Contribution ID: 65 Type: Oral report

Determining the initial conditions and transport properties of quark-gluon plasma by flow measurements at the LHC

Monday 12 October 2020 15:55 (25 minutes)

The collective expansion of the color-deconfined fireball created in relativistic heavy-ion collisions maps the initial state of the quark-gluon plasma (QGP) to the final-state particle spectrum.

The LHC experiments are completing the flow harmonic measurements at the highest energies to date as well as improving flow harmonic correlation techniques to understand the properties of the QGP and the full evolution of the heavy-ion collisions.

In this talk, a brief summary of the flow measurements developed in recent years and their implications to constrain the initial conditions and transport properties of heavy-ion collisions will be discussed.

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Session Classification: Section 4. Relativistic nuclear physics, elementary particle physics and high-

energy physics

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