Main Cross Sections

Figure: Plot of cross section (barn) versus neutron energy (eV), showing Elastic (red), Capture (green), and Inelastic (blue) cross sections. The y-axis ranges from 10^{-7} to 10^{5} barn, and the x-axis ranges from 10^{-5} to 10^{7} eV.
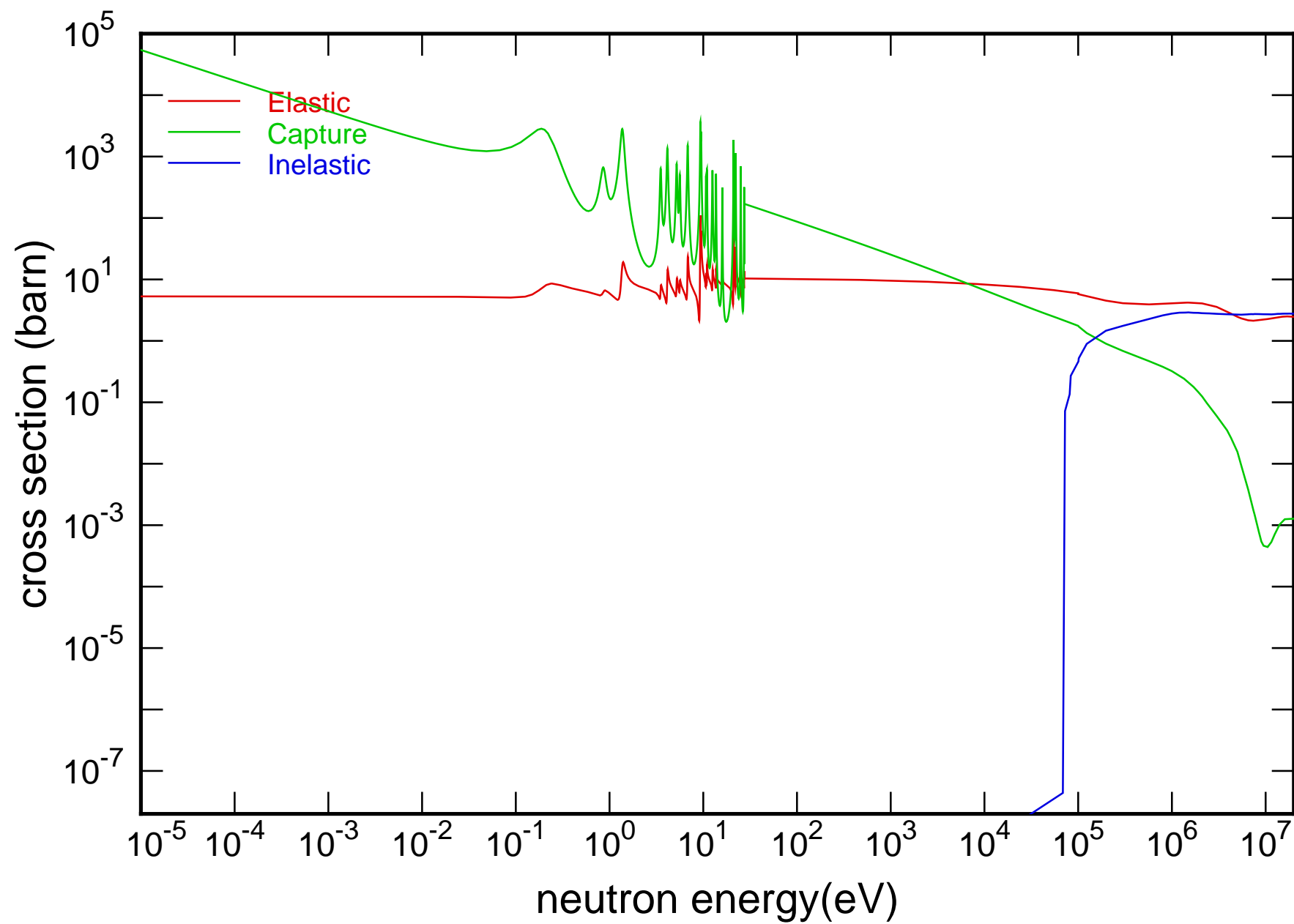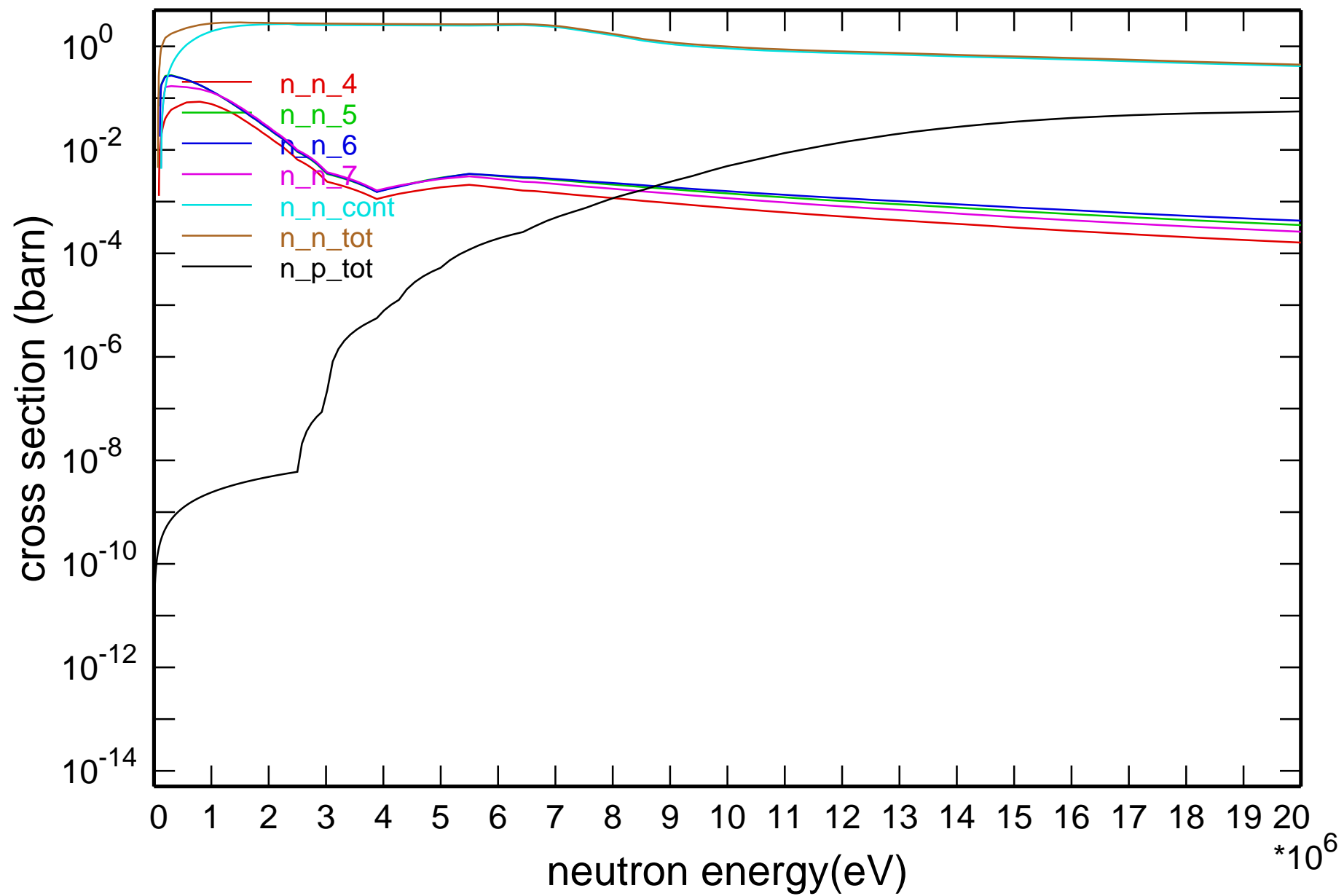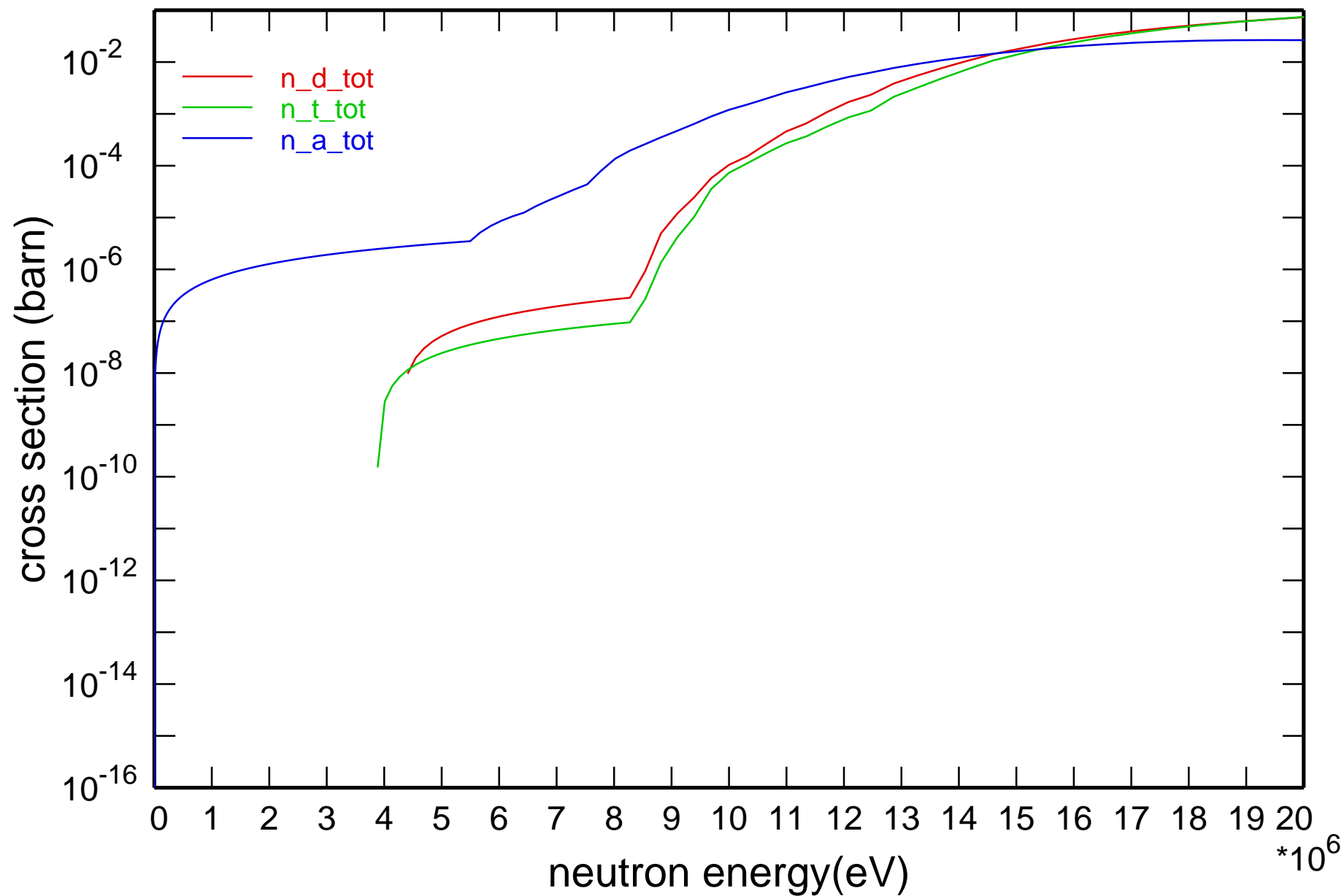
Cross Section

