Contribution ID: **388** Type: **Experimental poster**

The characterisation of non-collision background events in the ATLAS detector during LHC Run 2 data-taking.

Thursday 10 June 2021 18:45 (1 hour)

Understanding events from proton interactions with residual gas in the beam pipe, with collimators or from cosmic rays, is of primary importance to identify potential risk of damage to the accelerator and experiments. In addition, these events represent one of the main background of non-conventional physics signatures based on tracks not pointing to the interaction point, out-of-time energy deposits, or displaced decay vertices might come from signals released by long-lived heavy particles.
The characteristics of these non-collision backgrounds are illustrated in detail in order to identify, estimate and reject them by using the full ATLAS detector.

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