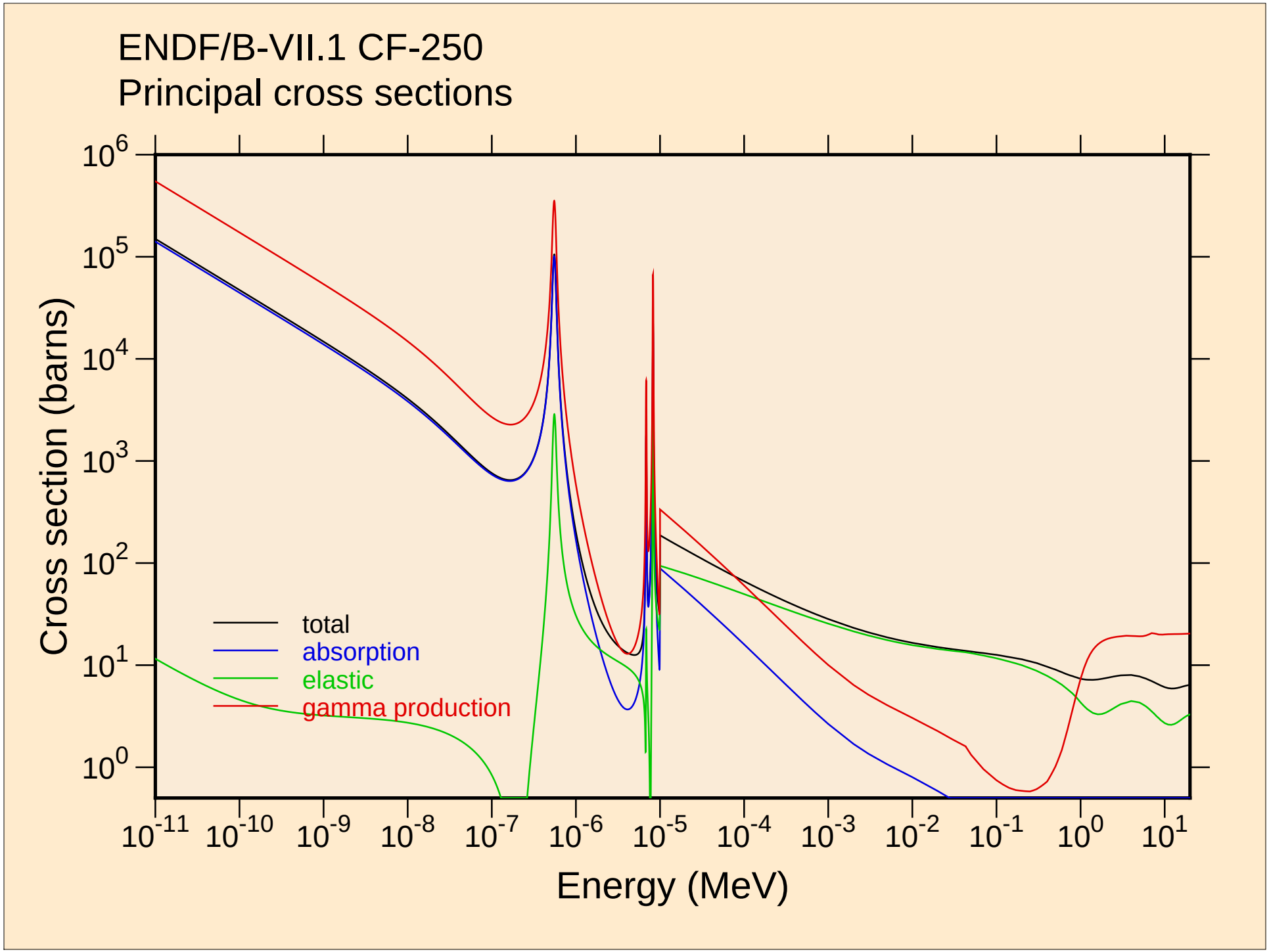
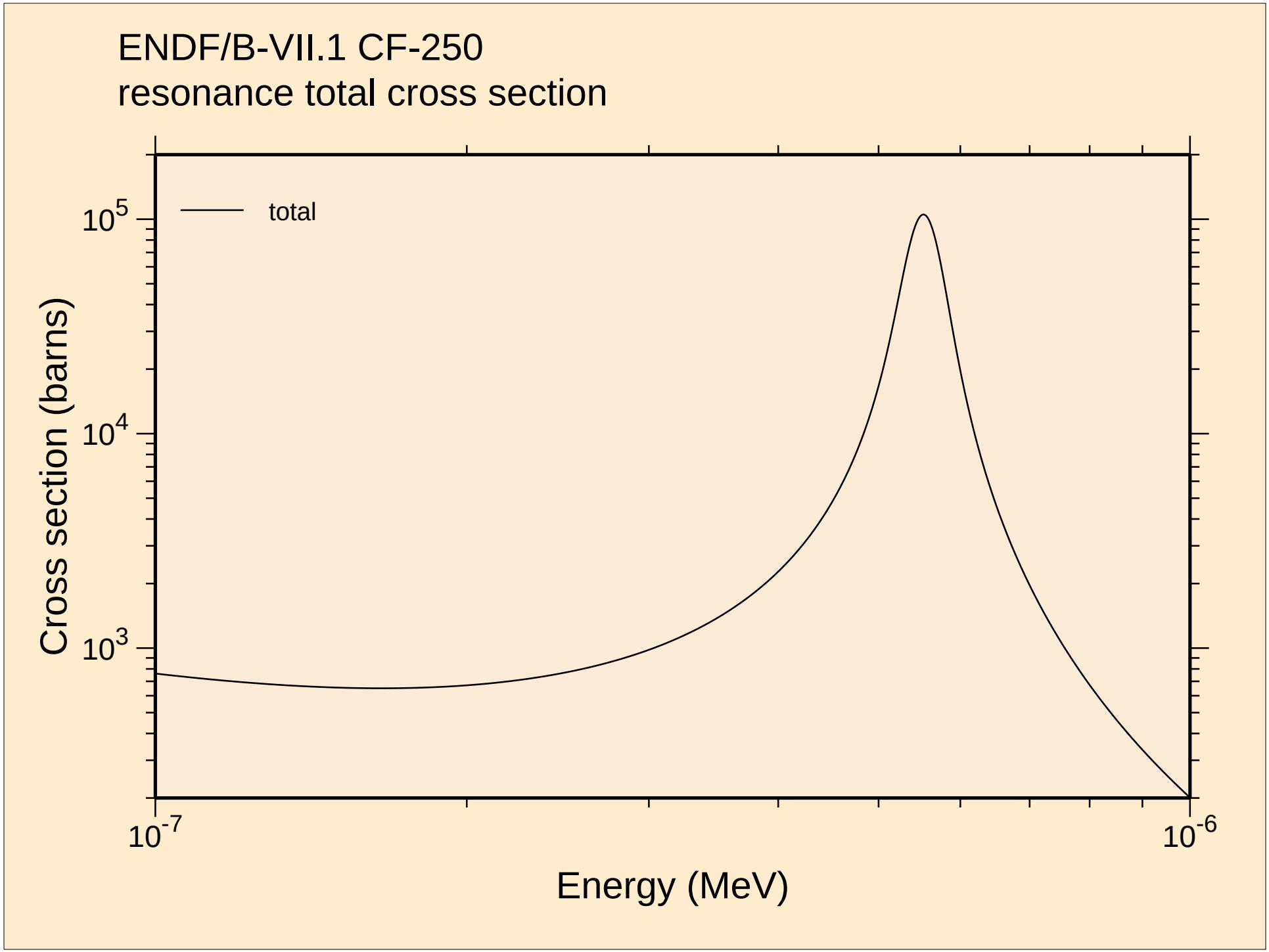
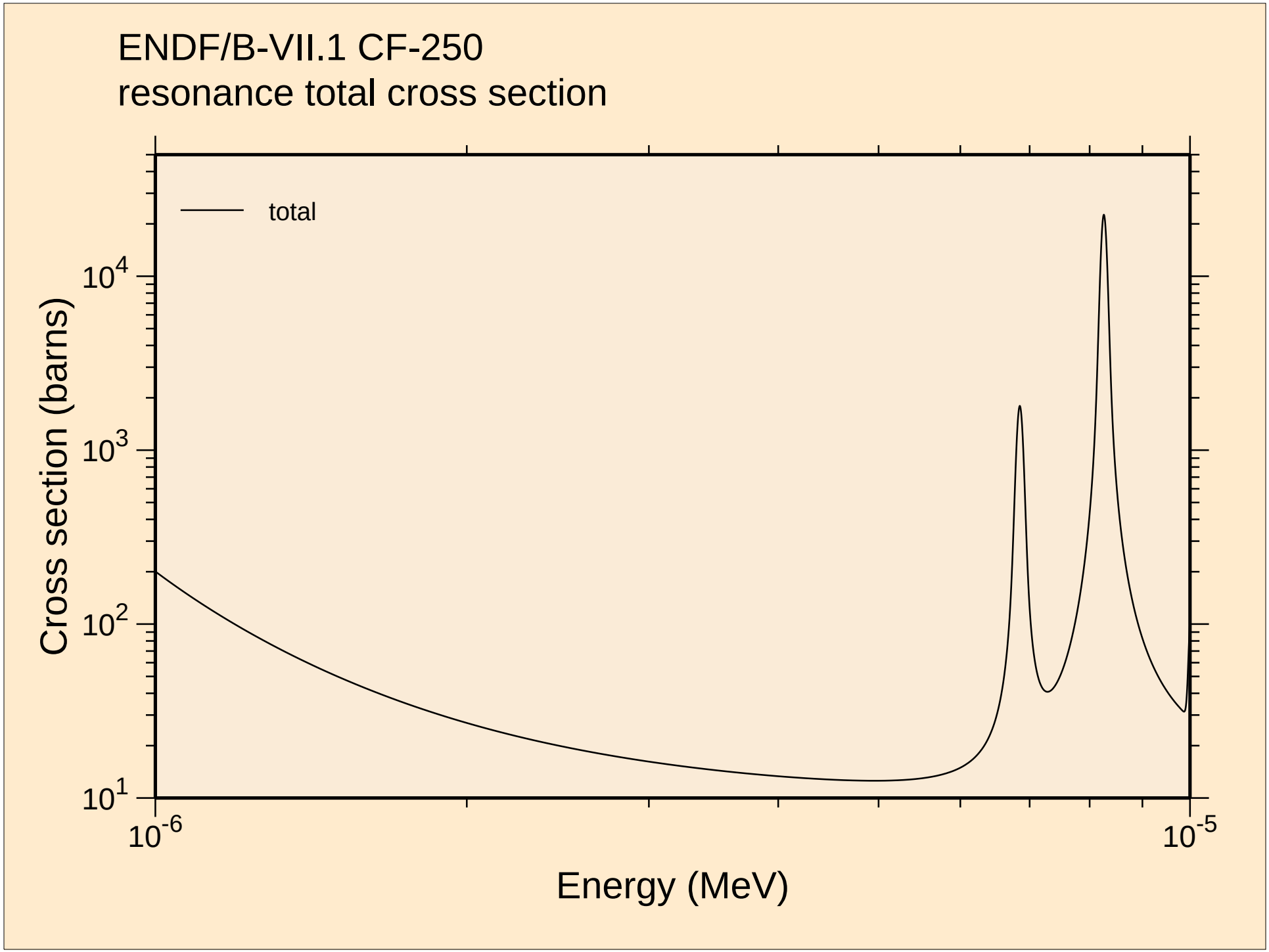
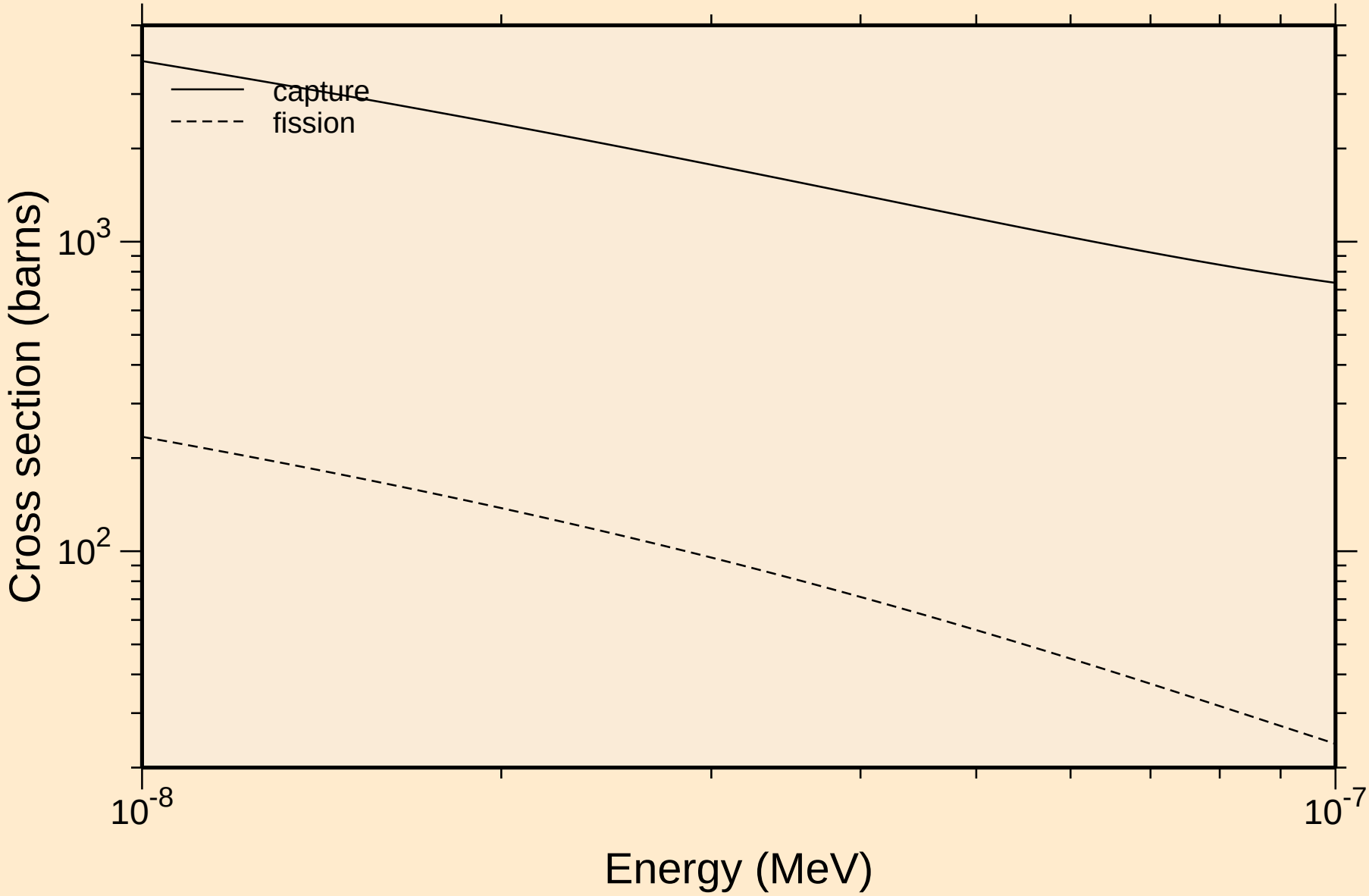
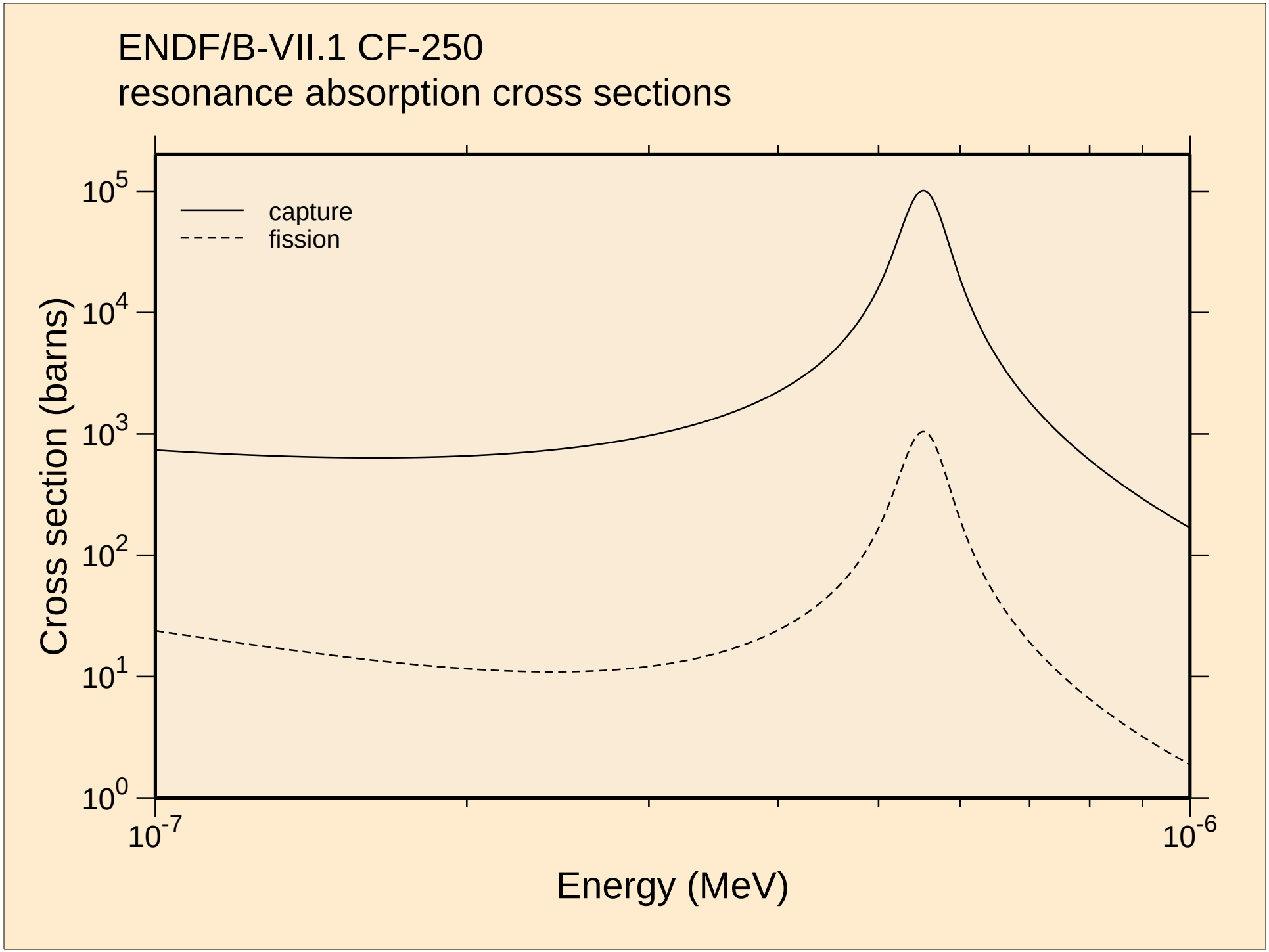

ENDF/B-VII.1 CF-250
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production

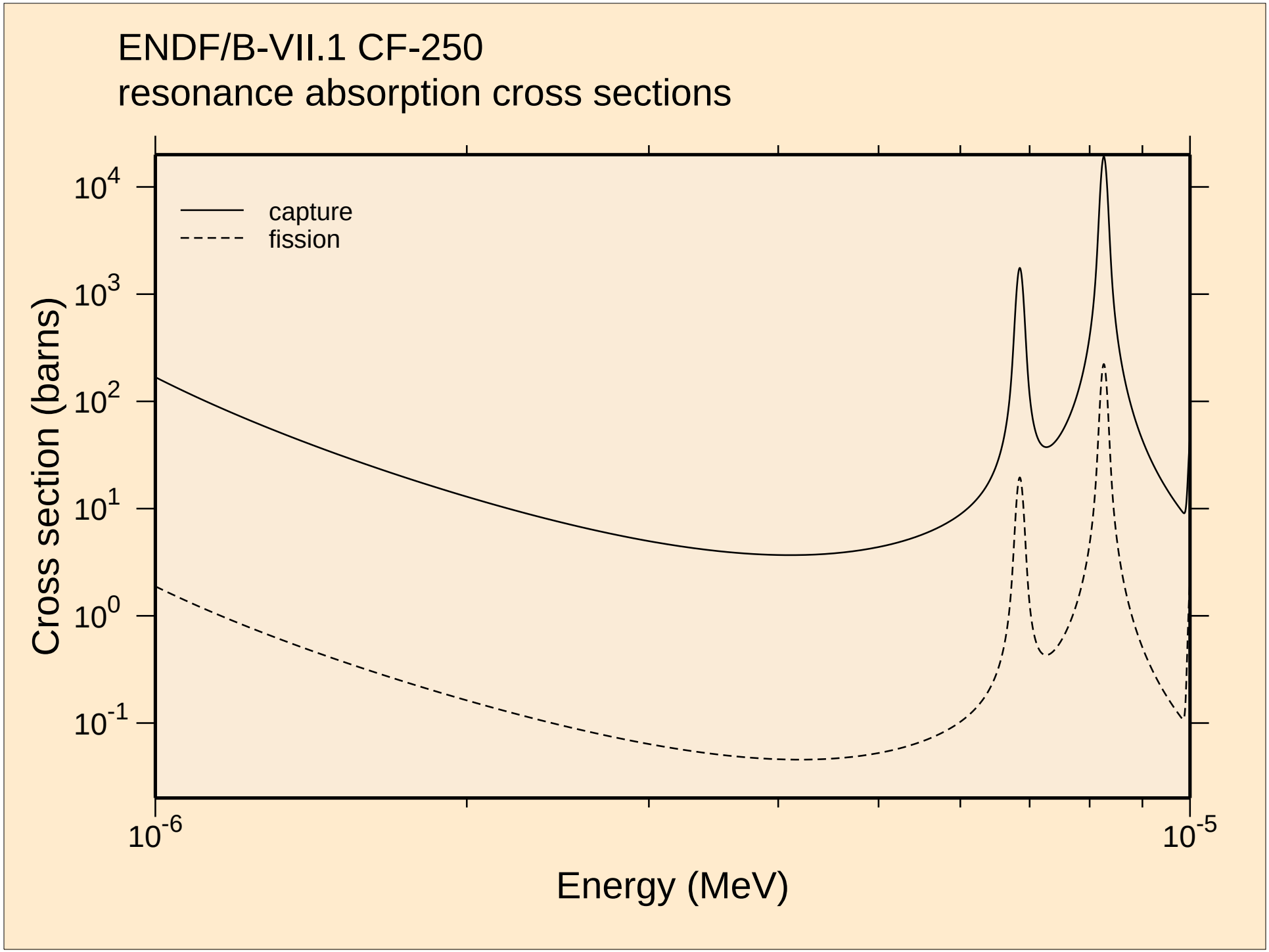

ENDF/B-VII.1 CF-250
resonance total cross section
total
$10^5$
$10^4$
$10^3$
Cross section (barns)
$10^{-7}$
$10^{-6}$
Energy (MeV)


