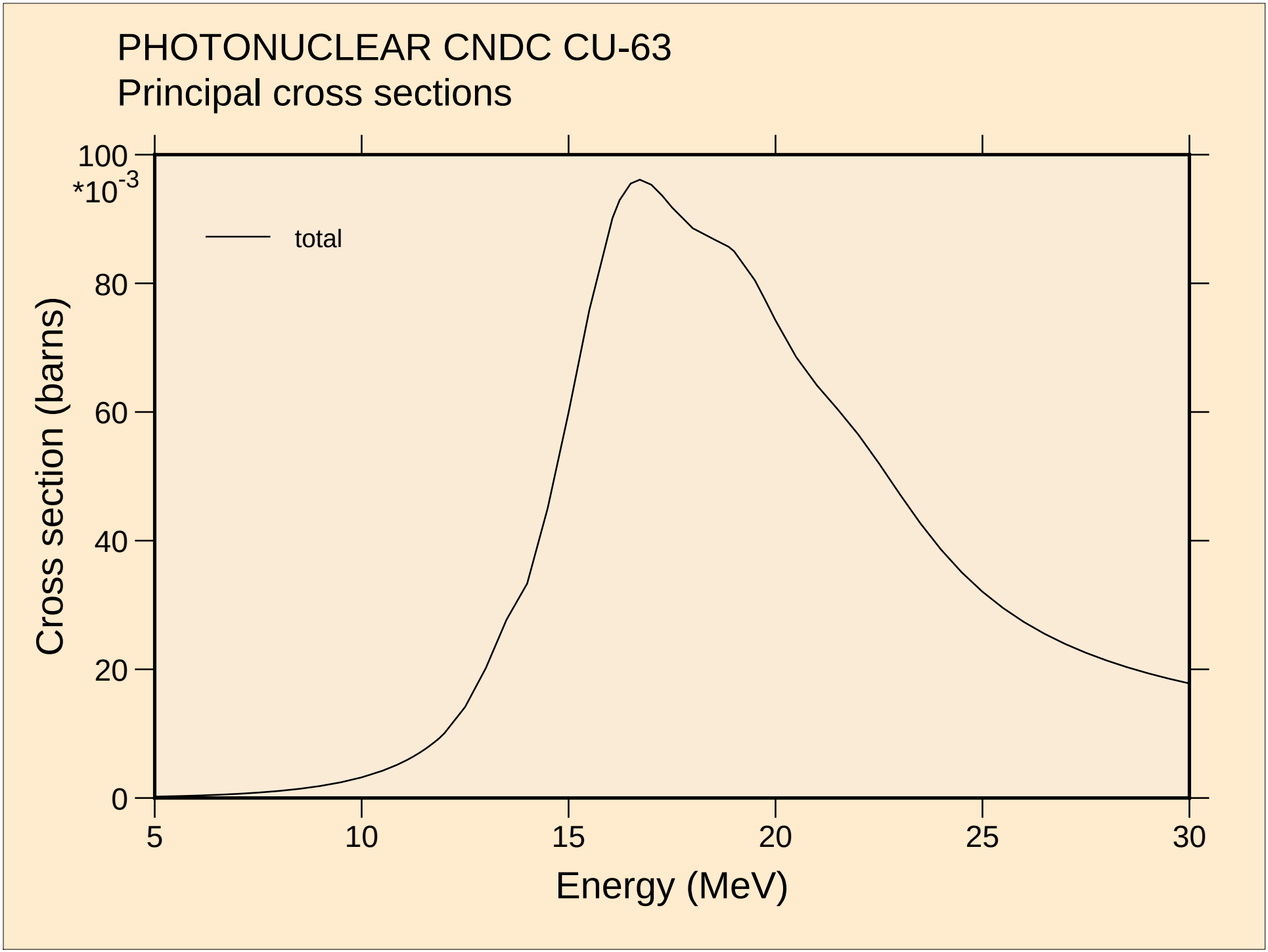
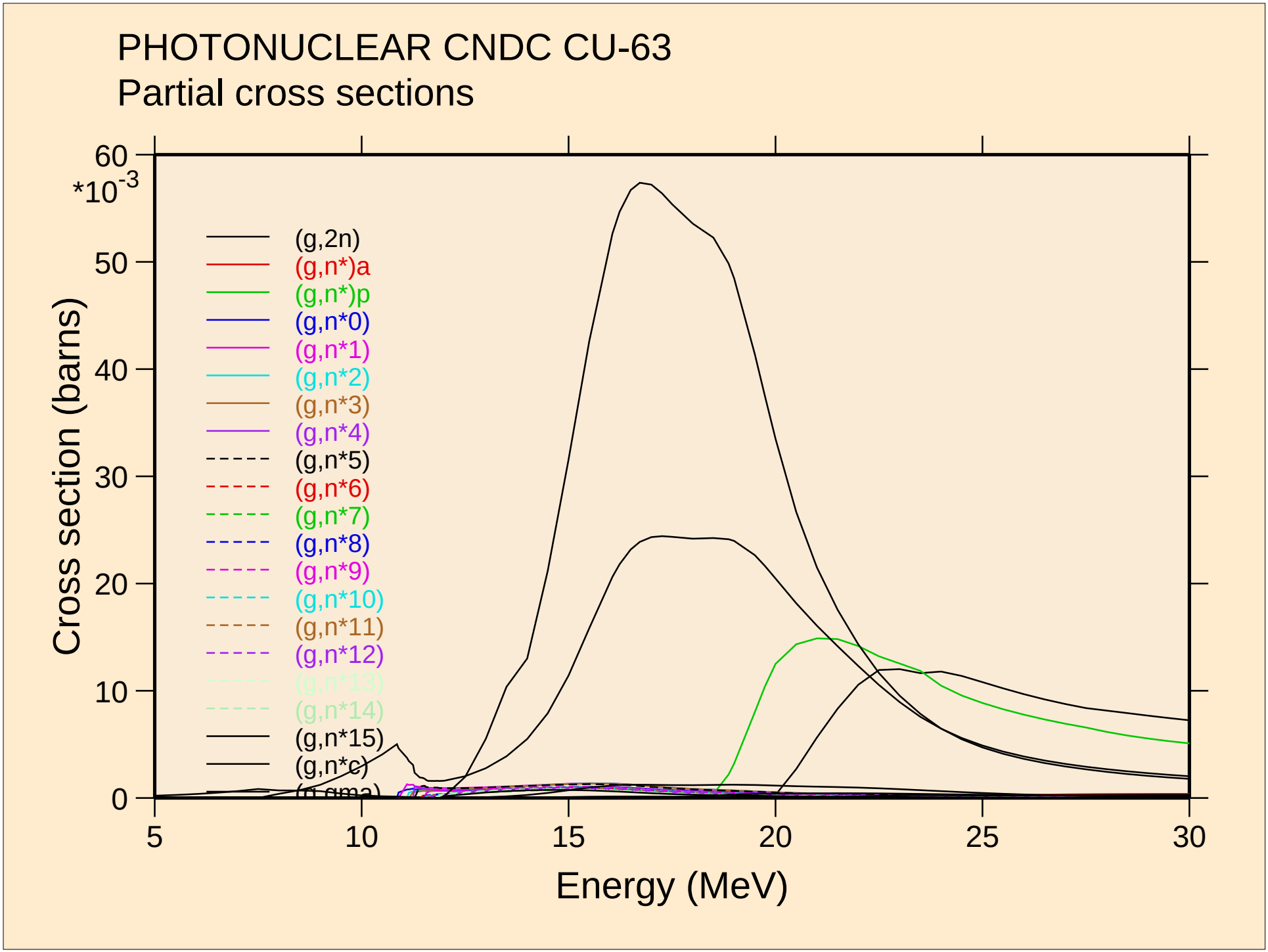
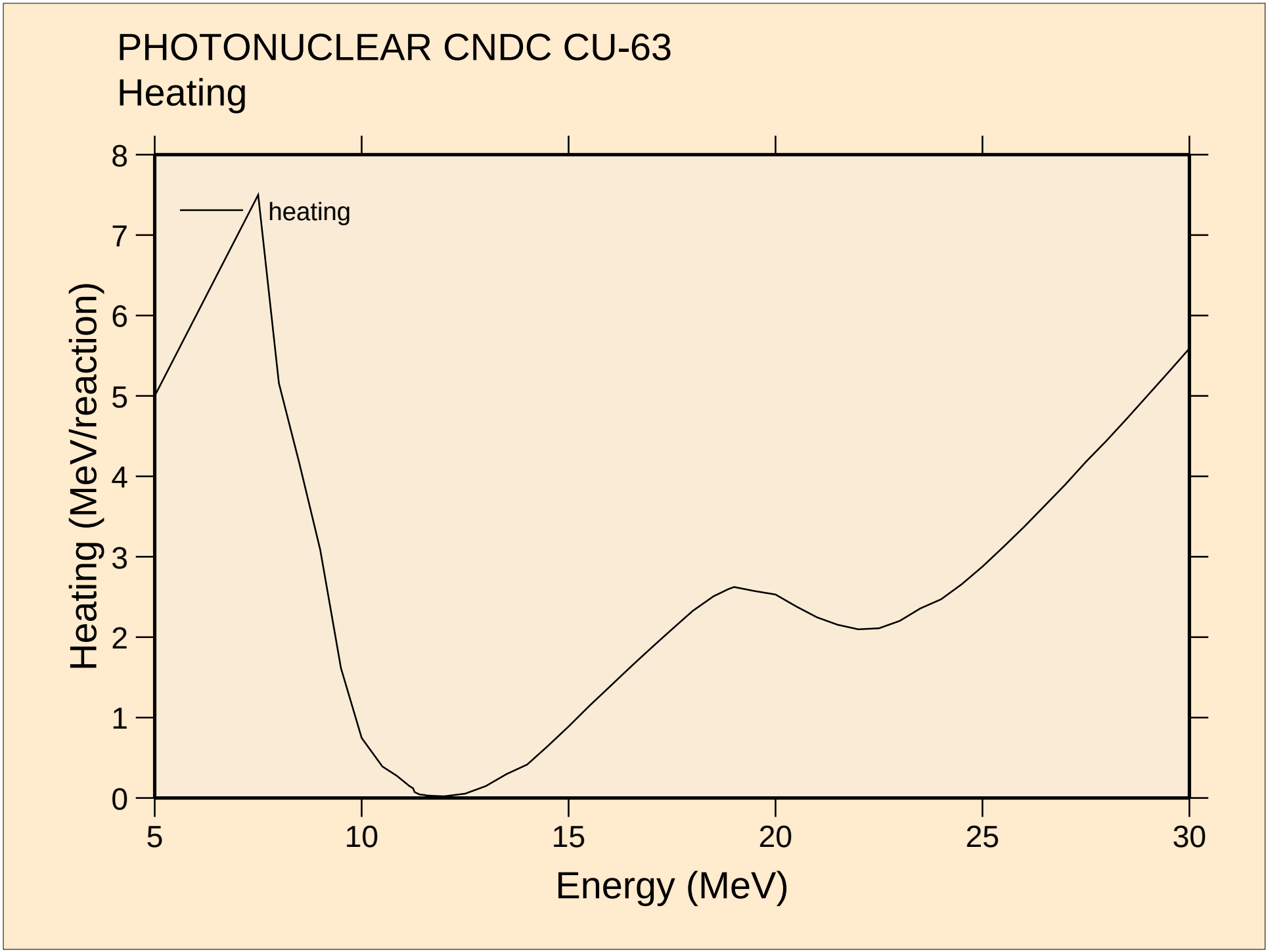
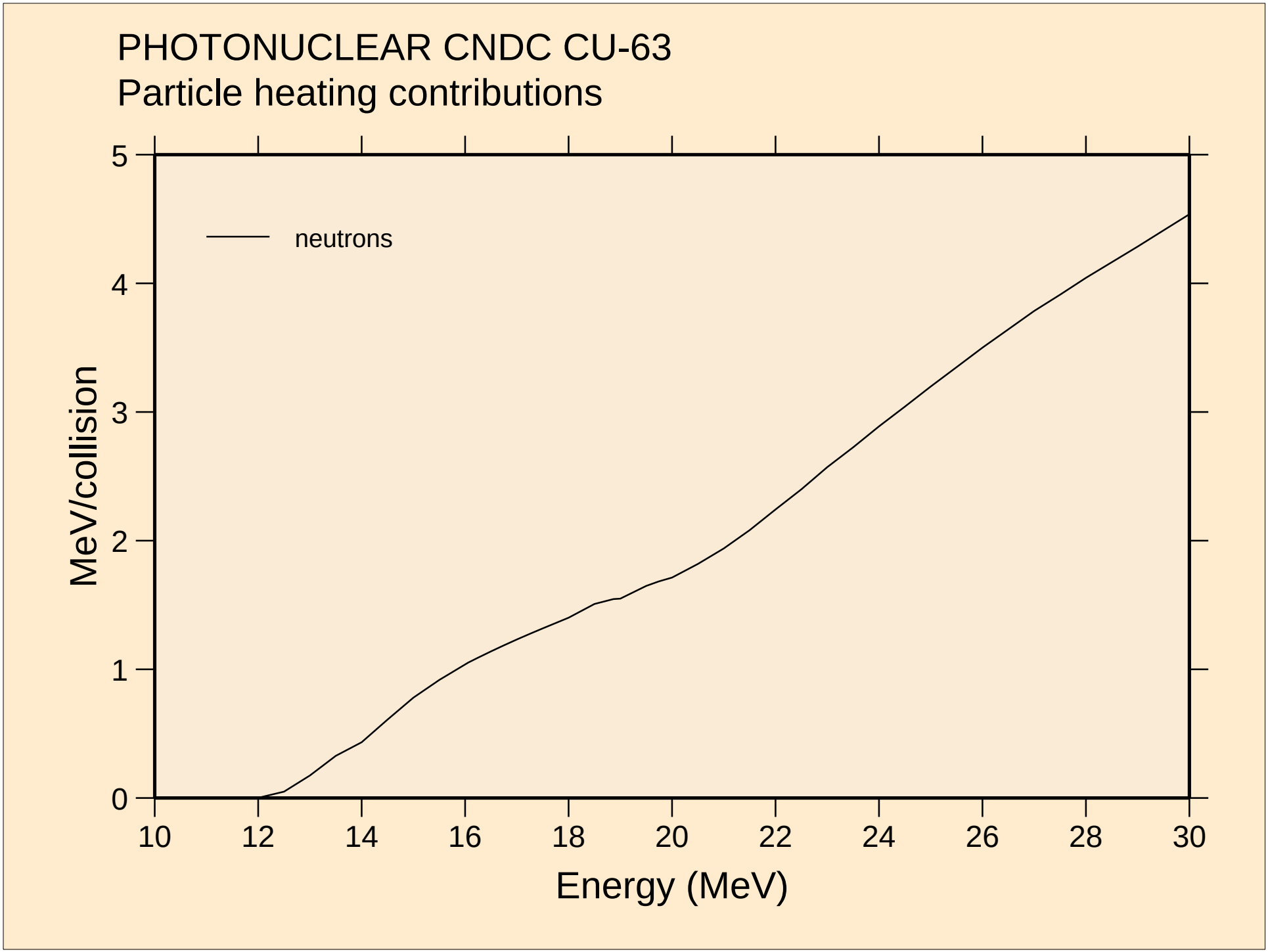
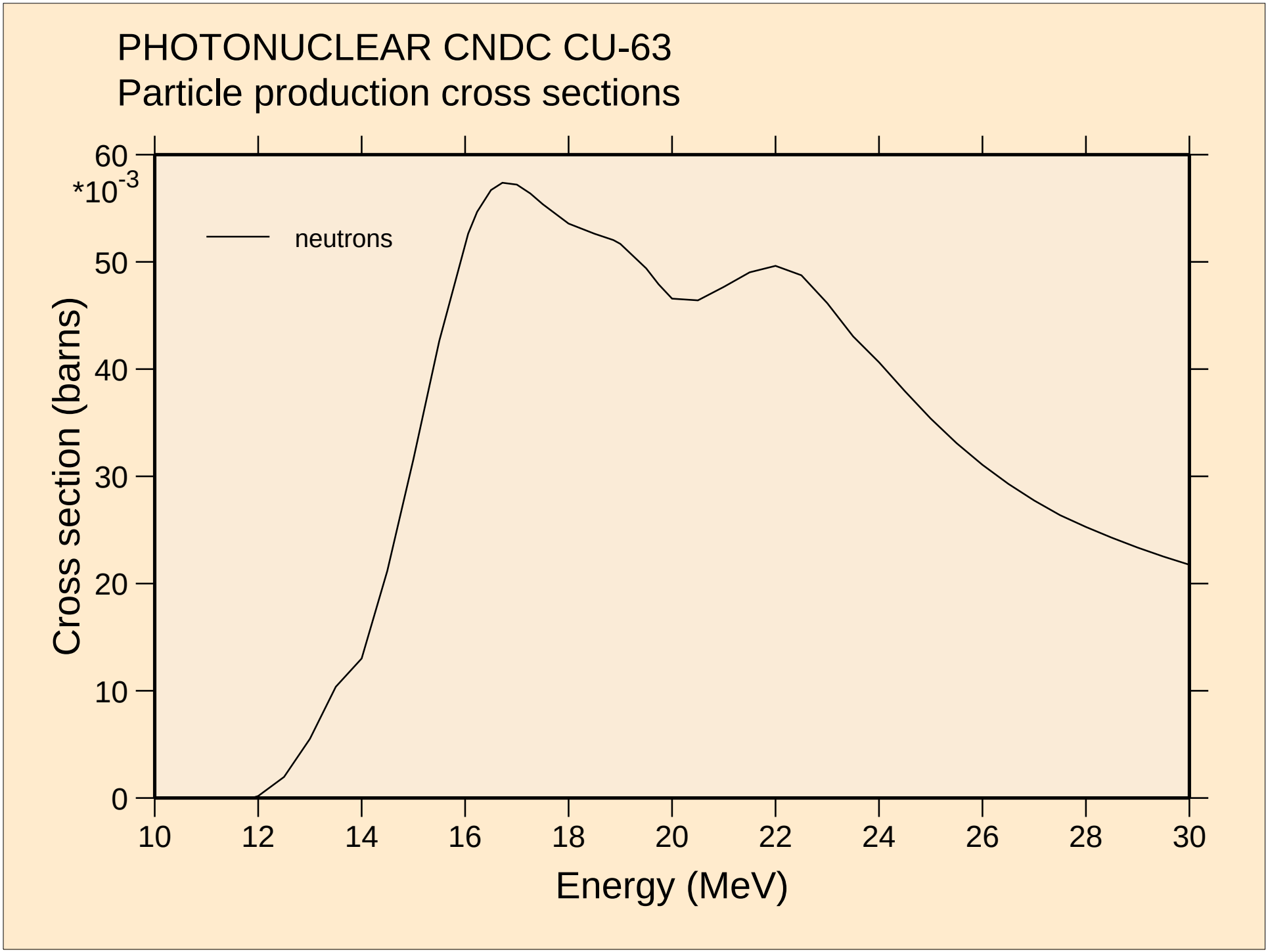
