

Abstract Submitted
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Studying Hard Elastic NN Scattering in Isosinglet State¹ CARLOS GRANADOS, MISAK SARGSIAN, Florida International University — We analyze world data on high momentum transfer pp and pn scattering in order to extract the hard nucleon-nucleon elastic cross sections in isosinglet channel. These data provide us with new constraints in checking the QCD dynamics of elastic nucleon-nucleon scattering. Several aspects of this dynamics are studied, such as the evidence of the oscillations in the energy dependence of s^{10} weighted differential cross section of NN scattering at 90° center of mass scattering angles and extent of SU6 symmetry breaking in the quark wave function of the nucleon. Studying, both, angular and energy dependences of isosinglet NN cross section we attempted to constrain the contribution due to resonating scattering as well as independent gluon exchanges that could give rise the energy oscillations observed in pp scattering.

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