

Post Reference Number: SPBU066

Post Title: Postdoctoral Research Associate for MINOS

Type of Post 1 full-time (possible job share), 3 year fixed-term post at Band 5/4 (ex-CCLRC) / Band 4/3 (ex-PPARC)

Location: Rutherford Appleton Laboratory, Oxfordshire, UK

Directorate/Facility/Group: Particle Physics Department

Salary Range: £24,638 to £35,543 per annum

Deadline for Applications: Monday 14th January 2008

Interview Date: Monday 28th January 2008

Applications are invited for a three-year fixed term research associate position within the Particle Physics Department at the Rutherford Appleton Laboratory to work on the MINOS neutrino oscillation experiment (<http://www.numi.fnal.gov/>). Applicants should have or be about to complete a PhD in experimental particle physics or have equivalent experience.

MINOS is a long baseline neutrino oscillation experiment, based in the USA, which is currently taking data and making precision measurements of neutrino oscillations using the worlds highest power neutrino beamline at Fermilab. The experiment has two detectors: a 1kton 'near' detector near the neutrino source at Fermilab and a 5.4 kton 'far' detector in the Soudan Mine 450 miles away in N. Minnesota. The RAL group are actively involved in physics analyses, including work on anti-neutrino oscillations, searches for heavy neutral particle production, searches for sterile neutrinos, detector energy calibration and neutrino physics simulations and have responsibility for the MINOS data acquisition systems.

The successful candidate will be expected to work primarily on the exploitation of MINOS data. Duties include:

- Contributions to the operation of the experiment by taking operational shifts at Fermilab or Soudan.
- Participation in the processing, reconstruction, analysis or simulation of data (as appropriate to the appointee)
- A substantial contribution to one of the many MINOS physics analysis or to a novel analysis as appropriate

Full participation in meetings and travel to conferences as required

The post will be based at RAL but offers opportunities to spend short or extended periods of time at the experimental site at Fermilab. The successful candidate will be expected to make a substantial contribution to the physics analysis of MINOS data.

The post holder will be working as a member of the MINOS group within the Particle Physics Department at RAL. The MINOS team includes three research physicists, a physicist programmer and a postdoctoral research associate in addition to the post advertised. The work will entail close cooperation with physicists from across the collaboration and neutrino community, both in the UK and abroad.

You will have a PhD in experimental particle physics (or equivalent), be able to undertake original research and have demonstrated experience in physics analysis. He/She will have a good knowledge of data and statistical analysis techniques and experience with object oriented software, C++ programming and physics analysis tools. A high degree of self motivation and an ability to work independently are expected, and good communication skills are essential for working within international collaborations.

There will be a requirement to travel within the UK and overseas (primarily to the USA). An ability to work in underground experimental areas would be desirable but is not essential.

FURTHER INFORMATION

For an informal discussion about this post, please contact Geoff Pearce on 01235 445676 or email g.f.pearce@rl.ac.uk

For further information about the recruitment process, please contact Mandy Spelzini on telephone number 01235 445872 or e-mail recruit-spbu@rl.ac.uk