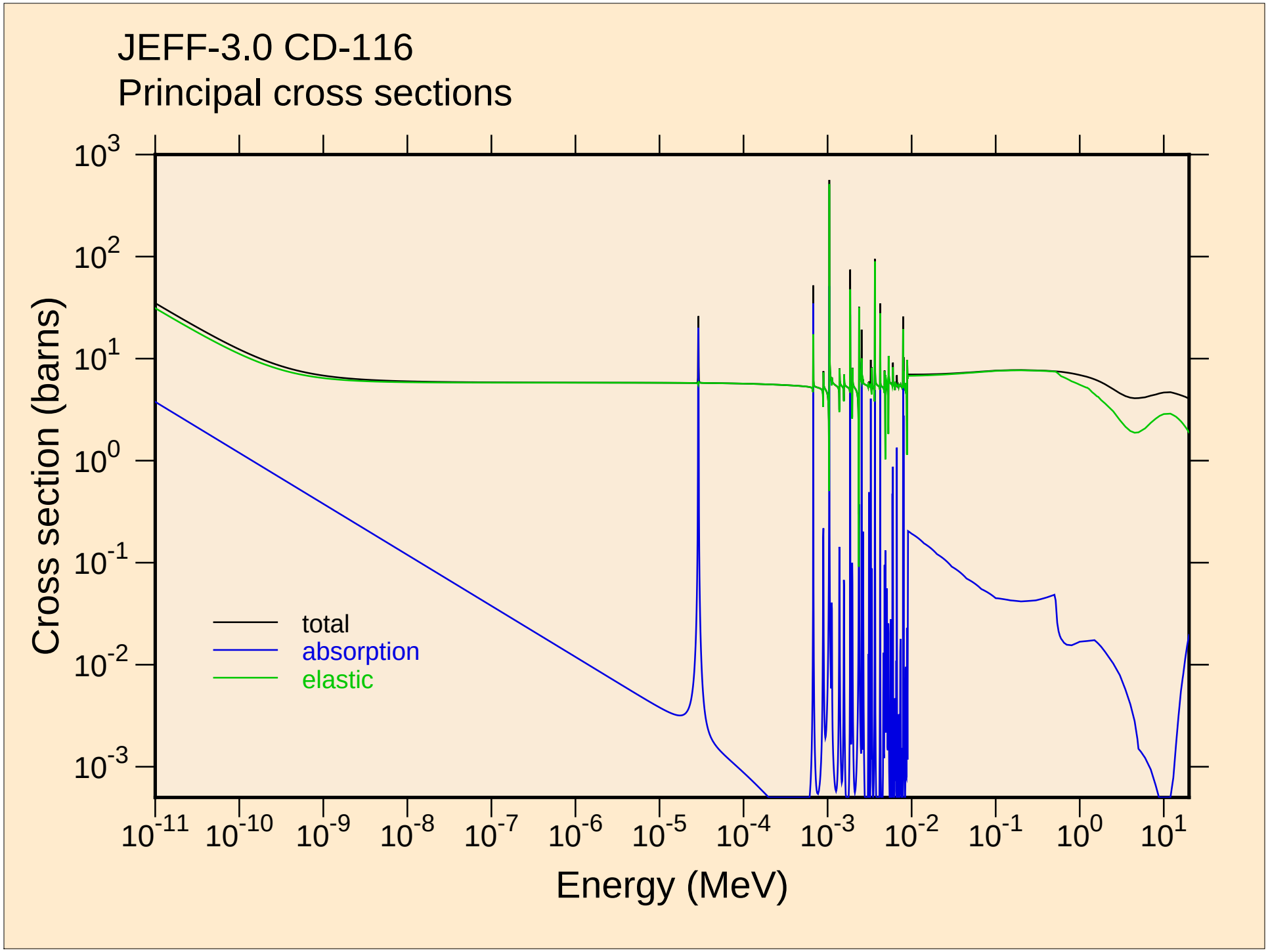
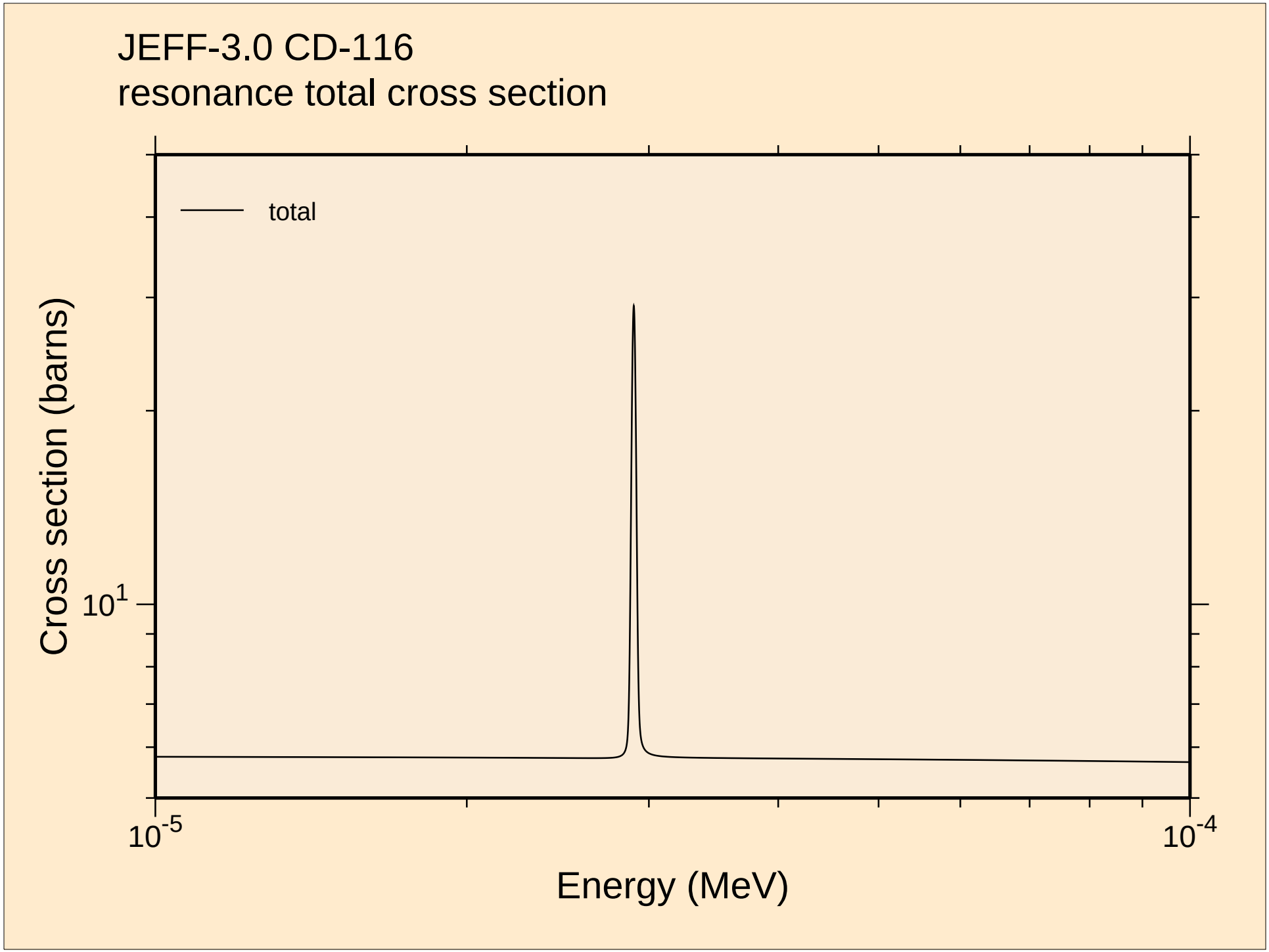
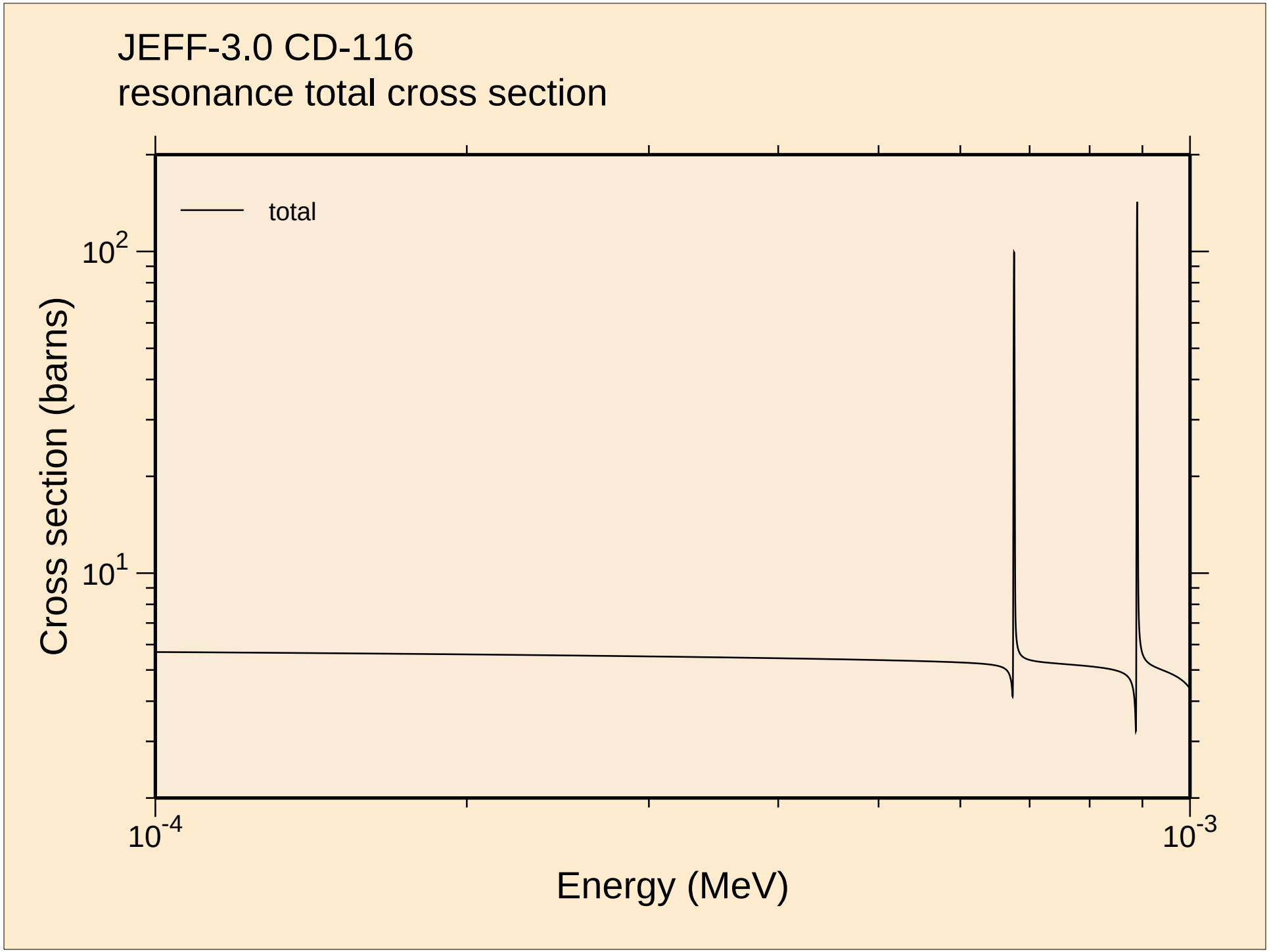
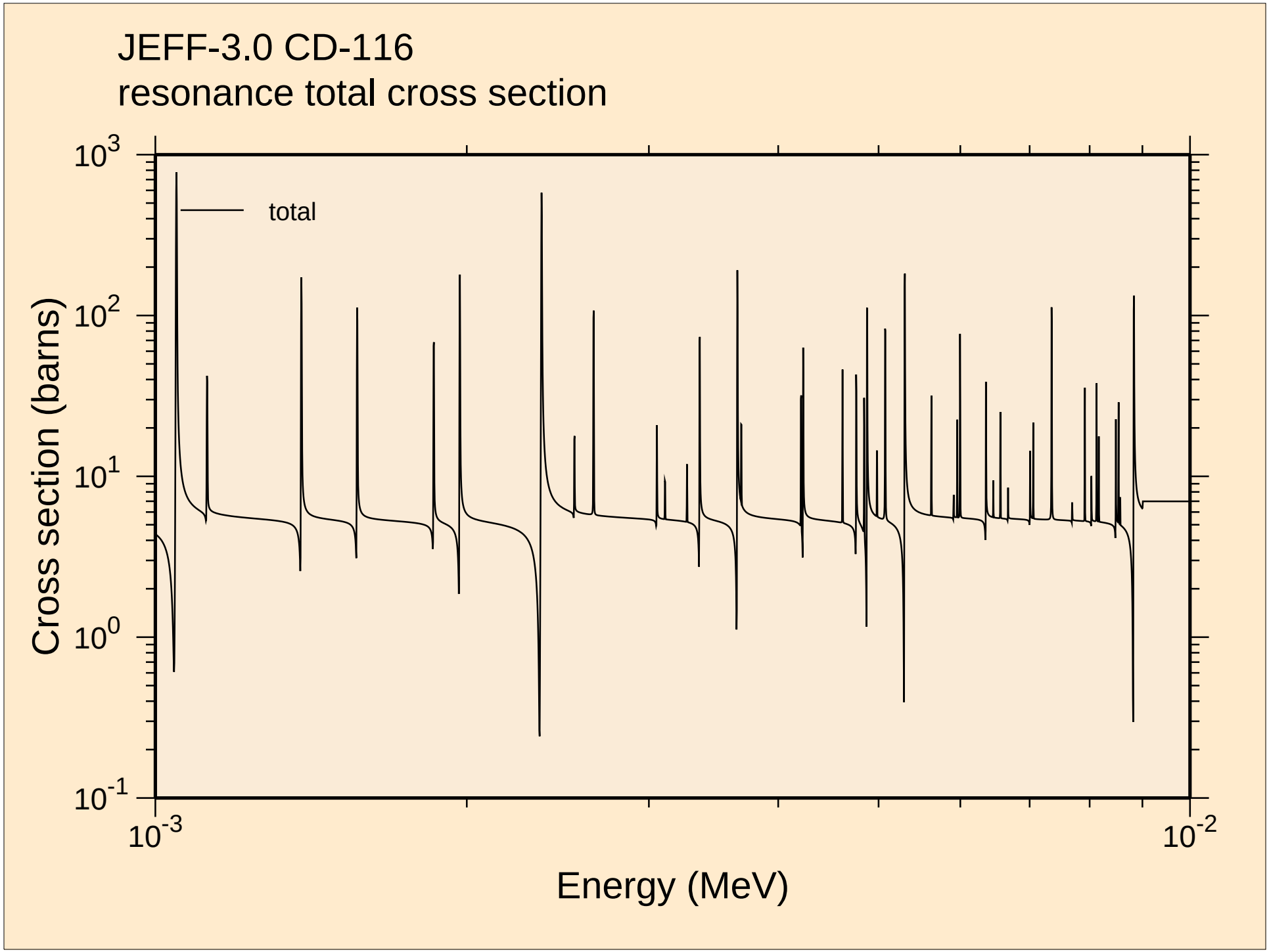
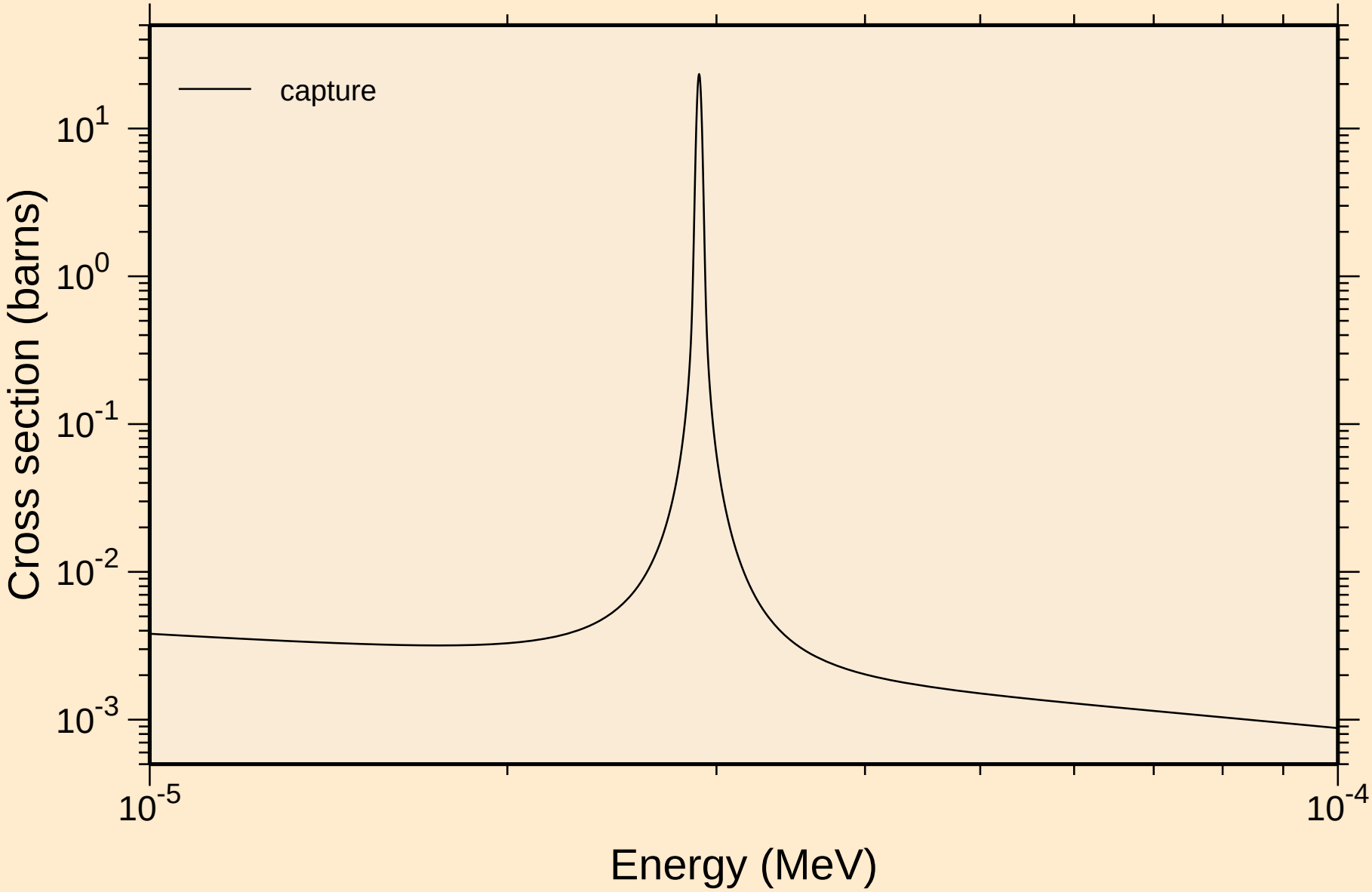

