**JOB DESCRIPTION**

**Senior Research Associate (Space Weather Impacts)**

Vacancy Ref: A2056

<table>
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<tr>
<th>Job Title:</th>
<th>Senior Research Associate (Space Weather Impacts)</th>
<th>Present Grade:</th>
<th>7P</th>
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<tbody>
<tr>
<td>Department/College:</td>
<td>Physics</td>
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<td>Directly responsible to:</td>
<td>Prof. Jim Wild</td>
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<td>Supervisory responsibility for:</td>
<td>N/A</td>
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**Other contacts**

**Internal:**
Dr. Emma Eastoe (Mathematics and Statistics)

**External:**
Project partners and collaborators

**Major Duties:**

1. Conduct individual and collaborative scientific research into the potential impact of extreme geomagnetically induced currents (GIC) on electricity infrastructure. Specifically, the role will include:
   a. Investigating the physical parameters and magnetospheric/ionospheric current systems most critical for realistic representation of ground magnetic disturbances.
   b. Using extreme value statistics to infer the likely future extremes of geomagnetic disturbance.
   c. Work with project partners to exploit models of the UK transmission system and ground conductivity and assess the resulting GIC in terms of their potential impact on electricity infrastructure.

2. Work with relevant space environment measurements, geomagnetic data, and electricity grid and ground conductivity models to address the scientific goals of the project, developing appropriate computer-based analysis and visualisation techniques.

3. Take a leading role in liaising with collaborators and industrial project partners, as appropriate.

4. Prepare papers for publication of project outputs in high-impact, peer-reviewed scientific journals.

5. Participate in national and international meetings, conferences and workshops; prepare and present talks, posters and reports to disseminate the scientific results of the project to a wide audience and to learn about current advances in the field.

6. Participate in writing new research proposals that build on expertise developed over the course of the project.

7. Engage in appropriate training, professional development, and knowledge exchange opportunities offered by the university.