ENDF/B-VII.1 CF-250
resonance total cross section
total
Cross section (barns)
10^4
10^3
10^2
10^1
10^-6
10^-5
Energy (MeV)

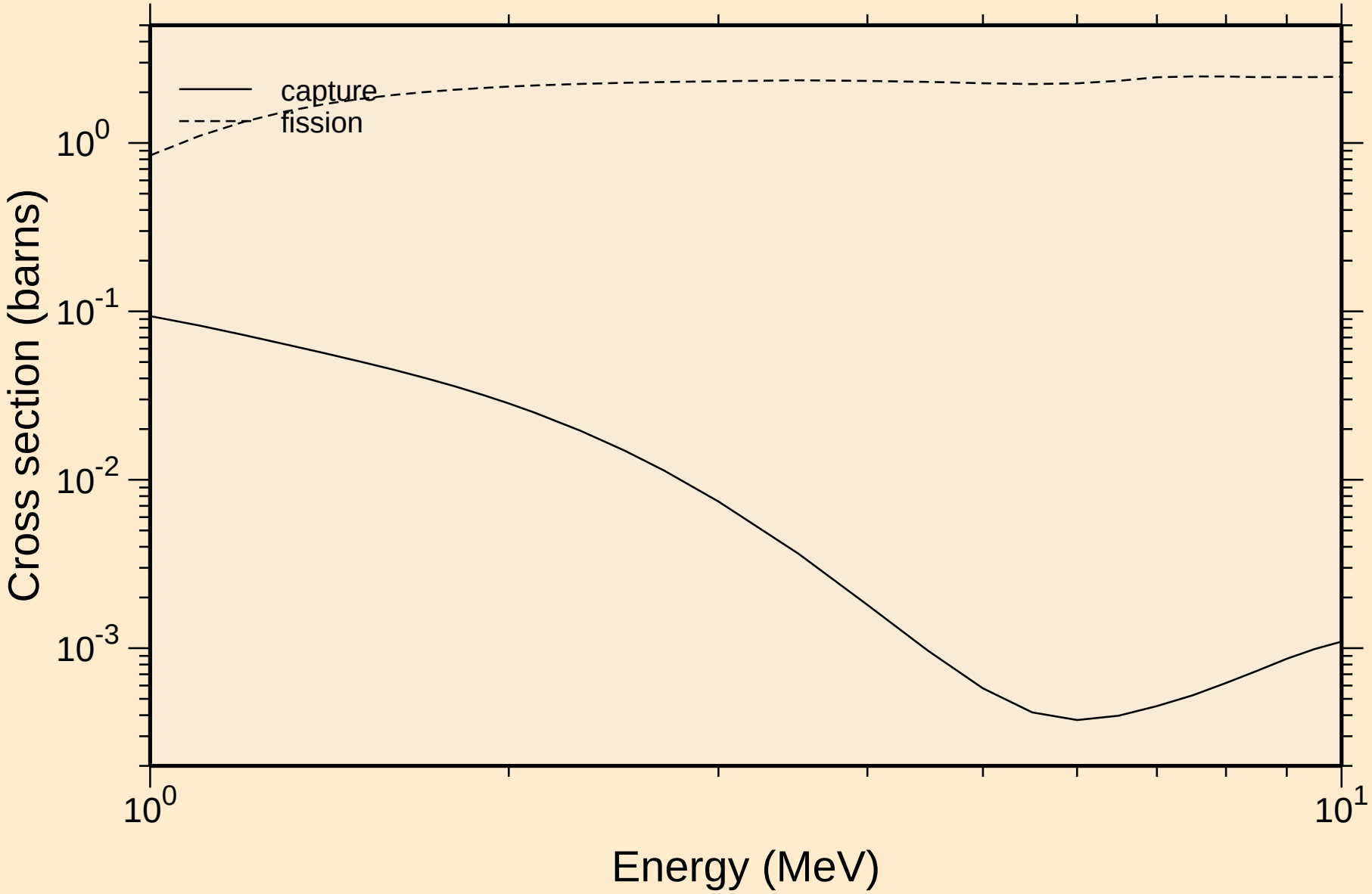
ENDF/B-VII.1 CF-250
resonance absorption cross sections

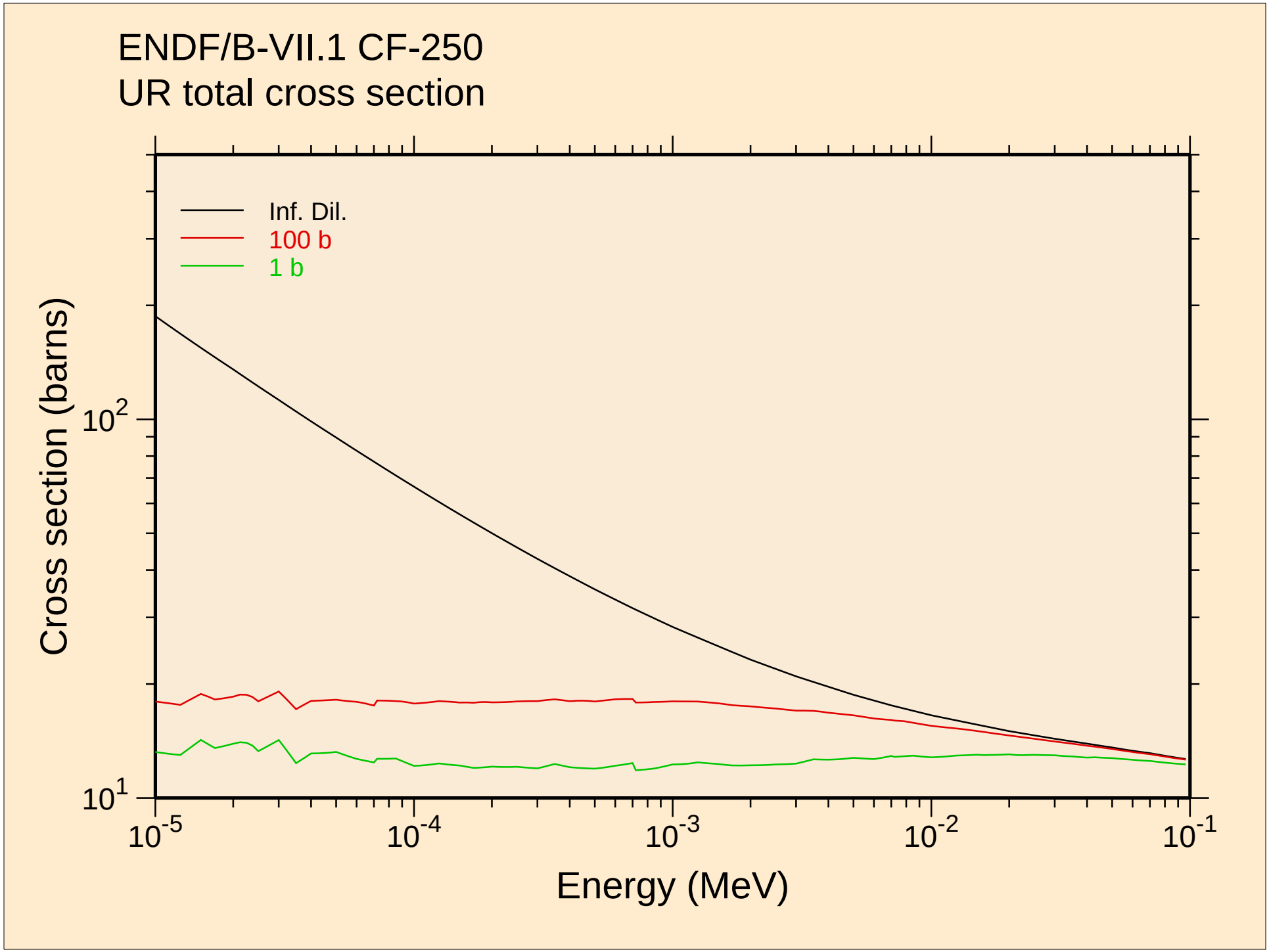


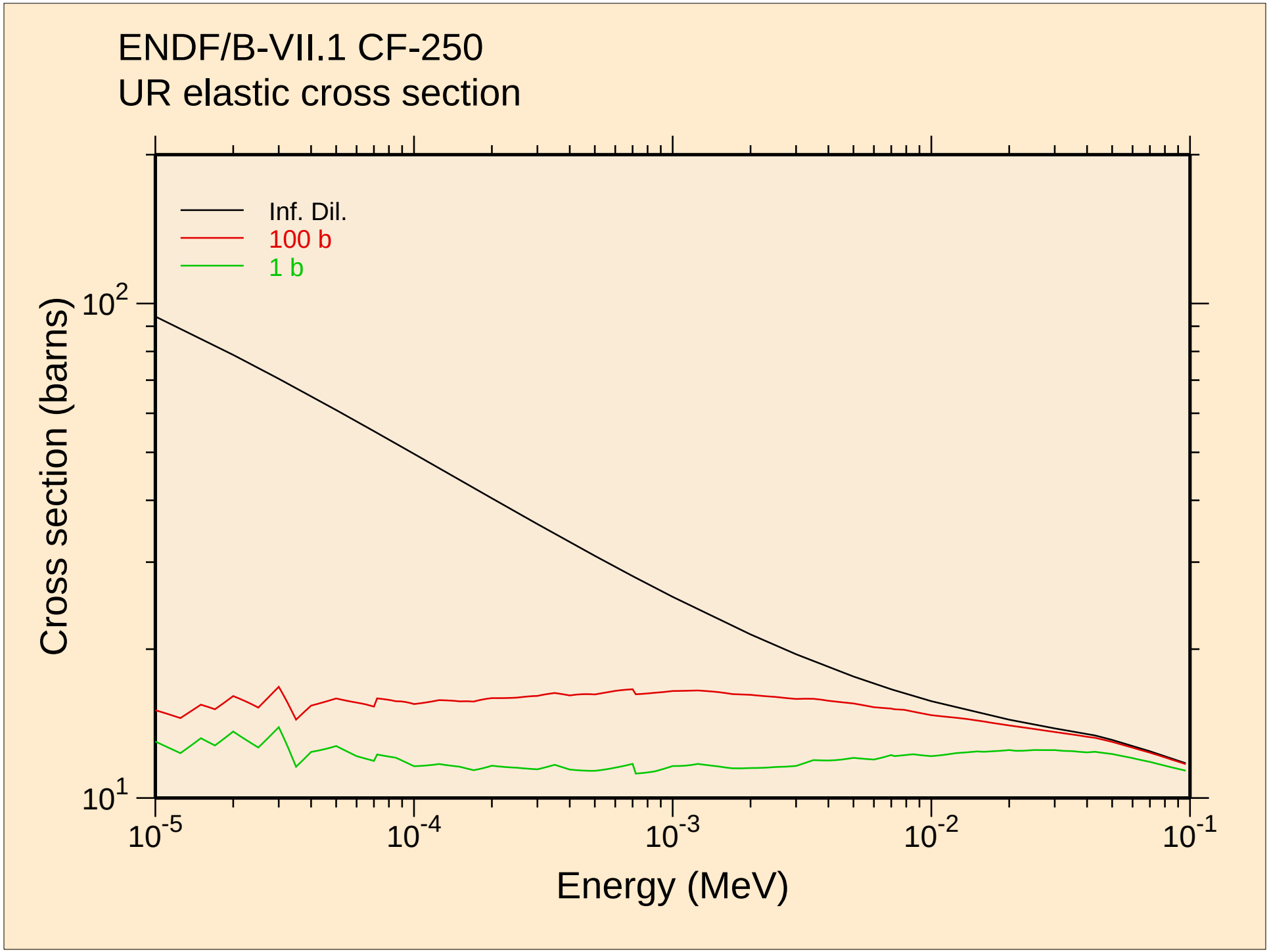

ENDF/B-VII.1 CF-250
resonance absorption cross sections
capture
fission
Cross section (barns)
$10^5$
$10^4$
$10^3$
$10^2$
$10^1$
$10^0$
$10^{-7}$
$10^{-6}$
Energy (MeV)

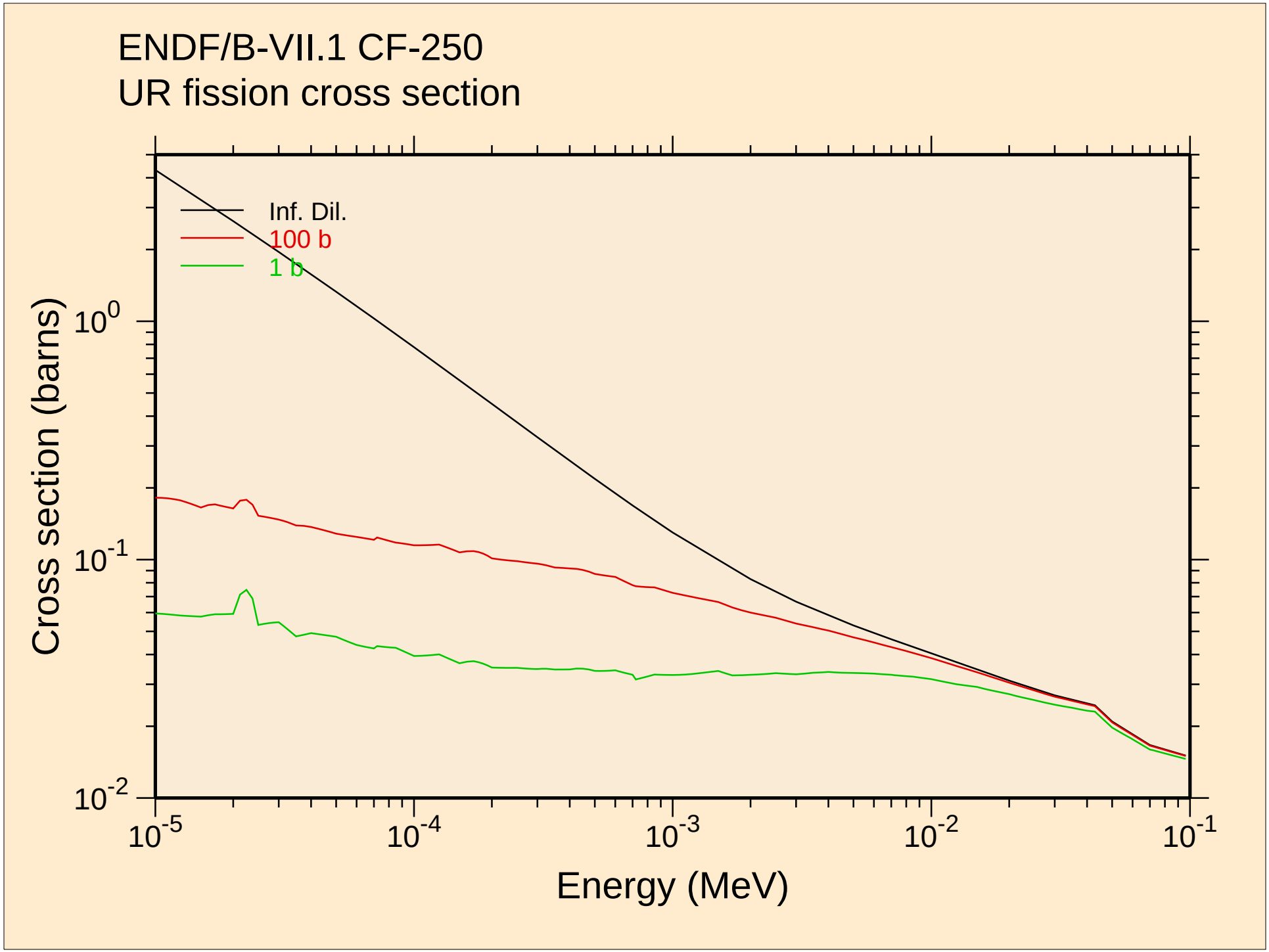

ENDF/B-VII.1 CF-250
resonance absorption cross sections
capture
fission
Cross section (barns)
$10^{4}$
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
$10^{-1}$
$10^{-6}$
$10^{-5}$
Energy (MeV)

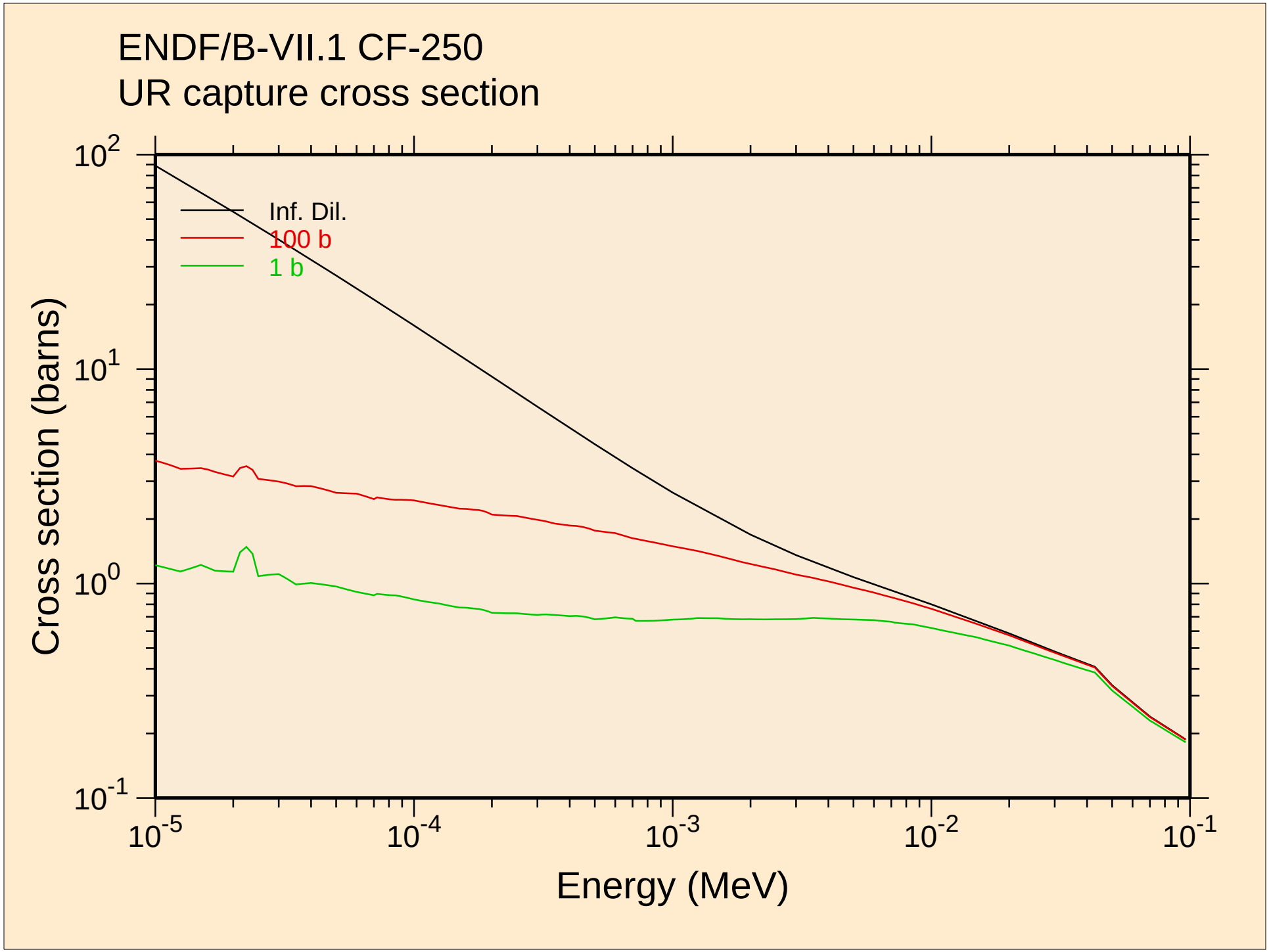
ENDF/B-VII.1 CF-250
resonance absorption cross sections

