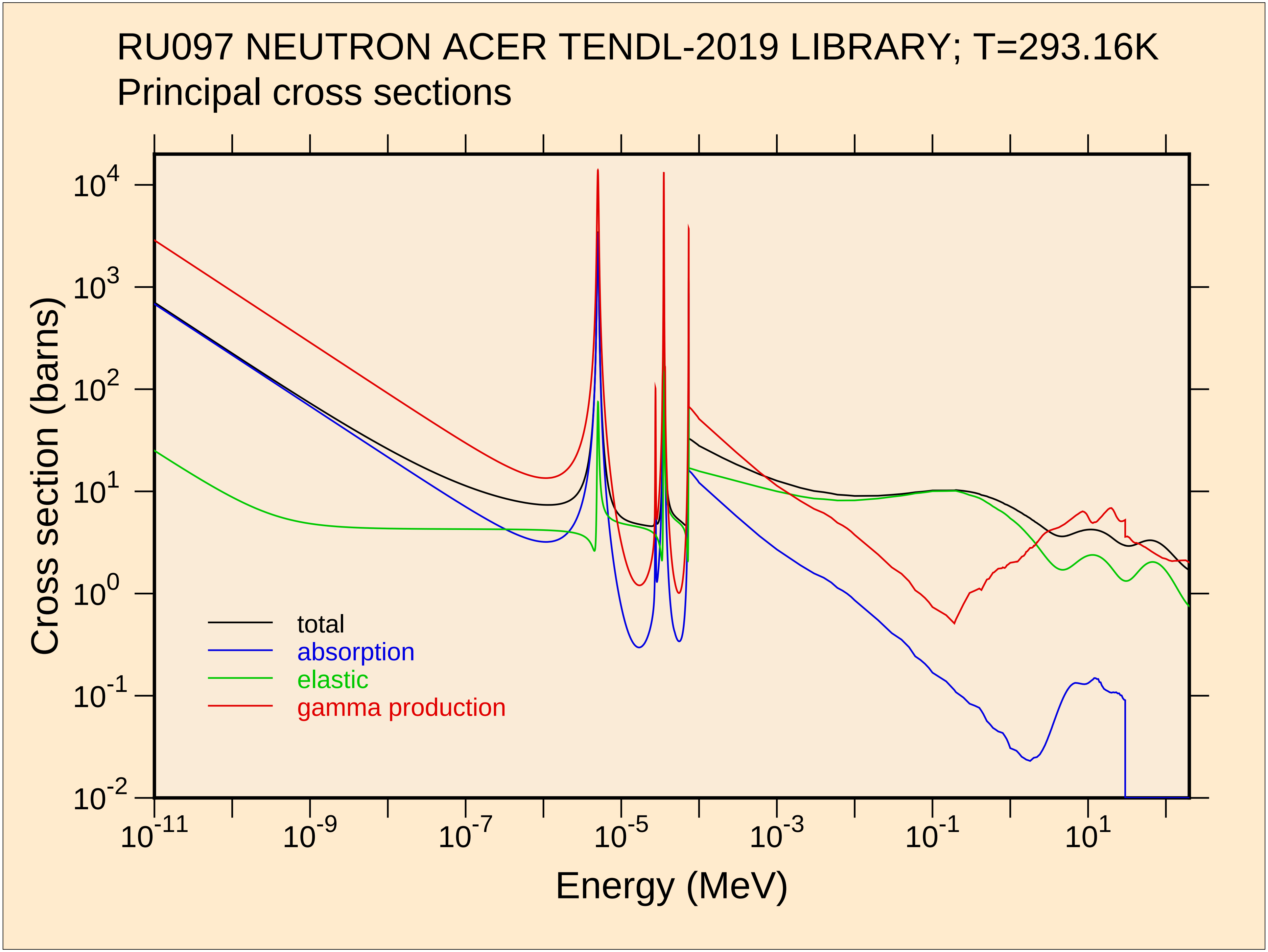
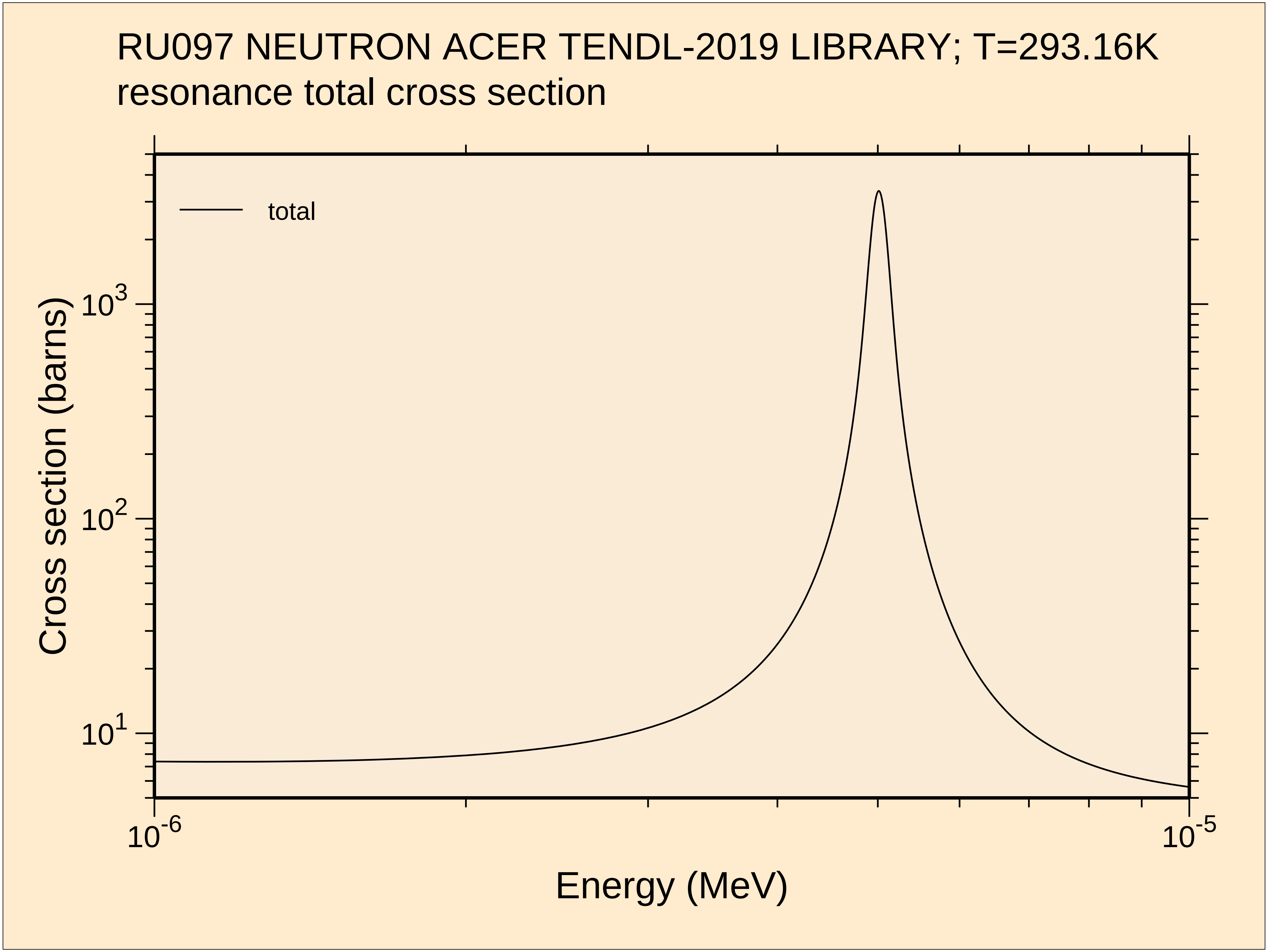
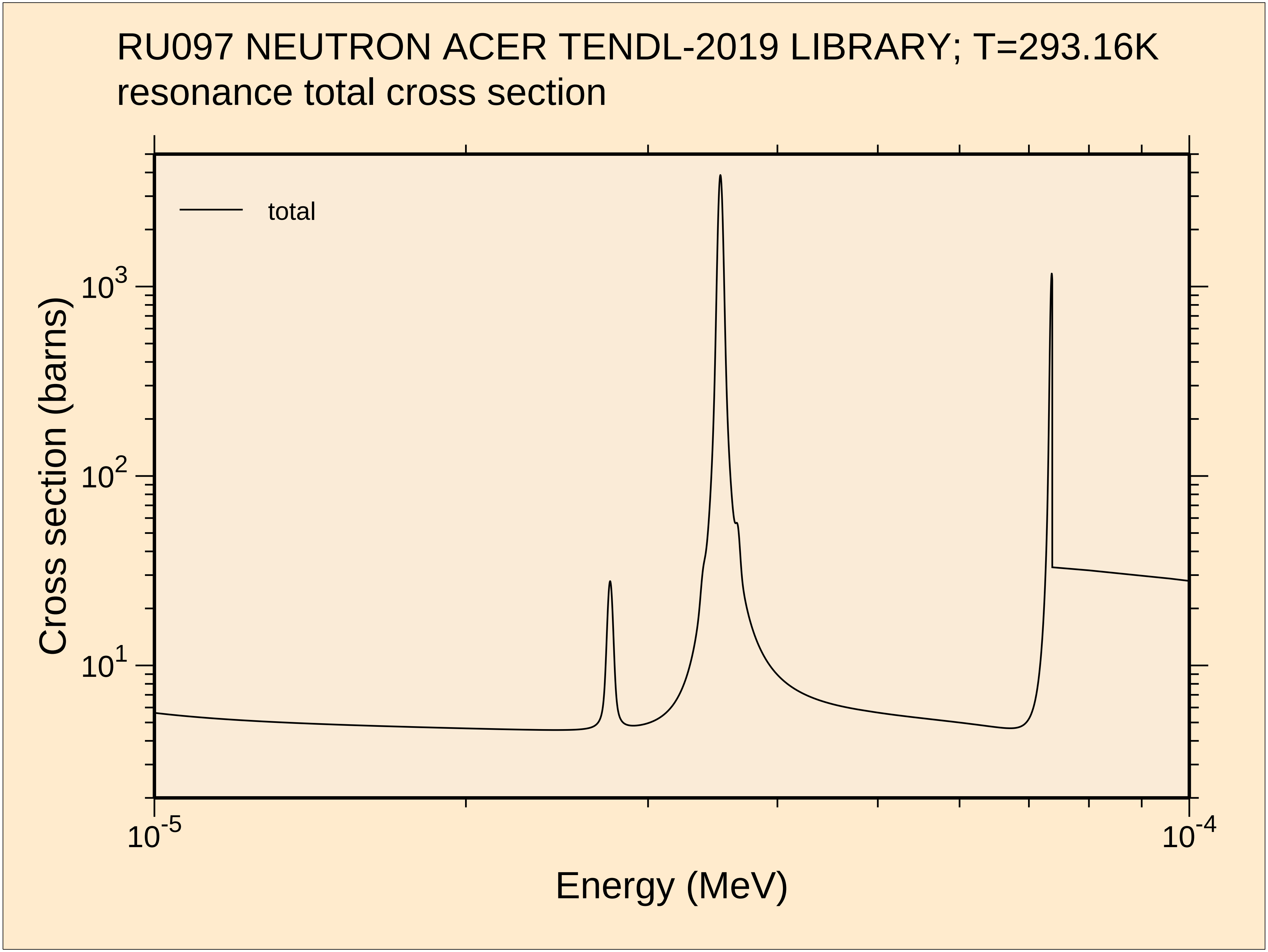
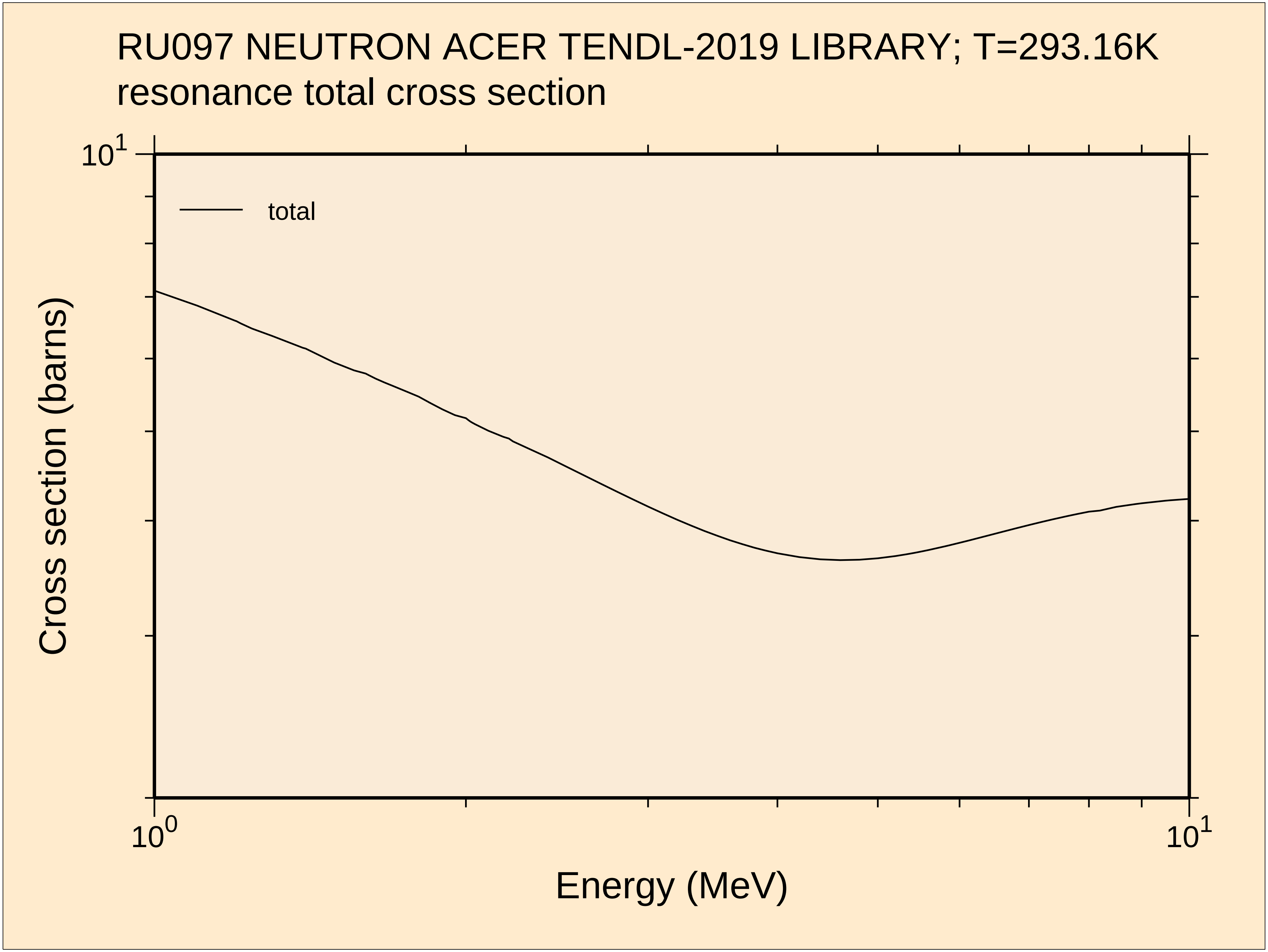


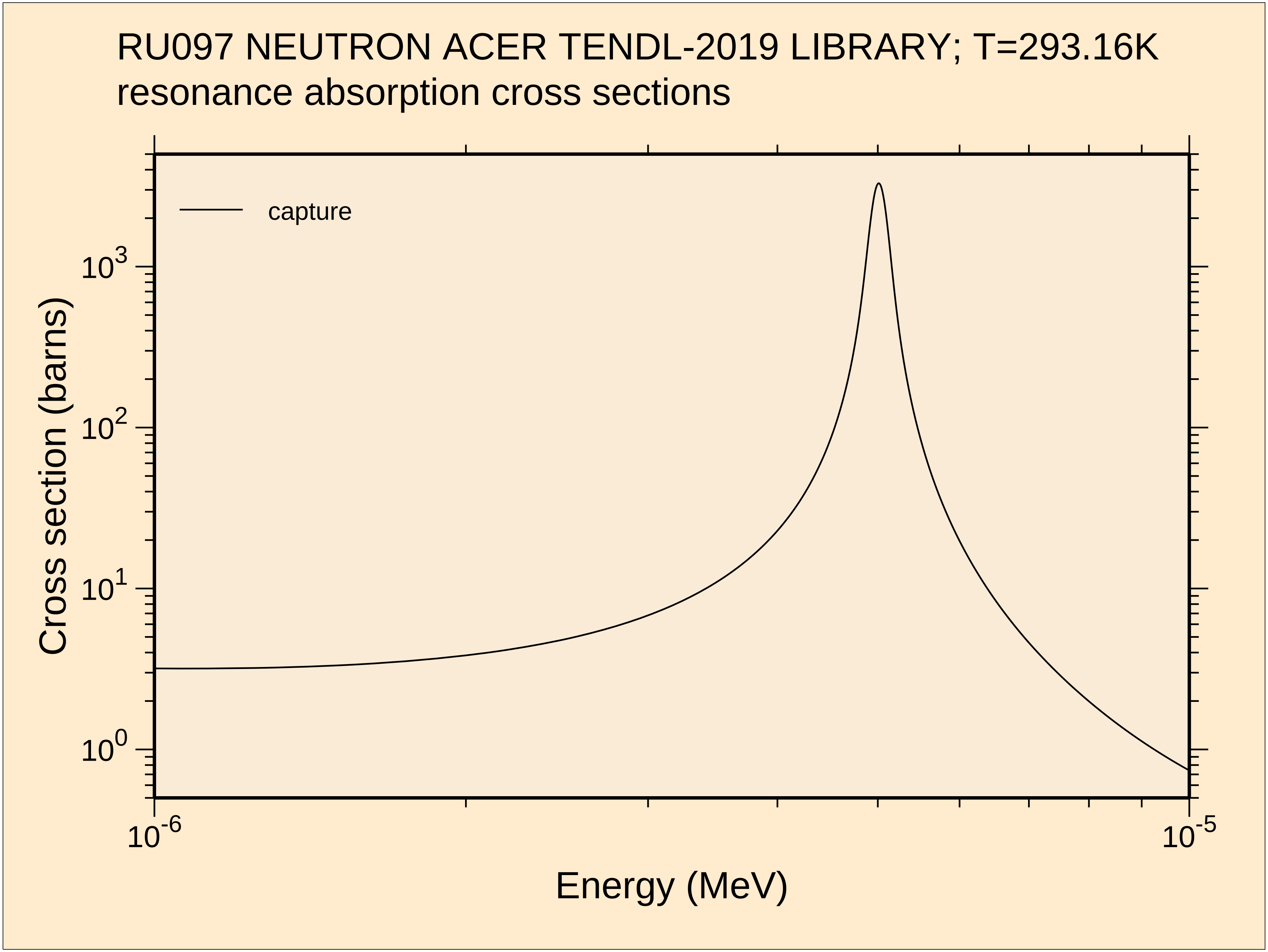
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Principal cross sections
Cross section (barns)
Energy (MeV)
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
total
absorption
elastic
gamma production

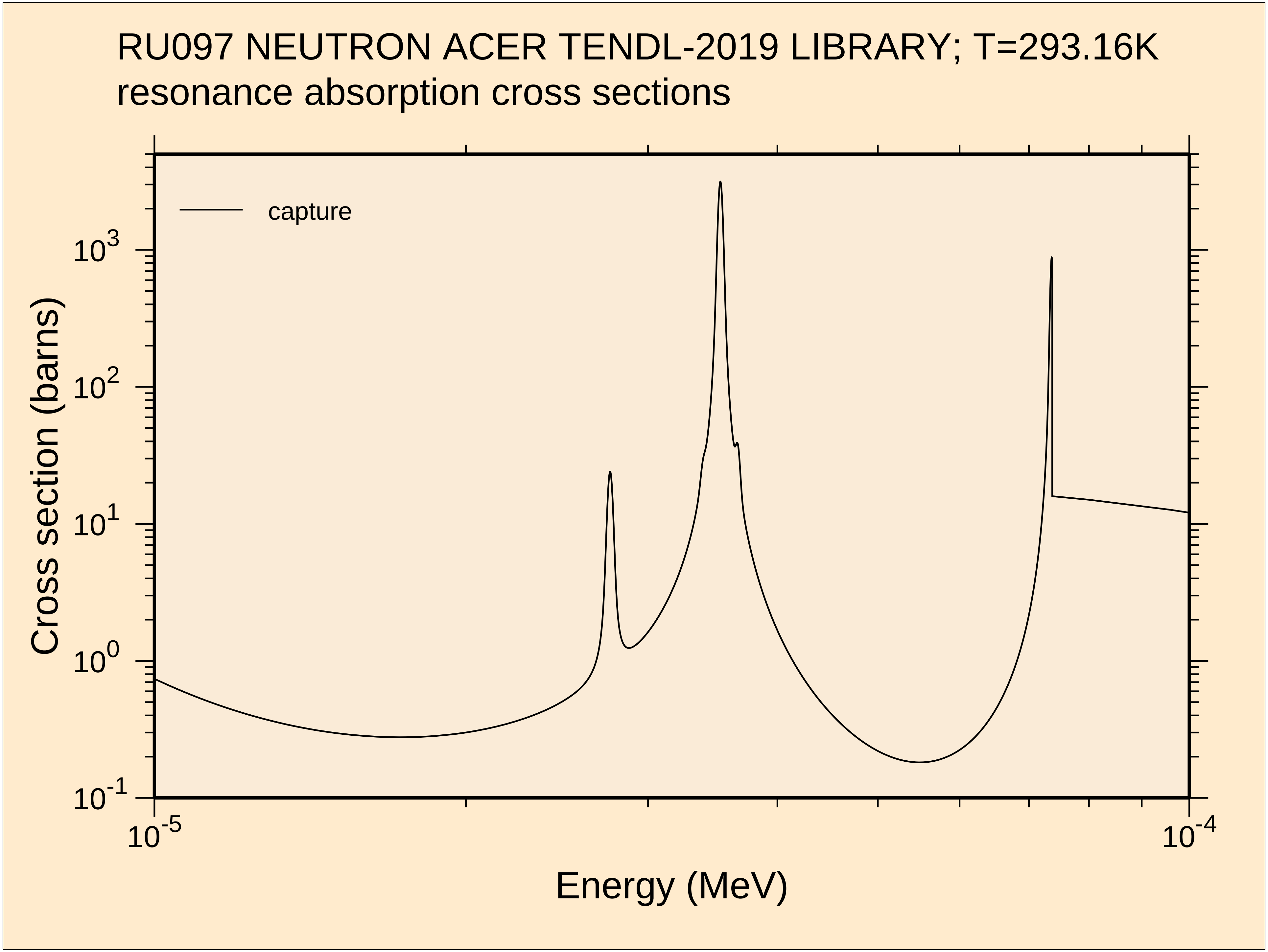

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance total cross section
total
Cross section (barns)
10^3
10^2
10^1
10^{-6}
10^{-5}
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance total cross section
total
10^3
10^2
10^1
Cross section (barns)
10^{-5}
10^{-4}
Energy (MeV)

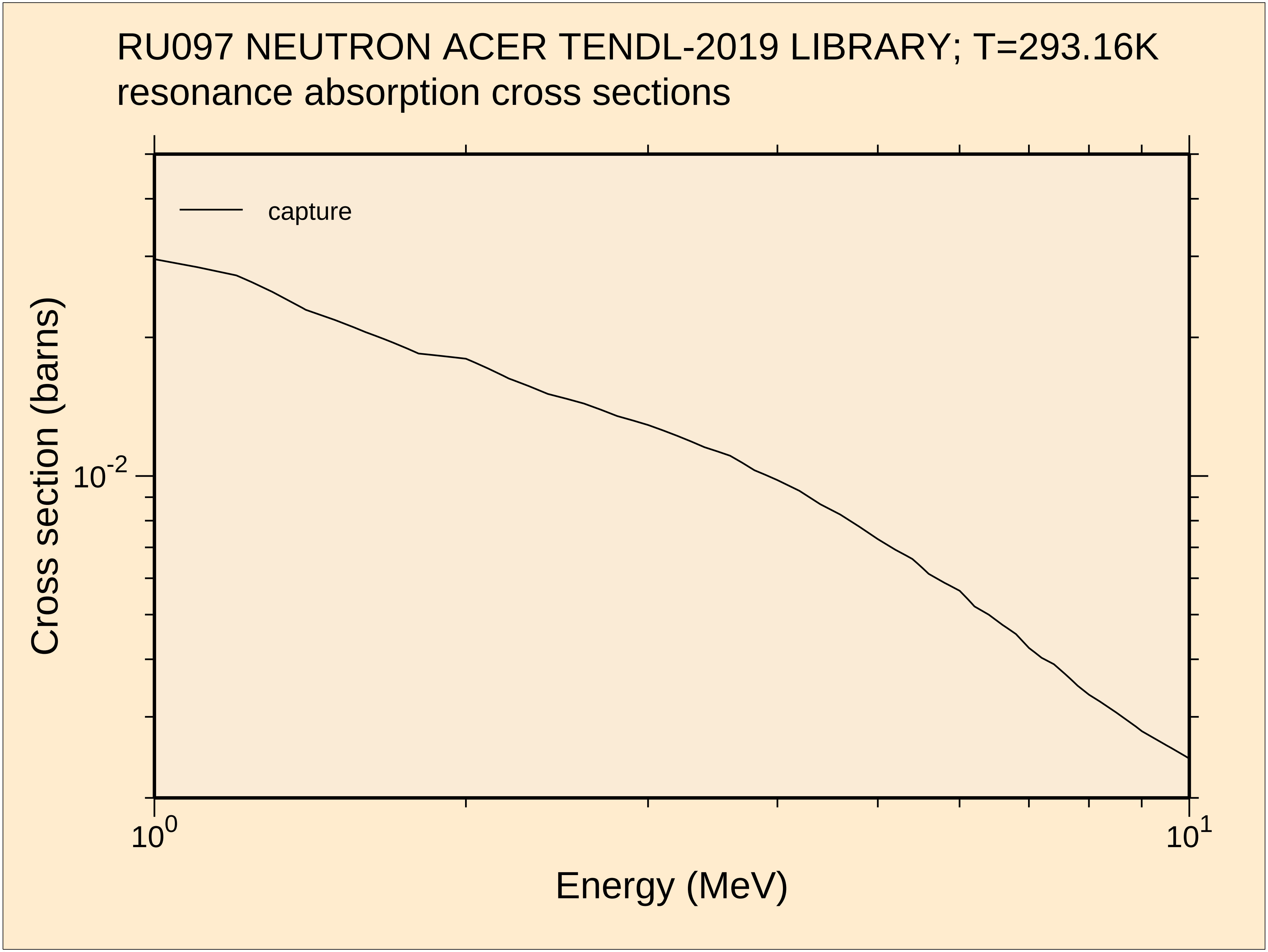


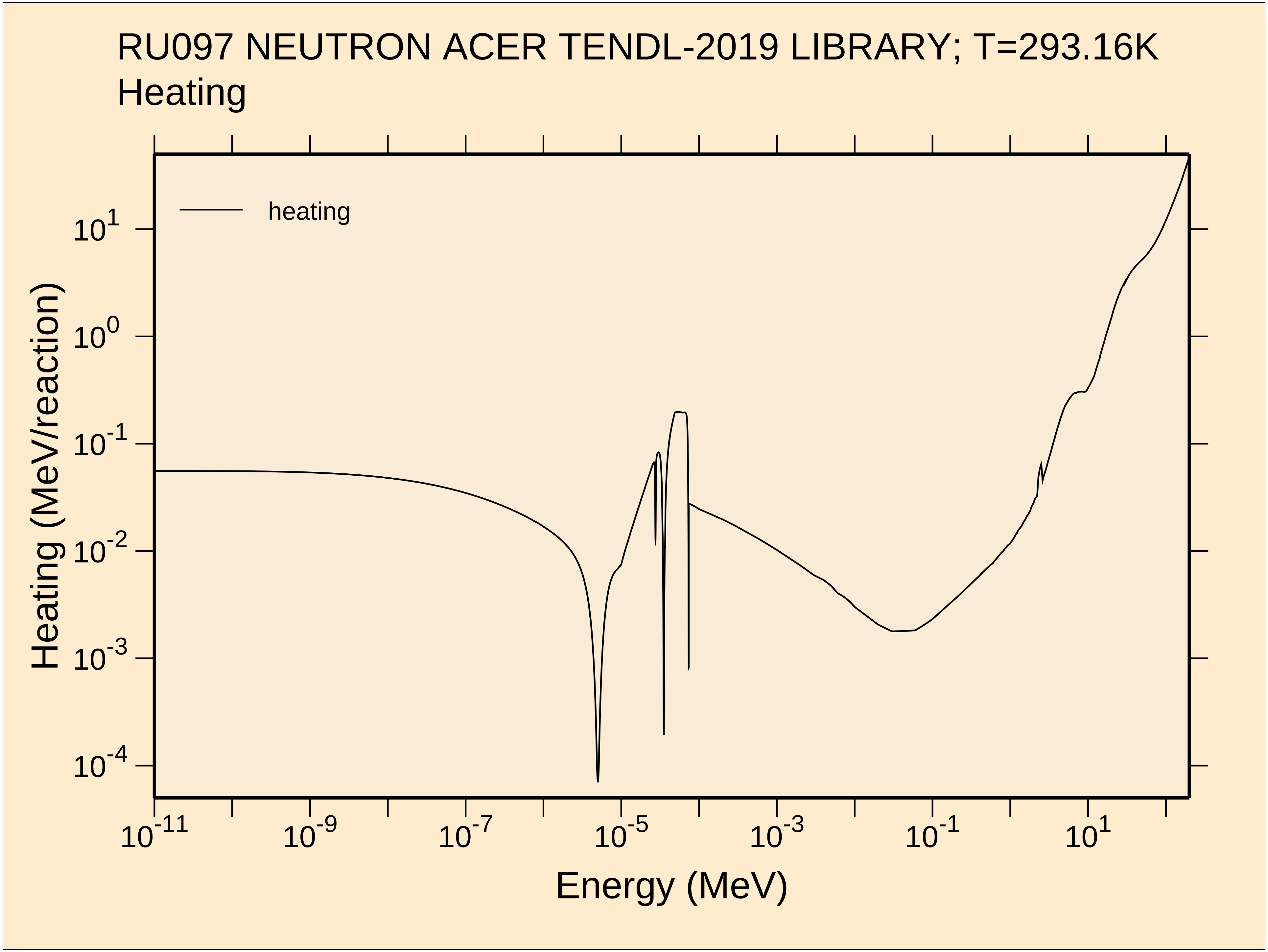
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance total cross section
total
Cross section (barns)
Energy (MeV)
10^1
10^0
10^1

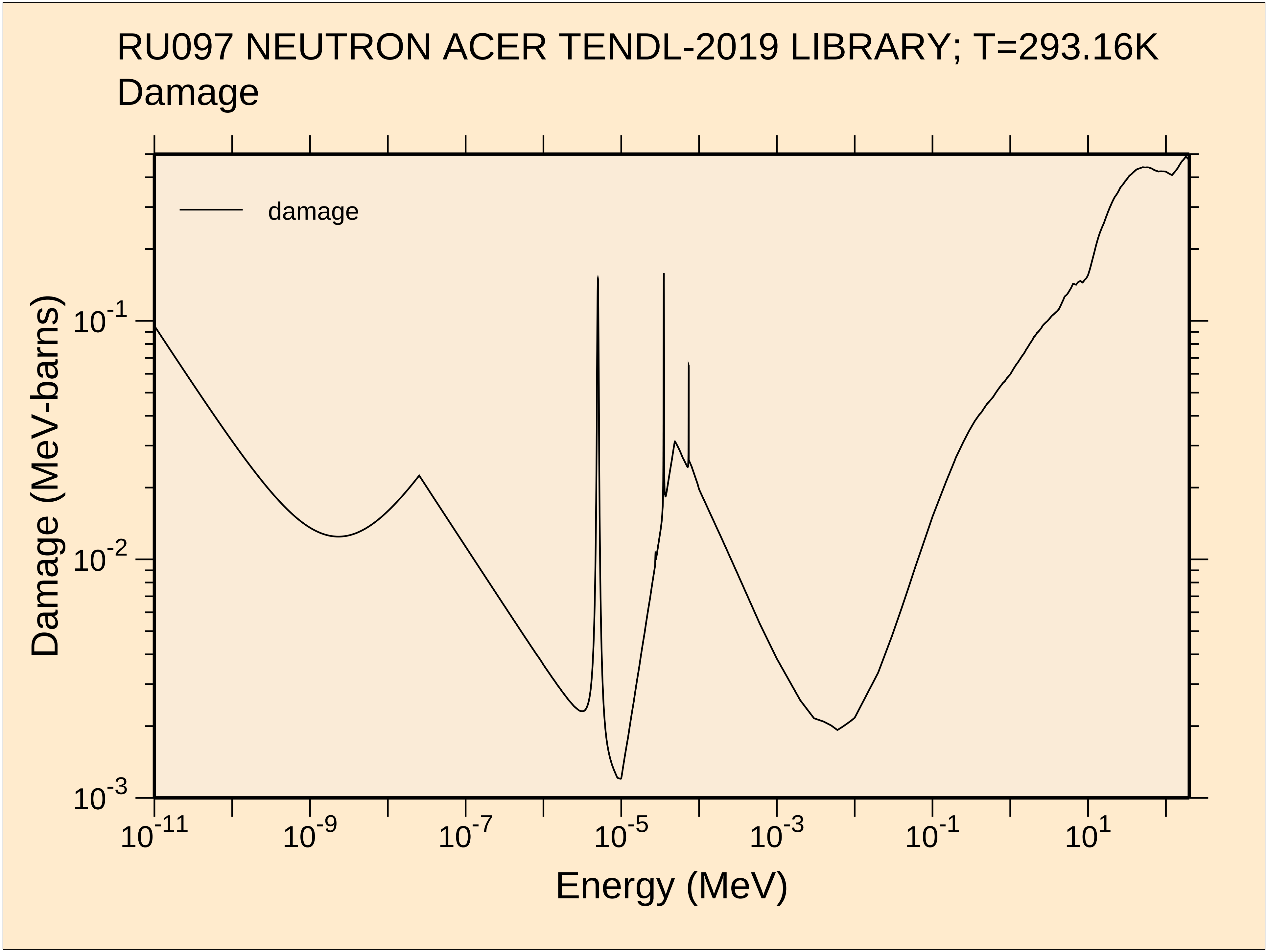

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance absorption cross sections
capture
Cross section (barns)
10^3
10^2
10^1
10^0
10^-6
10^-5
Energy (MeV)



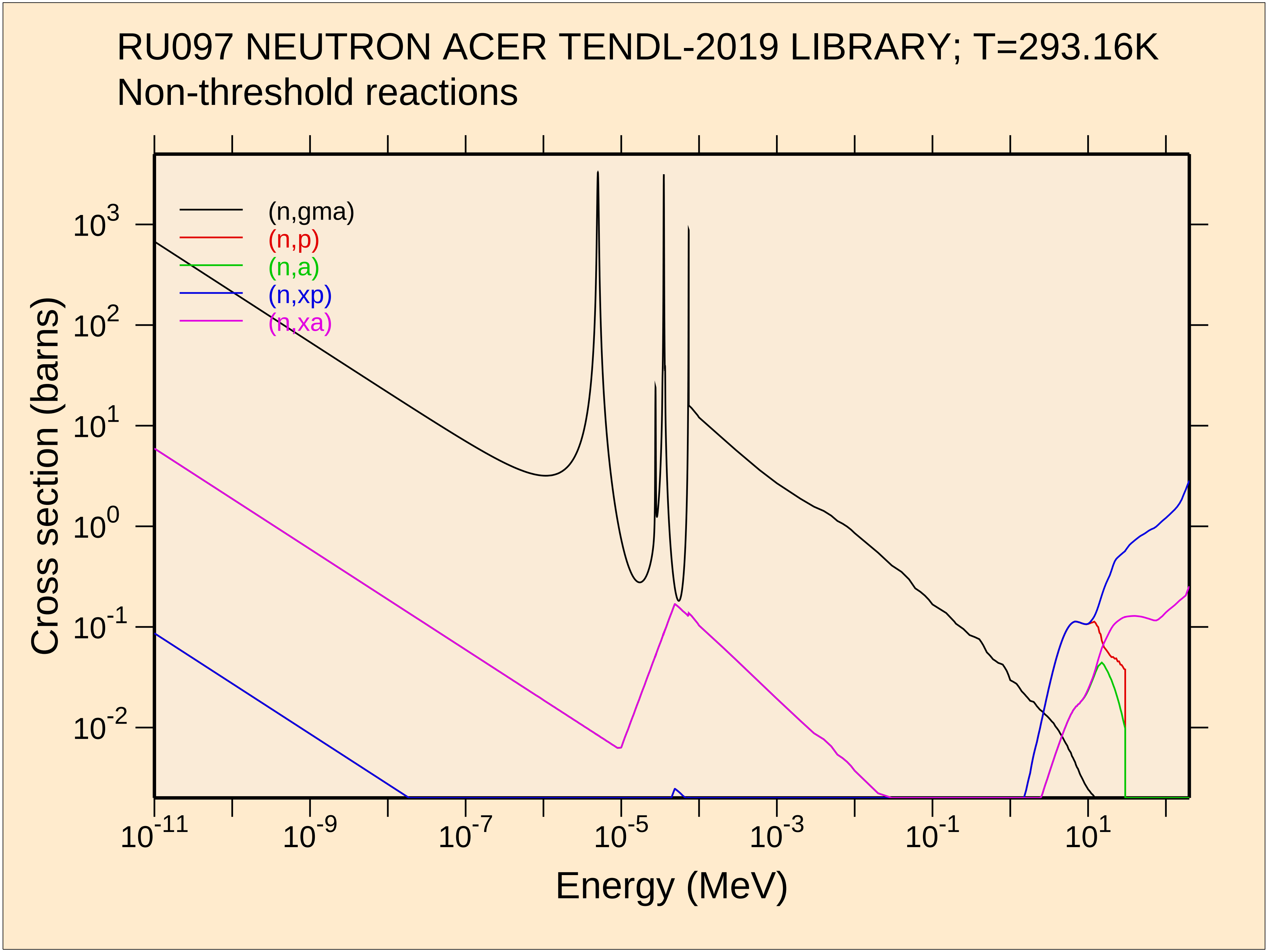
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance absorption cross sections
capture
Cross section (barns)
Energy (MeV)
10^3
10^2
10^1
10^0
10^-1
10^-5
10^-4


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
resonance absorption cross sections
capture
Cross section (barns)
10^-2
10^0
10^1
Energy (MeV)

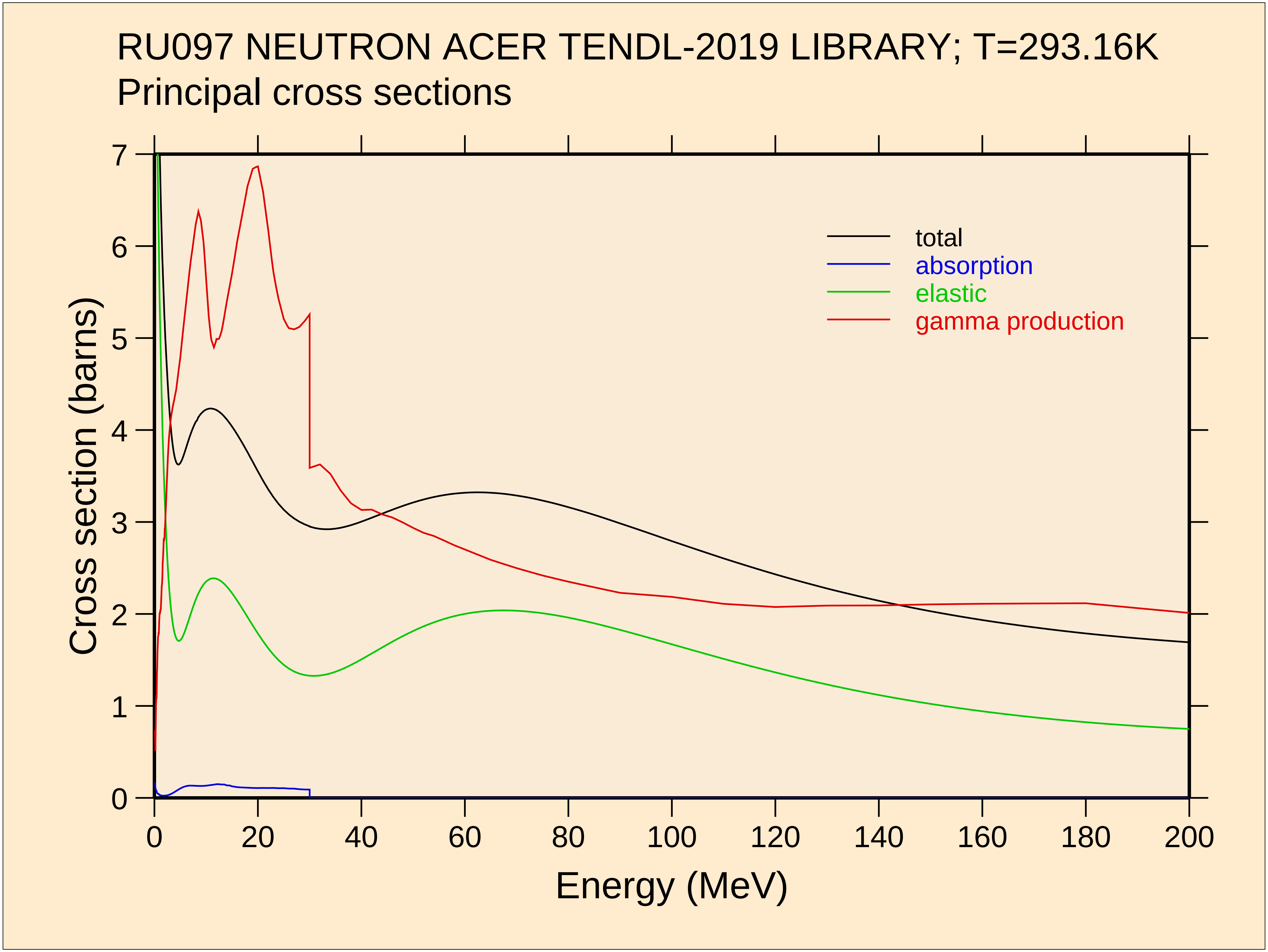

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Heating
heating
Heating (MeV/reaction)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)



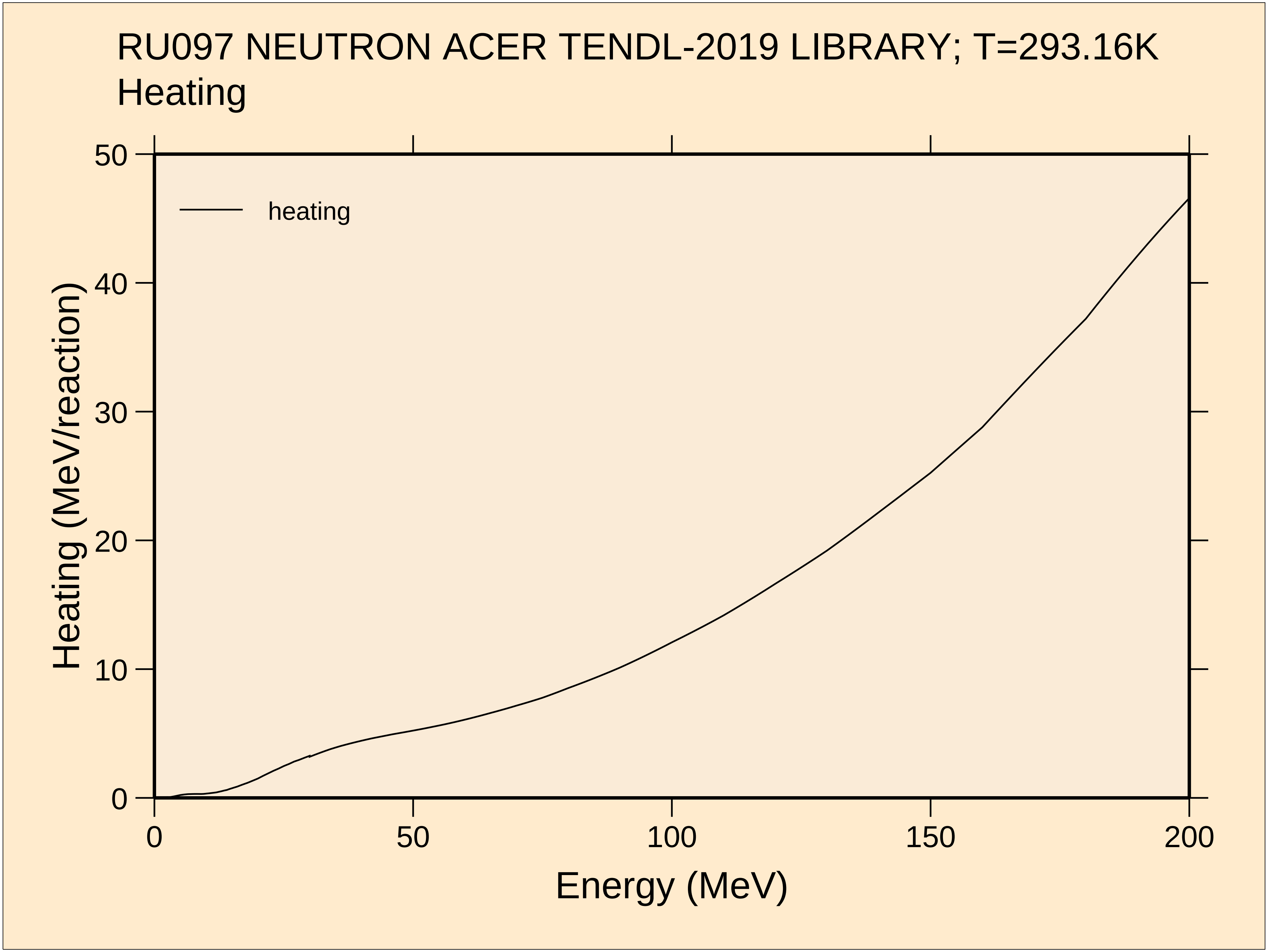
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Damage
damage
Damage (MeV-barns)
10^-1
10^-2
10^-3
10^-11
10^-9
10^-7
10^-5
10^-3
10^-1
10^1
Energy (MeV)

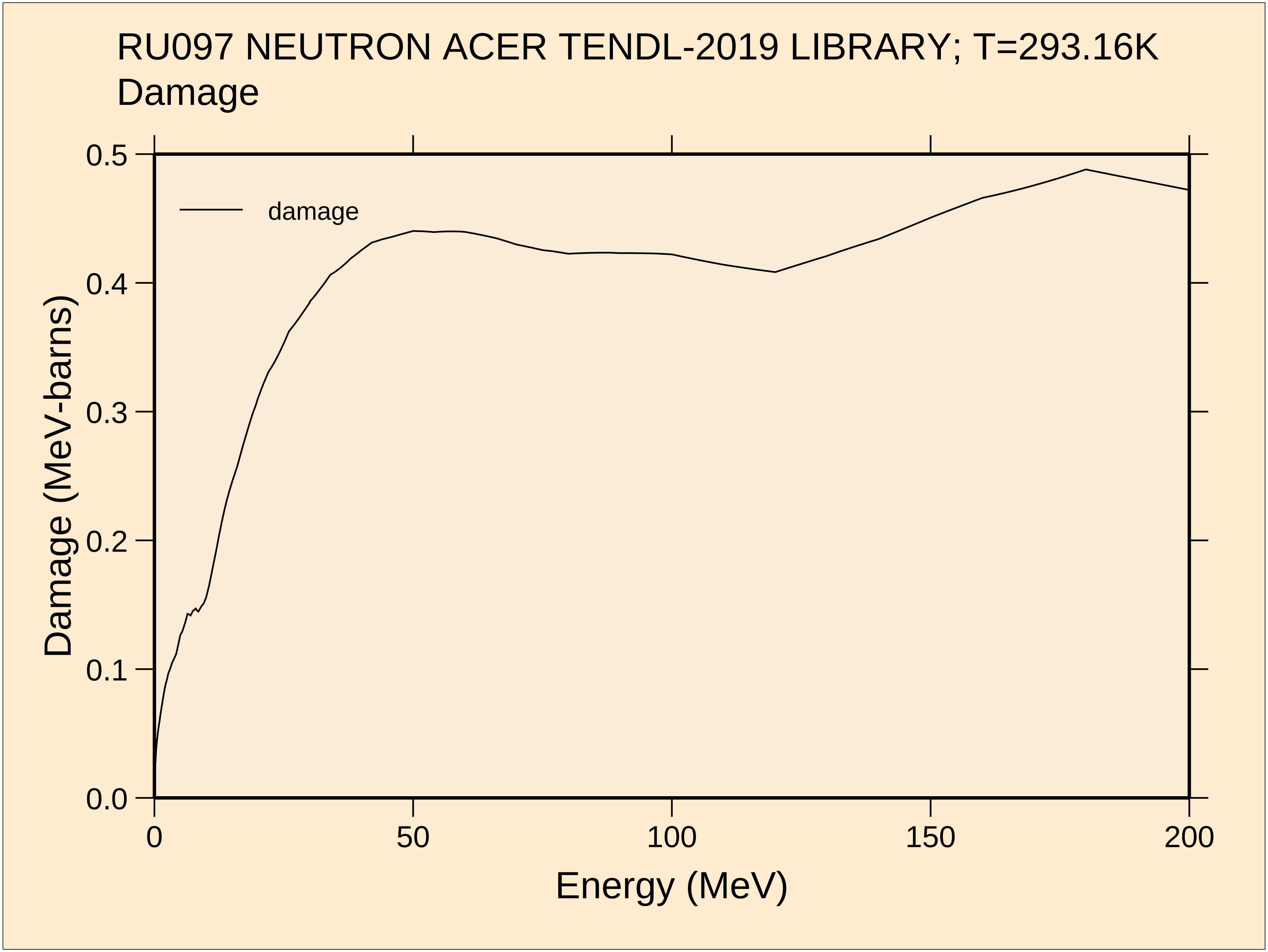


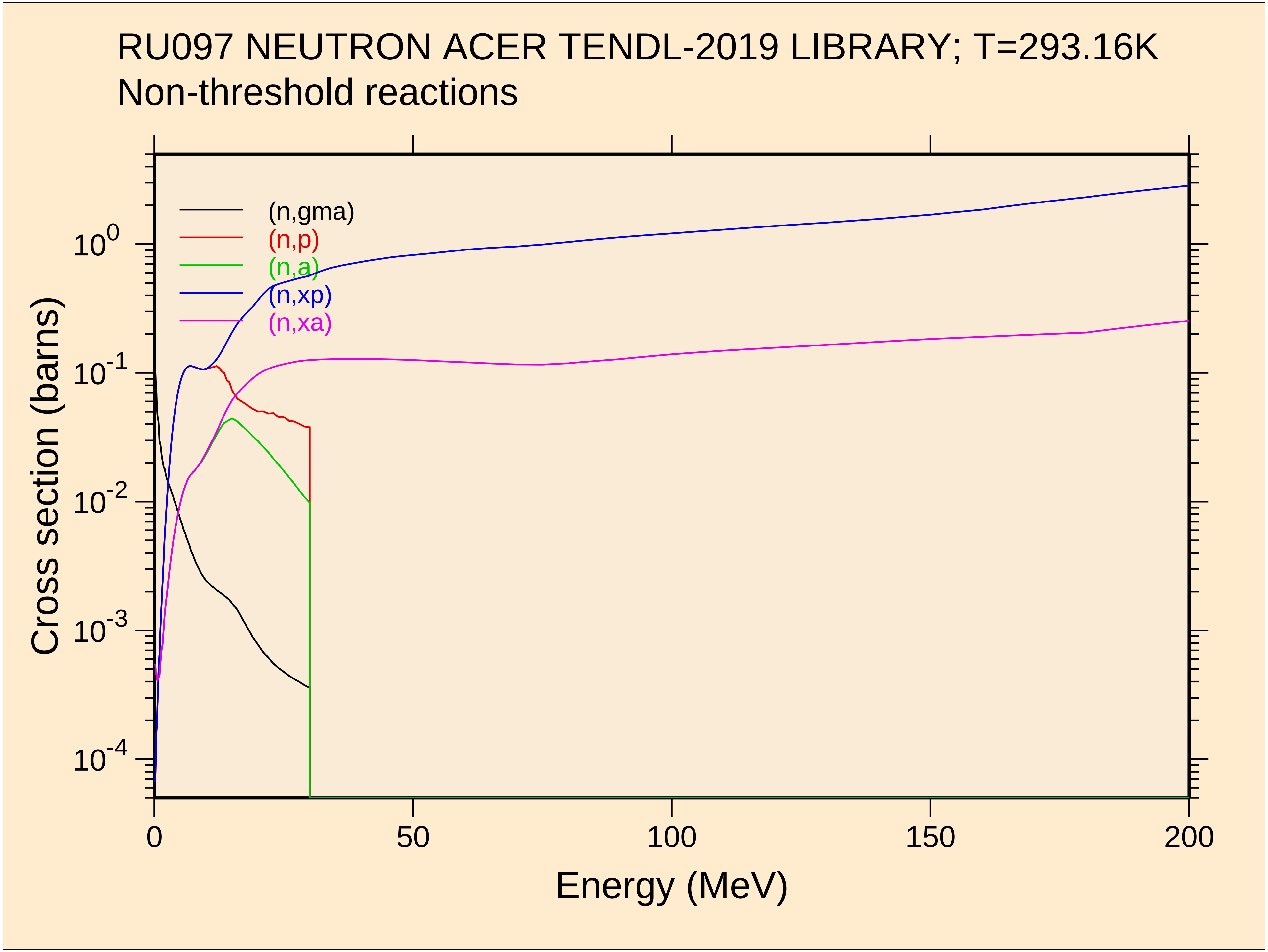
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Non-threshold reactions
(n,gma)
(n,p)
(n,a)
(n,xp)
(n,xa)
Cross section (barns)
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-11}
10^{-9}
10^{-7}
10^{-5}
10^{-3}
10^{-1}
10^{1}
Energy (MeV)



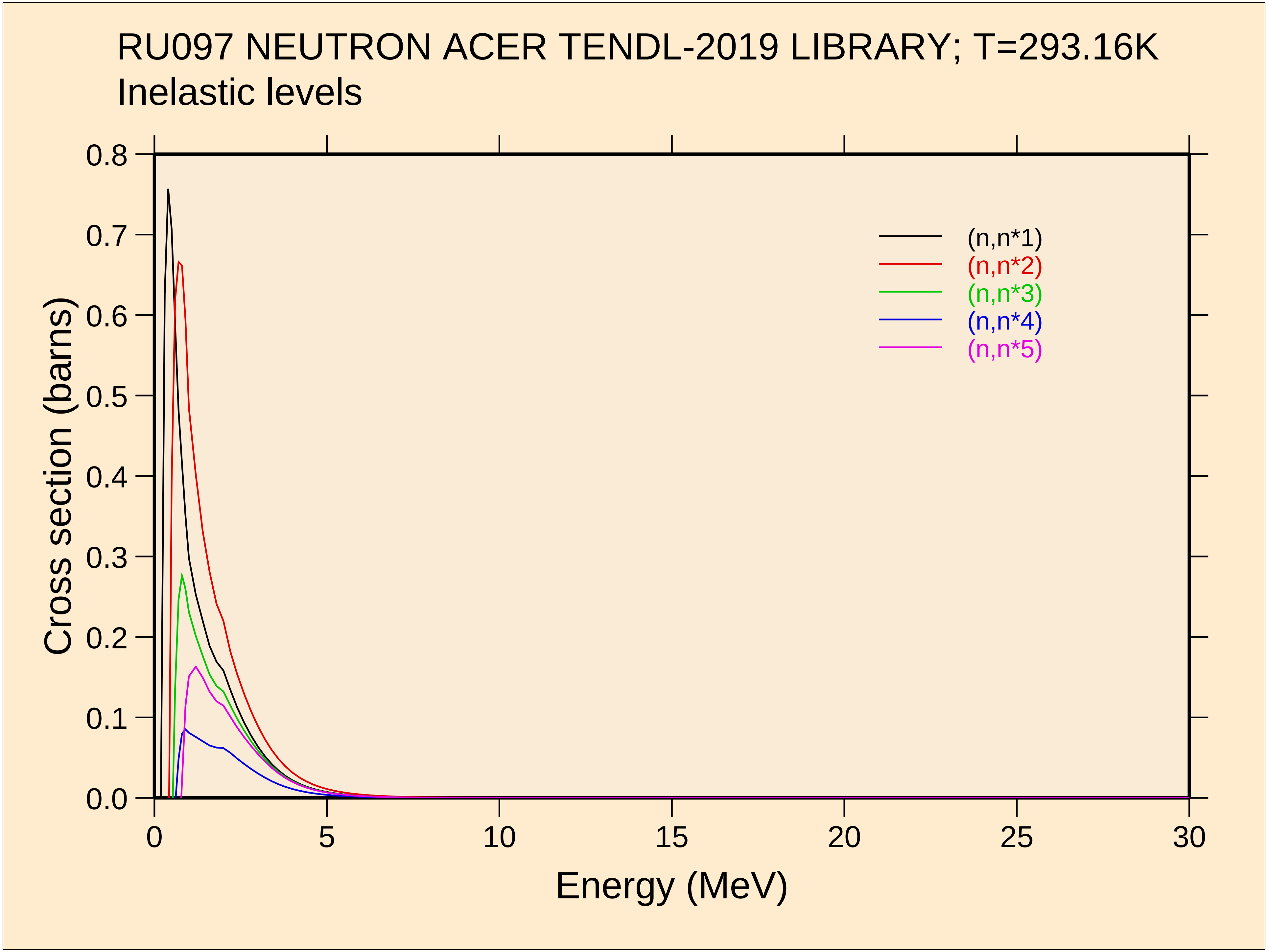
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Principal cross sections
Cross section (barns)
Energy (MeV)
0
1
2
3
4
5
6
7
0
20
40
60
80
100
120
140
160
180
200
total
absorption
elastic
gamma production

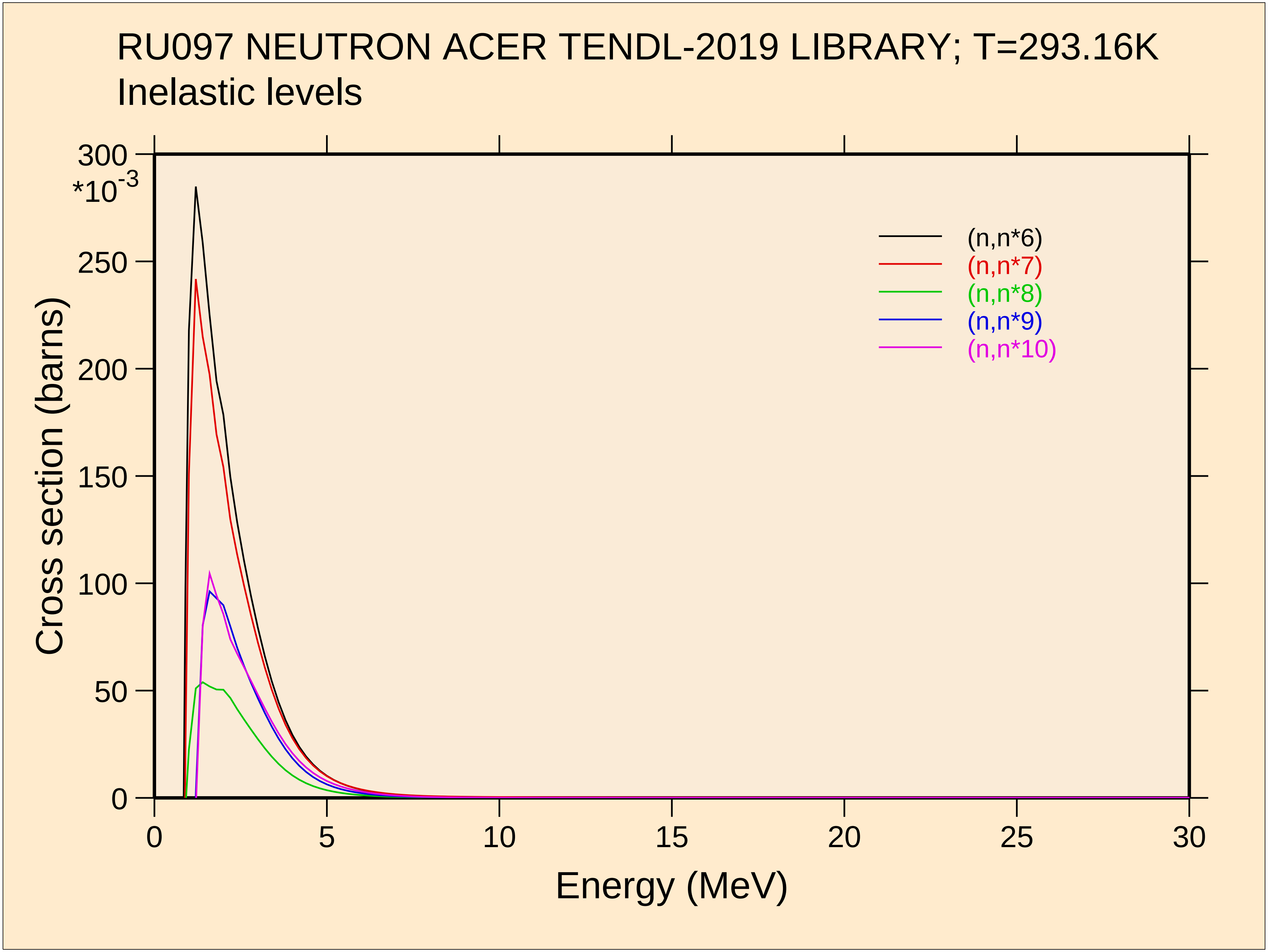

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Heating
heating
Heating (MeV/reaction)
Energy (MeV)
0
10
20
30
40
50
0
50
100
150
200

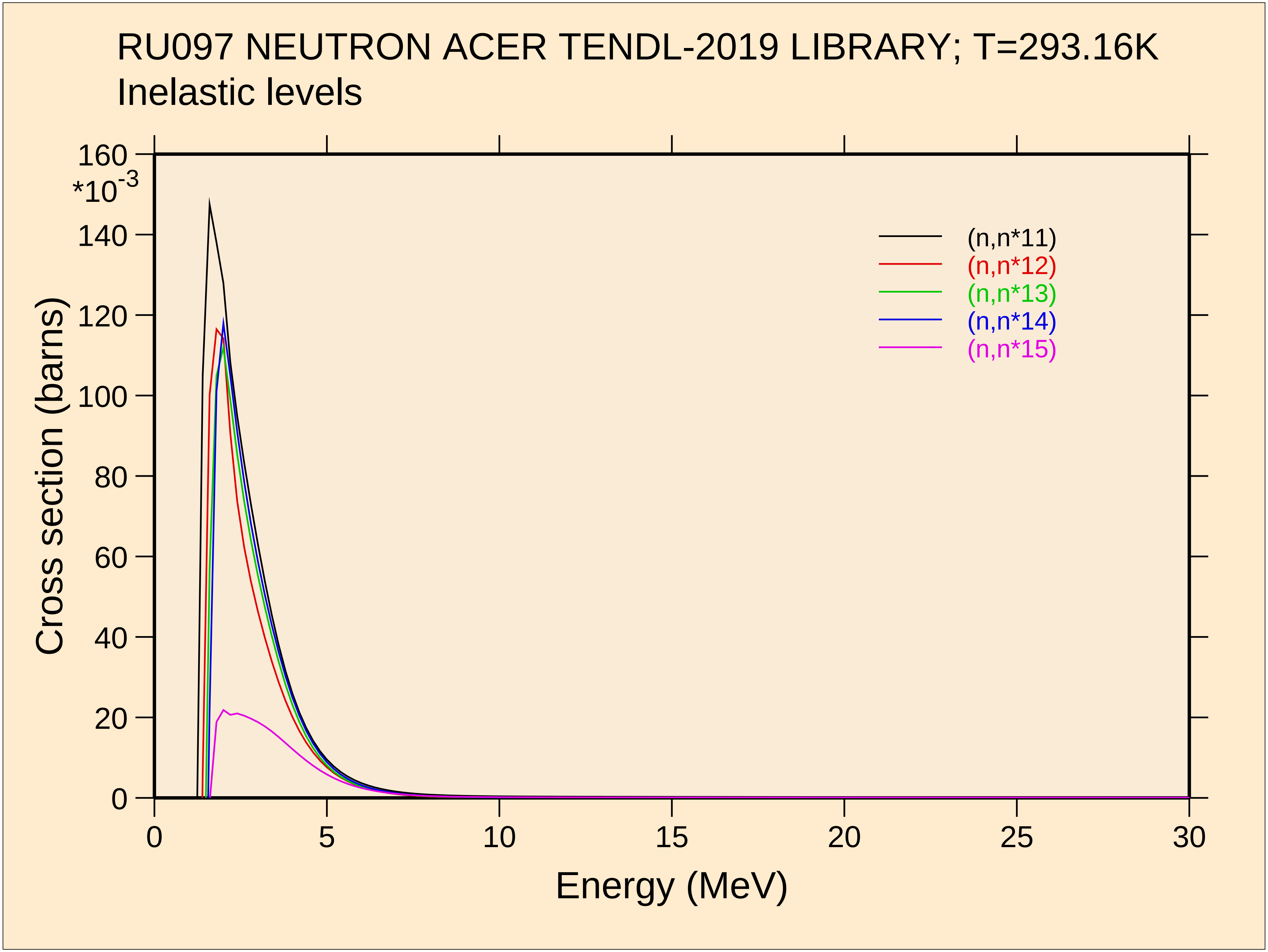

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Damage
damage
Damage (MeV-barns)
0.0
0.1
0.2
0.3
0.4
0.5
0
50
100
150
200
Energy (MeV)

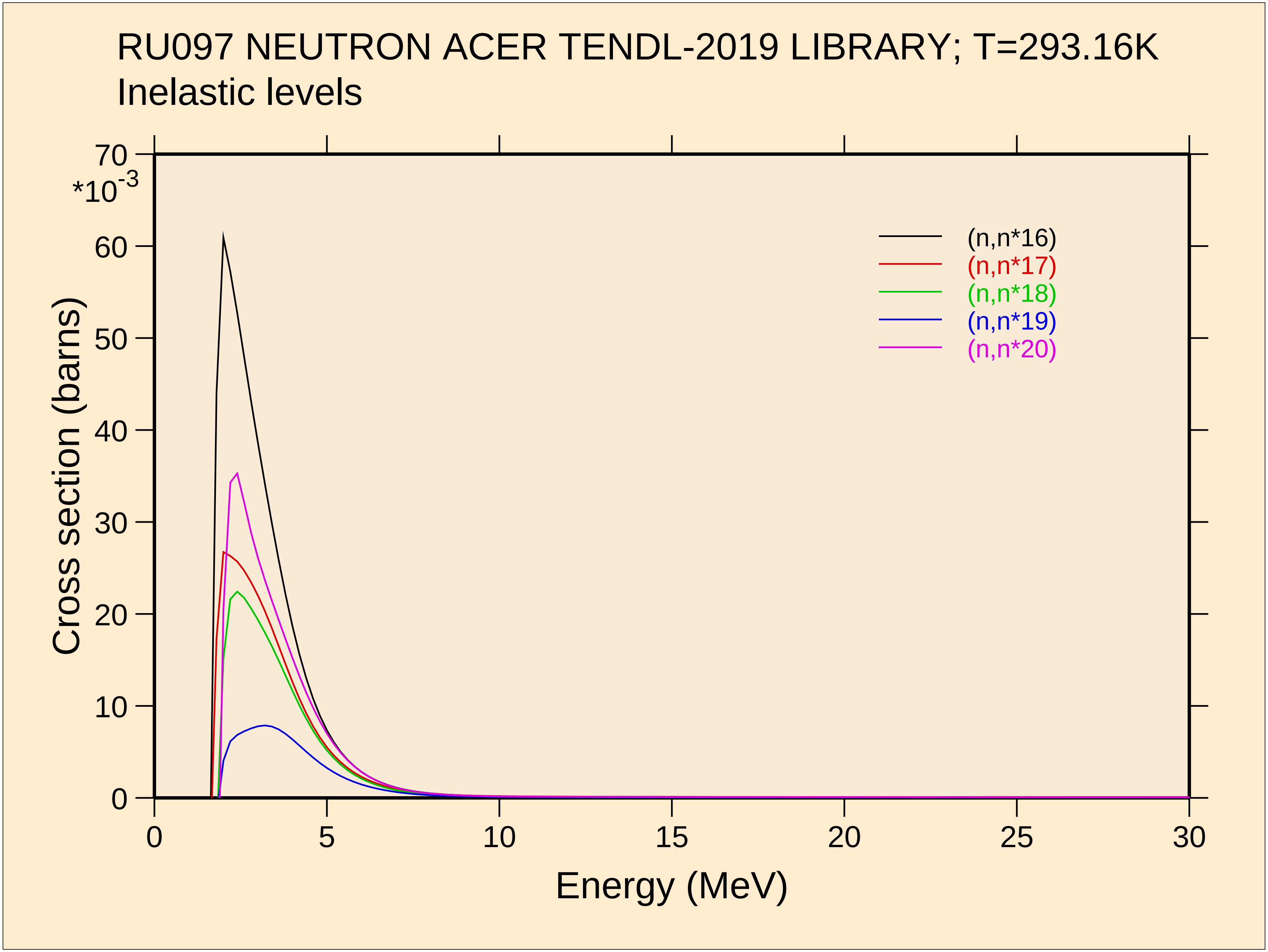


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Non-threshold reactions
(n,gma)
(n,p)
(n,a)
(n,xp)
(n,xa)
Cross section (barns)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
0
50
100
150
200
Energy (MeV)

