Contribution ID: **390** Type: **Plenary report**

Present and future upgrades of ALICE

Thursday, 23 September 2021 12:15 (35 minutes)

ALICE is currently completing major upgrades for LHC Run 3 and in the meantime further projects are already underway. ALICE is developing thinned wafer-sized monolithic active pixel sensors to replace the inner tracking layers during the Long Shutdown 3. This resulting detector will have an unprecedented low material budget, and consequently drastically reduced interaction probabilities and unparalleled vertexing performance. Furthermore, we plan to install a Forward Calorimeter (FoCal) comprising a Si-W electromagnetic calorimeter with pad and pixel readout and a hadronic calorimeter with conventional metal-scintillator technology with optical readout, covering 3.4 < eta < 5.8. Finally, a proposal of a next-generation heavy-ion experiment for LHC Run 5 is also in preparation and will be discussed. This new apparatus foresees an extensive usage of thin silicon sensors for tracking and a modern particle identification system, combining a silicon-based time of flight detector, a RICH and preshower detector. The advantages of extremely low material budget, fast read-out and high resolution will enable novel measurements of electromagnetic and hadronic probes of the QGP at very low momentum.

Primary author: BEOLE, Stefania (Universita e INFN Torino (IT))

Presenter: BEOLE, Stefania (Universita e INFN Torino (IT))

Session Classification: Plenary

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