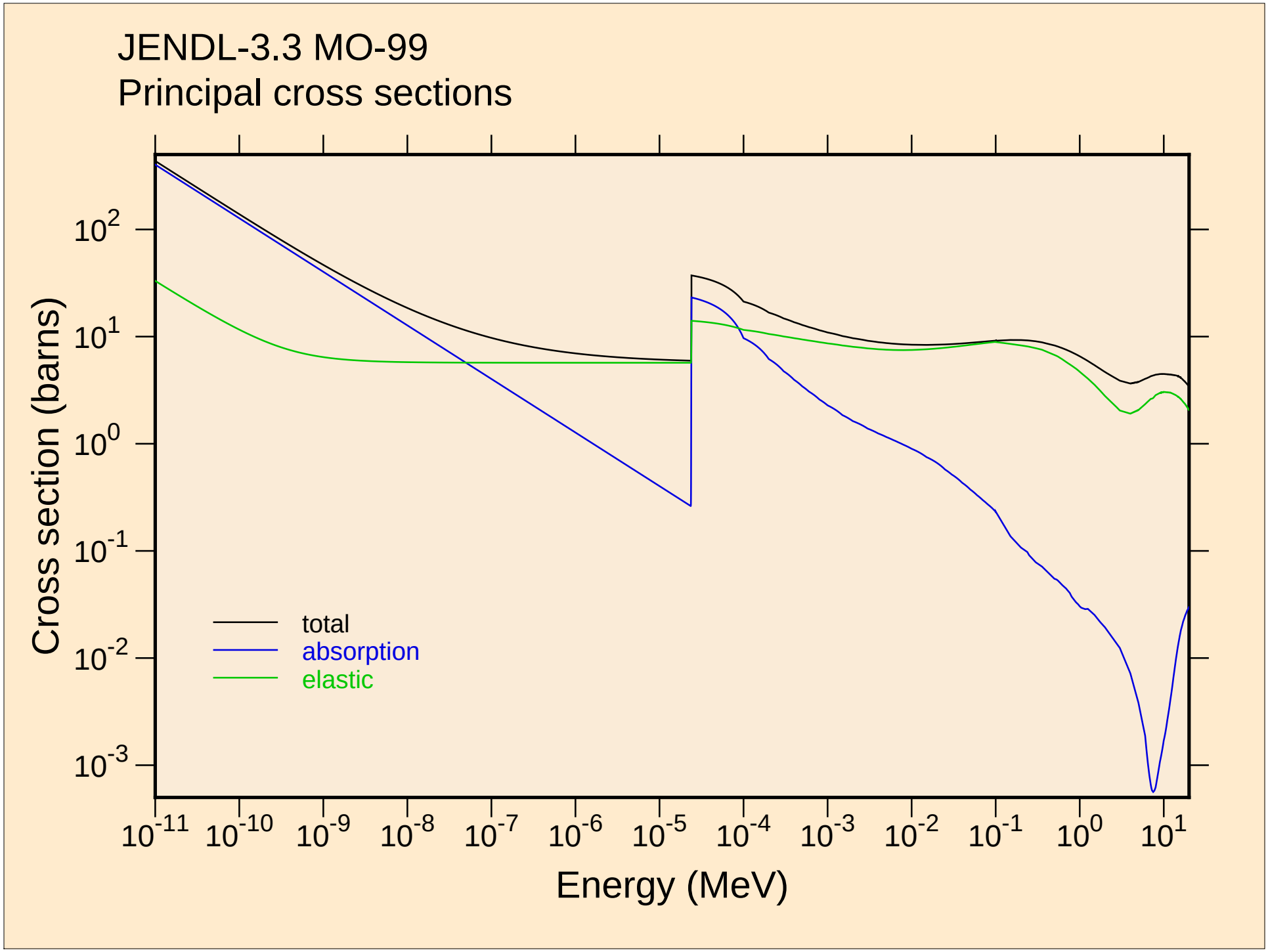
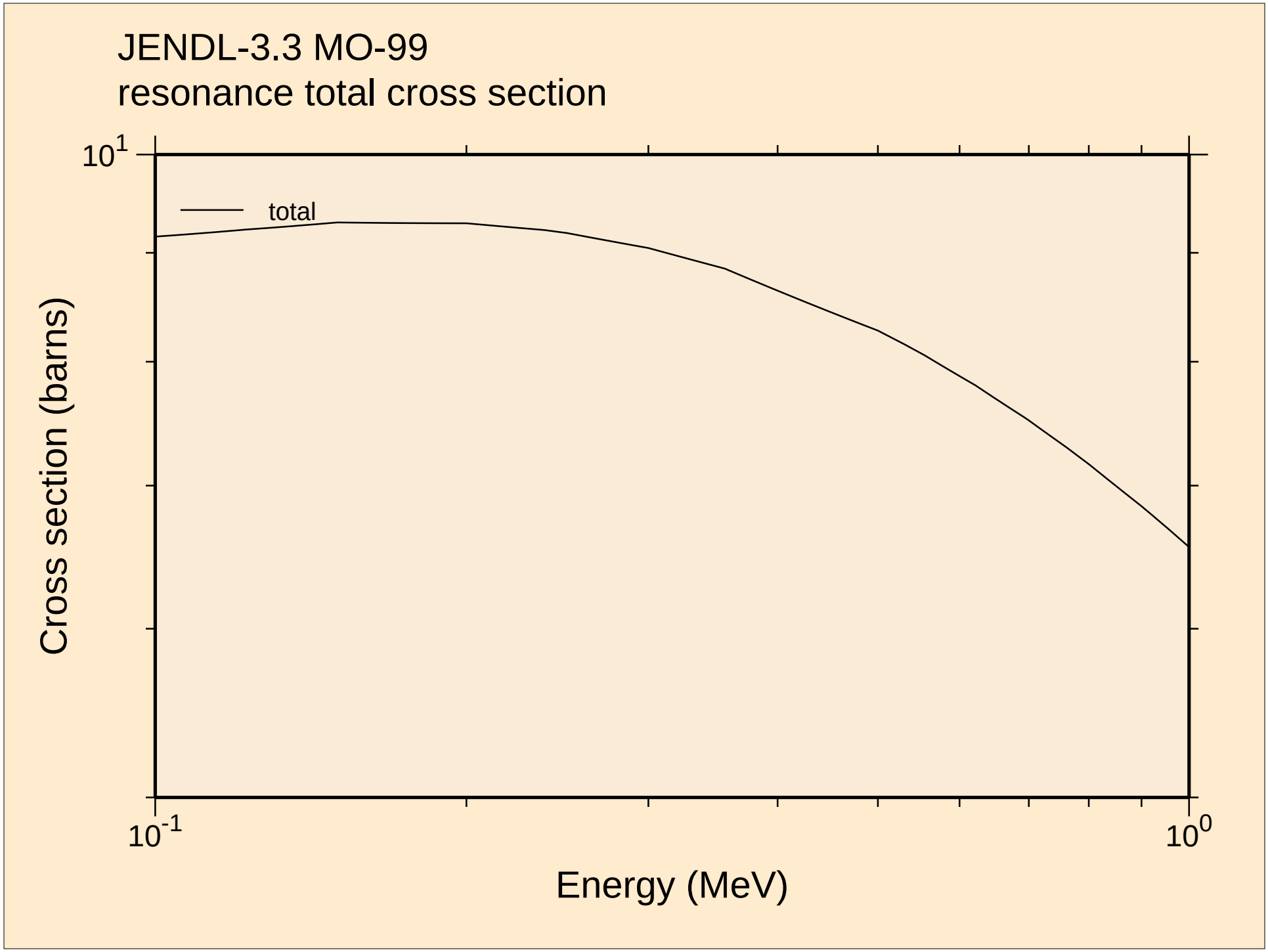
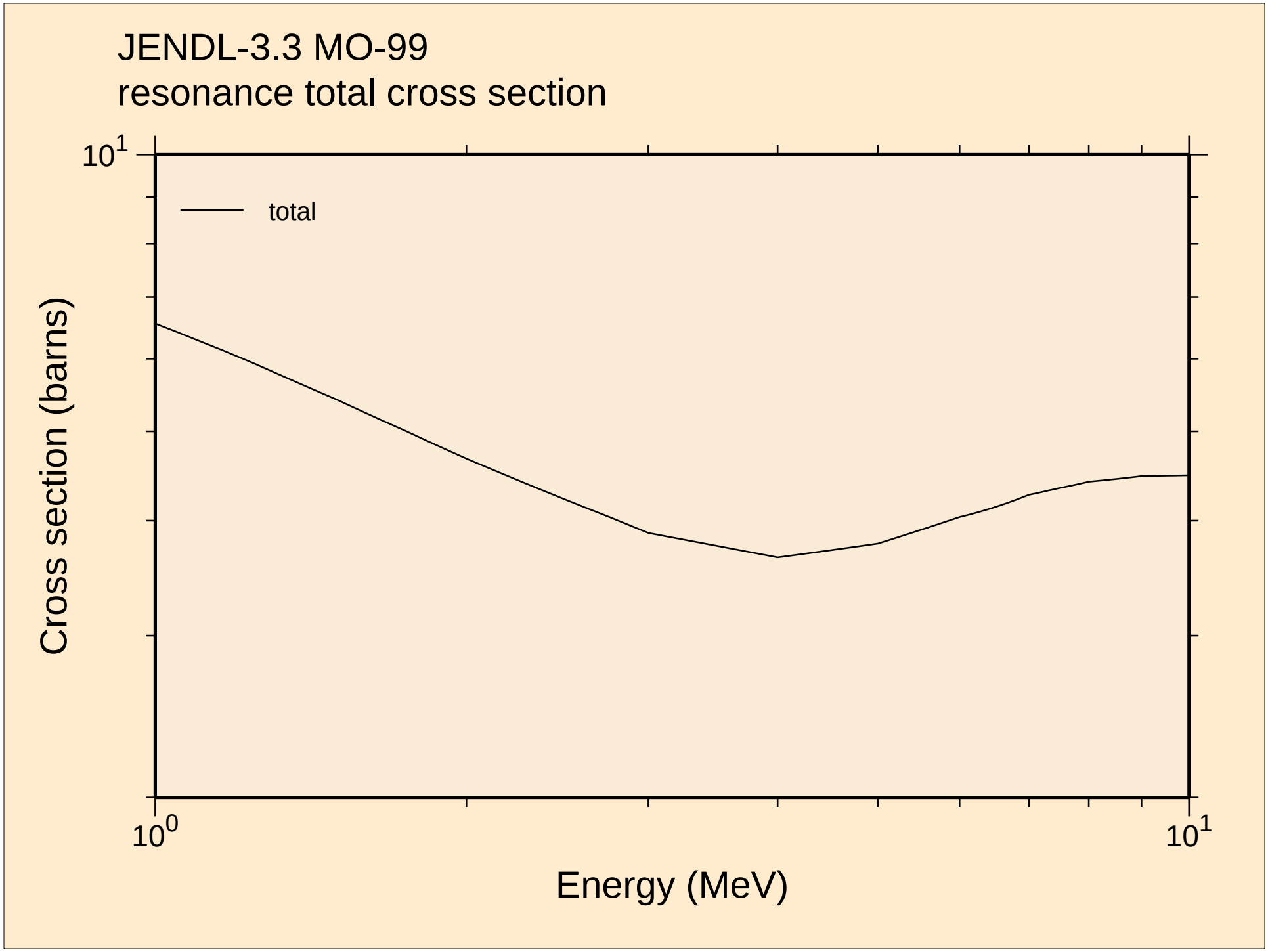
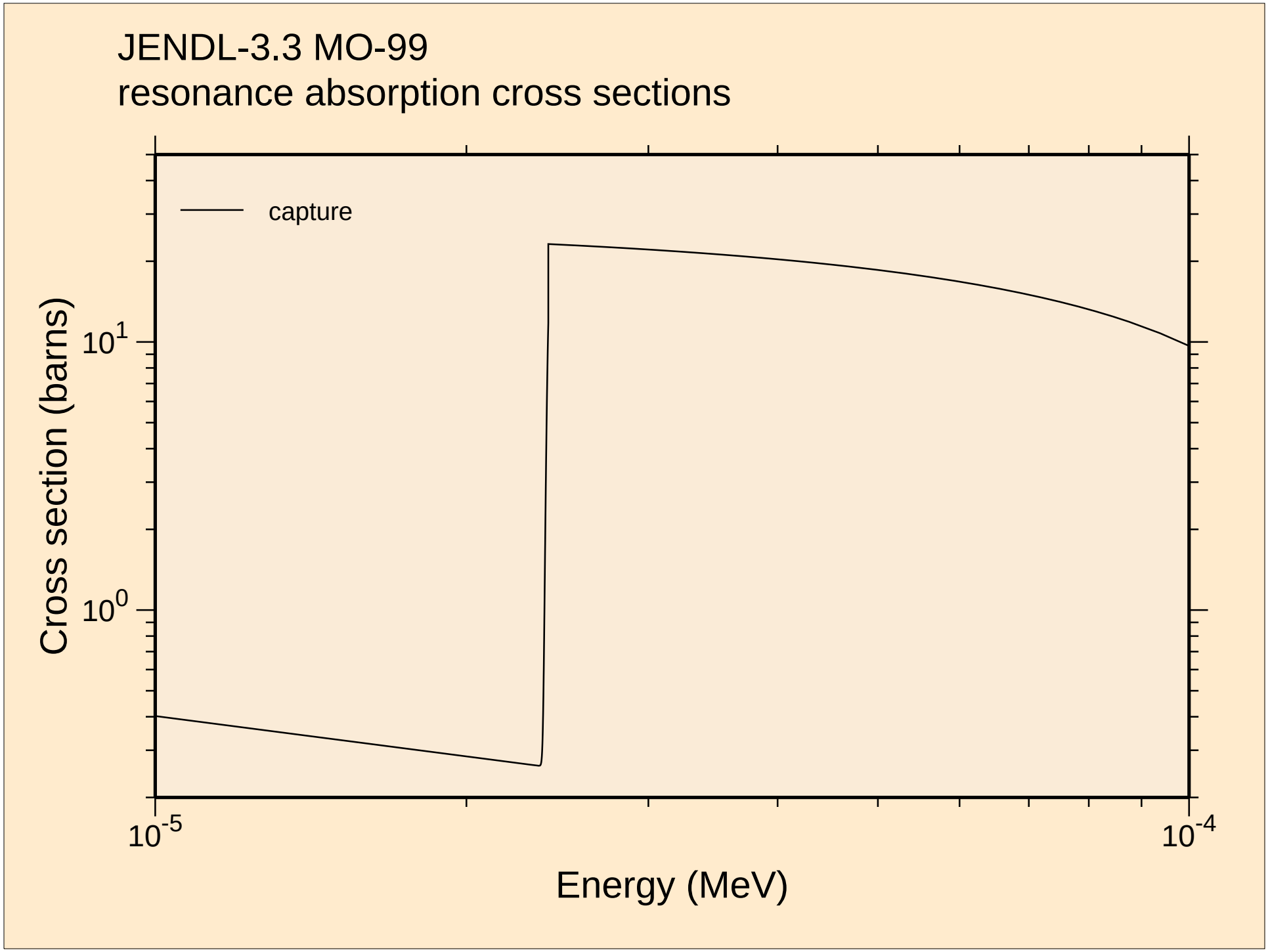
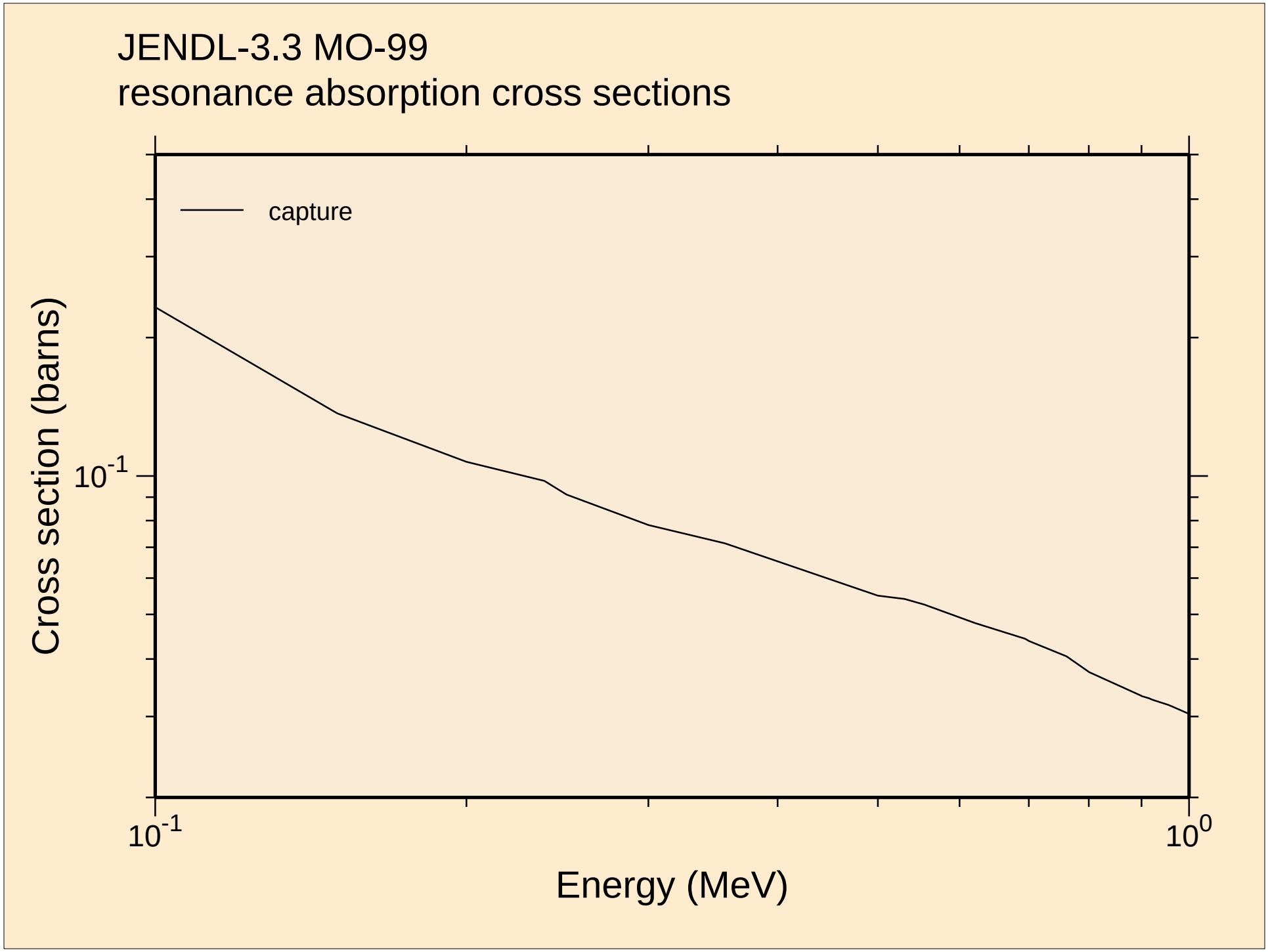

JENDL-3.3 MO-99
Principal cross sections
Cross section (barns)
Energy (MeV)
total
absorption
elastic
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}

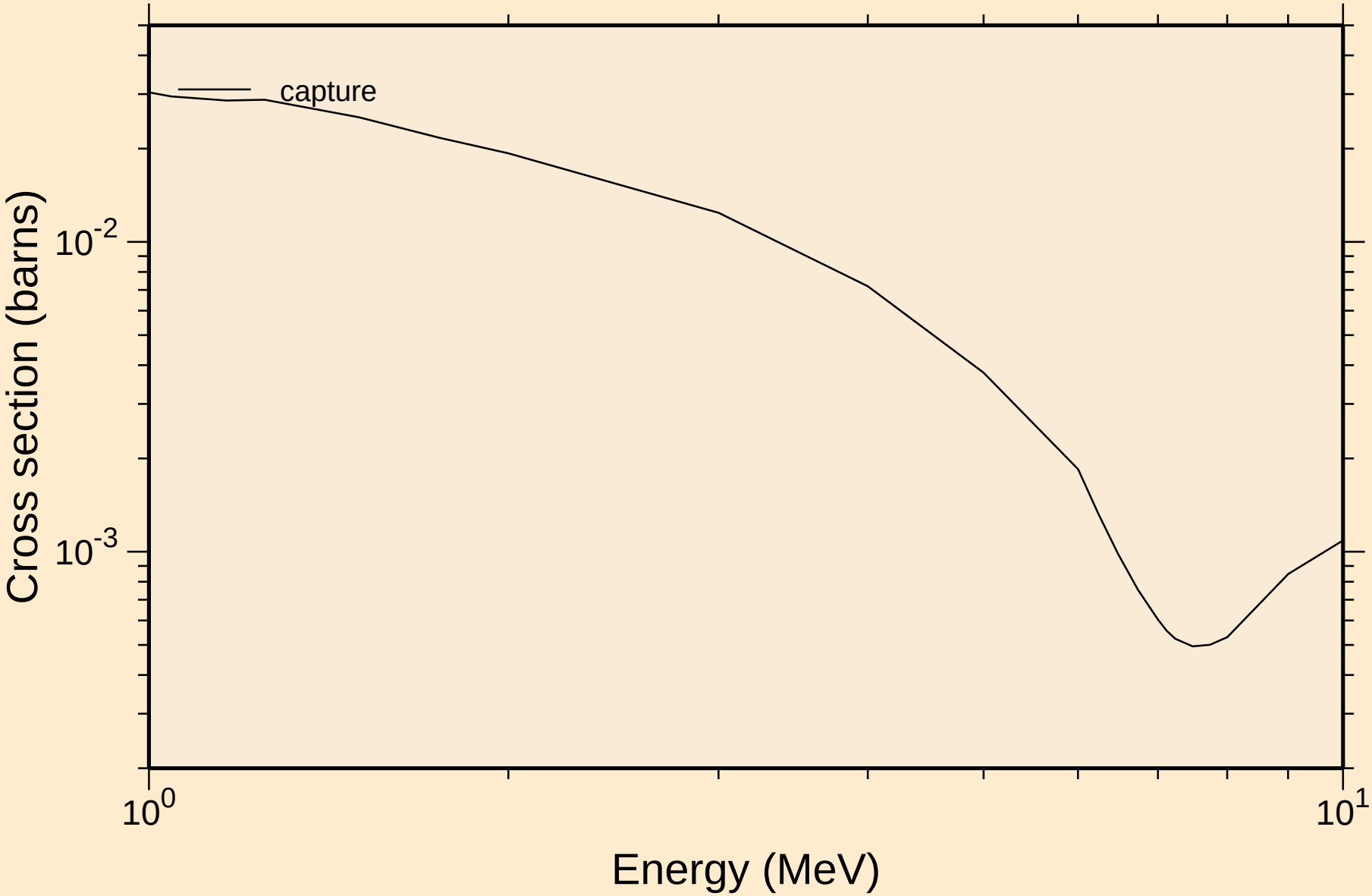

JENDL-3.3 MO-99
resonance total cross section
total
Cross section (barns)
Energy (MeV)
10^{1}
10^{-1}
10^{0}

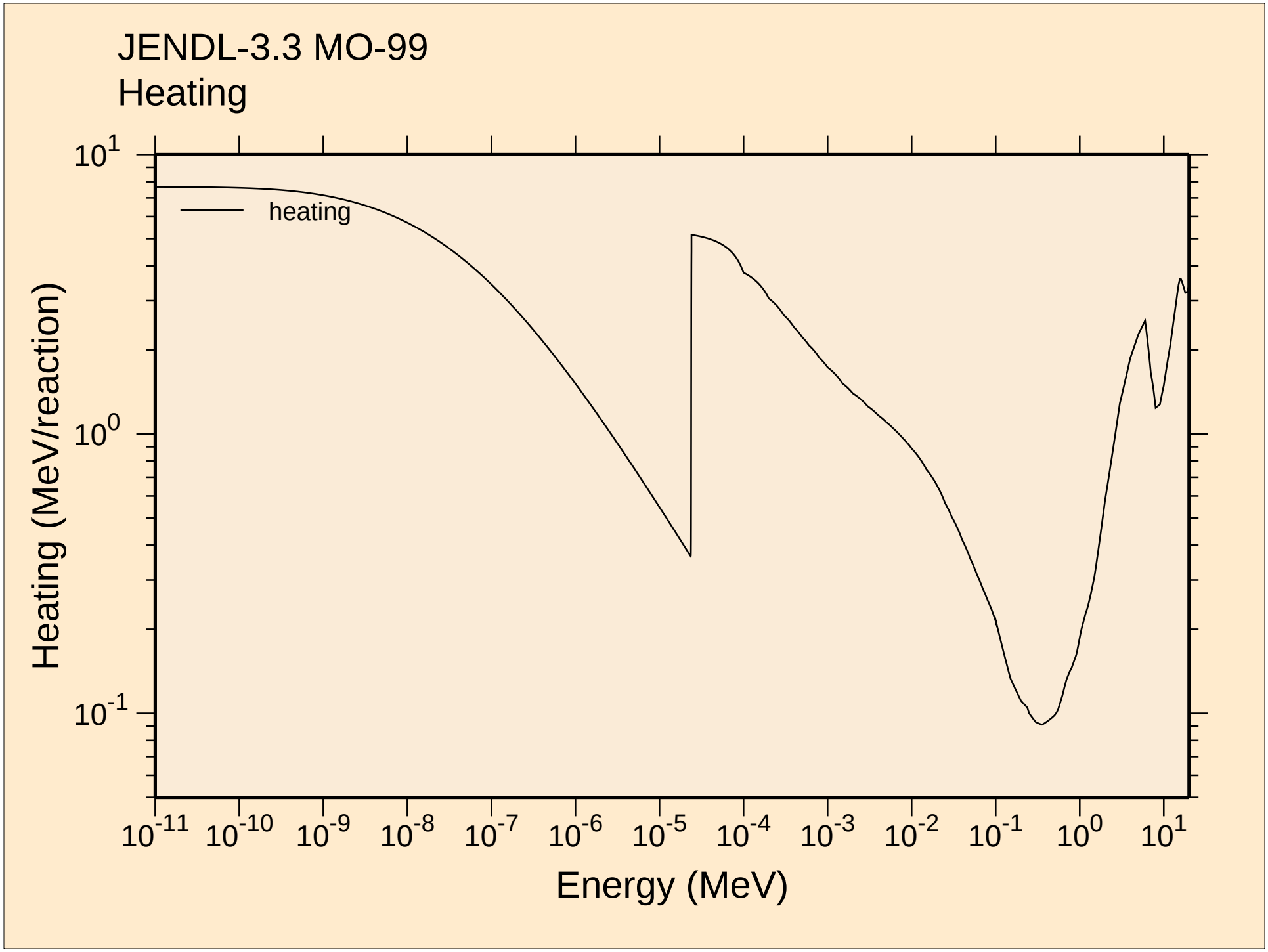

JENDL-3.3 MO-99
resonance total cross section
total
Cross section (barns)
Energy (MeV)
10^1
10^0
10^1

