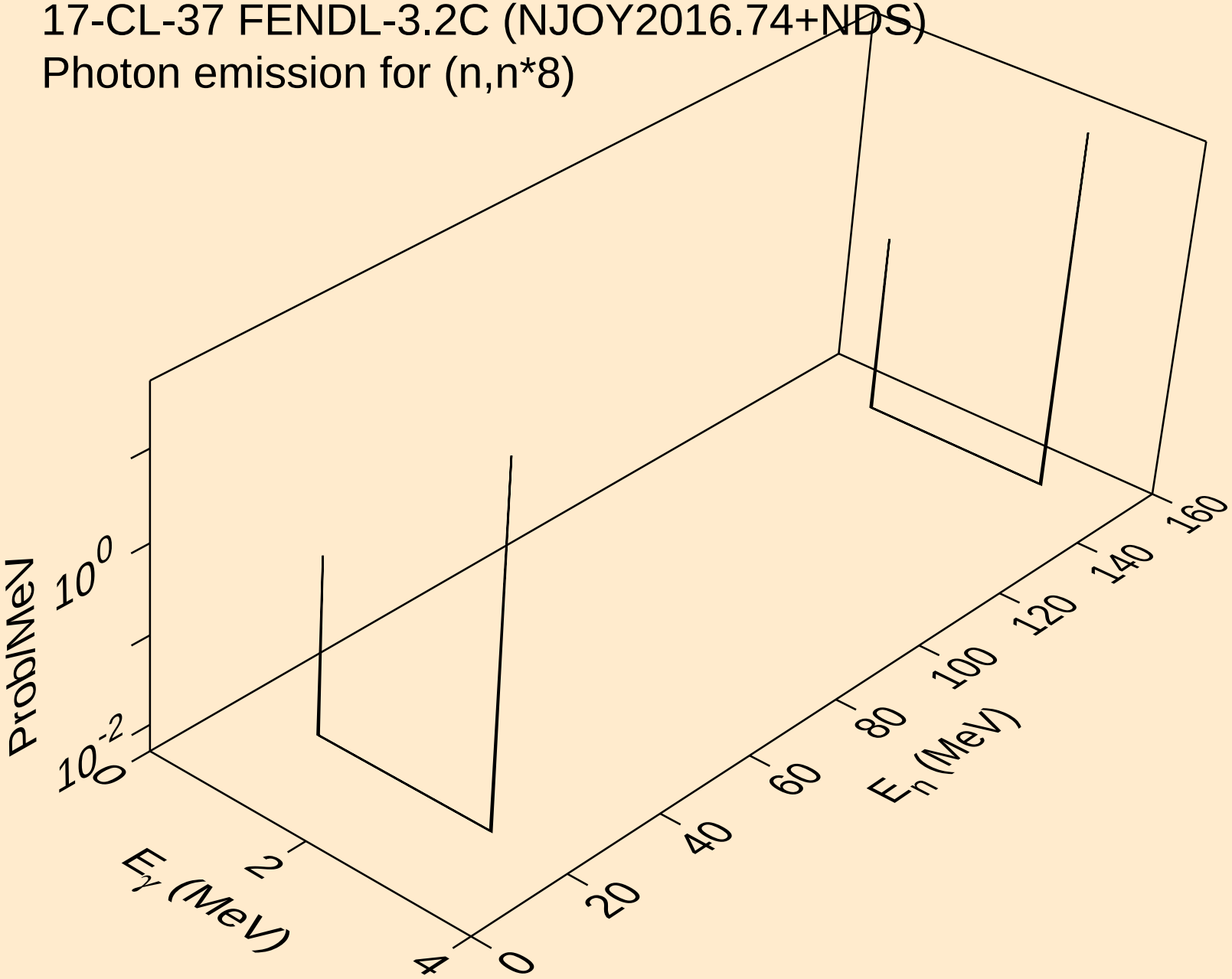

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*5)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

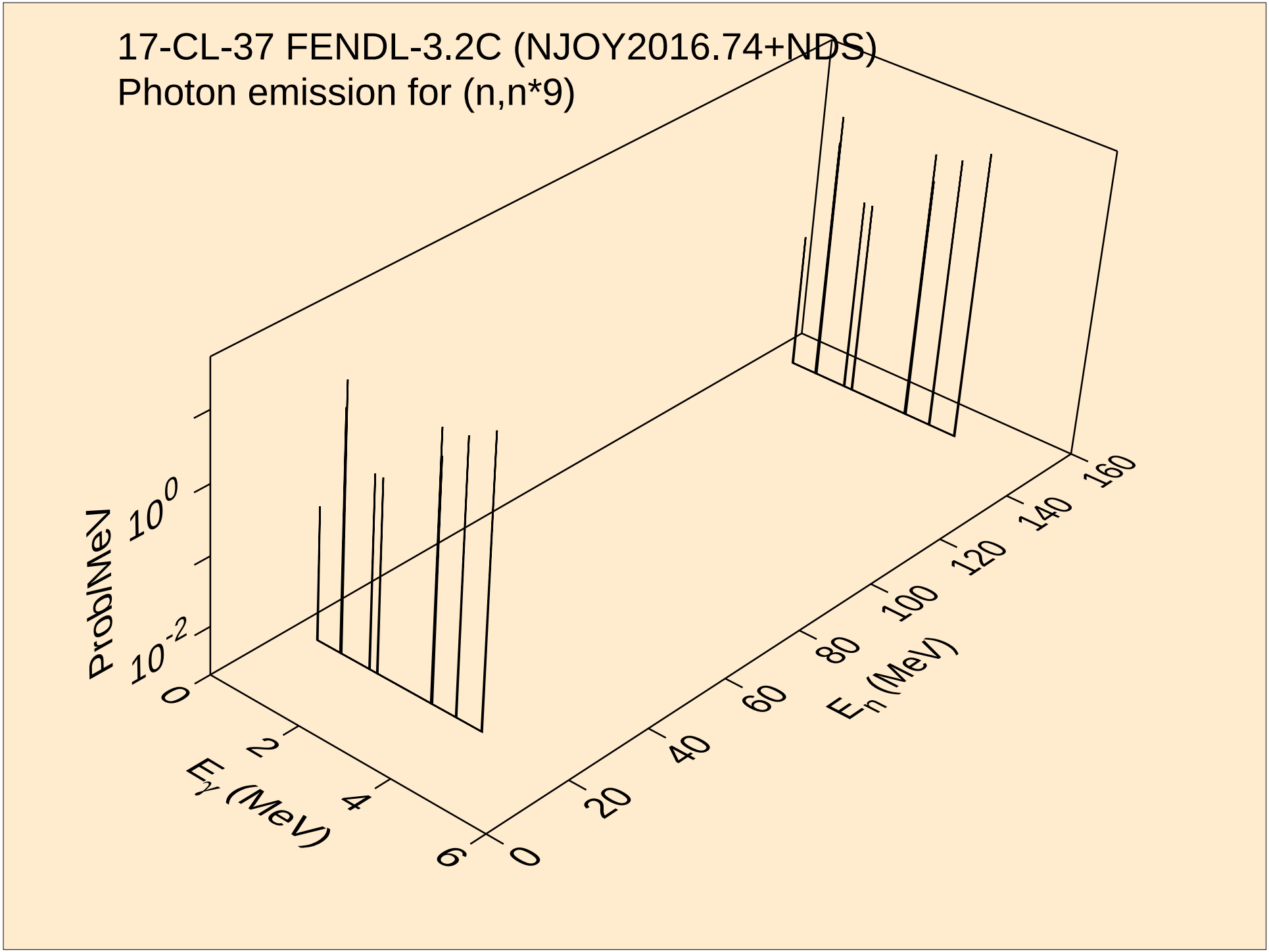

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*6)
Prob/MeV
10^2
10^0
3.0
3.5
4.0
4.5
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

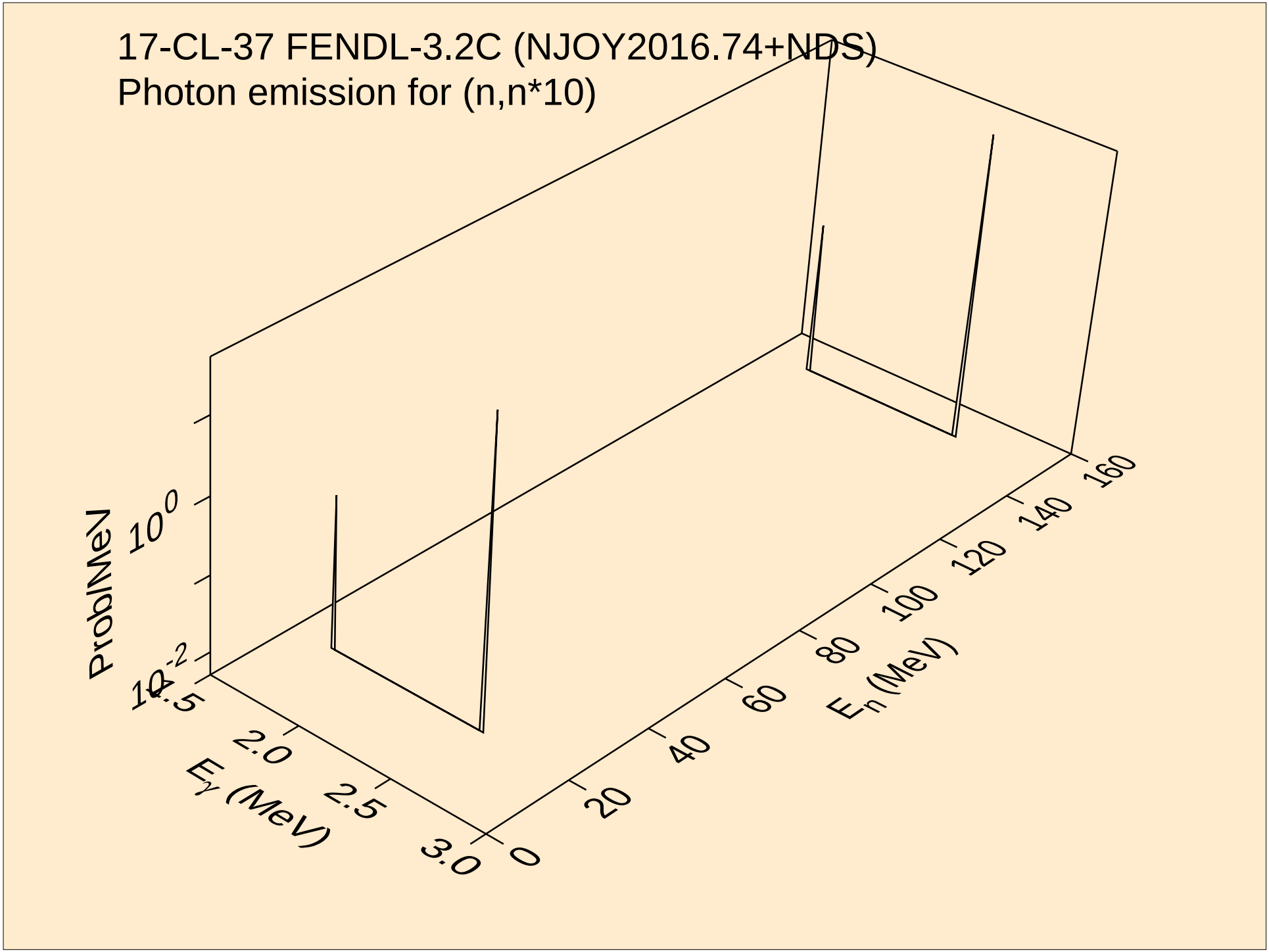
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*7)

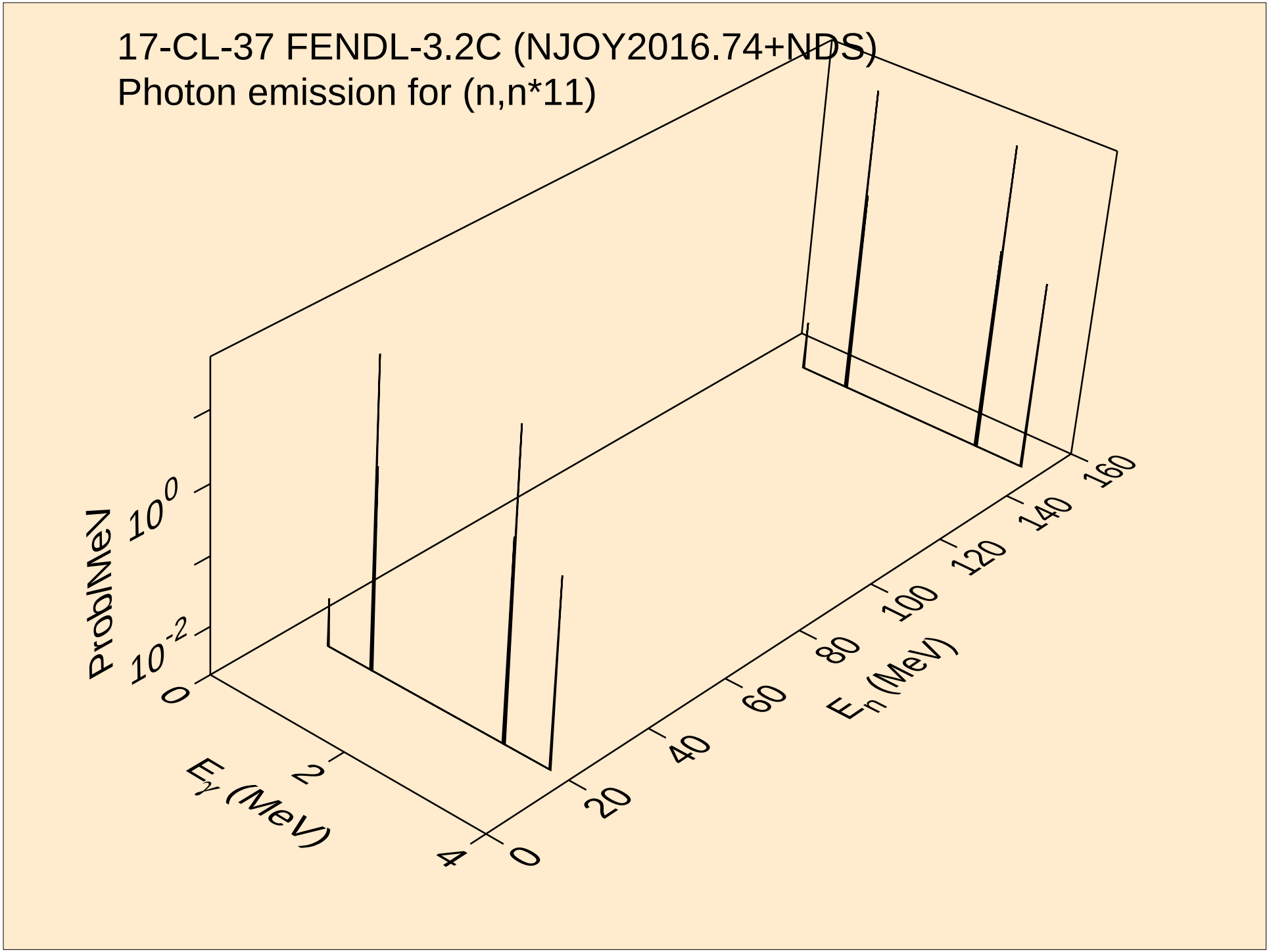


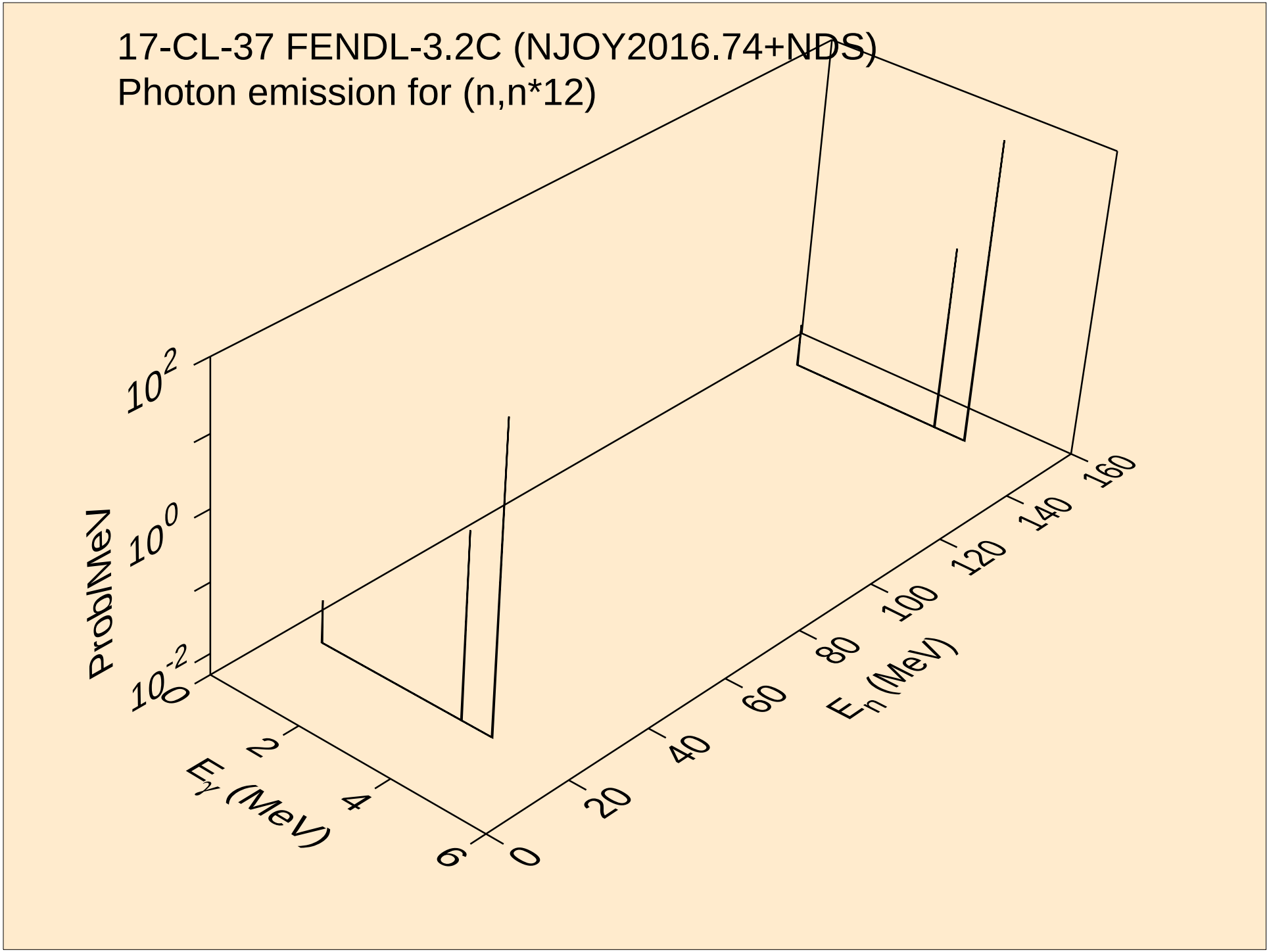
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*8)

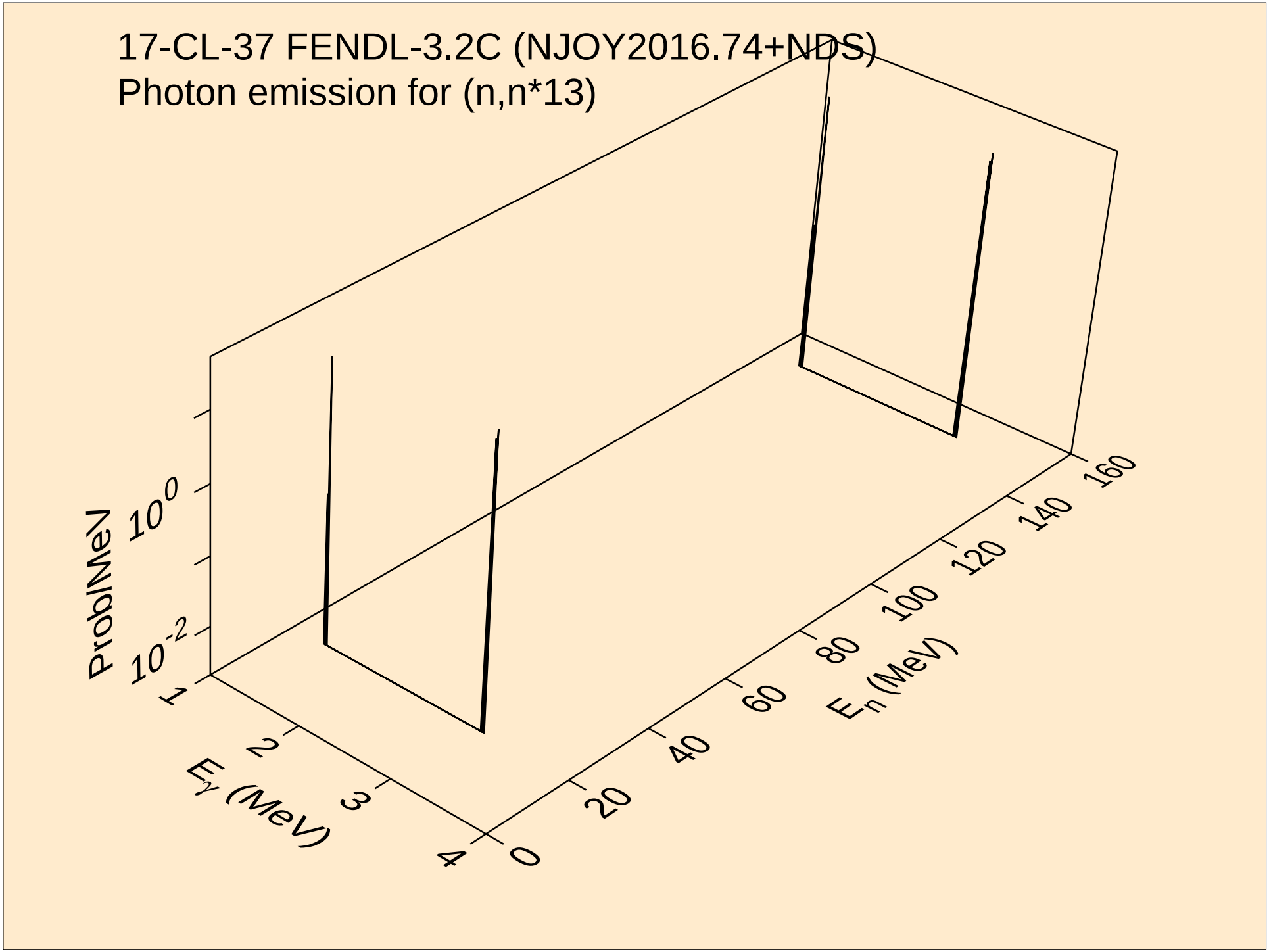


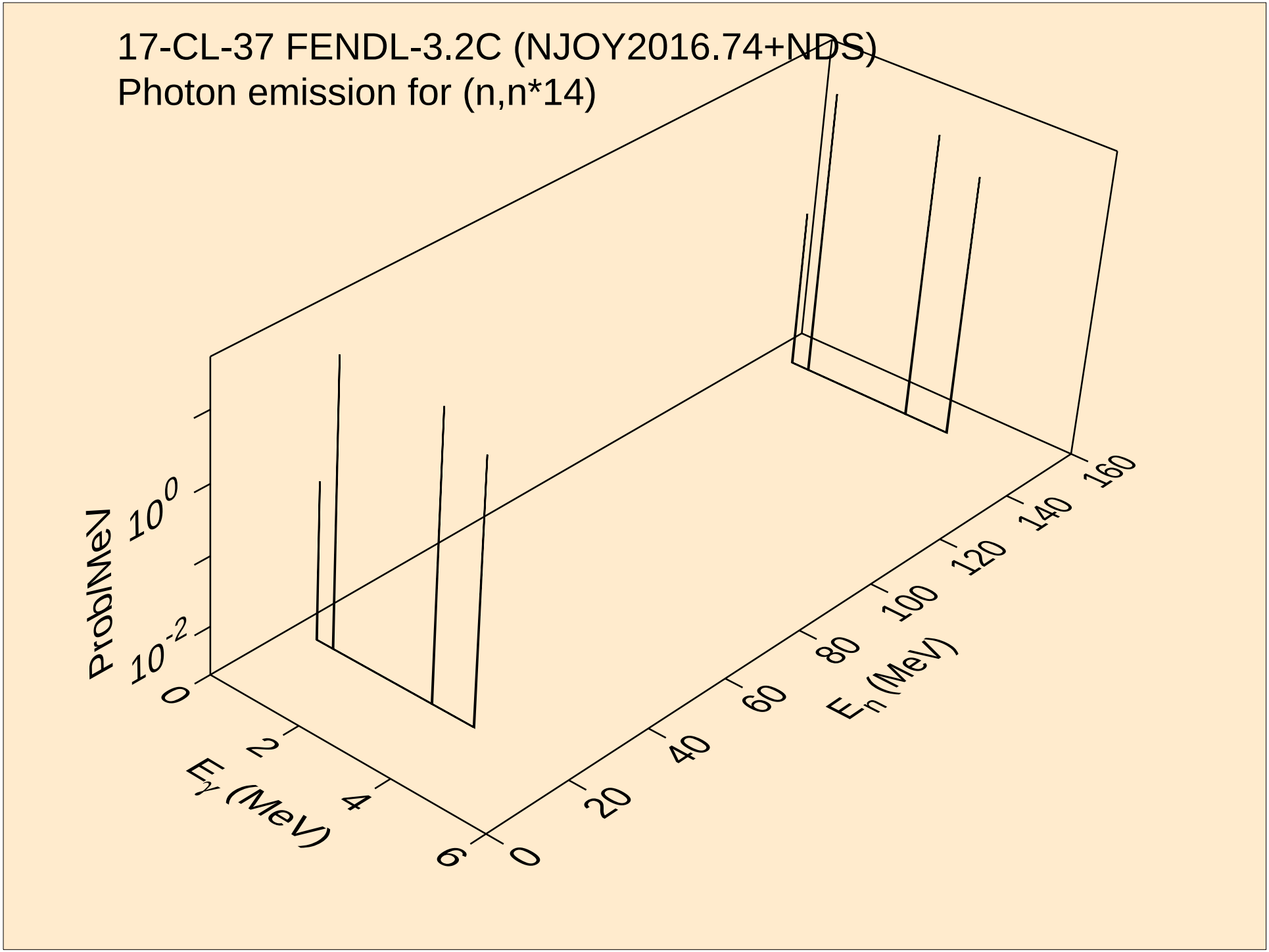

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*9)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

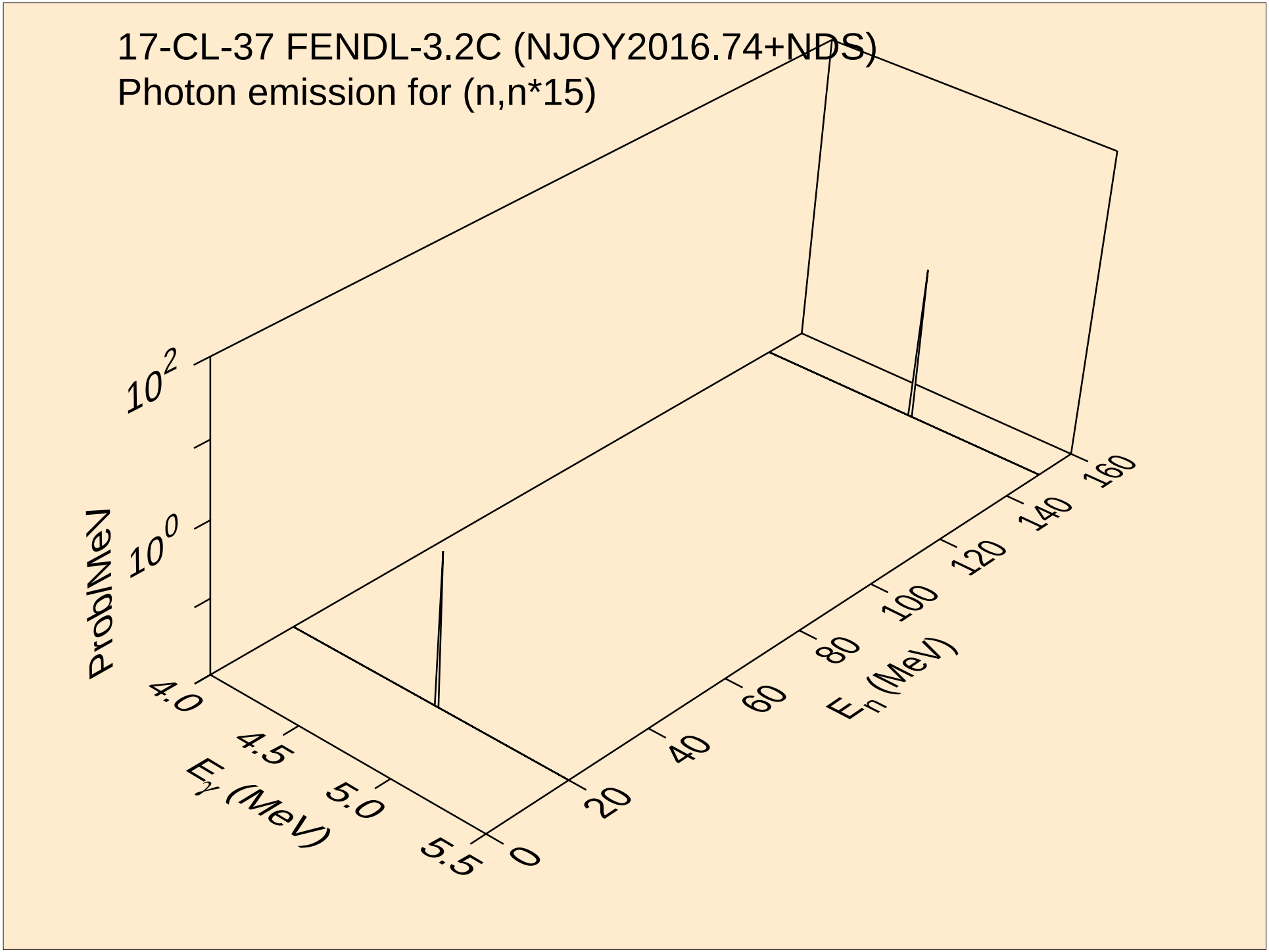

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*10)
Prob/MeV
10^{0}
10^{-2}
1.5
2.0
2.5
3.0
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

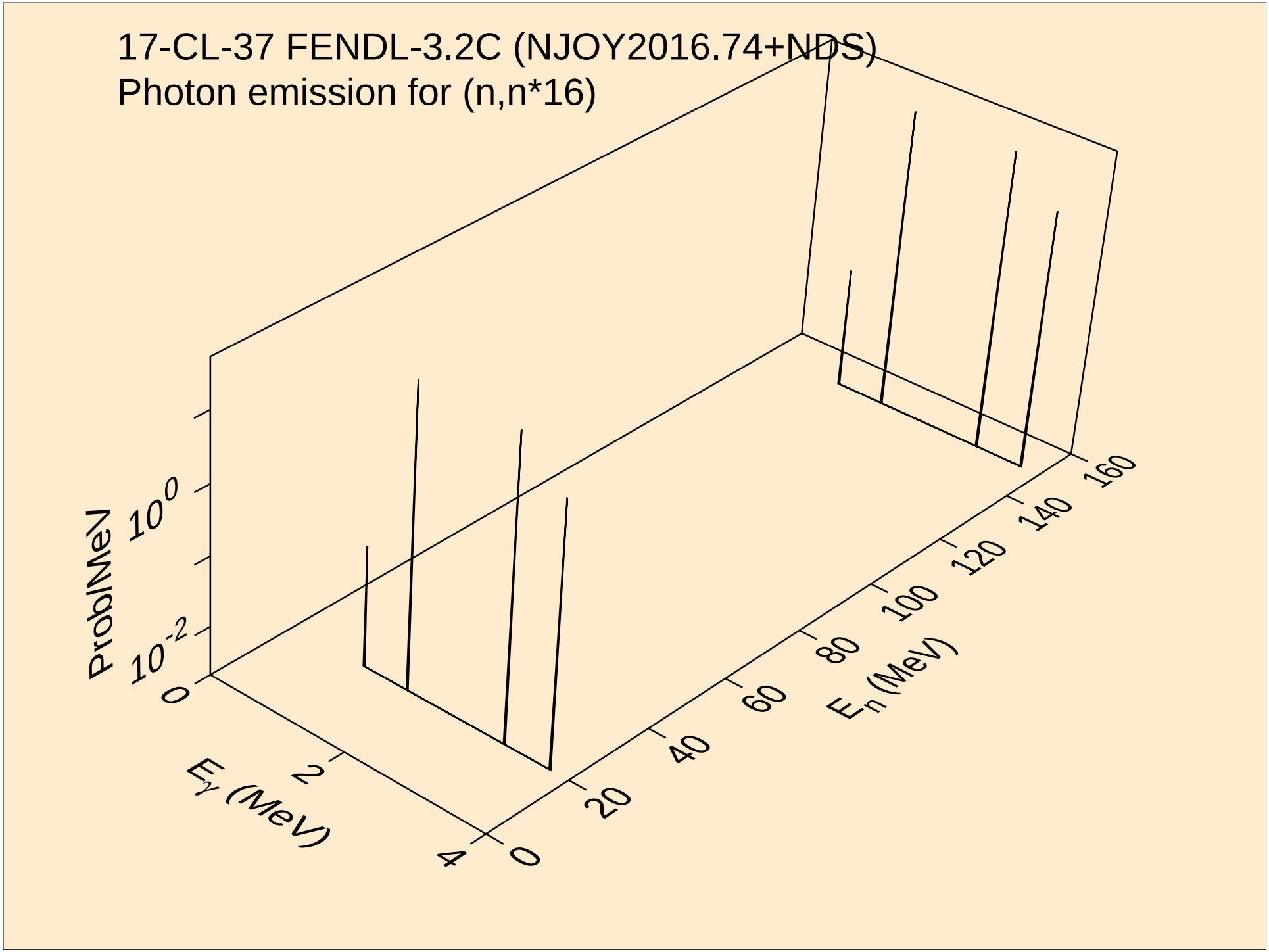

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*11)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*12)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
20
40
60
80
100
120
140
160

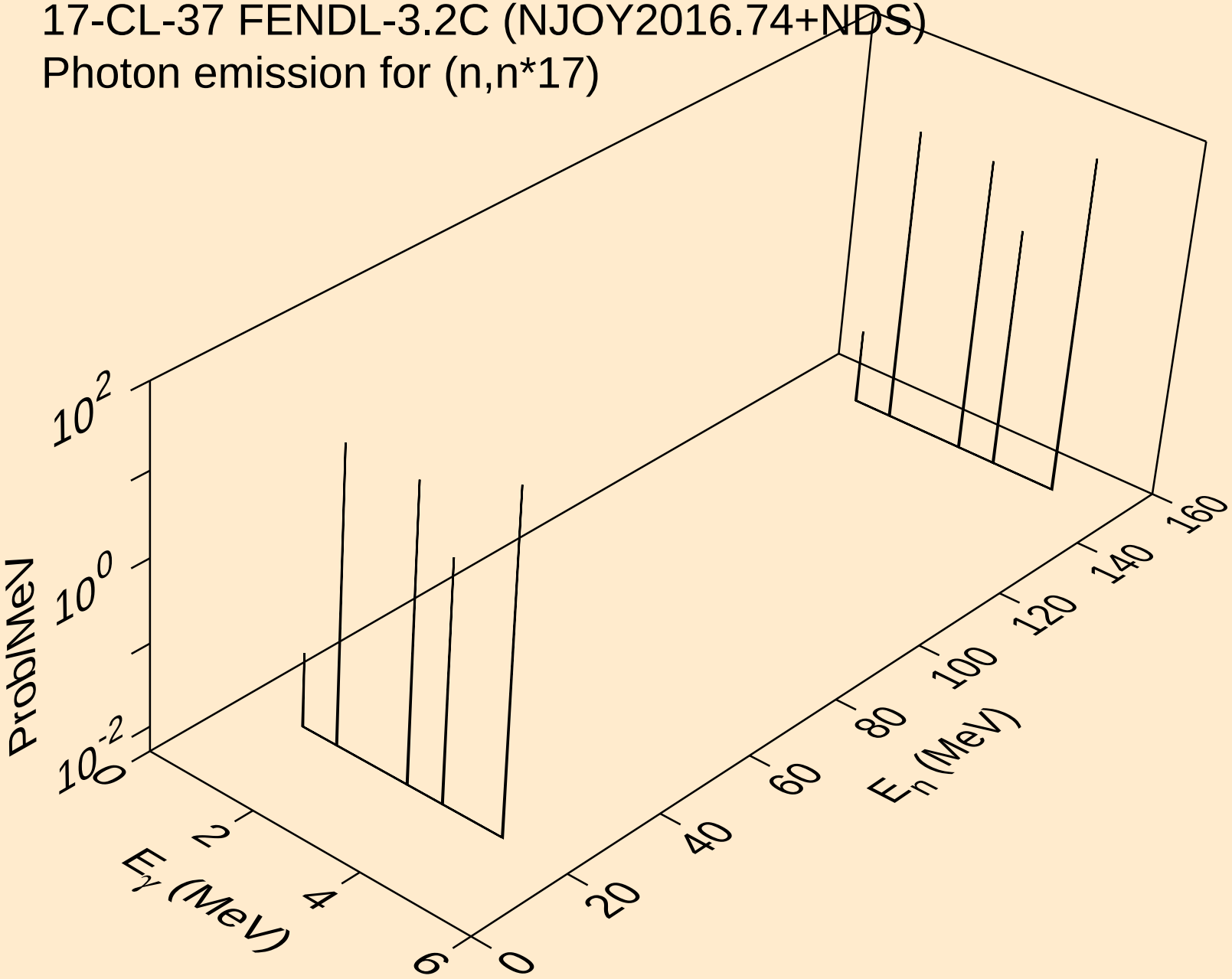

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*13)
Prob/MeV
10^{0}
10^{-2}
1
2
3
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

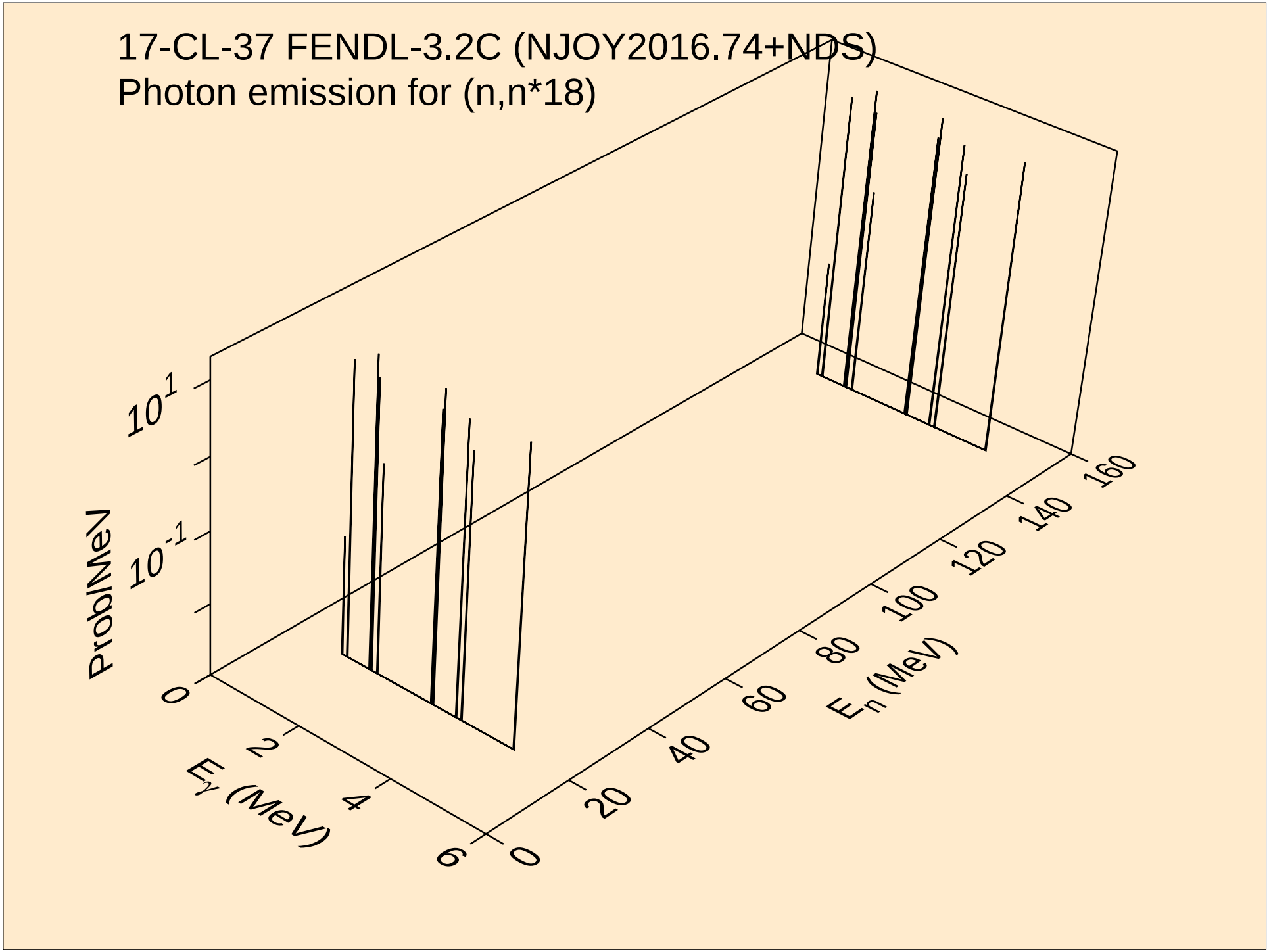

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*14)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

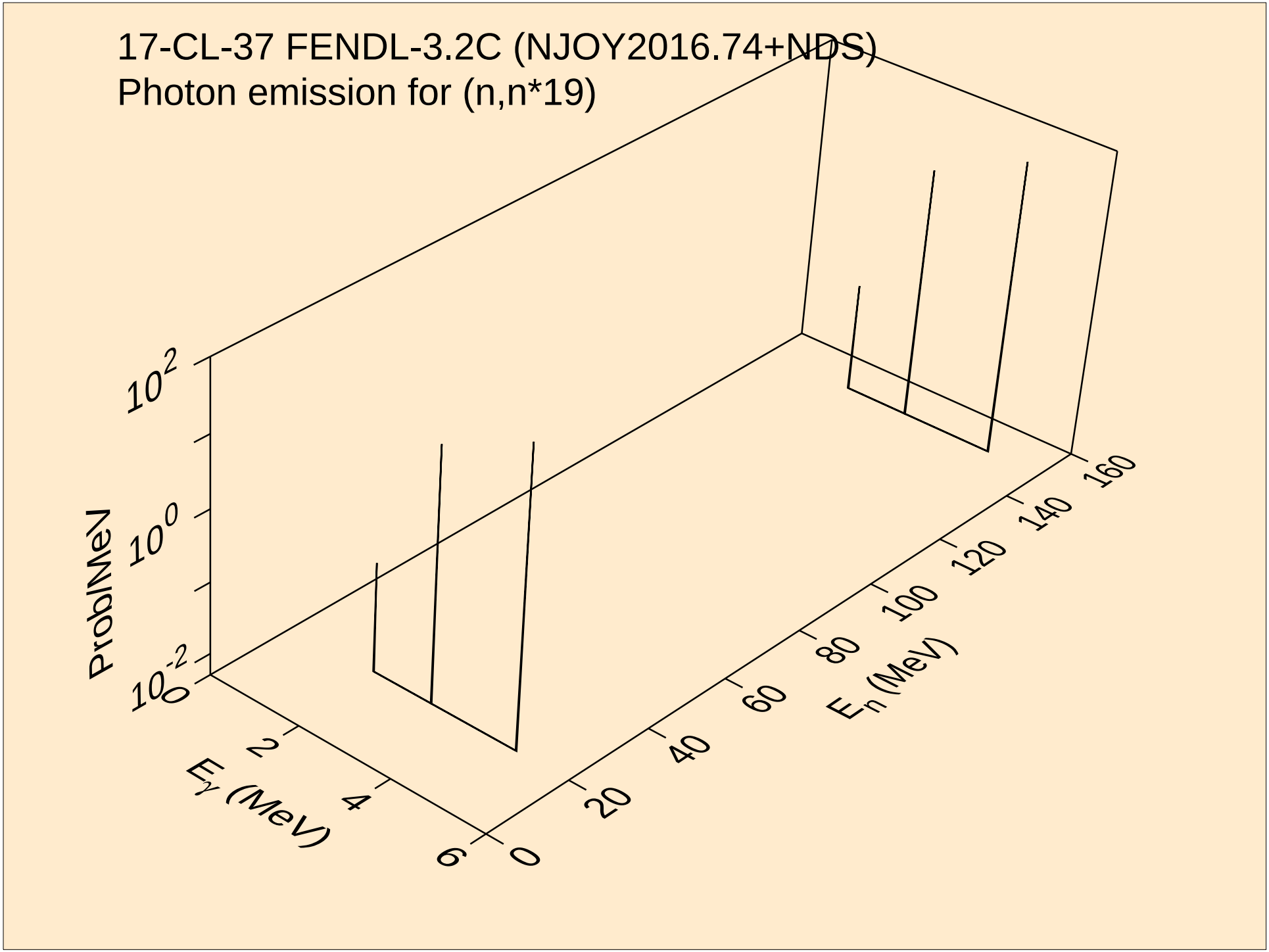

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*15)
Prob/MeV
10^2
10^0
4.0
4.5
5.0
5.5
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

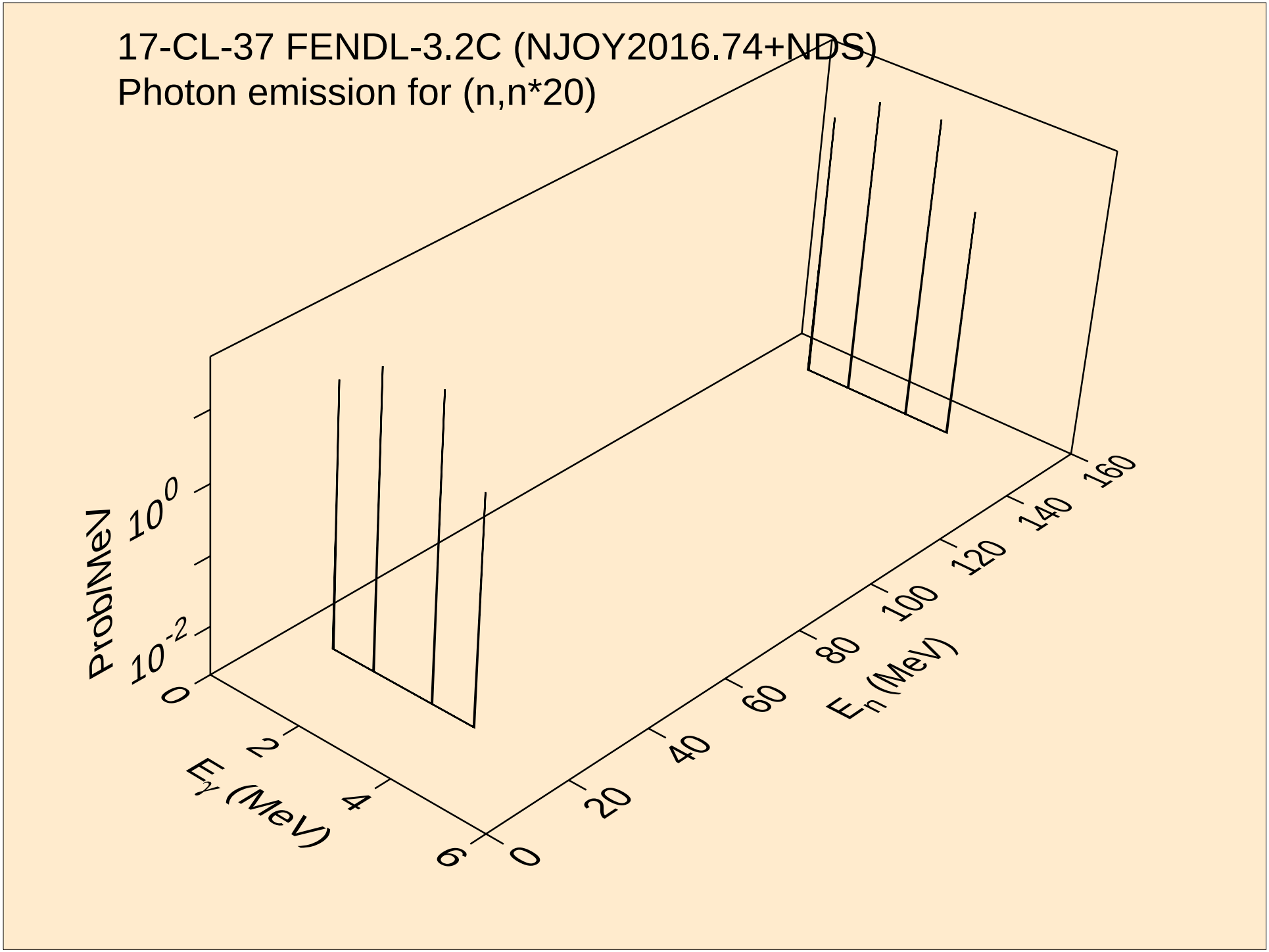

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*16)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

