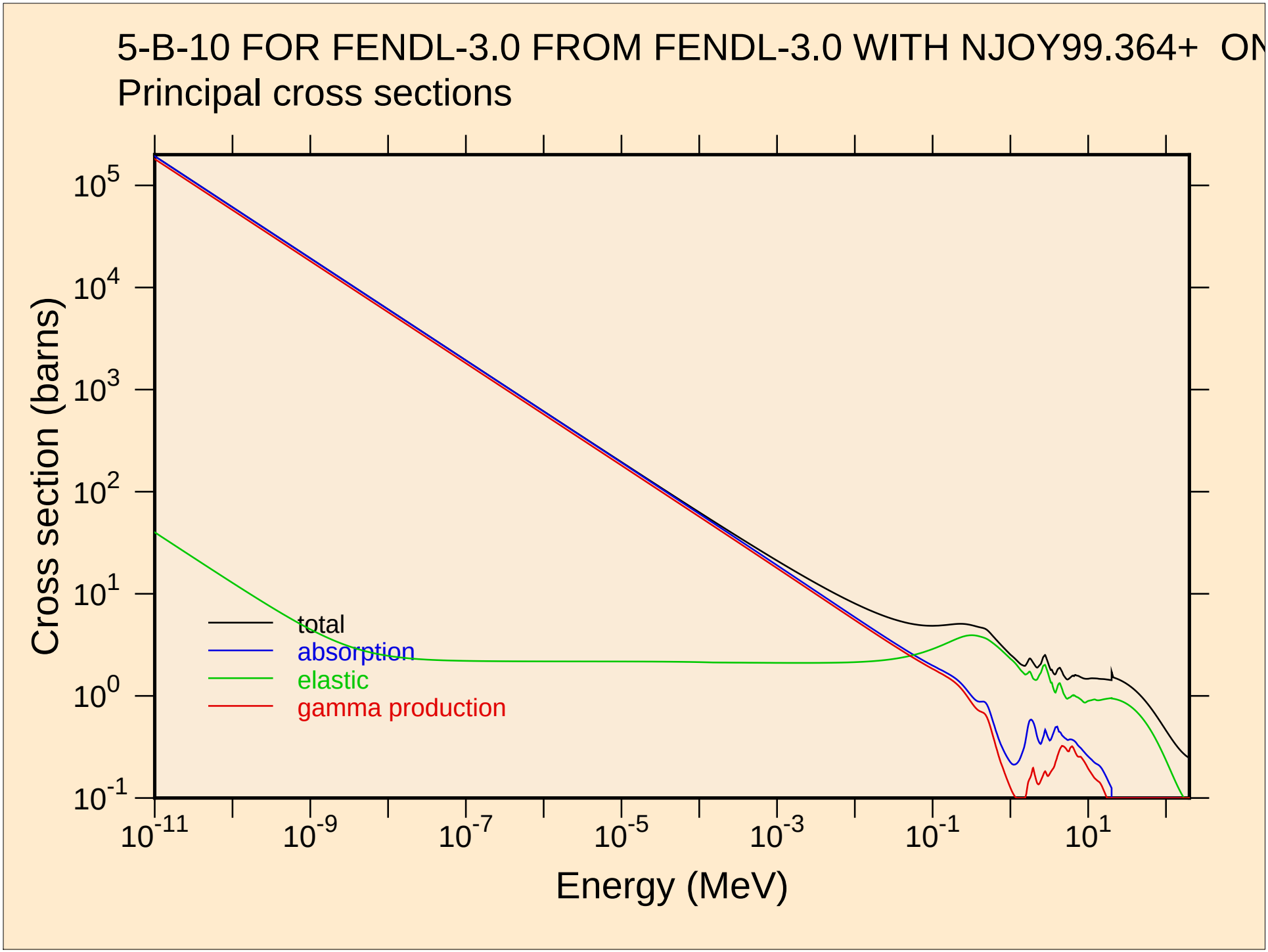
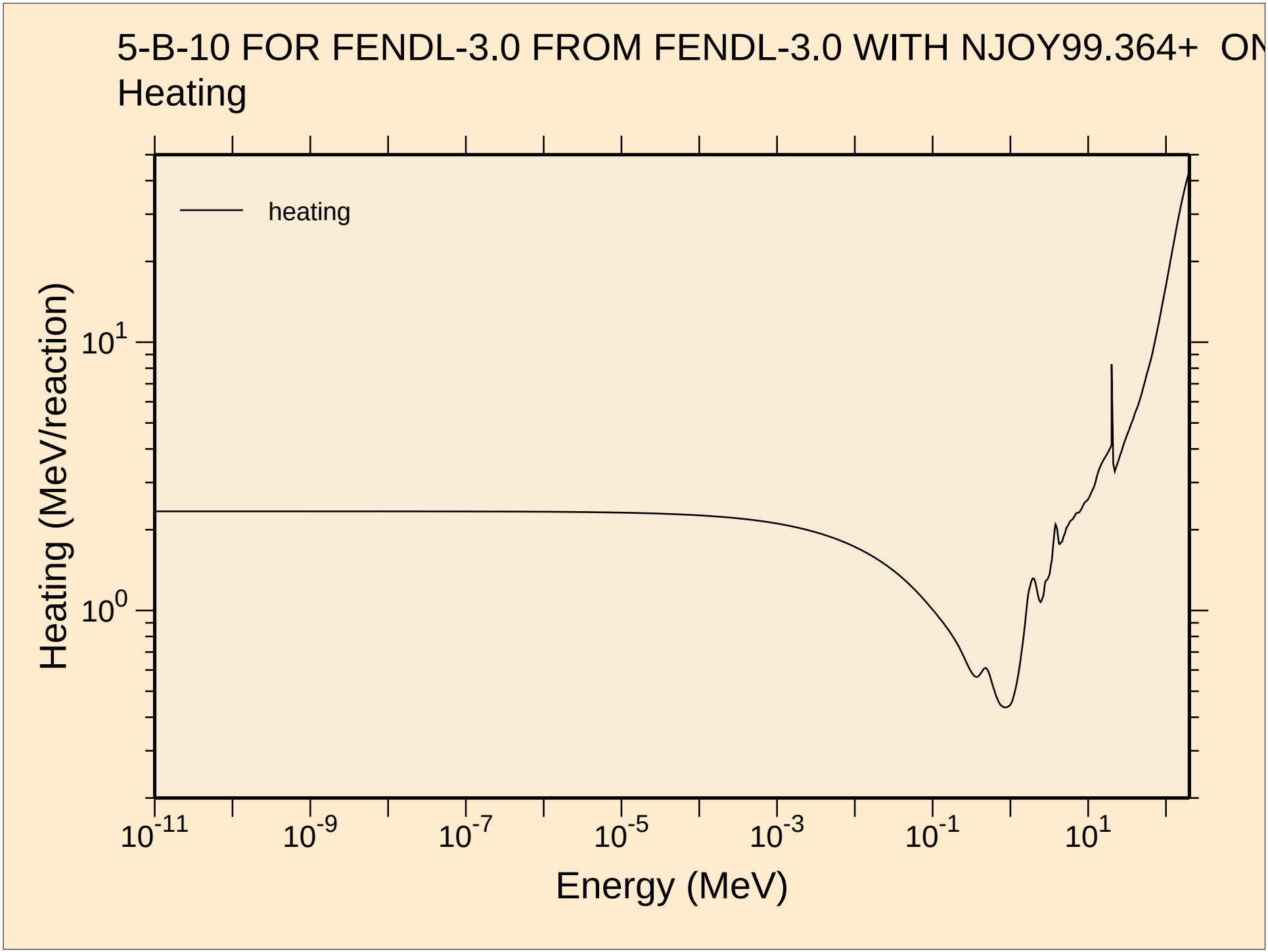
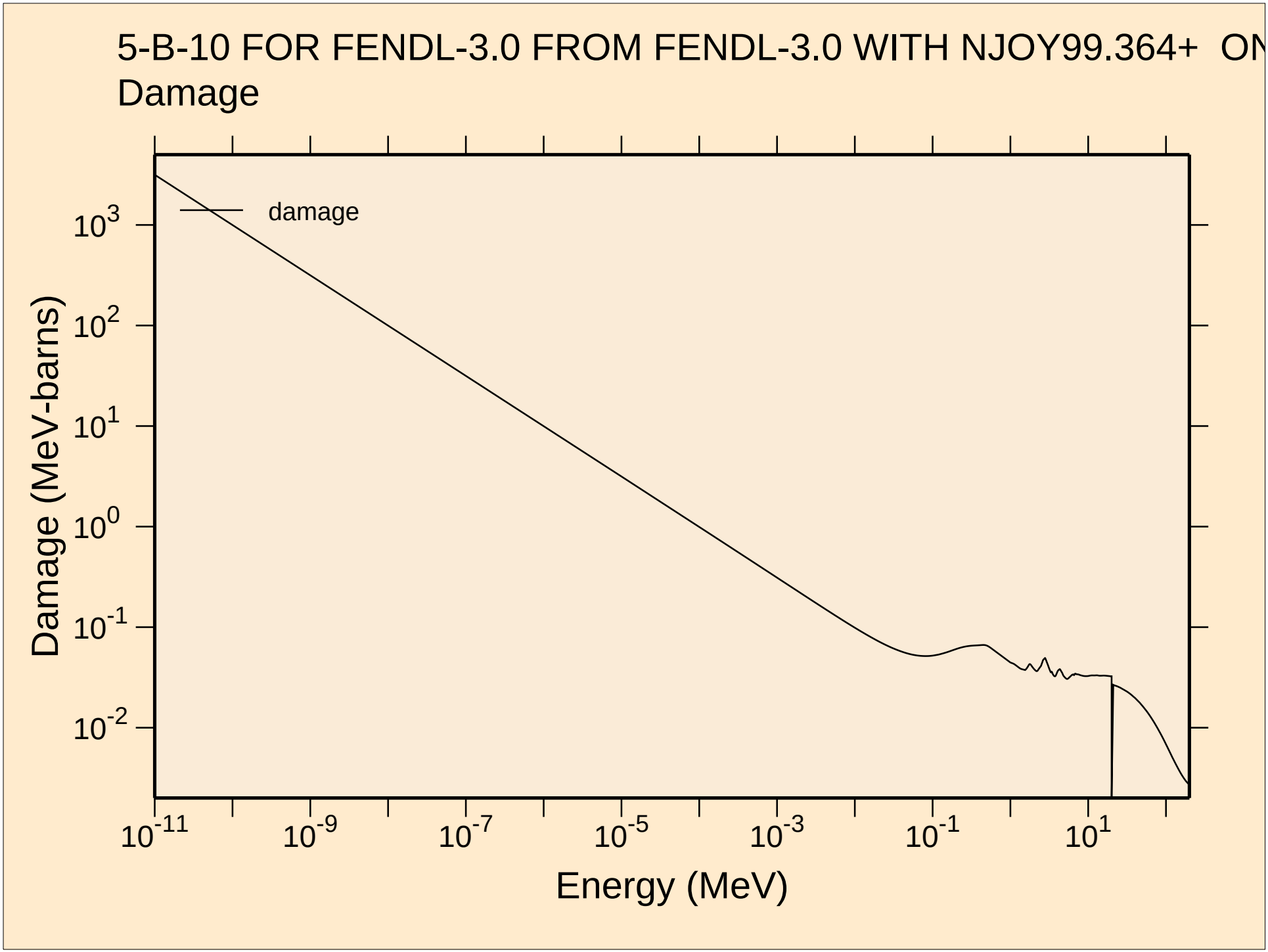
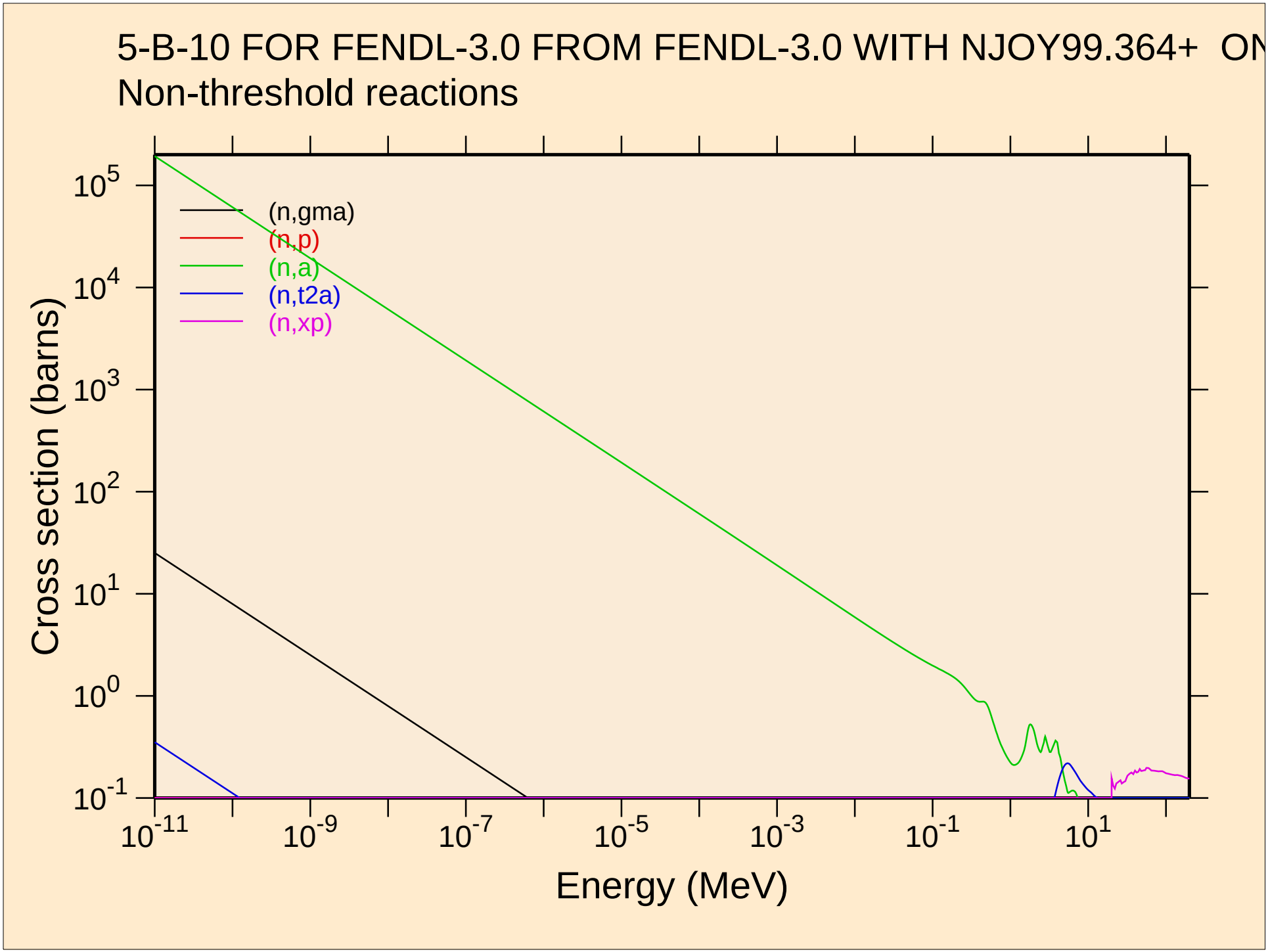
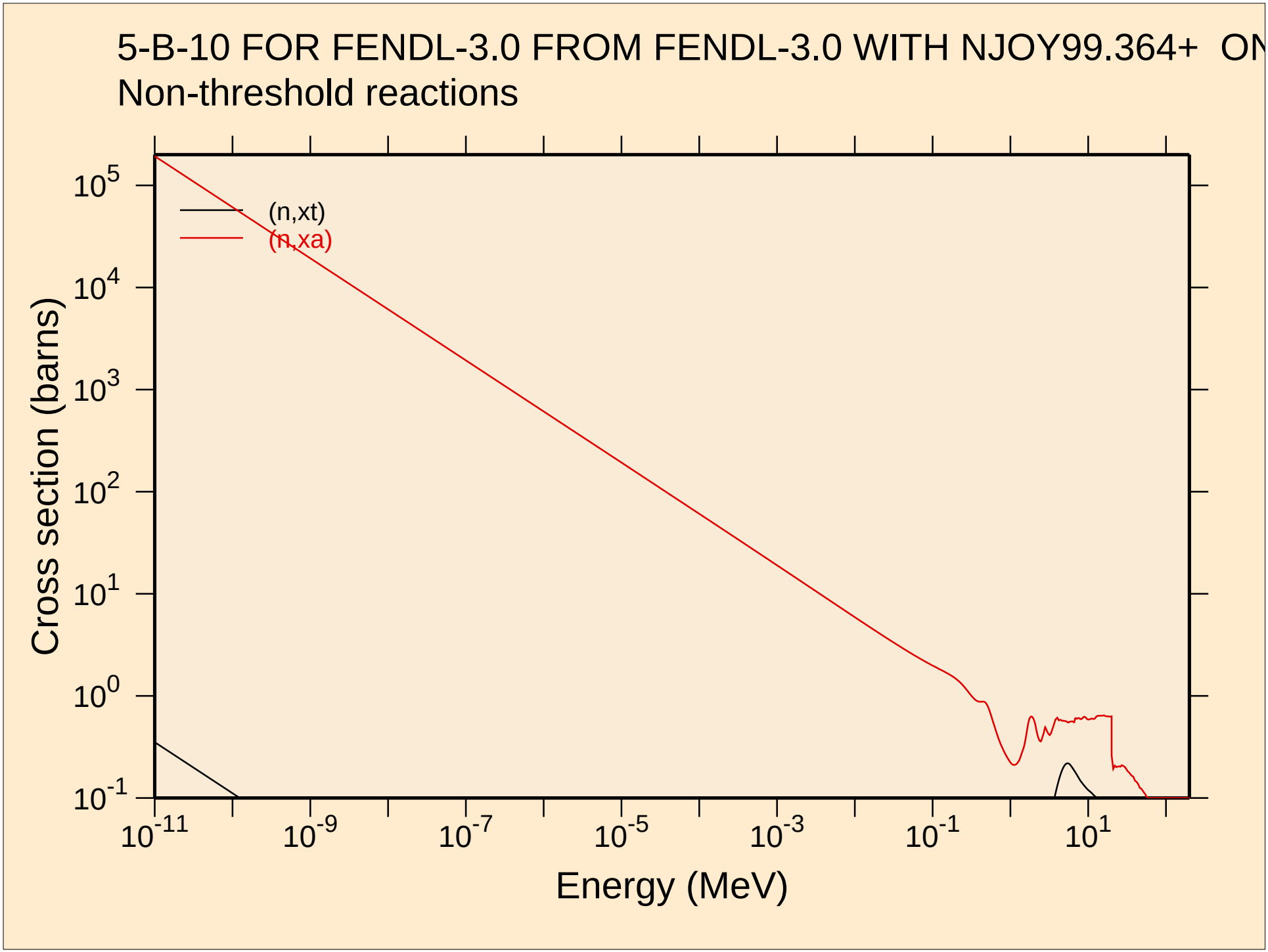
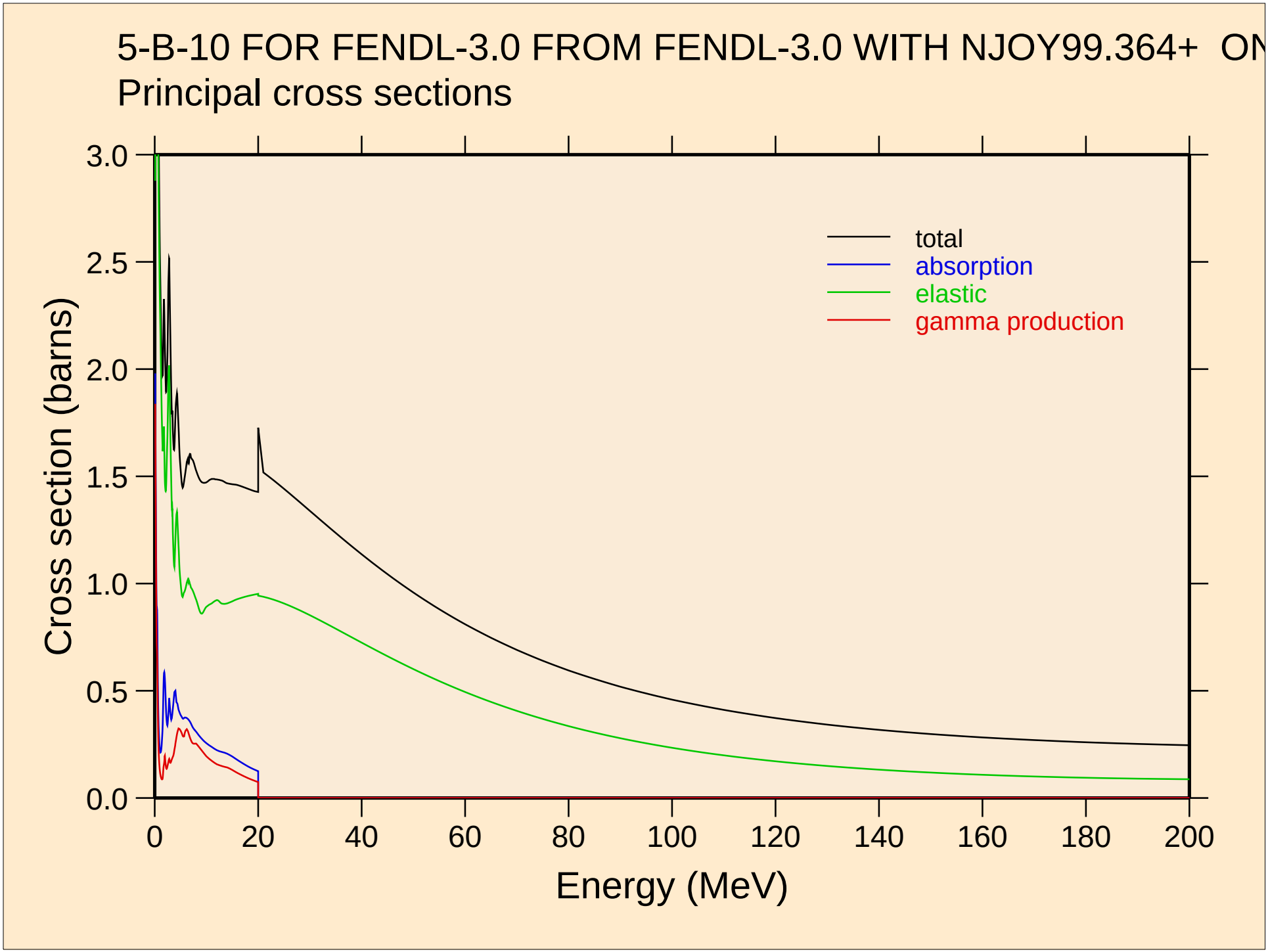

