

Dark matter search with superconducting detector

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WIMP dark matter search in GeV order mass range is led by xenon detectors. Moreover, searches for light (sub-GeV and MeV) dark matter are planning or ongoing with lighter target like silicon nucleus. We are planning an experiment to search dark matter up to keV mass region. To lower energy threshold, electrons in superconductor will be used as target. Energy gap of cooper-pair is enough small to observe keV dark matter recoils. Superconducting detector LEKID(Lumped Element Kinetic Inductance Detector) will be used for readout. Detector design, setup and commissioning will be performed. In this talk, experimental concept and status will be reported.

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