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NINTH NEGOTIATORS' STANDING SUB-GROUP (NSSG-9) AND RELATED MEETINGS

by **Dr. Y. Okumura, Deputy Director of Office of ITER Project Promotion, JAERI**

The ninth meeting of the ITER Negotiators' Standing Sub-Group (NSSG-9) was held on 28 and 29 July 2003 at Mita International Conference Center in Tokyo. Japan hosted the meeting, which was also attended by delegations from Canada, China, the European Union, the Republic of Korea, the Russian Federation and the United States of America, as well as the members from IT. The delegations accepted Mr. Satoru Ohtake as Moderator and Dr. Taro Matsumoto as Secretary.

This was the first time at the NSSG for the Republic of Korea, which decided to join the ITER Negotiations in June 2003. All the delegations welcomed the participation of the Republic of Korea at the NSSG.

At the opening of the meeting, all the delegations noted the departure of Dr. Aymar and Dr. Huguet from IT, and the delegations expressed appreciations for their great contributions to the development of the ITER Project over many years.



Participants at the Meeting

Prior to the NSSG-9 meeting, a number of meetings of specialist Working Groups were held over the period from 22 to 27 July 2003 at JAERI Ueno in Tokyo. The topics discussed in the Working Groups were:

- Risk Management
- Procurement Systems and Methods
- Procurement Allocation
- Management Structure
- Intellectual Property Rights
- Drafting of the Agreement and Related Instruments.

Each Working Group was led by a rapporteur, who subsequently summarized the discussion and presented the group's findings and recommendations to the NSSG as a whole for consideration and guidance. This approach, which was initiated at NSSG-8, was found to be very effective for focused discussion on many different topics.

The NSSG also discussed the future working plan and confirmed the necessity to accelerate development of the Agreement and Annexes. The delegations agreed to develop the discussion on substantial elements of some selected legal instruments, particularly Staff Regulations and Project Resource Management Regulations including Decommissioning Fund Arrangements. The delegations also exchanged views on the expected time frames of their domestic processes towards formal adoption of the Agreement and agreed to further clarify their internal procedures and to continue discussion on this issue.

The next meeting of the NSSG (NSSG-10) and related meetings are scheduled for the period of 18–25 September in Culham, UK.

JOINT MEETING OF ITPA TOPICAL GROUPS ON CONFINEMENT DATABASES & MODELLING, AND ON TRANSPORT & INTERNAL TRANSPORT BARRIERS

by W. Houlberg, A. Polevoi, and the Confinement Database & Modelling ITPA Topical Group, and E. Doyle, V. Mukhovatov, and the Transport & ITB Topical Group

General

The Confinement Database & Modelling (CDB&M) and Transport & Internal Transport Barrier (T&ITB) Topical Groups (TGs) held a joint meeting in St. Petersburg, Russia from 8 to 12 April 2003 that was attended by 38 participants (see list of participants at the end of this article). These two TGs share the common goals of achieving a better understanding of the confinement and transport of hot core plasmas to provide methodologies to make projections to ITER and other Burning Plasma Experiments. The CDB&M TG puts more emphasis on developing and analysing databases from many experimental devices and modelling the plasma profiles with transport codes. The T&ITB TG puts more emphasis on experimental characterization of transport phenomena and developing theories to explain them.

Joint session on review paper “Tokamak Physics Basis for Burning Plasmas”

The purpose of the International Tokamak Physics Activity (ITPA) is to provide methodologies for projection and control of burning plasmas. The results obtained up to 1998 under the framework of ITER Physics R&D, which is a predecessor of ITPA, were documented in “ITER Physics Basis”, which was published in Nuclear Fusion in 1999. The ITPA TGs are planning to update this document by jointly writing a review paper titled “Tokamak Physics Basis for Burning Plasmas”. The focus will be on the progress made during the last five years in the areas of outstanding issues that were pointed out in “ITER Physics Basis”.

A presentation on the rationale and process for generating the Tokamak Physics Basis (TPB) document was followed by a discussion of the outline of Chapter 2, for which the two TGs share responsibility with the Pedestal TG. Lead TG responsibility was assigned to each section, and an initial set of proposed authors was later identified in working sessions.

Joint session on particle transport and plasma rotation

Two joint technical sessions were held to review some new work on particle transport and plasma rotation, with the goal of identifying developments to be presented in the TPB, as well as opportunities to extend the



Participants at the Meeting

treatment of these issues in the ITPA framework. The local hosts arranged a tour of the Ioffe facilities, including the Globus-M spherical torus experiment.

Working sessions

- Working sessions were devoted to a review of the progress on various projects, status of collaborations, analysis of data, discussion and the generation of new action lists. Several groups reported progress on the collaborative experiments identified last autumn to address high priority issues. The JET team demonstrated the most extensive response to the ITPA requests, while responses from other teams have so far been more limited because of the relatively short time since the list was formulated.
- ITB modelling demonstrates a limited success and shows a high sensitivity to plasma parameters and details of the models. A start has been made on modelling edge-core interactions using JET data and the JETTO code. The re-normalized and retuned (1.61) version of the GLF23 transport model is now available for users. Progress on several new modelling projects that use the Pedestal Database was reported and discussed. These include high performance plasmas, T_e/T_i effects on transport, pellet fuelling and steady state scenarios. Progress was reported on and data needs identified for the modelling project on core plus edge transport.
- Papers were discussed for the EPS examining key parameters for ITB formation and one proposed for the H-mode and ITB Physics Workshop on Advanced Tokamak Regimes, including a discussion of prospects based on a multi-machine comparison.
- Reports from DIII-D and JET on new β -scan experiments in ELMy H-mode do not show any degradation of confinement time with β . A new two-term ELMy H-mode scaling for confinement that assumes a neoclassical pedestal term was presented. This results in a pedestal term with strong β degradation and a gyro-Bohm core with no β dependence.

