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Overview of soft QCD and diffractive physics at LHC

Tuesday 5 June 2012 10:55 (30 minutes)

After a short introduction on the importance of the soft and of the diffractive studies in the understanding of minimum bias events, the main results obtained at LHC are discussed. The overview includes identified particle and inclusive measurements, both shedding light on the soft process mechanism.
A review of the most recent diffraction results is presented, showing the different approaches used by the LHC experiments, relying on different experimental techniques. The combination of the results obtained by ALICE, ATLAS, CMS, LHCb and TOTEM provides a wide sample of information, covering an unprecedented pseudorapidity range. A detailed comparison between the obtained results is shown, followed by a critical discussion on the still existing discrepancies between the experimental data and the most popular Monte Carlo used at LHC to simulate soft and diffractive physics.

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