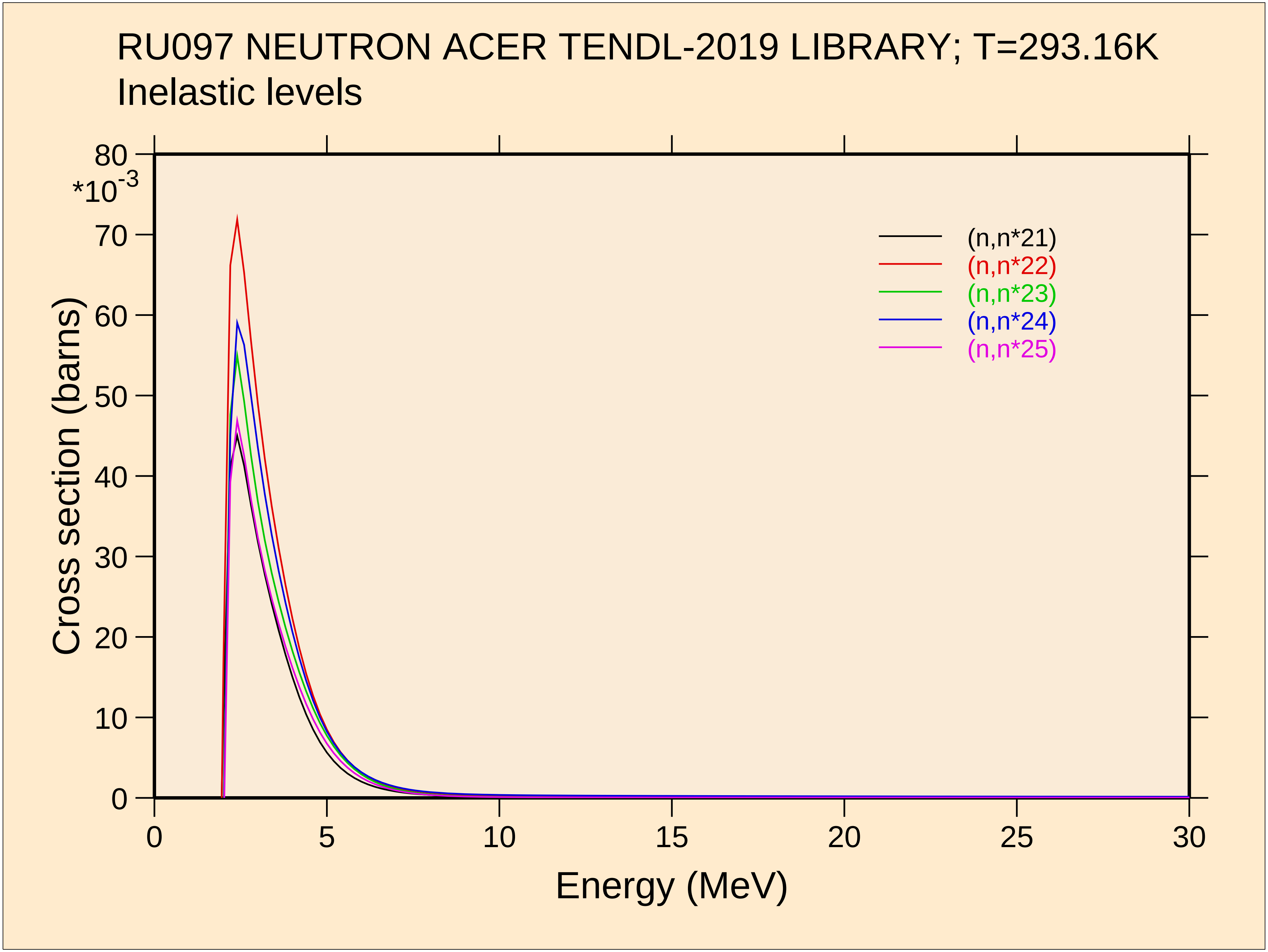

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
Energy (MeV)
(n,n*1)
(n,n*2)
(n,n*3)
(n,n*4)
(n,n*5)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0
5
10
15
20
25
30


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
*10^-3
300
250
200
150
100
50
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

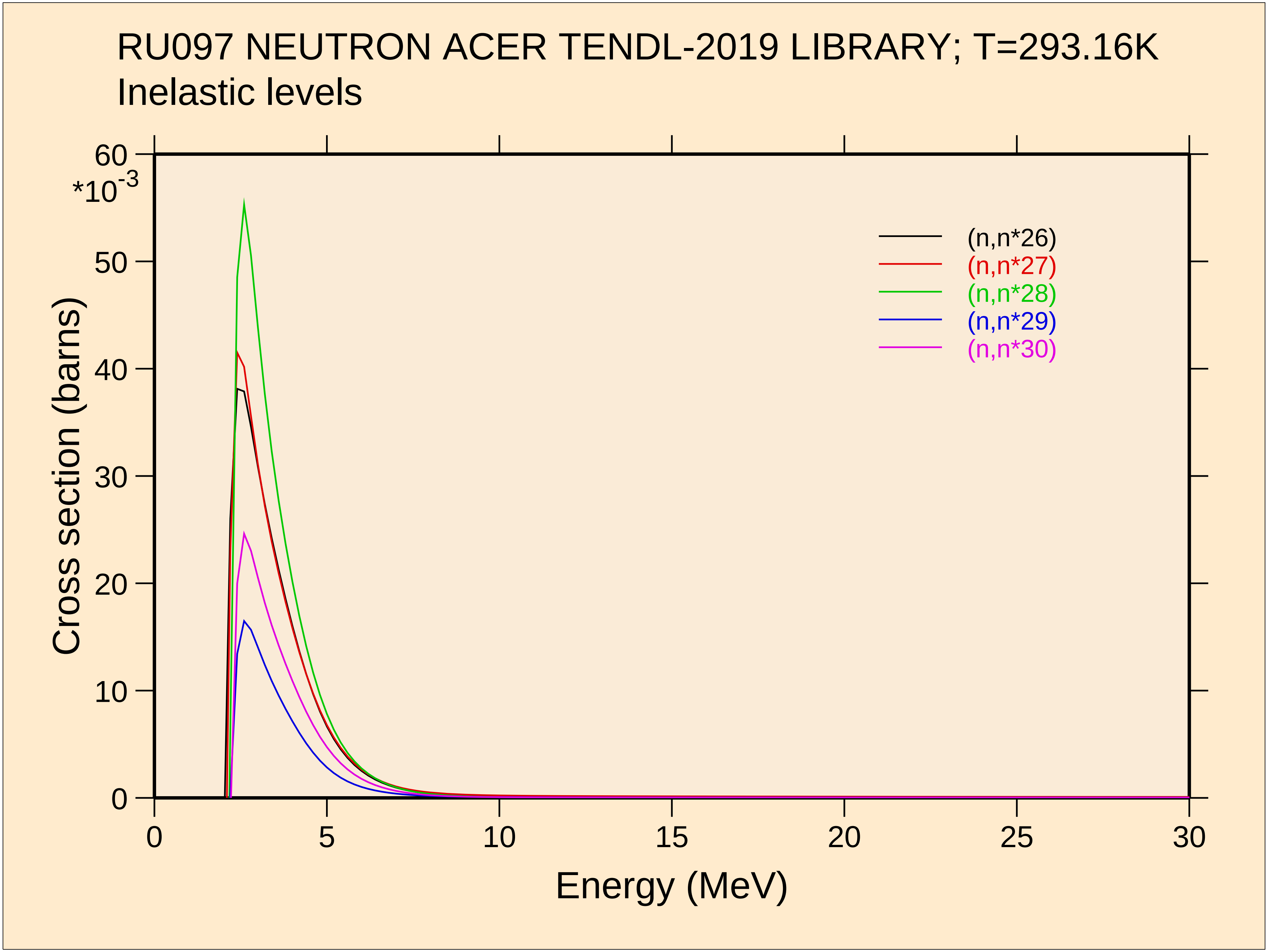

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
*10^-3
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*11)
(n,n*12)
(n,n*13)
(n,n*14)
(n,n*15)



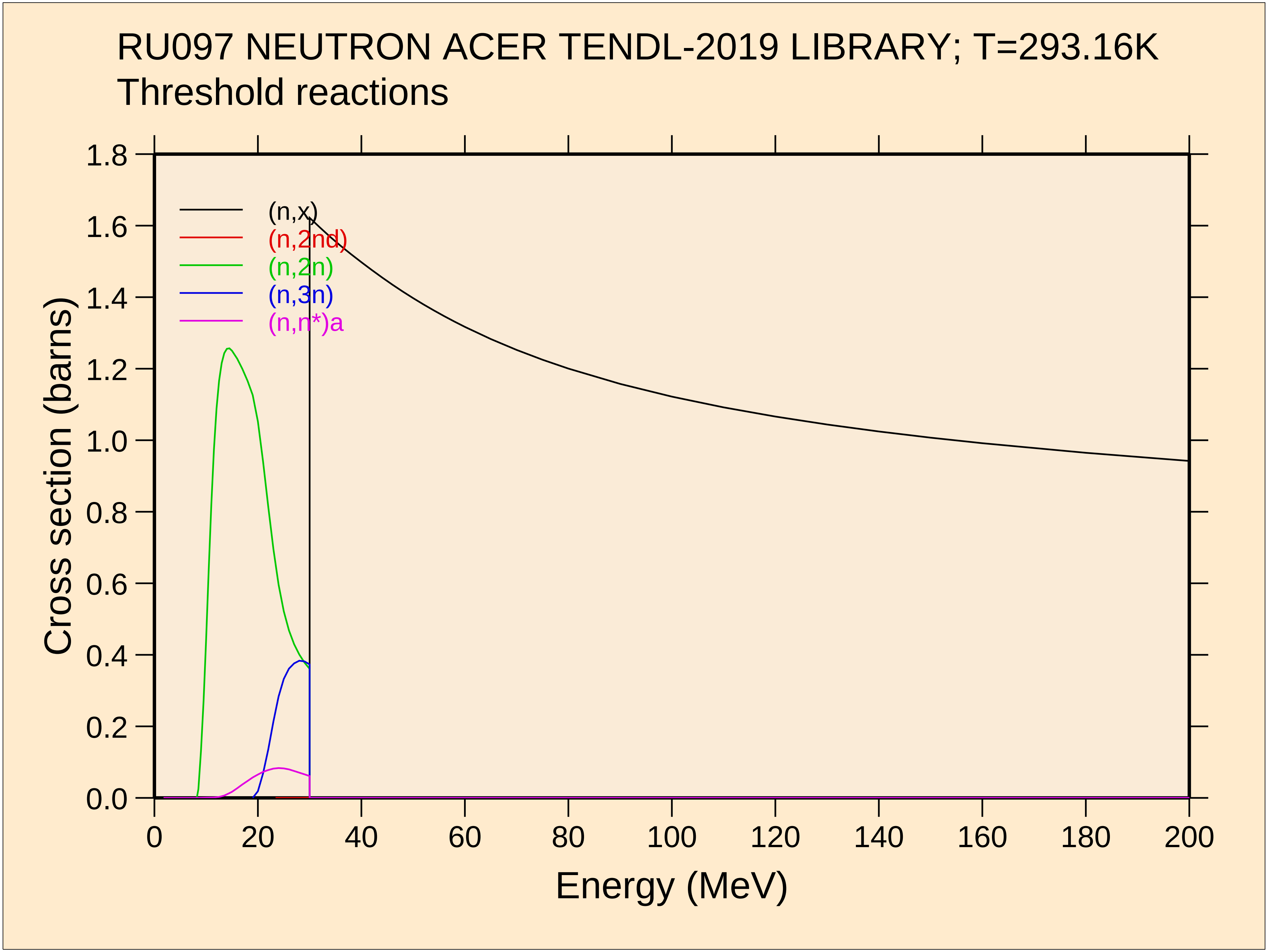
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
*10-3
70
60
50
40
30
20
10
0
(n,n*16)
(n,n*17)
(n,n*18)
(n,n*19)
(n,n*20)
0
5
10
15
20
25
30
Energy (MeV)

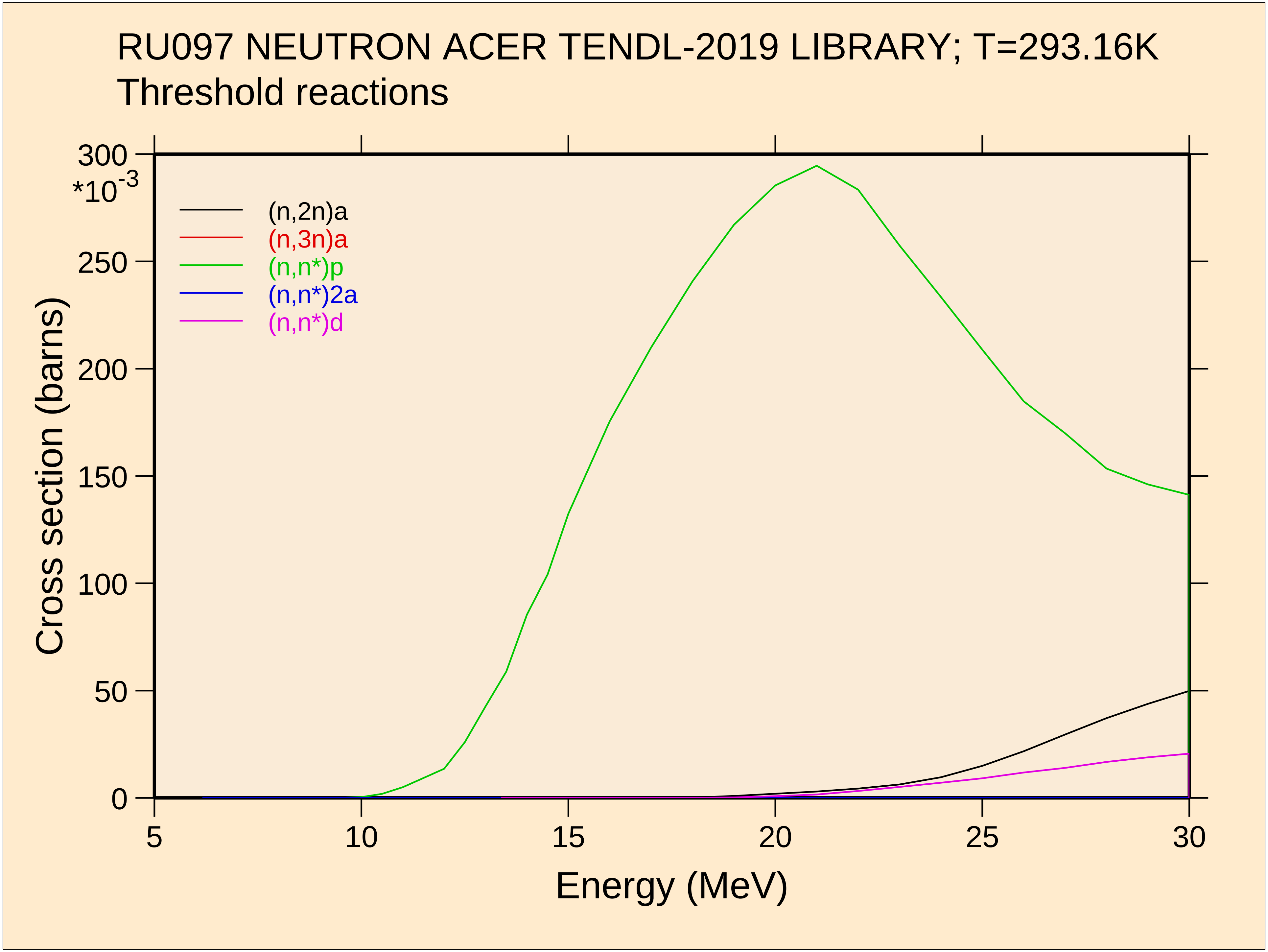


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
*10^-3
0
10
20
30
40
50
60
70
80
Energy (MeV)
0
5
10
15
20
25
30
(n,n*21)
(n,n*22)
(n,n*23)
(n,n*24)
(n,n*25)

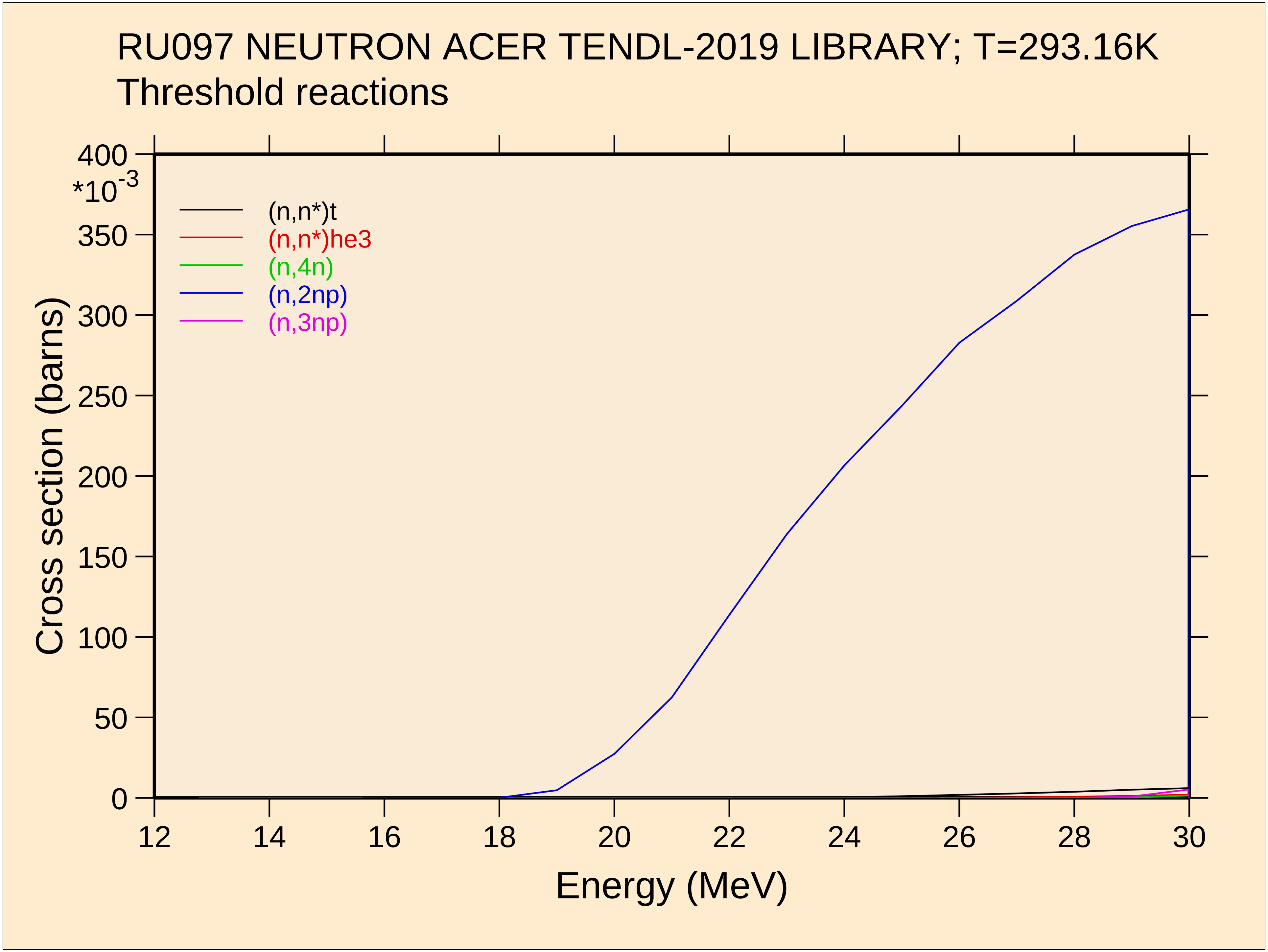


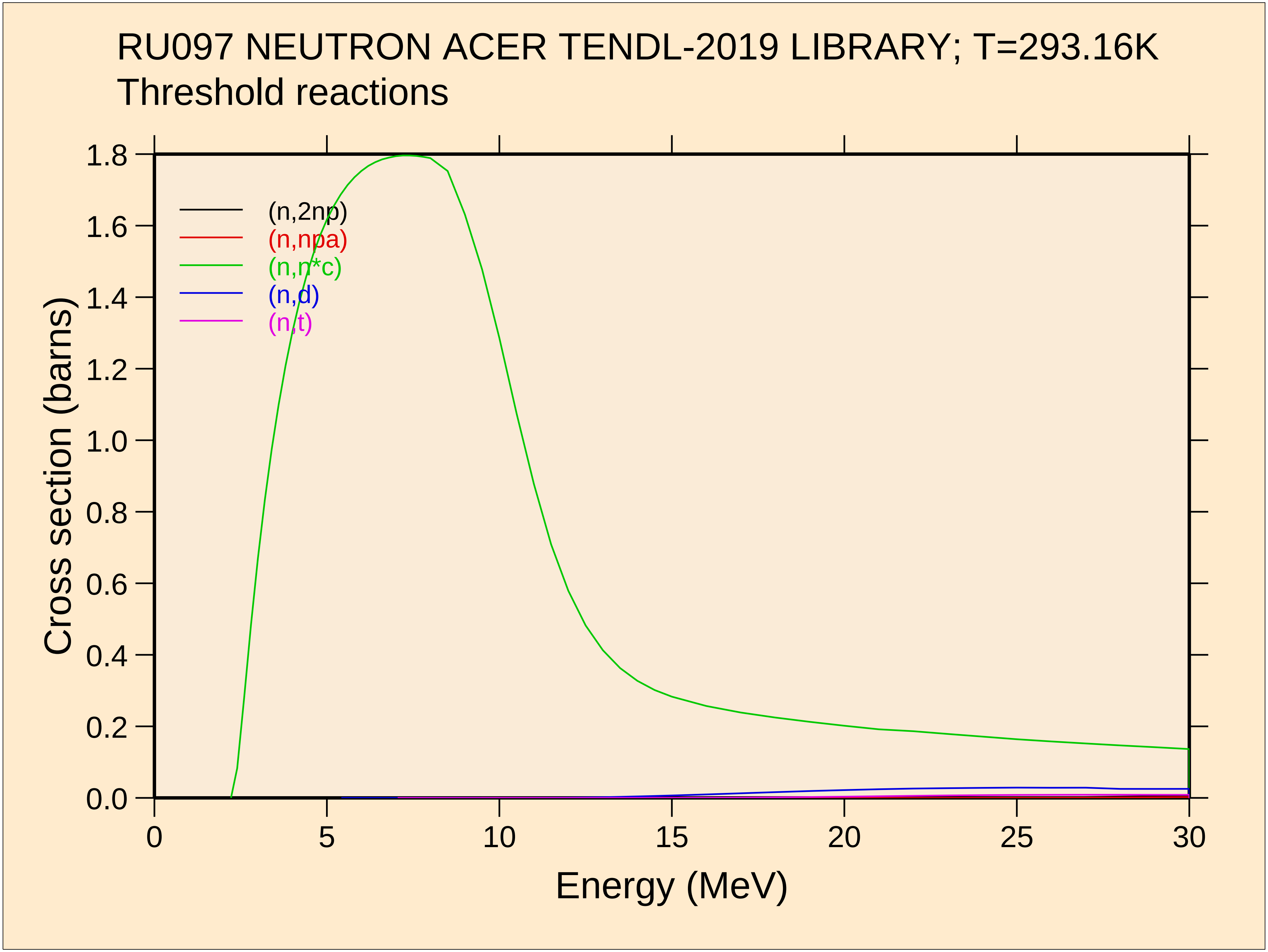
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Inelastic levels
Cross section (barns)
*10^-3
60
50
40
30
20
10
0
0
5
10
15
20
25
30
Energy (MeV)
(n,n*26)
(n,n*27)
(n,n*28)
(n,n*29)
(n,n*30)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
Cross section (barns)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)
(n,x)
(n,2nd)
(n,2n)
(n,3n)
(n,n*)a

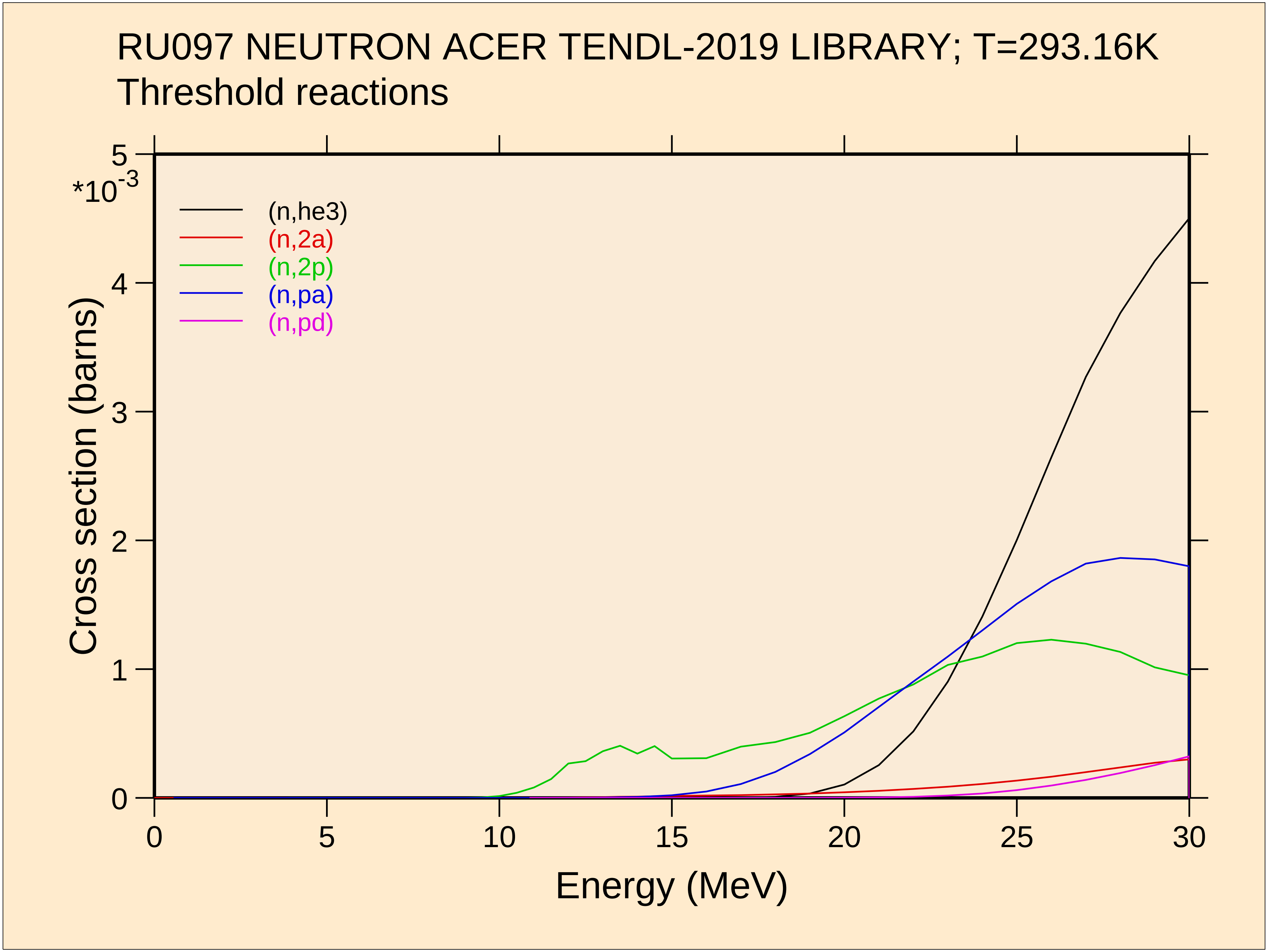


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
Cross section (barns)
*10^-3
300
250
200
150
100
50
0
(n,2n)a
(n,3n)a
(n,n*)p
(n,n*)2a
(n,n*)d
5
10
15
20
25
30
Energy (MeV)

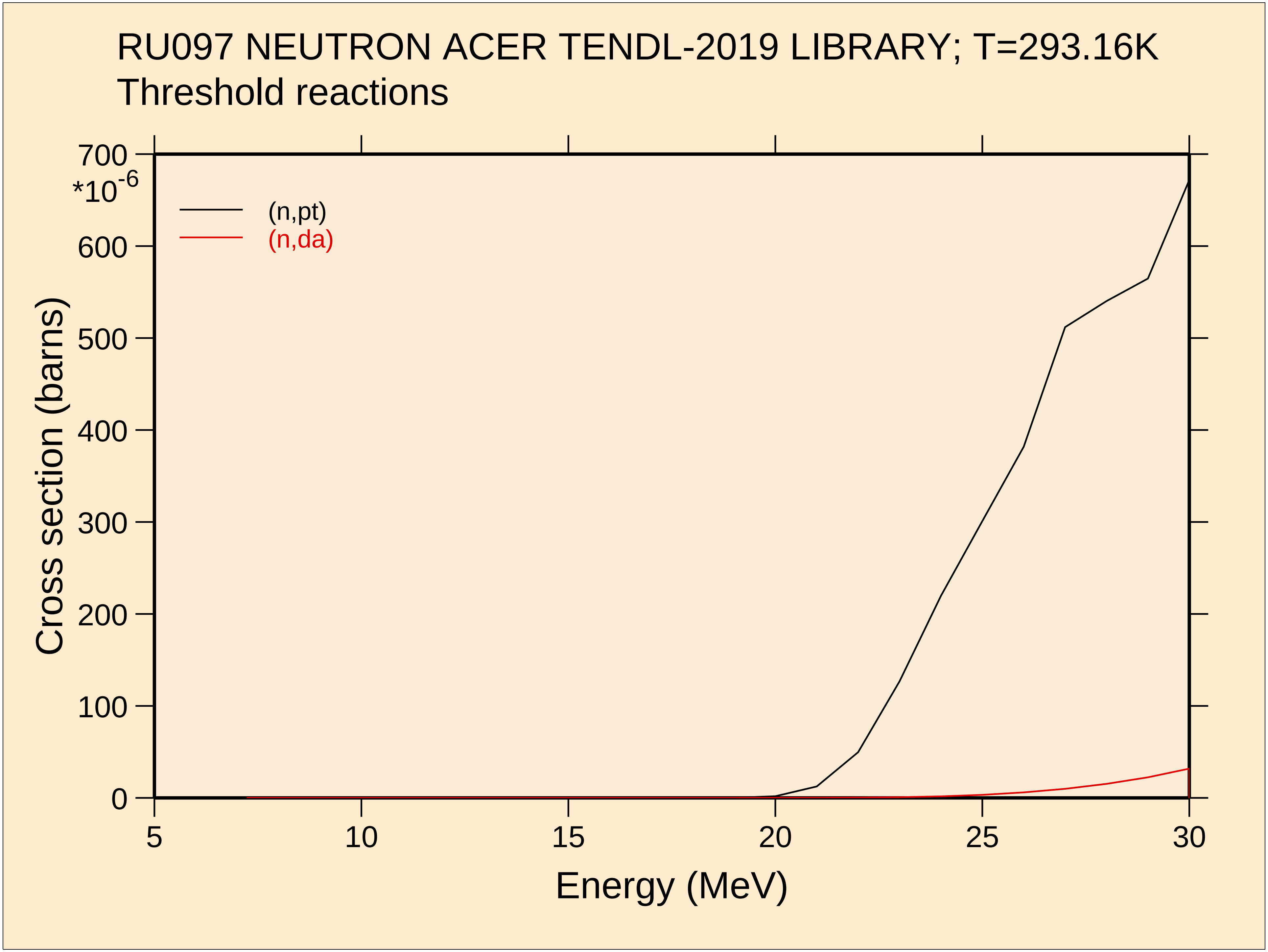

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
(n,n*)t
(n,n*)he3
(n,4n)
(n,2np)
(n,3np)
Cross section (barns)
*10-3
0
50
100
150
200
250
300
350
400
12
14
16
18
20
22
24
26
28
30
Energy (MeV)



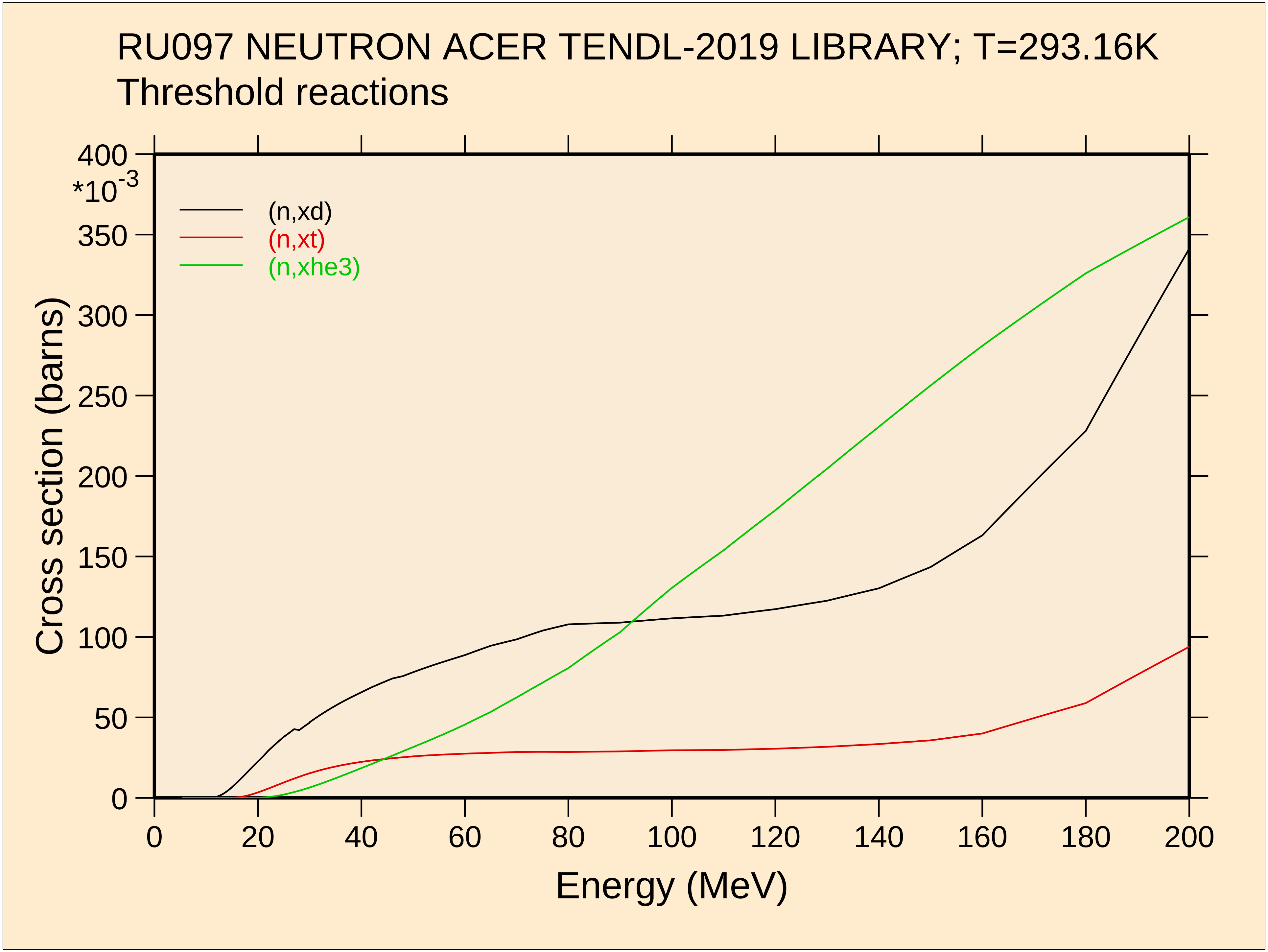
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
Cross section (barns)
Energy (MeV)
(n,2np)
(n,npa)
(n,n*c)
(n,d)
(n,t)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
5
10
15
20
25
30

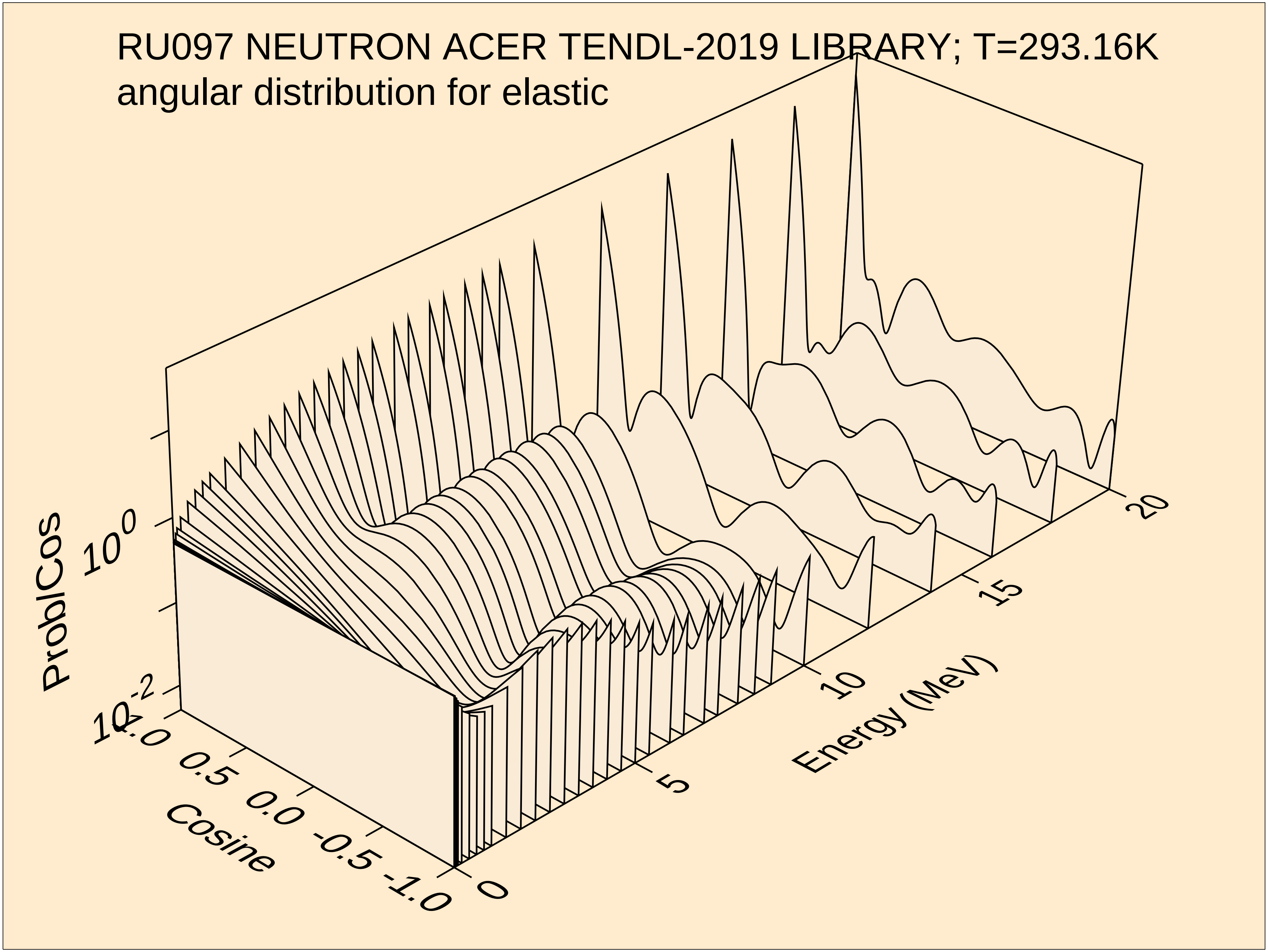


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
Cross section (barns)
*10-3
0
1
2
3
4
5
(n,he3)
(n,2a)
(n,2p)
(n,pa)
(n,pd)
0
5
10
15
20
25
30
Energy (MeV)

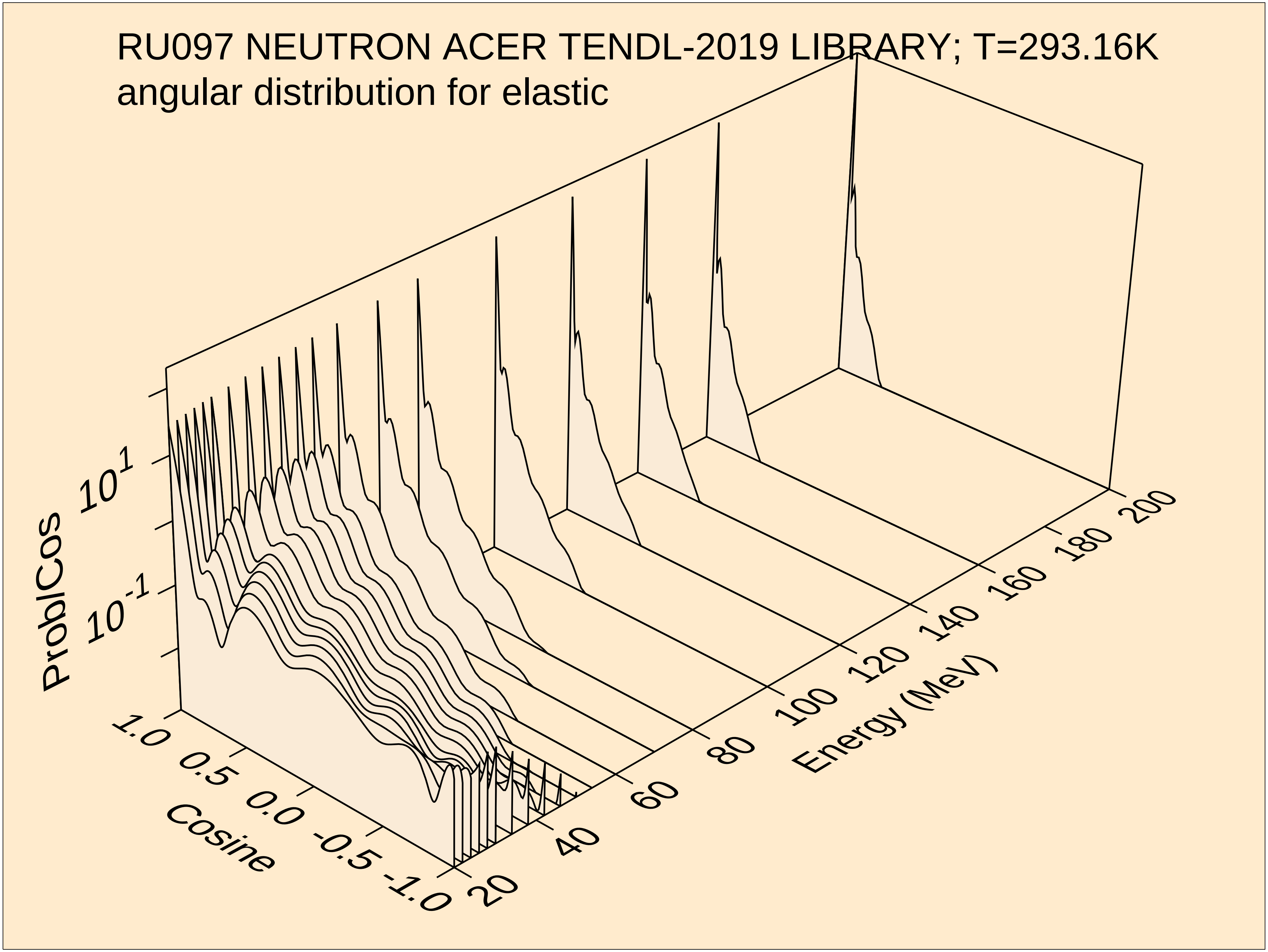


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
(n,pt)
(n,da)
Cross section (barns)
*10^-6
0
100
200
300
400
500
600
700
Energy (MeV)
5
10
15
20
25
30

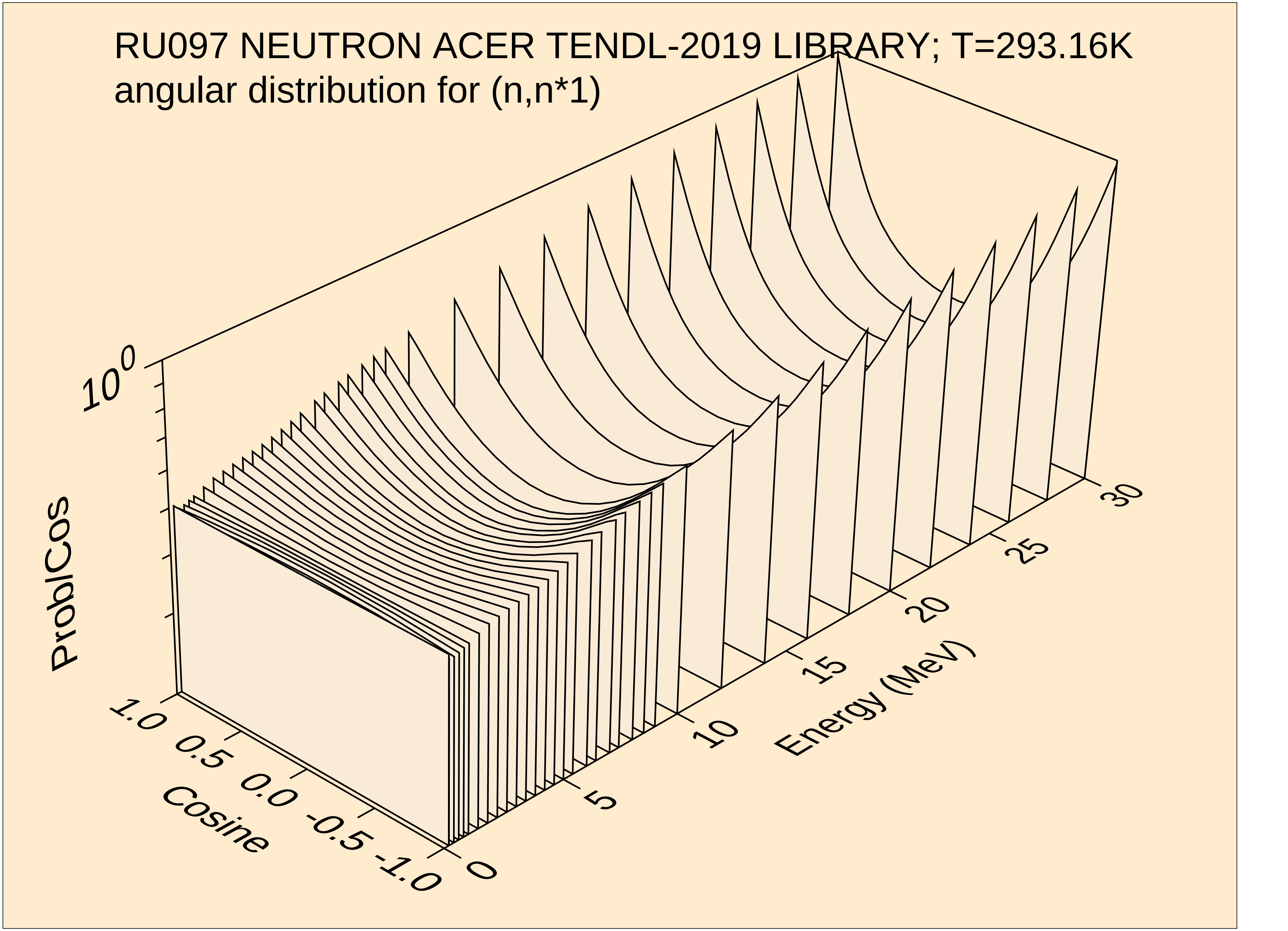

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Threshold reactions
(n,xd)
(n,xt)
(n,xhe3)
Cross section (barns)
*10^-3
0
50
100
150
200
250
300
350
400
0
20
40
60
80
100
120
140
160
180
200
Energy (MeV)



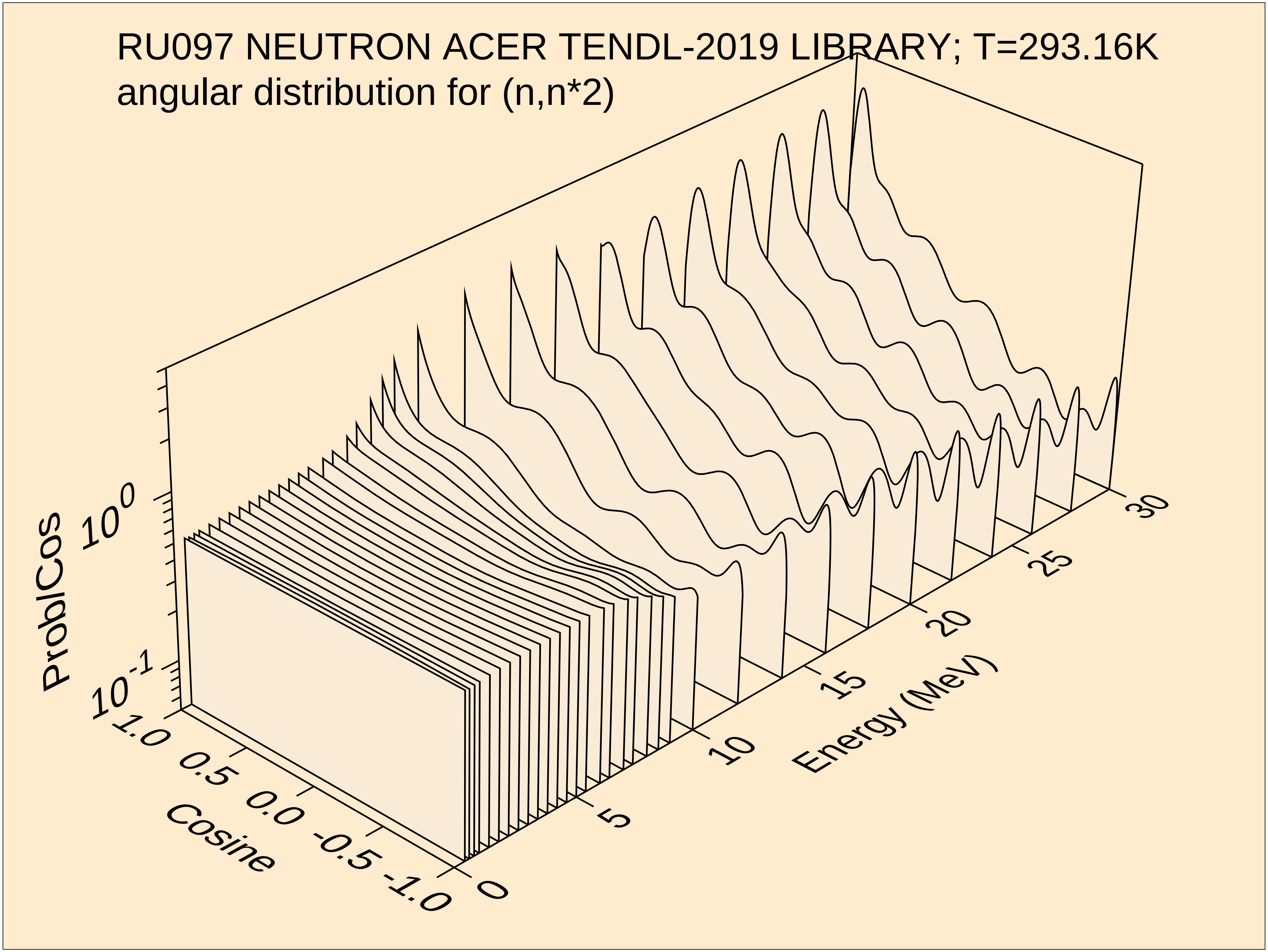
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for elastic
ProbICos
10^{0}
10^{-2}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
Energy (MeV)



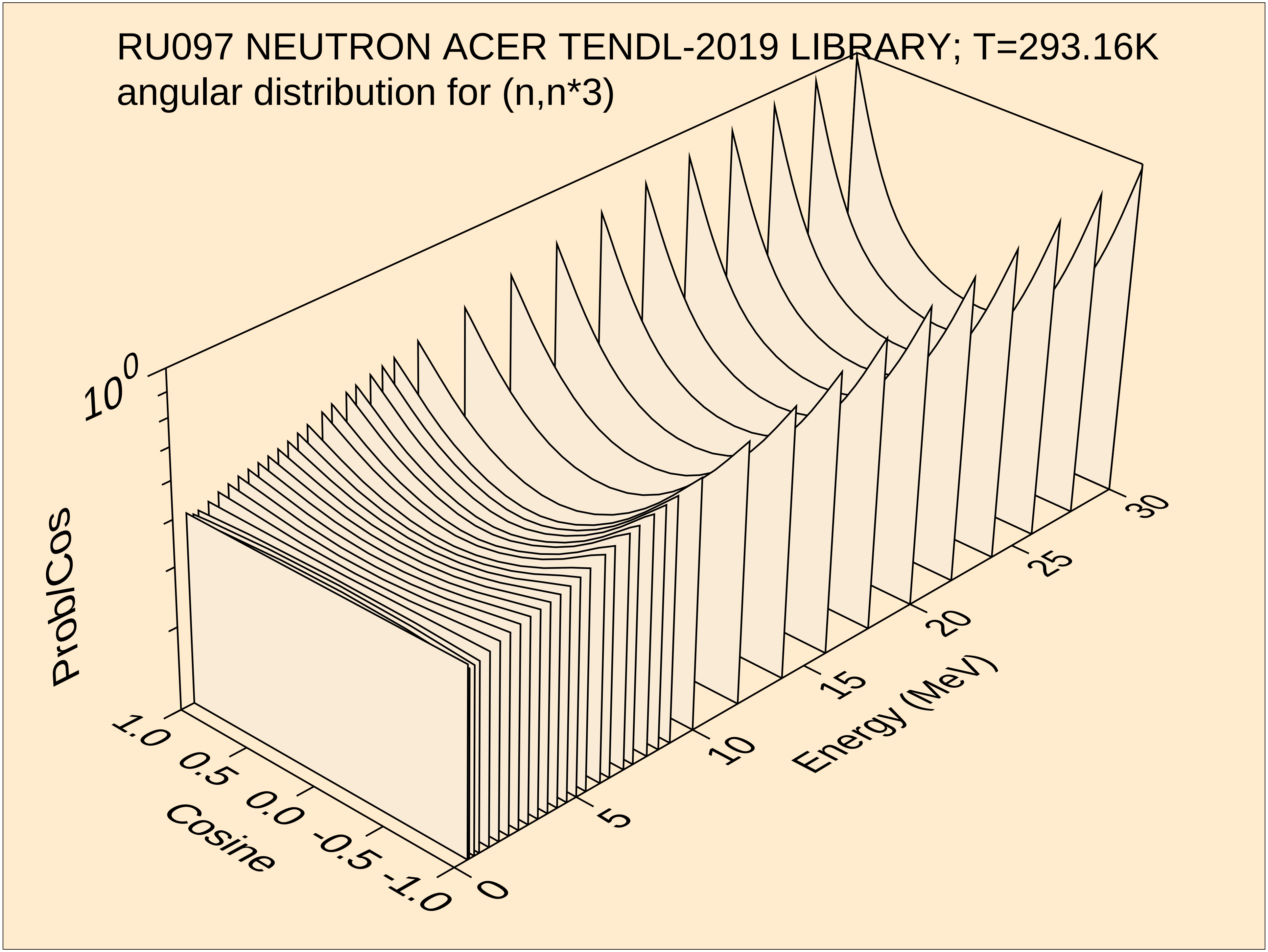
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for elastic
ProbICos
10^{1}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
20
40
60
80
100
120
140
160
180
200
Energy (MeV)

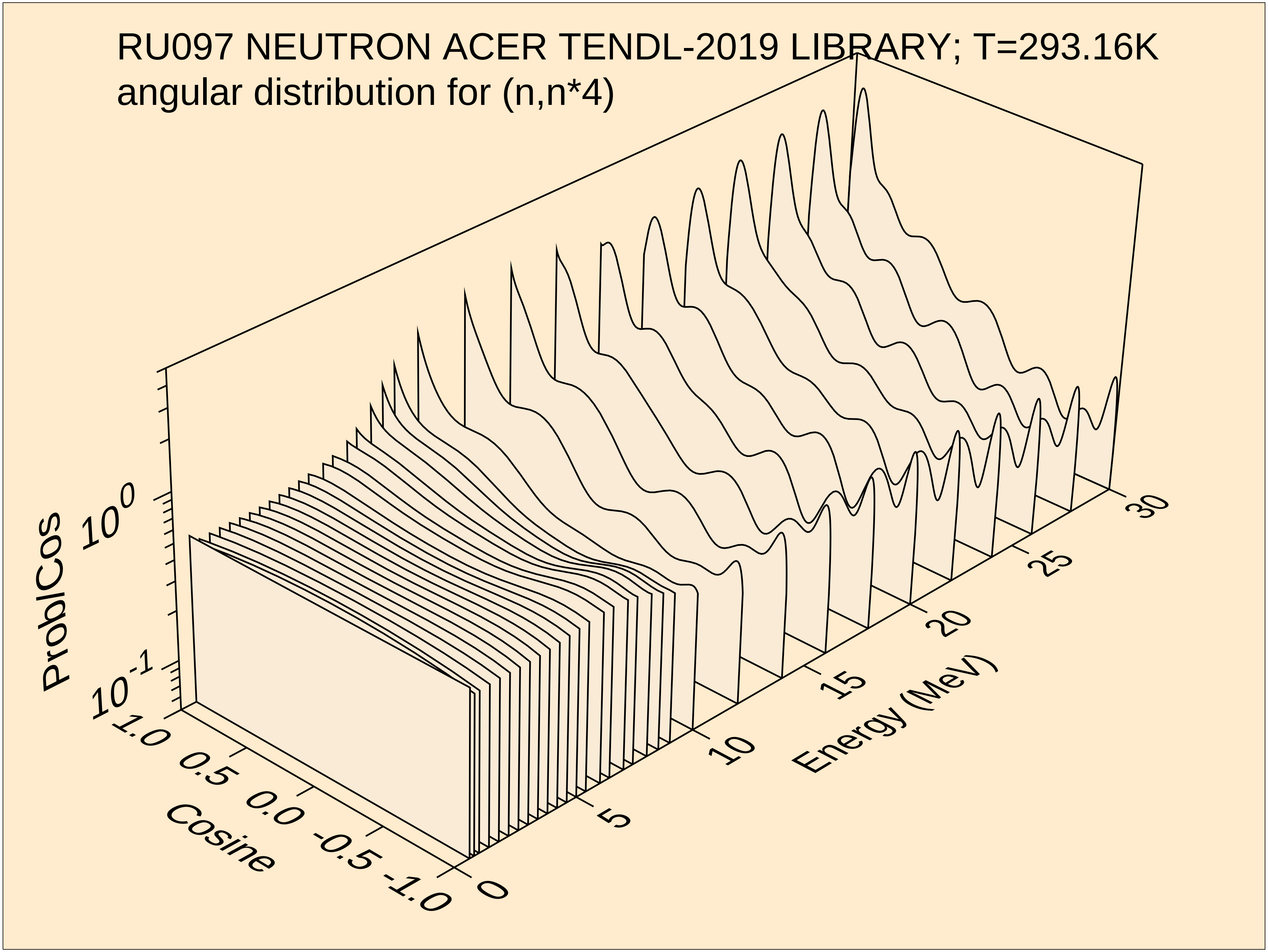


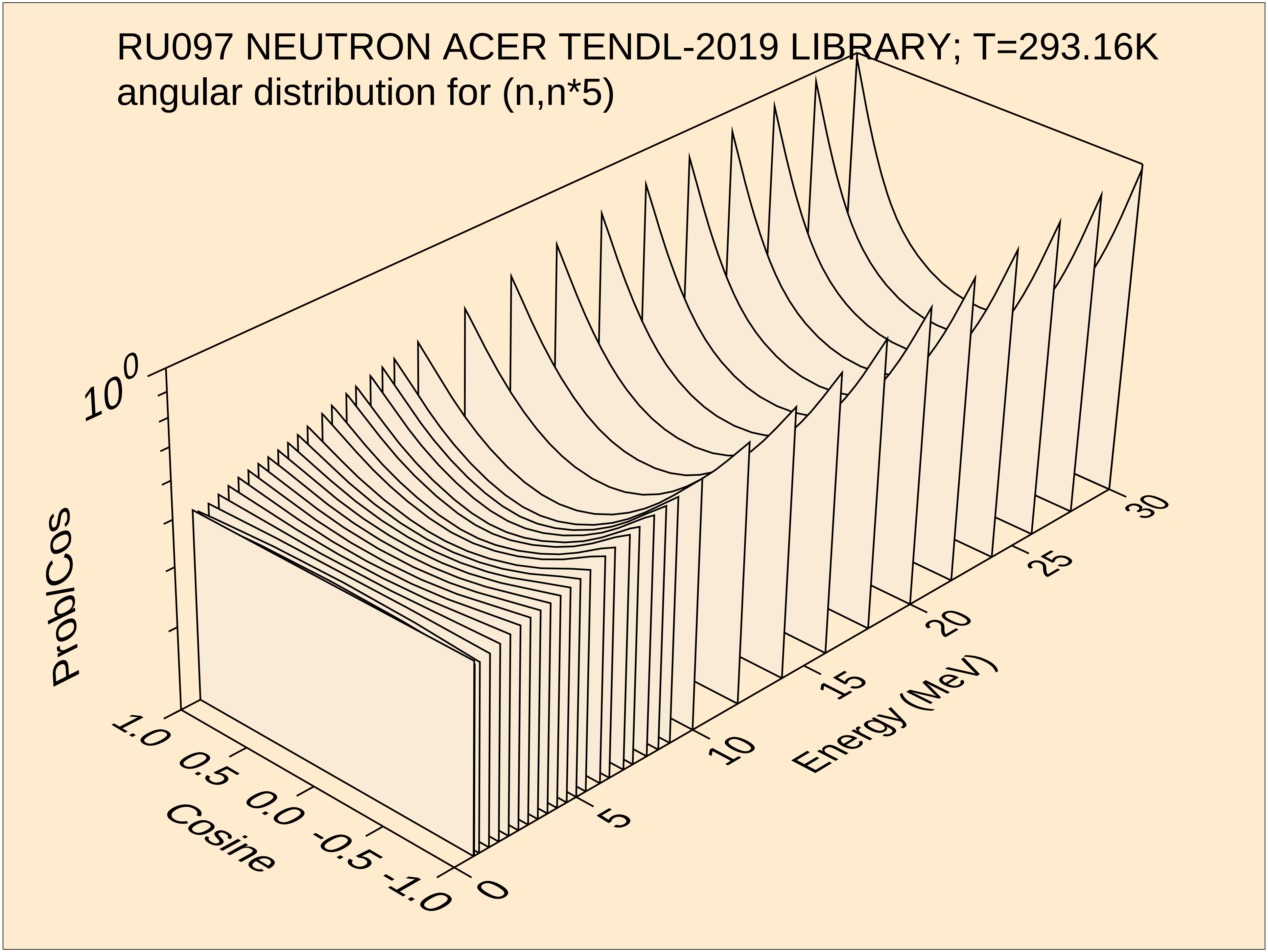
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*1)
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

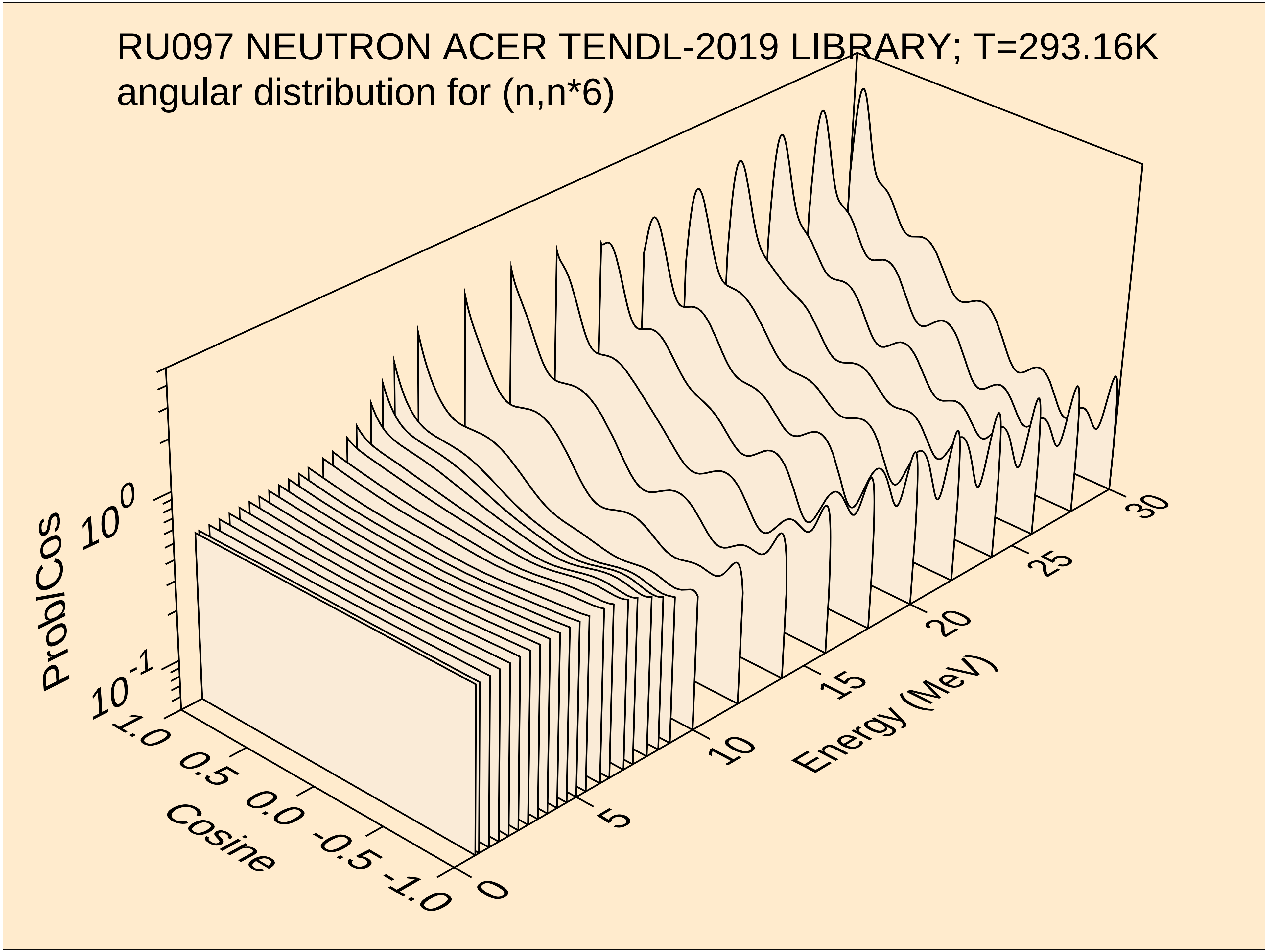


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*2)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

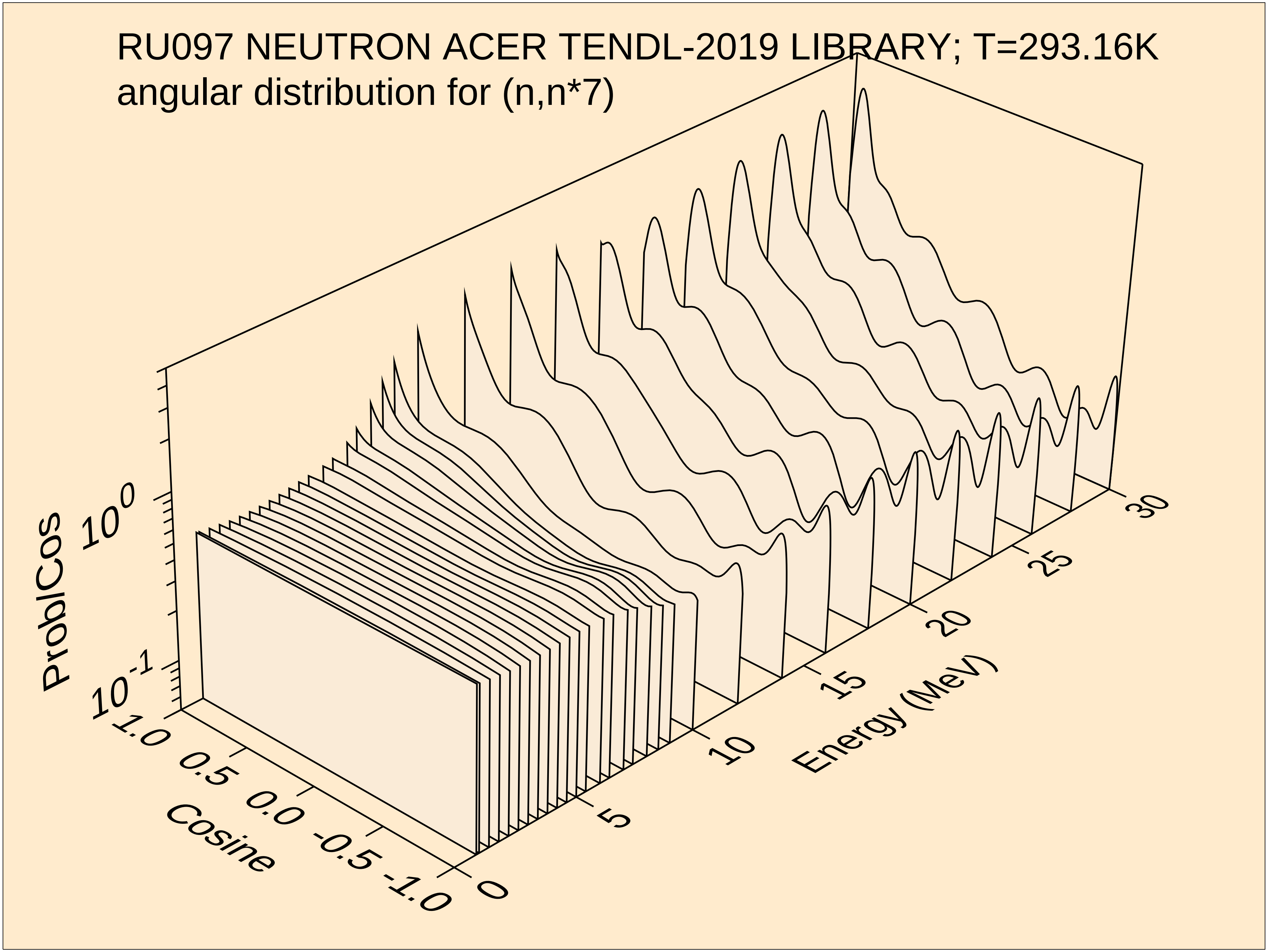

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*3)
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

