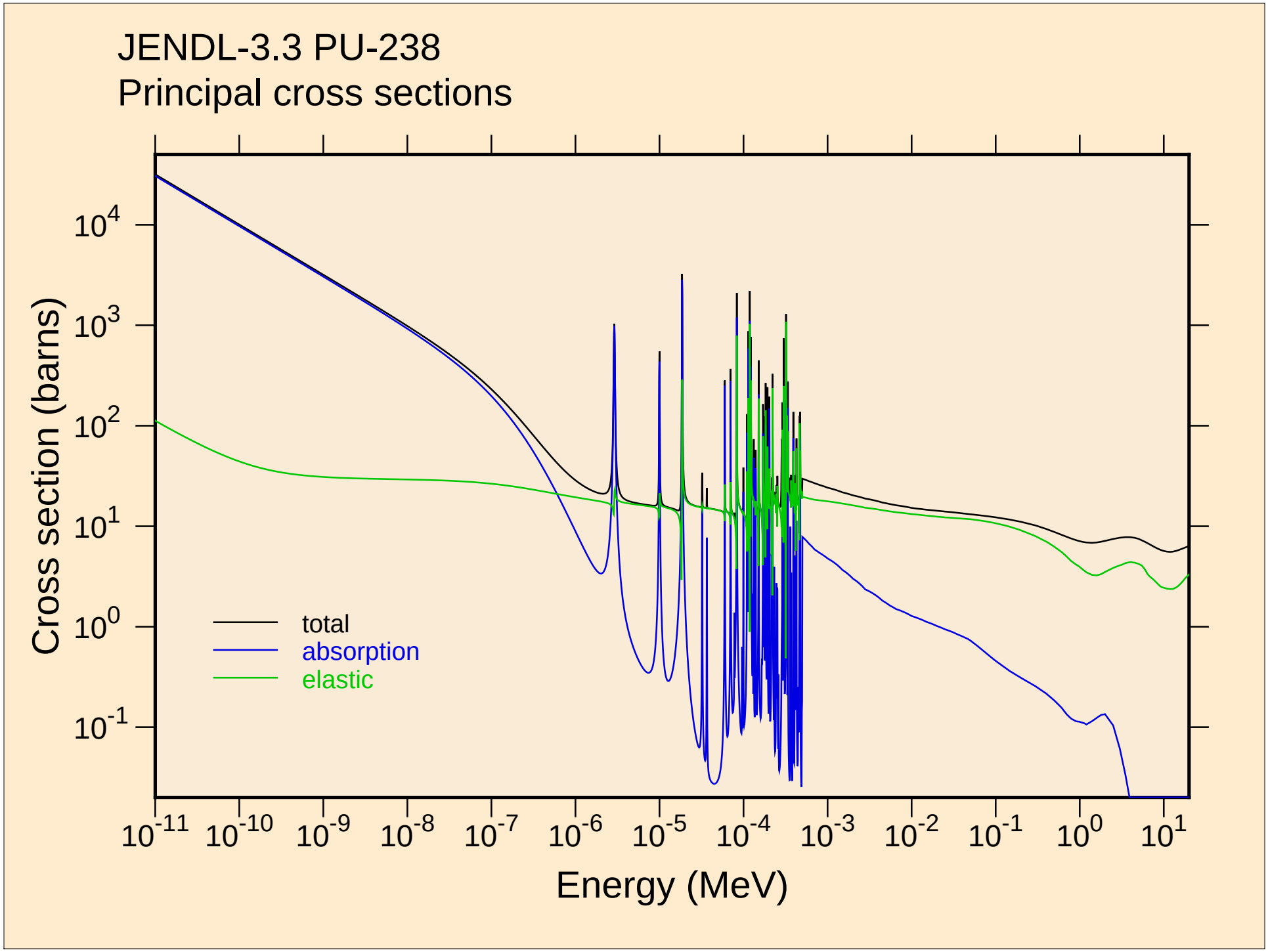
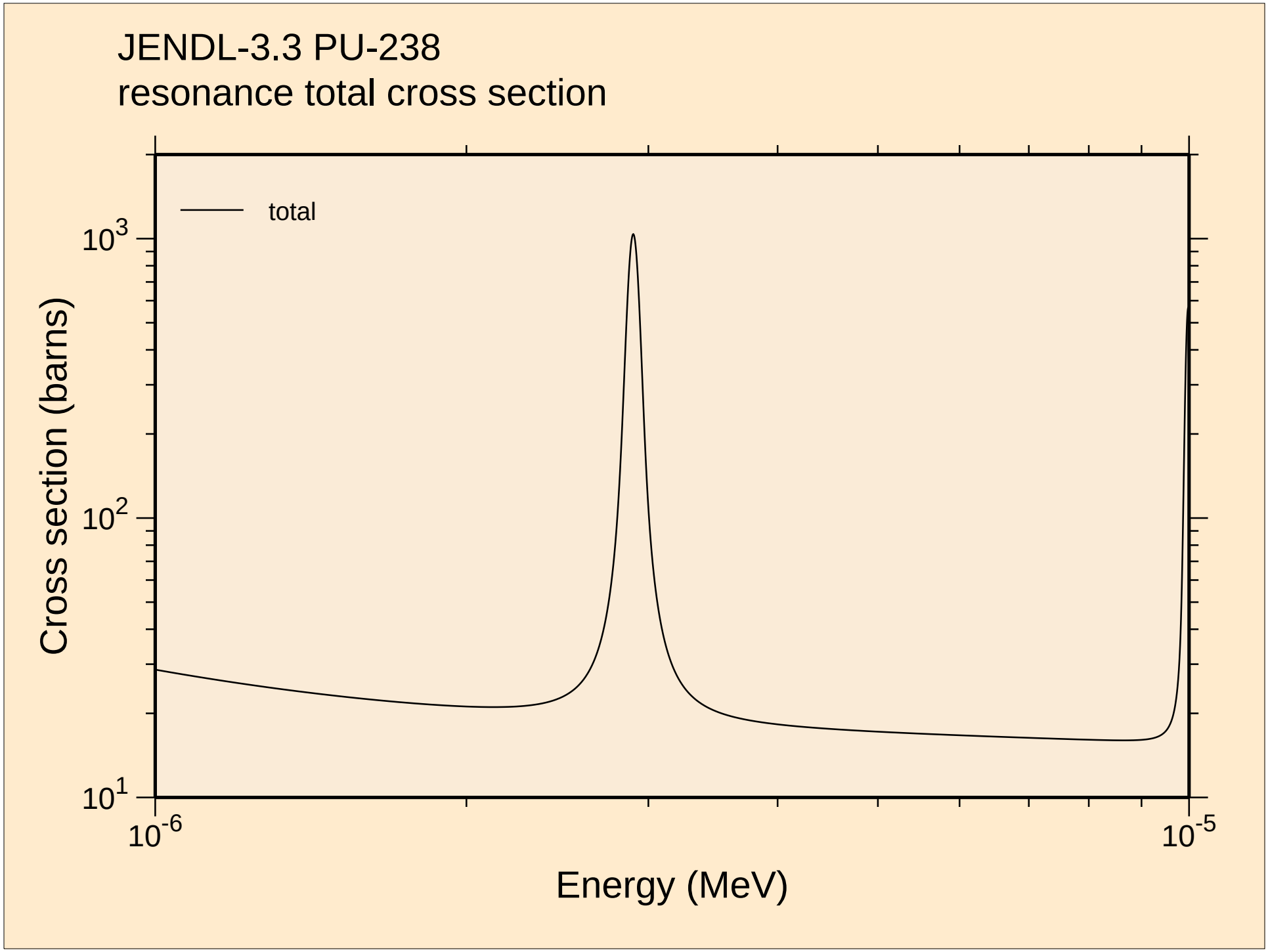
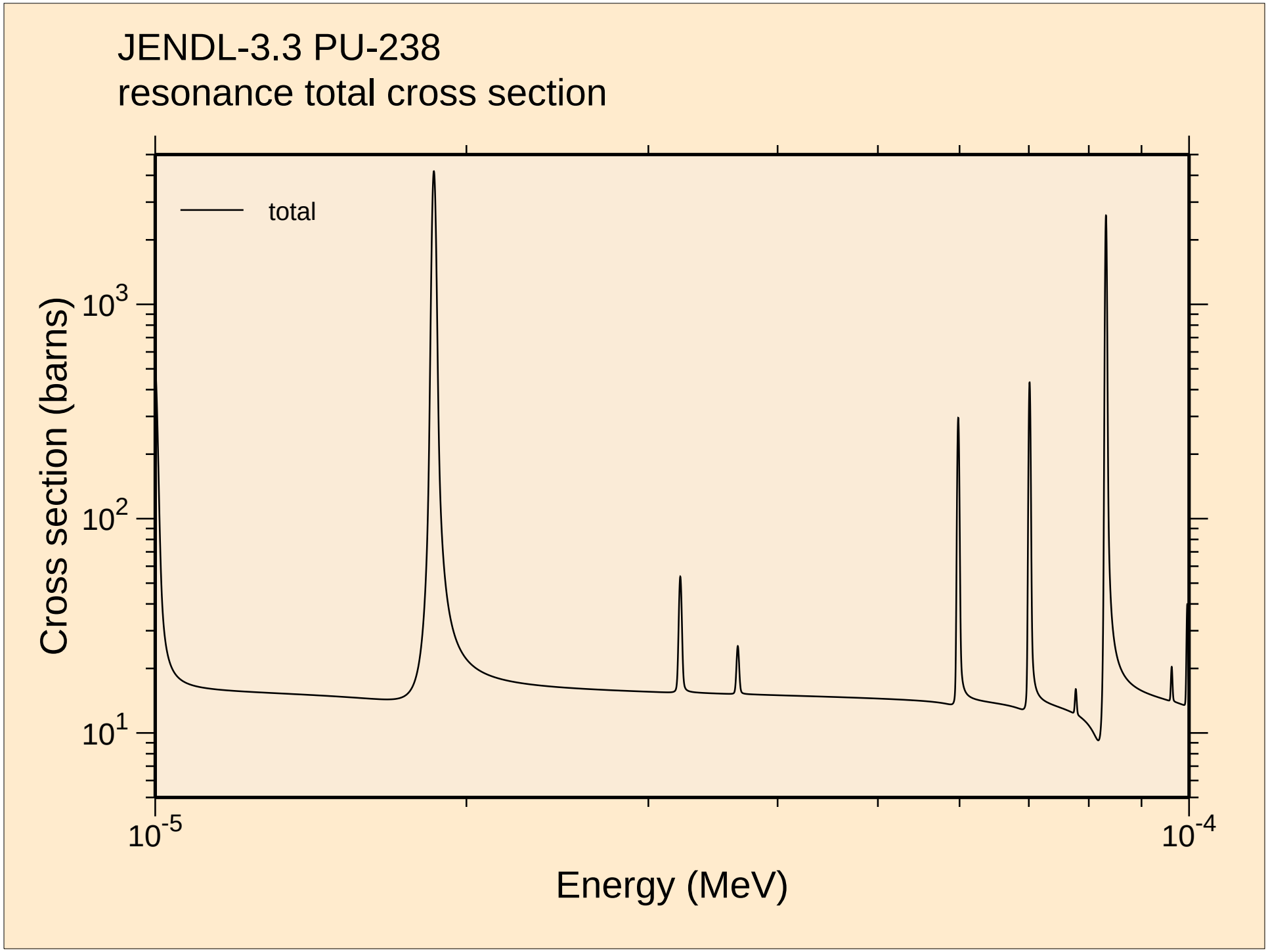
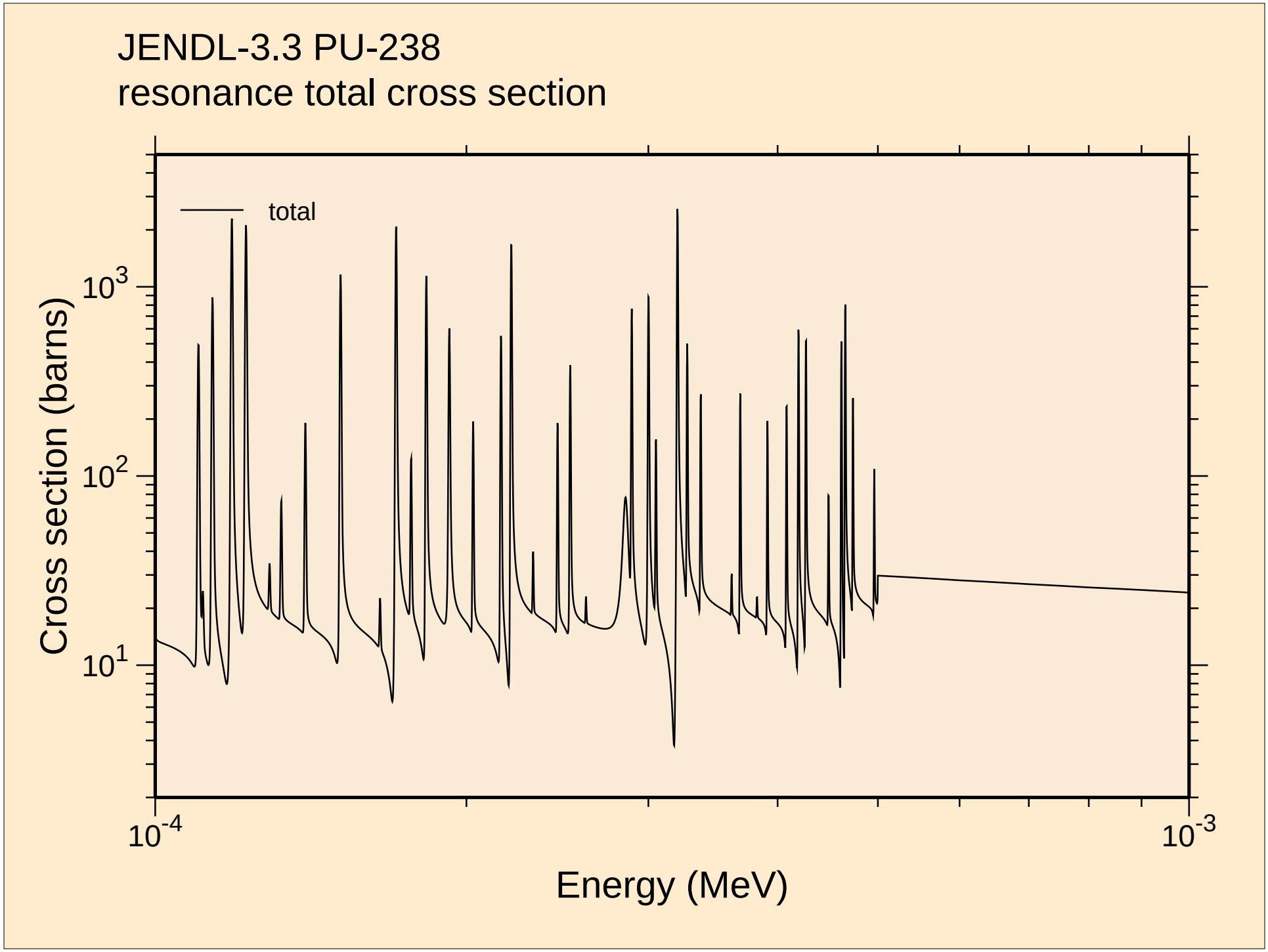
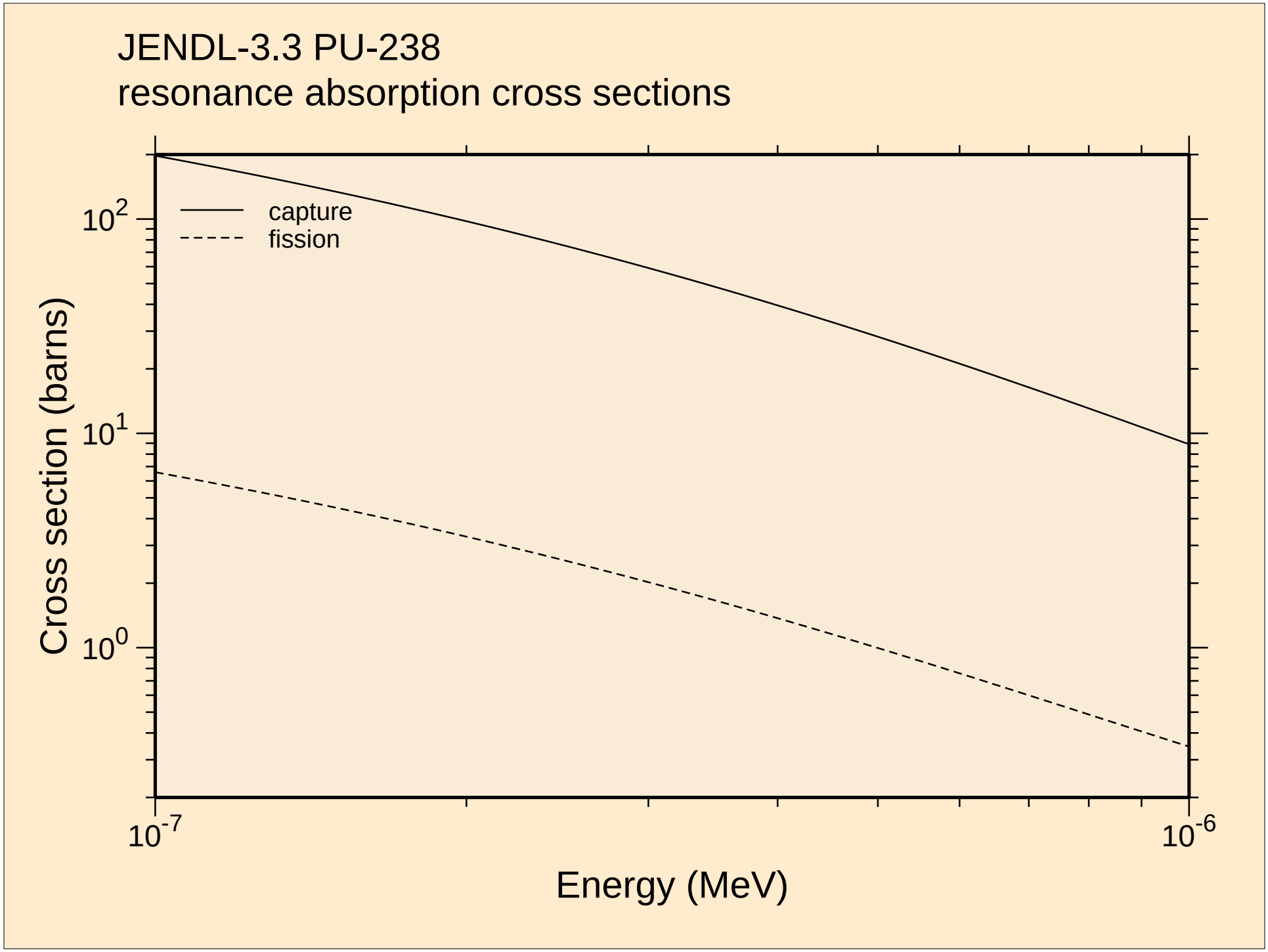
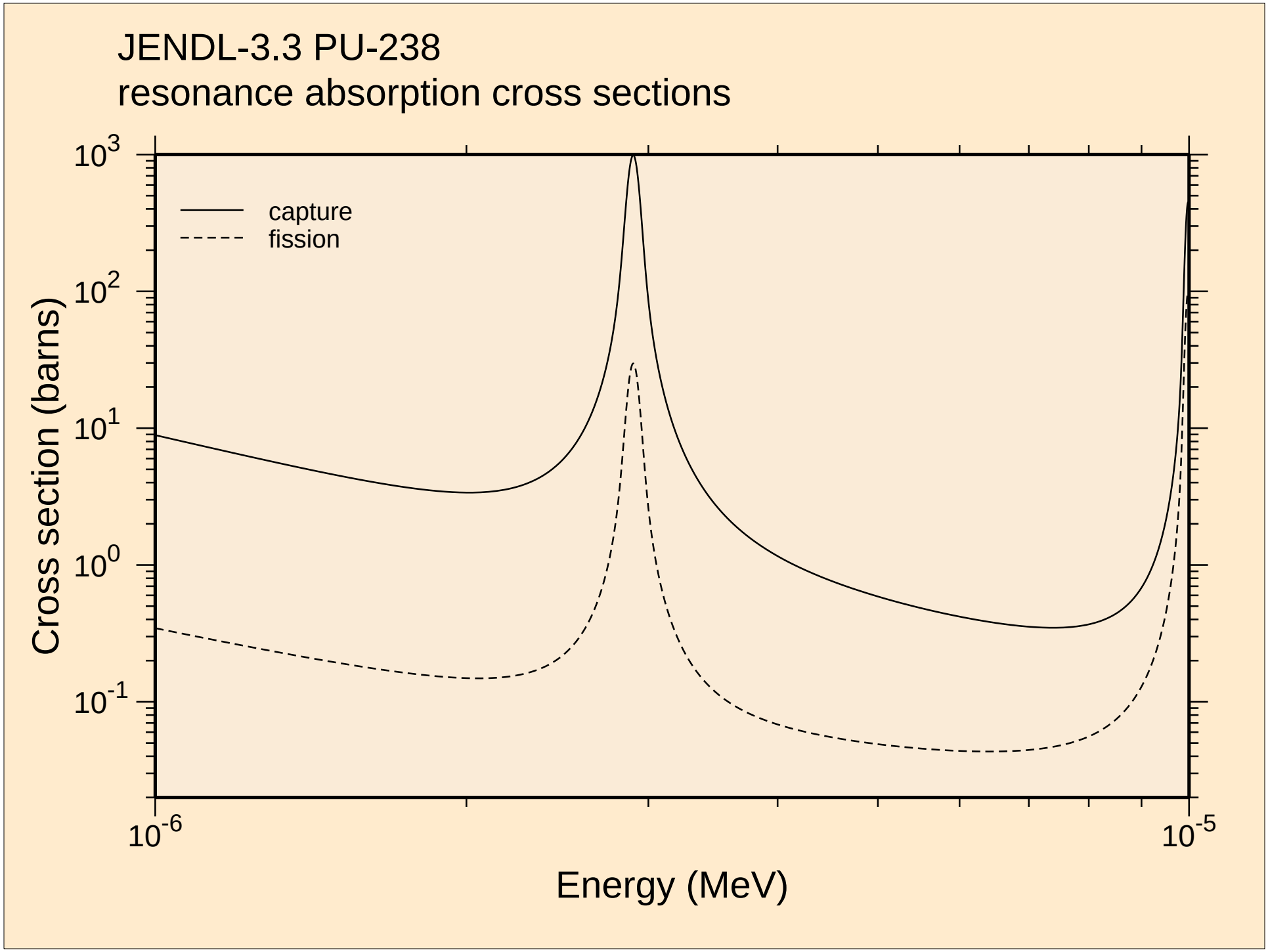

