



Contribution ID: 29

Type: **not specified**

Design of a 500 Gy radiation tolerant converter

Wednesday 3 February 2021 14:00 (20 minutes)

In 2010, and with the objective of improving the LHC availability, CERN decided to replace converters operating under radiation by radiation tolerant ones. This major work focused first on the 600A and kA converters installed mainly in RRs point 1/5/7, all deployed during LS2, after a successful radiation tolerant development and qualification.

The emerging challenges now focus on the 60A and 120A converters, located in parts of the machine (both tunnel and alcoves) expected to receive up to 250 Gy during the HL-LHC era.

The experience of the former R2E design, and the related lesson learnt, allow to present a credible and efficient plan, optimizing the resources for adequate and reasonable design.

This talk will present the hypothesis and general background for the design of 60A and 120A converters, focusing on design choices (redundancy), as well as testing effort to come in the following years.

Presenter: THUREL, Yves (CERN)

Session Classification: Developments