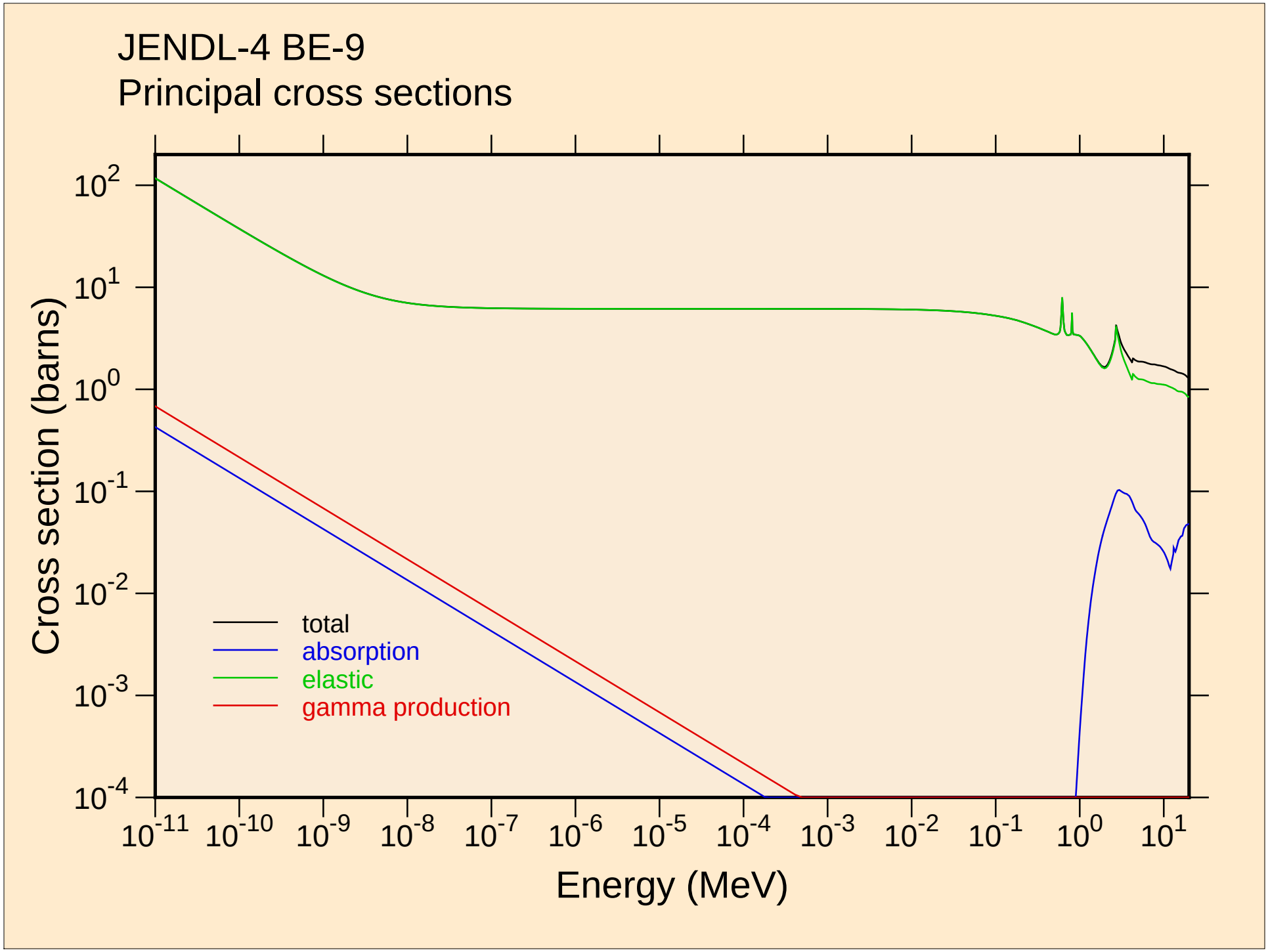
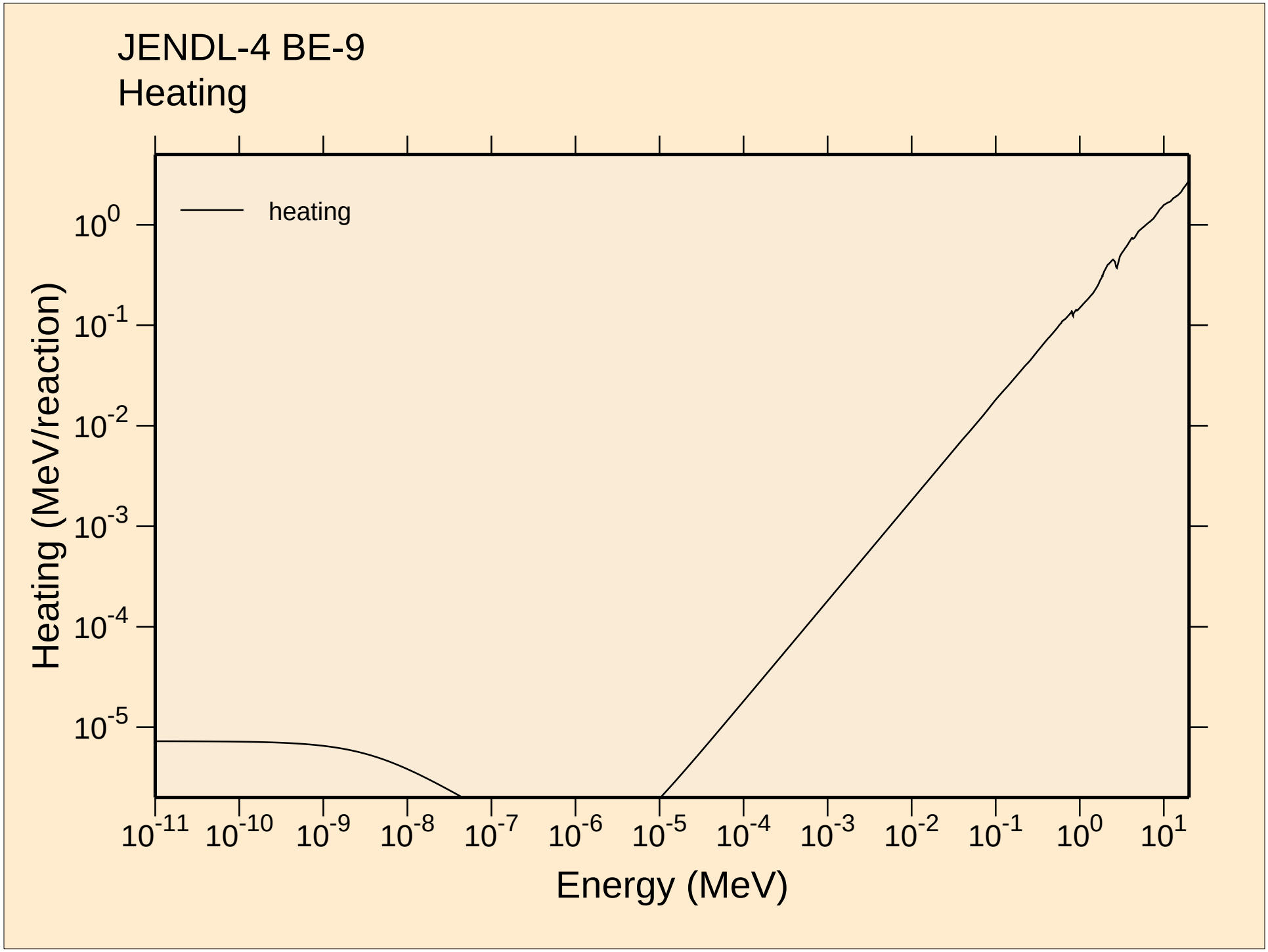
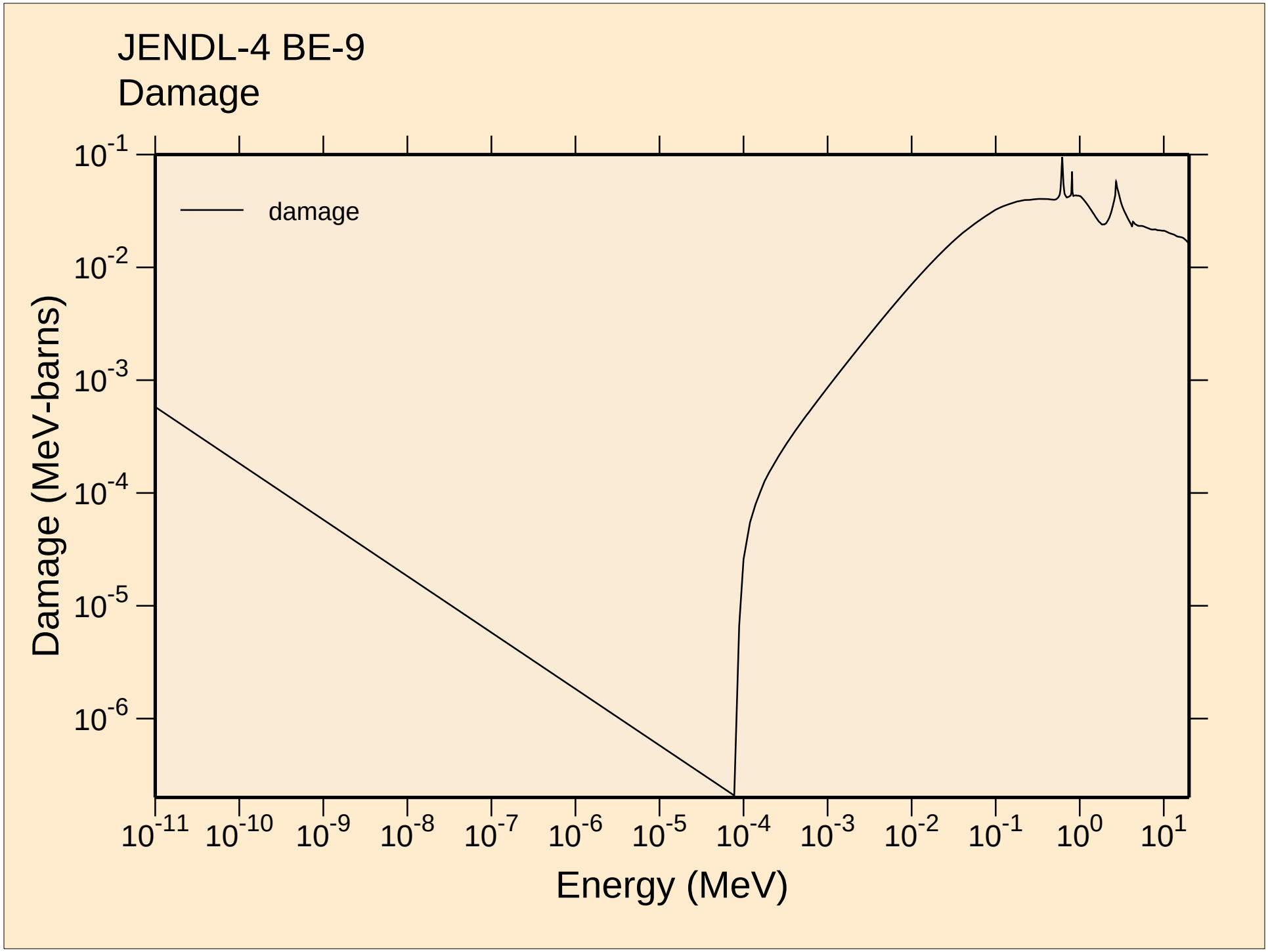
