

ITER ITA NEWSLETTER

No. 30, APRIL - MAY 2006



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, AUSTRIA

ISSN 1727-9852

VISIT OF KANAME IKEDA, DIRECTOR GENERAL NOMINEE, TO NAKA

Contributed by Dr. M. Shimada, Physics Division Head, Naka JWS

Ambassador. Kaname Ikeda visited Naka on 7-8 March 2006 for the first time since his nomination as Director General Nominee. He met the IT members in small groups and discussed their views on the structure of the new organization and schedule for the move from Naka to Cadarache. He stressed the need to maintain project momentum and staff expertise during the transition to Cadarache. On 8 March he was joined by Mr. Itakura, Director of Office of Fusion Energy, MEXT and visited JT-60 and other facilities of Japan Atomic Energy Agency, Naka.



Mr. Ikeda with IT Members at Naka

COMMON MESSAGE FROM THE 6TH PREPARATORY MEETING FOR ITER DECISION MAKING

High level negotiators from China, European Union, the Republic of India, Japan, the Republic of Korea, the Russian Federation, and the United States of America met at the Tokyo International Exchange Center in Tokyo on 1st April 2006 to finalize the ITER negotiations and to take key decisions on the future of the project.

Conclusion of ITER Negotiations

At the Meeting, the representatives of the seven Parties involved accepted the final results of the four years of intensive negotiations and confirmed their intentions now to present proposals to their respective authorities for approval to conclude the international agreement on the project.

Designation of nominee Principal Deputy Director-General

Following interviews with all Parties, the negotiators unanimously agreed on the proposal of European Union to designate Dr. Norbert Holtkamp as nominee to the principal technical management post under the Director-General of the prospective ITER Organization. Dr. Holtkamp is currently Director of Accelerator Systems Division, Spallation Neutron Source at the Oak Ridge National Laboratory in the USA. The Parties asked Dr. Holtkamp to take up his duties promptly.

Coming after the designation in November 2005 of Ambassador Kaname Ikeda as the nominee Director-General, this means that the core of the management team of the prospective ITER Organization is now in place.

Conclusion

These two developments confirm that the ITER Project is well on the way to becoming a reality with the start of its construction. The core of the management team will now press forward with the build up of the international ITER Team and its activities on the ITER site.

As the next major step in the official process, a meeting of the parties at Ministerial level is planned for 24 May in Brussels for the purpose of initialling the ITER Agreement.

EIGHTH ITER PREPARATORY COMMITTEE AND LEADERS MEETING **Contributed by Bill Spears, ITER Public Information, Garching**

The Eighth Meeting of the ITER Preparatory Committee (IPC8) took place on 26 to 27 April in Goa, with India hosting and chairing for the first time.

The meeting addressed how to prepare for the practical implementation of the ITER Joint Implementation Agreement, to be initialed by the Parties' Government representatives on 24 May 24 in Brussels.

It discussed how to recruit the remaining senior management and organize the project team structure, and how to then smoothly integrate existing and new staff working at multiple joint work sites into the new project team being built in Cadarache. It also agreed to ask the IAEA to act as trustee of a joint fund for shared expenses prior to the establishment of the new ITER Organization next year.

It considered the status of the current project, the work plan up to March 2007, urgent staff needs, and how to handle future work on test blanket modules, one of the key reactor-relevant elements to be tested on ITER.

It was preceded by a meeting of the Participant Team Leaders with the new project management – the DG Nominee and his Principal Deputy Nominee (see below). They discussed in more detail the technical aspects and implications of the work programme in terms of activities, how to come to reasonable technical solutions for procurement sharing, and how to rationalize the integration of multiparty test blanket operation into the machine.