JEFF-3.0 CD-116
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

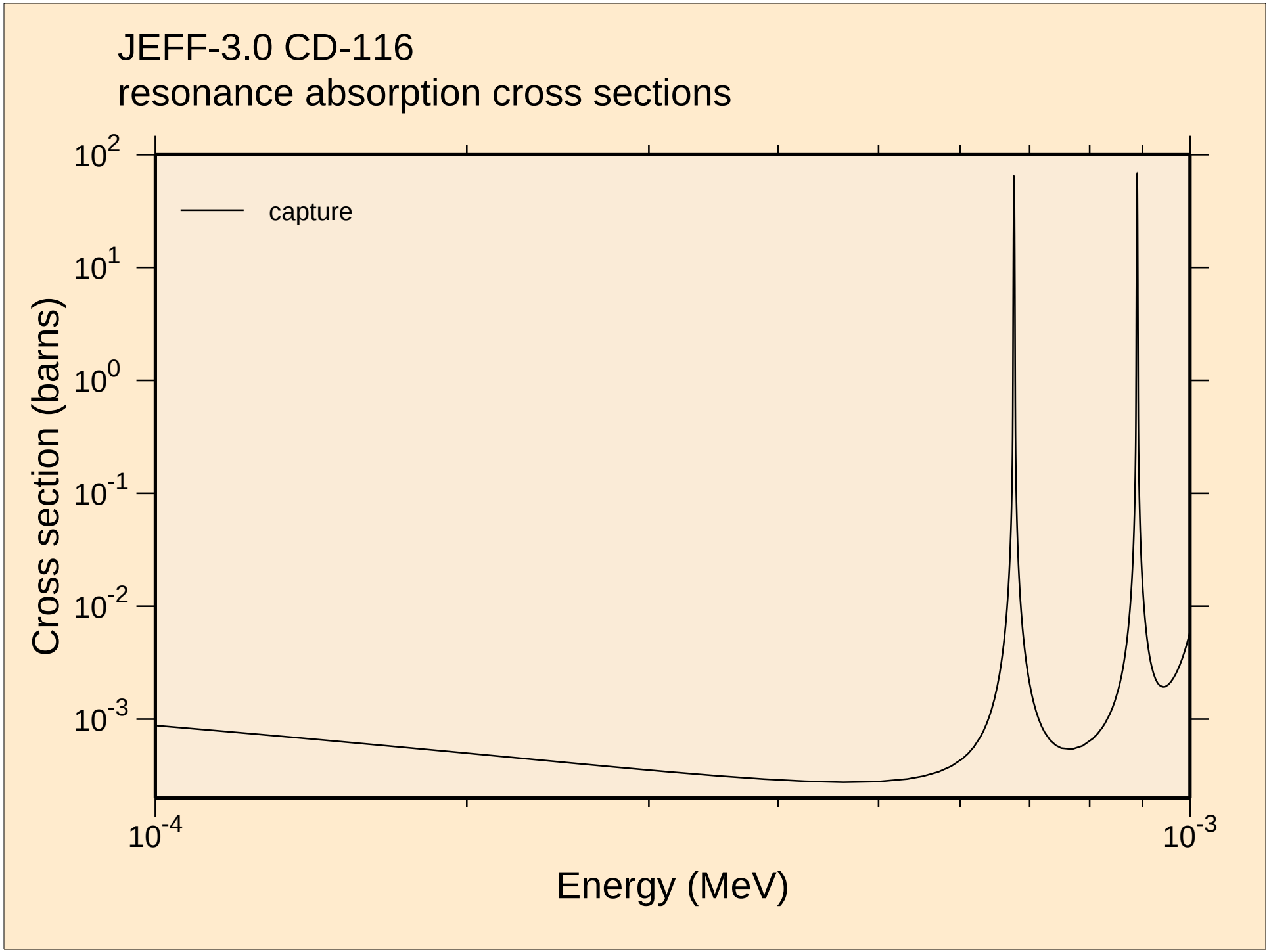

JEFF-3.0 CD-116
resonance total cross section
total
Cross section (barns)
10^1
10^-5
10^-4
Energy (MeV)

