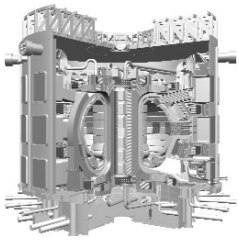

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NINTH ITER NEGOTIATIONS MEETING (N-9) AND RELATED MEETINGS

by Dr. LUO Delong, Director for International Organizations and Conferences, Department of International Co-operation, Ministry of Science and Technology (MOST), People's Republic of China

The Ninth ITER Negotiations Meeting (N-9) was held on 9–10 November 2003 at the Fragrant Hill Golden Resources Commerce Hotel in Beijing. China hosted this meeting. Delegations from Canada, China, the European Union, Japan, the Republic of Korea, the Russian Federation and the United States of America, as well as members from the International Team, met to continue their efforts to reach agreement on the implementation of the ITER international fusion energy research project. The delegations accepted Secretary General of MOST, Mr. SHI Dinghuan as Chair, Director General of MOST, Mr. JIN Ju as Moderator, and Ms. C. Basaldella (IAEA) as Secretary.

This was the first such Negotiations Meeting held in the People's Republic of China, and the first full Negotiations Meeting attended by the Republic of Korea, which formally joined the ITER partnership in June, 2003.

Participants at the Meeting

In his welcoming speech to the delegations, Mr. XU Guanhua, Minister of Science and Technology of the People's Republic of China, emphasized the importance of the ITER Project in the search for new sources of energy, not only for China, but for the whole world. Mr. XU said, "ITER is the most significant stage in realizing the dream of creating secure, effective and clean fusion energy."

At N-9, delegates discussed a full range of legal, technical, administrative and managerial topics, including the form and the structure of the International Organization, staffing, resources, and risk management, which will form the basis for the Agreement on implementing ITER and the operation of the International ITER Organization.

N-9 also discussed the progress report of its standing subgroup (NSSG) and forward planning and future tasks.

Negotiators agreed that substantial progress was made on all topics, and delegations are optimistic that final decisions on the site of ITER and the cost-sharing arrangements will be in place before the end of 2003.

The next Negotiations Meeting (N-10) and related meetings was tentatively scheduled for the period of the week of 29 March 2004, in the Republic of Korea, with an expectation that, at the end of that Meeting, Negotiators from all parties would finalize all documents and initial the Joint Implementation Agreement.

INTRODUCTION TO MAGNETIC CONFINEMENT FUSION RESEARCH IN THE PEOPLE'S REPUBLIC OF CHINA

by Messrs. HE Kaihui and YANG Changchun, ITER China Office

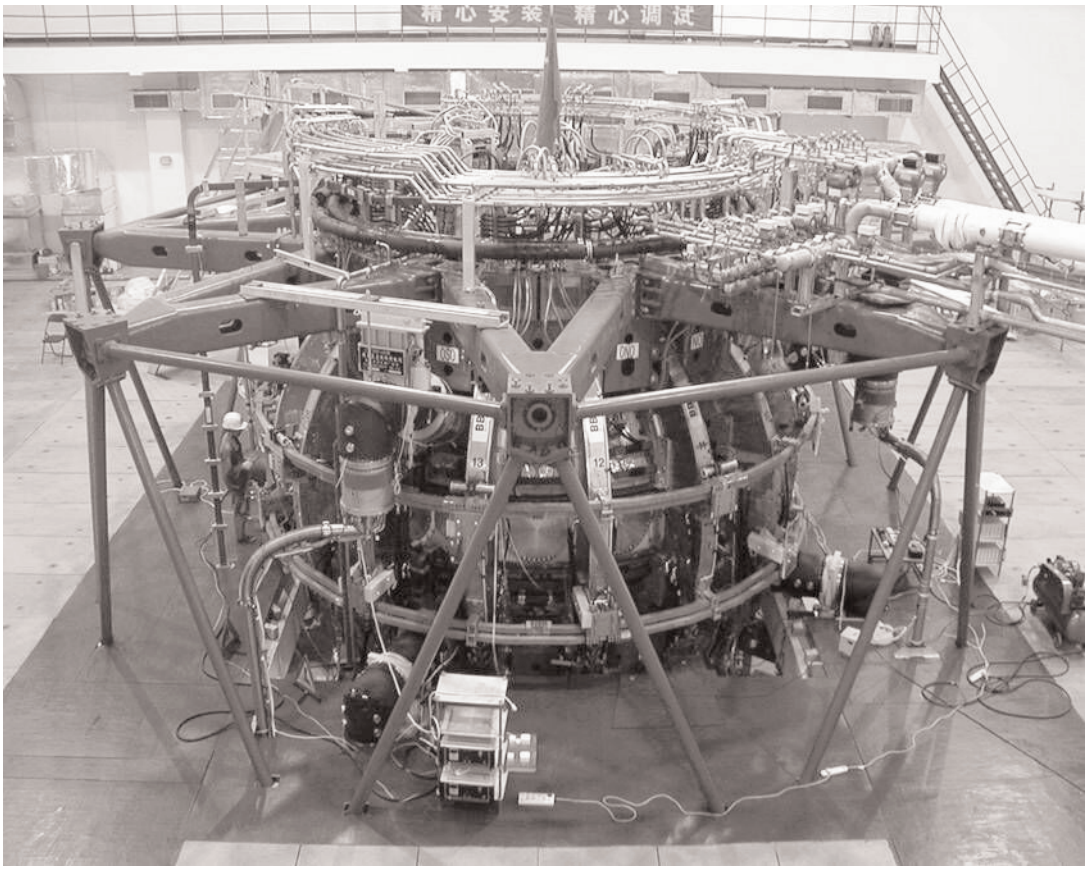
Research on magnetic confinement fusion (MCF) in China started at the end of the 1950s, marked by the establishment of the nuclear fusion research department at the Institute of Atomic Energy of China, which is now the Southwestern Institute of Physics (SWIP) and is affiliated to the China National Nuclear Company (CNNC).

