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The new BaBar Analysis Model

Thursday, September 30, 2004 3:40 PM (20 minutes)

This talk will describe the new analysis computing model deployed by BaBar over the past year. The new model was designed to better support the current and future needs of physicists analyzing data, and to improve BaBar's analysis computing efficiency.

The use of RootIO in the new model is described in other talks. Babar's new analysis data content format contains both high and low level information, allowing physicists to pick a tradeoff between speed and precision/flexibility appropriate to their analysis. The new format is customizable, allowing physicists to create analysis-specific content using simple and familiar tools.

Babar's new analysis processing model involves selecting events according to their physics content, and writing them together with analysis-customized content to dedicated output streams. Currently 120 such 'skims' are written as part of a periodic central processing cycle. Skims can be further reduced and customized as well as queried interactively in root-based applications. Skims and subskims retain links back to the original full event information. This processing model eliminates the need for large tuple production efforts by physicists.

The entire BaBar data sample is available in the new format, and the new model has been used to produce physics results presented at the summer HEP conferences.

We will also present reactions from the BaBar analysis community, and describe the issues that arose in deploying the new model.

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