

## 8. Activities of Rokkasho Research Center (RRC)

The Rokkasho Research Center (RRC, established in May 2007) promotes cooperation and joint research with the Broader Approach (BA) activities that are being undertaken in parallel with the ITER project and builds the technical foundation for the development of a prototype fusion reactor, by supporting the participation of collaborators of NIFS and universities, based on academic standpoints. Furthermore, in order to promote the interdisciplinary expansion of problems being tackled in fusion research, we are focusing on disseminating research issues to a range of academic fields, inviting interdisciplinary meetings, and promoting interdisciplinary joint efforts. As an example, the 4th mid-term strategic project of the Research Organization of Information and Systems (ROIS), “statistical-mathematical modeling for plasma data, complementary to plasma physics,” has been established and we are deepening/widening collaborations with communities in fields such as statistical-mathematics and data science. In addition, we are actively working to contribute to human resource development through establishing and deepening cooperation with neighboring educational institutions.

RRC’s Homepage: <https://www.nifs.ac.jp/en/about/rrc.html>

### Highlighted Activities in FY2023

The RRC has been a hub for promoting the research project, the Research Organization of Information and Systems (ROIS), the 4th mid-term strategic projects, “statistical-mathematical modelling on plasma data, complementary to plasma physics”. A meeting for sharing research topics among fusion and statistical-mathematical researchers was held in Dec. 2022 at NIFS RRC/QST Rokkasho Institute (from April. 2024, QST Rokkasho Fusion Energy Institute) and Hachinohe City Public Hall. This project has pursued synergetic development of both research communities by applying/improving the statistical-mathematical approach to fusion and plasma data and has so far produced notable collaborative achievements. The report on the last symposium (March 2024 at IMS, Institute of Statistical Mathematics) was published in ISM News (No. 164, May 2024) (in Japanese).

The international conference, “Global Plasma Forum in Aomori” (October 15–18, 2023, Aomori City) was held in collaboration with the Nagoya University Low Temperature Plasma Science Research Center, with the aim of promoting communications among researchers and inviting an academic conference to Aomori Prefecture. The RRC took on the role of the local executive committee. This initiative was selected and implemented as one of the “demonstration of post-corona convention programs”, which is promoted by Japan Tourism Agency (JTA), Ministry of Land, Infrastructure, Transport and Tourism. It was further selected as an excellent initiative of the program. There were 176 registered participants, including 70 foreign residents (from 12 countries/regions). At the opening ceremony, we received a greeting from the Deputy Governor of Aomori Prefecture, and we were able to use this international conference as an opportunity to build a wide range of connections with local related authorities/organizations.

We are also working on collaboration with nearby educational institutions. In July 2023, an RRC member gave a lecture entitled “Challenges to the Unexplored, Towards the Realization of Fusion Energy” at the class of Engineering Design (ED) I for advanced-course first-year students at the National Institute of Technology (KOSEN), Hachinohe College. The contents were designed so that students could feel that their nearby area

(Rokkasho village) has been and will be further evolving as the world-leading base for fusion research. It is planned to continue lecturing in 2024 as well.

In addition, we are working to promote regional collaboration by participating in events and holding seminars related to the initiative so-called the “Aomori Prefectural College”, which we joined as a partner institution in 2023.

The foundation of human civilization:  
Fire in Jomon period, and Plasma in modern time

## Global Plasma Forum in AOMORI

### October 15 sun – 18 wed, 2023

<https://plasma-aomori.jp/>

Venue:  
Nebuta Museum **WA RASSE**, and World Heritage **Sannai Maruyama Site**,  
Aomori, Japan



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<p><b>Topics</b></p> <p>SOL/divertor plasmas and PWM, Data-driven &amp; DX plasma, Green DX plasma, Plasma catalysis, Plasma agriculture, Plasma bio-applications, Plasma nano-processes, Advanced semiconductor, Industrial consortium, etc.</p>	<p><b>Program</b></p> <p>Oct 15, evening public lecture Oct 16-18, Scientific Program (networking at Sannai Maruyama Site on Oct 17, afternoon)</p> <p><b>Chairs of Committees</b></p> <p>Organizing: Noriyasu OHNO (Nagoya Univ.) Program: Kenji ISHIKAWA (Nagoya Univ.) Local: Masayuki YOKOYAMA (NIFS Rokkasho)</p>
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Supported by  
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Fig. 1 Poster for the “Global Plasma Forum in Aomori” (with a flavor of Aomori Prefecture).

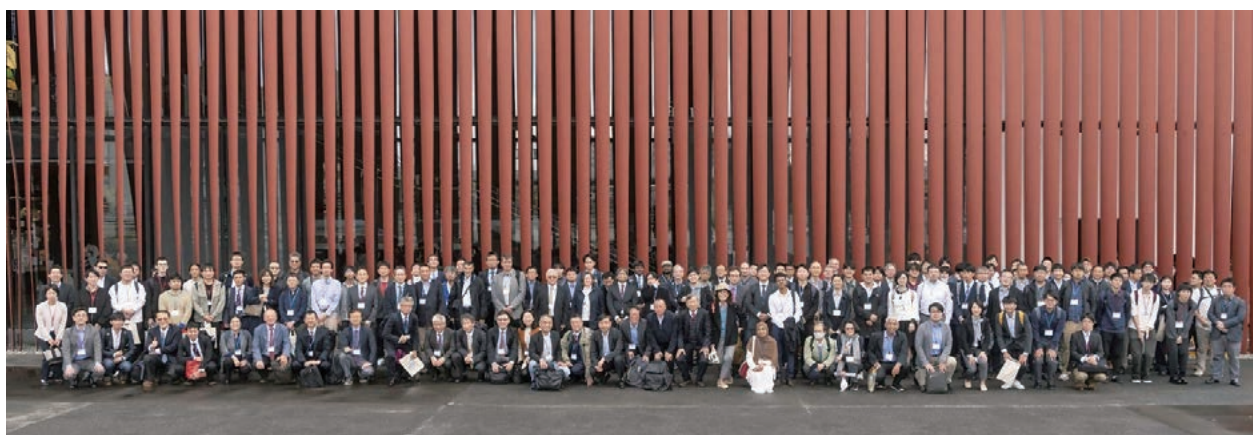


Fig. 2 Group photo of the “Global Plasma Forum in Aomori” (in front of the main venue, the Aomori City Cultural Tourism Exchange Facility, Nebuta Museum WA-RASSE).

(M. Yokoyama)