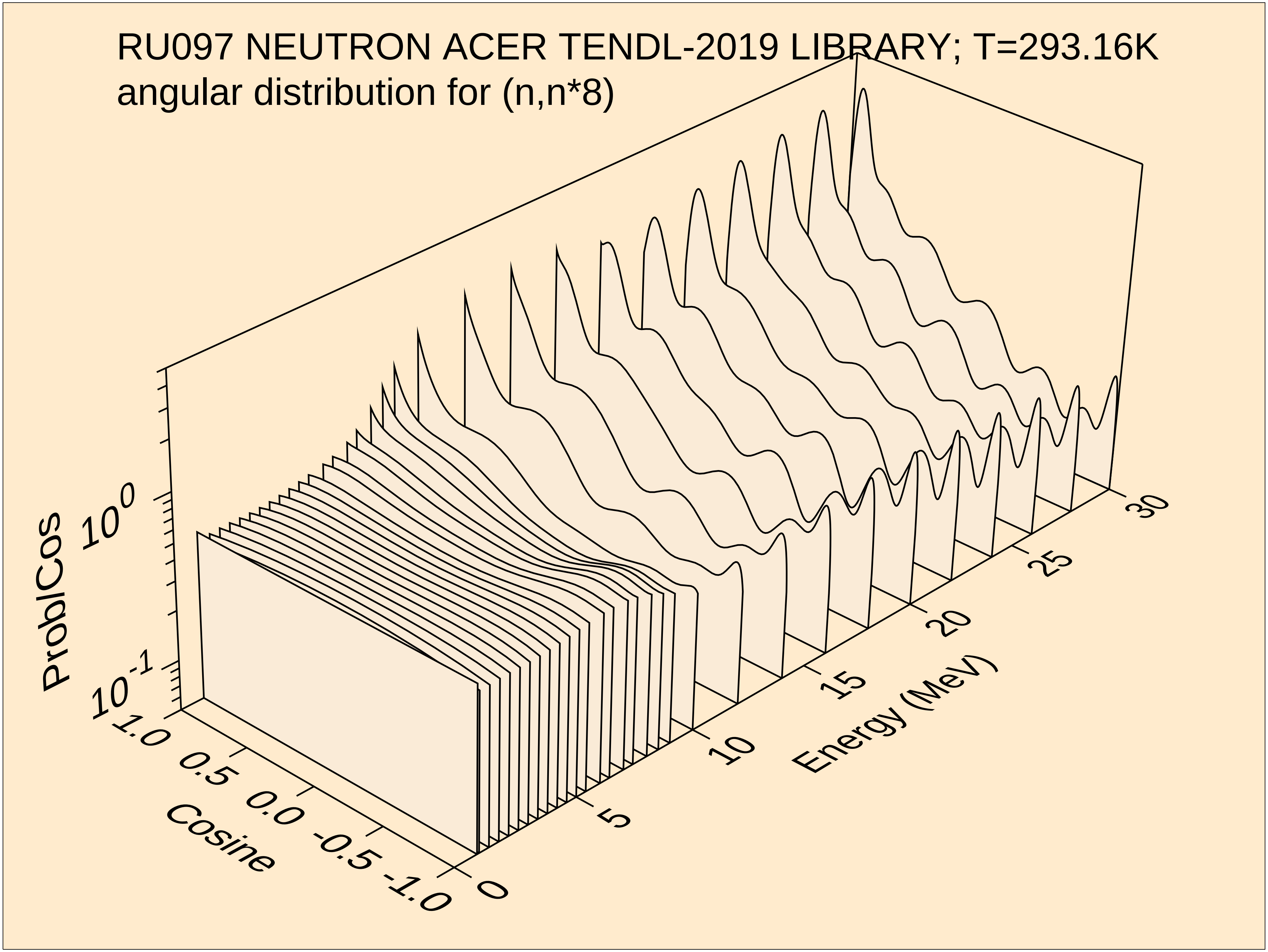

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*4)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*5)
10^0
ProblCos
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

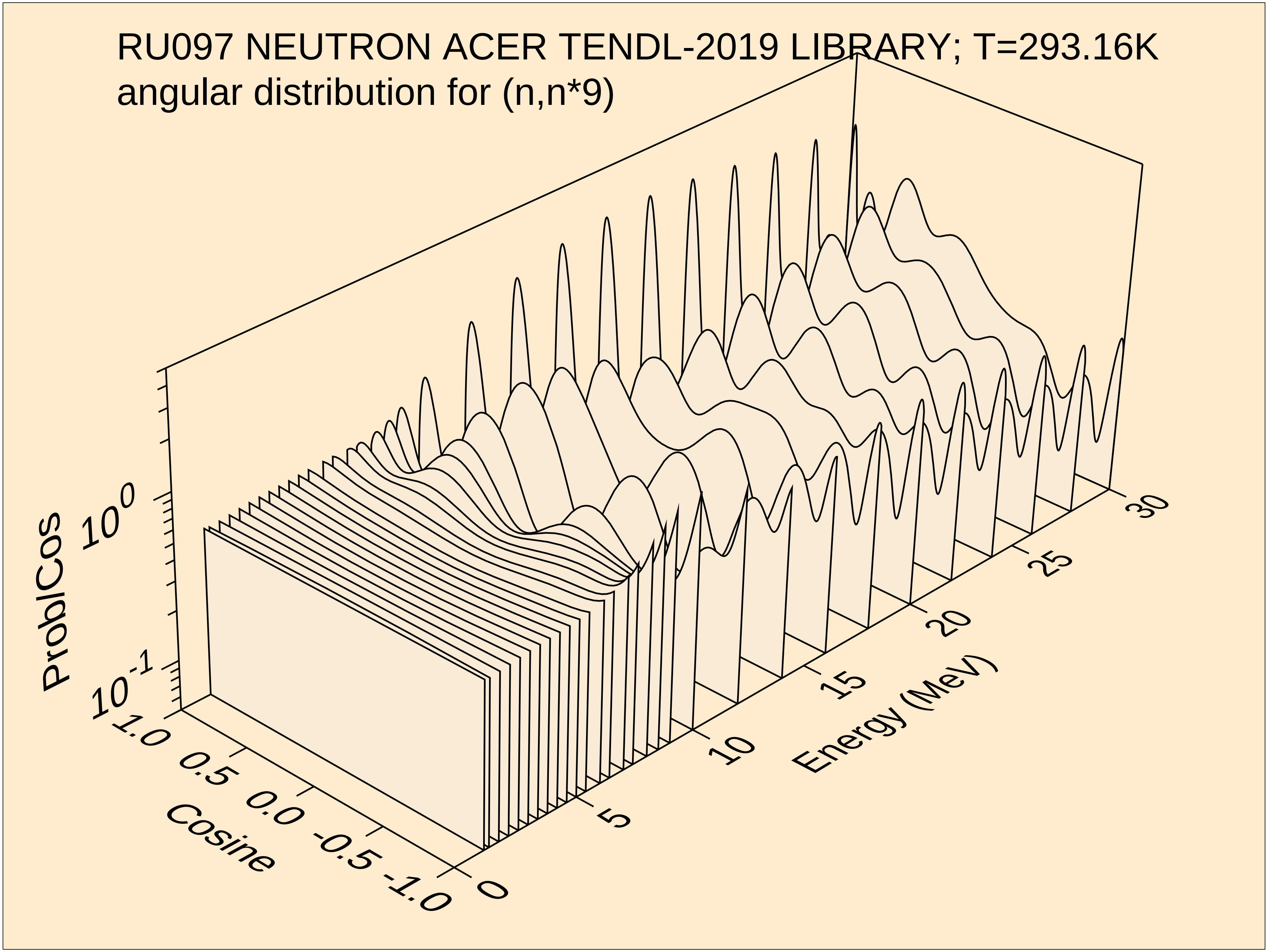


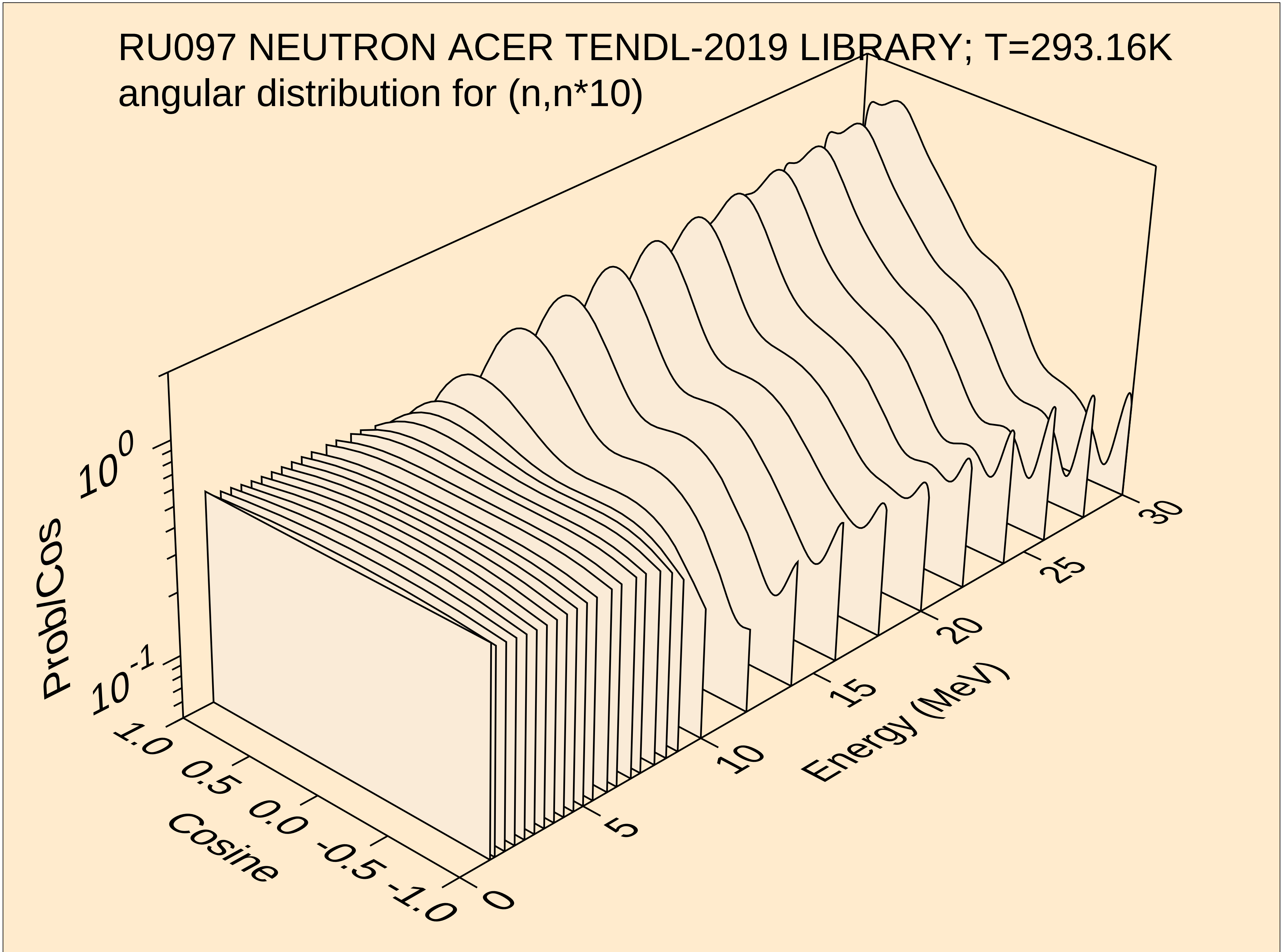
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*6)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*7)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

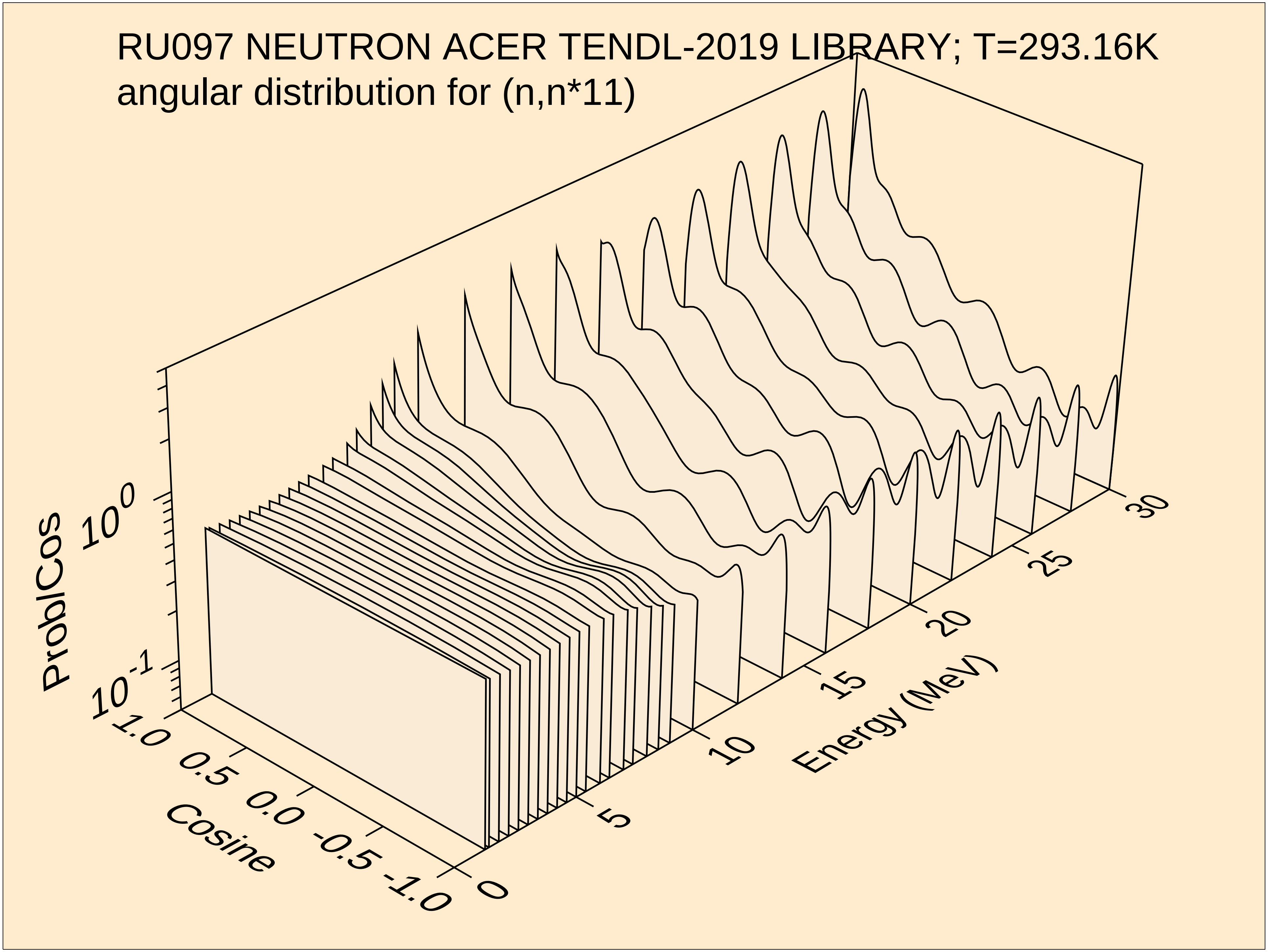


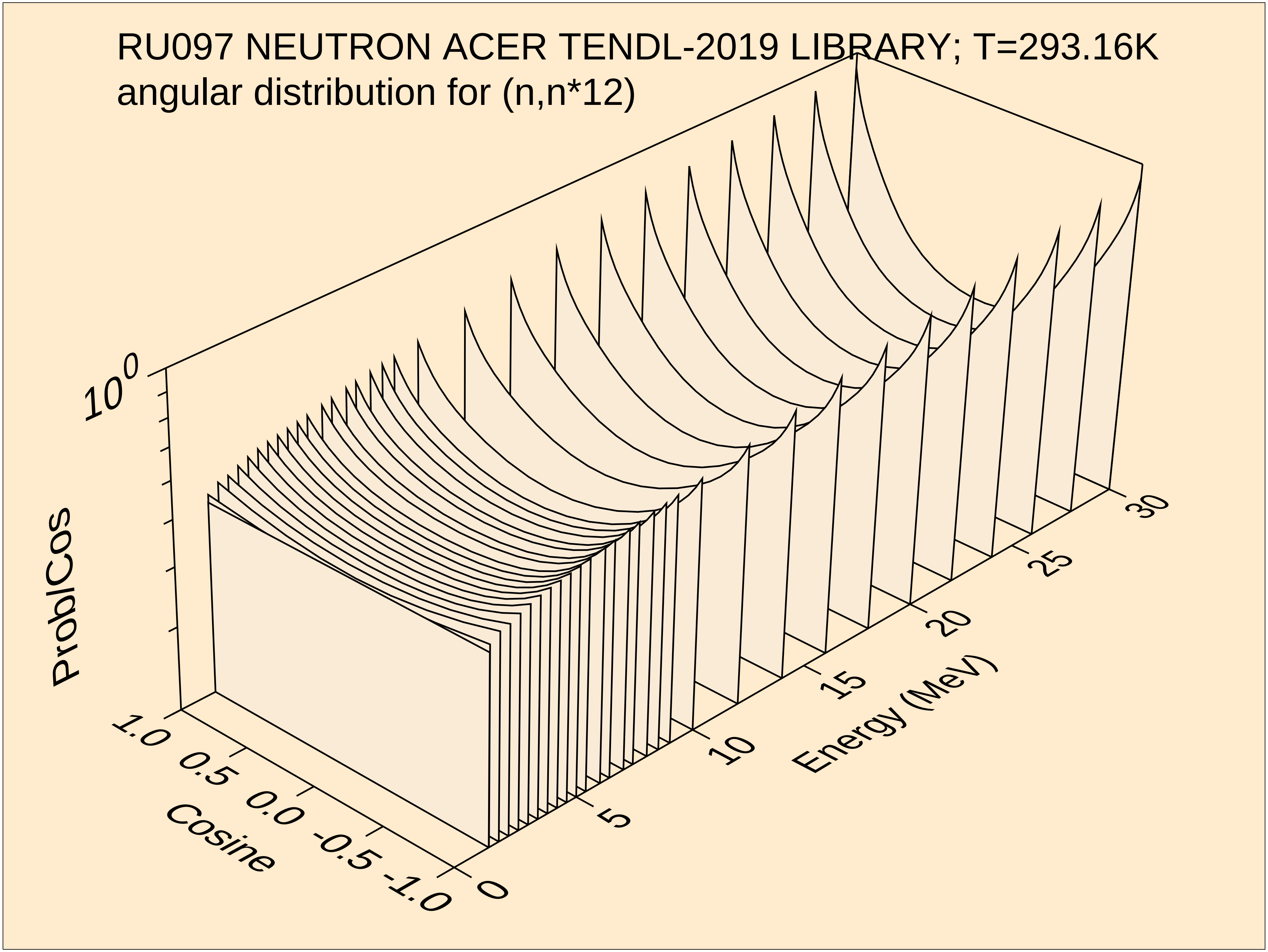
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*8)
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*9)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

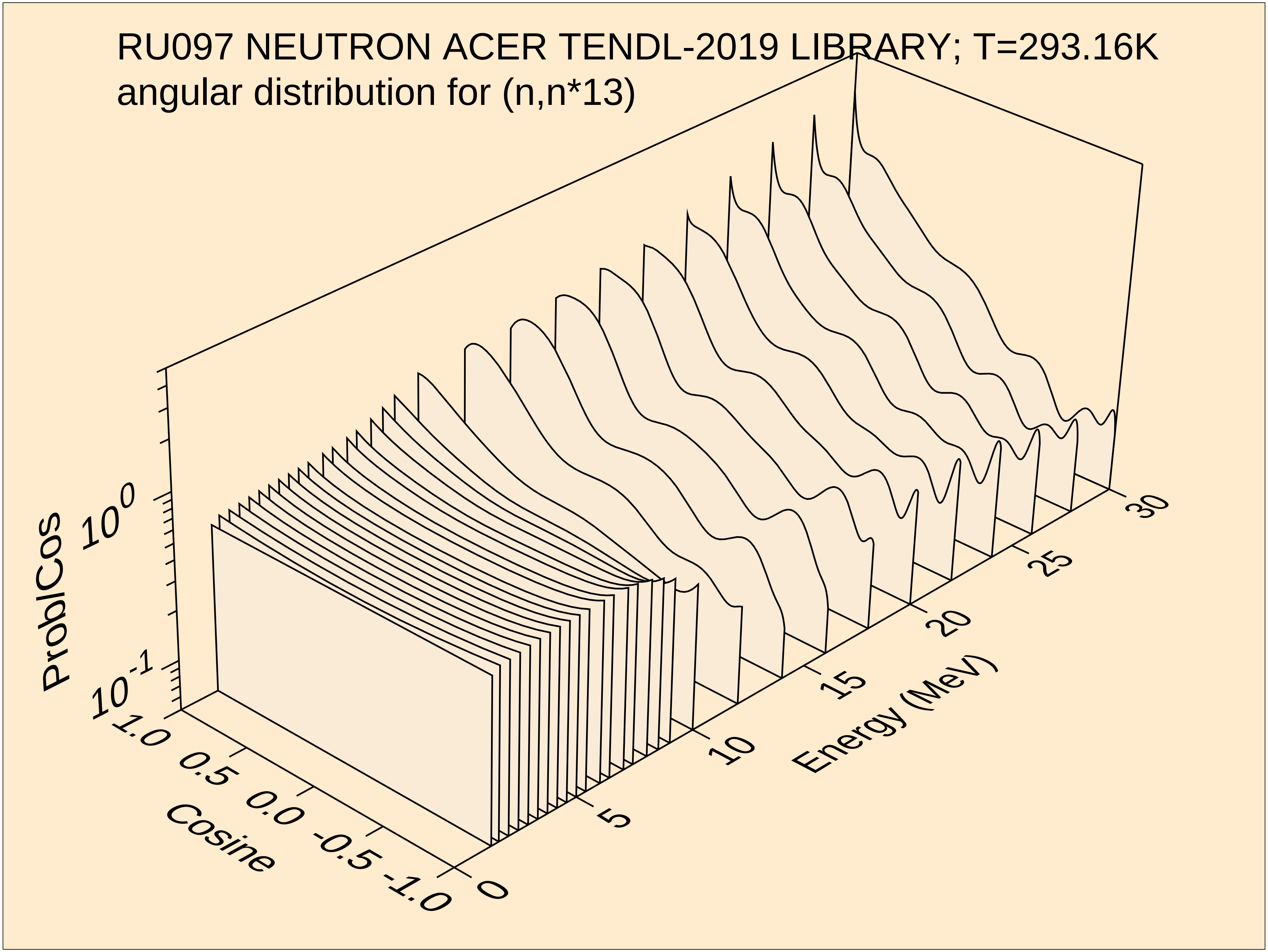


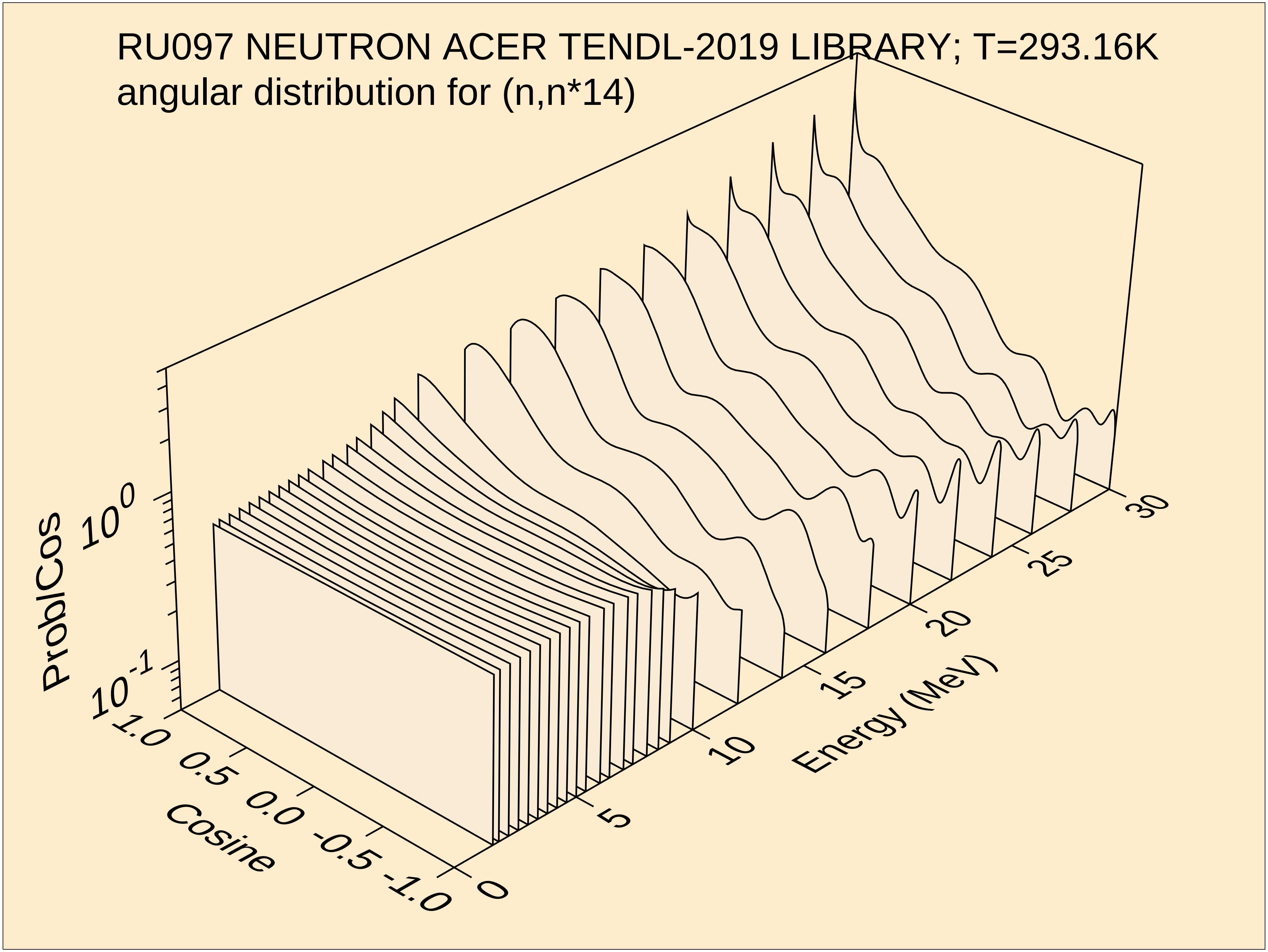
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*10)
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*11)
ProblCos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

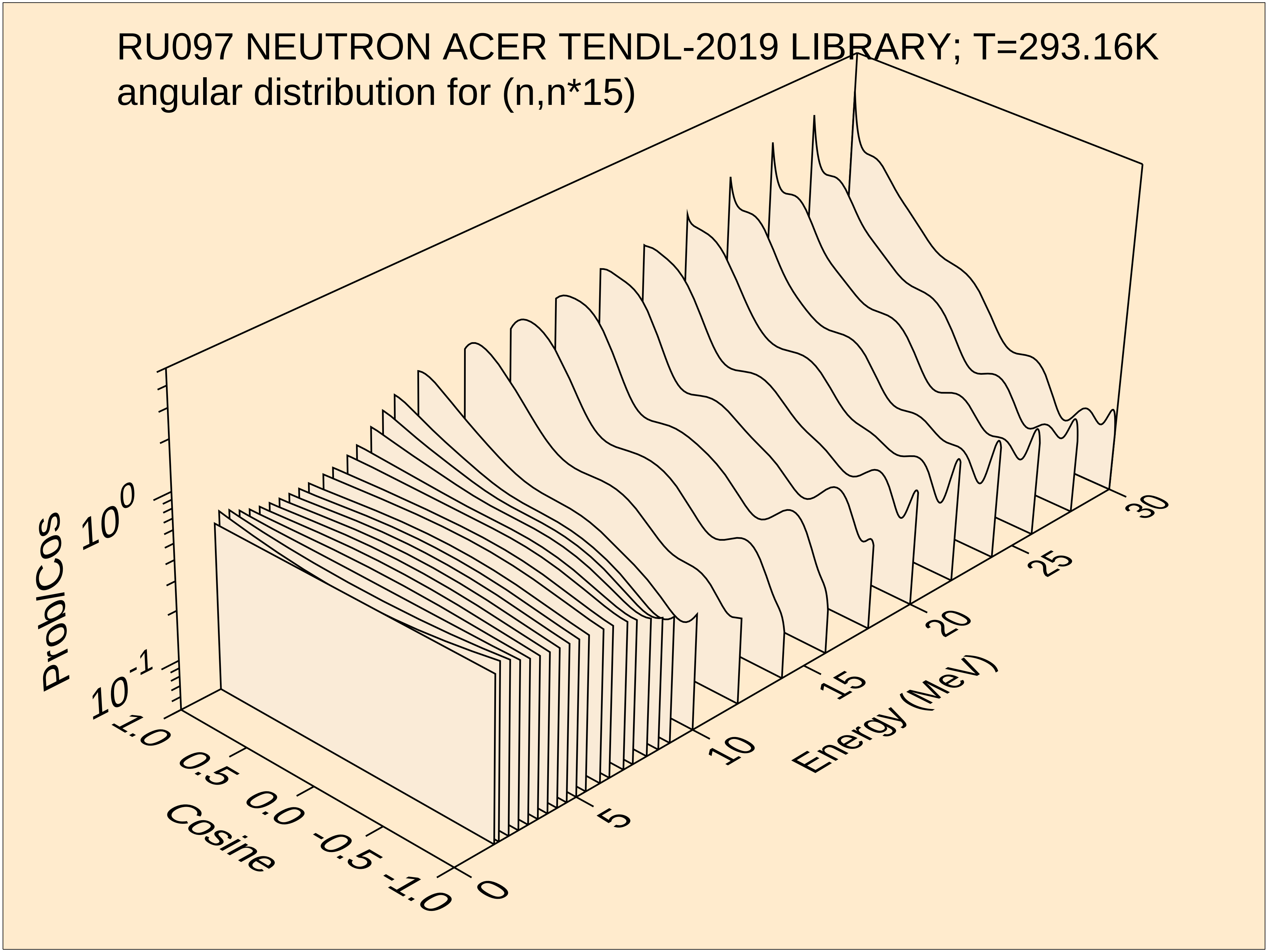


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*12)
ProblCos
10^0
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

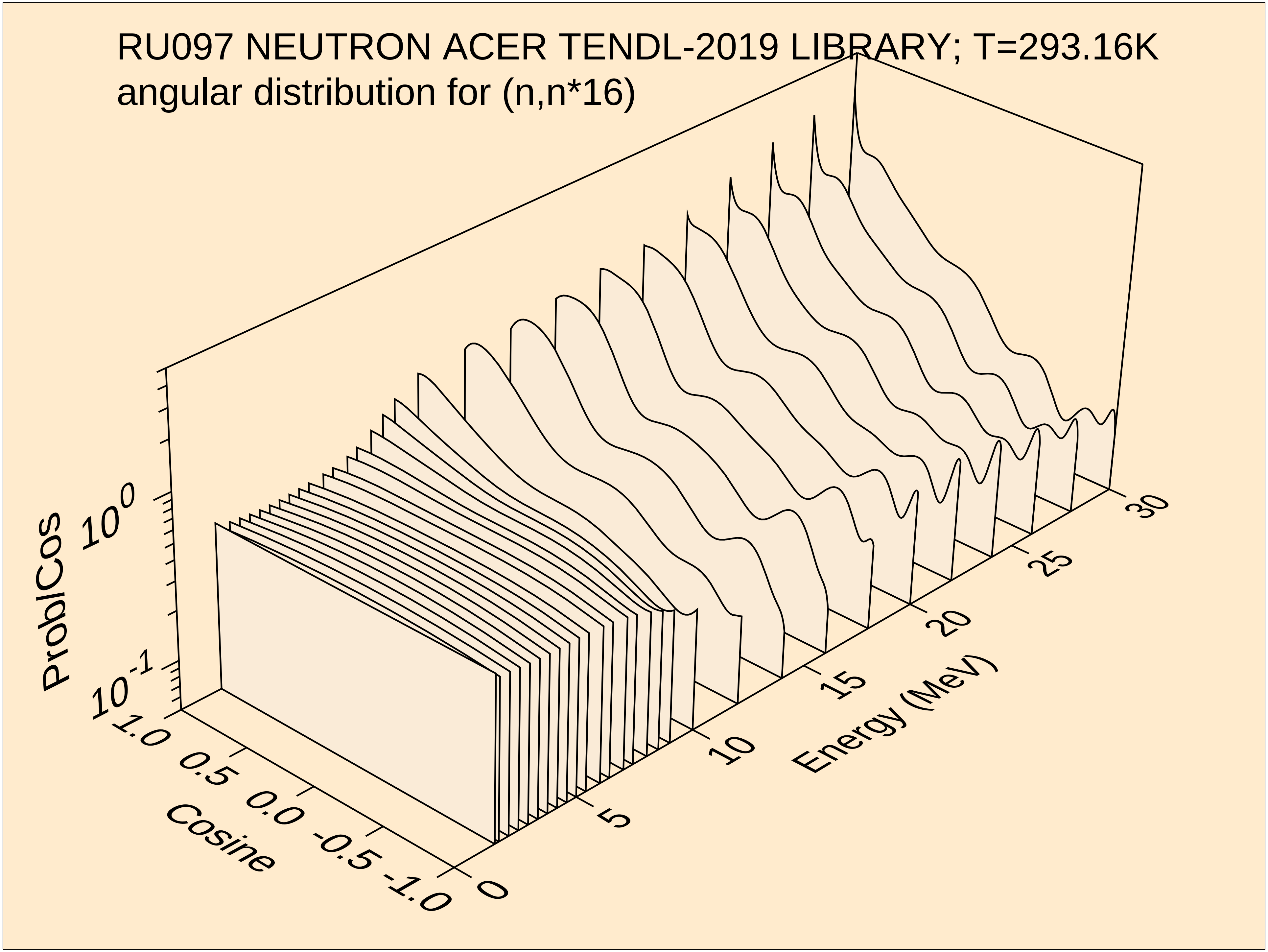

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*13)
ProblCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30



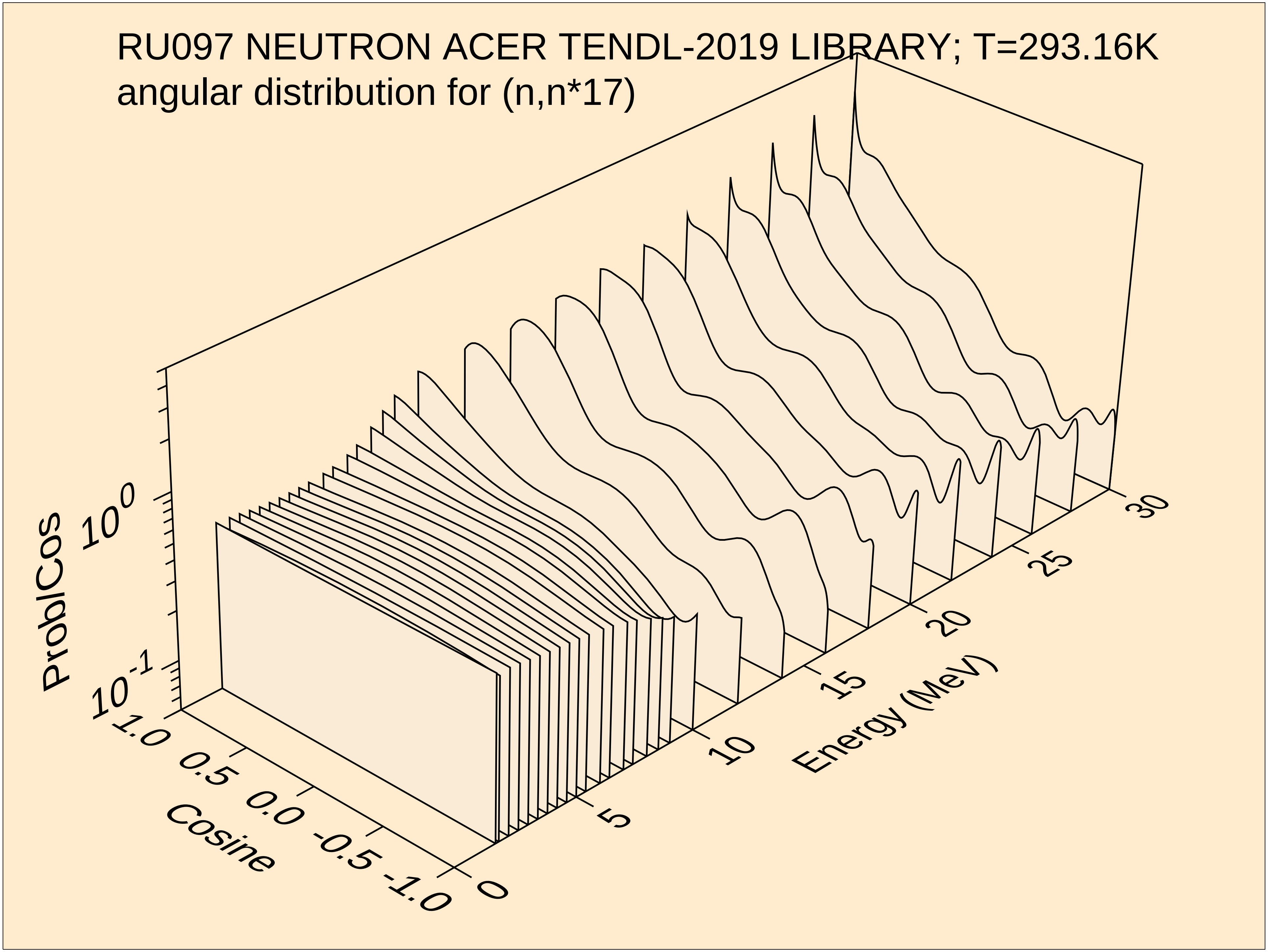
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*14)
ProbICos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30



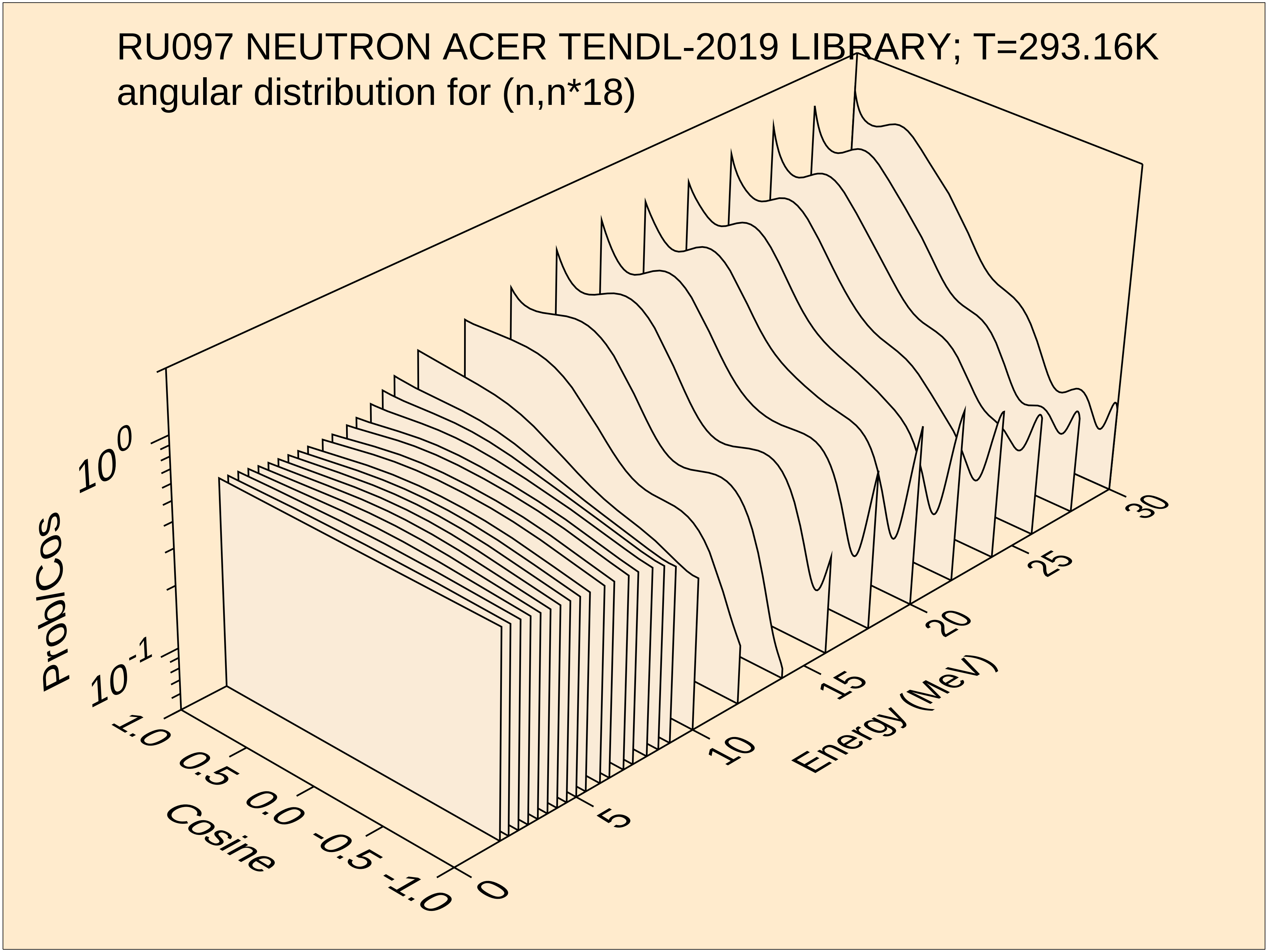
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*15)
Prob/Cos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

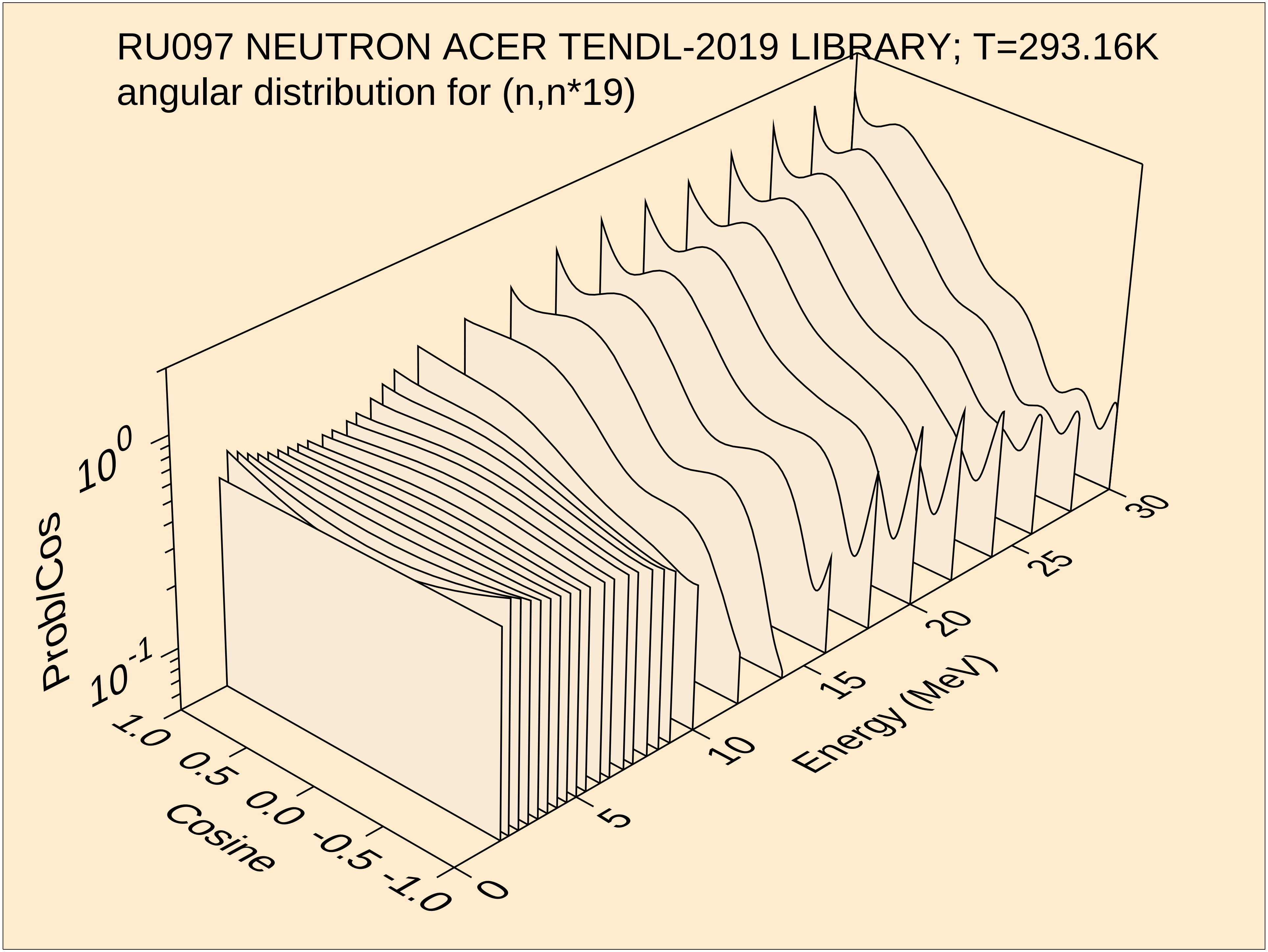


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*16)
ProbICos
10^{0}
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30

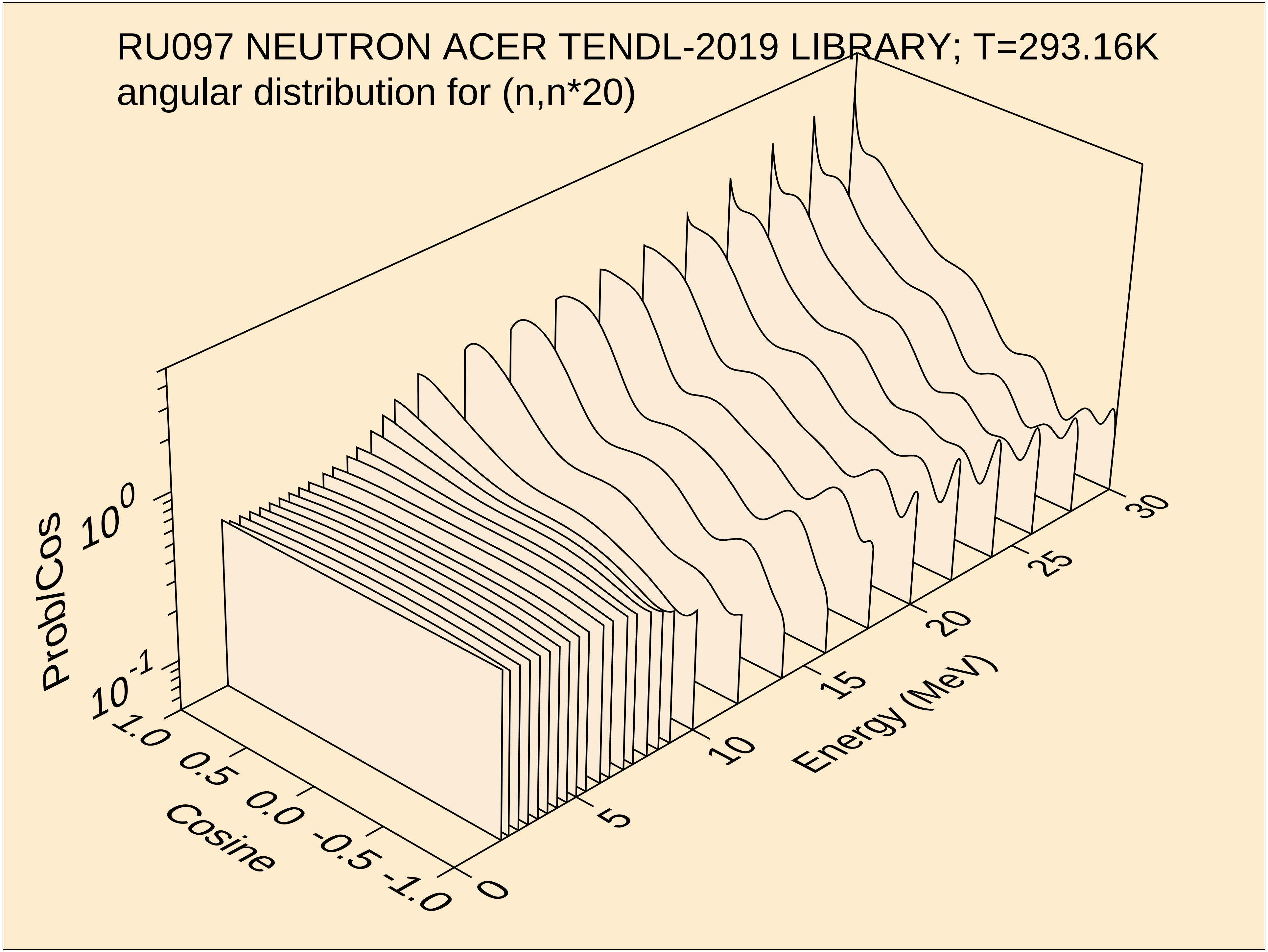


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*17)
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

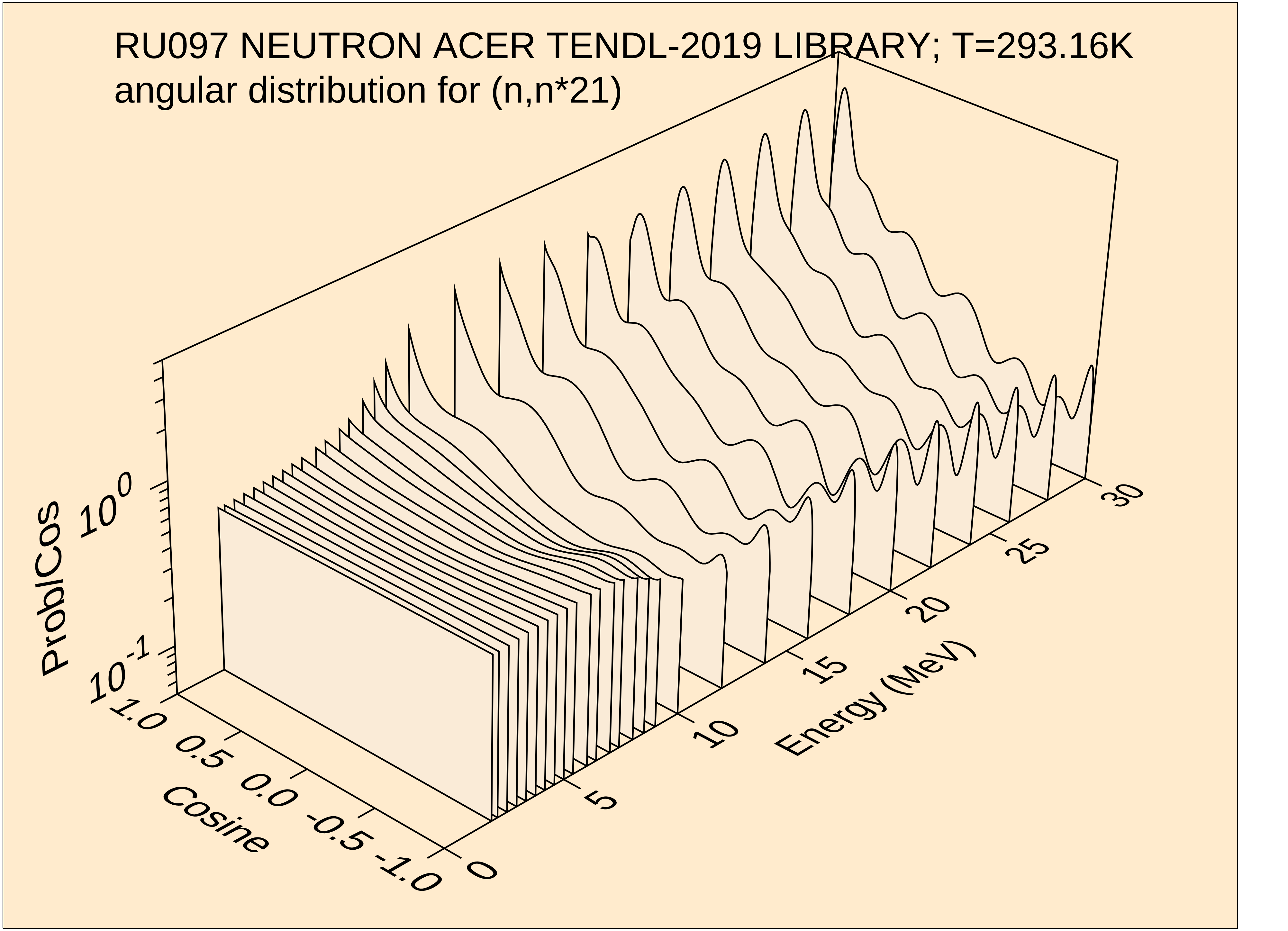

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*18)
ProblCos
10^0
10^-1
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

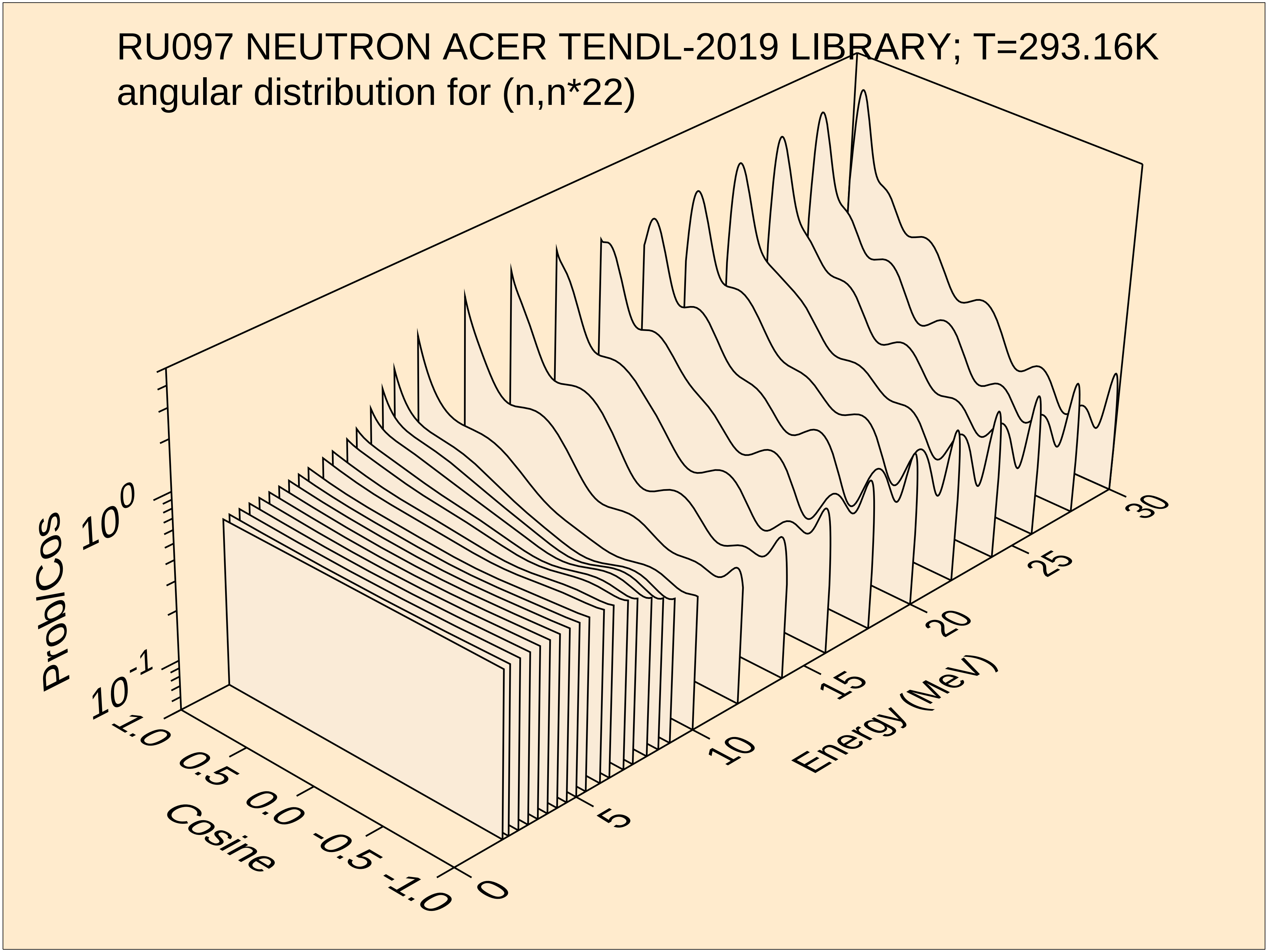


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*19)
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

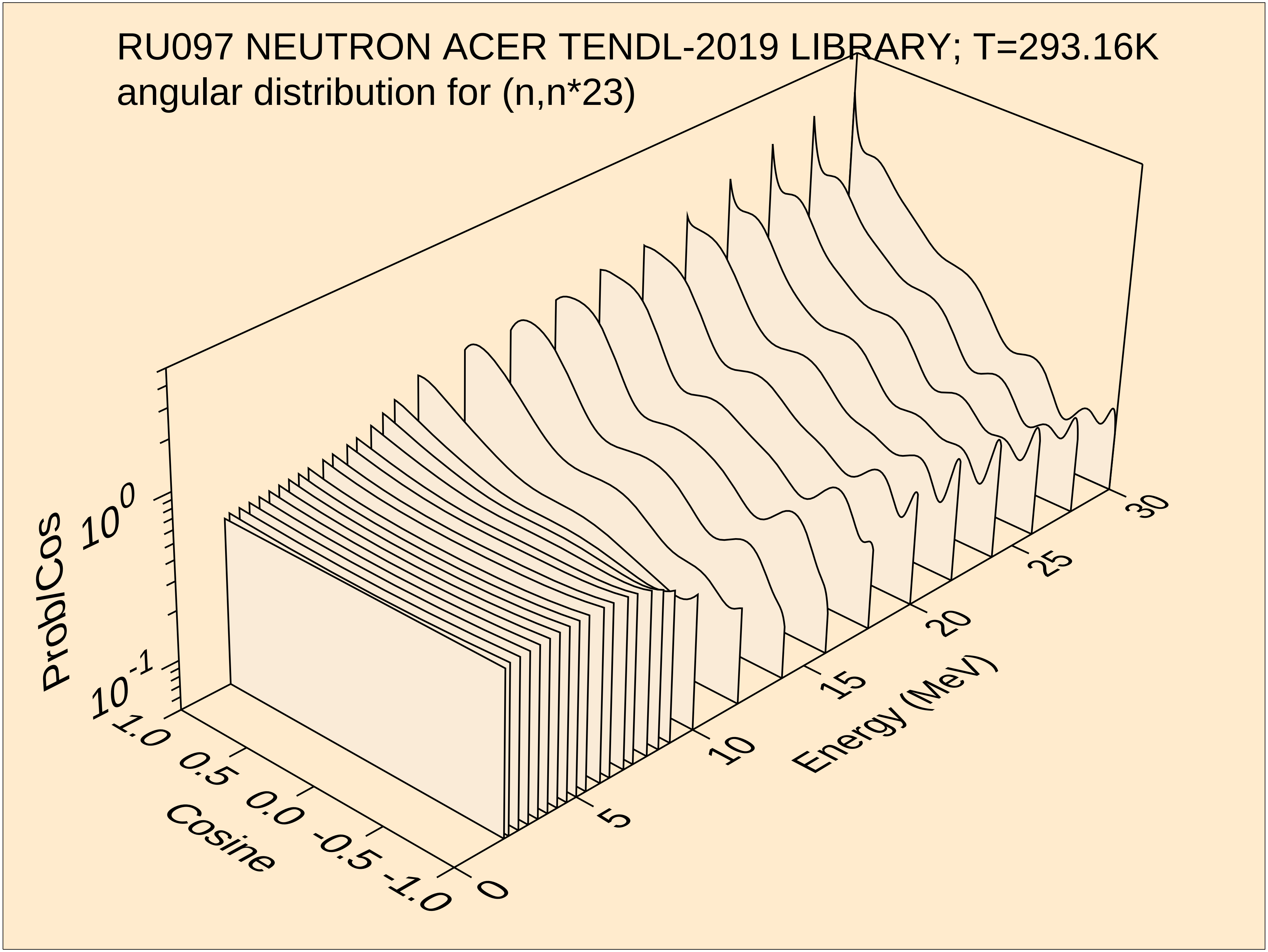


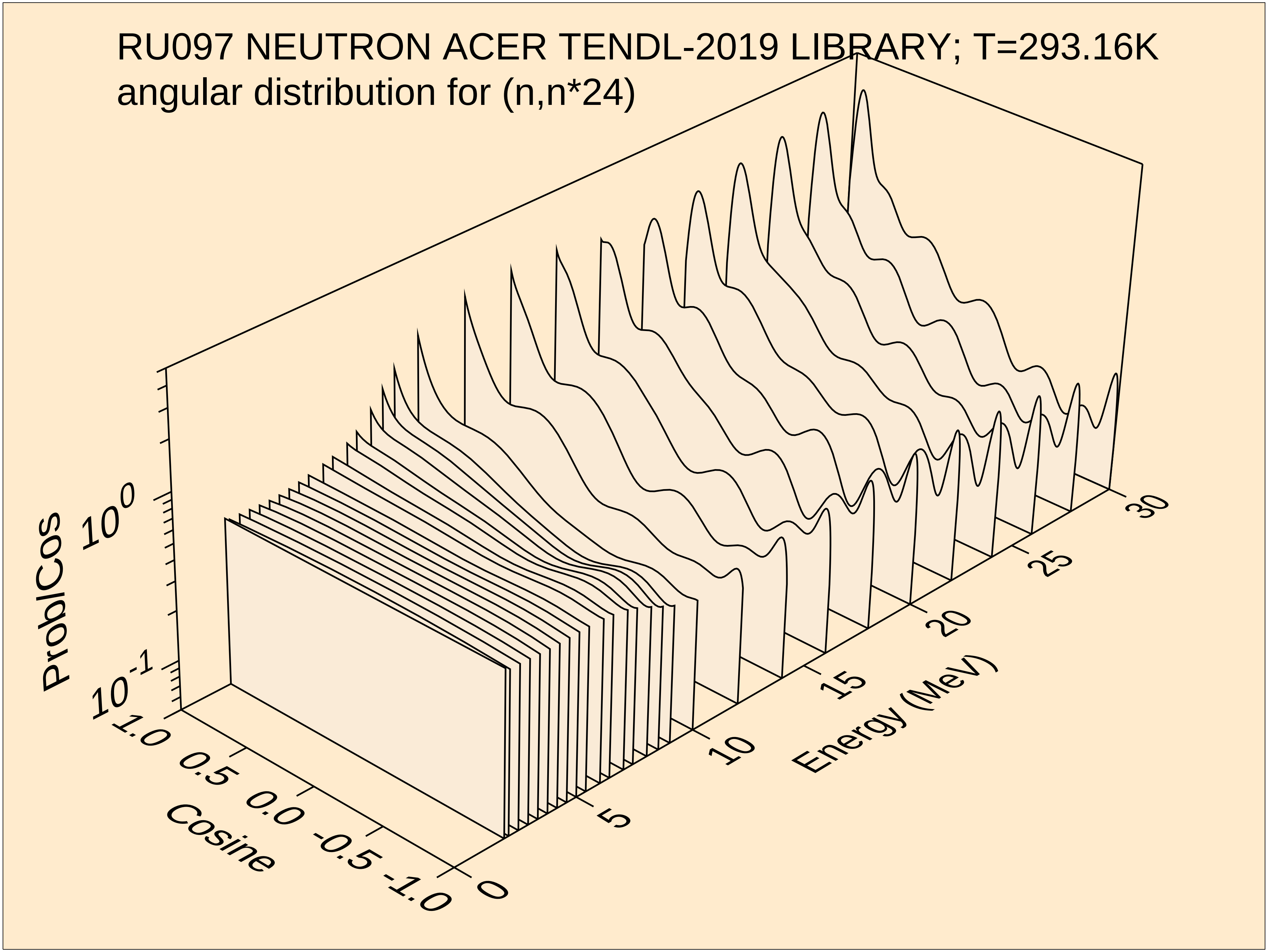
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*20)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*21)
ProblCos
10^0
10^{-1}
Cosine
1.0
0.5
0.0
-0.5
-1.0
Energy (MeV)
0
5
10
15
20
25
30

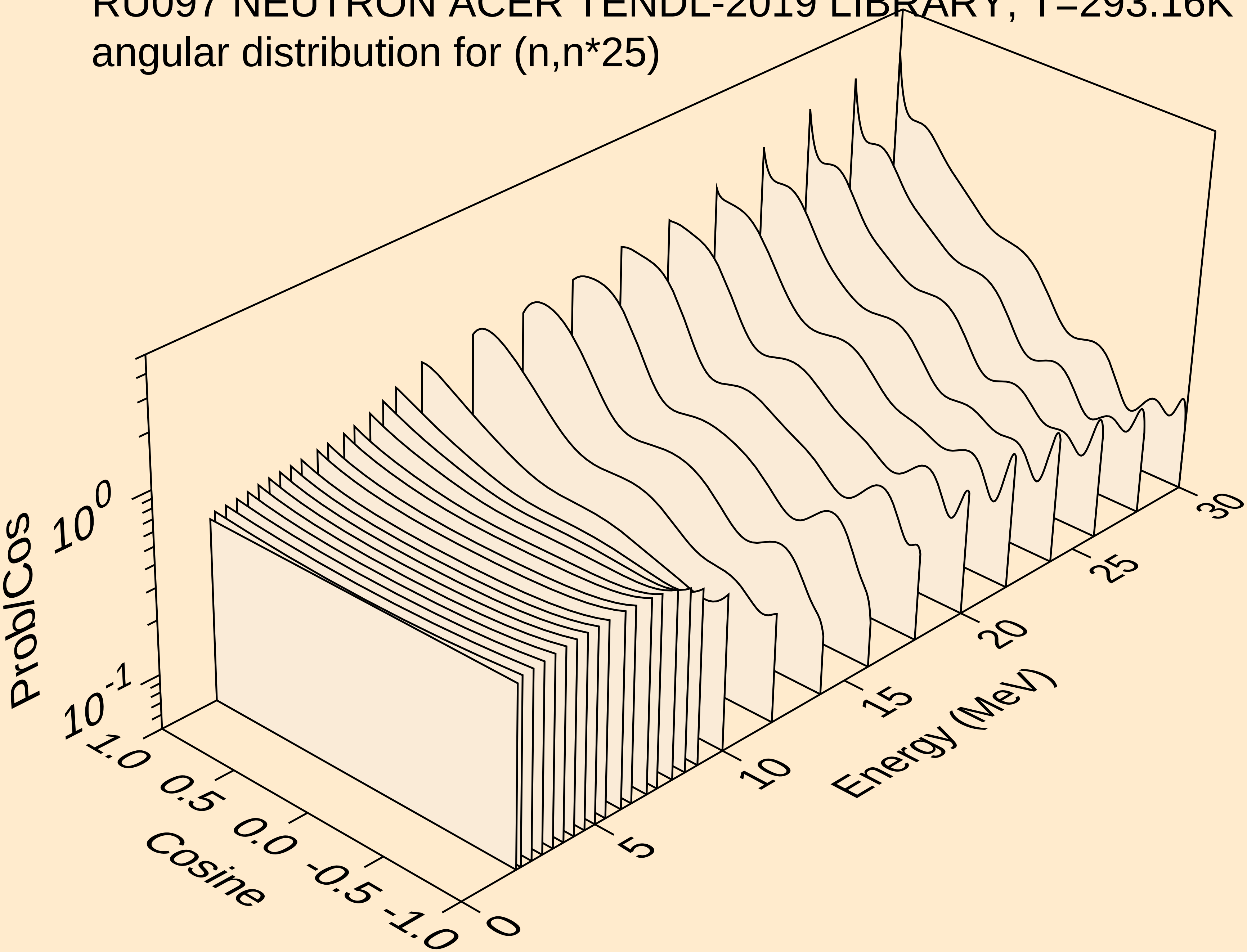


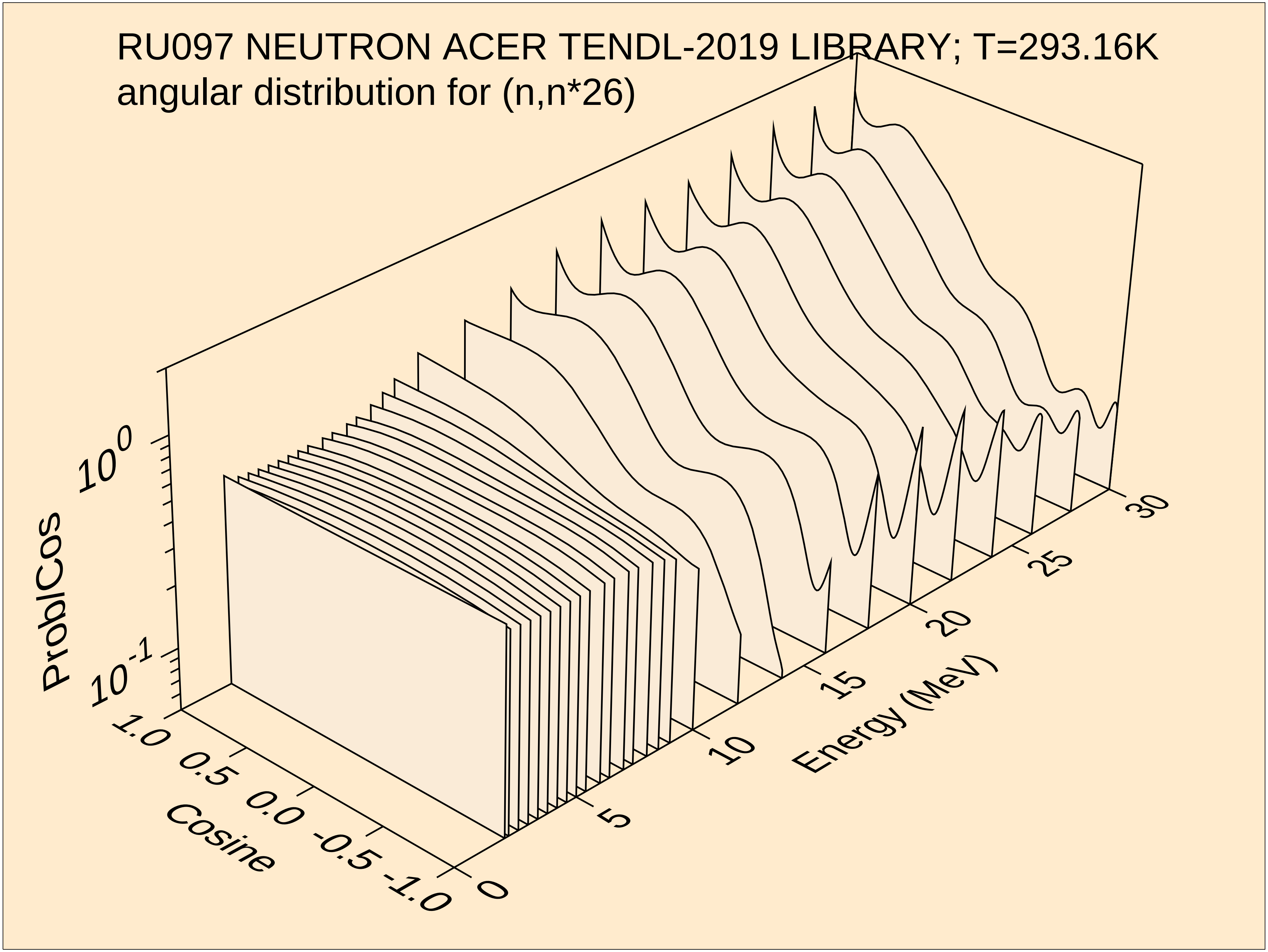
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*22)
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*23)
ProblCos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