JENDL-3.3 PU-238
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}

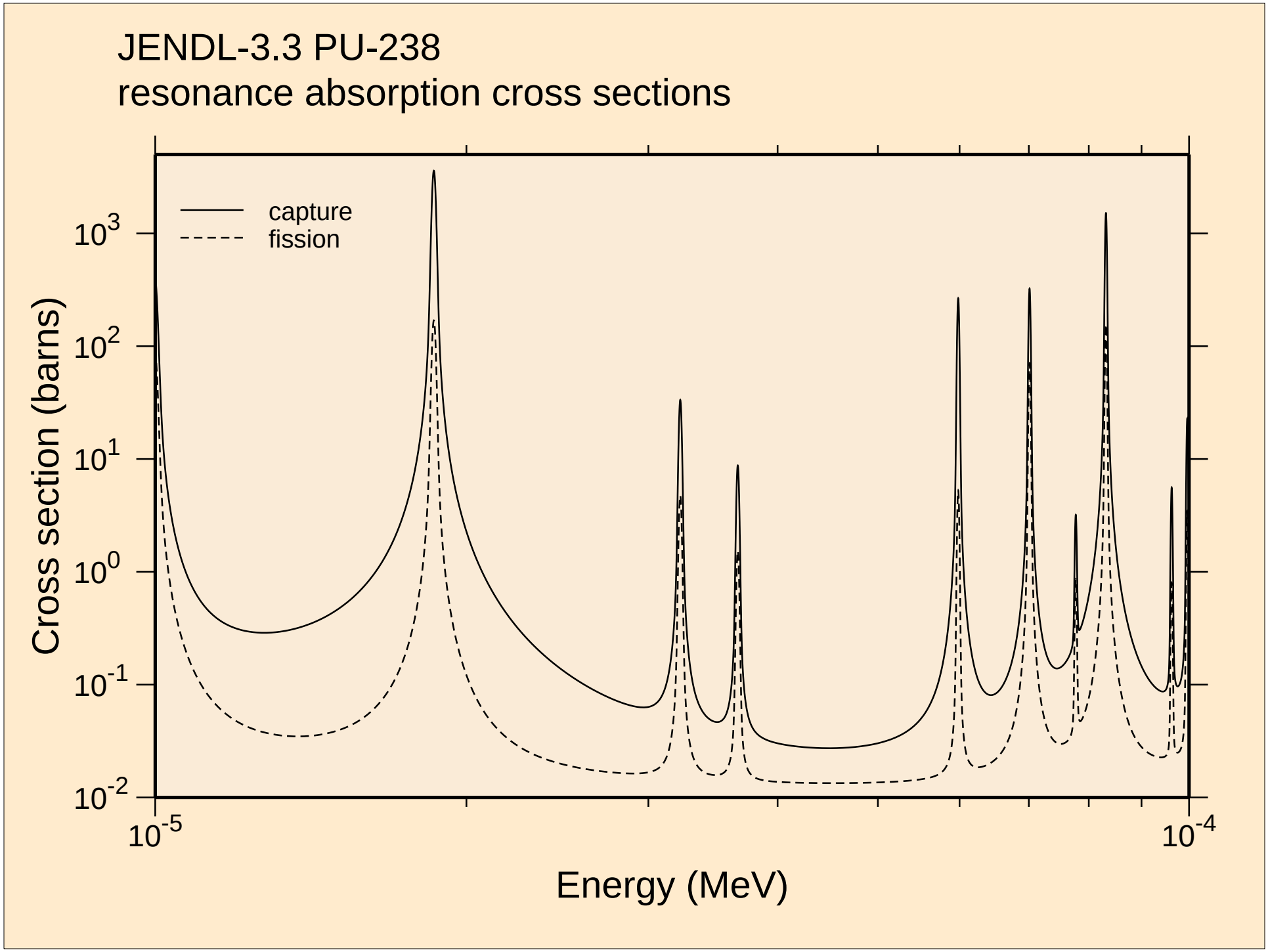

JENDL-3.3 PU-238
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)


JENDL-3.3 PU-238
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^{-5}
10^{-4}
Energy (MeV)

