TESTING of THE COMPONENTS OF the signal registration system of the VERTICAL NEUTRON CAMERA for ITER

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To make measurements by the Vertical Neutron Camera (VNC) system, each element of the diagnostic system or its equivalent must be tested. We have the choice of the best option for the components based on the test results.

The report contains experimental data showing the results of testing the VNC components, namely:

- charged particle detectors;

- communication cables between detectors and preamplifiers;

- preamplifiers;

- the digital part of the measuring channel and the VNC system software (digitizing the analog signal from the preamplifier, transmitting it via optical fiber to improve noise immunity and galvanically isolate the analog part of the system from the digital one, pre-processing the signal from the detector and transmitting data to the ITER control system).

The method of testing the individual components of the VNK diagnostic system is given.

The report is of interest to physicists and engineers working in the field of atomic physics, plasma physics and controlled thermonuclear fusion.

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