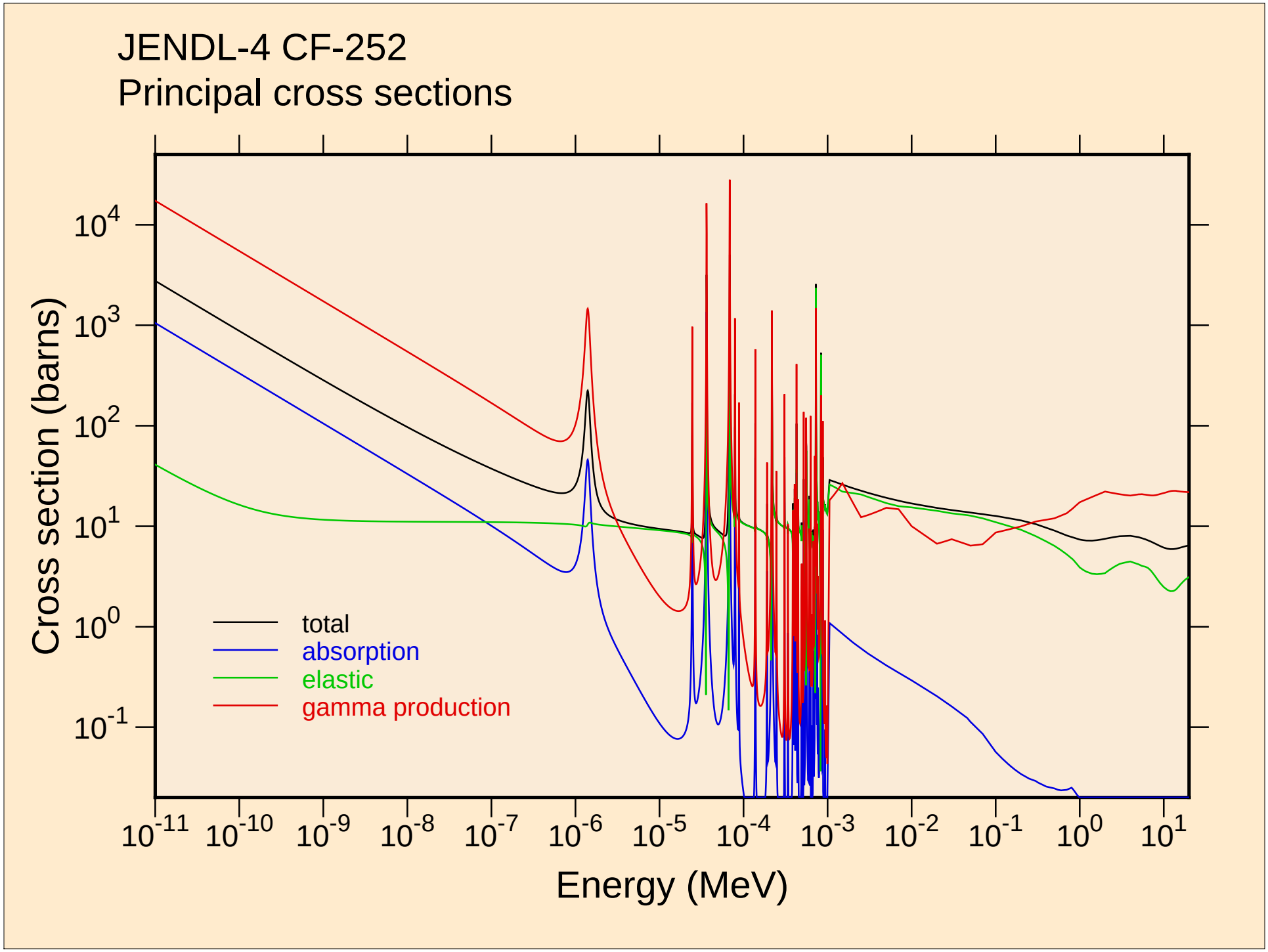
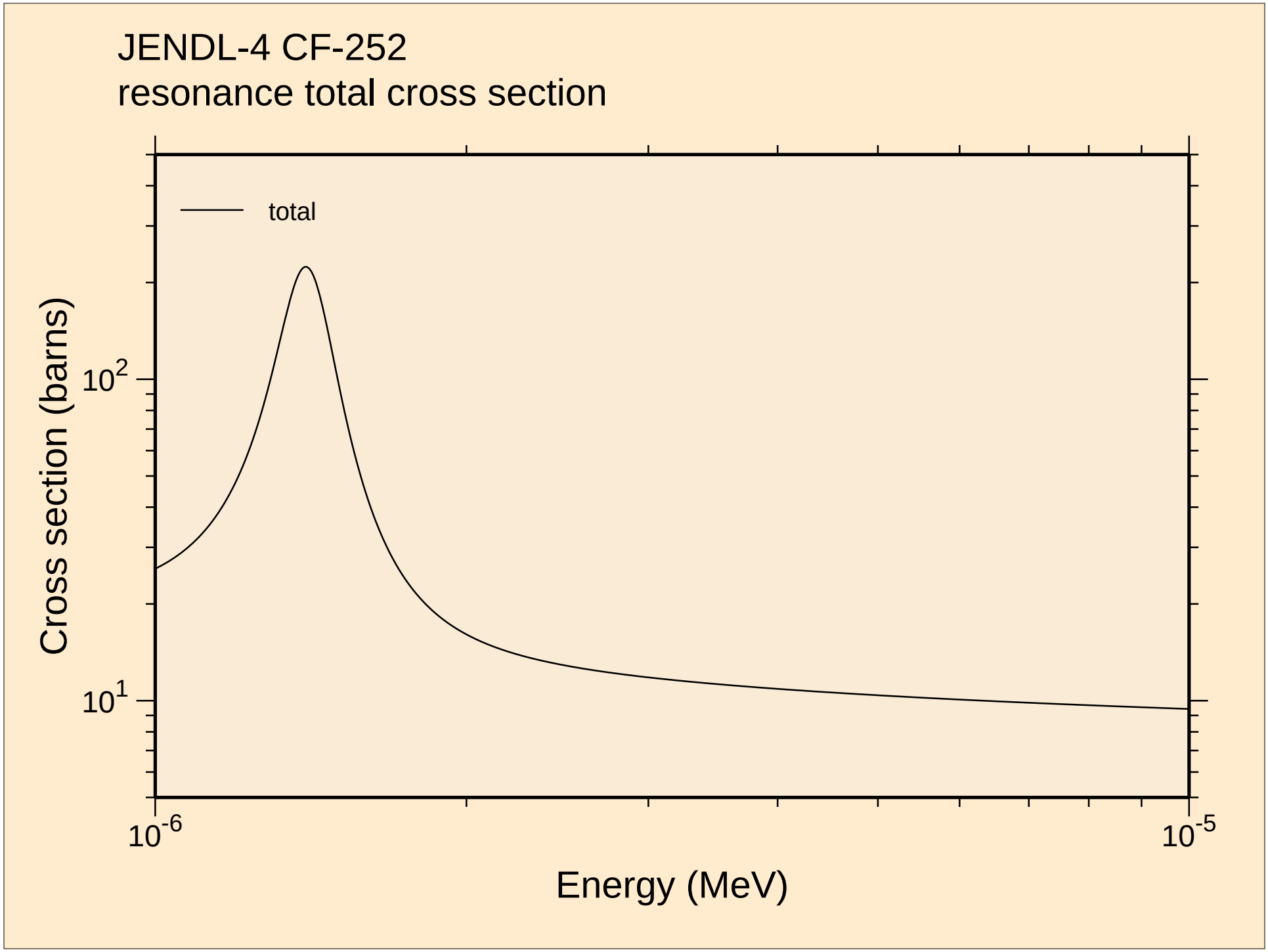
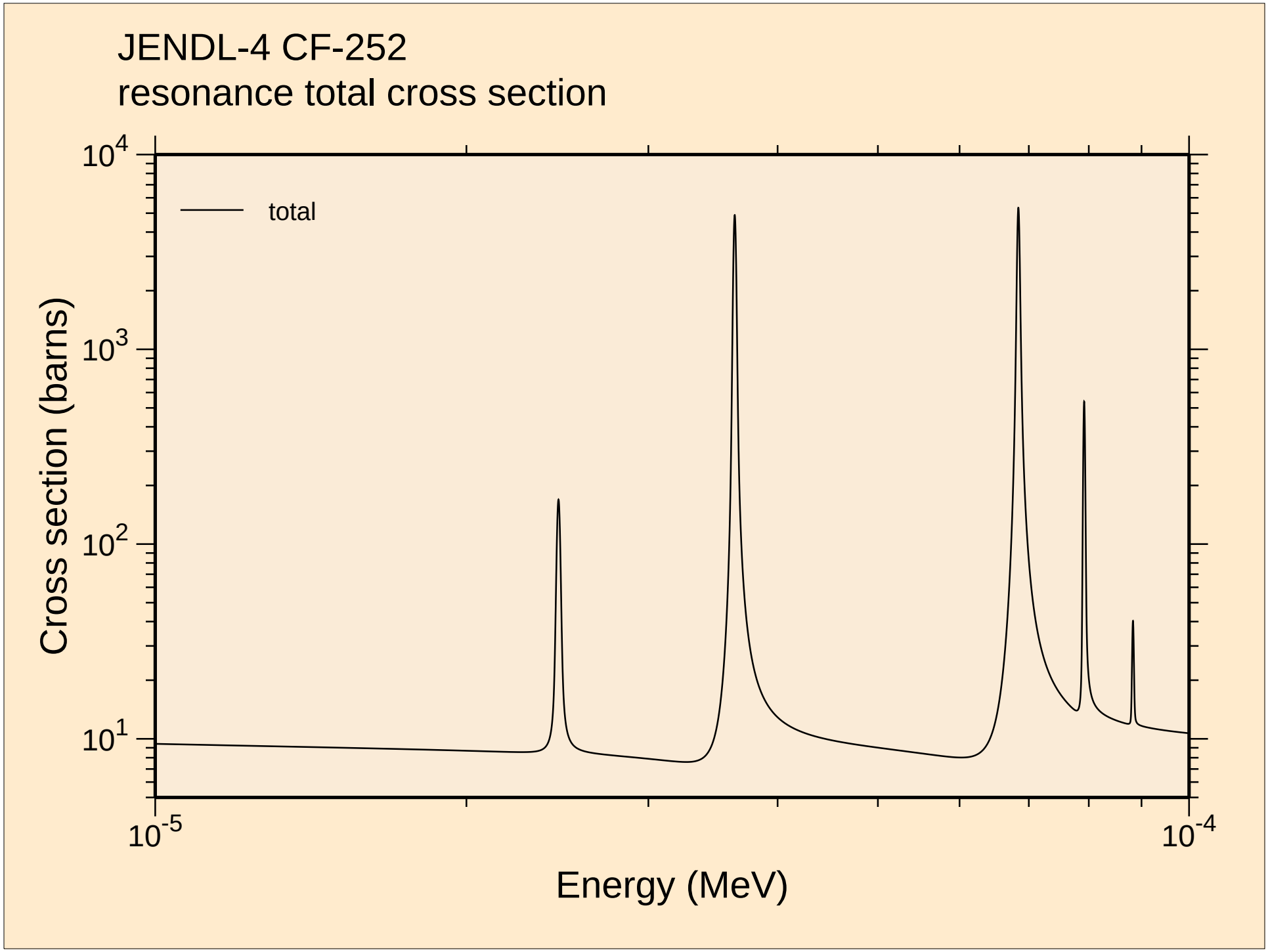
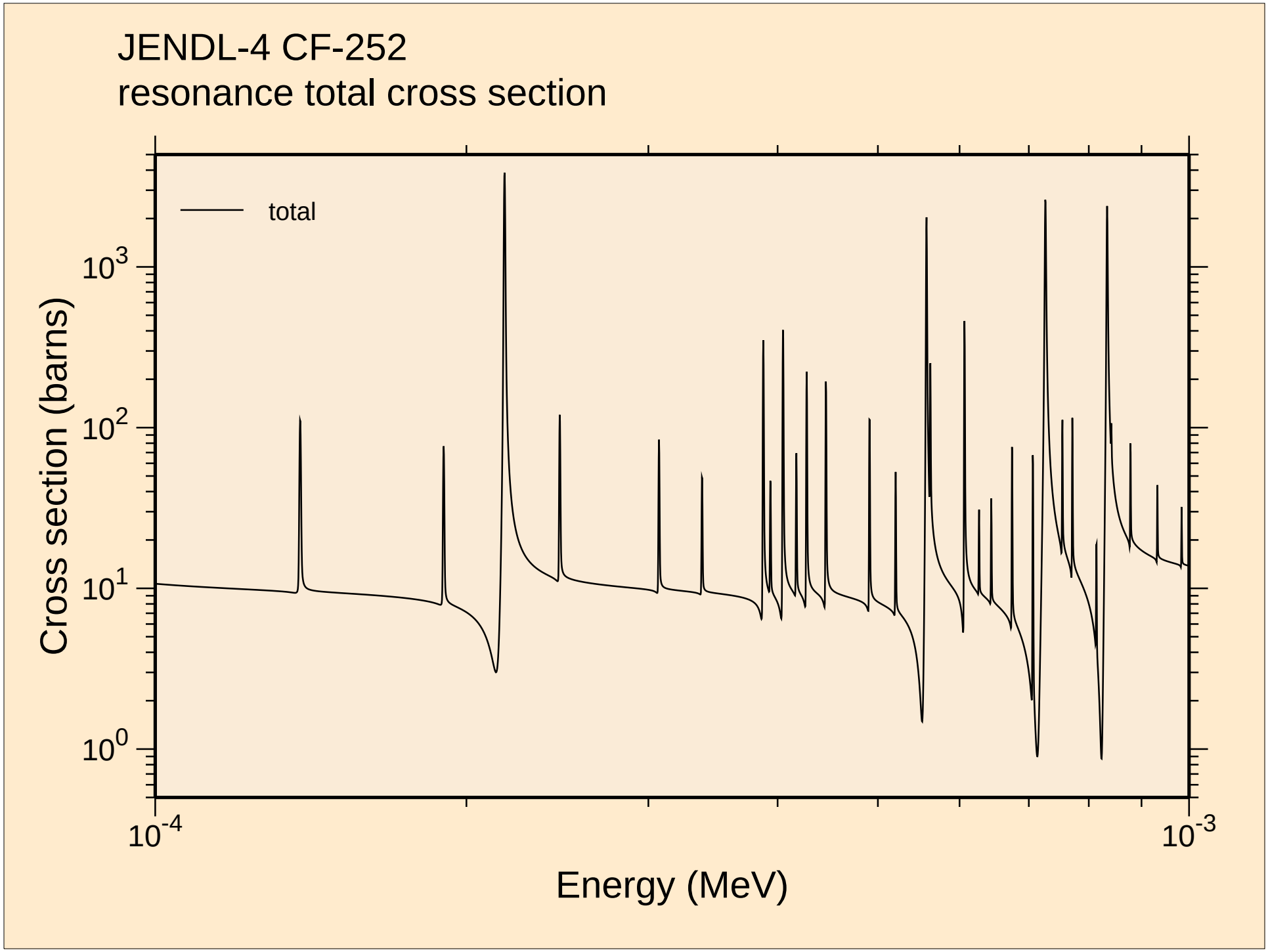
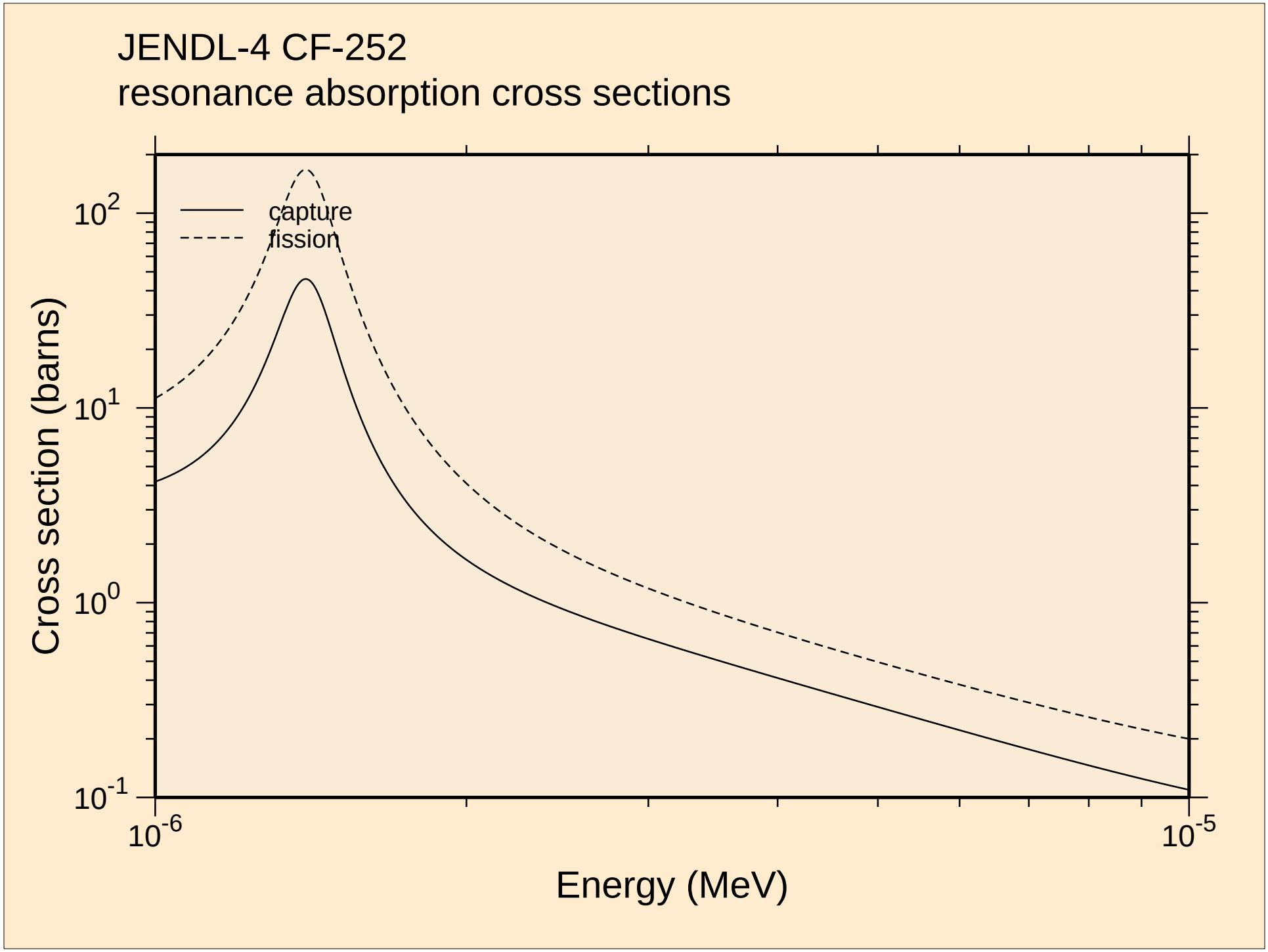
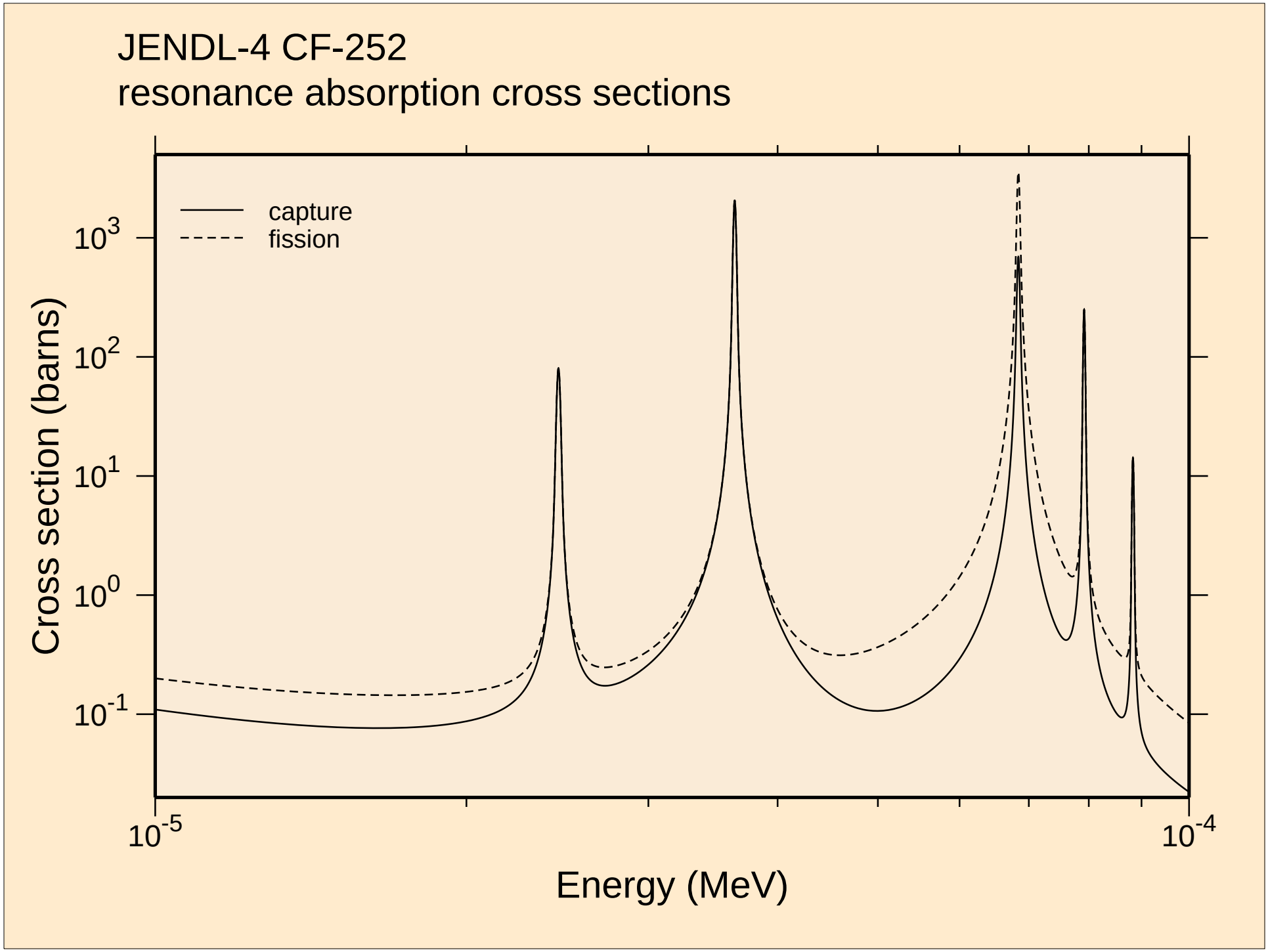