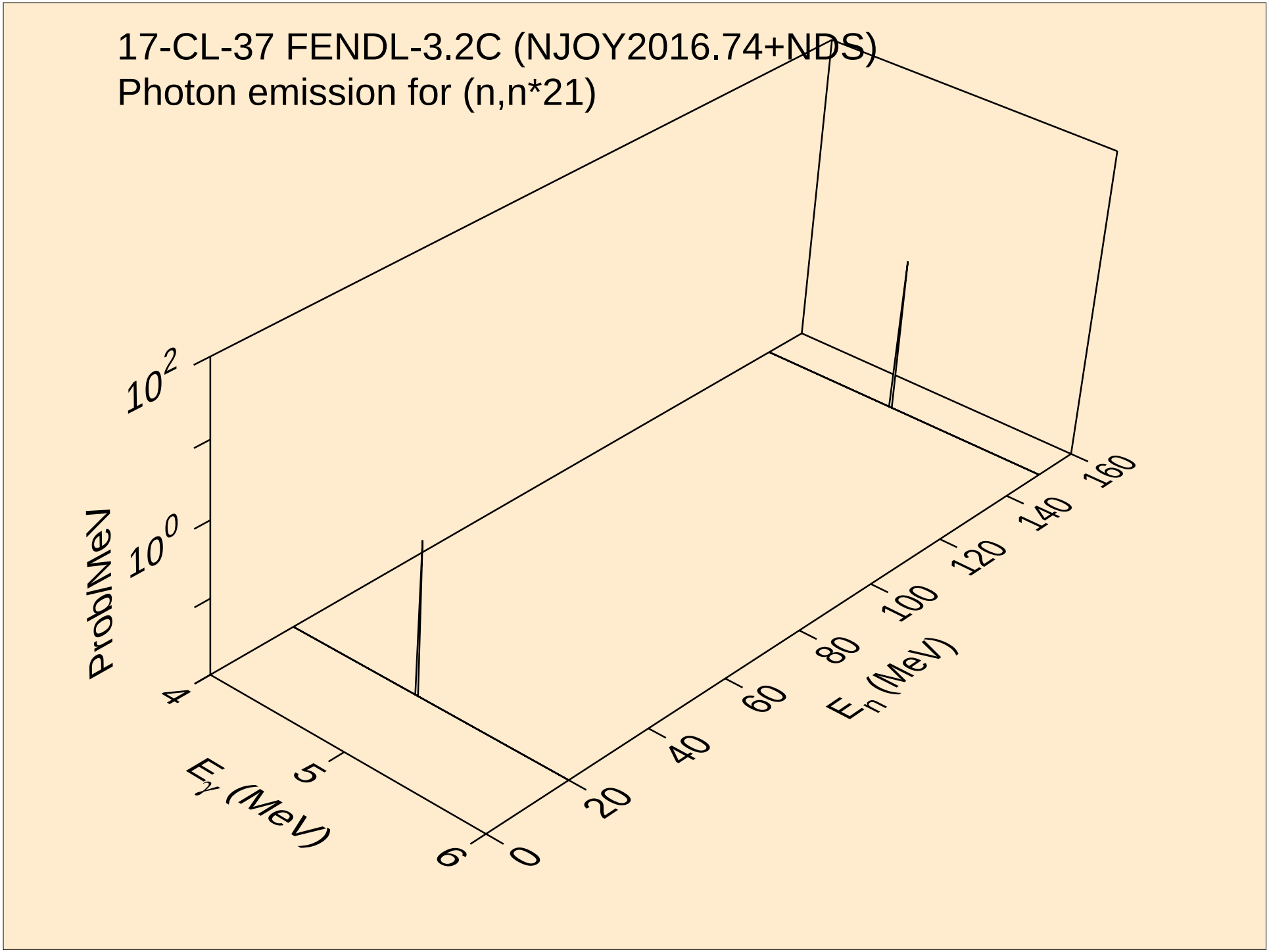
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*17)



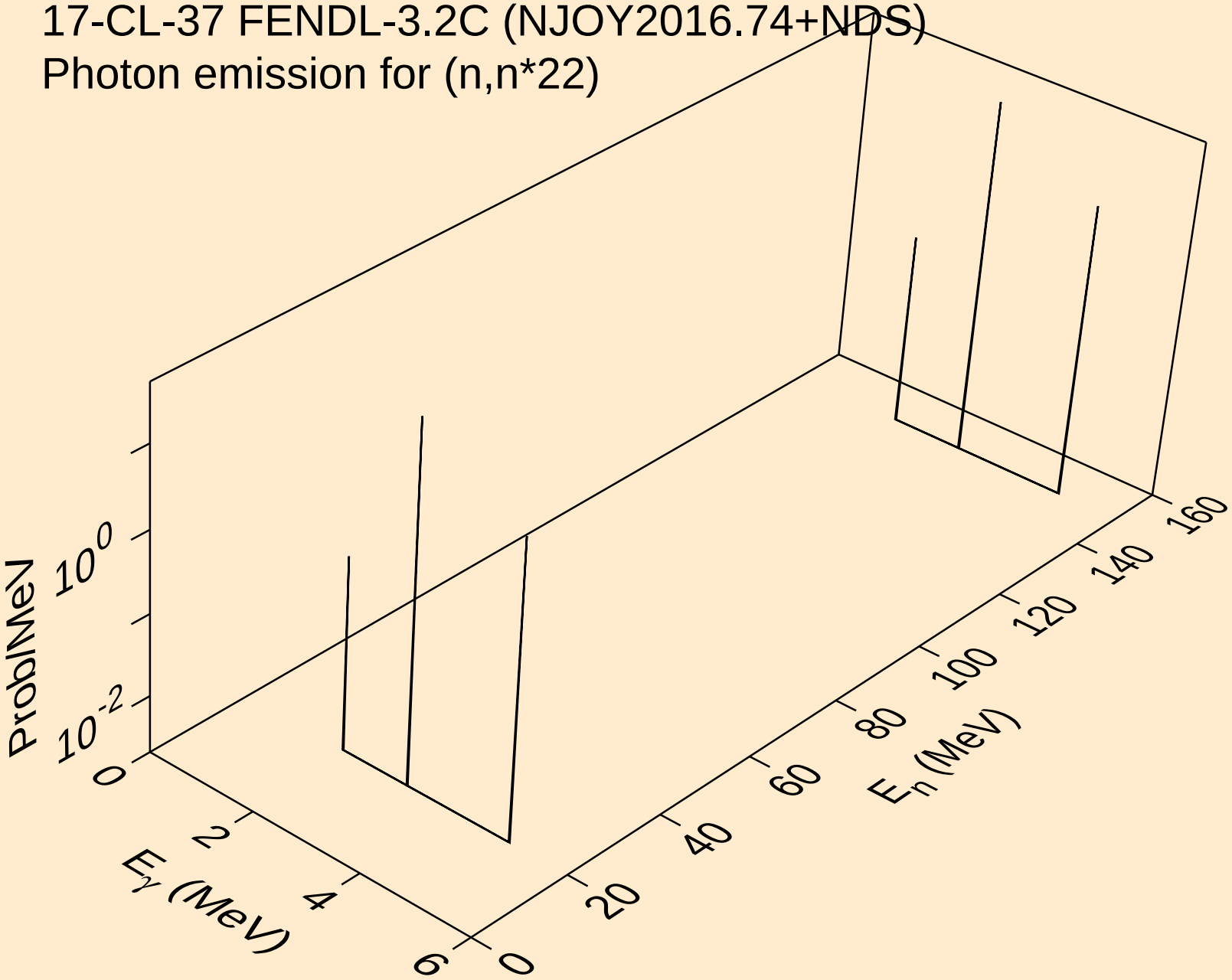

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*18)
Prob/MeV
10^{1}
10^{-1}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

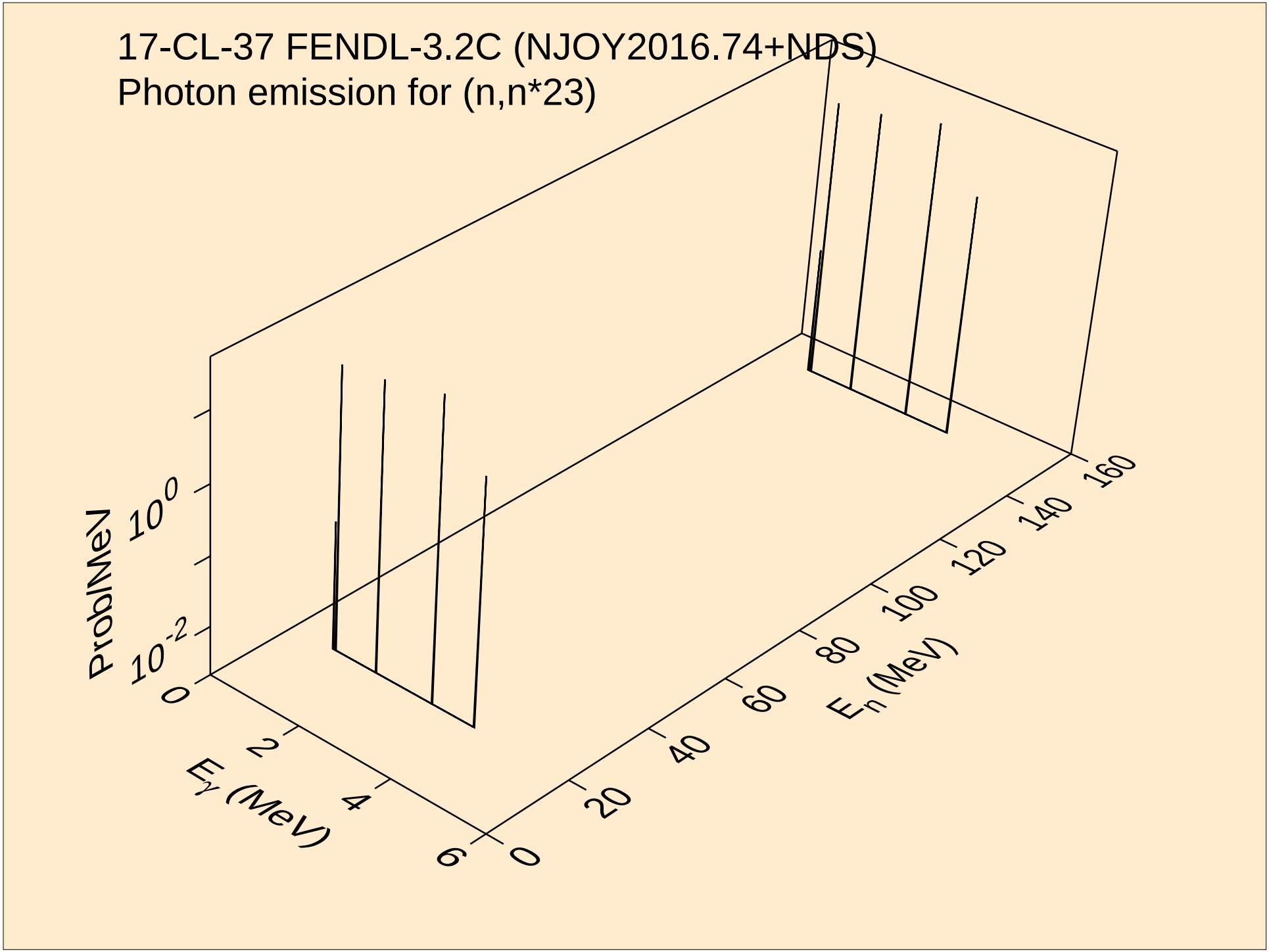

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*19)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
20
40
60
80
100
120
140
160

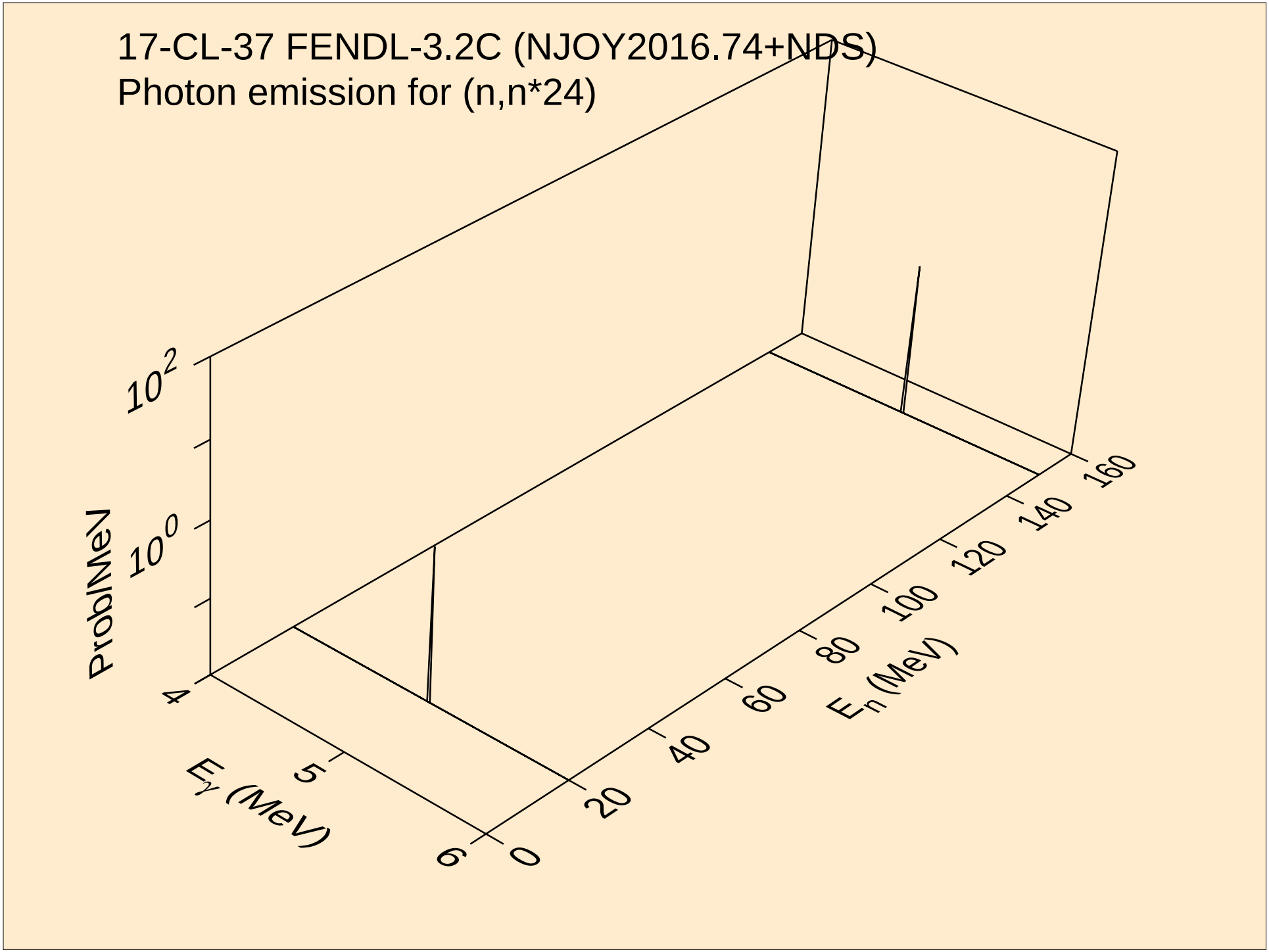

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*20)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

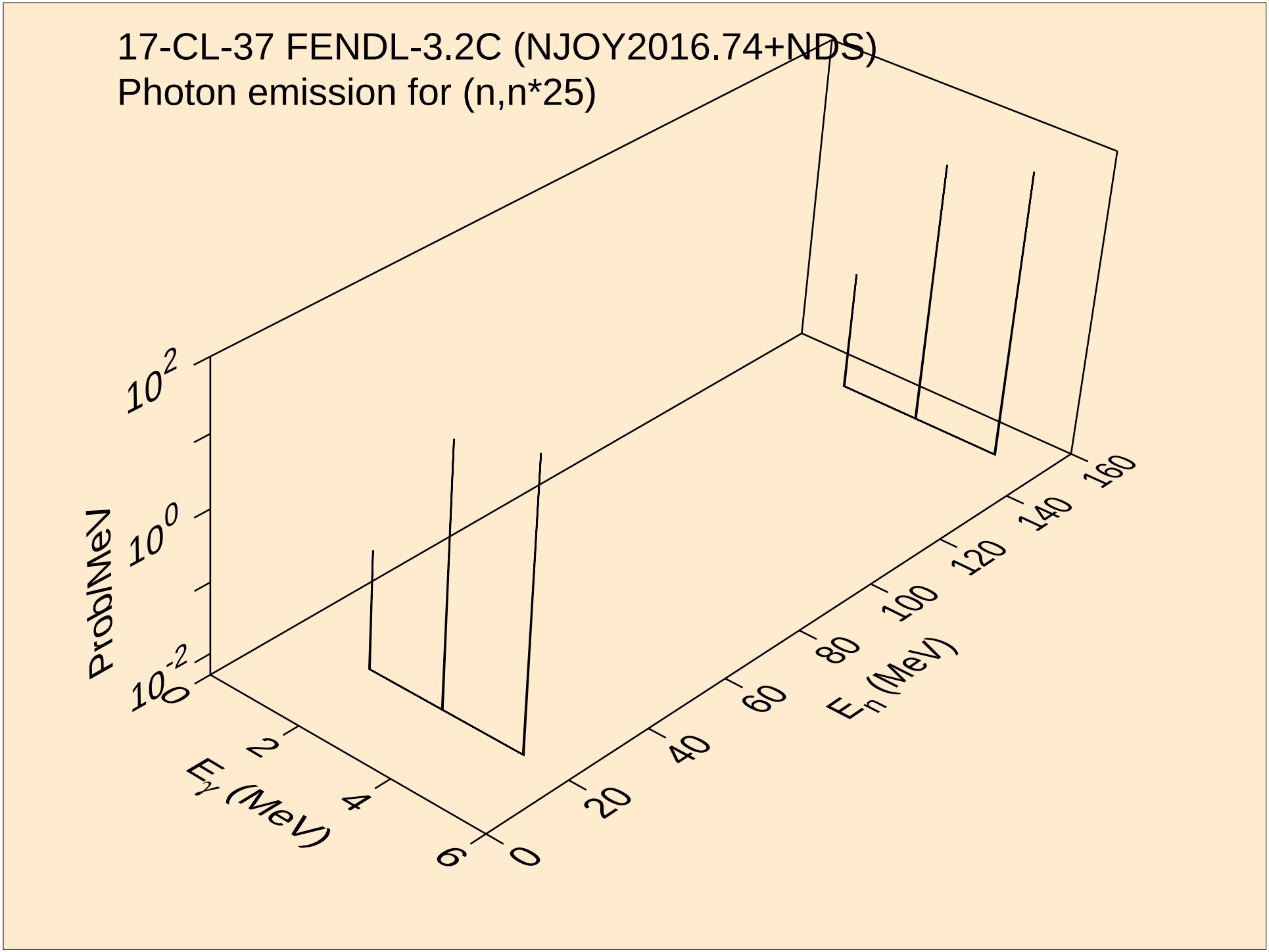

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*21)
Prob/MeV
10^2
10^0
4
5
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

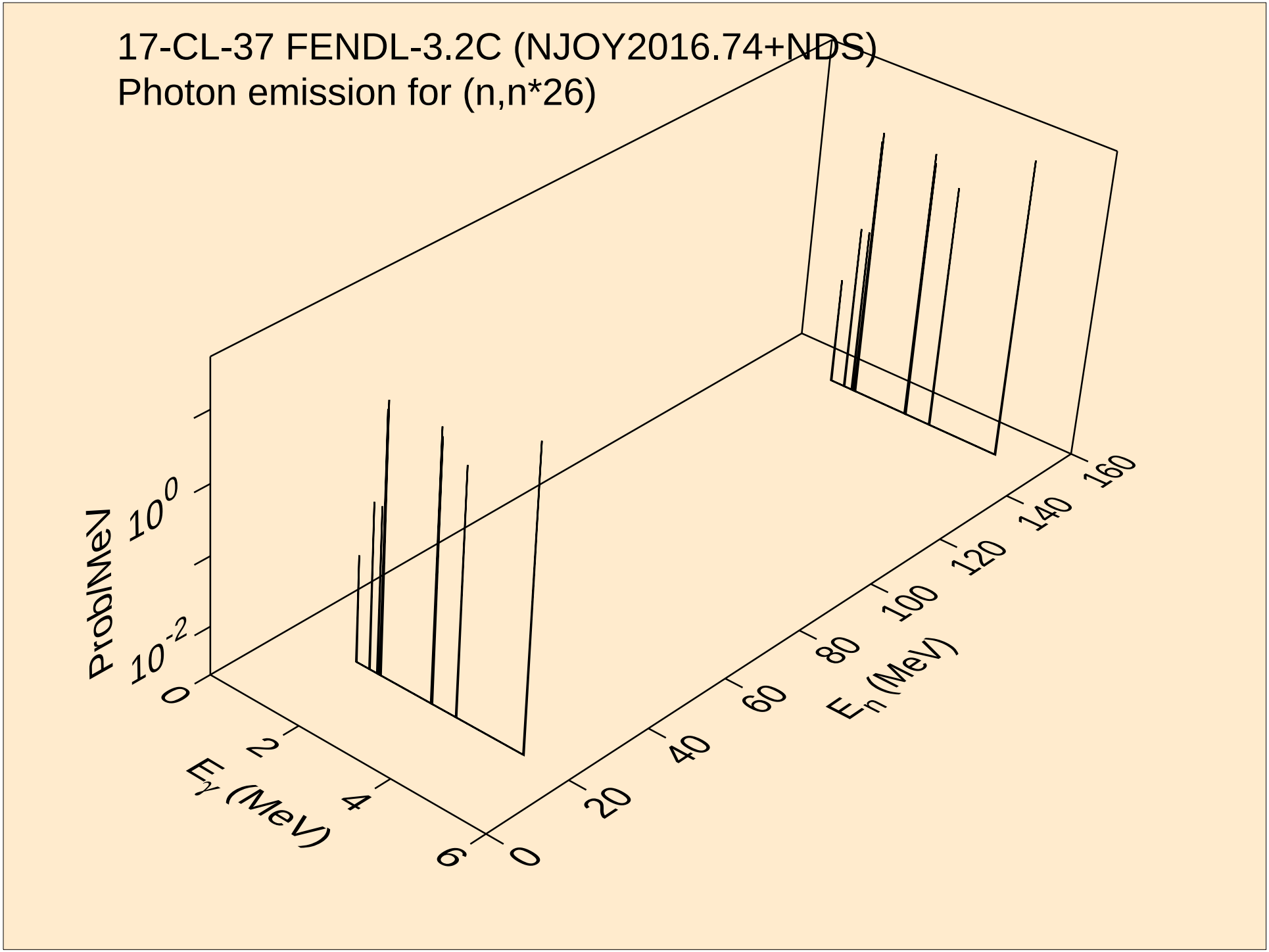
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*22)

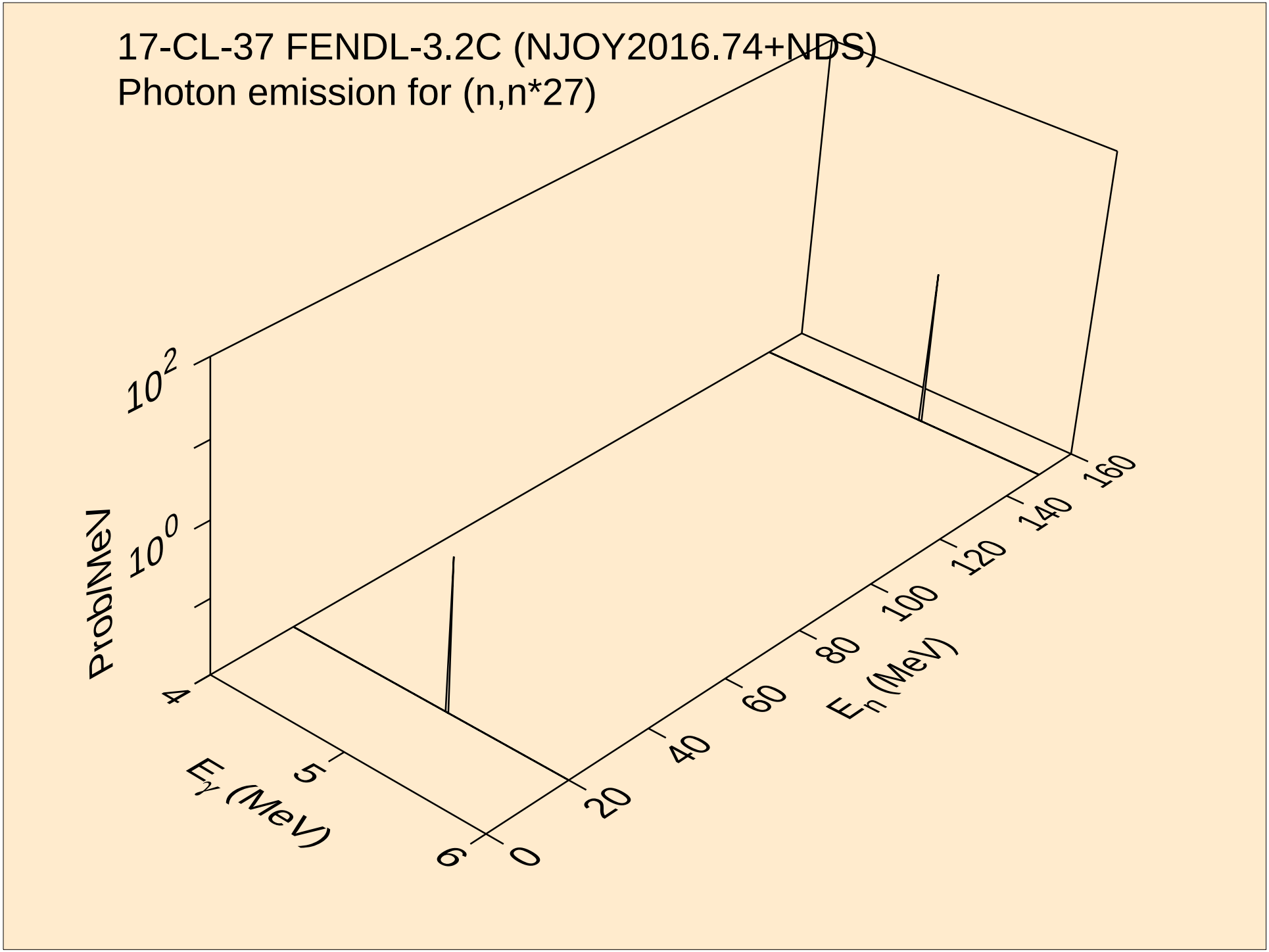


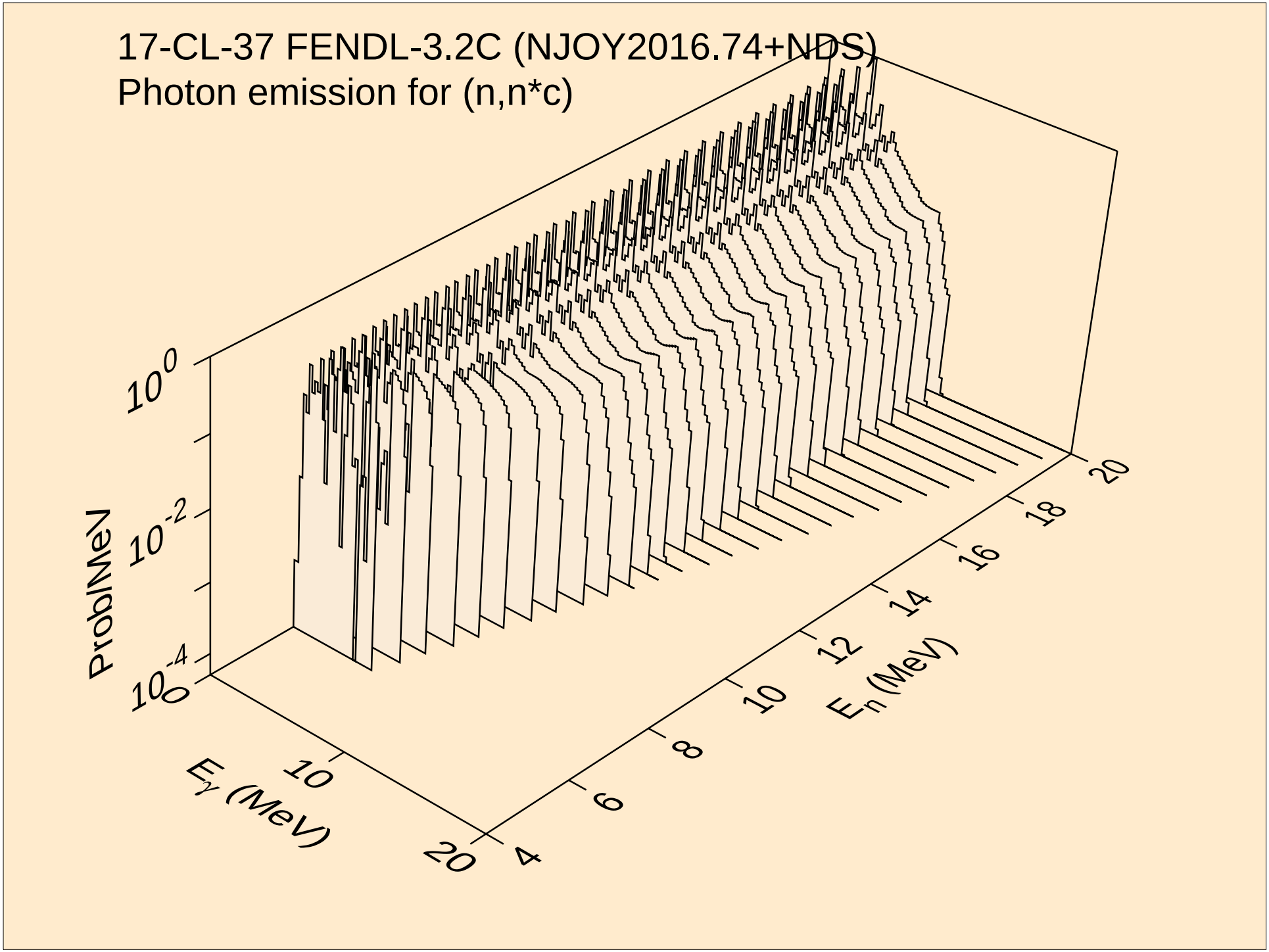

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*23)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

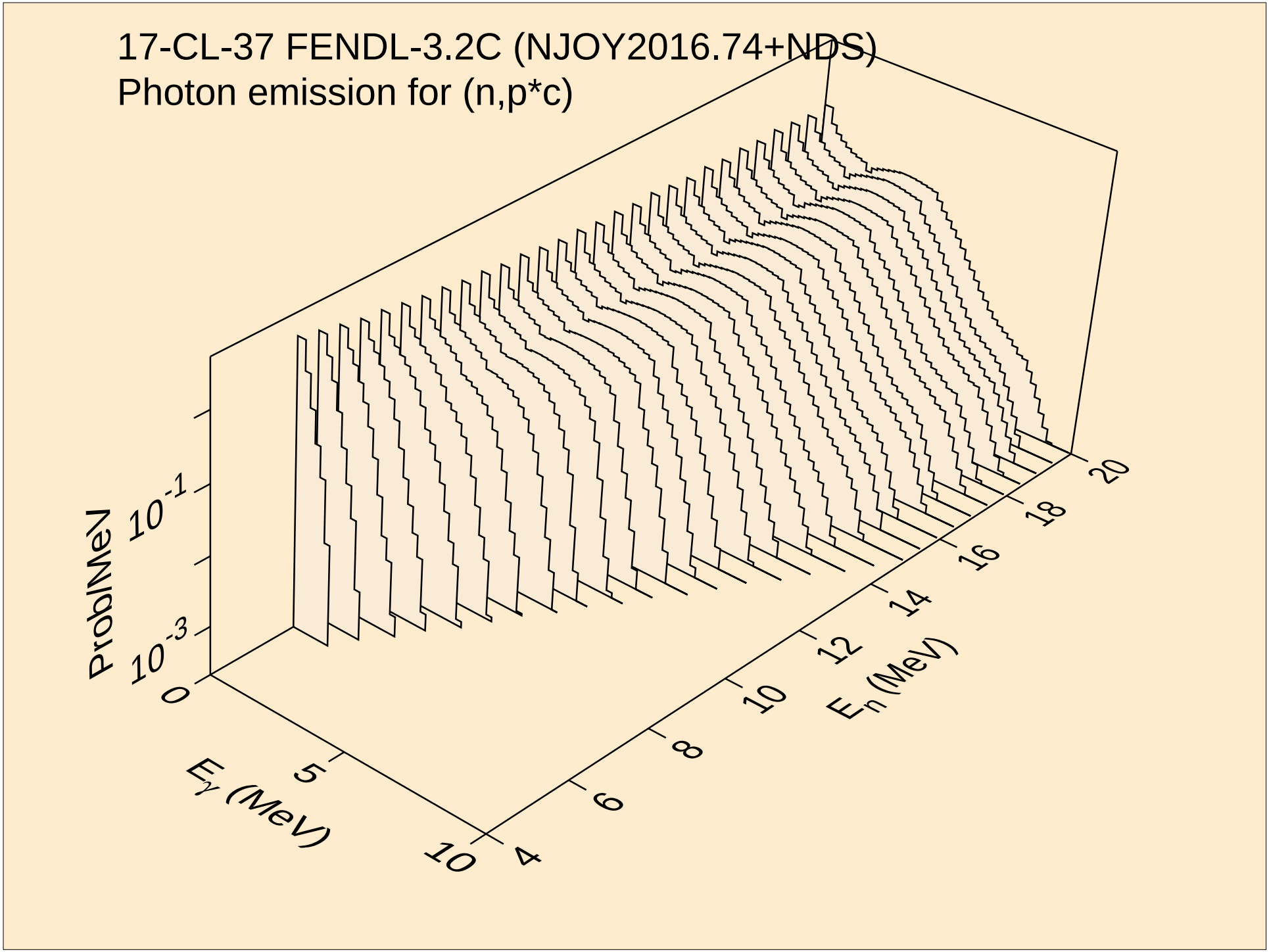

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*24)
Prob/MeV
10^2
10^0
4
5
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

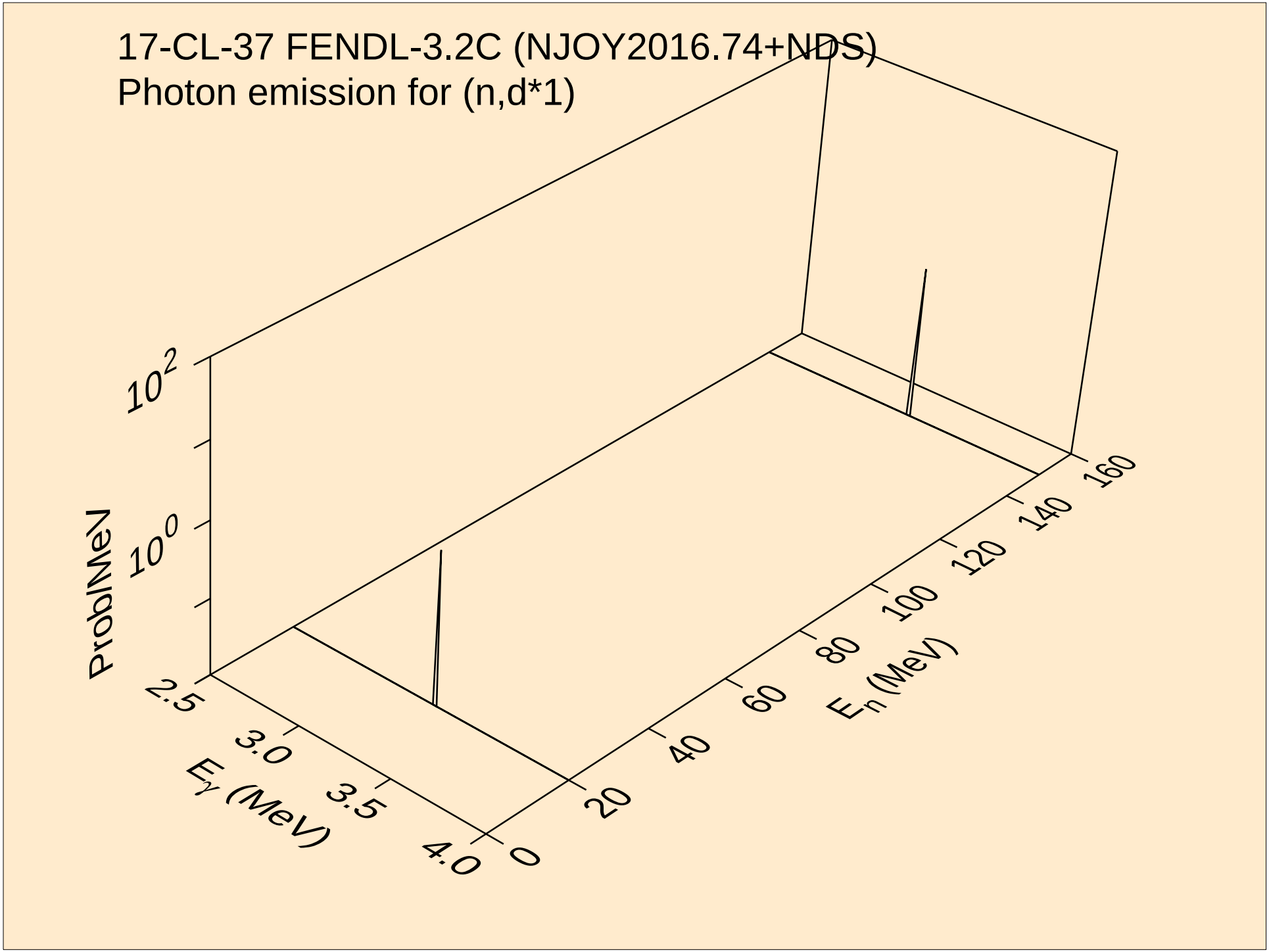

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*25)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
20
40
60
80
100
120
140
160

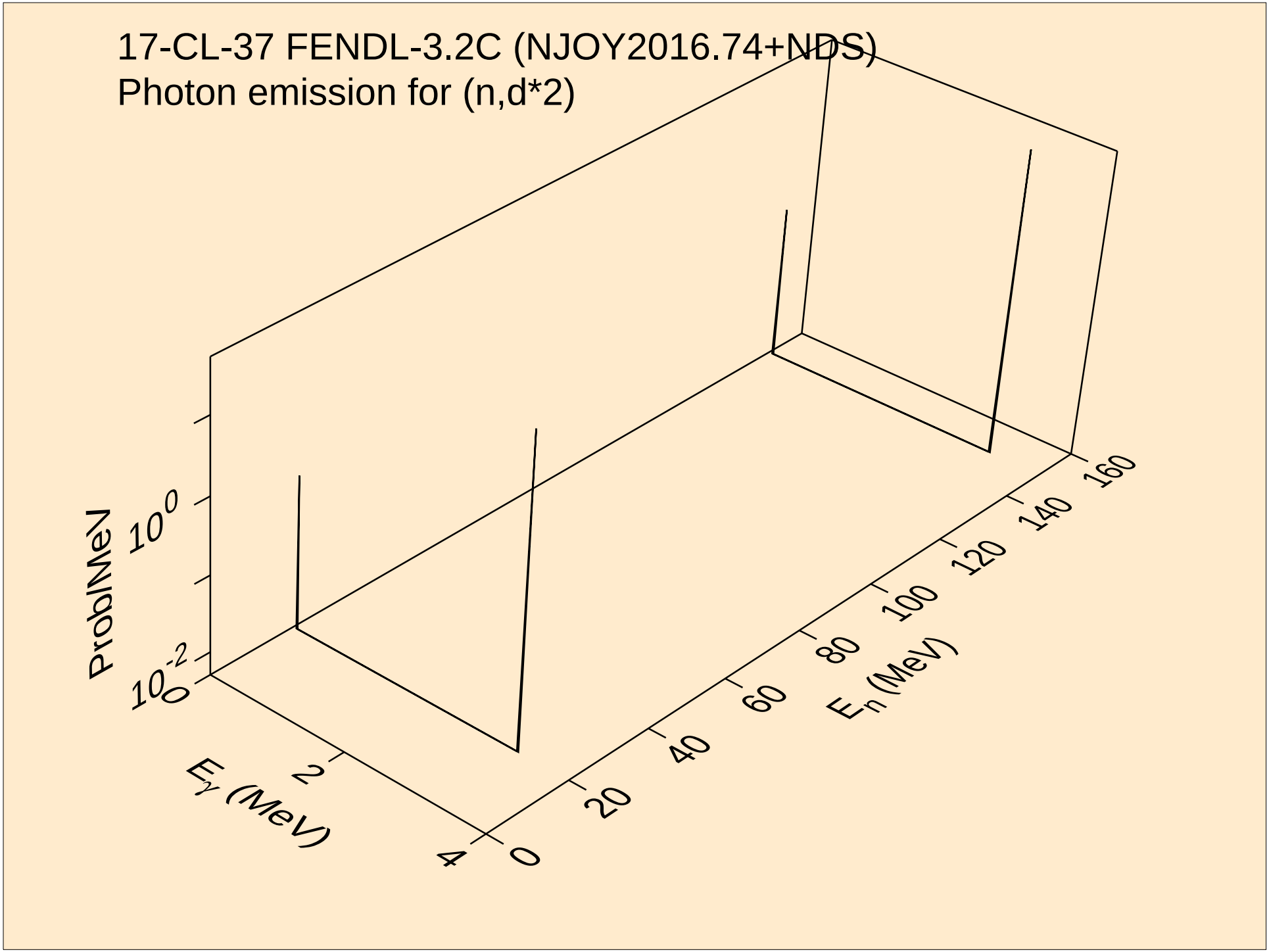

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*26)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

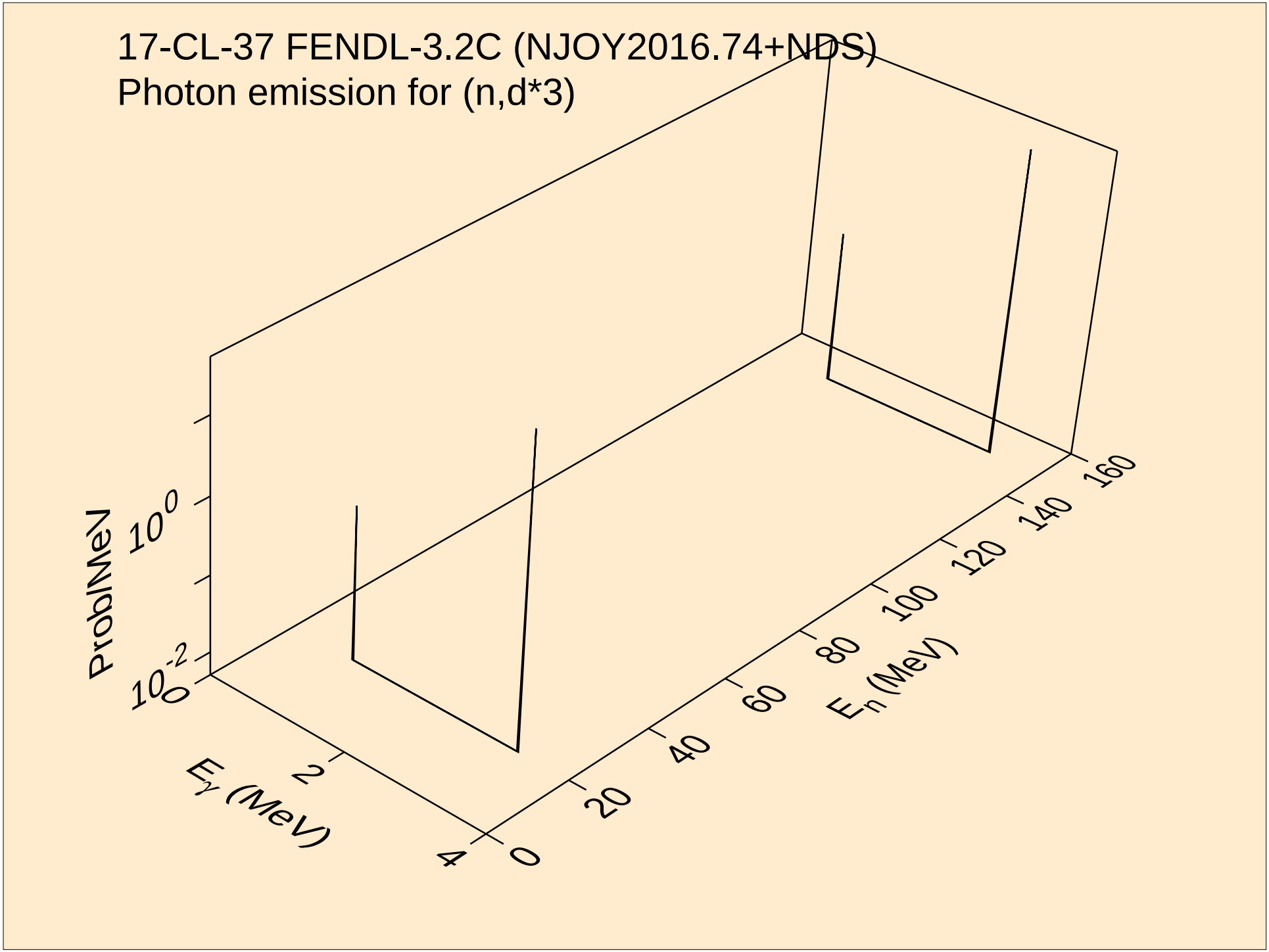

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*27)
Prob/MeV
10^2
10^0
4
5
6
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

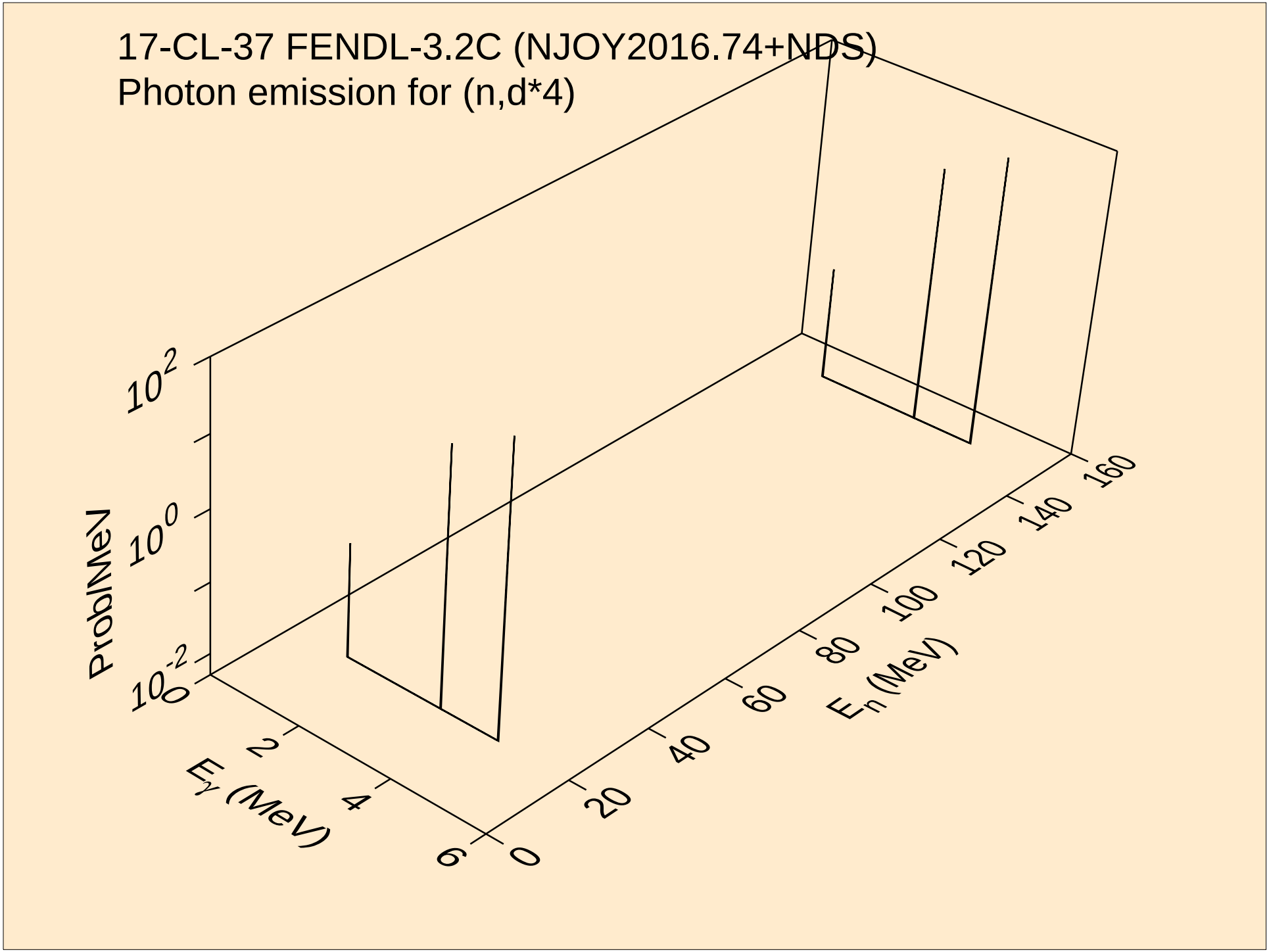

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,n*c)
Prob/MeV
10^0
10^{-2}
10^{-4}
0
10
20
E_γ (MeV)
4
6
8
10
12
14
16
18
20
E_n (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,p*c)
Prob/MeV
10^{-1}
10^{-3}
0
5
10
E_γ (MeV)
4
6
8
10
12
14
16
18
20
E_n (MeV)

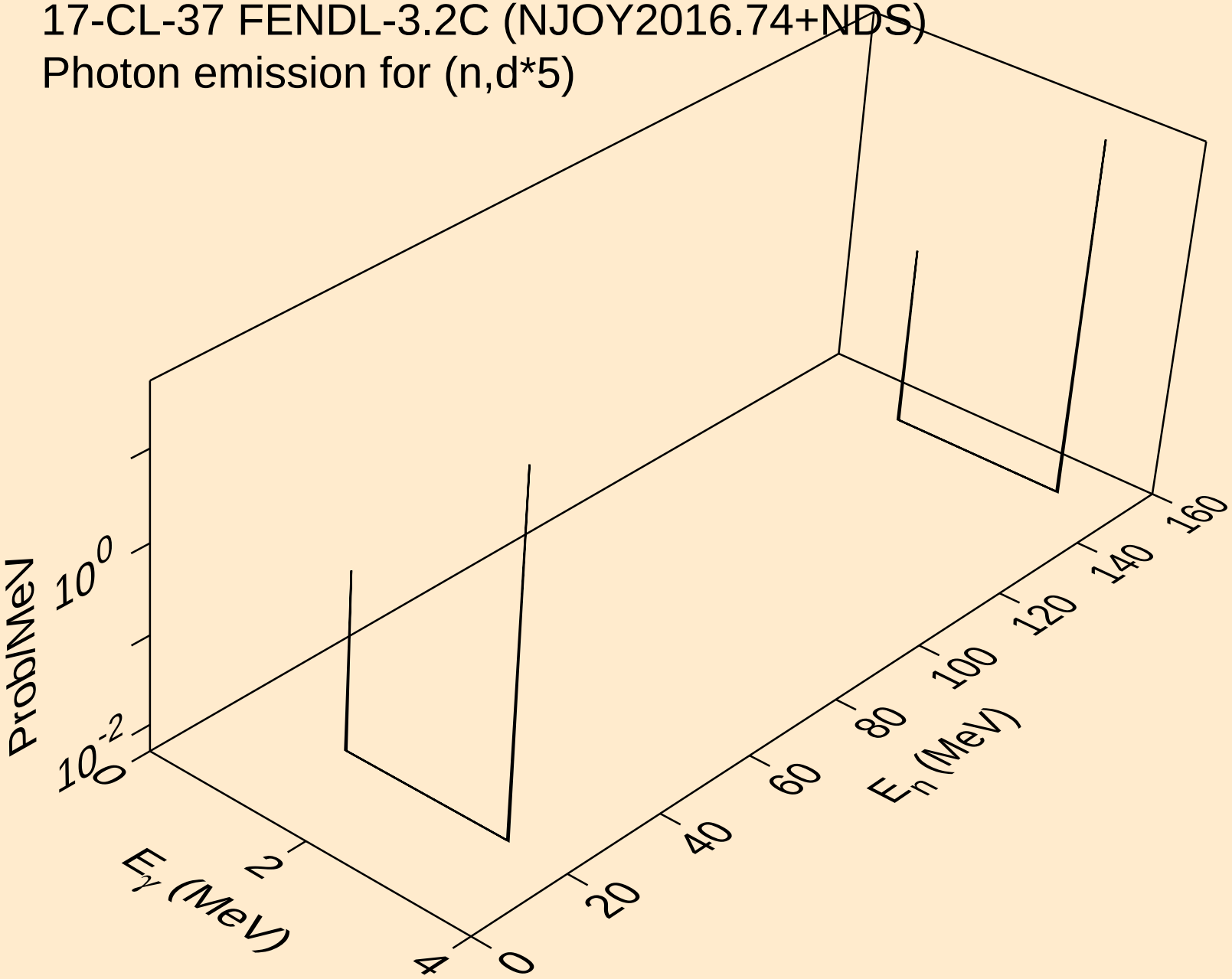

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*1)
Prob/MeV
10^2
10^0
2.5
3.0
3.5
4.0
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

