HW 22 due 2019-12-02

1. Derive (10.22) from (10.21) and (10.17)

2. Using the formula for E_n $(n = n_r + l + 1)$ find the distance outside of which $V(r) = -\frac{Ze^2}{r}$ is $> E$. This distance is the classical turning point.

3. Use (10.43) to do Townsend 10.4. You will need the result of 2.

4. Re-do Townsend 10.4, but calculate the probability to be inside the classical turning point. Check your work by making sure that your answers to problems 3 and 4 add up to 1.