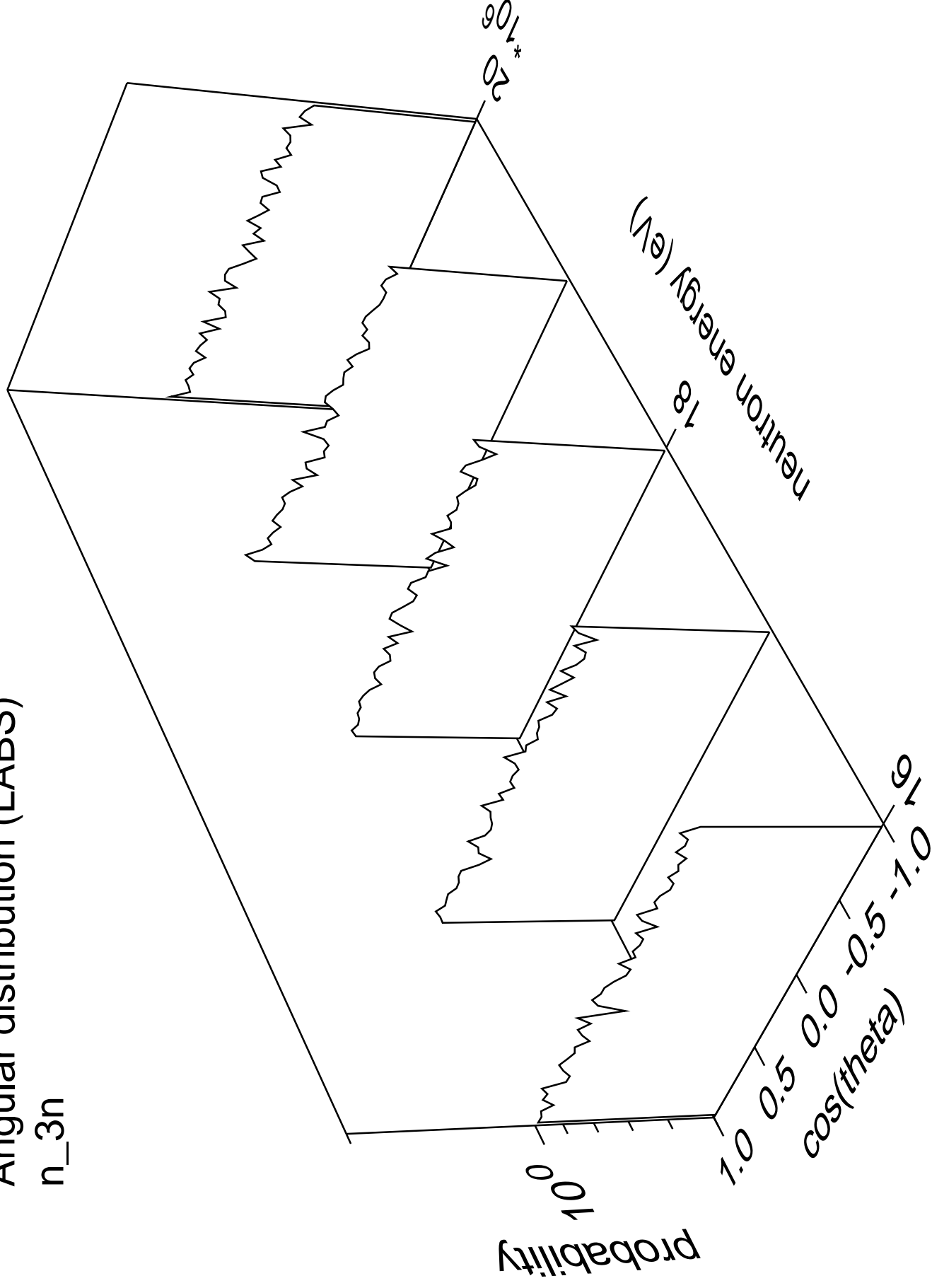Cross Section

Cross Section

Angular distribution (CMS)
Elastic
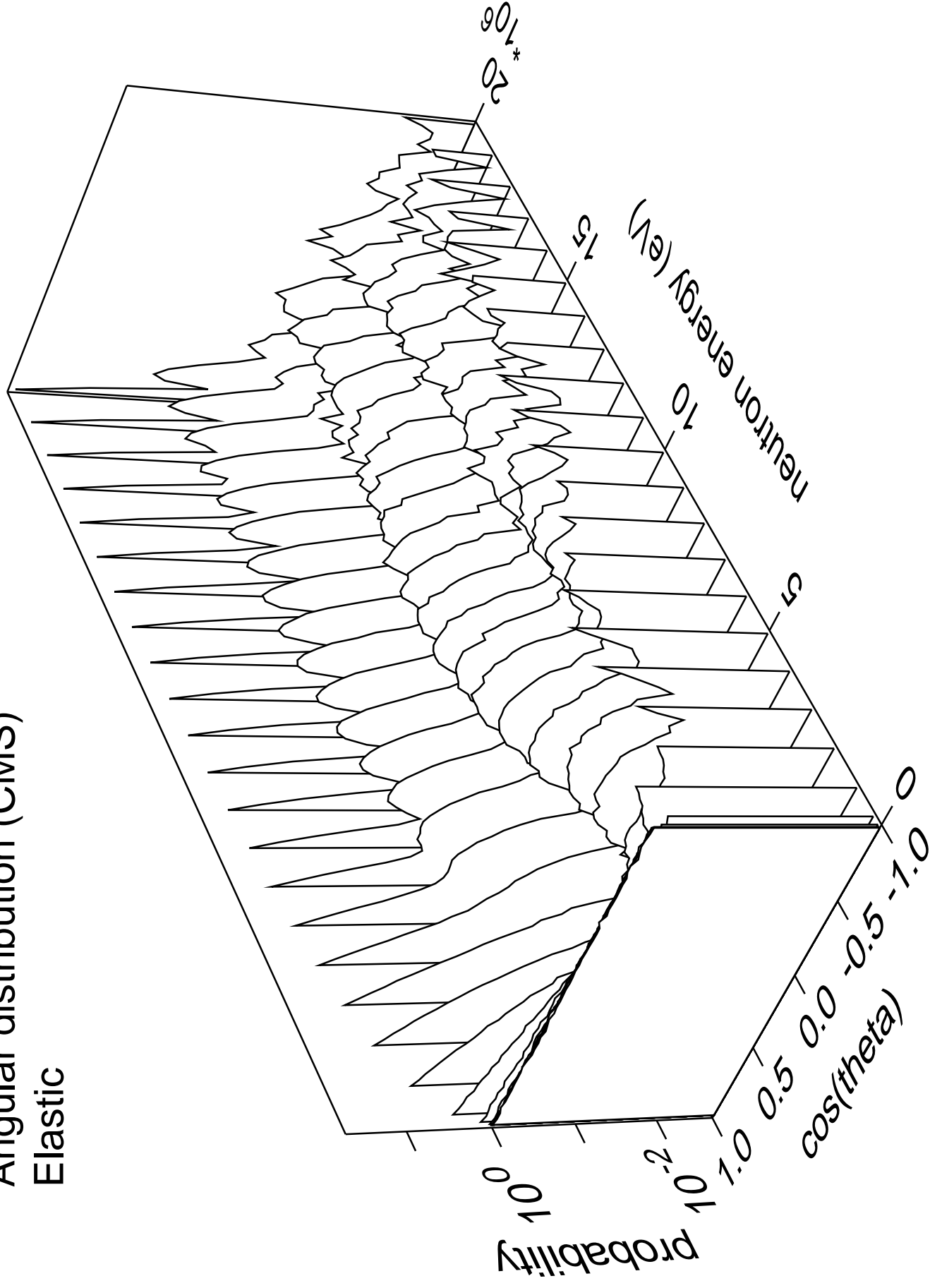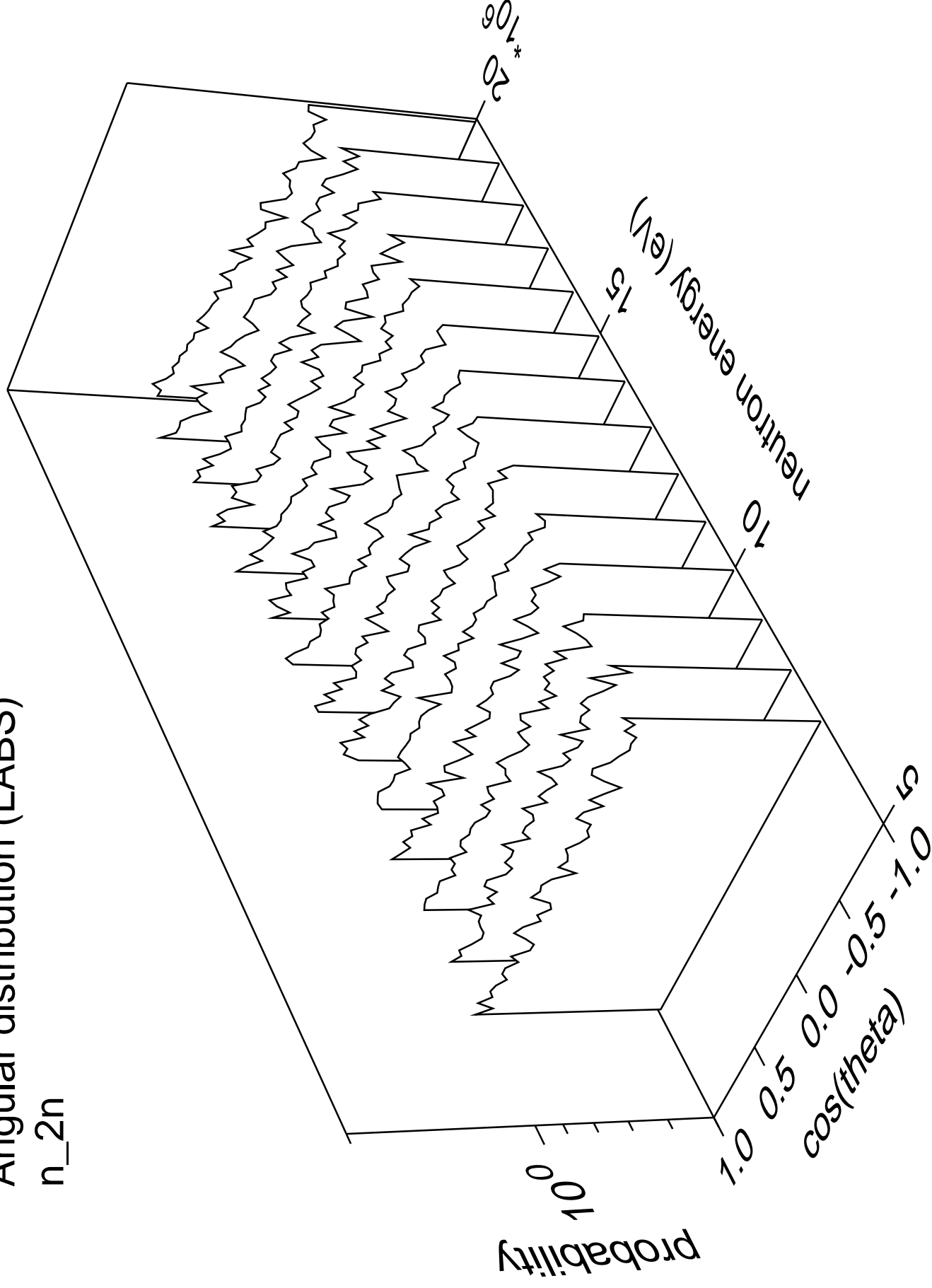
neutron energy (eV)

cos(theta)

probability

Angular distribution (LABS)
n_2n

probability

neutron energy (eV)

cos(theta)