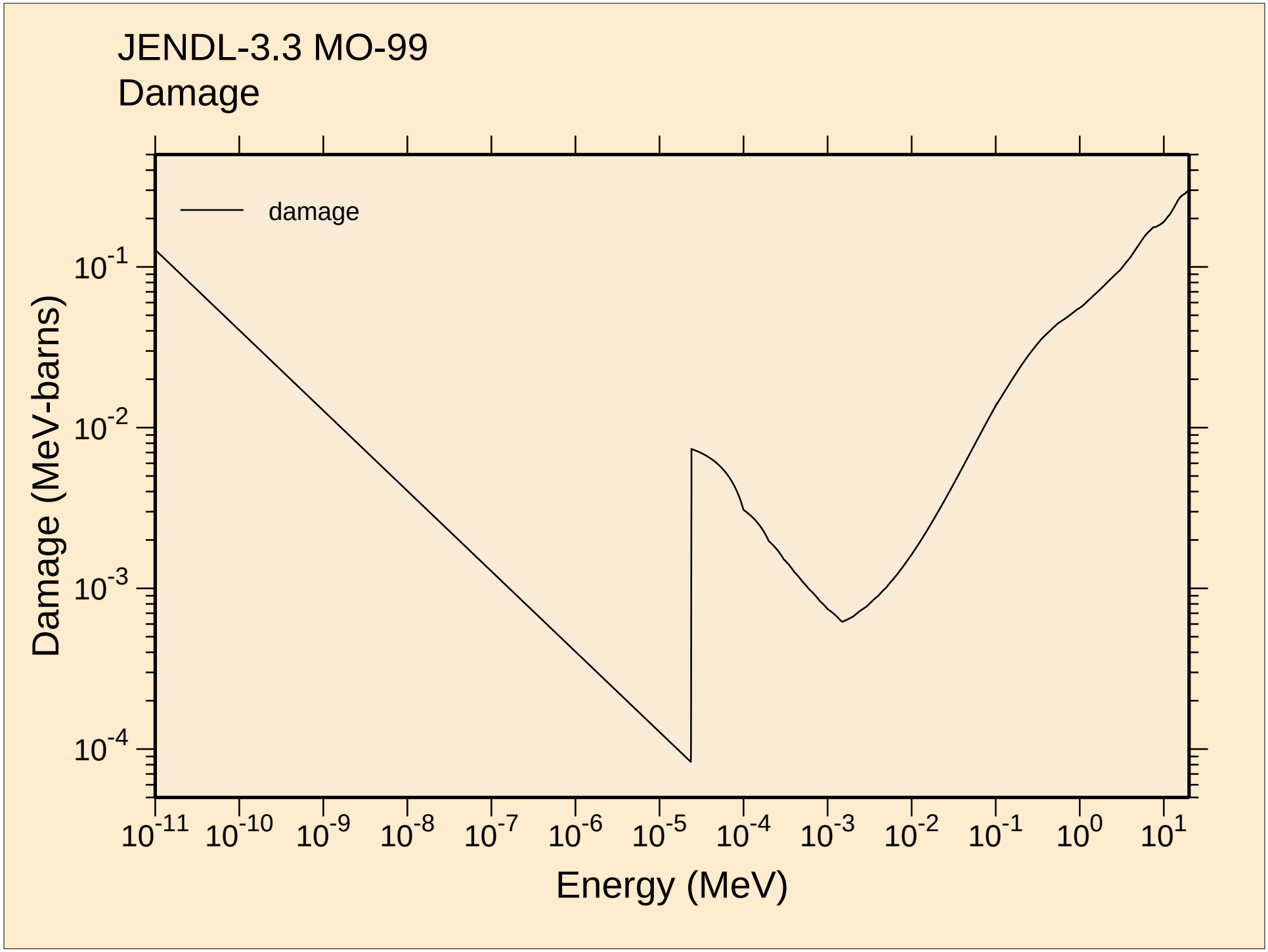

JENDL-3.3 MO-99
resonance absorption cross sections
capture
Cross section (barns)
10^1
10^0
10^{-5}
10^{-4}
Energy (MeV)

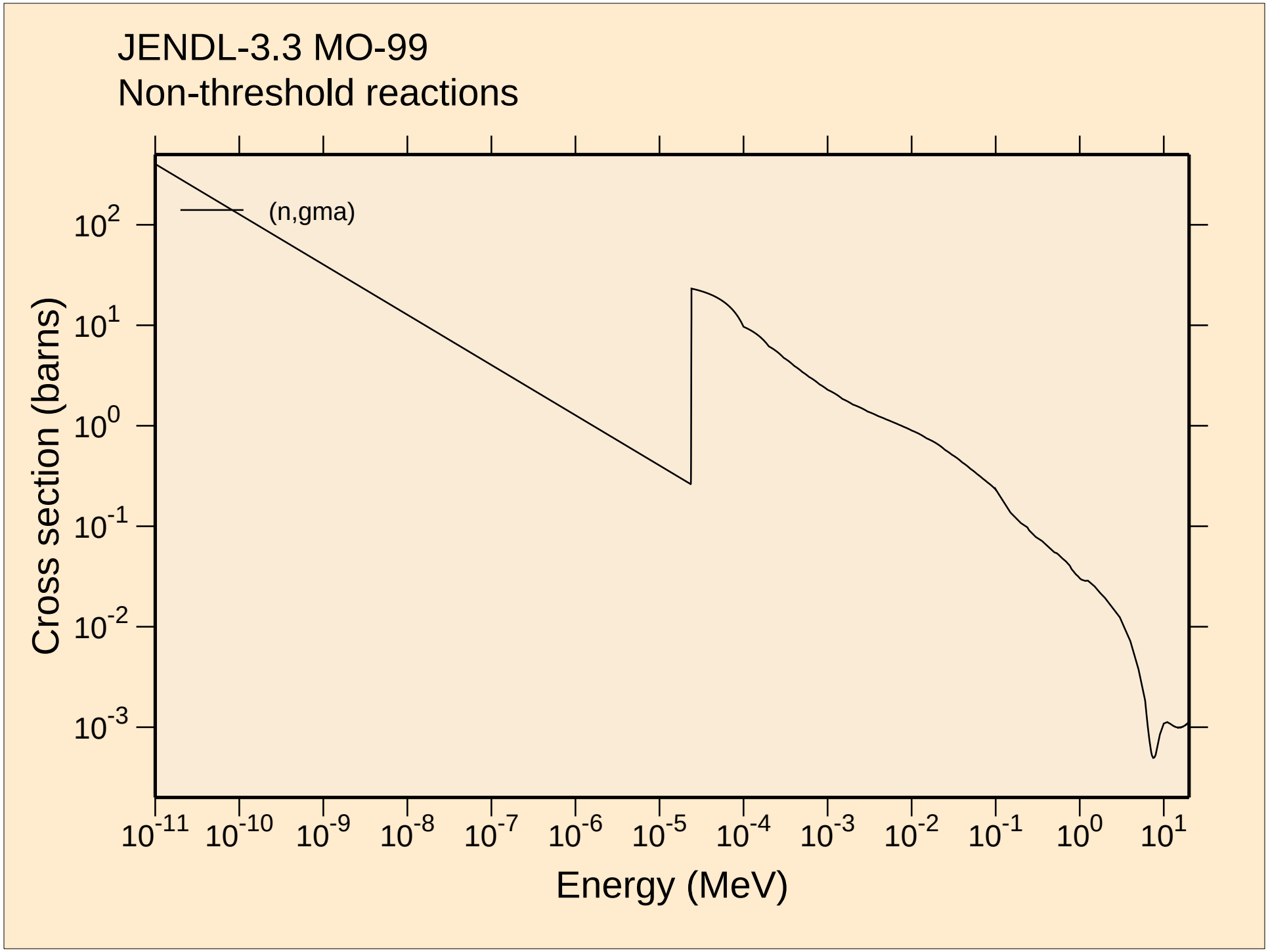

JENDL-3.3 MO-99
resonance absorption cross sections
capture
Cross section (barns)
10-1
10-1
100
Energy (MeV)

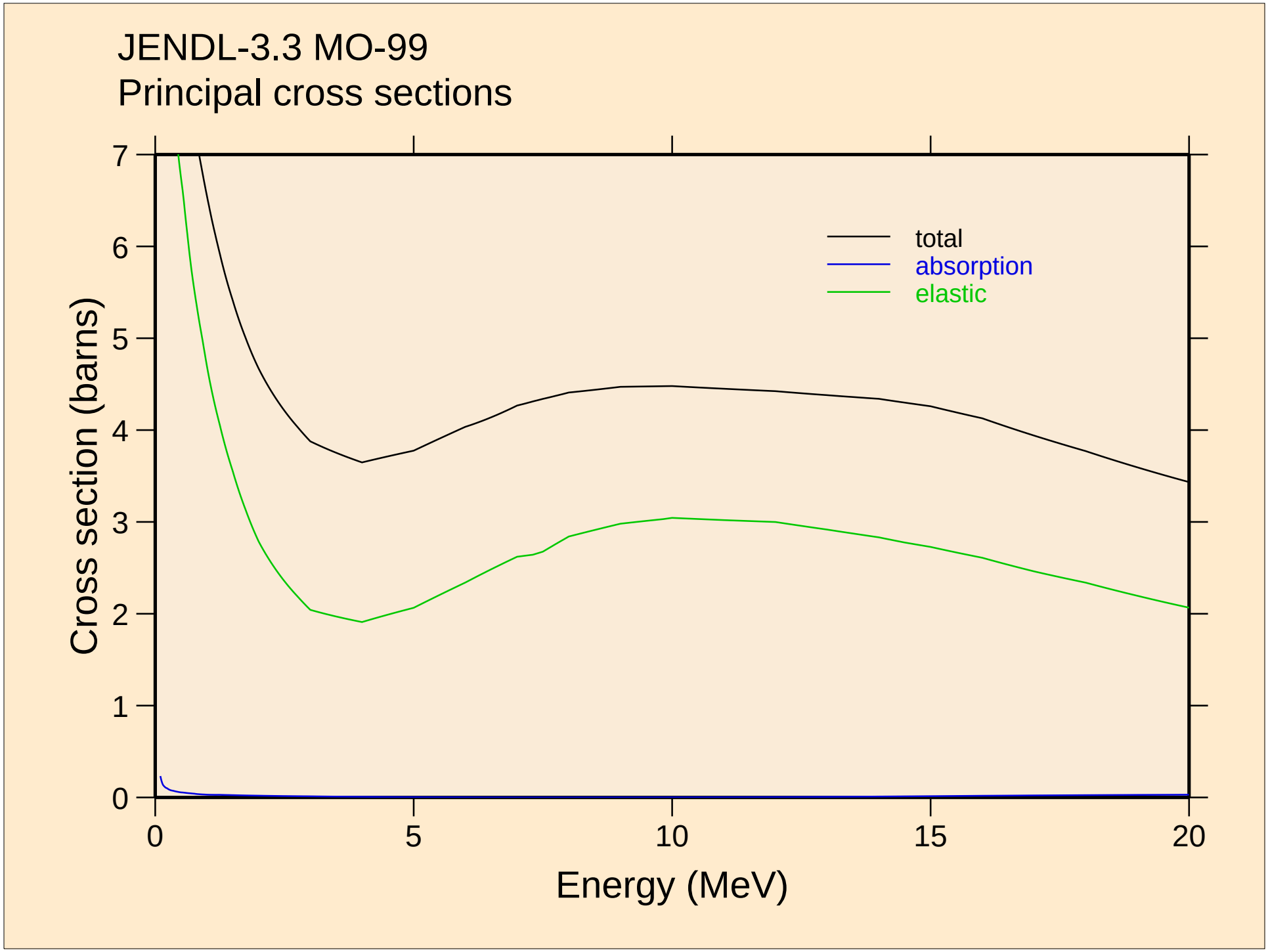
JENDL-3.3 MO-99
resonance absorption cross sections

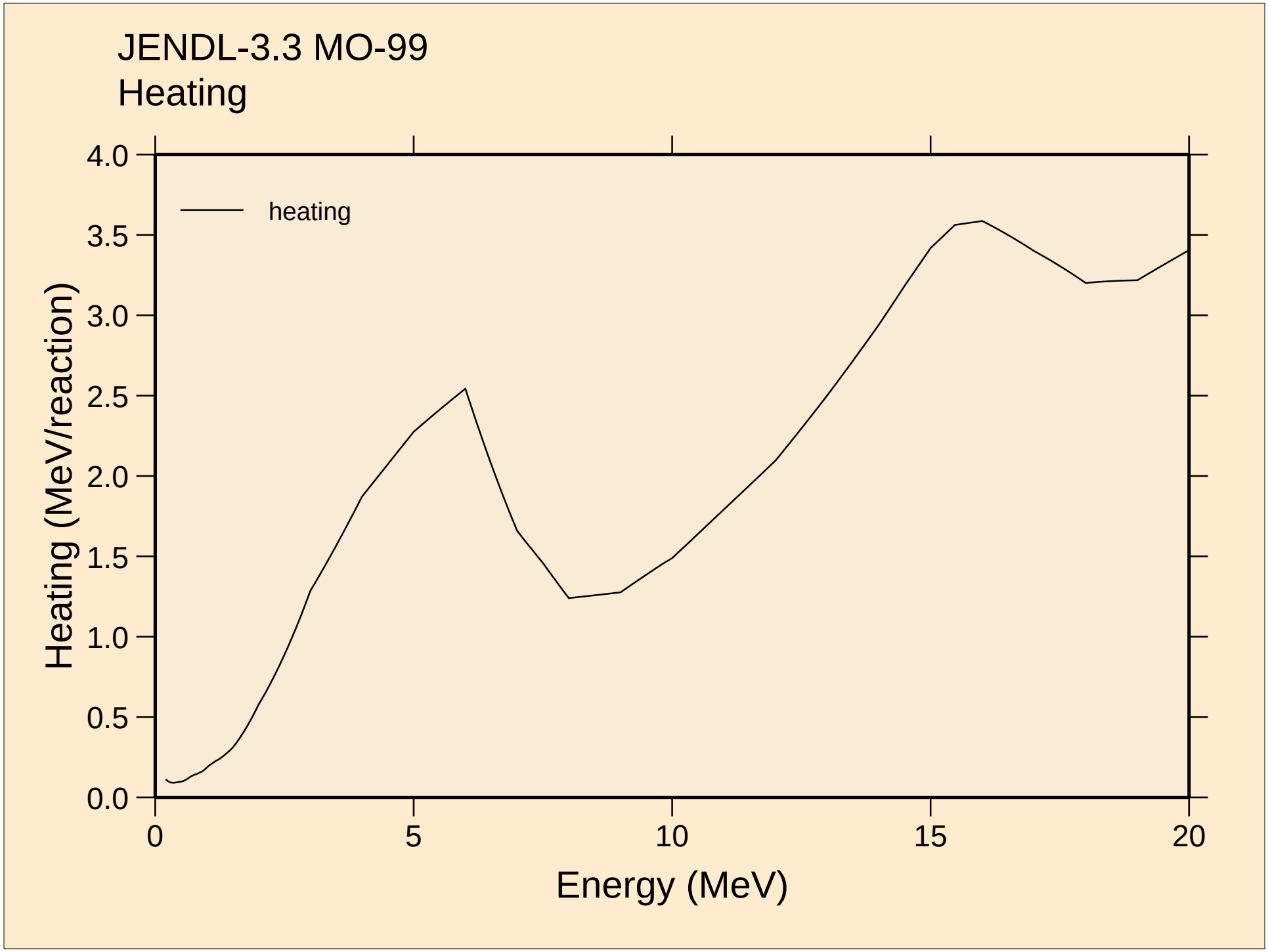


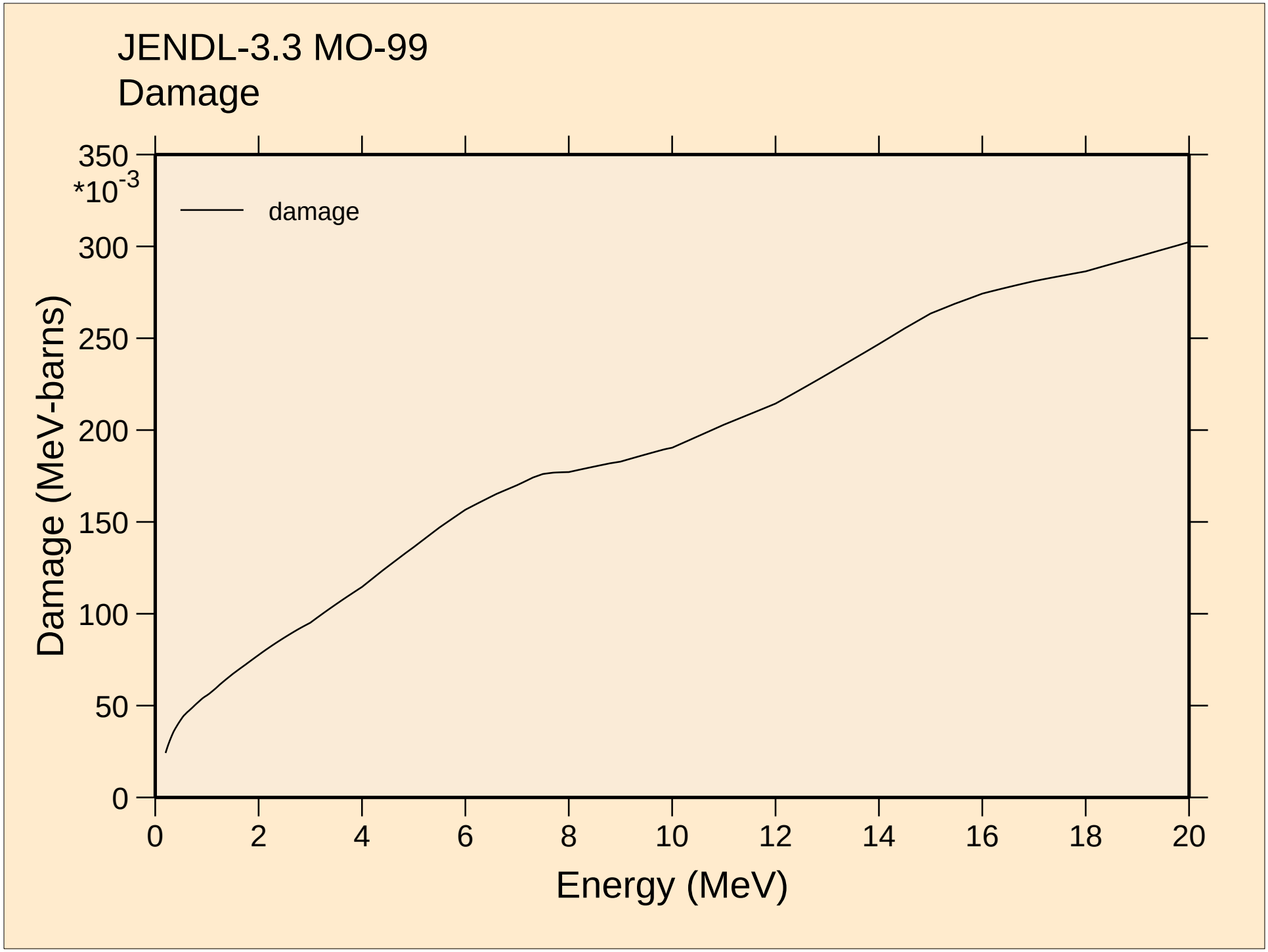

JENDL-3.3 MO-99
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^{1}
10^{0}
10^{-1}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}

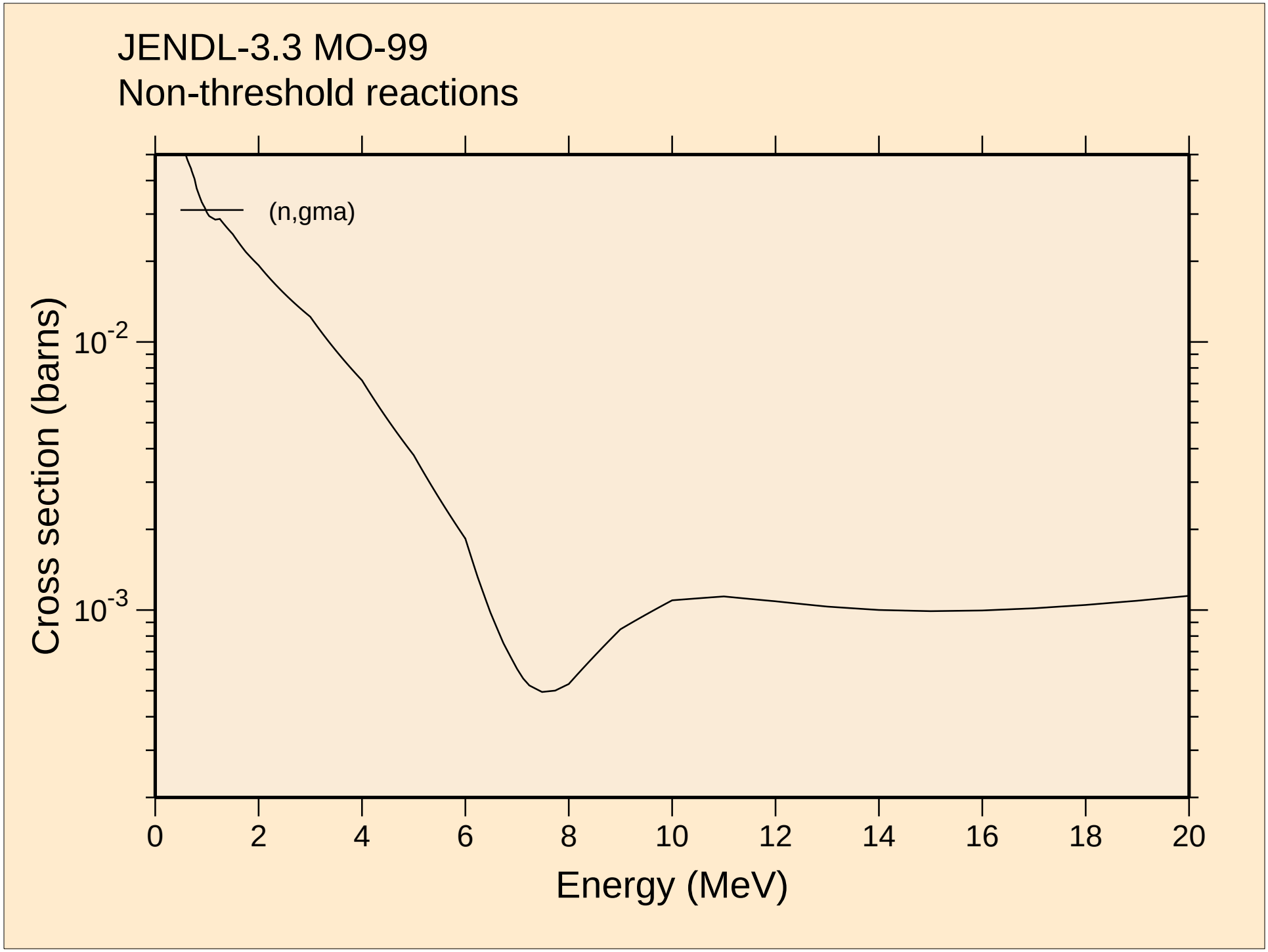

JENDL-3.3 MO-99
Damage
damage
Damage (MeV-barns)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1}
Energy (MeV)

