

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032,

India

Seminar Notice

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School of Physical Sciences

Title:	Angular correlation of cosmic neutrinos with astrophysical CRs and gamma-ray sources
Speaker:	Reetanjali Moharana, Racah Institute of Physics, Hebrew University, Jerusalem, Israel
Date:	March 5, 2019 (Tuesday)
Time:	3:00 p.m.
Venue:	Physics Seminar Room - C406, 3rd Floor, Centenary Building, IACS
Abstract:	IceCube is the world's largest detector for cosmic neutrinos, built in South pole. Recently reported high-energy starting events (HESE) by IceCube is one of the main attractions for astrophysics as well as particle physics. The sample of 54 neutrino events collected within 1347 days of operation, have deposited energy ranging from 20 TeV to 2 PeV. These events correspond to a 6.5-sigma detection of cosmic neutrinos above an estimated atmospheric neutrino background events and atmospheric muon background events. The origin of these cosmic neutrinos is one of the outstanding puzzles in recent years. An astrophysical origin can be established by a significant correlation of the HESE neutrino with different counterpart directions. Ultra-high energy cosmic rays, high energy gamma rays are one of the important counterparts for astrophysical neutrinos. We have studied the angular cross correlation between the HESE events with UHECRs and different source catalogs of high energy gamma-rays detected by Fermi satellite detector.

All are cordially invited to attend the seminar