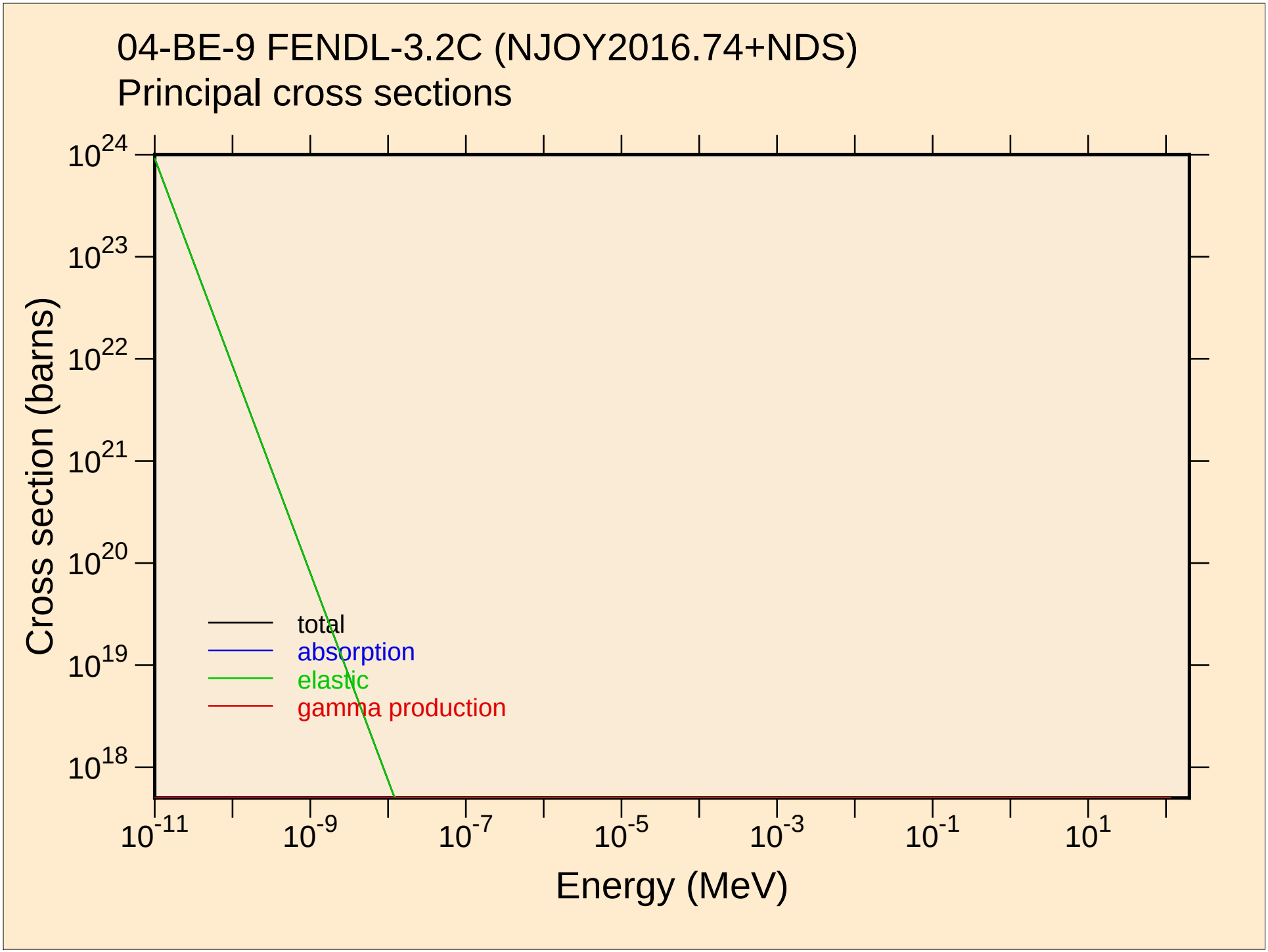
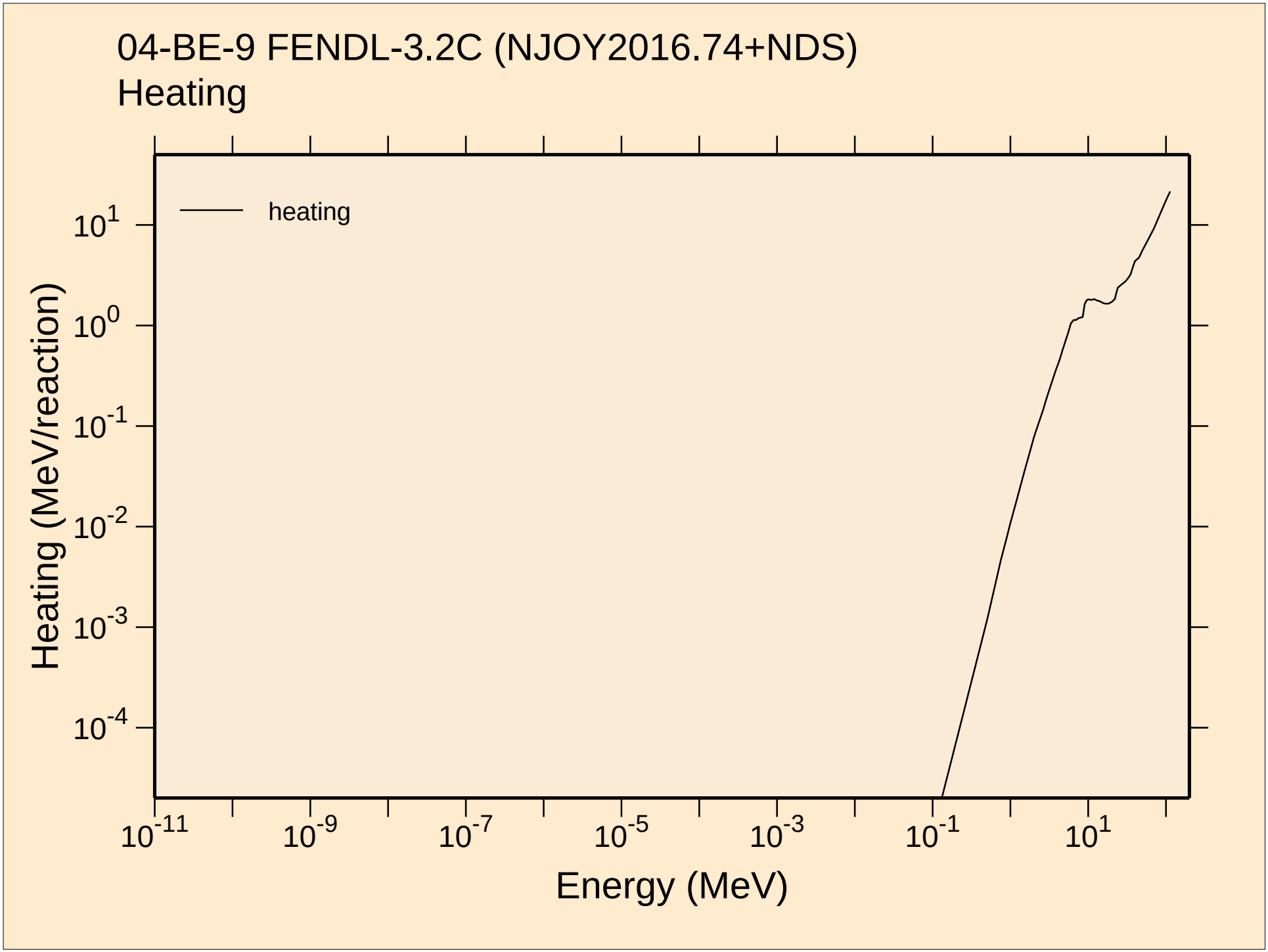
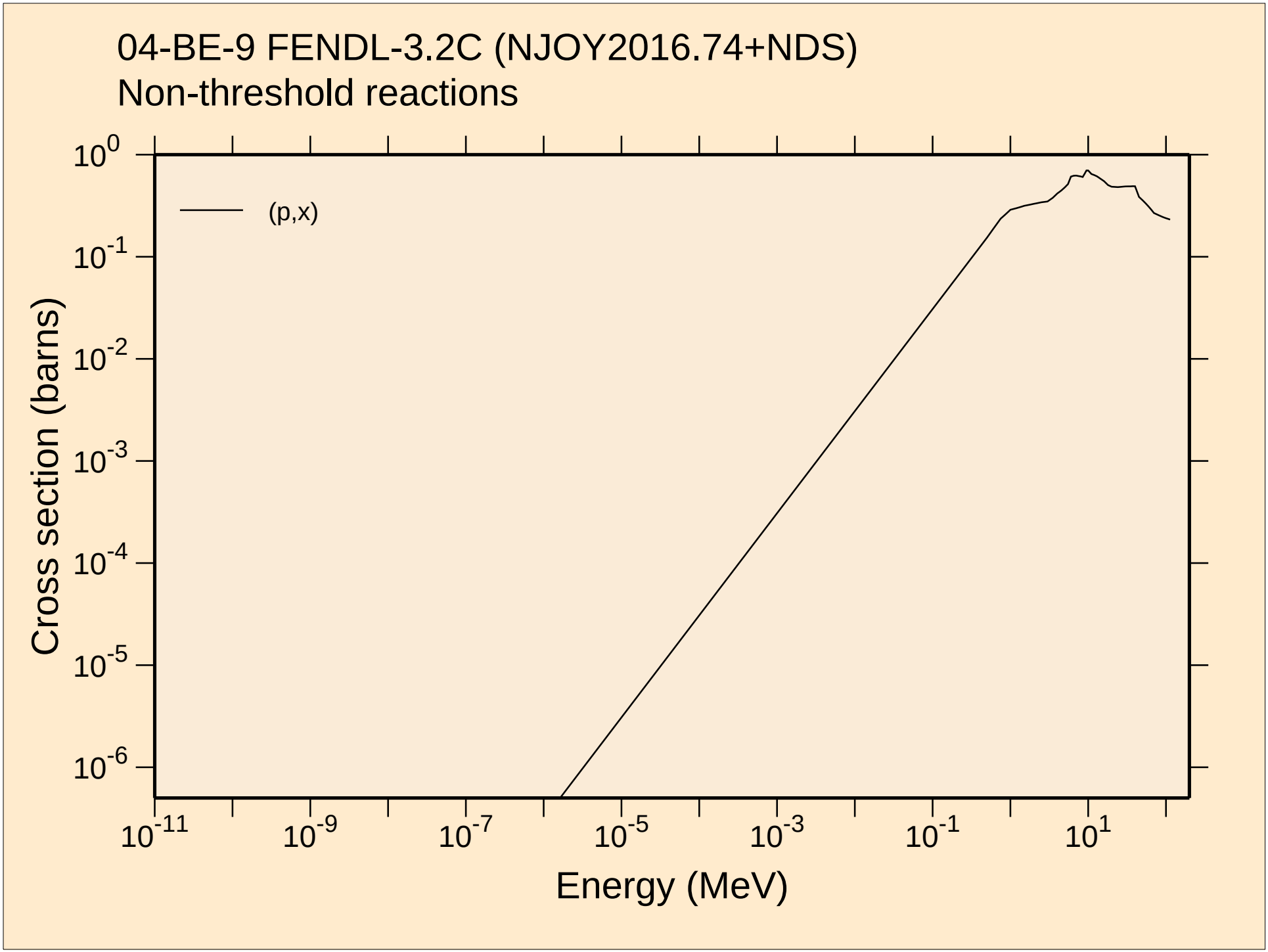
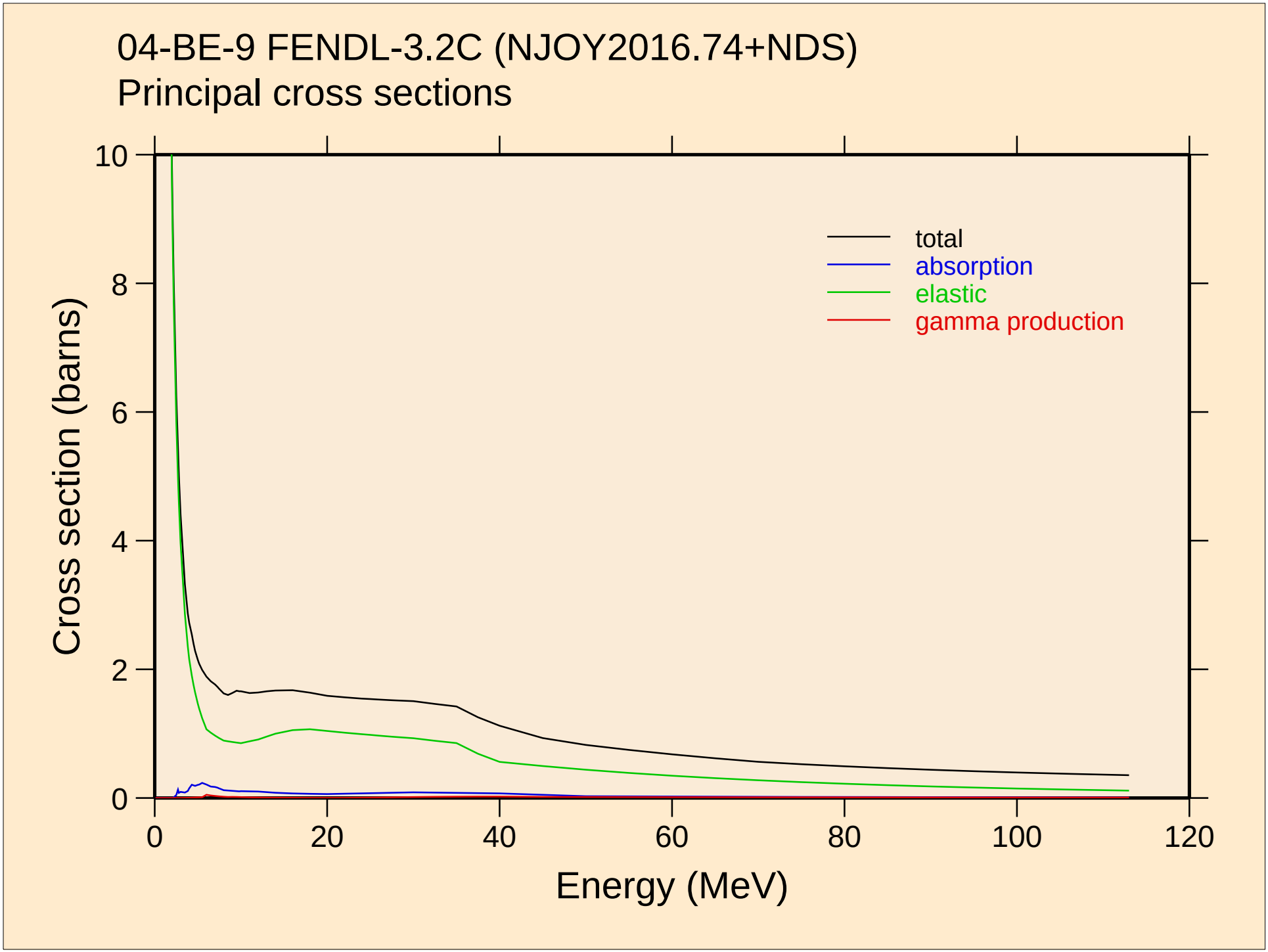
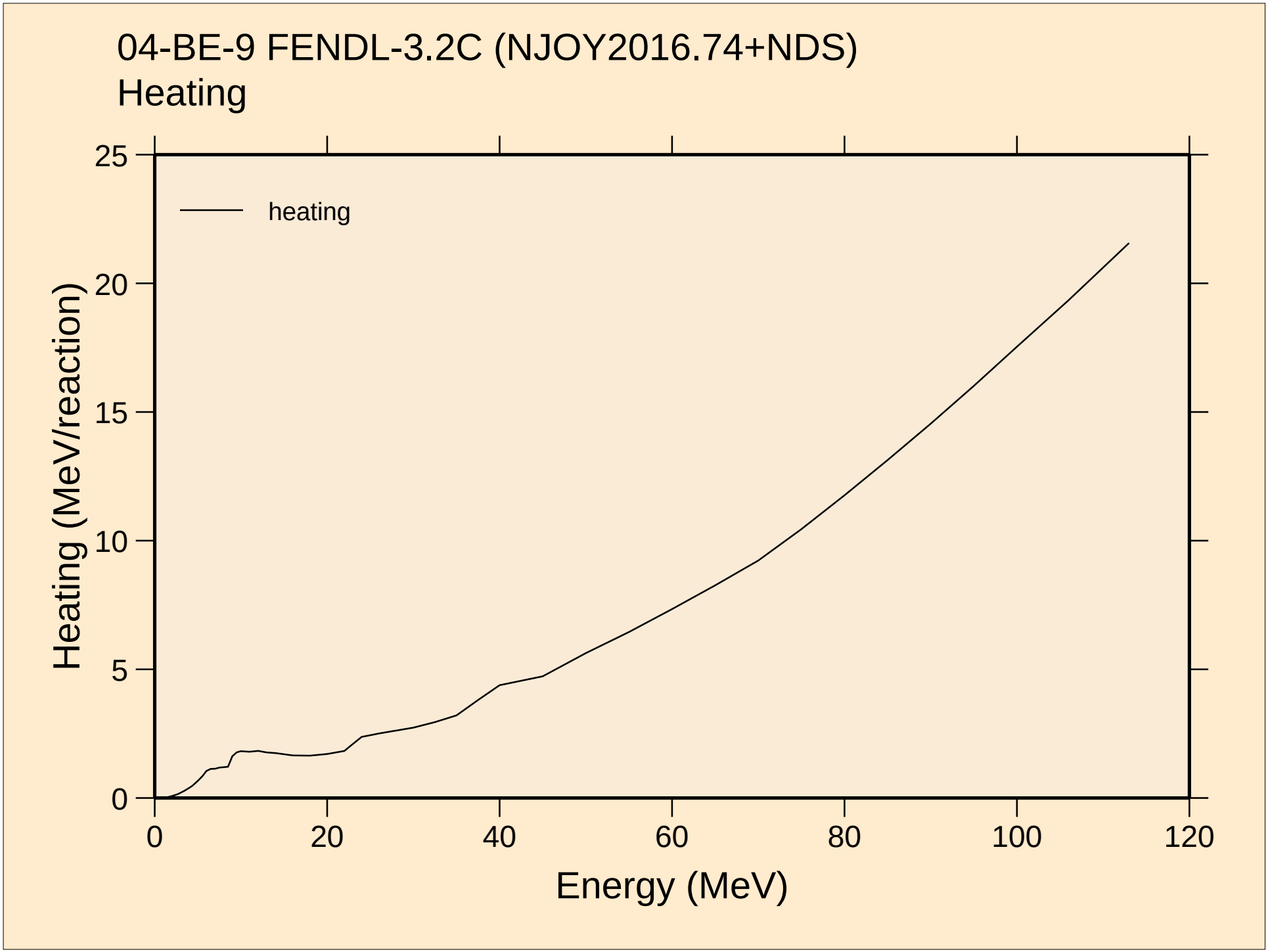
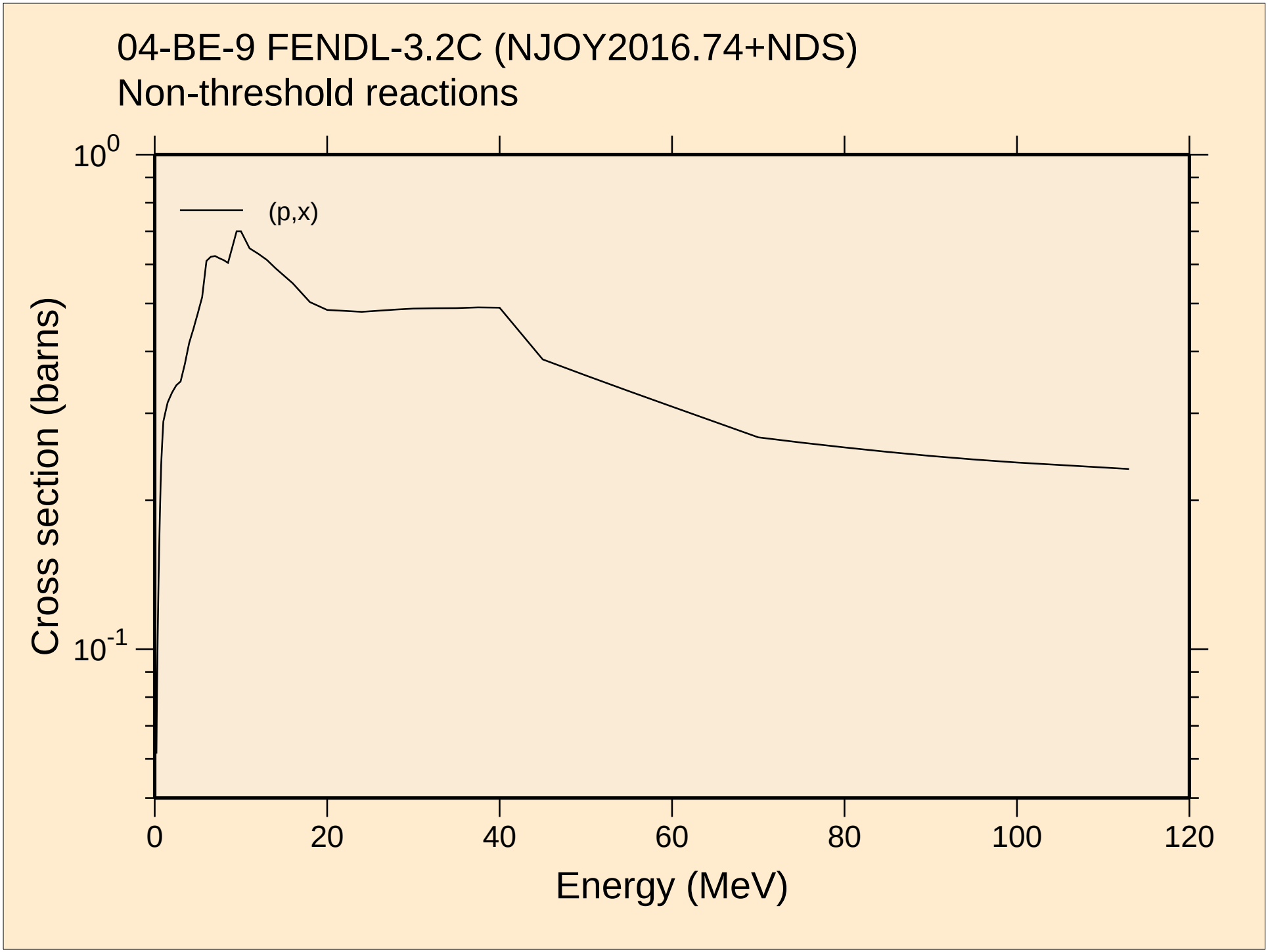

