

9. Research Enhancement Strategy Office

The Research Enhancement Strategy Office (RESO) was established on November 1, 2013, to strengthen the research activities of the Institute by planning various support programs for the researchers and conducting public relations programs for making fusion science more understandable in society. Two University Research Administrators (URAs) are working in the following five Task Groups:

- (1) IR (Institutional Research)/Evaluation Task Group
- (2) Collaboration Research Enhancement Task Group
- (3) Human Resource Development Strengthening Task Group
- (4) Public Relations Enhancement Task Group
- (5) Financial Basis Strengthening Task Group

(1) IR/Evaluation

The task group for the IR and evaluation continued its role to make systematic analyses of the present research activities of NIFS. The statistical data from publications and scientific reports were collected using the NIFS article information system (NAIS), with complementary data obtained through SCOPUS and WoS, companies that supply public research resources. Unique indicators that can demonstrate the strength of the research capabilities of NIFS were investigated.

By collaboration with the Self-inspection Committee, the task group compiled the draft annual FY2023 self-examination report for the fourth mid-term goals and assisted in compiling the materials to be submitted to the External Evaluation Committee for evaluation of “External Funding” and the “Fusion Science Interdisciplinary Research Center, Advanced Academic Research Coordination Section (AARCS)”.

(2) Supporting Enhancing Collaboration Research

- 1) Promotion of Domestic and International Collaborative Research
Actively facilitated and supported both domestic and international collaborative research initiatives.
- 2) Interdisciplinary and Collaborative Research Support
Implemented support measures for interdisciplinary and collaborative research across different fields.
- 3) Support for Collaborative Research Activities
Supported collaborative research activities domestically and internationally through the National Institutes of Natural Sciences (NINS) joint usage/research teams and international collaboration teams.

(3) Supporting Young Researchers

As the activities for developing young researchers, RESO and Human Resource Development committee in NIFS supports their startup studies for them to enhance the basic research skills by setting Start-up Support Program for Young Researchers. A tutor is assigned for each selected young researcher in this program, who is expected to give suggestions and advices to the researcher in appropriate timing. The selected program in FY2024 is as follows:

1. *Understanding self-scattering of ultraintense laser-produced plasmas for non-equilibrium plasma diagnostics* (Kentaro Sakai), (Fig. 1): The imaging measurement of a scattered intense laser beam reveals that the electron becomes less dense around the focal spot because of the competition between target preheating and electron evacuation by the pre-pulse and main pulse.

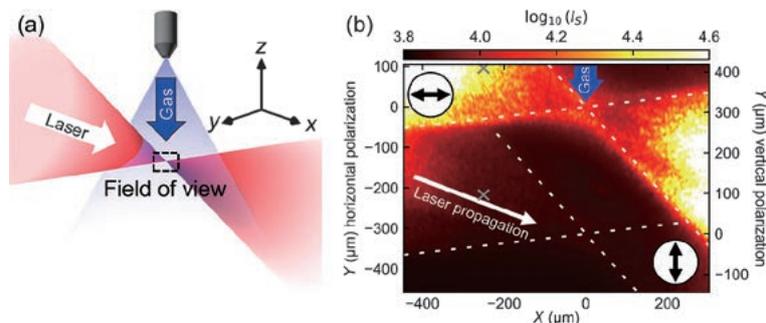


Fig. 1 Polarization-separated imaging measurement showing that the signal is polarized and consistent with the scattered intense laser beam, provided by K. Sakai. (Fig. 2 of “K. Sakai *et al.*, *Contrib. Plasma Phys.* e70020, 2025”).

A debriefing meeting was held in March 2024 for the three people who received support in FY2023.

RESO also assisted the applications of young scientists to the International Research Exchange Support Program of the National Institutes of Natural Sciences.

(4) Enhancing Public Relations

The policy for public relations activities was discussed at a RESO meeting. Regarding publicity events, depending on geographical spread, (1) participation in local festivals, (2) participation in events organized by Toki City, (3) holding science events in large shopping malls, and (4) the Open Campus were organized. In addition, an exhibition of the institute’s research was held at the new building of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

The Altmetric score has definitely increased since the international news sites picked it up when we posted it on EurekAlert! From now on, we will actively utilize EurekAlert!

We were given the opportunity to contribute to online media. Although broadcast media is often considered the most effective advertising medium, online media can also be effective enough if targeted.

(5) Strengthening Financial Basis

1) Support for Securing Competitive Research Funds

Organized briefing sessions to obtain competitive research funds such as Grants-in-Aid for Scientific Research (KAKENHI), JST, and NEDO, and provided support for the preparation of application forms.

2) Support for the Operation of the Financial Base Strengthening Task Force

Provided operational support for the Financial Base Strengthening Task Force and supported activities of the Industry-Academia-Government Collaboration Headquarters.

3) Support for Industry-Academia-Government Collaboration Activities

One such initiative was our support for the NIFS exhibition at Fusion Power World, held at INTEX Osaka. The event drew strong interest from industry, with two to three groups of visitors consistently engaging with the NIFS booth and asking questions. Many visitors expressed a desire to tour the institute following their experience at the exhibition.

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