



Contribution ID: 11

Type: **not specified**

The procurement and distribution of cryogenics for LHC

Tuesday 23 September 2008 14:30 (25 minutes)

CERN is a large user of industrially procured cryogenics essentially liquid helium and nitrogen. Recent contracts have been placed by the Organization for the delivery of quantities up to 320 tons of liquid helium and up to 70'000 tons of liquid nitrogen, both over a four years operational period. Main users are the very large cryogenic system of the LHC accelerator complex, the physics detectors using superconducting magnets and liquefied gases and all the related test facilities whether industrial or laboratory scale. The initial cool down of LHC requests the supply of in total 10'000 tons of liquid nitrogen to be delivered in batches of 1'250 tons for each of the 8 sectors. For the operation of LHC, a total helium inventory of 130 tons will be needed, of which up to 75 tons can be stored in situ in gaseous or liquid storage tanks. During maintenance shutdowns up to 55 tons might have to be stored at suppliers premises in collaboration with the industrial contractors. The presentation reviews the procurement and distribution strategy for liquid helium and nitrogen, including delivery rates, distribution methods and adopted safety standards.

Proposed for workshop session (see call for abstracts): 1- Operation 2- Maintenance 3 - Safety 4 - Control

1- Operation

Author: Mr BARTH, Klaus (CERN)

Co-authors: Mr DELIKARIS, Dimitri (CERN); Mr RODRIGUEZ, Francisco (CERN); Mr TAVIAN, Laurent (CERN); Mr CHANUT, Robert (CERN)

Presenter: Mr BARTH, Klaus (CERN)

Session Classification: MAINTENANCE

Track Classification: MAINTENANCE