



Contribution ID: 14

Type: **Lecture**

Diffraction in QCD

Wednesday 21 August 2019 15:00 (1 hour)

The main features of diffractive processes and QCD inspired models are overviewed. The following topics are discussed: (1) Diagonal (elastic) diffraction, which shows that the underlying theory is non-abelian; (2) Quantum mechanics and general features of the off-diagonal diffractive processes; (3) Color dipole description of diffraction; (4) triple-Regge phenomenology; (5) what do we learn about hadron structure from soft diffraction? Why interaction of Pomerons is so weak? (6) Diffraction near the unitarity bound: why the diffractive cross stops rising; (7) “Hard diffraction” turns out to be semisoft-semihard; (8) factorization of short- and long-distance interactions is severely broken in hard diffractive hadronic collisions; (9) examples: diffractive DIS, diffractive Drell-Yan, diffractive production of gauge bosons, diffractive heavy flavors, diffractive Higgs production.

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