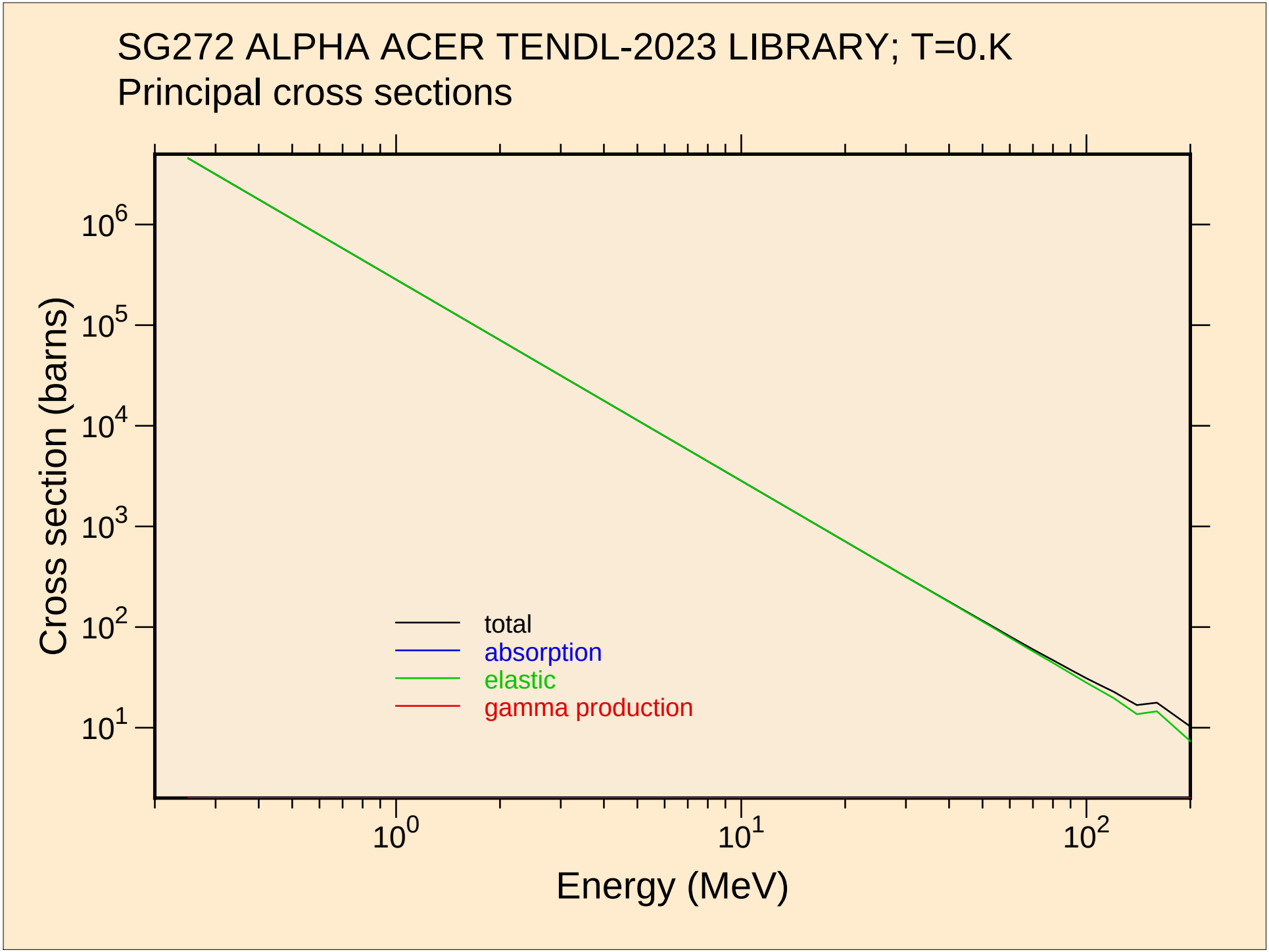
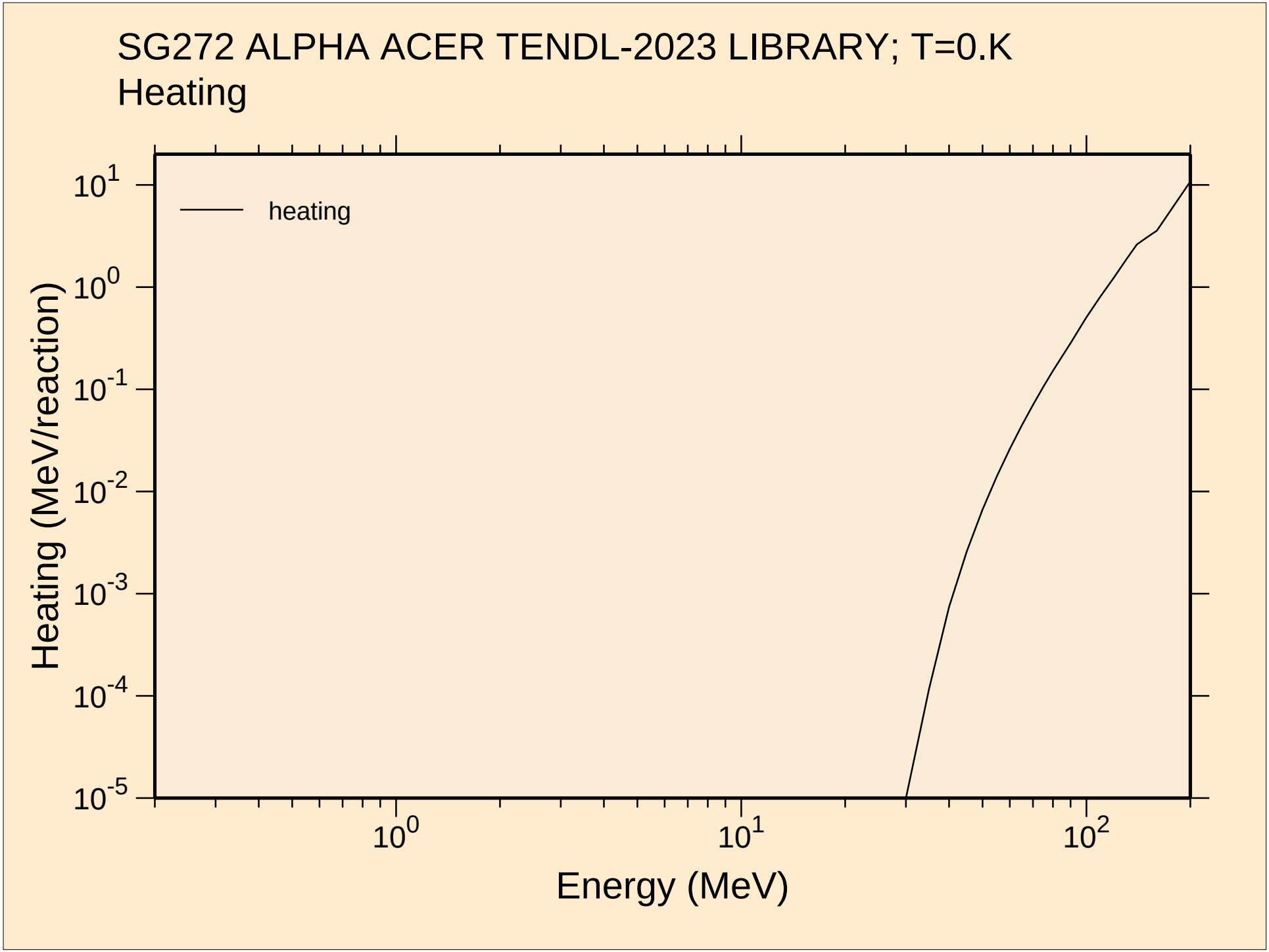
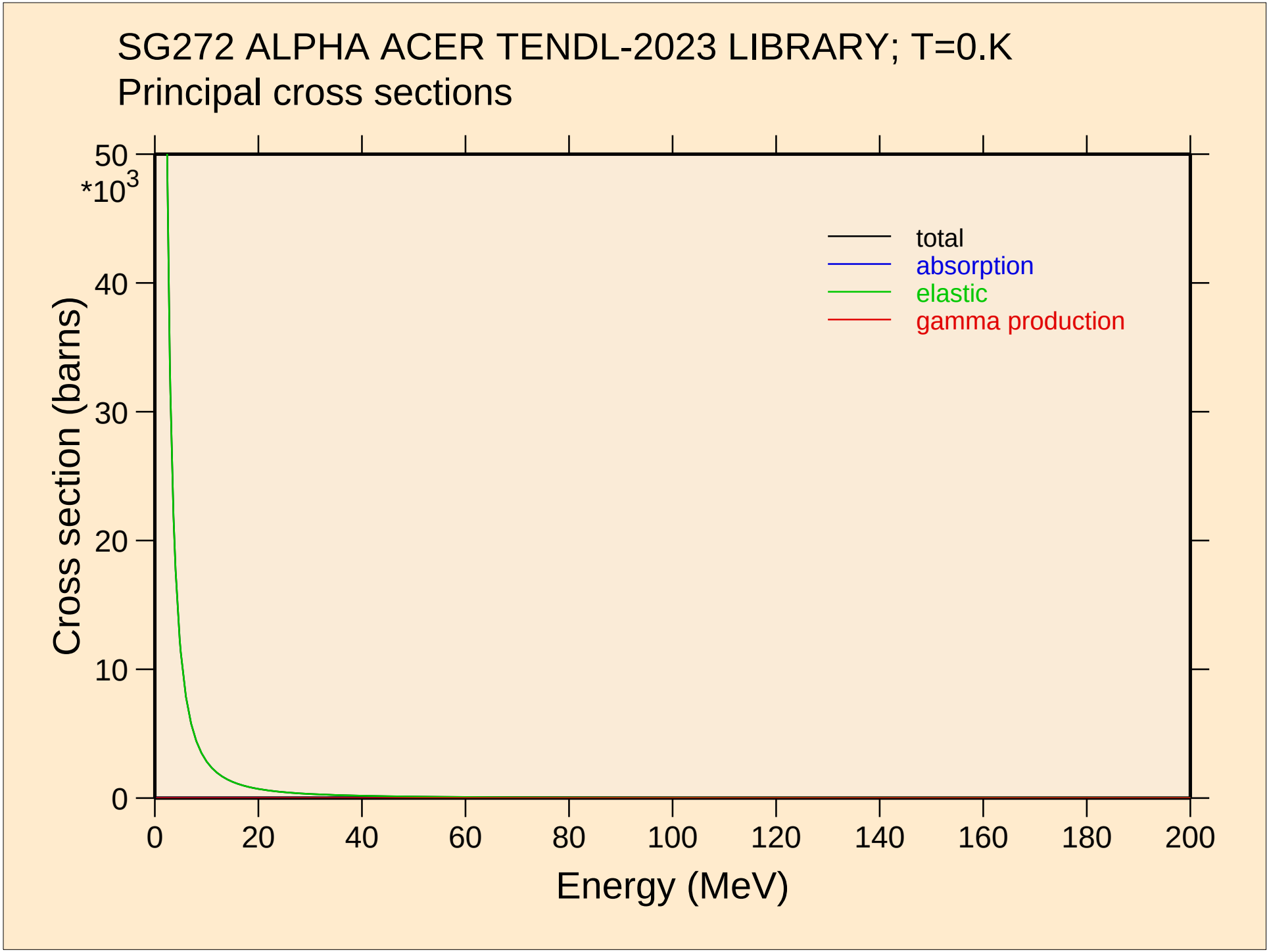
