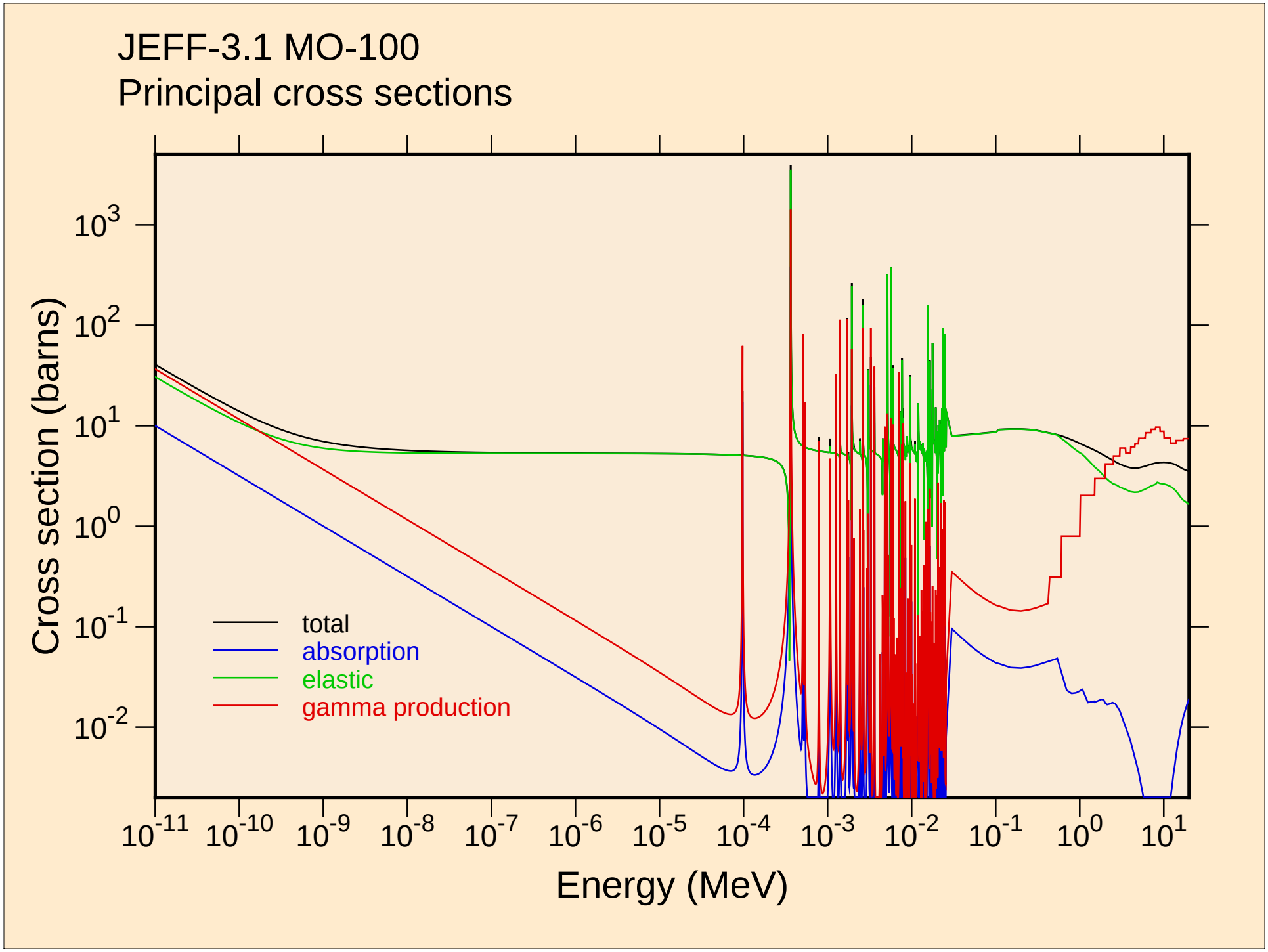
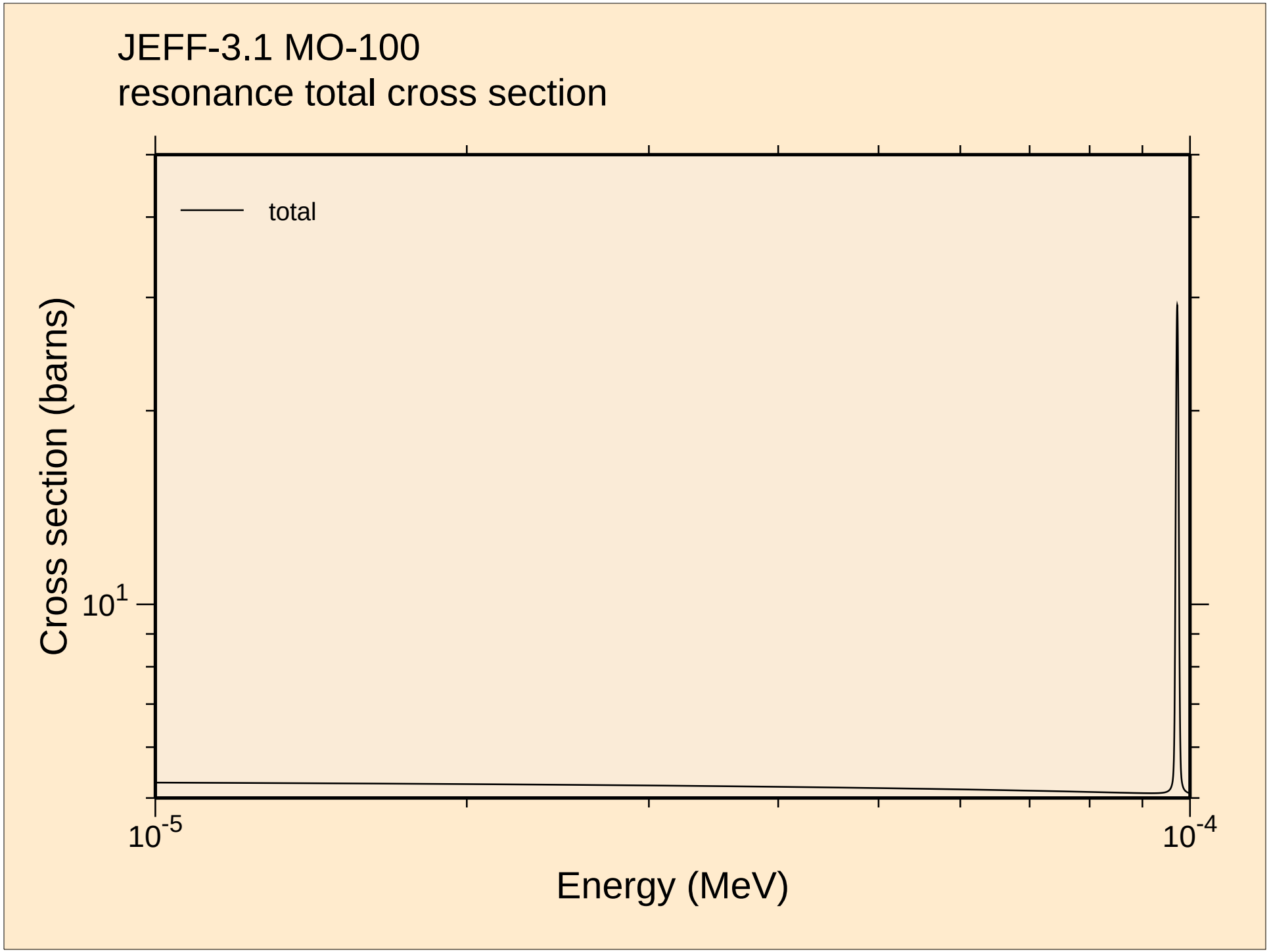
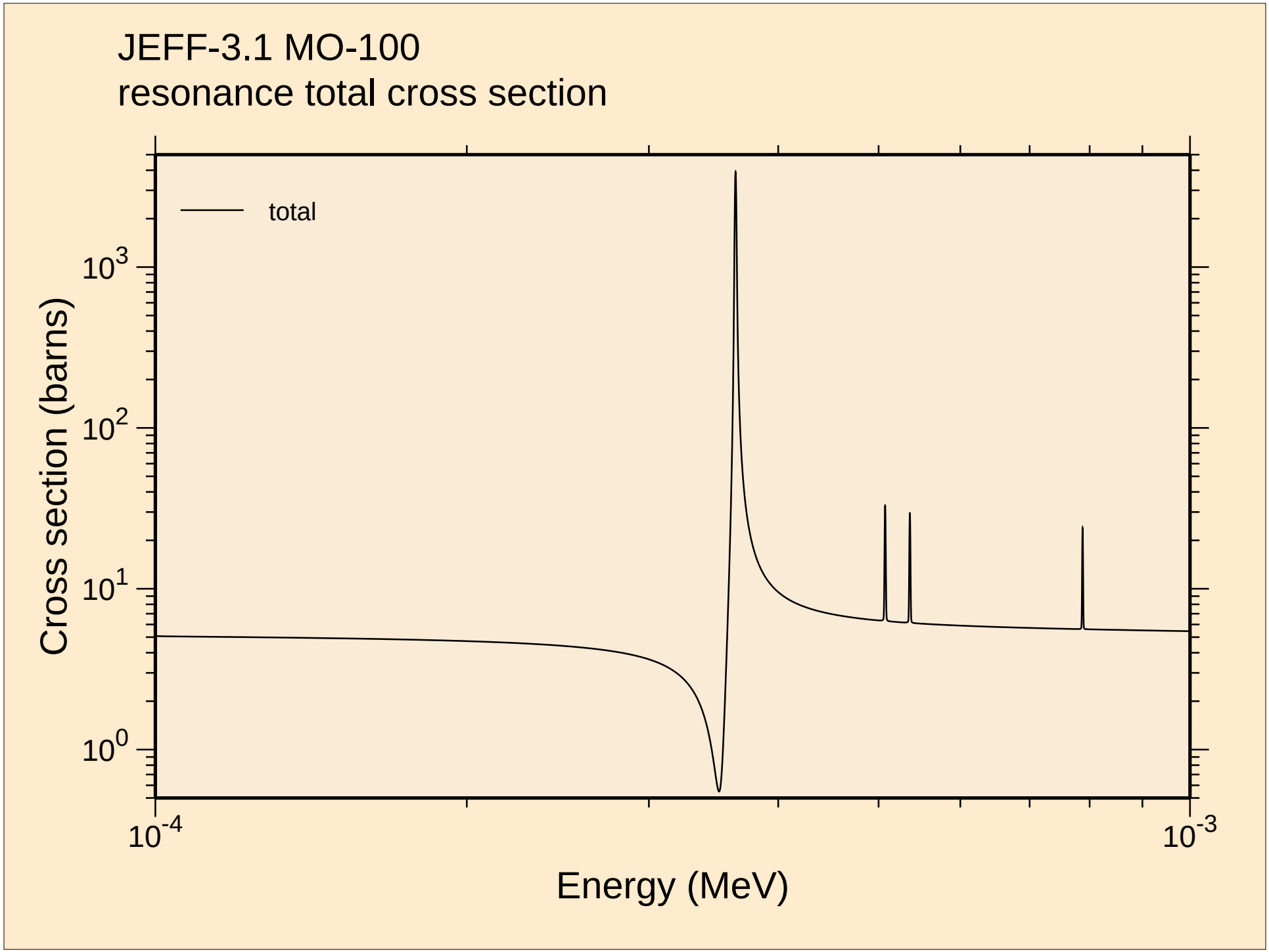
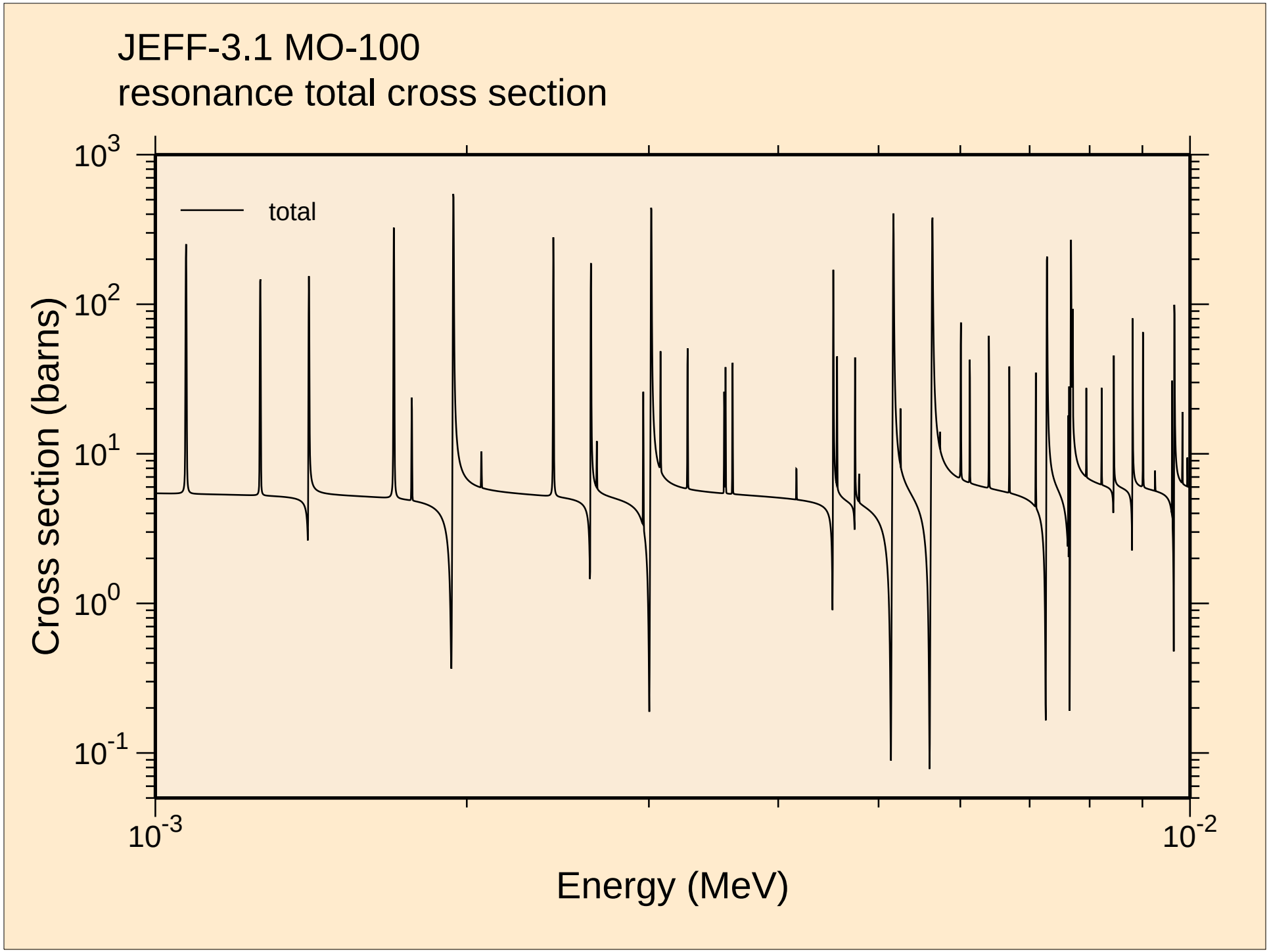
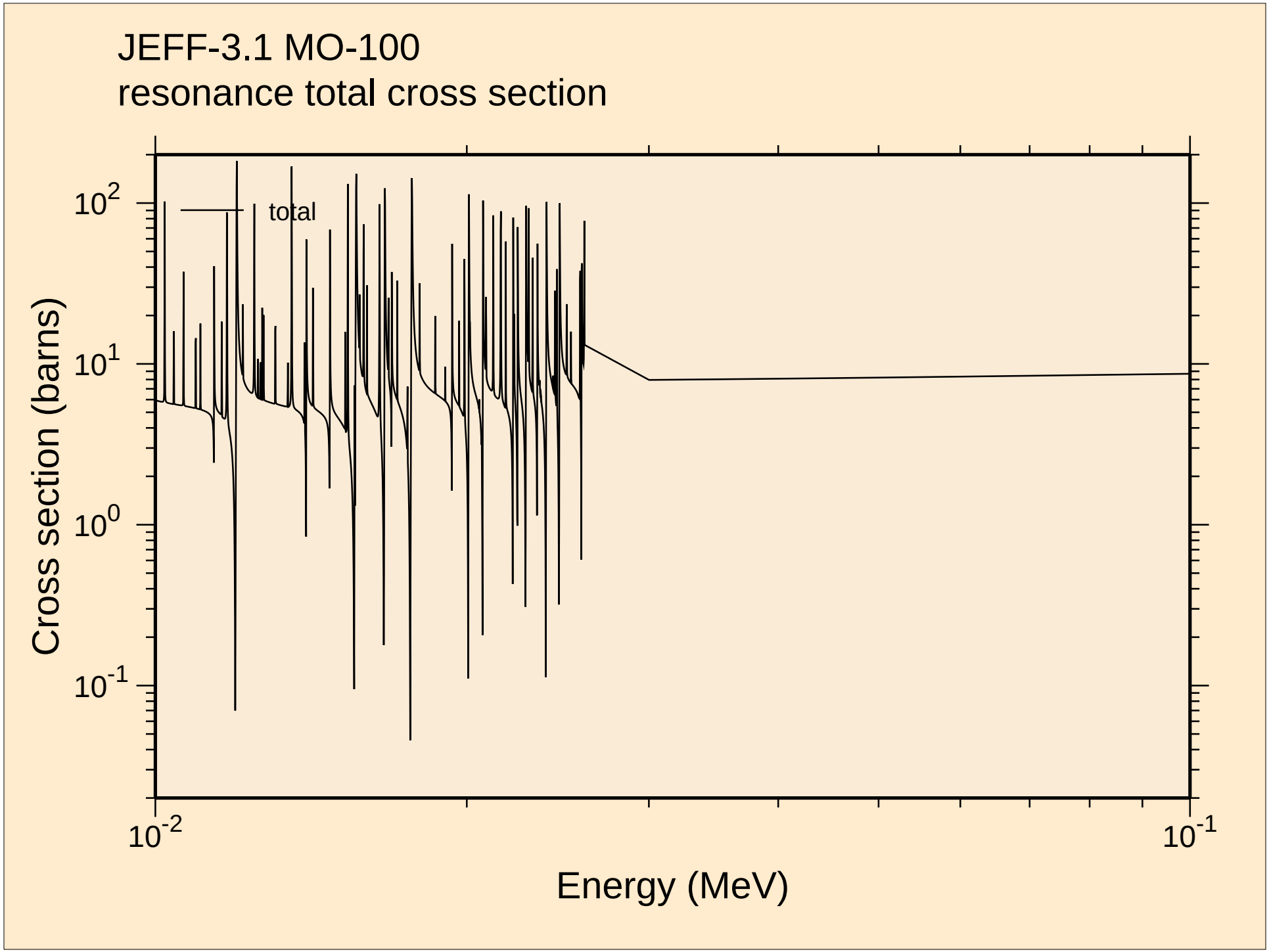
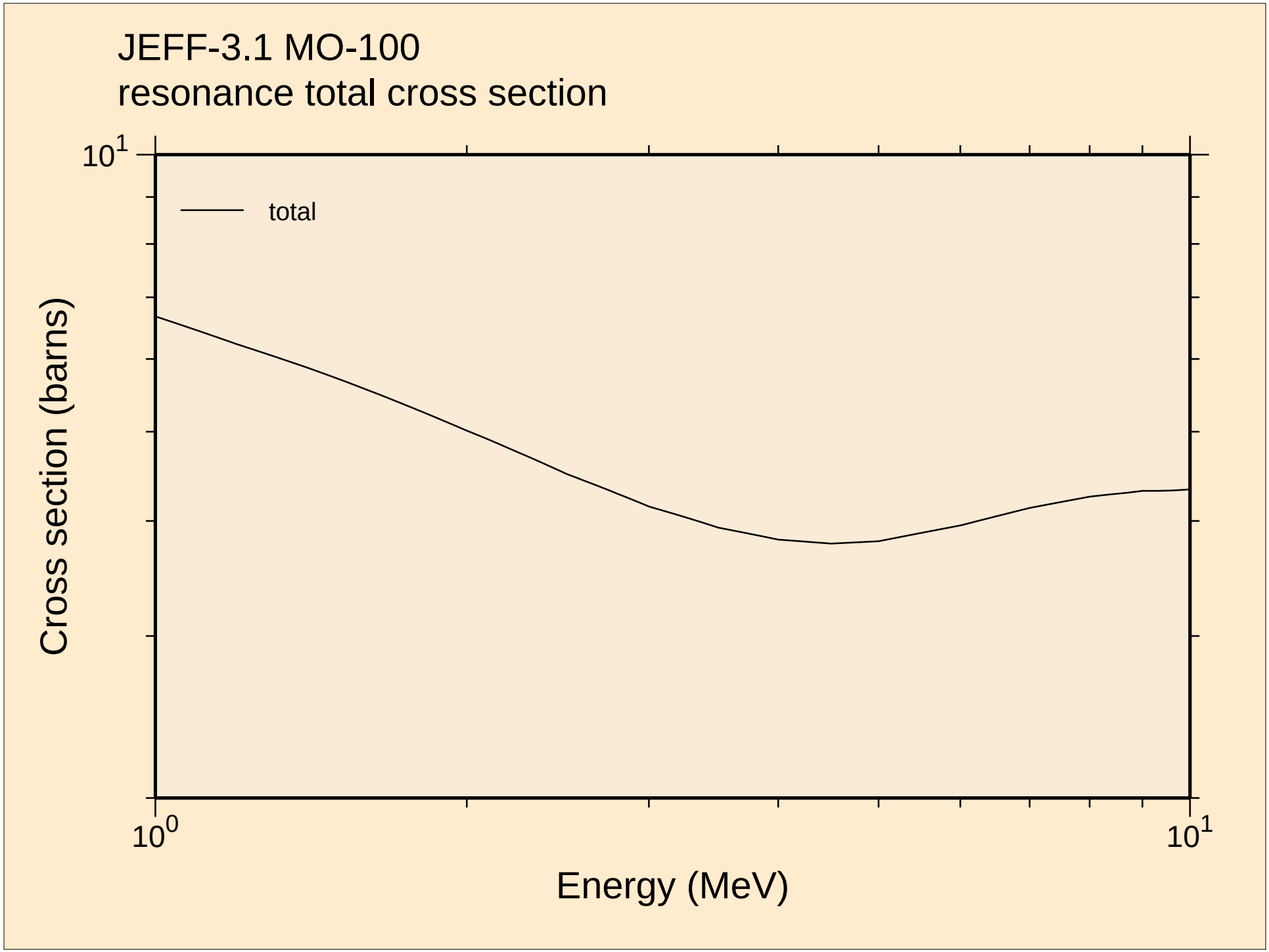

JEFF-3.1 MO-100
Principal cross sections
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
total
absorption
elastic
gamma production
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)


JEFF-3.1 MO-100
resonance total cross section
total
Cross section (barns)
10^1
10^-5
10^-4
Energy (MeV)