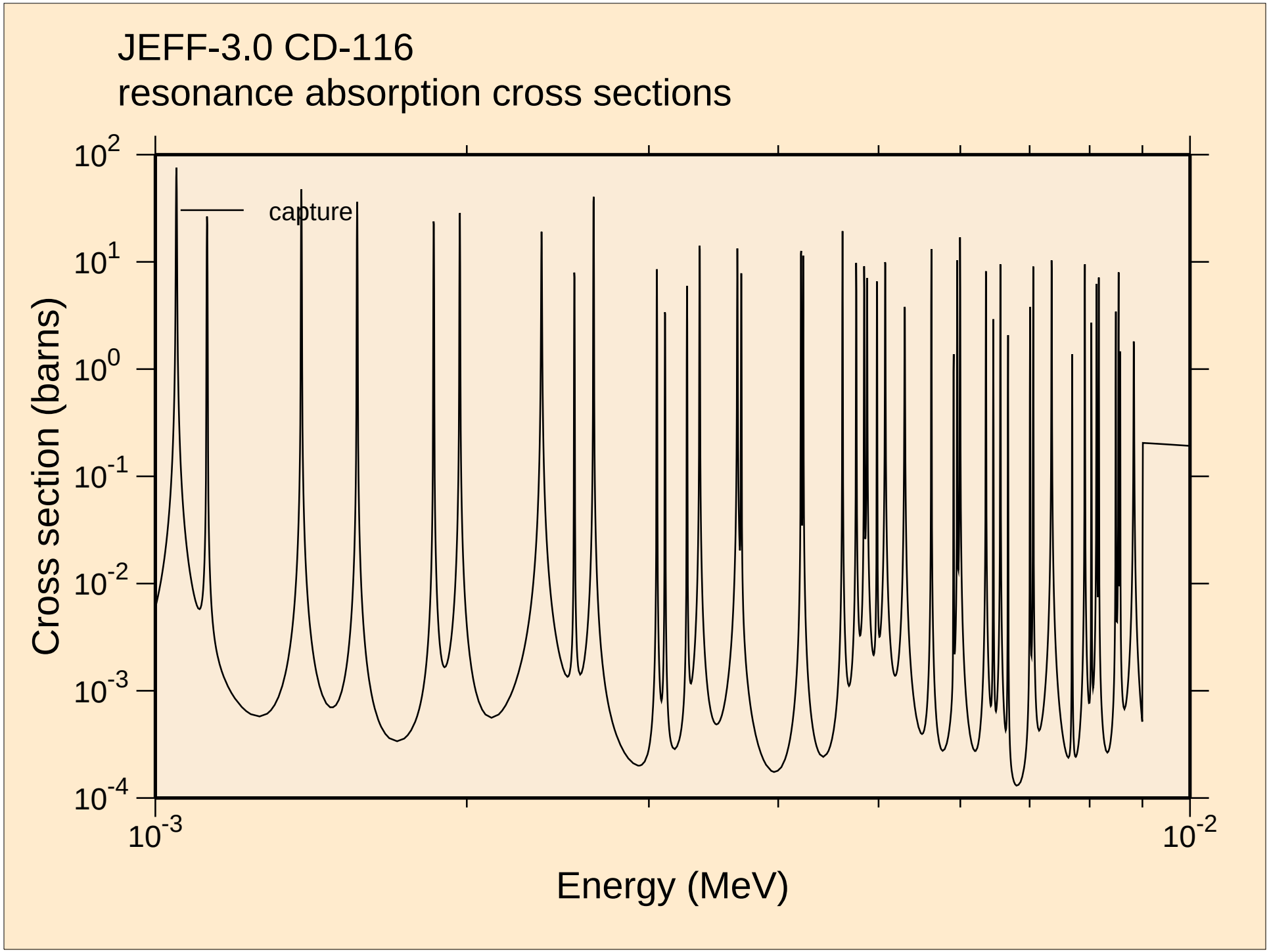

JEFF-3.0 CD-116
resonance total cross section
total
Cross section (barns)
10^2
10^1
10^{-4}
10^{-3}
Energy (MeV)

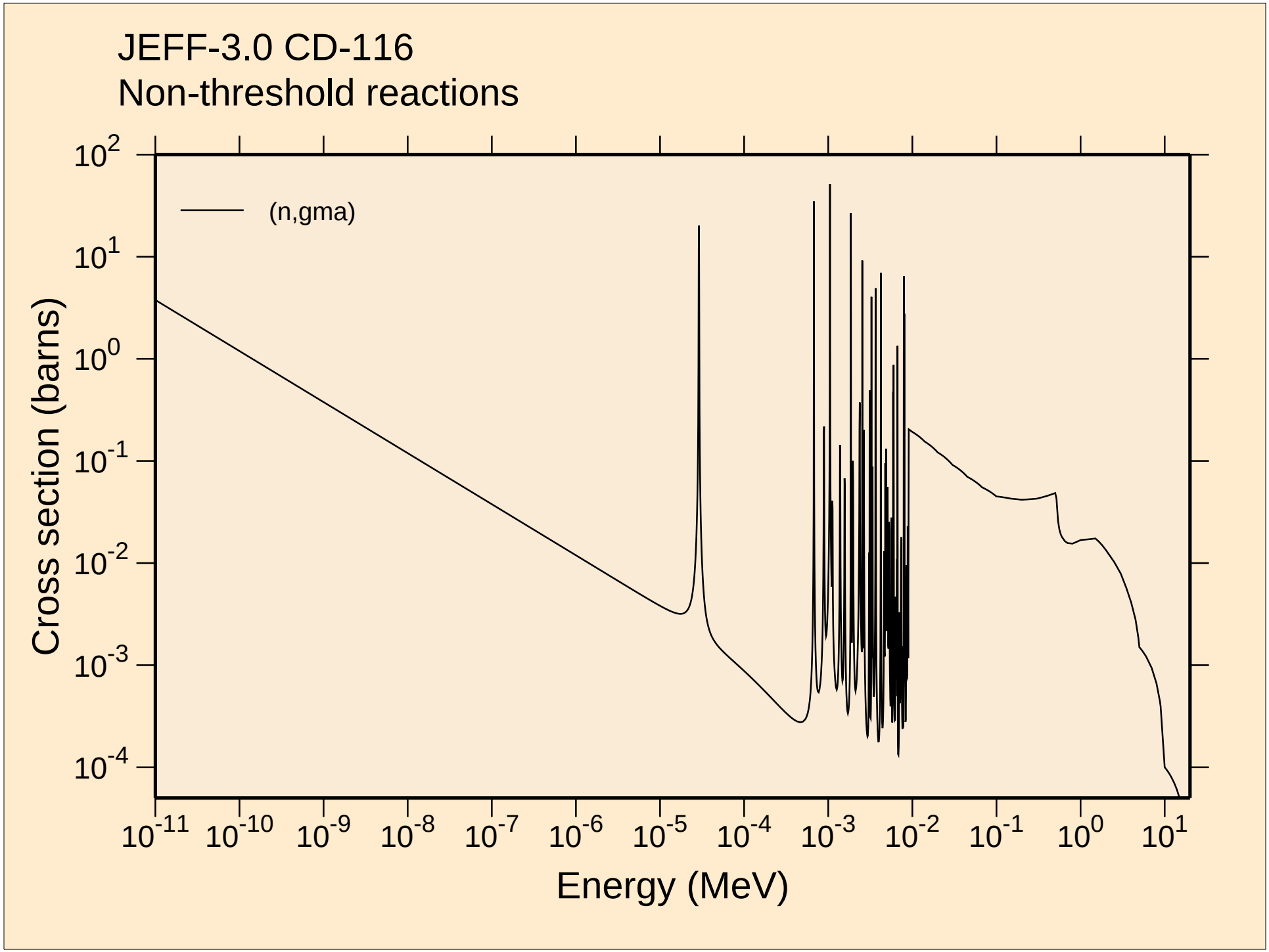

JEFF-3.0 CD-116
resonance total cross section
total
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-3}
10^{-2}
Energy (MeV)

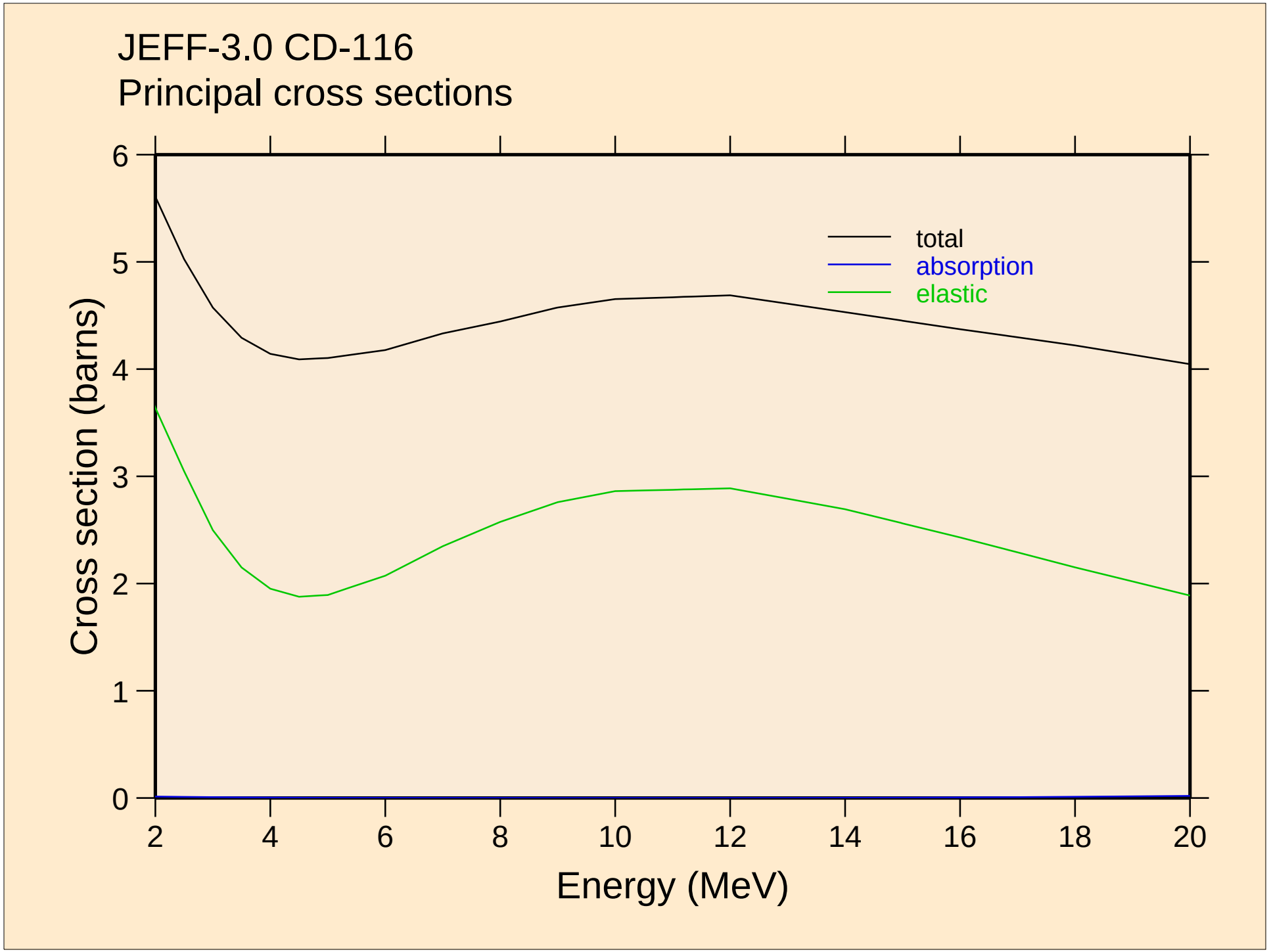
JEFF-3.0 CD-116
resonance absorption cross sections