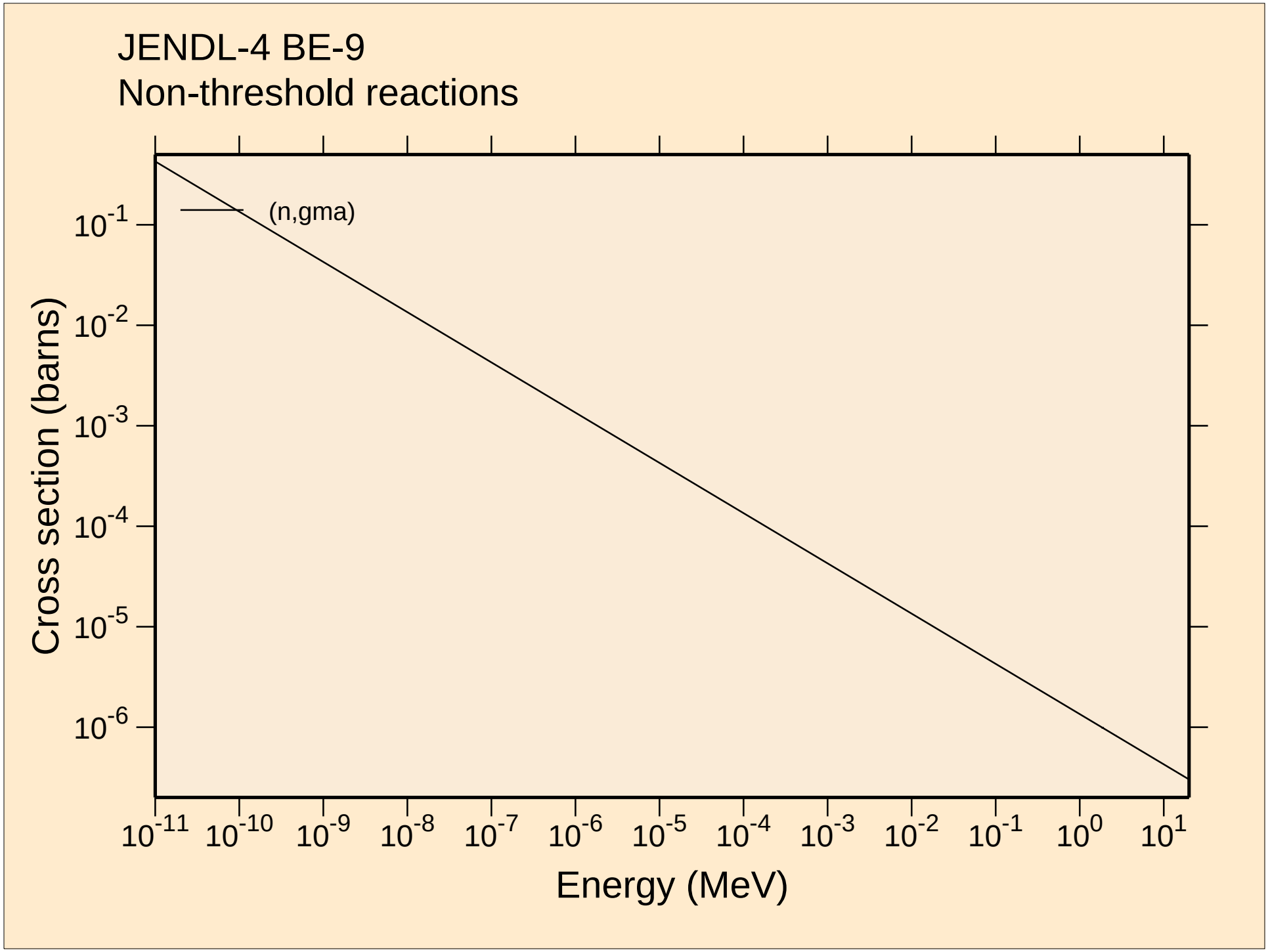
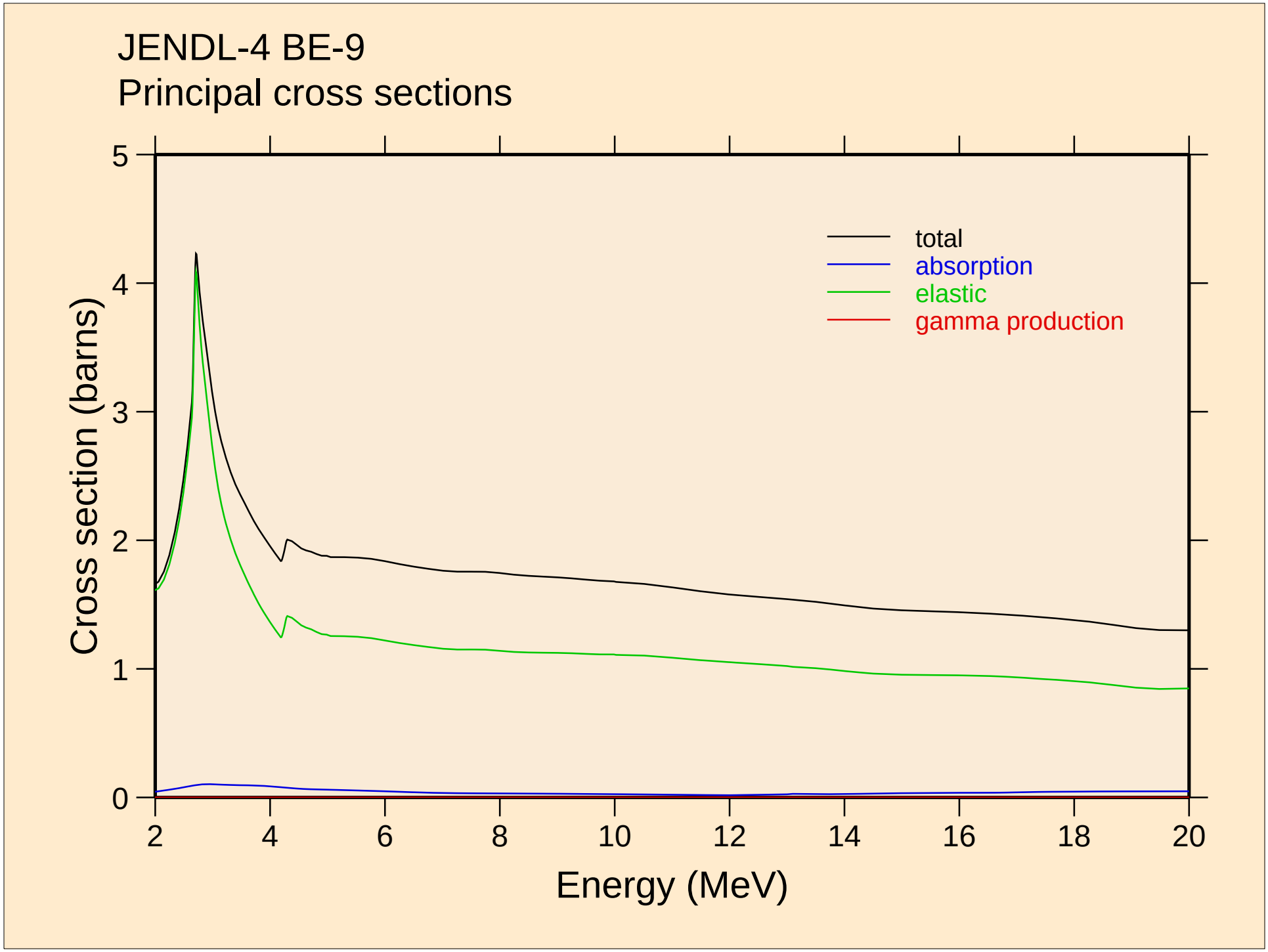
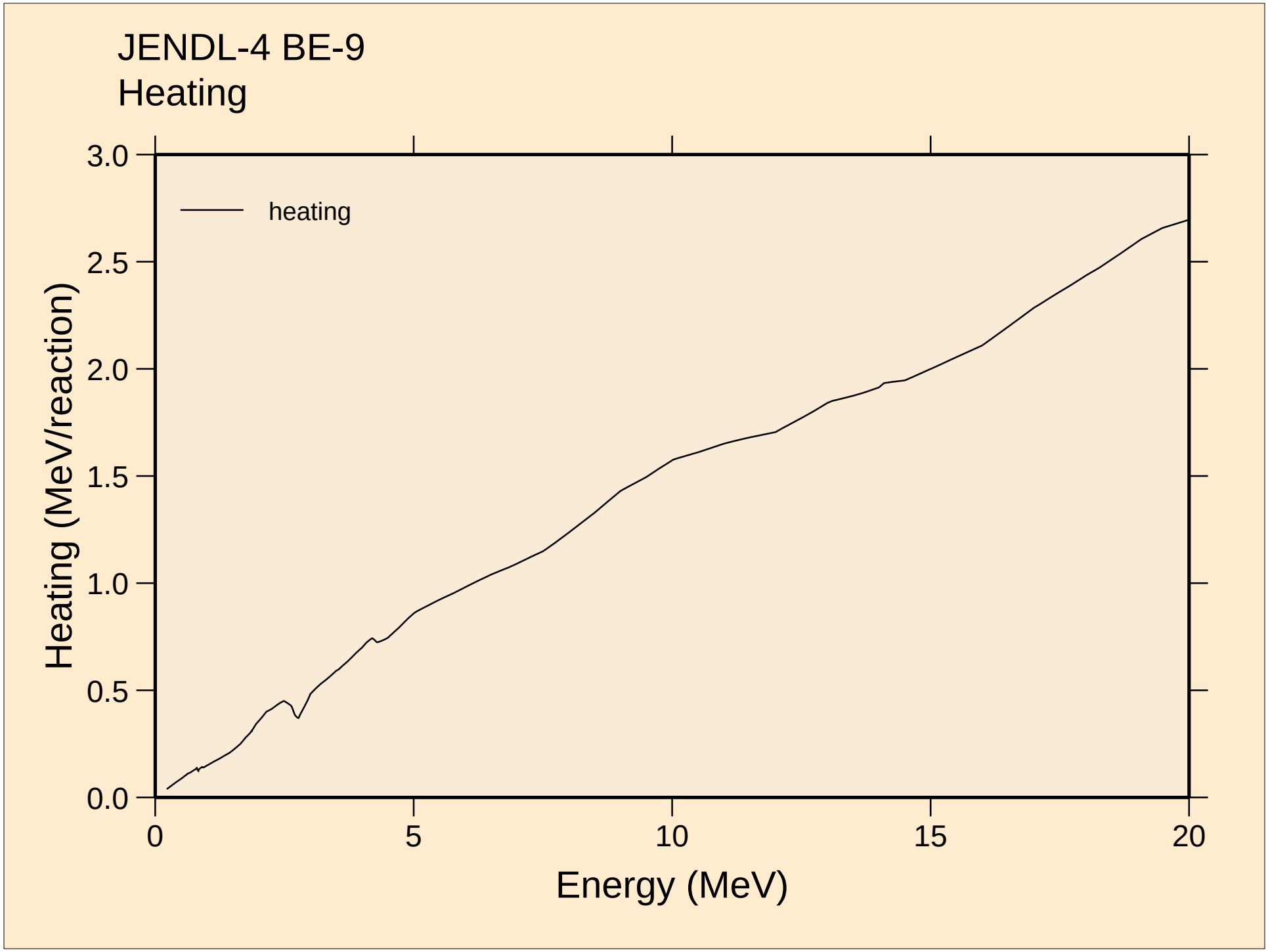