Future meetings

The fifth meeting of these TGs will be held in San Diego in September. The sixth meeting is proposed to be held in Japan in spring 2004, and the seventh meeting in Europe in autumn 2004.

LIST OF PARTICIPANTS

- JA:** T. Fujita, T. Takizuka
EU: J.G. Cordey, C. Hidalgo, F. Imbeaux, X. Litaudon, Y. Martin, V. Parail, F. Ryter, K. Thomsen, B. Unterberg, M. Valovic, J. Weiland
RF: V. Andreev, A. Chudnovskiy, Yu. Dnestrovskiy, E. Kaveeva, N. Kirneva, S. Lebedev, V. Leonov, S. Neudatchin, M. Ossipenko, K. Razumova, V. Rozhansky, I. Semenov, A. Tukachinsky, V. Vershkov
US: L. Baylor, R. Budny, J. DeBoo, E. Doyle, P. Gohil, W. Houlberg, M. Peng, J. Snipes
ITER: V. Mukhovatov, A. Polevoi, M. Shimada.

NEW PARTICIPANTS IN THE ITER TRANSITIONAL ARRANGEMENTS

Information from the Editor

After the start of the ITER Transitional Arrangements (ITA), (see ITER Newsletter January 2003), the IAEA Director General, Dr. M. ElBaradei, received by letters from the Governments of the three new Participants in the ITER Negotiations – The People’s Republic of China, the Republic of Korea and the United States of America – confirmation of their intentions to participate in the ITA, the aim of which is to prepare for the entry into force of an international agreement on the joint implementation of ITER, as and when so decided.

BORIS KUVSHINNIKOV, SENIOR INFORMATION OFFICER FOR 13 YEARS AT THE ITER OFFICE VIENNA, HAS RETIRED

by Dr. L. Golubchikov, Fusion Center at RRC “Kurchatov Institute”, Moscow



Boris was born in Moscow in 1929. His school years coincided with very hard times in the history of the USSR, including the years of World War II. After completing his secondary education, he was accepted as a student at the very prestigious MIFI College (Moscow Engineering and Physical Institute), where he was awarded the diploma of engineer–physicist in 1952. Thus his retirement at this time comes after more than 50 years of work in the world nuclear community.

After graduating from the MIFI, Boris took up a post as lecturer at his alma mater and continued scientific research there until 1967. Incidentally, he chaired the commission that selected new students from the great number of applicants, and among the students selected was A.Yu. Rumyantsev, now Minister of the Russian Federation for Atomic Energy.

In 1967 Boris was appointed Scientific Advisor at the Permanent Mission of the USSR to the International Organizations in Vienna, where he dealt mainly with issues related to nuclear energy. Upon the recommendation of former IAEA



Prof. W. Burkart, IAEA Deputy Director General (center), opening the series of speeches at the farewell party

Director General Dr. S. Eklund, Boris was appointed Representative of the IAEA Director General at United Nations Headquarters in New York in 1975.

From 1982 to 1989 Boris was Deputy Director of the Department of International Relations at Minatom. It should be recalled that in 1989 the ITER Conceptual Design Activities were already in full swing. In the USSR, research in fusion energy was oriented towards ITER, and this is why it was decided to involve people with an excellent scientific background and experience in foreign affairs. Boris was highly qualified in both respects, and so he joined the group of Russian specialists working in Garching (the head of the group at that time was Dr. Yuri Sokolov, who has recently been appointed Deputy Director General of the Department of Nuclear Energy at the IAEA in Vienna).

The ITER project is fortunate to have had Boris Kuvshinnikov's contributions to its activities for almost 15 years, and the fusion community is grateful to Boris for everything he has done for ITER, in particular for the ITER Office Vienna. We wish him and his wife Lidia good health and happiness. We hope that Boris will enjoy his life after more than half a century of work, and we hope we can still count on his help "in word and deed" at least until we attend the inauguration of ITER together.

and by C. Basaldella, ITER Office Vienna

When Boris joined the ITER Office Vienna in 1990, he was in the course of three years my third Russian boss in as many years, after Alexander Mavrin and Nikolai Pozniakov – and he was the only one who held out in the face of the vicissitudes of the job. A kind of symbiosis developed between us rather quickly and strengthened over the years – both in minor matters (Boris bought and prepared the 10 o'clock coffee, I arranged for the cookies) and in the main work of the ITER Office, publishing. Boris refused to have his own PC and therefore never had a personal e-mail address ("Don't bother me with that..."), but we would sit together for hours in front of my PC over the drafts of books and articles ("People working in their own language don't have an idea how lucky they are.") and over Boris' "favorite child", the ITER Newsletter, the

name of which has changed several times in those 13 years, from CDA to EDA to CTA to ITA Newsletter... remember?

We worked together for nearly 13 years, with the door between our offices always open, nevertheless leaving each other enough privacy, since I could not understand his talking in Russian on the phone and he did not understand my Viennese dialect (though I sometimes had strong doubts on this point).

I miss you Boris, and please remember your promise: Whenever I need your help and advice, I am allowed to call.



At the farewell dinner hosted by Boris and his wife Lidia

Items to be considered for inclusion in the ITER CTA 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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