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Low Tc IrPt TES Light Detectors for CUPID[1] BRADFORD WELLIVER, LBNL, WHITNEY ARMSTRONG, ANL, GIOVANNI BENATO, Univ of California Berkeley, CLARENCE CHANG, ANL; Kavli Inst for Cosmological Physics; Univ of Chicago, BRIAN FUJIKAWA, LBNL, KAWTAR HAFIDI, ANL, RAUL HENNINGS-YEOMANS, ROGER HUANG, Univ of California Berkeley, GORAN KARAPETROV, Drexel Univ, YURY KOLOMENSKY, Univ of California Berkeley; NSD LBNL, CHARLES LI, Univ of California Berkeley, MARHARYTA LISOVENKO, Argonne Natl Lab; Sumy State Univ, LAURA MARINI, Univ of California Berkeley, ZEIN-EDDINE MEZIANI, VALENTINE NOVOSAD, JOHN PEARSON, ANL, TOMAS POLAKOVIC, ANL; Drexel Univ, BENJAMIN SCHMIDT, LBNL, VIVEK SINGH, SACHINTHYA WAGAARACHCHI, Univ of California Berkeley, GENSHENG WANG, VOLODYMYR YEFREMENKO, JIANJIE ZHANG, ANL — The Cryogenic Underground Observatory for Rare Events (CUORE) is currently searching for lepton number violating physics at the Laboratori Nazionali del Gran Sasso (LNGS). CUORE is comprised of 988 TeO2 crystals operated as cryogenic bolometers with NTD Ge thermistors. The CUORE Upgrade with Particle ID (CUPID) experiment will aim to improve upon the CUORE background by a factor of 1000 and will have event by event discrimination for α and β interactions in the crystal. This will be accomplished via the collection of both heat and scintillation light signals. In order to meet the timing and energy resolution requirements, low-Tc transition edge sensors (TES) are a promising technology to use. This talk presents the status of ongoing RD in developing a novel IrPt bilayer TES to use as a light detector.

[1]The DOE

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