

4. Coordination Research Project

1. Coordination Research Project

The coordination research project aims at a smooth accomplishment of a wide range of coordinated research activities in NIFS. It plans, establishes and supports the framework of coordinated research and opens coordinated research products for the effective use of them.

2. Coordination Research Committee

In order to accomplish the above-mentioned purpose, the coordination research committee with the sectional meetings as shown in Fig. 1 was set up and corresponds to a variety of coordinated researches.

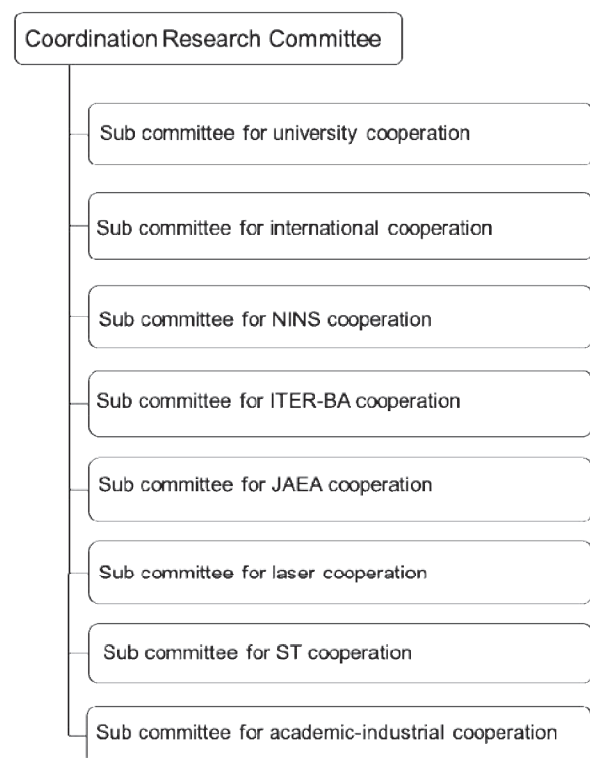


Fig. 1. Composition of coordination research committee.

“University cooperation” is the coordination based on the agreements between each domestic university and NIFS. NIFS started the coordinated researches based on the agreements with the universities, and the collaboration with 11 universities (Hokkaido University, University of Tsukuba, Toyama University, Nagoya University, Osaka University, Gifu University, Tohoku University, Shizuoka University, Kyusyu University, Nagoya Institute of Technology, University of Hyogo) that makes the best use of the feature of both organizations has been executed in 2013.

“International cooperation” is categorized to the collaboration based on inter-governmental agreements such as the IEA stellarator-heliotoron agreement, the collaboration based on inter-institutional agreements with 17 institutes of 10 countries and the ITER International Organization. A very active international collaboration was executed in each

field of the category.

“NINS cooperation” is the international collaboration research under the National Institutes of Natural Sciences (NINS) and the collaboration within NINS by five NINS member institutes (NAOJ, NIBB, NIPS, IMS and NIFS).

“ITER-BA cooperation” promotes international coordinated activities related to the ITPA (International Tokamak Physics Activity), the ITER project and the ITER-BA project.

“JAEA cooperation” promotes coordinated activities between the Japan Atomic Energy Research Institute (JAEA) and NIFS such as the support of joint experiments.

“Laser cooperation” promotes a nuclear fusion research application of the laser technique and a coordinated activity concerning the inertial confinement fusion research

“ST cooperation” promote coordinate activities related to the Spherical Tokamak (ST) collaboration.

“Academic-industrial coordination” is aimed to provide the latest technical findings of NIFS as payback to the society for an extensive use under collaboration with industry.

3. Achievements of Coordination Research

The achievements of coordinated research activities are included in each section in this annual report as a result of a wide range of joint research. Only a part in the result of coordinated research activities is settled here.

ITER/BA collaboration is one of the most important cooperation in NIFS, the activities of the sectorial meeting for ITER-BA cooperation including the contribution to the ITPA is summarized.

Relating to the laser cooperation, a new apparatus for fuel layering demonstration of FIREX (Fast Ignition Realization Experiment) target has been studied under the collaboration between ILE of Osaka University and NIFS.

Study of methods of scientific and industrial application of atomic and molecular data was summarized.

Development of decontamination technology using atmospheric pressure plasma was summarized.

Development of dielectric laminated dipole antenna (DLDA) for micro-wave computer tomography (MWCT) and development of micro-wave TV camera (MWTV) were reported.

The two results of the collaboration with KIT in Germany were reported. The influence of micro-wave on residual impurities during pig iron production and to develop a method for in-situ measurement of thermal balance under 30 GHz heating making iron were reported.

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