Contribution ID: **274** Type: **Poster**

Kinetic inductance detectors on CaF2 for spin-dependent dark matter search

Thursday, 25 July 2019 18:45 (15 minutes)

CaF2 is a novel target for neutrino-less double-beta decay and spin-dependent dark matter studies, since 48Ca is one of the double-beta decay nuclei and 19F is sensitive to spin-dependent elastic scattering with dark matter.
We implement kinetic inductance detectors(KIDs) on CaF2 crystal which is used as substrate. KIDs on CaF2 is cooled to low temperature with a dilution fridge. The resonance is found in O(1GHz). In addition, several basic parameters of KIDs are measured. Thus, we confirmed that KIDs on CaF2 worked well. This result opens a new possibility in the next generation of astroparticle physics experiments.

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

N

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

N

Primary authors: Dr ISHIDOSHIRO, Koji (Tohoku University); HOSOKAWA, Keishi (Tohoku University); KISHIMOTO, Yasuhiro (Tohoku University); MIMA, Satoru (RIKEN); NAKAMURA, Kousuke (Tohoku University); SUZUKI, Atsushi (Tohoku University)

Presenter: Dr ISHIDOSHIRO, Koji (Tohoku University)

Session Classification: Poster session

Track Classification: Low Temperature Detector Development and Physics