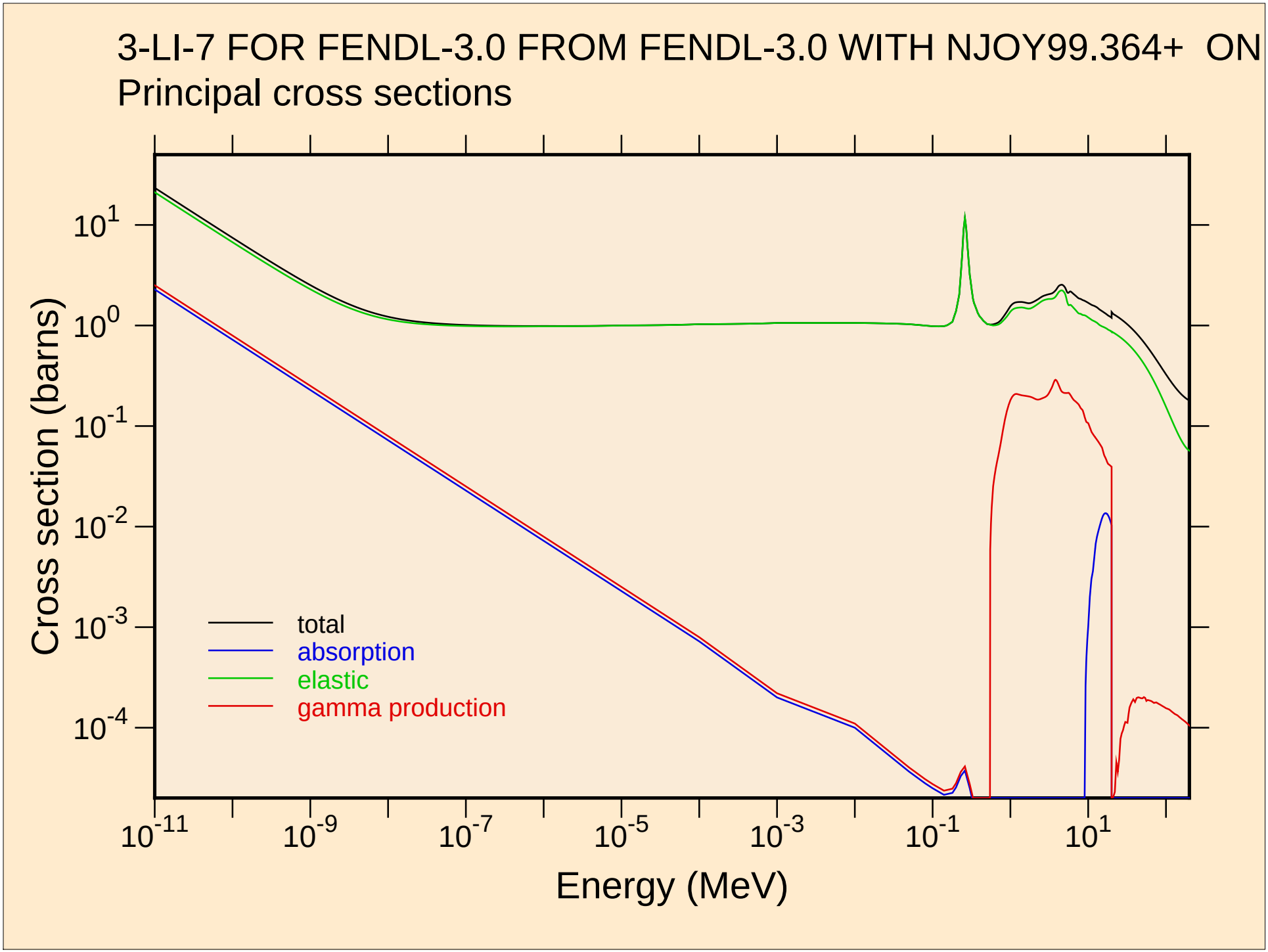
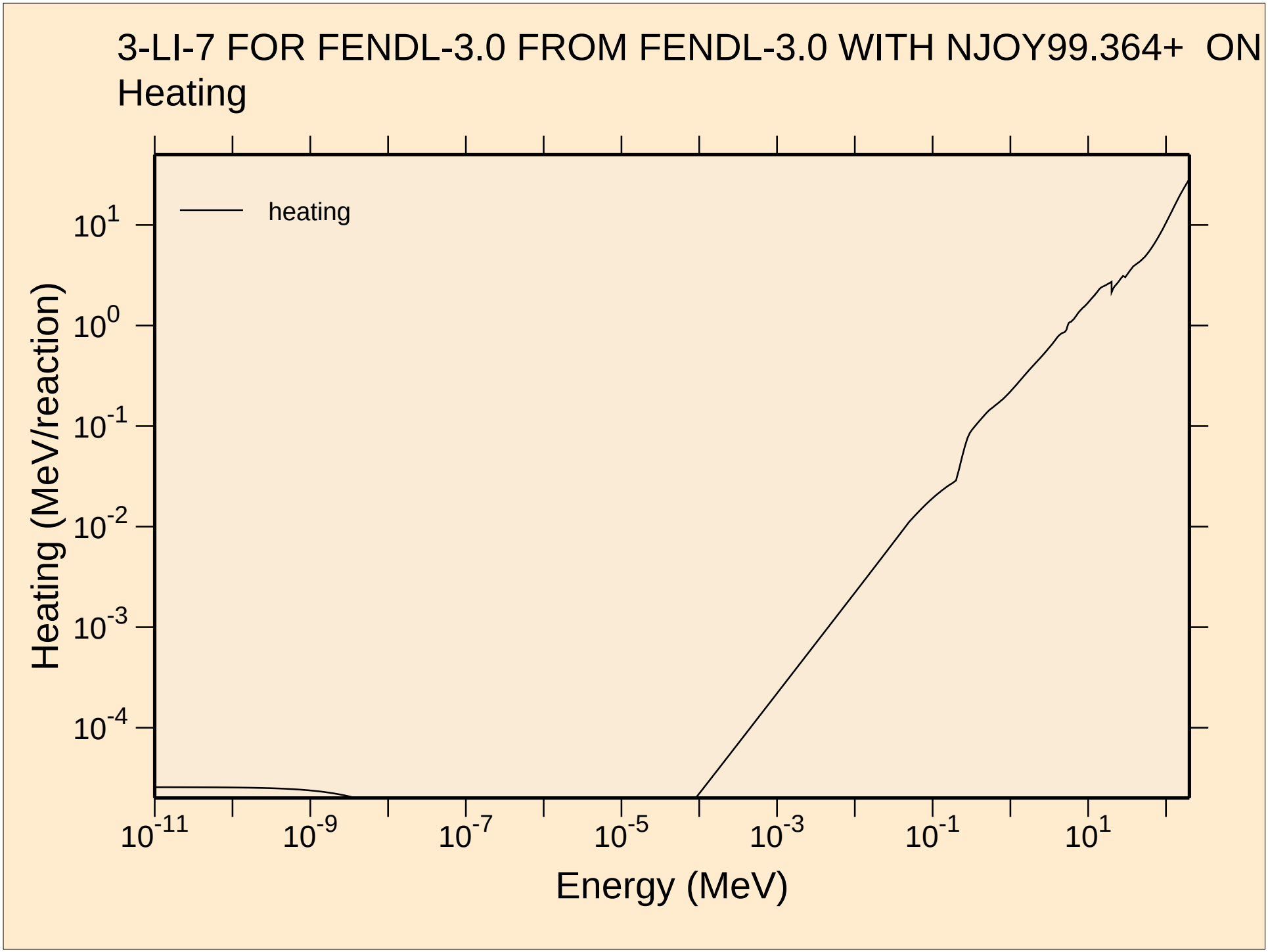
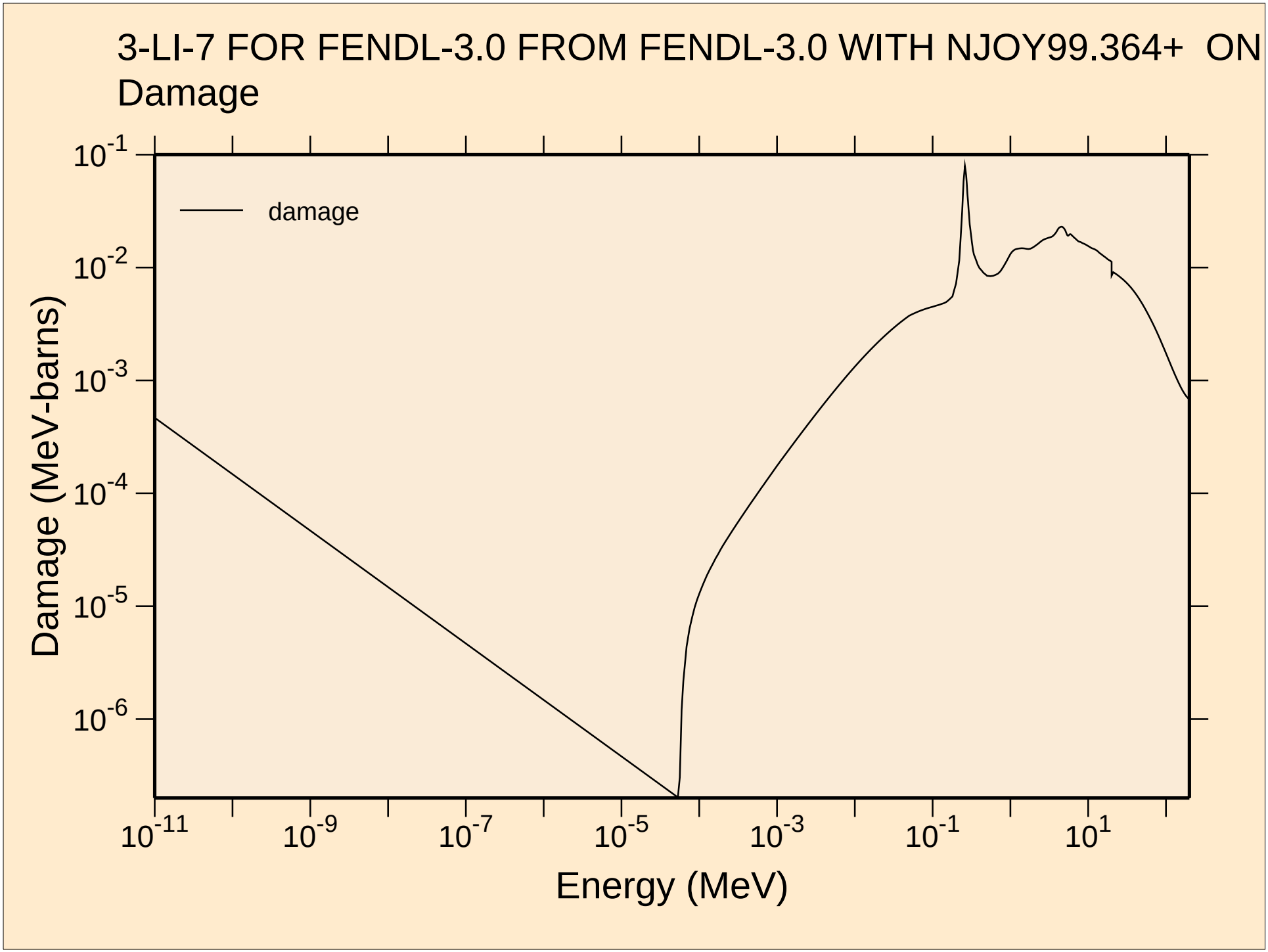
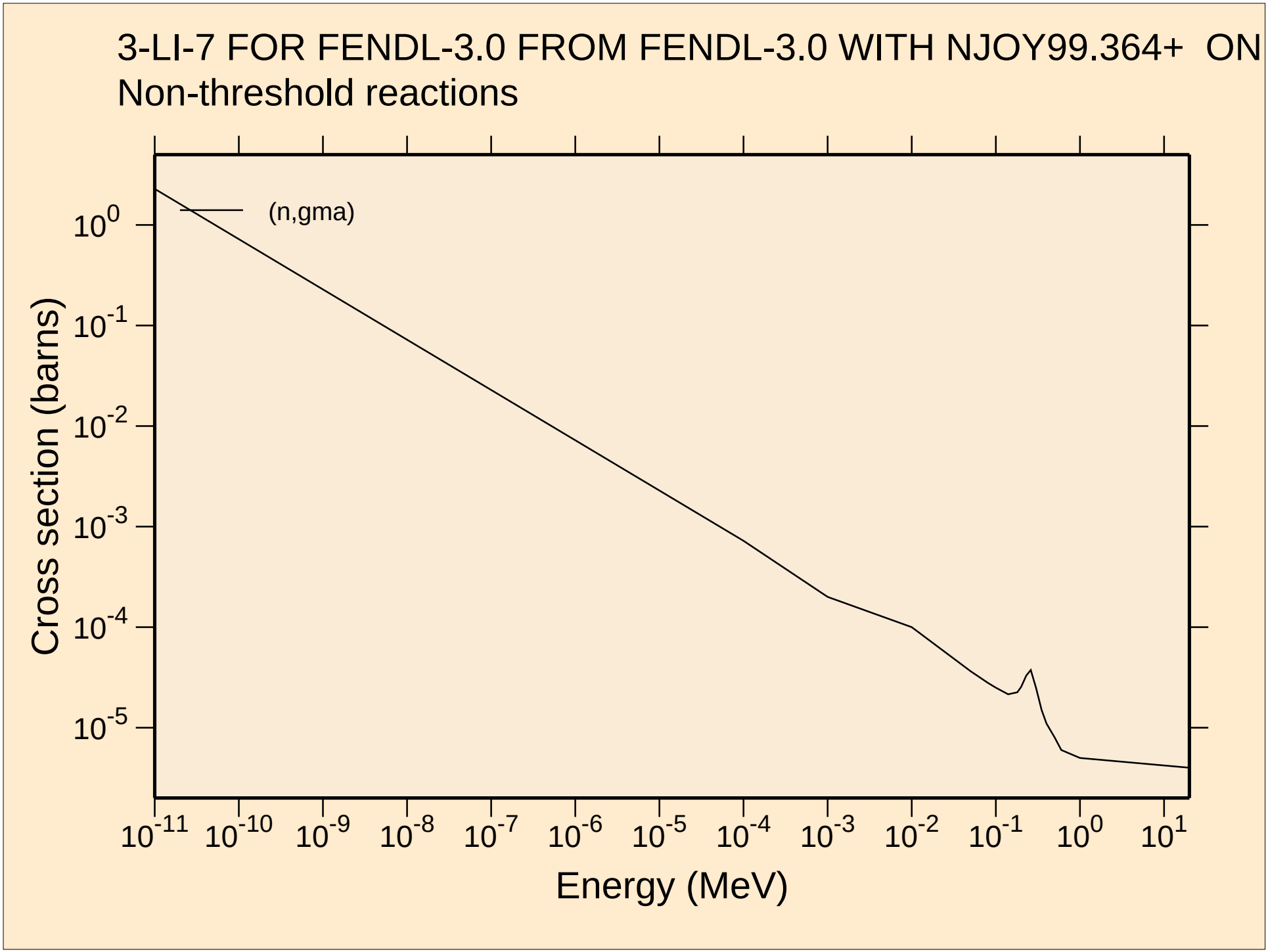
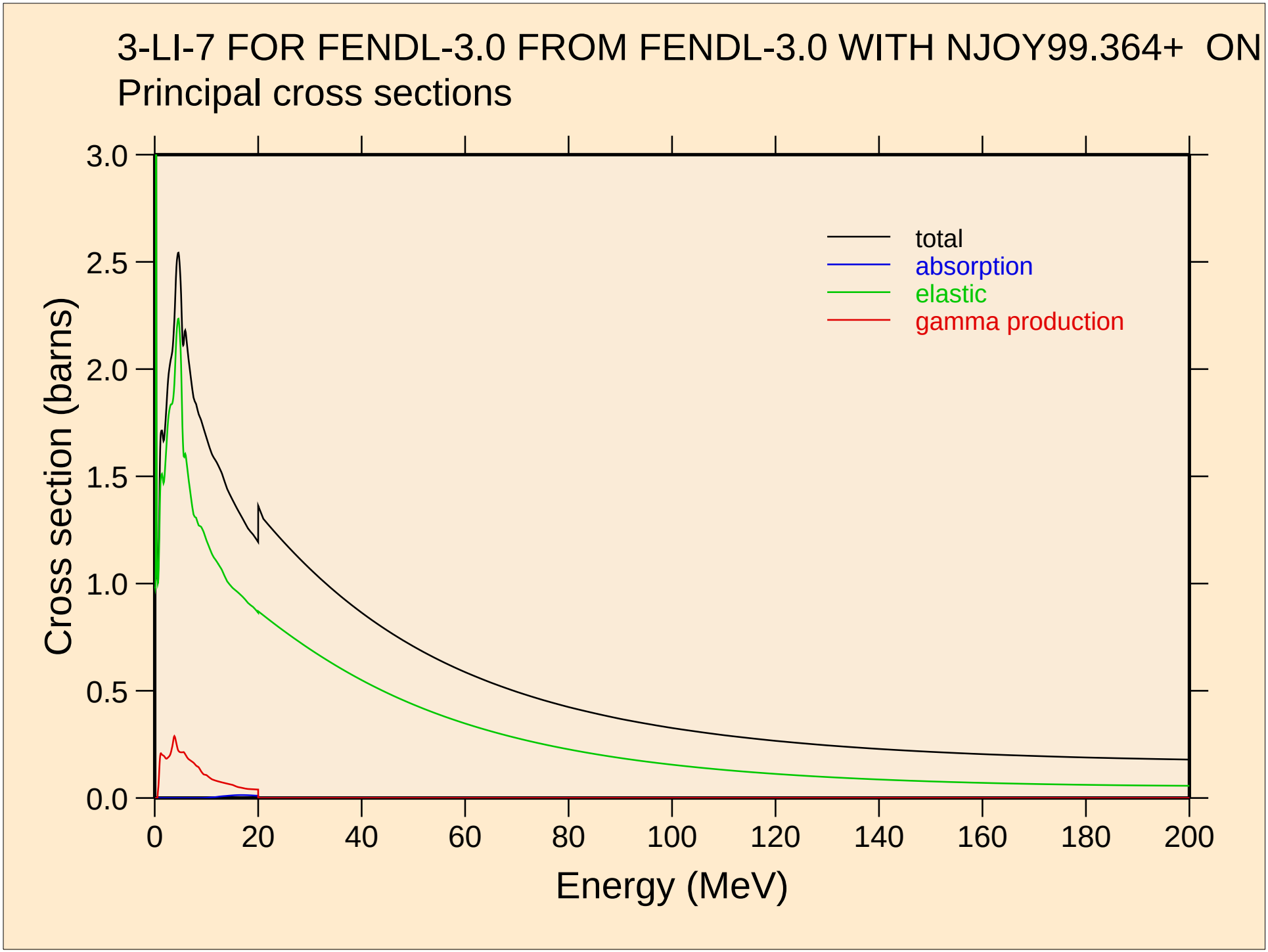
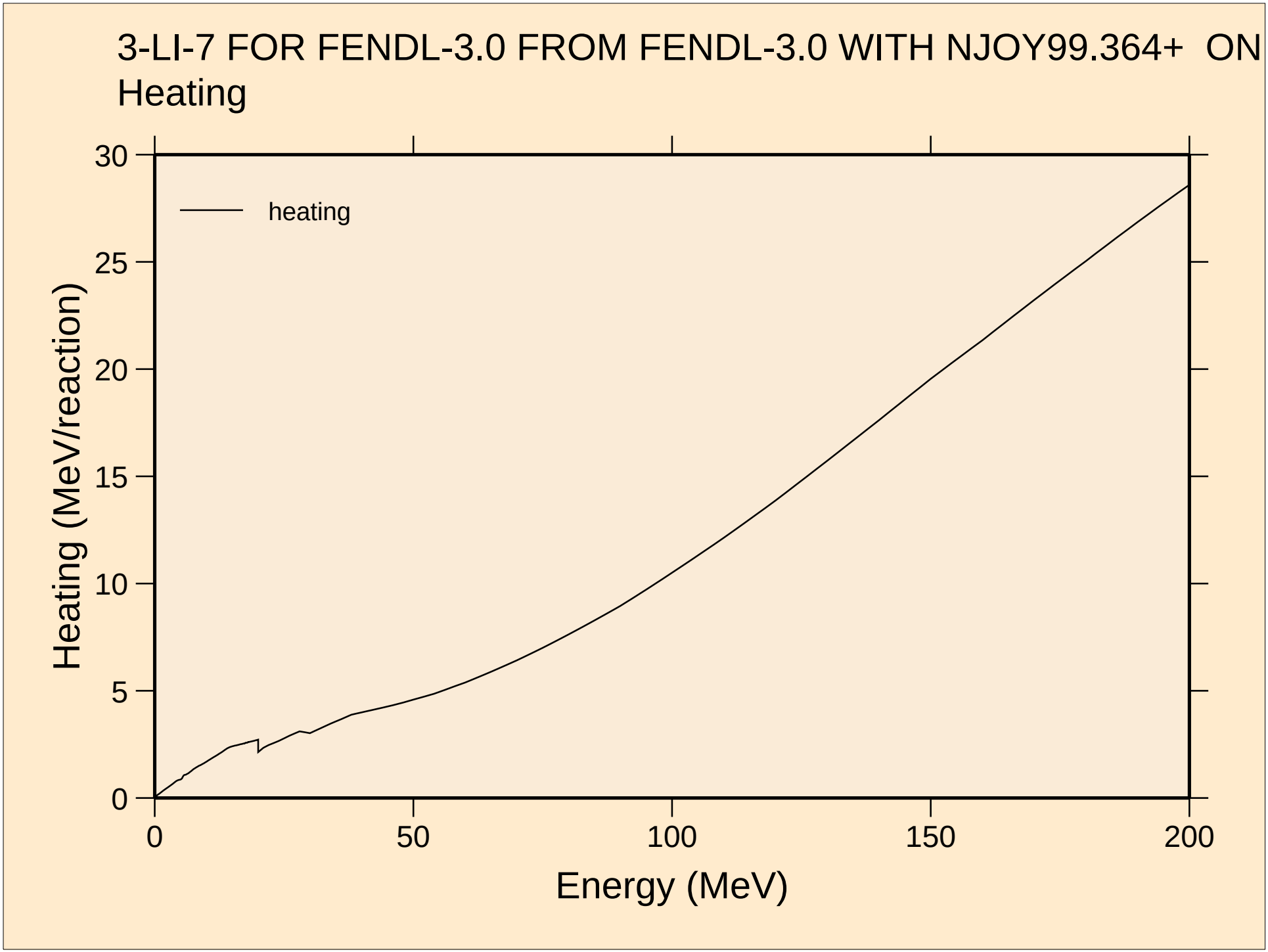

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Principal cross sections
Cross section (barns)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
total
absorption
elastic
gamma production
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

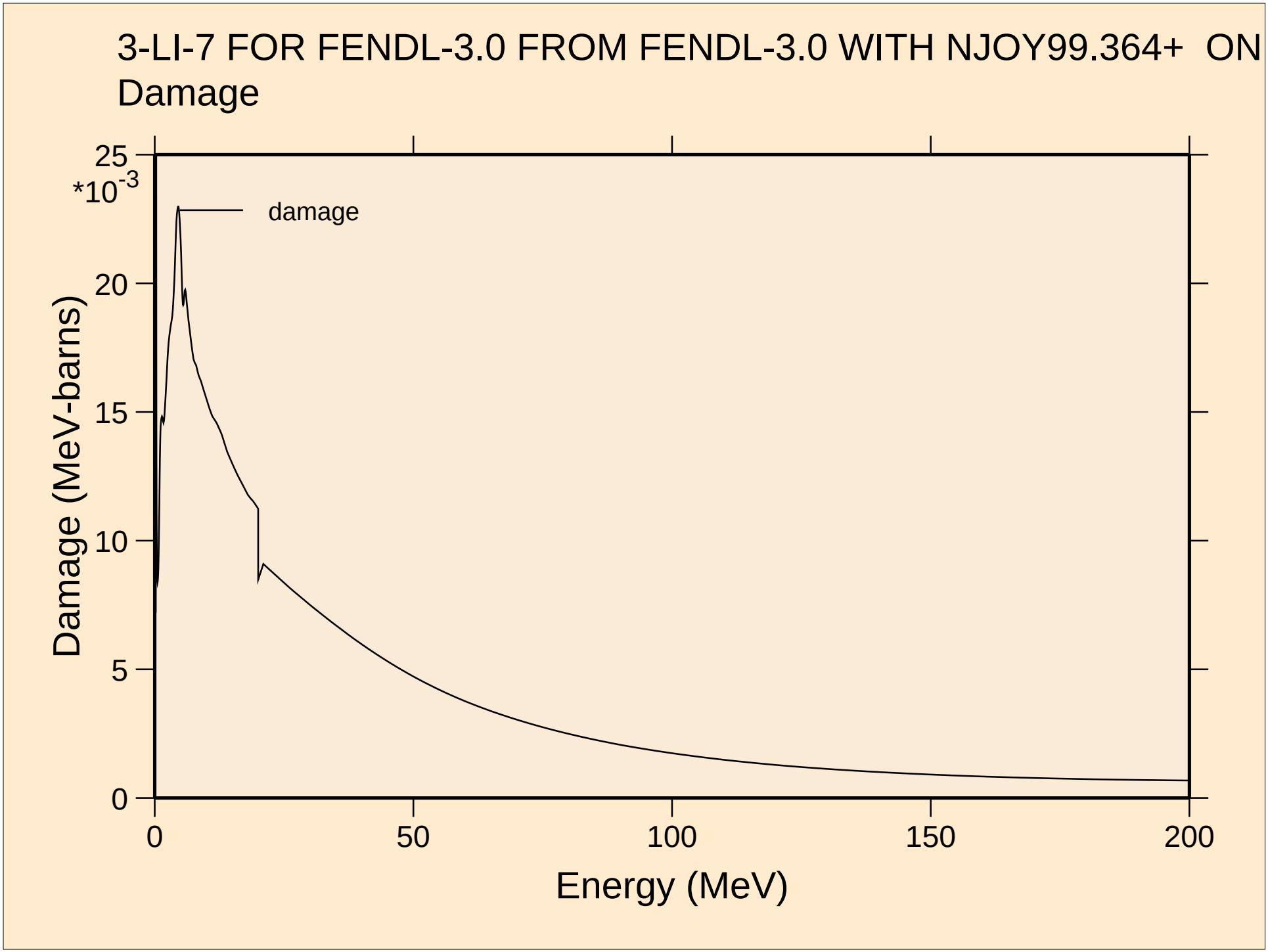

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Heating
heating
Heating (MeV/reaction)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)

