

IFERC Newsletter

IFERC

IFERC-N-2021-02, 6 June 2022

International Fusion Energy Research Centre, Rokkasho, Aomori 039-3212, Japan

Start of BA Phase II

Start of IFERC project in BA Phase II

Based on a definite expectation that the IFERC project would fulfill successfully its mission in BA Phase I (from Jun. 2007 to Mar. 2020), the discussion on the overall plan of IFERC project for the extension of BA into a phase II started in 2019. Accordingly, the “BA Phase II Summary Plan” of IFERC project was prepared in Dec. 2019. Taking into account the summary plans of three BA projects and the discussions held in Jan. 2020, the Joint Declaration on Broader Approach (BA) Activities in the field of fusion energy was signed on 2 Mar. 2020 for BA Phase II together with its annex, the “Common Understanding on Contribution to the Broader Approach Activities” as shown in Fig.1 below:



Fig. 1 Signature of Joint Declaration

Following this decision, a detailed IFERC project plan for BA Phase II was prepared, including long-term objectives, and short-term objectives for a period of 5 years. The Project Plan was approved by SC in BA SC-25 (3-6 July 2020), and has been thereafter updated year by year in order to orient its activities according to the priorities given by the BA SC for BA Phase II.

The long-term objectives of IFERC project are

- to build on the past successful collaboration in the CSC in order to provide support to the ITER and JT-60SA projects by fostering state of the art modelling tools development, providing computer simulation resources, as well as remote experimentation facilities;
- to provide support for the JT-60SA, and eventually ITER exploitation by promoting simulation projects to develop reliable scenarios;
- to provide support to the IFMIF validation and

design projects, both those taking place in the Rokkasho site (LIPAc) and the projected DONES and Advanced Fusion Neutron Source (A-FNS), including making use of the licensed materials laboratory;

- to consolidate and further the know-how on analysis/design of fusion reactors (e.g. DEMO) in strong collaboration with JT-60SA and ITER.

The short-term objectives of IFERC project are

- to provide support for ITER, IFMIF/EVEDA, and JT-60SA,
- to consolidate the know-how for future fusion reactors (e.g. DEMO) through the production of databases, inputs to engineering handbooks, and review of lessons learned in the existing fusion projects, building on the results of BA Phase I.

In addition, a Cooperation Arrangement between the Broader Approach Activities and the ITER Project was signed in Nov. 2019 between F4E, QST and ITER Organization for promoting and furthering academic and scientific cooperation and establishing a collaboration between ITER and BA Activities. Regarding the IFERC project, following the approval of a new annex to the Cooperation Arrangement for IFERC, the Implementing Arrangement No.2 to the Cooperation Arrangement was concluded in Jun. 2021. In October 2021, the Coordination Committee approved the Work Programme 2021/2022

Based on the Work Programme 2021/2022, collaborations have started in the area of remote participation in ITER between ITER CODAC/IT and IFERC-REC, and in CSC with the provision of CSC resources to collaborative simulation projects in high priority areas related to disruptions studies and edge/SOL/divertor. Collaboration with ITER in the preparation of DEMO design guidelines and knowledge management will also be considered.

*(Noriyoshi Nakajima, IFERC Deputy Project Leader
in BA Phase II)*