

# Measure Hardy Towner isospin breaking correction to super allowed beta decay with parity violating electron scattering

## Discussion after Misha's talk today

- For heavier super allowed beta decays there is an about 1.5% correction to the  $Ft$  value from isospin violation (Coulomb makes big contribution).
- CVC: Can explore this charged current effect in a neutral current process.
- Consider elastic parity violating electron scattering from  $N=Z$  nucleus and measure  $R_n - R_p$ . This is zero if no isospin breaking.
- $^{40}\text{Ca}$  is important case. Heaviest  $N=Z$  stable nucleus.  $R_n - R_p = -0.05$  fm. This sets scale for how accurately need to measure.
- CREX40: CREX is measuring  $^{48}\text{Ca}$  with goal of 0.02 fm sensitivity. Experiment would look like a  $^{40}\text{Ca}$  version of CREX.