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Dual-use tools and systematics-aware analysis workflows in the ATLAS Run-II analysis model

The ATLAS analysis model has been overhauled for the upcoming run of data collection in 2015 at 13 TeV. One key component of this upgrade was the Event Data Model (EDM), which now allows for greater flexibility in the choice of analysis software framework and provides powerful new features that can be exploited by analysis software tools. A second key component of the upgrade is the introduction of a dual-use tool technology, which provides abstract interfaces for analysis software tools to run in either the Athena framework or a ROOT-based framework. The tool interfaces, including a new interface for handling systematic uncertainties, have been standardized for the development of improved analysis workflows and consolidation of high-level analysis tools. This presentation will cover the details of the dual-use tool functionality, the systematics interface, and how these features fit into a centrally supported analysis environment.

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