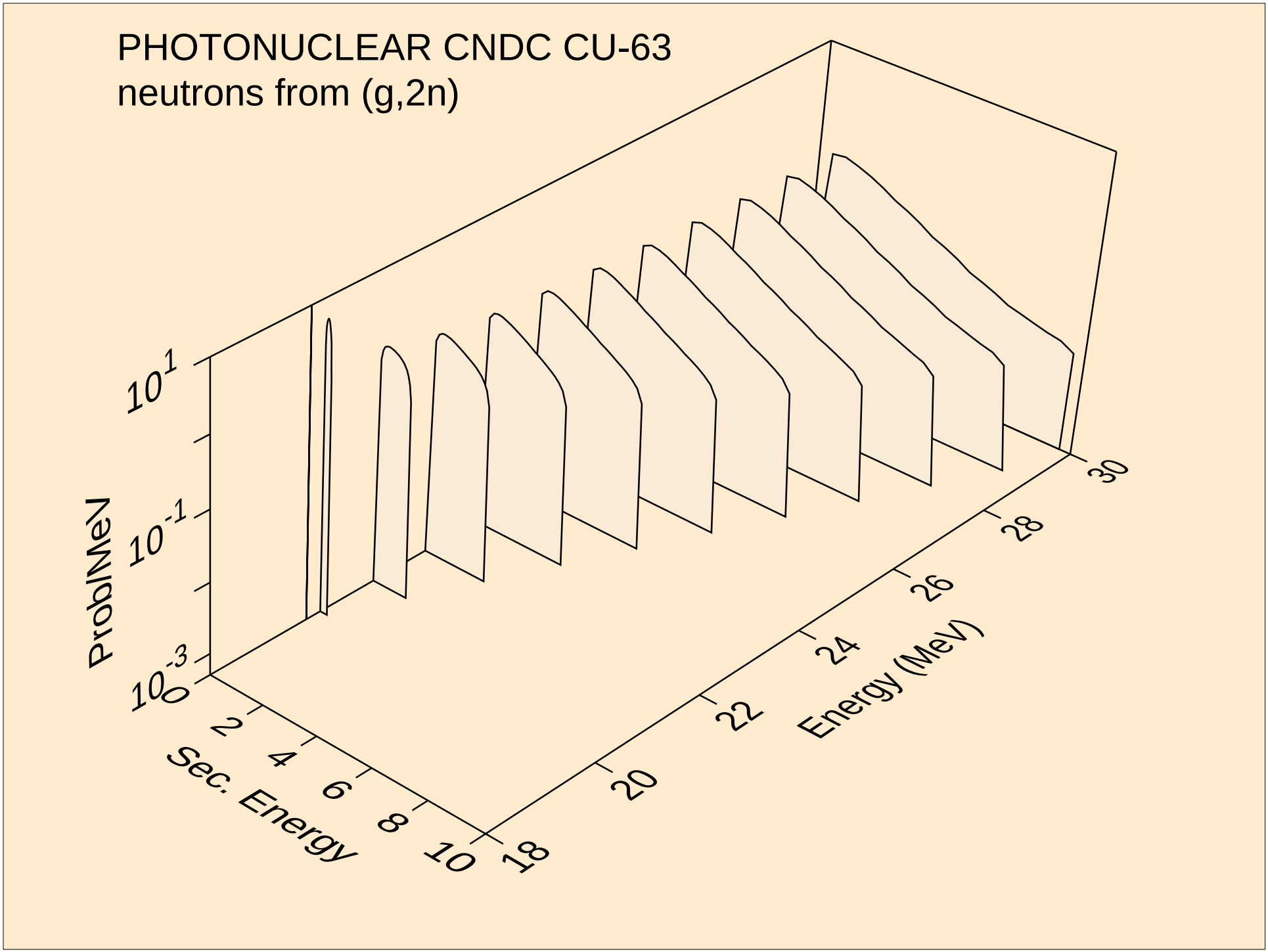

PHOTONUCLEAR CNDC CU-63
Principal cross sections
100
*10-3
80
60
40
20
0
total
Cross section (barns)
5
10
15
20
25
30
Energy (MeV)

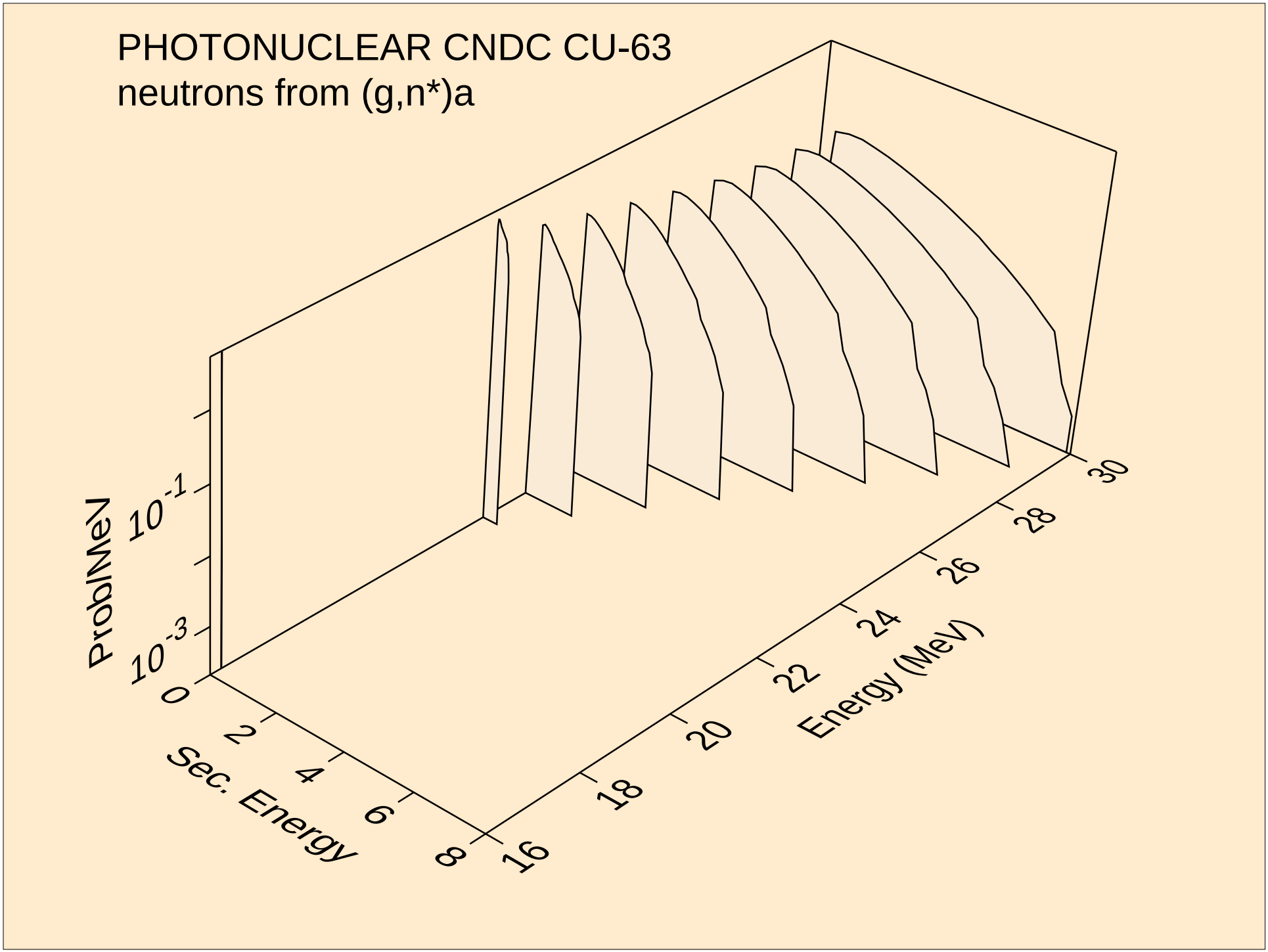

PHOTONUCLEAR CNDC CU-63
