

12. OTHER FUSION-RELATED ACTIVITIES

12.1. Collaboration with Brazilian Institutions

IST/CFN has proceeded with the collaboration on nuclear fusion with two Brazilian Institutions:

- Laboratório de Plasmas (LP), do Instituto de Física, da Universidade de São Paulo;
- Laboratório Associado de Plasmas (LAP), do Instituto Nacional de Pesquisas Espaciais, de São José dos Campos.

The 2005 working programme included the development of *data acquisition boards* for TCA/Br¹ and ETE², the design of a *microwave reflectometer* for TCA/Br, the development of a *high spatial resolution Thomson scattering diagnostic* for ETE and *experiments on edge physics* on TCA/Br.

12.2. Collaboration with IPP.CR

IST starts in 2005 a new collaboration with Institute of Plasma Physics, (IPP.CR) related with the re-commissioning in Prague of the COMPASS-D tokamak. The areas of joint work are *control and data acquisition, microwave reflectometry and edge plasma diagnostics and physics*.

12.3. Participation in the management of Fusion Programmes

- Some members of the Association EURATOM/IST are delegates to Committees of the European Fusion Programme and of the European Fusion Development Agreement (Table 11.1).
- Prof. Carlos Varandas is/was:
 - Chairman of the EFDA Steering Committee;
 - Member of the European Union Delegation to the ITER negotiations;
 - Member of the Steering Committees of the Bilateral Agreements of EURATOM with Russia, Japan and USA;
 - Member of the Ad-Hoc Group on ELE/EFEDO and related issues;
 - Chairman of the Ad-Hoc Group on the new European Fusion Development Agreement and the Contracts of Association.
- Prof. Fernando Serra is/was a member of:
 - Ad-Hoc Group from STAC for the “Monitoring of W7-X Project”;
 - Member of the ITPA (International Tokamak Physics Activity) Topical Group on Diagnostics.

- Profª Maria Emília Manso was:
 - Member of the Programme Committee of the ASDEX-Upgrade Project;
 - Chairperson of the International Advisory Board on Reflectometry.

12.4. Organization of scientific meetings

Two members of the CFN staff have been involved in the organization of scientific meetings:

- Dr. Carlos Silva was member of the Programme Committee of the “Workshop on the Role of Electric Field in Plasma Confinement and Exhaust”.
- Prof. Carlos Varandas was:
 - Chairman of the Organizing Committee of the Workshop on “Energies of the Present and Future”, Lisboa, 21 and 22 November 2005;
 - Member of the International Organizing Committee of the “XI Latin-American Workshop on Plasma Physics”, Mexico, 1-5 December 2005.

12.5. Collaboration with Portuguese Universities

CFN has proceeded with the collaboration in graduation and post-graduation university programmes:

- CFN has been responsible by experimental teaching in tokamak physics and engineering;
- Seventh students have been performing Master and Ph.D. programmes at CFN in fusion plasma physics and engineering.

12.6. Public information

CFN has proceeded with activities aiming at increasing the public understanding on fusion energy:

- Six seminaries have been given in secondary schools;
- A film about fusion and ITER has been translated to Portuguese;
- Prof. Carlos Varandas has participated in television programmes about the ITER Project;
- Several articles have been published in Portuguese newspapers with the direct or indirect participation of members of the IST/CFN staff.

¹ TCA/Br is a tokamak of the University of São Paulo

² ETE is a tokamak of LAP.

Name	Member of
Carlos Varandas	CCE-FU
	EFDA Steering Committee
	GoC ³
	CFI ⁴
	STC ⁵
	EFDA Technology Sub-Committee
Maria Emília Manso	CCE-FU
	EFDA Steering Committee
	EFDA Public Information Sub-Committee
Fernando Serra	STAC ⁶
	EFDA/PIG ⁷
J.P. Bizarro	STAC
P. Silva	STC
	EFDA Technology Sub-Committee
Carlos Silva	AFAC ⁸
J.T. Mendonça	IFEC ⁹

Table 12.1 – Participation of members of the Association EURATOM/IST on the management of the European Fusion Programme and of the European Fusion Development Agreement

³ GoC means “Group of Chairmen”

⁴ CFI means “Committee Fusion Industry”

⁵ STC means “Scientific and Technical Committee”

⁶ STAC means “Scientific and Technical Advisory Committee”

⁷ PIG means “Public Information Group”

⁸ AFAC means “Administrative and Financial Advisory Committee”

⁹ IFEC means “Inertial Fusion Energy Committee”