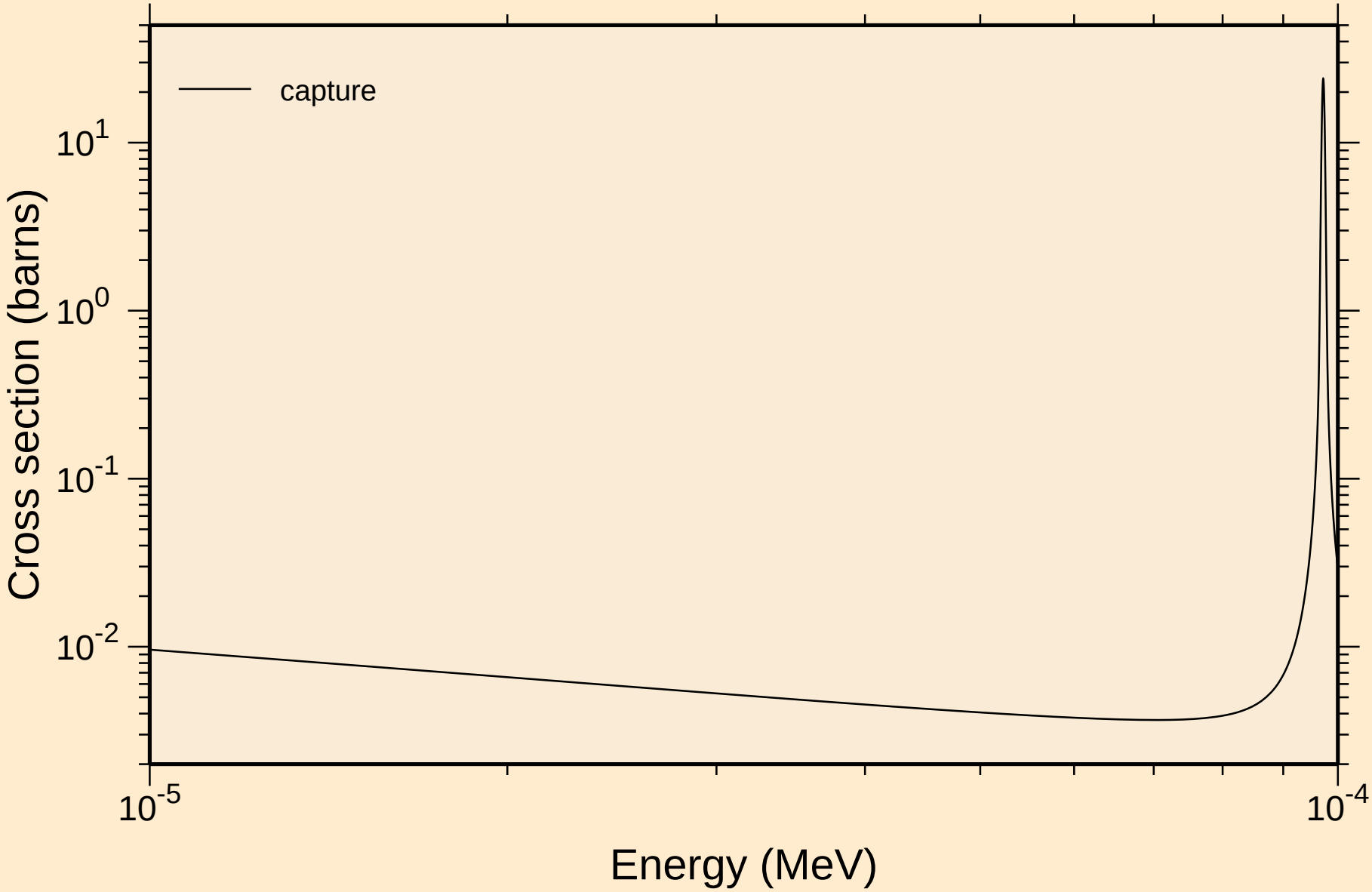

JEFF-3.1 MO-100
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^0
10^{-4}
10^{-3}
Energy (MeV)

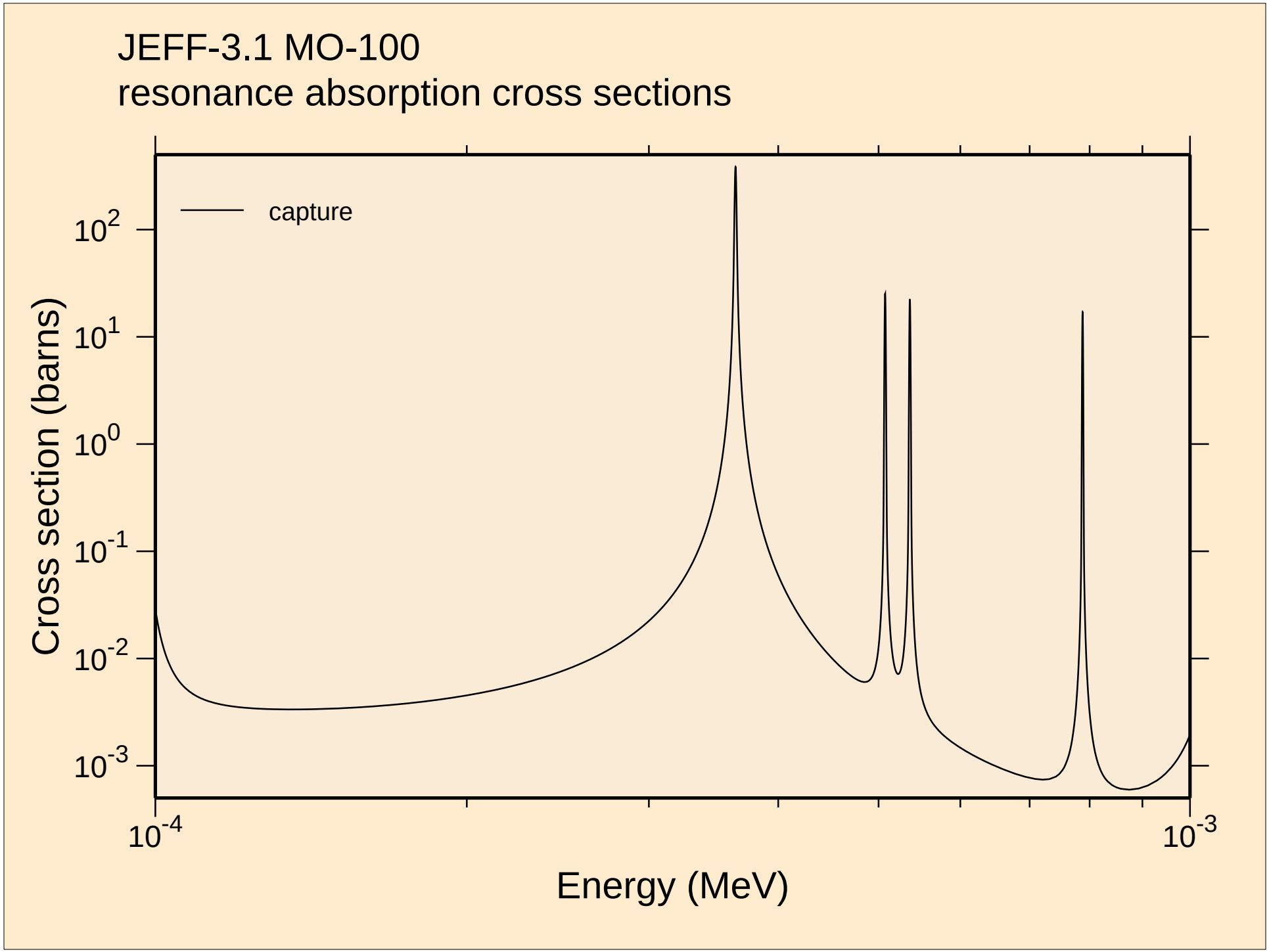

JEFF-3.1 MO-100
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^0
10^-1
10^-3
10^-2
Energy (MeV)

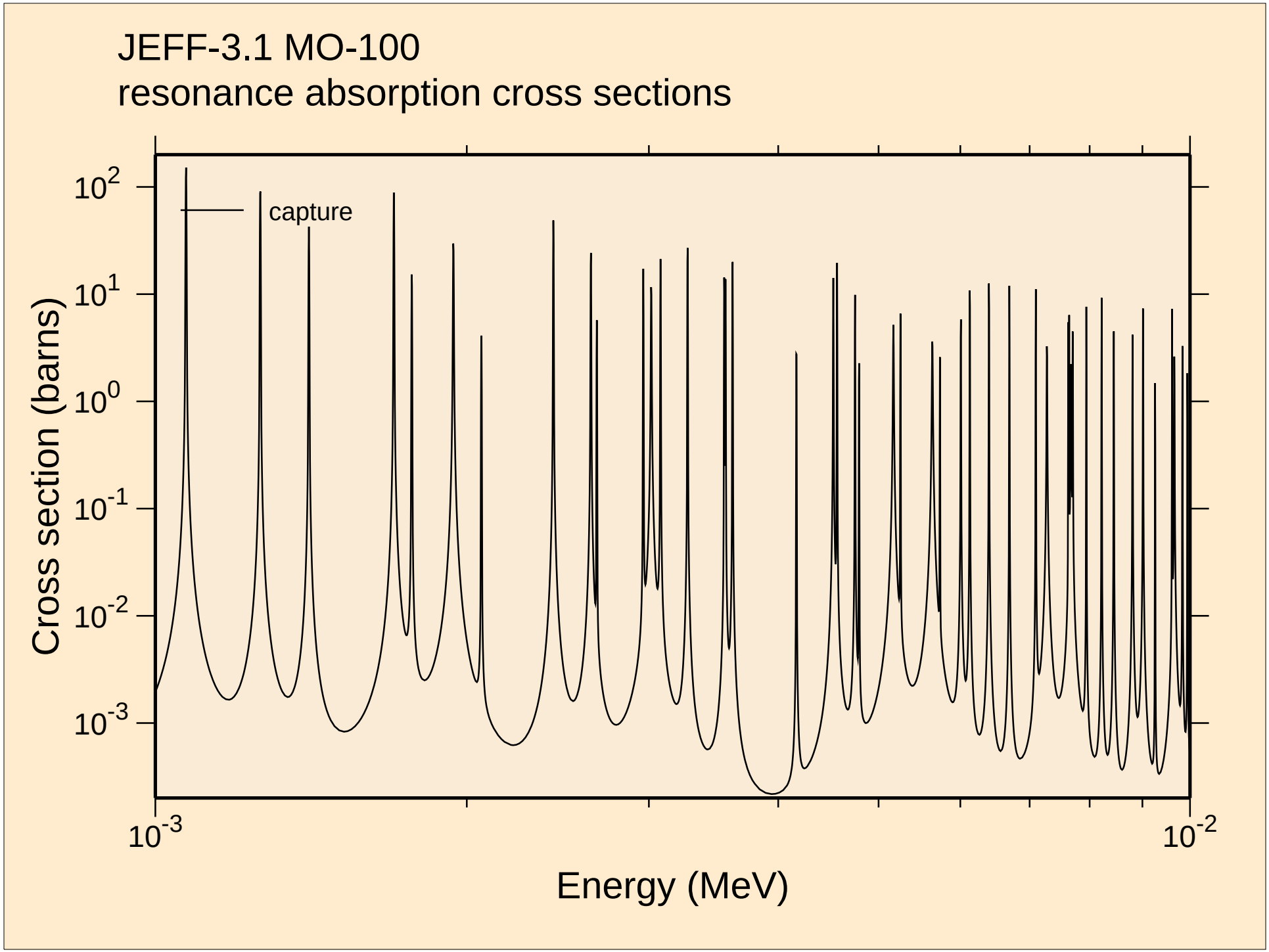

JEFF-3.1 MO-100
resonance total cross section
total
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-1}
Energy (MeV)

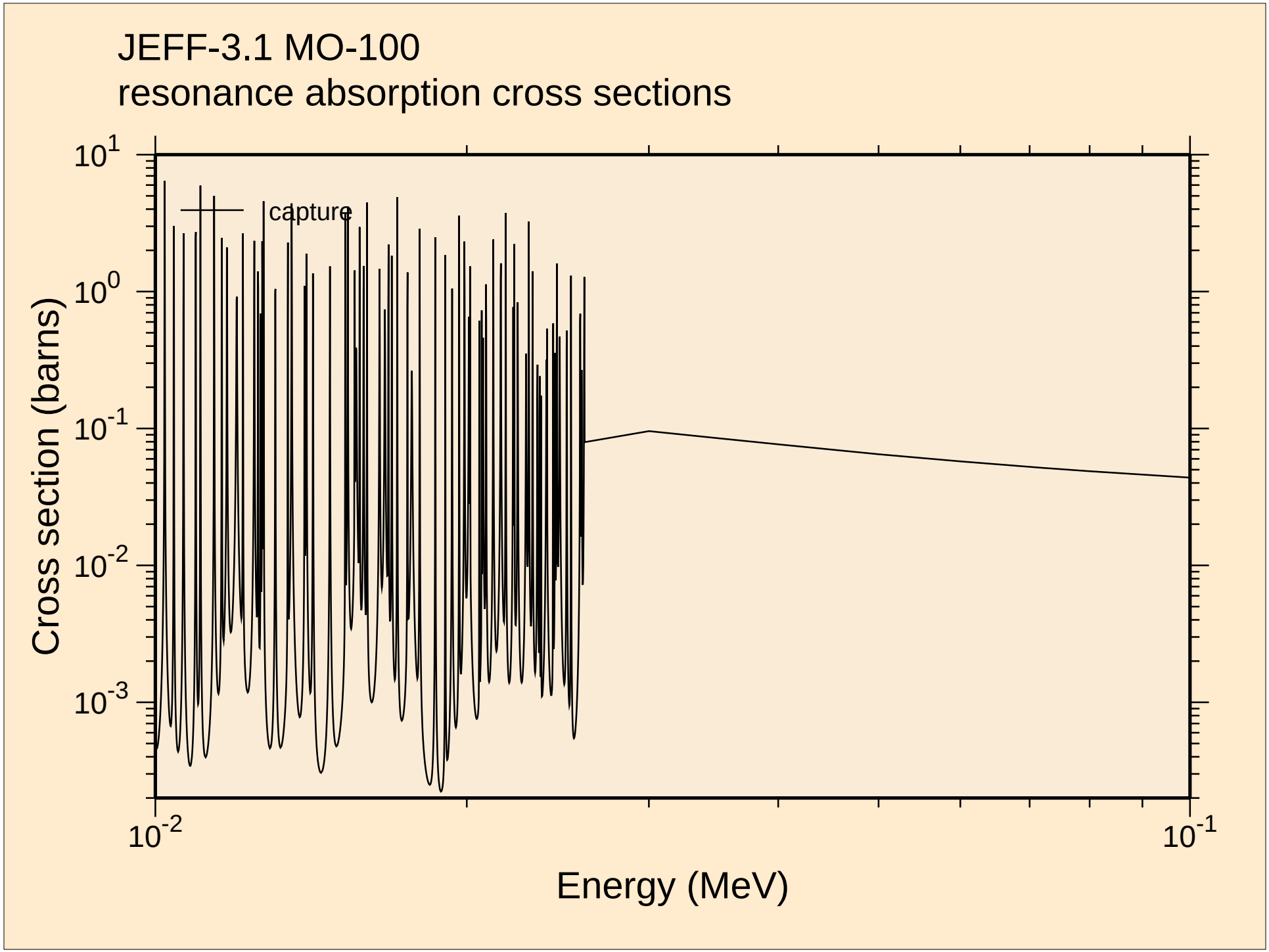

JEFF-3.1 MO-100
resonance total cross section
10^1
total
Cross section (barns)
10^0
10^1
Energy (MeV)

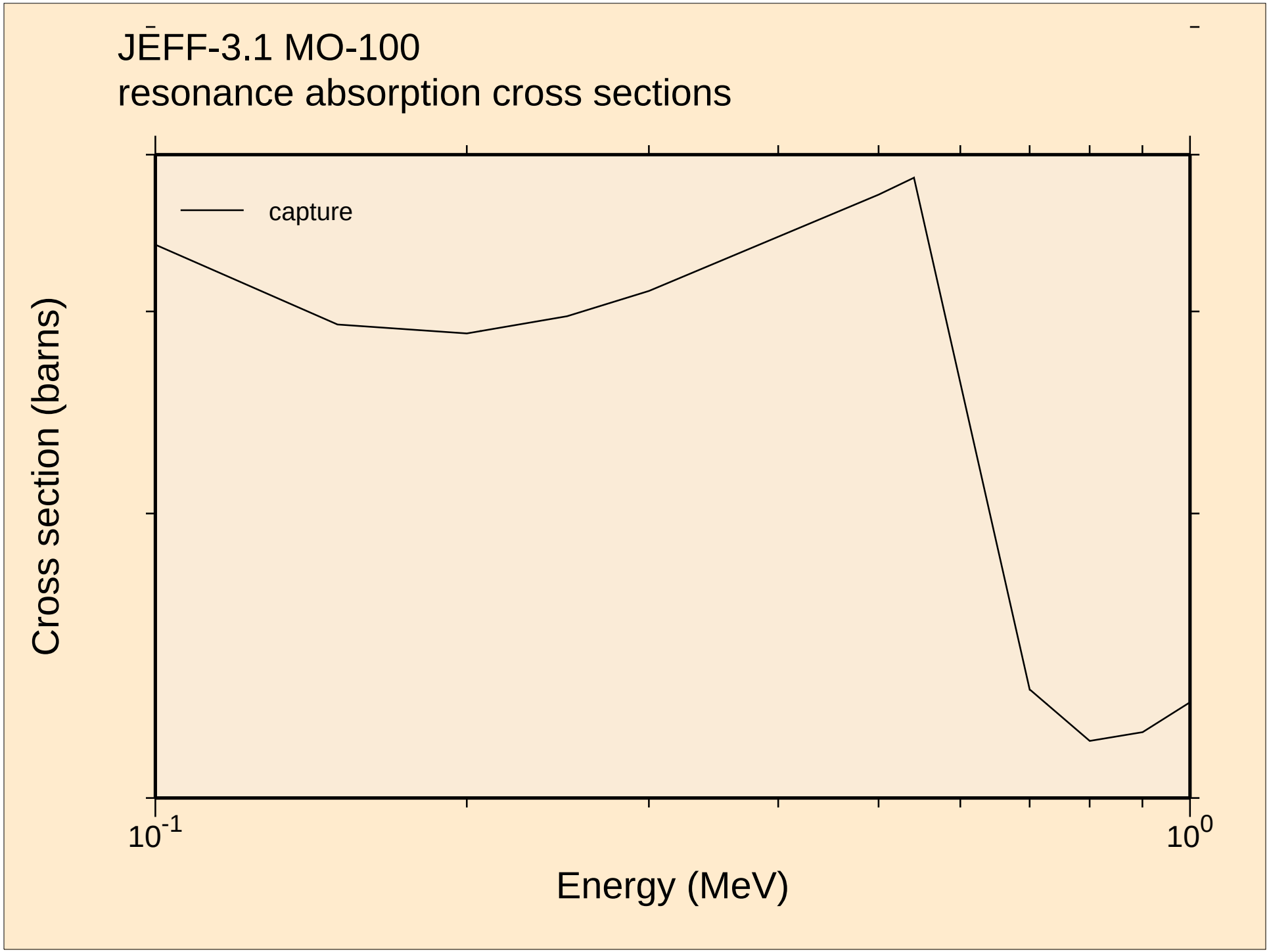
JEFF-3.1 MO-100
resonance absorption cross sections



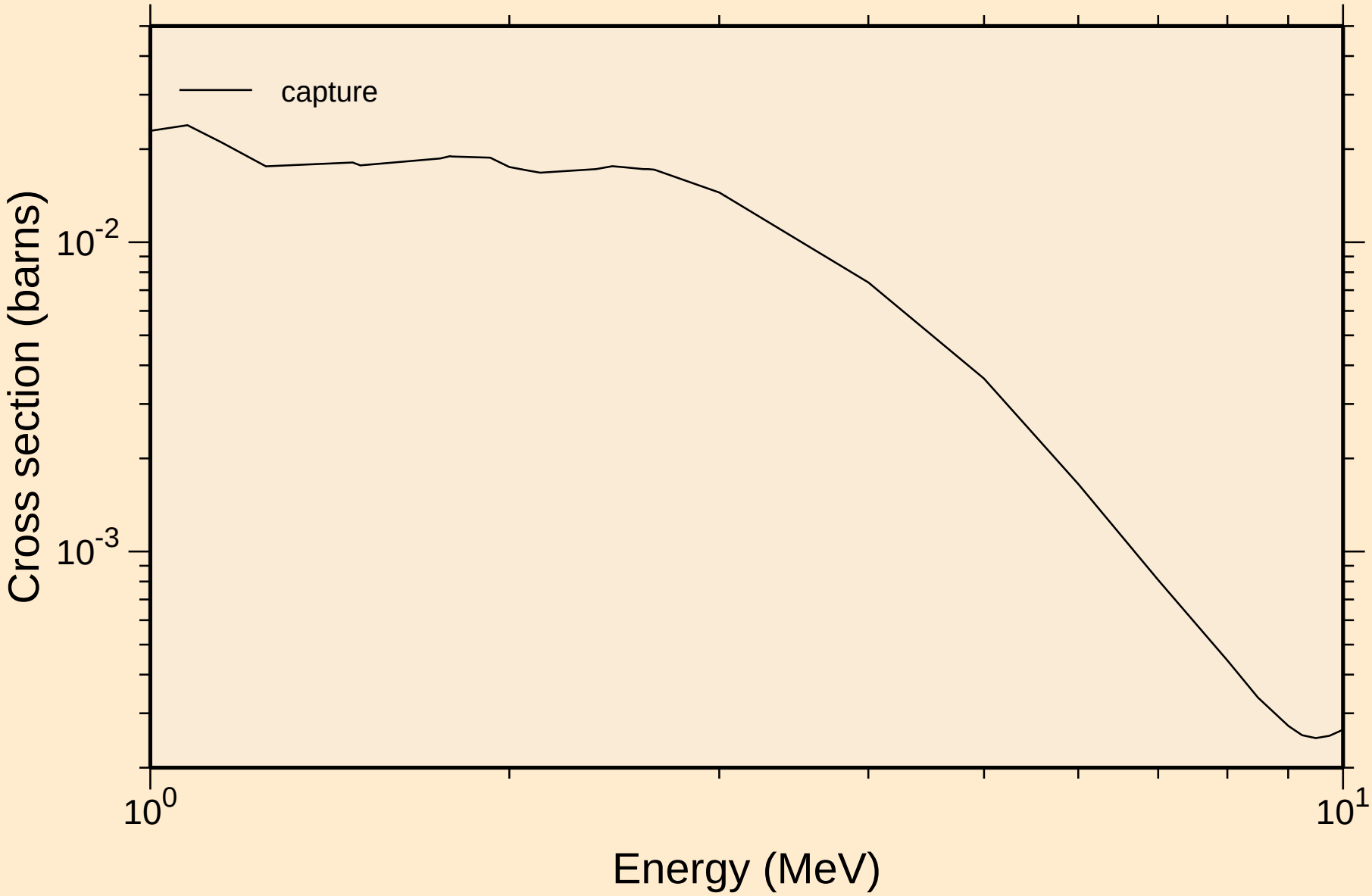

JEFF-3.1 MO-100
resonance absorption cross sections
capture
Cross section (barns)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-3
Energy (MeV)