JENDL-4 BE-9
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production

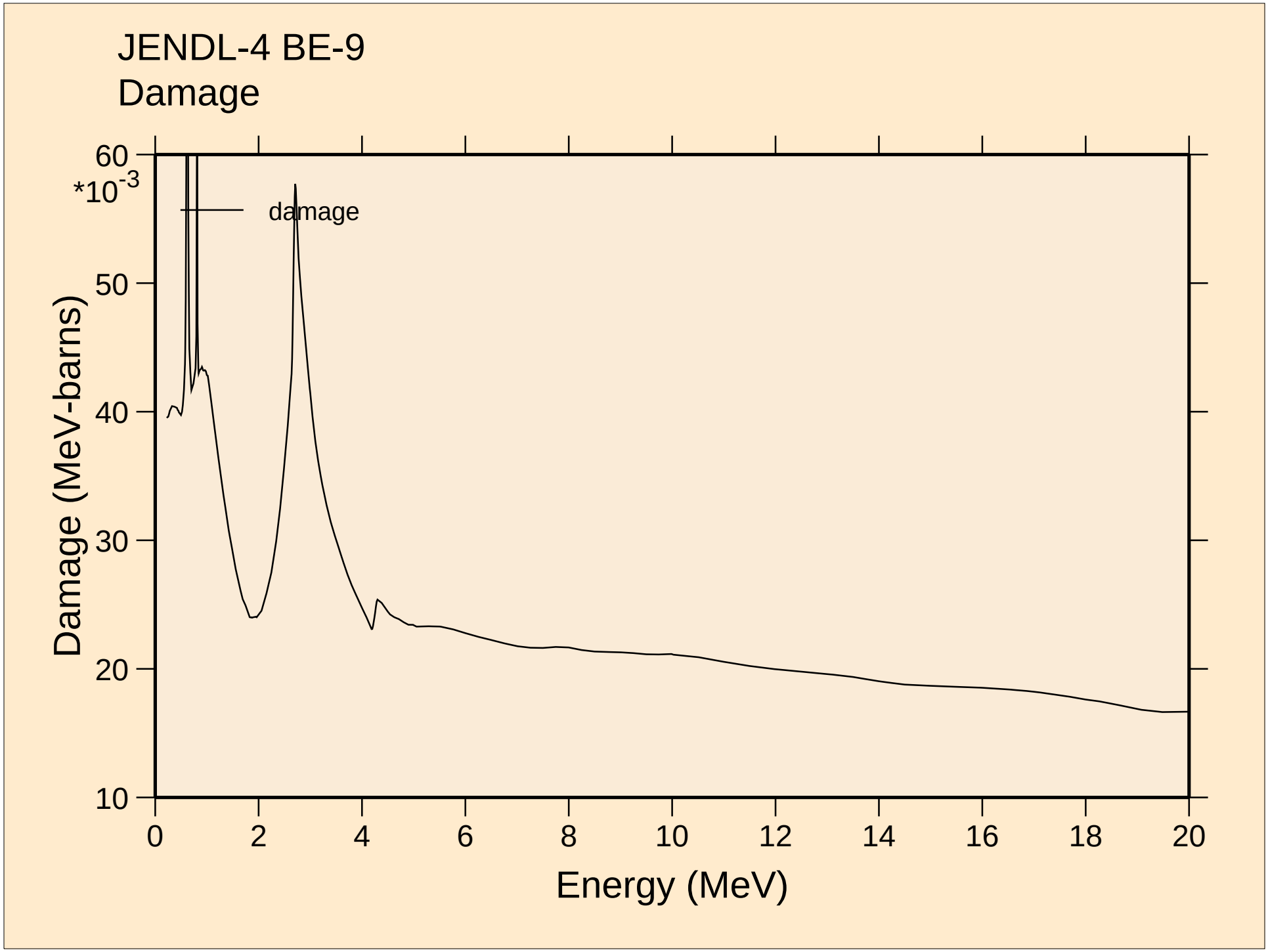

JENDL-4 BE-9
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

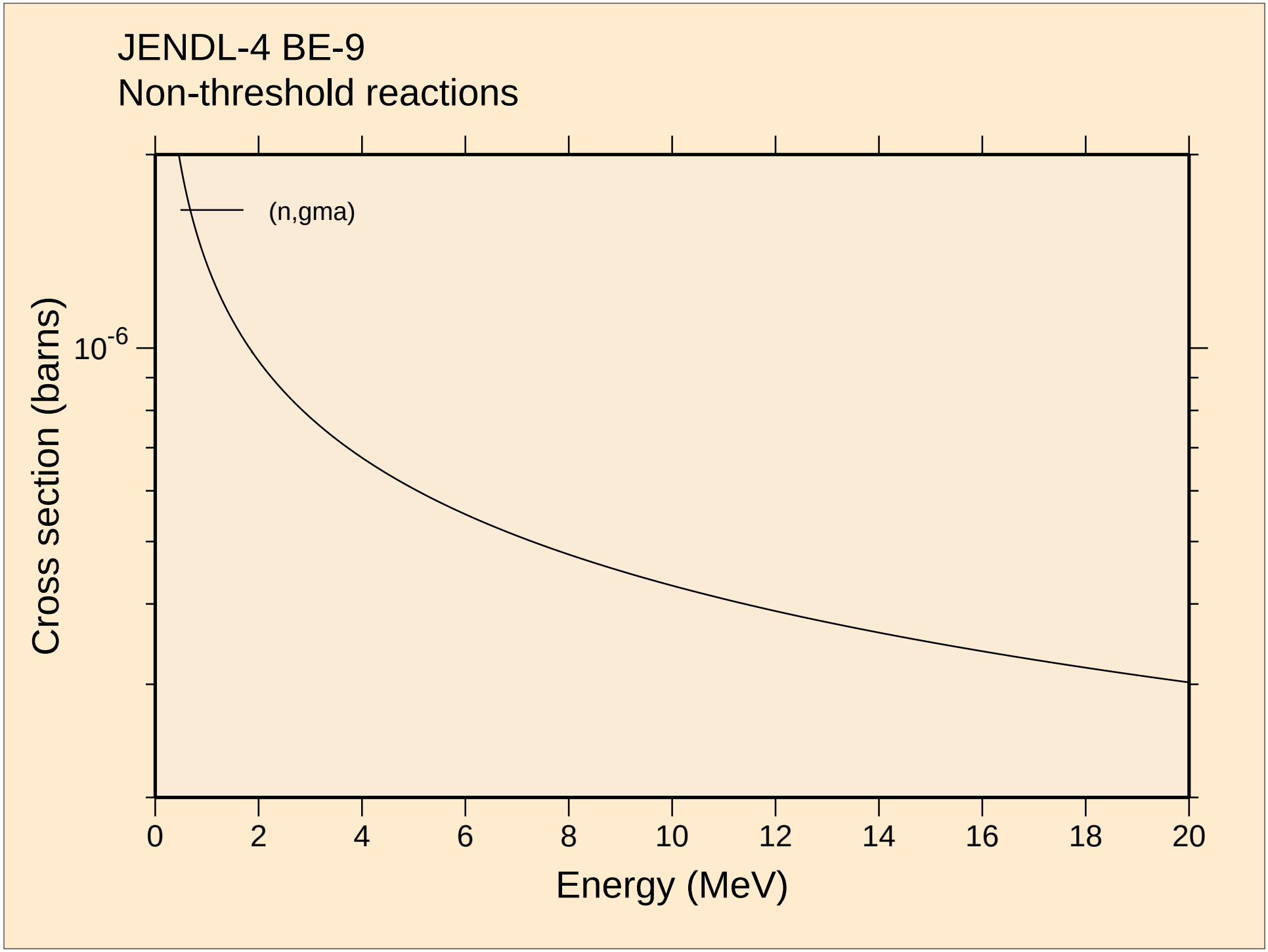

JENDL-4 BE-9
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

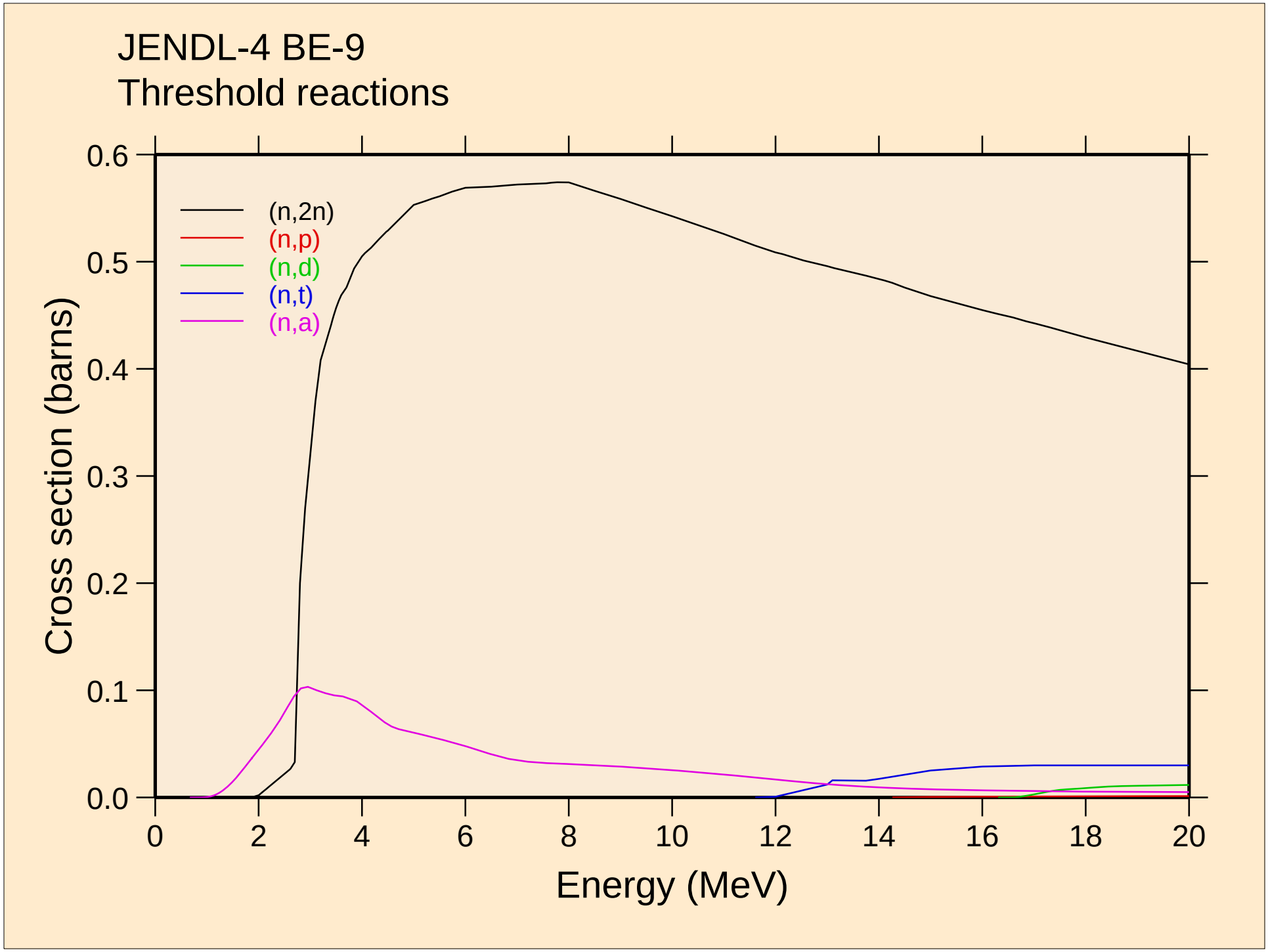

JENDL-4 BE-9