Angular distribution (LABS)
n_3n

neutron energy (eV)

cos(theta)

probability

10^0

20 *10⁶

18

16

1.0 0.5 0.0 -0.5 -1.0

Angular distribution (LABS)
n_na

probability

neutron energy (eV)

cos(theta)
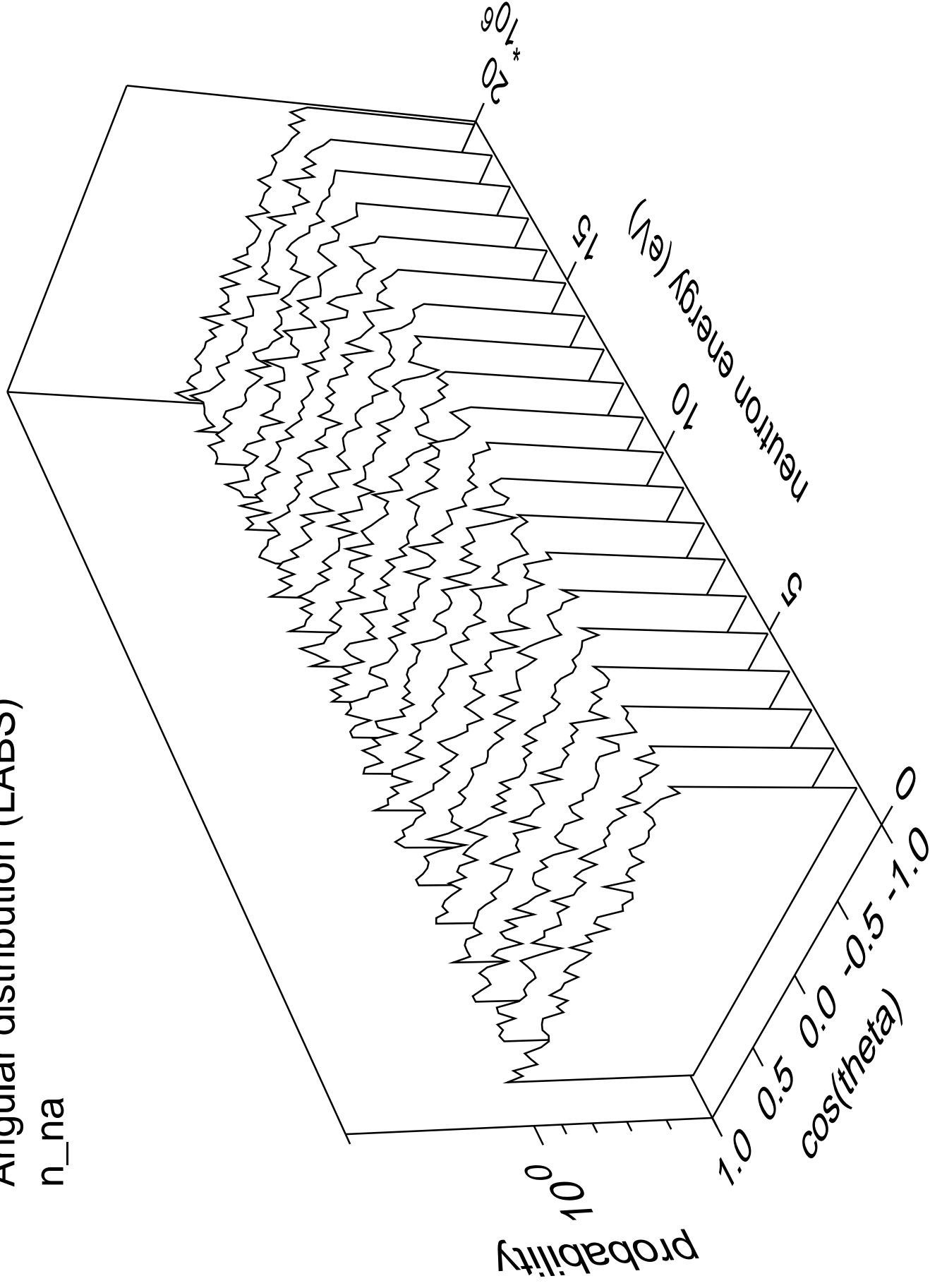
Angular distribution (LABS)
n_np