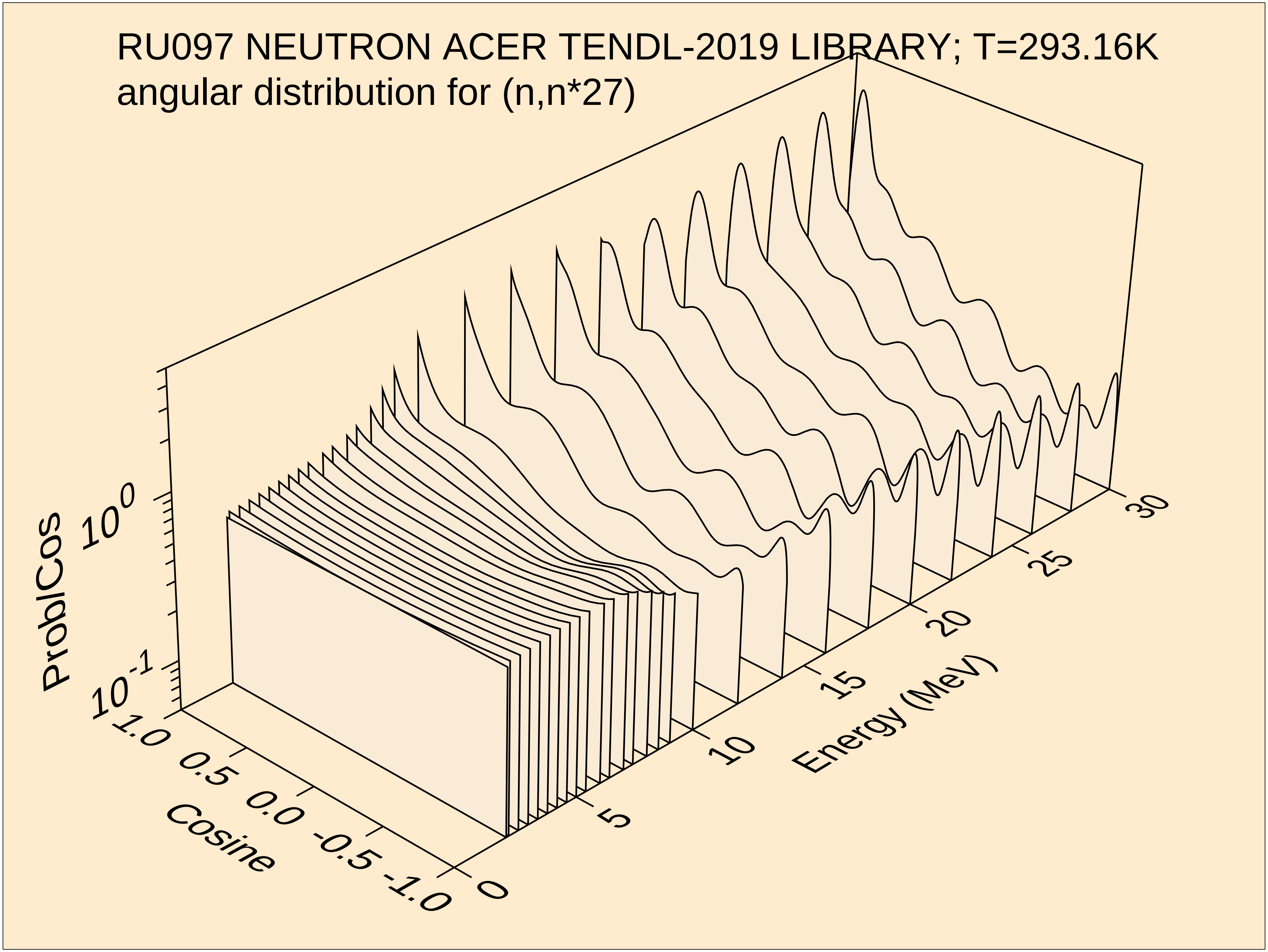

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*24)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

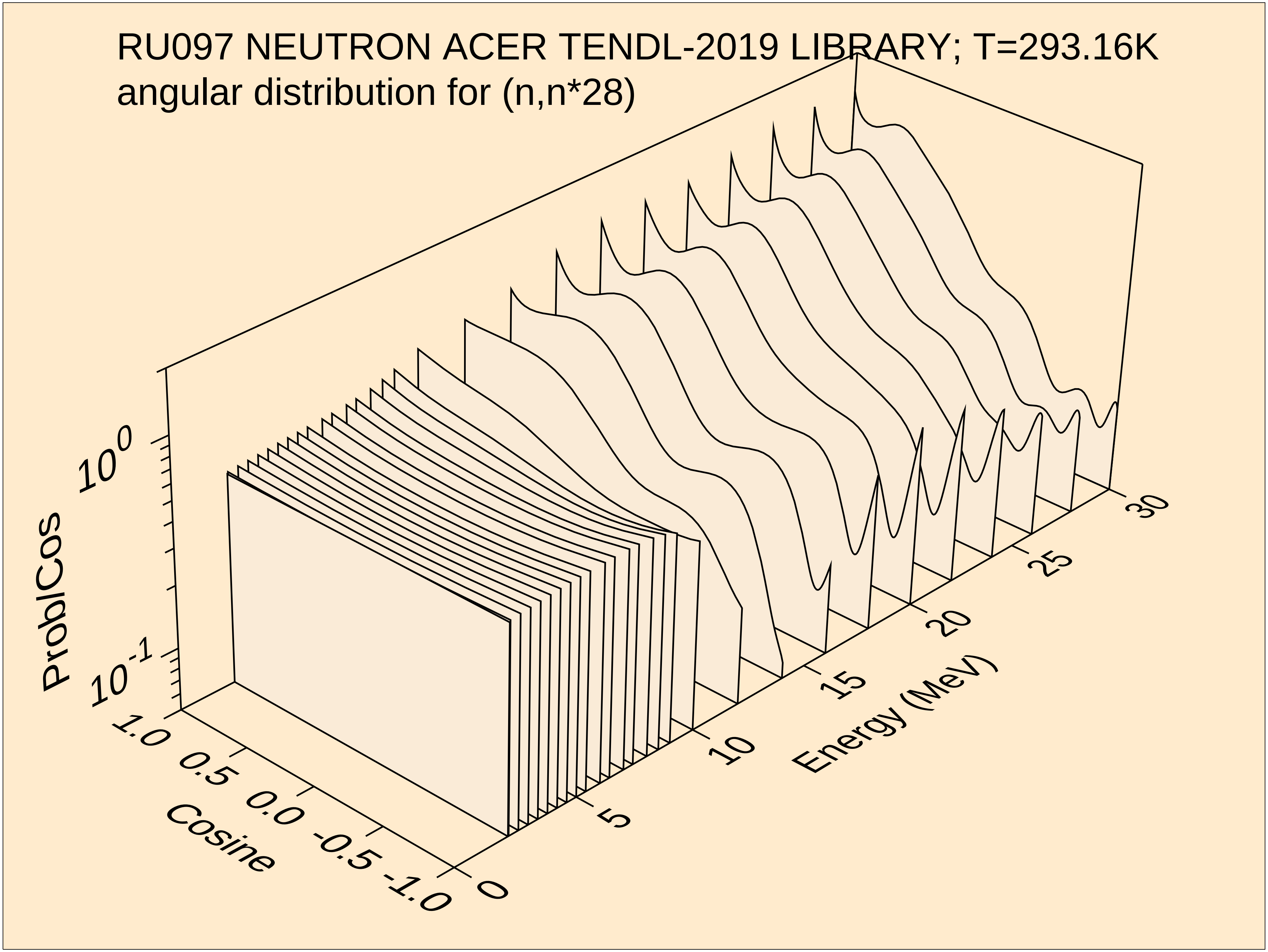
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*25)



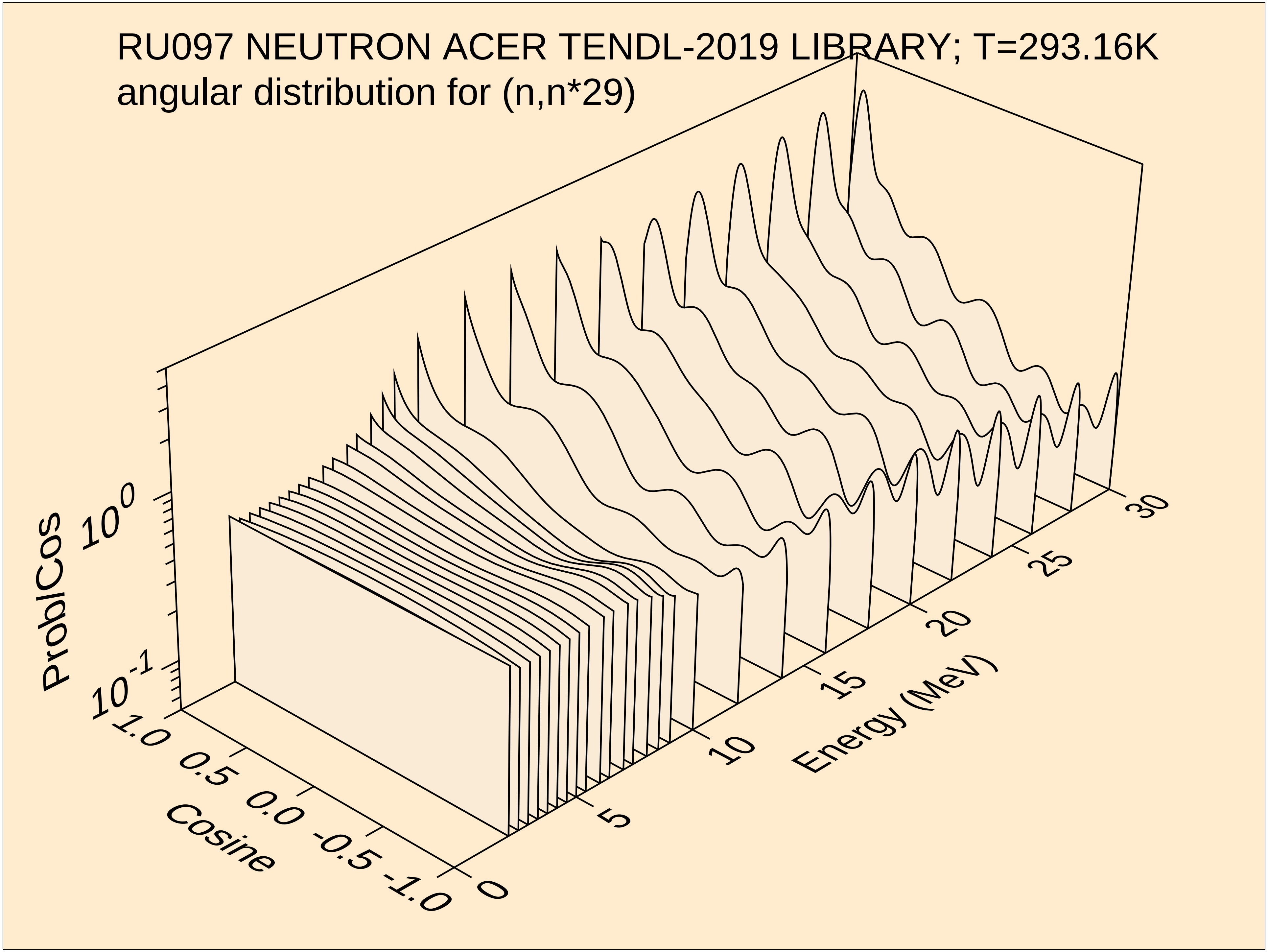


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*26)
ProblCos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

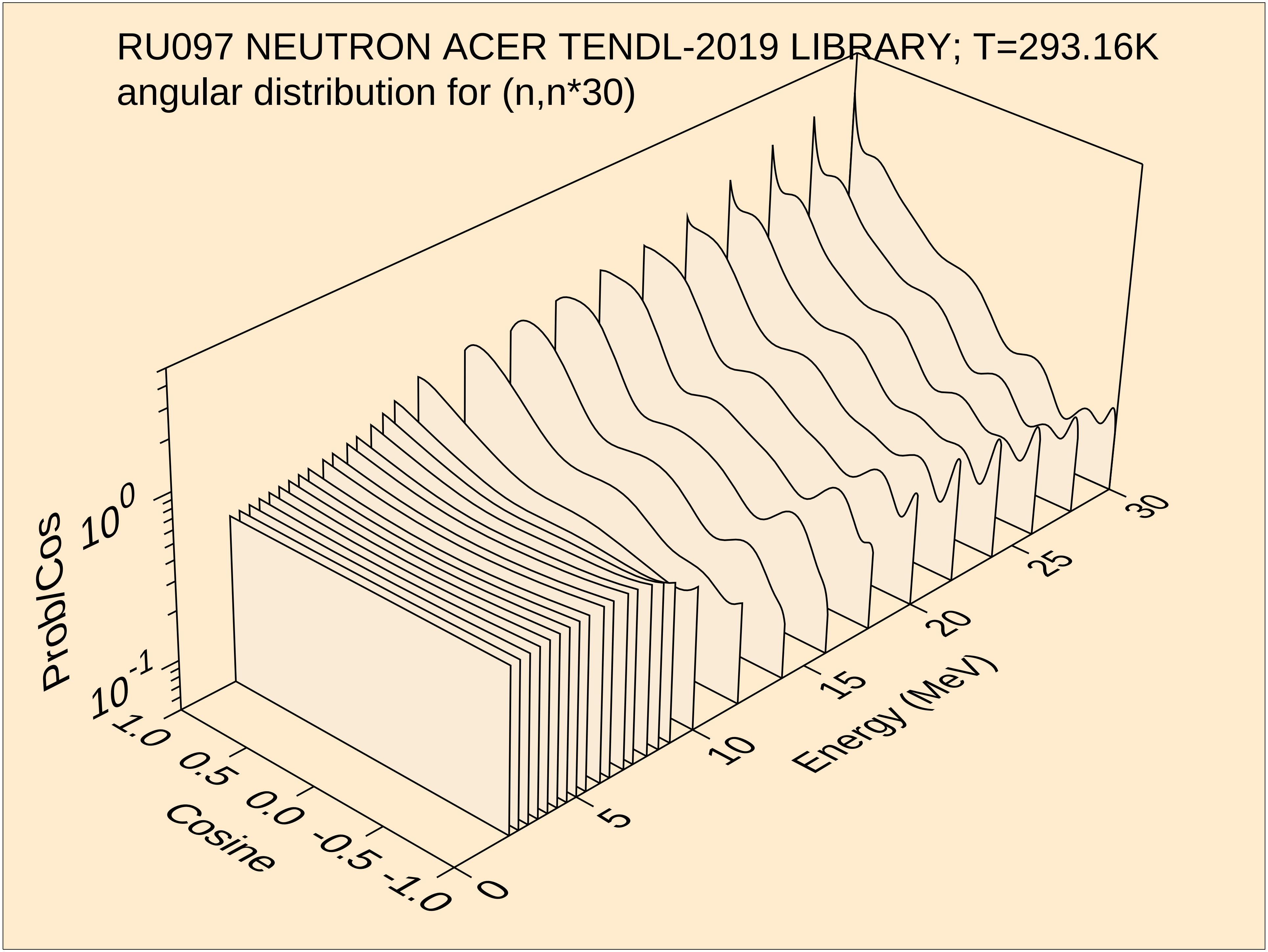

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*27)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)



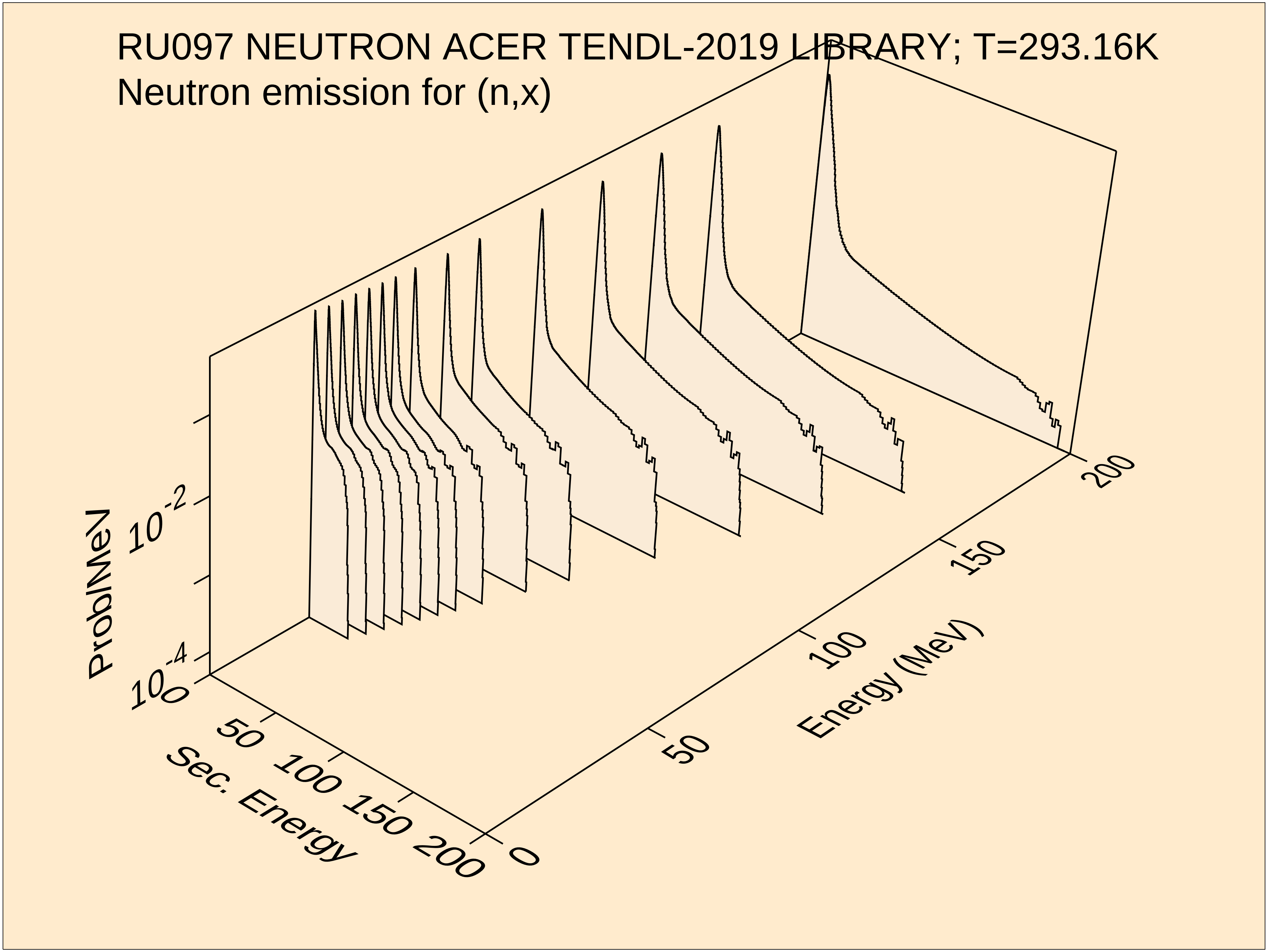
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*28)
ProbICos
10^{0}
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

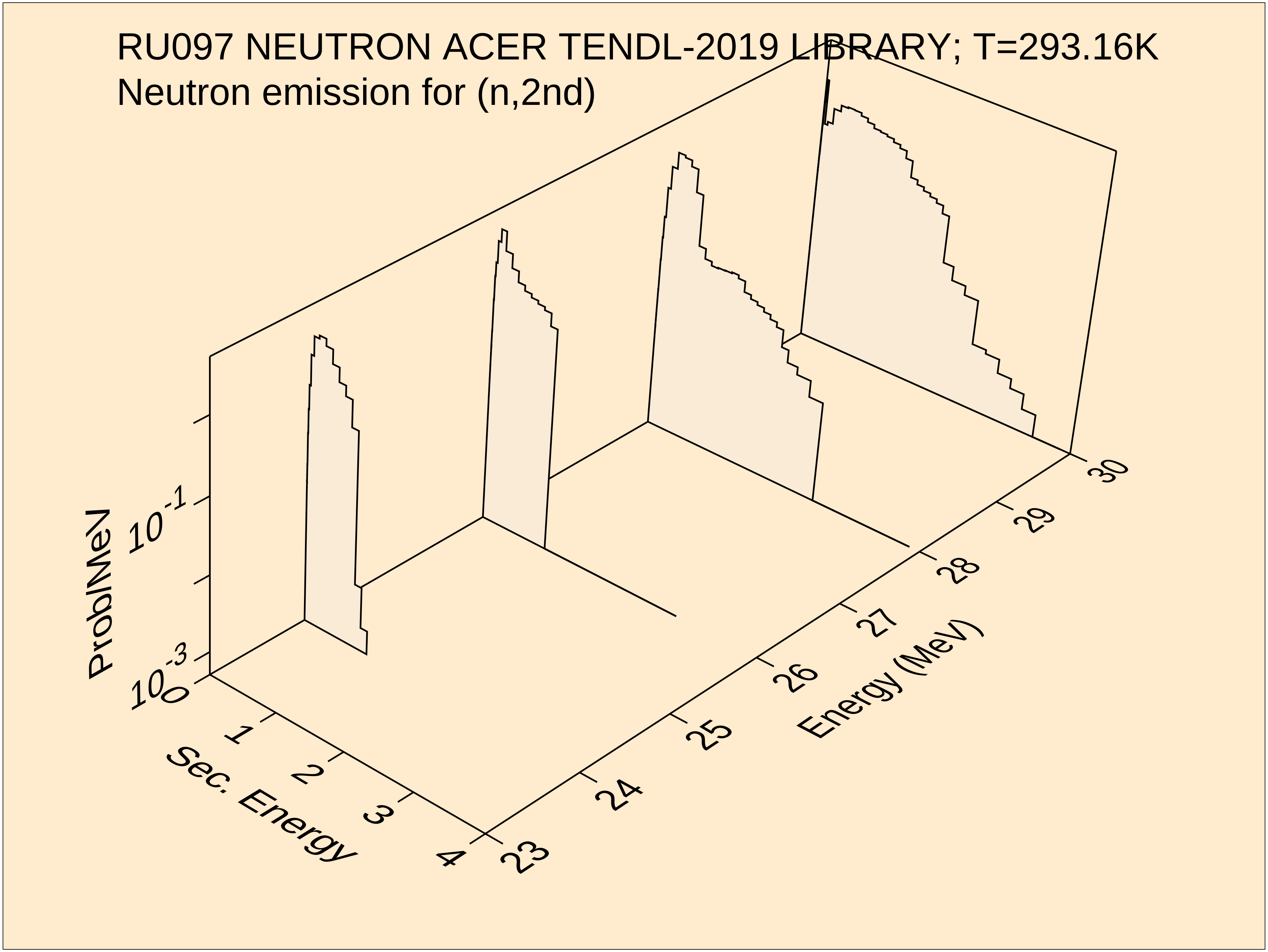


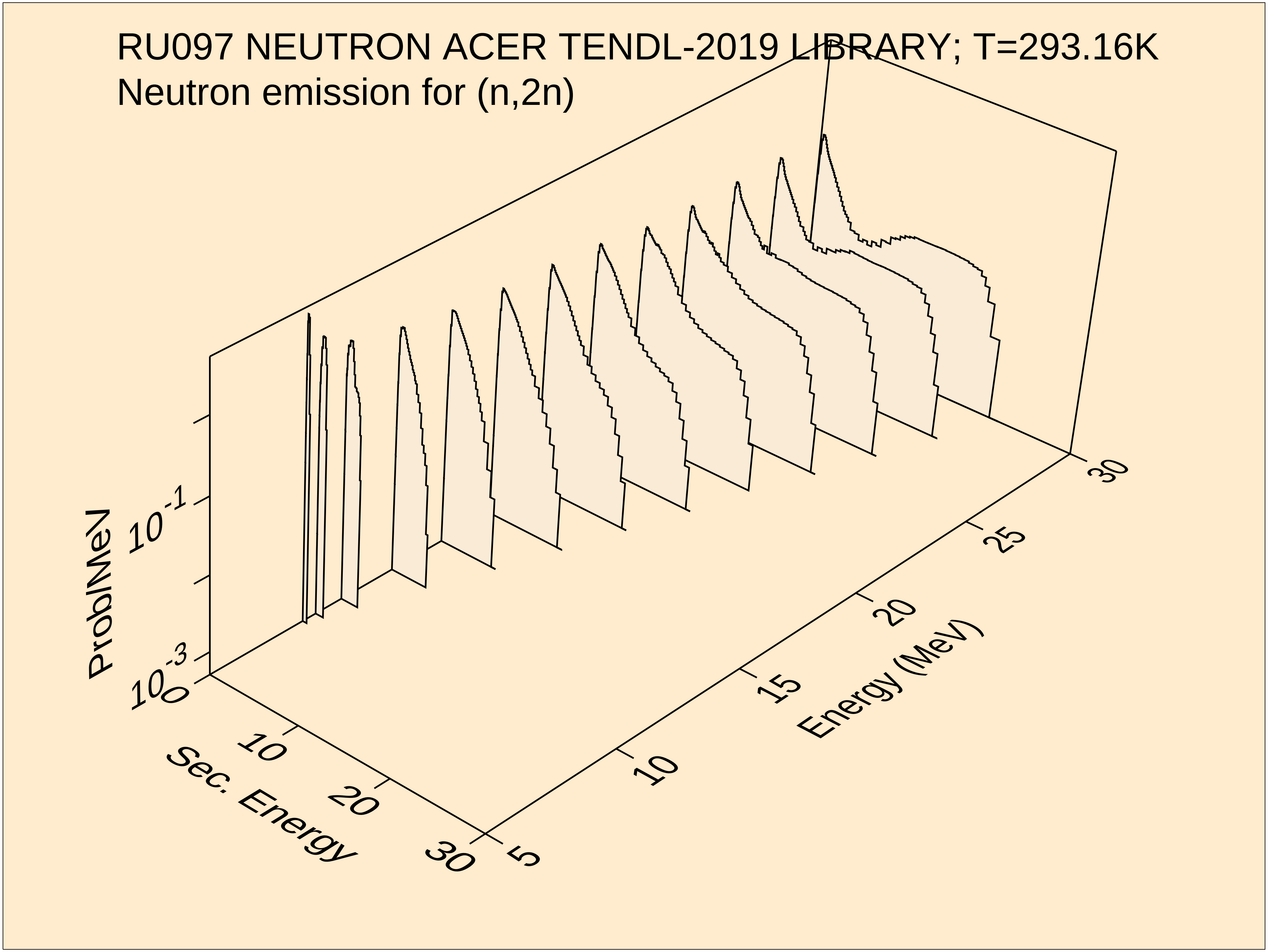
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*29)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

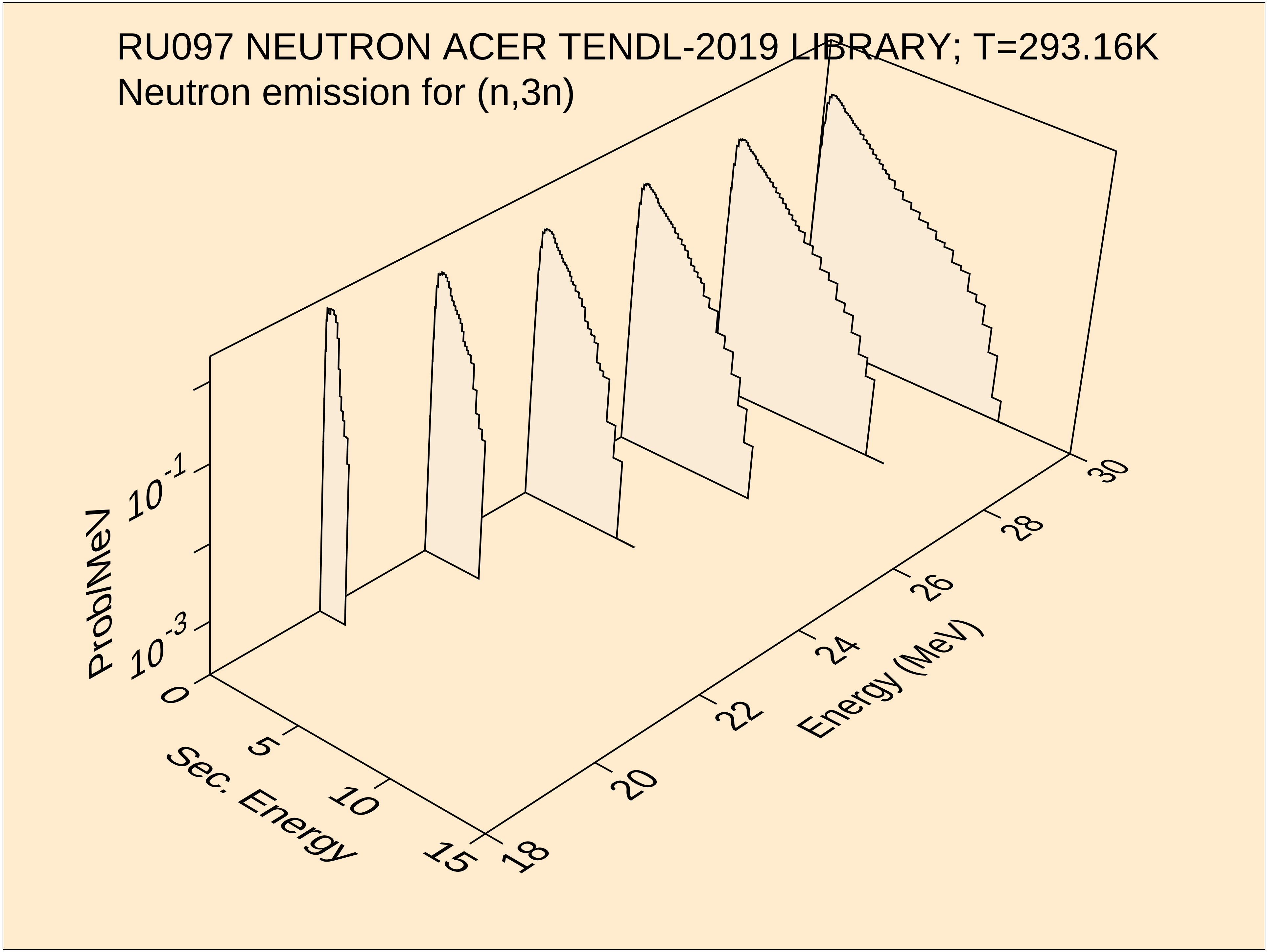


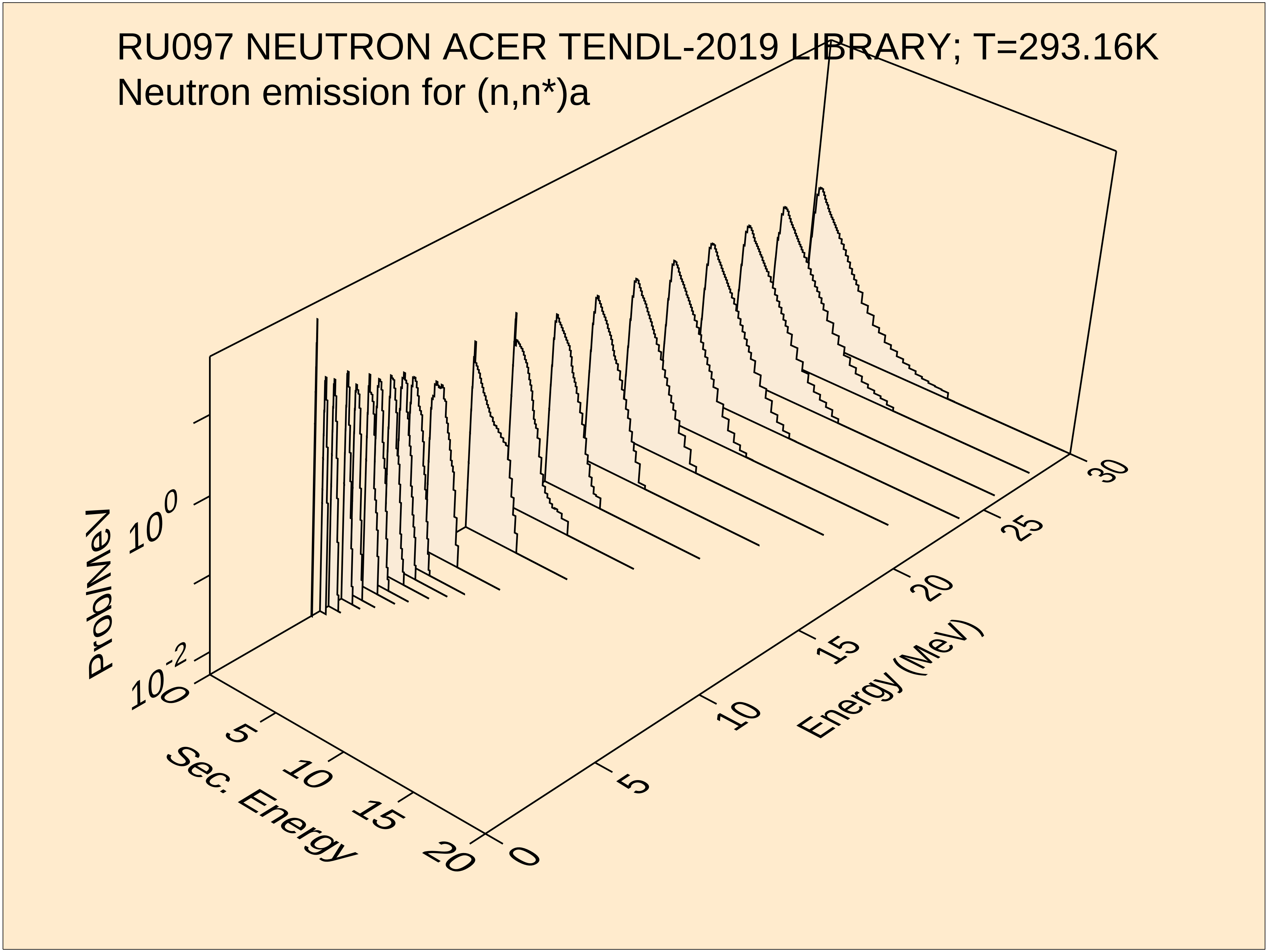
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
angular distribution for (n,n*30)
ProbICos
10^0
10^{-1}
1.0
0.5
0.0
-0.5
-1.0
Cosine
0
5
10
15
20
25
30
Energy (MeV)

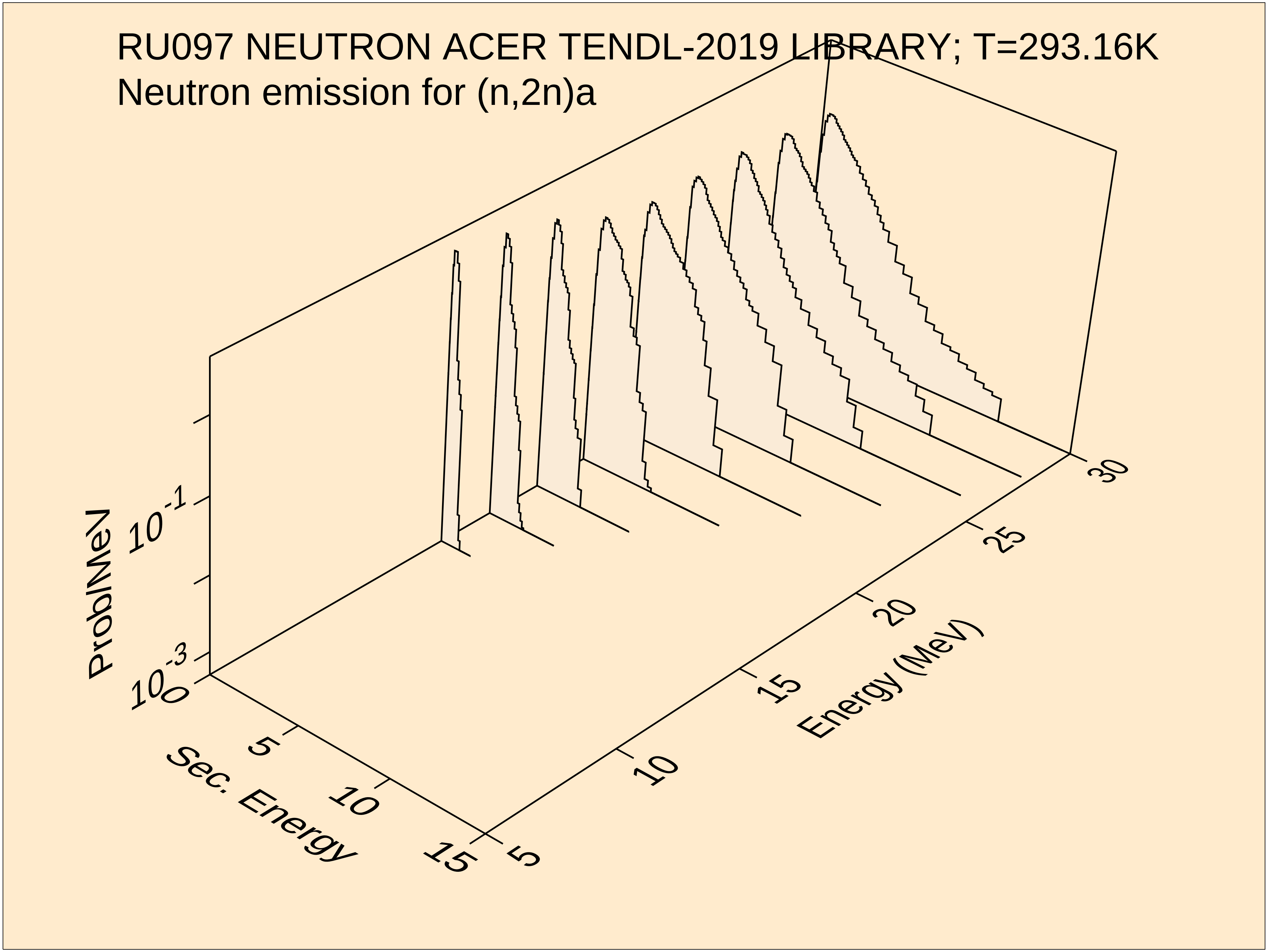

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,x)
Prob/MeV
10^{-2}
10^{-4}
0
50
100
150
200
Sec. Energy
Energy (MeV)

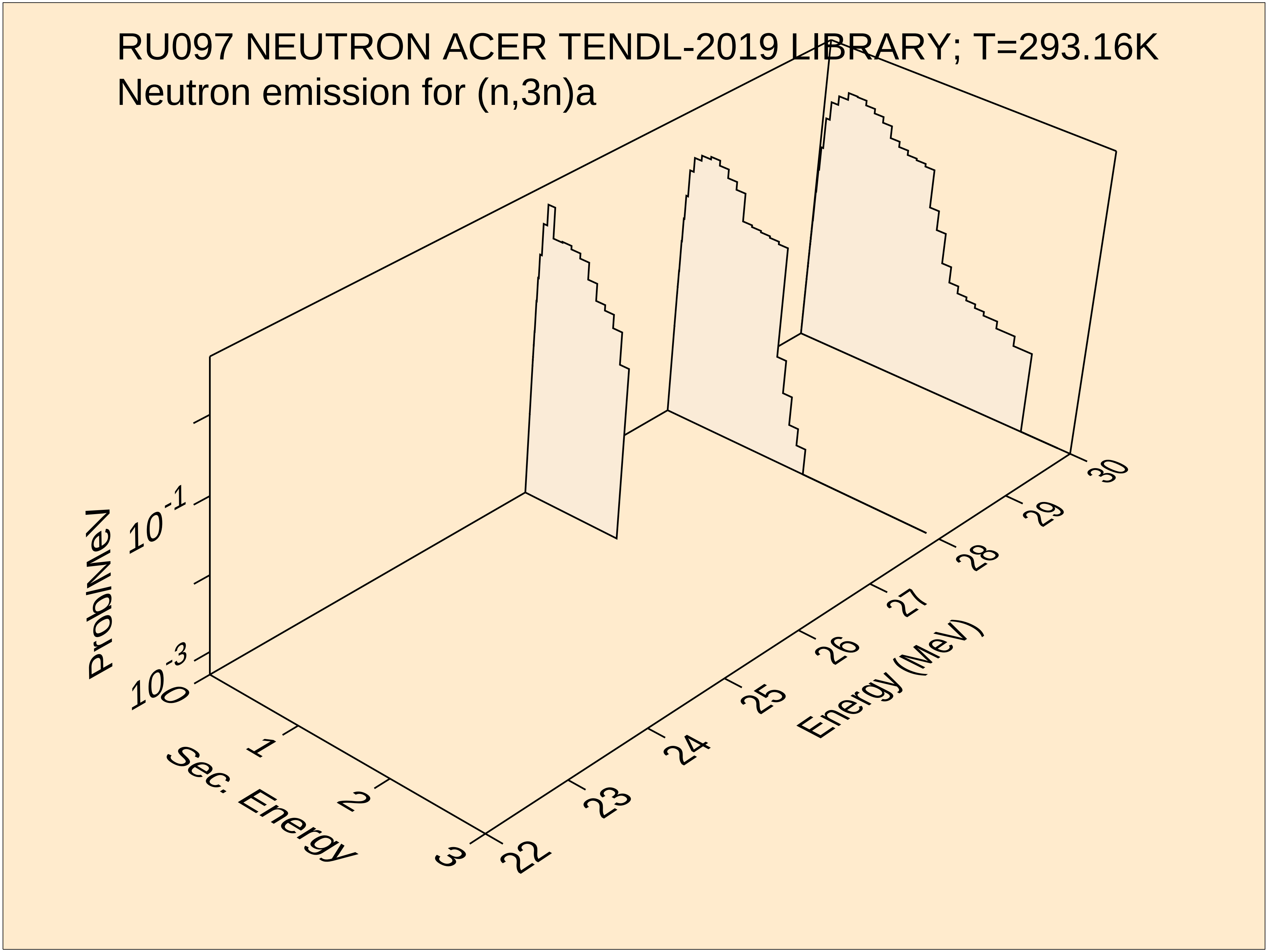

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,2nd)
ProbMeV
10^{-1}
10^{-3}
0
1
2
3
4
Sec. Energy
23
24
25
26
27
28
29
30
Energy (MeV)

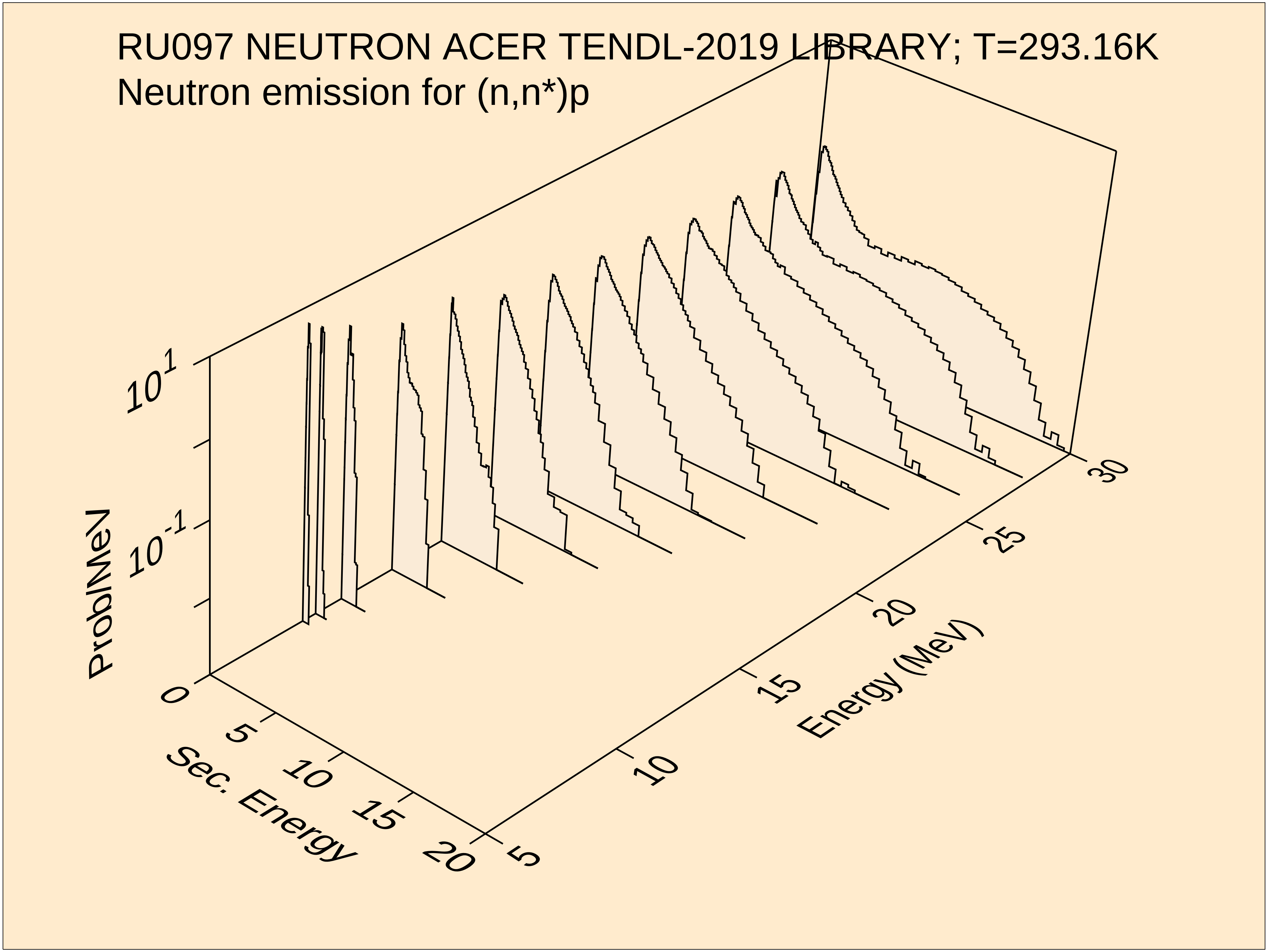

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,2n)
ProbMeV
10-1
10-3
0
10
20
30
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

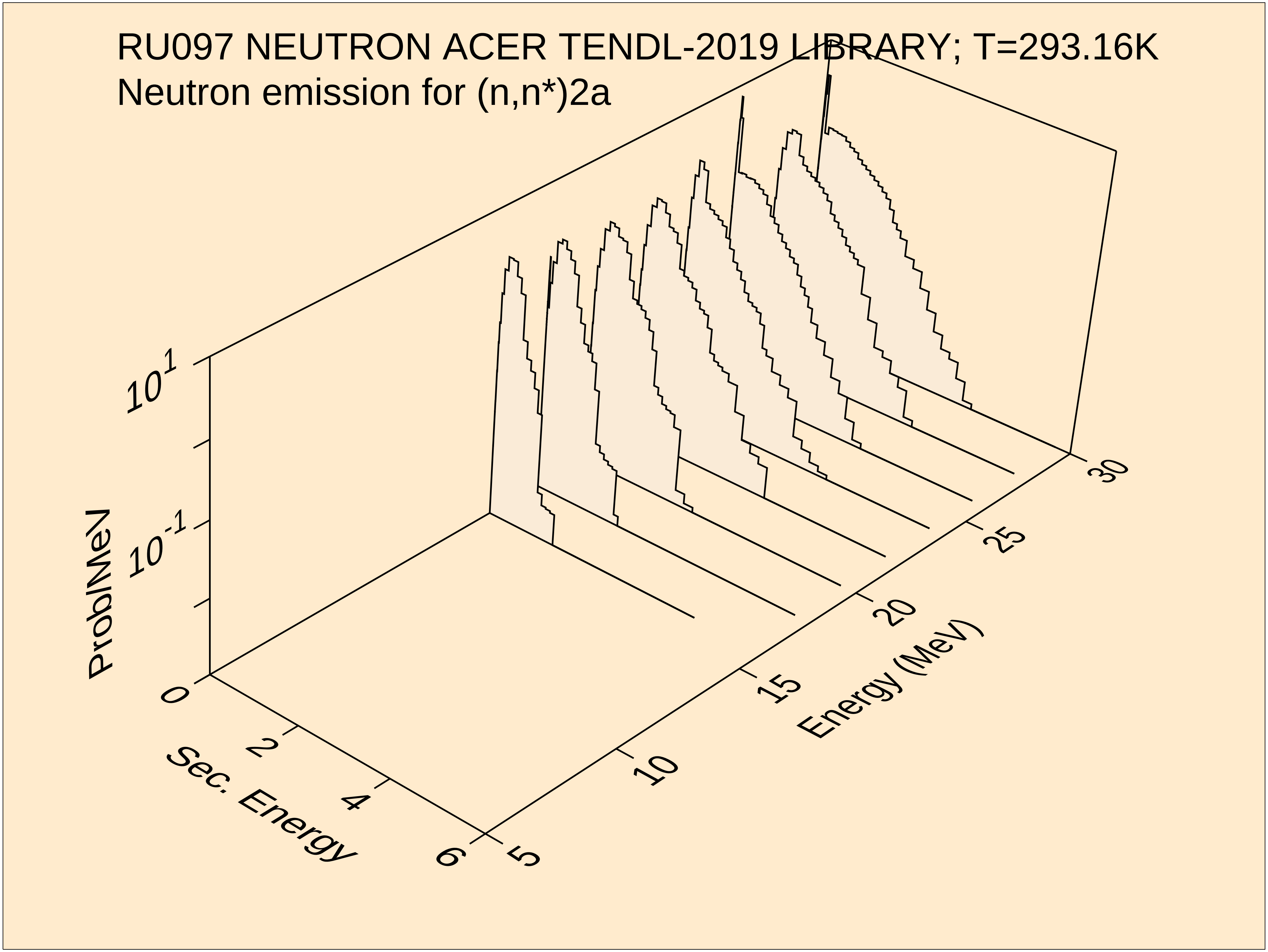

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,3n)
ProbMeV
10^-1
10^-3
0
5
10
15
Sec. Energy
18
20
22
24
26
28
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)a
ProbMeV
10^{0}
10^{-2}
Sec. Energy
0
5
10
15
20
Energy (MeV)
0
5
10
15
20
25
30

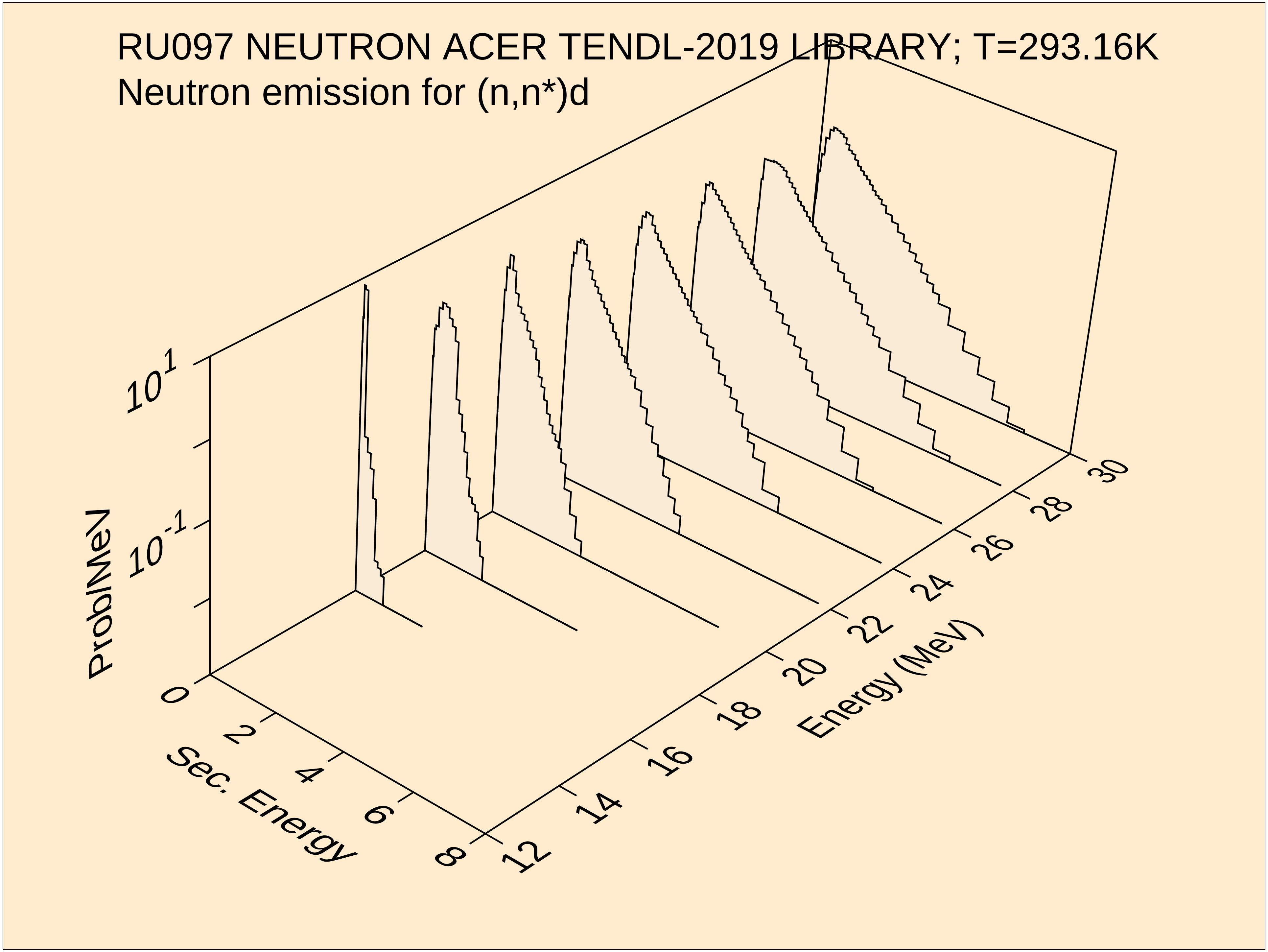

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,2n)a
ProbMeV
10^{-1}
10^{-3}
0
5
10
15
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

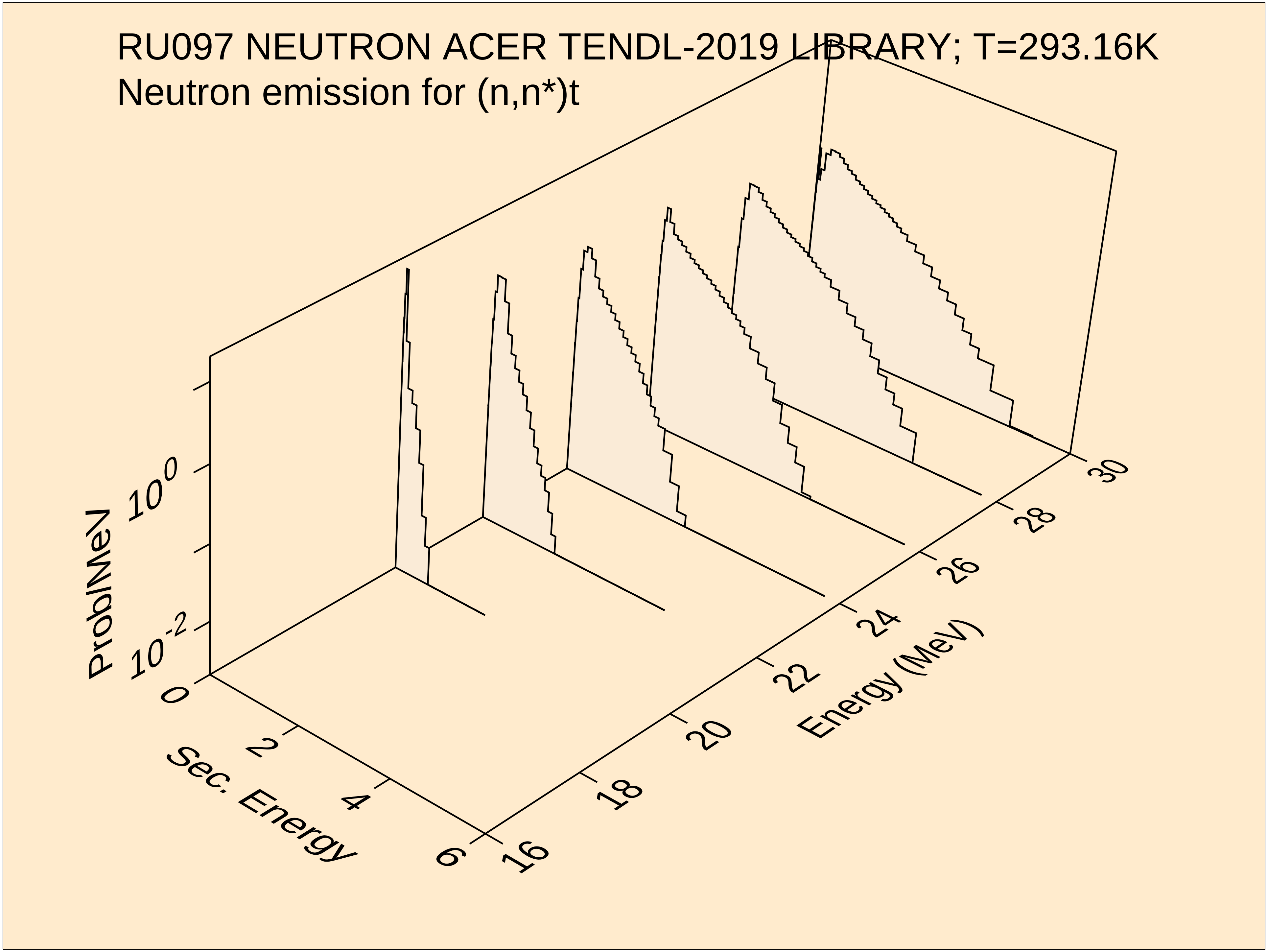

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,3n)a
Prob/MeV
10^{-1}
10^{-3}
0
1
2
3
Sec. Energy
22
23
24
25
26
27
28
29
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)p
ProblMeV
10^{1}
10^{-1}
0
5
10
15
20
Sec. Energy
Energy (MeV)
5
10
15
20
25
30



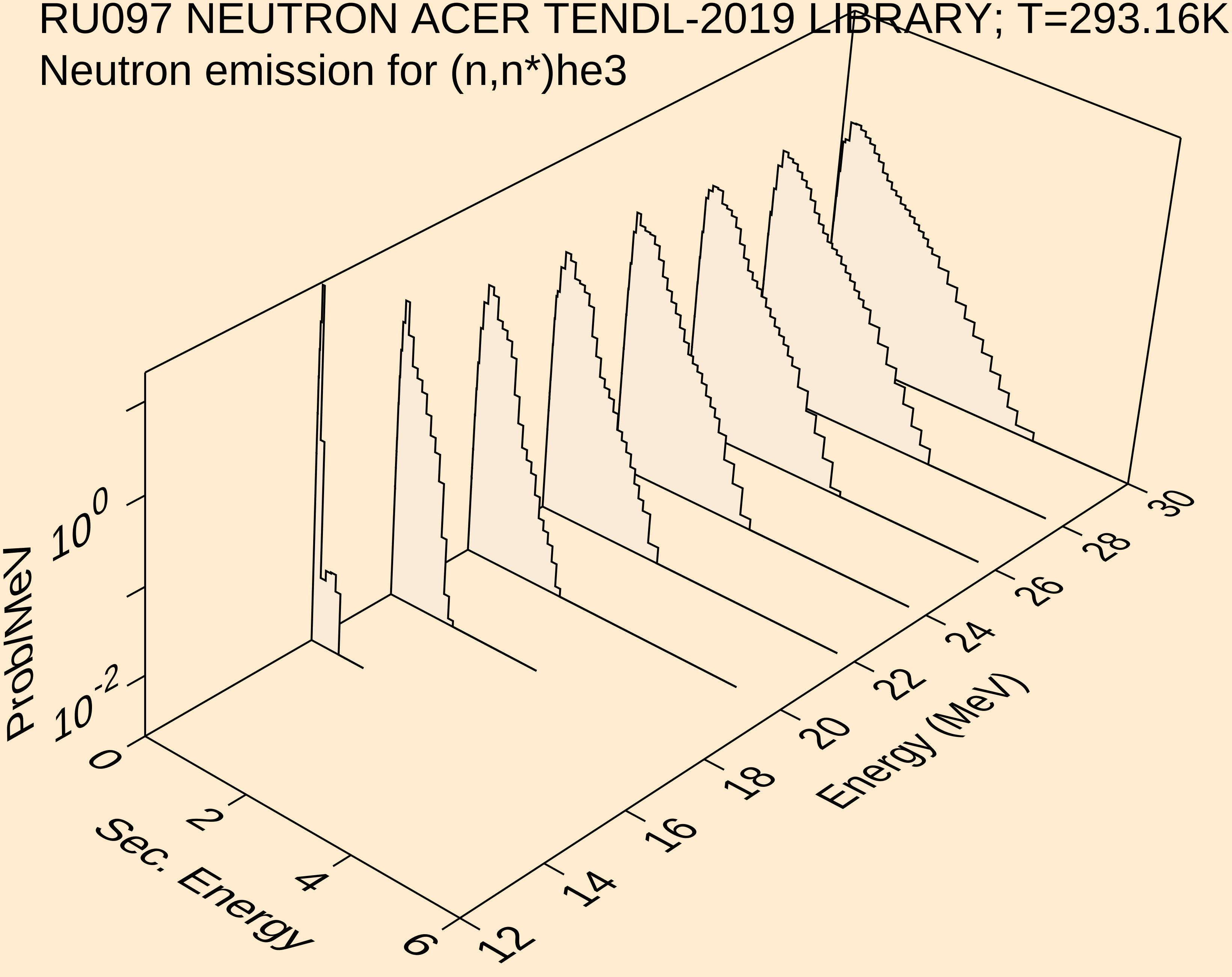
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)2a
ProbMeV
10^{1}
10^{-1}
0
2
4
6
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

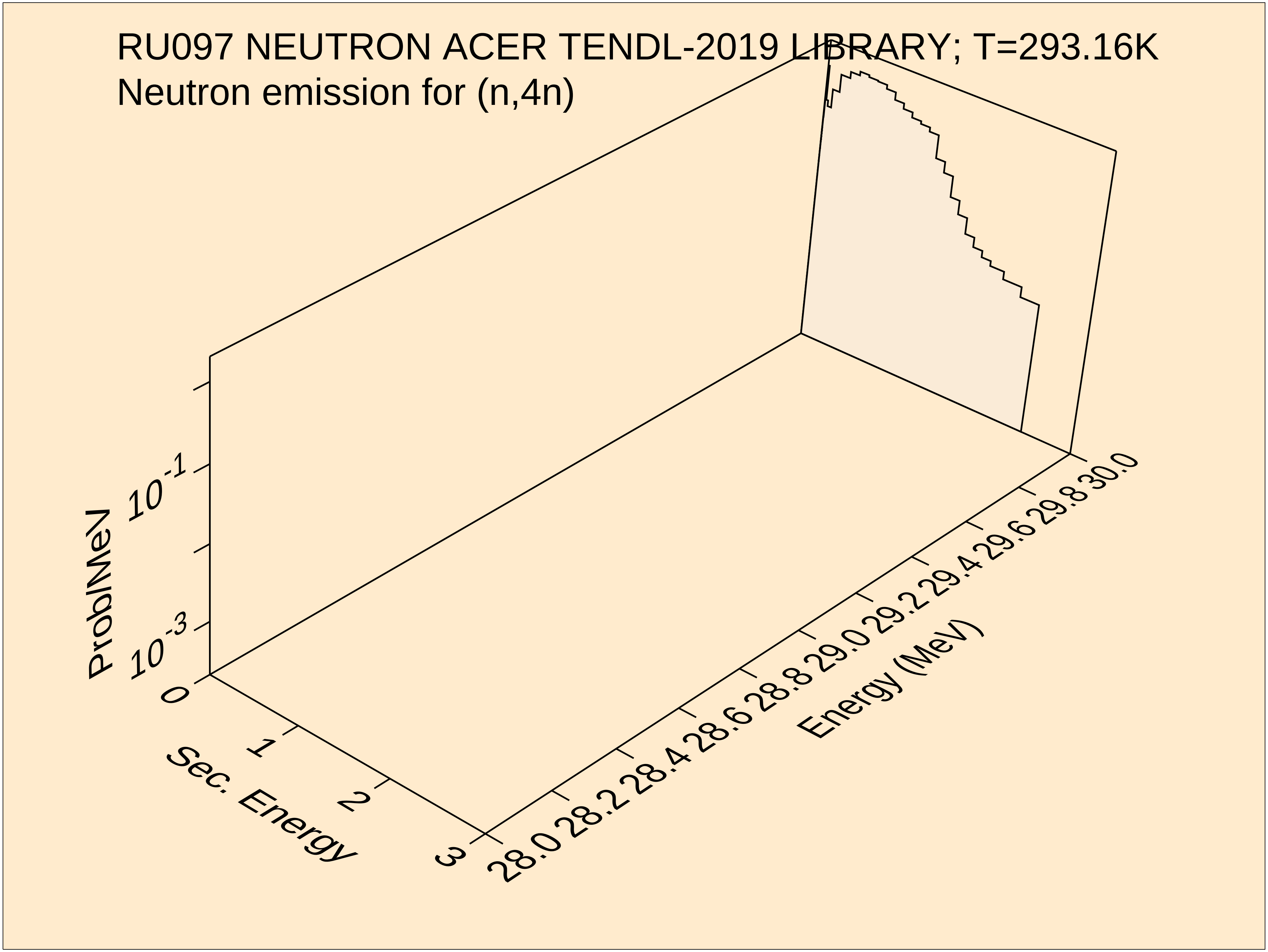

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)d
ProbMeV
10^1
10^-1
0
Sec. Energy
2
4
6
8
Energy (MeV)
12
14
16
18
20
22
24
26
28
30



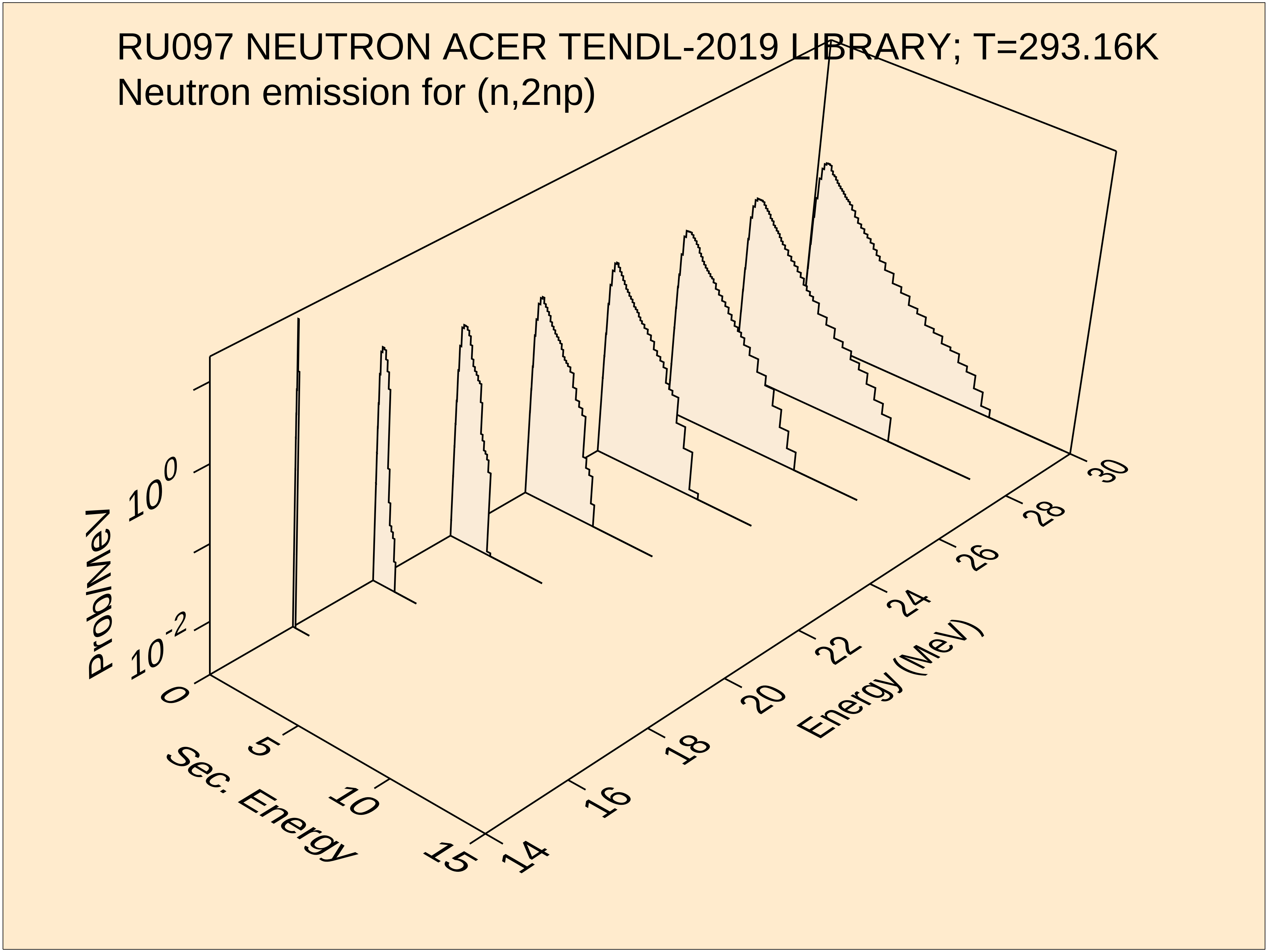
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)t
ProbMeV
10^{0}
10^{-2}
0
2
4
6
Sec. Energy
16
18
20
22
24
26
28
30
Energy (MeV)

