



Contribution ID: 290

Type: **Poster**

BULLKID - Bulky and low-threshold kinetic inductance detectors

Thursday, July 25, 2019 6:45 PM (15 minutes)

BULLKID is an R&D project on a new cryogenic particle detector to search for rare low energy processes such as low-mass dark matter and neutrino coherent scattering off nuclei. The detector unit we are designing consists in an array of around 100 silicon absorbers sensed by phonon-mediated, microwave-multiplexed Kinetic Inductance Detectors (KIDs), with energy threshold below 100 eVnr and target mass around 30 g. The single detector unit will be engineered to ensure a straightforward scalability to a future kg-scale experiment. In poster we will describe the proposed technology and the prospects of the project.

Less than 5 years of experience since completion of Ph.D

N

Student (Ph.D., M.Sc. or B.Sc.)

N

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Session Classification: Poster session

Track Classification: Low Temperature Detector Development and Physics