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First events of the CNGS beam detected by LVD

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Abstract content

The Cern Neutrinos to Gran Sasso (CNGS) project aims to produce a high energy, wide band muon neutrino beam at Cern and send it towards the INFN Gran Sasso National Laboratory (LNGS). Its main goal is the observation of the tau neutrino appearance. The beam started its operation in August 2006: a total amount of $7.6 \cdot 10^{17}$ protons were delivered to the target. The LVD detector, installed at LNGS and mainly dedicated to the study of supernova neutrinos, can detect CNGS neutrinos through the internal CC and NC interactions in the apparatus and through the muons generated by CC interactions in the rock upstream the detector. LVD was fully operating during the whole CNGS running time, with 950 t of active mass. A total number of about 570 events were detected in coincidence with the beam spill time. This is in good agreement with the expected number of events.

If this papers is presented for a collaboration, please specify the collaboration

LVD collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 5 (HE part 2), pages 1113-1116

Primary author(s) : Dr. SELVI, Marco (INFN Bologna); Prof. SARTORELLI, Gabriella (Physics Department- Bologna University & INFN)

Presenter(s) : SARTORELLI, Gabriella (INFN and Department of Physics, University of Bologna)

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