

## 14. OTHER ACTIVITIES

### 14.1. CENTRO DE FUSÃO NUCLEAR

#### 14.1.1. Collaboration with Brazil

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.

In 2004, a working programme for the collaboration between IST and IFUSP in nuclear fusion was elaborated, with activities on tokamak operation, control and data acquisition, diagnostics and MHD. The design of a microwave reflectometer for TCA/Br has been jointly performed. A joint project on “identification of local Alfvén wave resonances with reflectometry” to be submitted to the EFDA JET Close Support Unit and to the ASDEX-Upgrade Programme Committee has been elaborated. New software for the CFN VME transient recorder modules in operation on TAC/Br was made. Collaboration with LAP in the development of a multi-point Thomson scattering diagnostic for ETE has proceeded.

#### 14.1.2. Organization of scientific meetings and exhibitions

- CFN has collaborated with IAEA on the organization of the “20<sup>th</sup> Fusion Energy Conference” (FEC-2004), held in Vilamoura, Portugal, in November 2004, with 604 participants from 32 countries.
- CFN organized an exhibition of the “EXPO Fusion”, in Vilamoura, from 1 to 6 November 2004. The exhibition has been visited by about 500 students of secondary schools of the south of Portugal.
- Dr. Duarte Borba was member of the Programme Committee of FEC-2004.
- Dr. Carlos Silva was member of the Programme Committee of the “Workshop on the Role of Electric Field in Plasma Confinement and Exhaust”.

#### 14.1.3. Participation in the management of Fusion Programmes

- Some members of the IST/CFN staff are delegates to Committees of the European Fusion Programme and of the European Fusion Development Agreement (Table 14.1).
- Prof. Carlos Varandas is/was:
  - Chairman of the EFDA Steering Committee;
  - Vice-Chairman of the “CCE-FU<sup>1</sup> Special Working Group on Possible Joint Implementation of ITER”;

- Member of the Steering Committees of the Bilateral Agreements of EURATOM with Russia, Japan and the US Department of Energy;
- Member of the European Union Delegation to the ITER negotiations.
- Prof. Horácio Fernandes and Dr. Paulo Varela were members of the JET Remote Participation Users Group.
- Dr. Duarte Borba was Deputy Leader of the JET Task Force M and Leader of the ASDEX-Upgrade Task Force on MHD.
- Prof. Fernando Serra is/was a member of:
  - Ad-Hoc Group for the Monitoring of 2003 and Overview of 2003 EFDA Technology Activities: Diagnostic;
  - Ad-Hoc Group from STAC for the “Monitoring of W7-X project”;
  - Member of the ITPA (International Tokamak Physics Activity) Topical Group on Diagnostics.
- Prof. Maria Emília Manso was:
  - Member of the Programme Committee of the ASDEX-Upgrade project;
  - Chairperson of the International Advisory Board on Reflectometry.

### 14.2. CENTRO DE FÍSICA DOS PLASMAS

#### 14.2.1. Organization of scientific meetings and exhibitions

- Prof. Matos Ferreira was:
  - Chairman of an exhibition called “À luz de Einstein 1905-2005”, organized in the frame of the “2005 World Year of Physics”, in collaboration with Fundação Calouste Gulbenkian.;
  - Member of the International Advisory Board of International Summer School on Vacuum, Electron and Ion Technology organized by Bulgarian Academy of Sciences and Institute of Ion Beam Physics and Materials Research, Rossendorf Centre (Germany);
  - Member of the International Scientific Committee of International Workshop: Microwave Discharges, Fundamentals and Applications;
- Profs. Luís Silva, João Mendanha Dias and Ricardo Fonseca and Dr. Gonçalo Figueira are also members of the Organizing team of the exhibition “À luz de Einstein 1905-2005”.
- Prof. V. Guerra was member of the International Scientific Committee European Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG).

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<sup>1</sup> CCE-FU means “Consultative Committee for the EURATOM Specific Research and Training Programme in the Field of Nuclear Energy Fusion

- Prof. Tito Mendonça was co-chairman of the Workshop on Theoretical Plasma Physics, Abdus Salam ICTP Trieste
- Prof. Luís Silva:
  - Was appointed member of the Programme Committee of the 47th Annual Meeting of the Division of Plasma Physics of the American Physical Society
  - Is member of the Scientific Committee of the Workshop on Laser and Plasma Accelerators, and member of the Scientific Committee of the International Workshop on Fast Ignition and High-Field Physics.

#### 14.2.2. Participation in the management of International Programmes

- Prof. Tito Mendonça is member of the Inertial Fusion Energy Coordinating Committee (Table 14.1).
- Prof. Matos Ferreira is member of:
  - COST Technical Committee on Physics;
  - Academia Europeia of the European Physical Society.

#### 14.2.3. Prizes and Awards

- Prof Luis Silva was the recipient of the 2003 IBM Scientific Prize.
- Mr Nuno Brites was the recipient of the Prémio António da Silveira 2004.
- Prof. Tito Mendonça and Prof. Luis Silva are Fellows of the Centre for Fundamental Physics, Rutherford Appleton Laboratory.

Name	Member of
Carlos Varandas	CCE-FU
	EFDA Steering Committee
	FTC <sup>2</sup>
	CFI <sup>3</sup>
	STC <sup>4</sup>
	EFDA Technology Sub-Committee
Maria Emília Manso	CCE-FU
	EFDA Steering Committee
	EFDA Public Information Sub-Committee
Fernando Serra	STAC <sup>5</sup>
	EFDA/PIG <sup>6</sup>
J.P. Bizarro	STAC
P. Silva	STC
	EFDA Technology Sub-Committee
Carlos Silva	AFAC <sup>7</sup>
J.T. Mendonça	IFEC <sup>8</sup>

Table 14.1 – Participation of members of the Association EURATOM/IST on the management of the European Fusion Programme and of the European Fusion Development Agreement

<sup>2</sup> FTC means “Fusion Technology Committee”

<sup>3</sup> CFI means “Committee Fusion Industry”

<sup>4</sup> STC means “Scientific and Technical Committee”

<sup>5</sup> STAC means “Scientific and Technical Advisory Committee”

<sup>6</sup> PIG means “Public Information Group”

<sup>7</sup> AFAC means “Administrative and Financial Advisory Committee”

<sup>8</sup> IFEC means “Inertial Fusion Energy Committee”