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Principal cross sections
Cross section (barns)
10^24
10^23
10^22
10^21
10^20
10^19
10^18
total
absorption
elastic
gamma production
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

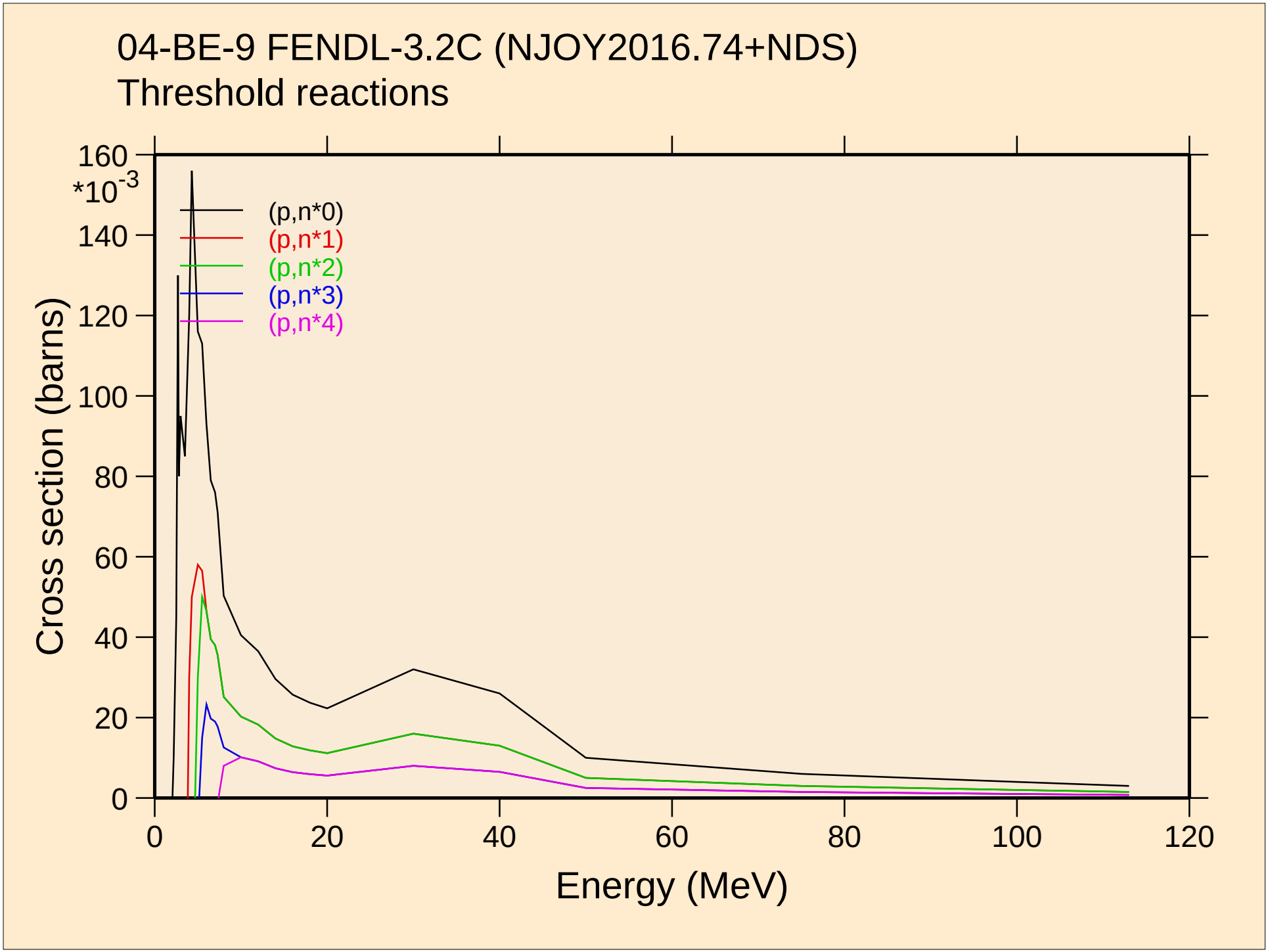

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Heating
heating
Heating (MeV/reaction)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)

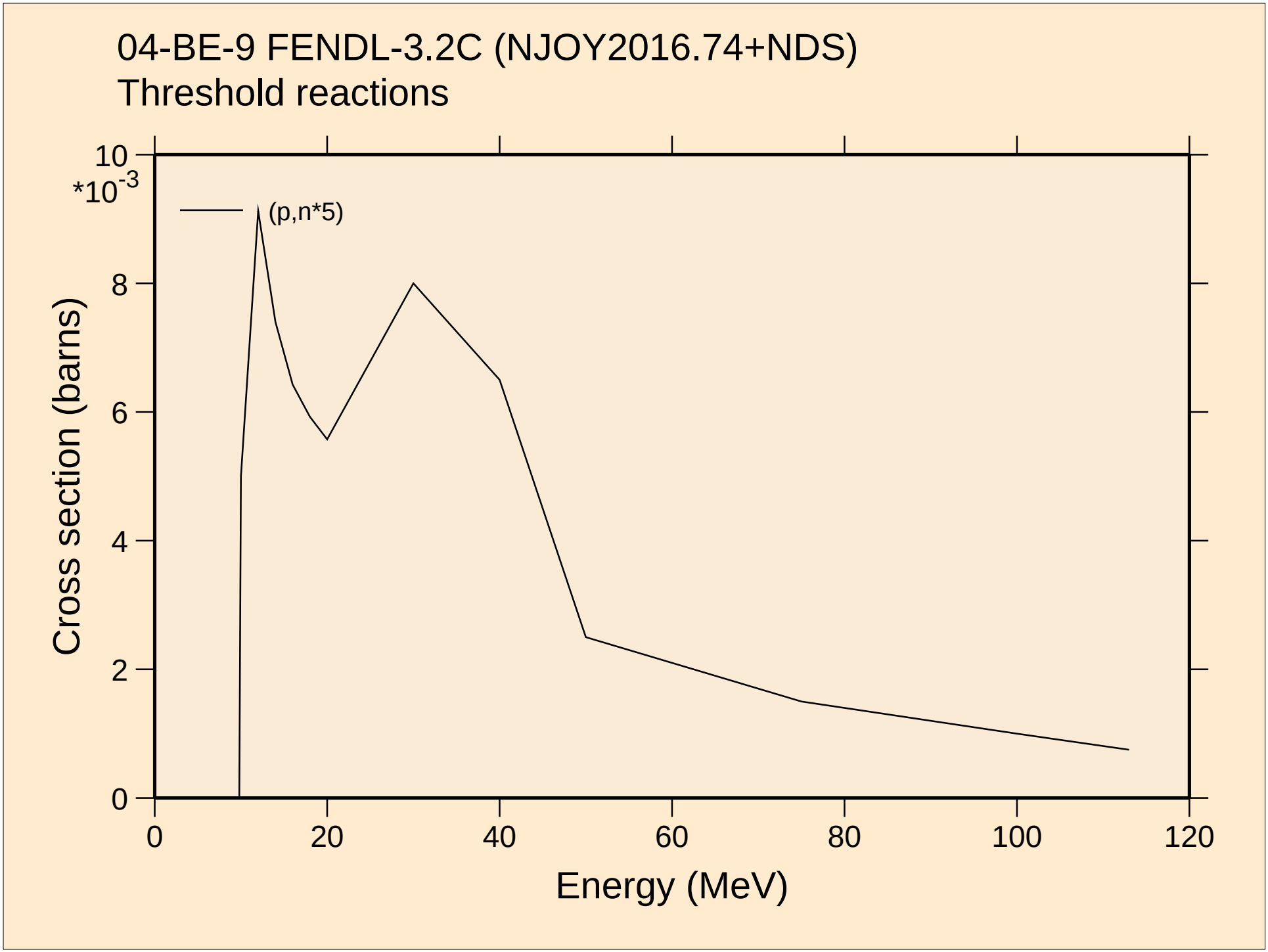

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Non-threshold reactions
(p,x)
Cross section (barns)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1

