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# ATLAS Trigger system for Run 3

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The ATLAS Trigger in Run 3 is expected to record on average around 1.7 kHz of primary 13.6 TeV physics data, along with a substantial additional rate of delayed data (to be reconstructed at a later date) and trigger-level-analysis data, surpassing the instantaneous data volumes collected during Run 2.

Events will be selected based on physics signatures such as the presence of energetic leptons, photons, jets or large missing energy. New in the Level 1 (L1) trigger are the New Small Wheel and BIS78 chambers, in combination with new L1Muon endcap sector logic and MUCTPI. In addition, a new L1Calo system based around eFEX, jFEX and gFEX systems for egamma, tau, jets and missing energy will be under commissioning in 2022. In the High Level Trigger, the ATLAS physics menu was re-implemented from scratch using a new multi-threaded framework.

We will present first results from the early phases of commissioning the Run 3 trigger in 2022. We will describe the ATLAS Run 3 trigger menu, and how it differs from Run 2. Exploring how rate, bandwidth, and CPU constraints are integrated into the menu. Improvements made during the run to react to changing LHC conditions and data taking scenarios will be discussed and we will conclude with an outlook on how the trigger menu will evolve with the continued commissioning on the new L1 systems.

## In-person participation

Yes

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