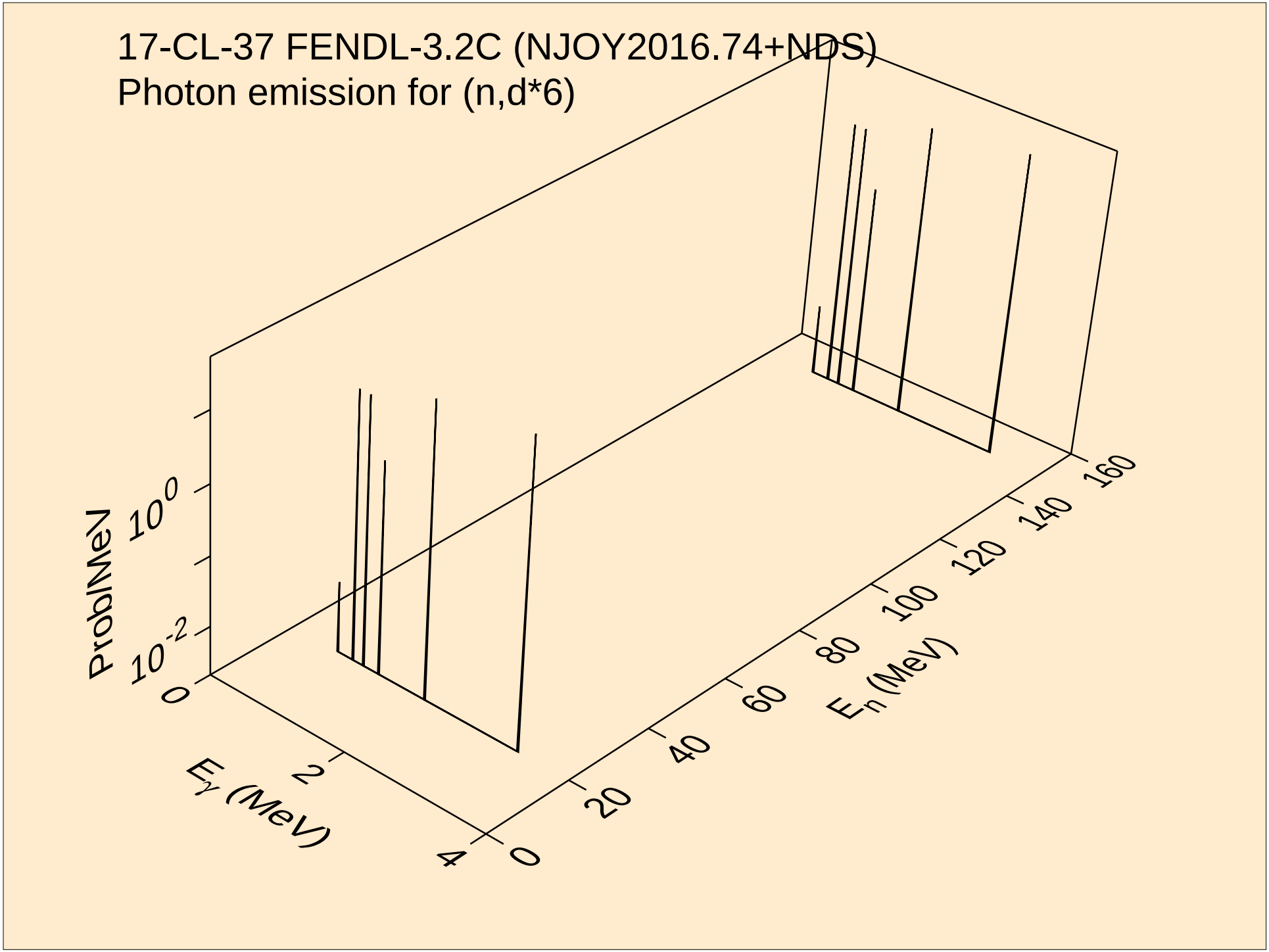

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*2)
Prob/MeV
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*3)
Prob/MeV
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

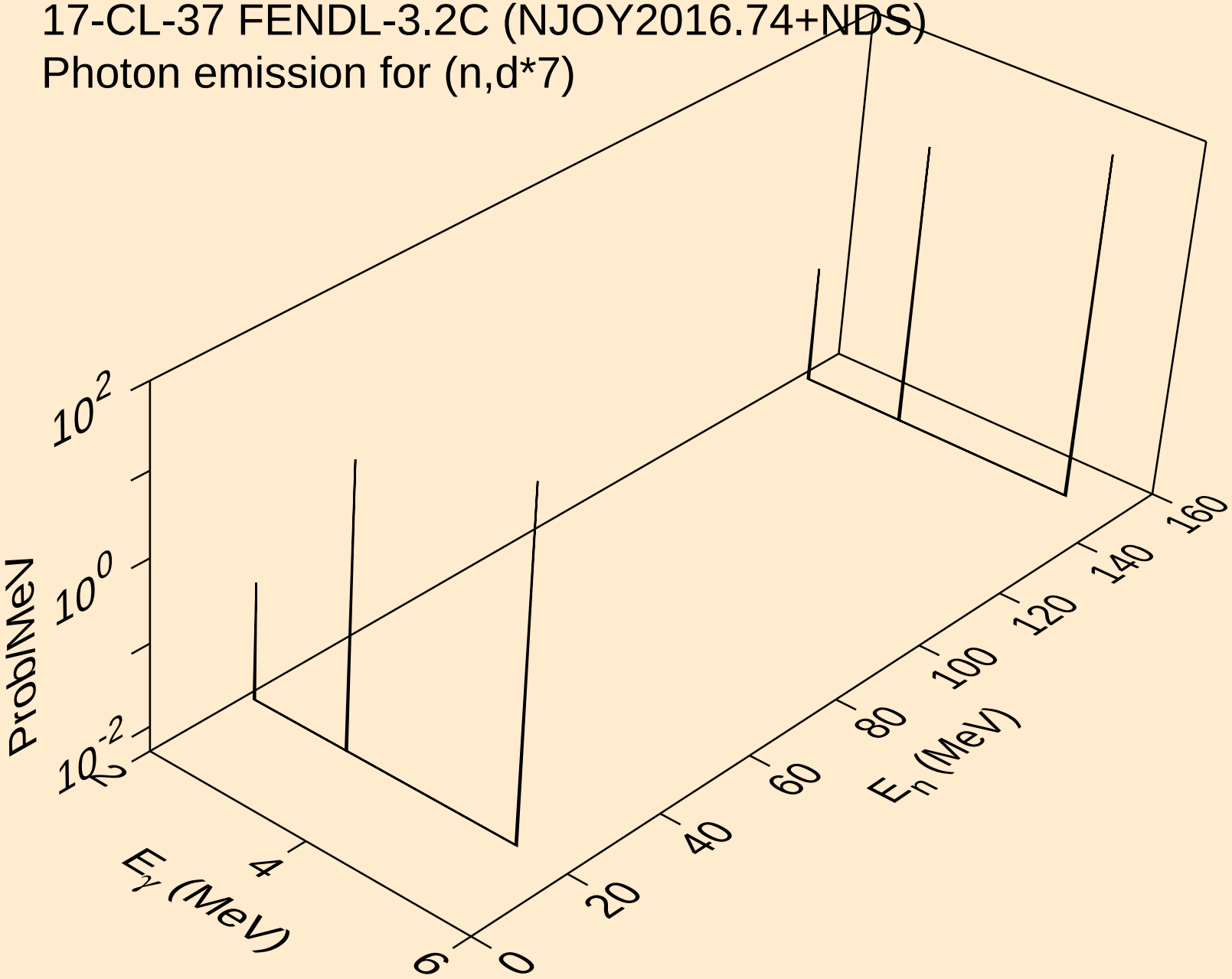

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*4)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
20
40
60
80
100
120
140
160

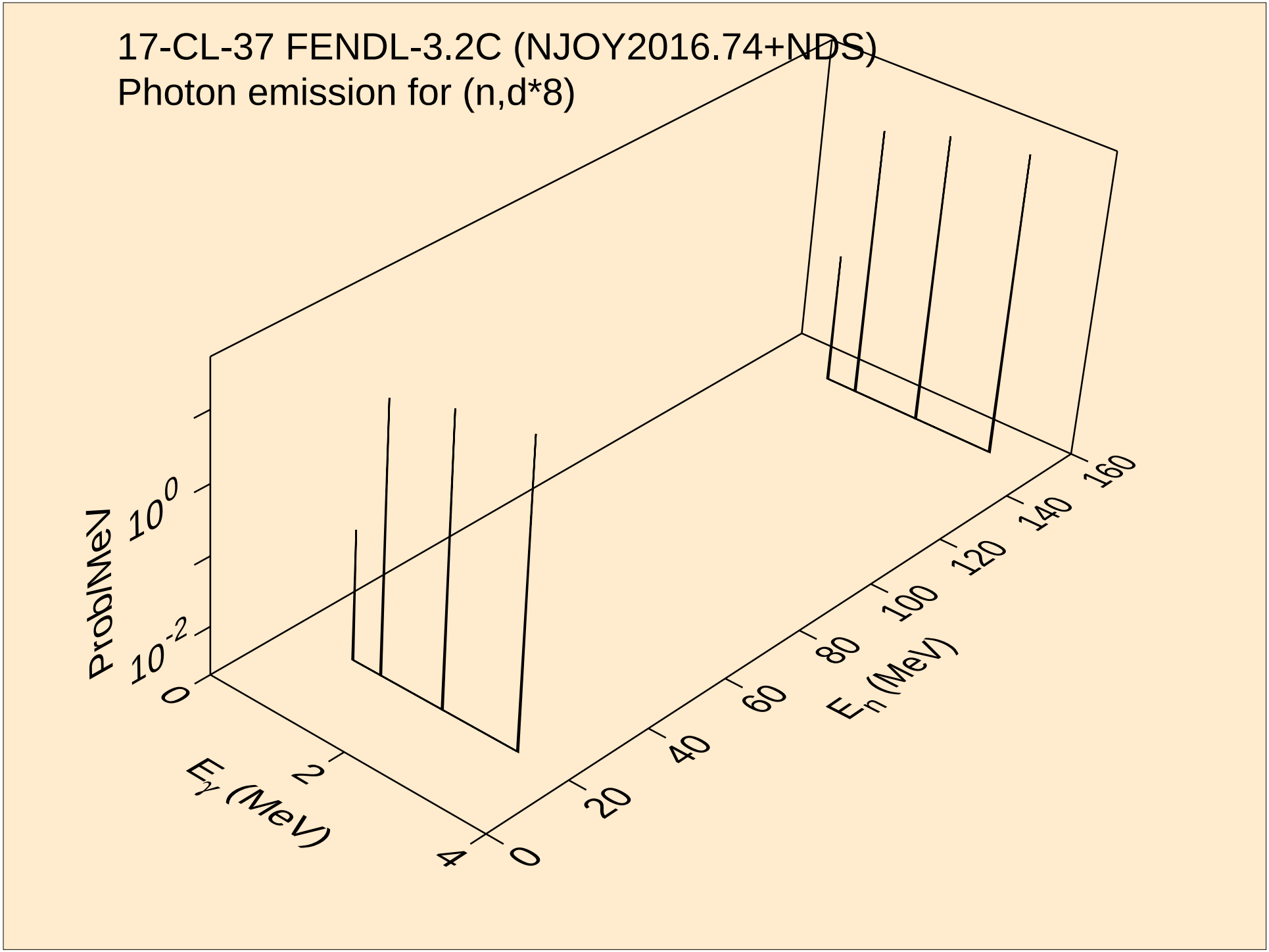
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*5)

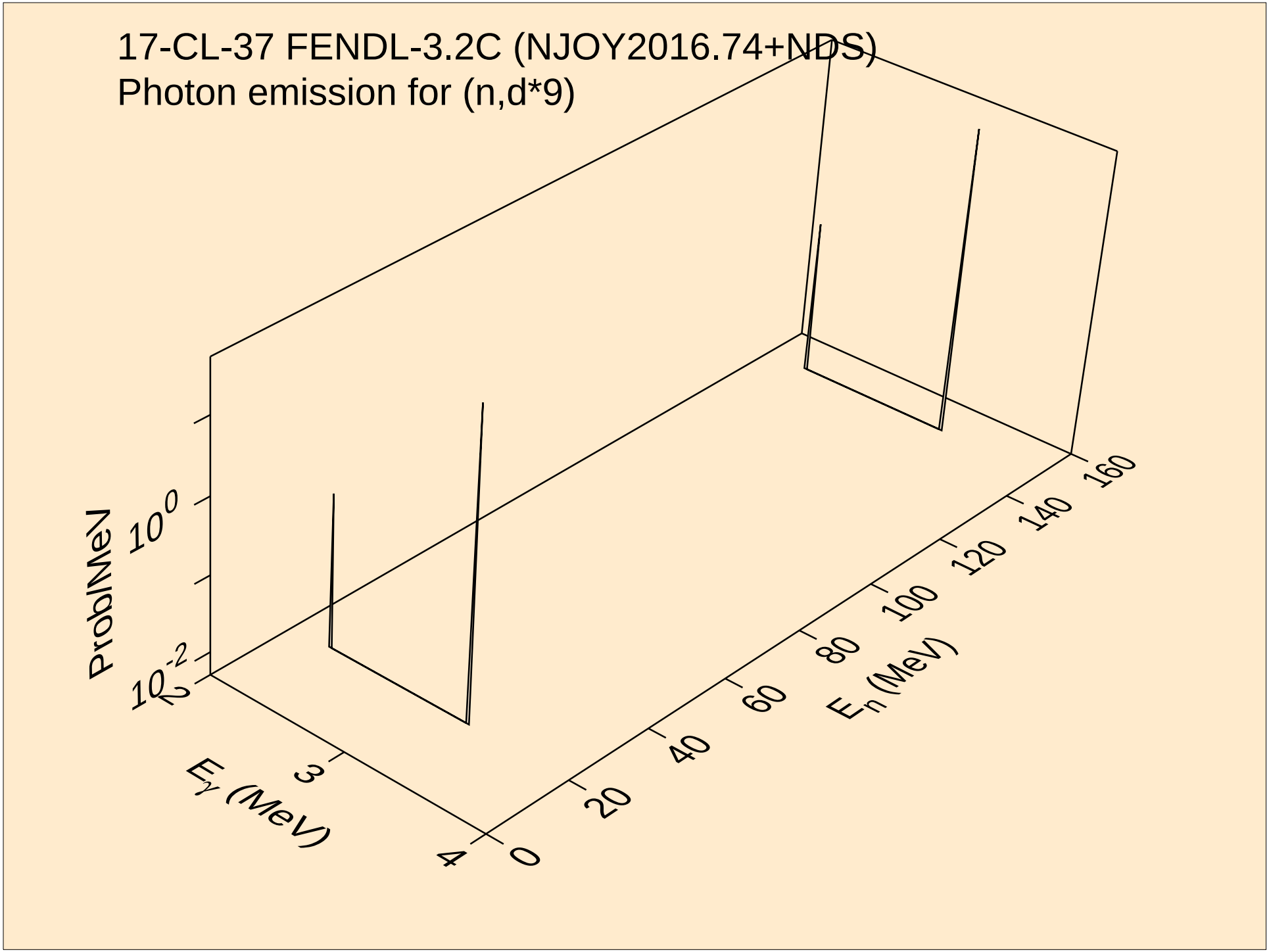


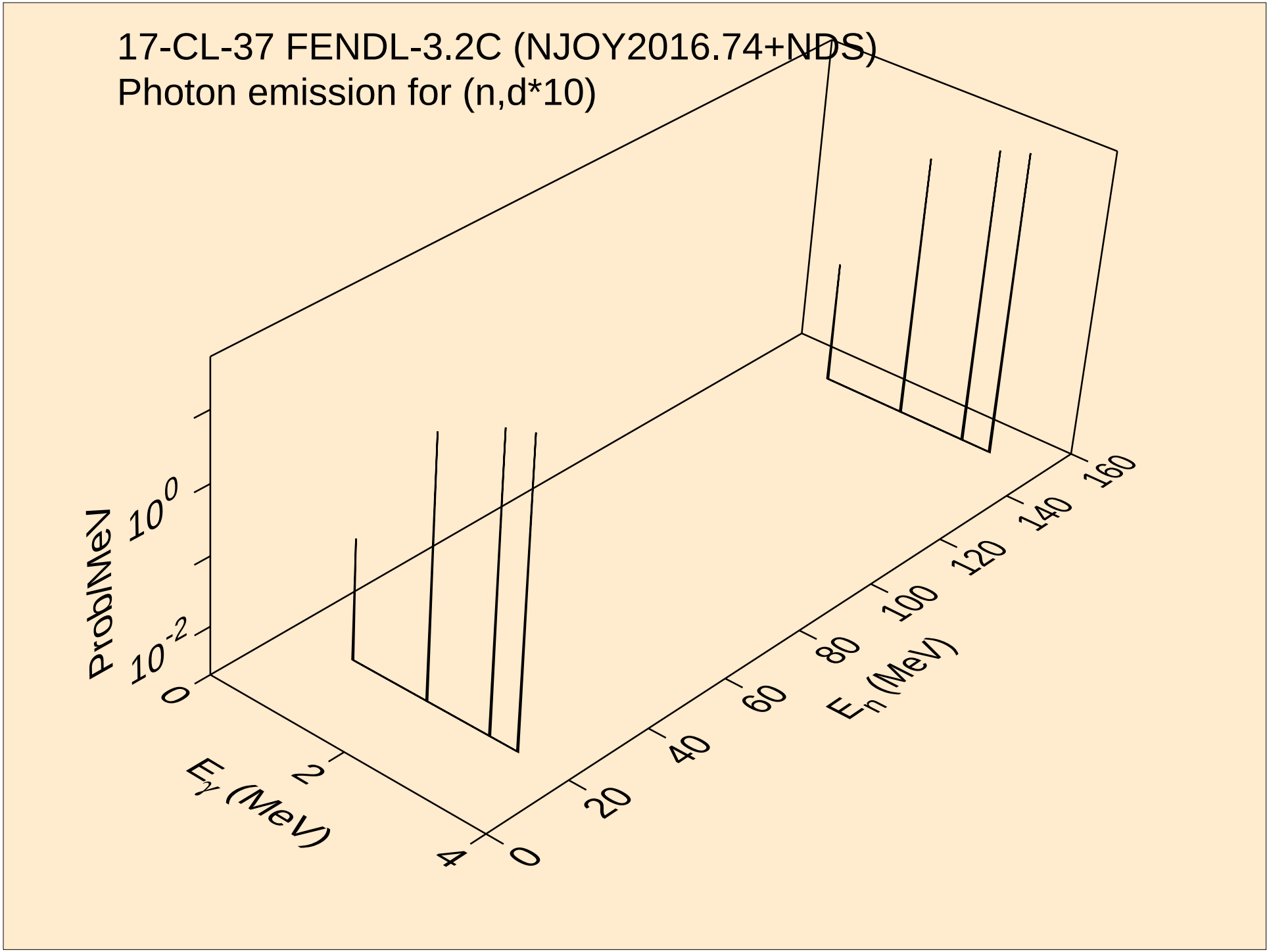

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*6)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

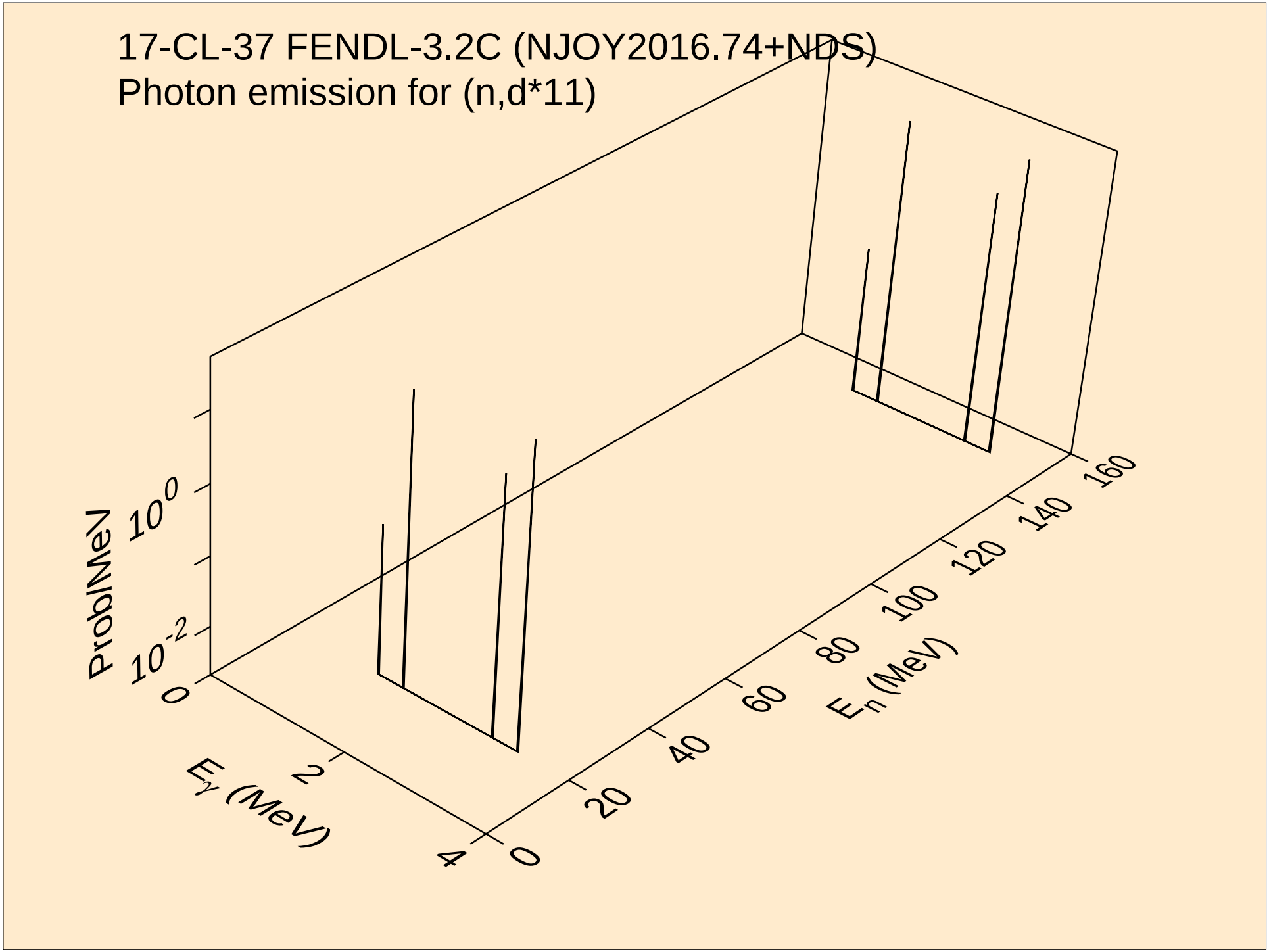
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*7)

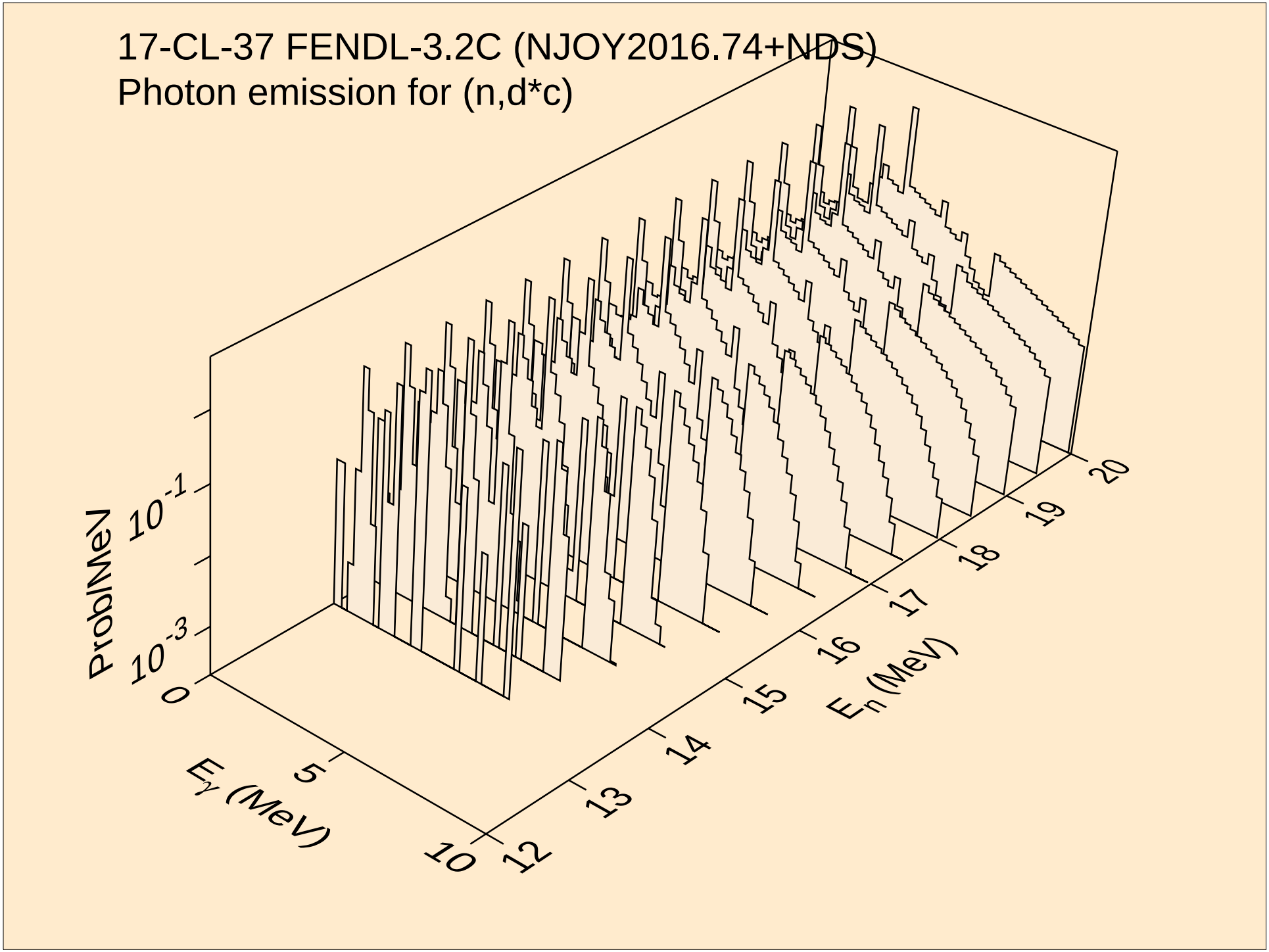



17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*8)
Prob/MeV
10^{0}
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

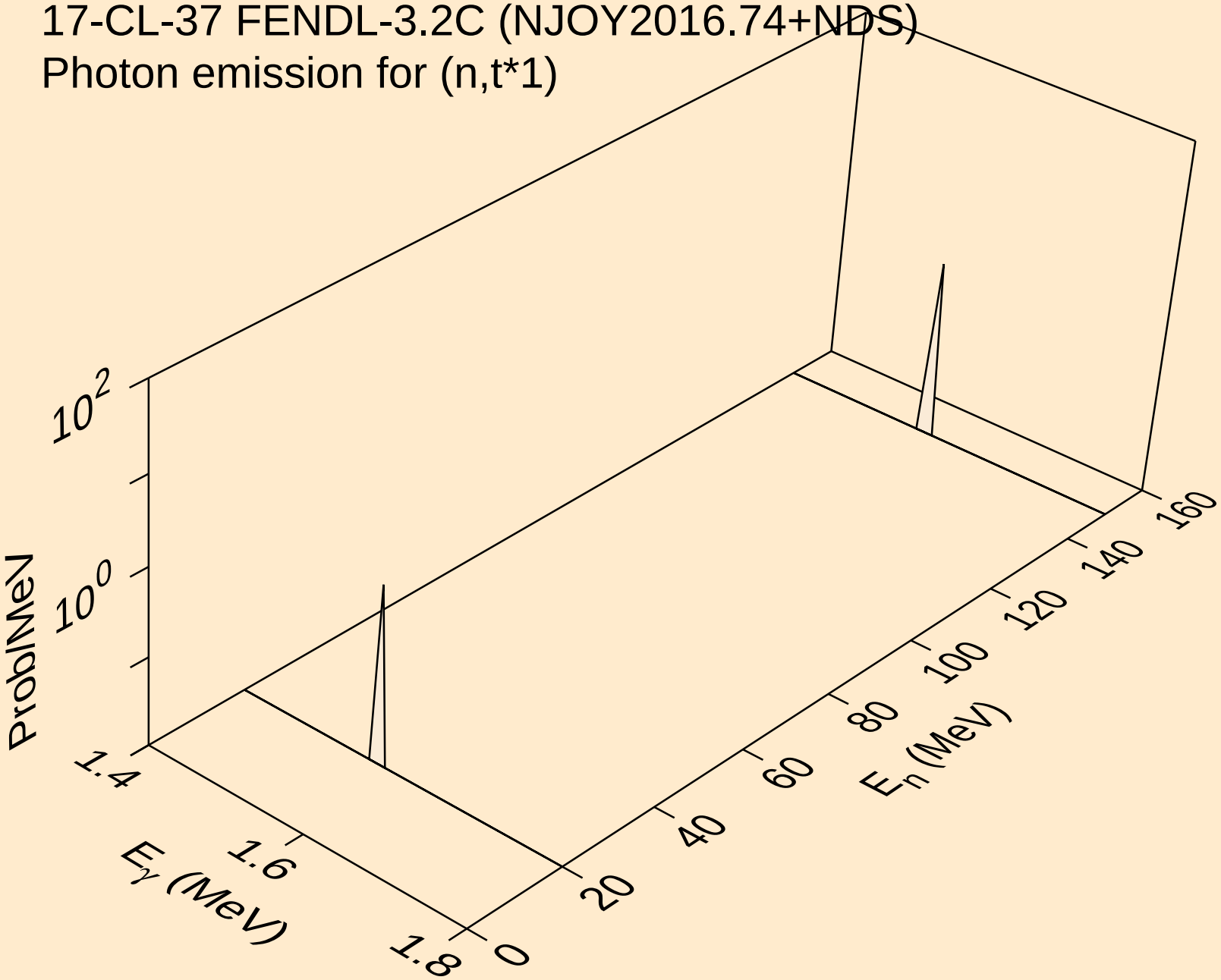

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*9)
Prob/MeV
10^{0}
10^{-2}
E_γ (MeV)
2
3
4
E_n (MeV)
0
20
40
60
80
100
120
140
160


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*10)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

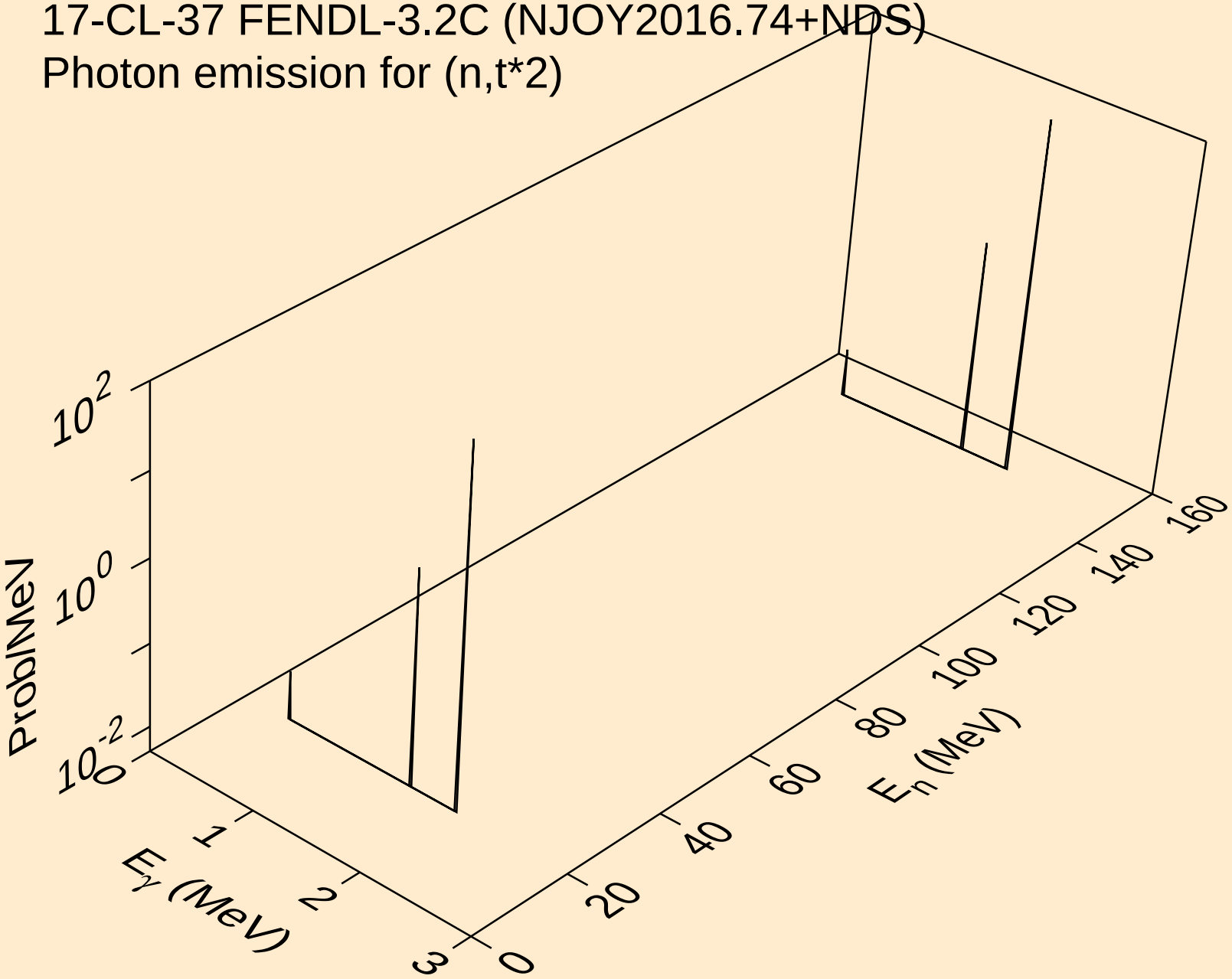

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*11)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

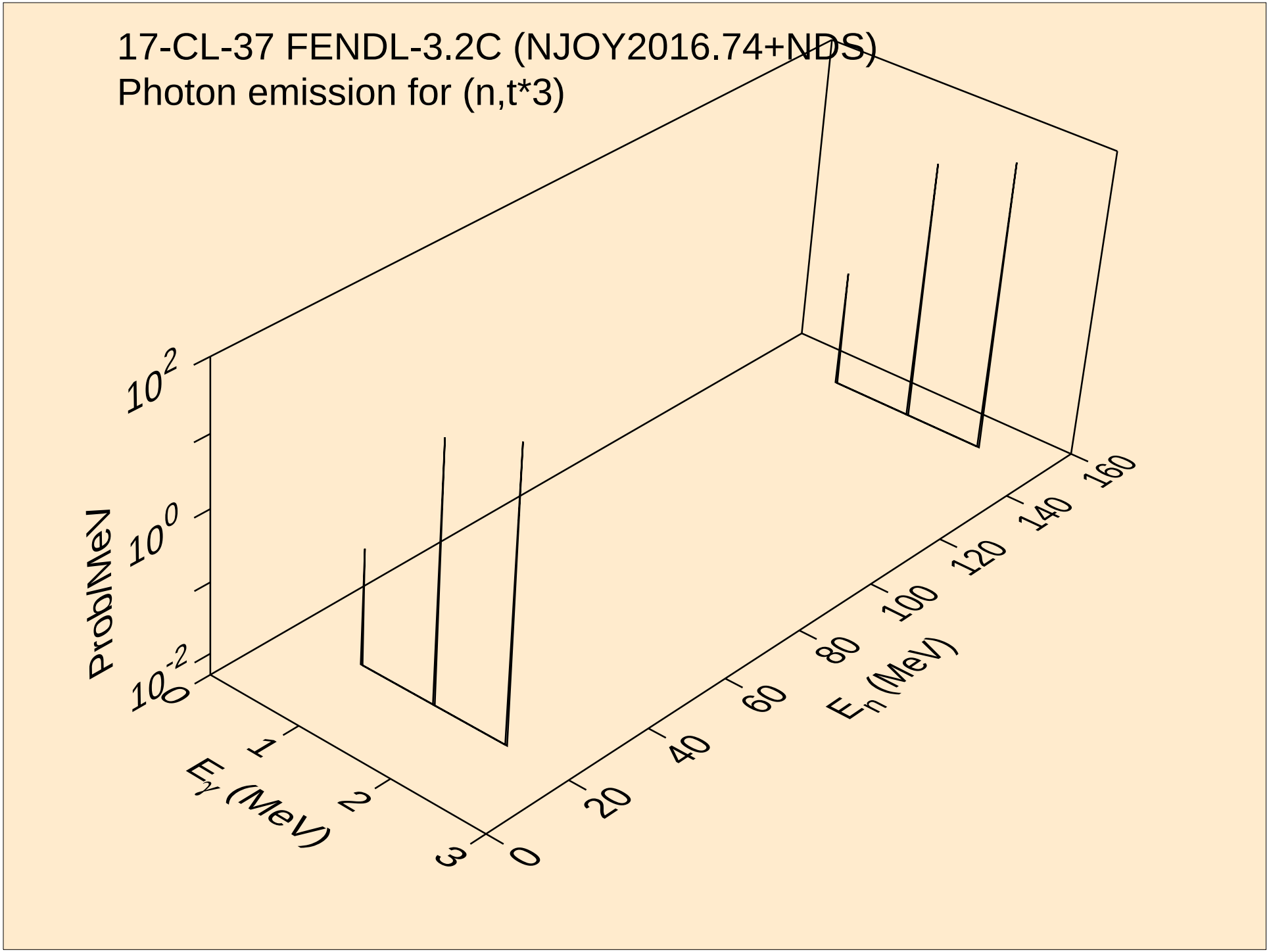

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,d*c)
Prob/MeV
10^-1
10^-3
0
5
10
E_γ (MeV)
12
13
14
15
16
17
18
19
20
E_n (MeV)

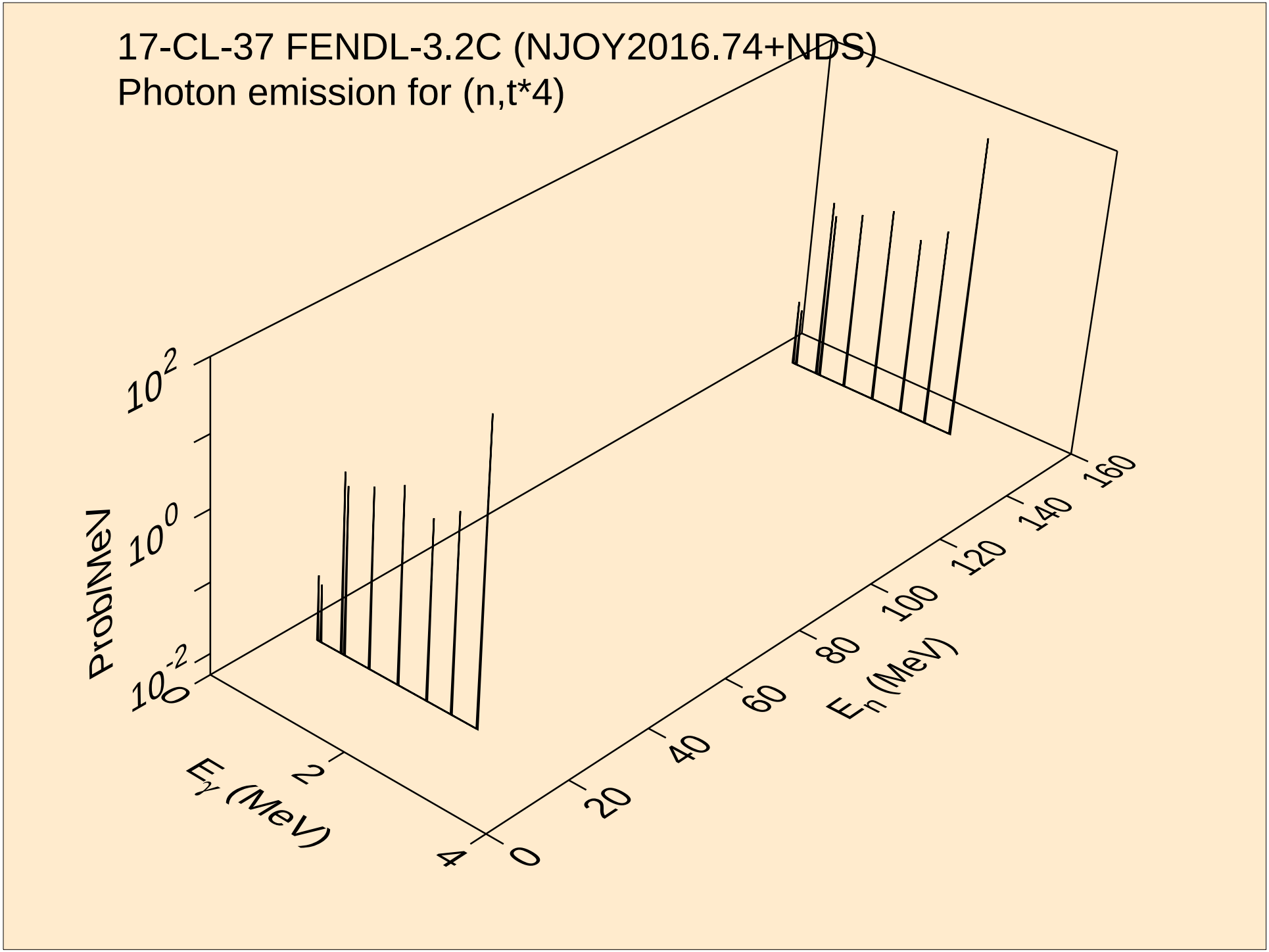
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*1)

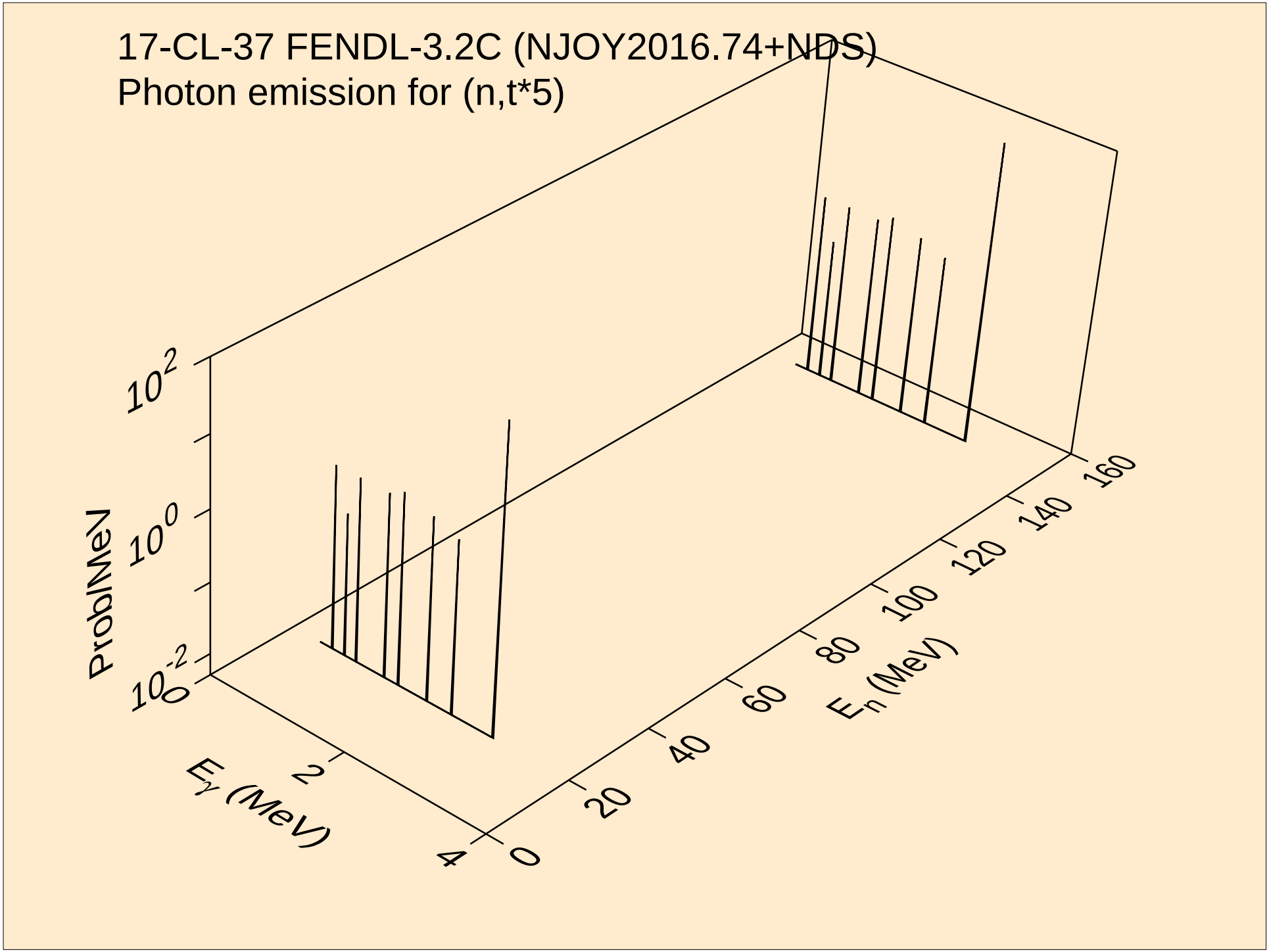


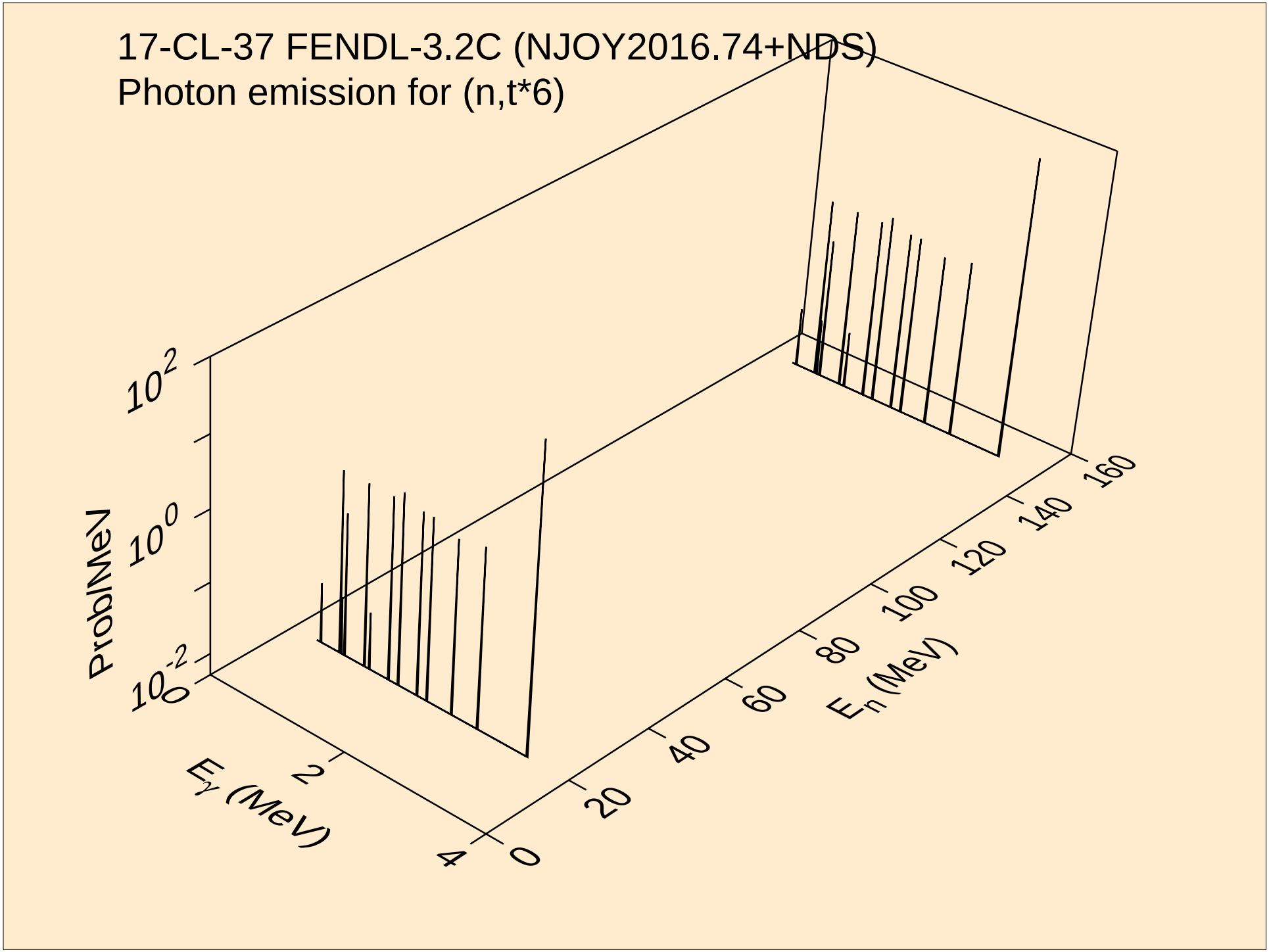
17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*2)