Angular distribution (CMS)
n_n_1
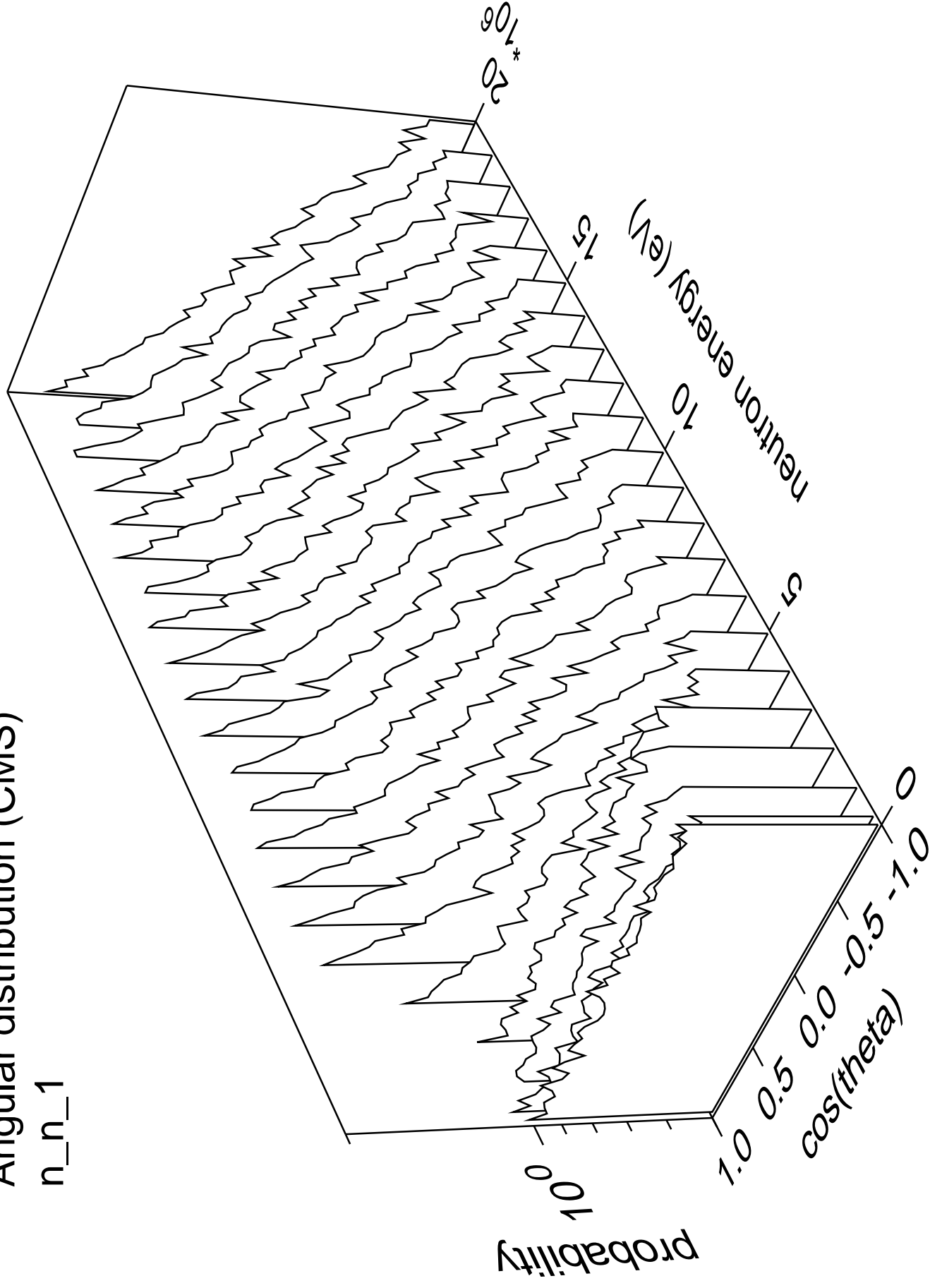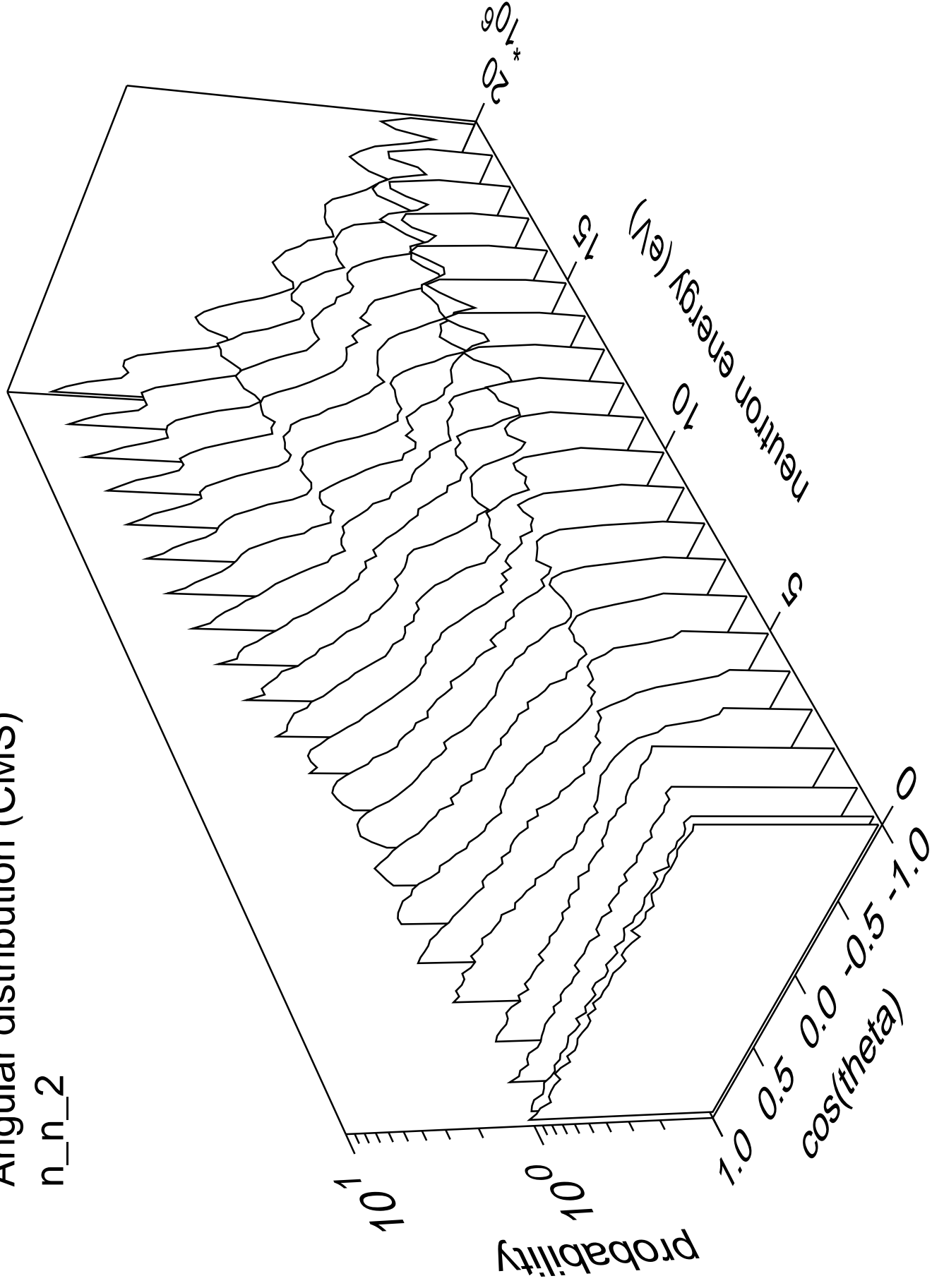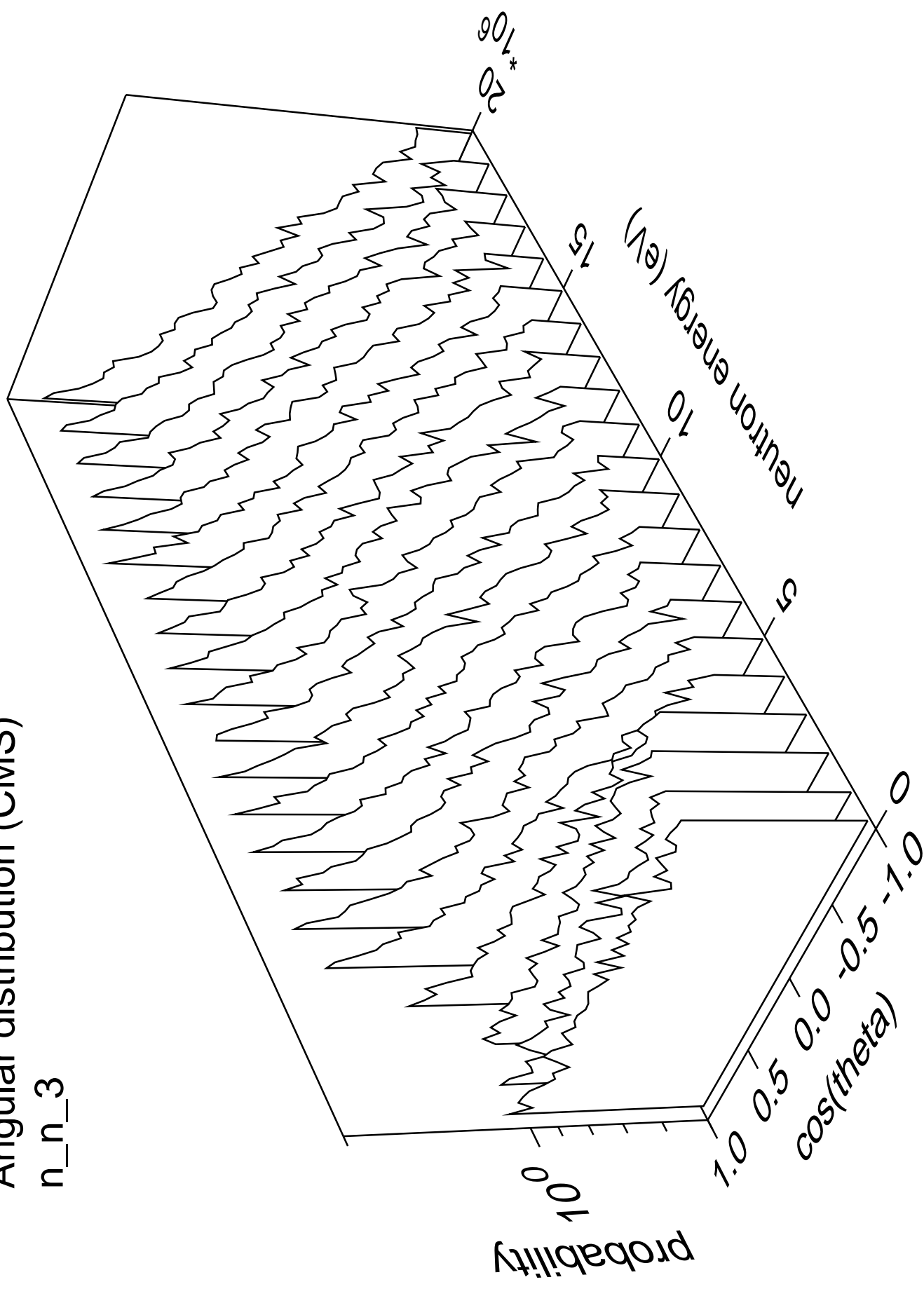
probability

cos(theta)

neutron energy (eV)

*10^6

Angular distribution (CMS)
n_n_2

neutron energy (eV)

cos(theta)

probability

Angular distribution (CMS)
n_n_3

probability

neutron energy (eV)

cos(theta)

Angular distribution (CMS)
n_n_4

probability

neutron energy (eV)

cos(theta)

*10⁶

Angular distribution (CMS)
n_n_5

probability

cos(theta)

neutron energy (eV)

Angular distribution (CMS)
n_n_6

probability

neutron energy (eV)

cos(theta)

Angular distribution (CMS)
n_n_7

probability

neutron energy (eV)

cos(theta)

