

KMI Colloquium

"First Light" of the high energy neutrino astronomy - The recent results from IceCube



Shigeru Yoshida

(Department of Physics, Graduate School of Science, Chiba University, and International Center for Hadron Astrophysics, Chiba University)

Wednesday, June 25, 17:00-
KMI Science Symposia (ES635)

Abstract:

We review the present status of the search for high energy cosmic neutrinos with the IceCube Neutrino Observatory. The IceCube neutrino observatory has currently realized the best sensitivity on detection of cosmic neutrinos in the energy range of TeV up to 10EeV ($=10^{10}$ GeV), by the standard neutrino detection technique measuring ultra-violet Cherenkov light emissions. The astrophysical component of neutrinos has emerged over the atmospheric background in the sub-PeV region. We present their features in some details, followed by discussions on the implication to origin of ultra-high energy cosmic rays. The neutrino astronomy has finally begun to understand the mystery of high energy cosmic rays.