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production

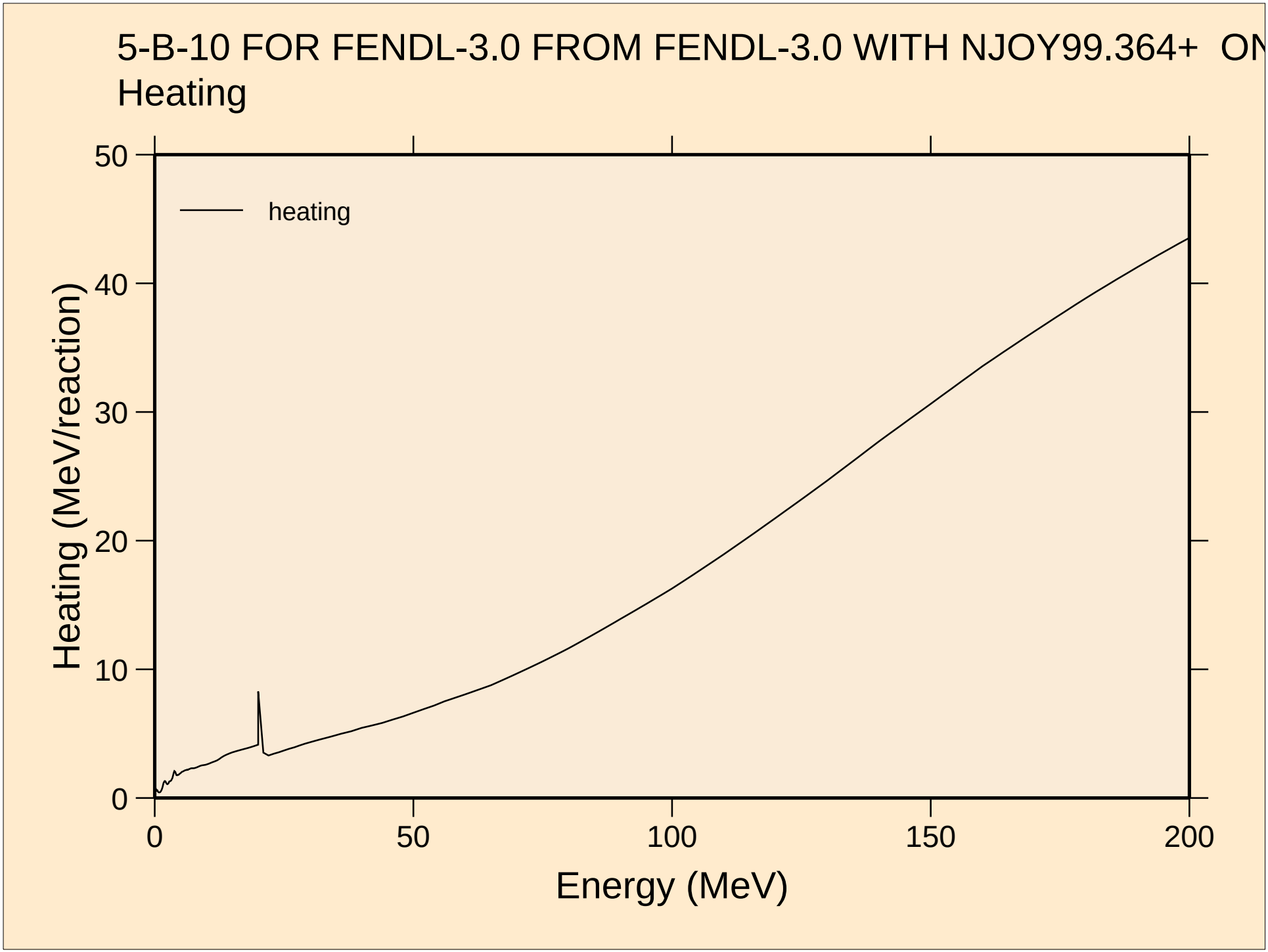

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Heating
heating
Heating (MeV/reaction)
10^1
10^0
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

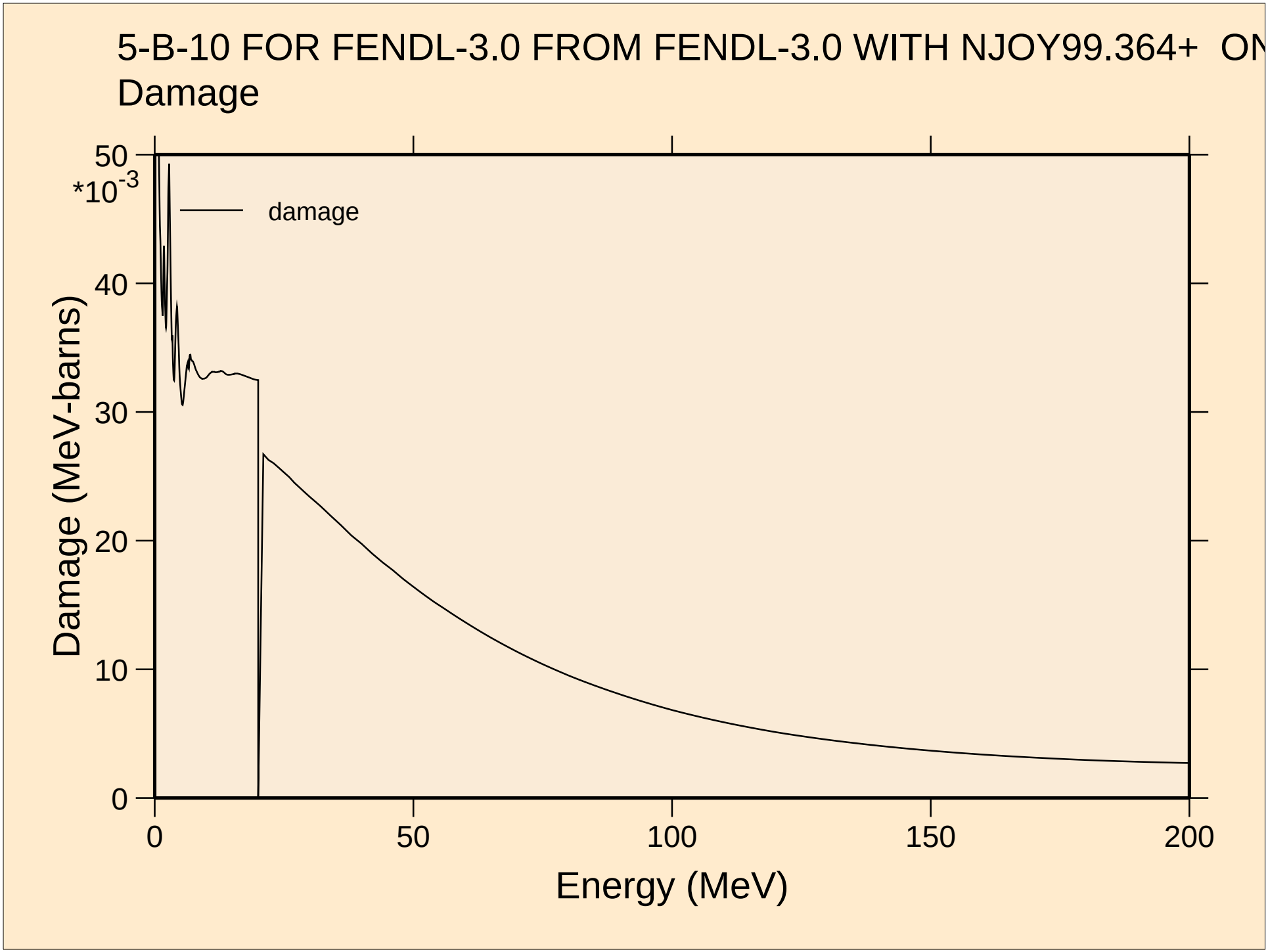

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Damage
damage
Damage (MeV-barns)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

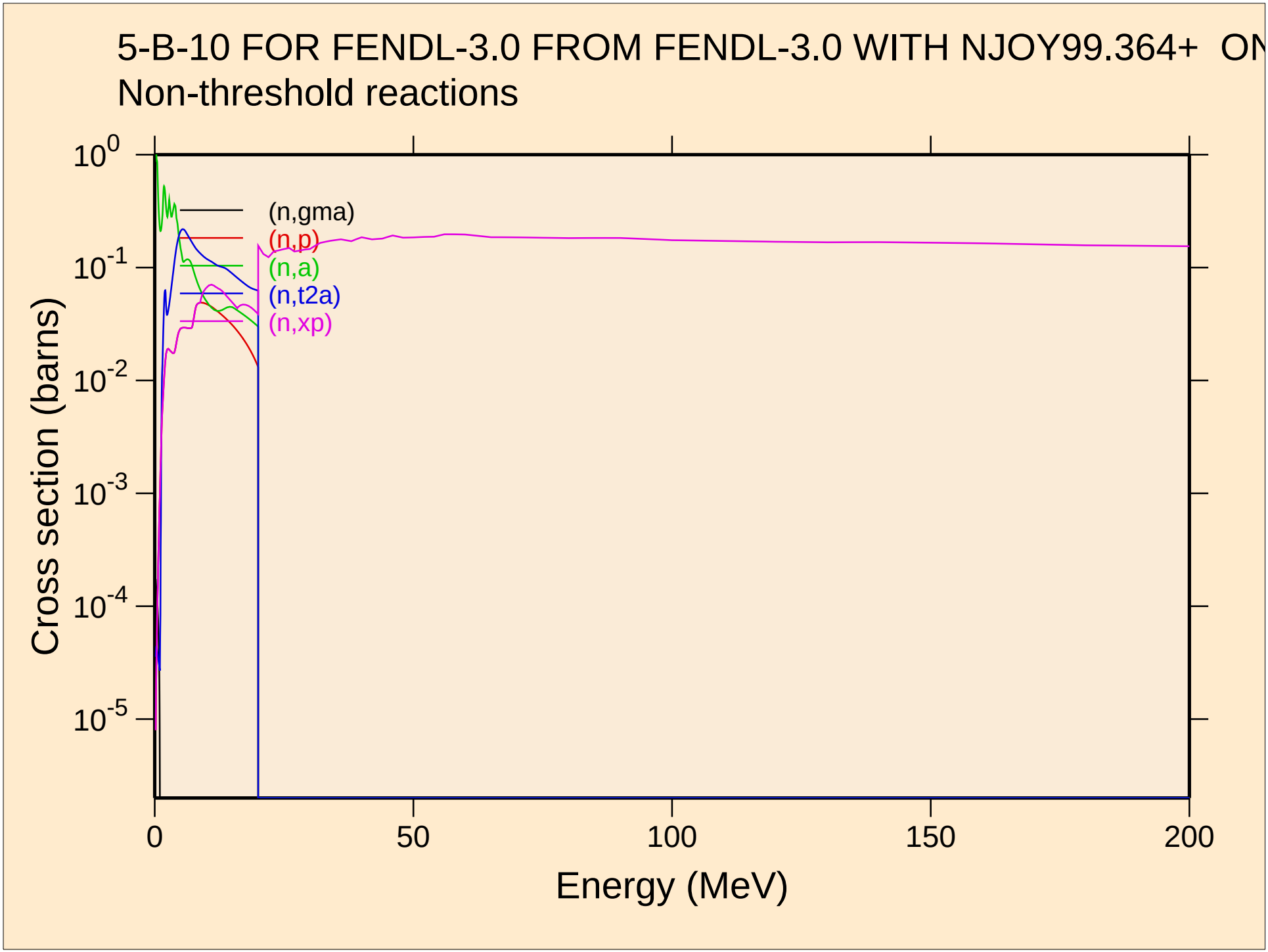

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
(n,gma)
(n,p)
(n,a)
(n,t2a)
(n,xp)
Cross section (barns)
Energy (MeV)
10^5
10^4
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

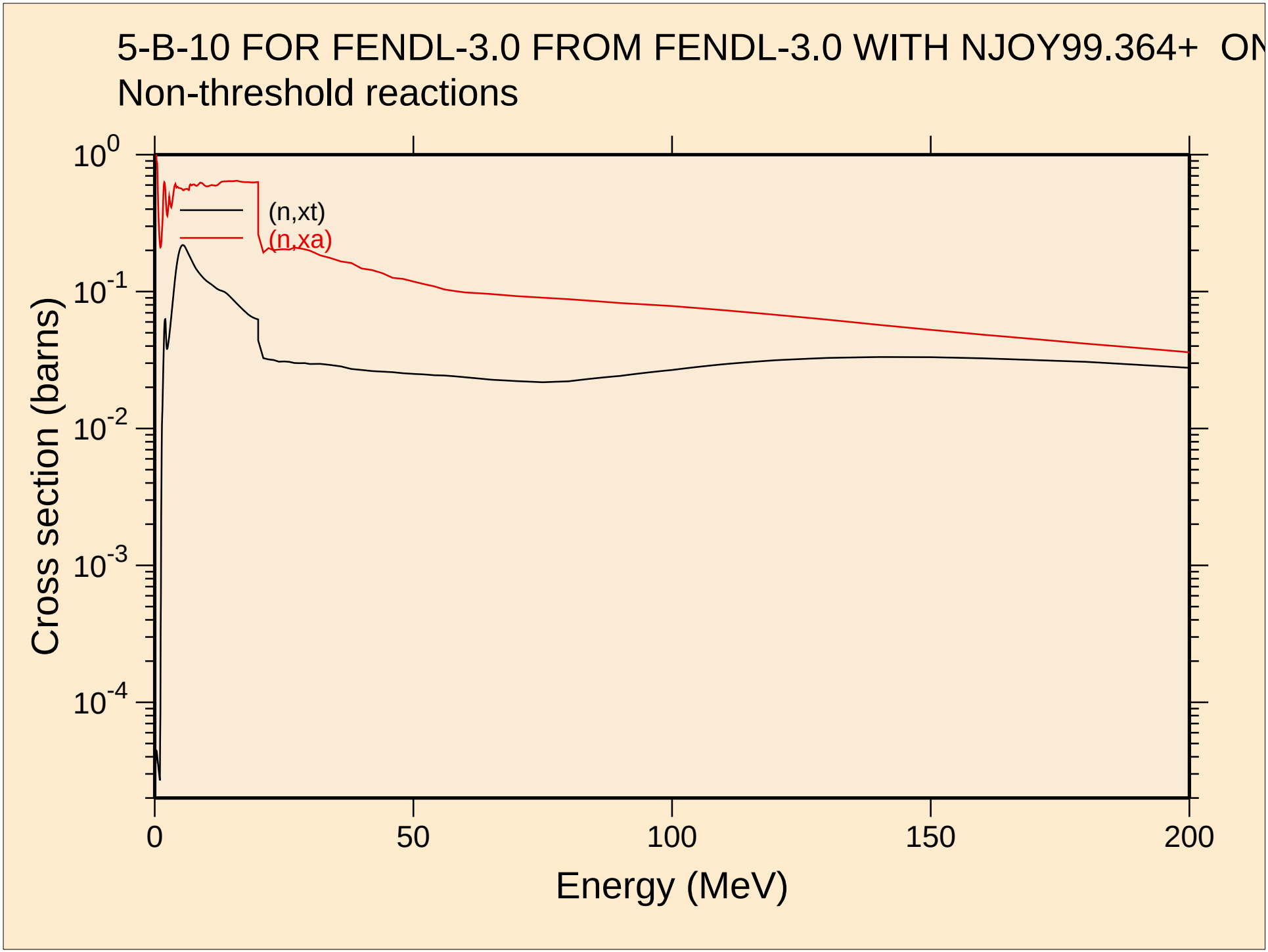

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
(n,xt)
(n,xa)
Cross section (barns)
Energy (MeV)
10^5
10^4
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

