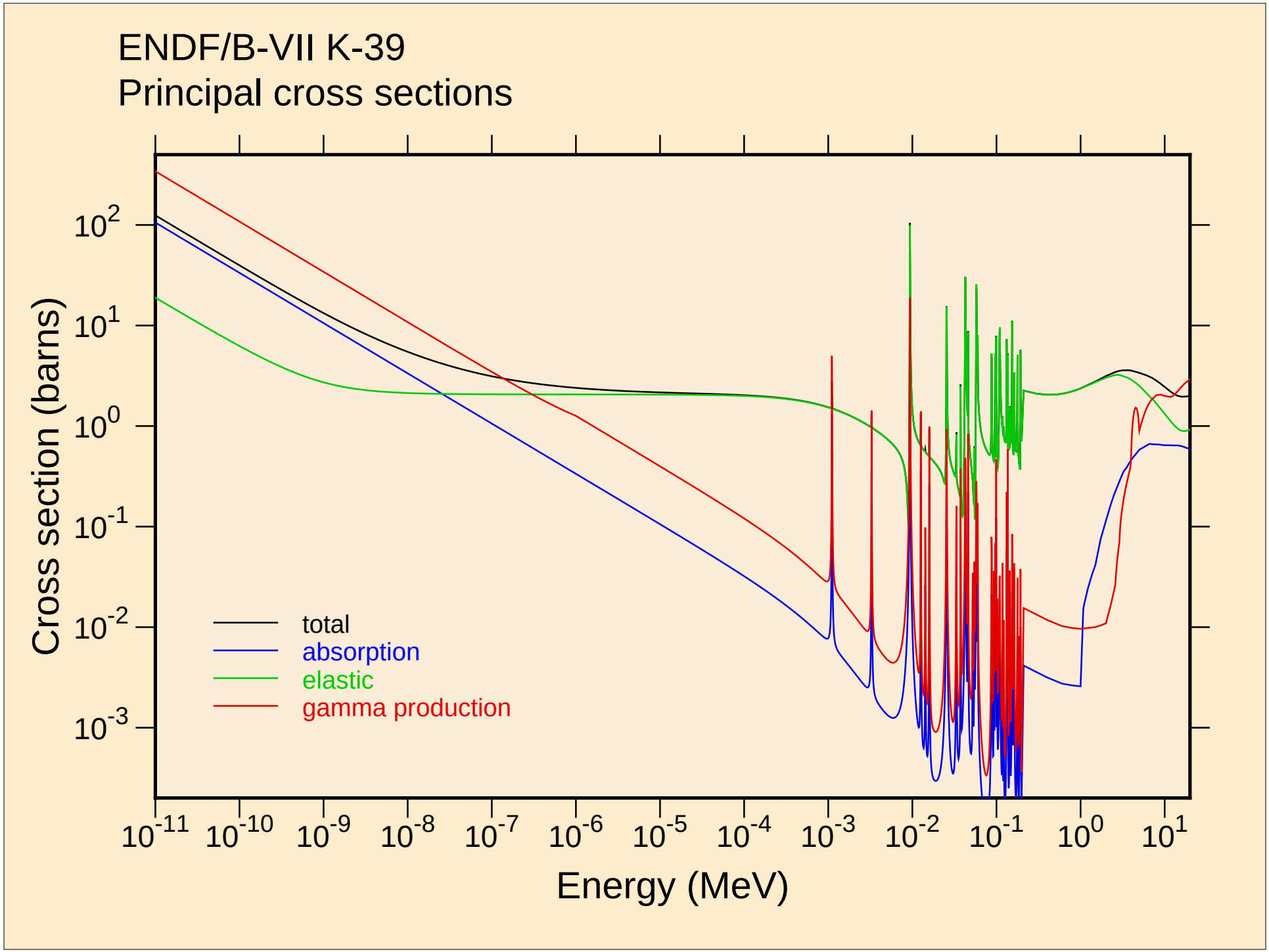
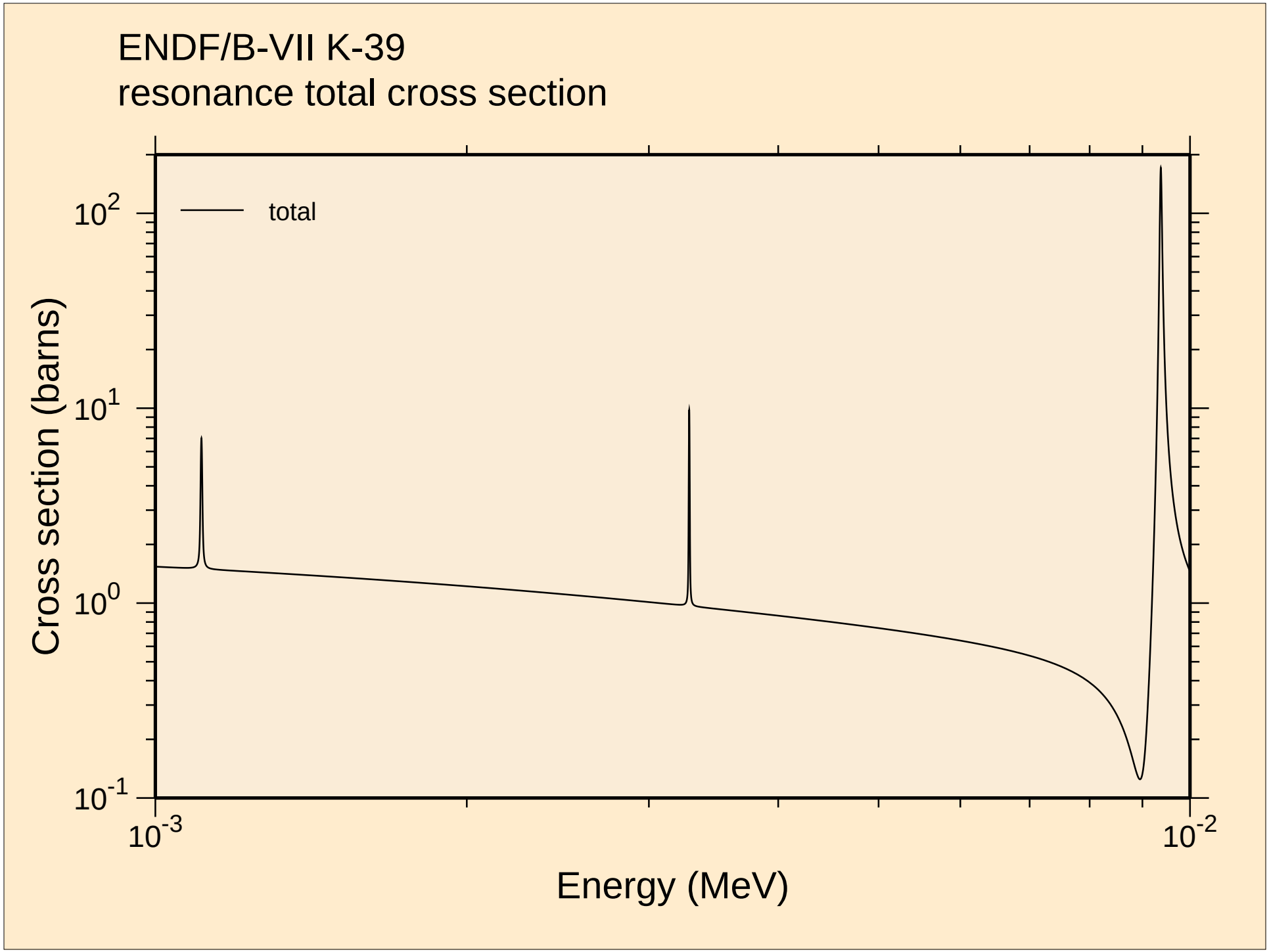
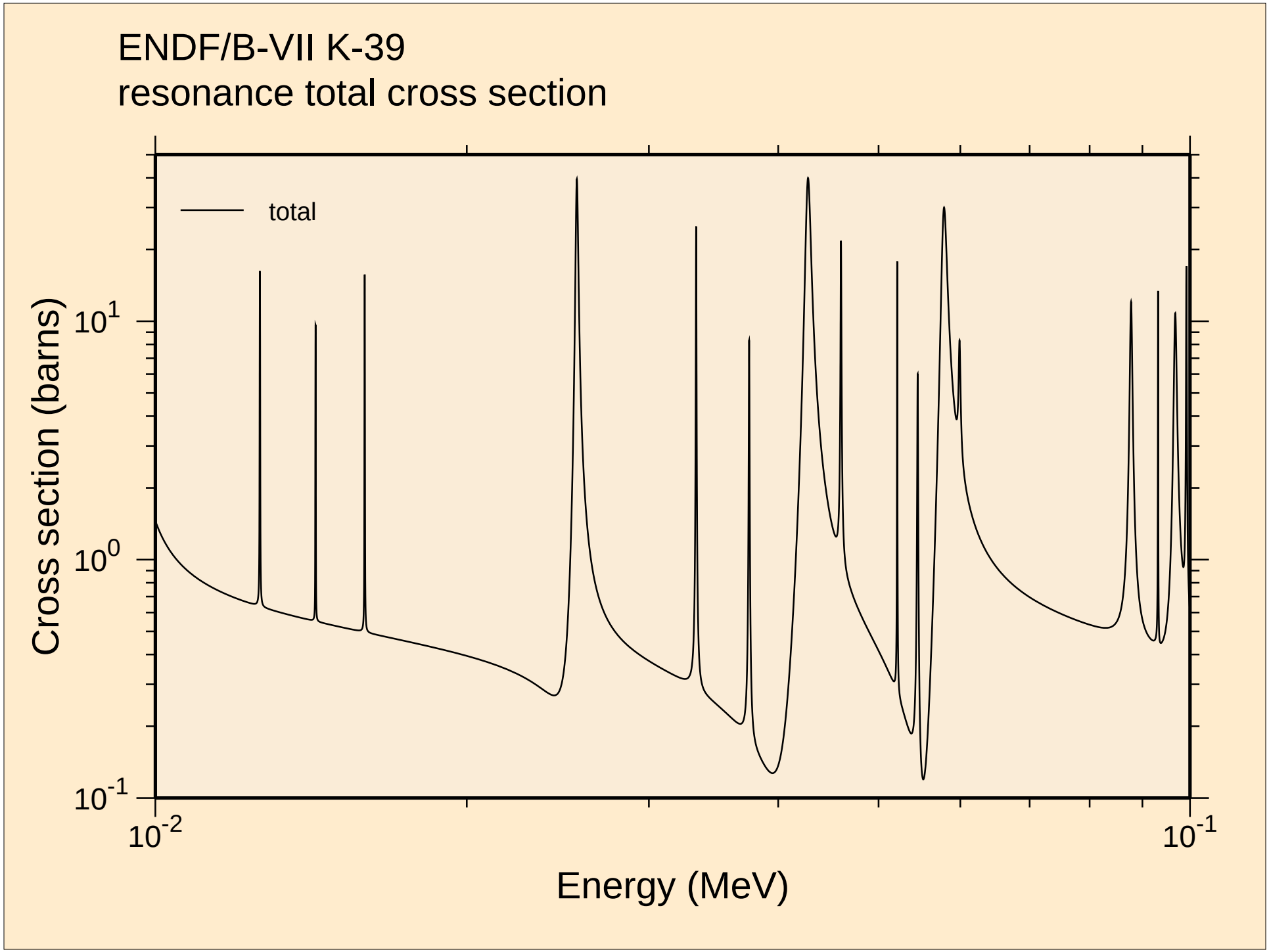
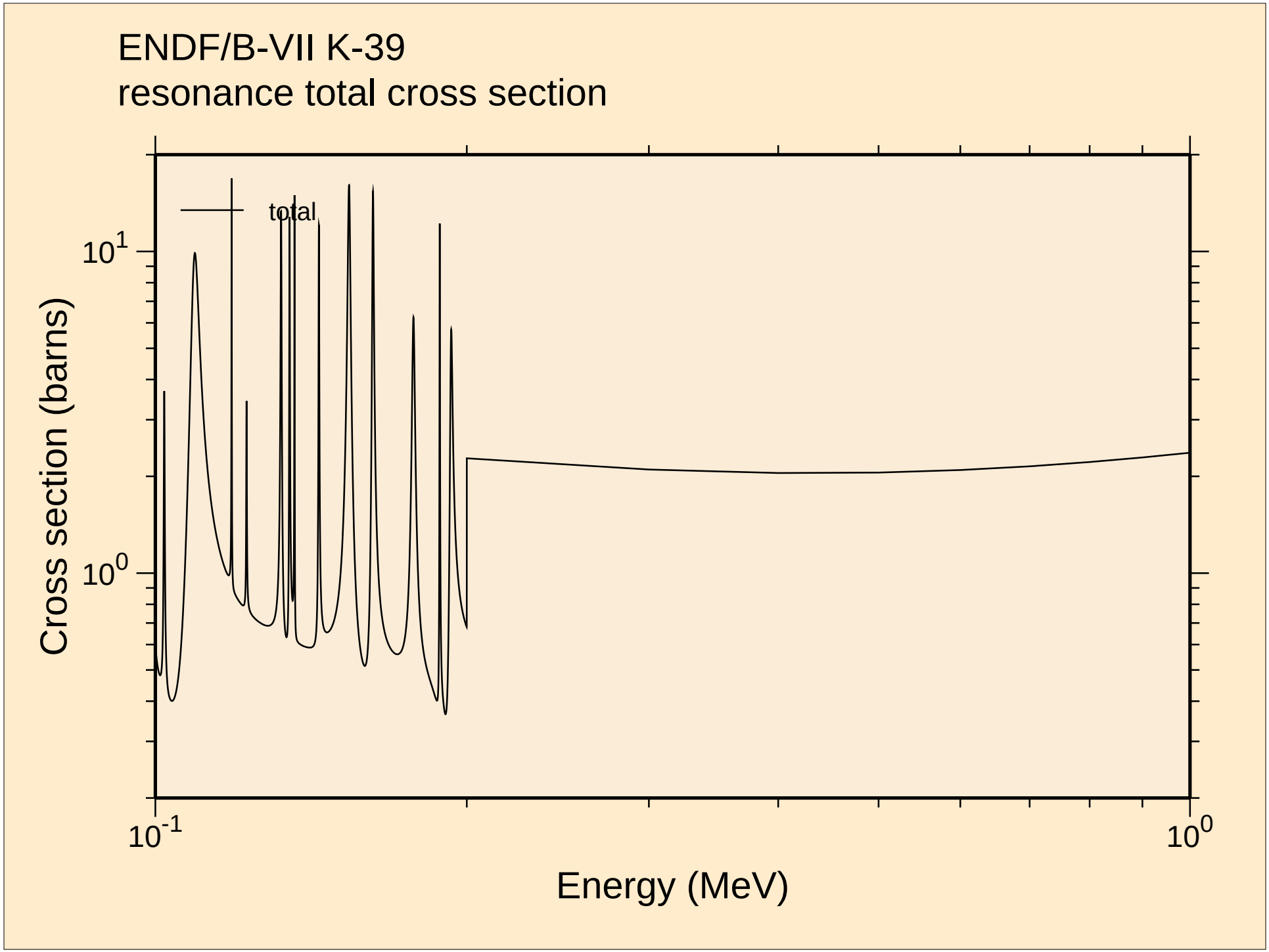
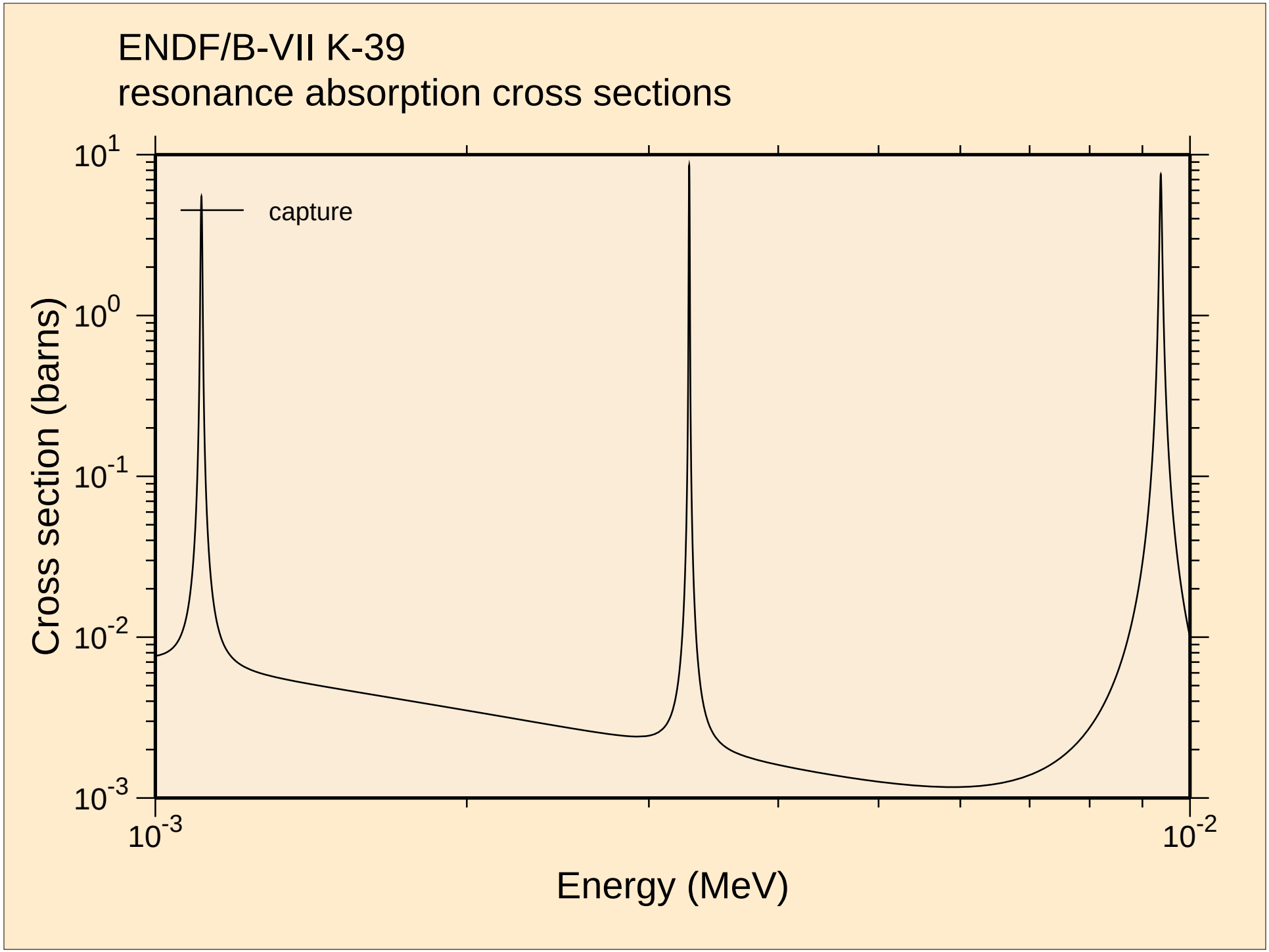
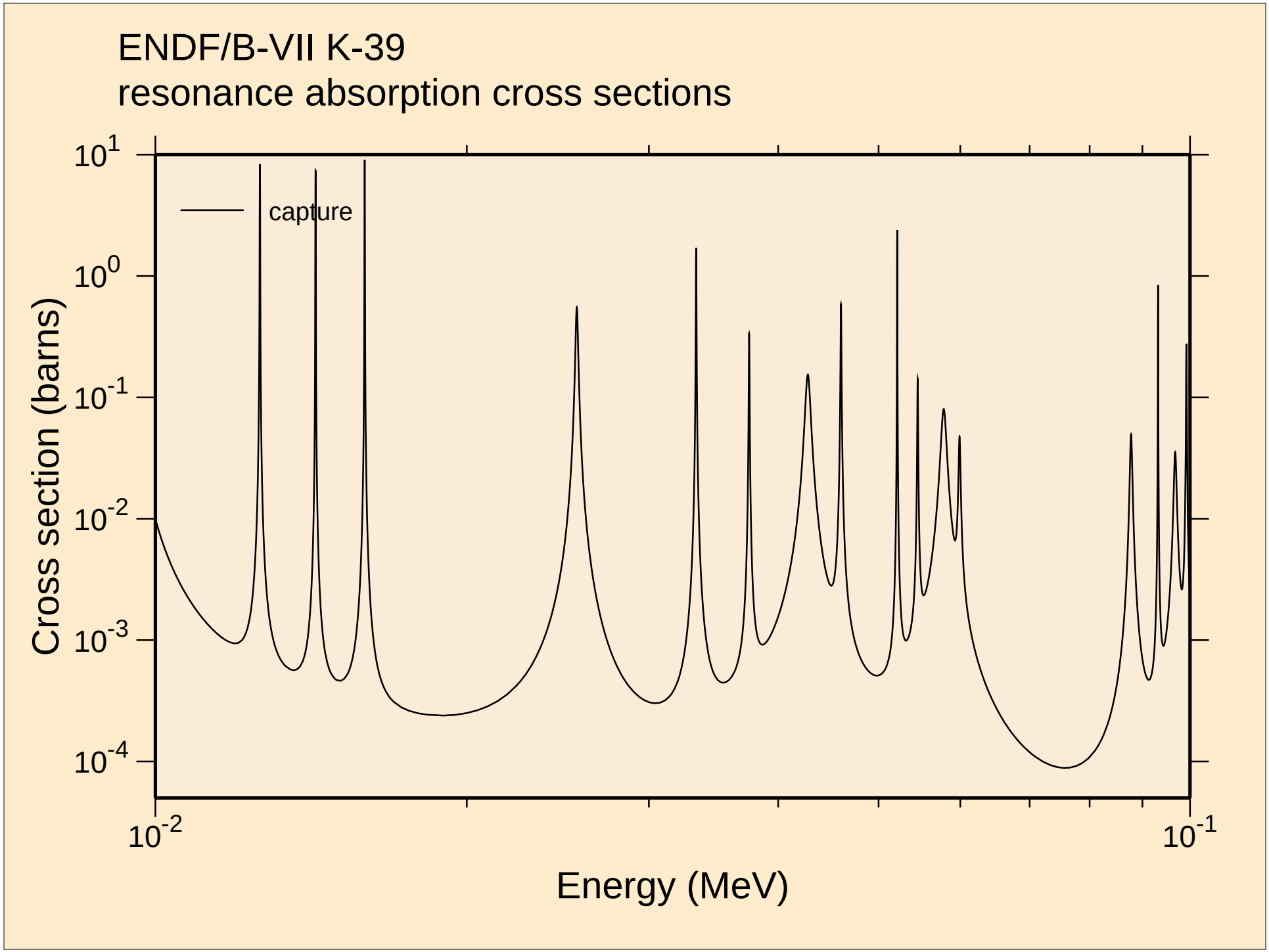