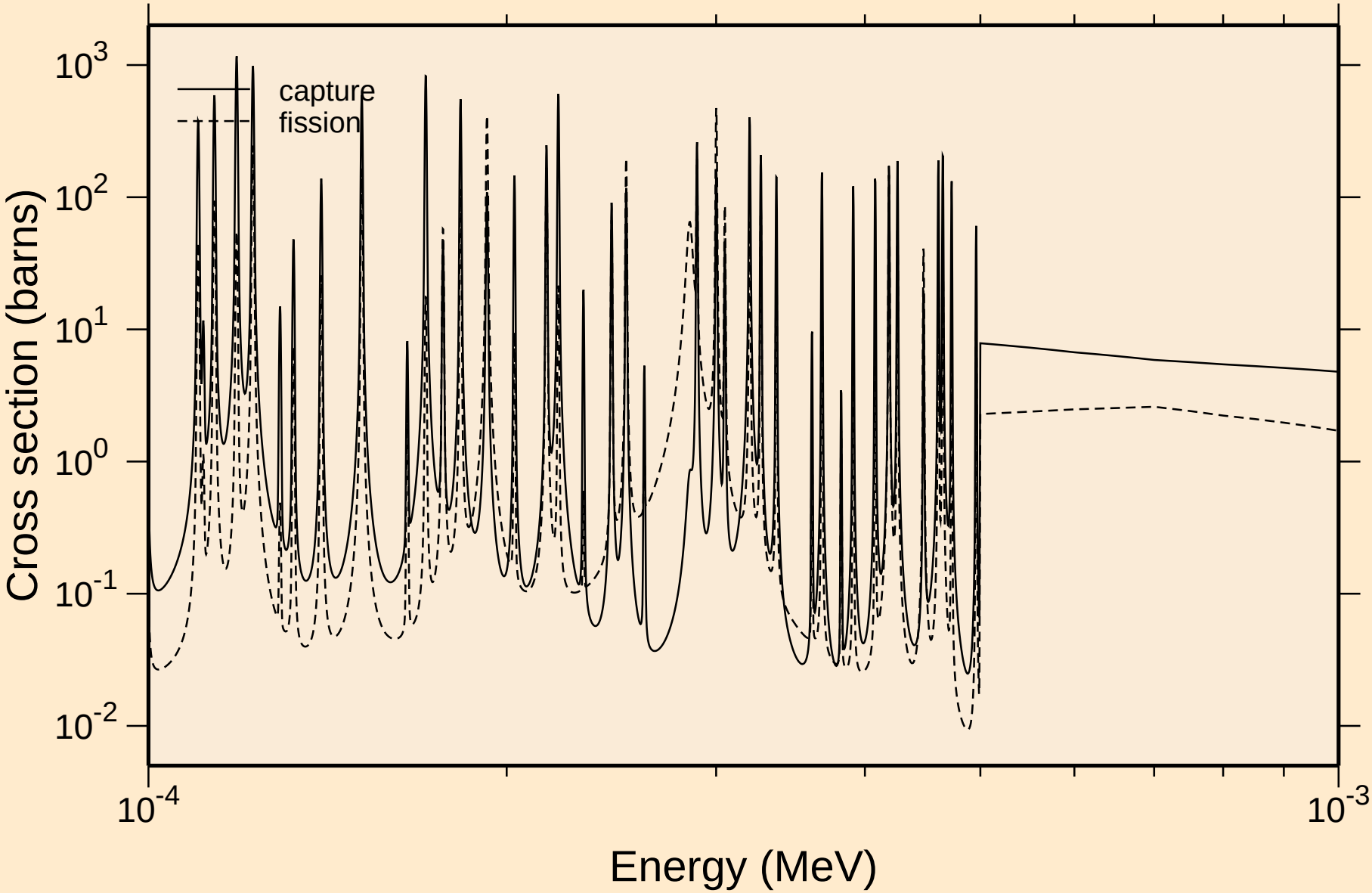

JENDL-3.3 PU-238
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^{-4}
10^{-3}
Energy (MeV)

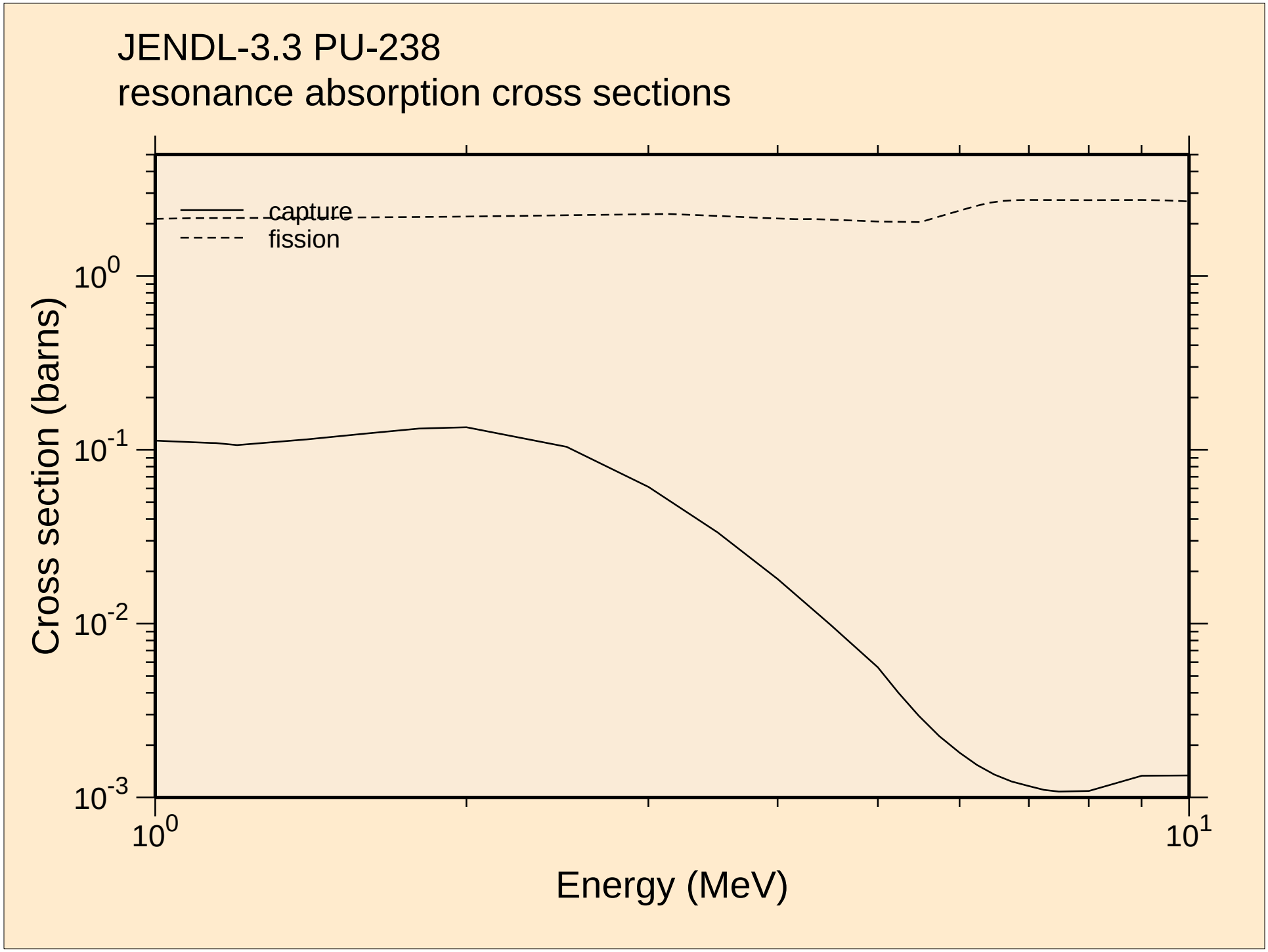

JENDL-3.3 PU-238
resonance absorption cross sections
capture
fission
Cross section (barns)
10^2
10^1
10^0
10^{-7}
10^{-6}
Energy (MeV)

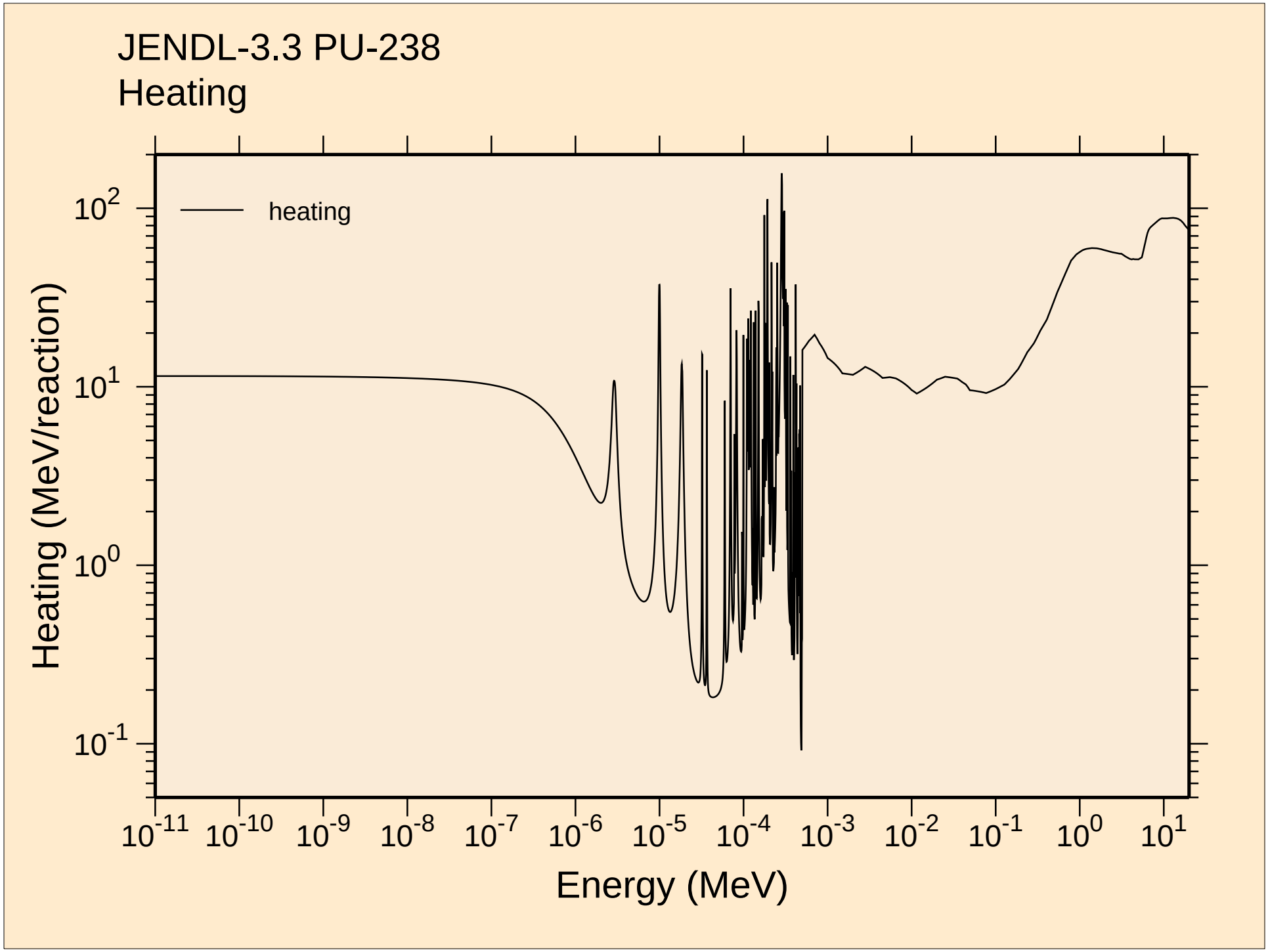

JENDL-3.3 PU-238
resonance absorption cross sections
capture
fission
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-6
10^-5

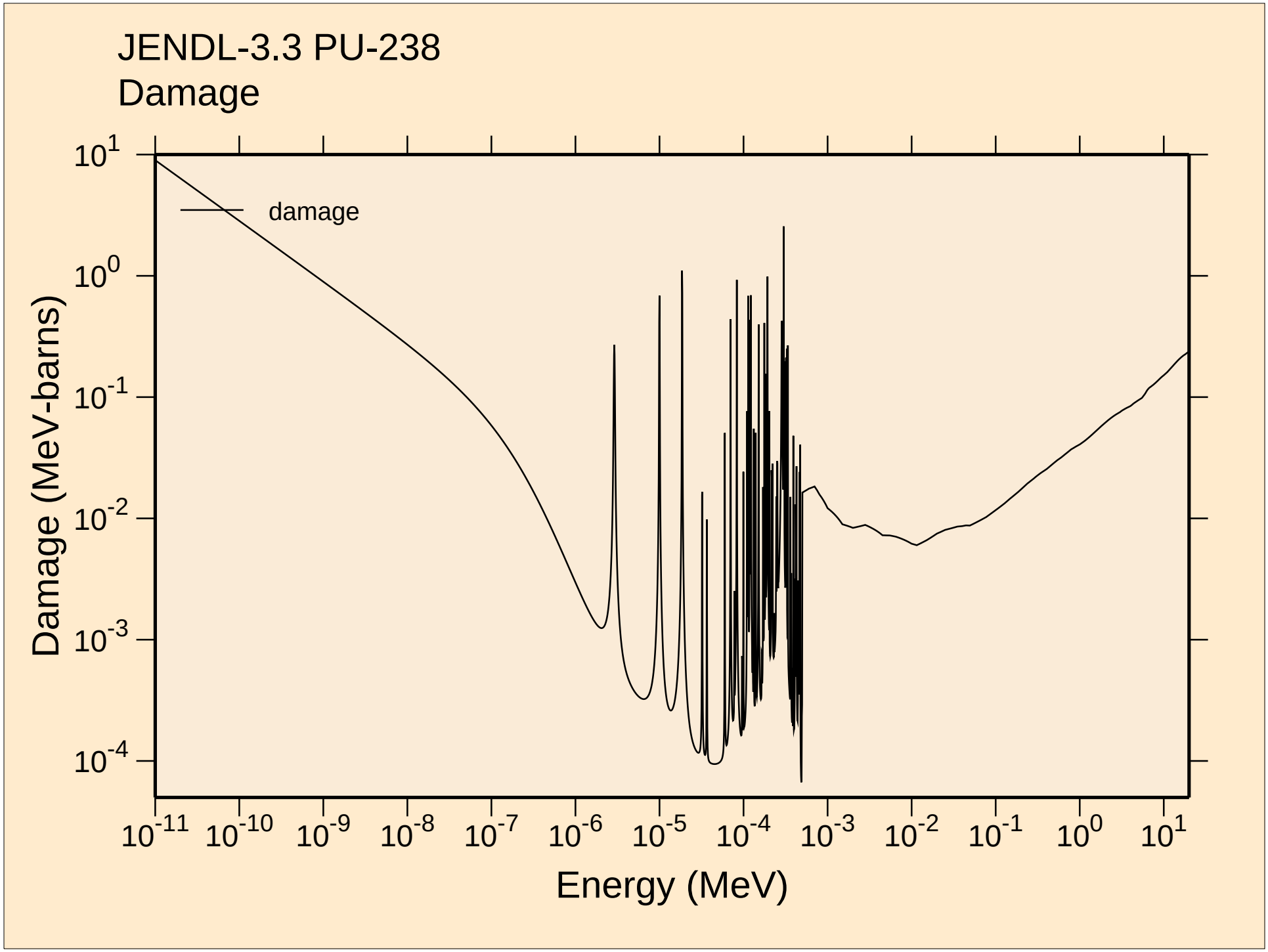

JENDL-3.3 PU-238
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-5}
10^{-4}
Energy (MeV)