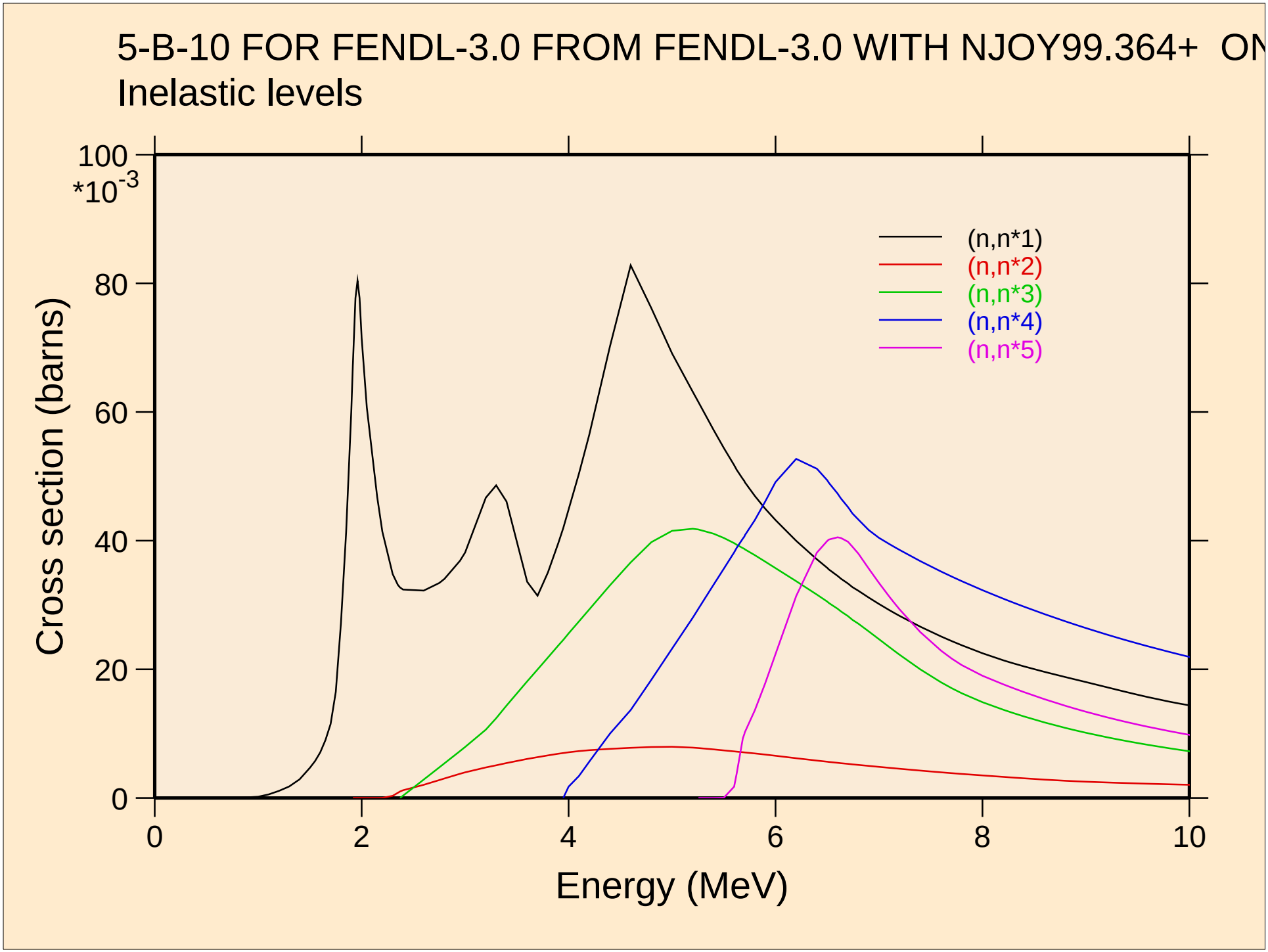

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
20
40
60
80
100
120
140
160
180
200

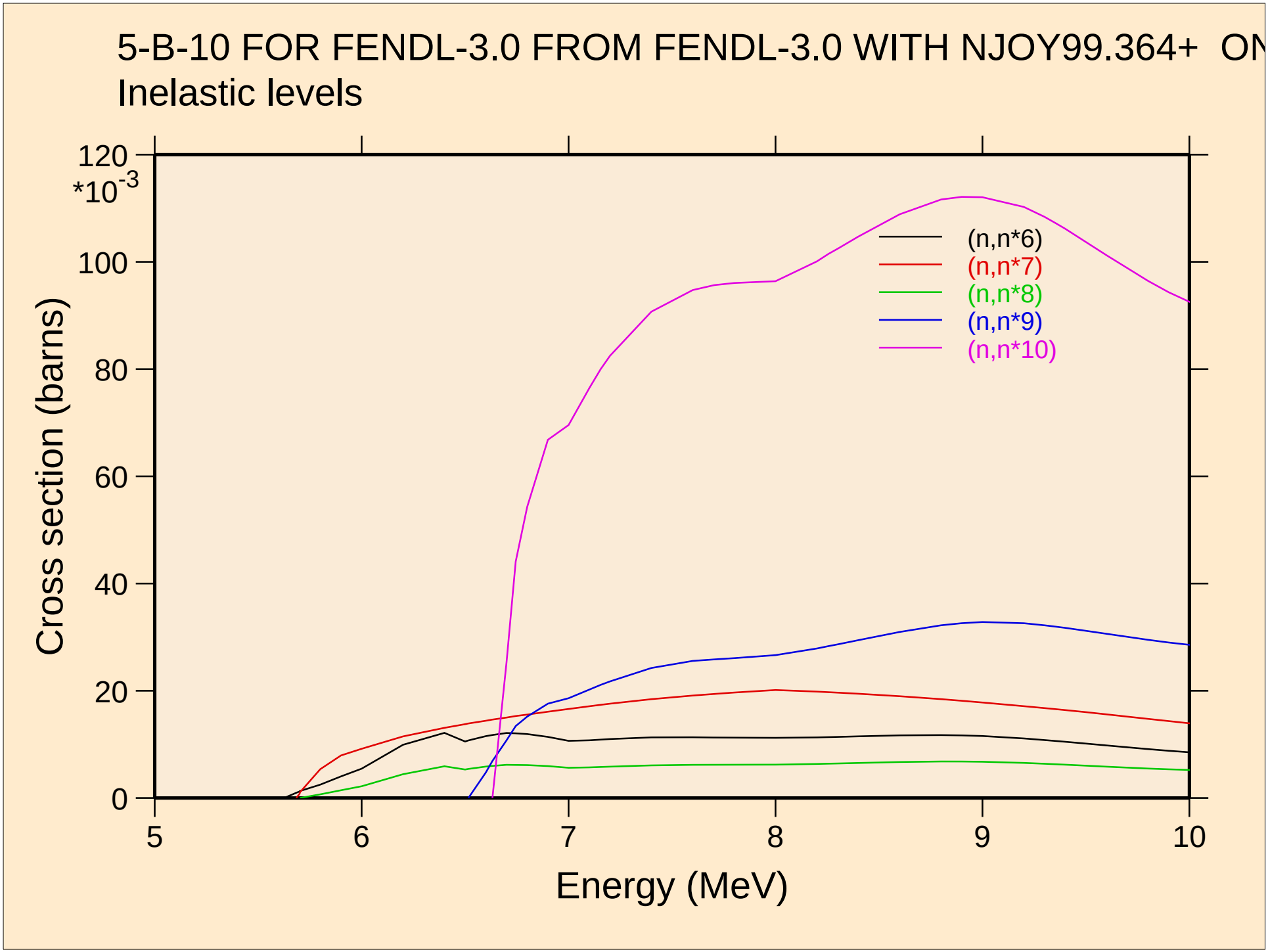

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
10
20
30
40
50
0
50
100
150
200

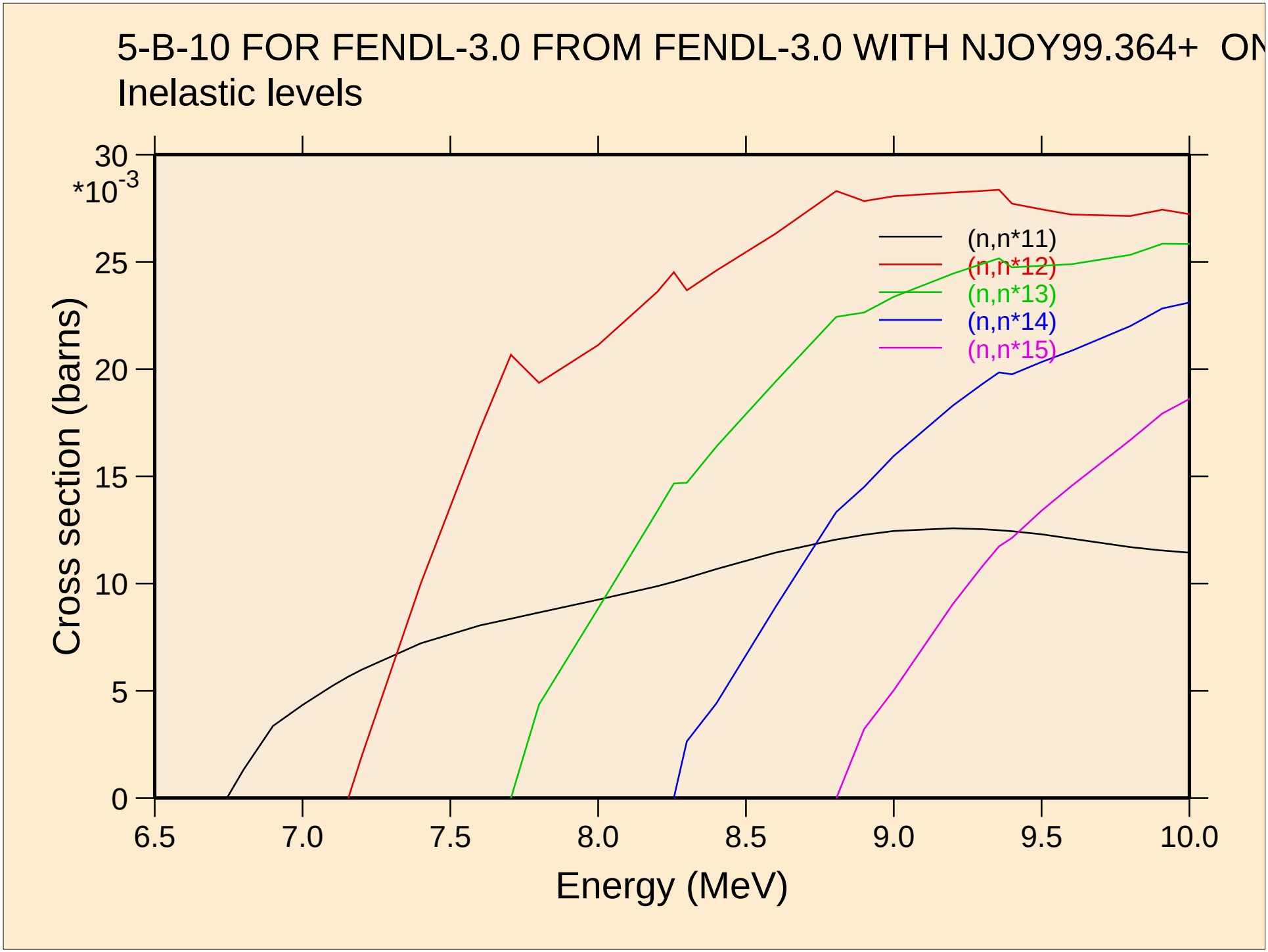

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Damage
50
*10-3
damage
40
30
20
10
0
Damage (MeV-barns)
0
50
100
150
200
Energy (MeV)

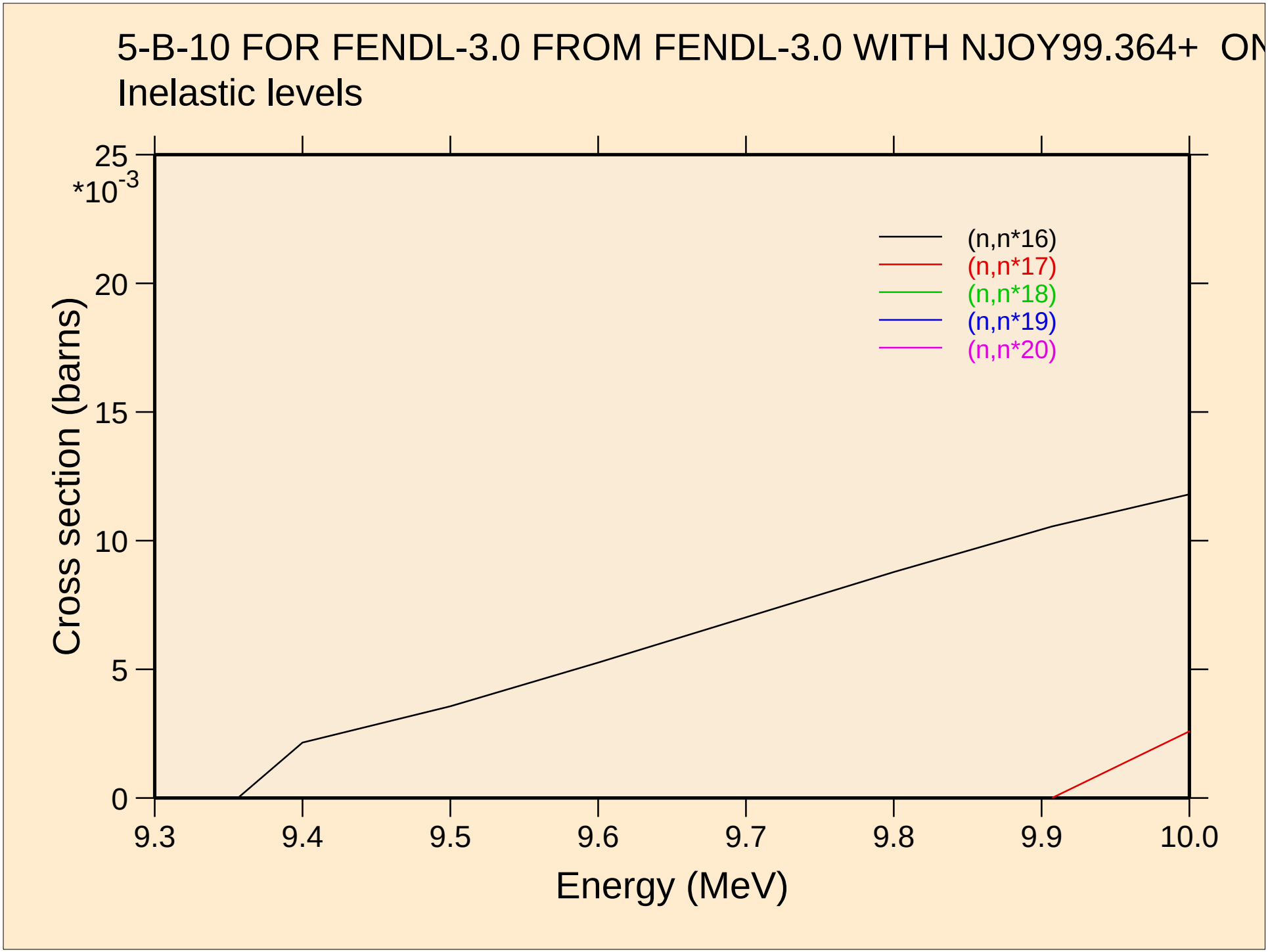

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
Cross section (barns)
Energy (MeV)
(n,gma)
(n,p)
(n,a)
(n,t2a)
(n,xp)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
0
50
100
150
200

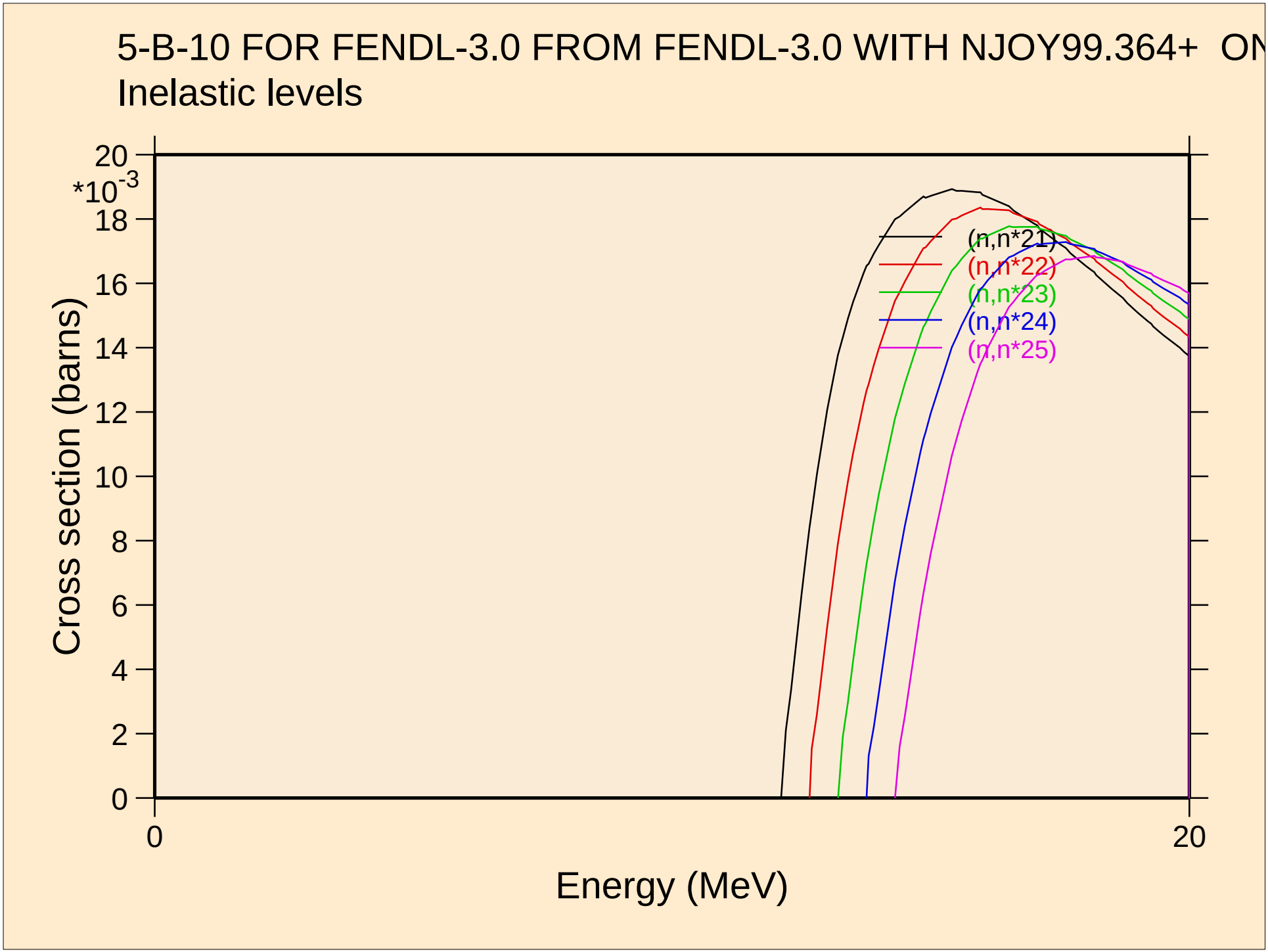

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Non-threshold reactions
(n,xt)
(n,xa)
Cross section (barns)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
0
50
100
150
200