ENDF/B-VII K-39
Principal cross sections
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
total
absorption
elastic
gamma production
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

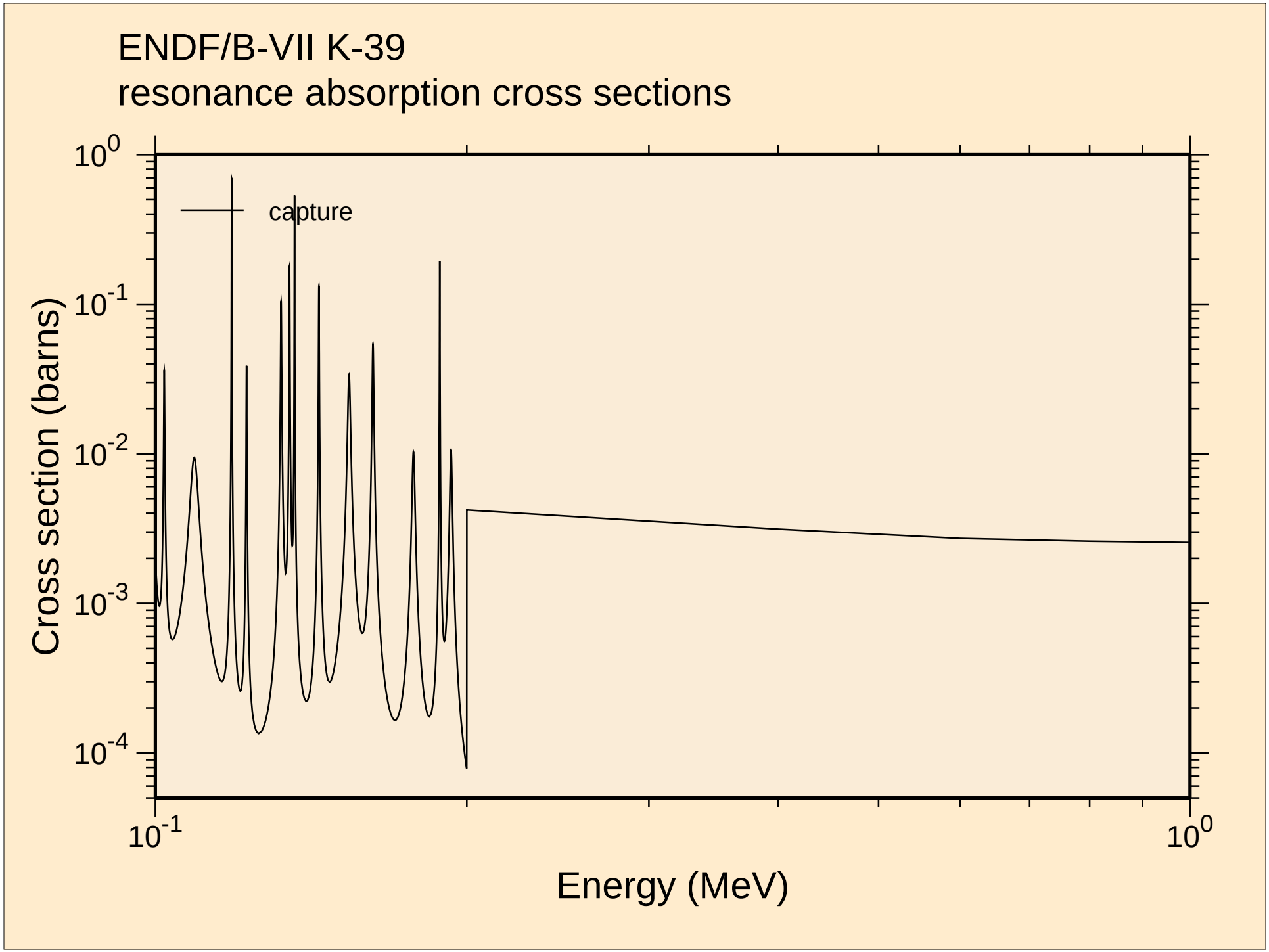

ENDF/B-VII K-39
resonance total cross section
total
Cross section (barns)
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-3}
10^{-2}
Energy (MeV)

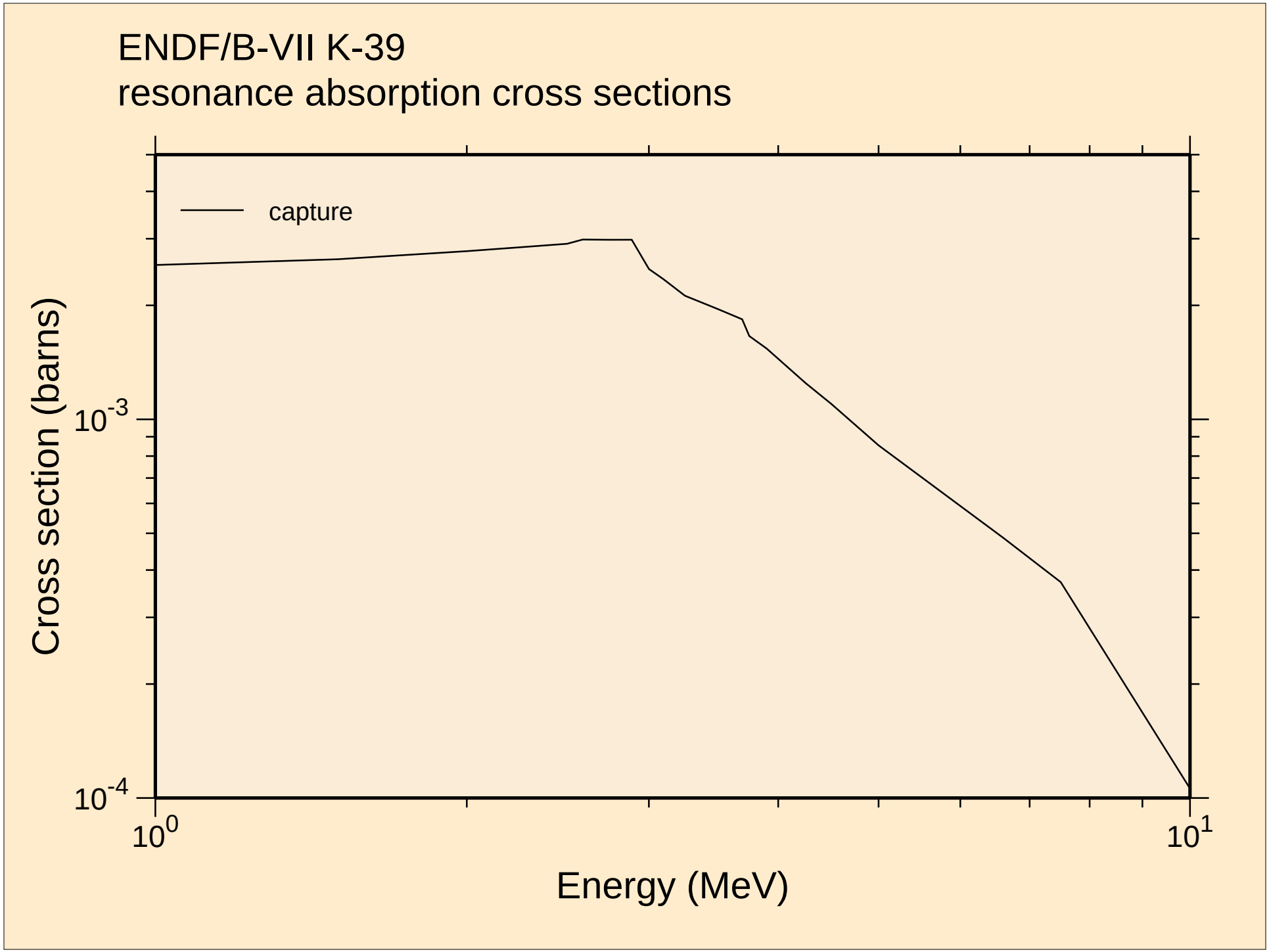

ENDF/B-VII K-39
resonance total cross section
total
Cross section (barns)
10^1
10^0
10^-1
10^-2
10^-1
Energy (MeV)

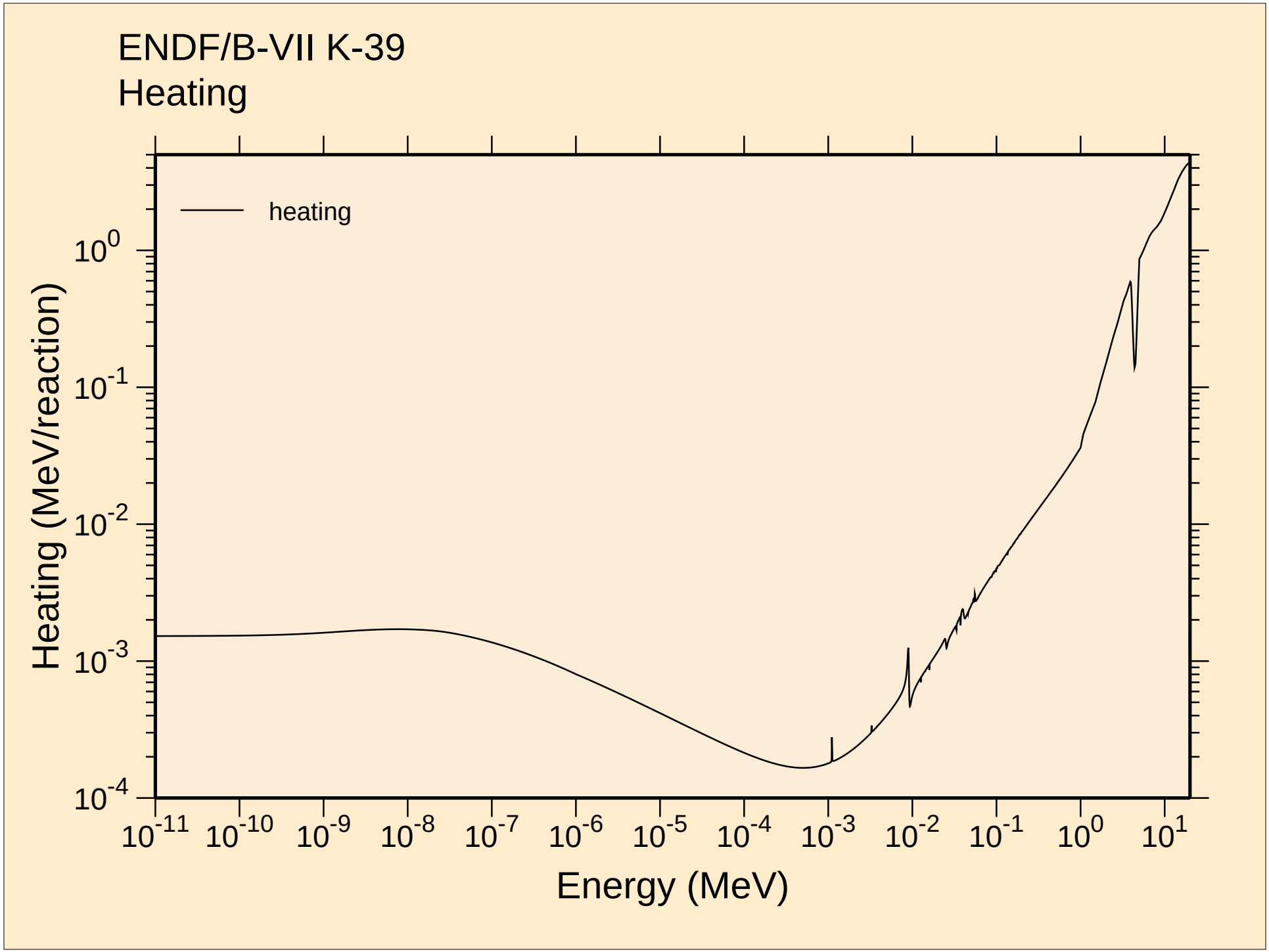

ENDF/B-VII K-39
resonance total cross section
total
Cross section (barns)
10^1
10^0
10^{-1}
10^0
Energy (MeV)

