

Past and present experiments of geoneutrinos

Monday, September 9, 2013 2:00 PM (20 minutes)

Geoneutrinos are antineutrinos produced in radioactive decays within Earth's interior. Those antineutrinos can be detected by inverse beta-decays of protons, however, due to extremely small cross section, there were no feasible experiments for a long time. Owing to the development of large-size antineutrino detectors, the observation of geoneutrinos has been finally made, and then composition models of the Earth are constrained from the radiogenic heat estimate. In this talk, the latest results from ongoing experiments, KamLAND and Borexino, will be presented.

Primary author: Dr SHIMIZU, Itaru (Tohoku University)

Presenter: Dr SHIMIZU, Itaru (Tohoku University)

Session Classification: Low Energy Neutrinos I

Track Classification: Low-Energy Neutrinos (solar, reactor, supernova, and geo neutrinos and also nuclear astrophysics associated with these sources)