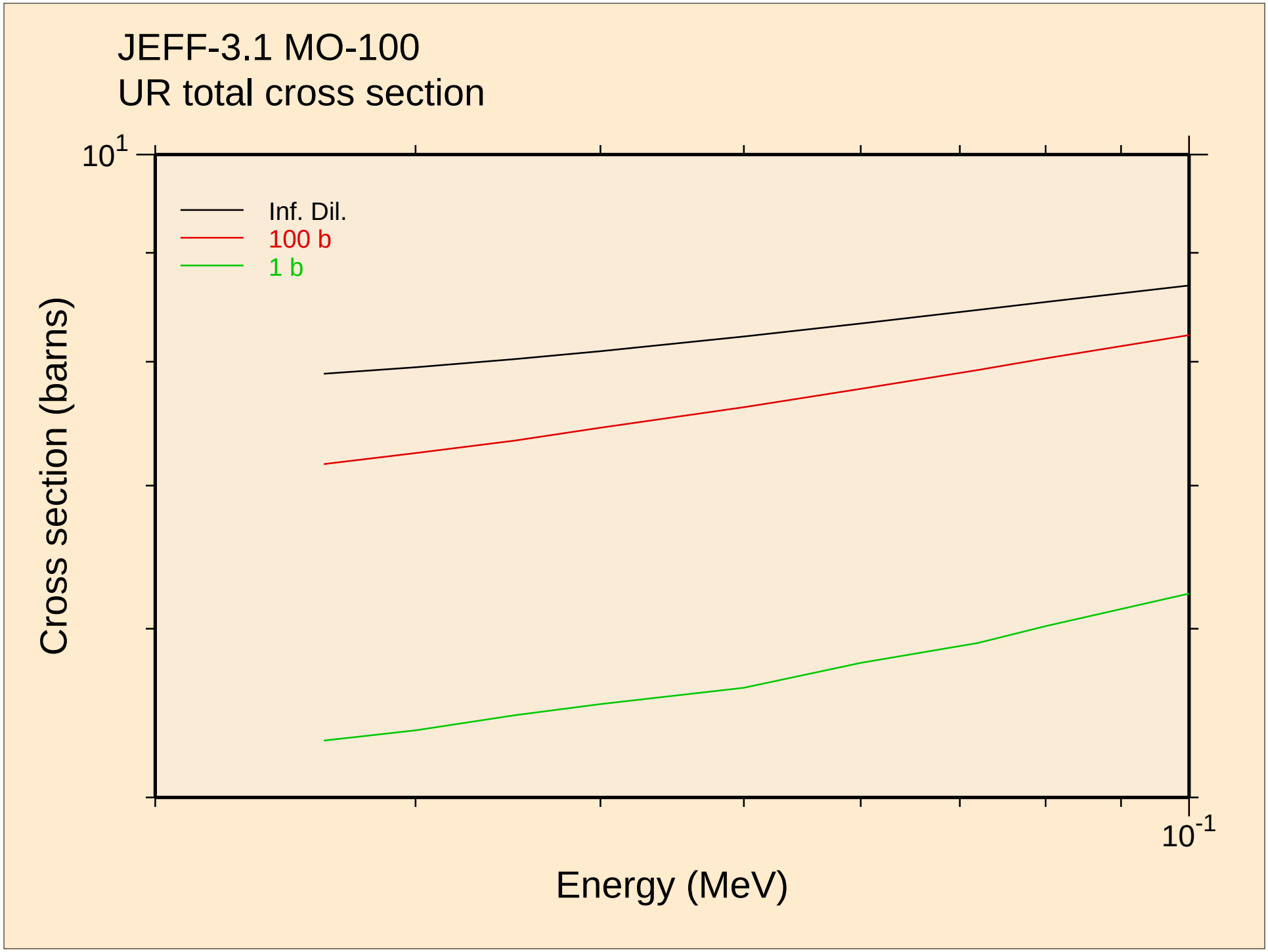

JEFF-3.1 MO-100
resonance absorption cross sections
capture
Cross section (barns)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-3
10^-2
Energy (MeV)

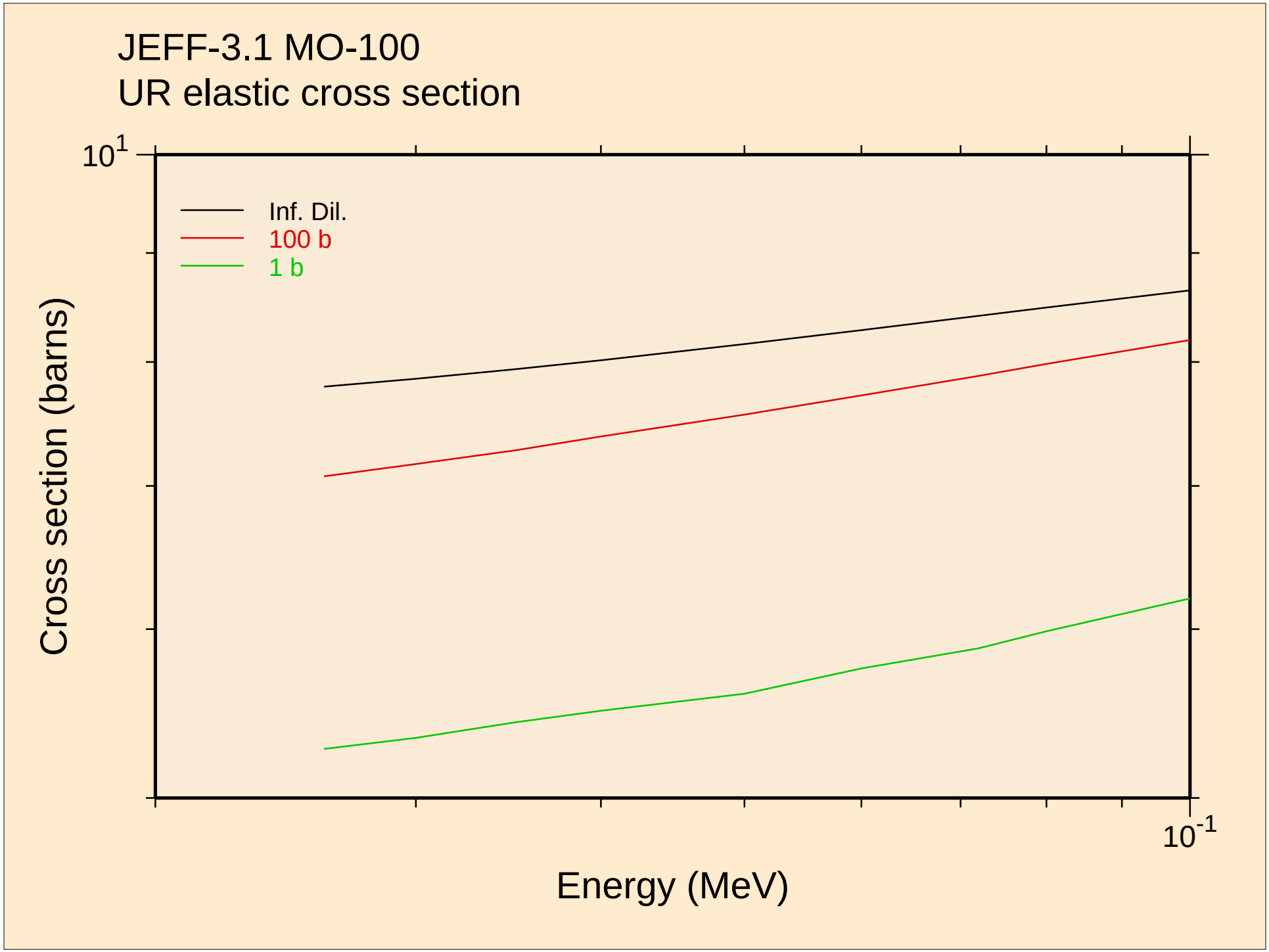

JEFF-3.1 MO-100
resonance absorption cross sections
capture
Cross section (barns)
10^1
10^0
10^-1
10^-2
10^-3
10^-2
10^-1
Energy (MeV)


JĒFF-3.1 MO-100
resonance absorption cross sections
capture
Cross section (barns)
10^{-1}
10^{0}
Energy (MeV)

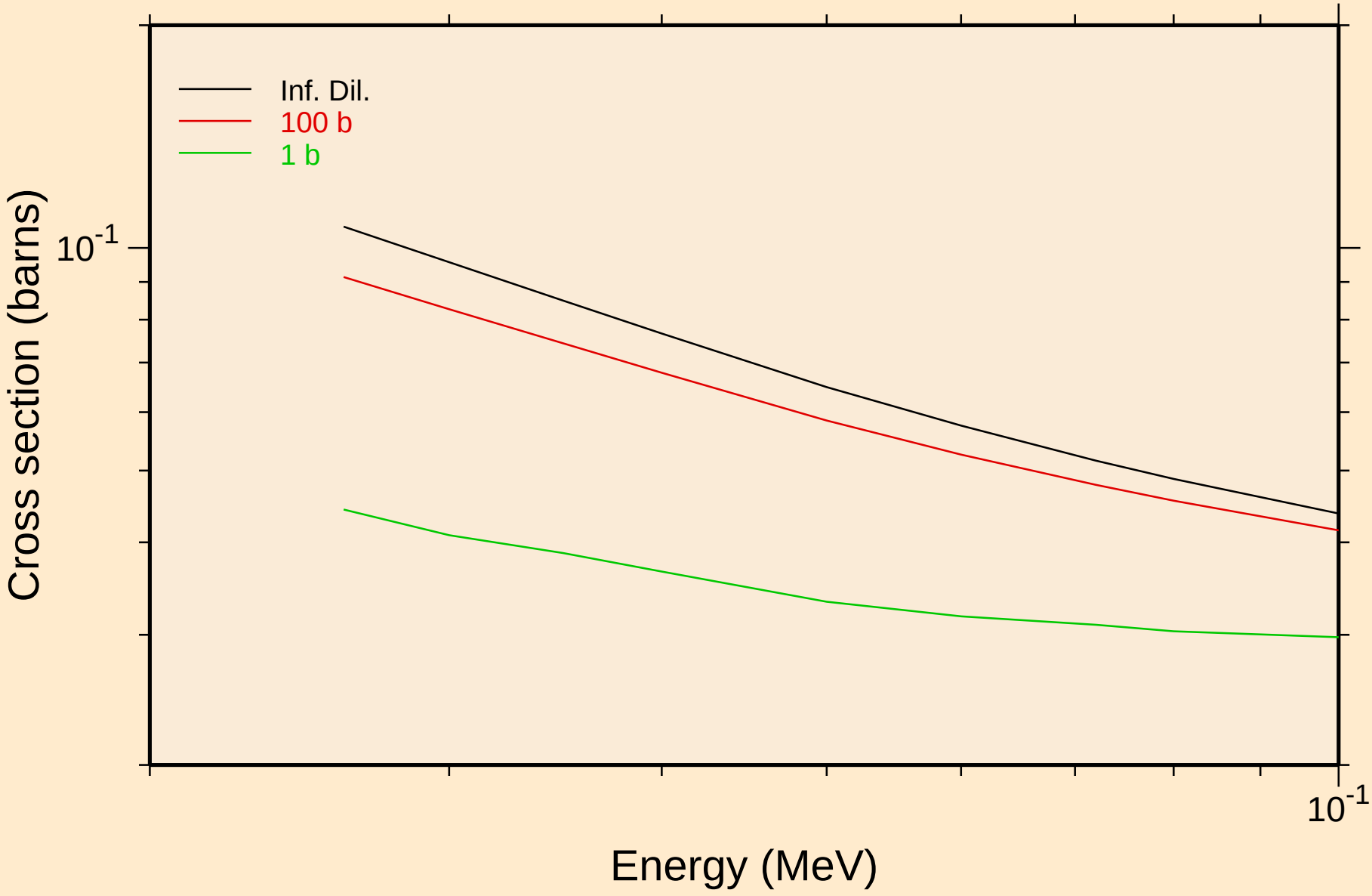
JEFF-3.1 MO-100
resonance absorption cross sections

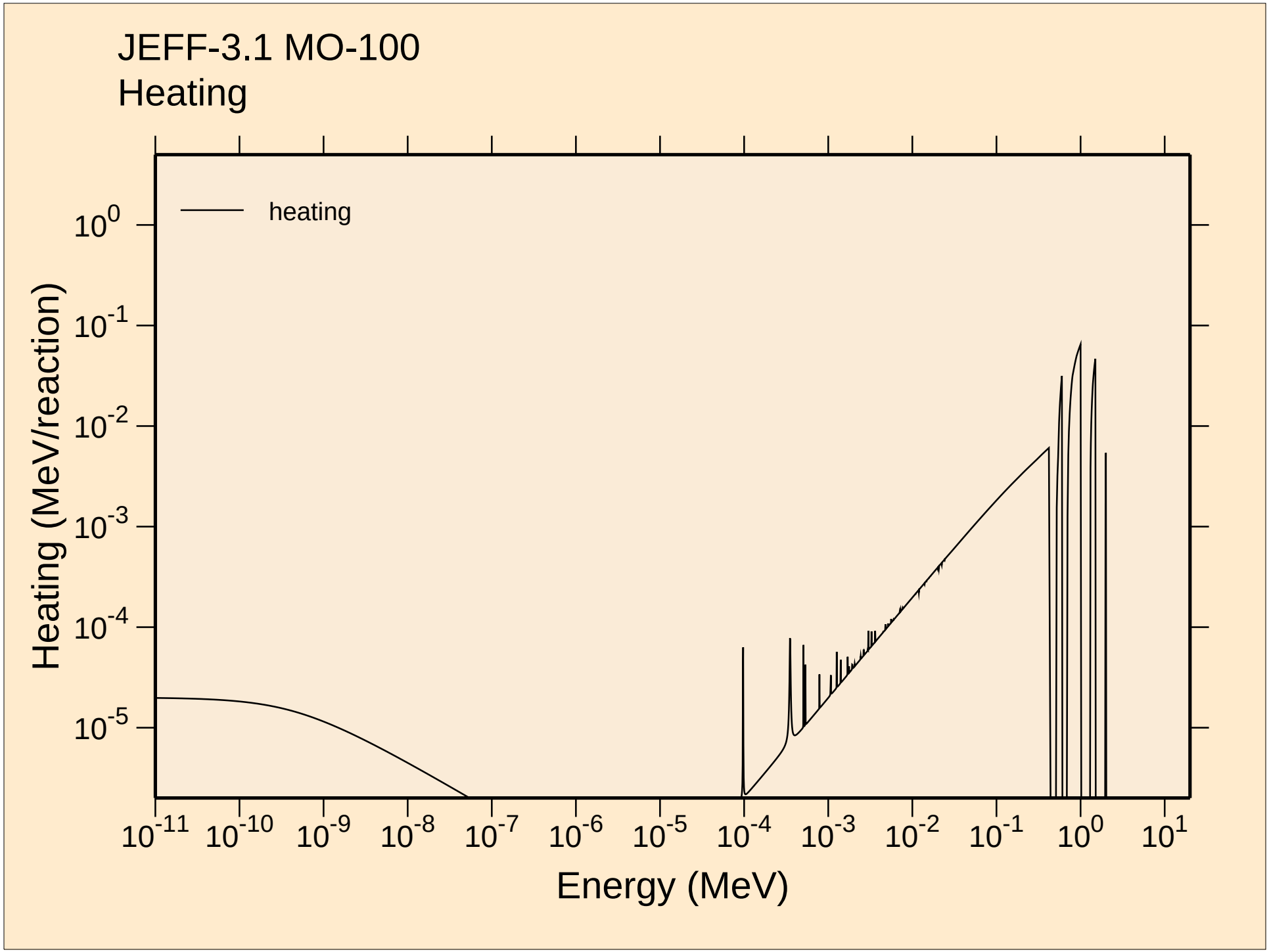


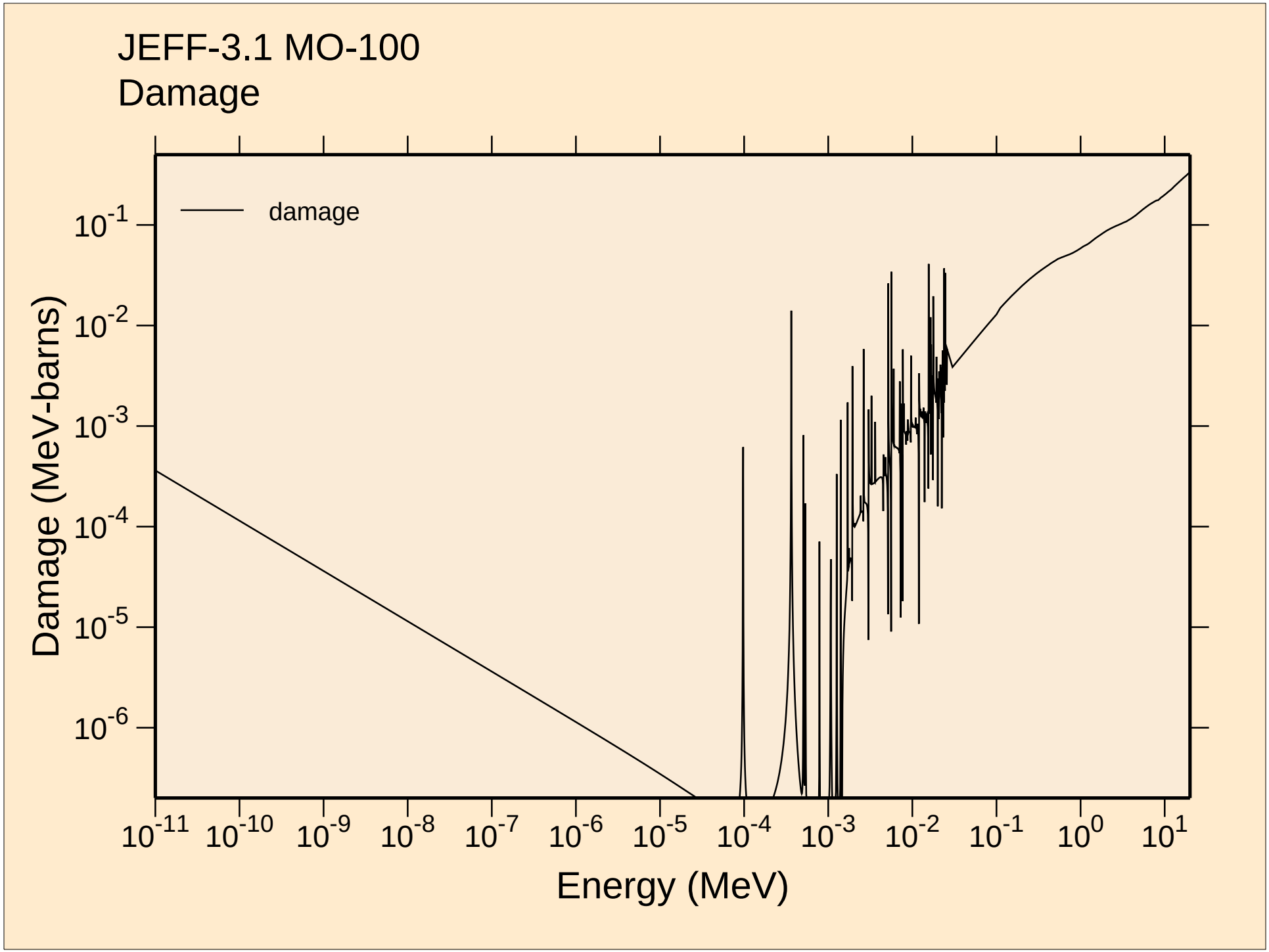

JEFF-3.1 MO-100
UR total cross section
10^{1}
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{-1}
Energy (MeV)

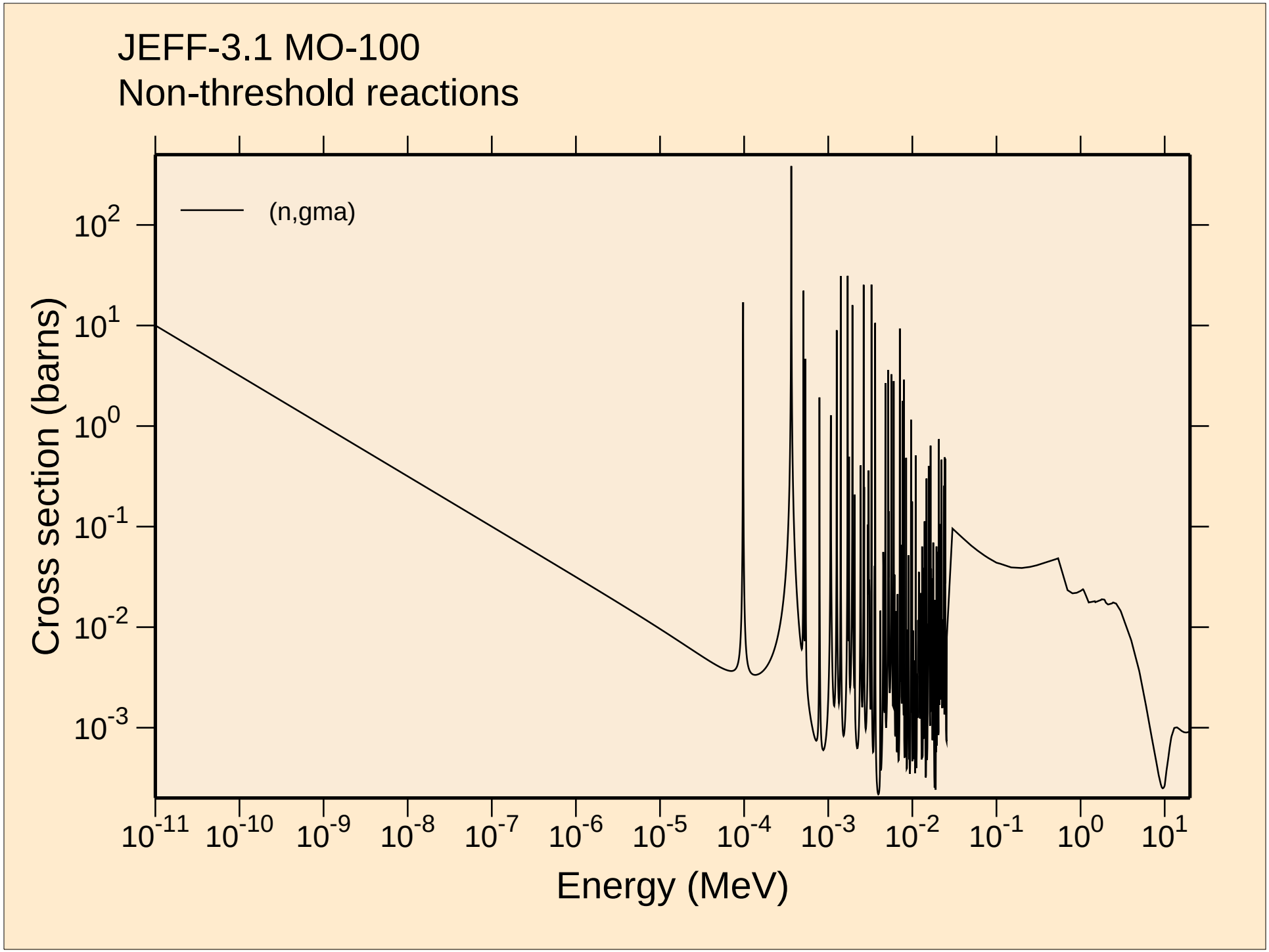

JEFF-3.1 MO-100
UR elastic cross section
10^1
Inf. Dil.
100 b
1 b
Cross section (barns)
10^{-1}
Energy (MeV)