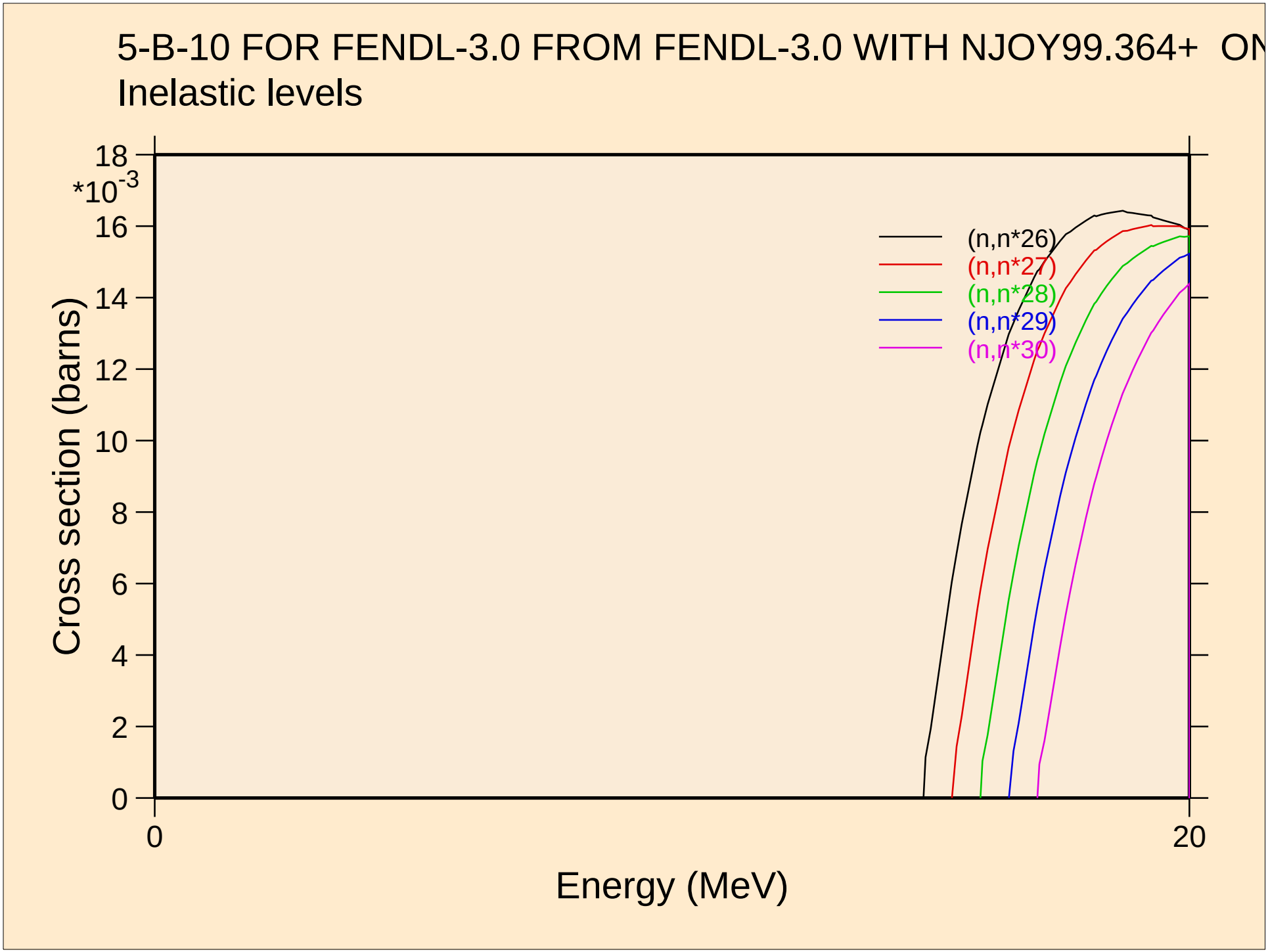

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
0
2
4
6
8
10
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)

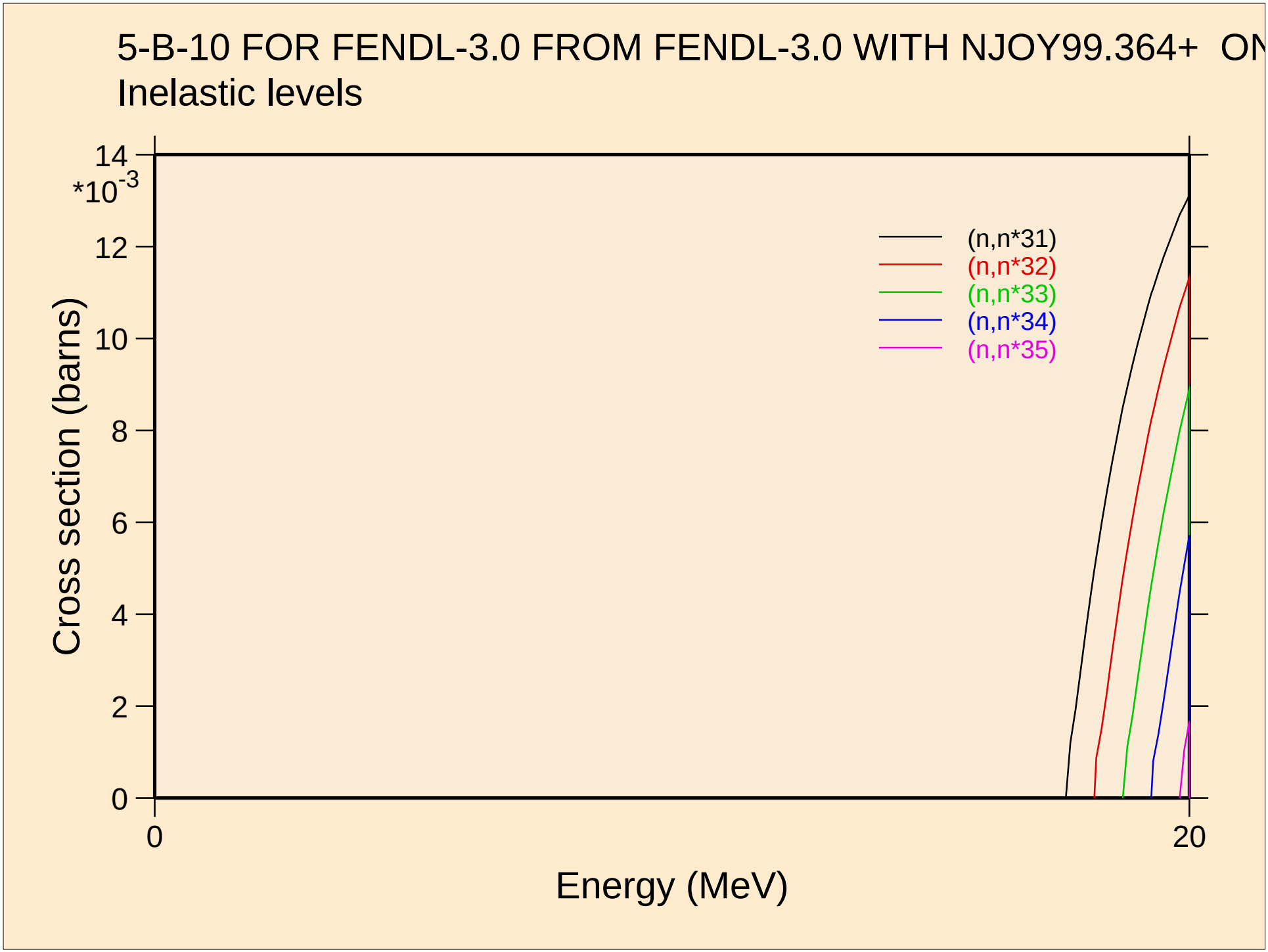

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
120
*10-3
100
80
60
40
20
0
Cross section (barns)
5
6
7
8
9
10
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

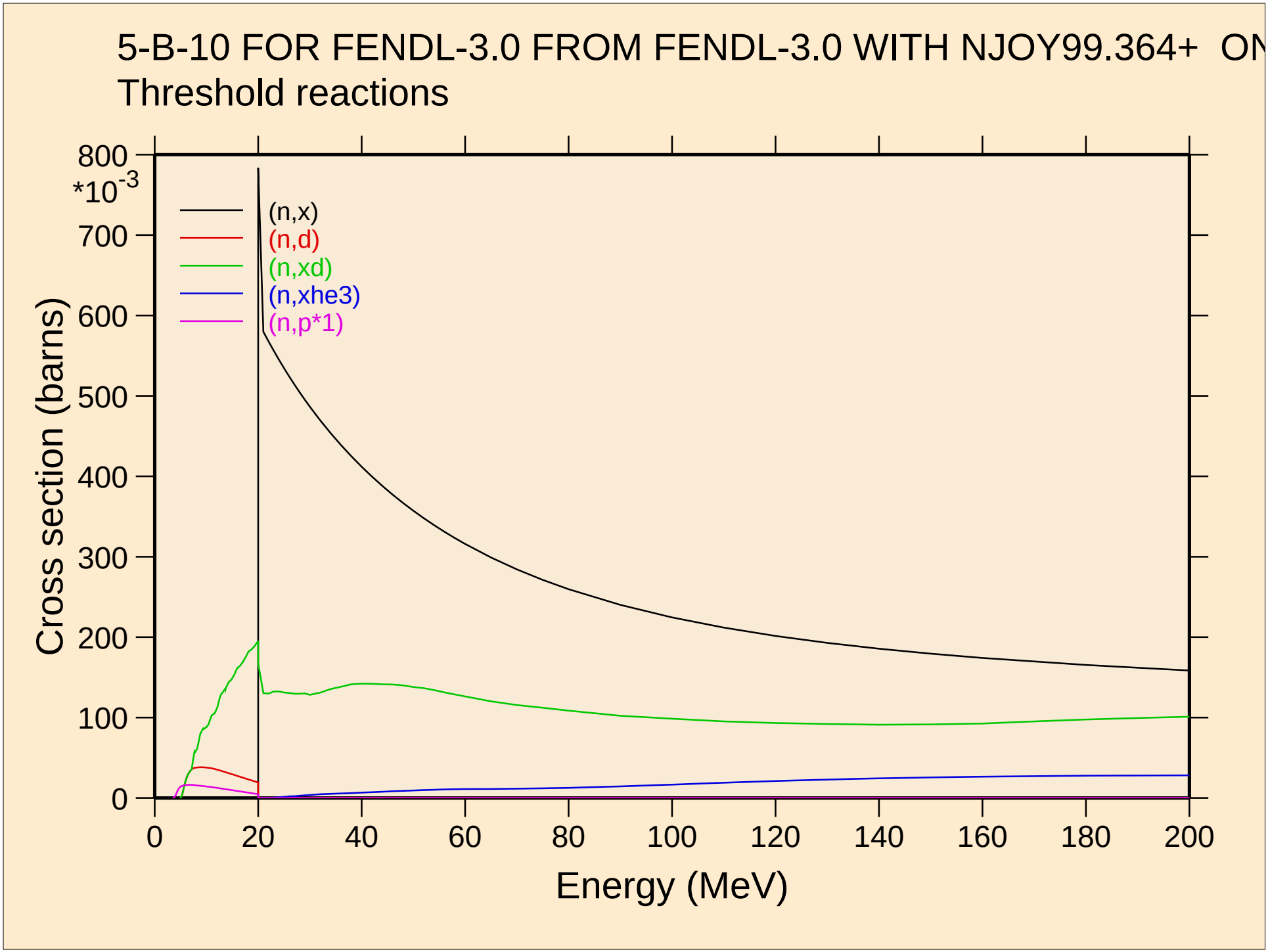

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
30
25
20
15
10
5
0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

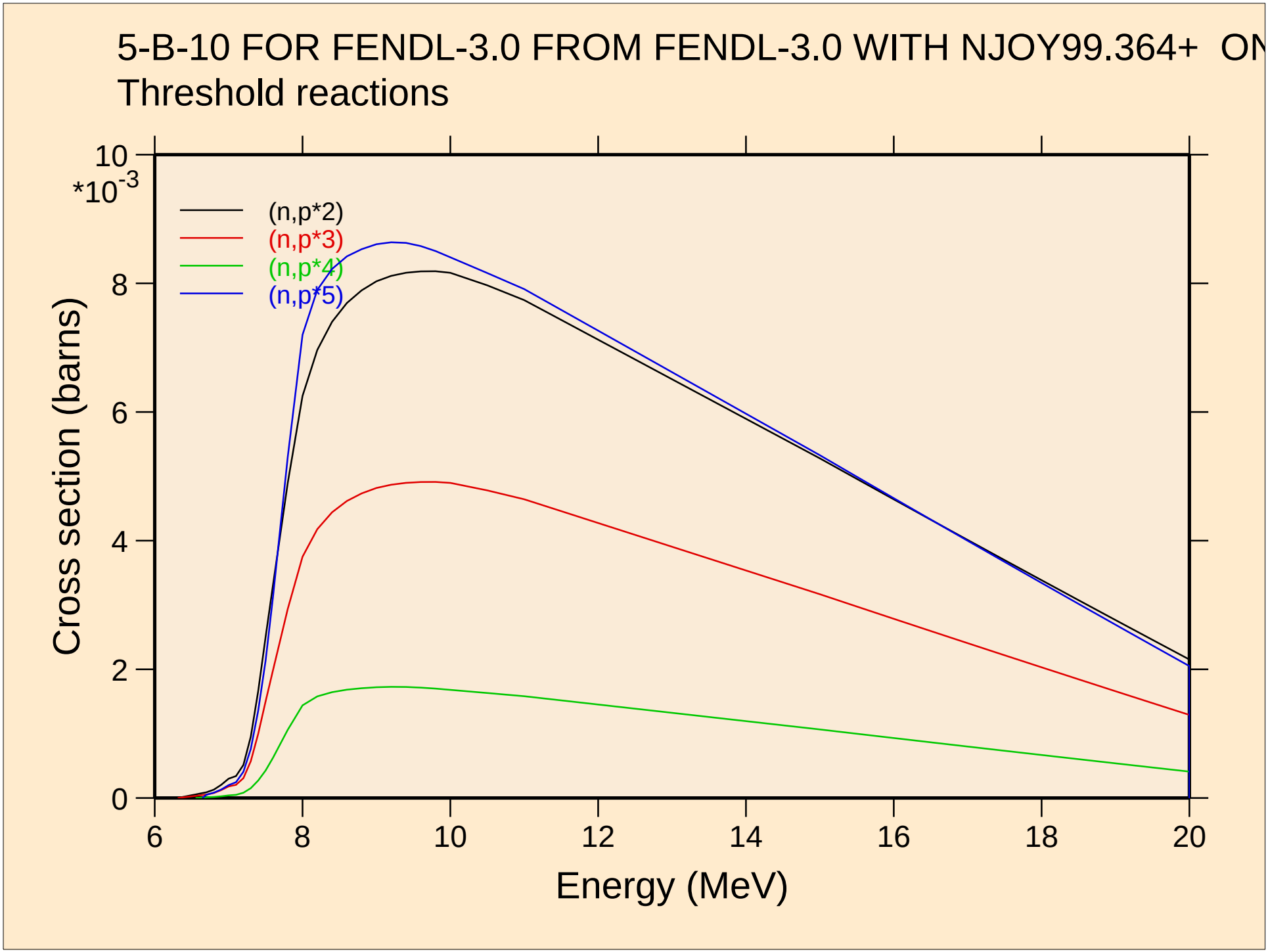

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
25
20
15
10
5
0
9.3
9.4
9.5
9.6
9.7
9.8
9.9
10.0
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)

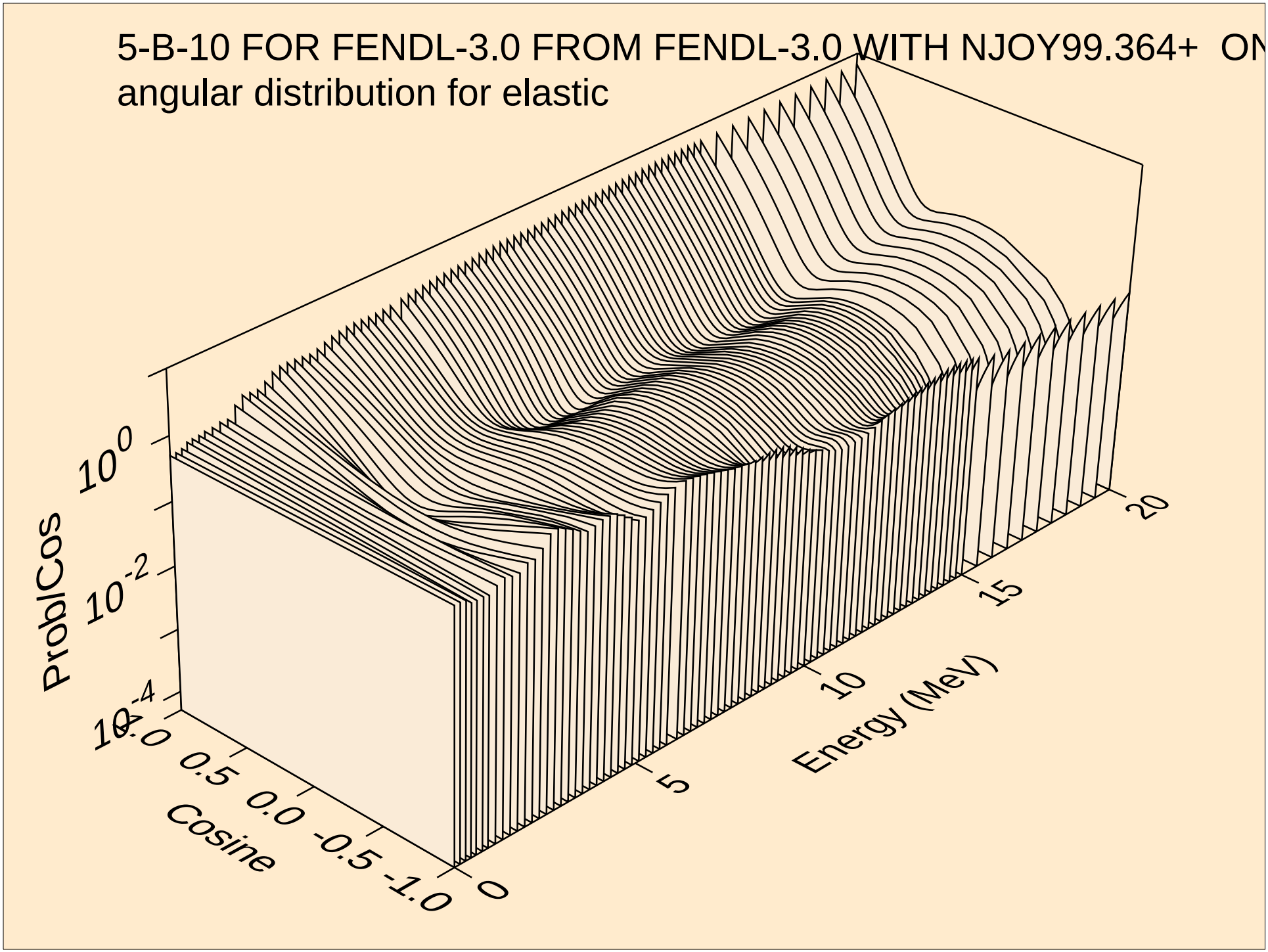

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
20
18
16
14
12
10
8
6
4
2
0
0
20
Energy (MeV)
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

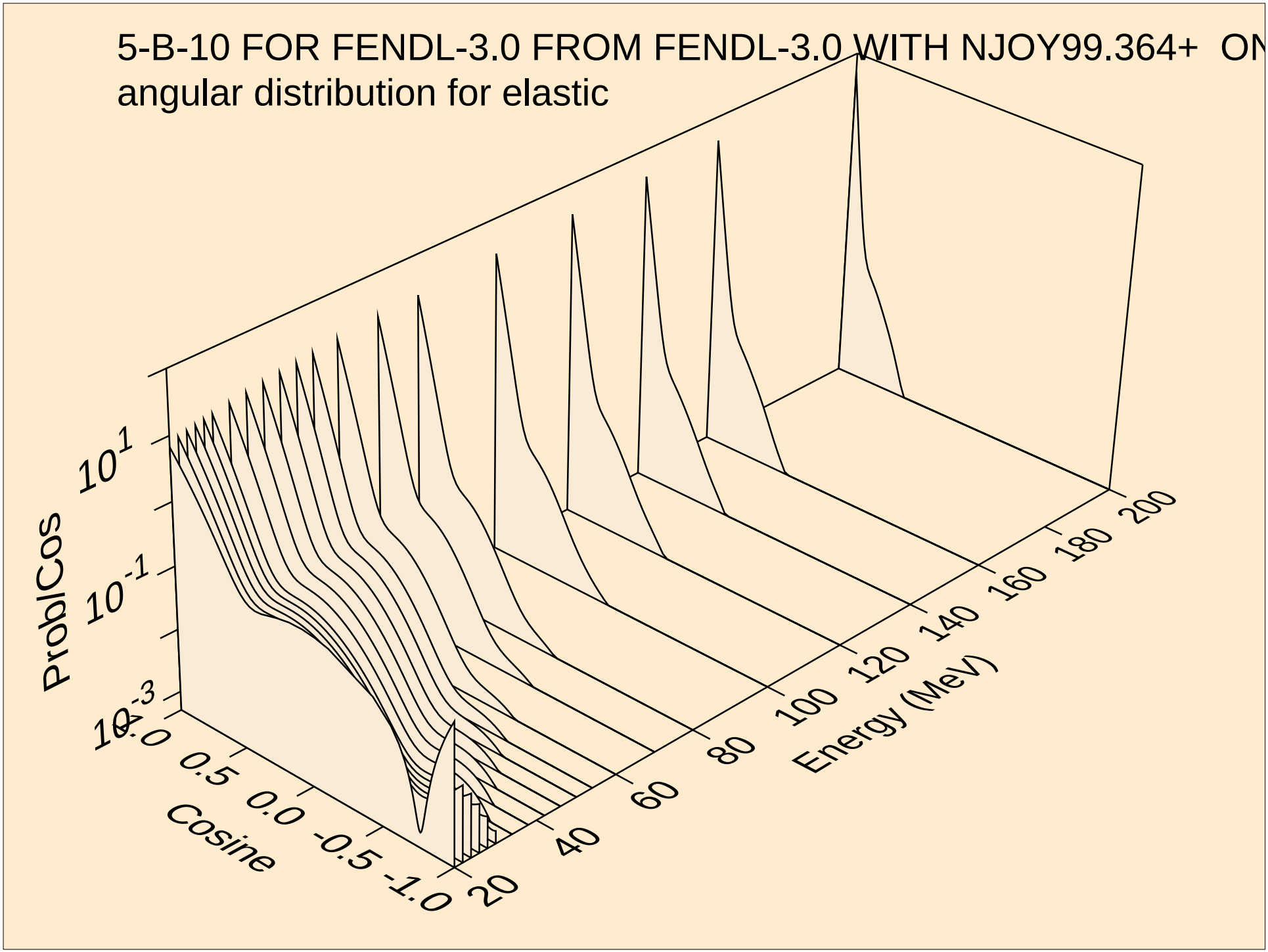

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
Cross section (barns)
*10-3
18
16
14
12
10
8
6
4
2
0
0
20
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)