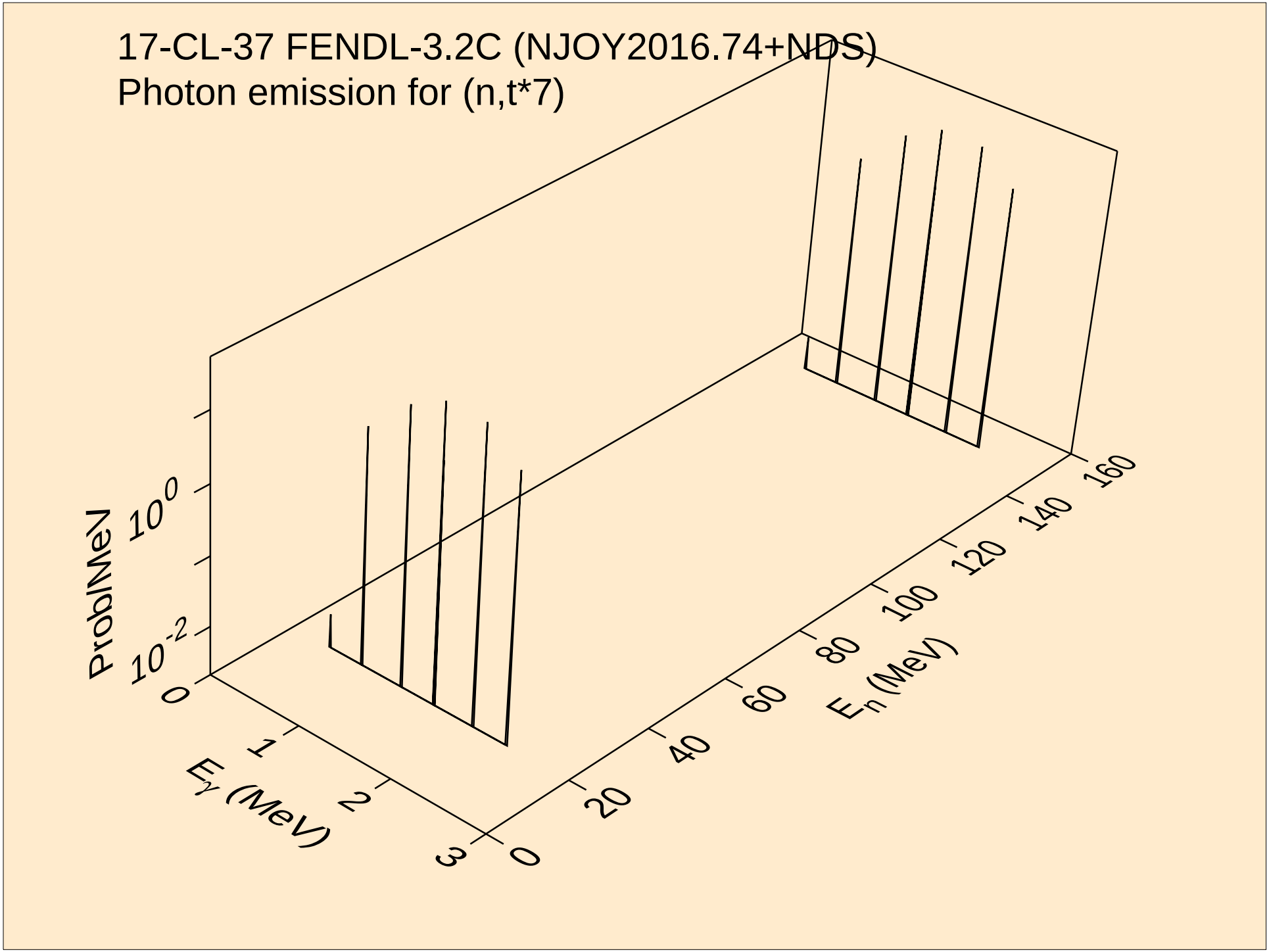


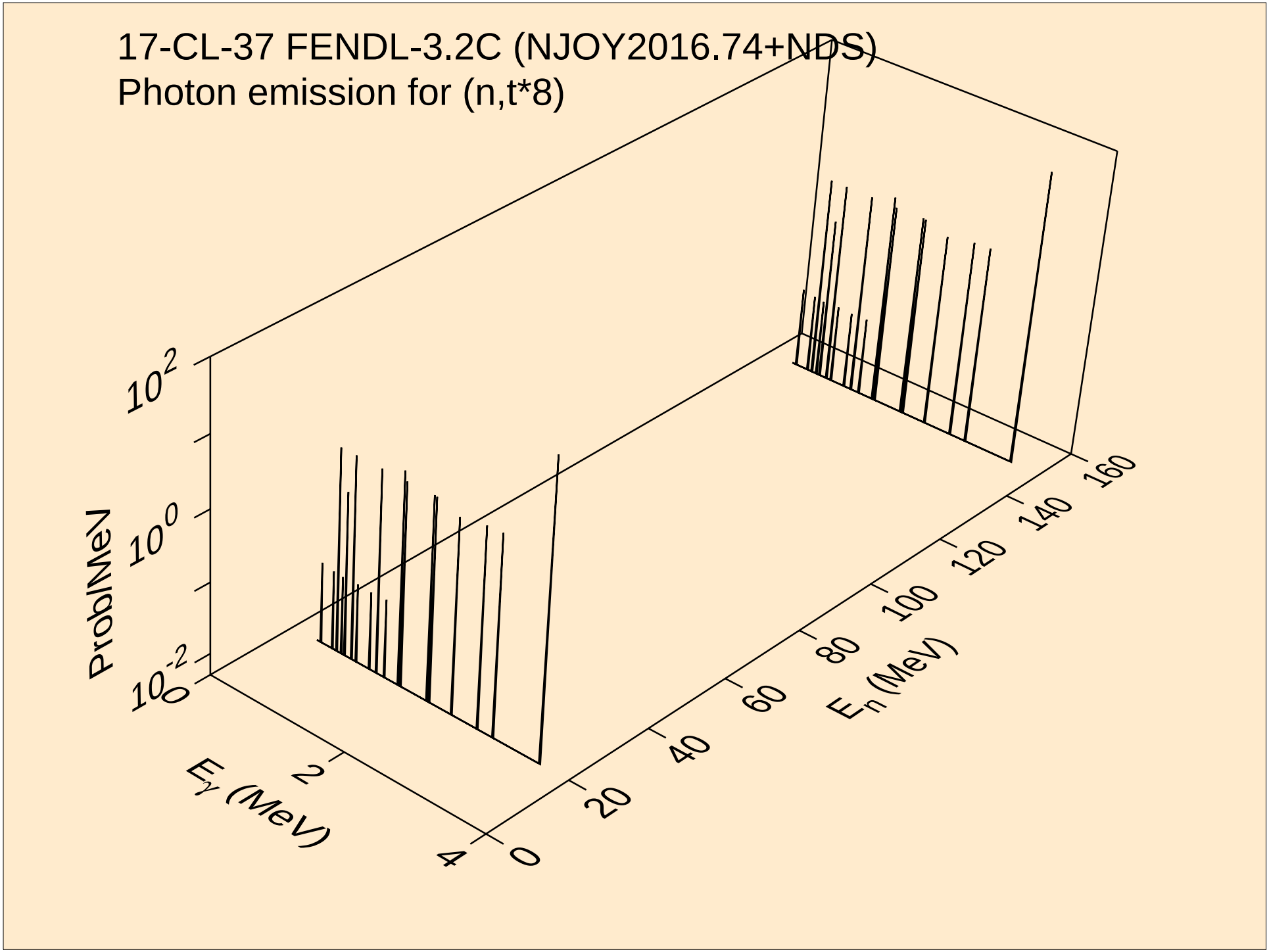

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*3)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
3
E_n (MeV)
0
20
40
60
80
100
120
140
160

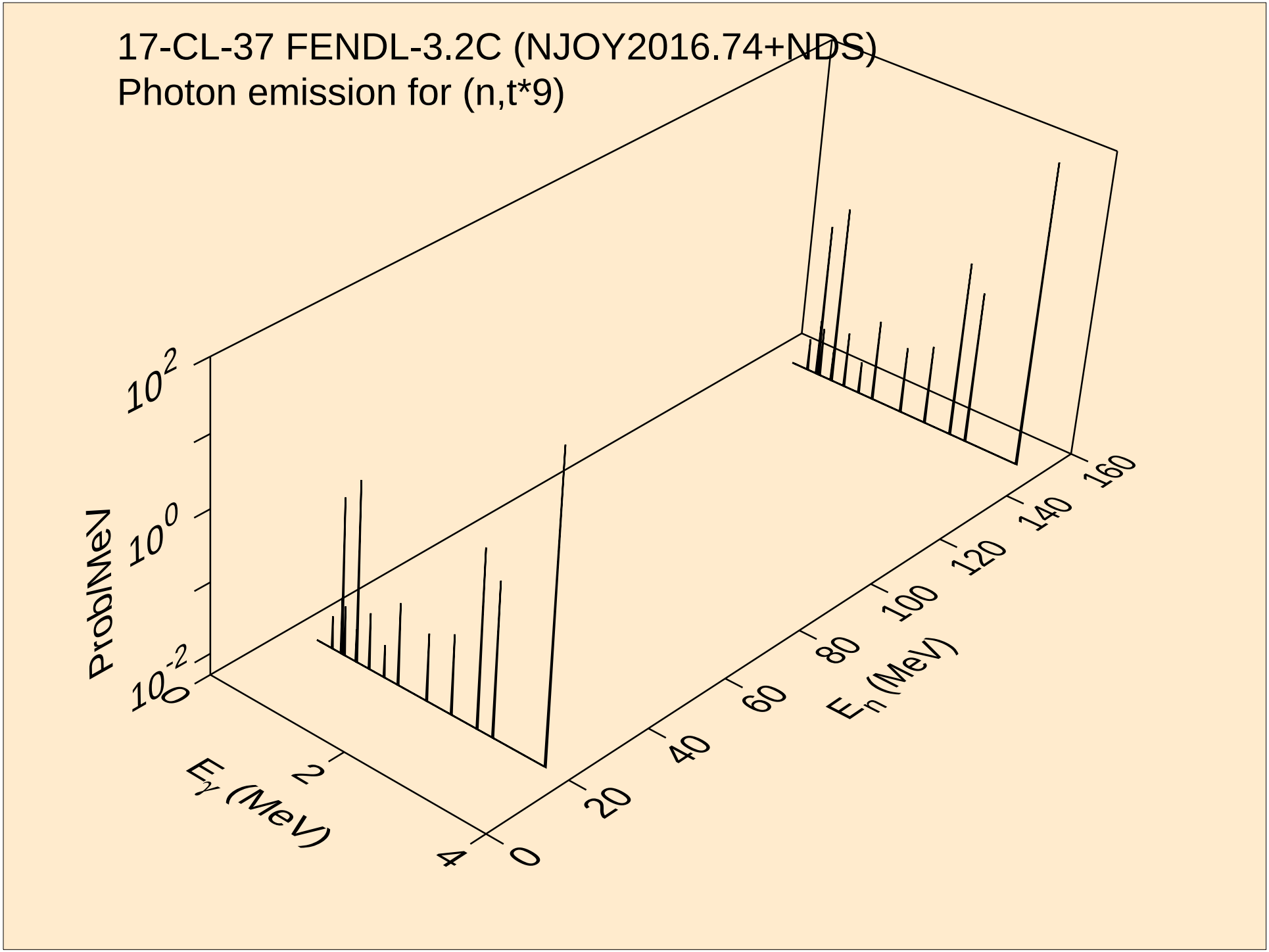

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*4)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

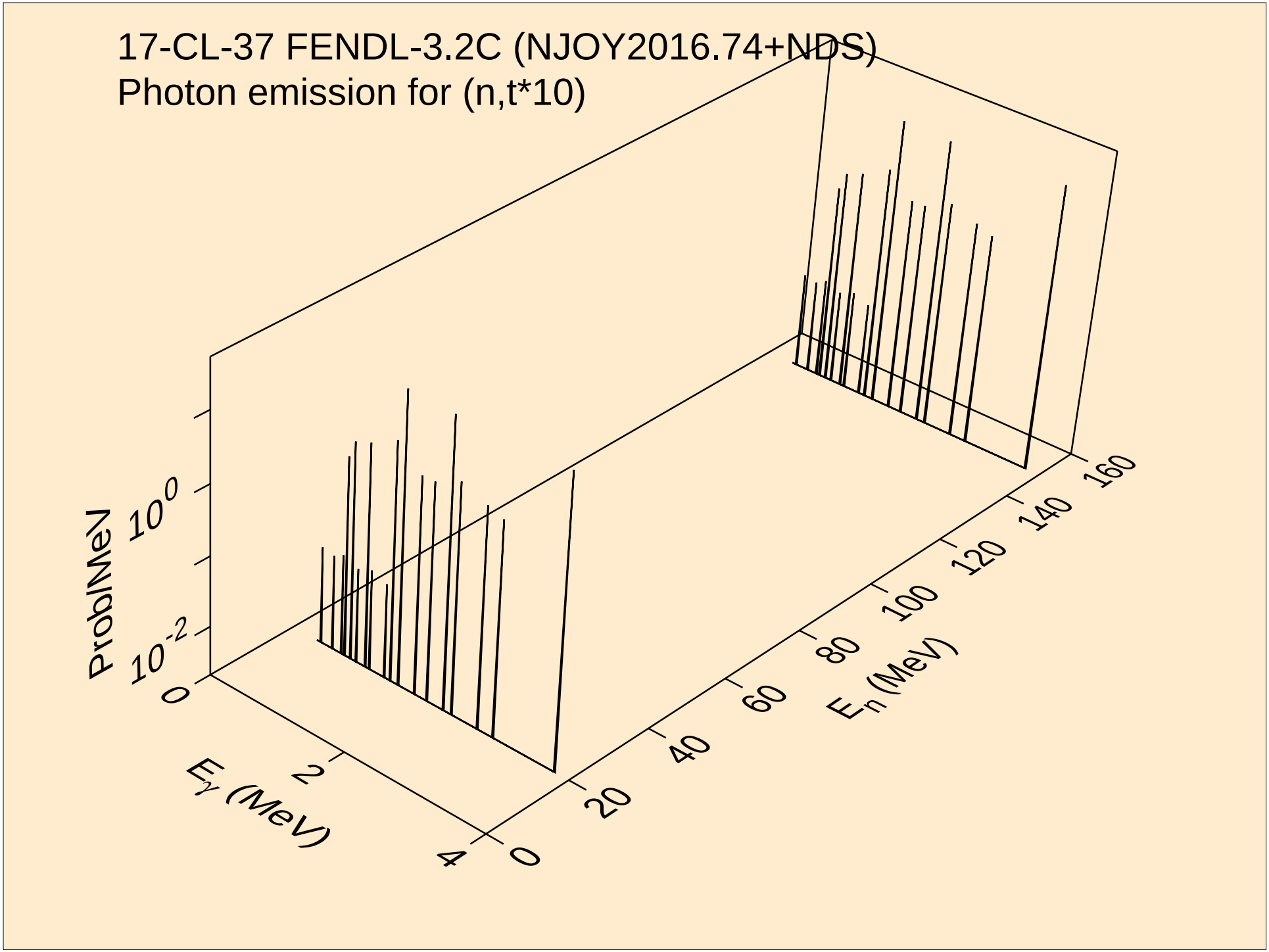

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*5)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

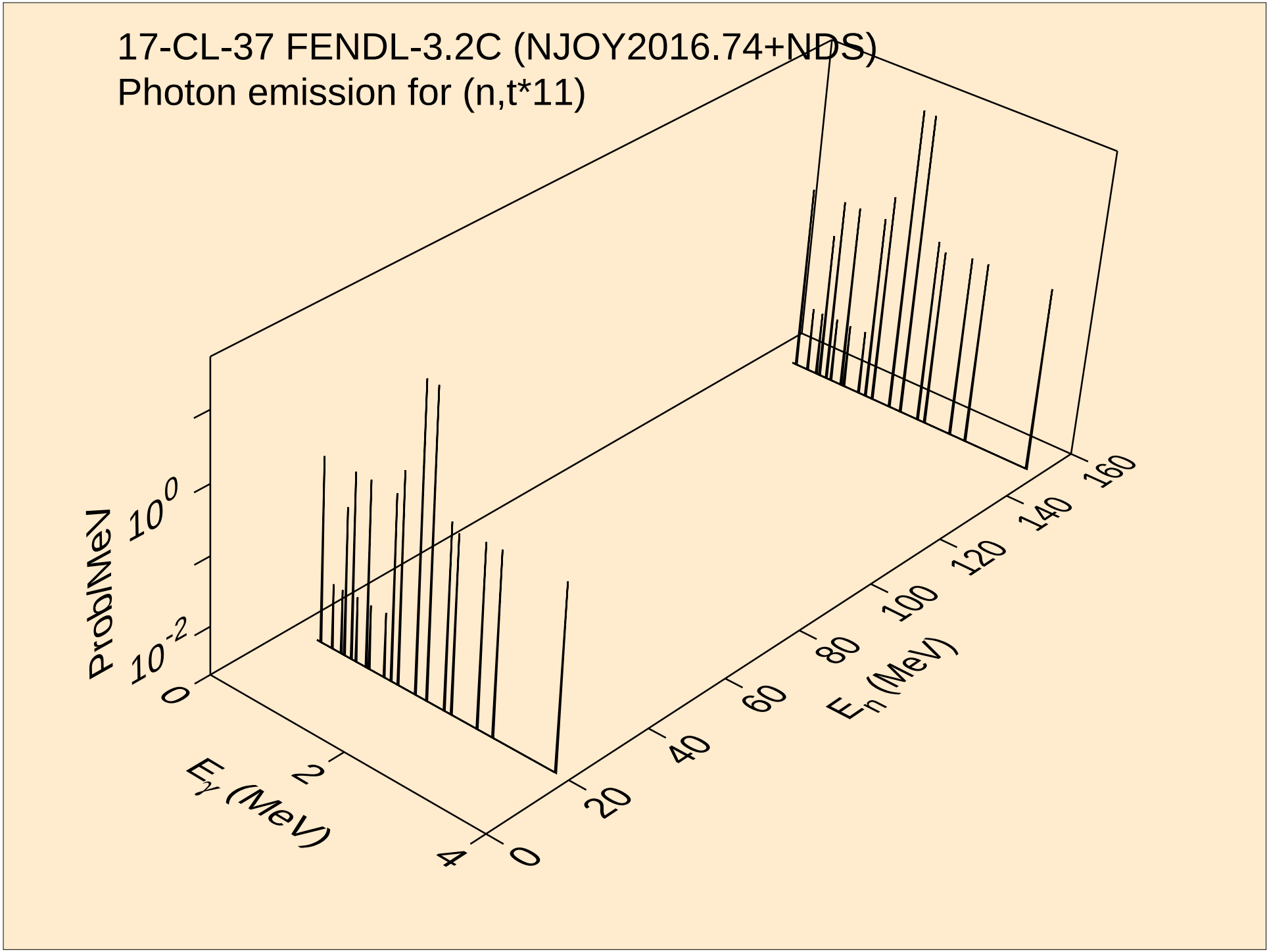

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*6)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

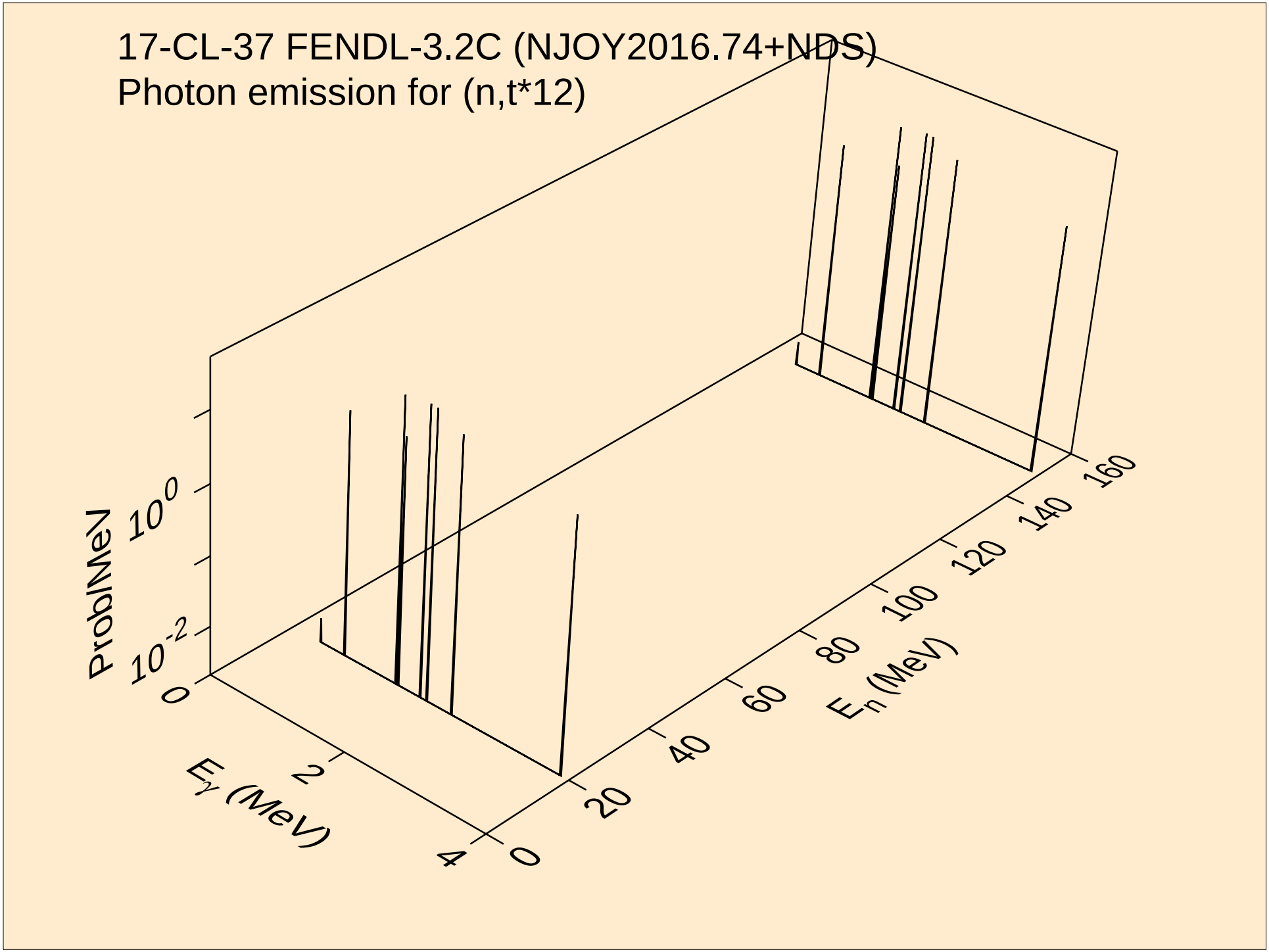

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*7)
Prob/MeV
10^{0}
10^{-2}
0
1
2
3
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

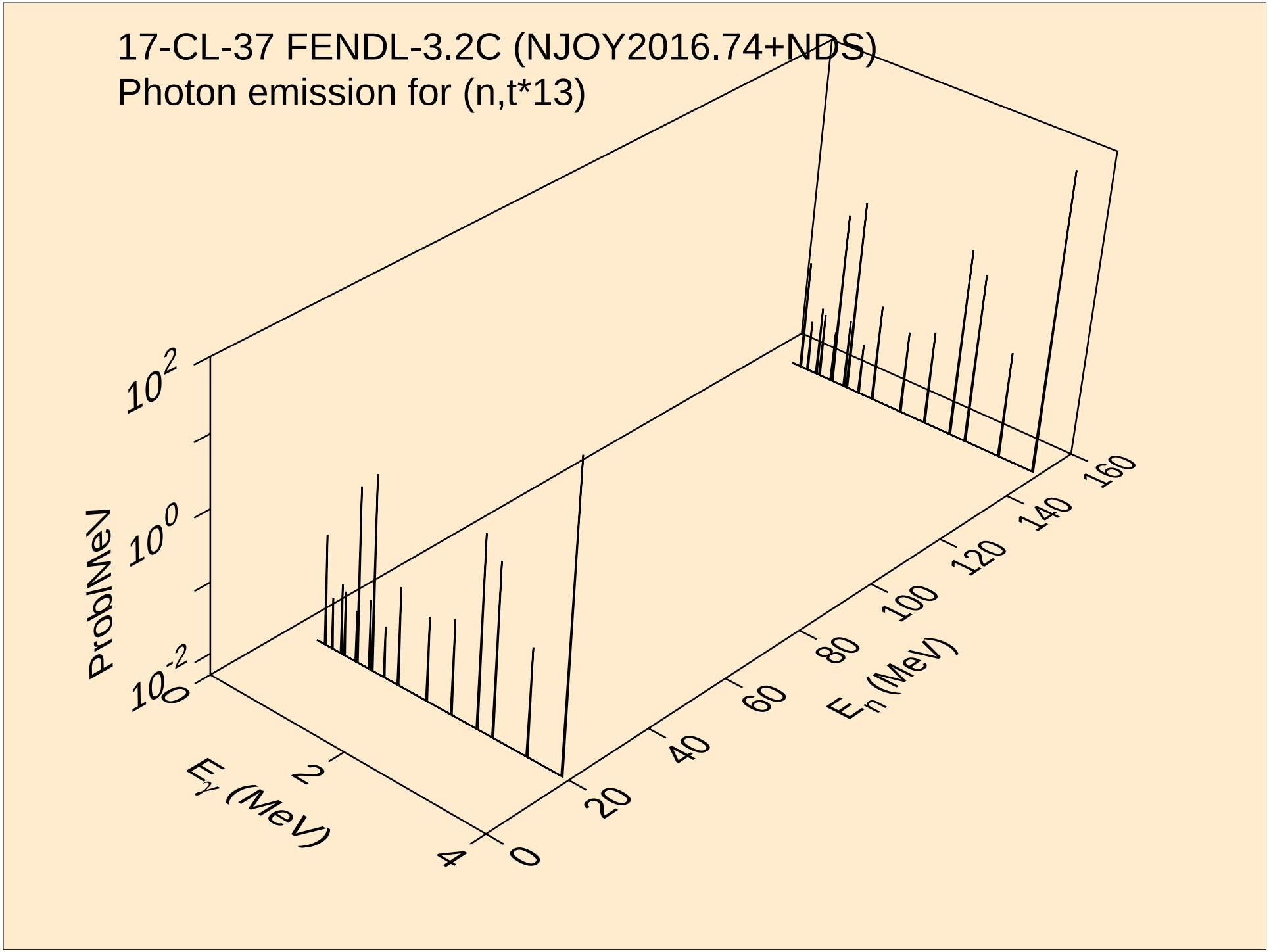

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*8)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

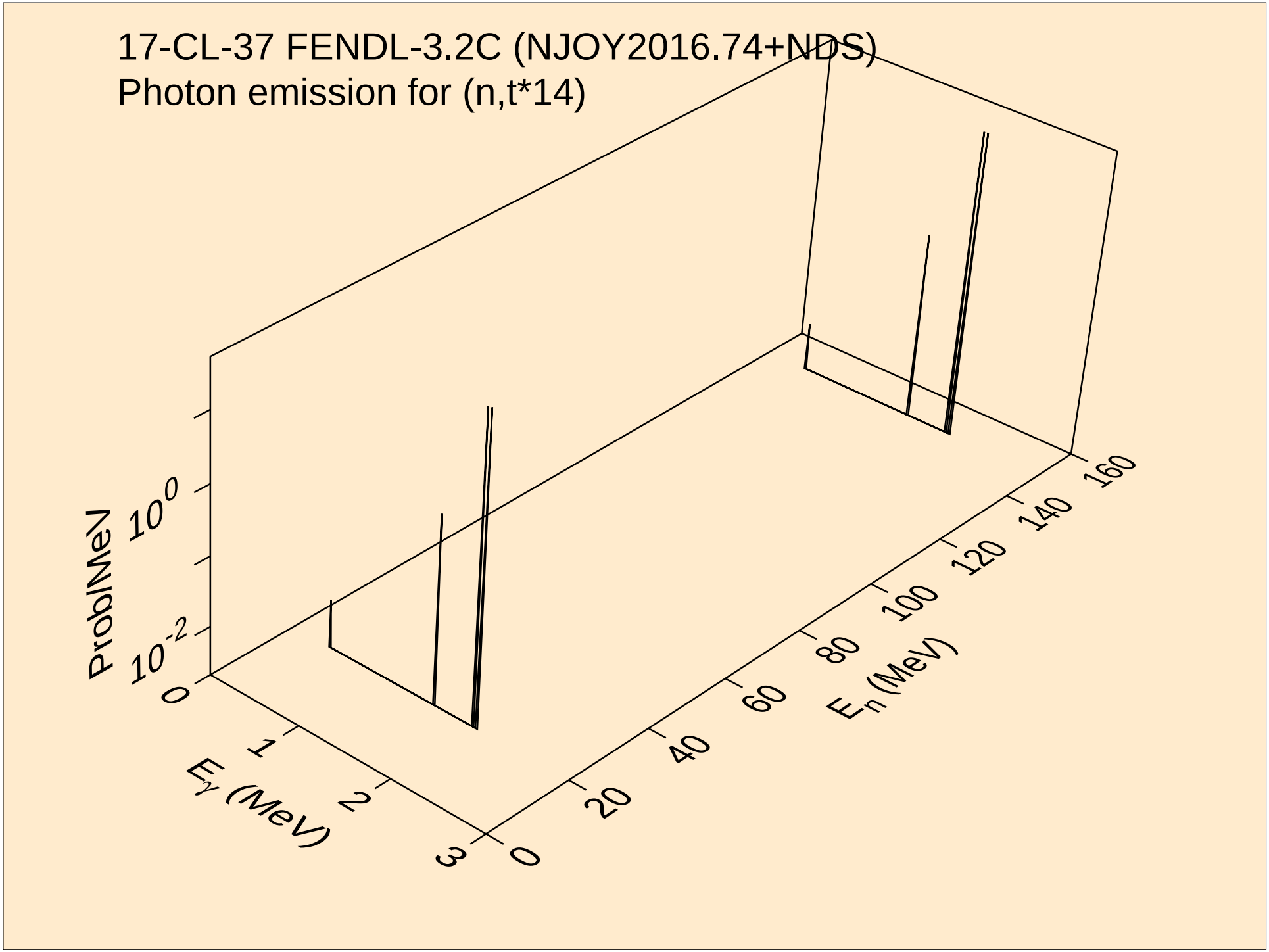

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*9)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

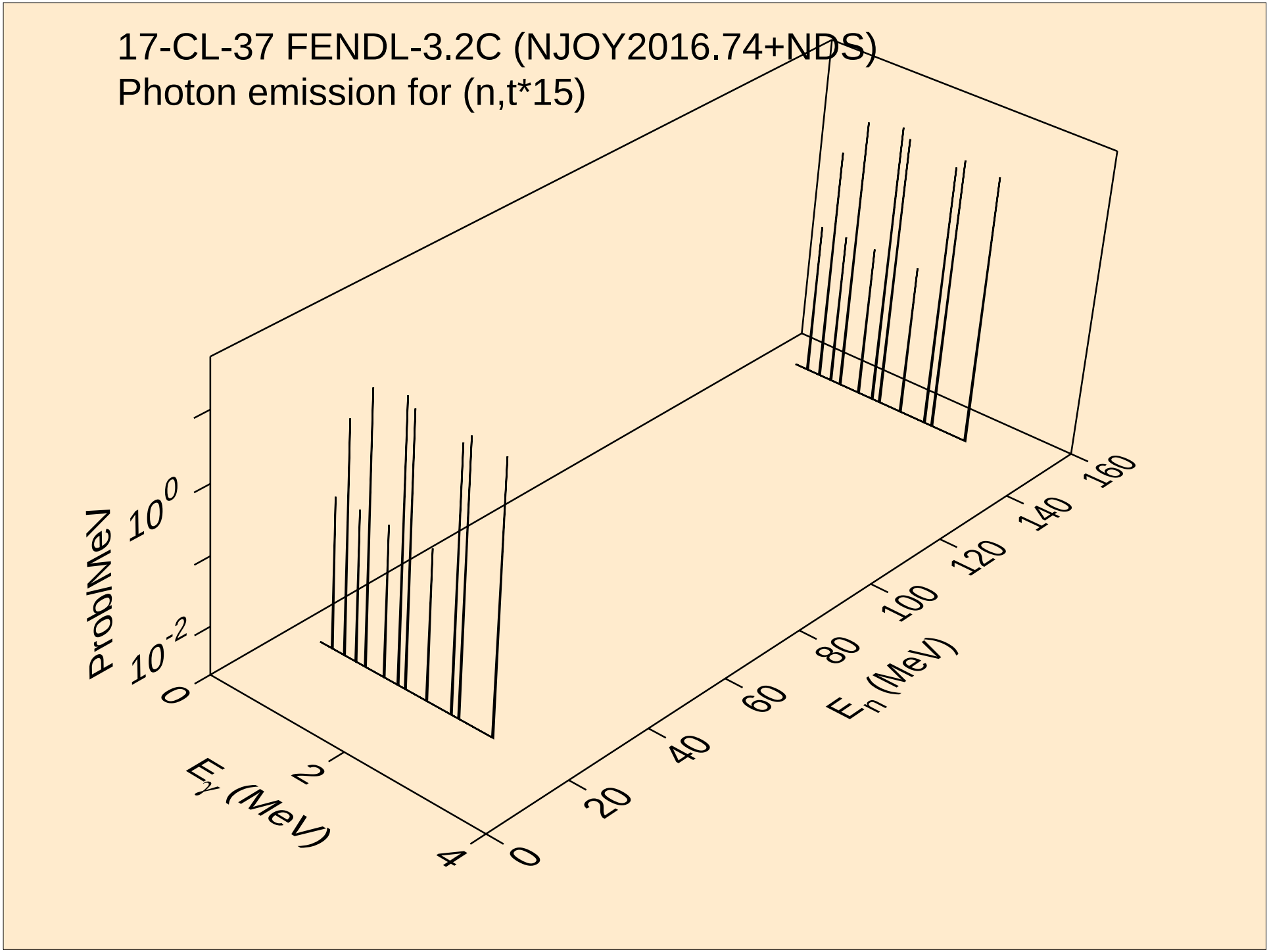

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*10)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

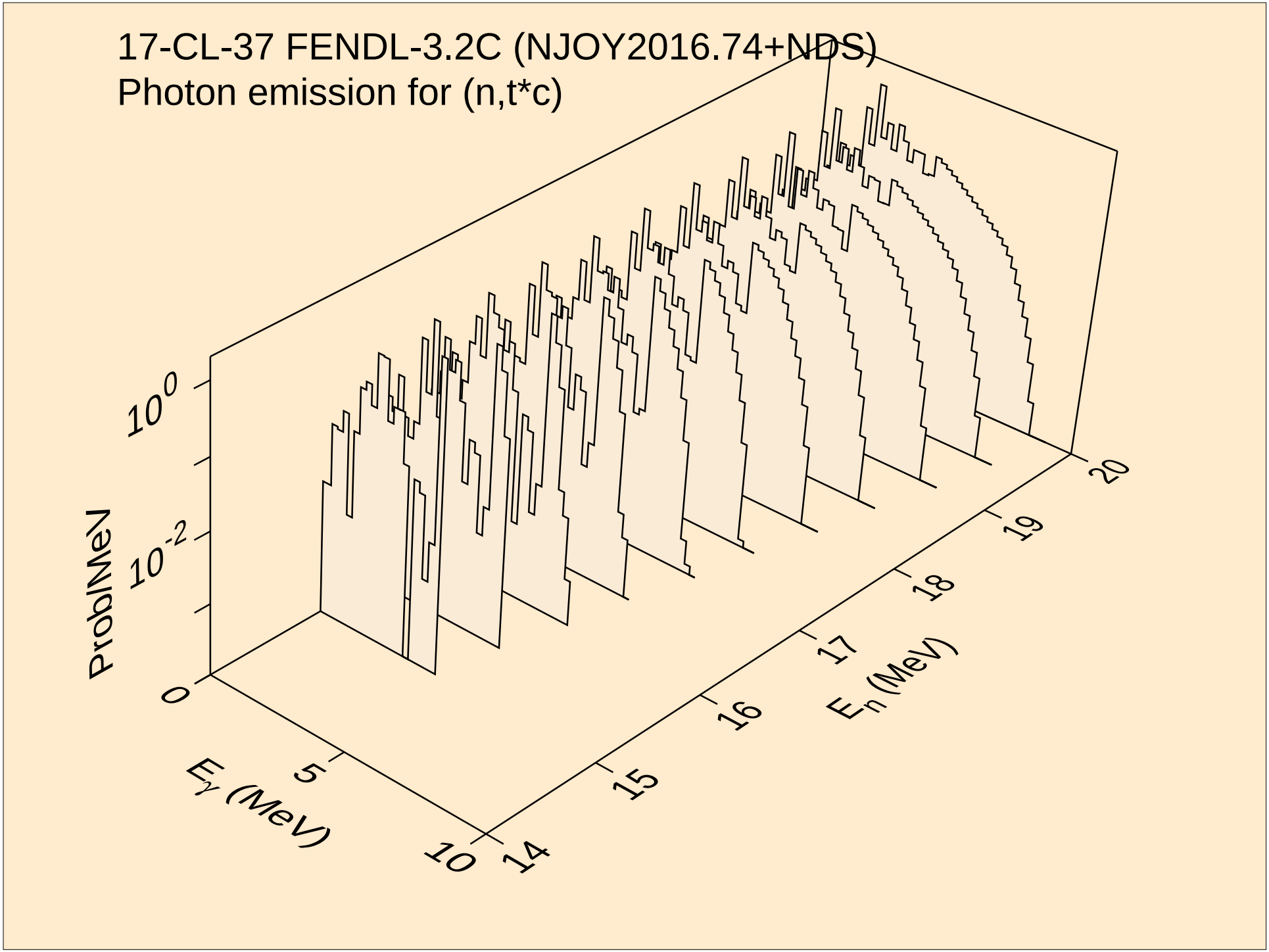

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*11)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

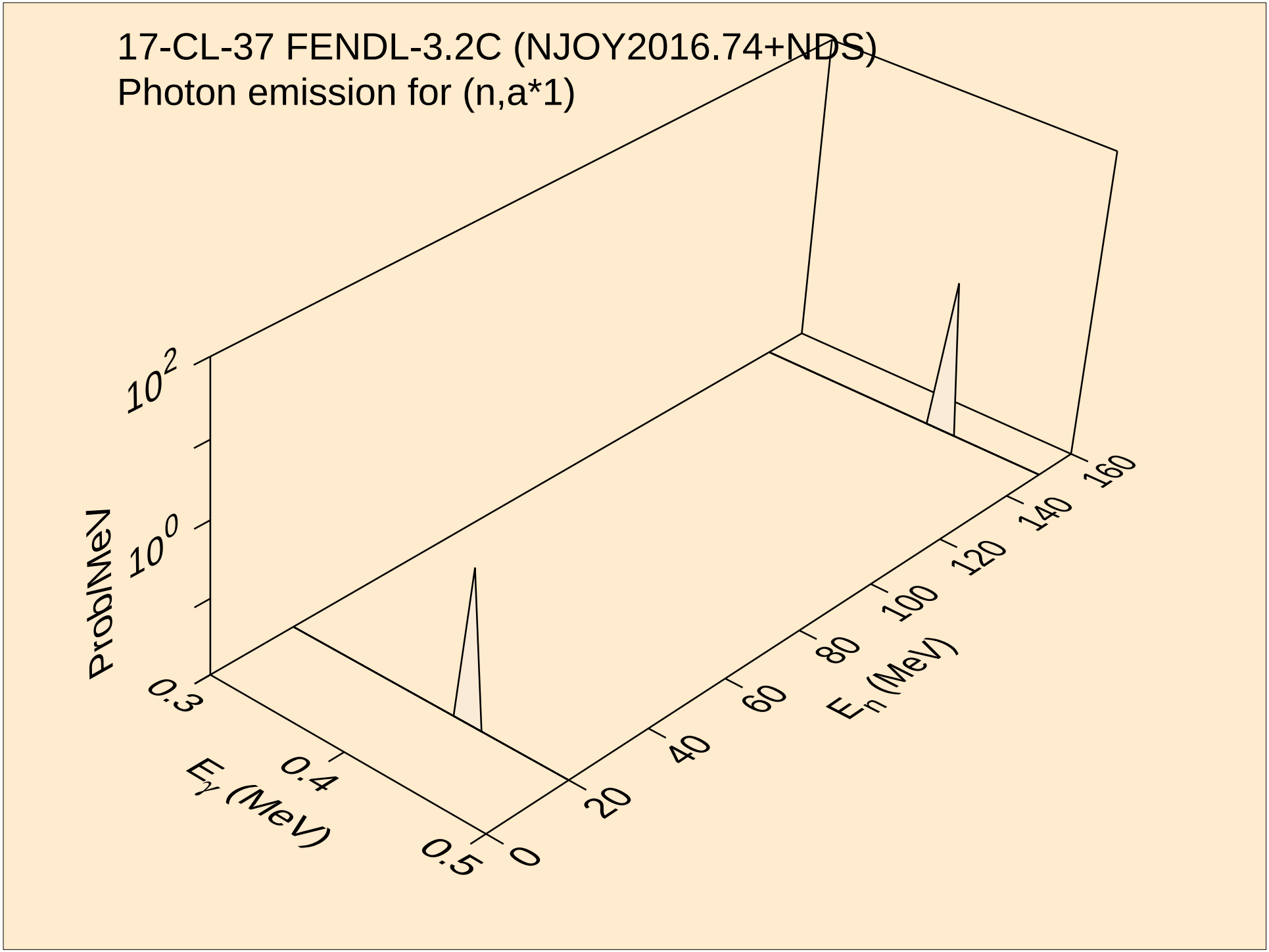

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*12)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

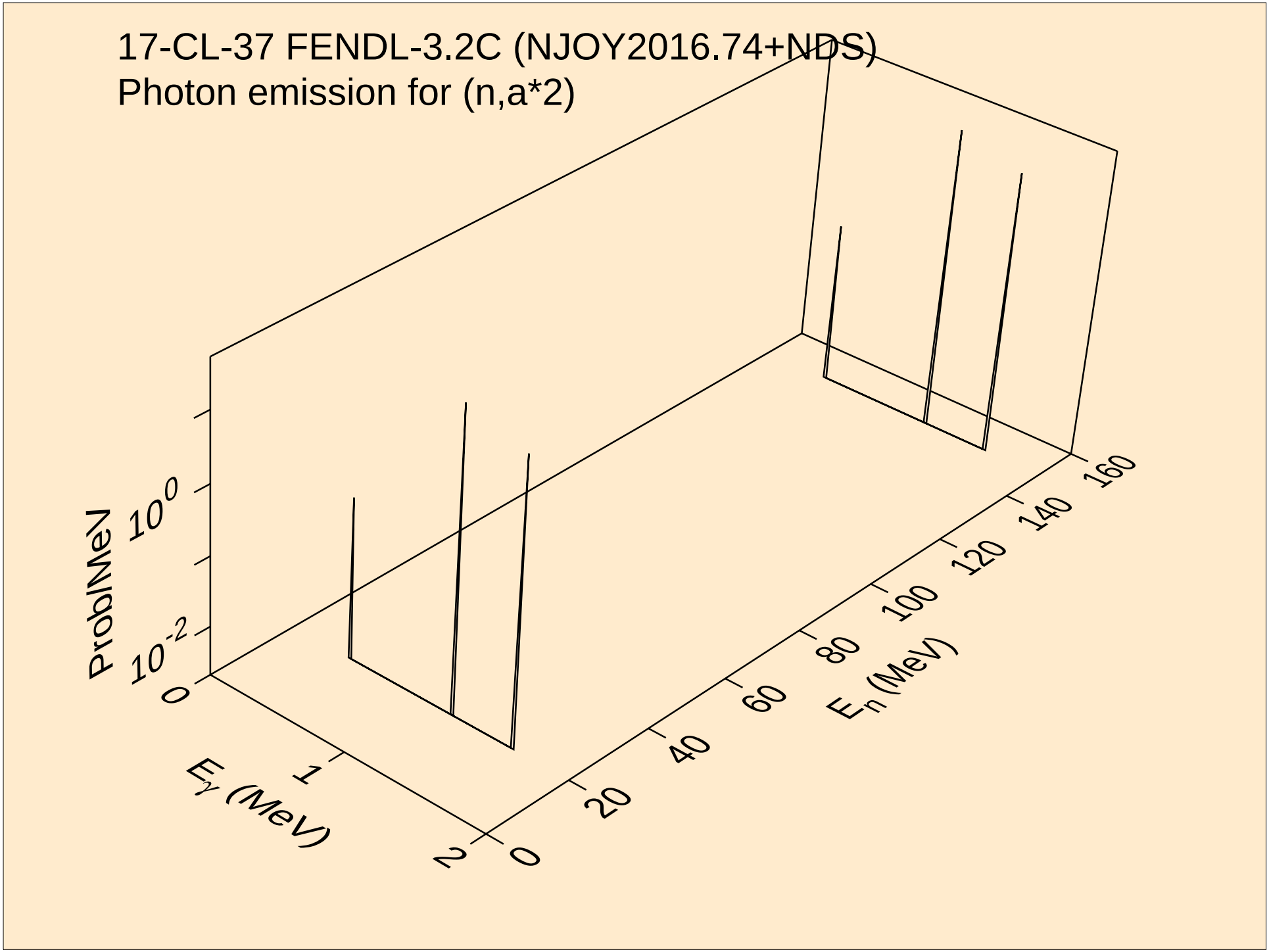

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*13)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
E_n (MeV)
0
20
40
60
80
100
120
140
160

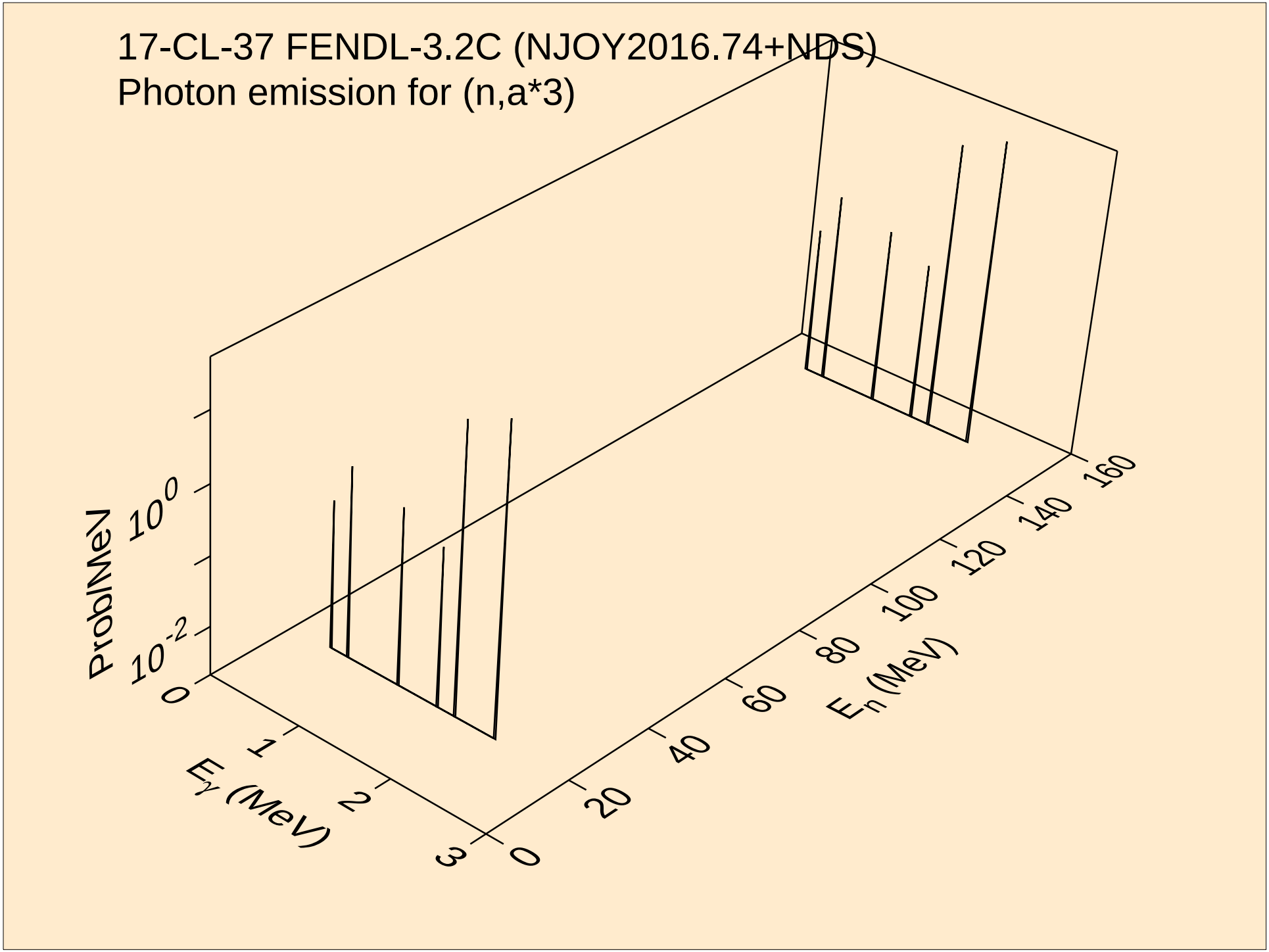

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*14)
Prob/MeV
10^{0}
10^{-2}
0
1
2
3
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

