

Radiation tests on the complete system of the instrumentation of the LHC Cryogenics at the CERN Neutrinos to Gran Sasso (CNGS) test facility

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There are more than 6000 electronic cards for the instrumentation of the LHC cryogenics, housed in crates and distributed around the 27km tunnel. Cards and crates will be exposed to a complex radiation field during the 10y of LHC operation. COTS and rad-tol ASIC have been selected and individually qualified during the design phase of the cards. The test setup and the acquired data presented in this paper target the qualitative assessment of the compliance with the LHC radiation environment of an assembled system. It is carried out at the CNGS test facility which provides exposure to LHC-like radiation field.

Primary author: Ms GOUSIOU, Evangelina (CERN)

Co-authors: Mr PENACOBIA FERNANDEZ, GONZALO (CERN); Mr DE LA GAMA SERRANO, JOSE (CERN); Dr CASAS CUBILLOS, JUAN (CERN)

Presenter: Ms GOUSIOU, Evangelina (CERN)

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