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Compact data stream for jets at ATLAS

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The LHC delivers an unprecedented number of proton-proton collisions to its experiments. In kinematic regimes first studied by earlier generations of collider experiments, the limiting factor to more deeply probing for new physics can be the online and offline computing, and offline storage, requirements for the recording and analysis of this data. In this contribution, we describe a strategy that the ATLAS experiment employs to overcome these limitations and make the most of LHC data during Run-2 - a compact data stream involving trigger-level jets, recorded at a far higher rate than is possible for full event data. We discuss the implementation of this stream and outline its technical challenges, as well as developments to further streamline it for more demanding 2018 conditions.

Additionally, the results of an analysis of this dataset are shown to highlight the competitiveness and complementarity with traditional data streams.

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