Contribution ID: 104 Type: not specified

XENON1T detector

The XENON1T detector is a dual-phase time projection chamber with a total of 3200kg of liquid xenon to search for dark matter. XENON1T is currently under construction at the Gran Sasso underground laboratory for commissioning early 2015. With a fiducial volume of at least 1000kg and a background more than two orders of magnitude below that of XENON100, the XENON1T experiment will be able to probe a particularly rich region of the electroweak-scale parameter space, with a sensitivity \sigma_{\nsigma_{\text{NSI}}\sim 2\times10^{-47}\,\nsigma_{\text{Cm}}^2 within 2 years of operation. This poster will present the detector, some design aspects, and its sensitivity.

Authors: PIENAAR, Jacques (Purdue University); CERVANTES VALDOVINOS, Mayra Daniela (Purdue University);

sity (US)); SHAYNE, Richard (Purdue University)

Co-author: LANG, Rafael

Presenter: CERVANTES VALDOVINOS, Mayra Daniela (Purdue University (US))

Track Classification: Aug/6