Angular distribution (LABS)
n_n_cont

probability

10⁰

neutron energy (eV)

20 *10⁶

15

10

5

0

cos(theta)

1.0 0.5 0.0 -0.5 -1.0

Energy distribution (LABS)
n_2n

probability

energy (eV)

neutron energy (eV)
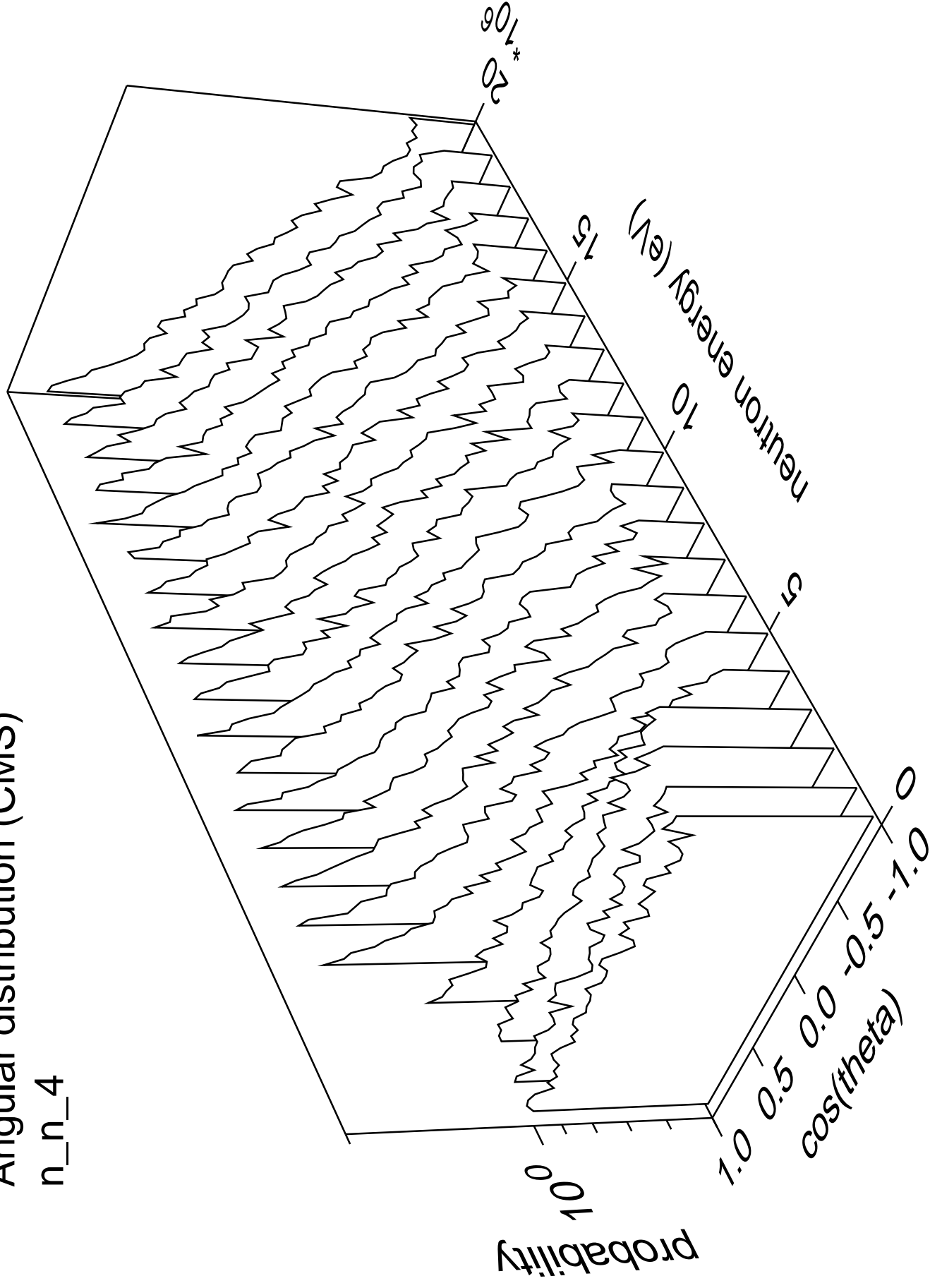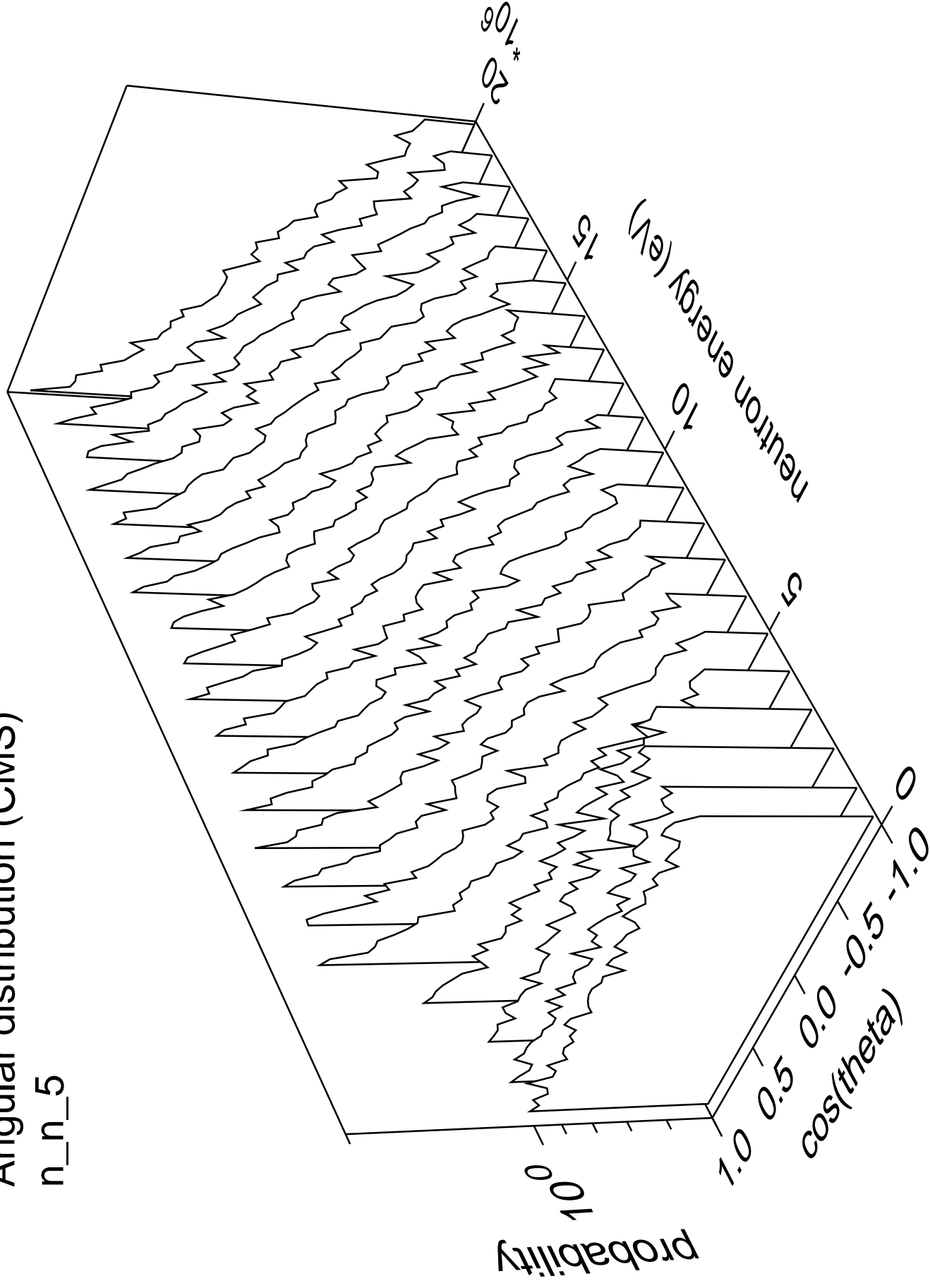