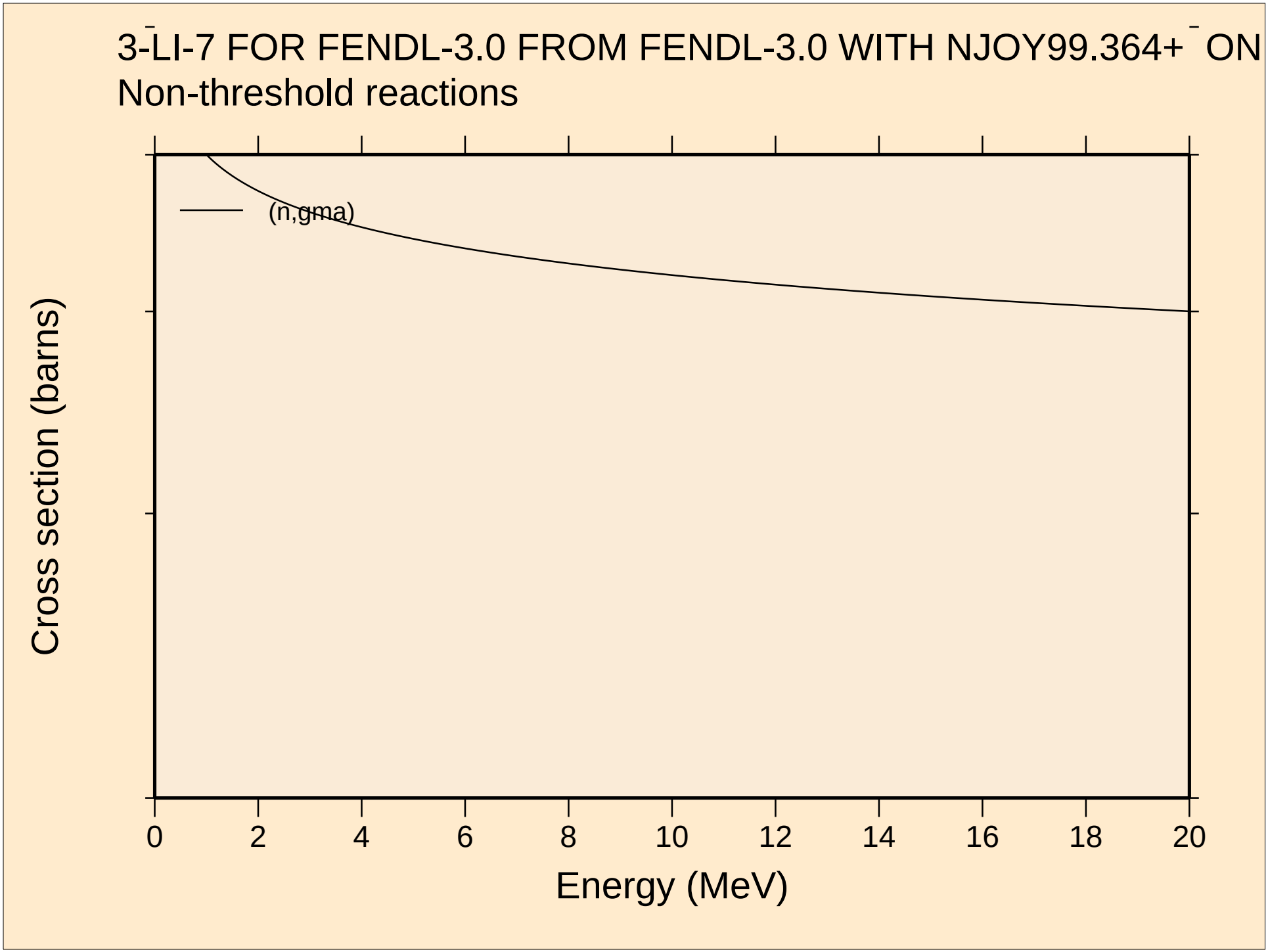

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Damage
damage
Damage (MeV-barns)
10-1
10-2
10-3
10-4
10-5
10-6
10-11
10-9
10-7
10-5
10-3
10-1
101
Energy (MeV)

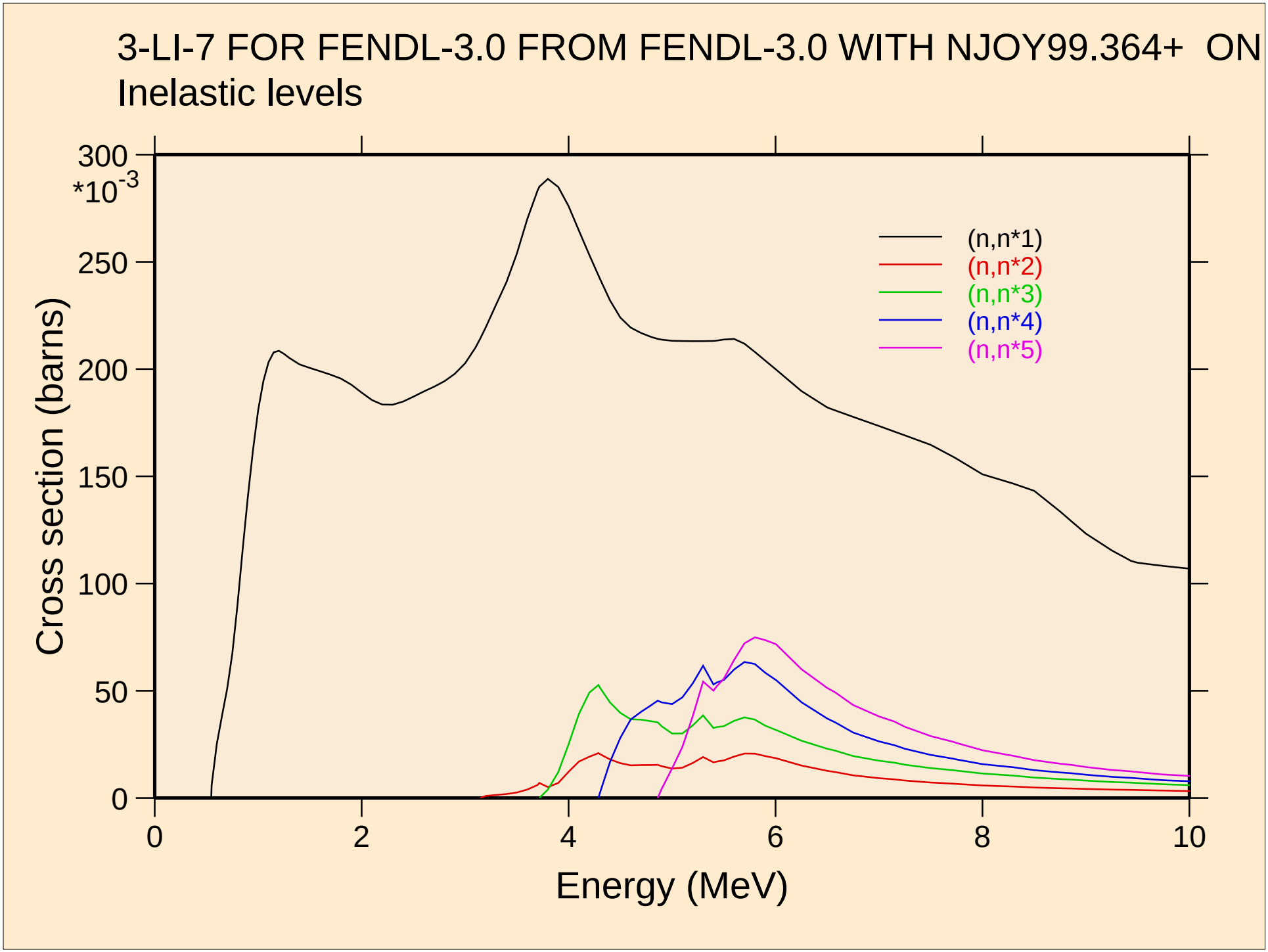

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
(n,gma)
Cross section (barns)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-11 10^-10 10^-9 10^-8 10^-7 10^-6 10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1
Energy (MeV)

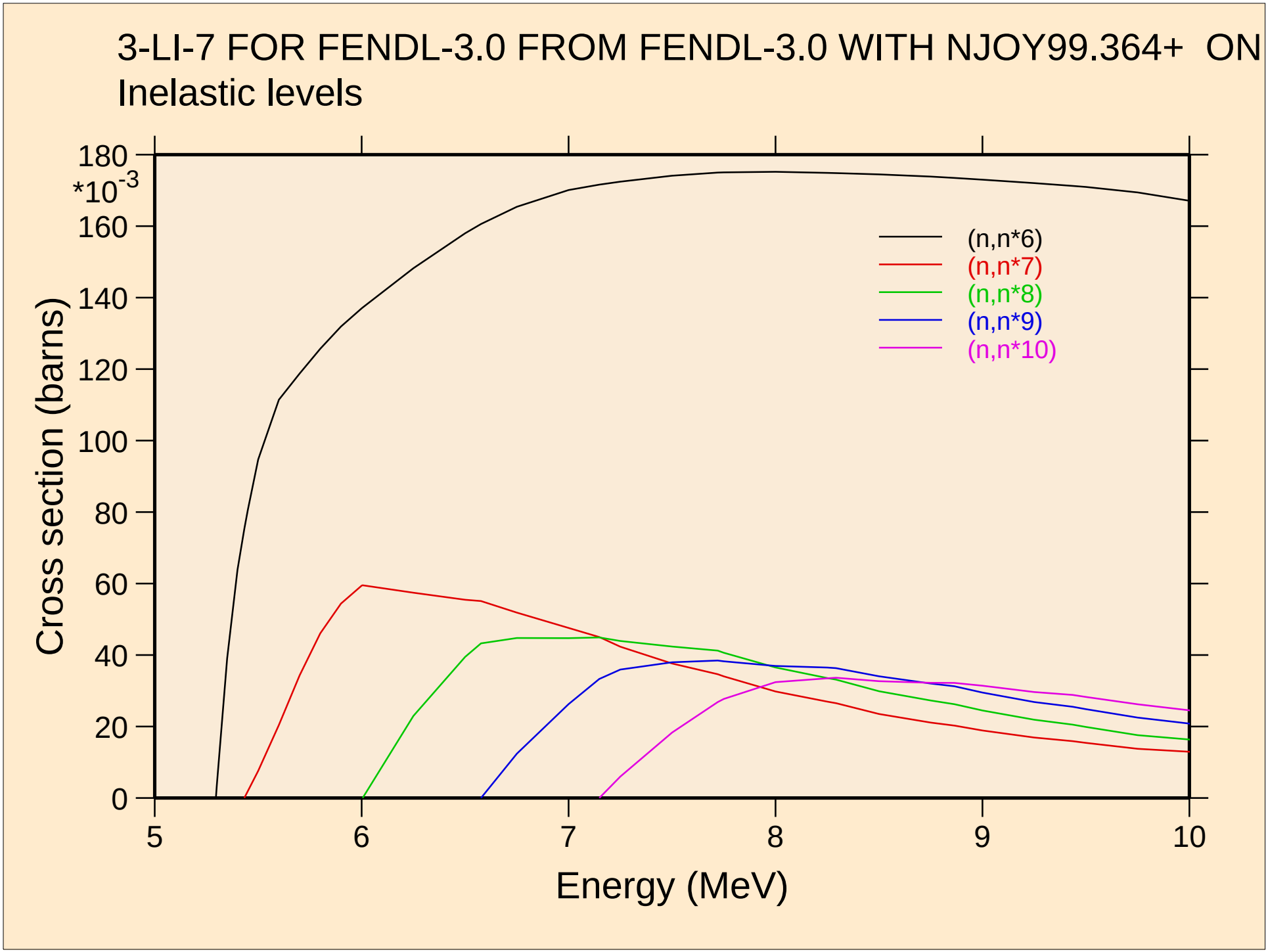

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
20
40
60
80
100
120
140
160
180
200

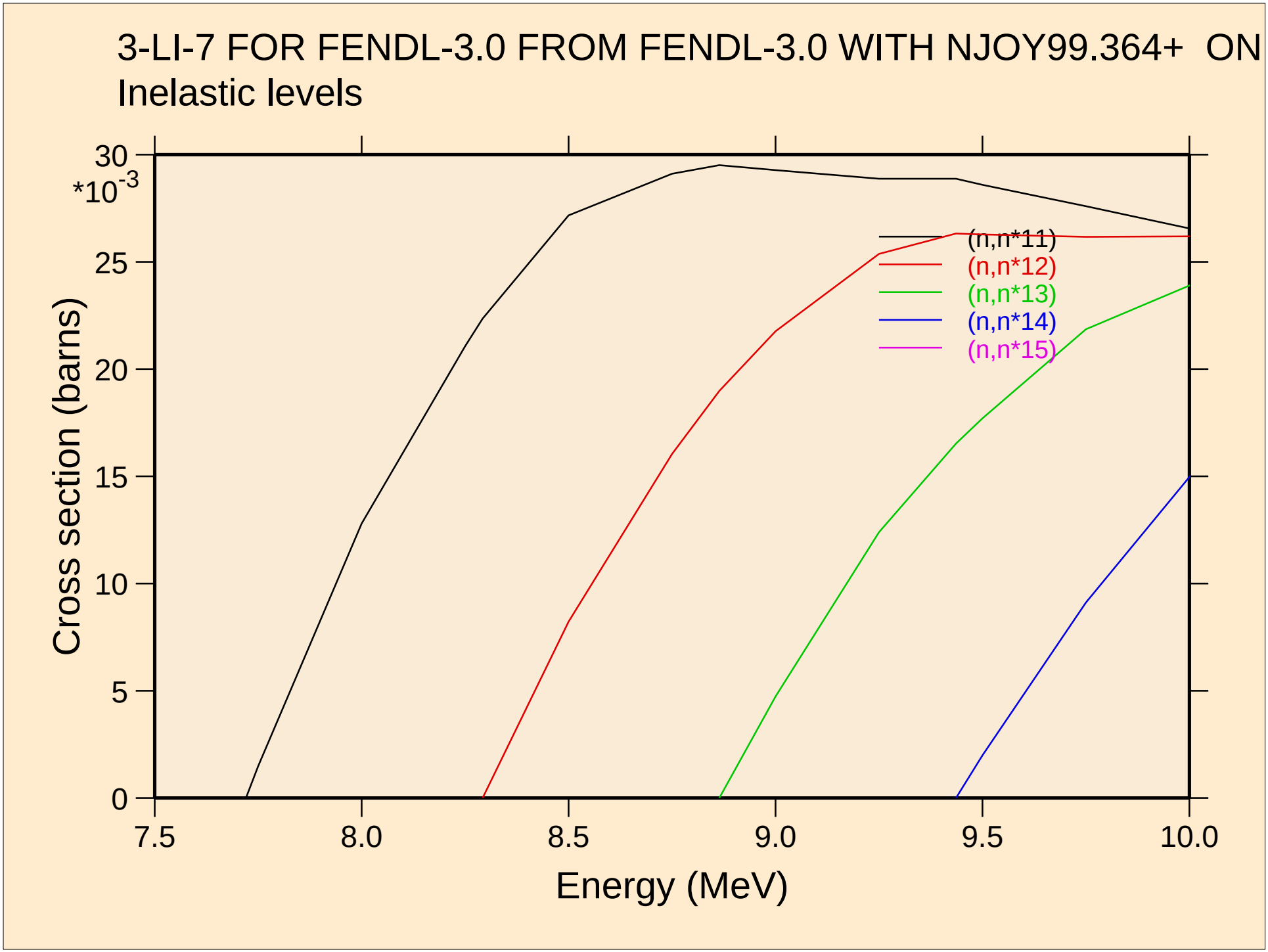

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
5
10
15
20
25
30
0
50
100
150
200

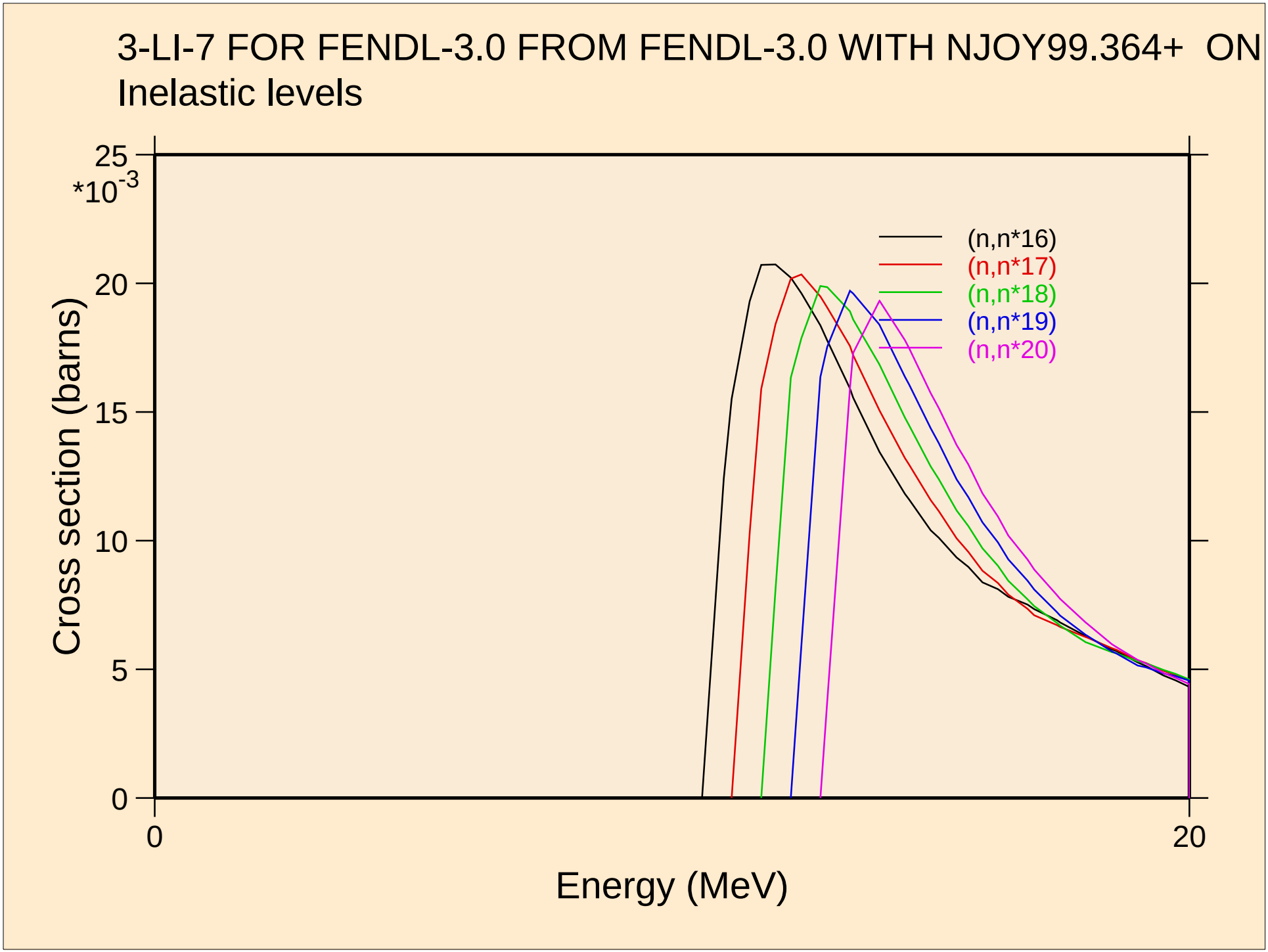

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Damage
25
*10-3
damage
20
15
10
5
0
Damage (MeV-barns)
0
50
100
150
200
Energy (MeV)

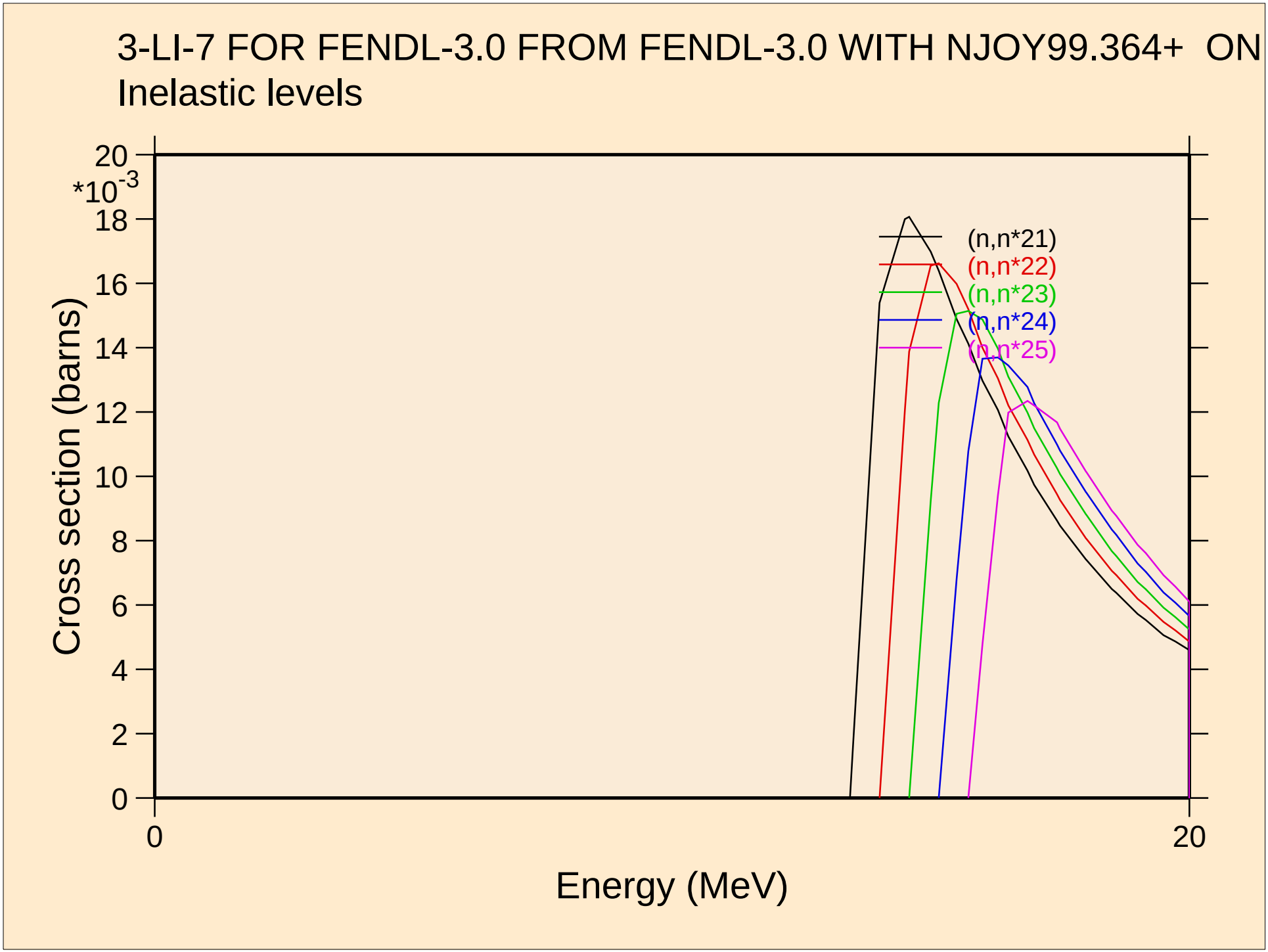

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
(n,gma)
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

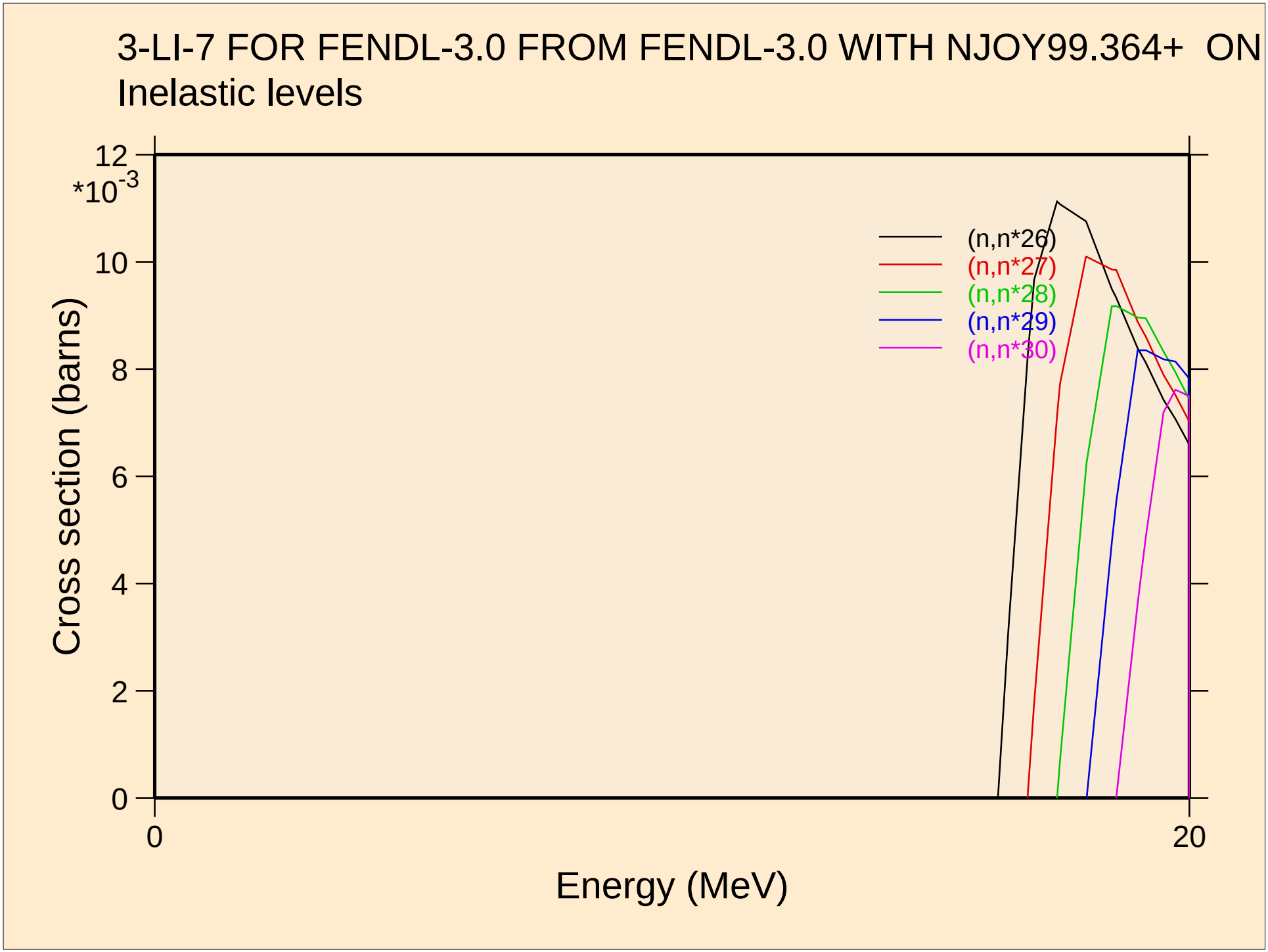

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
300
*10-3
250
200
150
100
50
0
Cross section (barns)
0
2
4
6
8
10
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

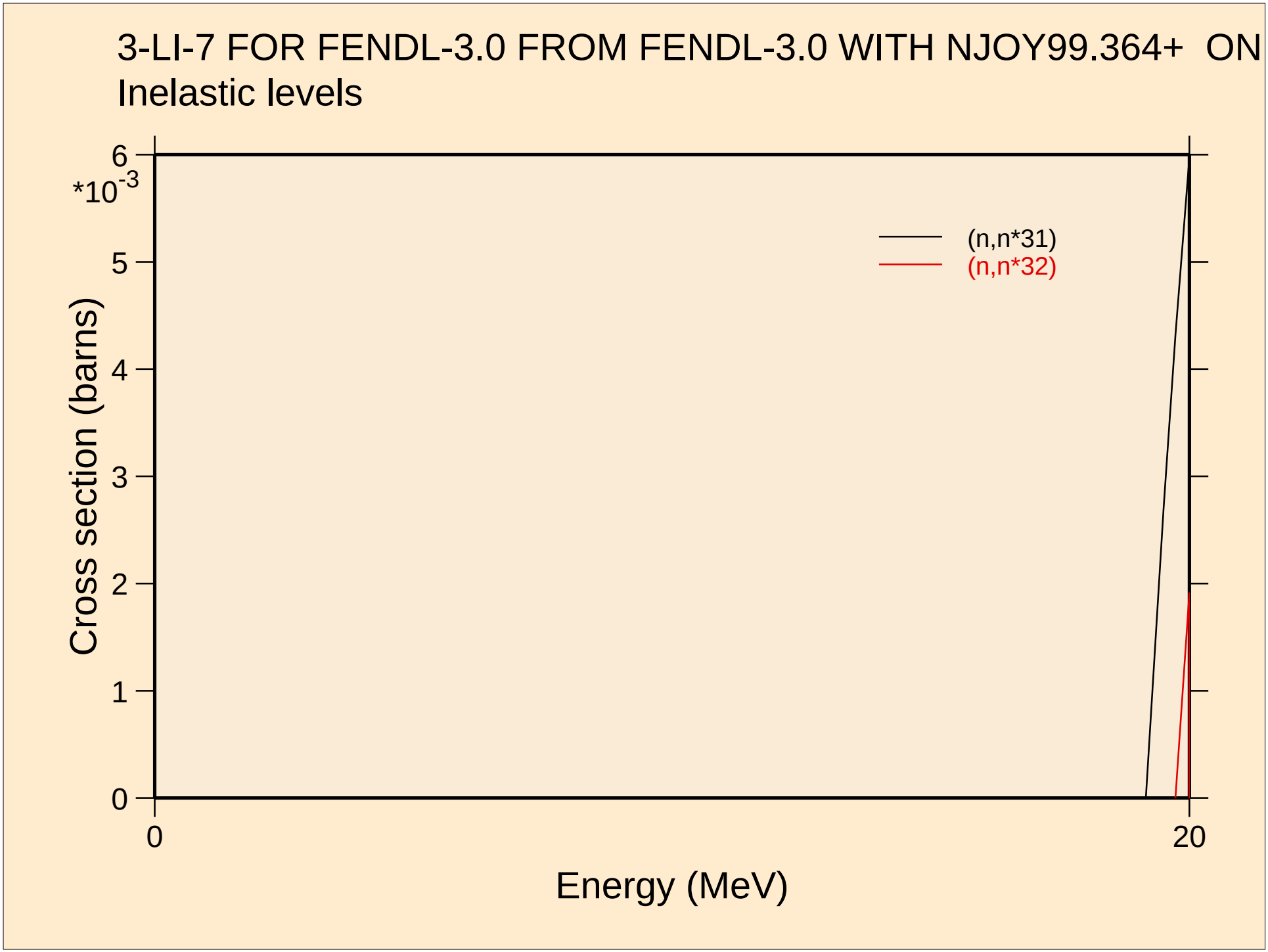

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
180
160
140
120
100
80
60
40
20
0
5
6
7
8
9
10
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