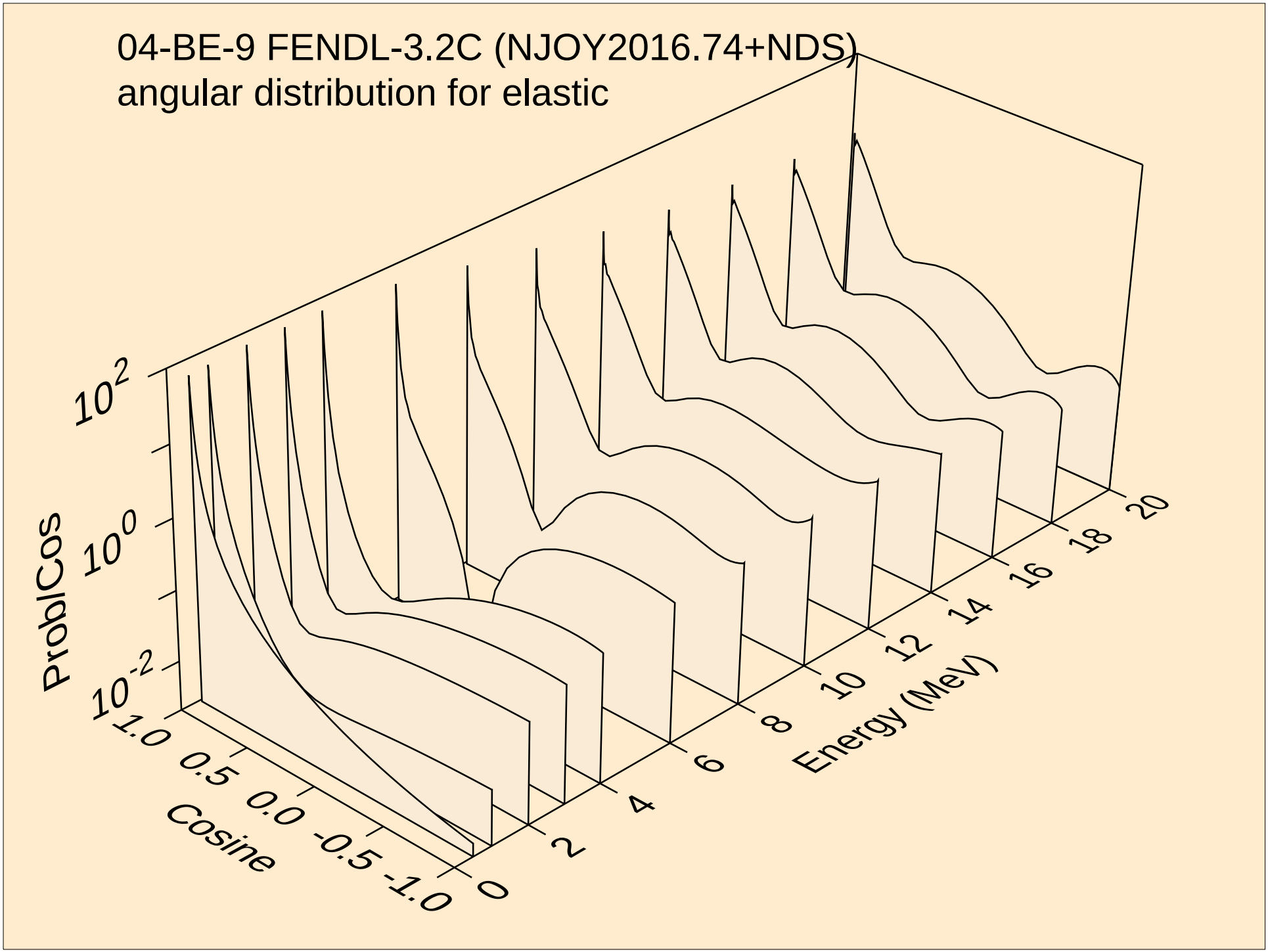

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Principal cross sections
Cross section (barns)
Energy (MeV)
0
2
4
6
8
10
0
20
40
60
80
100
120
total
absorption
elastic
gamma production

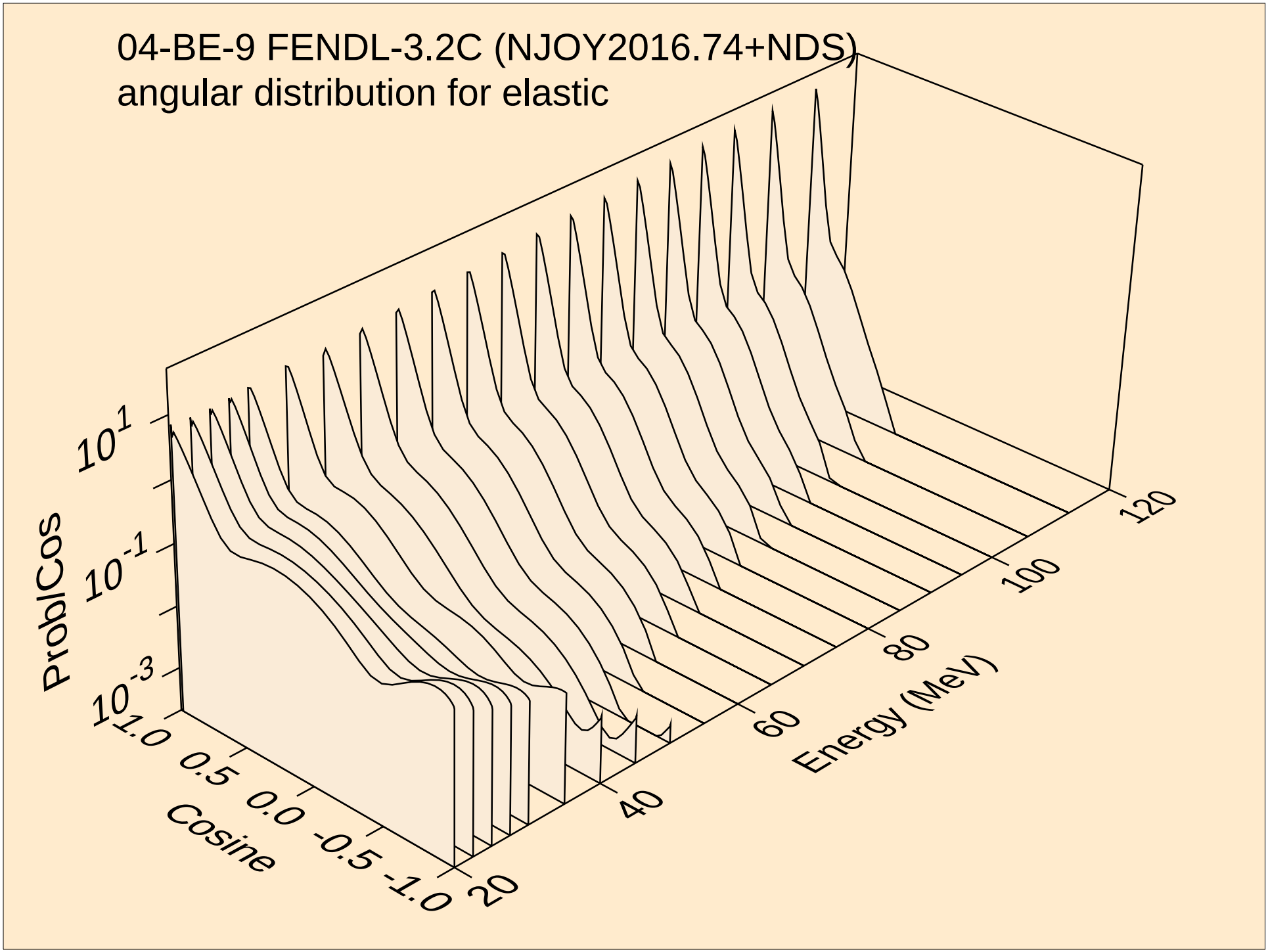

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
5
10
15
20
25
0
20
40
60
80
100
120

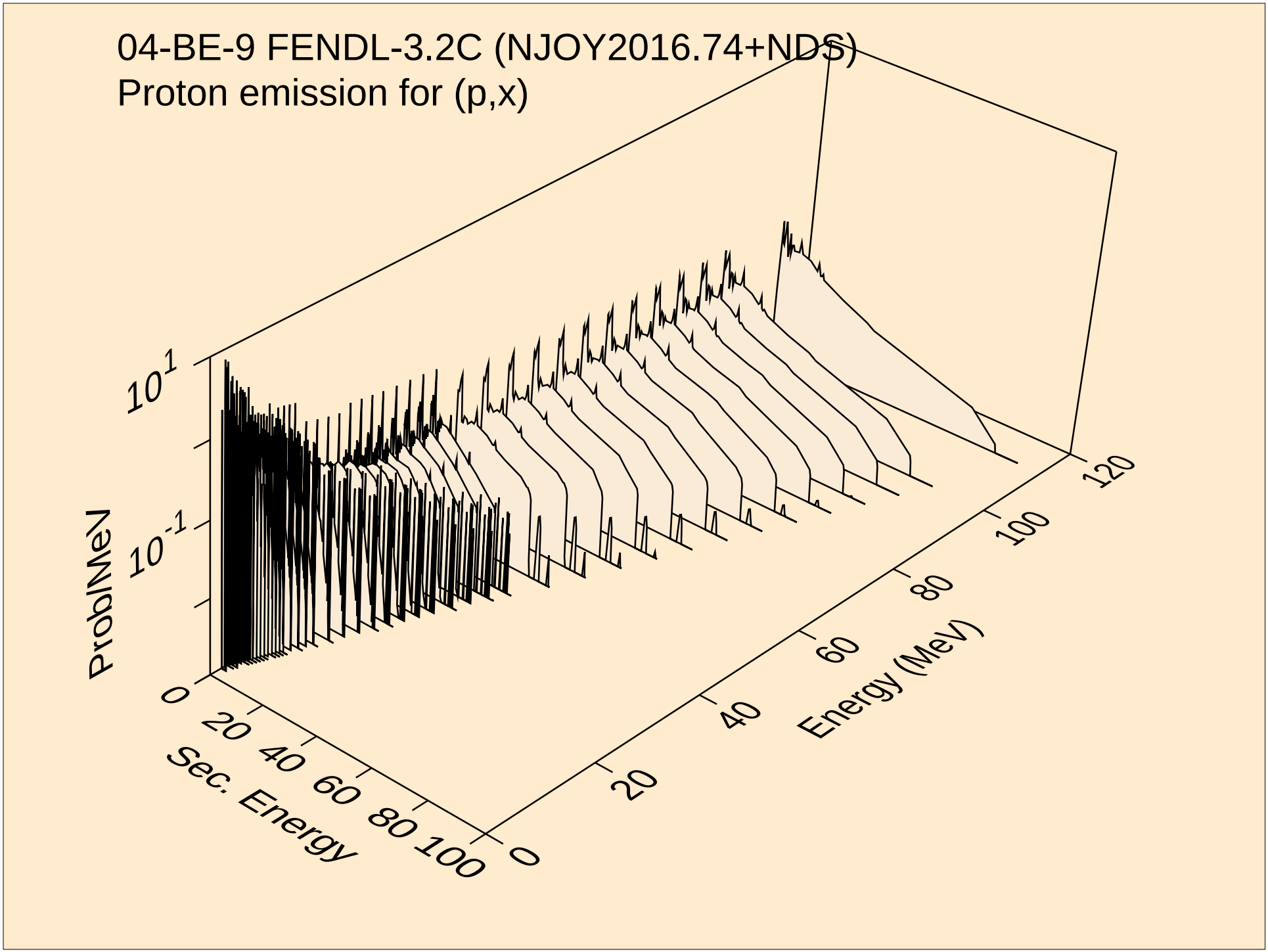

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Non-threshold reactions
(p,x)
Cross section (barns)
10^0
10^-1
0
20
40
60
80
100
120
Energy (MeV)

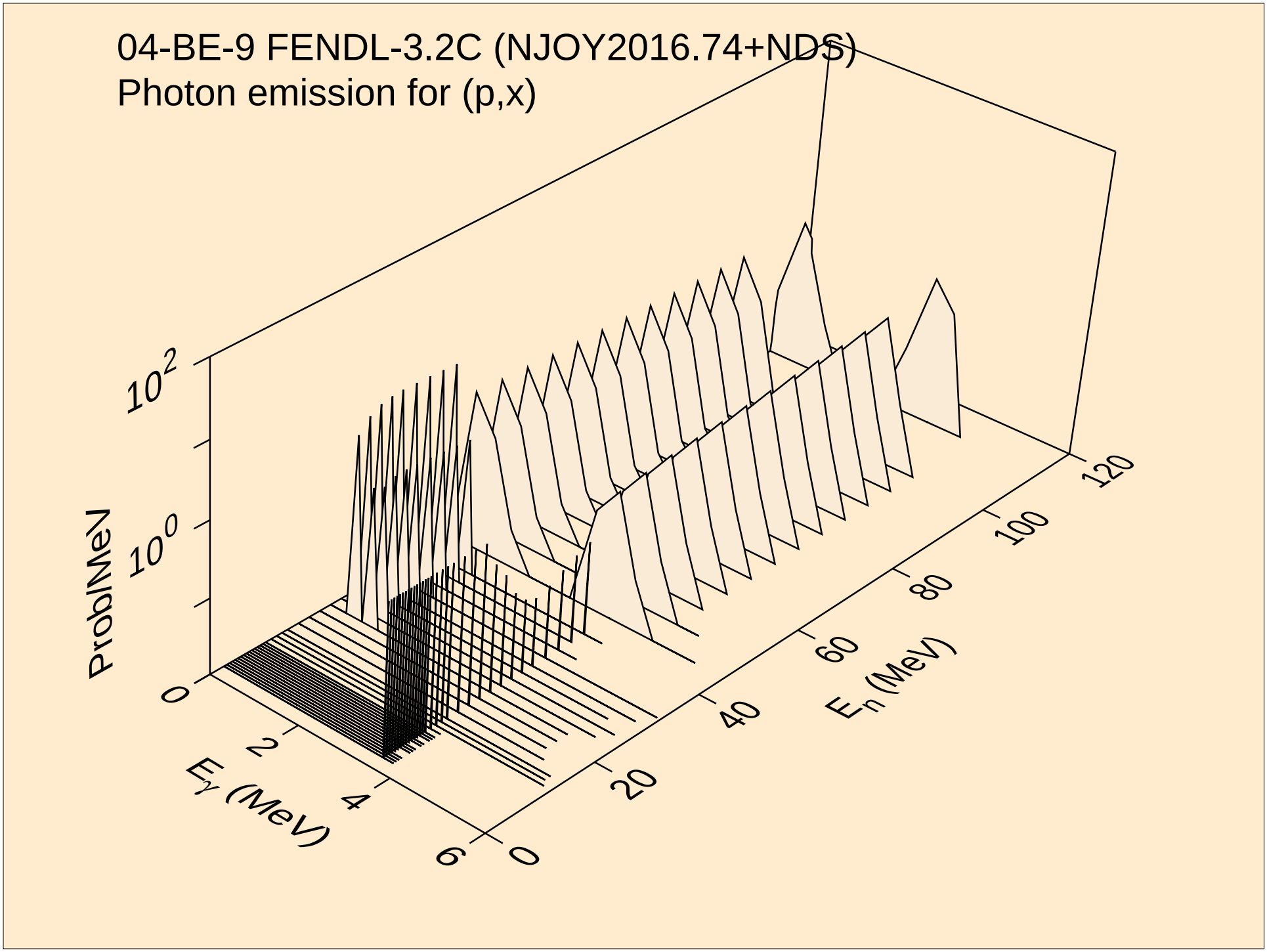

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
Cross section (barns)
*10-3
160
140
120
100
80
60
40
20
0
0
20
40
60
80
100
120
Energy (MeV)
(p,n*0)
(p,n*1)
(p,n*2)
(p,n*3)
(p,n*4)

