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AIP IKP (FUSIONSPACE.RU): WORK PROGRESS IN 2025 ^{*)}

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Within the framework of the comprehensive program "Development of equipment, technologies and scientific research in the field of atomic energy use in the Russian Federation", a common IT space for fusion research in the Russian Federation (AIP IKP, FusionSpace.ru) was developed and created. The purpose of AIP IKP is to unite the distributed experimental base and human resources of the main research institutes and enterprises of the industry participating in fusion research, in order to achieve the goals and implement the activities of the new national project "New Atomic and Energy Technologies".

This infrastructure is focused not only on domestic thermonuclear research, but will also allow working with data of international scientific activities, such as the ITER experimental reactor with more than 180 technological and diagnostic subsystems generating daily 2.2 PB of data.

The developed functionality allows integration of distributed fusion research, creation of joint experimental programs, unifying the approach of working with the obtained scientific data and organizing the storage and exchange of design and technical documentation, experimental data, computational scenarios, etc.

The report presents the main results obtained in 2024, namely, it describes the technical solutions applied in the development and manufacture of the Experimental complex of the fusion data center, as well as the results of load and complex tests of the AIP IKP as a system.

The report also describes the nearest plans for the development of software and hardware of the AIP IKP in the following periods. These plans to include the increasing number of nodes and adding new scientific project areas in the field of fusion and nuclear research, for which the integration of a common IT space for R&D, conducting experiments, processing results and planning will improve technological and managerial decision making.

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^{*)} [abstracts of this report in Russian](#)