

JT-60 Successfully Controlled from Germany

The Japan Atomic Energy Agency (JAEA) recently succeeded in controlling a large tokamak device, the JT-60, remotely from the Max Planck Institute for Plasma Physics in Germany. That means that a firm footing has been acquired for the core technology for remote experimentation for the International Thermonuclear Experimental Reactor (ITER) and a satellite tokamak program, as part of so-called “broad-approach” activities.

The Max Planck Institute lies about 10,000km away from the JT-60, which is located in JAEA's Naka Fusion Institute. The success of the recent experiment demonstrates the excellent ability of the JAEA's system, which includes advanced security and high-speed data communications. The system for remote experiments was developed by JAEA using technology -- an advanced version of grid-computing software -- created by the Center for Computational Science and e-Systems (CCSE).

Within the ITER project, the Remote Experimentation Center will be established in the International Fusion Energy Research Center in Rokkasho Village (Aomori Pref.) as part of “broad-approach” activities by various countries, with Japan participating in remote experiments domestically. The experimentation center is linked to the main body of ITER through a high-speed network, for which Japan has established operational conditions and carried out data collection, analyses, etc. Because of the time difference between Japan and Cadarache, France, remote experimentation at ITER can be carried out with particular efficiency.

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