

JOB DESCRIPTION

Ref: A454

Job Title: Senior Research Associate: “Quantifying Energetic Particle Precipitation into the Atmosphere”	Present Grade: 7
Department/College: Space Plasma Environment and Radio Science Group, Dept. of Physics	
Directly responsible to: Prof. Farideh Honary, Physics	
Supervisory responsibility for: N/A	
<p><u>Other contacts</u></p> <p>Internal: All members of academic, support, and research staff as appropriate. Research Support Office</p> <p>External:</p>	
<p>Major Duties:</p> <p>A 3 year Postdoctoral position is available in the Department of Physics. This vacancy is associated with a programme of research aiming to address energy and momentum coupling between the Earth’s magnetic field and the solar wind which leads to the precipitation of charged particles into the upper atmosphere and generates odd nitrogen (NO_x), influencing the chemistry and dynamics of the atmosphere. This is an important mechanism by which solar activity can influence the atmosphere beyond atmospheric waves and solar irradiance. The post is funded by NERC as part of the joint research programme between Lancaster University and British Antarctic Survey.</p> <p>The post holder’s research will involve characterizing electron precipitation by exploiting measurements from two existing global arrays: riometer measurements of cosmic radio noise absorption (CNA) and changes of the sub-ionospheric propagation of very low frequency (VLF) radio waves; the groups at Lancaster and BAS are internationally recognised experts in the use of these techniques.</p> <p>The post holder’s main duties will include:</p> <ul style="list-style-type: none"> • Liaising with the Principal Investigator (Prof. Honary) on the project. Assist with the planning of the overall project (where relevant), and with the organisation and management of workshops and other events. • Develop a research profile through the pursuit of funding, conducting of research and dissemination of findings. • Contribute to the national and international research reputation of the institution. • Form individual and/or joint project proposals. • Identify sources of funding and pursue the process of securing funds. • Conduct individual and collaborative research projects. • The analysis and interpretation of spacecraft data and supporting data from other instruments. • Resolving practical and theoretical problems concerning methodology, analysis and ethics that arise whilst conducting research. • The preparation of manuscripts for submission to peer-reviewed publications based on results from the above. 	

- The preparation of material in oral and poster formats and the presentation of such material at national and international scientific conferences.
- Prioritising and organising tasks and managing time spent on the project effectively and efficiently.
- Develop an individual research profile and decide how the research is conducted. Consider alternative ways of most effective use of budget.
- Collaborating closely and constructively with other members of the research team including colleagues from British Antarctic Survey and project partners from NewZealand and Finland as well as with other members of the Space Plasma Environment and Radio Science Research group.
- To maintain accurate and complete records of all findings.
- To contribute to writing bids for research grants.
- To take responsibility for organising resources and effective decision making in support of research.
- To develop contacts and research collaborations within the University and the wider community.

Other Duties:

- To undertake appropriate administration tasks.
- To attend relevant meetings.
- To comply with relevant University policies, including Financial Regulations, Equal Opportunities Policy, Promoting Race Equality Policy, Health and Safety Policy, Information Systems Security Policy and Intellectual Property Rights and Register of Interests Policies.
- To undertake any necessary training and/or development.
- Develop colleagues in the team by sharing own skills, knowledge and expertise.
- Teach/train colleagues in various research techniques.
- Any other duties commensurate with the grade of the post as directed by line manager / supervisor.