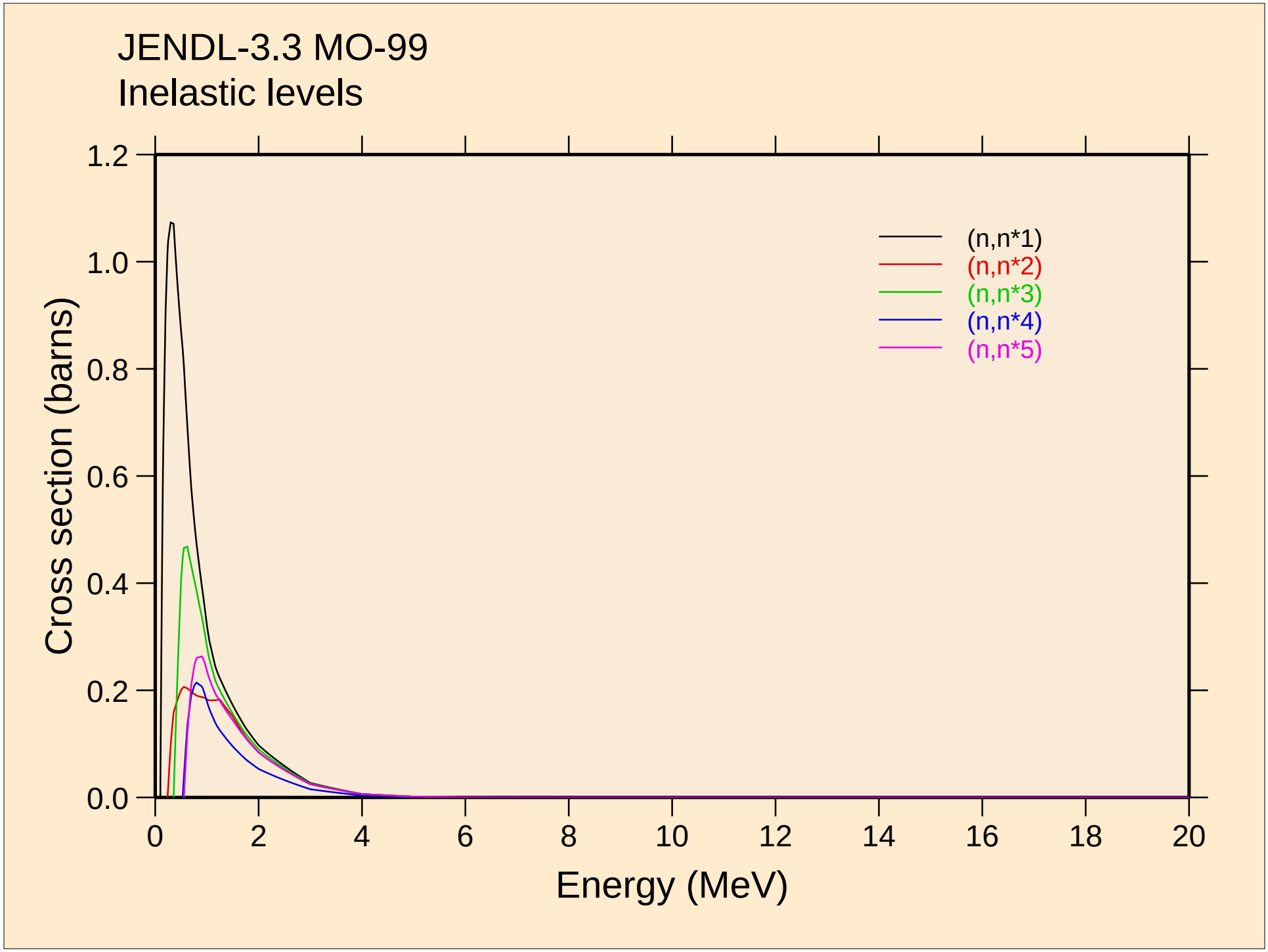

JENDL-3.3 MO-99
Non-threshold reactions
(n,gma)
Cross section (barns)
10^2
10^1
10^0
10^-1
10^-2
10^-3
10^-11
10^-10
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
Energy (MeV)

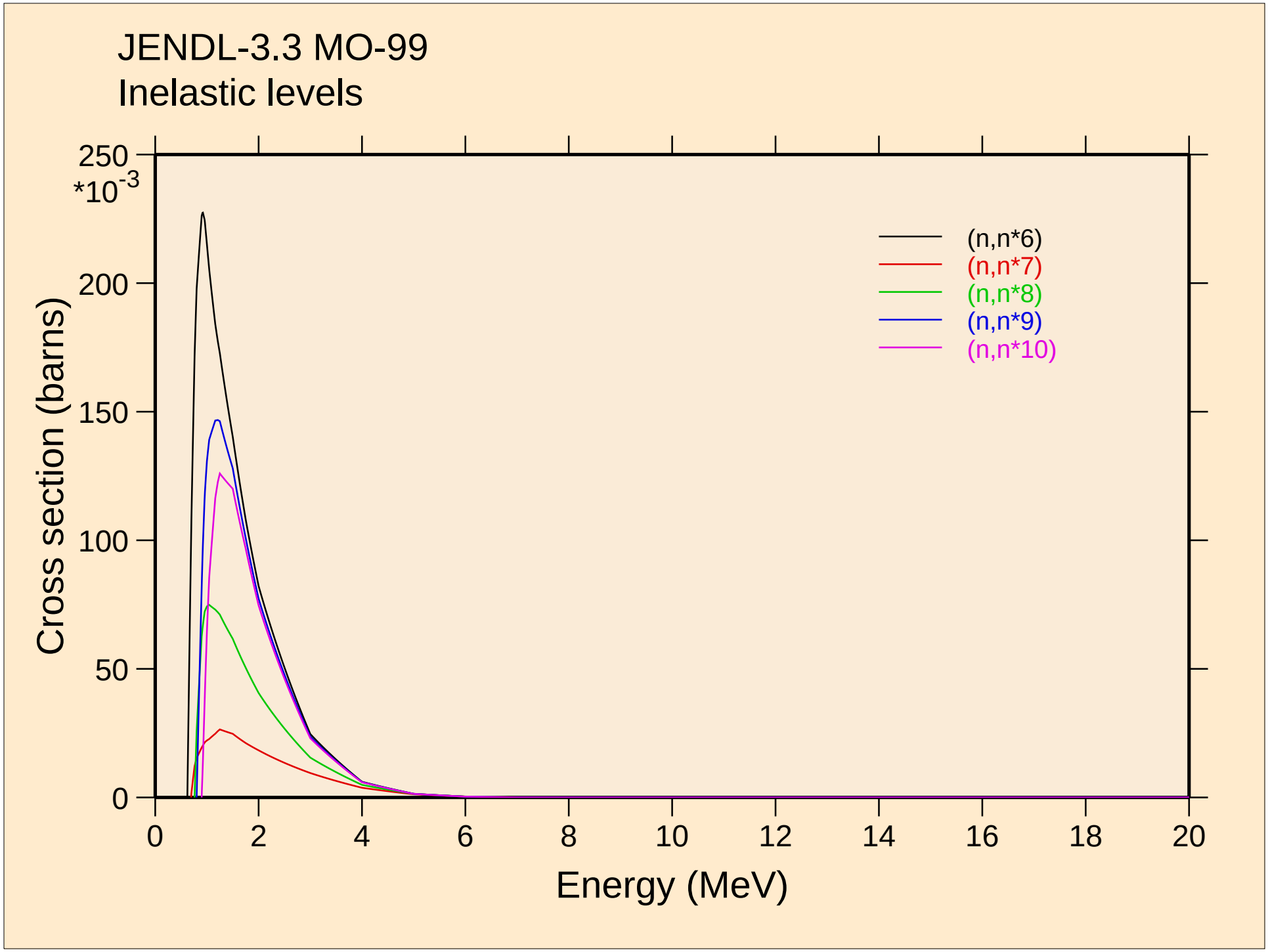

JENDL-3.3 MO-99
Principal cross sections
total
absorption
elastic
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
0
5
10
15
20

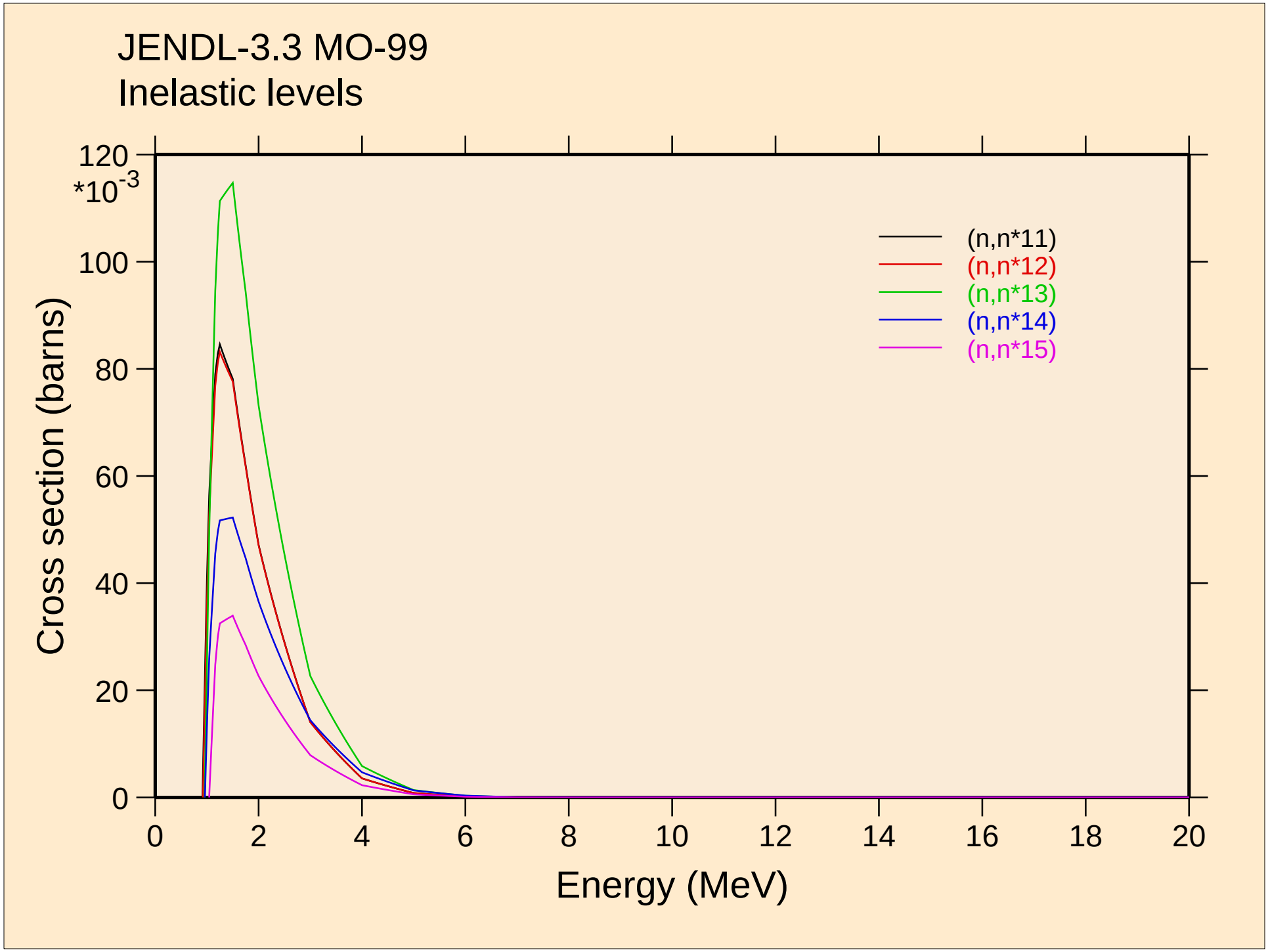

JENDL-3.3 MO-99
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
5
10
15
20

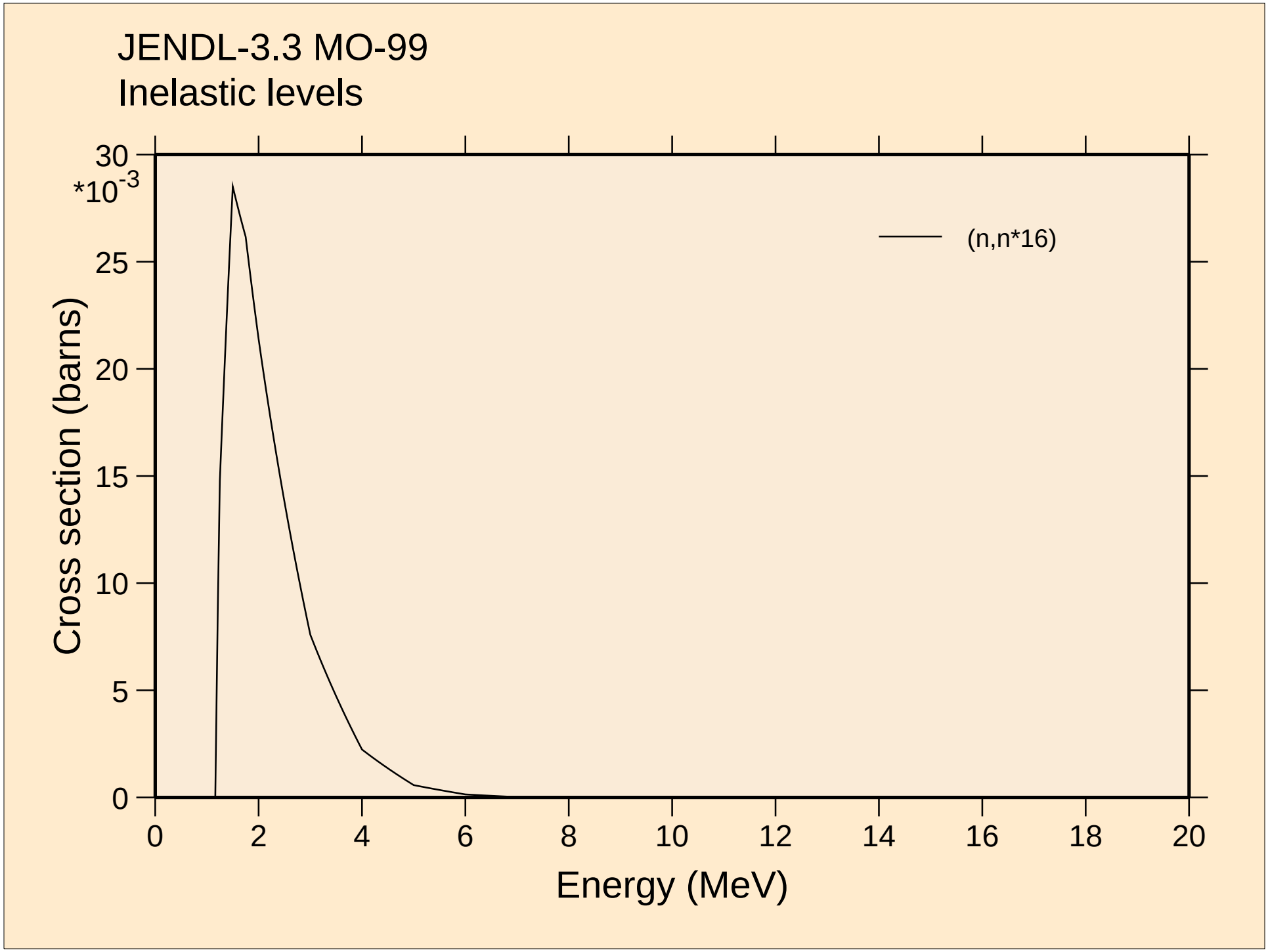

JENDL-3.3 MO-99
Damage
damage
*10-3
350
300
250
200
150
100
50
0
Damage (MeV-barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

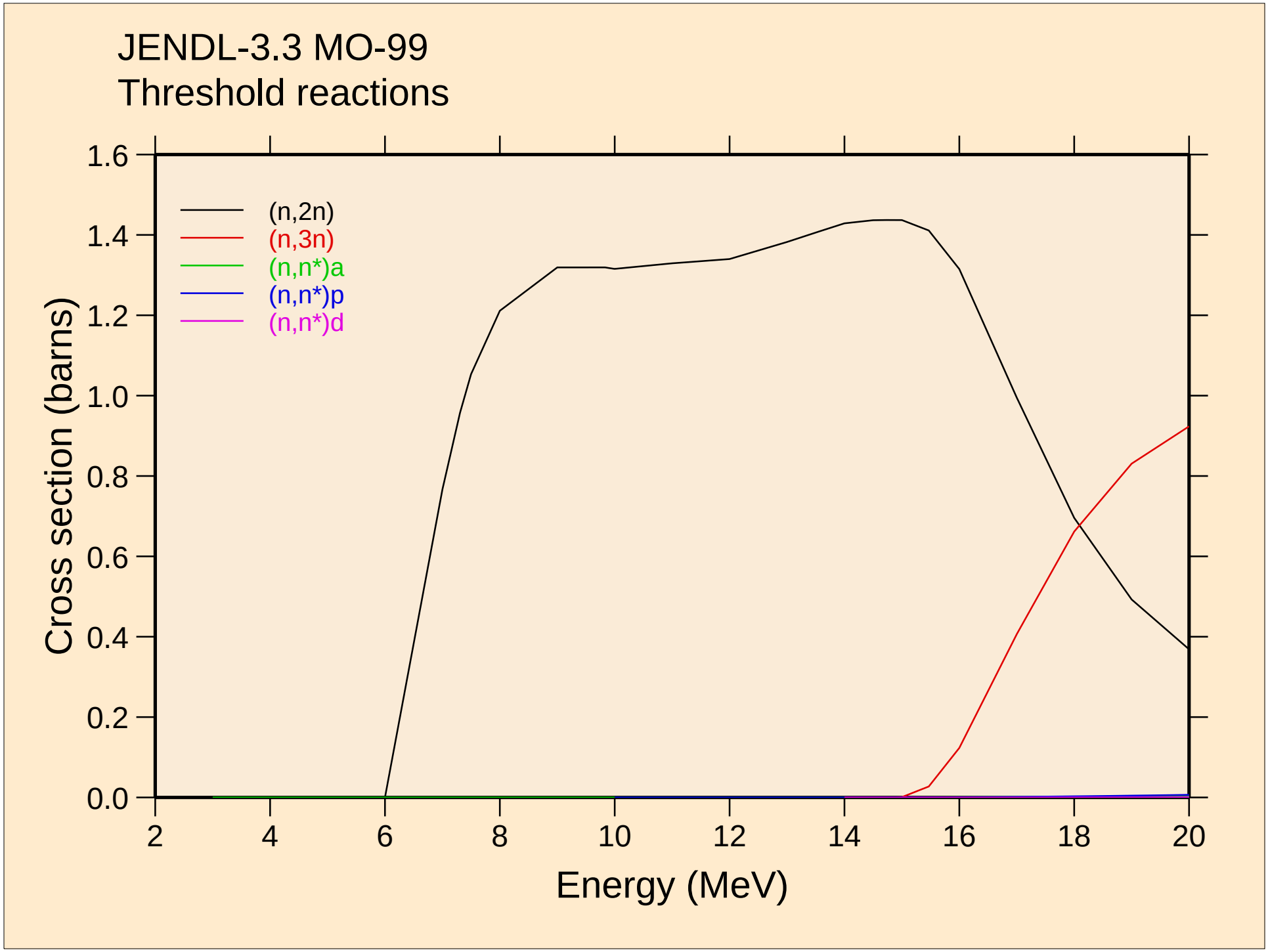

JENDL-3.3 MO-99
Non-threshold reactions
(n,gma)
Cross section (barns)
10-2
10-3
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

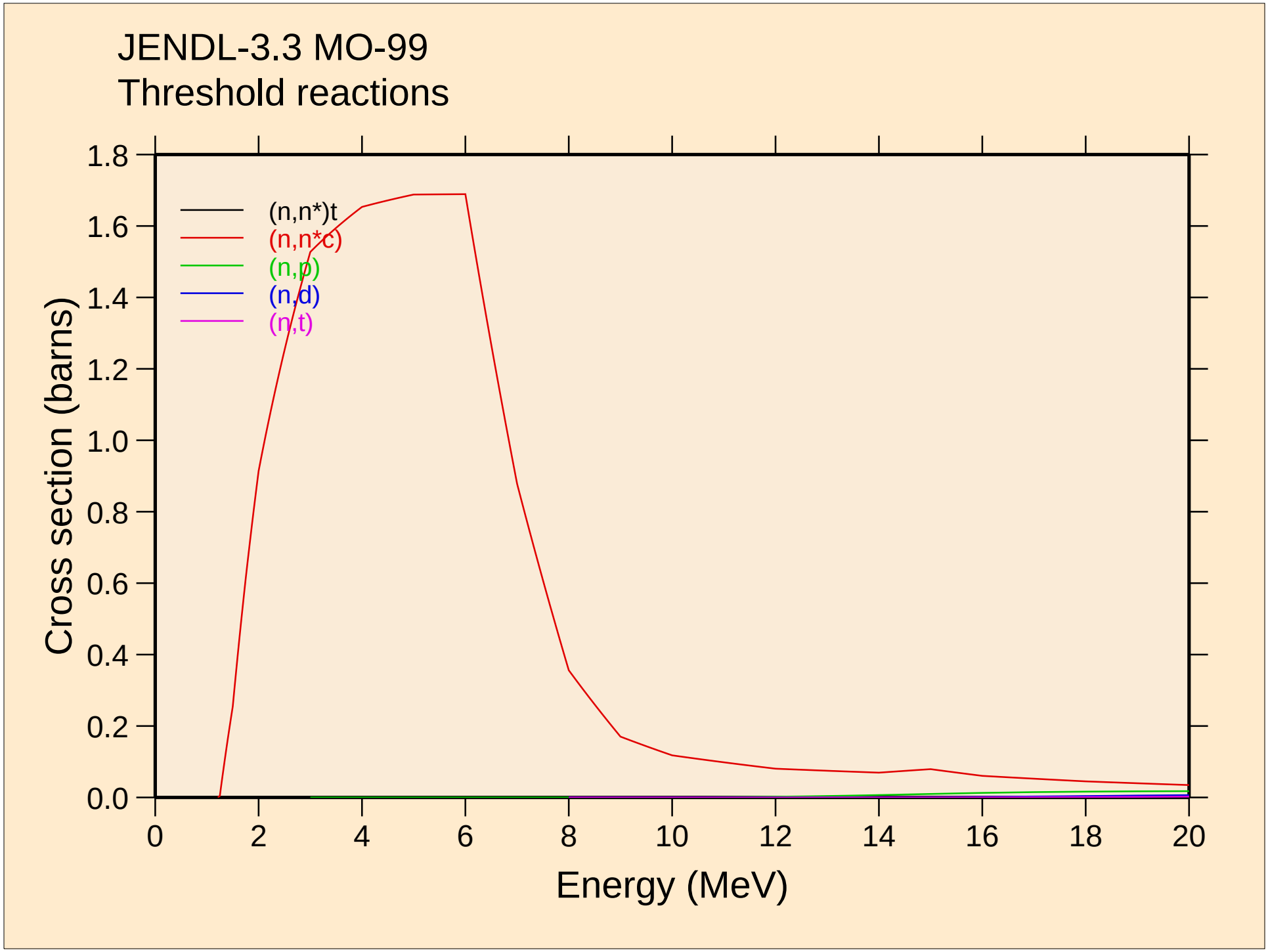

JENDL-3.3 MO-99
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
2
4
6
8
10
12
14
16
18
20

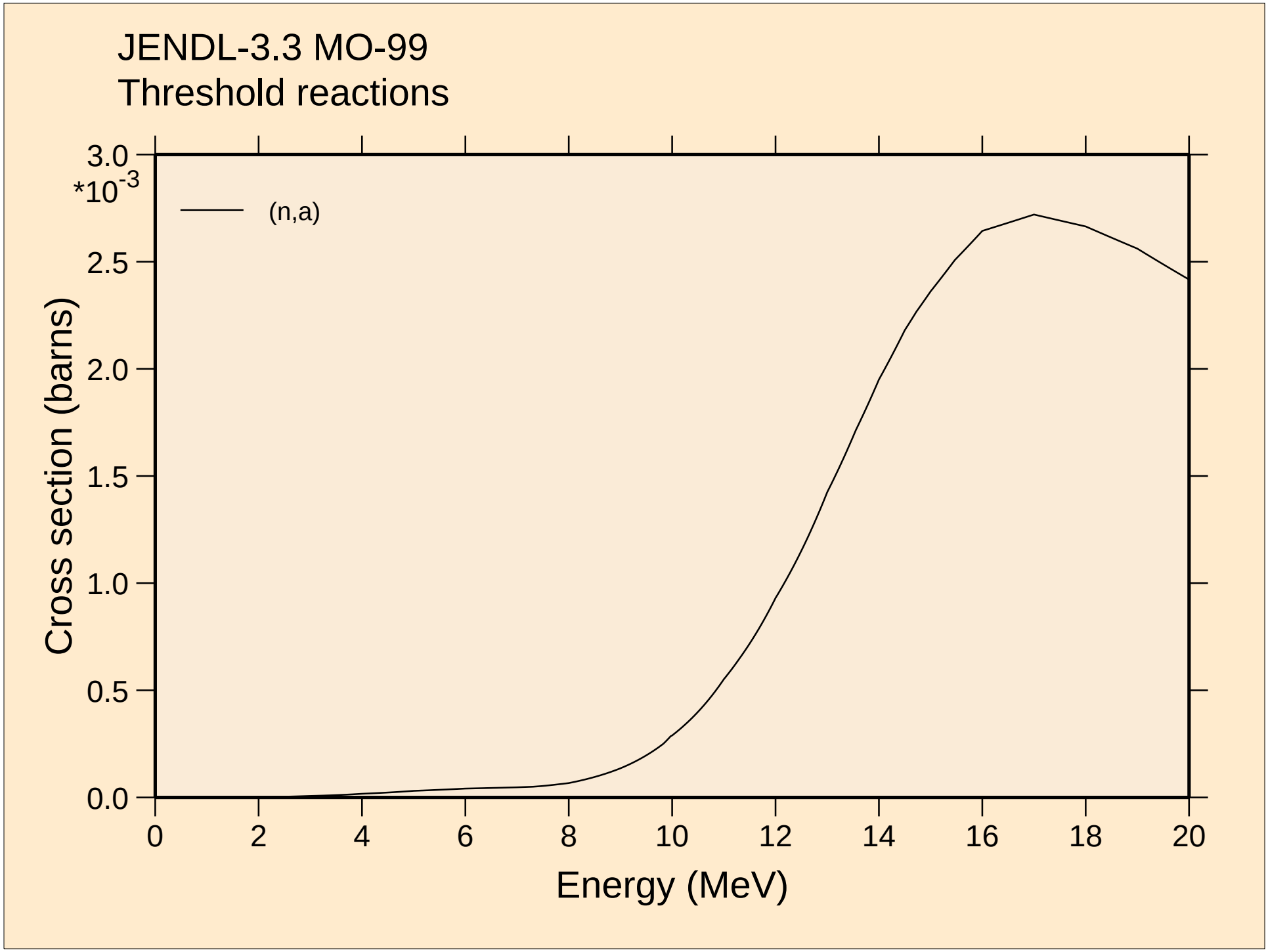

JENDL-3.3 MO-99
Inelastic levels
Cross section (barns)
*10^-3
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