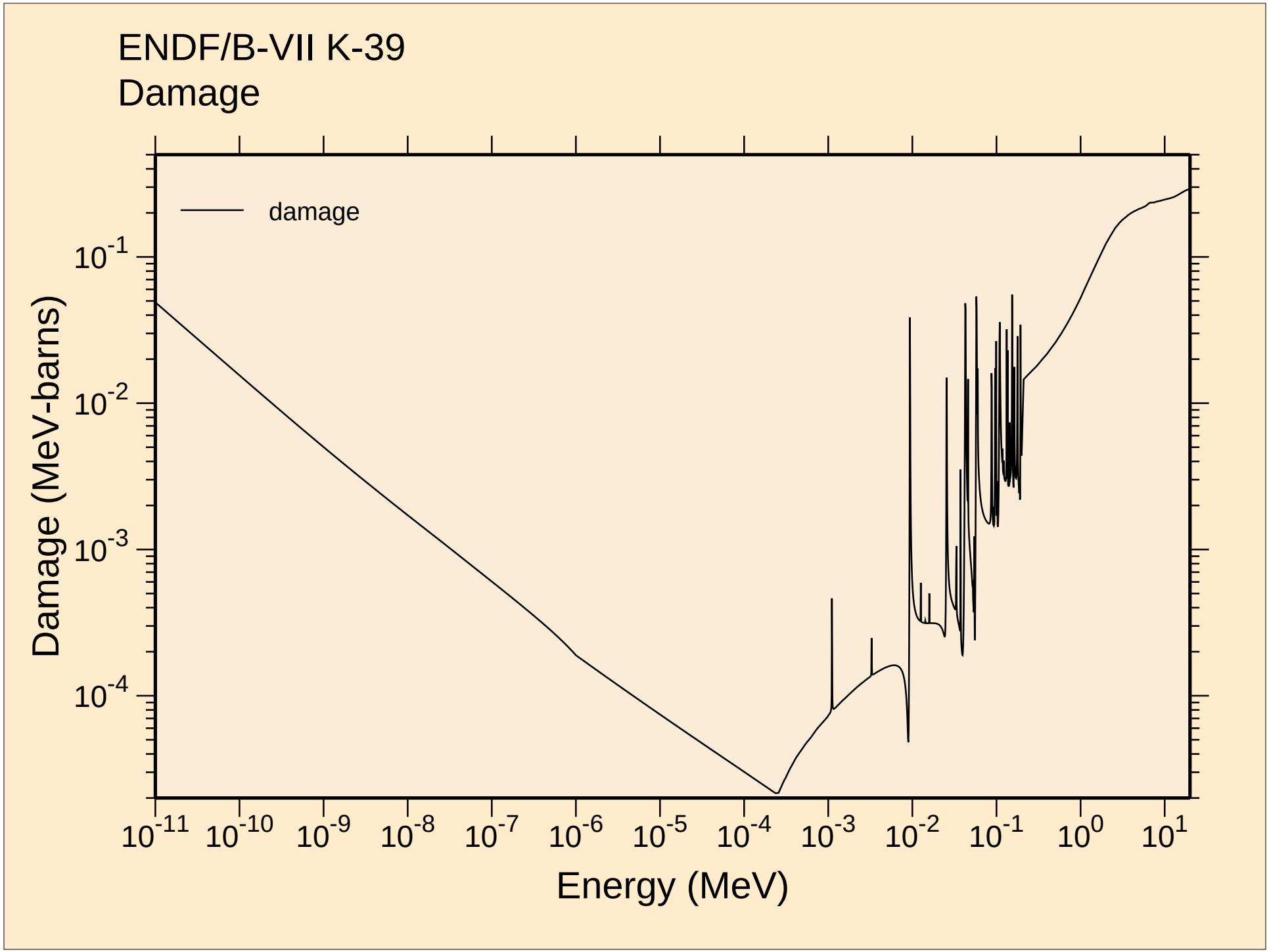

ENDF/B-VII K-39
resonance absorption cross sections
capture
Cross section (barns)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-3}
10^{-2}
Energy (MeV)

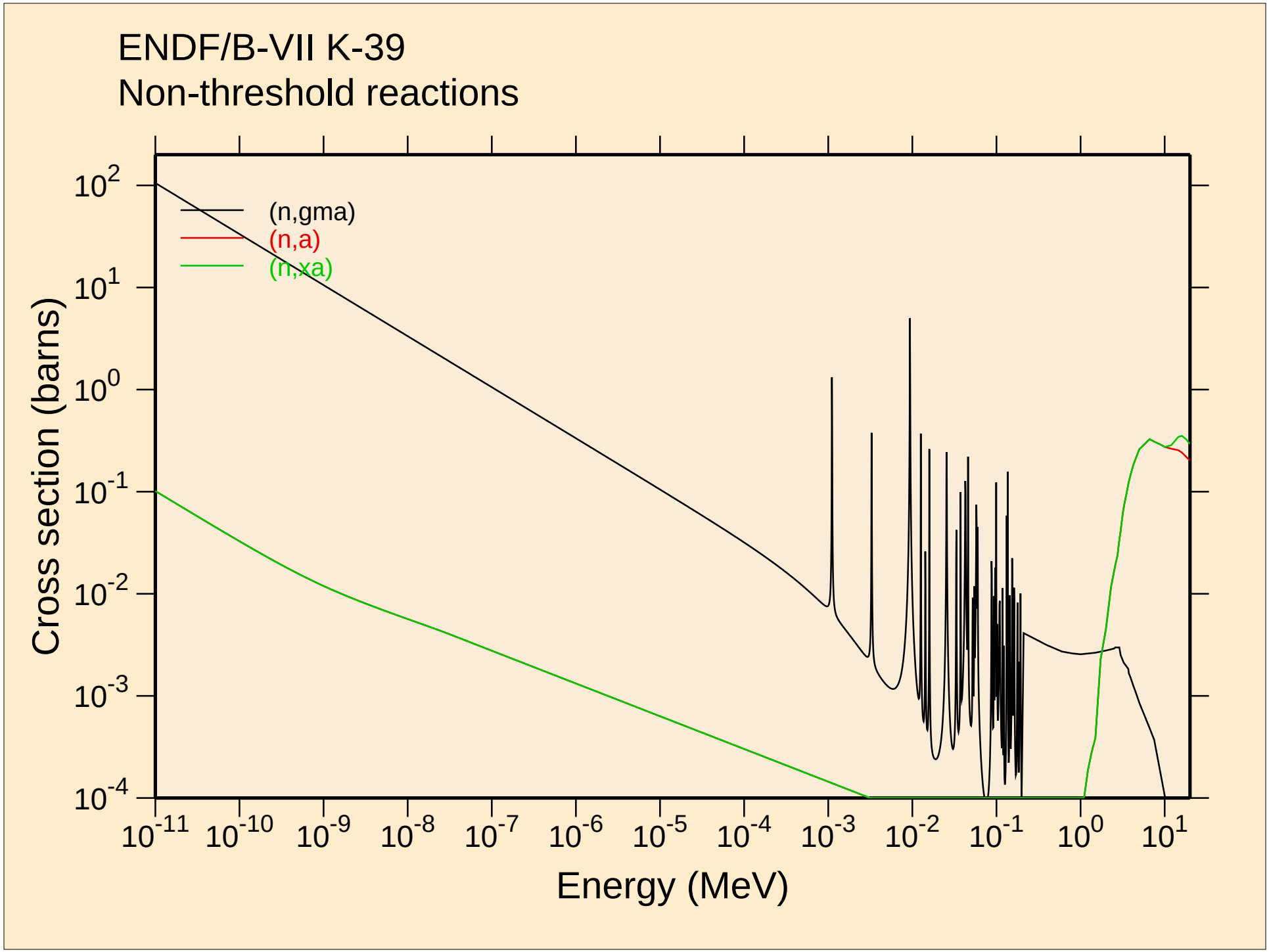

ENDF/B-VII K-39
resonance absorption cross sections
capture
Cross section (barns)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-2
10^-1
Energy (MeV)

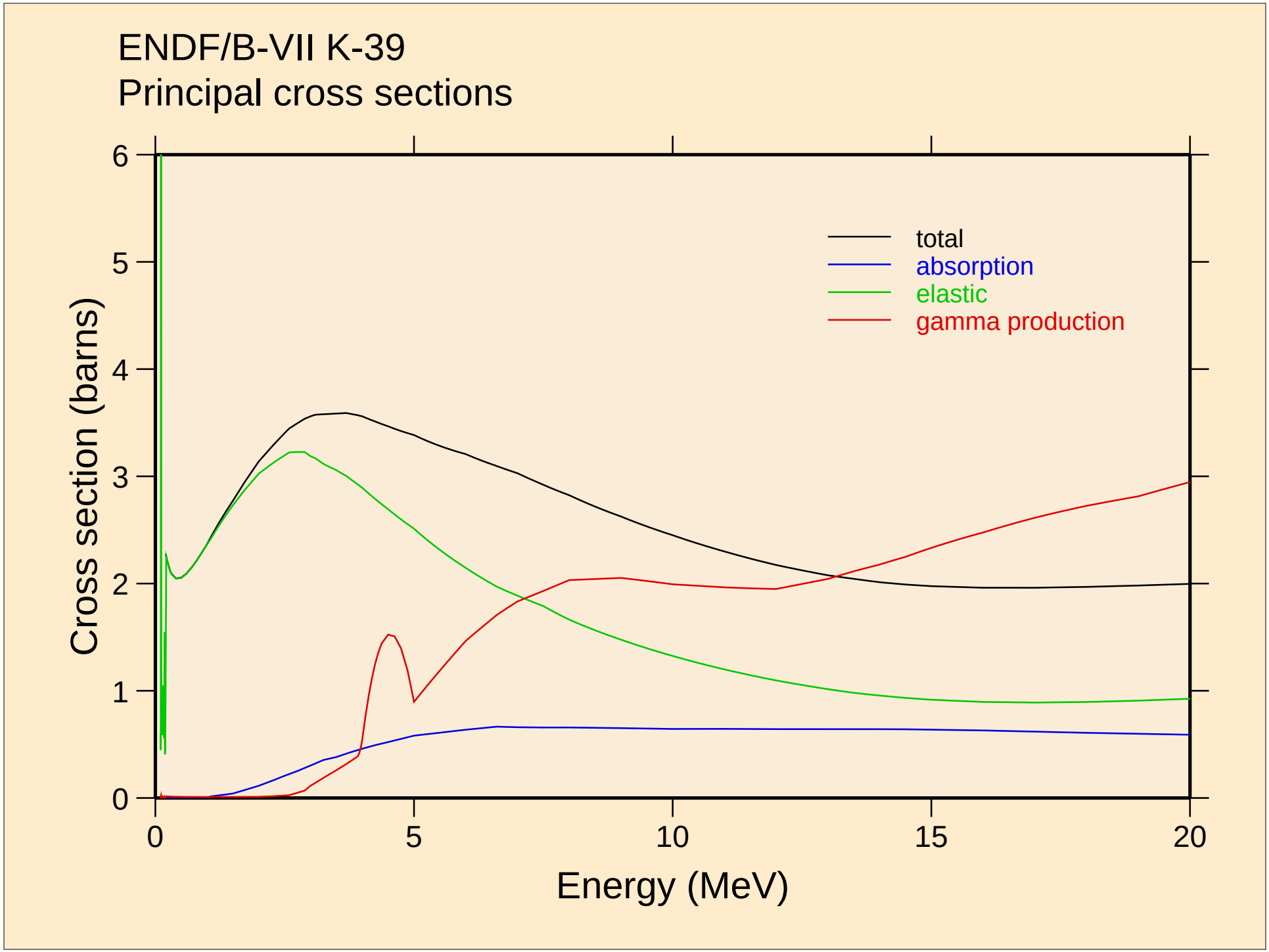

ENDF/B-VII K-39
resonance absorption cross sections
capture
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-1}
10^{0}
Energy (MeV)

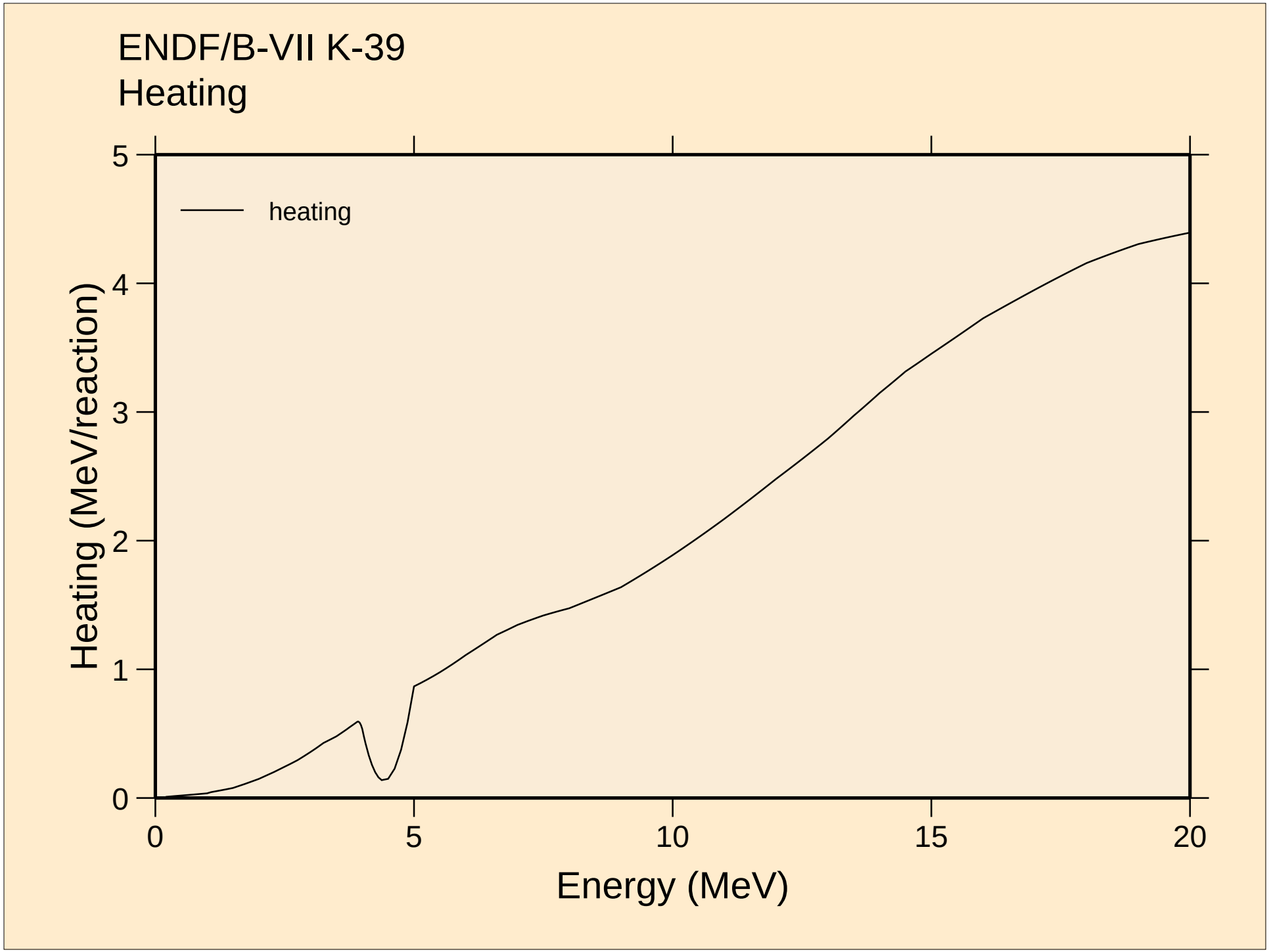

ENDF/B-VII K-39
resonance absorption cross sections
capture
Cross section (barns)
10-3
10-4
100
101
Energy (MeV)

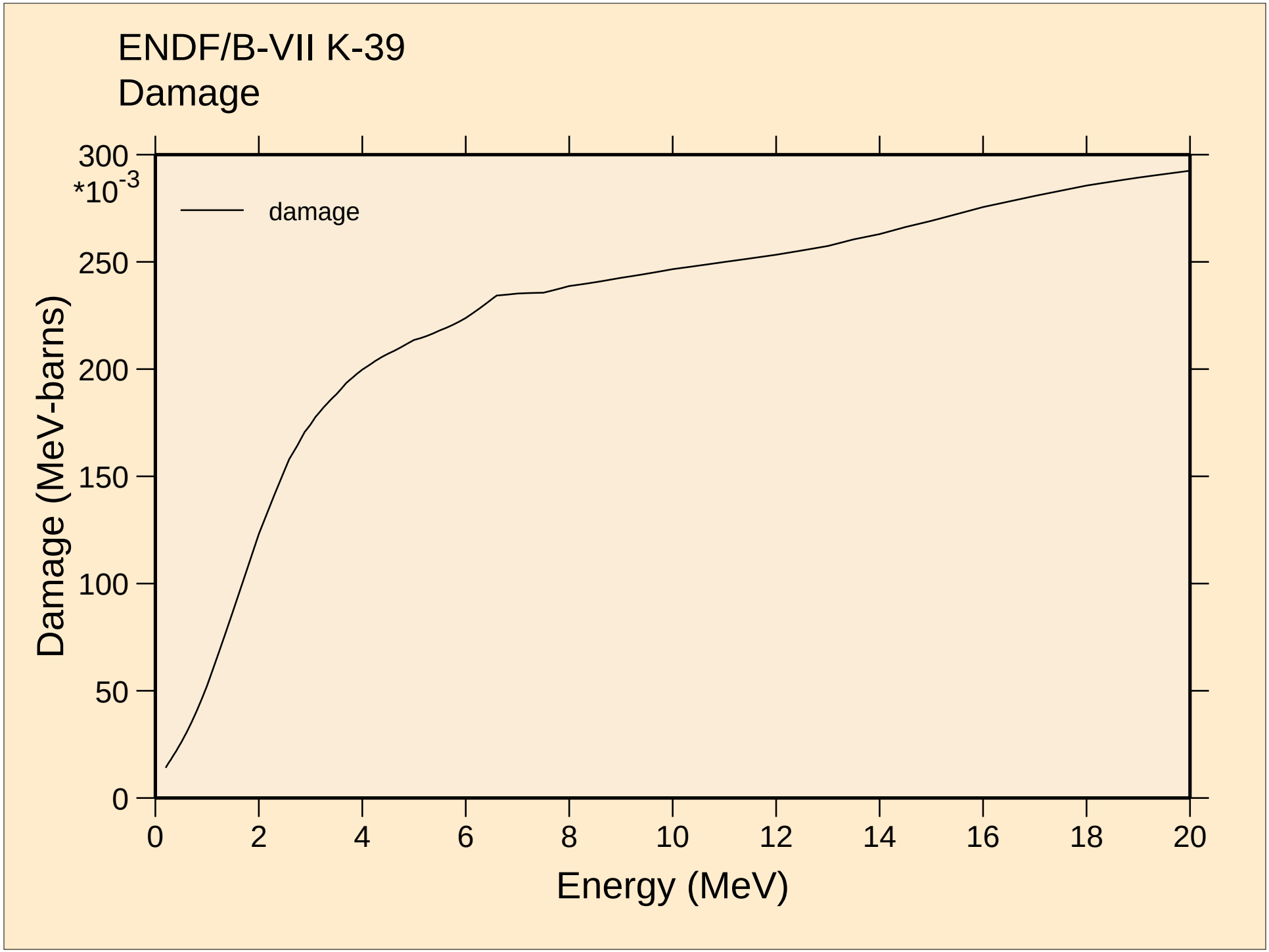

ENDF/B-VII K-39
Heating
heating
Heating (MeV/reaction)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

