

Abstract Submitted  
for the HAW09 Meeting of  
The American Physical Society

**The Fission Time Projection Chamber** MIKE HEFFNER, Lawrence Livermore National Laboratory, NIFFTE COLLABORATION — New high-precision fission experiments have become a priority within the nuclear energy community due to a growing, world wide, interest in nuclear reactors. In particular, the designs of next generation reactors require reductions in the uncertainties on a number of energy dependent, neutron induced fission cross sections. The fission Time Projection Chamber (fission TPC) is the instrument that has been selected to carry out these challenging cross section measurements. This 6000 pad TPC with 2mm hex pads has a volume of only 2 liters and is filled with a hydrogen working gas. A unique set of electronics have been designed for the TPC that use all off the shelf components to reduce development costs. In this talk, I will show how the TPC will improve previous measurements, the design specifics of the fission TPC and the progress to date.

Mike Heffner  
LLNL

Date submitted: 25 Aug 2009

Electronic form version 1.4