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*)he3

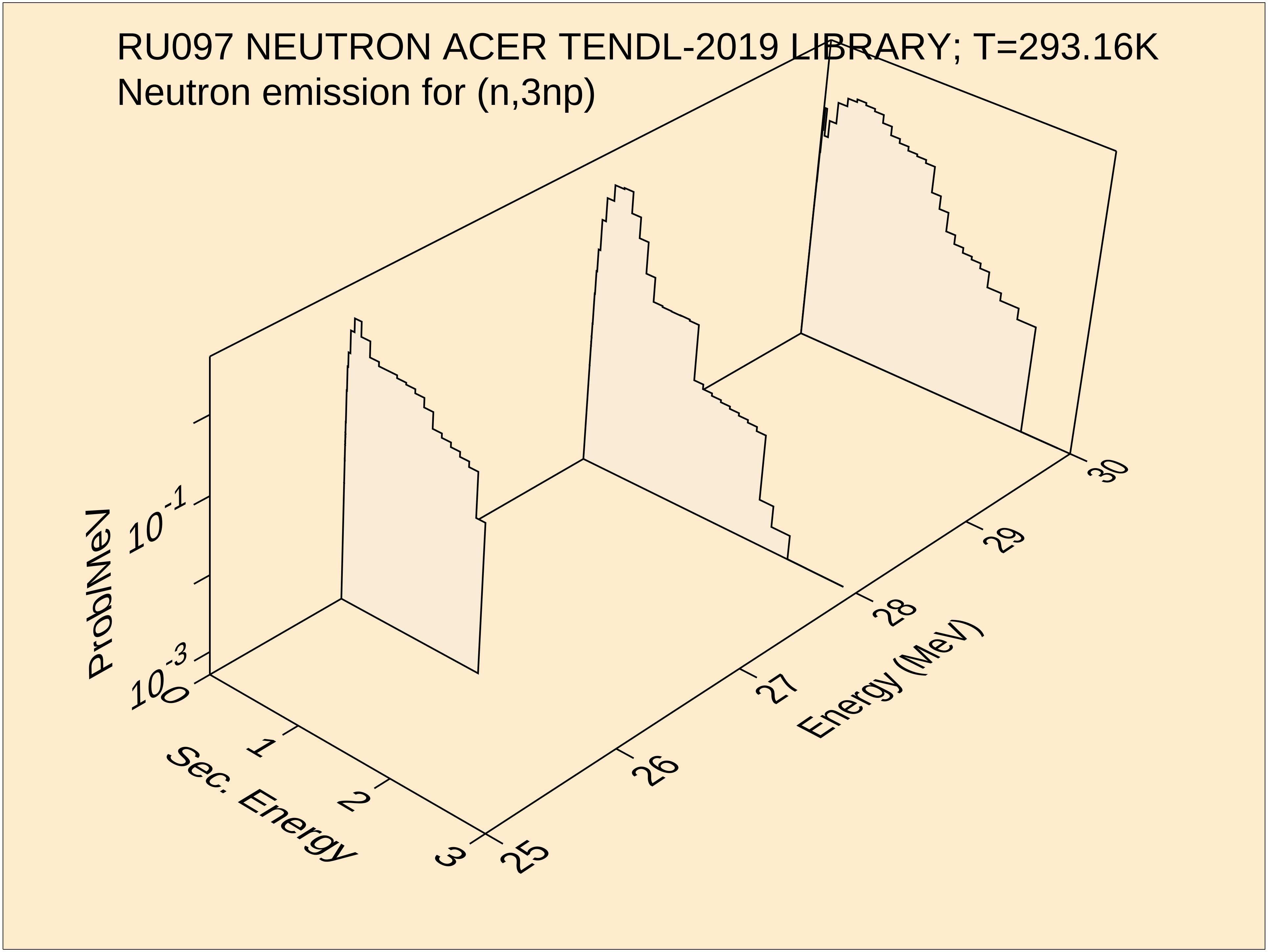




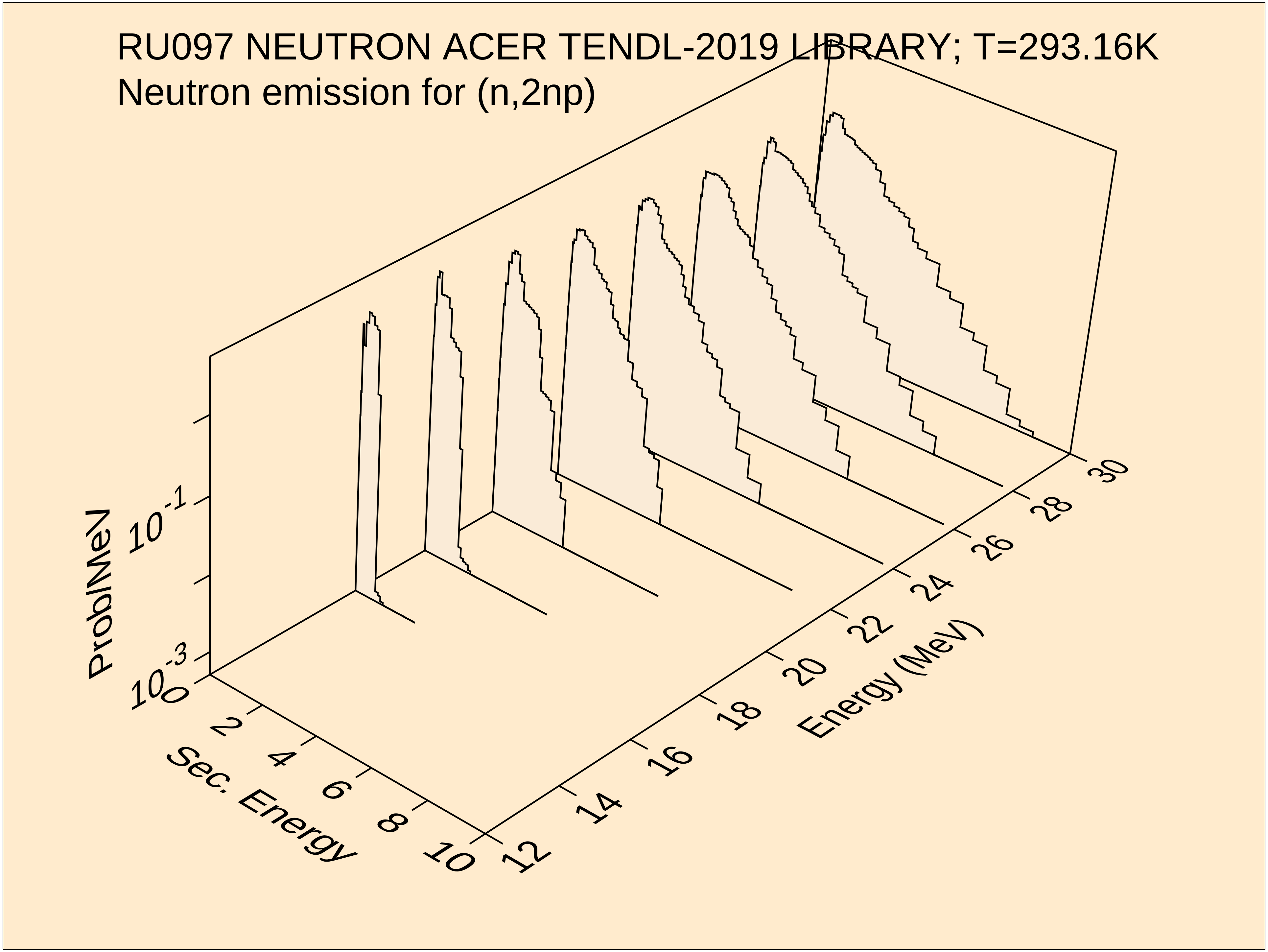
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,4n)
ProbMeV
10^{-1}
10^{-3}
0
1
2
3
Sec. Energy
28.0
28.2
28.4
28.6
28.8
29.0
29.2
29.4
29.6
29.8
30.0
Energy (MeV)



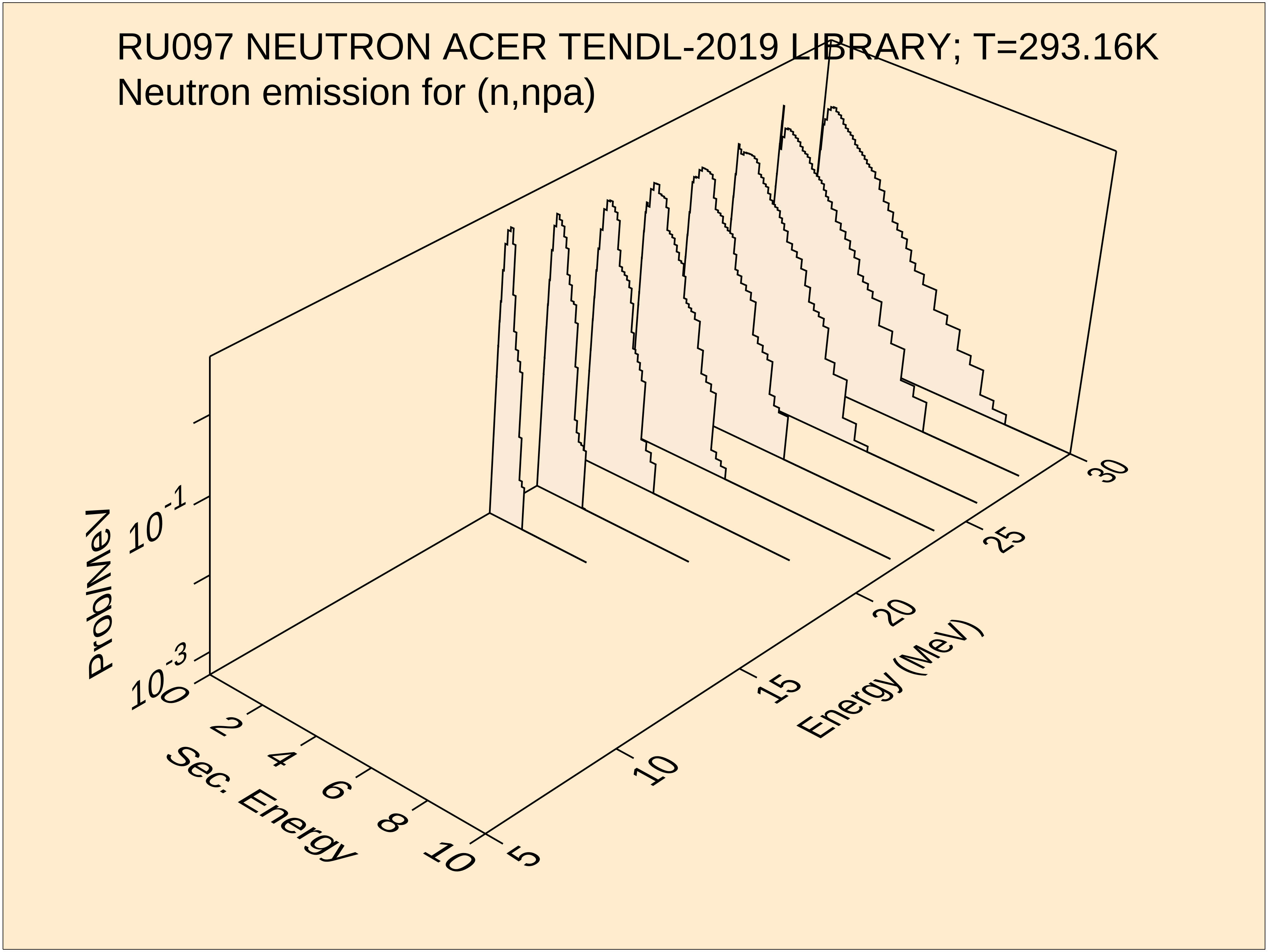
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,2np)
ProbMeV
10^{0}
10^{-2}
0
5
10
15
Sec. Energy
14
16
18
20
22
24
26
28
30
Energy (MeV)



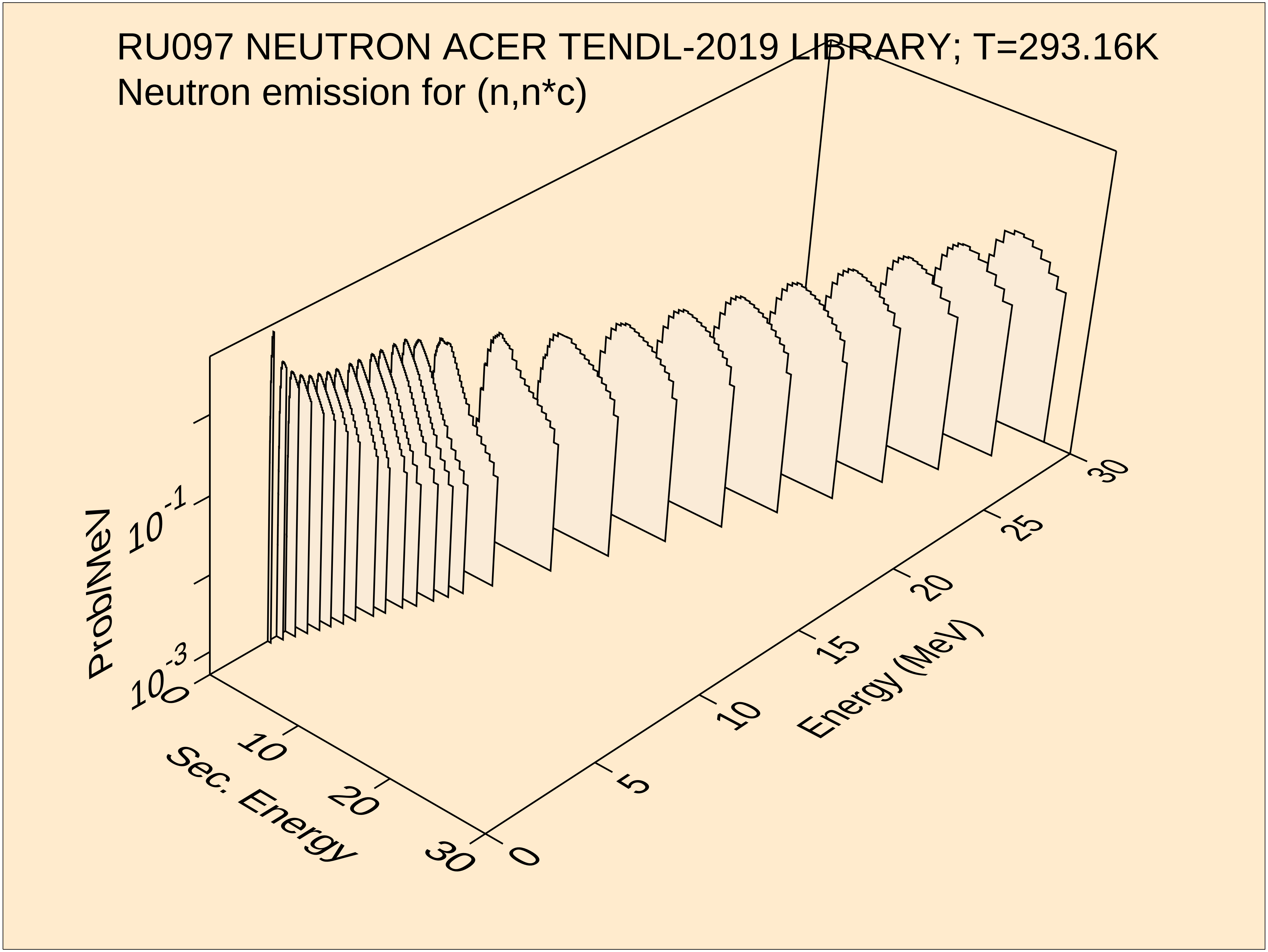
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,3np)
ProbMeV
10^{-1}
10^{-3}
0
1
2
3
Sec. Energy
25
26
27
28
29
30
Energy (MeV)



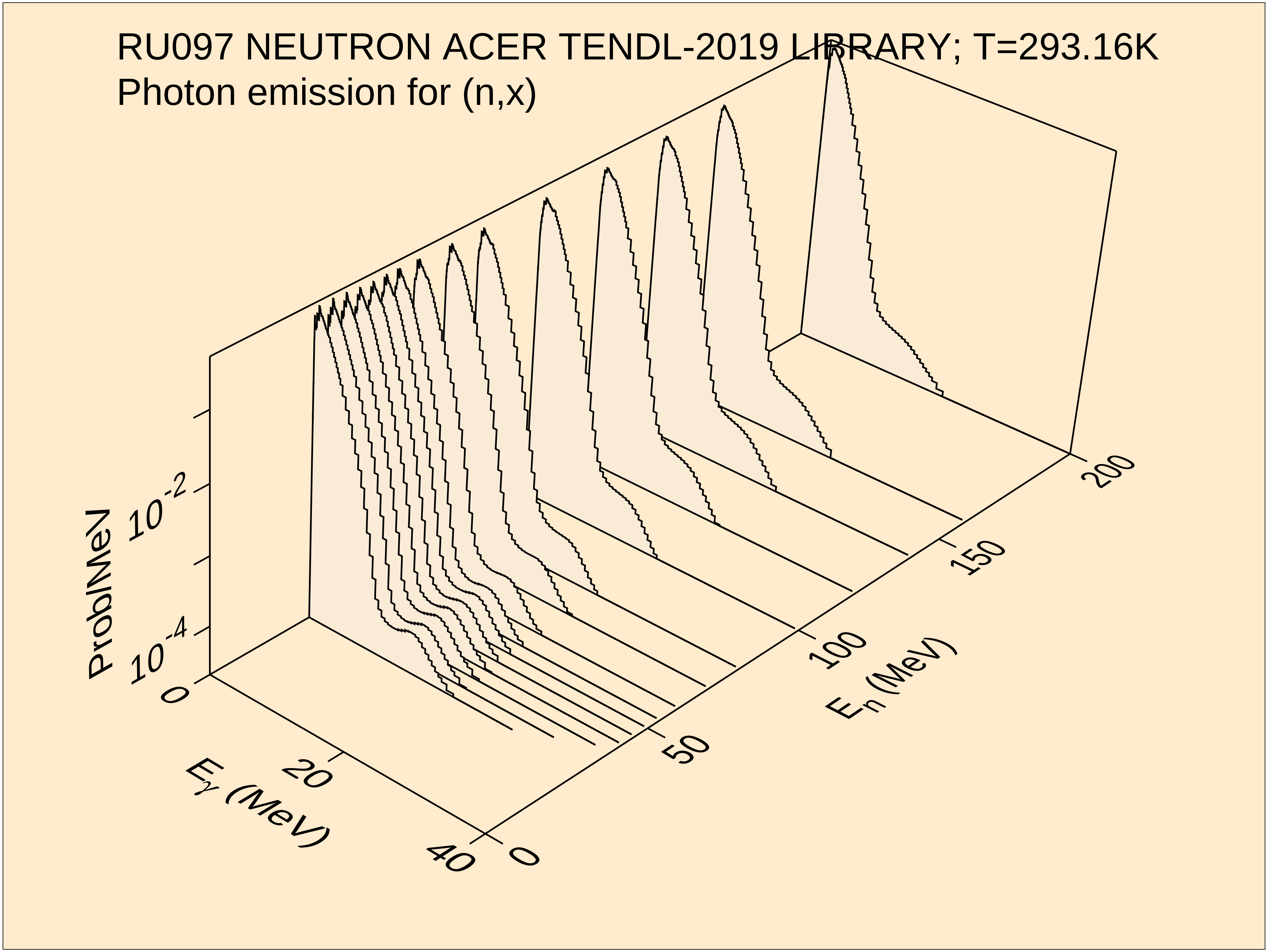
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,2np)
ProbMeV
10^{-1}
10^{-3}
0
2
4
6
8
10
Sec. Energy
12
14
16
18
20
22
24
26
28
30
Energy (MeV)



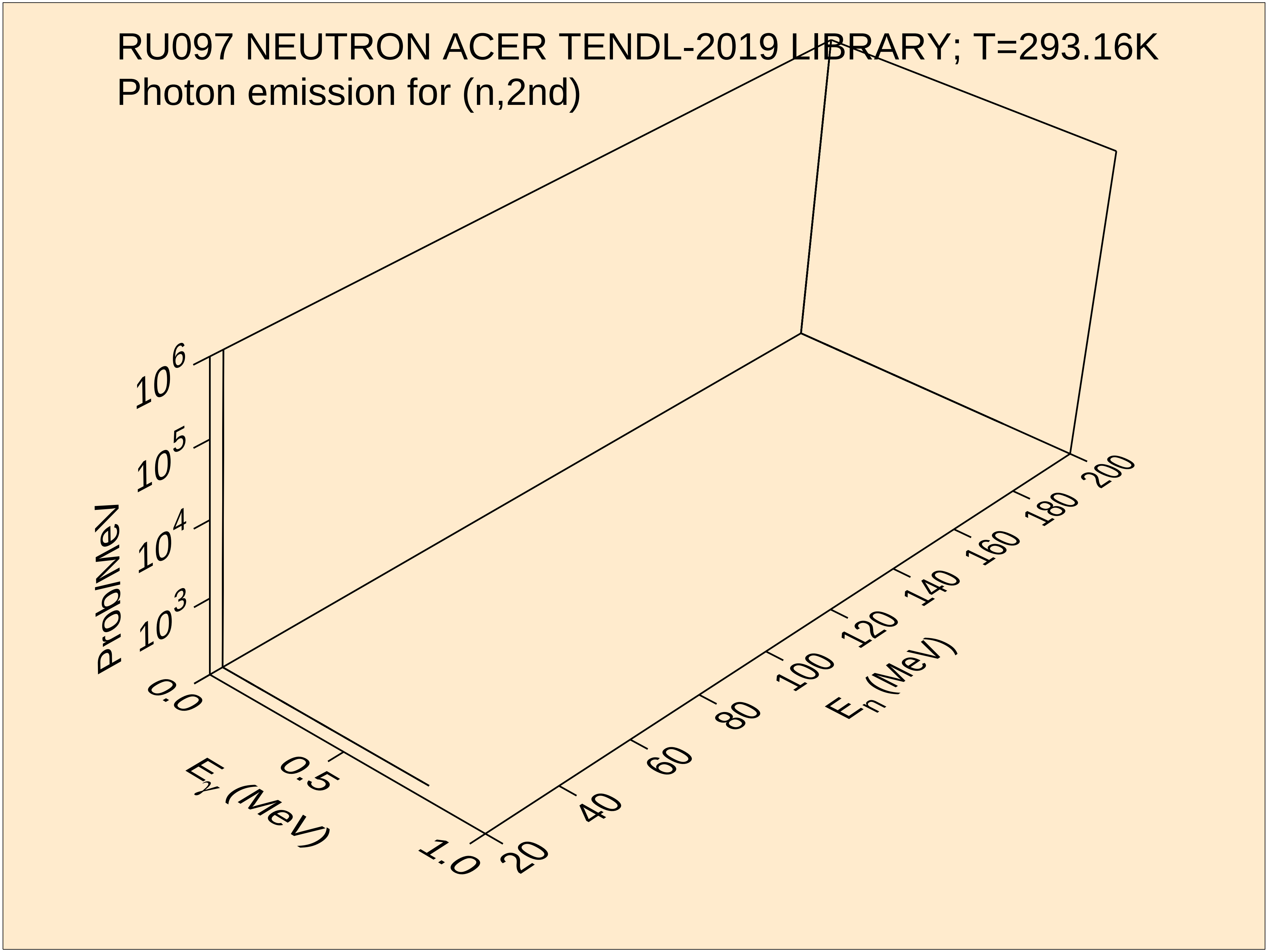
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,npa)
Prob/MeV
10^{-1}
10^{-3}
0
2
4
6
8
10
Sec. Energy
5
10
15
20
25
30
Energy (MeV)



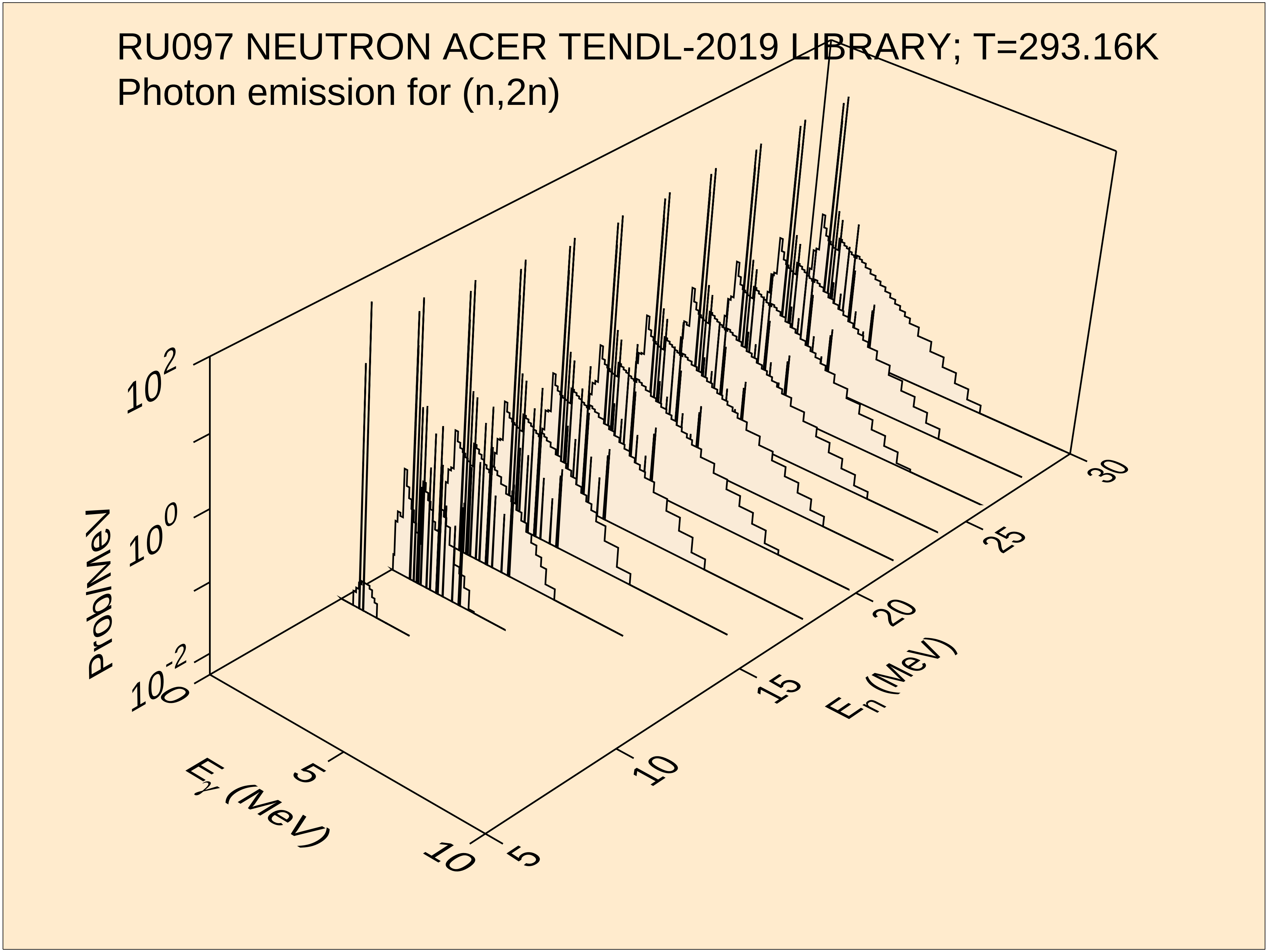
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Neutron emission for (n,n*c)
ProbMeV
10-1
10-3
Sec. Energy
0
10
20
30
Energy (MeV)
0
5
10
15
20
25
30

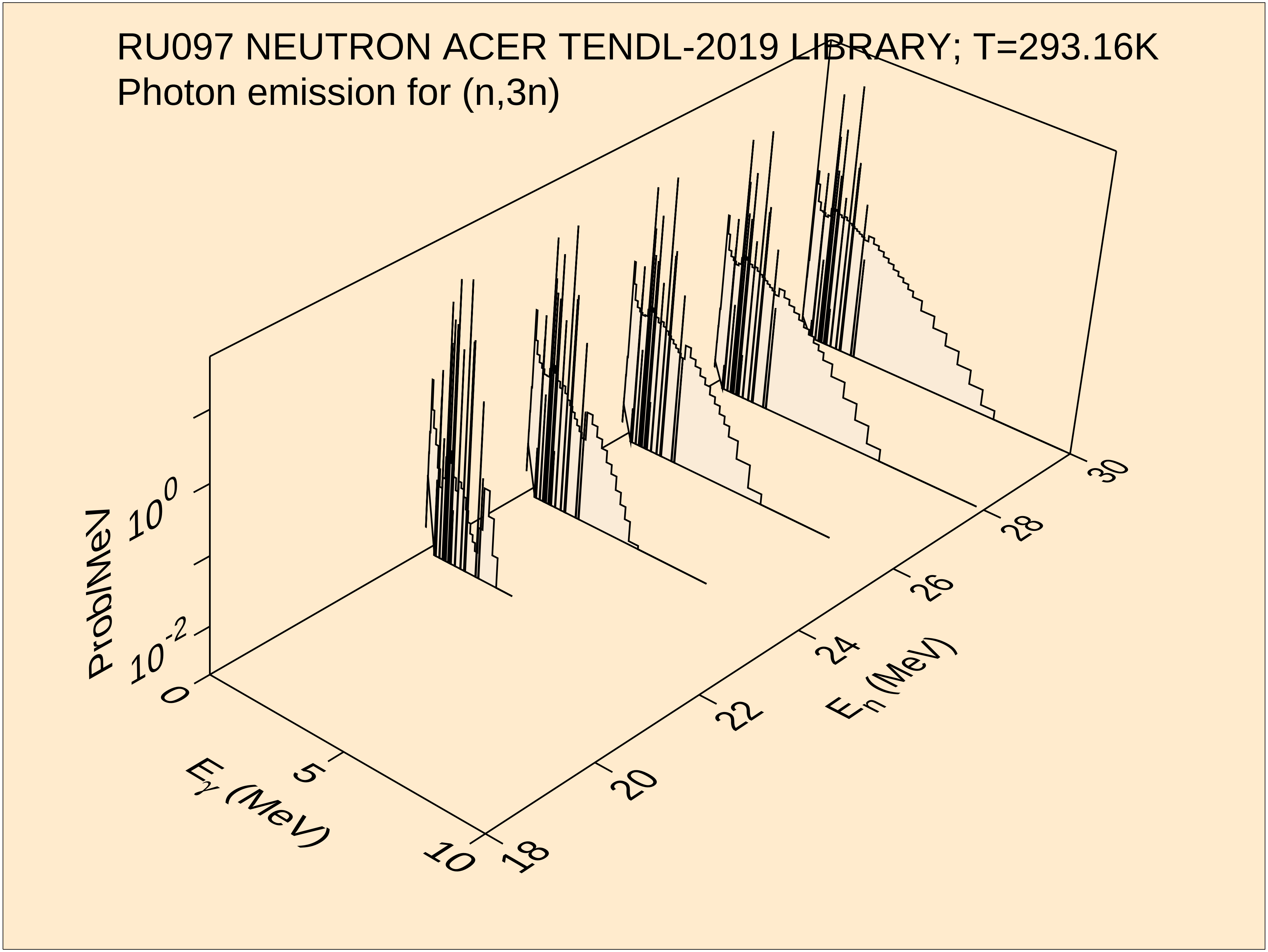


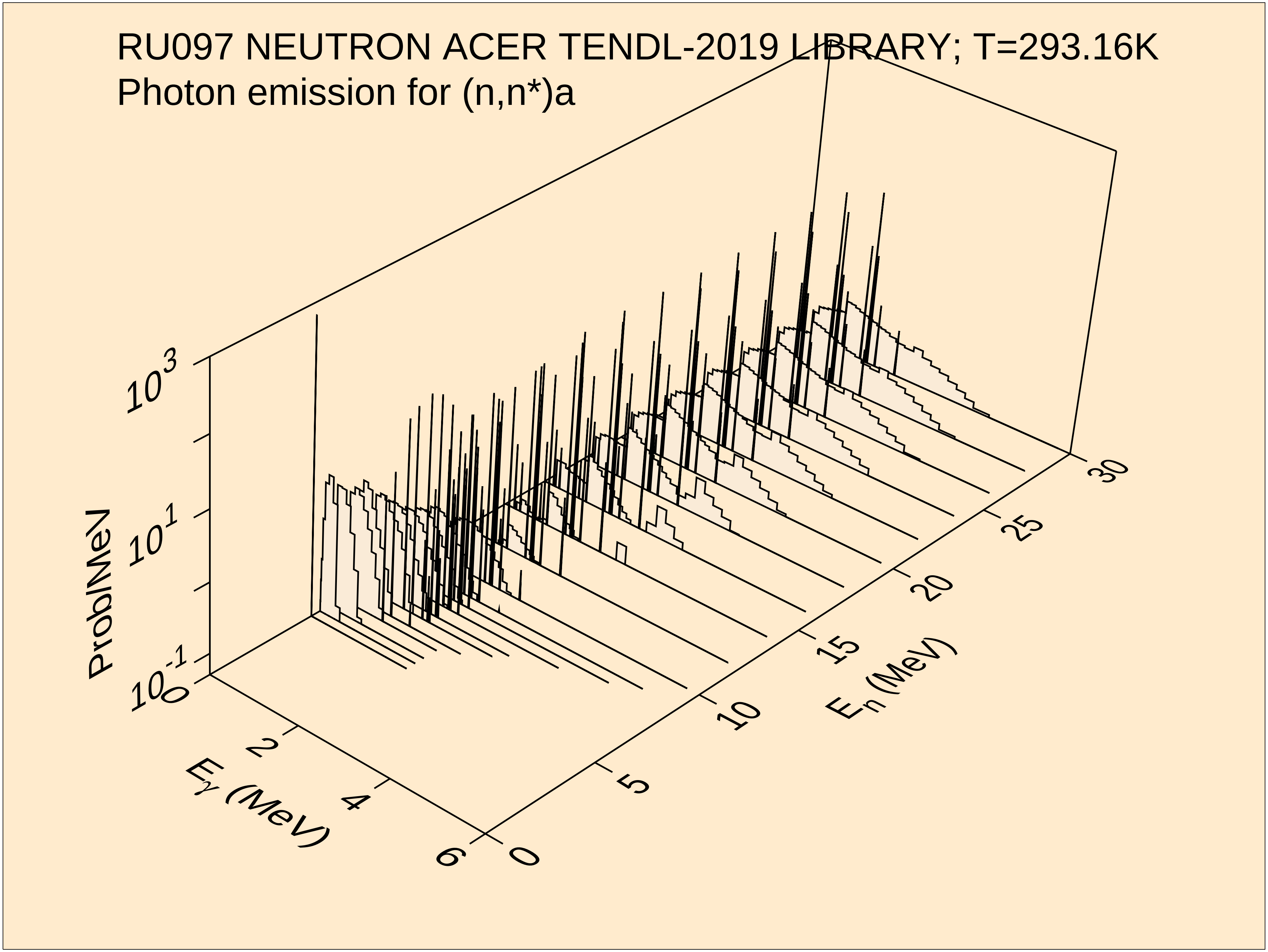
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,x)
Prob/MeV
10^{-2}
10^{-4}
0
20
40
E_γ (MeV)
0
50
100
150
200
E_n (MeV)

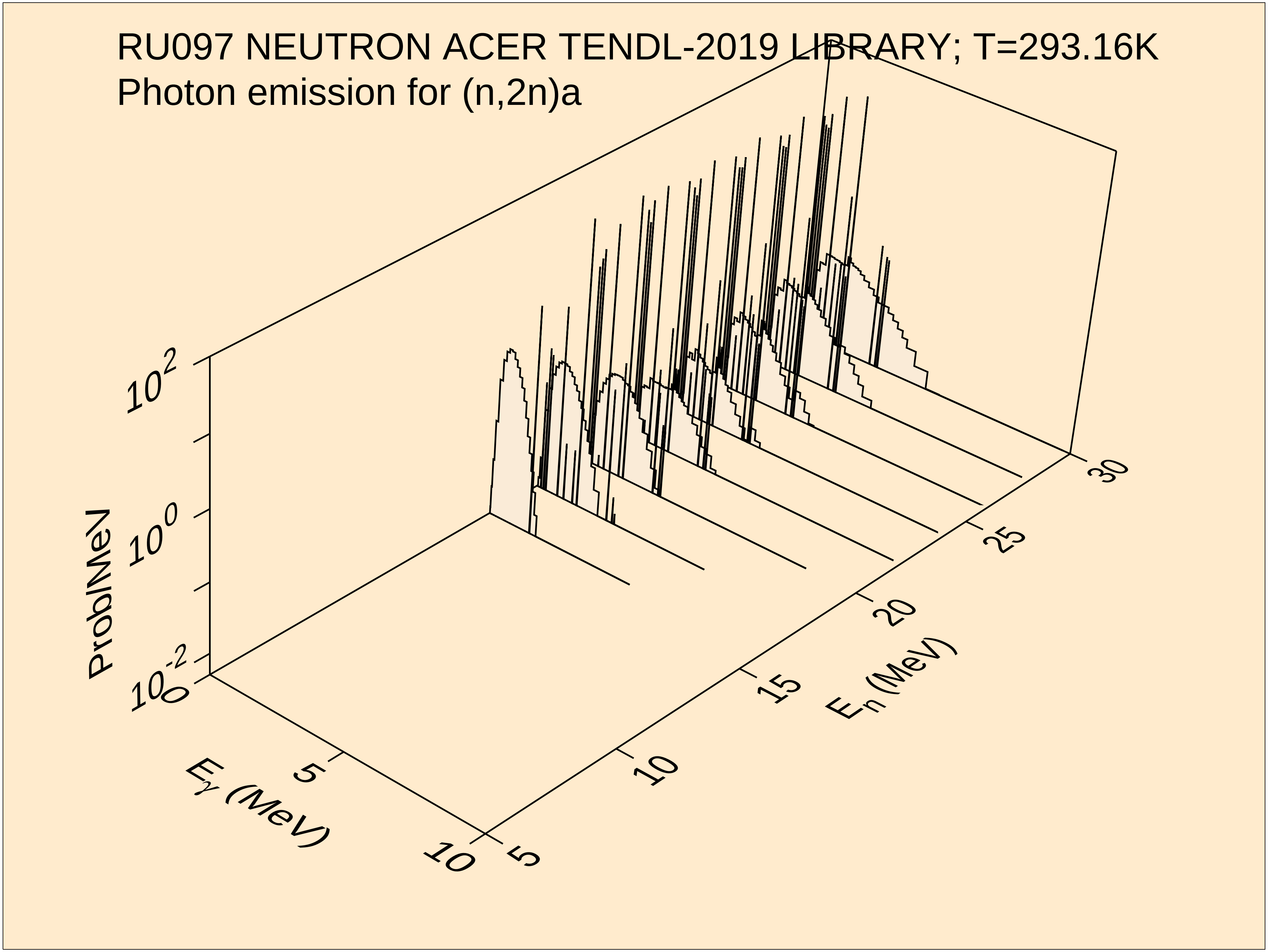


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2nd)
Prob/MeV
10^3
10^4
10^5
10^6
0.0
0.5
1.0
E_γ (MeV)
20
40
60
80
100
120
140
160
180
200
E_n (MeV)

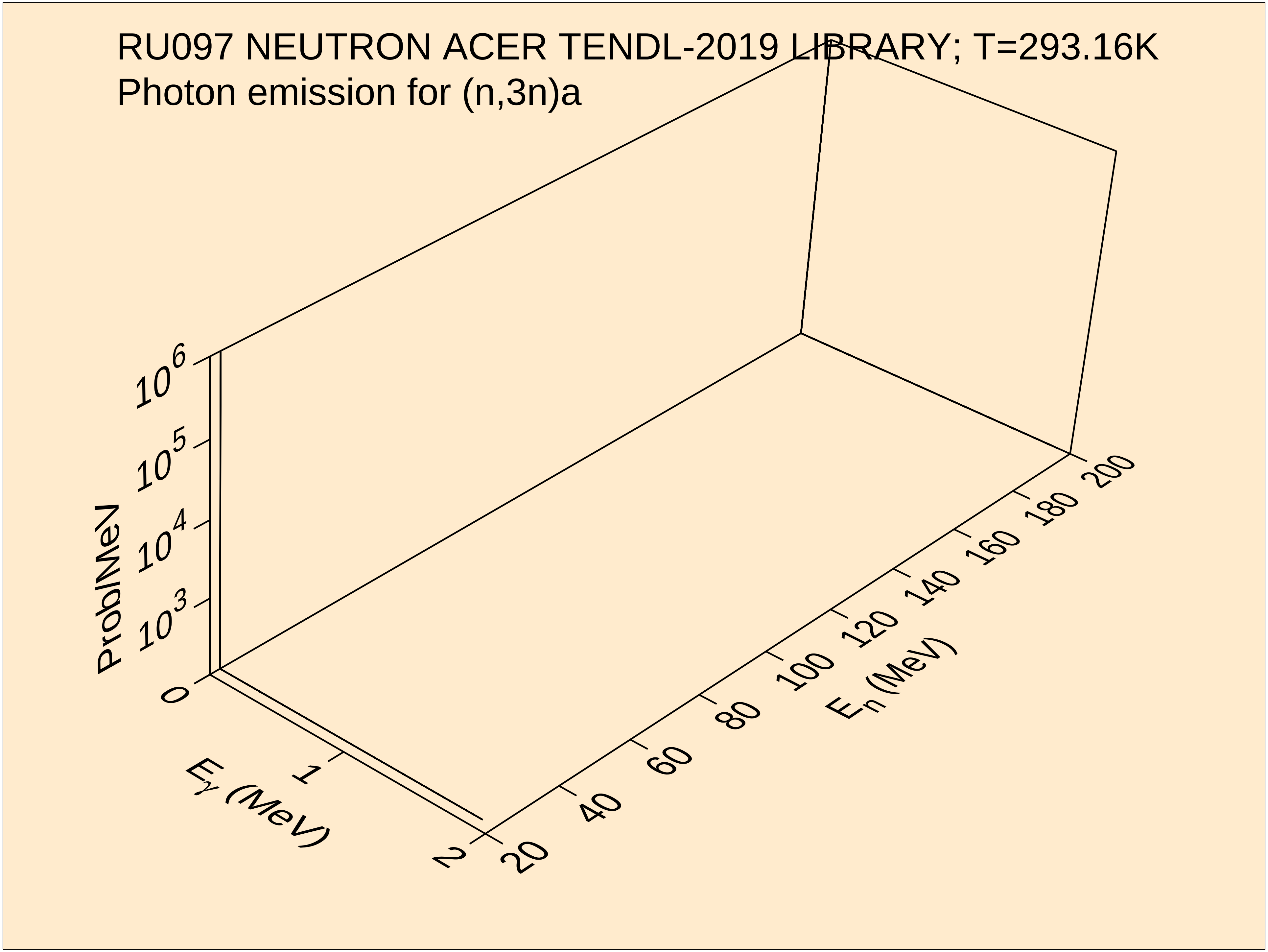

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2n)
ProbMeV
10^{2}
10^{0}
10^{-2}
E_γ (MeV)
0
5
10
E_n (MeV)
5
10
15
20
25
30

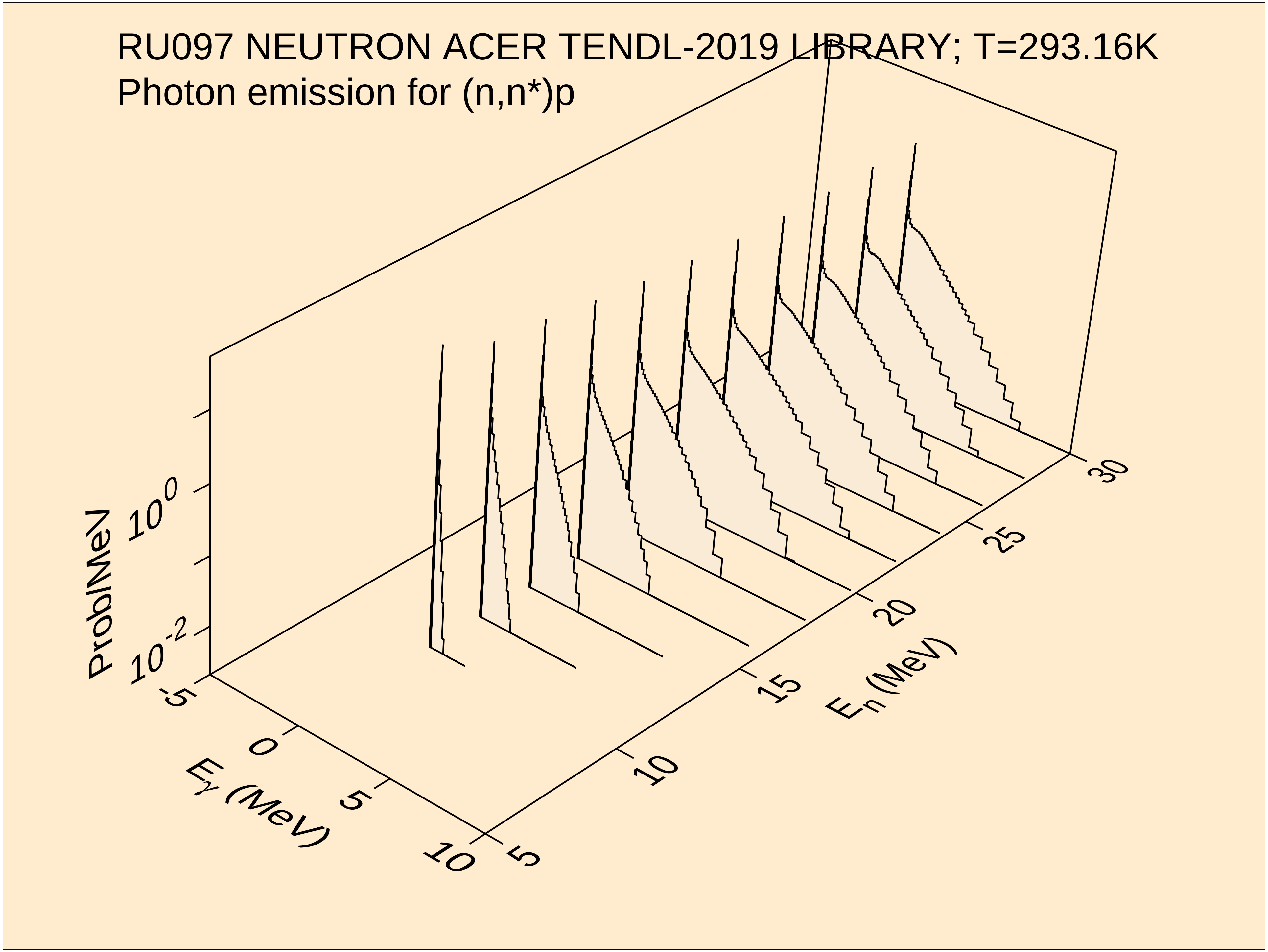

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,3n)
ProbMeV
10^0
10^{-2}
0
5
10
E_γ (MeV)
18
20
22
24
26
28
30
E_n (MeV)

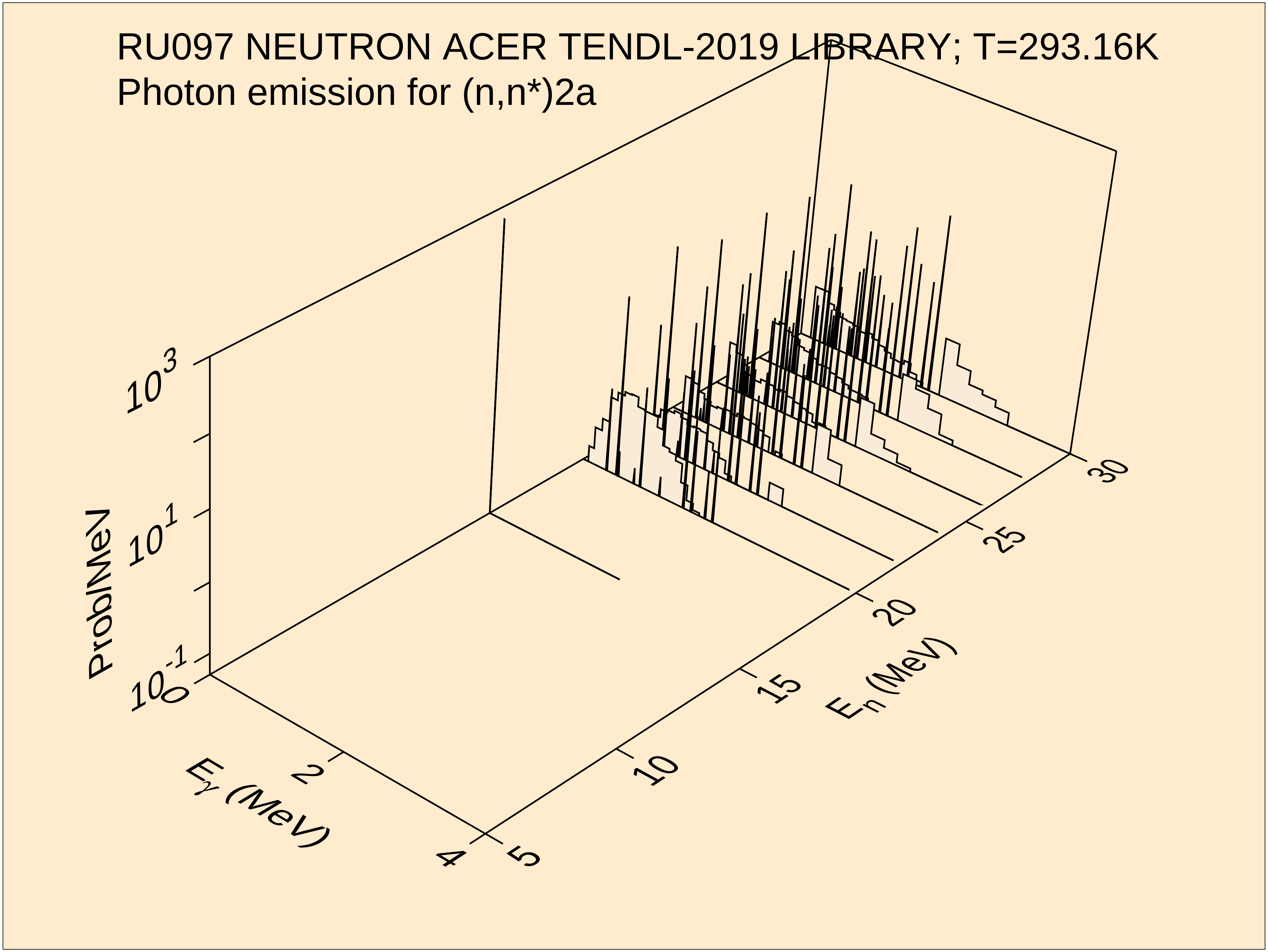

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)a
Prob/MeV
10^3
10^1
10^{-1}
E_γ (MeV)
0
2
4
6
E_n (MeV)
0
5
10
15
20
25
30



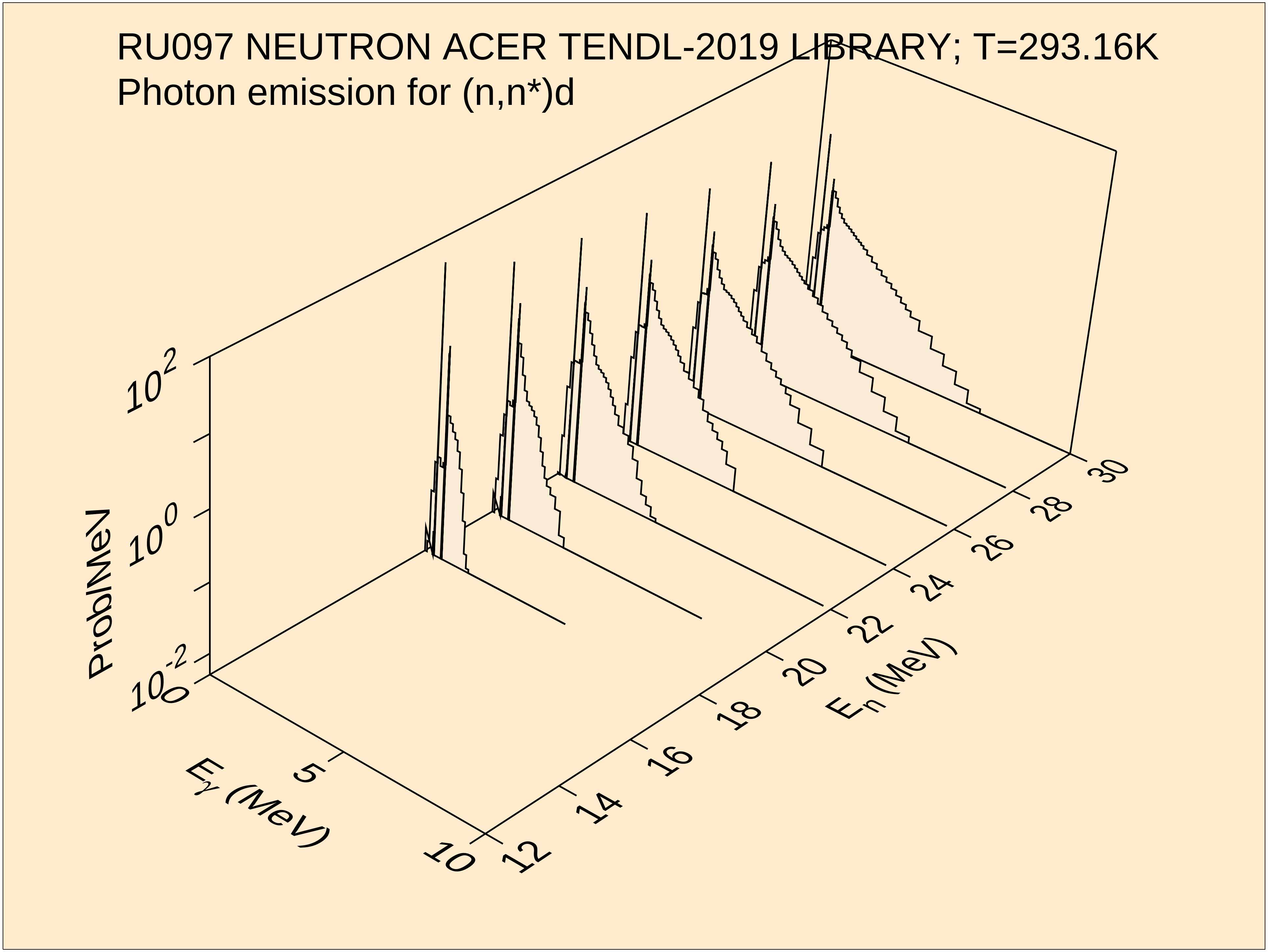
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2n)a
ProbMeV
10^{2}
10^{0}
10^{-2}
E_{γ} (MeV)
0
5
10
E_{n} (MeV)
5
10
15
20
25
30

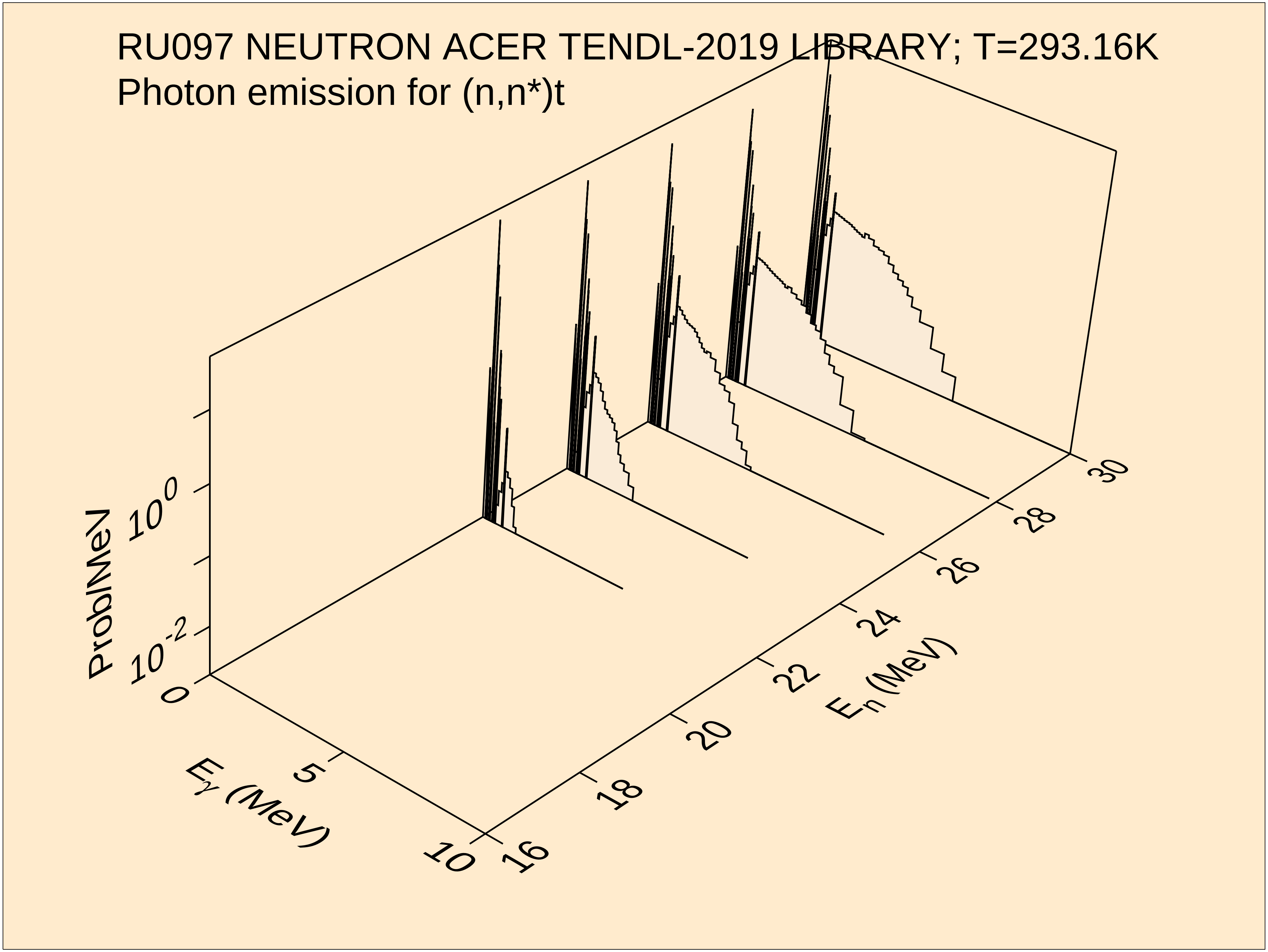

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,3n)a
Prob/MeV
10^6
10^5
10^4
10^3
0
1
2
E_γ (MeV)
20
40
60
80
100
120
140
160
180
200
E_n (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)p
ProbMeV
10^{0}
10^{-2}
E_{γ} (MeV)
-5
0
5
10
E_{n} (MeV)
5
10
15
20
25
30

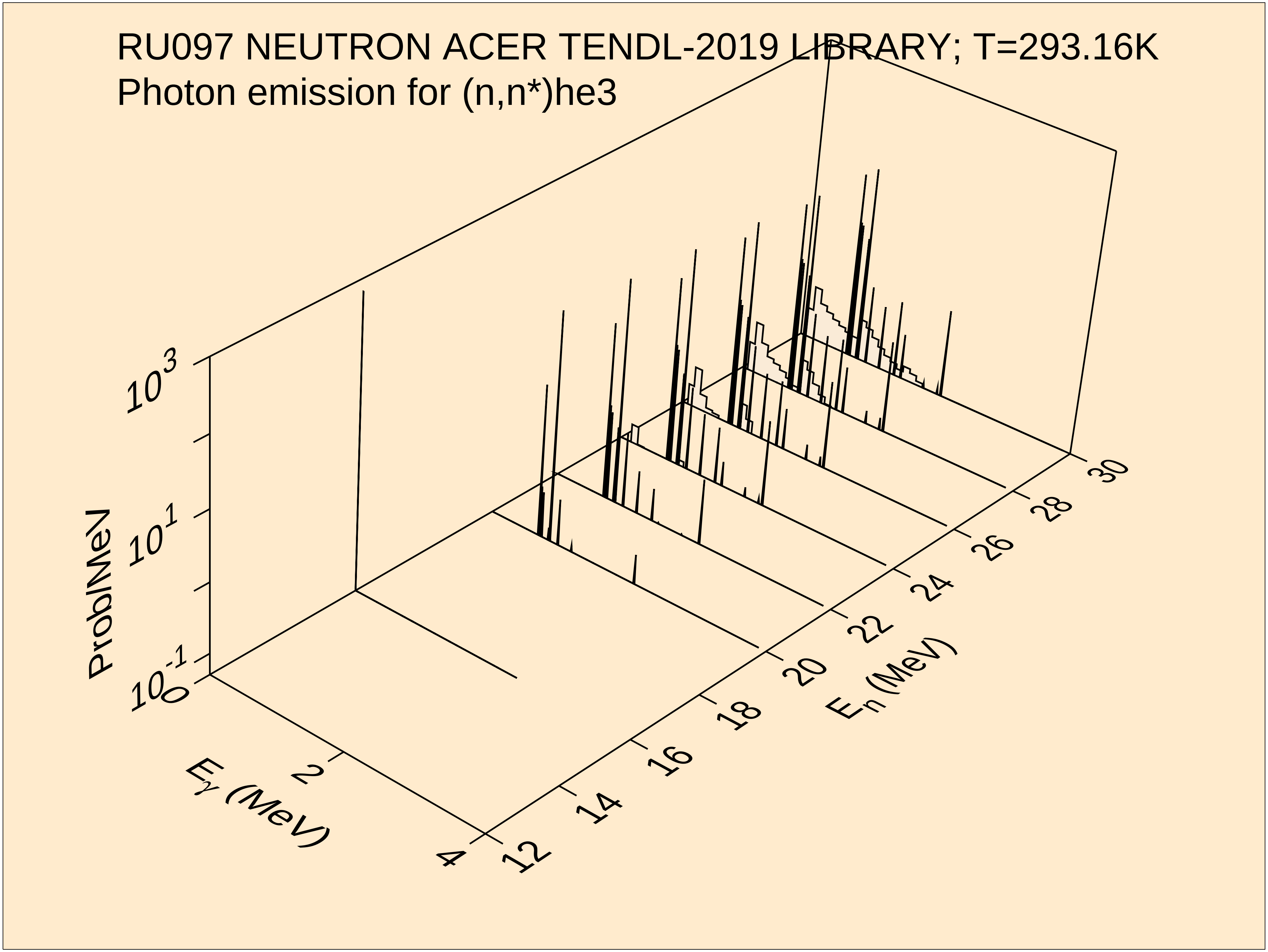


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)2a
Prob/MeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_{γ} (MeV)
5
10
15
20
25
30
E_{n} (MeV)

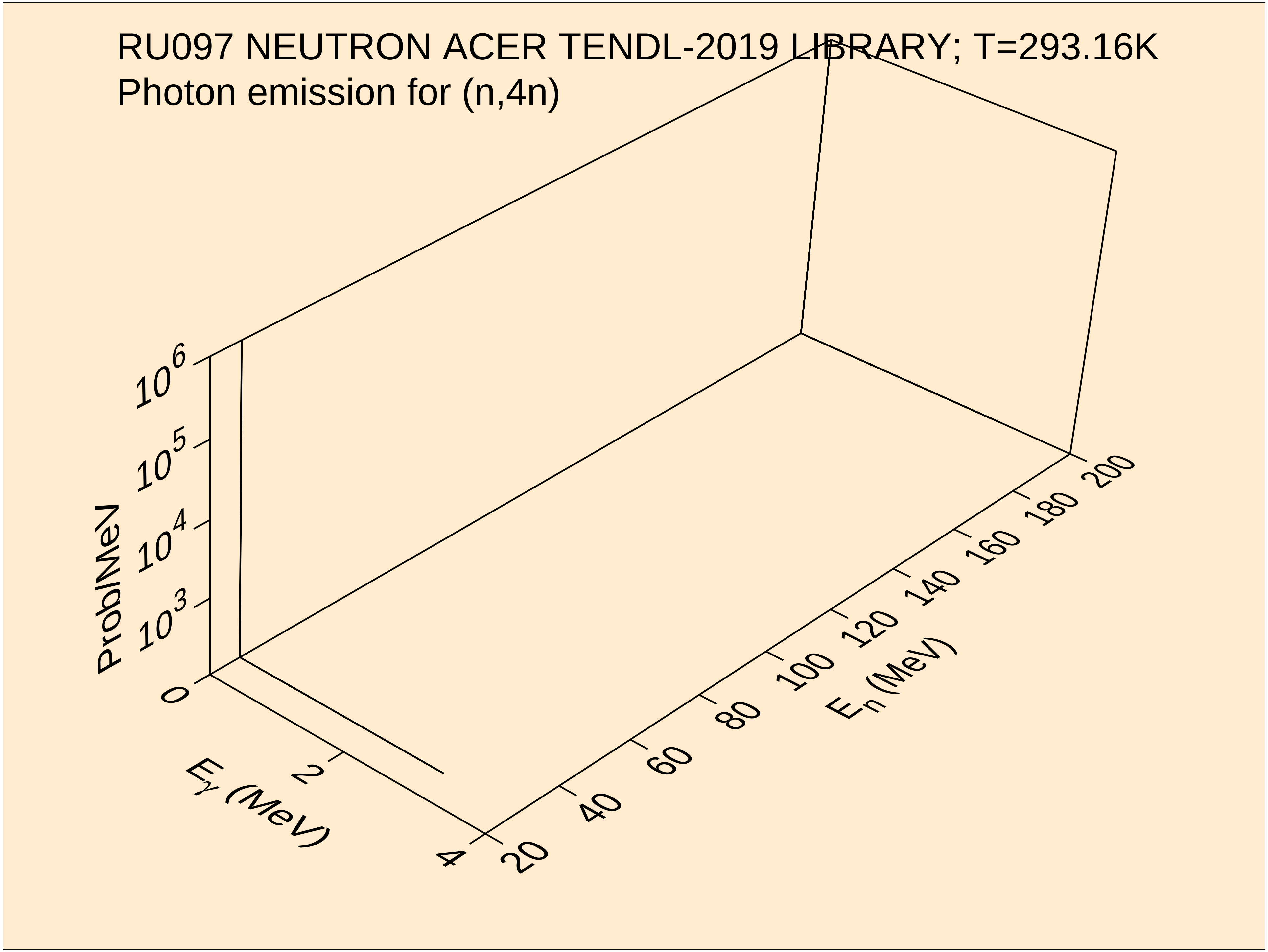

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)d
ProbMeV
10^{2}
10^{0}
10^{-2}
0
5
10
E_{γ} (MeV)
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

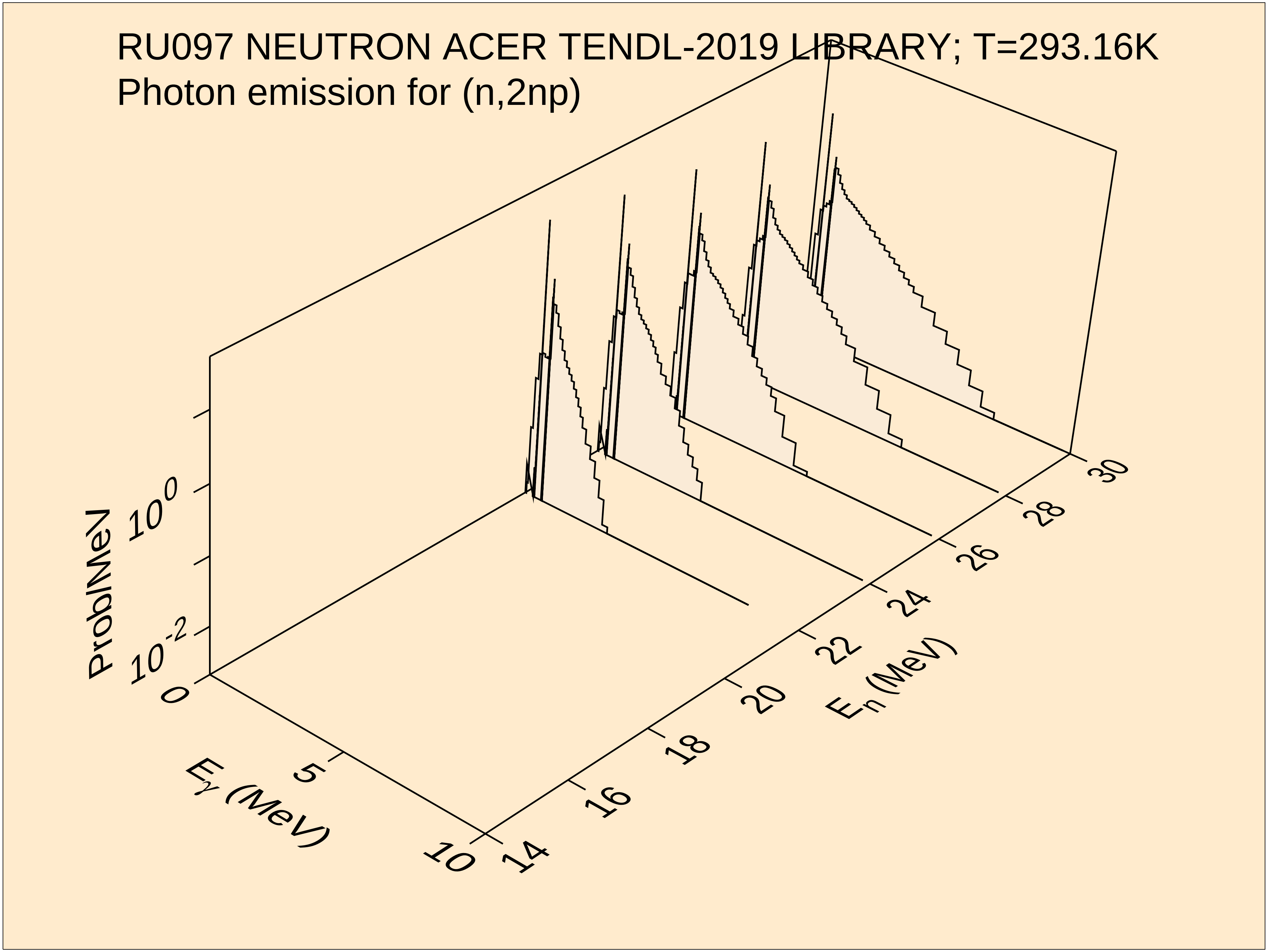


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)t
Prob/MeV
10^0
10^-2
0
5
10
E_γ (MeV)
16
18
20
22
24
26
28
30
E_n (MeV)