JENDL-4 CF-252
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production

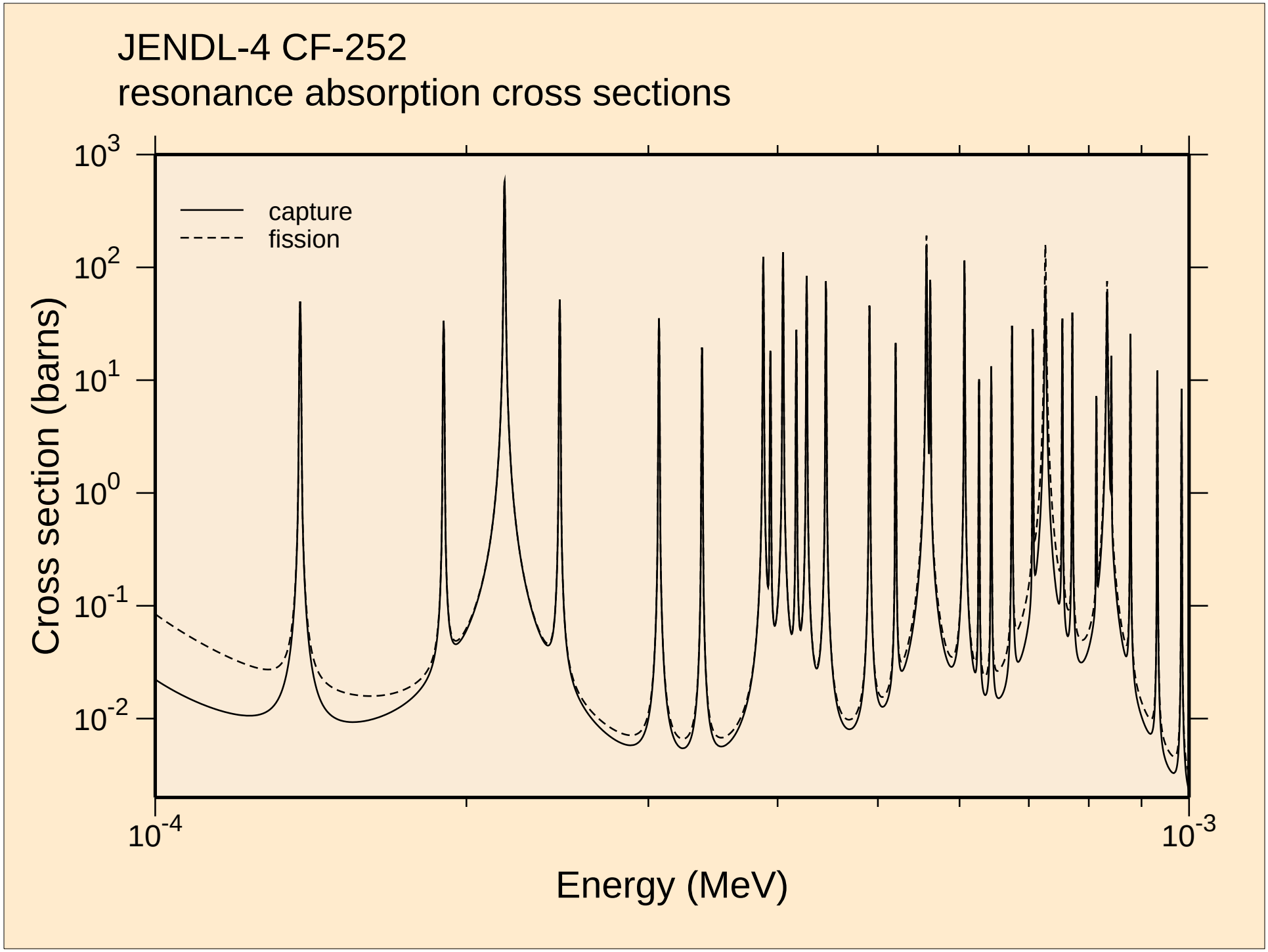

JENDL-4 CF-252
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)


JENDL-4 CF-252
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^{-5}
10^{-4}
Energy (MeV)

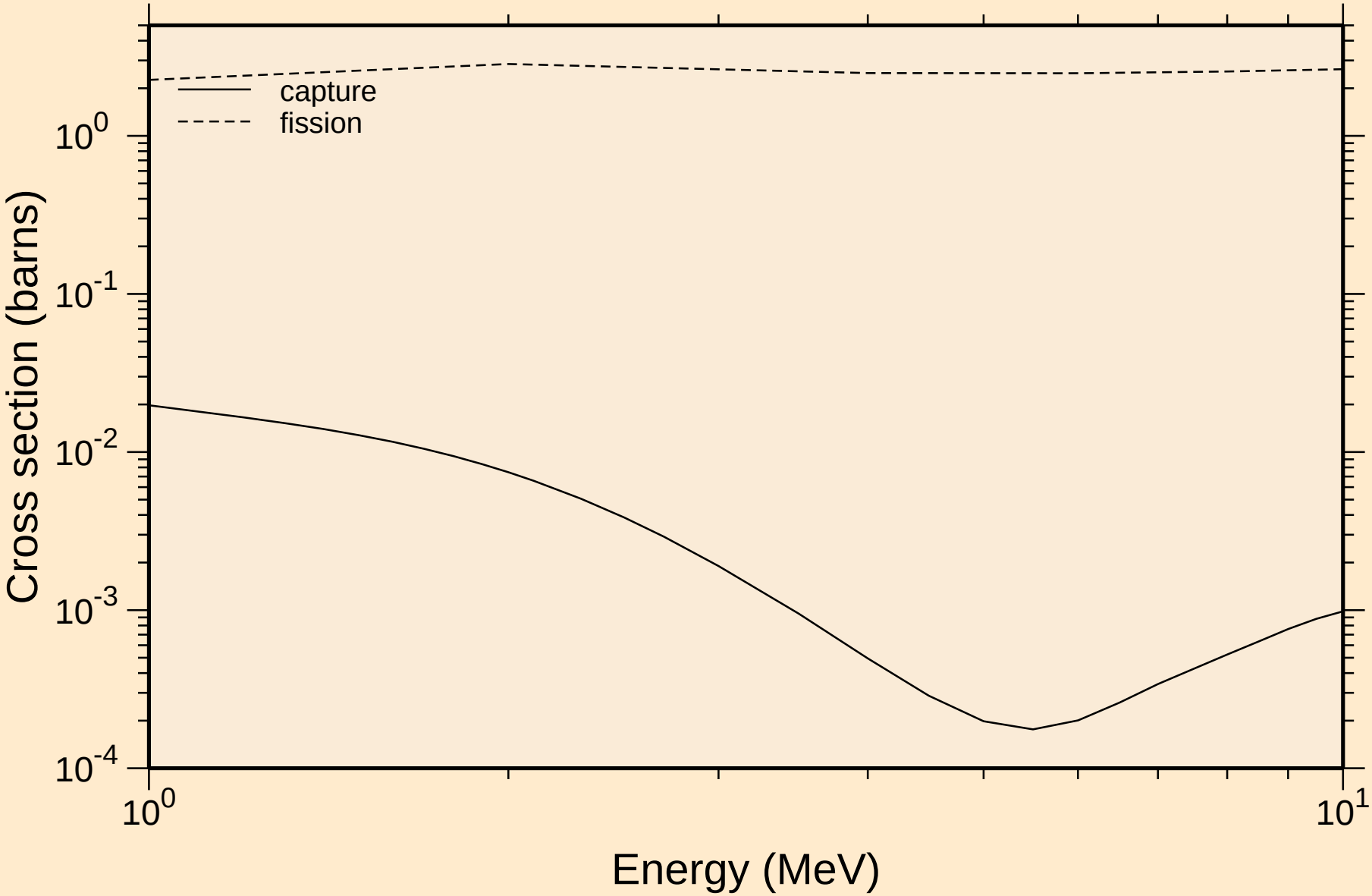

JENDL-4 CF-252
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^0
10^{-4}
10^{-3}
Energy (MeV)

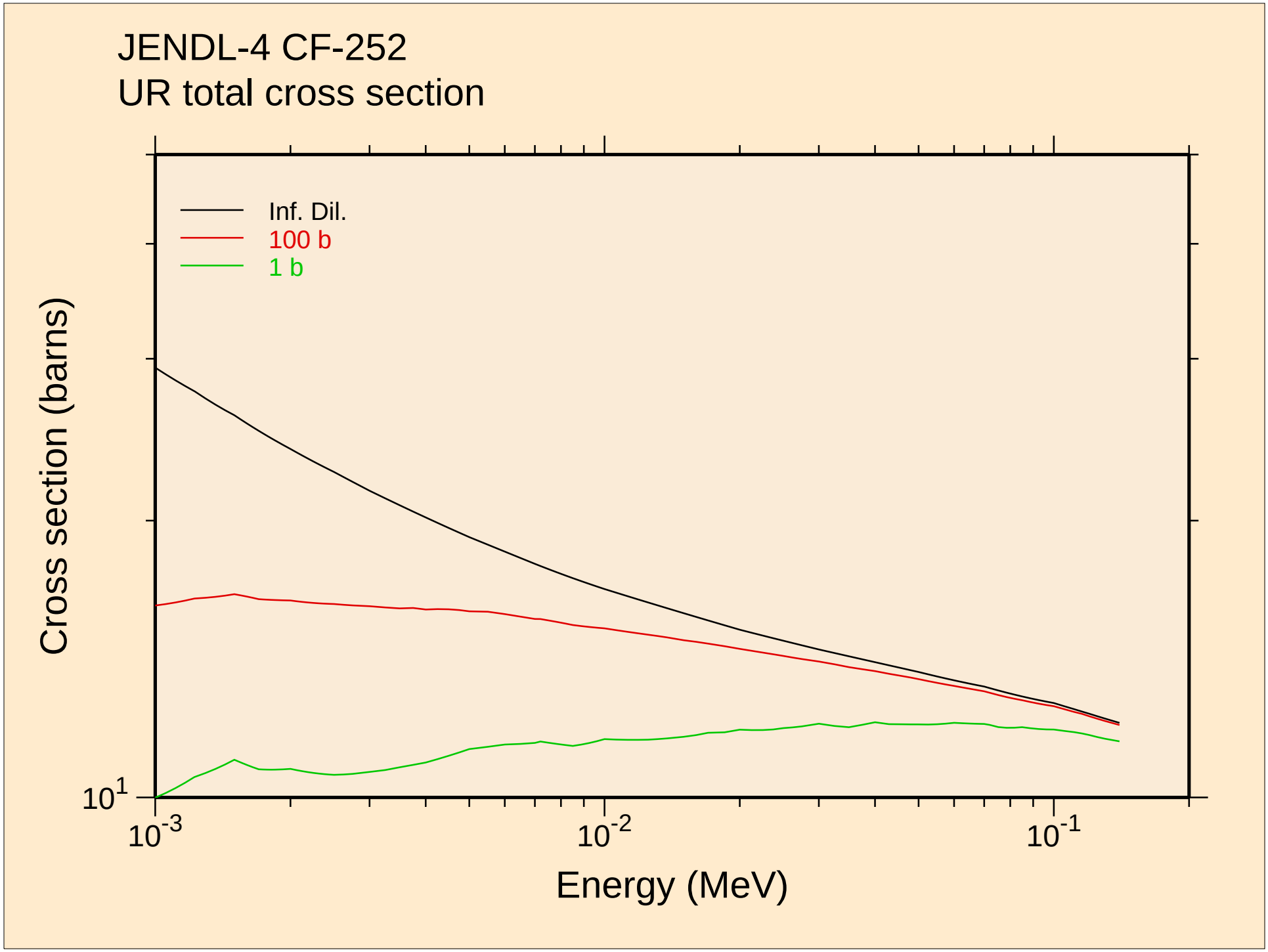

JENDL-4 CF-252
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-6}
10^{-5}
Energy (MeV)

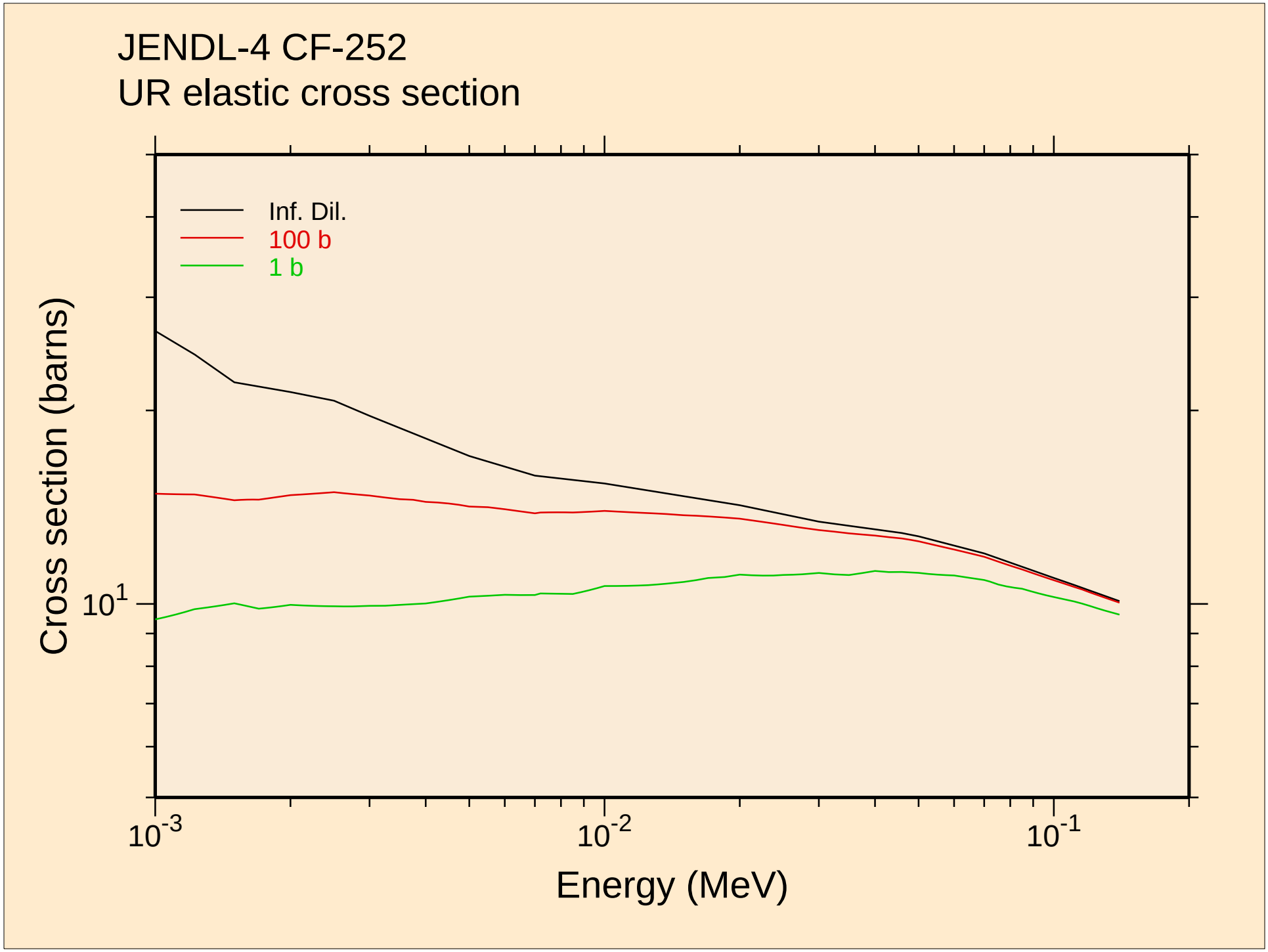

JENDL-4 CF-252
resonance absorption cross sections
capture
fission
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-5}
10^{-4}
Energy (MeV)

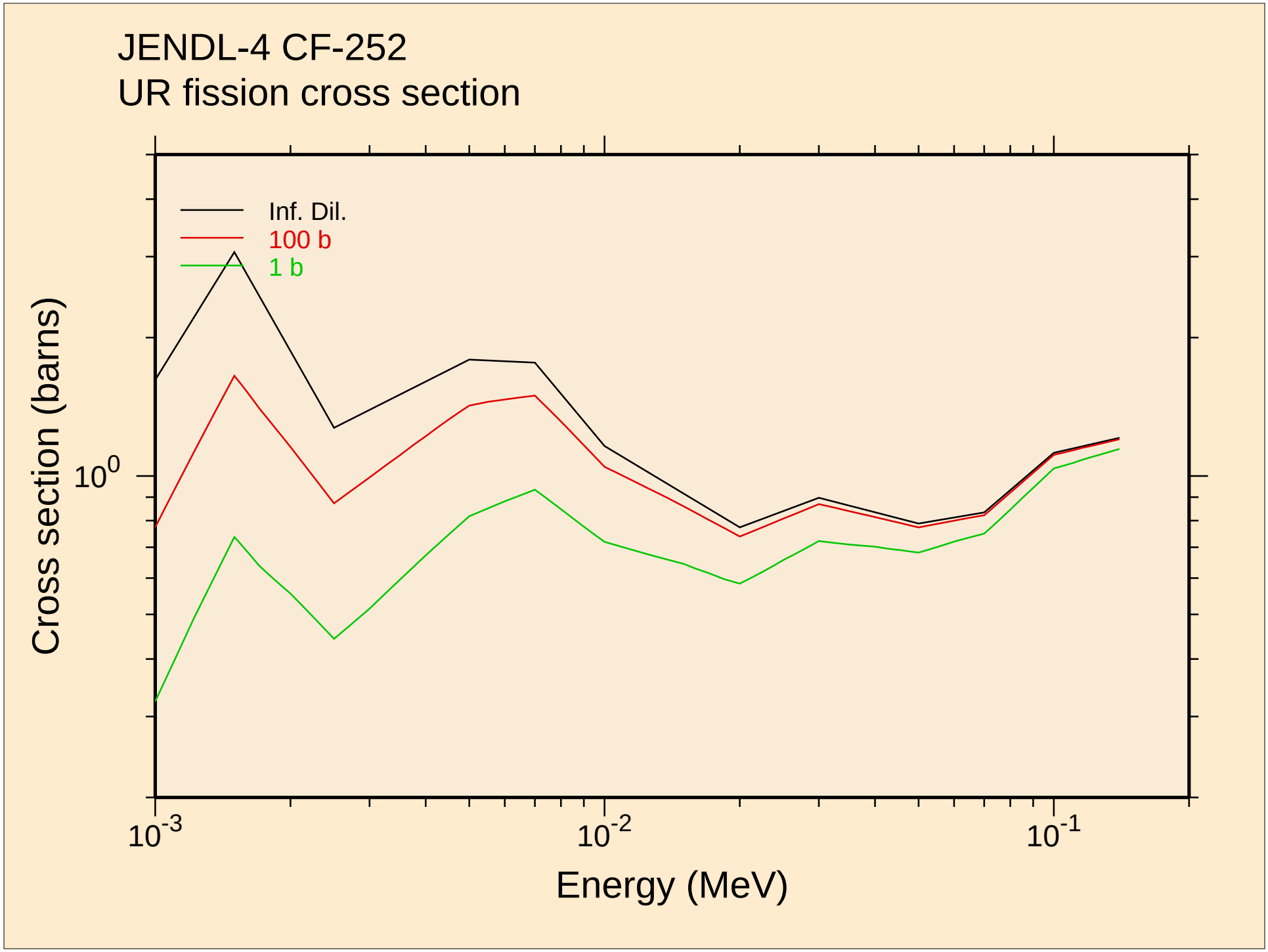

JENDL-4 CF-252
resonance absorption cross sections
capture
fission
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-4
10^-3