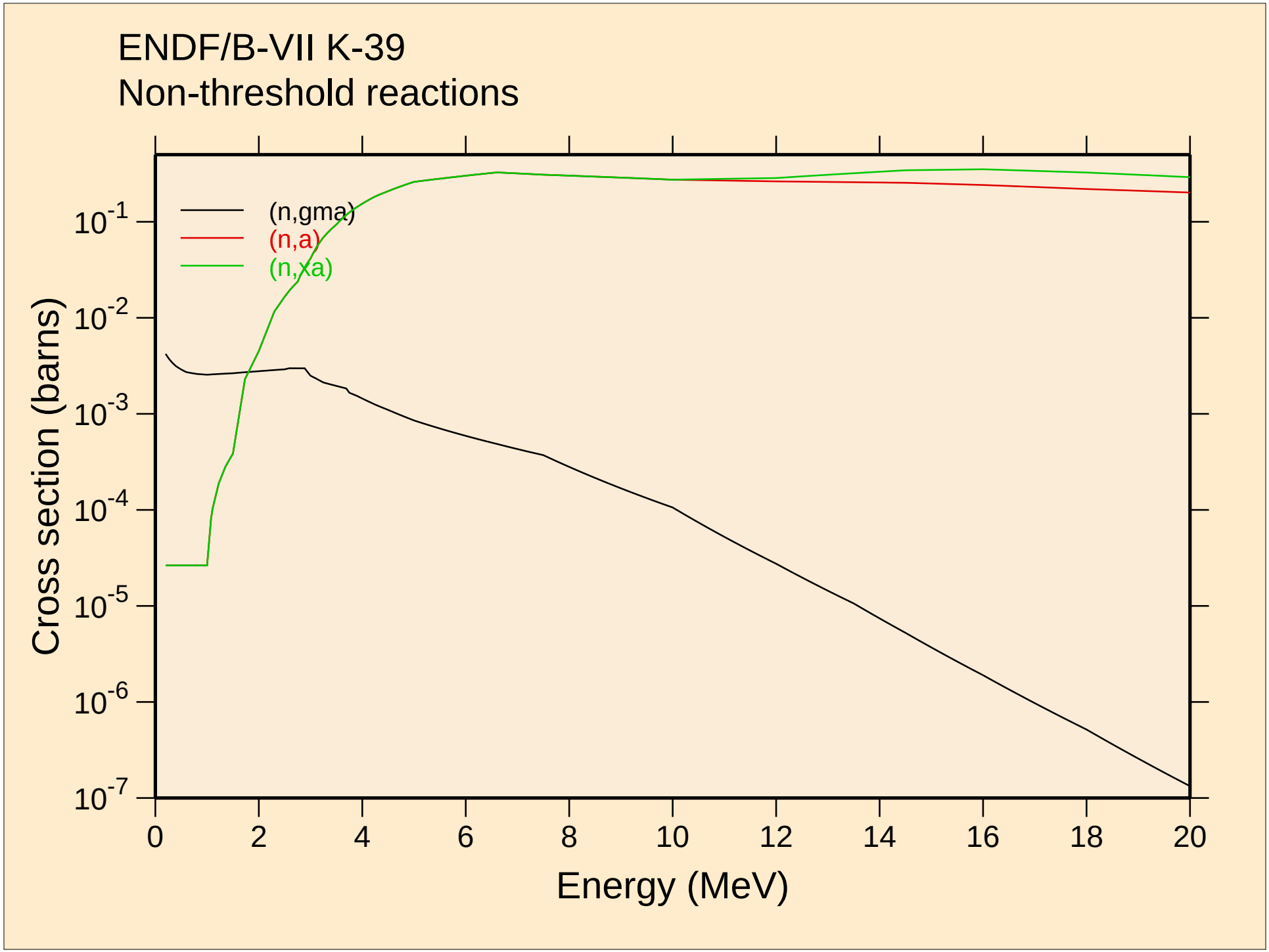

ENDF/B-VII K-39
Damage
damage
Damage (MeV-barns)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

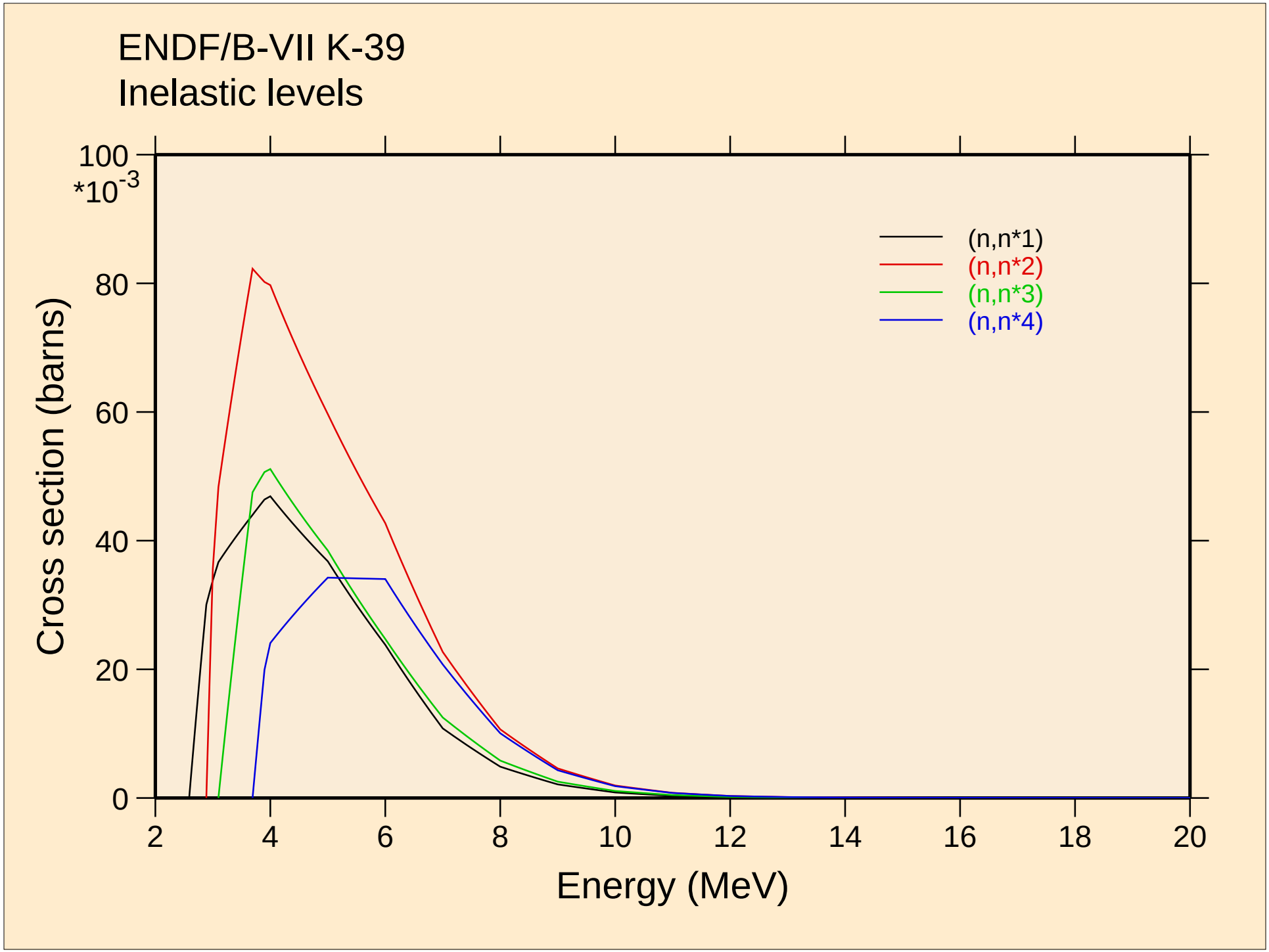

ENDF/B-VII K-39
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
Energy (MeV)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1

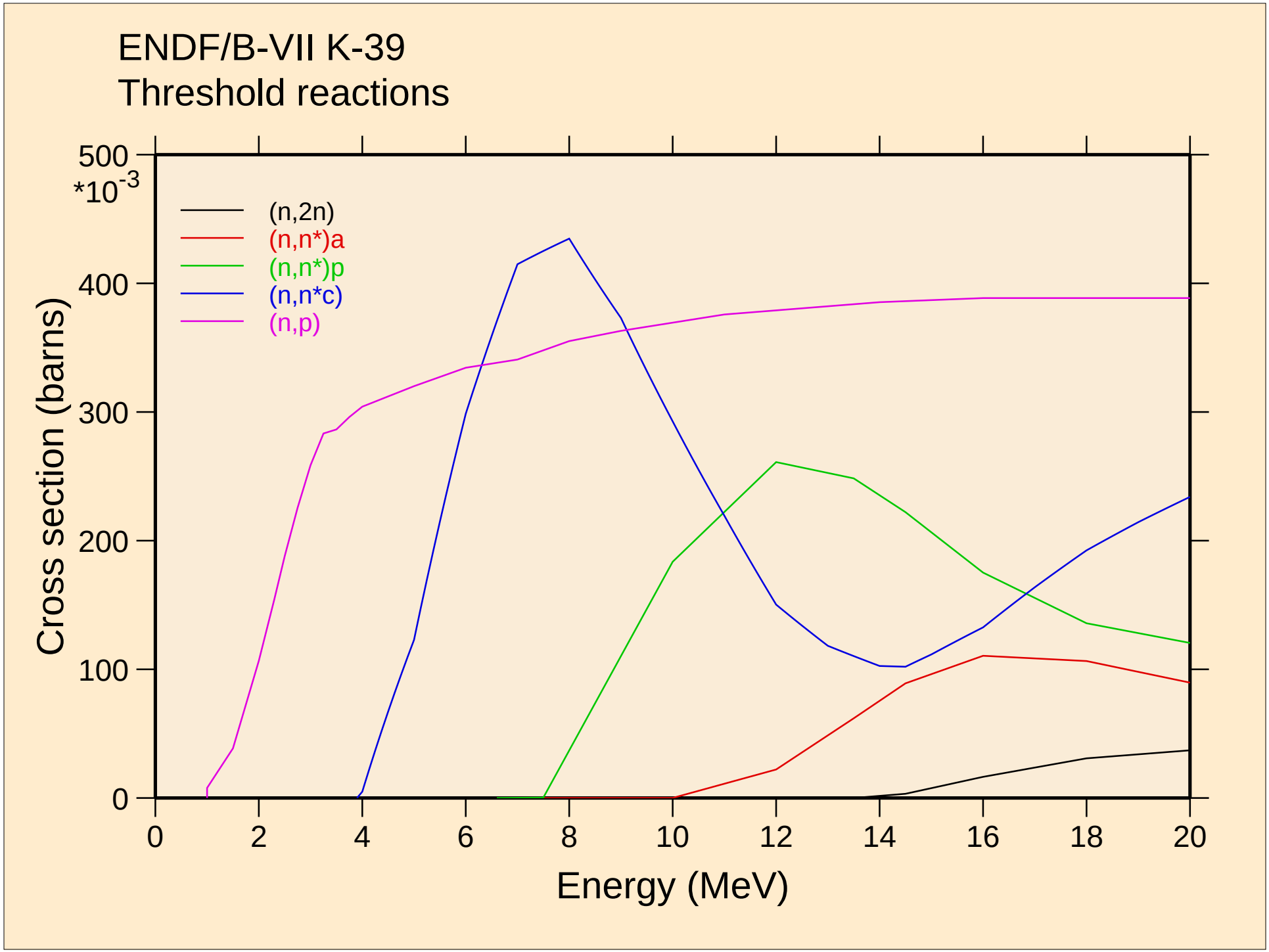

ENDF/B-VII K-39
Principal cross sections
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
0
5
10
15
20
total
absorption
elastic
gamma production

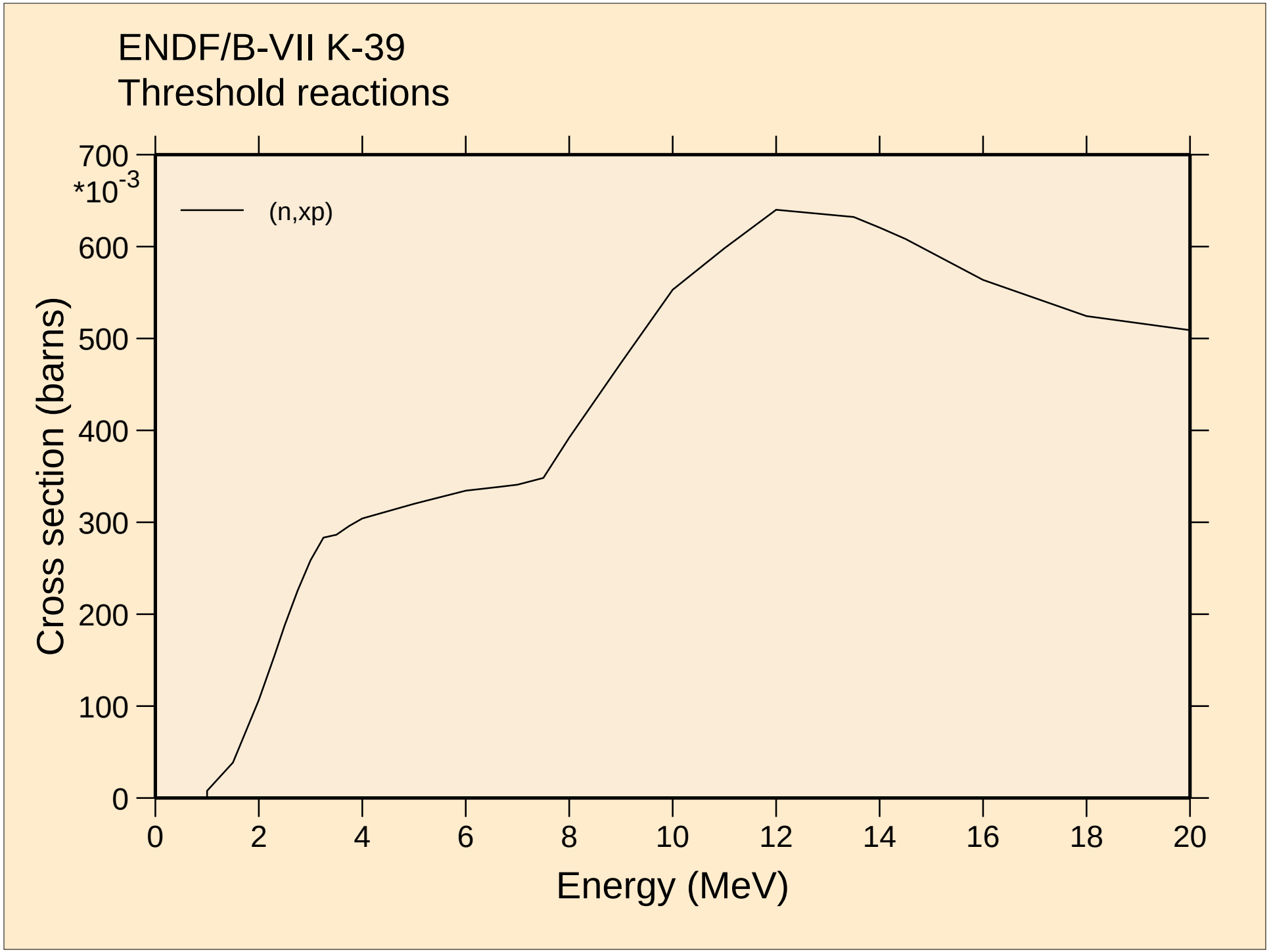

ENDF/B-VII K-39
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
1
2
3
4
5
0
5
10
15
20

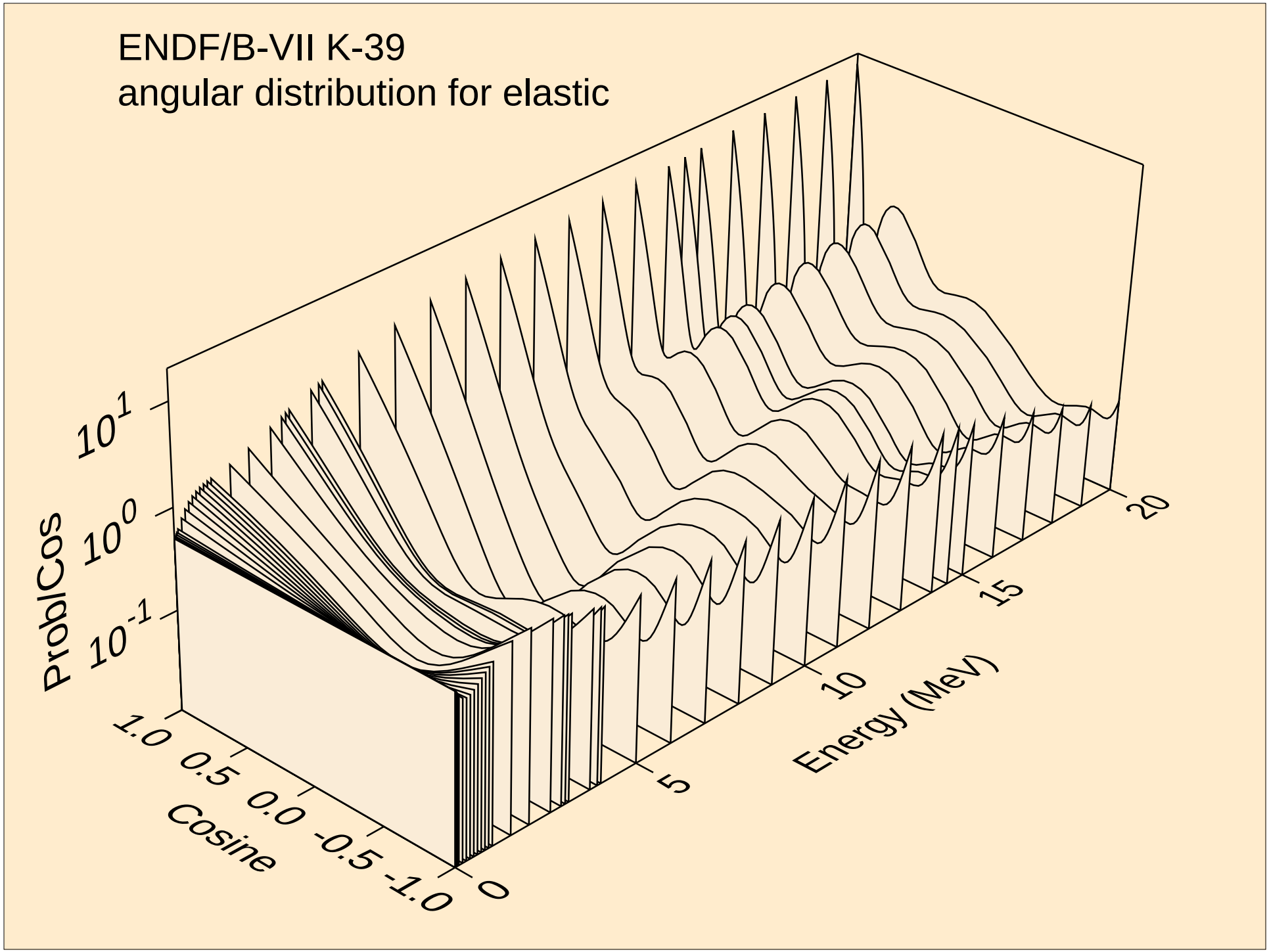

ENDF/B-VII K-39
Damage
300
*10-3
250
200
150
100
50
0
damage
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

