

Abstract Submitted
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Slow Control System for the NIFFTE Collaboration TPC¹ ERIK RINGLE, Abilene Christian University, NIFFTE COLLABORATION COLLABORATION — As world energy concerns continue to dominate public policy in the 21st century, the need for cleaner and more efficient nuclear power is necessary. In order to effectively design and implement plans for generation IV nuclear reactors, more accurate fission cross-section measurements are necessary. The Neutron Induced Fission Fragment Tracking Experiment (NIFFTE) collaboration, in an effort to meet this need, has constructed a Time Projection Chamber (TPC) which aims to reduce the uncertainty of the fission cross-section to less than 1%. Using the Maximum Integration Data Acquisition System (MIDAS) framework, slow control measurements are integrated into a single interface to facilitate off-site monitoring. The Hart Scientific 1560 Black Stack will be used with two 2564 Thermistor Scanner Modules to monitor internal temperature of the TPC. A Prologix GPIB to Ethernet controller will be used to interface the hardware with MIDAS. This presentation will detail the design and implementation of the slow control system for the TPC.

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