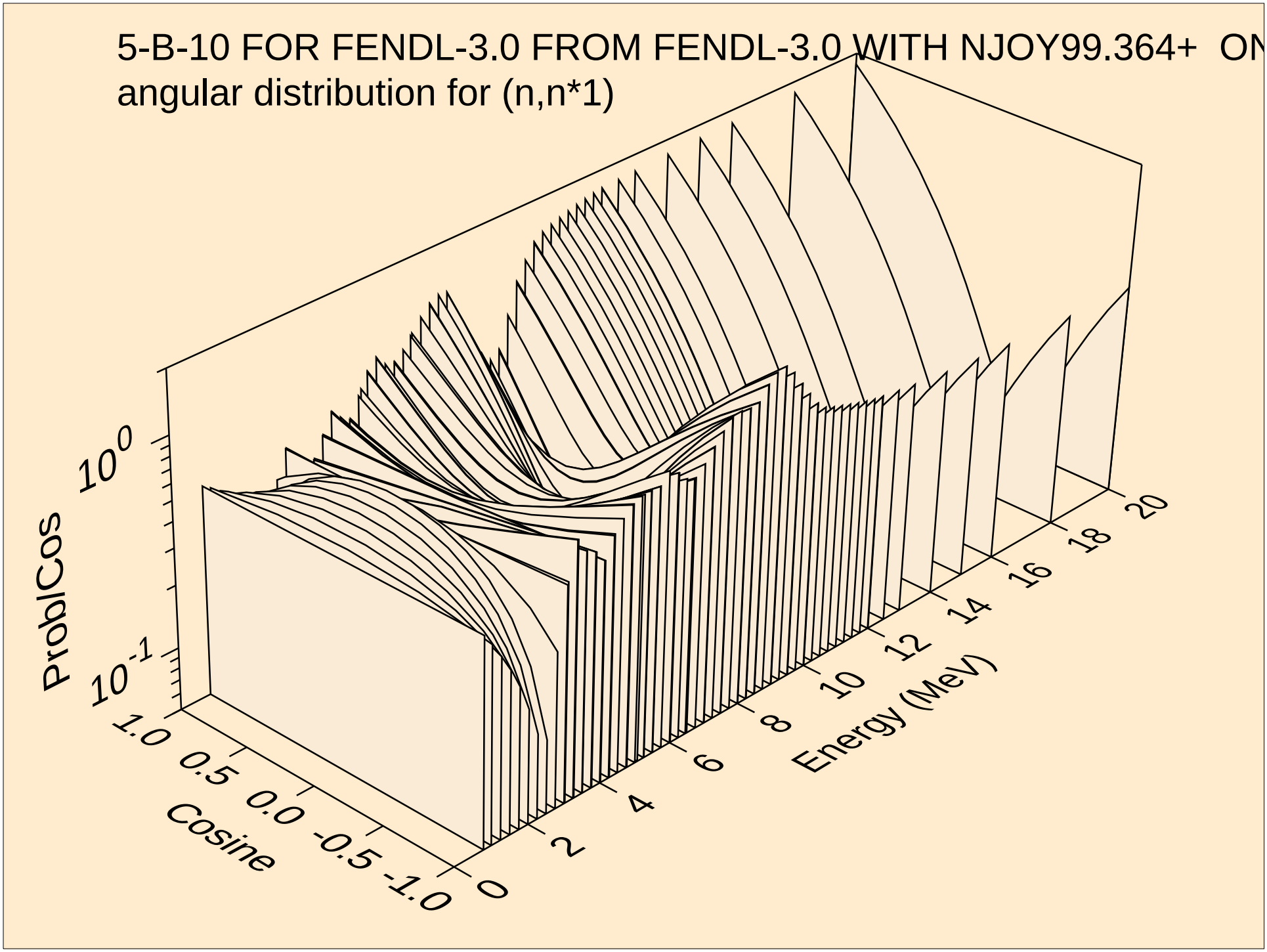

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Inelastic levels
14
*10-3
12
10
8
6
4
2
0
Cross section (barns)
0
20
Energy (MeV)
(n,n*31)
(n,n*32)
(n,n*33)
(n,n*34)
(n,n*35)

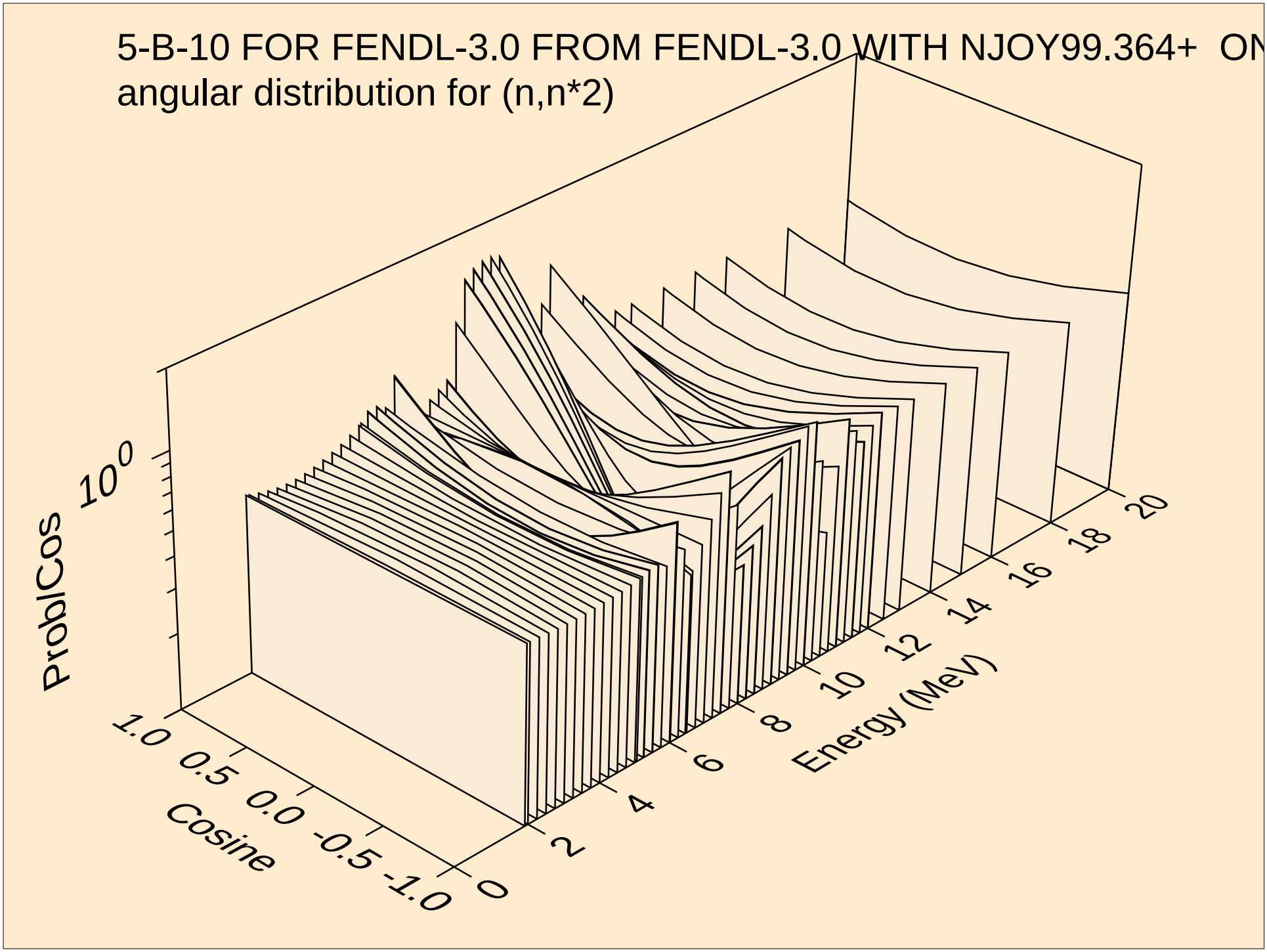

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Threshold reactions
800
*10-3
700
600
500
400
300
200
100
0
Cross section (barns)
(n,x)
(n,d)
(n,xd)
(n,xhe3)
(n,p*1)
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

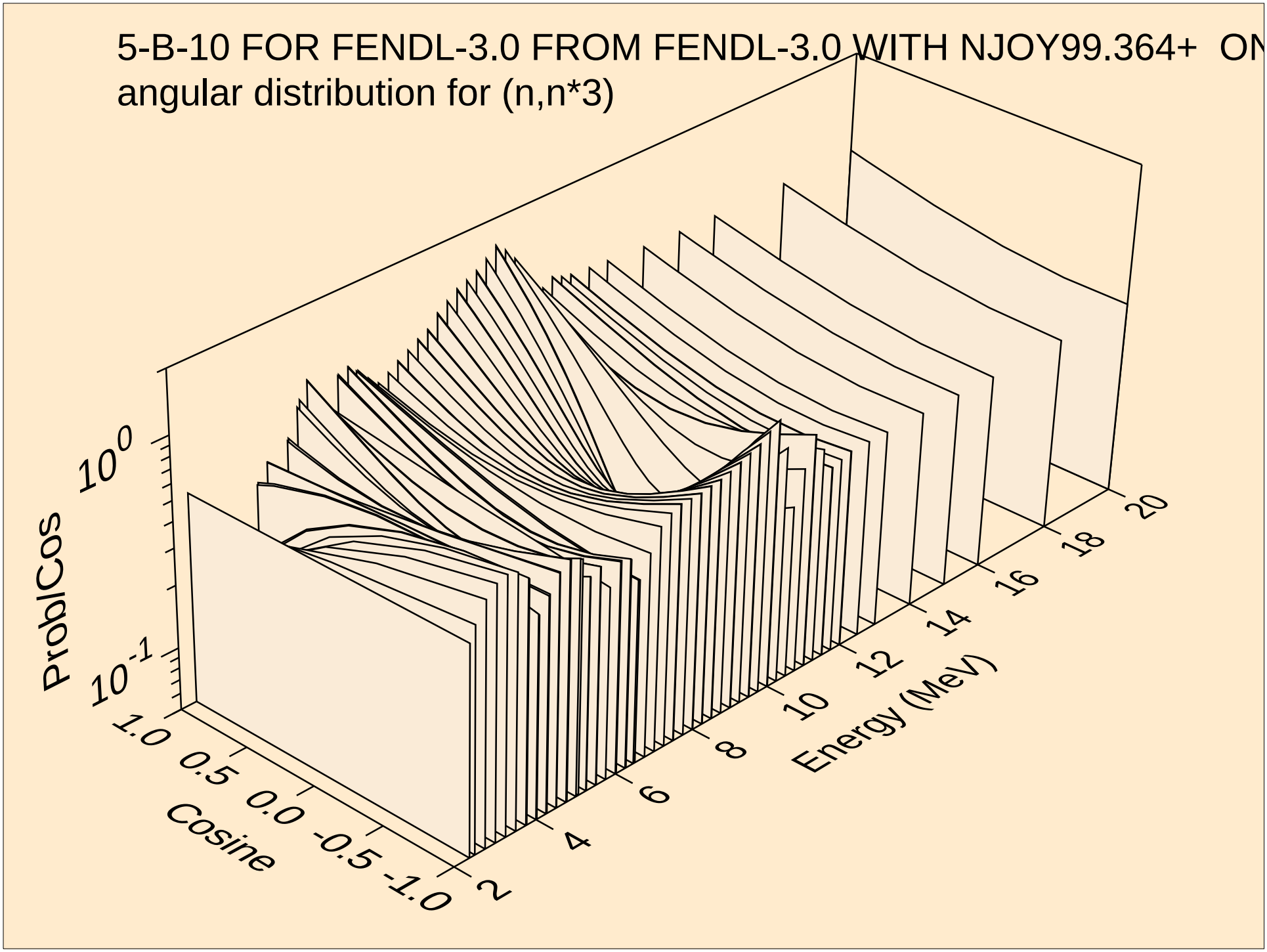

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Threshold reactions
10
*10-3
8
6
4
2
0
(n,p*2)
(n,p*3)
(n,p*4)
(n,p*5)
Cross section (barns)
6
8
10
12
14
16
18
20
Energy (MeV)

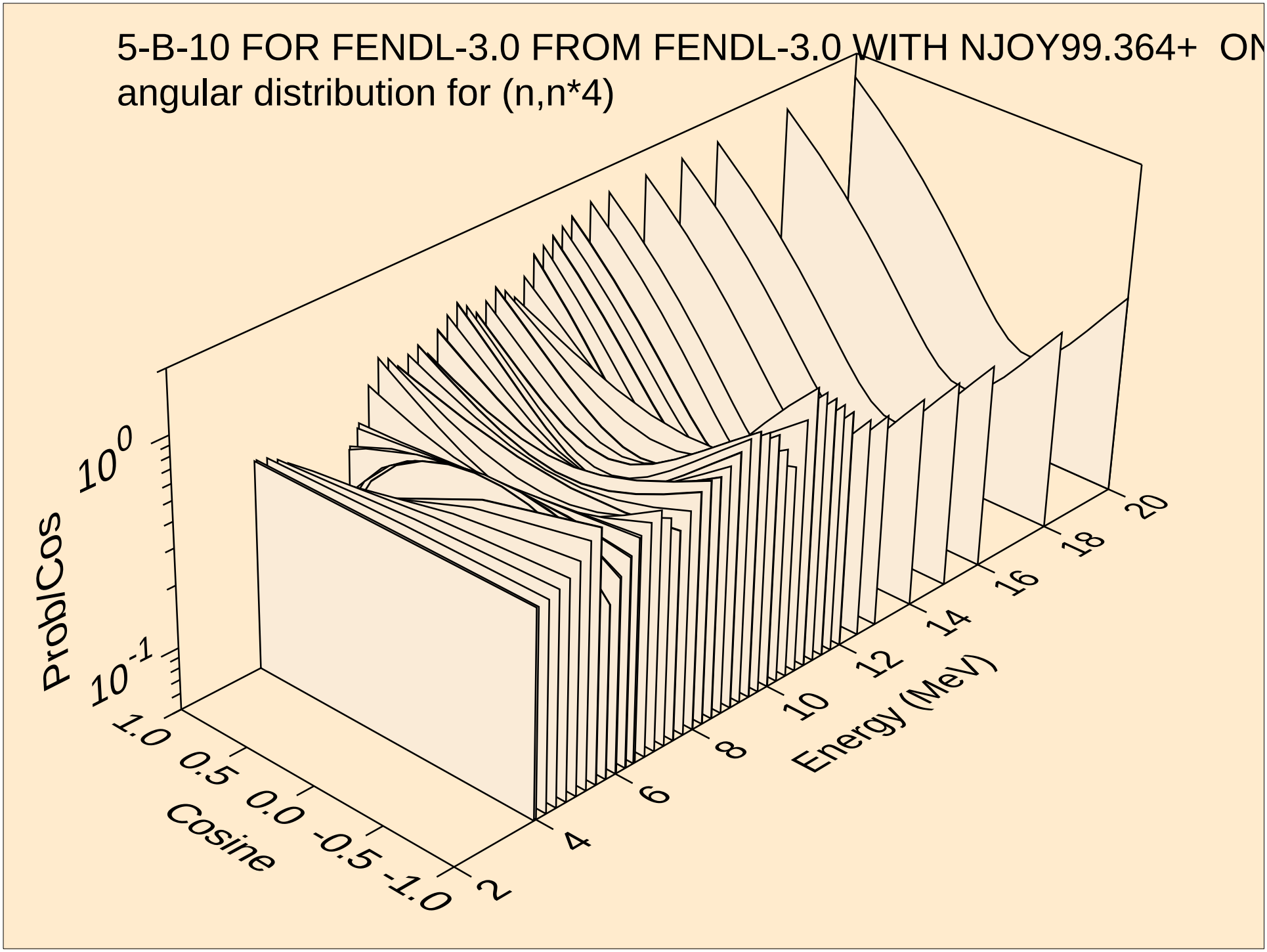

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for elastic
ProbICos
10^0
10^-2
10^-4
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

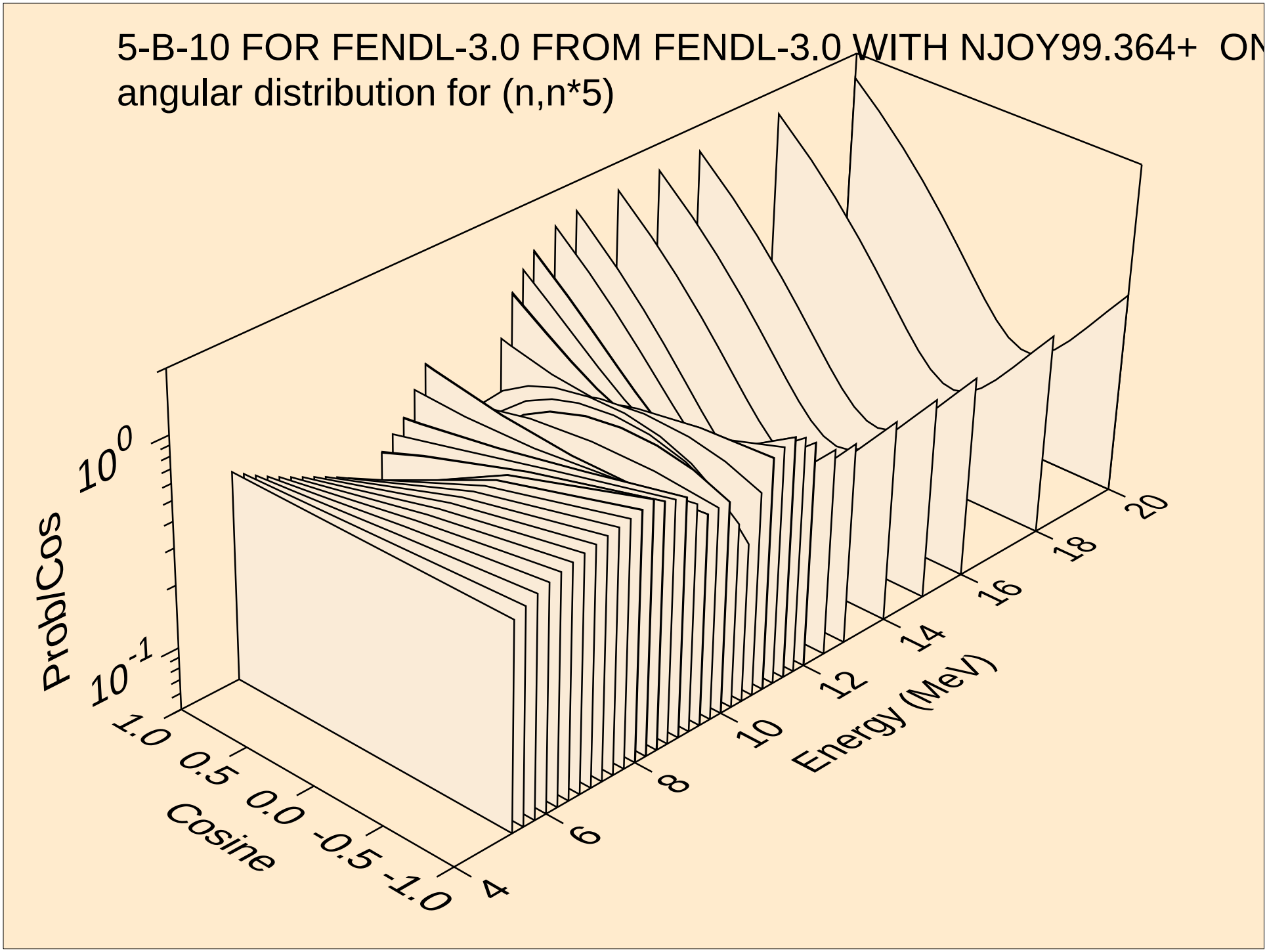

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for elastic
Prob\Cos
10^1
10^-1
10^-3
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