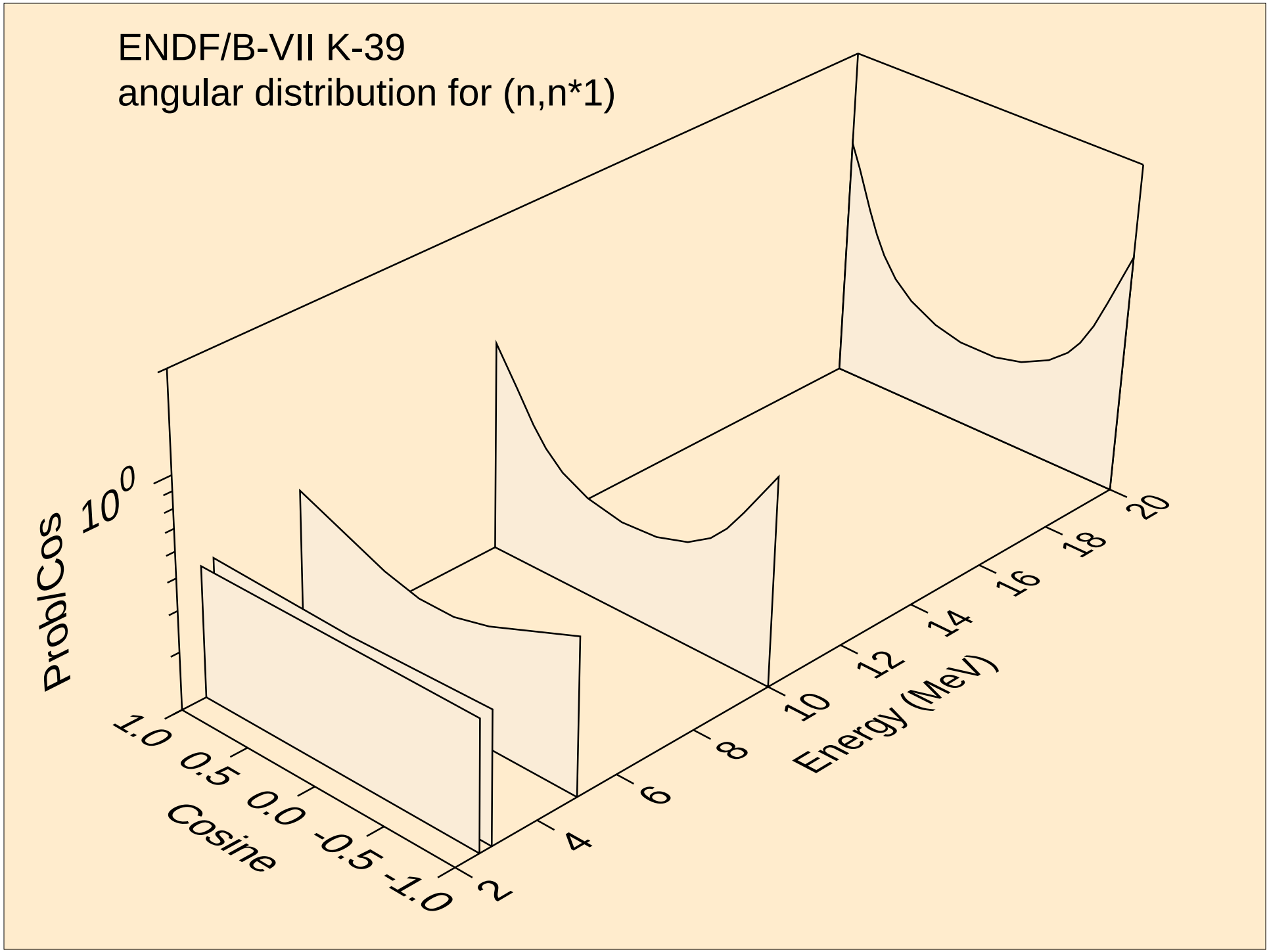

ENDF/B-VII K-39
Non-threshold reactions
(n,gma)
(n,a)
(n,xa)
Cross section (barns)
10-1
10-2
10-3
10-4
10-5
10-6
10-7
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

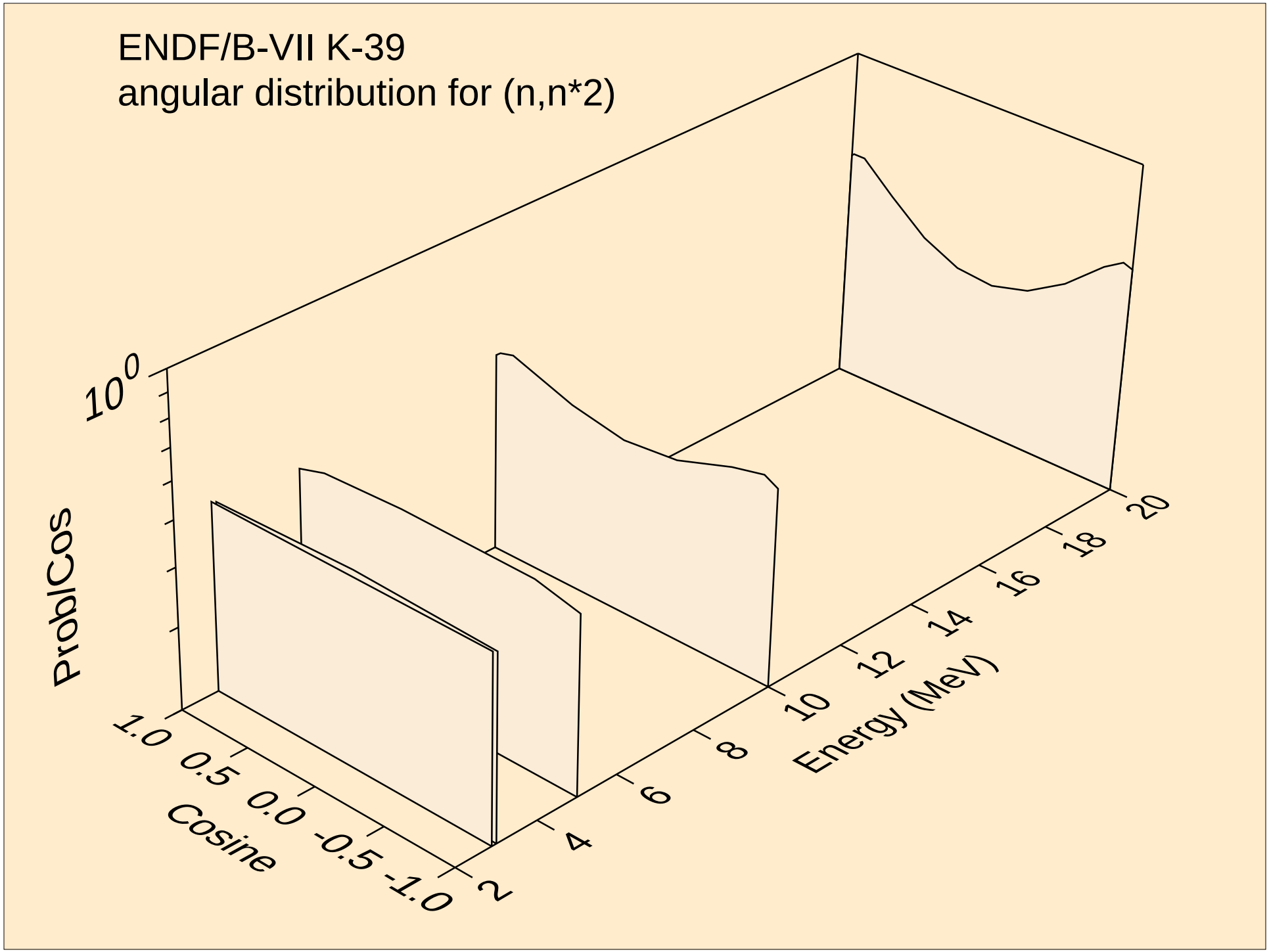

ENDF/B-VII K-39
Inelastic levels
100
*10-3
80
60
40
20
0
Cross section (barns)
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)

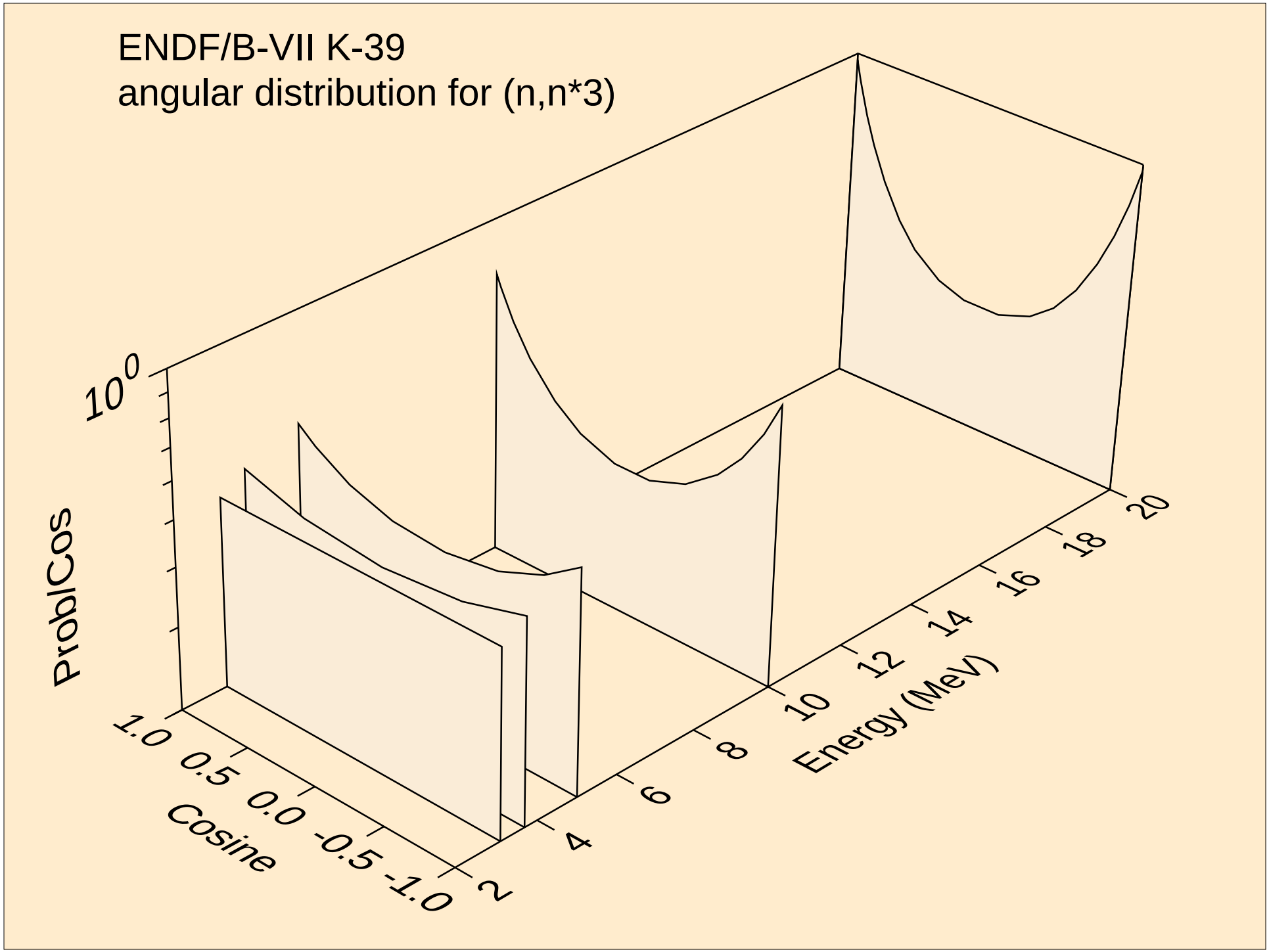

ENDF/B-VII K-39
Threshold reactions
500
*10-3
400
300
200
100
0
Cross section (barns)
(n,2n)
(n,n*)a
(n,n*)p
(n,n*c)
(n,p)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

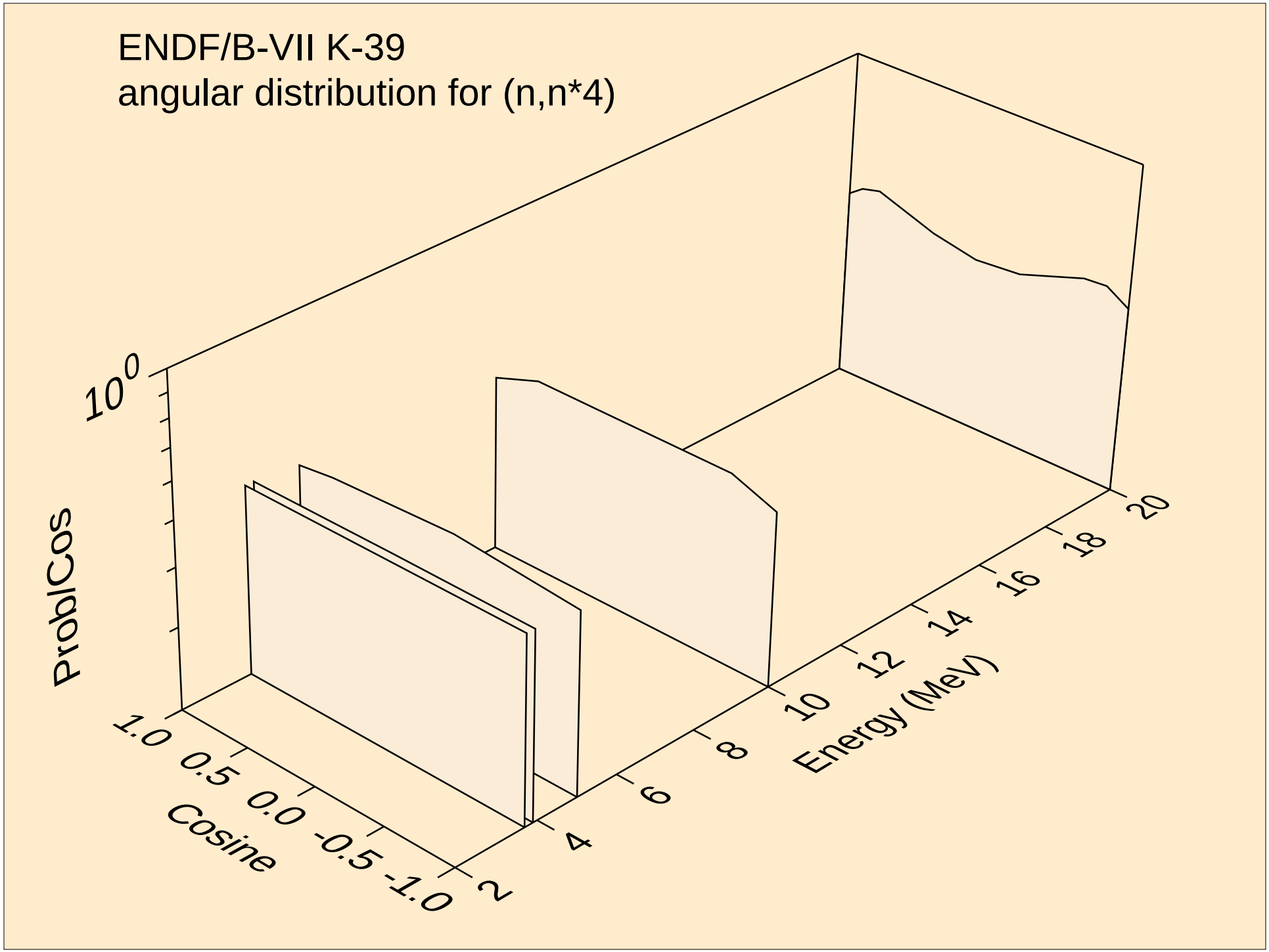

ENDF/B-VII K-39
Threshold reactions
700
*10-3
600
500
400
300
200
100
0
(n,xp)
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

