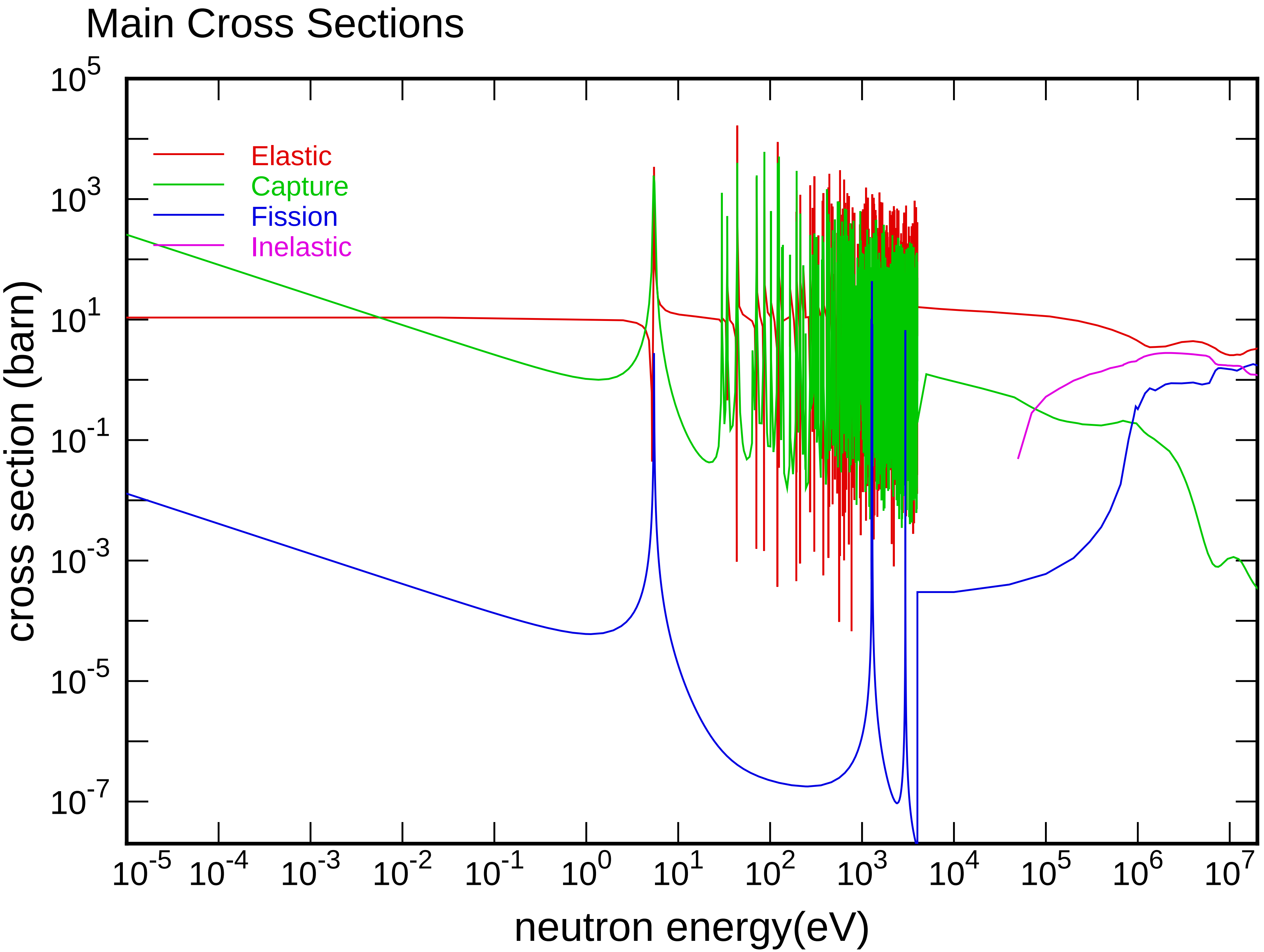
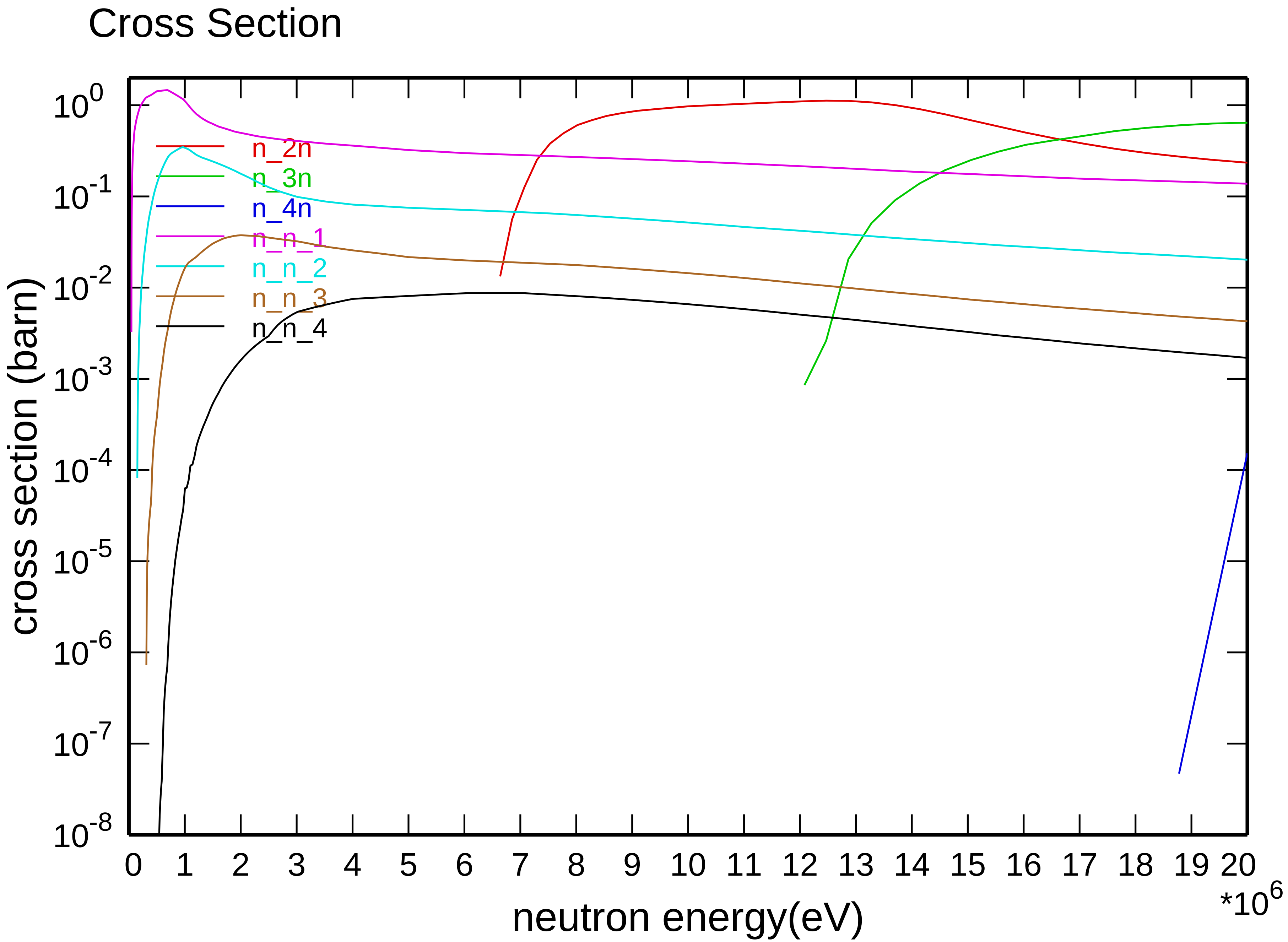
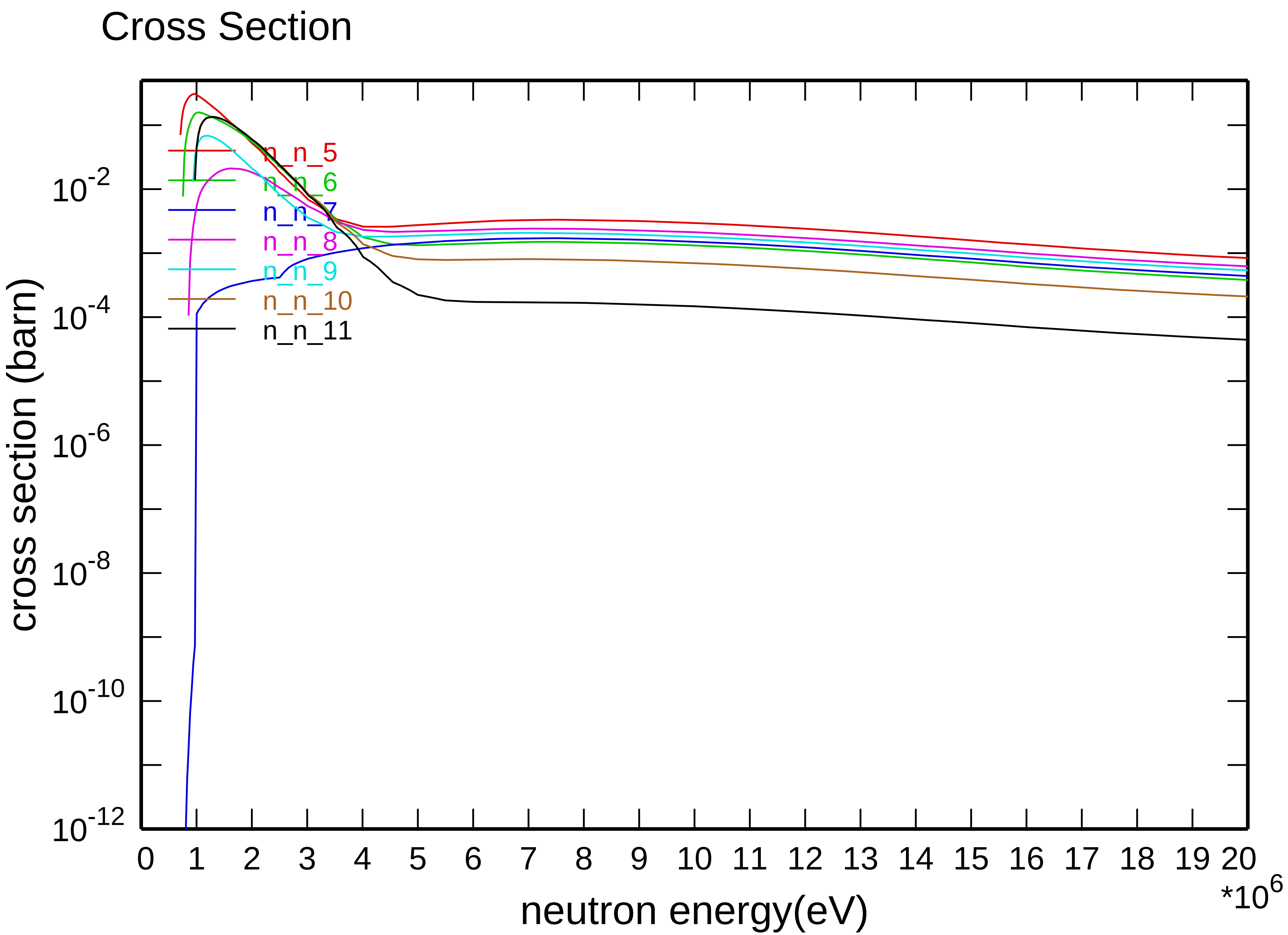
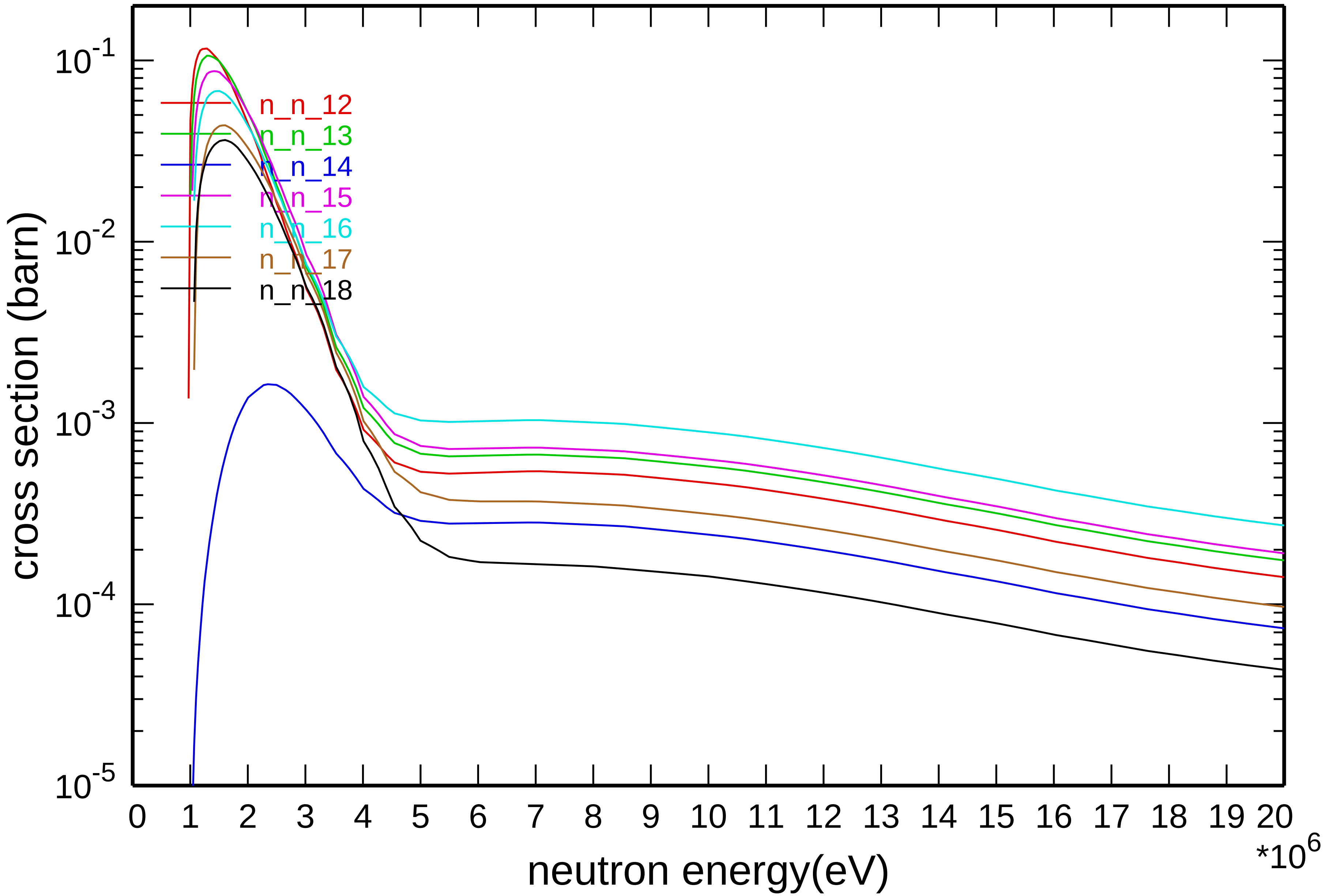
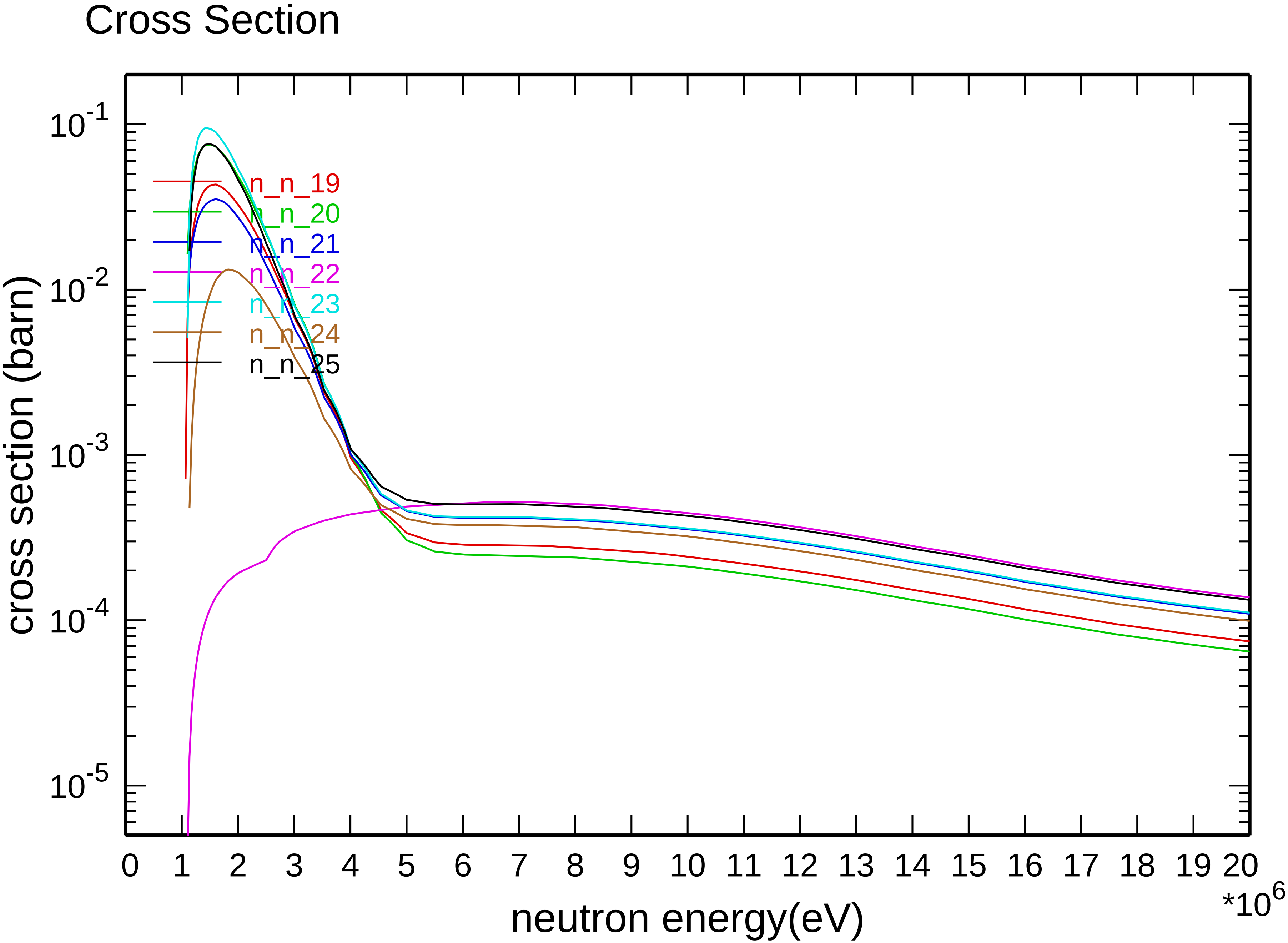

Main Cross Sections
Elastic
Capture
Fission
Inelastic
cross section (barn)
10^{5}
10^{3}
10^{1}
10^{-1}
10^{-3}
10^{-5}
10^{-7}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7}
neutron energy(eV)


Cross Section
cross section (barn)
neutron energy(eV)
*10^6
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-6
10^-7
10^-8
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
n_2n
n_3n
n_4n
n_n_1
n_n_2
n_n_3
n_n_4

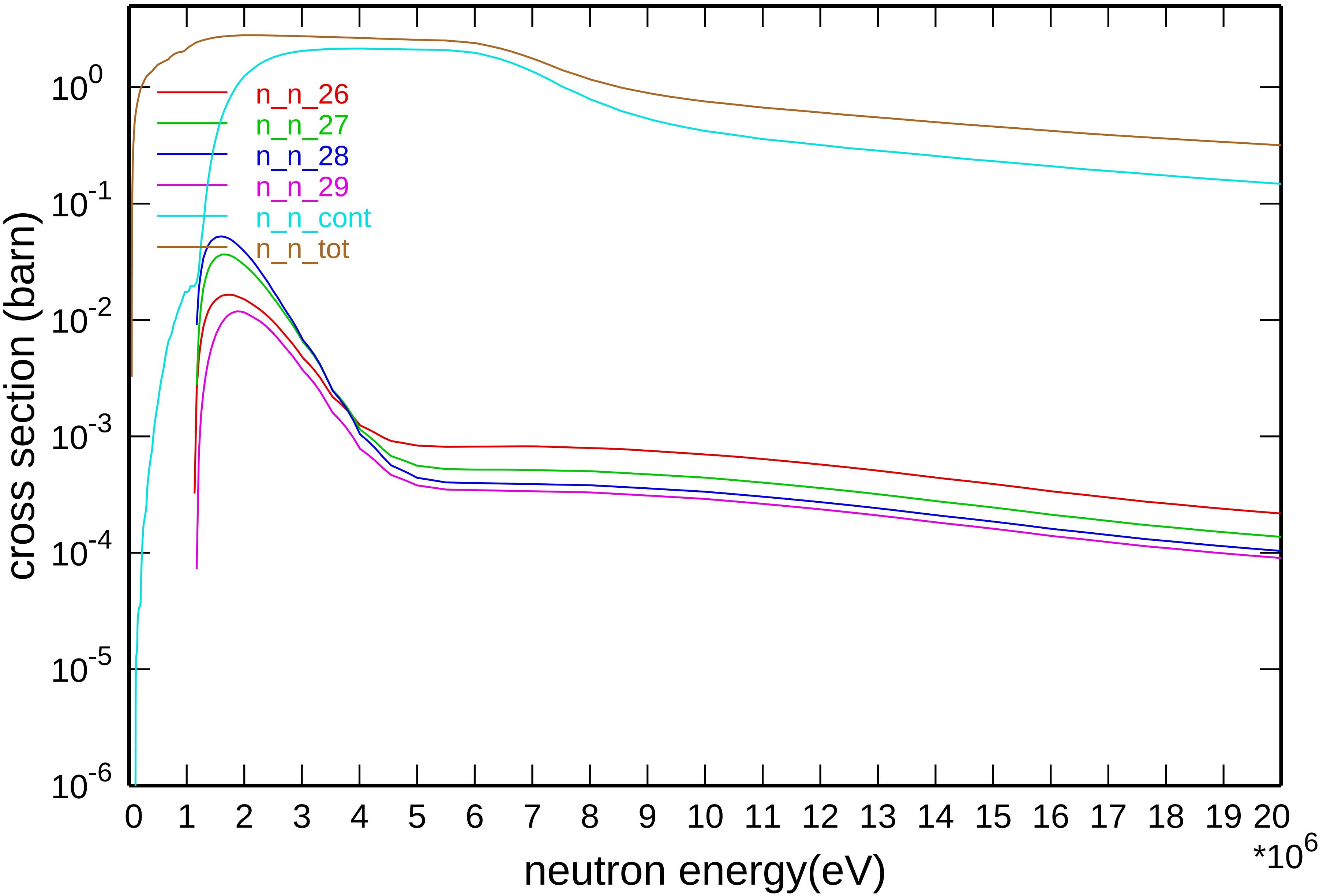

Cross Section
cross section (barn)
neutron energy(eV)
*10^6
10^-2
10^-4
10^-6
10^-8
10^-10
10^-12
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
n_n_5
n_n_6
n_n_7
n_n_8
n_n_9
n_n_10
n_n_11

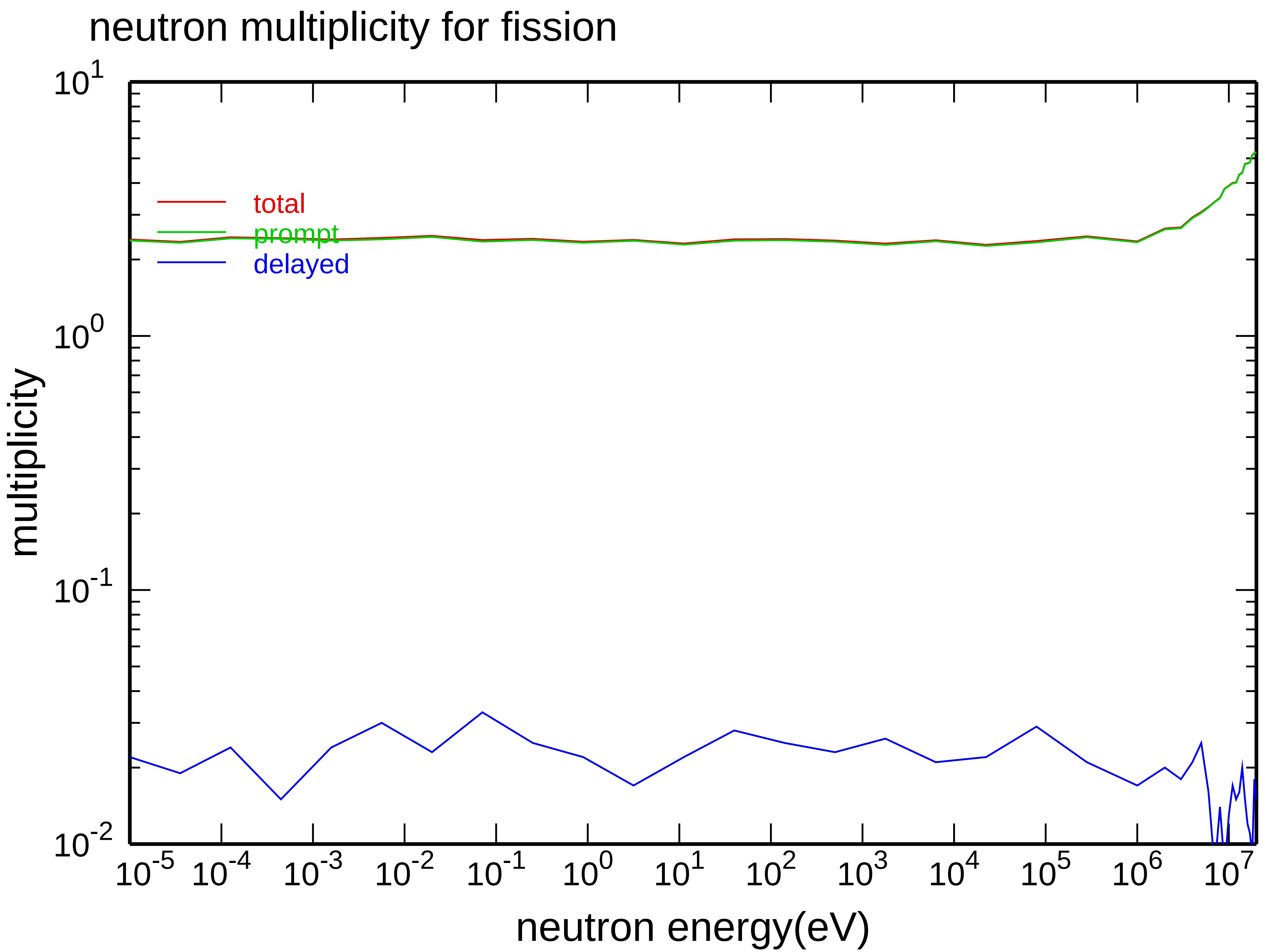
Cross Section



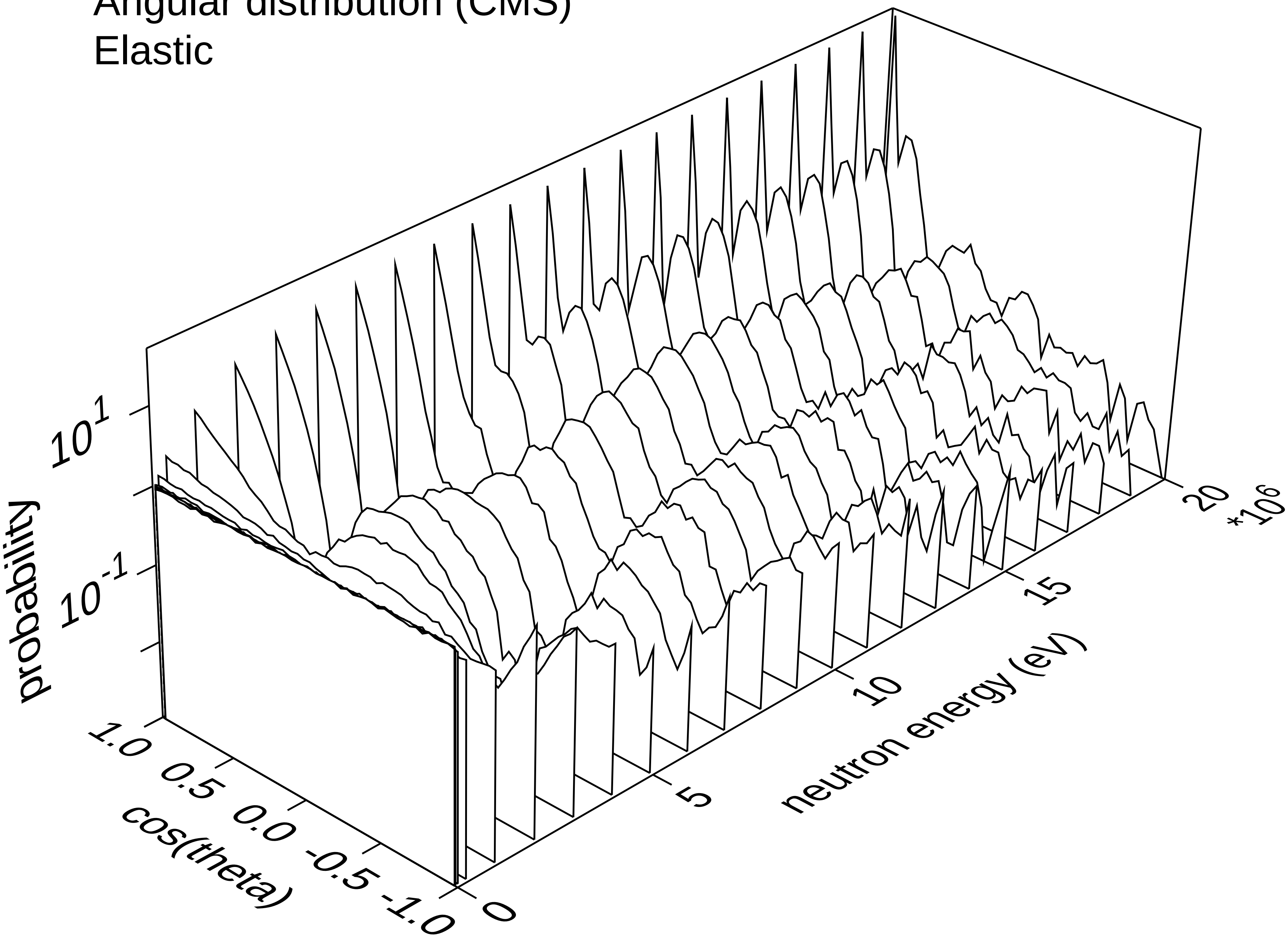

Cross Section
cross section (barn)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
n_n_19
n_n_20
n_n_21
n_n_22
n_n_23
n_n_24
n_n_25
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
$*10^{6}$
neutron energy(eV)

Cross Section

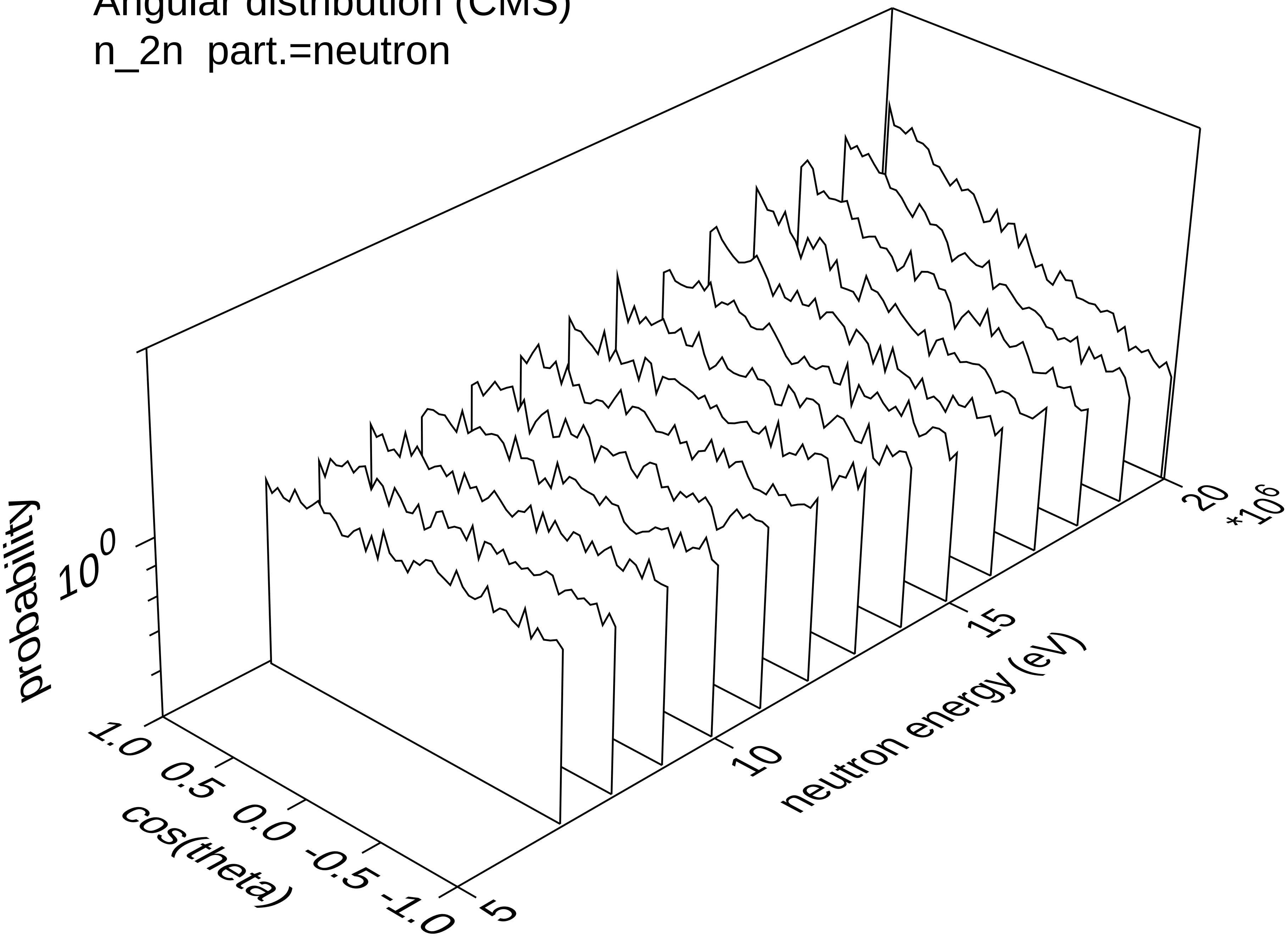



neutron multiplicity for fission
total
prompt
delayed
multiplicity
neutron energy(eV)
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
10^{6}
10^{7}

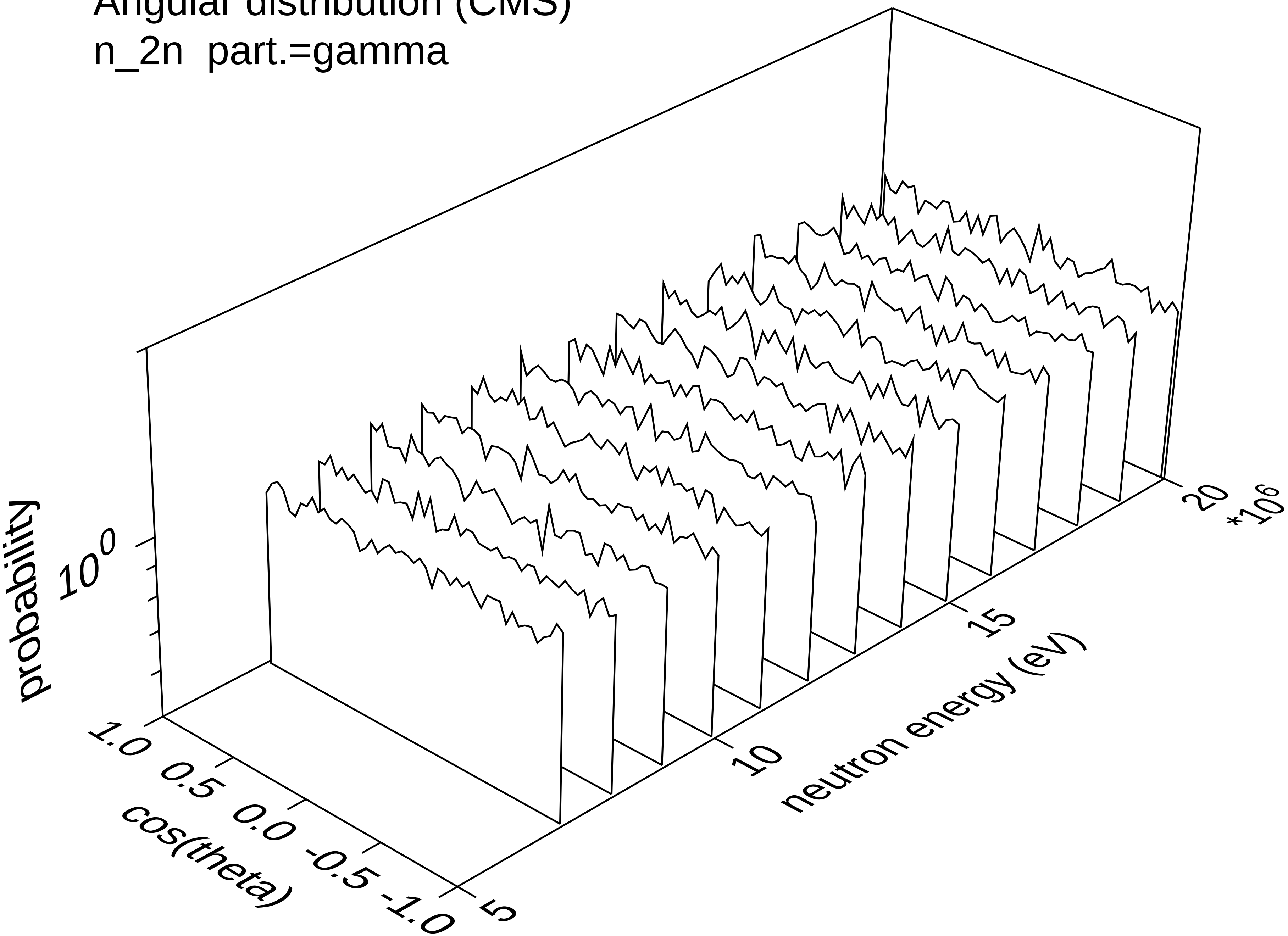
Angular distribution (CMS)
Elastic

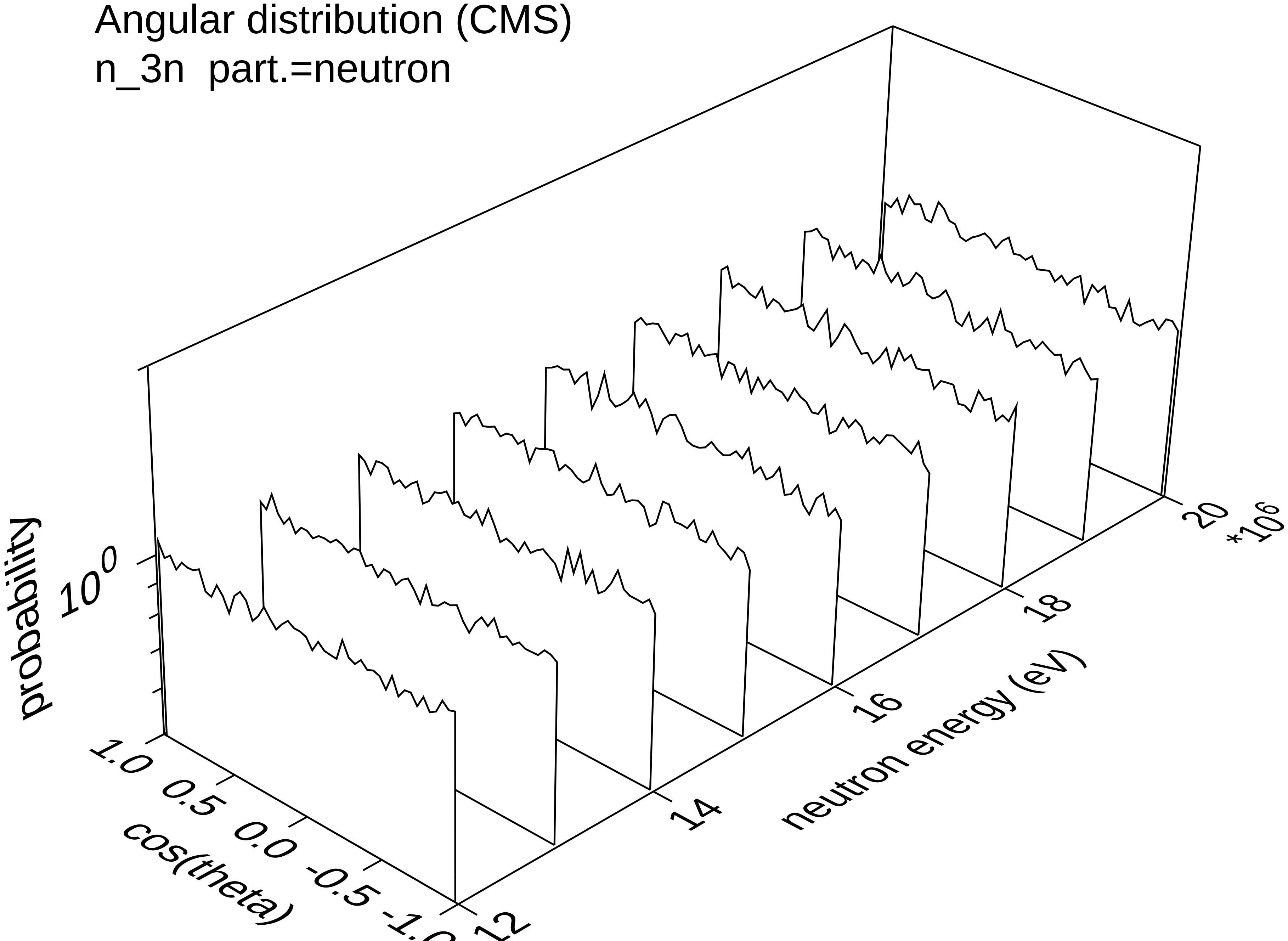


Angular distribution (CMS)
n_2n part.=neutron

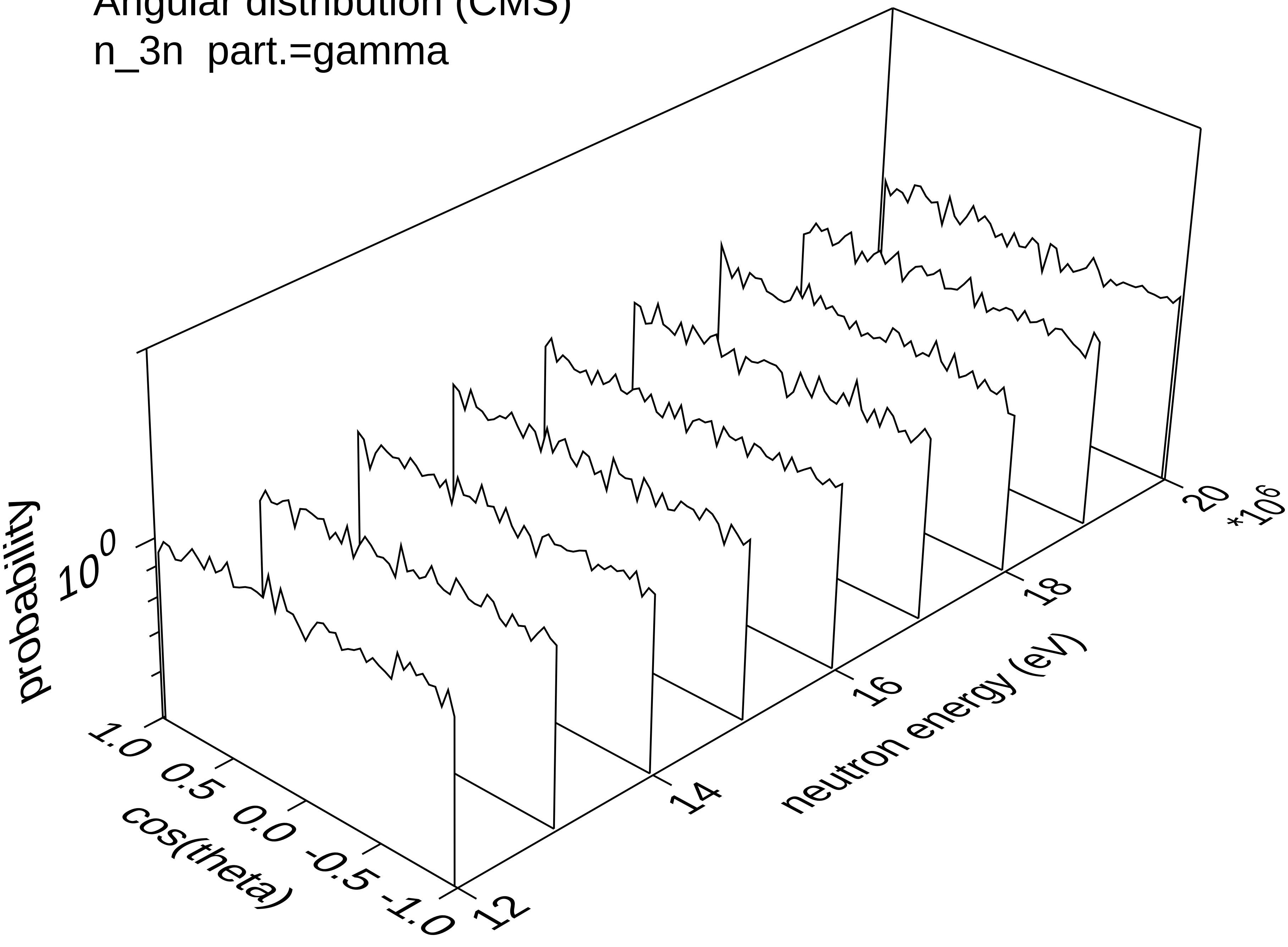


Angular distribution (CMS)
n_2n part.=gamma

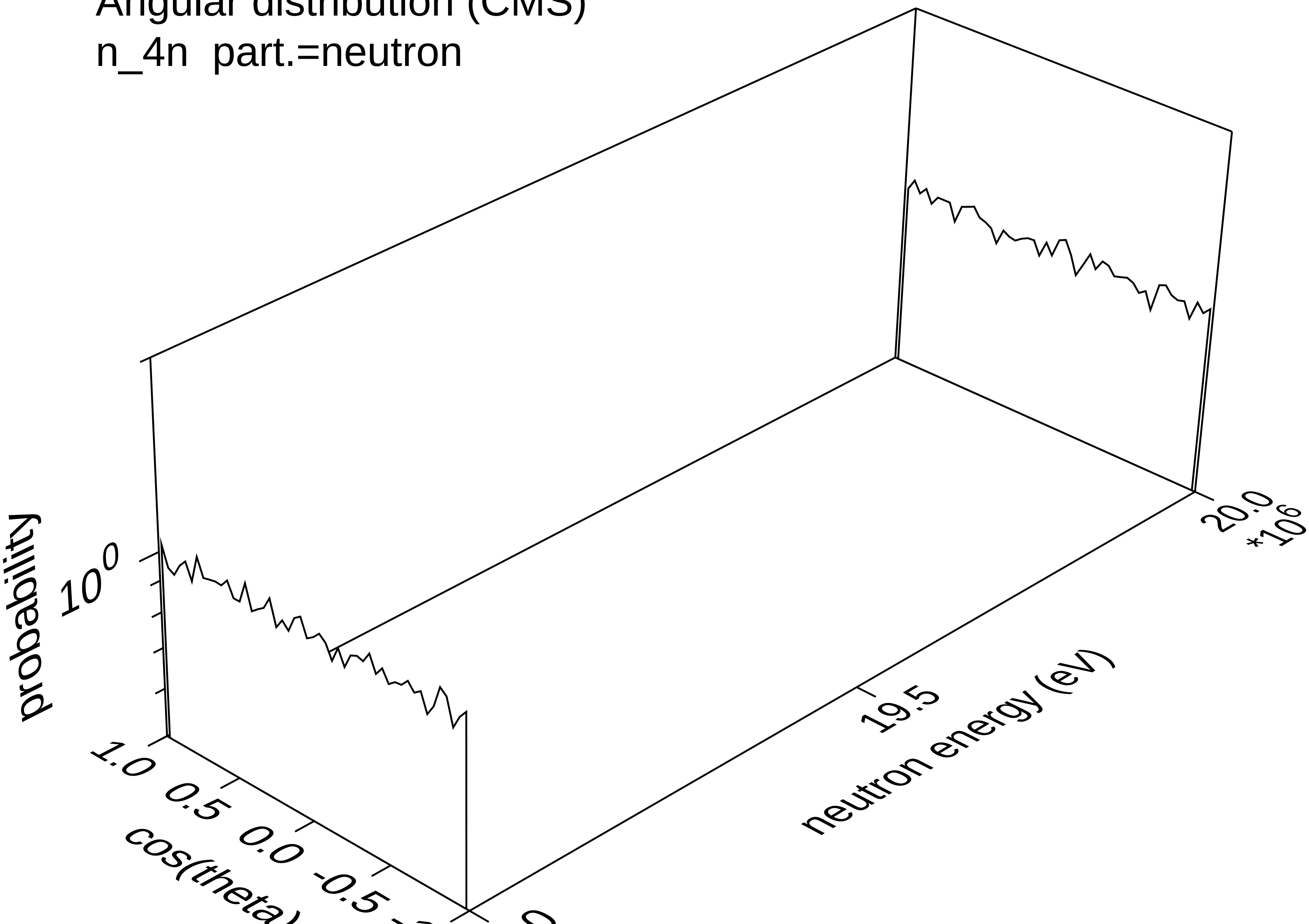



Angular distribution (CMS)
n_3n part.=neutron
probability
10^0
1.0
0.5
0.0
-0.5
-1.0
cos(theta)
12
14
16
18
20
$*10^6$
neutron energy (eV)

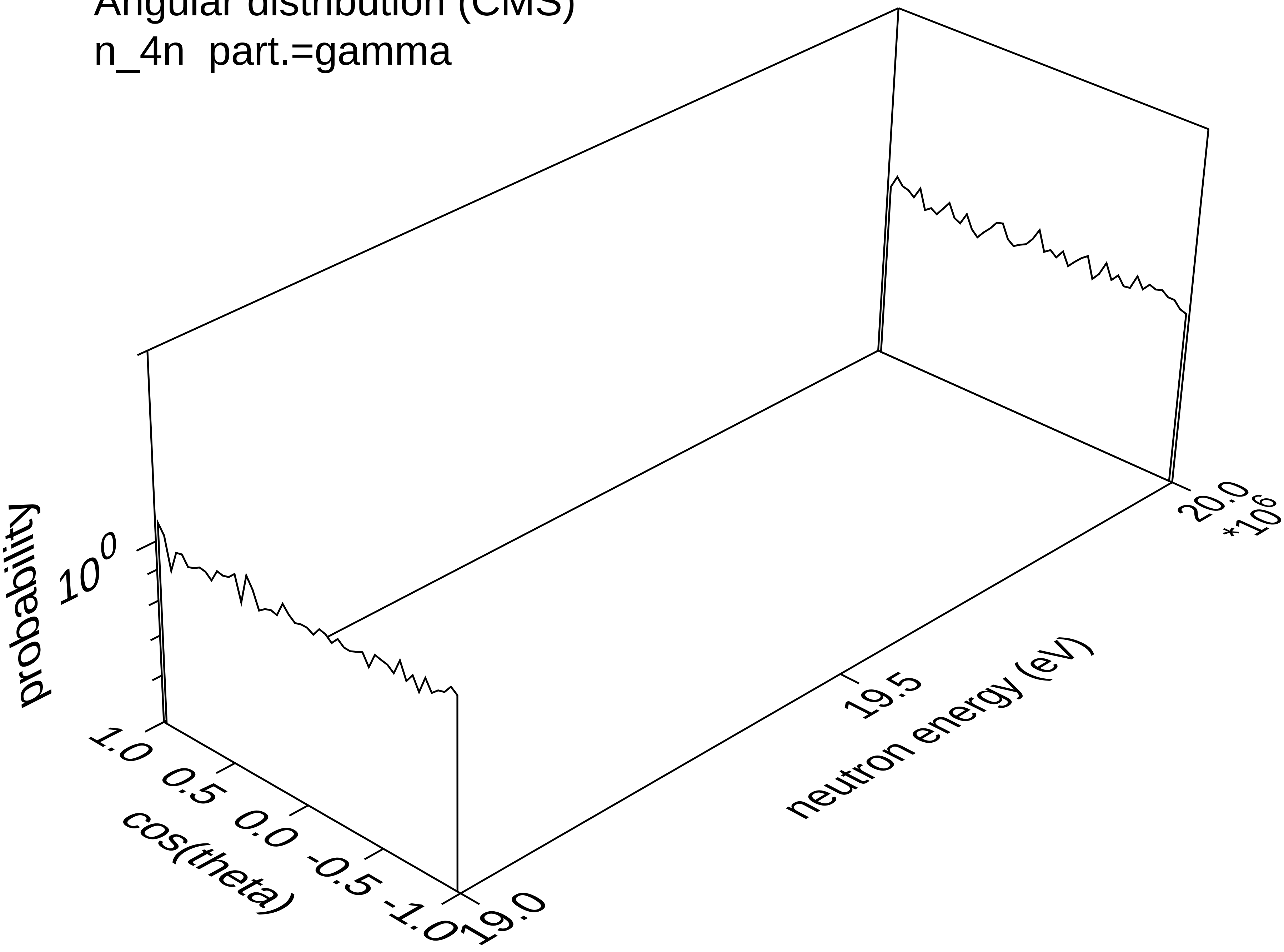
Angular distribution (CMS)
n_3n part.=gamma



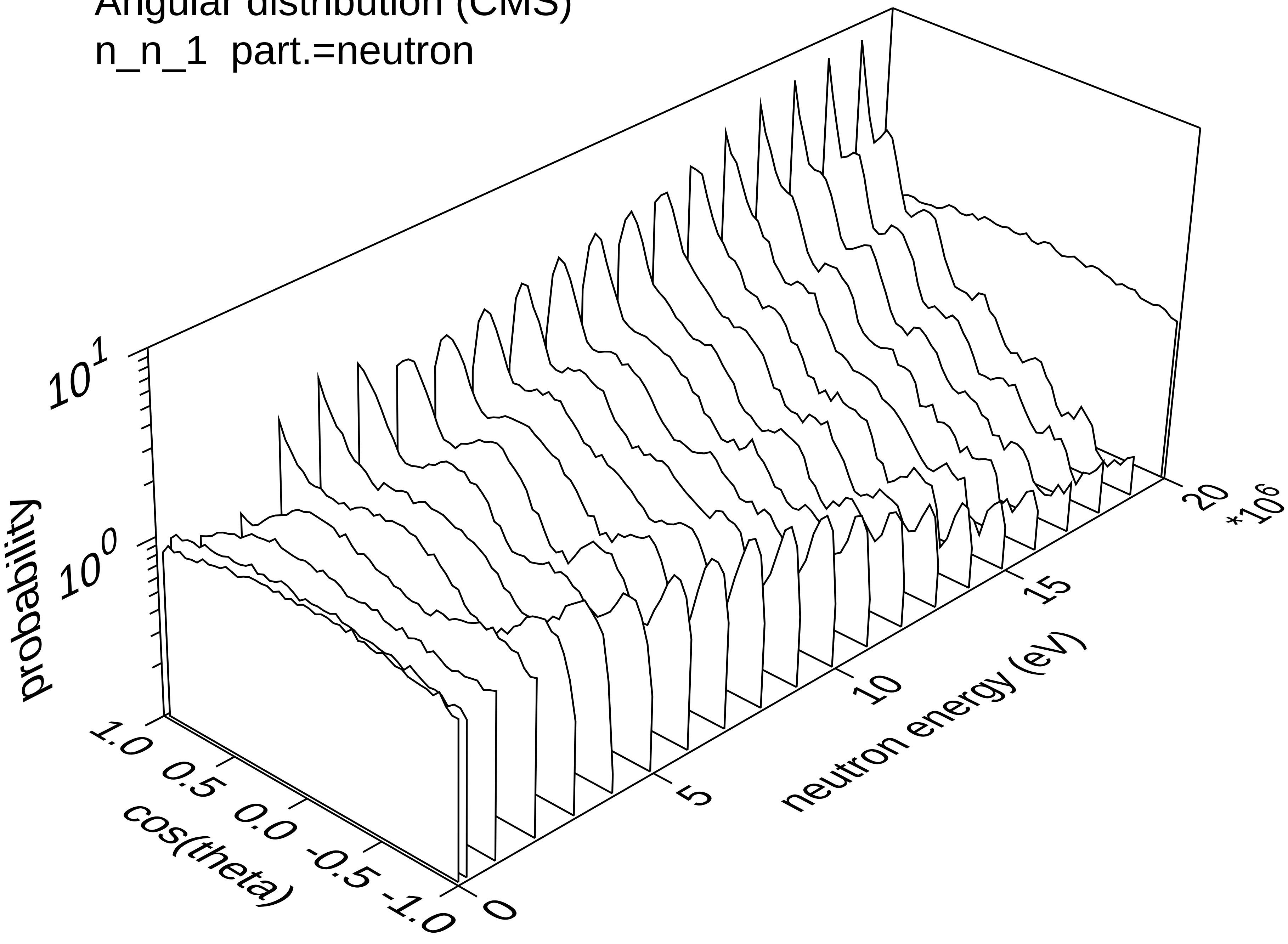
Angular distribution (CMS)
n_4n part.=neutron



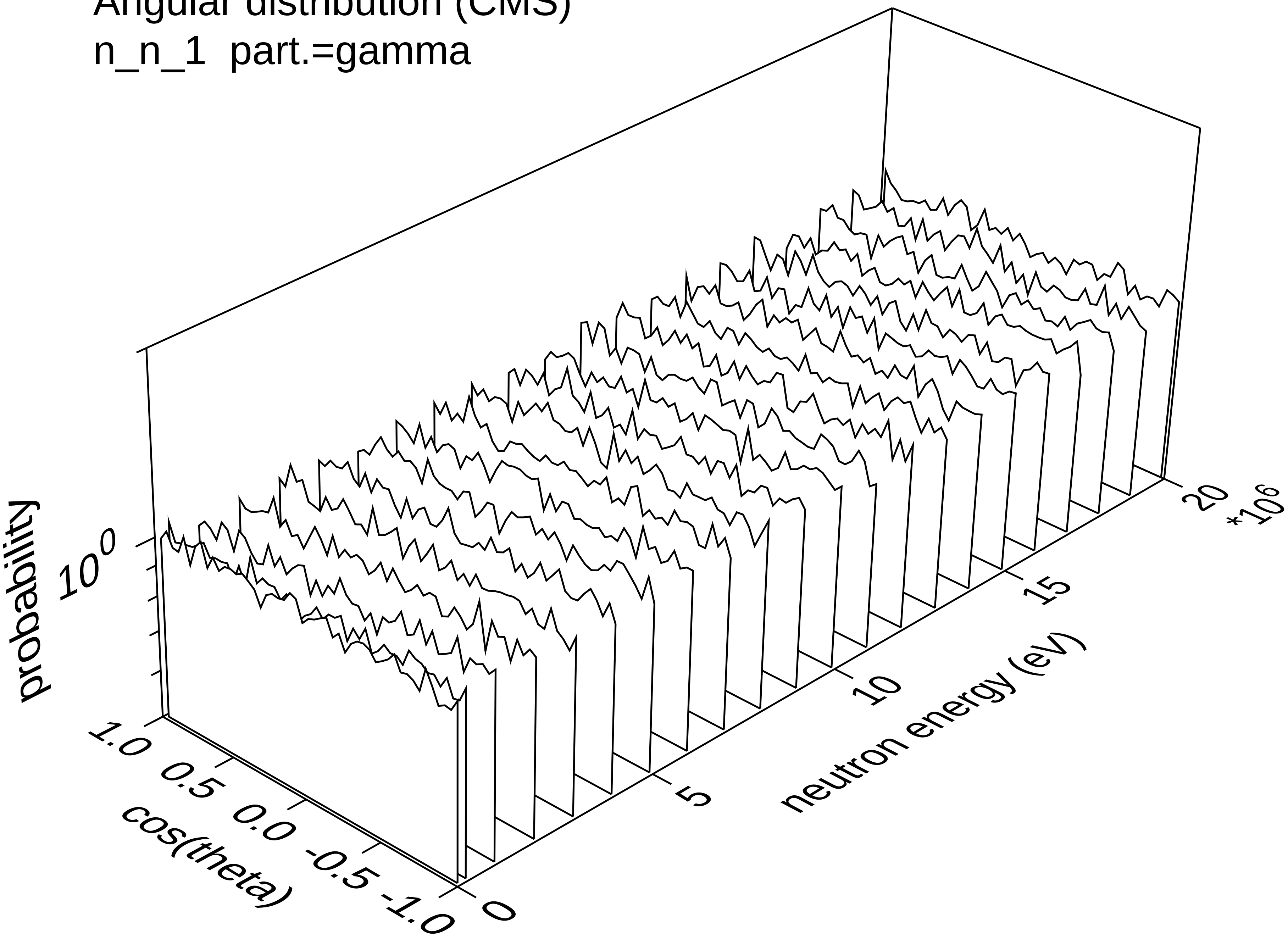
Angular distribution (CMS)
n_4n part.=gamma



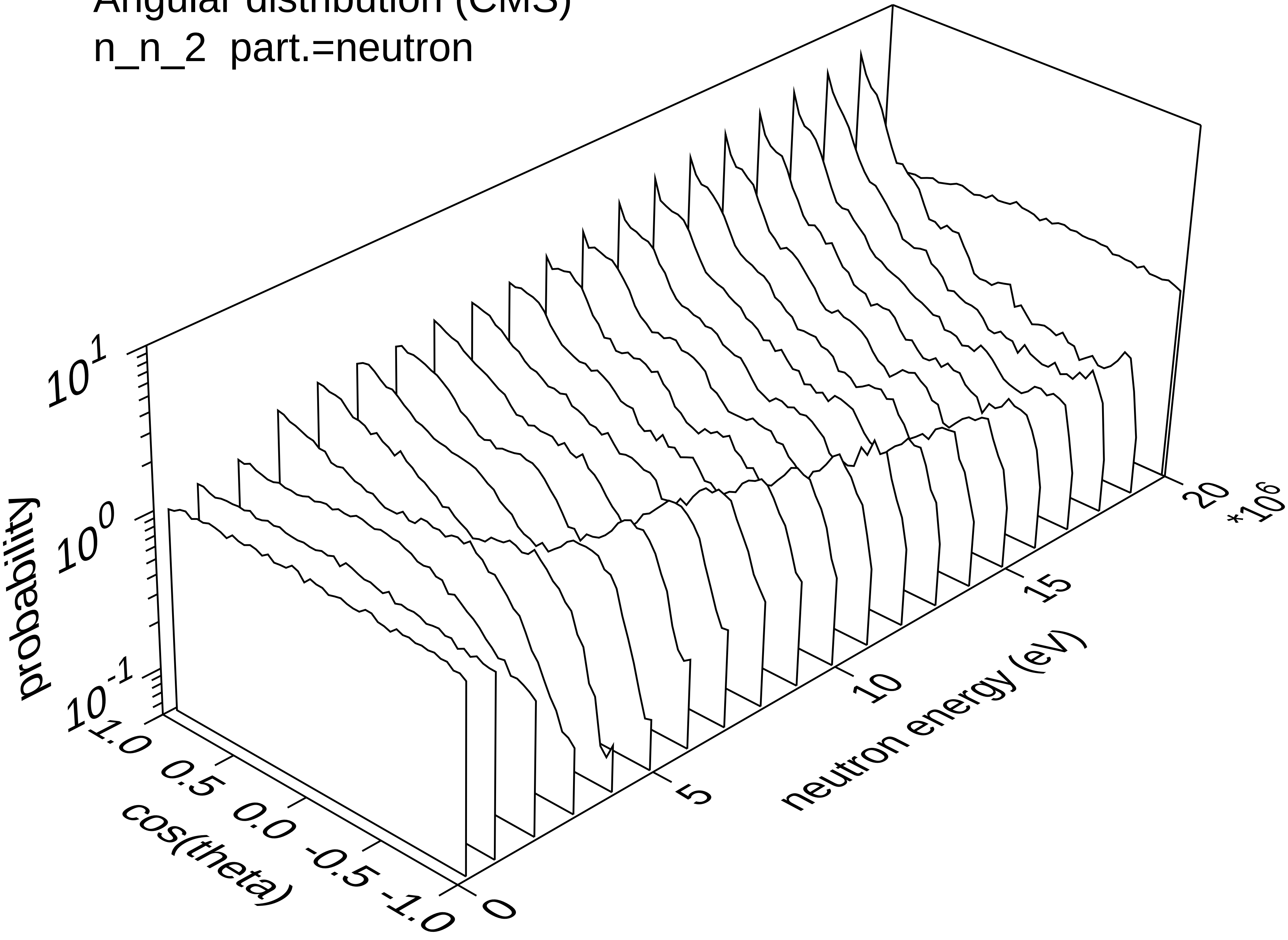
Angular distribution (CMS)
n_n_1 part.=neutron



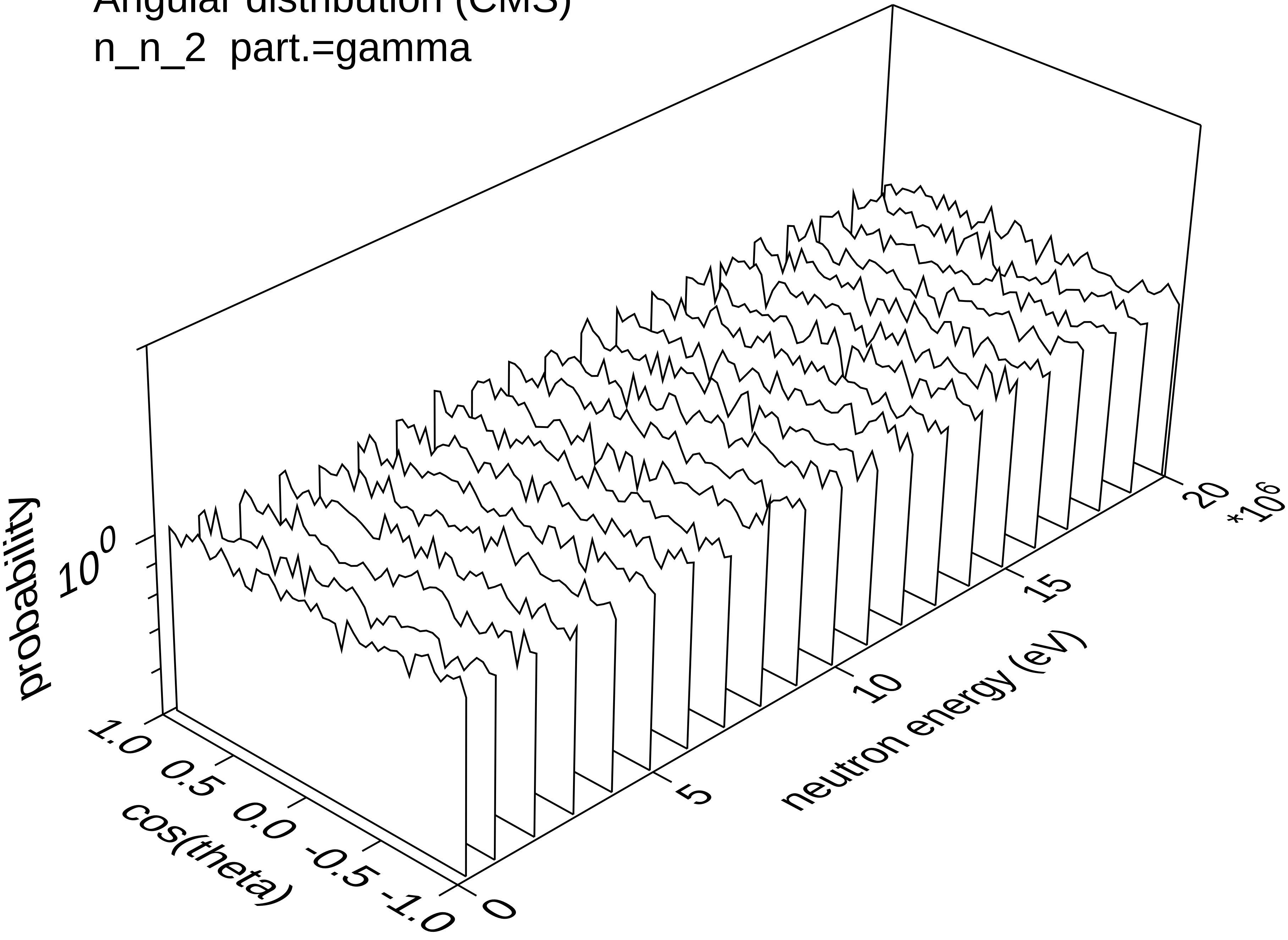
Angular distribution (CMS)
n_n_1 part.=gamma