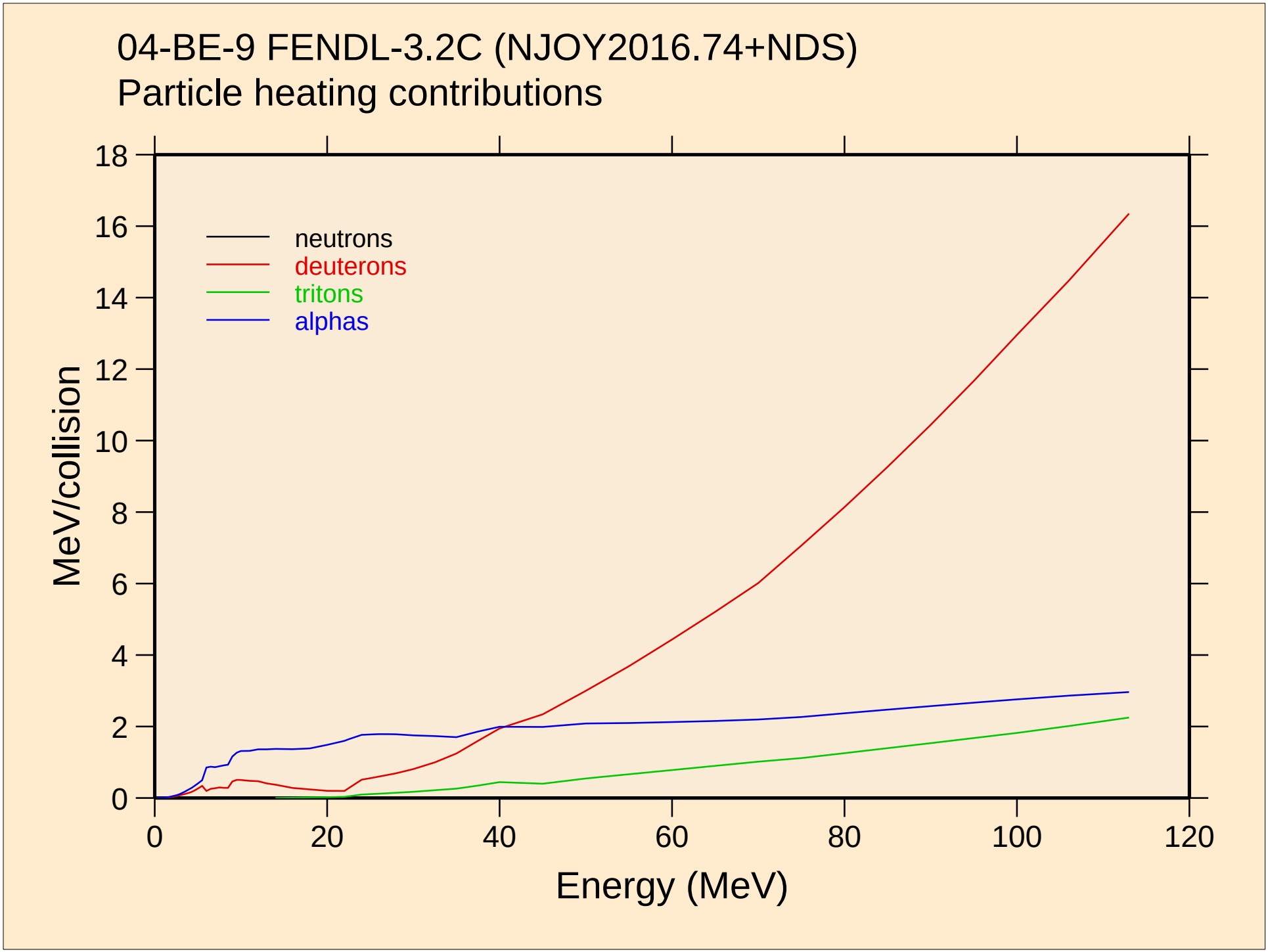

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Threshold reactions
10
*10-3
8
6
4
2
0
(p,n*5)
Cross section (barns)
0
20
40
60
80
100
120
Energy (MeV)

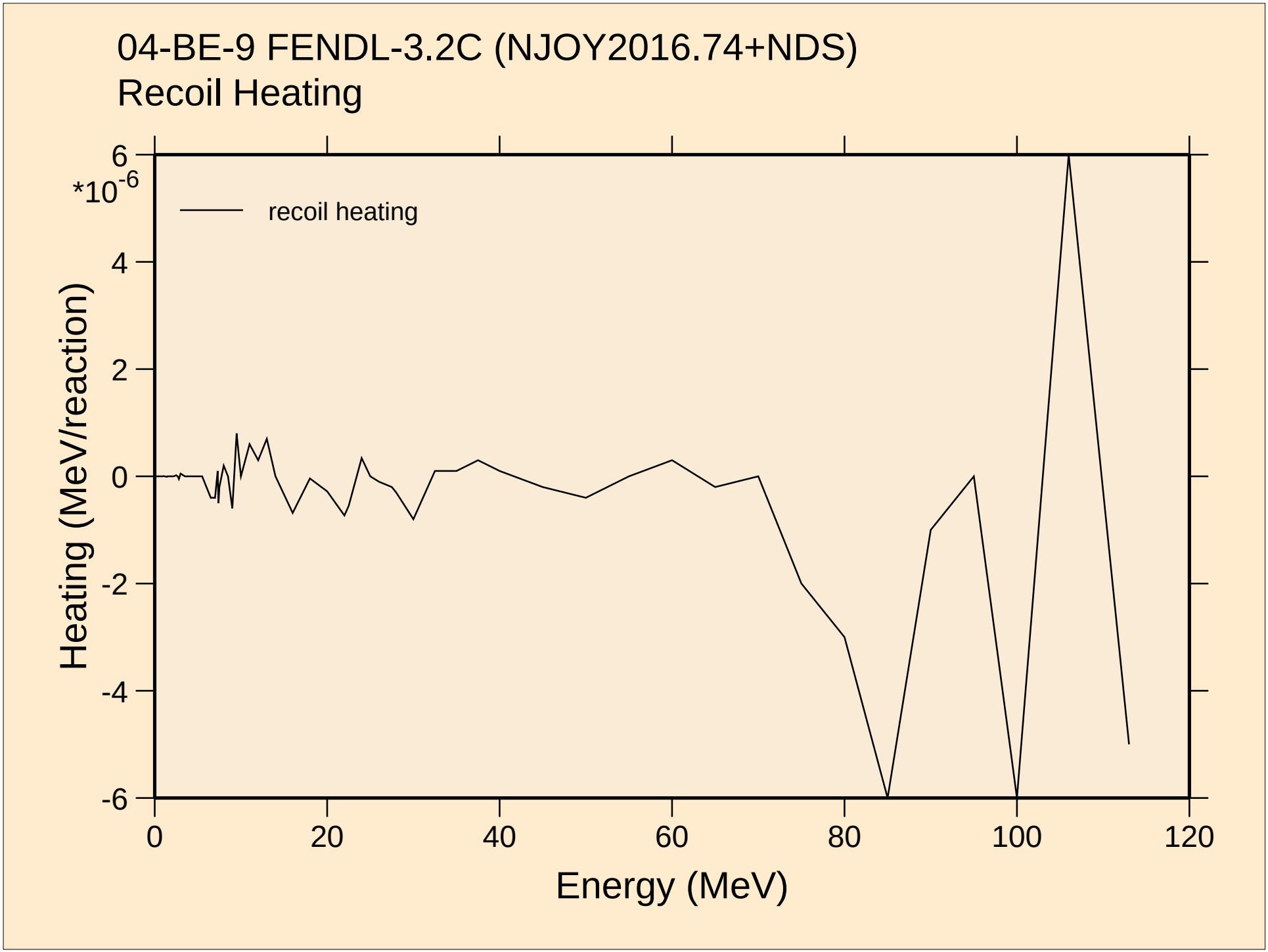

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for elastic
ProbICos
10^{2}
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

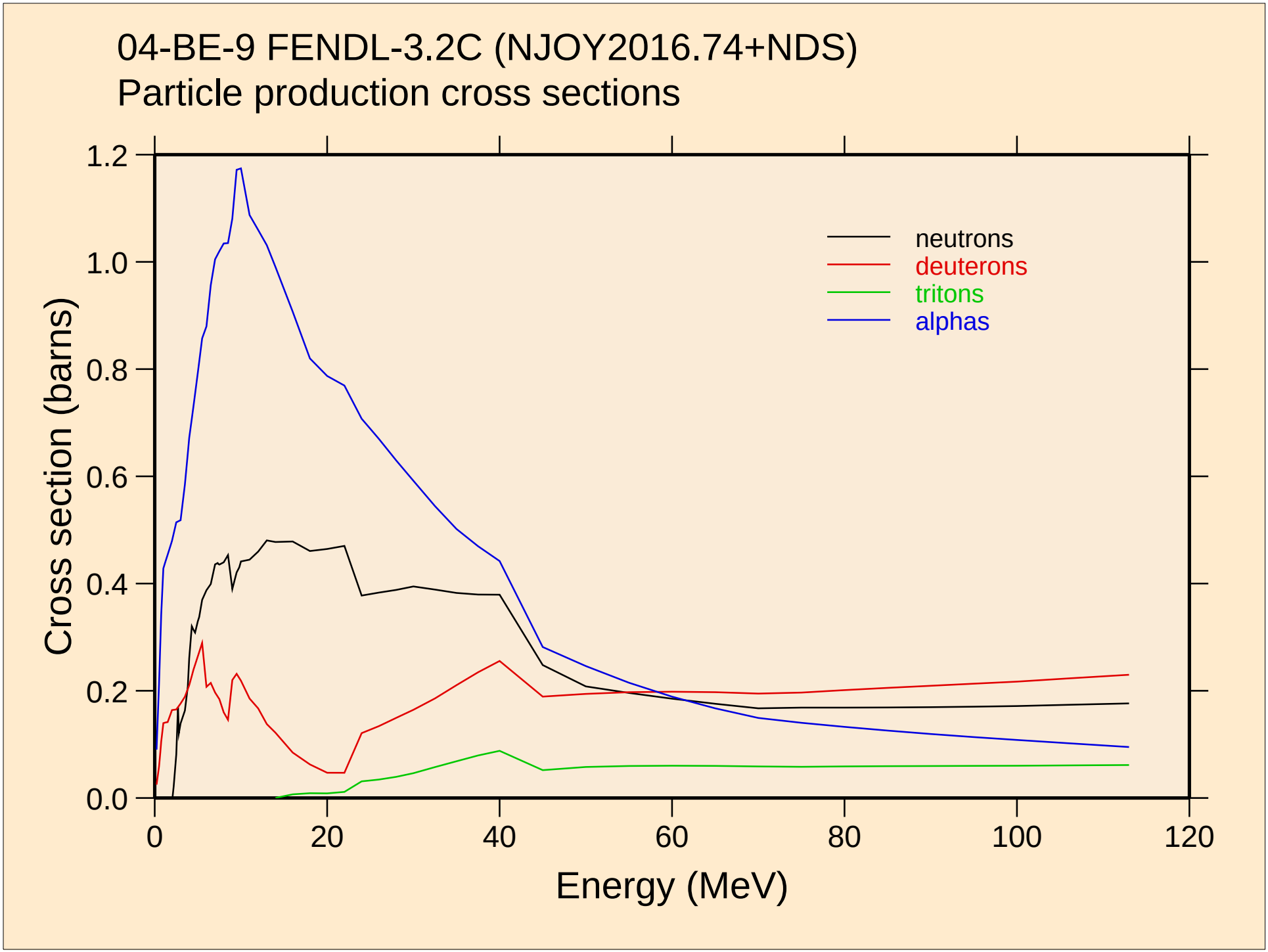

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for elastic
ProblCos
10^{1}
10^{-1}
10^{-3}
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)

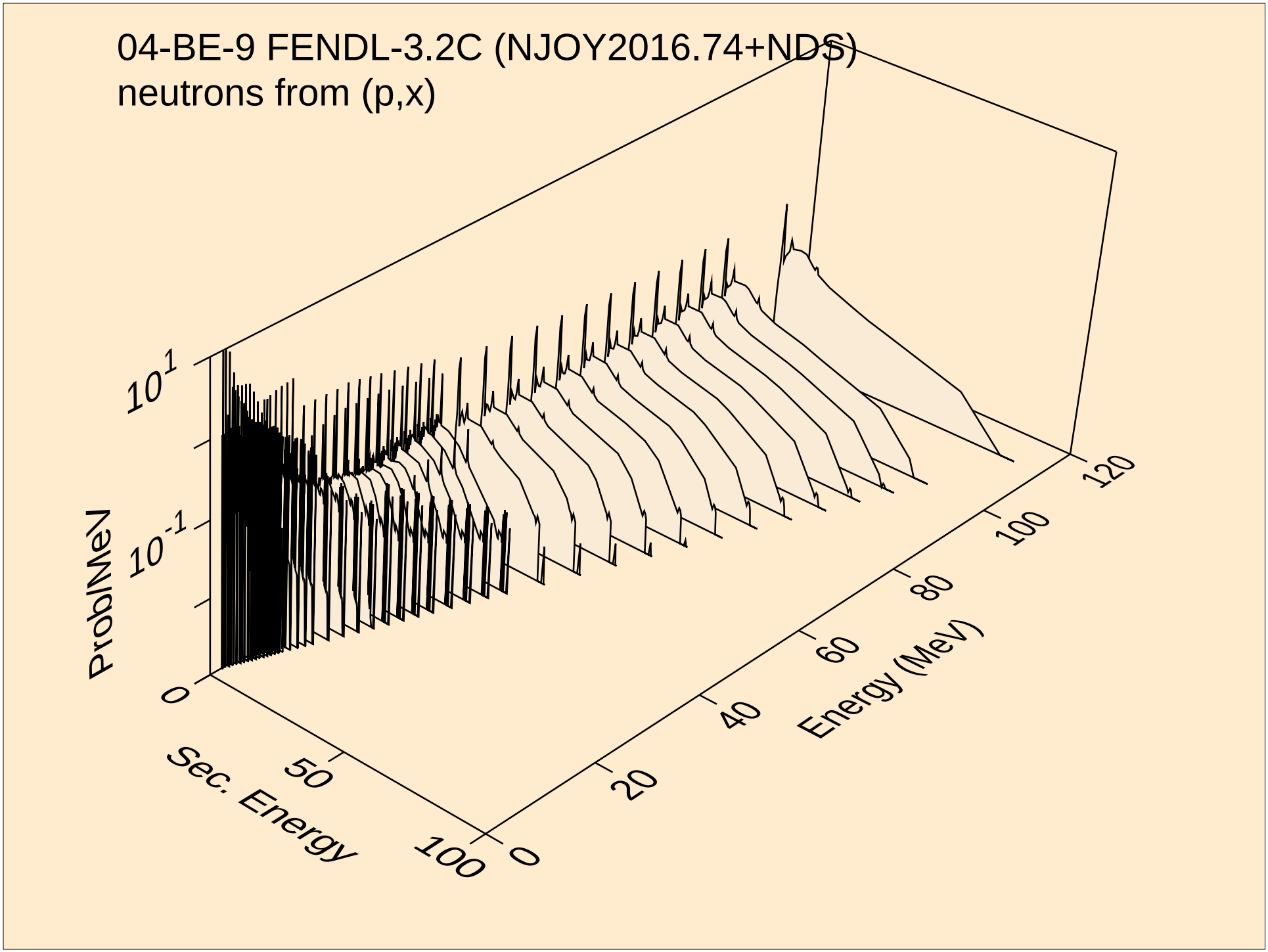

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Proton emission for (p,x)
Prob/MeV
10^1
10^-1
0
20
40
60
80
100
Sec. Energy
0
20
40
60
80
100
120
Energy (MeV)

