

**Título: Nonperturbative QCD effects in forward scattering at the LHC**

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Resumo:

We study infrared contributions to semihard parton-parton interactions by considering an effective charge whose finite infrared behavior is constrained by a dynamical mass scale. We discuss the theoretical aspects of this formalism and consider the phenomenological implications of a class of energy-dependent form factors in the high-energy behavior of the forward amplitude. We see that our results are consistent with recent data from the TOTEM, AUGER, and Telescope Array experiments.