



Contribution ID: 5

Type: **not specified**

Neganov-Luke Amplified Cryogenic Light-Detectors: Current Status and Future Applications

Tuesday 3 June 2014 11:00 (20 minutes)

Ultra-low background experiments that employ the phonon-light technique for an active background suppression (e.g. the direct dark matter search experiment CRESST-II and the planned EURECA experiment or future experiments searching for the neutrino-less double beta decay) rely heavily on the sensitivity of the cryogenic light-detector at low energies.

The Neganov-Luke (NL) effect offers a promising way to increase the sensitivity of these cryogenic light-detectors by drifting photon induced electrons and holes in a semiconductor in an applied electric field and thus amplifying the phonon signal.

In this talk, we will present methods for the calibration and regeneration of these novel cryogenic light-detectors and recent results obtained with such detectors. Furthermore, we will introduce possible future applications.

Primary author: Mr MICHAEL, Willers (Technische Universität München)

Presenter: Mr MICHAEL, Willers (Technische Universität München)

Session Classification: Session 4