

Multi-photon production at LHC in the Parton Reggeization Approach

We study production of one, two, three and four isolated photons at the energy of Large Hadron Collider in the Parton Reggeization Approach [1,2], which is based on high-energy factorization, Lipatov effective theory [3] and new unintegrated PDFs, obtained in modified multi-Regge kinematics approximation for QCD scattering amplitudes [4]. It is shown that experimental data from ATLAS and CMS Collaborations at the energies 7 and 8 TeV can be described quite well in LO approximation of Parton Reggeization Approach matching with real NLO corrections. Predictions for higher energies (13 and 27 TeV) have been done too. We demonstrate also agreement between calculations with analytical amplitudes obtained via Feynman rules of the Lipatov effective theory and calculations use Monte-Carlo generator KaTie [5].

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