SWIP was located in Leshan from the 1950s to the 1980s, and then in Chengdu, Sichuan province, from the end of the 1980s. During the mid-1970s, concerted efforts were made to build and operate the medium sized tokamak device HL-1, HL being the acronym of Huan-Liu, the Chinese term for torus. This device was upgraded and modified to HL-1M in the 1980s. The results of experiments in these tokamaks formed the basis for Chinese fusion research.

At the same time, from the beginning of the 1970s, the Chinese Academy of Sciences initiated research in nuclear fusion and founded the Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP) in 1978 in Hefei, Anhui province, and set up the Department of Plasma Physics at the University of Science and Technology of China. By the mid-1980s, several small and medium sized tokamak devices, including CT-6, KT-5, HT-6B and HT-6M, had been built, and a stable fusion research team was formed. The research on MCF of both institutes in China focused mainly on the tokamak approach, through which Chinese scientists have carried out experiments and research on almost all aspects of MCF-related science and engineering. On the other hand, plasma technology and products were developed in industries and factories.

Under the auspices of the Chinese 863 Program founded in March 1986, the development and implementation of the Project of Fusion and Fission Hybrid Reactor R&D has effectively advanced Chinese fusion research, and much progress has been made in some key fusion techniques, including tritium handling, plasma heating and current drive, and the design of advanced tokamak fusion reactors.

The construction of a superconducting tokamak facility in China benefited from this programme as well. Through international cooperation with the Russian Federation, China's first superconducting tokamak, HT-7, was built in 1994 in ASIPP with a circular cross-section, and a series of experiments on stability with a medium parameter plasma have been carried out since then. In March 2003, a repetitive plasma discharge of longer than one minute was achieved in this machine. ASIPP constructed a completely new tokamak with a non-circular cross-section, the superconducting tokamak, in which the first plasma is expected in 2005.



HL-2A, Southwestern Institute of Physics, Chengdu, People's Republic of China

HT-7, Institute of Plasma Physics, Chinese Academy of Sciences, Hefei, People's Republic of China

At the Center of Fusion Science of SWIP, the ASDEX tokamak from IPP Garching was reassembled, named HL-2A, and re-commissioned at the end of 2002 modified with a divertor configuration, which was operated in the experiments of 2003. After dozens of years of development, research on MCF in China has achieved great accomplishments and attracted the attention of the international fusion community. So far, related research institutes in China have established long term co-operative relations with institutes and universities of more than 30 main fusion research countries and international organizations, including the USA, Japan, the Russian Federation, Germany, the United Kingdom and France.

During the past 30 years, hundreds of fusion scientists and engineers in China have been sent abroad to study and exchange fusion research know-how, particularly by participation in the experiments of TFTR, JET and JT-60, etc. Within China, a great number of students have become interested in fusion research as well.

With participation in the ITER project, China will be working with the European Union, the Russian Federation, Japan, the Republic of Korea, the United States of America and Canada on the creation of ITER in an effort to produce clean, safe, renewable and commercially available fusion energy by the middle of this century.

Items to be considered for inclusion in the ITER ITA Newsletter should be submitted to C. Basaldella, ITER Office, IAEA, Wagramer Strasse 5, P.O. Box 100, A-1400 Vienna, Austria, or Facsimile: +43 1 2633832, or e-mail: c.basaldella@iaea.org (phone +43 1 260026392).

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