

## The mirror nuclei ${}^3\text{H}$ and ${}^3\text{He}$ program at JLab

Using electron beam energies of up to 11 GeV, Jefferson Lab plans to carry out in the near future a group of four experiments involving the mirror nuclei  ${}^3\text{H}$  &  ${}^3\text{He}$  whose differences are thought to be well understood. The experiments aim to, *(A)* extract the deep inelastic neutron to proton structure function ratio  $F_2^n/F_2^p$  (and  $u/d$  quark distributions) in the  $0.2 \Rightarrow 1$  Bjorken  $x$  region, *(B)* study the isospin structure of the two-nucleon Short Range Correlations (SRC) up to  $x > 2$ , *(C)* measure the proton momentum distribution of both nuclei at  $x = 1.2$  in search of short-range interaction effects between different fermions and, *(D)* extract the charge radii of both nuclei at  $Q^2 \leq 0.1 \text{ GeV}^2$ . These radii or the proton and neutron radius distributions extracted from them using isospin symmetry are sensitive to nuclei details.