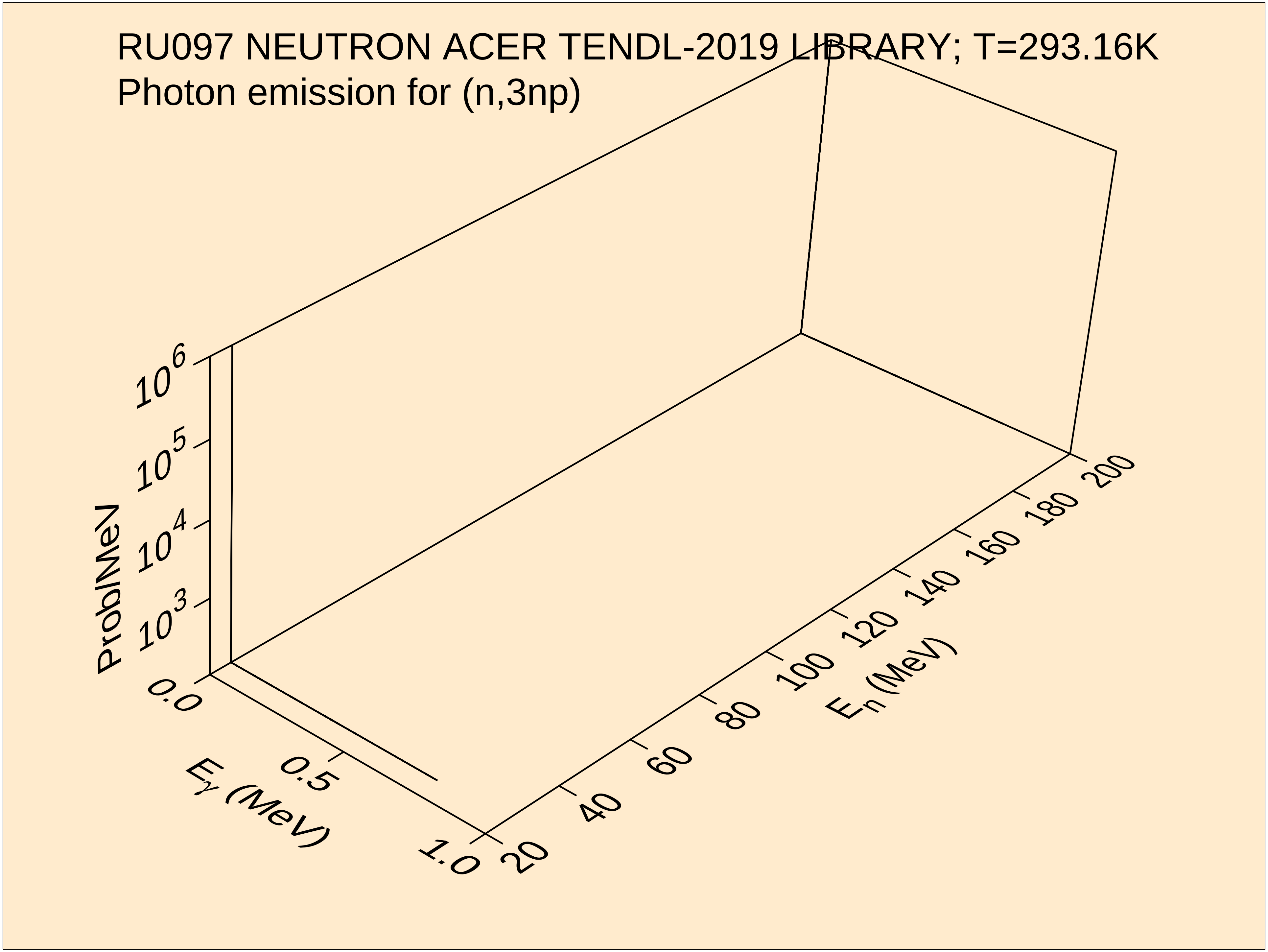


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*)he3
ProbMeV
10^{3}
10^{1}
10^{-1}
0
2
4
E_{γ} (MeV)
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

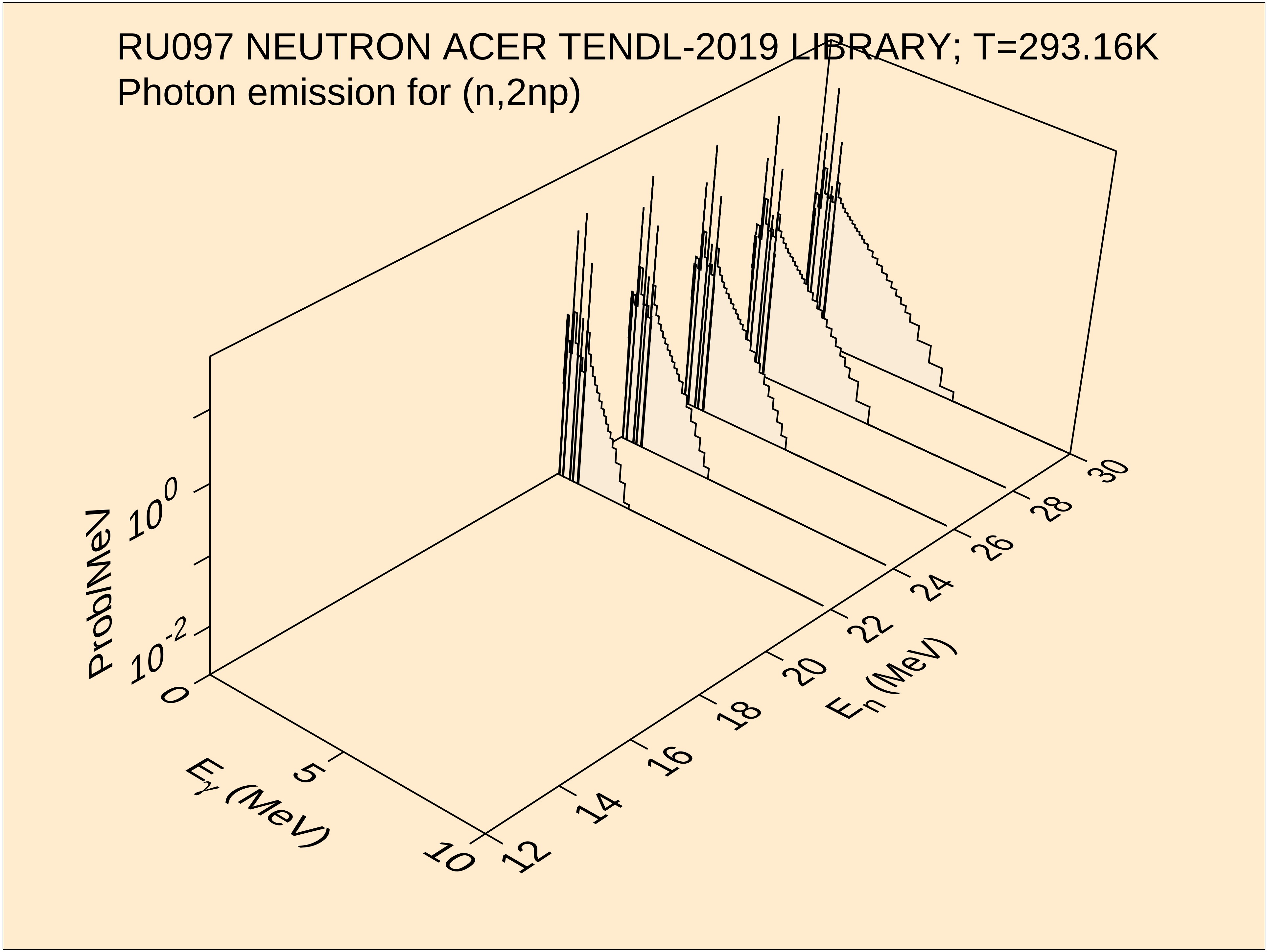

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,4n)
Prob/MeV
0
10^3
10^4
10^5
10^6
E_γ (MeV)
2
4
E_n (MeV)
20
40
60
80
100
120
140
160
180
200



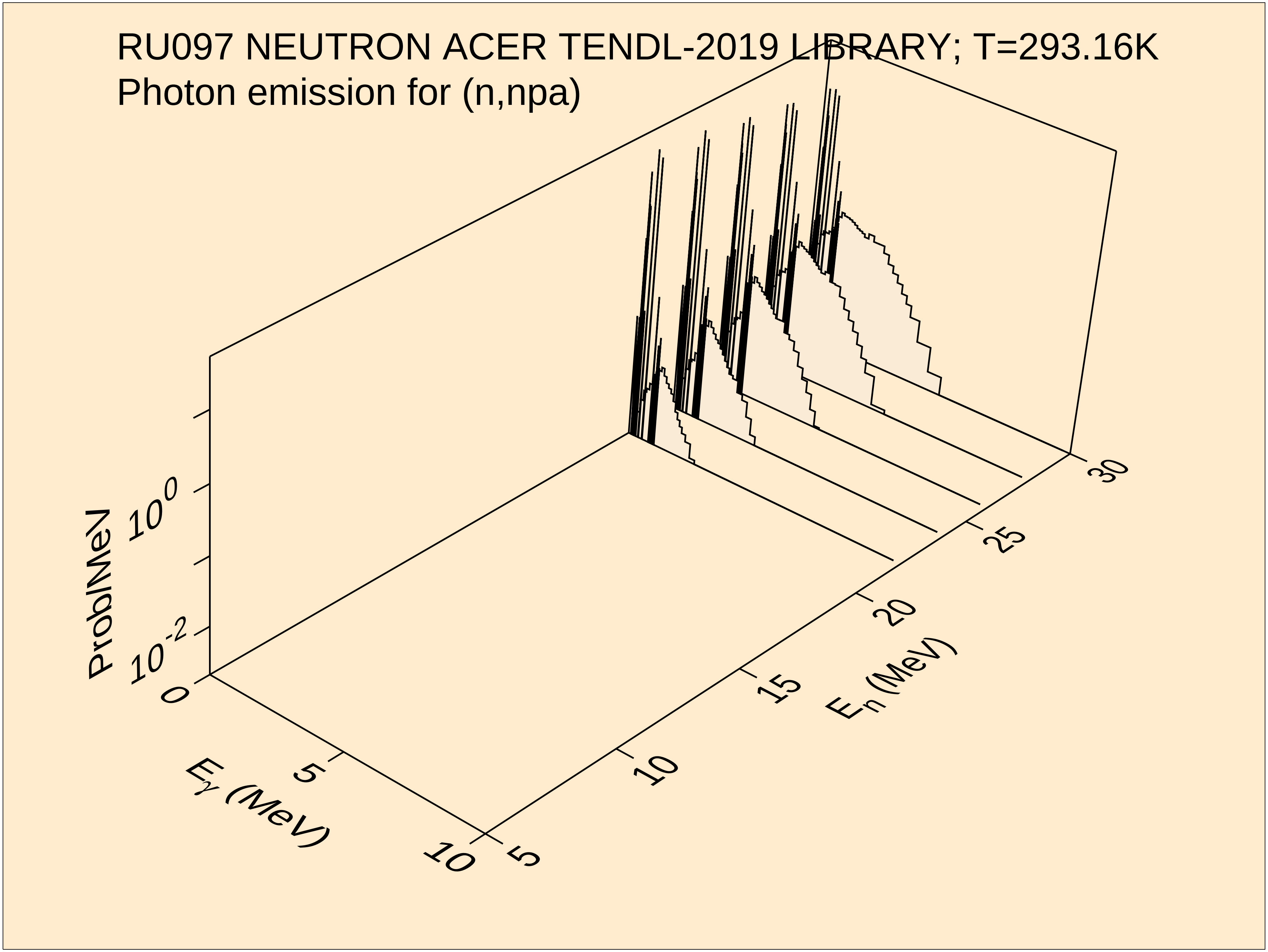
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2np)
Prob/MeV
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
14
16
18
20
22
24
26
28
30
E_n (MeV)

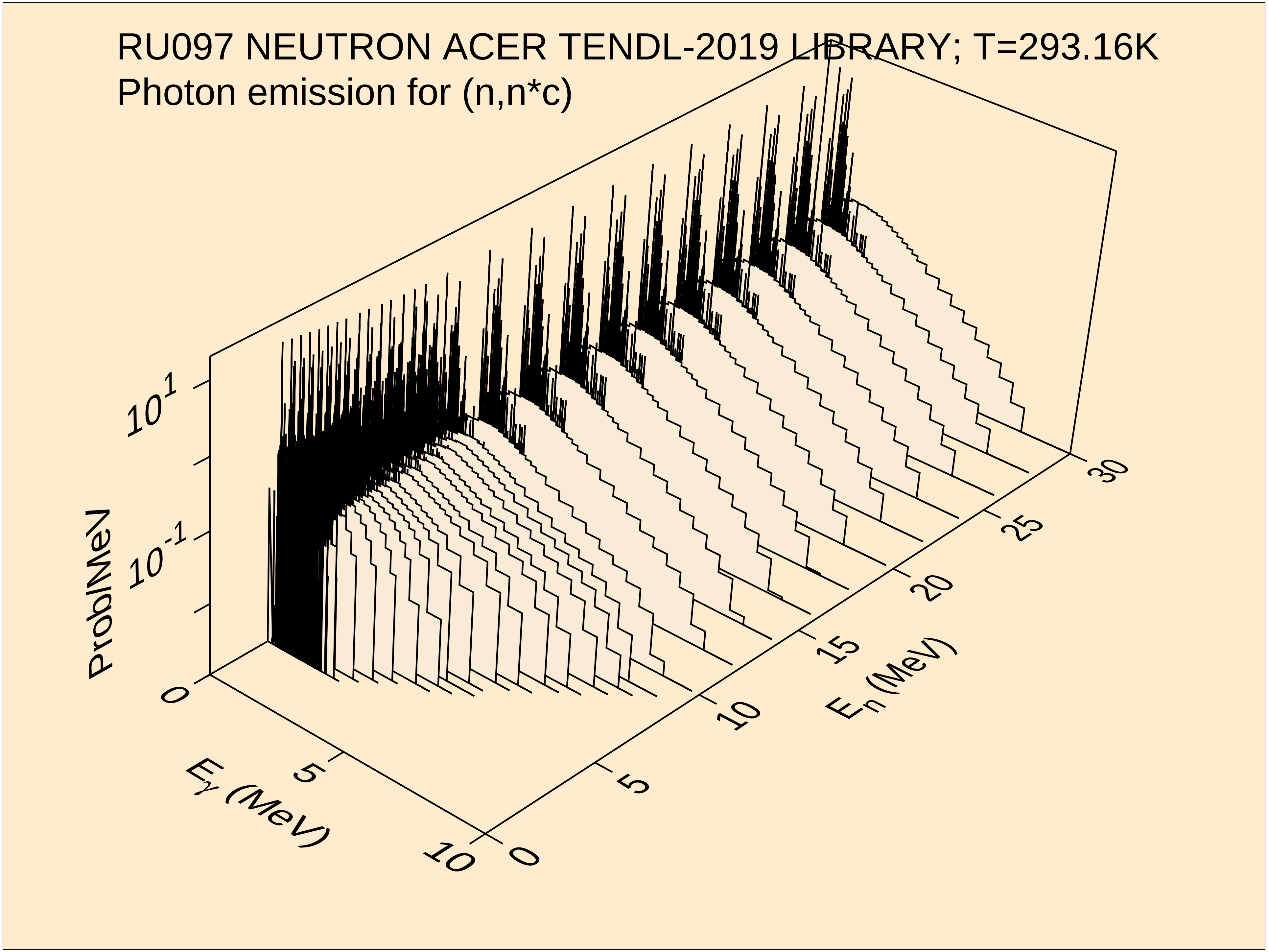


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,3np)
Prob/MeV
10^3
10^4
10^5
10^6
0.0
0.5
1.0
E_γ (MeV)
20
40
60
80
100
120
140
160
180
200
E_n (MeV)



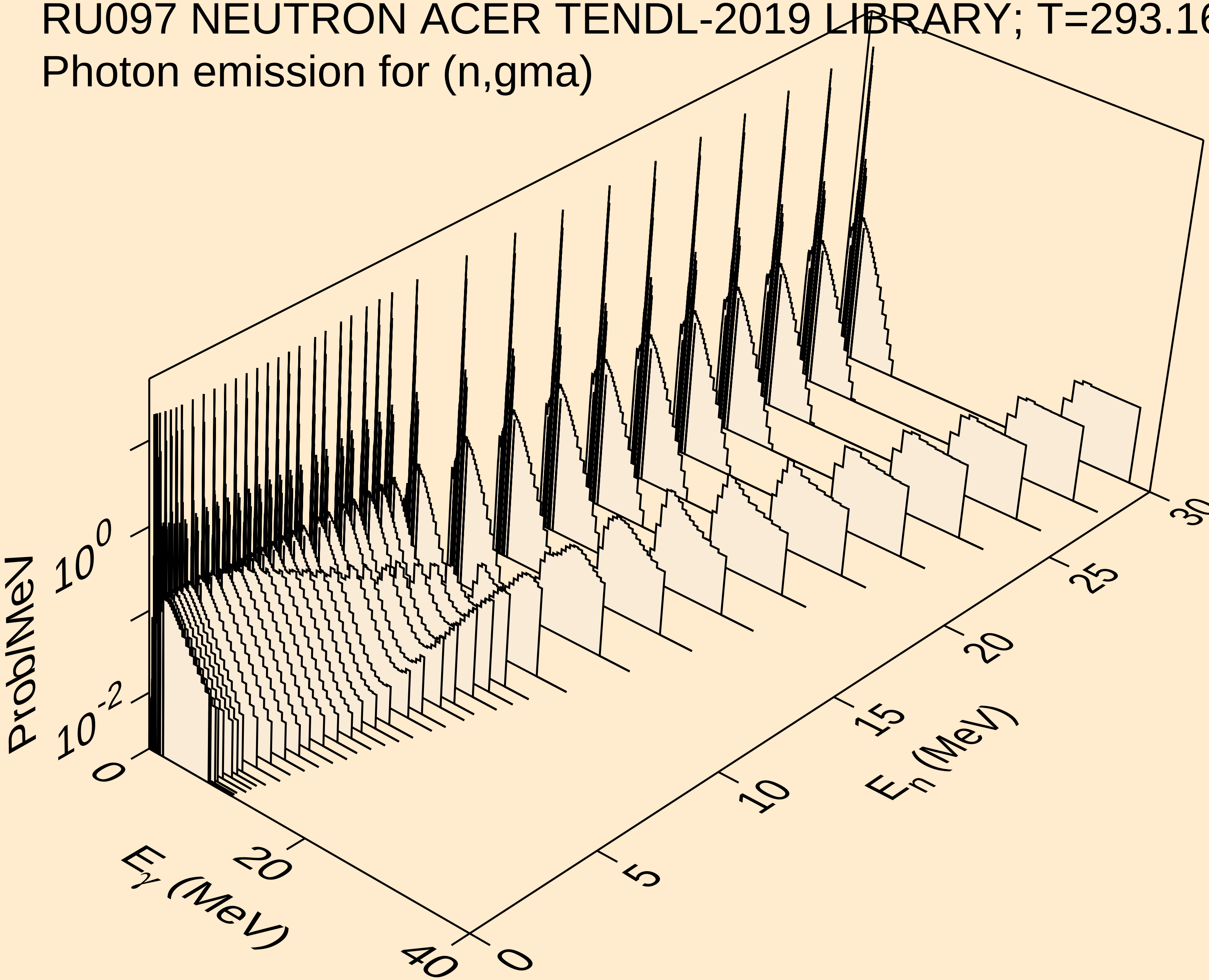
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2np)
Prob/MeV
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

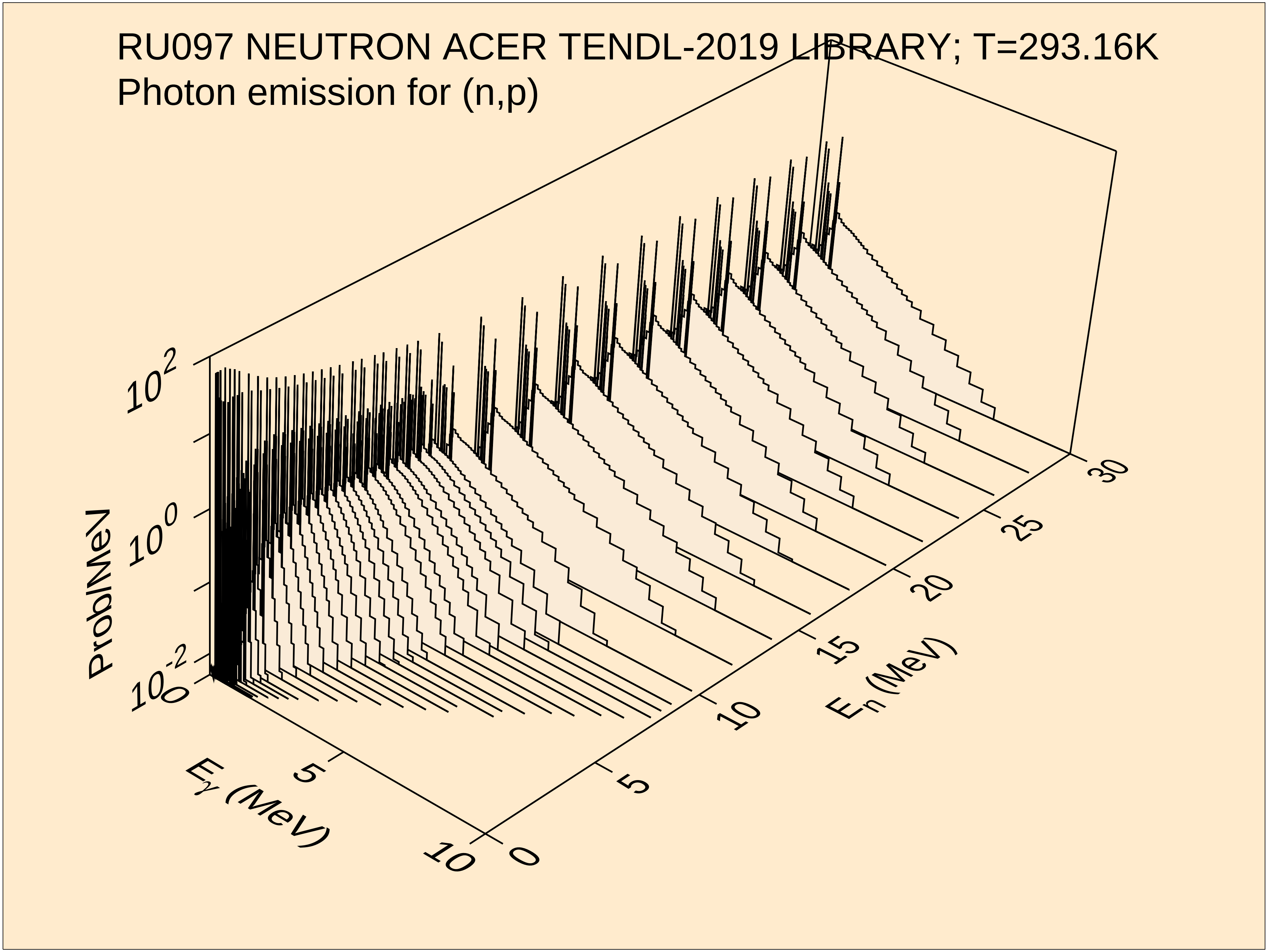

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,npa)
ProbMeV
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

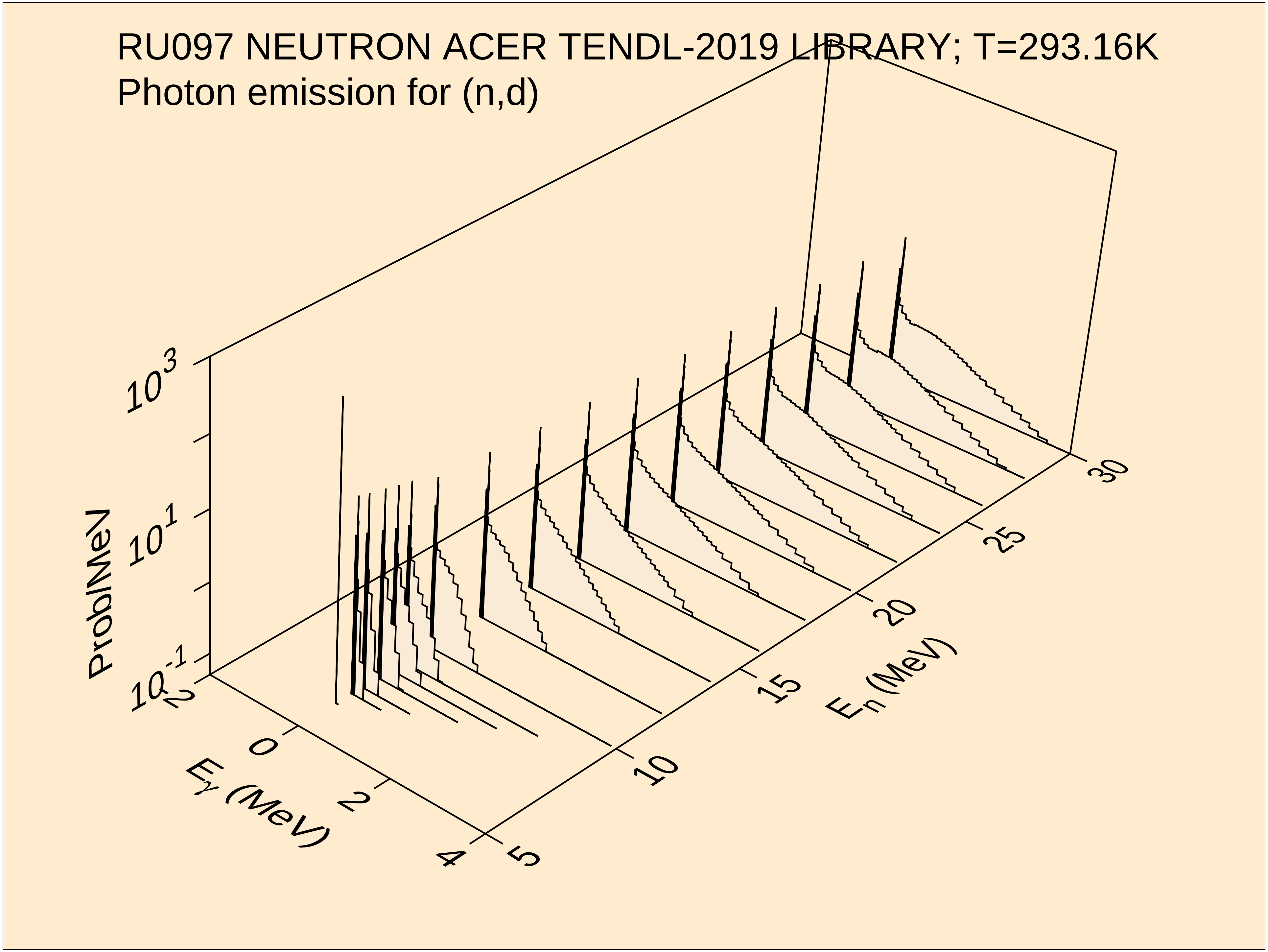


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,n*c)
Prob/MeV
10^{1}
10^{-1}
0
5
10
E_γ (MeV)
0
5
10
15
20
25
30
E_n (MeV)

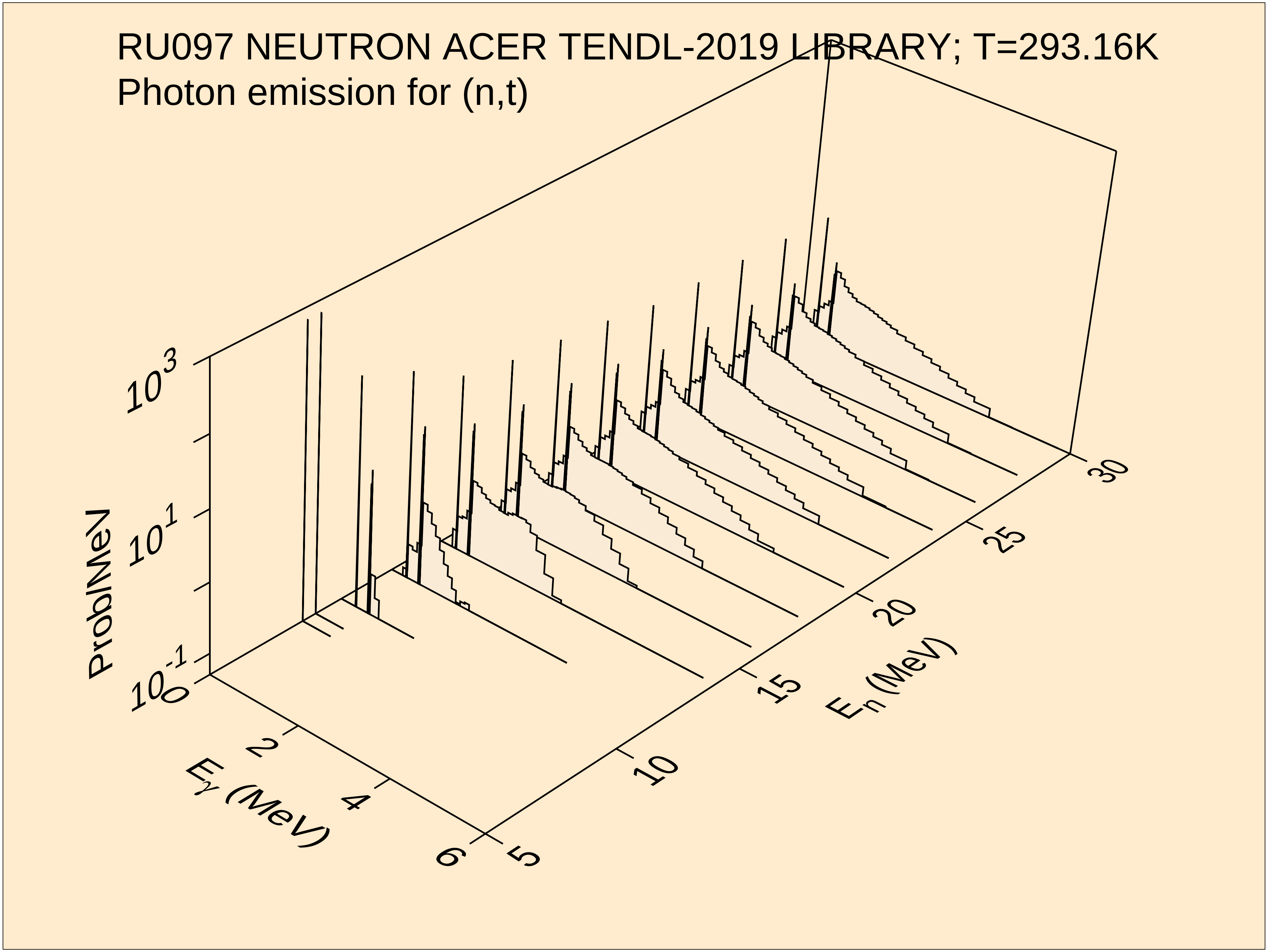
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,gma)



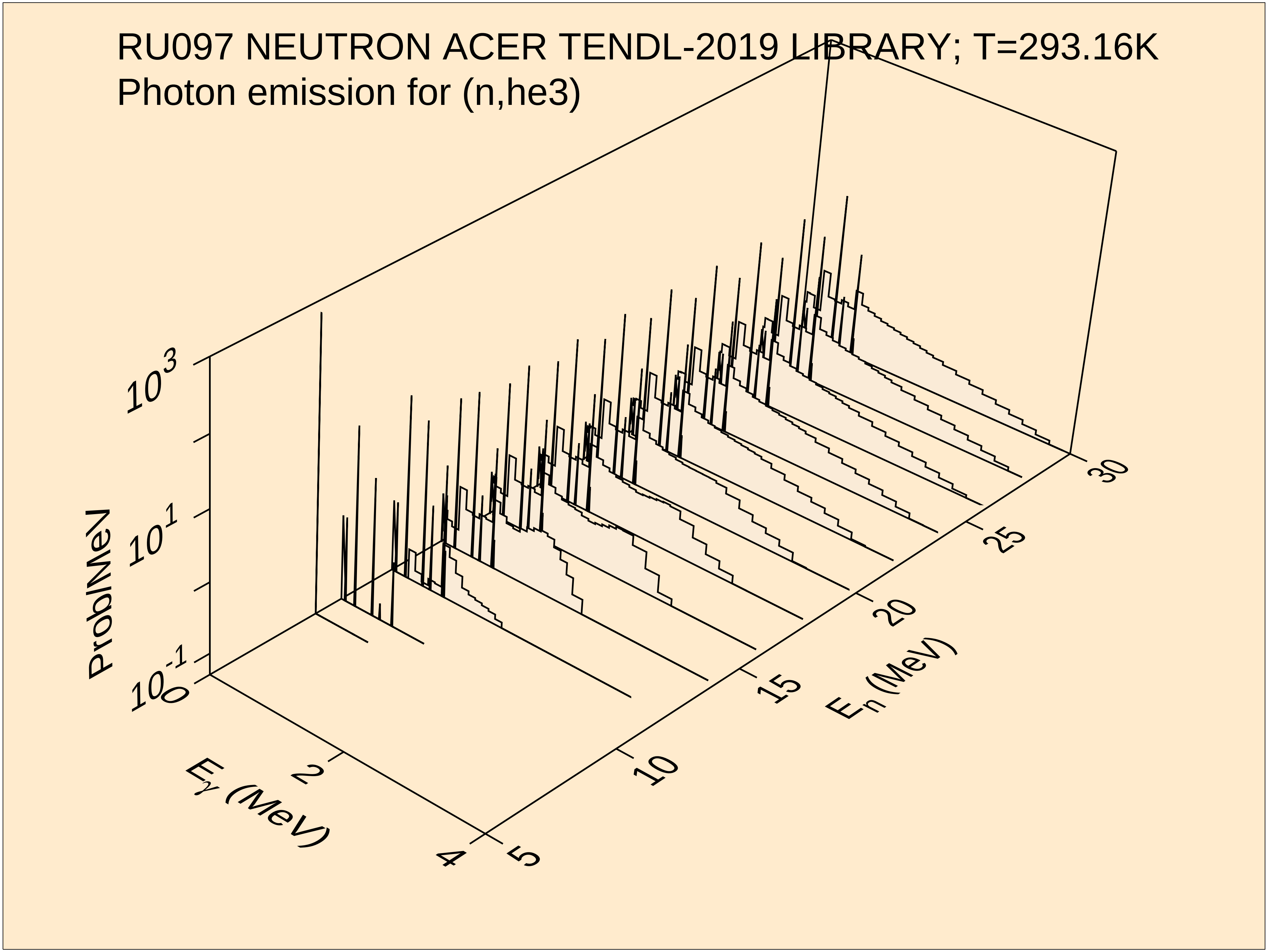

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,p)
Prob/MeV
10^{2}
10^{0}
10^{-2}
E_{γ} (MeV)
0
5
10
E_{n} (MeV)
0
5
10
15
20
25
30



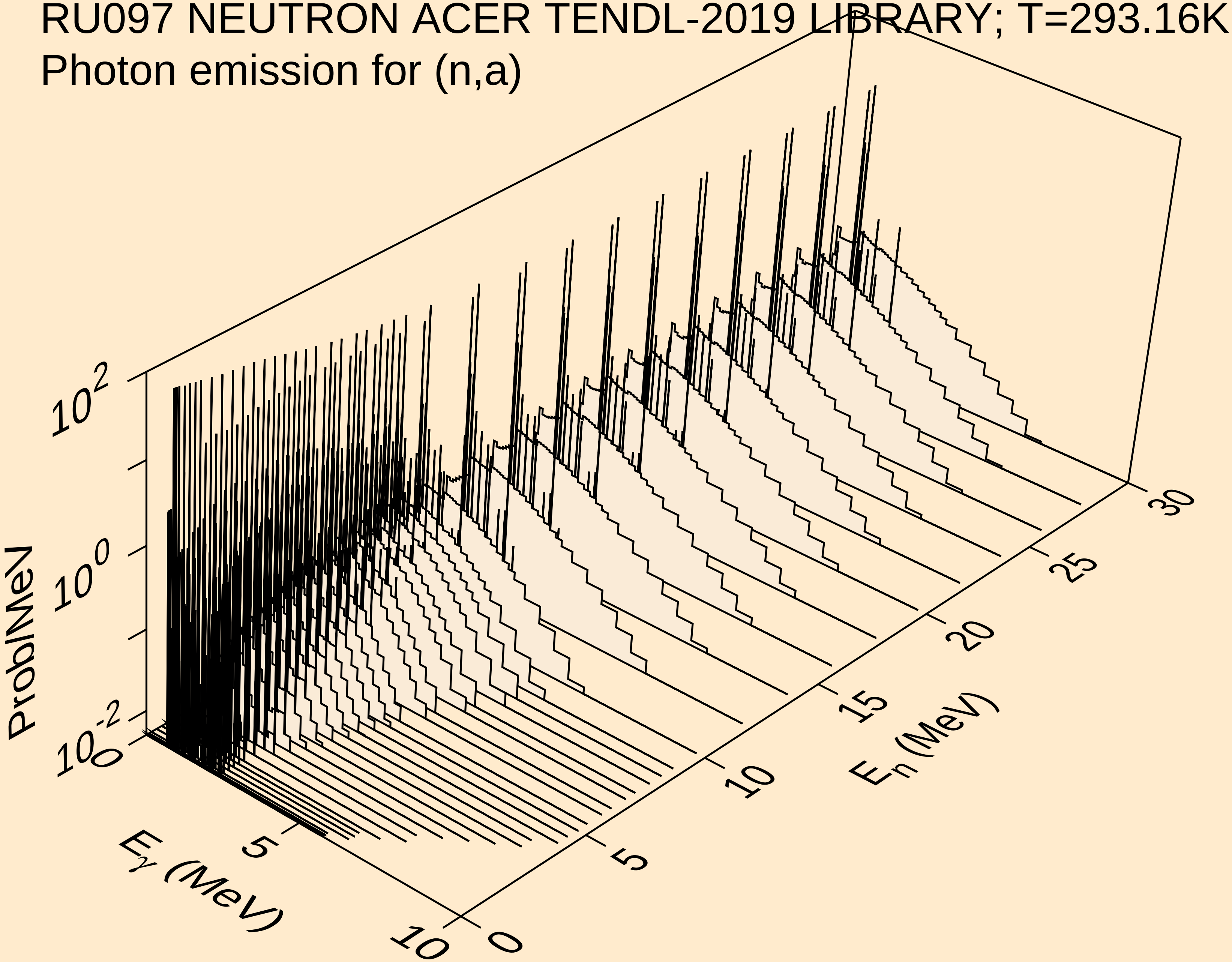
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,d)
Prob/MeV
10^{3}
10^{1}
10^{-1}
E_γ (MeV)
-2
0
2
4
E_n (MeV)
5
10
15
20
25
30

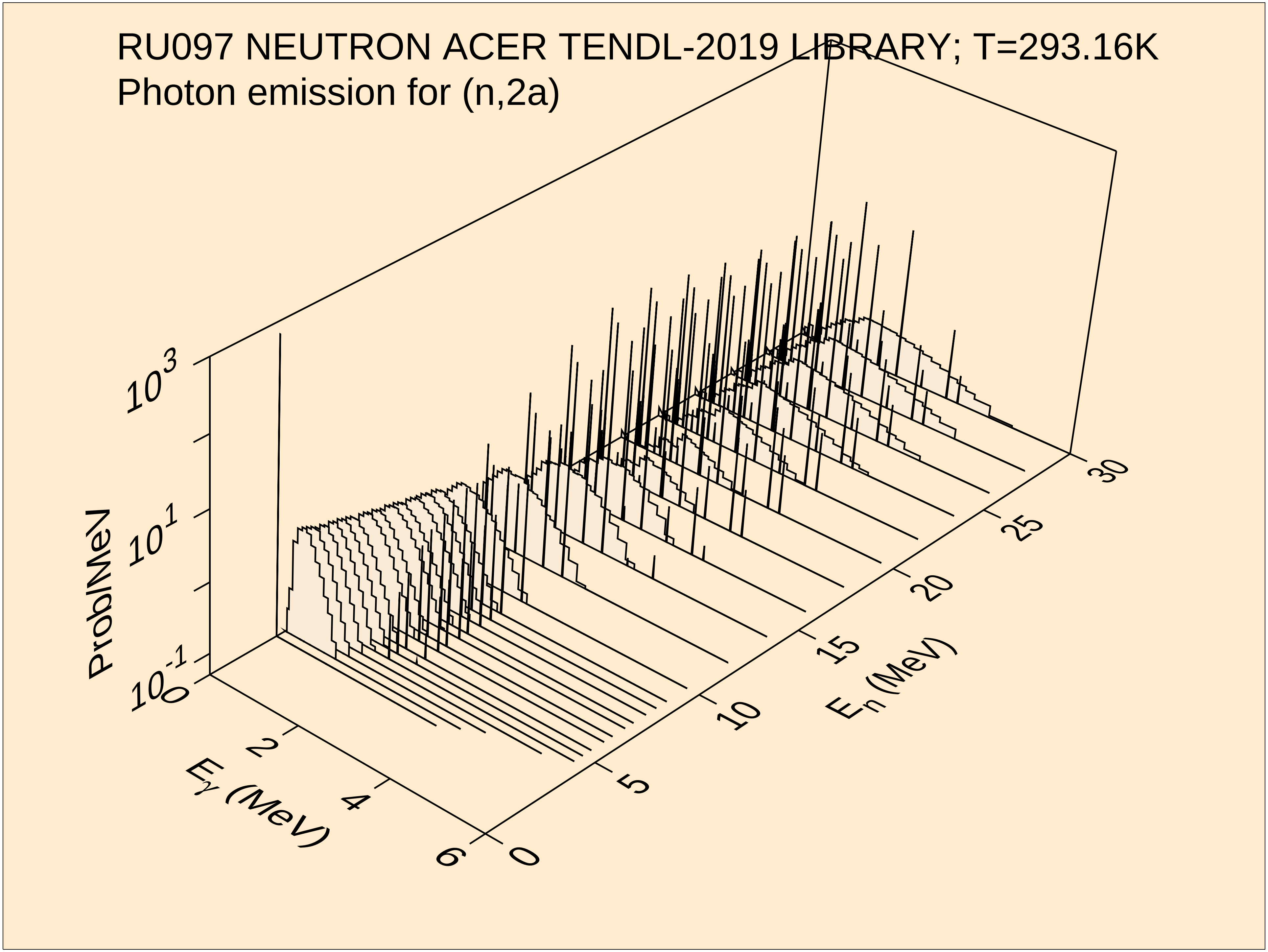


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,t)
10^3
10^1
10^{-1}
Prob/MeV
0
2
4
6
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

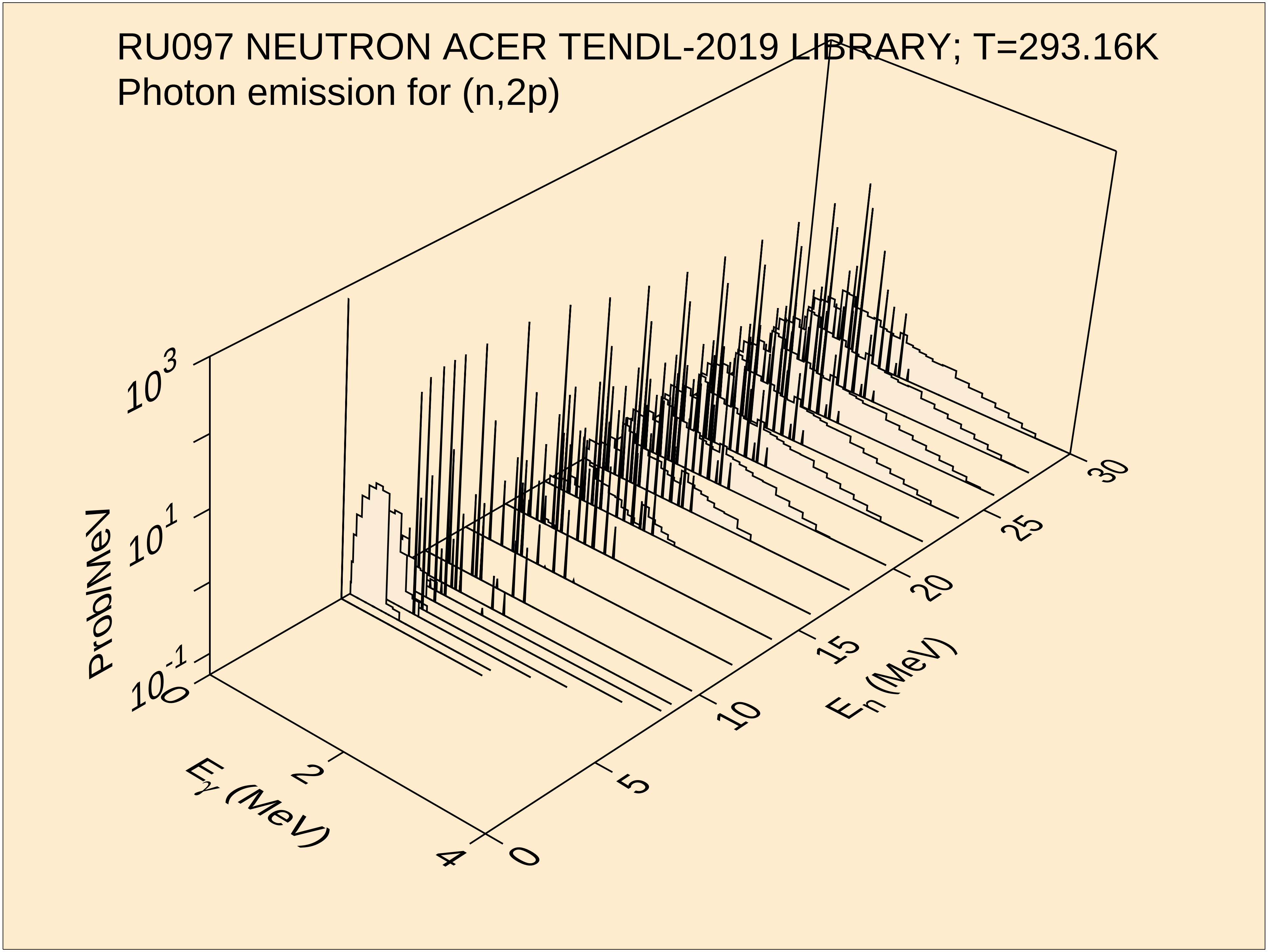

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,he3)
ProbMeV
10^{3}
10^{1}
10^{-1}
E_{γ} (MeV)
0
2
4
E_n (MeV)
5
10
15
20
25
30

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,a)

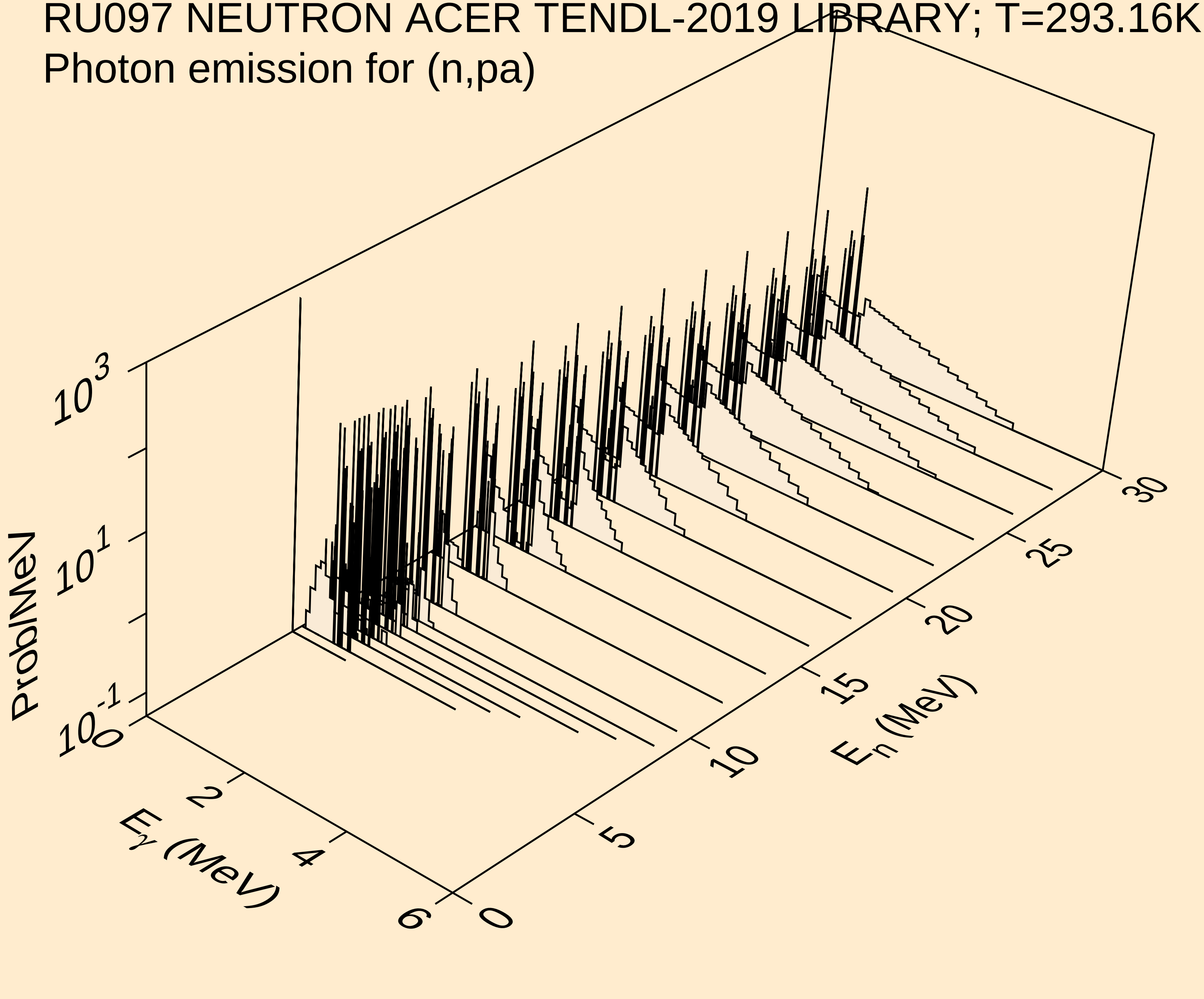


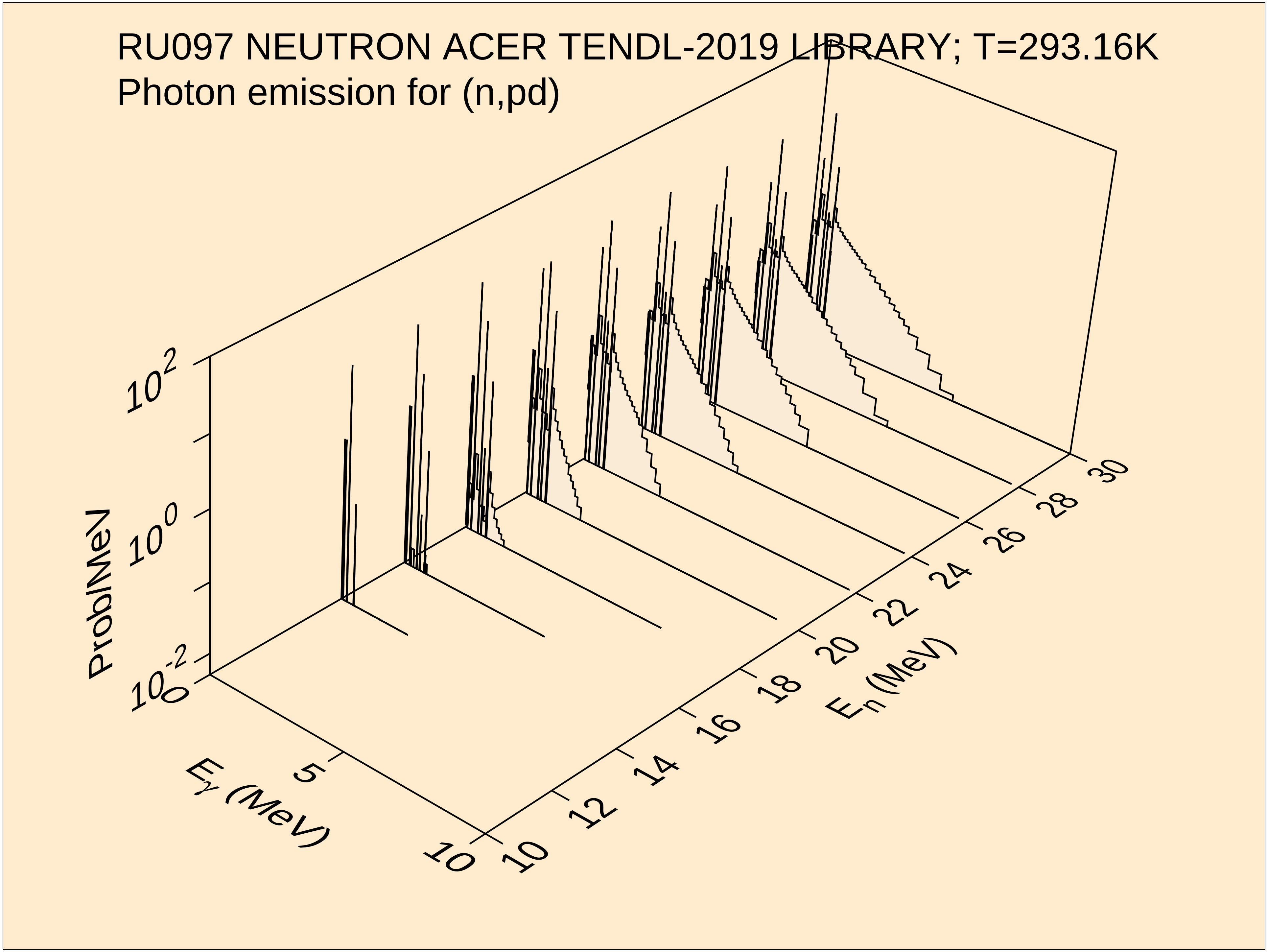


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2a)
ProbMeV
10^{3}
10^{1}
10^{-1}
E_n (MeV)
0
5
10
15
20
25
30
E_γ (MeV)
0
2
4
6

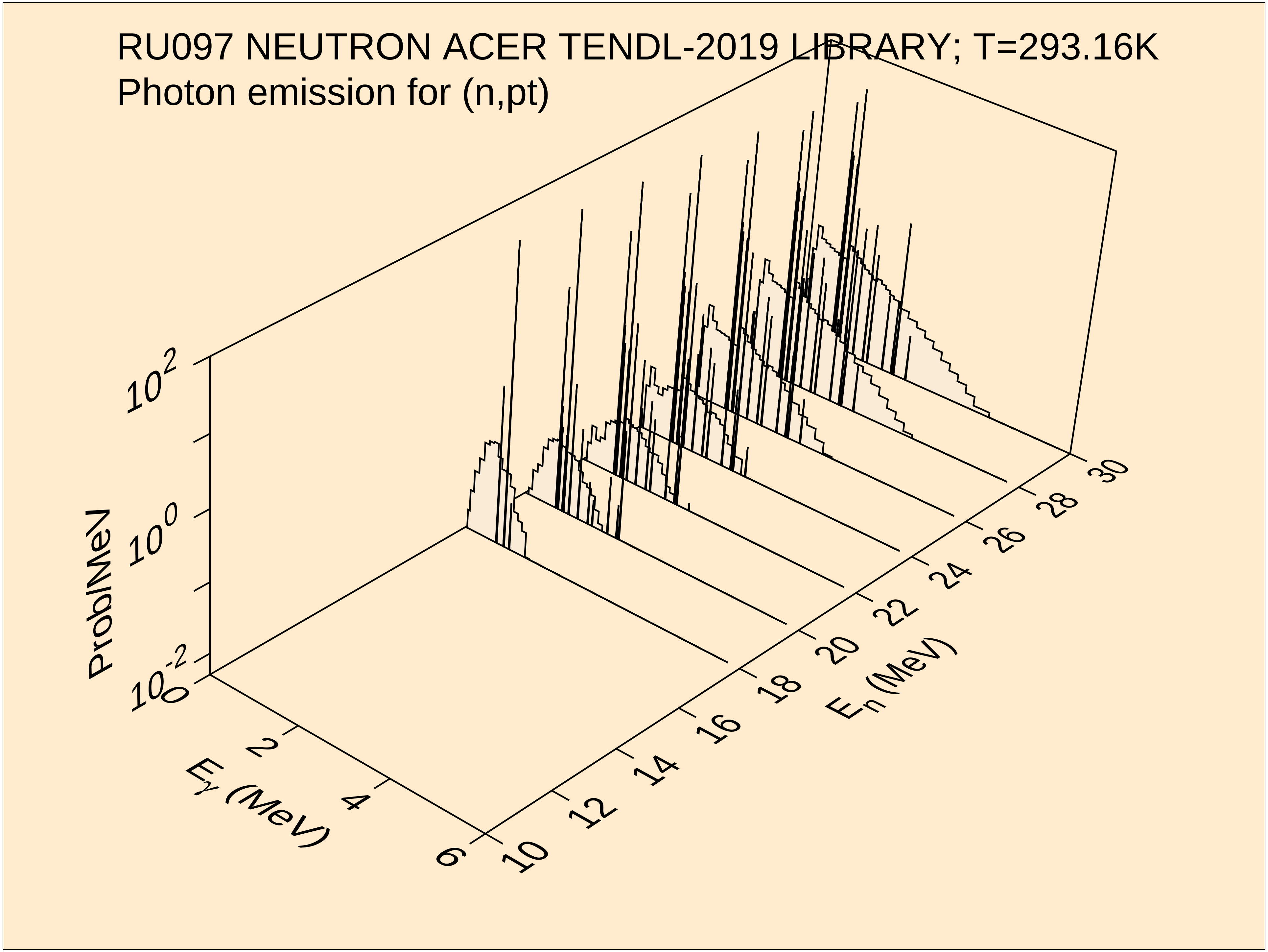

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,2p)
Prob/MeV
10^{3}
10^{1}
10^{-1}
E_{γ} (MeV)
0
2
4
E_{n} (MeV)
0
5
10
15
20
25
30

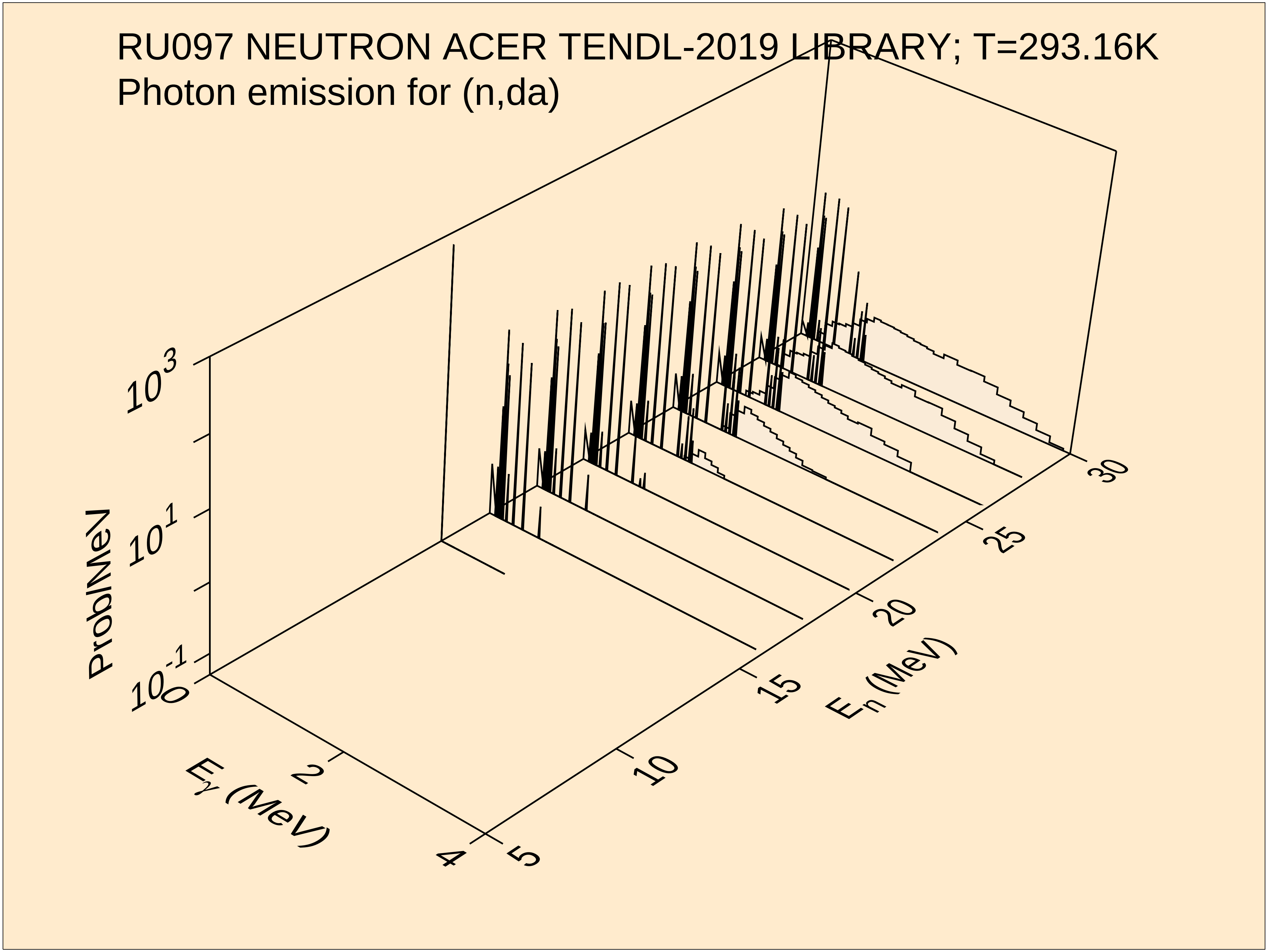
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,pa)



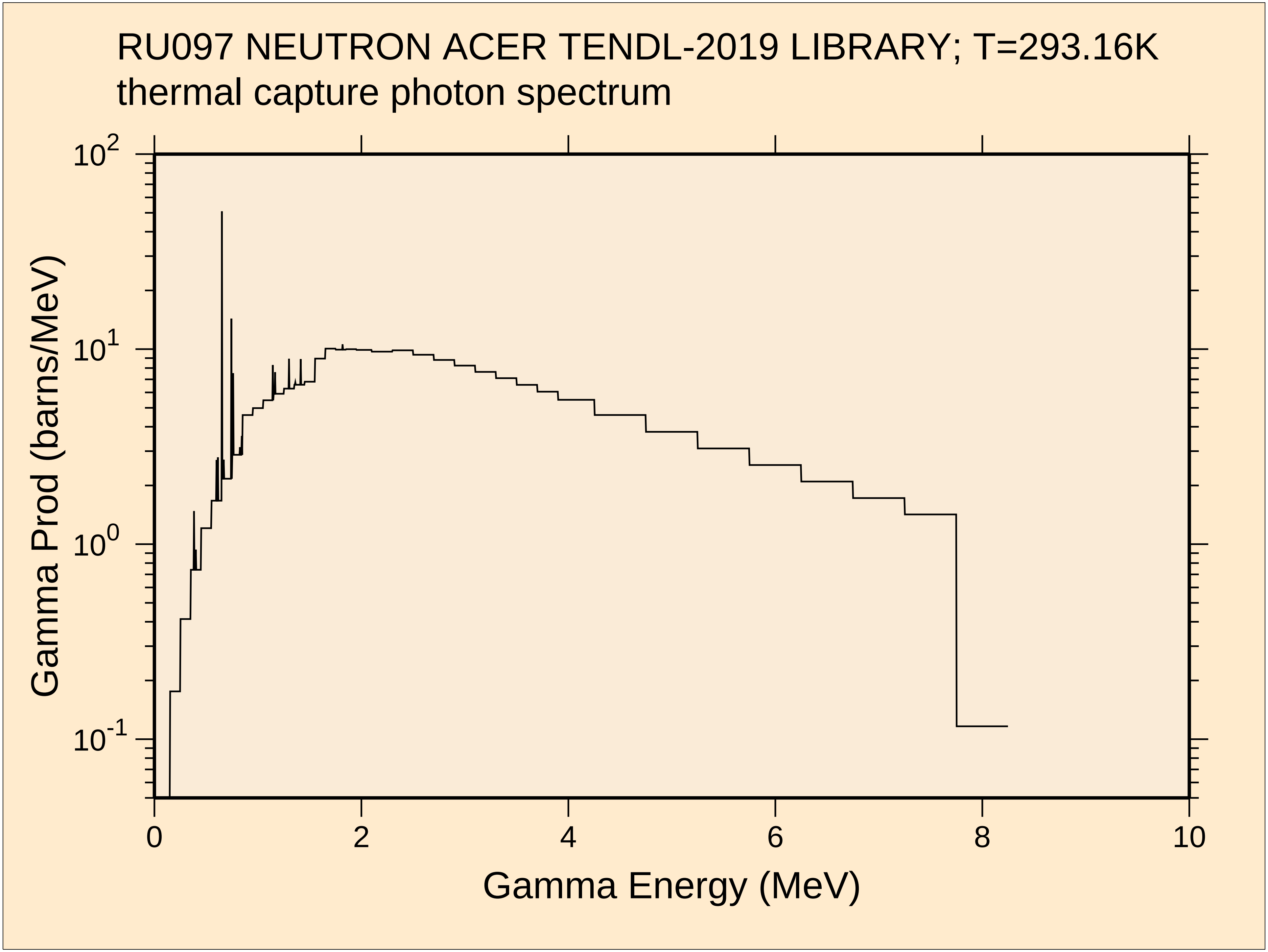


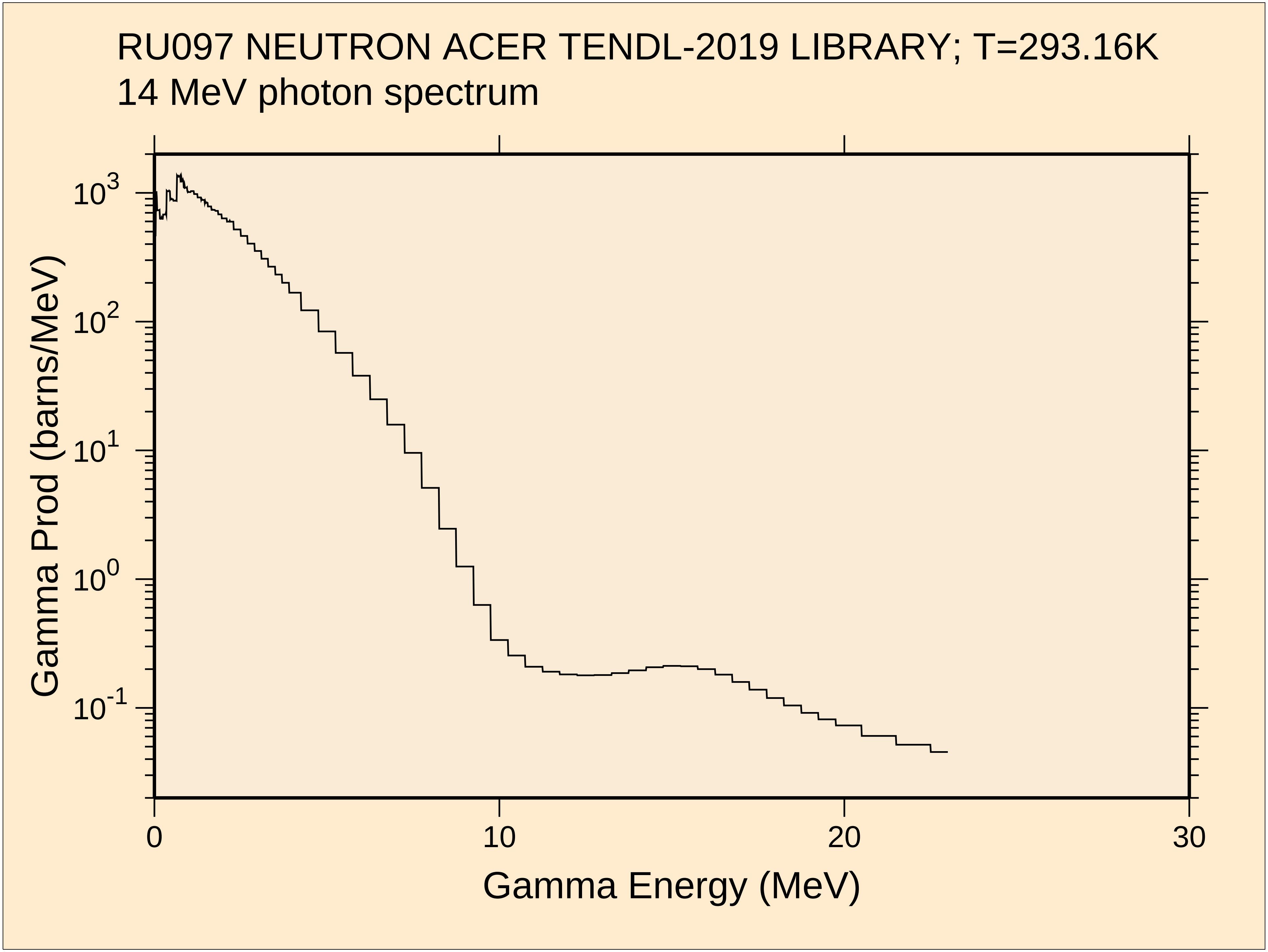
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,pd)
ProbMeV
10^{2}
10^{0}
10^{-2}
0
5
10
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

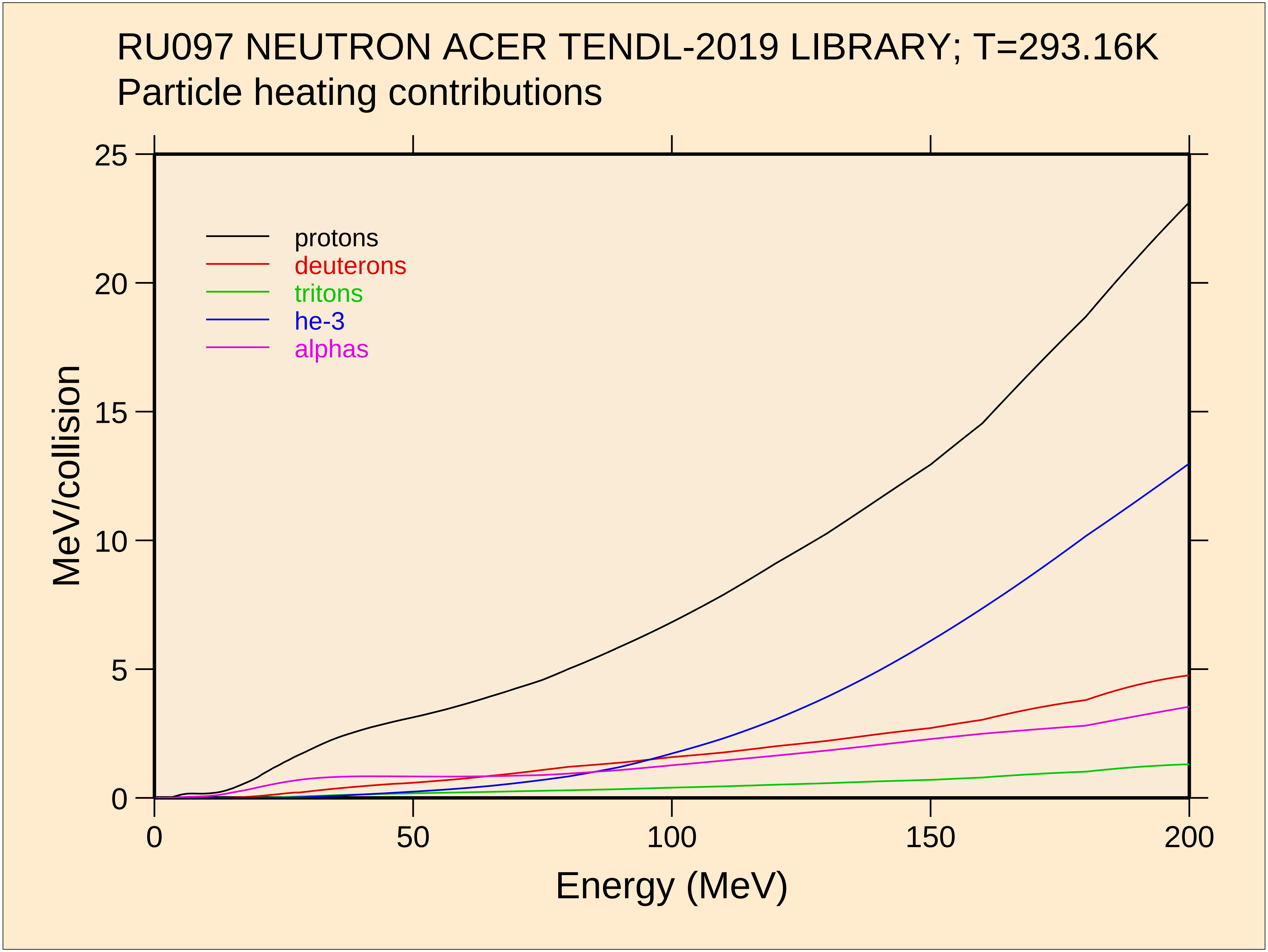

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,pt)
ProbMeV
10^{2}
10^{0}
10^{-2}
0
2
4
6
E_γ (MeV)
10
12
14
16
18
20
22
24
26
28
30
E_n (MeV)

