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An express data production chain in the STAR experiment

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Within the FAIR Phase-0 program the fast algorithms of the FLES (First-Level Event Selection) package developed for the CBM experiment (FAIR/GSI, Germany) are adapted for online and offline processing in the STAR experiment (BNL, USA). Using the same algorithms creates a bridge between online and offline. This makes it possible to combine online and offline resources for data processing.

Thus, on the basis of the STAR HLT farm an express data production chain was created, which extends the functionality of HLT in real time, up to the analysis of physics. The same express data production chain can be used on the RCF farm, which is used for fast offline production with the similar tasks as in the extended HLT. The chain of express analysis does not interfere with the chain of standard analysis.

An important advantage of express analysis is that it allows to start calibration, production and analysis of the data as soon as they are received. Therefore, use of the express analysis can be beneficial for BES-II data production and help accelerate science discovery by helping to obtain results within a year after the end of data acquisition.

The specific features of express data production are given, as well as the result of online QA plots such as the real-time reconstruction of secondary decays in a BES-II environment.

Consider for promotion

No

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