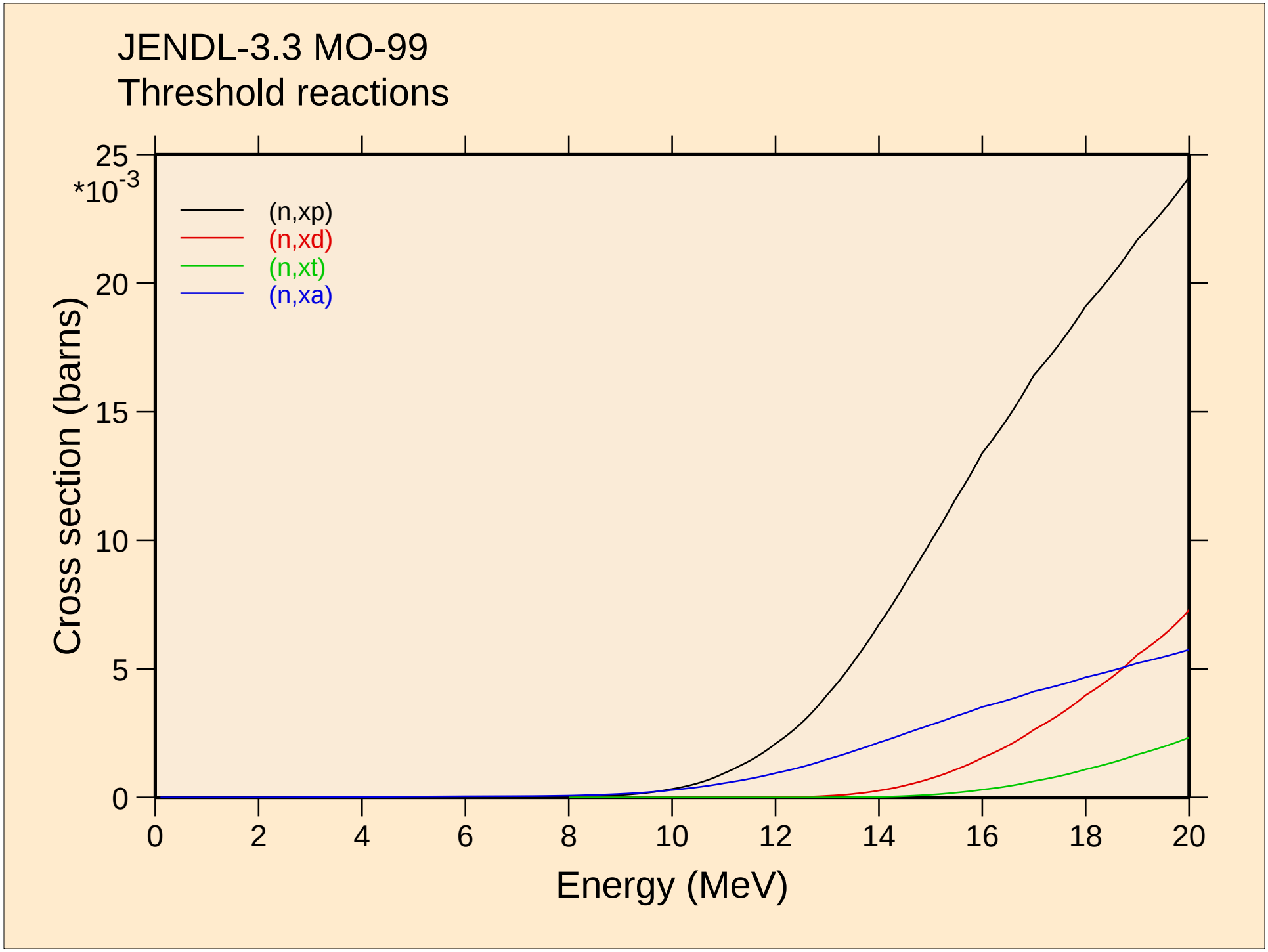

JENDL-3.3 MO-99
Inelastic levels
Cross section (barns)
*10^-3
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)

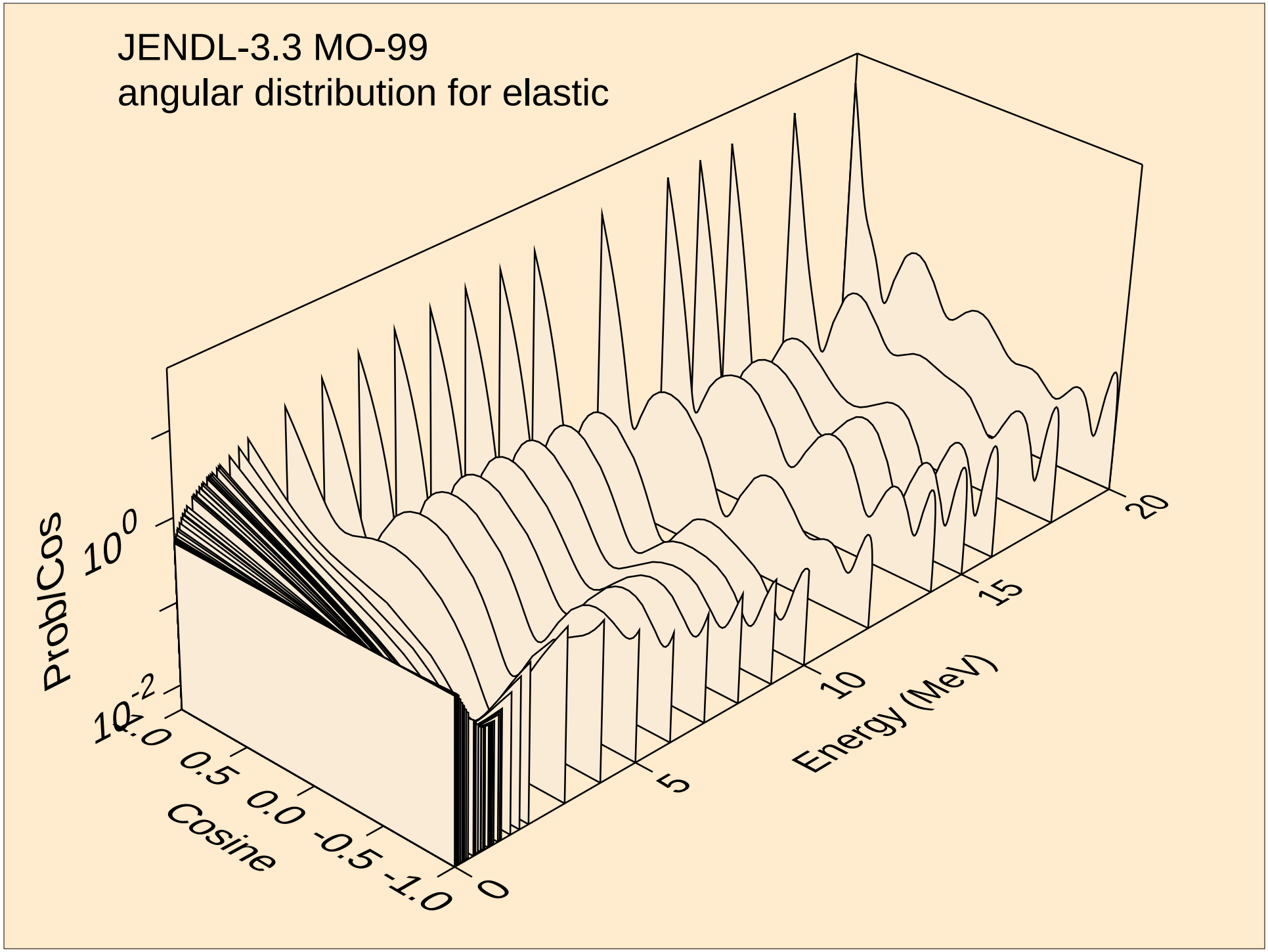

JENDL-3.3 MO-99
Inelastic levels
(n,n*16)
Cross section (barns)
*10-3
30
25
20
15
10
5
0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

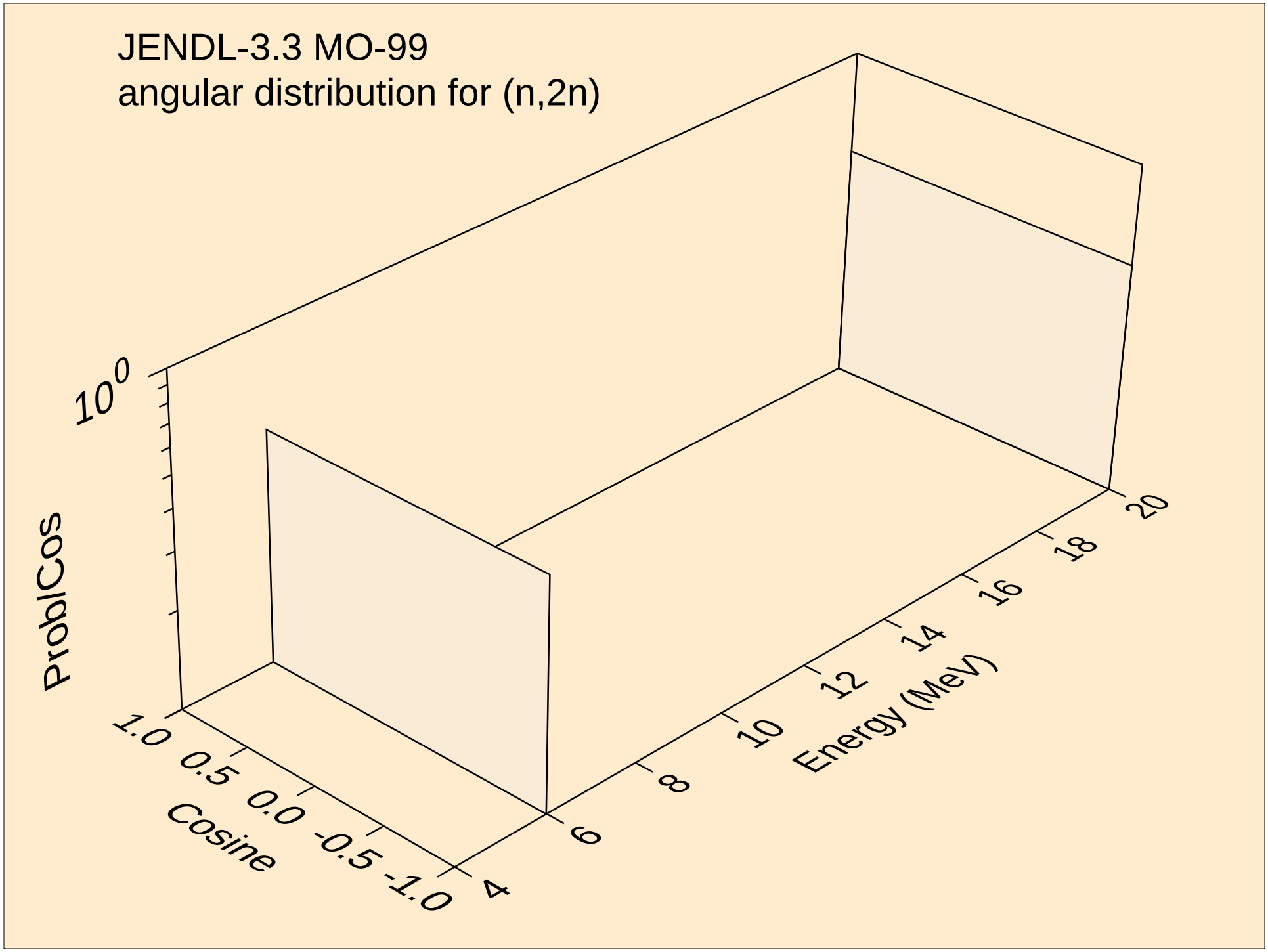

JENDL-3.3 MO-99
Threshold reactions
(n,2n)
(n,3n)
(n,n*)a
(n,n*)p
(n,n*)d
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
2
4
6
8
10
12
14
16
18
20

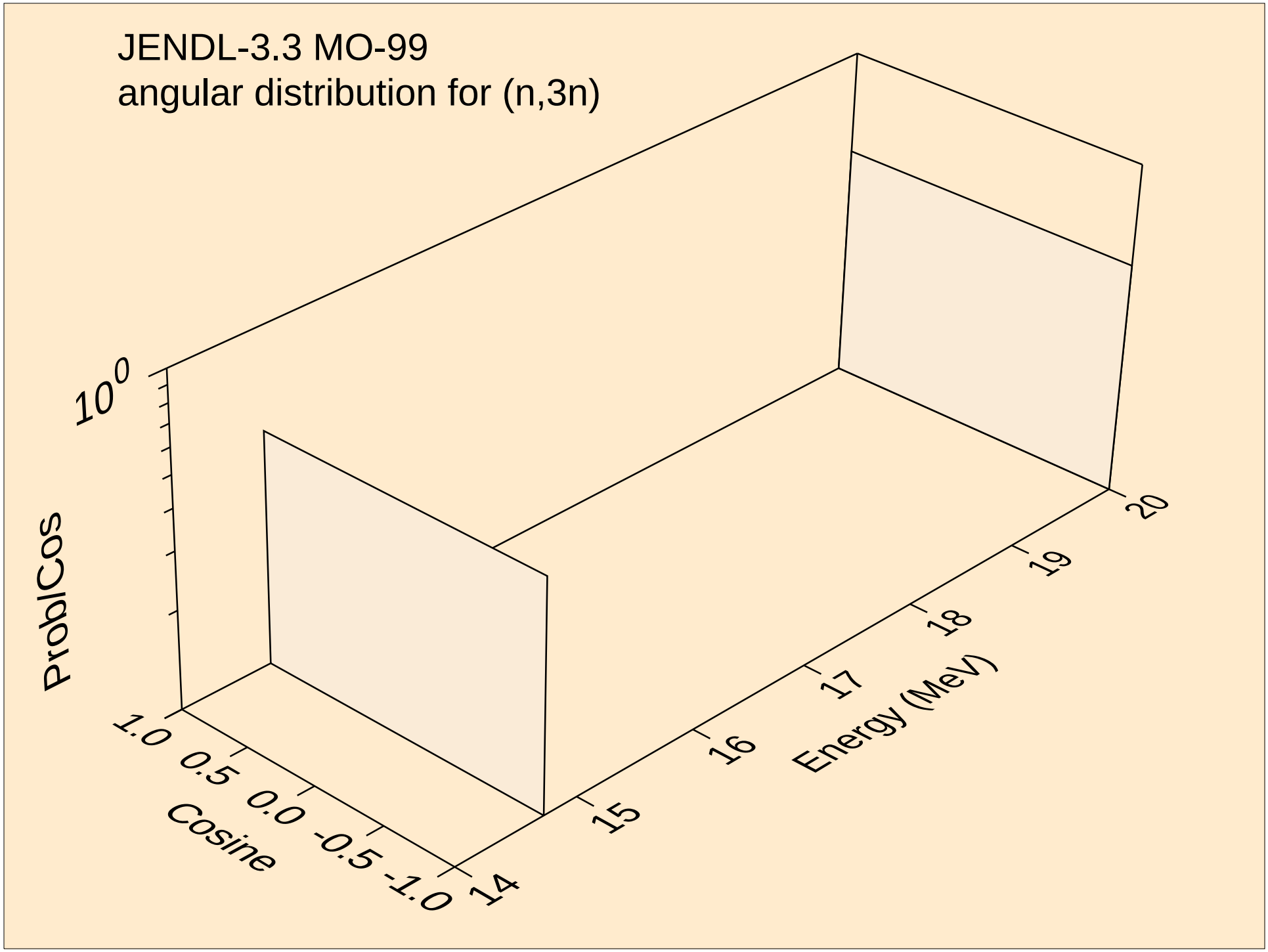

JENDL-3.3 MO-99
Threshold reactions
(n,n*)t
(n,n*c)
(n,p)
(n,d)
(n,t)
Cross section (barns)
Energy (MeV)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
2
4
6
8
10
12
14
16
18
20

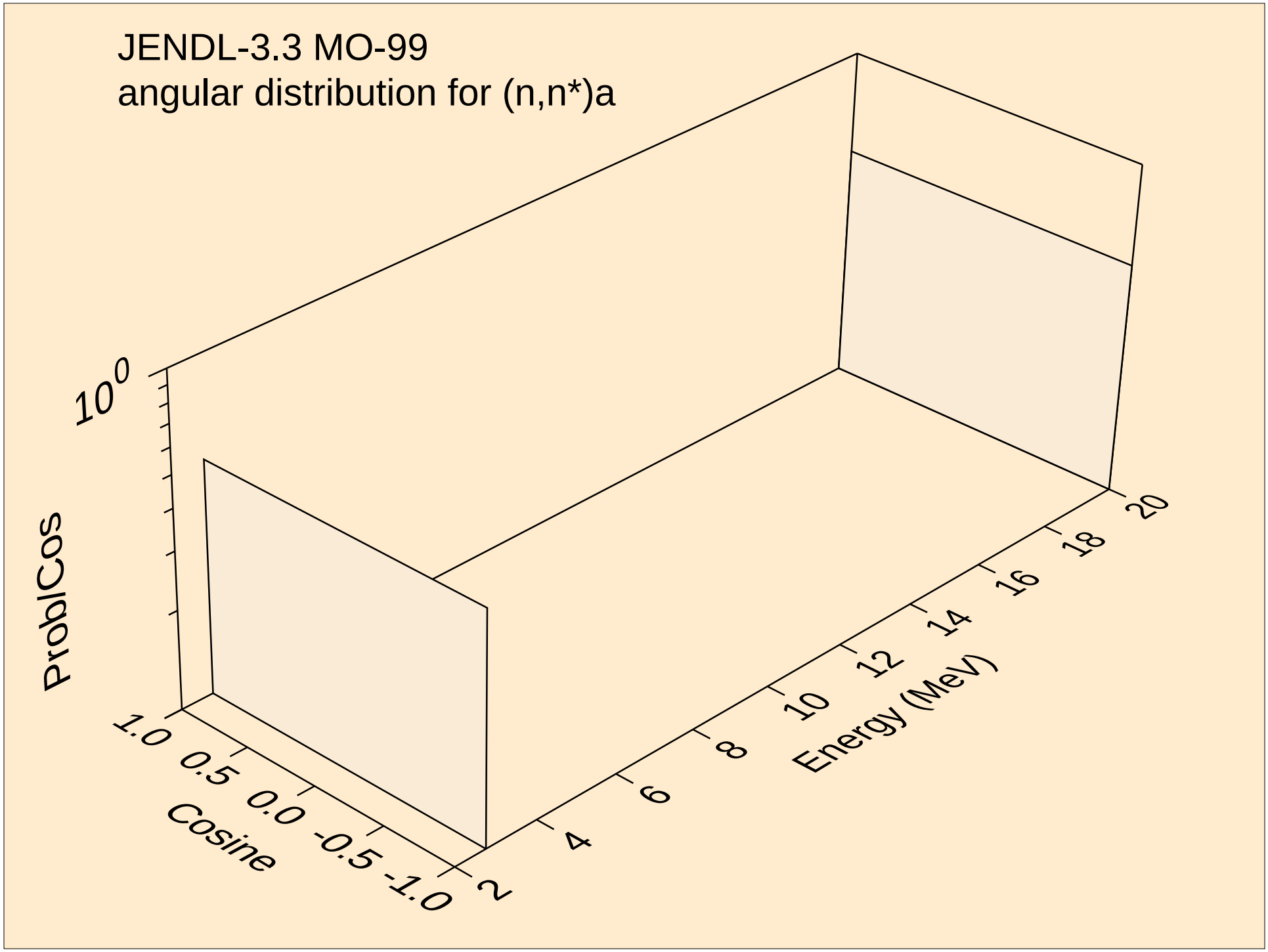

JENDL-3.3 MO-99
Threshold reactions
(n,a)
Cross section (barns)
*10-3
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

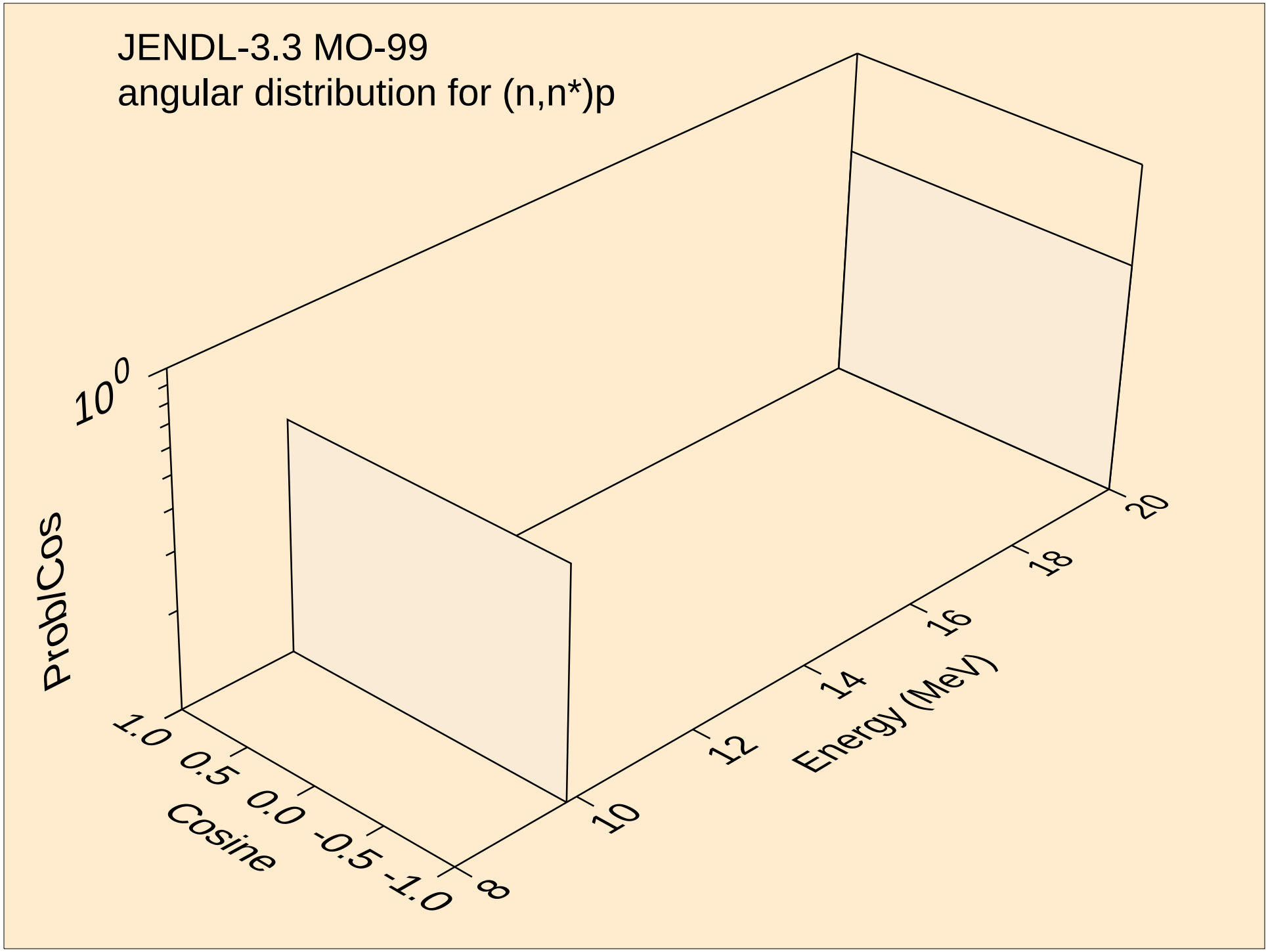

JENDL-3.3 MO-99
Threshold reactions
(n,xp)
(n,xd)
(n,xt)
(n,xa)
*10-3
25
20
15
10
5
0
Cross section (barns)
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