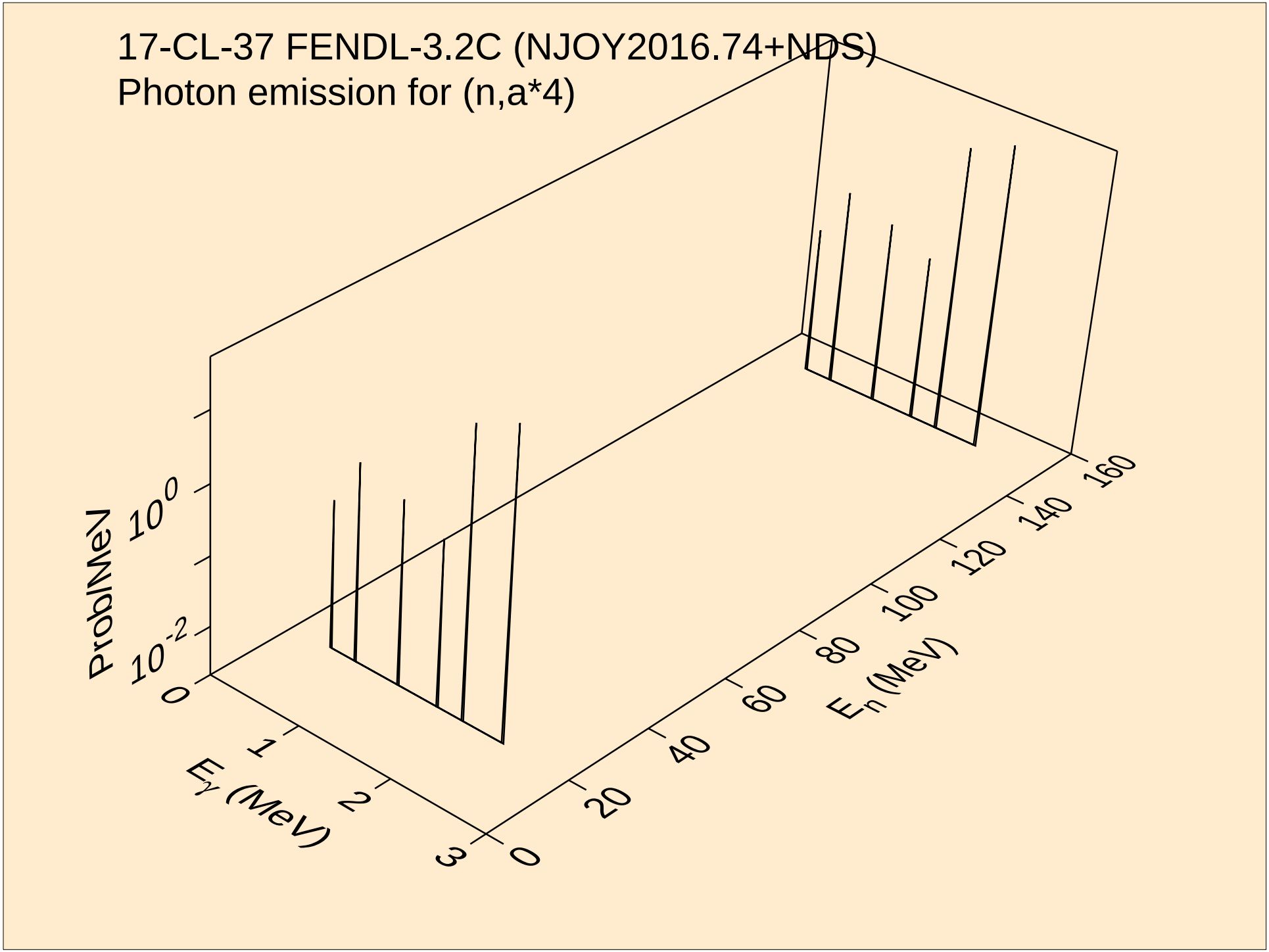

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*15)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

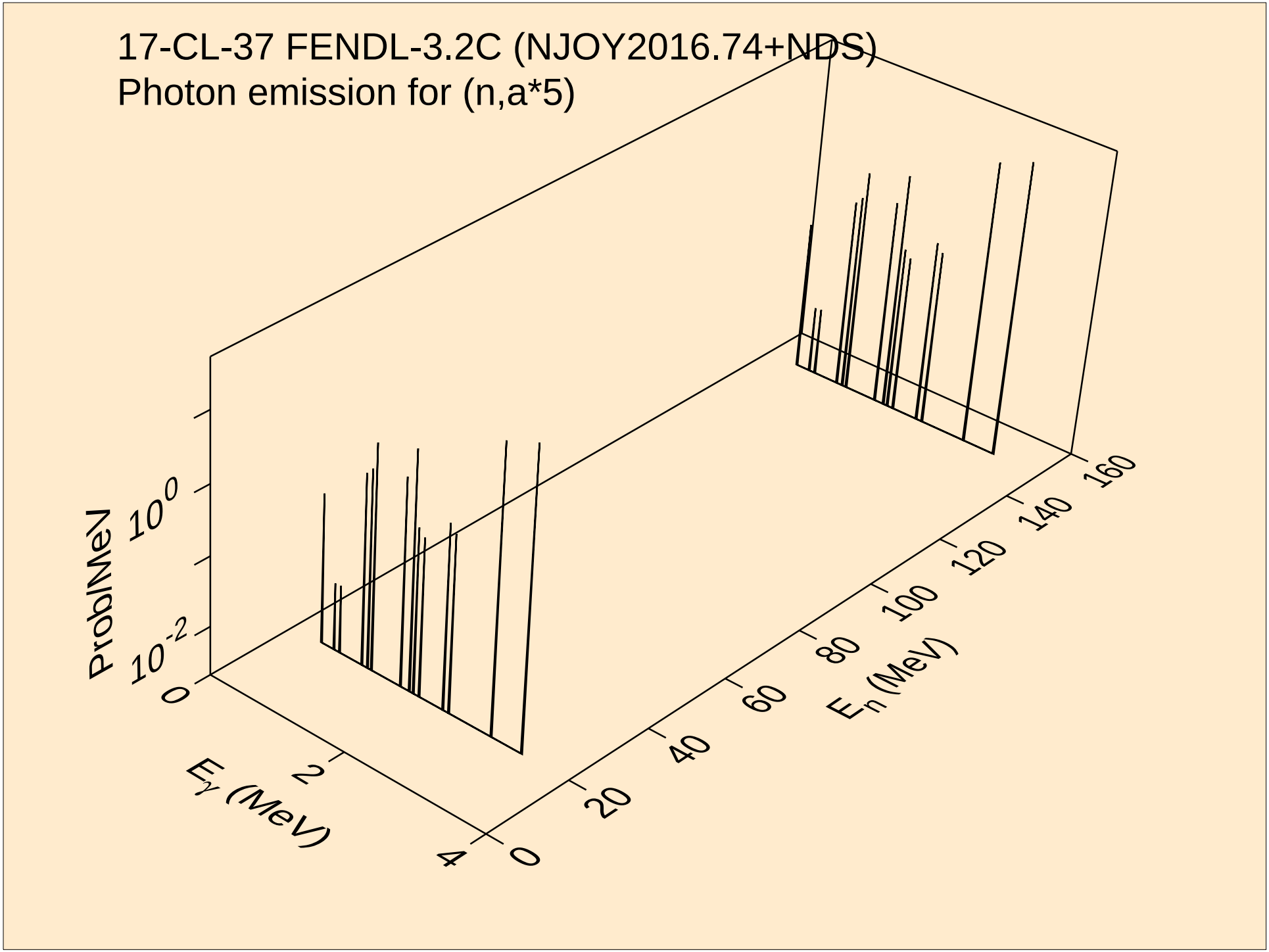

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,t*c)
Prob/MeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
14
15
16
17
18
19
20
E_n (MeV)

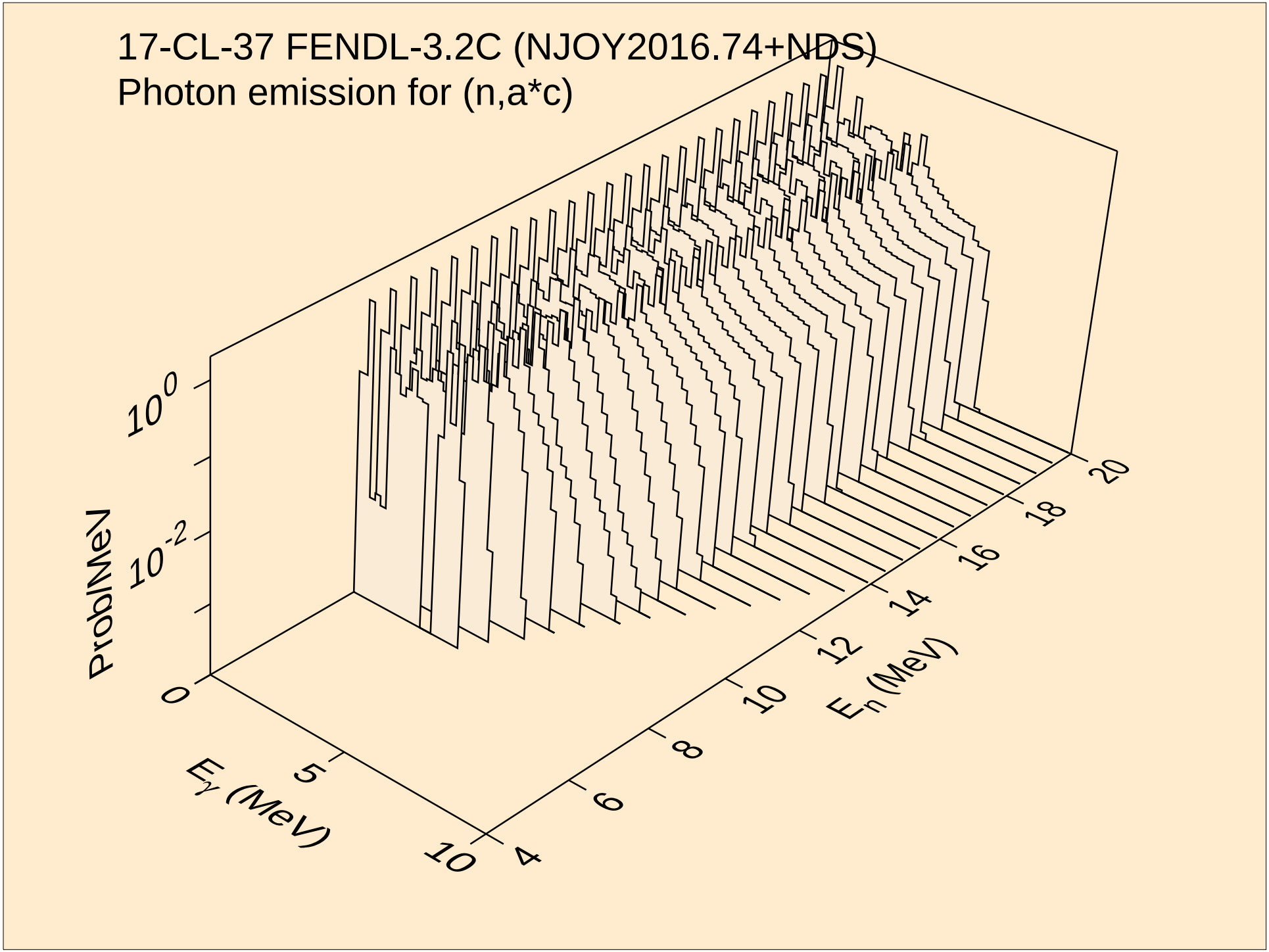

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*1)
Prob/MeV
10^2
10^0
0.3
0.4
0.5
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

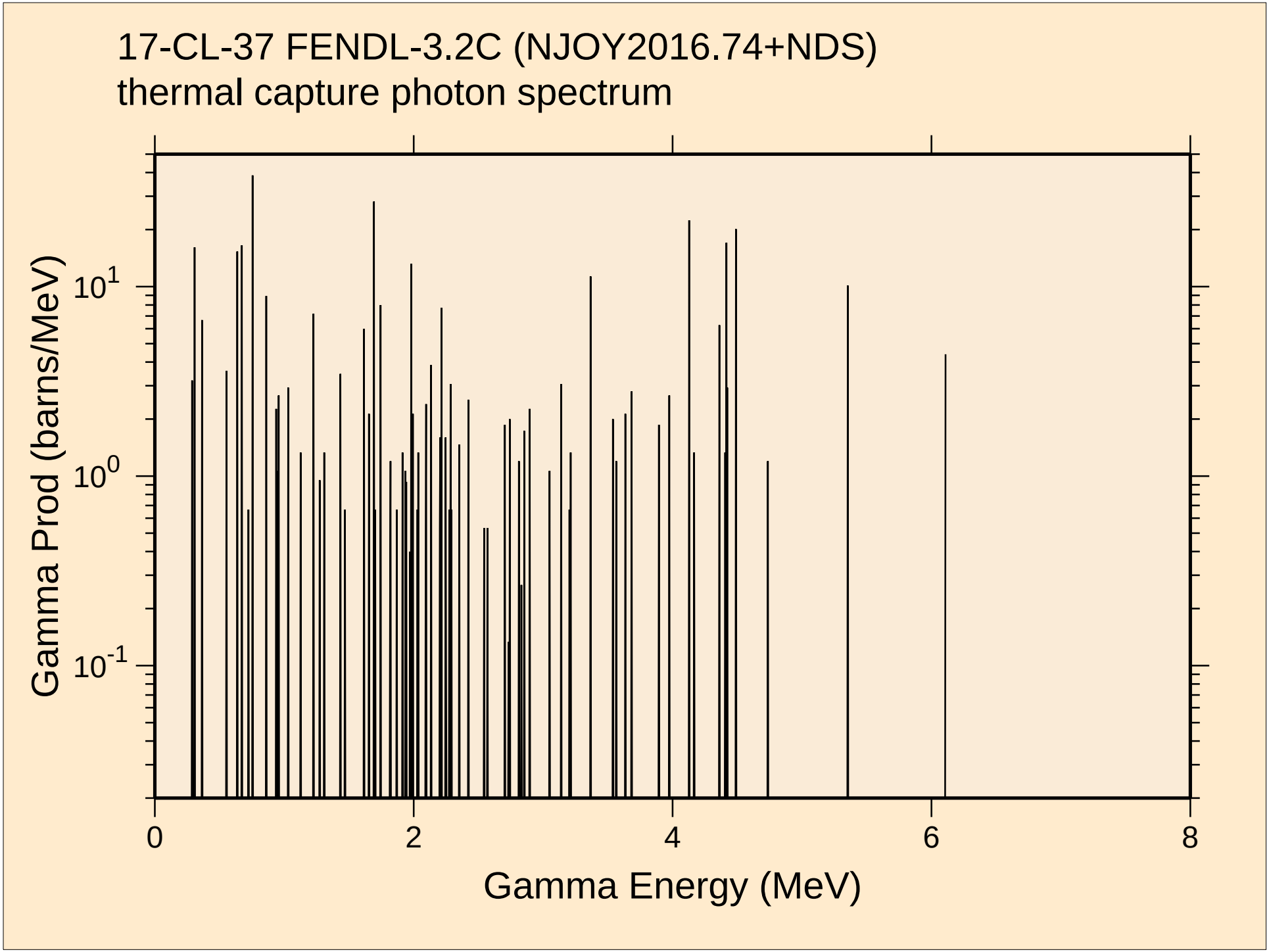

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*2)
Prob/MeV
10^{0}
10^{-2}
0
1
2
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

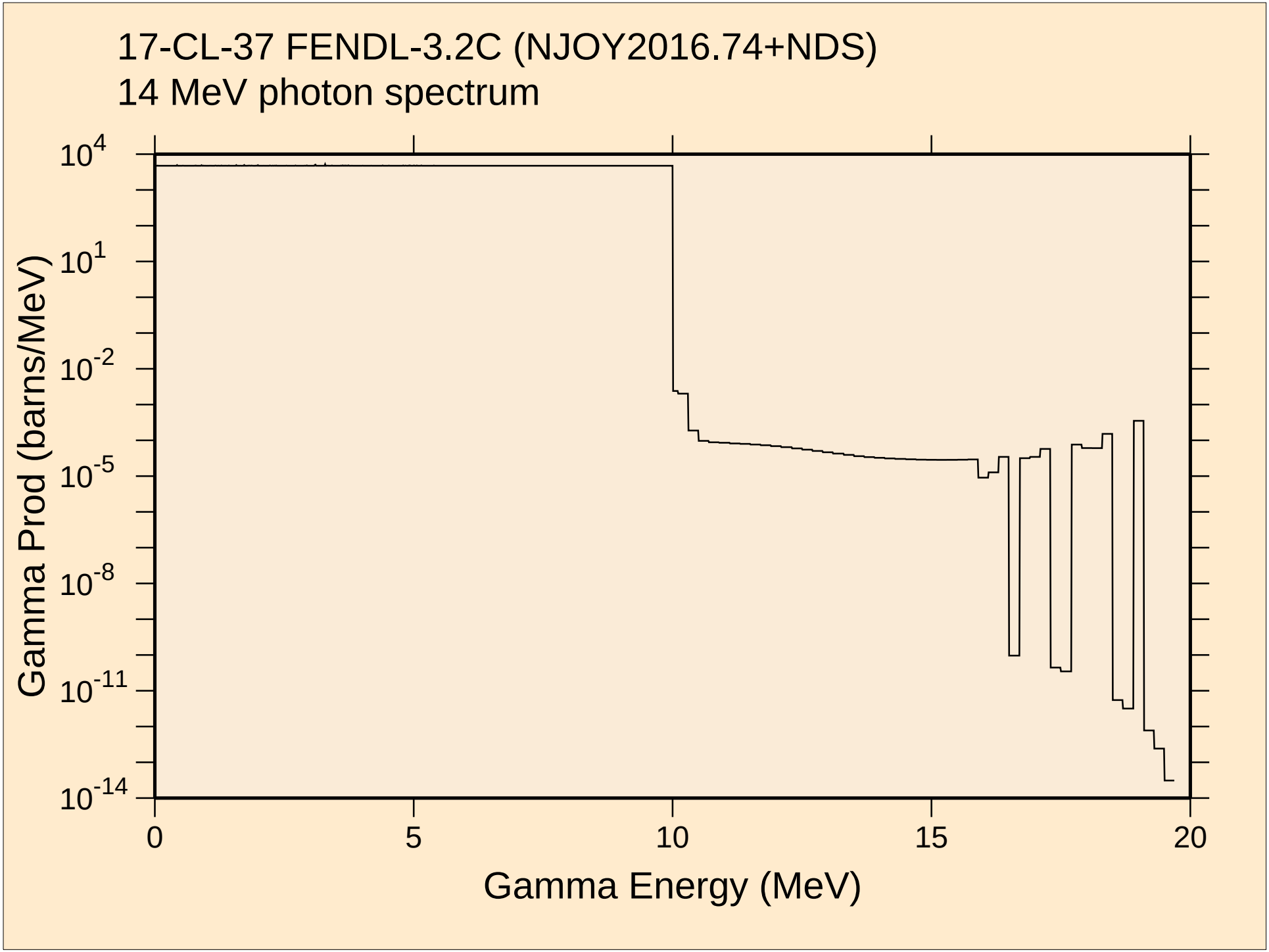

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*3)
Prob/MeV
10^{0}
10^{-2}
0
1
2
3
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

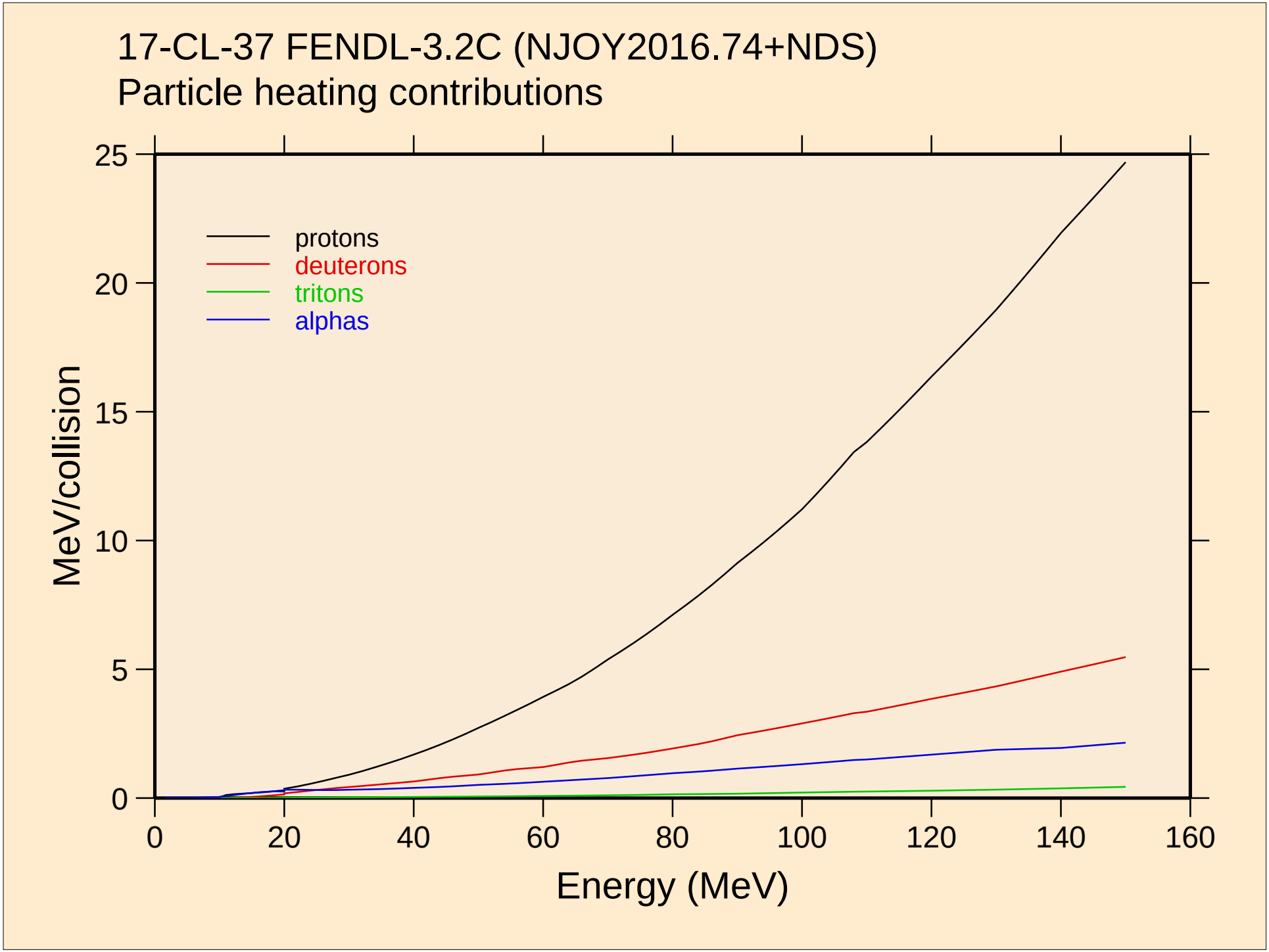

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*4)
Prob/MeV
10^{0}
10^{-2}
0
1
2
3
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

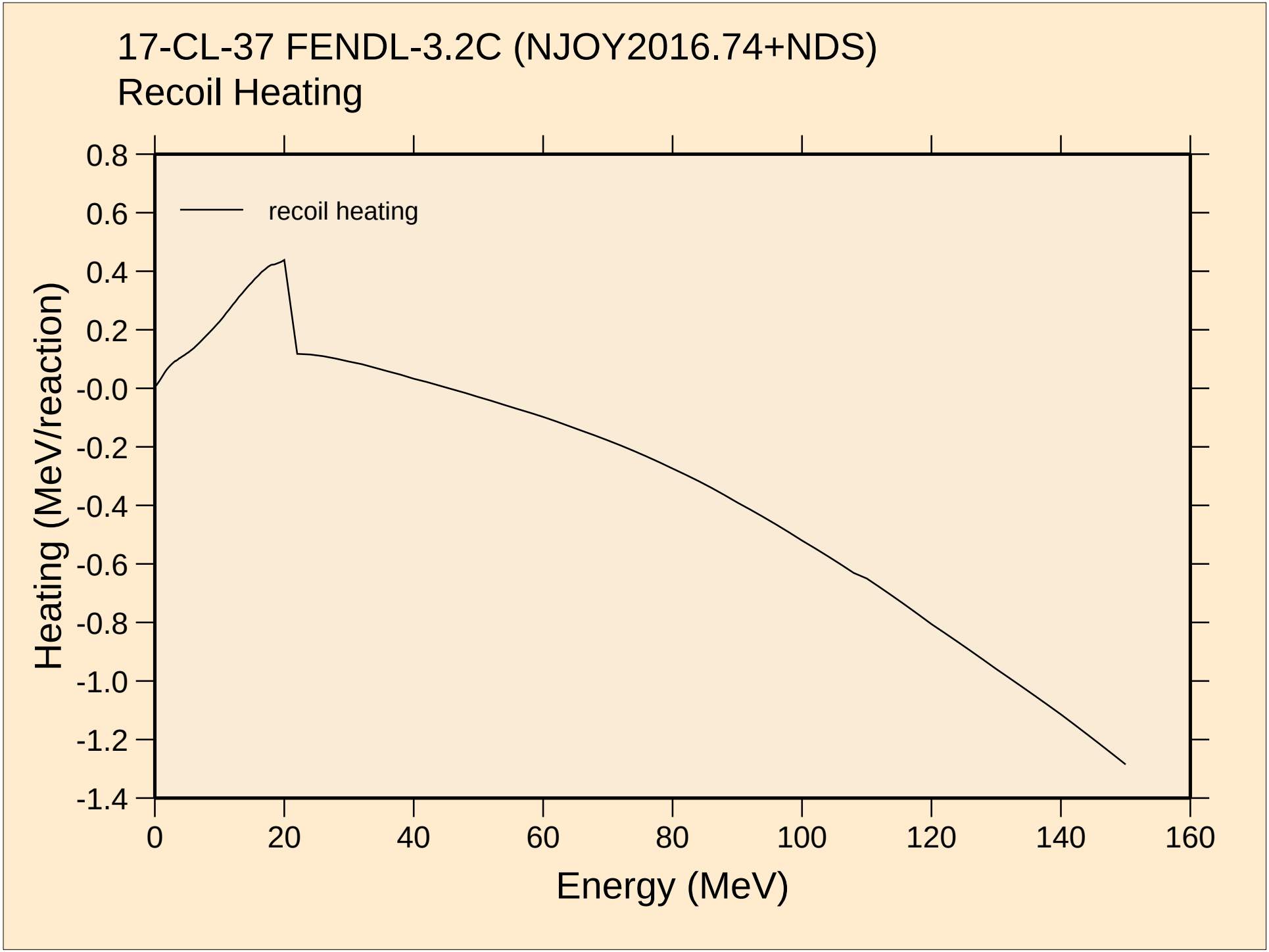

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*5)
Prob/MeV
10^0
10^{-2}
0
2
4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
E_n (MeV)

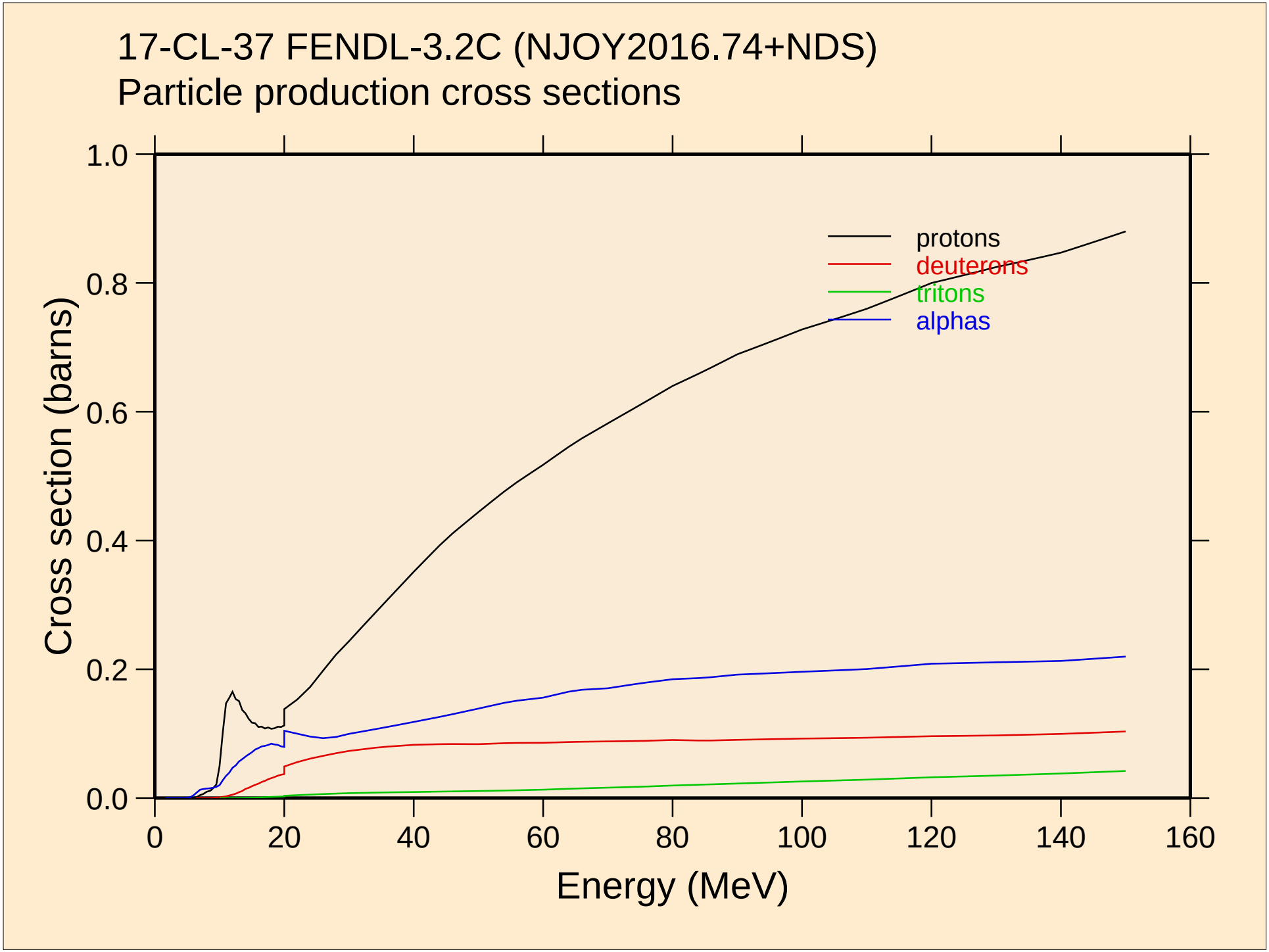

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (n,a*c)
Prob/MeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
4
6
8
10
12
14
16
18
20
E_n (MeV)

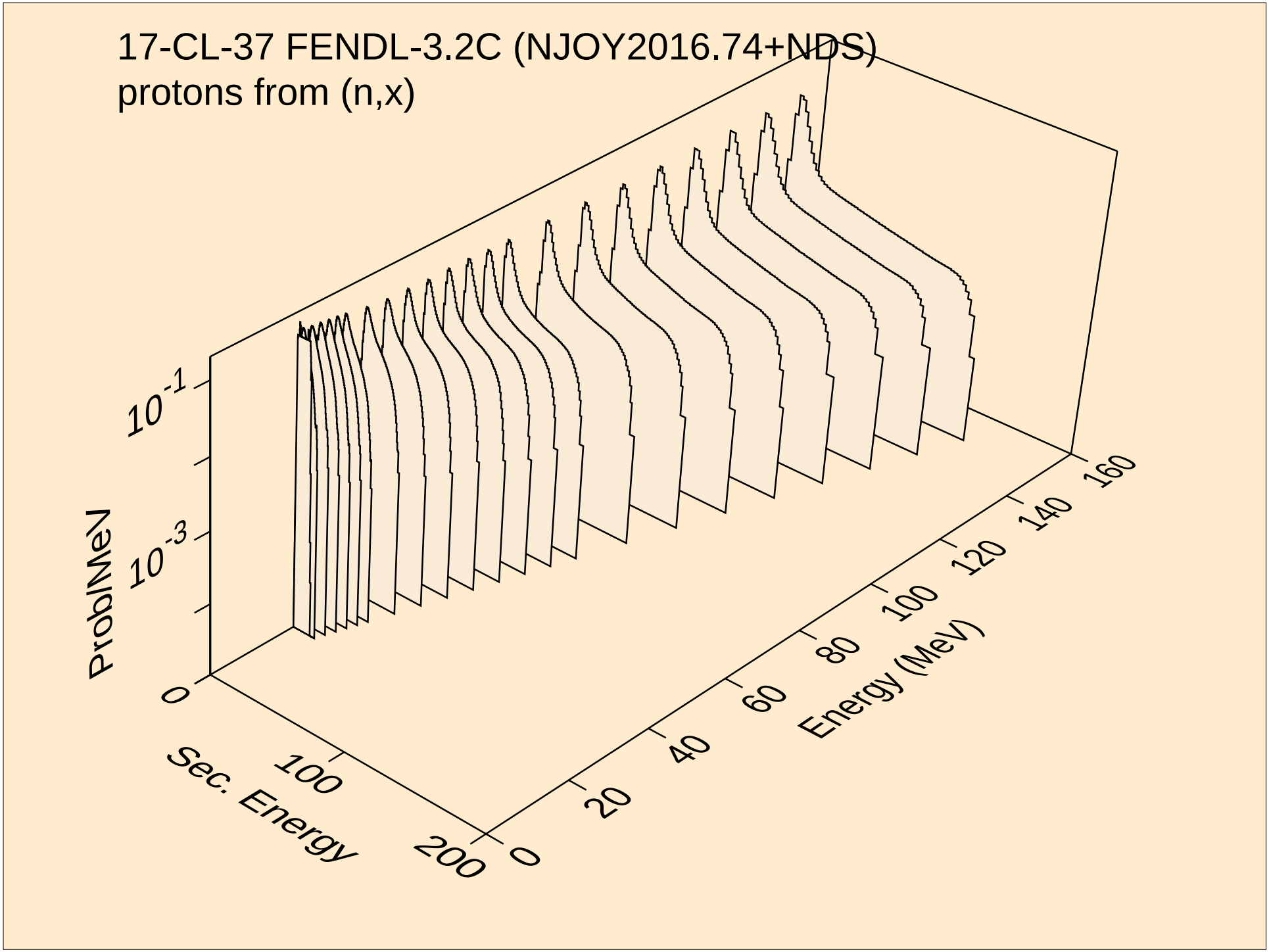

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
0
2
4
6
8
Gamma Energy (MeV)

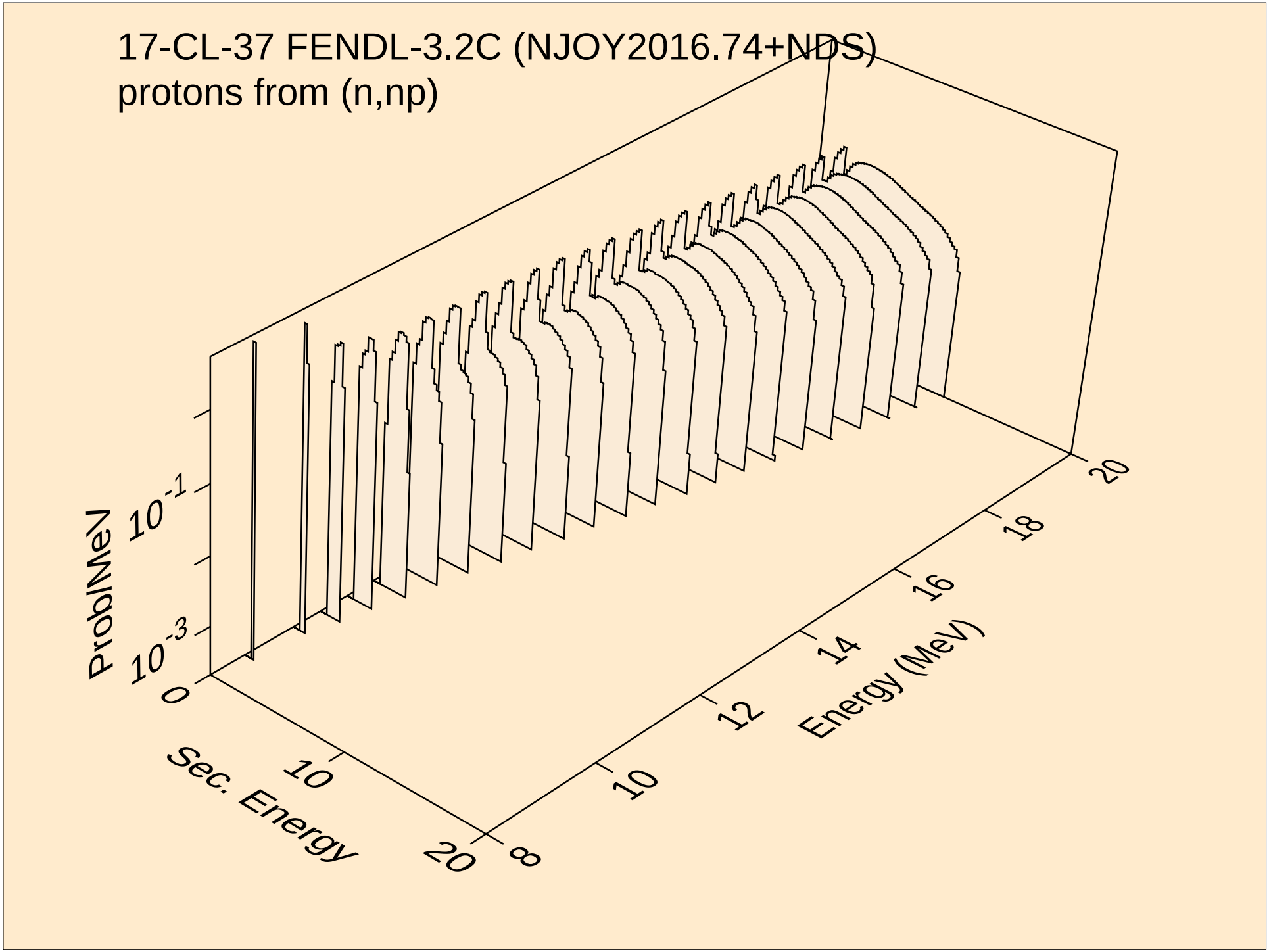

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^4
10^1
10^-2
10^-5
10^-8
10^-11
10^-14
0
5
10
15
20
Gamma Energy (MeV)

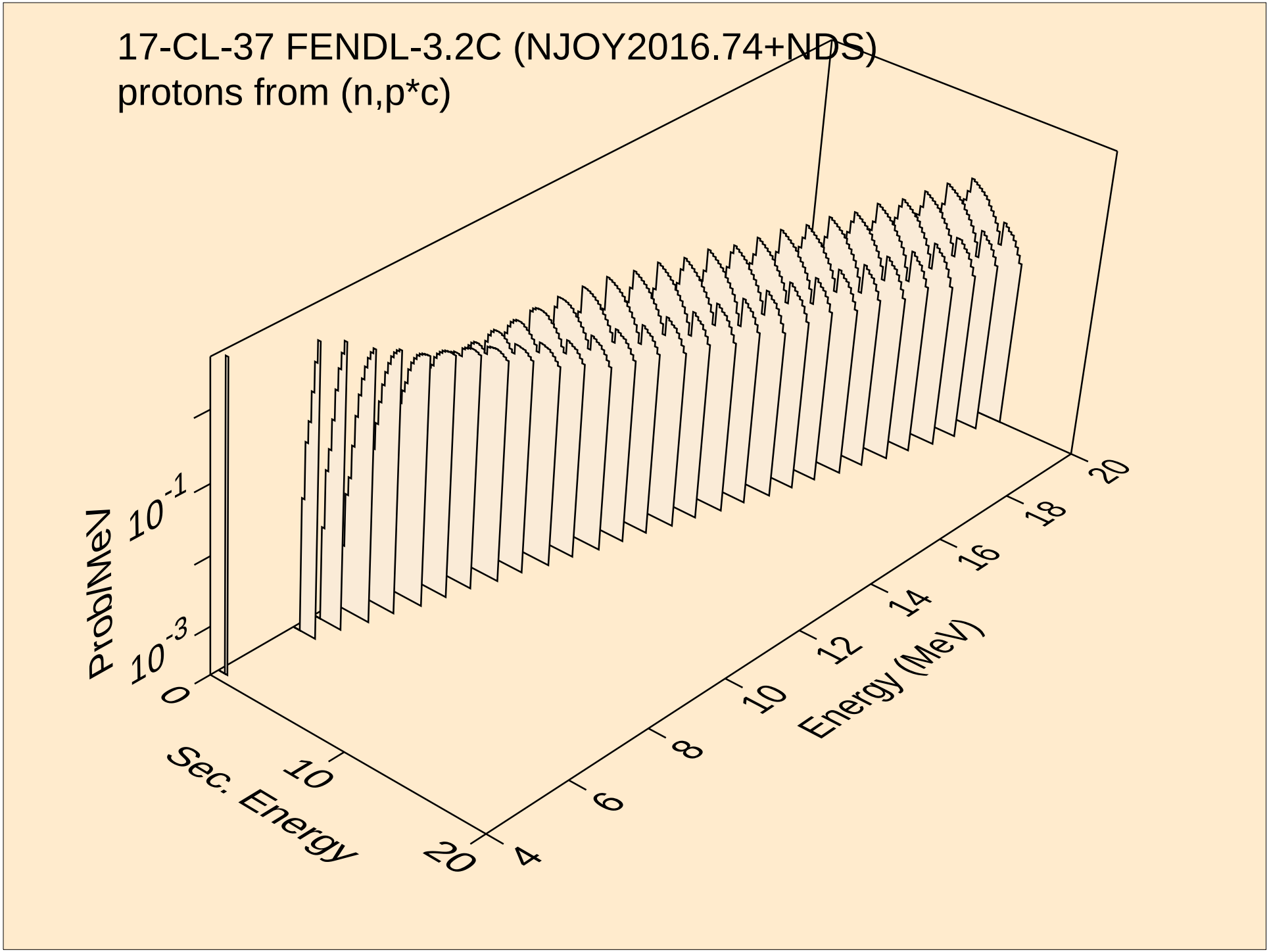

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Particle heating contributions
protons
deuterons
tritons
alphas
MeV/collision
Energy (MeV)
0
5
10
15
20
25
0
20
40
60
80
100
120
140
160

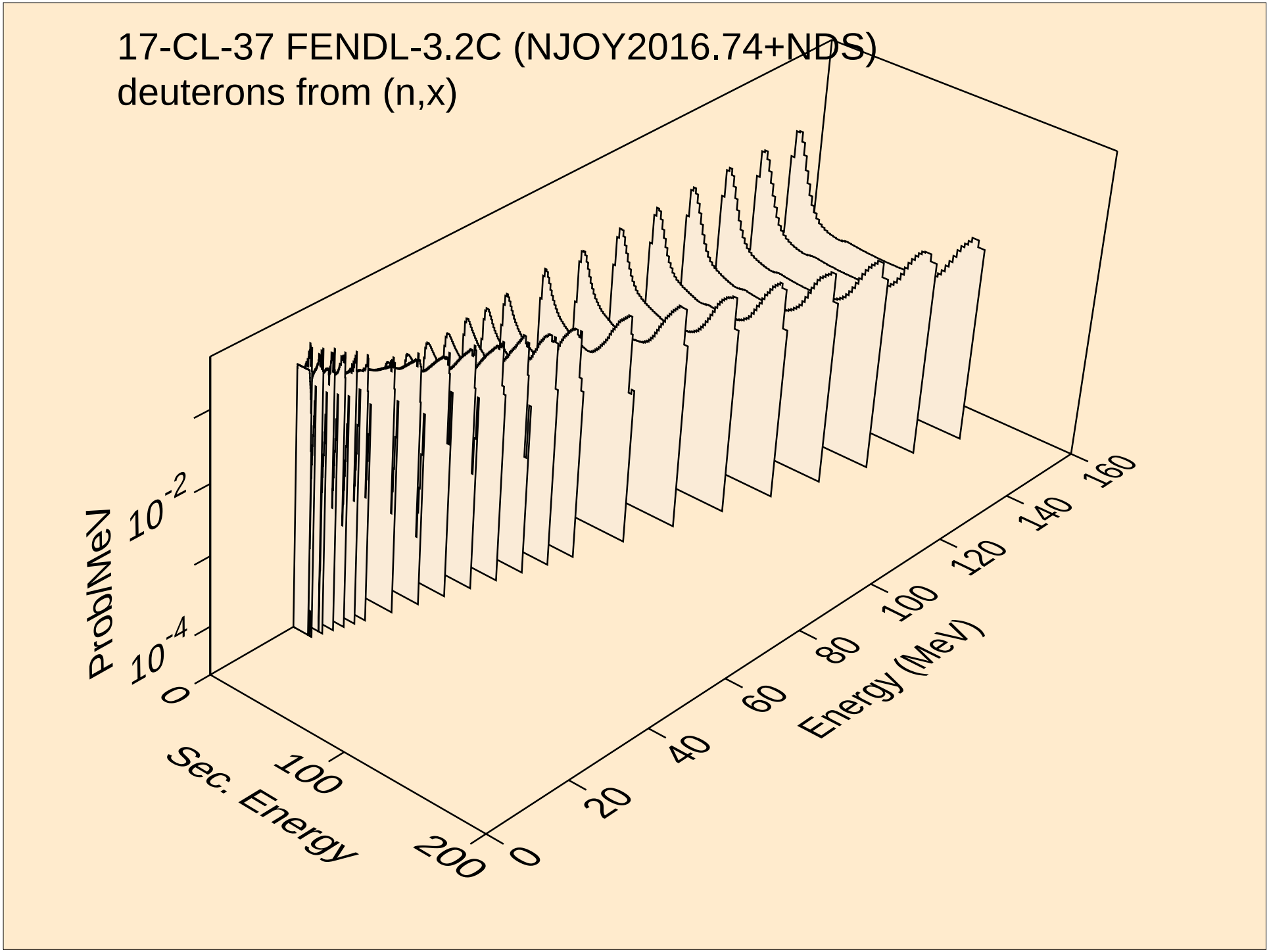

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Recoil Heating
recoil heating
Heating (MeV/reaction)
0.8
0.6
0.4
0.2
-0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
0
20
40
60
80
100
120
140
160
Energy (MeV)

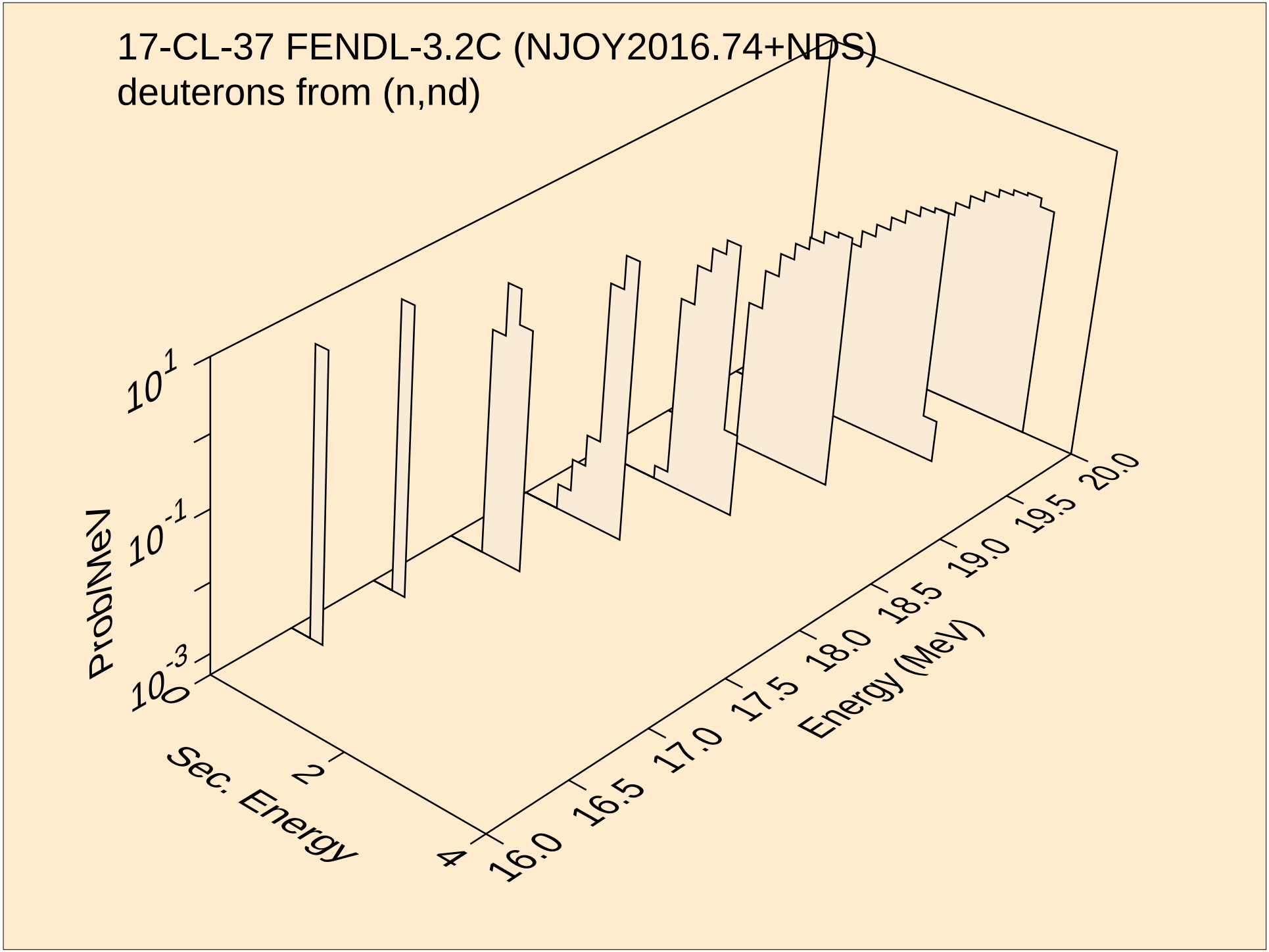

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
Particle production cross sections
protons
deuterons
tritons
alphas
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
120
140
160

