

The LHC Cryogenics System at CERN and Operational Experience from the last 4-years physics Run2 (2015-2018)

D. Delikaris¹

¹*CERN, 1211 Geneva 23, Switzerland*

Corresponding author: E-mail Dimitri.Delikaris@cern.ch

The LHC (Large Hadron Collider) accelerator helium cryogenic system at CERN and its operational experience from the first 3-years physics Run1 (2010-2012) was presented and the main obtained results summarized in Reference [1].

The first part of this presentation provides, as a reminder, the baseline design and implementation of the LHC cryogenics system and its ancillary infrastructure.

The second part of the presentation will focus on the retained configuration of the cryogenic equipment, the available cryogenic refrigeration capacity and adaptability to the physics beams parameters and requirements of the recently completed 4-years physics Run2 (2015-2018). The obtained operational results in terms of availability and reliability of the cryogenic system and its infrastructure including the management of the associated large cryogen inventory (helium and nitrogen) are developed.

References

[1] D. Delikaris and L. Taviani. J. Cryo. Super. Soc. Jpn. Vol. 49 No. 12, (2014).