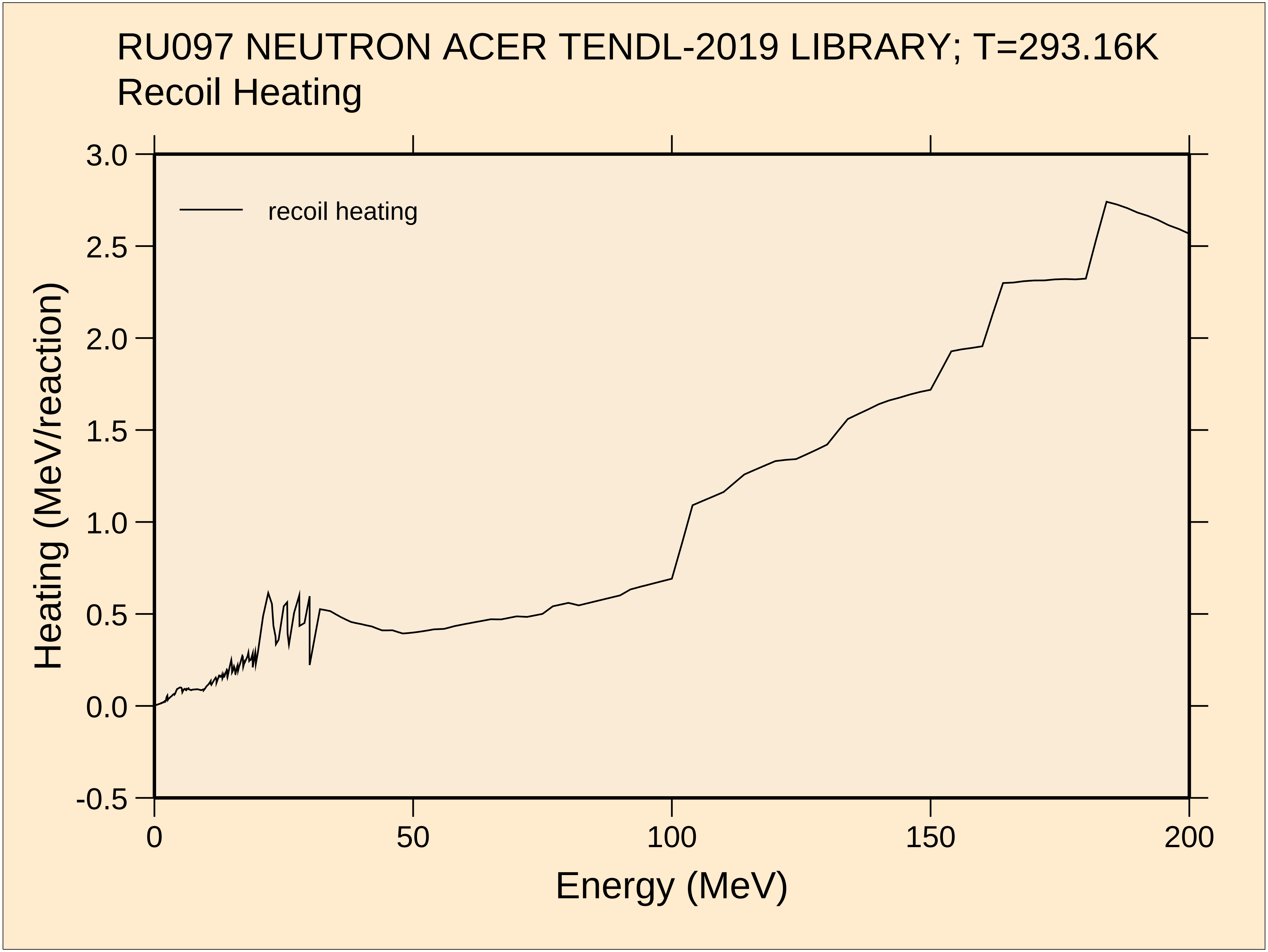


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Photon emission for (n,da)
Prob/MeV
10^-1
10^1
10^3
0
2
4
E_γ (MeV)
5
10
15
20
25
30
E_n (MeV)

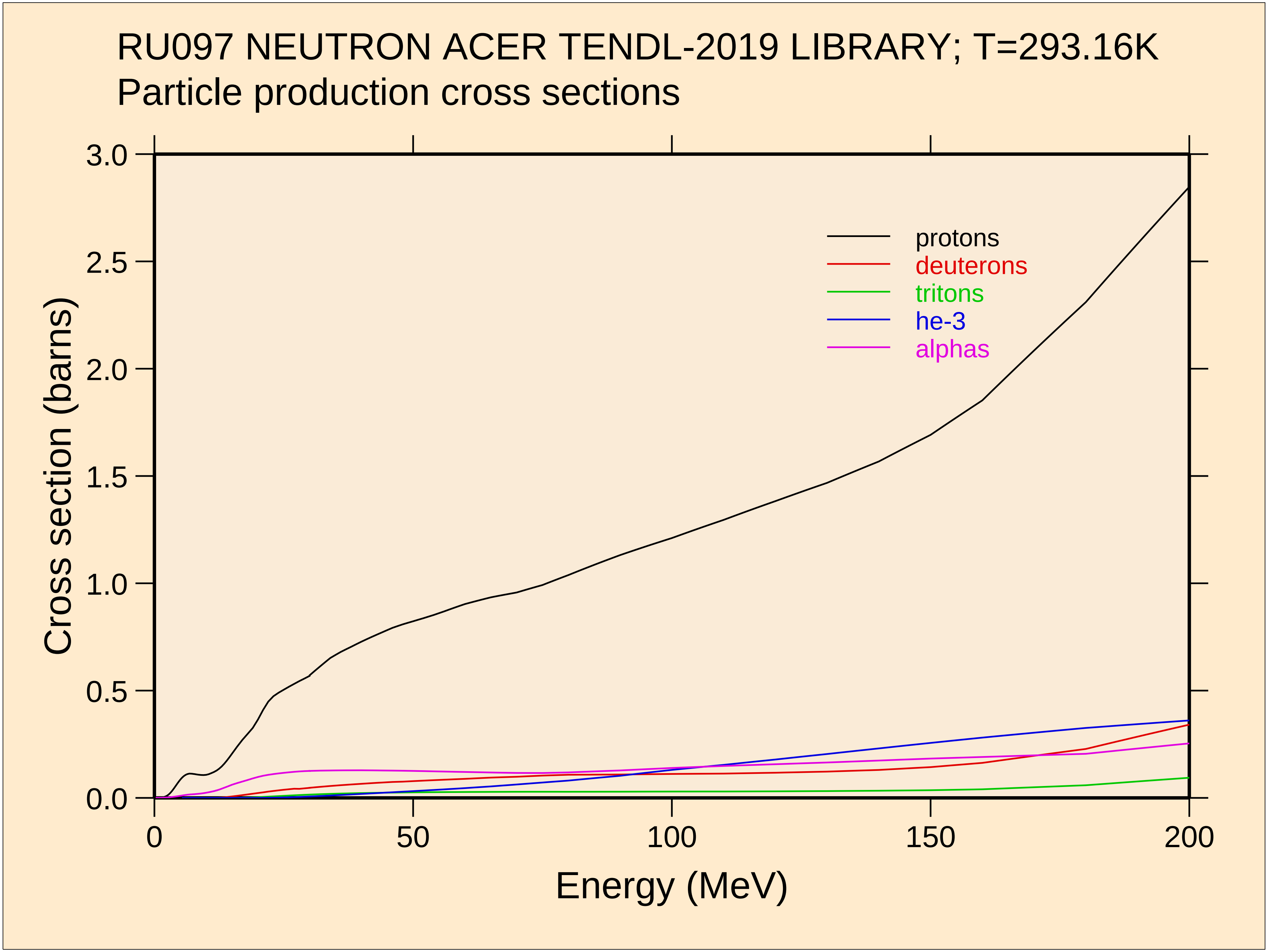

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
thermal capture photon spectrum
Gamma Prod (barns/MeV)
Gamma Energy (MeV)
10^{2}
10^{1}
10^{0}
10^{-1}
0
2
4
6
8
10


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
14 MeV photon spectrum
Gamma Prod (barns/MeV)
10^3
10^2
10^1
10^0
10^{-1}
0
10
20
30
Gamma Energy (MeV)

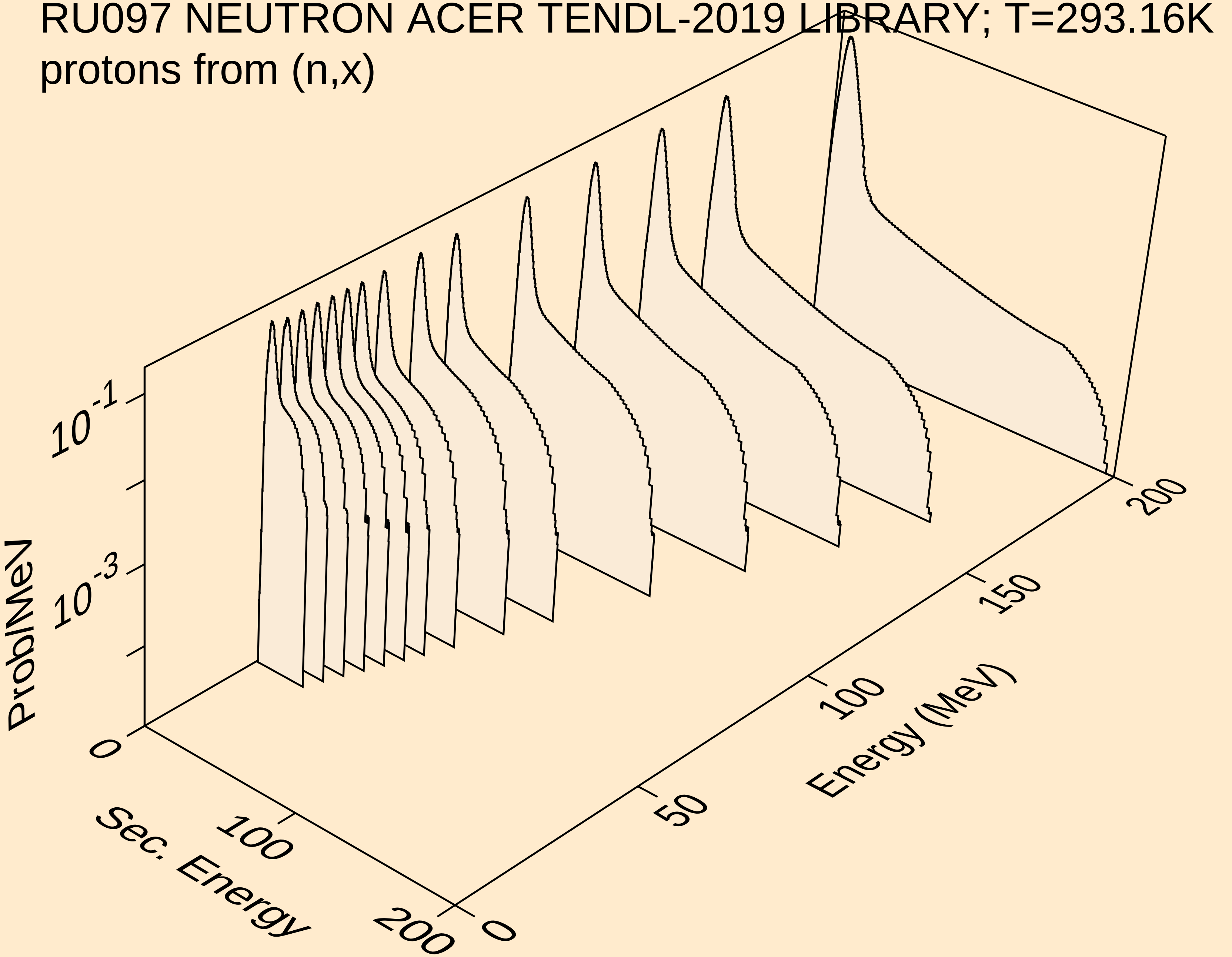

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Particle heating contributions
protons
deuterons
tritons
he-3
alphas
MeV/collision
Energy (MeV)
0
5
10
15
20
25
0
50
100
150
200

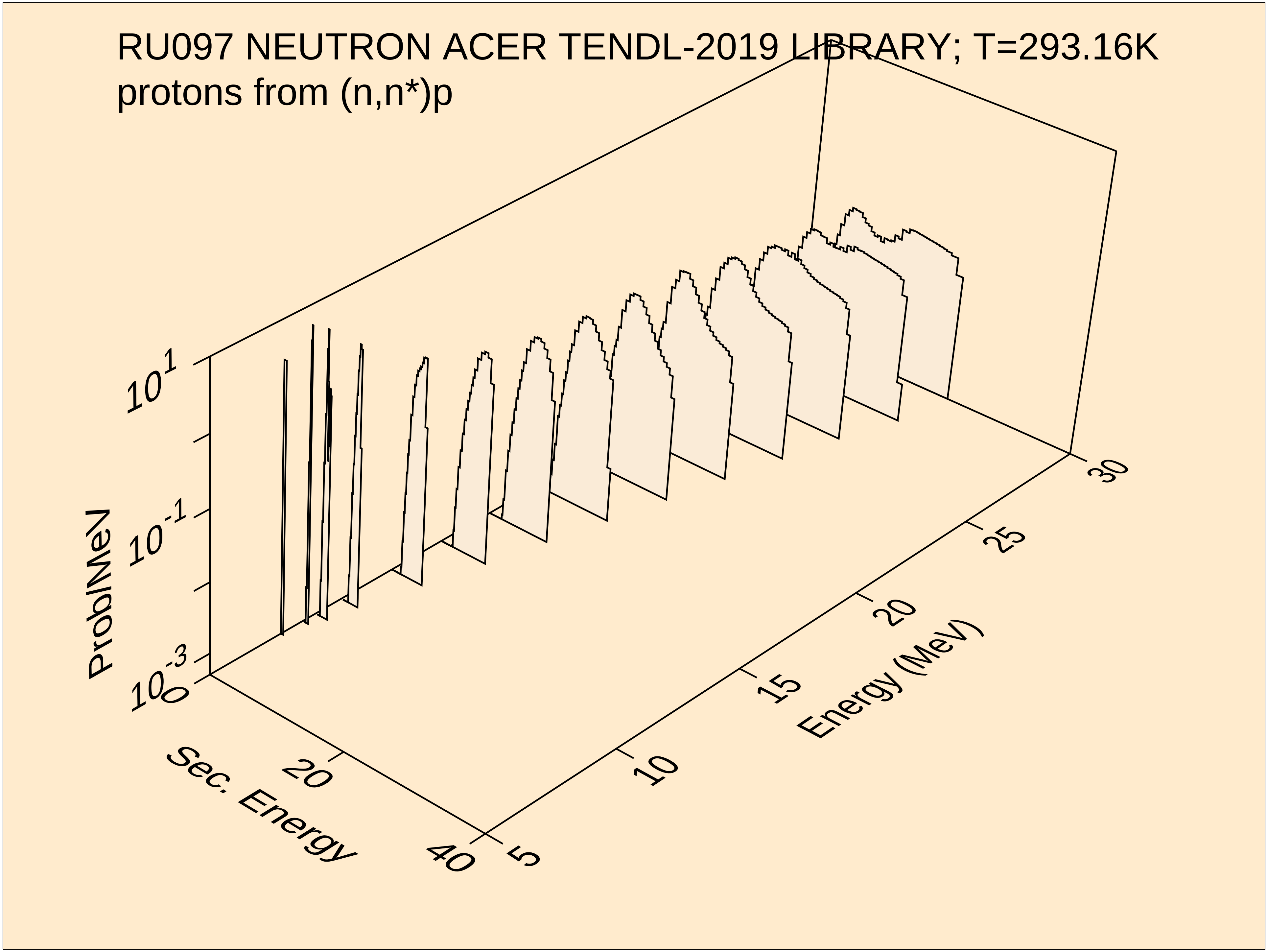


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Recoil Heating
recoil heating
Heating (MeV/reaction)
Energy (MeV)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
0
50
100
150
200

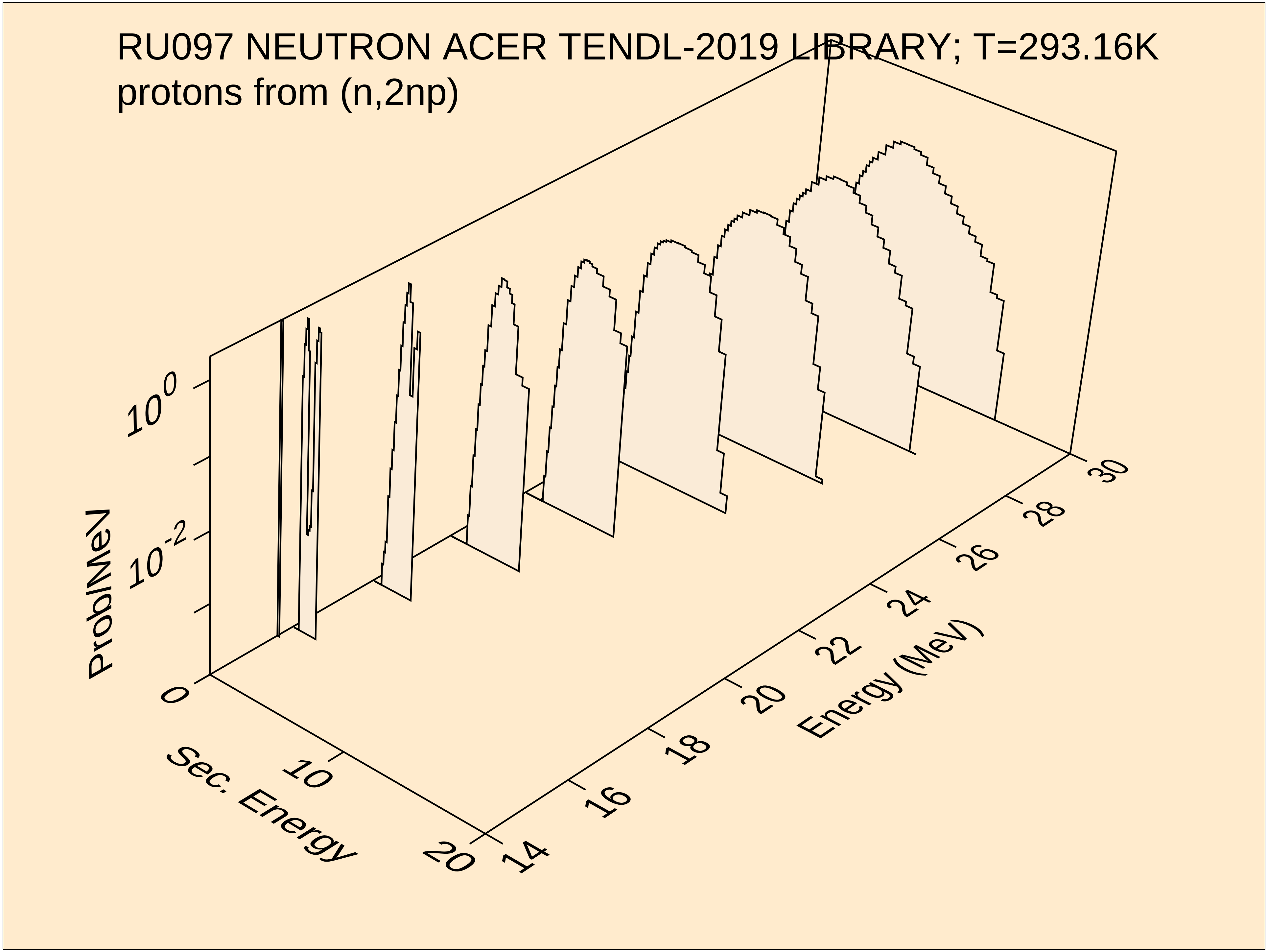

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
Particle production cross sections
protons
deuterons
tritons
he-3
alphas
Cross section (barns)
Energy (MeV)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
50
100
150
200

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,x)

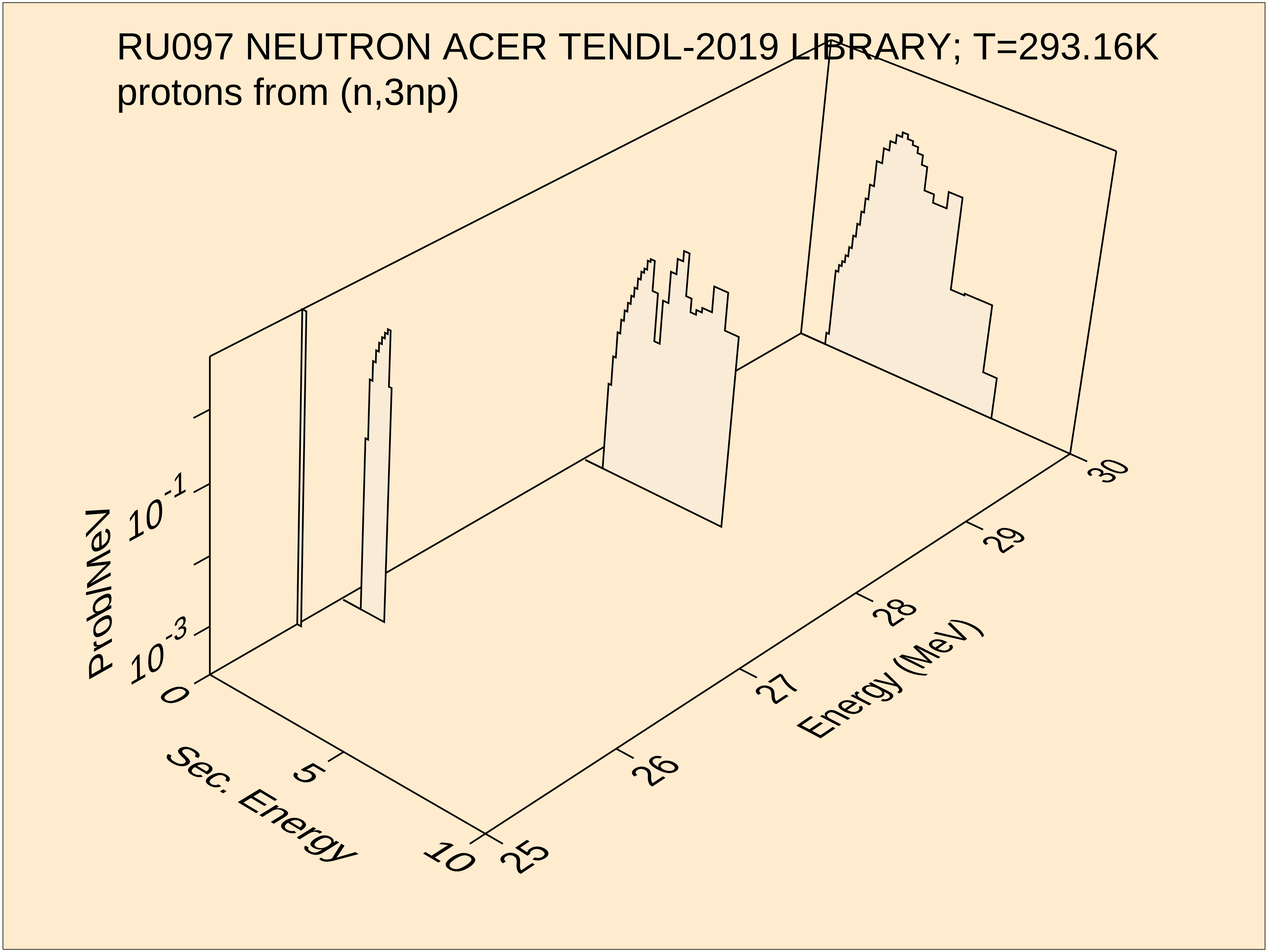




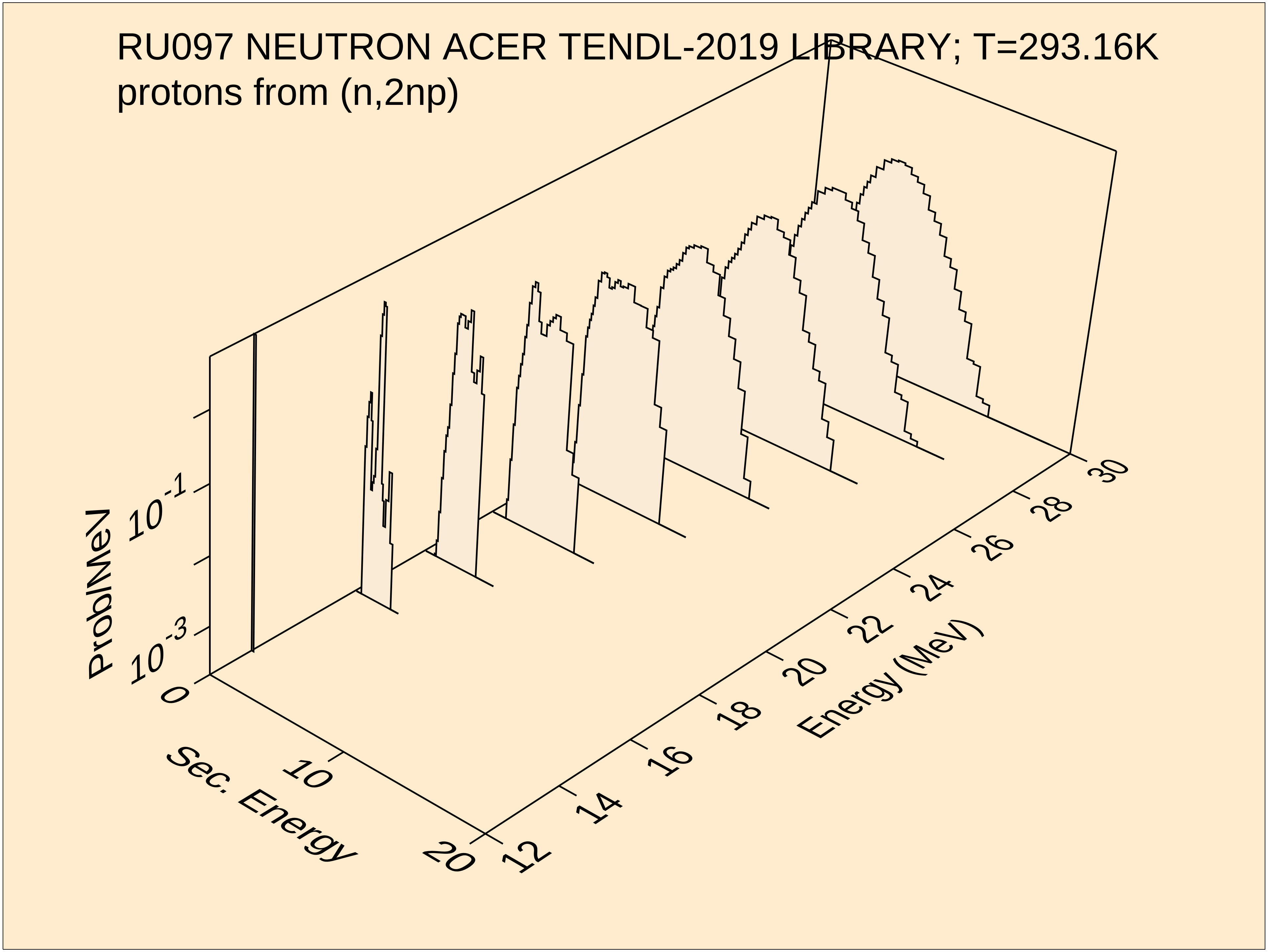
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,n*)p
Prob/MeV
10^{1}
10^{-1}
10^{-3}
0
20
40
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

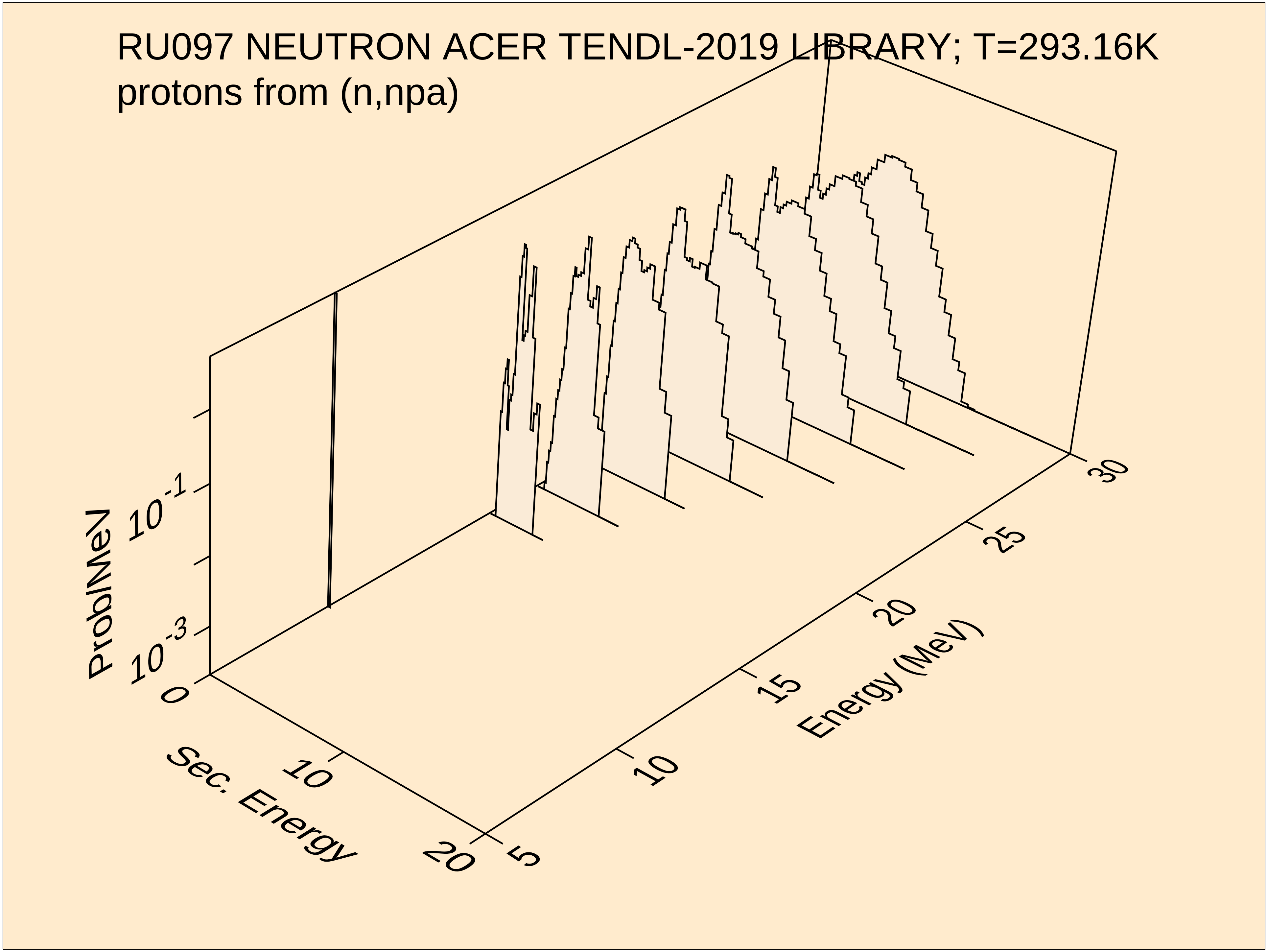


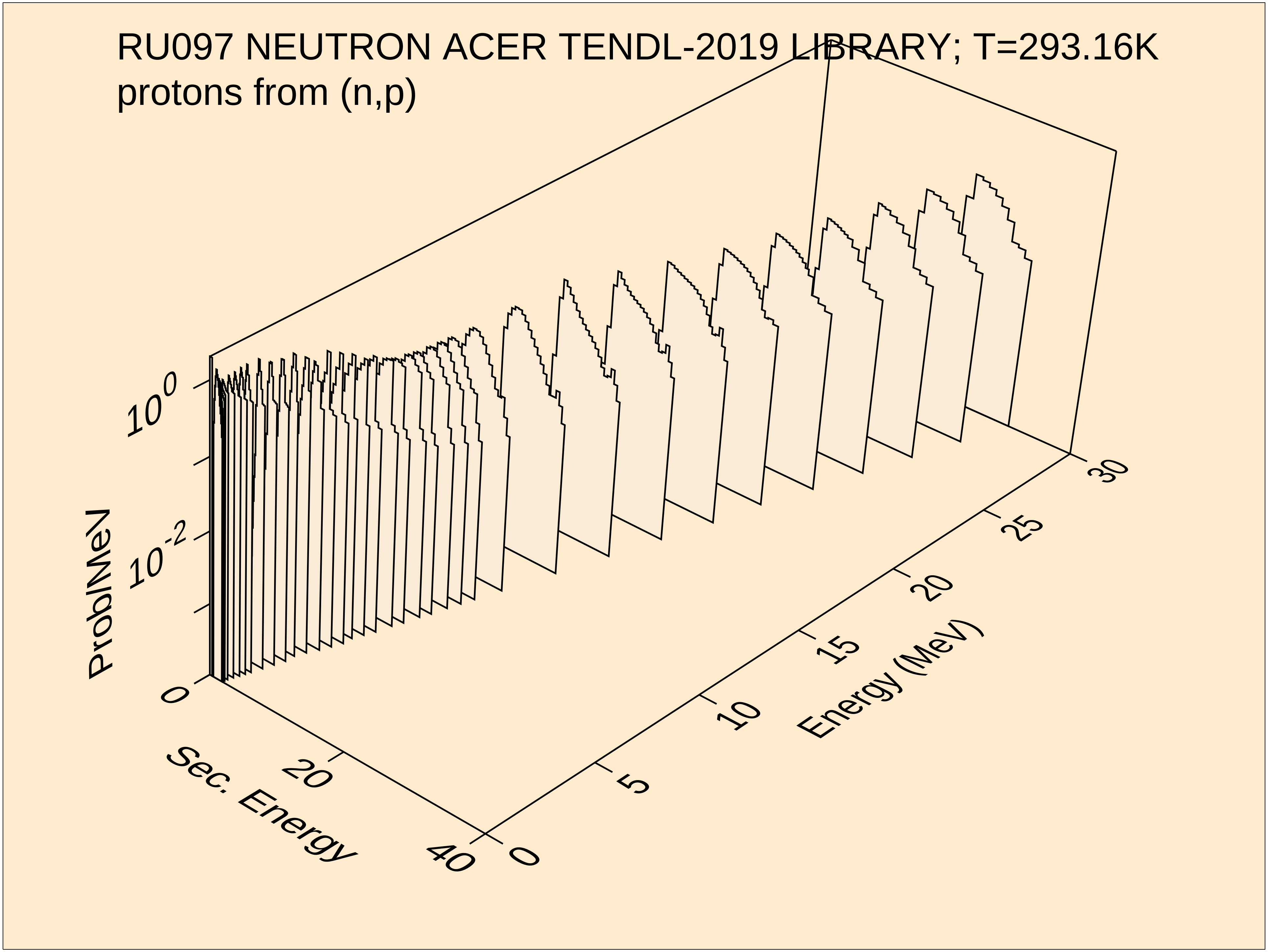
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,2np)
Prob/MeV
10^{0}
10^{-2}
0
10
20
Sec. Energy
14
16
18
20
22
24
26
28
30
Energy (MeV)

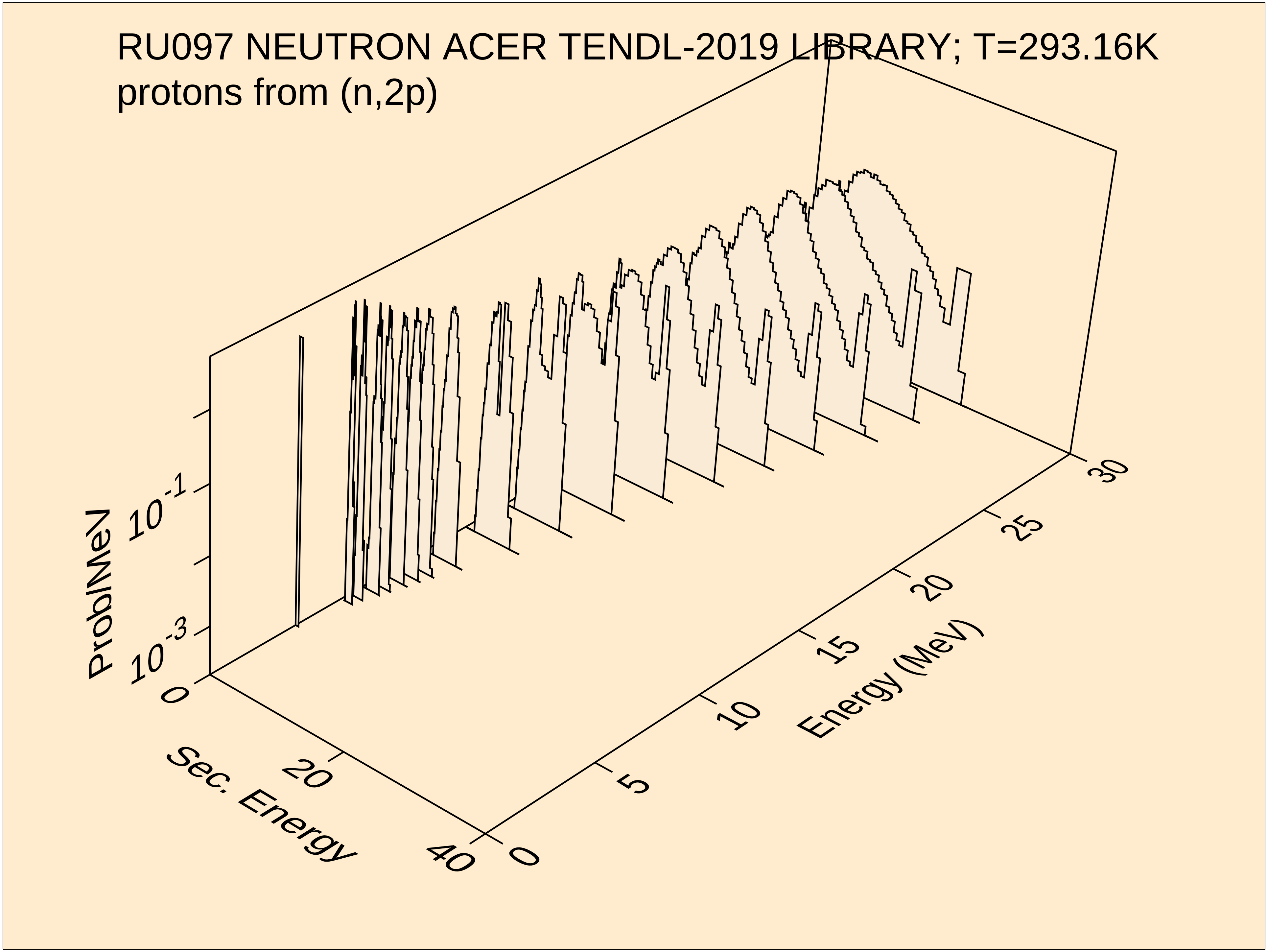


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,3np)
Prob/MeV
10^{-1}
10^{-3}
0
5
10
Sec. Energy
25
26
27
28
29
30
Energy (MeV)

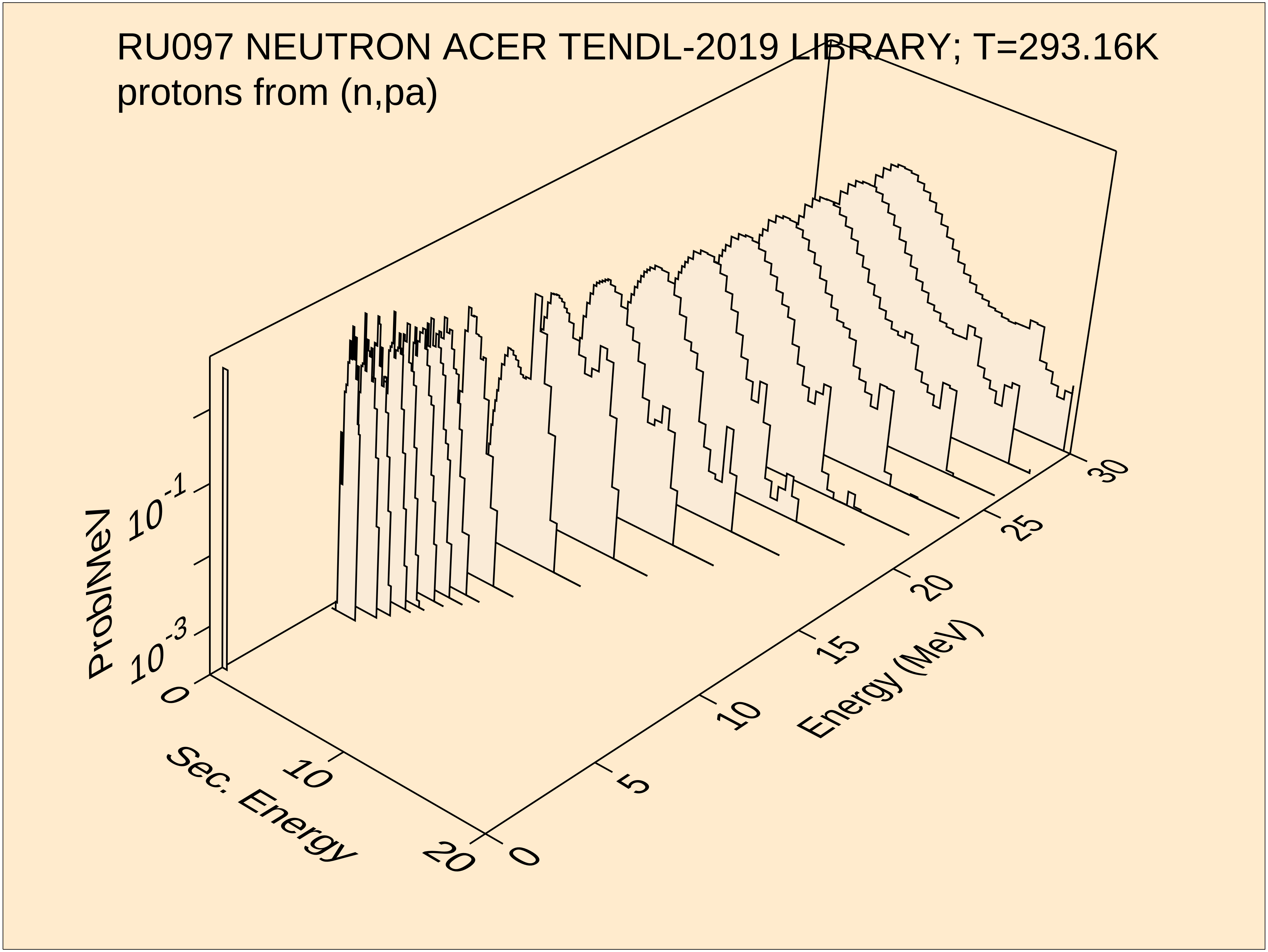

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,2np)
Prob/MeV
10^-1
10^-3
0
Sec. Energy
10
20
Energy (MeV)
12
14
16
18
20
22
24
26
28
30

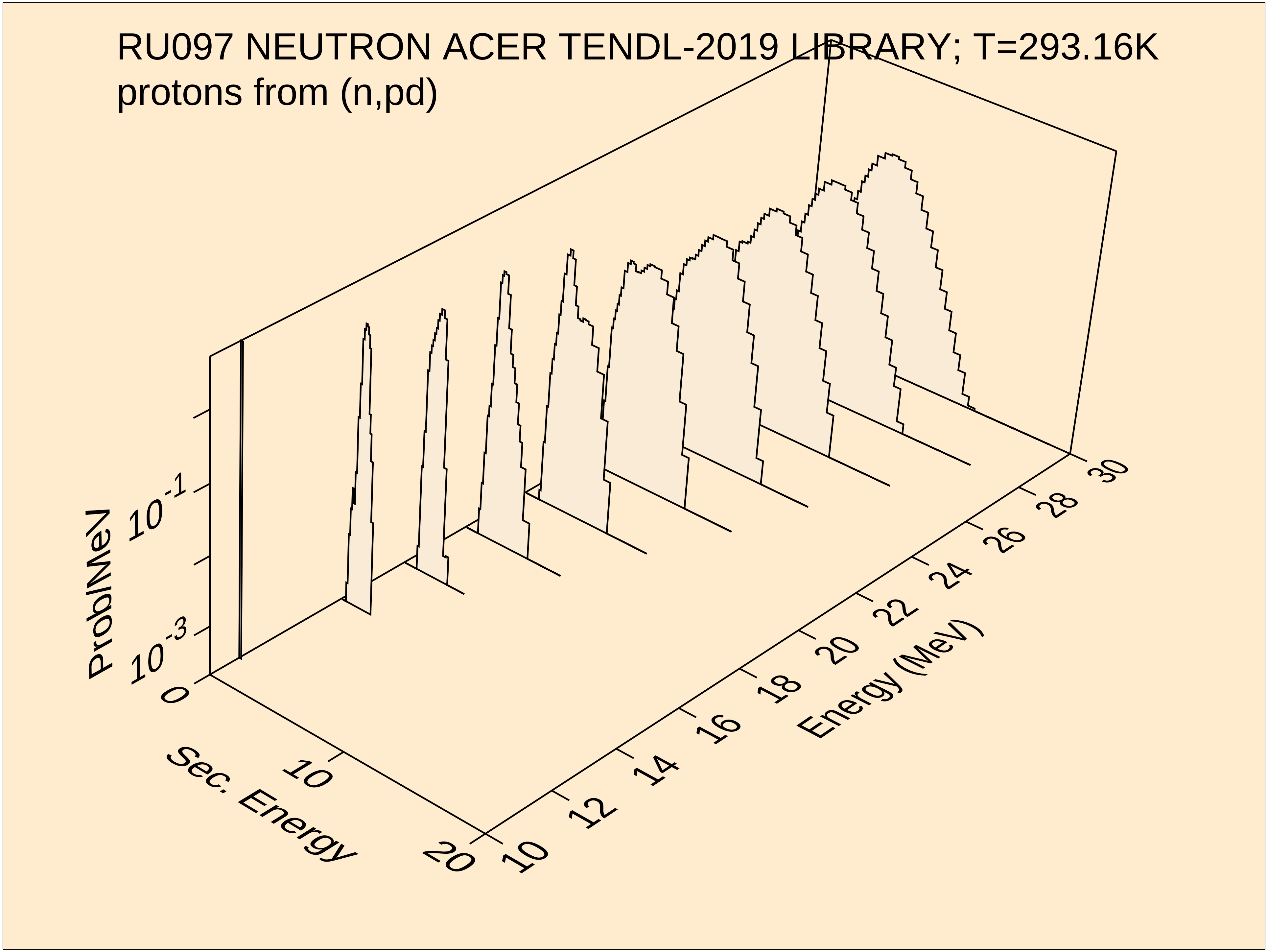

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,npa)
Prob/MeV
10^{-1}
10^{-3}
0
10
20
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

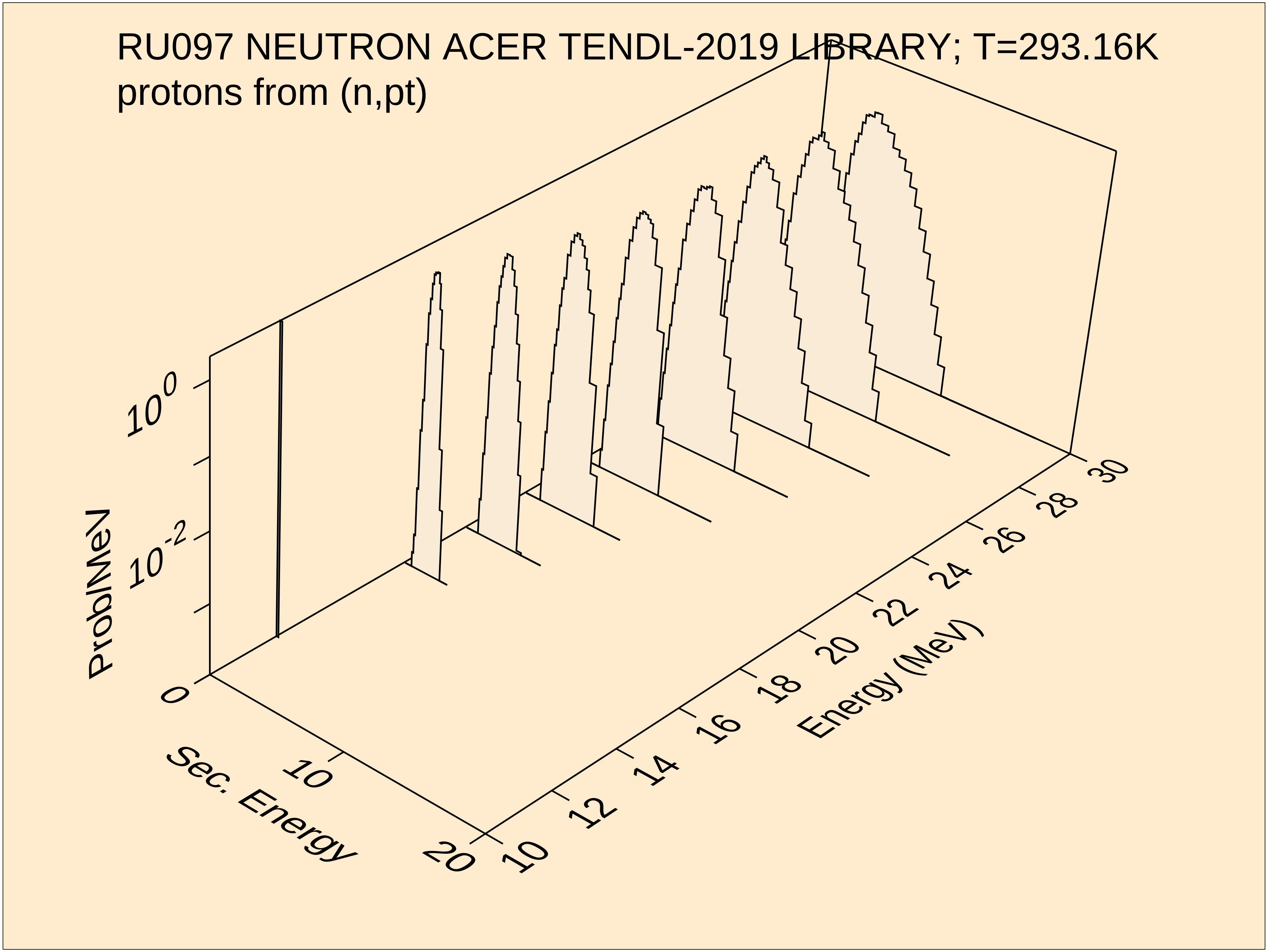

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,p)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

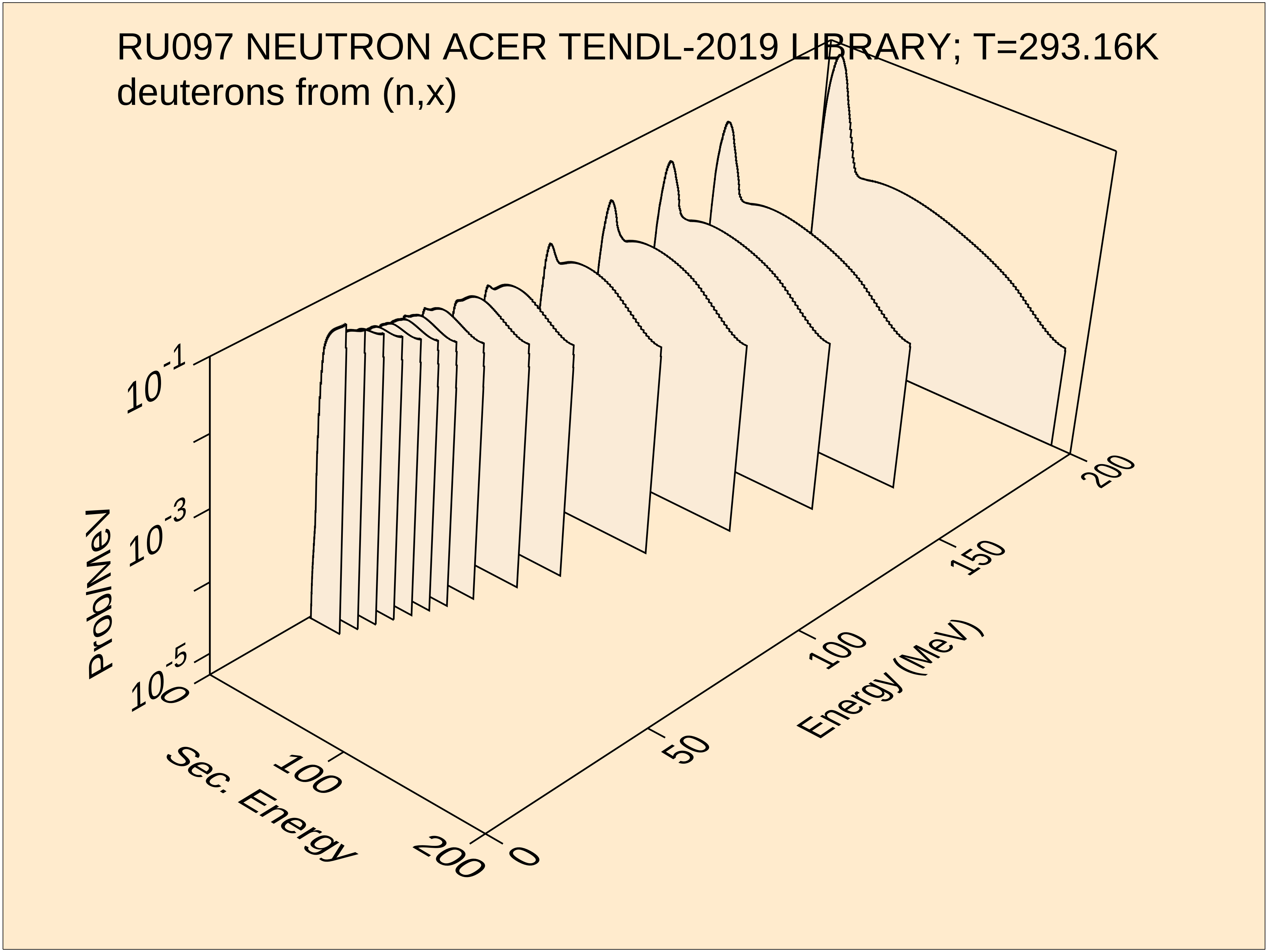


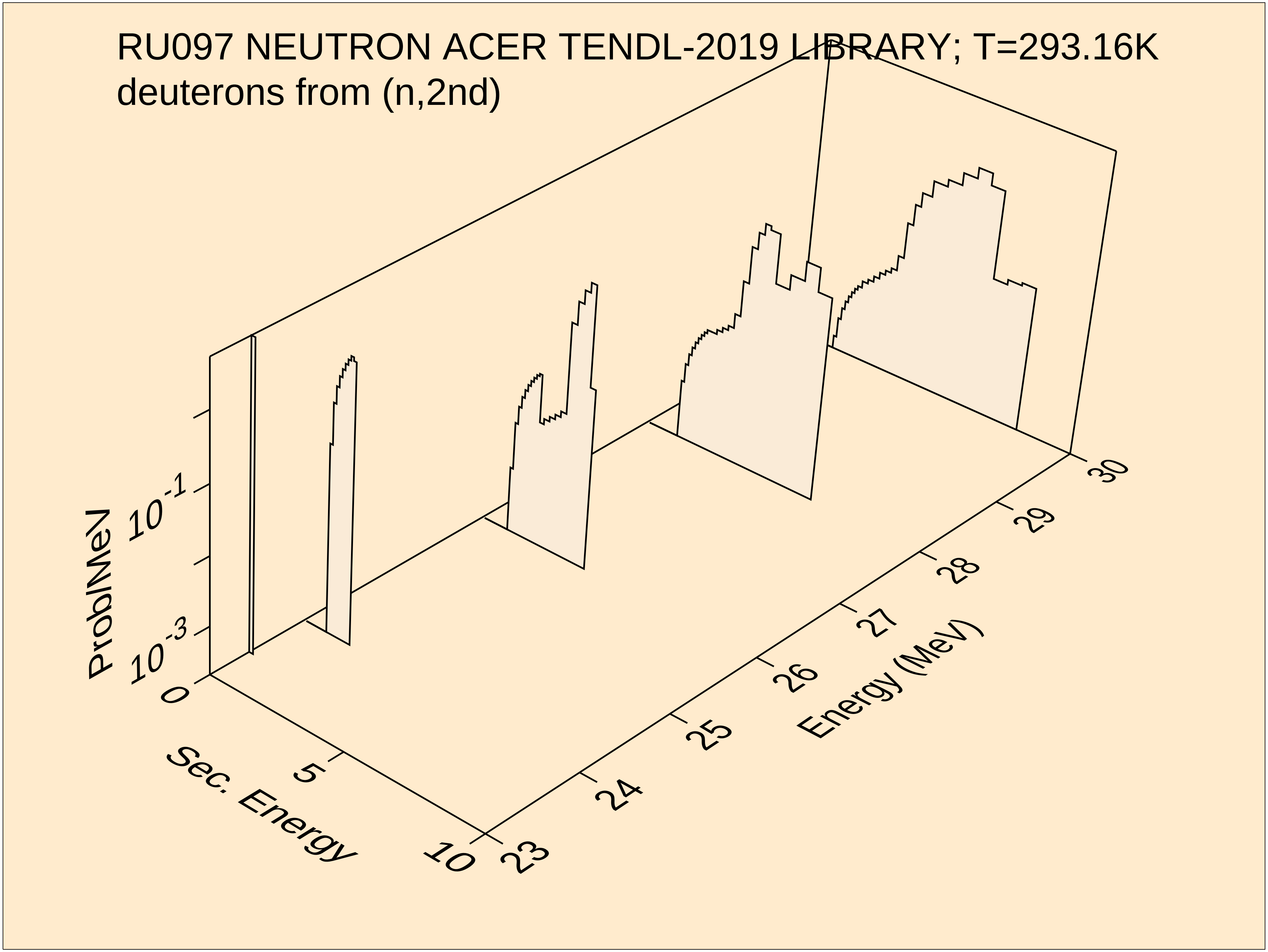
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,2p)
Prob/MeV
10-1
10-3
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,pa)
Prob/MeV
10^{-1}
10^{-3}
0
Sec. Energy
10
20
0
5
10
15
20
25
30
Energy (MeV)

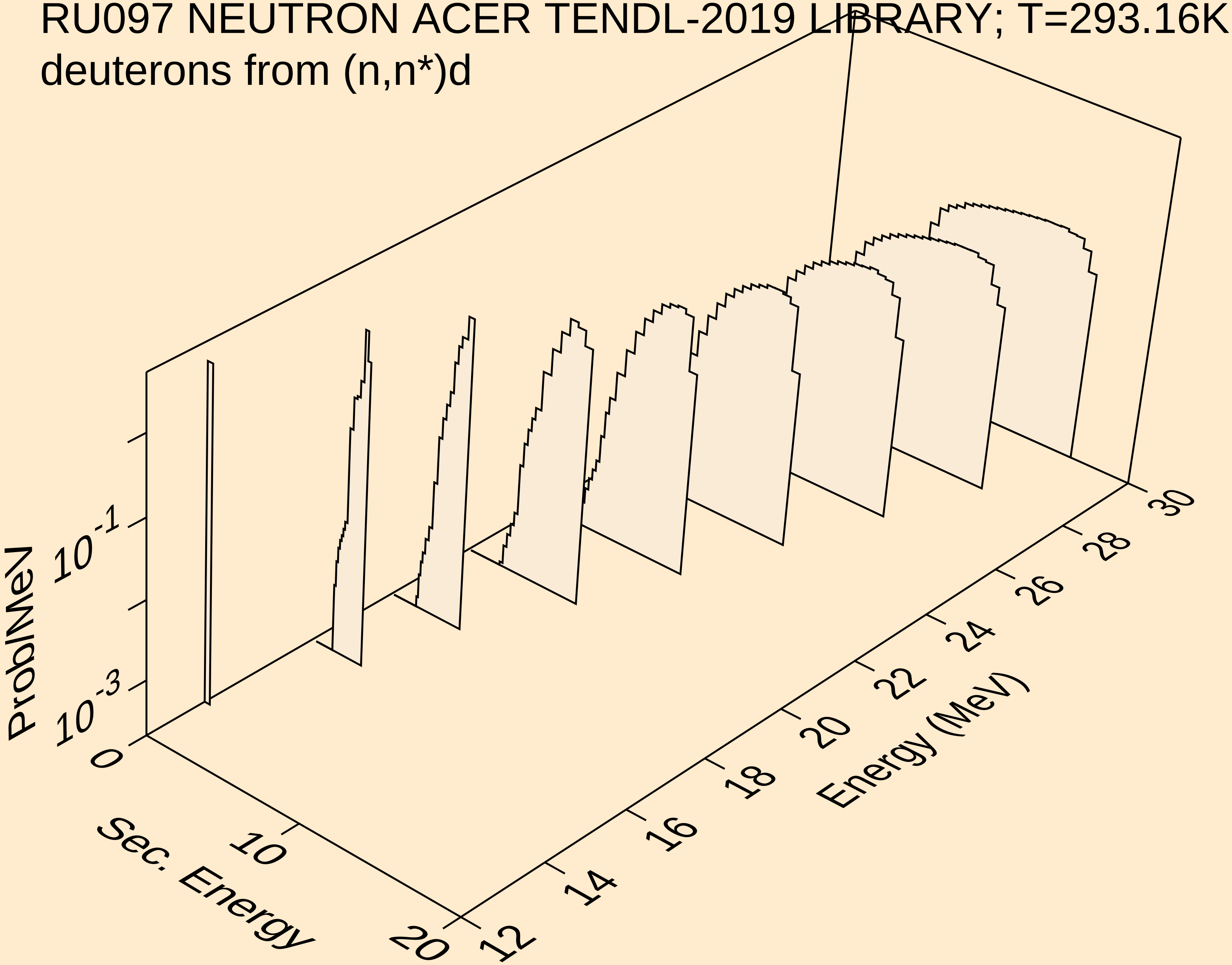

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,pd)
Prob/MeV
10^{-1}
10^{-3}
0
Sec. Energy
10
20
Energy (MeV)
10
12
14
16
18
20
22
24
26
28
30

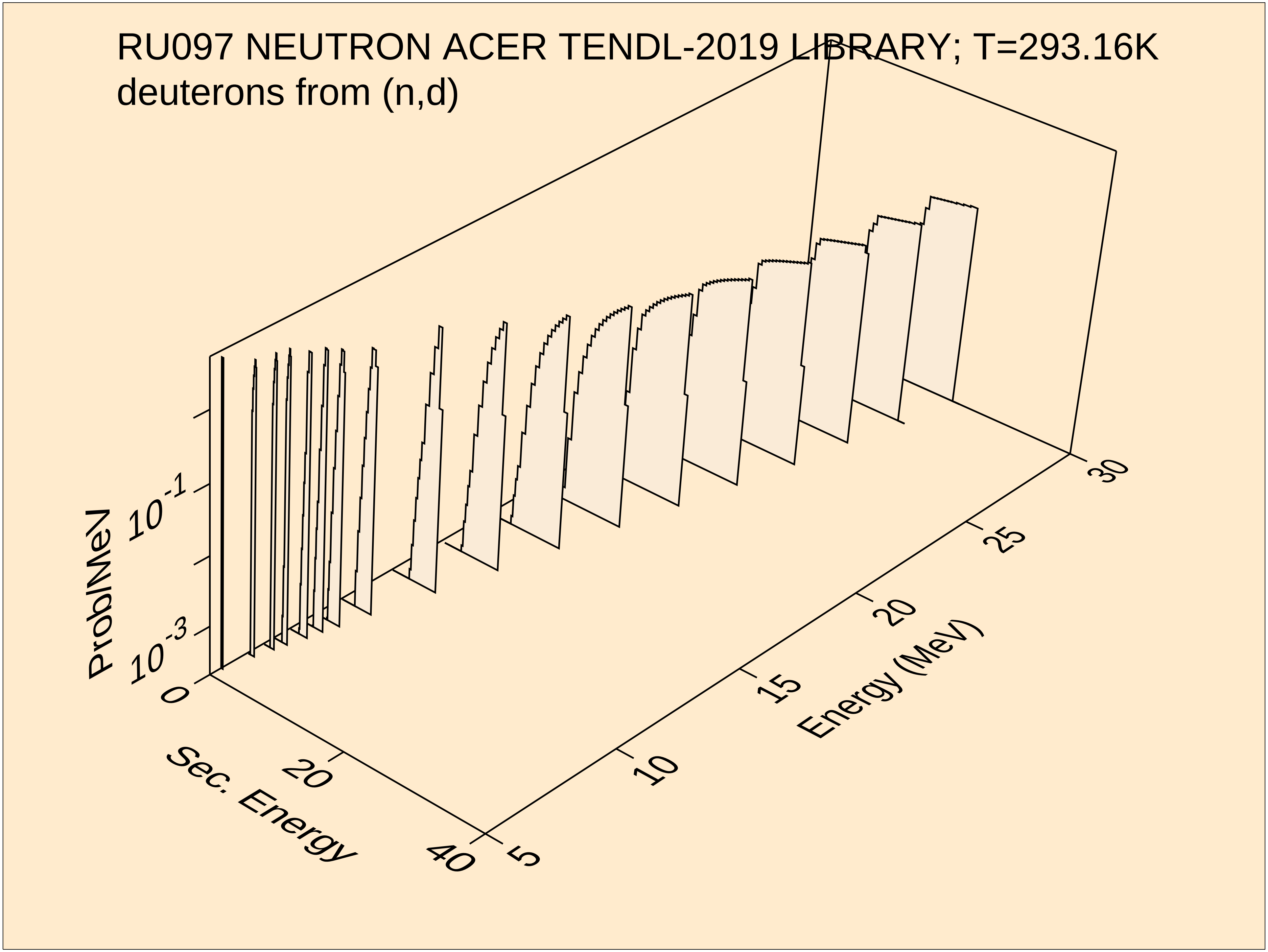

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
protons from (n,pt)
ProbMeV
10^{0}
10^{-2}
0
10
20
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

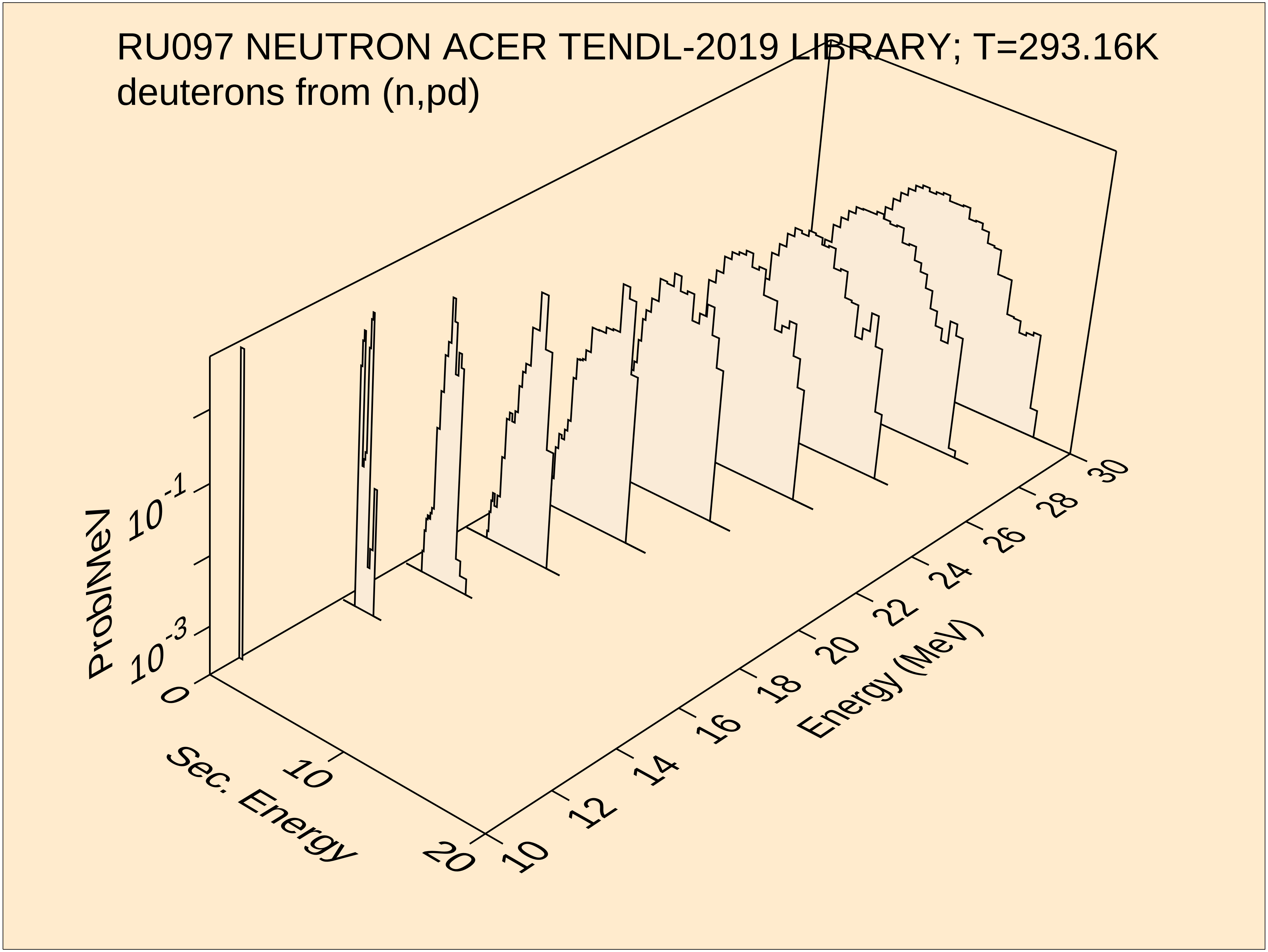

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,x)
ProbMeV
10^{-1}
10^{-3}
10^{-5}
Sec. Energy
0
100
200
Energy (MeV)
0
50
100
150
200