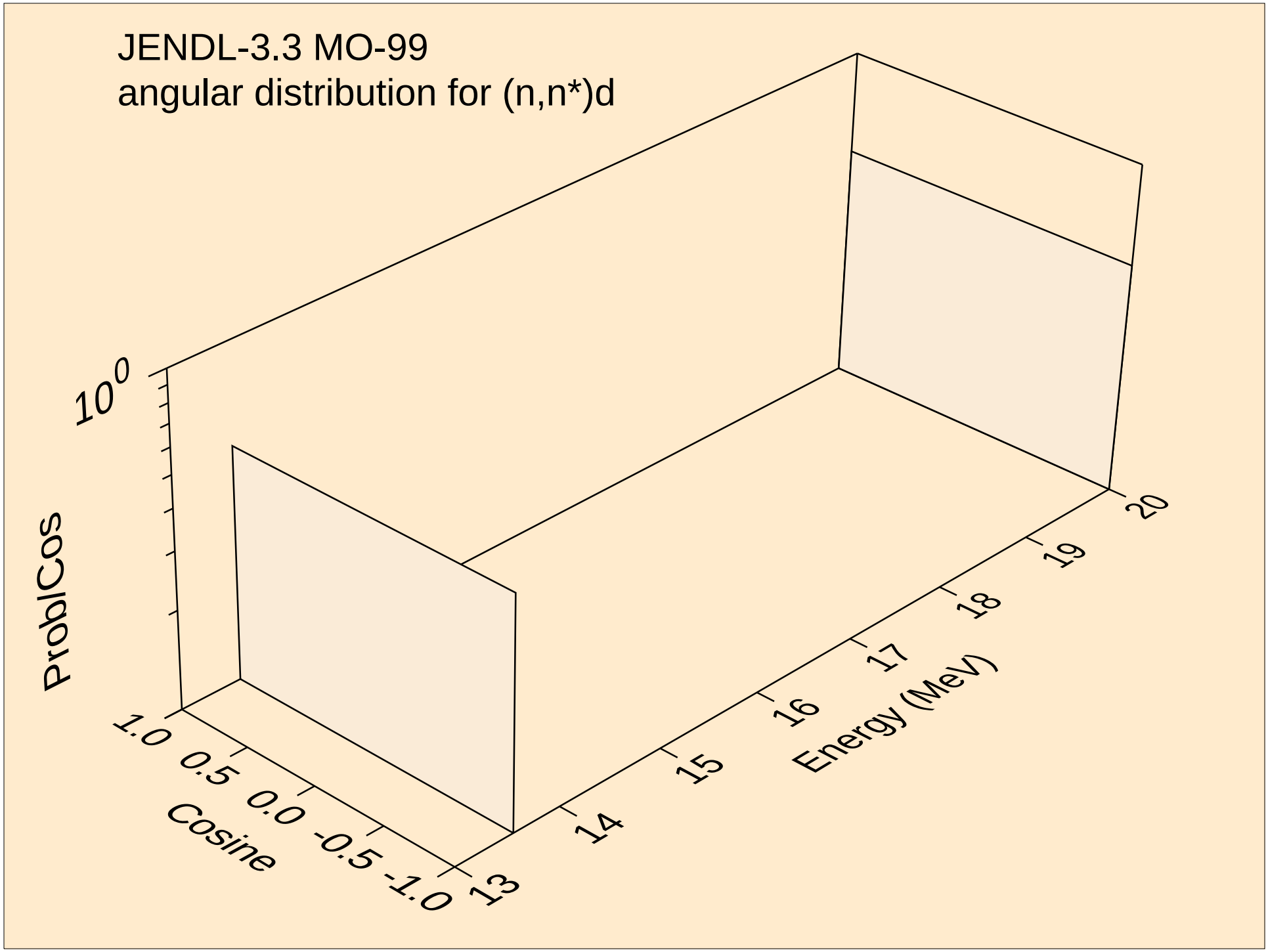

JENDL-3.3 MO-99
angular distribution for elastic
ProblCos
10^0
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)

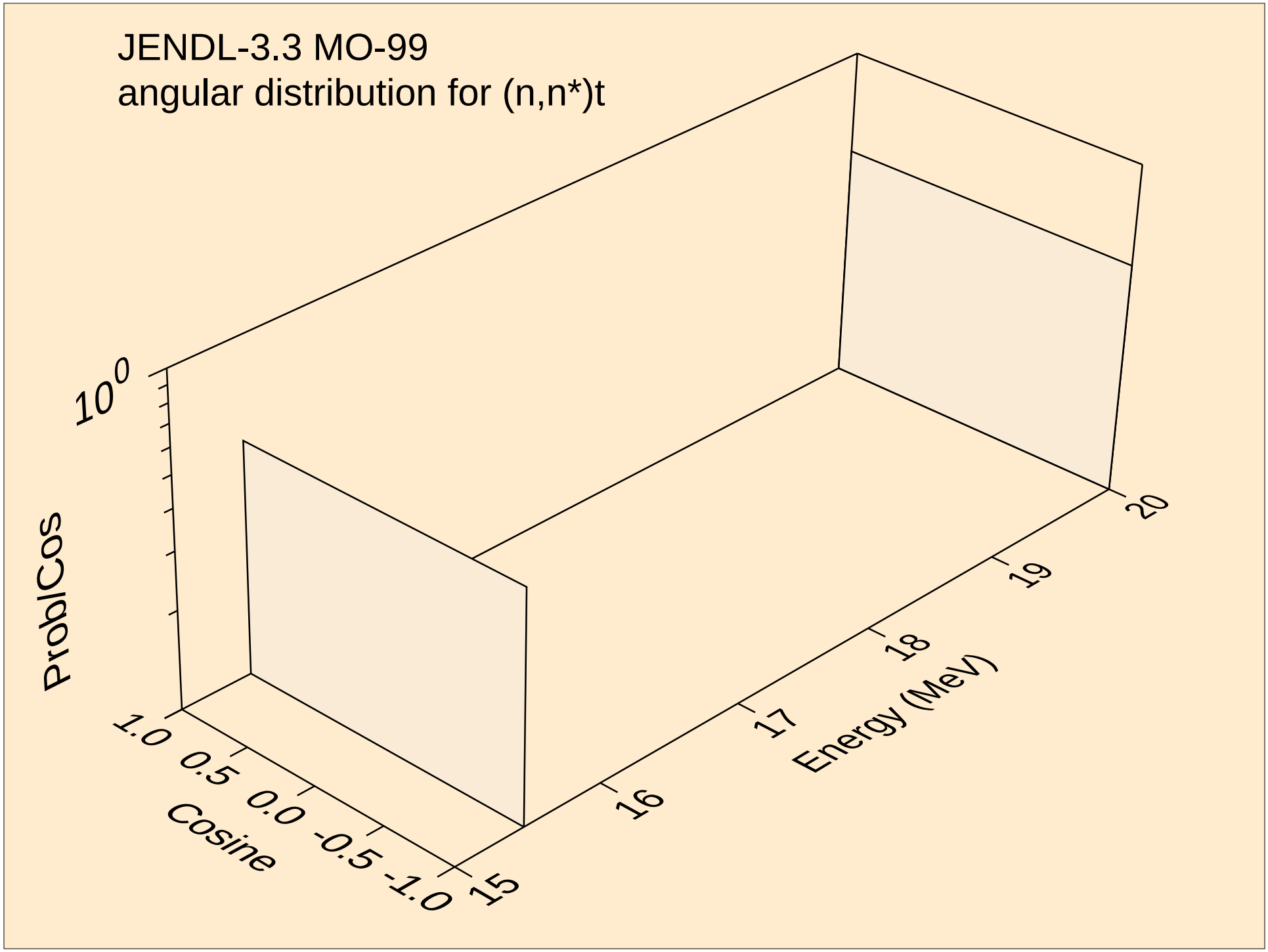

JENDL-3.3 MO-99
angular distribution for (n,2n)
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
4
6
8
10
12
14
16
18
20
Energy (MeV)

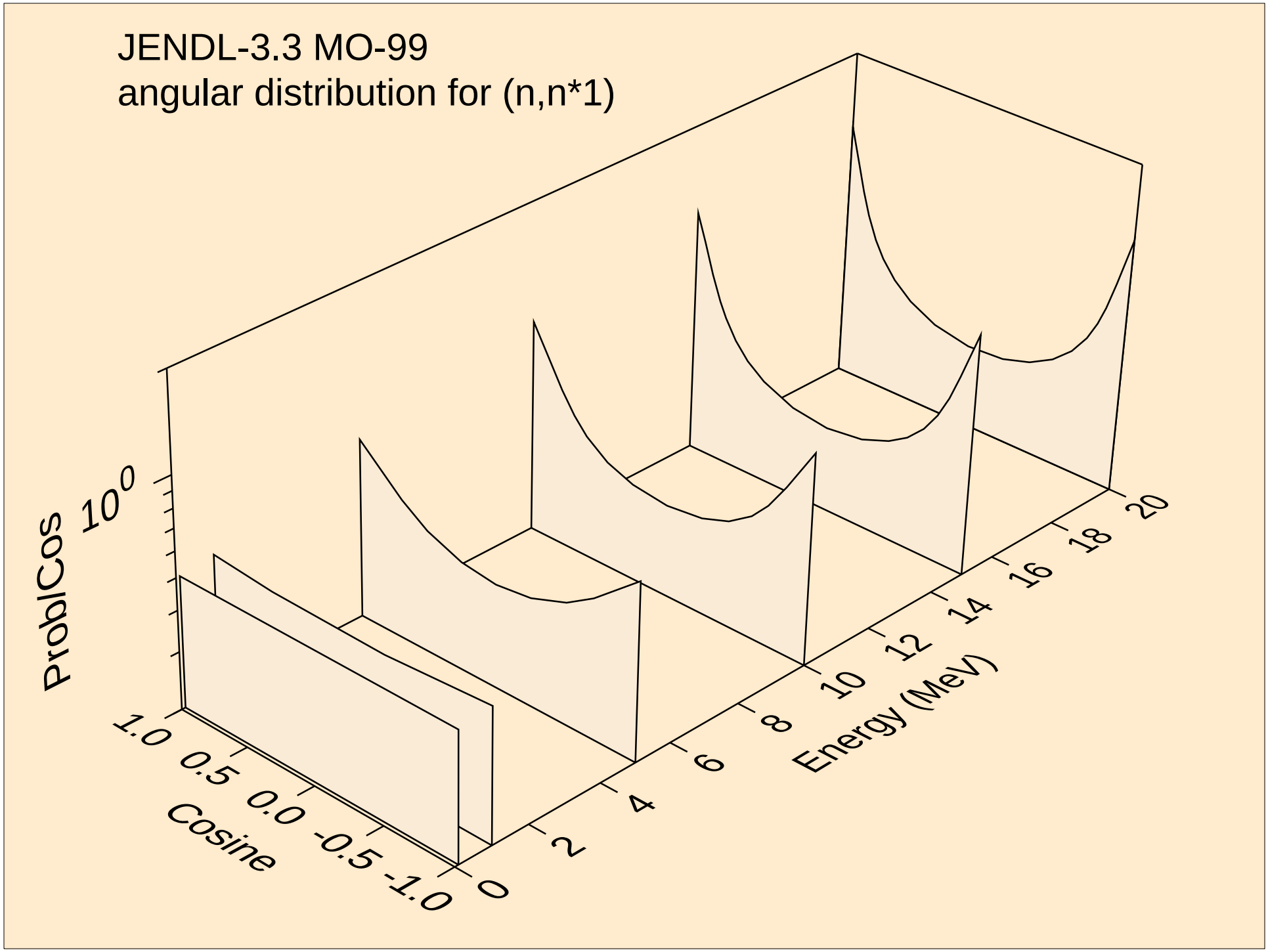

JENDL-3.3 MO-99
angular distribution for (n,3n)
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
14
15
16
17
18
19
20
Energy (MeV)

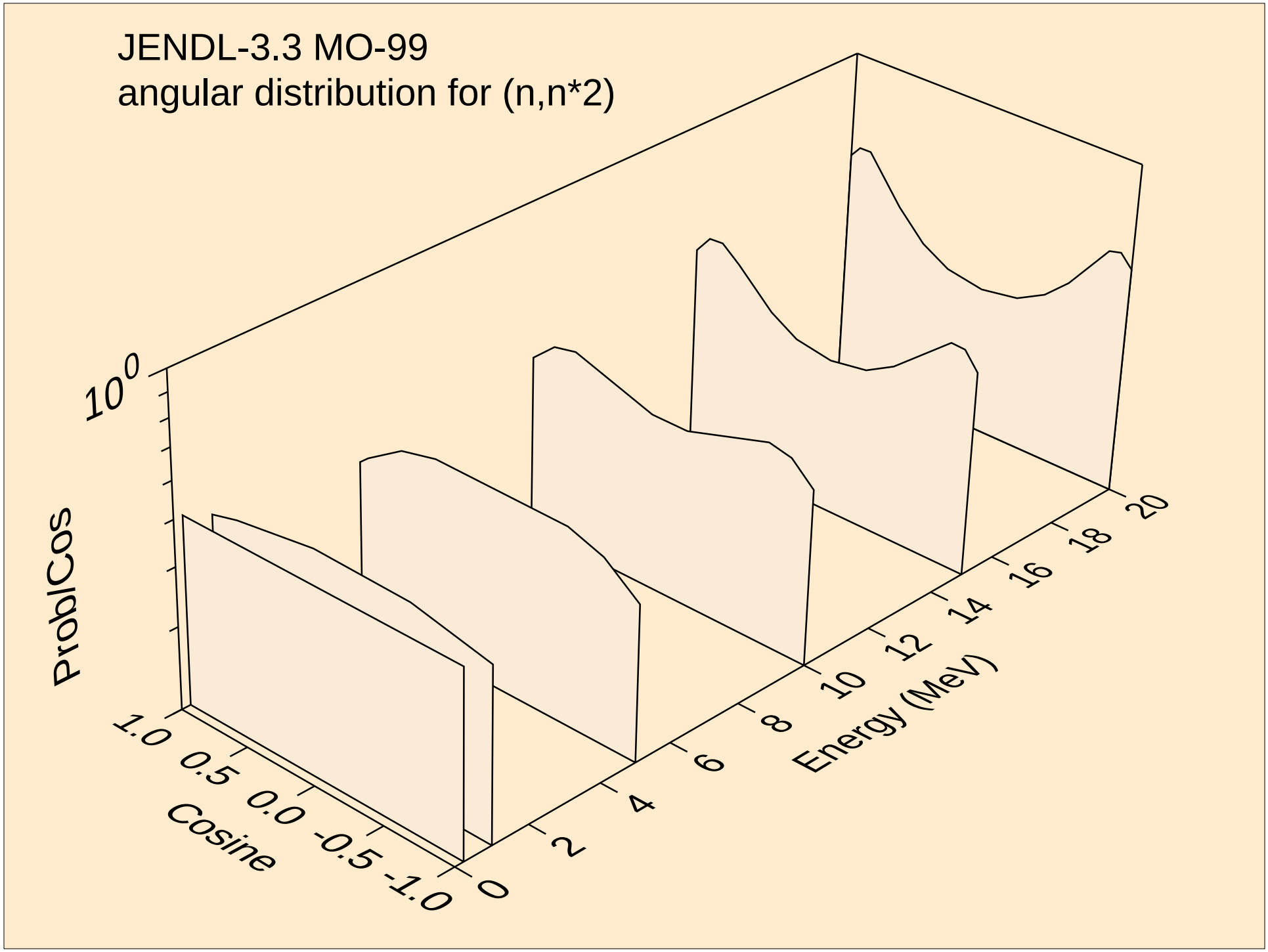

JENDL-3.3 MO-99
angular distribution for (n,n*)a
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

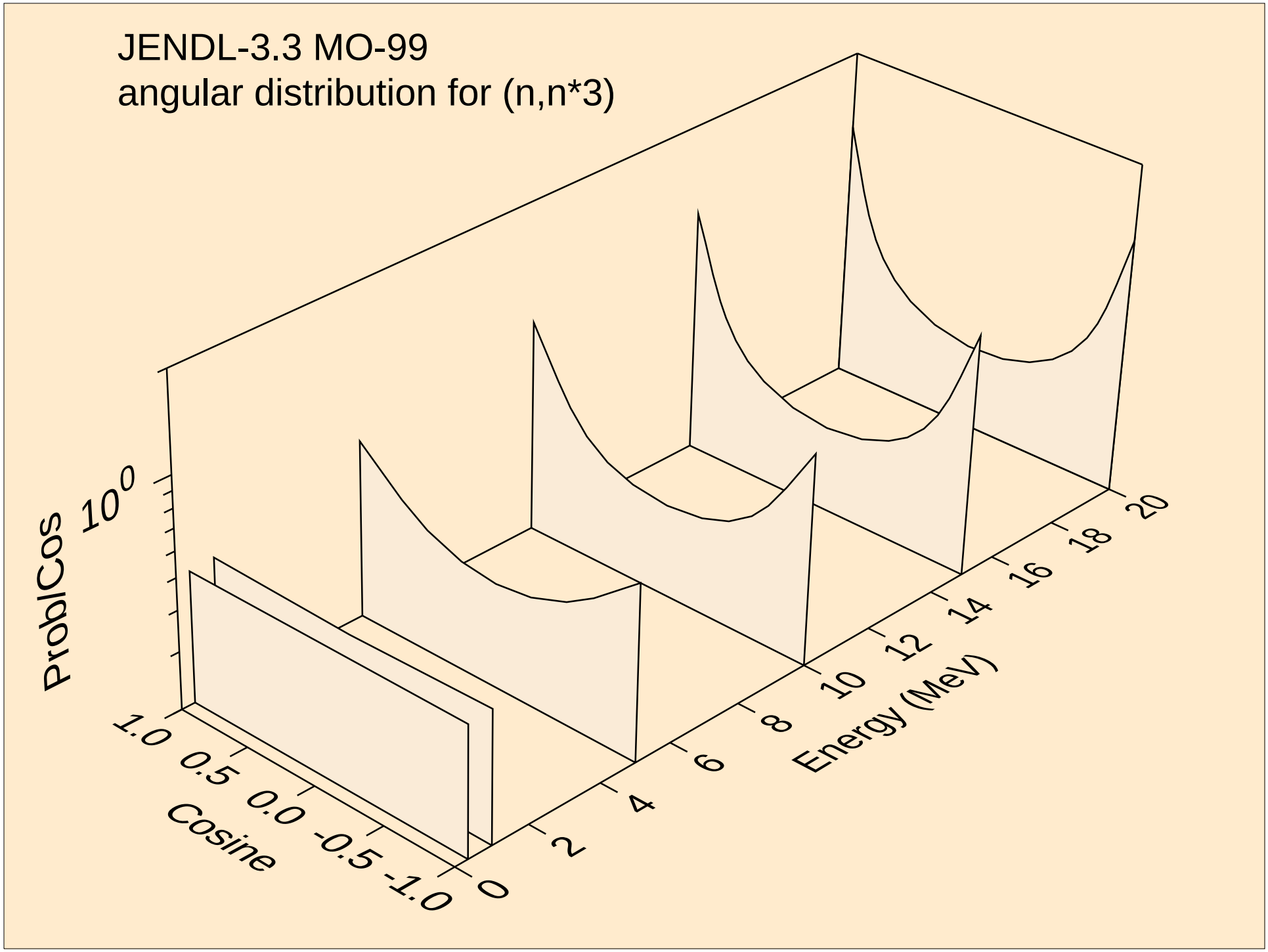

JENDL-3.3 MO-99
angular distribution for (n,n*)p
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
8
10
12
14
16
18
20
Energy (MeV)

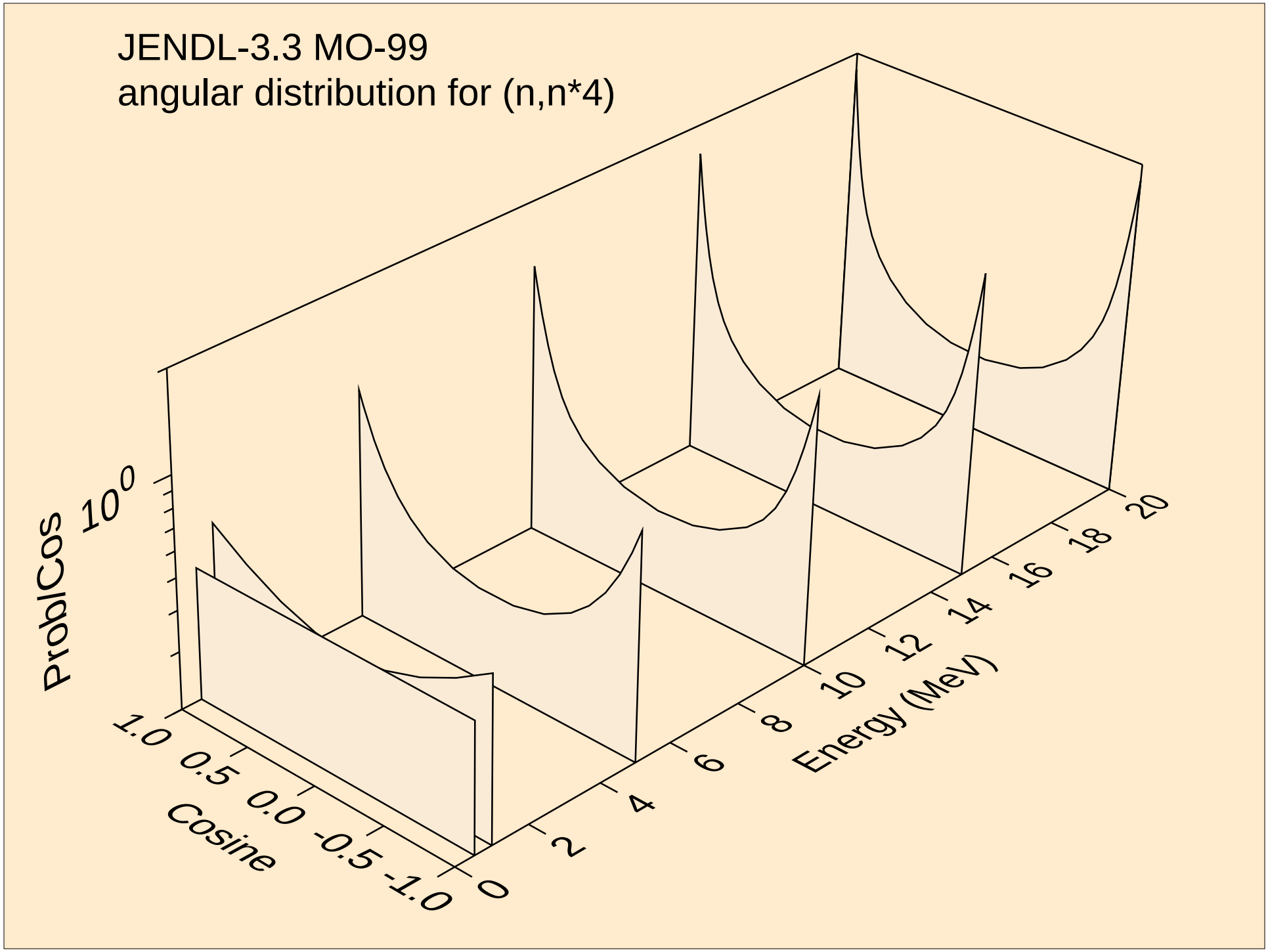

JENDL-3.3 MO-99
angular distribution for (n,n*)d
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
13
14
15
16
17
18
19
20
Energy (MeV)

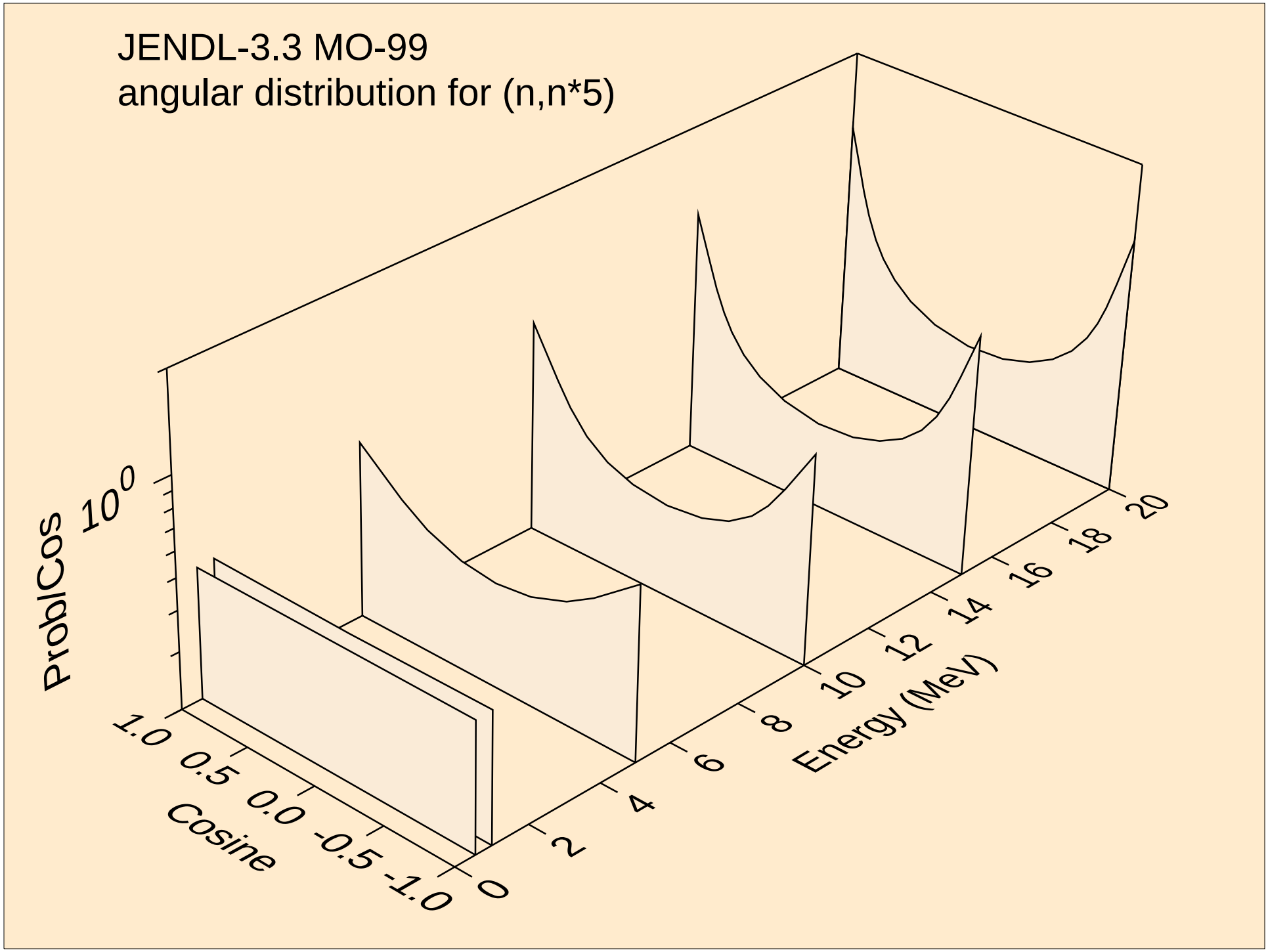

JENDL-3.3 MO-99
angular distribution for (n,n*)t
10^0
Prob/Cos
1.0
0.5
0.0
-0.5
-1.0
Cosine
15
16
17
18
19
20
Energy (MeV)