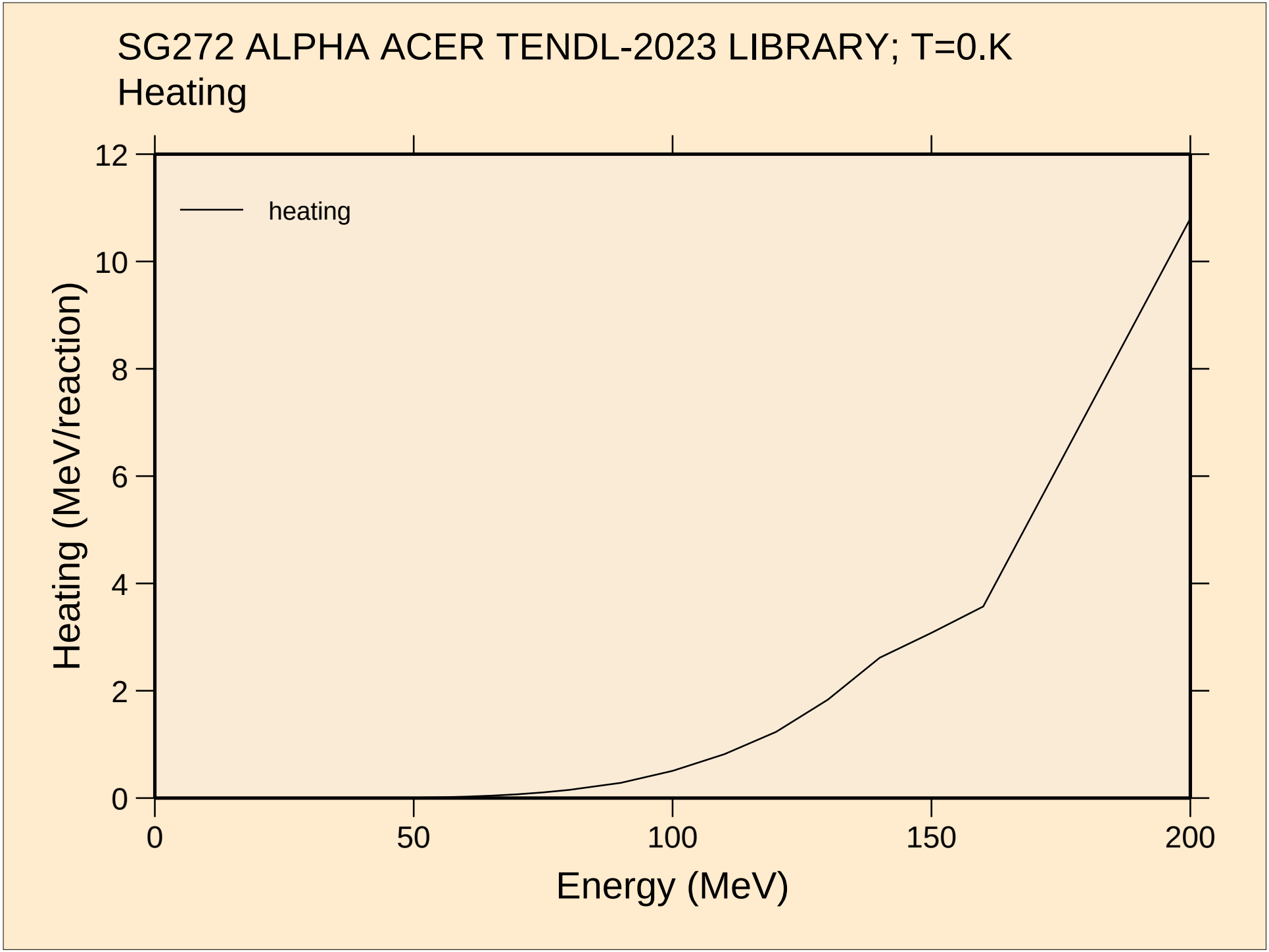
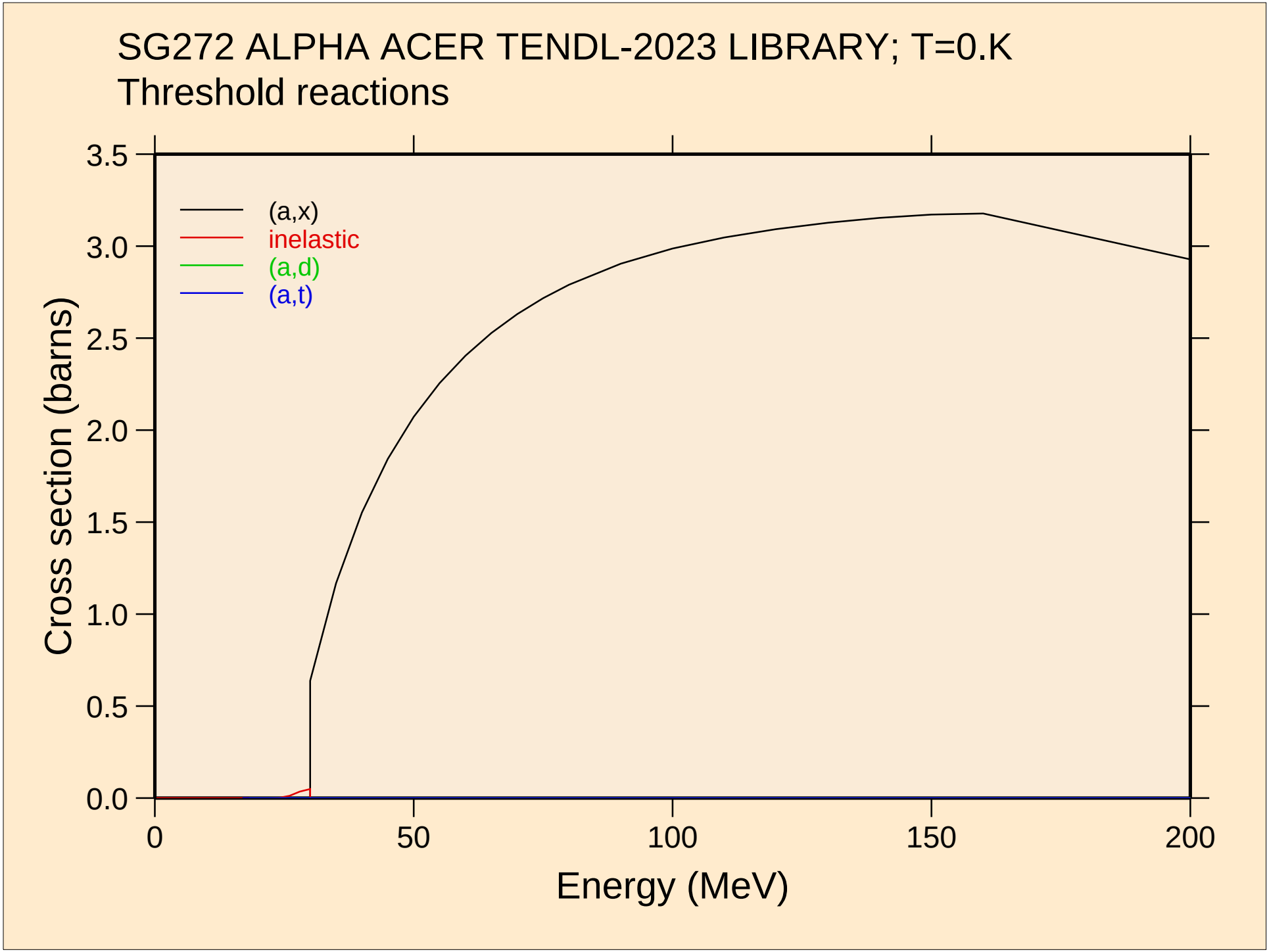
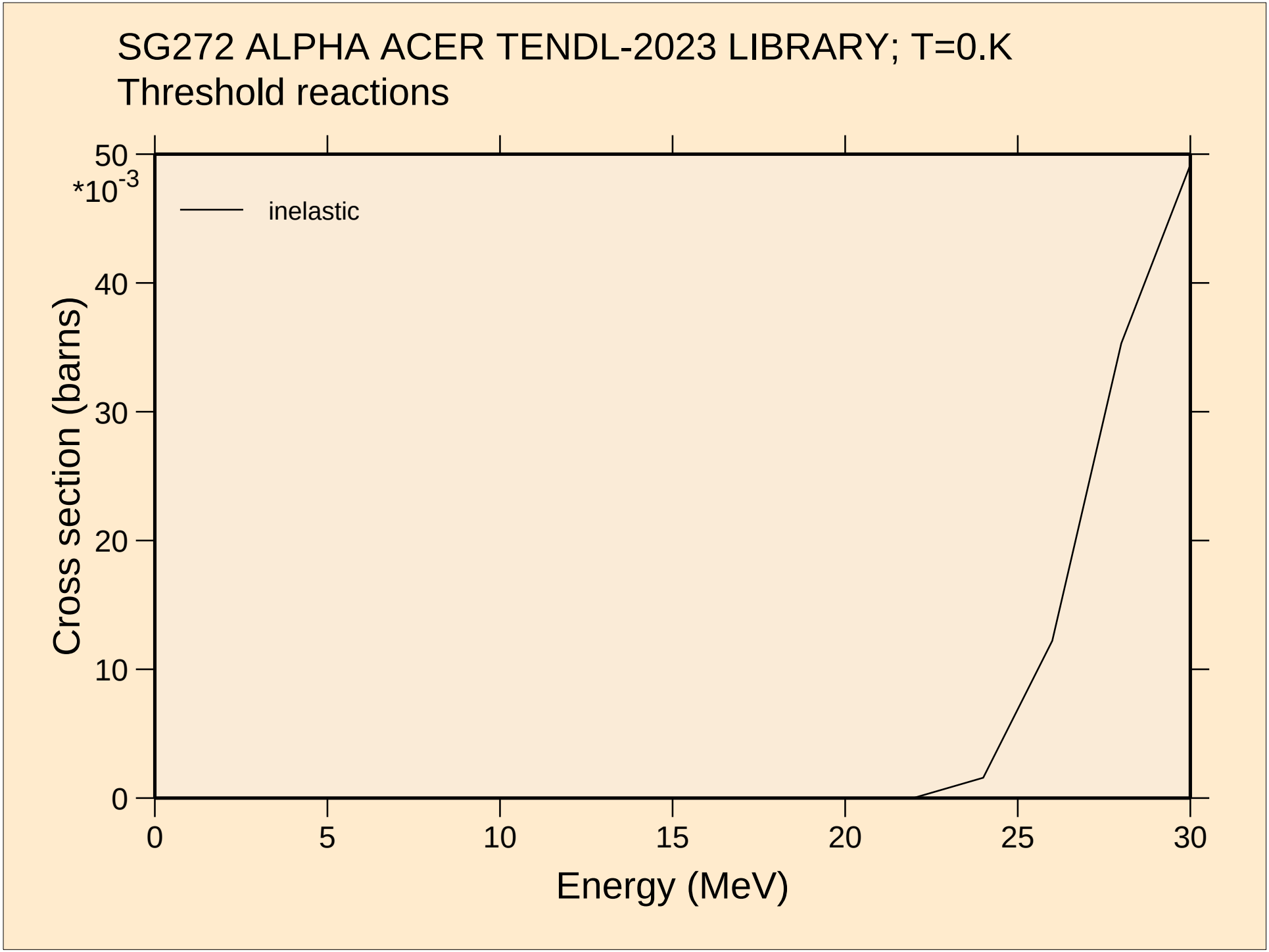