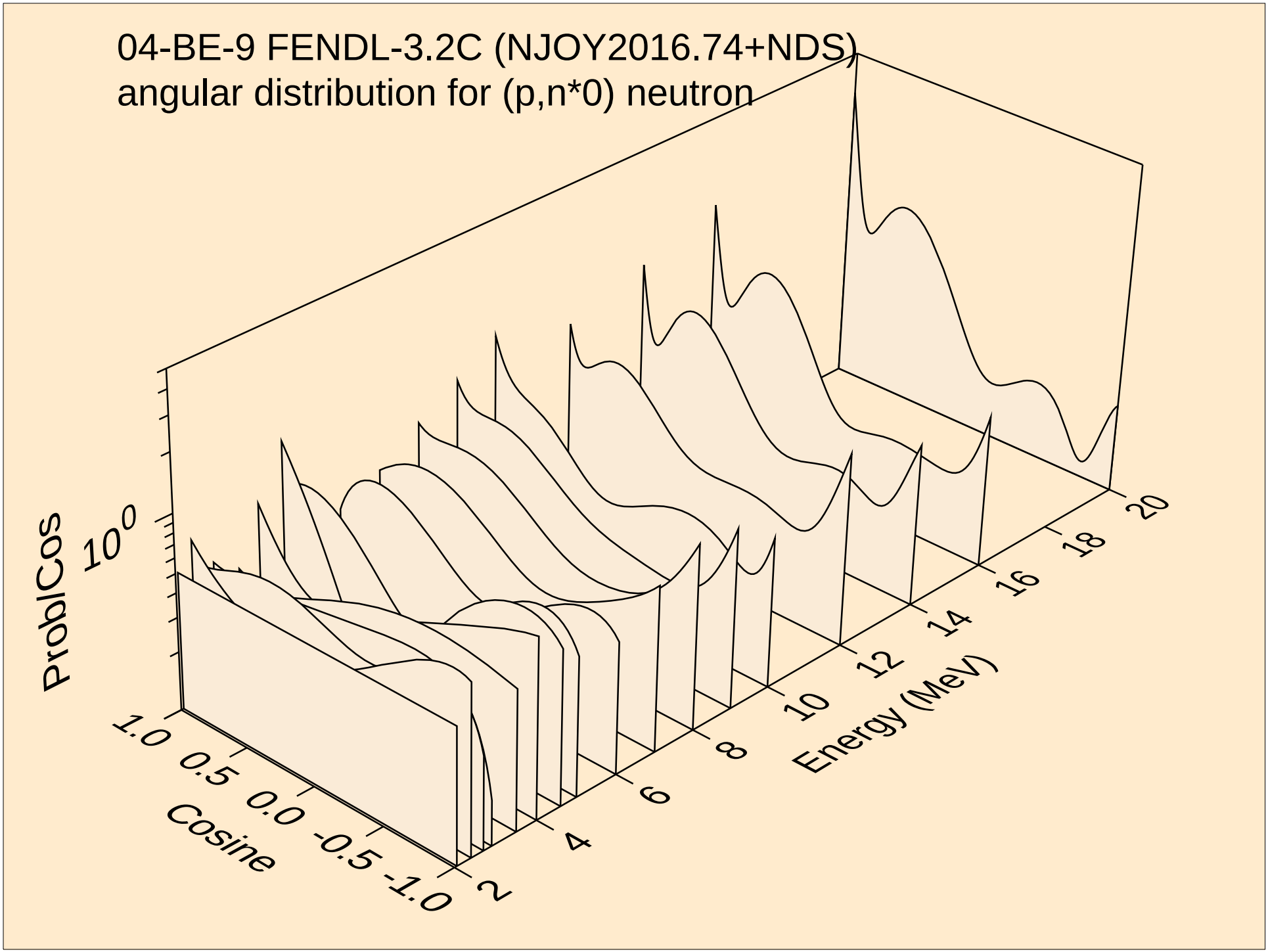

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Photon emission for (p,x)
Prob/MeV
10^2
10^0
0
2
4
6
E_γ (MeV)
0
20
40
60
80
100
120
E_n (MeV)

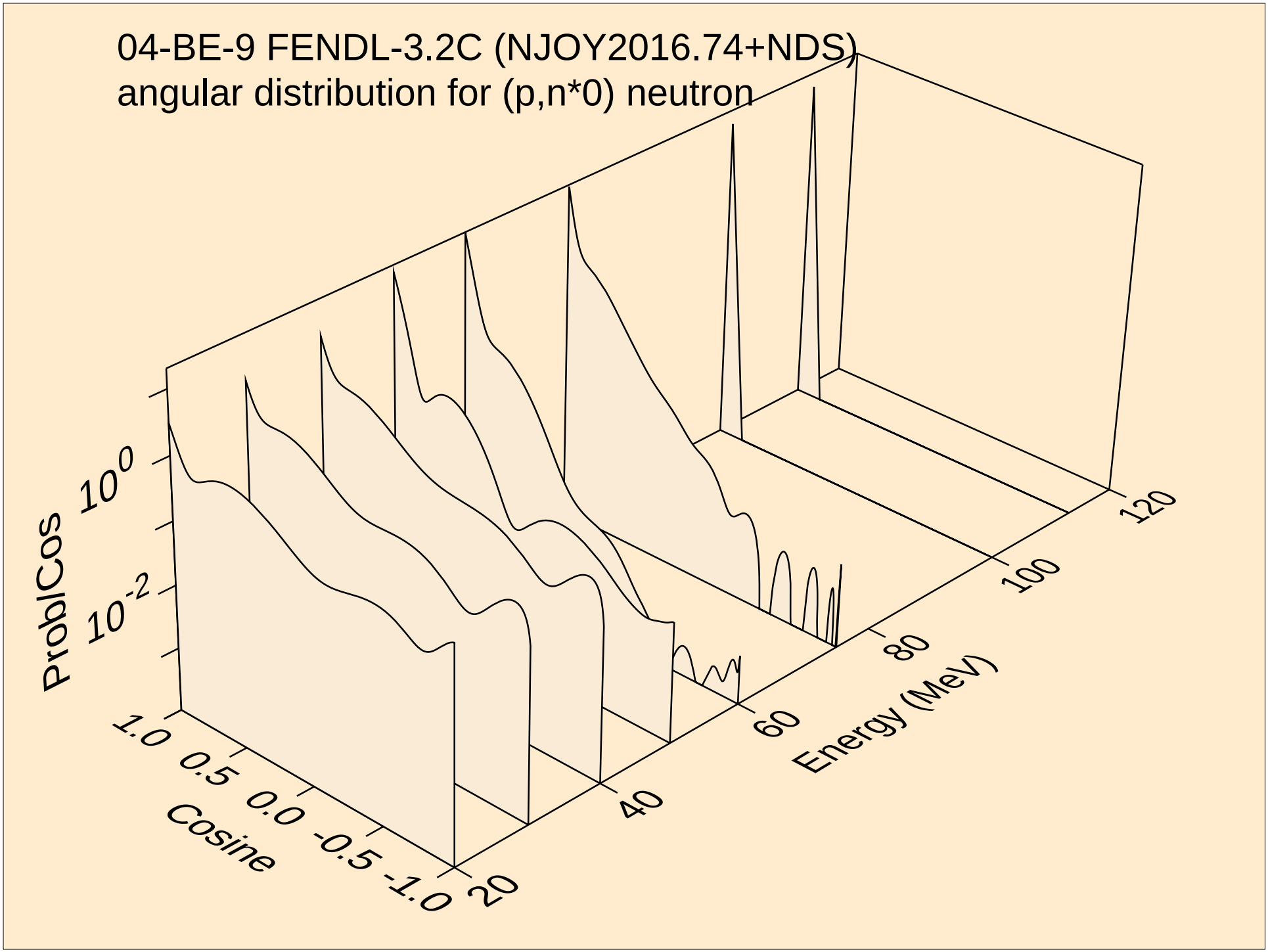

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Particle heating contributions
neutrons
deuterons
tritons
alphas
MeV/collision
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
0
20
40
60
80
100
120

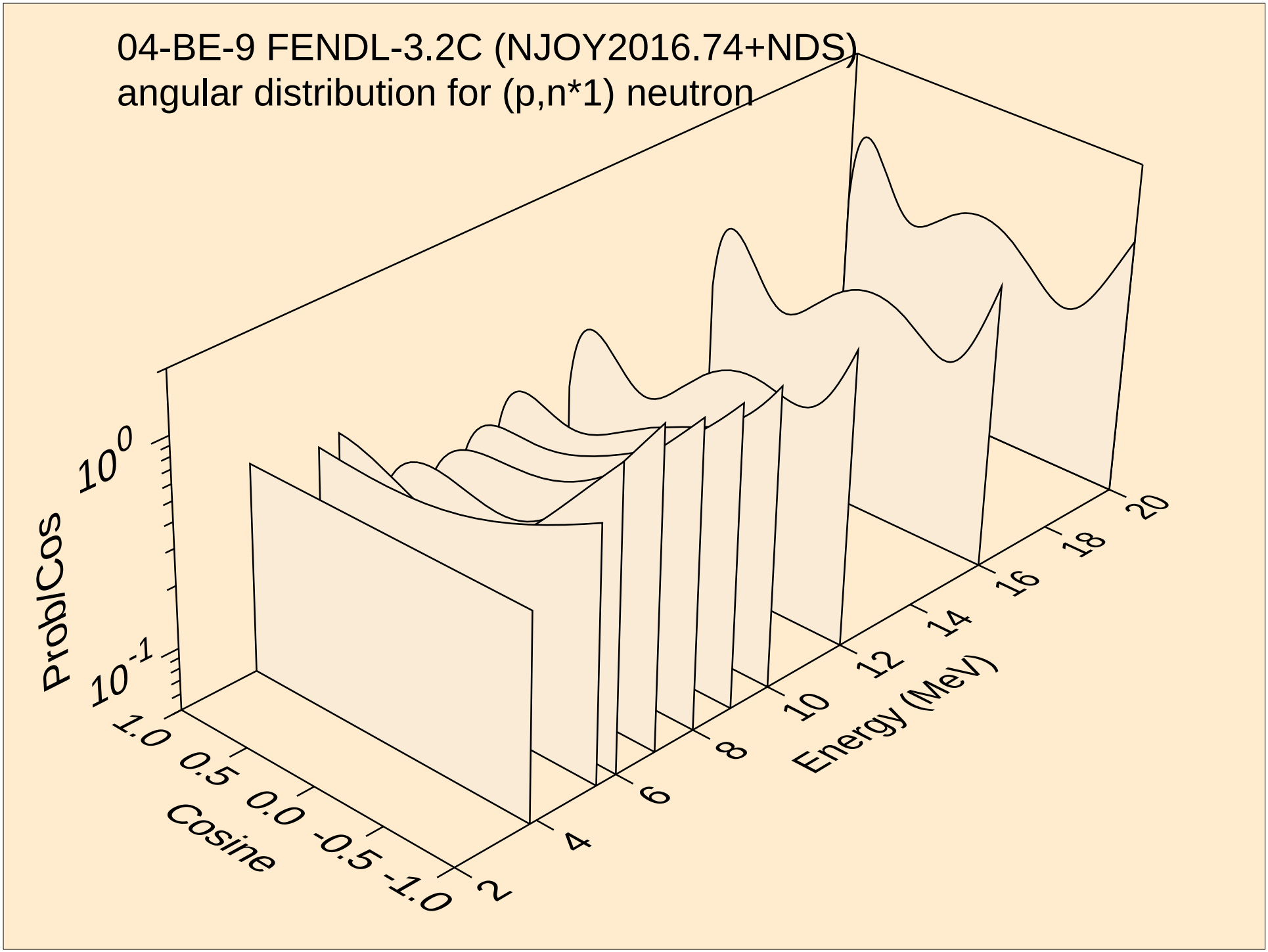

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Recoil Heating
*10-6
recoil heating
Heating (MeV/reaction)
6
4
2
0
-2
-4
-6
0
20
40
60
80
100
120
Energy (MeV)

