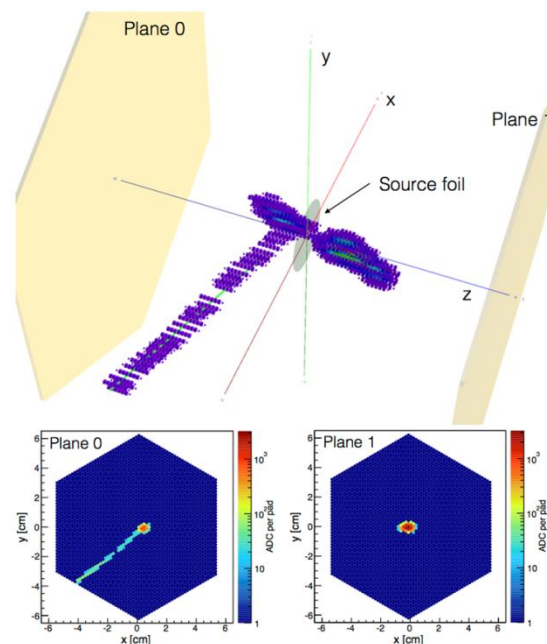
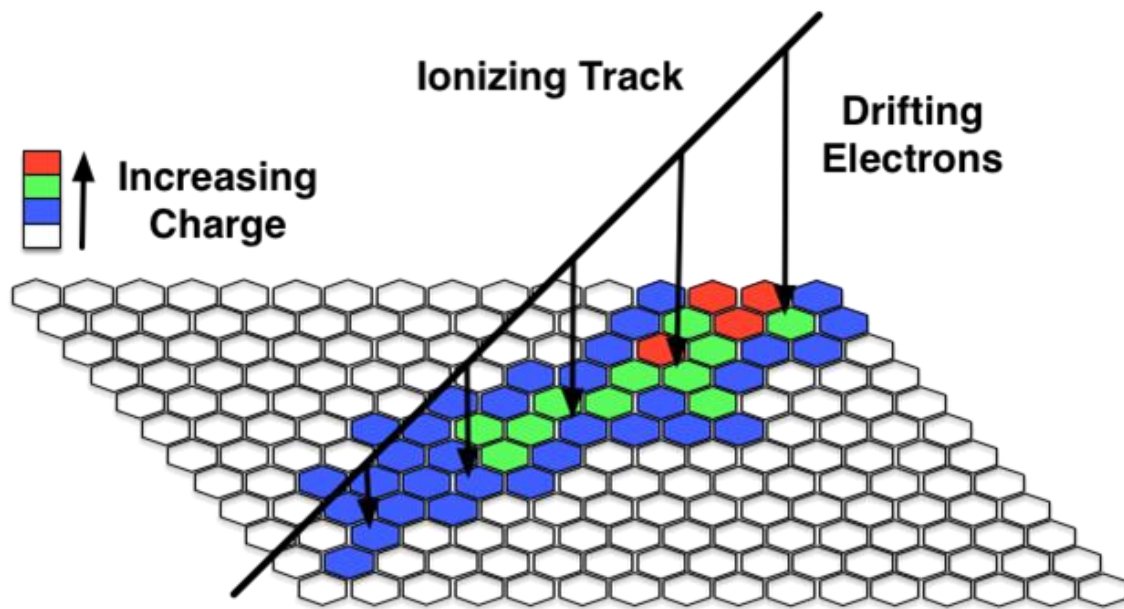