Partial cross sections
Cross section (barns)
*10-3
60
50
40
30
20
10
0
5
10
15
20
25
30
Energy (MeV)
(g,2n)
(g,n*)a
(g,n*)p
(g,n*0)
(g,n*1)
(g,n*2)
(g,n*3)
(g,n*4)
(g,n*5)
(g,n*6)
(g,n*7)
(g,n*8)
(g,n*9)
(g,n*10)
(g,n*11)
(g,n*12)
(g,n*13)
(g,n*14)
(g,n*15)
(g,n*c)
(g,gma)

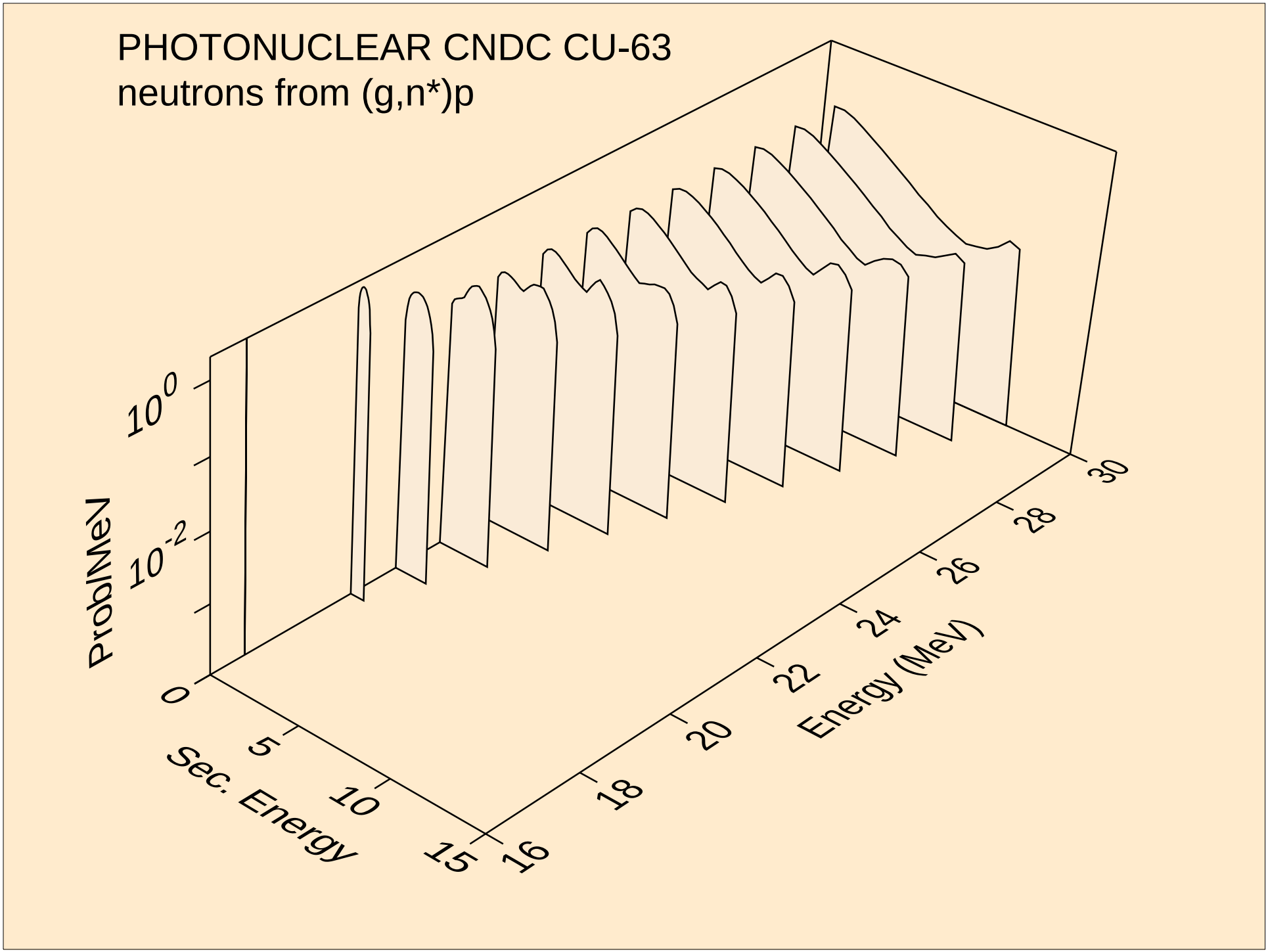

PHOTONUCLEAR CNDC CU-63
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
1
2
3
4
5
6
7
8
5
10
15
20
25
30