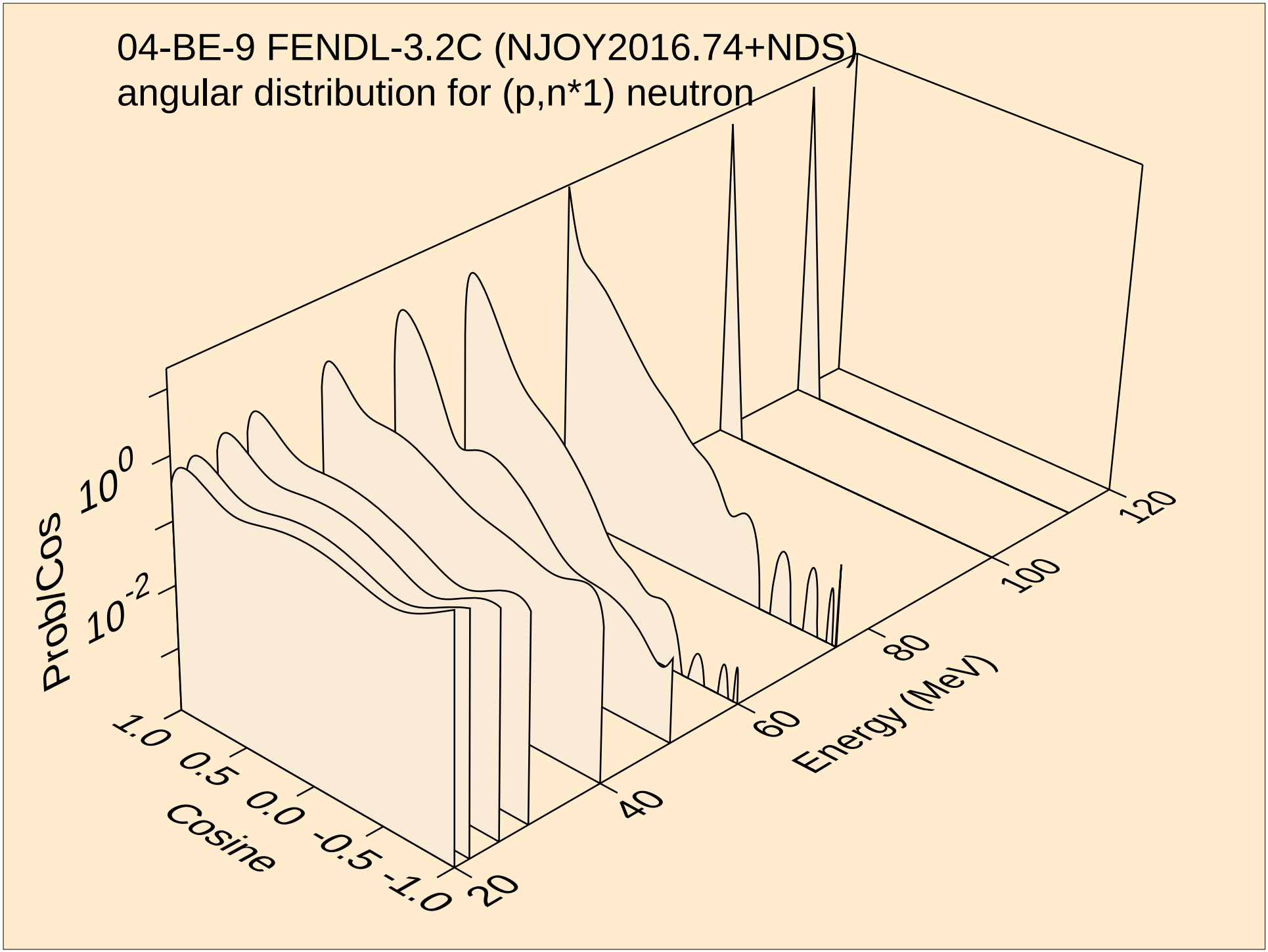

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
Particle production cross sections
Cross section (barns)
Energy (MeV)
neutrons
deuterons
tritons
alphas
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
20
40
60
80
100
120

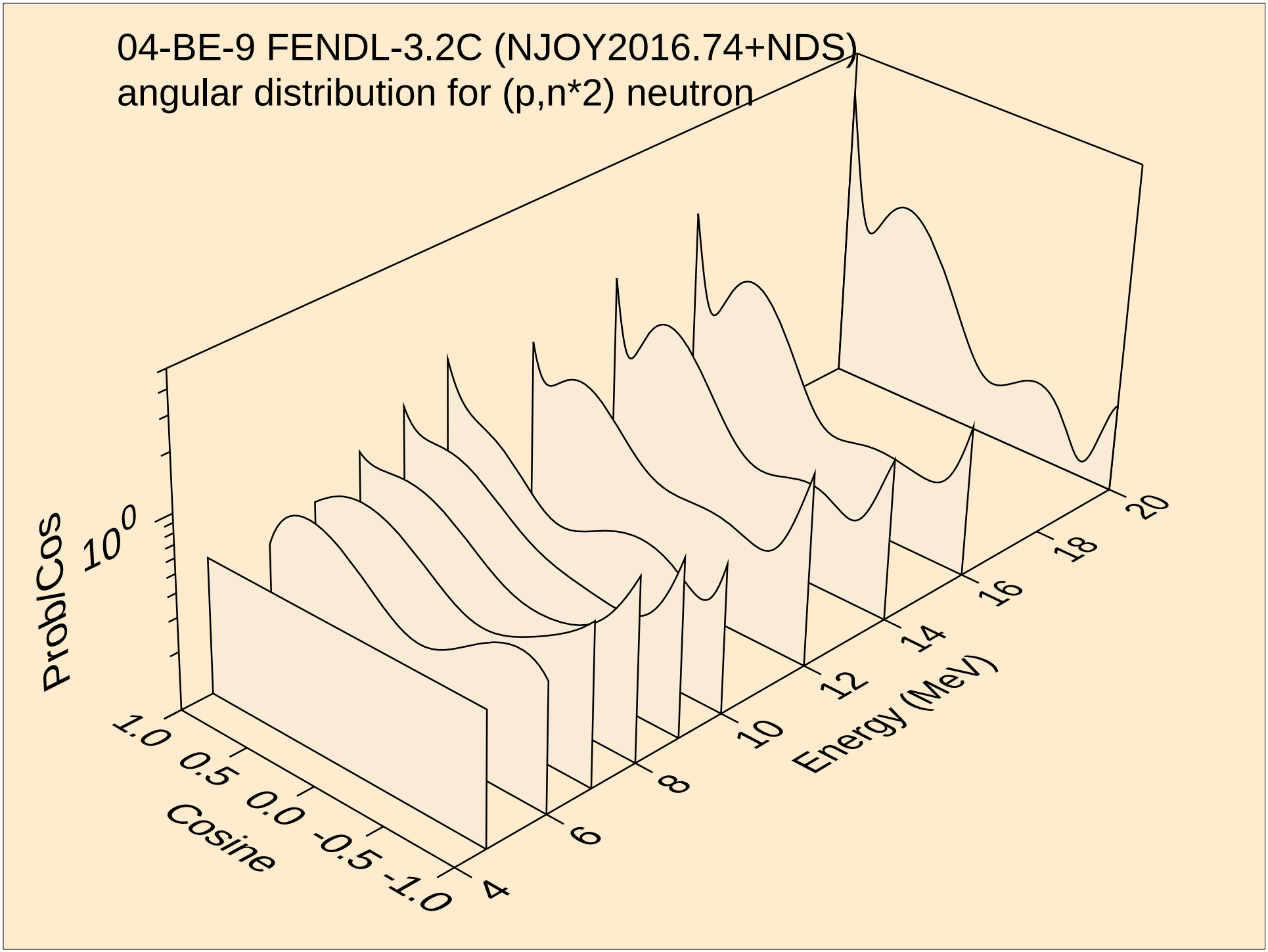

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
neutrons from (p,x)
Prob/MeV
10^1
10^-1
0
Sec. Energy
50
100
0
20
40
60
80
100
120
Energy (MeV)

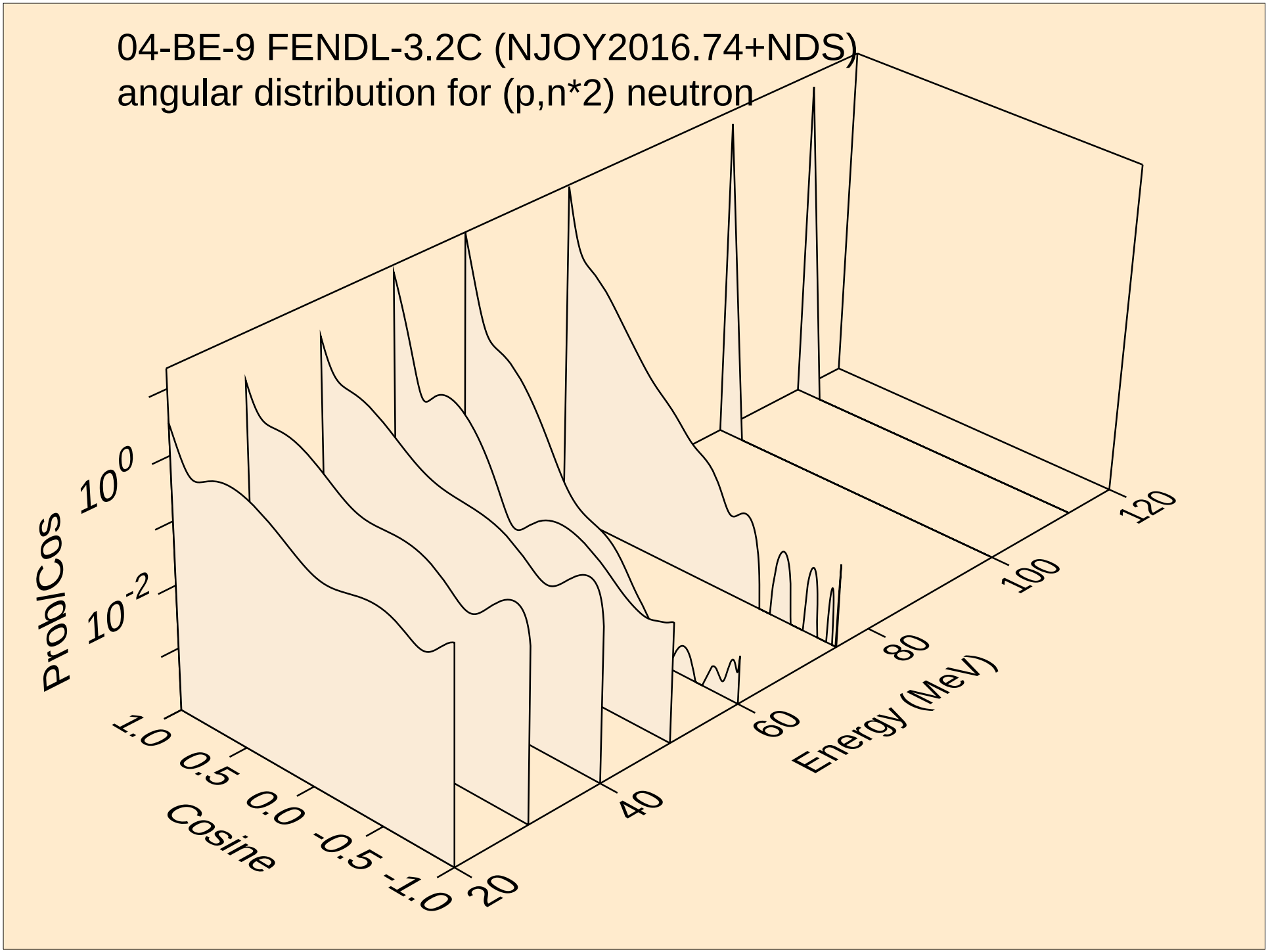

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*0) neutron
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

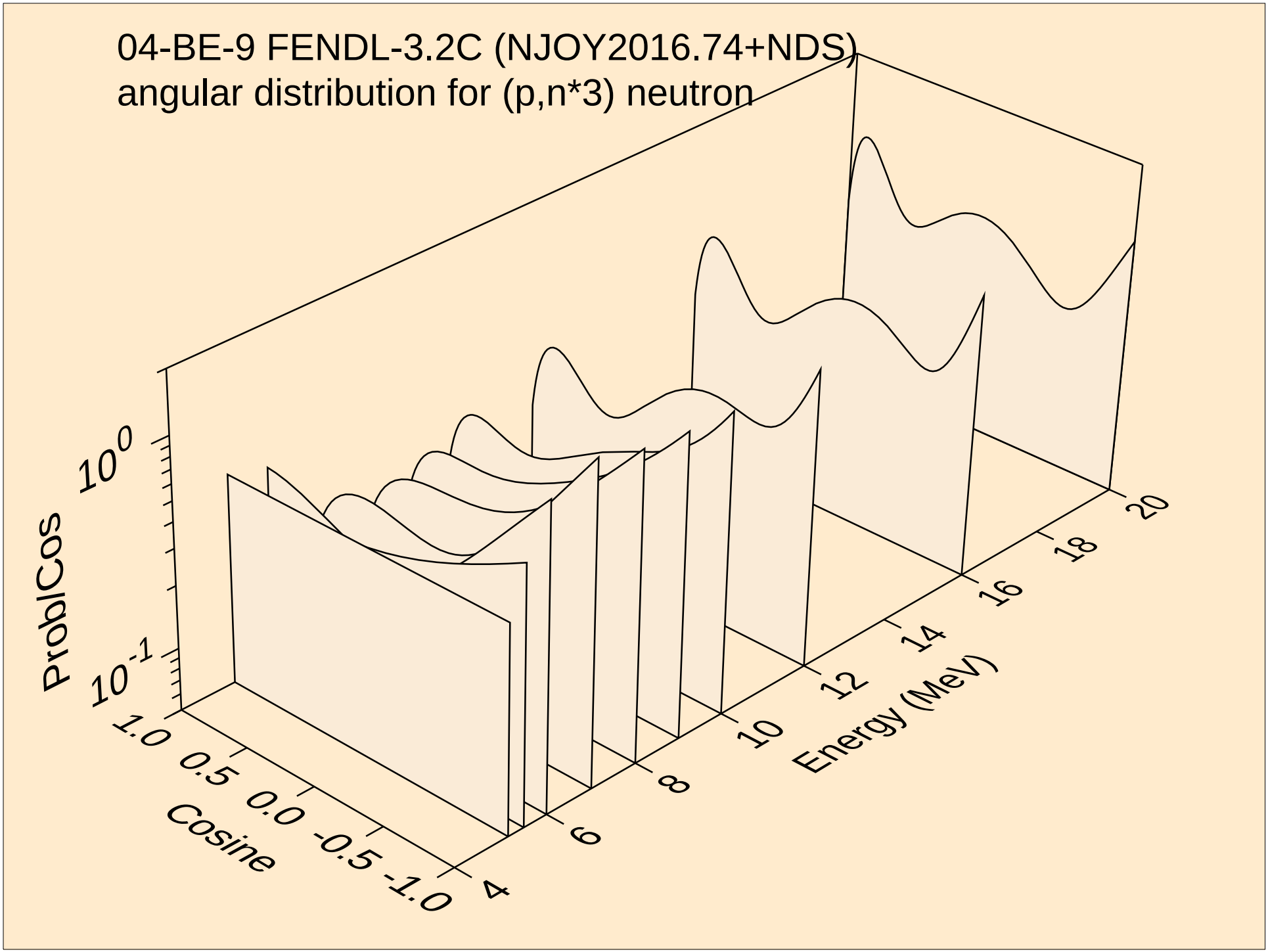

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*0) neutron
ProbCos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)

