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ATLAS's EventView Analysis Framework

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The EventView Analysis Framework is currently the basis for much of the analysis software employed by various ATLAS physics groups (for example the Top, SUSY, Higgs, and Exotics working groups). In ATLAS's central data preparation, this framework provides an assessment of data quality and the first analysis of physics data for the whole collaboration. An EventView is a self-consistent interpretation of a physics event or equivalently the state of a specific analysis. Analyses are constructed at runtime by chaining and configuring modular components consisting of tools, C++ implementation of specific analysis algorithms, and modules, python grouping and configuration of various tool. A large common library of general tools and modules serve as the building blocks of nearly all of the steps of any analysis. The output is multiple simultaneous EventViews of every event, typically reflecting different choices of selections, reconstruction algorithms, combinatoric assignments, or input data (eg full or fast reconstruction or truth).

Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

ATLAS Offline Computing

Summary

In this talk I will motivate the EventView concept through various physics examples and then detail the design and implementation of this now widely-used analysis framework.

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