Contribution ID: **145** Type: **Oral presentation**

IceCube Cosmic Neutrino events from Star-forming galaxies.

Thursday, 29 October 2015 17:10 (15 minutes)

Sources of the 53 high energy neutrino events detected by IceCube with energy between 20 TeV and 2.7 PeV is one of the outstanding puzzles in recent years. Suggestions range from Galactic to extragalactic sources, and from standard model interactions to dark matter decay or annihilation. We perform a statistical analysis of the distribution of these neutrino events and astrophysical sources. Our results suggest correlation between the IceCube neutrino events and star forming galaxies with at least 3-sigma significance. We also perform a multi-messenger study of gamma rays and neutrinos from these sources and constrain star formation rate and environment parameters based observations.

Primary author: Dr MOHARANA, REETANJALI (University of Johannesburg)

Co-author: Prof. RAZZAQUE, Soebur (University of Johannesburg)

Presenter: Dr MOHARANA, REETANJALI (University of Johannesburg)

Session Classification: Neutrinos

Track Classification: Neutrino physics