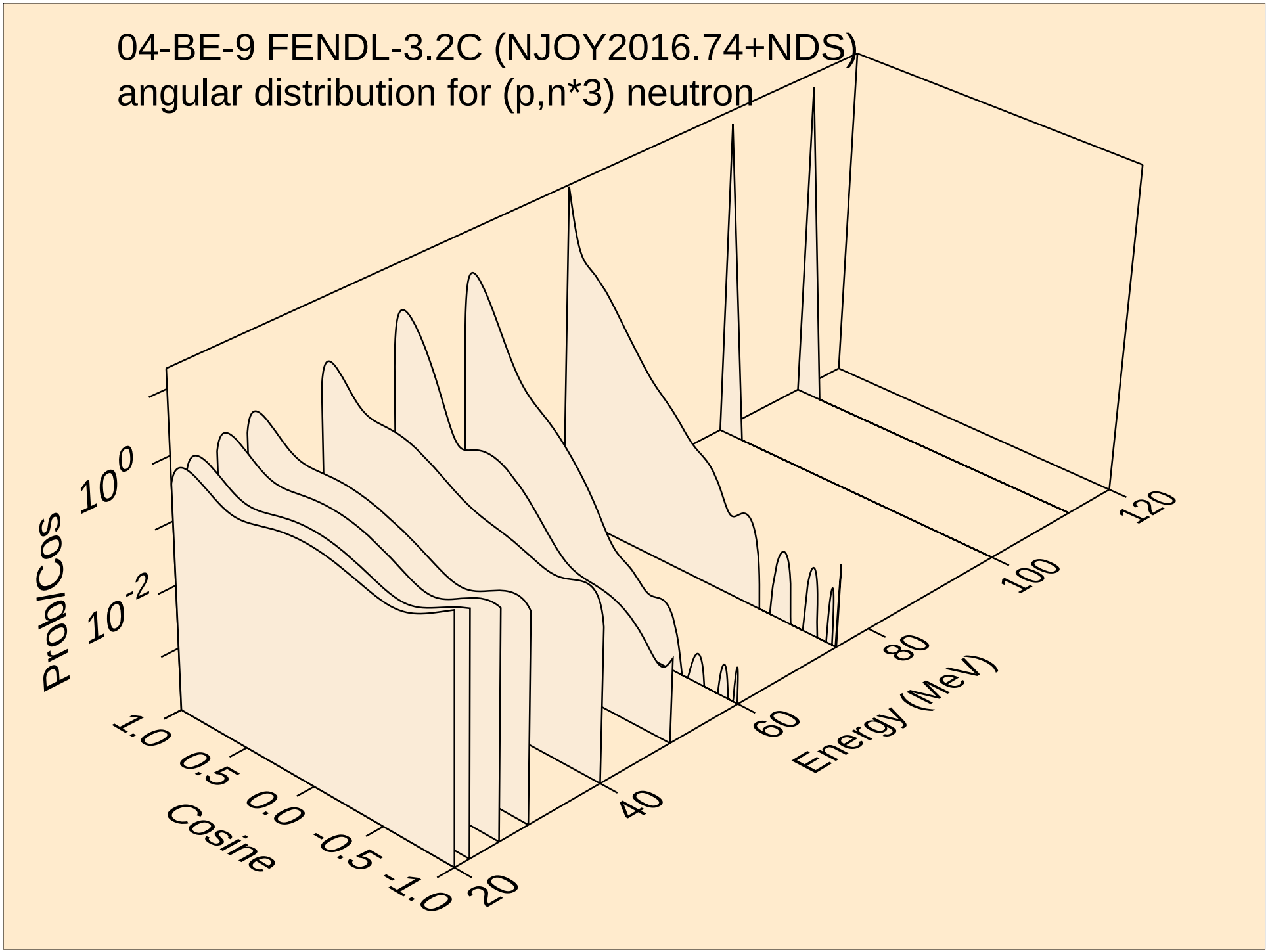

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*1) neutron
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

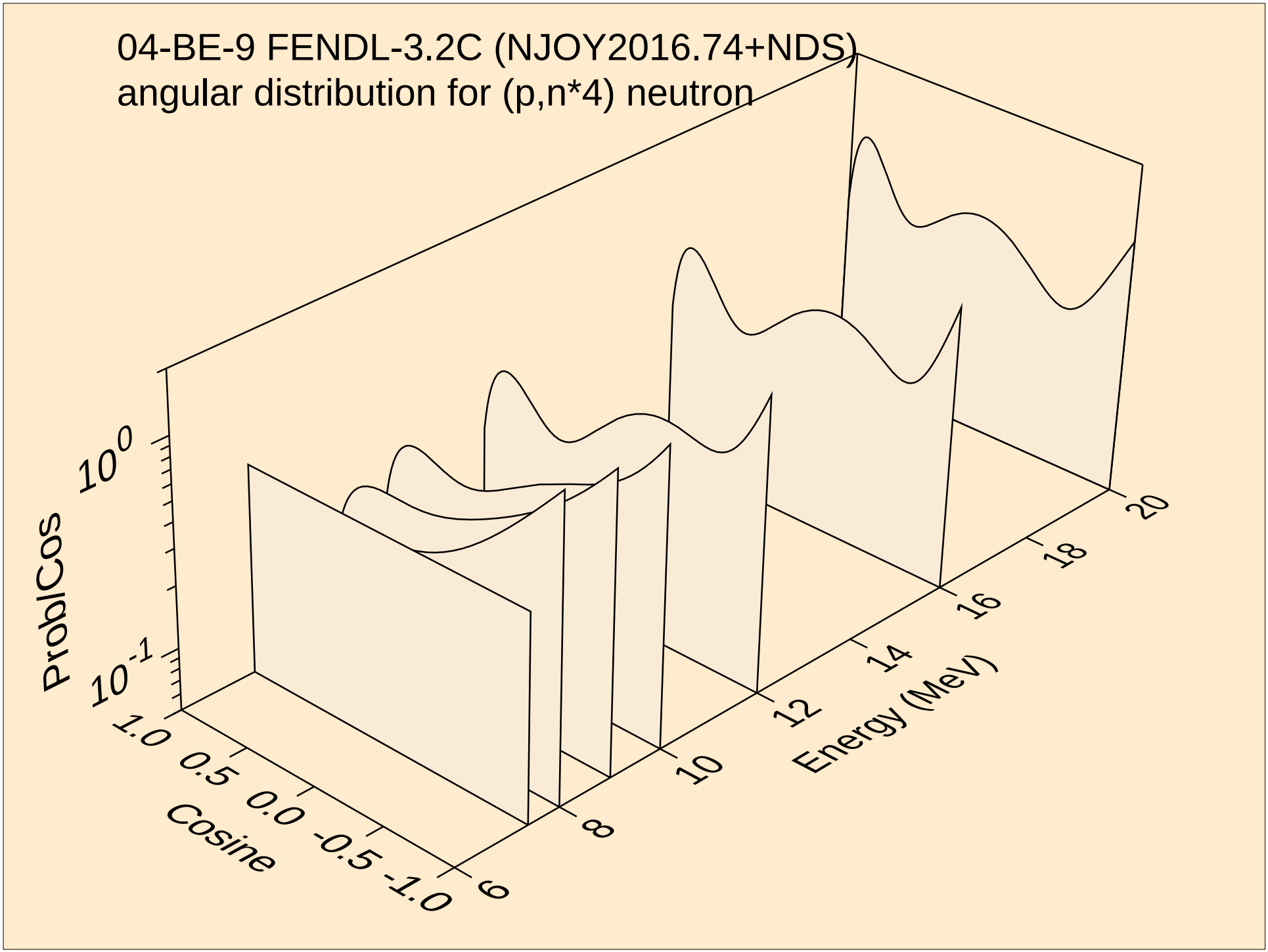

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*1) neutron
Prob\Cos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)

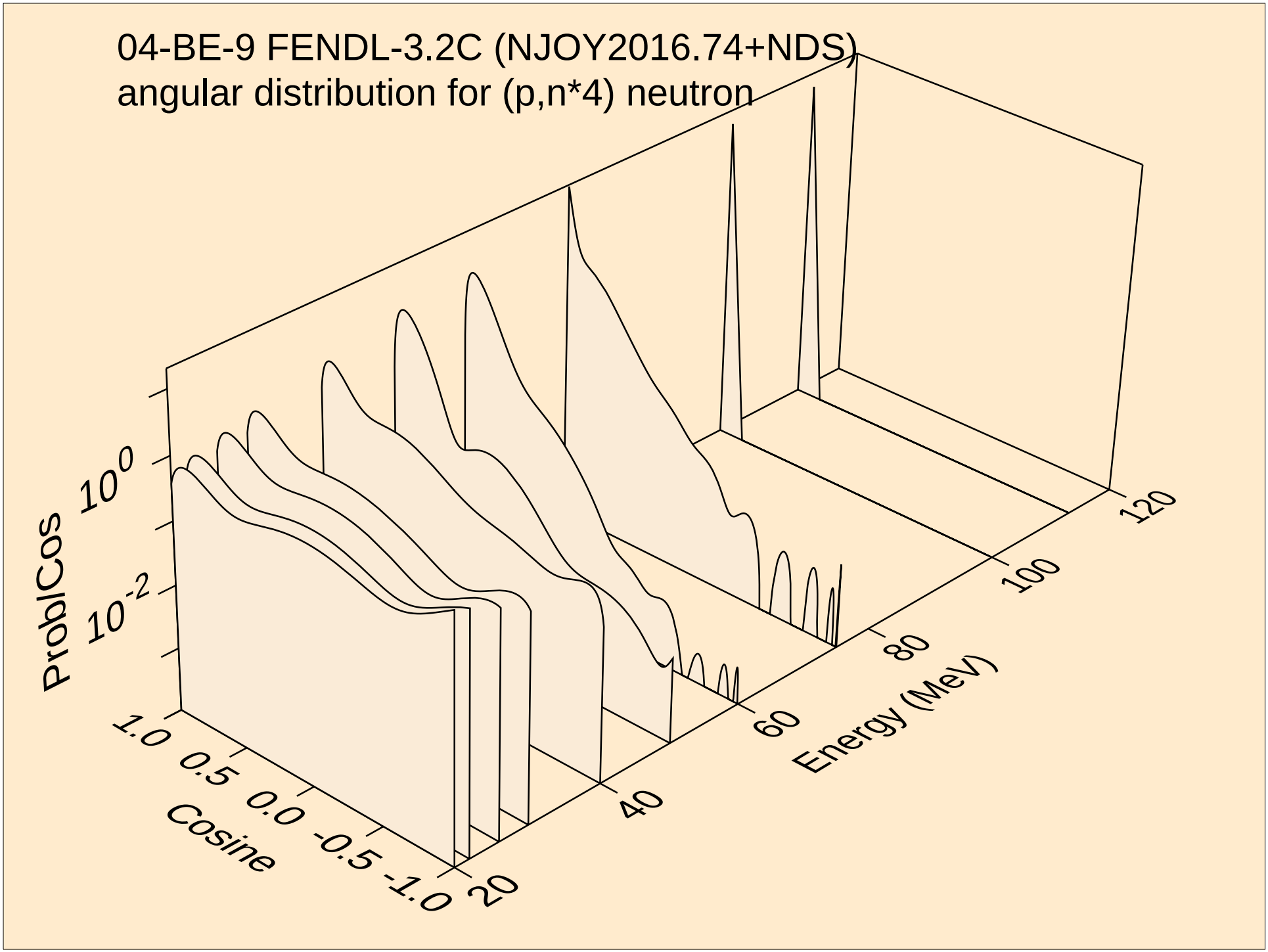

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*2) neutron
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

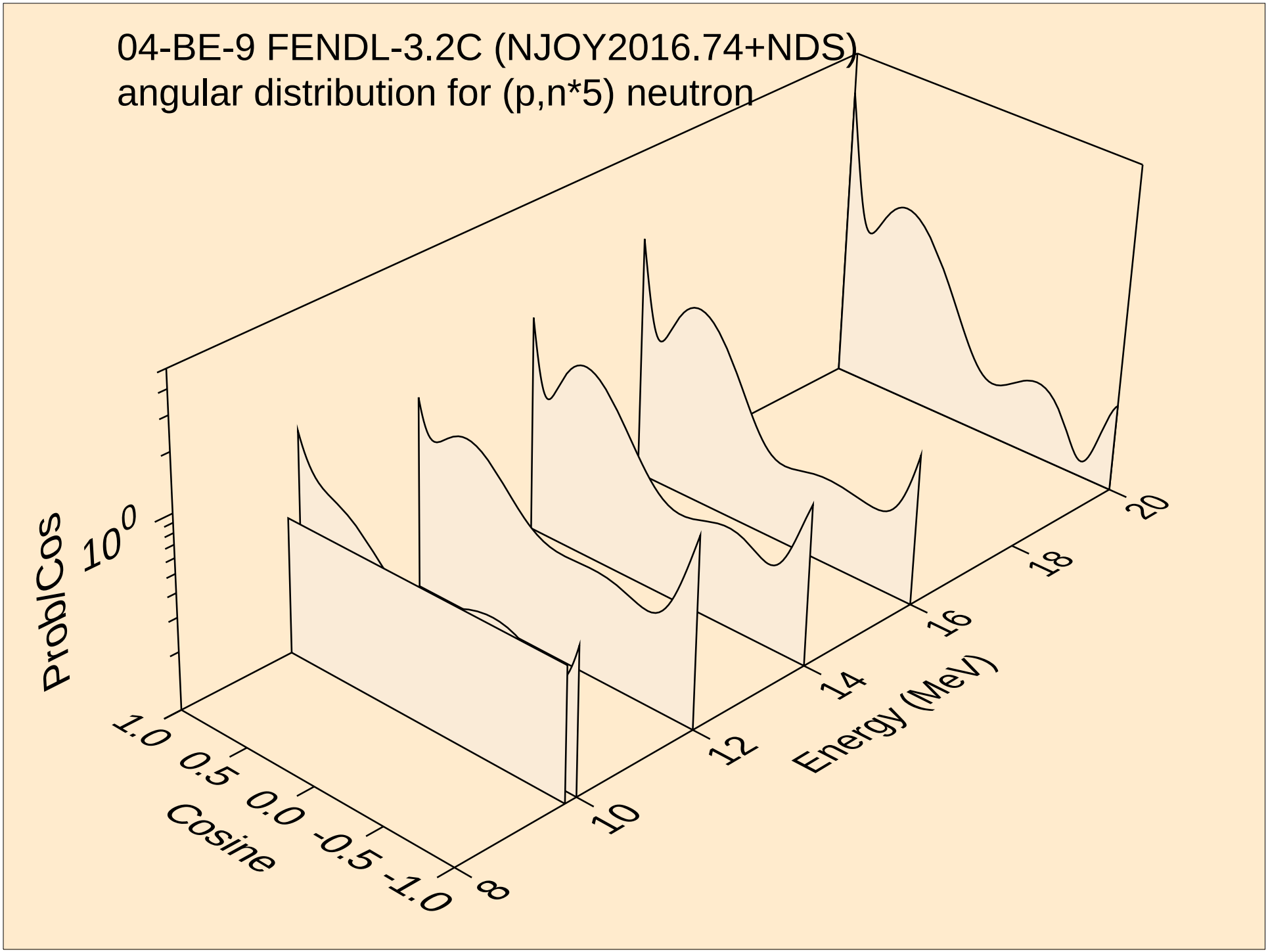

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*2) neutron
Prob\Cos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)