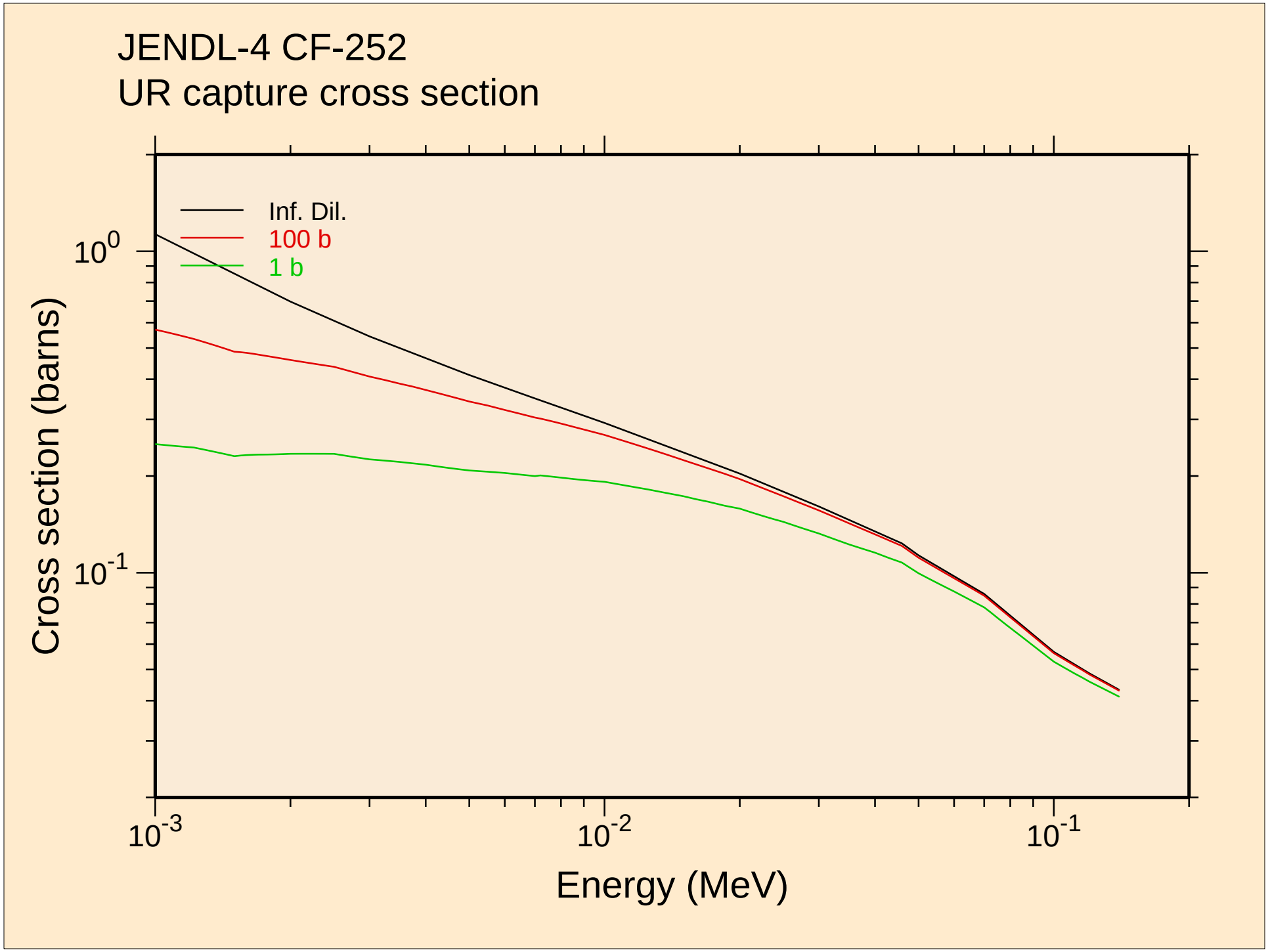
JENDL-4 CF-252
resonance absorption cross sections

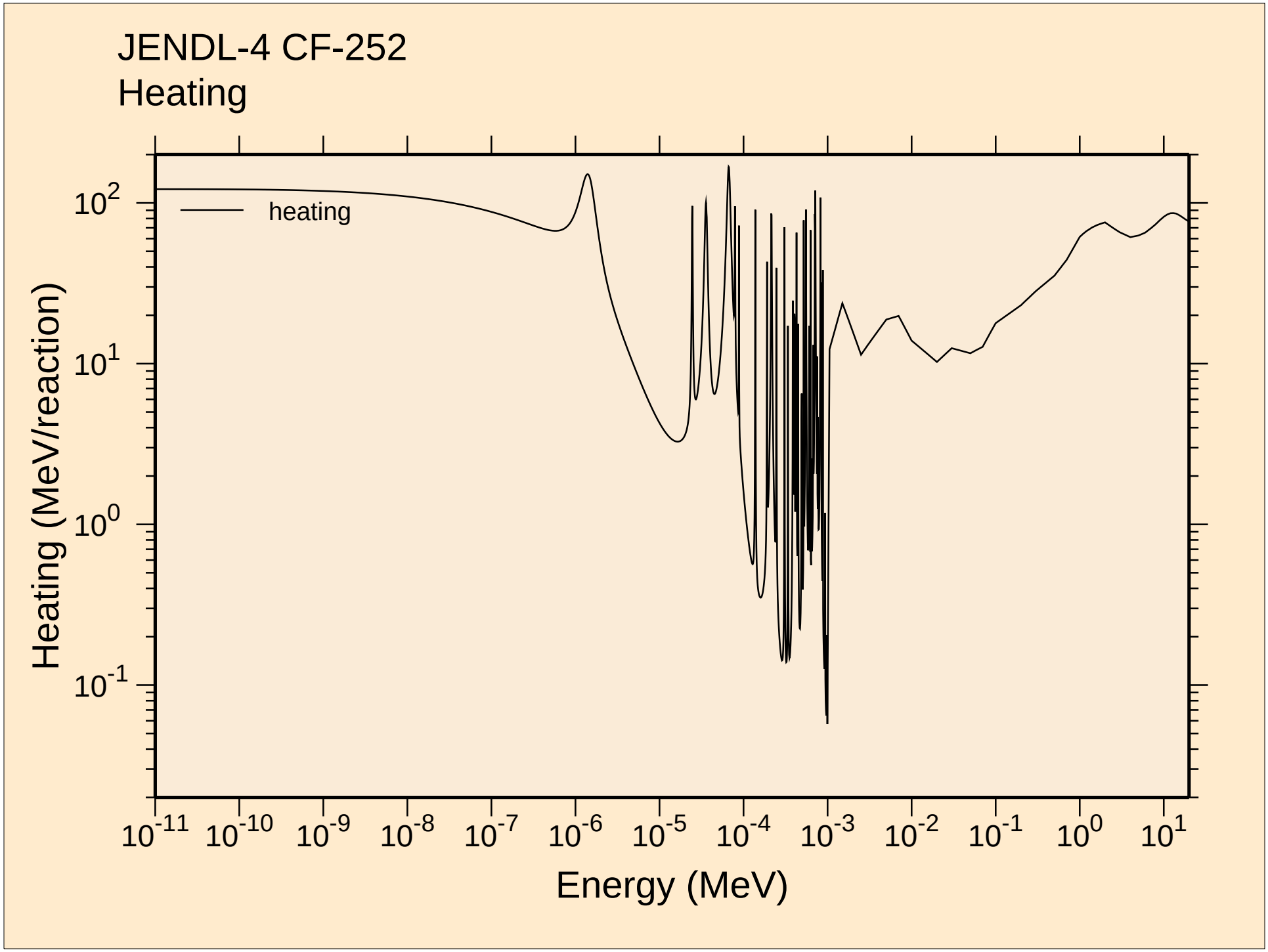


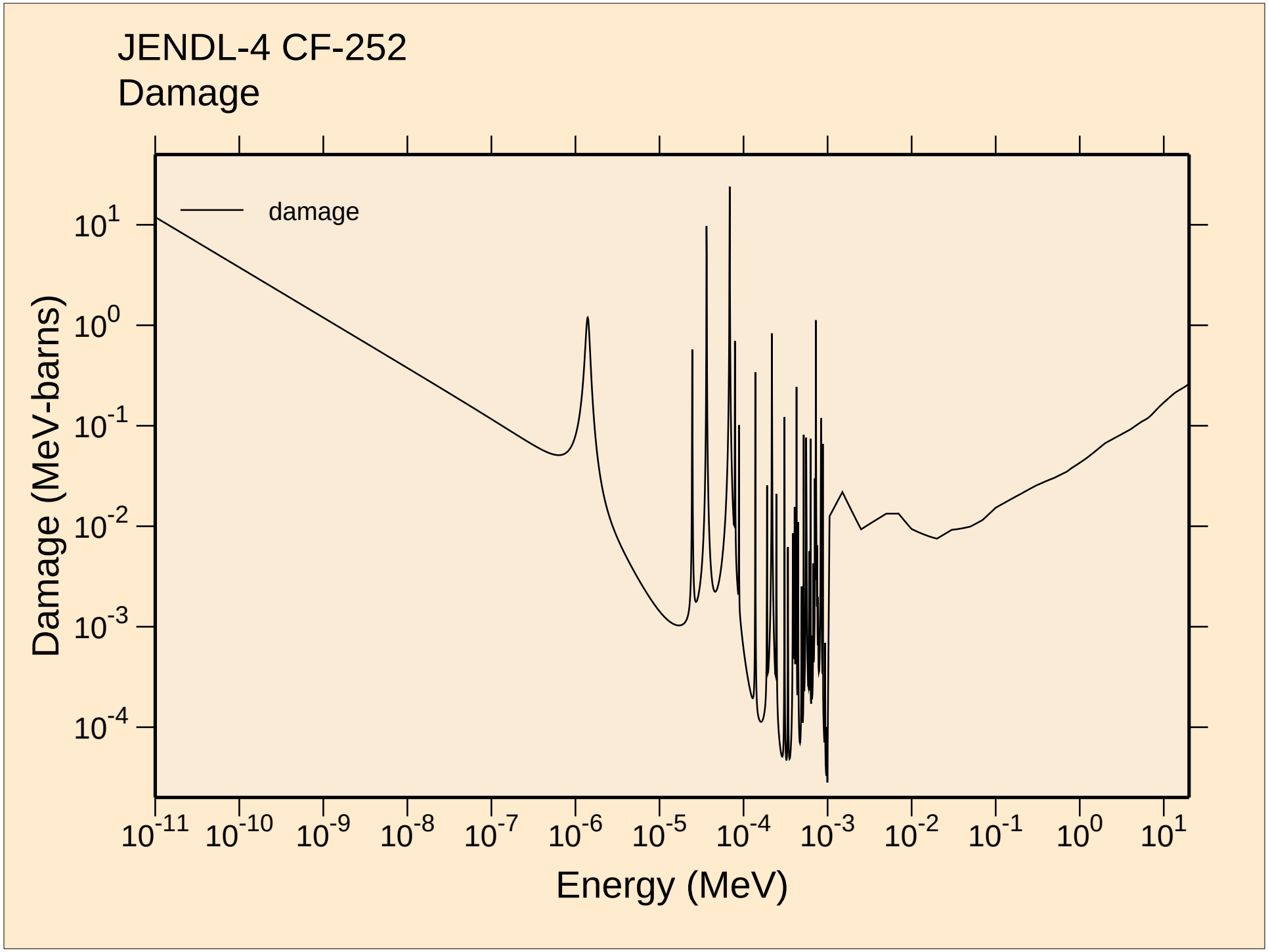

JENDL-4 CF-252
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{1}
10^{-3}
10^{-2}
10^{-1}
Energy (MeV)

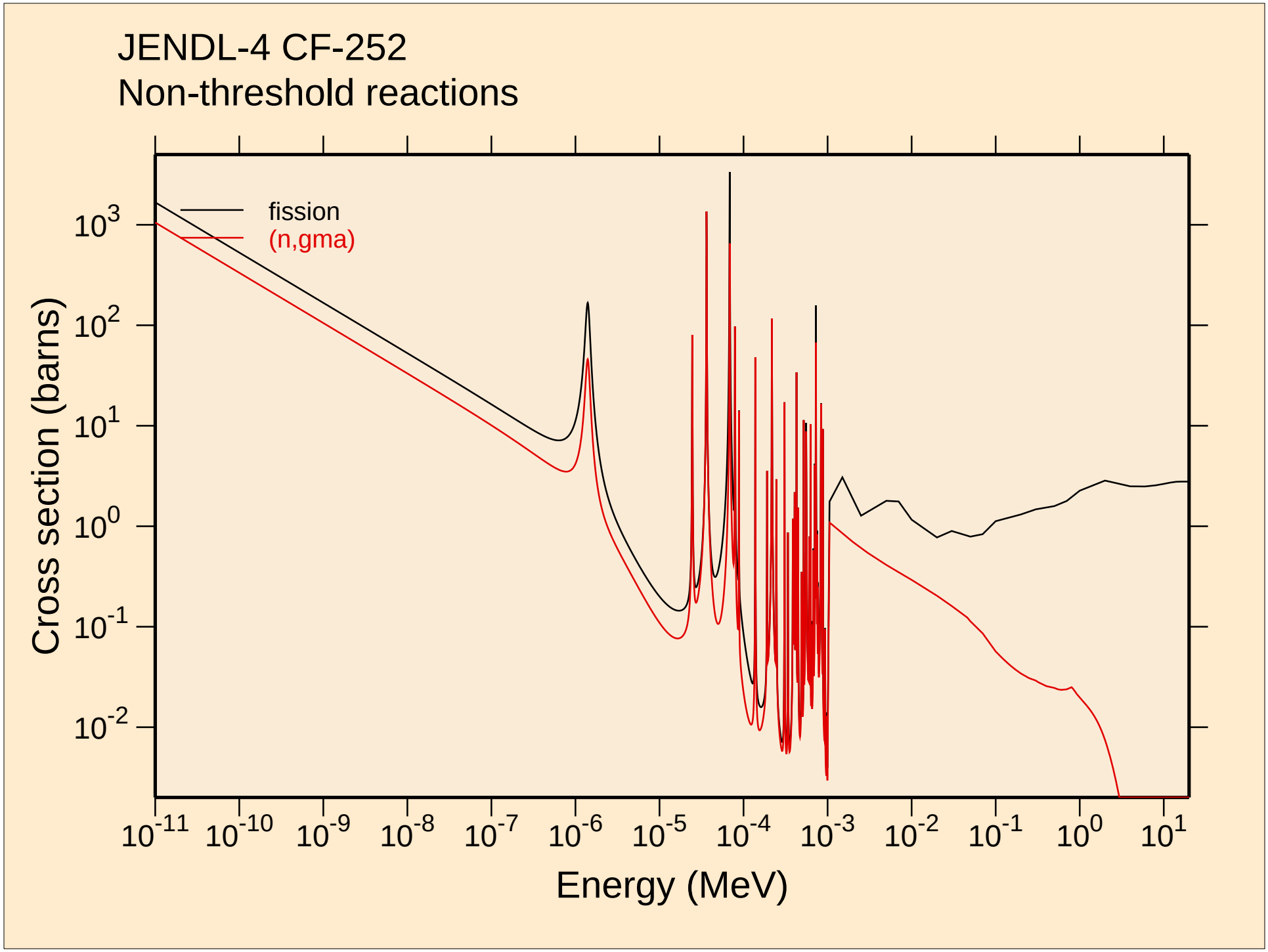

JENDL-4 CF-252
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^1
10^-3
10^-2
10^-1
Energy (MeV)

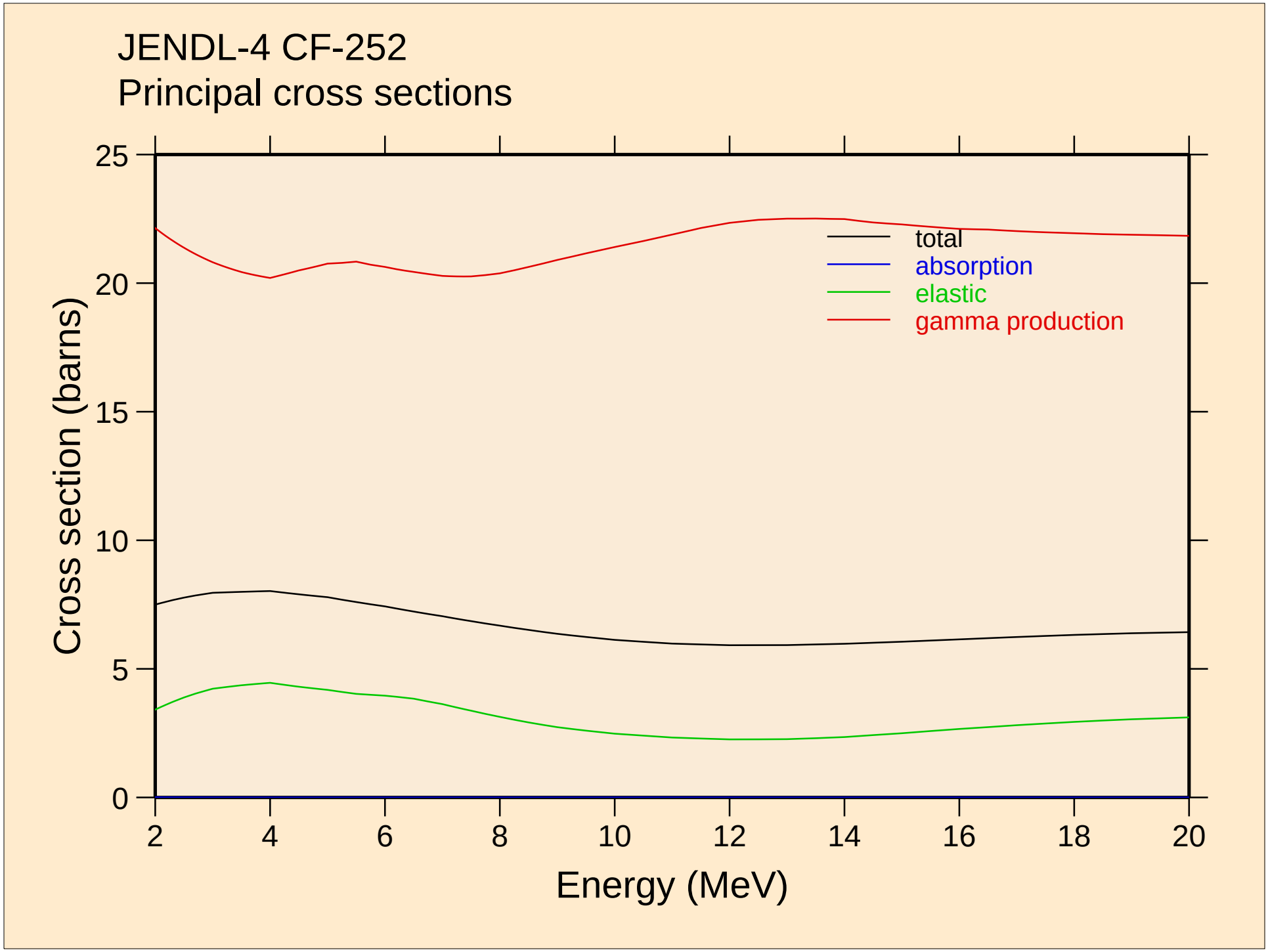

JENDL-4 CF-252
UR fission cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^0
10^{-3}
10^{-2}
10^{-1}
Energy (MeV)

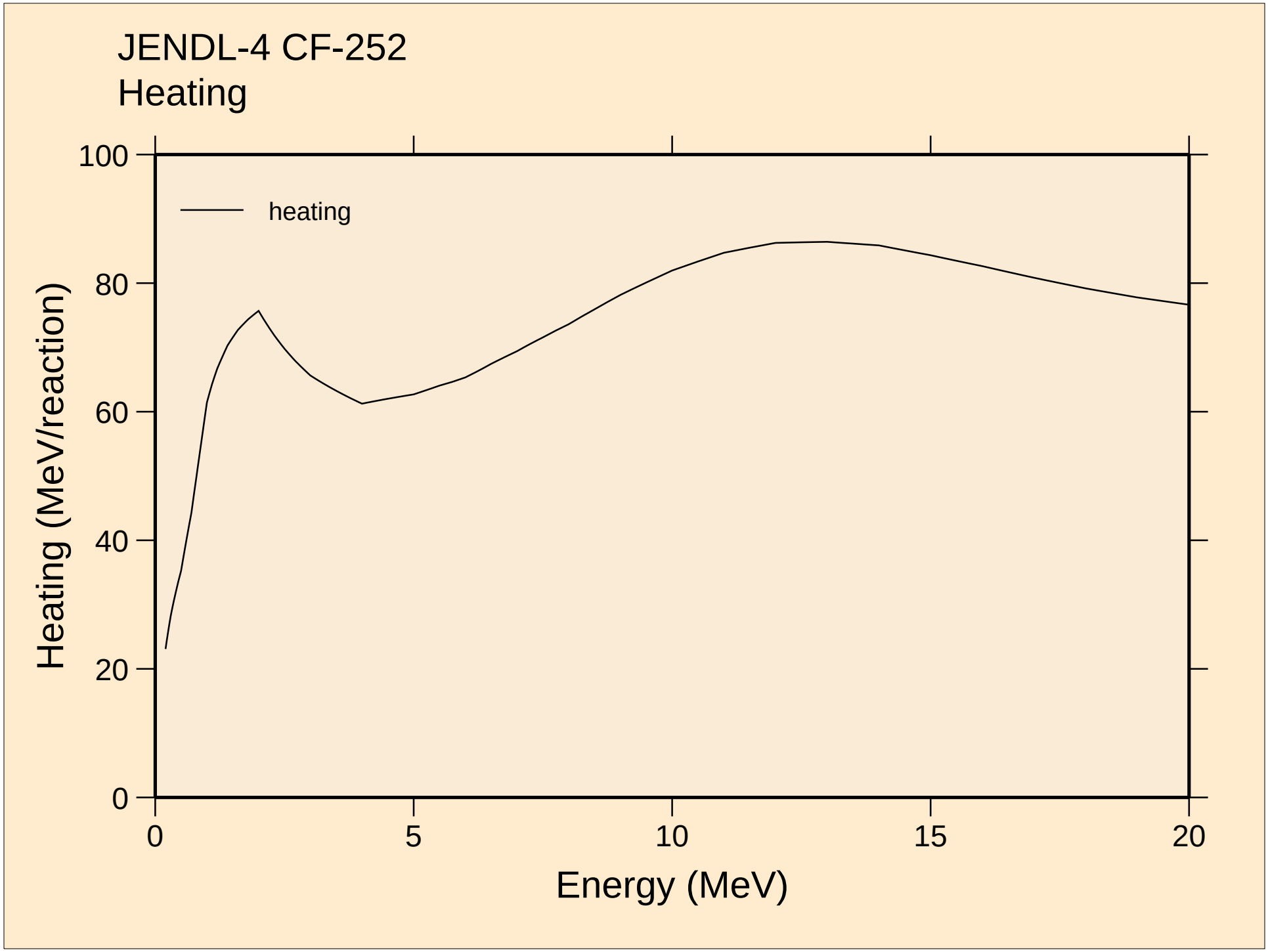

JENDL-4 CF-252
UR capture cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{0}
10^{-1}
10^{-3}
10^{-2}
10^{-1}
Energy (MeV)