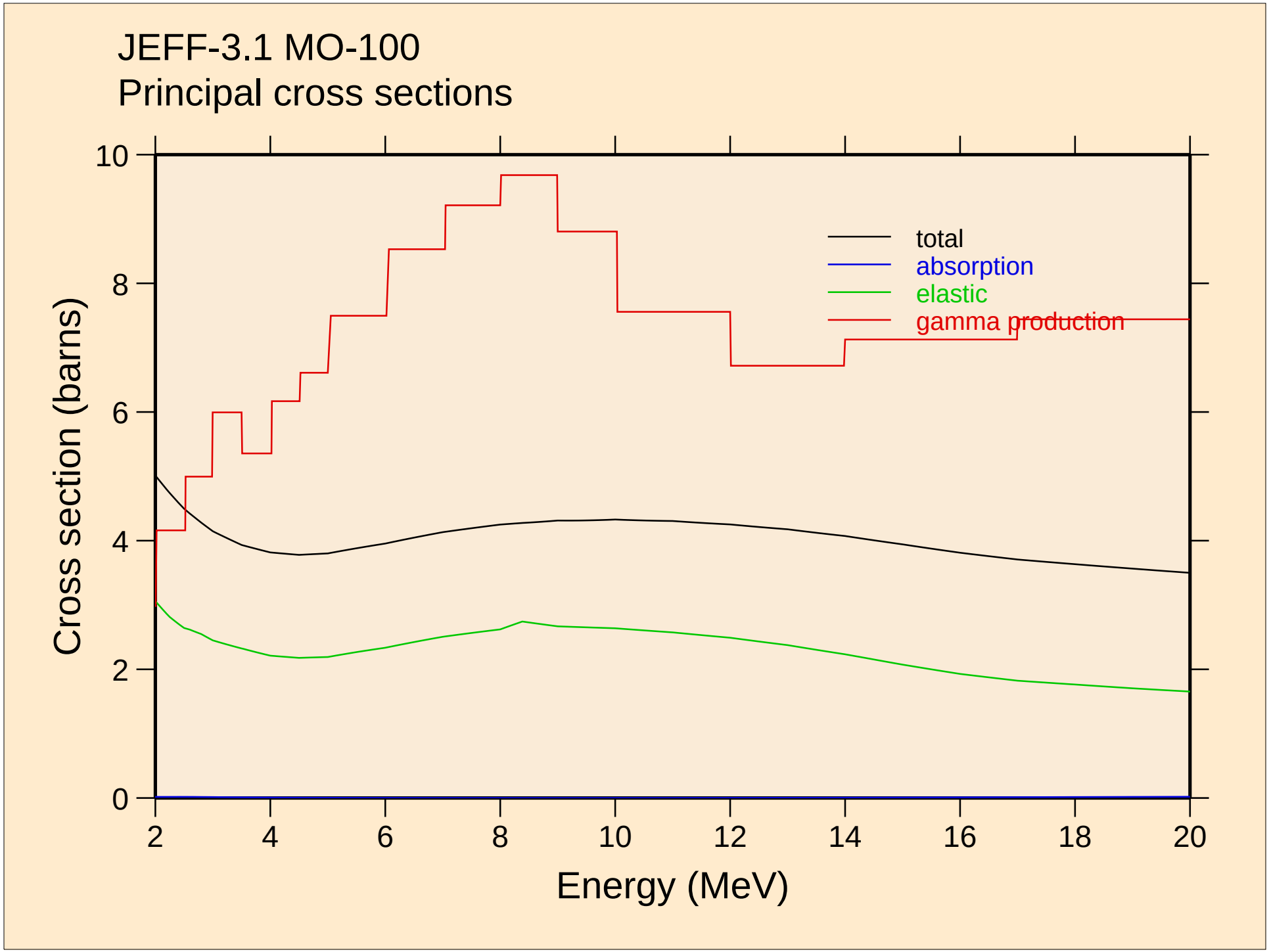
JEFF-3.1 MO-100
UR capture cross section

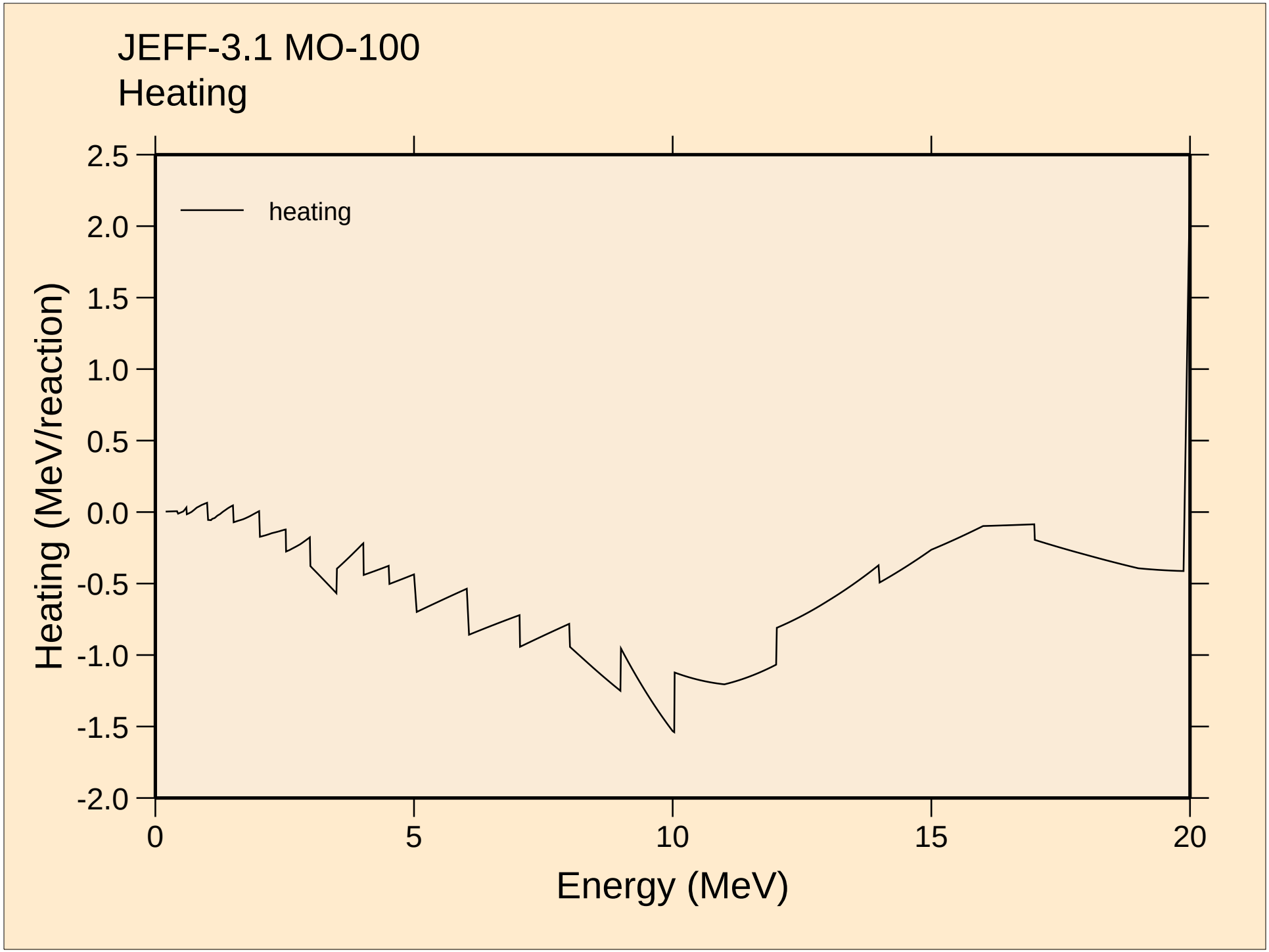


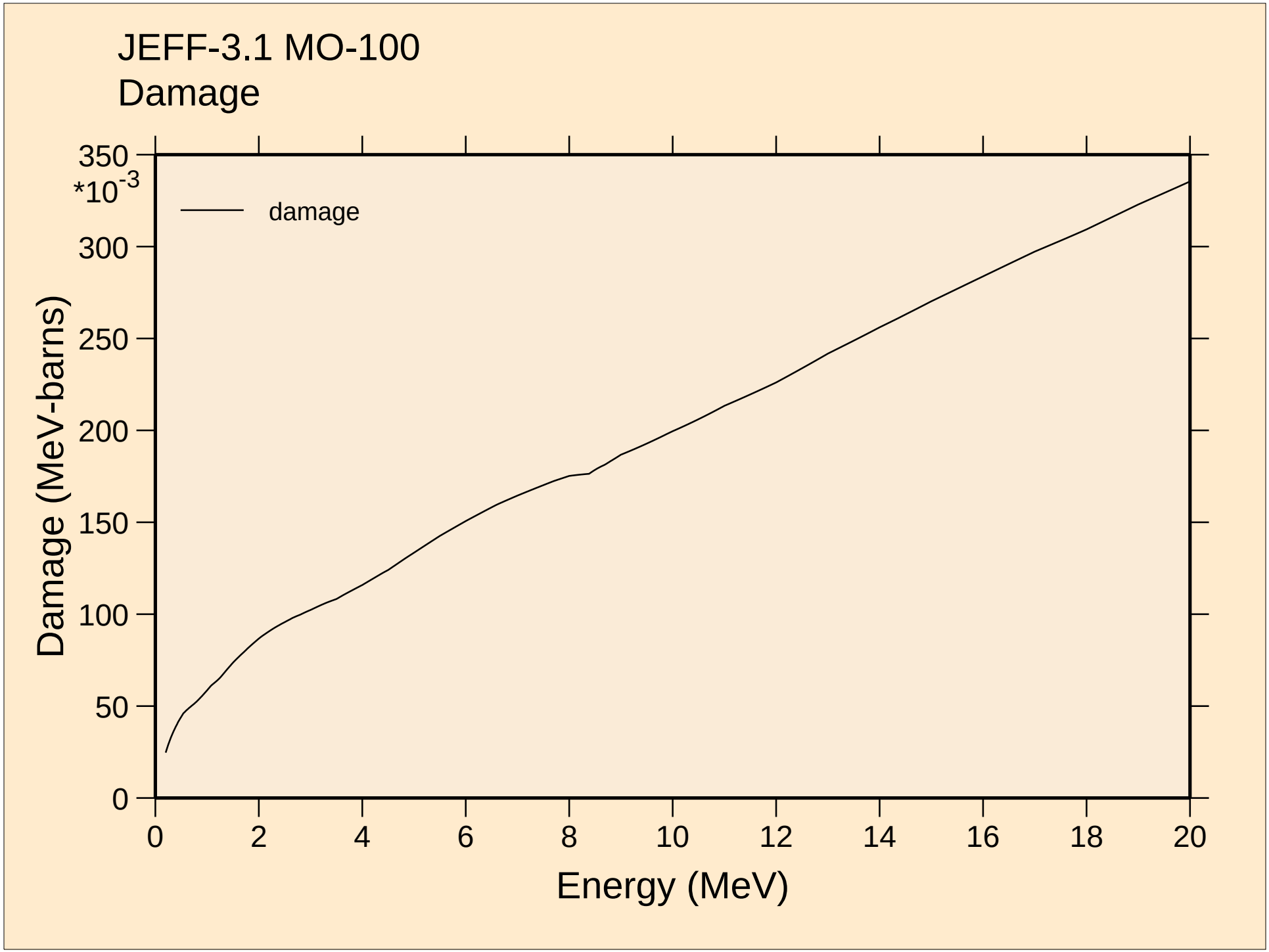

JEFF-3.1 MO-100
Heating
heating
Heating (MeV/reaction)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

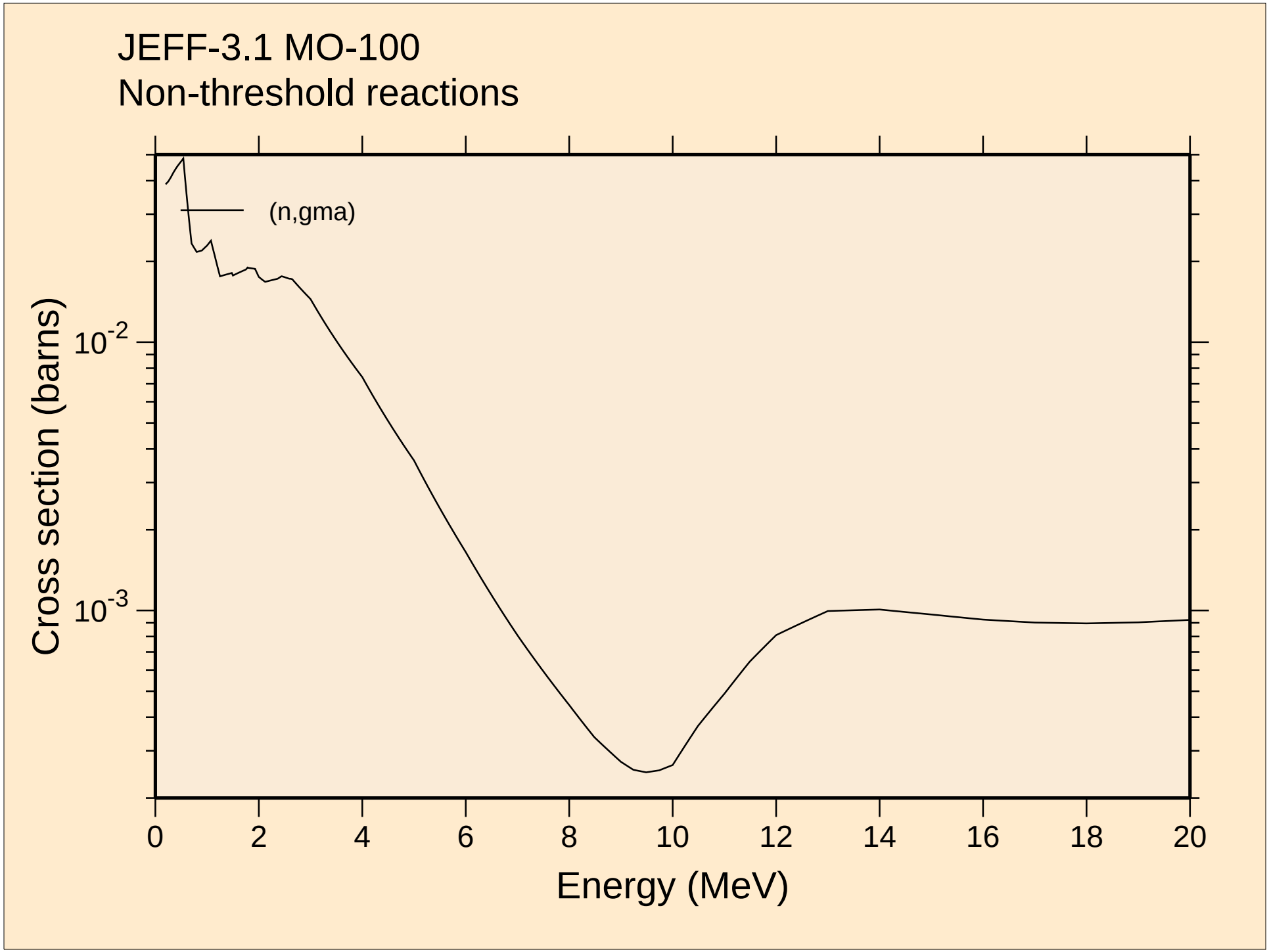

JEFF-3.1 MO-100
Damage
damage
Damage (MeV-barns)
10-1
10-2
10-3
10-4
10-5
10-6
10-11 10-10 10-9 10-8 10-7 10-6 10-5 10-4 10-3 10-2 10-1 100 101
Energy (MeV)

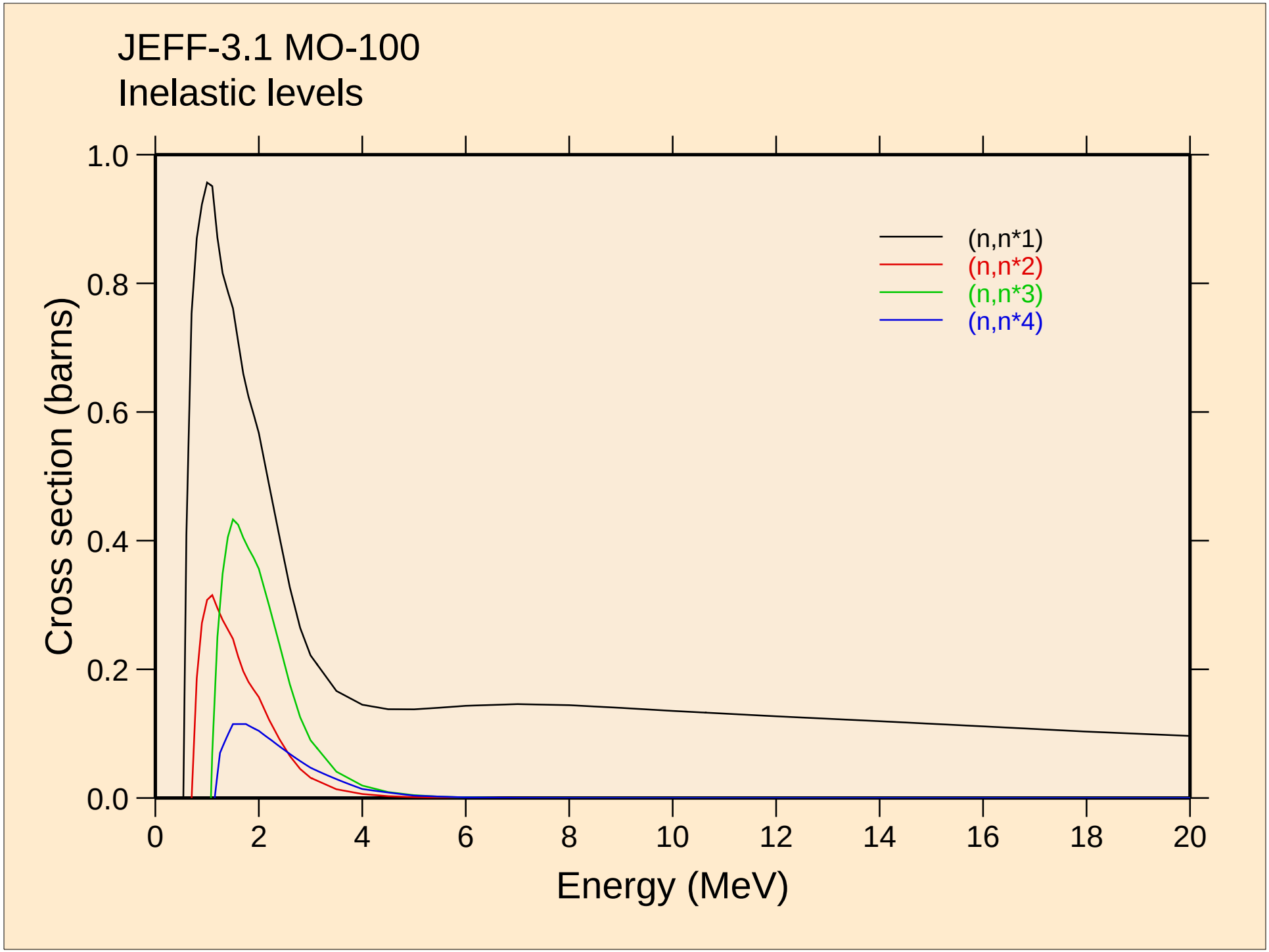

JEFF-3.1 MO-100
Non-threshold reactions
(n,gma)
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

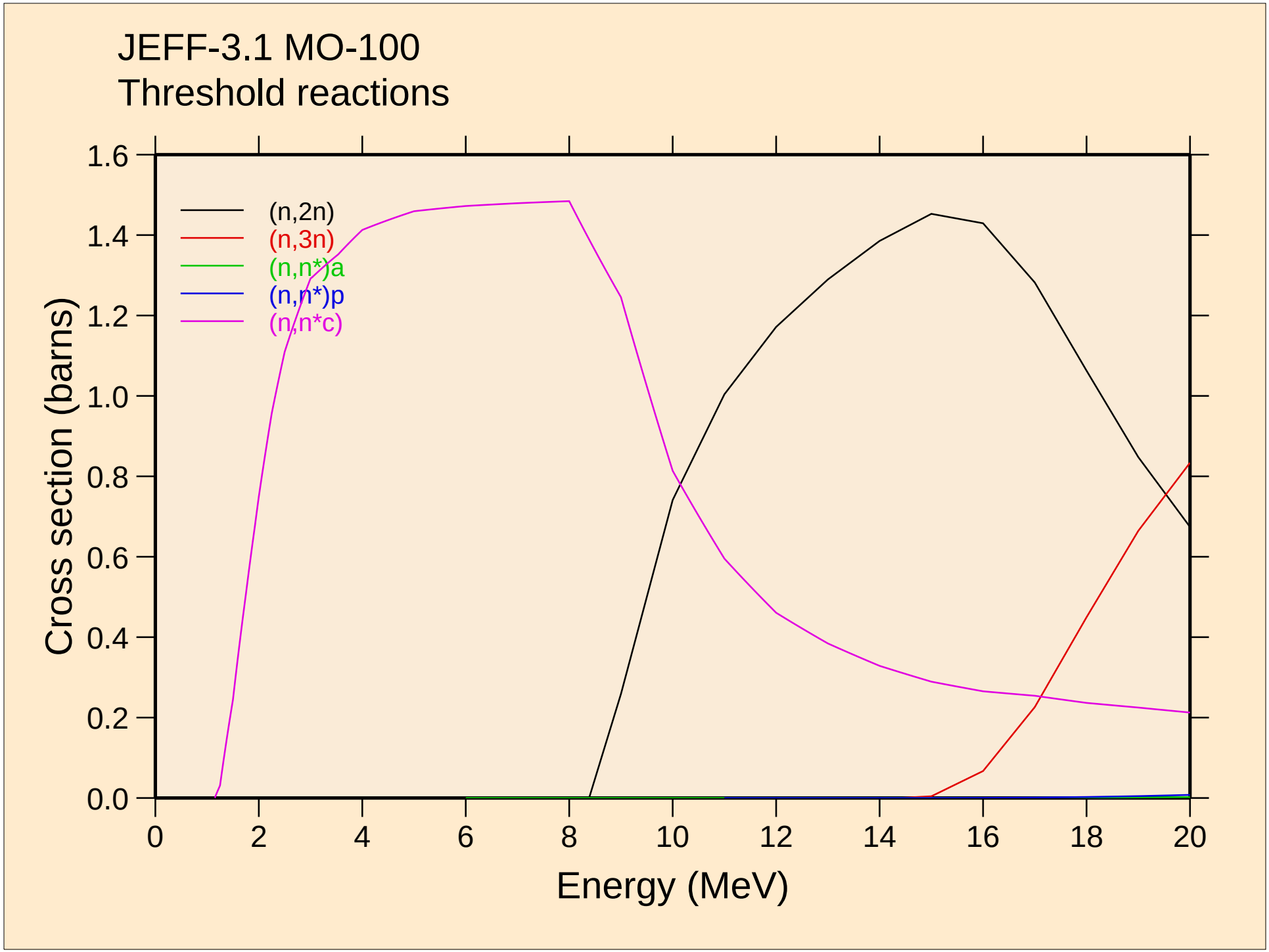

JEFF-3.1 MO-100
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
gamma production
0
2
4
6
8
10
2
4
6
8
10
12
14
16
18
20