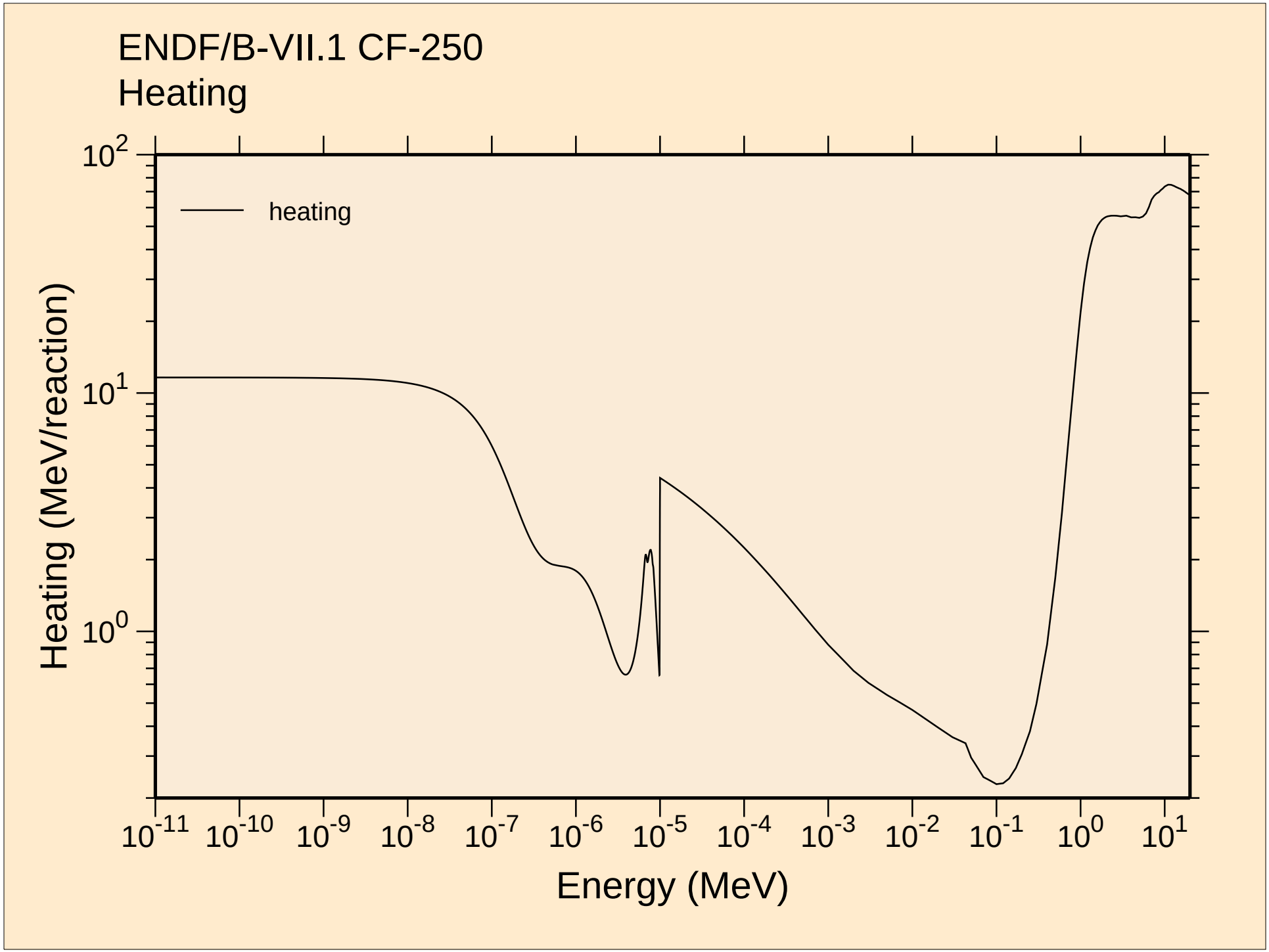


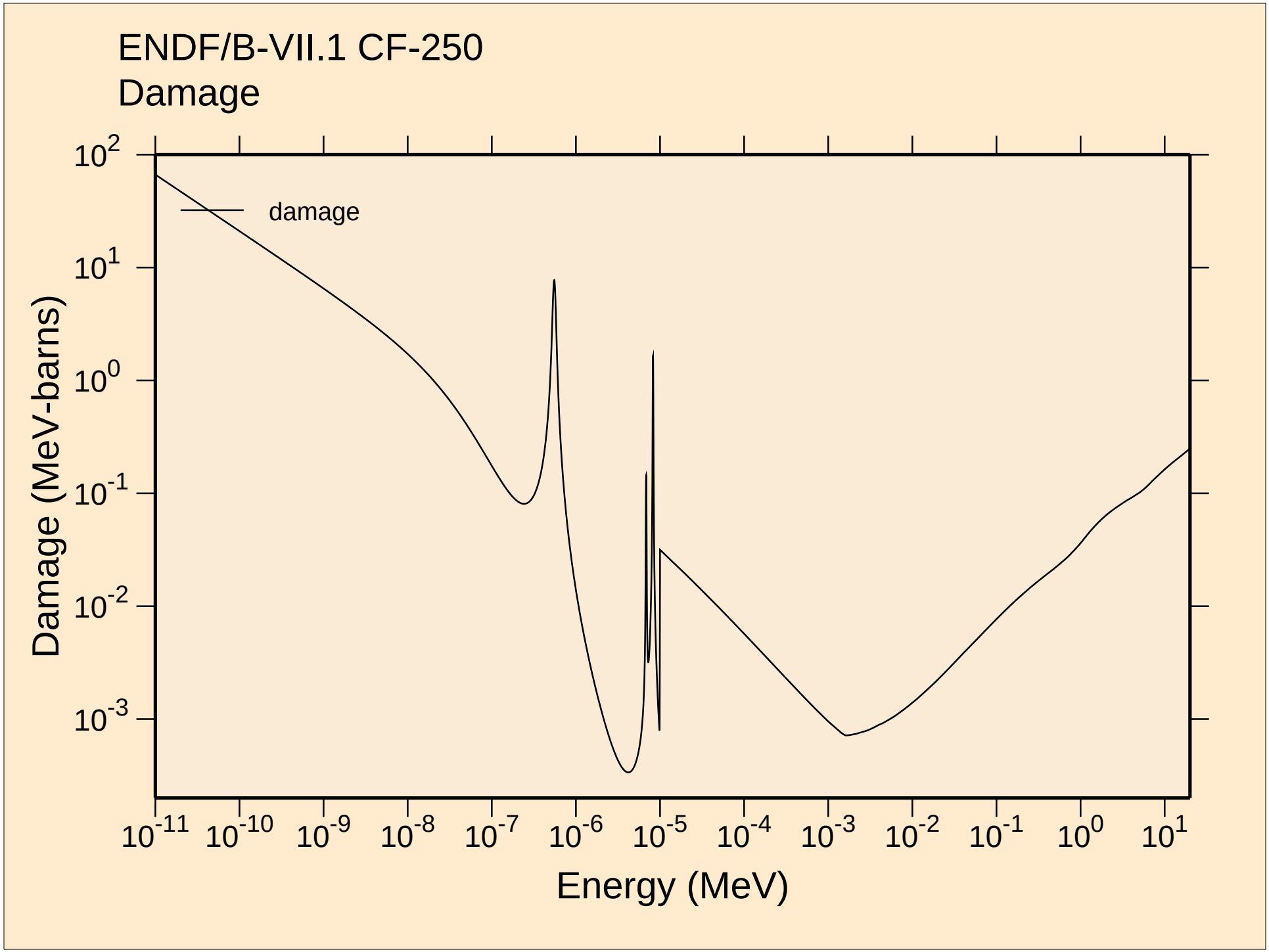

ENDF/B-VII.1 CF-250
UR total cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^2
10^1
10^-5
10^-4
10^-3
10^-2
10^-1
Energy (MeV)

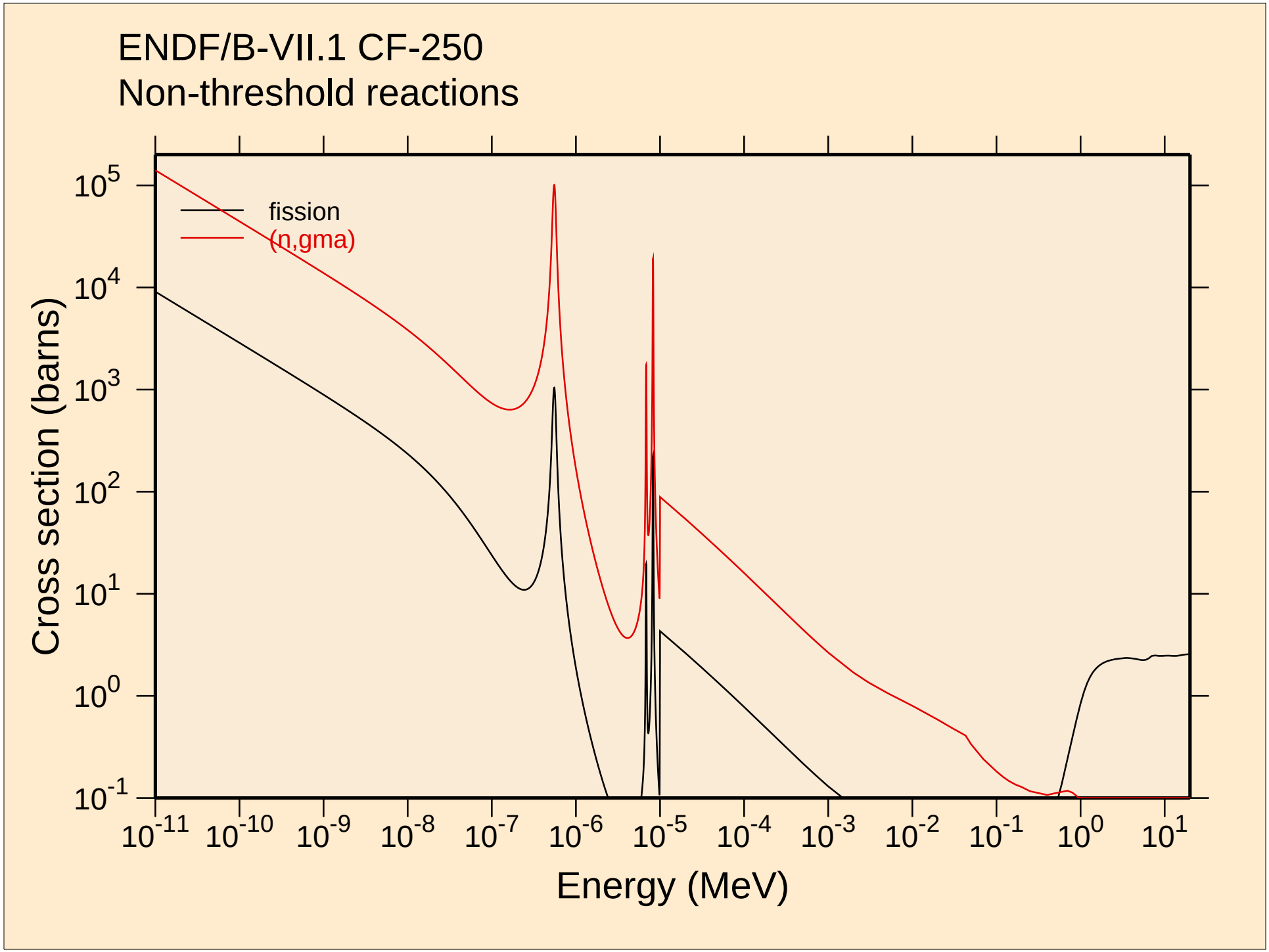

ENDF/B-VII.1 CF-250
UR elastic cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^2
10^1
10^-5
10^-4
10^-3
10^-2
10^-1
Energy (MeV)

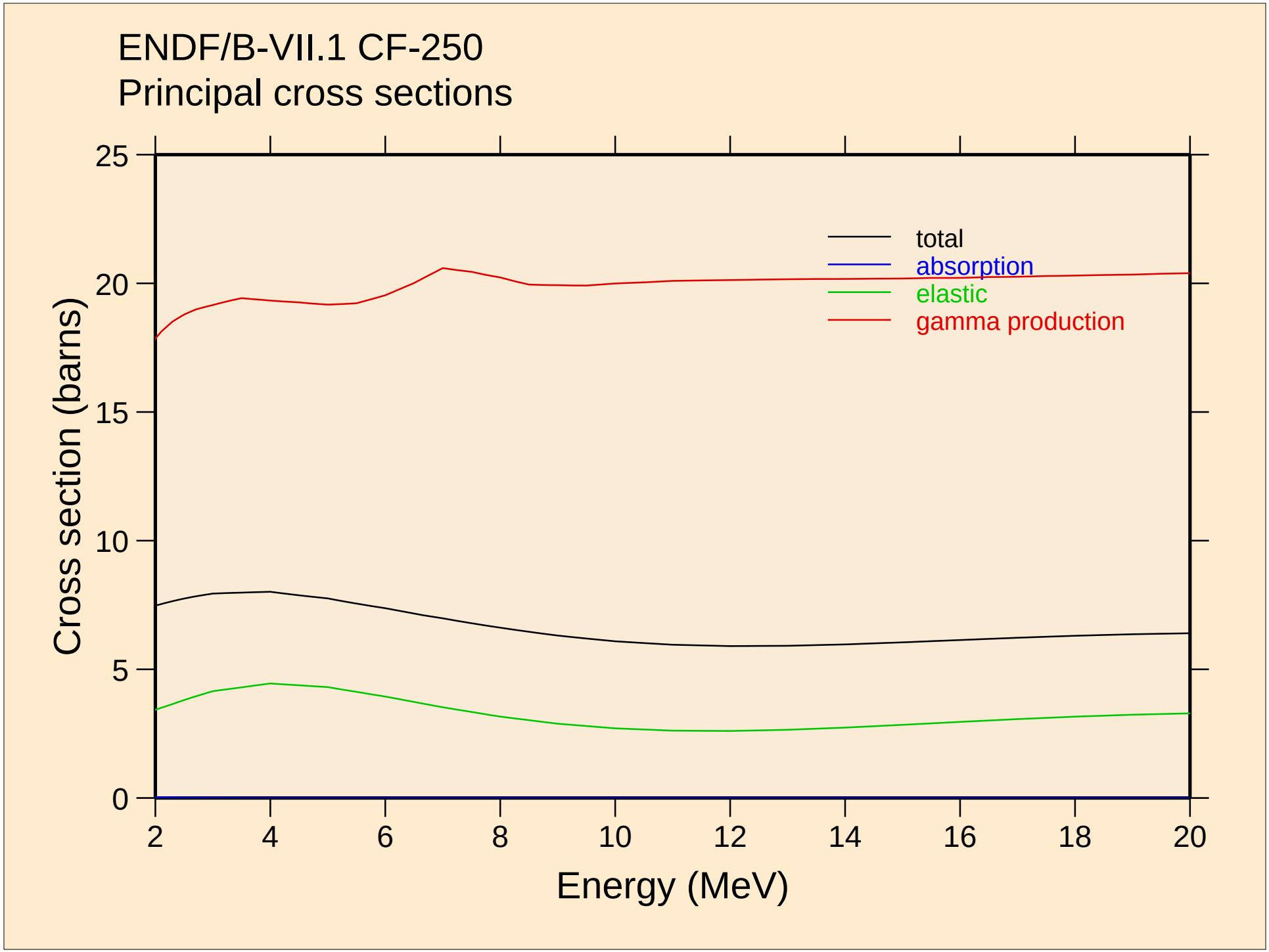

ENDF/B-VII.1 CF-250
UR fission cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
10^0
10^-1
10^-2
10^-5
10^-4
10^-3
10^-2
10^-1
Energy (MeV)

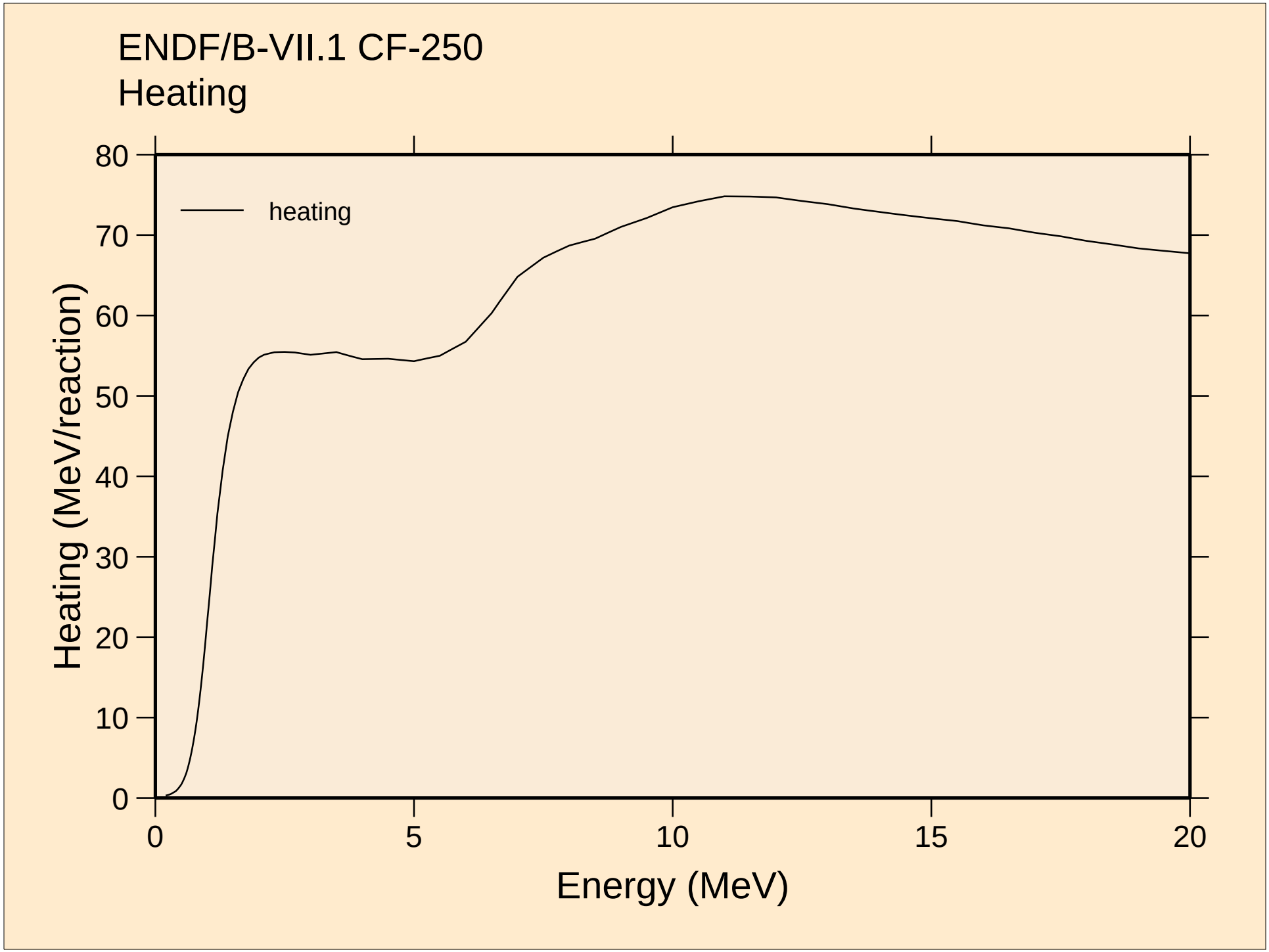

ENDF/B-VII.1 CF-250
UR capture cross section
Inf. Dil.
100 b
1 b
Cross section (barns)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-5
10^-4
10^-3
10^-2
10^-1