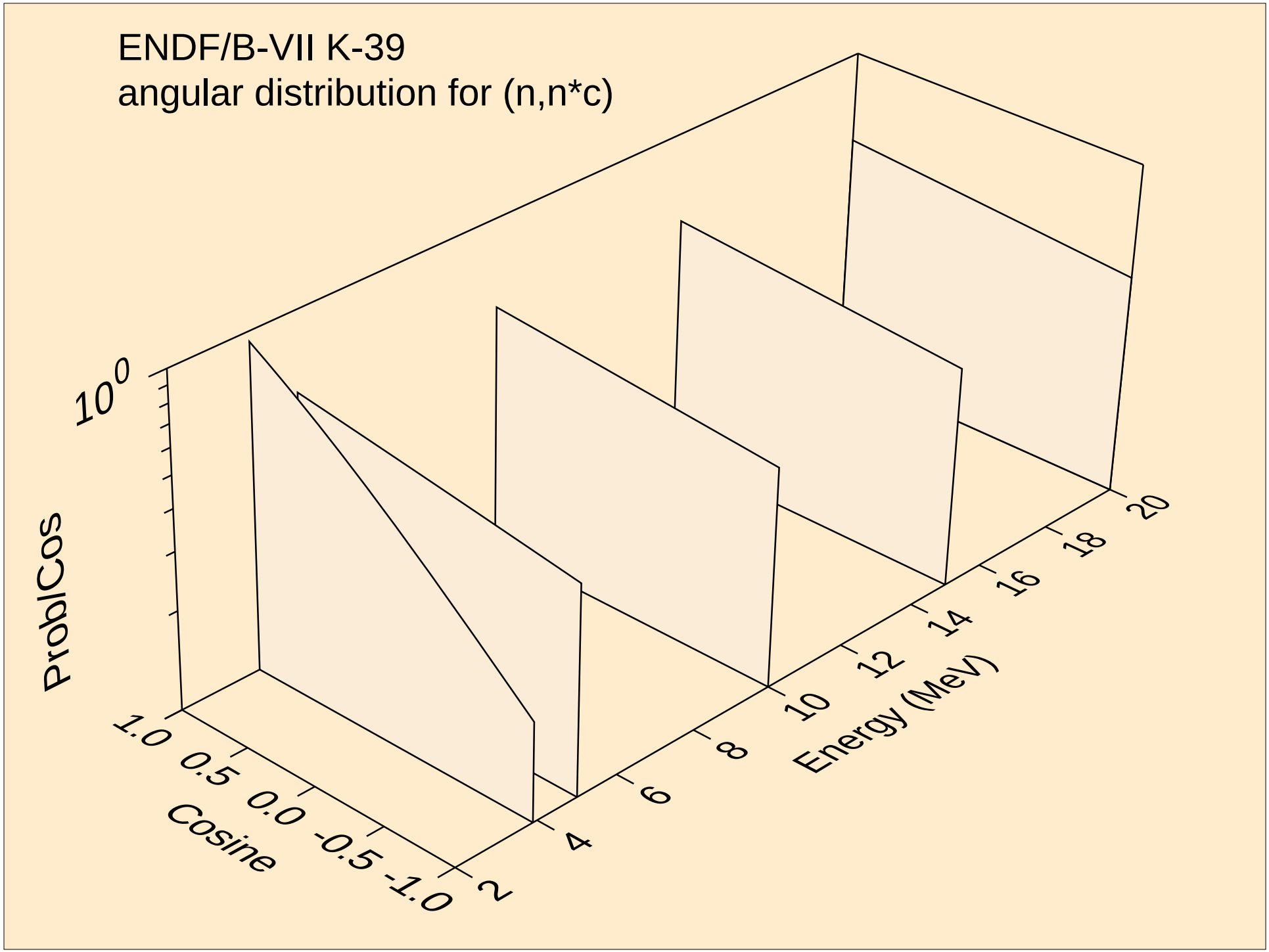

ENDF/B-VII K-39
angular distribution for elastic
Prob\Cos
10^{1}
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

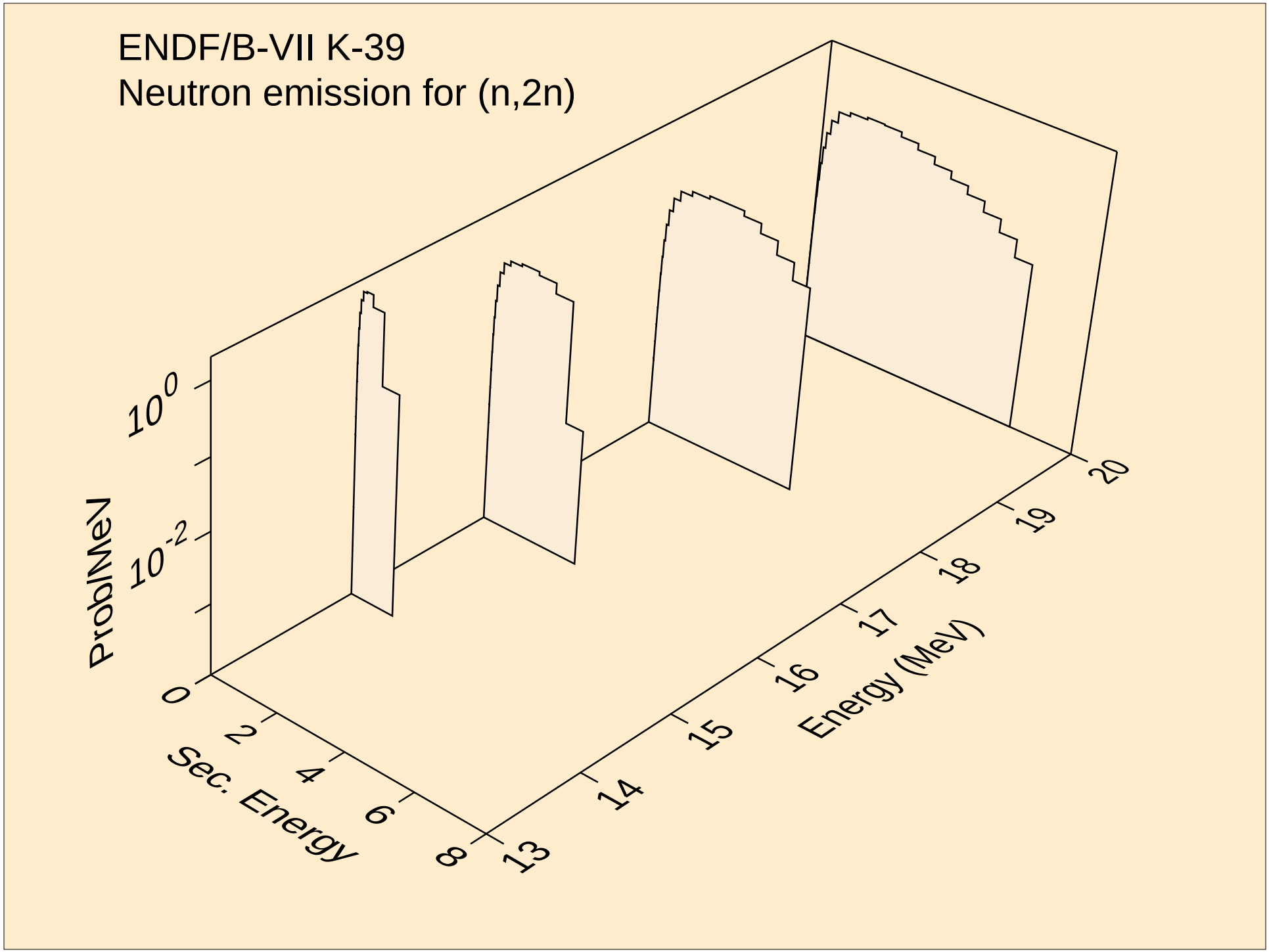

ENDF/B-VII K-39
angular distribution for (n,n*1)
ProbICos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

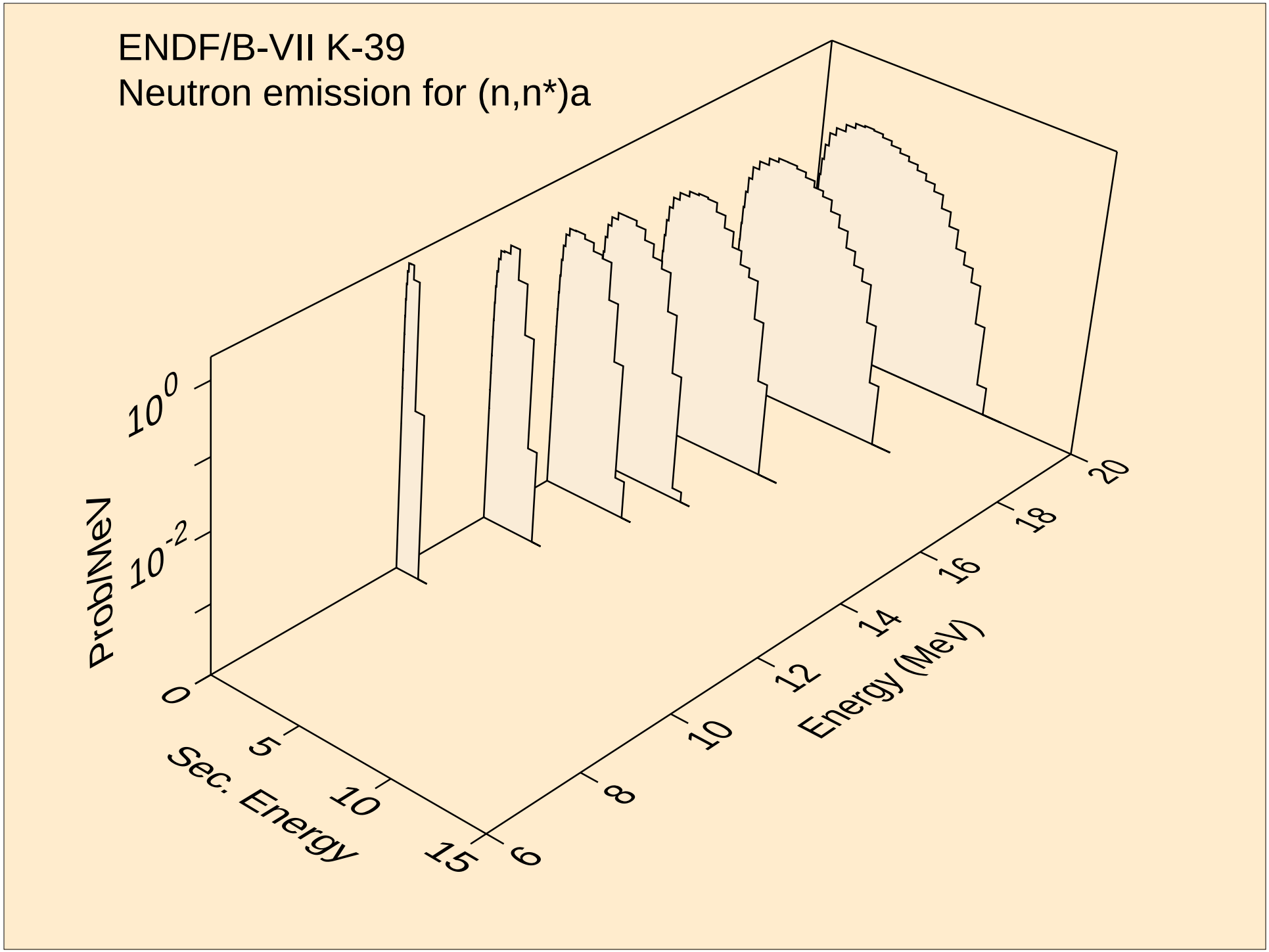

ENDF/B-VII K-39
angular distribution for (n,n*2)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

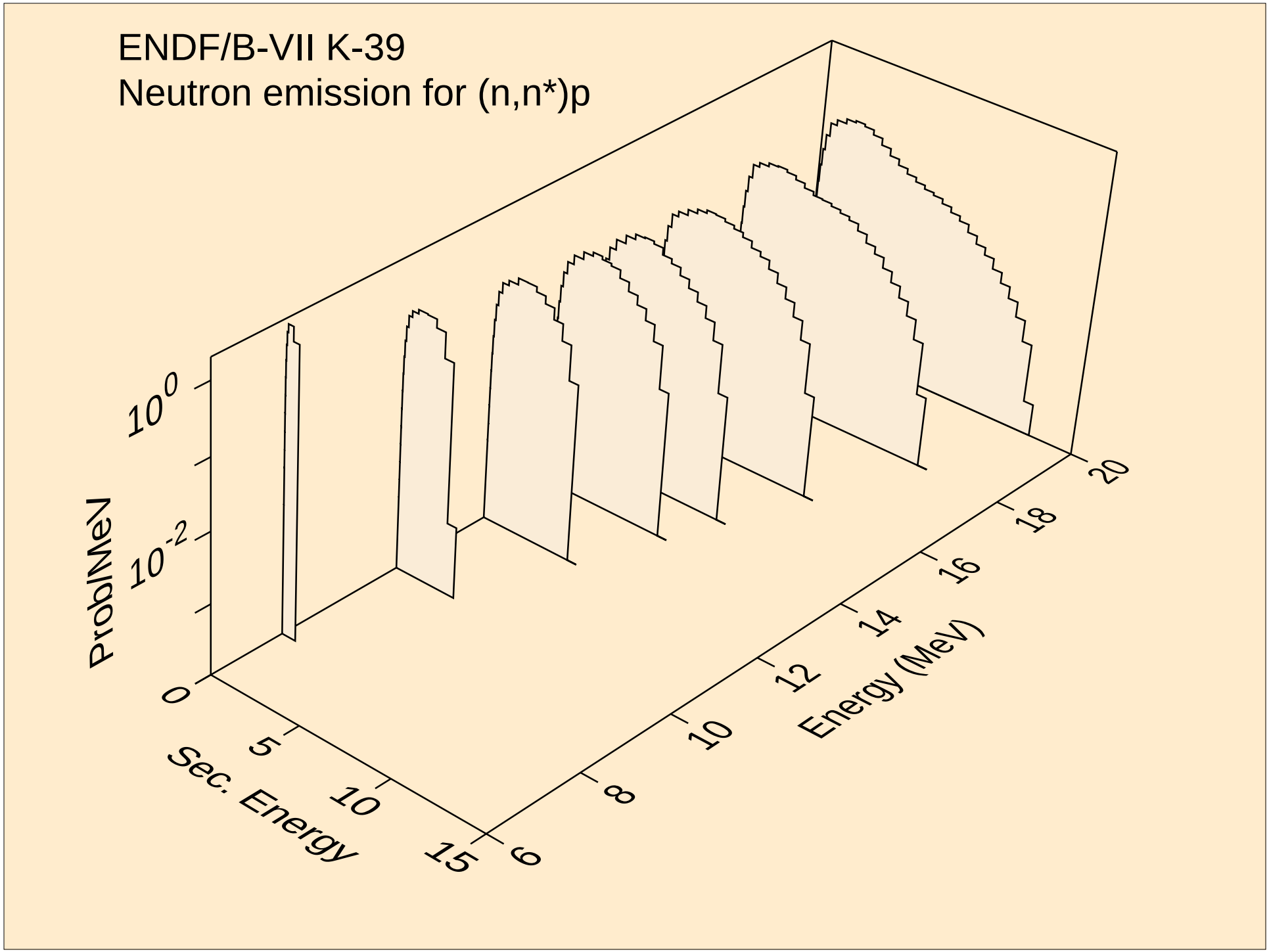

ENDF/B-VII K-39
angular distribution for (n,n*3)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

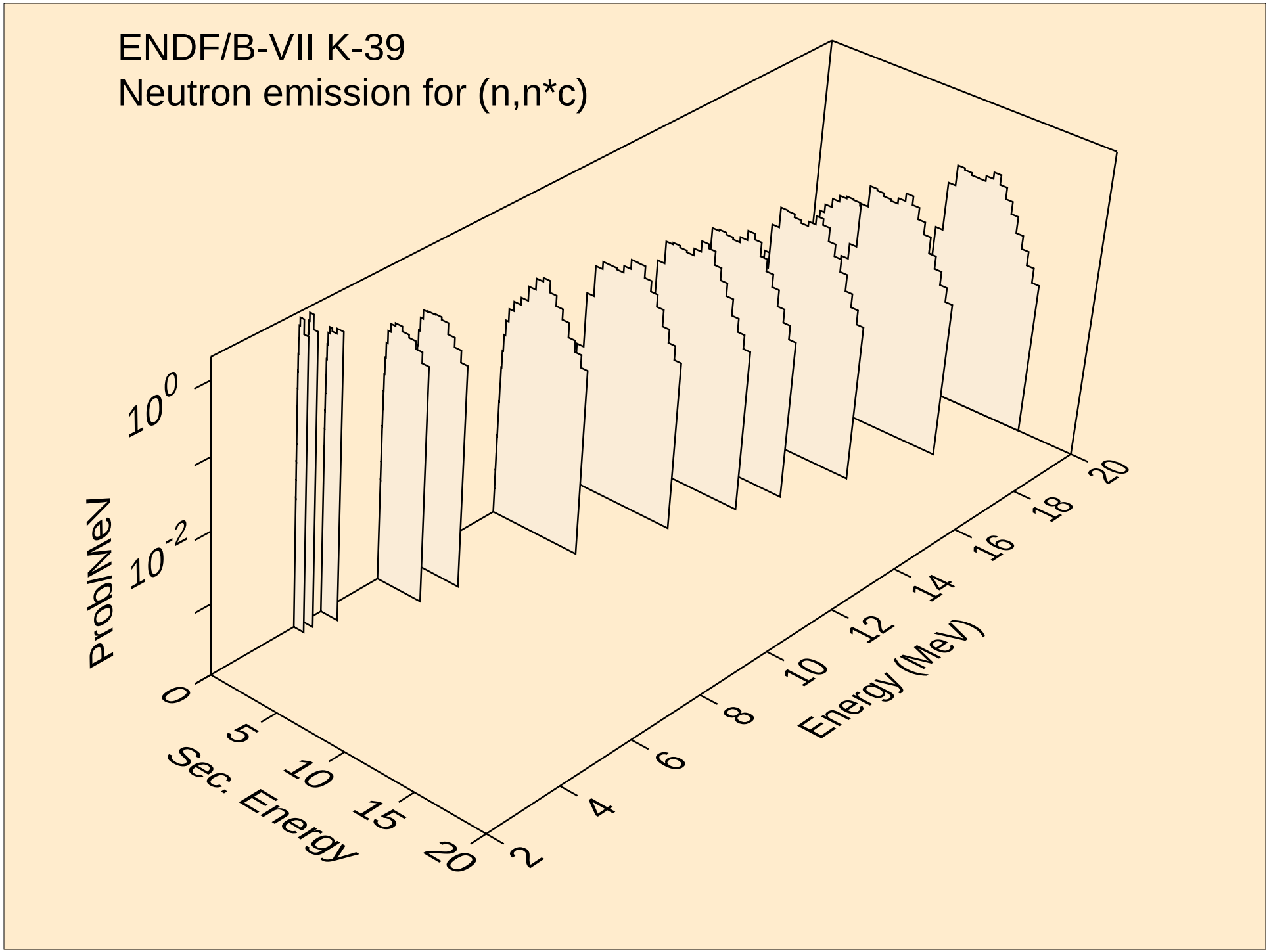

ENDF/B-VII K-39
angular distribution for (n,n*4)
10^0
Prob\Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

