



1. Problem 10.1: obtain the energy eigenvalues for the **odd parity solutions only** using the shooting method. Compare with the exact solution. The code has the results for the even-parity solutions.
2. (10 points) Problem 10.2 using the shooting method.
3. Problem 10.7 using **the shooting** only for  $l = 0$ .
  - (a) (10 points) Obtain the two first eigenvalues.
  - (b) (10 points) Obtain the corresponding radial probability distributions and compare them with the exact results in one plot.