The XXI International Scientific Conference of Young Scientists and Specialists (AYSS-2017)



Contribution ID: 229

Type: Oral

The Unified Database as offline storage of the BM@N/NICA experiment

Today the use of databases is a prerequisite for qualitative management and unified access to the data of modern high-energy physics experiments. The report describes the developed Unified Database designed as comprehensive relational data storage of the BM@N experiment at the Joint Institute for Nuclear Research. The BM@N experiment is the fixed target experiment at the extracted Nuclotron beam of the Laboratory of high energy physics which is one of the main elements of the first stage of the NICA collider development. The structure and purposes of the BM@N facility will be briefly presented. The report shows the scheme of the Unified Database, its attributes and implementation features in detail. The use of the developed BM@N database implemented on the PostgreSQL allows to provide correct multi-user access to the actual information of the experiment for collaboration members. It stores information about experiment runs, detectors and their geometries, different configuration, calibration and algorithm parameters used in offline BM@N data process-ing. An important part of any database –user interfaces will be presented. The first was implemented as the set of C++ classes of the BmnRoot environment to process experimental data in offline without SQL statements, the second –user-friendly Web-interface being available on the Web page of the BM@N experiment to simplify reading and changing the BM@N data by users.

Primary author: Dr GERTSENBERGER, Konstantin (JINR)

Presenter: Dr GERTSENBERGER, Konstantin (JINR)

Track Classification: Information Technology