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Principal cross sections
Cross section (barns)
10^6
10^5
10^4
10^3
10^2
10^1
10^0
10^1
10^2
Energy (MeV)
total
absorption
elastic
gamma production

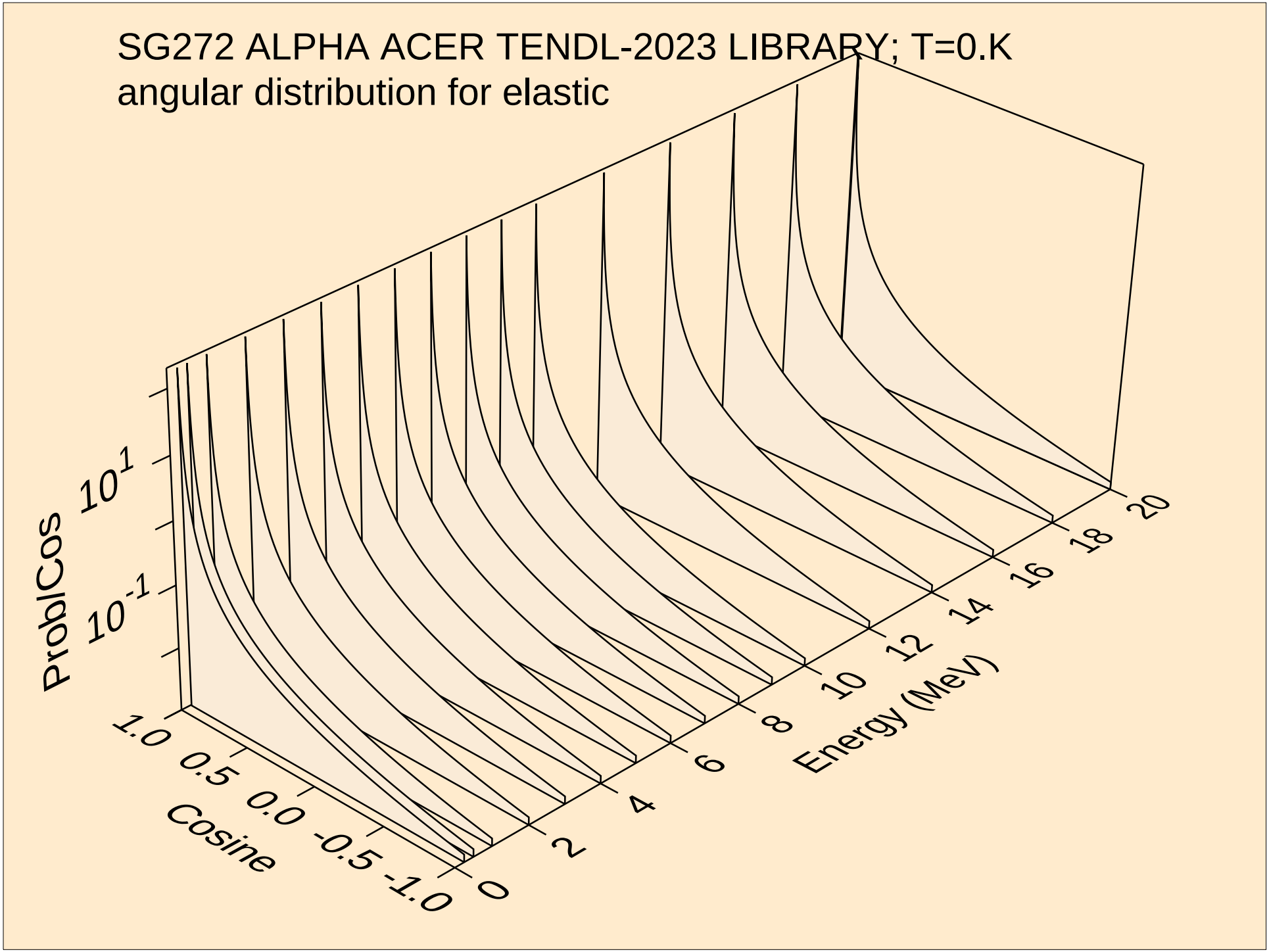

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^0
10^1
10^2

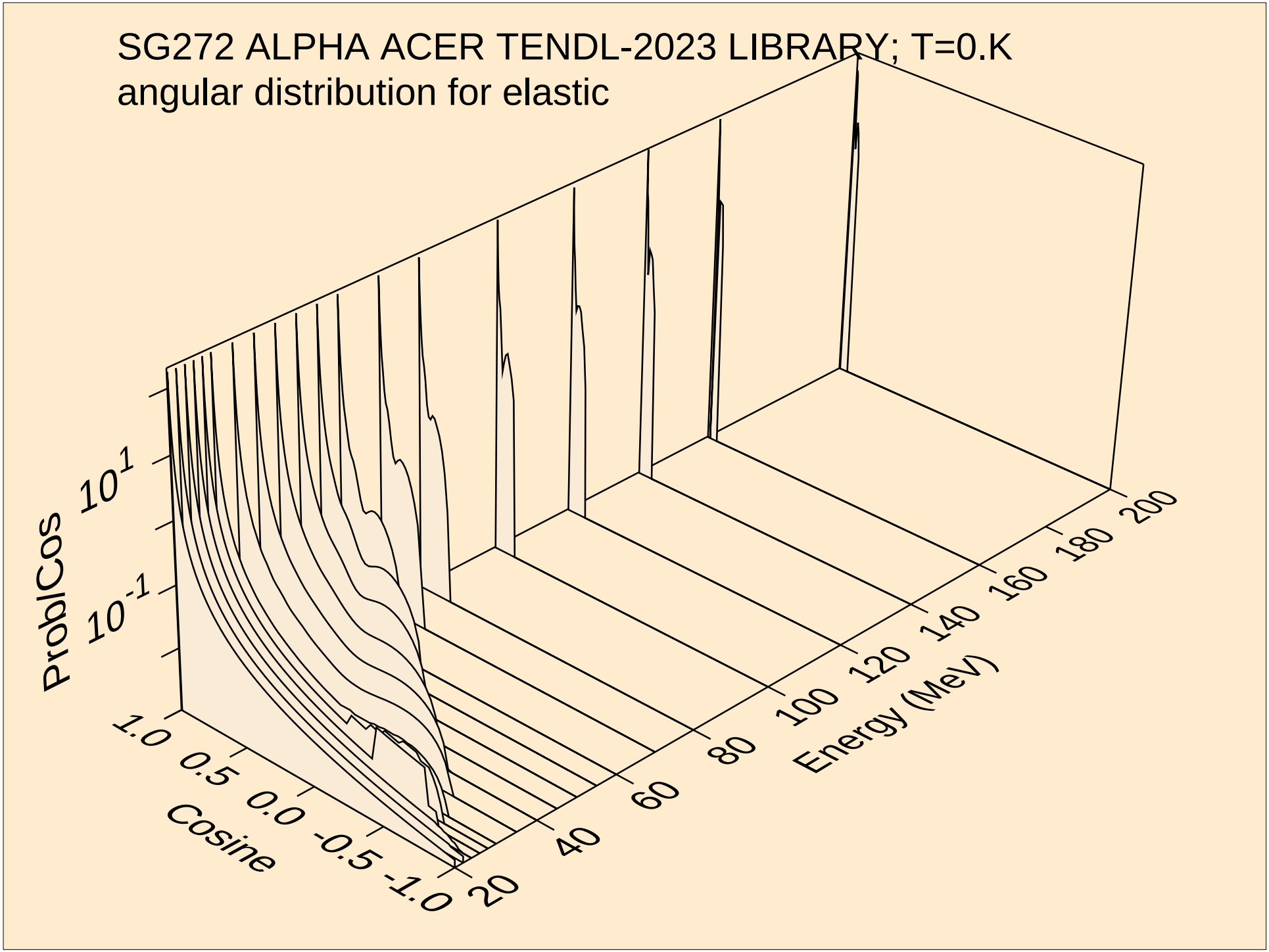

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Principal cross sections
Cross section (barns)
*10^3
50
40
30
20
10
0
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)
total
absorption
elastic
gamma production

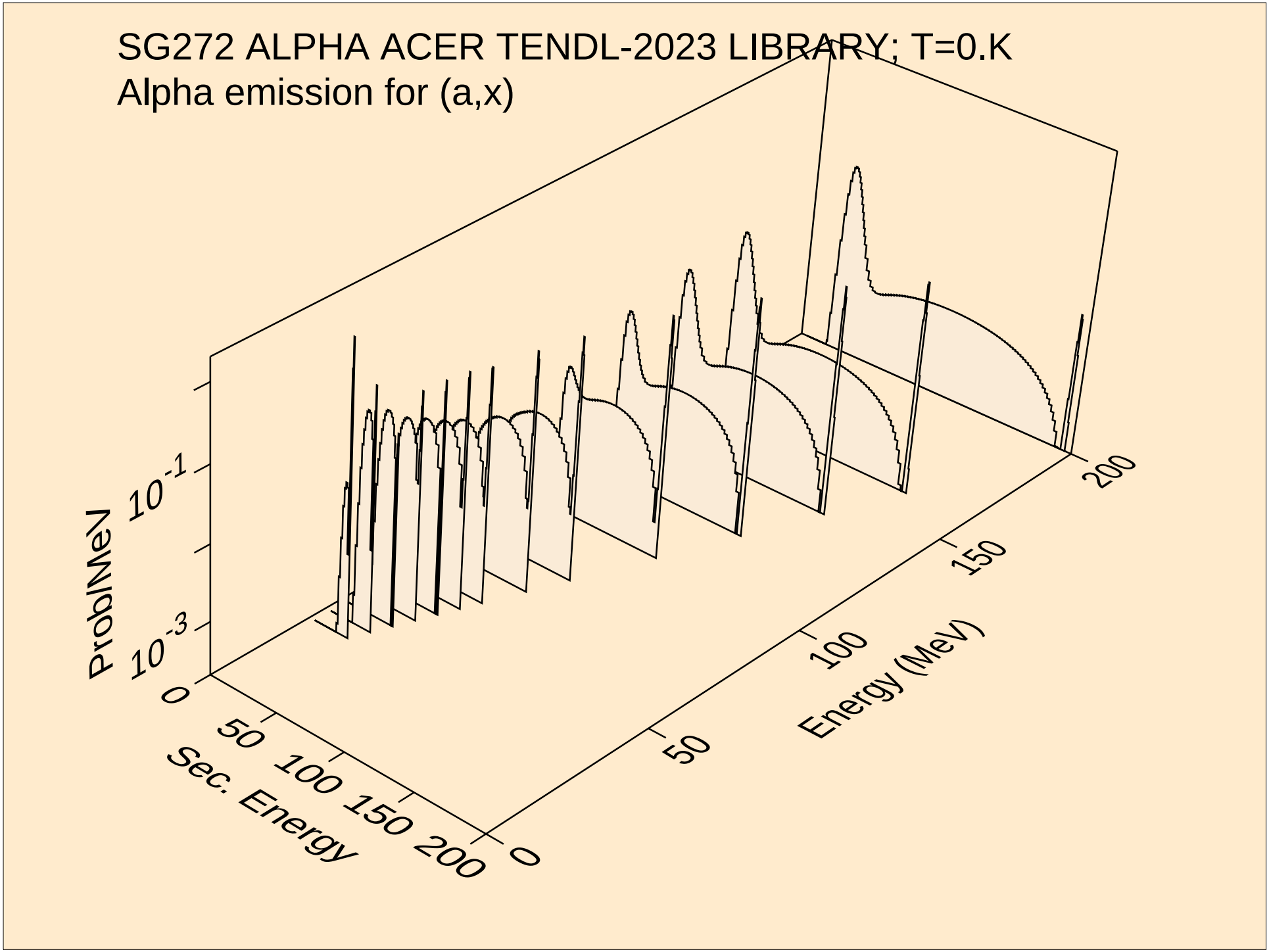

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
2
4
6
8
10
12
0
50
100
150
200