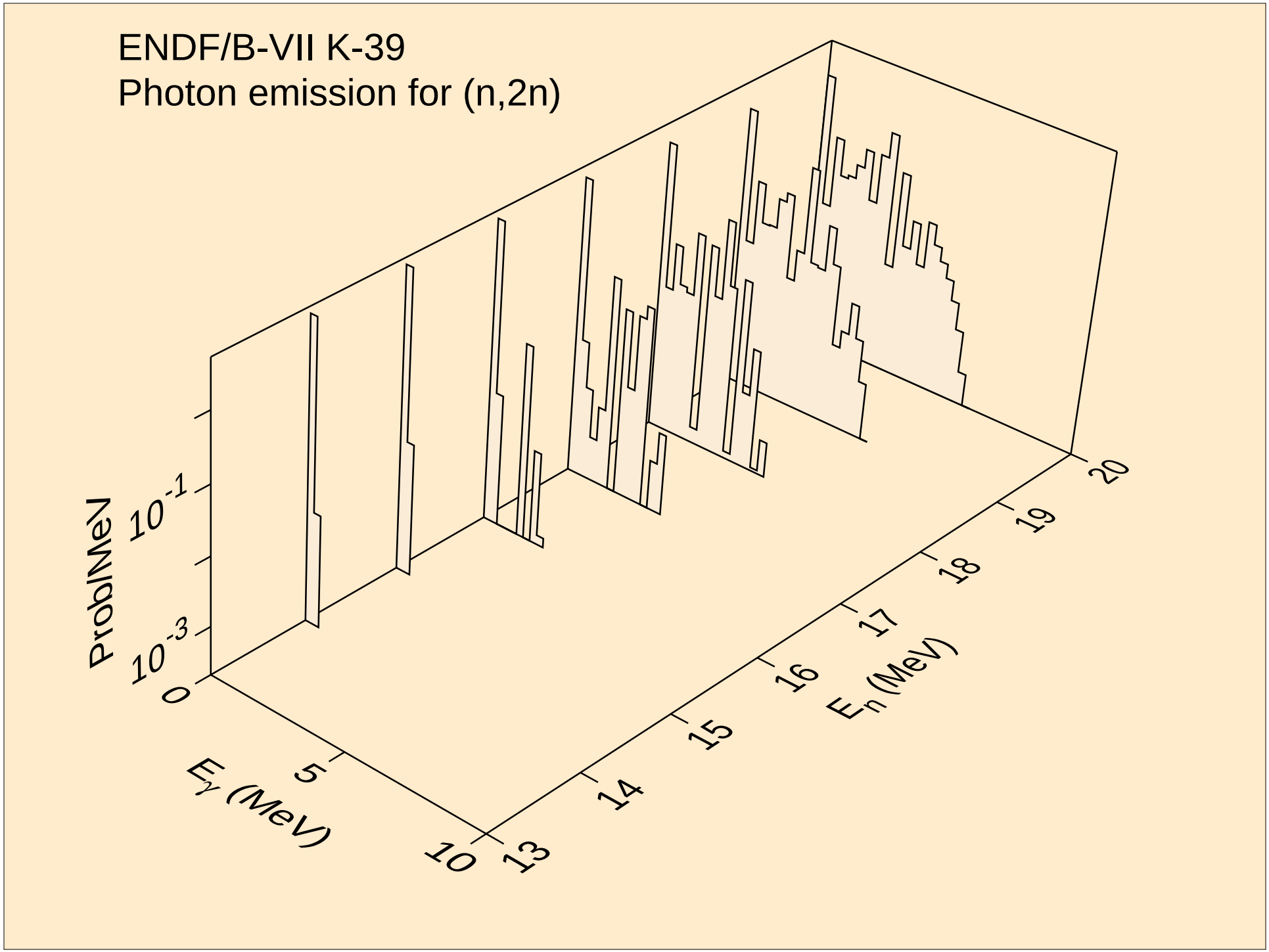

ENDF/B-VII K-39
angular distribution for (n,n*c)
10^0
ProbICos
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

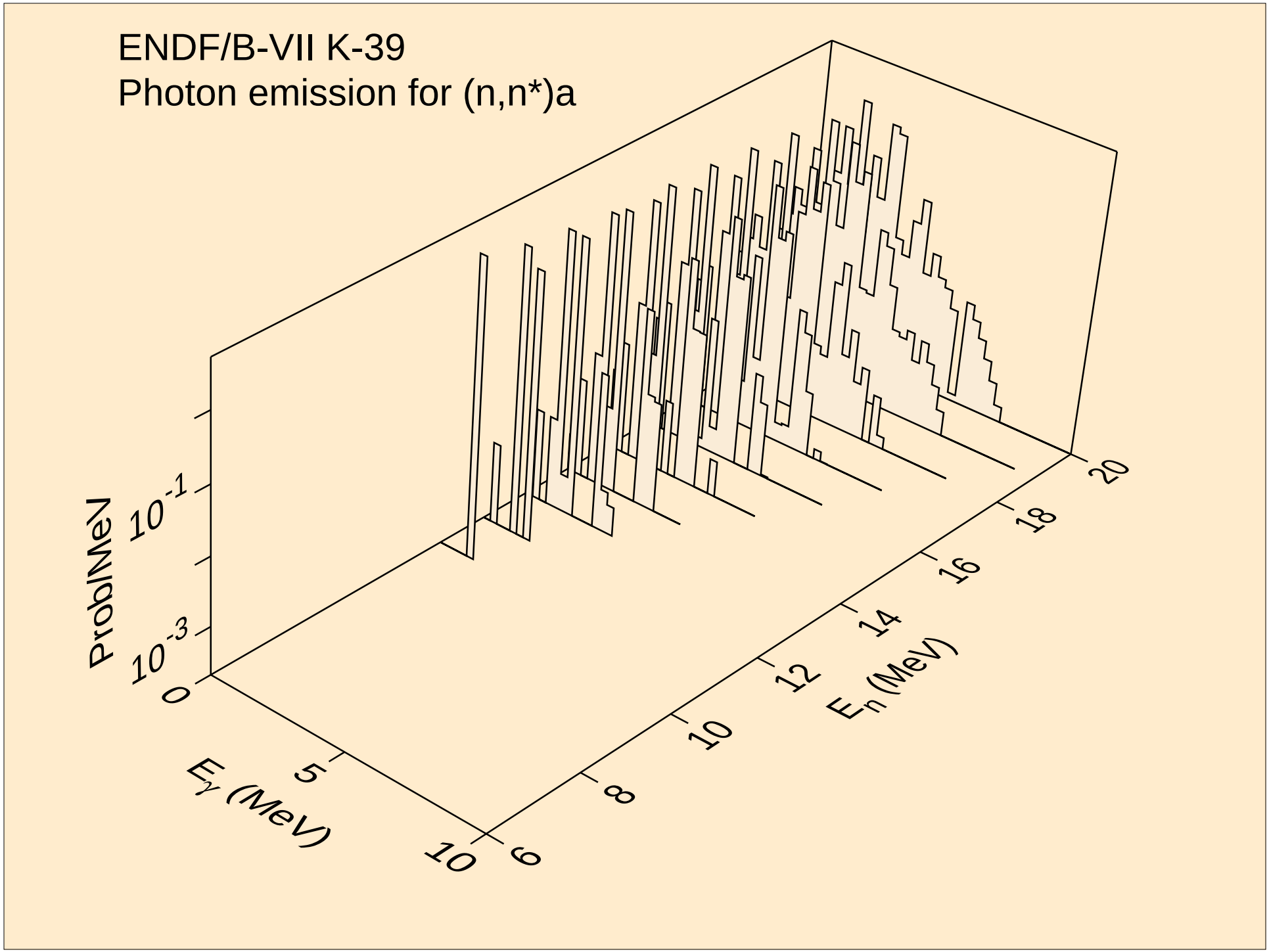

ENDF/B-VII K-39
Neutron emission for (n,2n)
Prob/MeV
10^{0}
10^{-2}
0
2
4
6
8
Sec. Energy
13
14
15
16
17
18
19
20
Energy (MeV)

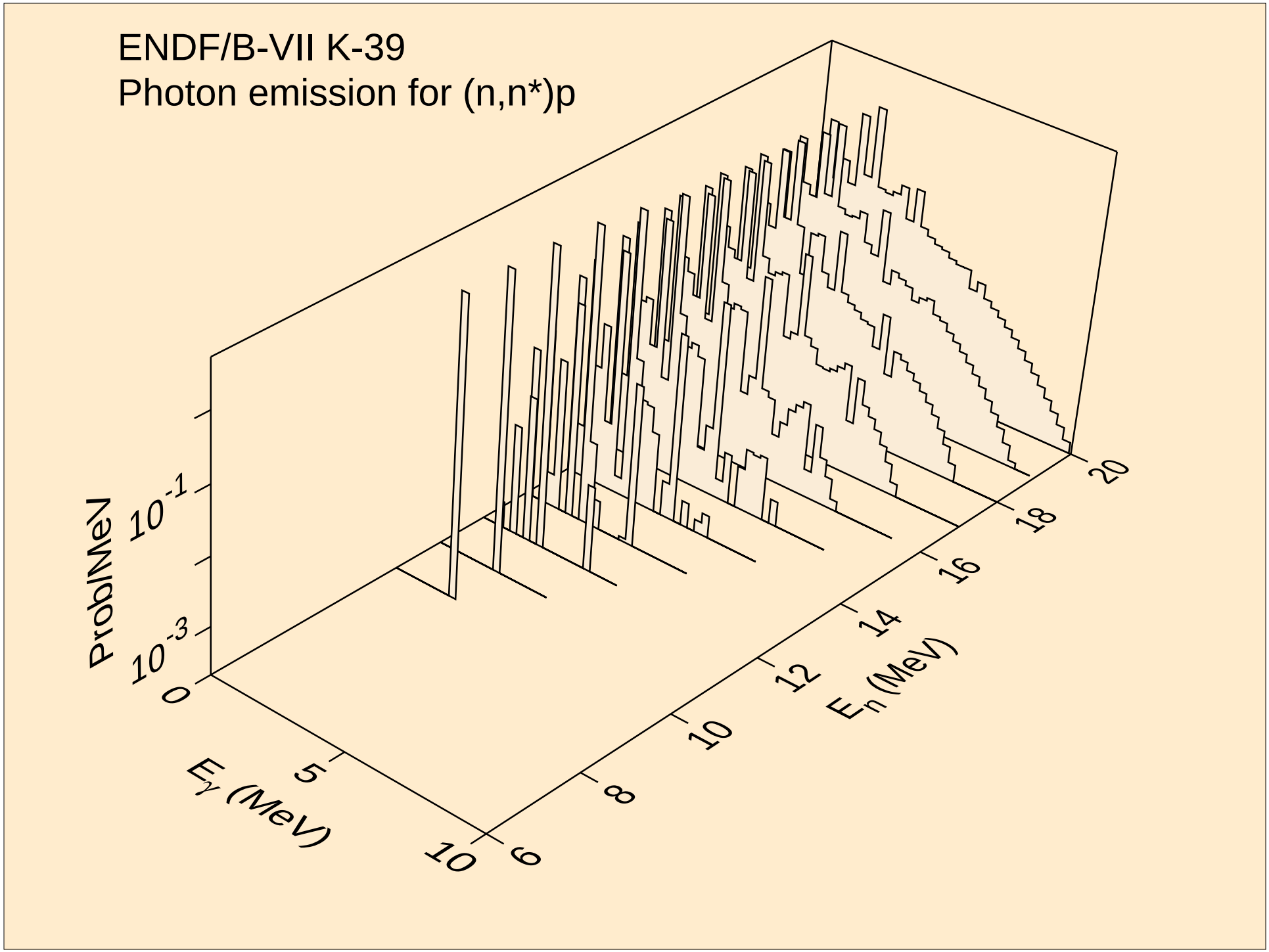

ENDF/B-VII K-39
Neutron emission for (n,n*)a
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
5
10
15
6
8
10
12
14
16
18
20
Energy (MeV)

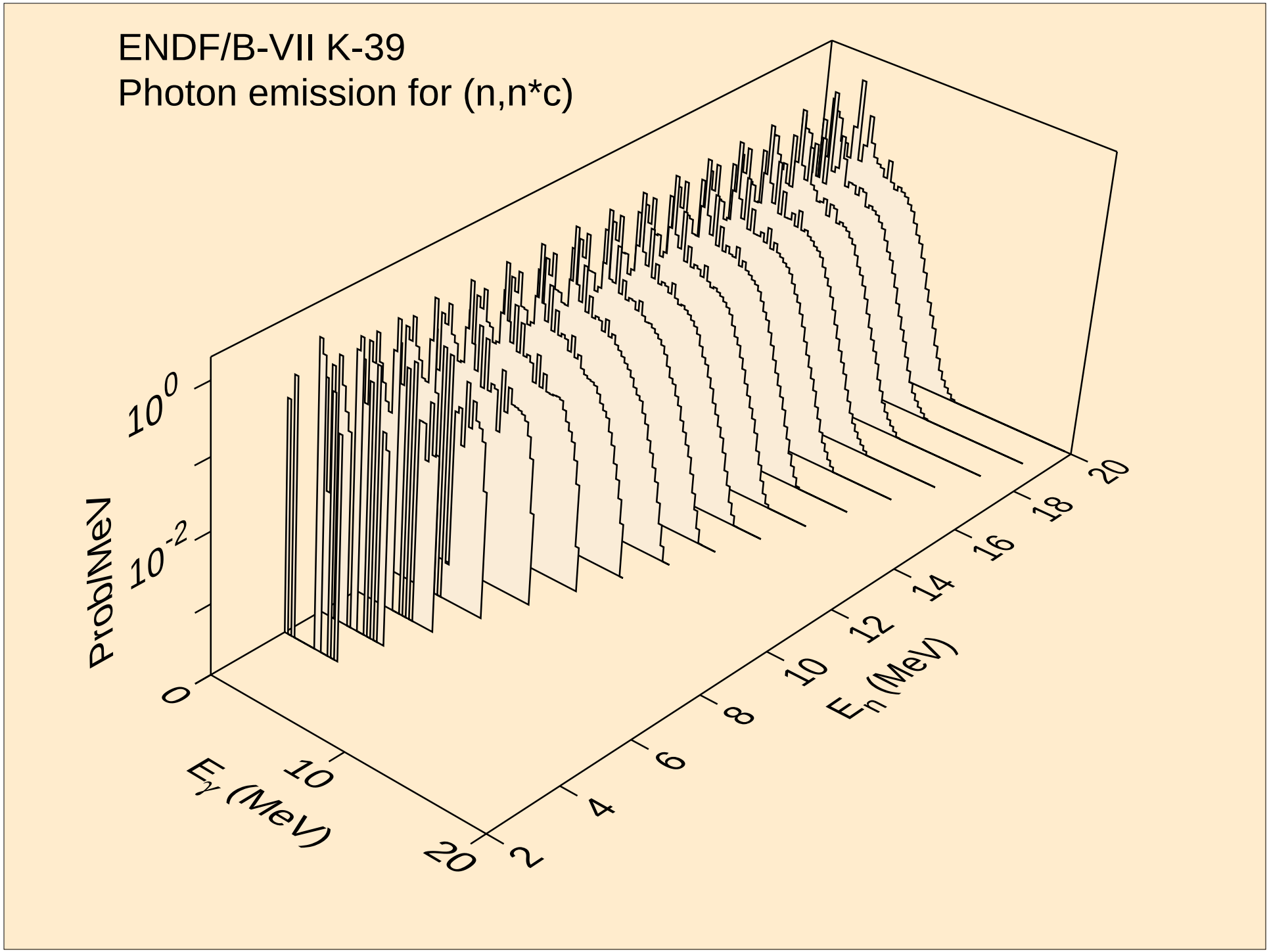

ENDF/B-VII K-39
Neutron emission for (n,n*)p
Prob/MeV
10^{0}
10^{-2}
0
5
10
15
Sec. Energy
6
8
10
12
14
16
18
20
Energy (MeV)

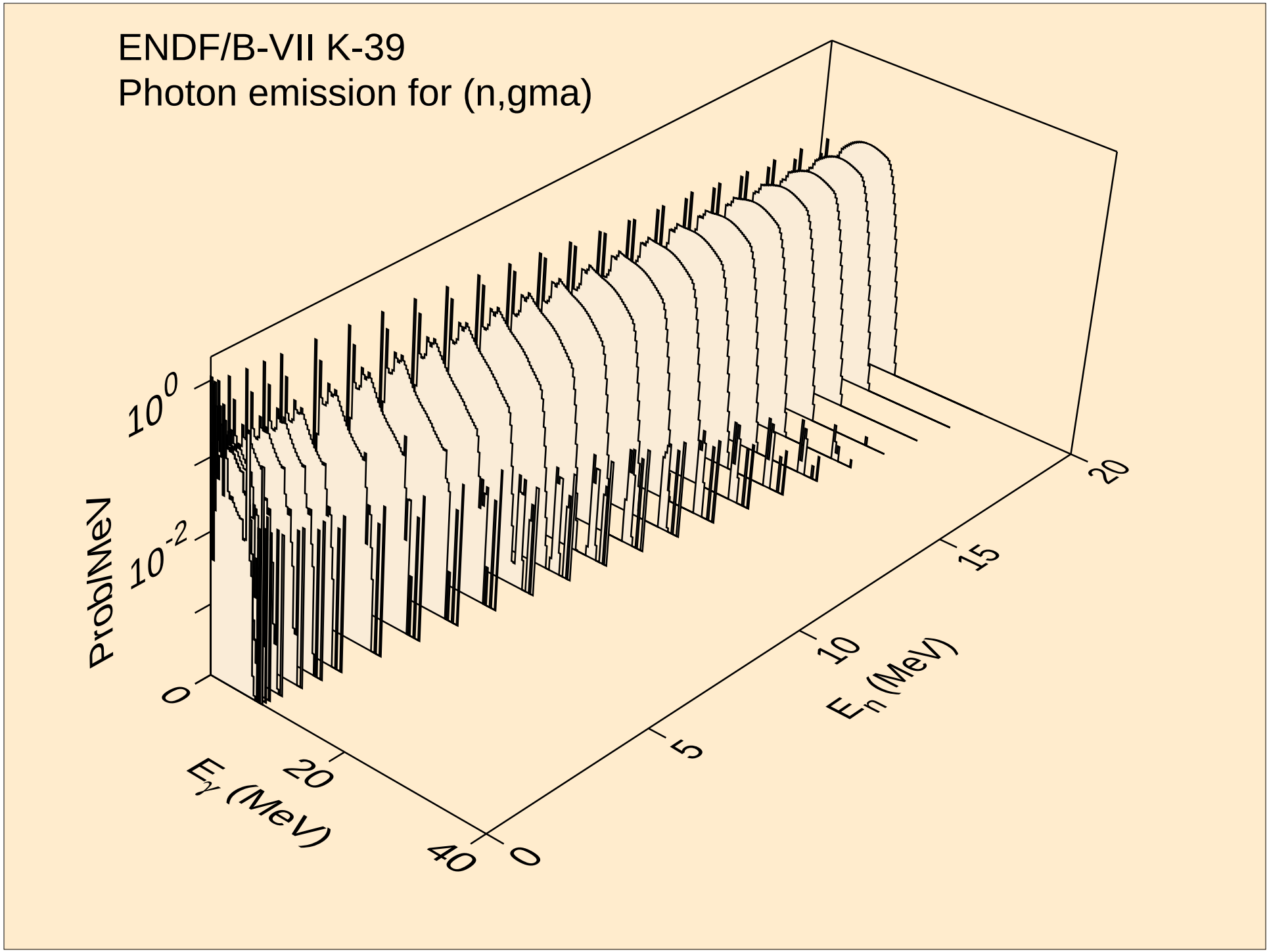

ENDF/B-VII K-39
Neutron emission for (n,n*c)
Prob/MeV
10^{0}
10^{-2}
0
5
10
15
20
Sec. Energy
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