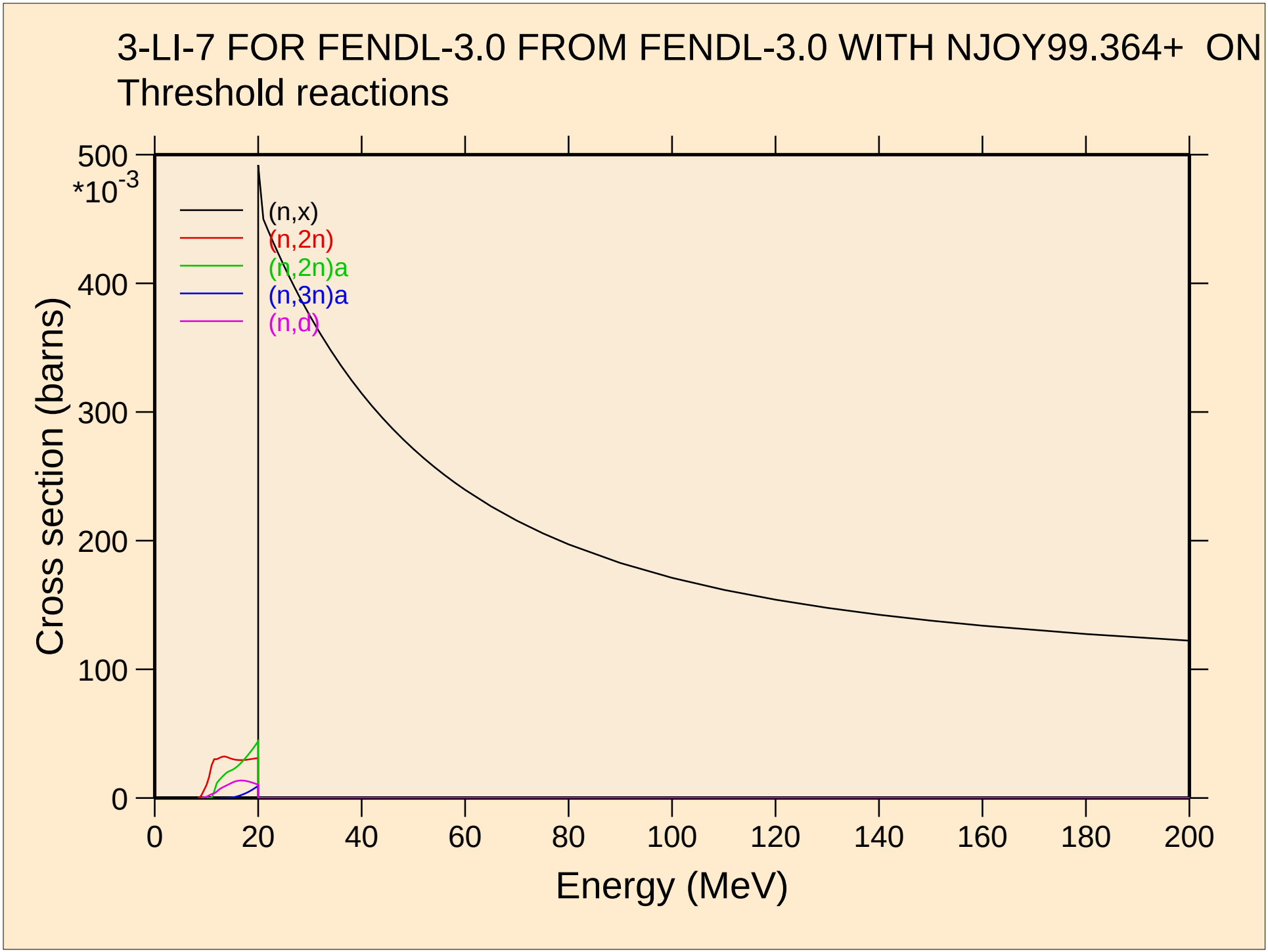

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
30
*10-3
25
20
15
10
5
0
Cross section (barns)
7.5
8.0
8.5
9.0
9.5
10.0
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

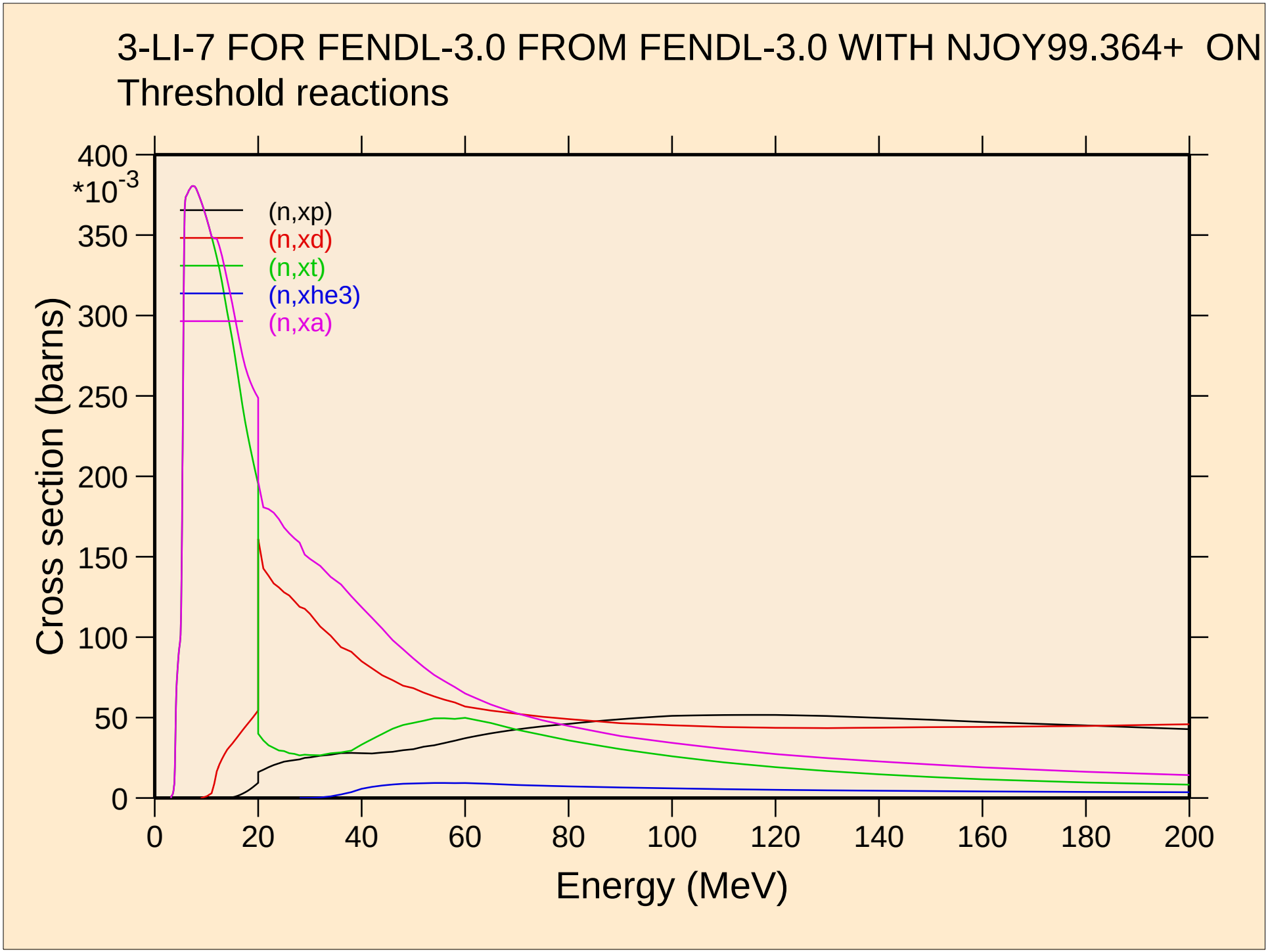

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
25
*10-3
20
15
10
5
0
Cross section (barns)
0
20
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

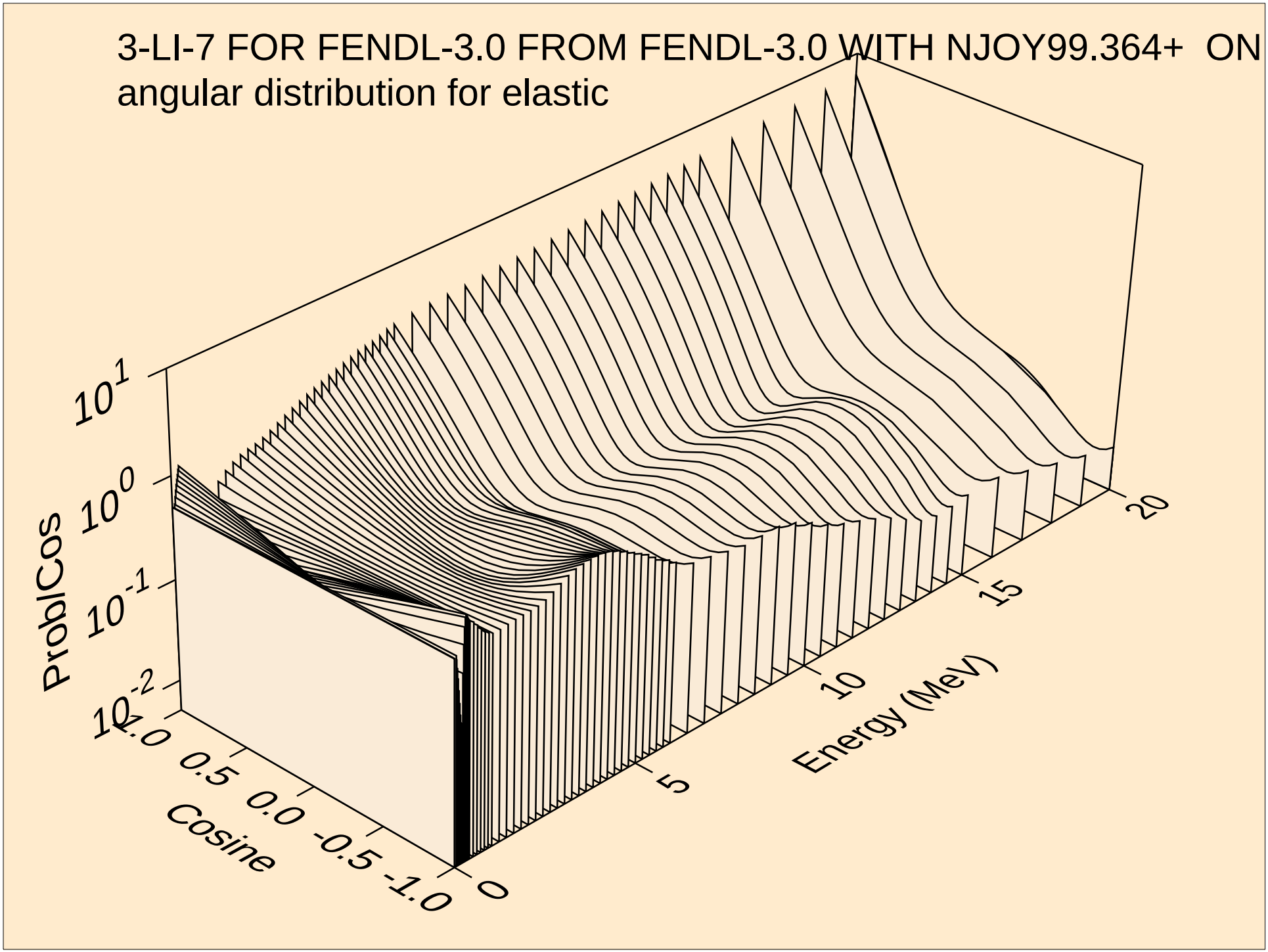

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
20
18
16
14
12
10
8
6
4
2
0
0
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

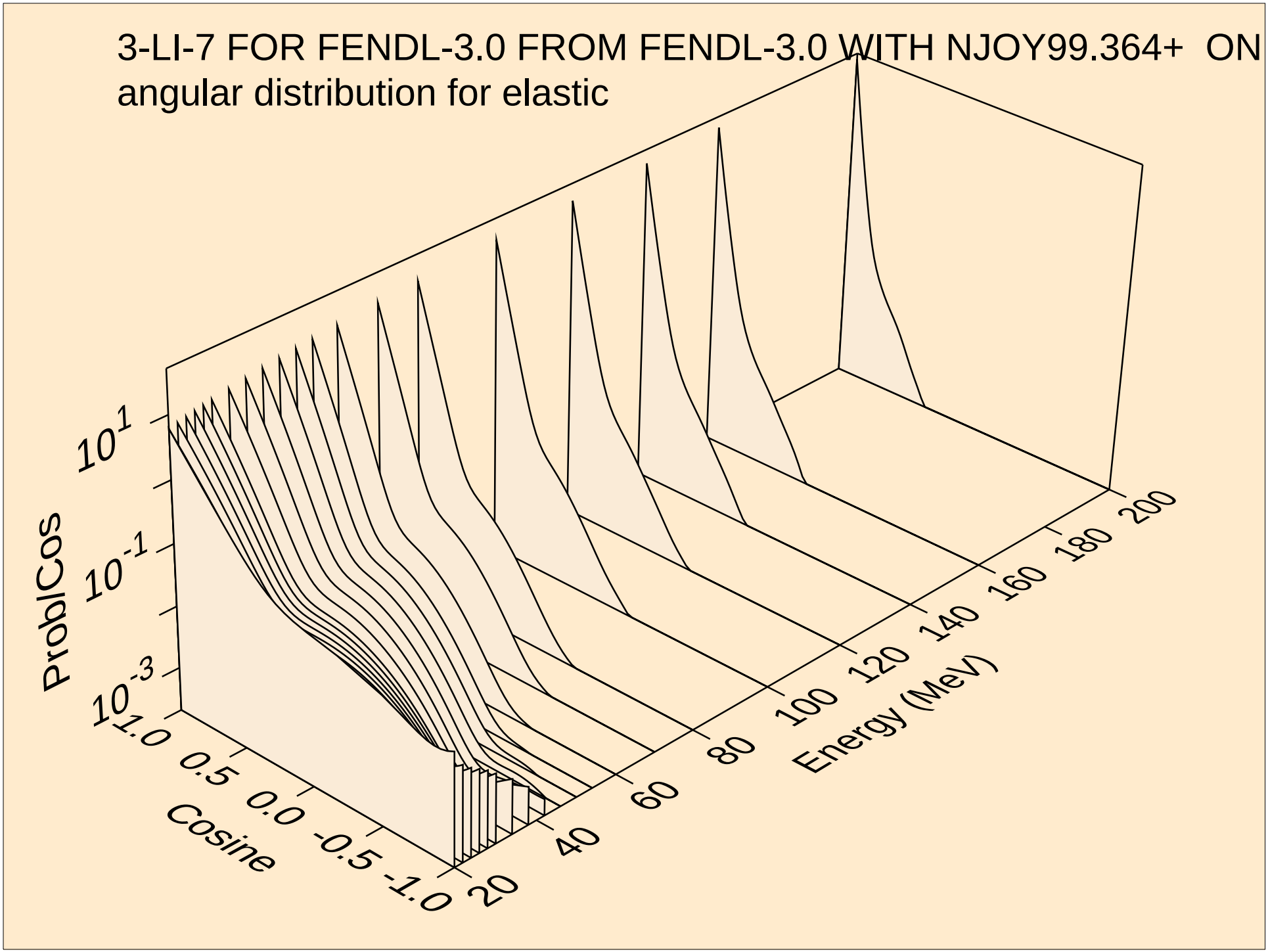

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
12
*10-3
10
8
6
4
2
0
Cross section (barns)
0
20
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

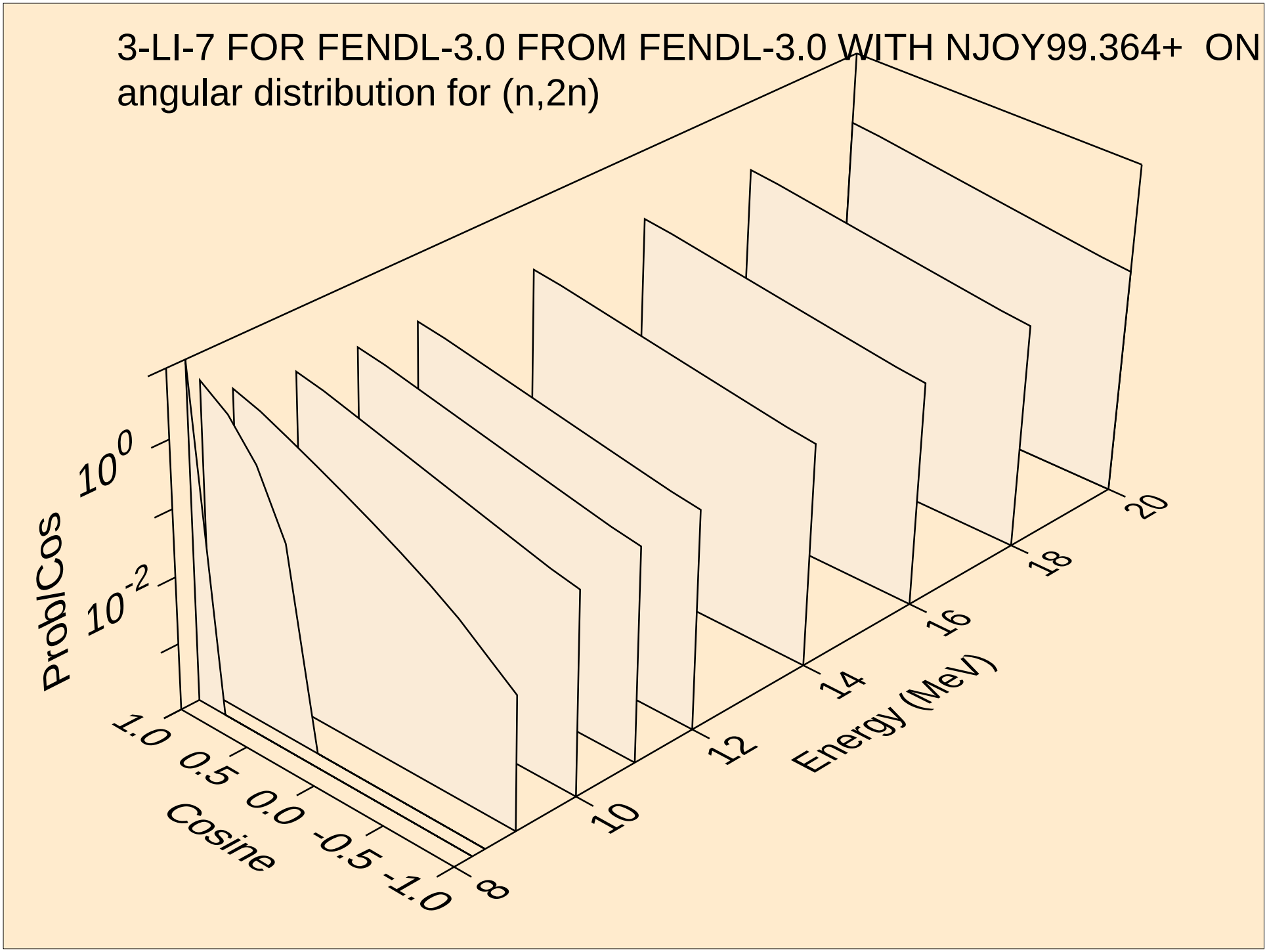

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
*10-3
6
5
4
3
2
1
0
Cross section (barns)
(n,n*31)
(n,n*32)
0
20
Energy (MeV)

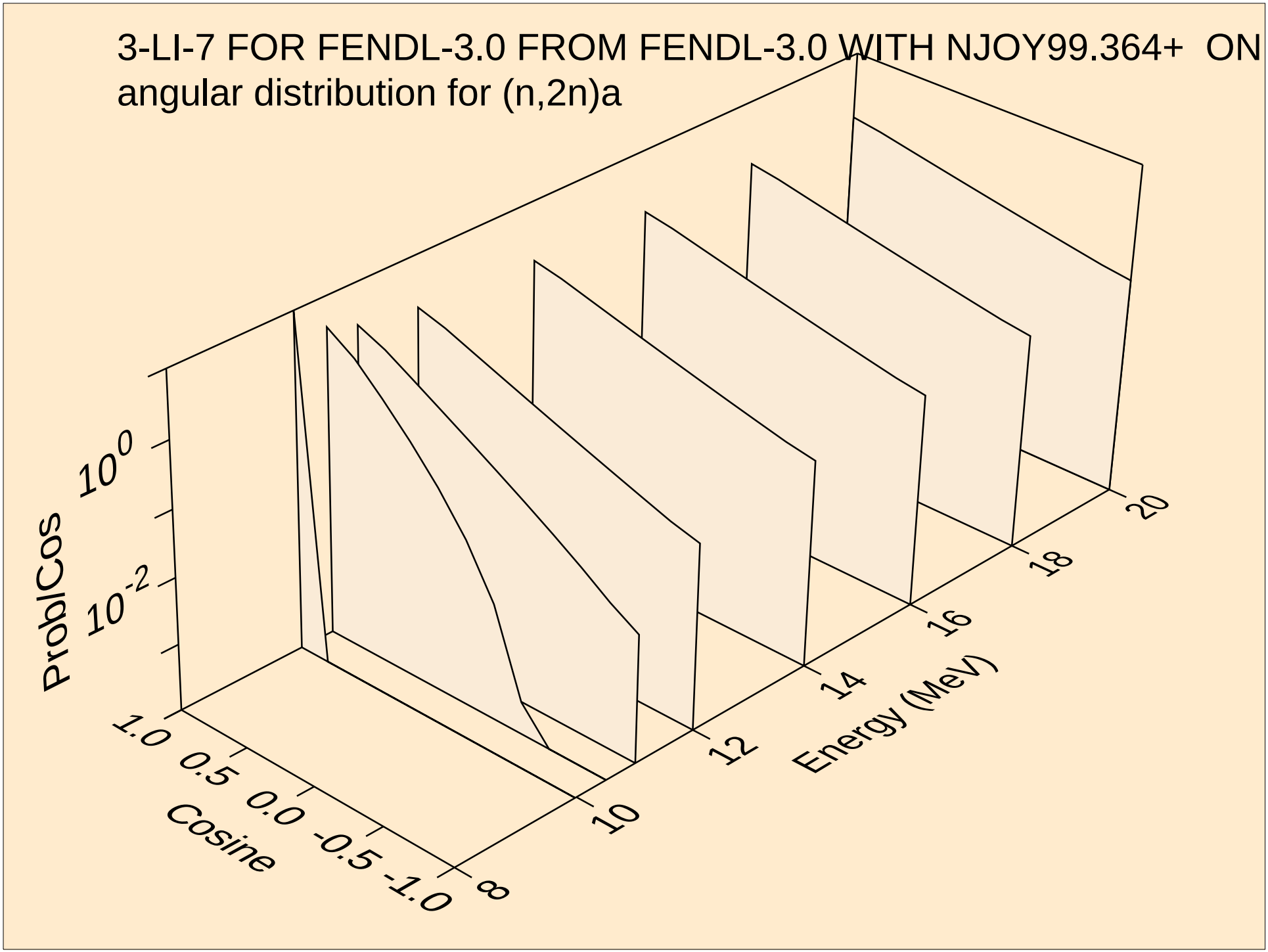

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Threshold reactions
500
*10-3
400
300
200
100
0
Cross section (barns)
(n,x)
(n,2n)
(n,2n)a
(n,3n)a
(n,d)
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

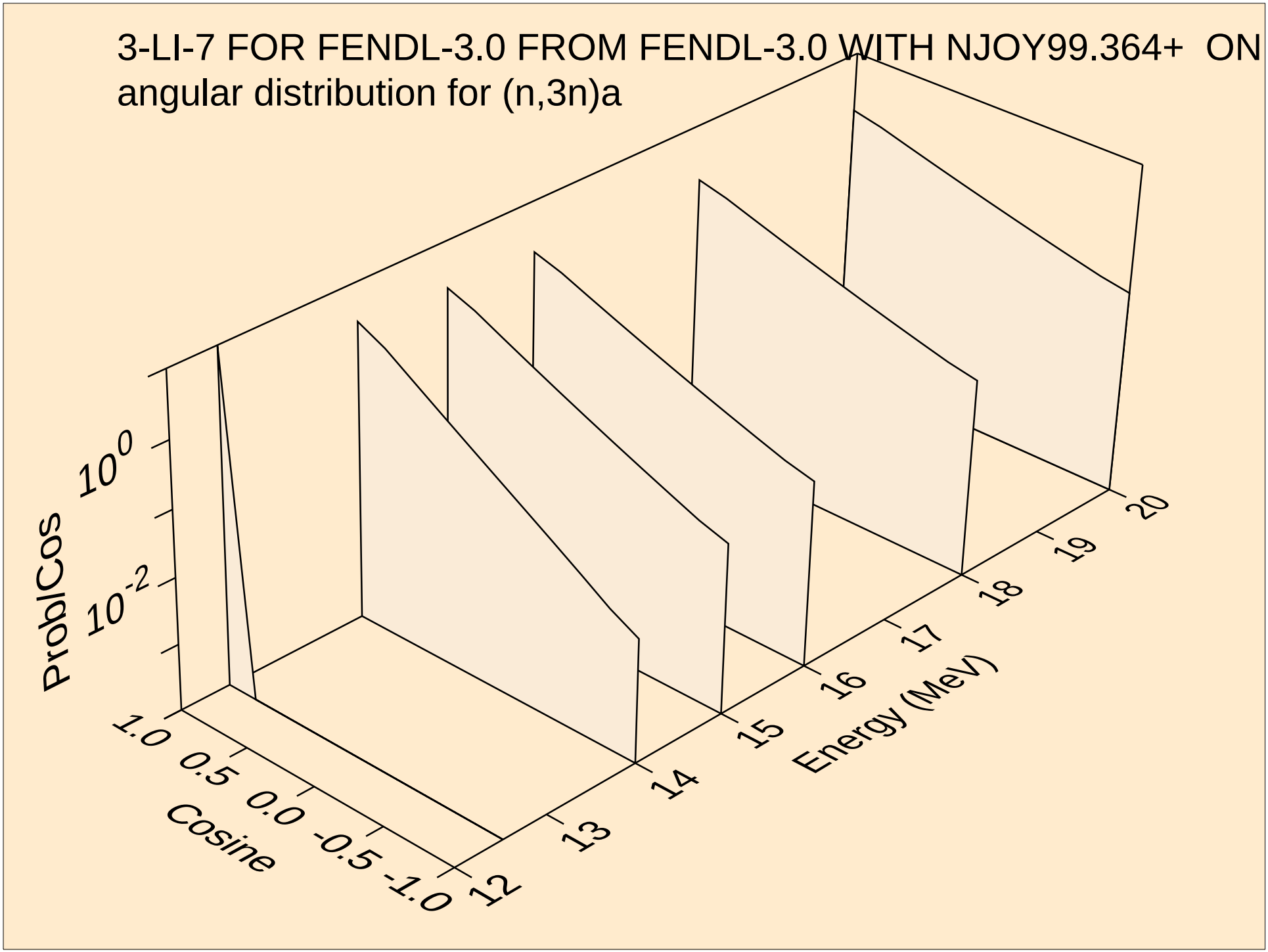

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Threshold reactions
400
*10-3
350
300
250
200
150
100
50
0
Cross section (barns)
(n,xp)
(n,xd)
(n,xt)
(n,xhe3)
(n,xa)
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