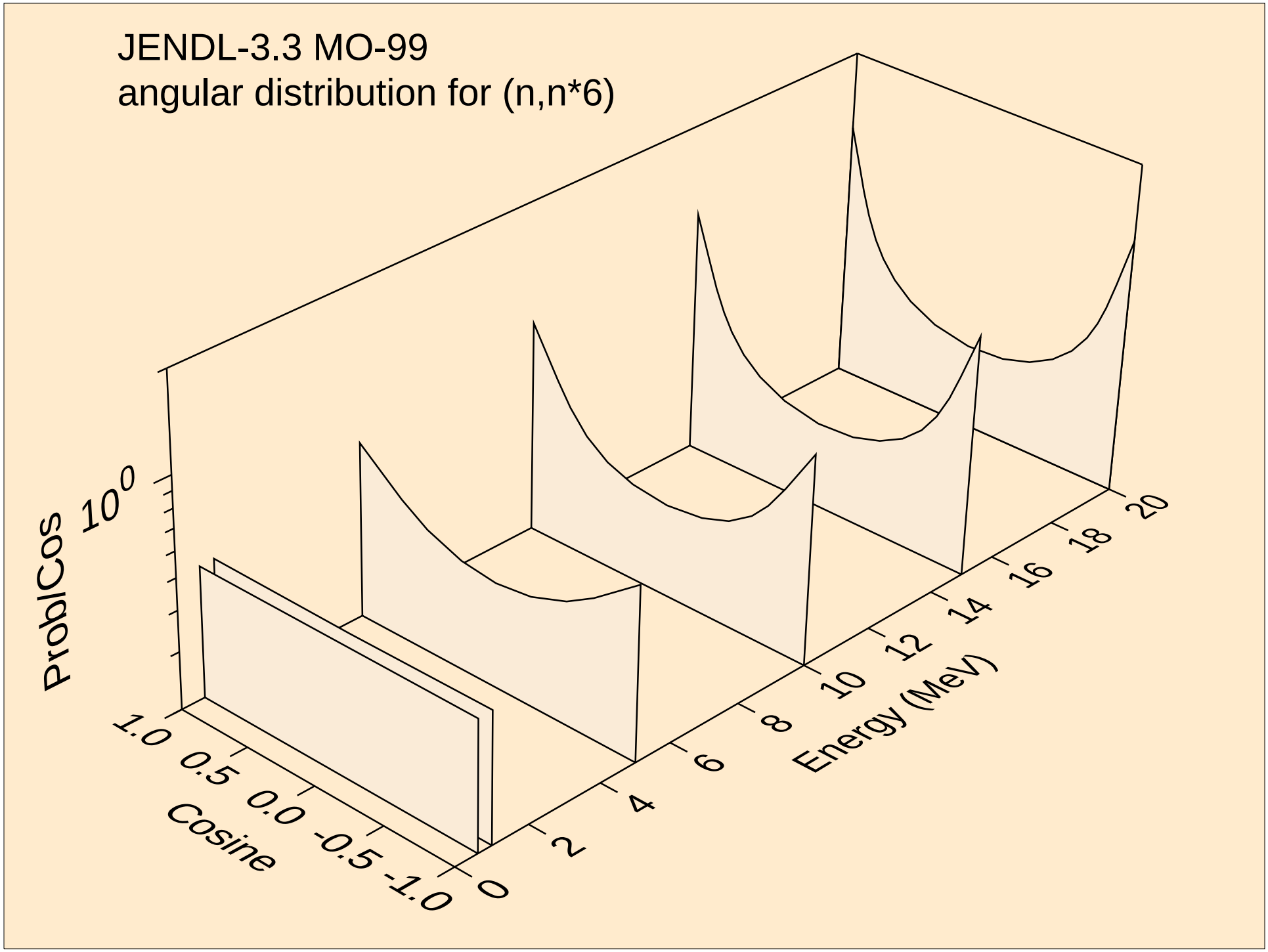

JENDL-3.3 MO-99
angular distribution for (n,n*1)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

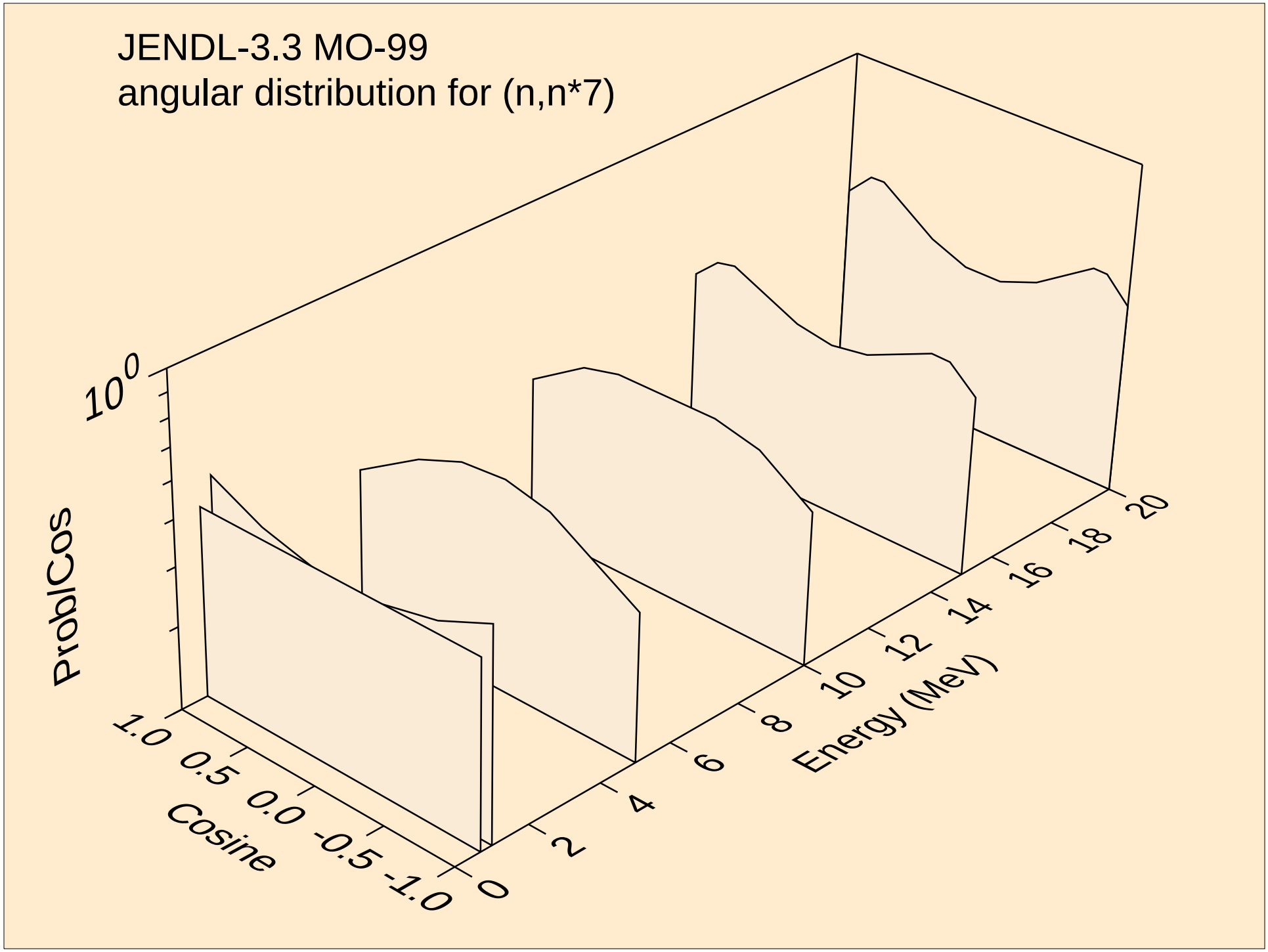

JENDL-3.3 MO-99
angular distribution for (n,n*2)
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

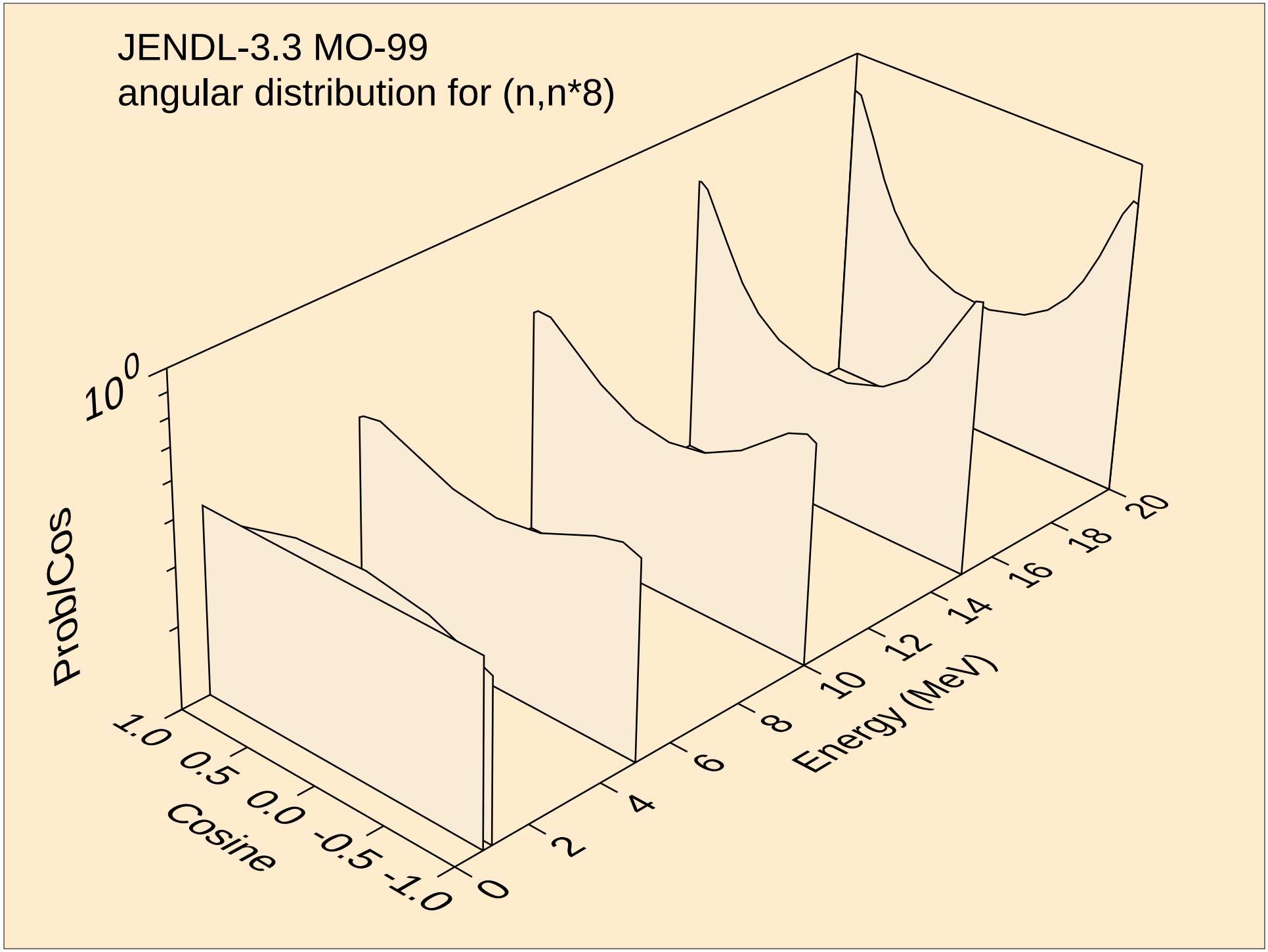

JENDL-3.3 MO-99
angular distribution for (n,n*3)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

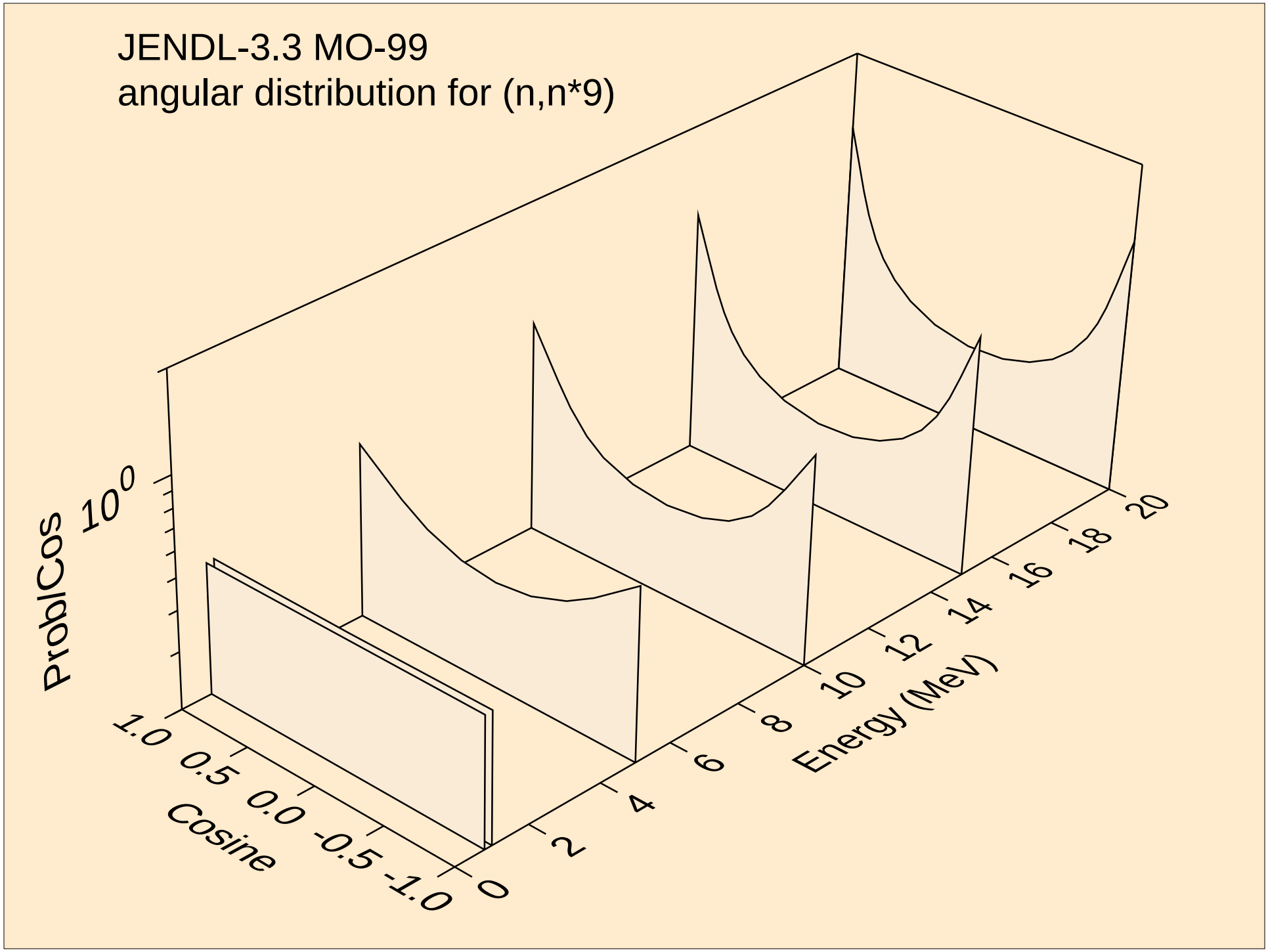

JENDL-3.3 MO-99
angular distribution for (n,n*4)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

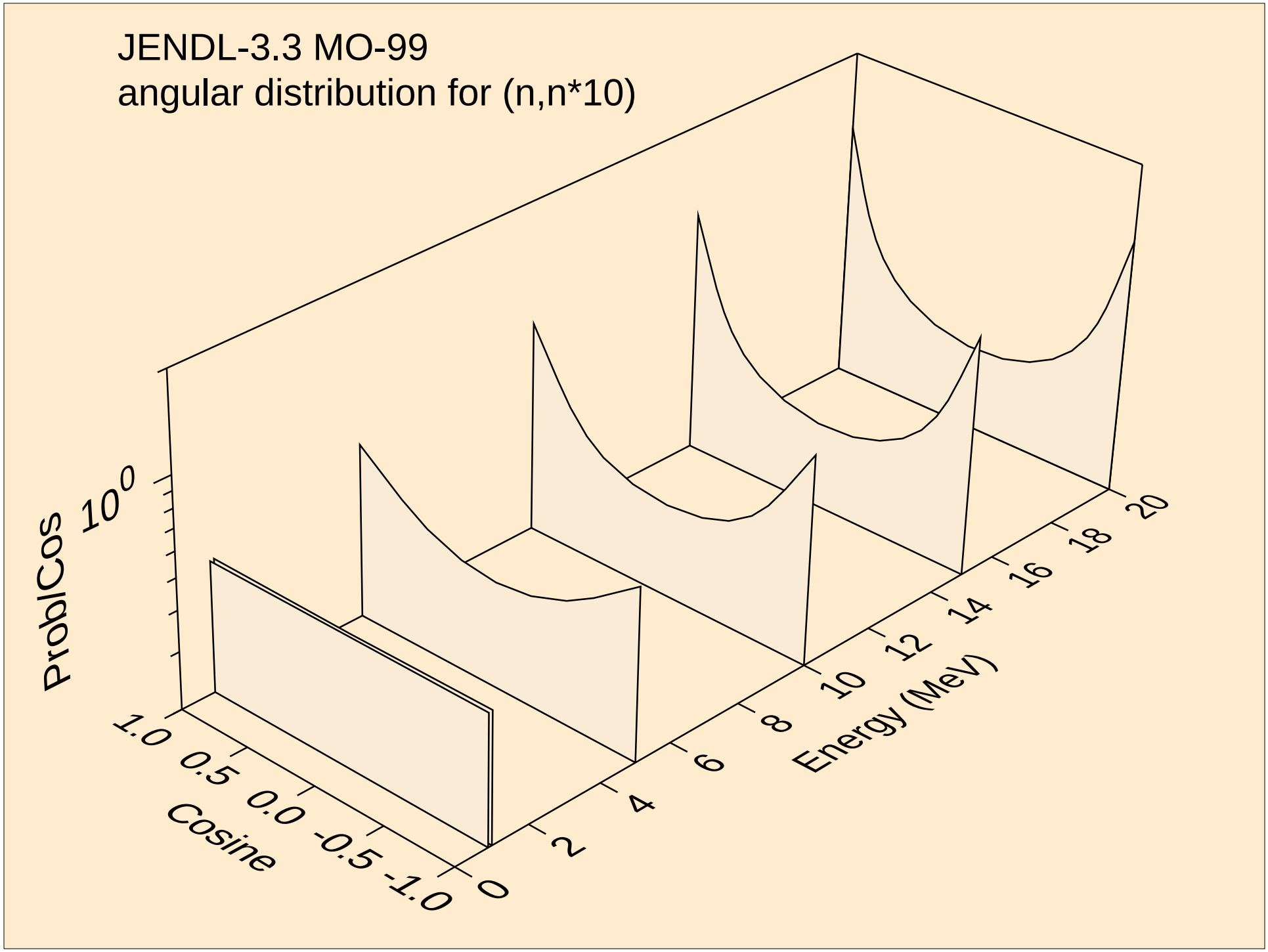

JENDL-3.3 MO-99
angular distribution for (n,n*5)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

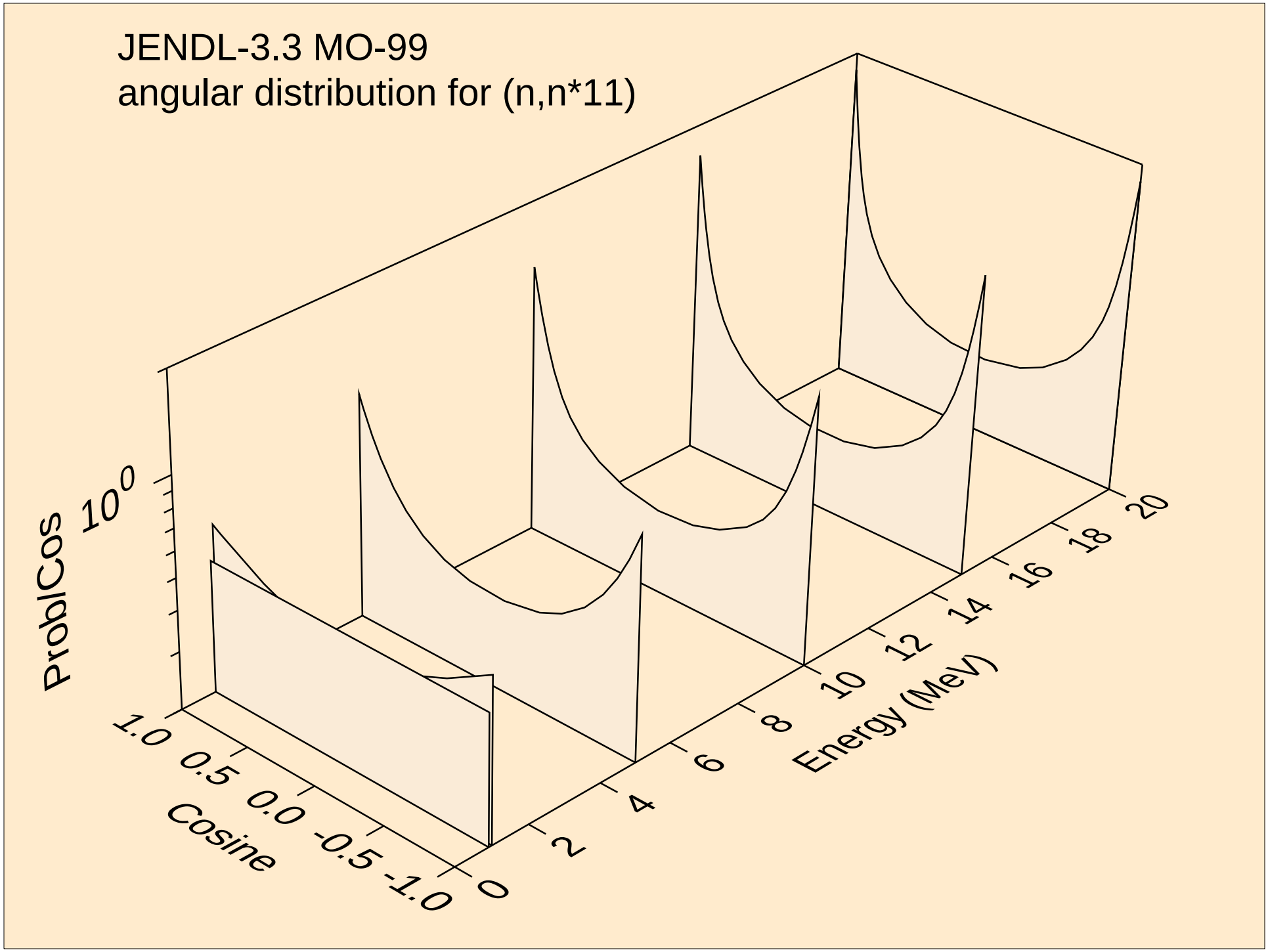

JENDL-3.3 MO-99
angular distribution for (n,n*6)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