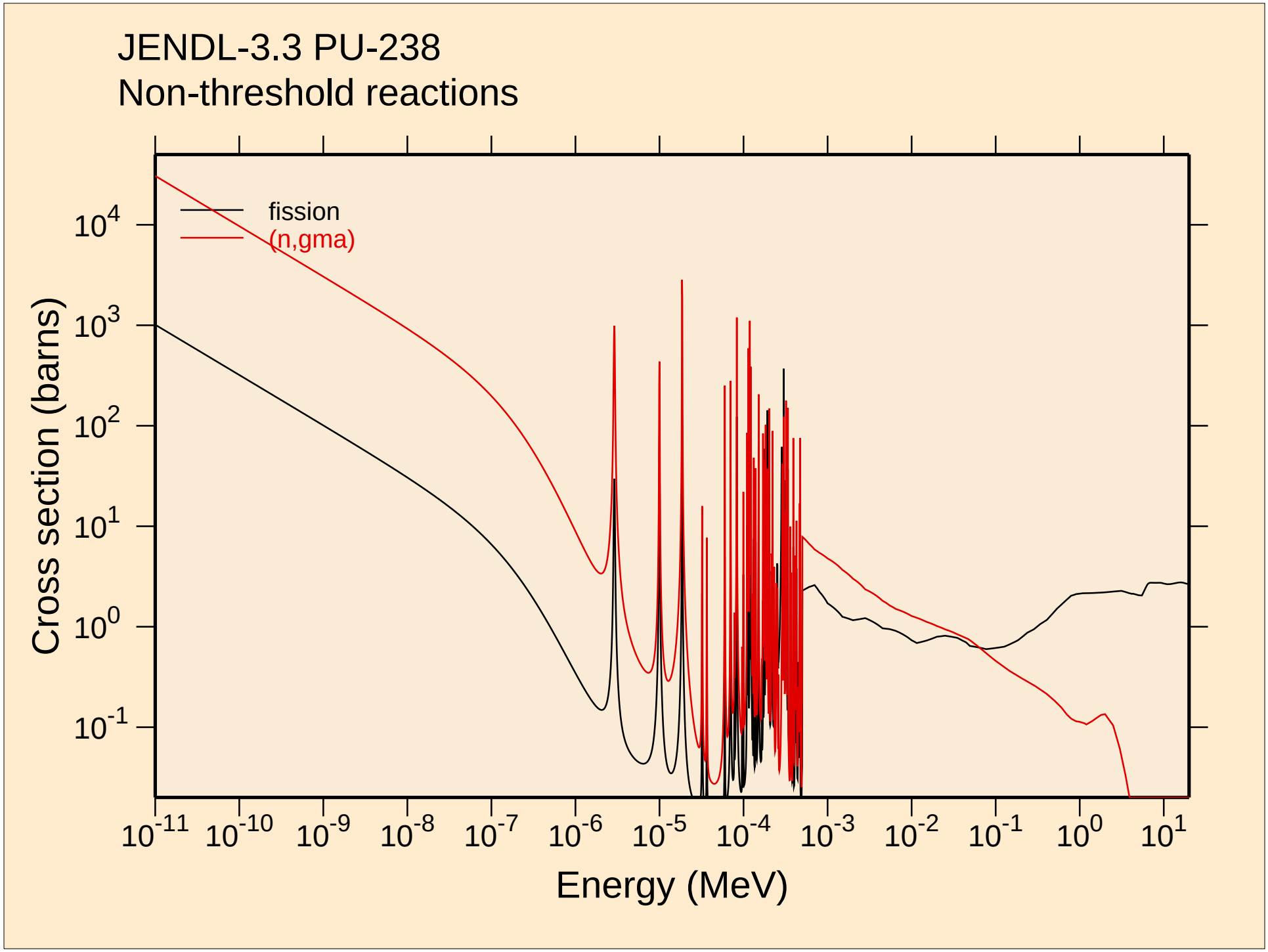
JENDL-3.3 PU-238
resonance absorption cross sections

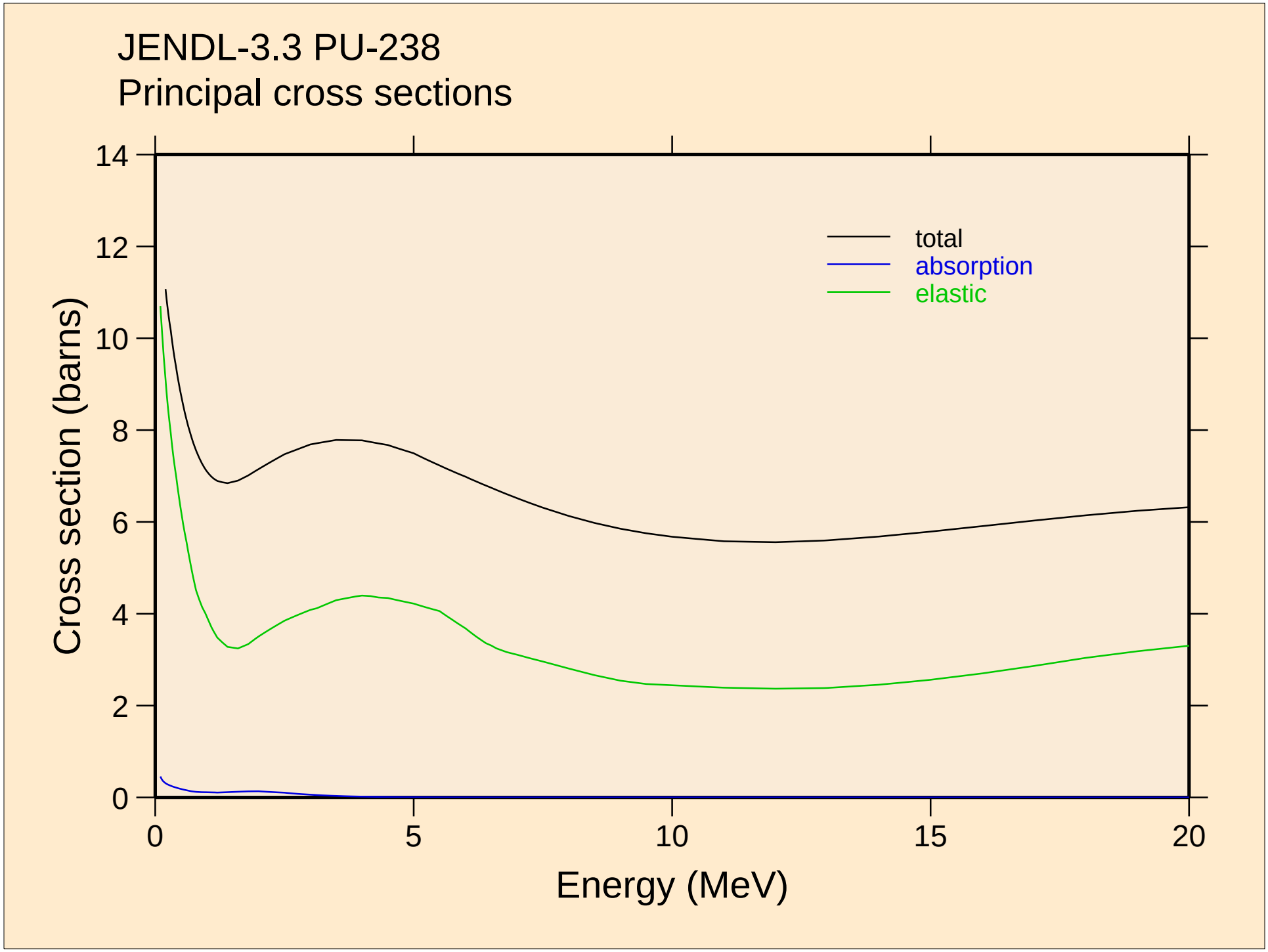


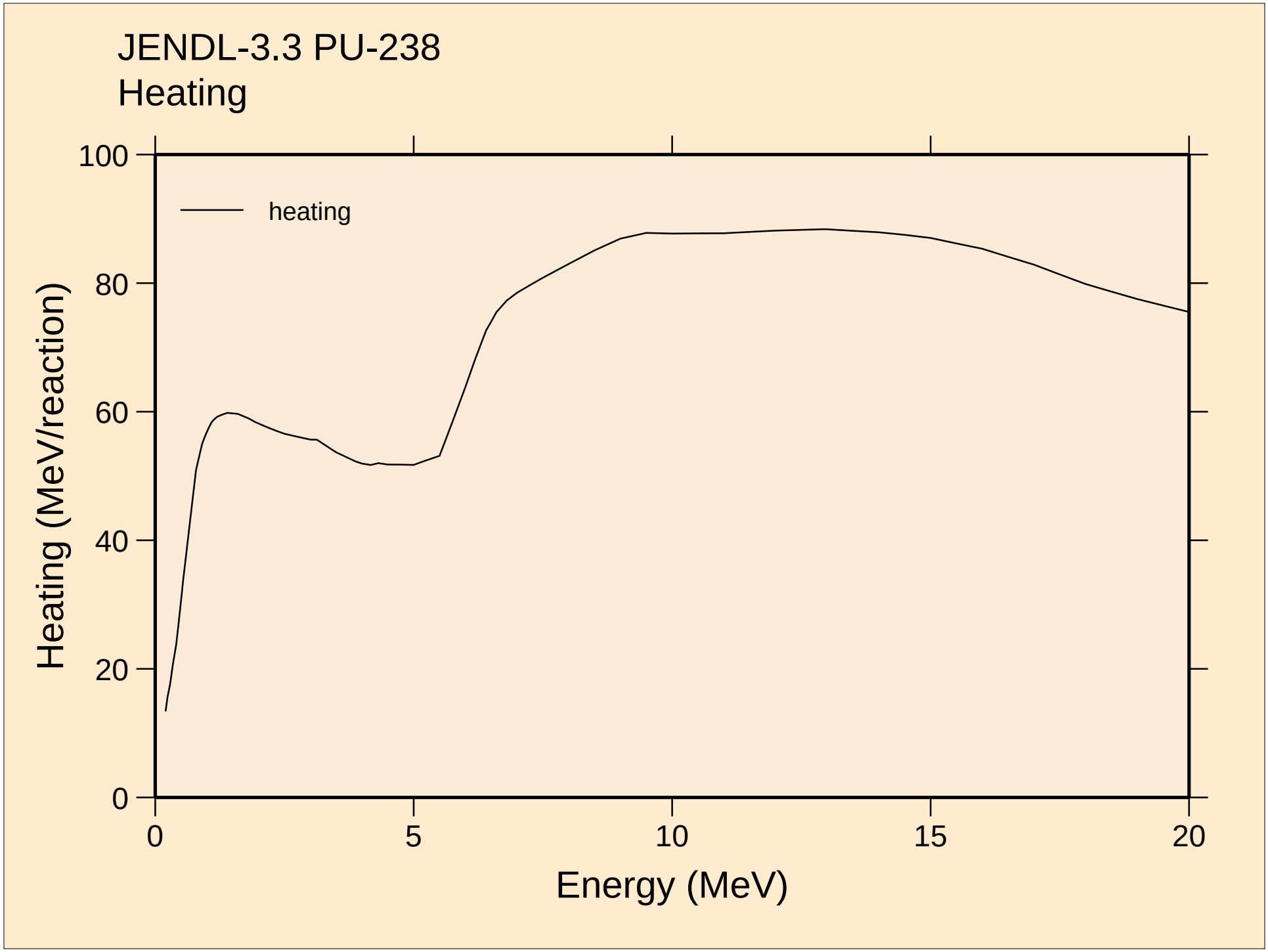

JENDL-3.3 PU-238
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{0}
10^{1}
Energy (MeV)