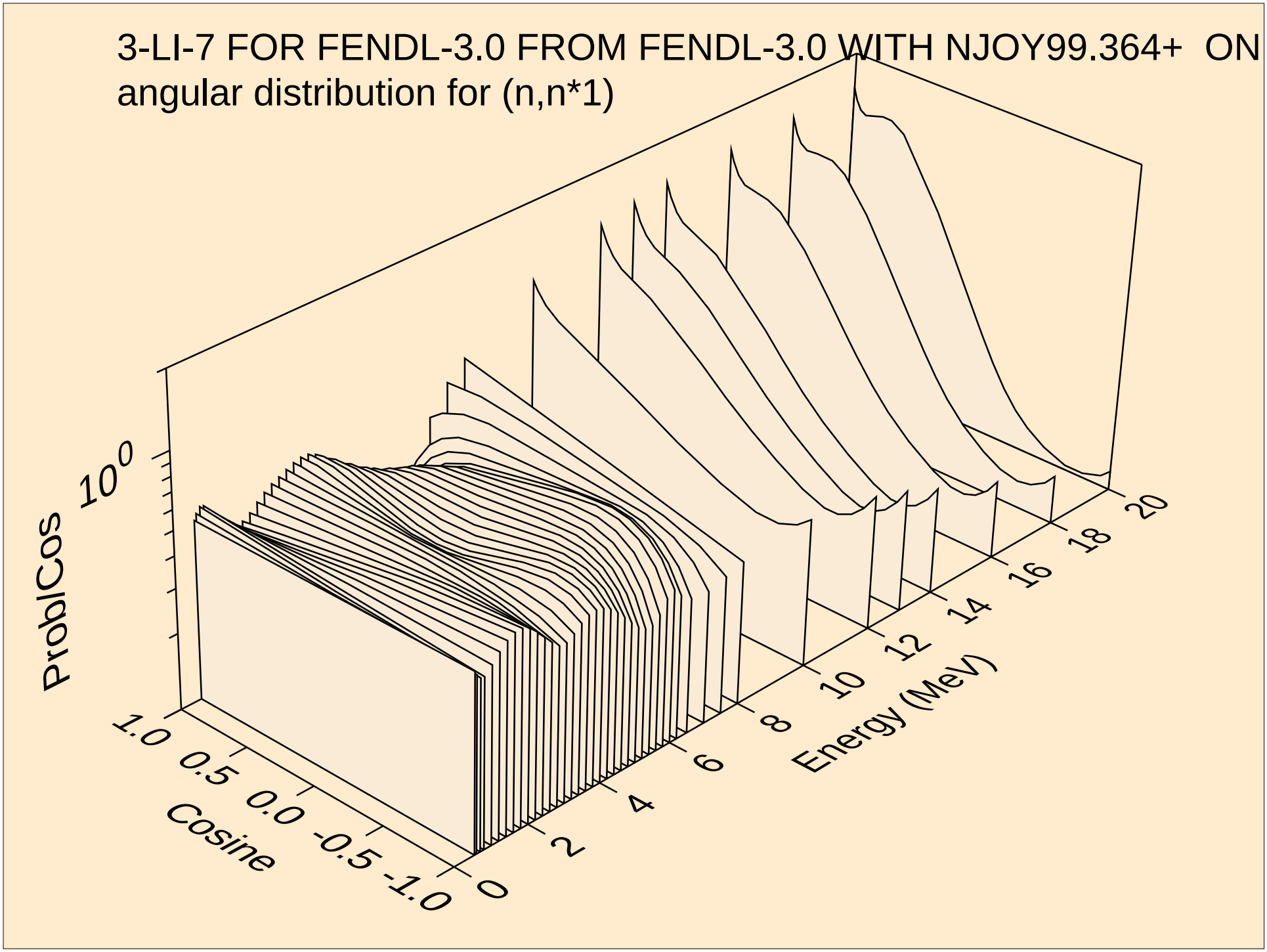

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for elastic
ProbCos
10^{1}
10^{0}
10^{-1}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

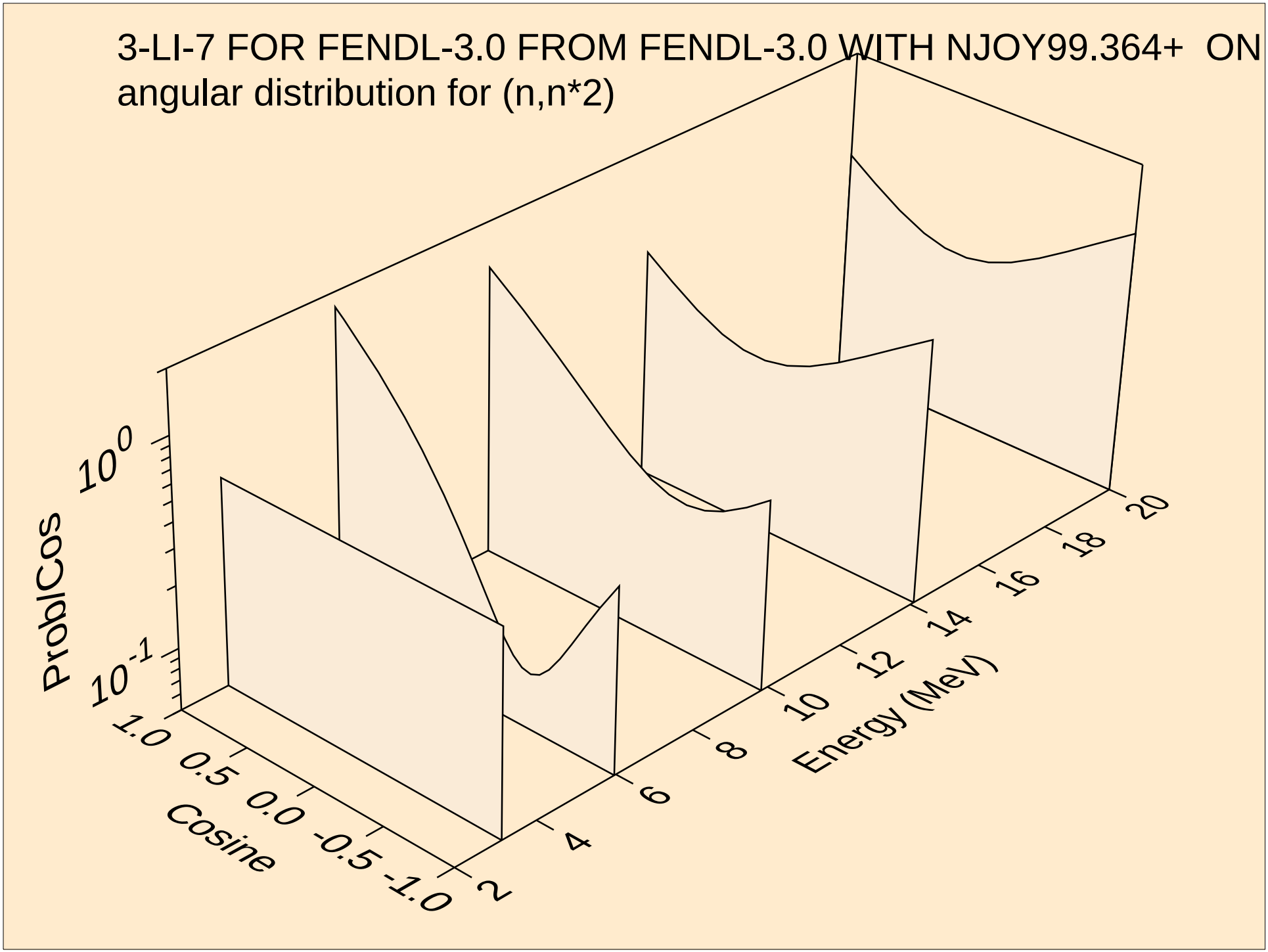

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for elastic
ProbICos
10^1
10^-1
10^-3
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
20
40
60
80
100
120
140
160
180
200

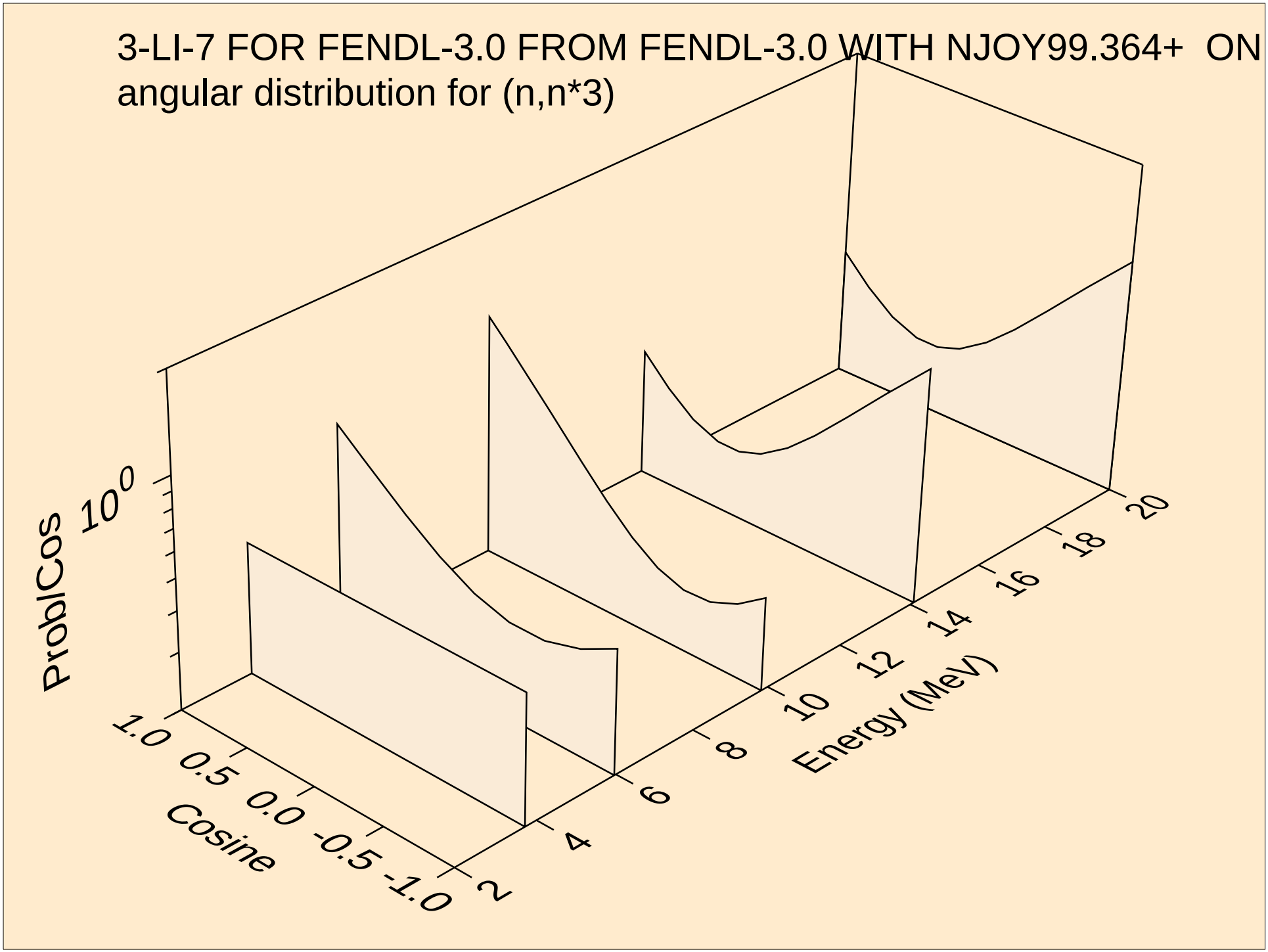

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,2n)
Prob\Cos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

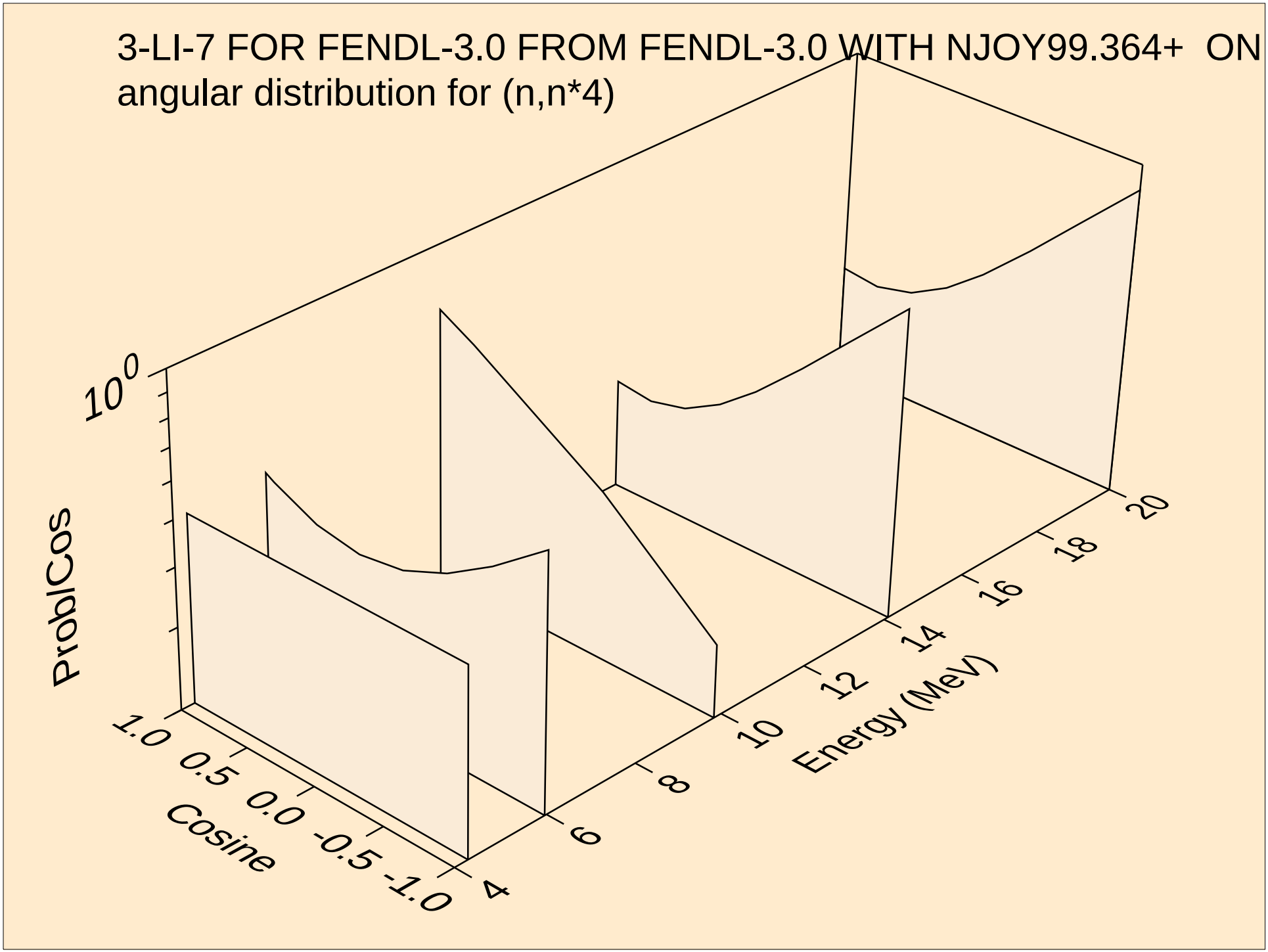

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,2n)a
Prob\Cos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

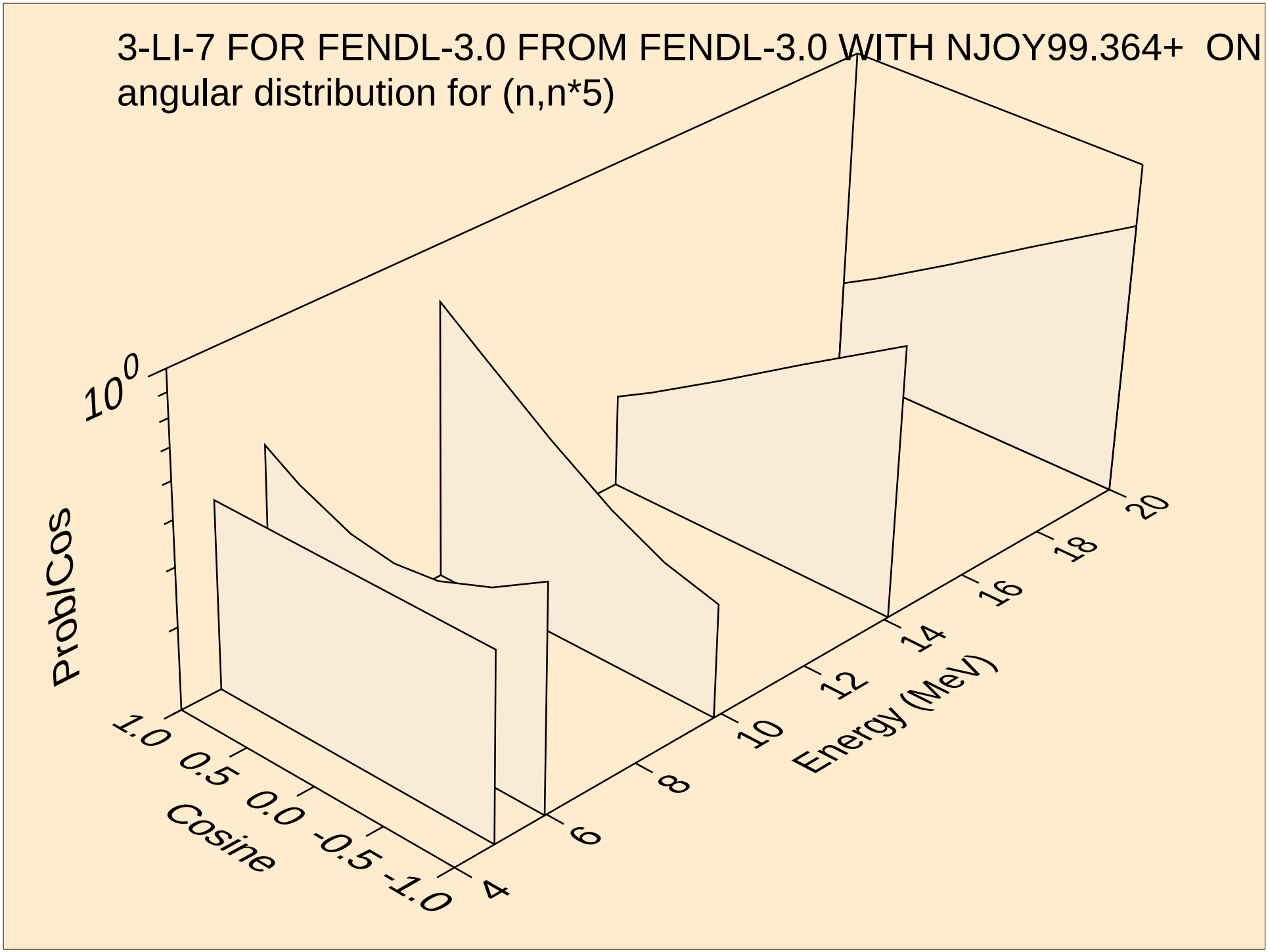

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,3n)a
ProbCos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
12
13
14
15
16
17
18
19
20
Energy (MeV)

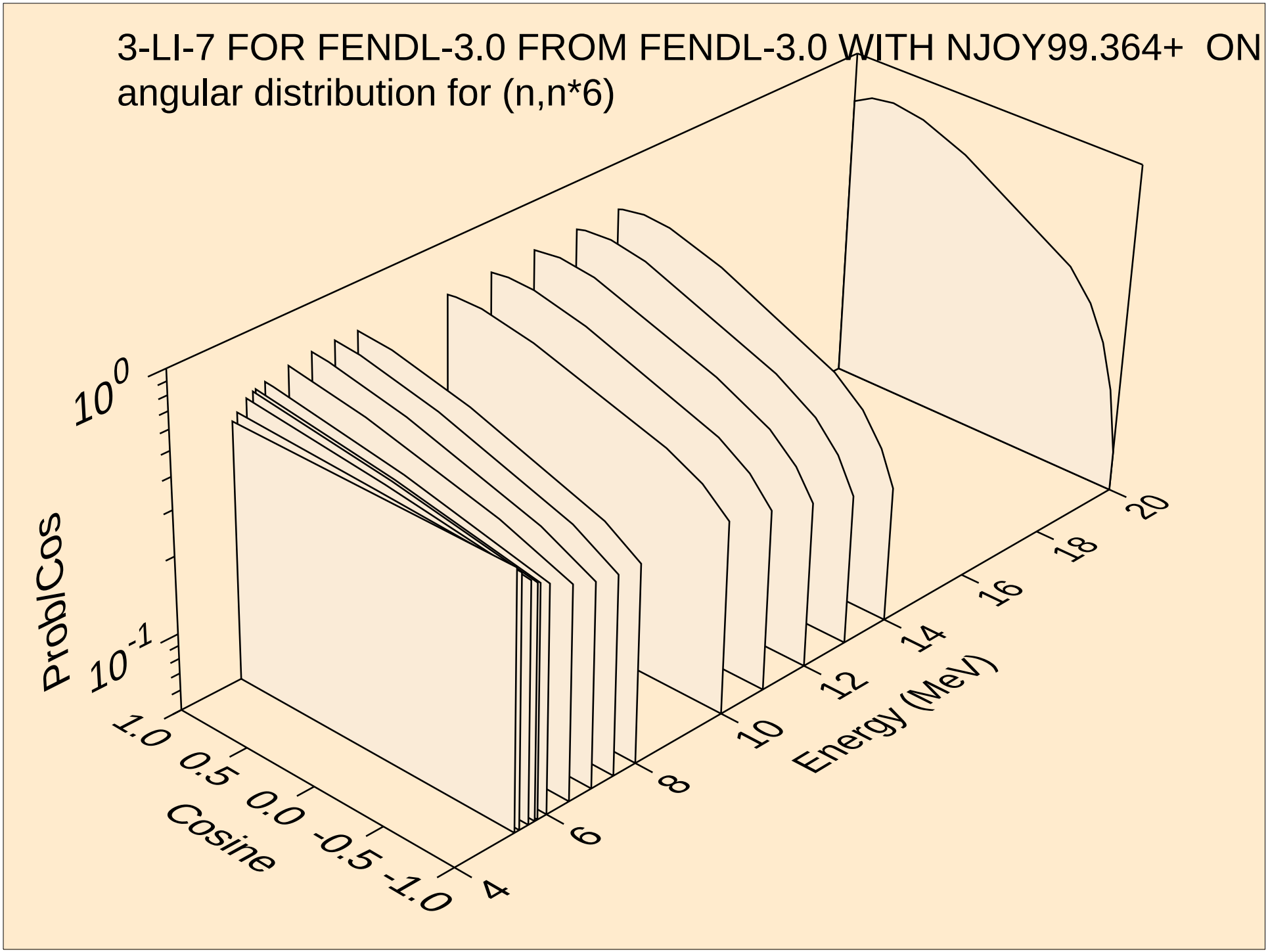

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*1)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

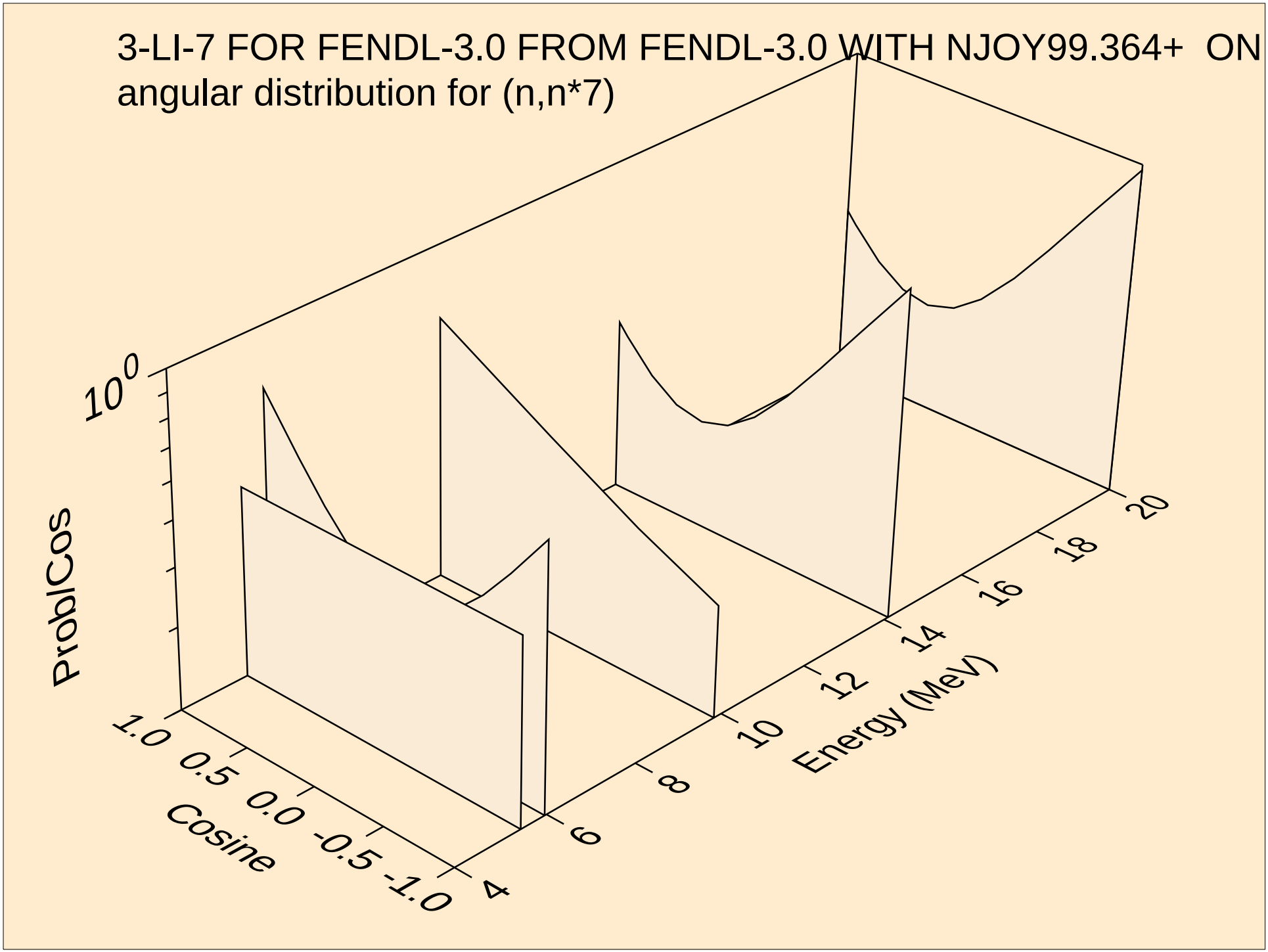

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*2)
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