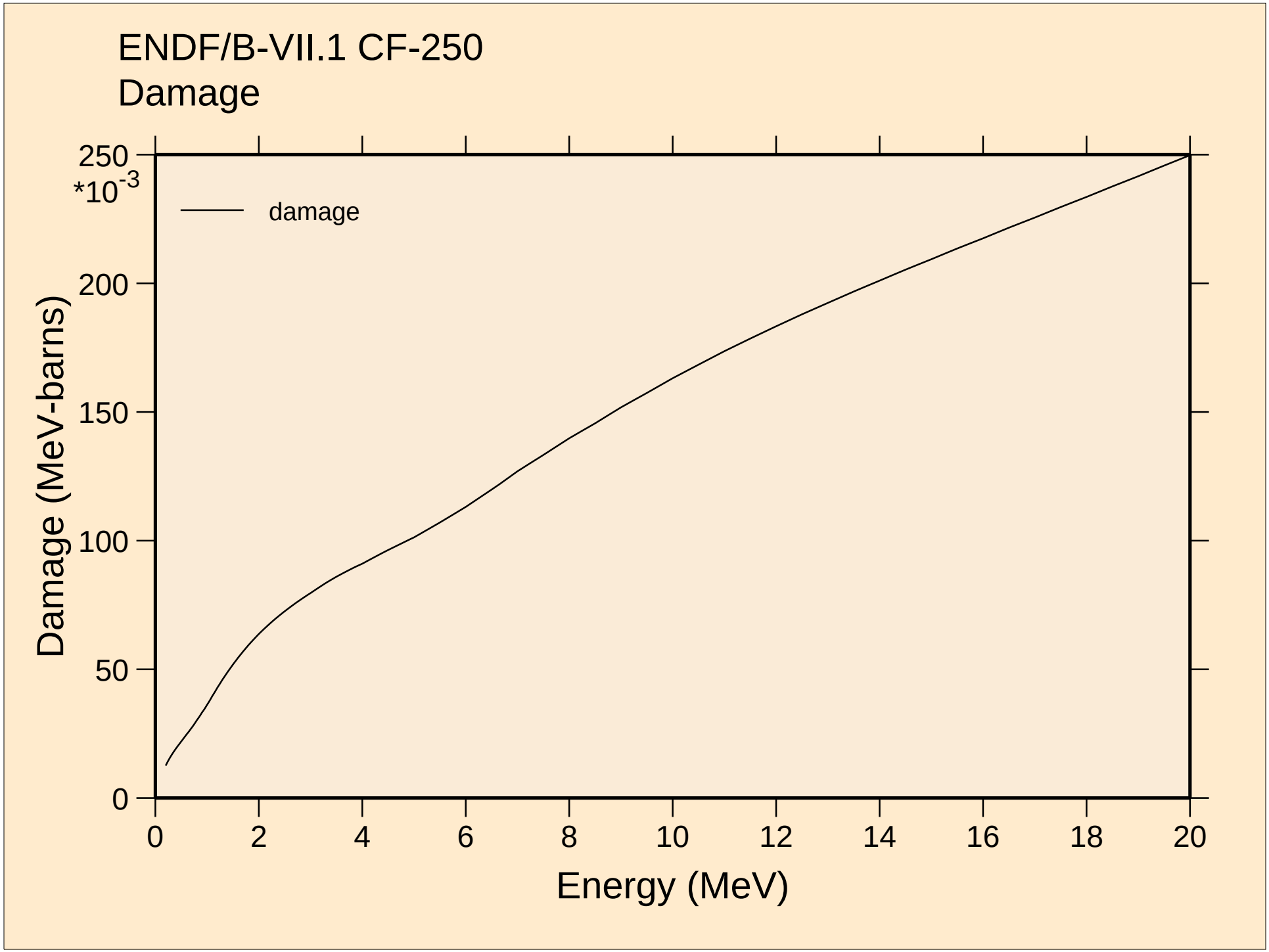

ENDF/B-VII.1 CF-250
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^2
10^1
10^0
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

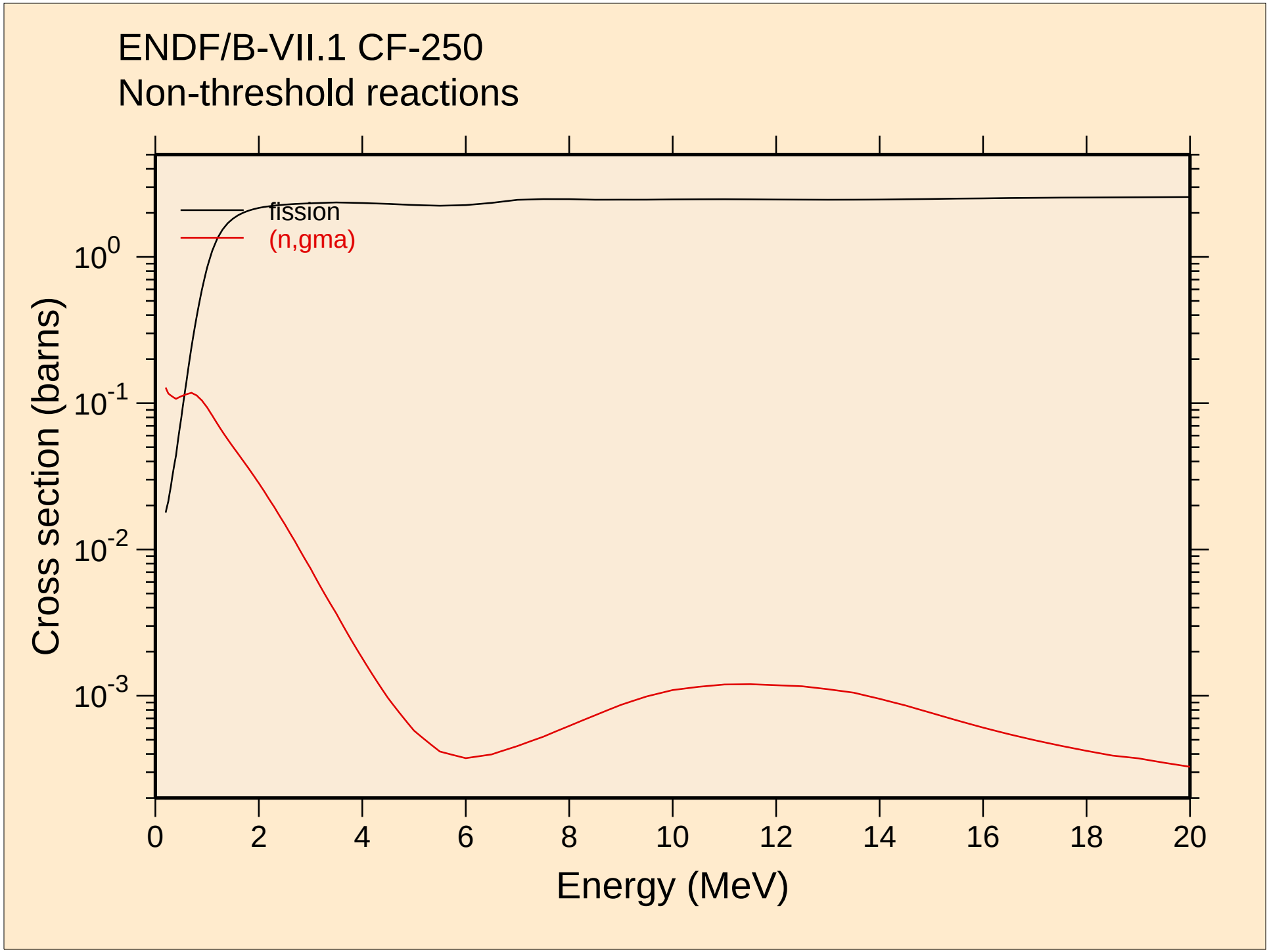

ENDF/B-VII.1 CF-250
Damage
damage
Damage (MeV-barns)
$10^{2}$
$10^{1}$
$10^{0}$
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-11}$ $10^{-10}$ $10^{-9}$ $10^{-8}$ $10^{-7}$ $10^{-6}$ $10^{-5}$ $10^{-4}$ $10^{-3}$ $10^{-2}$ $10^{-1}$ $10^{0}$ $10^{1}$
Energy (MeV)

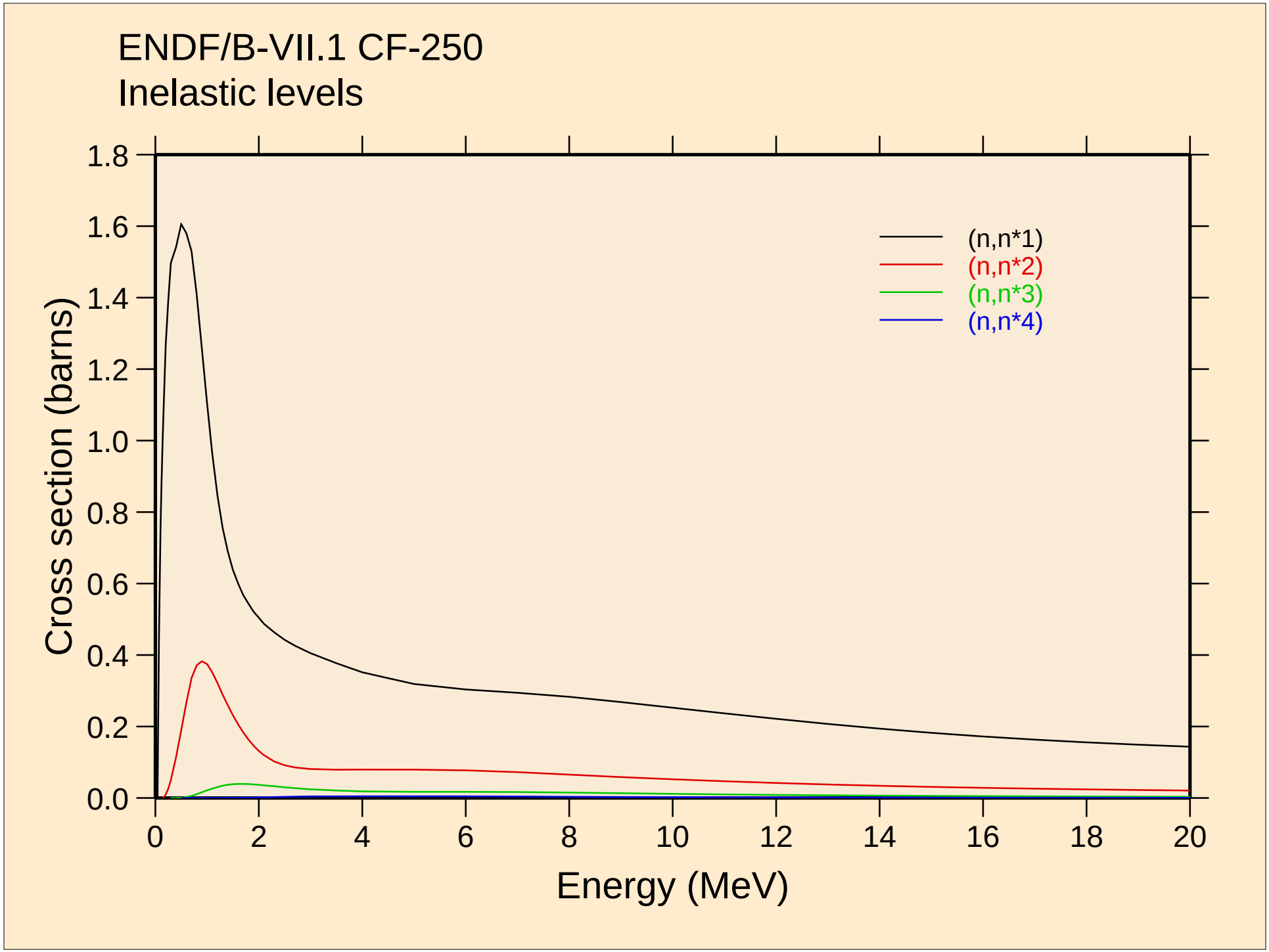

ENDF/B-VII.1 CF-250
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
Energy (MeV)
10^5
10^4
10^3
10^2
10^1
10^0
10^-1
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

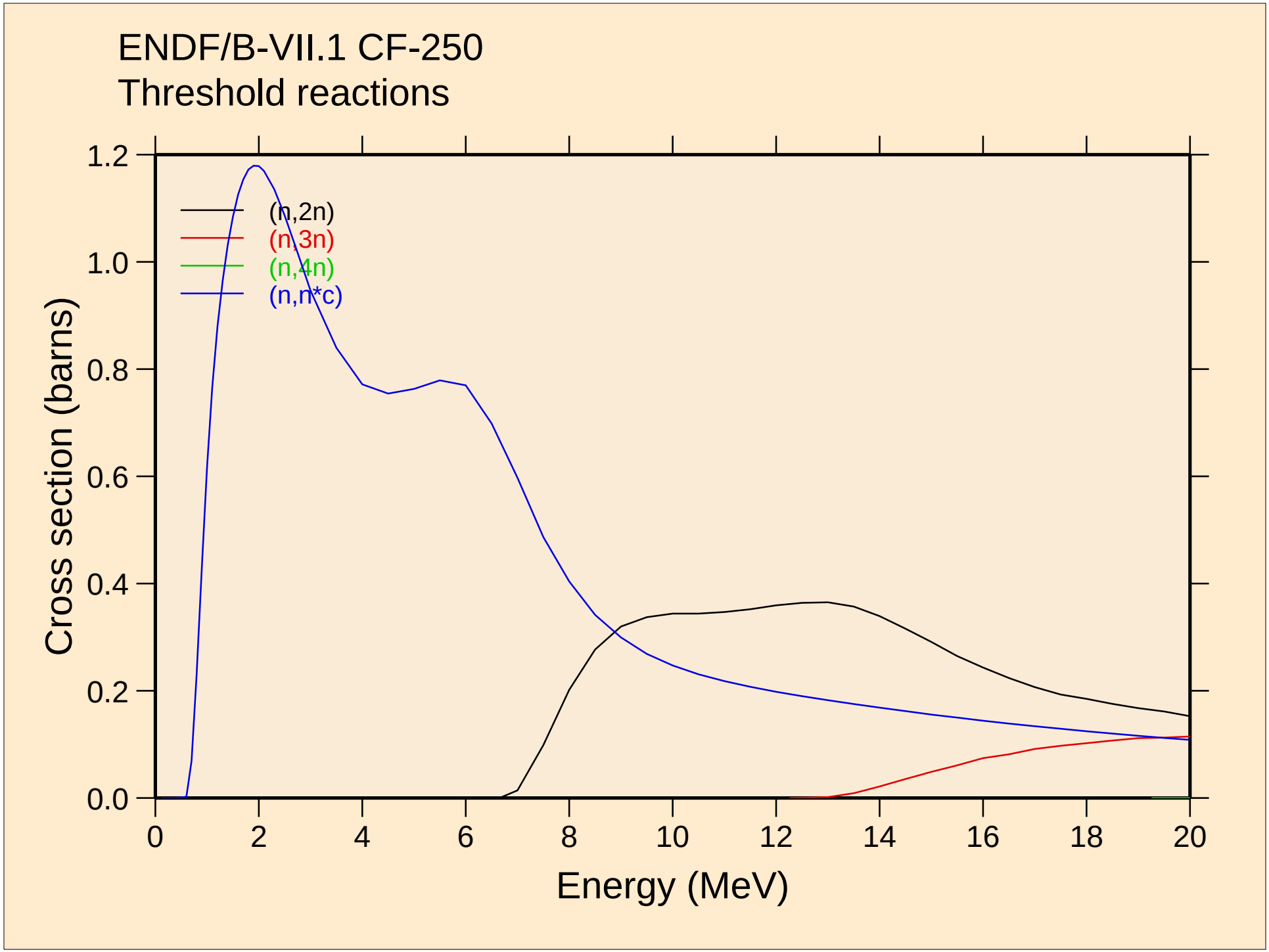

ENDF/B-VII.1 CF-250
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
5
10
15
20
25
2
4
6
8
10
12
14
16
18
20

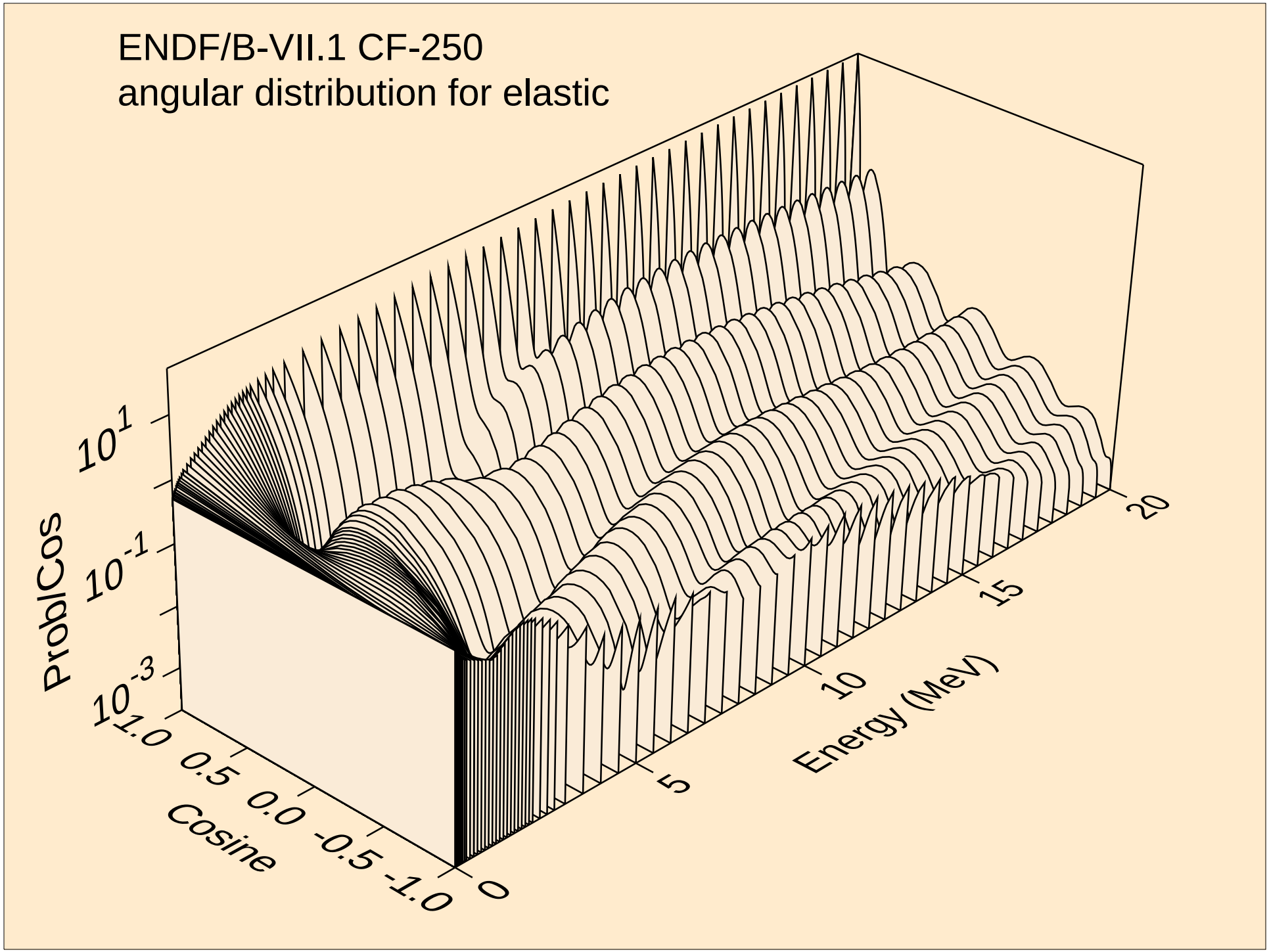

ENDF/B-VII.1 CF-250
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
10
20
30
40
50
60
70
80
0
5
10
15
20

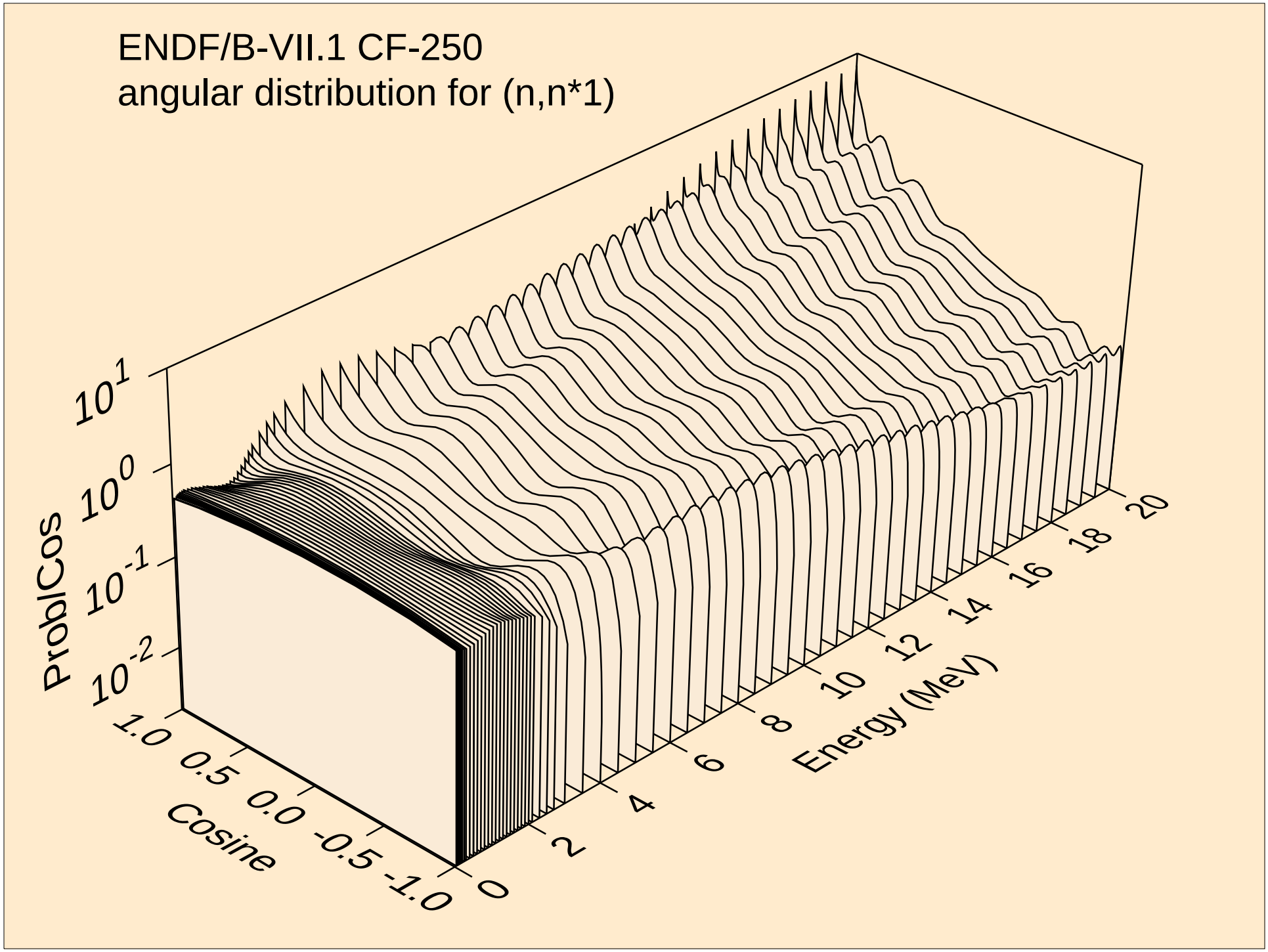

ENDF/B-VII.1 CF-250
Damage
250
*10-3
200
150
100
50
0
damage
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