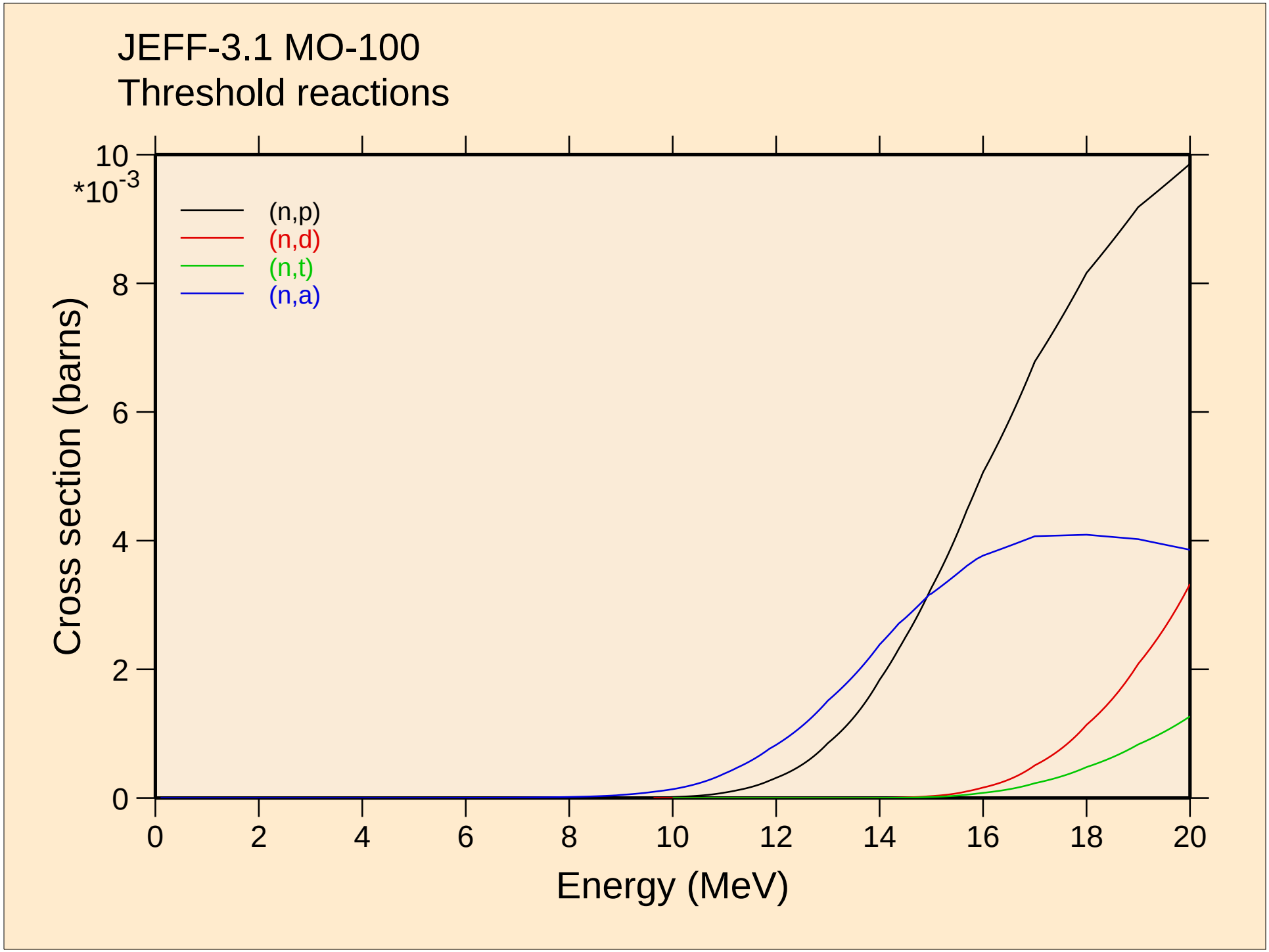

JEFF-3.1 MO-100
Heating
heating
Heating (MeV/reaction)
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
0
5
10
15
20
Energy (MeV)

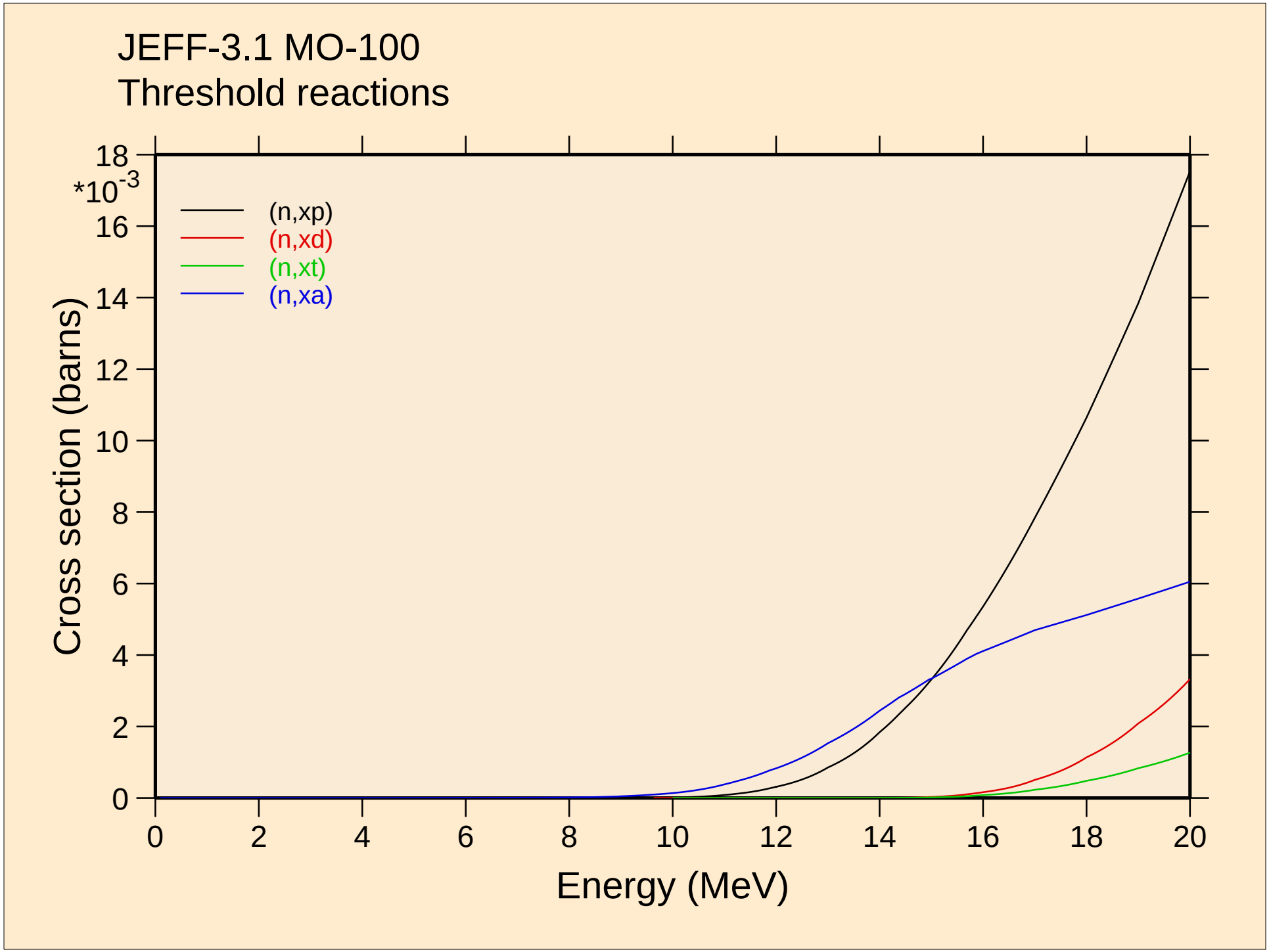

JEFF-3.1 MO-100
Damage
350
*10-3
300
250
200
150
100
50
0
damage
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

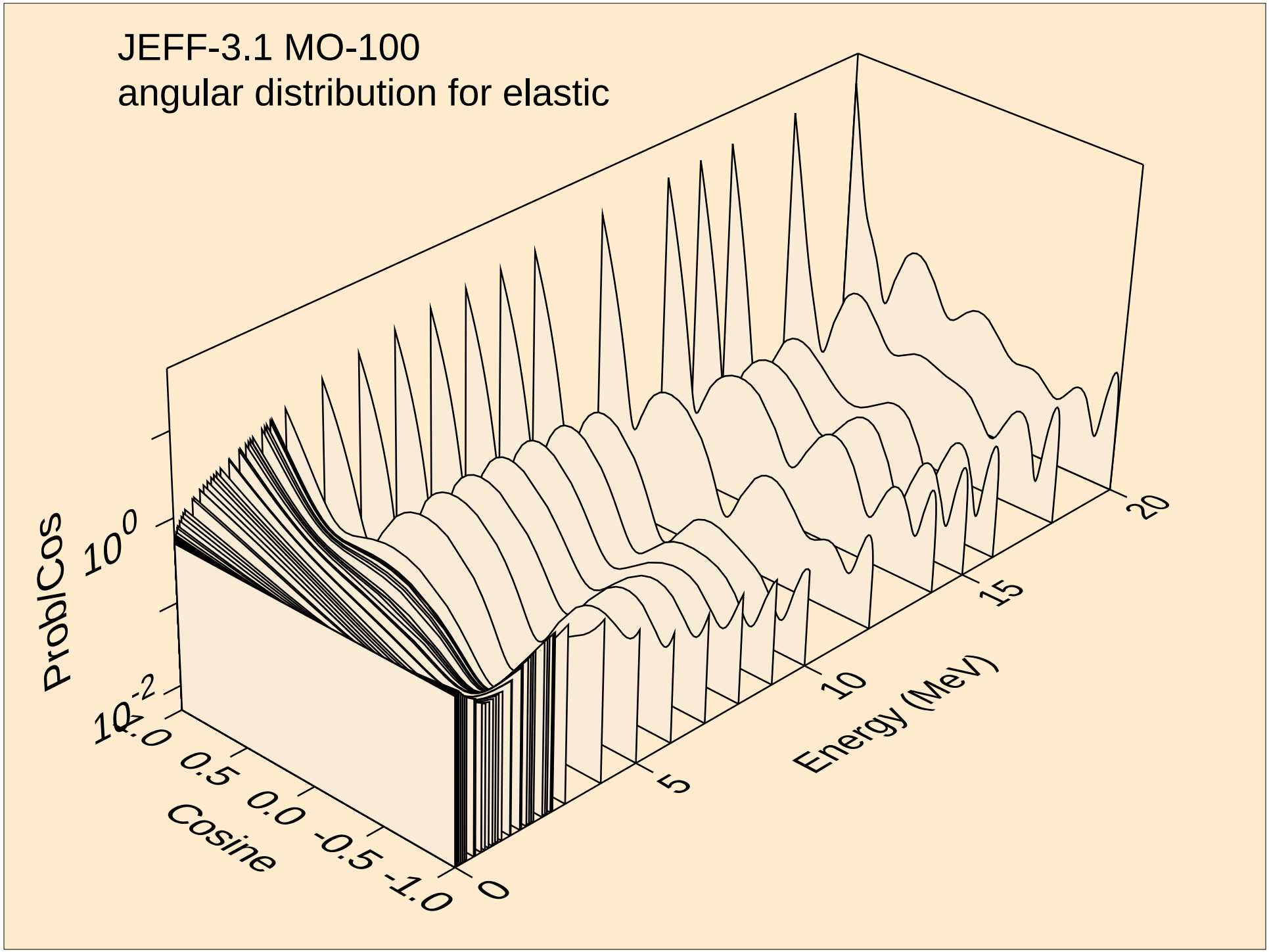

JEFF-3.1 MO-100
Non-threshold reactions
(n,gma)
Cross section (barns)
10-2
10-3
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

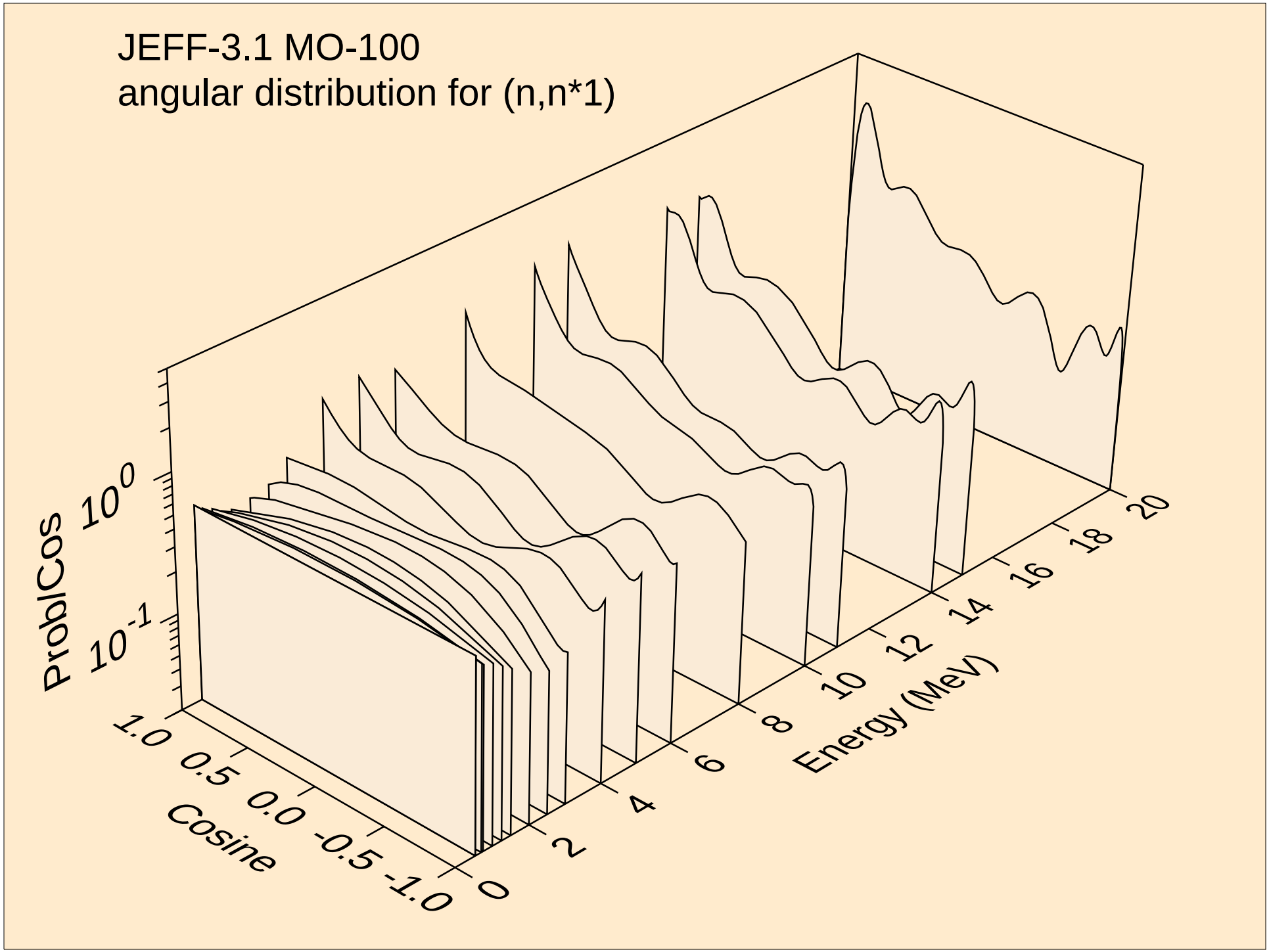

JEFF-3.1 MO-100
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
0.0
0.2
0.4
0.6
0.8
1.0
0
2
4
6
8
10
12
14
16
18
20

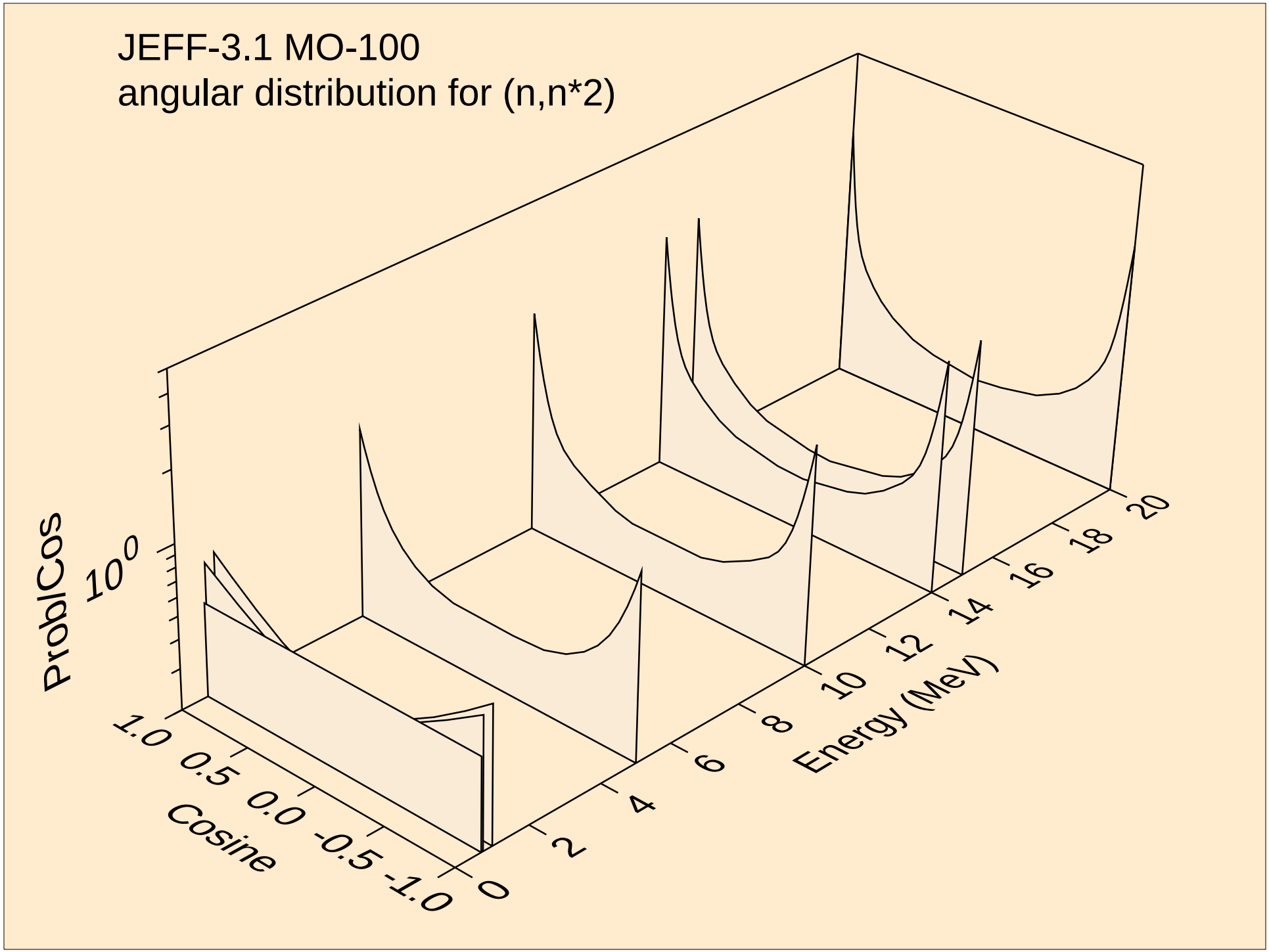

JEFF-3.1 MO-100
Threshold reactions
(n,2n)
(n,3n)
(n,n*)a
(n,n*)p
(n,n*c)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
0
2
4
6
8
10
12
14
16
18
20

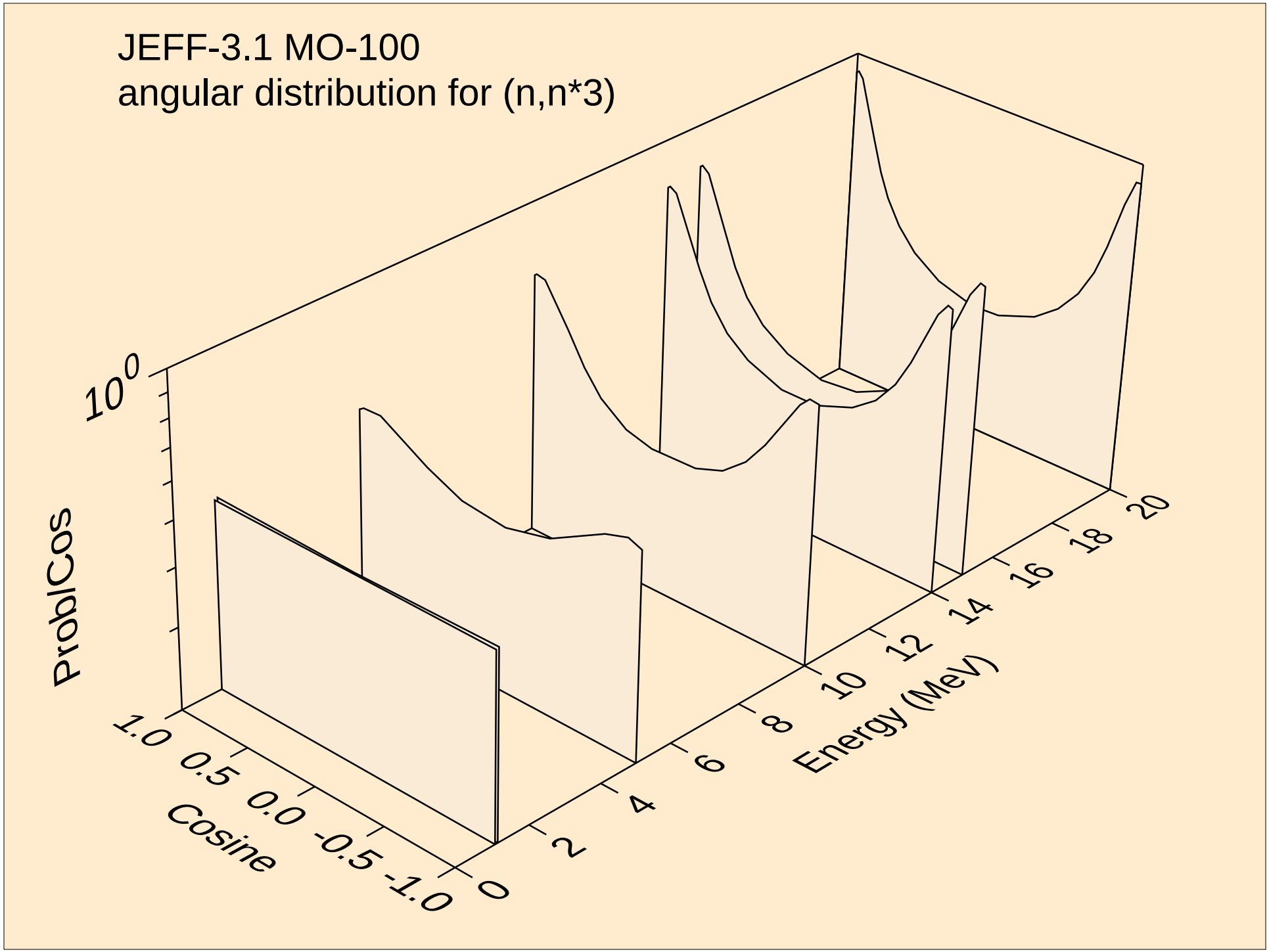

JEFF-3.1 MO-100
Threshold reactions
10
*10-3
8
6
4
2
0
Cross section (barns)
(n,p)
(n,d)
(n,t)
(n,a)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

