AliFemto - A Femtoscopic Analysis Framework for ALICE

AliFemto

User Guide and Reference Manual

Revision 1.1

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dynamic system's evolution, geometry rules. The geometric overlap anisotropy of the entrance channel is known to dominate the subsequent evolution of the bulk, and focusing systematics of geometric entrance-channel quantities (e.g. reaction-plane, impact parameter) yields much more information than geometric averages over these quantities. In the intermediate stage of the collision, path-lengh considerations are crucial to determine the physics of so-called "jet quenching" at the highest energies. Further, we seek a system in which coloured degrees of freedom are relevant over "large" length scales. Much of the dynamic det5(ys4(lengt34(scal-i4(scal-rth)1flectured)al-ined)al-4(the)al-enred)al-4(frze-outed)al-snatcoectilevvscal-9((e.g.357(flkno)25er)cal

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2.2.4   AliFemtoCorrFctn

The "end result" of most femtoscopic studies is the correlation function. These compare somehow (often via a ratio of distributions, c.f. Equation 1) "real" and reference pairs. In general, then, a user-written class which derives from AliFemtoCorrFctn should implement AddRealPair(*AliFemtoPair*)
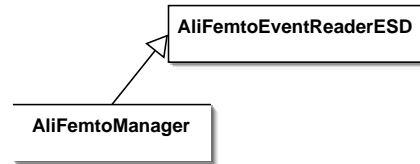
Figure 3: The preliminaries in a `AliFemto` macro: loading of the libraries, instantiation of top-level structure, and instantiating and plugging in a Reader. The cartoon is meant so suggest the action of the macro commands; it is not a UML diagram.

nated with any other information coming from the AliFemtoAnalysis itself. This constitutes the Report of the AliFemtoAnalysis.

The AliFemtoManager collects Reports from each of its AliFemtoEventReader objects (both those in read and write mode) and from each of its AliFemtoAnalysis objects. These are concatenated and constitute the

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Figure 6: A second Analysis is instantiated, configured, and added to the collection. The same proceedure is followed as for the fist Analysis (Figures 4

ated in the previous Figure. In Figure

Figure 7: Construction of the AliFemto study complete, event looping is trivial. Note that all interaction with the code is through only a few methods of the AliFemtoManager object.

In Figure 7, the processing is ordered within a "pure root" macro directly. This can be different in other frameworks. For example, in the STAR Maker schema (6), the AliFemtoManager Init(), Processg)seit(),

Part II

Reference Manual

The Reference Manual is being finalized.