

Magic Nature of Neutrons in  $^{54}\text{Ca}$ : First mass measurements of  $^{55-57}\text{Ca}$   
9/12/18 Discussion Questions

- What are subshells? How do subshells work/behave? Why do we care? (Bishnu)
- Classify the different **theoretical mass** models used according to degree of phenomenology used and comment on **similarities/differences**. (Som)
- Why not just use the  $m/q$  vs TOF relationship in the paper and instead use a 4<sup>th</sup> order polynomial? (Mahesh)
- In Fig. 3 the  $S_{2n}$  seems like it is continuously decreasing. Does that imply that there is a shell closure at every point? How does a  $\delta e$  value comparable or slightly smaller than another isotope indicate a magic number? (Taya)
- What is time of flight magnetic-rigidity method? (Doug)
- What is SHARAQ? How does it Work? (Joey)
- How does the wedge degrader at F1 remove the high flux of lower Z fragments? (Sudhanva)
- What are the CVD diamond detectors measuring? How do they work? (Chowdhury)
- What is a dispersion matching mode? (Robert)