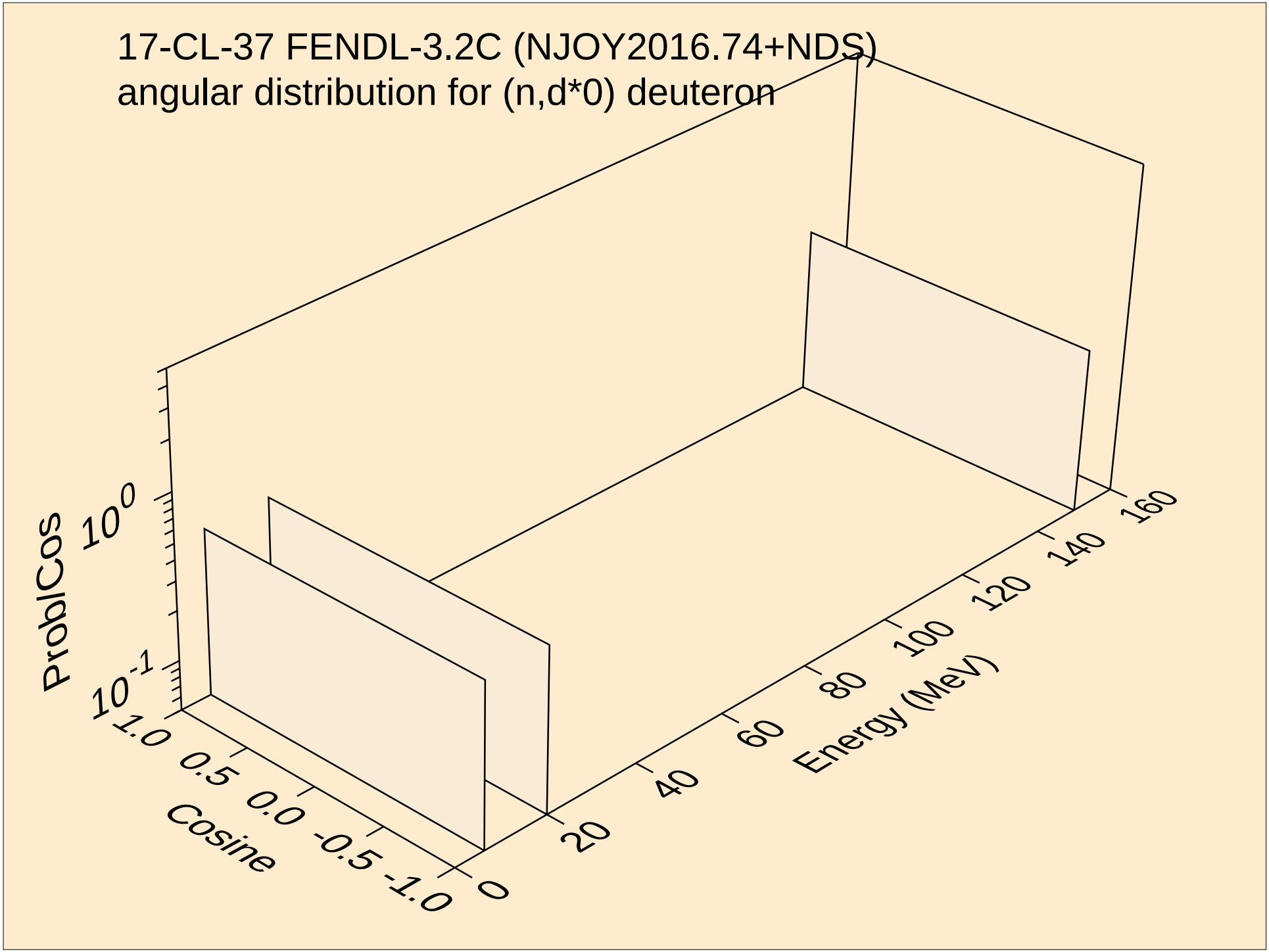

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
protons from (n,x)
Prob/MeV
10-1
10-3
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)

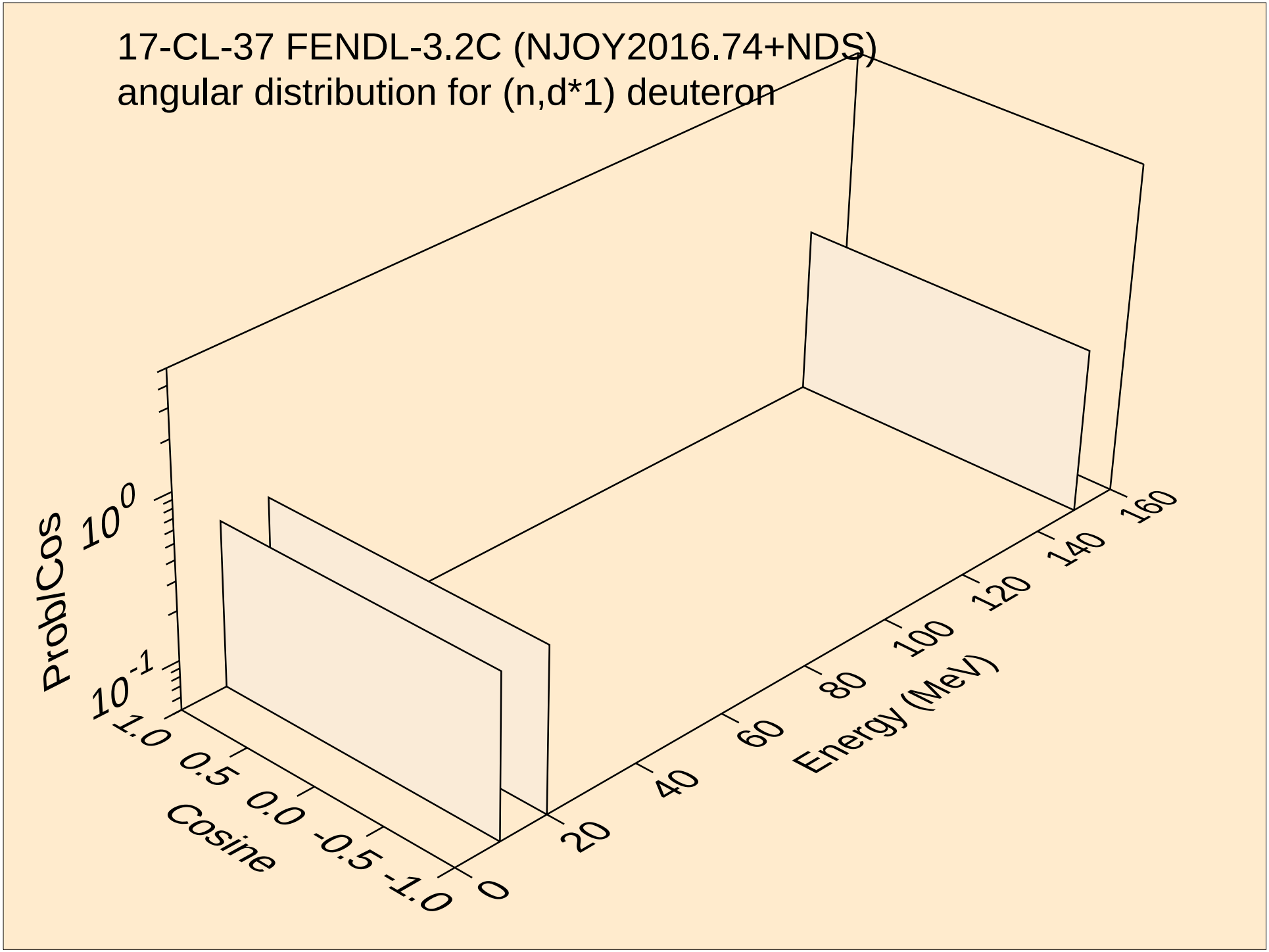

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
protons from (n,np)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
8
10
12
14
16
18
20
Energy (MeV)

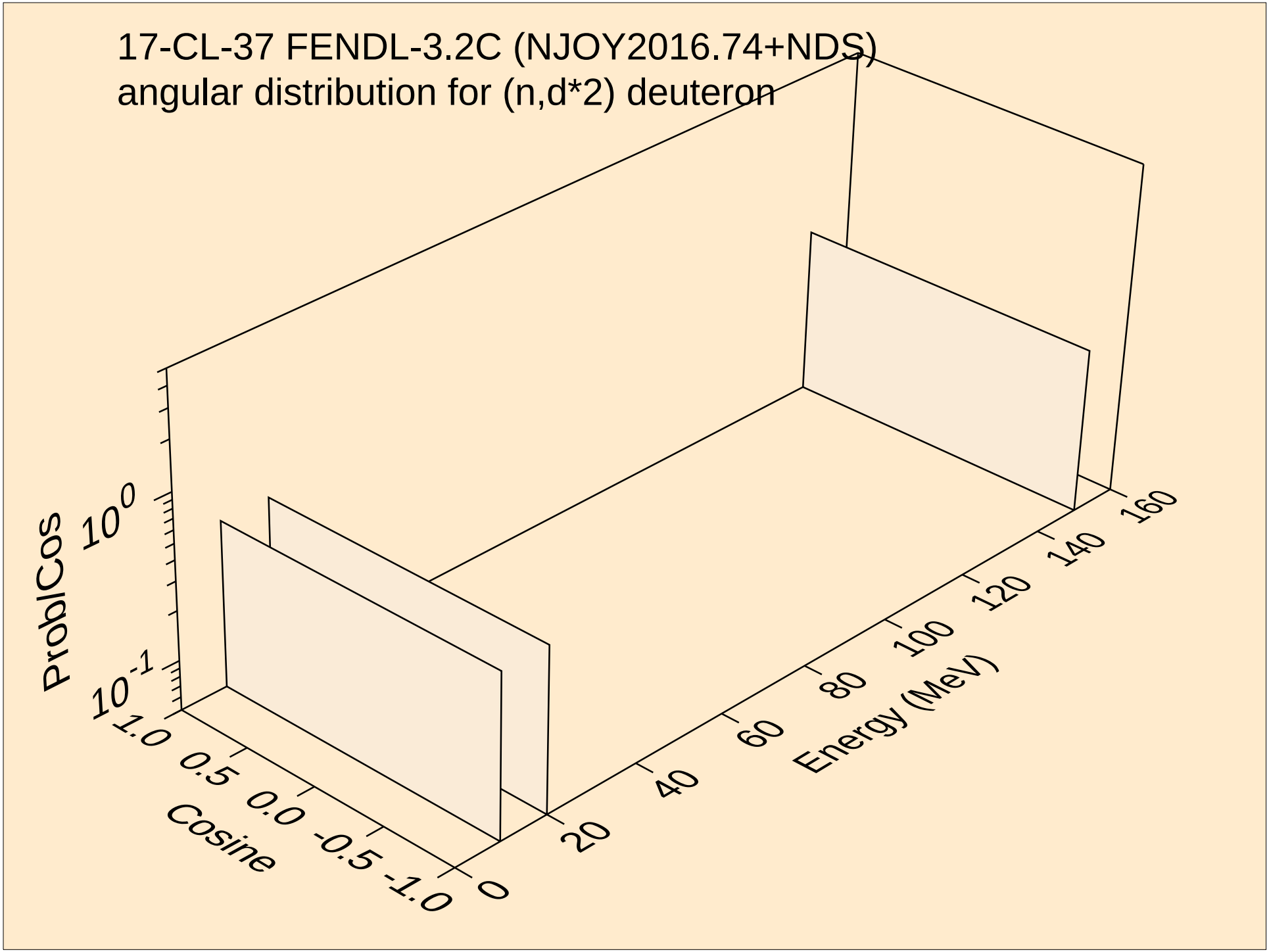

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
protons from (n,p*c)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
4
6
8
10
12
14
16
18
20
Energy (MeV)

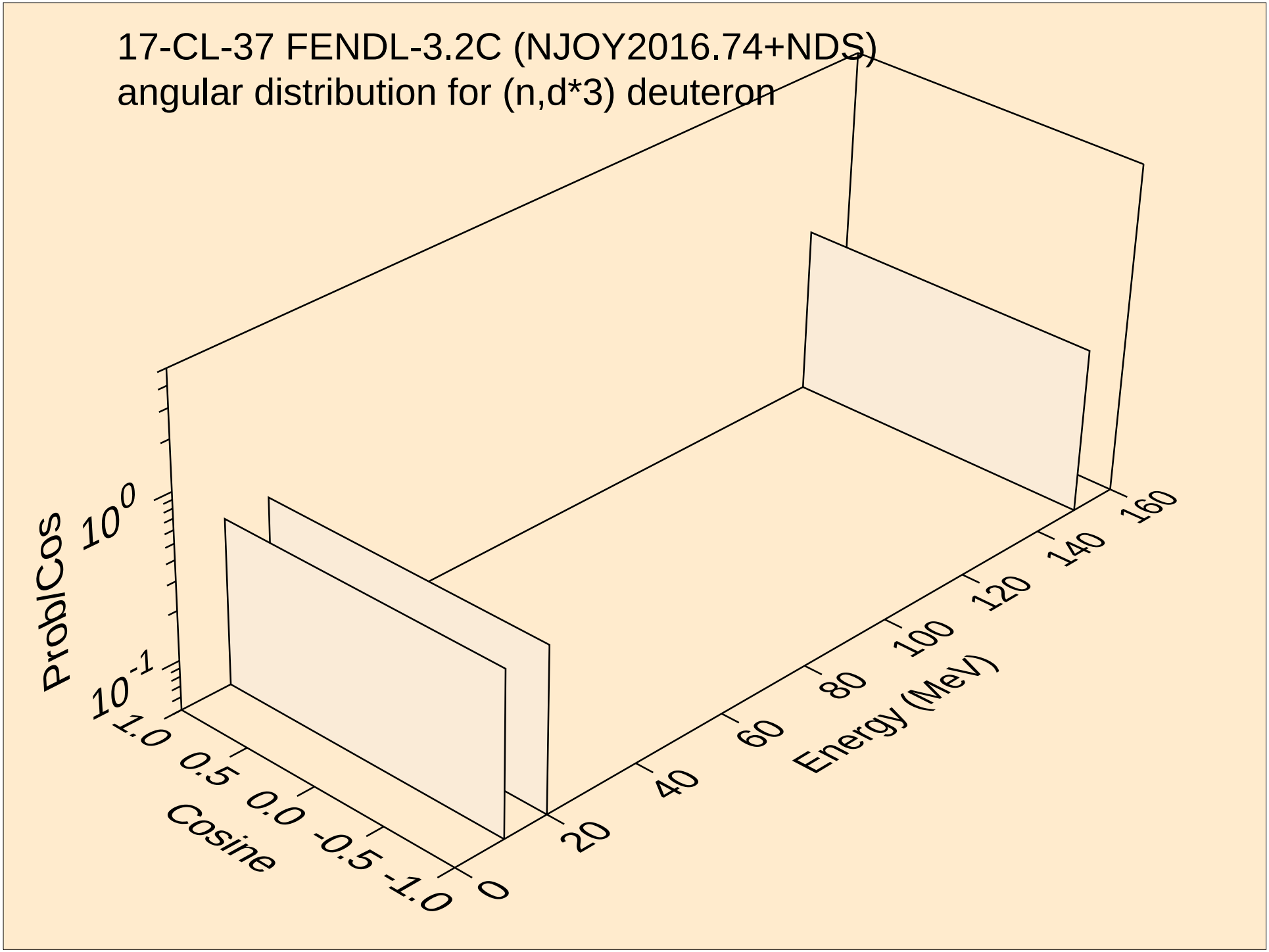

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
deuterons from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)

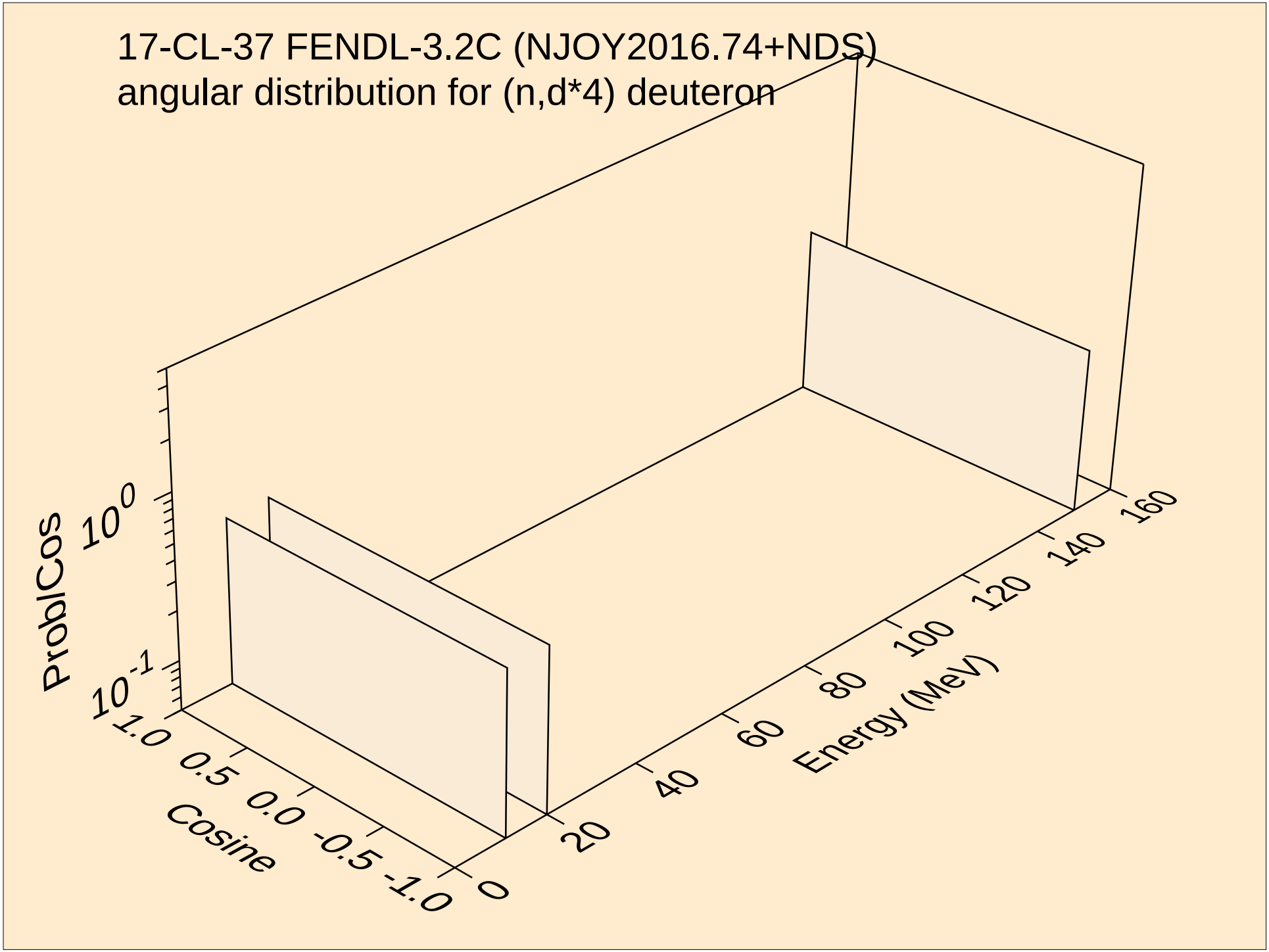

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
deuterons from (n,nd)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
Sec. Energy
0
2
4
Energy (MeV)
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0

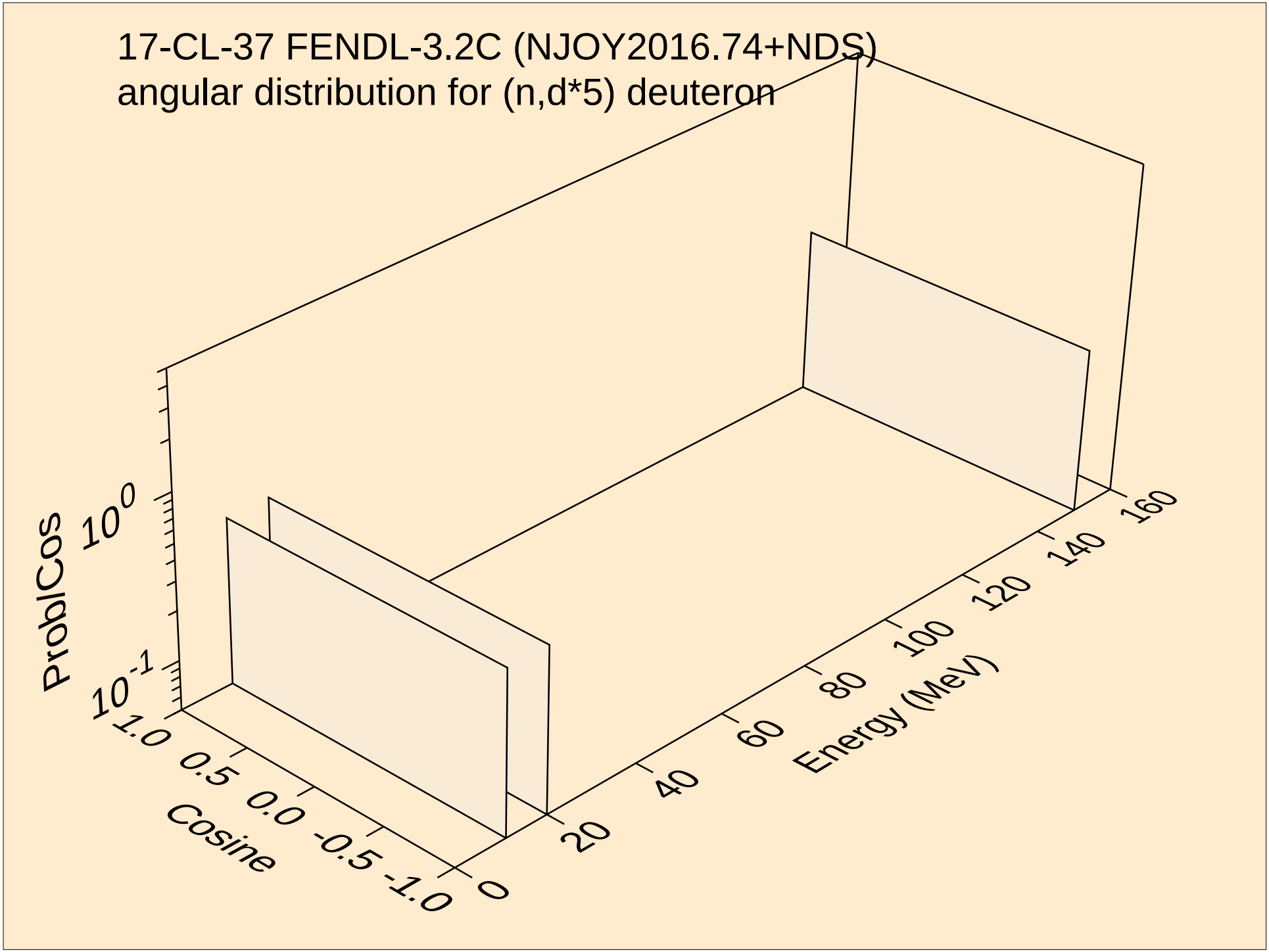

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*0) deuteron
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

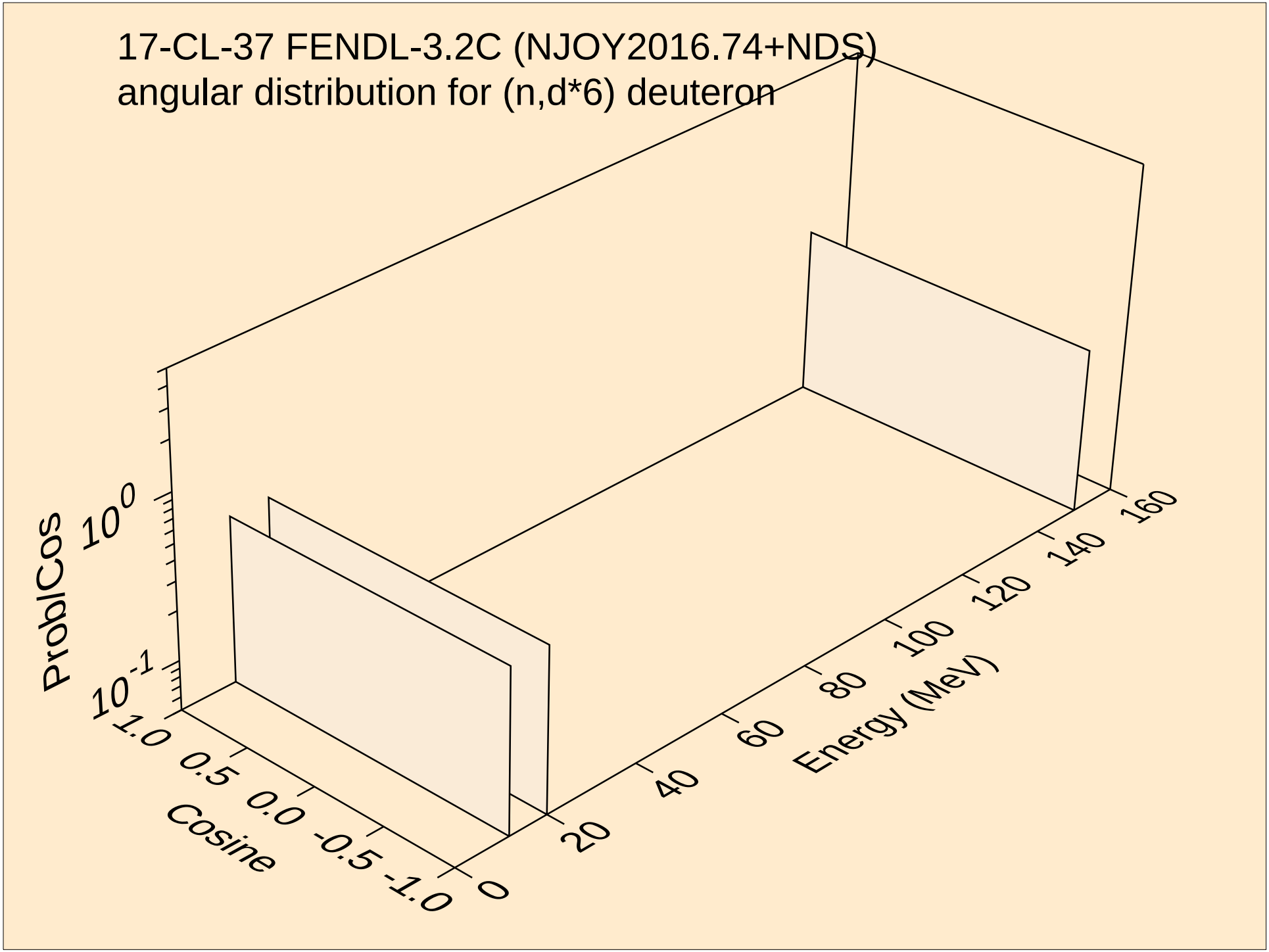

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*1) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

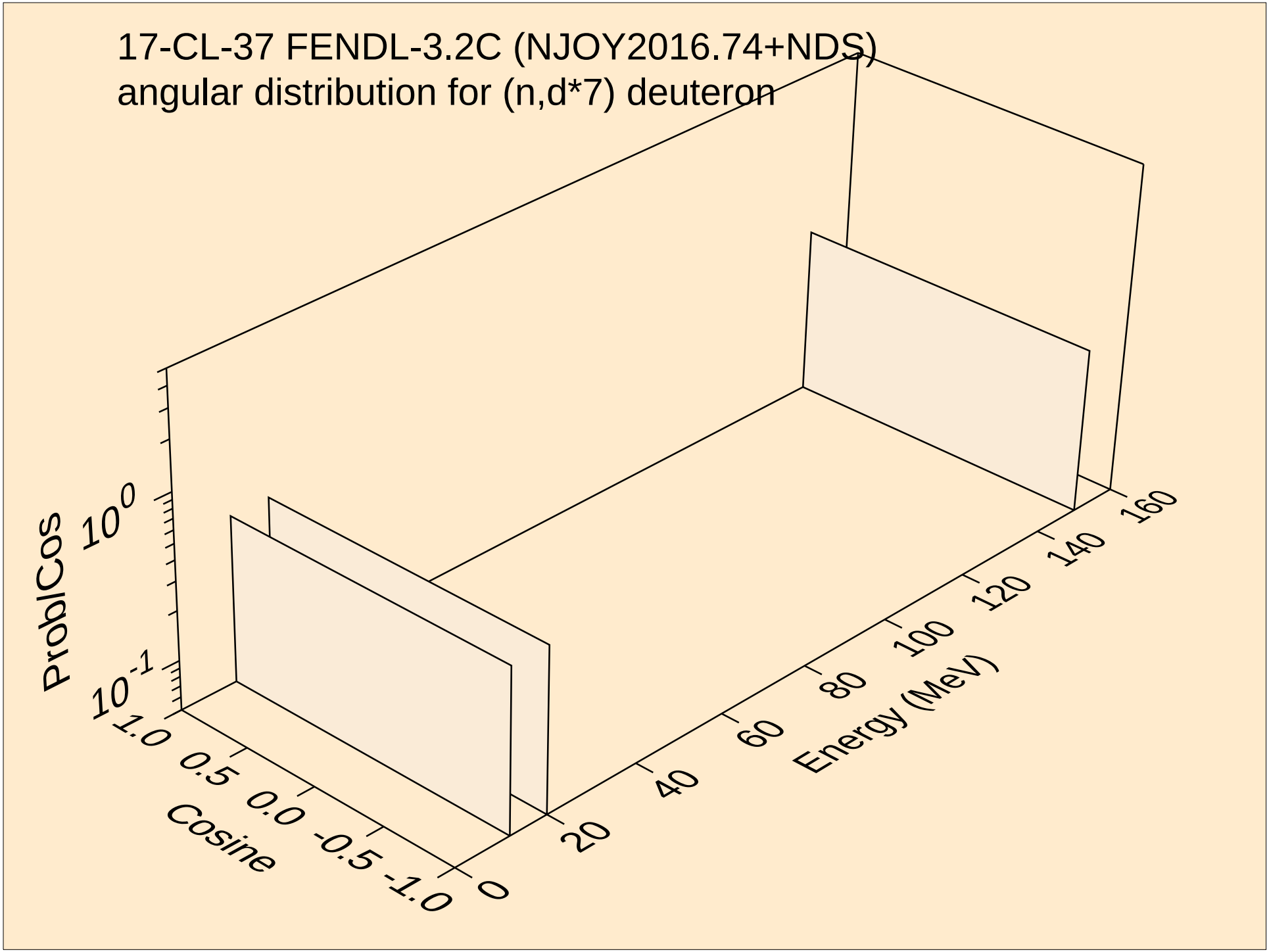

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*2) deuteron
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

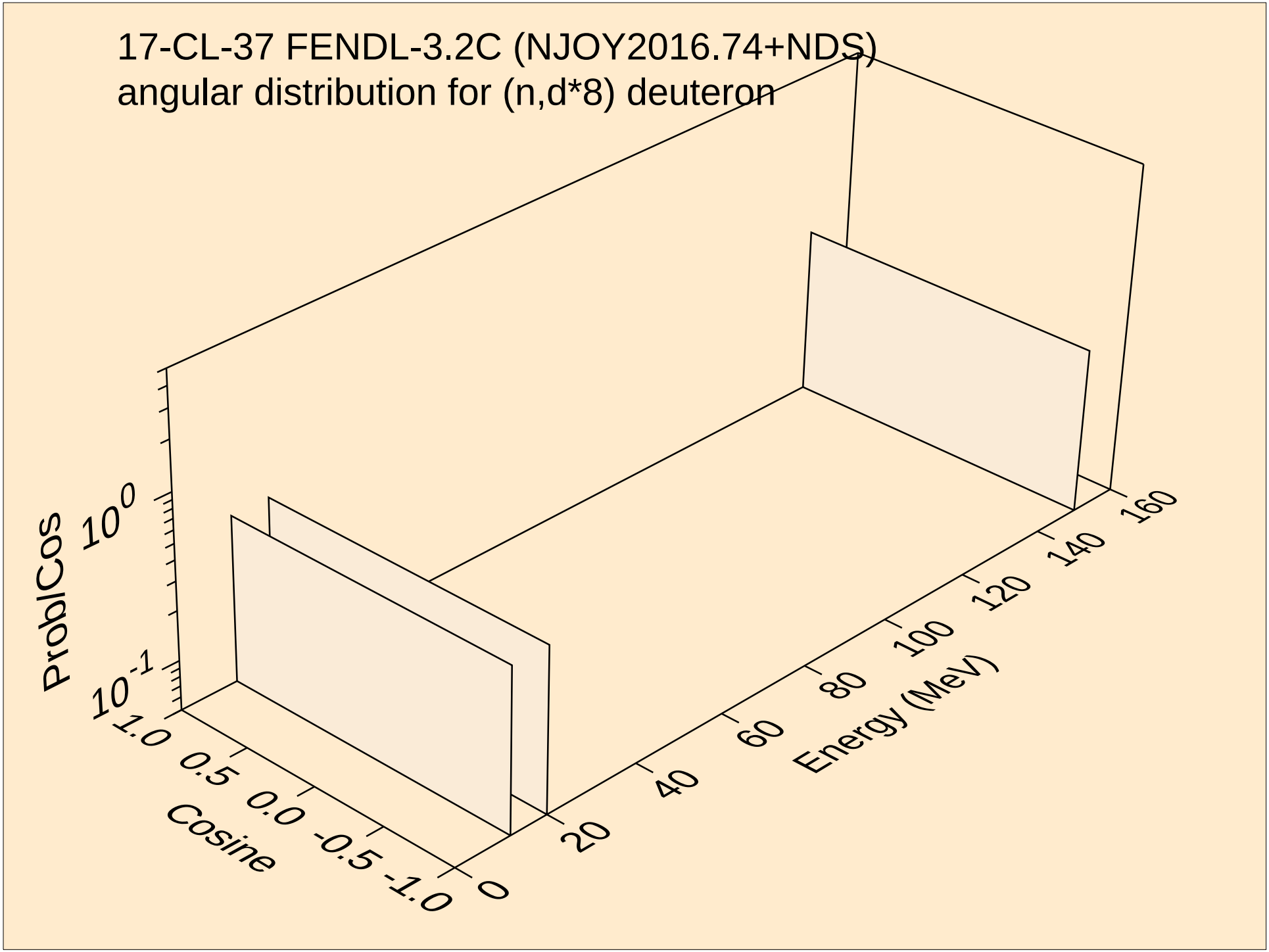

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*3) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

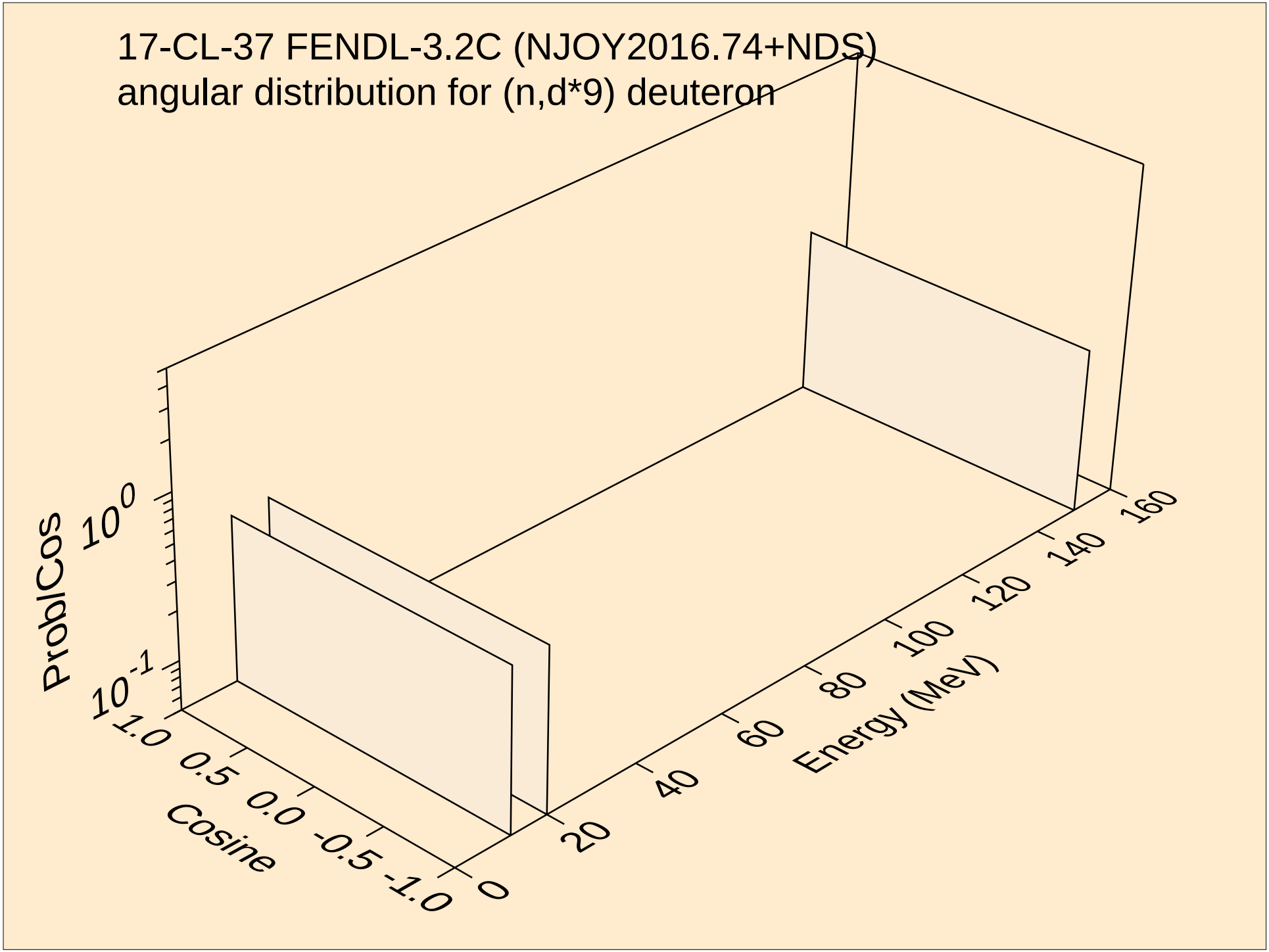

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*4) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

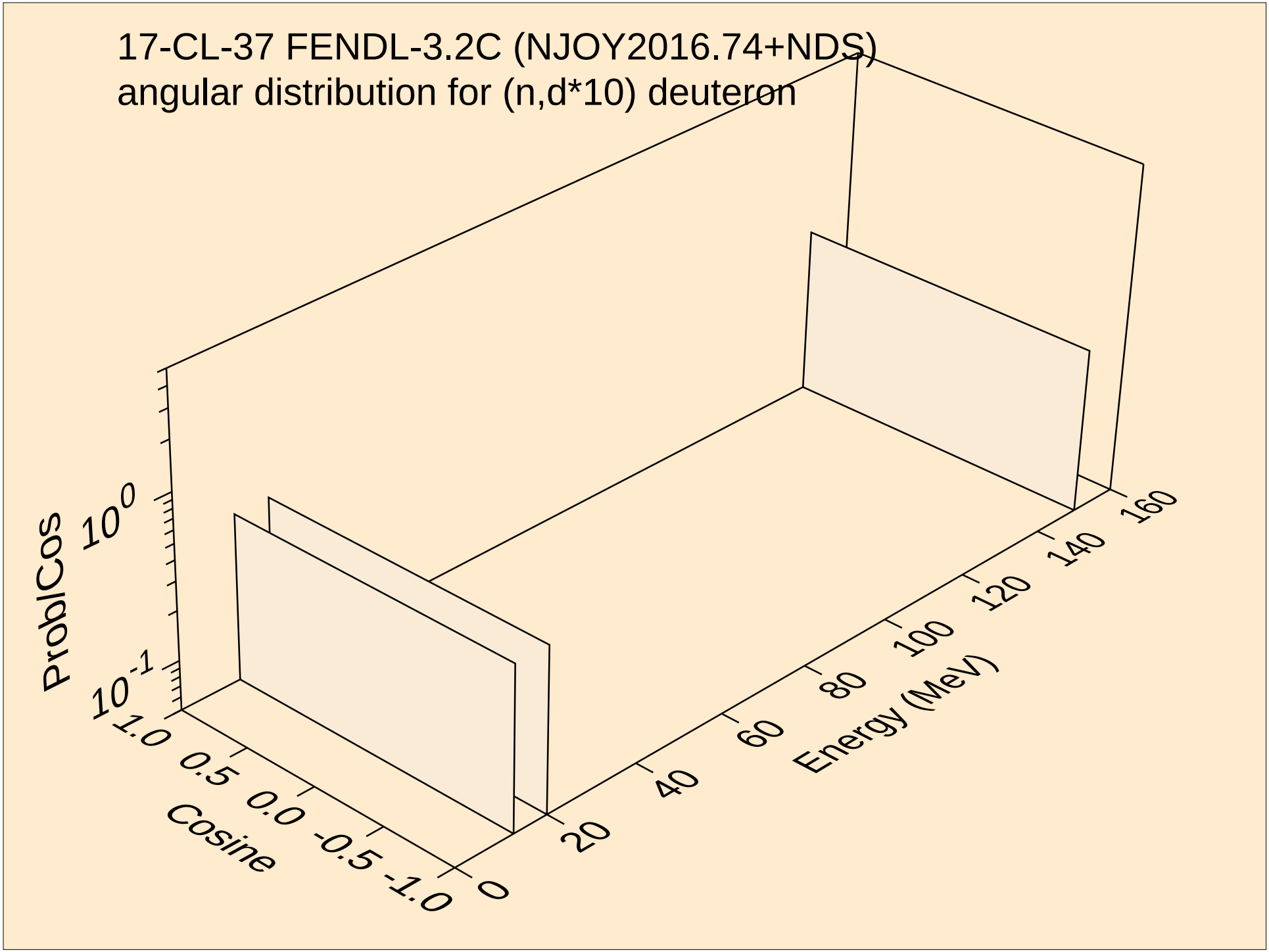

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*5) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

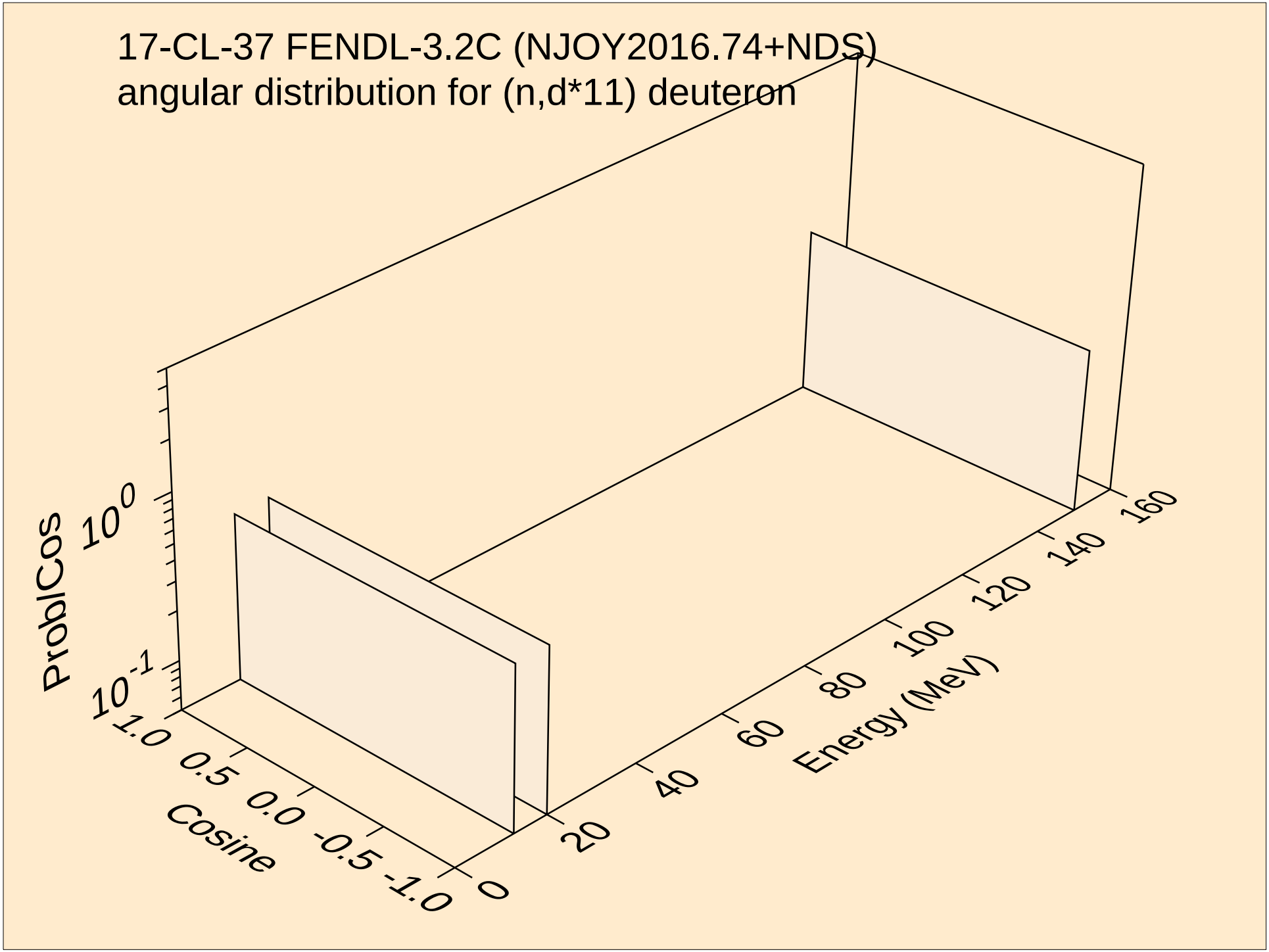

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*6) deuteron
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

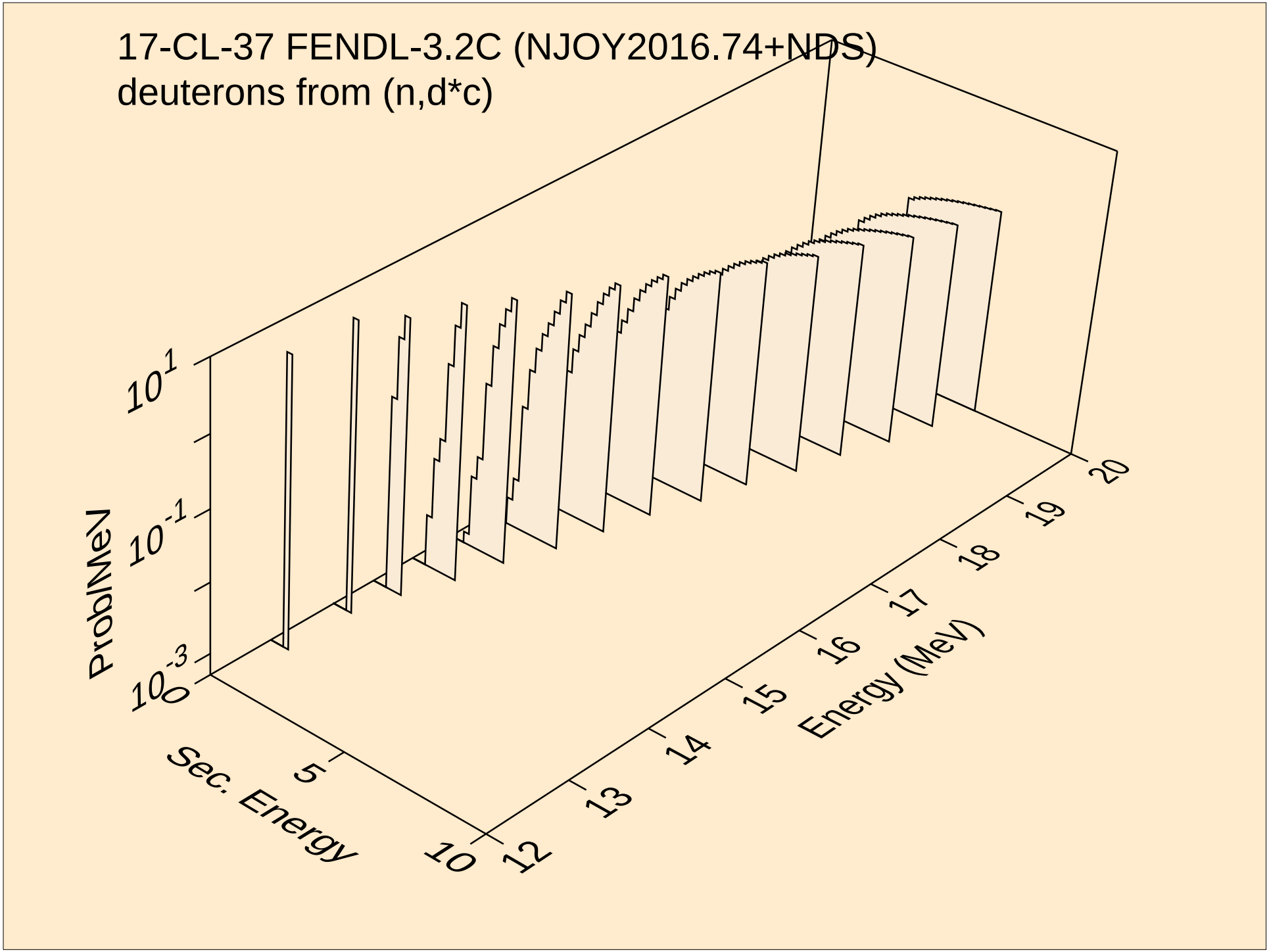

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*7) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

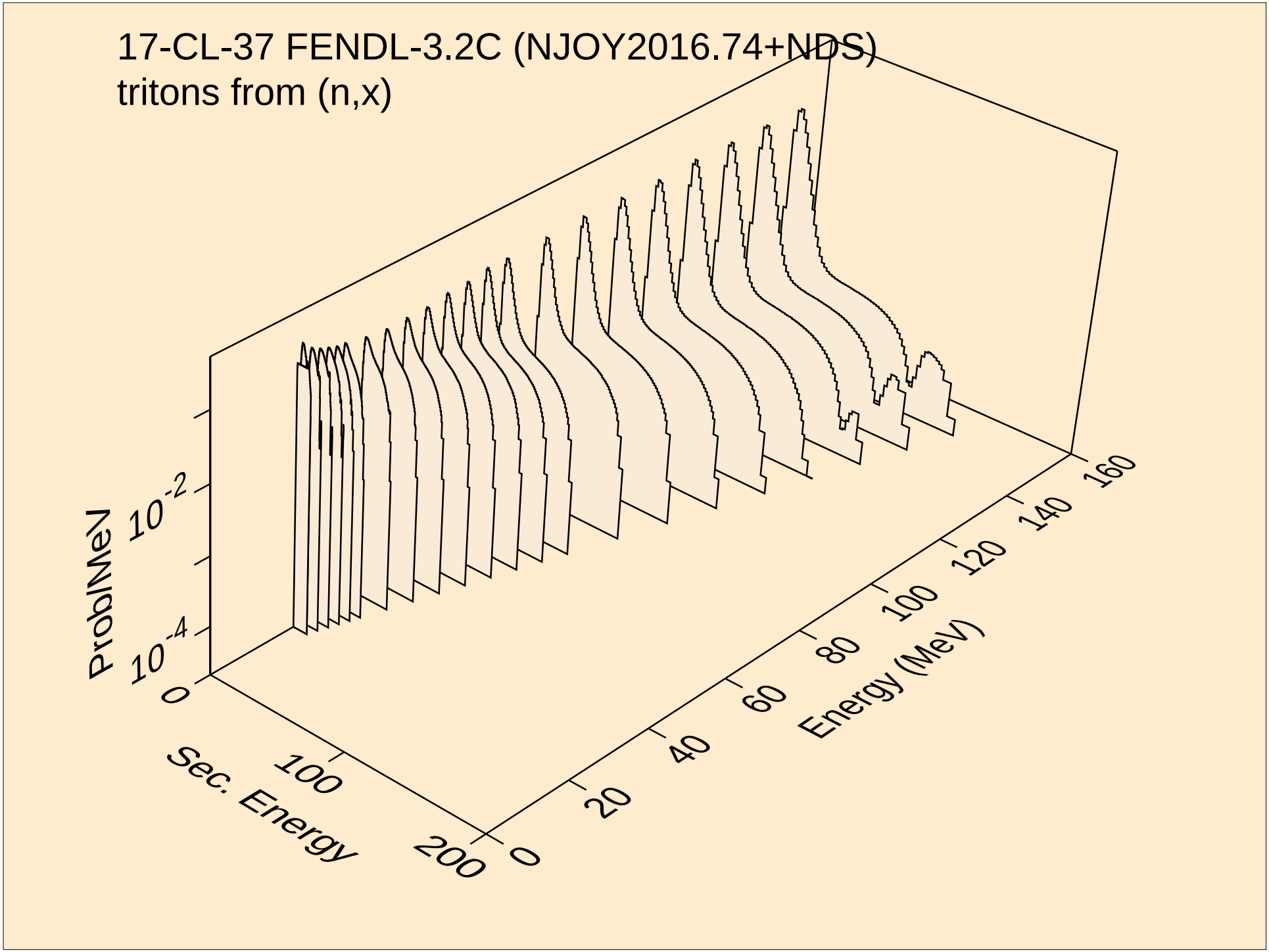

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*8) deuteron
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

