

Lundi 20/02/2017, 11h00-12h00

CEA-Saclay Bat 141, salle Andr © Berthelot

Luminosity measurement and calibration in proton-proton and heavy-ion collisions at the LHC

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After introducing the basic concepts underpinning luminosity determination, this seminar will outline the various strategies that have been developed for relative-luminosity monitoring in the demanding experimental environment of the CERN Large Hadron Collider. Establishing the absolute luminosity scale to the accuracy implied by the physics goals, and maintaining it over year-long running periods, has been complicated by unexpected challenges, some associated with hitherto unconsidered beam-dynamical effects and some with instrumental limitations. Finally, the percent-level precision on the absolute integrated luminosity achieved by the four LHC experiments is reviewed in the light of its impact on some recently published key Standard Model measurements.

Le caf © sera servi 10 minutes avant.

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