Abstract Submitted
for the TSF09 Meeting of
The American Physical Society

Test Chamber for Optimizing a High Pressure Xenon Neutrinoless Double Beta Decay Detector[1] PAUL ROBERT, Texas A&M University, NEXT COLLABORATION — The NEXT experiment is designed to search for neutrinoless double beta decay in high pressure xenon gas; the gas is enriched with ^{136}Xe which is a double beta decay candidate emitter. It is currently in the research and development phase and is scheduled to be operating in Canfranc Underground Laboratory in Huesca Spain within the next 5 years. High pressure xenon gas is chosen because of its excellent energy resolution and the ability to observe tracks. Observation of the track end points will provide excellent background rejection. The design and principle of a test chamber used to optimize the detector design will be discussed.

[1]This work is funded by NSF Grants No. PHY-07-05076, PHY-08-10281.

Paul Robert
Texas A&M University

Date submitted: 02 Oct 2009 Electronic form version 1.4