Participants in the Meeting

NORBERT HOLTkamp CHOSEN AS PRINCIPAL DEPUTY DIRECTOR-GENERAL NOMINEE

Contributed by Bill Spears, ITER Public Information, ITER Garching

After a lengthy competition with more than 400 other candidates, on March 27th Norbert Holtkamp was selected by Euratom in Brussels as their candidate for the second in command of the future ITER Organisation, and as the Project Construction Leader. He immediately found himself boarding a plane to Japan in the hope of acceptance by Ambassador Kaname Ikeda, the DG Nominee, and by the other Parties at their ministerial-high-level meeting there to declare the formal end of negotiations on the joint implementation of ITER construction and operation. These hurdles duly accomplished, Norbert became the second nominal recruit to the new ITER Organisation.



Norbert was born in Fürstenau, Germany, in 1961. He made his diploma studies in Physics at the Free University of Berlin between 1982 and 1987, and obtained his doctorate, also in Physics, in 1990 at the Technical University Darmstadt. He got married to Maria, an architect, in 1987 and has two sons - Philipp, now aged 18, and Alexander, 15.

Between diploma and doctorate, he began working in accelerators, on the research staff at BESSY (Berliner Elektronspeicherung Gesellschaft für Synchrotronstrahlung GmbH). Following his Doctorate he worked as a Research Associate at the TU Darmstadt. A four month sabbatical at SLAC (Stanford Linear Accelerator) had him working on accelerators again, and set him up for a 6-year stint at DESY (Deutsches Elektron Synchrotron), in Hamburg. Here he was head of a research group responsible for the development of a normal conducting linear collider concept (S-Band). Later, he

became department head for linear accelerators. In 1998 he moved to the United States and became a senior staff member at FNAL (Fermi National Accelerator Laboratory) near Chicago, working on muon collider and neutrino factory research, linear colliders, and the main injector.. In 2001 he became Accelerator Systems Division Director at the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL).

The SNS is a Pulsed Neutron Source based on a 1 GeV H- largely superconducting linac and an accumulator ring that can provide 1-3 MW of average beam power. The facility has been under construction since 1999 and will be officially finished in June 2006. He coordinated and led the design and construction of the SNS accelerator among five participating DOE laboratories (Lawrence Berkeley National Laboratory (LBNL), Los Alamos National Laboratory (LANL), Thomas Jefferson National Accelerator Facility (TJNAF), Brookhaven National Laboratory (BNL) and ORNL).

The total cost of SNS is approximately \$1.4 Billion, and the accelerator comprises approximately half of that. Within that scope of work he was responsible for the management of cost, schedule and technical coordination. At the peak of the construction approximately 500 people worked under his direction. About 150 of these were located at Oak Ridge and the rest were distributed at the participating labs. As the labs completed the design and construction of SNS equipment, he led the installation and commissioning of the SNS accelerator systems. When SNS goes into operation, the total staff at the SNS facility will be about 450 of which about 200 will be assigned to the accelerator.

Commenting on the challenges ahead, Norbert indicated, "One of the most exciting things about SNS is that it was foreseen from the very beginning as a project to be constructed in partnership with total of six national DOE laboratories (also Argonne National Laboratory). Since this was a unique way of building such a large project within the DOE, much had to be developed and learned along the way. It required a great deal of strong technical leadership and integration effort as well as sensitivity in the management of such a dispersed work force."

"Many of the challenges that lie ahead for the Principal Deputy Director-General of ITER are very similar to those faced by SNS, but of course on an international scale:

- (1) integration between the design philosophies and design approaches in the different countries,
- (2) well defined handoff points,
- (3) integrated technical designs and schedules, and of course
- (4) a smooth transition into an operational facility – all of this while maintaining the overall project schedule and cost."

"From my point of view this is true for the technology as well. While large accelerators and fusion devices are obviously different systems, the technologies are very similar in both cases. High power radio frequency systems, beam diagnostics, electrical and mechanical engineering, vacuum technology, controls, cryogenics, magnet construction and radiation are only some of the areas with large overlap. "

Norbert has served on a variety of US Department of Energy (DOE) and National Science Foundation (NSF) review committees dealing with technical, cost schedule and planning issues on linear colliders, neutrino factories and neutrino beams, synchrotron radiation and X-ray free electron laser designs, as well as high energy colliders. He was a member of the HEPAP sub-panel on long-range planning in high-energy physics in 2001/2002. He was also a member of the International Technology Recommendation Panel (ITRP) that recommended superconducting technology as the preferred choice worldwide for a Linear Collider in 2004. He was the chair of the Particle Accelerator Conference in 2005, and is the Linac Conference Chair in 2006.

