

Abstract Submitted  
for the TS4CF08 Meeting of  
The American Physical Society

**Introduction to NIFFTE and its Data Acquisition System**

ALEXANDER WHITE, Abilene Christian University, NEUTRON INDUCED FISSION FRAGMENT TRACKING EXPERIMENT COLLABORATION — The Neutron Induced Fission Fragment Tracking Experiment (NIFFTE) is a collaboration to design, build, and operate a Time Projection Chamber (TPC) for precise fission cross-section measurements. Precise data on the fission cross sections will facilitate actinide-burning reactor designs and investigate the proliferation resistance of potential new fuel cycles. These will allow the next generation of nuclear power generators to operate with increased safety, efficiency, and security. Essential to the TPC is a new data acquisition system utilizing Maximum Integration Data Acquisition System (MIDAS). MIDAS will coordinate data collection, monitor environmental variables such as gas pressure and temperature, and automate slow controls such as high voltage supplies. After a general introduction to NIFFTE, I will discuss the design and initial hardware testing for this innovative data acquisition system.

Alexander White  
Abilene Christian University

Date submitted: 17 Sep 2008

Electronic form version 1.4