

Title: Photon induced interactions at LHC as a laboratory for the hadronic physics

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Abstract: In the last years the Large Hadron Collider (LHC) at CERN has collected a large amount of data considering pp , pPb and $PbPb$ collisions, which is allowing to probe the Standard Model in a new kinematical range. In this talk I will show that the LHC can also be considered as a photon collider, which allows to study several aspects of the hadronic physics by the analysis of photon induced interactions in hadronic collisions. The basic idea is that in these interactions the total cross section for a given process can be factorized in terms of the equivalent flux of photons into the hadron projectile and the photon-photon or photon-target production cross section. The main advantages of using hadron - hadron collisions for studying photon induced interactions are the high equivalent photon energies and luminosities that can be achieved at existing accelerators. I review recent results which demonstrate that photon induced interactions at LHC can be used to study the QCD dynamics at high energies, the Odderon, Meson properties and Charmoniumlike Exotic states.