

Investigating the photon and pomeron - induced dijets production at LHC

We present a detailed comparison of the dijet production by photon–photon, photon–pomeron and pomeron–pomeron interactions in pp, pA and AA collisions at the LHC energy. The transverse momentum, pseudo-rapidity and angular dependencies of the cross sections are calculated at LHC energy using the Forward Physics Monte Carlo (FPMC), which allows one to obtain realistic predictions for the dijet production with two leading intact hadrons. We see that the photon-Pomeron channel is dominant at forward rapidities in pp collisions and in the full kinematical range in the nuclear collisions of heavy nuclei. Our results indicate that the analysis of dijet production at the LHC can be useful to test the resolved pomeron model as well as to constrain the magnitude of the absorption effects.

Authors: KOHARA, Anderson Kendi (UFRJ-Brazil); BASSO, Eduardo; SANTANA RANGEL, Murilo (Federal University of Rio de Janeiro (BR)); GONÇALVES, Victor (Universidade Federal de Pelotas)

Presenter: BASSO, Eduardo