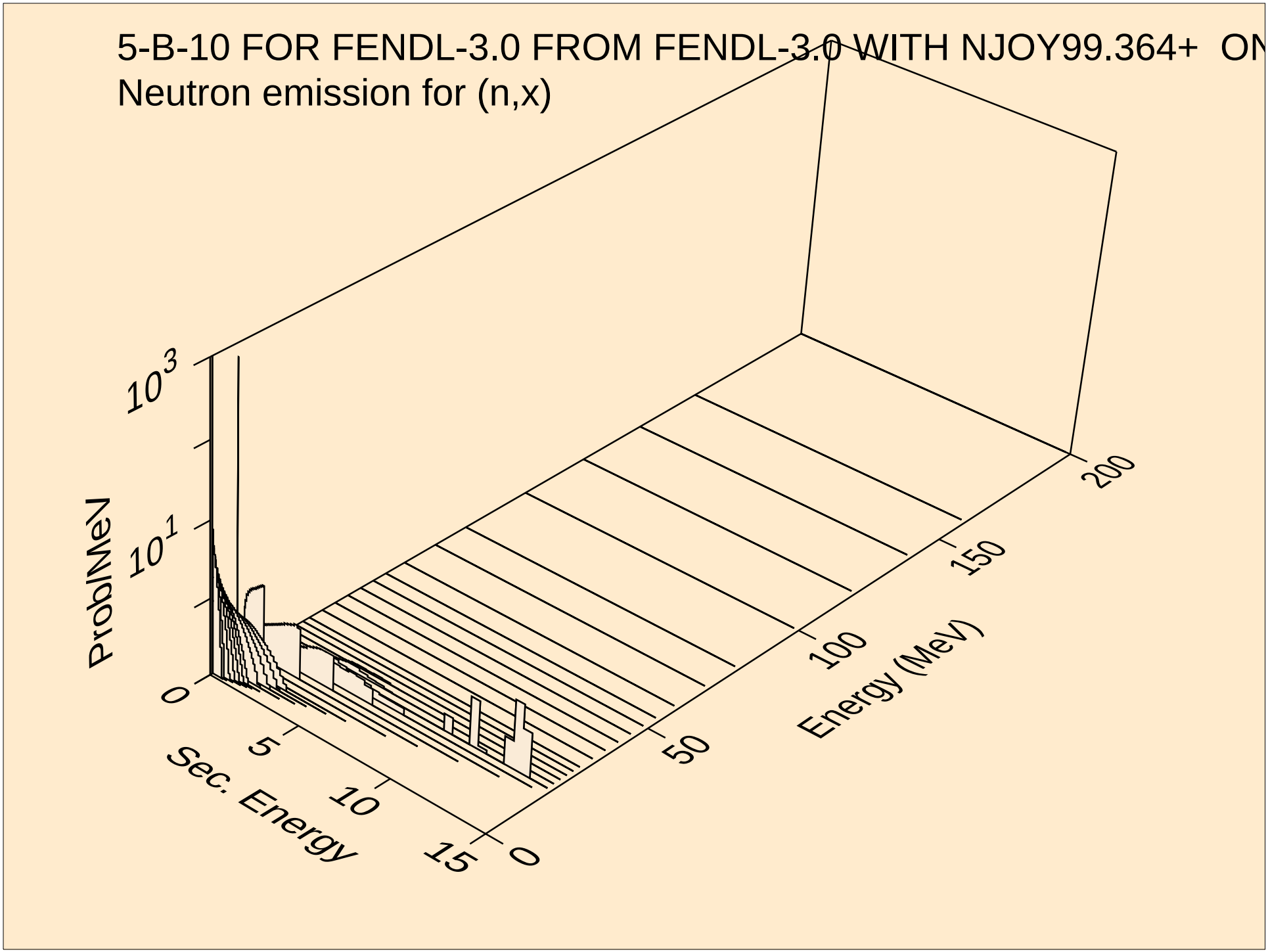

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*1)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

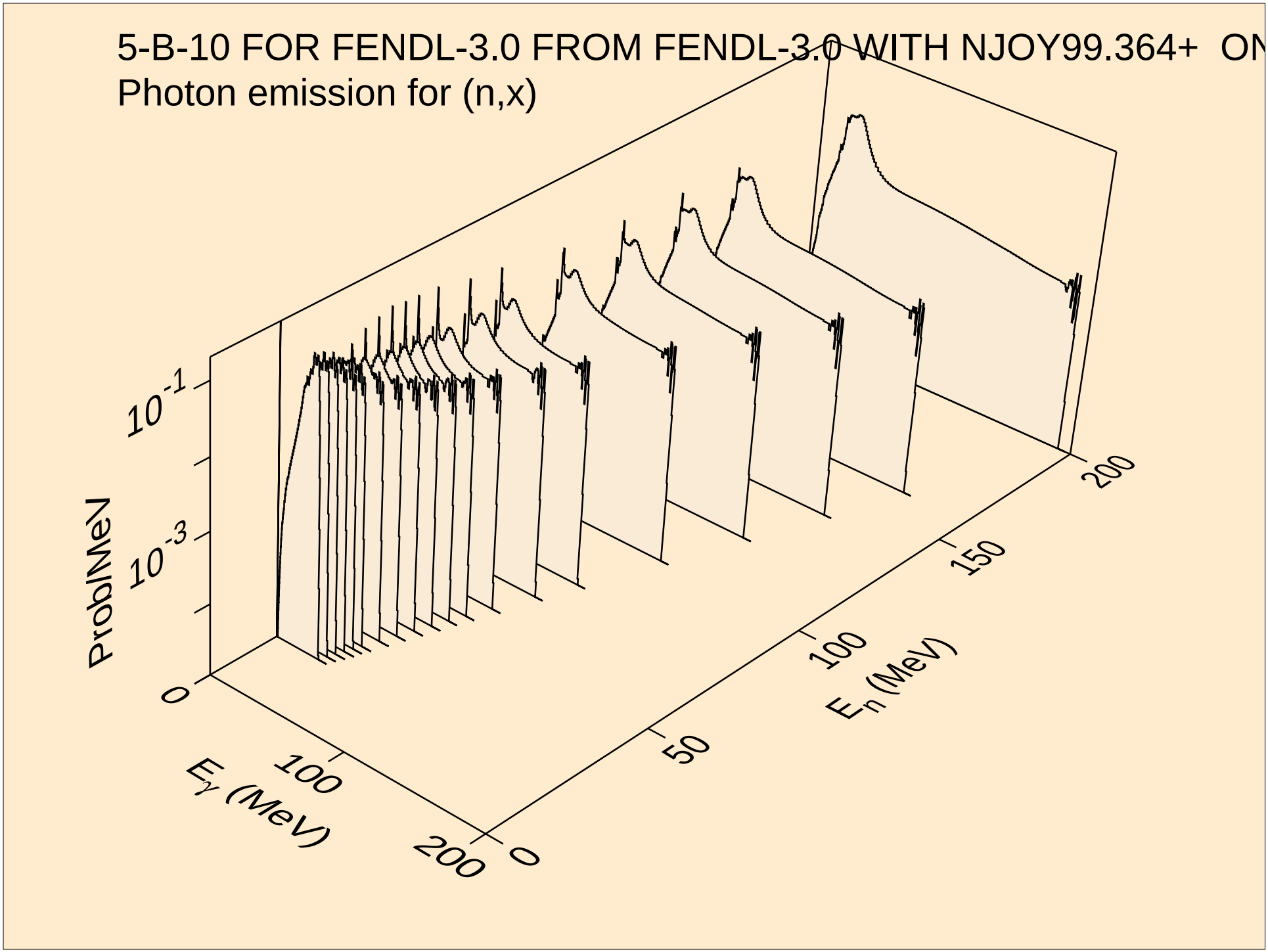

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*2)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

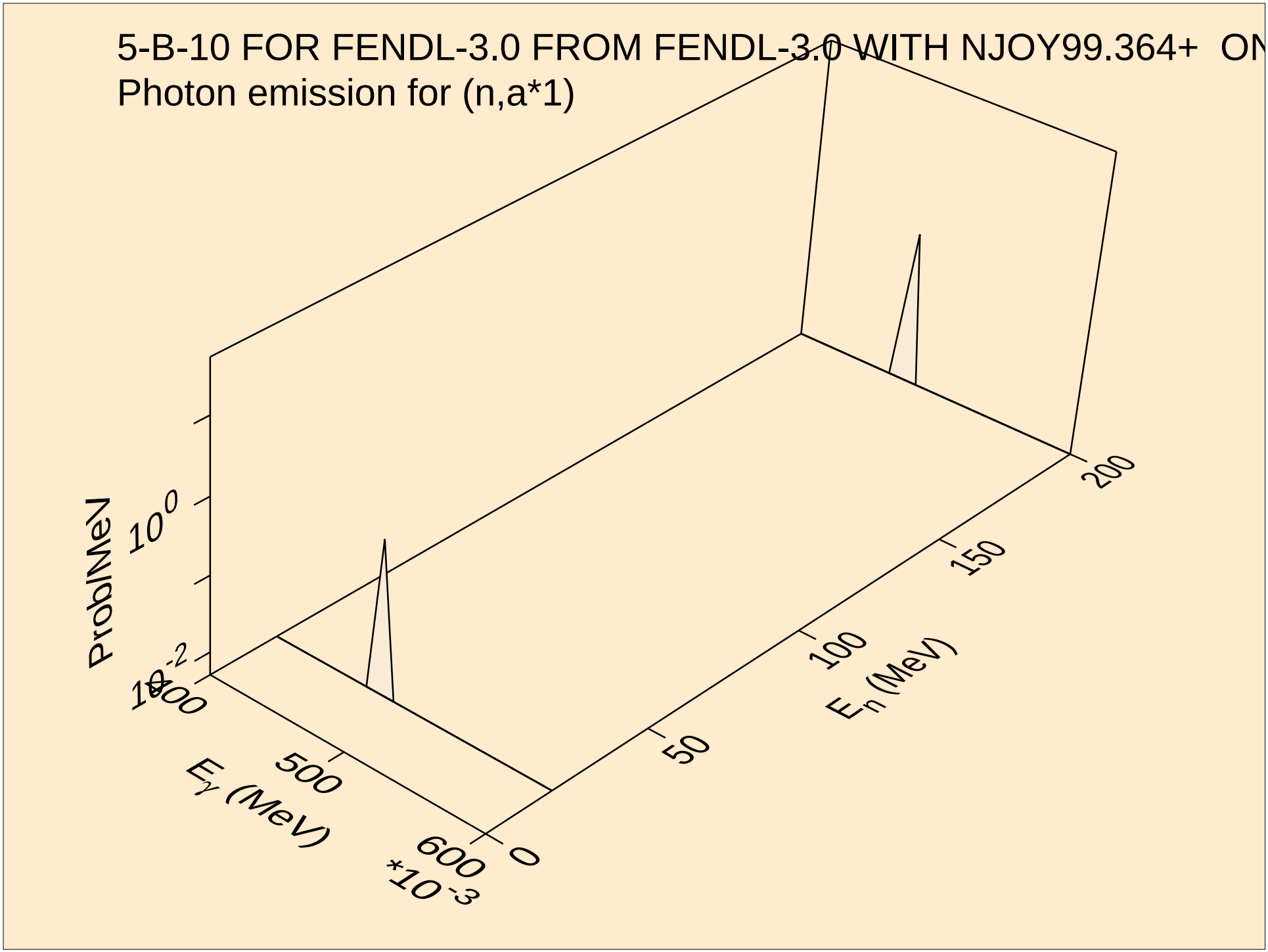

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*3)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

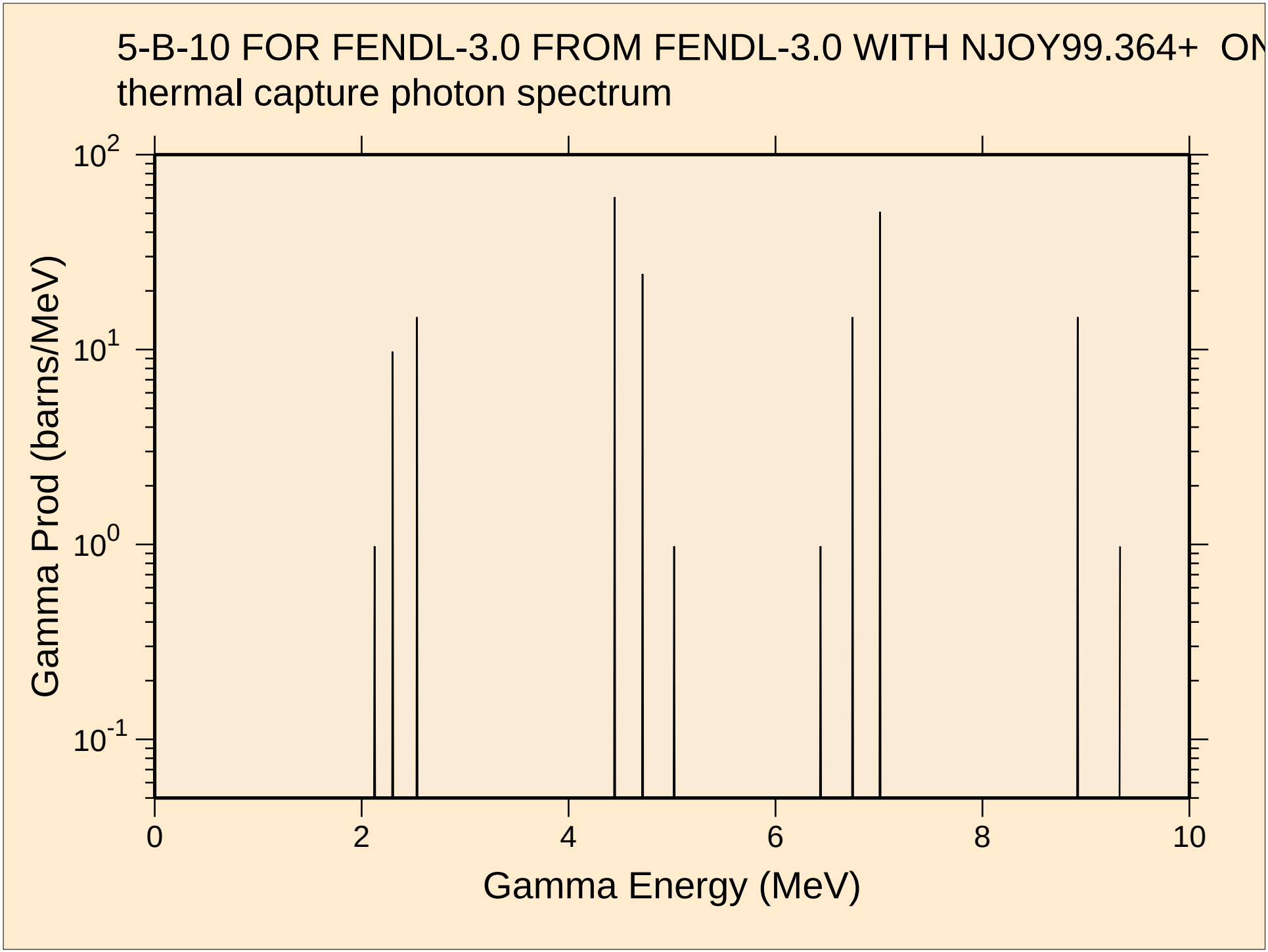

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*4)
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

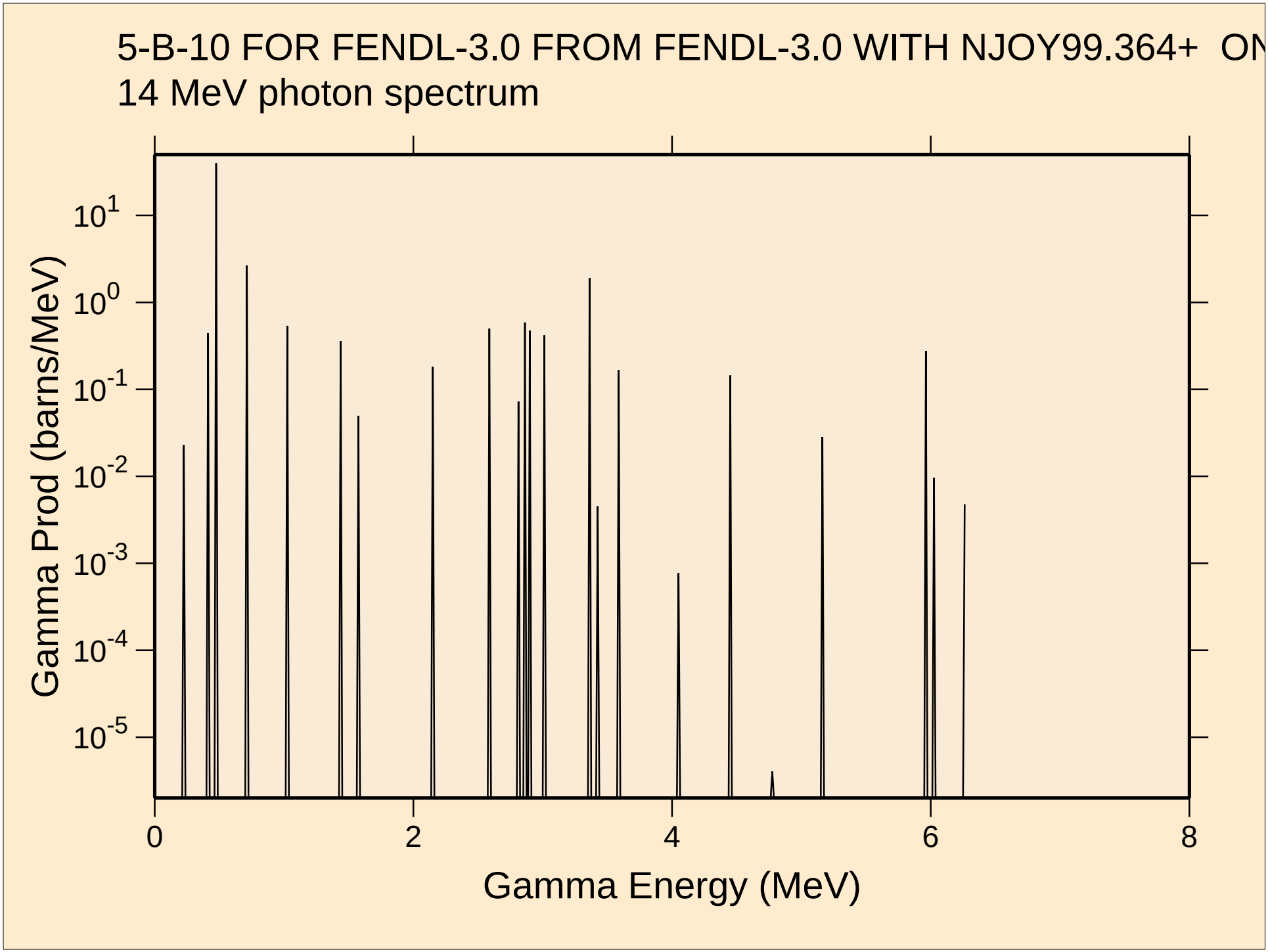

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,n*5)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