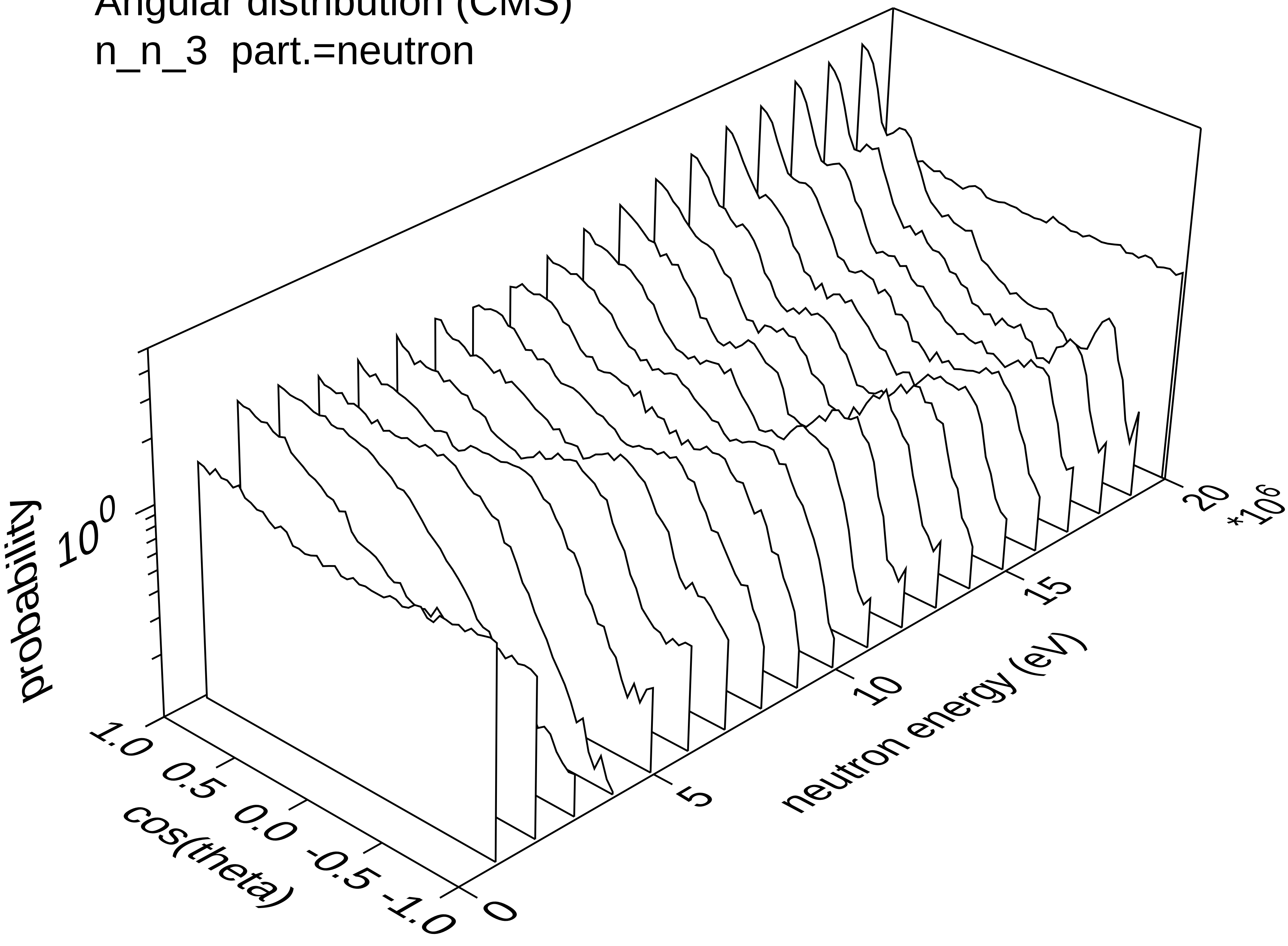
Angular distribution (CMS)
n_n_2 part.=neutron



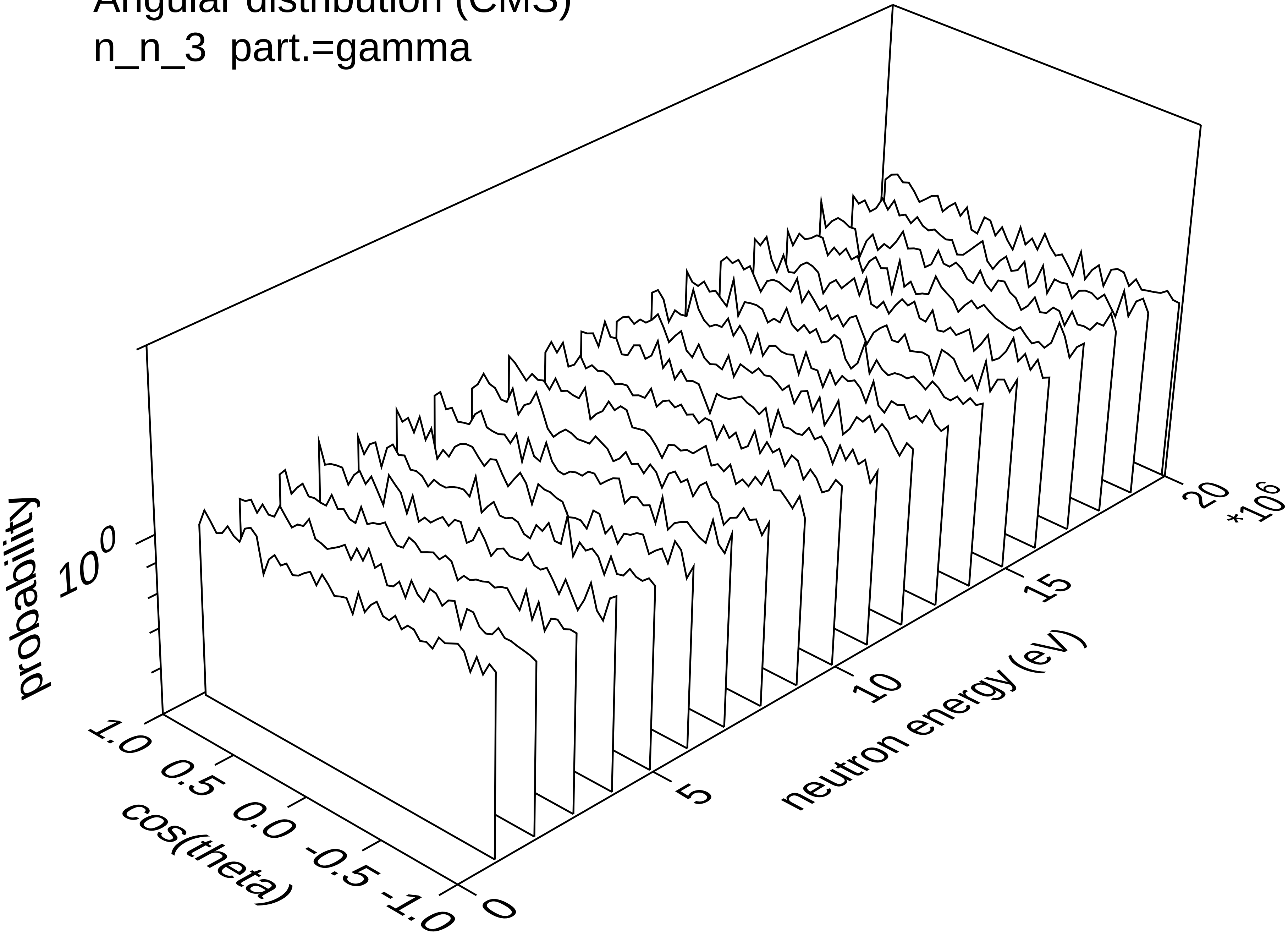
Angular distribution (CMS)
n_n_2 part.=gamma

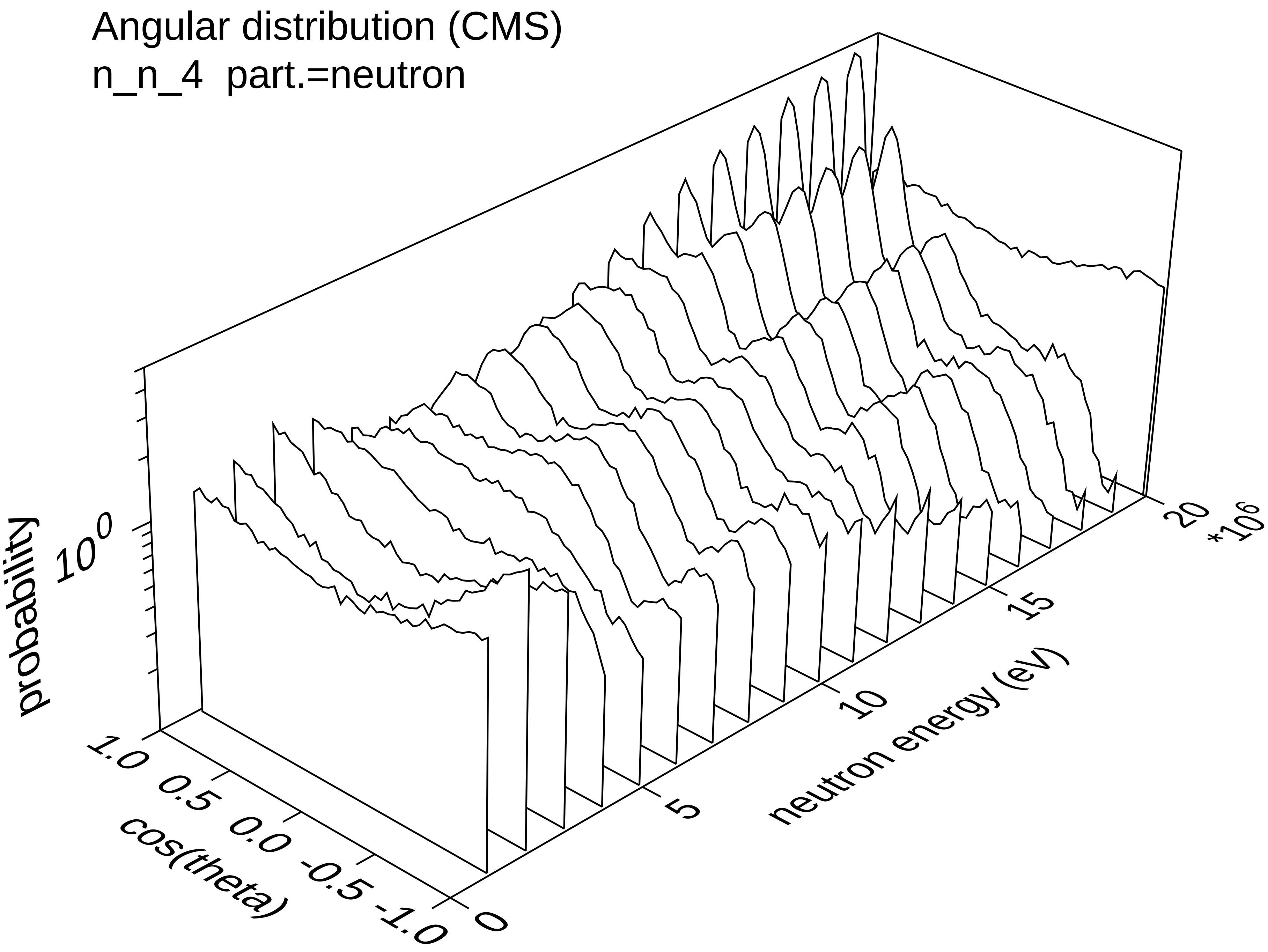


Angular distribution (CMS)
n_n_3 part.=neutron

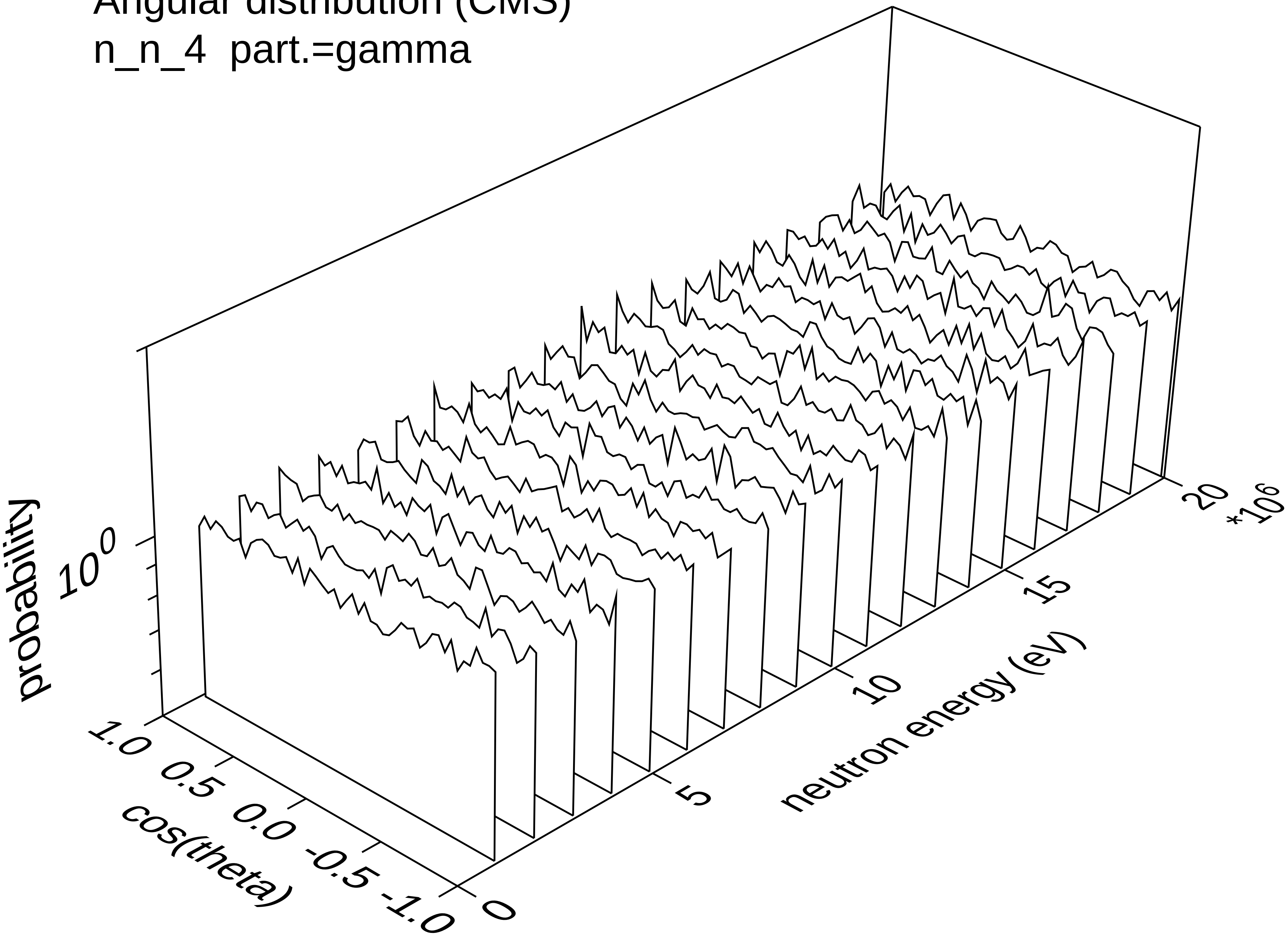


Angular distribution (CMS)
n_n_3 part.=gamma

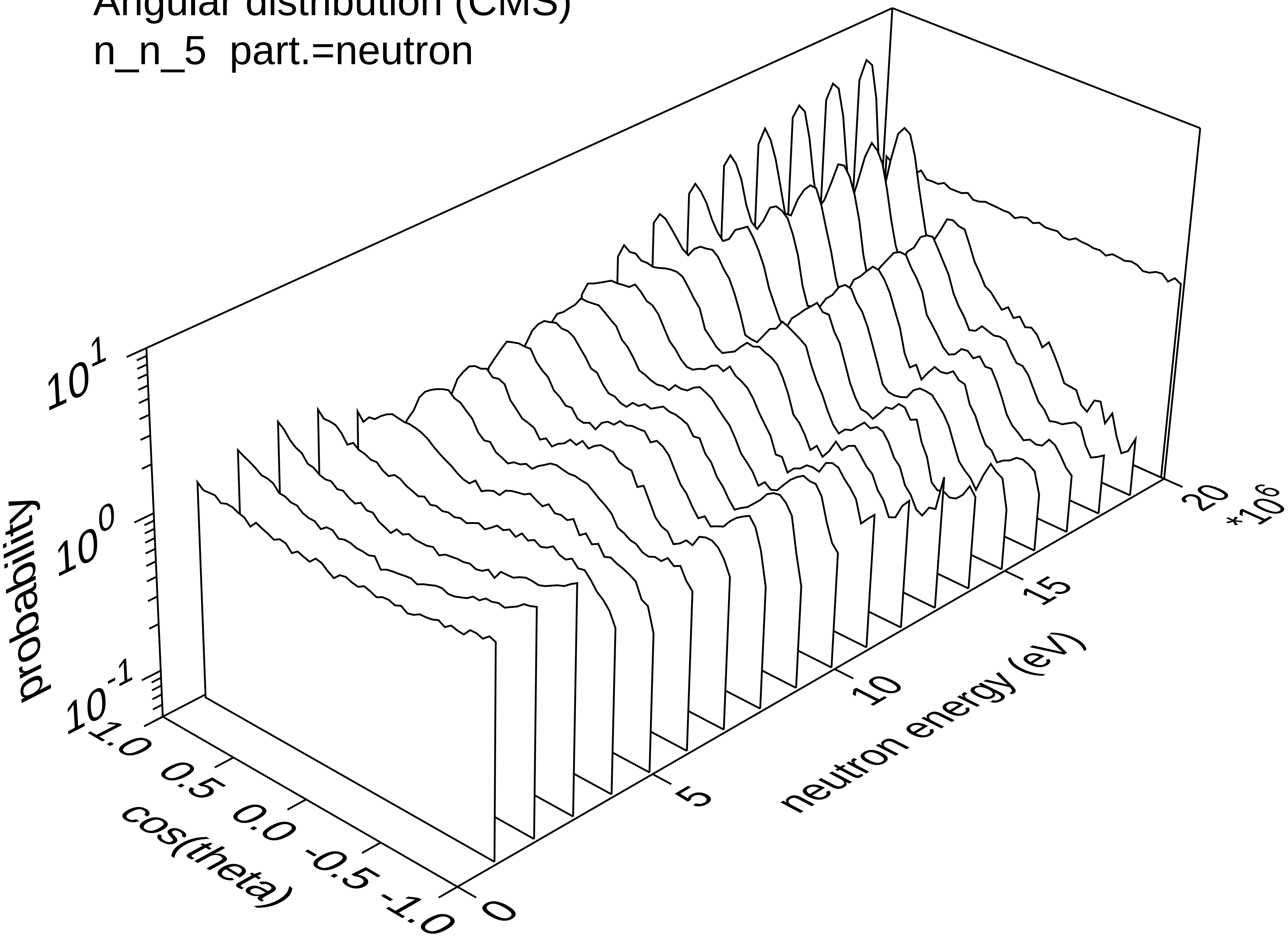



Angular distribution (CMS)
n_n_4 part.=neutron

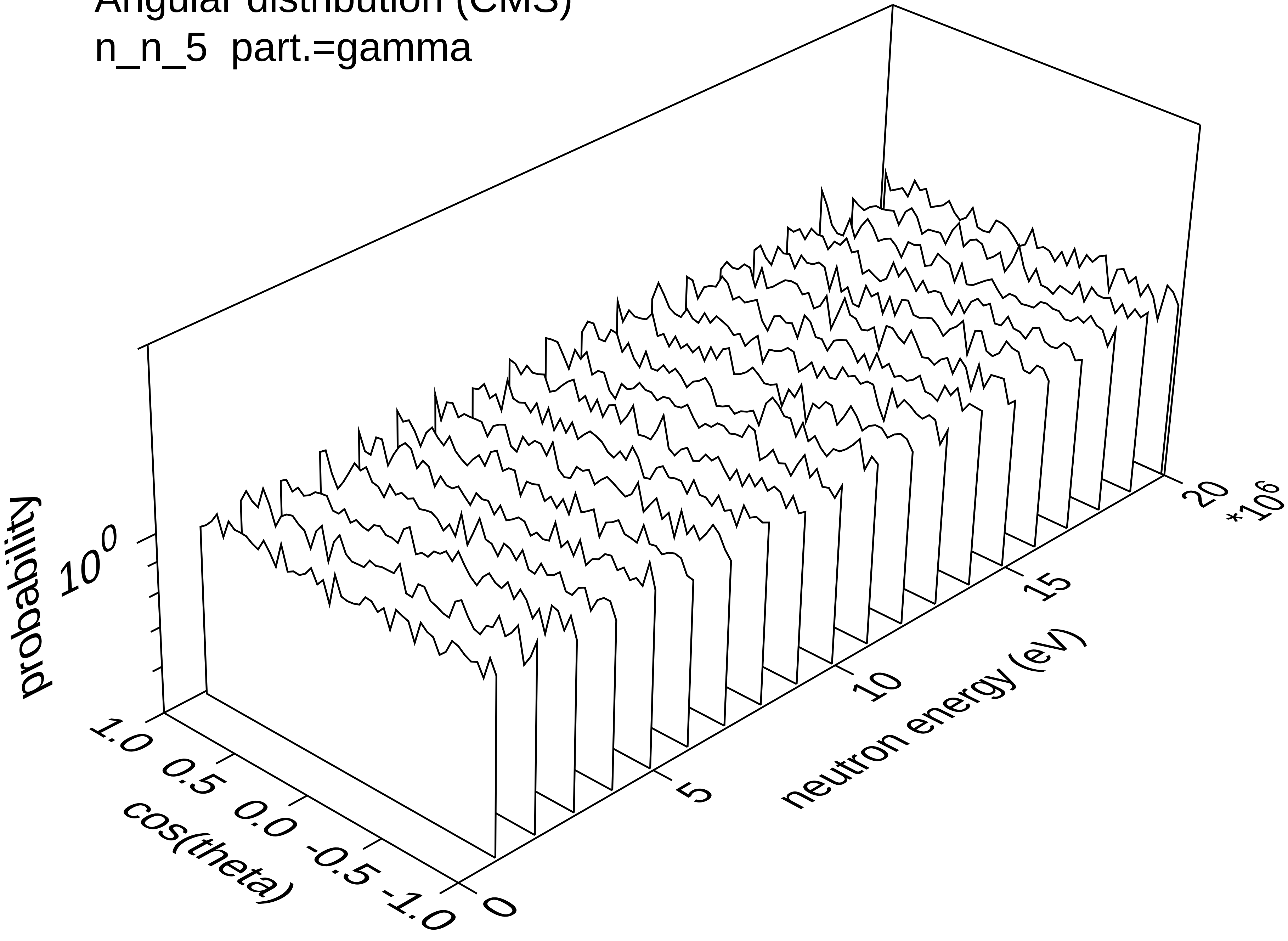
Angular distribution (CMS)
n_n_4 part.=gamma



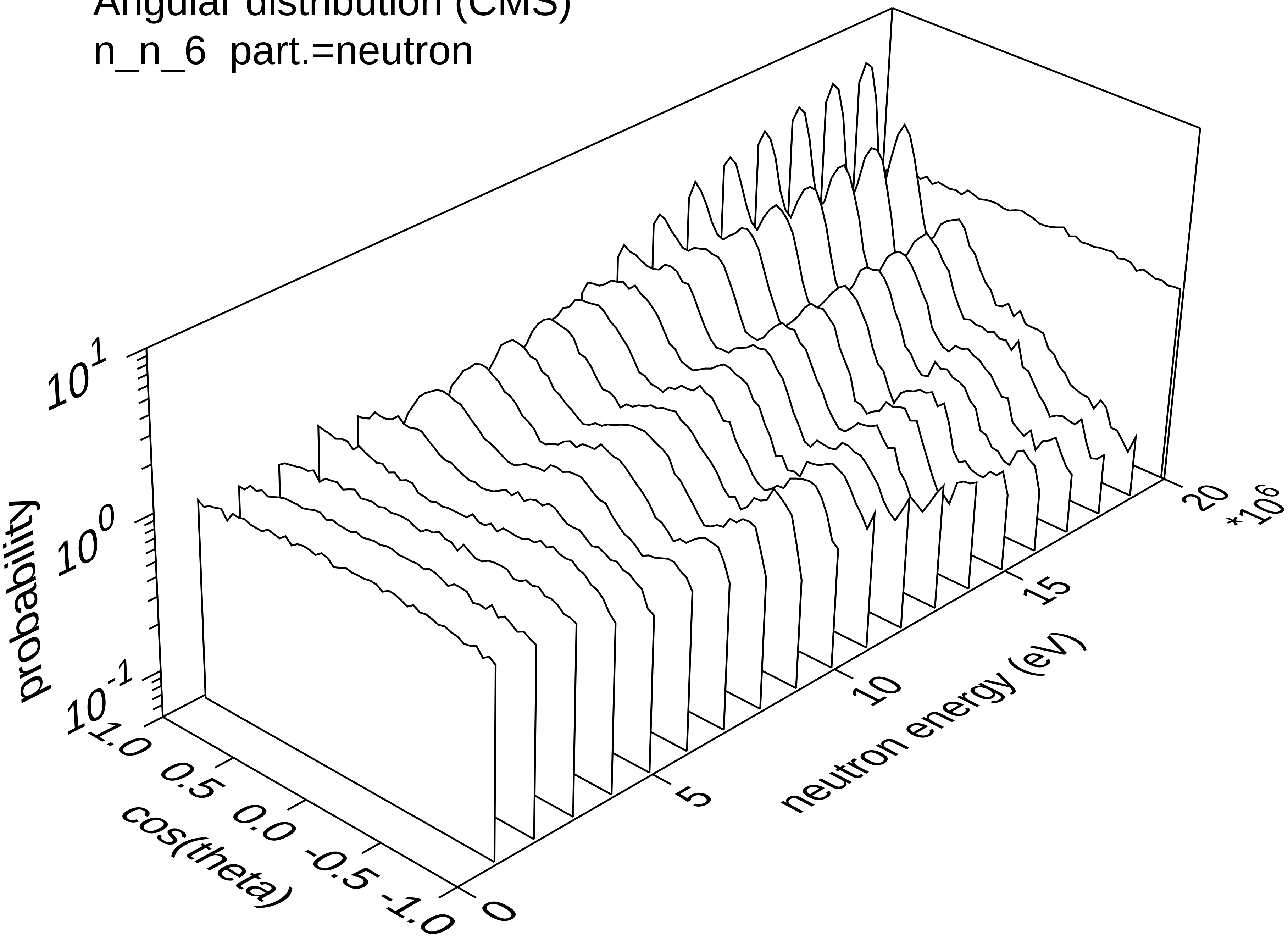
Angular distribution (CMS)
n_n_5 part.=neutron



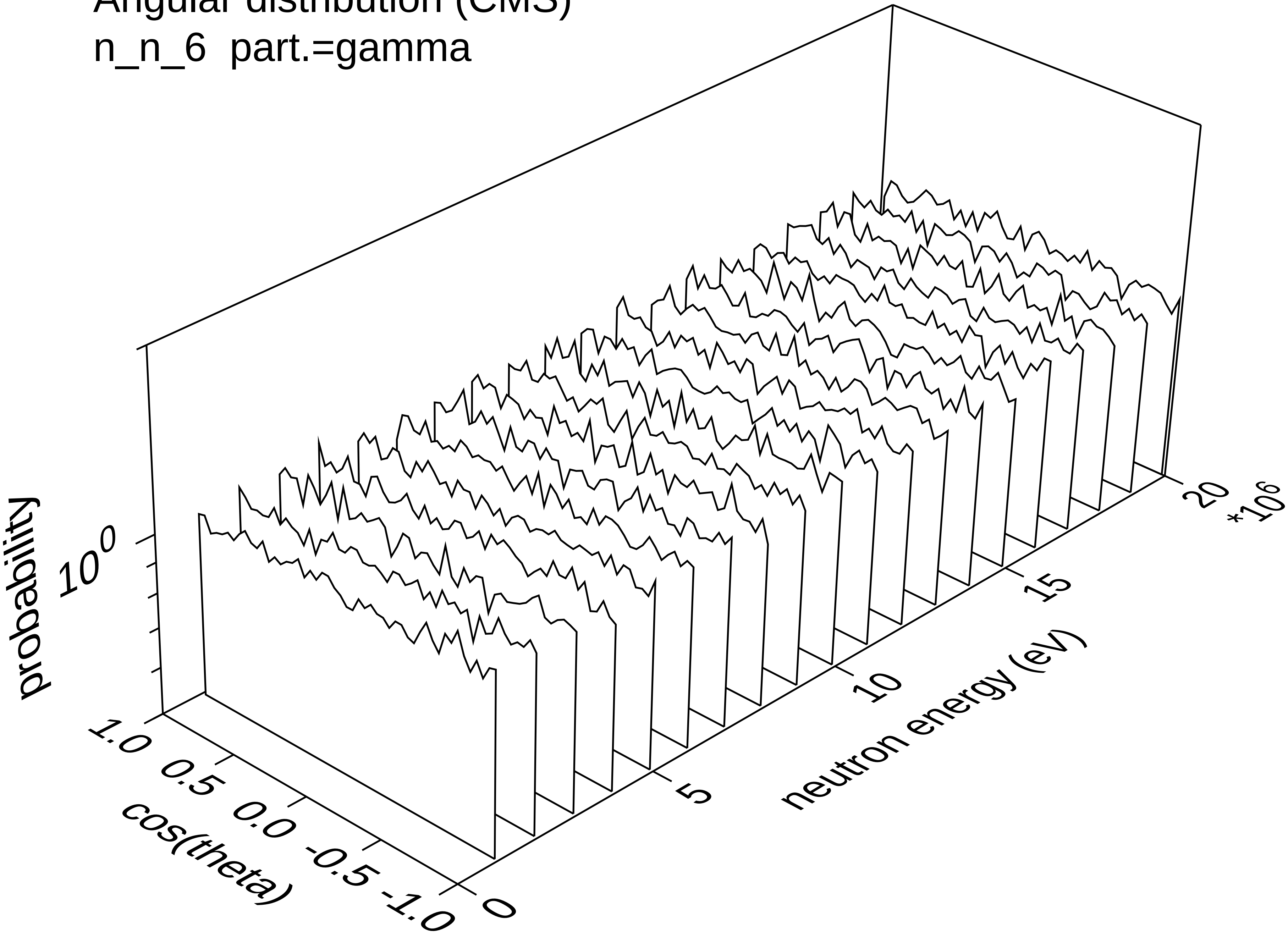
Angular distribution (CMS)
n_n_5 part.=gamma

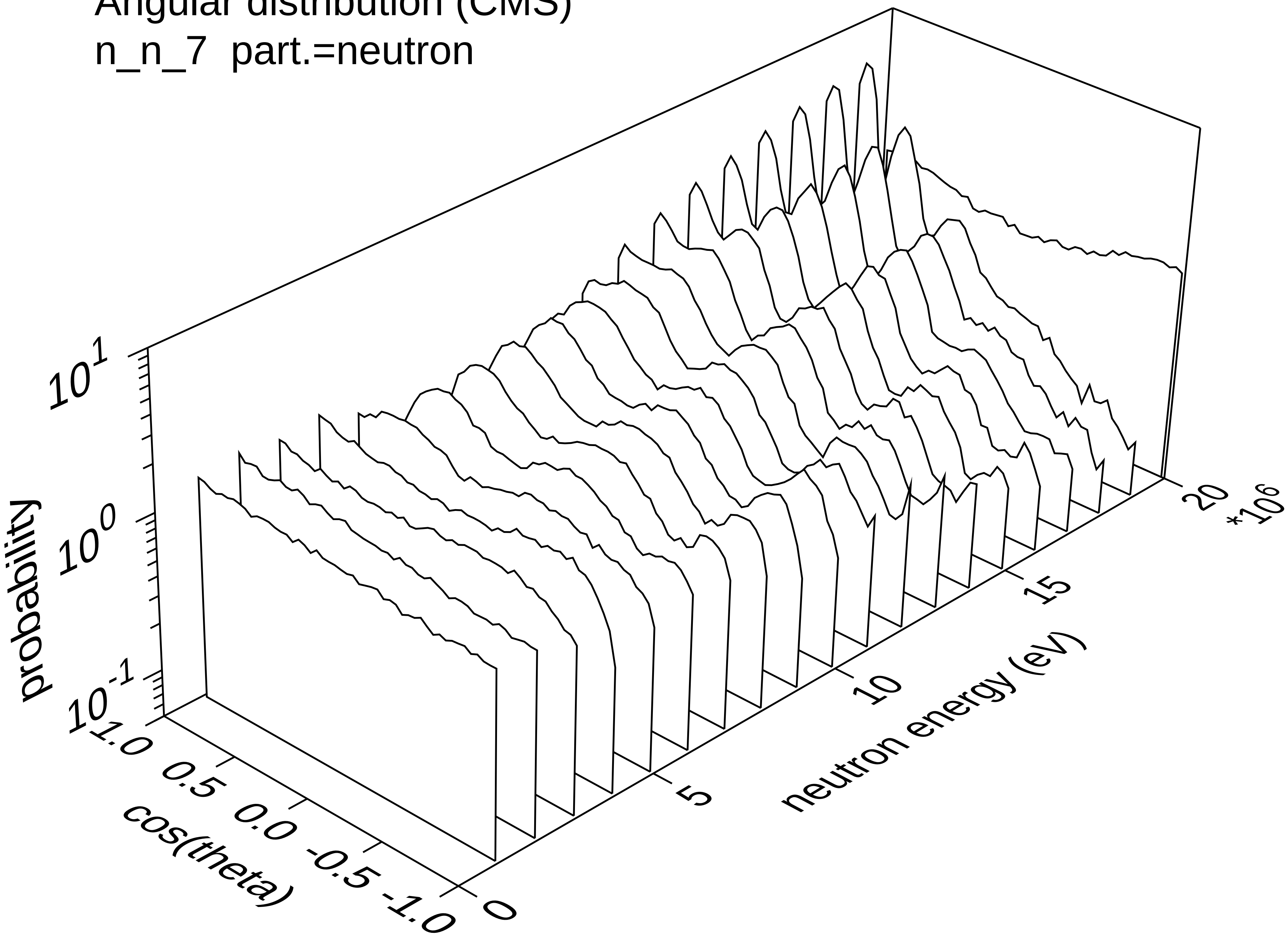


Angular distribution (CMS)
n_n_6 part.=neutron



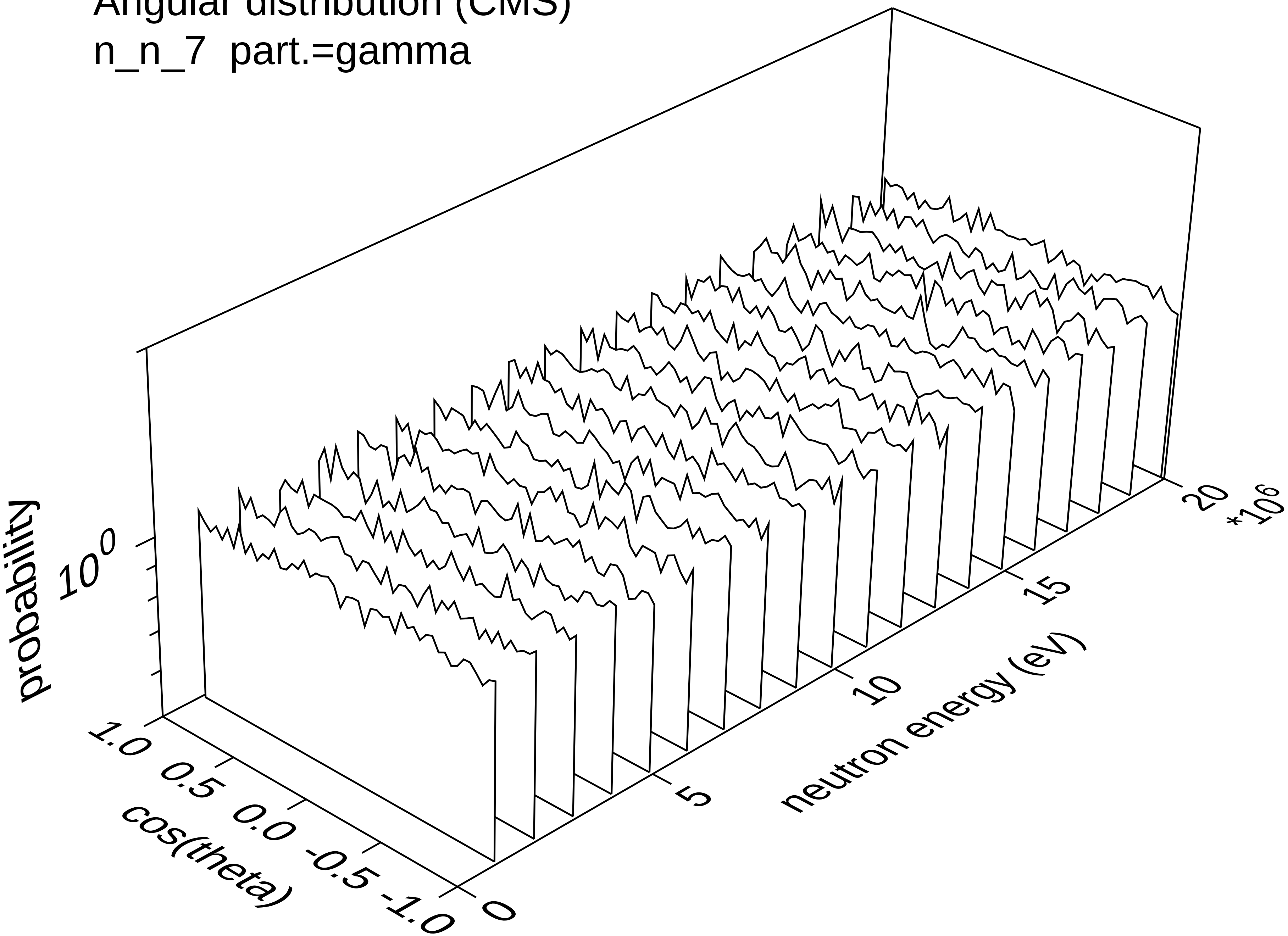
Angular distribution (CMS)
n_n_6 part.=gamma



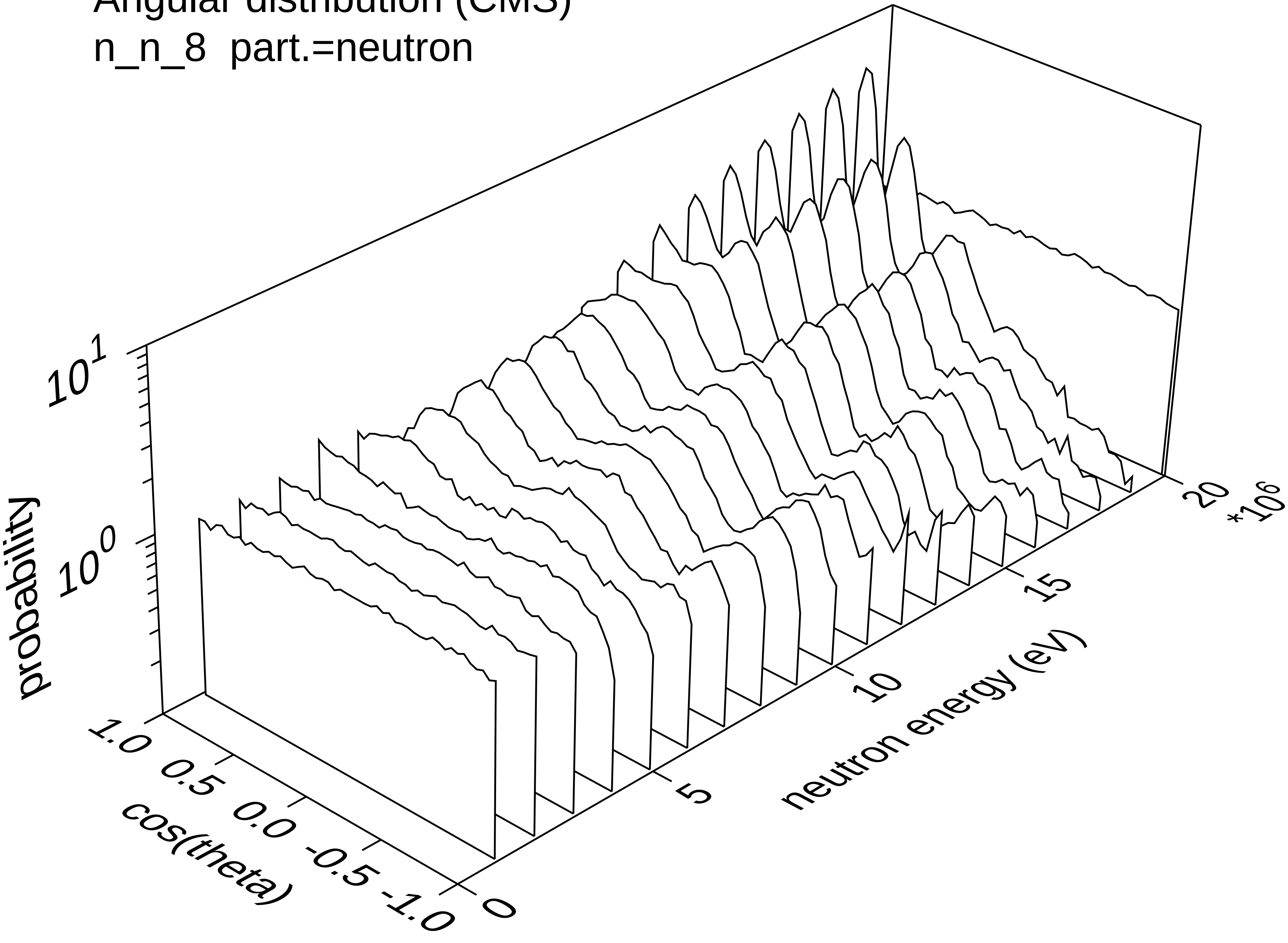


Angular distribution (CMS)
n_n_7 part.=neutron

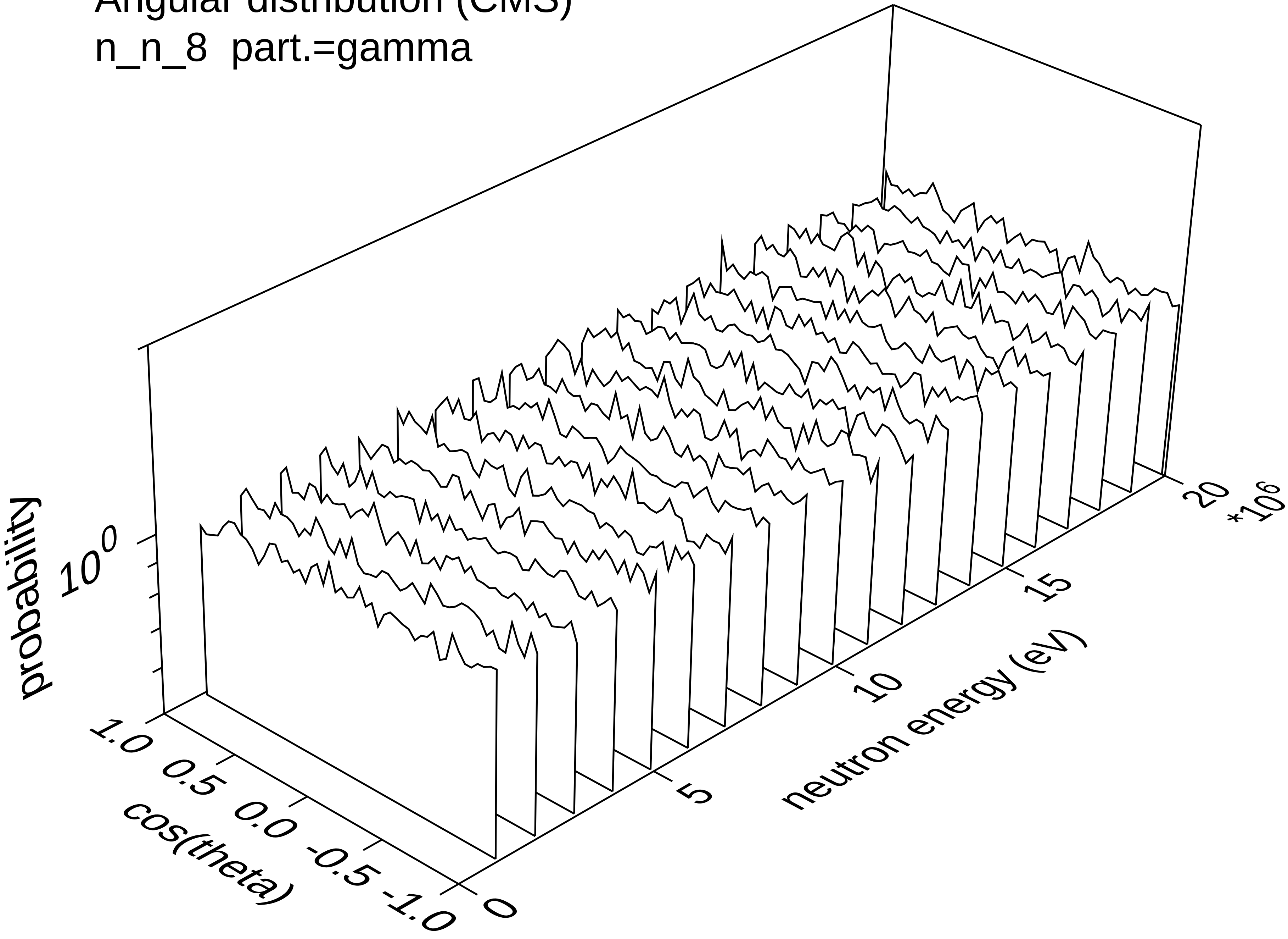
Angular distribution (CMS)
n_n_7 part.=gamma



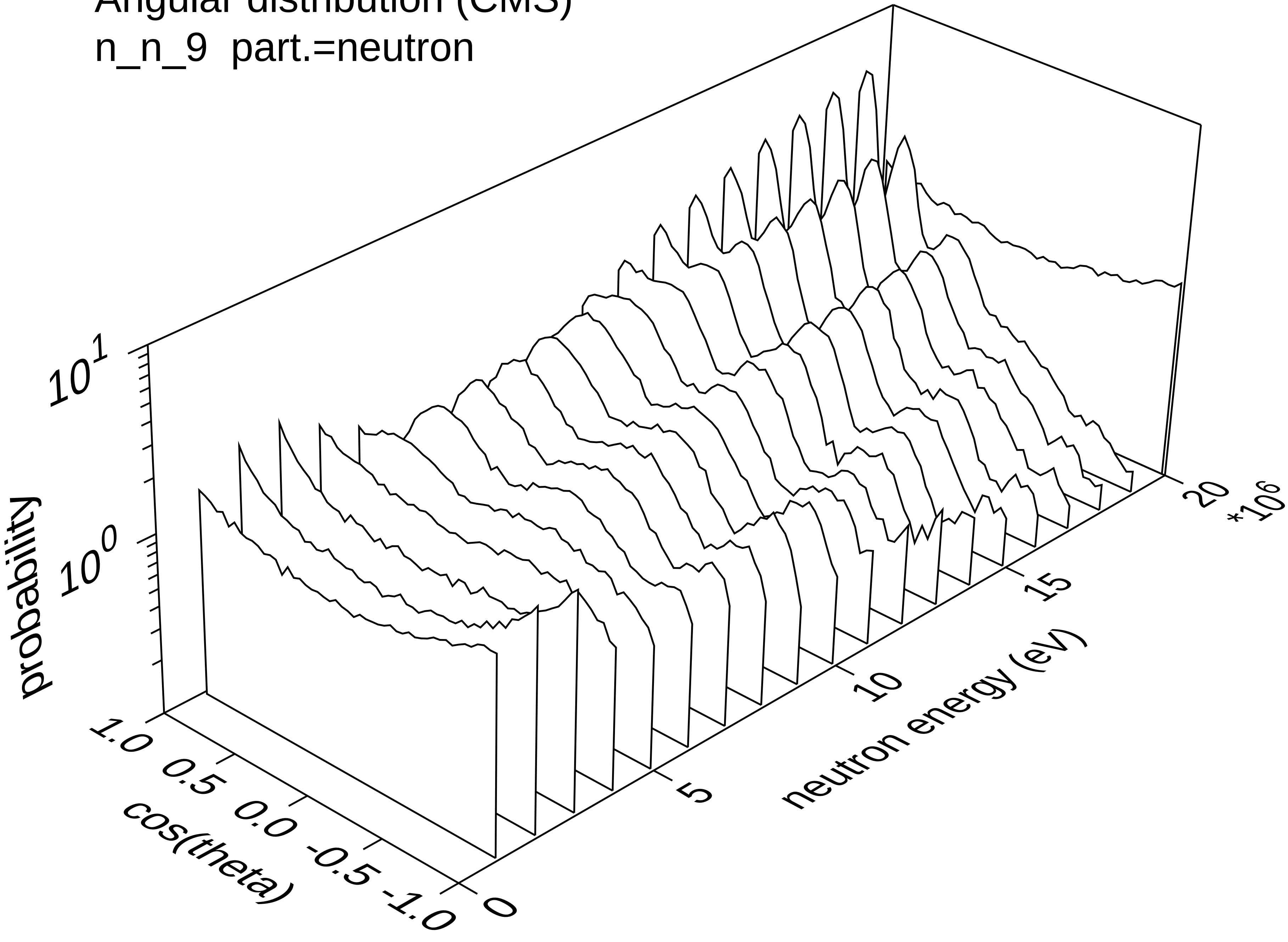
Angular distribution (CMS)
n_n_8 part.=neutron



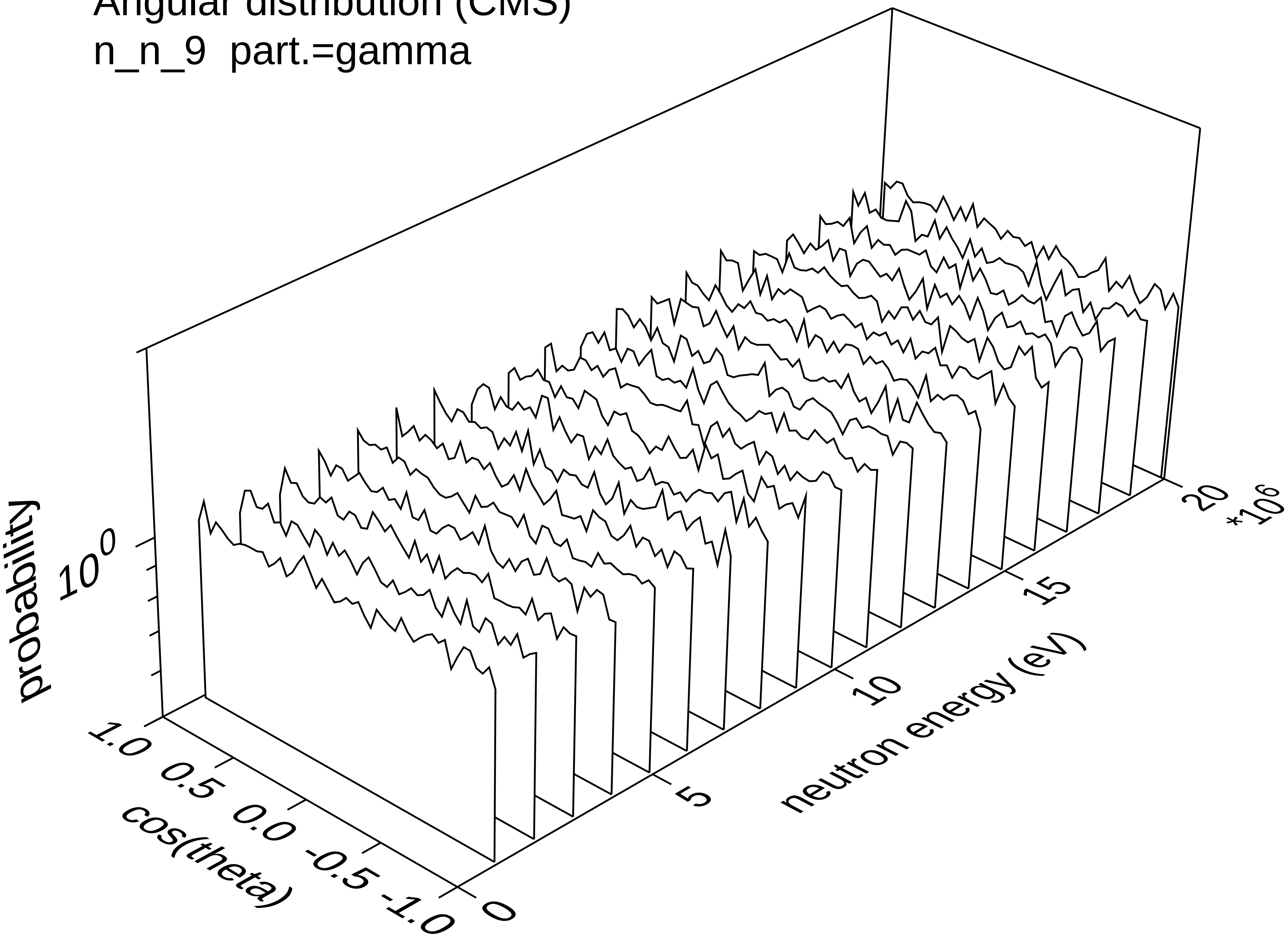
Angular distribution (CMS)
n_n_8 part.=gamma



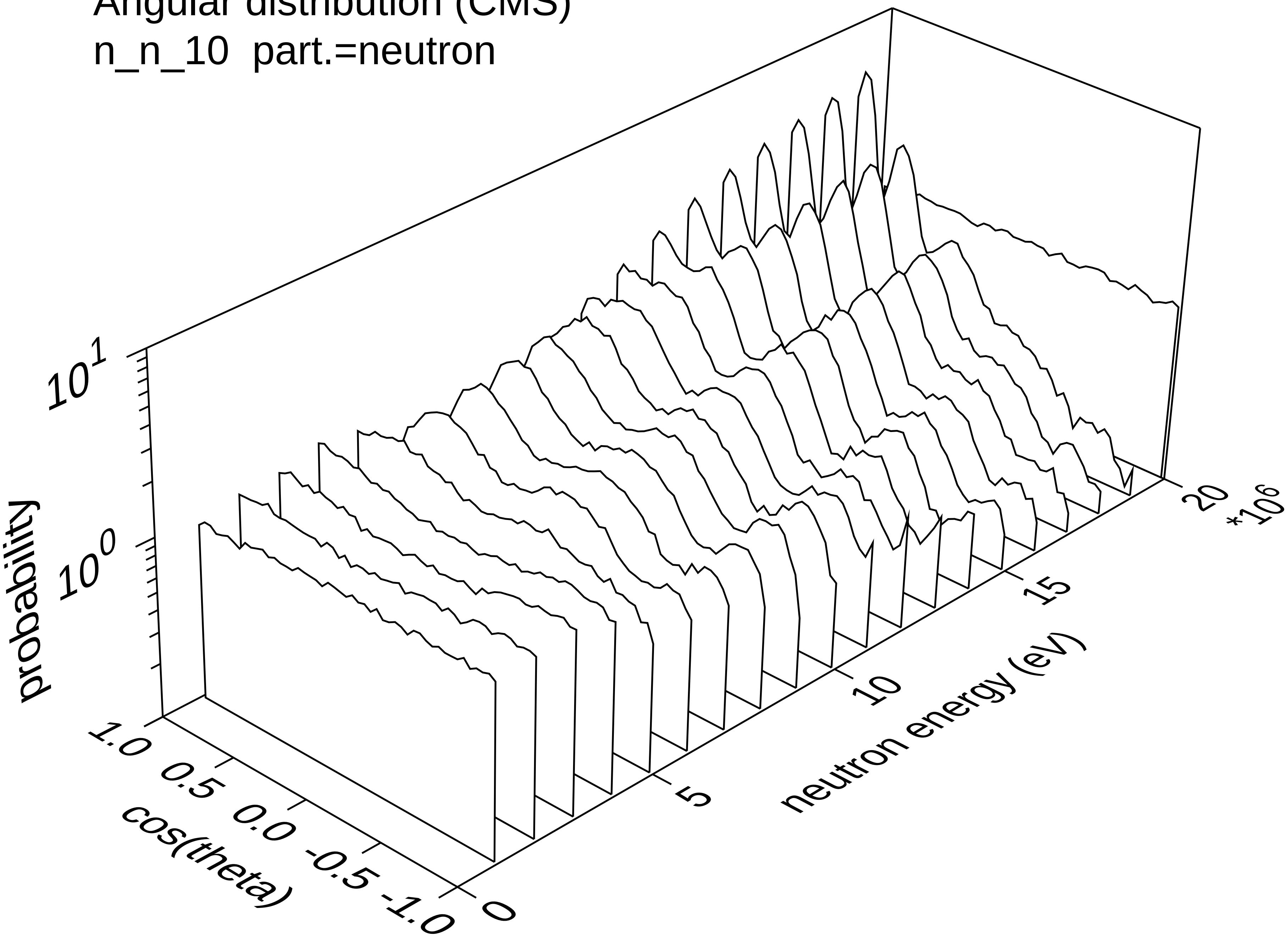
Angular distribution (CMS)
n_n_9 part.=neutron



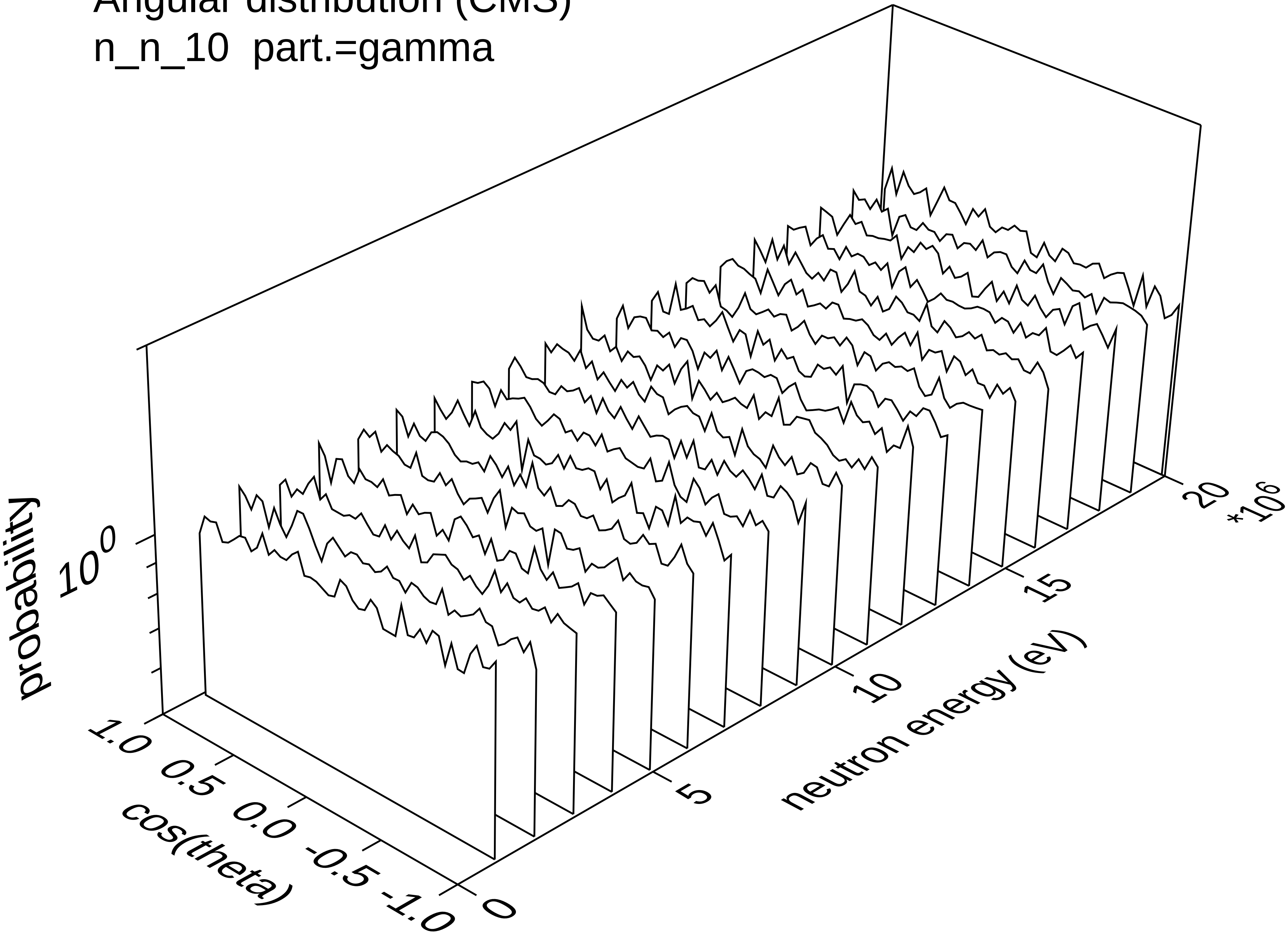
Angular distribution (CMS)
n_n_9 part.=gamma



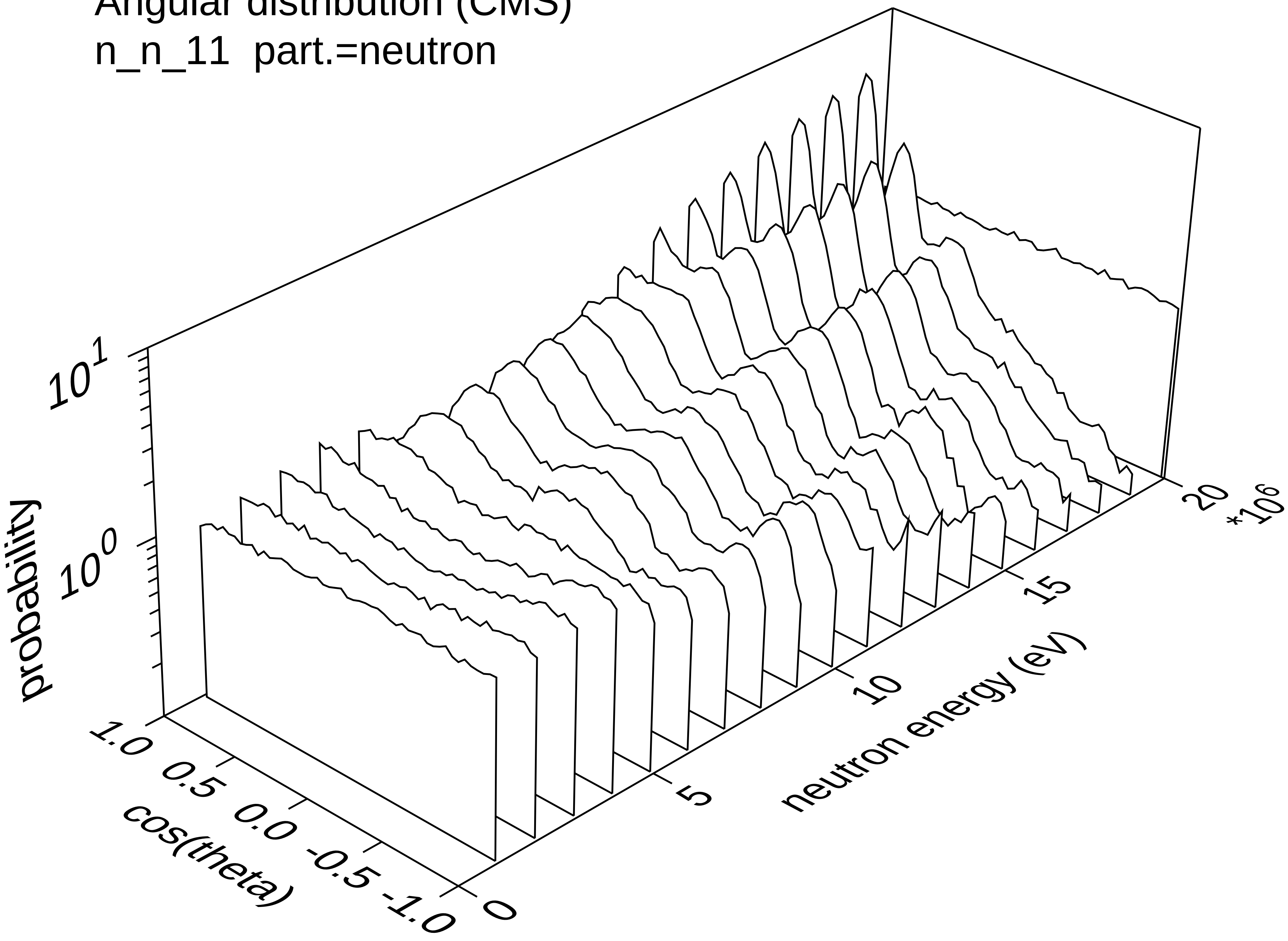
Angular distribution (CMS)
n_n_10 part.=neutron



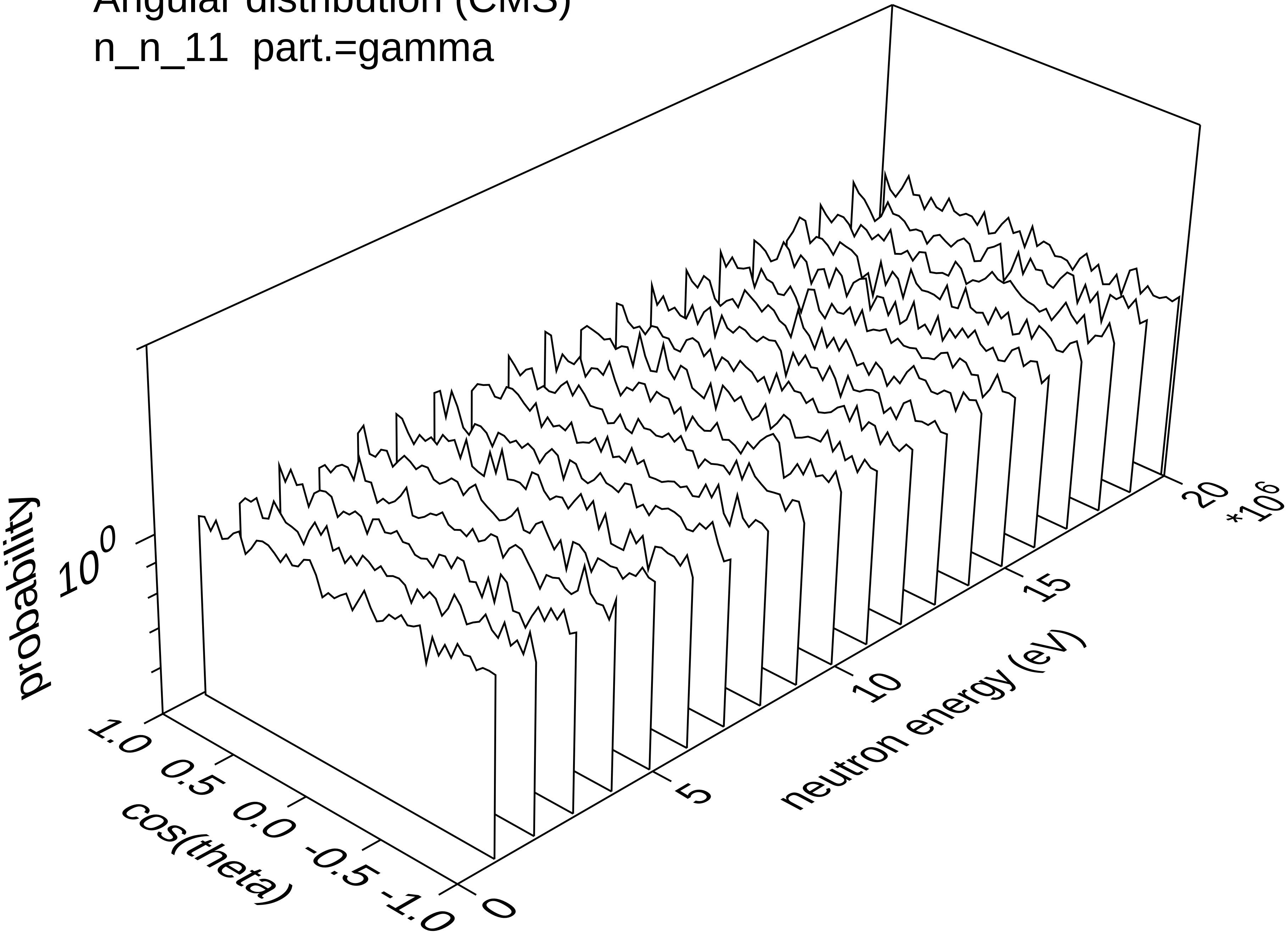
Angular distribution (CMS)
n_n_10 part.=gamma