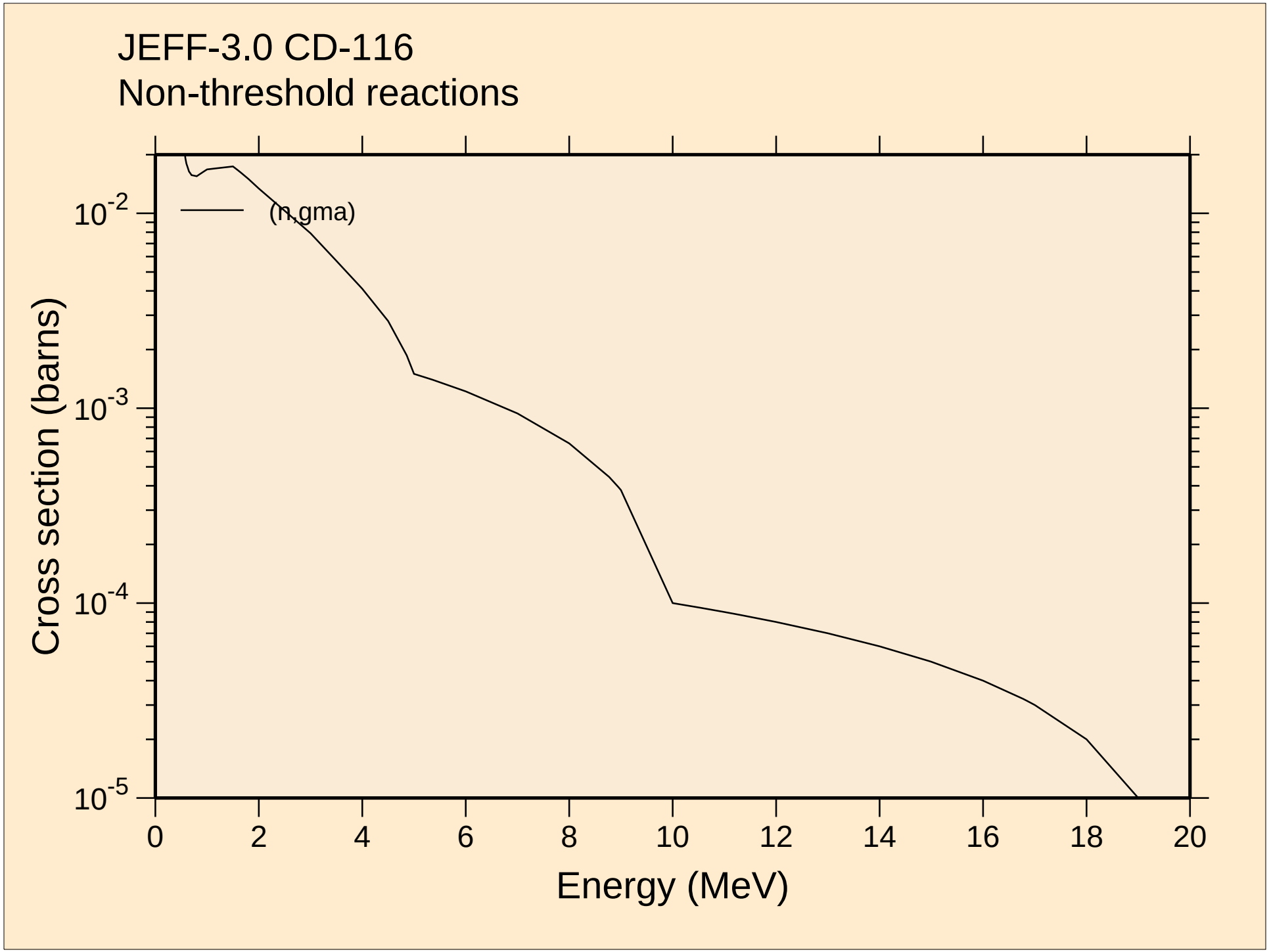


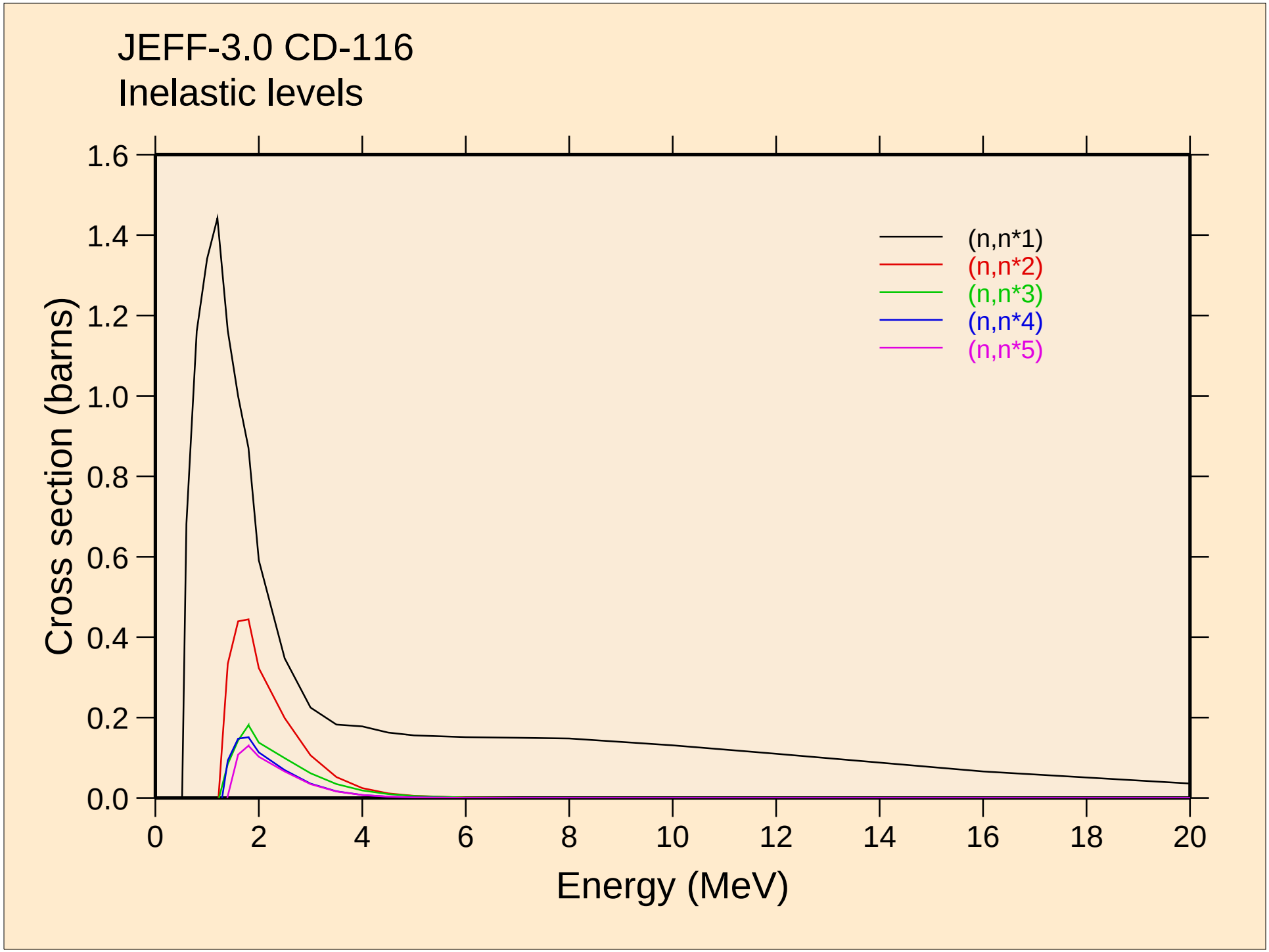

JEFF-3.0 CD-116
resonance absorption cross sections
capture
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-3}
Energy (MeV)

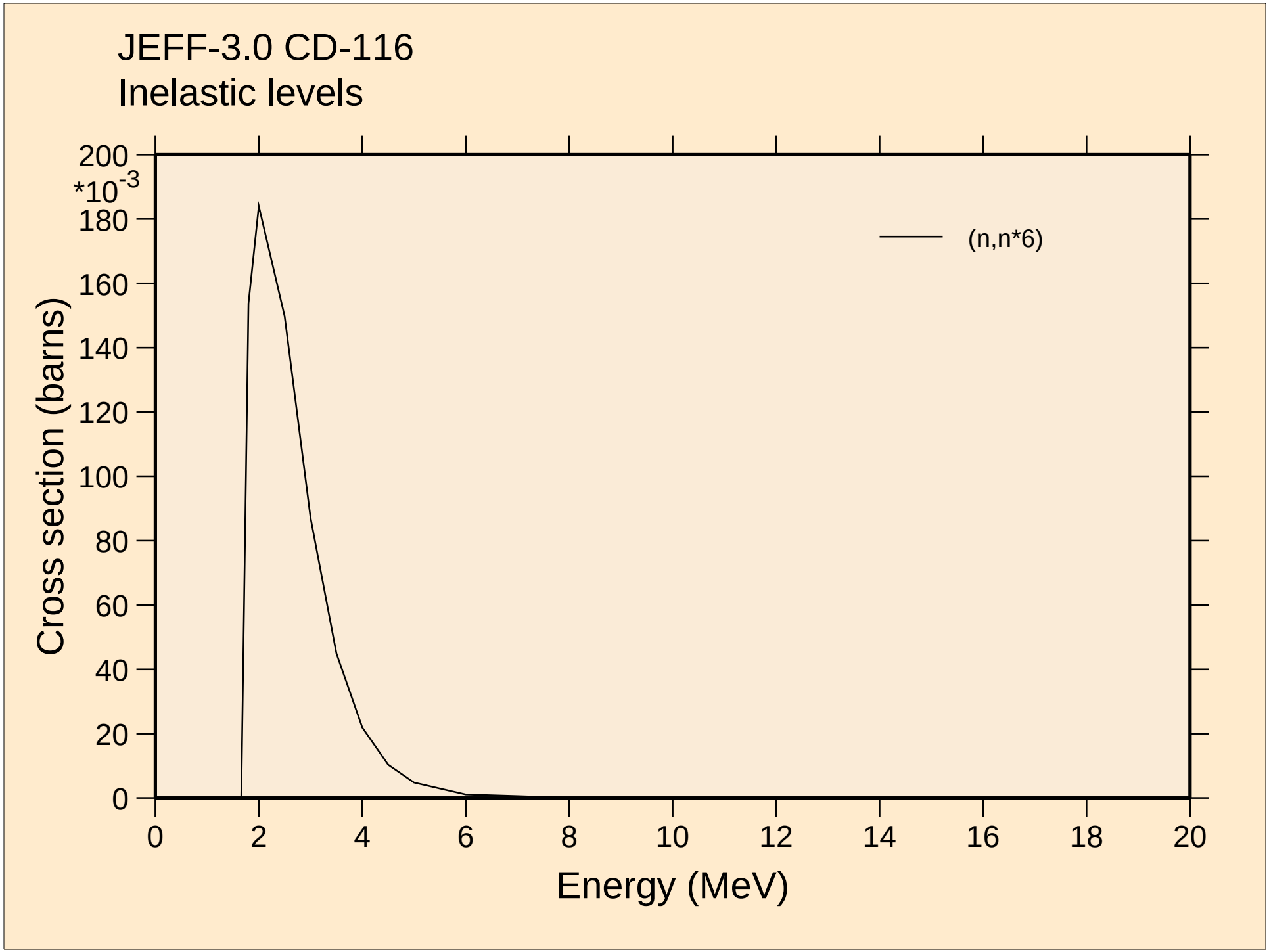

JEFF-3.0 CD-116
resonance absorption cross sections
capture
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-3}
10^{-2}
Energy (MeV)