Non-threshold reactions
(n,gma)
Cross section (barns)
10-1
10-2
10-3
10-4
10-5
10-6
10-11
10-10
10-9
10-8
10-7
10-6
10-5
10-4
10-3
10-2
10-1
100
101
Energy (MeV)

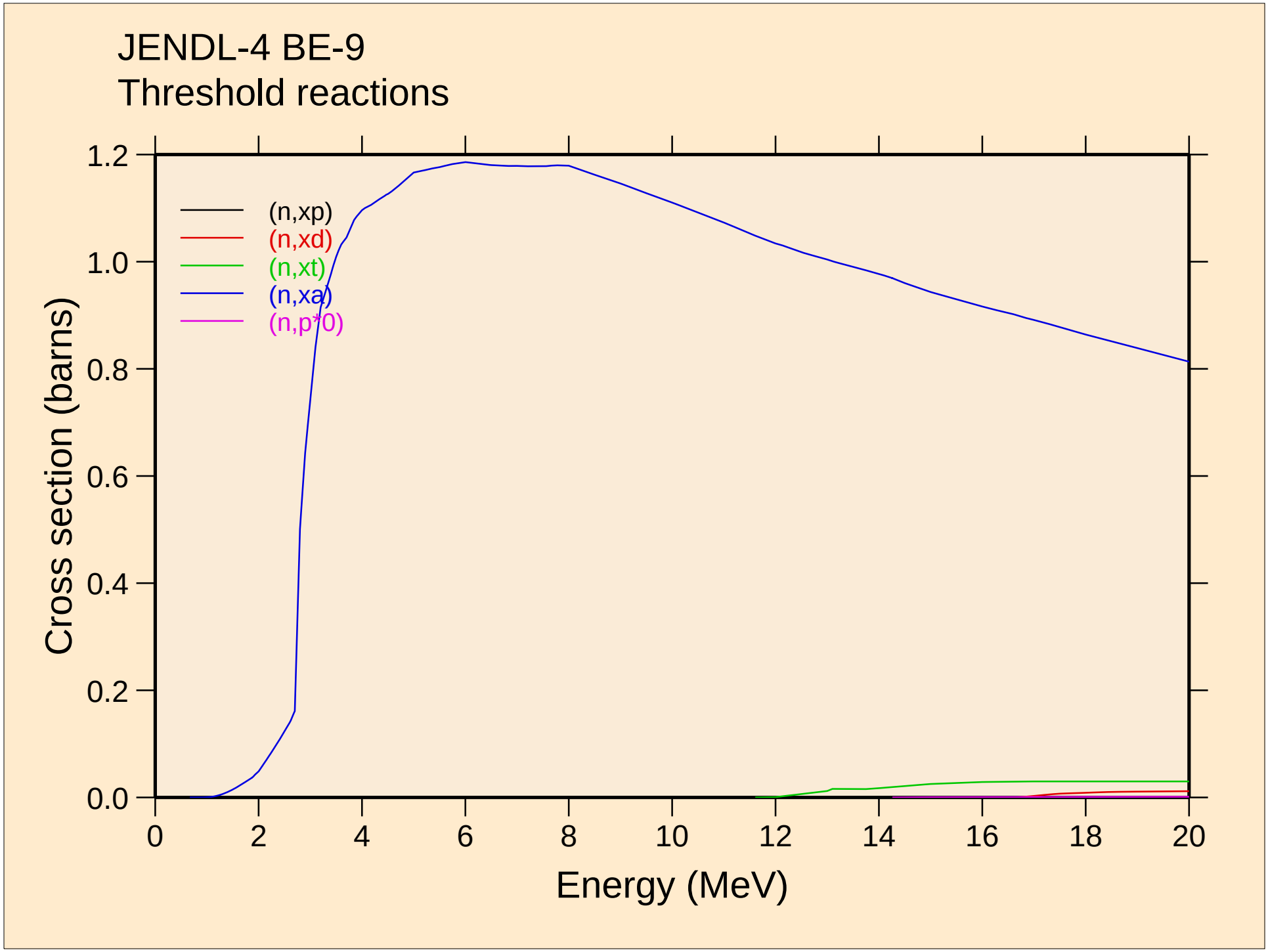

JENDL-4 BE-9
Principal cross sections
total
absorption
elastic
gamma production
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
2
4
6
8
10
12
14
16
18
20

