Contribution ID: **43**   Type: **Poster**

Tracking in Dense Environments with the ATLAS Detector

High energy hadronic interactions at the LHC provide ATLAS with a wide variety of physics signatures. Due to the high centre-of-mass energy tracks in signatures such as hadronic jets and tau lepton decays can become highly collimated.

The separation between these tracks can become smaller than the ATLAS Inner Detector sensitive elements resulting in a loss of reconstruction efficiency.

In order to alleviate this effect a neural network has been incorporated into the ATLAS reconstruction since 2011. This talk will cover that latest studies of reconstruction efficiency in these dense environments as well as the plans for improving the strategy in LHC Run-3 data taking based on results of simulation studies using truth-level tracking.

Consider for young scientist forum (Student or postdoc speaker)

No

Second most appropriate track (if necessary)

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