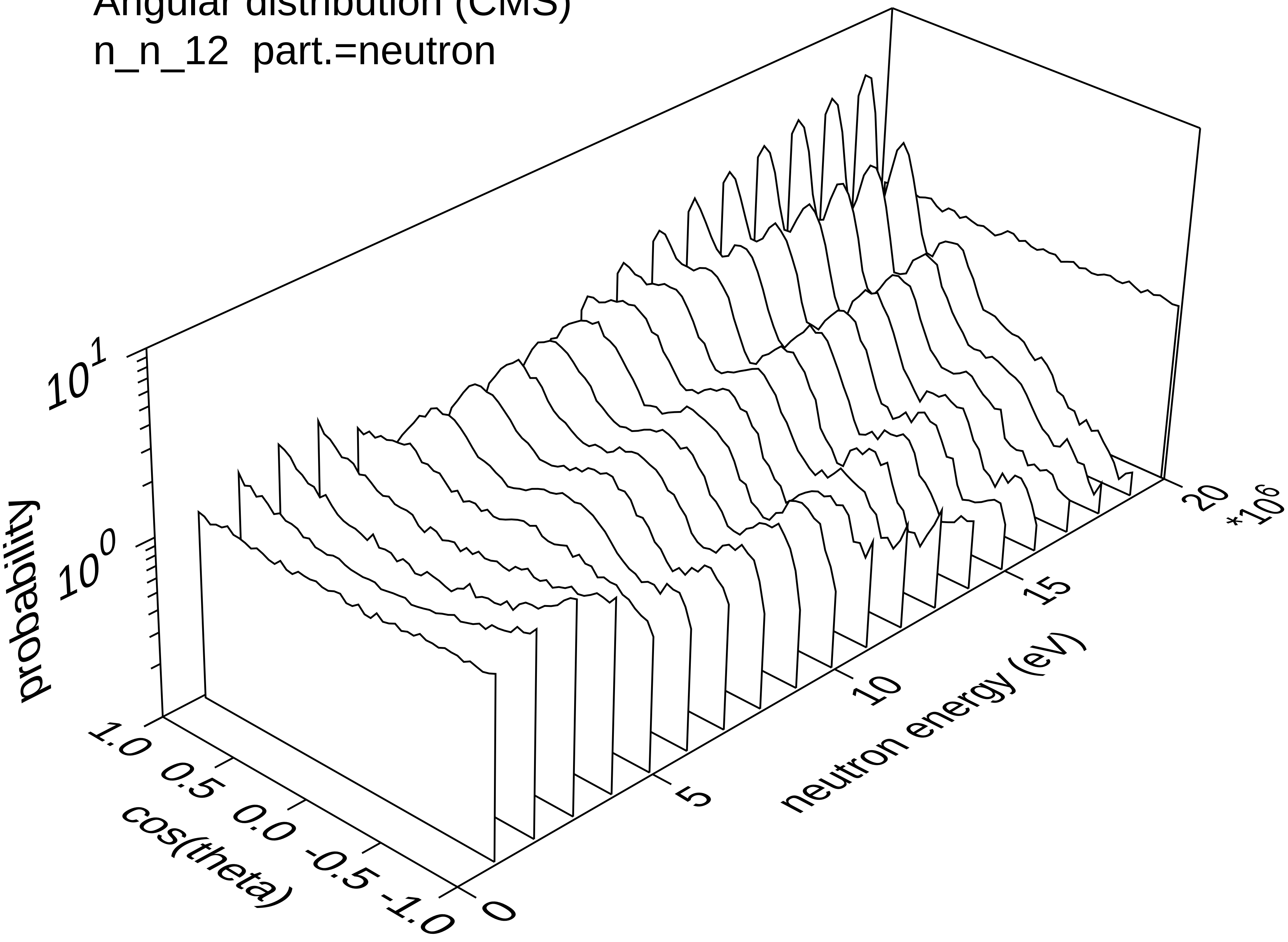
Angular distribution (CMS)
n_n_11 part.=neutron



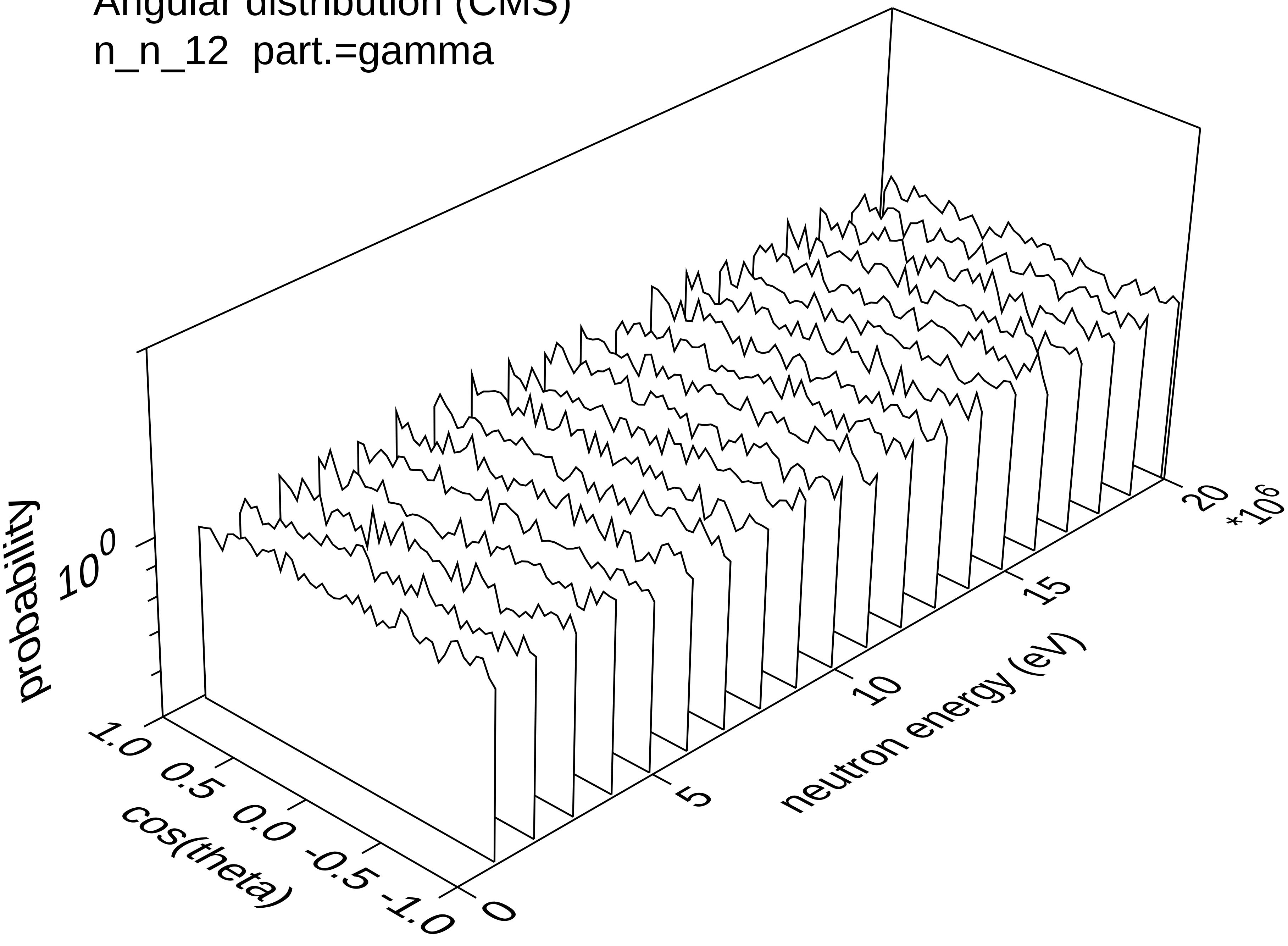
Angular distribution (CMS)
n_n_11 part.=gamma



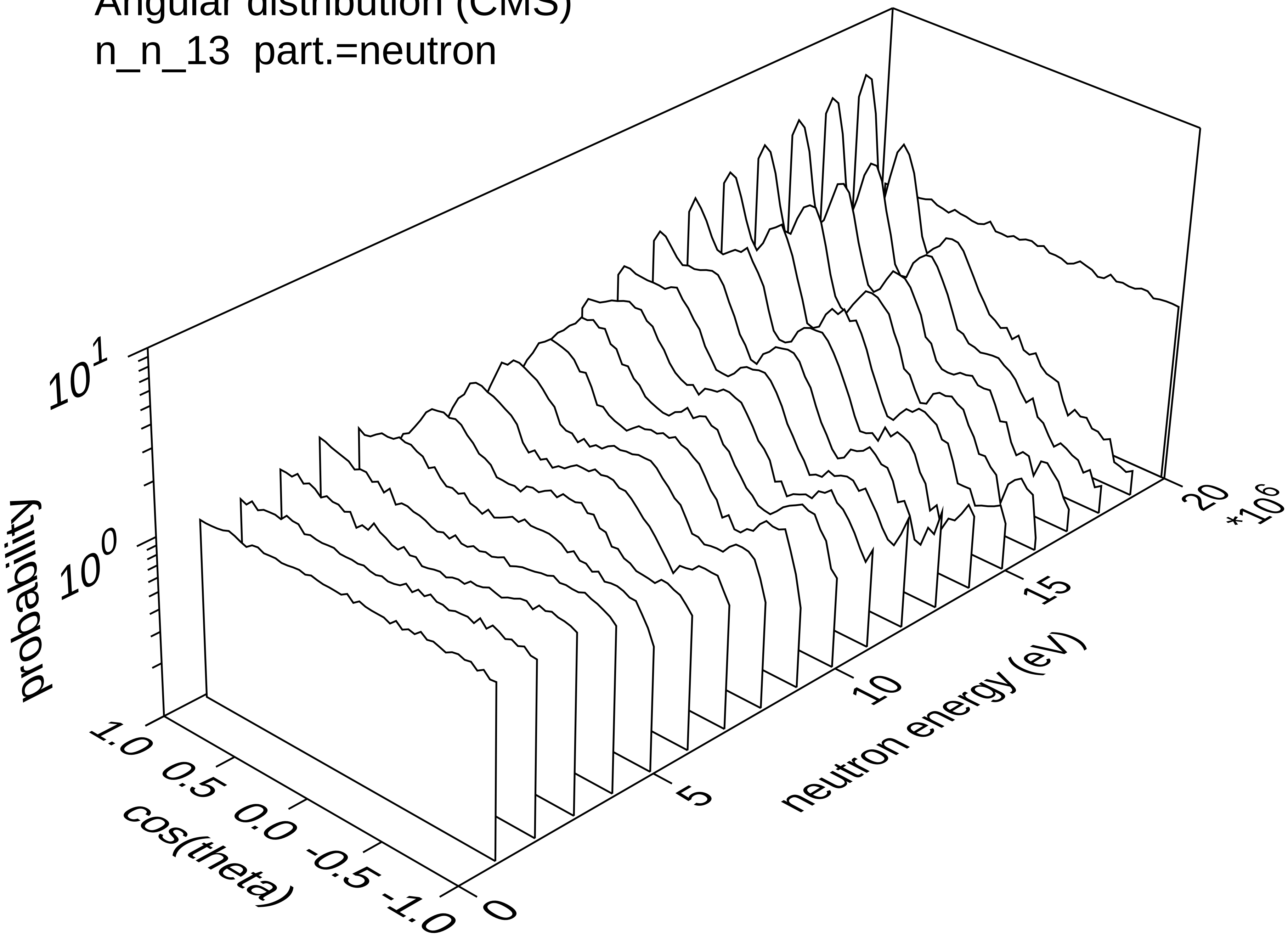
Angular distribution (CMS)
n_n_12 part.=neutron



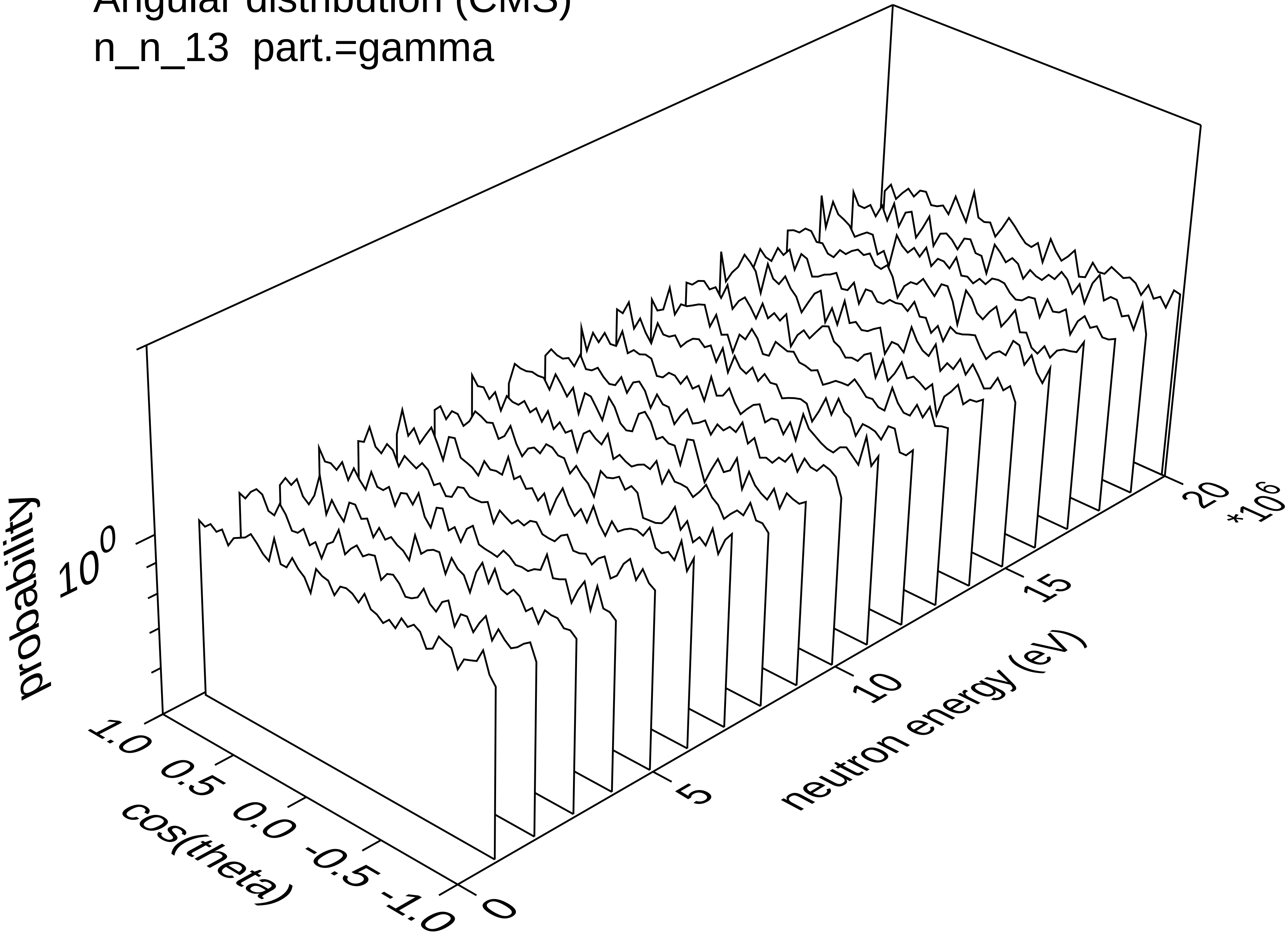
Angular distribution (CMS)
n_n_12 part.=gamma



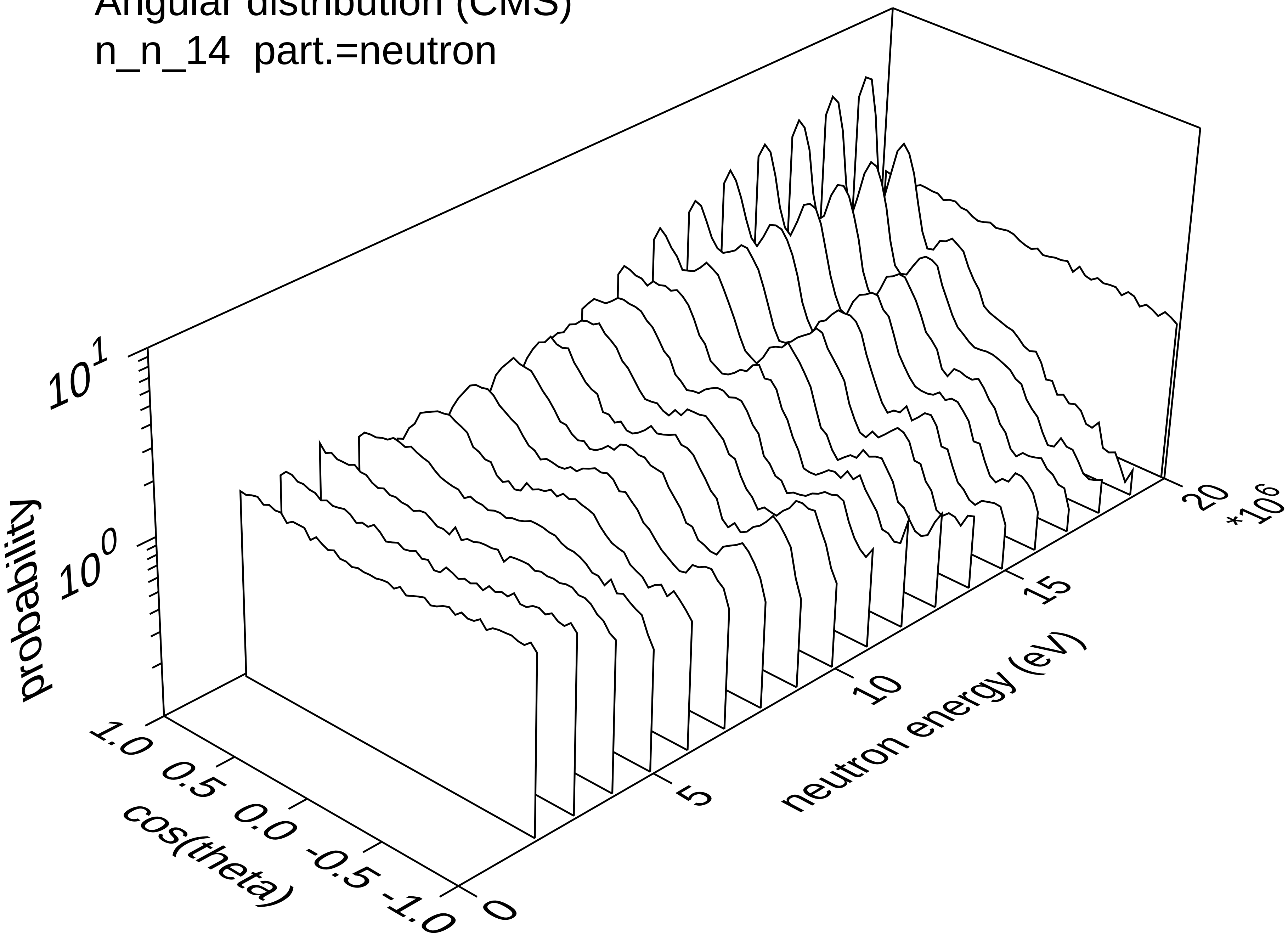
Angular distribution (CMS)
n_n_13 part.=neutron



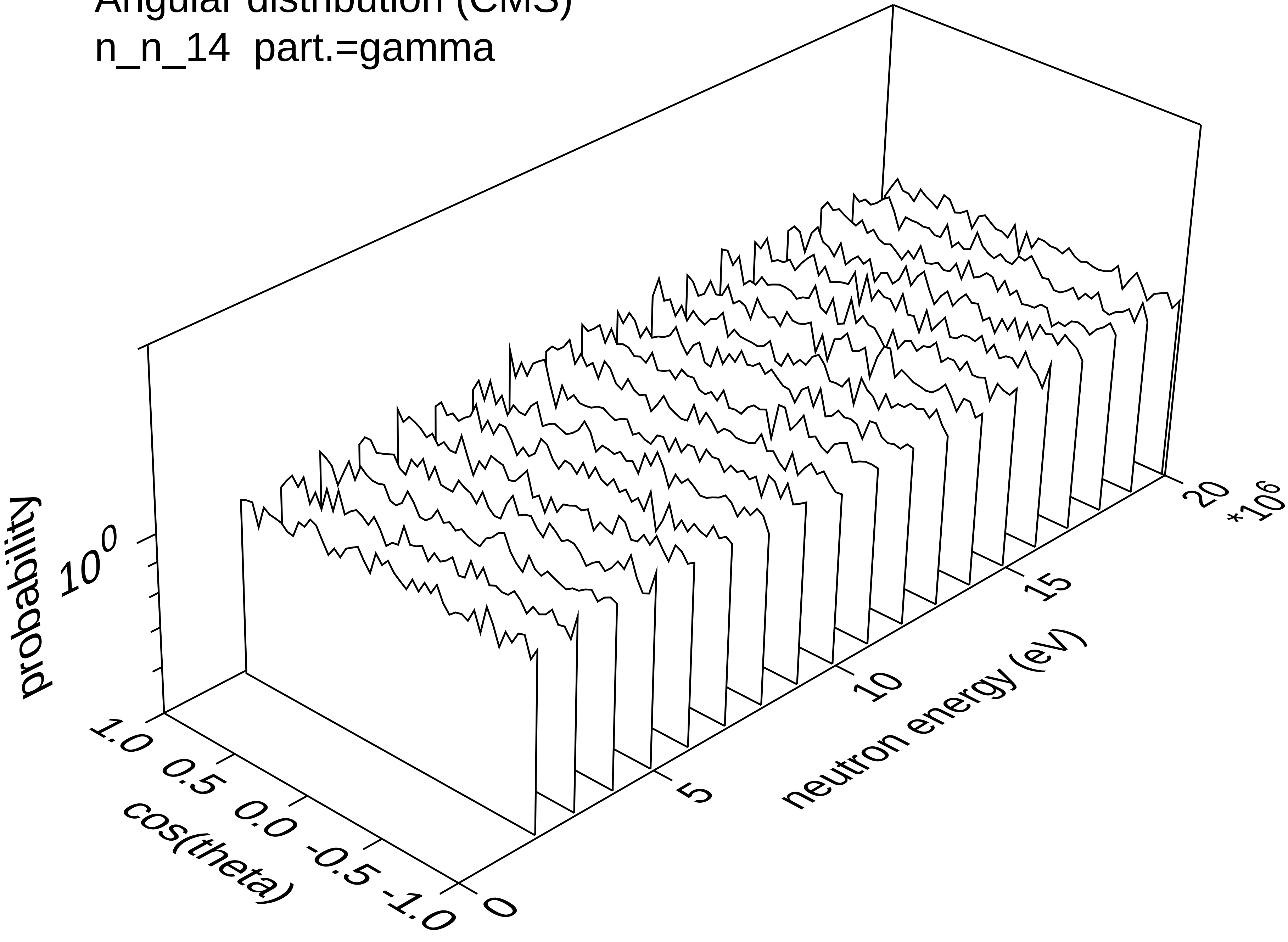
Angular distribution (CMS)
n_n_13 part.=gamma



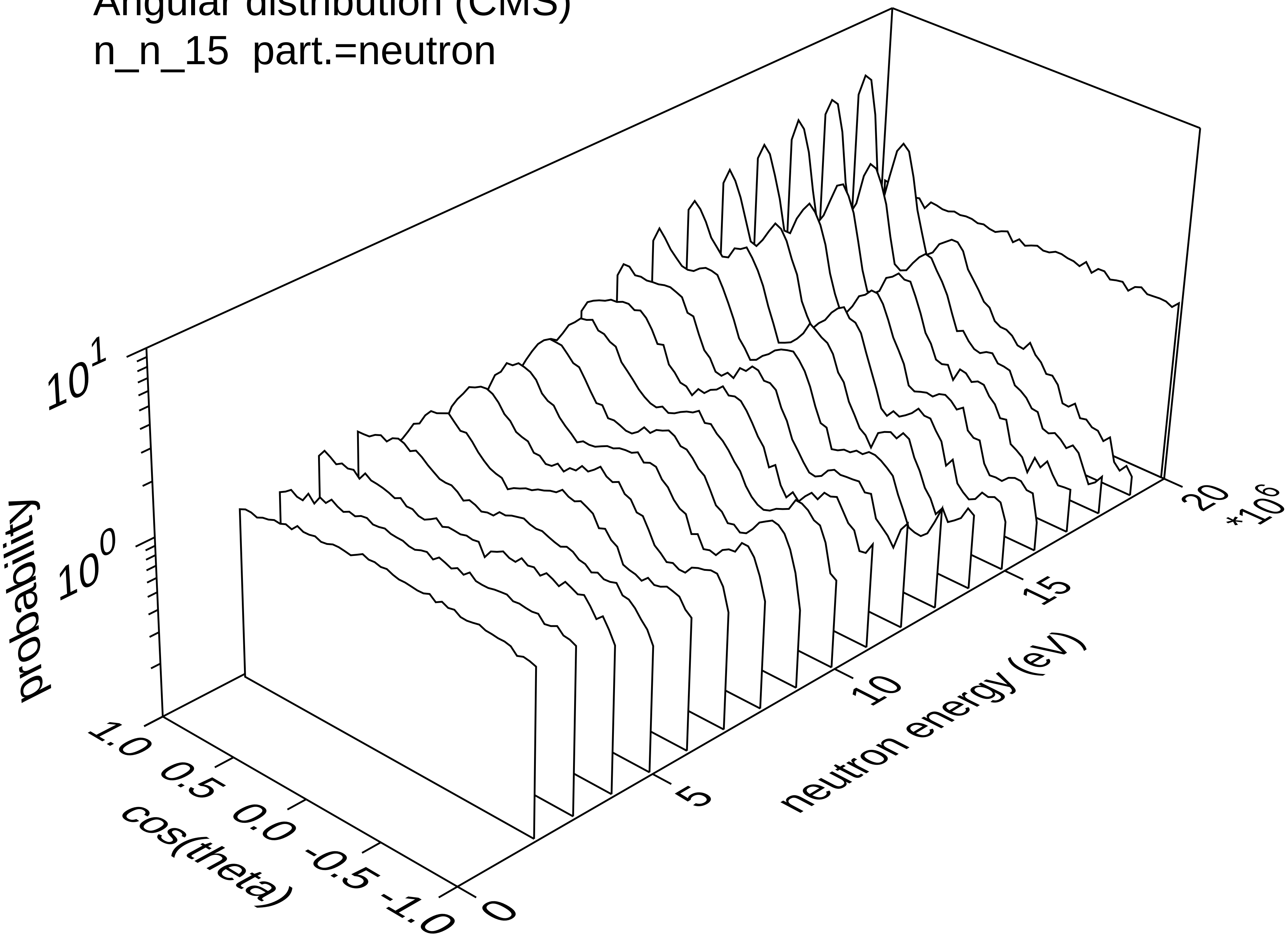
Angular distribution (CMS)
n_n_14 part.=neutron



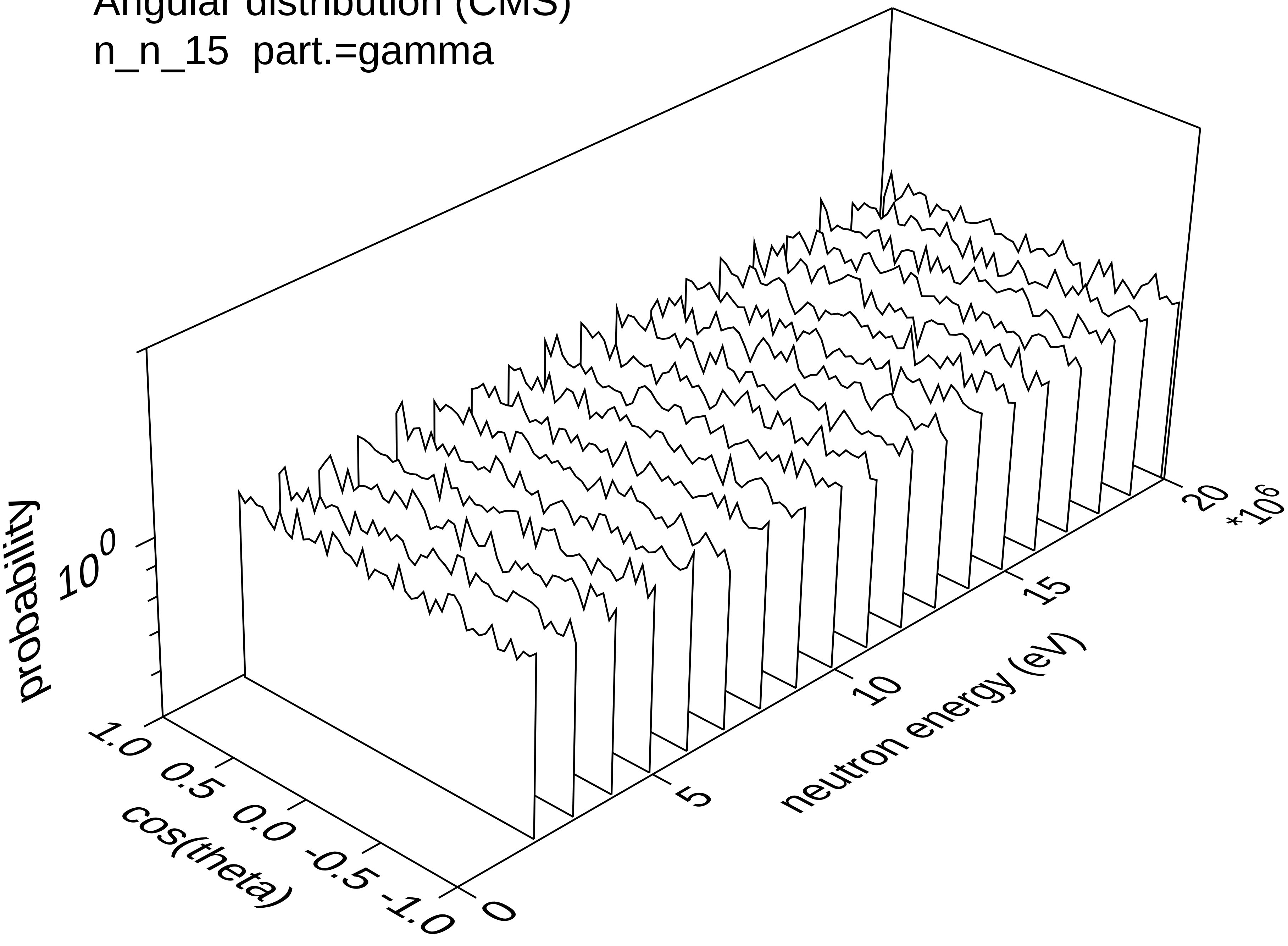
Angular distribution (CMS)
n_n_14 part.=gamma



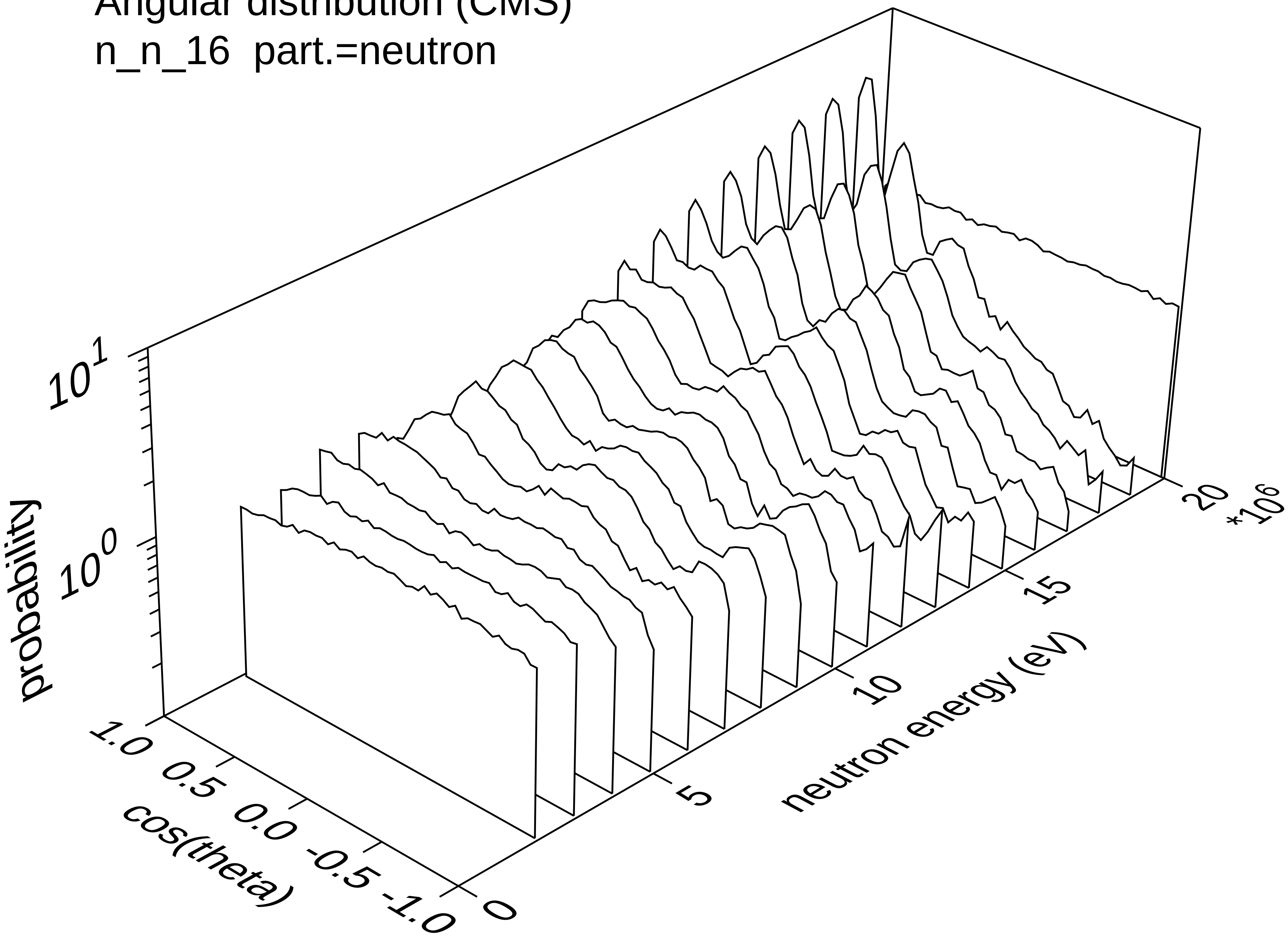
Angular distribution (CMS)
n_n_15 part.=neutron



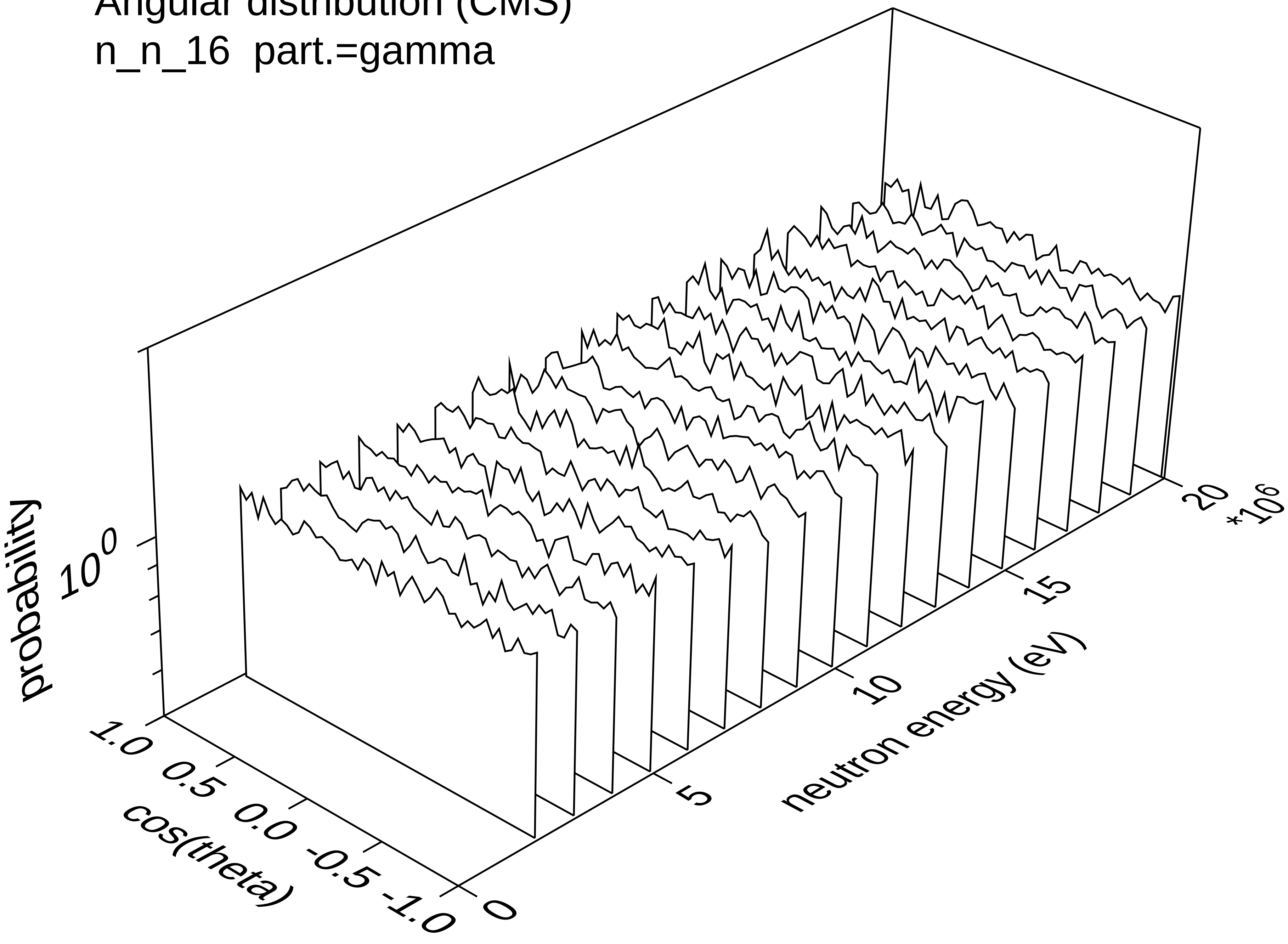
Angular distribution (CMS)
n_n_15 part.=gamma



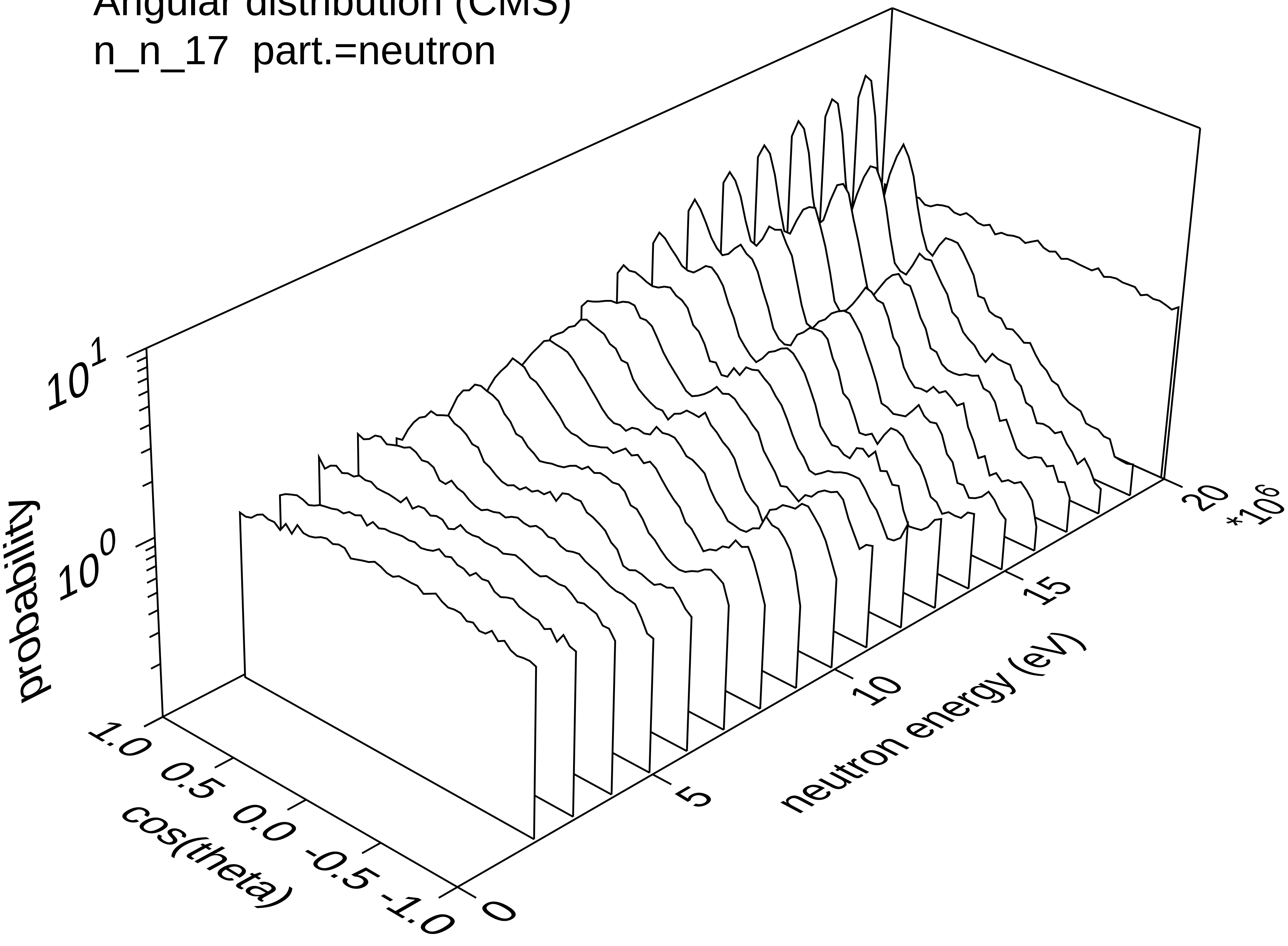
Angular distribution (CMS)
n_n_16 part.=neutron



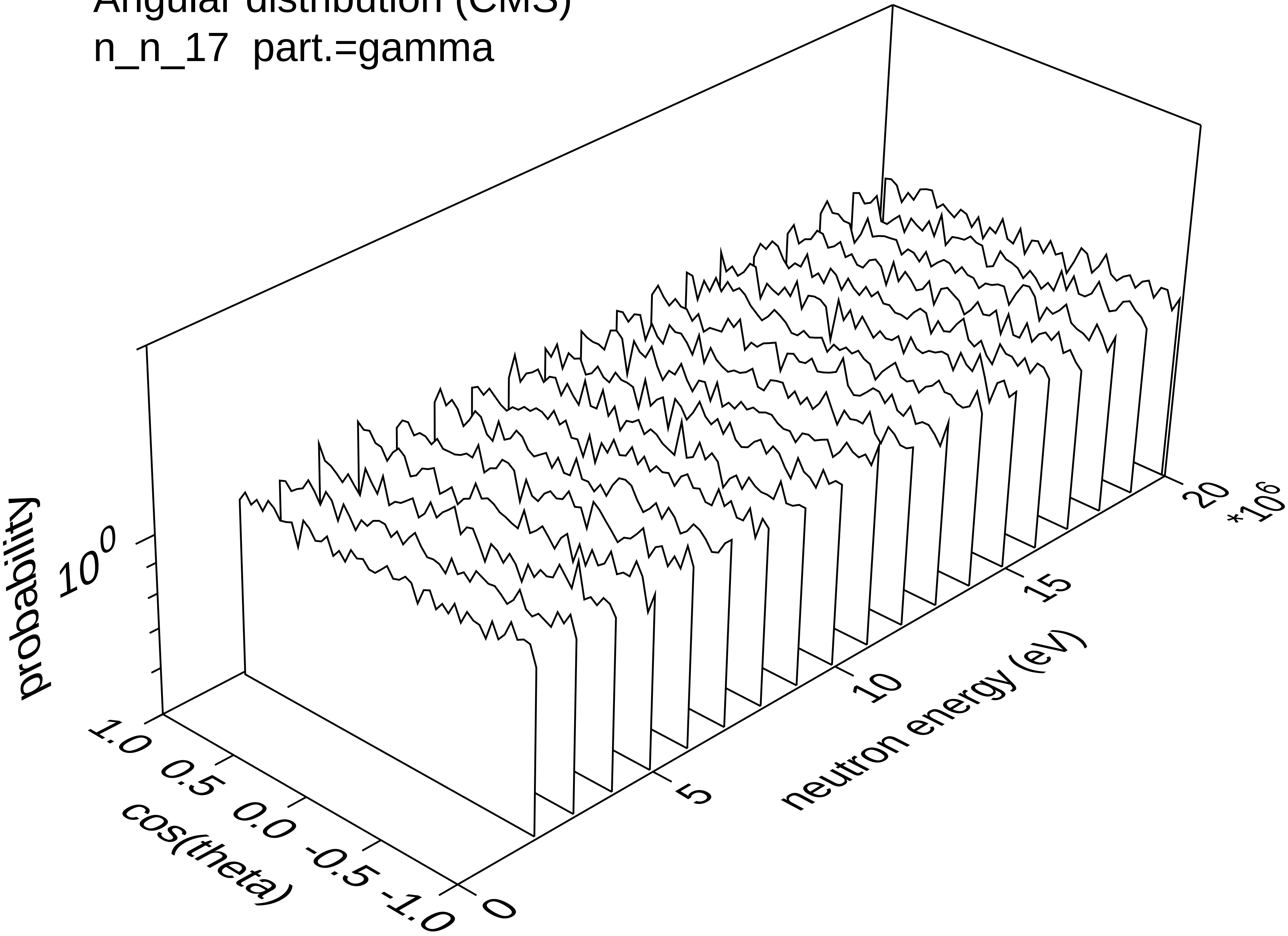
Angular distribution (CMS)
n_n_16 part.=gamma



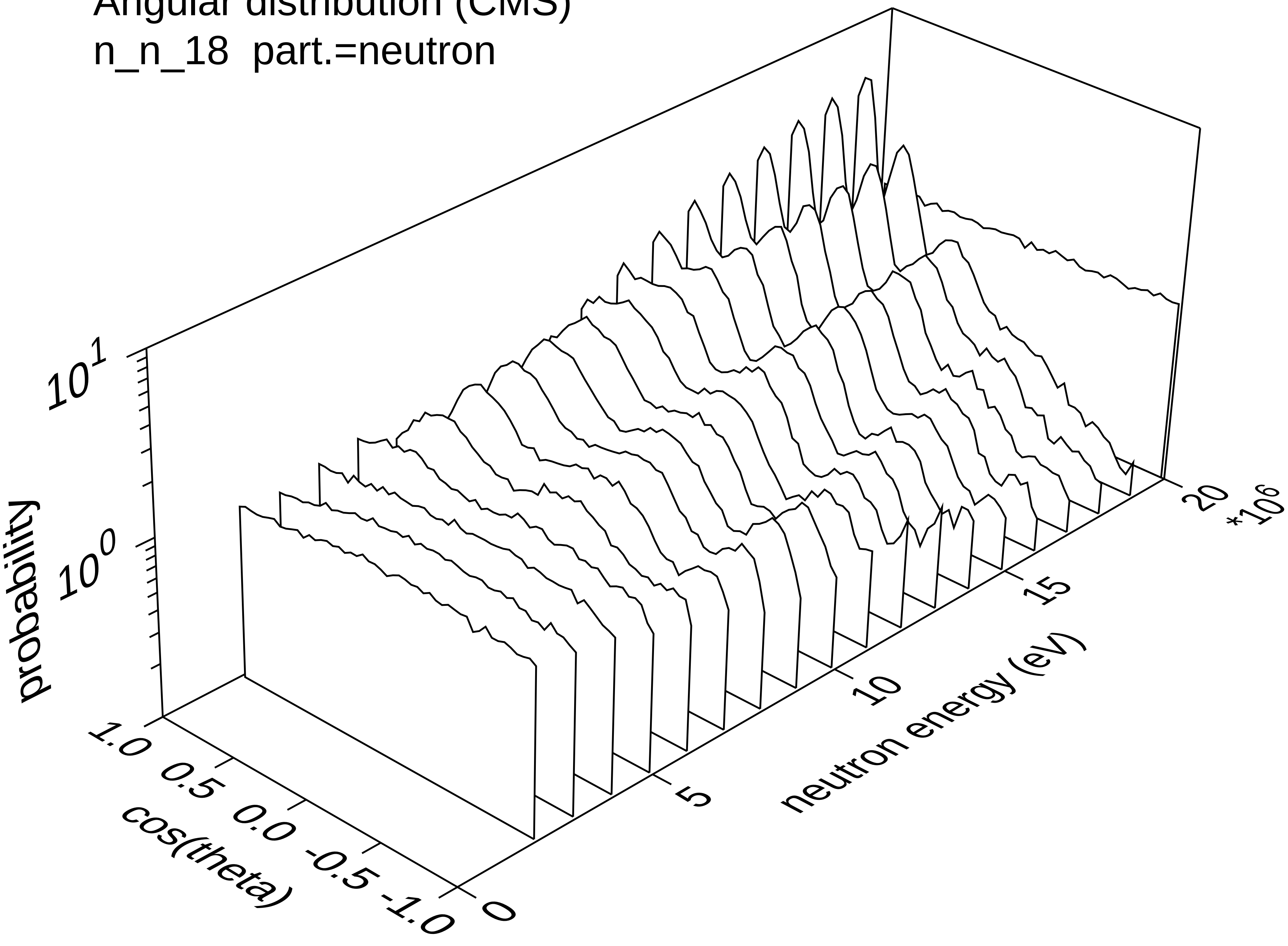
Angular distribution (CMS)
n_n_17 part.=neutron

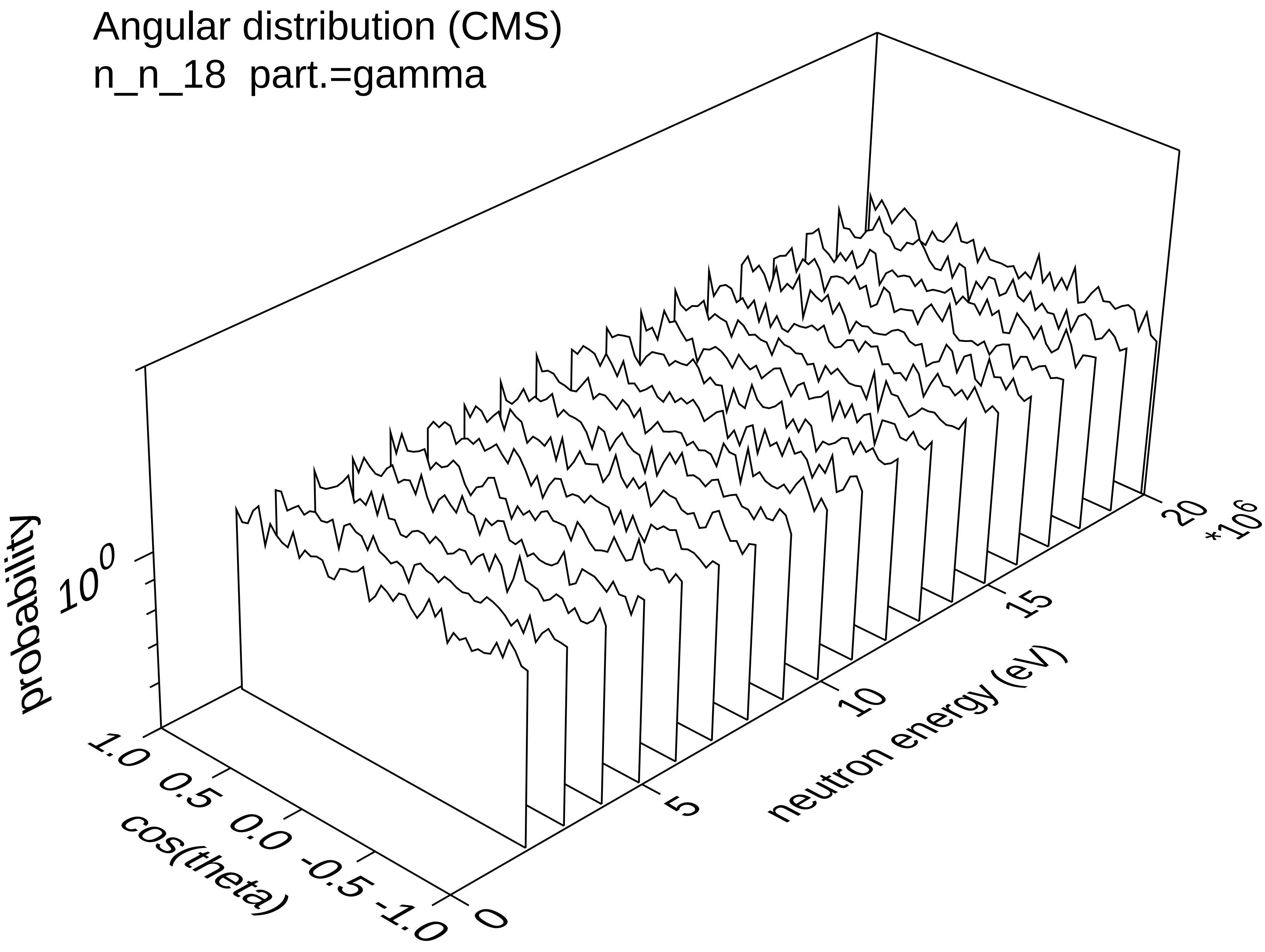


Angular distribution (CMS)
n_n_17 part.=gamma

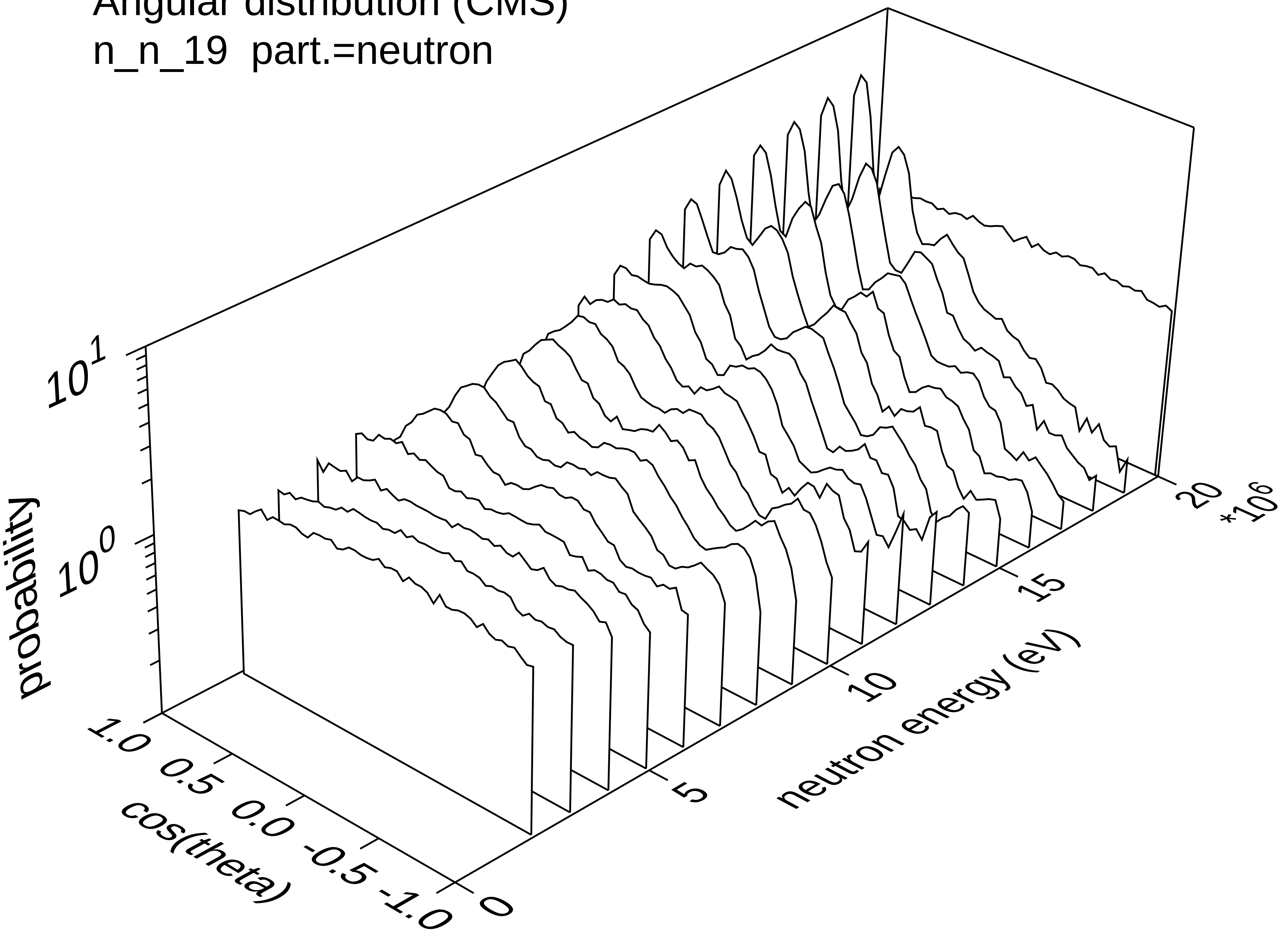


Angular distribution (CMS)
n_n_18 part.=neutron

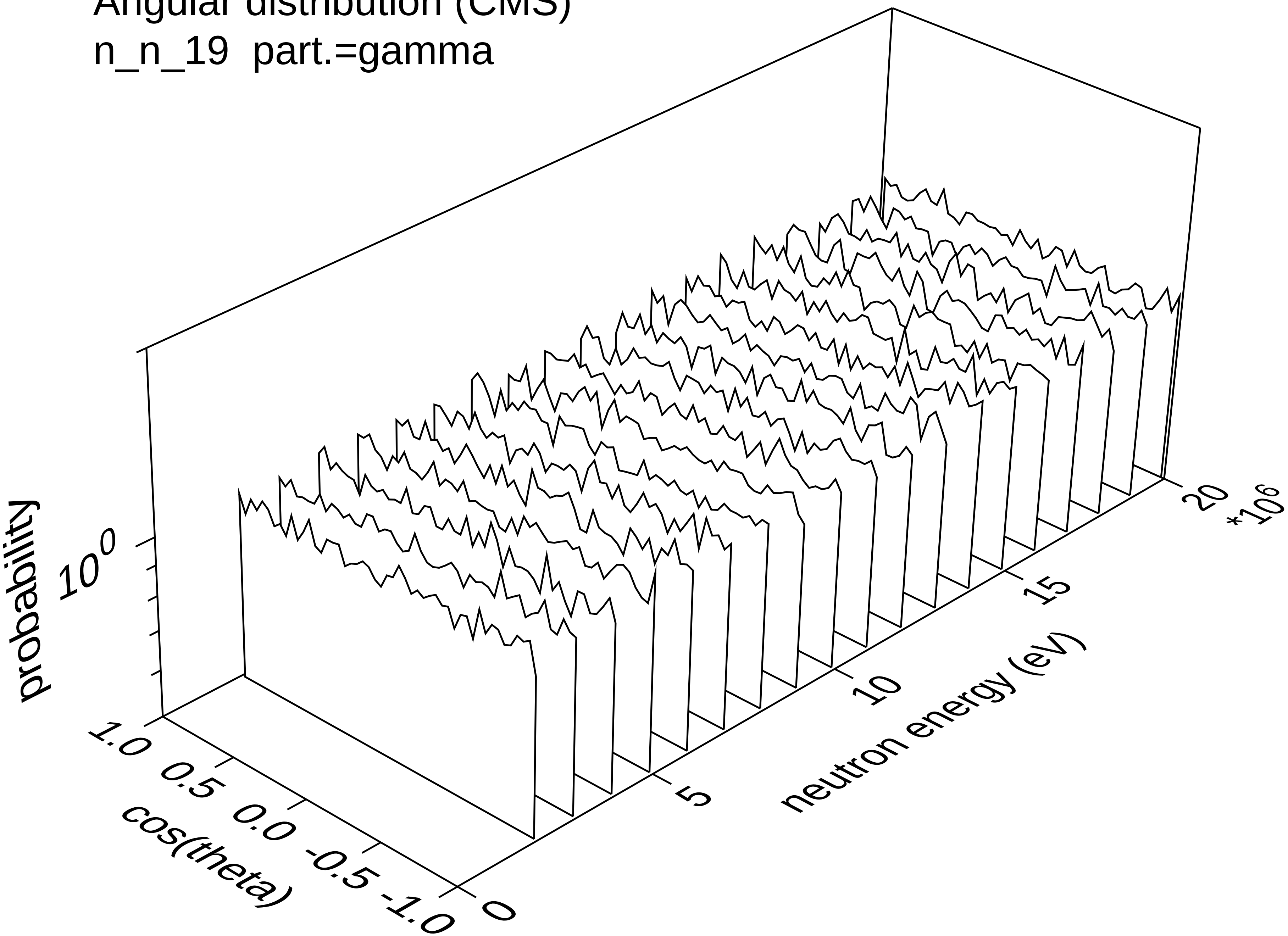



Angular distribution (CMS)
n_n_18 part.=gamma
probability
10^0
1.0
0.5
0.0
-0.5
-1.0
cos(theta)
0
5
10
15
20
*10^6
neutron energy (eV)

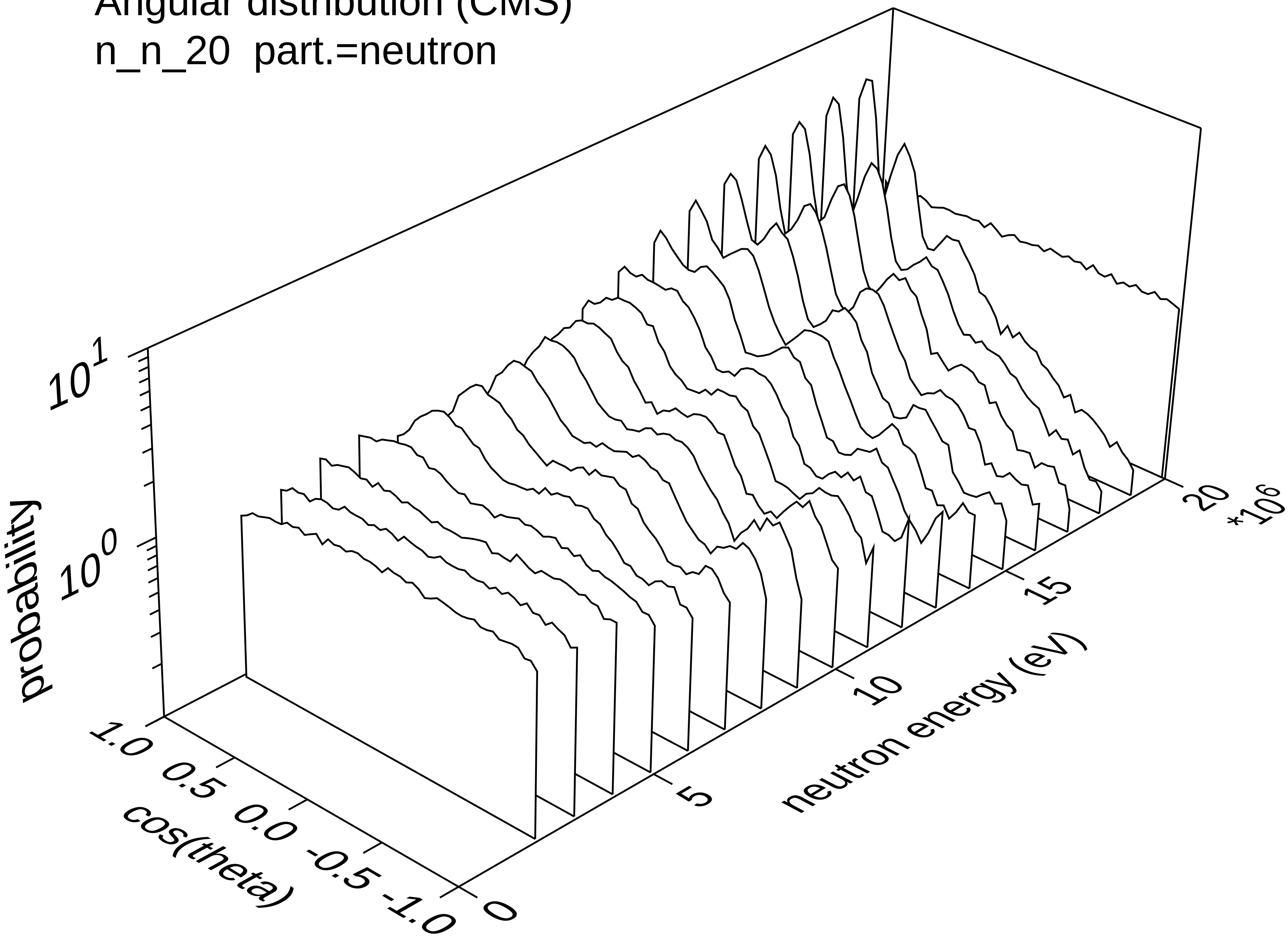
Angular distribution (CMS)
n_n_19 part.=neutron



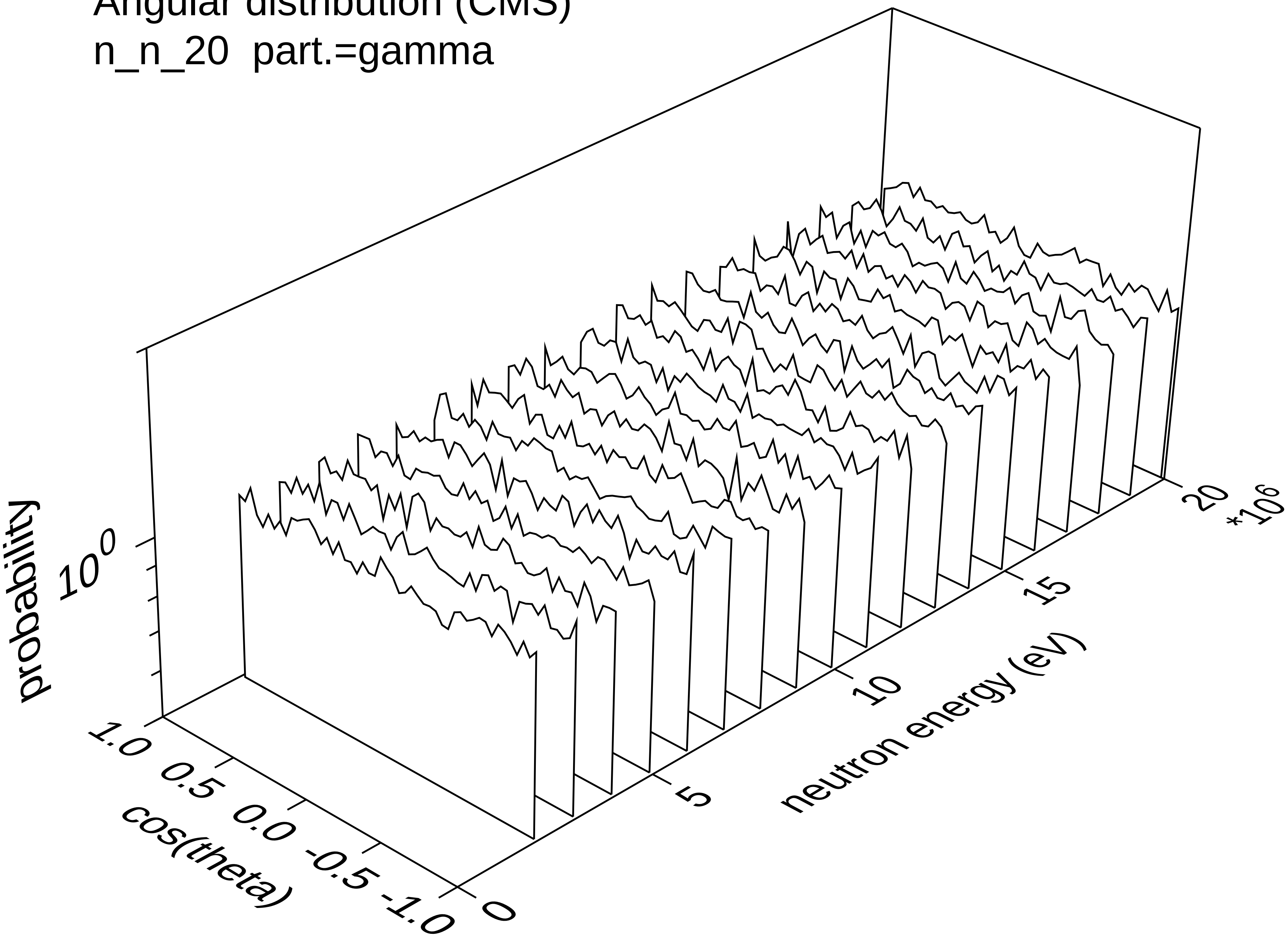
Angular distribution (CMS)
n_n_19 part.=gamma



