THE PRESENT STATUS OF THE CONTROL SYSTEM FOR THE ANGARA-5 FUSION FACILITY

V. I. Zaitsev, E. V. Grabovsky, A. V. Kartashov, G. M. Oleinik, SRC RF TRINITI, Moscow region

Abstract

Angara-5 is a high-power facility designed for making research into the field of inertial confinement fusion. The control system structure includes different subsystems meeting technological requirements of the facility. The later important upgrading caused by the equipment aging and wear was executed by replacement of the block-module structure of fast subsystems (Data Acquisition and Synchronization Subsystem) with separate devices (oscilloscopes of Tektronix type and Digital Delay generators). At present, the Data acquisition Subsystem includes 80 channels with samples frequency 1-2 GHz for measurements of high-speed processes. The Timing Subsystem contains 12 channels of the programmed delays in the range from 0 to 2000 s with an accuracy of 1 ns. The devices were incorporated into a subsystem by means of USB and GPIB interfaces. The software is based on the LabView development system and the VISA communication interface software. The remote terminal service exercises control of the subsystems. The present-day hard- and software structures of the control system are considered.

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