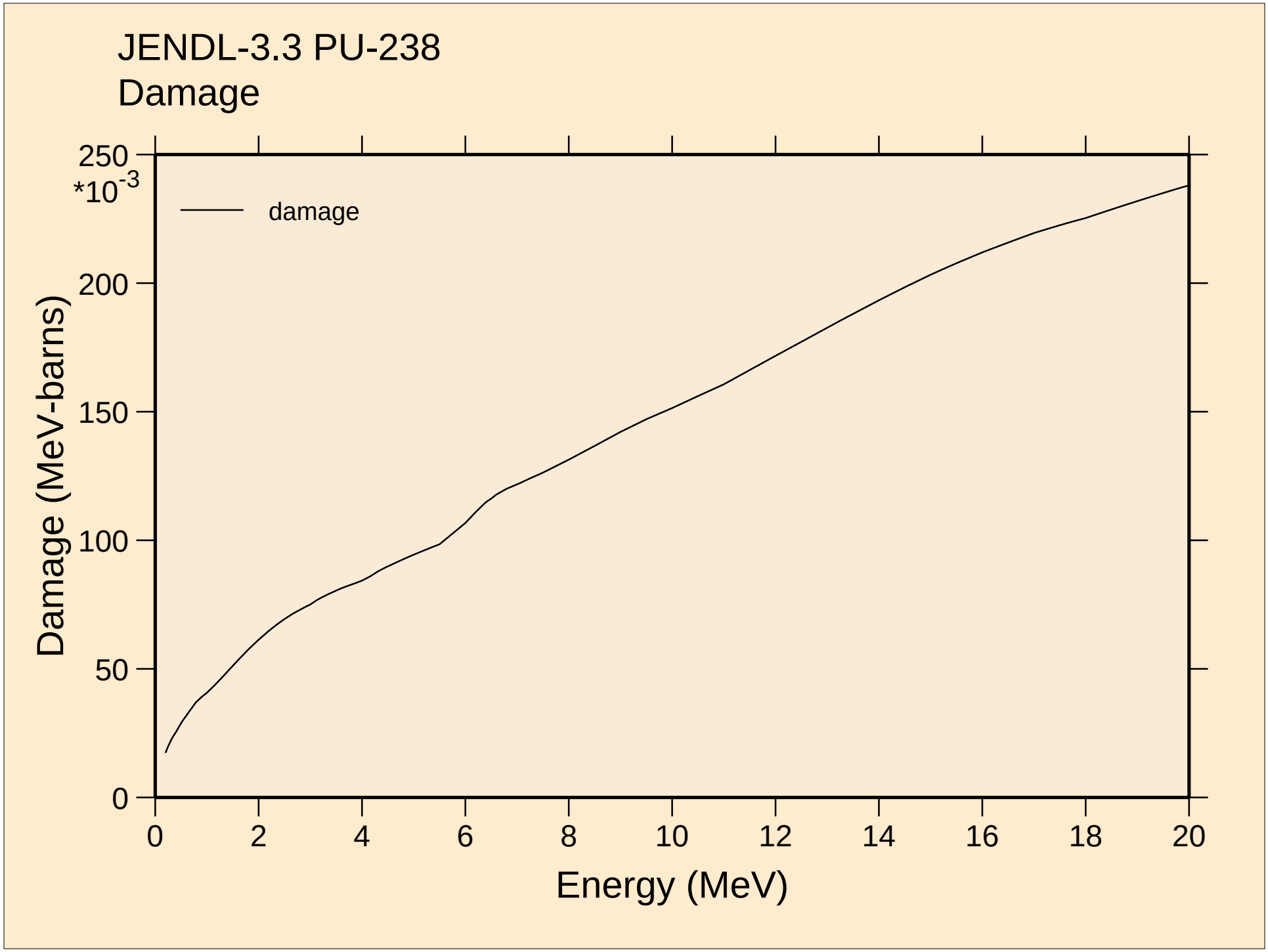

JENDL-3.3 PU-238
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

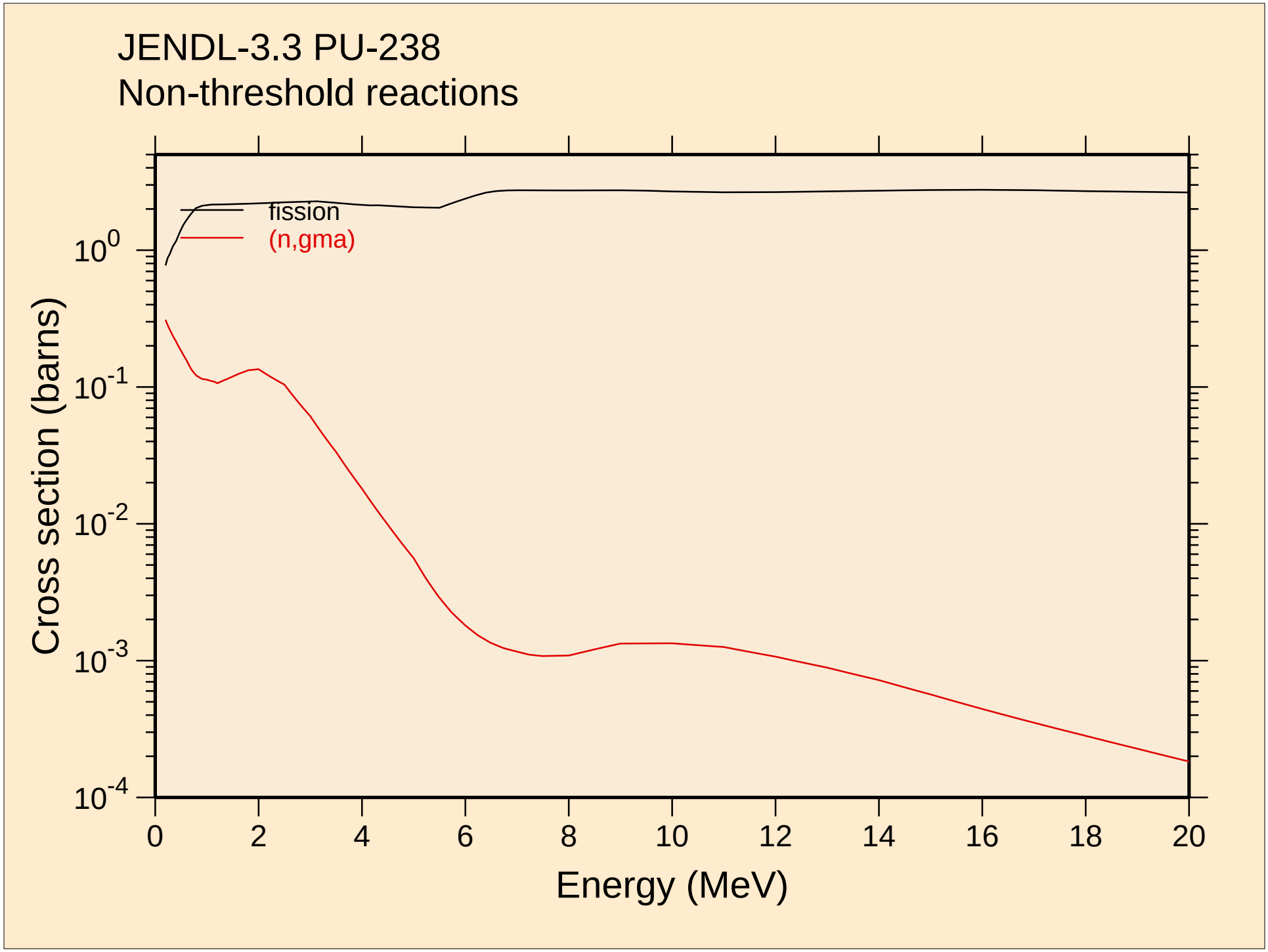

JENDL-3.3 PU-238
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

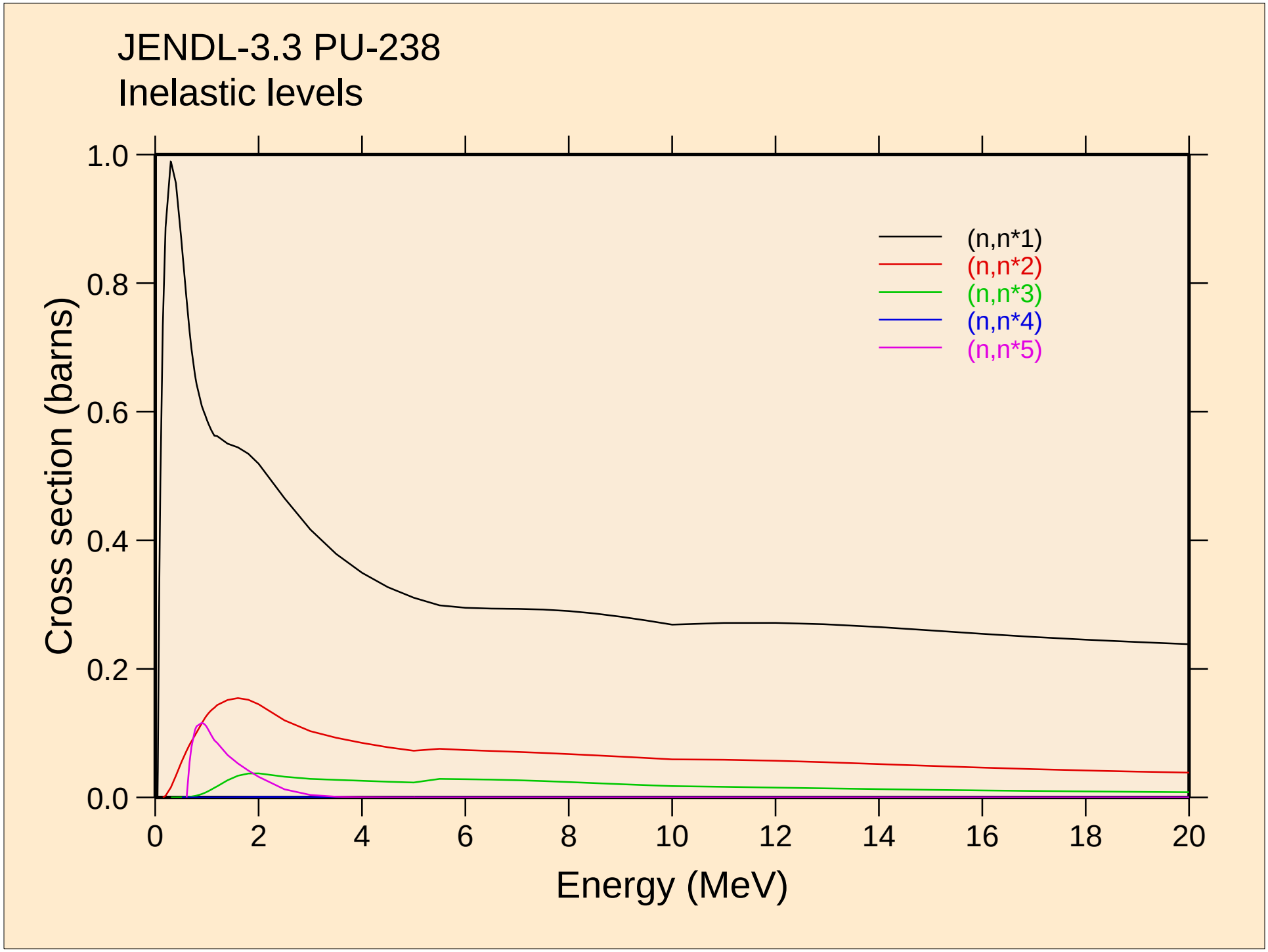

JENDL-3.3 PU-238
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
Energy (MeV)
10^4
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

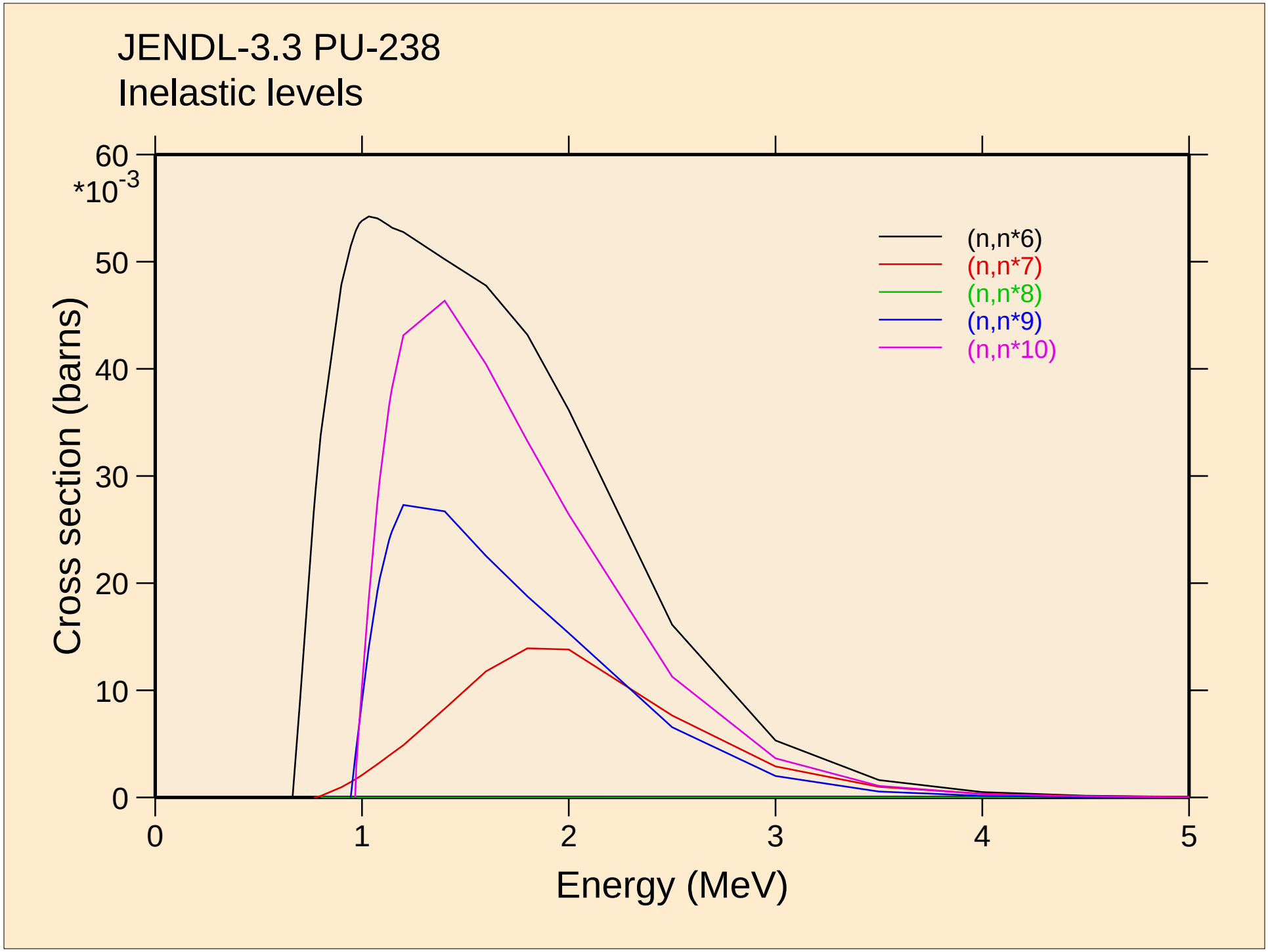

JENDL-3.3 PU-238
Principal cross sections
total
absorption
elastic
Cross section (barns)
Energy (MeV)
0
2
4
6
8
10
12
14
0
5
10
15
20