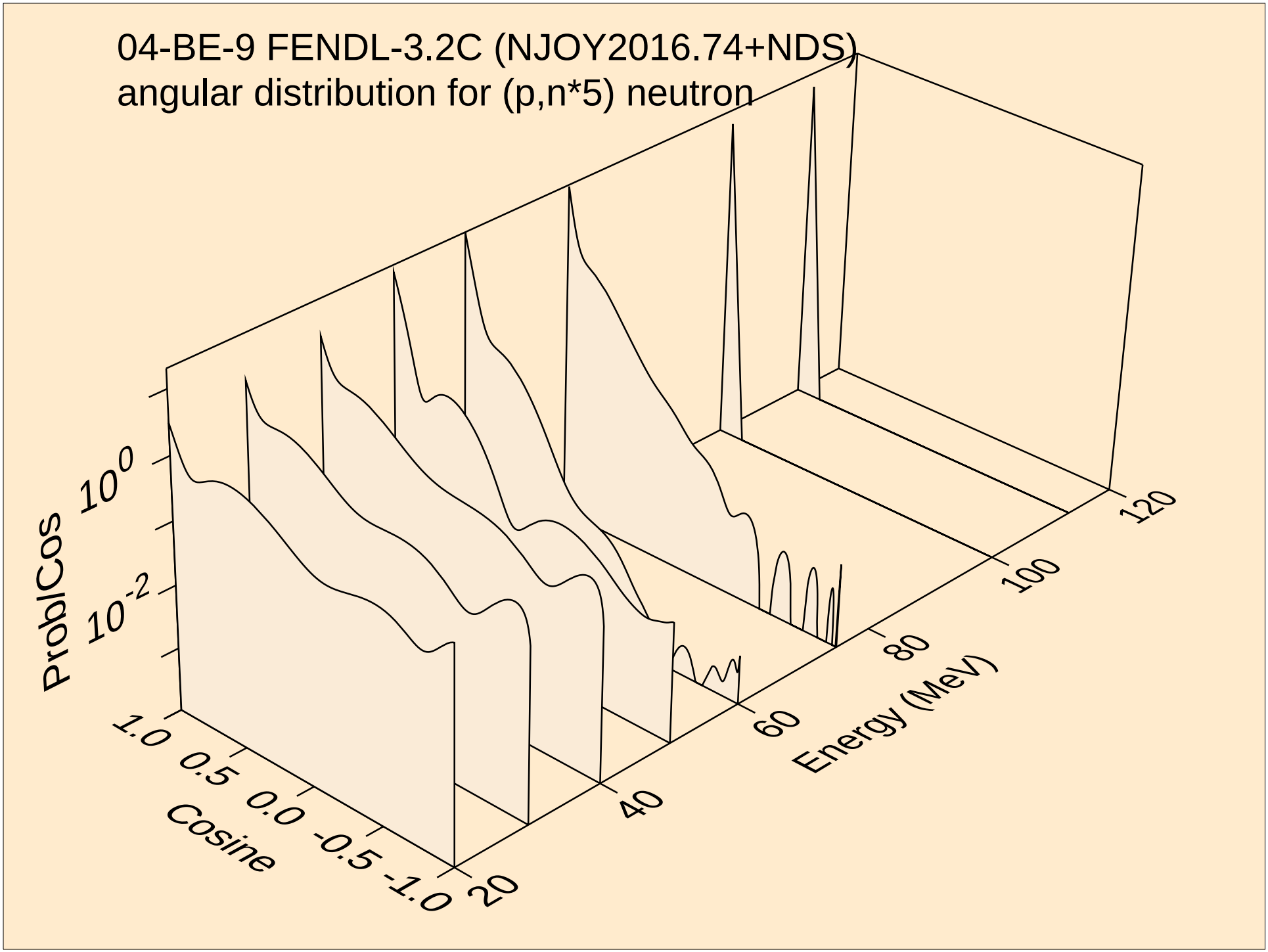

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*3) neutron
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

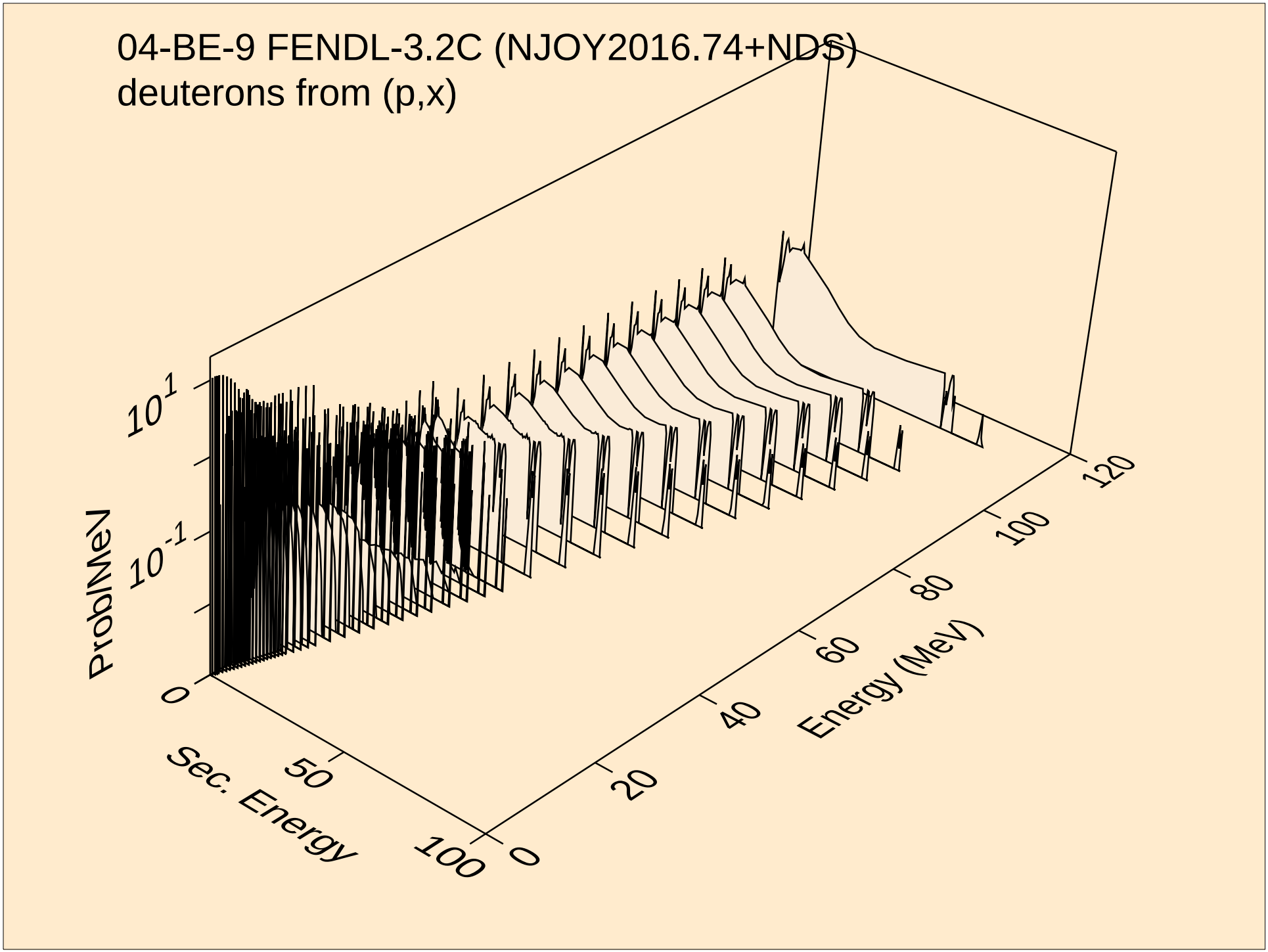

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*3) neutron
Prob\Cos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)

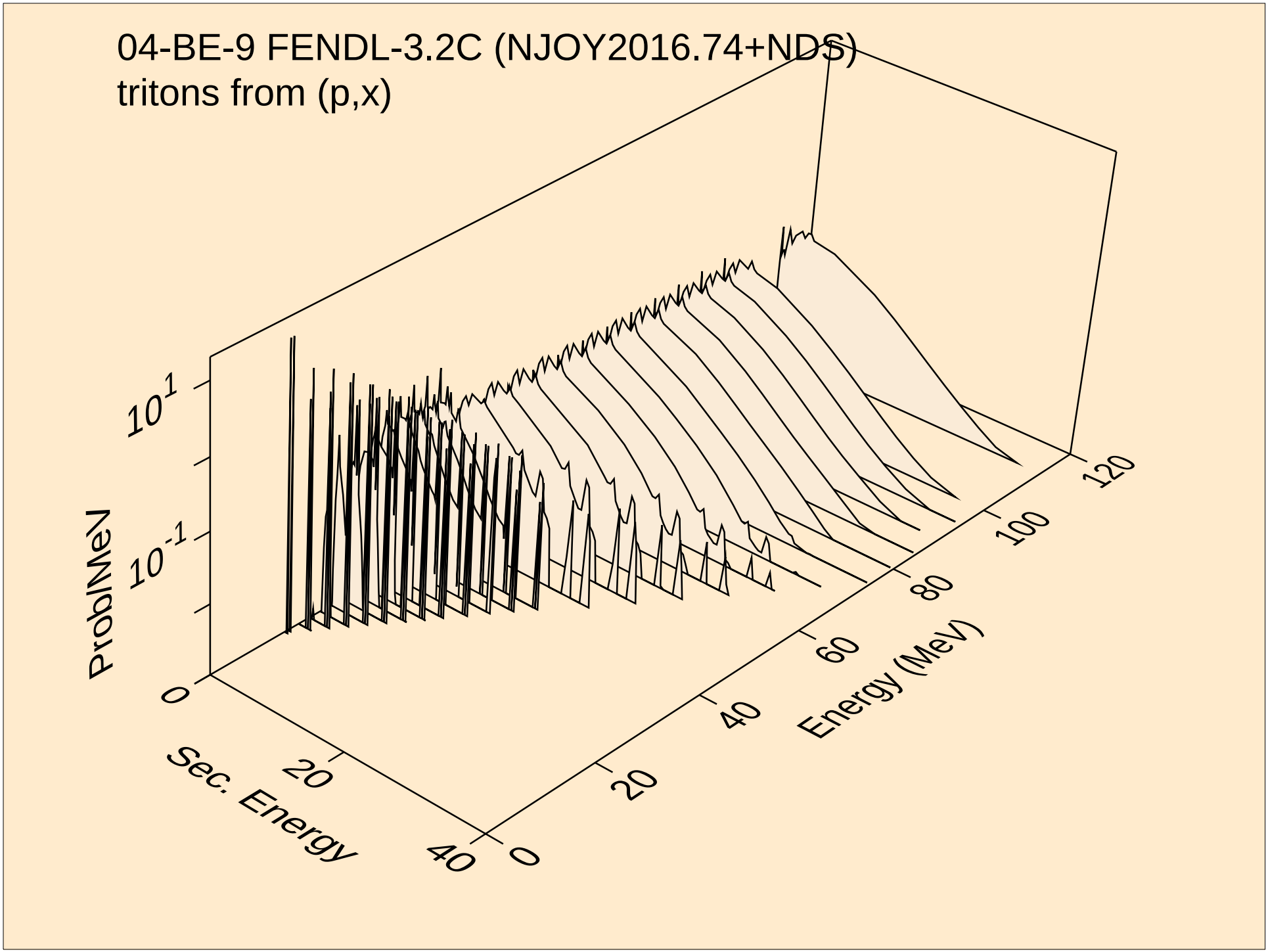

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*4) neutron
ProbICos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
6
8
10
12
14
16
18
20
Energy (MeV)

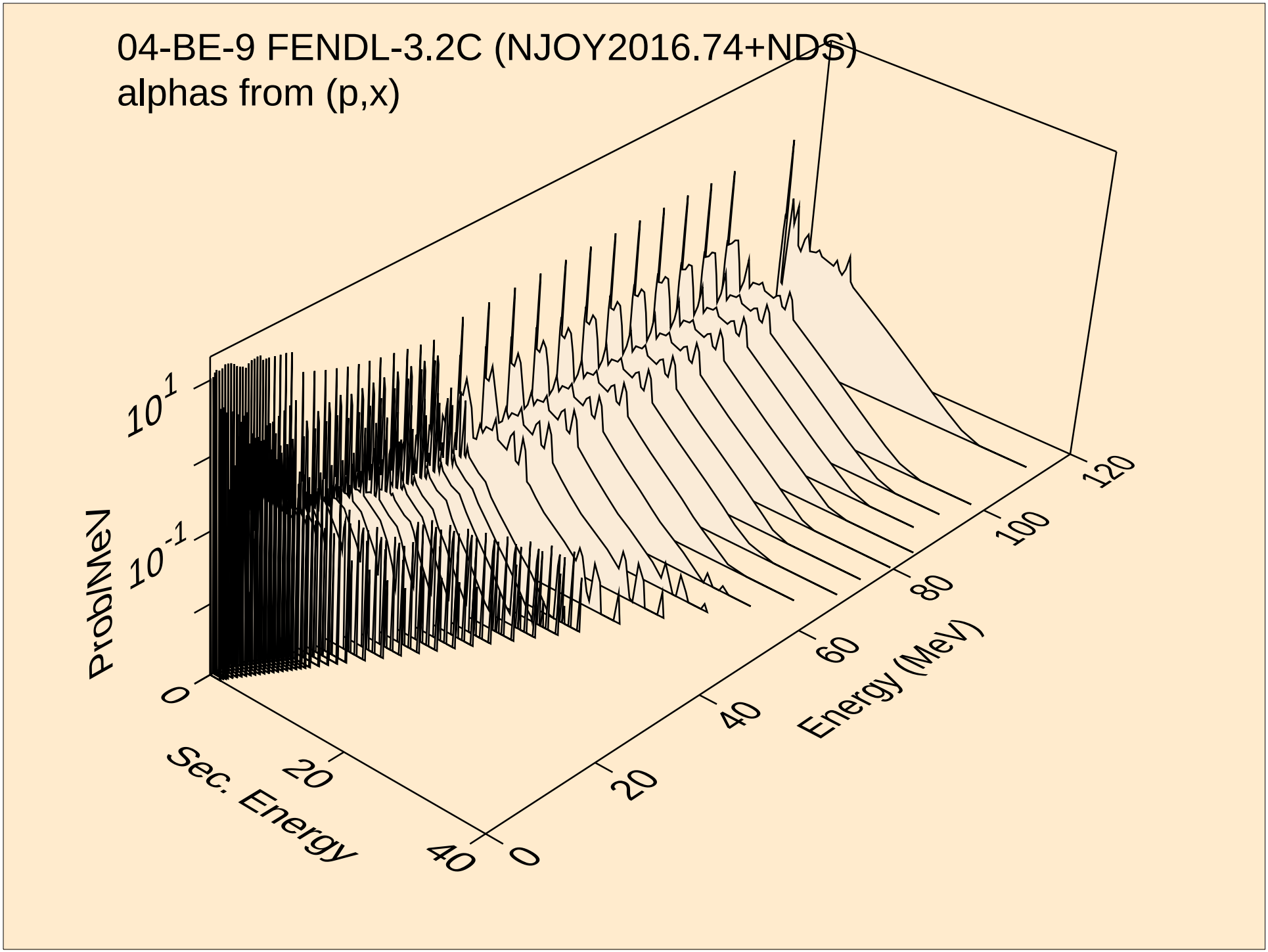

04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*4) neutron
Prob\Cos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)


04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*5) neutron
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)


04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
angular distribution for (p,n*5) neutron
Prob\Cos
10^0
10^-2
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
Energy (MeV)


04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
deuterons from (p,x)
Prob/MeV
10^1
10^-1
0
Sec. Energy
50
100
0
20
40
60
80
100
120
Energy (MeV)


04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
tritons from (p,x)
Prob/MeV
10^{1}
10^{-1}
0
20
40
Sec. Energy
0
20
40
60
80
100
120
Energy (MeV)


04-BE-9 FENDL-3.2C (NJOY2016.74+NDS)
alphas from (p,x)
Prob/MeV
10^1
10^-1
0
Sec. Energy
20
40
0
20
40
60
80
100
120
Energy (MeV)