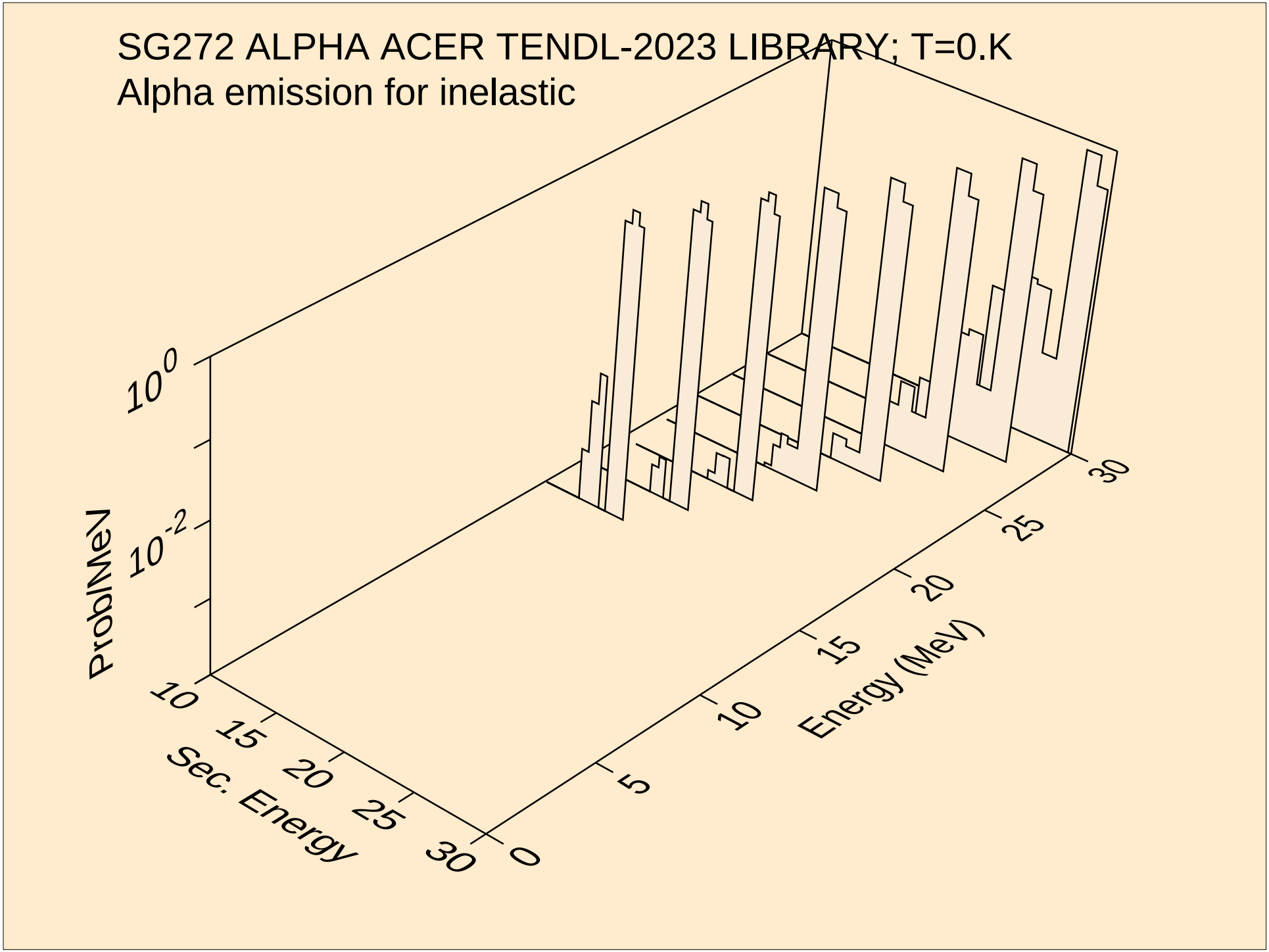

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions
(a,x)
inelastic
(a,d)
(a,t)
Cross section (barns)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
50
100
150
200

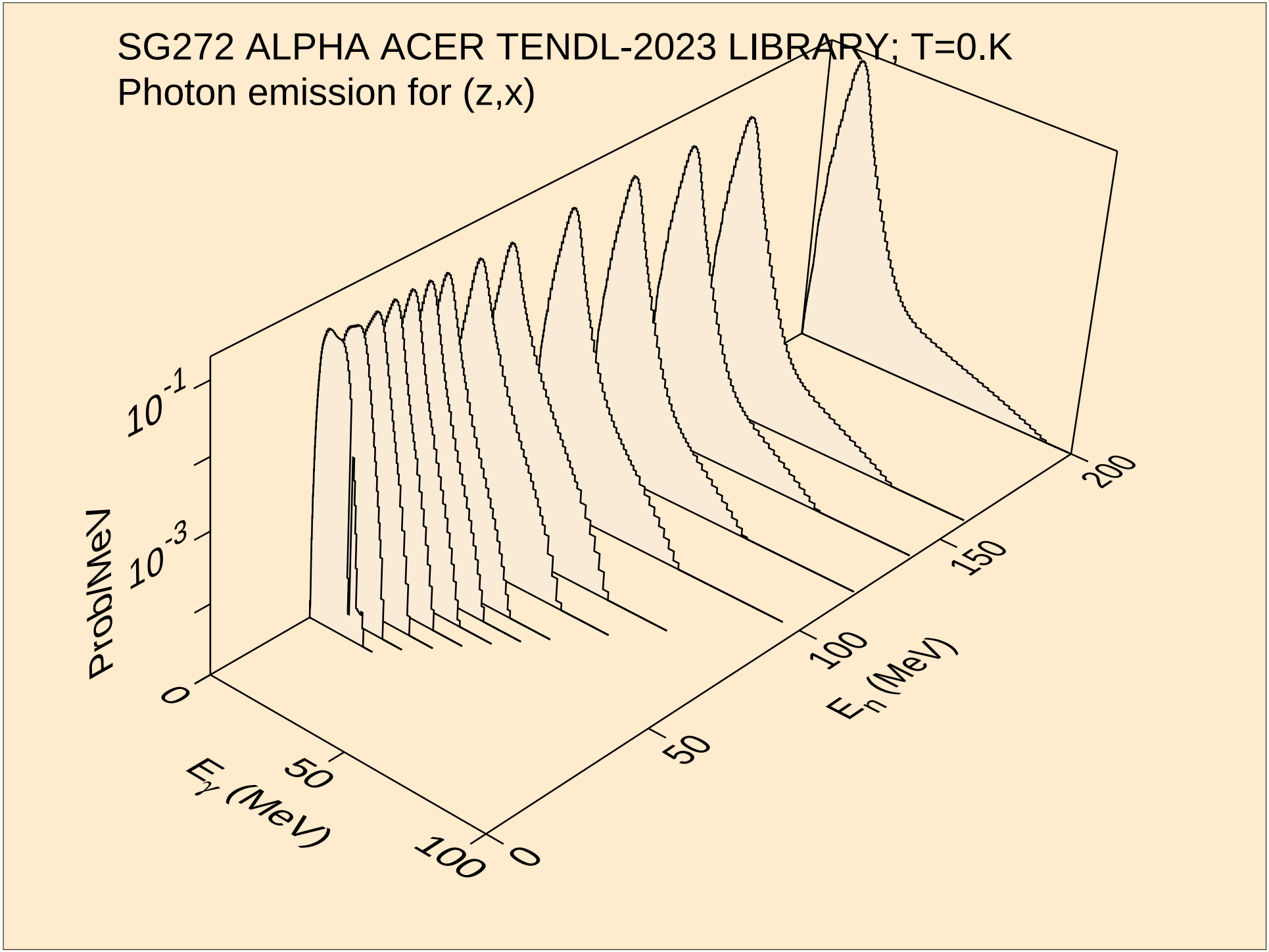

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Threshold reactions
*10-3
inelastic
Cross section (barns)
50
40
30
20
10
0
0
5
10
15
20
25
30
Energy (MeV)

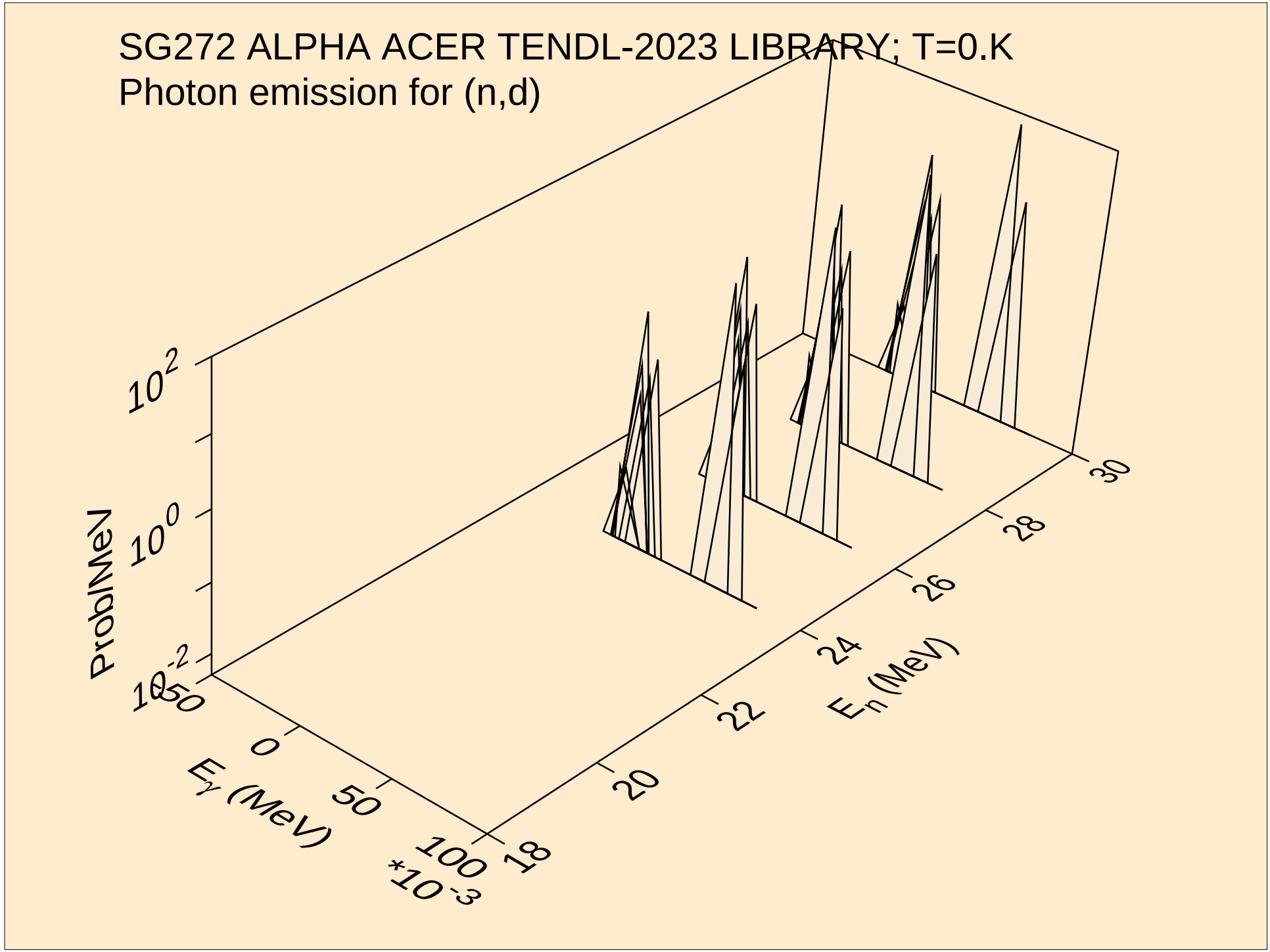

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for elastic
ProbICos
10^1
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
2
4
6
8
10
12
14
16
18
20
Energy (MeV)

