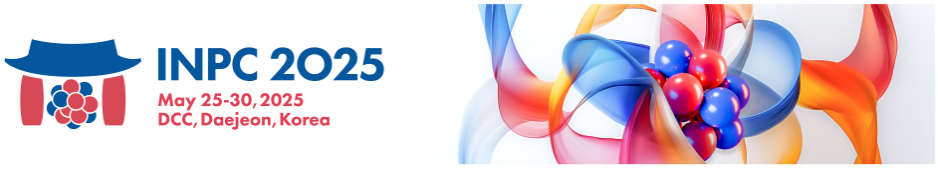


Contribution ID: **646** Type: **Contributed Poster Presentation**

# LEGEND-200: Integration and restart data taking

The aim of the LEGEND experiment is searching for neutrinoless double beta ($0\nu\beta\beta$) decay of Ge-76. The detection of this lepton number violating process would be a direct proof of the Majorana nature of neutrinos and would indicate the existence of a New Physics beyond the Standard Model. Its first stage, so-called LEGEND-200, operates up to 200 kg of bare enriched high-purity germanium (HPGe) detectors in a liquid argon (LAr) cryostat and located deep underground at LNGS. The HPGe detectors are mounted in strings and surrounded by the LAr instrumentation, which detects scintillation light emitted upon interactions with ionizing radiation. This together with excellent pulse shape discrimination capability (PSD) of LEGEND detectors help to tag and reject backgrounds in order to reach quasi background free regime during whole data taking period. The experiment was stopped in 2024 to examine and solve the issue with the mildly increased background.
In this poster we present the experimental setup of LEGEND-200 and discuss the re-installation process of the HPGe detector array and the LAr instrumentation.
This work is supported by the U.S. DOE and the NSF, the LANL, ORNL and LBNL LDRD programs; the European ERC and Horizon programs; the German DFG, BMBF, and MPG; the Italian INFN; the Polish NCN and MNiSW; the Czech MEYS; the Slovak RDA; the Swiss SNF; the UK STFC; the Canadian NSERC and CFI; the LNGS and SURF facilities.

## Consent

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**Session Classification:** Poster Session

**Track Classification:** Neutrinos and Nuclei