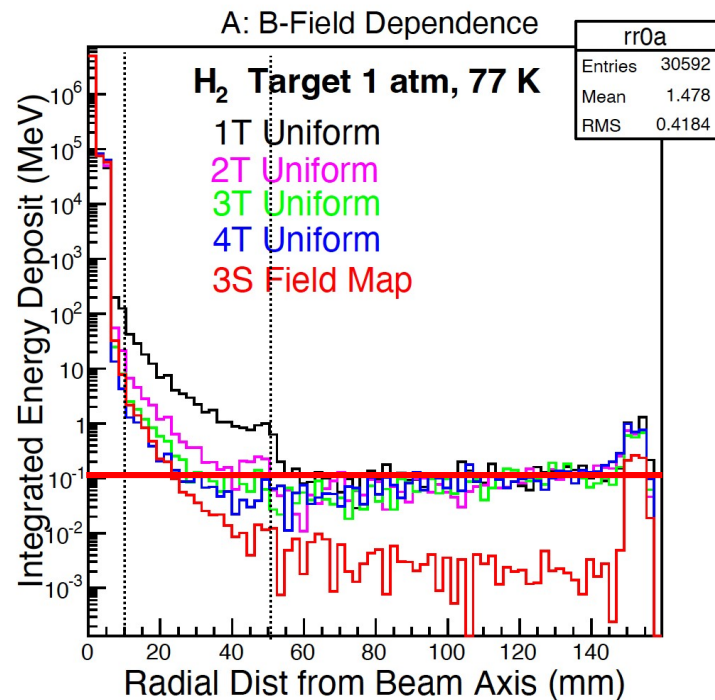
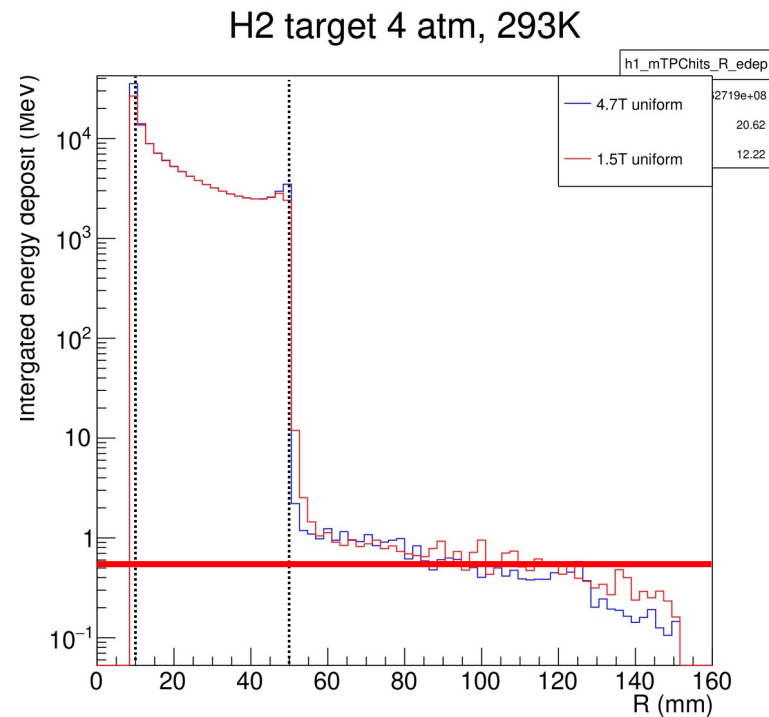


Energy deposited in mTPC



0.15 atm 4He
 $d_{\text{H}_2} = 0.084 \times 10^{-3} \times 293 / 77 \text{ g/cm}^3$
 8×10^8 electrons



0.15atm 4He
 $d_{\text{H}_2} = 0.084 \times 10^{-3} \times 4 \text{ g/cm}^3$
Normalized to 8×10^8 electrons

Energy deposited in mTPC

Using 0.15 atm 4He in mTPC, and normalizing to 8×10^8 electrons for both simulations:

- * in mTPC gas, total energy deposit by Moller electrons differs by less than 1 order of magnitude between both simulations;
- * There is still a large discrepancy of energy deposit in the inner volume; (In G4SBS, target wall thickness = 30 μm – should not be too different in John's simulation);
- * other possibility (that only occurred to me on Jan 5th 2024...): the large noise that we're seeing in inner gas *could* be due to electrons upstream of mTPC (beam on target electrons are generated $\sim 5\text{m}$ upstream of target); => doesn't seem so (see next);
- * That being said, if people are already happy to move on, I aint gonna fight to run more simulations...

Energy deposited in mTPC

H2 target 4 atm, 293K, 1.5T

