Contribution ID: 5 Type: **not specified**

HL-LHC Vacuum upgrade

Tuesday, 16 April 2024 10:05 (25 minutes)

The luminosity upgrade program (HL-LHC) requires modifications of the present LHC's vacuum system, in particular the inner triplets, new crab cavities, matching section and experimental areas. Such modifications must follow strict guidelines: increased stored current implies a higher thermal power in the beam screen from the image current moving along with the stored particles and stronger synchrotron radiation (SR) and electron cloud (EC) effects, which in turn translate into higher degassing rates. An overview of the vacuum layout modification and upgrade will be presented and discussed.

Summary

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Session Classification: Session 1