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,2nd)
ProbMeV
10^{-1}
10^{-3}
0
5
10
Sec. Energy
23
24
25
26
27
28
29
30
Energy (MeV)

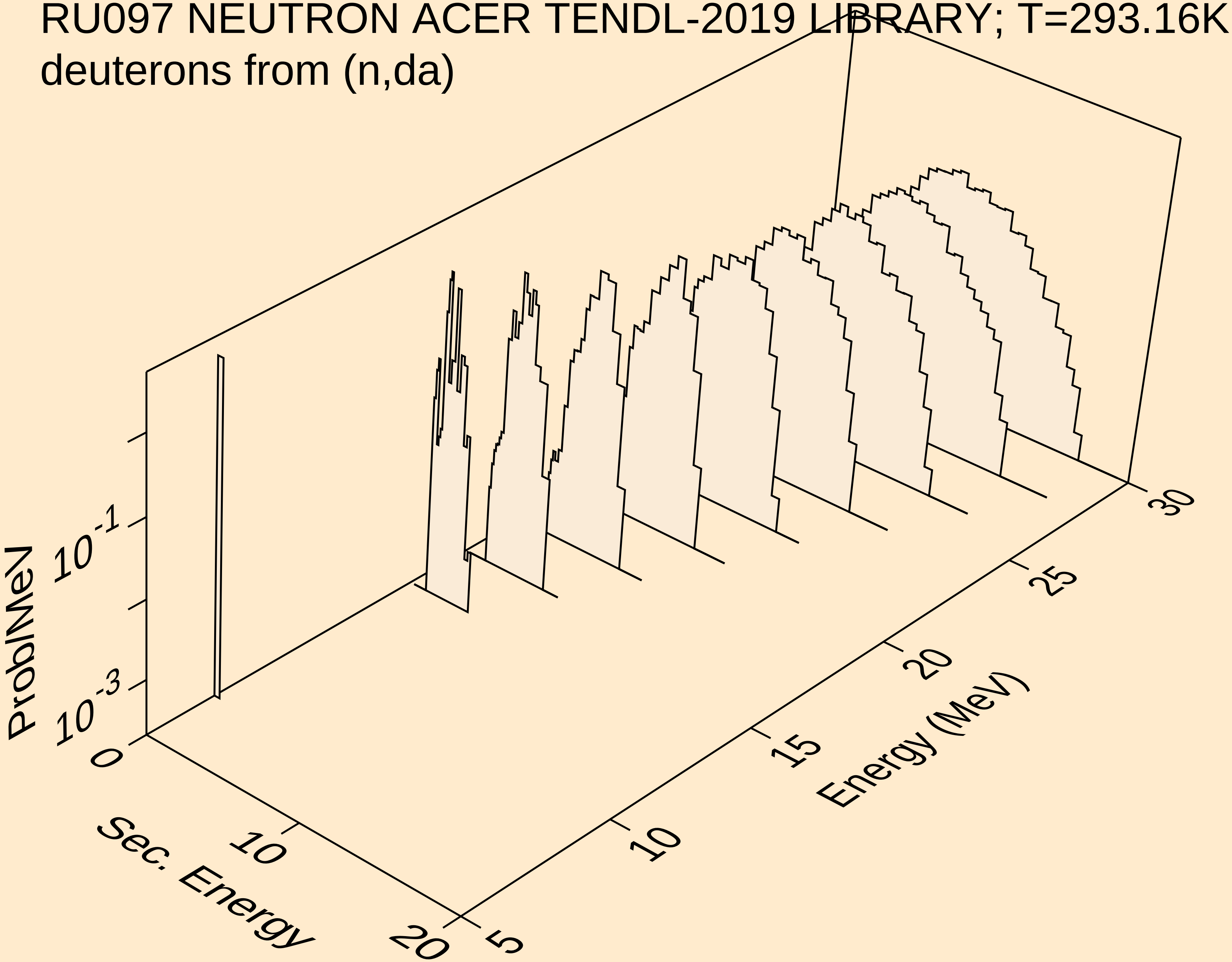
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,n*)d

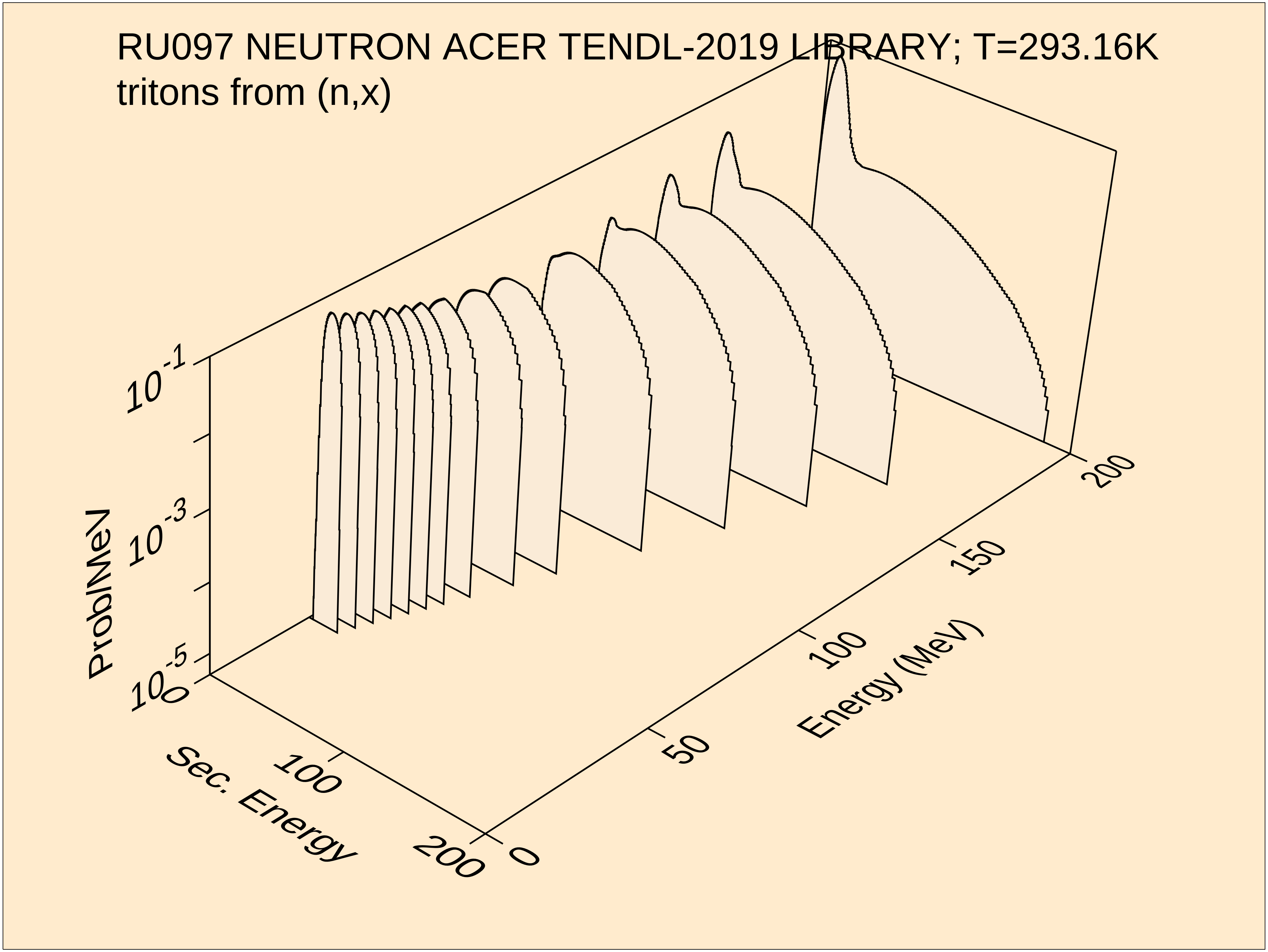



RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,d)
Prob/MeV
10^{-1}
10^{-3}
0
20
40
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

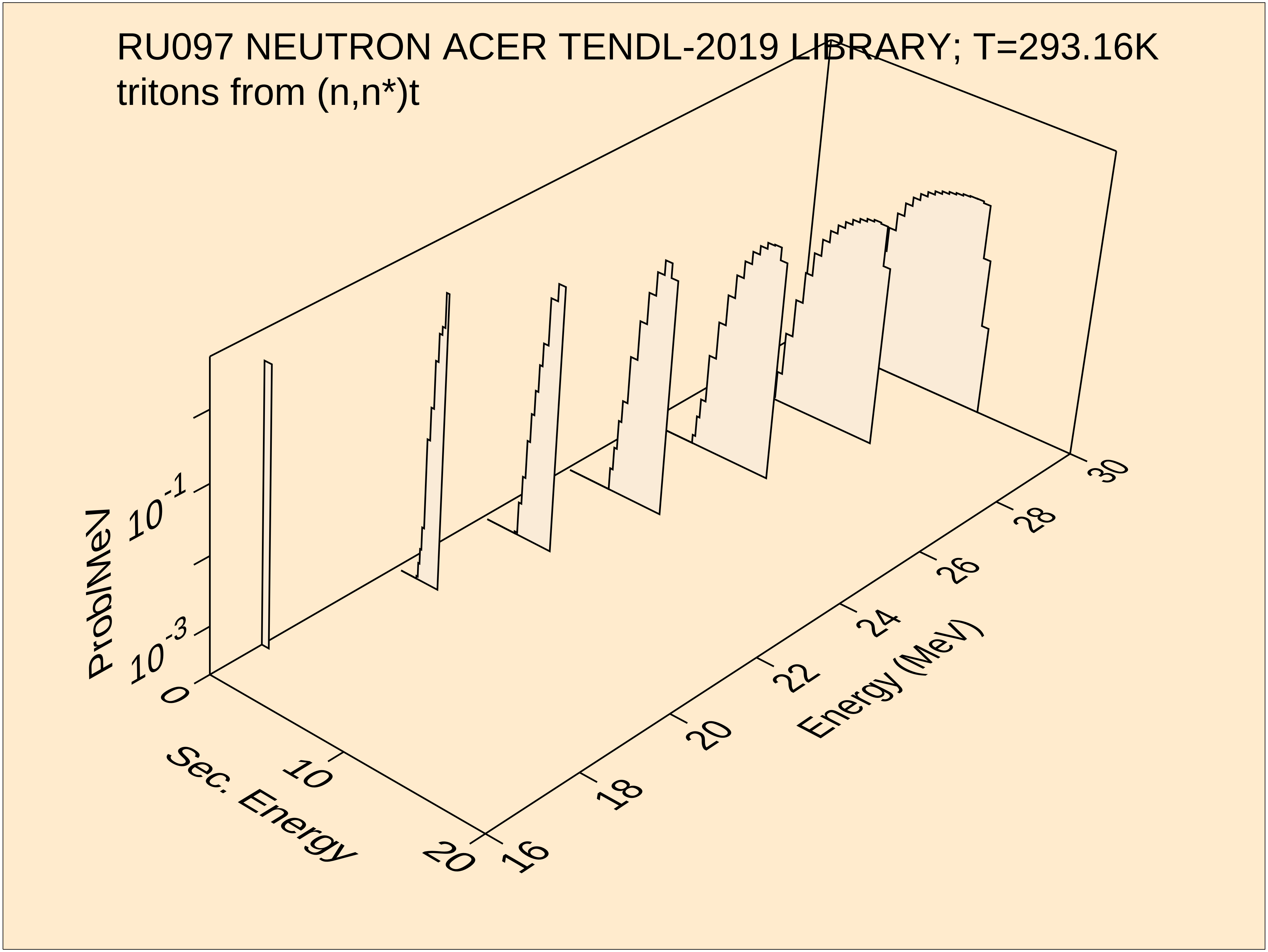

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,pd)
Prob/MeV
10^{-1}
10^{-3}
0
10
20
Sec. Energy
10
12
14
16
18
20
22
24
26
28
30
Energy (MeV)

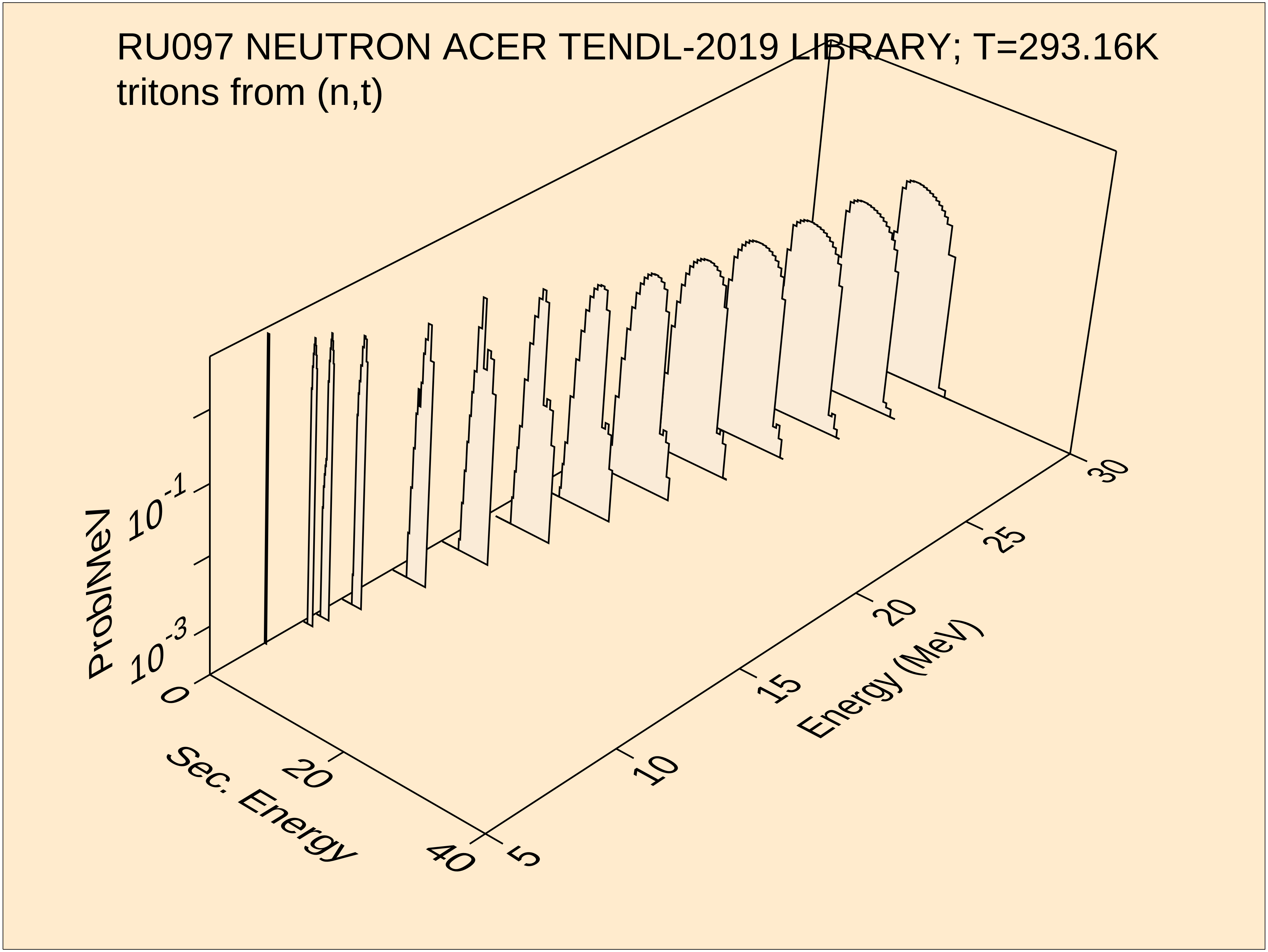
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
deuterons from (n,da)

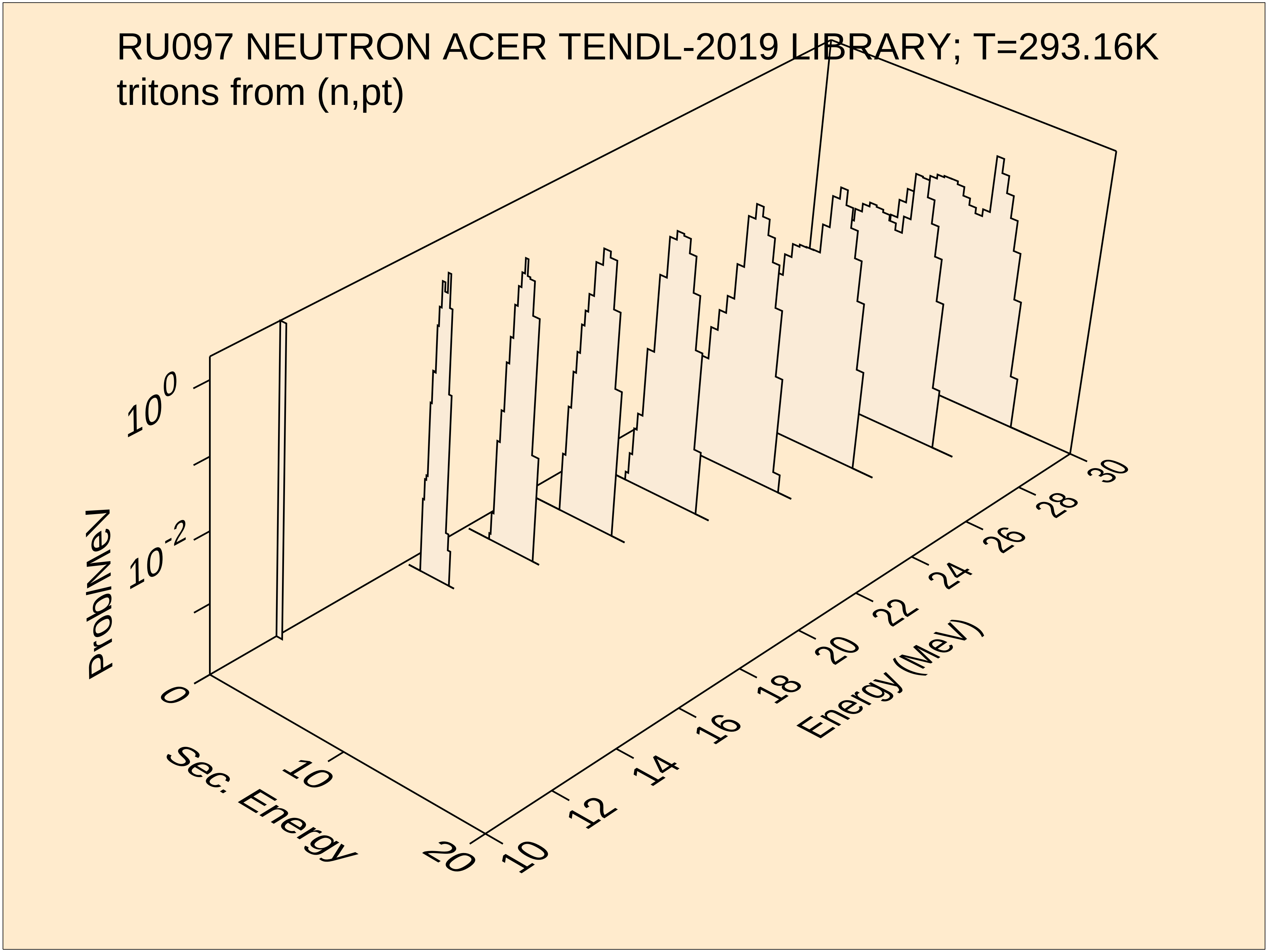


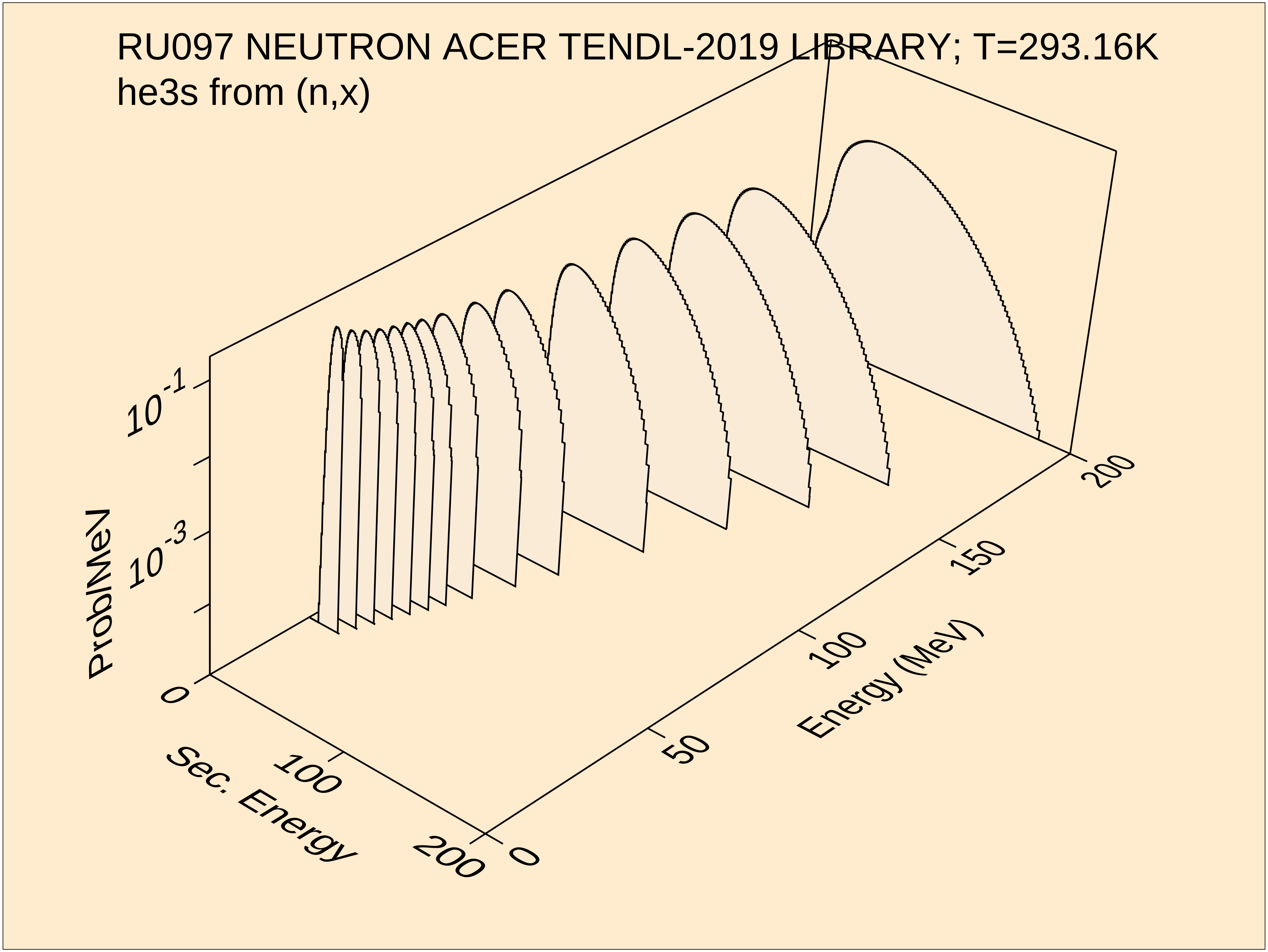


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
tritons from (n,x)
Prob/MeV
10^{-1}
10^{-3}
10^{-5}
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
tritons from (n,n*)t
Prob/MeV
10^{-1}
10^{-3}
0
Sec. Energy
10
20
16
18
20
22
24
26
28
30
Energy (MeV)

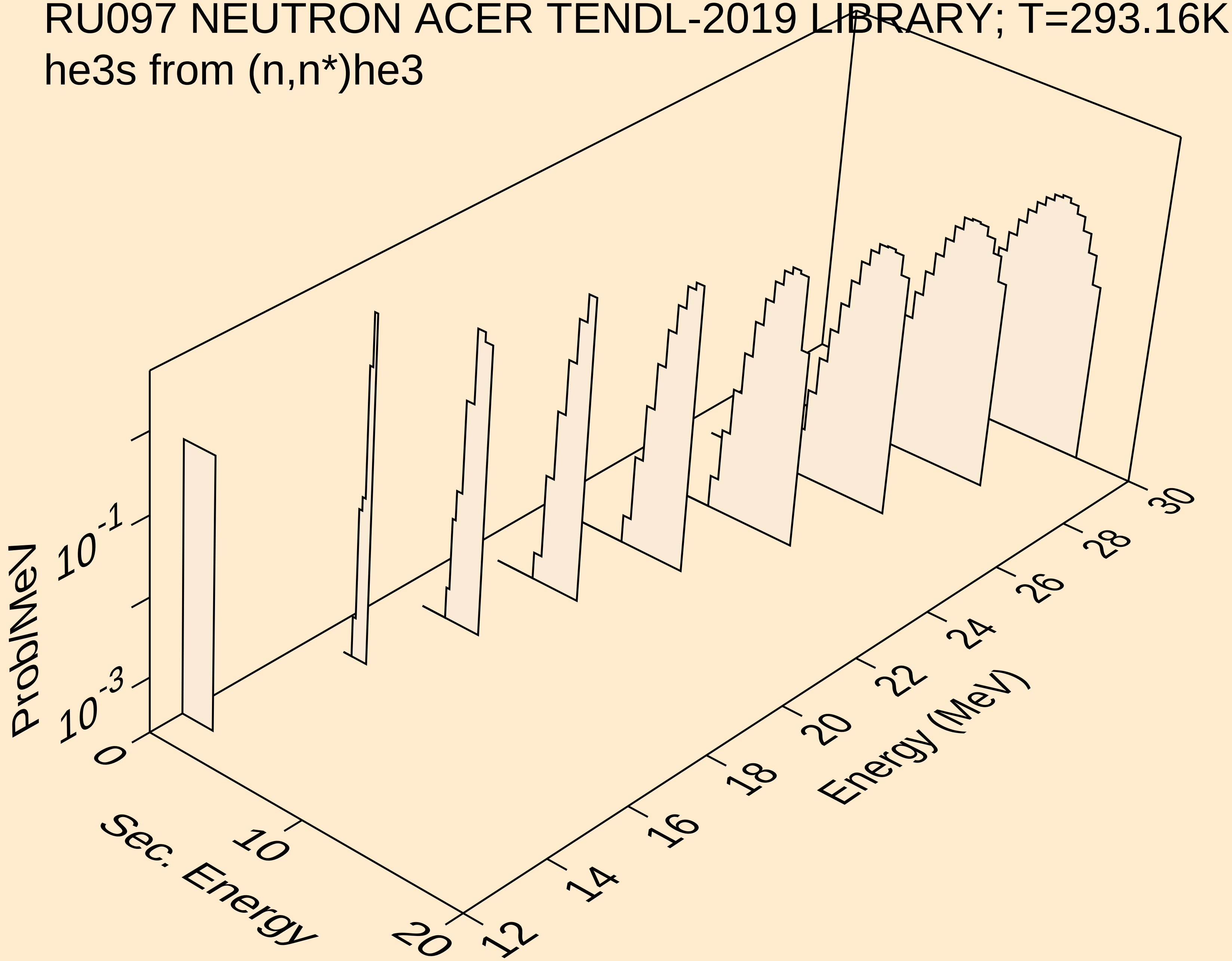

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
tritons from (n,t)
Prob/MeV
10^{-1}
10^{-3}
0
20
40
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

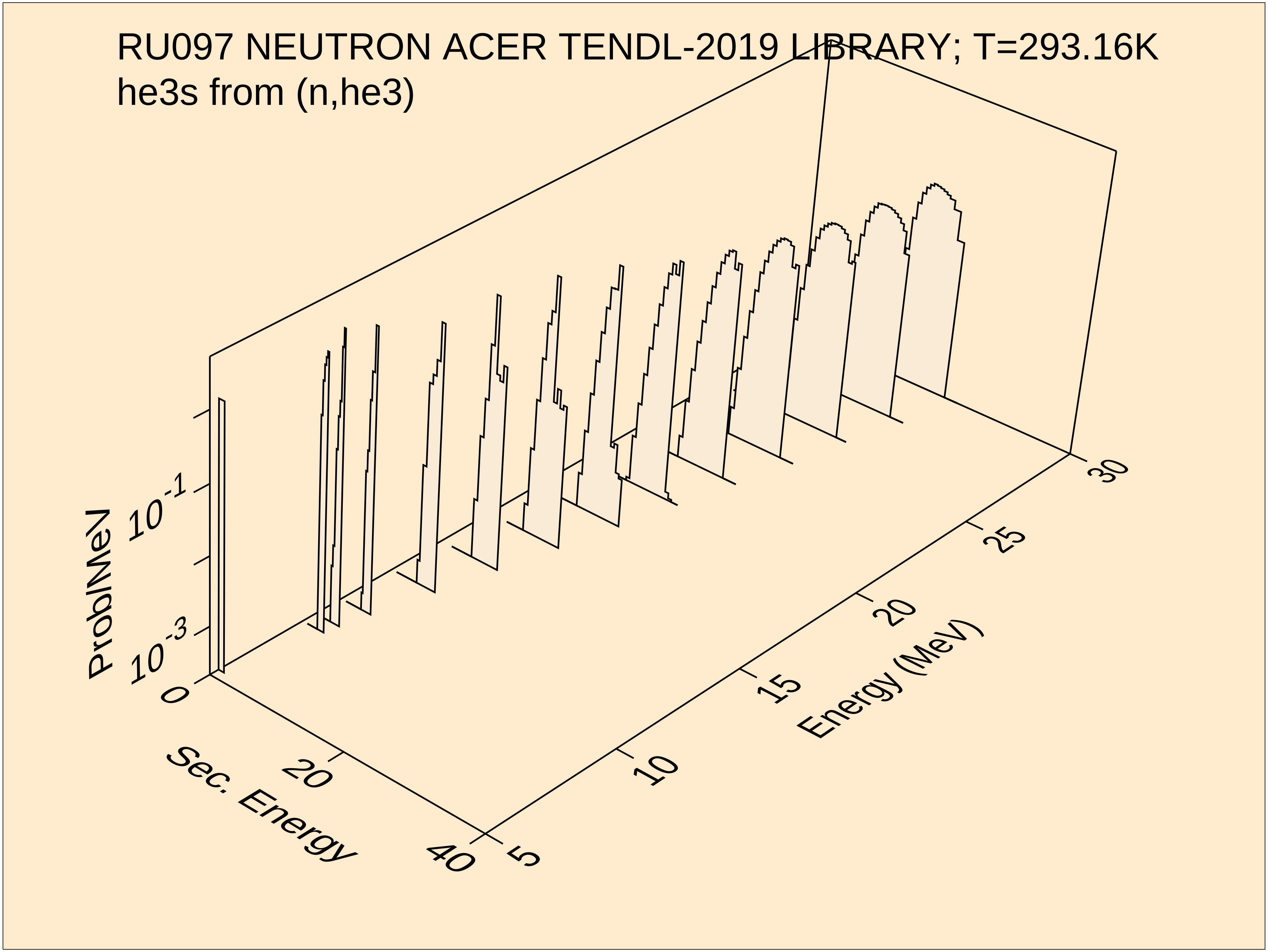

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
tritons from (n,pt)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
10
20
Energy (MeV)
10
12
14
16
18
20
22
24
26
28
30

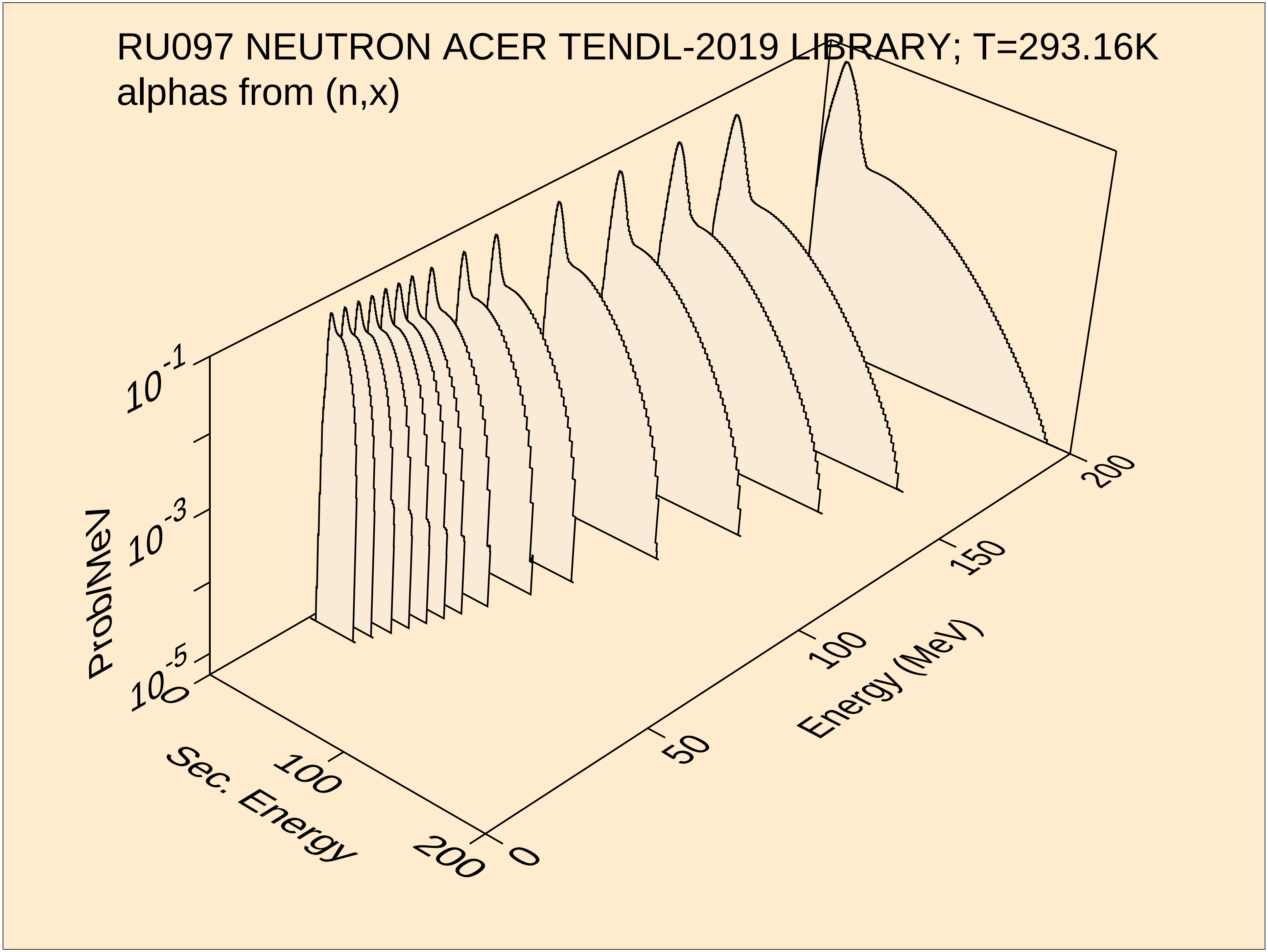


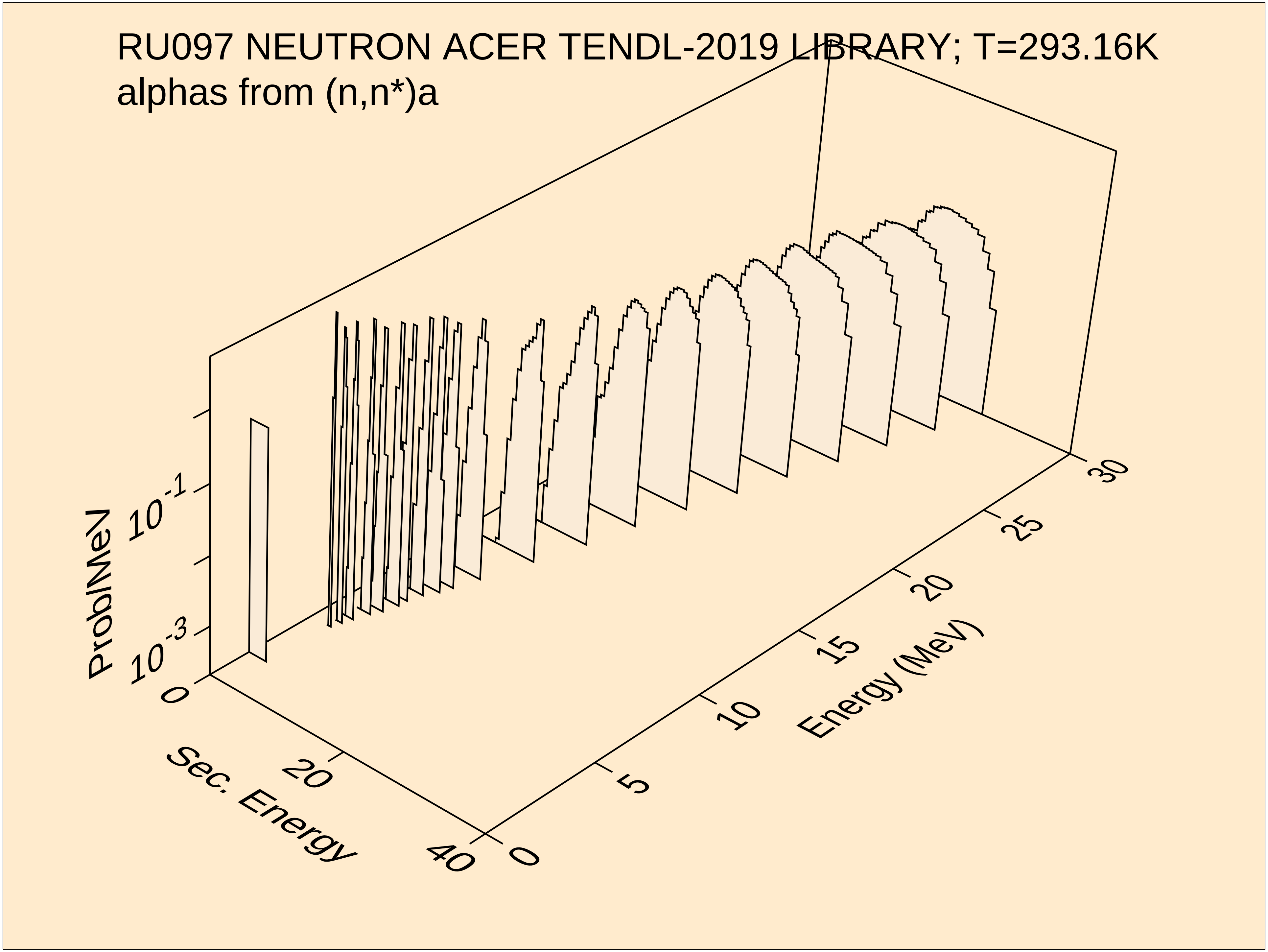
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
he3s from (n,x)
10^{-1}
10^{-3}
Prob/MeV
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
he3s from (n,n*)he3

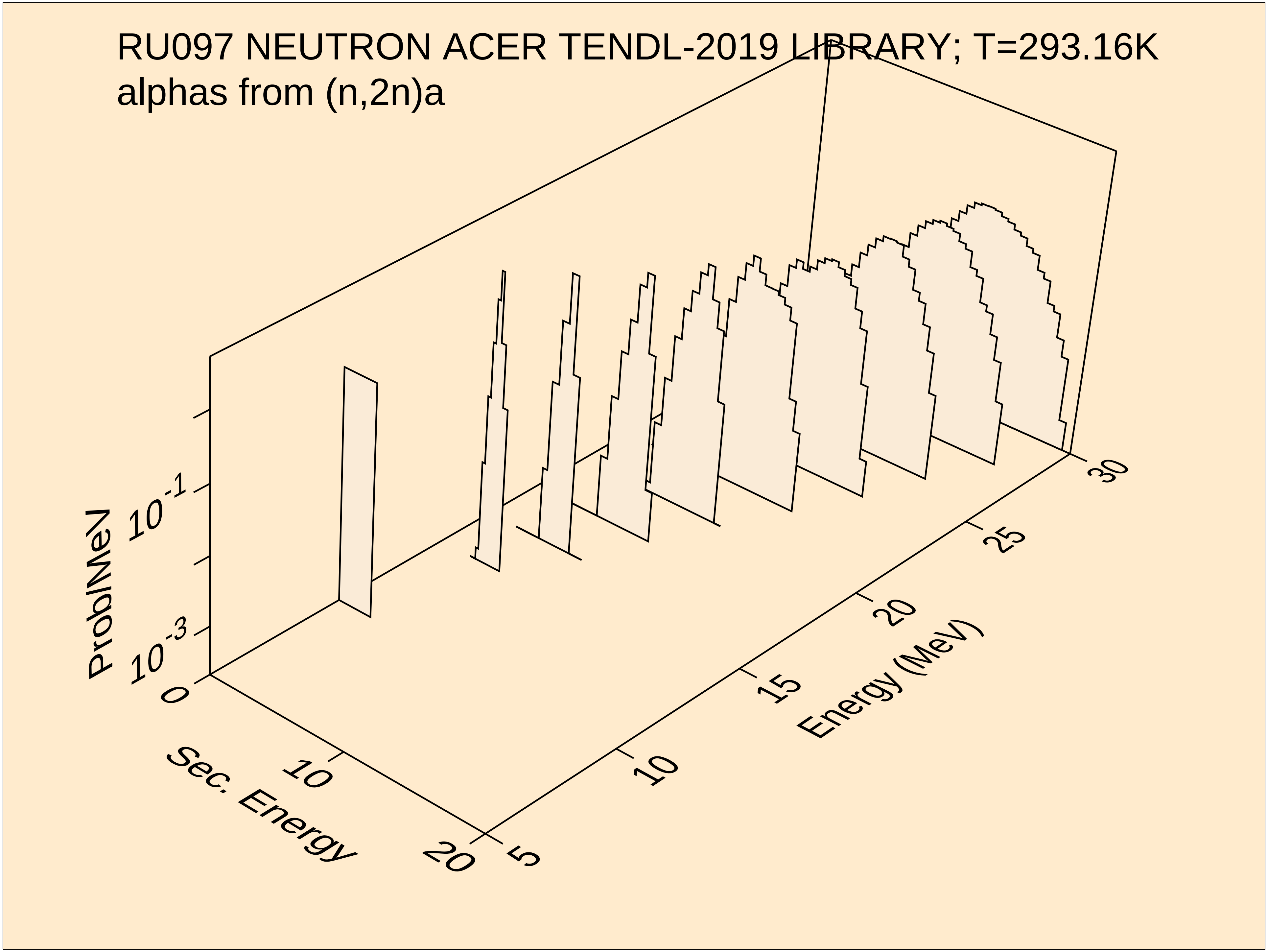


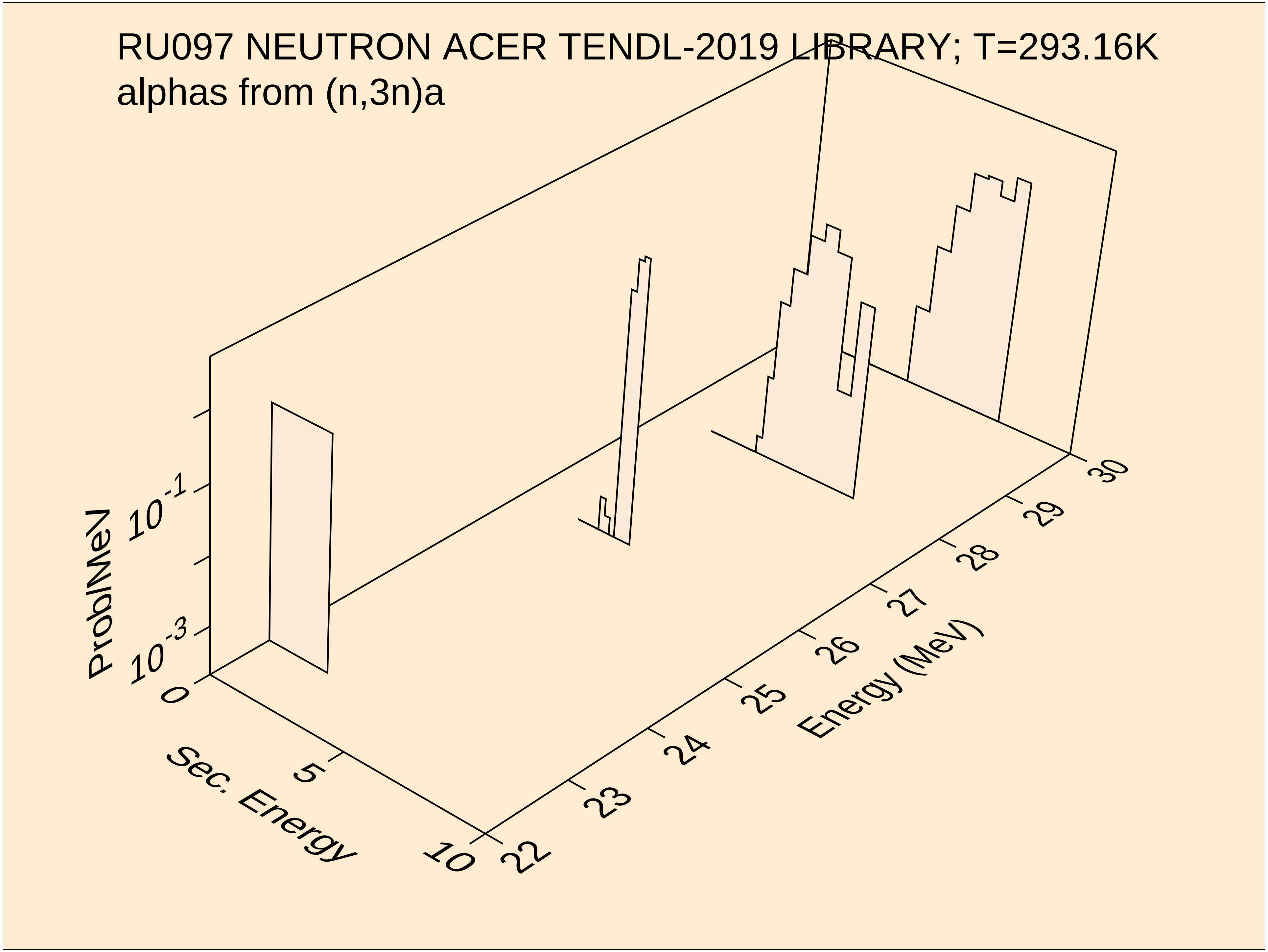

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
he3s from (n,he3)
Prob/MeV
10^{-1}
10^{-3}
0
20
40
Sec. Energy
5
10
15
20
25
30
Energy (MeV)


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,x)
ProbMeV
10^{-1}
10^{-3}
10^{-5}
0
100
200
Sec. Energy
0
50
100
150
200
Energy (MeV)



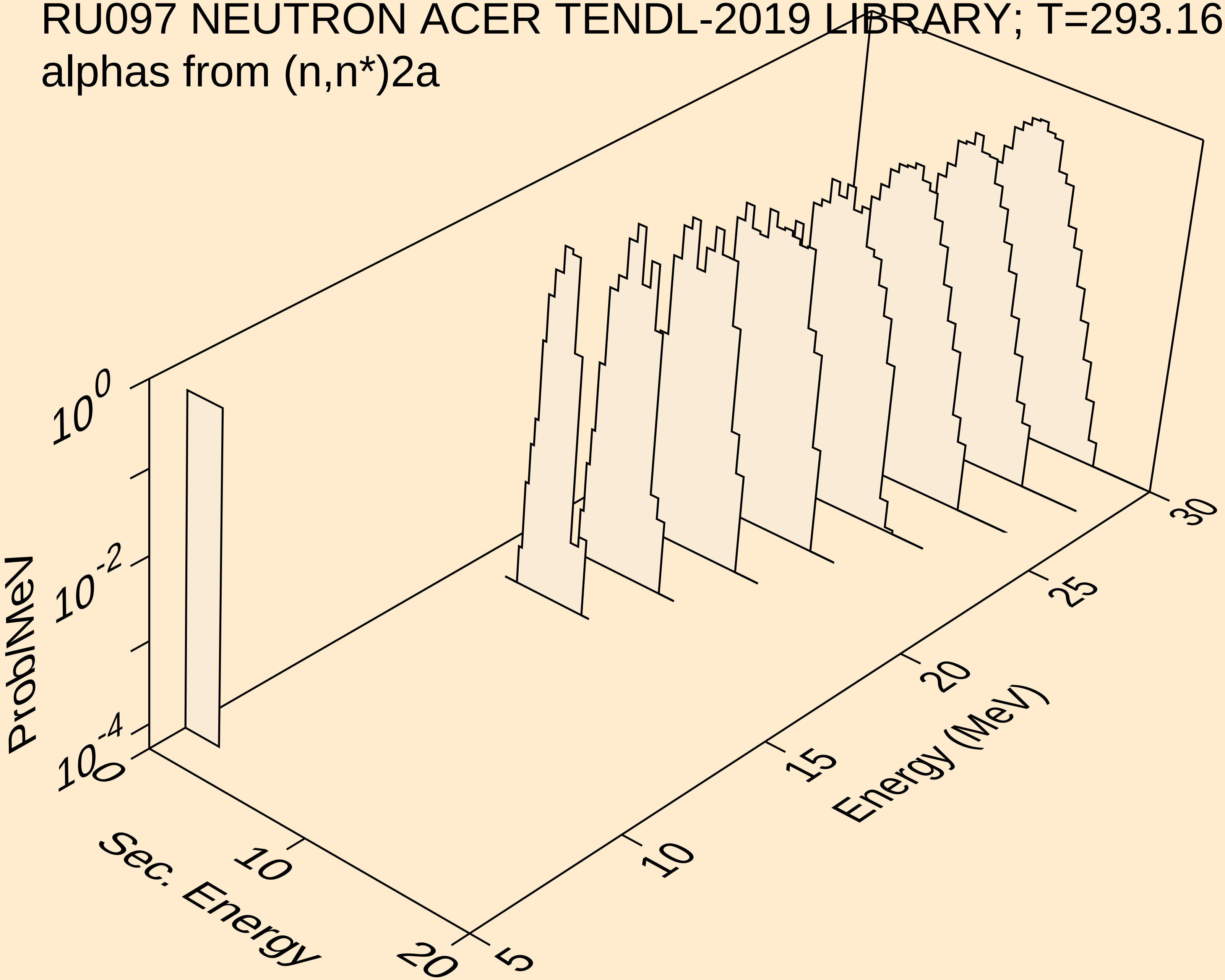
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,n*)a
Prob/MeV
10^{-1}
10^{-3}
0
20
40
Sec. Energy
0
5
10
15
20
25
30
Energy (MeV)

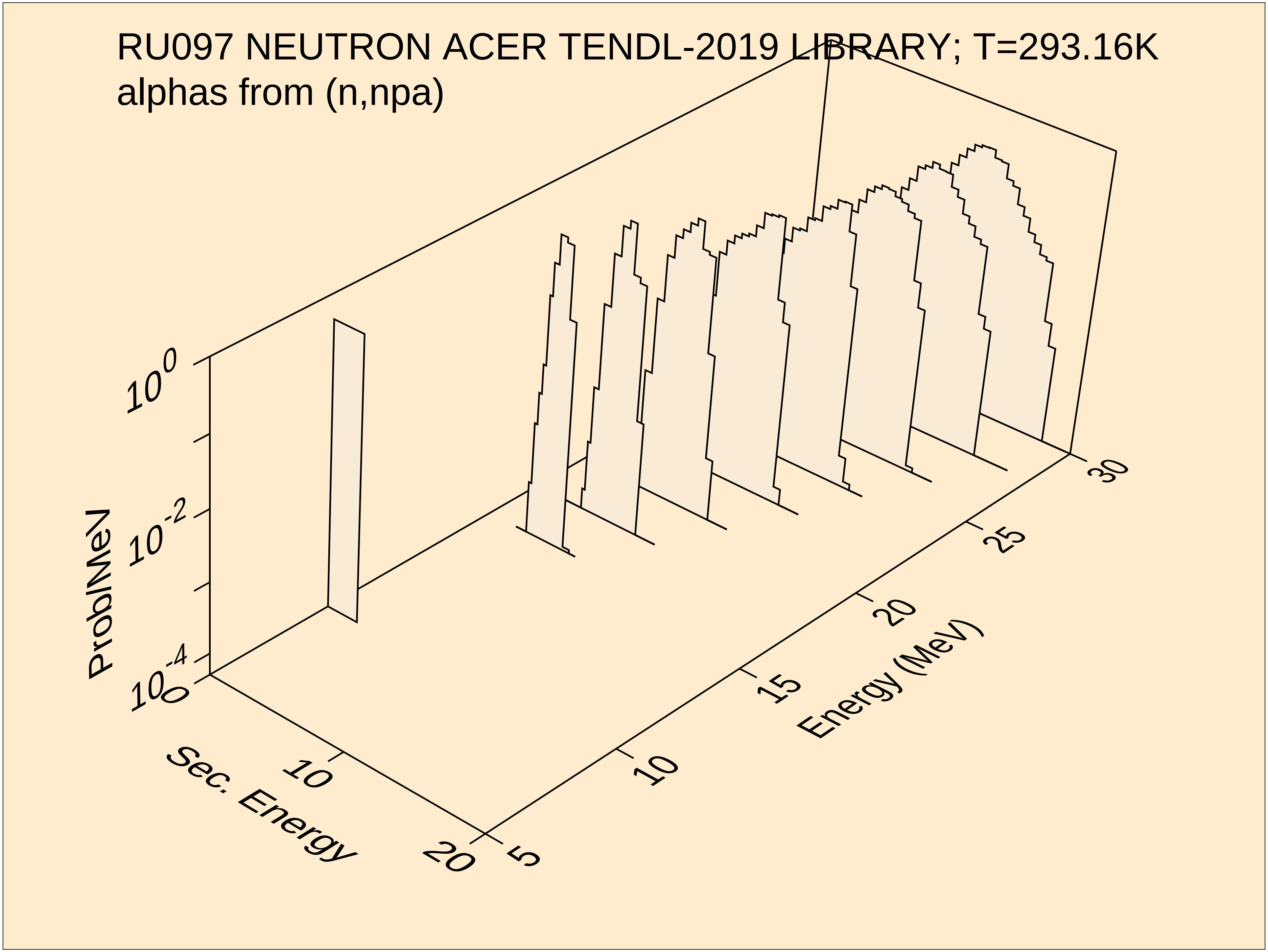

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,2n)a
Prob/MeV
10^-1
10^-3
0
10
20
Sec. Energy
5
10
15
20
25
30
Energy (MeV)

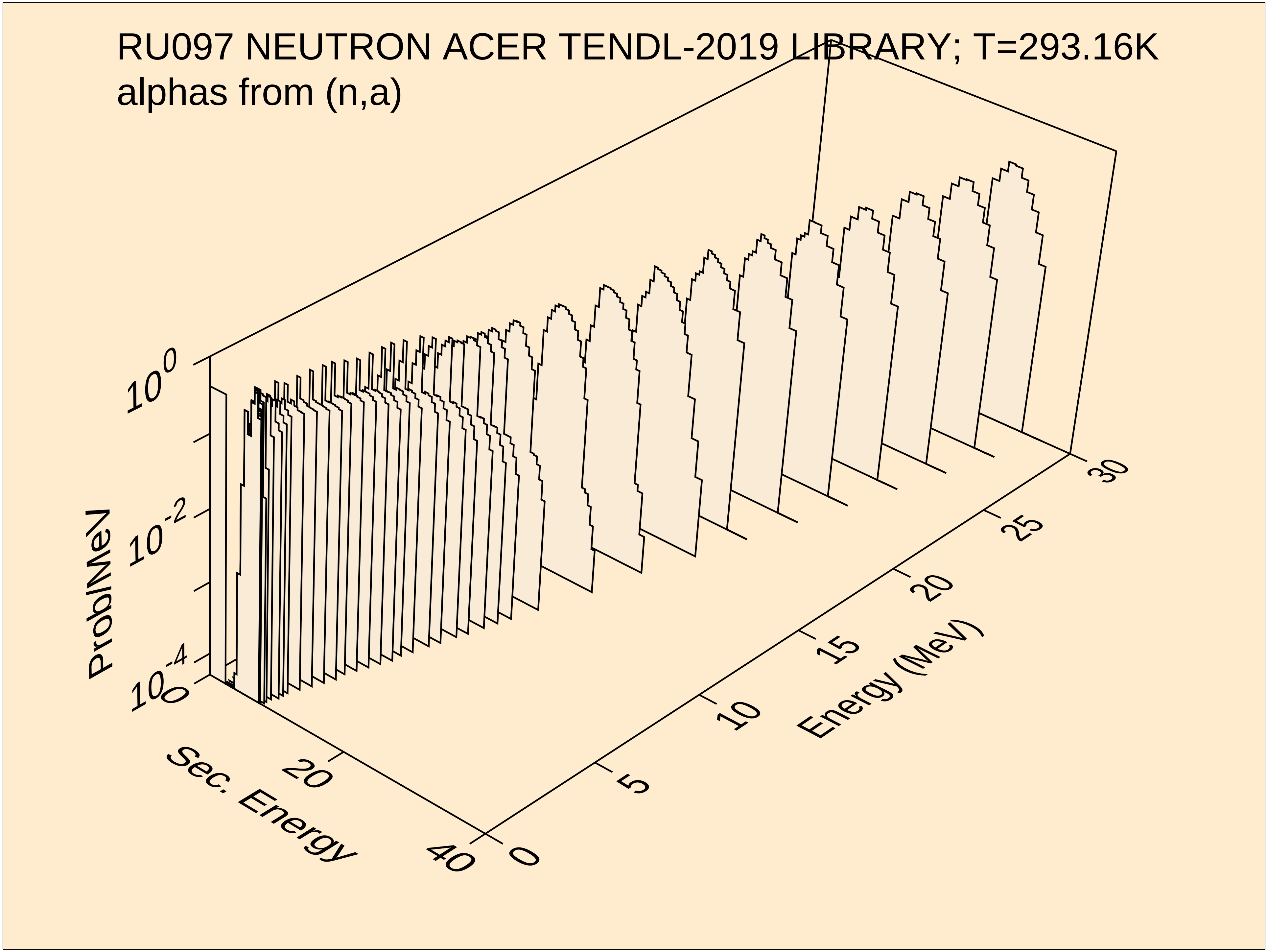


RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,3n)a
ProbMeV
10-1
10-3
0
Sec. Energy
5
10
22
23
24
25
26
27
28
29
30
Energy (MeV)

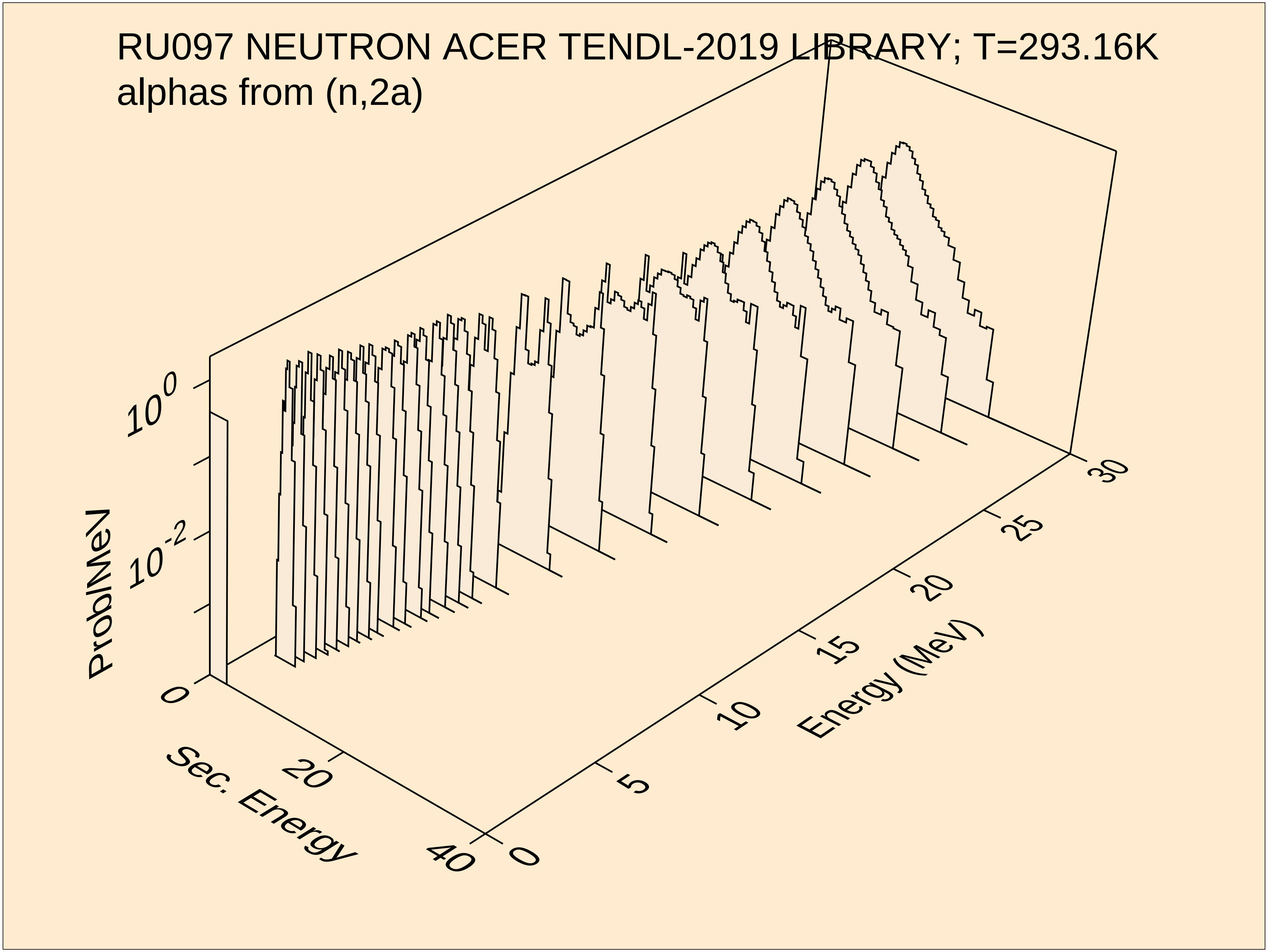
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,n*)2a




RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,npa)
ProbMeV
10^{0}
10^{-2}
10^{-4}
Sec. Energy
0
10
20
Energy (MeV)
5
10
15
20
25
30

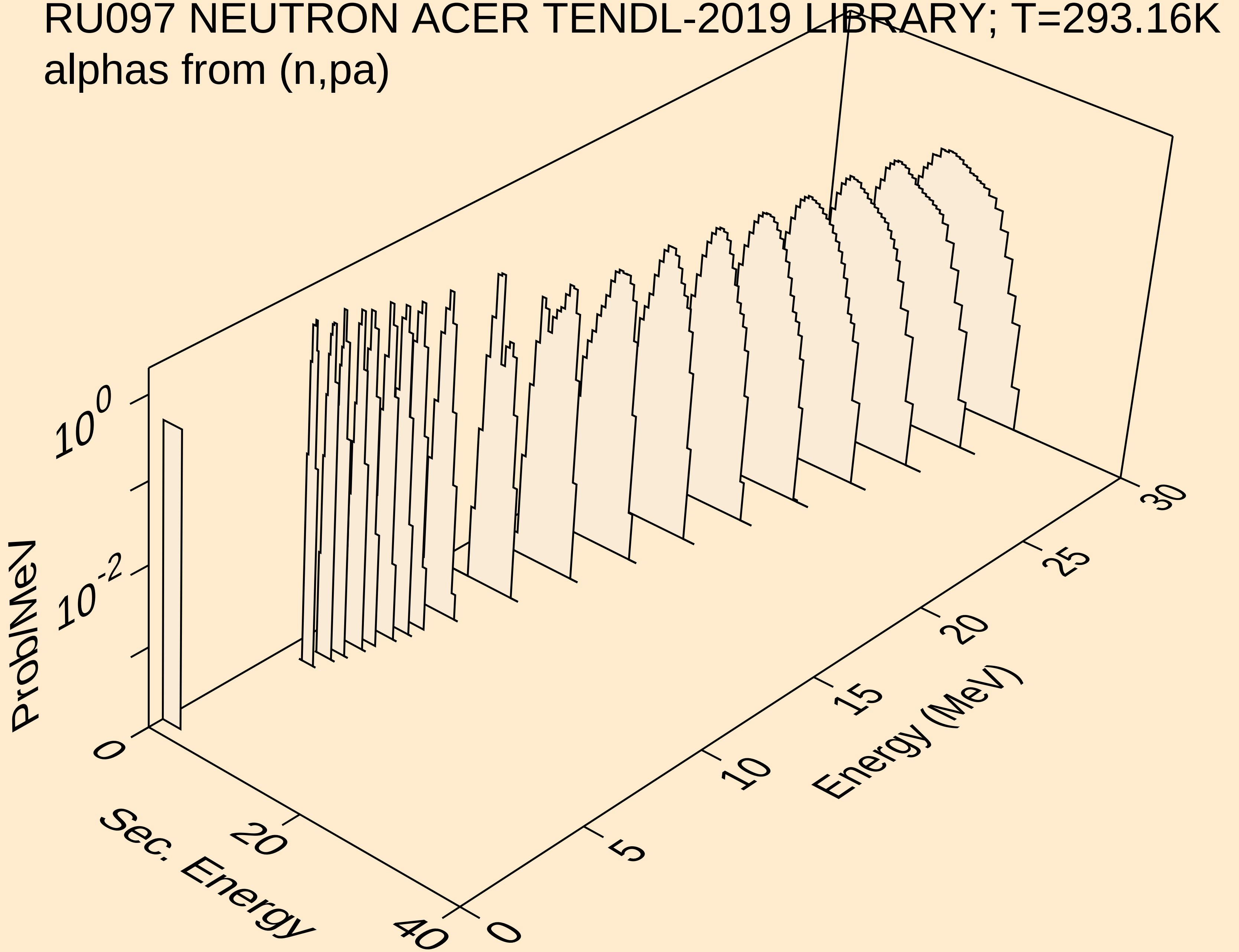


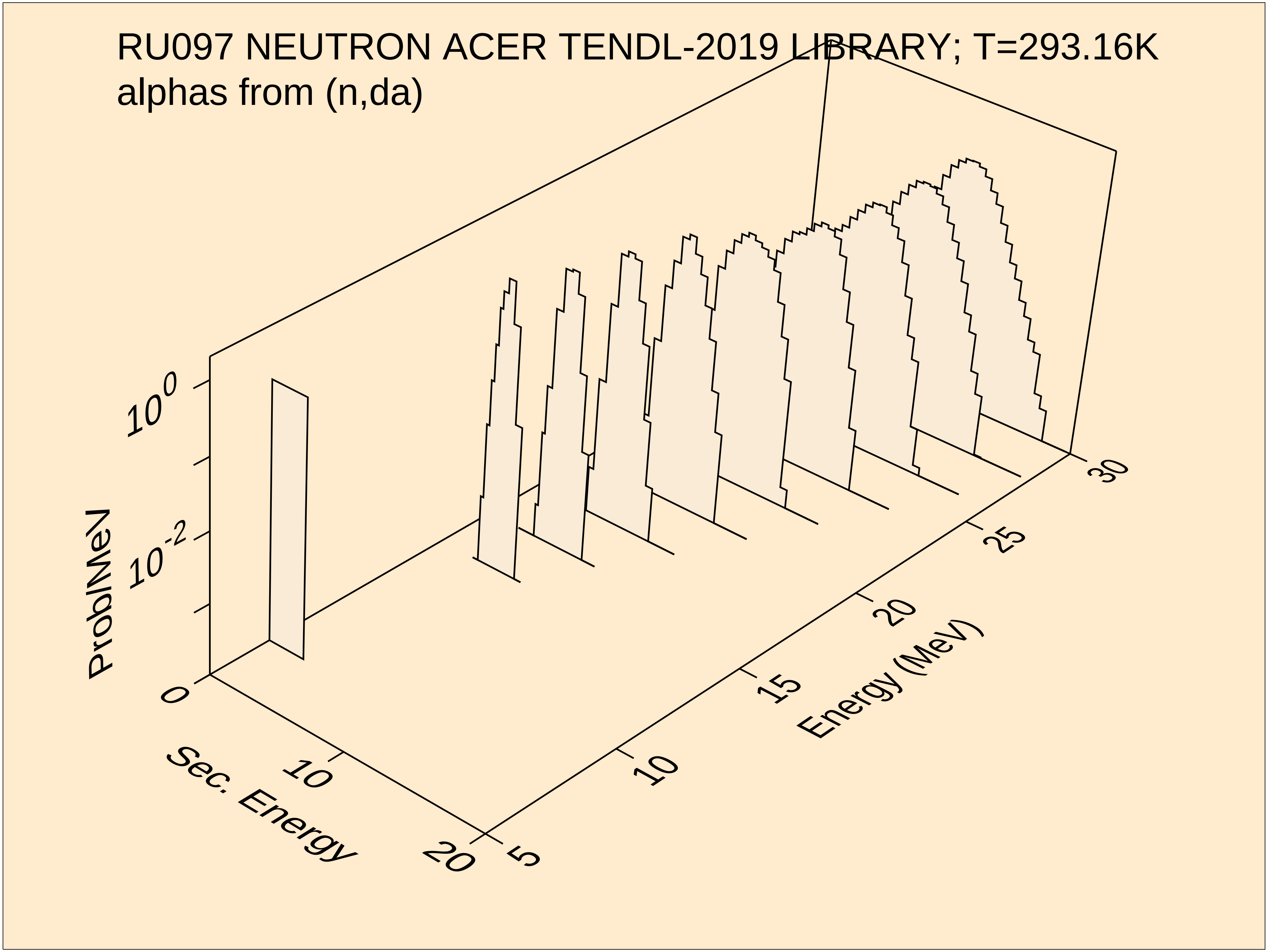
RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,a)
Prob/MeV
10^{0}
10^{-2}
10^{-4}
Sec. Energy
0
20
40
Energy (MeV)
0
5
10
15
20
25
30



RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,2a)
Prob/MeV
10^{0}
10^{-2}
0
Sec. Energy
20
40
0
5
10
15
20
25
30
Energy (MeV)

RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,pa)




RU097 NEUTRON ACER TENDL-2019 LIBRARY; T=293.16K
alphas from (n,da)
Prob/MeV
10^{0}
10^{-2}
0
10
20
Sec. Energy
5
10
15
20
25
30
Energy (MeV)