



Cryogenics Operations 2018

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LHC cryogenics control system at CERN: 10 years' experience.

Since 2008, the CERN cryogenic system for the Large Hadron Collider accelerator installed on five cryogenic islands feeding a 26.7-km circumference ring deep underground tunnel is in operation. The LHC cryogenic operation support has brought new challenges and opportunities. Several consolidations and upgrades have been undertaken in the cryogenics process control system in order to maintain a high reliability: analysis, consolidation, upgrade including R2E (Radiation to Electronics) campaign, cold compressors refurbishment and massive usage of automatic advanced generators applied to classical industrial controls architecture, have been performed. The achieved work has allowed an improved expertise of the support team as well as in the technical quality of the applied solutions. This paper will describe the gained experience dealing with this large cryogenic process control system and its electrical associated system.

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