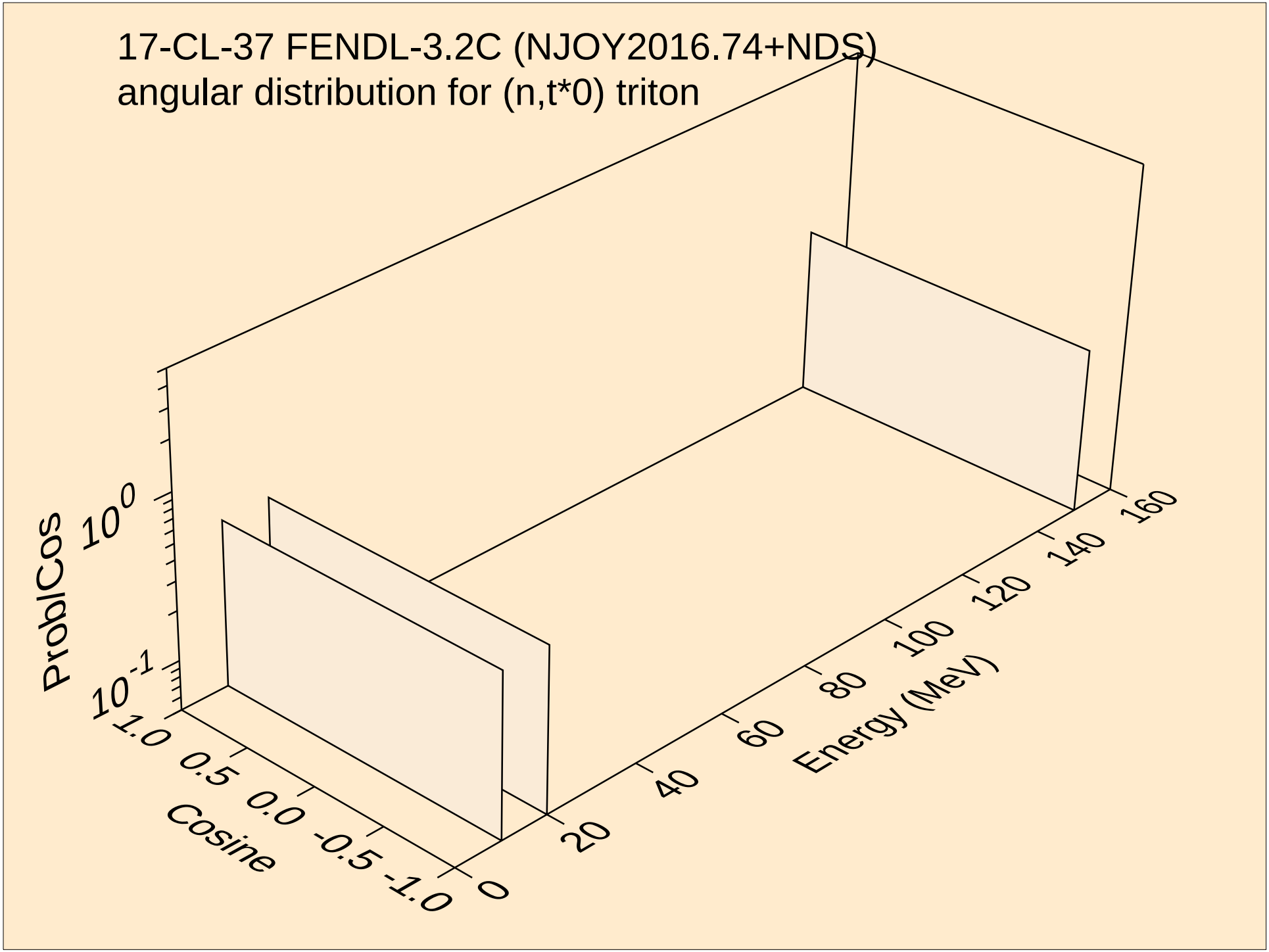

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*9) deuteron
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

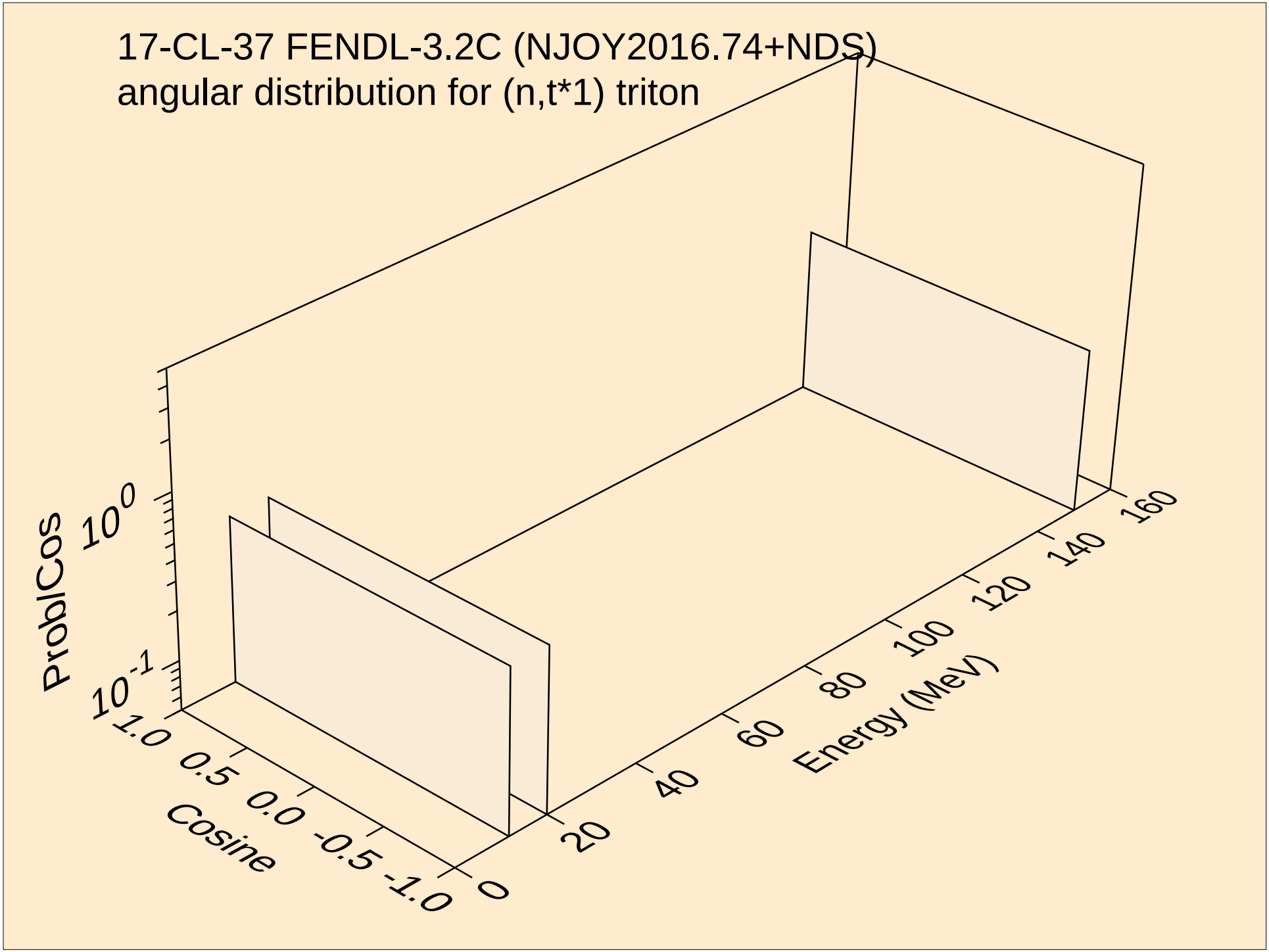

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*10) deuteron
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

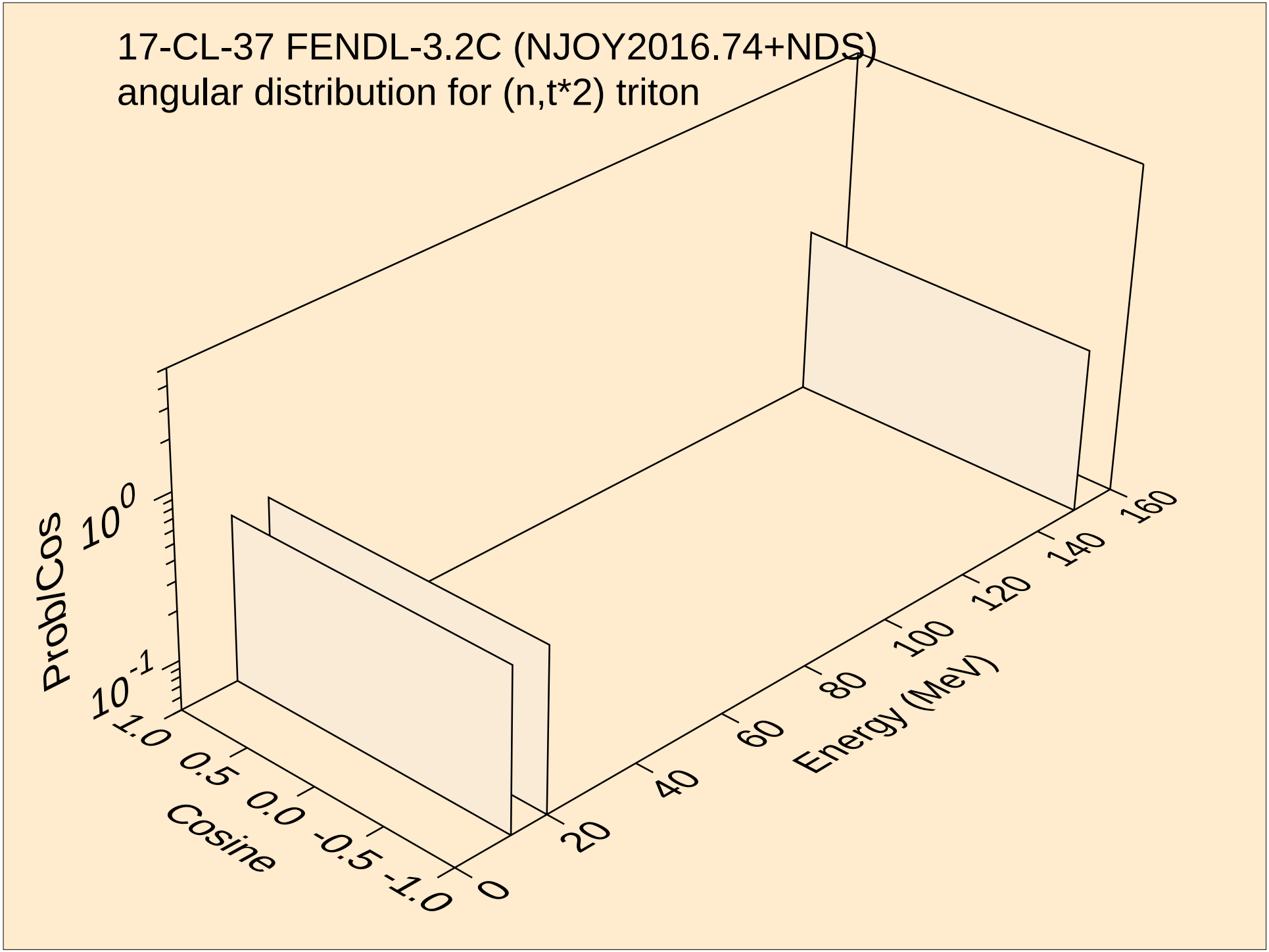

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,d*11) deuteron
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

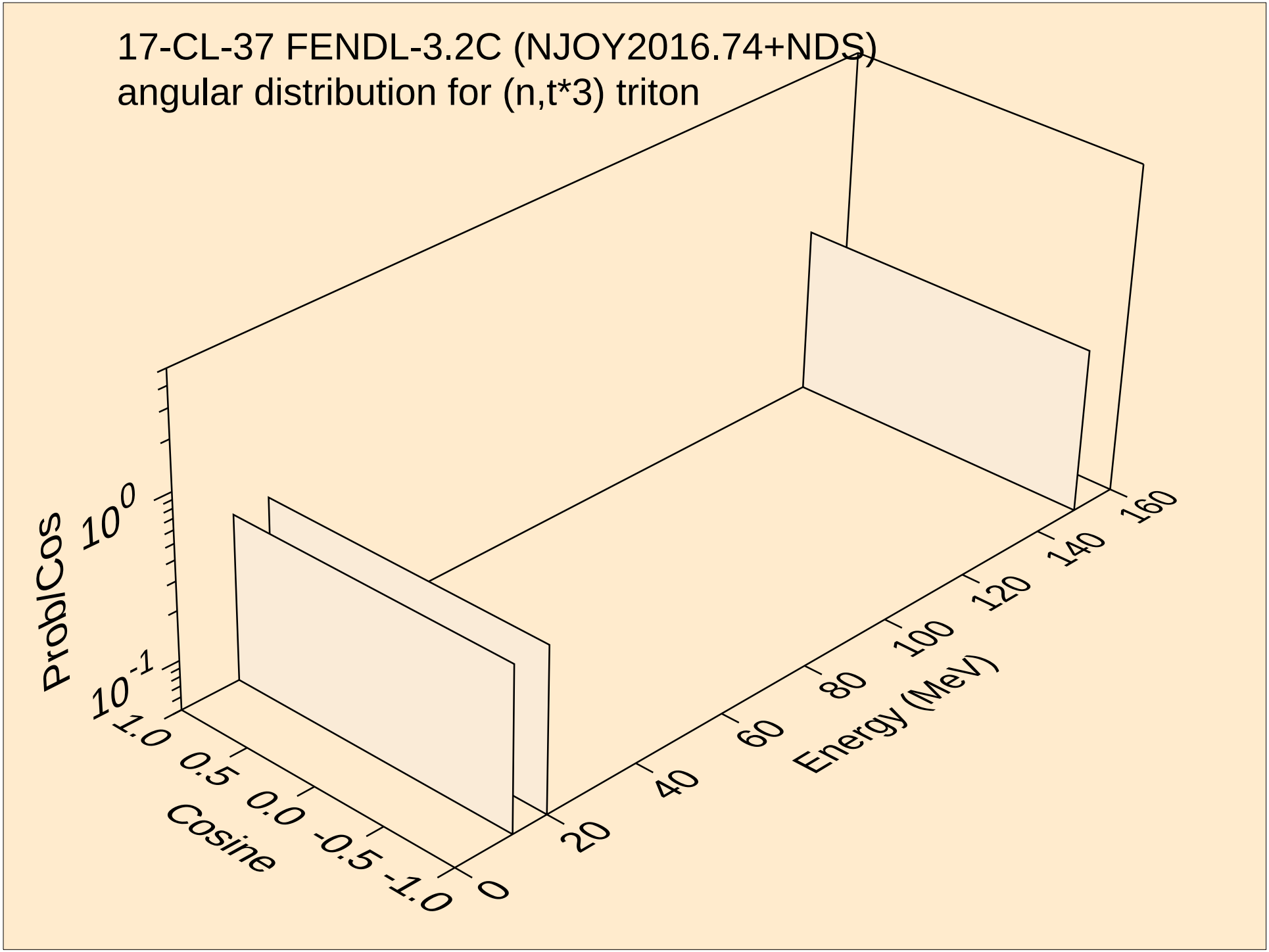

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
deuterons from (n,d*c)
Prob/MeV
10^1
10^-1
10^-3
Sec. Energy
0
5
10
Energy (MeV)
12
13
14
15
16
17
18
19
20

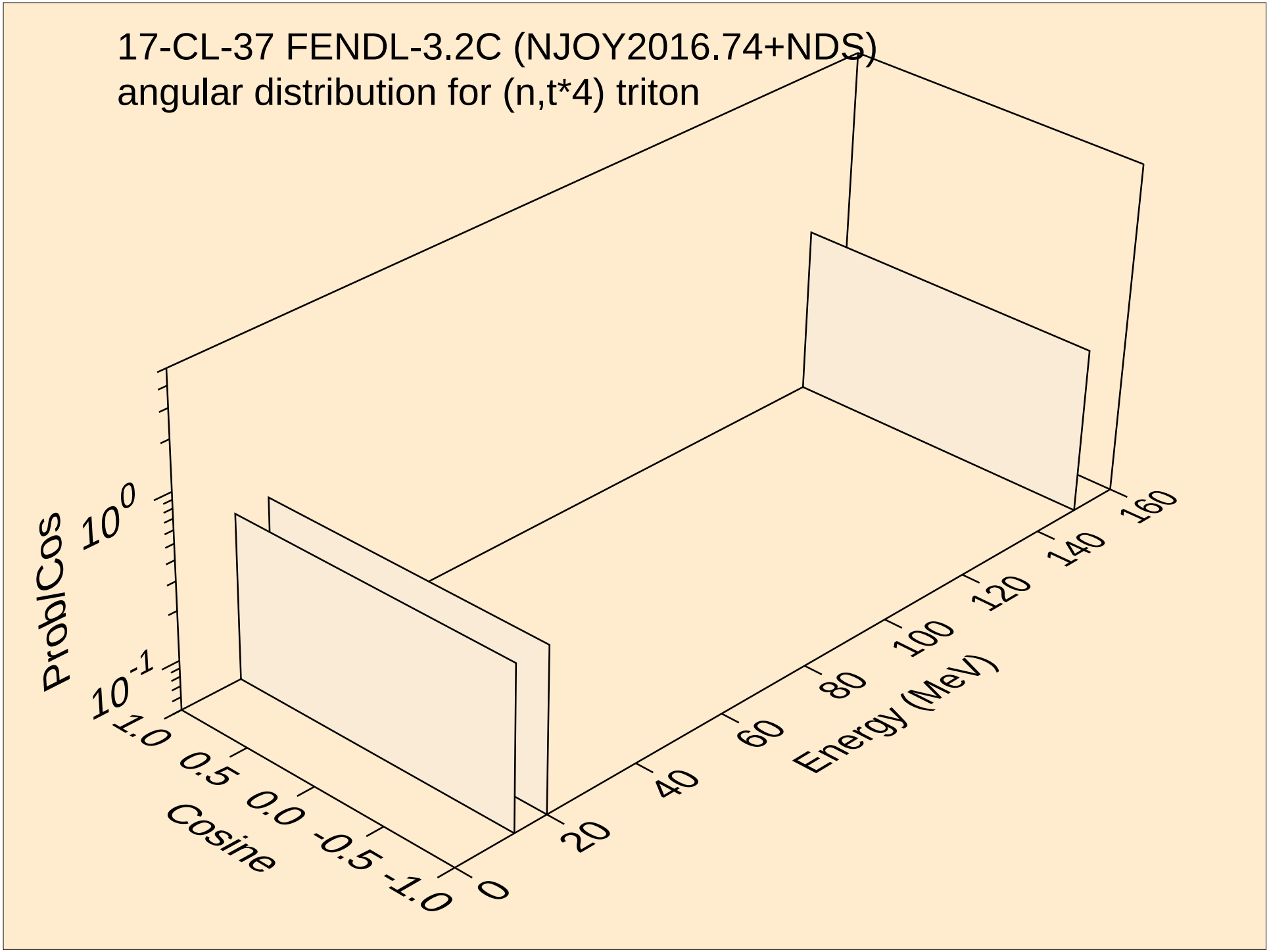

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
tritons from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)

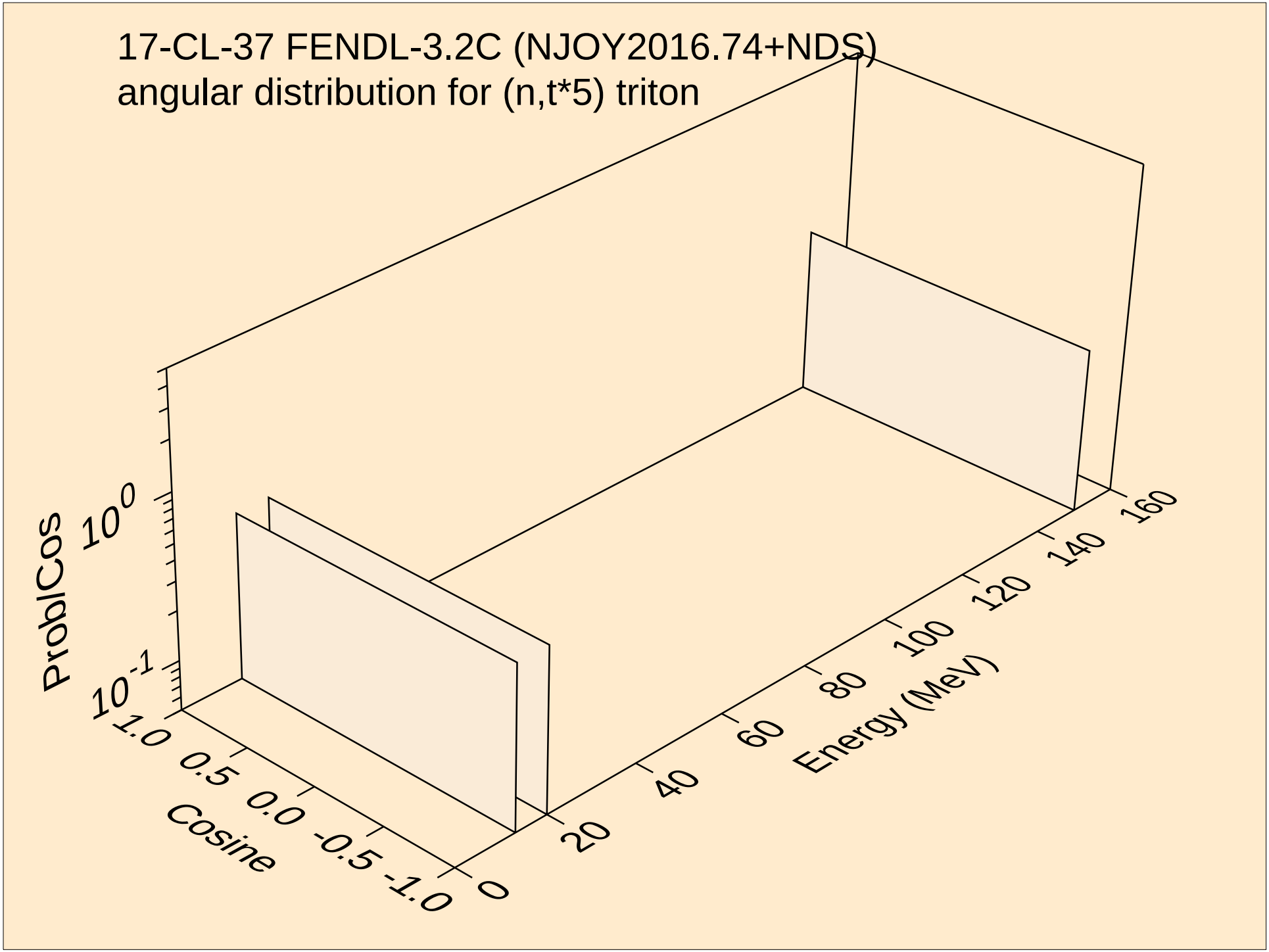

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*0) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

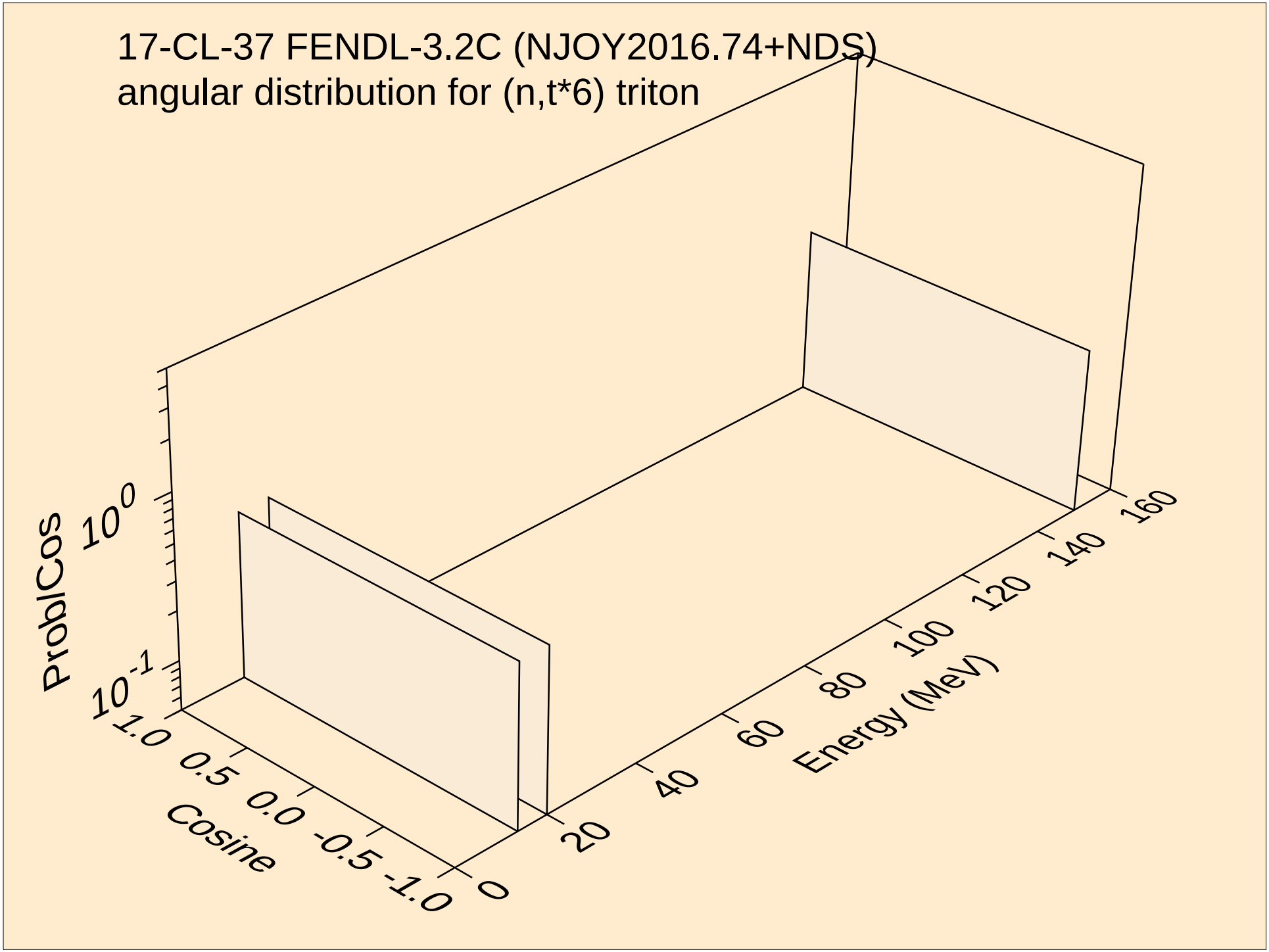

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*1) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

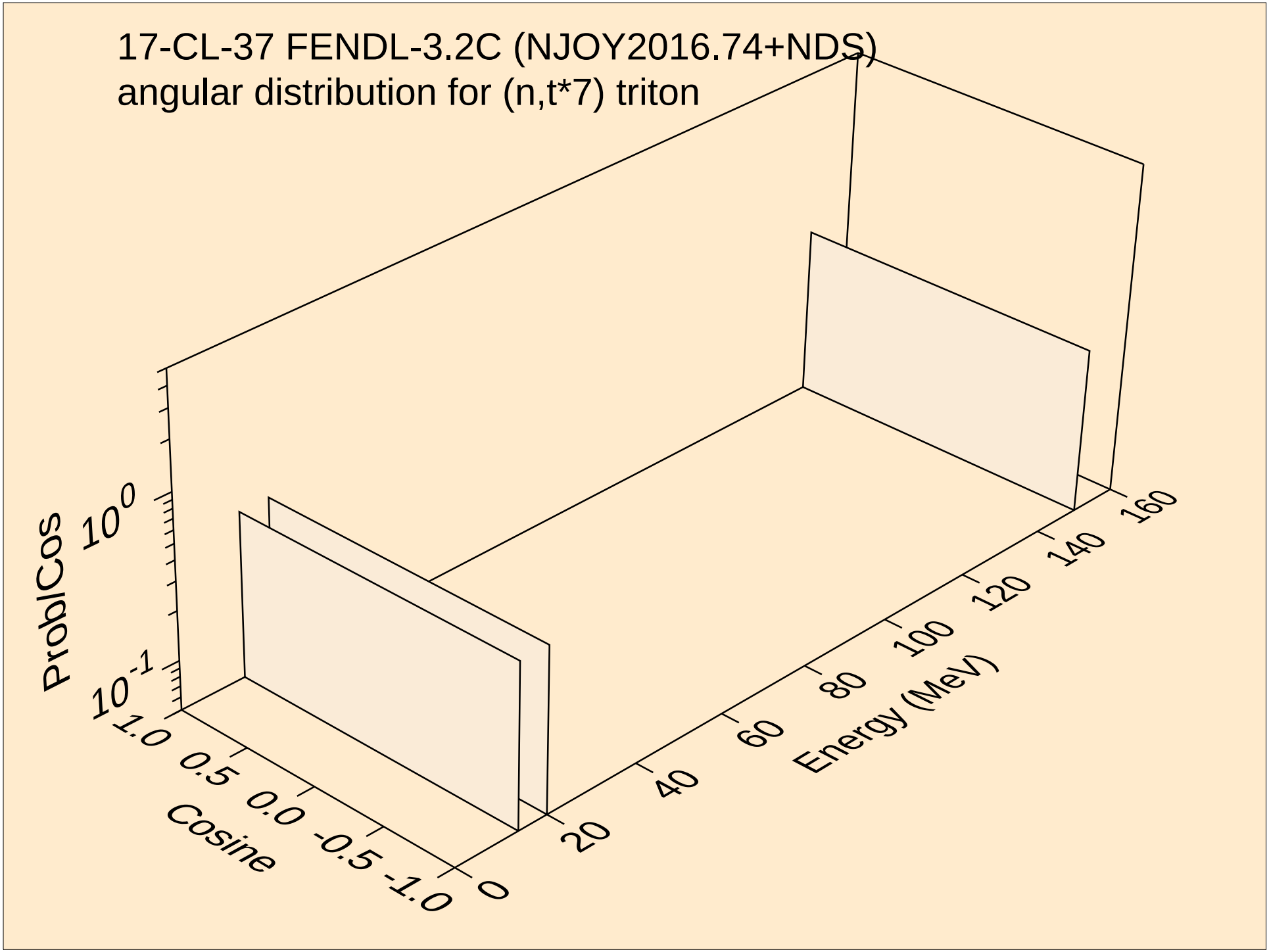

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*2) triton
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

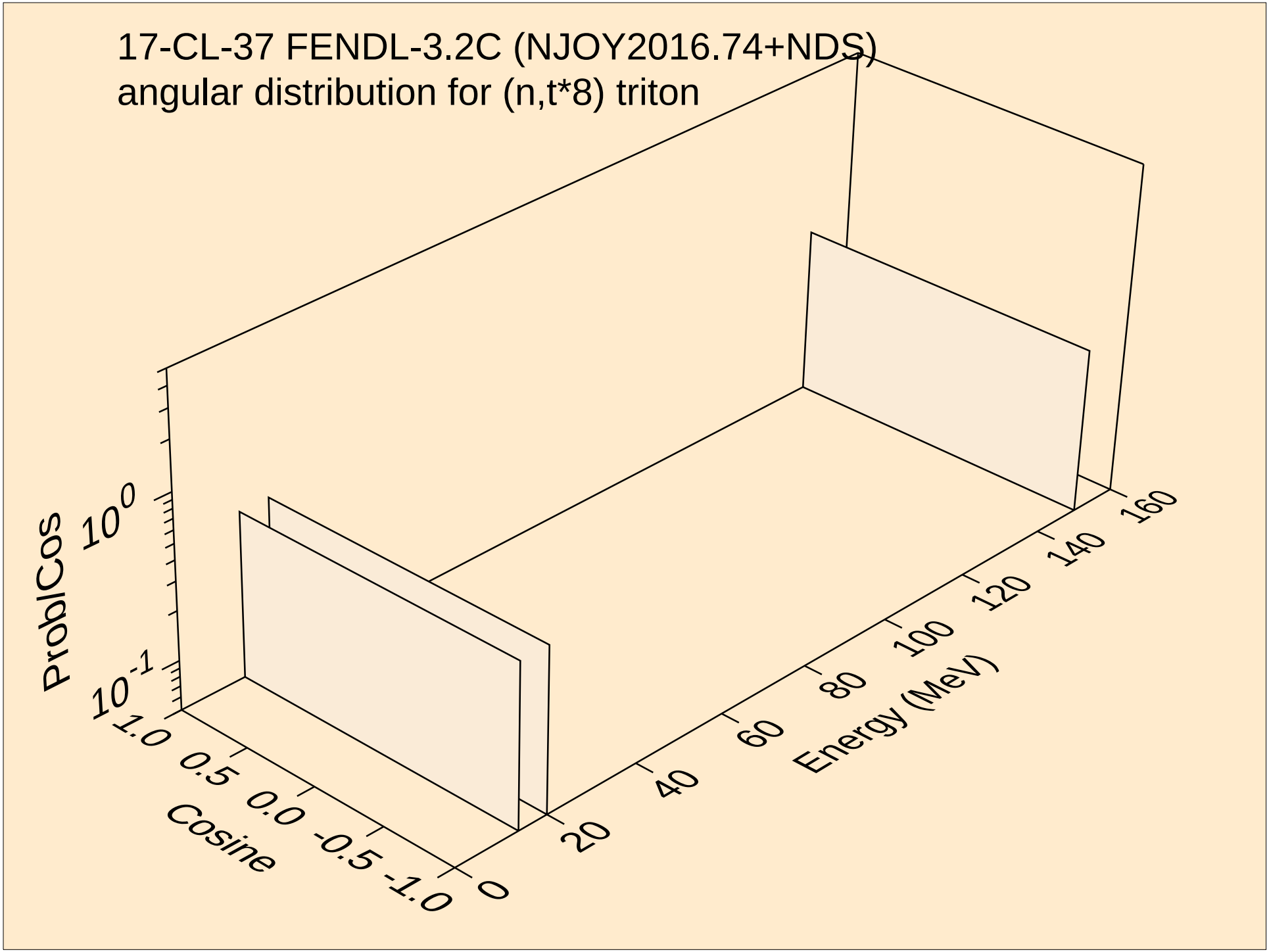

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*3) triton
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

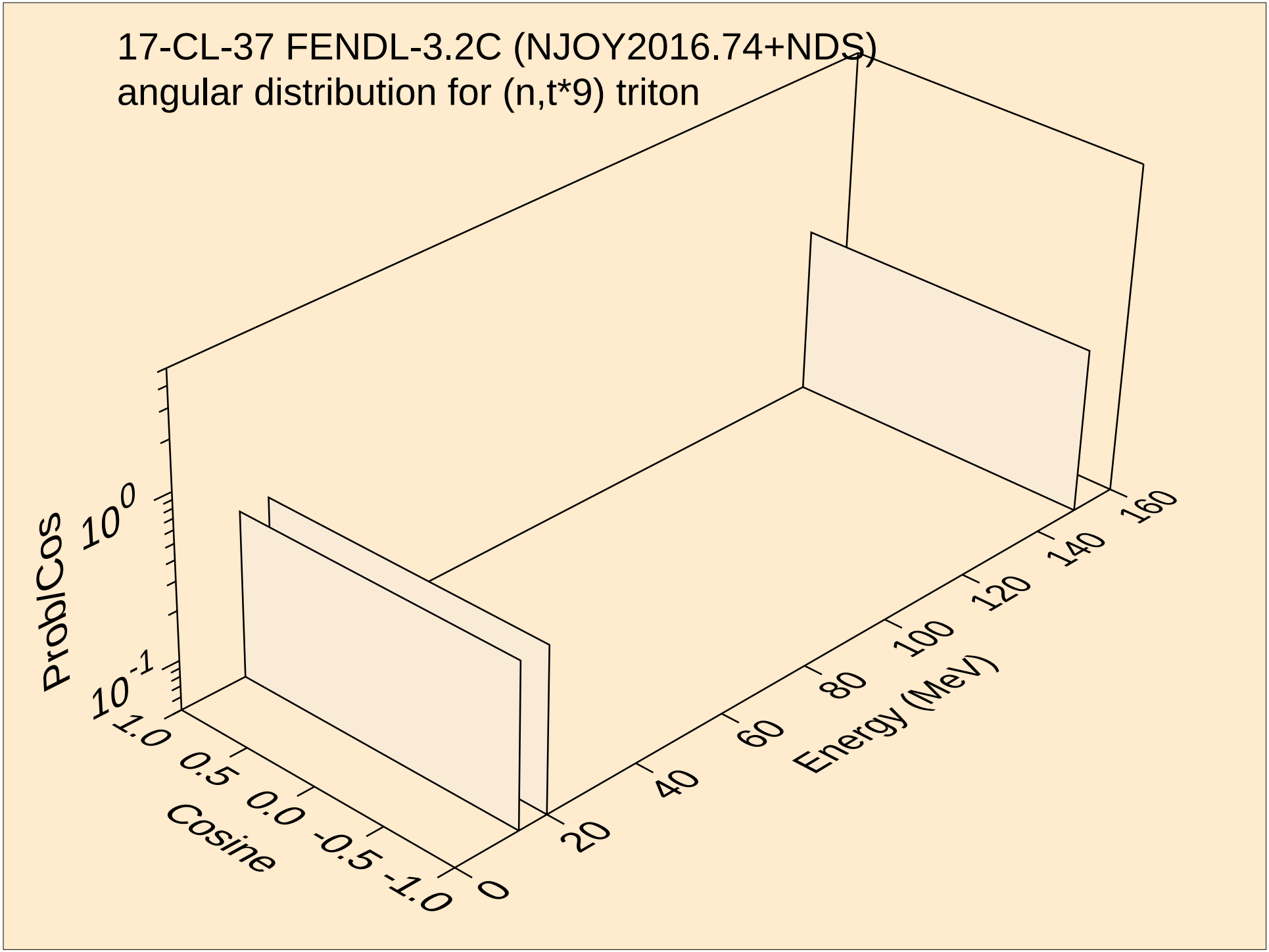

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*4) triton
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

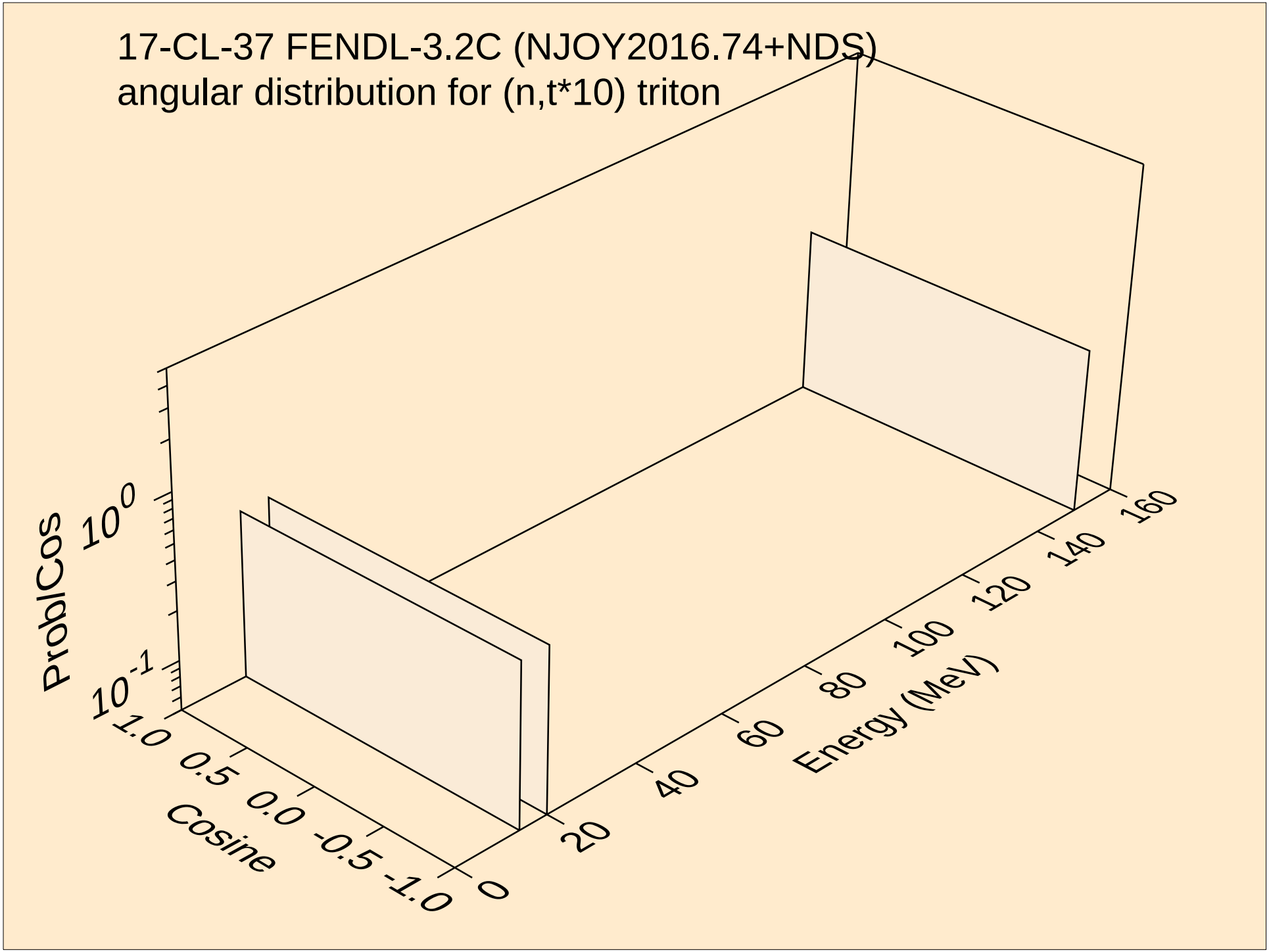

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*5) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

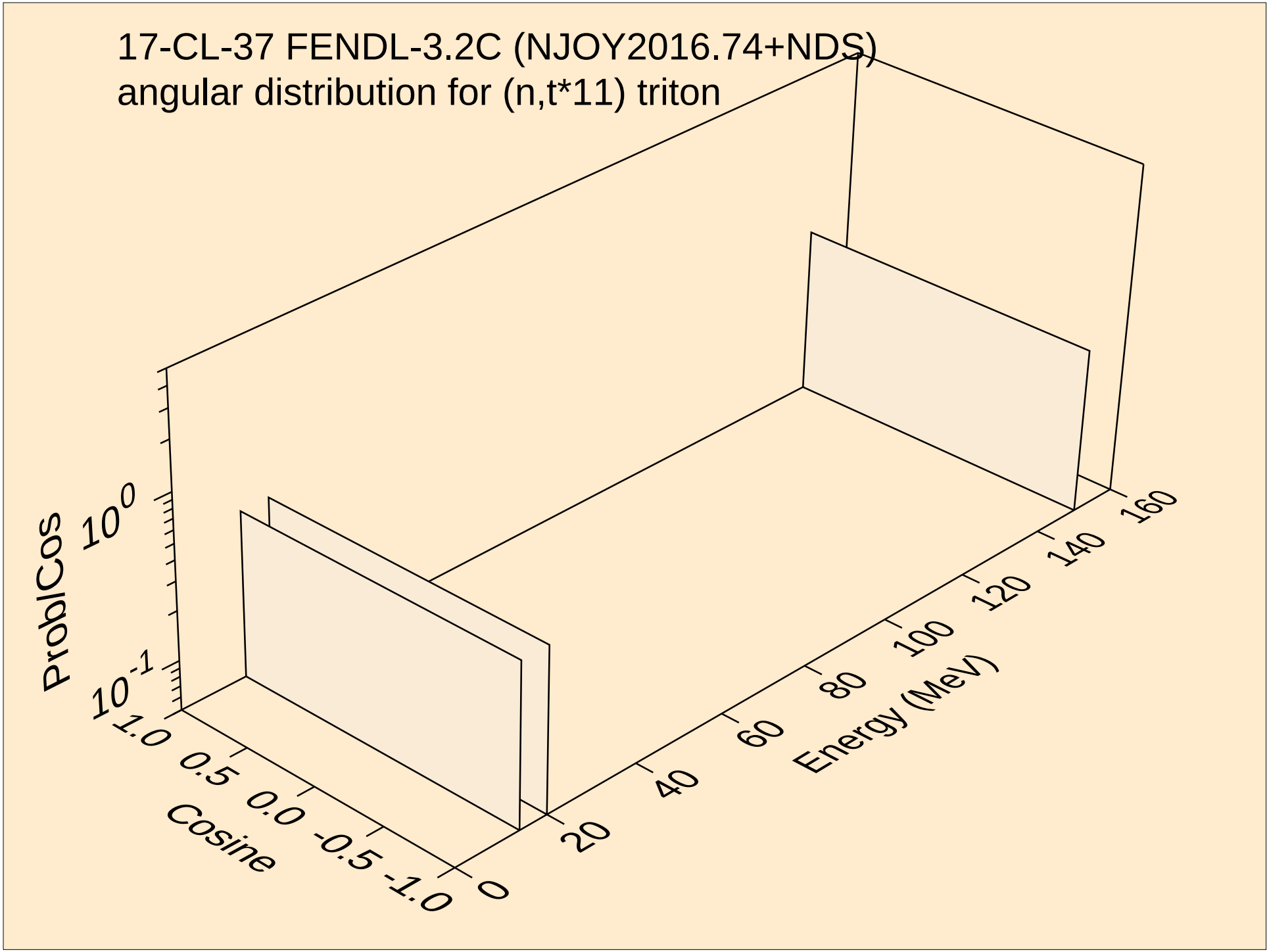

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*6) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

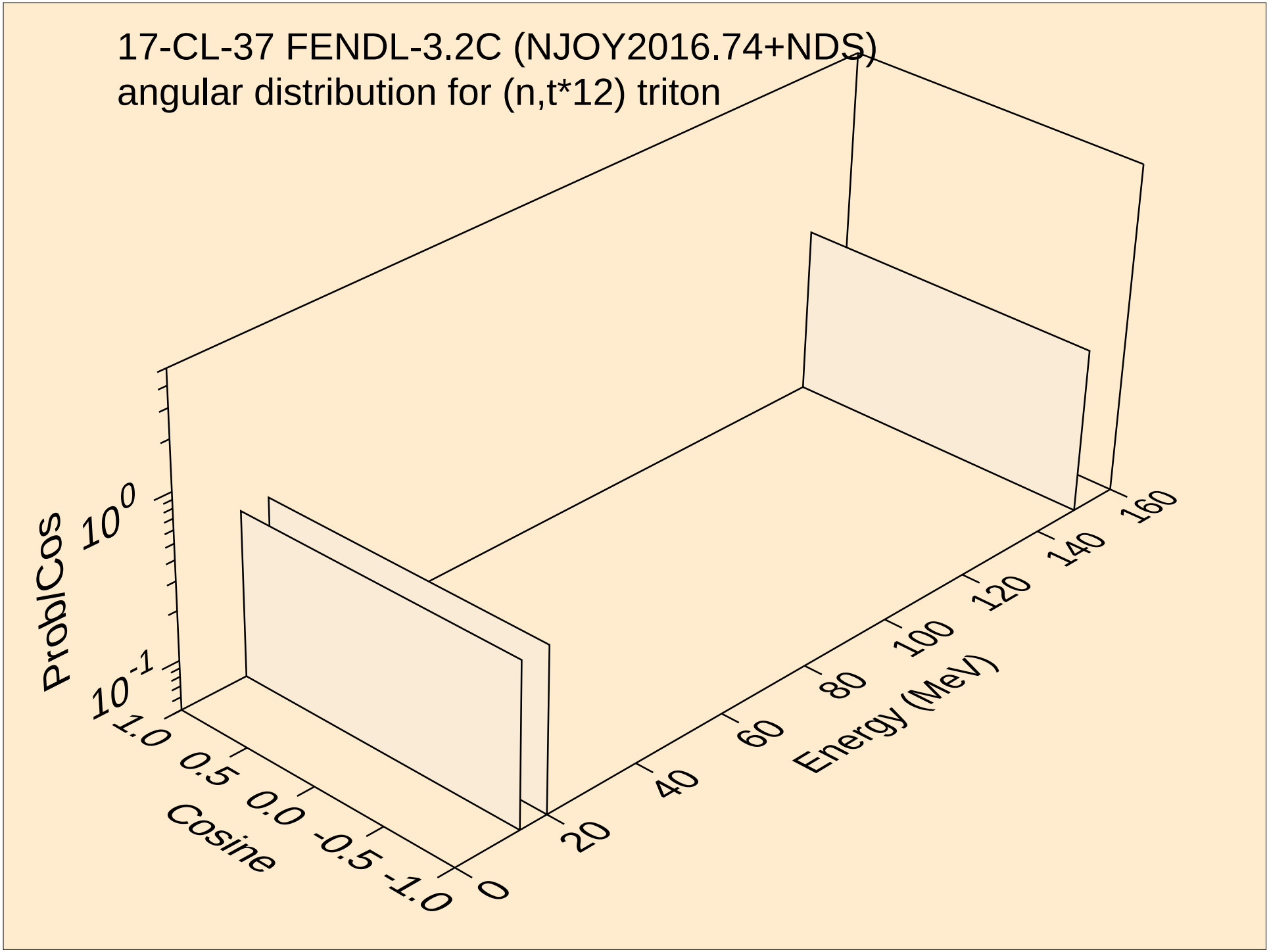

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*7) triton
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