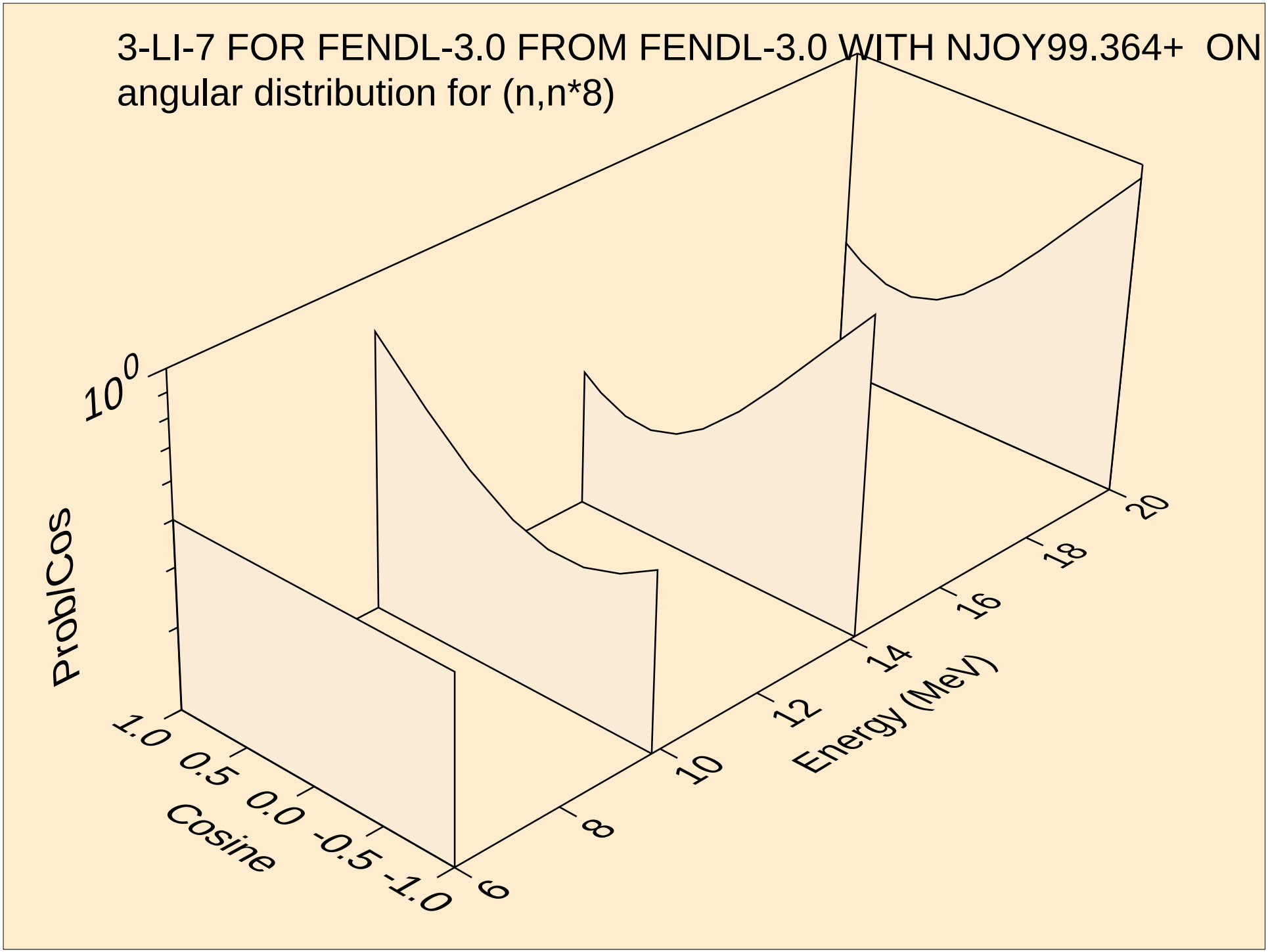

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*3)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

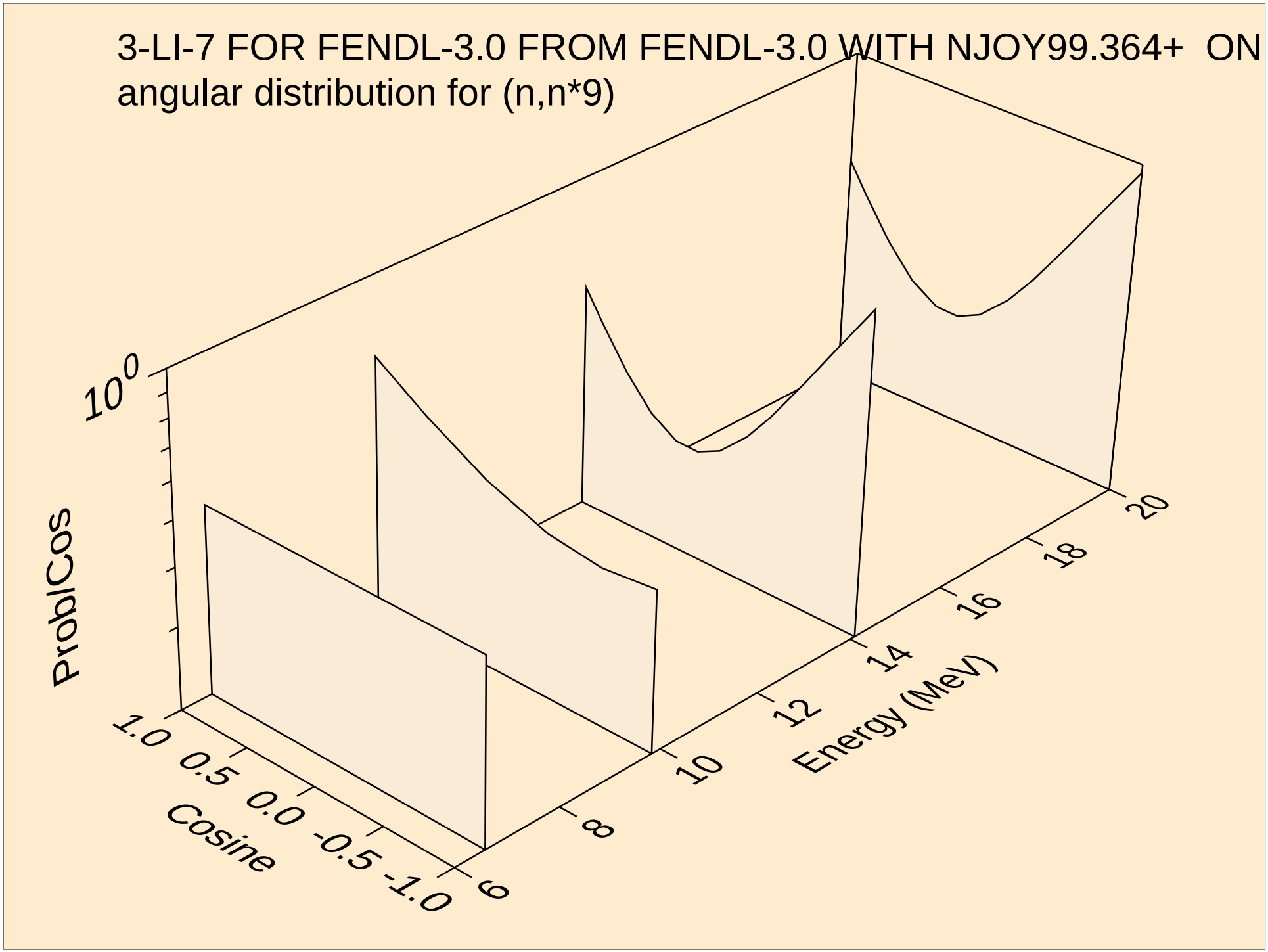

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*4)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

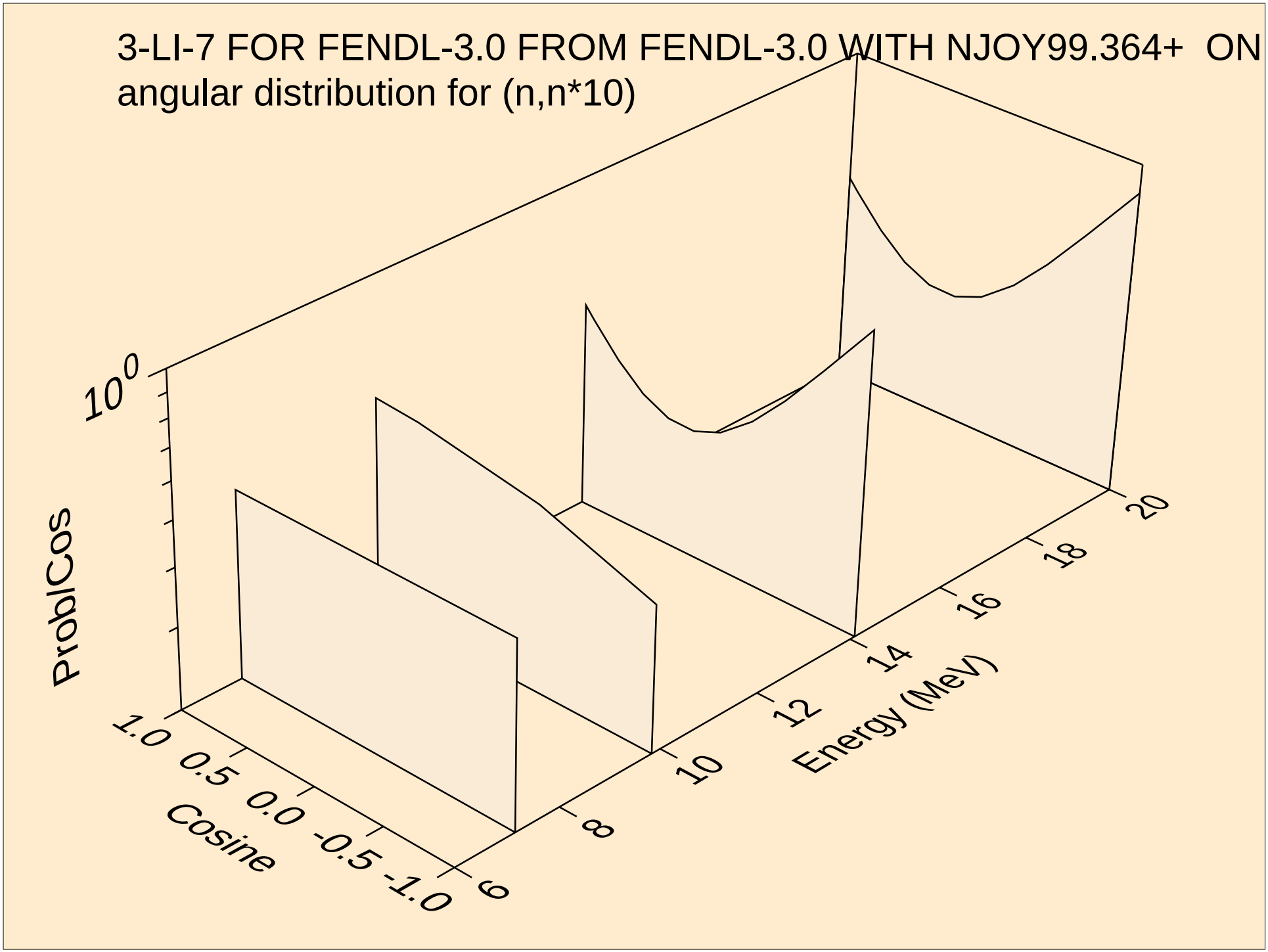

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*5)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

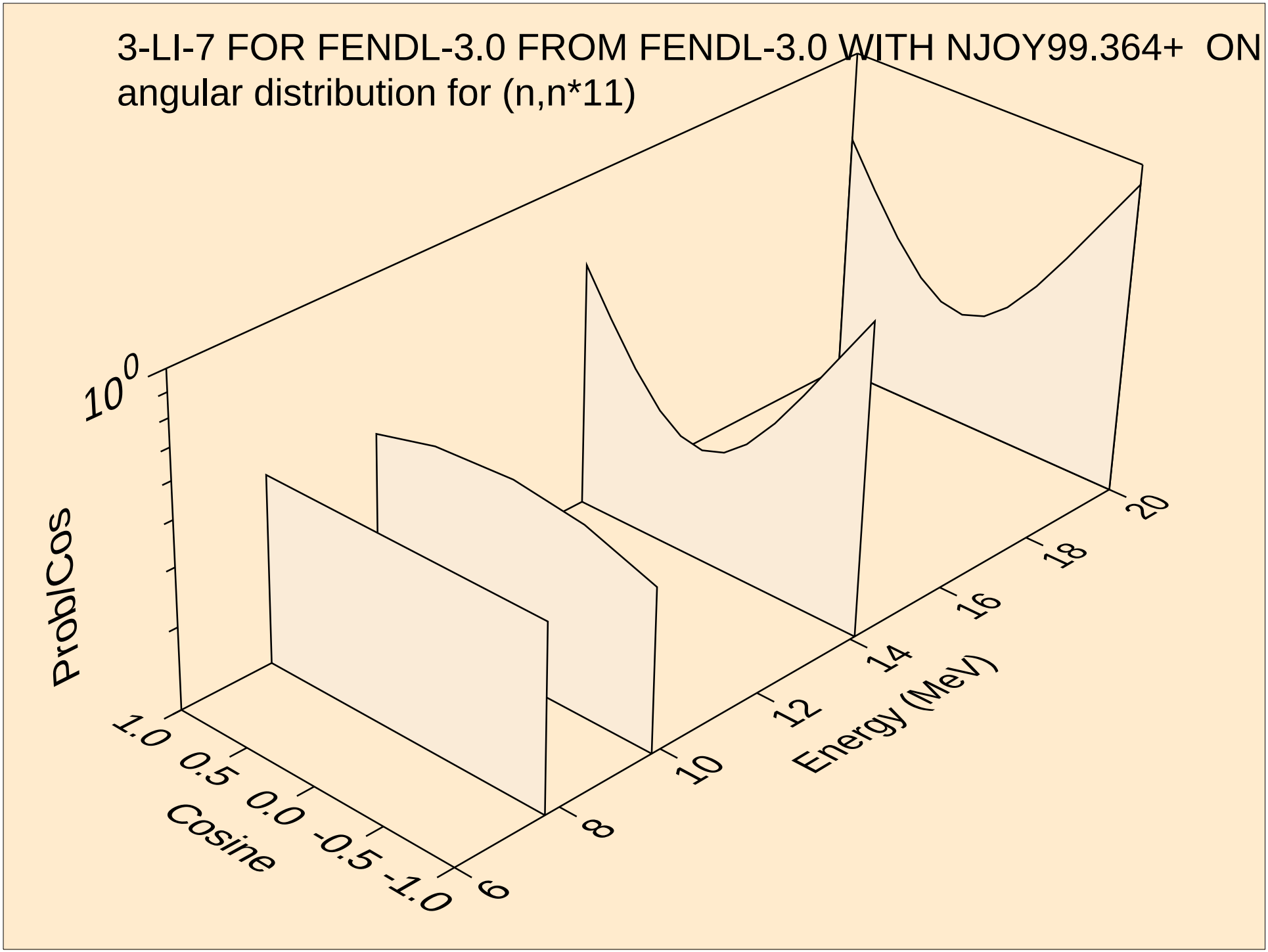

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*6)
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

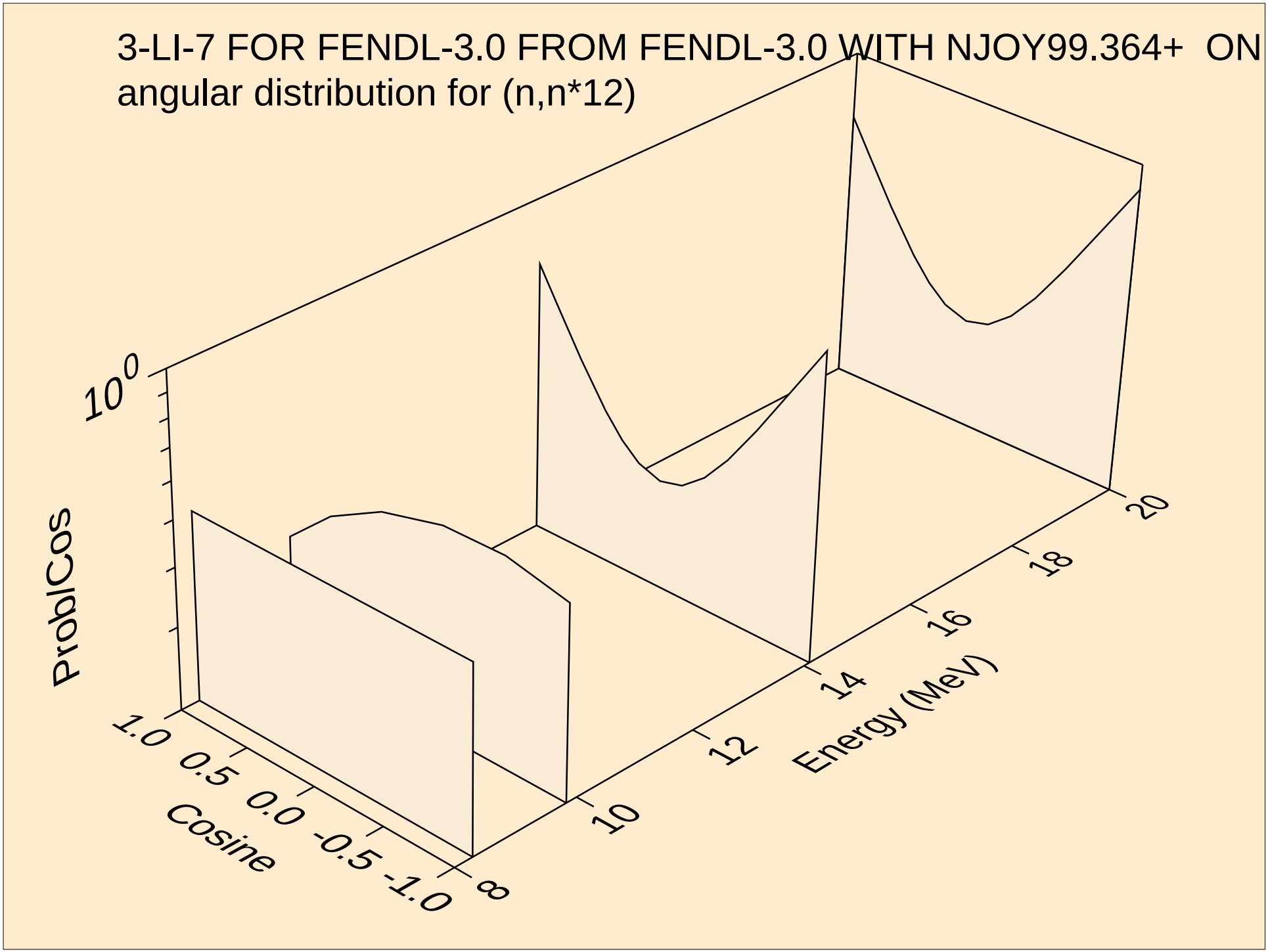

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*7)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

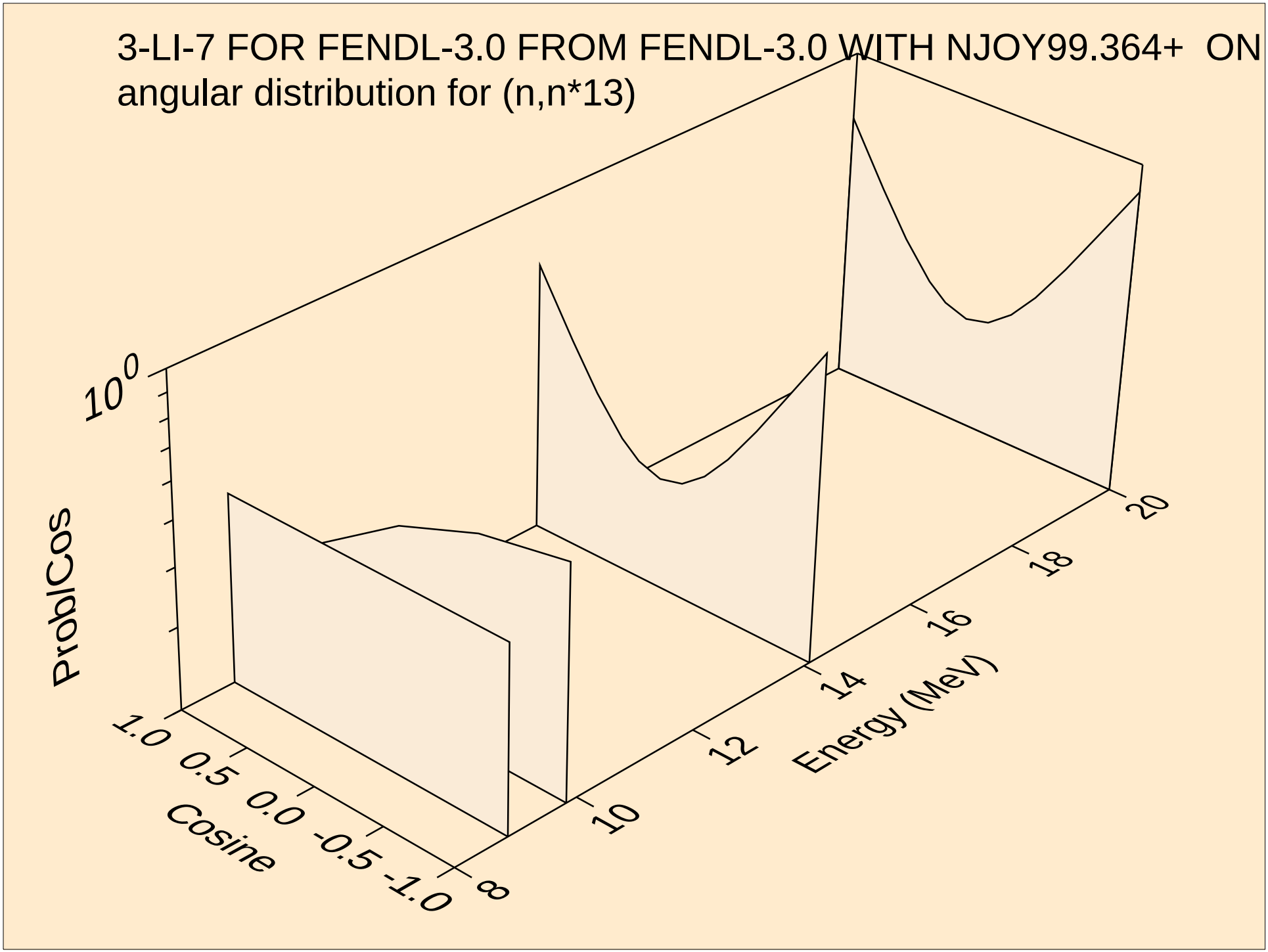

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*8)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
6
8
10
12
14
16
18
20
Energy (MeV)

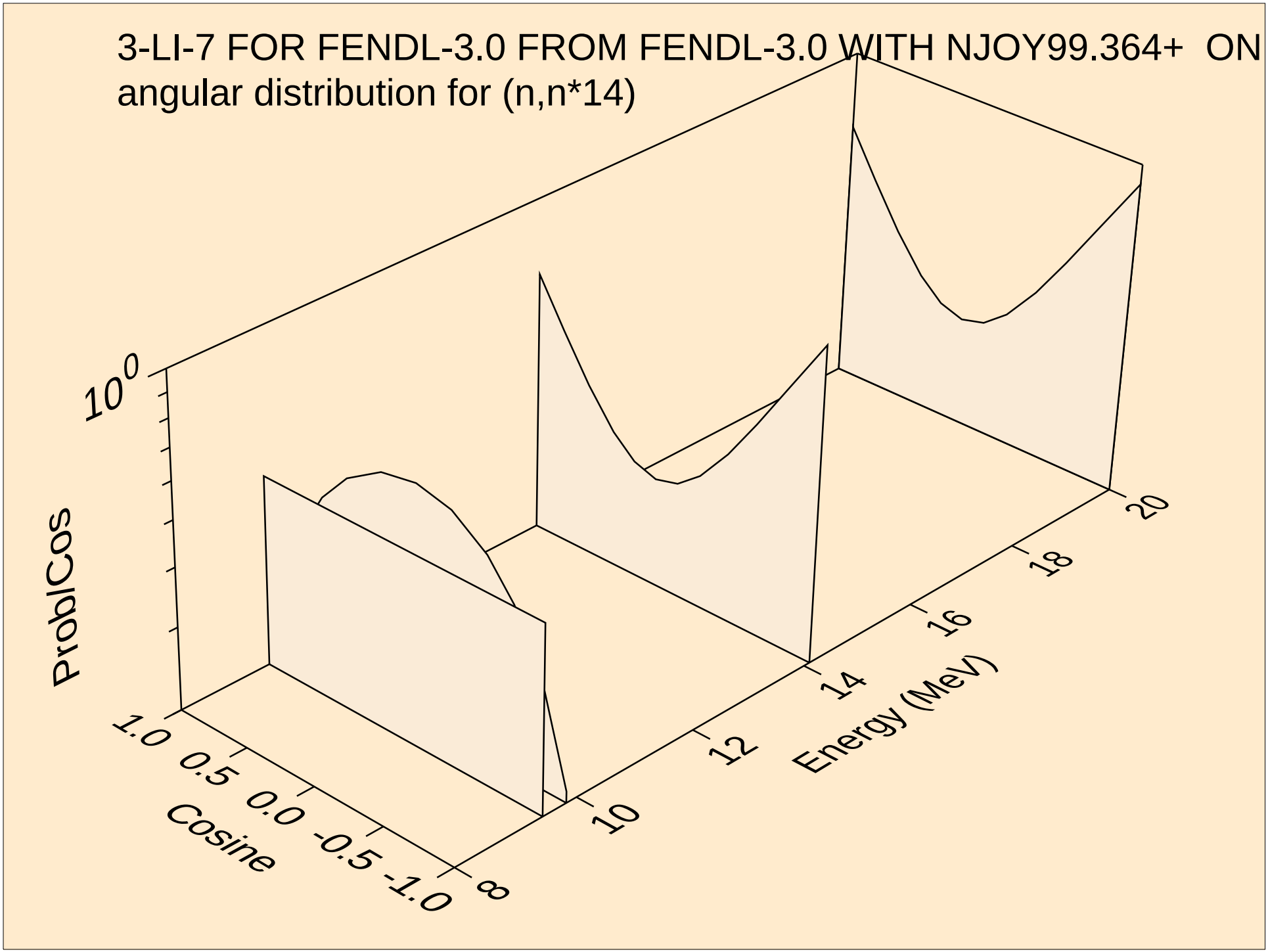

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*9)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
6
8
10
12
14
16
18
20
Energy (MeV)

