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Raw-data display and visual reconstruction validation in ALICE

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ALICE Event Visualization Environment (AliEVE) is based on ROOT and its GUI, 2D & 3D graphics classes. A small
application kernel provides for registration and management of visualization objects. CINT scripts are used as an
extensible mechanism for data extraction, selection and processing as well as for steering of frequent event-related tasks. AliEVE is used for event visualization in offline and high-level trigger frameworks.
The first emphasis of the talk is on visual representations of
raw-data for different detector-types. Common infrastructure for thresholding and color-coding of signal/time information, placement of detector-modules in various 2D/3D layouts and for user-interaction with displayed data
is presented. Methods for visualization of raw-data on different levels of detail are discussed as they are expected
to play an important role during early detector operation with poorly understood detector calibration, occupancy
and noise-levels.
The second emphasis of the talk is put on tools developed for visual validation of reconstruction code on event-by-
event basis. Since September 2006 ALICE applies a regular visual-scanning procedure to simulated proton-proton
data to detect any shortcomings in cluster finding, tracking and primary & secondary vertex reconstruction. A
high-level of interactivity is required to allow in-depth exploration of event-structure and navigation back to simulation records is supported for debugging purposes. Standard 2D projections and transformations are available for clusters, tracks and simplified detector geometry

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

ALICE

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