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## Measurements on hadron production in proton-proton collisions with the ATLAS detector

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Studies of correlated hadron production are an important source of information about the early stages of hadron formation, not yet understood from first principles. Although experimental high energy physics employs several semi-classical models of hadronization which describe the formation of jets with remarkable accuracy, correlation phenomena are more elusive. In this presentation, we will discuss Bose-Einstein correlations measured with the ATLAS detector and provide a unique opportunity for detailed understanding of the space-time geometry of the hadronization region. If available, an analysis of the momentum difference between charged hadrons in high-energy proton-proton collisions will be also presented, which is performed in order to study coherent particle production. This allows the investigation of observables sensitive to the predictions of the quantized string model.

**Primary authors:** ESCALIER, Marc (LAL-Orsay (FR)); ZENIS, Tibor (Comenius University (SK))

**Presenter:** ZENIS, Tibor (Comenius University (SK))

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