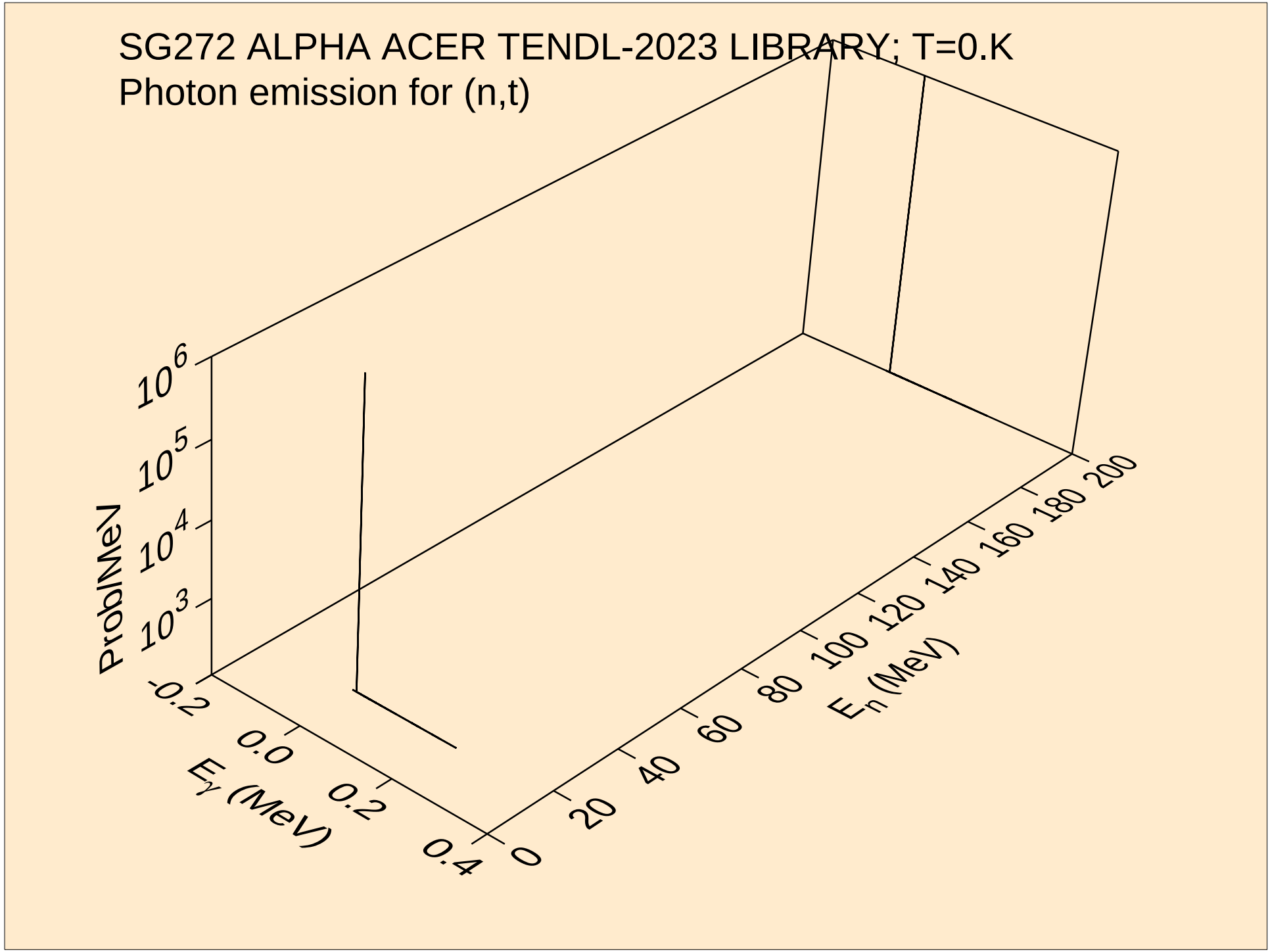

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
angular distribution for elastic
ProbICos
10^1
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

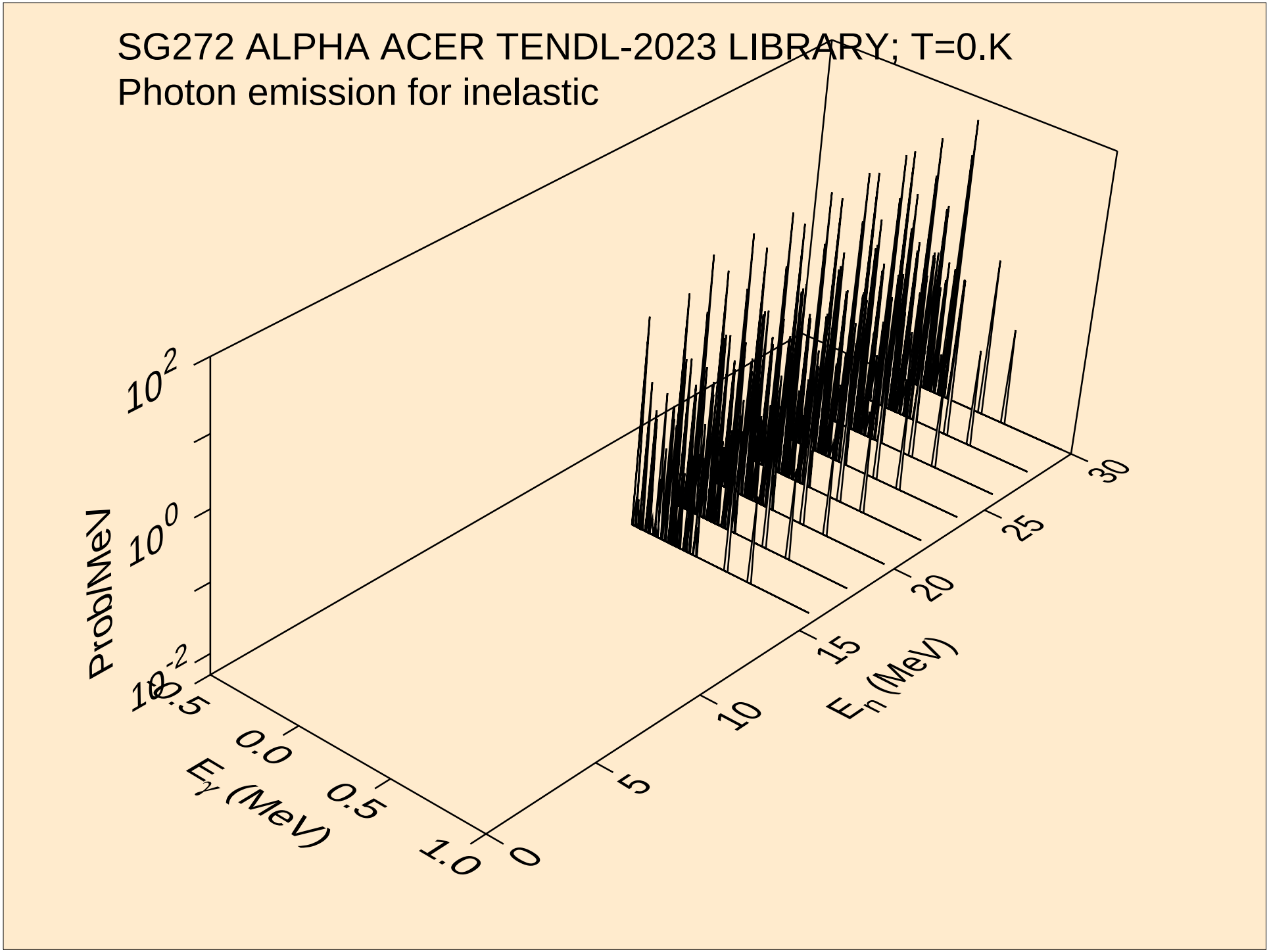

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Alpha emission for (a,x)
Prob/MeV
10-1
10-3
0
50
100
150
200
Sec. Energy
0
50
100
150
200
Energy (MeV)

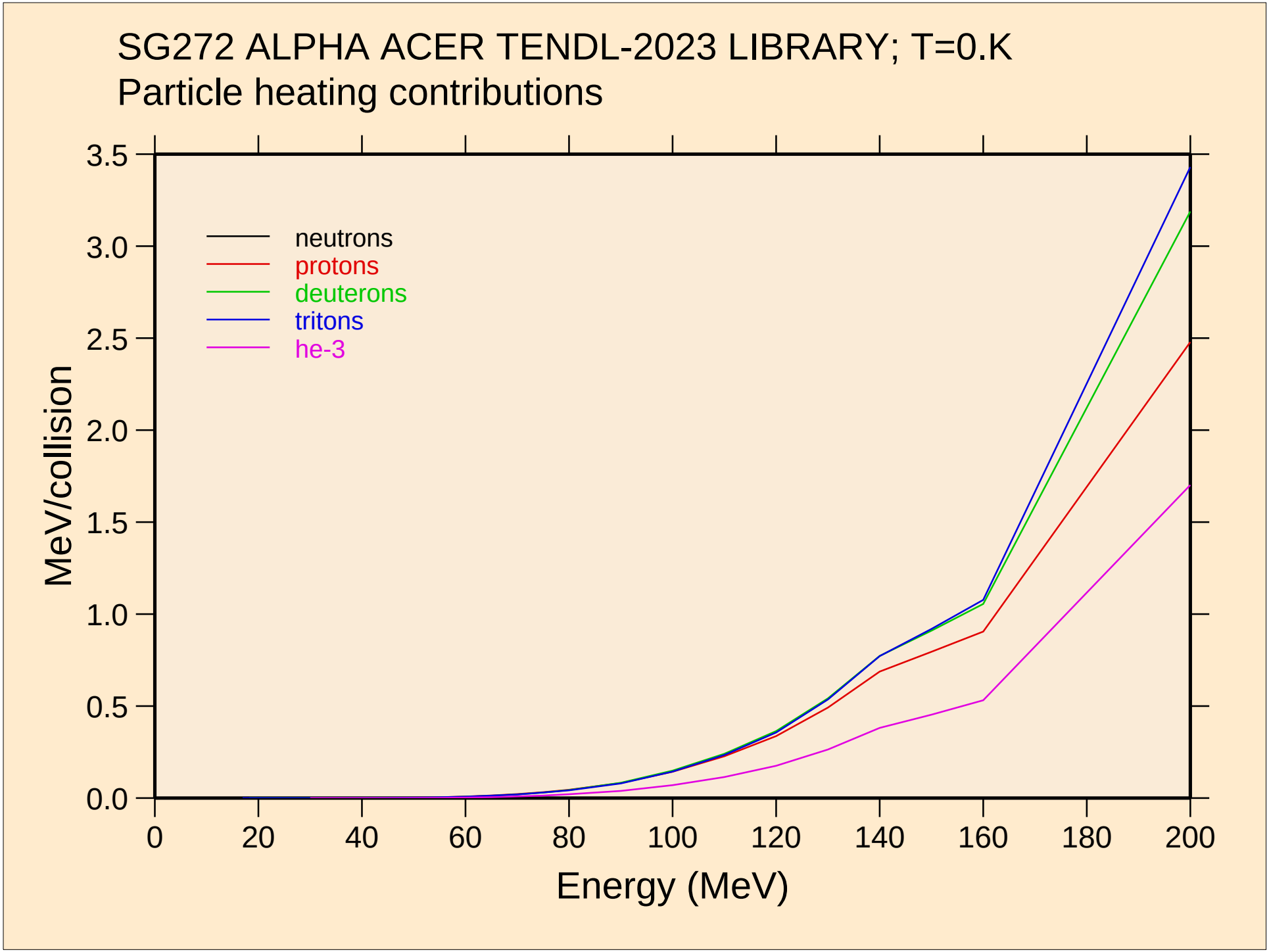

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Alpha emission for inelastic
Prob/MeV
10^{0}
10^{-2}
10
15
20
25
30
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