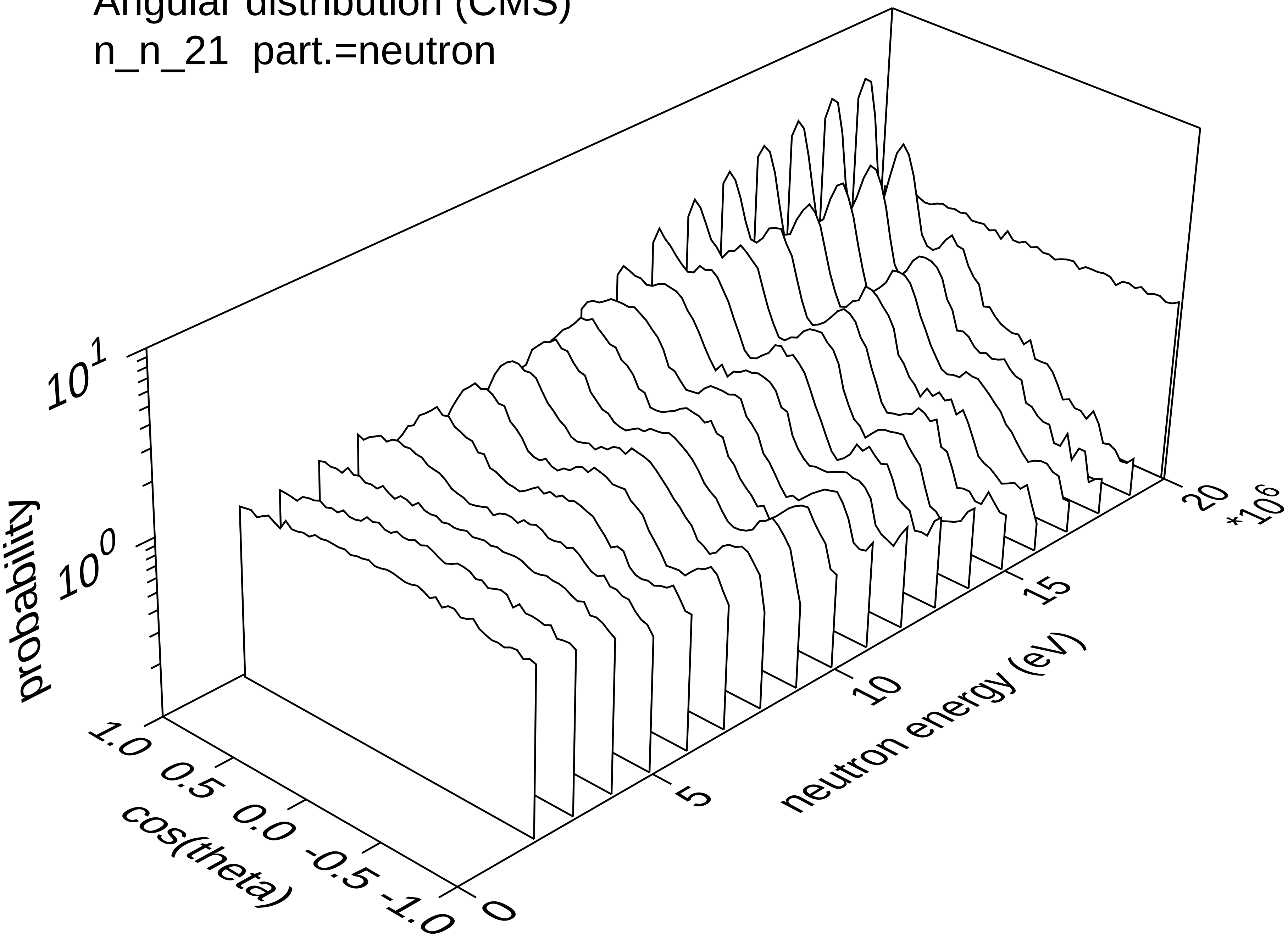
Angular distribution (CMS)
n_n_20 part.=neutron



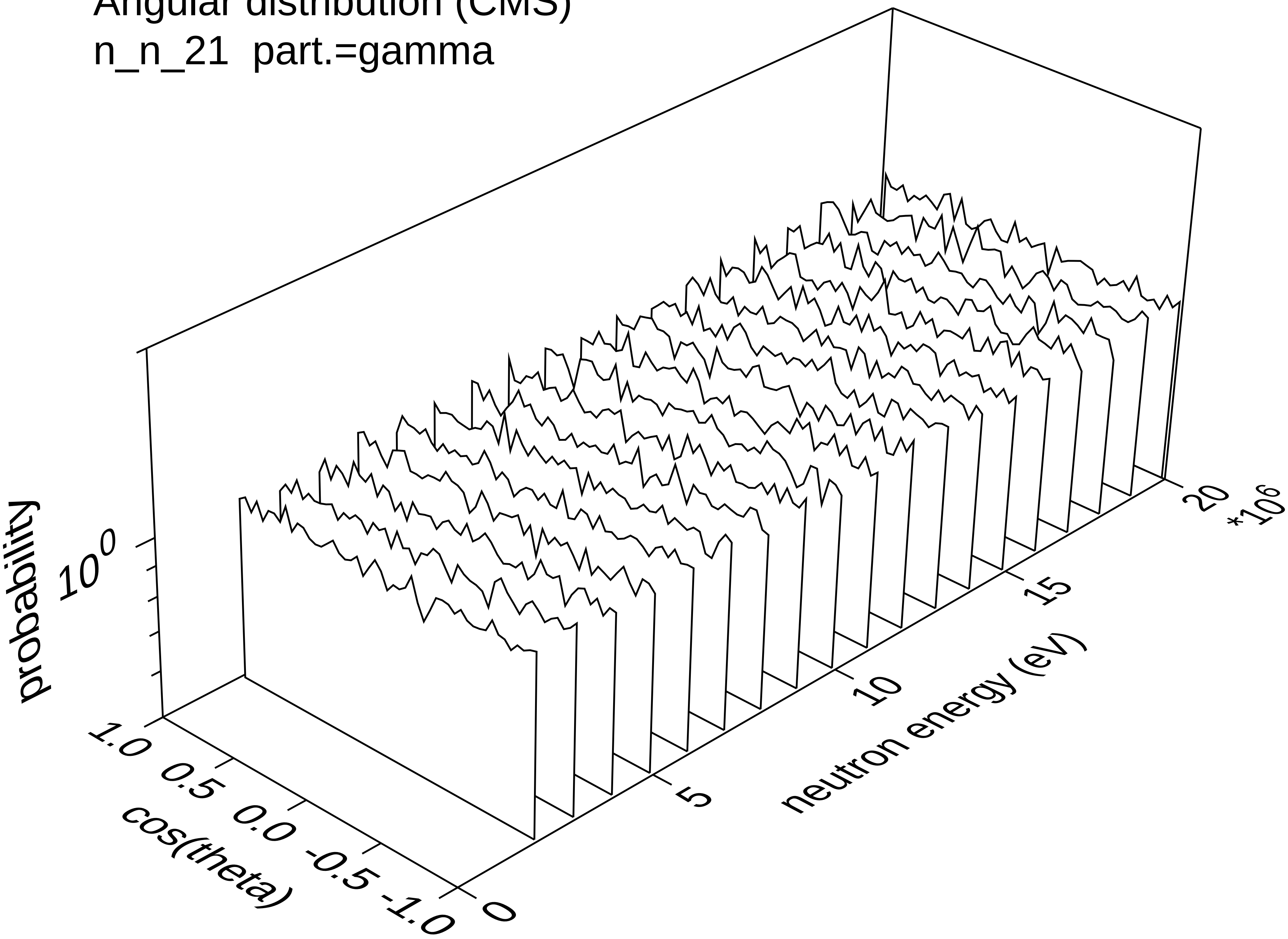
Angular distribution (CMS)
n_n_20 part.=gamma



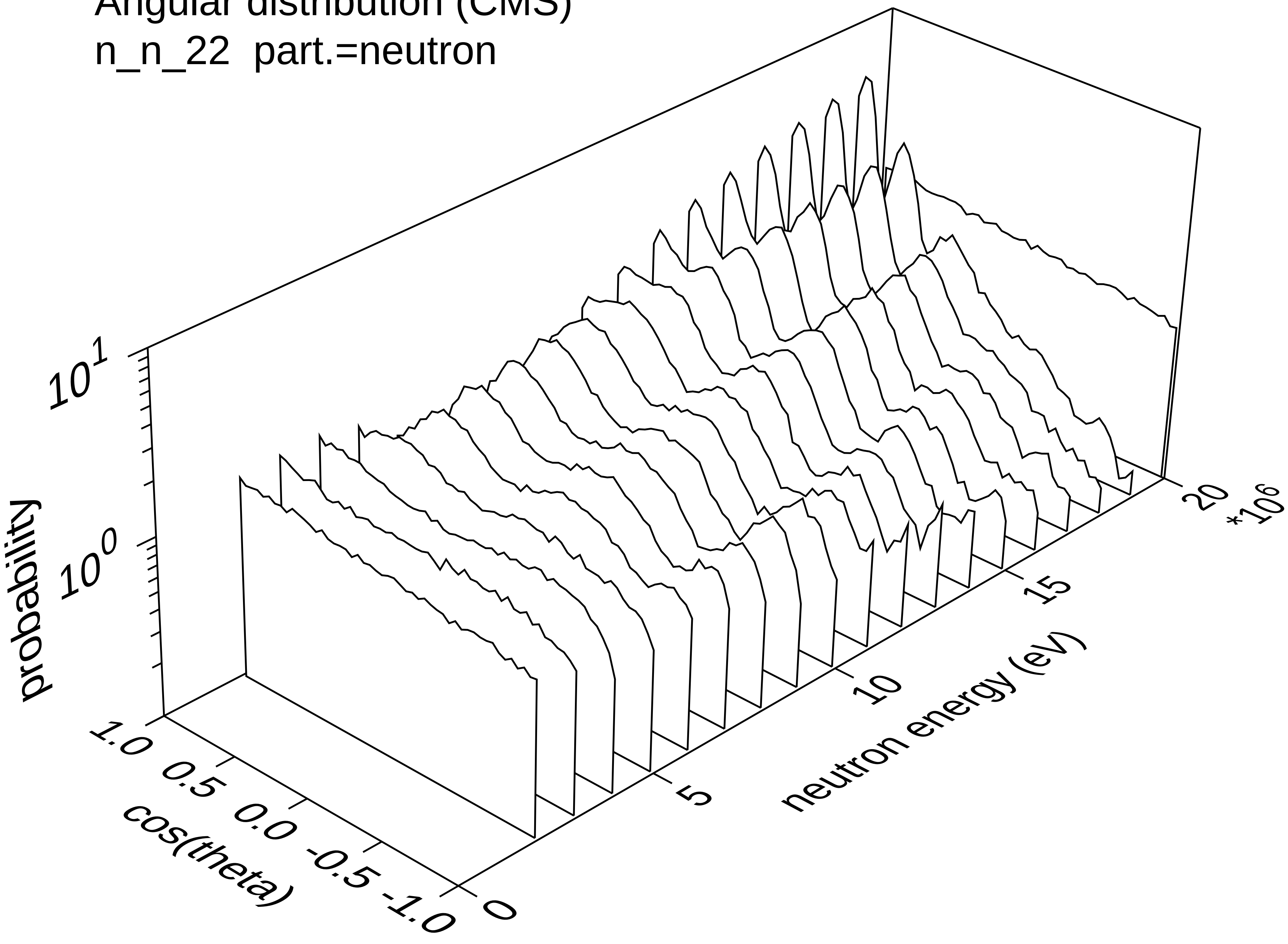
Angular distribution (CMS)
n_n_21 part.=neutron



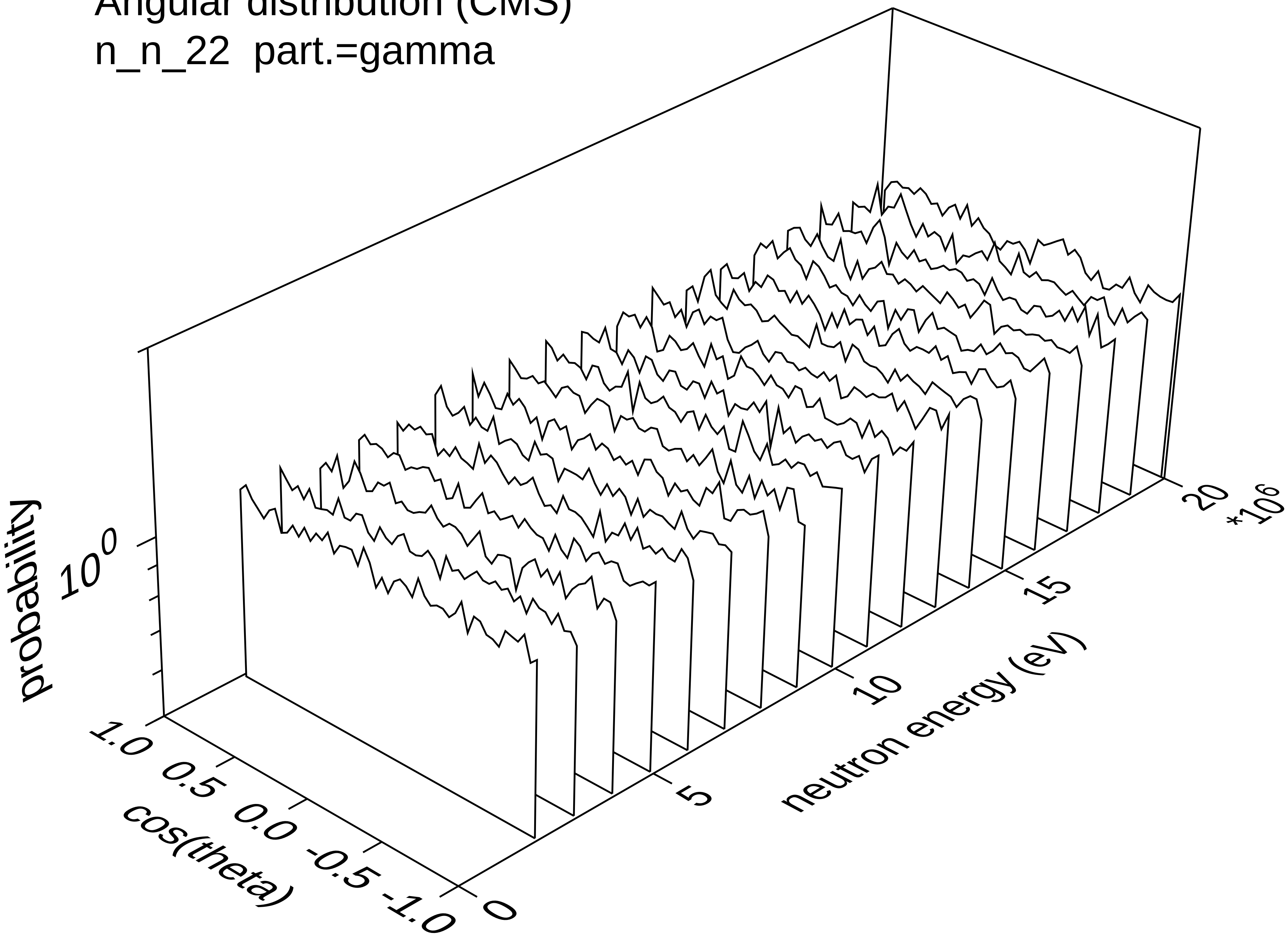
Angular distribution (CMS)
n_n_21 part.=gamma



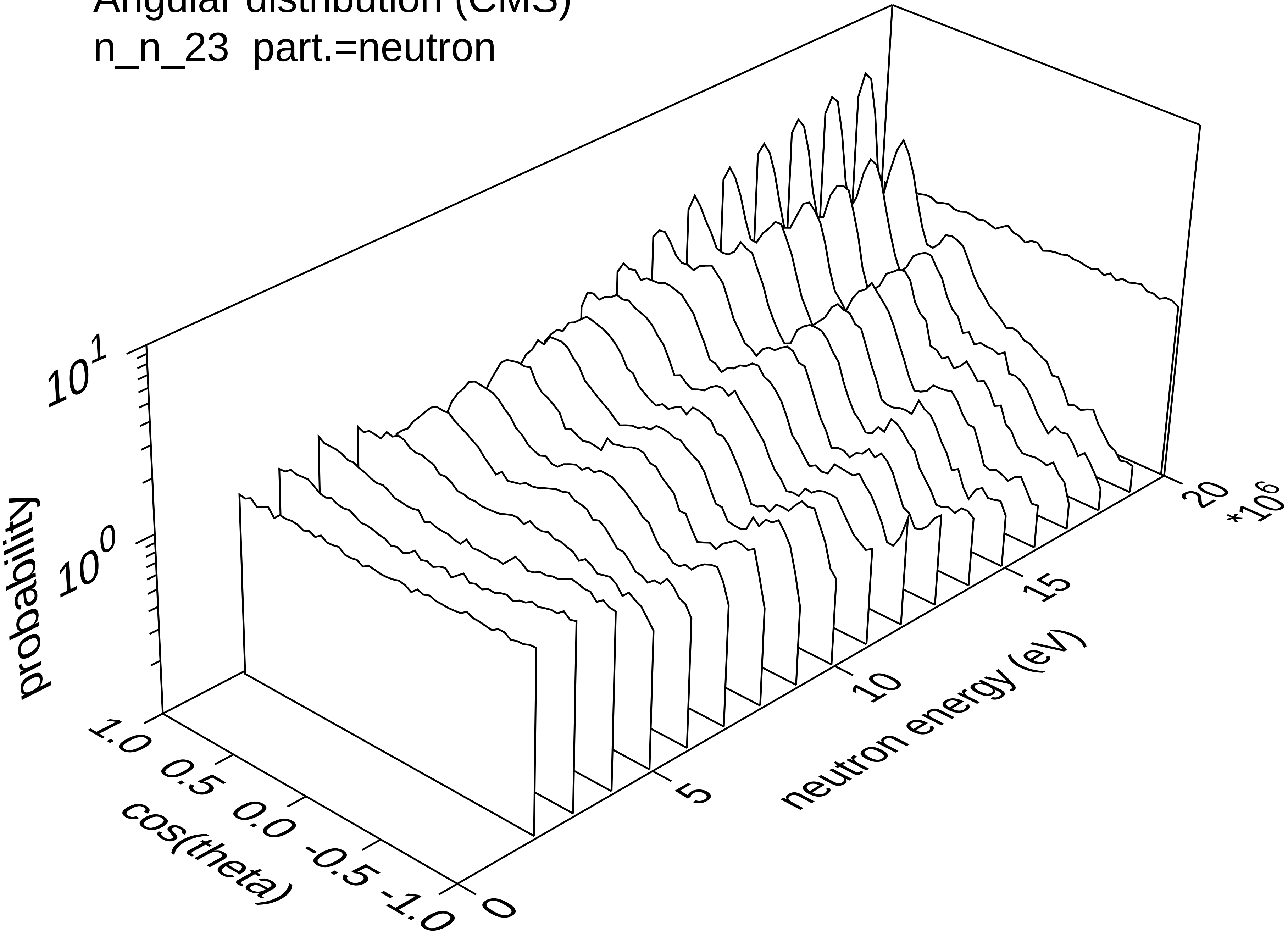
Angular distribution (CMS)
n_n_22 part.=neutron



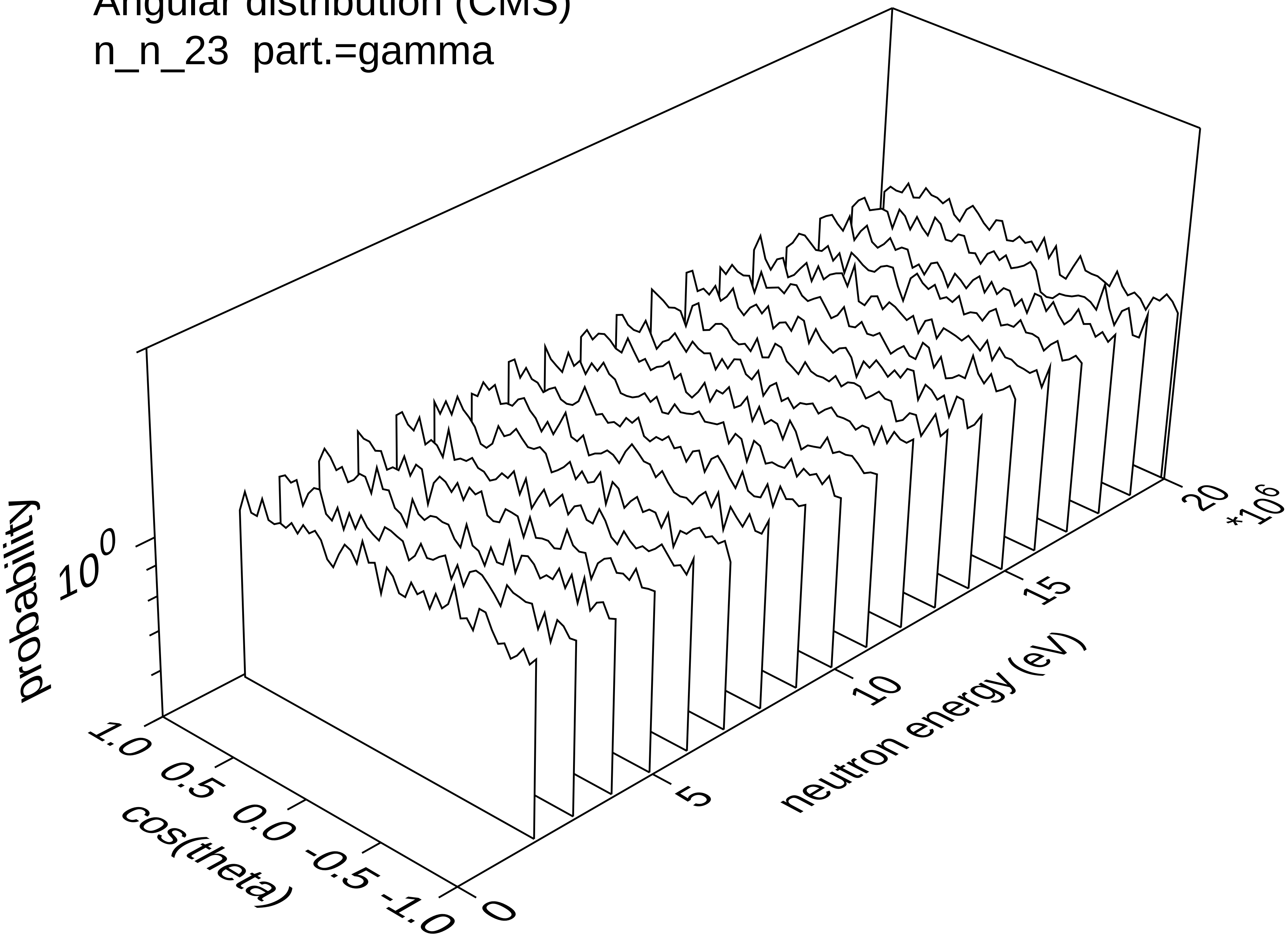
Angular distribution (CMS)
n_n_22 part.=gamma

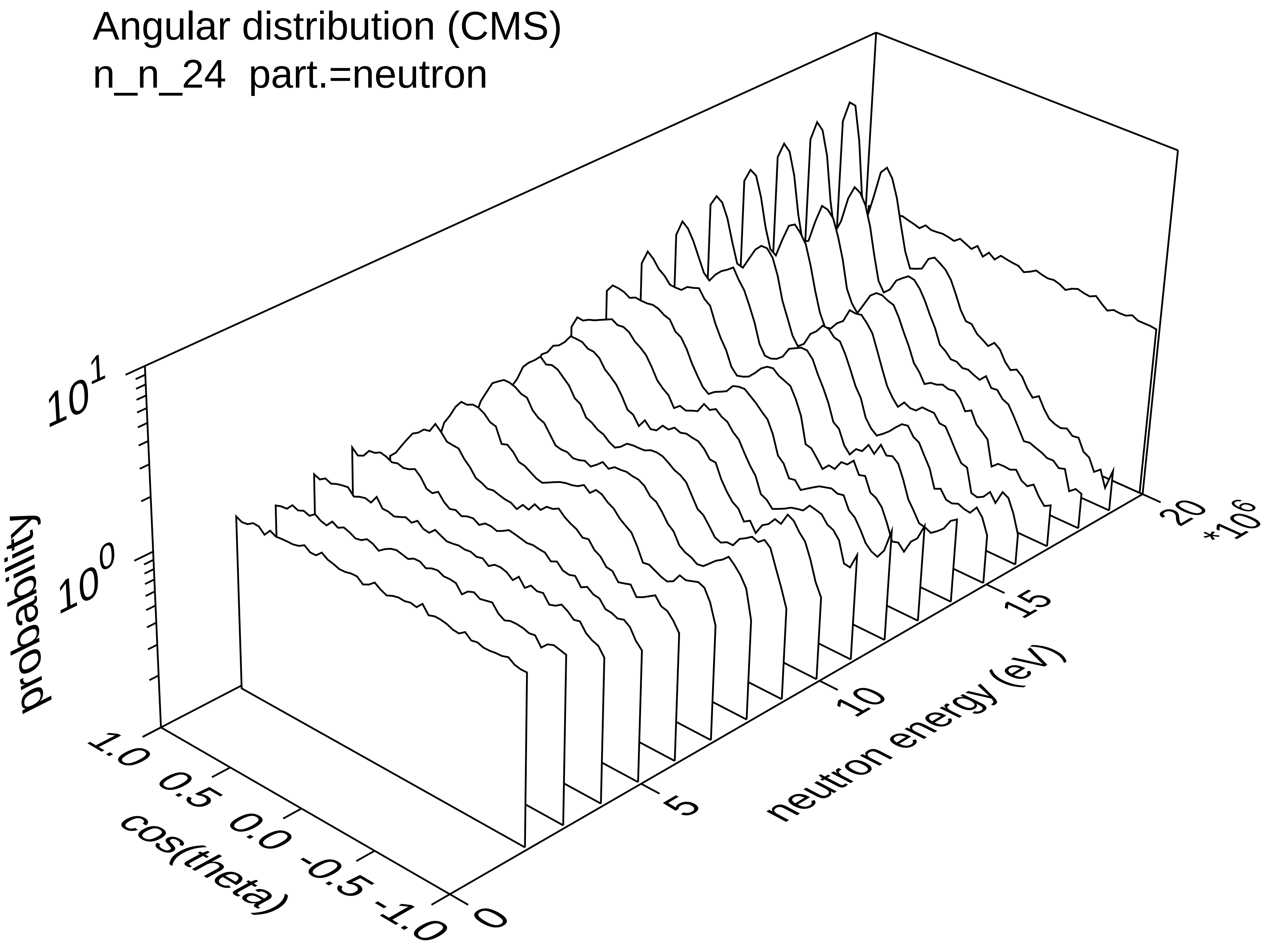


Angular distribution (CMS)
n_n_23 part.=neutron

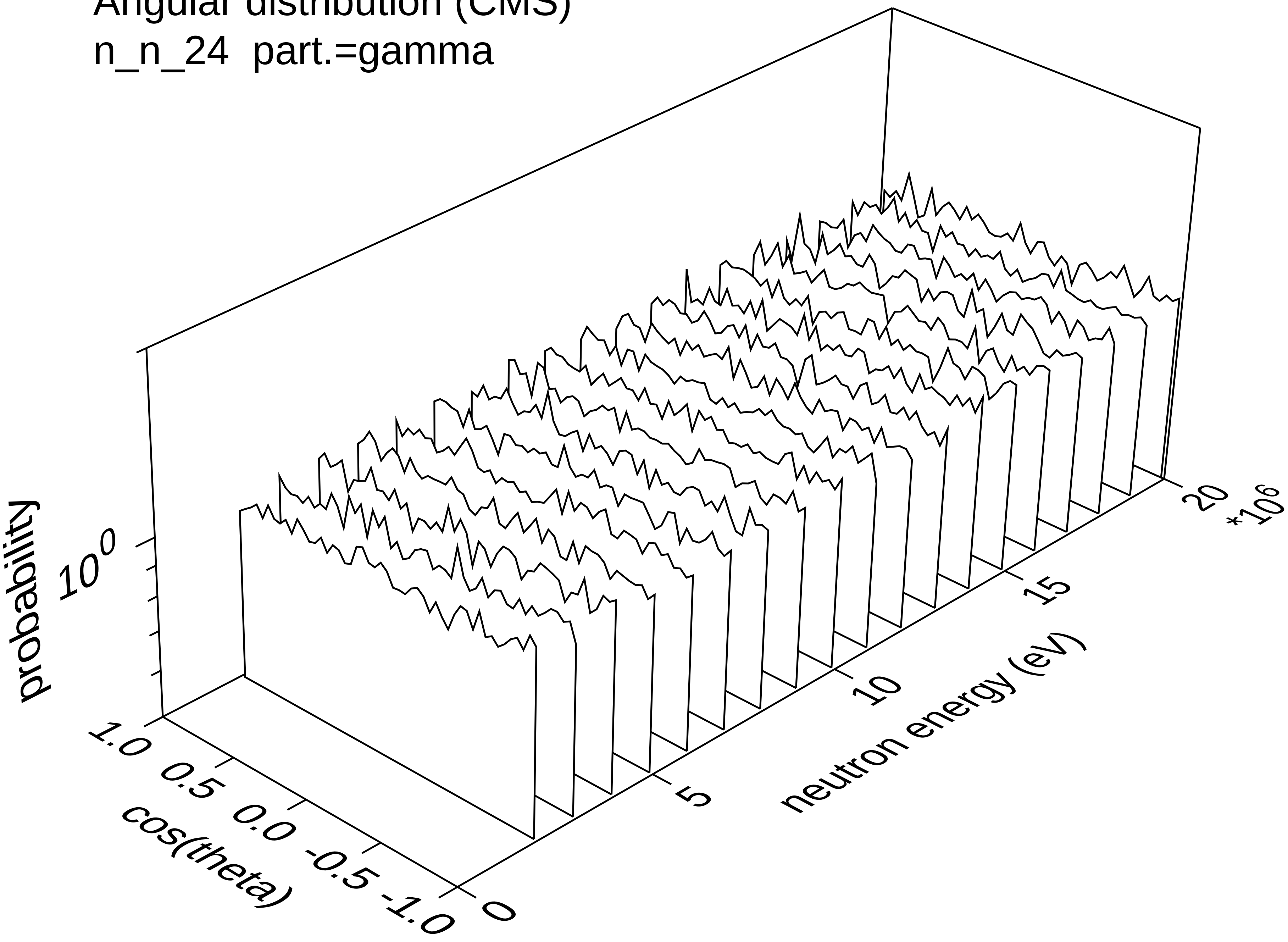


Angular distribution (CMS)
n_n_23 part.=gamma

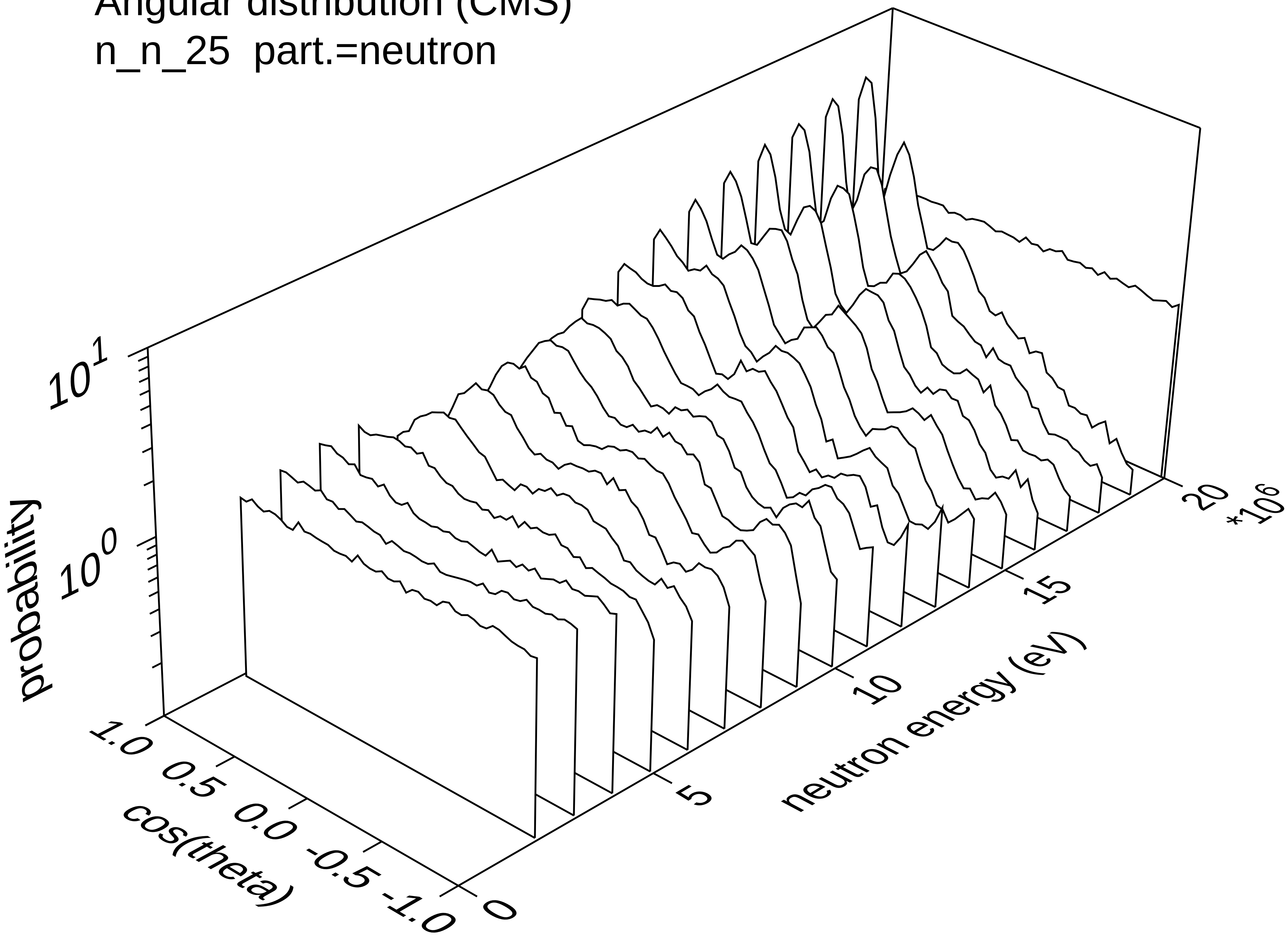



Angular distribution (CMS)
n_n_24 part.=neutron
probability
10^1
10^0
1.0
0.5
0.0
-0.5
-1.0
cos(theta)
0
5
10
15
20
$*10^6$
neutron energy (eV)

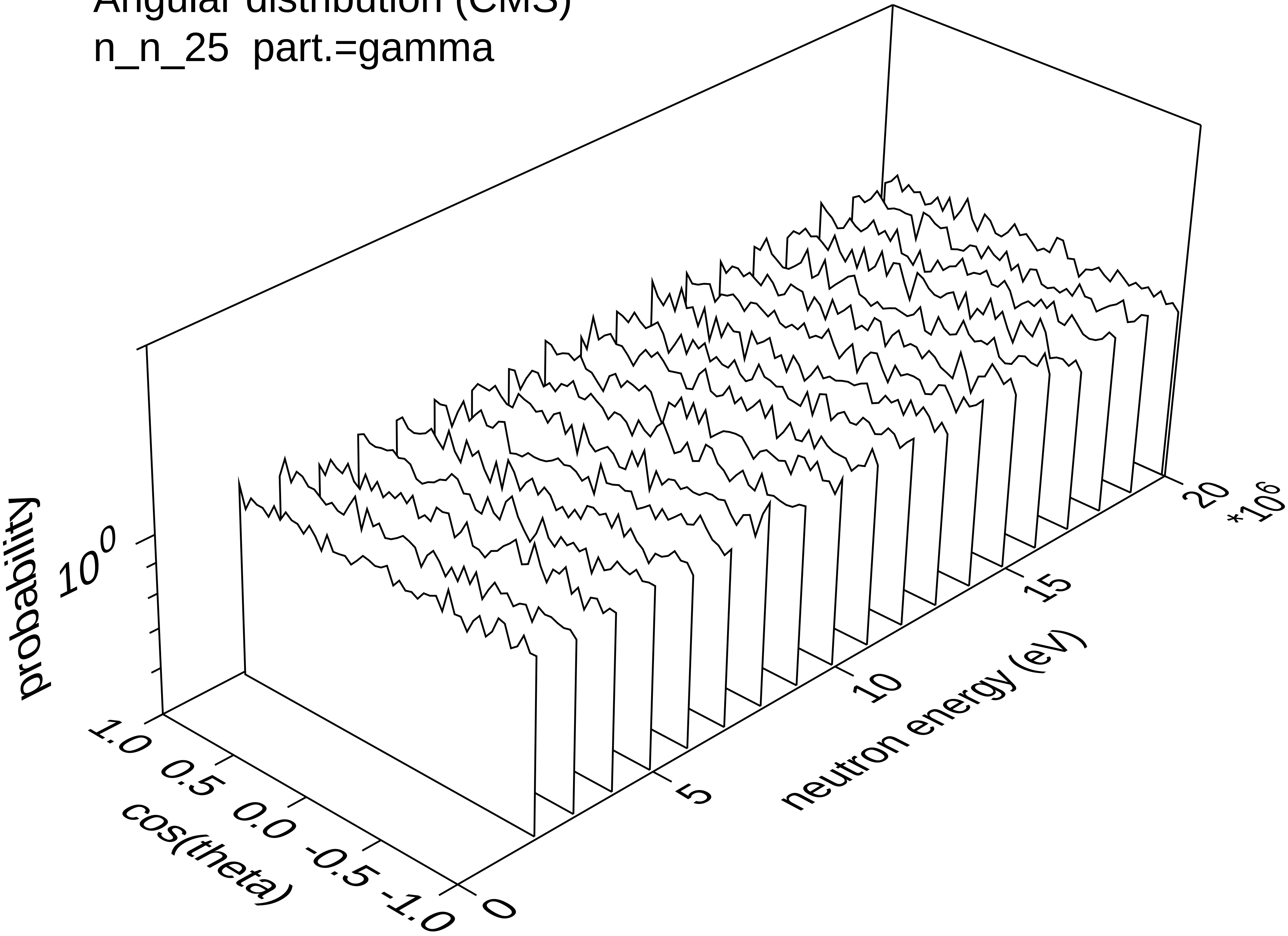
Angular distribution (CMS)
n_n_24 part.=gamma



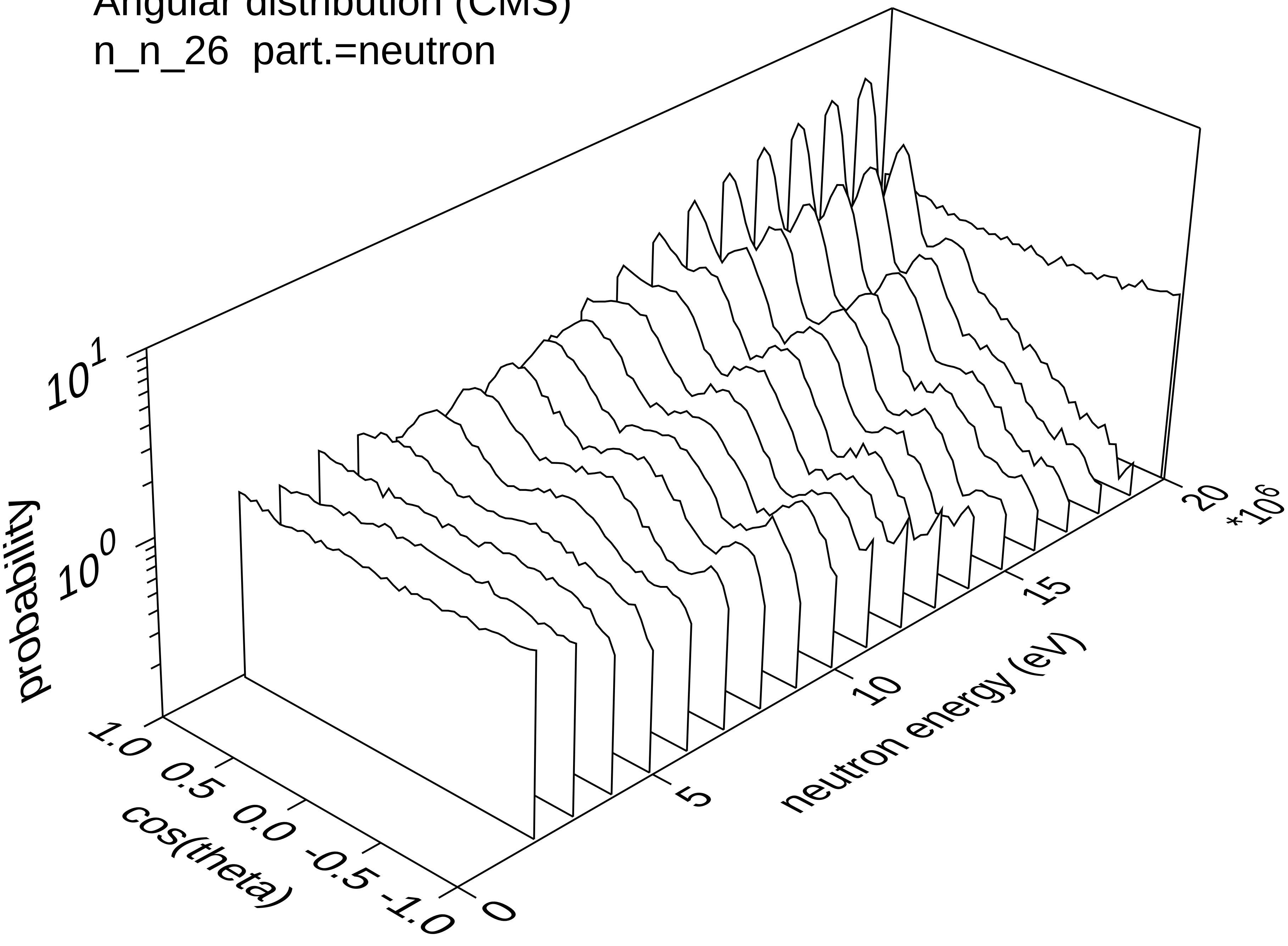
Angular distribution (CMS)
n_n_25 part.=neutron



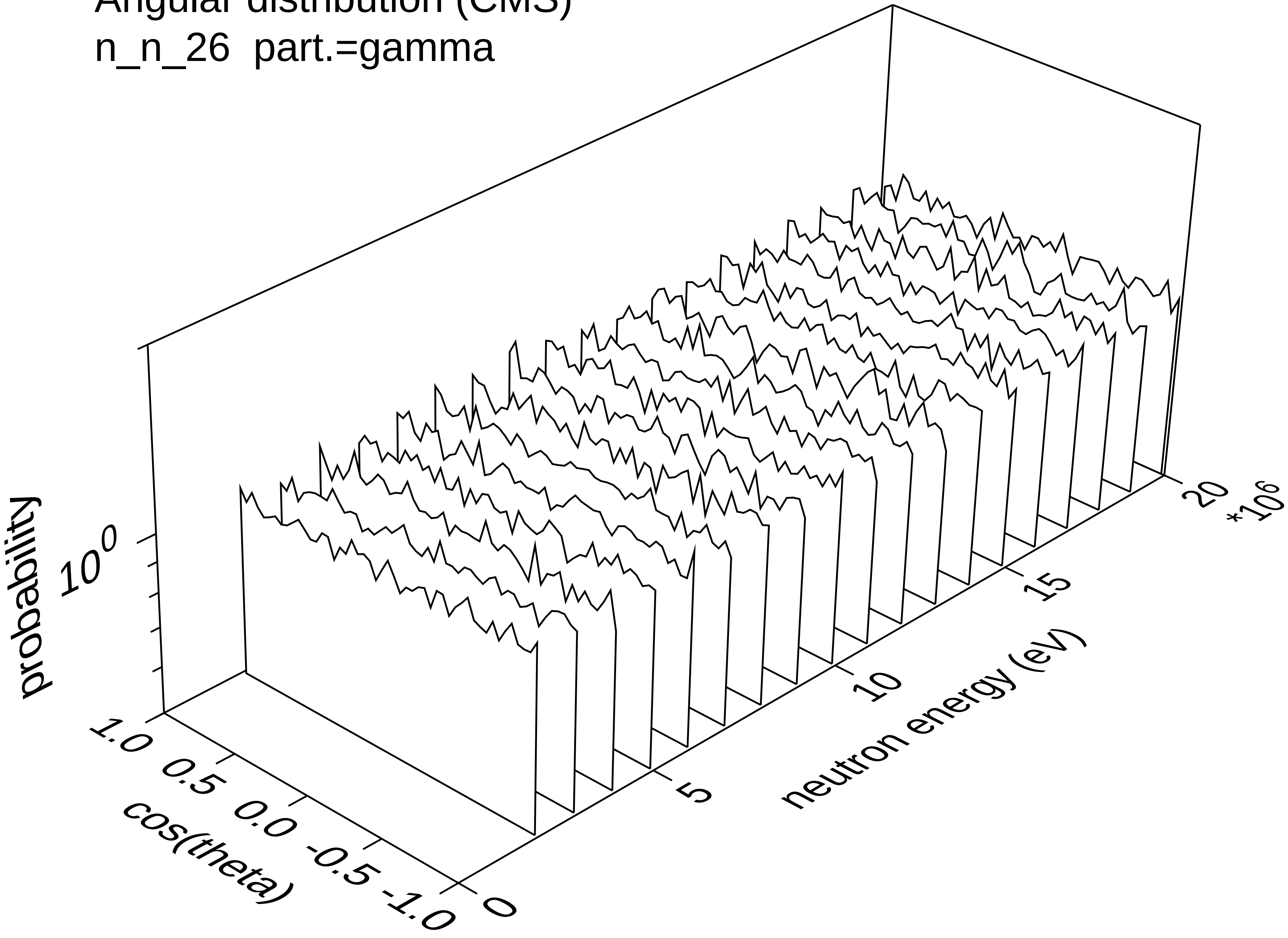
Angular distribution (CMS)
n_n_25 part.=gamma



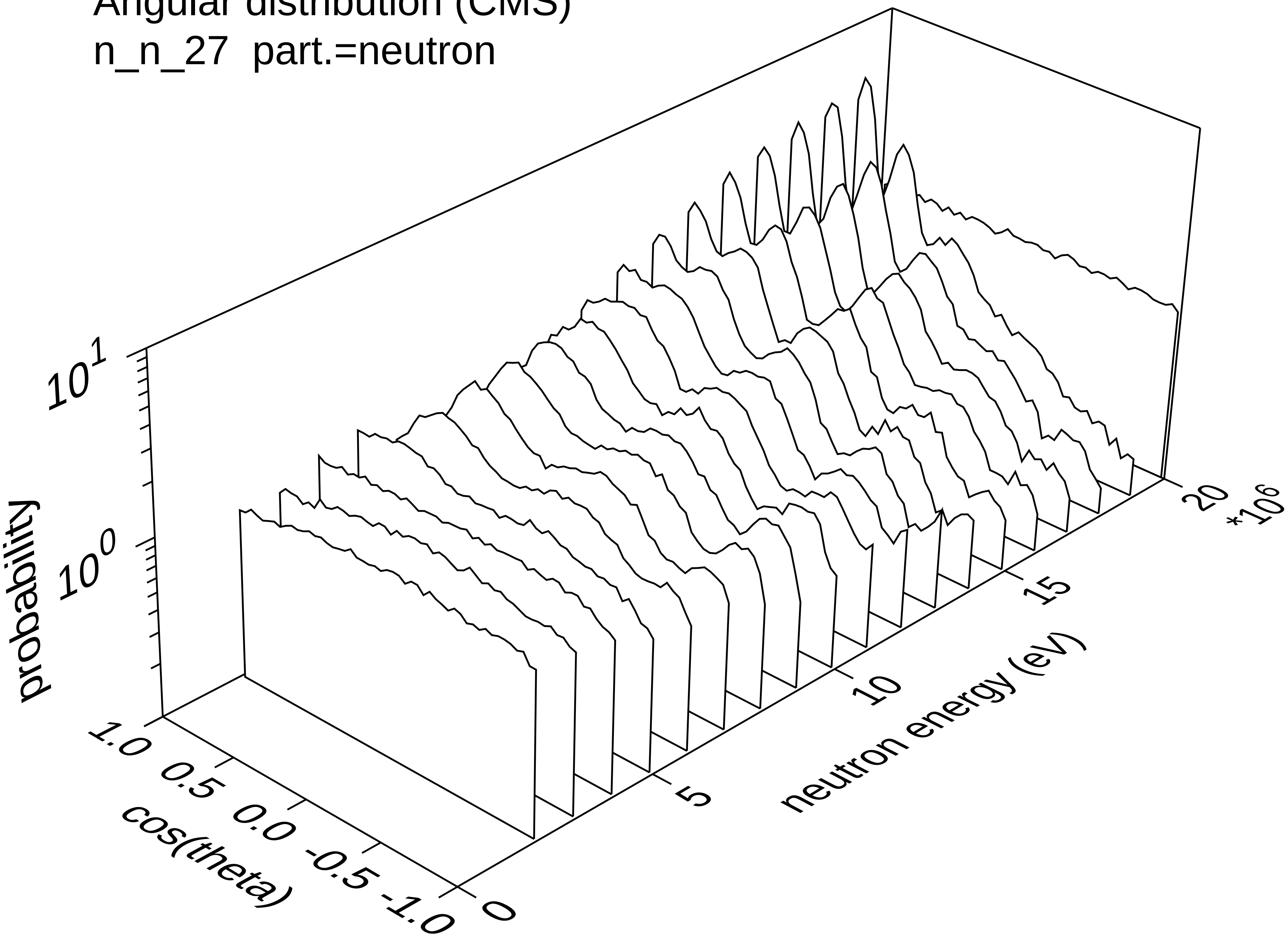
Angular distribution (CMS)
n_n_26 part.=neutron



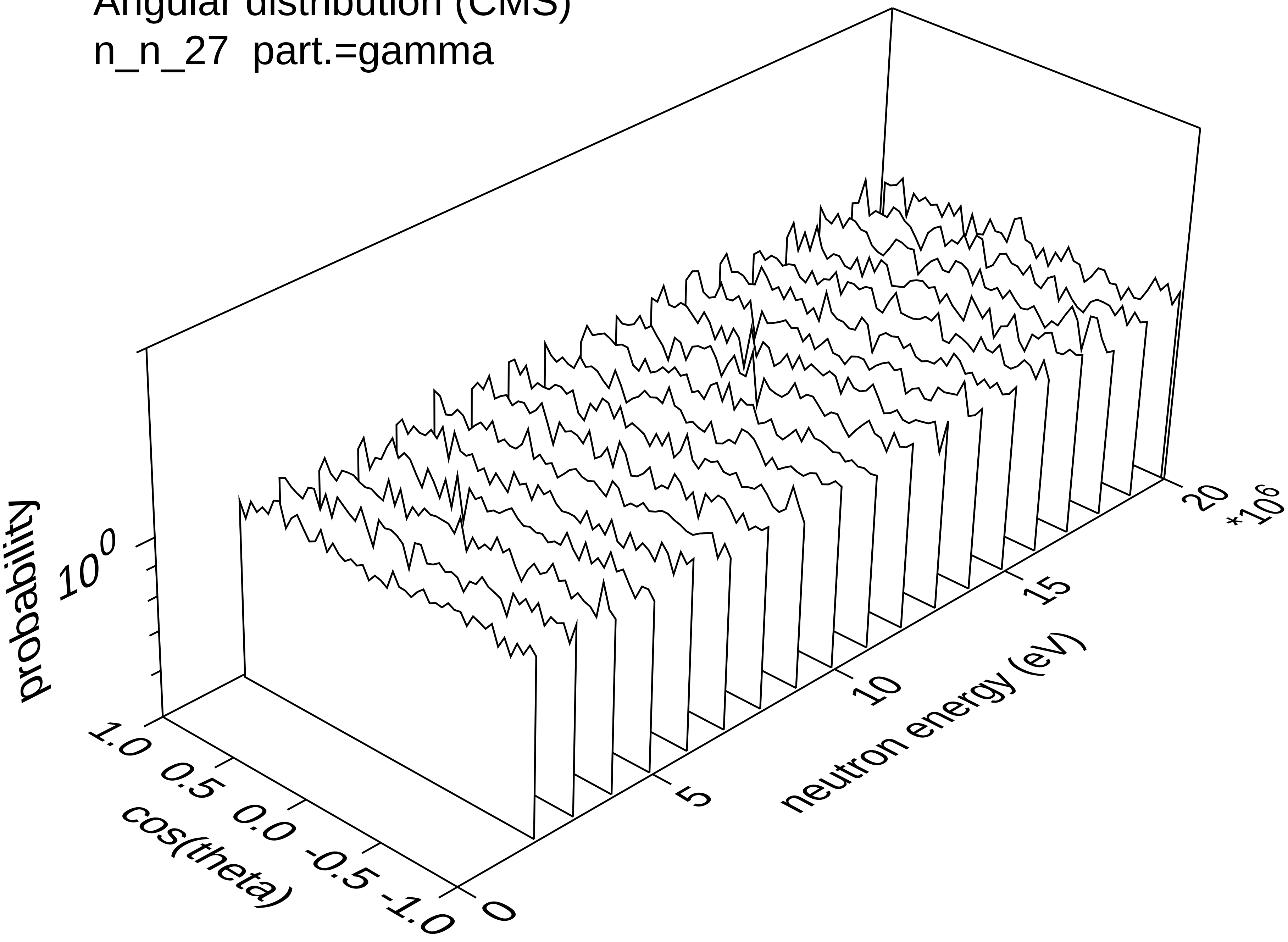
Angular distribution (CMS)
n_n_26 part.=gamma

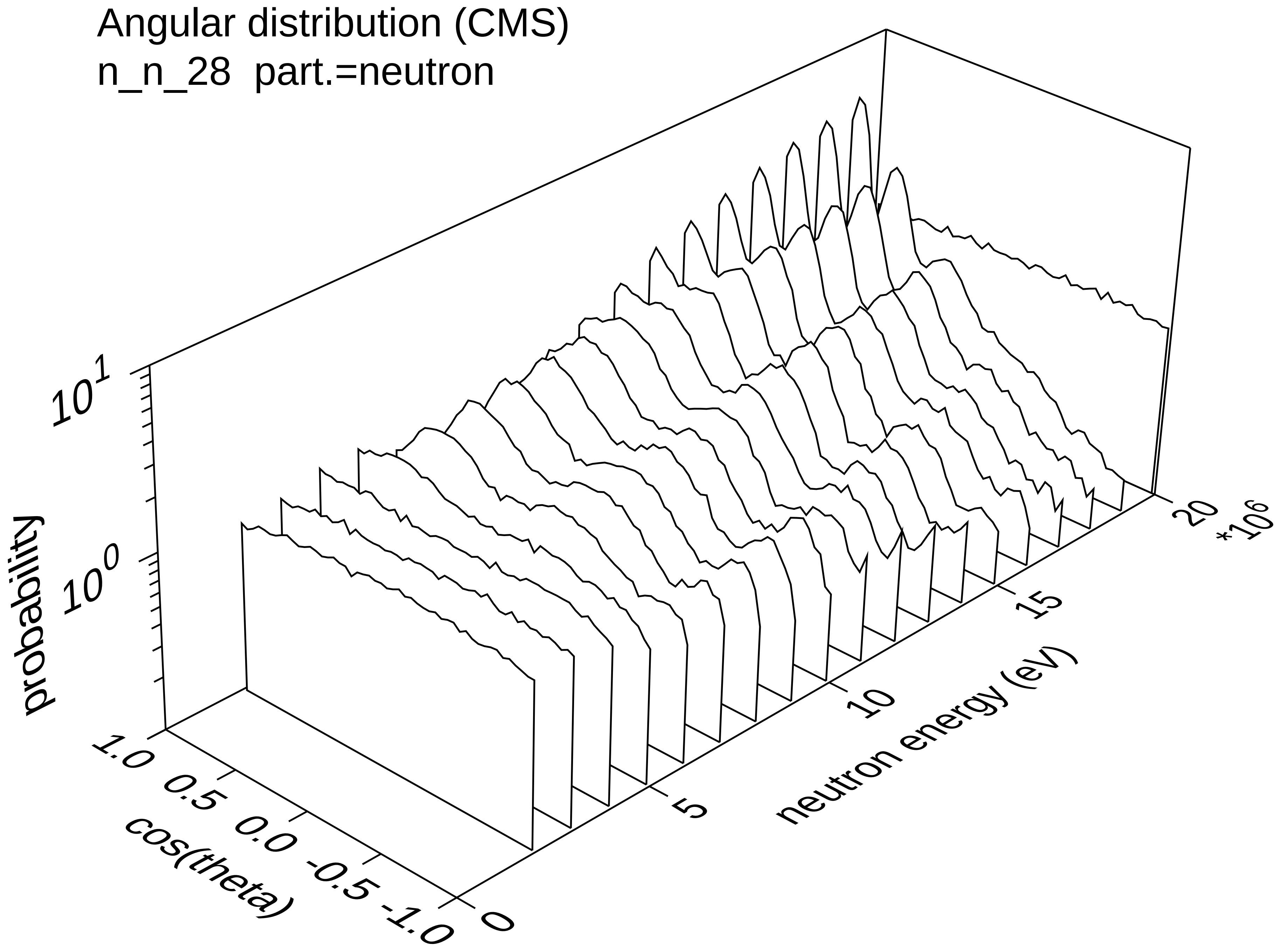


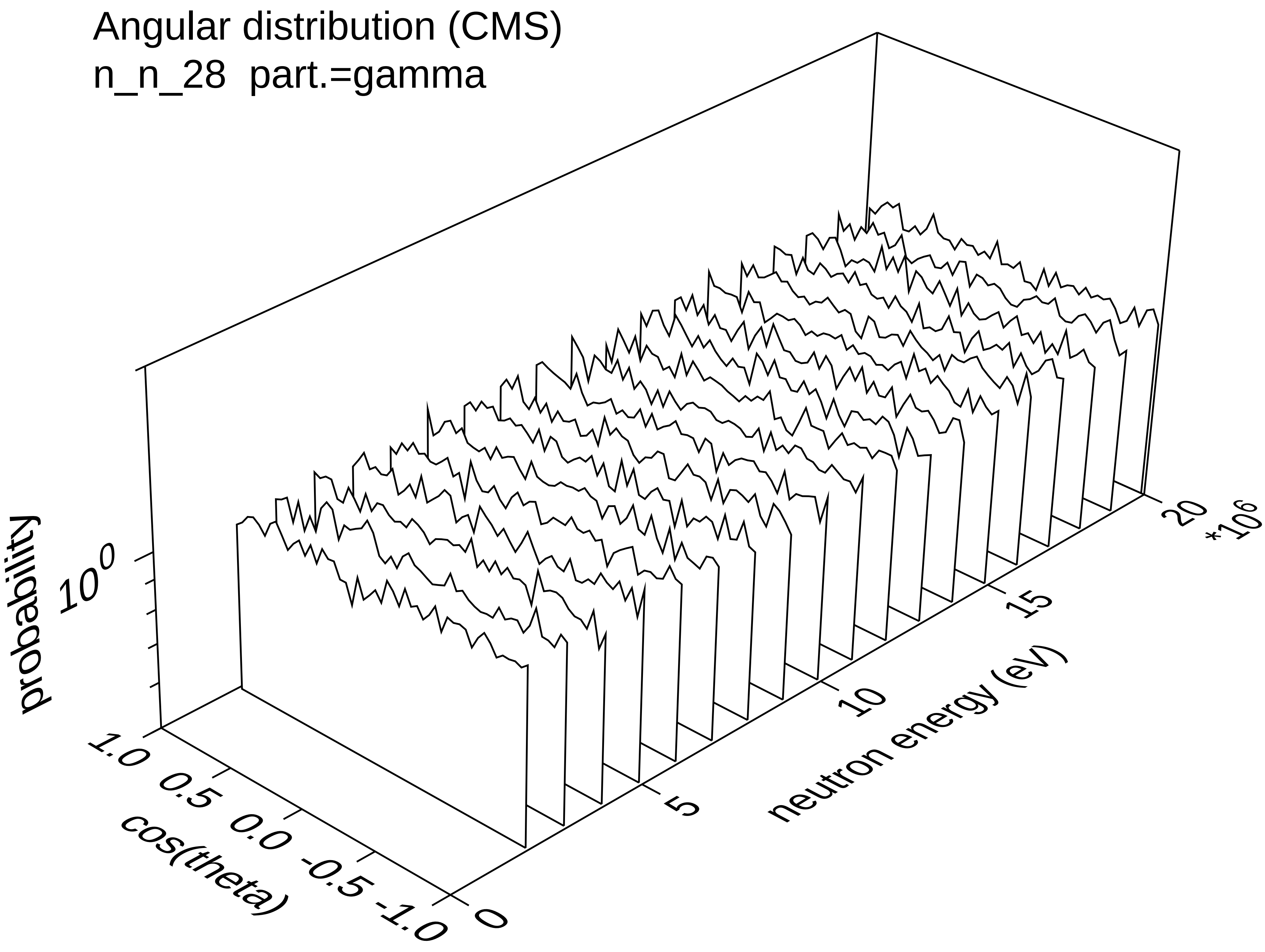
Angular distribution (CMS)
n_n_27 part.=neutron



Angular distribution (CMS)
n_n_27 part.=gamma

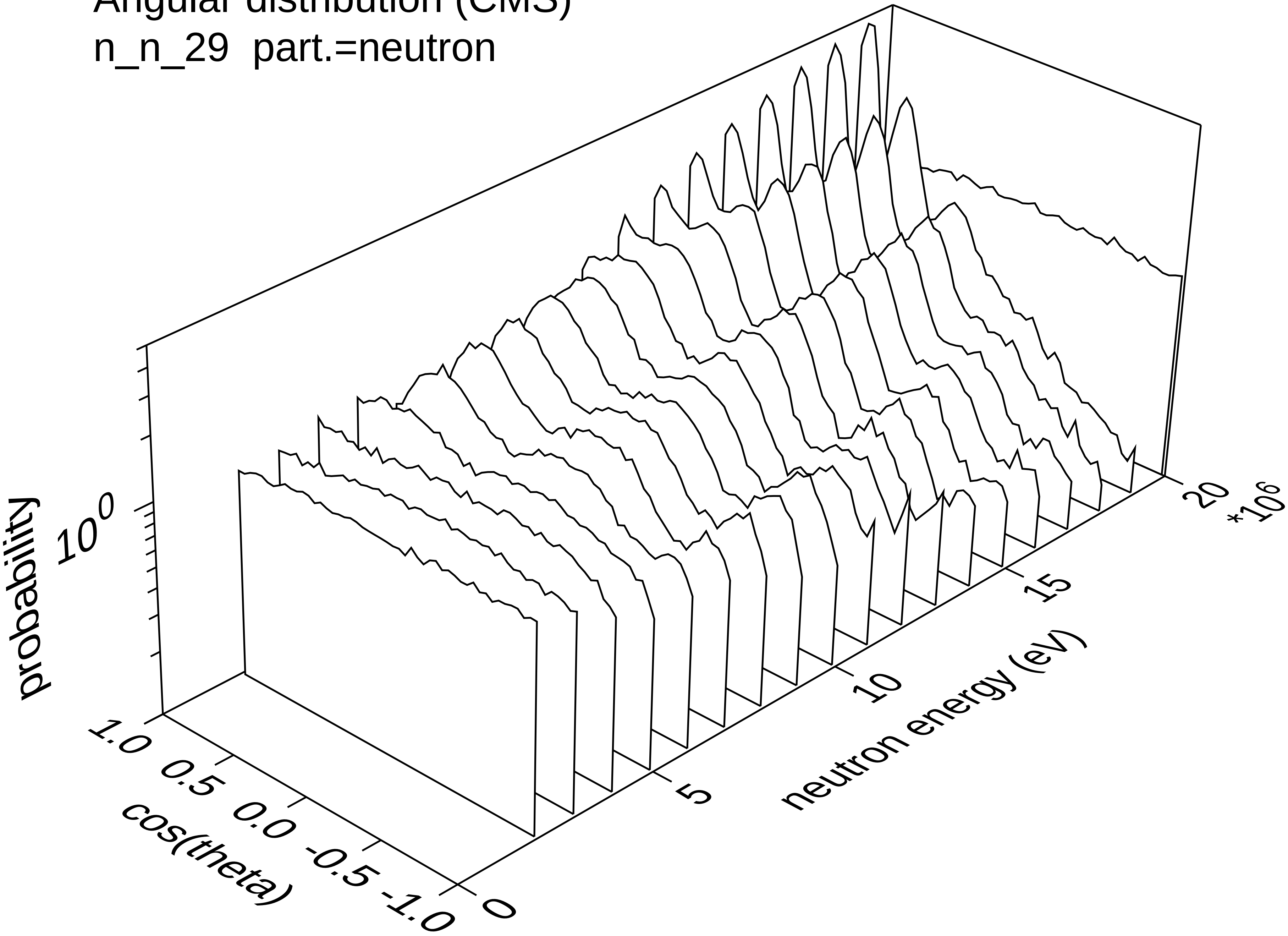



Angular distribution (CMS)
n_n_28 part.=neutron
probability
10^1
10^0
1.0
0.5
0.0
-0.5
-1.0
cos(theta)
0
5
10
15
20
*10^6
neutron energy (eV)

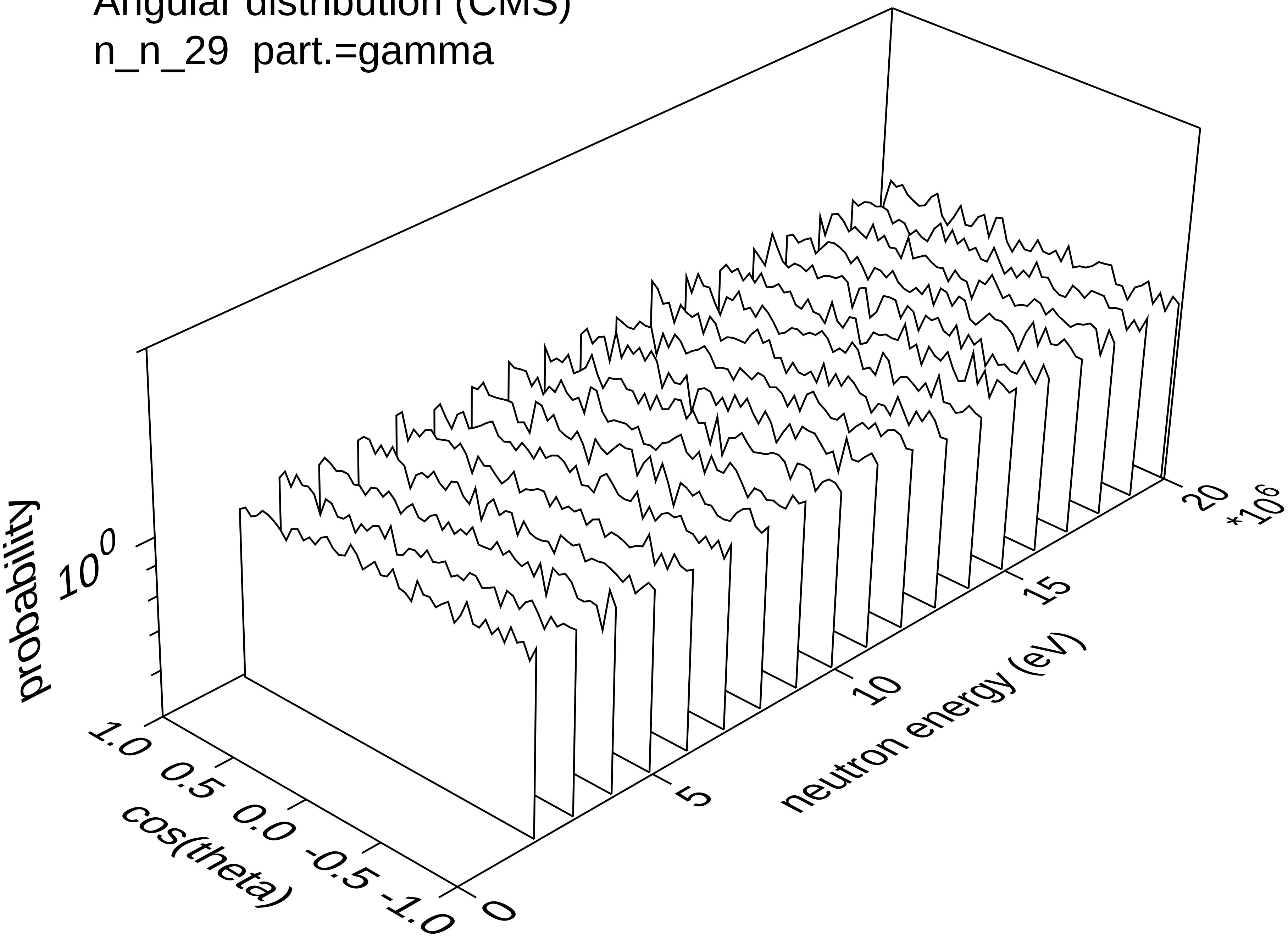


Angular distribution (CMS)
n_n_28 part.=gamma

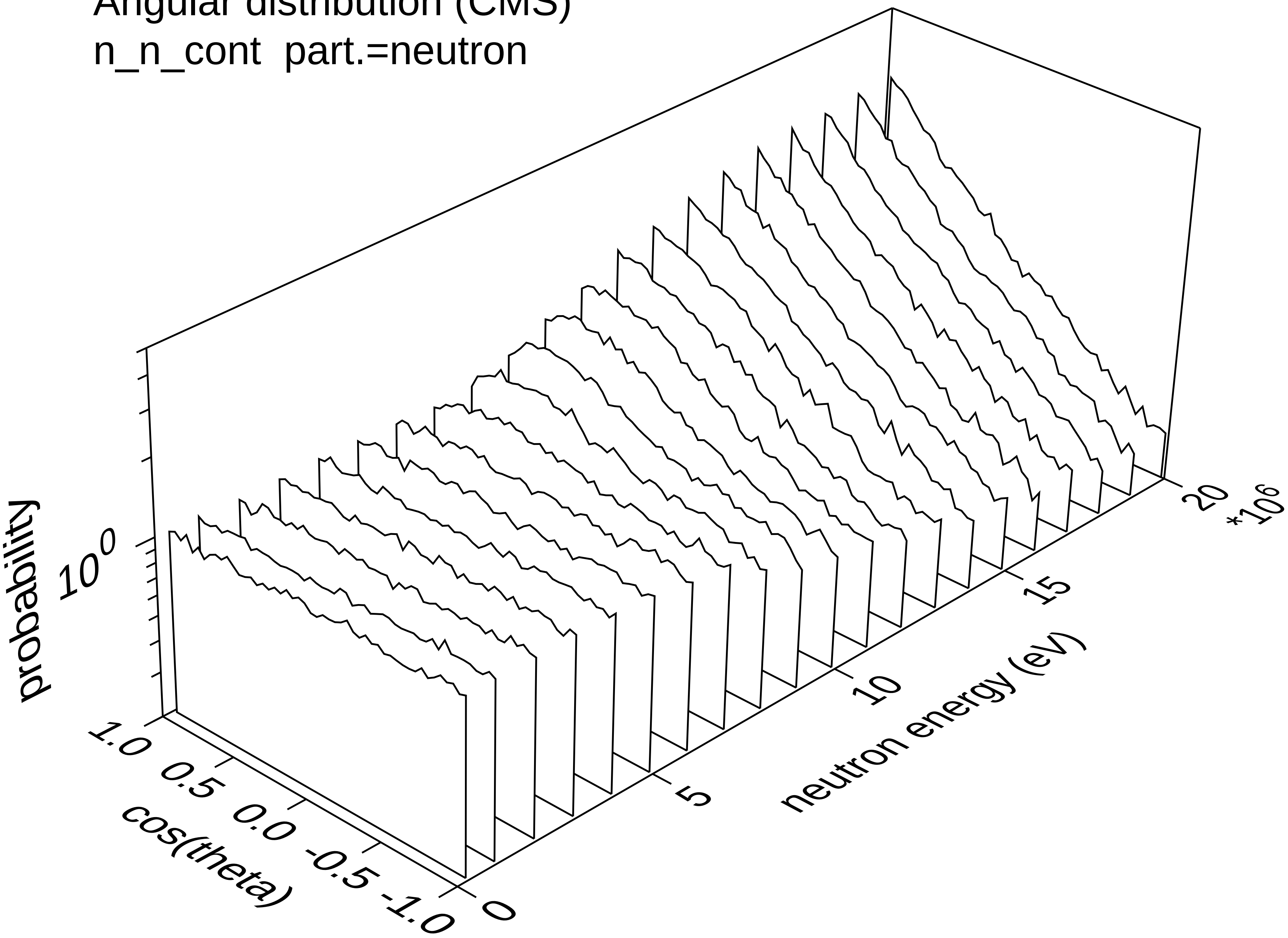
Angular distribution (CMS)
n_n_29 part.=neutron



