



Contribution ID: 28

Type: **Plenary**

## Tracking on GPU at LHCb's fully software trigger

*Thursday 2 June 2022 09:00 (25 minutes)*

The LHCb experiment will use a fully software trigger to collect data from 2022 at an event rate of 30 MHz. During the first stage of High-Level Trigger (HLT1), a partial track reconstruction is performed on charged particles to select interesting events using efficient parallelisation techniques on GPU cards. This stage will already help reduce the event rates by at least a factor 30. Reconstructing tracks at a 30 MHz level represents a challenge which requires very efficient tracking algorithms and high parallelisation. The talk will particularly focus on tracking algorithms specialised on reconstructing particles traversing the whole LHCb detector.

### Consider for young scientist forum (Student or postdoc speaker)

Yes

**Author:** SCARABOTTO, Alessandro (Centre National de la Recherche Scientifique (FR))

**Presenter:** SCARABOTTO, Alessandro (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Plenary