

<b>TITLE: Senior Scientific Officer, Energetic Particle Physics</b>		<b>FST- 016</b>
<b>REPORTS TO LINE MANAGER:</b> Assistant Deputy Director-General/ Deputy Director-General Fusion Science and Technology		
<b>DIRECT EMPLOYMENT:</b> NOT REQUIRED		<b>GRADE RANGE:</b> P4-P5
<b>DATE WRITTEN:</b> January 2008	<b>DATE REVISED:</b>	<b>DATE REVISED:</b>

**Purpose:**

- Supports the Assistant Deputy Director-General (ADDG)/ Deputy Director-General (DDG) for Fusion Science and Technology through coordination of and contributions to the analysis of all areas of energetic particle physics and heating and current (H&CD) drive physics for ITER, and by the definition of relevant physics requirements contributes to meeting the ITER operational and performance specifications. This involves close interaction with the ITER Members in the specification, implementation and monitoring of the relevant activities.

**Major Duties/Responsibilities:**

- Definition and management of a programme of experimental and modelling R&D activities on the analysis of energetic particle/alpha particle physics and H&CD performance in ITER plasma scenarios;
- Major contributions to the definition of ITER requirements for an integrated plasma modelling capability for plasma simulation through a leading role in specifying plasma processes involving energetic particle populations and H&CD physics for ITER;
- Major contributions to the specification and analysis of ITER plasma operation scenarios through a leading role in specifying plasma processes involving energetic particle populations and H&CD physics for ITER;
- Substantial contributions to the planning for ITER plasma commissioning and operation;
- Integration of R&D results and analysis from the ITER Members on all aspects of H&CD physics and energetic particle physics, and the analysis of their implications for ITER plasma operation scenarios;
- Interaction with and coordination of experts in the ITER Members for the definition, implementation and monitoring of activities in this area;
- Contributions to the preparation of documentation defining operational performance requirements for ITER plasma scenarios and synthesising predictions of ITER performance;
- Provision of support to the management of the FS&T Department in liaising with ITER construction activities;

- Supervision of ITER staff and visiting researchers contributing to activities in the area of H&CD physics and energetic particle physics;
- Shows strong commitment to the ITER safety programme and enforces it through individual behaviour and work organization;
- Maintains a strong commitment to the implementation and communication of ITER goals and ethics.

#### **Qualifications Required:**

- PhD or equivalent research experience in a relevant area;
- Outstanding expertise in experimental and theoretical aspects of fusion physics, with extensive experience in energetic particle physics and/or physics aspects of plasma H&CD;
- At least 10 years experience in fusion research, with significant project management experience and proven technical leadership abilities;
- Extensive experience in managing international collaborations and demonstrated ability to represent an international organisation such as ITER;
- Excellent written and verbal communication skills in English.

#### **Work Management structure and Interfaces:**

- Reports to the ADDG/DDG for Fusion Science and Technology;
- Supervises a small group of technical experts contributing to the analysis of H&CD physics and energetic particle physics in ITER plasma scenarios;
- Interacts with the project divisions responsible for the procurement of components and sub-systems, in particular in the areas of H&CD, Diagnostics and Control;
- Liaises with experts in the international fusion community in the area of H&CD physics and energetic particle physics.

#### **Authority/Approval Levels:**

- Has authority and approval levels defined by the ADDG/DDG for Fusion Science and Technology.

**Measures of Effectiveness:**

- Successfully implements the R&D programme supporting the analysis of H&CD physics and performance and energetic particle physics in ITER plasma scenarios leading to operational performance specification for related ITER systems and to the definition of ITER plasma operation scenarios;
- Successfully supports the planning for ITER operation;
- Successfully develops a team activity in these areas of ITER physics and maintains effective support for ITER construction activities in related areas;
- Successfully develops R&D activities within the international fusion community in this area in support of ITER construction and the preparations for operation.