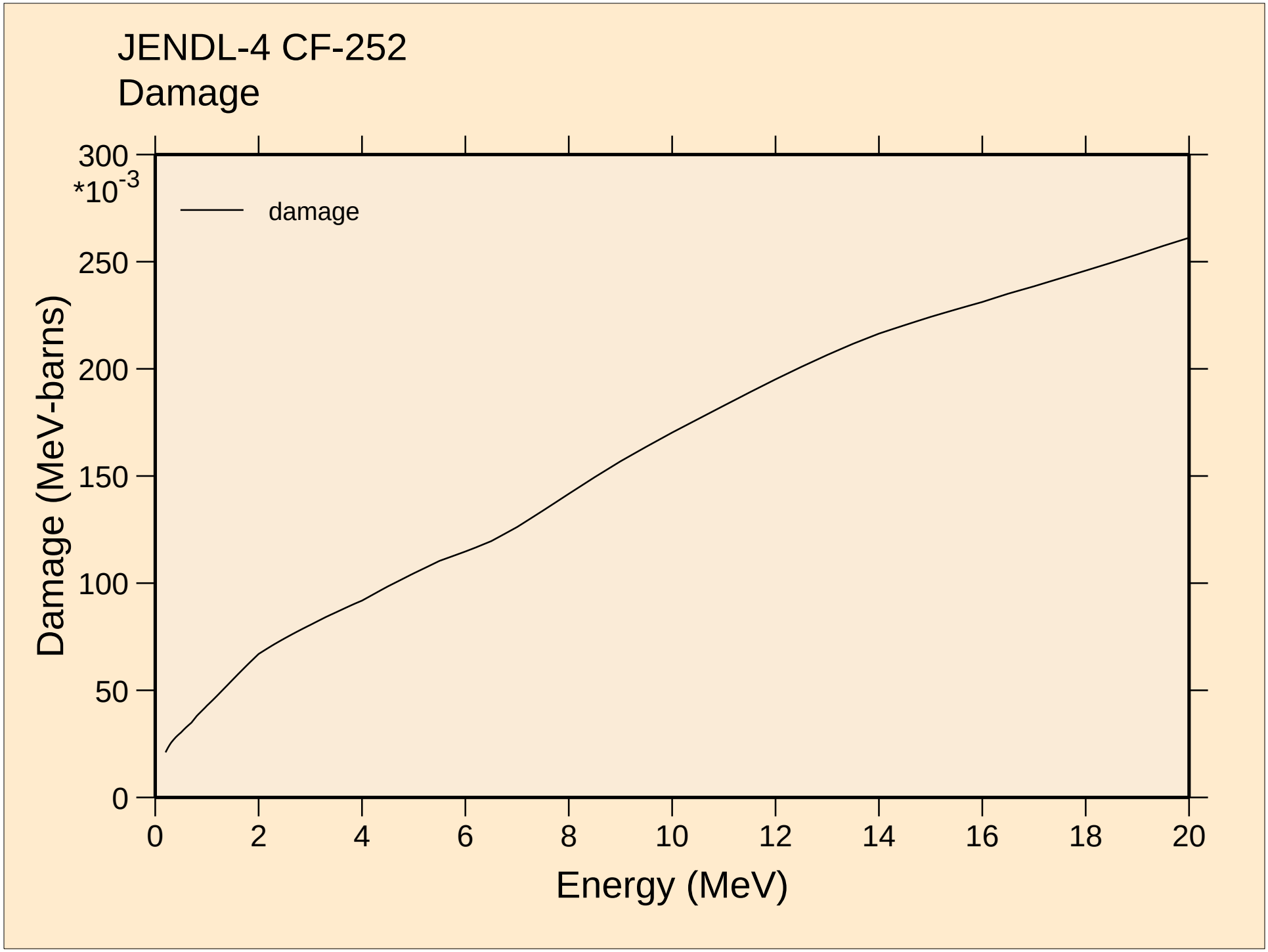

JENDL-4 CF-252
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

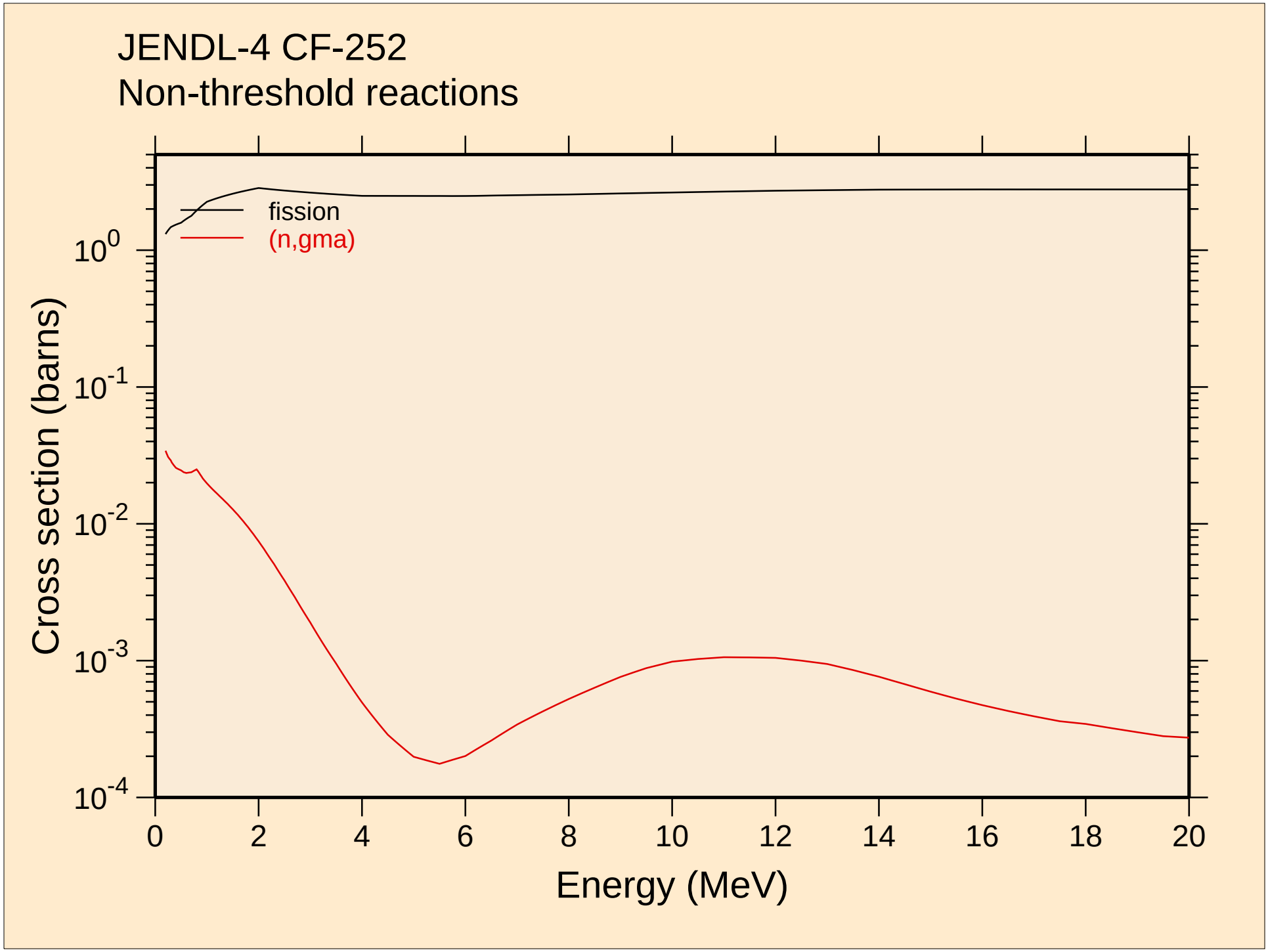

JENDL-4 CF-252
Damage
damage
Damage (MeV-barns)
Energy (MeV)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

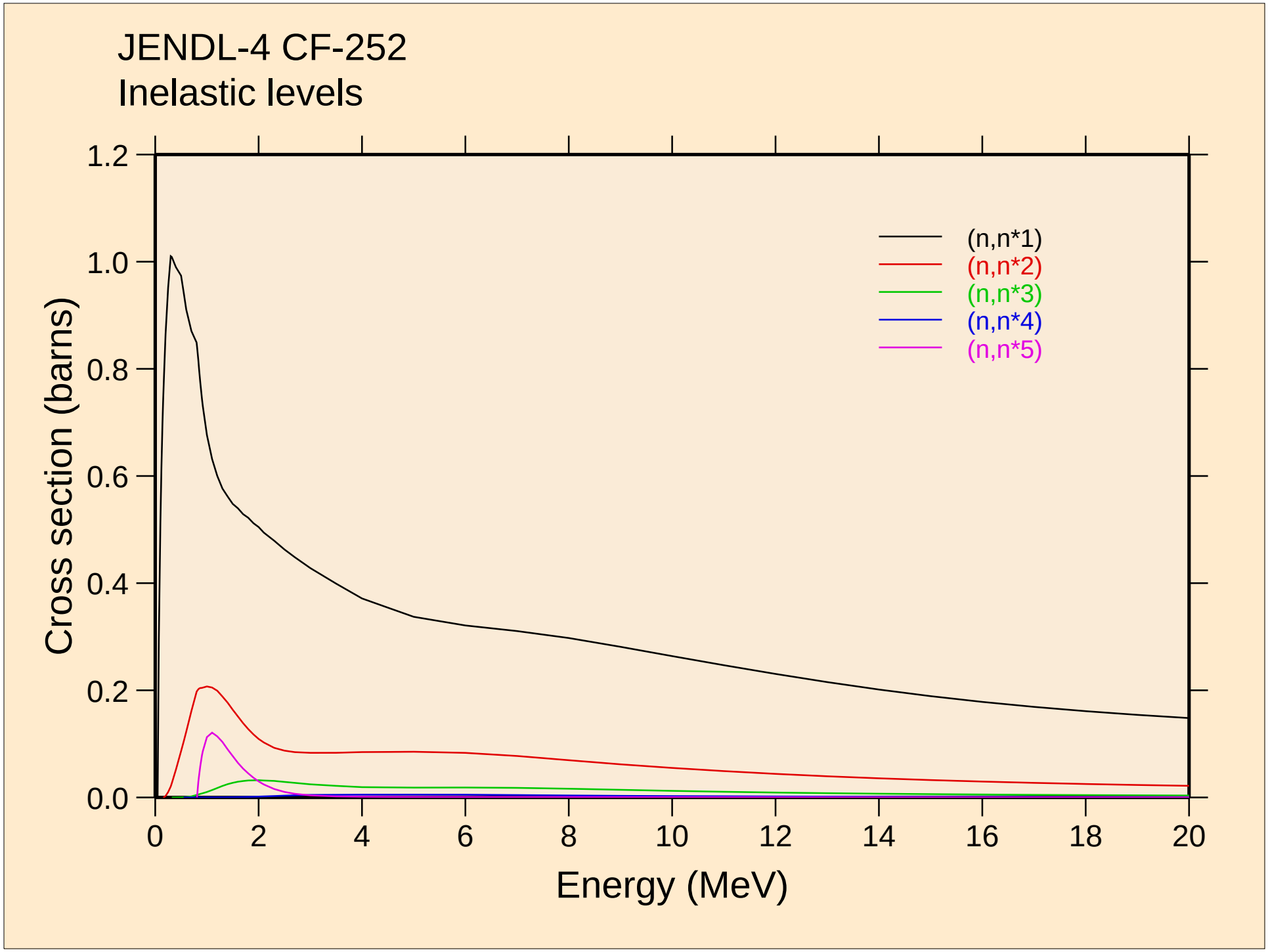

JENDL-4 CF-252
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

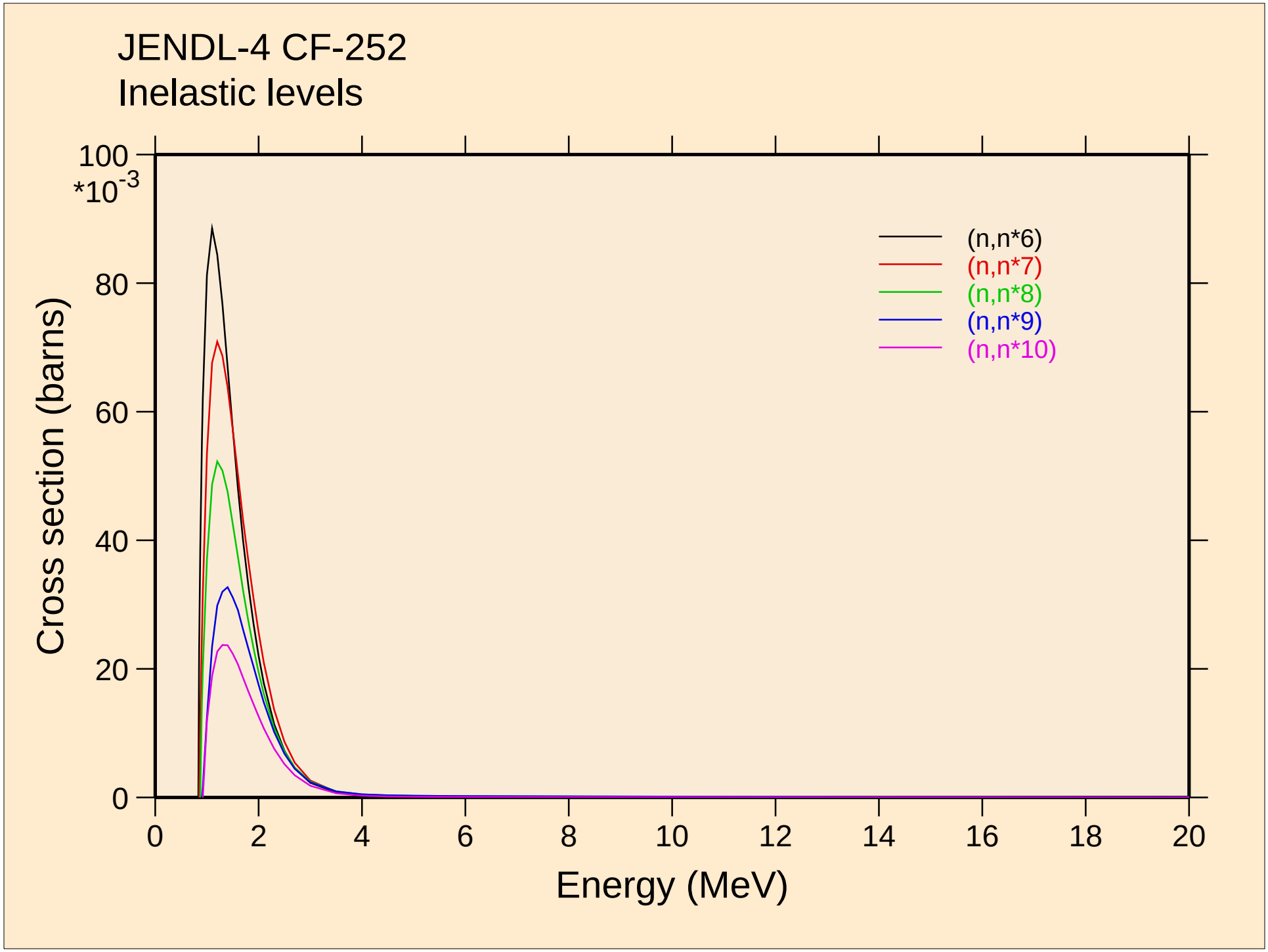

JENDL-4 CF-252
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
5
10
15
20
25
2
4
6
8
10
12
14
16
18
20

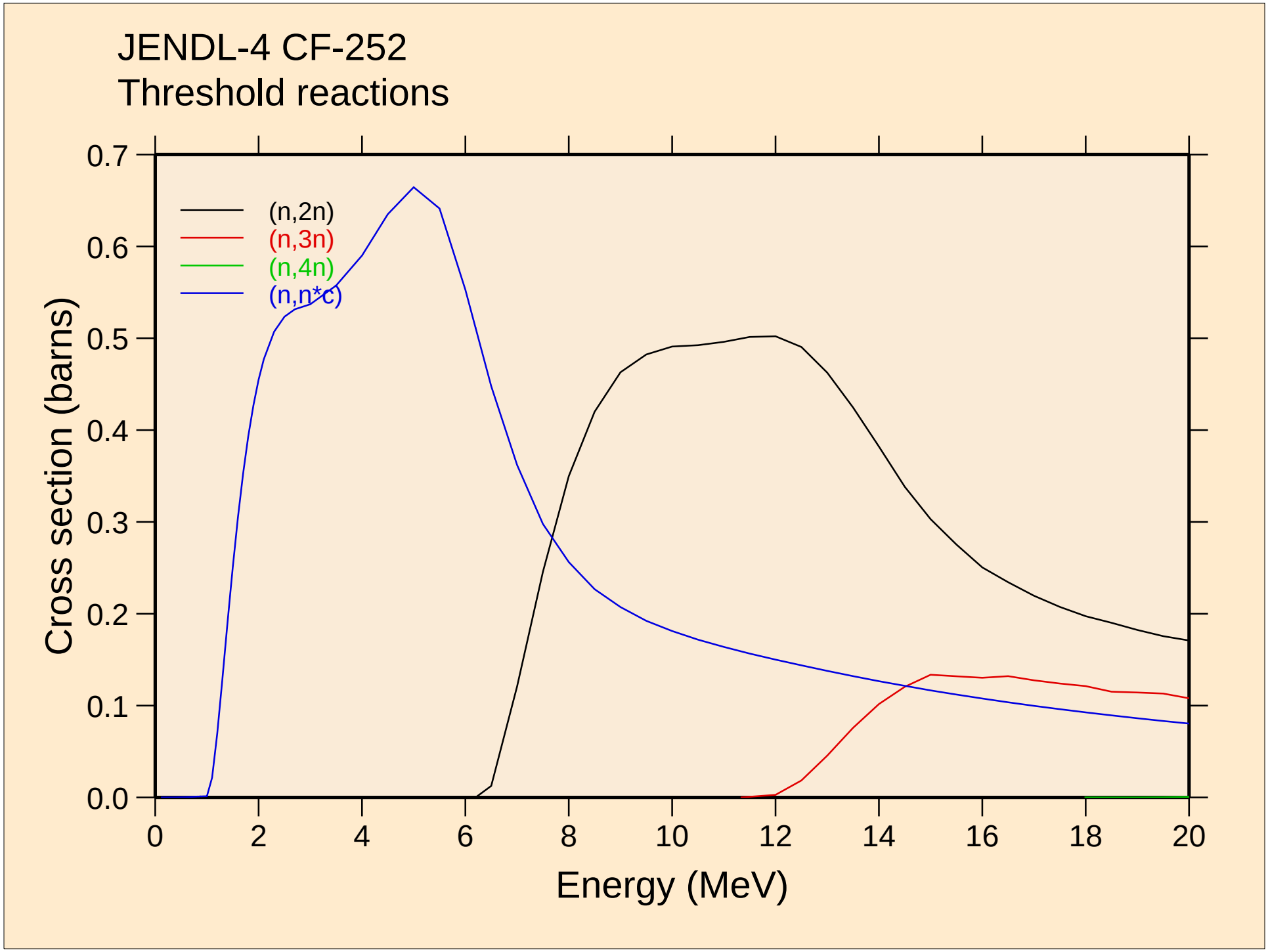

JENDL-4 CF-252
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
20
40
60
80
100
0
5
10
15
20