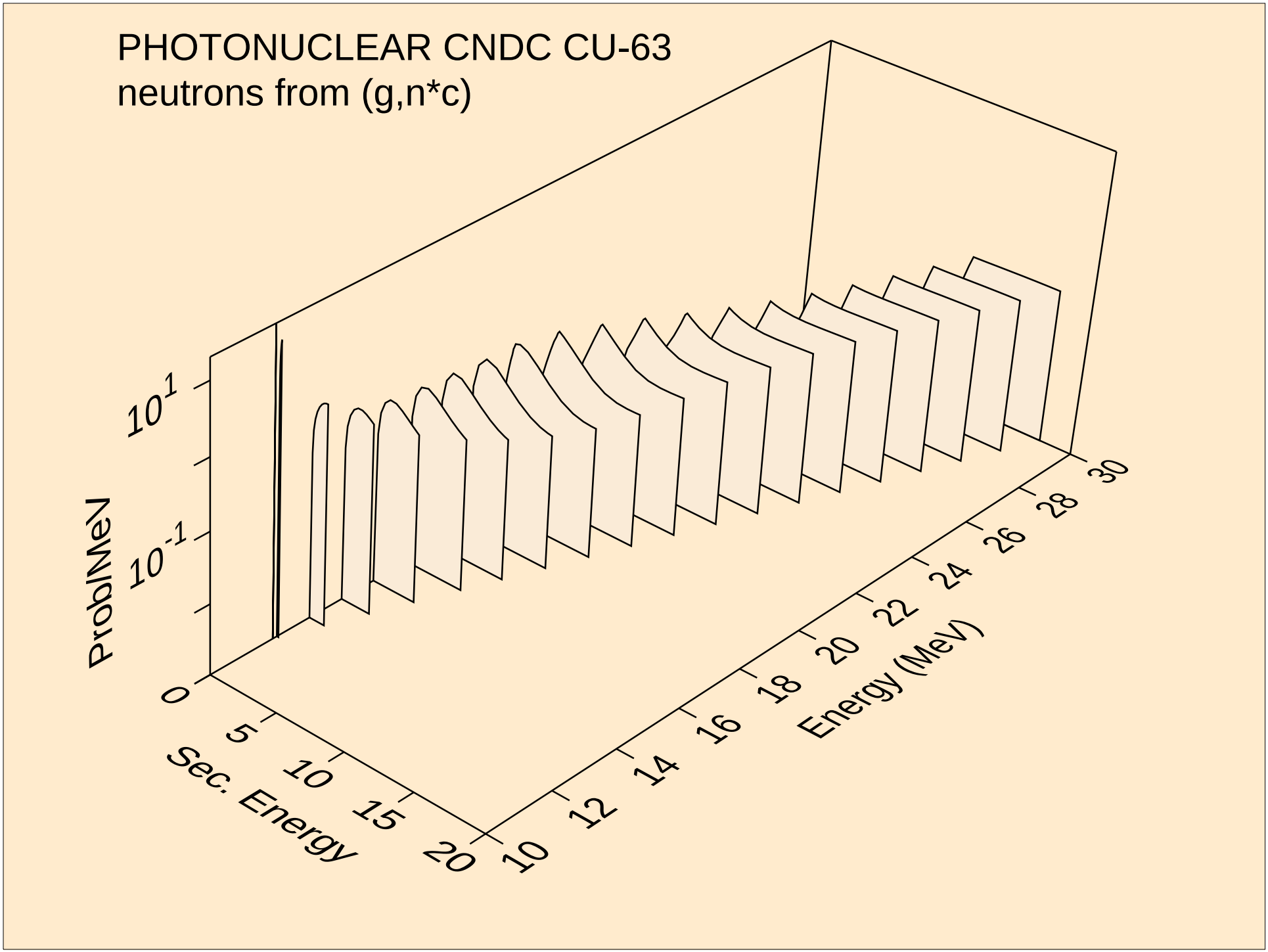

PHOTONUCLEAR CNDC CU-63
Particle heating contributions
neutrons
MeV/collision
Energy (MeV)
0
1
2
3
4
5
10
12
14
16
18
20
22
24
26
28
30


PHOTONUCLEAR CNDC CU-63
Particle production cross sections
*10-3
neutrons
Cross section (barns)
60
50
40
30
20
10
0
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)


PHOTONUCLEAR CNDC CU-63
neutrons from (g,2n)
Prob/MeV
10^1
10^-1
10^-3
0
2
4
6
8
10
Sec. Energy
18
20
22
24
26
28
30
Energy (MeV)


PHOTONUCLEAR CNDC CU-63
neutrons from (g,n*)a
Prob/MeV
10-1
10-3
0
2
4
6
8
Sec. Energy
16
18
20
22
24
26
28
30
Energy (MeV)


PHOTONUCLEAR CNDC CU-63
neutrons from (g,n*)p
Prob/MeV
10^0
10^-2
0
Sec. Energy
5
10
15
16
18
20
22
24
26
28
30
Energy (MeV)


PHOTONUCLEAR CNDC CU-63
neutrons from (g,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
15
20
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)