Contribution ID: **167** Type: **not specified**

[Cancelled] Angular correlations in $\gamma + 2$ jet events at high energies in the parton Reggeization approach

We calculate the different angular distribution spectra of γ-jet and jet-jet pairs in associated $\gamma + 2$ jet production at the energies of the Tevatron and the LHC Colliders in the leading order approximation of the parton Reggeization approach [1-3]. Last one is based on high-energy factorization (k_T-factorization) and L.N. Lipatov's Effective Theory of Reggeized gluon and quarks. The contribution from $QR \to qg\gamma$ and $RR \to q\bar{q}\gamma$ subprocesses with Reggeized initial partons is considered. We compare our predictions with existing experimental data as well as with the parton model calculations at the NLO level. The relation between single parton scattering and double parton scattering production mechanisms in these processes is also studied.

[1] M. A. Nefedov, V. A. Saleev and A. V. Shipilova, *Dijet azimuthal decorrelations at the LHC in the parton Reggeization approach.* Phys. Rev. D **87** (2013) no.9, 094030

[2] A. V. Karpishkov, M. A. Nefedov and V. A. Saleev, *$B\bar{B}$ angular correlations at the LHC in parton Reggeization approach merged with higher-order matrix elements.* Phys. Rev. D **96** (2017) no.9, 096019

[3] M. Nefedov and V. Saleev, *Diphoton production at the Tevatron and the LHC in the NLO approximation of the parton Reggeization approach.* Phys. Rev. D **92** (2015) no.9, 094033

Primary authors: Mr KARPISHKOV, Anton (Samara National Research University); Dr NEFEDOV, Maxim (Samara National Research University); Prof. SALEEV, Vladimir (Samara National Research University); Dr SHIPILOVA, Alexandera (Samara National Research University)

Presenter: Mr KARPISHKOV, Anton (Samara National Research University)

Session Classification: WG4: Hadronic and Electroweak Observables

Track Classification: WG4: Hadronic and Electroweak Observables