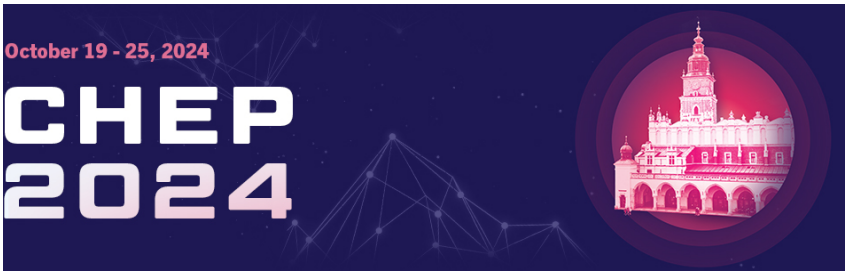


Contribution ID: **527** Type: **Talk**

# A data Quality-Assurance framework for online and offline applications for the CBM experiment

*Tuesday 22 October 2024 14:24 (18 minutes)*

A data quality assurance (QA) framework is being developed for the CBM experiment. It provides flexible tools for monitoring of reference quantity distributions for different detector subsystems and data reconstruction algorithms. This helps to identify software malfunctions and calibration status, to prepare a setup for the data taking and to prepare data for the production. A modular structure of the QA framework allows to keep independent QA units for different steps of the data reconstruction.

Since the offline and the online scenarios of data reconstruction need to meet different requirements, the QA framework is implemented differently for those two regimes. In the offline scenario, the data QA software is based on the FairRoot framework and is used to track the effects on data in the continuous development of the reconstruction algorithms as well as to check the data quality on the production stage. The QA software for the online reconstruction scenario utilizes the standard and boost C++ libraries and provides a real-time monitoring of detector and algorithm performance. This was successfully applied to the data taking at the mini-CBM experiment in May 2024.

**Author:** ZHARKO, Sergei (GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany)

**Presenter:** ZHARKO, Sergei (GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany)

**Session Classification:** Parallel (Track 6)

**Track Classification:** Track 6 - Collaborative software and maintainability