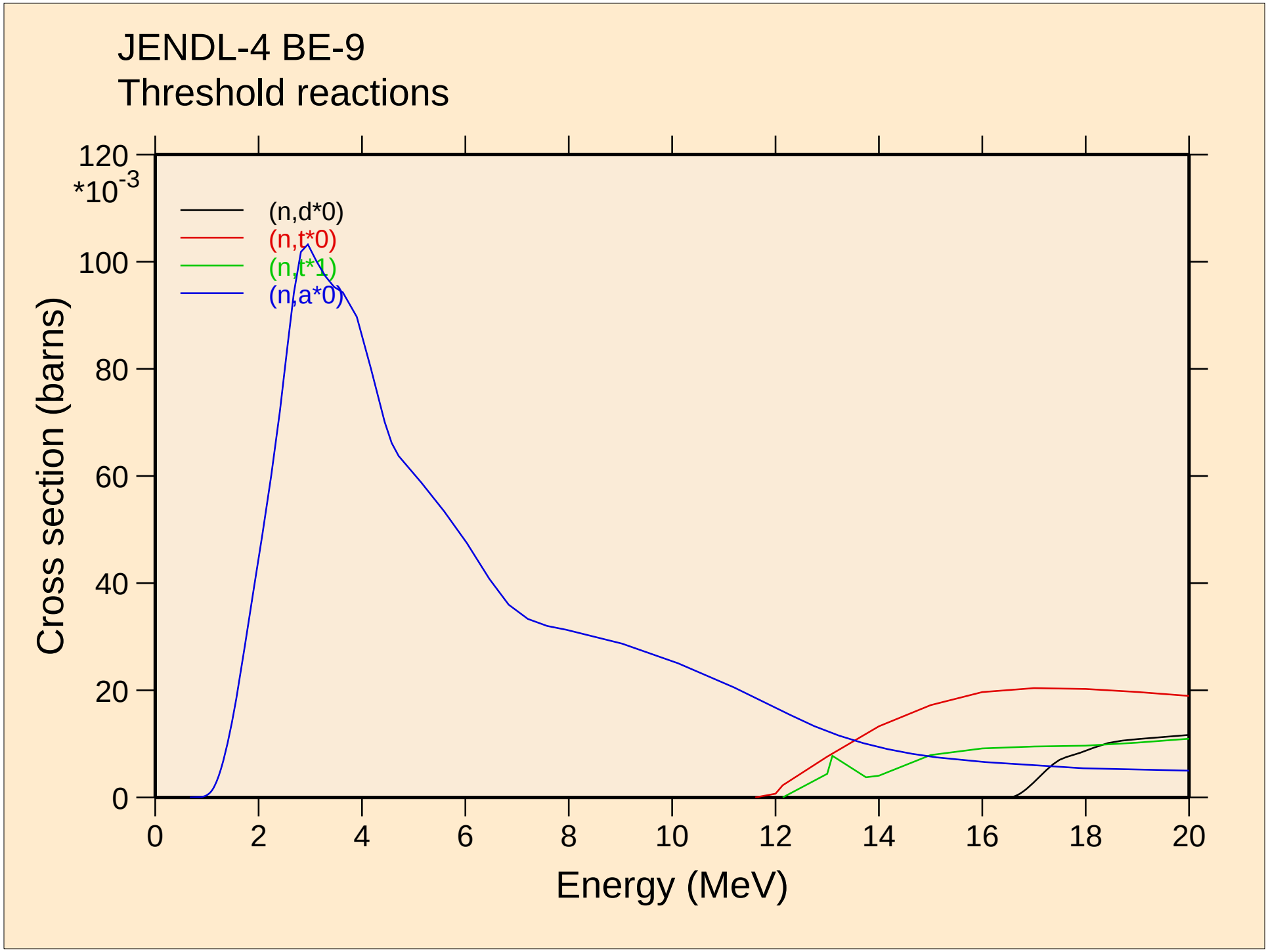

JENDL-4 BE-9
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
5
10
15
20

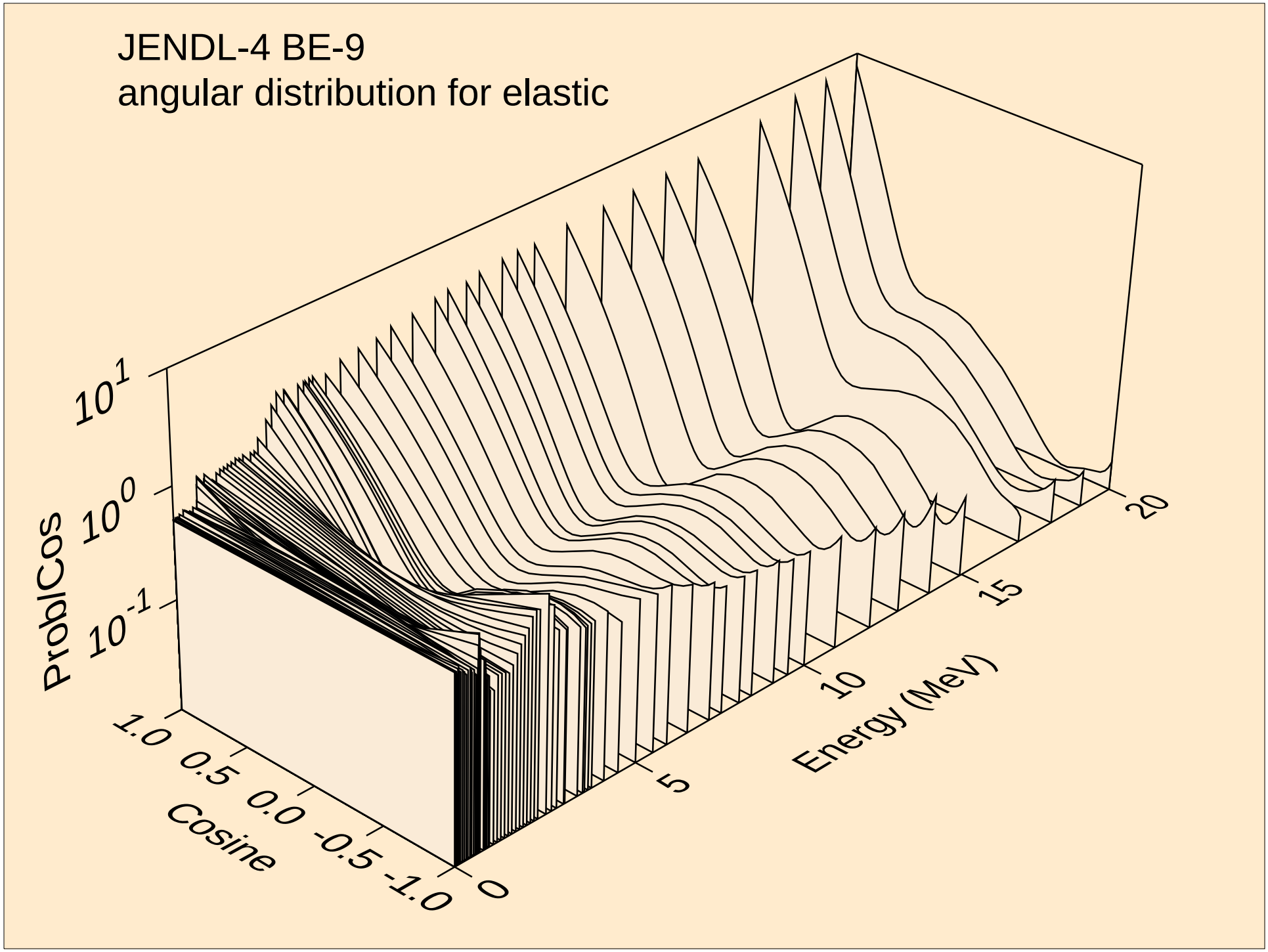

JENDL-4 BE-9
Damage
*10-3
damage
Damage (MeV-barns)
60
50
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