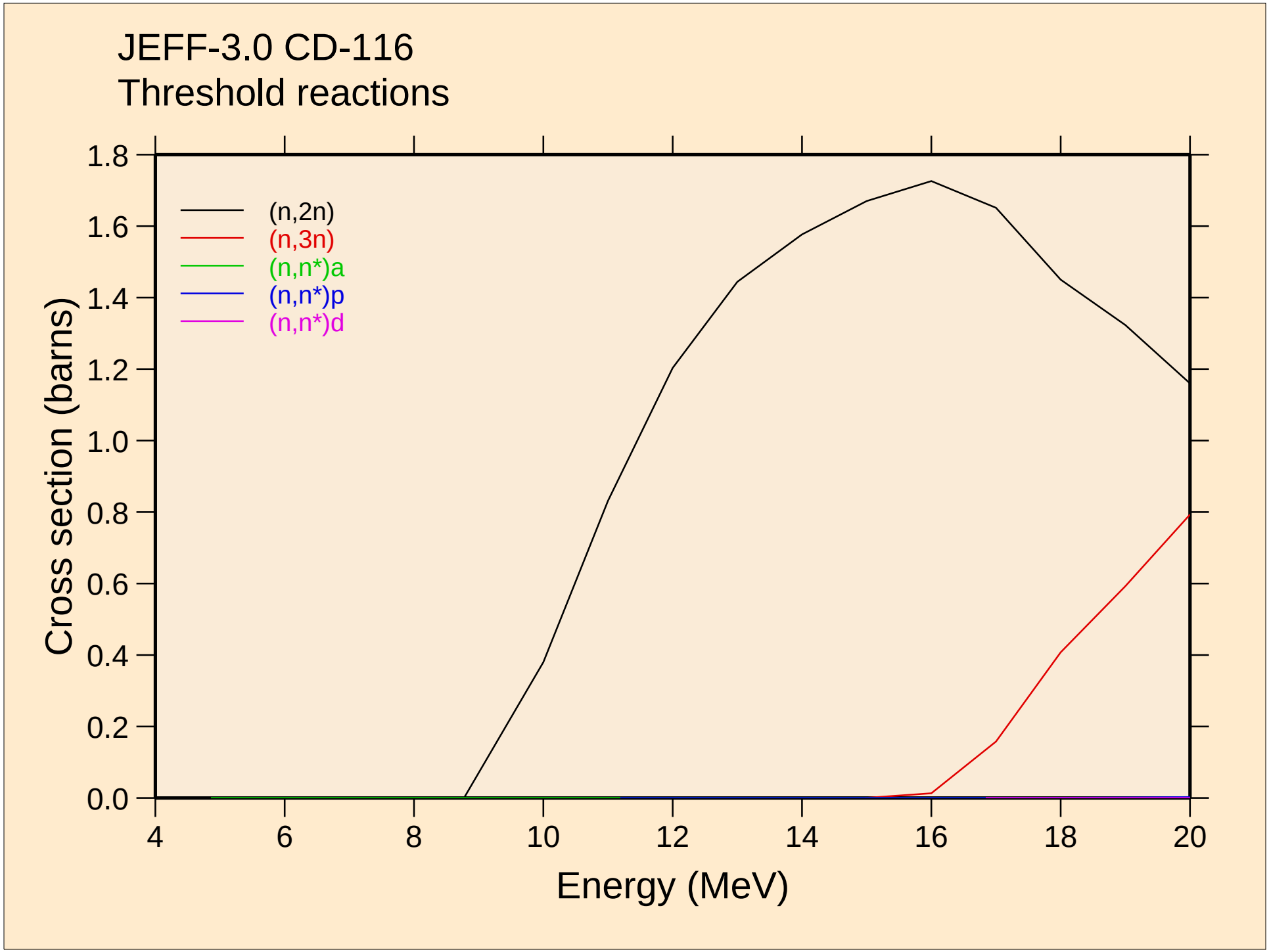

JEFF-3.0 CD-116
Non-threshold reactions
(n,gma)
Cross section (barns)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

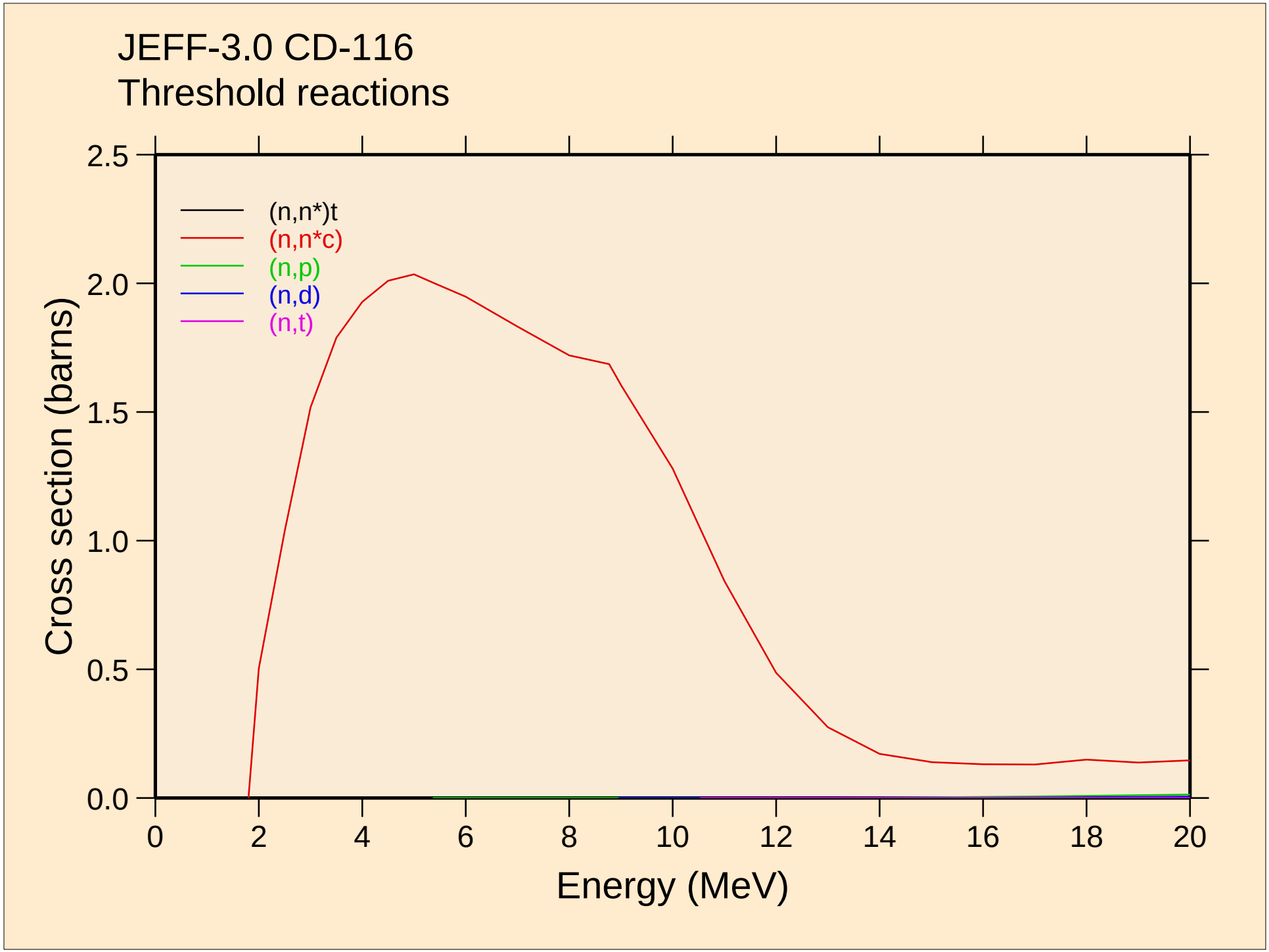

JEFF-3.0 CD-116
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
0
1
2
3
4
5
6
2
4
6
8
10
12
14
16
18
20

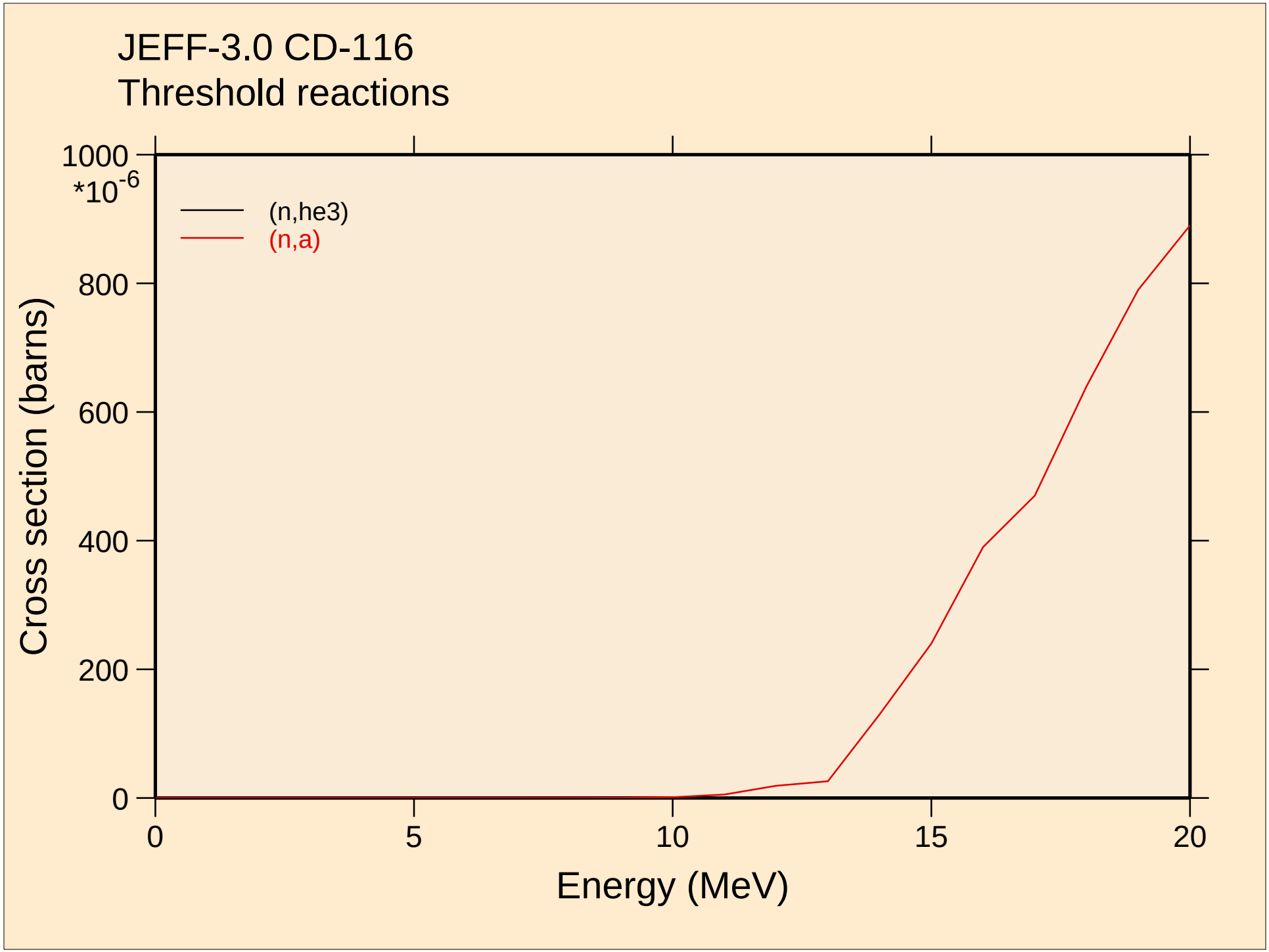

JEFF-3.0 CD-116
Non-threshold reactions
(n,gma)
Cross section (barns)
10-2
10-3
10-4
10-5
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

