Contribution ID: **464**   Type: **Plenary talk**

Software complex for distributed data processing during Run 9 of the BM@N experiment

Tuesday 8 July 2025 09:00 (30 minutes)

Modern physics experiments on particle collisions cannot operate without sophisticated software used at all stages of the work, including the design of the setup, control of the operation of different subsystems, data collection, online and offline processing and final physics analysis. This also holds true for the fixed target experiment, BM@N, the first experiment operating and taking data at the NICA complex in JINR. Since 2015, eight BM@N Runs, including the latest, physics one, have been conducted, and Run 9 with xenon ion beams is scheduled in the coming months. The report presents a set of software systems and services developed to automate BM@N data processing and storing on distributed hardware platforms, and some manual operated procedures during Run 9 of the experiment. Computing software as well as a complex of information systems providing information necessary for event data processing will be discussed. Both newly implemented software of the experiment and proven solutions used in recent BM@N Runs but constantly evolving will be demonstrated. Furthermore, a set of additional, but essential services will be noted, for instance, event daily (and integral) statistics service, which collects and visualizes event distributions divided into days by various parameters.

Author: GERTSENBERGER, Konstantin (JINR)

Presenter: GERTSENBERGER, Konstantin (JINR)

Session Classification: Plenary