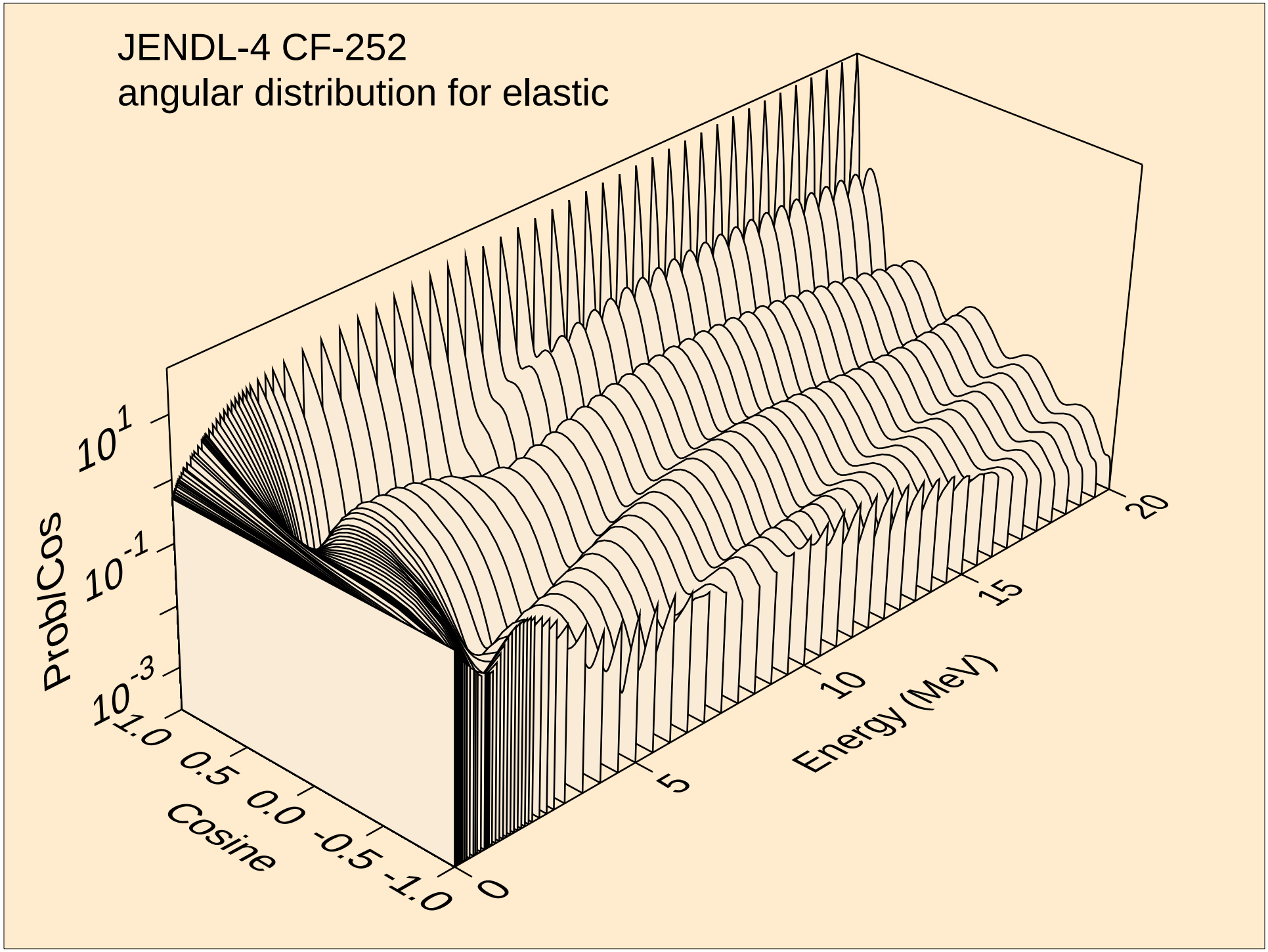

JENDL-4 CF-252
Damage
damage
*10-3
300
250
200
150
100
50
0
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

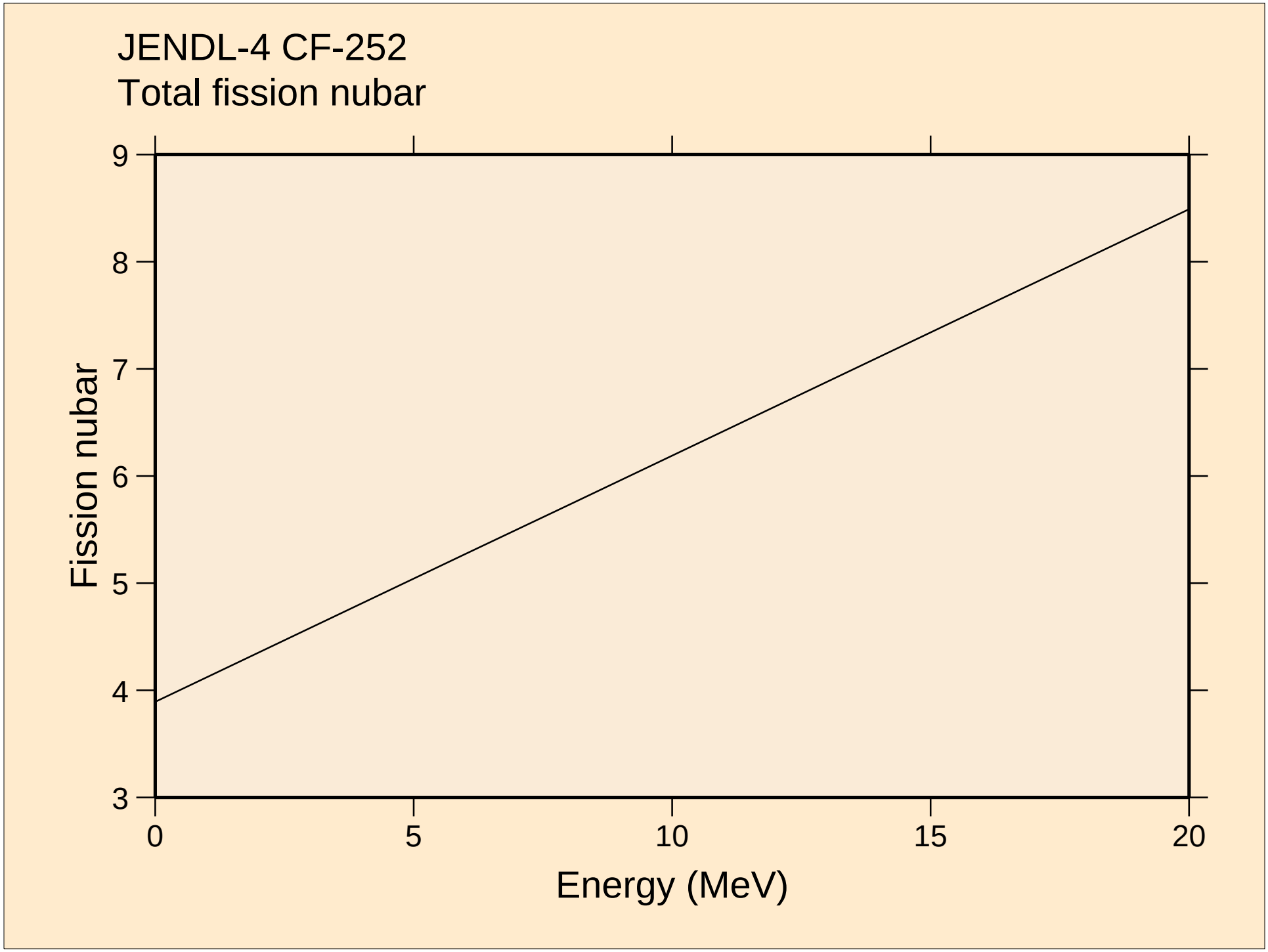

JENDL-4 CF-252
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

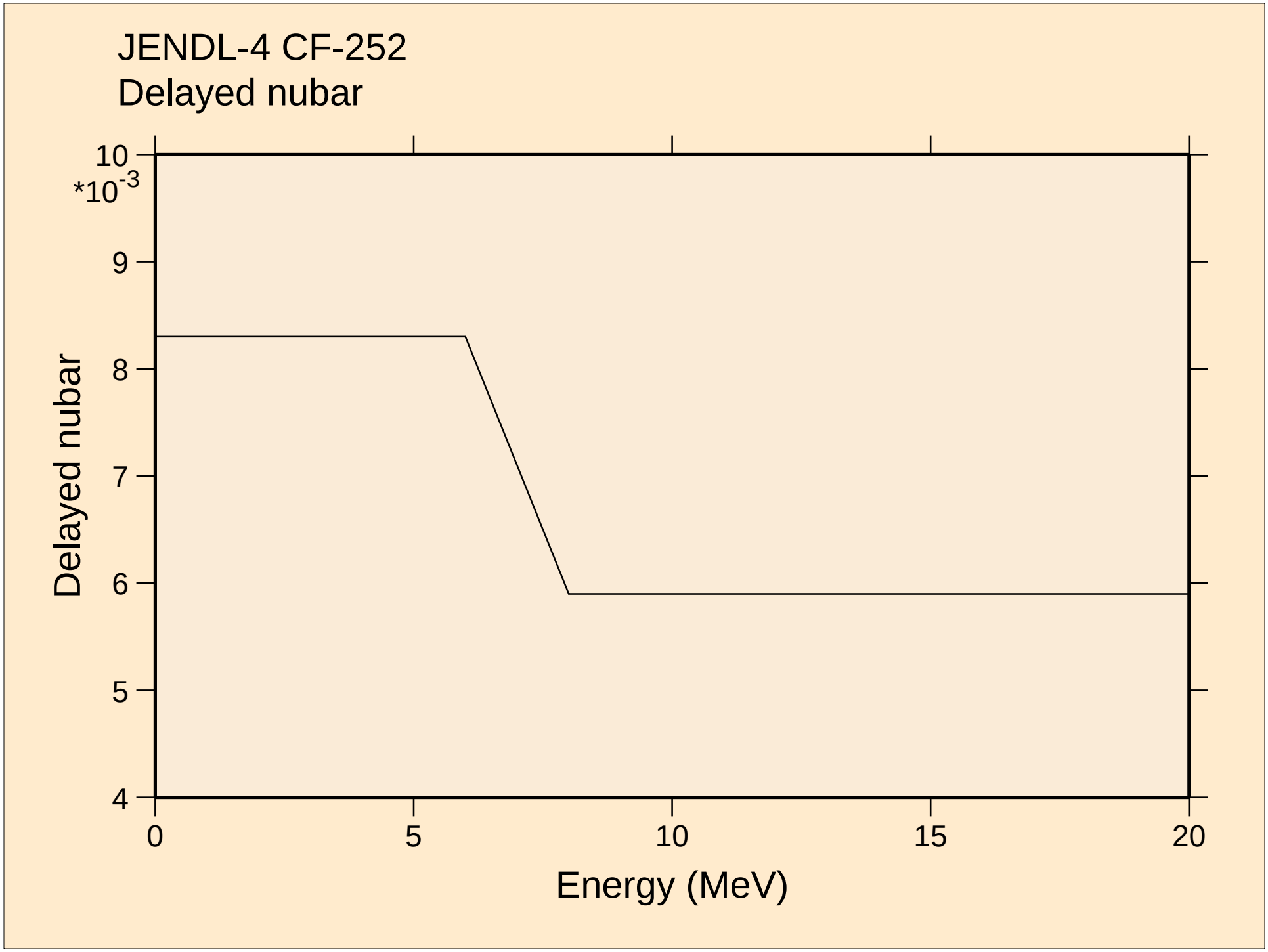

JENDL-4 CF-252
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20

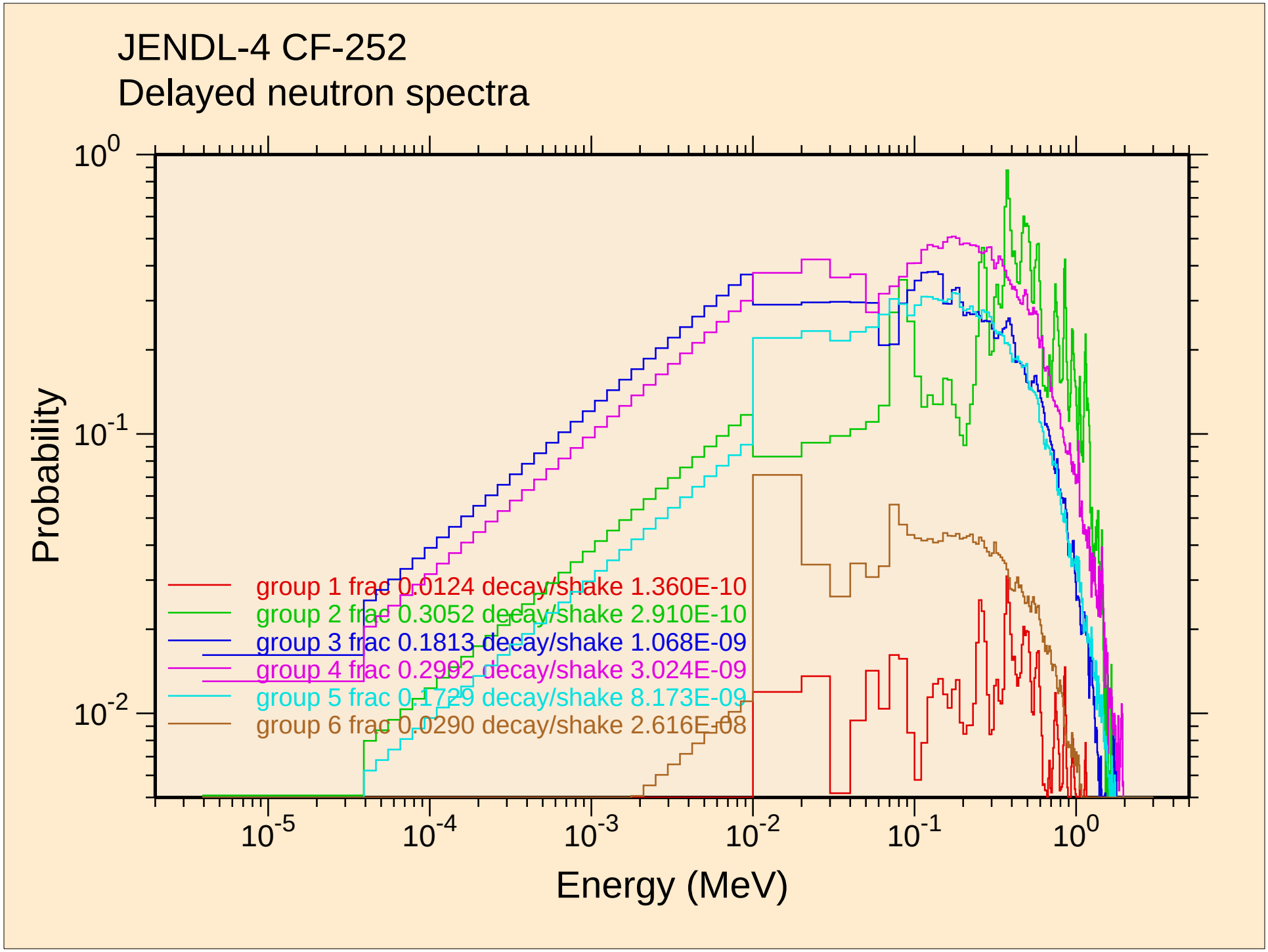

JENDL-4 CF-252
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

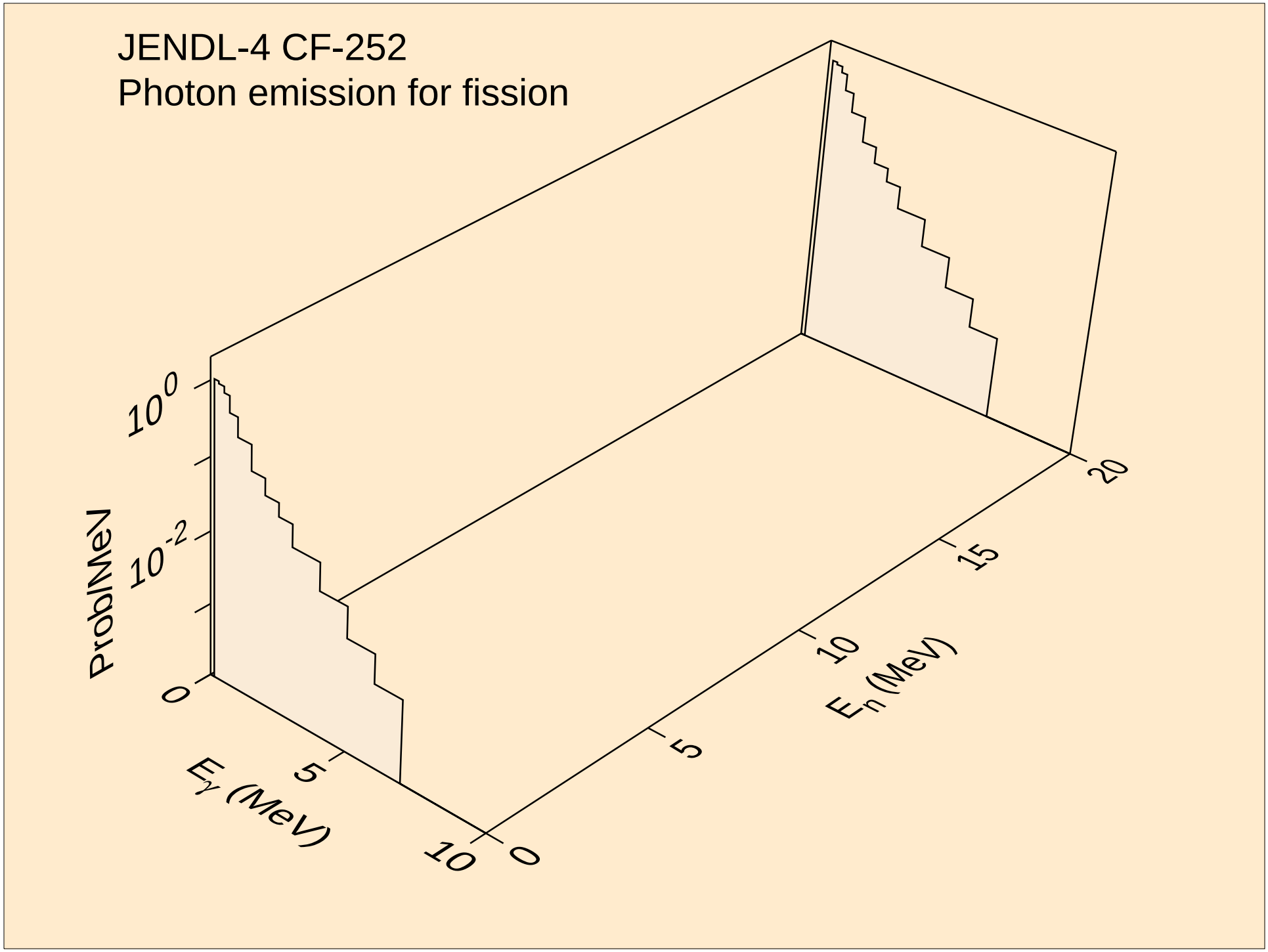

JENDL-4 CF-252
Threshold reactions
(n,2n)
(n,3n)
(n,4n)
(n,n*c)
Cross section (barns)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

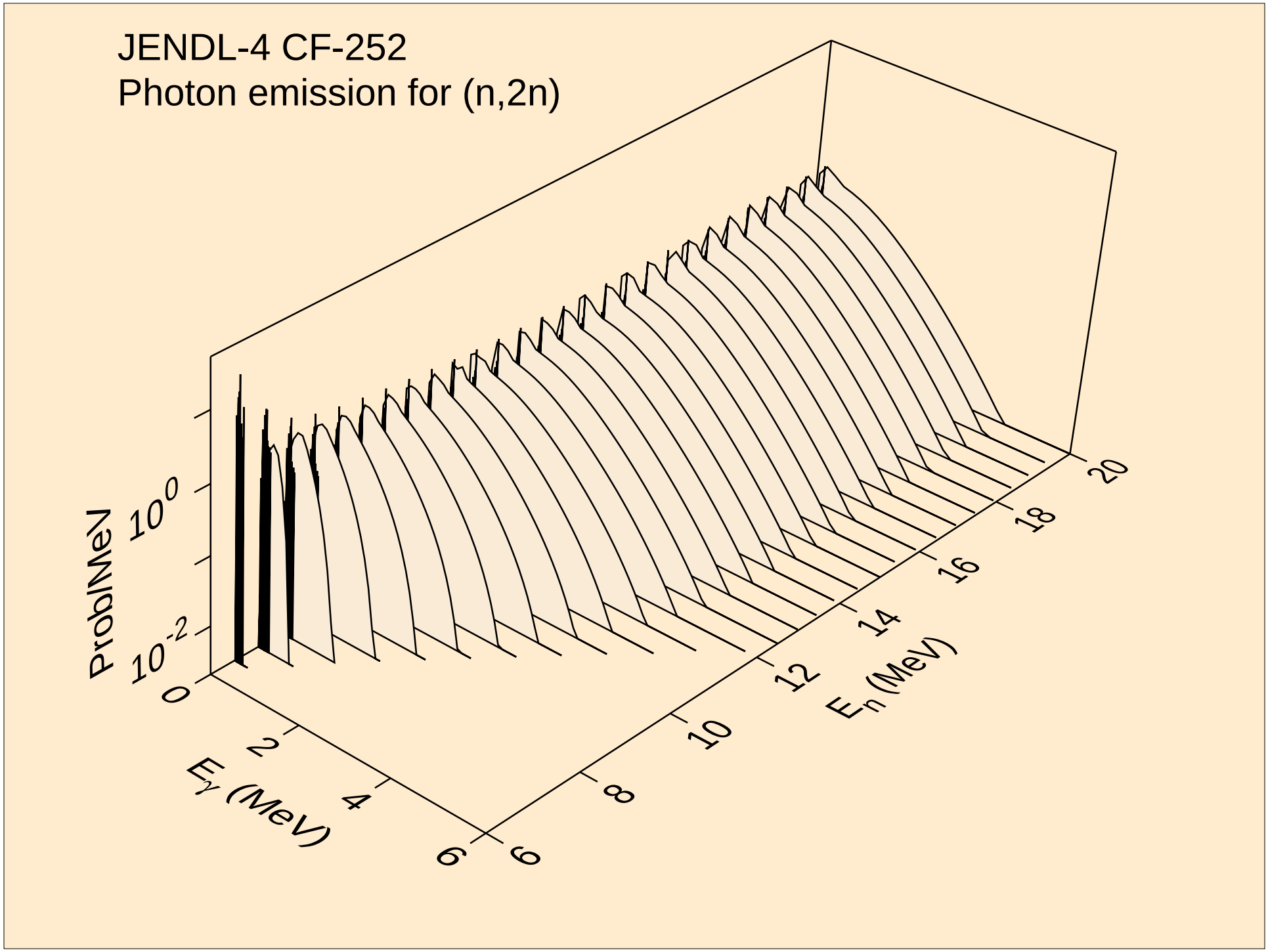

JENDL-4 CF-252
angular distribution for elastic
ProblCos
10^{1}
10^{-1}
10^{-3}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20