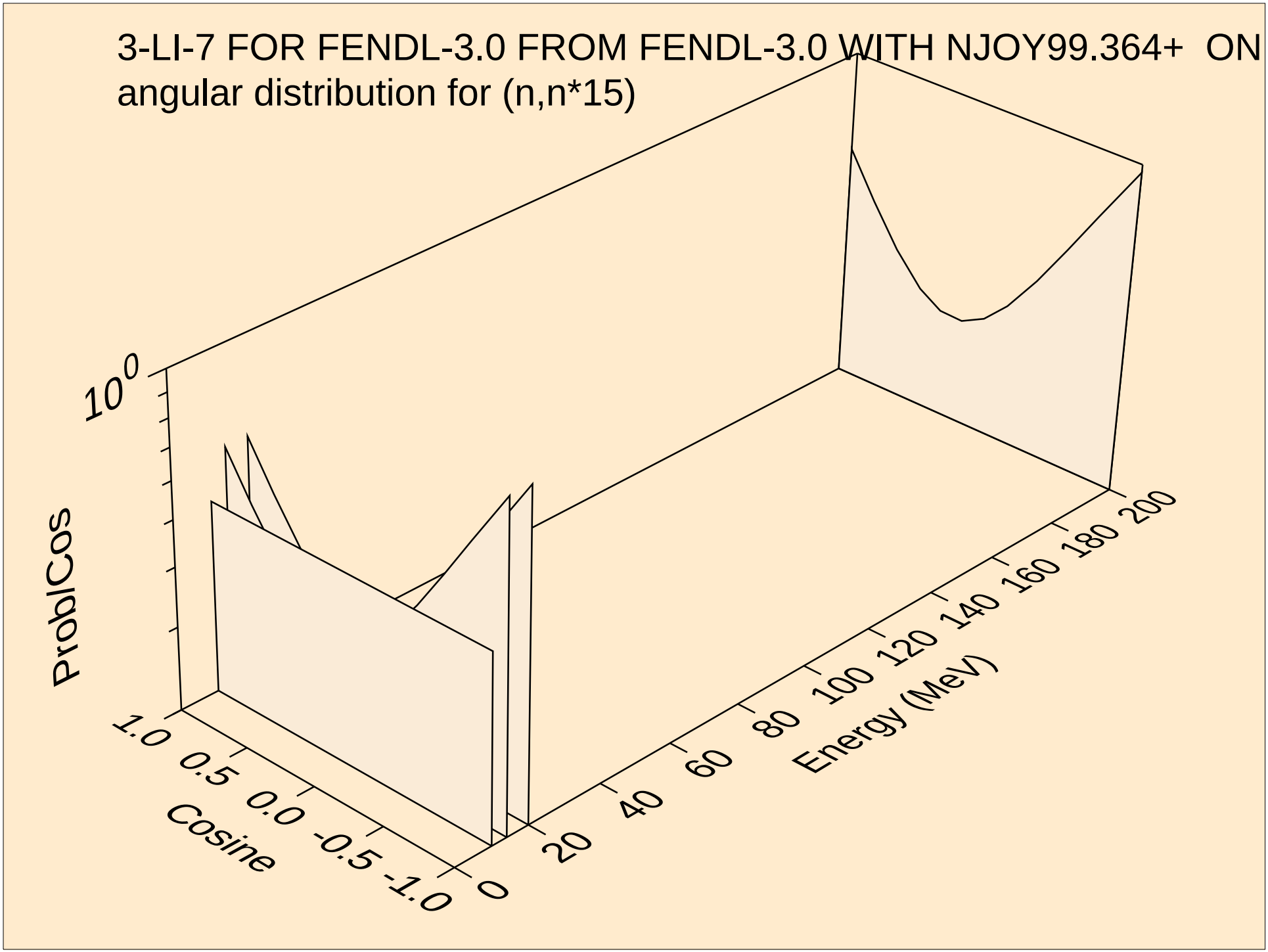

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*10)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
6
8
10
12
14
16
18
20
Energy (MeV)

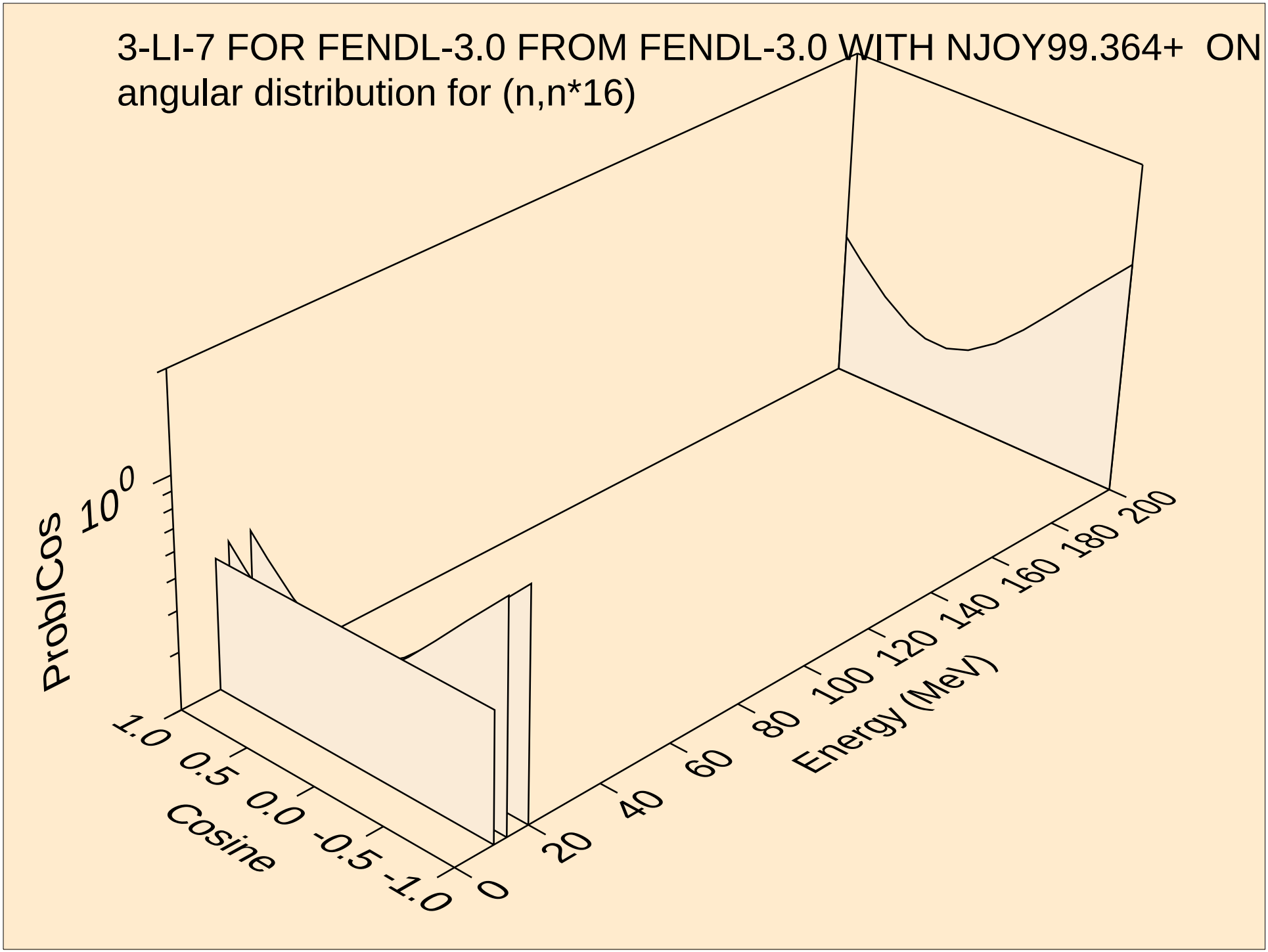

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*11)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
6
8
10
12
14
16
18
20
Energy (MeV)

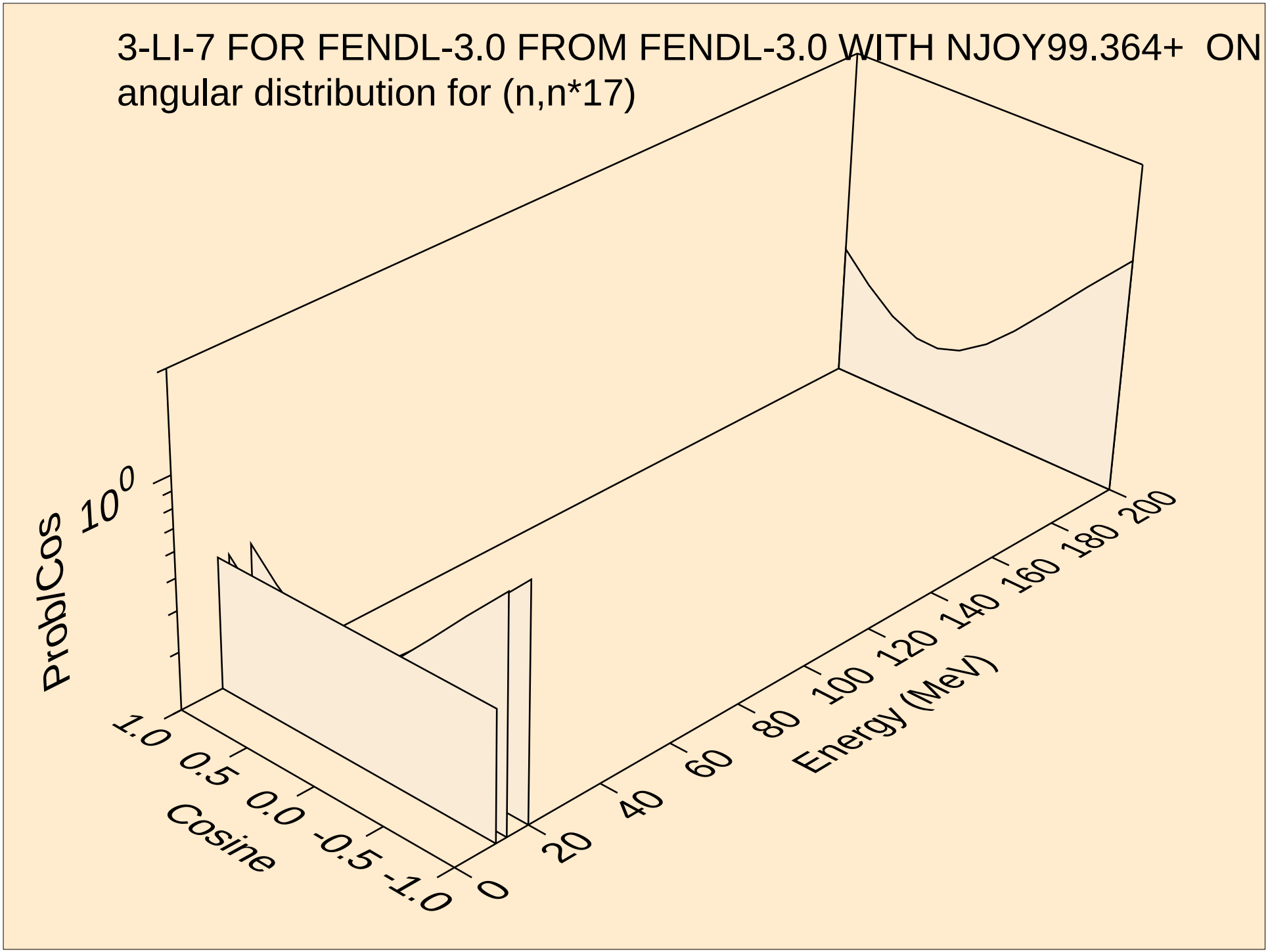

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*12)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

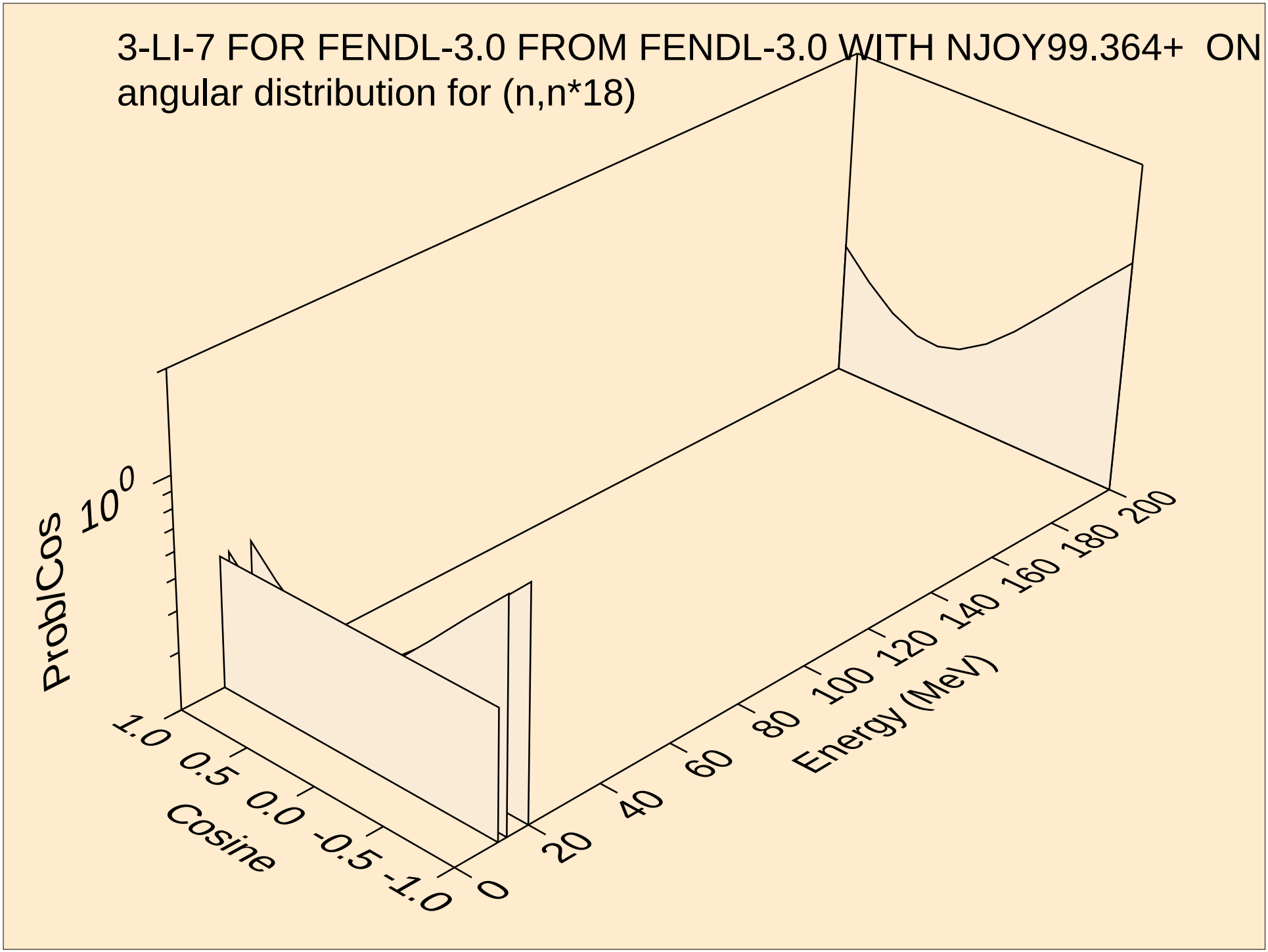

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*13)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

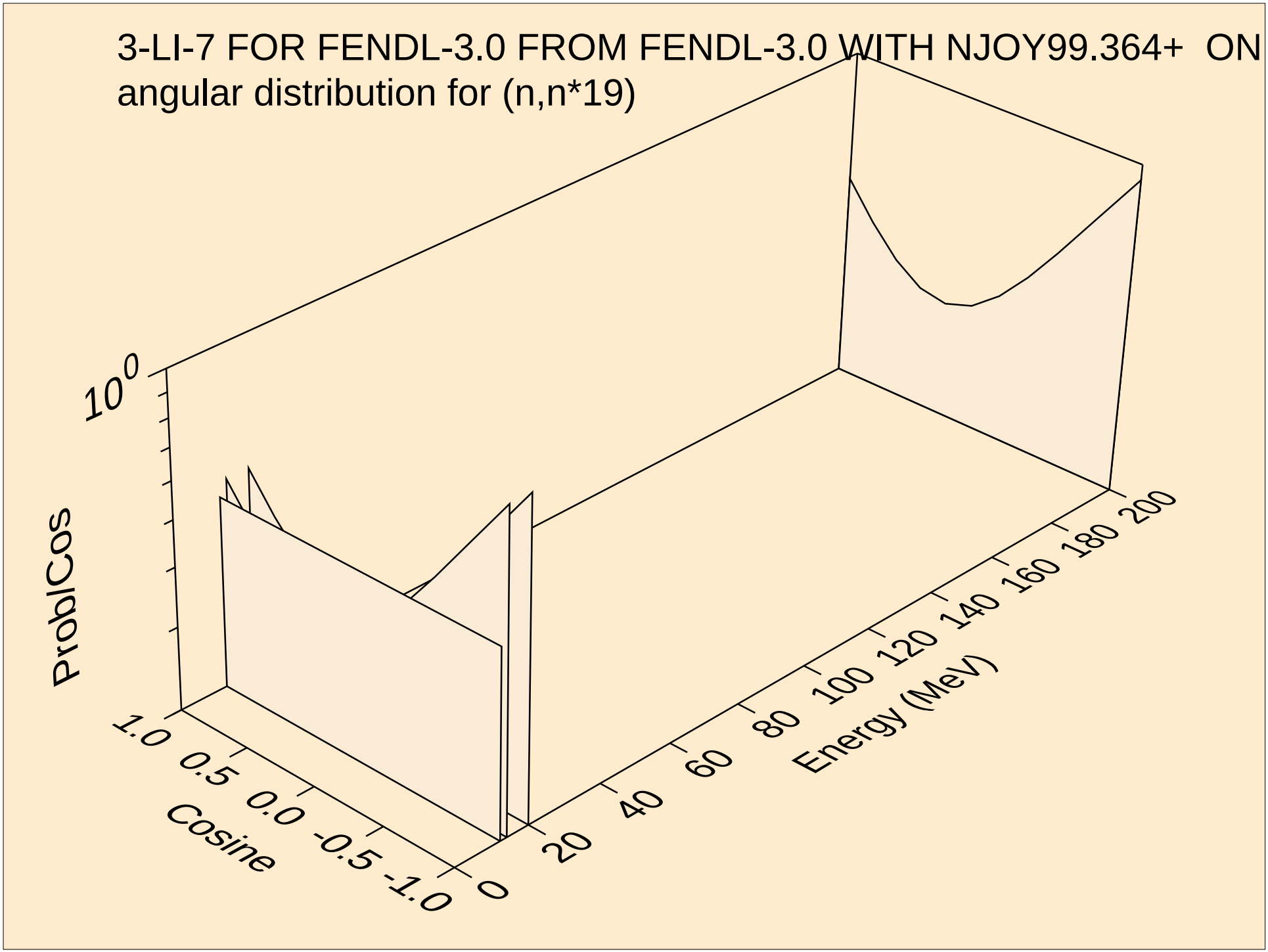

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*14)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

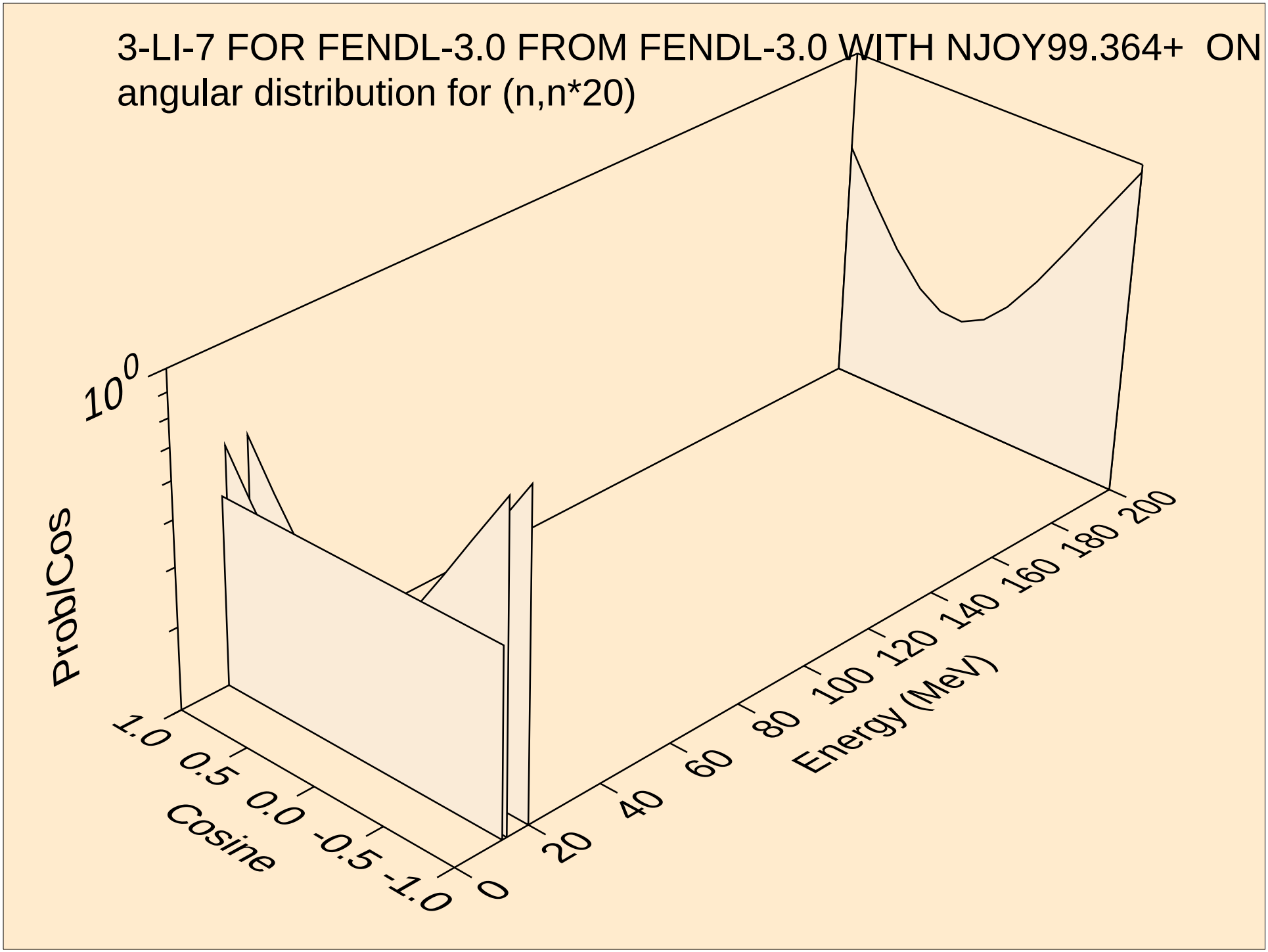

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*15)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

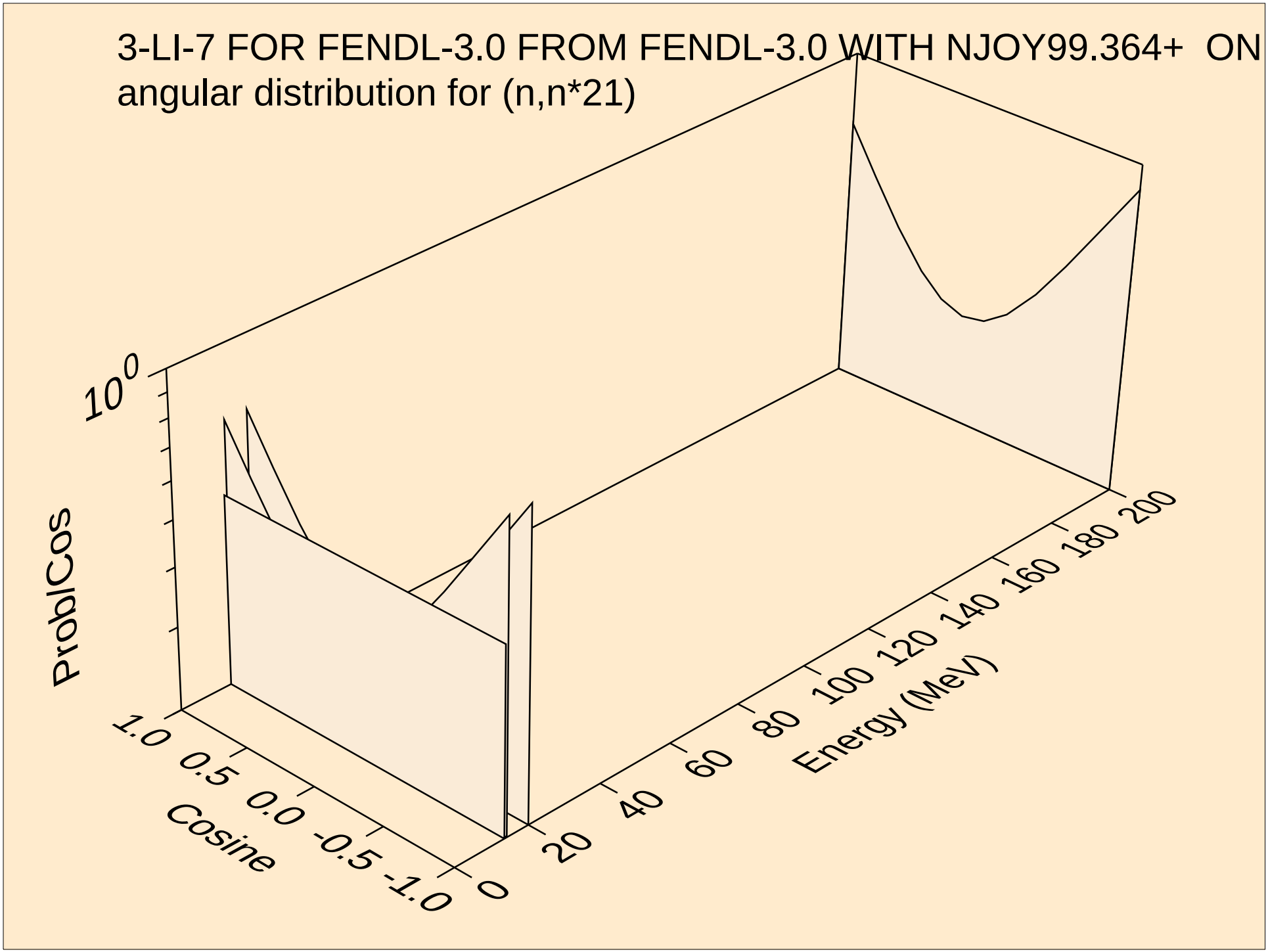

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*16)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

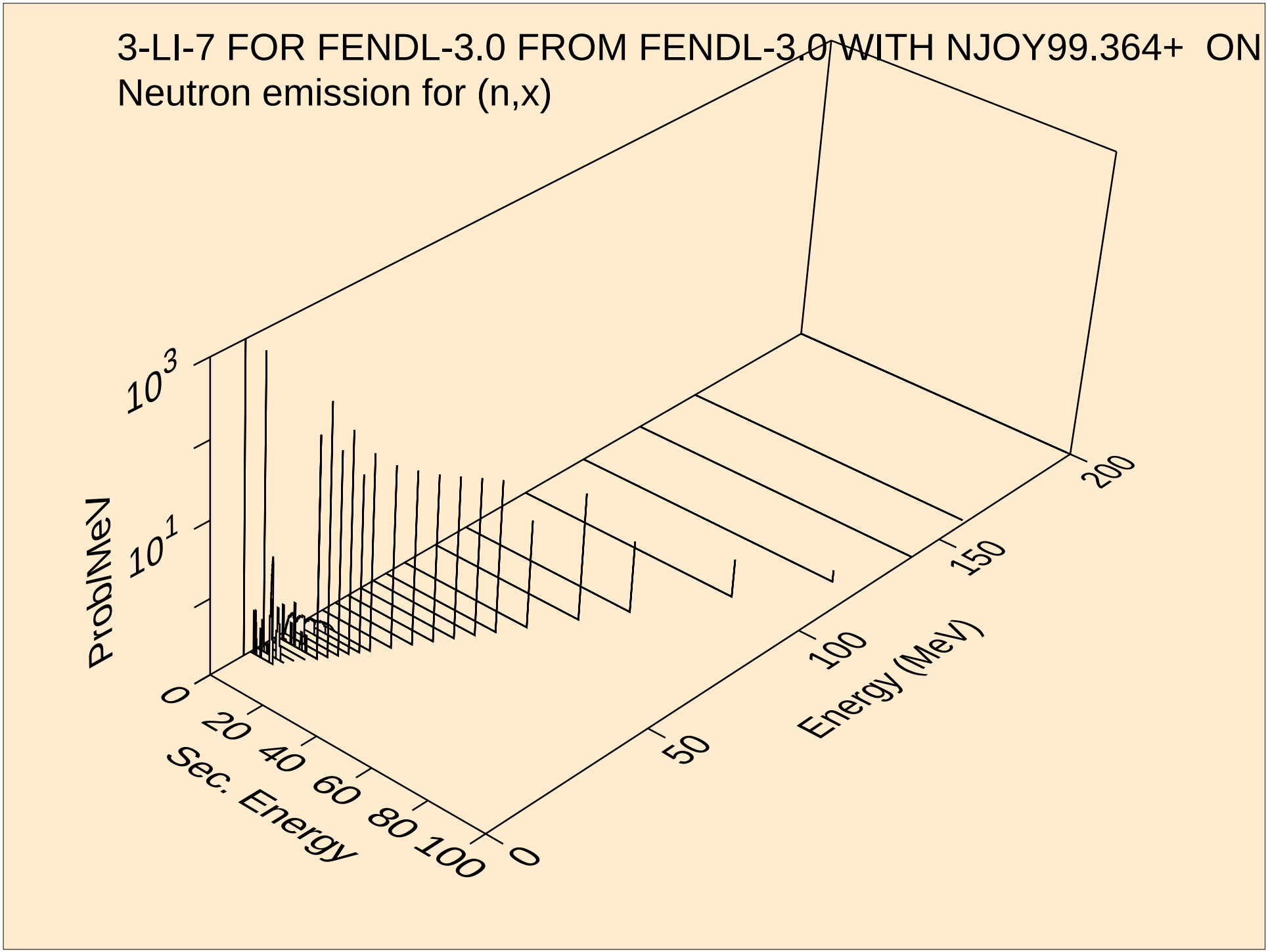

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*17)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

