ICEC/ICMC 2014 Conference



Contribution ID: 166

Type: Oral presentation (15min)

Helium inventory management and losses for LHC Cryogenics: strategy and results for Run 1

Tuesday 8 July 2014 17:15 (15 minutes)

The Large Hadron Collider (LHC) cryogenic system requires an unprecedented helium inventory of 136 tons. If the operational availability for physics was clearly set first priority for run 1 (from first cool-down to long shut-down 1), specific measures were taken from the beginning towards the best rational use of helium during this period. Additional storage capacity was installed to match schedule constraints. Tools were developed to monitor the inventory. Operational achievements were analysed and corrections applied. After recalling the strategy defined for managing the helium inventory and associated infrastructure, tools and methods developed, the achieved results and perspectives will be presented.

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Session Classification: Tue-Af-Orals Session 4

Track Classification: C-01: Large scale refrigeration, liquefaction