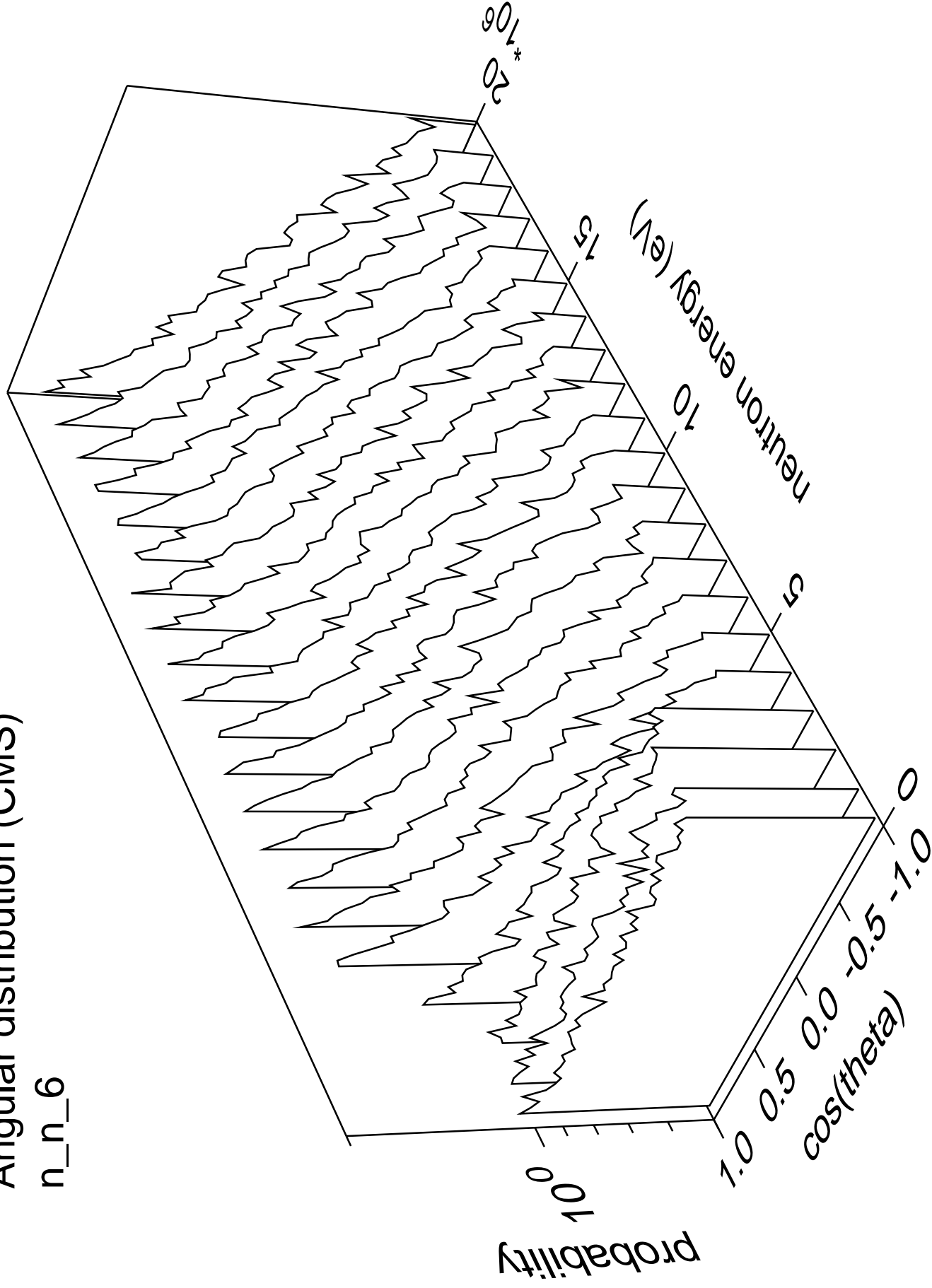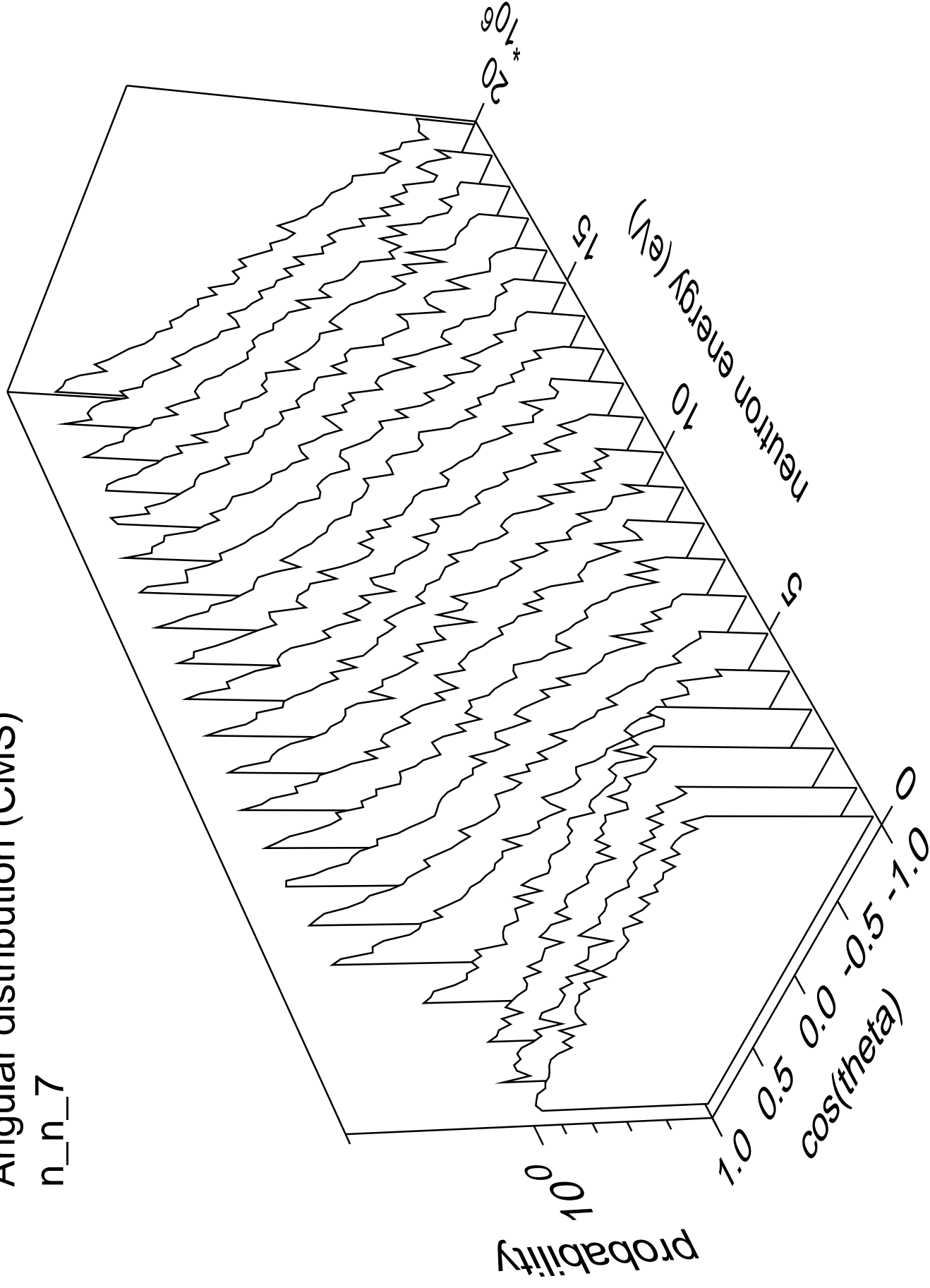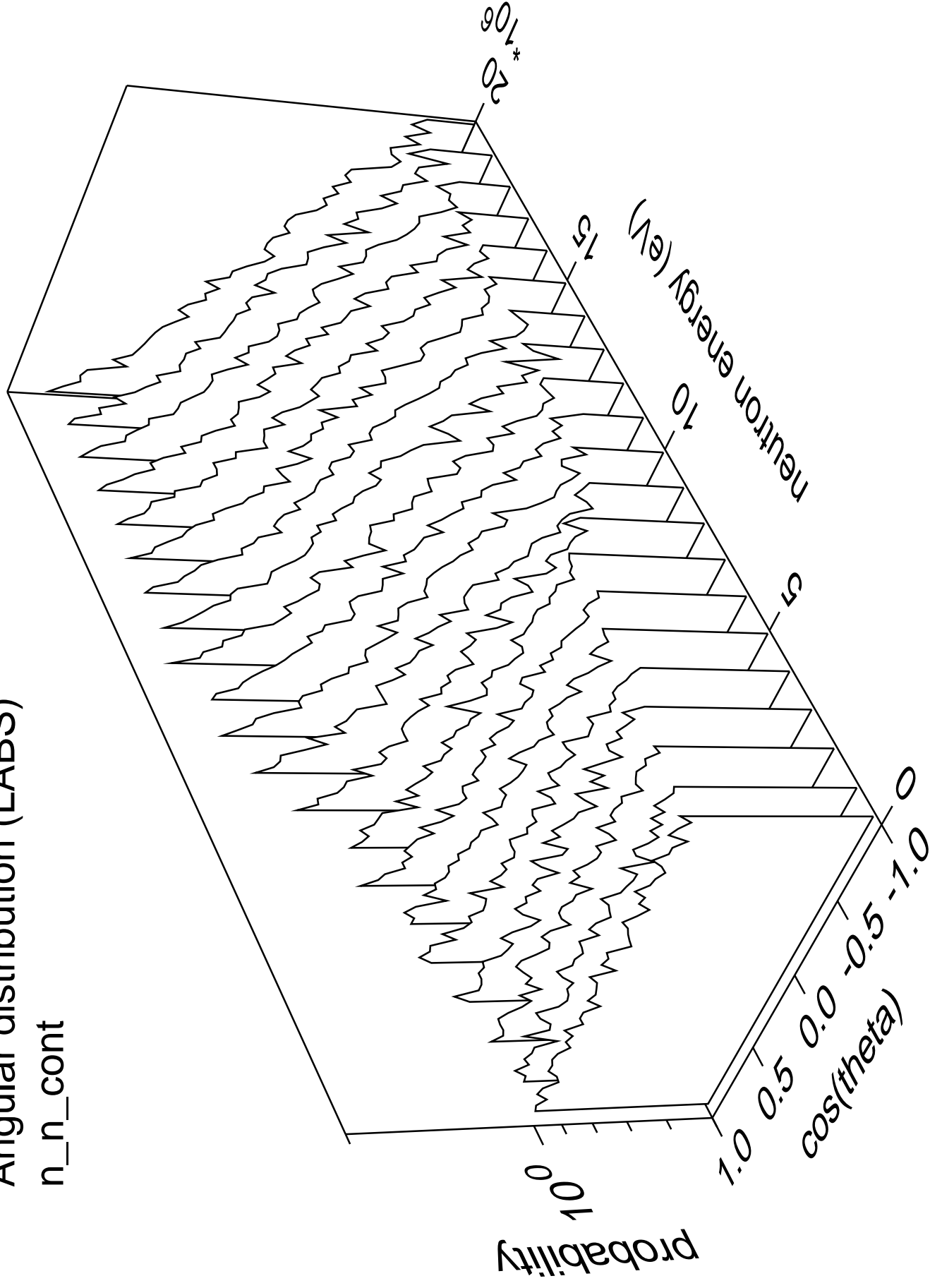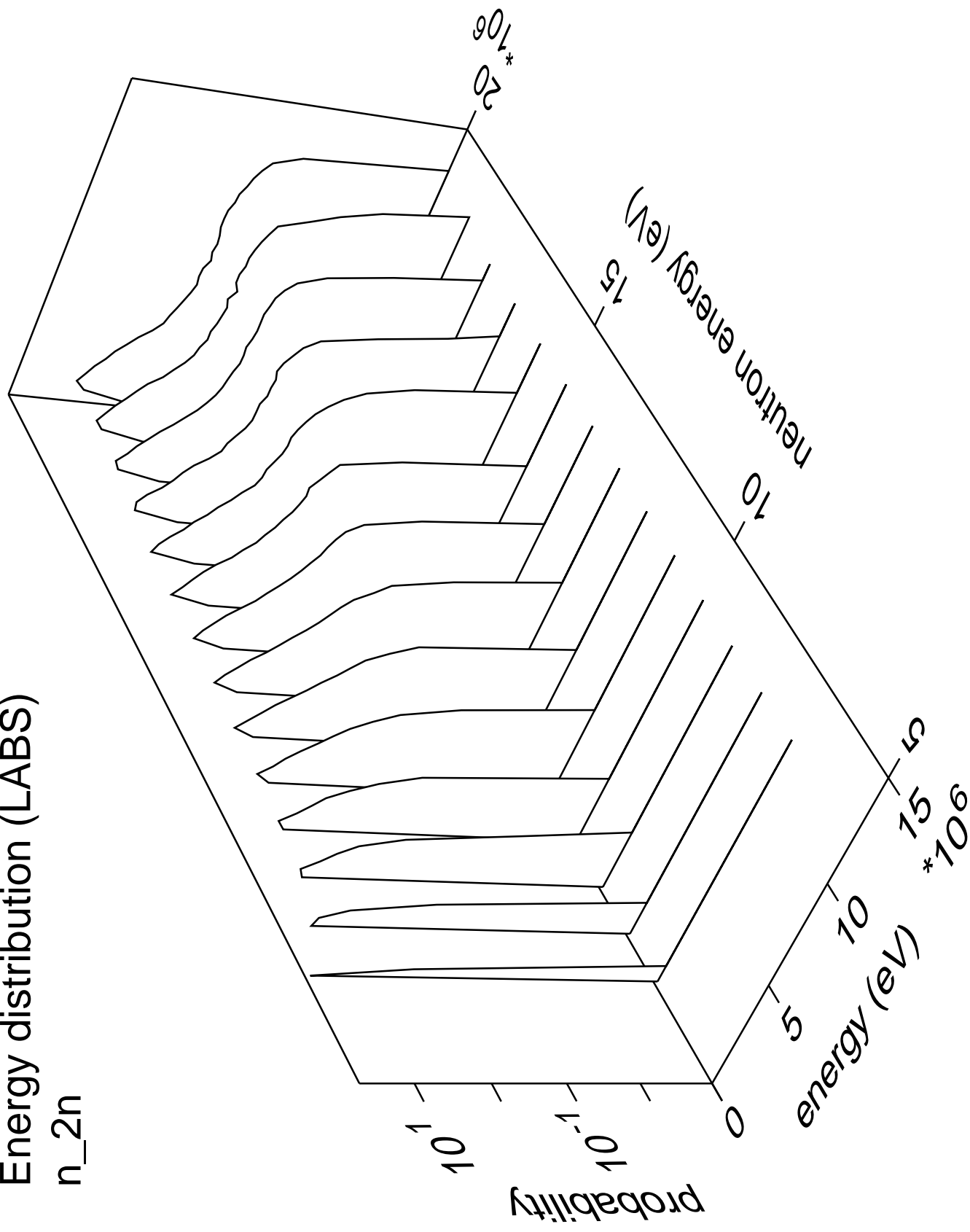
Energy distribution (LABS)
n_3n

Energy distribution (LABS)
n_na

probability

10^1

10^{-1}

energy (eV)

0

5

10

15   $*10^6$

neutron energy (eV)

5

10

15

20   $*10^6$

Energy distribution (LABS)
n_np

probability

10^1

10^{-1}

energy (eV)

0
2
4
6
8
10   *10⁶

5

10

15

20   *10⁶

neutron energy (eV)

Energy distribution (LABS)
n_n_cont

probability

10⁰
10⁻²

energy (eV) *10⁶

neutron energy (eV)