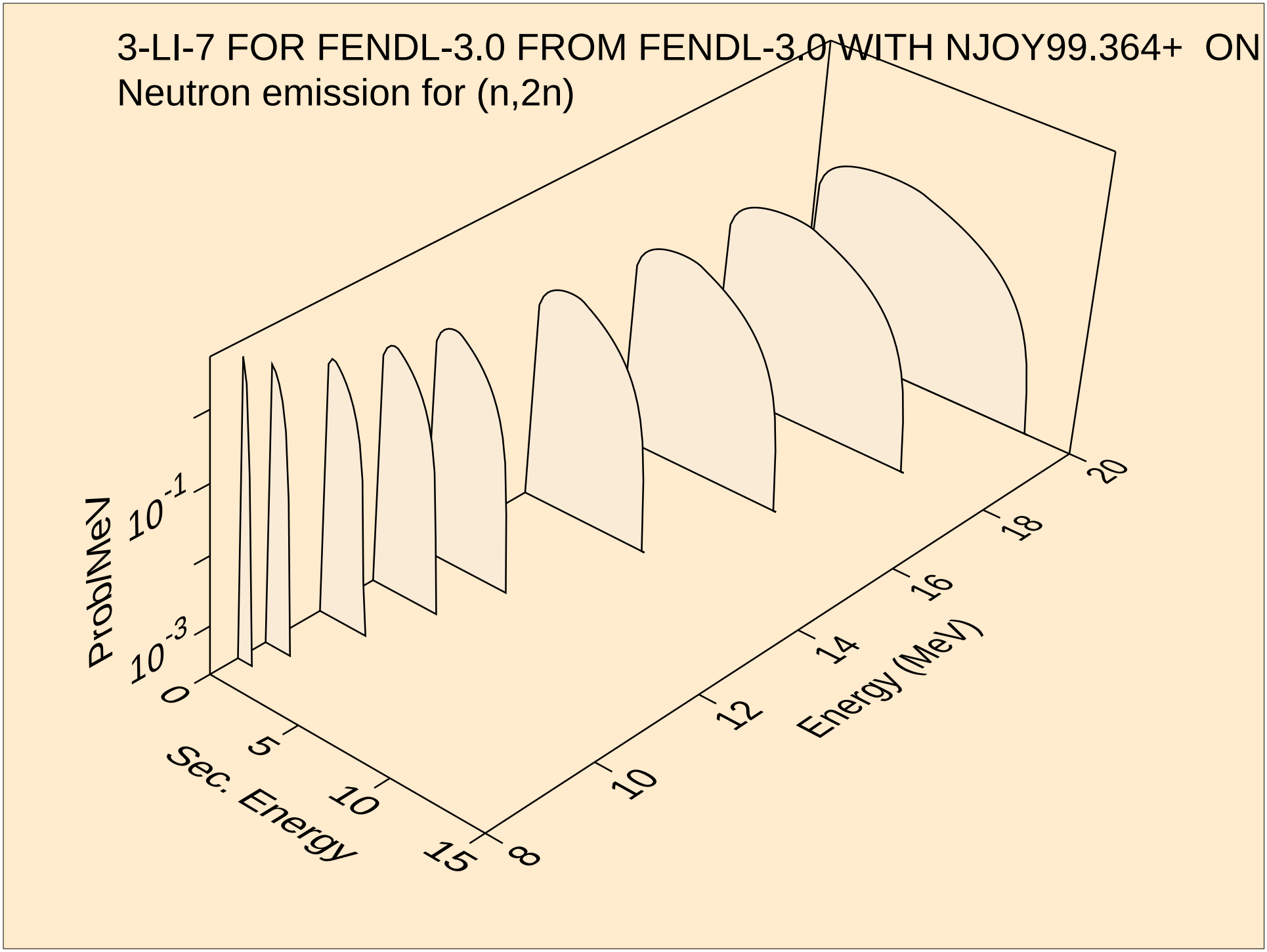

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*18)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

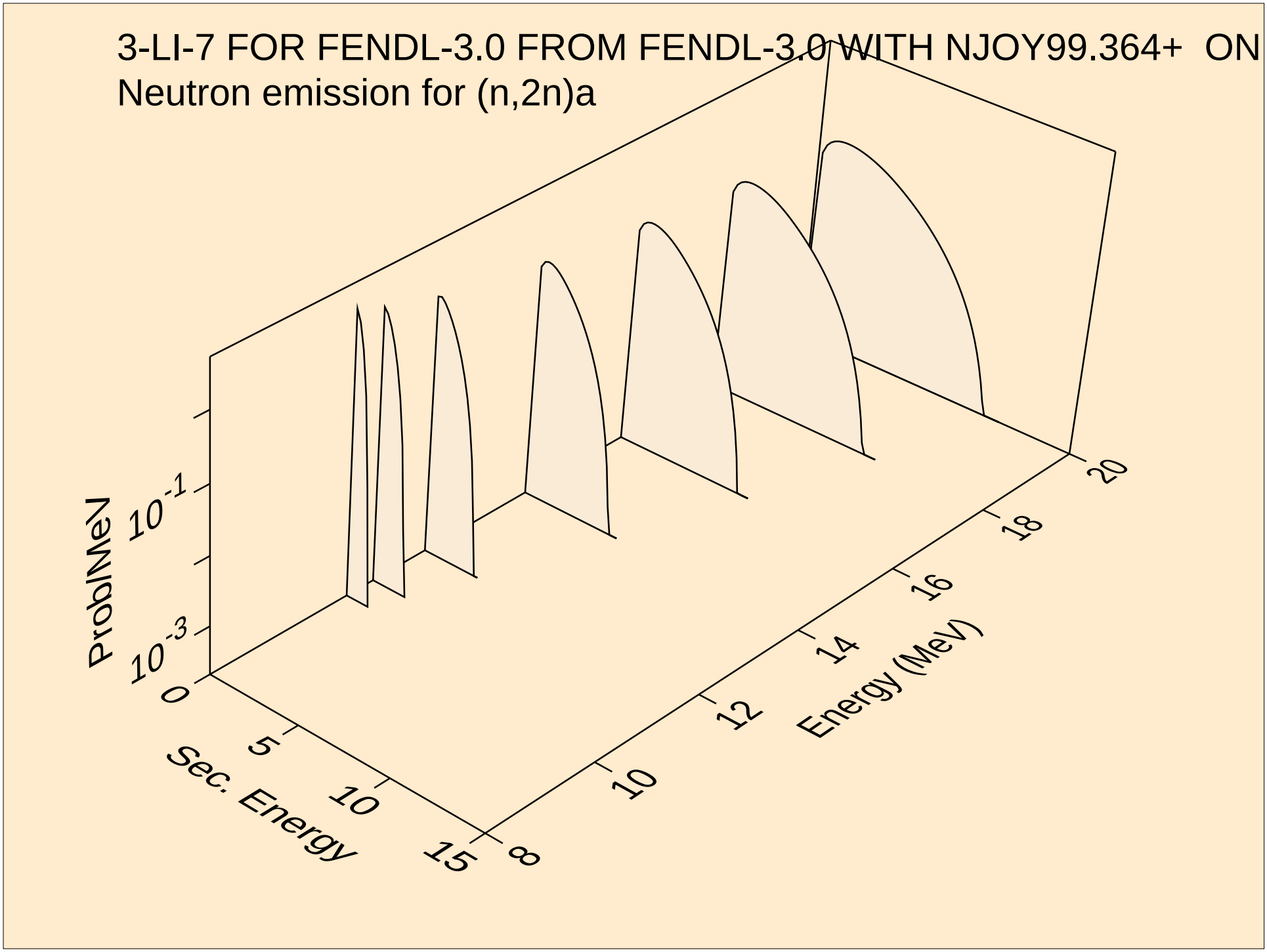

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*19)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

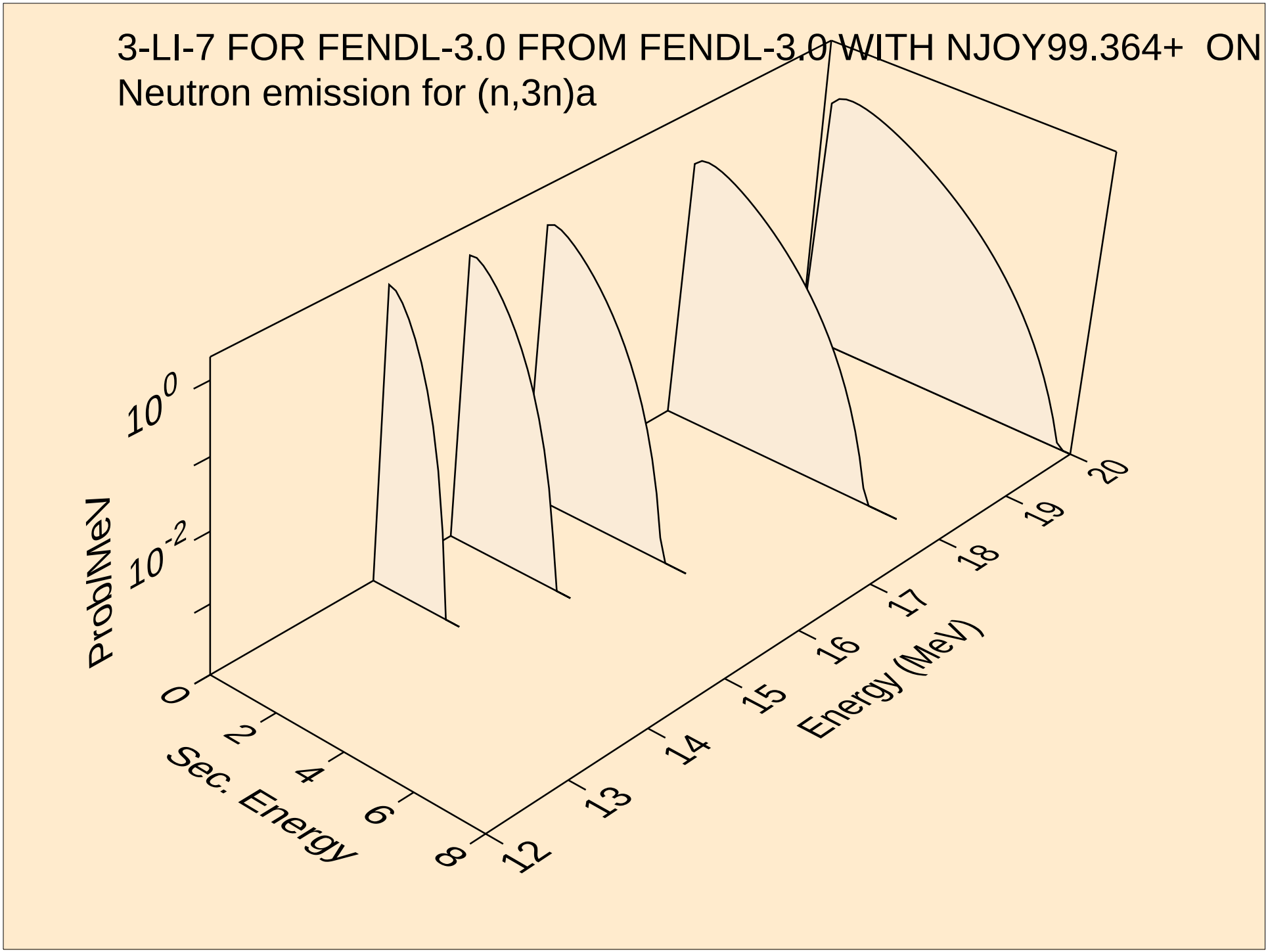

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*20)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

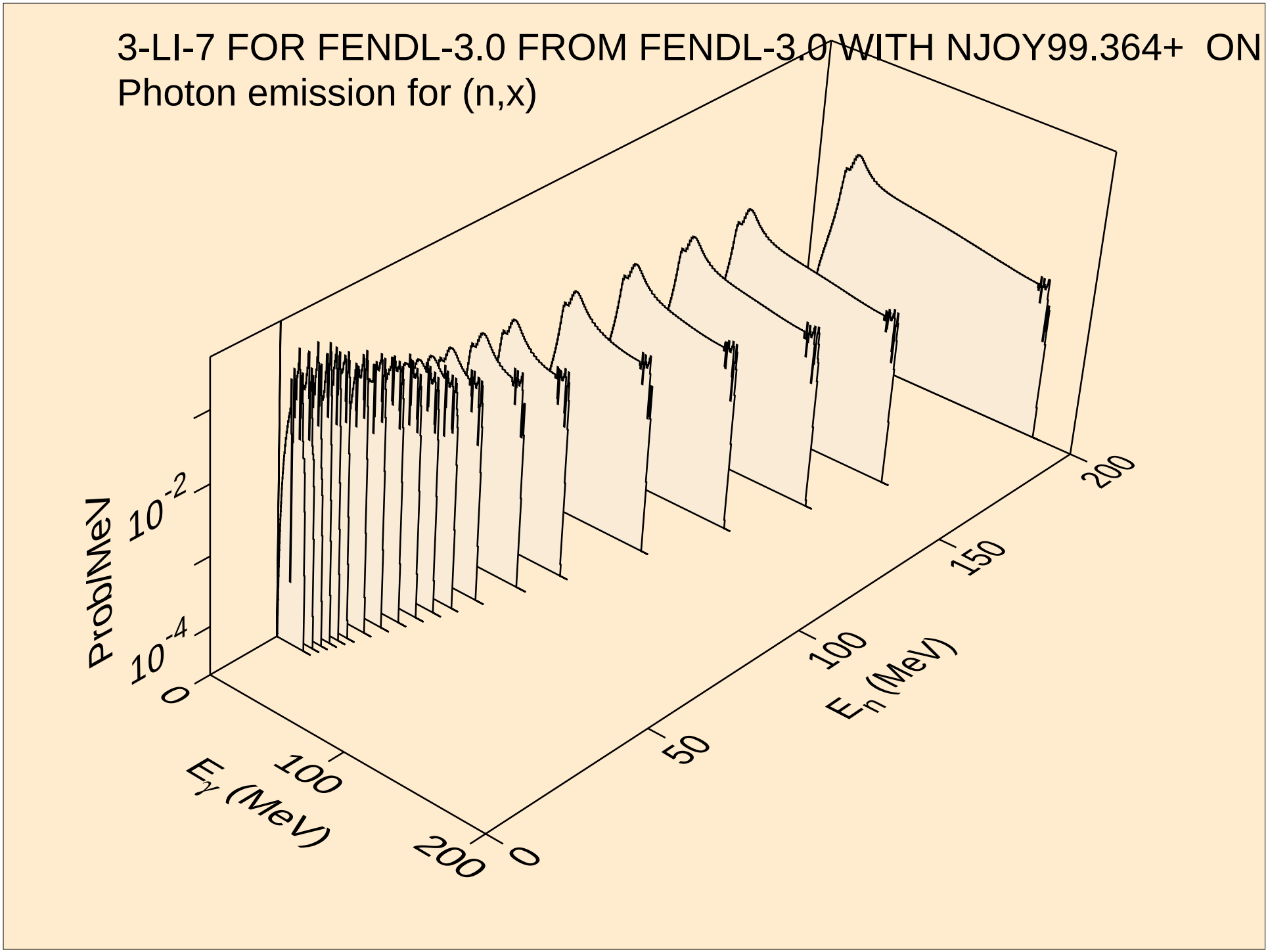

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*21)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

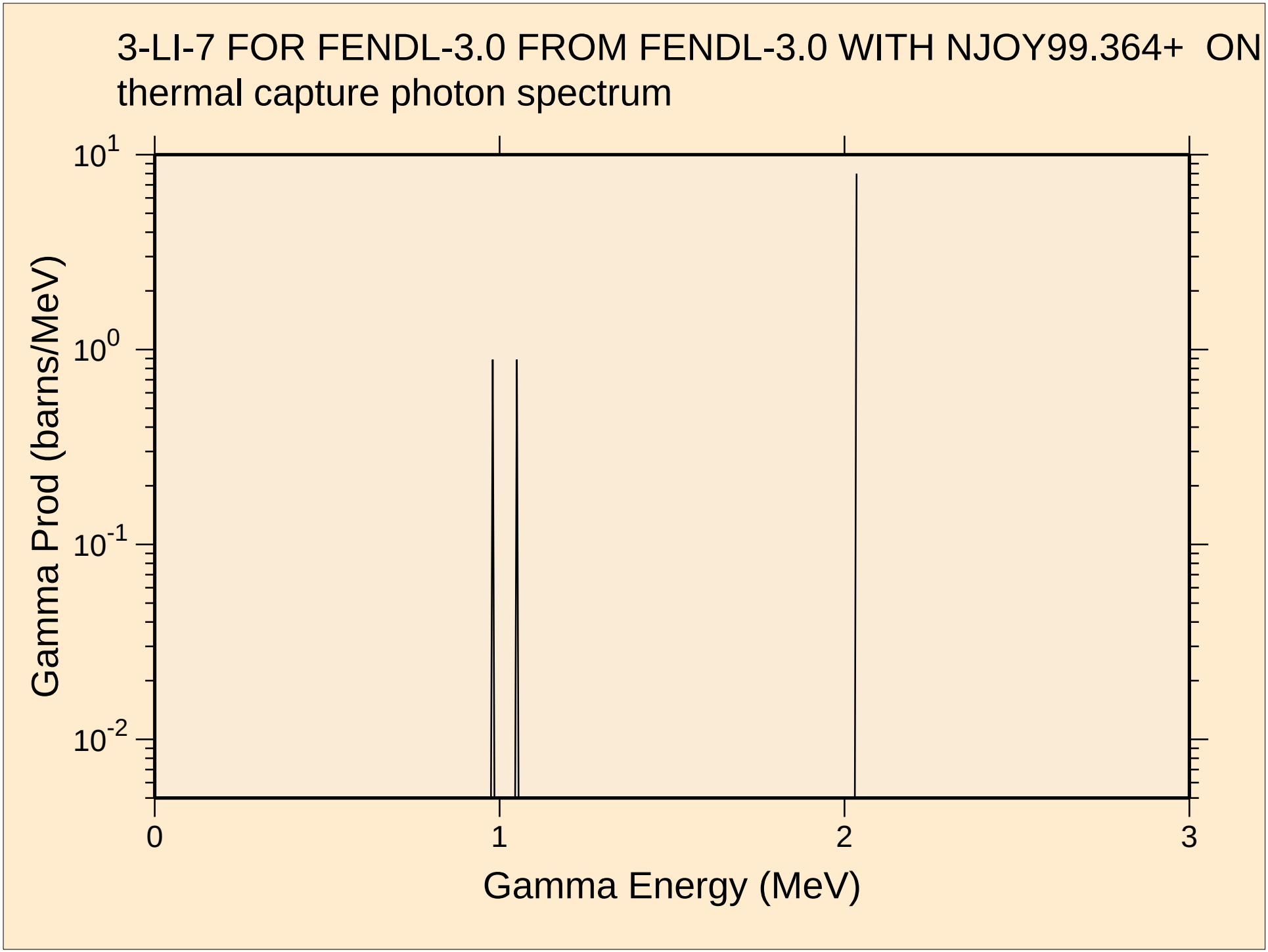

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Neutron emission for (n,x)
Prob/MeV
10^3
10^1
0
20
40
60
80
100
Sec. Energy
0
50
100
150
200
Energy (MeV)

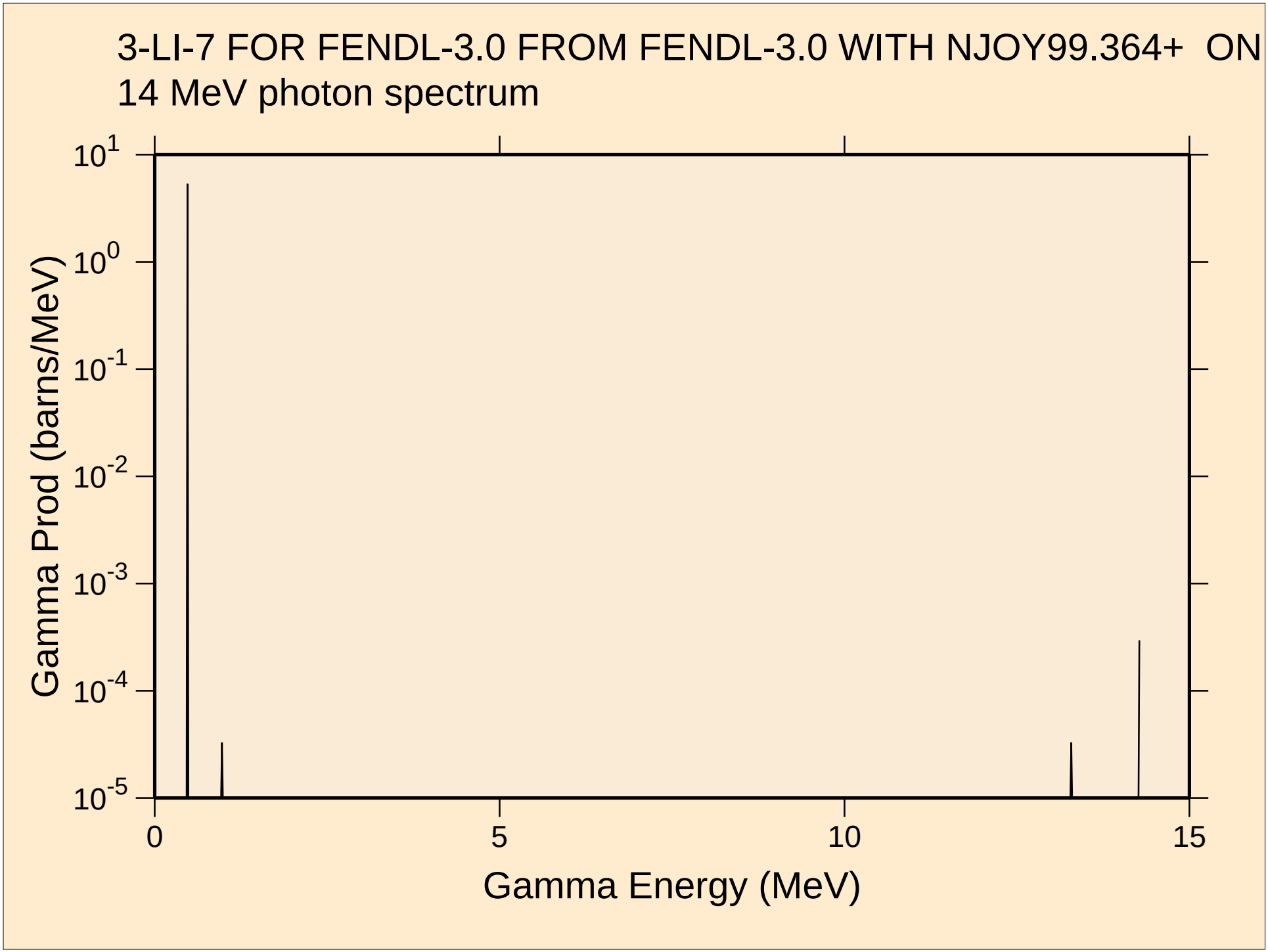

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Neutron emission for (n,2n)
Prob/MeV
10-1
10-3
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

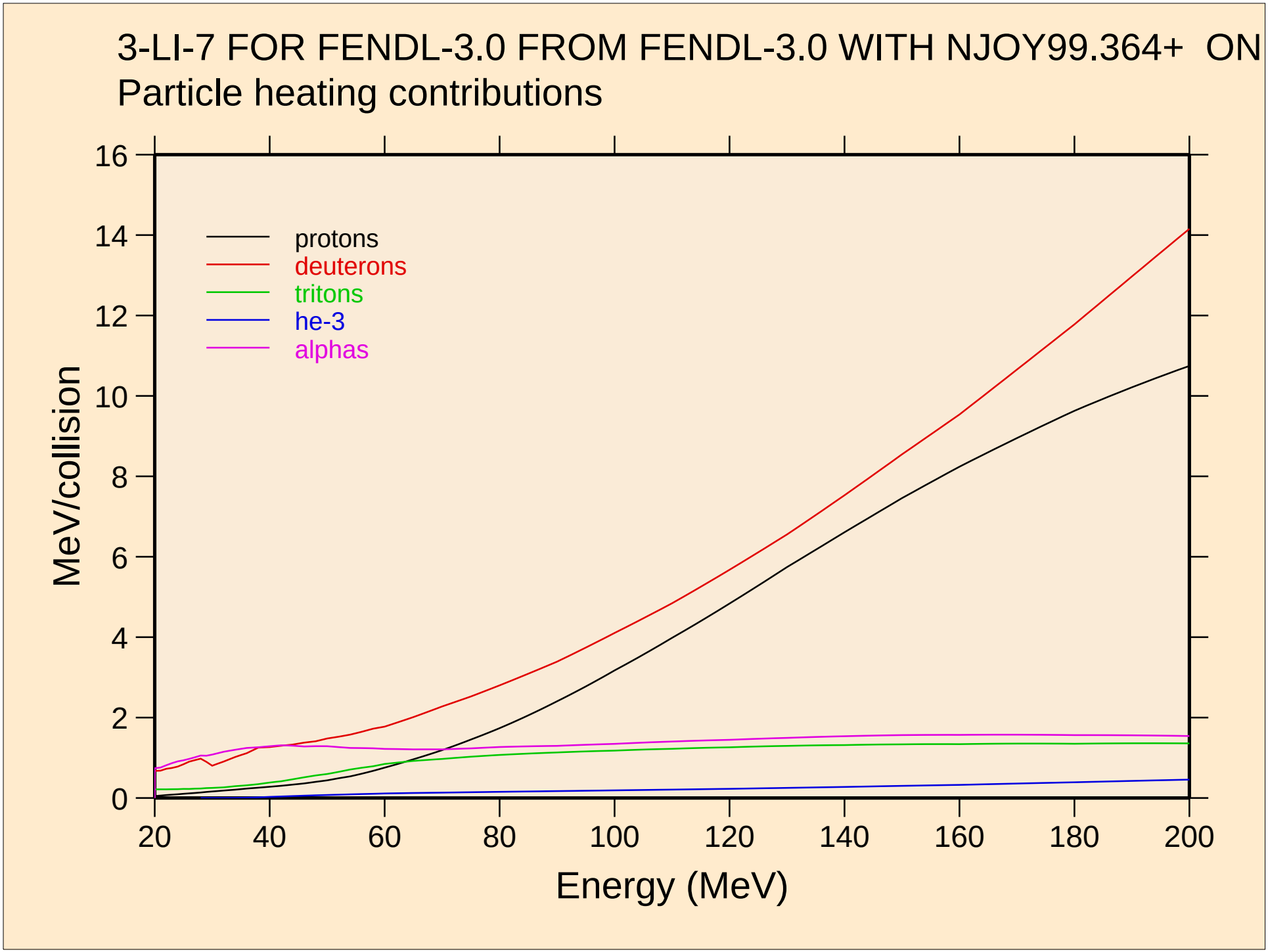

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Neutron emission for (n,2n)a
Prob/MeV
10-1
10-3
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