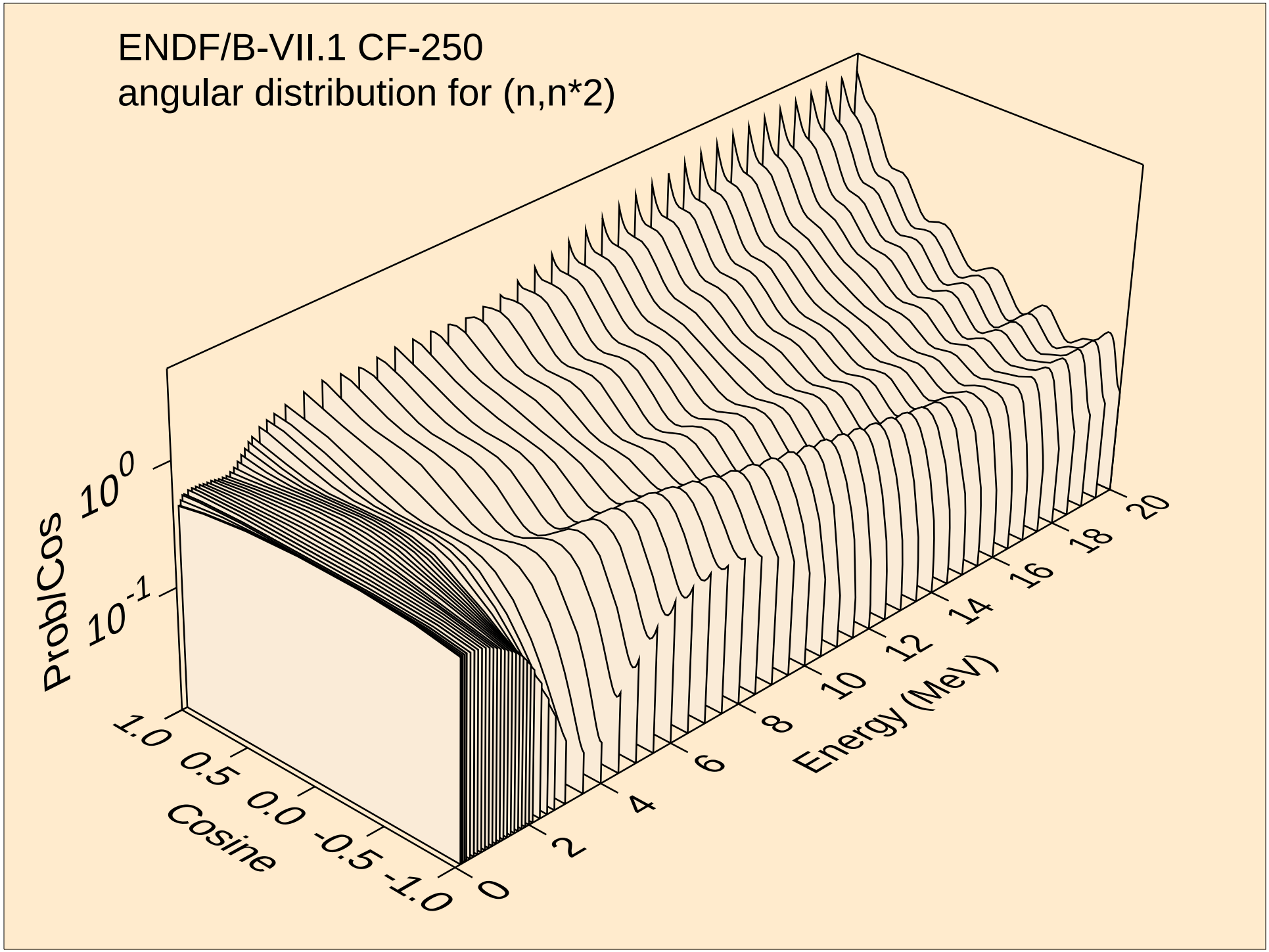

ENDF/B-VII.1 CF-250
Non-threshold reactions
fission
(n,gma)
Cross section (barns)
10^0
10^-1
10^-2
10^-3
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

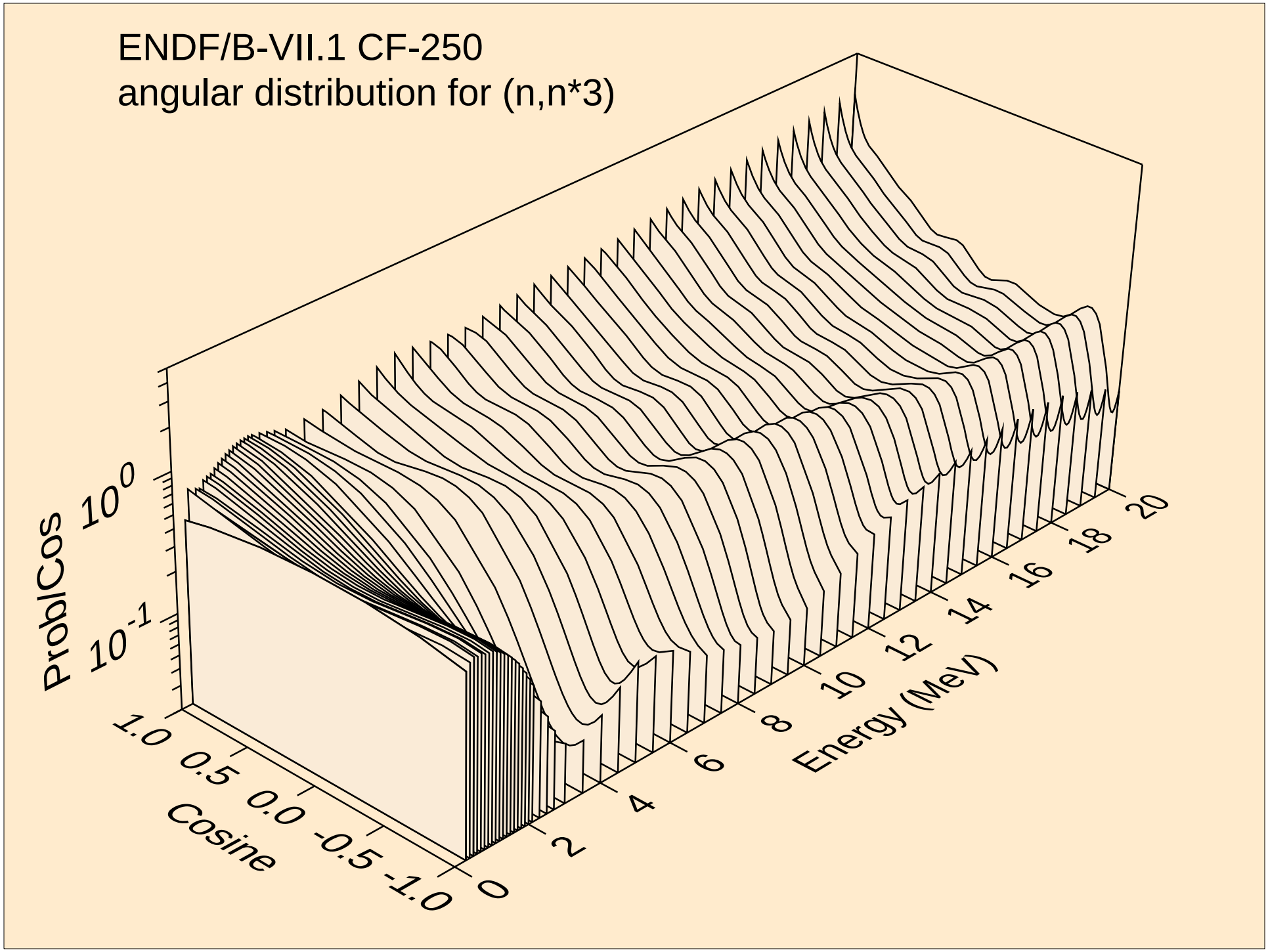

ENDF/B-VII.1 CF-250
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
2
4
6
8
10
12
14
16
18
20

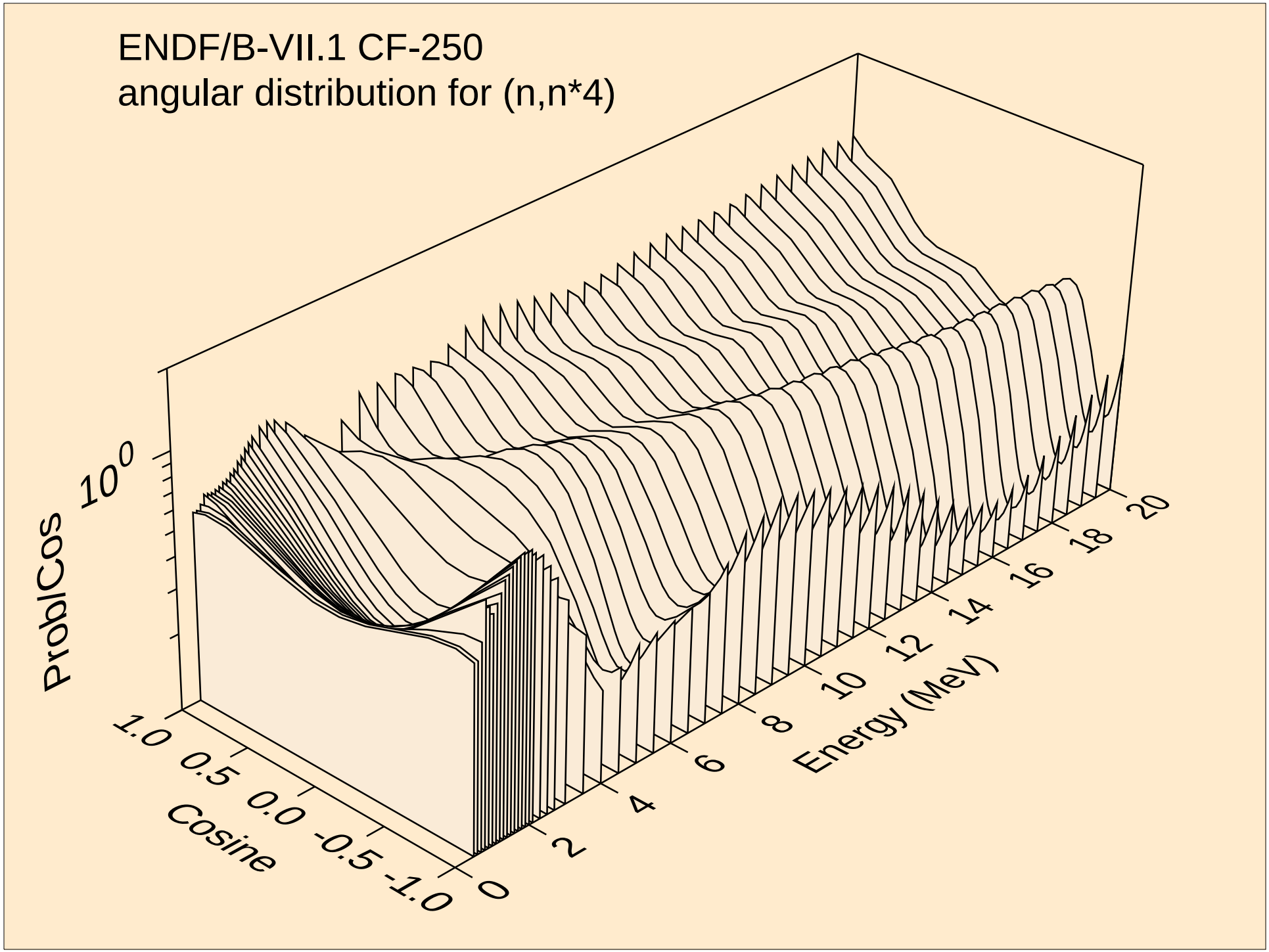

ENDF/B-VII.1 CF-250
Threshold reactions
(n,2n)
(n,3n)
(n,4n)
(n,n*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20

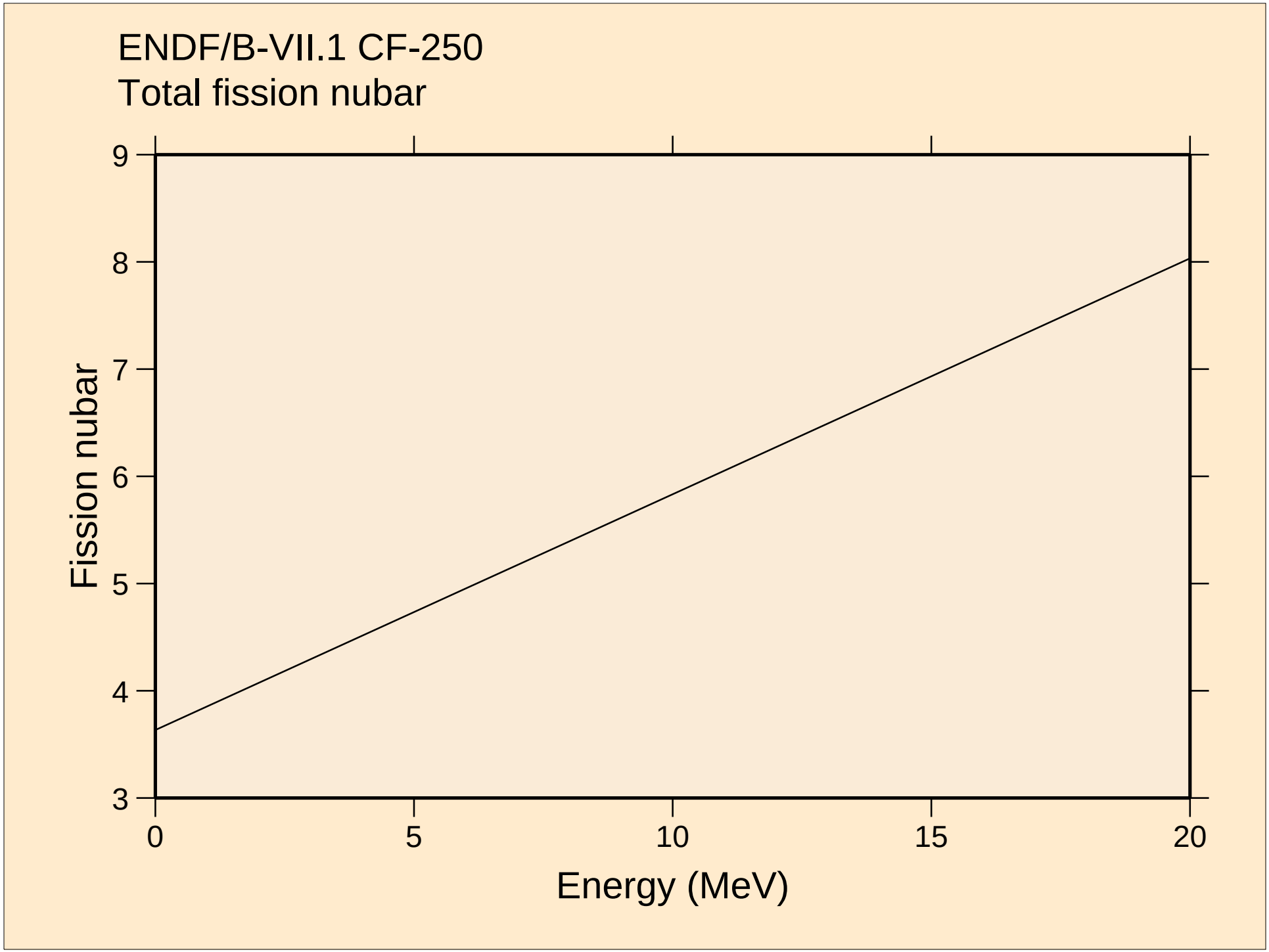

ENDF/B-VII.1 CF-250
angular distribution for elastic
ProbICos
$10^{1}$
$10^{-1}$
$10^{-3}$
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

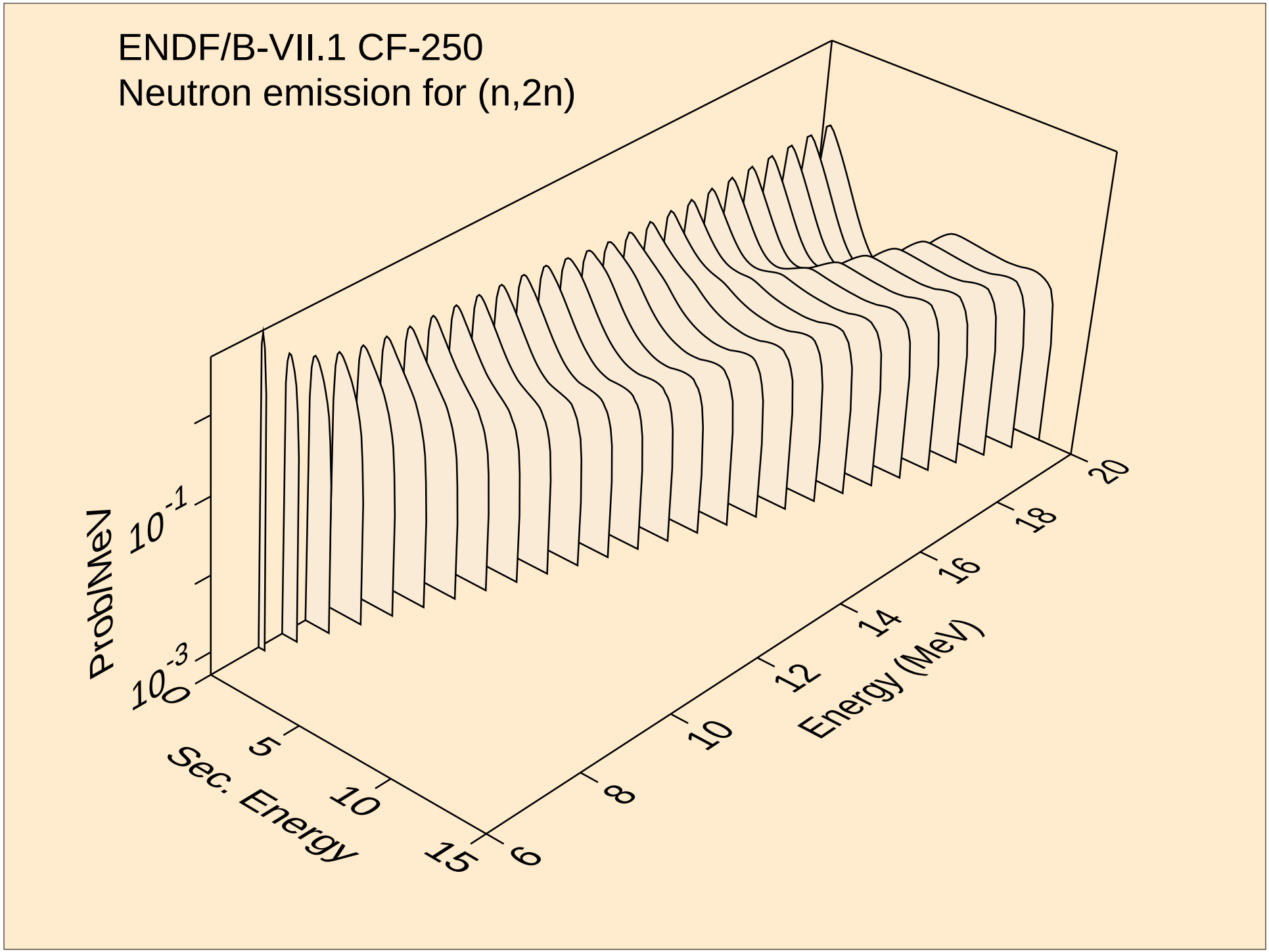

ENDF/B-VII.1 CF-250
angular distribution for (n,n*1)
Prob\Cos
$10^{1}$
$10^{0}$
$10^{-1}$
$10^{-2}$
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