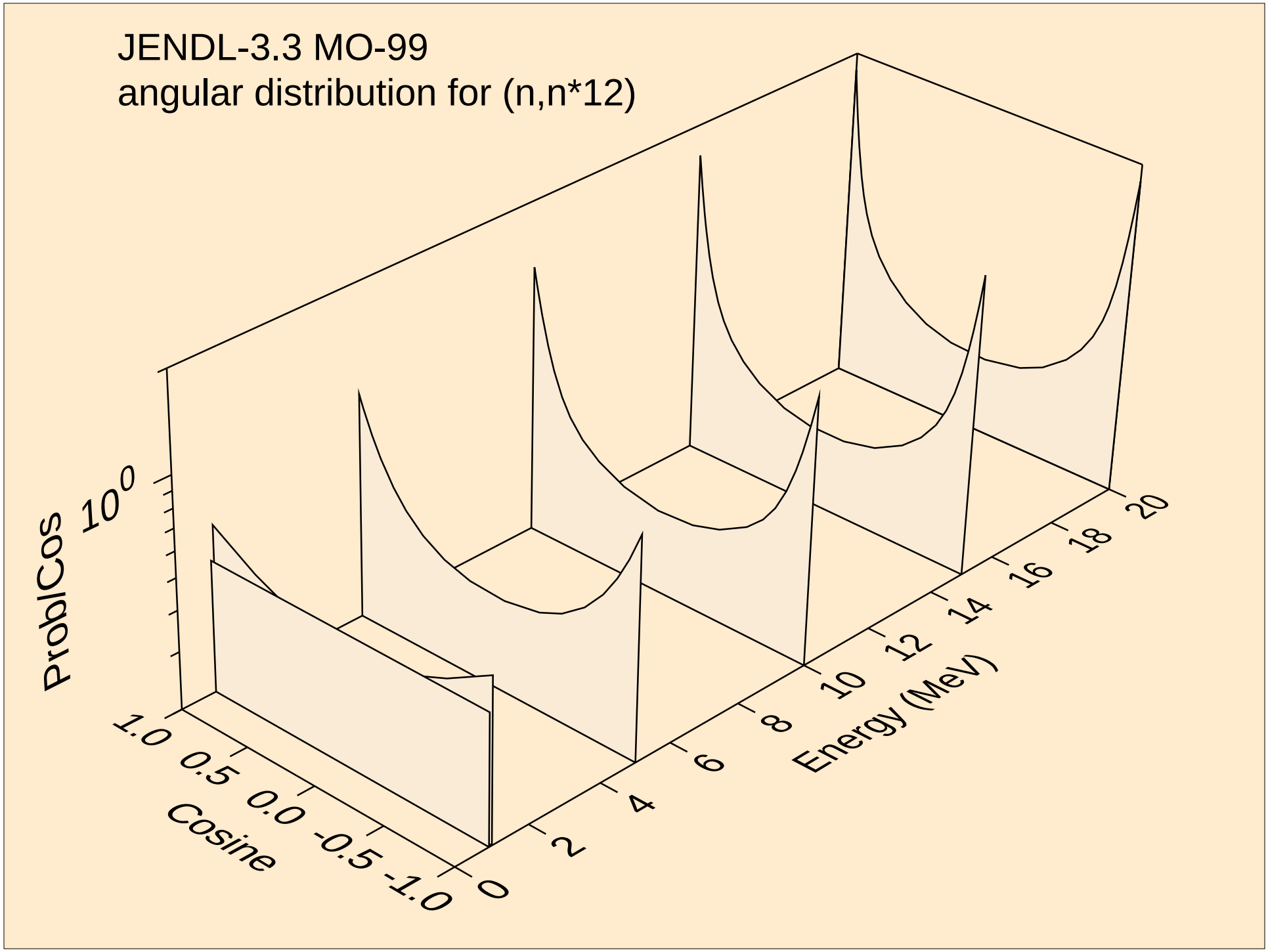

JENDL-3.3 MO-99
angular distribution for (n,n*7)
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

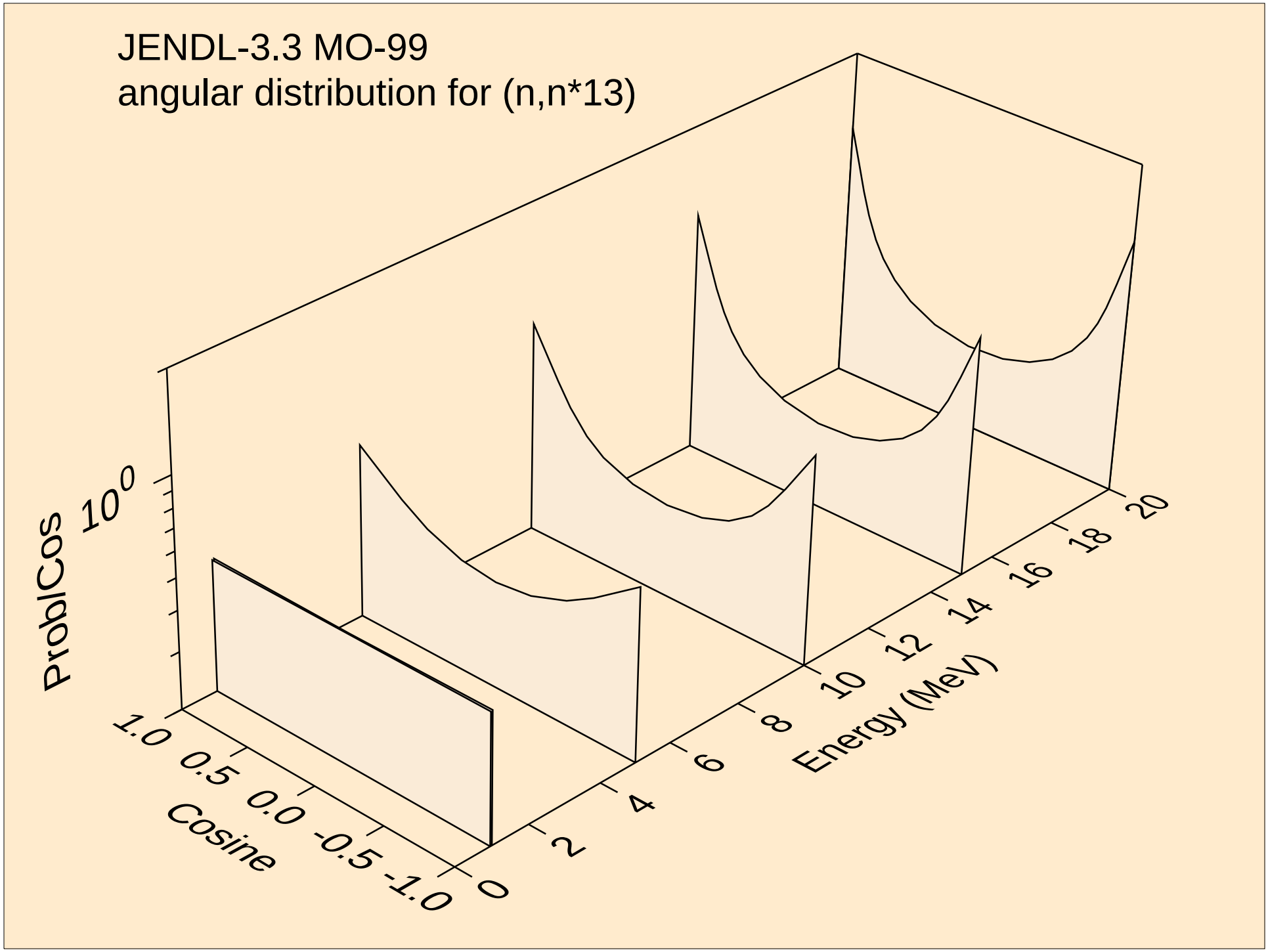

JENDL-3.3 MO-99
angular distribution for (n,n*8)
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

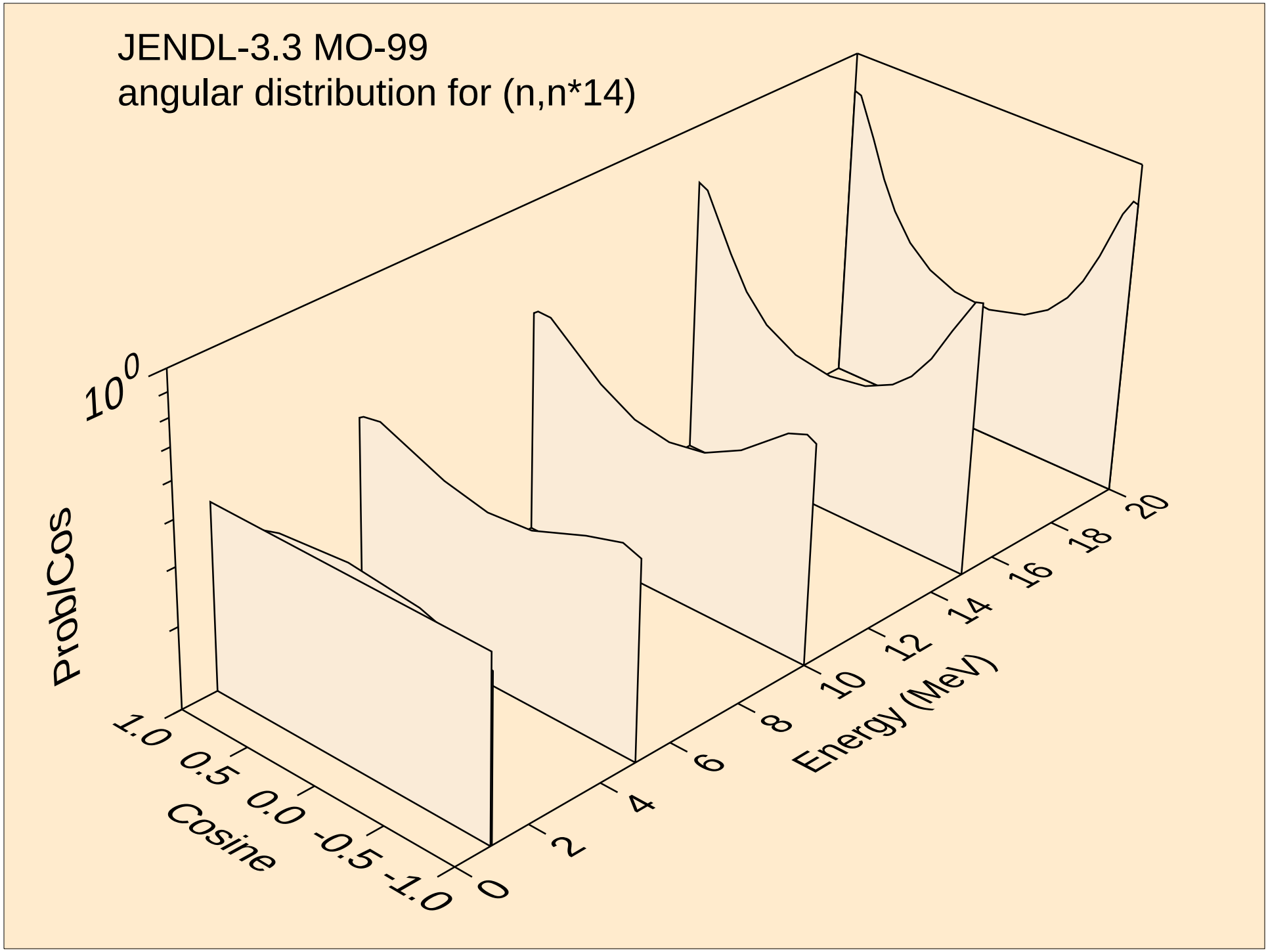

JENDL-3.3 MO-99
angular distribution for (n,n*9)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

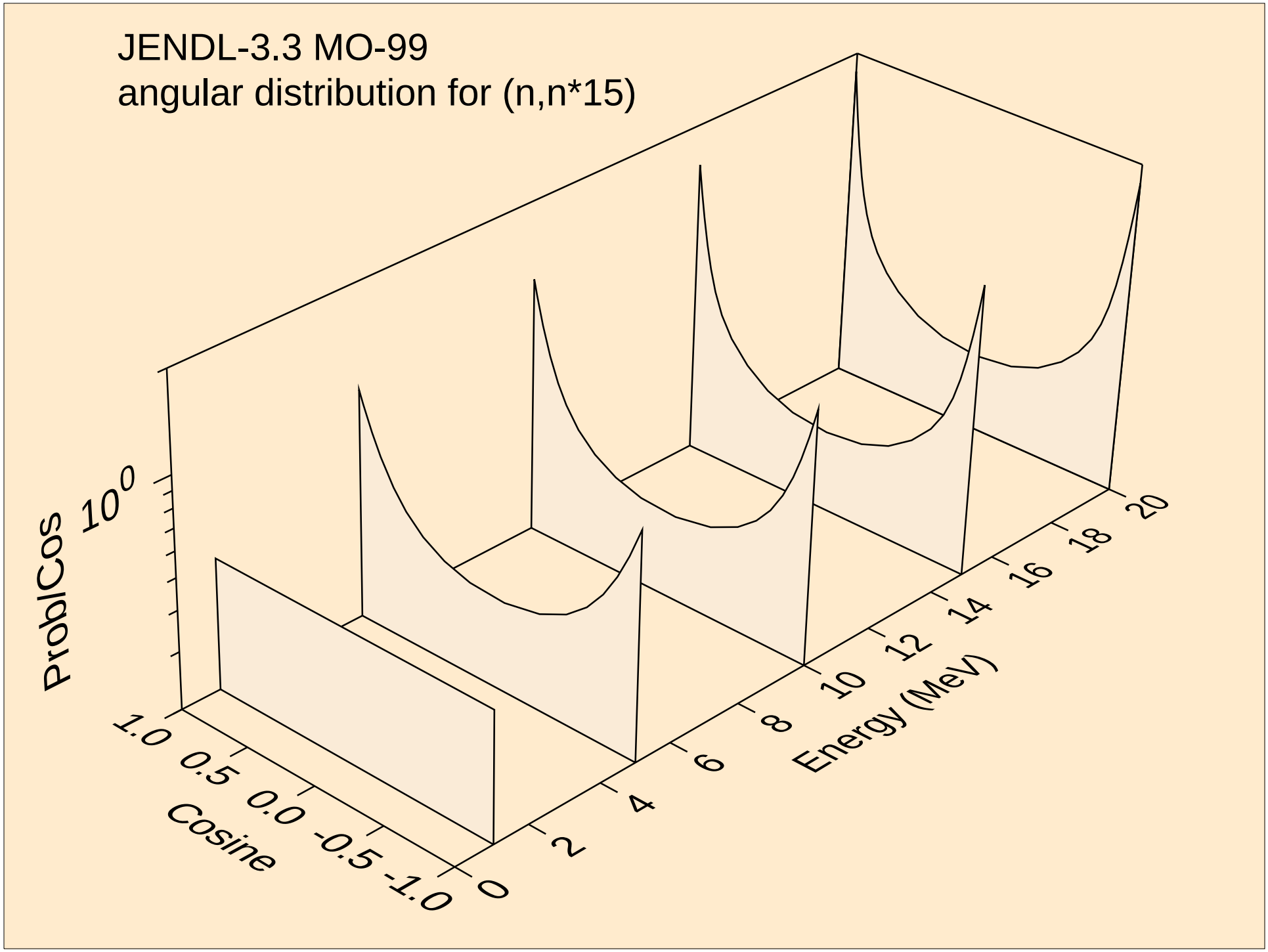

JENDL-3.3 MO-99
angular distribution for (n,n*10)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

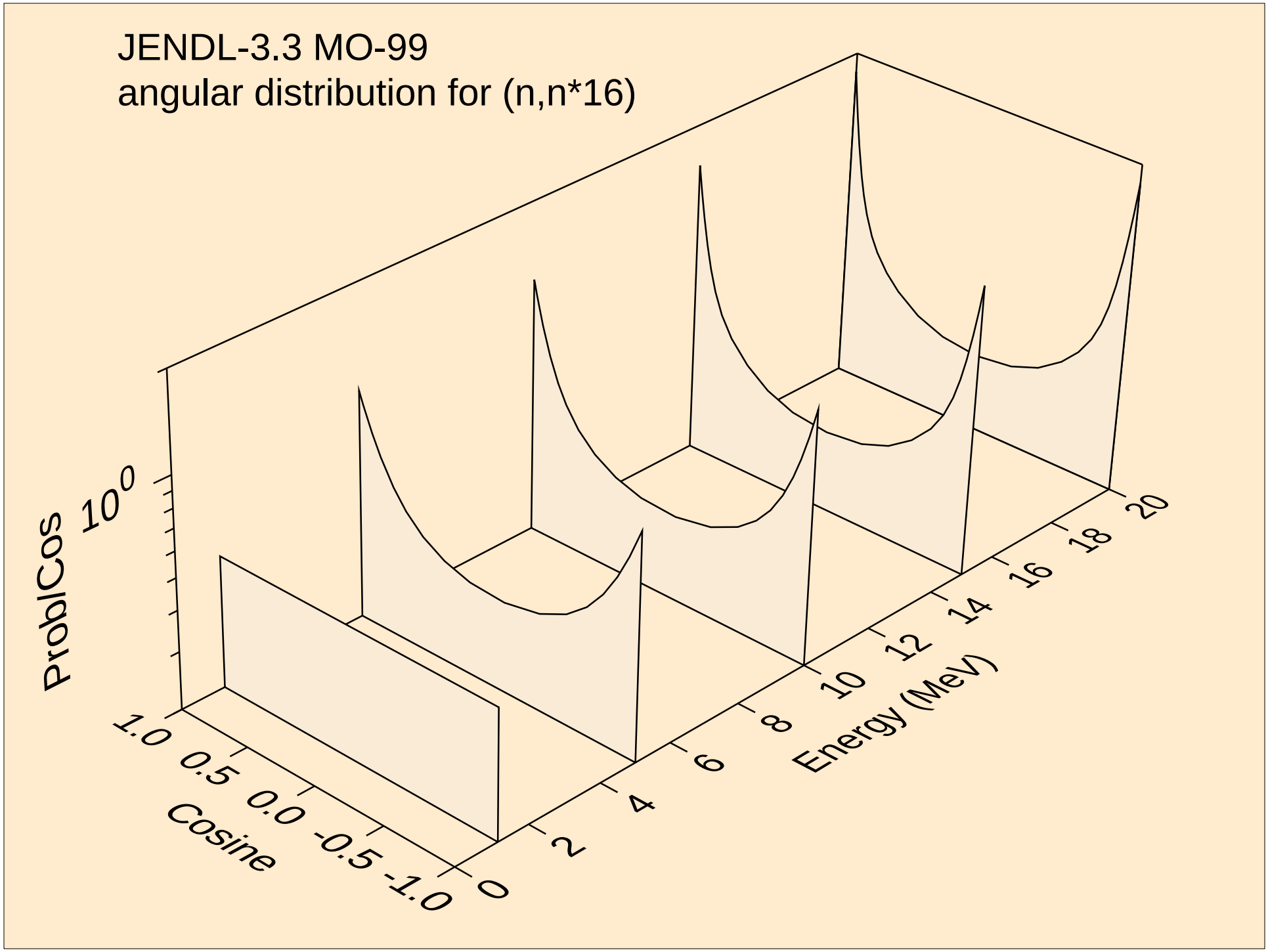

JENDL-3.3 MO-99
angular distribution for (n,n*11)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

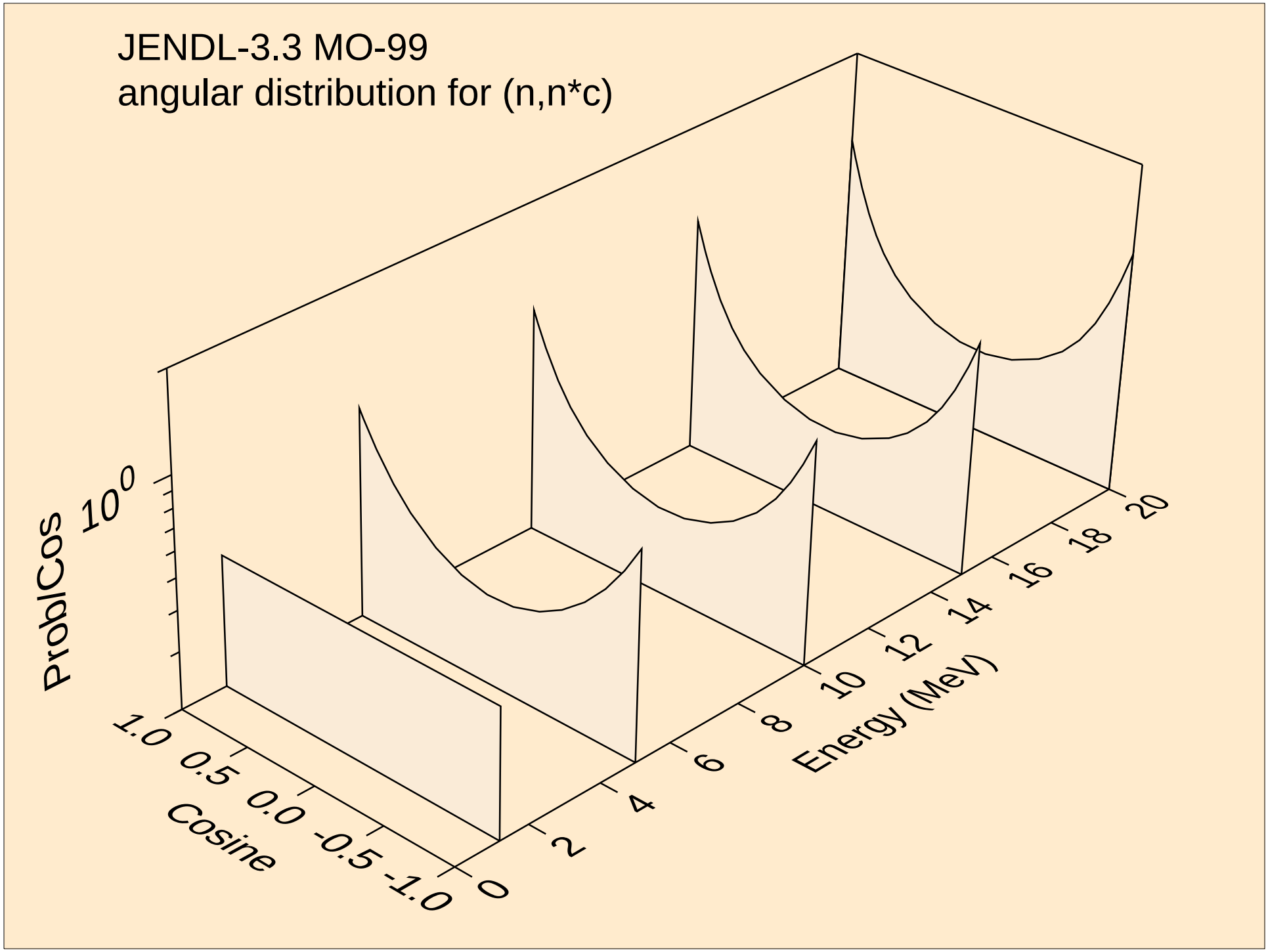

JENDL-3.3 MO-99
angular distribution for (n,n*12)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

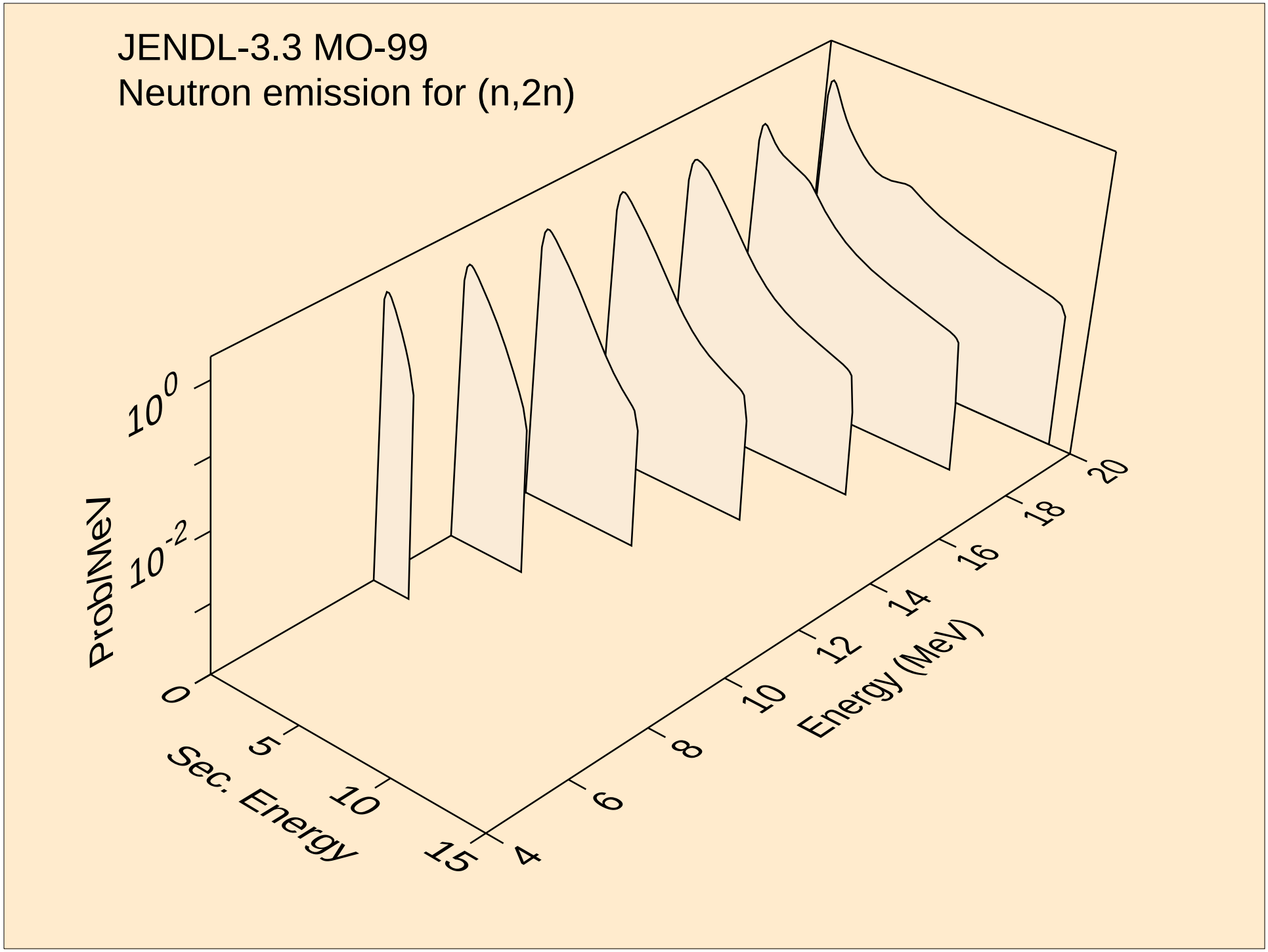

JENDL-3.3 MO-99
angular distribution for (n,n*13)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

