Contribution ID: **313** Type: **not specified**

SPD Offline Computing System

Tuesday, 4 July 2023 16:45 (15 minutes)

In accordance with the technical design report, the SPD detector, which is being built at the NICA collider at JINR, will produce trillions of physical events per year, estimated at dozens of petabytes of data, which puts it on a par with experiments at the Large Hadron Collider. Although the physical facility is under construction, these figures must be taken into account already now, at the design stage of the offline data storage and processing system. Besides that, as the design of subdetectors and subsystems is developed, the applied software of the experiment requires more and more computing resources to perform Monte Carlo simulations of the future facility. In modern physics research, even the process of modelling a small subsystem may require significant computational resources, and in its form is organized as a set of sequential processing steps that form a data processing chain. And although the facility itself has not yet been built, the needs of physical groups in computing power for carrying out such calculations are constantly growing and already occupy a fairly significant amount of processor time on the computing resources of JINR. In fact, this form of processing is a user or group processing sequence, within which tens of thousands of intermediate and final files can be produced, which means that both tasks and data management is required. The status of work on building a system for managing the SPD experiment data storage and processing is presented in this report.

Summary

Primary authors: ZHEMCHUGOV, Alexey (JINR); Mr KIRYANOV, Andrey (PNPI); PETROSYAN, Artem (JINR); Dr OLEYNIK, Danila (JINR MLIT)

Presenter: PETROSYAN, Artem (JINR)

Session Classification: Computing for MegaScience Projects

Track Classification: Computing for MegaScience Projects