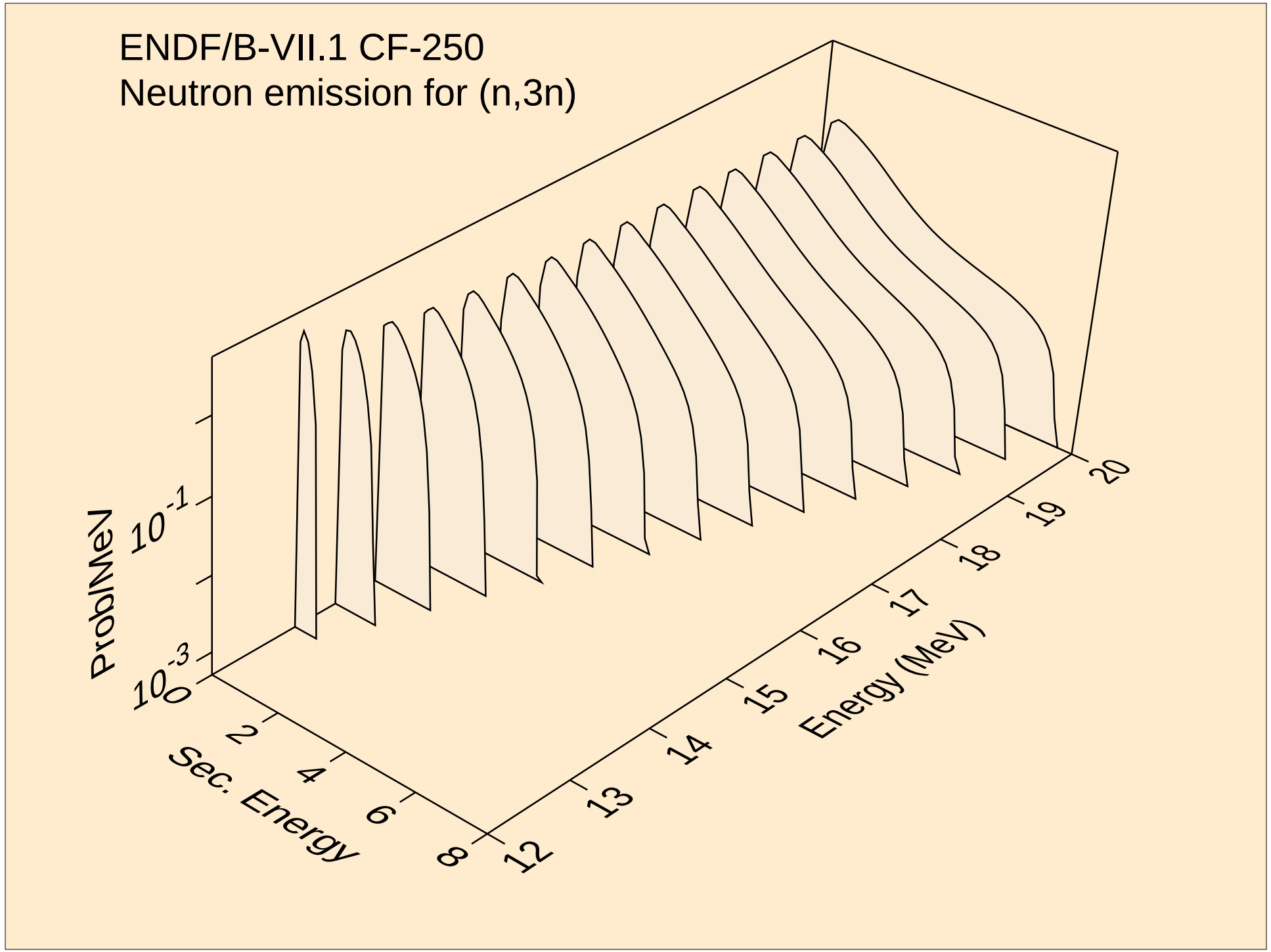

ENDF/B-VII.1 CF-250
angular distribution for (n,n*2)
Prob\Cos
$10^{0}$
$10^{-1}$
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

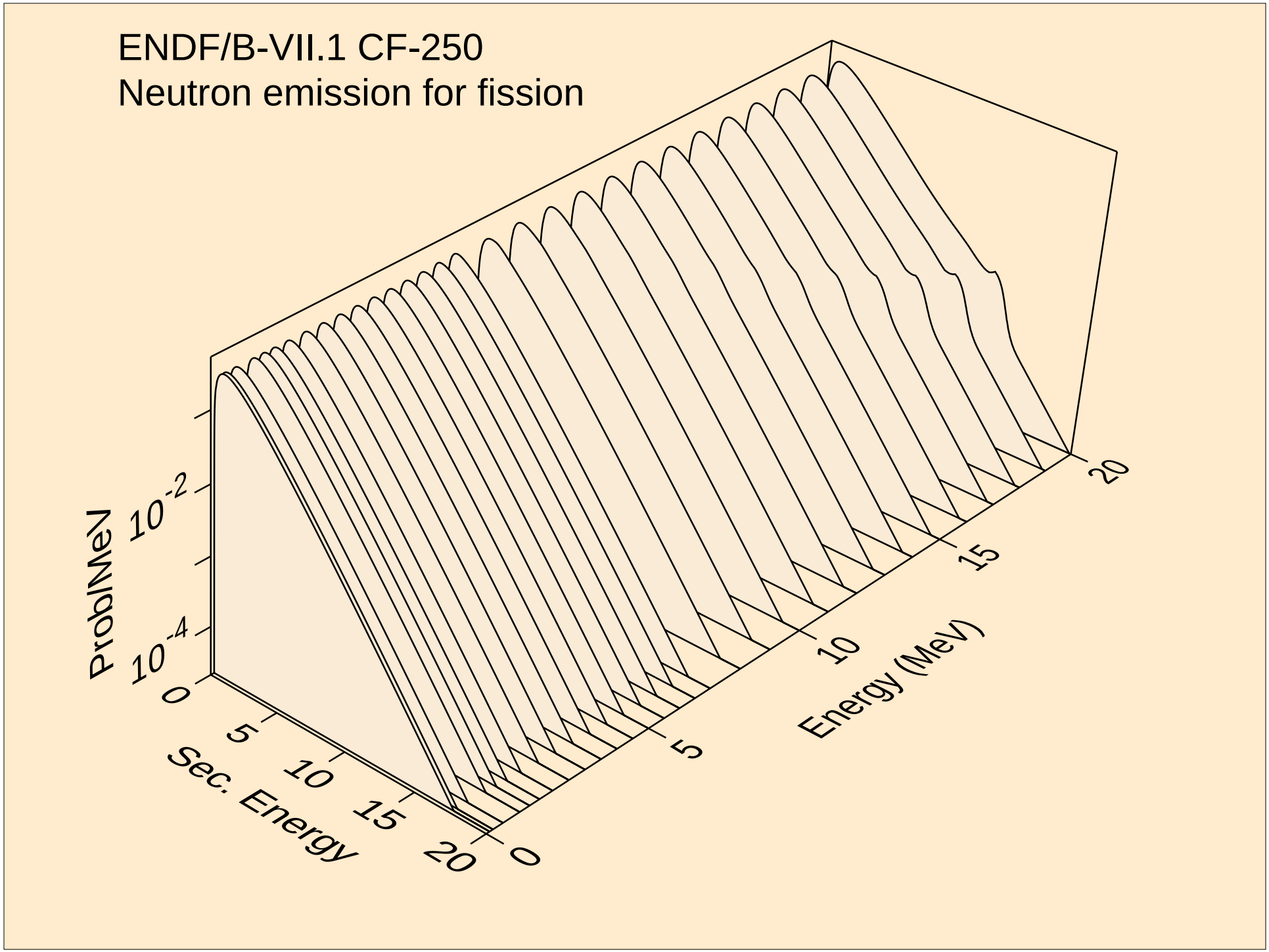

ENDF/B-VII.1 CF-250
angular distribution for (n,n*3)
ProbICos
$10^{0}$
$10^{-1}$
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

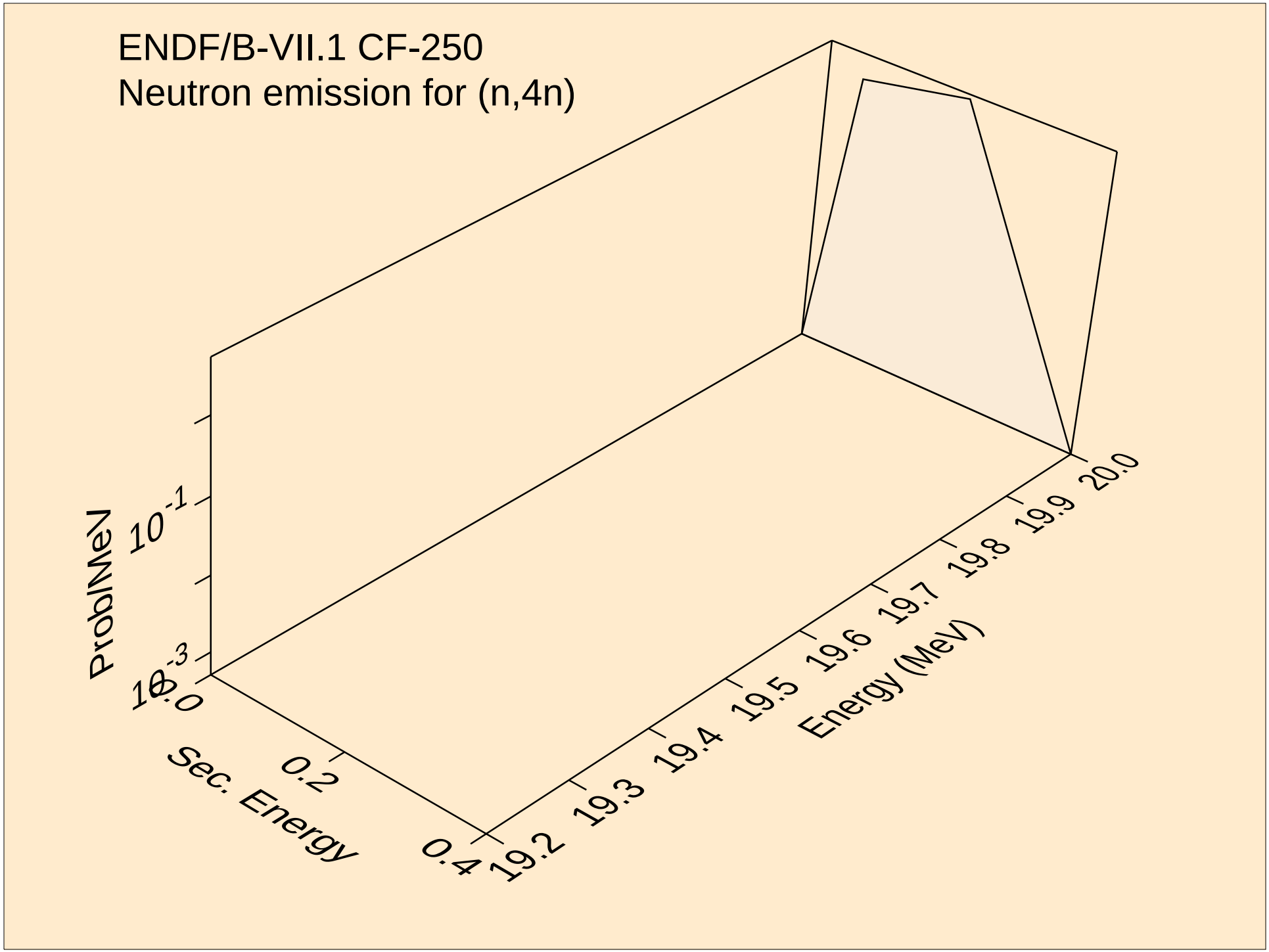

ENDF/B-VII.1 CF-250
angular distribution for (n,n*4)
ProbICos
$10^0$
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

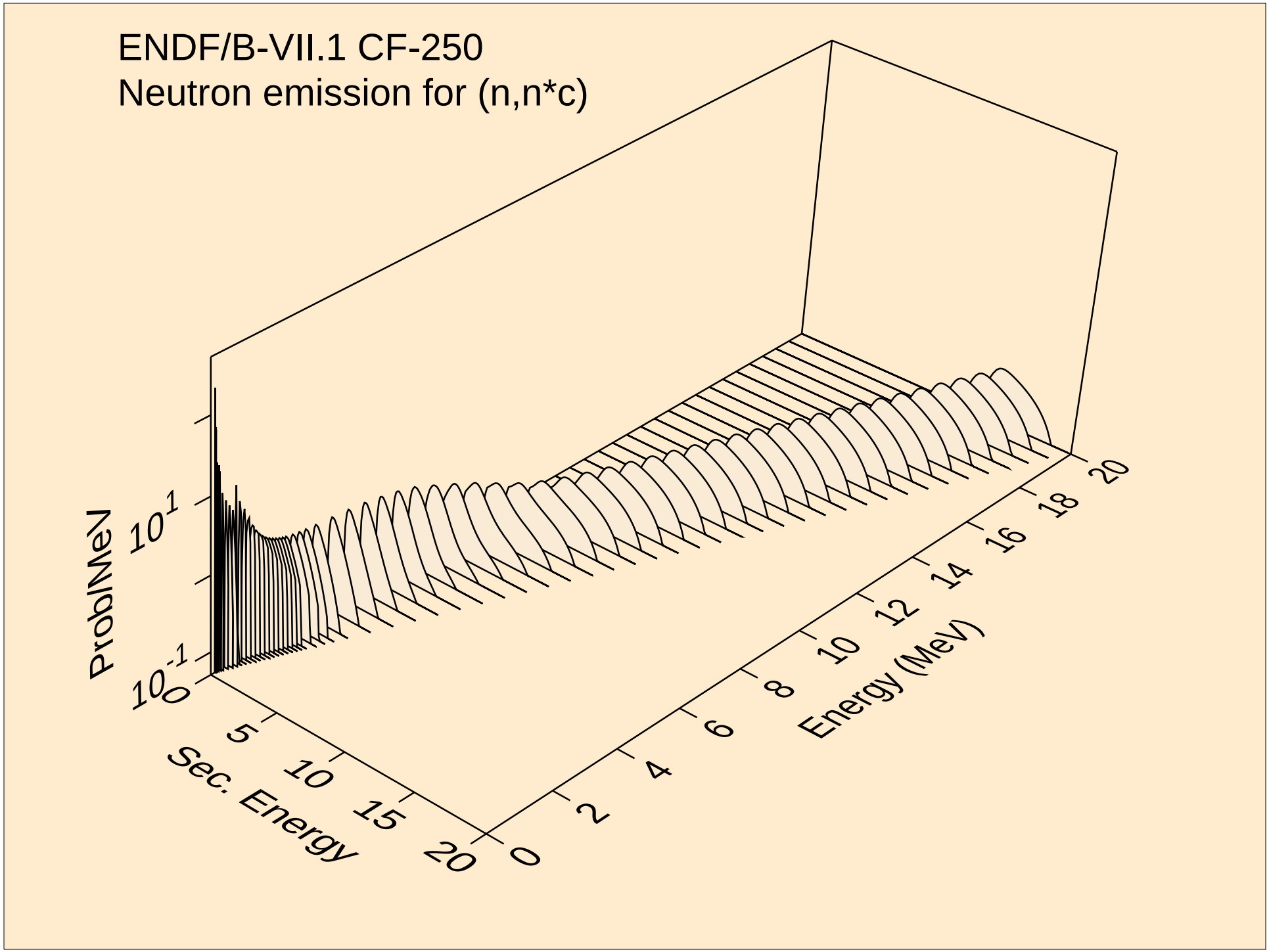

ENDF/B-VII.1 CF-250
Total fission nubar
Fission nubar
9
8
7
6
5
4
3
0
5
10
15
20
Energy (MeV)

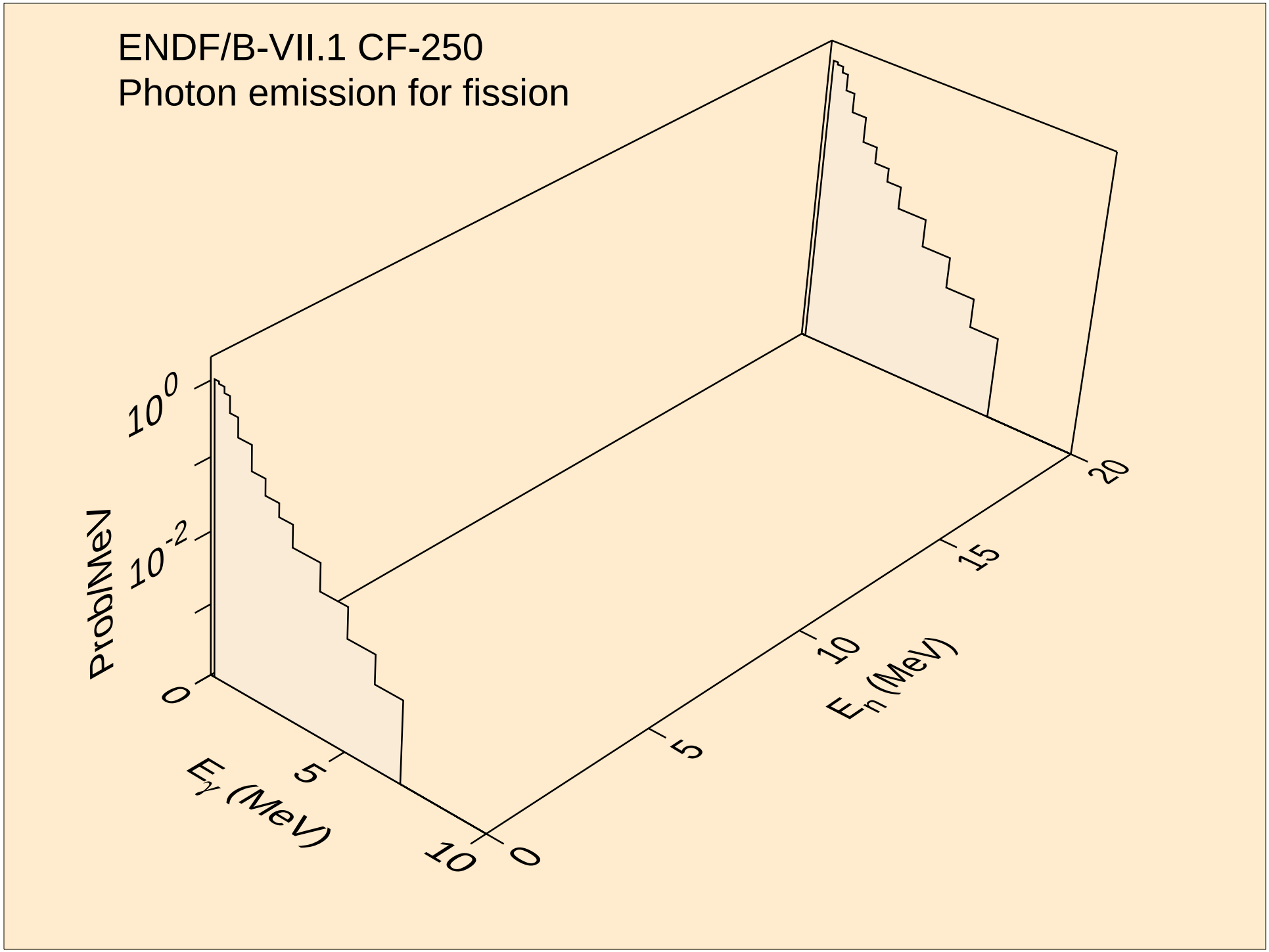

ENDF/B-VII.1 CF-250
Neutron emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
5
10
15
Sec. Energy
6
8
10
12
14
16
18
20
Energy (MeV)

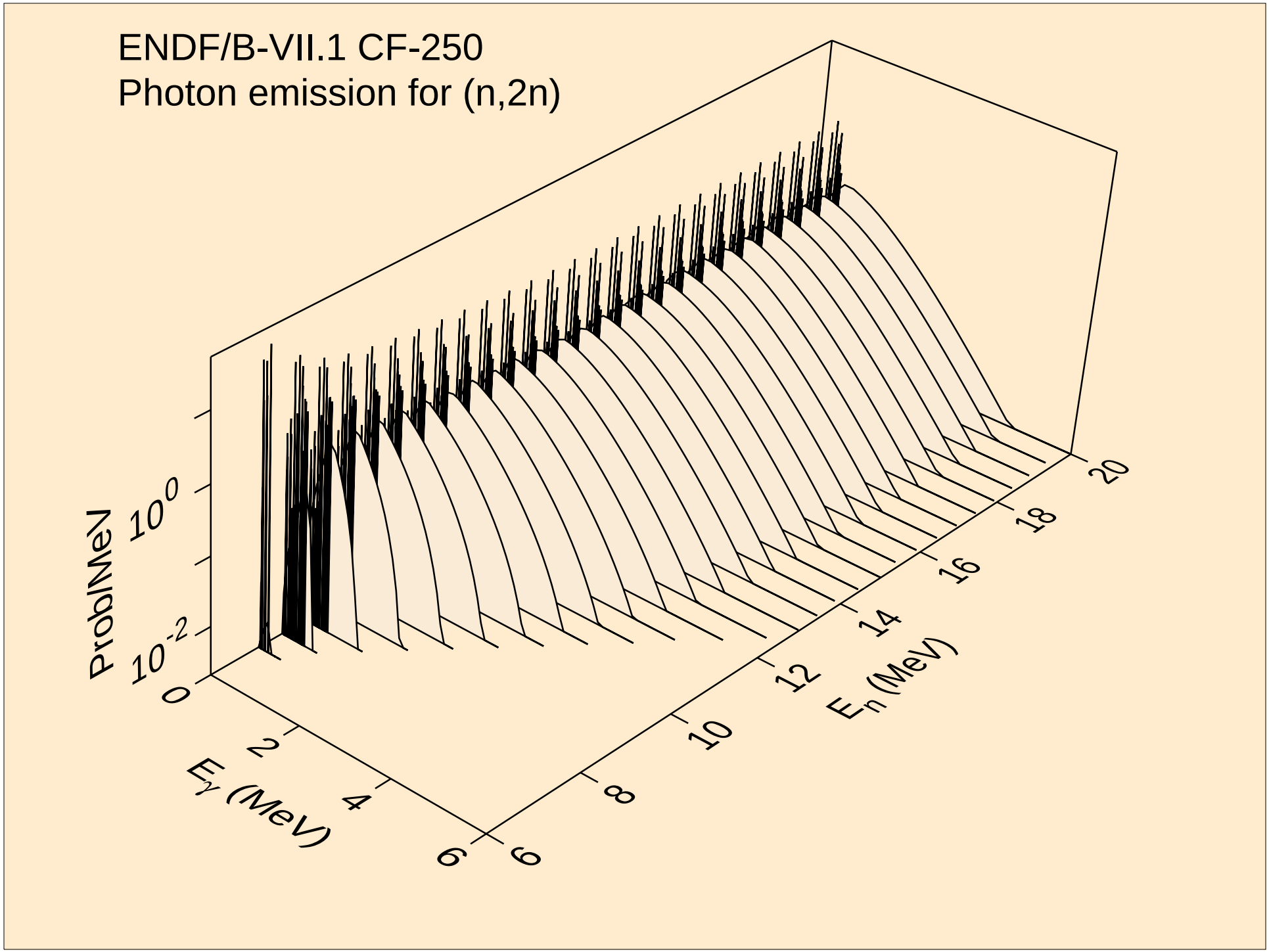

ENDF/B-VII.1 CF-250
Neutron emission for (n,3n)
Prob/MeV
10^-1
10^-3
0
2
4
6
8
Sec. Energy
12
13
14
15
16
17
18
19
20
Energy (MeV)

