

Candidate Information

Position:	Research Fellow in Solar Physics – DKIST Support
School/Department:	Astrophysics Research Ctre
Reference:	19/107858
Closing Date:	Tuesday 22 October 2019
Salary:	£33,797 – £39,152 per annum
Anticipated Interview Date:	Tuesday 12 November 2019
Duration:	24 months

JOB PURPOSE:

To undertake a number of duties within the Astrophysics Research Centre of the School of Mathematics and Physics and the National Solar Observatory, involving the preparation and execution of DKIST observing requests and the assessment and release of first-light observational datasets.

MAJOR DUTIES:

1. Assist scientists with the preparation and execution of DKIST observing proposals.
2. Provide advice and assistance with the reduction of multi-instrument datasets.
3. Provide training on the use of the Instrument Performance Calculators and Facility Instrument Distribution Optics tools.
4. Assist with the implementation of the instrument calibration and test plans.
5. Suggest solutions if specifications are not met.
6. Analyse and interpret relevant datasets.
7. Assist with the organisation and execution of training workshops.
8. Carry out occasional supervision and support postgraduate and undergraduate students working in this area.
9. Read academic papers, journals and manuals to keep abreast of developments.
10. Carry out any other duties designated by a line manager and which fall within the general ambit of the post.
11. To undertake an independent research programme in solar physics using DKIST and other solar facilities as appropriate.

Planning and Organising:

1. Plan own day-to-day activity within the framework of the agreed research programme.
2. Contribute to the planning of research projects through telescope proposals and publications etc.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise with research colleagues and support staff on routine matters.
2. Make internal and external contacts, particularly with the industrial partner and NSO, to develop knowledge and understanding and form relationships that will ensure the success of the project.
3. Organise, attend and contribute to relevant meetings.

ESSENTIAL CRITERIA:

1. A PhD in Solar Physics 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.
3. Experience in the reduction and analysis of observations of the solar atmosphere from ground-based instruments.
4. A number of refereed publications and/or technical reports in the research field, commensurate with stage of career.
5. Ability to contribute to method improvement where required.

6. Ability to program in the python and/or IDL programming environments.
7. Ability to interact with research colleagues and support staff.
8. Ability to analyse and communicate effectively.
9. Demonstrable intellectual ability.
10. Ability to meet the mobility requirements of the post

DESIRABLE CRITERIA:

1. PhD awarded.
2. Experience with the acquisition and reduction of imaging and spectropolarimetric astronomical data.
3. Experience with the design and implementation of instrument testing algorithms for imaging and/or spectroscopy.
4. Ability to program in python.
5. Demonstrated observational background.