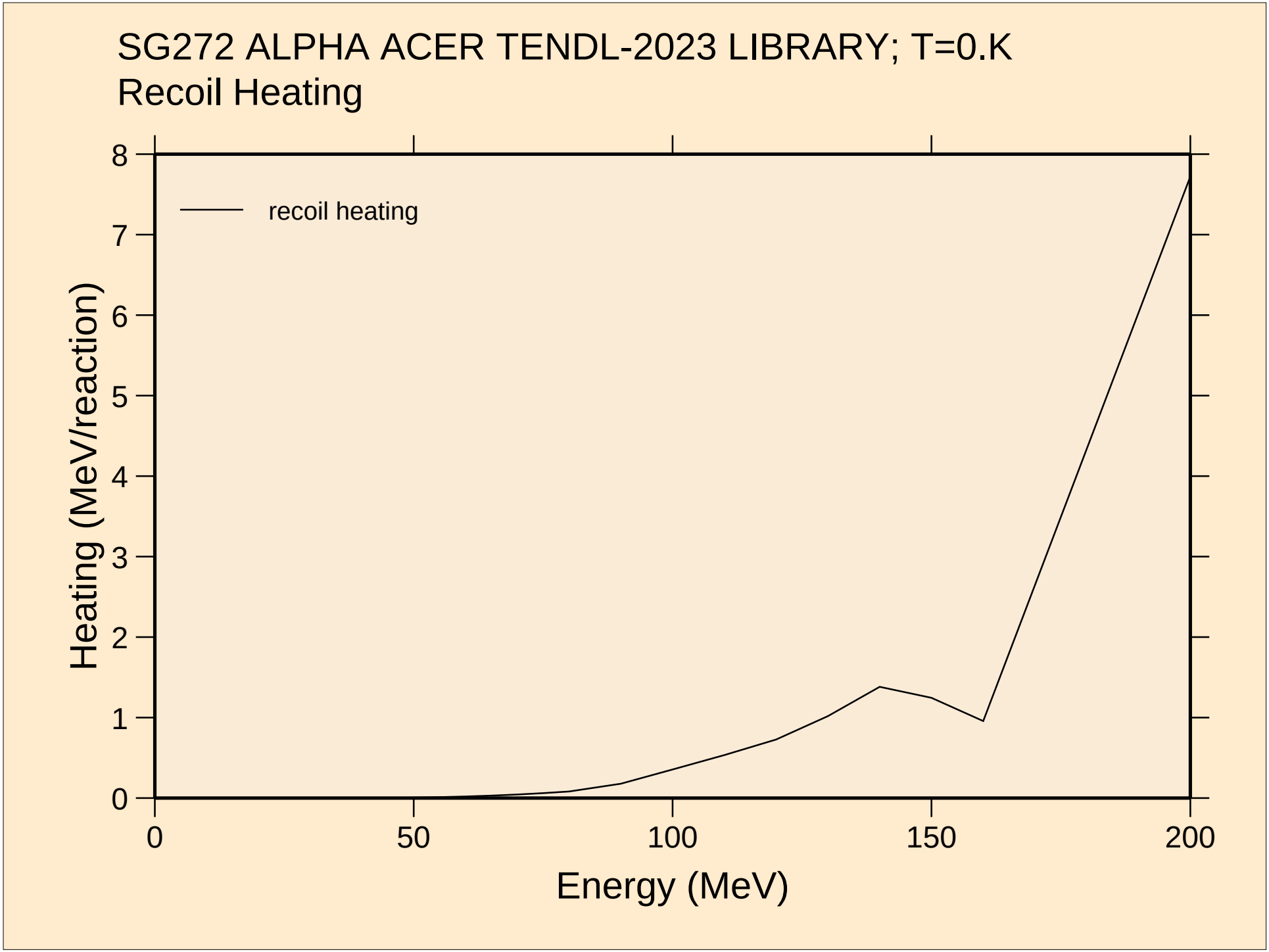

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (z,x)
Prob/MeV
10-1
10-3
0
50
100
Eγ (MeV)
0
50
100
150
200
En (MeV)

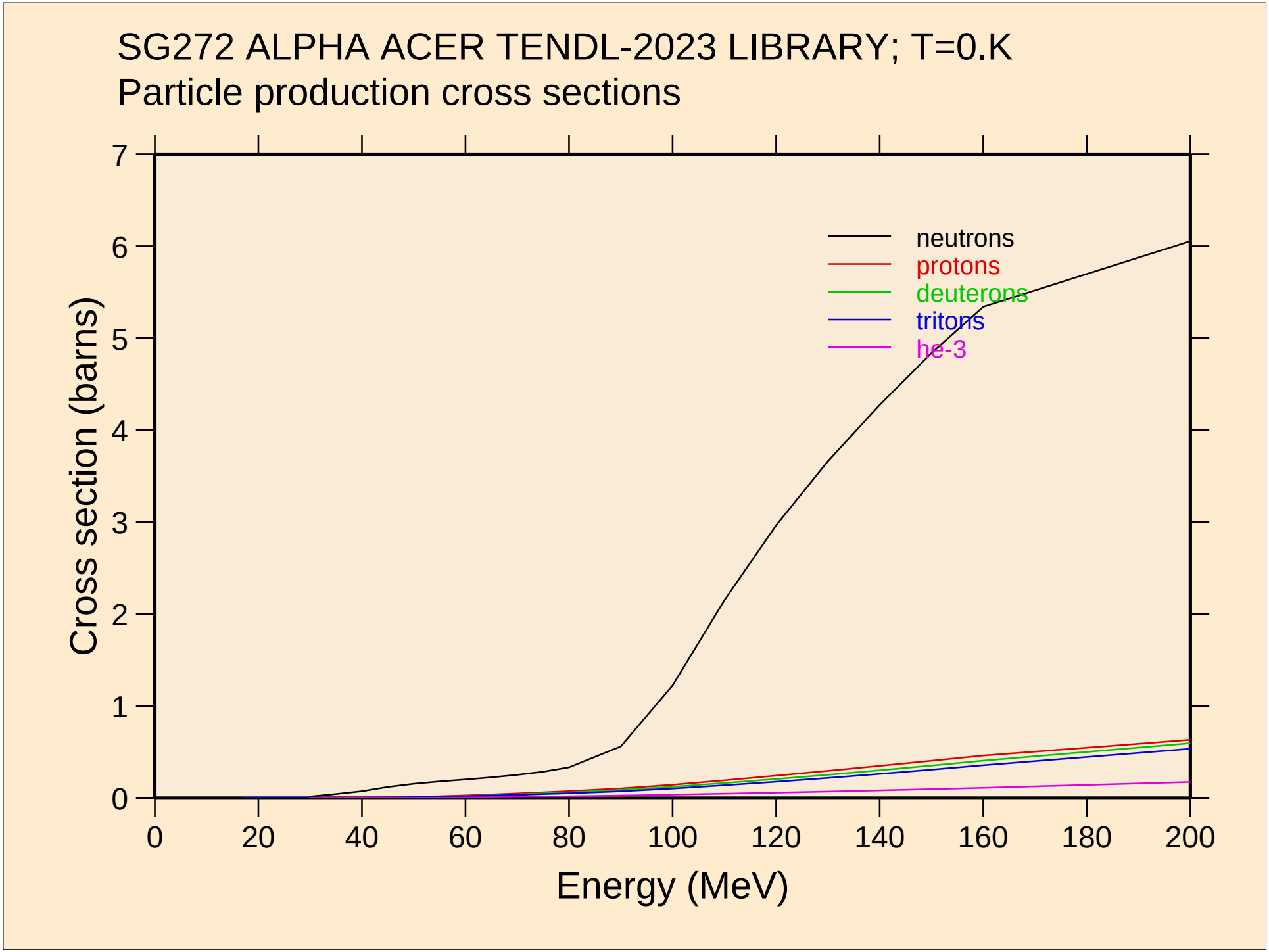

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,d)
Prob/MeV
10^{2}
10^{0}
10^{-2}
-50
0
50
100
E_γ (MeV)
*10 -3
18
20
22
24
26
28
30
E_n (MeV)

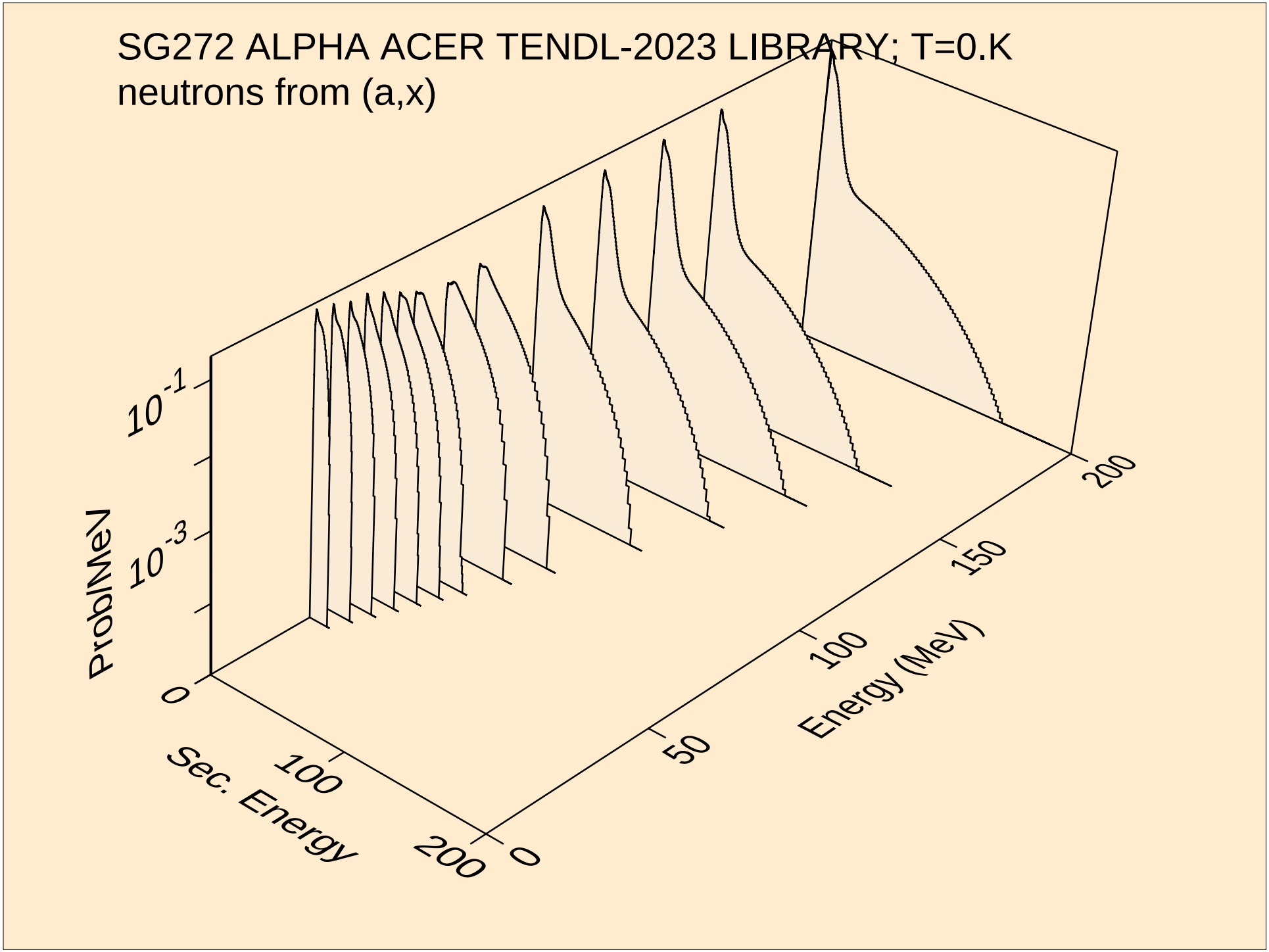

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for (n,t)
Prob/MeV
10^6
10^5
10^4
10^3
-0.2
0.0
0.2
0.4
E_γ (MeV)
0
20
40
60
80
100
120
140
160
180
200
E_n (MeV)