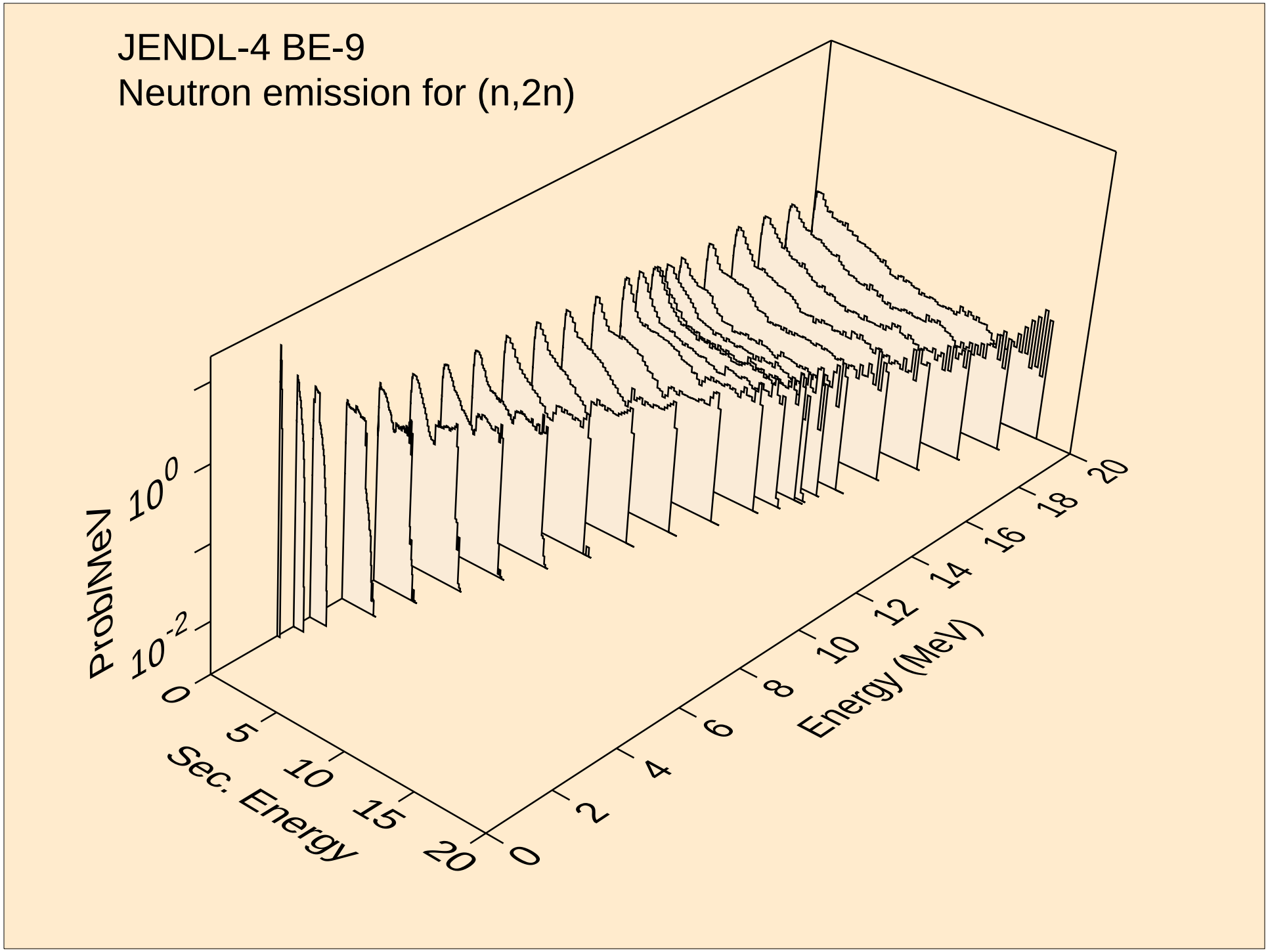

JENDL-4 BE-9
Non-threshold reactions
(n,gma)
Cross section (barns)
10-6
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

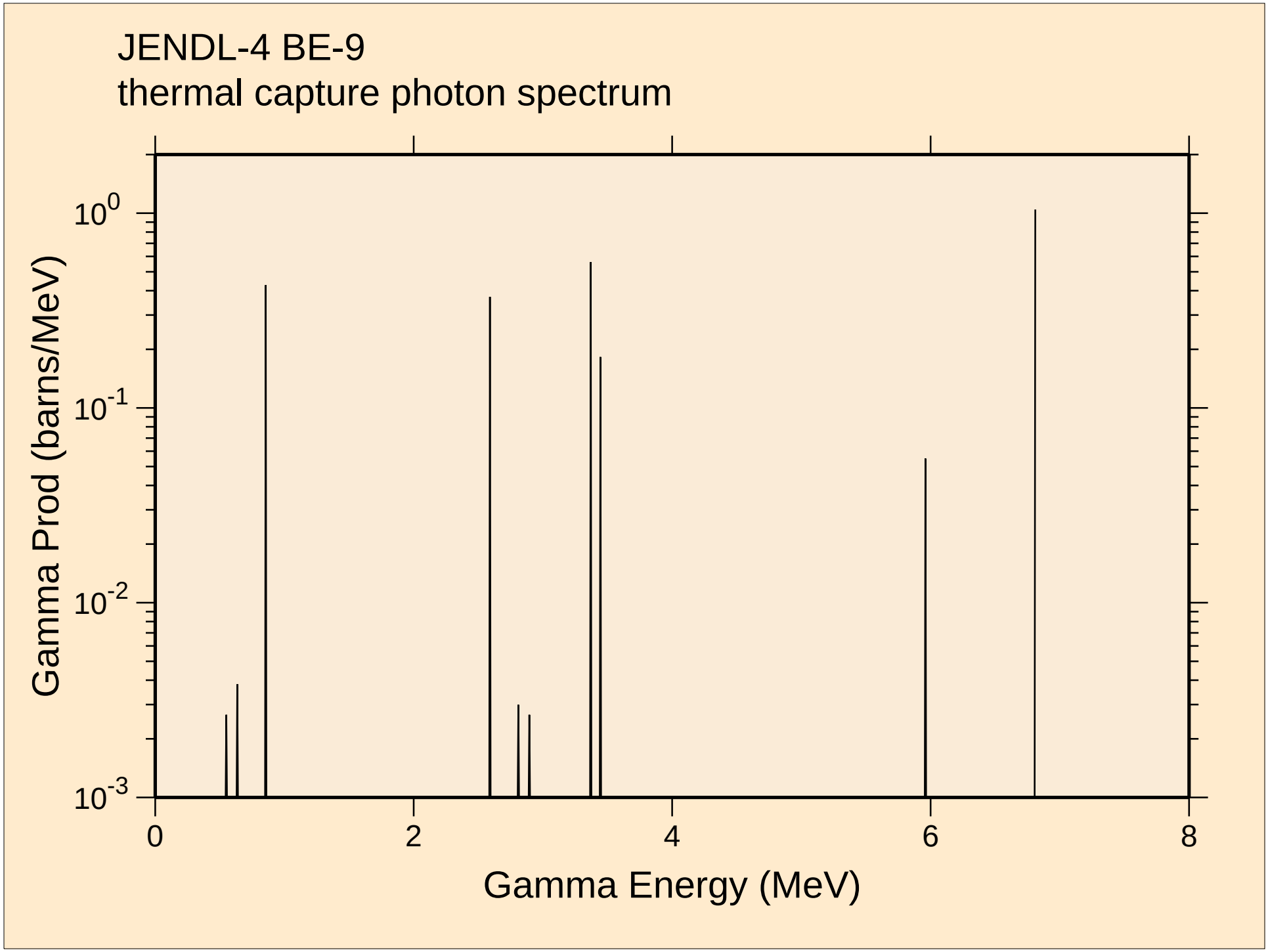

JENDL-4 BE-9
Threshold reactions
(n,2n)
(n,p)
(n,d)
(n,t)
(n,a)
Cross section (barns)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