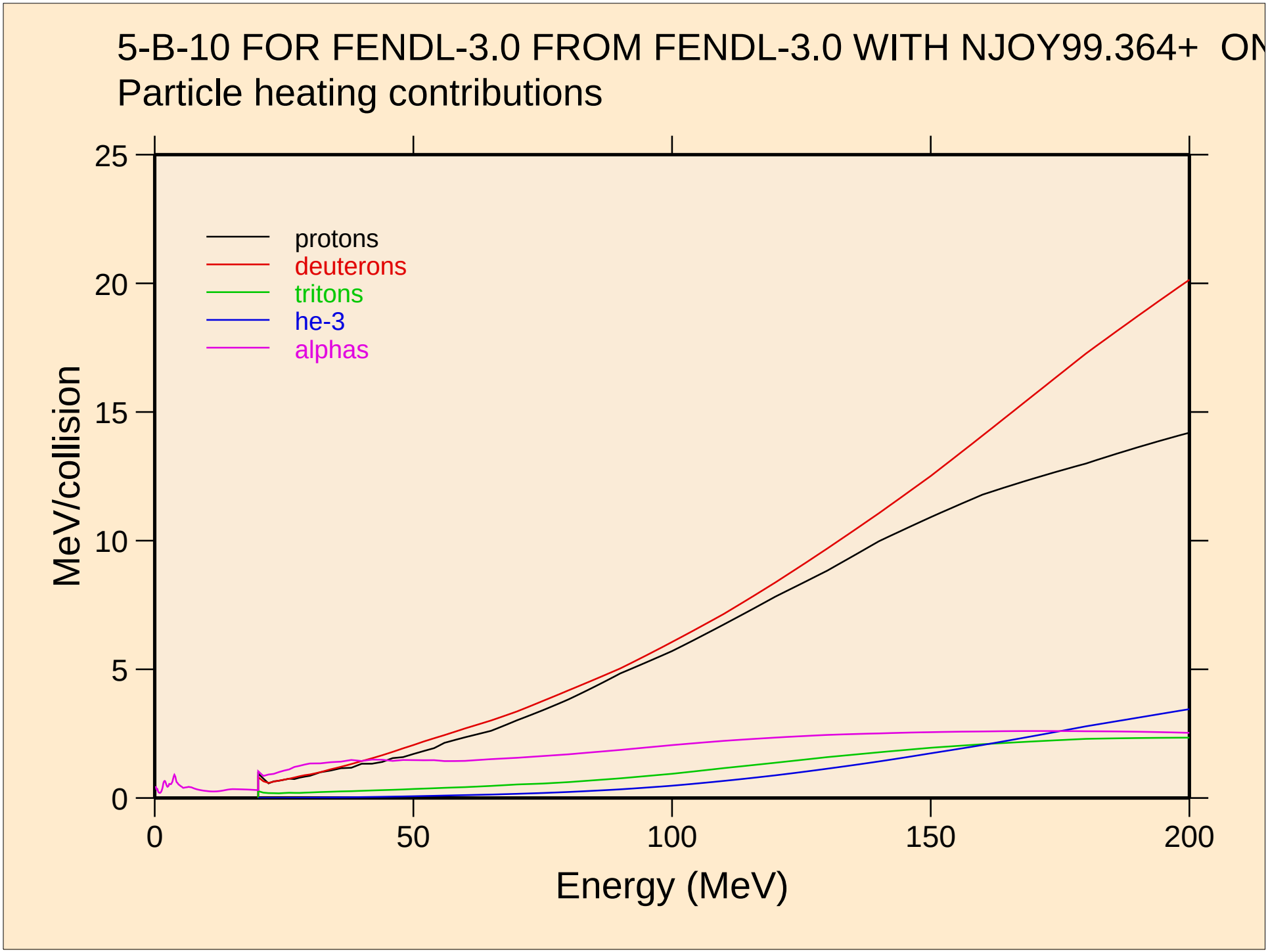

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Neutron emission for (n,x)
Prob/MeV
10^3
10^1
0
5
10
15
Sec. Energy
0
50
100
150
200
Energy (MeV)

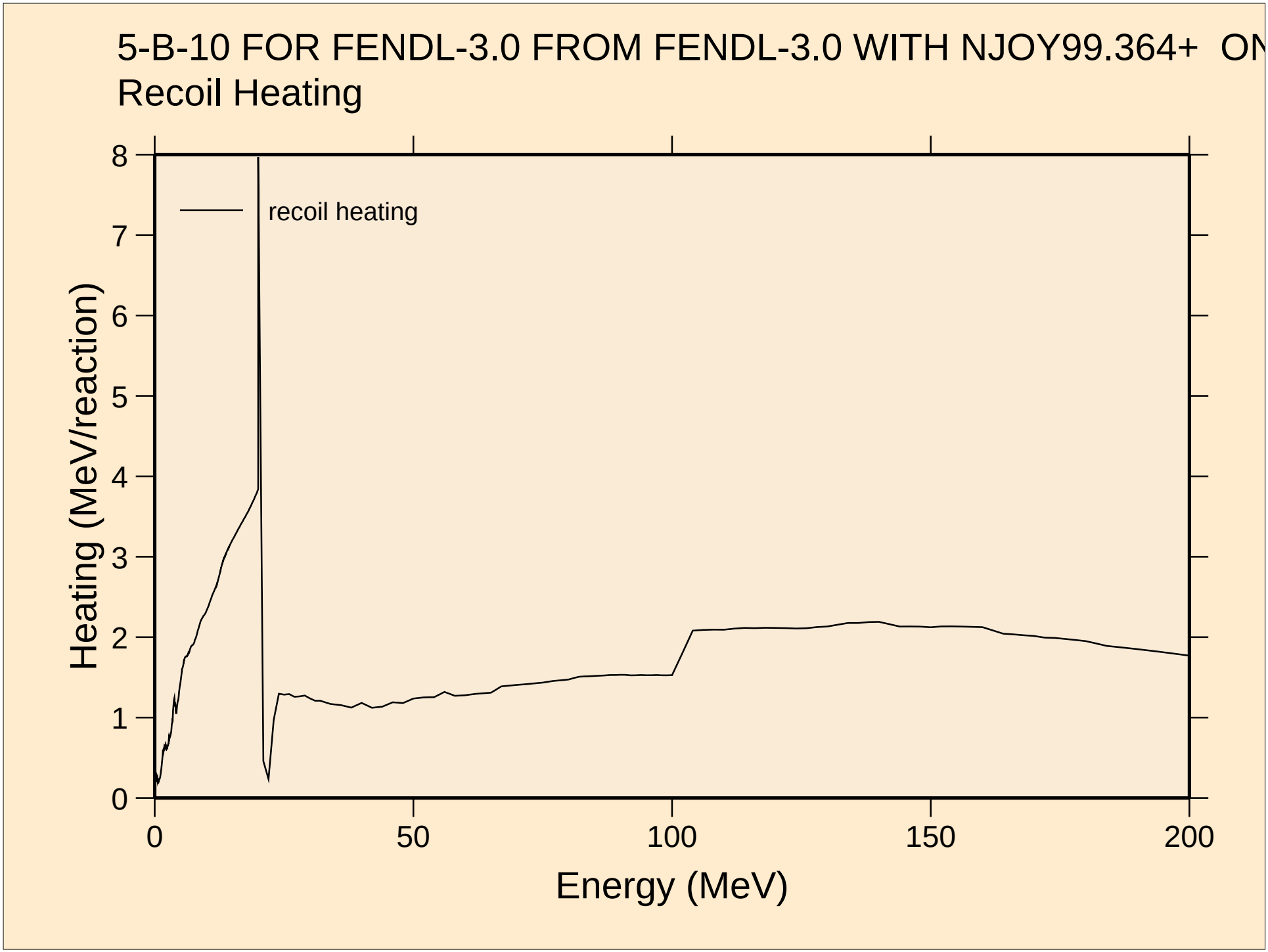

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Photon emission for (n,x)
Prob/MeV
10-1
10-3
0
100
200
Eγ (MeV)
0
50
100
150
200
En (MeV)

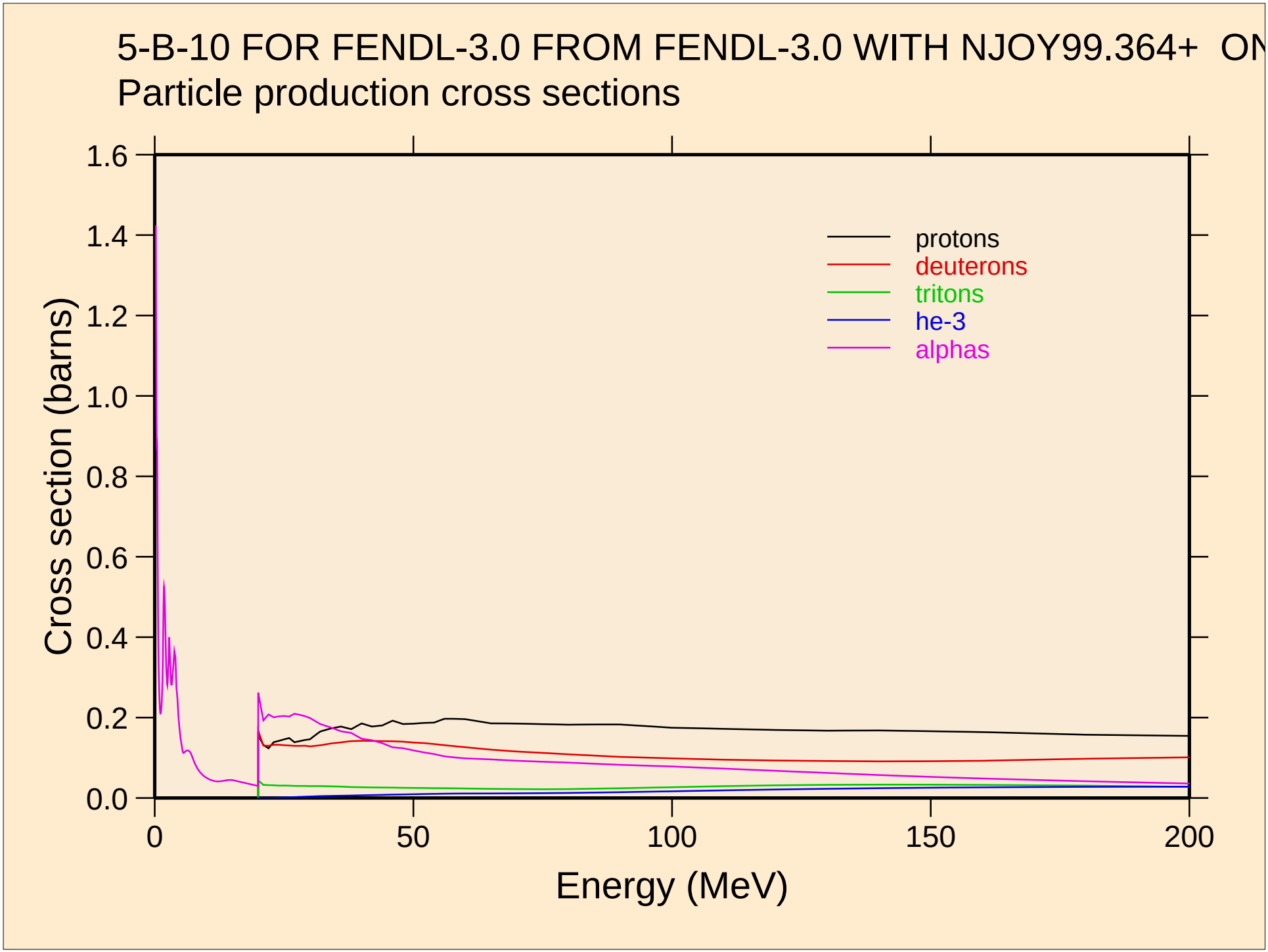

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Photon emission for (n,a*1)
Prob/MeV
10^0
10^-2
400
500
600
*10^-3
Eγ (MeV)
0
50
100
150
200
En (MeV)

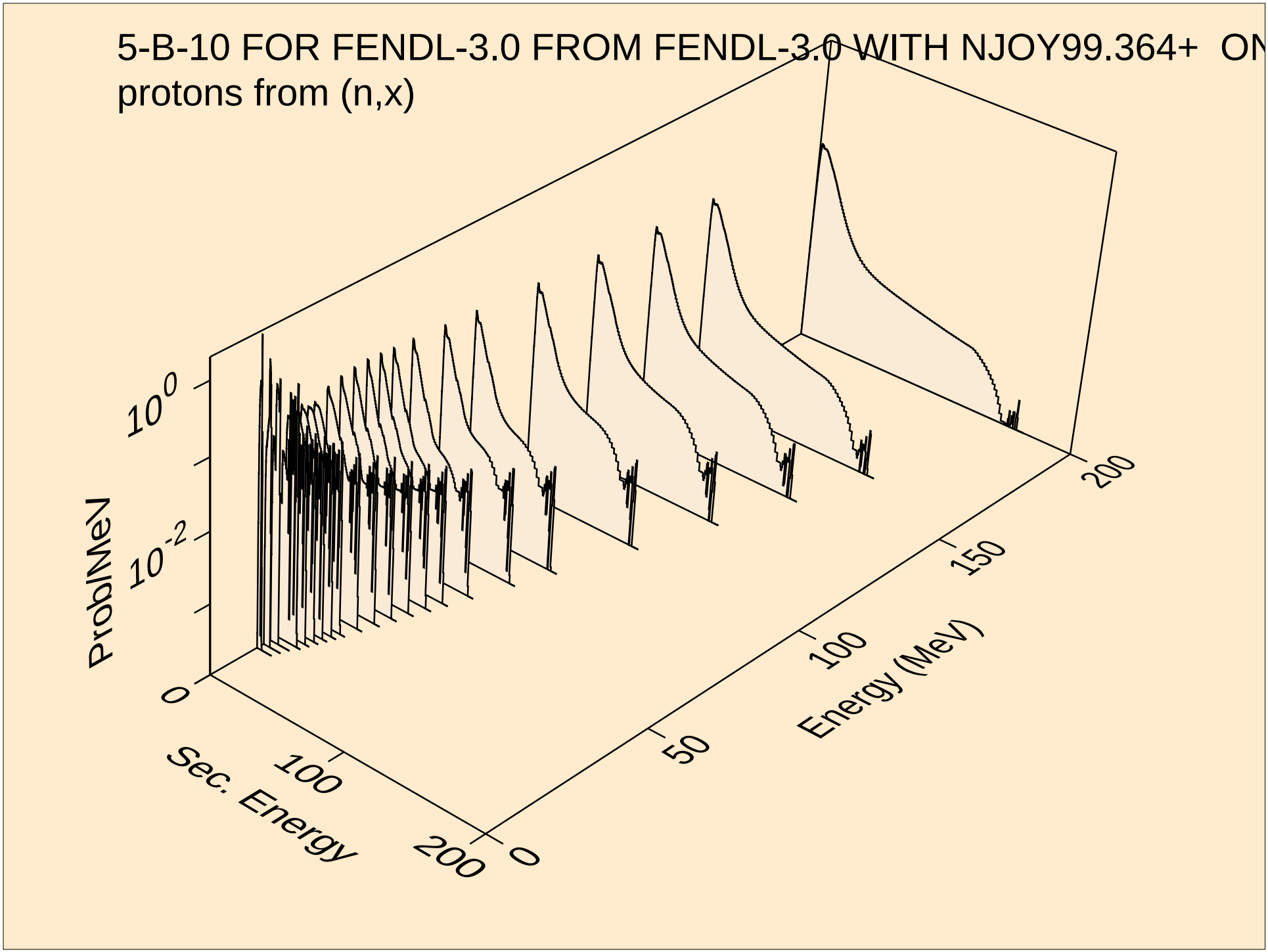

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^2
10^1
10^0
10^{-1}
0
2
4
6
8
10
Gamma Energy (MeV)

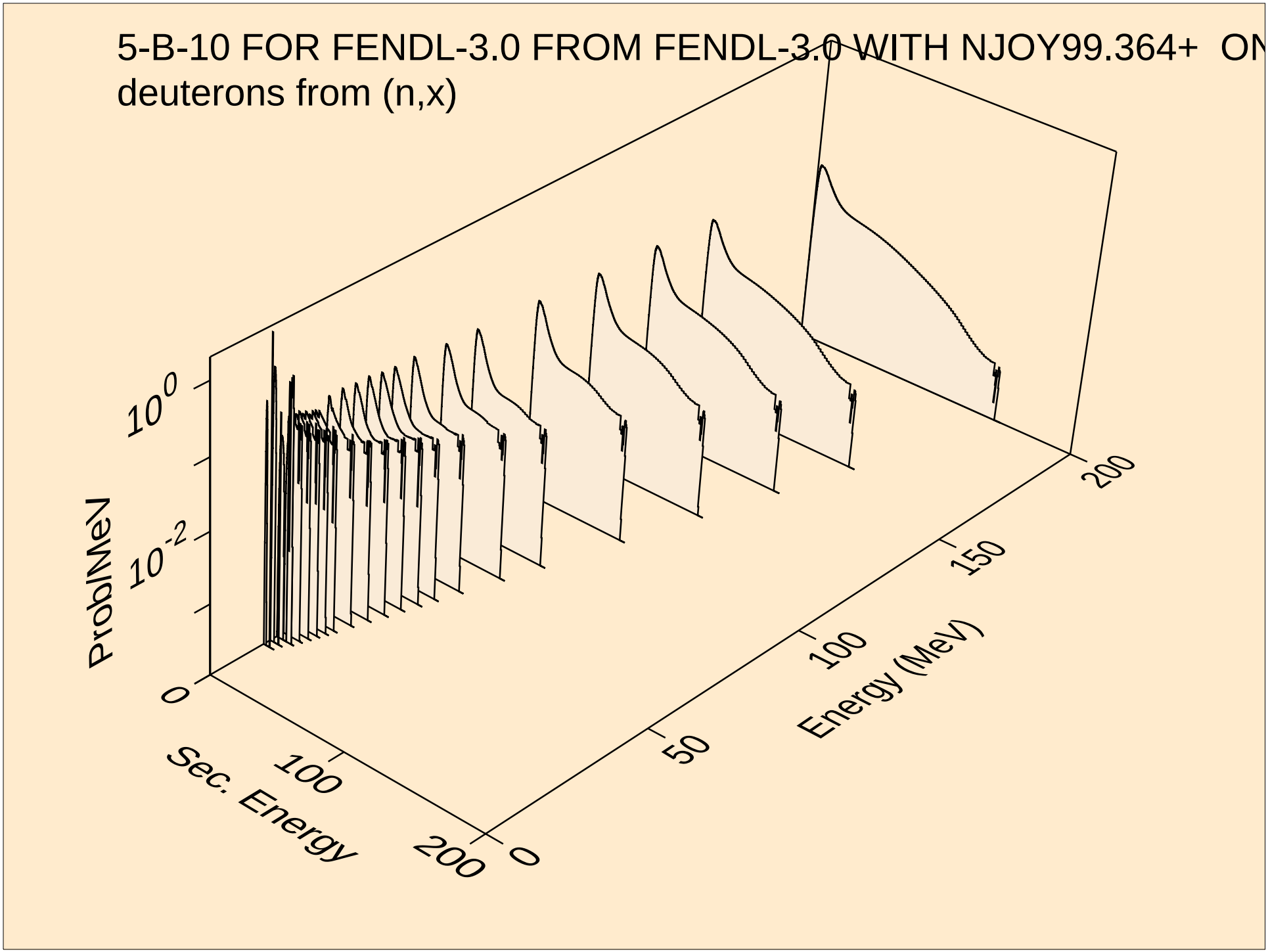

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
0
2
4
6
8
Gamma Energy (MeV)