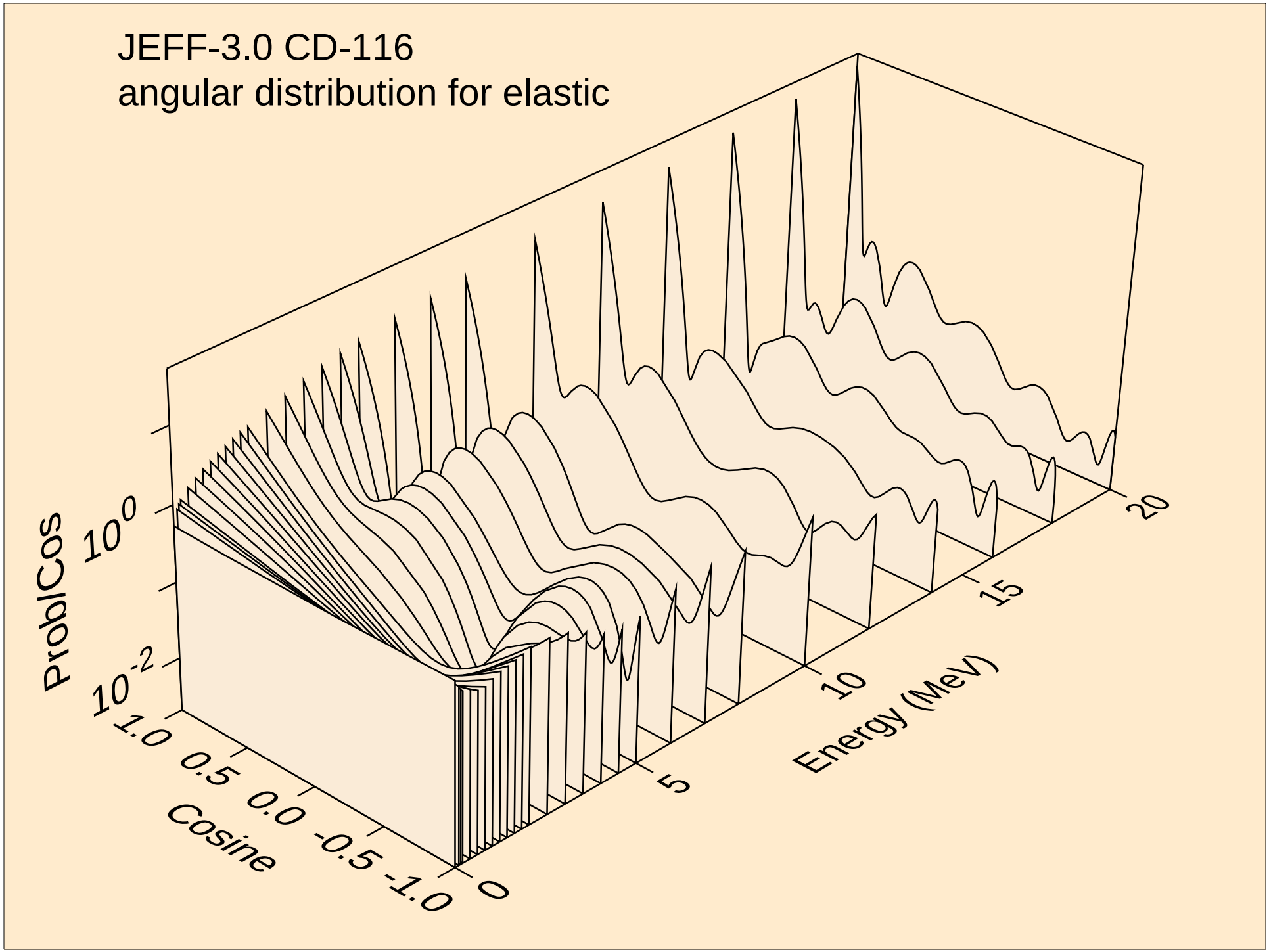

JEFF-3.0 CD-116
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
0
2
4
6
8
10
12
14
16
18
20

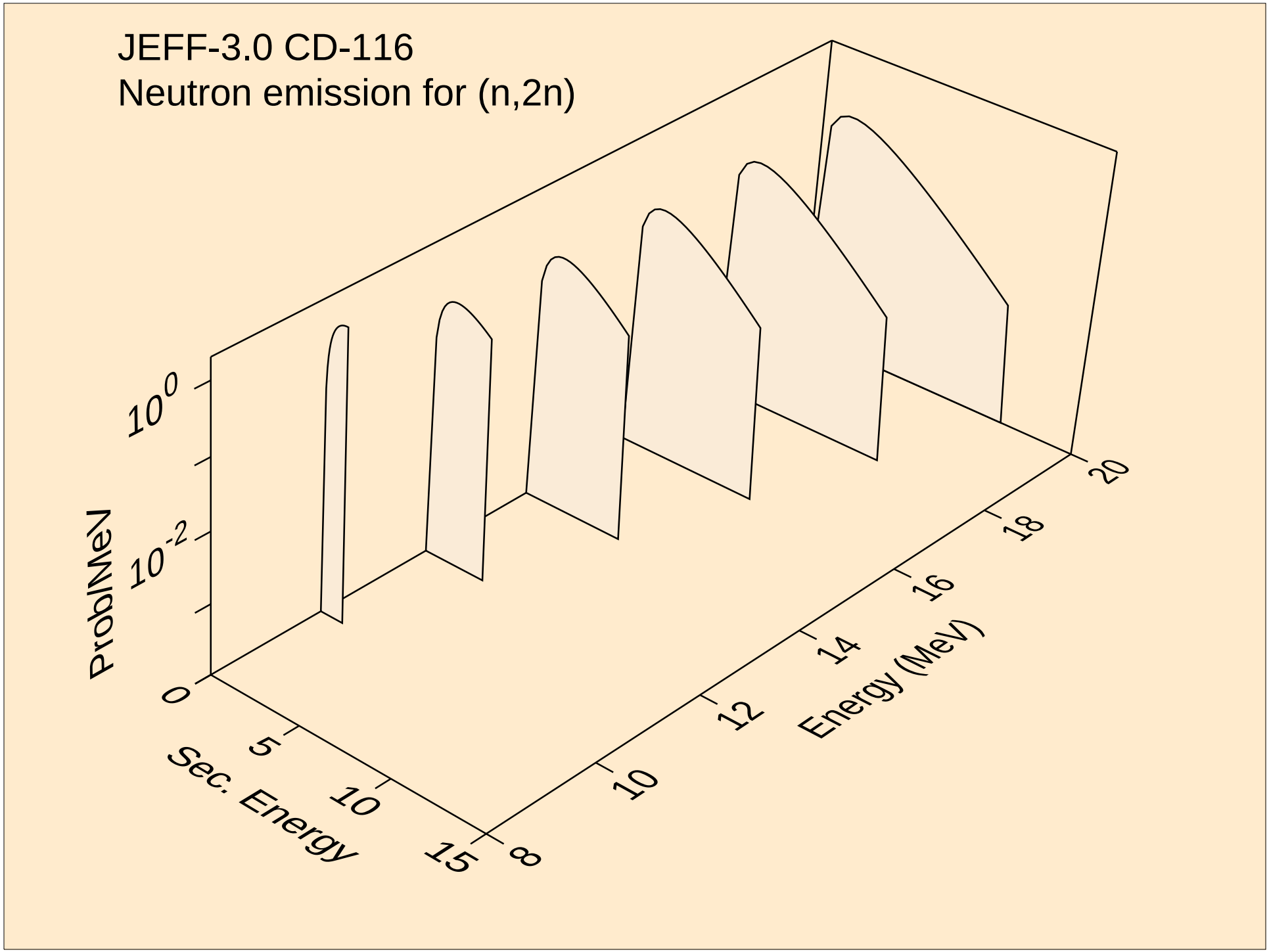

JEFF-3.0 CD-116
Inelastic levels
Cross section (barns)
*10-3
200
180
160
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)