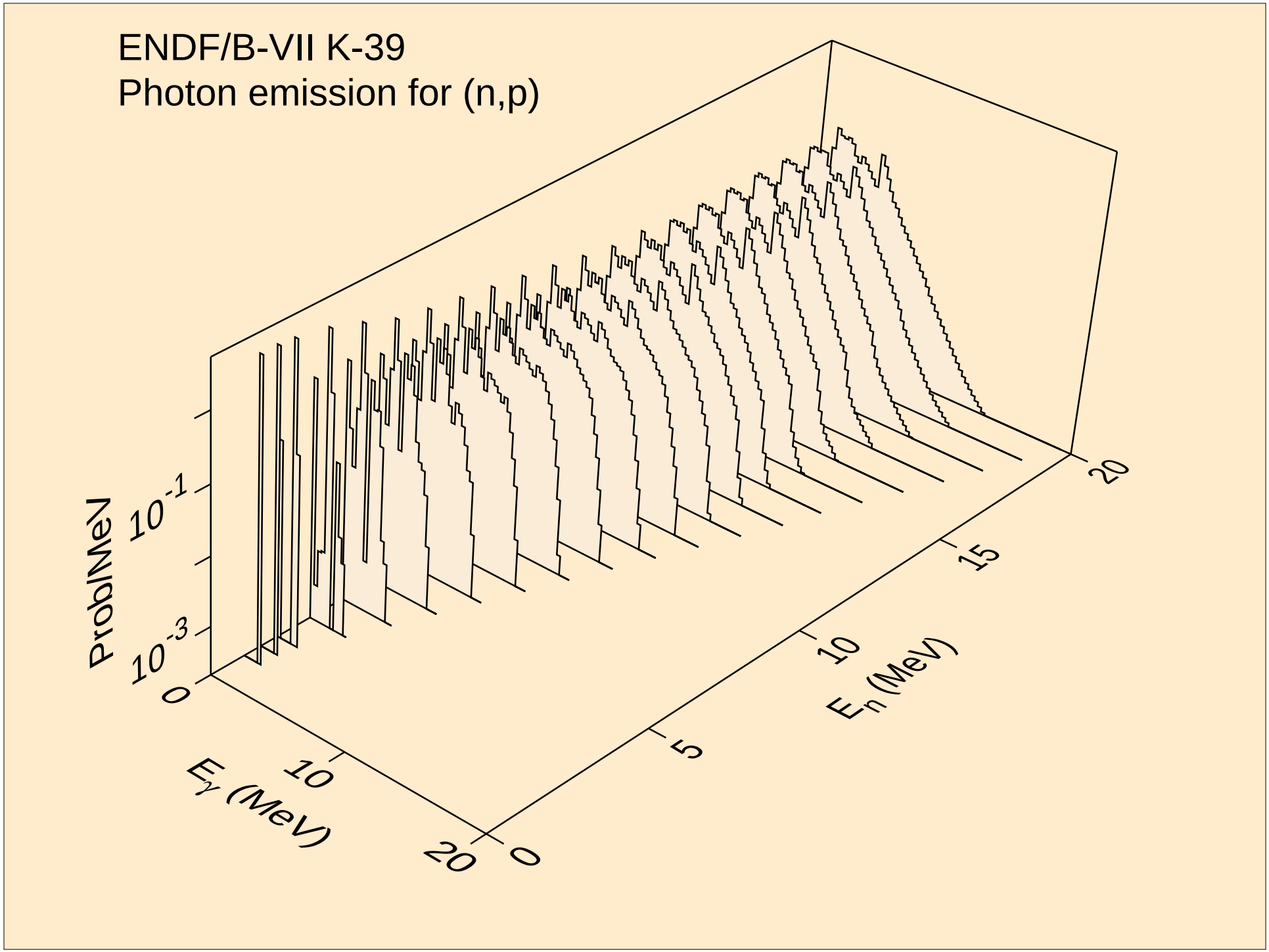

ENDF/B-VII K-39
Photon emission for (n,2n)
Prob/MeV
10^-1
10^-3
0
5
10
Eγ (MeV)
13
14
15
16
17
18
19
20
En (MeV)

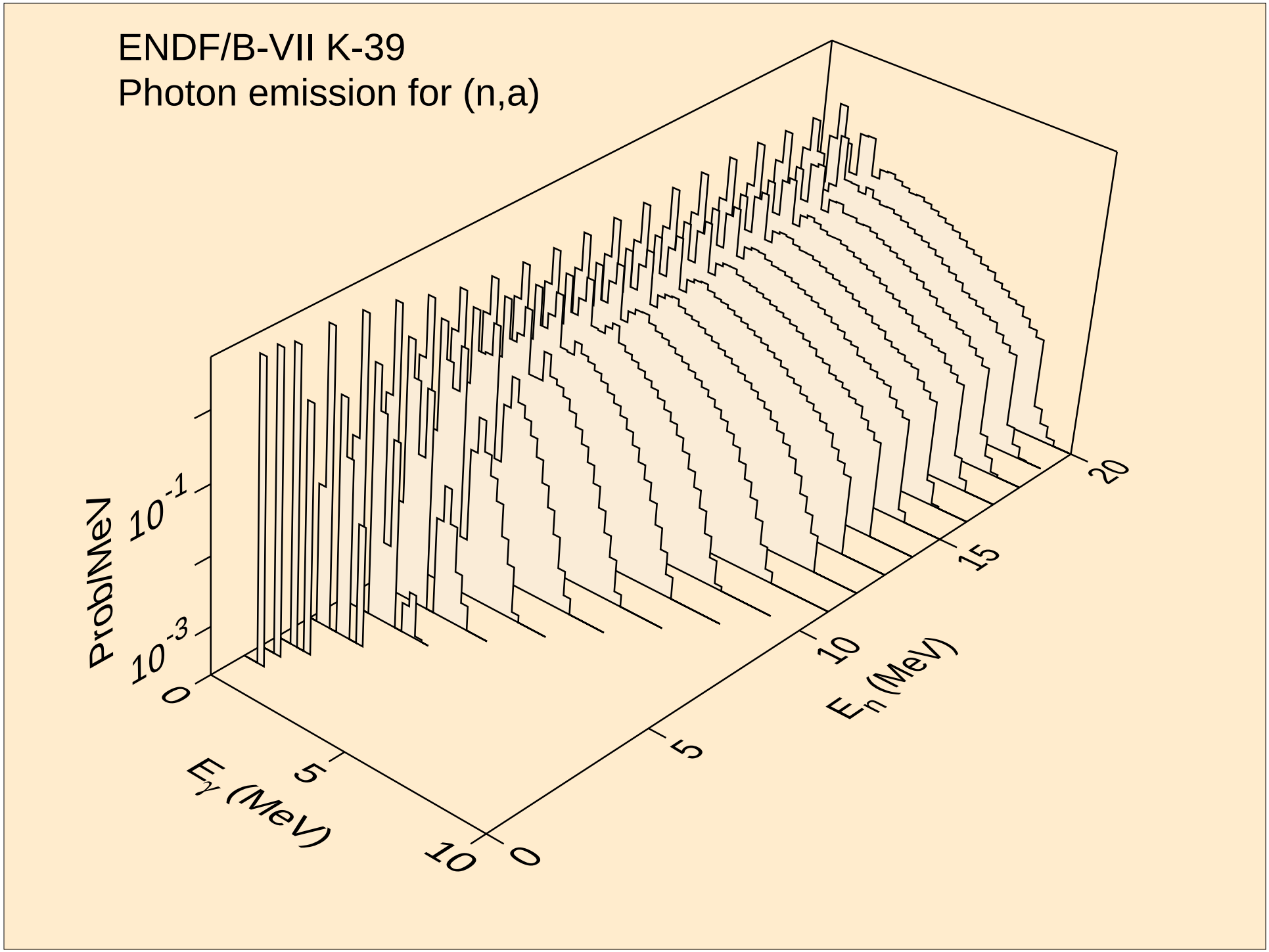

ENDF/B-VII K-39
Photon emission for (n,n*)a
Prob/MeV
10^-1
10^-3
0
5
10
Eγ (MeV)
6
8
10
12
14
16
18
20
En (MeV)

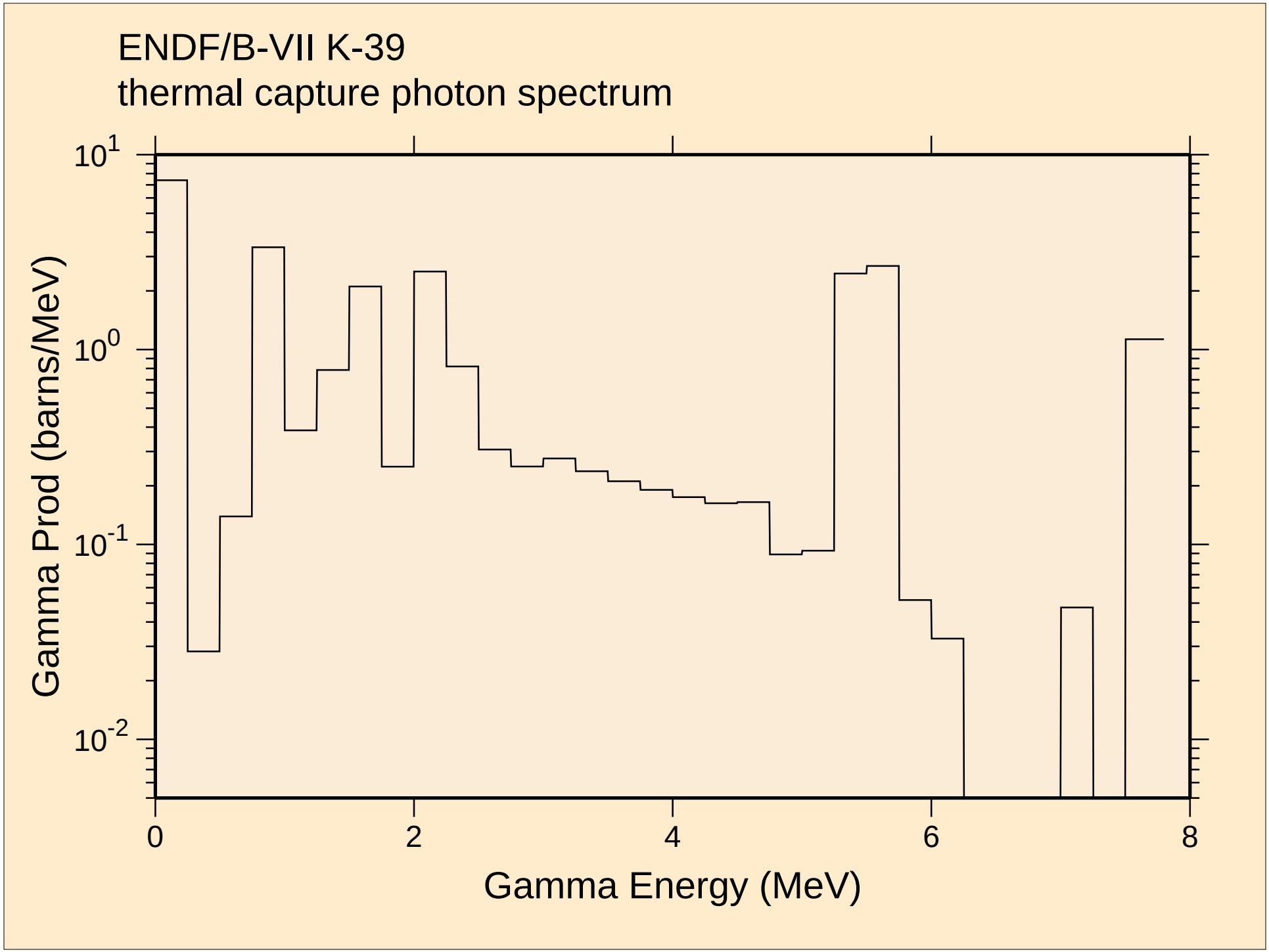

ENDF/B-VII K-39
Photon emission for (n,n*)p
Prob/MeV
10^-1
10^-3
0
5
10
Eγ (MeV)
6
8
10
12
14
16
18
20
En (MeV)

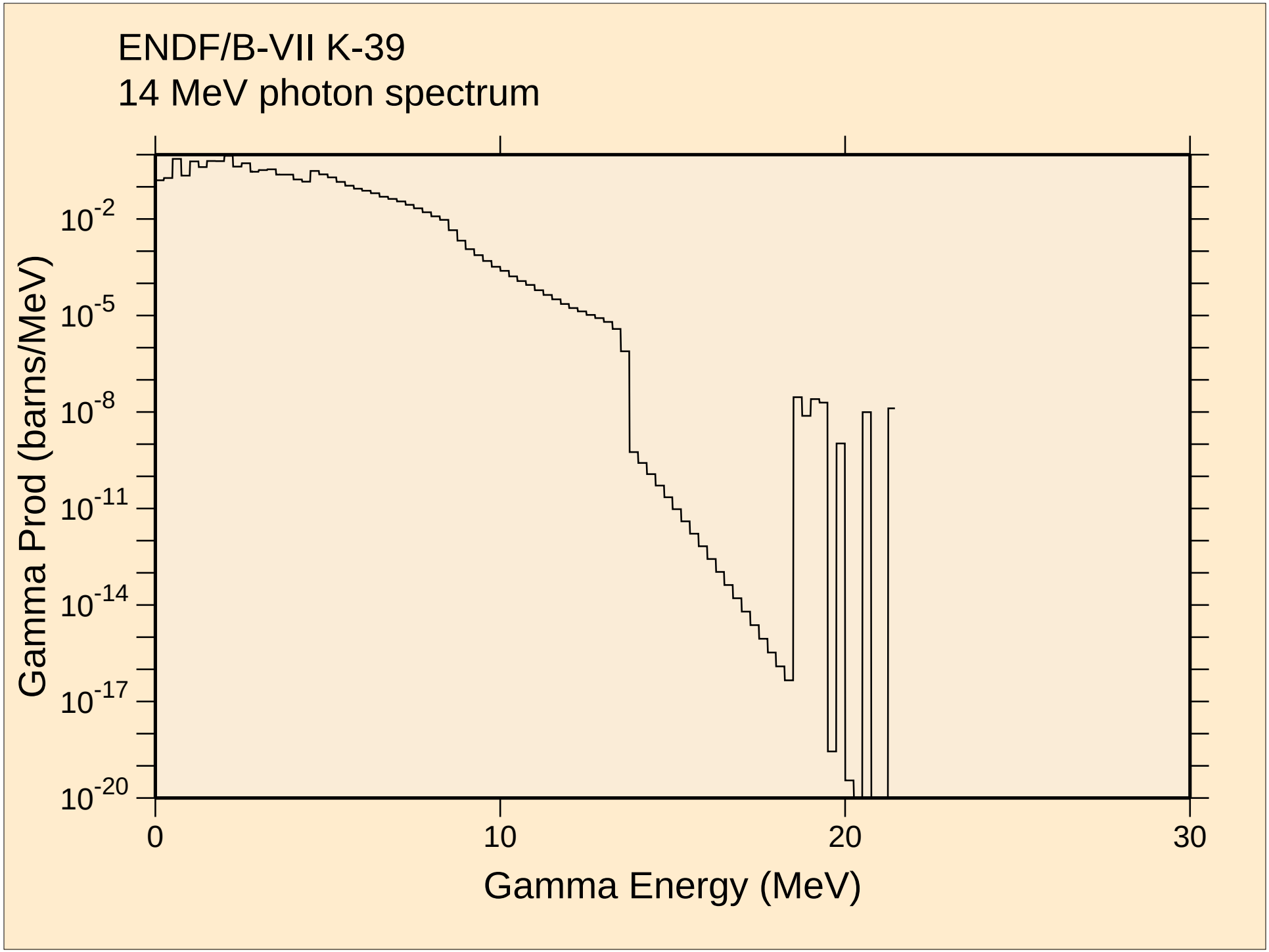

ENDF/B-VII K-39
Photon emission for (n,n*c)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
10
20
2
4
6
8
10
12
14
16
18
20
E_n (MeV)


ENDF/B-VII K-39
Photon emission for (n,gma)
Prob/MeV
10^{0}
10^{-2}
0
E_γ (MeV)
20
40
0
5
10
15
20
E_n (MeV)


ENDF/B-VII K-39
Photon emission for (n,p)
Prob/MeV
10^-1
10^-3
0
10
20
Eγ (MeV)
0
5
10
15
20
En (MeV)


ENDF/B-VII K-39
Photon emission for (n,a)
Prob/MeV
10^-1
10^-3
0
5
10
E_γ (MeV)
0
5
10
15
20
E_n (MeV)


ENDF/B-VII K-39
thermal capture photon spectrum
Gamma Prod (barns/MeV)
10^1
10^0
10^-1
10^-2
0
2
4
6
8
Gamma Energy (MeV)


ENDF/B-VII K-39
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10-2
10-5
10-8
10-11
10-14
10-17
10-20
0
10
20
30
Gamma Energy (MeV)