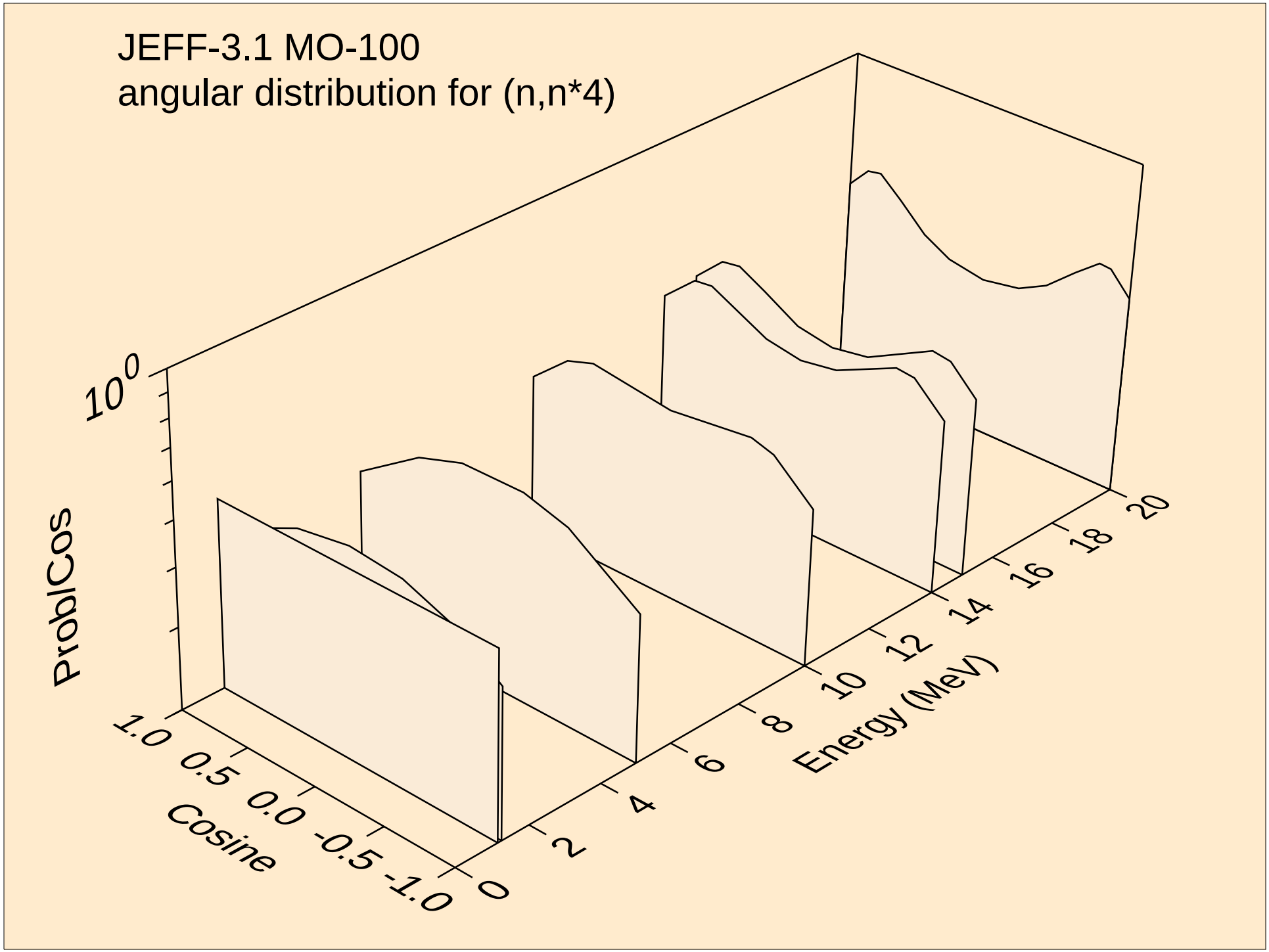

JEFF-3.1 MO-100
Threshold reactions
*10-3
Cross section (barns)
Energy (MeV)
(n,xp)
(n,xd)
(n,xt)
(n,xa)
0
2
4
6
8
10
12
14
16
18
20

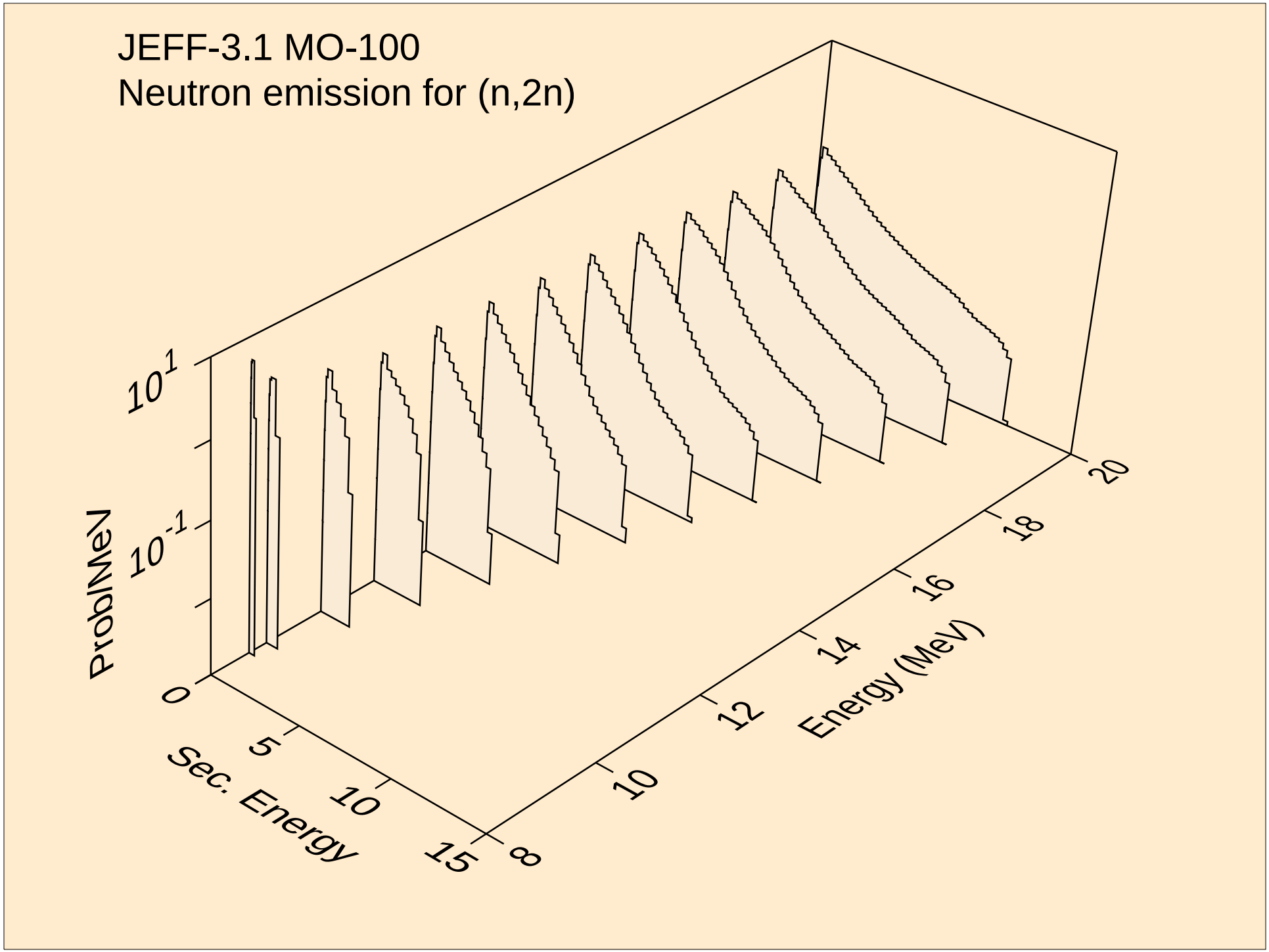

JEFF-3.1 MO-100
angular distribution for elastic
ProbICos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

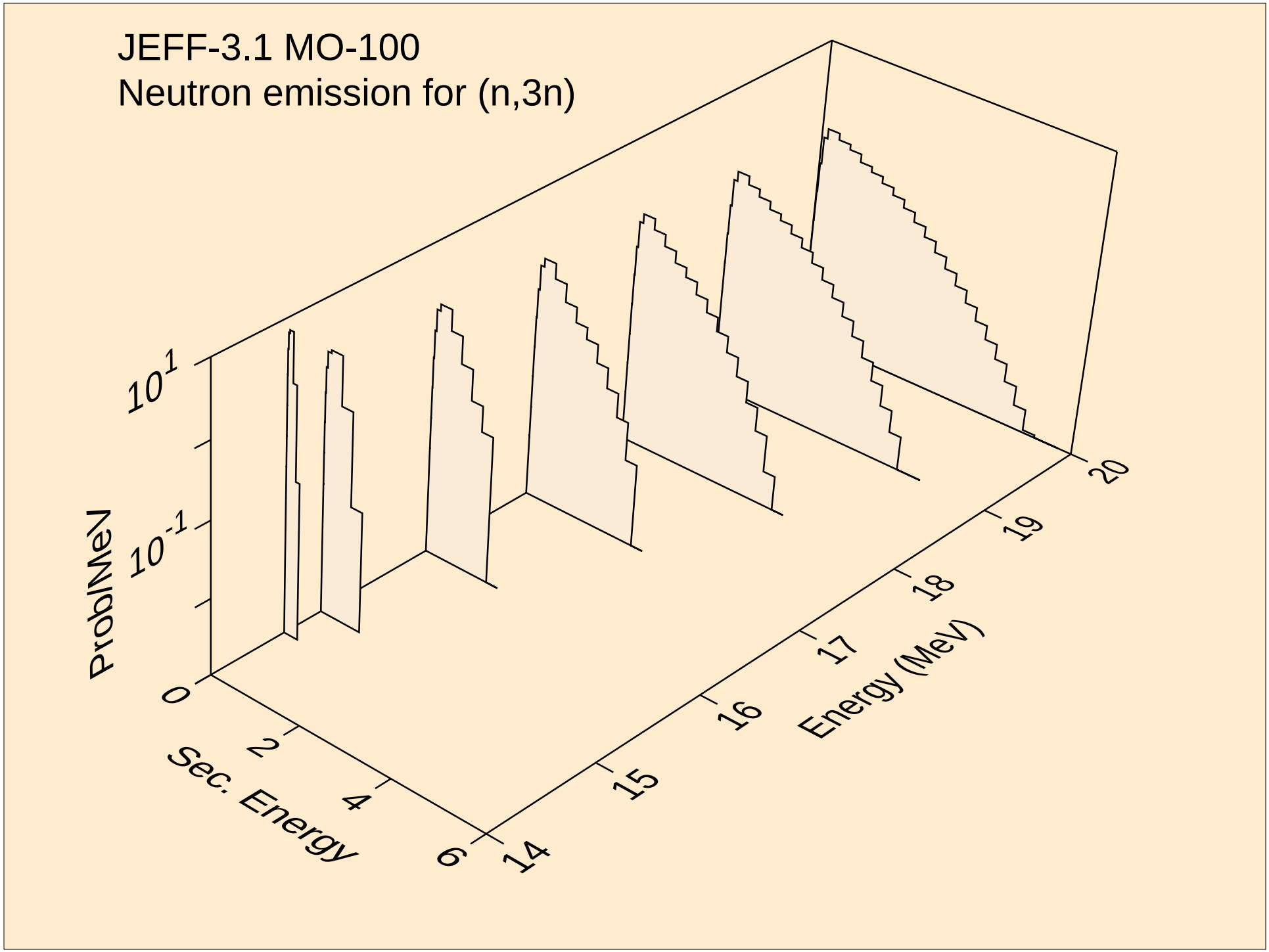

JEFF-3.1 MO-100
angular distribution for (n,n*1)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

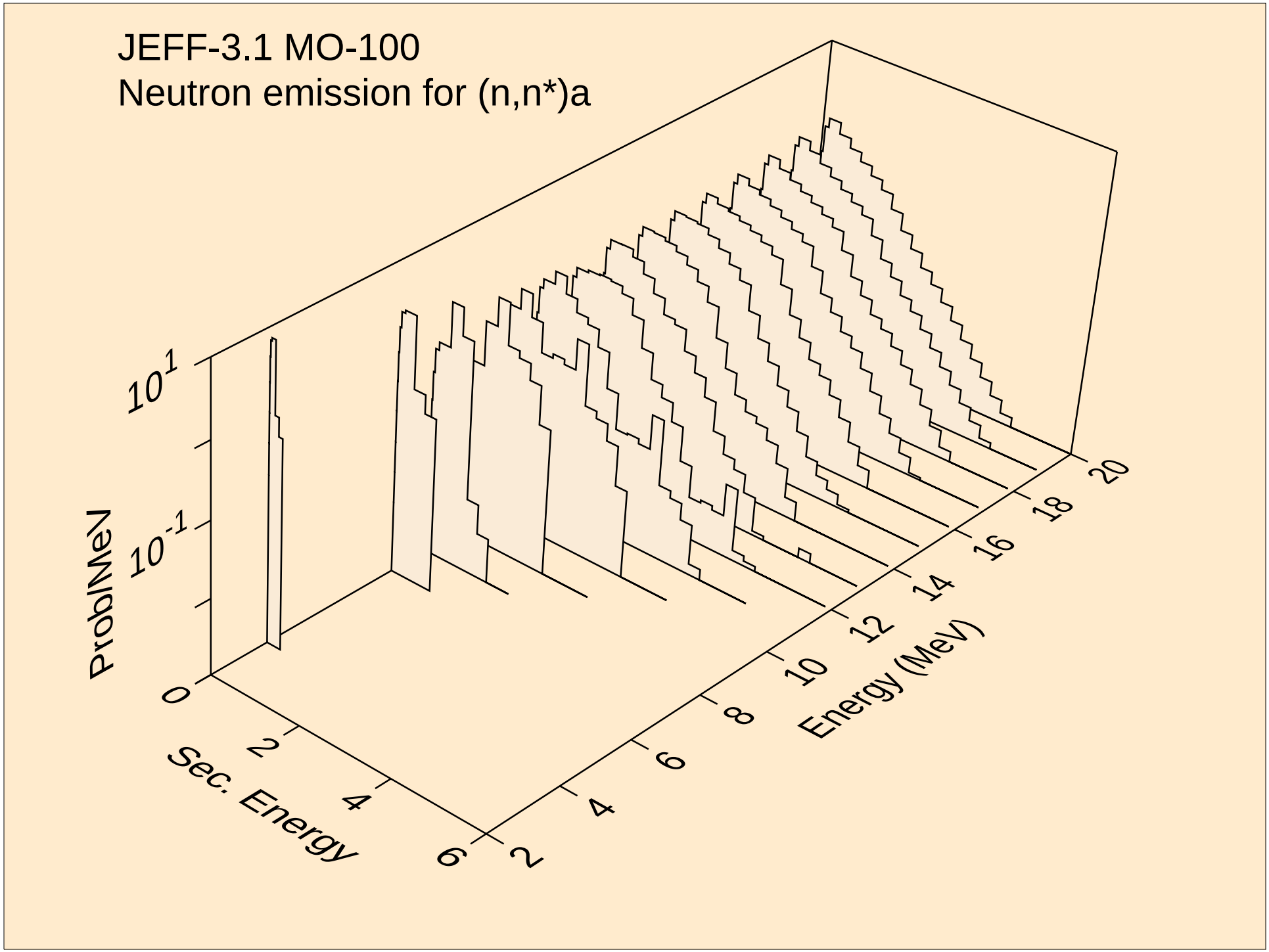

JEFF-3.1 MO-100
angular distribution for (n,n*2)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

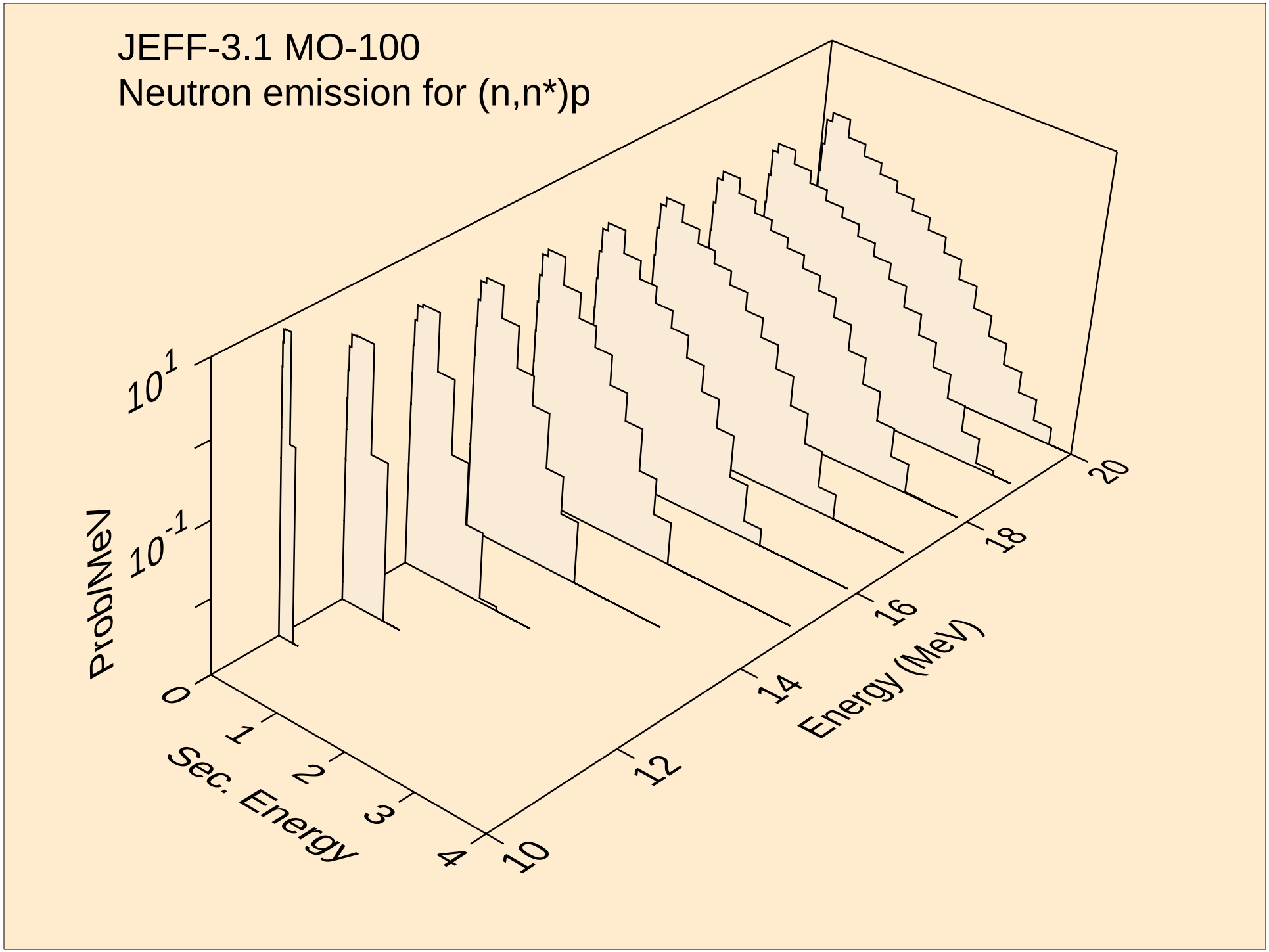

JEFF-3.1 MO-100
angular distribution for (n,n*3)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

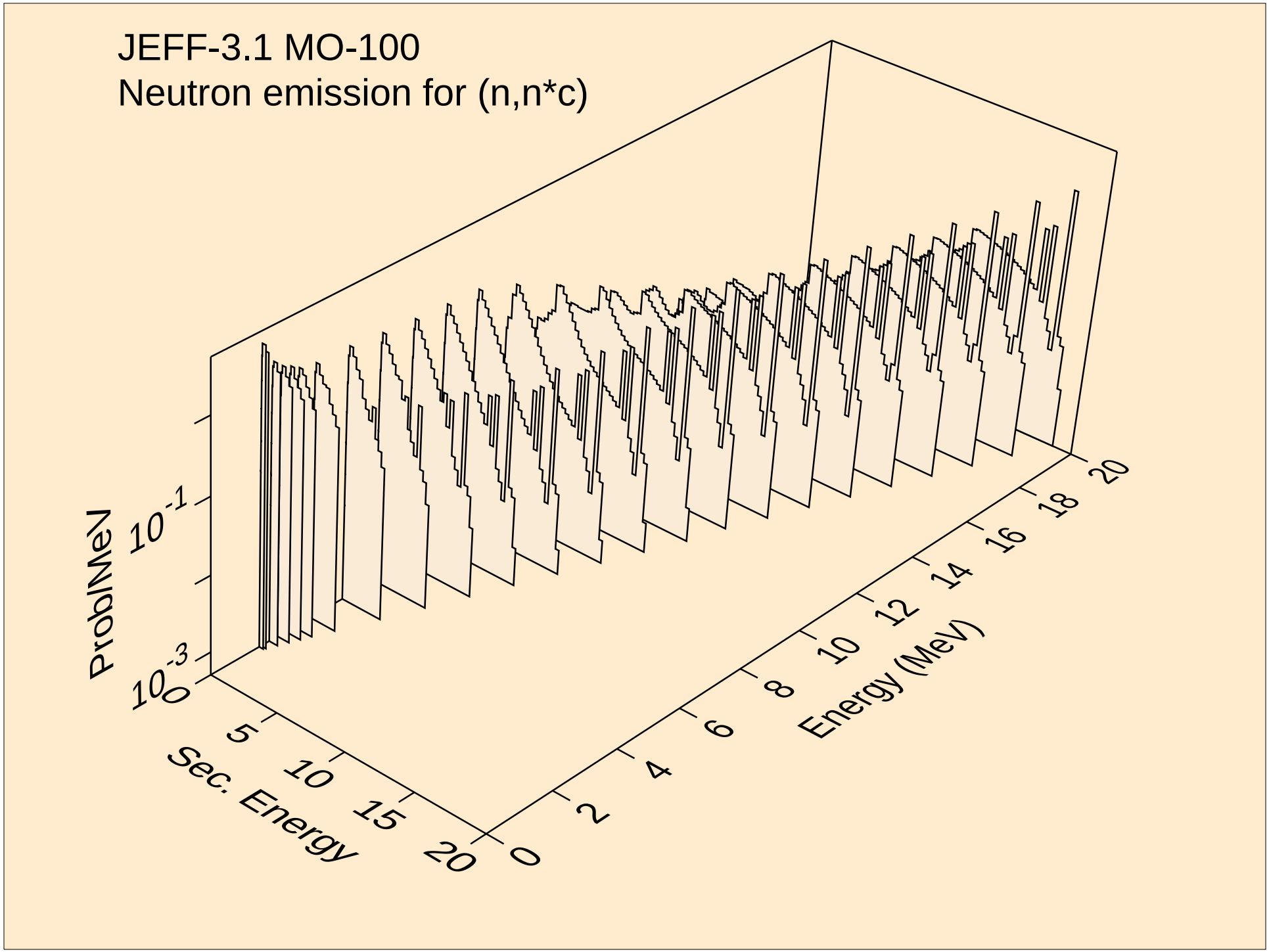

JEFF-3.1 MO-100
angular distribution for (n,n*4)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

