

Graduate Experimental Physicist

Vacancy Specification

We are currently looking for a graduate Experimental Physicist. You will design, build, carry out, analyse and support experiments towards the goal of inertial fusion power production. This will focus on the development of temporally and spatially resolved temperature and density diagnostics. You will also as part of the experimental team work closely with the simulation and pulsed power teams and collaborators in academia.

Current experimental work focuses on hypervelocity impact studies combined with extensive instrumentation based around very high speed photography, x-ray imaging, neutron detection and spectroscopy. This work is continually evolving with the purchase and custom design of new equipment and diagnostics.

Your work will focus on carrying out experiments testing new experimental designs to reach higher densities and temperatures in addition to utilising new diagnostics to better characterise these states.

Essential

- A 1st class undergraduate degree or equivalent in physics or a related subject
- Passion for fusion and for taking a bold approach to a high-risk transformational technology.
- Fast and effective problem solving skills.
- Ability to work under pressure to tight deadlines.
- Demonstrated self-motivation, enthusiasm to work in a dynamic team environment and evidence of taking the initiative.
- Strong communication and interpersonal skills.

Desirable

- Experience working in an experimental research team
- Knowledge of plasma related diagnostics such as optical or particle probing
- Experience with shock physics, warm dense matter or inertial fusion research
- Computational simulation skills
- Experience with gas guns, lasers or pulsed power devices would be advantageous
- Target assembly and metrology experience

Benefits

A competitive package and opportunity to participate in the company's share option scheme. Relocation packages will be considered.

How to apply

Please upload a covering letter / supporting statement and CV to www.firstlightfusion.com/careers quoting the job reference. Two referees should be available on request.



Informal enquiries may also be addressed to careers@firstlightfusion.com.

CVs sent by recruitment agencies will not be read, and in the event that the company receives a CV from both the direct applicant and a recruitment agency the CV will be treated as a direct application by the individual only. Unsolicited contact from Recruitment agencies will be disregarded.

We are an equal opportunities employer and this role is subject to background checks.

First Light Fusion

First Light Fusion Ltd is a lean, focused and agile corporation researching energy generation by inertial confinement fusion. The company was spun out from the University of Oxford in June 2011 and is based near Oxford. First Light continues to work closely with the academic community, both in the UK and internationally. The company is well-funded by both institutional investors and private individuals.

Inertial confinement fusion for energy generation is a well-established research field and is being pursued in many laboratories worldwide, perhaps most notably in the US at the National Ignition Facility. First Light is exploring a number of alternative research directions that harness the same fundamental physics, with the prime focus being power generation. First Light's work to-date has included theoretical analysis, detailed numerical simulation and experimental validation. This has allowed description of the accessible parameter space and has led to a clear vision of the pathway to fusion.

First Light has also considered the costs and engineering practicalities of a reactor implementing its technology and can articulate a number of advantages over other approaches. Additionally, the energy focusing processes being pursued form the foundations of a new technological platform where secondary opportunities exist in a number of alternative applications, for example material processing and chemical manufacture.

