

Detectors for direct Dark Matter search at KamLAND

Wednesday 20 February 2019 09:50 (20 minutes)

Nature and properties of the Dark Matter (DM) in the Universe are among the most fundamental questions of the modern particle physics and astrophysics. So far, the only experiment that claimed detection of a signal from the DM is the DAMA/LIBRA NaI(Tl) experiment located at the Gran Sasso underground laboratory in Italy. Until the recent time, the main obstacle in repeating the DAMA/LIBRA experiment was insufficient radio-purity of NaI(Tl) crystals developed by other collaborations. However, we successfully developed an ultra-low background NaI(Tl) crystals of required purity and prepare for independent verification of the DAMA/LIBRA result. In addition, we study sources of alternative explanation for modulation of the background in detectors located at deep underground laboratories.

Author: Dr KOZLOV, Alexandre (The University of Tokyo)

Presenter: Dr KOZLOV, Alexandre (The University of Tokyo)

Session Classification: Dark matter and other low-background experiments

Track Classification: Dark matter and other low-background experiments