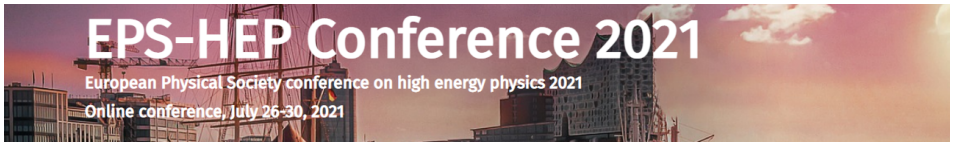

Contribution ID: **381** Type: **Poster**

Tracking performance with the HL-LHC ATLAS detector

During the High-Luminosity phase of LHC, scheduled to start in 2026, the ATLAS detector is expected to collect more than 3ab−1 of data at an instantaneous luminosity reaching up to 7.5×10^{34} cm$^{-2}s^{-1}$, corresponding to about 200 inelastic proton-proton collisions per bunch crossing. In order to cope with the large radiation doses and to maintain the physics performance reached up to LHC Run 3, the current ATLAS Inner Detector will be replaced with a new all-silicon Inner Tracker (ITk), whose layout has been recently updated to bring the innermost pixel layer at a radius of R=34 mm. In this talk, the latest results on the expected performance of the ITk tracking and of other high-level object identification will be presented.

First author

Collaboration / Activity

ATLAS Collaboration

Email

Primary author: ATLAS COLLABORATION

Presenter: ENE, Irina

Session Classification: T12: Detector R&D and Data Handling

Track Classification: Detector R&D and Data Handling