



Contribution ID: 1031

Type: **Oral**

Prospects for heavy-ion physics with the LHCb Upgrade II

Monday 7 April 2025 17:20 (20 minutes)

Owing to its spectrometer acceptance, unique with respect to the other LHC experiments, and to its excellent tracking and particle identification, LHCb has been developing since the LHC Run2 a complete heavy-ion programme. In parallel, by exploiting the injection of gases in the LHC accelerator beam-pipe, LHCb is now simultaneously acquiring data in collider and fixed-target mode, with two independent interaction points. The sum of the

two configurations already gives unique inputs to theoretical models. With the foreseen LHCb Upgrade II, to be operated from Run5, even more possibilities will be opened. Detector granularity will be increased, and new instrumentation with timing capabilities will be added, opening a plethora of new possible analyses to be explored. In this contribution, a full overview of the heavy-ion opportunities with the LHCb Upgrade II, as discussed in a recent workshop with theoreticians, will be presented and discussed.

Category

Experiment

Collaboration (if applicable)

LHCb

Author: MARIANI, Saverio (CERN)

Presenter: MARIANI, Saverio (CERN)

Session Classification: Parallel session 2

Track Classification: Detectors & future experiments