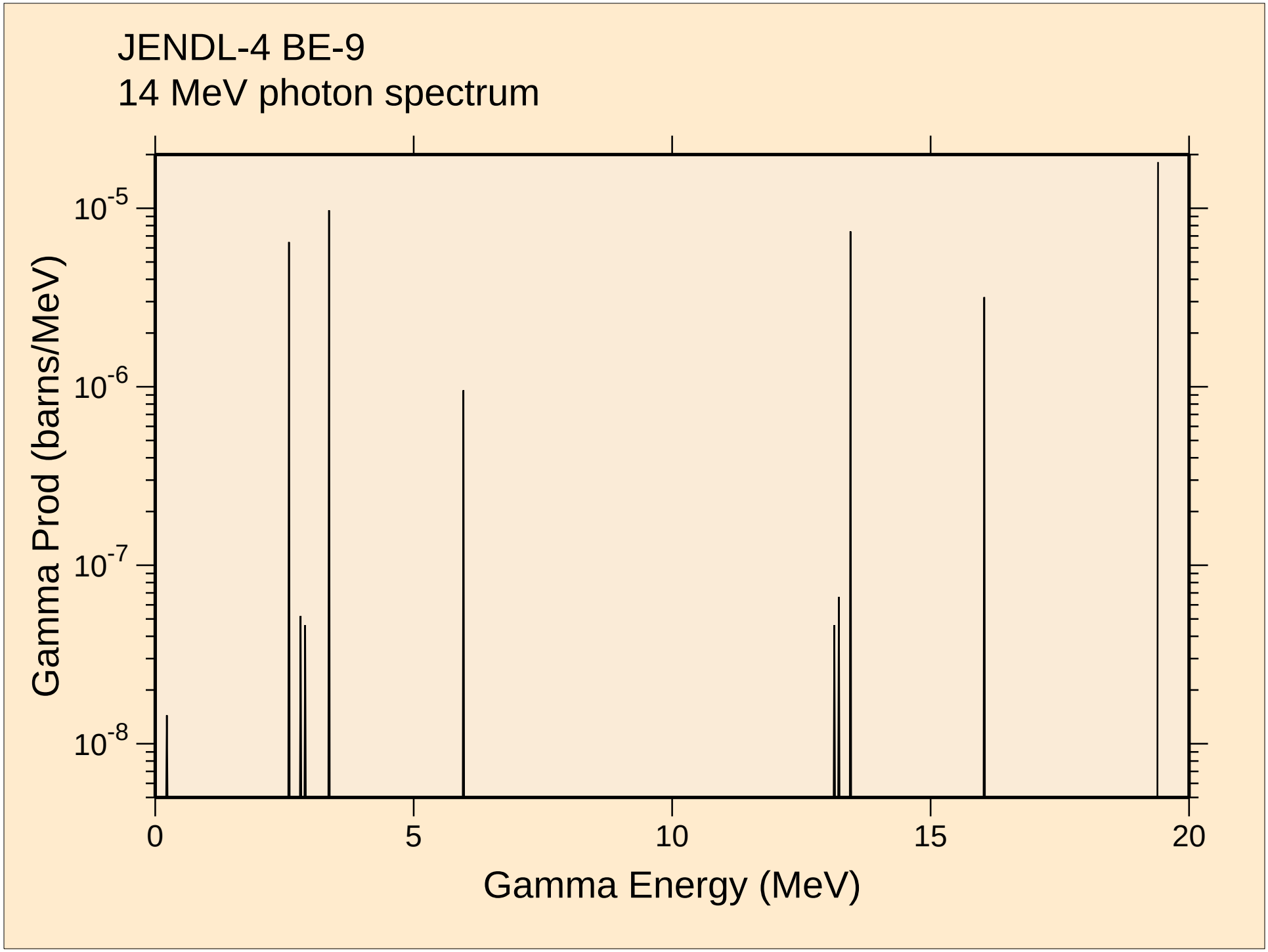

JENDL-4 BE-9
Threshold reactions
(n,xp)
(n,xd)
(n,xt)
(n,xa)
(n,p*0)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20

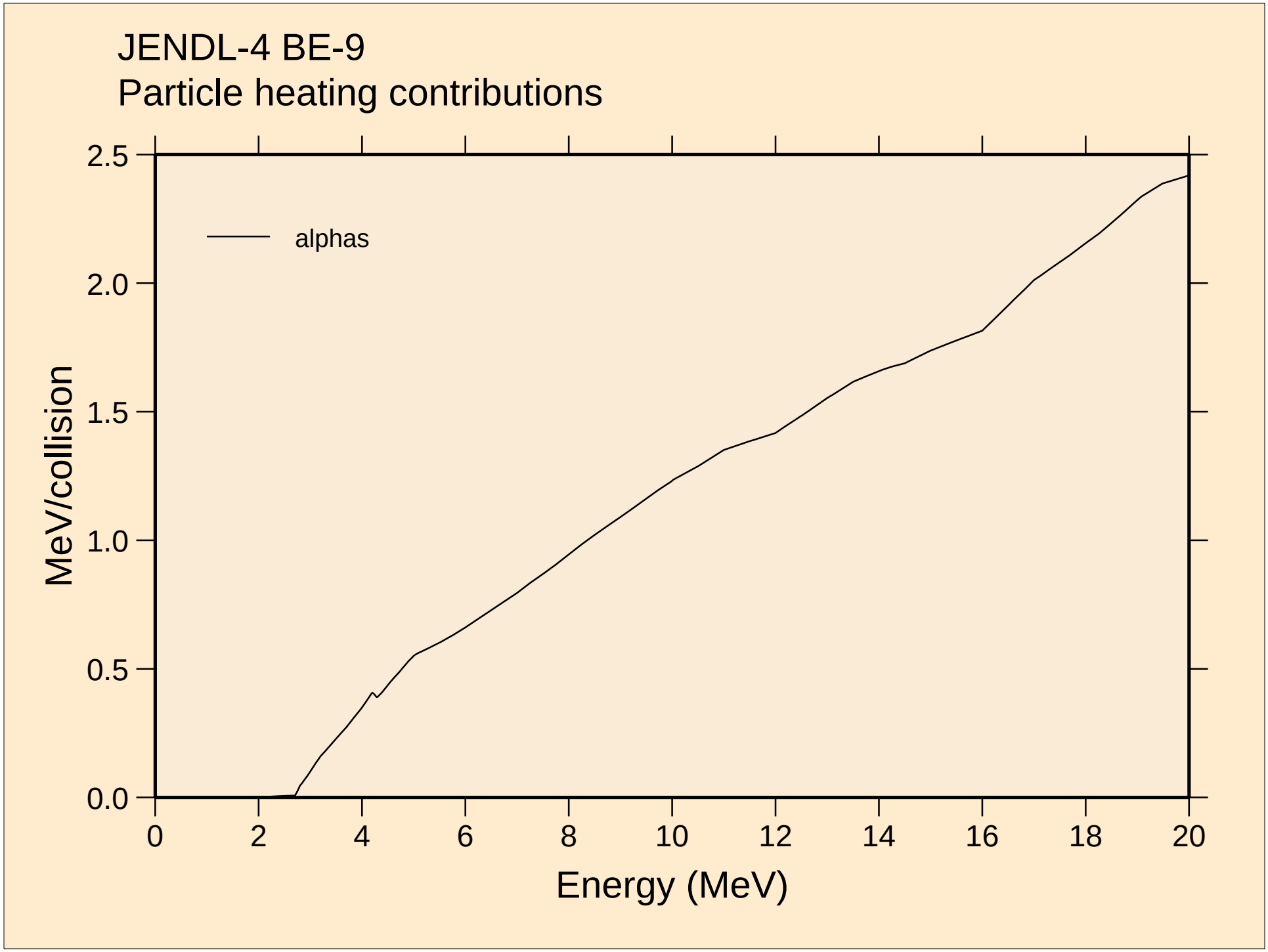

JENDL-4 BE-9
Threshold reactions
(n,d*0)
(n,t*0)
(n,t*1)
(n,a*0)
*10-3
120
100
80
60
40
20
0
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

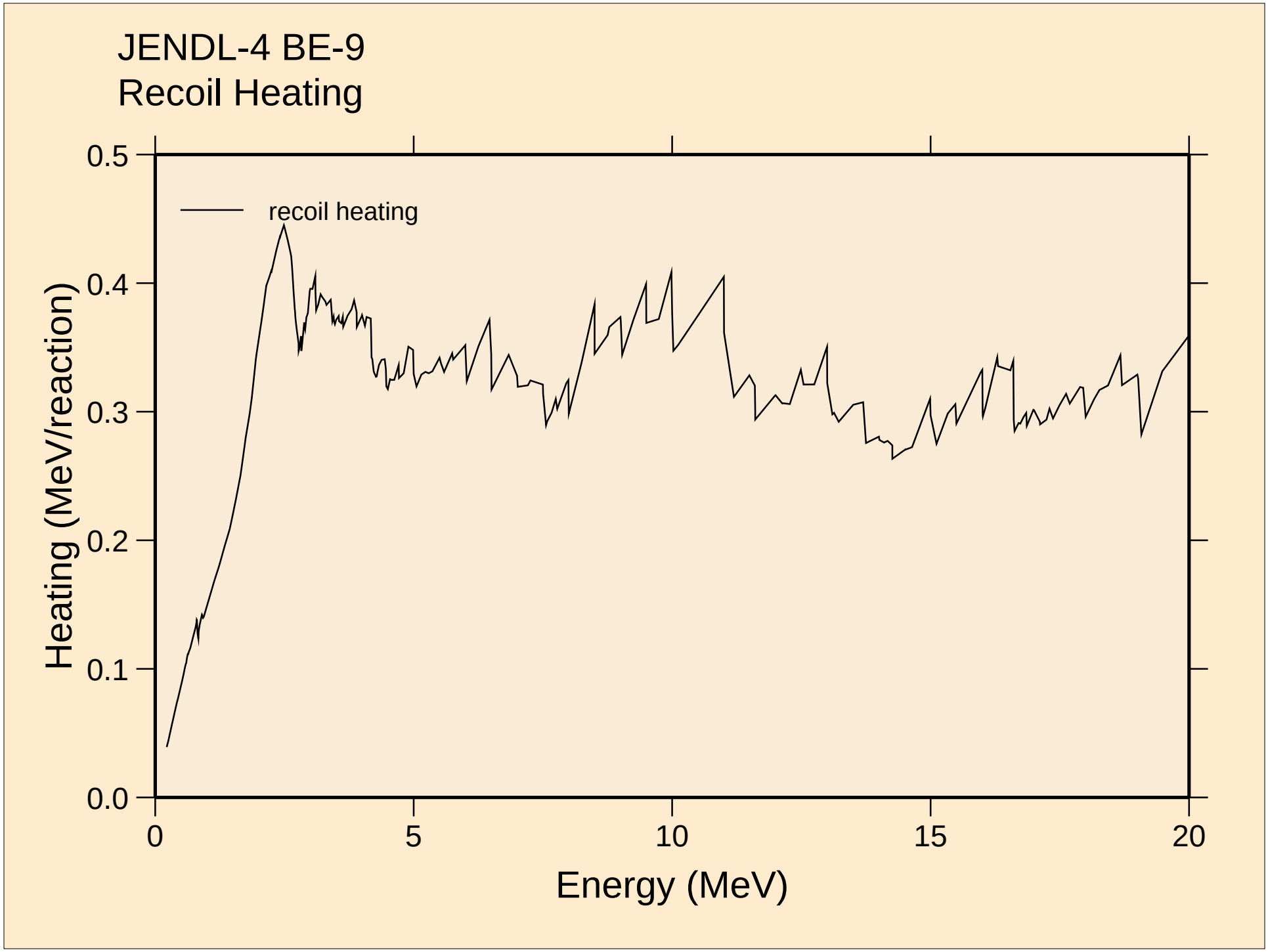

JENDL-4 BE-9
angular distribution for elastic
ProblCos
10^{1}
10^{0}
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20