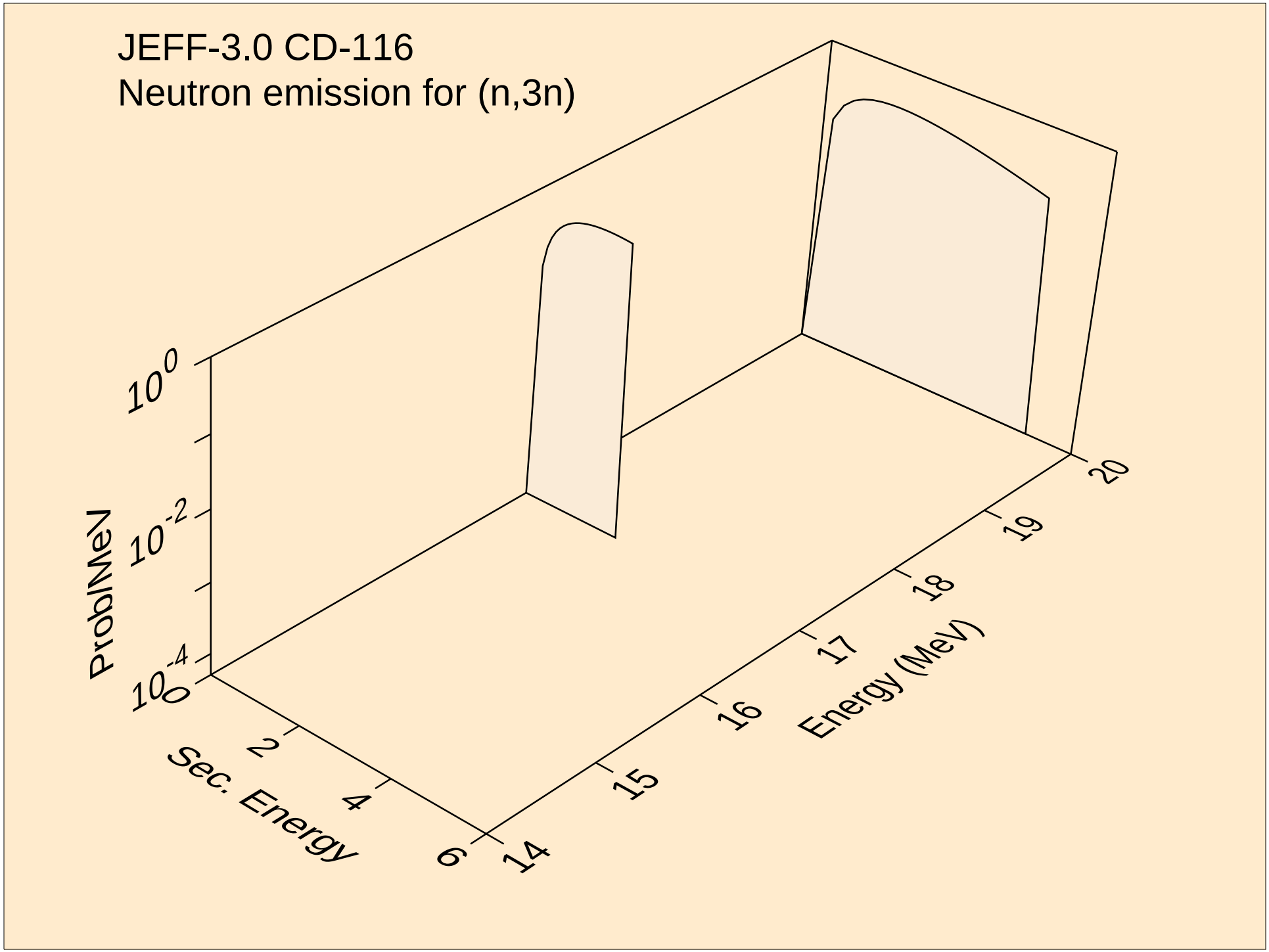

JEFF-3.0 CD-116
Threshold reactions
(n,2n)
(n,3n)
(n,n*)a
(n,n*)p
(n,n*)d
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
4
6
8
10
12
14
16
18
20

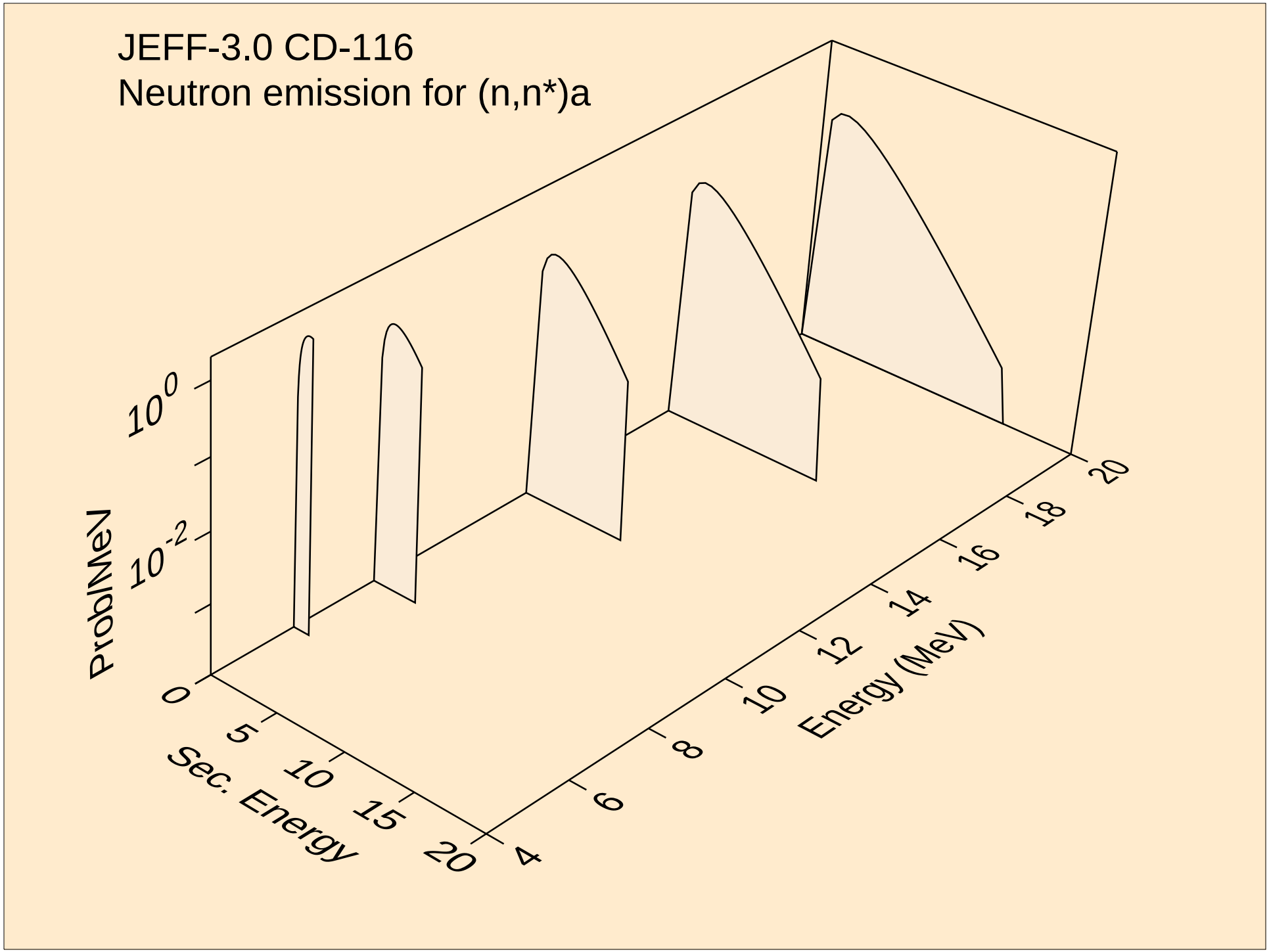

JEFF-3.0 CD-116
Threshold reactions
(n,n*)t
(n,n*c)
(n,p)
(n,d)
(n,t)
Cross section (barns)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
0
2
4
6
8
10
12
14
16
18
20

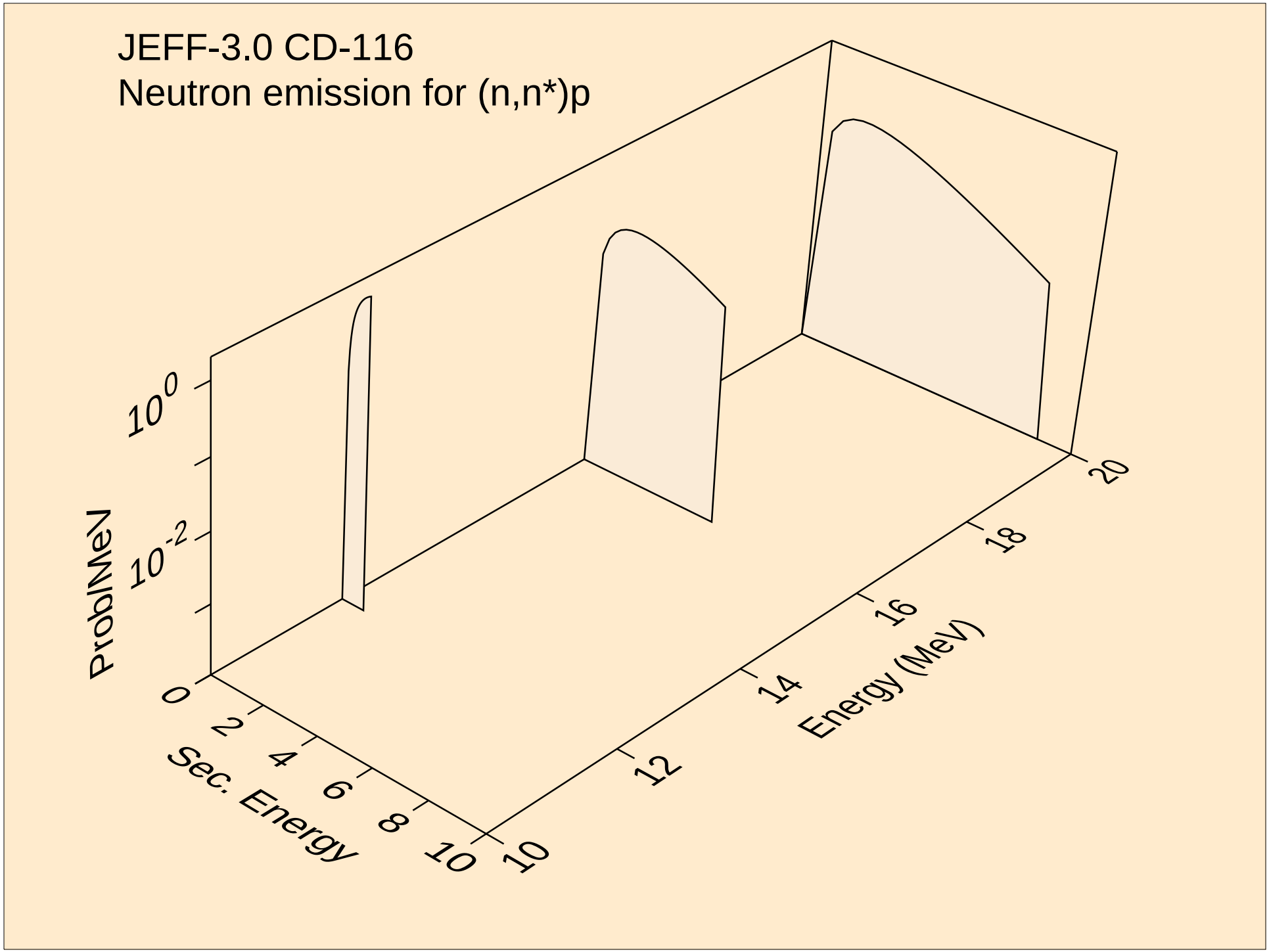

JEFF-3.0 CD-116
Threshold reactions
1000
*10-6
800
600
400
200
0
(n,he3)
(n,a)
Cross section (barns)
0
5
10
15
20
Energy (MeV)

