Contribution ID: **7** Type: **Poster**

Tracking performance with the HL-LHC ATLAS detector

Tuesday 21 April 2020 13:50 (10 minutes)

During the High-Luminosity Phase 2 of LHC, scheduled to start in 2026, the ATLAS detector is expected to collect more than 3 ab^{-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 during Phase 1, the current ATLAS Inner Detector will be replaced with a new all-silicon Inner Tracker (ITk) and completed with a new High-Granularity Timing Detector (HGTD) in the forward region. In this talk, the latest results on the expected ITk tracking performance and HGTD timing reconstruction will be presented, including their impact on physics object reconstruction.

Consider for young scientist forum (Student or postdoc speaker)

No

Second most appropriate track (if necessary)

Presenter: SCHILLACI, Zachary Michael (Brandeis University (US))

Session Classification: Recording sessions