Contribution ID: **380**   Type: **Poster**

Background Modeling for LEGEND-200

Wednesday 30 August 2023 15:39 (1 minute)

LEGEND-200 is the first phase of LEGEND, a ^{76}Ge-based experiment designed to observe a lepton number violating process: neutrinoless double-beta ($0\nu\beta\beta$) decay. Observation of this process would demonstrate neutrinos to be Majorana particles. The first 101 enriched ^{76}Ge detectors, with a total mass of 142 kg, have been installed and are currently taking data at the Laboratori Nazionali del Gran Sasso (LNGS), Italy. A comprehensive simulation campaign is underway to study and model the background contributions from various components in the experimental setup. In this poster, we will present the current results of the simulation campaign as well as a preliminary background model for the LEGEND-200 experiment.

Submitted on behalf of a Collaboration?

Yes

Primary author: Mr GALA, Rushabh (North Carolina State University, USA)

Co-author: GREEN, Matthew (NC State University)

Presenter: Mr GALA, Rushabh (North Carolina State University, USA)

Session Classification: Poster session

Track Classification: Neutrino physics and astrophysics