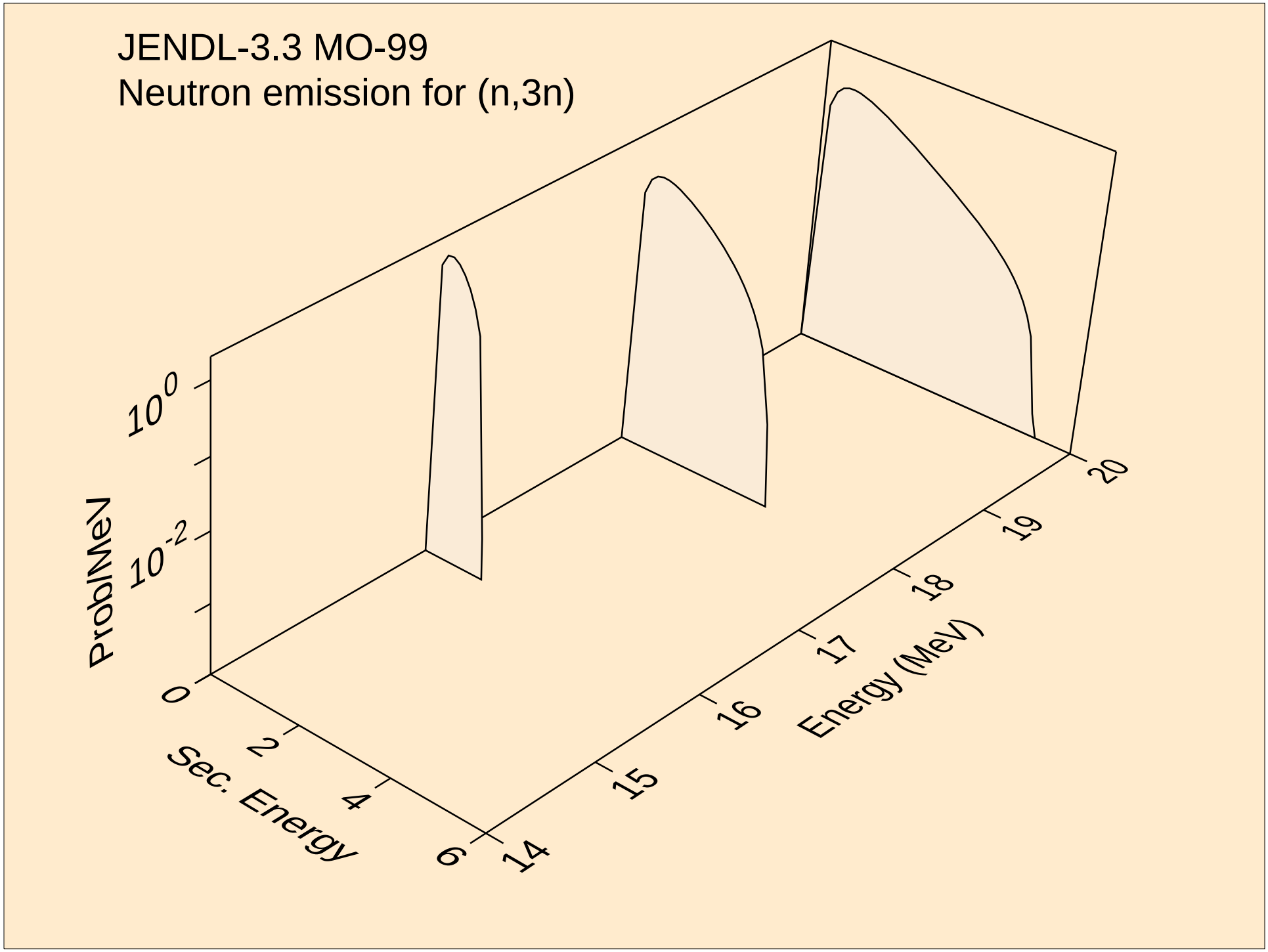

JENDL-3.3 MO-99
angular distribution for (n,n*14)
10^0
ProbCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

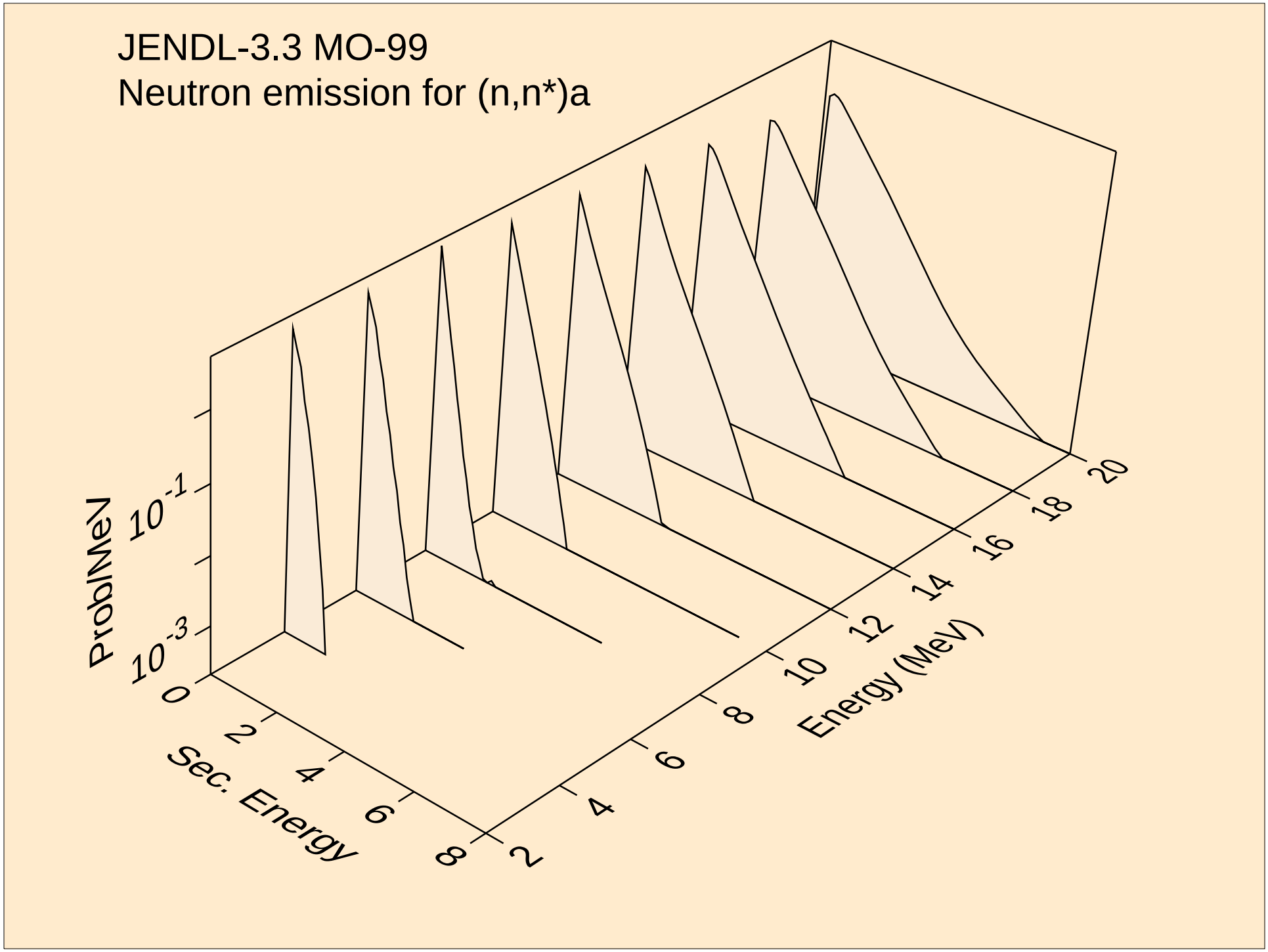

JENDL-3.3 MO-99
angular distribution for (n,n*15)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

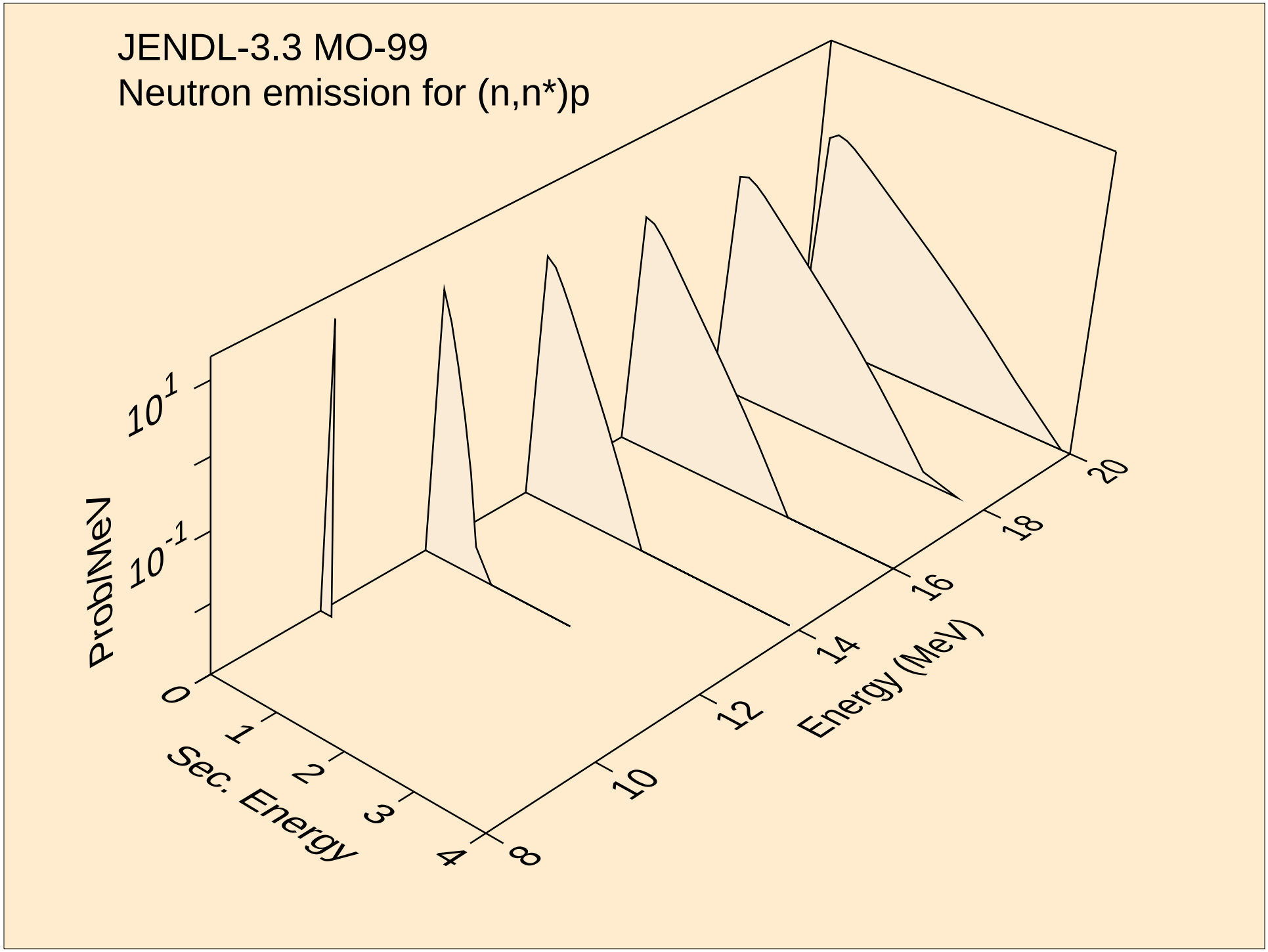

JENDL-3.3 MO-99
angular distribution for (n,n*16)
ProbCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

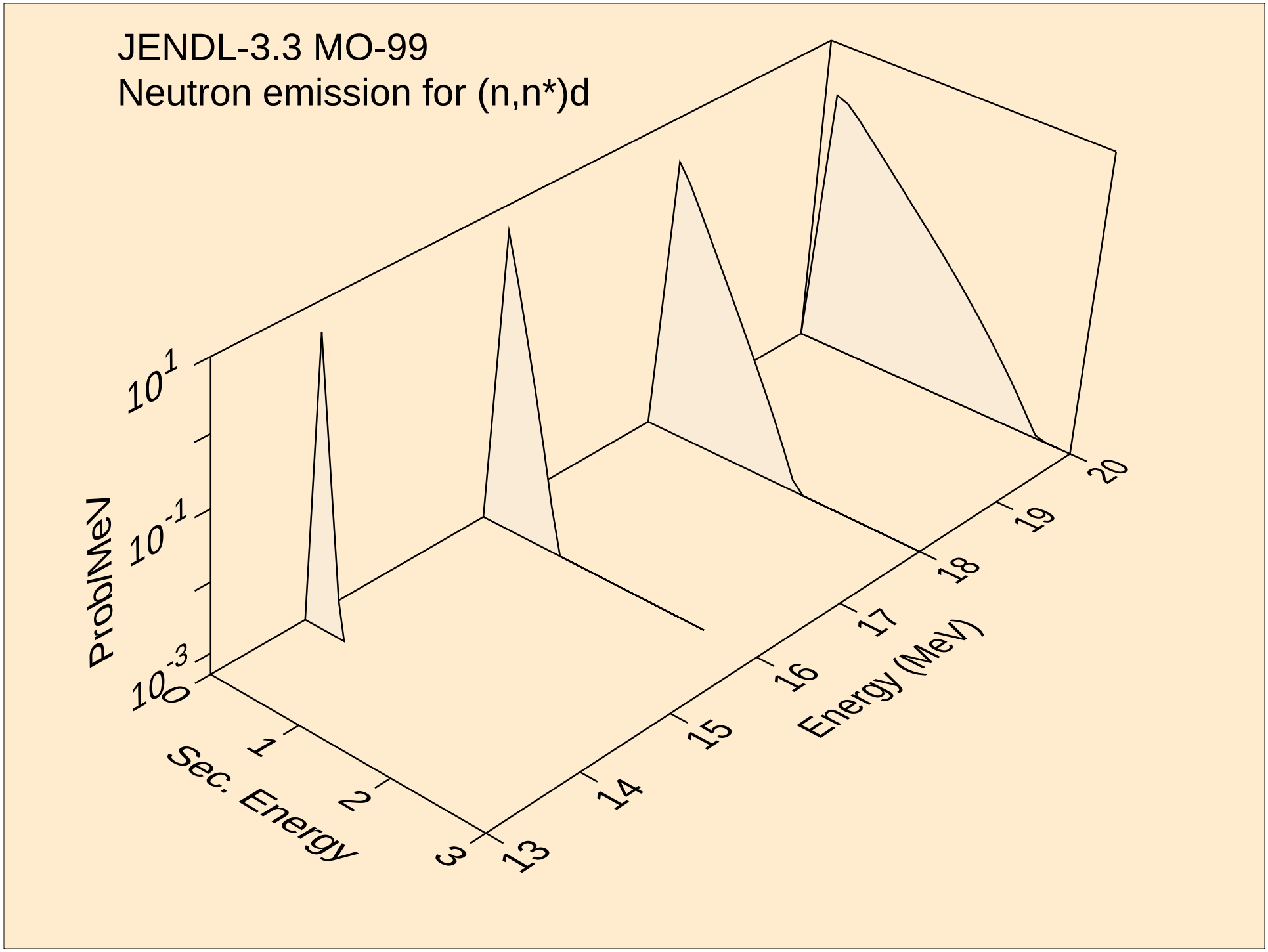

JENDL-3.3 MO-99
angular distribution for (n,n*c)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

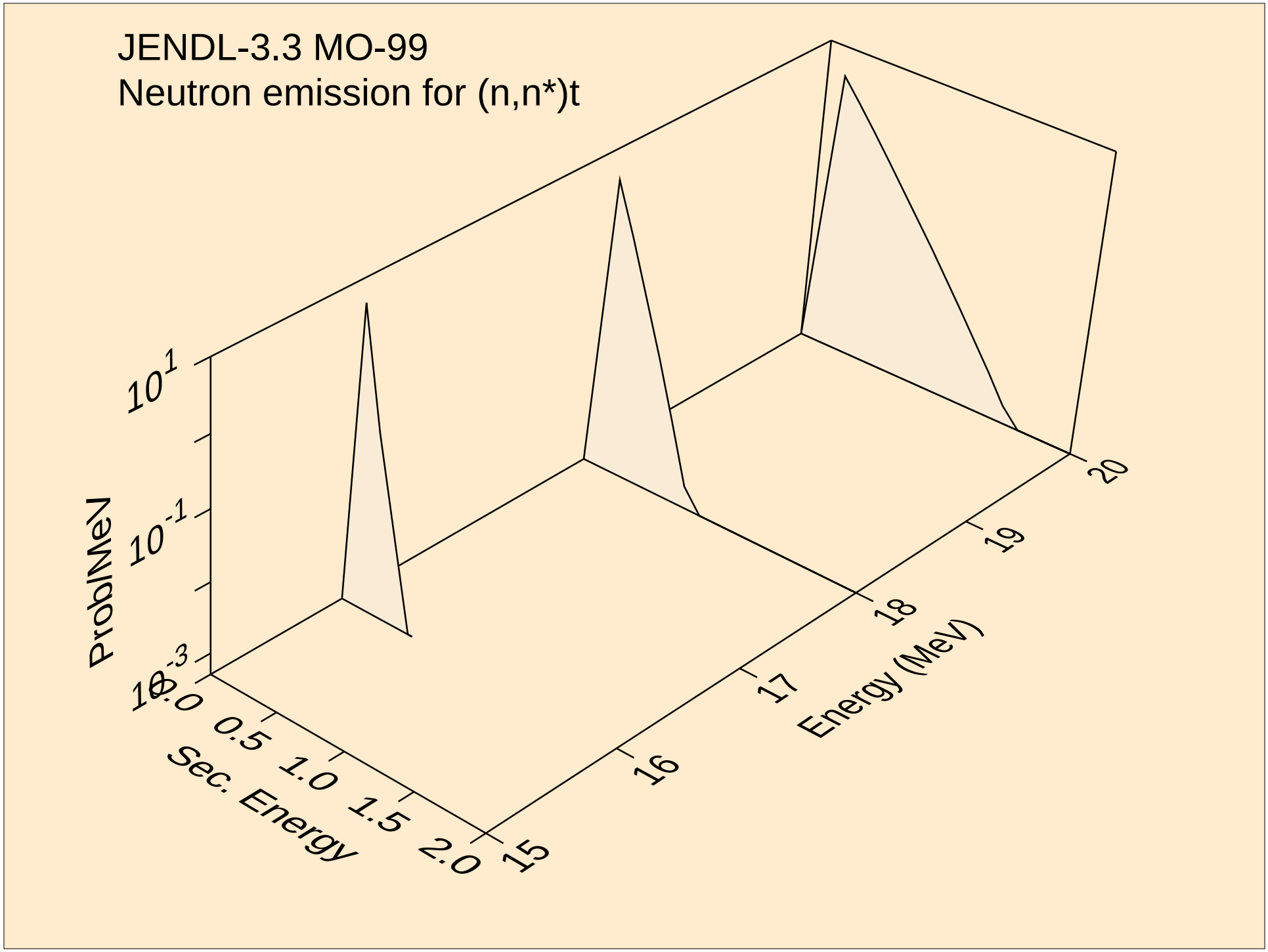

JENDL-3.3 MO-99
Neutron emission for (n,2n)
Prob/MeV
10^0
10^{-2}
0
5
10
15
Sec. Energy
4
6
8
10
12
14
16
18
20
Energy (MeV)

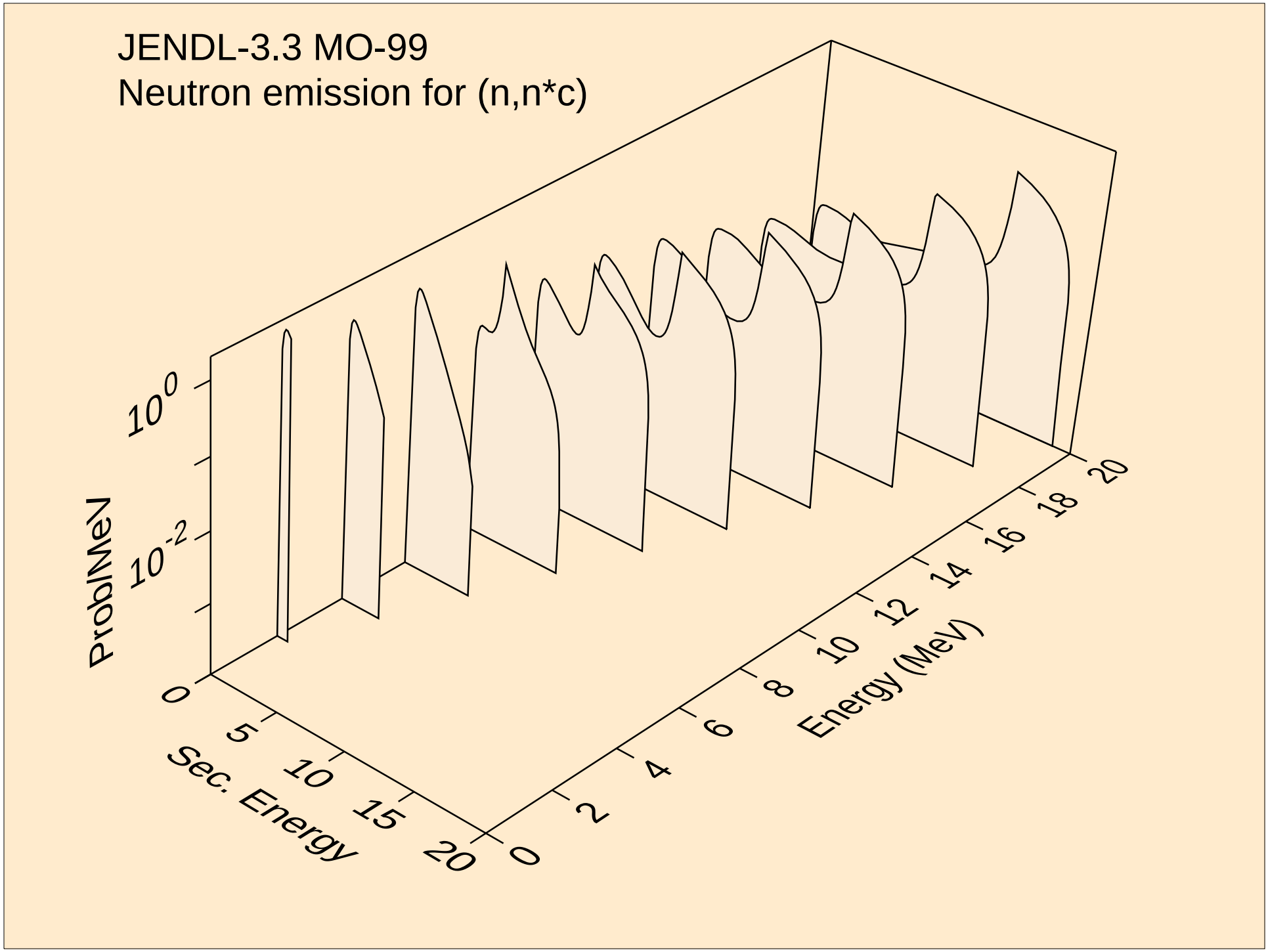

JENDL-3.3 MO-99
Neutron emission for (n,3n)
Prob/MeV
10^0
10^{-2}
0
2
4
6
Sec. Energy
14
15
16
17
18
19
20
Energy (MeV)


JENDL-3.3 MO-99
Neutron emission for (n,n*)a
Prob/MeV
10-1
10-3
0
Sec. Energy
2
4
6
8
Energy (MeV)
2
4
6
8
10
12
14
16
18
20


JENDL-3.3 MO-99
Neutron emission for (n,n*)p
Prob/MeV
10^1
10^-1
0
Sec. Energy
1
2
3
4
8
10
12
14
16
18
20
Energy (MeV)


JENDL-3.3 MO-99
Neutron emission for (n,n*)d
Prob/MeV
10^1
10^-1
10^-3
0
1
2
3
Sec. Energy
13
14
15
16
17
18
19
20
Energy (MeV)


JENDL-3.3 MO-99
Neutron emission for (n,n*)t
Prob/MeV
10^1
10^-1
10^-3
0.0
0.5
1.0
1.5
2.0
Sec. Energy
15
16
17
18
19
20
Energy (MeV)


JENDL-3.3 MO-99
Neutron emission for (n,n*c)
Prob/MeV
10^0
10^{-2}
0
5
10
15
20
Sec. Energy
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)