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Physics on the Fast Track: Incorporating global tracking into the ATLAS trigger

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Though hardware-based trackers were a crucial element of the triggering systems for both D0 and CDF, no such system has yet been incorporated into either ATLAS or CMS. The ATLAS Fast TracKer (FTK) is a first step towards this goal and will provide full tracking information for all events passing ATLAS's Level-1 trigger in Run 3. This system greatly reduces the CPU required to identify track-based signatures like b-jets and taus and allows for the suppression of pile-up effects on missing energy and jet triggers. In addition, it can be used to identify exotic displaced objects with track-based signatures. This talk will present an overview of FTK commissioning and future plans, along with updated projections for FTK performance.

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