

## Candidate Information

**Position:** Research Fellow  
**School/Department:** Astrophysics Research Ctre  
**Reference:** 23/111363  
**Closing Date:** Monday 27 November 2023  
**Salary:** £37,841 - £41,331 per annum  
**Anticipated Interview Date:** To be confirmed  
**Duration:** Fixed Term - Full Time, available for 24 months

### JOB PURPOSE:

To be an active member of the research project/team assisting in the planning and delivery of research on the modelling of non-LTE plasmas relevant to experimental work undertaken on the Orion laser at AWE Aldermaston.

### MAJOR DUTIES:

1. Undertake research in the modelling of non-LTE plasmas where photoionisation plays a significant role, in particular for plasmas relevant to experiments undertaken on the Orion high-power laser facility at Atomic Weapons Establishment (AWE) Aldermaston. Research activities will include running and possibly modifying plasma simulation codes such as FLYCHK, and the application of these to experimental data from Orion and other laser facilities including VULCAN and OMEGA EP.
2. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
3. Write up results of own work and contribute to the production of research reports, publications and proposals.
4. May contribute to introductory courses, e.g. on the use of research methods and equipment.
5. Undertake undergraduate supervision/demonstrating/teaching duties under direction.
6. Undertake routine administrative duties as requested, e.g. arranging research group meetings, maintaining research group website.
7. Read academic papers, journals and textbooks to keep abreast of developments.
8. Carry out any other duties designated by a line manager, and which fall within the general ambit of the post.

### ESSENTIAL CRITERIA:

1. Degree or equivalent in Physics or physics related subject. Must have PhD in experimental or computational plasma physics or have submitted thesis.
2. Specific, relevant experience of using computer codes, such as FLYCHK, to model laser-produced plasmas.
3. A publication record in plasma physics commensurate with stage of career.
4. Practical problem-solving skills, independence of thought and initiative.
5. Ability to assess and organise resources.
6. Ability to effectively interact with research colleagues and support staff.
7. Ability to analyse and communicate results effectively.
8. Demonstrable intellectual ability and ability to work in small group.
9. Evidence of experimental leadership.
10. Some attendance at international experiments remote from QUB and outside UK for up to several weeks at a time.

### DESIRABLE CRITERIA:

1. PhD in writing/development of laser-produced plasma simulation codes.
2. Experience of writing plasma simulation codes for application to laser-produced plasmas or modifying existing codes.
3. Experience of working on experimental data from major high-power laser facilities such as VULCAN.