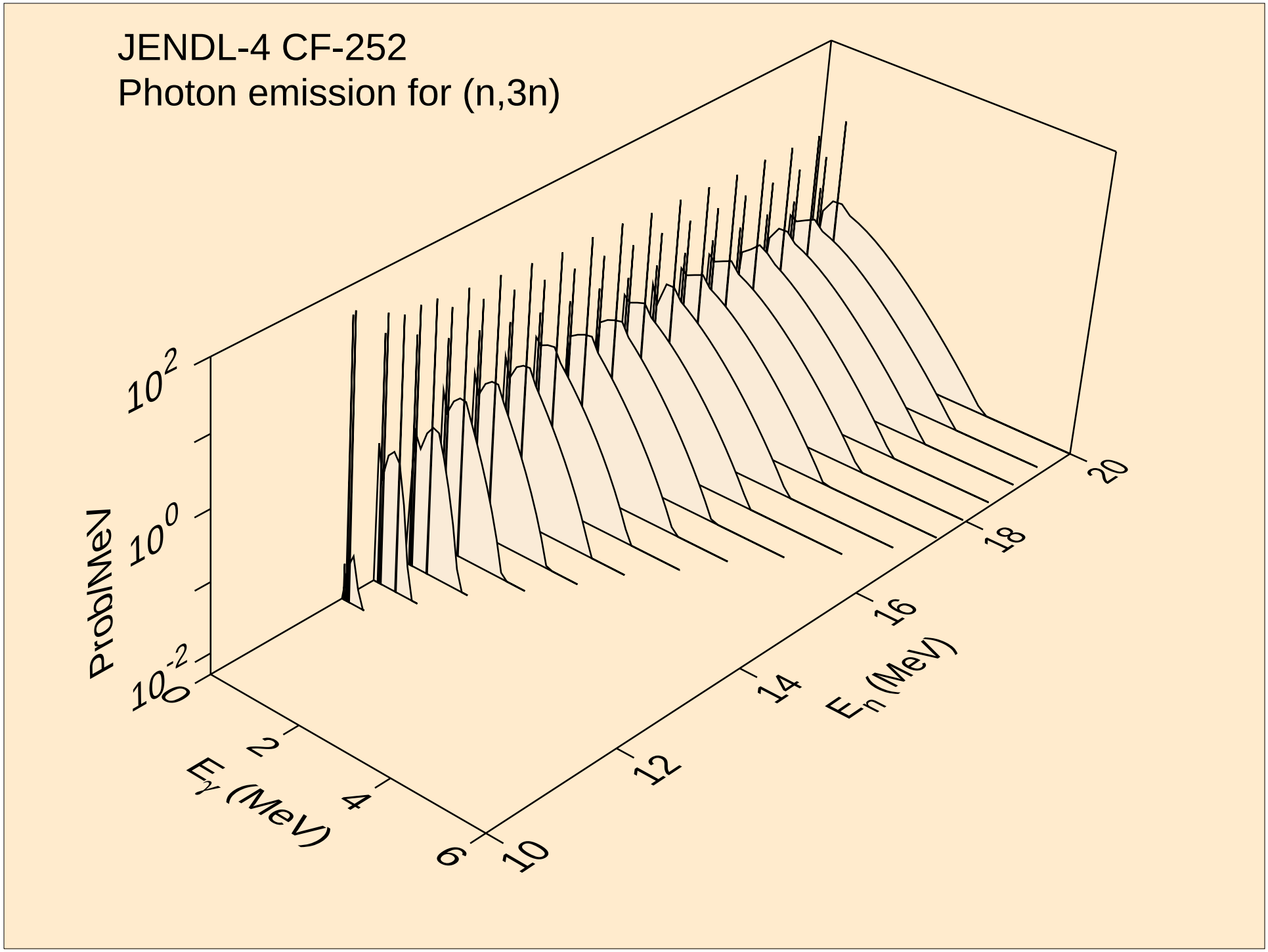

JENDL-4 CF-252
Total fission nubar
Fission nubar
9
8
7
6
5
4
3
0
5
10
15
20
Energy (MeV)

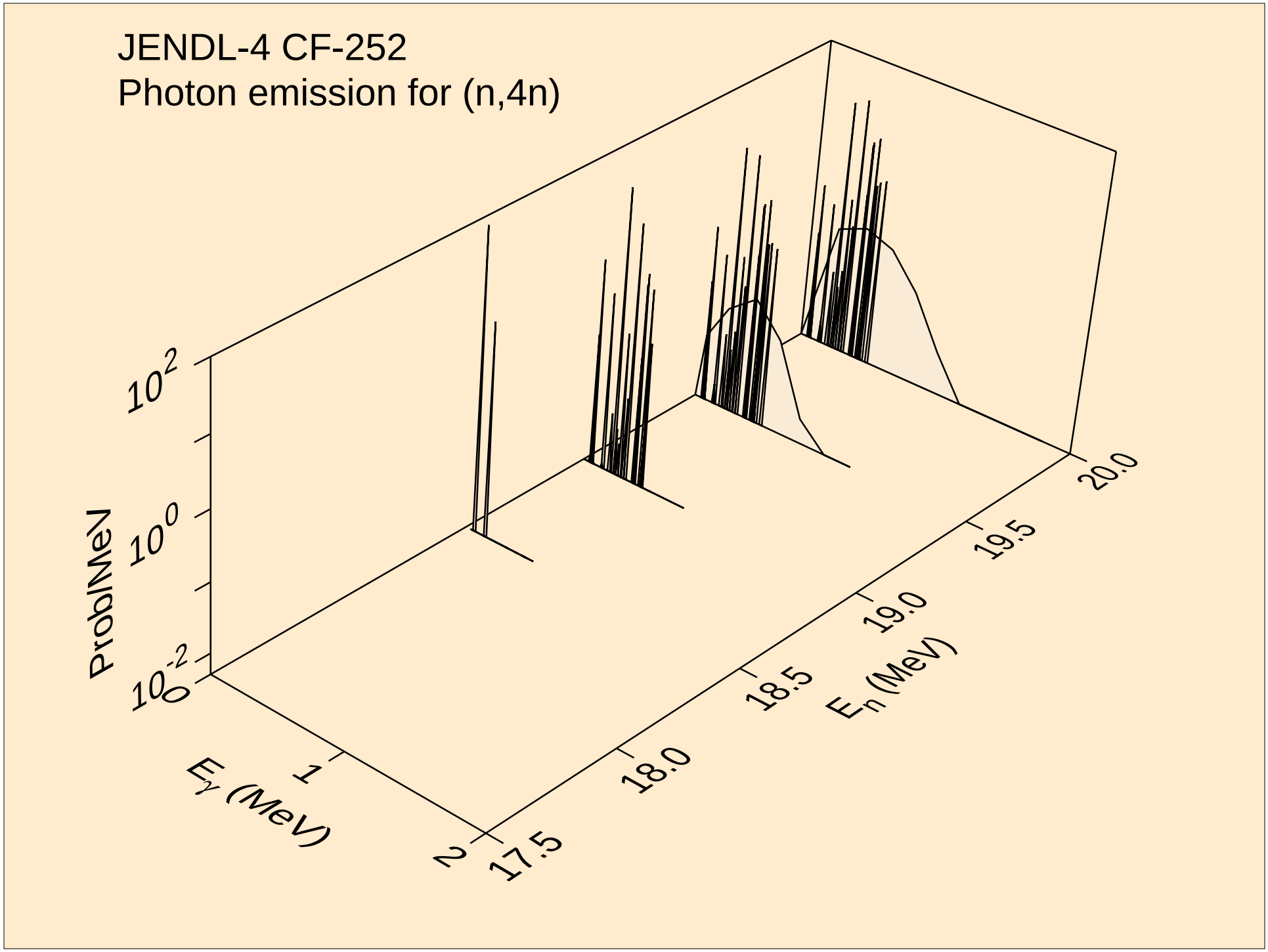

JENDL-4 CF-252
Delayed nubar
10
*10-3
9
8
7
6
5
4
Delayed nubar
0
5
10
15
20
Energy (MeV)

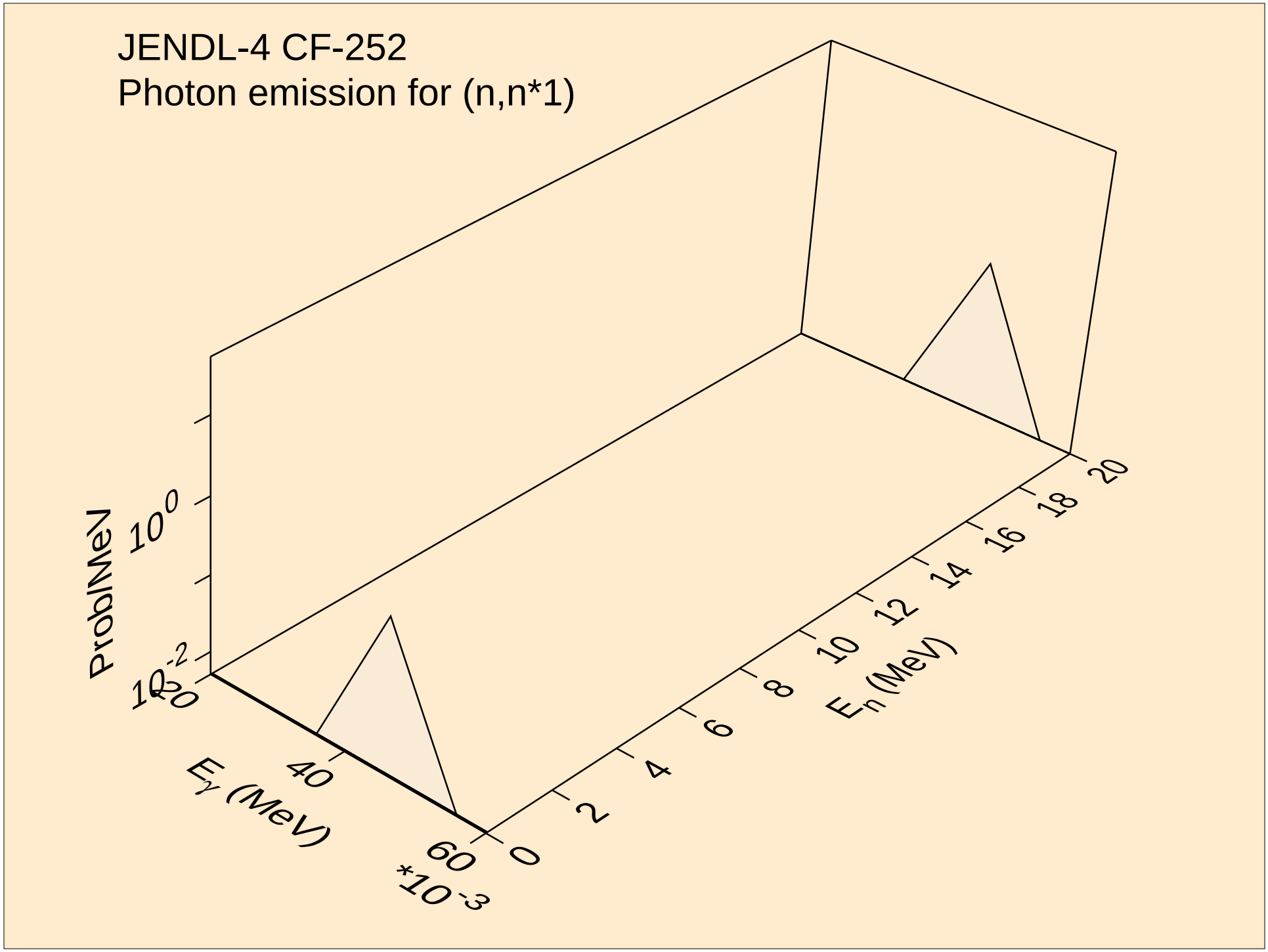

JENDL-4 CF-252
Delayed neutron spectra
Probability
Energy (MeV)
group 1 frac 0.0124 decay/shake 1.360E-10
group 2 frac 0.3052 decay/shake 2.910E-10
group 3 frac 0.1813 decay/shake 1.068E-09
group 4 frac 0.2992 decay/shake 3.024E-09
group 5 frac 0.1729 decay/shake 8.173E-09
group 6 frac 0.0290 decay/shake 2.616E-08

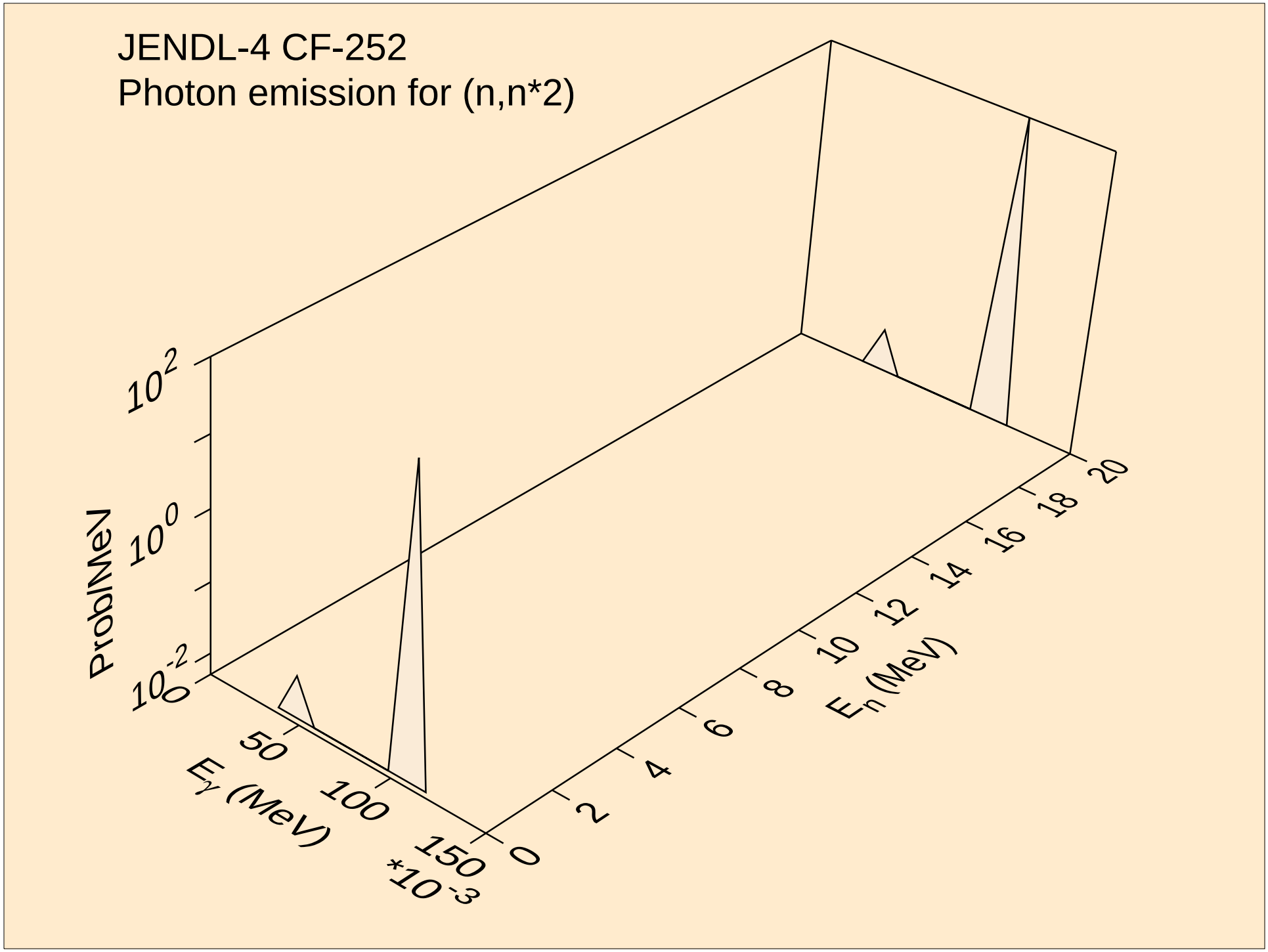

JENDL-4 CF-252
Photon emission for fission
Prob/MeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
0
5
10
15
20
E_n (MeV)


JENDL-4 CF-252
Photon emission for (n,2n)
Prob/MeV
10^0
10^{-2}
0
2
4
6
E_γ (MeV)
6
8
10
12
14
16
18
20
E_n (MeV)

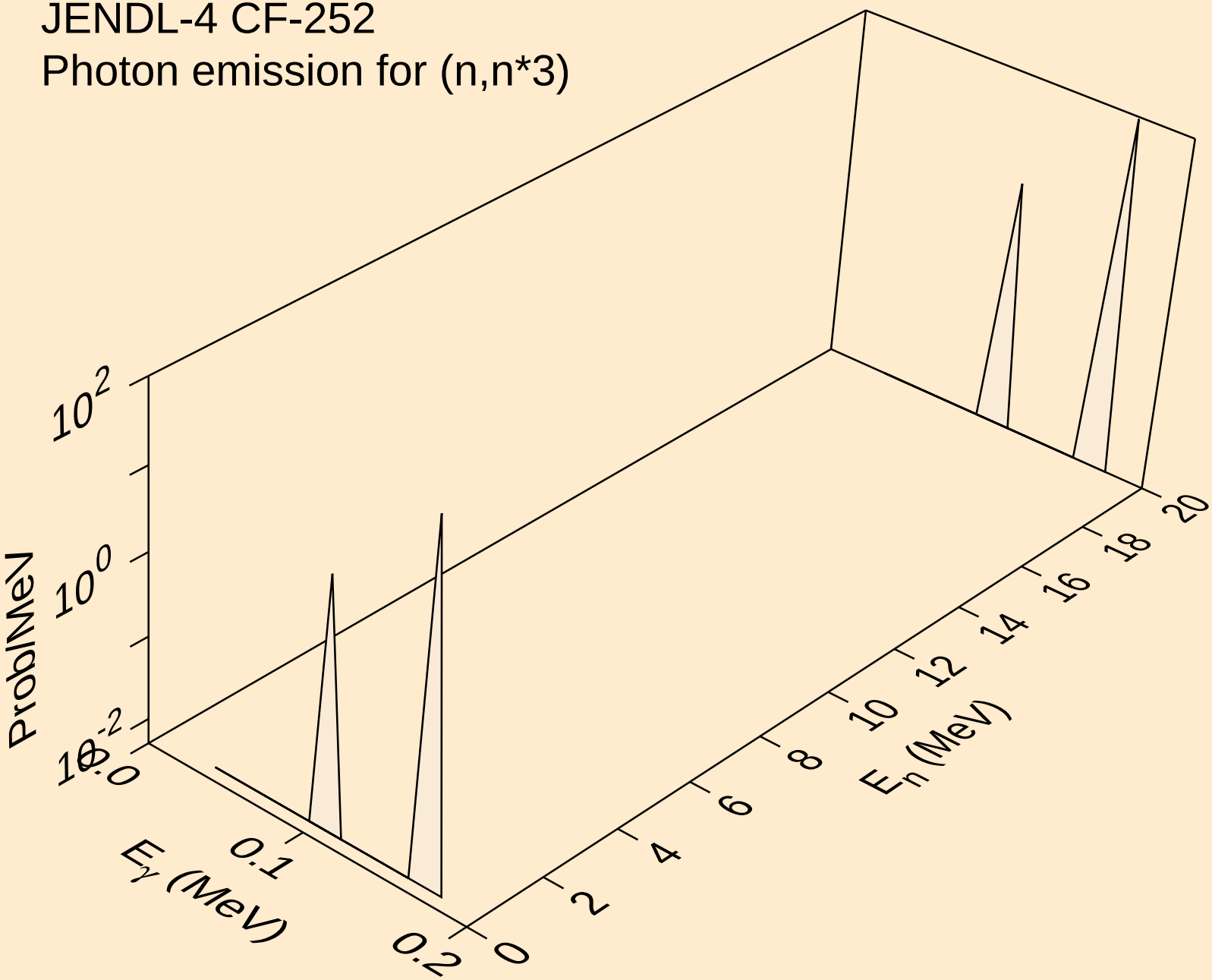

JENDL-4 CF-252
Photon emission for (n,3n)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
2
4
6
E_n (MeV)
10
12
14
16
18
20


JENDL-4 CF-252
Photon emission for (n,4n)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
1
2
E_n (MeV)
17.5
18.0
18.5
19.0
19.5
20.0

