



JOC-VN-176

Position title: Thomson Scattering Diagnostic Physicist (1 year)

Background

The successful applicant will be assigned to the Electron Kinetics Group within Experiments Department. The Electron Kinetics Group is responsible, amongst other things, for the development and operation of Thomson scattering systems for measurement of the electron temperature and density of the plasma. The job will focus on the analysis of High Resolution Thomson Scattering (HRTS) data, the execution and implementation of calibrations and corrective actions to maintain the diagnostic reliability. Participation in scientific work through the JET task forces is encouraged and will be carried out through the Association's S/T orders and notifications scheme.

Main responsibilities

- 1 Data analysis and validation of the JET HRTS diagnostic data.
- 2 Calibration and maintaining the quality of the inter-shot data analysis.
- 3 Assist in operations and maintenance of the JET HRTS and other laser based diagnostics in the EK Group
- 4 Scientific analysis using software packages such as IDL in aid of the JET task forces.
- 5 Modelling, investigation of new concepts and the verification of the performance in the laboratory.
- 6 Liaise with international collaborators and visitors.
- 7 Work with high power pulsed lasers and work on a variety of applied physics projects.

The successful applicant will be encouraged to take on additional roles within the Culham team as appropriate. Contribution to scientific research and published papers through the JET task forces is encouraged.

Special Features

Although the primary responsibility is with the HRTS system, the Electron Kinetics Group functions as a team and the secondee may be asked to assist with operation and/or maintenance of other systems for which the group is responsible. This could include activities such as helping to develop or apply high level analysis methods to other diagnostic data.

Desirable qualifications, aptitudes and experience

- 1 Experience in the area of optics and data analysis techniques.
- 2 Knowledge of lasers and optics.
- 3 Fluency in IDL and familiarity with the UNIX environment would be an advantage.
- 4 Good familiarity with plasma measurement techniques.
- 5 Good communication and interpersonal skills.
- 6 Professional approach to operation and safety.
- 7 Good physics or engineering degree or equivalent and expertise with laser or optical systems (e.g. PhD and post-doctoral research)
- 8 Understanding of quality assurance and documentation

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Technical contact: Marc Beurskens (Marc.Beurskens@ccfe.ac.uk), Electron Kinetics Group Leader.

Applications should be made through the Head of Association to the JOC Senior Manager, Tim Jones, timothy.jones@ccfe.ac.uk by **28 February 2013**. Later applications will be considered if the post remains unfilled.

The post is to substitute a member of the EK team who will be on maternity leave for the advertised period. The post will become vacant in the very near future and an early start before the JET campaigns is desirable to enable appropriate handover.

Note that candidates who are not EU nationals will need to obtain a visa to work in the UK. The JET Operator can provide advice on the issues involved and candidates are recommended to investigate before interview.