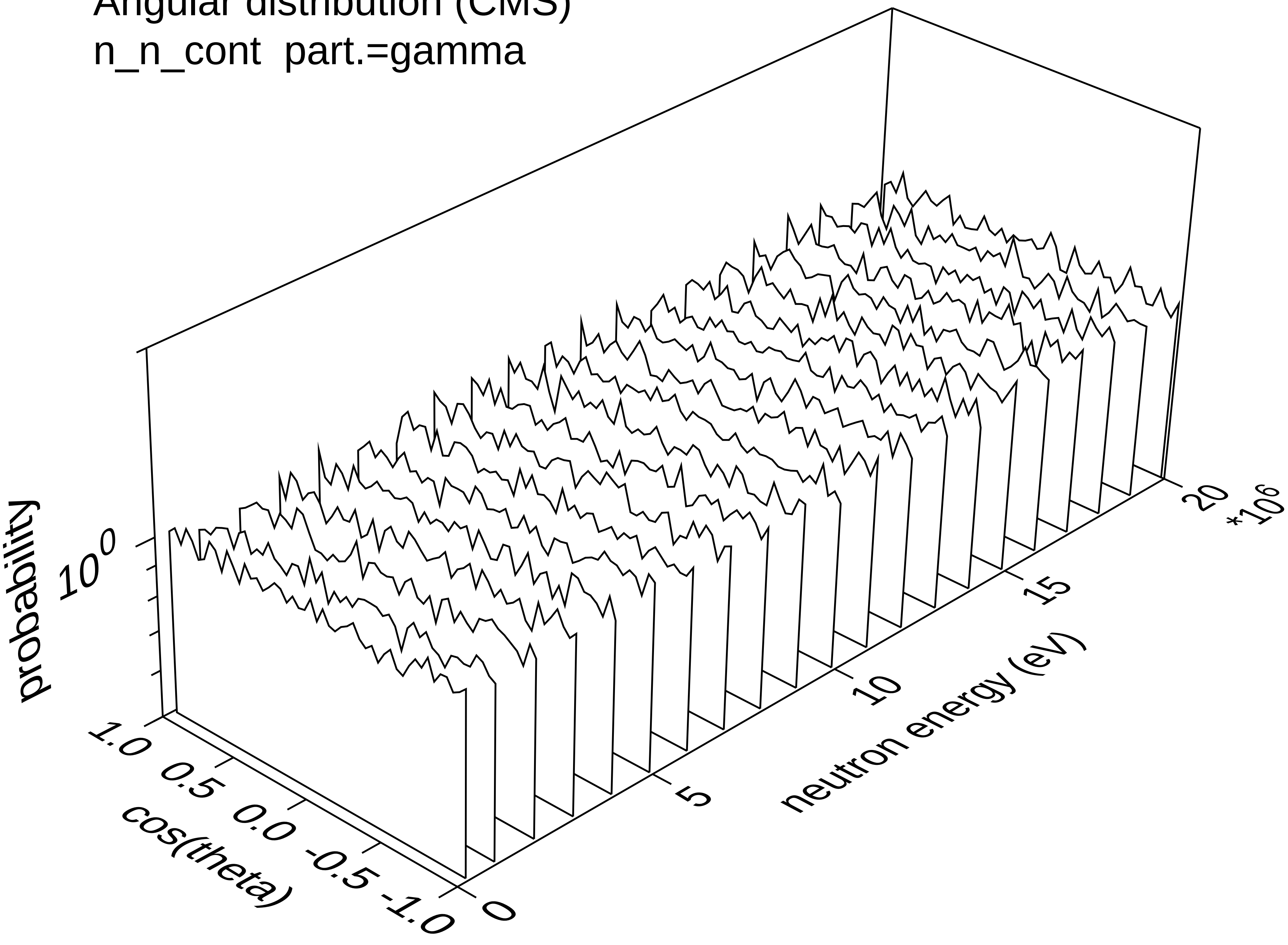
Angular distribution (CMS)
n_n_29 part.=gamma

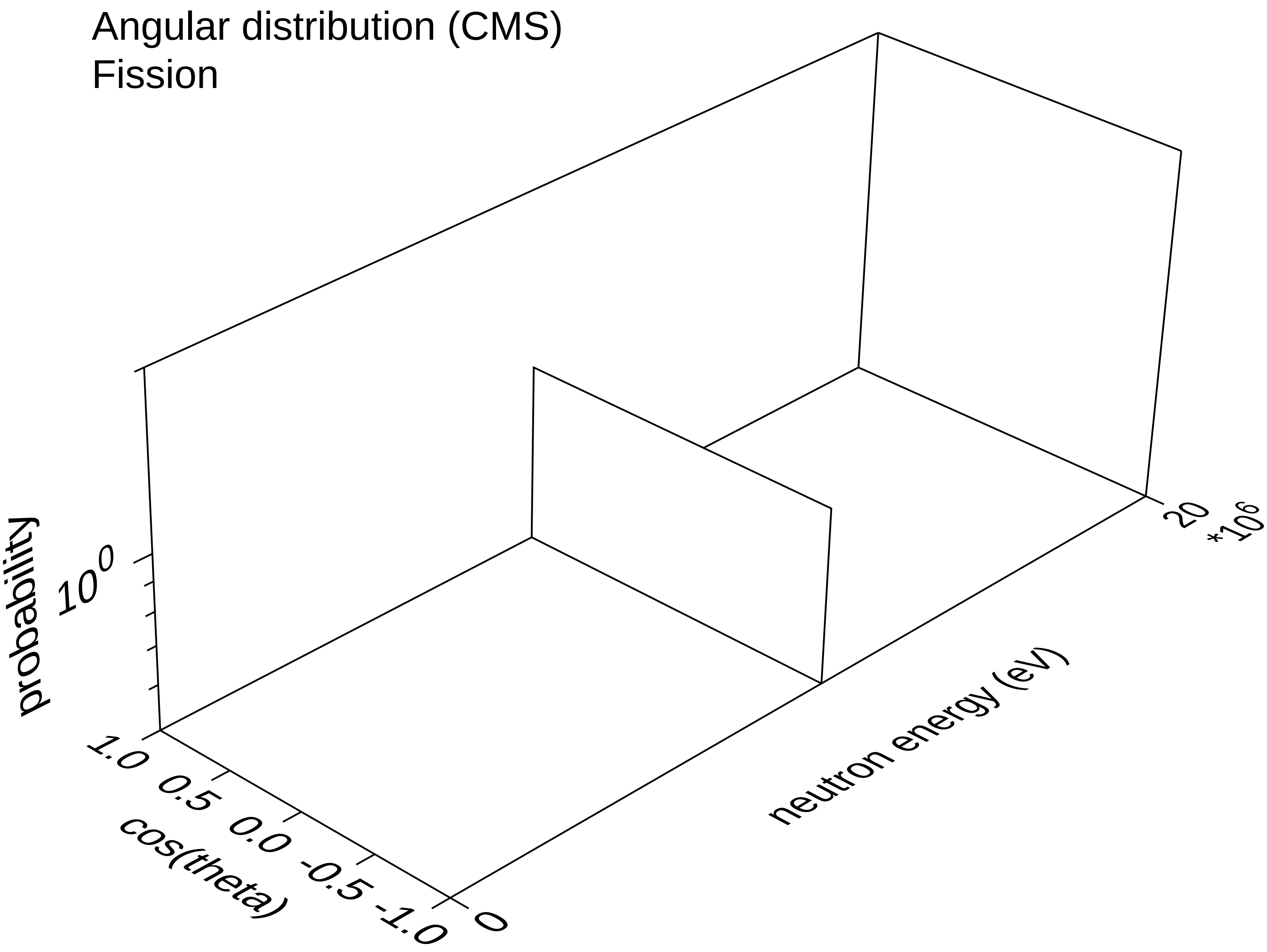


Angular distribution (CMS)
n_n_cont part.=neutron

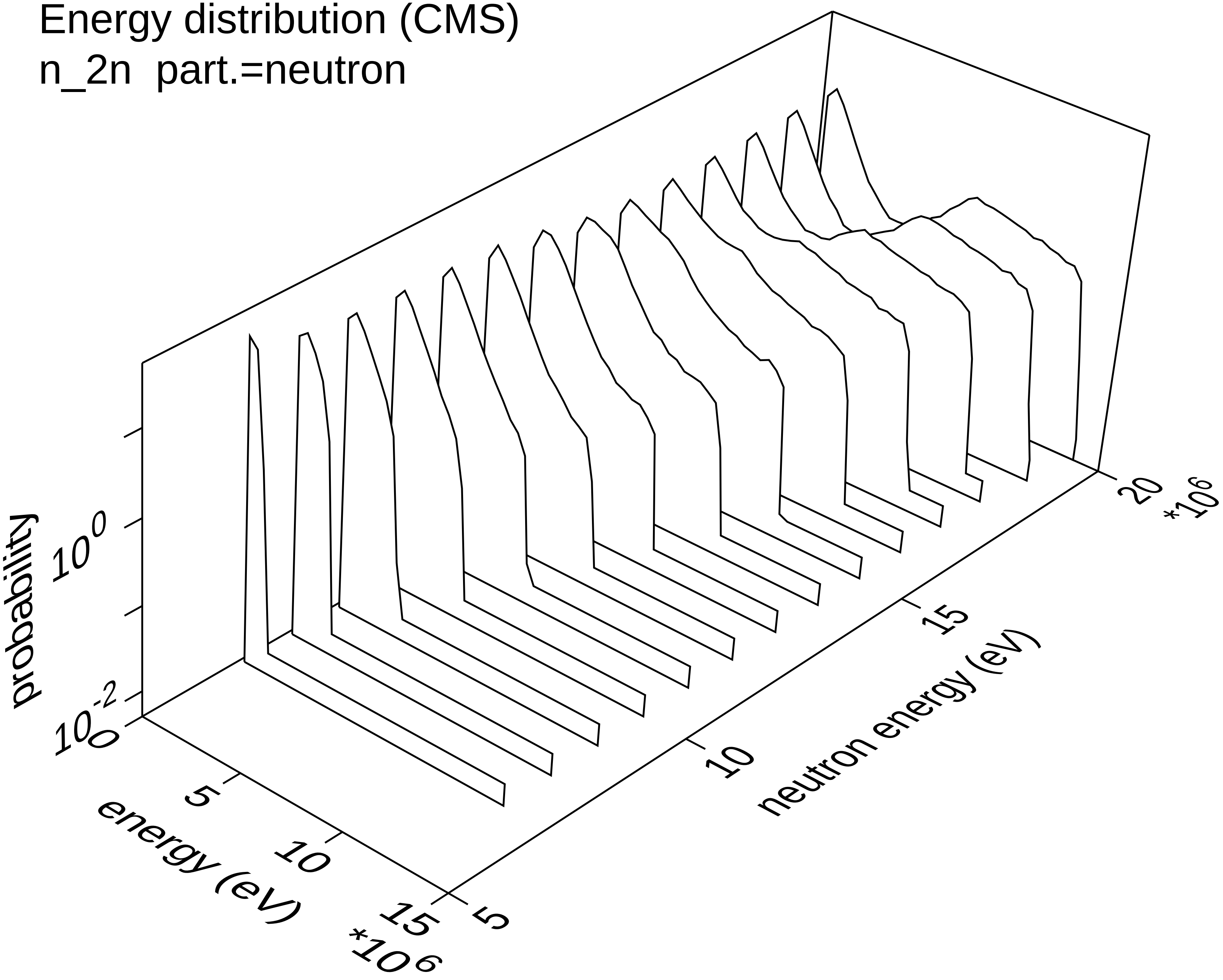


Angular distribution (CMS)
n_n_cont part.=gamma



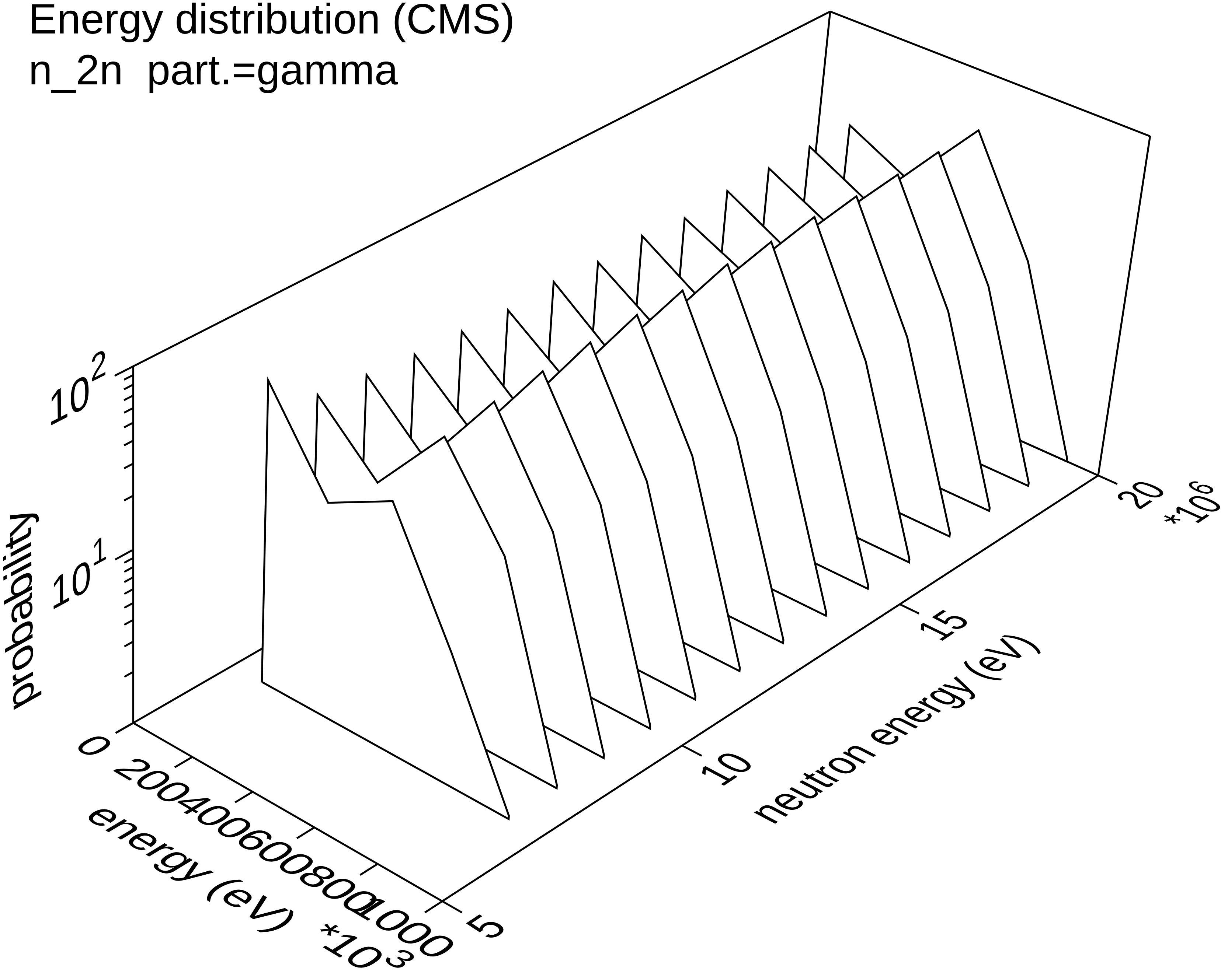


Angular distribution (CMS)
Fission

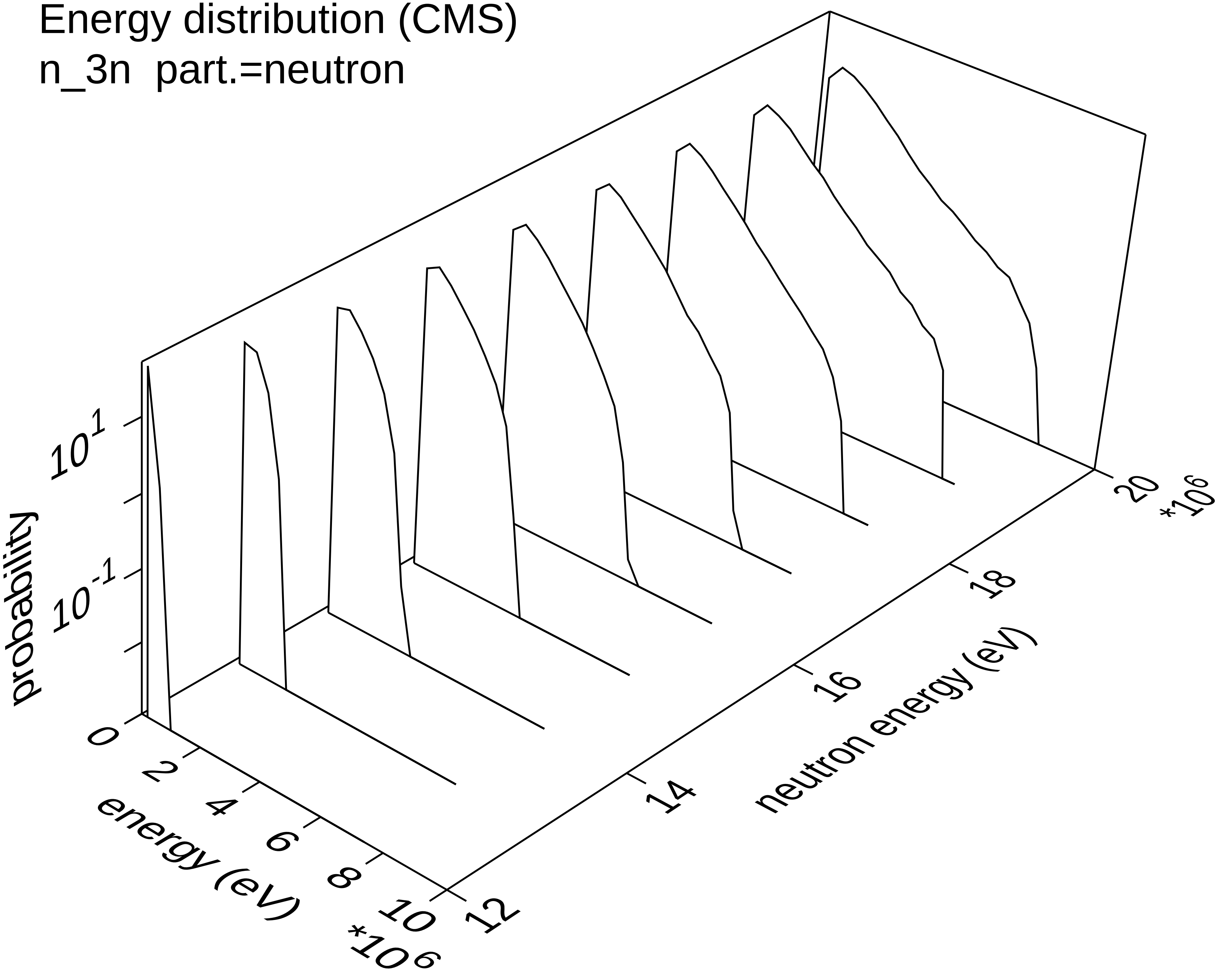


Energy distribution (CMS)
n_2n part.=neutron

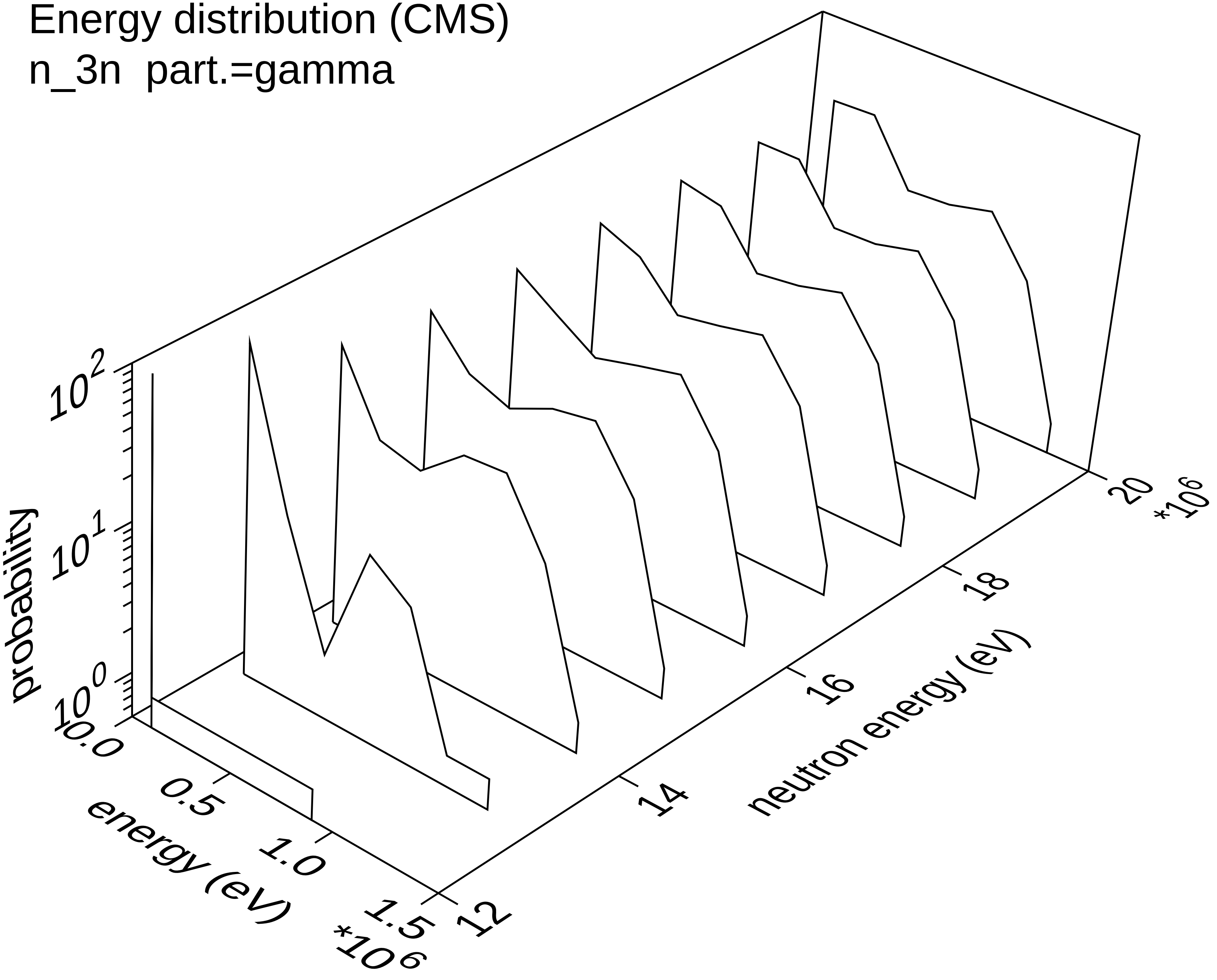
Energy distribution (CMS)
n_2n part.=gamma

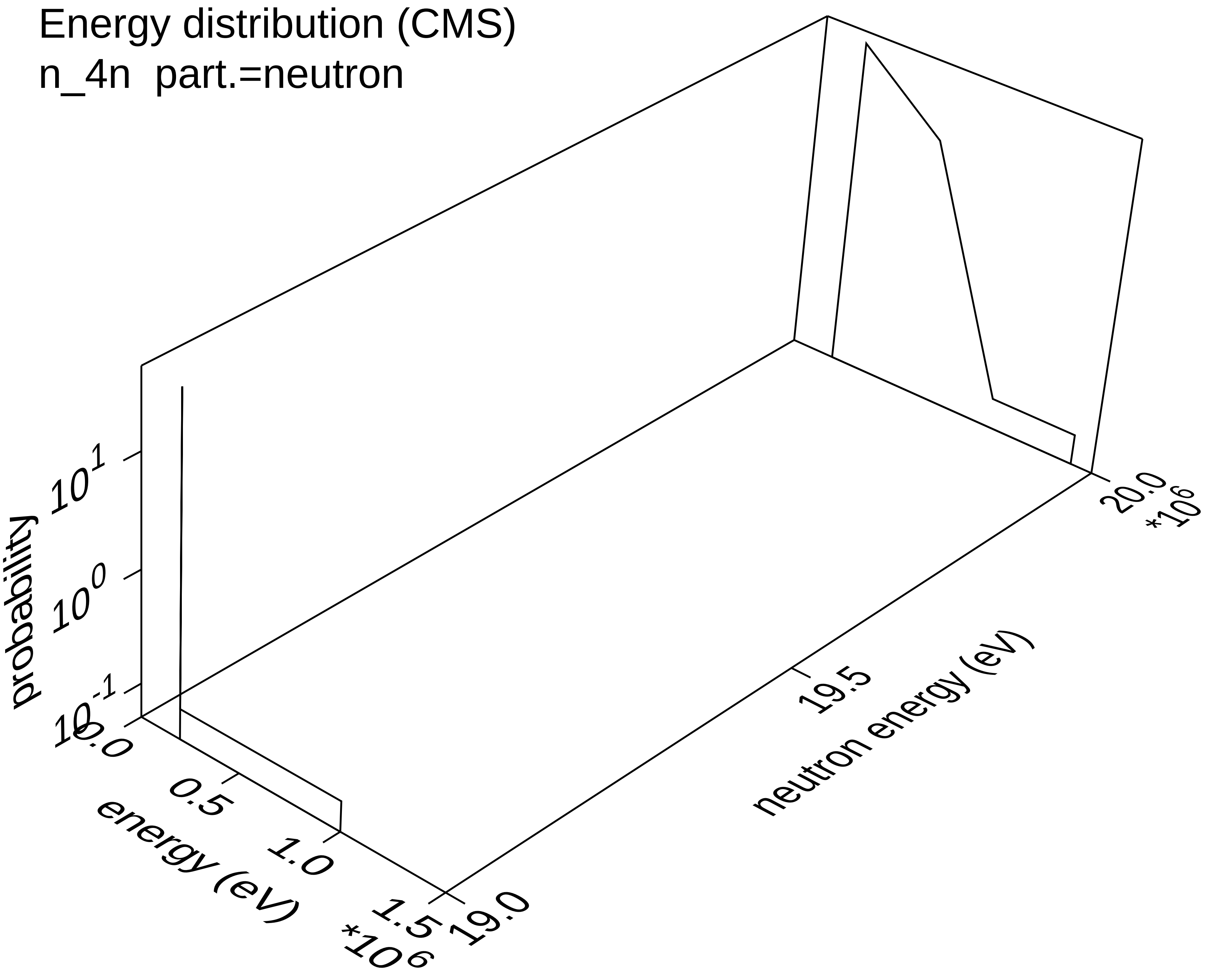


Energy distribution (CMS)
n_3n part.=neutron

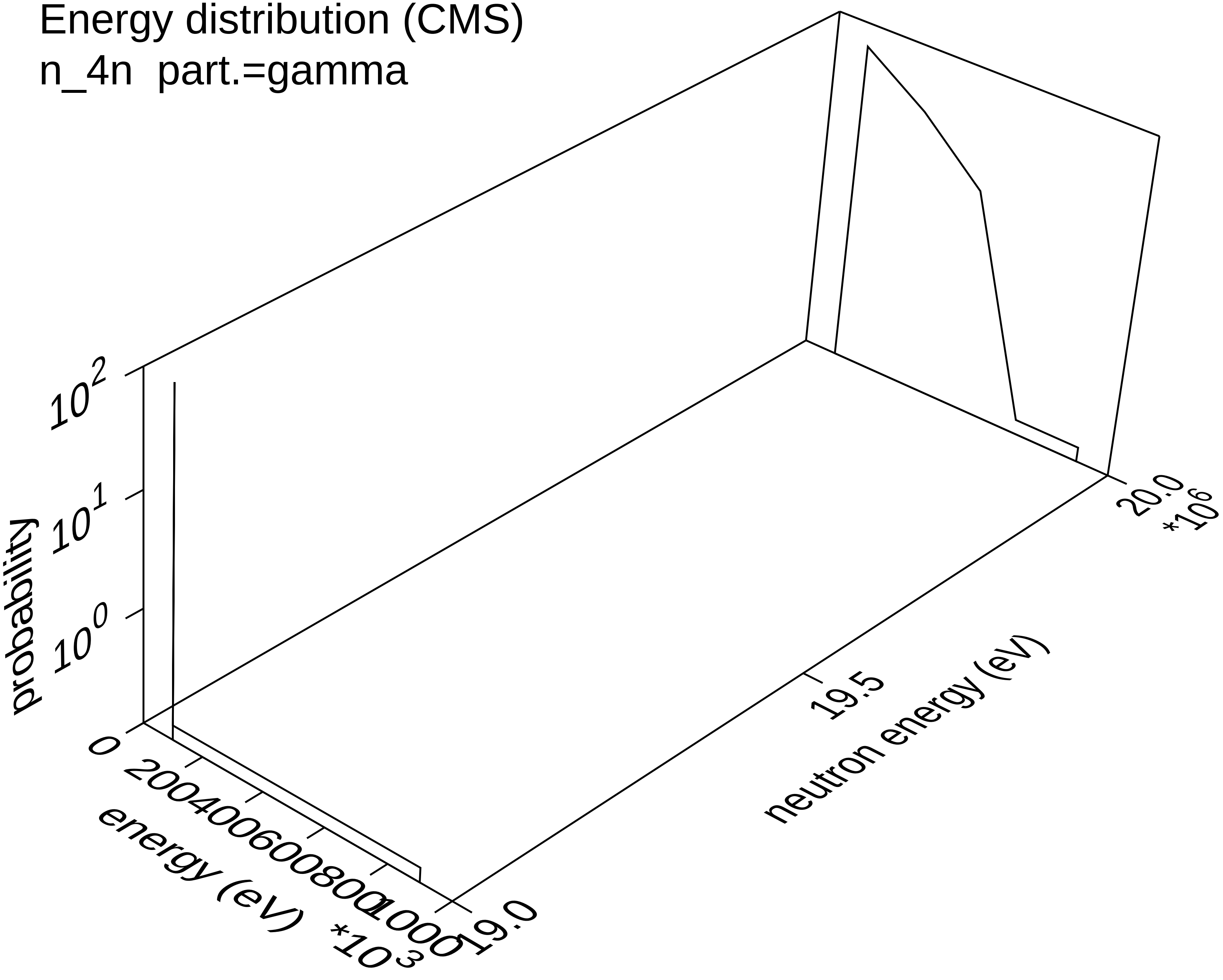


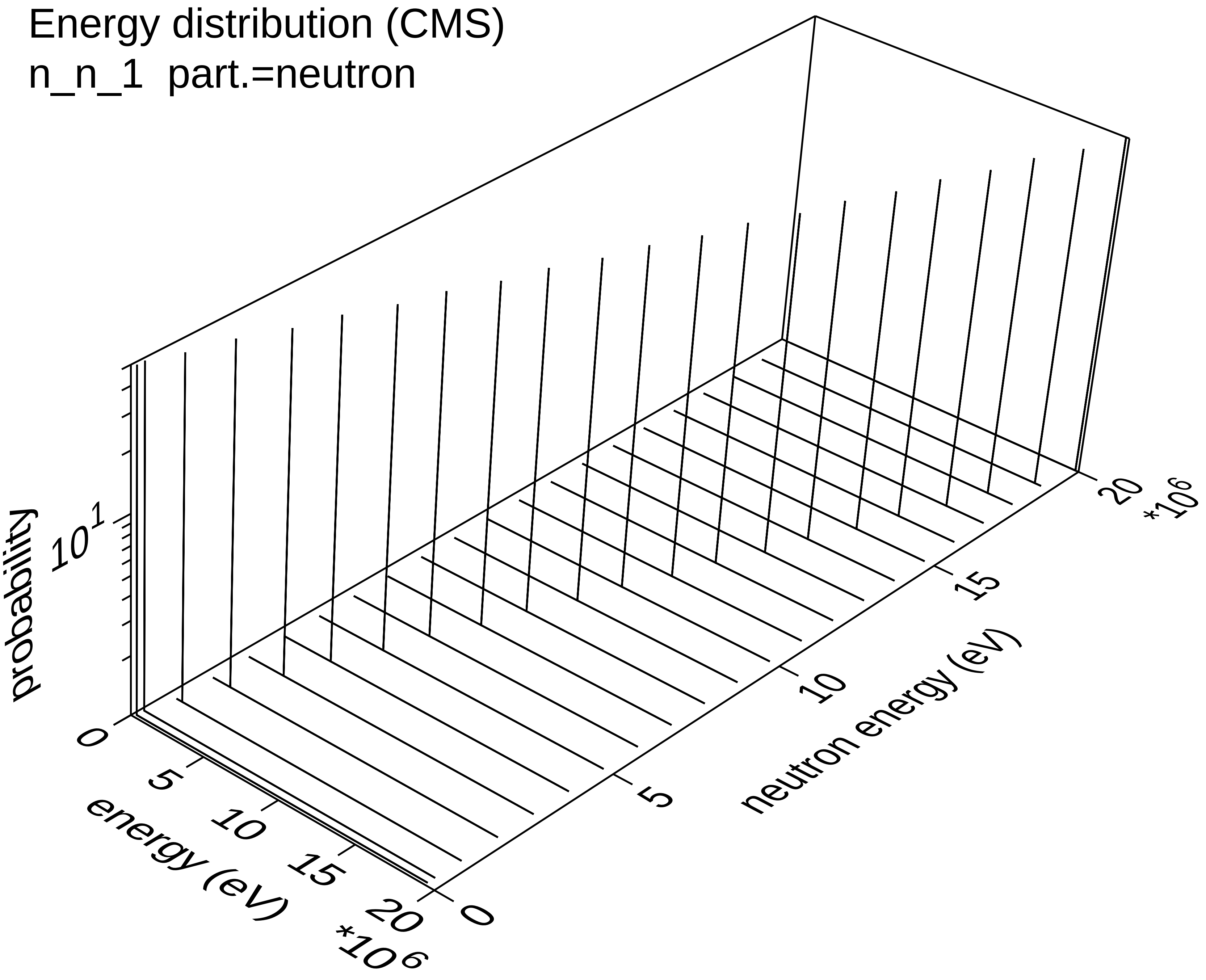
Energy distribution (CMS)
n_3n part.=gamma



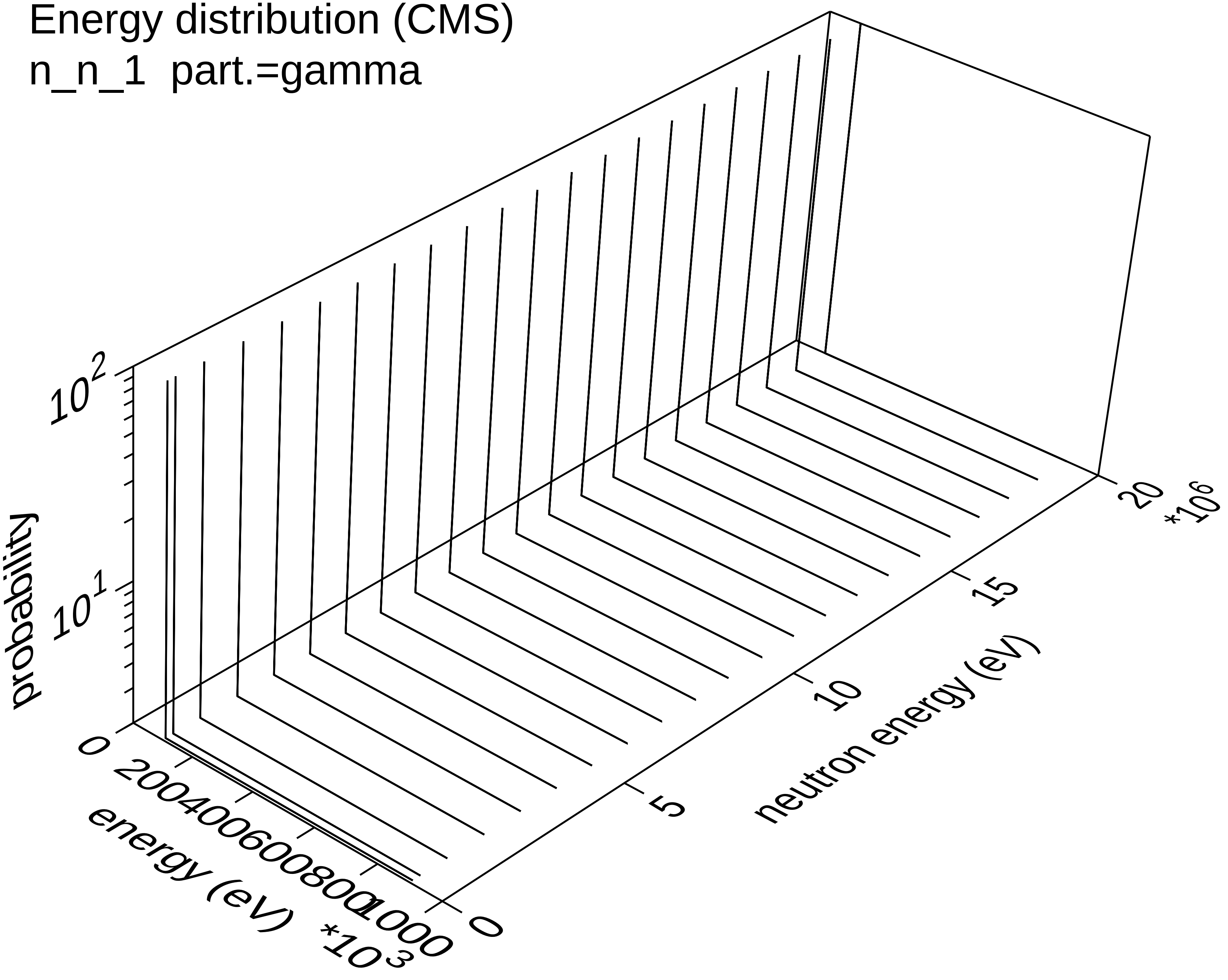

Energy distribution (CMS)
n_4n part.=neutron
probability
10^{1}
10^{0}
10^{-1}
0.0
0.5
1.0
1.5
$*10^{6}$
energy (eV)
19.0
19.5
20.0
$*10^{6}$
neutron energy (eV)

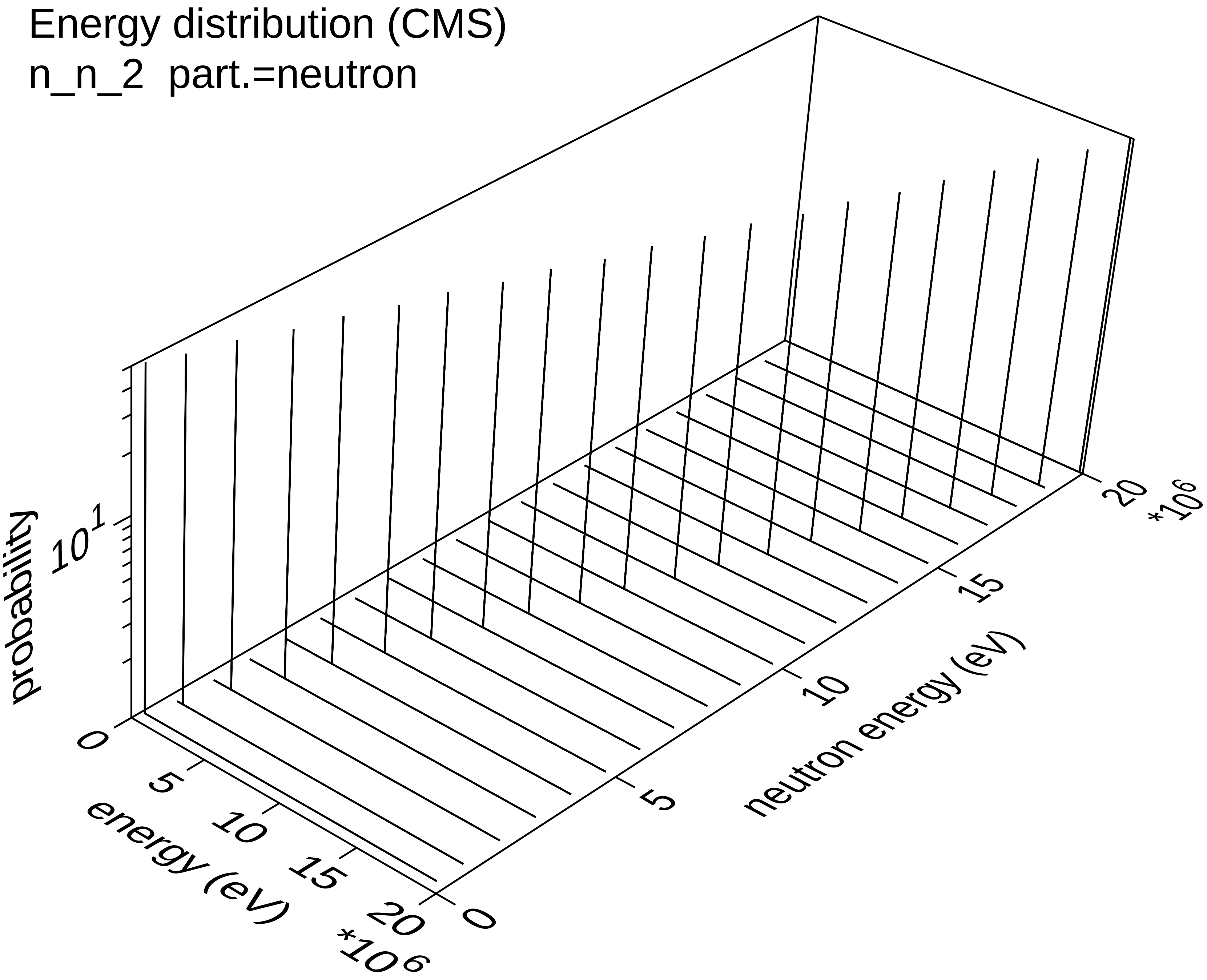
Energy distribution (CMS)
n_4n part.=gamma

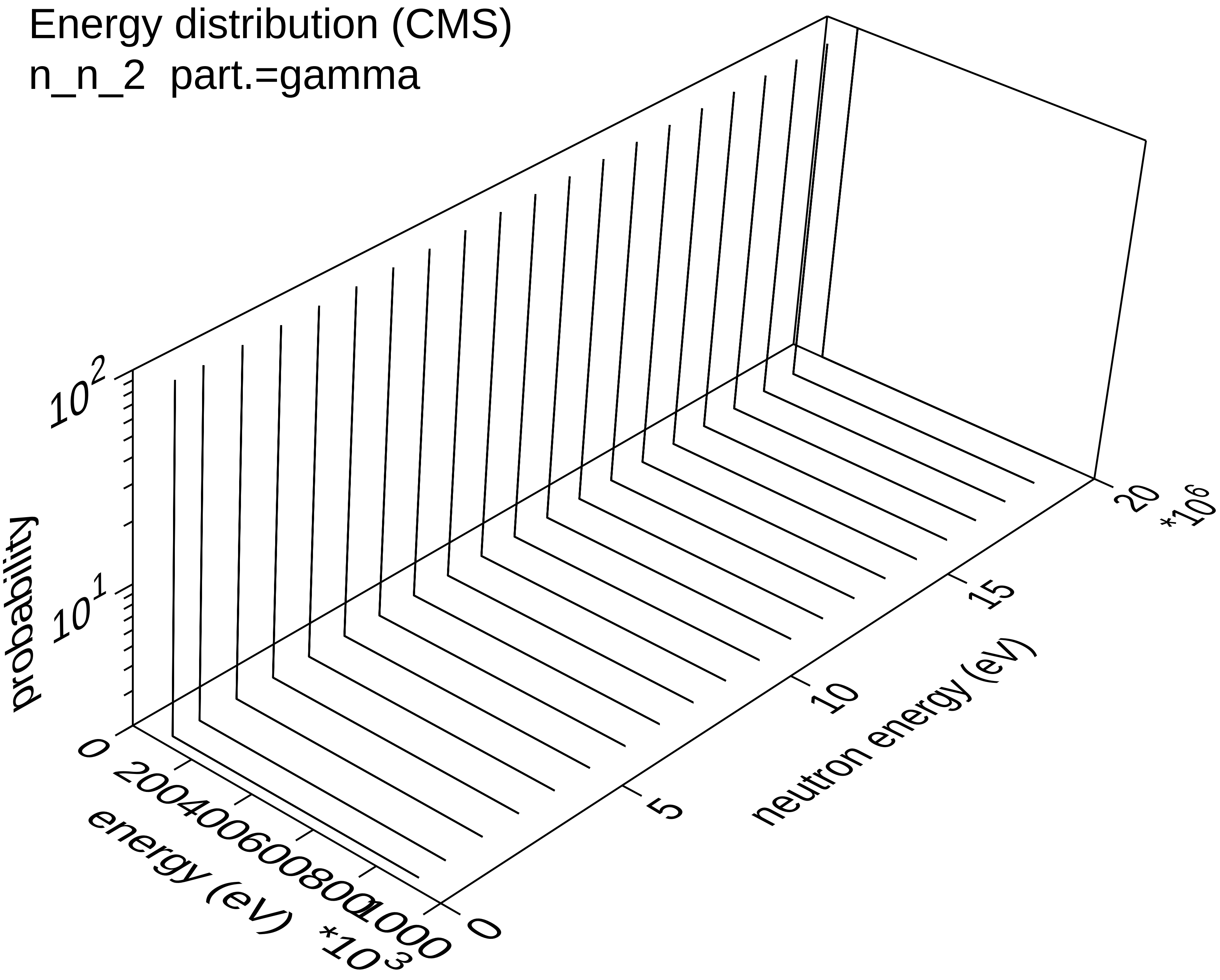


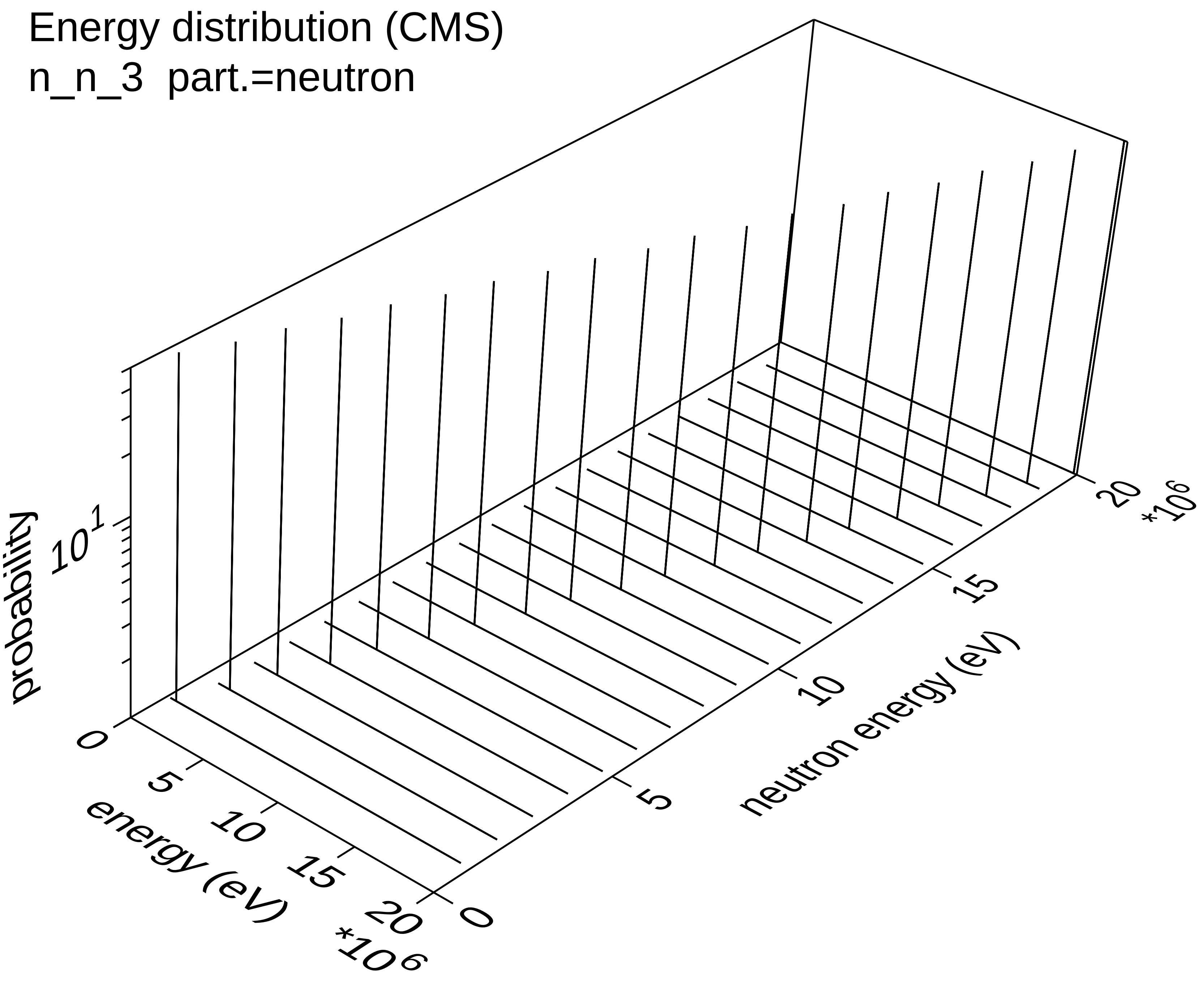

Energy distribution (CMS)
n_n_1 part.=neutron
probability
10^1
0
5
10
15
20
energy (eV)
*10^6
0
5
10
15
20
neutron energy (eV)
*10^6

Energy distribution (CMS)
n_n_1 part.=gamma

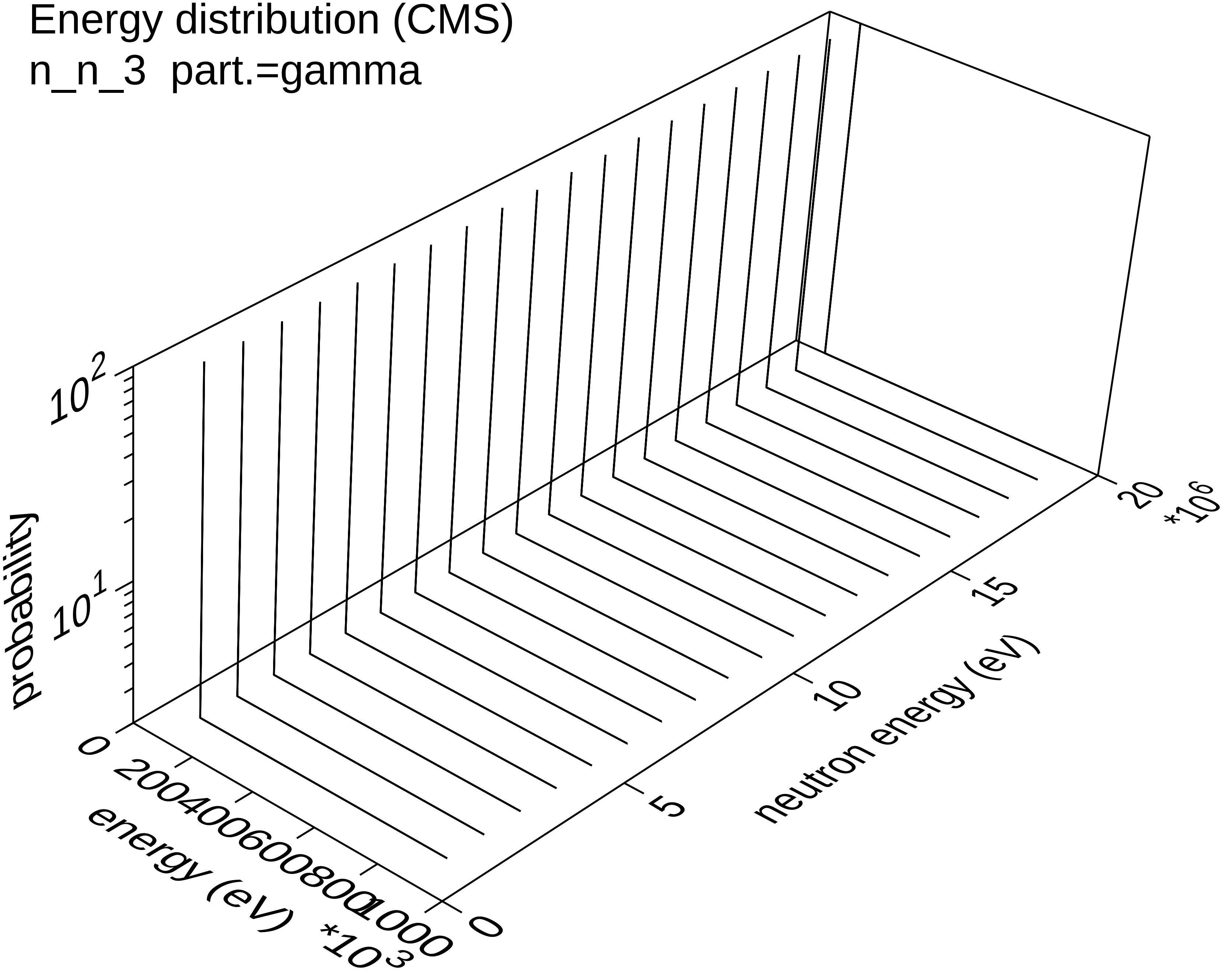



Energy distribution (CMS)
n_n_2 part.=neutron
probability
10^1
0
5
10
15
20
$*10^6$
energy (eV)
0
5
10
15
20
$*10^6$
neutron energy (eV)

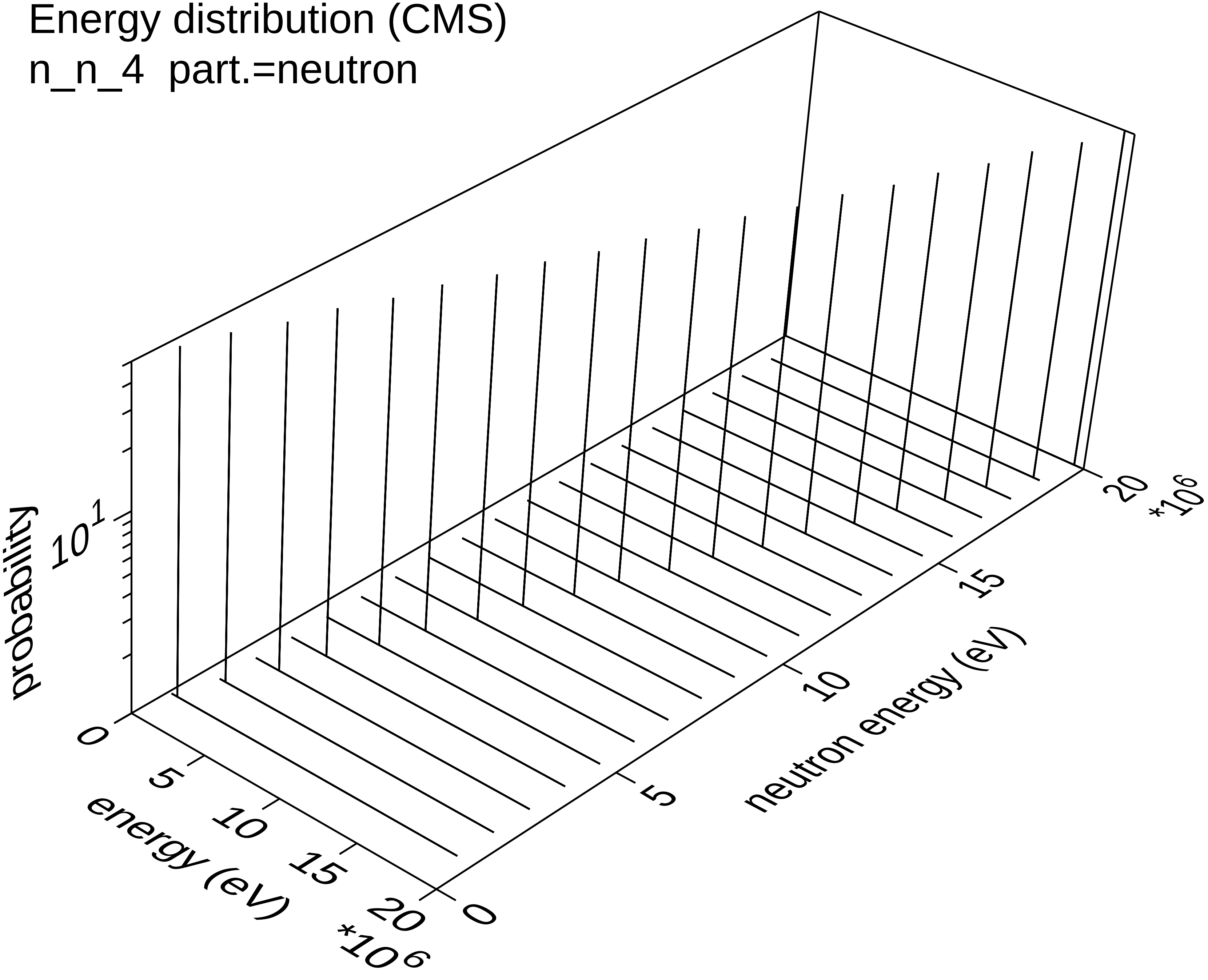

Energy distribution (CMS)
n_n_2 part.=gamma
probability
10^2
10^1
0
200
400
600
800
1000
energy (eV)
$*10^3$
0
5
10
15
20
$*10^6$
neutron energy (eV)


Energy distribution (CMS)
n_n_3 part.=neutron
probability
10^1
0
5
10
15
20
energy (eV)
$*10^6$
0
5
10
15
20
neutron energy (eV)
$*10^6$

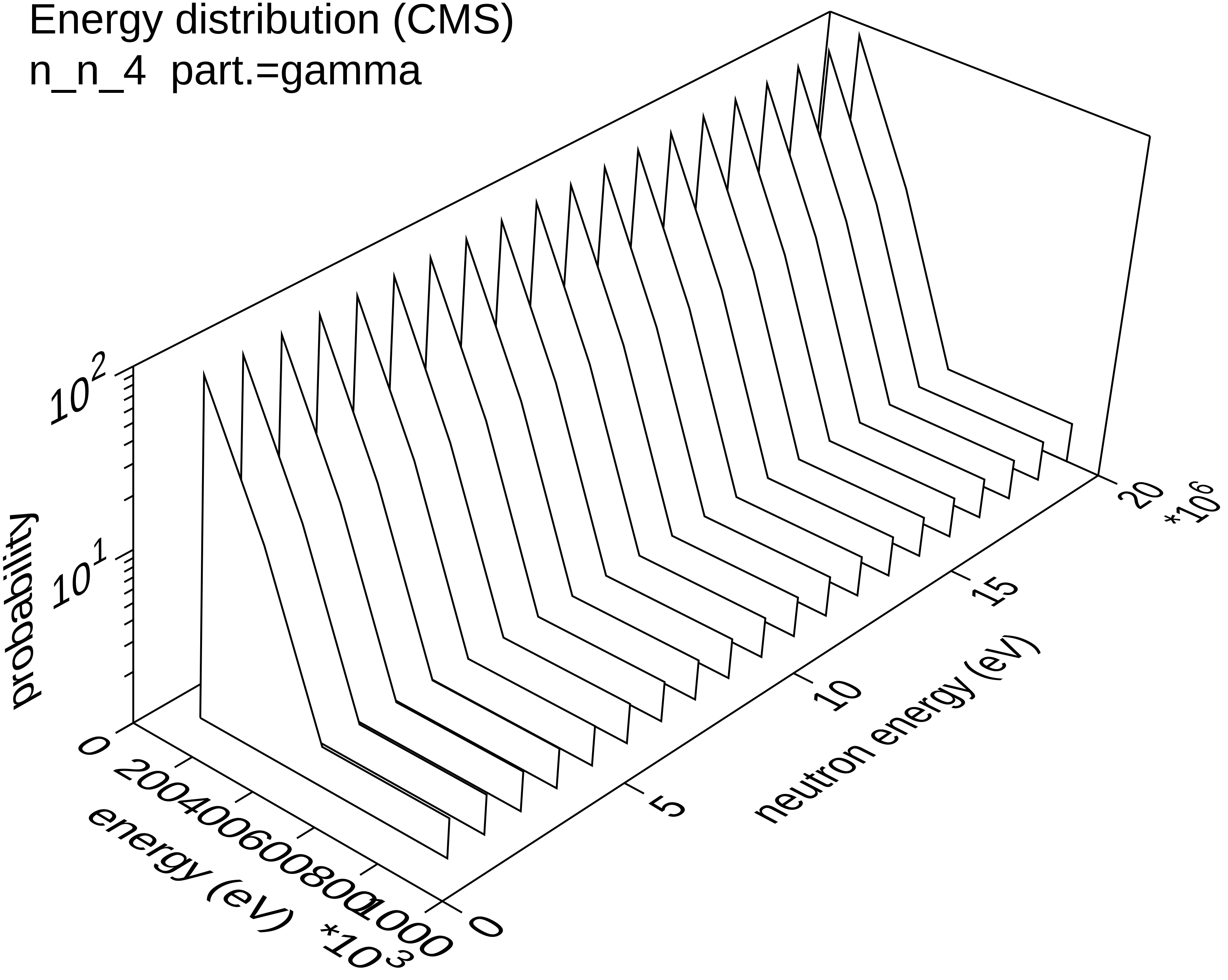
Energy distribution (CMS)
n_n_3 part.=gamma

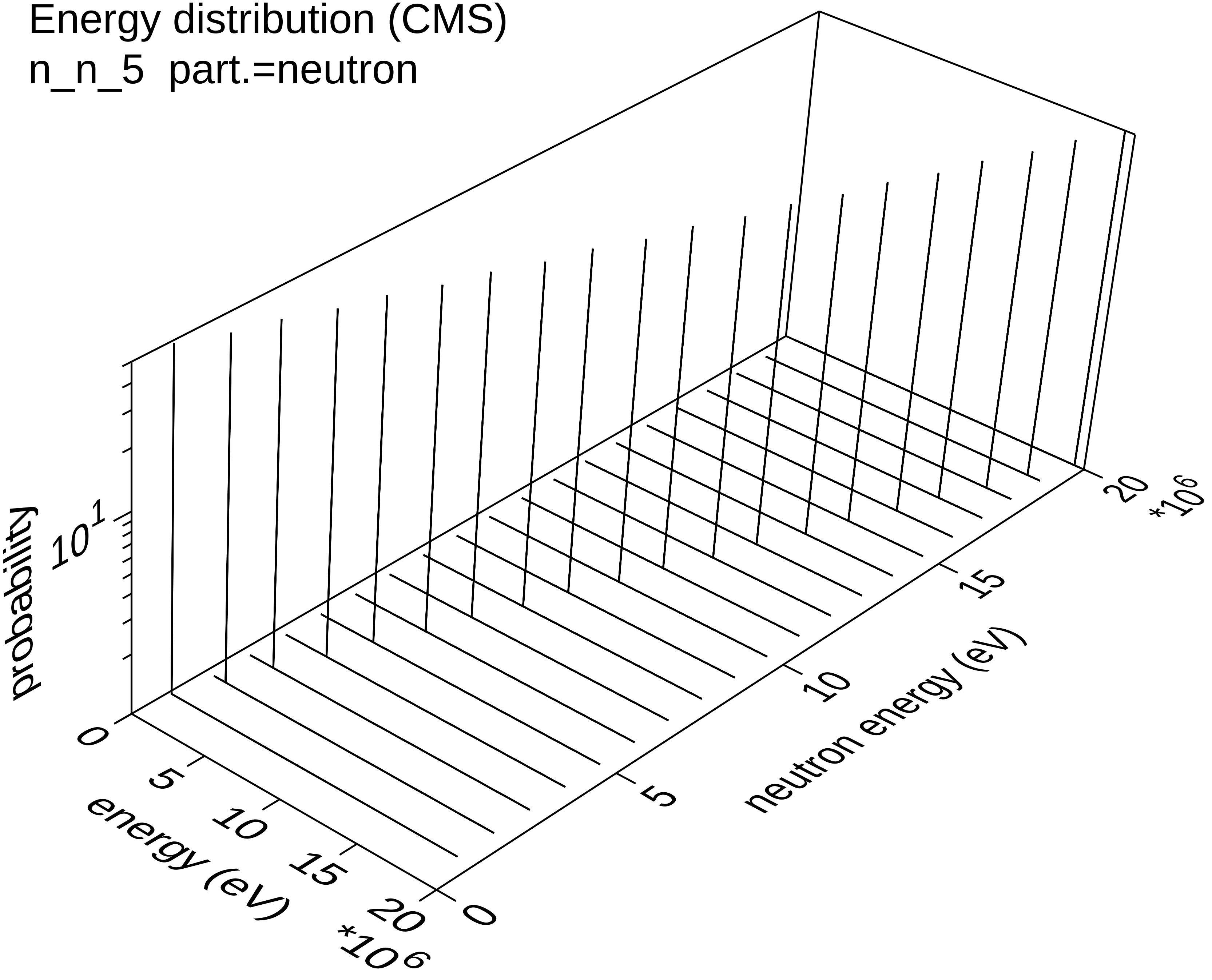


Energy distribution (CMS)
n_n_4 part.=neutron



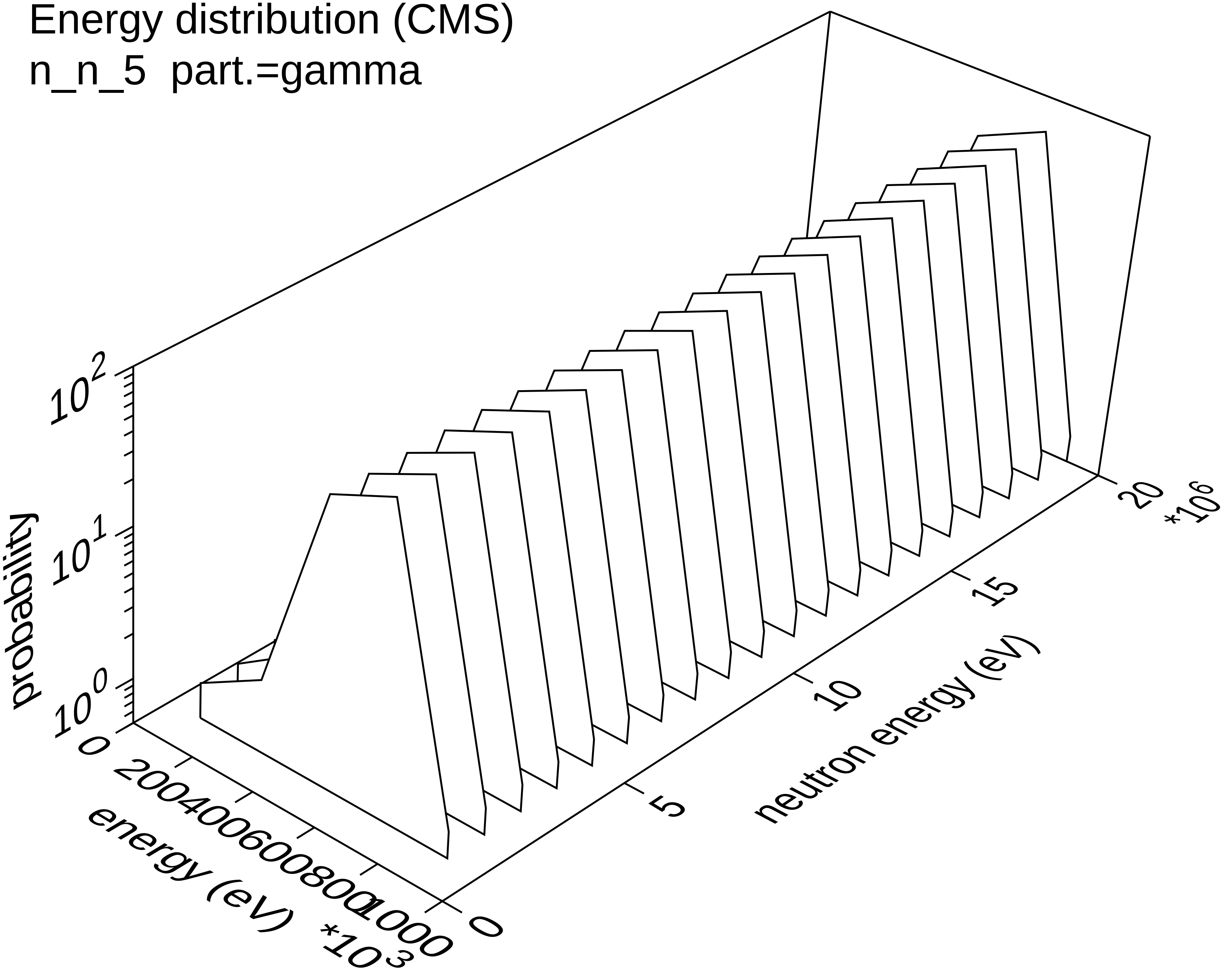
Energy distribution (CMS)
n_n_4 part.=gamma