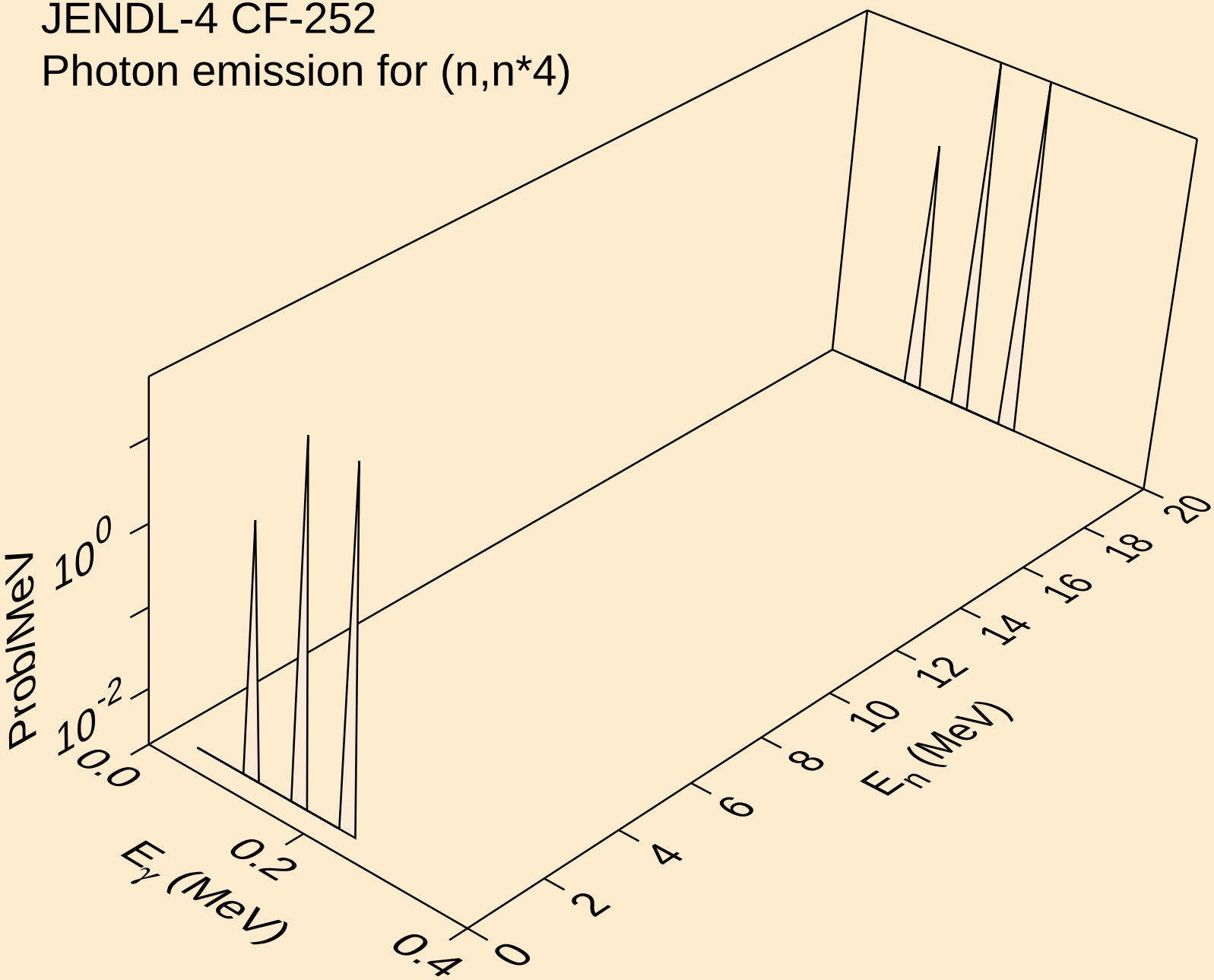

JENDL-4 CF-252
Photon emission for (n,n*1)
Prob/MeV
10^{0}
10^{-2}
E_γ (MeV)
20
40
60
*10^{-3}
E_n (MeV)
0
2
4
6
8
10
12
14
16
18
20

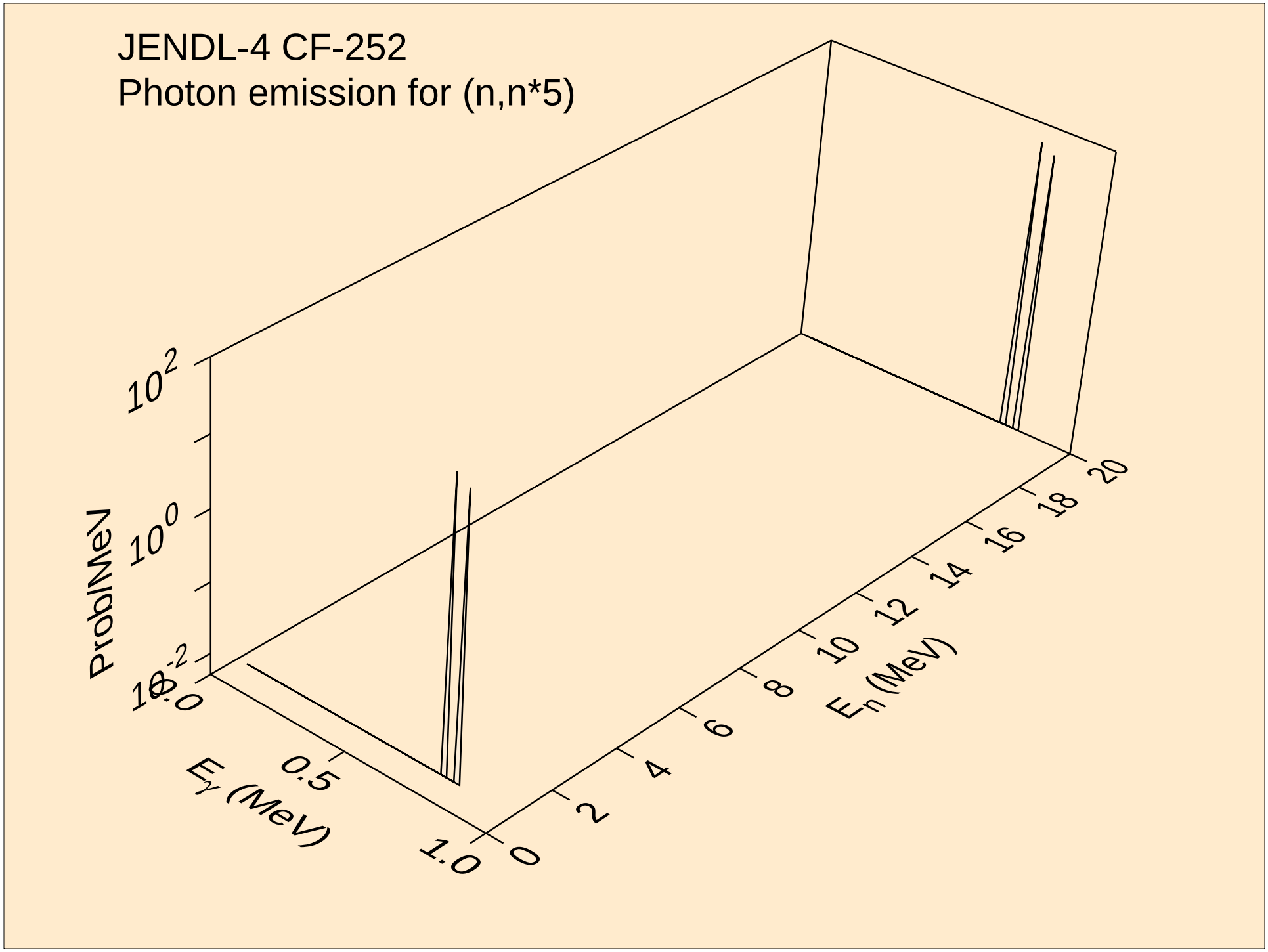

JENDL-4 CF-252
Photon emission for (n,n*2)
Prob/MeV
10^{2}
10^{0}
10^{-2}
0
50
100
150
E_γ (MeV)
*10^{-3}
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

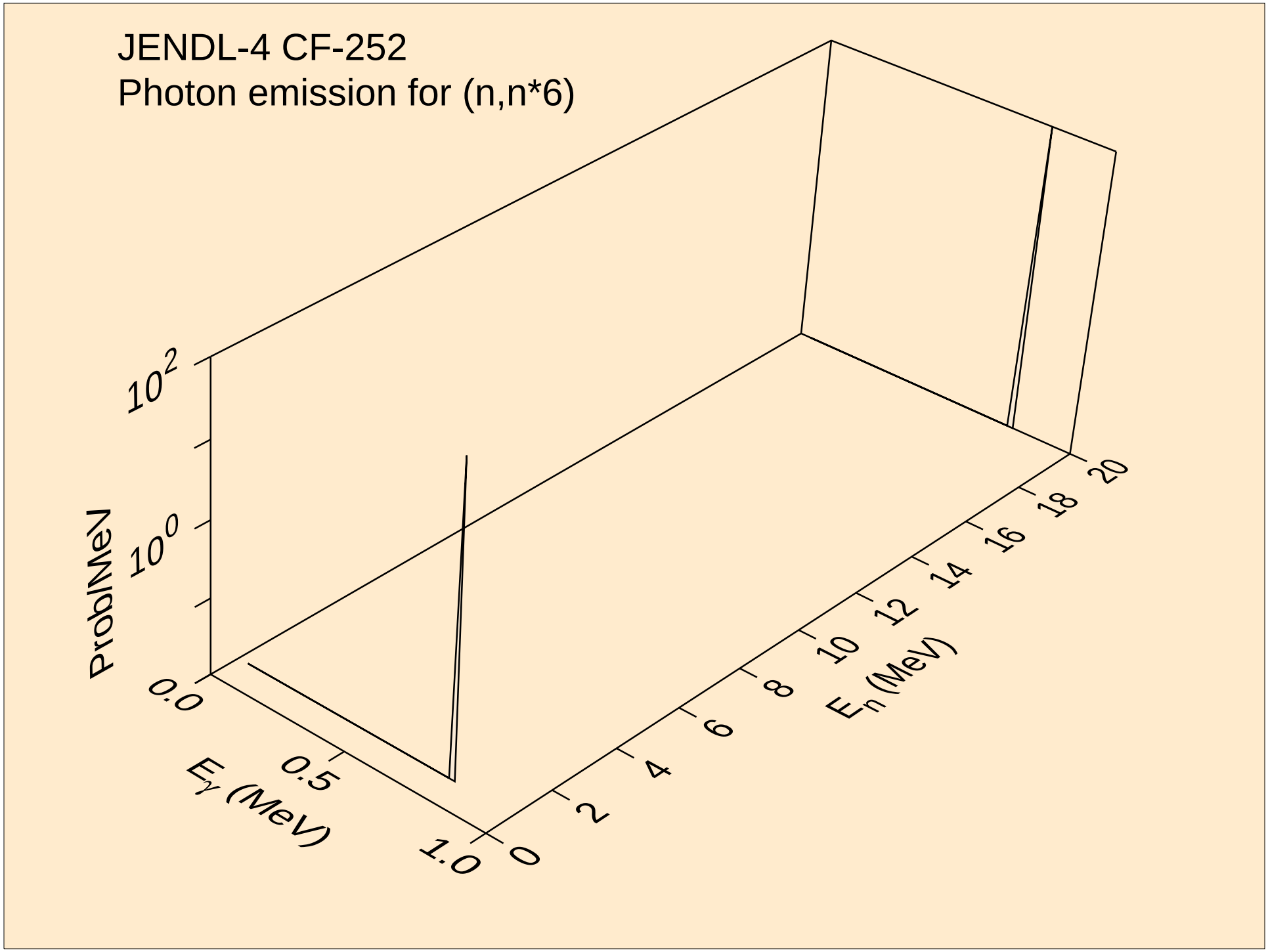
JENDL-4 CF-252
Photon emission for (n,n*3)



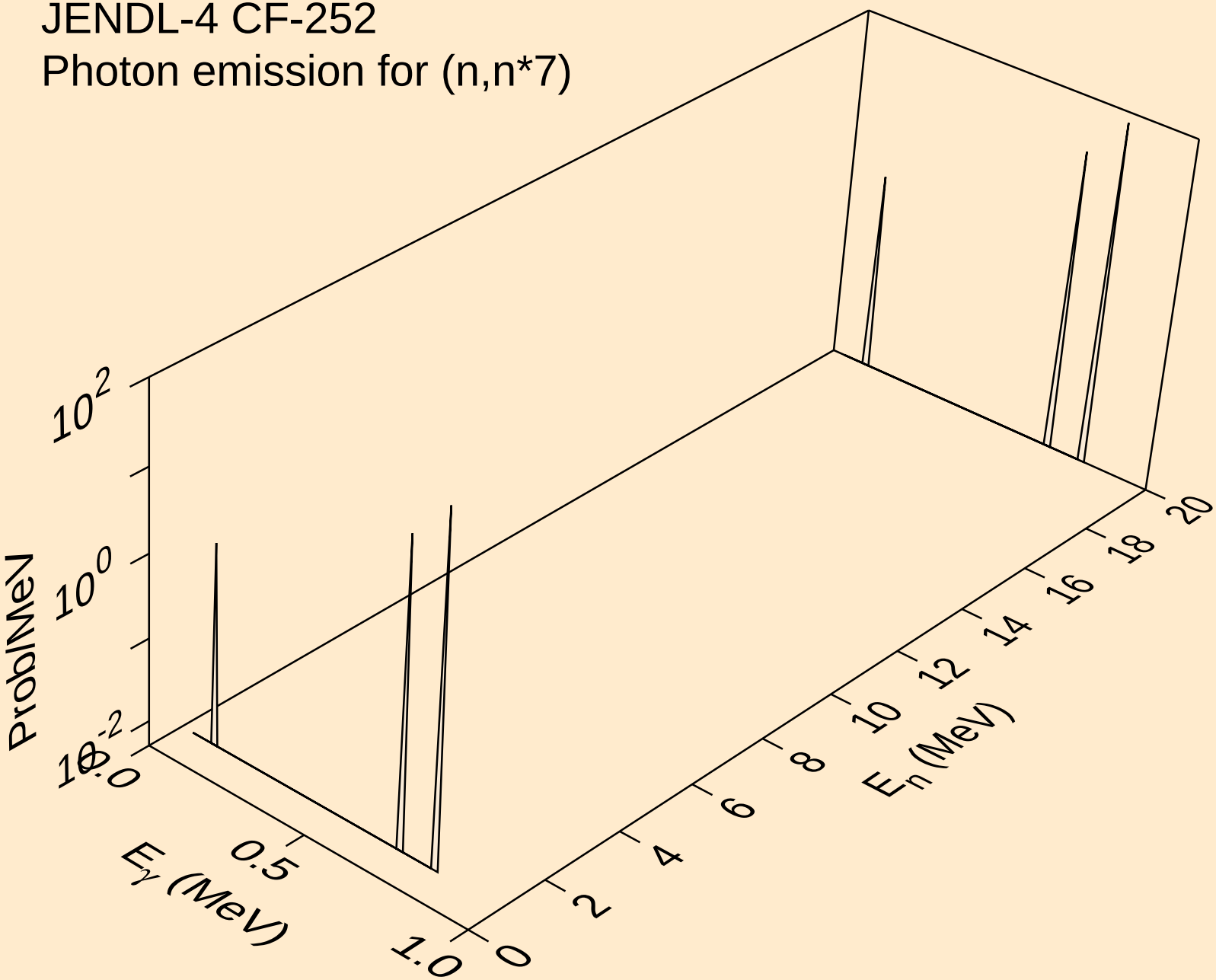
JENDL-4 CF-252
Photon emission for (n,n*4)



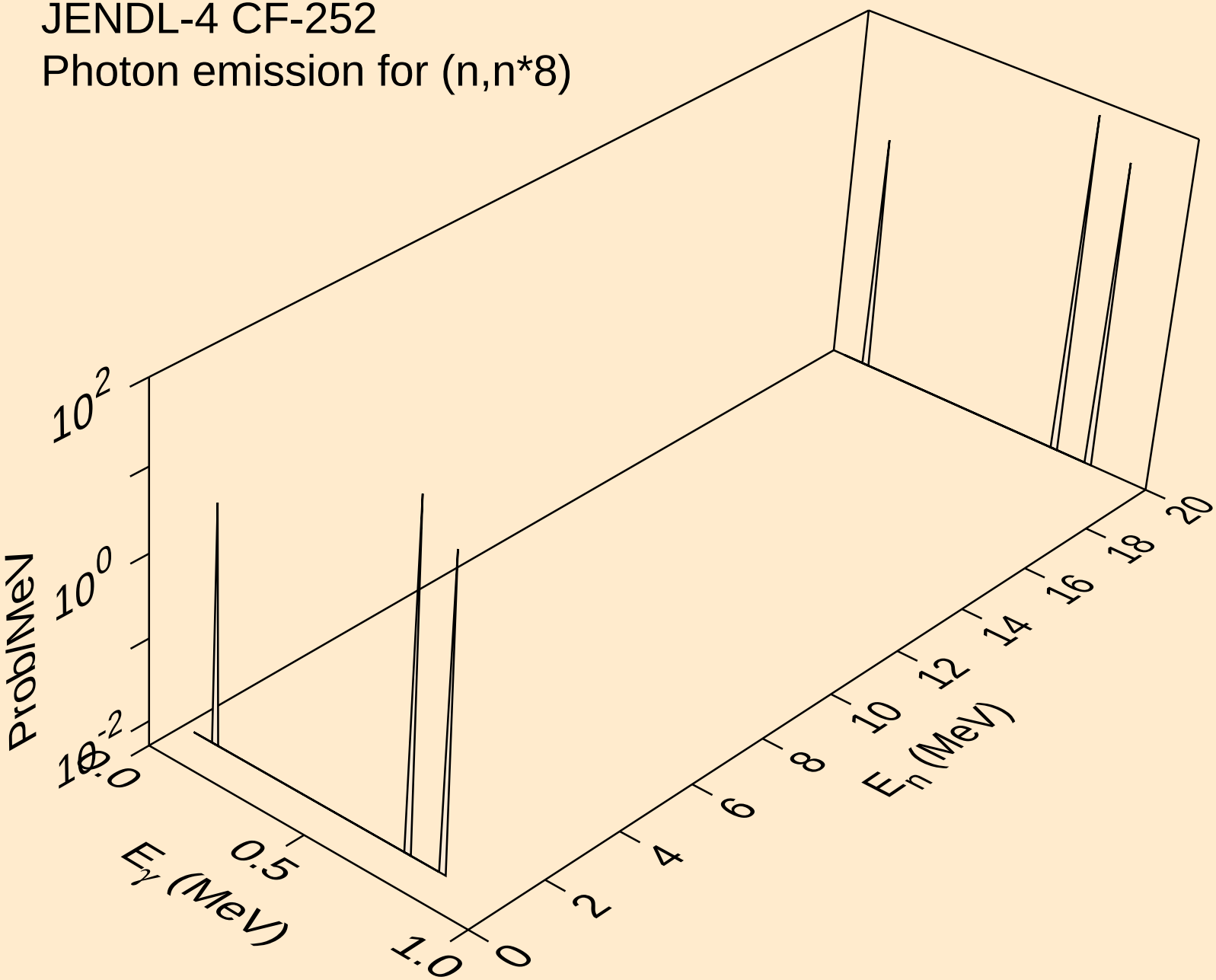

JENDL-4 CF-252
Photon emission for (n,n*5)
Prob/MeV
10^2
10^0
10^{-2}
0.0
0.5
1.0
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 CF-252
Photon emission for (n,n*6)
Prob/MeV
10^2
10^0
0.0
0.5
1.0
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

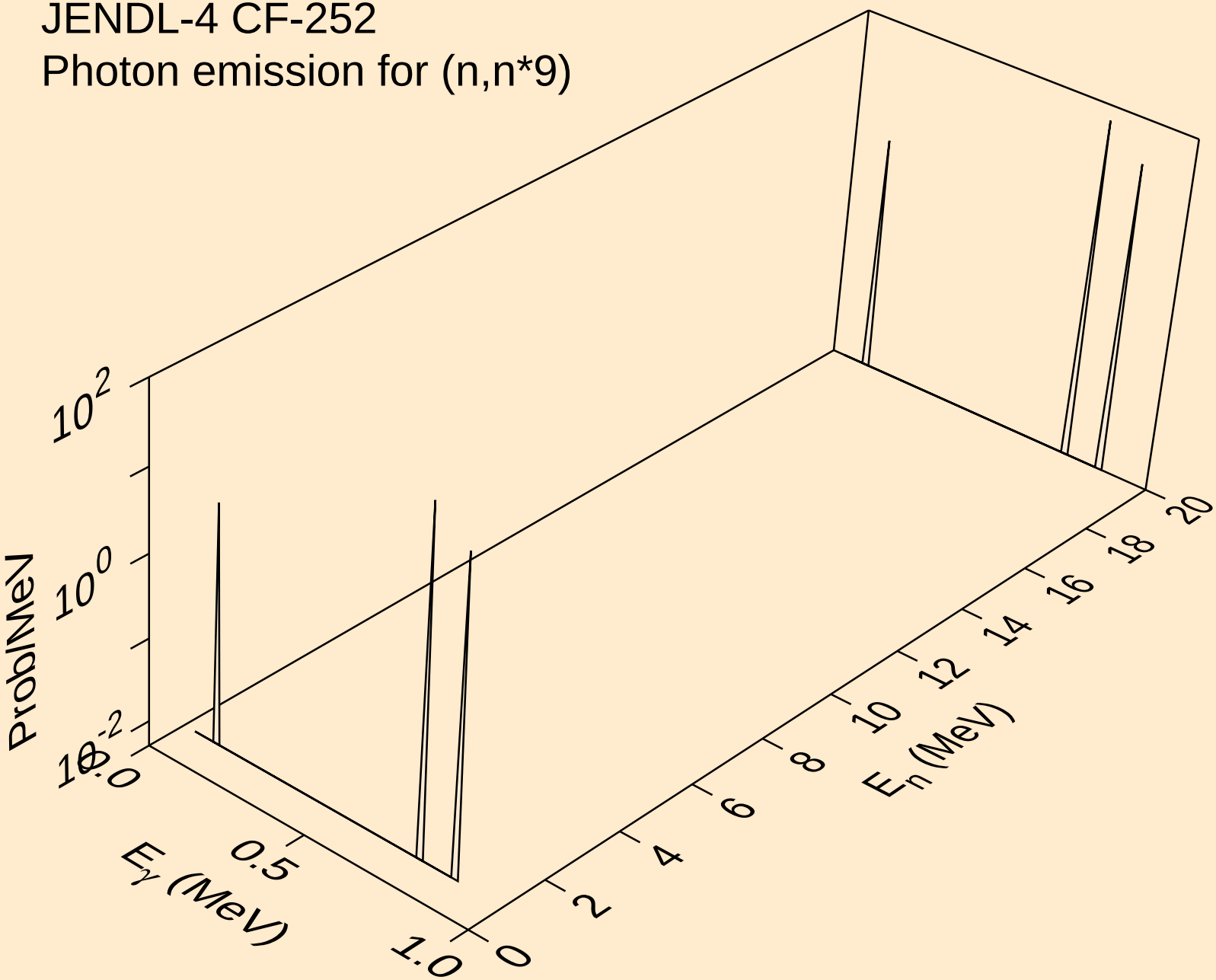
JENDL-4 CF-252
Photon emission for (n,n*7)