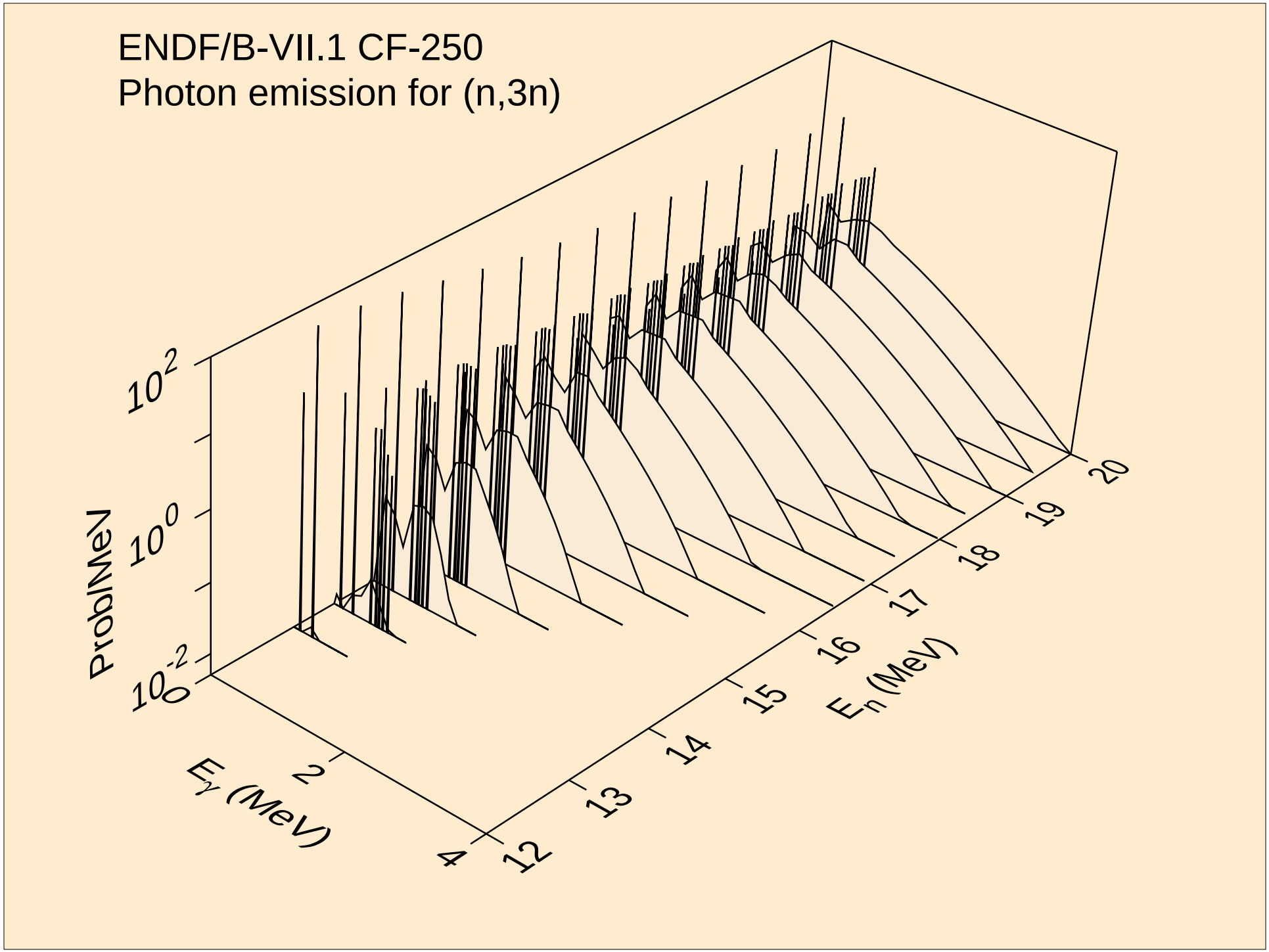

ENDF/B-VII.1 CF-250
Neutron emission for fission
Prob/MeV
$10^{-2}$
$10^{-4}$
0
5
10
15
20
Sec. Energy
0
5
10
15
20
Energy (MeV)

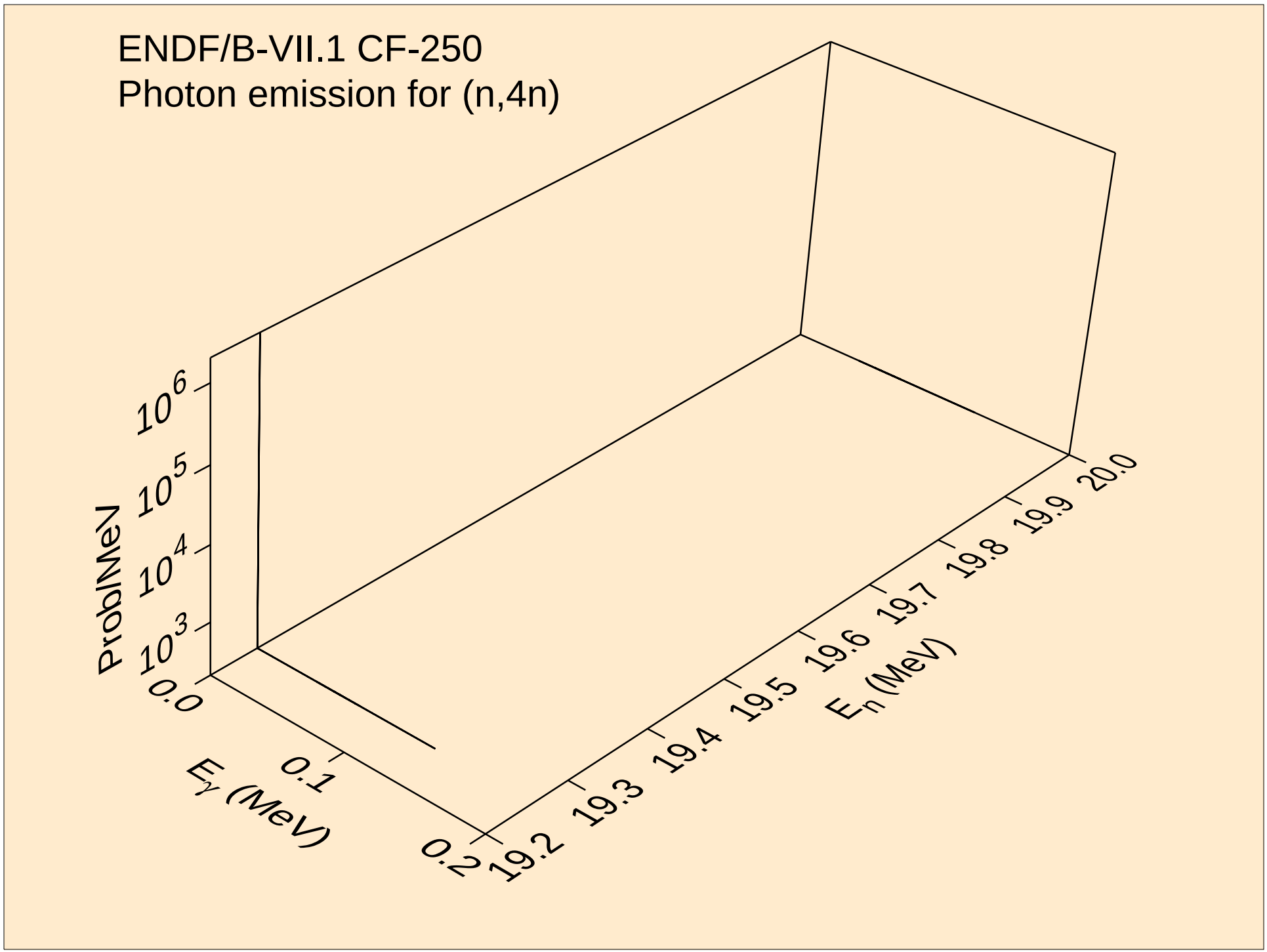

ENDF/B-VII.1 CF-250
Neutron emission for (n,4n)
Prob/MeV
10-1
10-3
0.0
0.2
0.4
Sec. Energy
19.2
19.3
19.4
19.5
19.6
19.7
19.8
19.9
20.0
Energy (MeV)

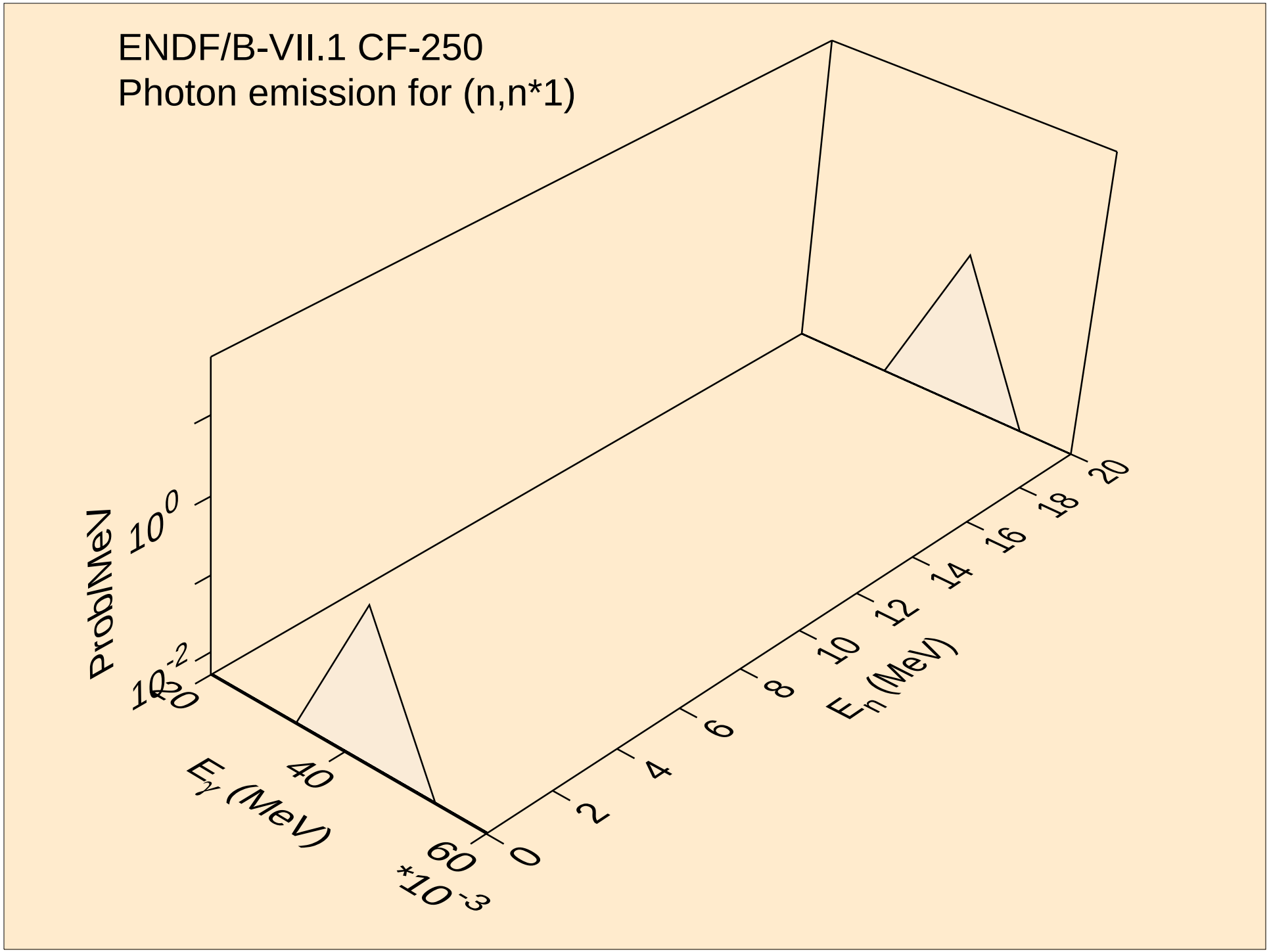

ENDF/B-VII.1 CF-250
Neutron emission for (n,n*c)
Prob/MeV
10^1
10^-1
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

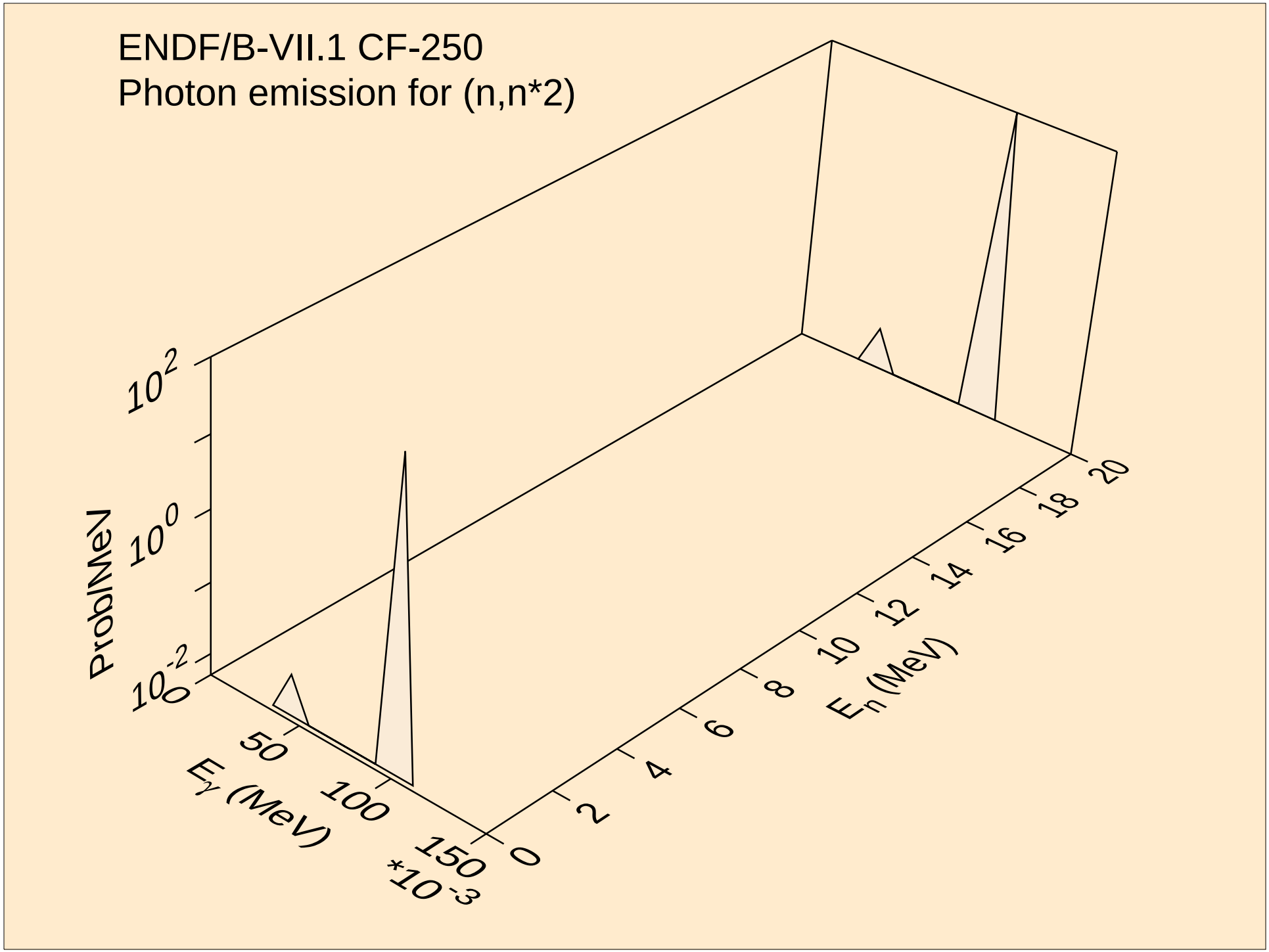

ENDF/B-VII.1 CF-250
Photon emission for fission
Prob/MeV
$10^{0}$
$10^{-2}$
0
5
10
$E_\gamma$ (MeV)
0
5
10
15
20
$E_n$ (MeV)

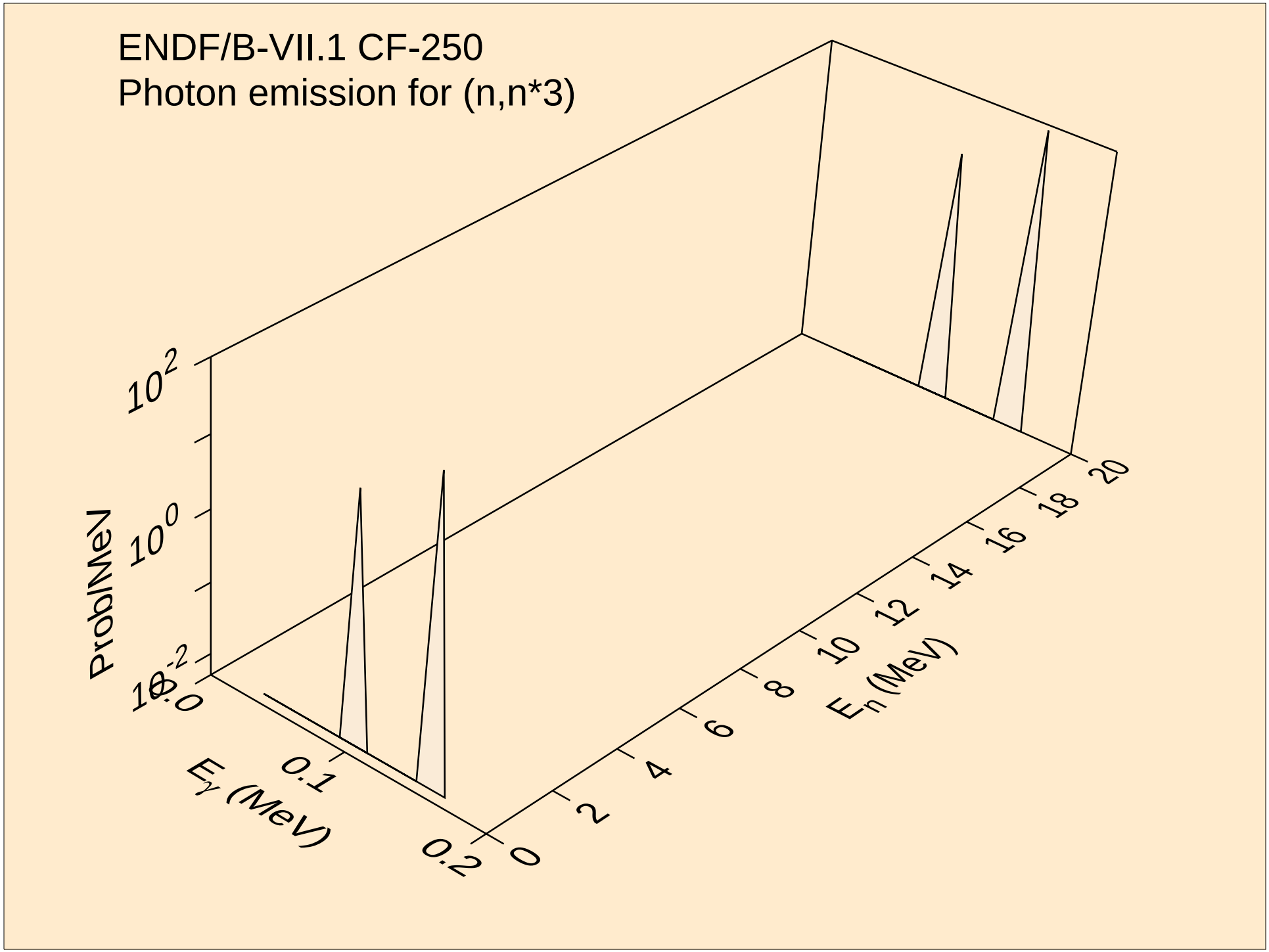

ENDF/B-VII.1 CF-250
Photon emission for (n,2n)
Prob/MeV
$10^{0}$
$10^{-2}$
0
2
4
6
$E_\gamma$ (MeV)
6
8
10
12
14
16
18
20
$E_n$ (MeV)