Norbert will participate in ITER management over the coming months as his other commitments allow, He plans to relocate and begin work full time in Cadarache at the beginning of September.

RECOLLECTIONS OF DR. MICHAEL ROBERTS ON THE OCCASION OF HIS RETIREMENT

by Dr. E. Canobbio, former ITER EU Contact Person (ret.)

More than twenty years have gone by since I met for the first time Dr. Michael (Mike) Roberts. He soon became my major interlocutor on the international scene. Mike was the accomplished sherpa of John Clarke,

me, a privileged mature beginner discovering international relations in the shadow of Donato Palumbo (who was to remain in office in Brussels one more year). Up to then I had been enjoying as a physicist the golden age of Plasma physics triggered by the epoch-making Geneva Conference on the Peaceful Uses of Atomic Energy (1958).

The level of importance reached by the international relations in the field of fusion was also fruit of the cold war time. That period could perhaps, in retrospect, be called the golden age of multilateralism. In fusion, multilateralism was personified by John Clarke, Donato Palumbo, Seguri Mori and Evgeniy Velikhov (“the gang of four”, as Donato liked to call them), together with their “national” interlocutors, acting virtually on an equal footing with as little cold-warrior postures as possible.

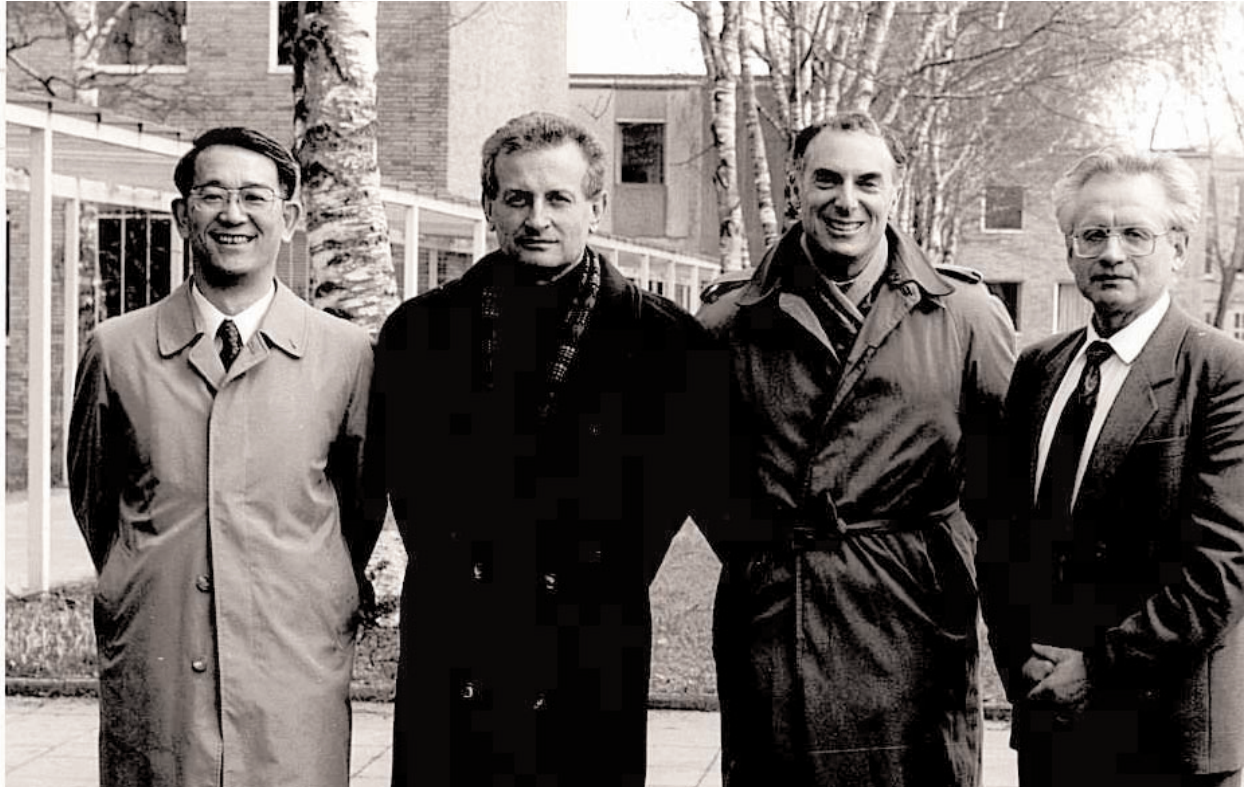
I came soon to appreciate the wide spectrum of Mike’s qualities. It was crystal clear from the beginning that we would dedicate ourselves to the common cause even at the cost of personal emotional suffering. But as in all true human stories, it could also be fun being and working together: his unmistakable gait, his scarf/raincoat silhouette, his vigorous voice and bursts of laughter. I still see his face when at a dinner party in Nice, Mike, basically a vegetarian, could not believe his eyes realizing that the “Plateau de Fruits de Mer” ordered confidently was actually shellfish (then happily consumed by me).