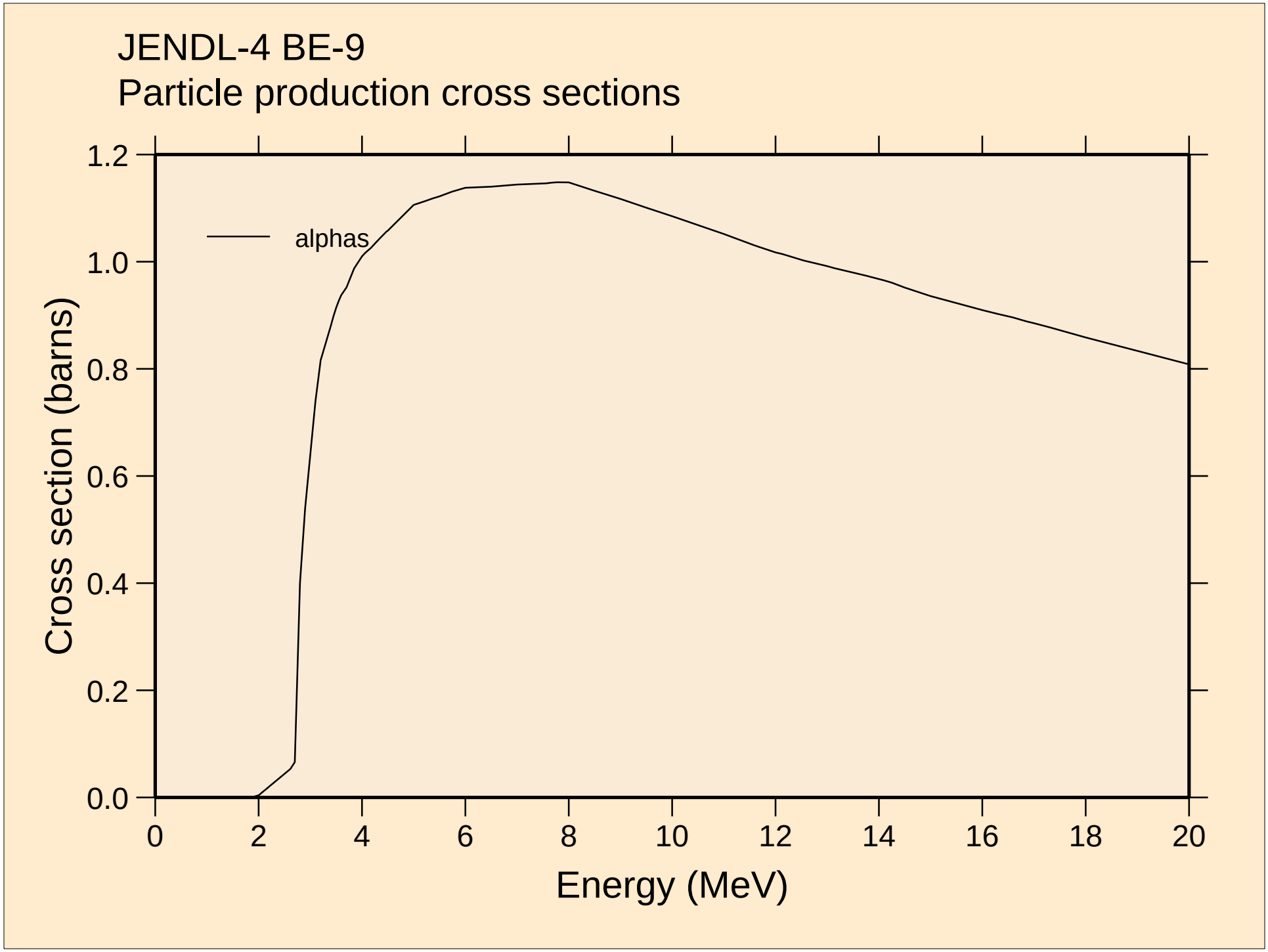

JENDL-4 BE-9
Neutron emission for (n,2n)
Prob/MeV
10^{0}
10^{-2}
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

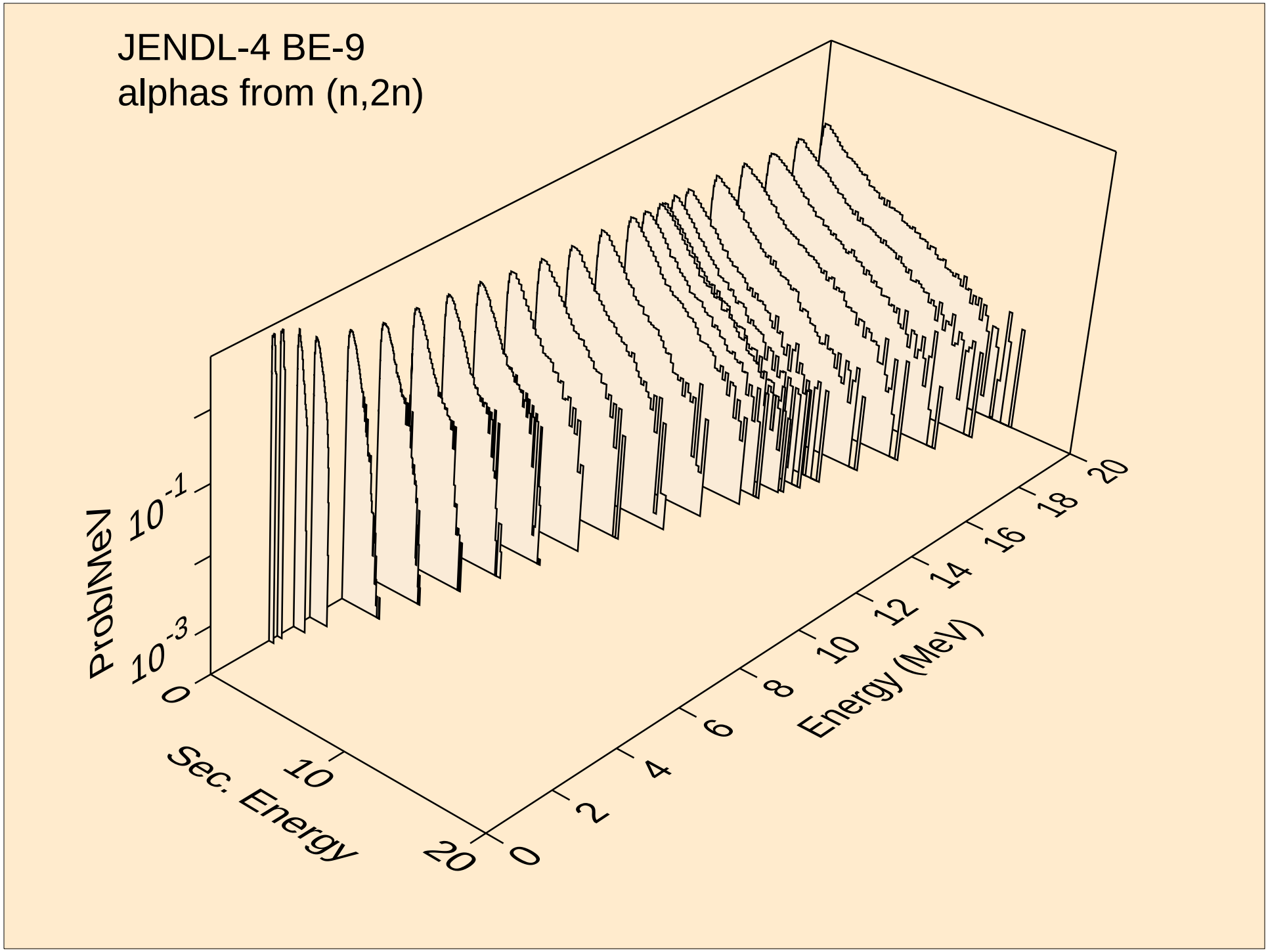

JENDL-4 BE-9
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^0
10^-1
10^-2
10^-3
0
2
4
6
8
Gamma Energy (MeV)


JENDL-4 BE-9
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10-5
10-6
10-7
10-8
0
5
10
15
20
Gamma Energy (MeV)


JENDL-4 BE-9
Particle heating contributions
alphas
MeV/collision
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
0
2
4
6
8
10
12
14
16
18
20


JENDL-4 BE-9
Recoil Heating
recoil heating
Heating (MeV/reaction)
0.0
0.1
0.2
0.3
0.4
0.5
0
5
10
15
20
Energy (MeV)


JENDL-4 BE-9
Particle production cross sections
alphas
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20


JENDL-4 BE-9
alphas from (n,2n)
Prob/MeV
10^-1
10^-3
0
10
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)