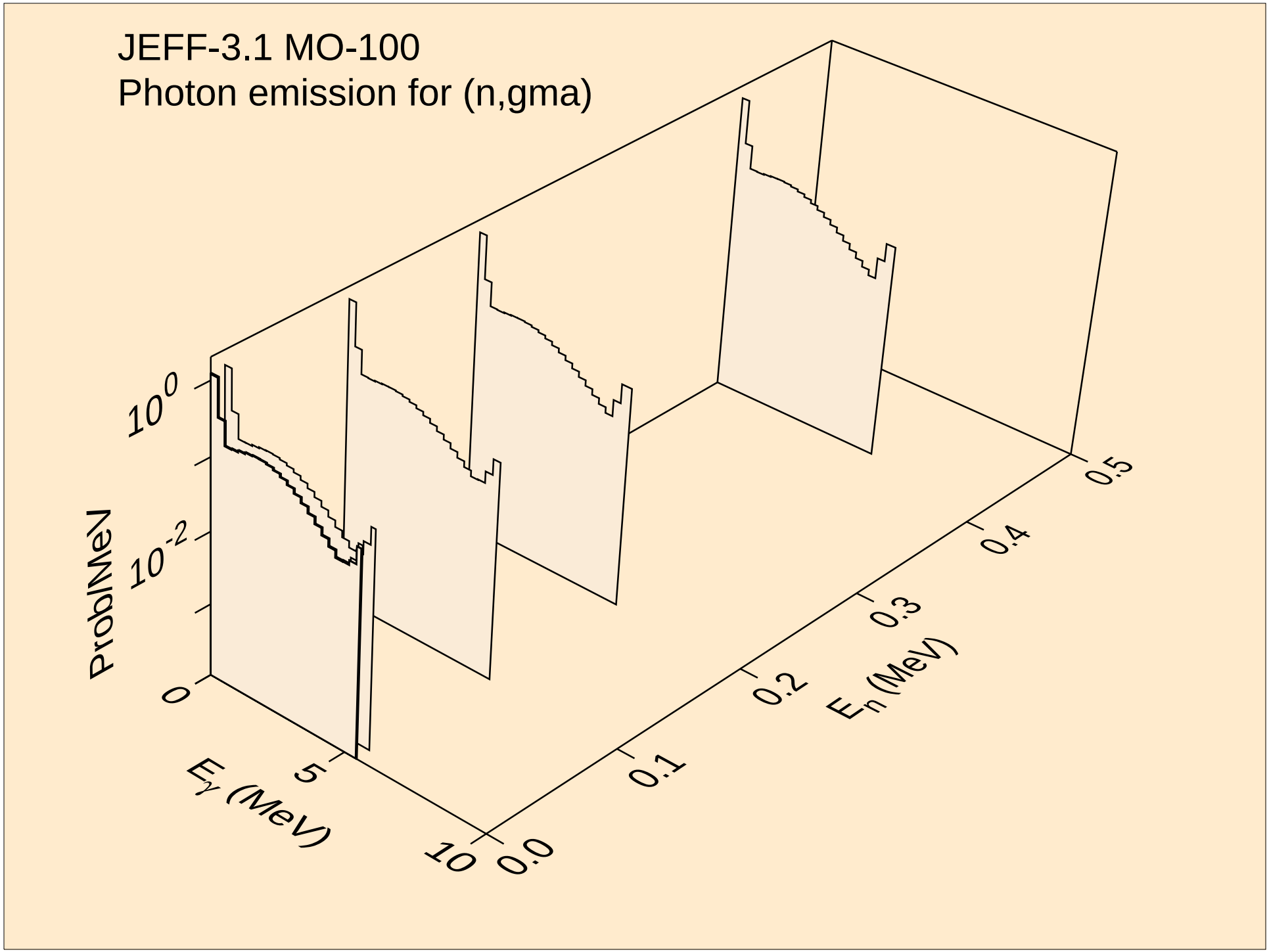

JEFF-3.1 MO-100
Neutron emission for (n,2n)
Prob/MeV
10^{1}
10^{-1}
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)

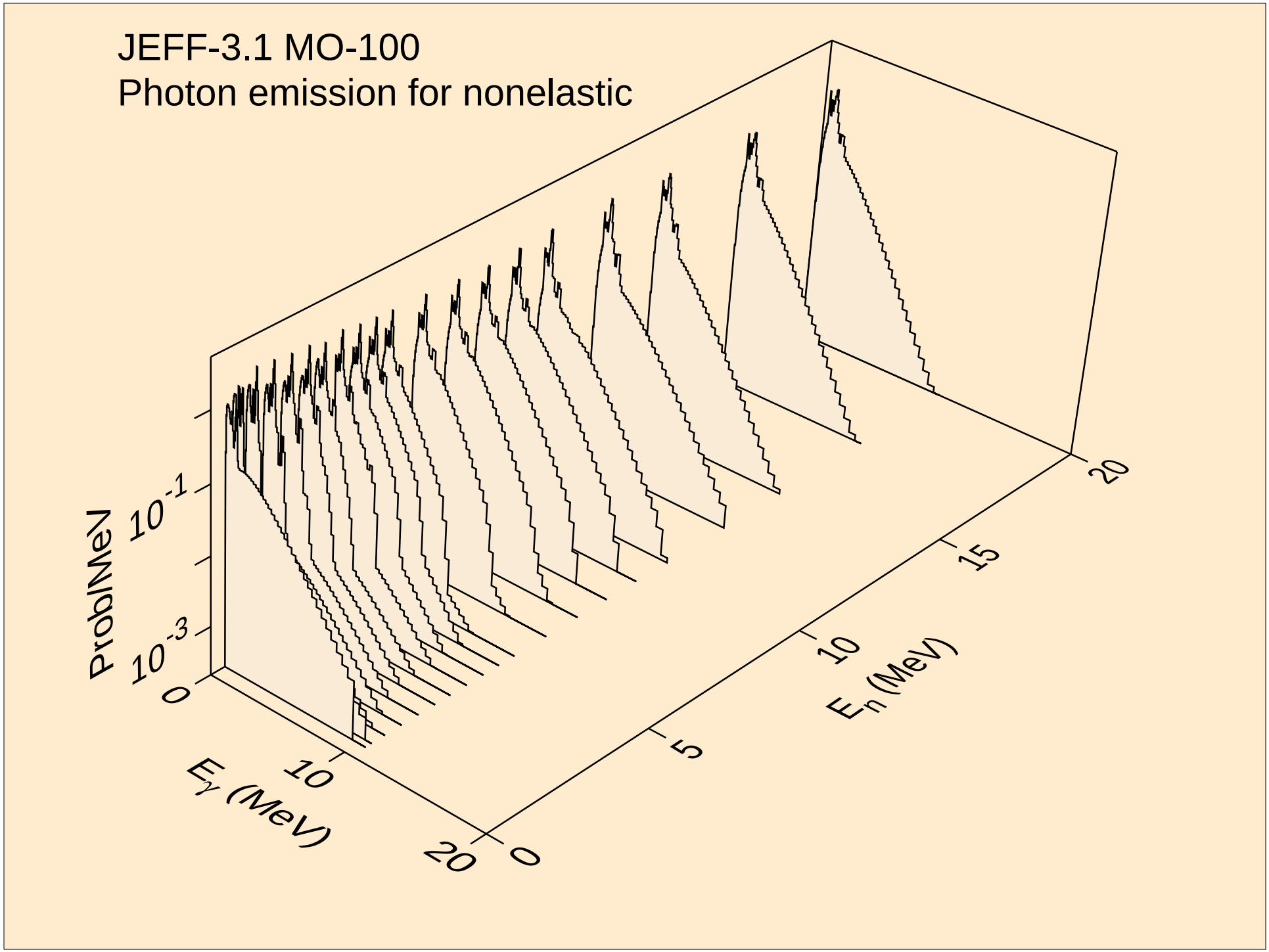

JEFF-3.1 MO-100
Neutron emission for (n,3n)
Prob/MeV
10^{1}
10^{-1}
0
2
4
6
Sec. Energy
14
15
16
17
18
19
20
Energy (MeV)

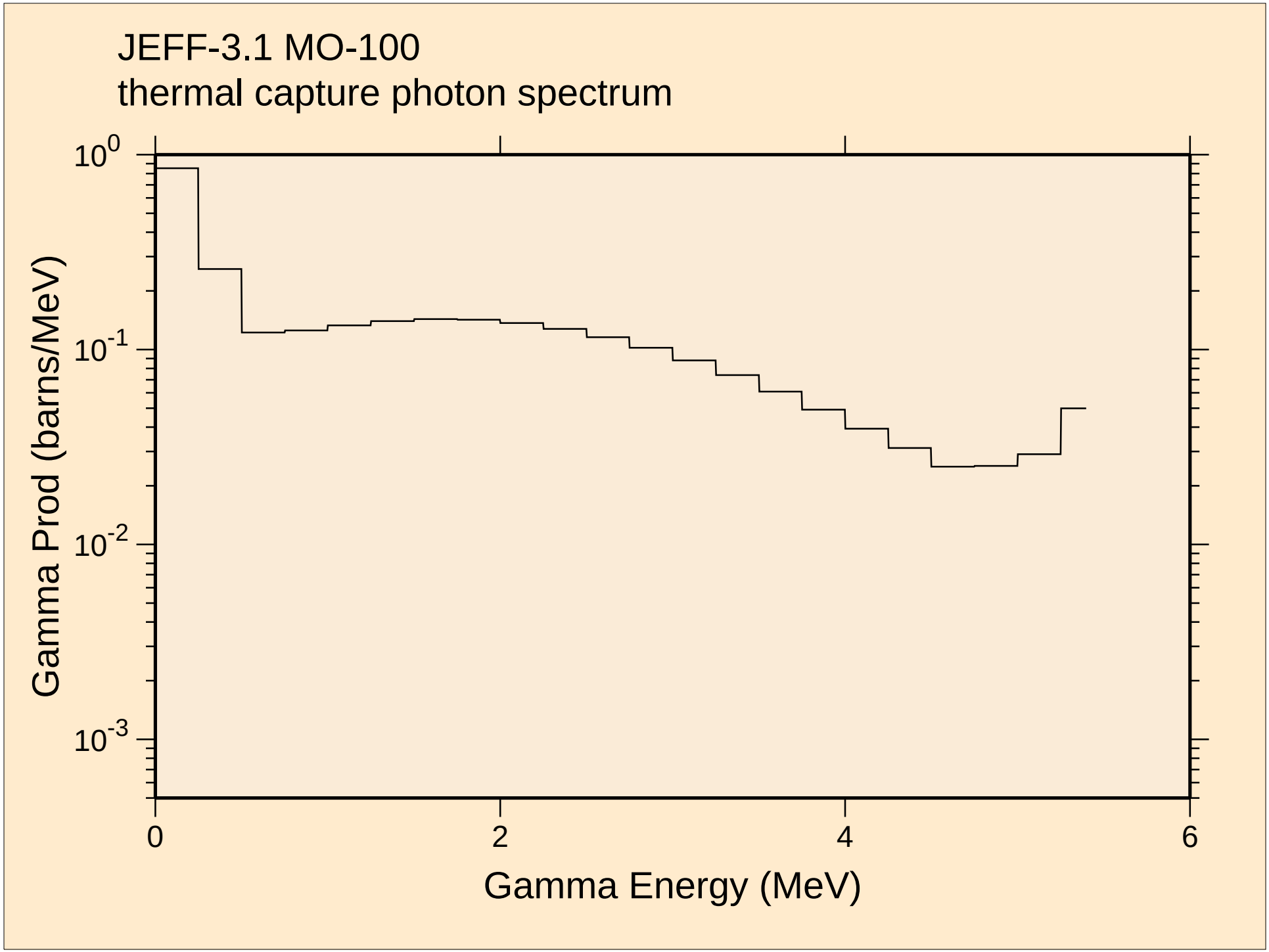

JEFF-3.1 MO-100
Neutron emission for (n,n*)a
Prob/MeV
10^1
10^-1
0
2
4
6
Sec. Energy
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

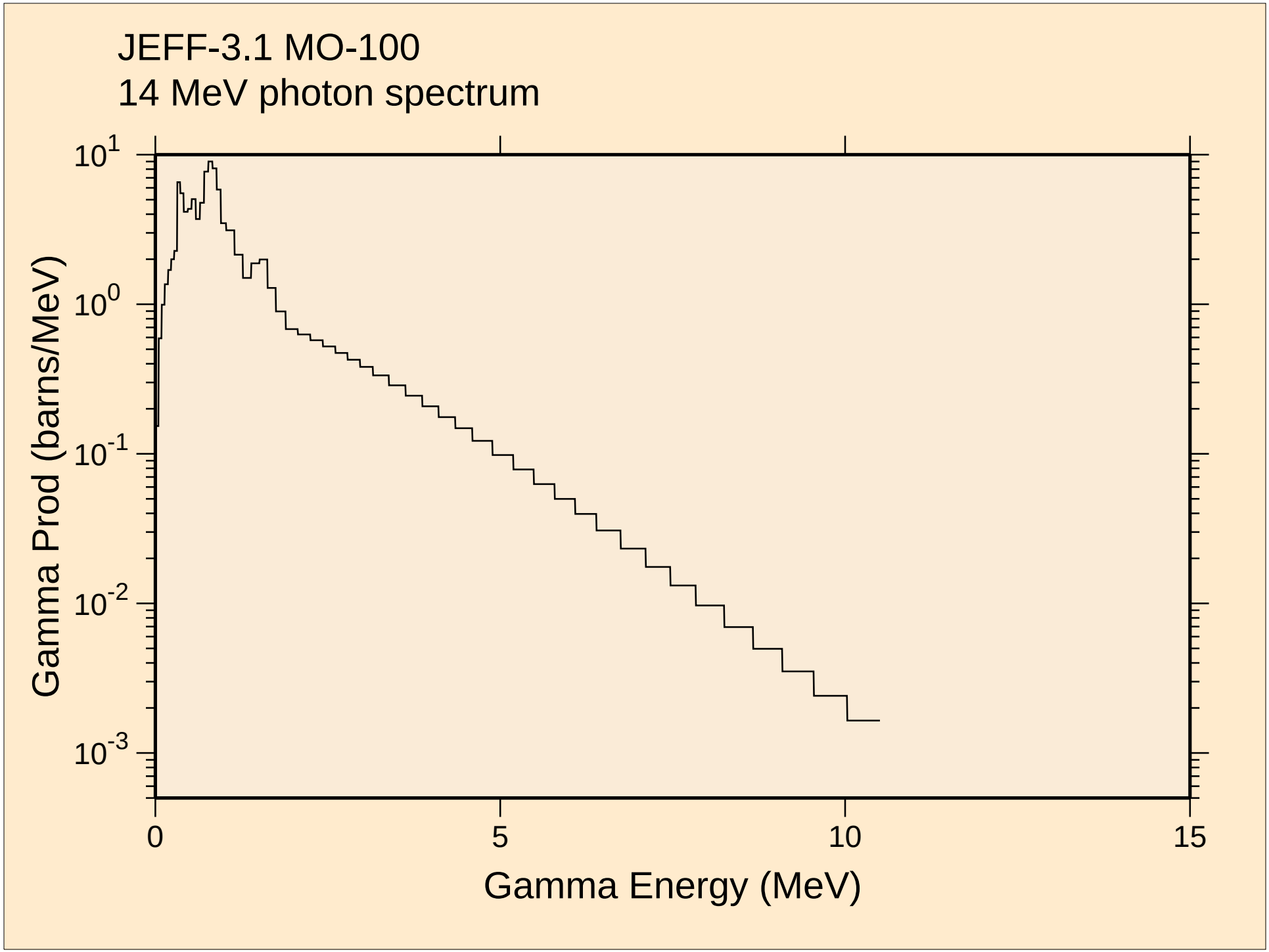

JEFF-3.1 MO-100
Neutron emission for (n,n*)p
Prob/MeV
10^1
10^-1
0
1
2
3
4
Sec. Energy
10
12
14
16
18
20
Energy (MeV)

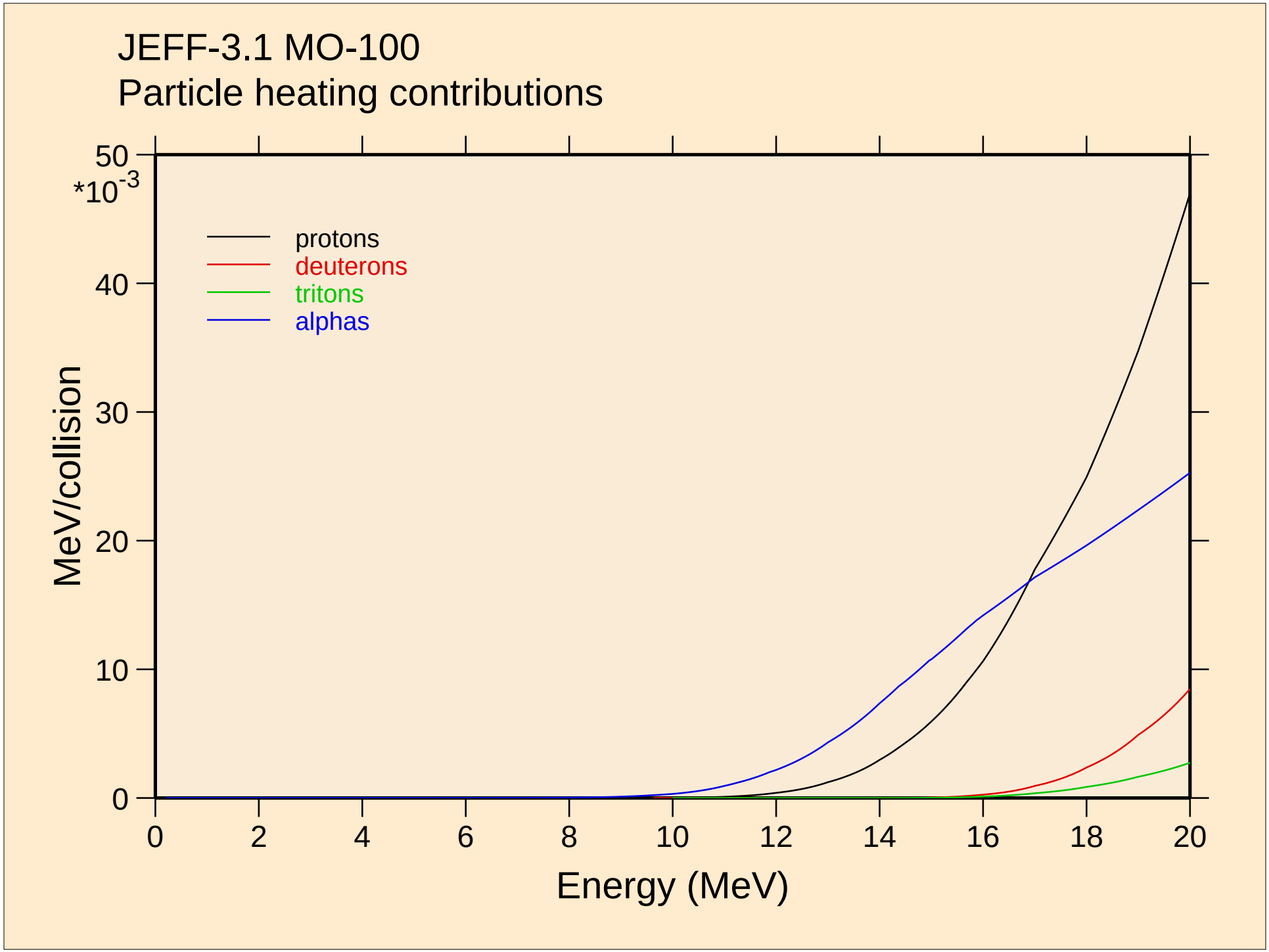

JEFF-3.1 MO-100
Neutron emission for (n,n*c)
Prob/MeV
10-1
10-3
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