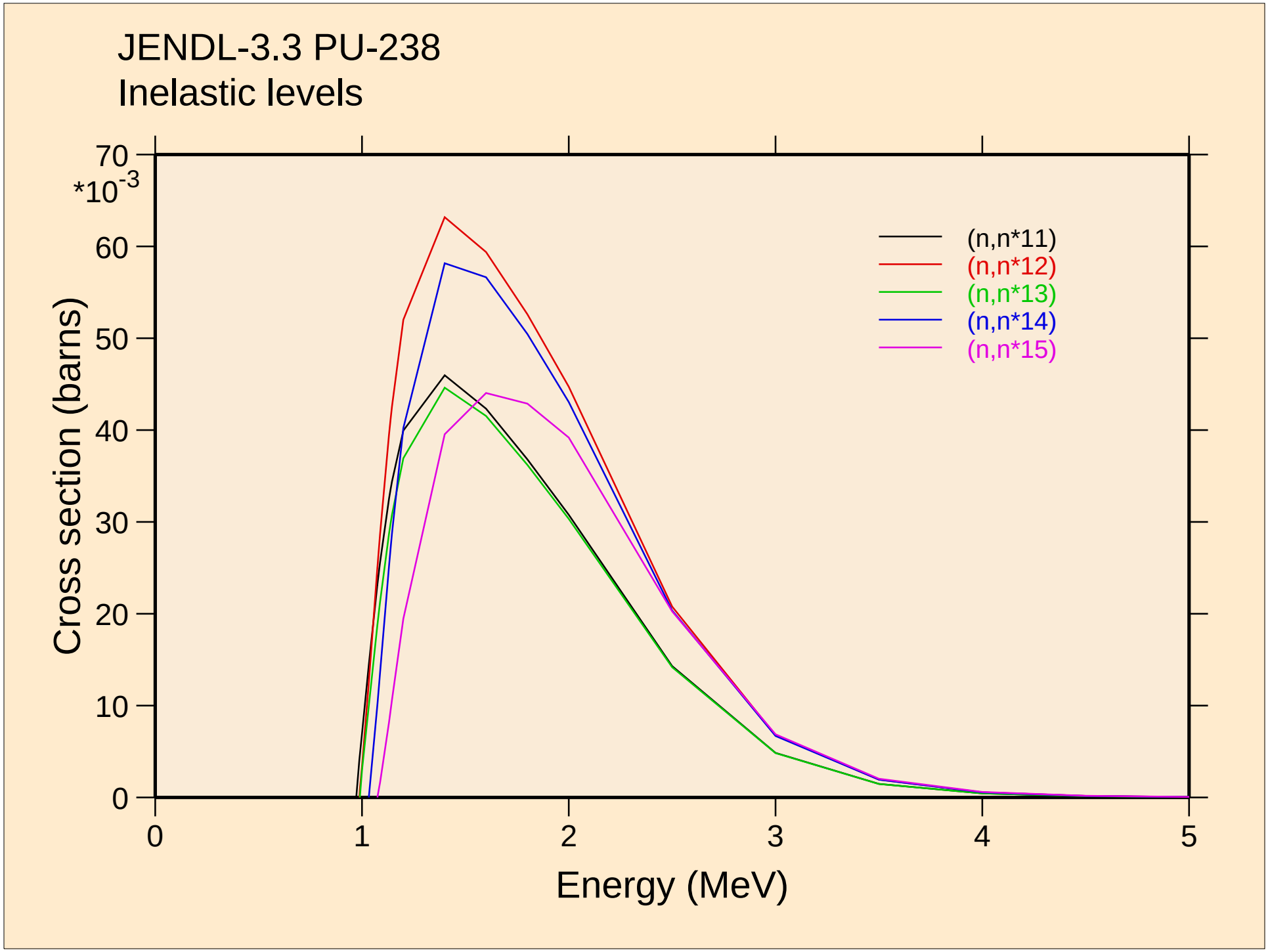

JENDL-3.3 PU-238
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
20
40
60
80
100
0
5
10
15
20

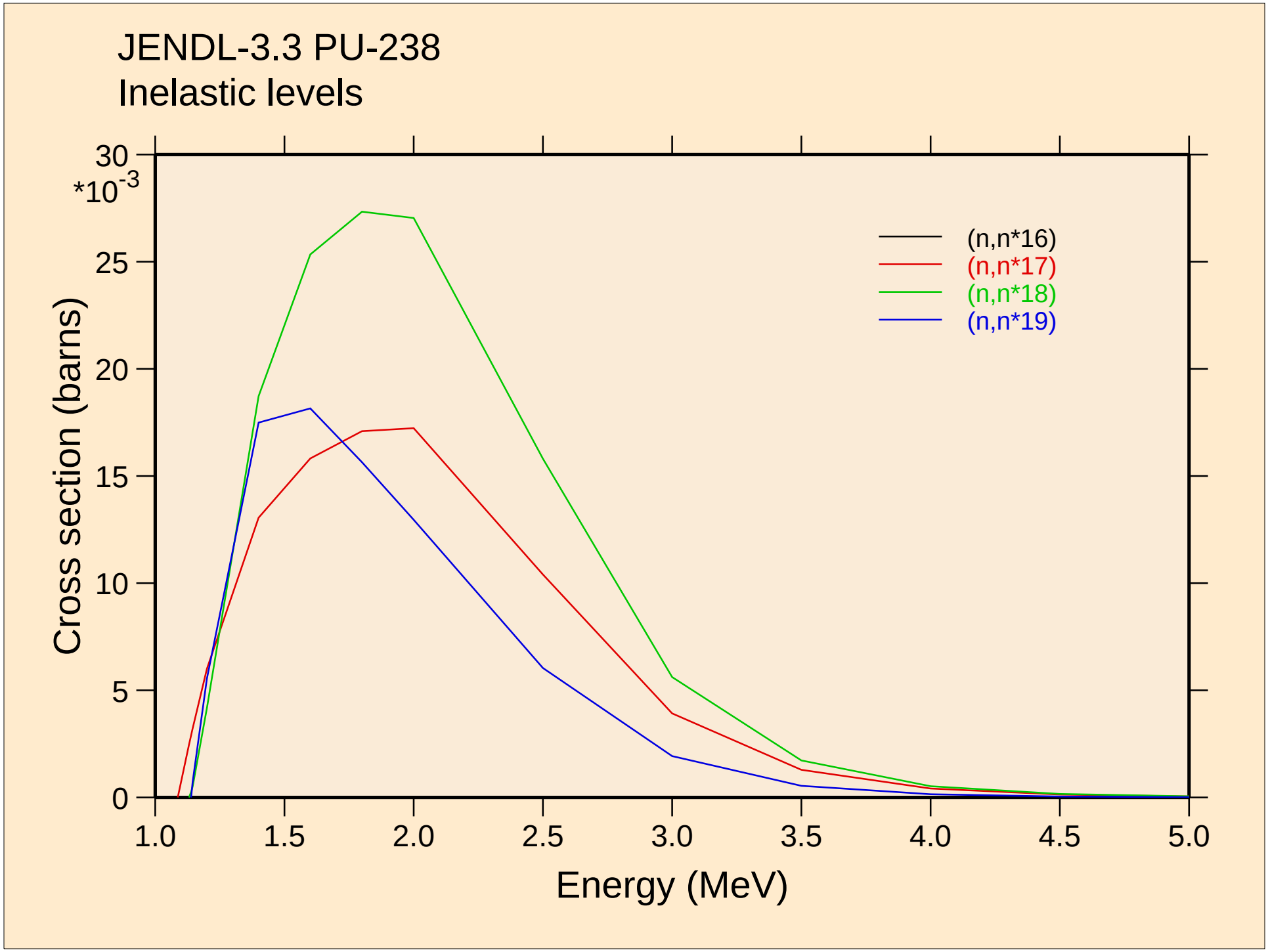

JENDL-3.3 PU-238
Damage
damage
Damage (MeV-barns)
*10-3
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