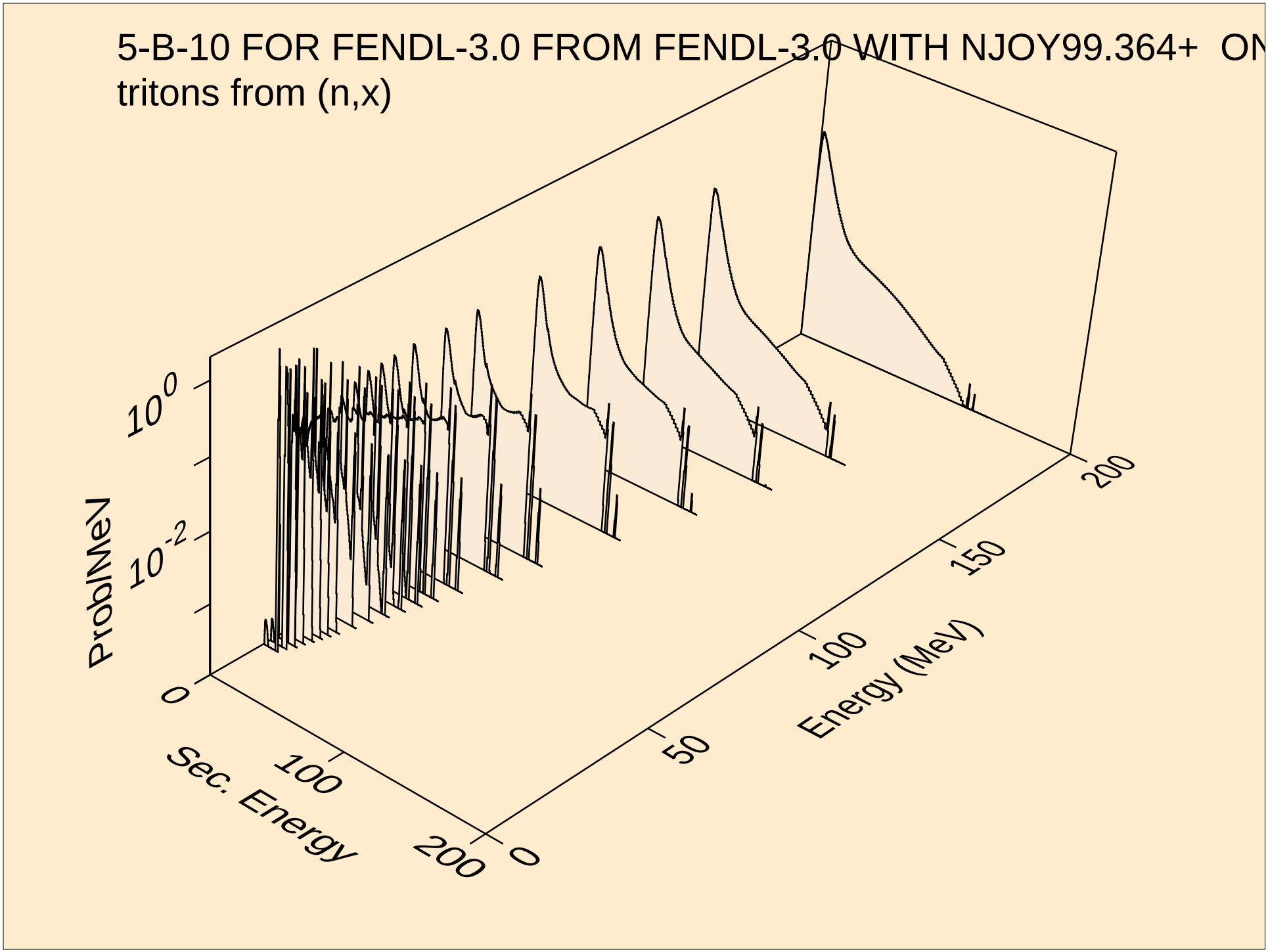

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Particle heating contributions
protons
deuterons
tritons
he-3
alphas
MeV/collision
Energy (MeV)
0
5
10
15
20
25
0
50
100
150
200

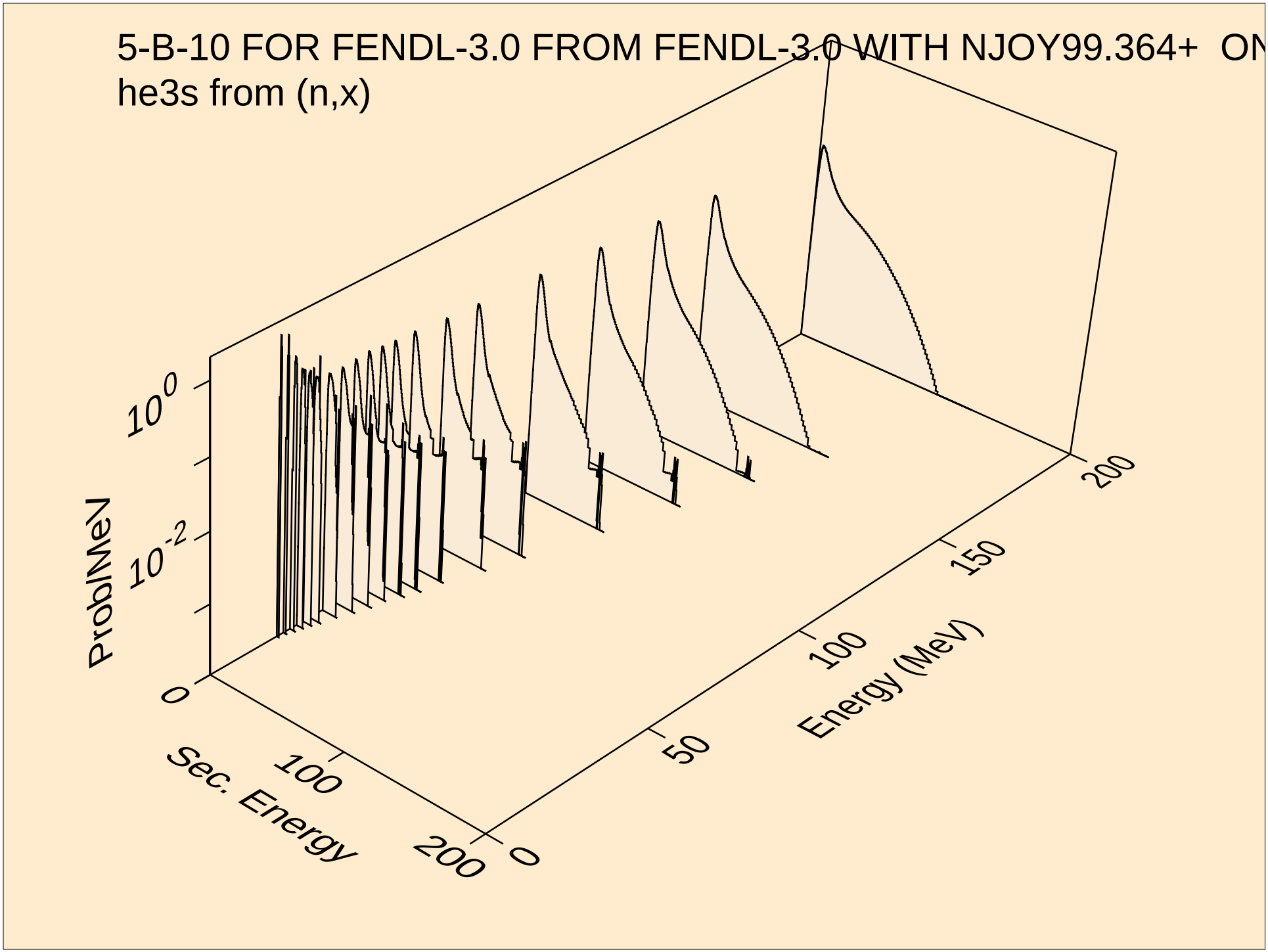

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0
1
2
3
4
5
6
7
8
0
50
100
150
200

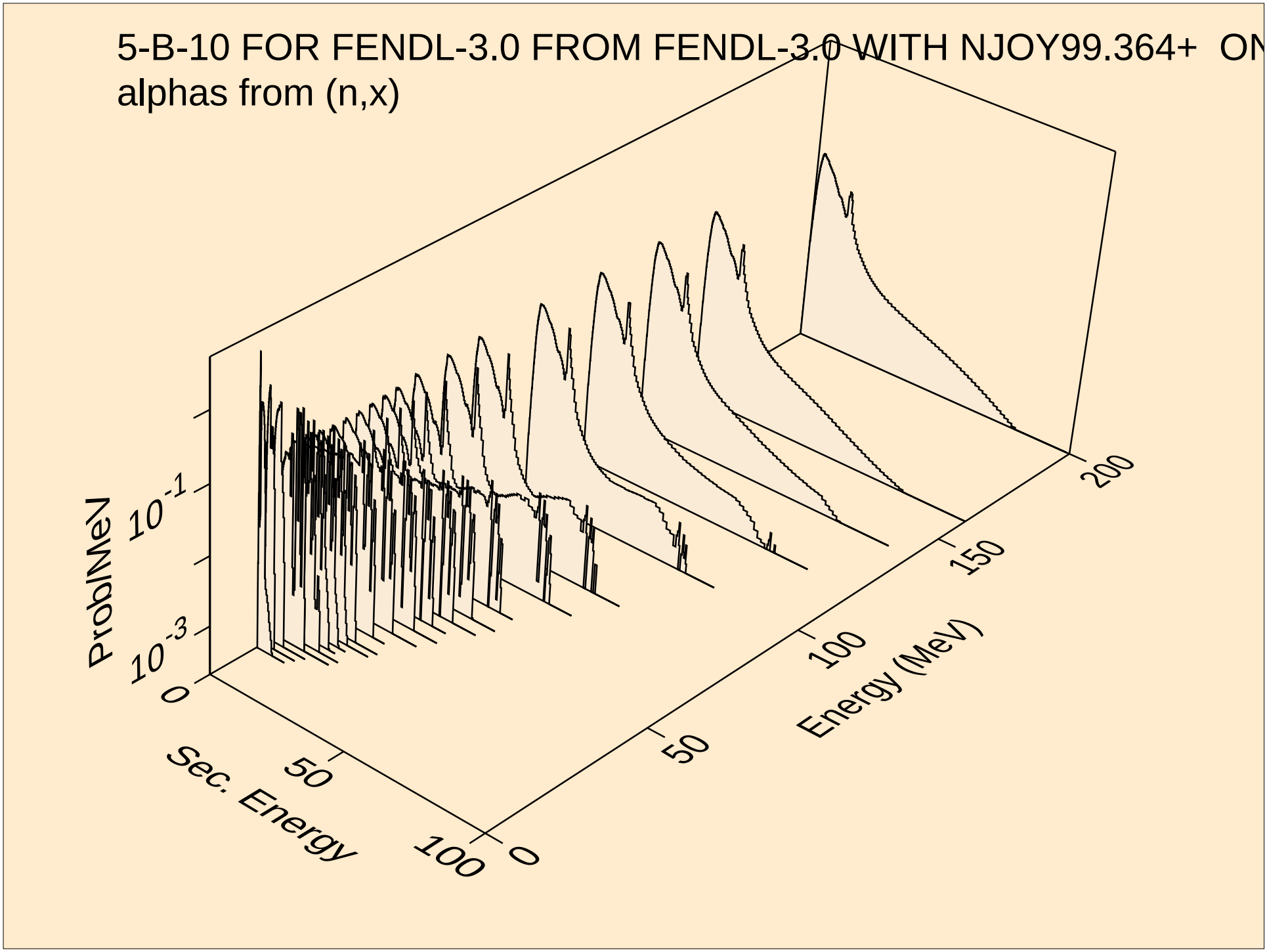

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
Particle production cross sections
Cross section (barns)
Energy (MeV)
protons
deuterons
tritons
he-3
alphas
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
0
50
100
150
200

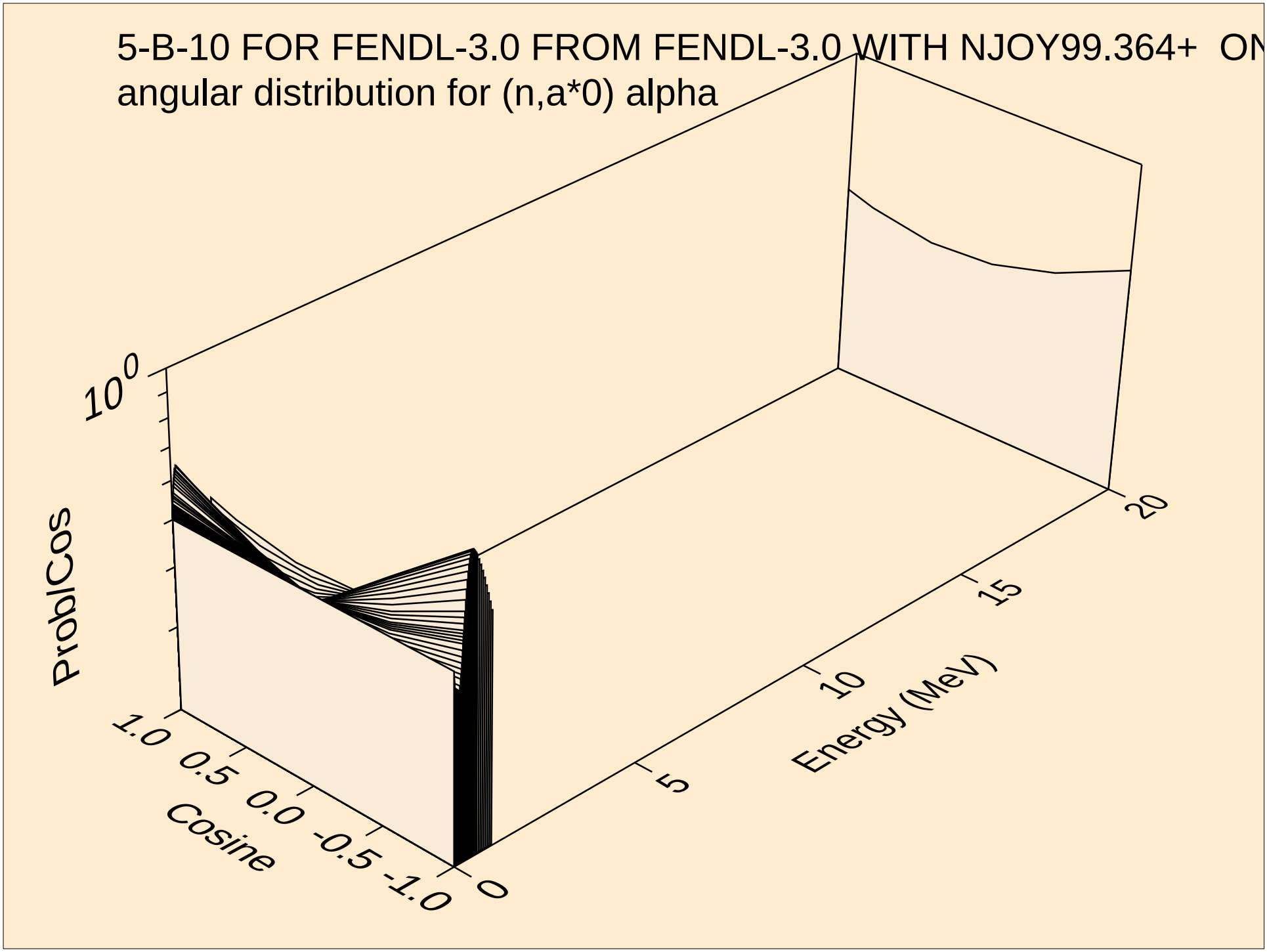

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
protons from (n,x)
Prob/MeV
10^0
10^-2
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)

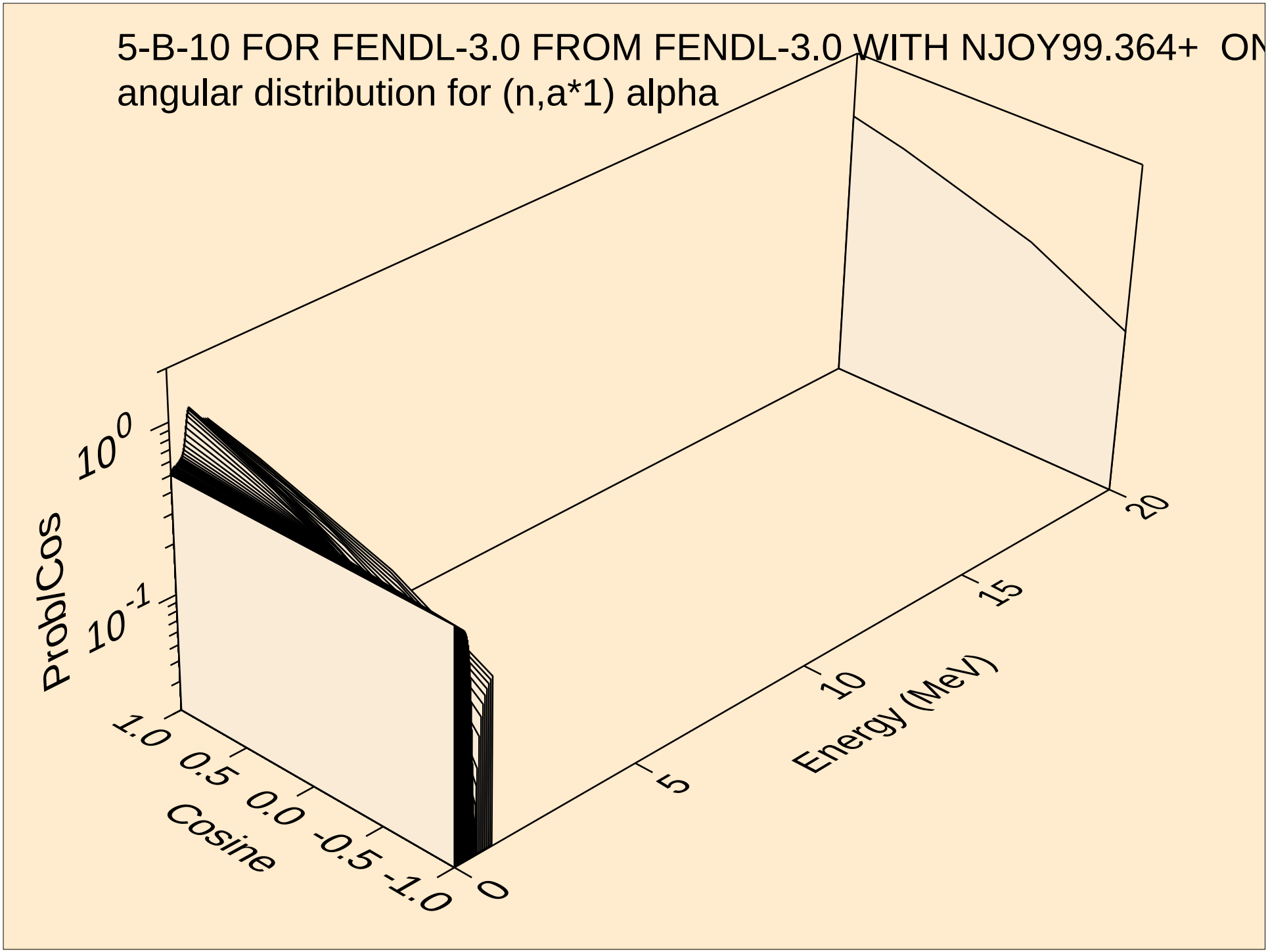

5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
deuterons from (n,x)
Prob/MeV
10^0
10^-2
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)


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


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


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


5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,a*0) alpha
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)


5-B-10 FOR FENDL-3.0 FROM FENDL-3.0 WITH NJOY99.364+ ON
angular distribution for (n,a*1) alpha
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)