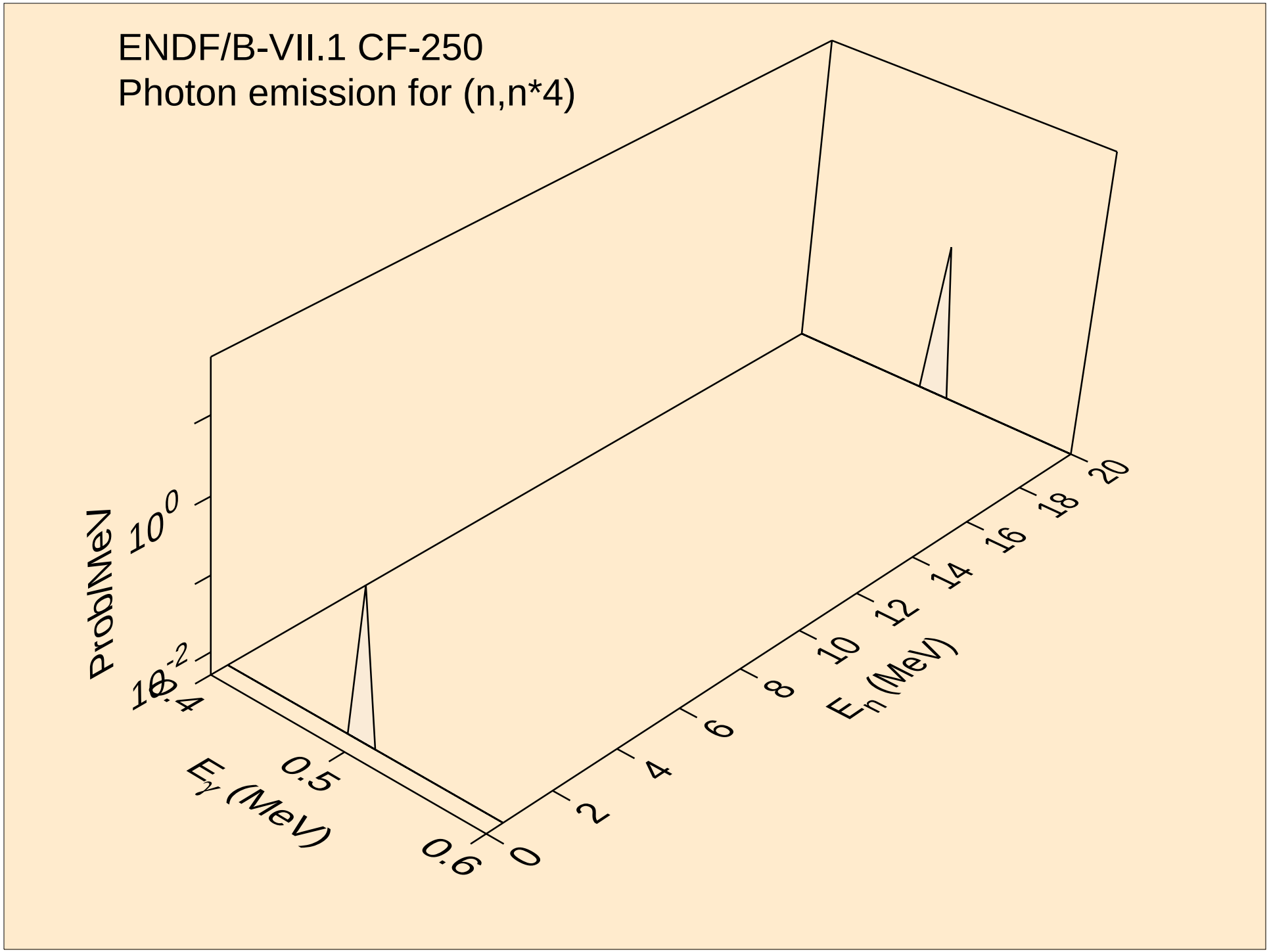

ENDF/B-VII.1 CF-250
Photon emission for (n,3n)
Prob/MeV
$10^{2}$
$10^{0}$
$10^{-2}$
0
2
4
$E_\gamma$ (MeV)
12
13
14
15
16
17
18
19
20
$E_n$ (MeV)

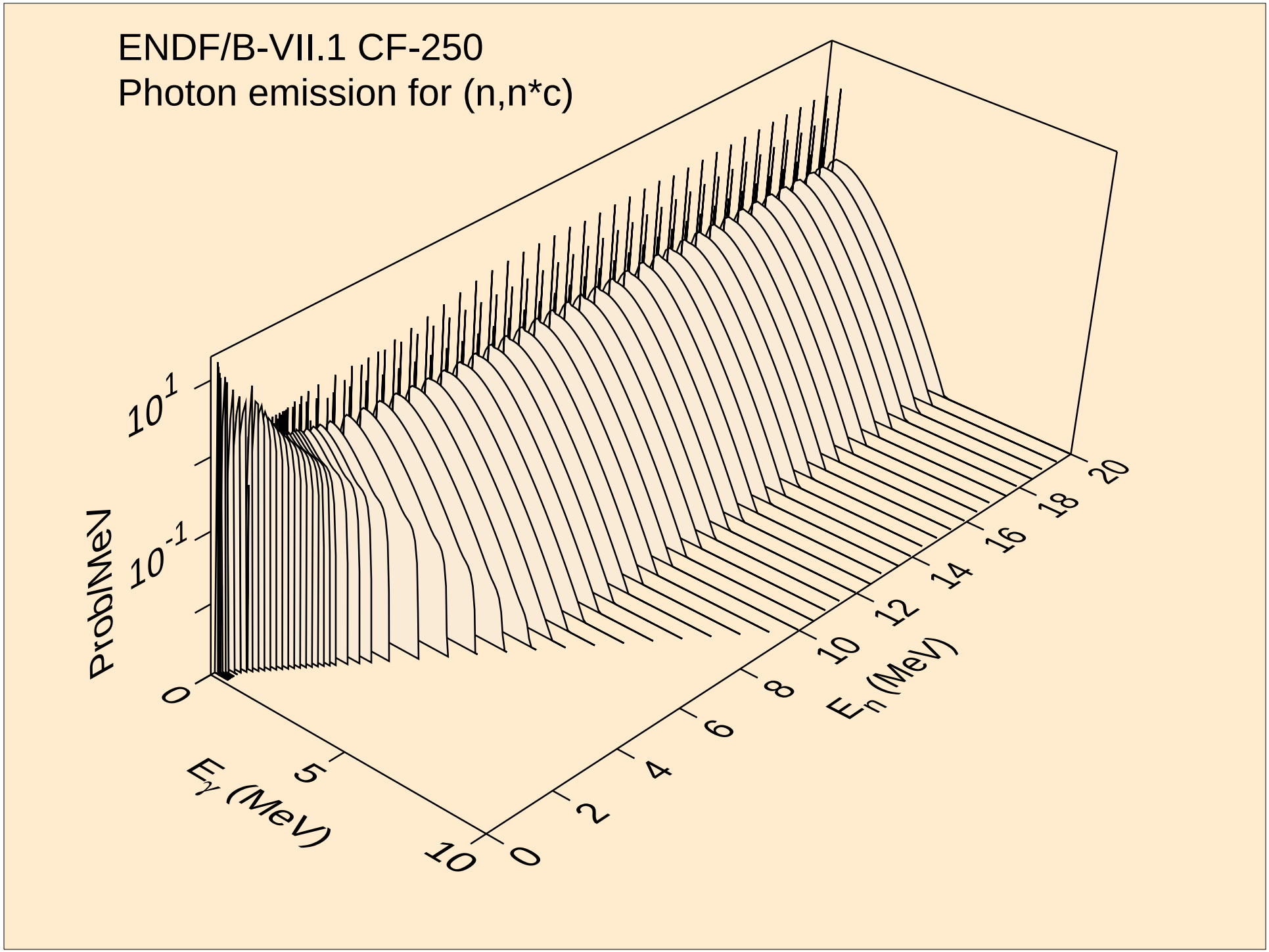

ENDF/B-VII.1 CF-250
Photon emission for (n,4n)
Prob/MeV
$10^6$
$10^5$
$10^4$
$10^3$
0.0
0.1
0.2
$E_\gamma$ (MeV)
19.2
19.3
19.4
19.5
19.6
19.7
19.8
19.9
20.0
$E_n$ (MeV)

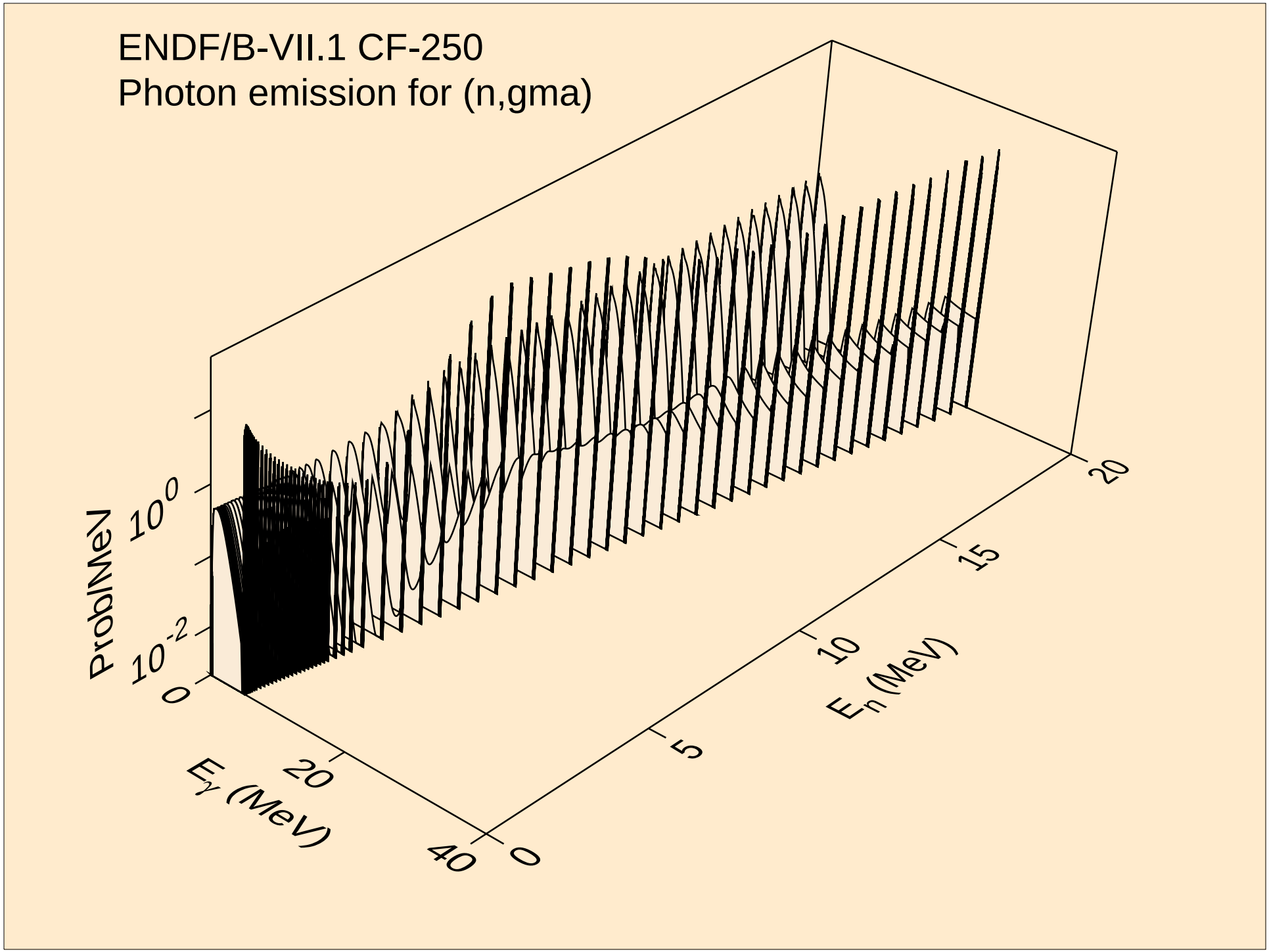

ENDF/B-VII.1 CF-250
Photon emission for (n,n*1)
Prob/MeV
10^0
10^-2
0
20
40
60
*10^-3
E_γ (MeV)
0
2
4
6
8
10
12
14
16
18
20
E_n (MeV)

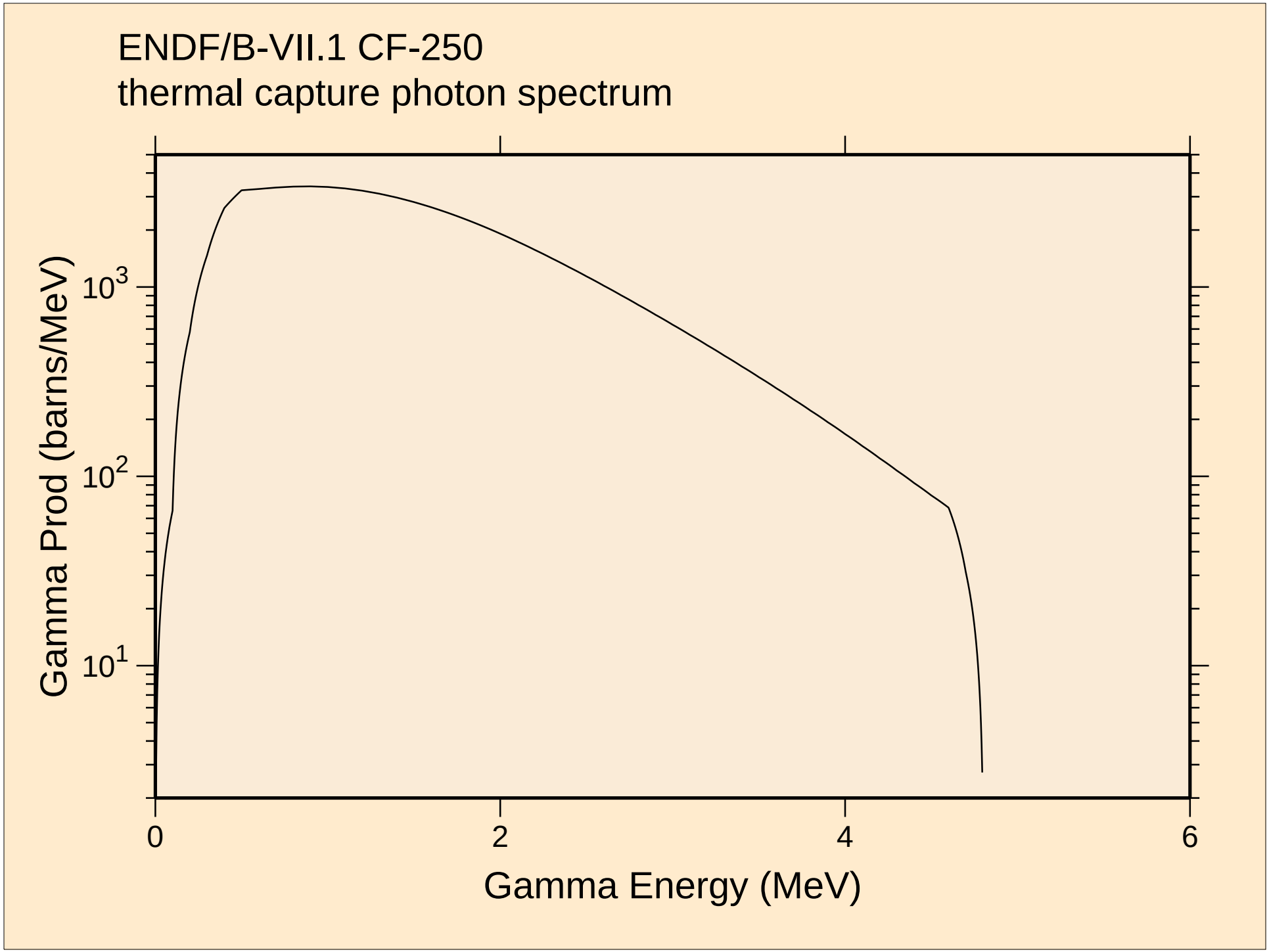

ENDF/B-VII.1 CF-250
Photon emission for (n,n*2)
Prob/MeV
$10^{2}$
$10^{0}$
$10^{-2}$
0
50
100
150
$E_\gamma$ (MeV)
*10 -3
0
2
4
6
8
10
12
14
16
18
20
$E_n$ (MeV)

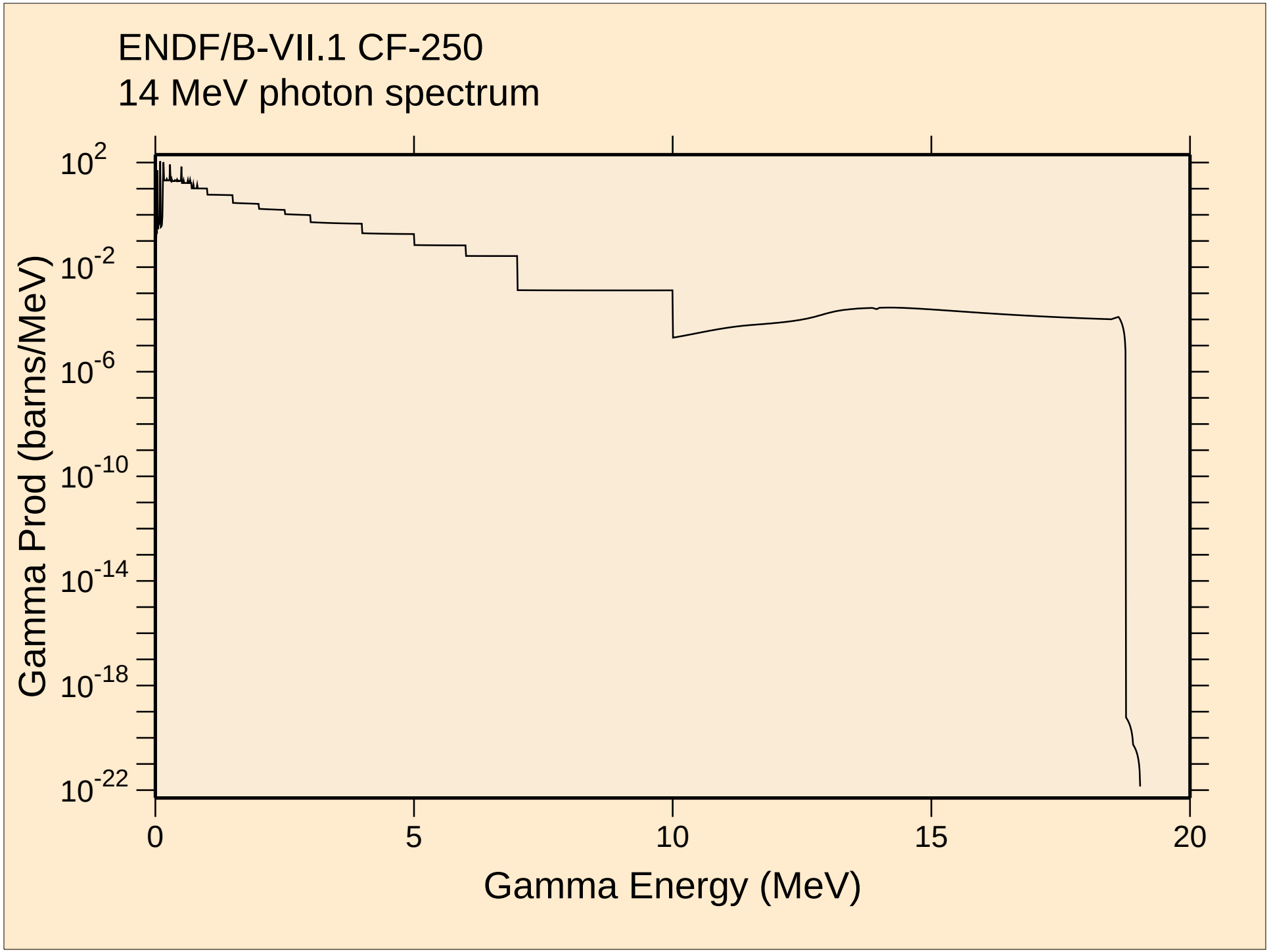

ENDF/B-VII.1 CF-250
Photon emission for (n,n*3)
Prob/MeV
$10^2$
$10^0$
$10^{-2}$
0.0
0.1
0.2
$E_\gamma$ (MeV)
0
2
4
6
8
10
12
14
16
18
20
$E_n$ (MeV)


ENDF/B-VII.1 CF-250
Photon emission for (n,n*4)
Prob/MeV
$10^{0}$
$10^{-2}$
0.4
0.5
0.6
$E_\gamma$ (MeV)
0
2
4
6
8
10
12
14
16
18
20
$E_n$ (MeV)


ENDF/B-VII.1 CF-250
Photon emission for (n,n*c)
Prob/MeV
$10^{1}$
$10^{-1}$
0
$E_\gamma$ (MeV)
5
10
0
2
4
6
8
10
12
14
16
18
20
$E_n$ (MeV)


ENDF/B-VII.1 CF-250
Photon emission for (n,gma)
Prob/MeV
10^0
10^-2
0
20
40
E_γ (MeV)
0
5
10
15
20
E_n (MeV)


ENDF/B-VII.1 CF-250
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^3
10^2
10^1
0
2
4
6
Gamma Energy (MeV)


ENDF/B-VII.1 CF-250
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)