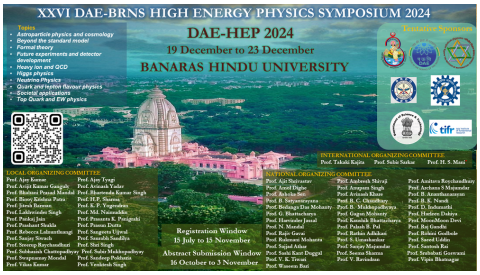

Contribution ID: **349** Type: **Oral**

Search for Gamma Ray sources with GRAPES-3

The GRAPES-3 experiment, situated in Ooty, Tamil Nadu (11.4°N, 76.7°E, 2200 m a.s.l.), is an array of 400 plastic scintillator detectors arranged in a hexagonal grid spanning 25,000 m², complemented by a muon detector made of proportional counters covering 560 m². The latter enables extensive air showers originating in gamma rays from Galactic and extragalactic sources within the TeV–PeV energy range to be distinguished from Cosmic Ray primaries. In this work, we explore machine learning techniques to enhance this capability and carry out a search for point sources of gamma rays using an unbinned maximum likelihood method that incorporates both directional and energy dependencies. This approach is particularly applied in our search for gamma-ray emissions from the Crab Nebula.

Field of contribution

Experiment

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Track Classification: Astroparticle physics and cosmology