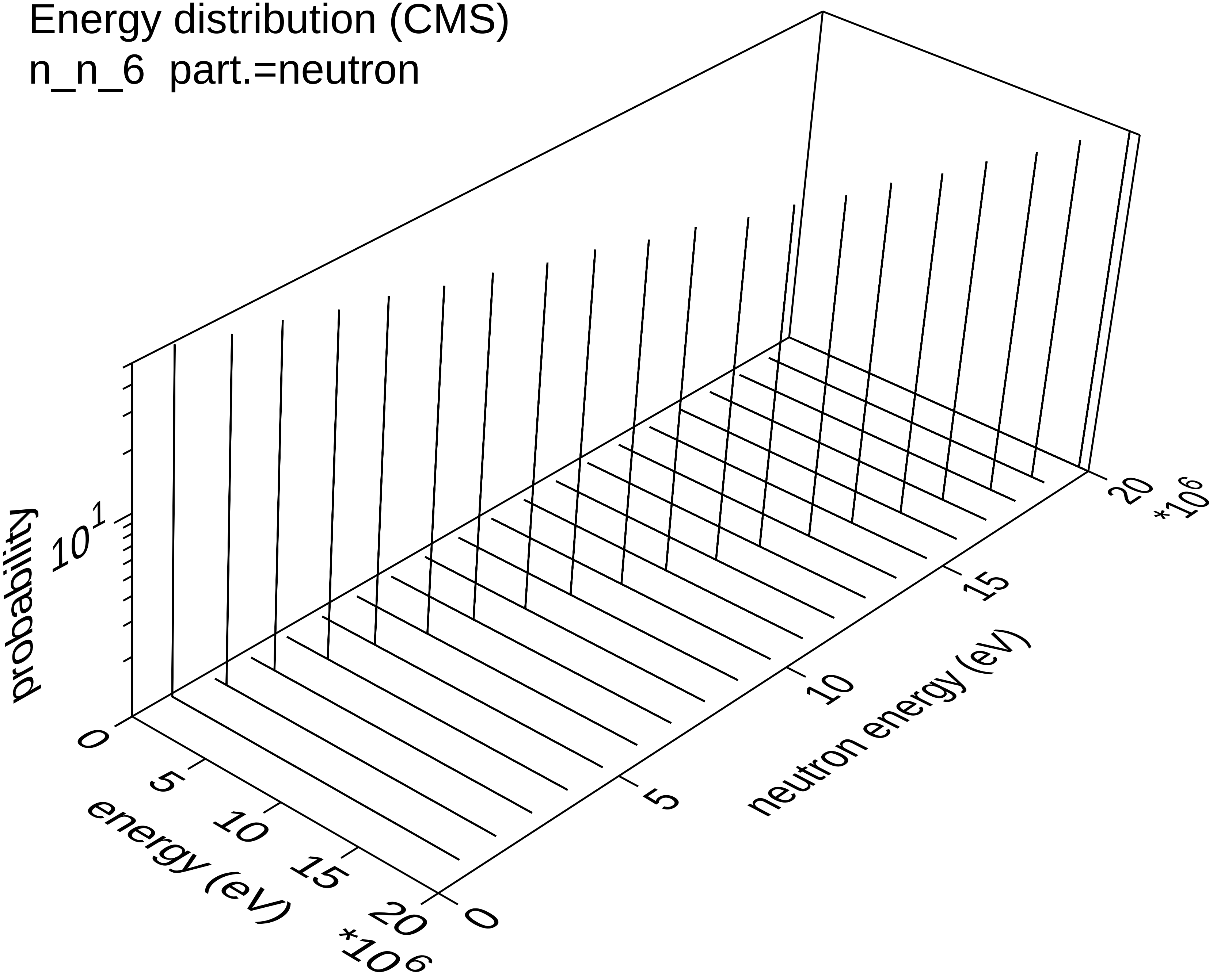


Energy distribution (CMS)
n_n_5 part.=neutron

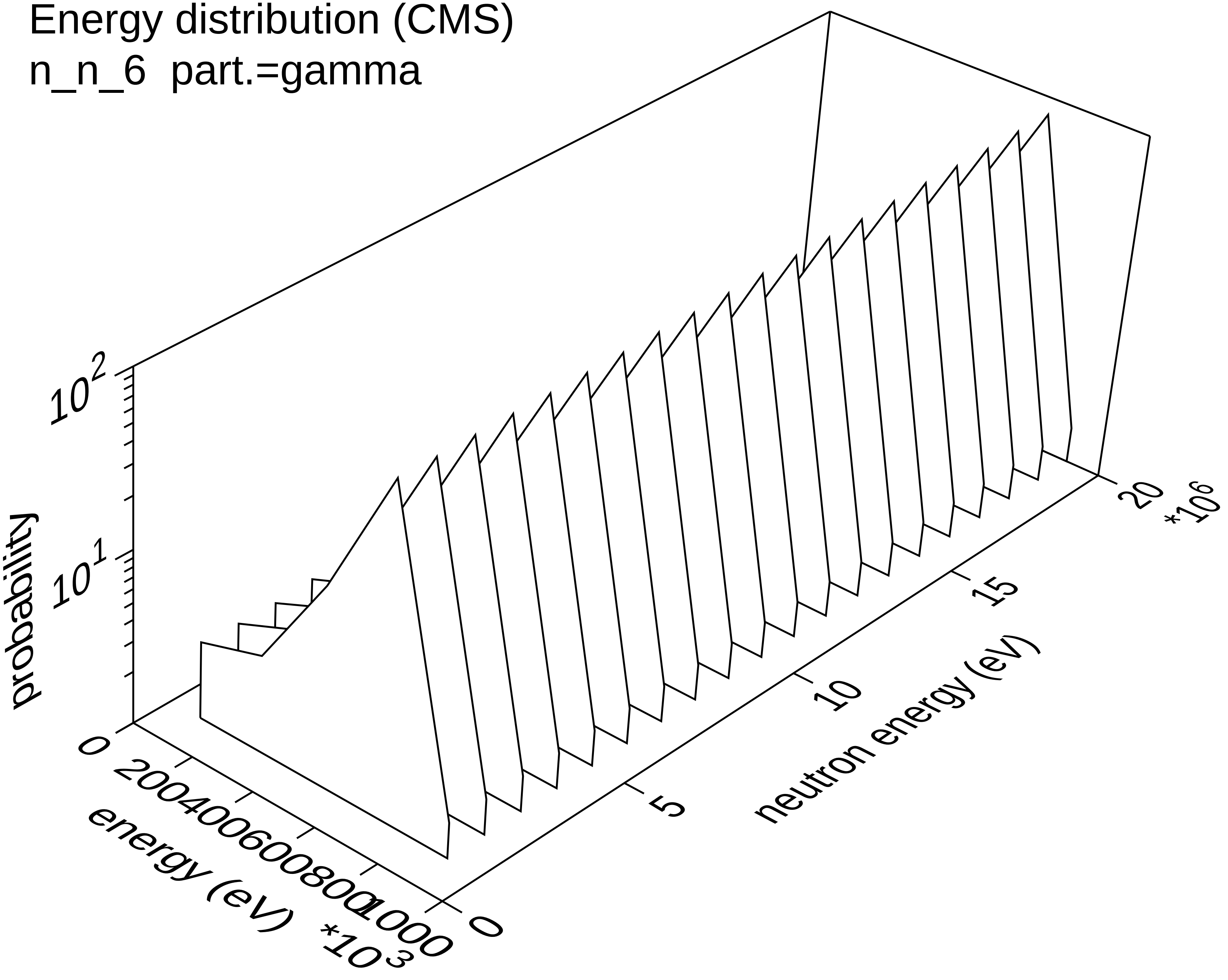
Energy distribution (CMS)
n_n_5 part.=gamma



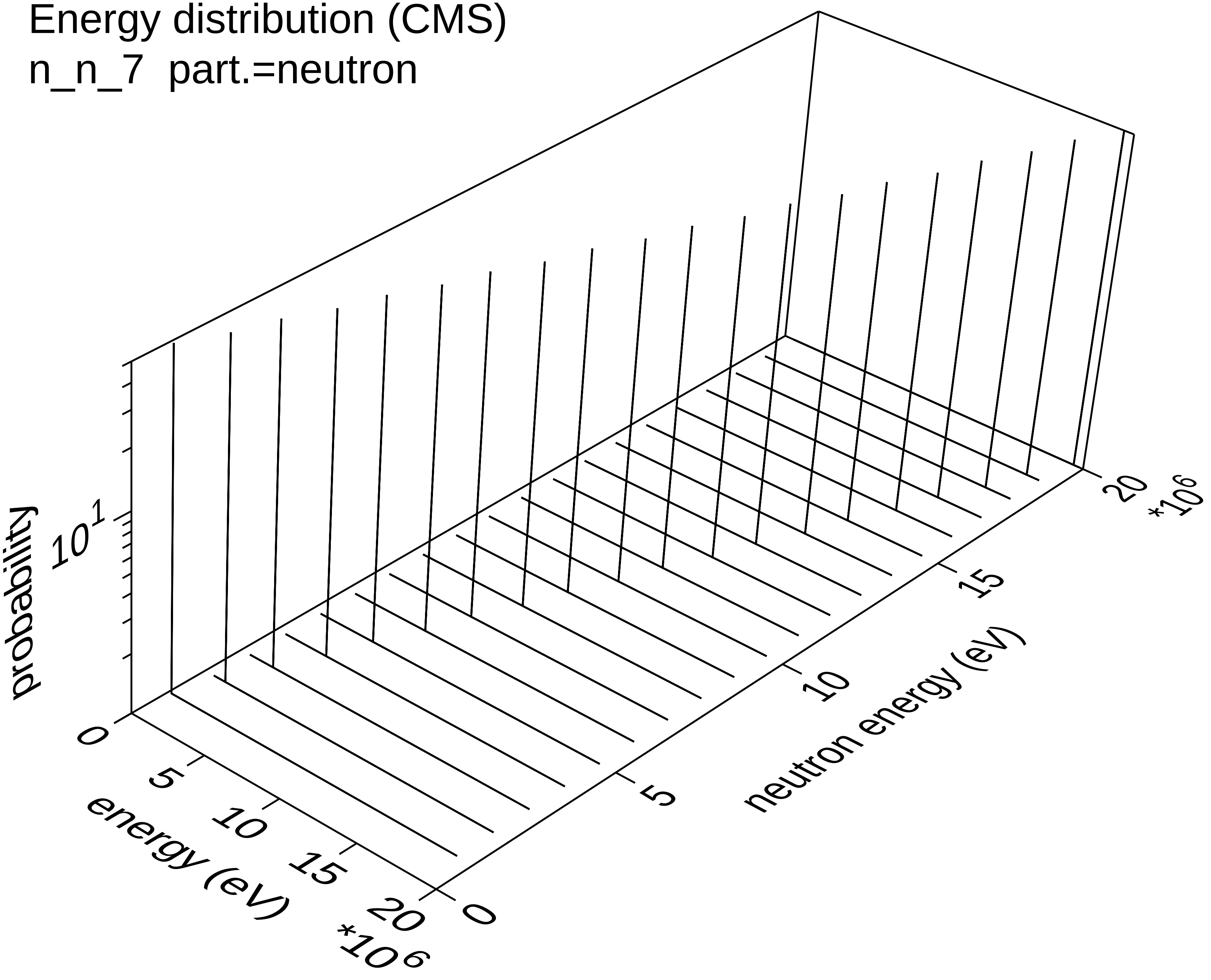
Energy distribution (CMS)
n_n_6 part.=neutron



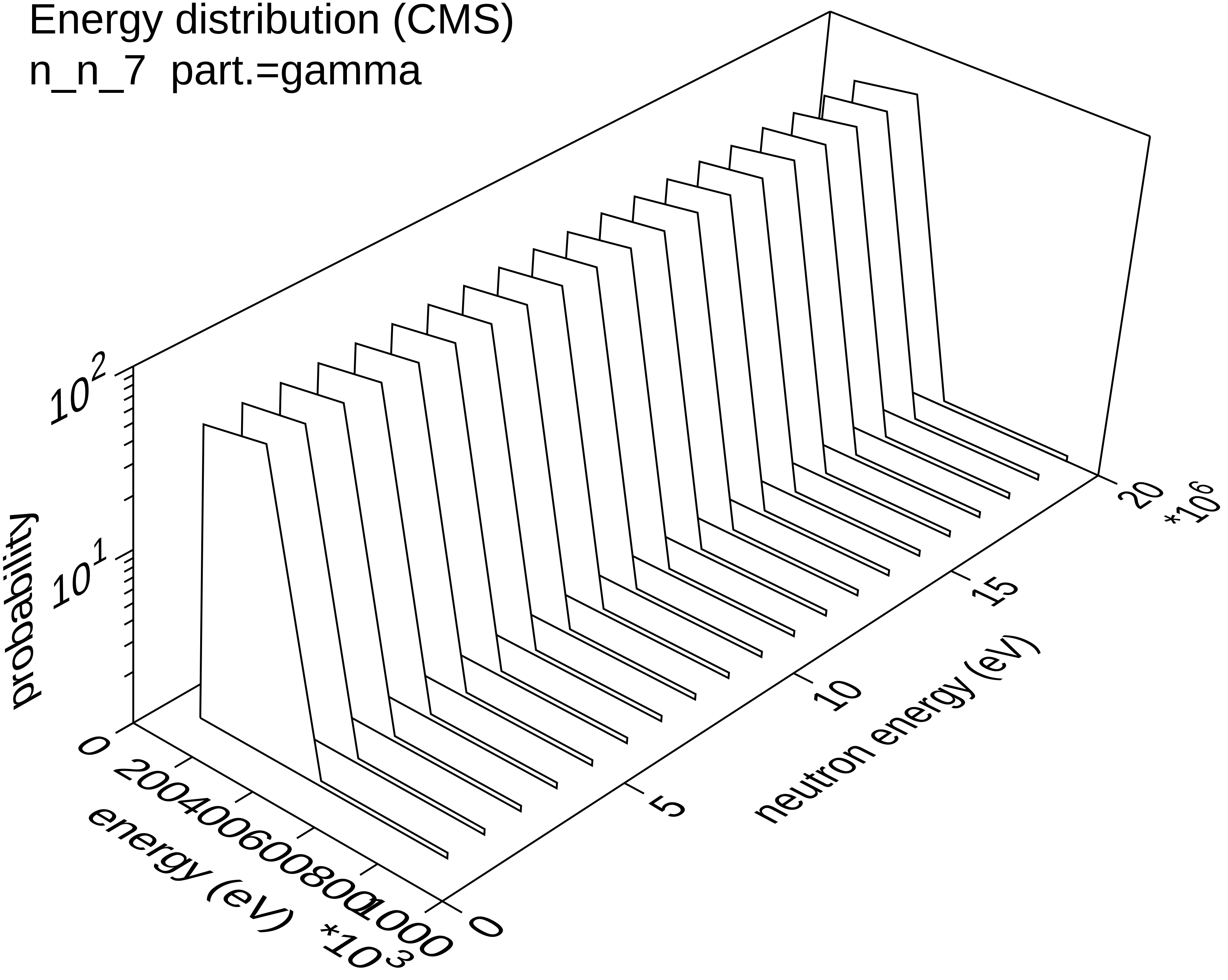
Energy distribution (CMS)
n_n_6 part.=gamma



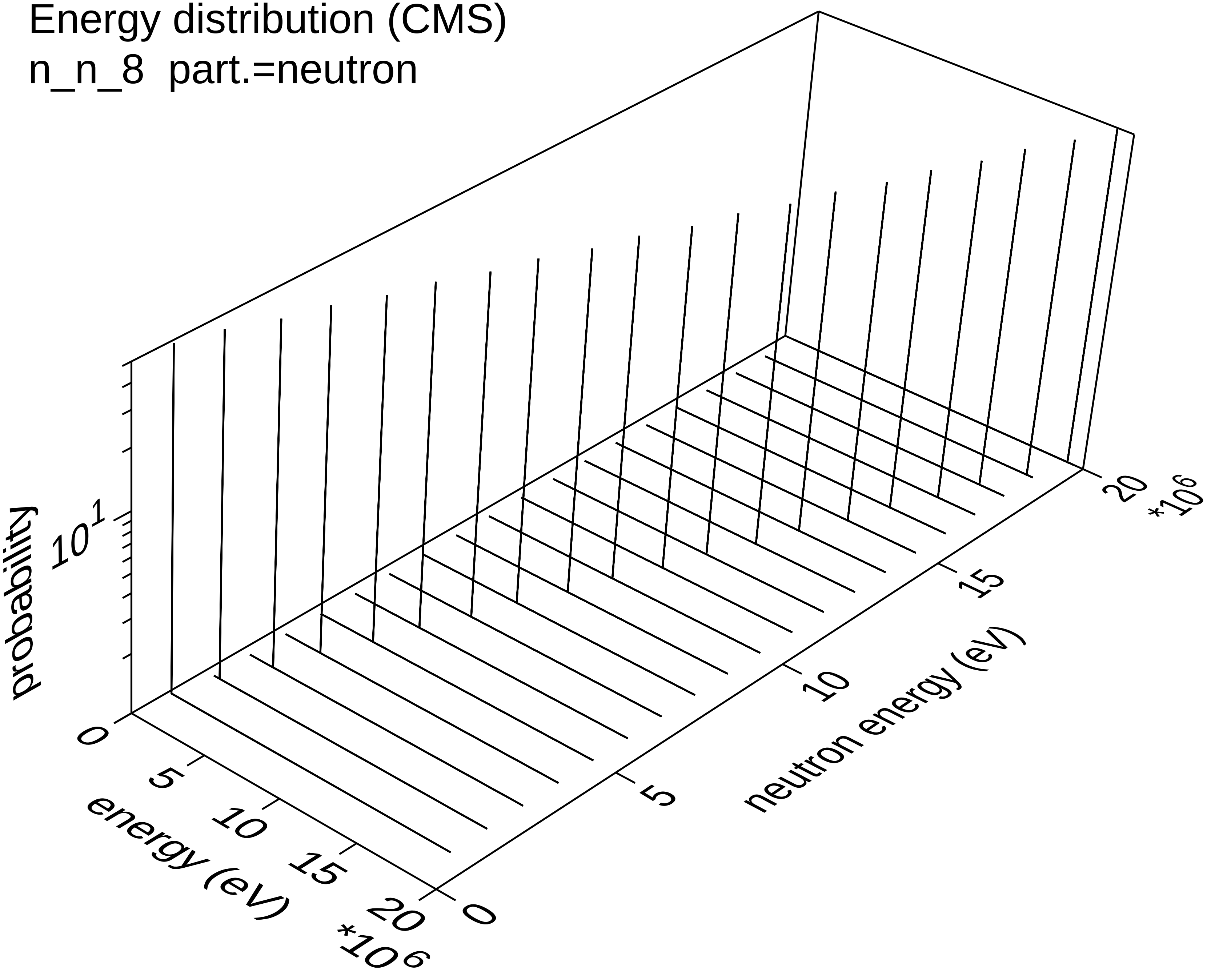
Energy distribution (CMS)
n_n_7 part.=neutron



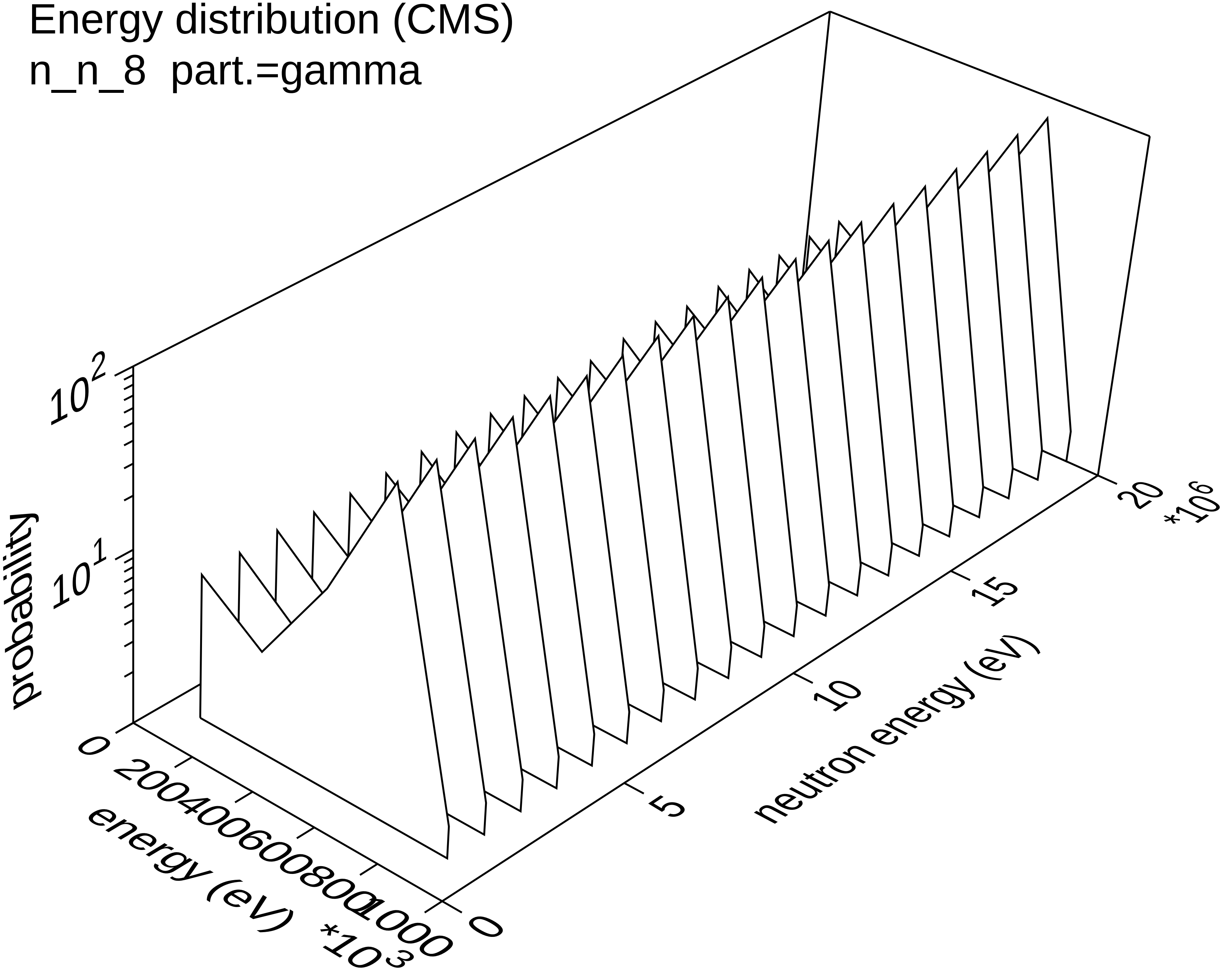
Energy distribution (CMS)
n_n_7 part.=gamma



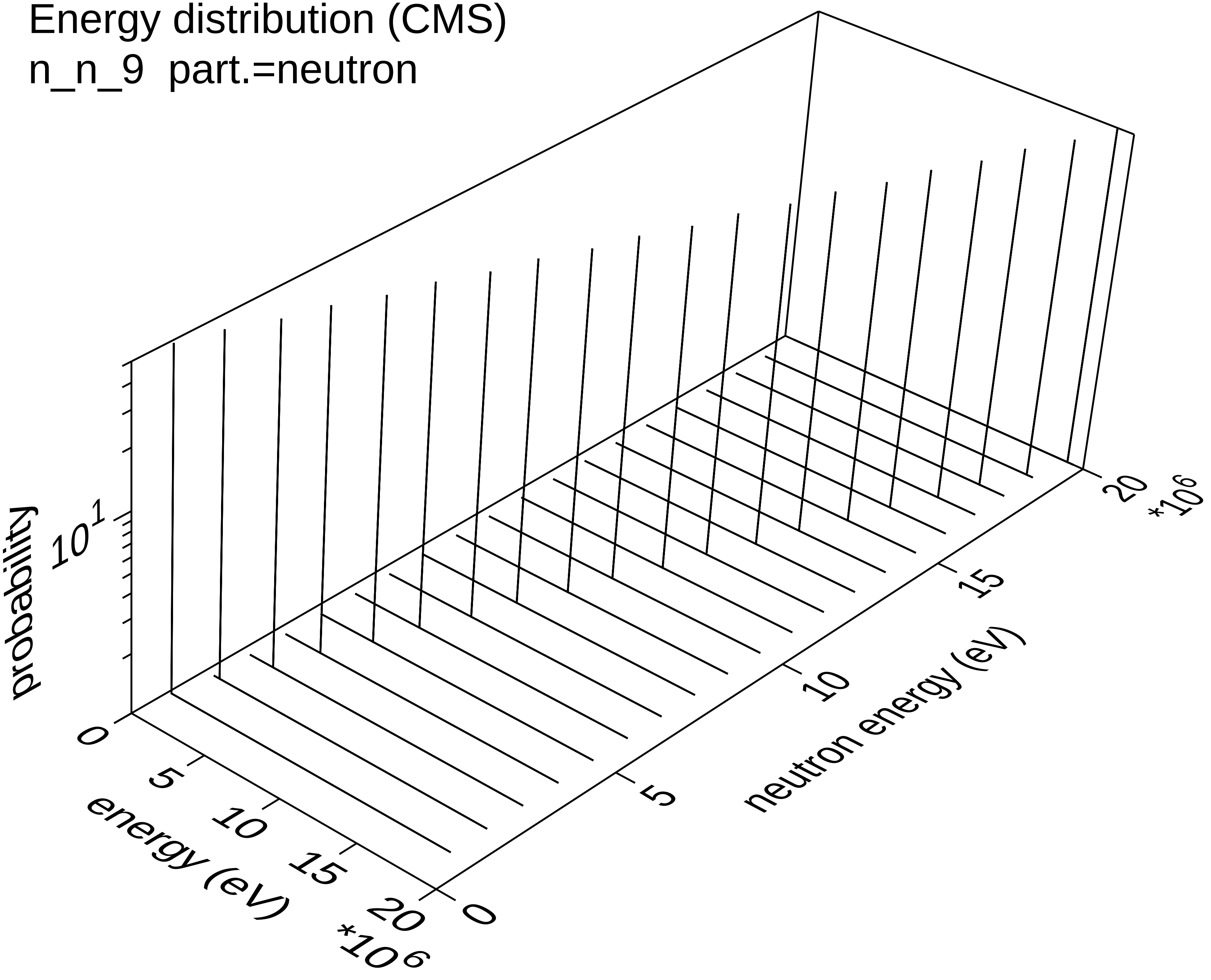
Energy distribution (CMS)
n_n_8 part.=neutron



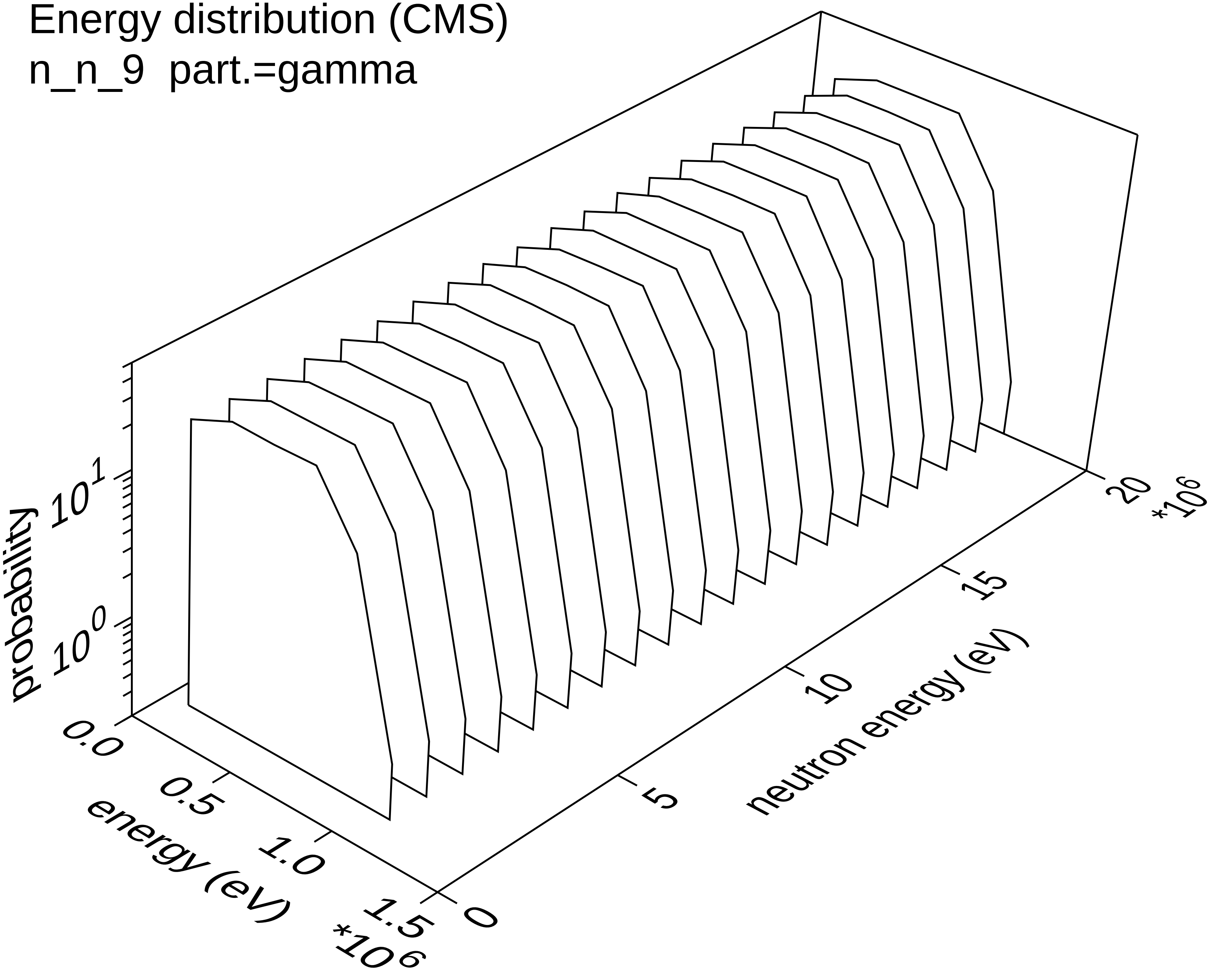
Energy distribution (CMS)
n_n_8 part.=gamma

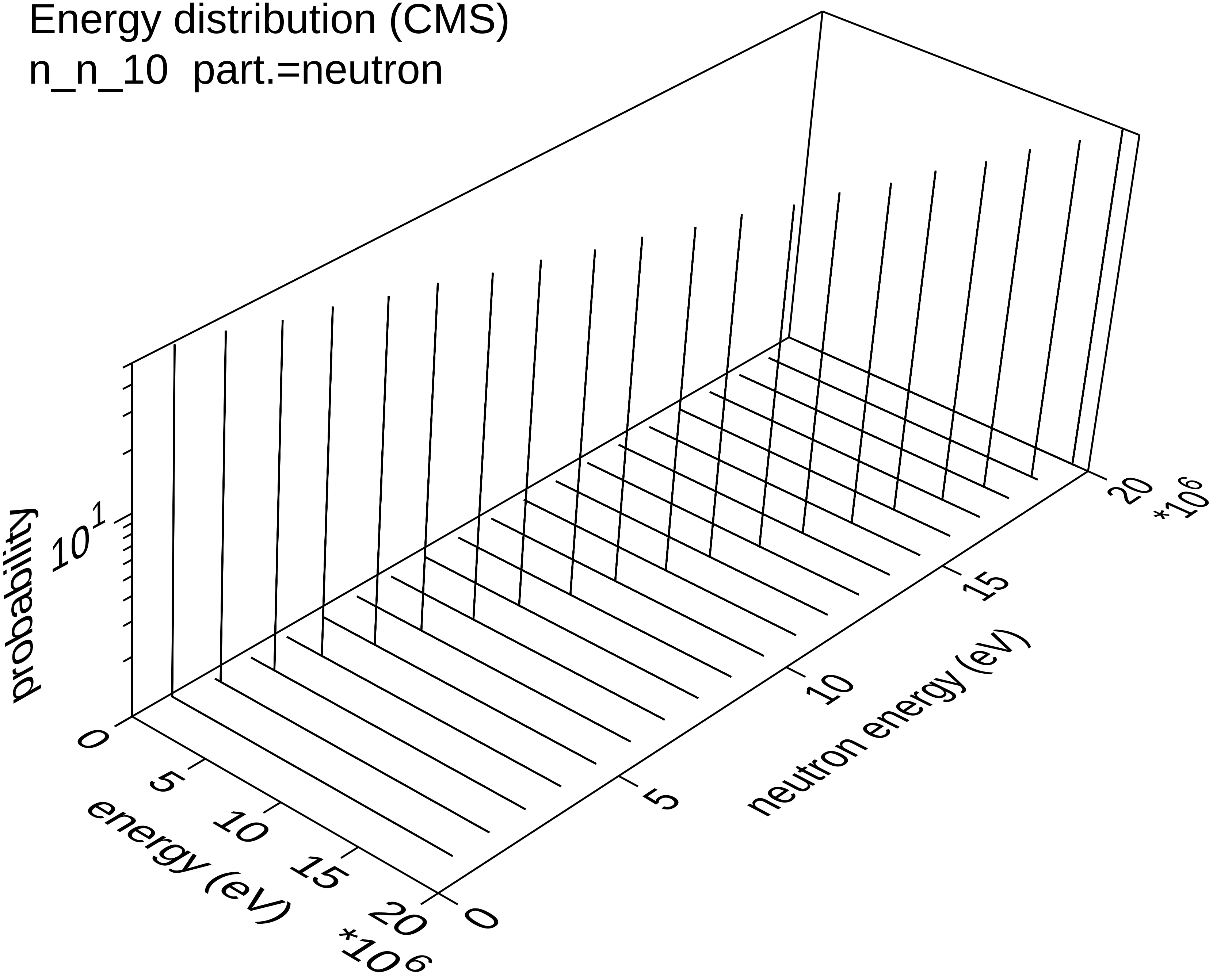


Energy distribution (CMS)
n_n_9 part.=neutron



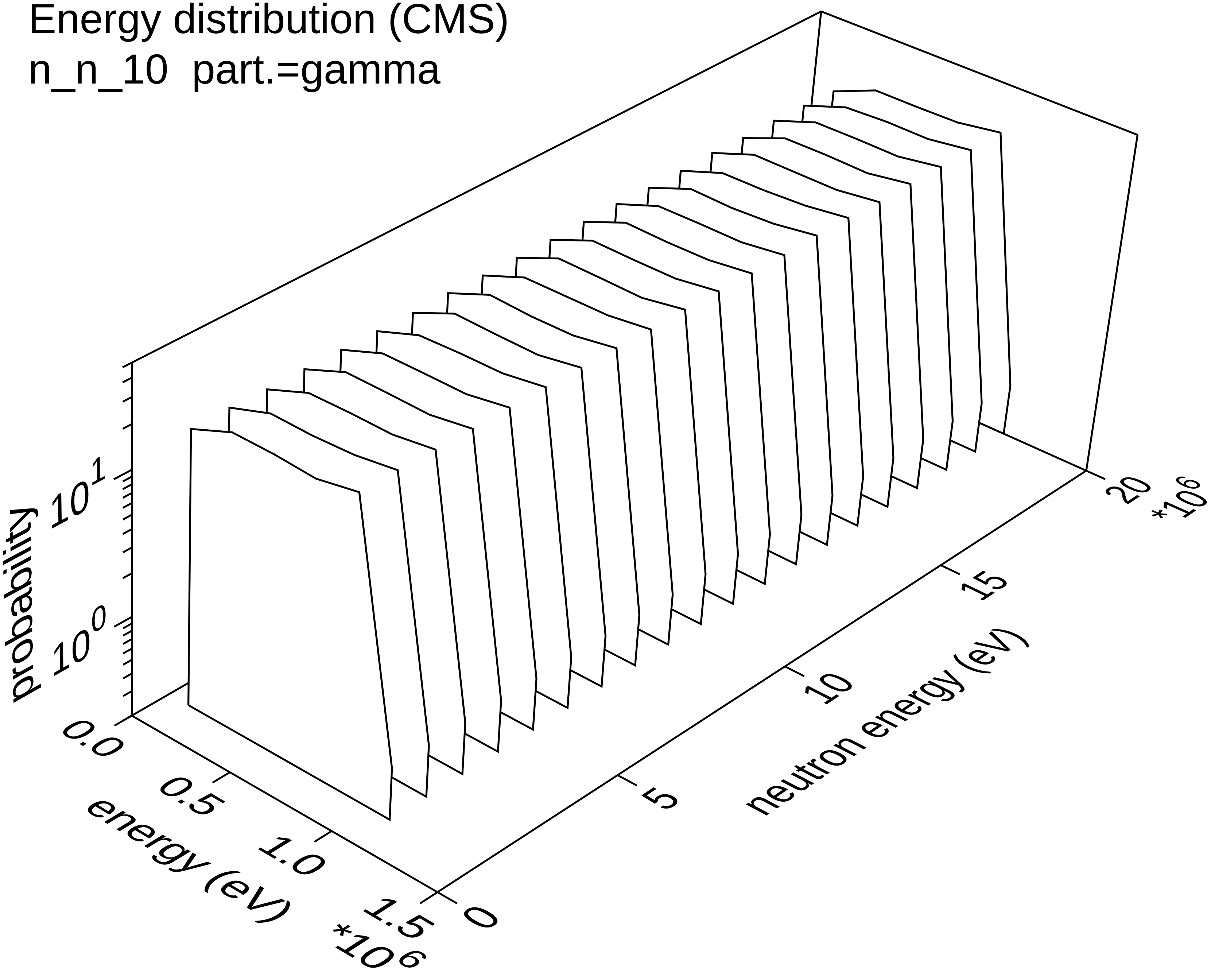
Energy distribution (CMS)
n_n_9 part.=gamma



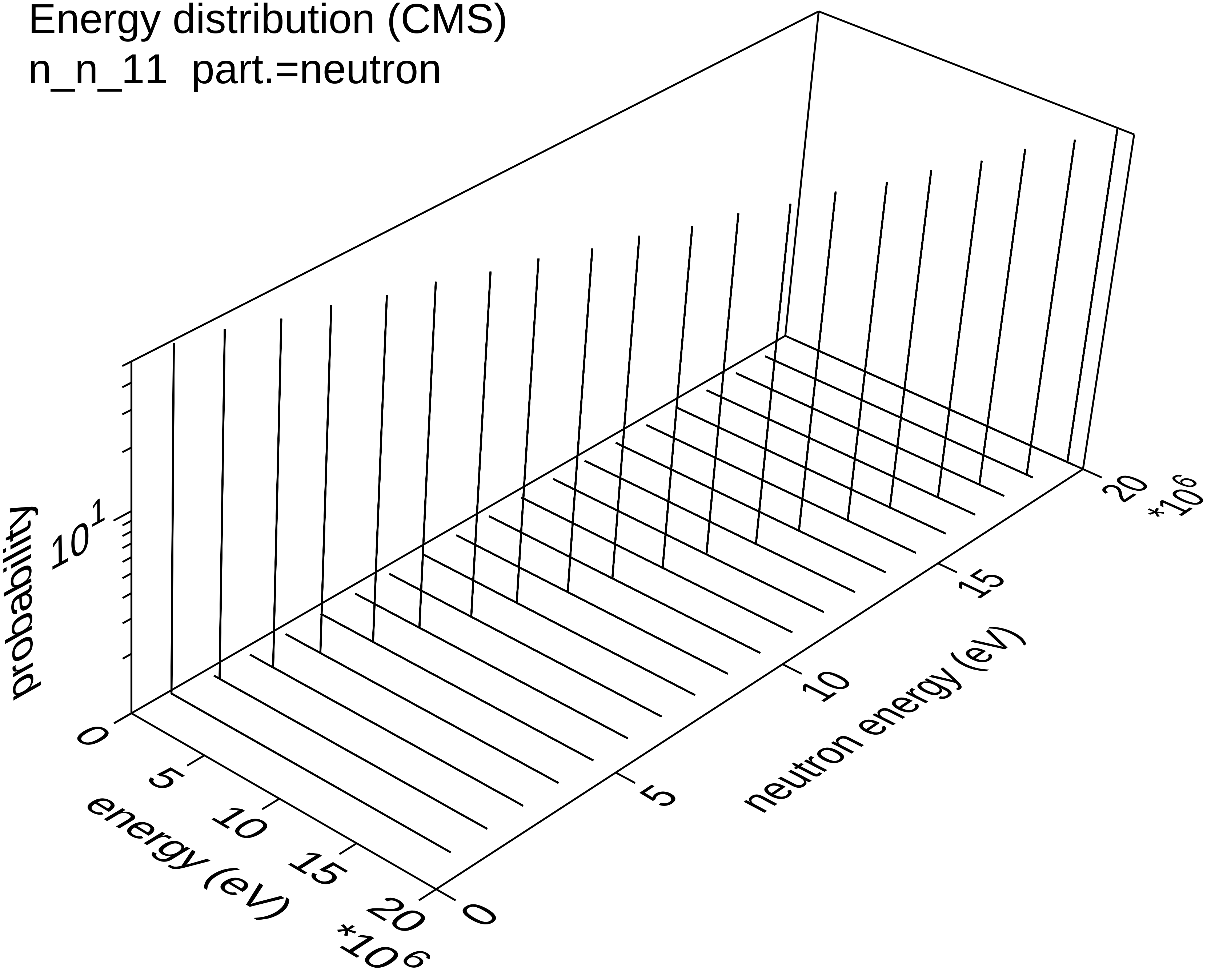


Energy distribution (CMS)
n_n_10 part.=neutron

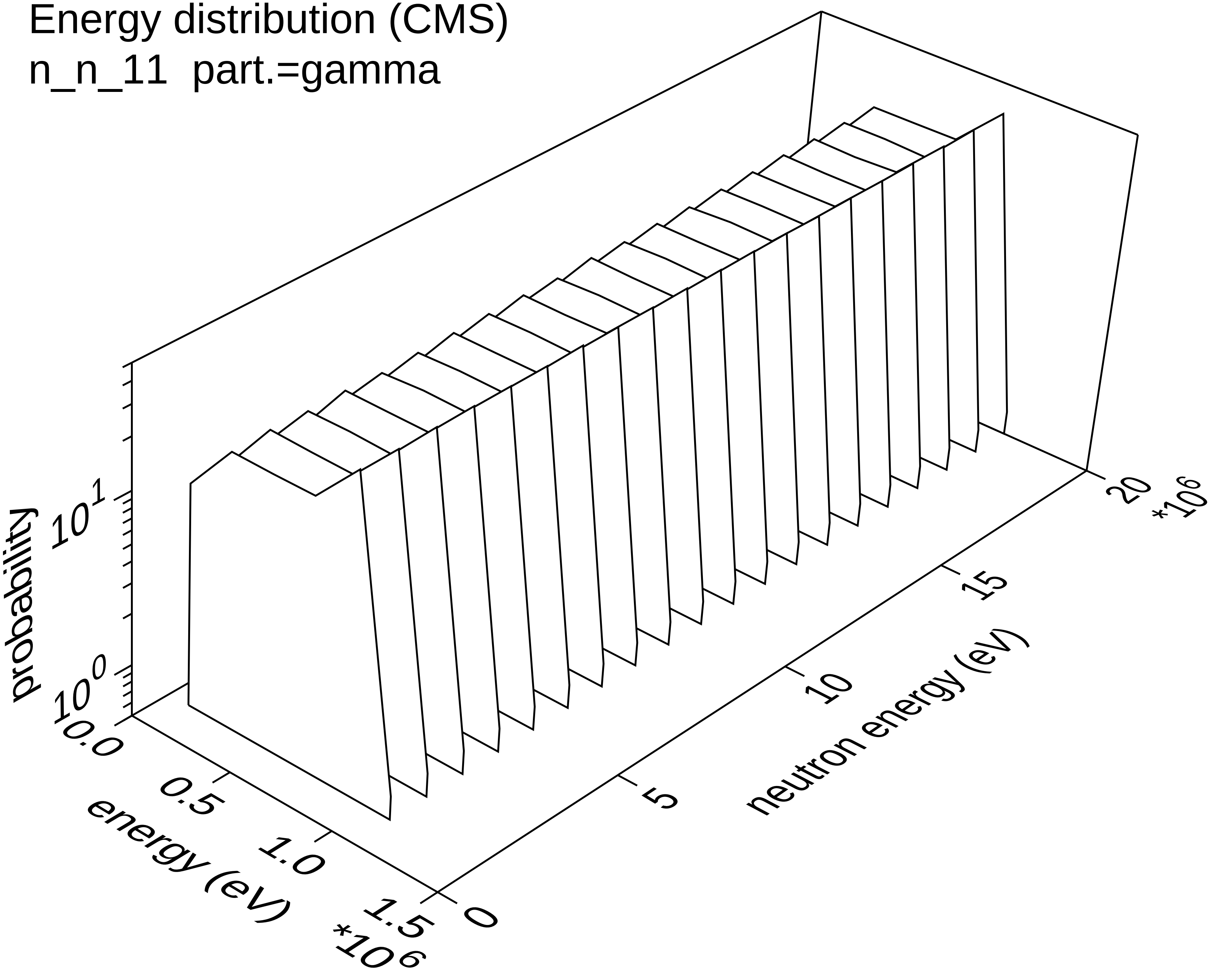
Energy distribution (CMS)
n_n_10 part.=gamma



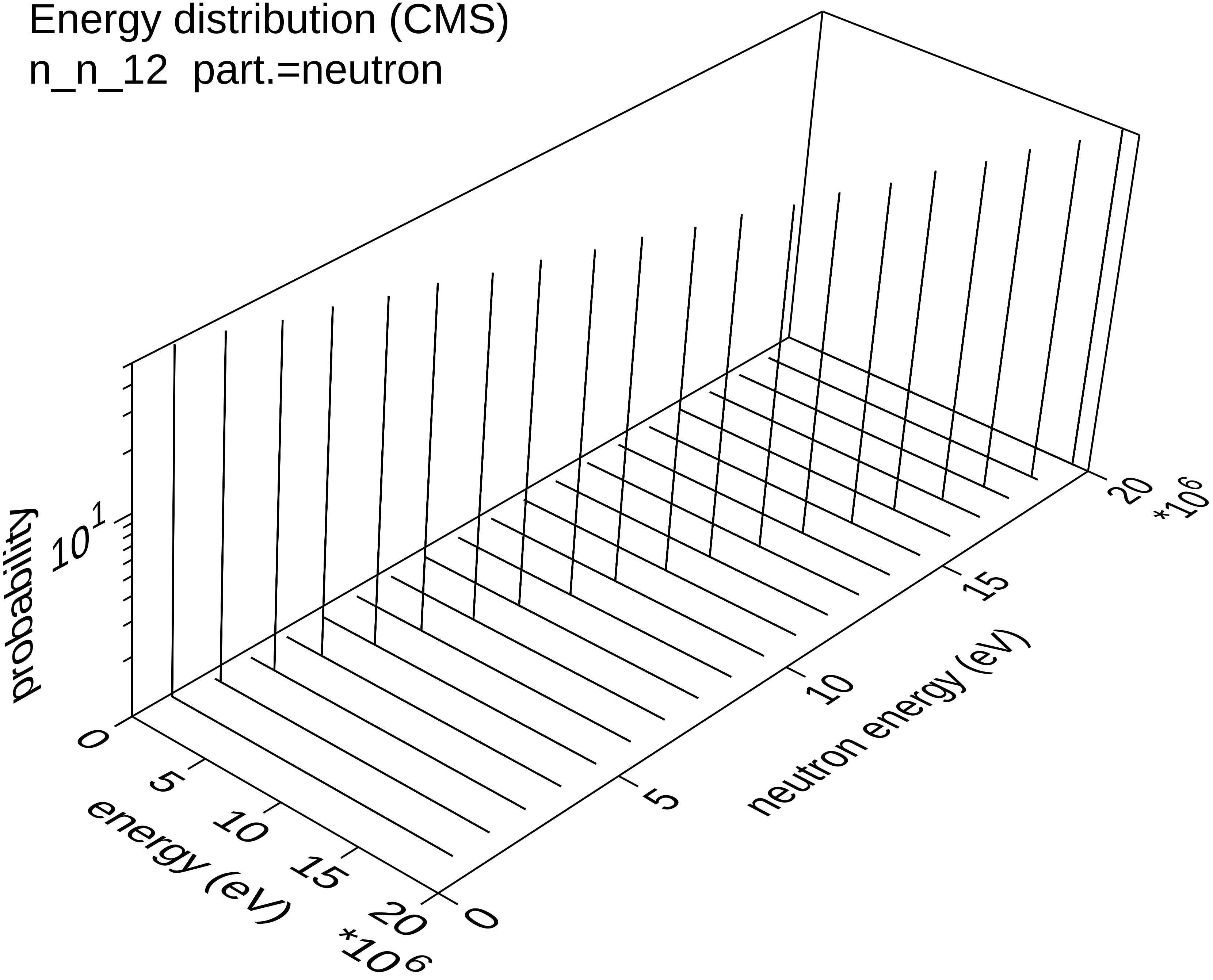
Energy distribution (CMS)
n_n_11 part.=neutron

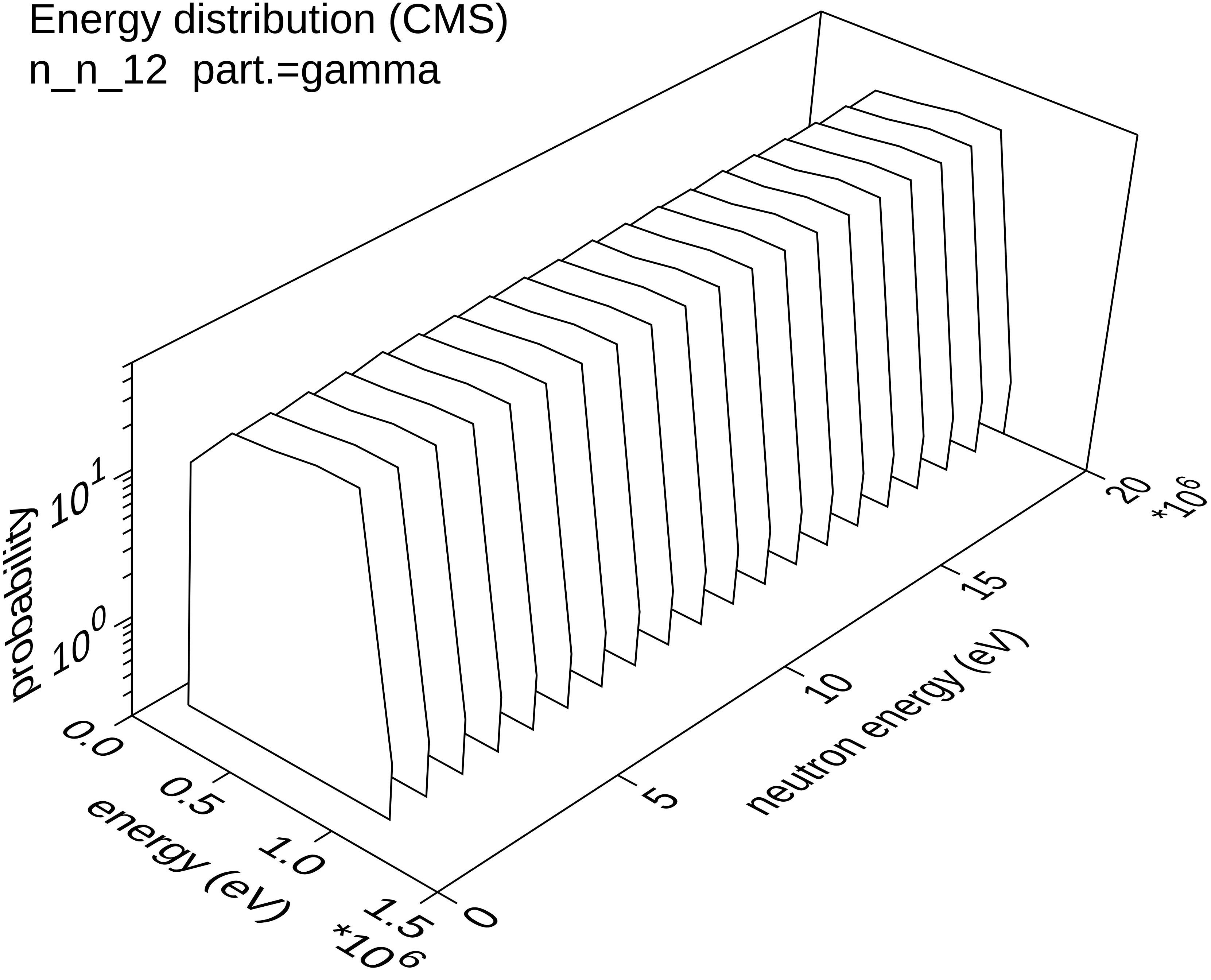


Energy distribution (CMS)
n_n_11 part.=gamma



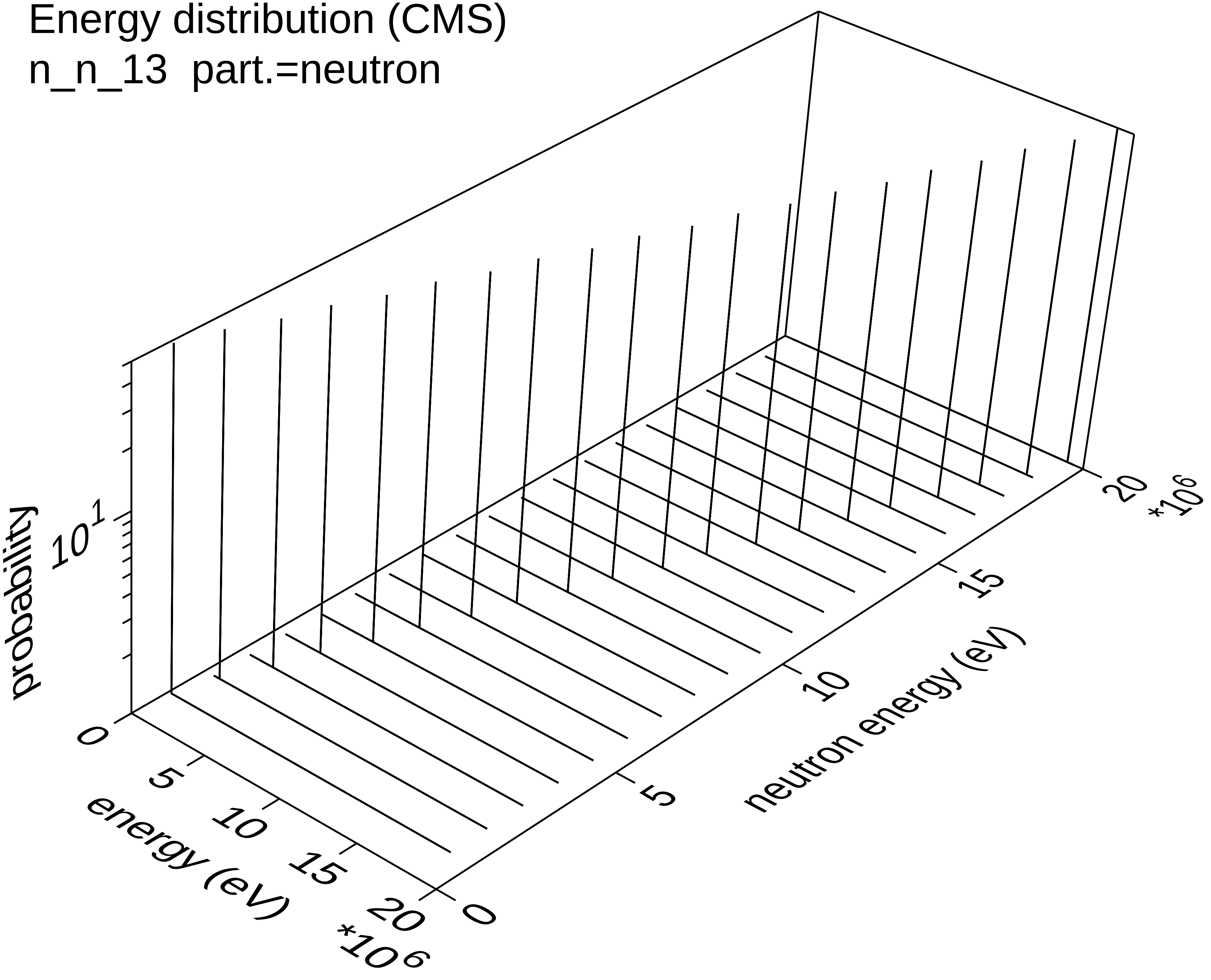
Energy distribution (CMS)
n_n_12 part.=neutron



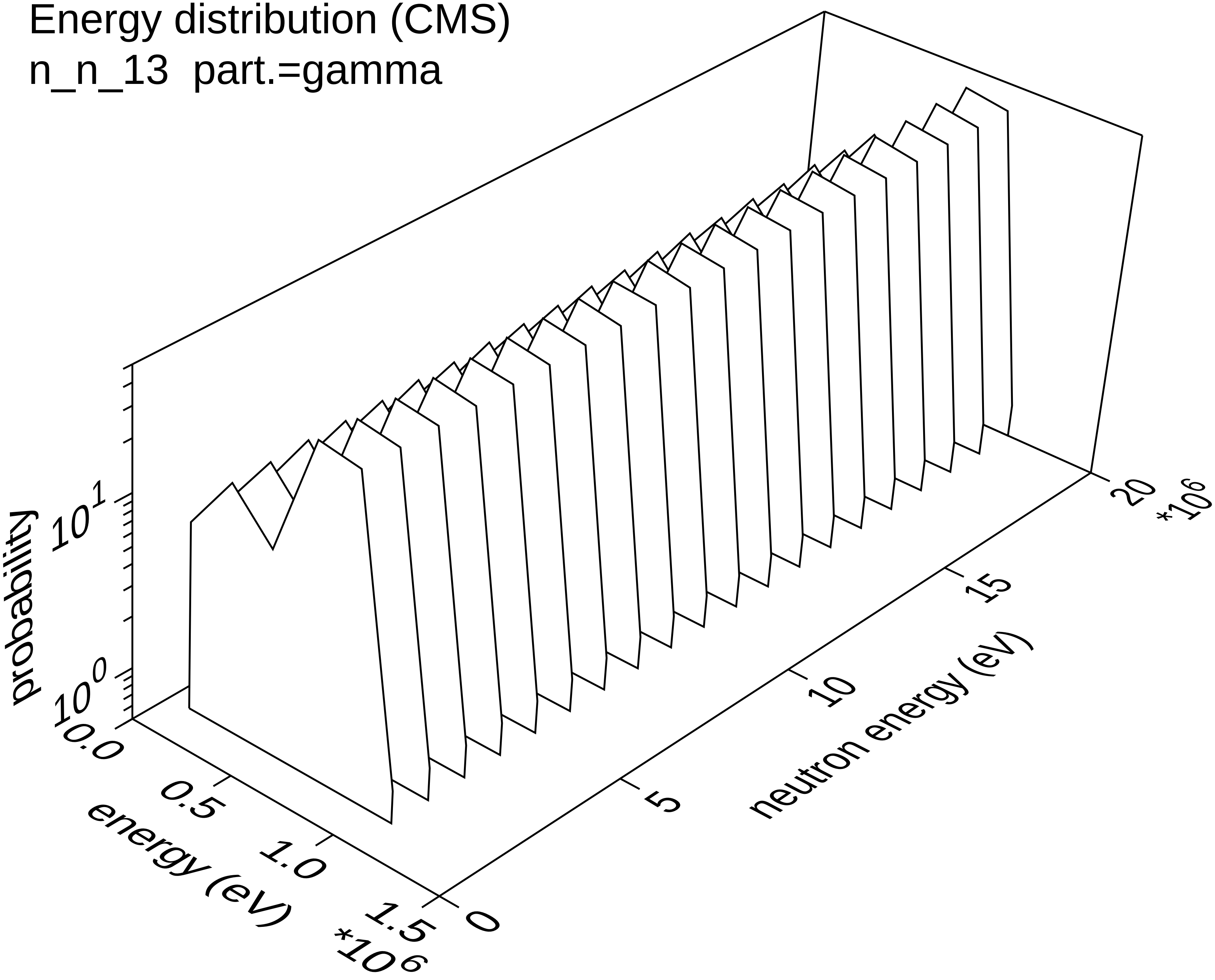


Energy distribution (CMS)
n_n_12 part.=gamma

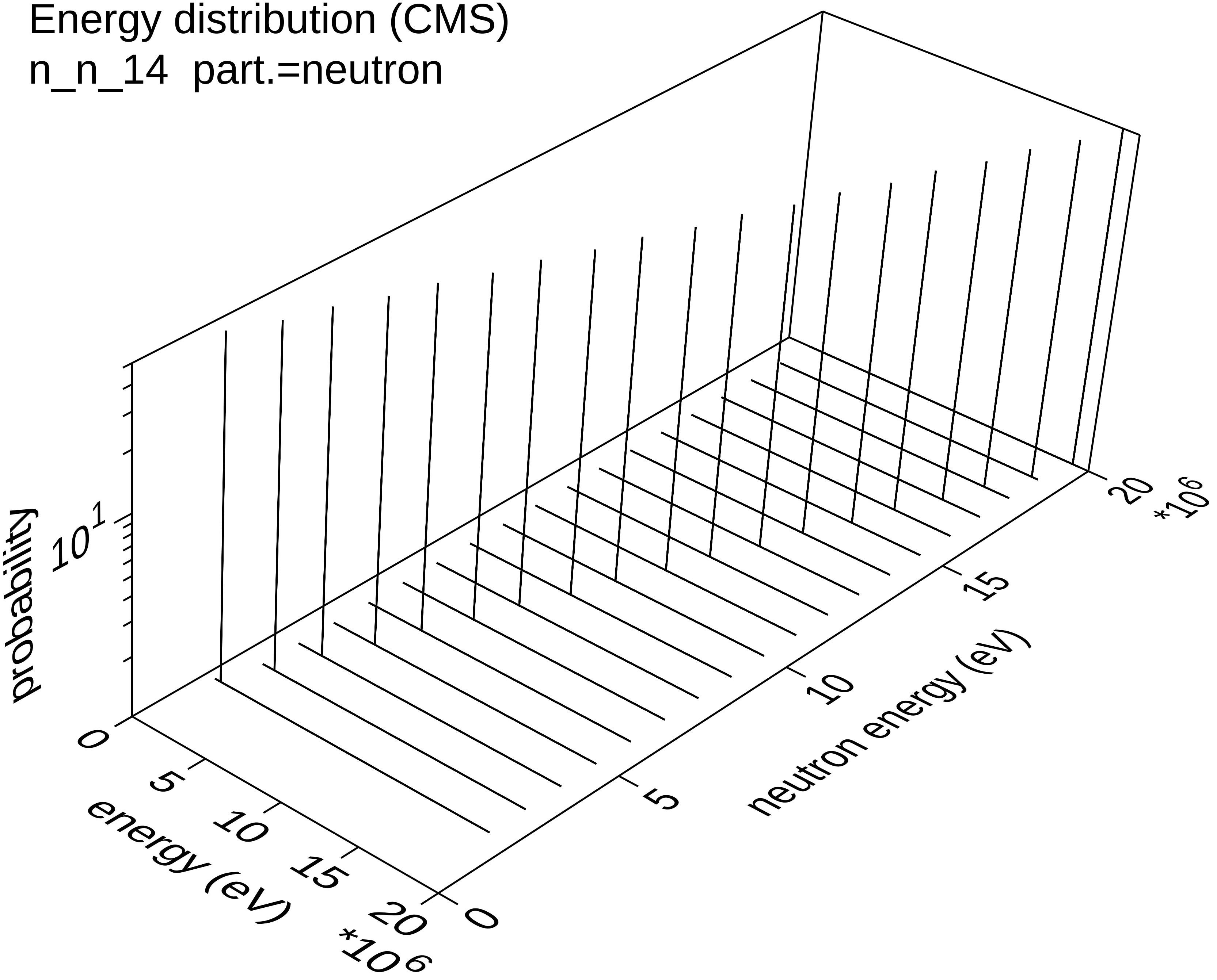
Energy distribution (CMS)
n_n_13 part.=neutron



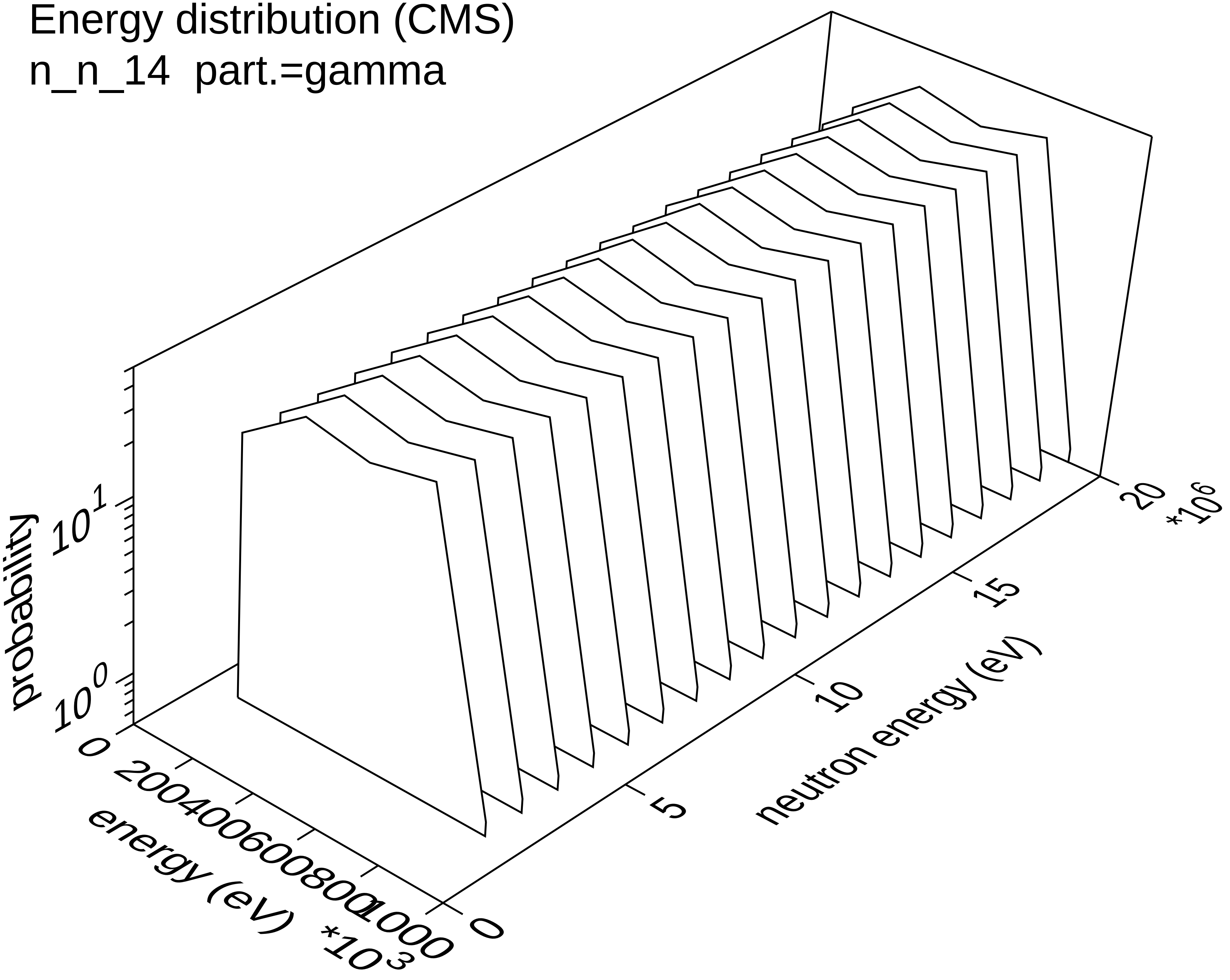
Energy distribution (CMS)
n_n_13 part.=gamma



