



## Candidate Information

<b>Position:</b>	Research Fellow in Solar Physics
<b>School/Department:</b>	School of Mathematics and Physics
<b>Reference:</b>	23/110590
<b>Closing Date:</b>	Monday 20 February 2023
<b>Salary:</b>	£35,333 - £37,474 per annum
<b>Anticipated Interview Date:</b>	Wednesday 8 March 2023
<b>Duration:</b>	Fixed Term 24 Months

### JOB PURPOSE:

To work on the analysis and interpretation of solar flare observations from space-based observatories such as SDO, RHESSI, Solar Orbiter, GOES-R, MAVEN, and SORCE, and the potential impact of associated changes in the solar irradiance on Earth's ionosphere. The successful candidate will work within the Astrophysics Research Centre of the School of Mathematics and Physics.

### MAJOR DUTIES:

1. Acquire solar flare datasets at geoeffective wavelengths taken by space-based telescopes and from instrument archives.
2. Cross-reference datasets with a variety of ionospheric observations and/or models.
3. Analyse and interpret relevant datasets and compare with theoretical models where applicable.
4. Write publications and present the findings at conferences and workshops.
5. Suggest solutions for improving the acquisition of future observations.
6. Assist with the organisation and execution of training workshops.
7. Help supervise (as necessary) and support postgraduate and undergraduate students working in this area.
8. Read academic papers, journals, and manuals to keep abreast of developments.
9. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

### ESSENTIAL CRITERIA:

1. A PhD (or equivalent) in Solar Physics, Solar Terrestrial Physics, Aeronomy, or a closely related discipline, either awarded or submitted by the time of taking up the post.
2. At least 3 years relevant research experience in either of the following areas:
  - the analysis and interpretation of solar flare observations and/or modelling.
  - observations/modelling of the response of planetary atmospheres to solar irradiance variability.
3. A number of refereed publications and/or technical reports in the research field, commensurate with stage of career.
4. Ability to contribute to broader management and administrative processes.
5. Contribute to the School's outreach programme by links with industry, community groups etc.
6. Ability to program in IDL and/or Python.
7. Ability to contribute to method improvement where required.
8. Demonstrable ability to analyse and communicate Application/CV/Interview complex information in English effectively in oral and written format.
9. Proven ability to interact with research colleagues and support staff.
10. Commitment to continuous professional development.
11. Demonstrable intellectual ability.

### DESIRABLE CRITERIA:

1. Experience in both solar and ionospheric data analysis/modelling
2. Experience at delivering presentations at conferences and/or workshops.
3. Ability to program in both IDL and Python.

4. Willingness to travel for periods of time to attend conferences and collaborative visits.