# Measuring Neutron-Induced Fission with a Time Projection Chamber

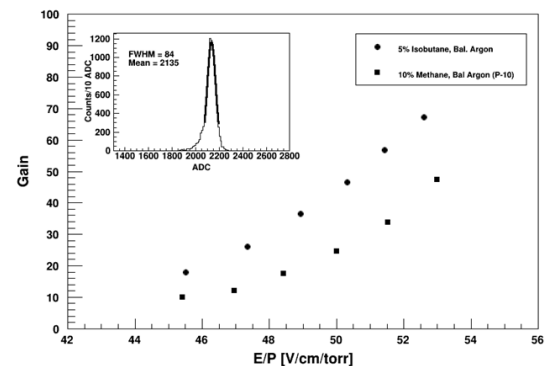
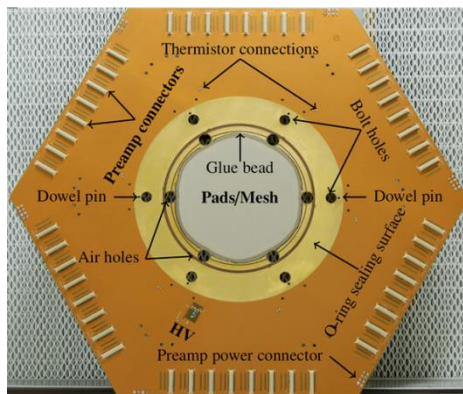
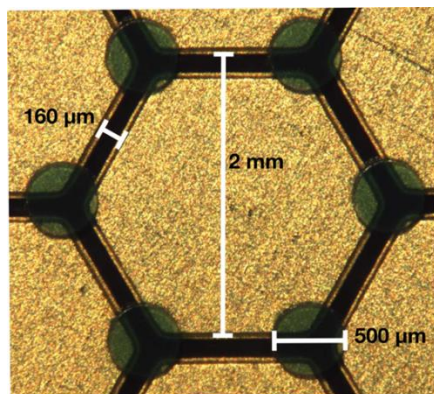
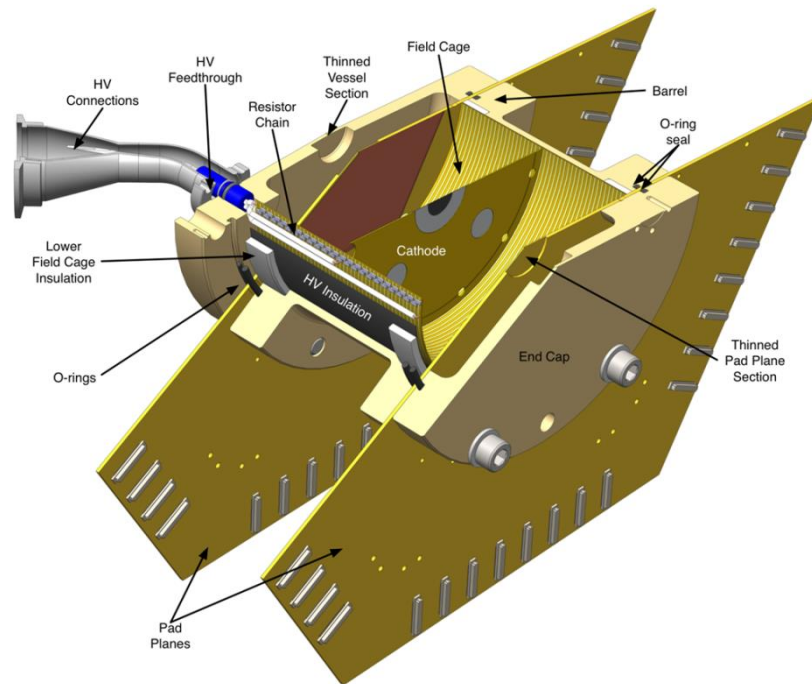
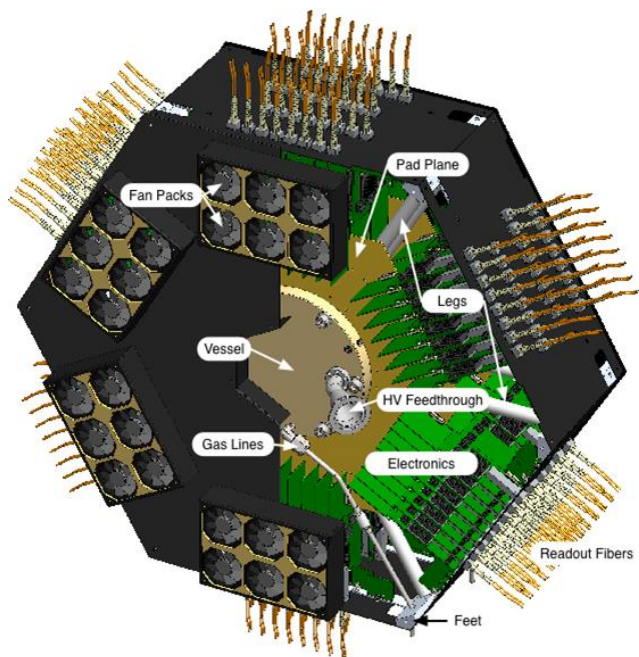
L. Snyder  
For the NIFFTE Collaboration  
ND 2016

The Neutron Induced Fission Fragment Tracking Experiment (NIFTE) is using a Time Projection Chamber (TPC) to investigate and improve the systematic uncertainties in fission chamber measurements.

The primary uncertainties currently being investigated are (1) Particle identification, (2) Target and beam non-uniformity, (3)  $^{235}\text{U}$  Standard



# Detector Design



- $^{238}\text{U}(n,f)/^{235}\text{U}(n,f)$  benchmarking measurement
- Progressing on a  $^{239}\text{Pu}(n,f)/^{235}\text{U}(n,f)$
- Designing for a  $^{239}\text{Pu}(n,f)/^1\text{H}(n,n)$
- “A Time Projection Chamber for high accuracy and precision fission cross-section measurements” NIM A, Vol. 759