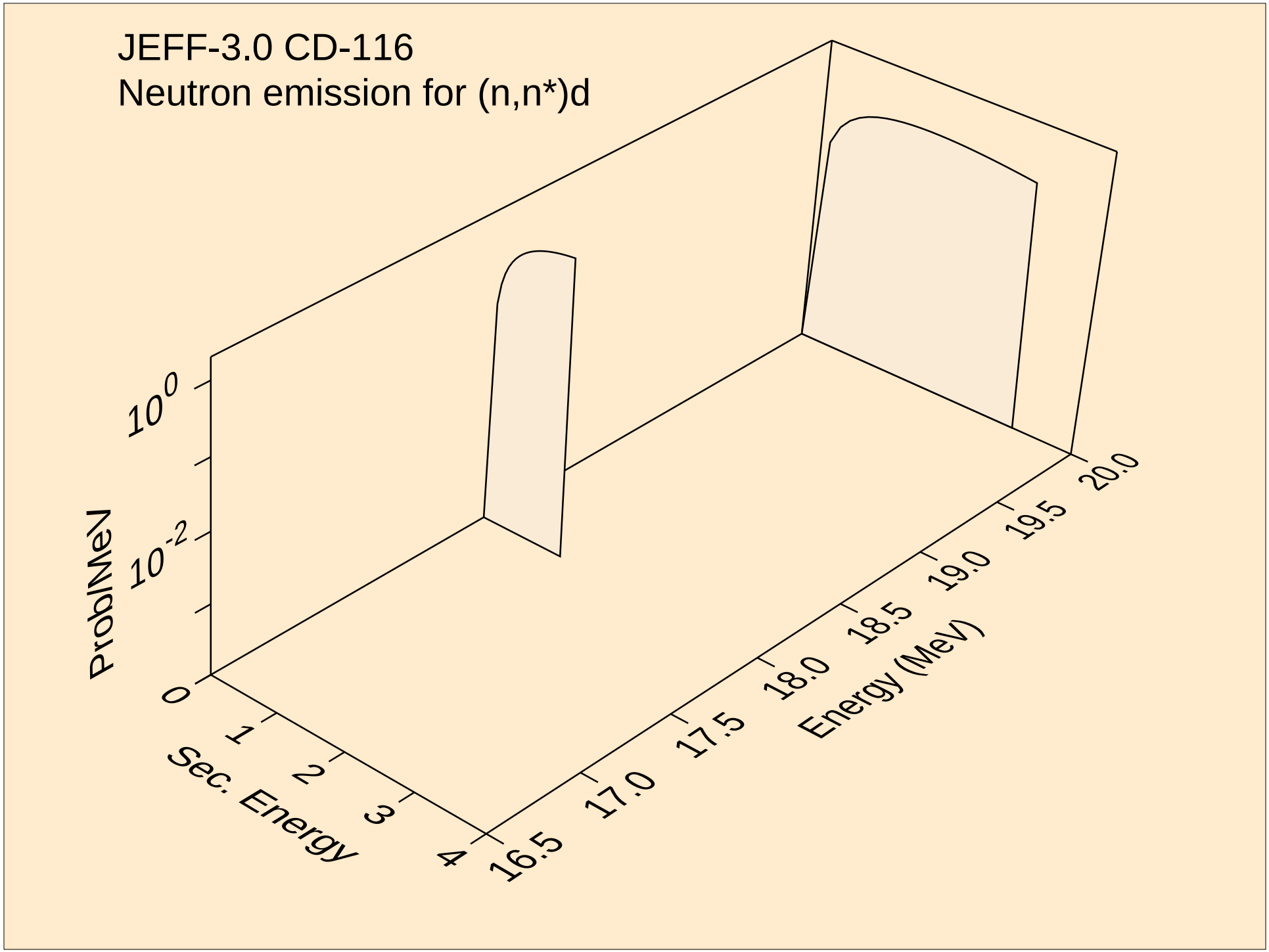

JEFF-3.0 CD-116
angular distribution for elastic
ProbICos
10^0
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

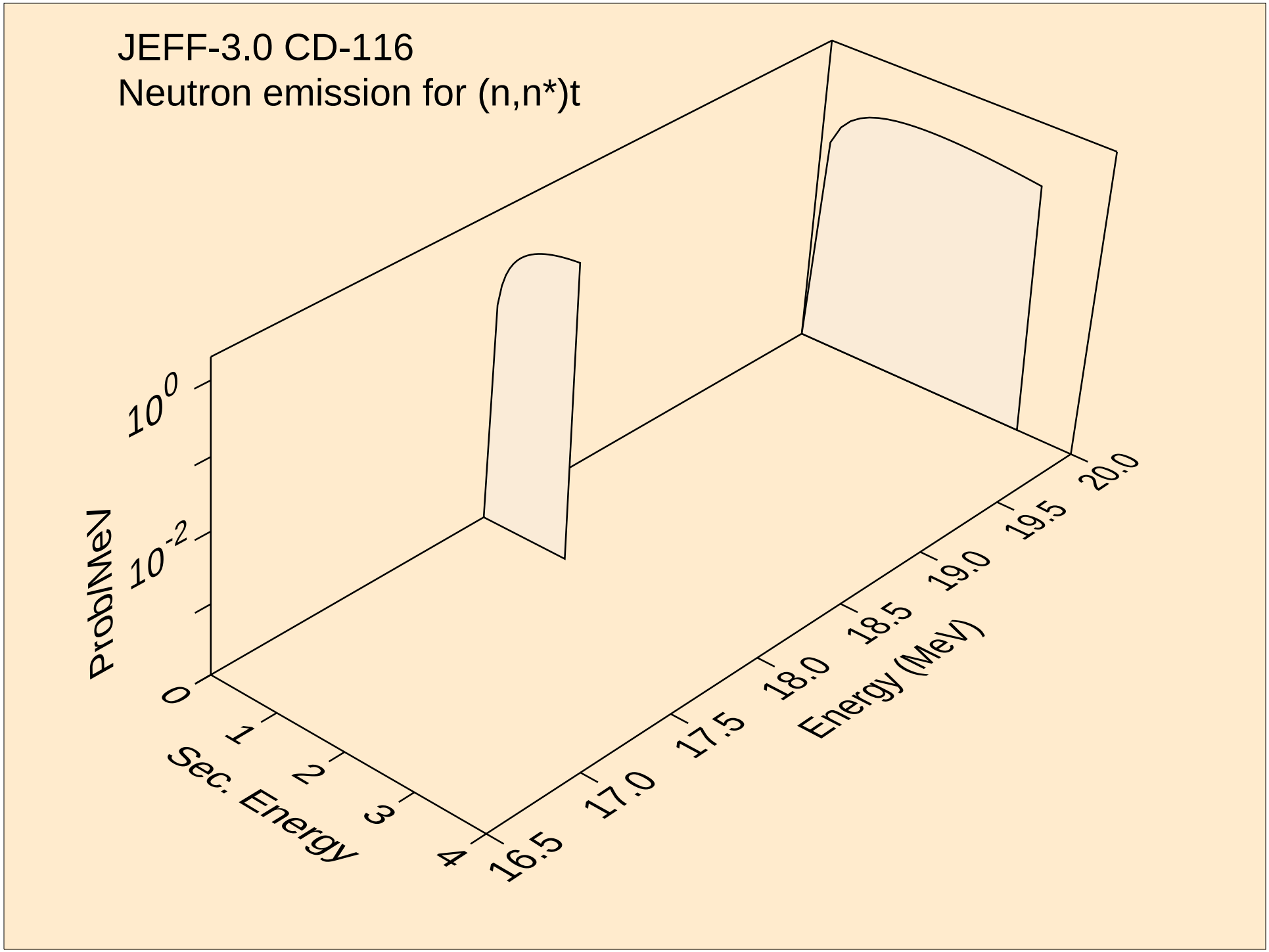

JEFF-3.0 CD-116
Neutron emission for (n,2n)
Prob/MeV
10^{0}
10^{-2}
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

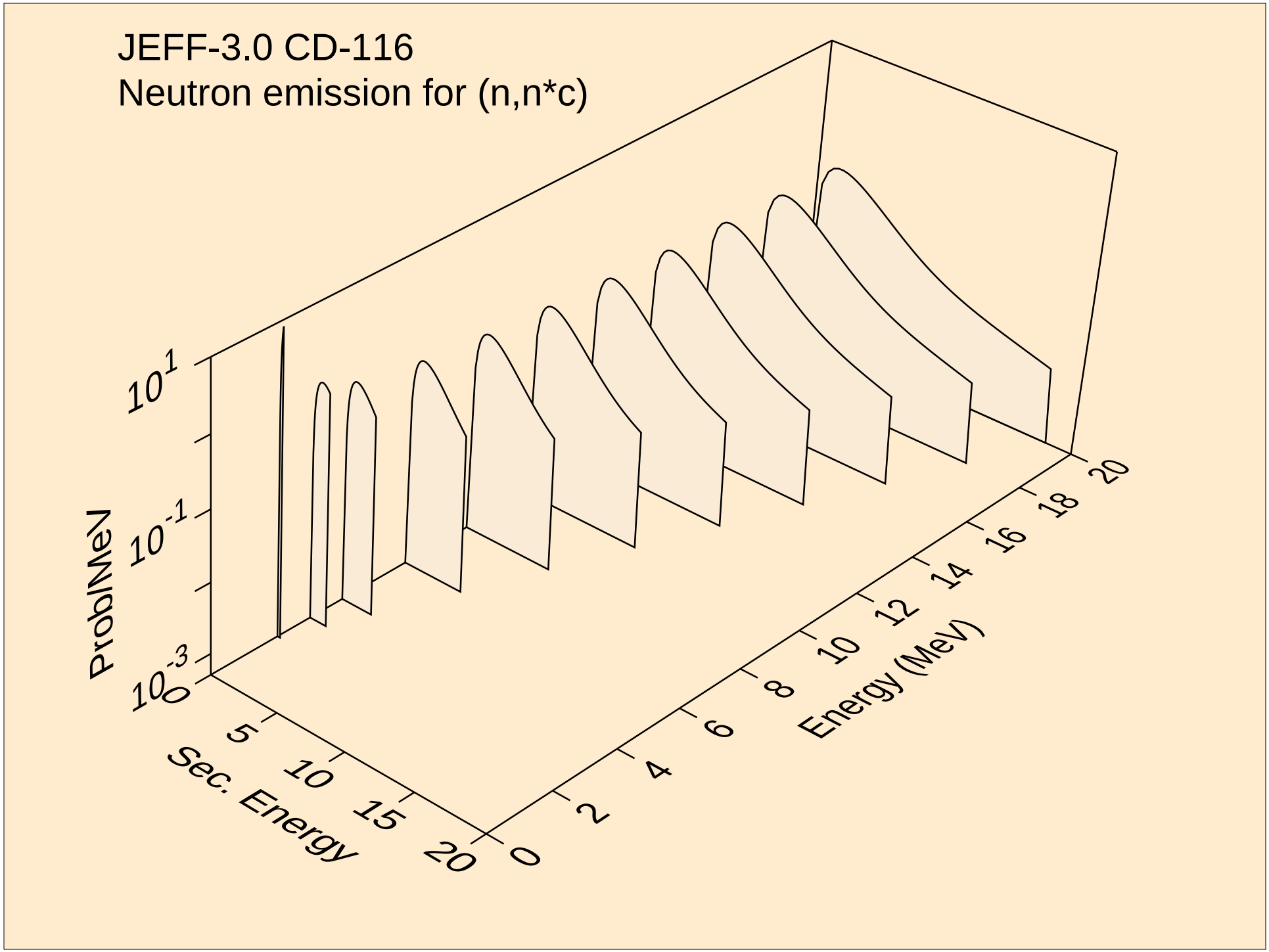

JEFF-3.0 CD-116
Neutron emission for (n,3n)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
Sec. Energy
2
4
6
Energy (MeV)
14
15
16
17
18
19
20


JEFF-3.0 CD-116
Neutron emission for (n,n*)a
Prob/MeV
10^0
10^-2
0
5
10
15
20
Sec. Energy
4
6
8
10
12
14
16
18
20
Energy (MeV)


JEFF-3.0 CD-116
Neutron emission for (n,n*)p
Prob/MeV
10^0
10^-2
0
2
4
6
8
10
Sec. Energy
10
12
14
16
18
20
Energy (MeV)


JEFF-3.0 CD-116
Neutron emission for (n,n*)d
Prob/MeV
10^0
10^-2
0
Sec. Energy
1
2
3
4
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
Energy (MeV)


JEFF-3.0 CD-116
Neutron emission for (n,n*)t
Prob/MeV
10^0
10^-2
0
Sec. Energy
1
2
3
4
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
Energy (MeV)


JEFF-3.0 CD-116
Neutron emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
Sec. Energy
0
5
10
15
20
Energy (MeV)
0
2
4
6
8
10
12
14
16
18
20