

IFERC Newsletter



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

Meetings

6th Technical Coordination Meeting of DEMO Design Activities

The 6th Technical Coordination Meeting (TCM-6) of DEMO Design Activity (DDA) was held at Kashiwa campus, the University of Tokyo, Japan on 2-3 February 2015 with 42 participants (including 25 remote participants); 4 from IFERC-PT, 25 from JA home team and 13 from EU home team.

As opening address, Prof. Y. Ogawa (the Univ. of Tokyo) reviewed the activity of the Joint Core Team in Japan, aiming at identifying critical issues for DEMO and at proposing a comprehensive framework for addressing these issues and building a robust technological basis in a coherent and effective manner.

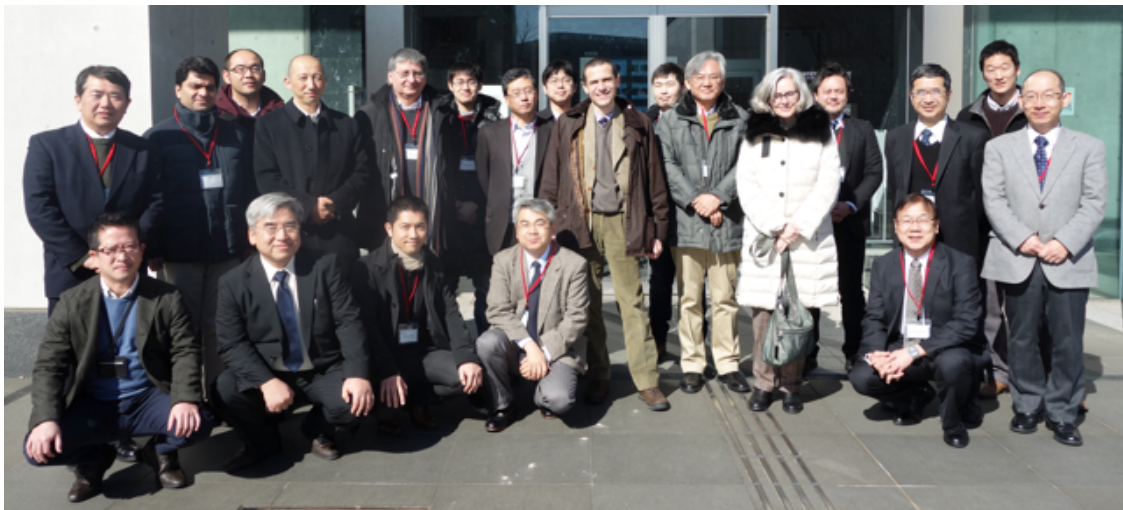
The main topic was the discussion on DDA intermediate report. The DDA intermediate report is a report of studies, which began in 2010 with the basic goal of (i) providing a technical perspective of a Demonstration Fusion Reactor with the capability of generating a few hundred MW of net electricity and operating with a closed fuel-cycle tokamak consistent with credible operating scenarios and feasible engineering solutions to critical design issues, (ii) preliminarily identifying a representative range of machine parameters. Emphasis in this report has been placed on identifying and analyzing key design issues and R&D needs in the following areas: System code and

analysis of DEMO design points; Physics basis and scenario modelling; Divertor and power exhaust; Vessel and in-vessel components; Remote maintenance; Superconducting magnets; Structural material design and R&D; and Safety. The effort on the DDA conducted so far has focused on identification of the DEMO prerequisites, the main design and technical challenges (physics and technology), identification and preliminary assessment of the foreseeable technical solutions and definition of the R&D needs. In view of many uncertainties still involved and recognizing the role of DEMO in fusion development, it is judged preferable to keep some flexibility in the approach to the conceptual design, rather than focusing on details of a single design point.

Other topics covered were as follows: 1) progress in 2014 and workplan for 2015 from EU/JA, 2) water-related issues for DEMO design 3) plasma vertical stability analysis considering torus configuration, 4) how to extrapolate present scenarios to DEMO, 5) divertor design and 6) cost model.

The JA/EU home teams will continuously carry out DEMO Design tasks and Safety studies, and a final report will be issued in 2017.

(Haruhiko Takase)



Group Photo of TCM-6 at Kashiwa Campus, the University of Tokyo