



**Job Title:** Research Associate

**Grade:** 7

**Salary:** £39,906 to £41,064 per annum (due to external funding restrictions), pro-rata if part-time

**Department:** Physics and Astronomy

**Hours/Contract:** Full-time, fixed term contract from 01 October 2026 to 30 September 2029

**Reference:** 13559

## Role Purpose

To have specific responsibilities within the research programme “The Closed Magnetosphere”. To work collaboratively and independently as part of the research team to achieve defined milestones, and produce high quality research as part of the wider programme. The primary research topic is the structure and dynamics of the magnetospheres of the Earth and Mercury during strongly-northward interplanetary magnetic field (NBZ IMF). For the Earth this will be studied through analysis of observations from multiple ground- and space-based observatories (e.g., SMILE, DMSP, Cluster, Geotail, THEMIS, MMS, SuperDARN, SuperMAG, AMPERE) of the terrestrial magnetosphere and ionosphere, including measurements of auroral emissions, ionospheric flows, current systems, plasma populations, and particle precipitation. At Mercury, data from MESSENGER and BepiColombo will be studied.

## Main Duties and Responsibilities

### Research

- Responsible for independent and collaborative research in the field of the terrestrial and Hermean magnetospheres, resulting in significant contributions to peer-reviewed journal papers (often as lead author).
- To study the impact of strongly-northward interplanetary magnetic field on magnetospheric and ionospheric processes.
- To lead in the visualisation, analysis, and interpretation of observations from ground- and space-based observatories.
- To develop computational data processing and visualisation tools for ground- and space-based magnetospheric and ionospheric observations.
- Represent the research group by disseminating results at national and international conferences and meetings, and to interact with all collaborators on the project.
- Contributing to determining the direction of the programme in line with reaching the research goals.
- Co-supervision of research students and provision of advice and guidance to other members of the team, both research staff and students.
- To undertake such duties consistent with the grade of the post as may be reasonably required.

### Professional Development

- Engage in work that supports your own professional development, including the preparation of fellowship applications for independent funding opportunities.



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**Impact and Knowledge Exchange**

- Network and contribute to the maintaining and furthering of the wider research programme and research area.
- To consult effectively on own specialism directly with people external to the University.
- To engage positively and pro-actively in research impact.

**Leadership and Citizenship**

- Provide guidance to other team members both research staff and students.
- Pro-actively build networks and collaborations.
- Providing mentoring and coaching to Early Career Researchers and research students.

**Internal and External Relationships**

- Work closely with collaborators within the Planetary Science Group and wider School of Physics and Astronomy with interests in solar-planetary science.
- Coordinate research and work closely with the principal and co-investigators, graduate students and external collaborators on the project.
- Contribute to the supervision of graduate students and undergraduate students working on related projects.
- Provide advice and support to research staff and post graduate students working on this and similar research projects.
- Network and contribute to the maintenance of the wider research programme.

**Planning and Organising**

- Plan and manage workload and resources as required to achieve the aims, objectives and deliverables of the project.
- Assist the principal investigator and collaborators in the planning, organisation and dissemination of the wider research programme.
- Provide assistance in the day-to-day planning and organisation of the wider research programme, and preparation and planning for research proposals.
- To foster new collaborations and to maintain a network of other research scientists elsewhere in the UK and overseas.

**Qualifications, Knowledge and Experience**

**Essential**

- To hold, or expect shortly to hold, a PhD in a research area relevant to solar-planetary.\*
- A good honours degree.\*
- Evidence of research experience and skills in analysing magnetospheric and ionospheric observations.\*



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- Demonstrate knowledge of magnetospheric and ionospheric science at an international research level.\*
- To have a record of productive research in magnetospheric and ionospheric science, and to have demonstrated the ability to produce published peer-reviewed papers.\*
- Evidence of experience in presenting results at national & international meetings.\*

**Desirable**

- Strong publication record in peer-reviewed journals.
- Experience of programming.
- Experience of collaboration.
- Supervisory experience.

**Skills, Abilities and Competencies**

**Essential**

- High level of proficiency in English, sufficient to undertake research, teaching and administrative activities utilising English Language materials and to communicate effectively with staff and students.
- Computer programming skills and the ability to program in scientific computing languages such as IDL or Python
- Evidence of good time management, organisational and problem-solving skills.
- Willingness to travel nationally and internationally for conferences and workshops
- Evidence of the ability to work both independently and as part of a wider research team.
- Commitment to Continuous Professional Development (CPD) for yourself, and encourage commitment to learn and develop in others.

**Desirable**

- Ability to develop novel ideas and to promote own research agenda.
- Flexible and adaptable approach to work over a range of research duties.
- Willingness to foster new collaborations with national and international partners.
- Demonstratable success in producing publications of the very highest standard.
- Proven ability to work as part of a team.
- Ability to collaborate with scientists from different institutions and research areas.

***\*Criteria to be used in shortlisting candidates for interview***

**Reason for Fixed Term Contract**

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

**Criminal Declaration**

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.



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## Supporting University Activities

As a University of Leicester citizen, you are encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

## University Values

**Inclusive** - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

**Inspiring** - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

**Impactful** - As Citizens of Change we will generate new ideas which deliver impact and empower our community

## Freedom of Speech

The University is committed to upholding freedom of speech and academic freedom within the law throughout our recruitment processes. We ensure that all candidates are considered based on merit and suitability for the role, without regard to their lawful viewpoints or the expression of challenging or controversial ideas. Our recruitment policies and practices are designed to protect applicants from discrimination or adverse treatment on the basis of their opinions, and to foster an environment where open debate and diverse perspectives are valued as essential to our academic mission.

## Equity and Diversity

We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.



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