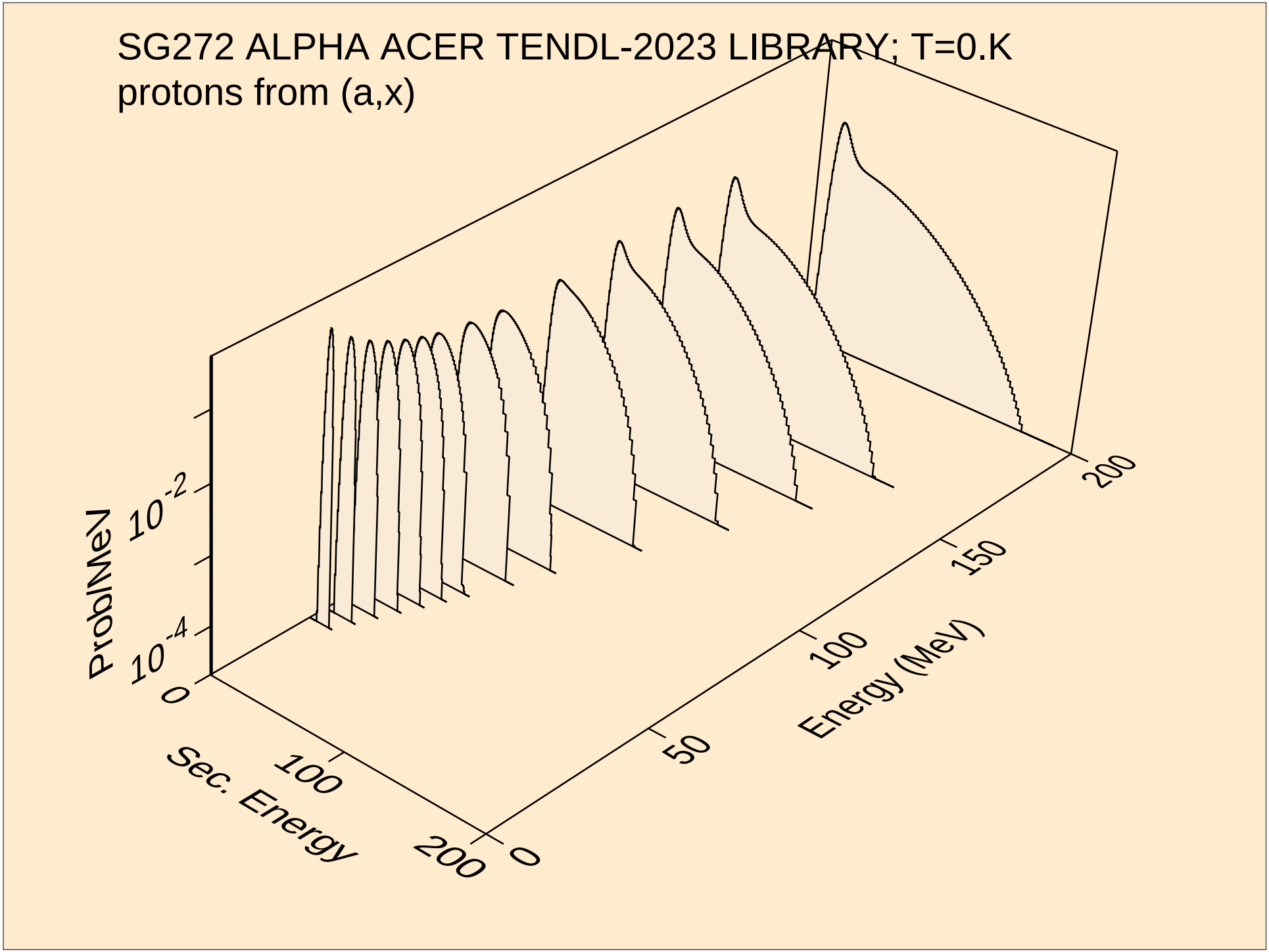

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Photon emission for inelastic
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
-0.5
0.0
0.5
1.0
E_n (MeV)
0
5
10
15
20
25
30

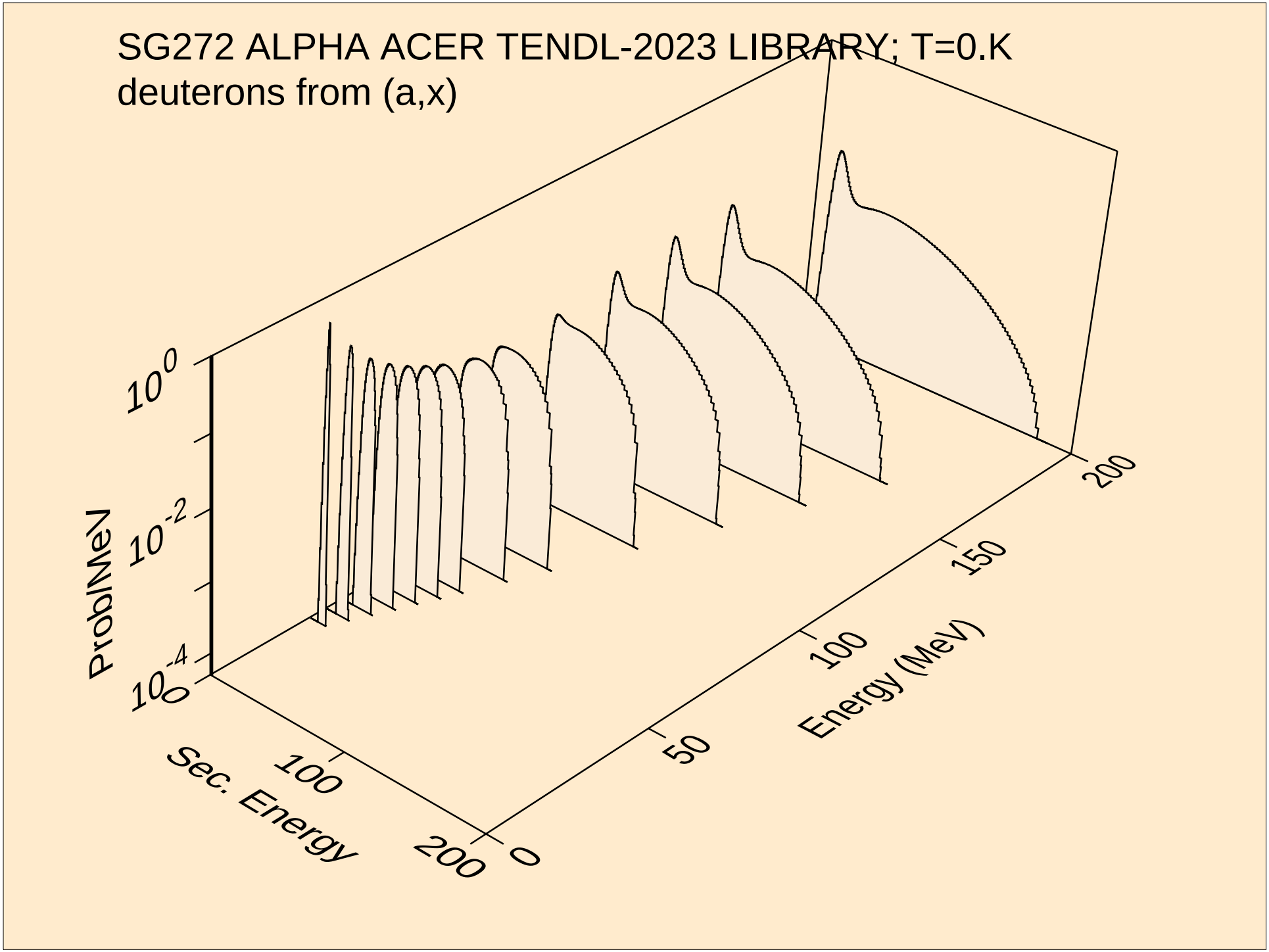

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Particle heating contributions
neutrons
protons
deuterons
tritons
he-3
MeV/collision
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
20
40
60
80
100
120
140
160
180
200

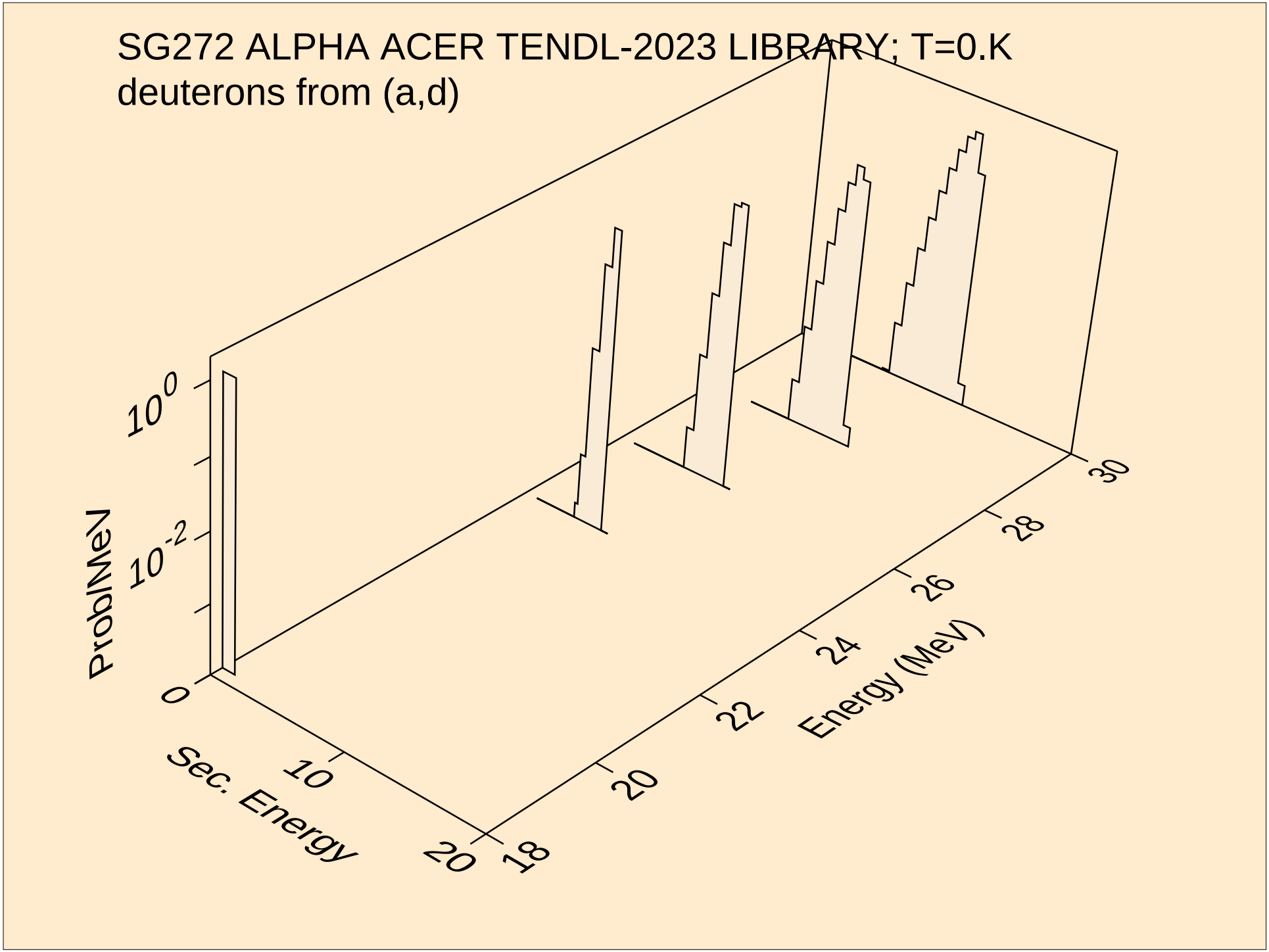

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
0
1
2
3
4
5
6
7
8
0
50
100
150
200

