Central Exclusive Production in proton-proton collisions at the STAR experiment

Monday, 14 January 2019 16:40 (20 minutes)

The STAR experiment at the Relativistic Heavy Ion Collider performs studies of diffractive processes with the focus on the exclusive production of particles in central range of rapidity. In 2017, STAR collected measured proton-proton collisions at $\sqrt{s} = 510$ GeV to study Central Exclusive Production process $pp \rightarrow pXp$ through Double Pomeron Exchange mechanism. The intact protons moving inside the RHIC beampipe after the collision were measured in silicon strip detectors, which were placed in the Roman Pot vessels. This enables full control over interaction kinematics and verification of the exclusivity of the reaction by measuring the total (missing) transverse momenta of all final state particles. The first results from 2017 RHICf period will be introduced in this presentation.

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