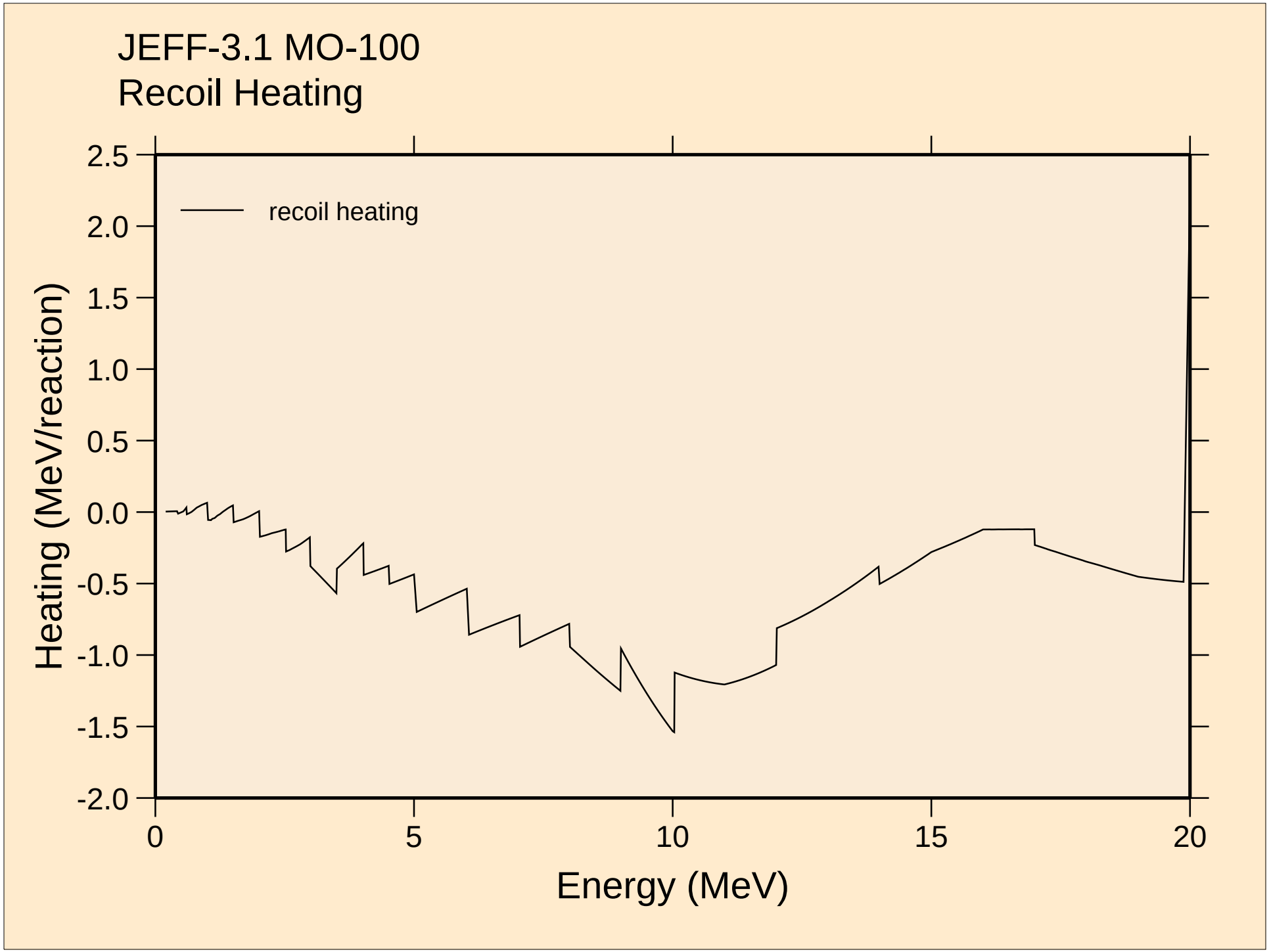

JEFF-3.1 MO-100
Photon emission for (n,gma)
Prob/MeV
10^0
10^-2
0
5
10
Eγ (MeV)
0.0
0.1
0.2
0.3
0.4
0.5
En (MeV)

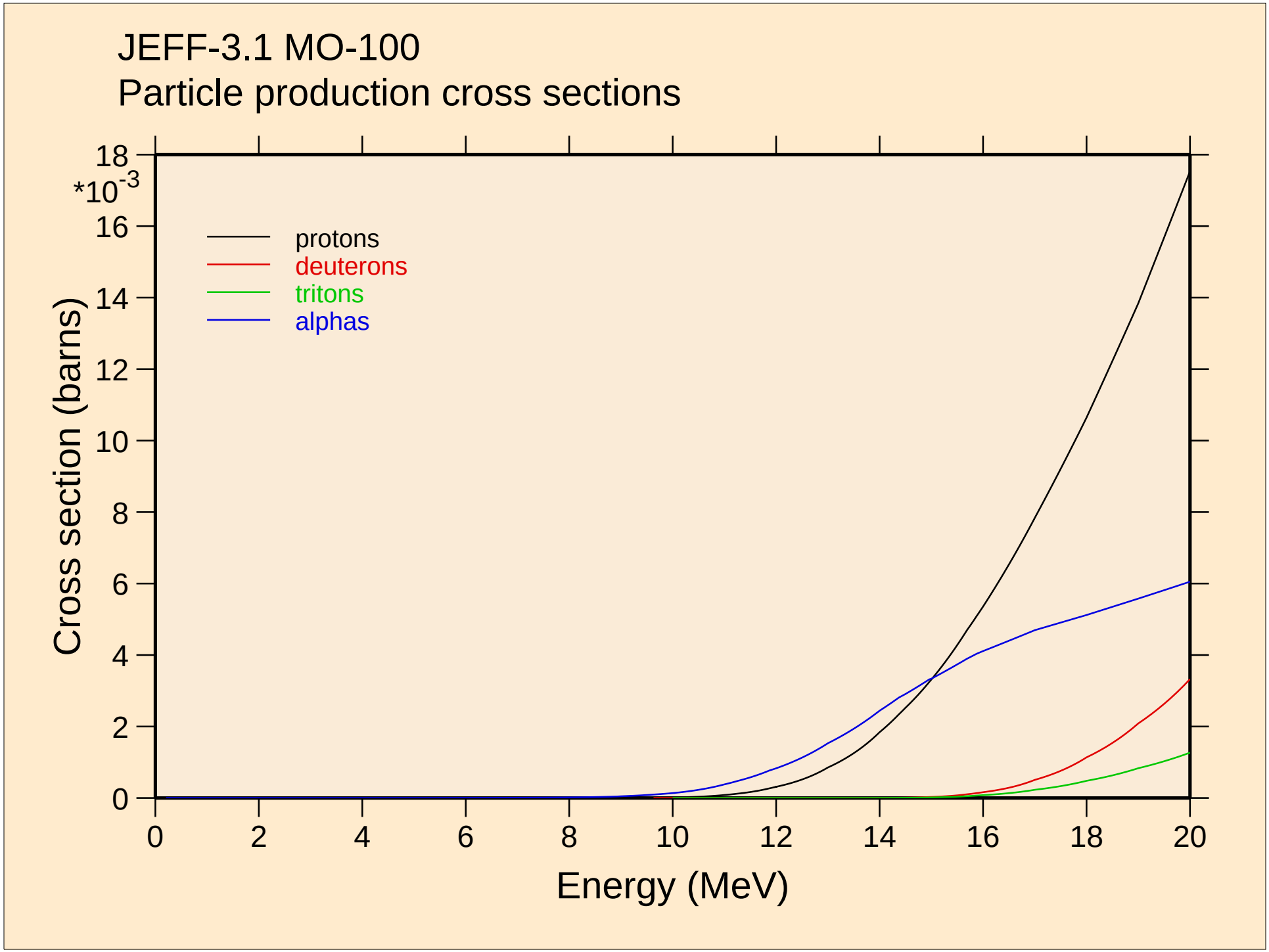

JEFF-3.1 MO-100
Photon emission for nonelastic
Prob/MeV
10^-1
10^-3
0
Eγ (MeV)
10
20
0
5
10
15
20
En (MeV)

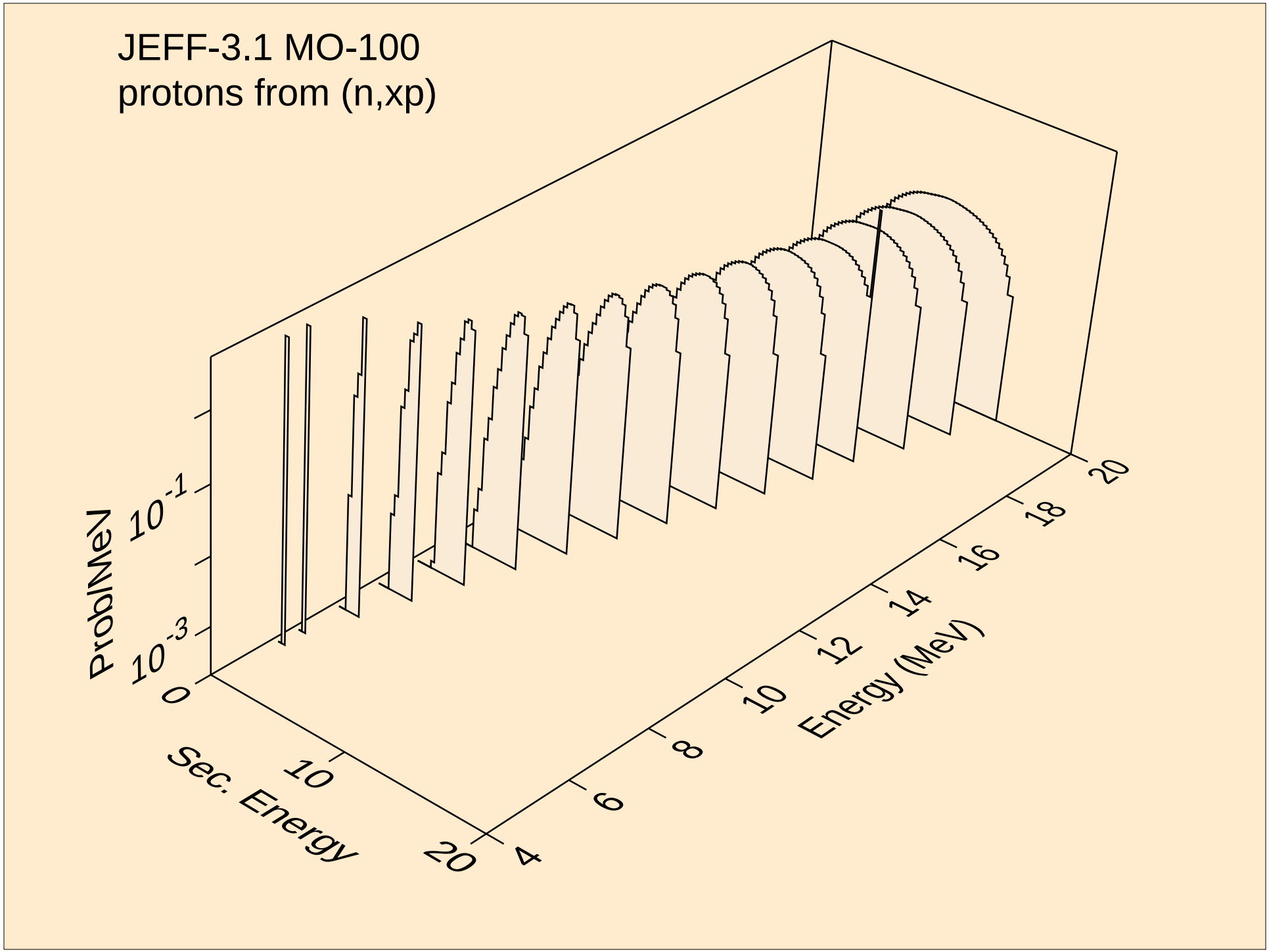

JEFF-3.1 MO-100
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^0
10^-1
10^-2
10^-3
0
2
4
6
Gamma Energy (MeV)

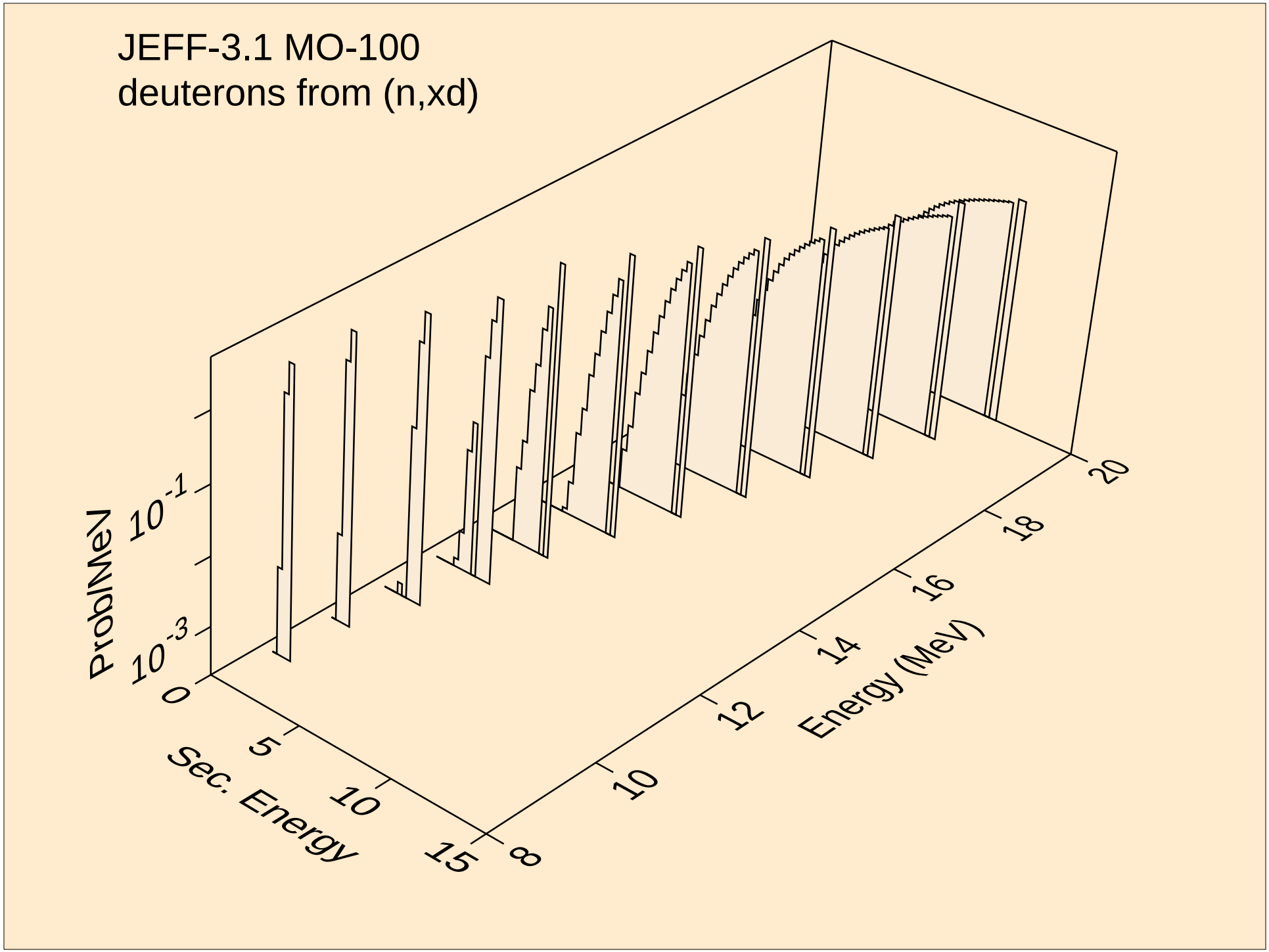

JEFF-3.1 MO-100
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
10^-3
0
5
10
15
Gamma Energy (MeV)

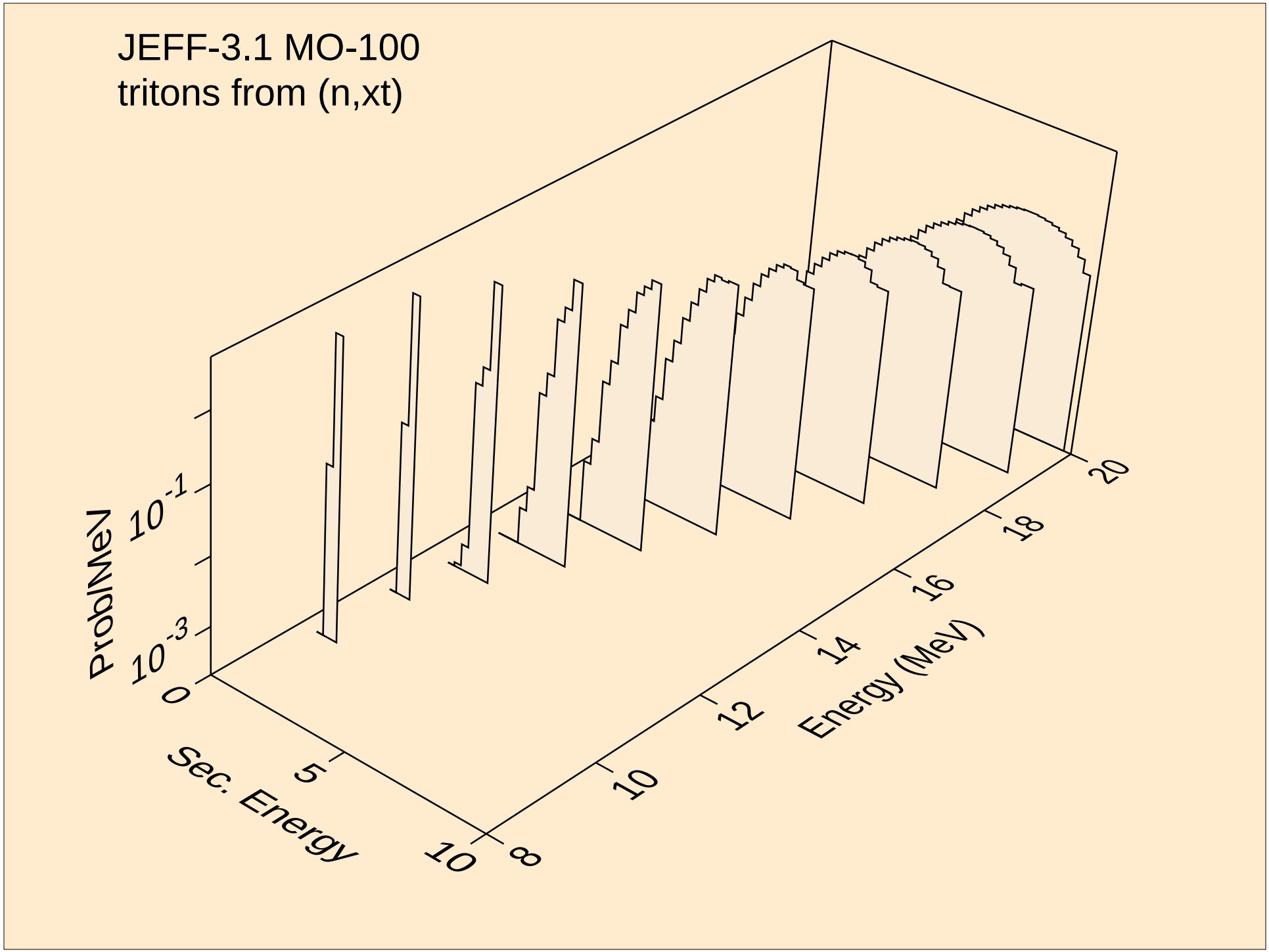

JEFF-3.1 MO-100
Particle heating contributions
50
*10-3
40
30
20
10
0
MeV/collision
protons
deuterons
tritons
alphas
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

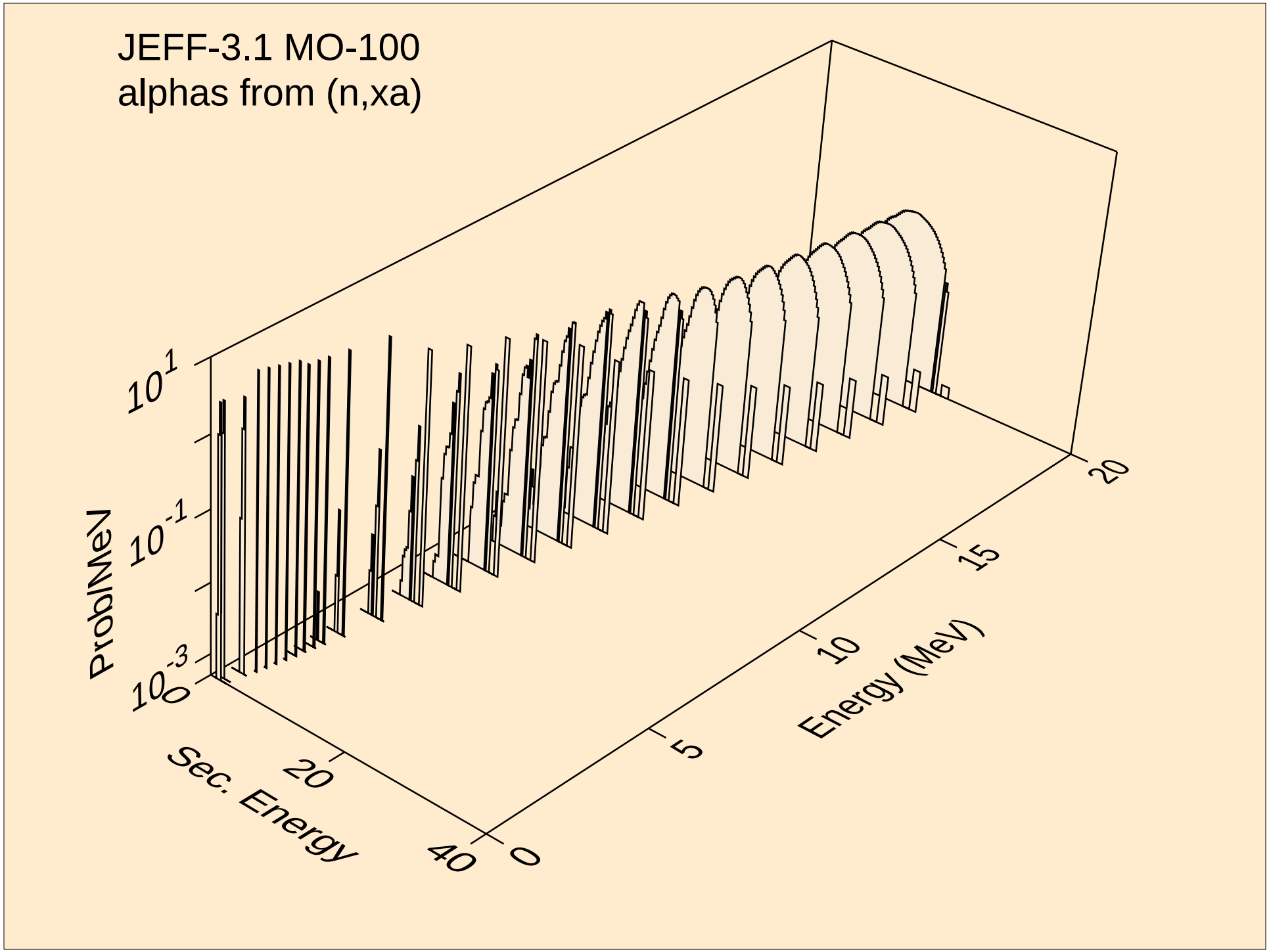

JEFF-3.1 MO-100
Recoil Heating
recoil heating
Heating (MeV/reaction)
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
0
5
10
15
20
Energy (MeV)


JEFF-3.1 MO-100
Particle production cross sections
Cross section (barns)
*10-3
18
16
14
12
10
8
6
4
2
0
protons
deuterons
tritons
alphas
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)


JEFF-3.1 MO-100
protons from (n,xp)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
4
6
8
10
12
14
16
18
20
Energy (MeV)


JEFF-3.1 MO-100
deuterons from (n,xd)
Prob/MeV
10^-1
10^-3
0
5
10
15
Sec. Energy
8
10
12
14
16
18
20
Energy (MeV)


JEFF-3.1 MO-100
tritons from (n,xt)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
5
10
8
10
12
14
16
18
20
Energy (MeV)


JEFF-3.1 MO-100
alphas from (n,xa)
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
20
40
Sec. Energy
0
5
10
15
20
Energy (MeV)