

Postdoctoral Laser Physicist/Engineer (VND436/09)

3 year fixed term, based at STFC Daresbury Laboratory, Daresbury, UK.

Salary Range: £26,610 to £29,566

(plus Recruitment & Retention Allowance of up to £3,000 and a relocation package)

Deadline for Applications: 20 November 2009

Ultrafast lasers are now being utilised in exciting experiments in conjunction with high performance charged particle beams. The Accelerator Science and Technology Centre (ASTeC) wishes to strengthen its core expertise in a variety of such areas. One example is in the development of unprecedented timing and synchronisation systems, capable of better than 10 femtosecond stability. Solutions based on mode-locked fibre lasers currently represent the leading technologies.

The Accelerator Science and Technology Centre (ASTeC) seeks to develop world leading optical timing systems and we are looking for someone who can take on responsibilities for applications on our ALICE Test Accelerator, utilising mode-locked fibre oscillators and stabilised links. There will also be wider opportunities for R&D studies on advanced optical techniques applied to diagnostics challenges and other particle beam interaction projects.

You will work closely with the ALICE research team and also in funded international programmes. Whilst postgraduate experience in optical systems is essential and their application to particle accelerators is desirable, training in the latter will be available.

List of Duties or Work Programme include

- To develop and implement an optical timing distribution system on the ALICE accelerator at Daresbury Laboratory. The post holder will have responsibility for construction and testing of all relevant optical systems, and for coordinating associated electronic, RF and mechanical work.
- To undertake and contribute to the development of a scientific programme for the precision testing and improvement in optical timing distribution systems.
- To contribute to reports for internal and European funders.
- To publish in peer reviewed journals, and present significant results at international conferences

The applicant will have a PhD or equivalent in a relevant discipline (most probably Physics or Engineering). You will have experience in optical fibre lasers, or in optical fibre distribution.

Experience or training related to particle accelerators, whilst desirable, is not essential. Where required, training in accelerator physics and technology will be available.

Further Information

The Accelerator Science and Technology Centre (ASTeC) is a department within the Science and Technology Facilities Council (STFC), and a core member of the Cockcroft Institute. More information on ASTeC and its activities can be found at <http://www.astec.ac.uk/>

For an informal discussion about this post, please contact Peter McIntosh, x3899 or email peter.mcintosh@stfc.ac.uk or Steve Jamison, x3961 or email steven.jamison@stfc.ac.uk

Full details of this position, and on how to apply, can be found at <https://erecruit.cclrc.ac.uk/home.asp>