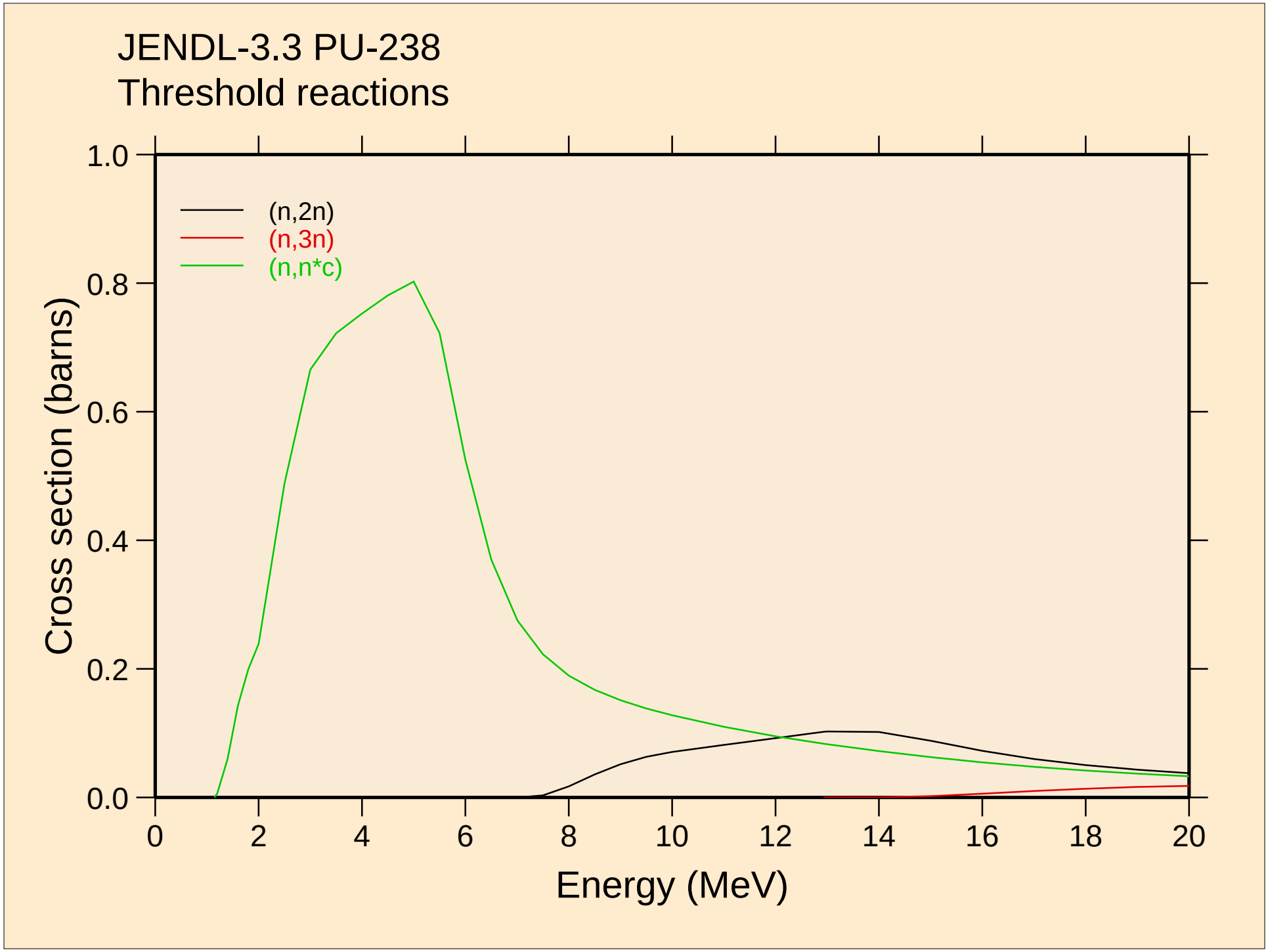

JENDL-3.3 PU-238
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

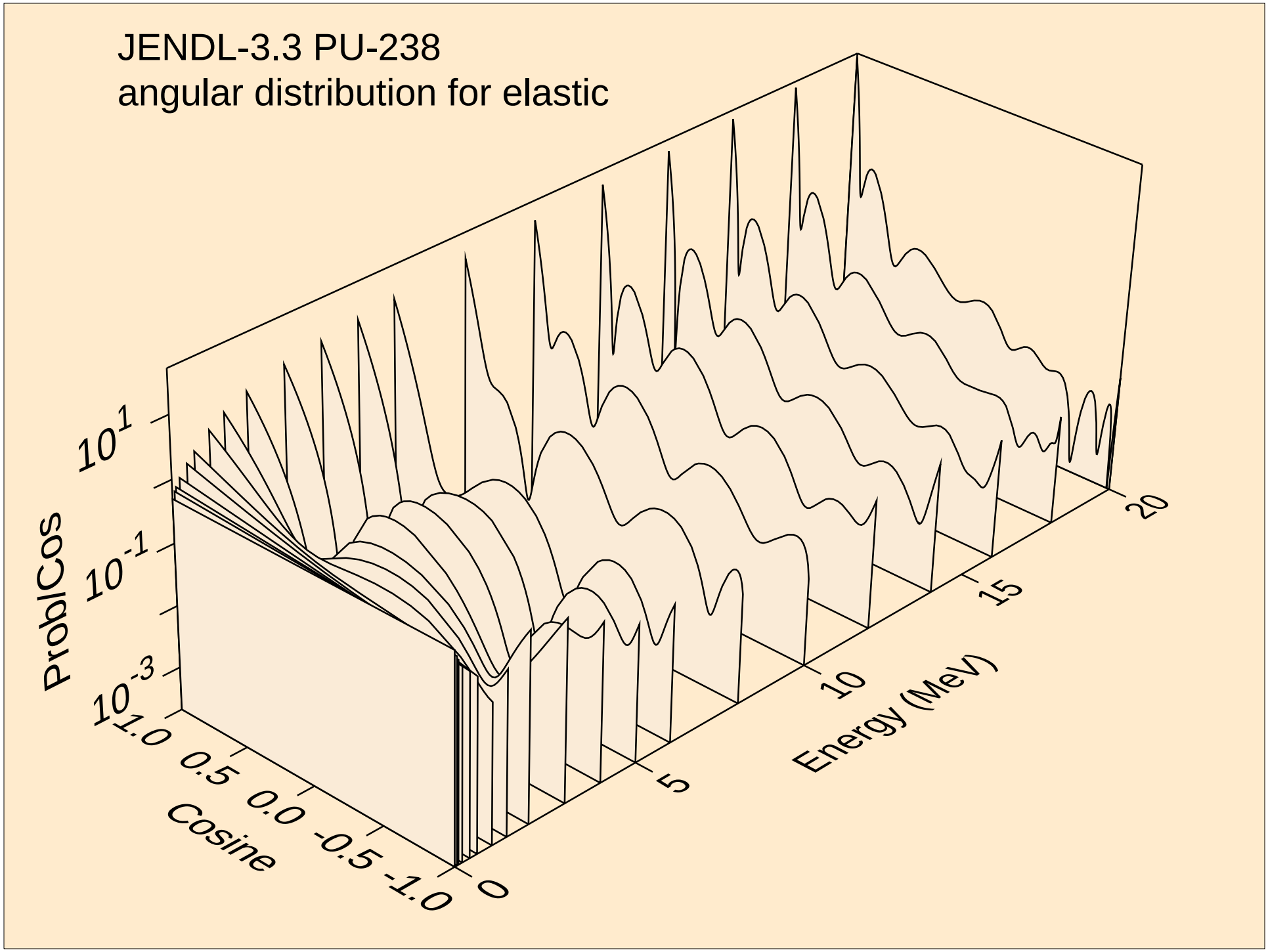

JENDL-3.3 PU-238
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
0.0
0.2
0.4
0.6
0.8
1.0
0
2
4
6
8
10
12
14
16
18
20

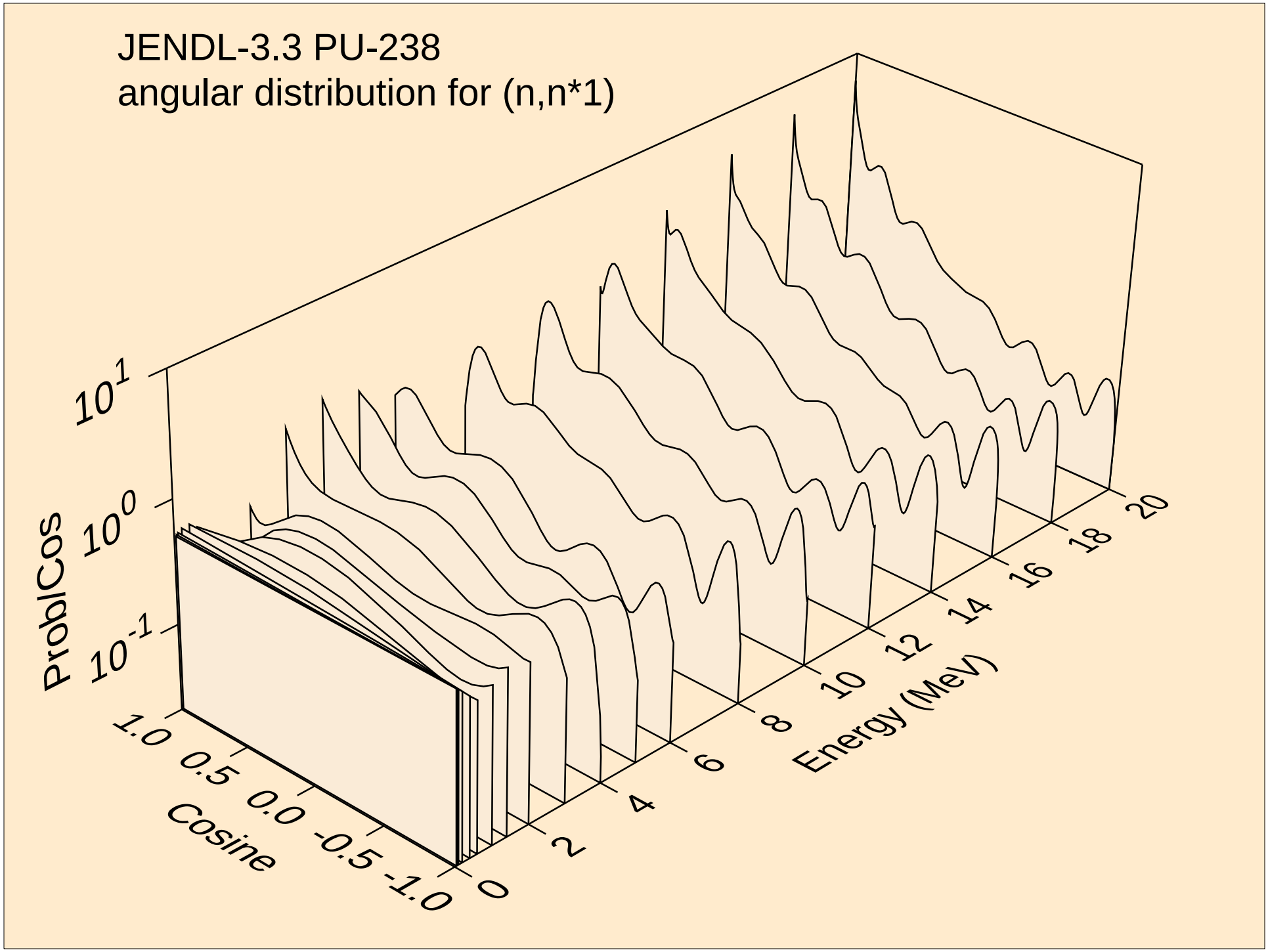

JENDL-3.3 PU-238
Inelastic levels
60
*10-3
50
40
30
20
10
0
Cross section (barns)
0
1
2
3
4
5
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

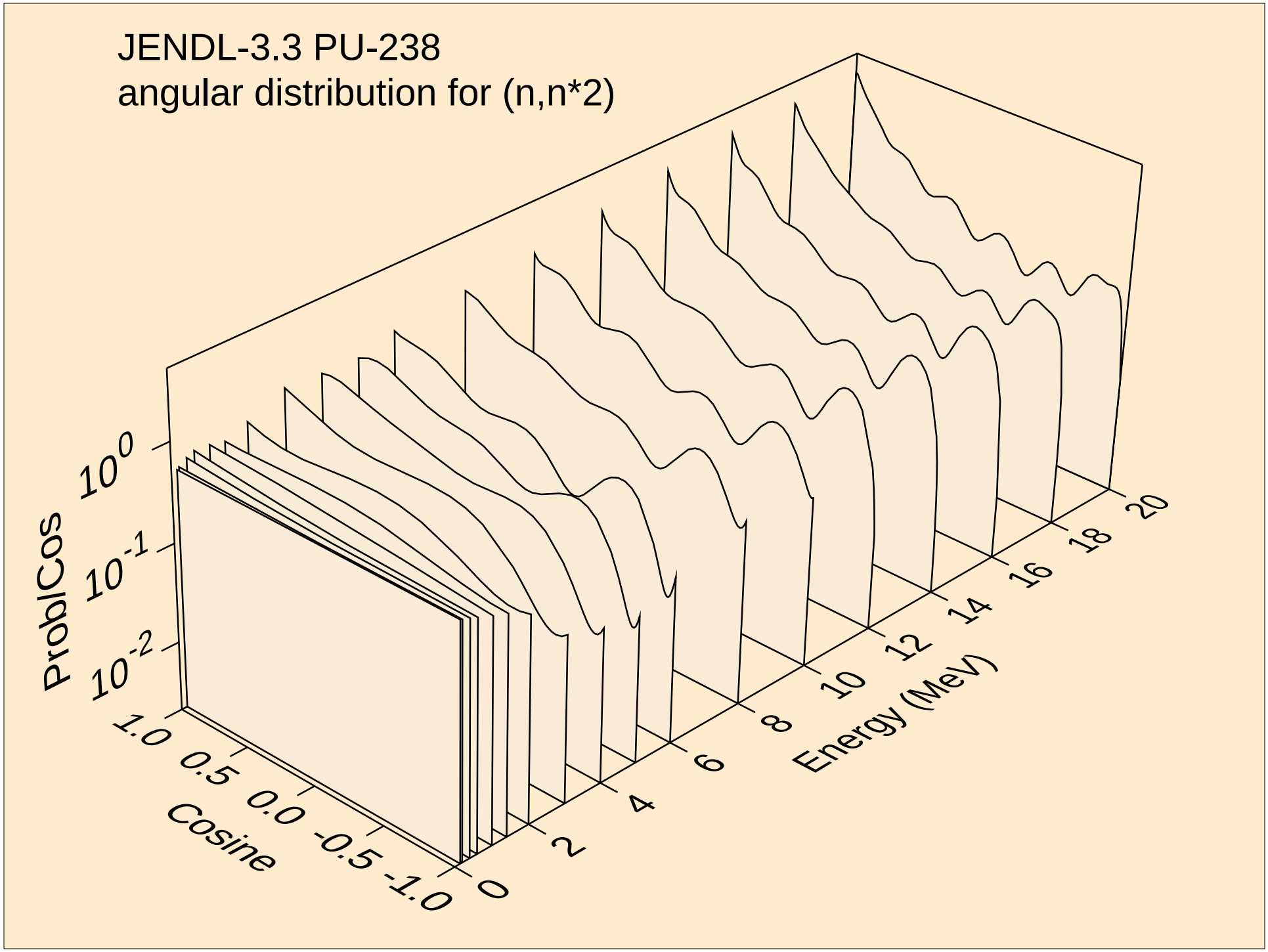

JENDL-3.3 PU-238
Inelastic levels
70
*10-3
60
50
40
30
20
10
0
Cross section (barns)
0
1
2
3
4
5
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

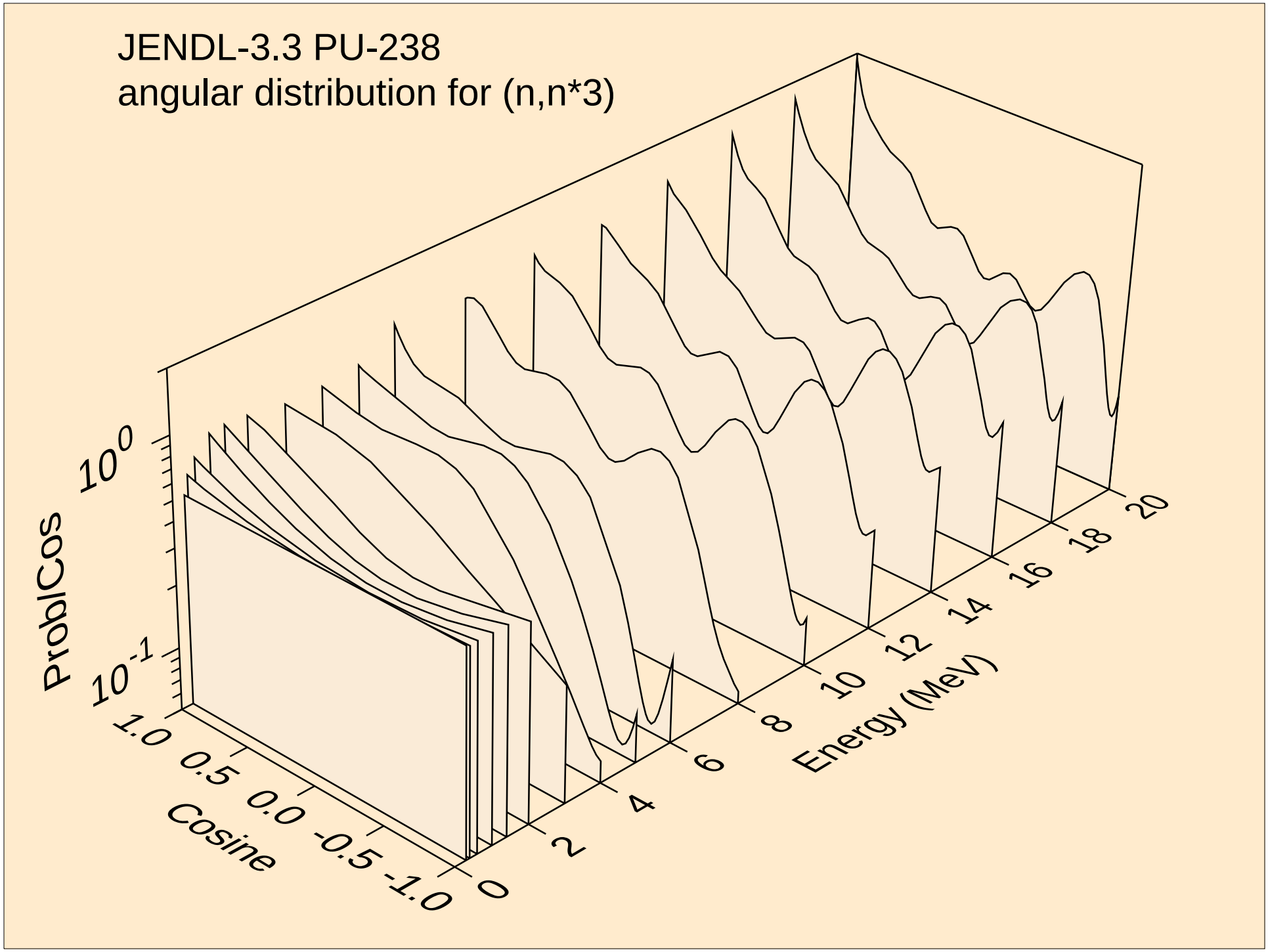

JENDL-3.3 PU-238
Inelastic levels
*10-3
30
25
20
15
10
5
0
Cross section (barns)
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Energy (MeV)
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)

