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**The Center for Remote Participation of the Unified information space for fusion research was opened at MEPhI and the university tokamak was connected to it**

*Now scientists from other cities of the country will be able to conduct experiments on the tokamak remotely*

On November 18, the opening of the Center for Remote Participation (CRP), one of the communication nodes of the Unified information space for fusion research created by Rosatom, took place at the National Research Nuclear University MEPhI, the basic university of the Rosatom State Corporation. The tokamak "MEPHIST-0" was also connected to the Unified information space. The event was held with the participation of Alexey Likhachev, Director General of the state corporation.

The Unified Information Space for Fusion Research is a unique information network that unites the most important scientific centers of the country engaged in research in the field of controlled thermonuclear fusion. A CRP should be created in each scientific organization connected to a single space, which will provide network participants not only with access to the results of all scientific experiments, but also the opportunity to remotely participate in experiments at scientific facilities (including, in the future, in experiments at the ITER international thermonuclear reactor in France).

The event began with an inspection of the tokamak, as well as its control room, which now, as Stepan Krat, senior researcher at the Institute of Laser and Plasma Technologies at the MEPhI National Research University, explained to the guests, can also be used to conduct experiments at other thermonuclear installations of Rosatom and the Russian Academy of Sciences.

After inspecting the tokamak, Alexey Likhachev and the rector of the MEPhI National Research University, Vladimir Shevchenko, conducted the official launch of the tokamak "MEPHIST-0" through the CRP of the Unified Information Space. The first remote pulse of a training tokamak was observed in real time by scientists from Moscow, St. Petersburg, Novosibirsk and even from France. Colleagues have already received the results of the experiment and can work with them. In the same way, Russian scientists at the ITER tokamak will participate in the experiments, and students will have the opportunity to gain important experience.

The duration of the experiment, conducted on November 18, was 20 milliseconds, the plasma temperature was 500,000 degrees. The data from the installation was immediately transferred to a single information space.

"The most important event has happened – we have connected the first training tokamak to the Unified information and communication space. This will ensure an influx of personnel into research related to thermonuclear reactions. In addition, we really hope that the unified information platform will be actively used for the design of the TRT tokamak, which today is the hope of all our fusion research," Anatoly Krasilnikov, the director of the Project Center ITER (an institution of the Rosatom State Corporation), congratulated the participants of the tokamak launch at MEPhI remotely.

Alexey Likhachev noted that the creation of a tokamak at MEPhI has become one of the elements of the federal project "Thermonuclear and Plasma Technologies" implemented by Rosatom. The head of Rosatom thanked his colleagues who work together in the framework of a single ITER project throughout the vast expanse of Eurasia. He added that Russia remains one of the key participants in the project. "The importance of today's event – the launch of the tokamak – lies in the fact that MEPhI students have already had the opportunity from the first year to participate not in words, but in deeds in the implementation of the largest project on a planetary scale," he noted.

Vladimir Shevchenko noted that it is important to train at the university not only specialists who are able to operate such installations as tokamak, but also developers who will be able to create fundamentally new fusion devices. "In 2017, a group of our students, led by a young employee Stepan Krat, took the initiative to create a tokamak. It cannot be said that this idea immediately caused universal acceptance, because tokamaks are associated with very large and very complex installations. But everything worked out, and today we attended a landmark event – an experiment on an installation created by the hands of students. At MEPhI, we consider it very important to train, albeit in a small number, researchers who have an understanding of the principles of operation and skills in designing complex devices," he said.

**For reference:**

The National Research Nuclear University "MEPhI" is one of the best technical universities in Russia. Provides training for specialists in science, IT and other high-tech sectors of the economy. MEPhI is a strategic partner and the basic university of the Rosatom State Corporation for personnel and scientific and innovative support of the nuclear industry. The University consists of 11 institutes, has a modern research infrastructure: laboratories, a library and a technopark. Thousands of students are trained in 29 areas of study at the university under the guidance of the best teachers and scientists in the country.

The educational spherical tokamak "MEPHIST-0" created at MEPhI allows you to conduct experiments on plasma confinement in a magnetic field (which is a necessary element of fusion installations). Now scientists from other cities of the country will be able to conduct experiments on the tokamak of MEPhI remotely.

ITER is a project of the world's first international thermonuclear experimental reactor of a new generation, being implemented by the efforts of the international community in Provence (France), near Marseille. The objective of the project is to demonstrate the scientific and technological feasibility of using thermonuclear energy on an industrial scale, as well as to develop the necessary technological processes for this. The Project Center ITER, institution of the State Atomic Energy Corporation “Rosatom”, performs the functions of the Russian ITER Domestic Agency responsible for ensuring Russia's in-kind contribution to the project.

Russia continues to fulfill its obligations under the International ITER Project. The main contribution of the Russian Federation is the development, manufacture and supply of 25 systems for the future machine. As part of the joint implementation of the ITER project, a number of key Rosatom enterprises manufacture the most important components of the future installation, including: all domes of the divertor, 40% of the panels of the first wall, switching equipment, connectors of blanket modules, etc. The shipment of unique Russian equipment within the framework of the joint implementation of the ITER project is carried out on time in full accordance with the reactor construction schedule.

Russian companies are successfully implementing development projects and creating innovative solutions. The development of breakthrough technologies increases the competitiveness of both the nuclear industry and the domestic economy as a whole. Rosatom and its enterprises are actively involved in this work.