In our capacity as ITER Contact Persons (CP), we – Mike, Akio Kitsunozaki, Lev Golubchikov, Martin Drew for the Director, and me, under Mike’s methodical chair, had gradually grown into a damned good team. Our job was to prepare for decisions at the highest level. The tentative sequences of events, the agendas, the briefings have been so helpful that often consensus could be reached rapidly at all levels. The sense of togetherness gradually became the common atmosphere of the ITER venture. At the opening ceremony of the EU ITER Joint Work Site, the late Professor Ruberti, EU Commissioner, could address his guests clustering from as far as the East and West coasts of the Pacific Ocean, by echoing what Socrates had told his Mediterranean friends: “We live round a sea like frogs round a pond.”

The CPs’ Group worked hard: telephone calls for hours, day and night meetings together all over the world under Mike’s gentle leadership; he mastered the jet lag better than anybody else. But we could also mix business with the pleasure of socializing in sushi bars whenever possible. This habit contributed to the mutual



Contact Persons meeting with the Special Working Group (1993 Garching)



The Contact Persons of the four ITER EDA Parties' before Martin Drew joining

understanding of our cultural differences. Above all, however – and I think I may say this on behalf of all the CPs – we really enjoyed working together, perhaps like a small chamber orchestra holding rehearsals “*allegro con brio, molto espressivo, con alcune licenze.....ma non troppo*”.

No one can pretend to have been indispensable to the success of ITER. Nevertheless, I think that the contribution of the CPs (and their lawyers) was a determining factor in the decision making process of the ITER Parties at least on three occasions:

1. When it was decided that the EDA Agreement be accompanied by implementing Protocols;
2. When the formal survival of the EDA was ensured in spite of the withdrawal of the USA;
3. When it was agreed to proceed formally, beyond the EDA, to jointly develop the legal framework to eventually implement ITER construction, “if and when so decided.”

The last point reveals the trend toward more and more flexibility if not reversibility that governed these years. Utopian thoughts were giving way to “Realpolitik”. I had to retire in summer 2000, when the EU formally decided on point 3).

Quoting now from your “Thank you to all” message of 3 May, “Today all the world’s major fusion program parties, encompassing half the world’s population, are represented at our project meetings.....The future looks even brighter than the past, with regard to fusion and ITER.” And yet, it is with a touch of nostalgia that I remember the time “of working with superb individuals from around the world” like you, Mike.

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 260026393).

Printed by the IAEA in Austria
June 2006

06-21711