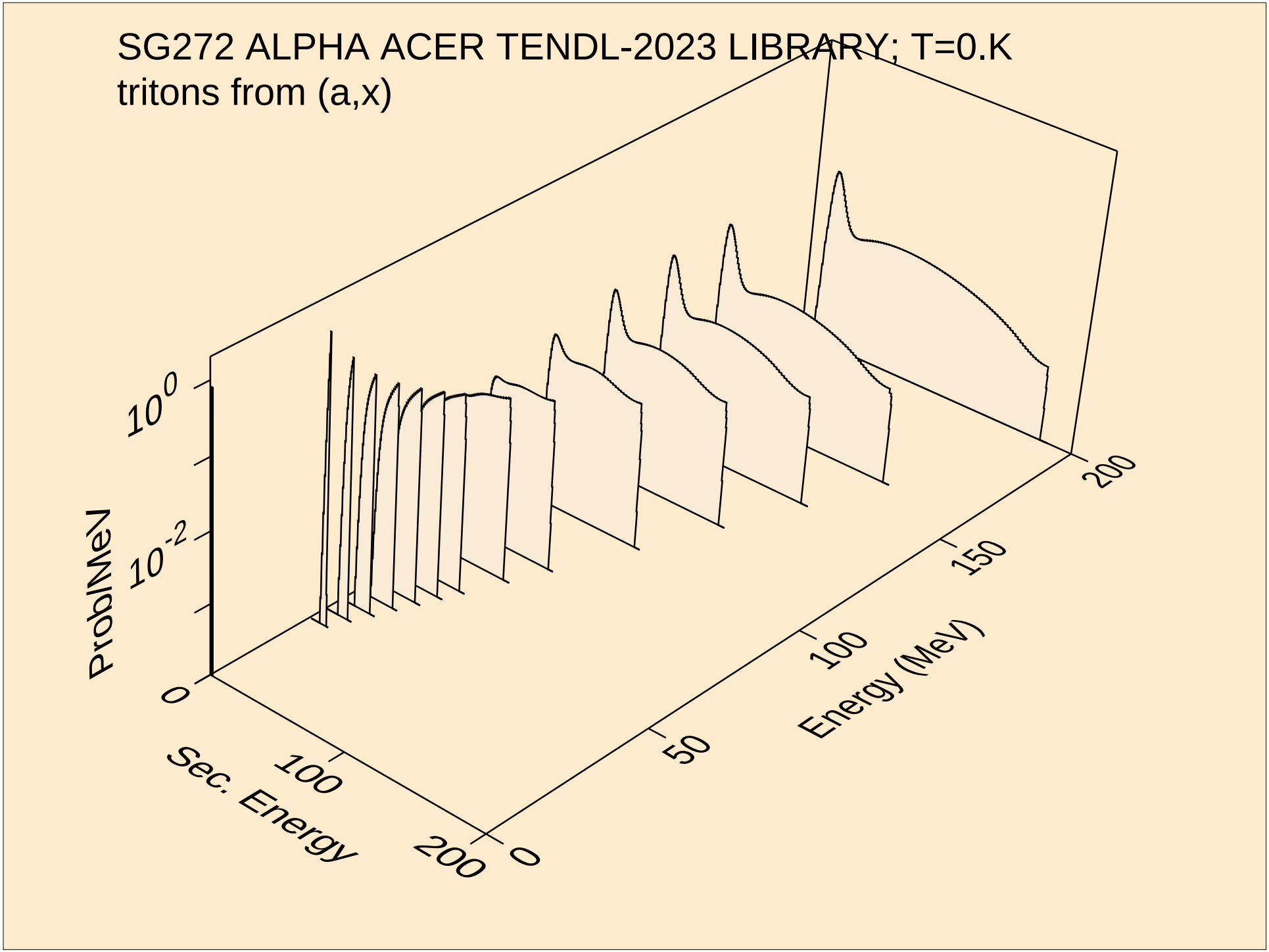

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
Particle production cross sections
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
0
20
40
60
80
100
120
140
160
180
200
neutrons
protons
deuterons
tritons
he-3

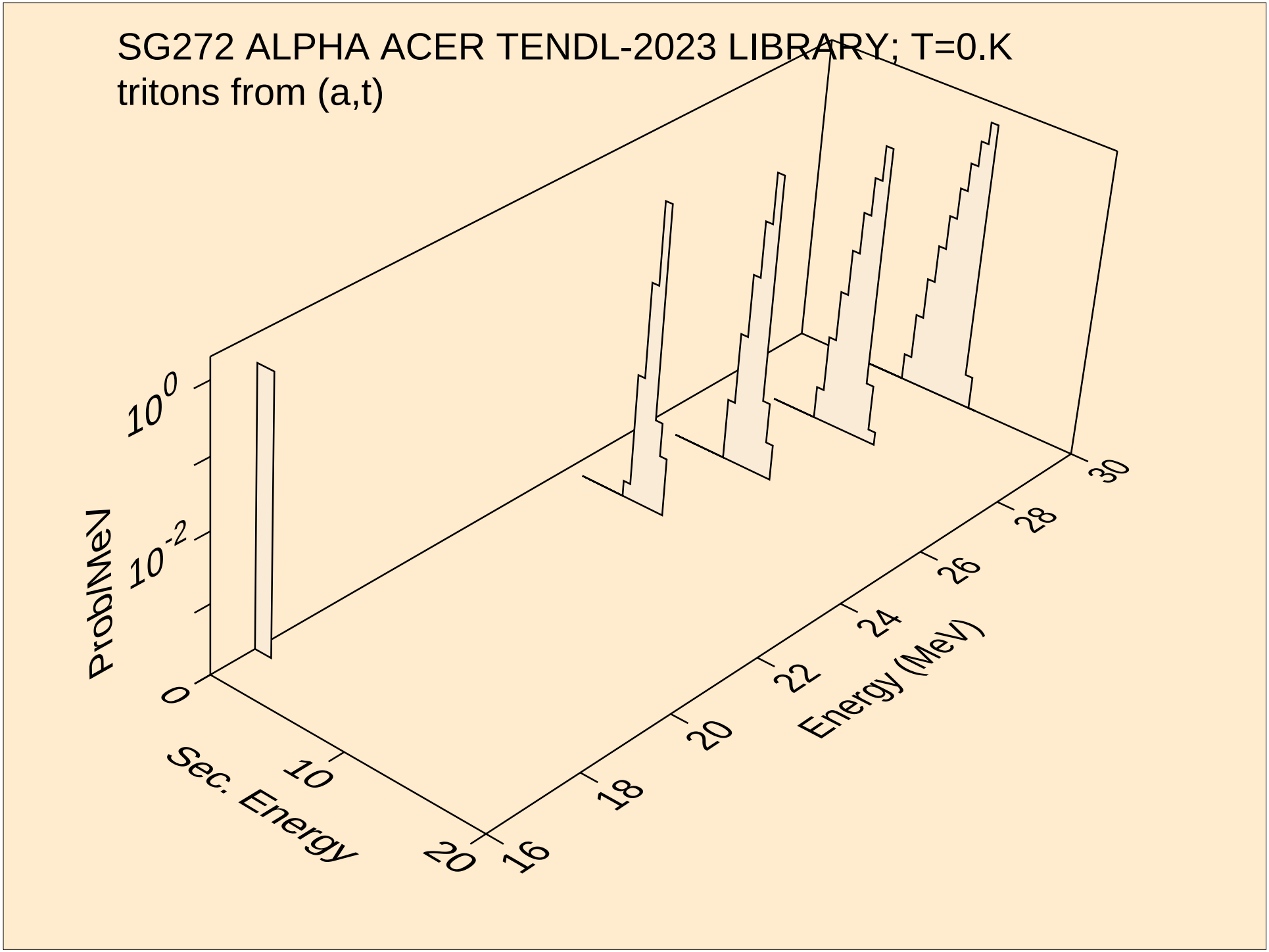

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
neutrons from (a,x)
Prob/MeV
10-1
10-3
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)

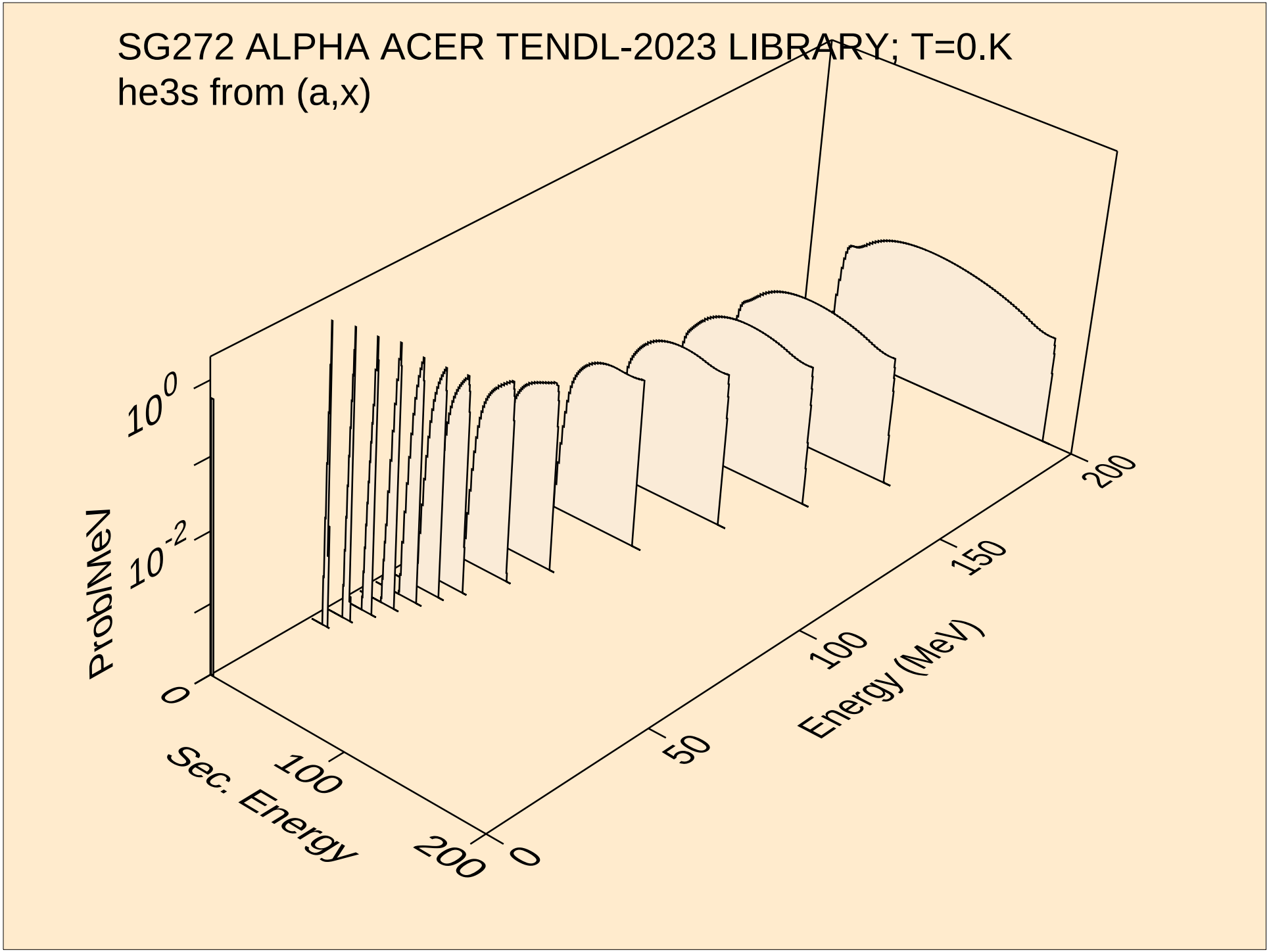

SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
protons from (a,x)
Prob/MeV
10-2
10-4
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)


SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
deuterons from (a,x)
Prob/MeV
10^0
10^-2
10^-4
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)


SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
deuterons from (a,d)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
10
20
18
20
22
24
26
28
30
Energy (MeV)


SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
tritons from (a,x)
Prob/MeV
10^0
10^-2
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)


SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
tritons from (a,t)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
10
20
16
18
20
22
24
26
28
30
Energy (MeV)


SG272 ALPHA ACER TENDL-2023 LIBRARY; T=0.K
he3s from (a,x)
Prob/MeV
10^0
10^-2
0
Sec. Energy
100
200
0
50
100
150
200
Energy (MeV)