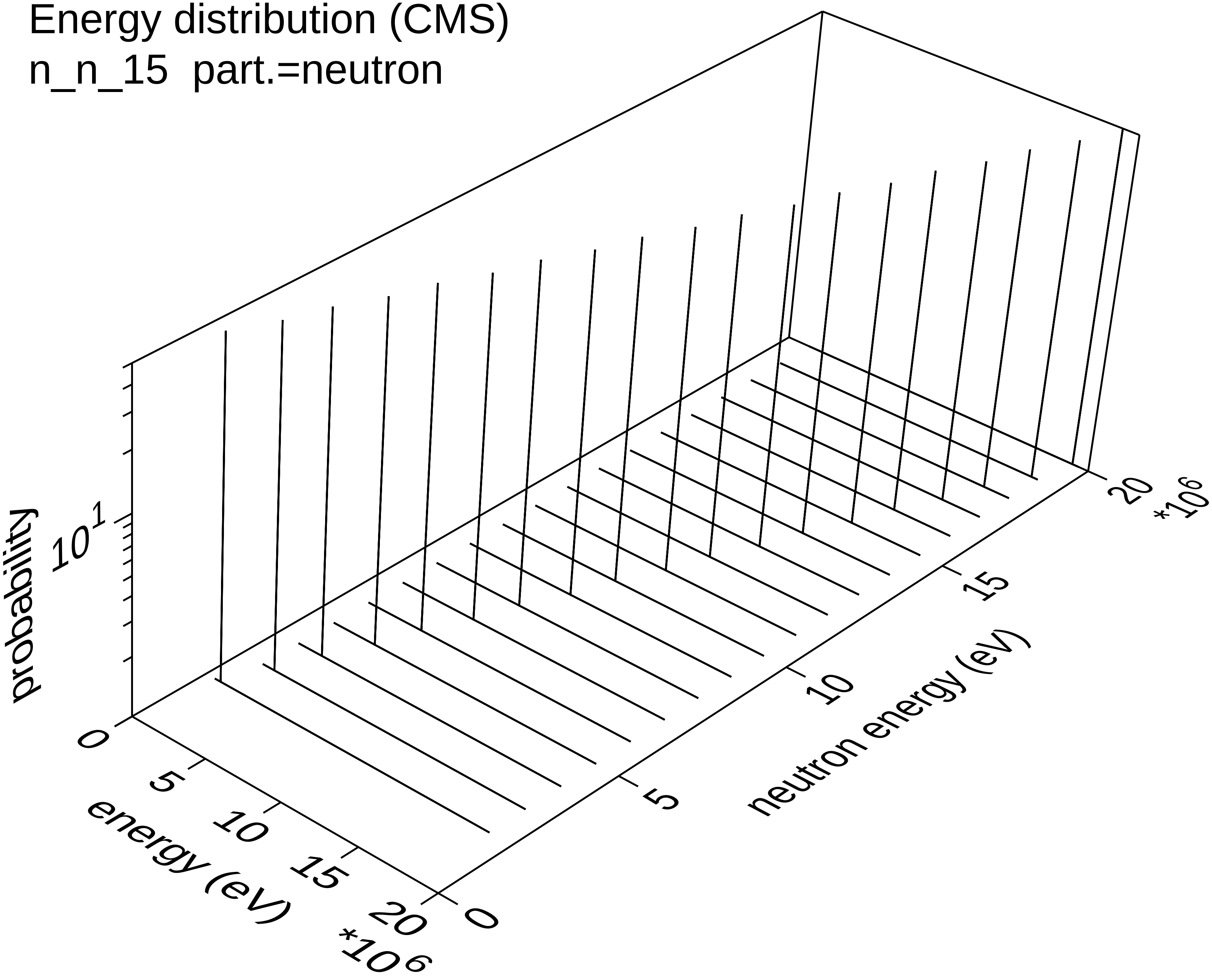
Energy distribution (CMS)
n_n_14 part.=neutron



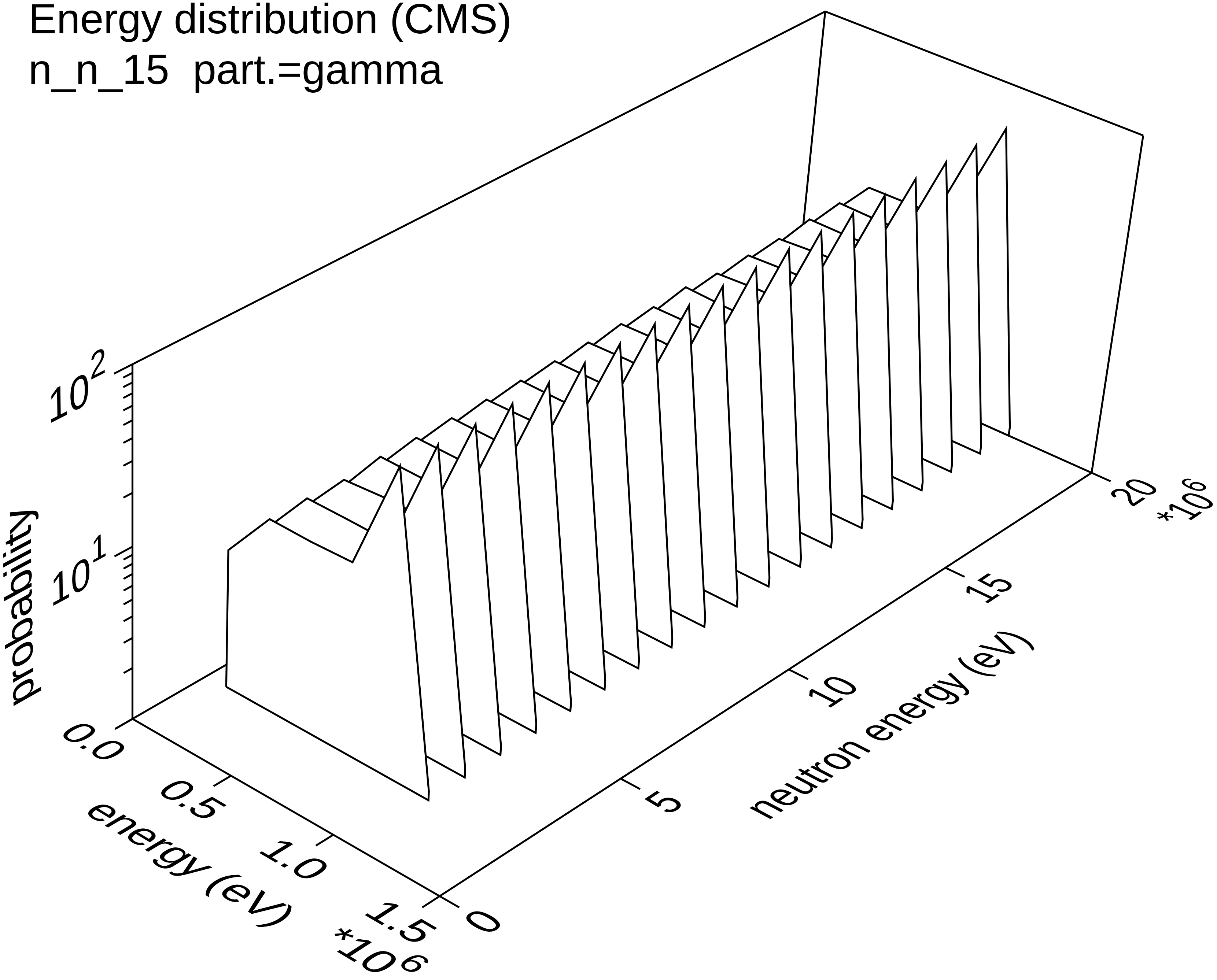
Energy distribution (CMS)
n_n_14 part.=gamma



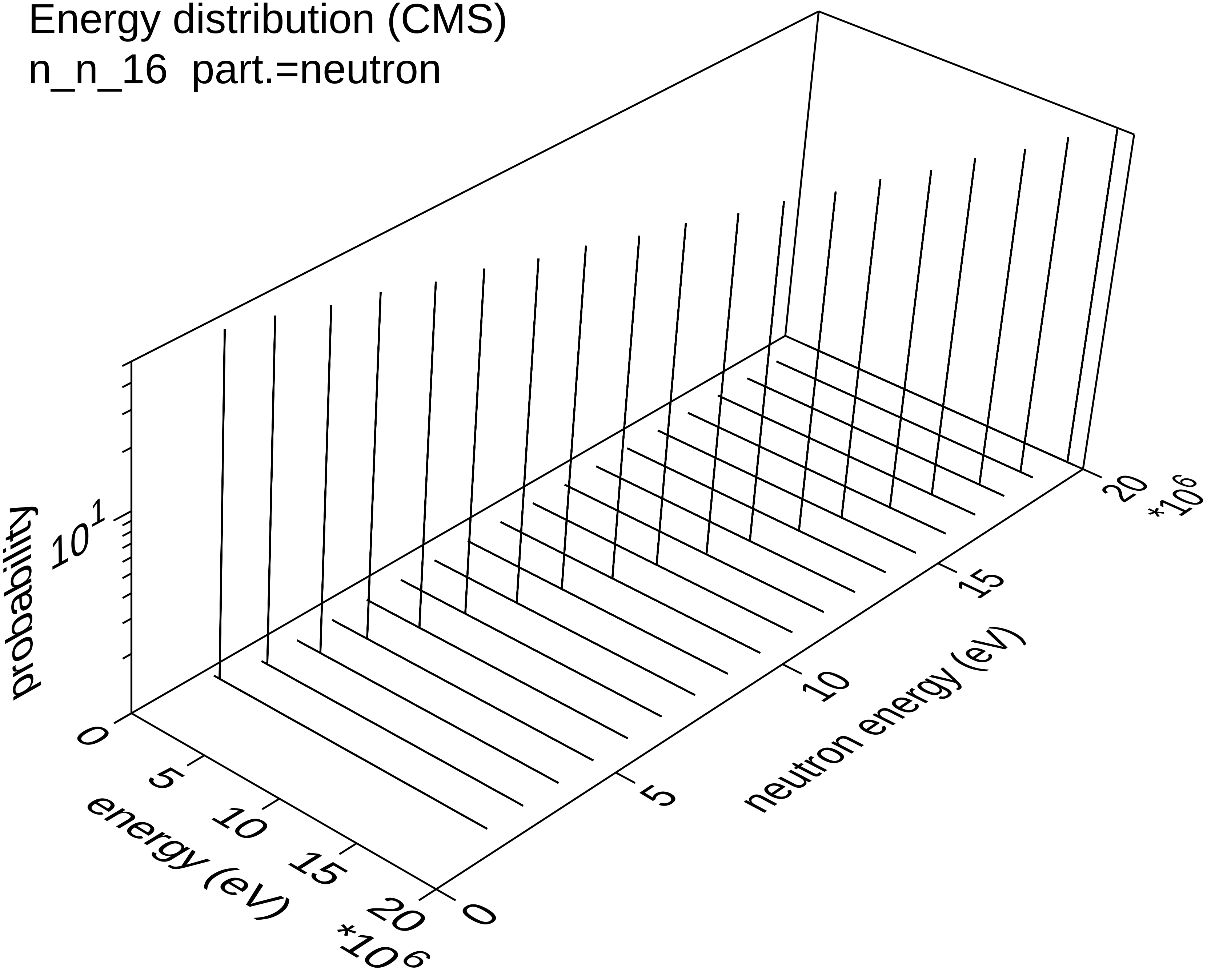
Energy distribution (CMS)
n_n_15 part.=neutron



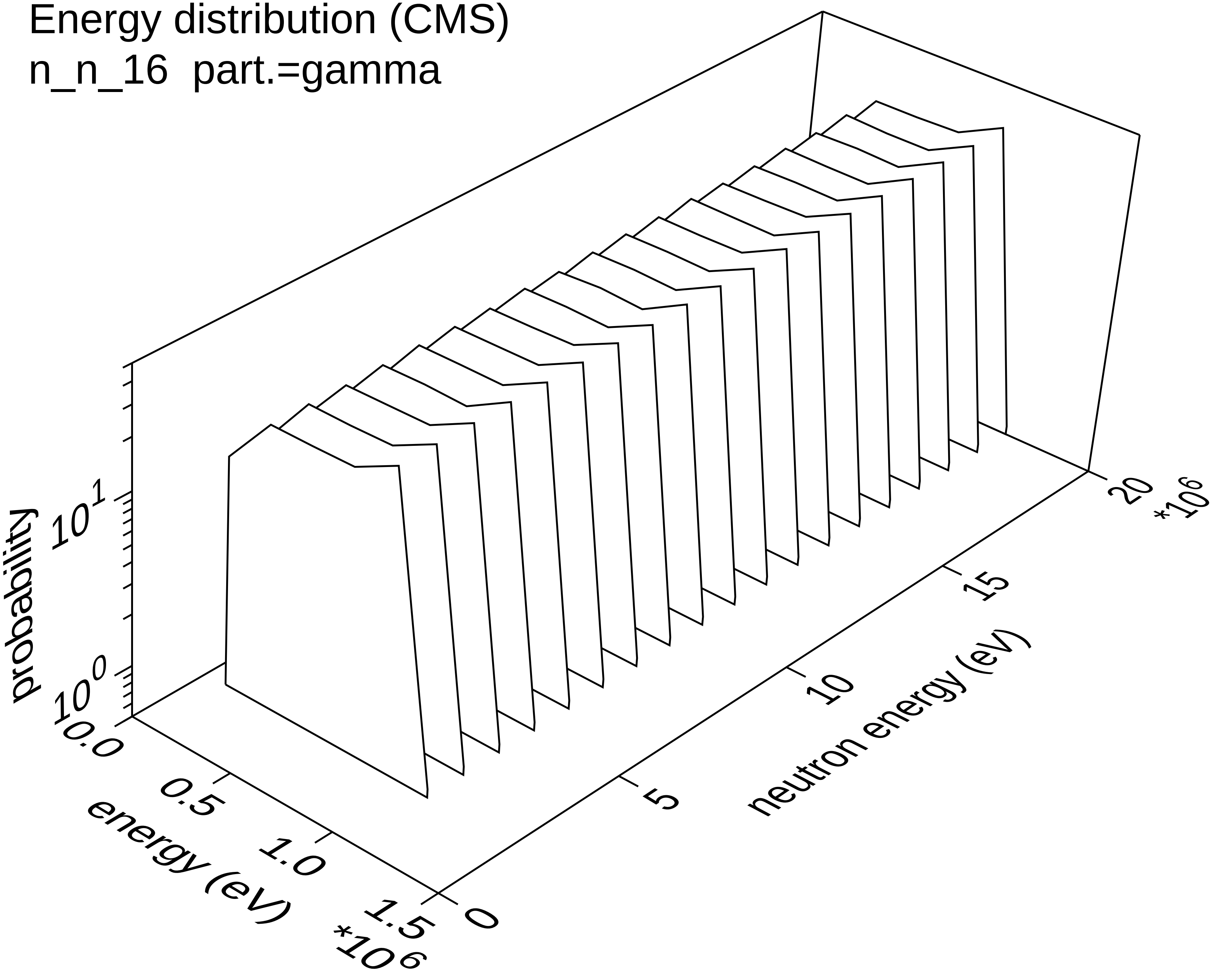
Energy distribution (CMS)
n_n_15 part.=gamma

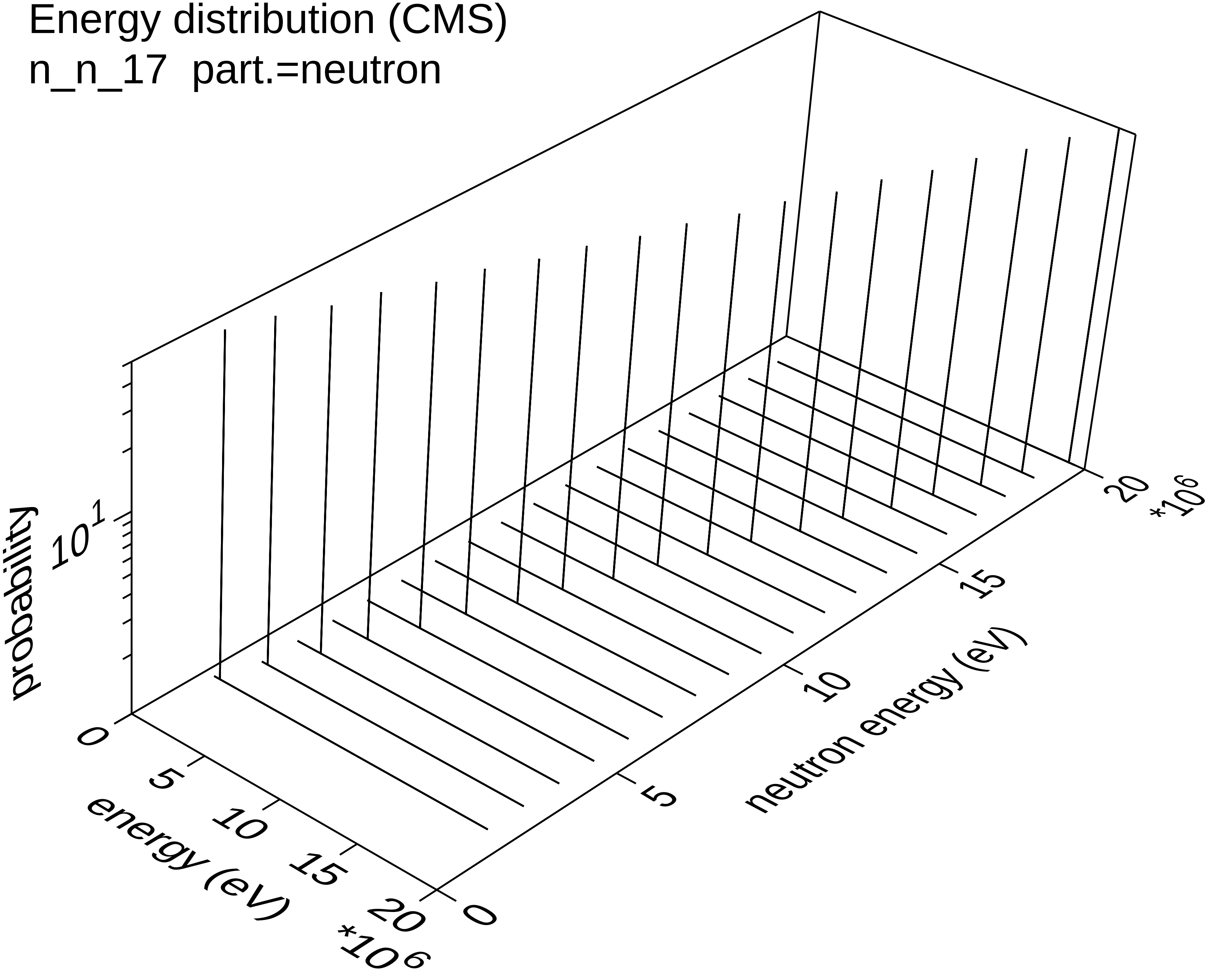


Energy distribution (CMS)
n_n_16 part.=neutron

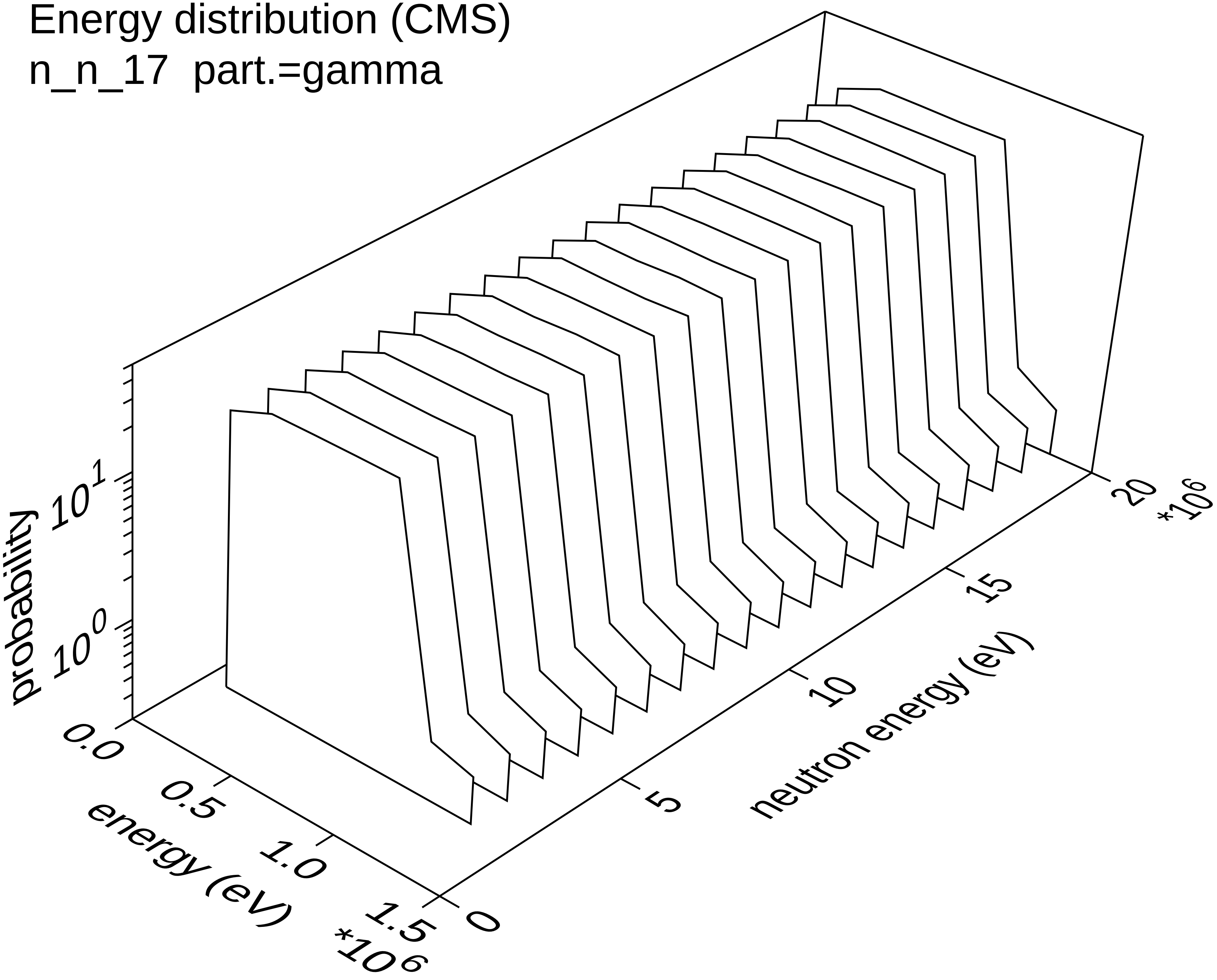


Energy distribution (CMS)
n_n_16 part.=gamma

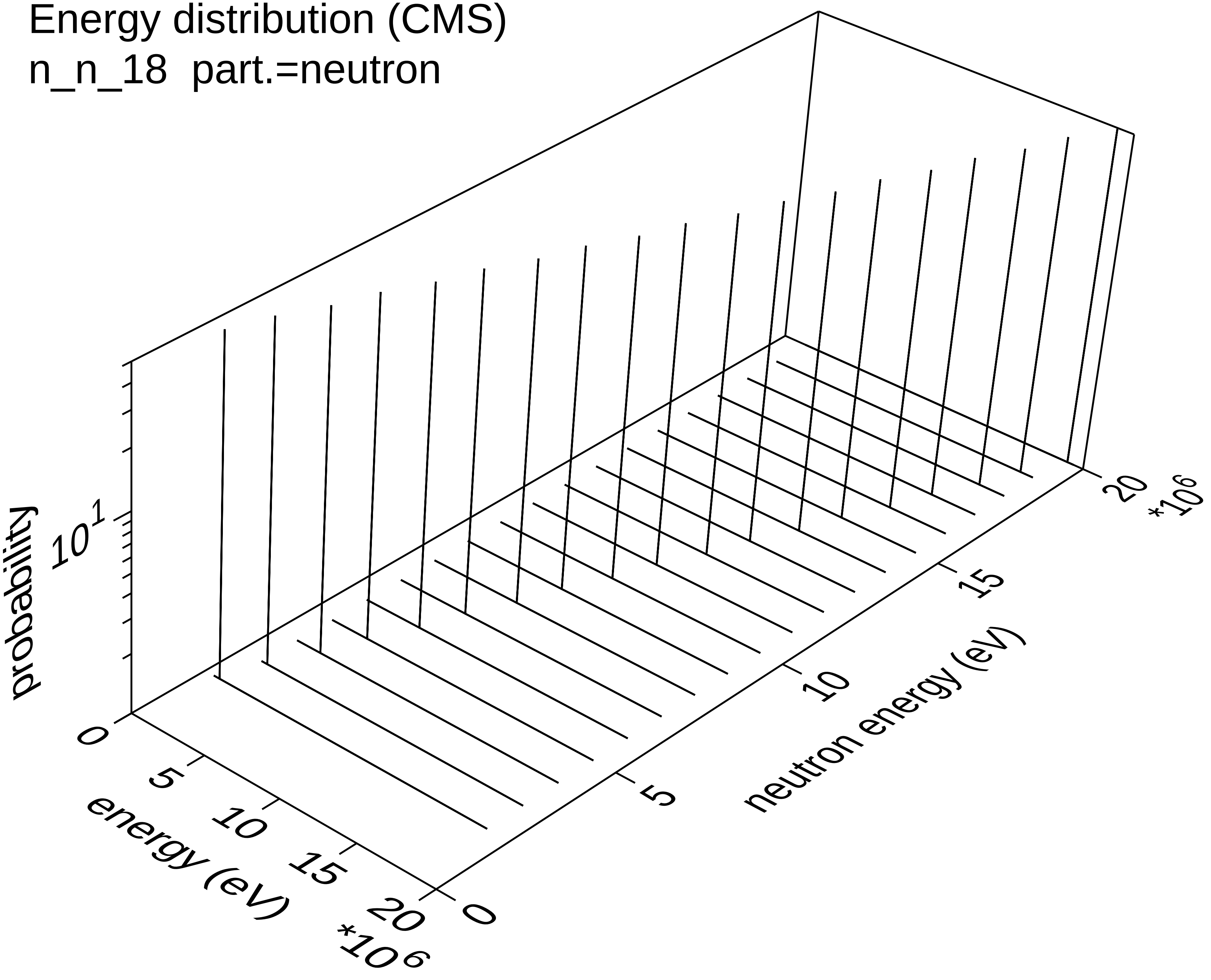



Energy distribution (CMS)
n_n_17 part.=neutron

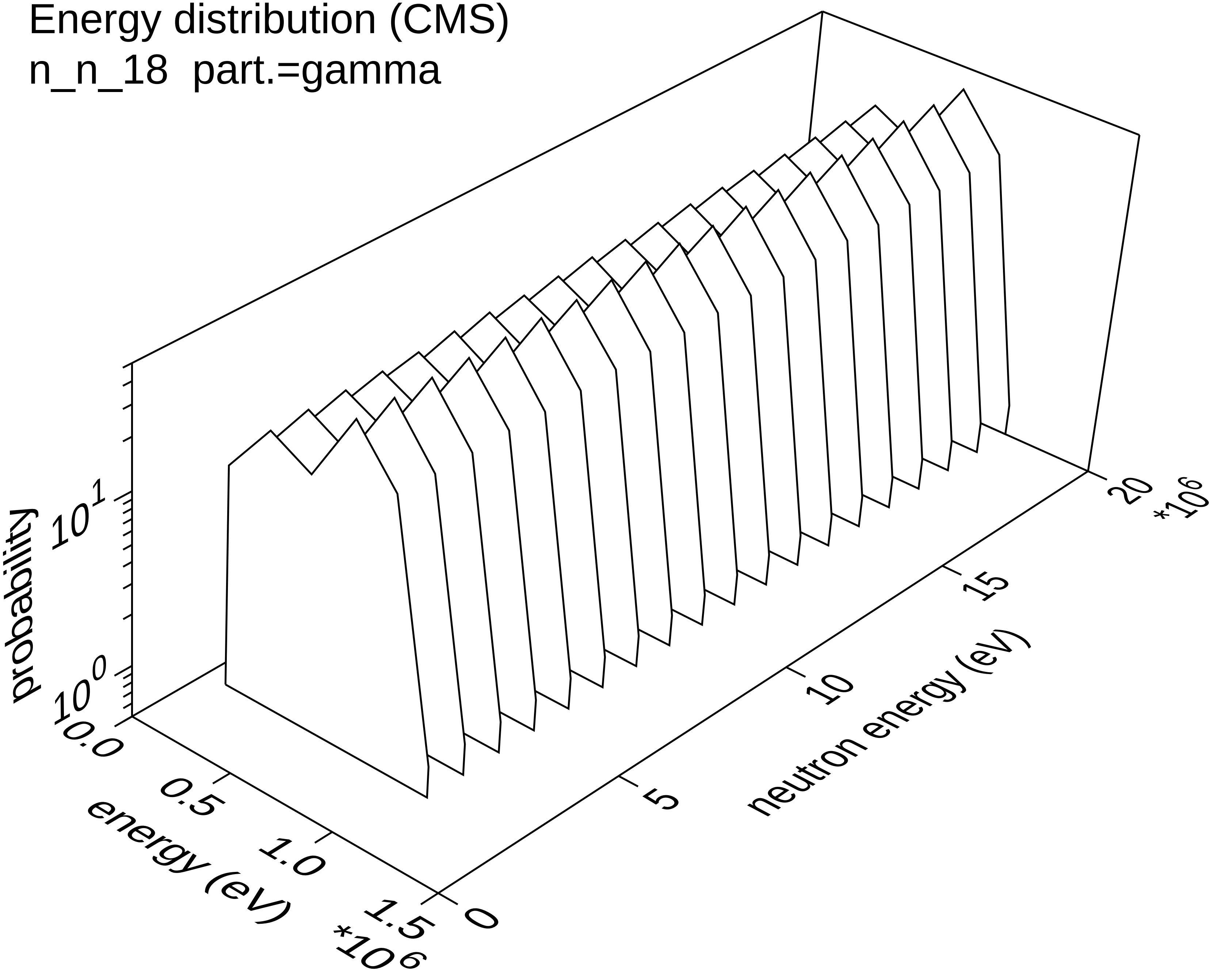
Energy distribution (CMS)
n_n_17 part.=gamma



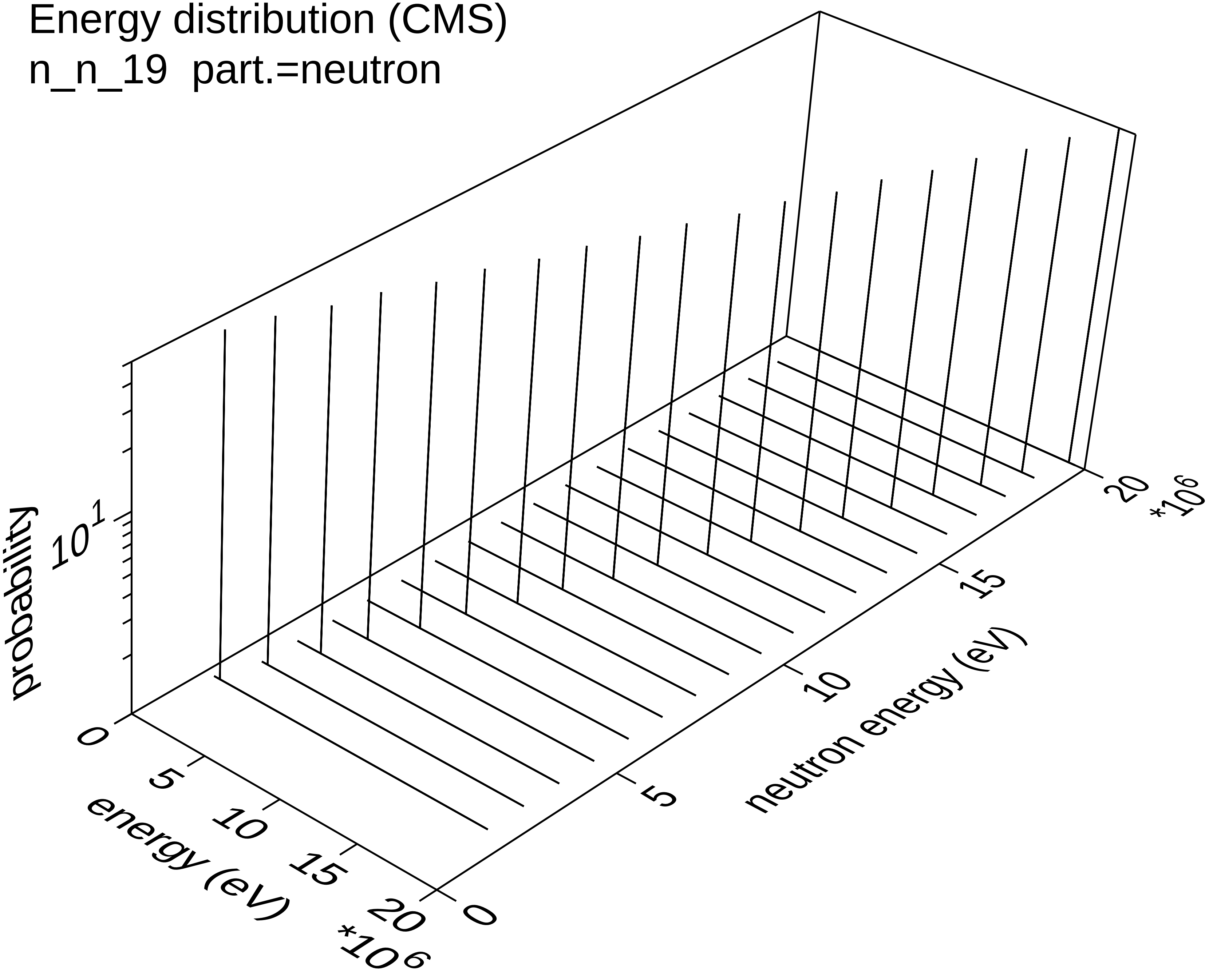
Energy distribution (CMS)
n_n_18 part.=neutron



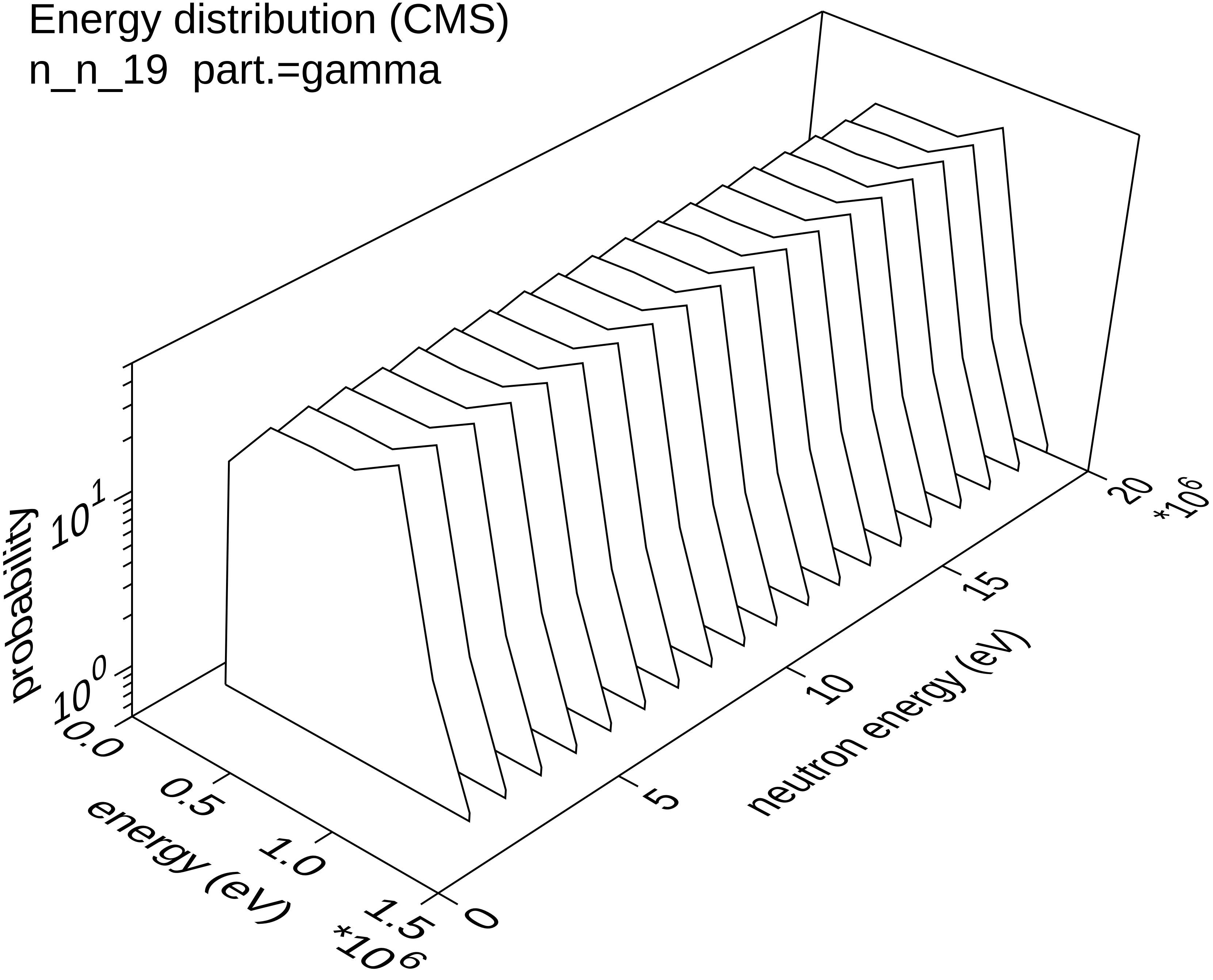
Energy distribution (CMS)
n_n_18 part.=gamma



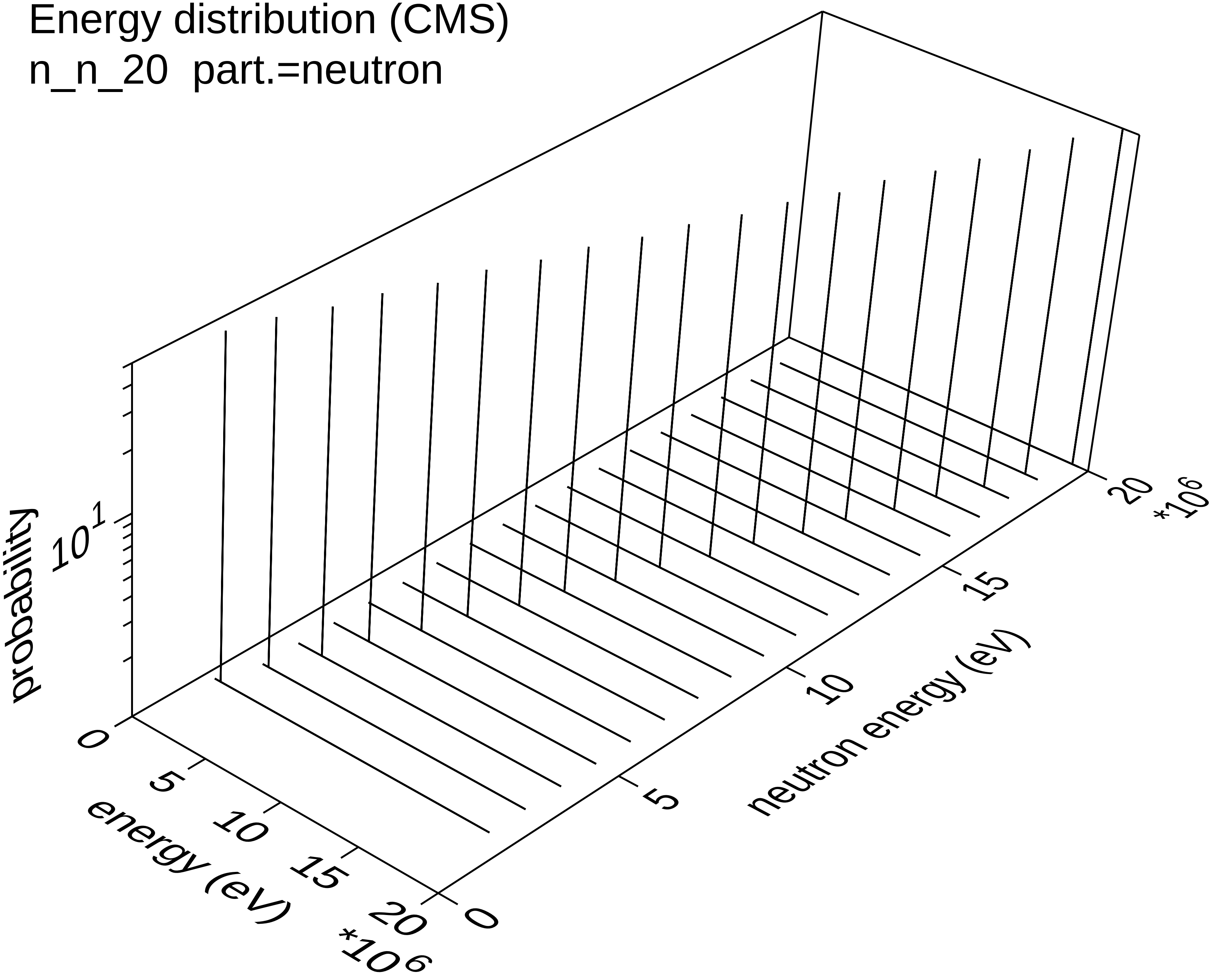
Energy distribution (CMS)
n_n_19 part.=neutron



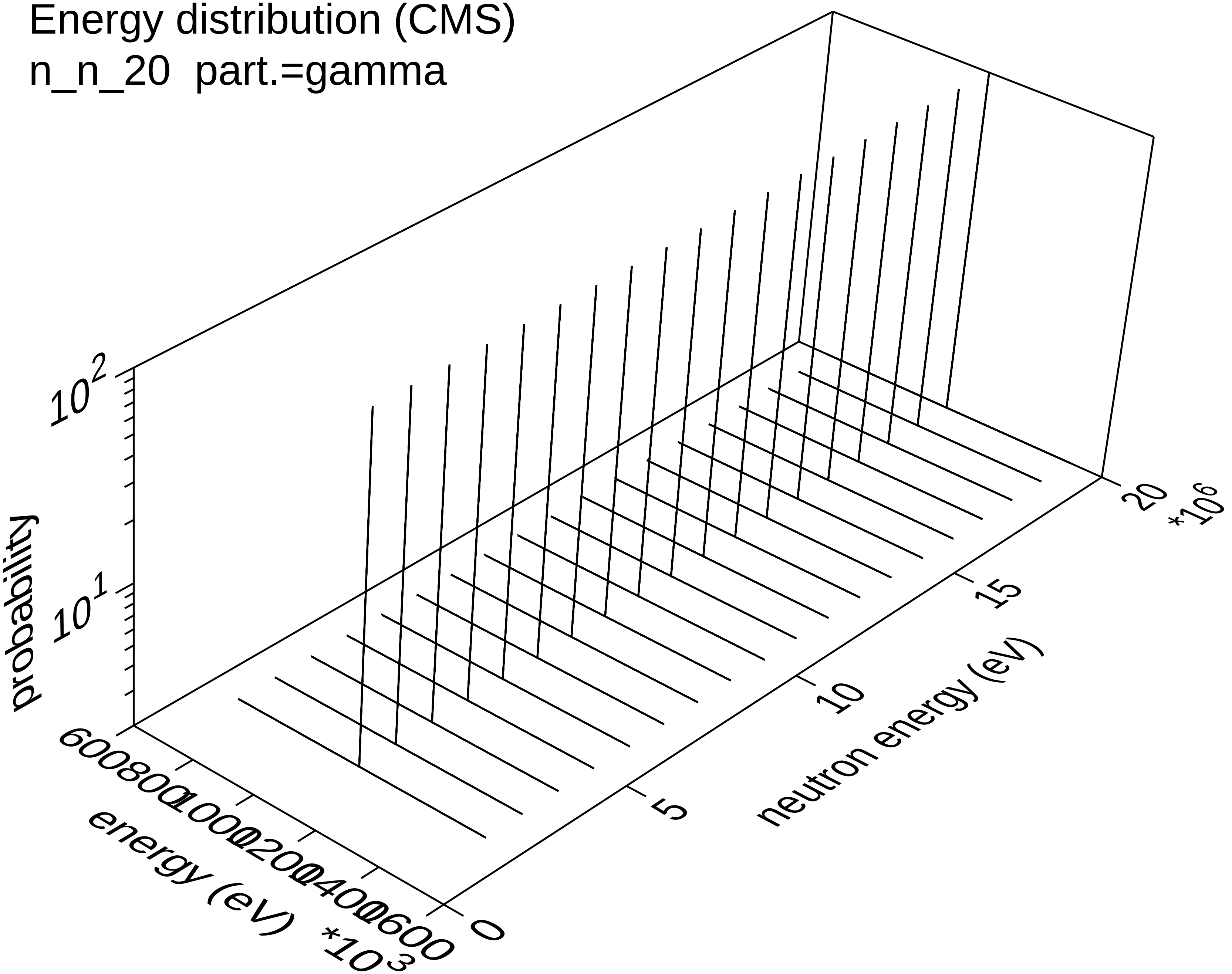
Energy distribution (CMS)
n_n_19 part.=gamma



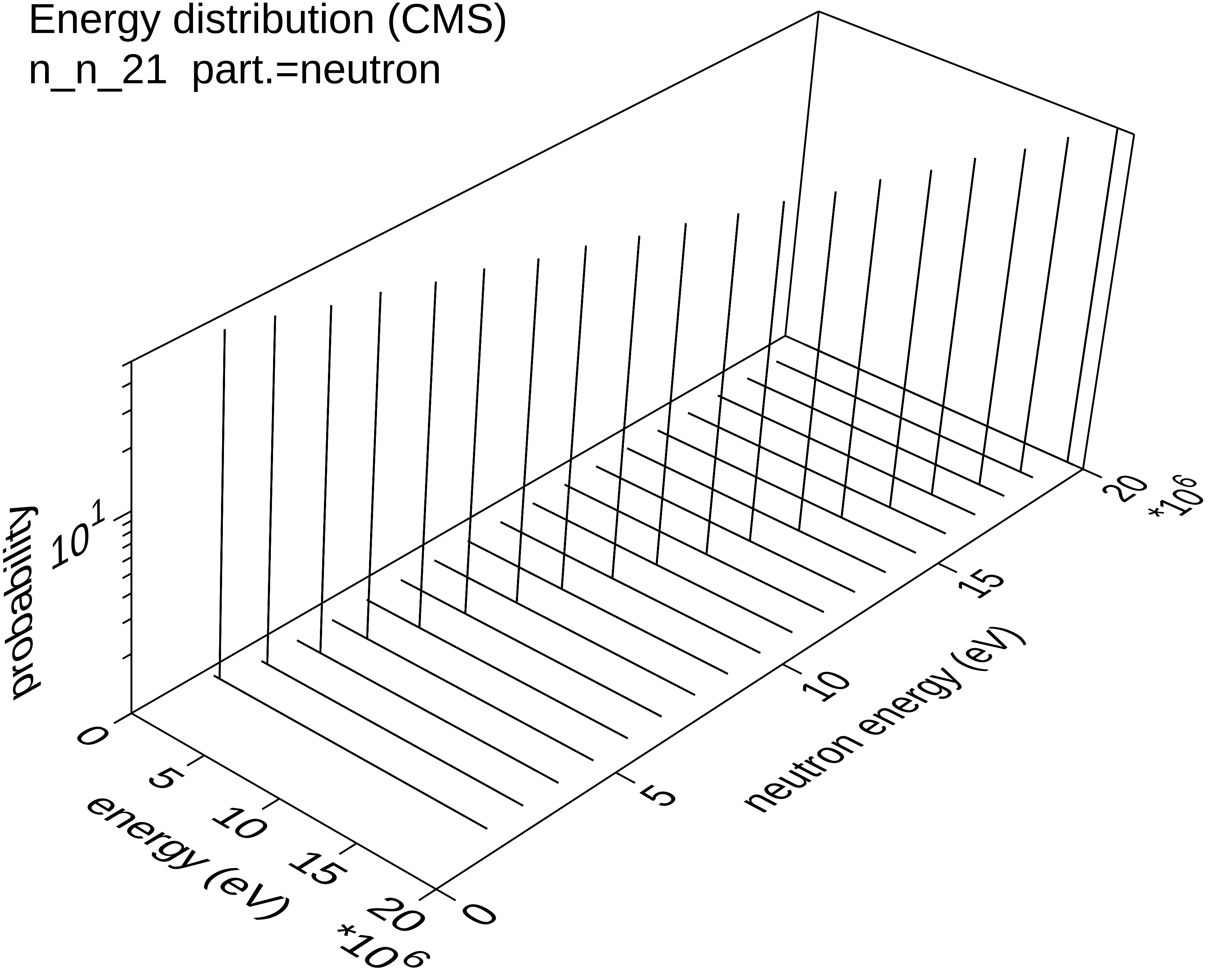
Energy distribution (CMS)
n_n_20 part.=neutron



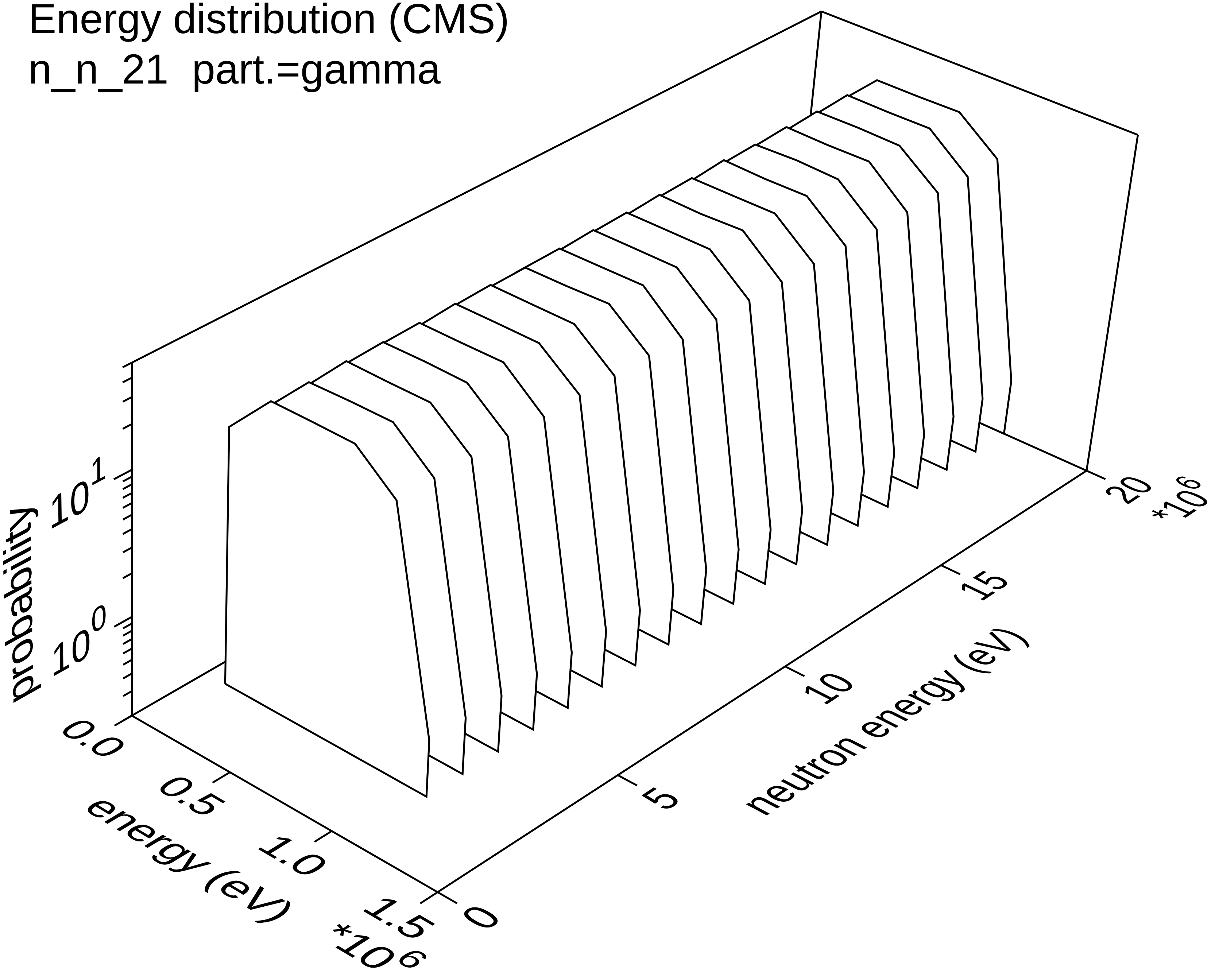
Energy distribution (CMS)
n_n_20 part.=gamma



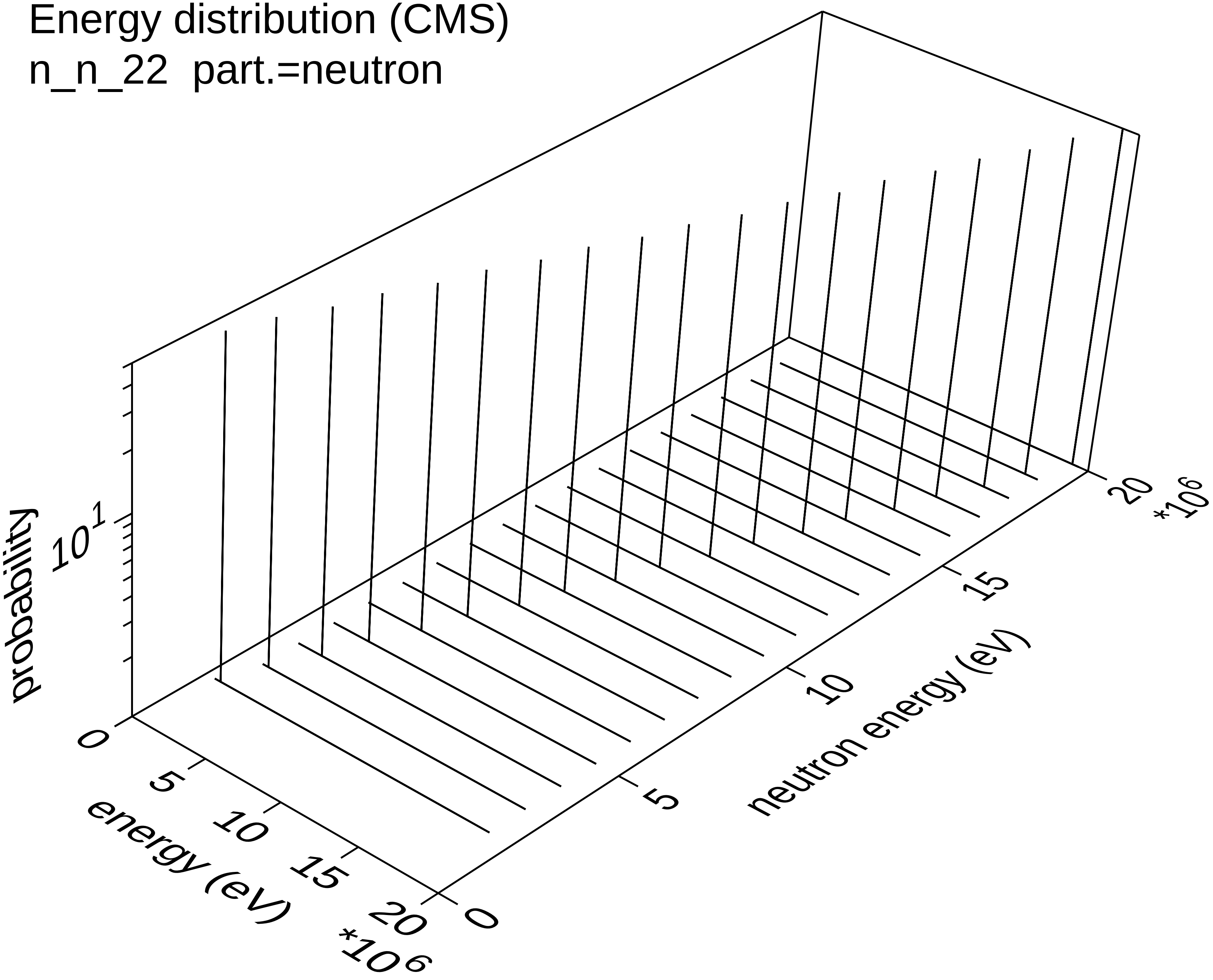
Energy distribution (CMS)
n_n_21 part.=neutron

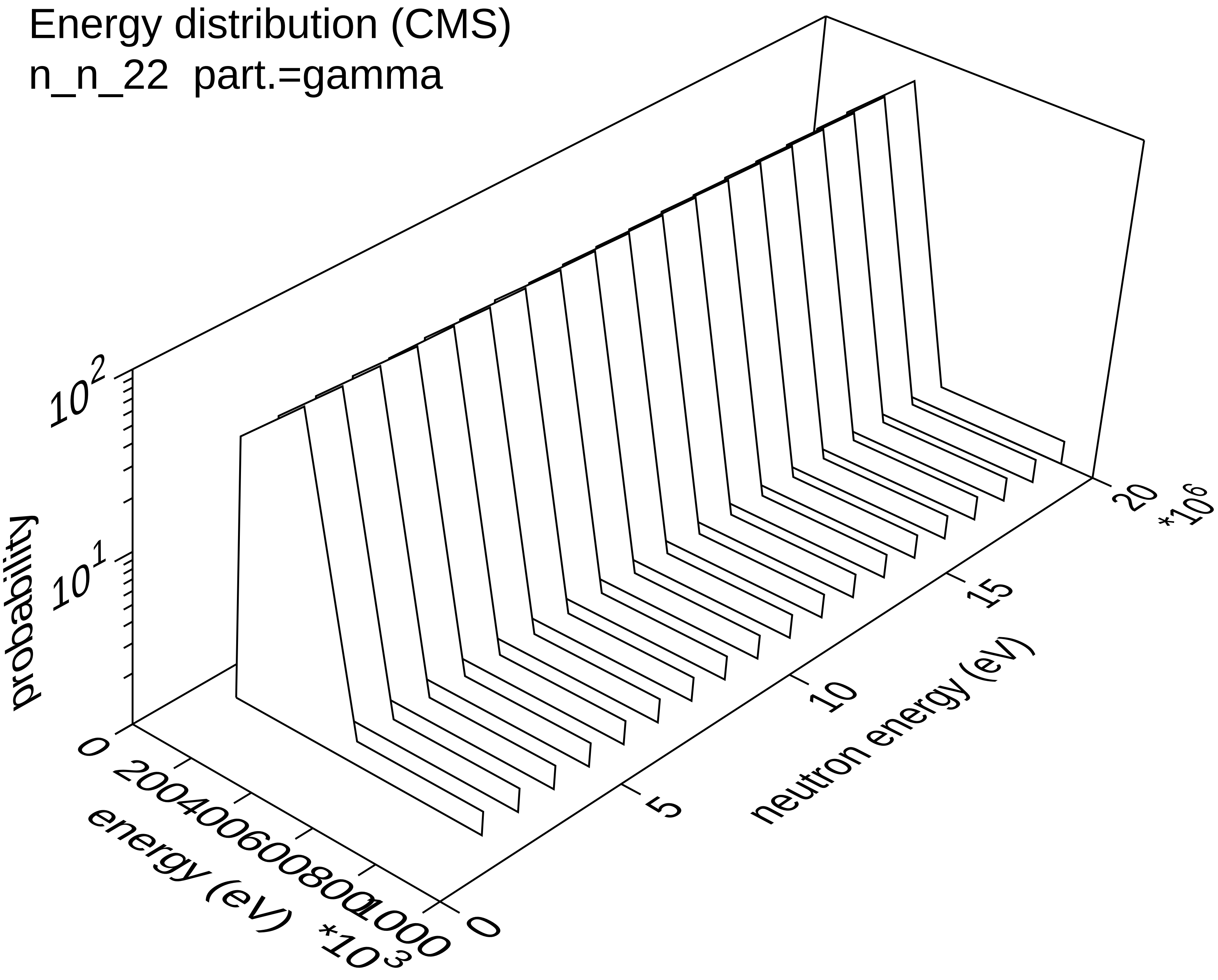


Energy distribution (CMS)
n_n_21 part.=gamma

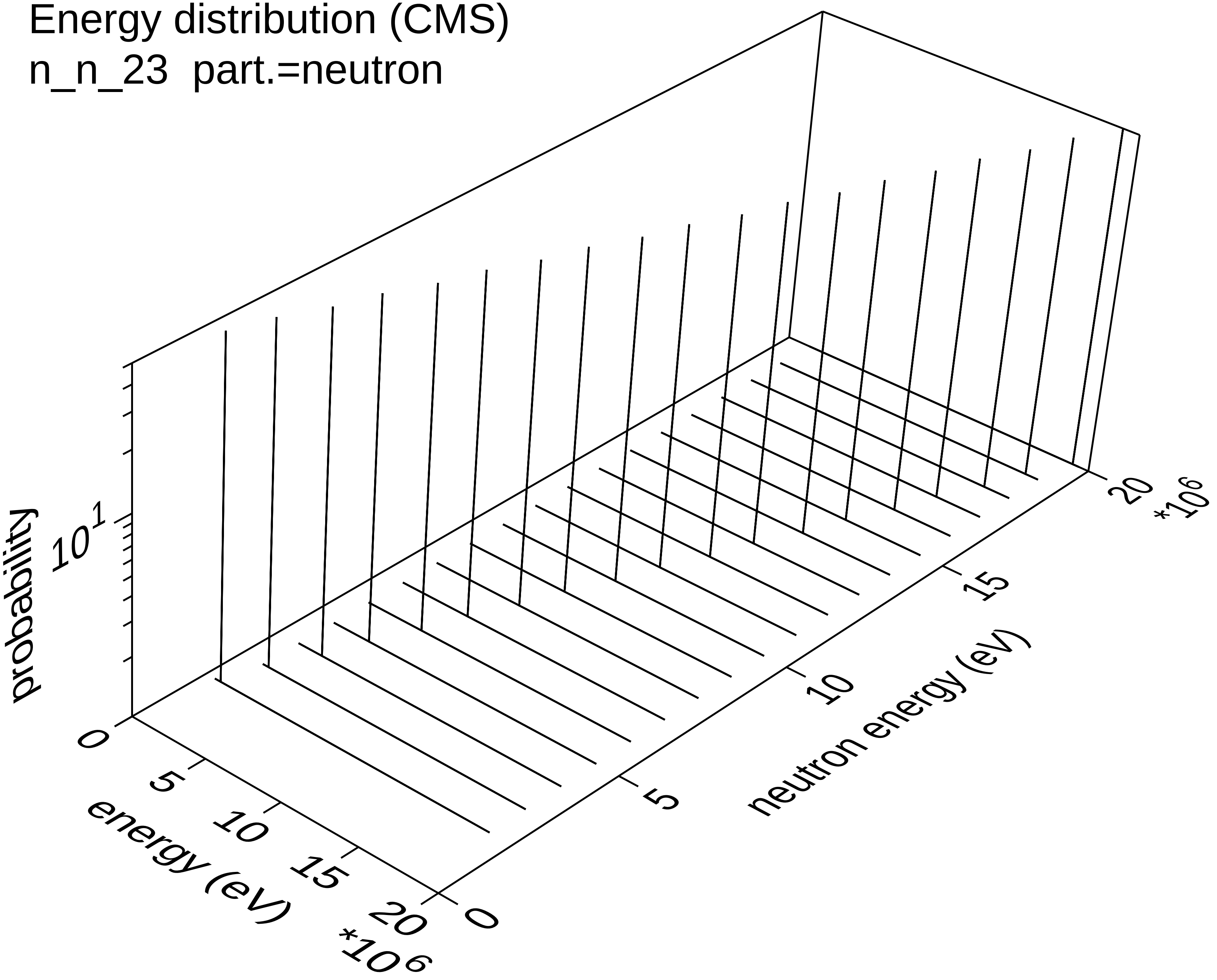


Energy distribution (CMS)
n_n_22 part.=neutron

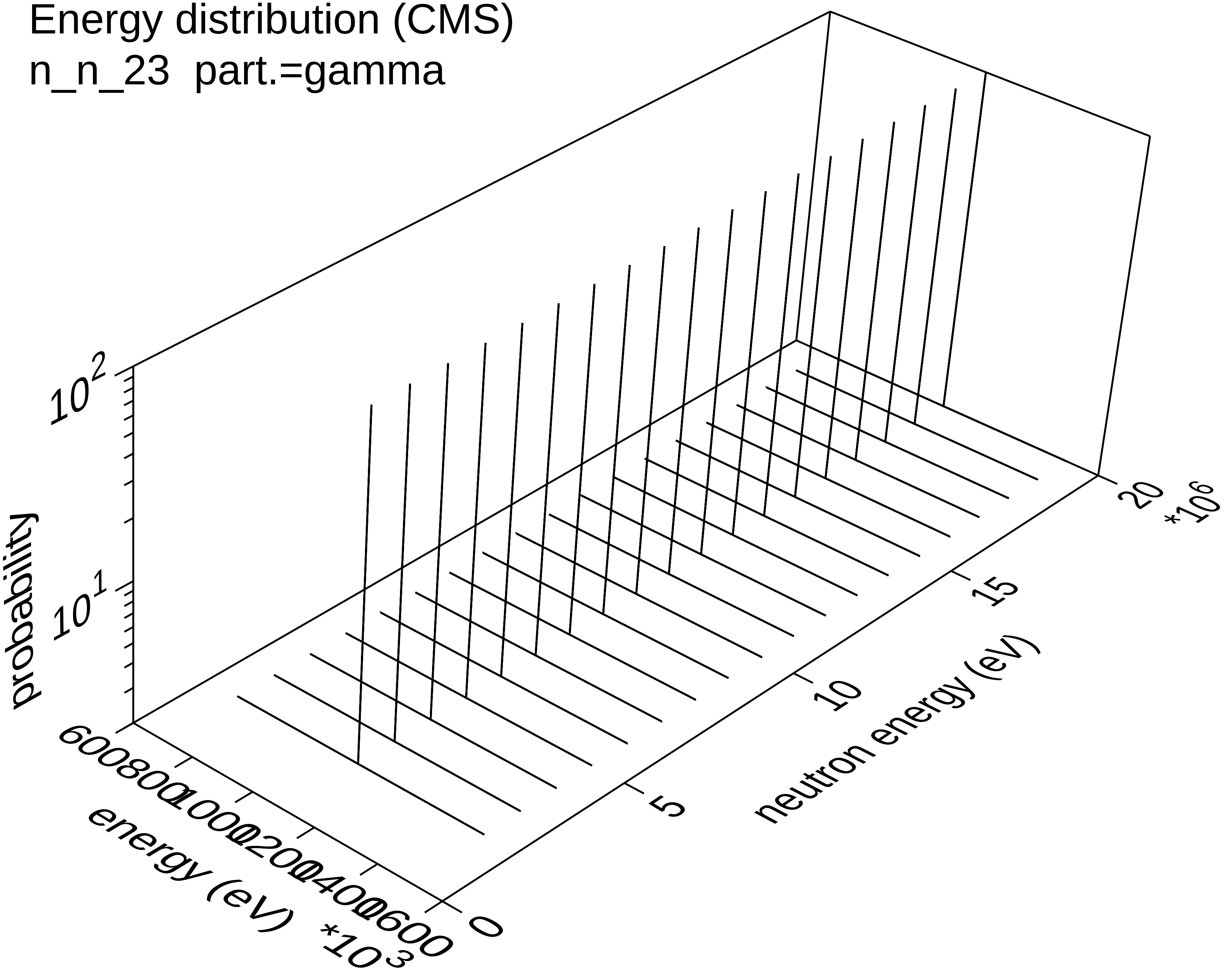



Energy distribution (CMS)
n_n_22 part.=gamma
probability
10^2
10^1
0
200
400
600
800
1000
energy (eV)
$*10^3$
0
5
10
15
20
$*10^6$
neutron energy (eV)

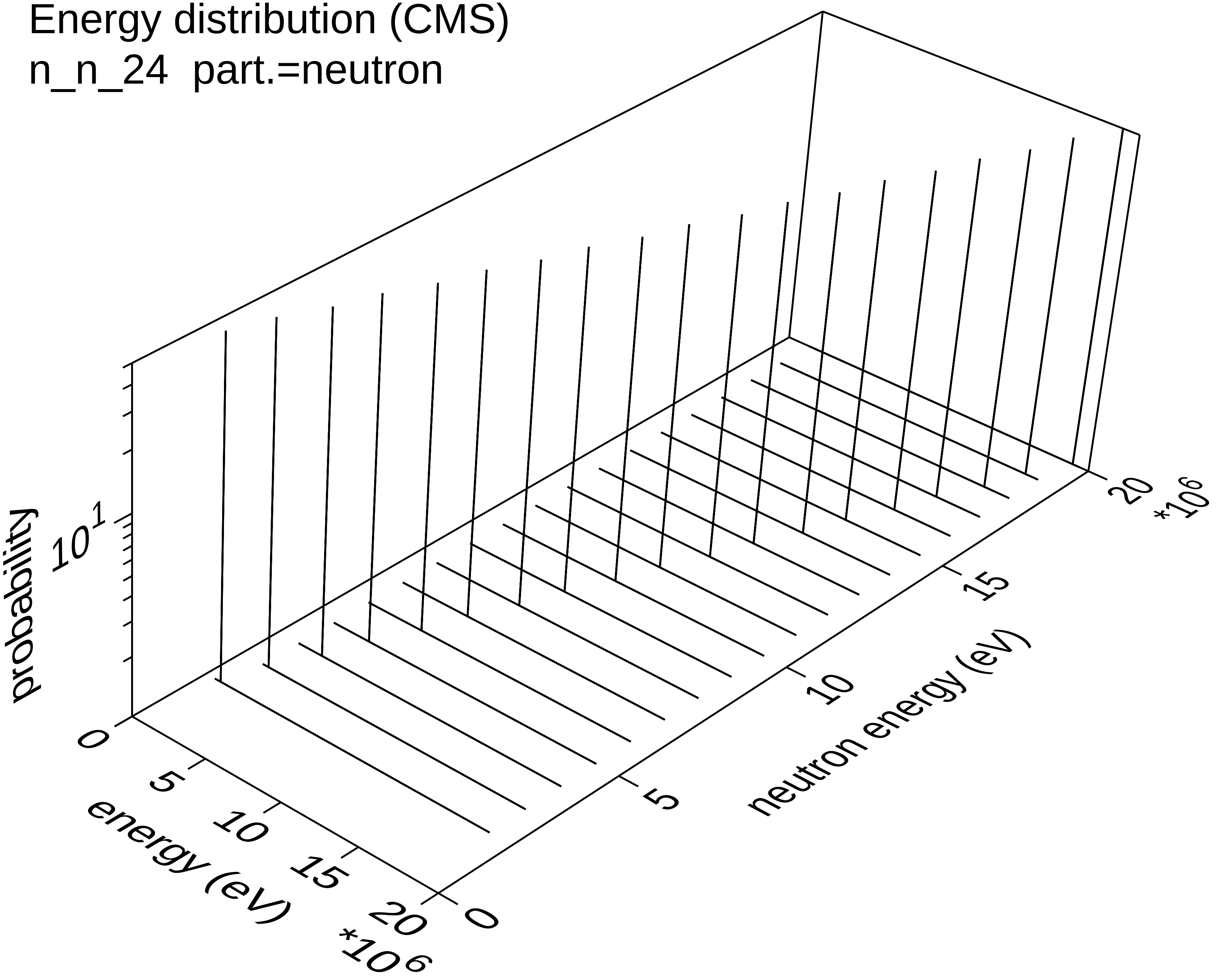
Energy distribution (CMS)
n_n_23 part.=neutron