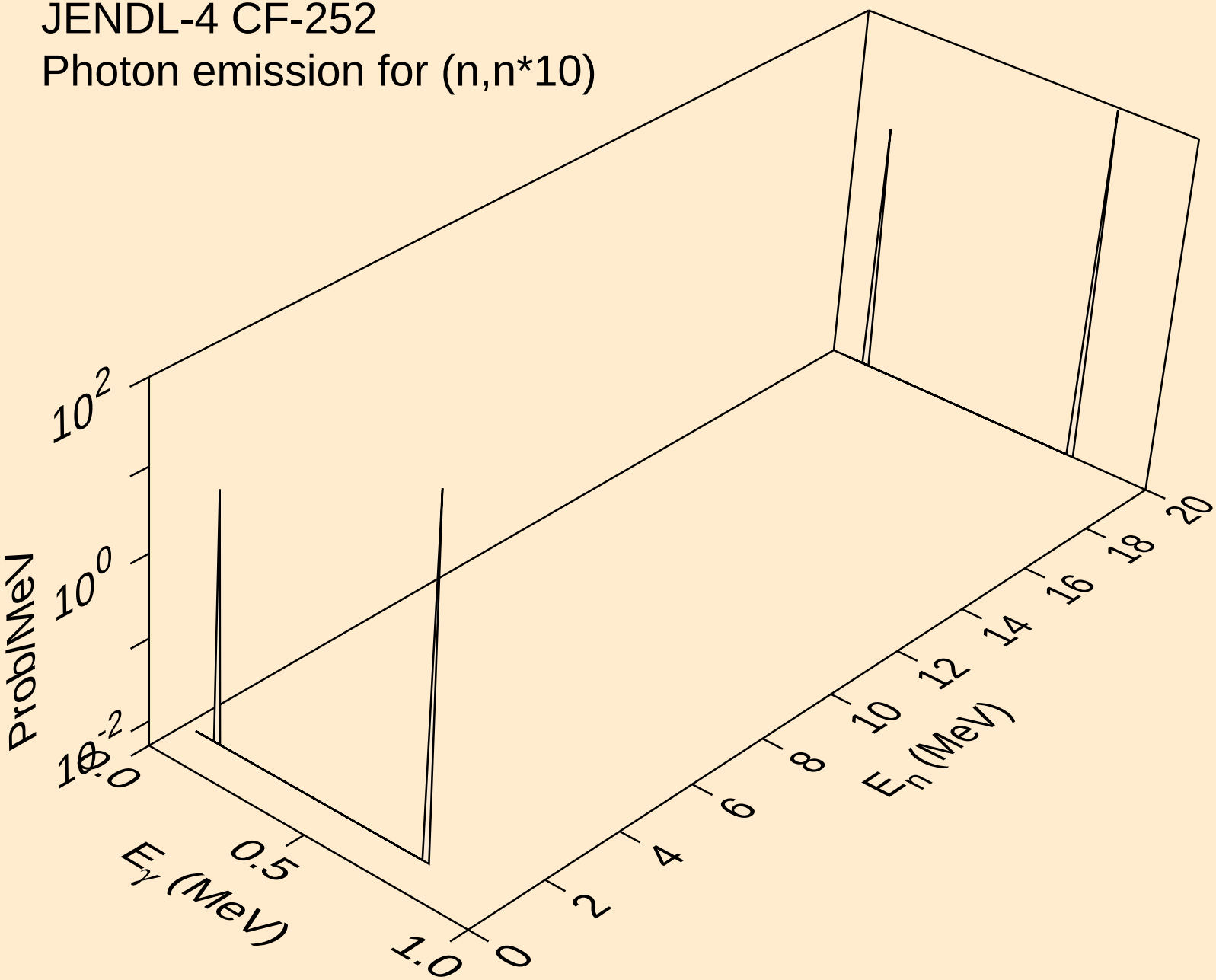
JENDL-4 CF-252
Photon emission for (n,n*8)

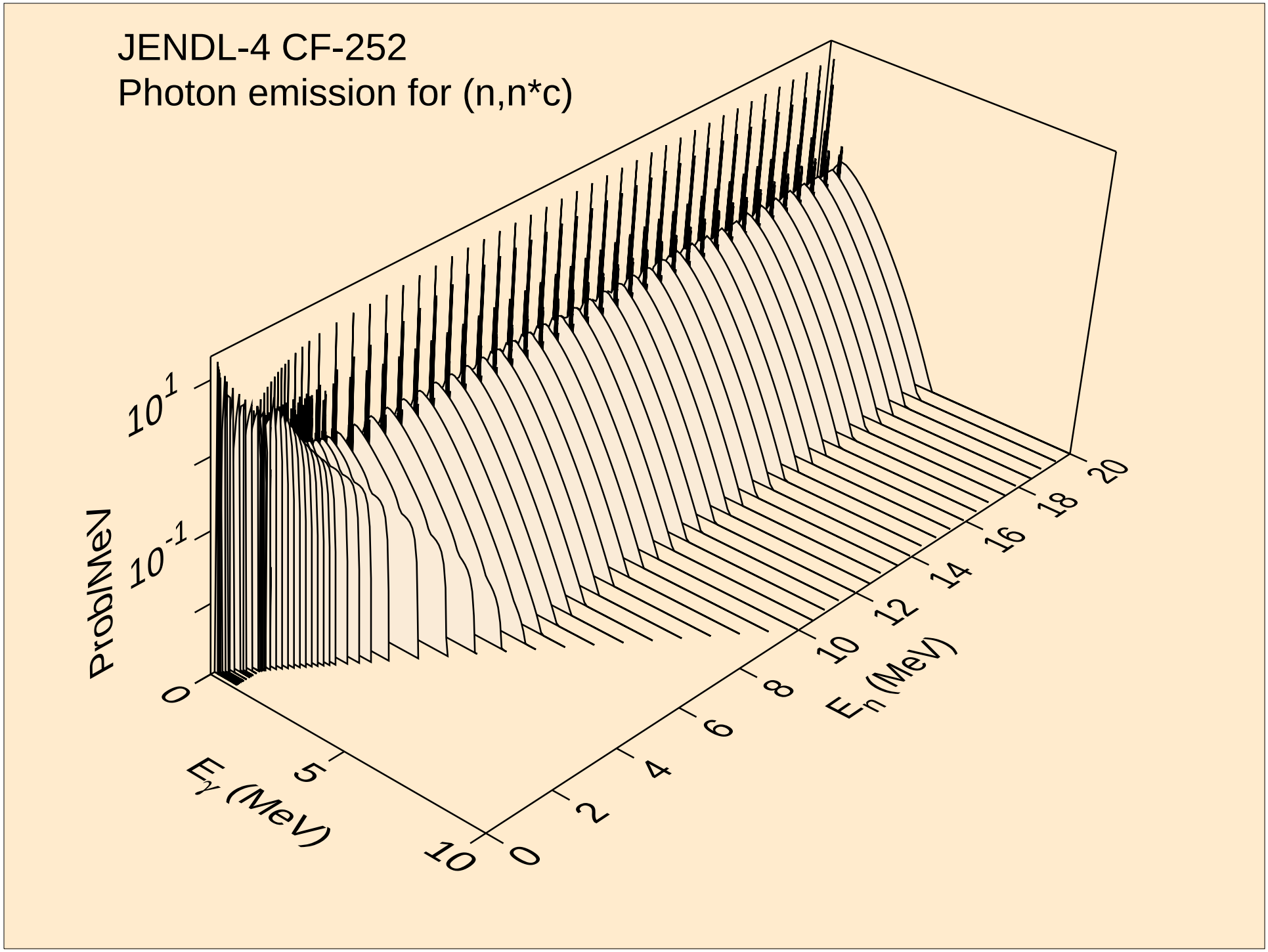


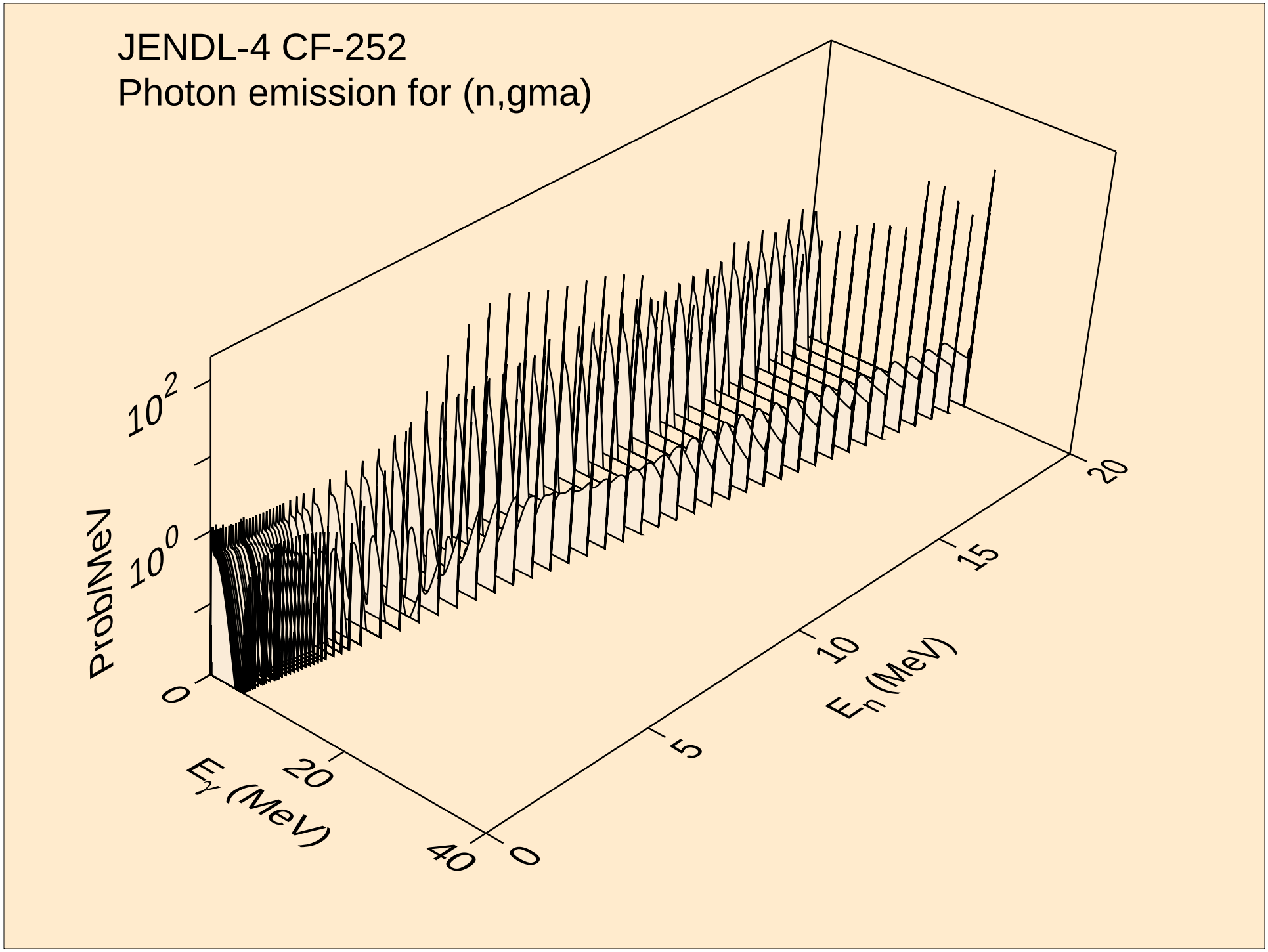
JENDL-4 CF-252
Photon emission for (n,n*9)

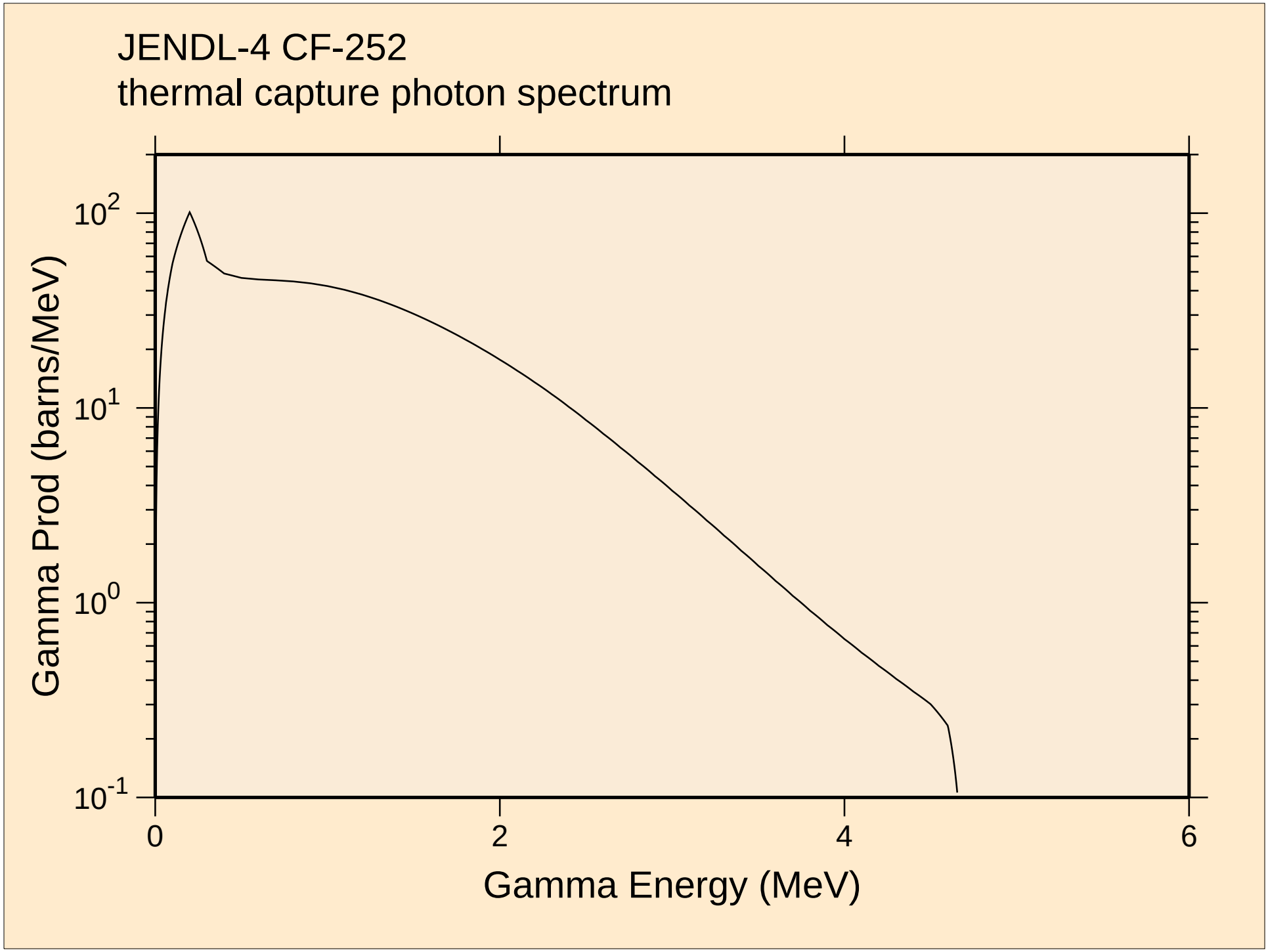


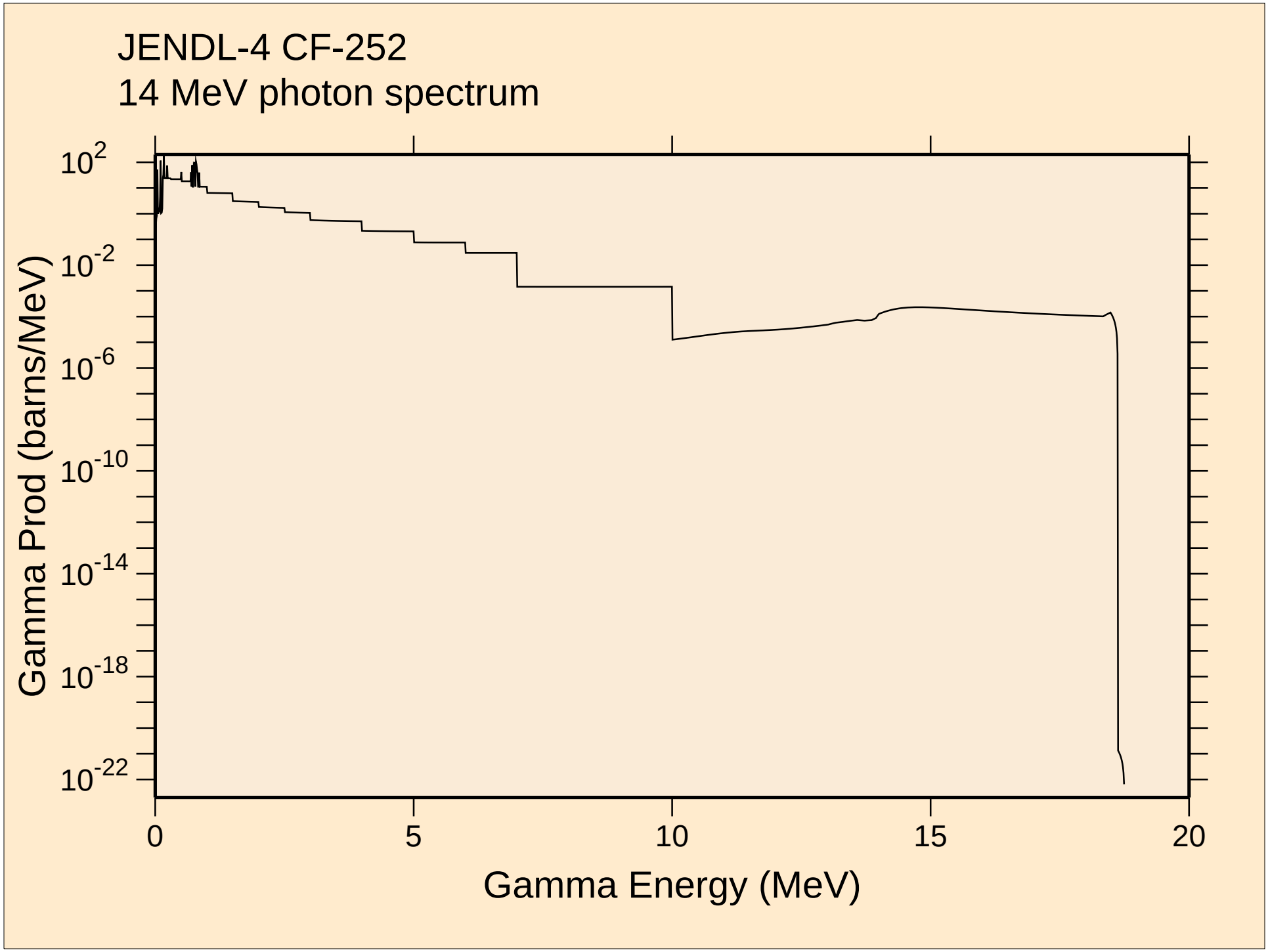
JENDL-4 CF-252
Photon emission for (n,n*10)




JENDL-4 CF-252
Photon emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


JENDL-4 CF-252
Photon emission for (n,gma)
Prob/MeV
10^2
10^0
0
20
40
E_γ (MeV)
0
5
10
15
20
E_n (MeV)


JENDL-4 CF-252
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^{2}
10^{1}
10^{0}
10^{-1}
0
2
4
6
Gamma Energy (MeV)


JENDL-4 CF-252
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^2
10^-2
10^-6
10^-10
10^-14
10^-18
10^-22
0
5
10
15
20
Gamma Energy (MeV)