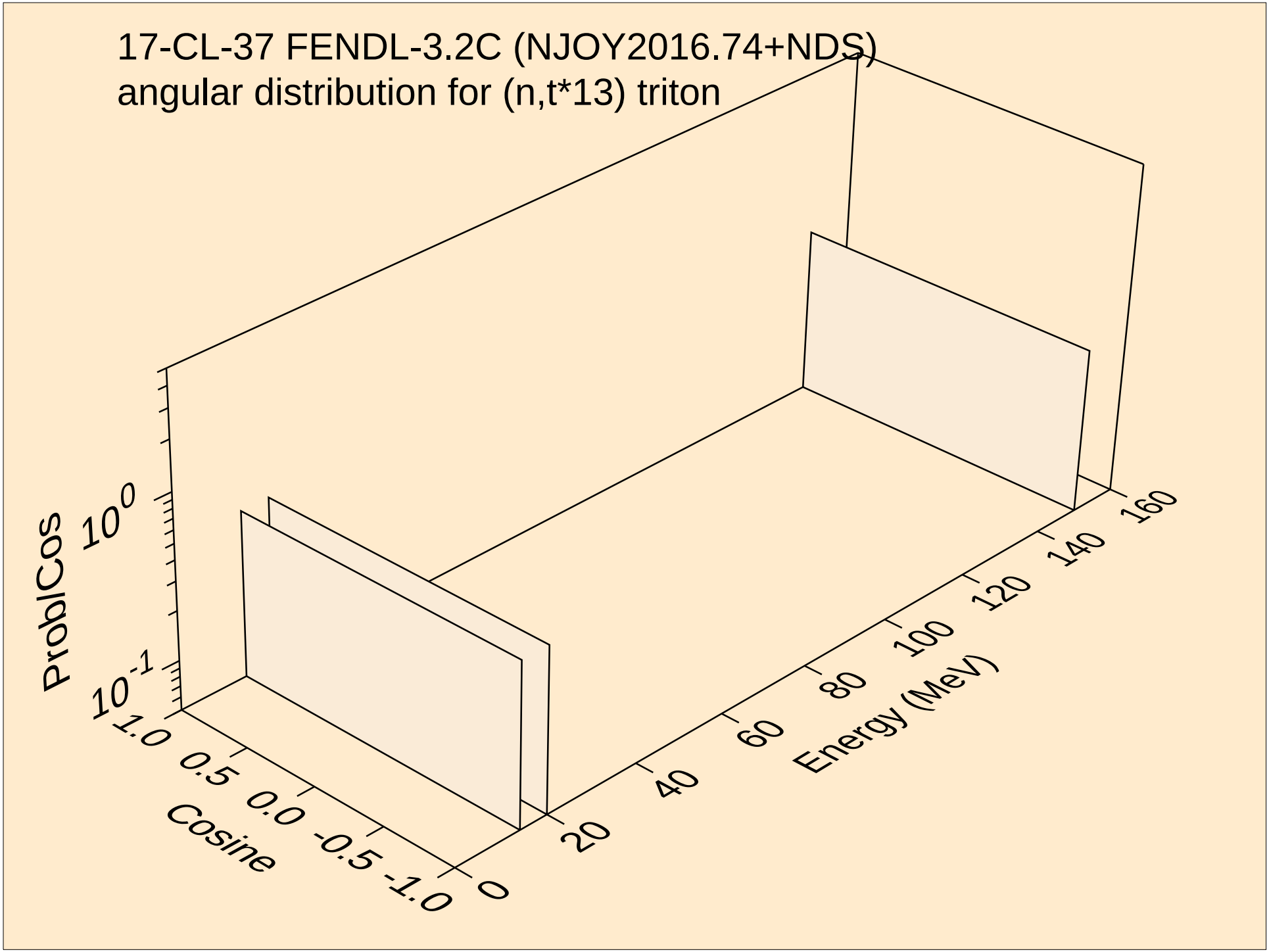

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*8) triton
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

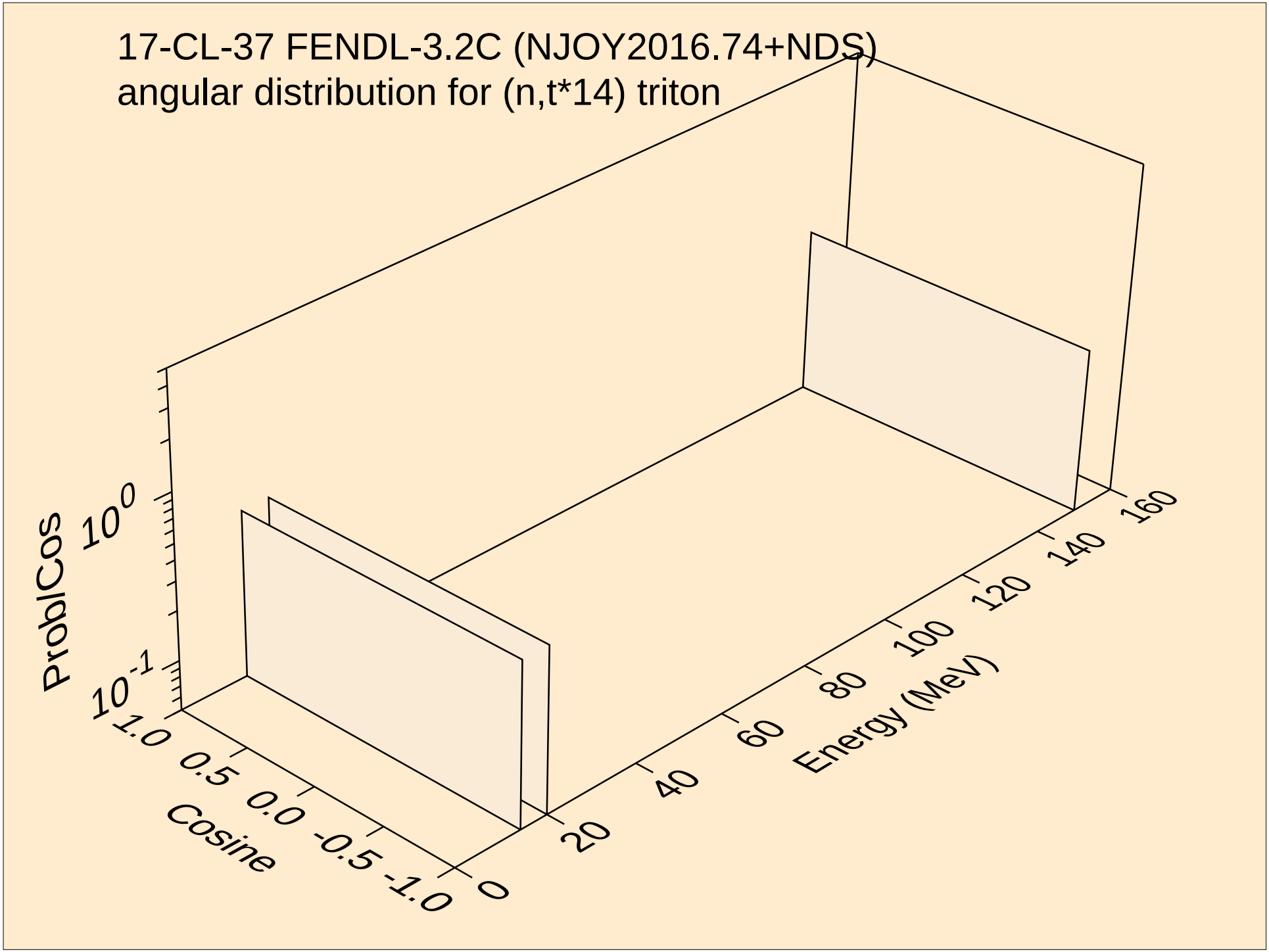

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*9) triton
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

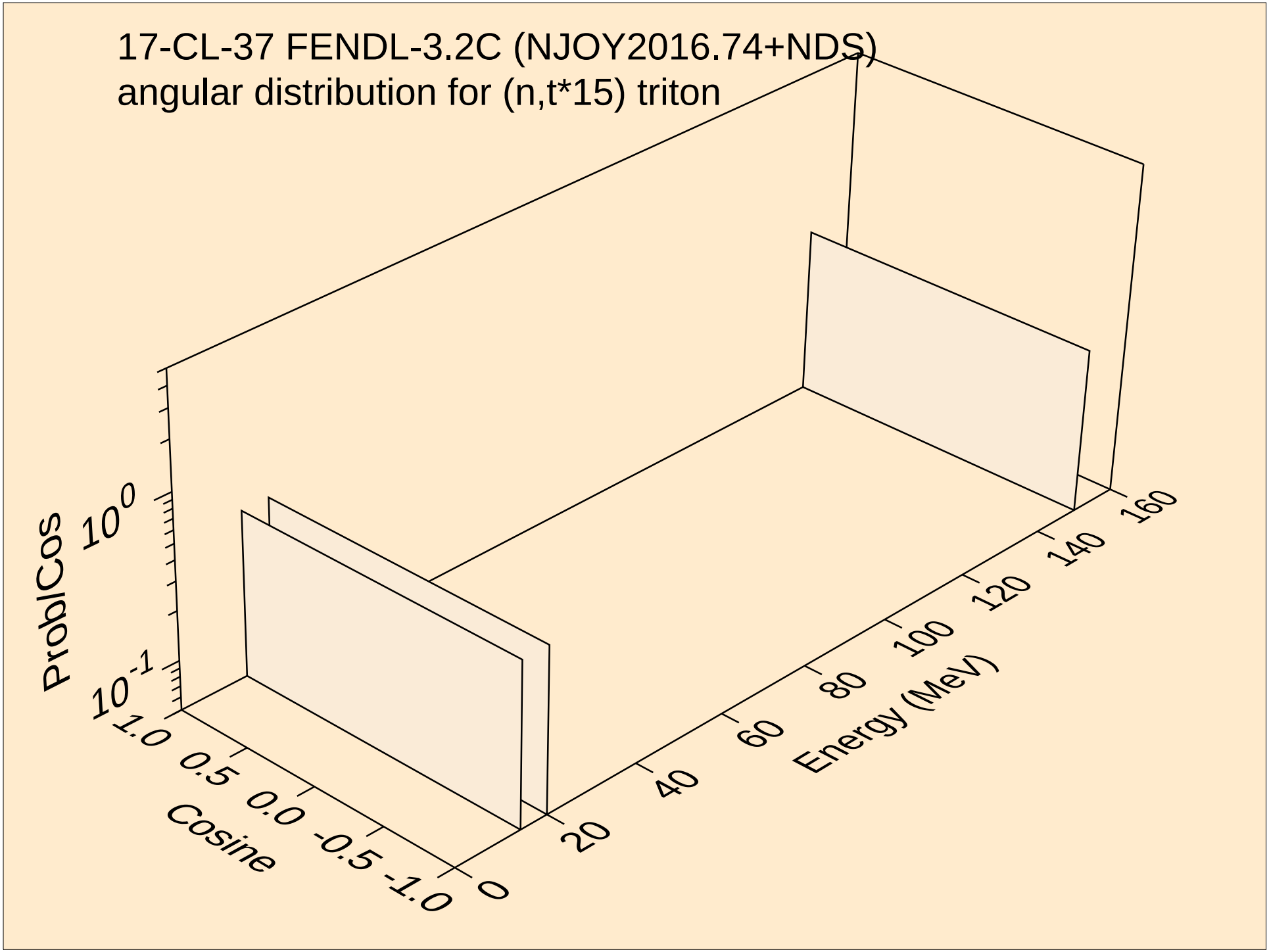

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*10) triton
ProbCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

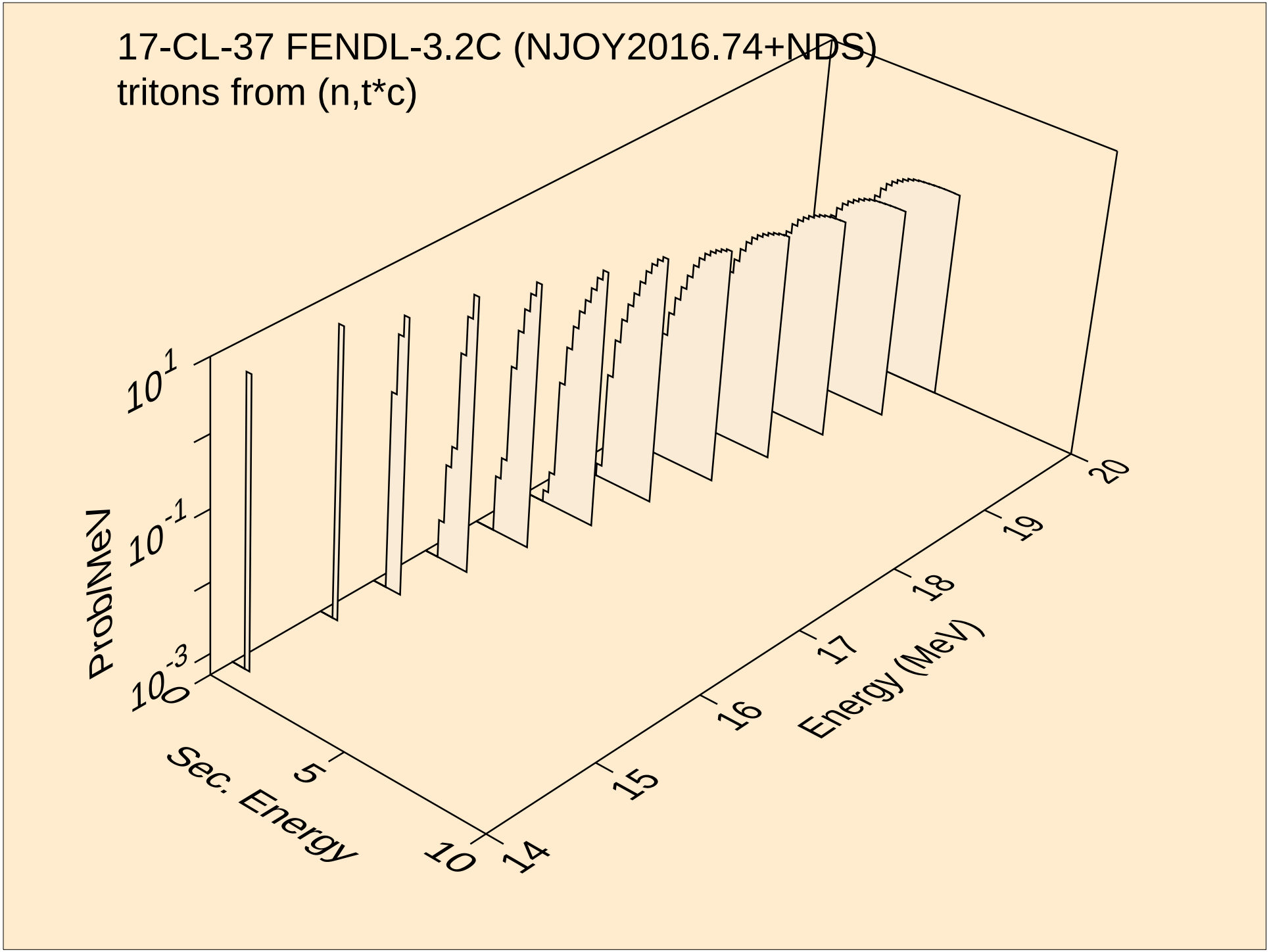

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*11) triton
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

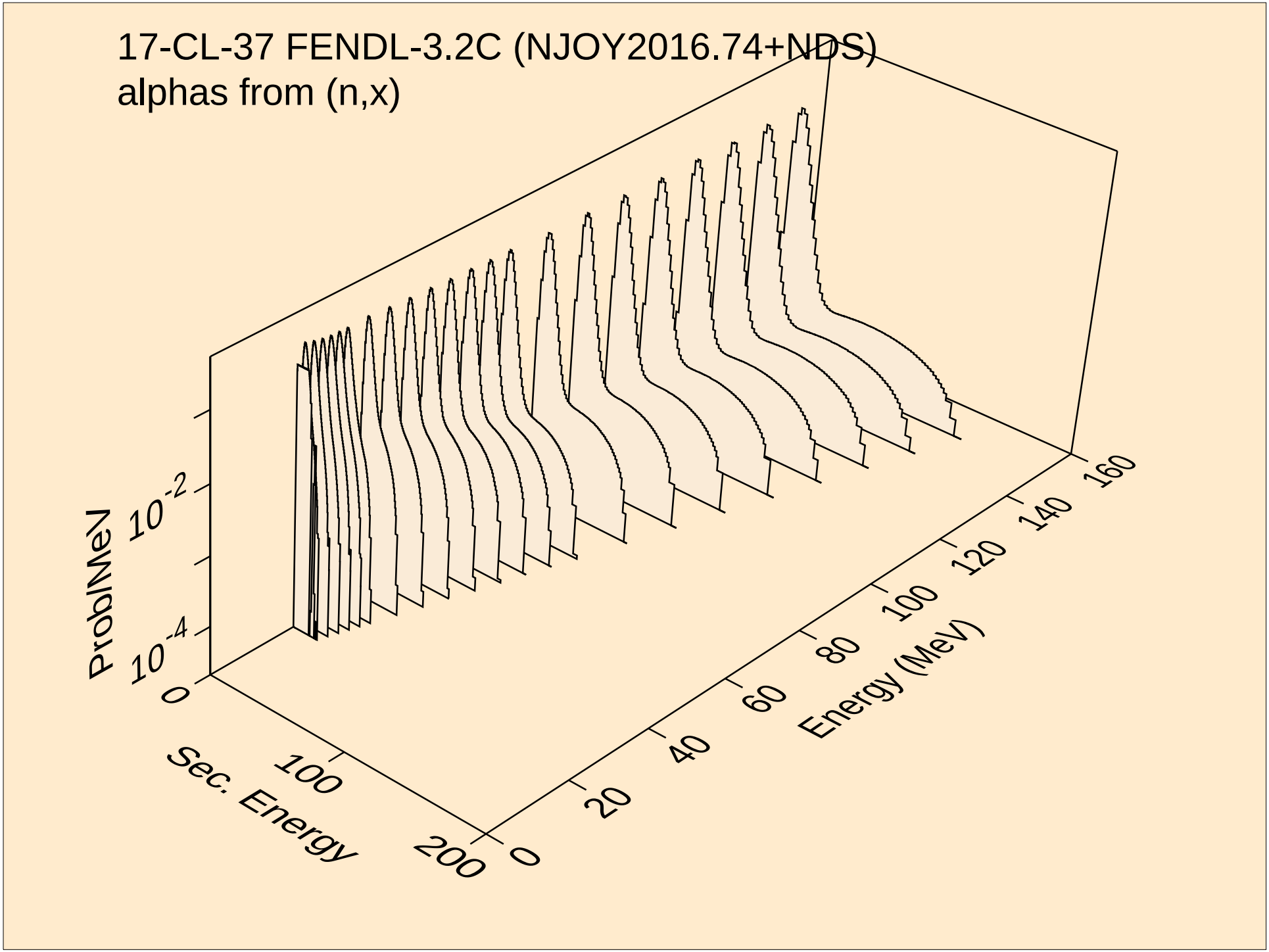

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*12) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

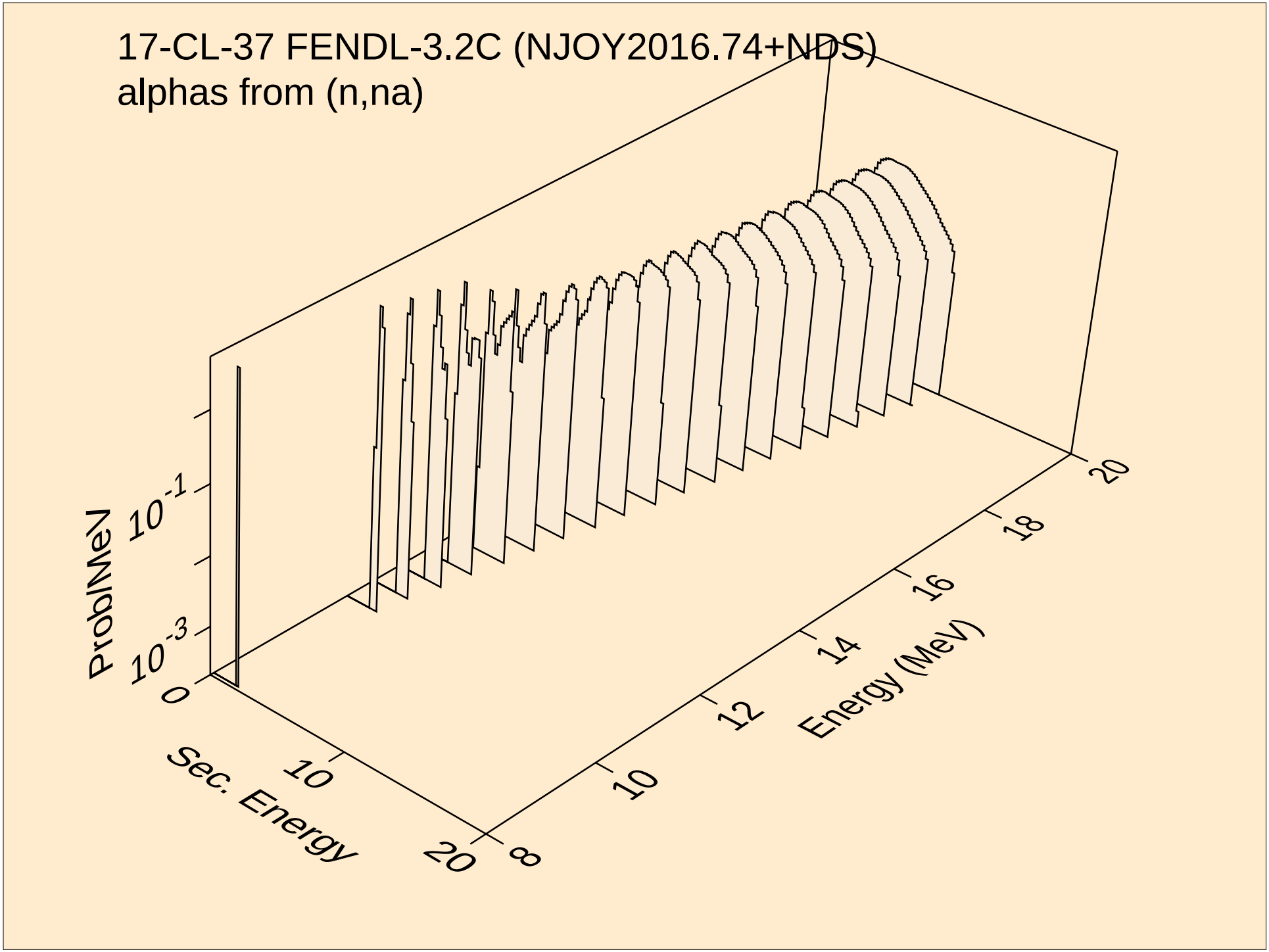

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*13) triton
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

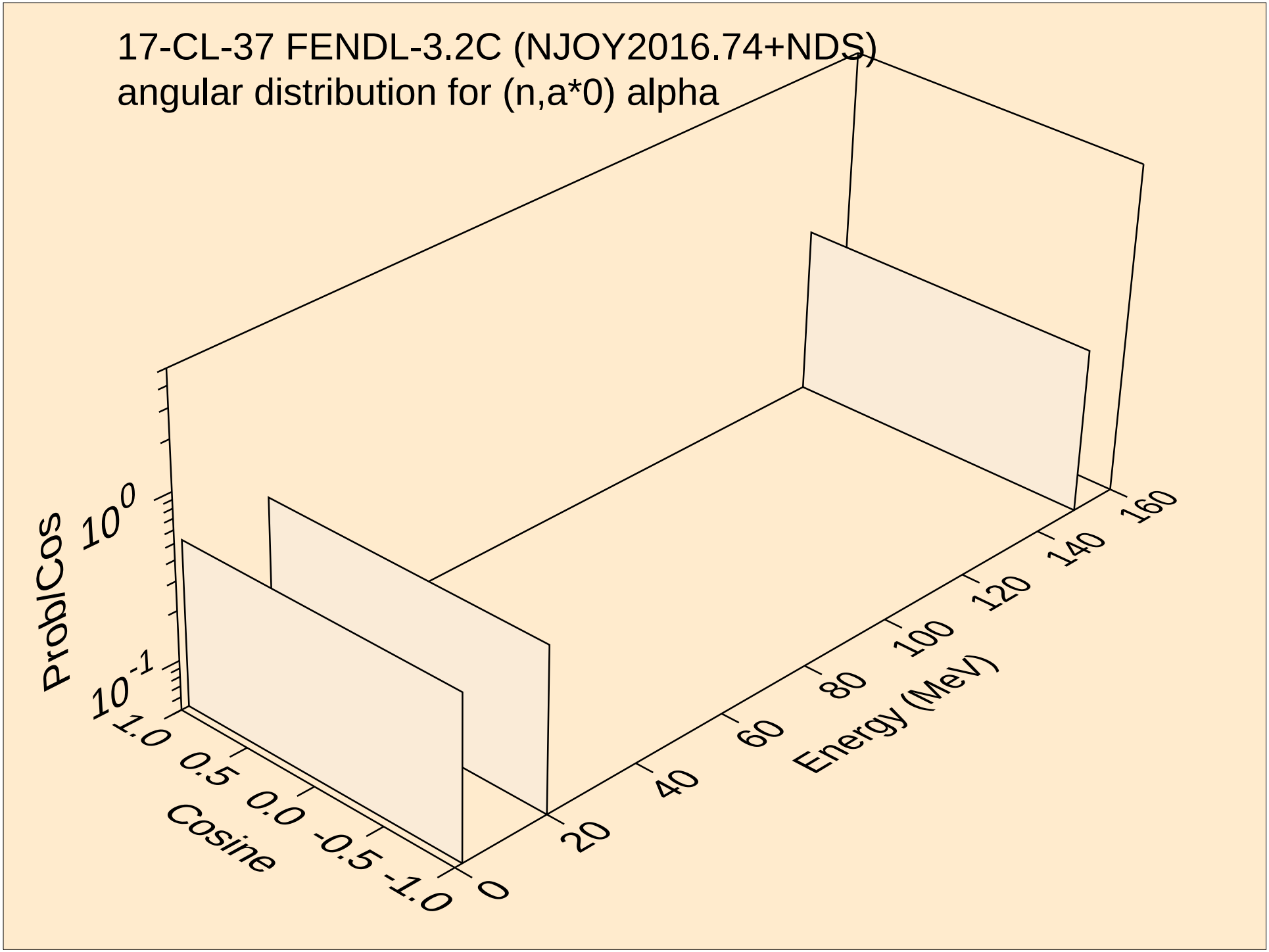

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*14) triton
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

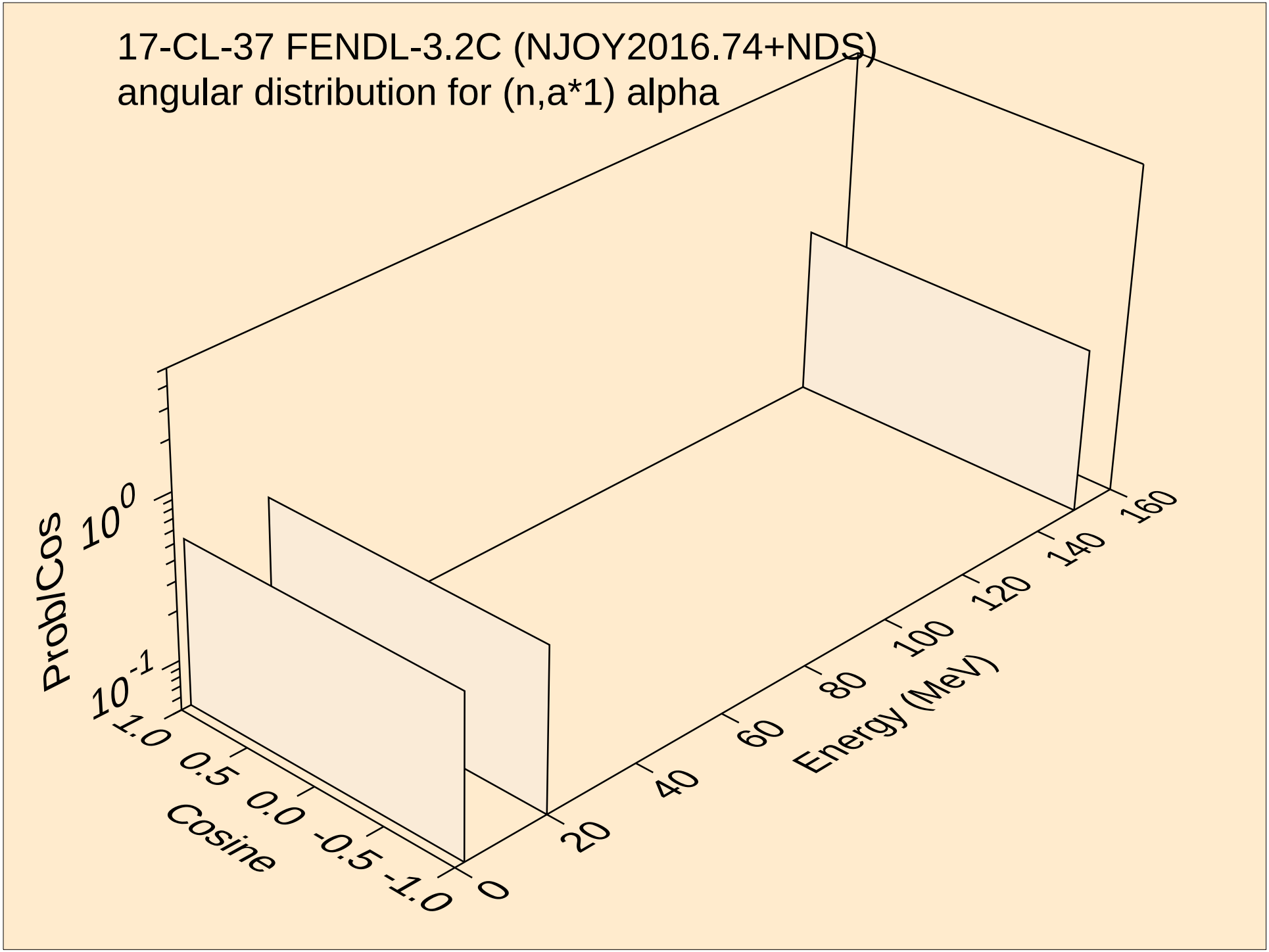

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,t*15) triton
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

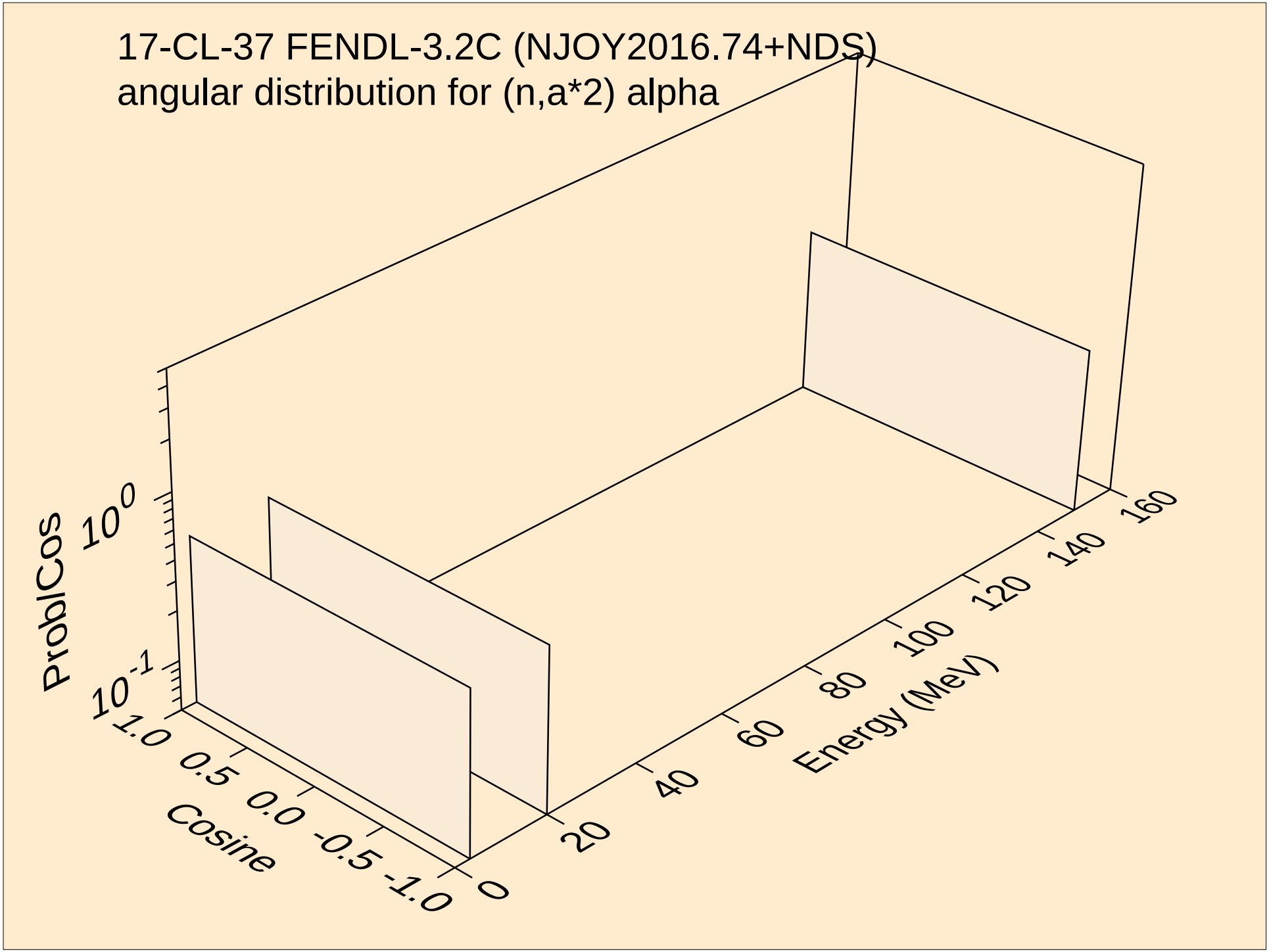

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
tritons from (n,t*c)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
5
10
Sec. Energy
14
15
16
17
18
19
20
Energy (MeV)

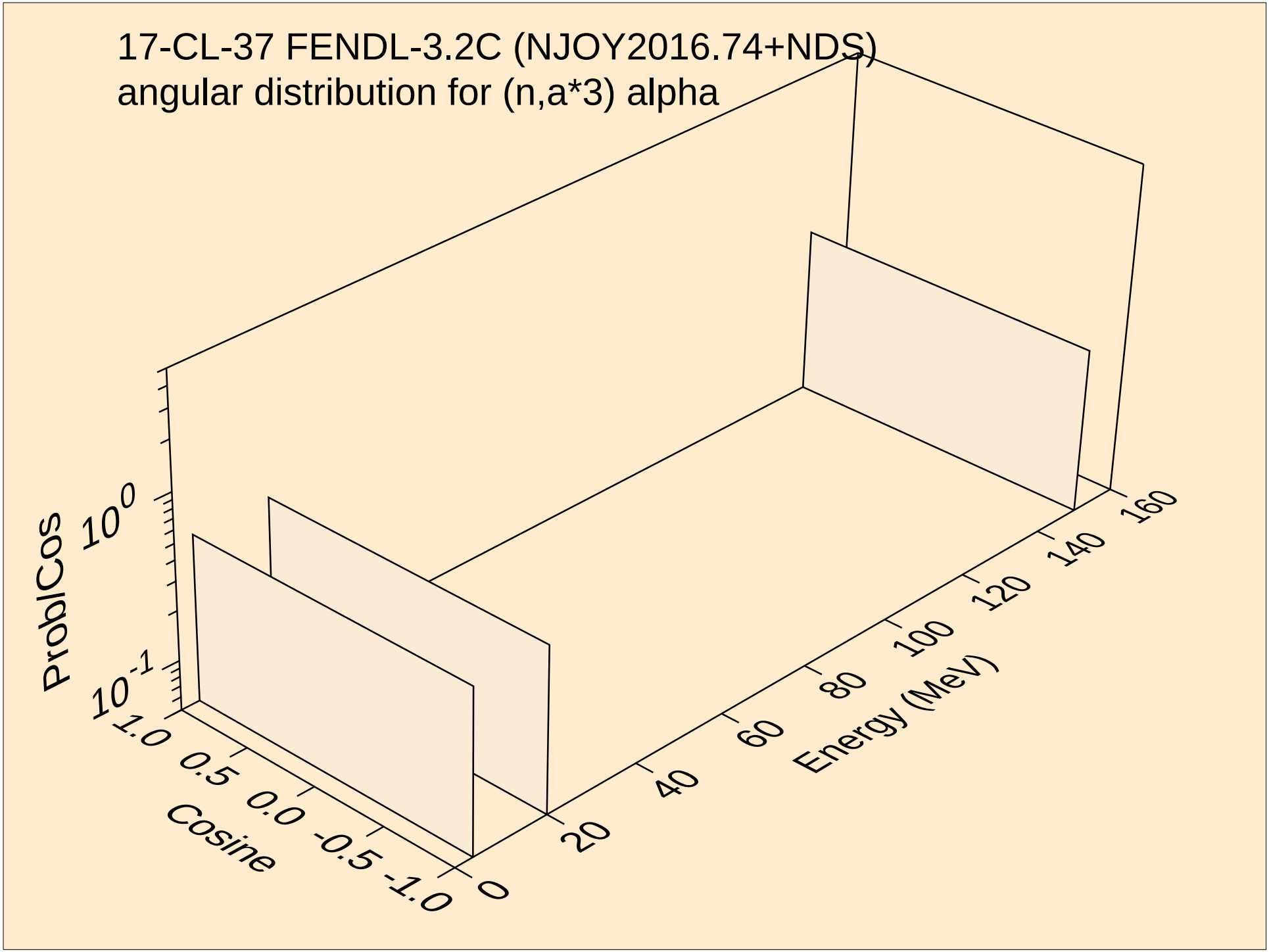

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
alphas from (n,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
20
40
60
80
100
120
140
160
Energy (MeV)

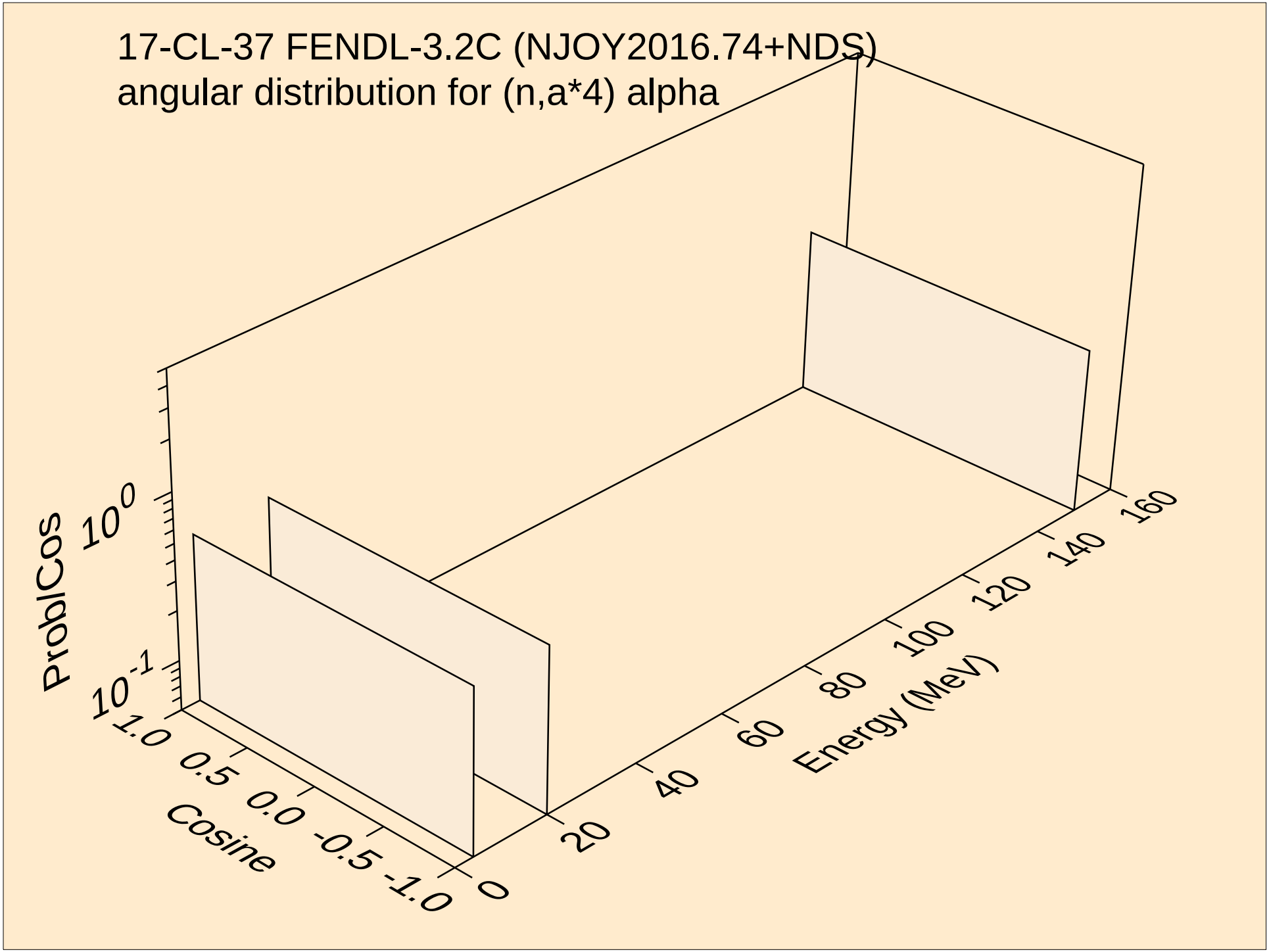

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
alphas from (n,na)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
8
10
12
14
16
18
20
Energy (MeV)

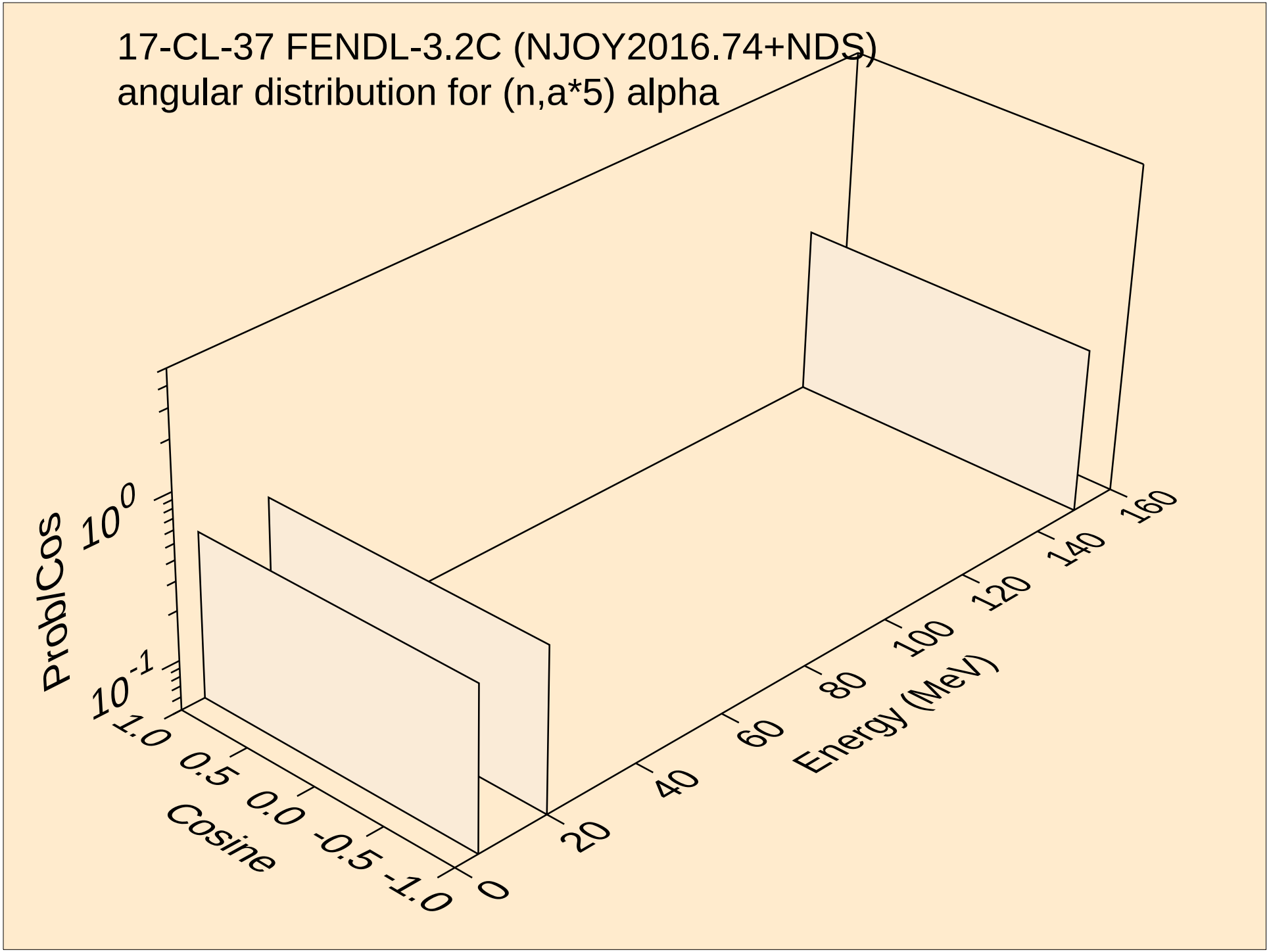

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*0) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)

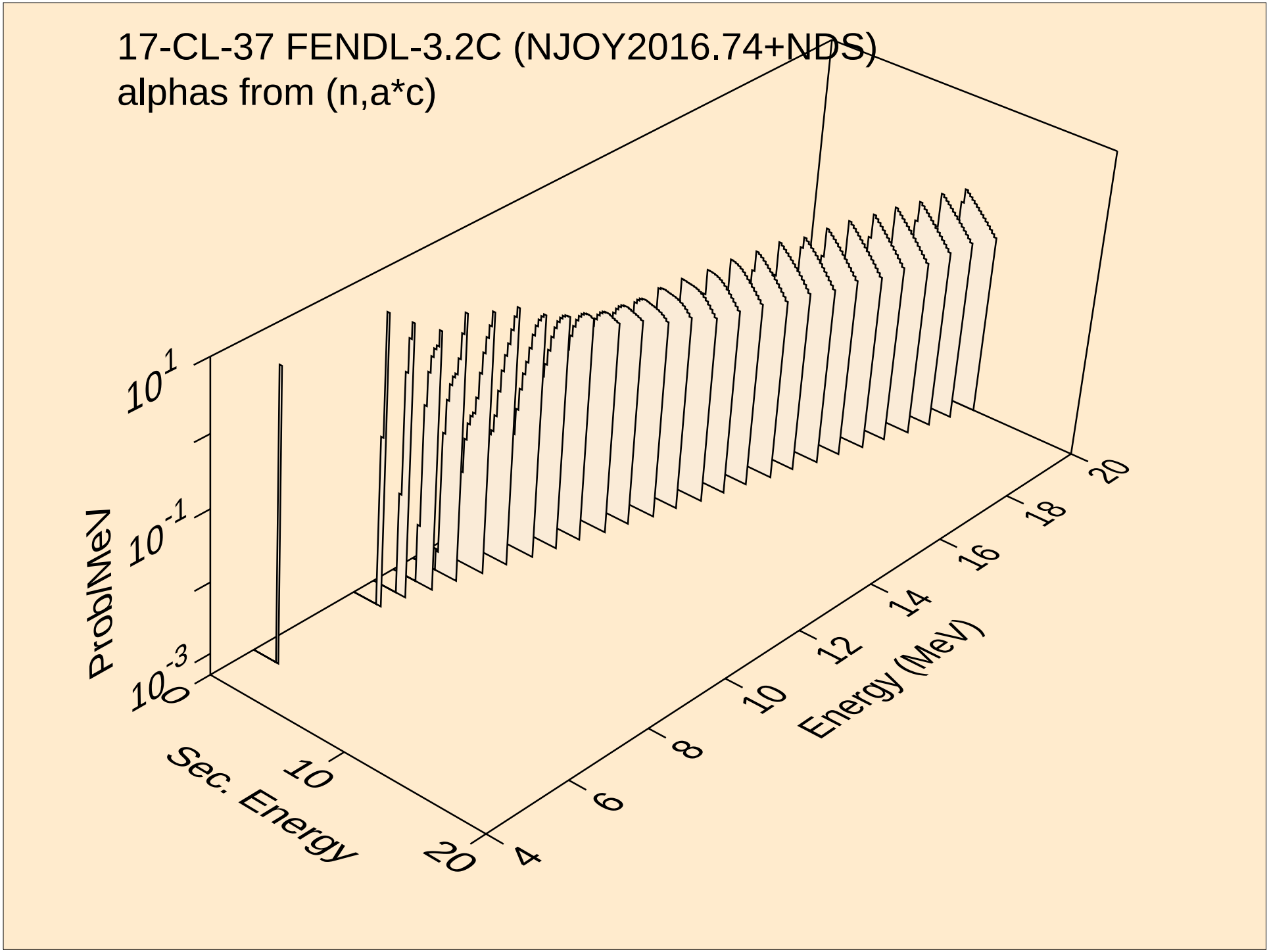

17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*1) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*2) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*3) alpha
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*4) alpha
ProbCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (n,a*5) alpha
Prob/Cos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
Energy (MeV)


17-CL-37 FENDL-3.2C (NJOY2016.74+NDS)
alphas from (n,a*c)
Prob/MeV
10^1
10^-1
10^-3
0
10
20
Sec. Energy
4
6
8
10
12
14
16
18
20
Energy (MeV)