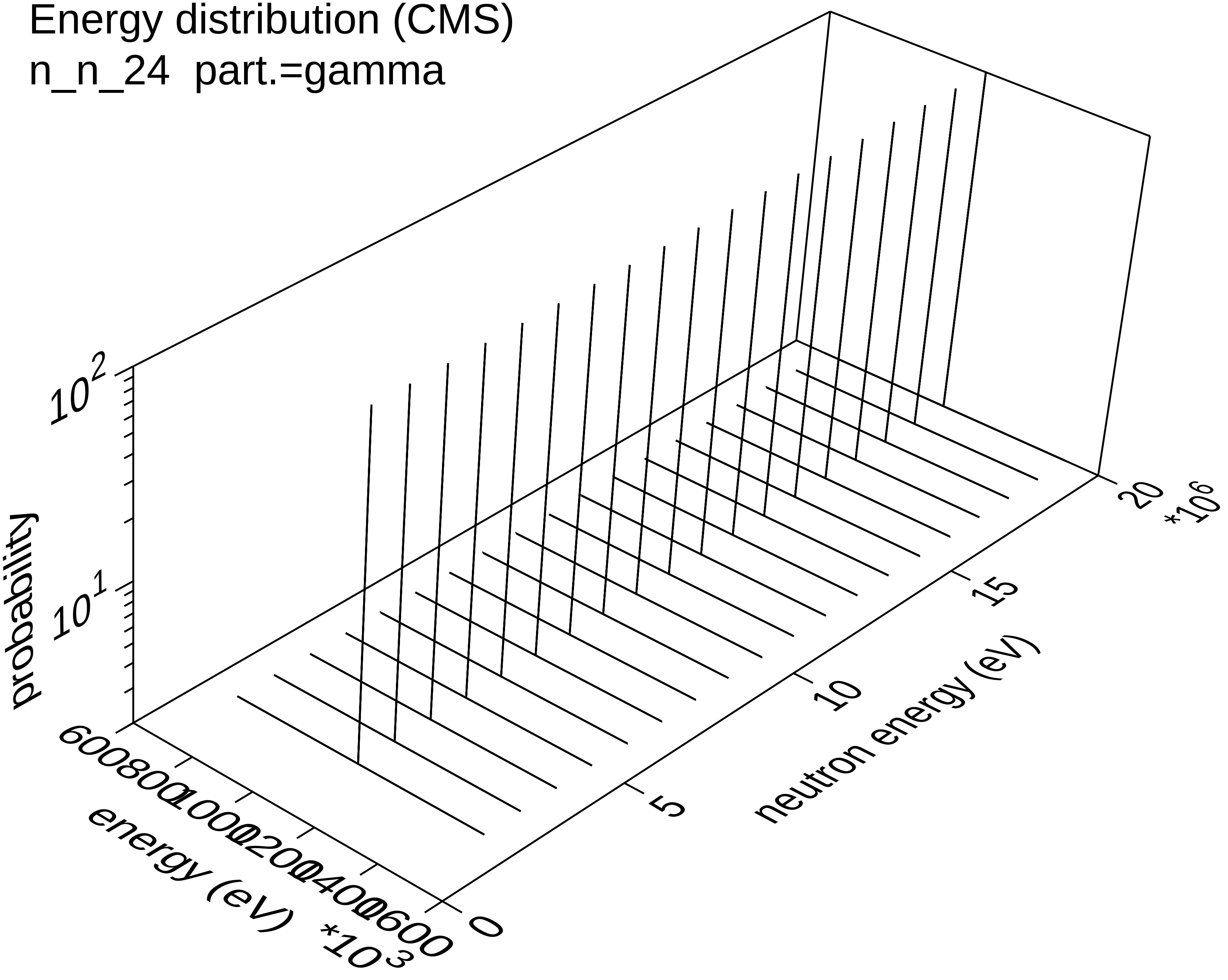
Energy distribution (CMS)
n_n_23 part.=gamma

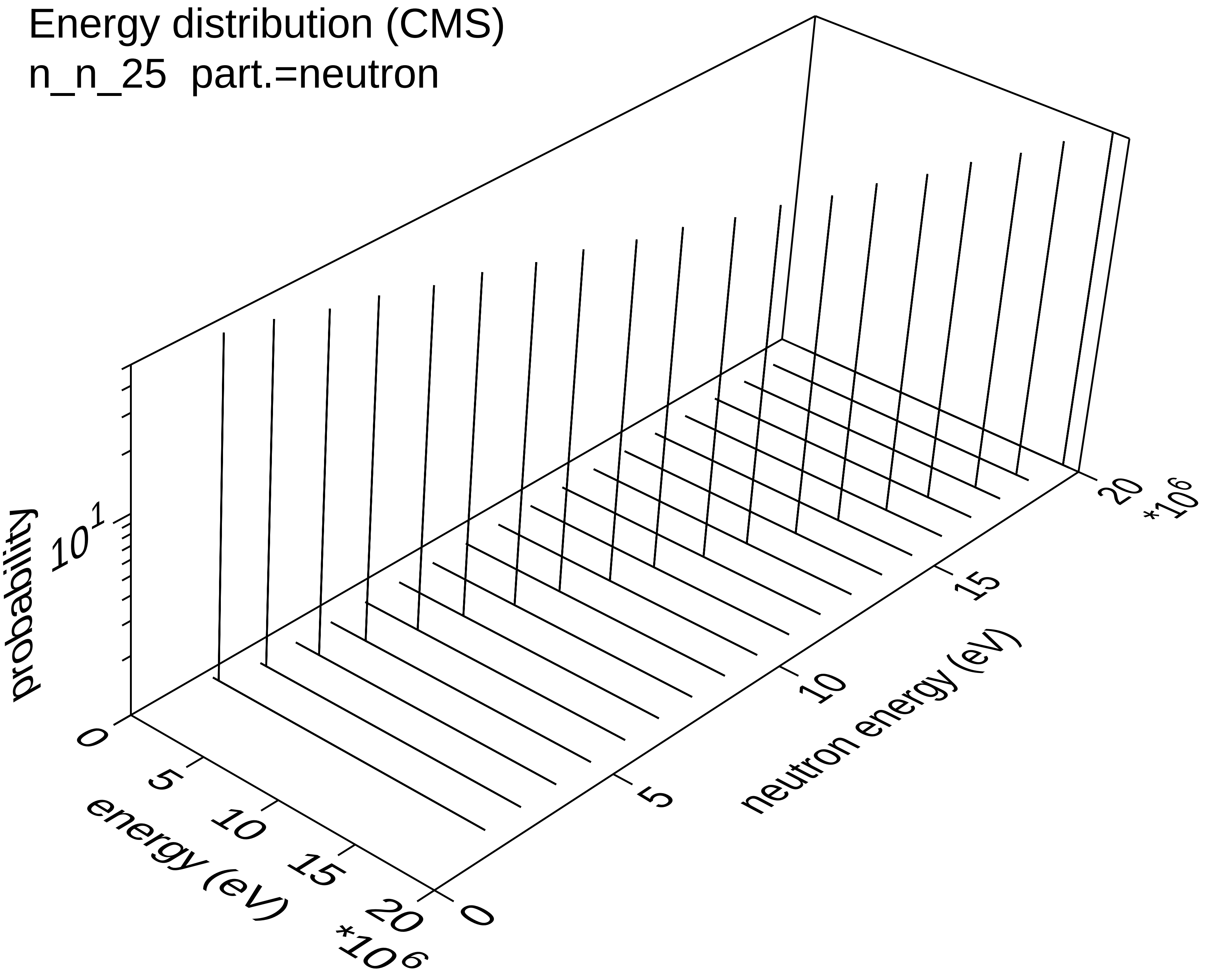


Energy distribution (CMS)
n_n_24 part.=neutron

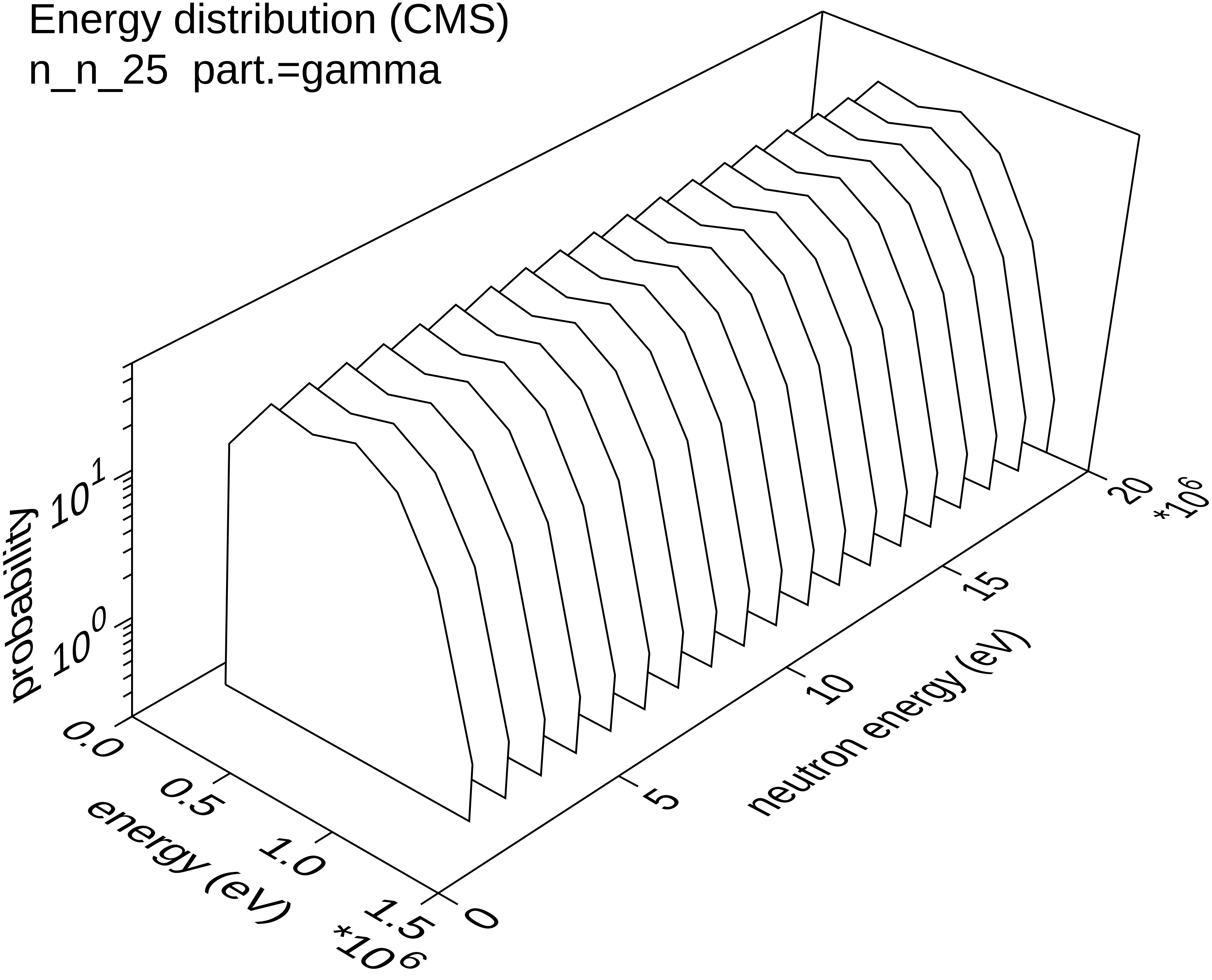


Energy distribution (CMS)
n_n_24 part.=gamma

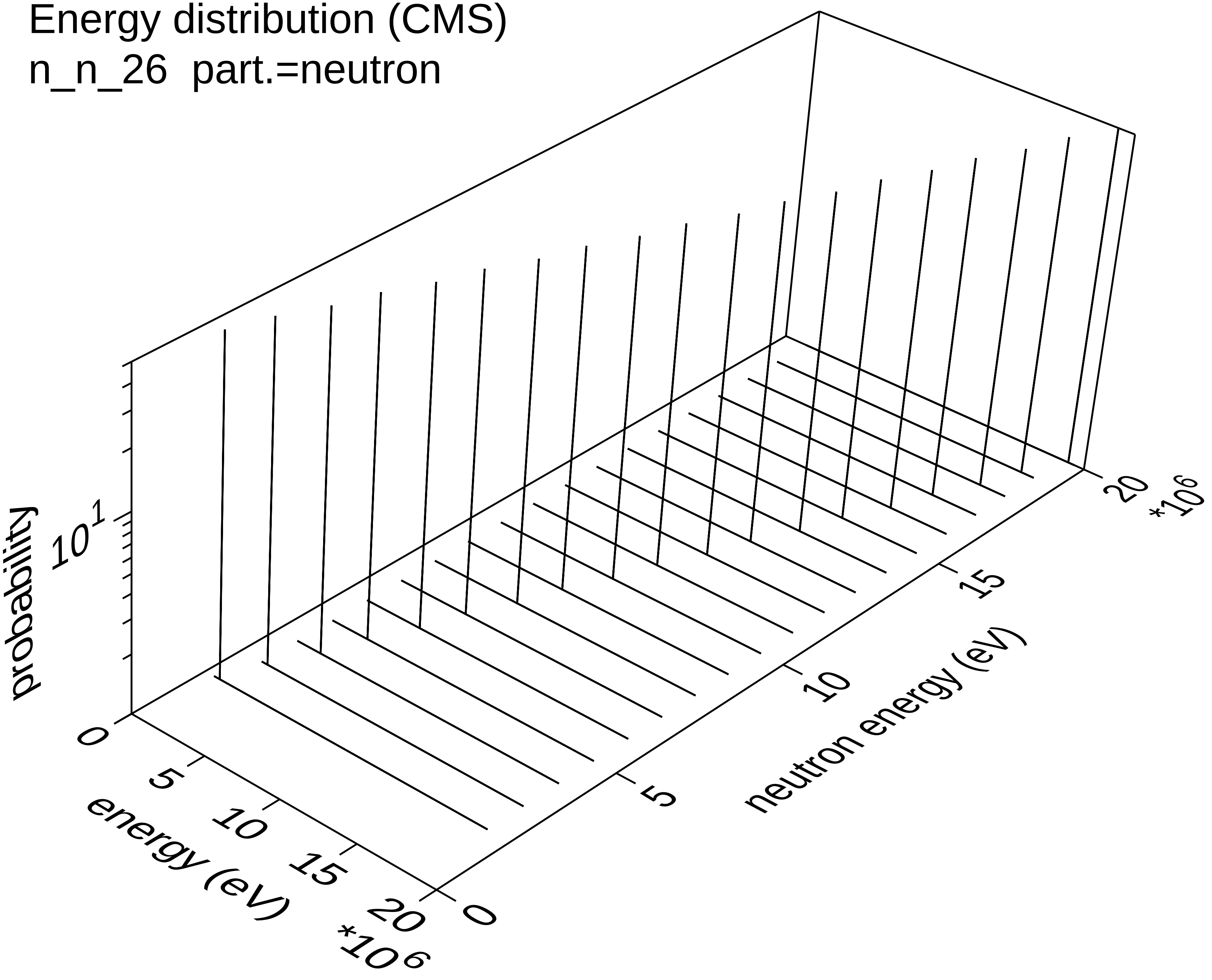


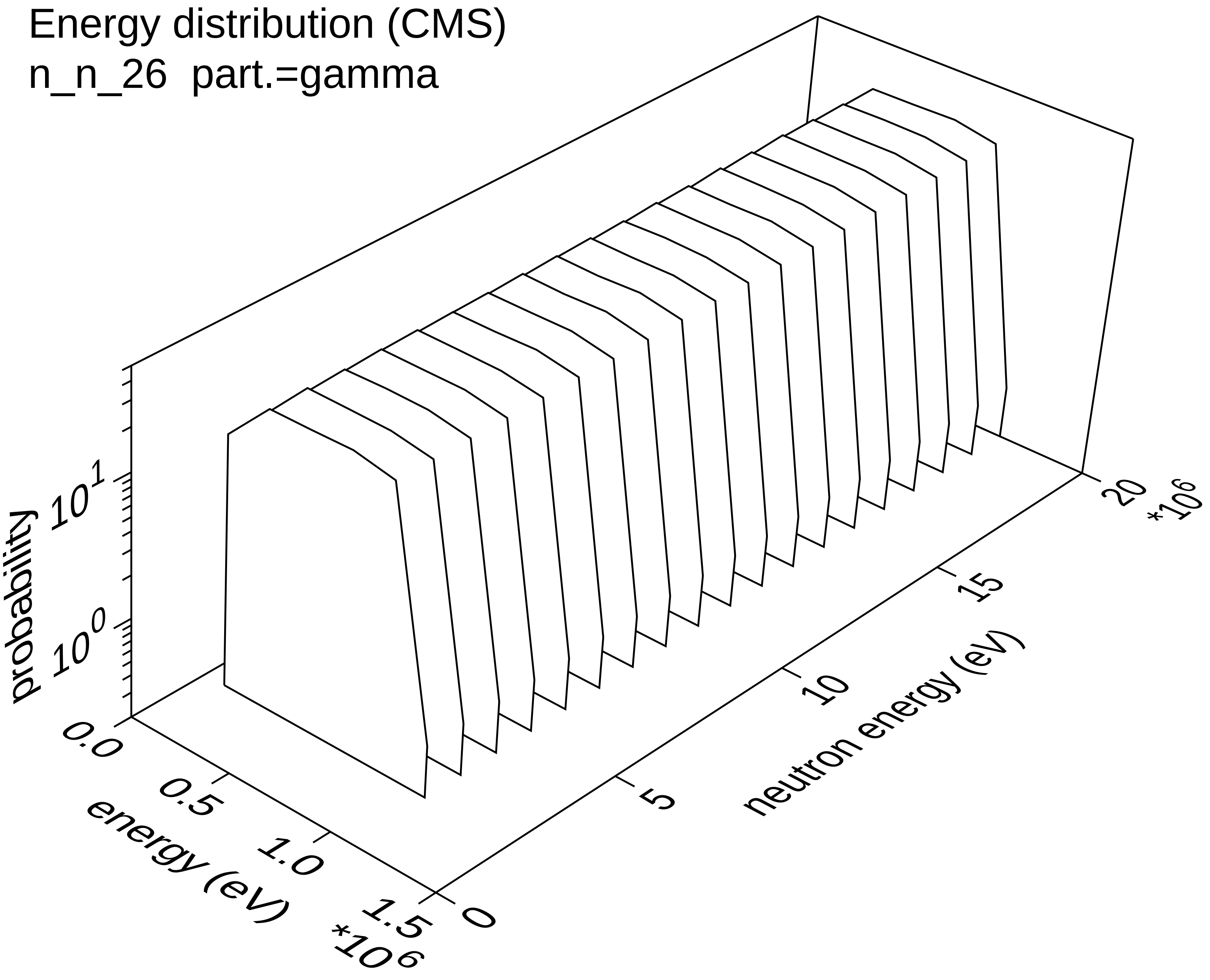

Energy distribution (CMS)
n_n_25 part.=neutron
probability
10^1
0
5
10
15
20
$*10^6$
energy (eV)
0
5
10
15
20
$*10^6$
neutron energy (eV)

Energy distribution (CMS)
n_n_25 part.=gamma



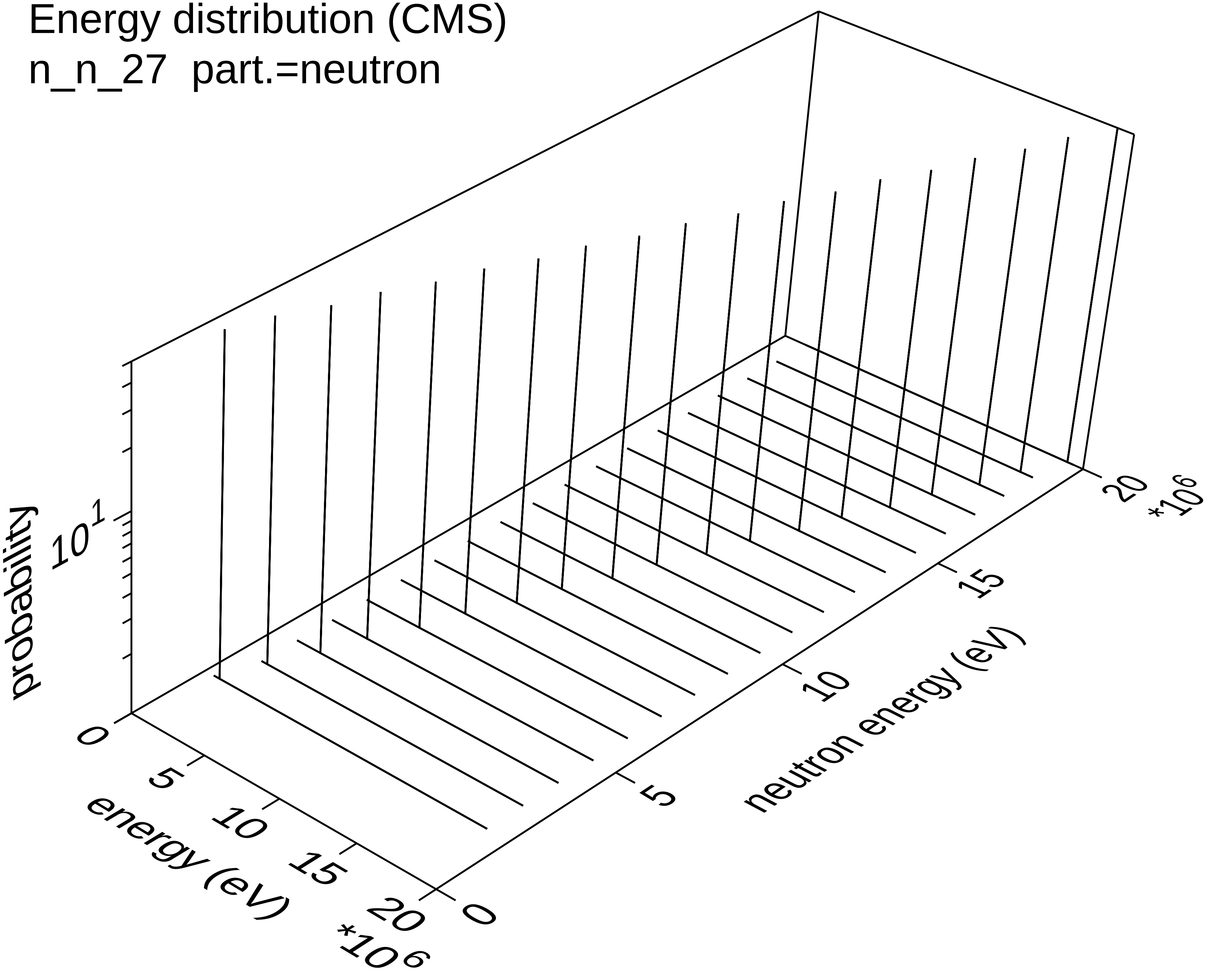
Energy distribution (CMS)
n_n_26 part.=neutron



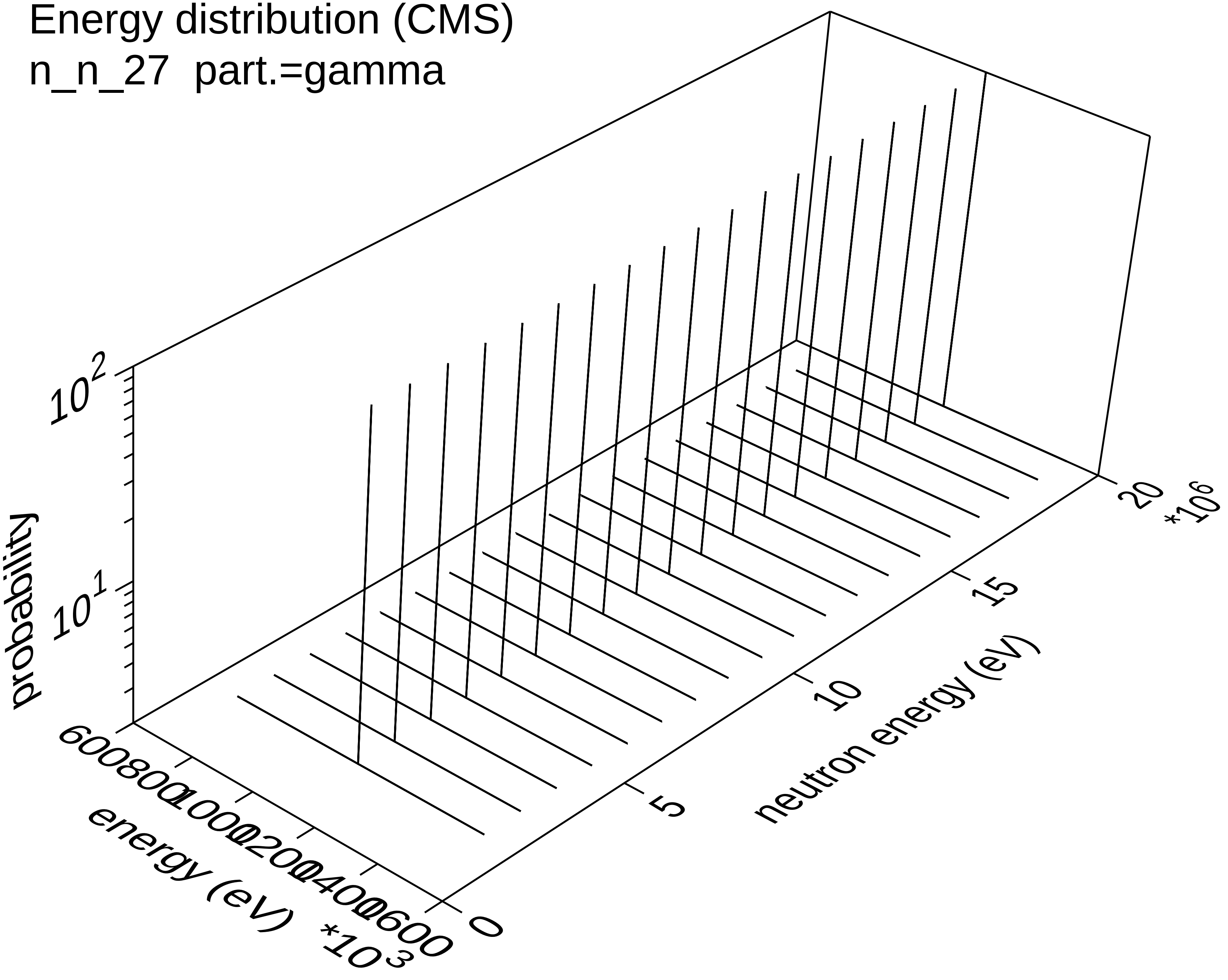


Energy distribution (CMS)
n_n_26 part.=gamma

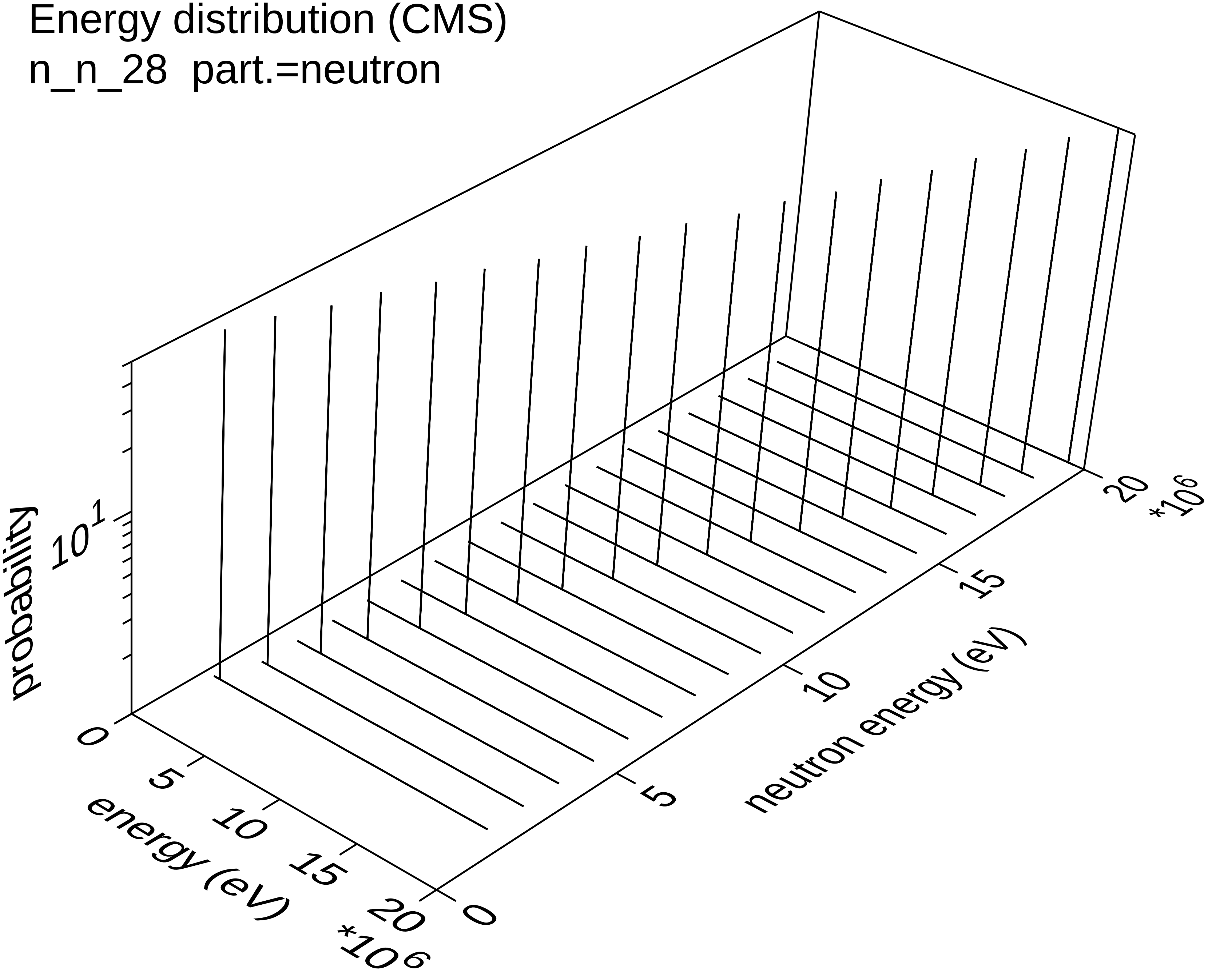
Energy distribution (CMS)
n_n_27 part.=neutron



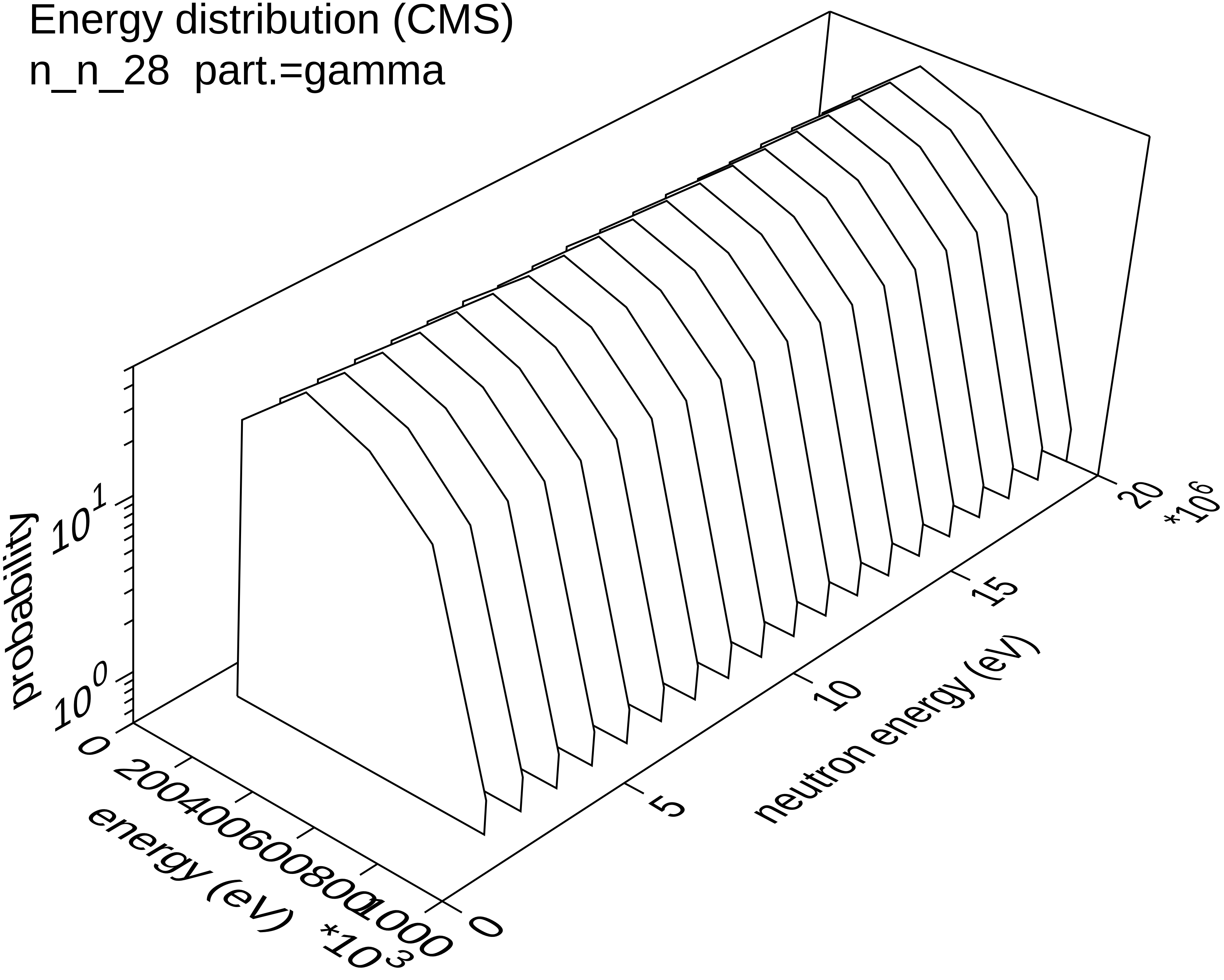
Energy distribution (CMS)
n_n_27 part.=gamma



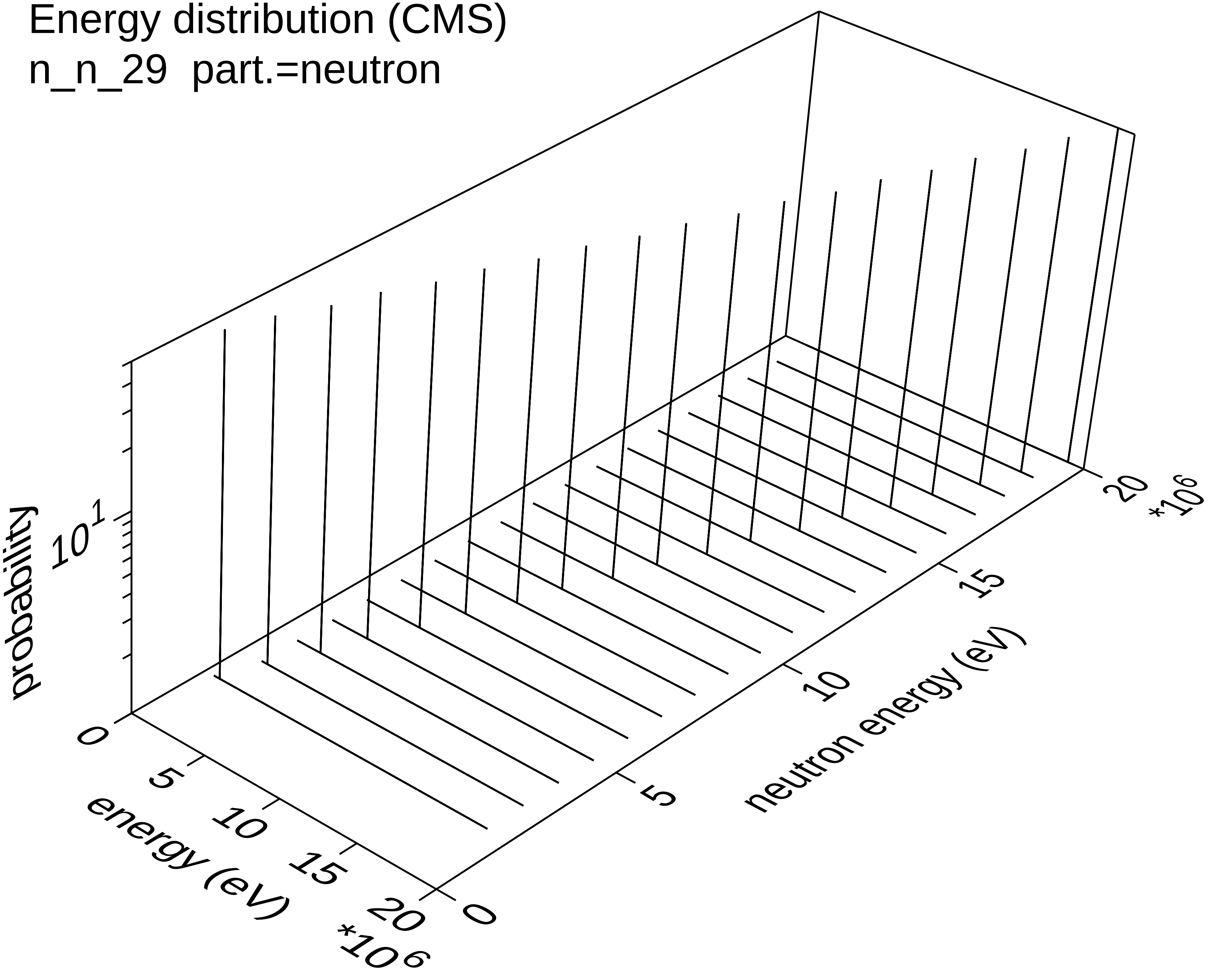
Energy distribution (CMS)
n_n_28 part.=neutron

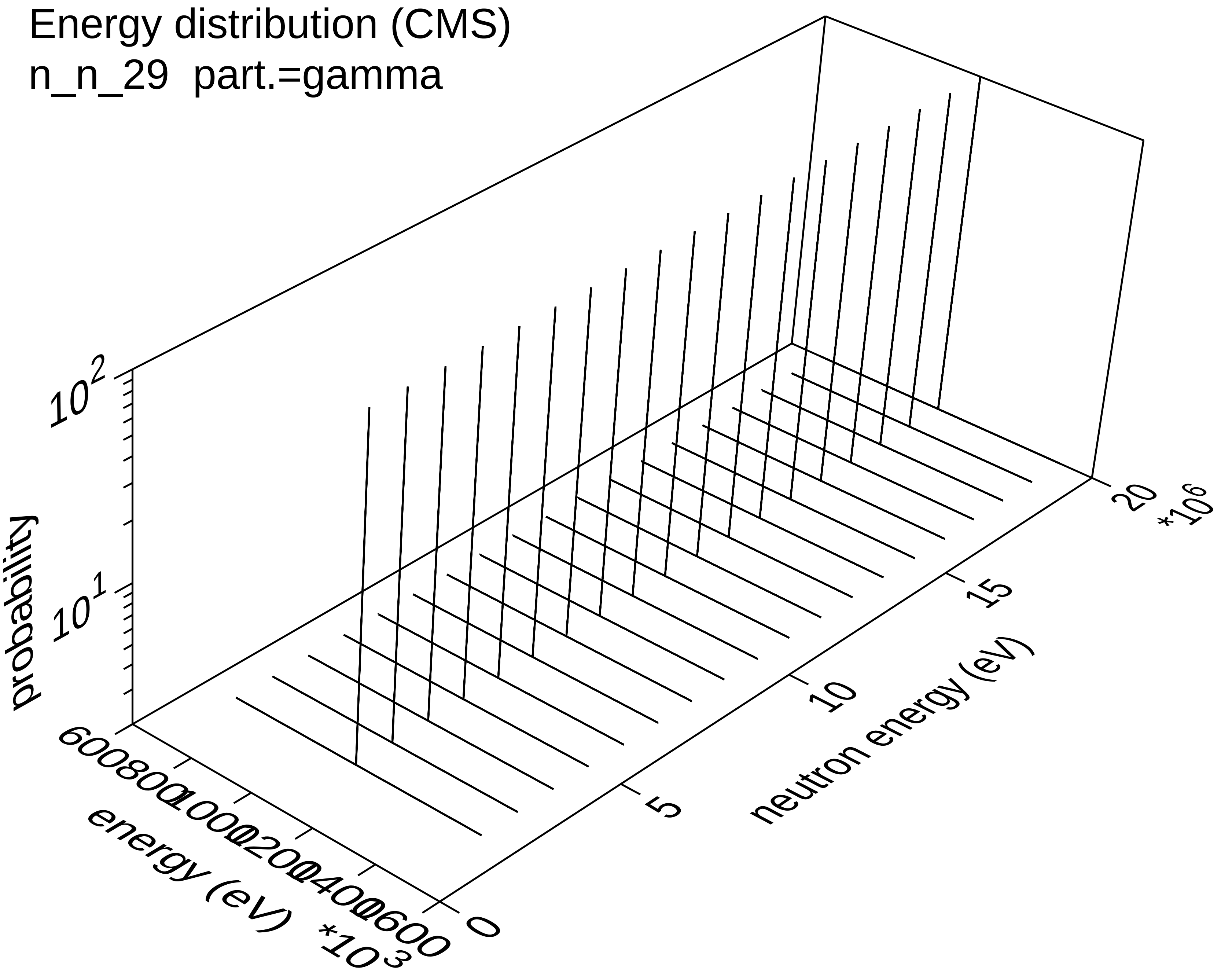


Energy distribution (CMS)
n_n_28 part.=gamma



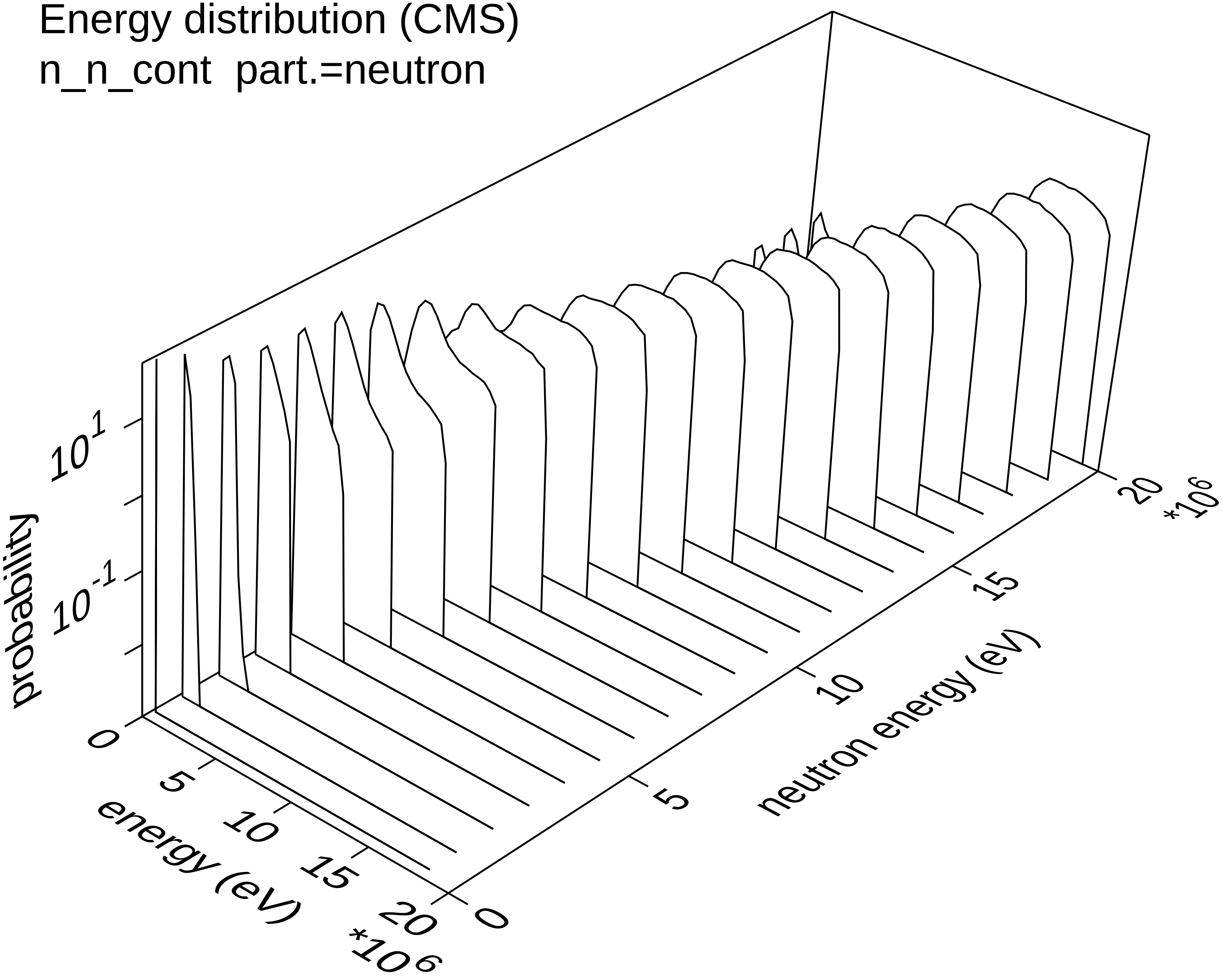
Energy distribution (CMS)
n_n_29 part.=neutron



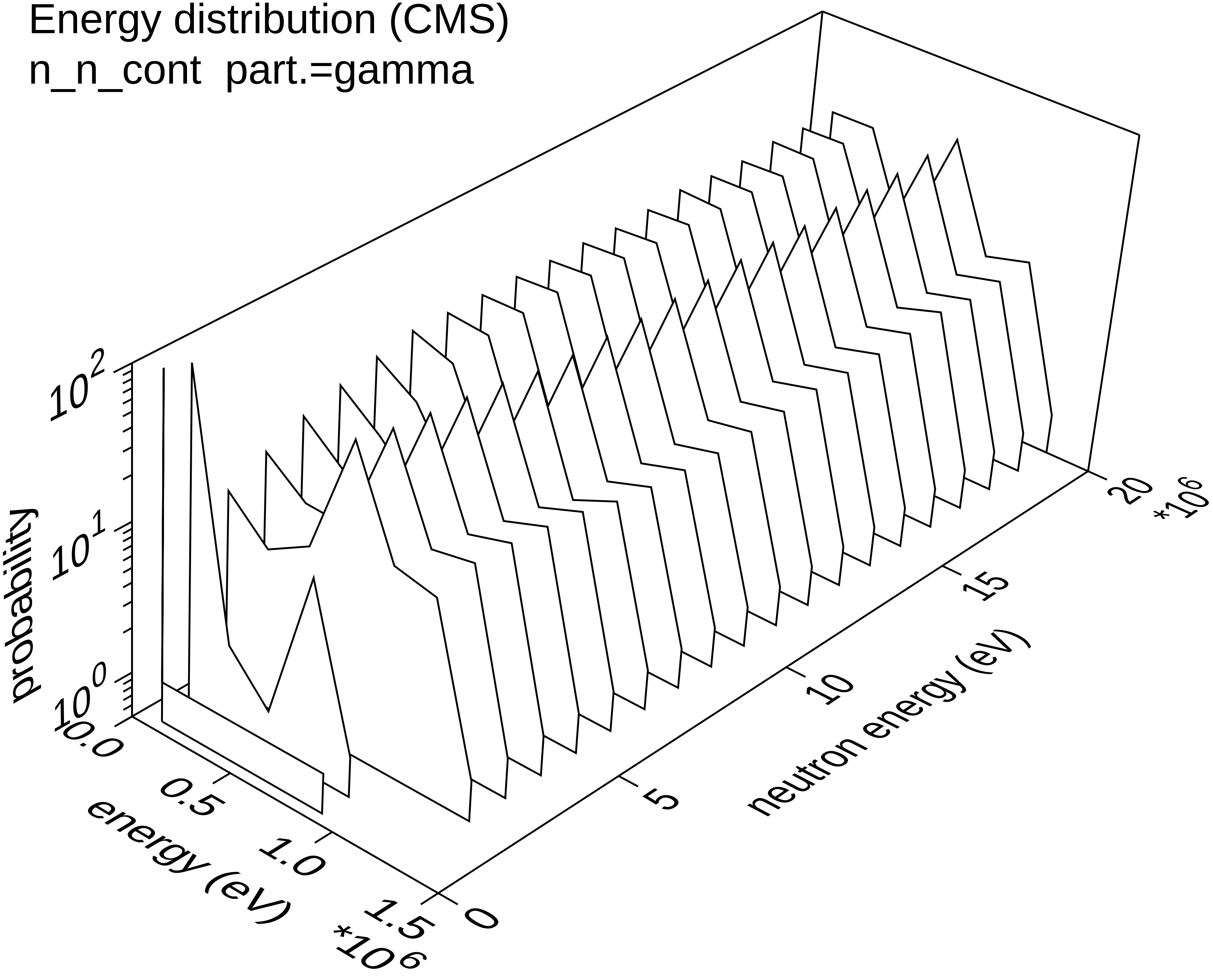


Energy distribution (CMS)
n_n_29 part.=gamma

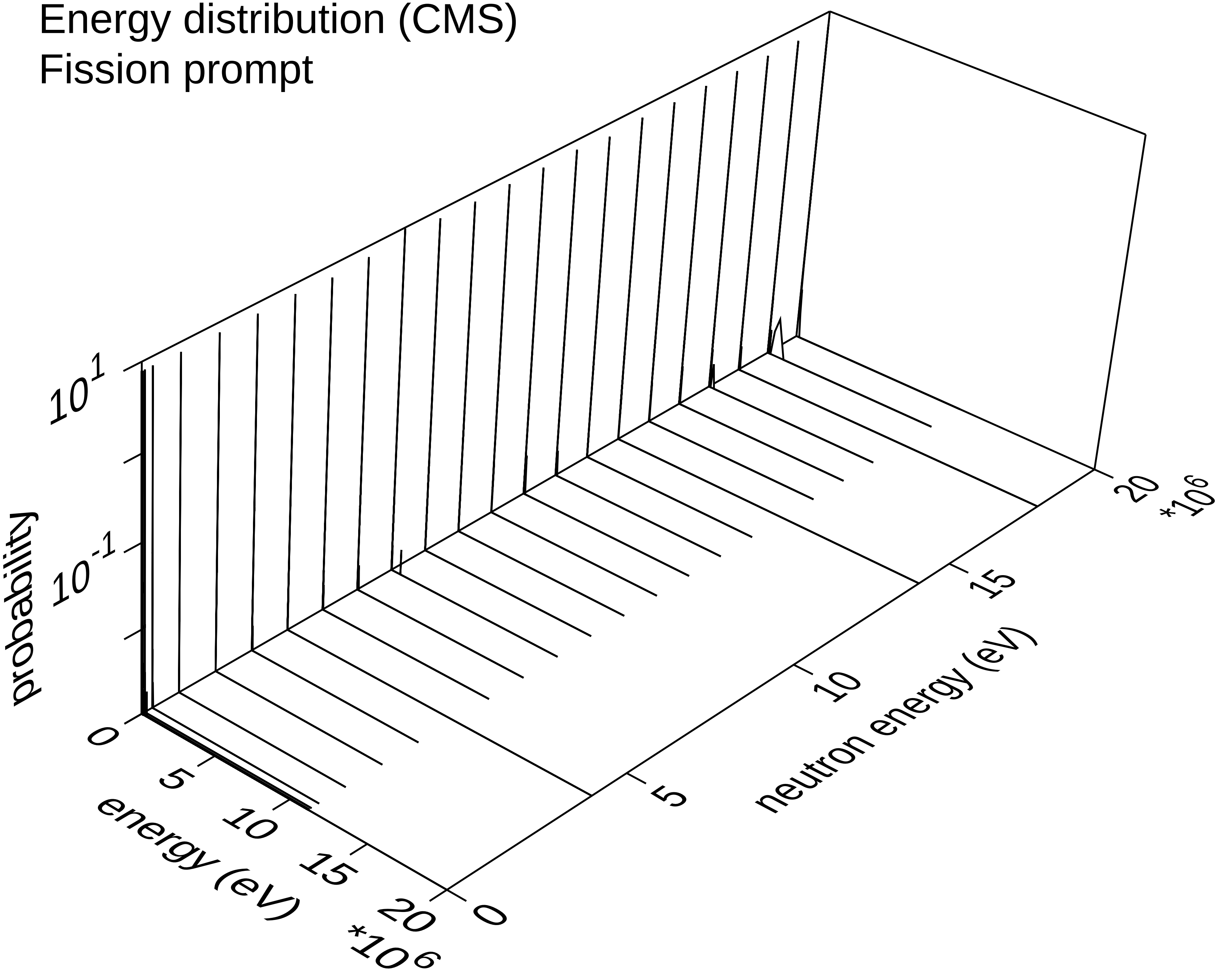
Energy distribution (CMS)
n_n_cont part.=neutron

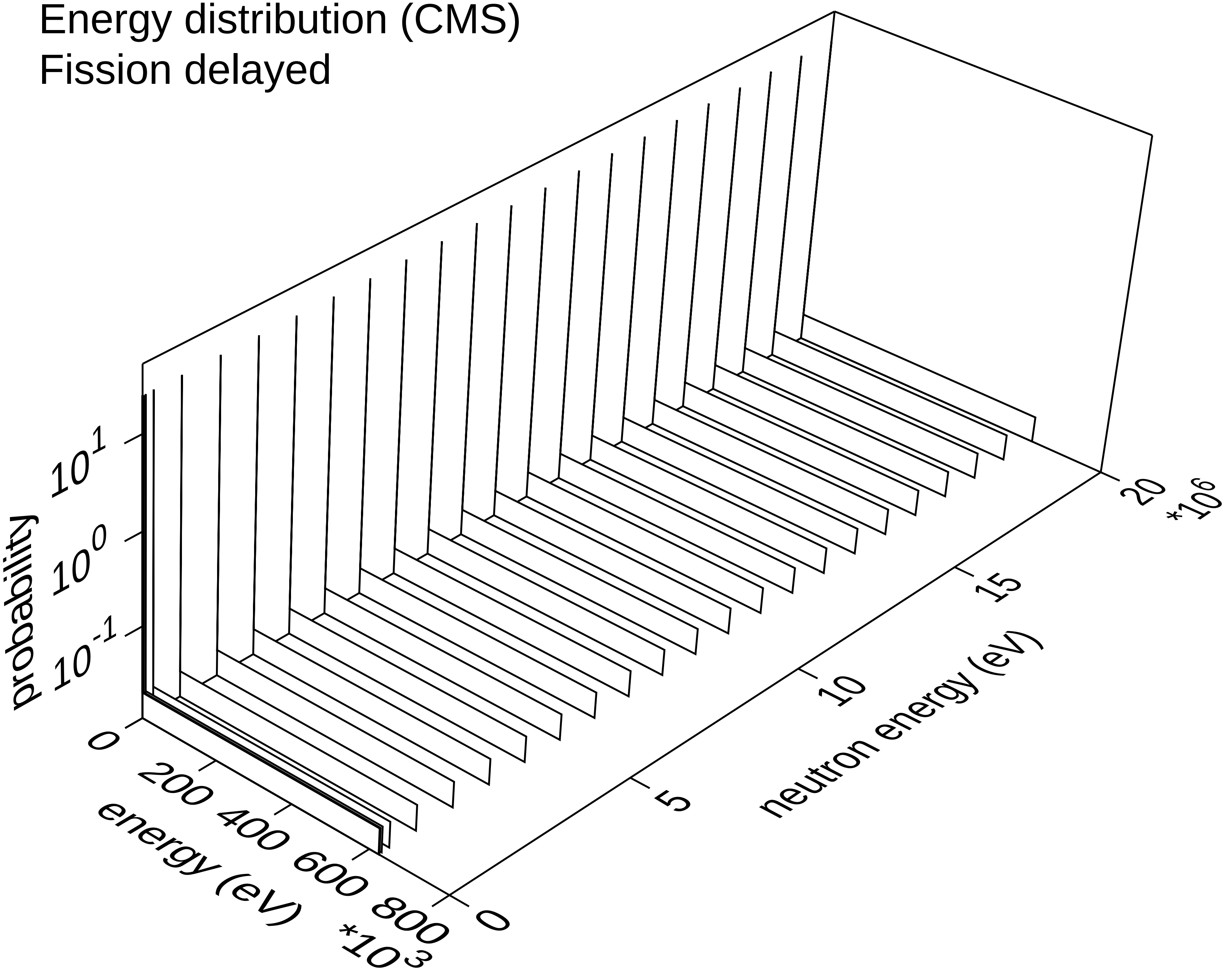


Energy distribution (CMS)
n_n_cont part.=gamma



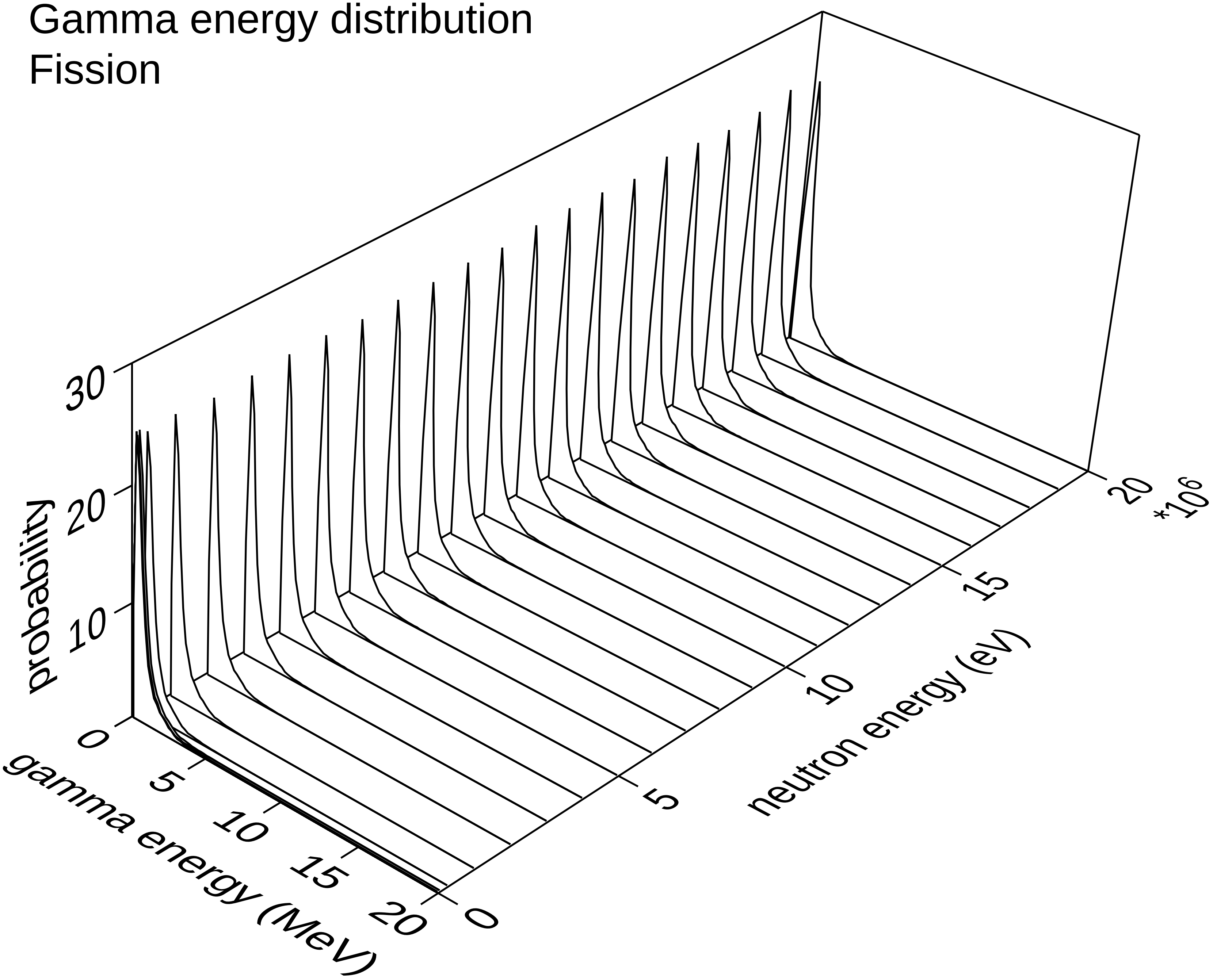
Energy distribution (CMS)
Fission prompt

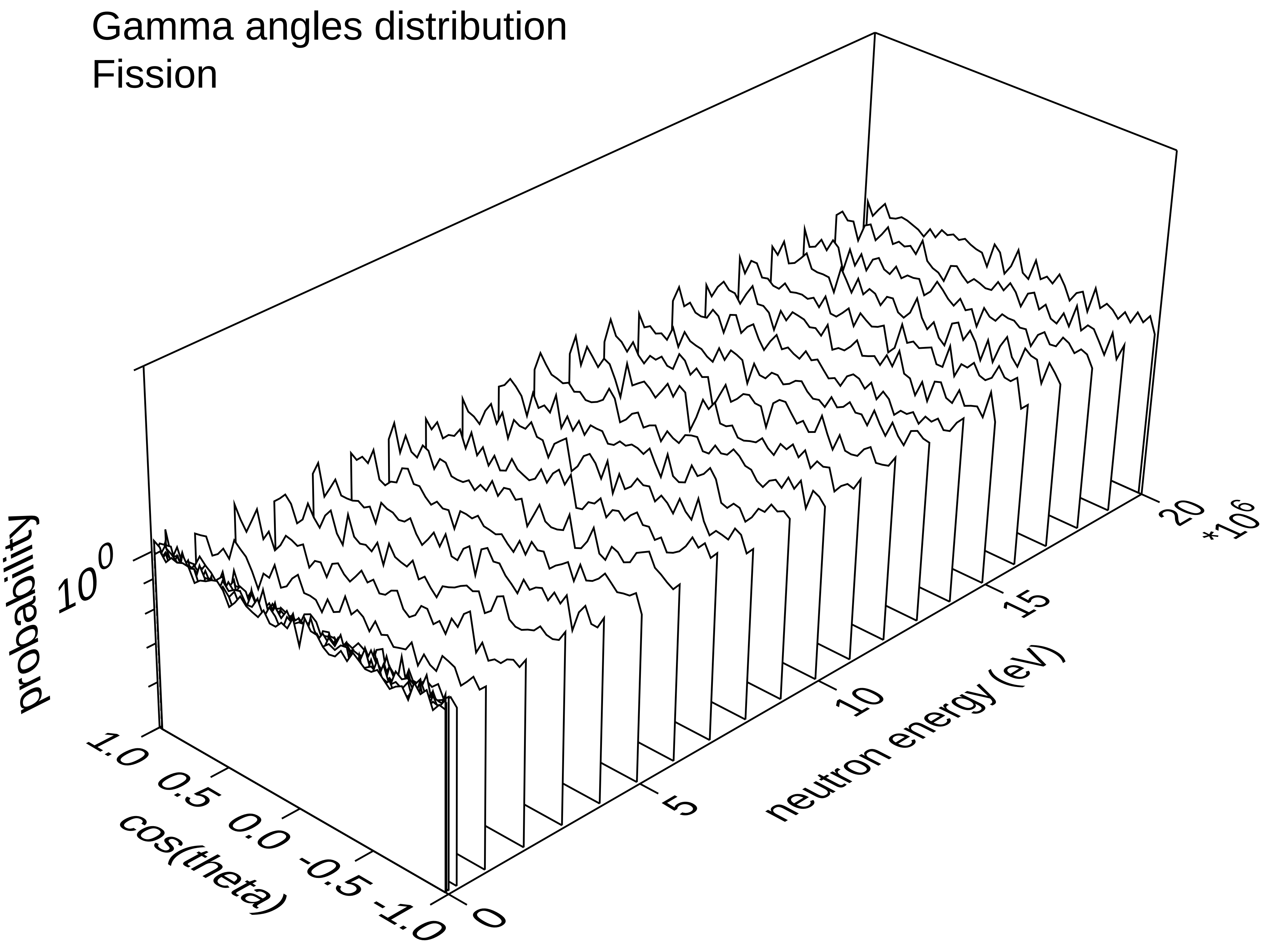




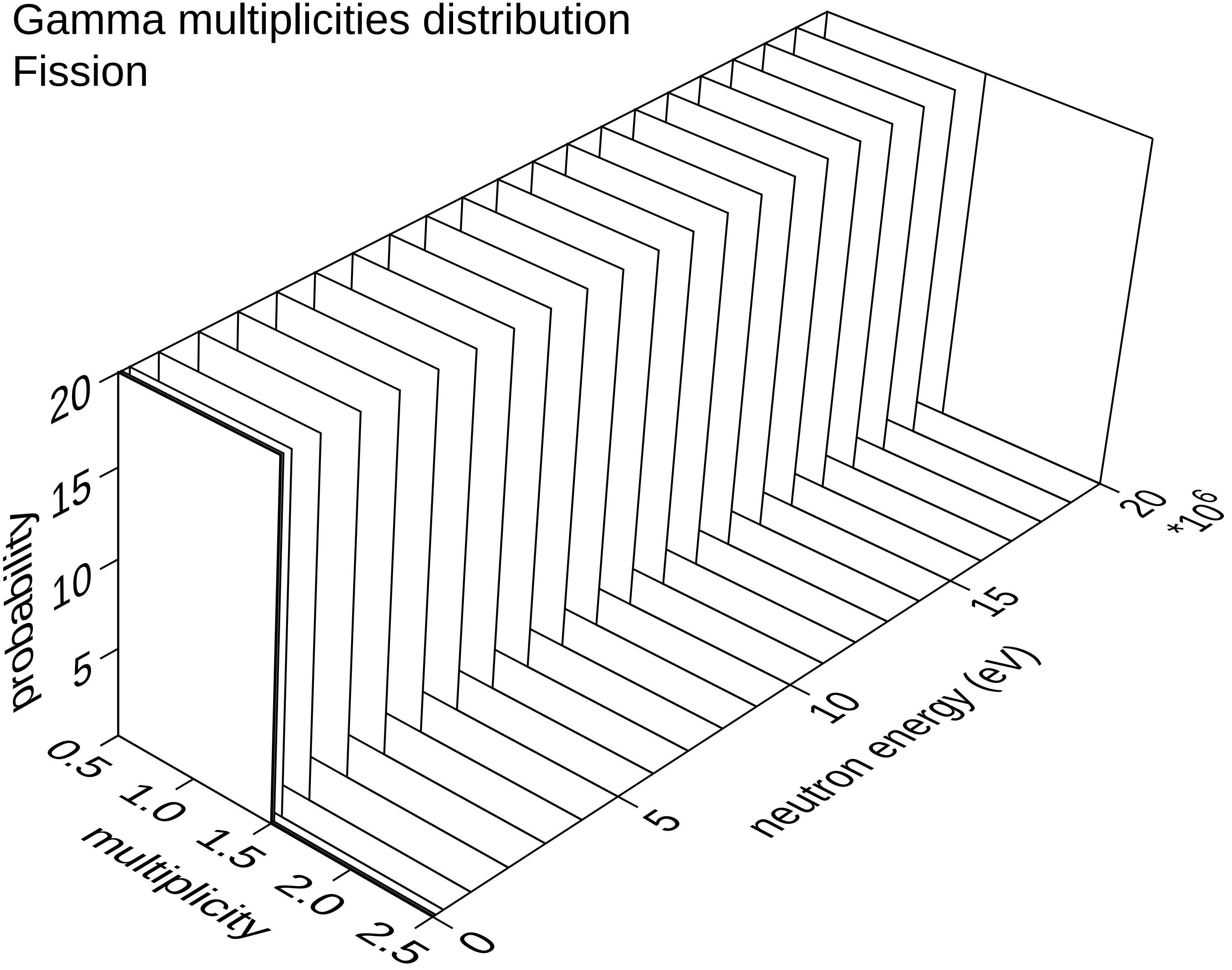
Energy distribution (CMS)
Fission delayed

Gamma energy distribution
Fission





Gamma angles distribution
Fission
probability
10^0
1.0
0.5
0.0
-0.5
-1.0
cos(theta)
0
5
10
15
20
*10^6
neutron energy (eV)



Gamma multiplicities distribution
Fission