Contribution ID: **92** Type: **Poster**

Development of Cryogenic Thermal Detectors for Sub-GeV Dark Matter

Thursday, 26 July 2018 14:40 (20 minutes)

An important topic in dark matter research is the search for sub-GeV dark matter. Direct detection searches for sub-GeV dark matter can be conducted through scattering on Silicon nuclei utilizing a detector with energy threshold on the order of 10 eV. This low threshold can be achieved by thermalizing a Transition-Edge Sensor (TES) based detector with gram scale silicon absorbers. This poster describes the design of a 10 eV threshold TES based detector as well as recent fabrication and testing progress.

Primary author: PINCKNEY, H Douglas (Northwestern University)

Co-authors: CHANG, Clarence (Argonne National Lab); Prof. FIGUEROA-FELICIANO, Enectali (Northwestern University); WANG, Gensheng (Argonne NAtional Laboratory); Dr BASTIDON, Noemie (Northwestern University); Dr NOVOSAD, Valentine (Argonne National Lab); Dr YEFREMENKO, Volodymyr (Argonne National Laboratory); Dr HONG, Ziqing (Northwestern University)

Presenter: PINCKNEY, H Douglas (Northwestern University)

Session Classification: 4.3 Direct Detection

Track Classification: Direct Detection