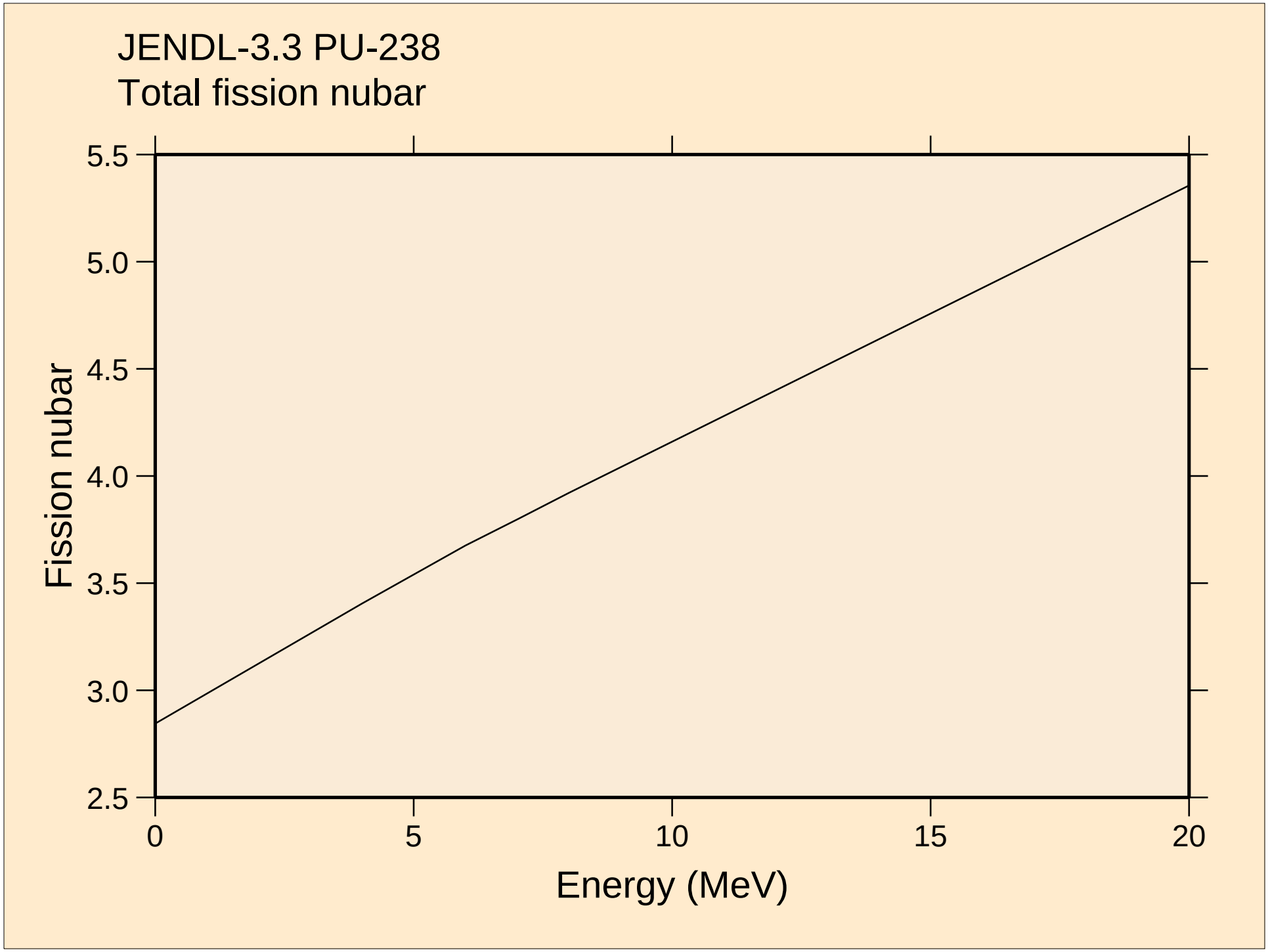

JENDL-3.3 PU-238
Threshold reactions
(n,2n)
(n,3n)
(n,n*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
0
2
4
6
8
10
12
14
16
18
20

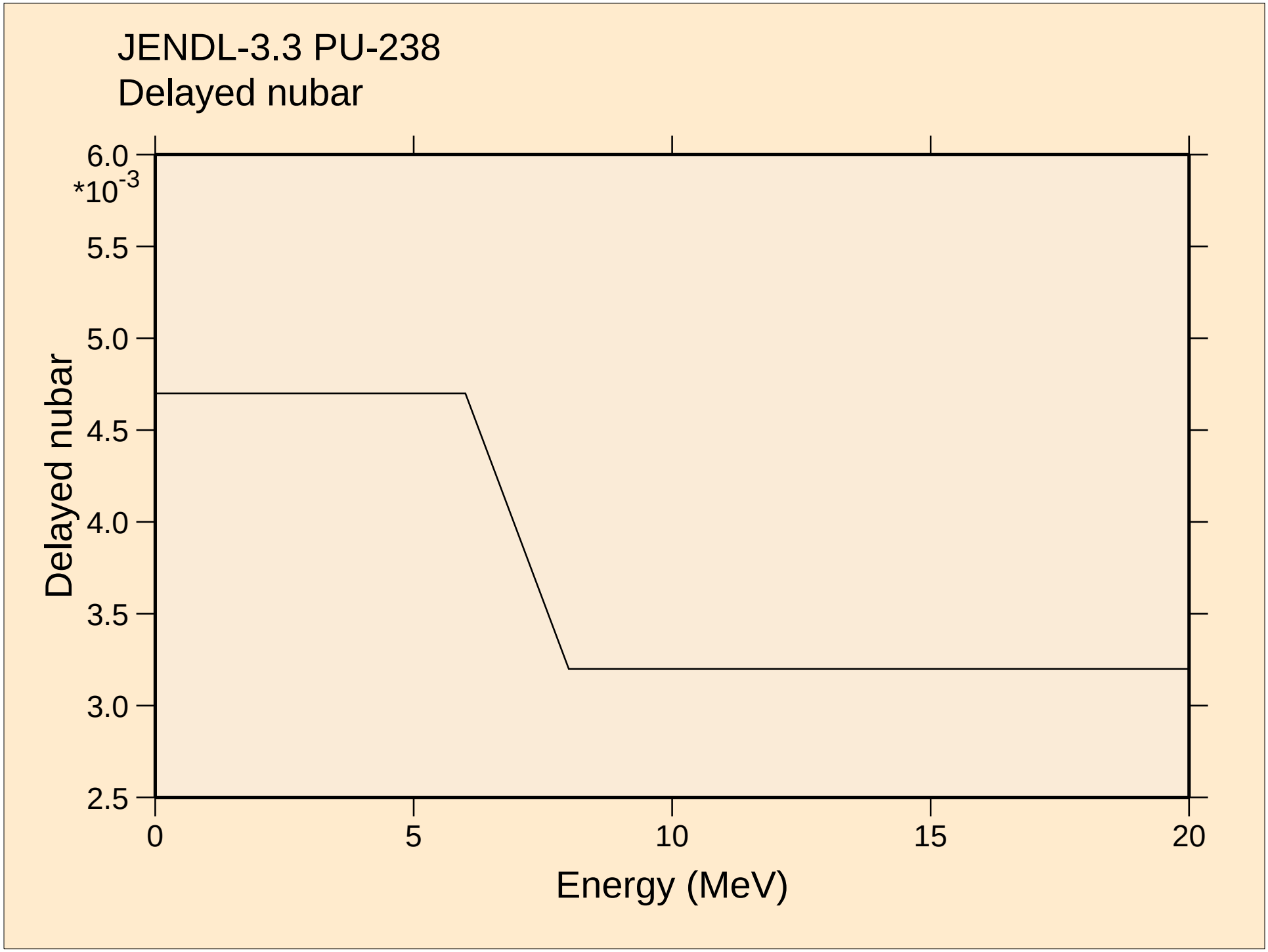

JENDL-3.3 PU-238
angular distribution for elastic
ProblCos
10^{1}
10^{-1}
10^{-3}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

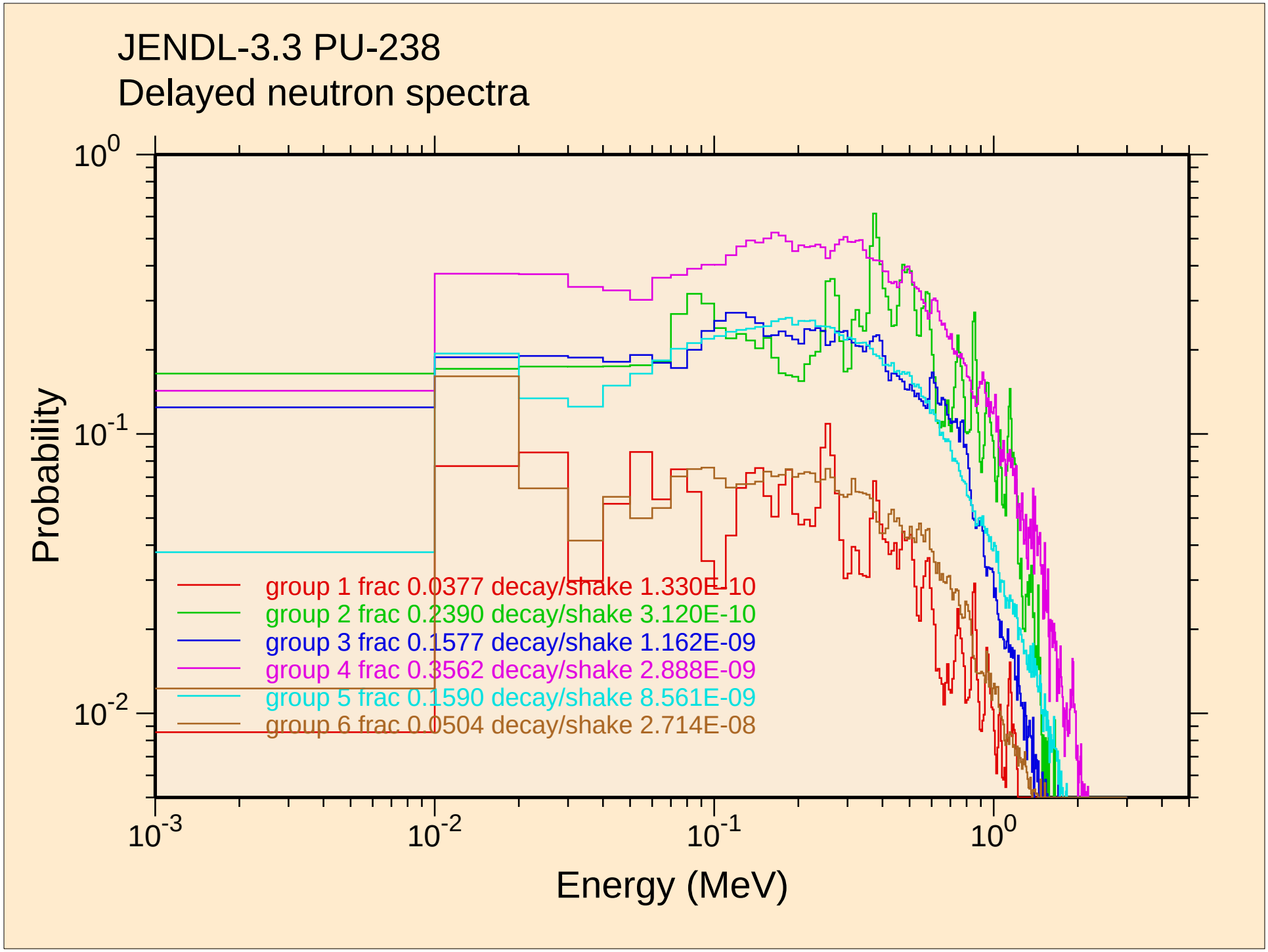

JENDL-3.3 PU-238
angular distribution for (n,n*1)
Prob/Cos
10^{1}
10^{0}
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20


JENDL-3.3 PU-238
angular distribution for (n,n*2)
ProbCos
10^{0}
10^{-1}
10^{-2}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20


JENDL-3.3 PU-238
angular distribution for (n,n*3)
ProbCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20


JENDL-3.3 PU-238
Total fission nubar
Fission nubar
5.5
5.0
4.5
4.0
3.5
3.0
2.5
0
5
10
15
20
Energy (MeV)


JENDL-3.3 PU-238
Delayed nubar
6.0
*10-3
5.5
5.0
4.5
4.0
3.5
3.0
2.5
Delayed nubar
0
5
10
15
20
Energy (MeV)


JENDL-3.3 PU-238
Delayed neutron spectra
Probability
Energy (MeV)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-2}
10^{-1}
10^{0}
group 1 frac 0.0377 decay/shake 1.330E-10
group 2 frac 0.2390 decay/shake 3.120E-10
group 3 frac 0.1577 decay/shake 1.162E-09
group 4 frac 0.3562 decay/shake 2.888E-09
group 5 frac 0.1590 decay/shake 8.561E-09
group 6 frac 0.0504 decay/shake 2.714E-08