Contribution ID: **569** Type: **Poster**

BSM Physics at ICAL@INO

The proposed ICAL detector at the INO facility offers an unparalleled window to probe various beyond the Standard Model (BSM) scenarios by observing atmospheric neutrinos and antineutrinos separately over a wide range of energies and baselines. We study several interesting BSM scenarios using 50 kt ICAL such as: a) Non-Standard Neutrino Interactions (NSIs), b) Flavor-dependent Long-Range Forces (LRFs), and c) Indirect Detection of Galactic Diffuse Dark Matter. We demonstrate how the unique features of ICAL like its charge identification capability, reconstruction of hadron energy (inelasticity), and excellent energy and zenith angle reconstruction of charged muon in multi-GeV energy range help to explore the parameter space of these BSM physics.

Mini-abstract

Role of charge id, inelasticity, excellent muon momenta reconstruction in INO to probe BSM physics

Experiment/Collaboration

ICAL@INO

Primary author: Dr KHATUN, Amina (Comenius University, Bratislava)

Co-author: Dr AGARWALLA, Sanjib Kumar (Institute of Physics, Bhubaneswar, India)

Presenter: Dr KHATUN, Amina (Comenius University, Bratislava)

Session Classification: Poster Session 1