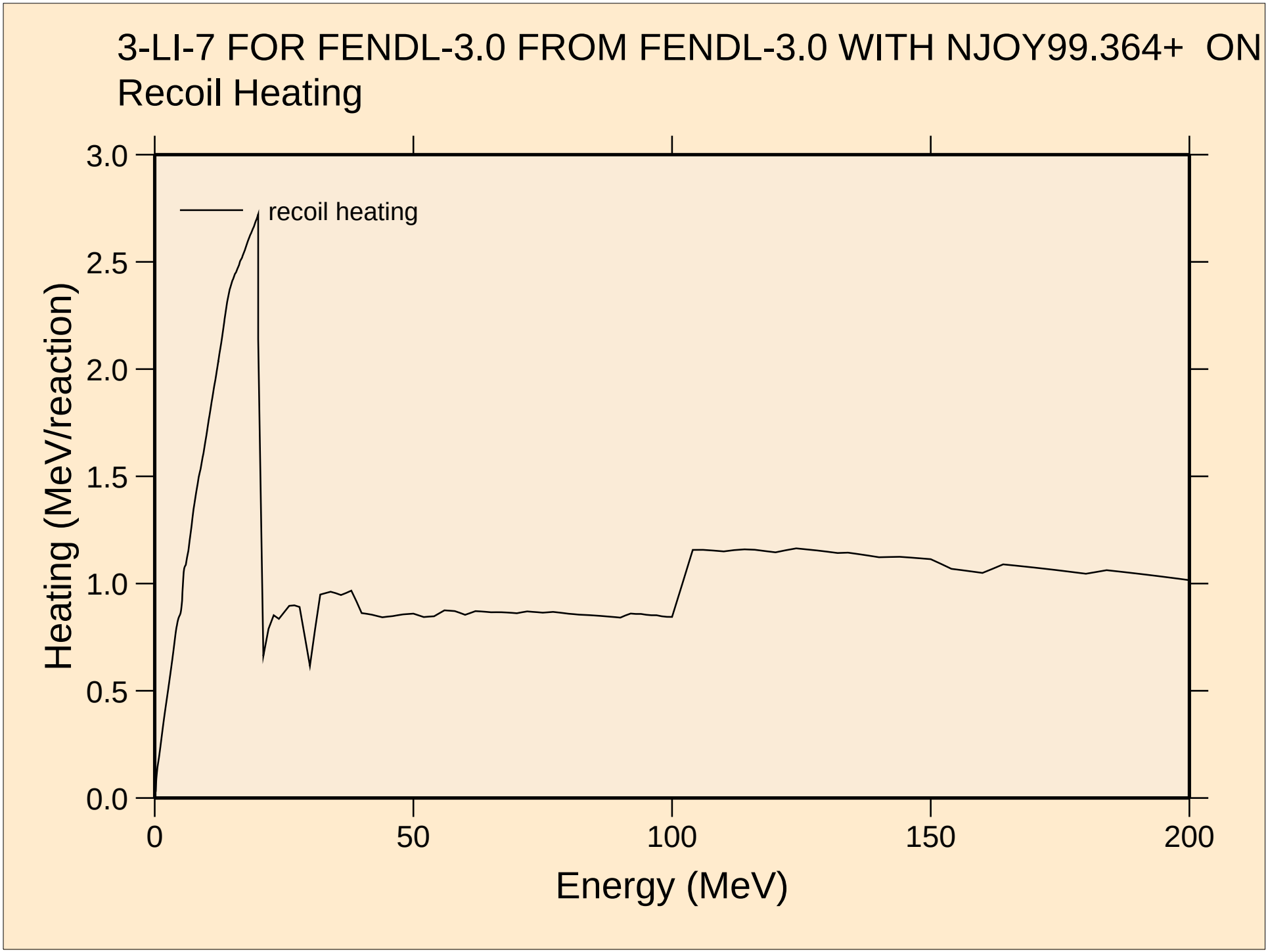

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Neutron emission for (n,3n)a
Prob/MeV
10^0
10^-2
0
2
4
6
8
Sec. Energy
12
13
14
15
16
17
18
19
20
Energy (MeV)

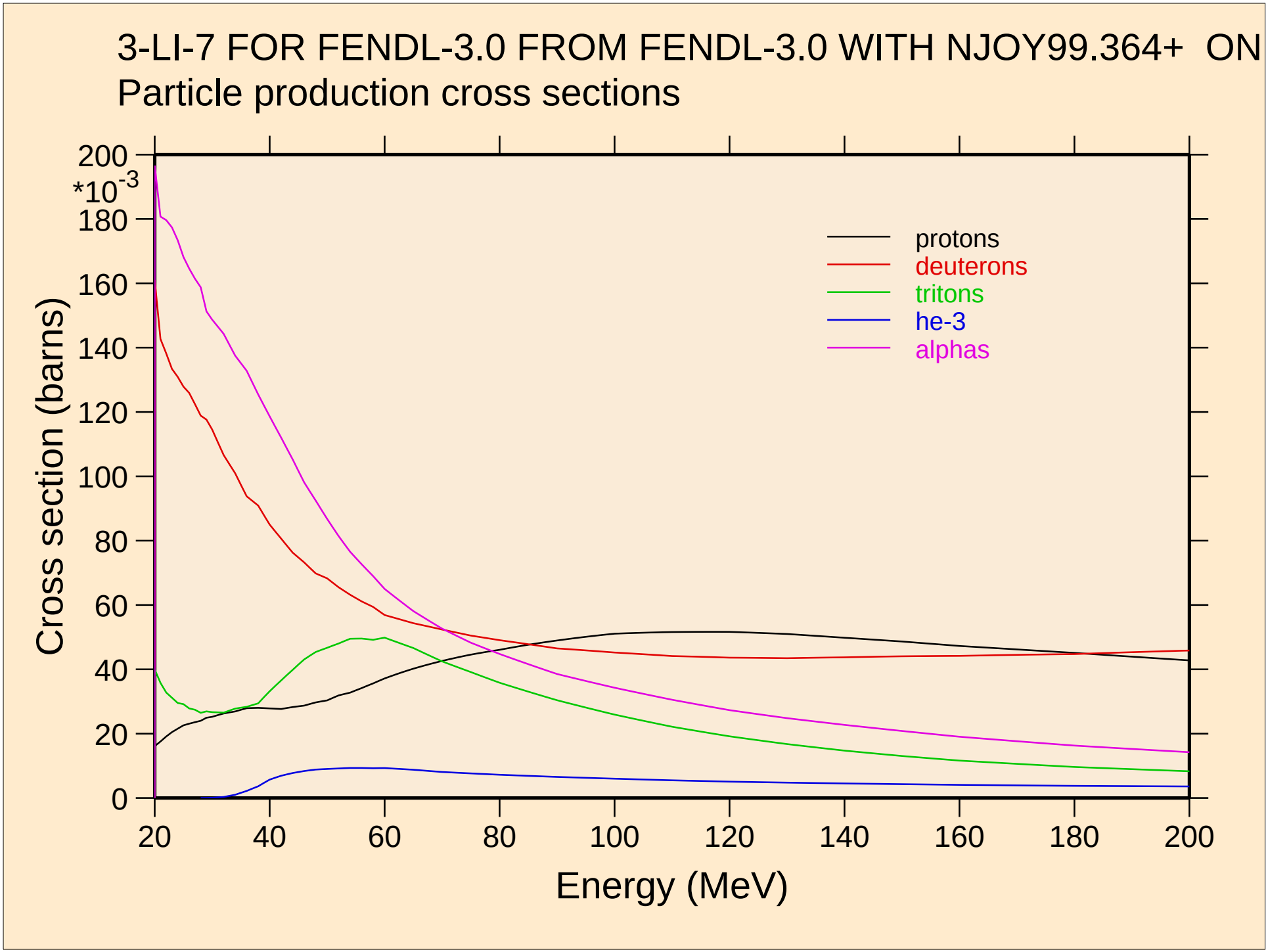

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Photon emission for (n,x)
Prob/MeV
10-2
10-4
0
100
200
Eγ (MeV)
0
50
100
150
200
En (MeV)

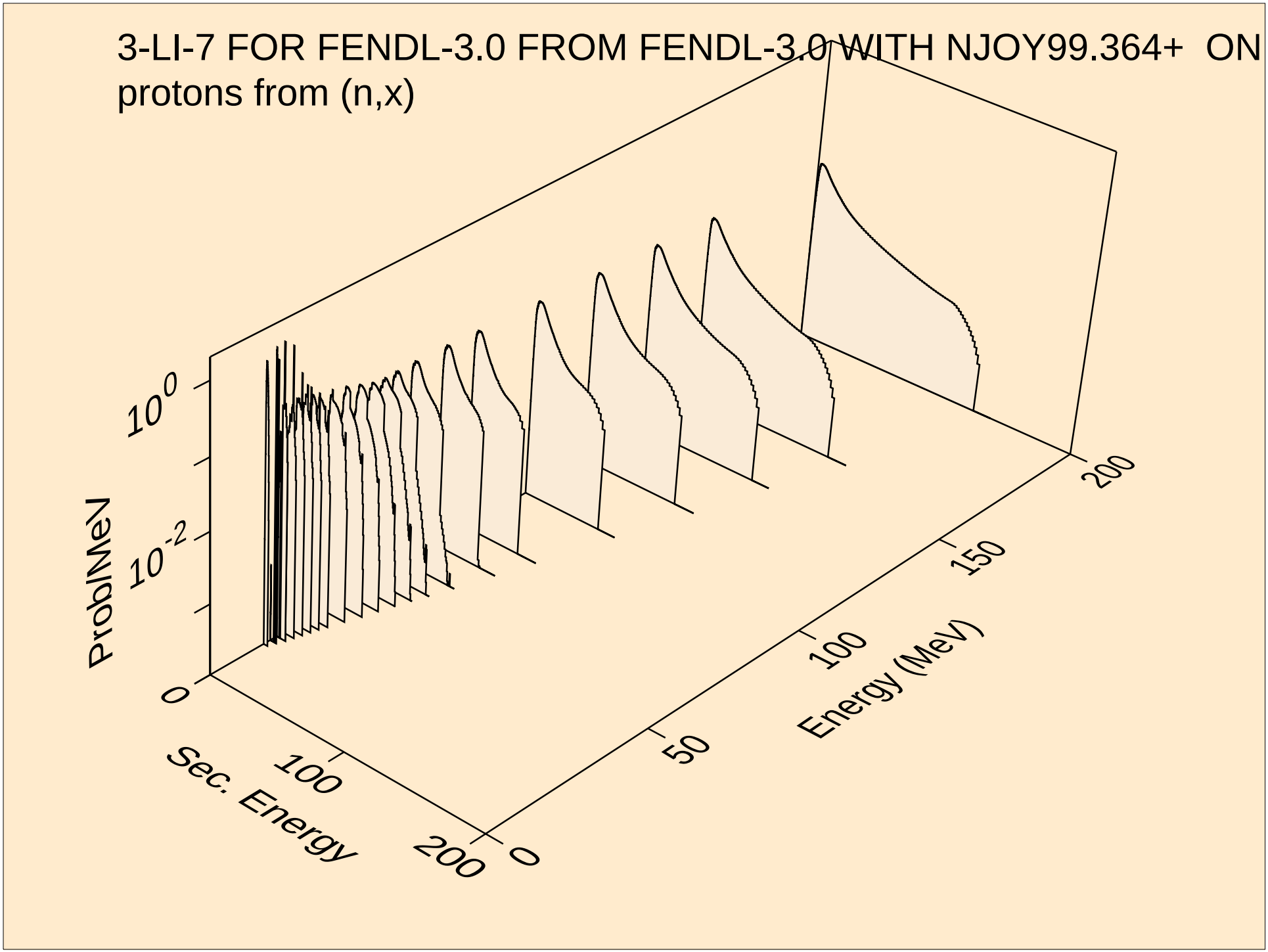

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
0
1
2
3
Gamma Energy (MeV)

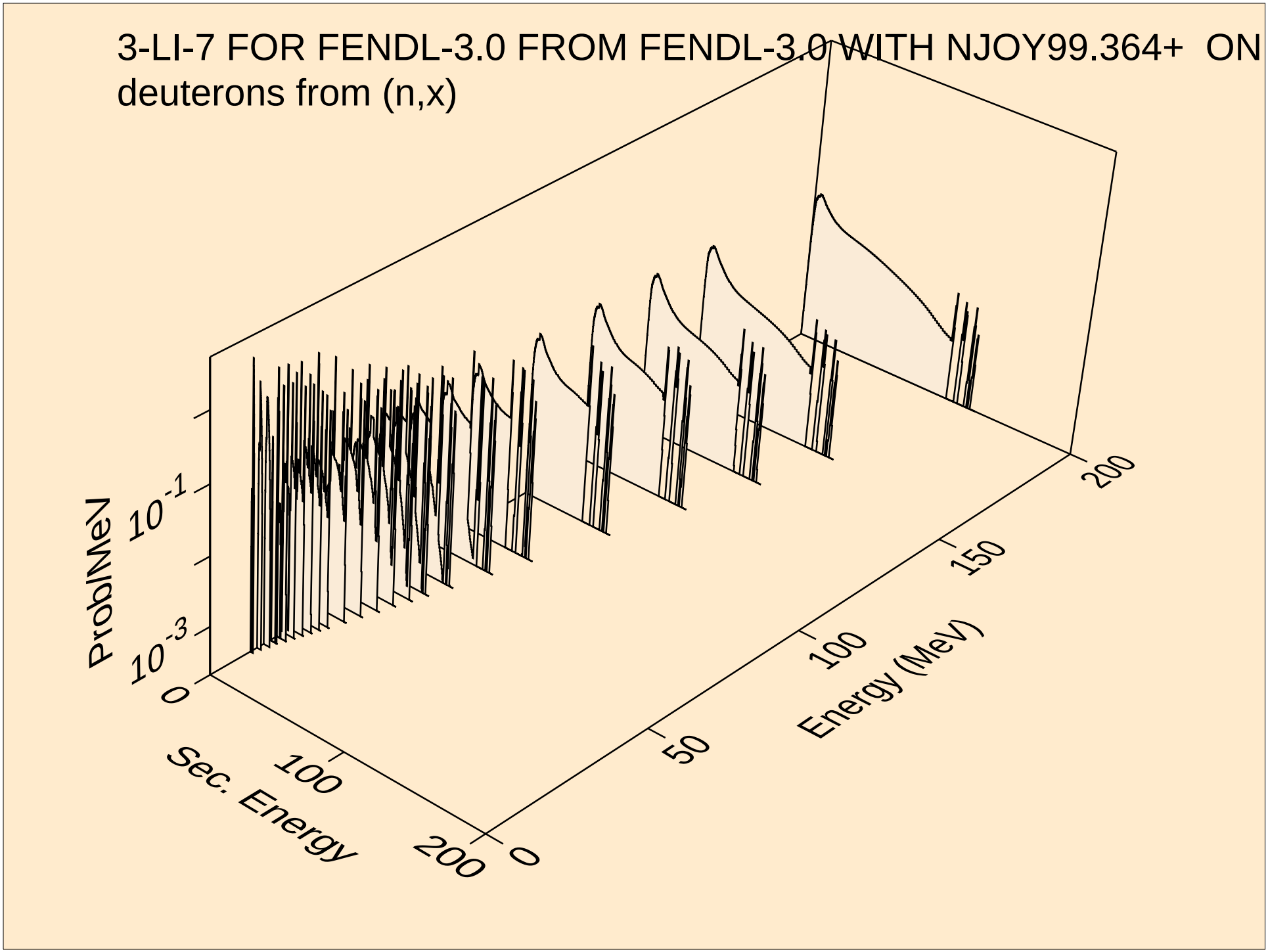

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
0
5
10
15
Gamma Energy (MeV)

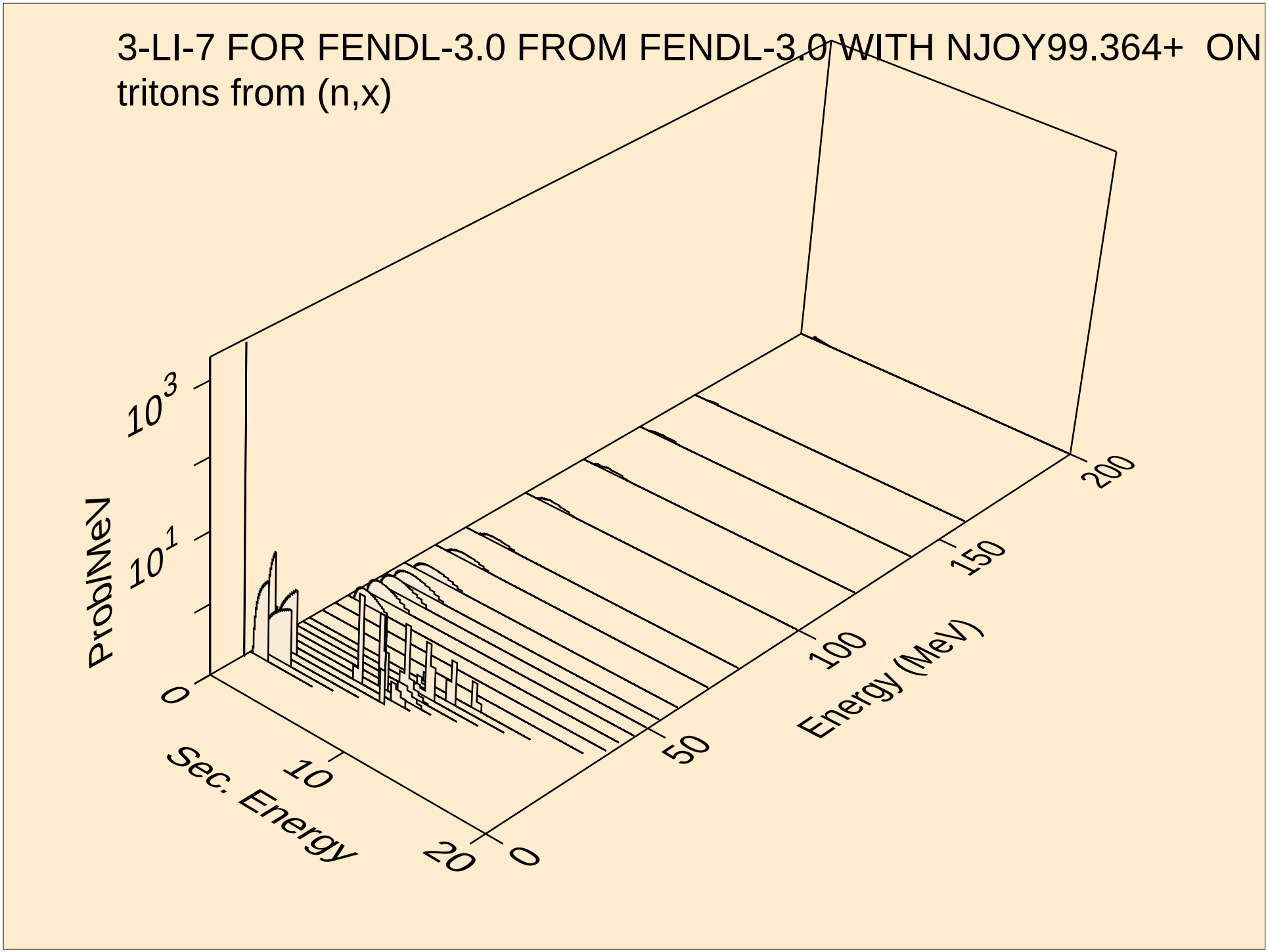

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Particle heating contributions
protons
deuterons
tritons
he-3
alphas
MeV/collision
Energy (MeV)
0
2
4
6
8
10
12
14
16
20
40
60
80
100
120
140
160
180
200

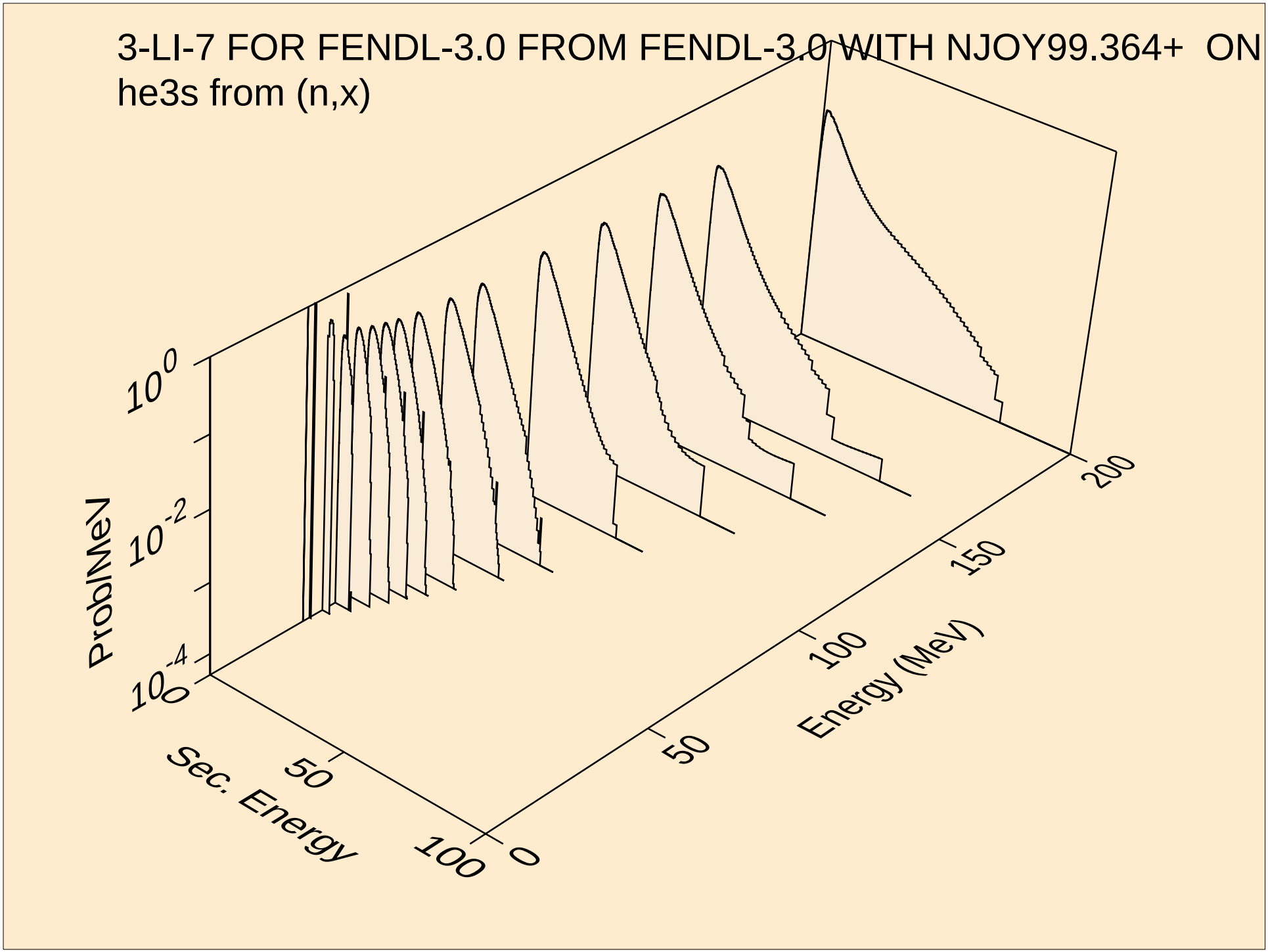

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
50
100
150
200

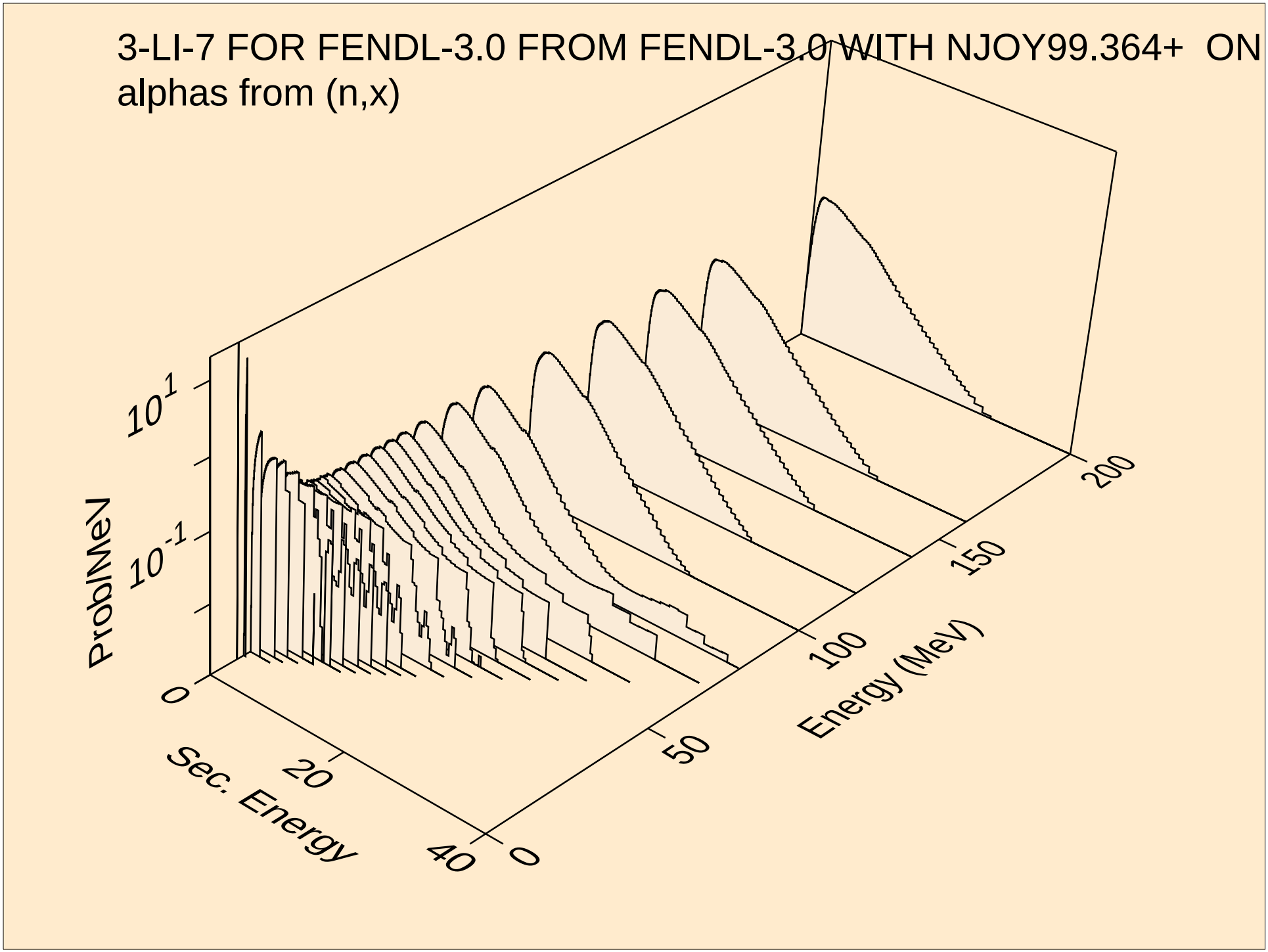

3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Particle production cross sections
Cross section (barns)
*10-3
200
180
160
140
120
100
80
60
40
20
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)
protons
deuterons
tritons
he-3
alphas


3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
protons from (n,x)
Prob/MeV
10^0
10^-2
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)


3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
deuterons from (n,x)
Prob/MeV
10-1
10-3
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)


3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
tritons from (n,x)
Prob/MeV
10^3
10^1
0
Sec. Energy
10
20
0
50
100
Energy (MeV)
150
200


3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
he3s from (n,x)
Prob/MeV
10^0
10^-2
10^-4
Sec. Energy
0
50
100
Energy (MeV)
0
50
100
150
200


3-LI-7 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
alphas from (n,x)
Prob/MeV
10^1
10^-1
0
20
40
Sec. Energy
0
50
100
150
200
Energy (MeV)