

BASIC SOFTWARE FOR AUTOMATED TRITIUM COMPLEXES OF THE “TRITON” AND “ACCULINA” FACILITIES

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While creating the automated tritium complexes for the “TRITON” and “ACCULINA” facilities intended for physical experiments there was developed the basic software which makes possible to design automated measurement and control systems and take into account peculiarities of activities with tritium [1] – the CRW-DAQ package.

Capabilities of the CRW-DAQ package version being used now for Windows are discussed. Special attention should be given to its features such as high reliability, available integrated languages for applied programming, concurrent support (multithreaded, multiprocessor and multi-machine systems), potential development of distributed systems, powerful visualization systems, convenient subject-oriented interface for the user on the base of mnemo-schemes, available means for restriction of access rights. Integrated medium allowing to develop and execute the package makes possible to changes the programming code and algorithms of the control without shutting down the facility, which is especially useful in the process of creating the research systems.

Systems of automated control designed by the CRW-DAQ package and intended for the complex of the TRITON [2] facility allowing to prepare gaseous mixture for experimental research regarding muon catalysis of nuclear reaction from fusion, as well as for the complexes involving the source of a tritium beam and a tritium target for investigation of exotic neutron-excess nuclei at the ACCULINA facility [3] have been successfully utilized in the experiments during several years.

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