

GOVERNORS OF ARMAGH OBSERVATORY AND PLANETARIUM

Employment Application Form Postdoctoral Researcher — Solar Physics

Please complete all sections of the form in full and return it by the specified closing date, together with a full curriculum vitae, a statement of research interests and complete bibliography, to: The Administrator, Armagh Observatory, College Hill, Armagh, BT61 9DG, Northern Ireland, UK.

1. Surname: Other Names:

Address

.....

.....

..... Postcode:

Tel (Home): Tel (Work):

Tel (Mob): Fax (Work):

e-mail: Skype:

2. Degrees awarded and membership of professional bodies (continue on separate sheet if necessary):

University or Professional Body	Dates	Degree or Qualification
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3. Present or most recent employment, and full previous employment details (continue on separate sheet if necessary):

Name and Address of Employer	Position	Dates	
		From	To

Current Salary: Period of Notice Required:

4. Brief description of position in organization and principal duties in present or most recent employment:

5. Academic References. Give the name, title and address of each referee, and the capacity in which you are known to them. It is your responsibility to ensure that at least two and no more than three references are submitted by the closing date for applications.

1.	2.	3.
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.....
.....
e-mail:.....	e-mail	e-mail
Tel:	Tel:	Tel:
FAX:	FAX:	FAX:
Capacity:.....	Capacity	Capacity

6. Summary of principal research findings and results, including telescope time and any research grants and any significant research collaborations in which you have been involved (continue on a separate sheet if necessary):

7. Programming and software experience, e.g. FORTRAN, IRAF, IDL, other specific codes.

8. Teaching and/or Management experience, including experience giving scientific presentations, public lectures or other public outreach activities, and experience of managing or supervising students, projects, etc.

9. Please summarize how you believe your research expertise aligns with the requirements for the post, and your future research plans (continue on a separate sheet if necessary):

10. Please provide information on any other skills, experience, activities and interests which you believe may be relevant to your application:

11. I confirm that the information provided on this form is correct and I understand that any misrepresentation or omission may render me liable to dismissal if engaged. If offered an appointment, I agree to undergo a pre-employment medical examination if required. I understand that I will be required to provide documentary proof of all qualifications. By signing and returning this application form, I also consent to the Governors of the Armagh Observatory and Planetarium using and keeping any information about me, including information provided by me and by third parties such as referees.

Signature:

Date:

GOVERNORS OF ARMAGH OBSERVATORY AND PLANETARIUM

Equal Opportunities Monitoring Form This Form must be Returned with your Application

Please note that this form is regarded as part of your application and failure to complete and return it will result in disqualification

POST

Position Applied For	
For Official Use Only	

It is the policy of the Governors of the Armagh Observatory and Planetarium to ensure that all eligible persons have equal opportunities for employment and advancement in the Armagh Observatory and Planetarium on the basis of their ability, qualifications and aptitude. The Governors of the Armagh Observatory and Planetarium select those suitable for appointment solely on the basis of merit without regard to an individual's religious belief, political opinion, trade union membership, gender, marital status, sexual orientation, age, disability, race, colour or ethnic origin. In order to ensure that the equal opportunity policy of the Governors of the Armagh Observatory and Planetarium is effectively implemented, applications for employment are monitored in terms of gender and Northern Ireland community background.

GENDER (Please tick as appropriate)

Male	Female

NORTHERN IRELAND COMMUNITY BACKGROUND

The Fair Employment and Treatment (Northern Ireland) Order 1998 (the Order) outlaws discrimination on the basis of religious belief or political opinion. The information below is required in connection with the requirements of the Order. The use and confidentiality of community background information is protected by the Order. It will be used only for monitoring the effectiveness of the equal opportunities policy of the Governors and to comply with statutory obligations of the Order. Please indicate your Northern Ireland community background by ticking one of the boxes below:

I have a Protestant Community Background	
I have a Roman Catholic Community Background	
I have neither a Protestant nor a Roman Catholic Community Background	

GOVERNORS OF ARMAGH OBSERVATORY AND PLANETARIUM

Referee Report Form — Postdoctoral Researcher

Full Name of Candidate:

Name of Referee:

Institute and Position:

Contact Address:

Capacity in Which You Know the Candidate:

Please rank the candidate by ticking the appropriate boxes below and providing brief comments or examples where appropriate to support your assessment. The marks 1 to 5 (1 Outstanding; 4 Poor) represent the following:

1. Outstanding 2. Consistently above average 3. About average 4. Poor 5. Unable to judge

Please return the completed form to The Administrator, Armagh Observatory, College Hill, Armagh, BT61 9DG, Northern Ireland. Tel: +44-(0)28-3752-2928; FAX: +44-(0)28-3752-7174; e-mail: lfy@arm.ac.uk.

Criterion

Comment

Academic record and potential

Candidate has high standing; work has high impact and influence

1 2 3 4

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Relatively low standing; low impact and influence

5

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Strong publication record; good rate of publications; high activity/high-quality work

1 2 3 4

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Weak publication record; low rate of publications; low activity/low-quality work

5

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Ability to identify new fields of high academic potential and world-wide activity/interest; often ahead of the field

1 2 3 4

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Unable to identify and grasp new opportunities; follows, rather than leads

5

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Technical skills

Strong analytic, numerical and/or computational skills

1 2 3 4

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Weak analytic, numerical and/or computational skills

5

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Strong observational, data handling and modelling skills

1 2 3 4

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Weak observational, data handling and modelling skills

5

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Writes well; communicates clearly and persuasively

1 2 3 4

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Poor written and oral communication skills

5

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Research capacity and general knowledge

Strong potential to lead/manage research programmes; works well with minimal supervision

1 2 3 4

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Requires constant prompting/supervision; unable to lead/manage research programmes

5

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Exceptional knowledge and research ability

1 2 3 4

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Limited knowledge and research ability

5

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Highly creative; strong drive; good insight

1 2 3 4

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Limited creativity; no drive; poor insight

5

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Well-read; wide scientific interests and technical expertise

1 2 3 4

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Narrow interests; limited knowledge/limited technical expertise

5

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Teaching and communication skills

Strong interest and ability to explain subject matter to others
 1 2 3 4

Poor ability to explain material to others
 5

Good lecturer; interested in teaching and public understanding of science; exceptional ability to communicate at all levels
 1 2 3 4

Poor lecturer; uninterested in communicating results to students and others; inability to communicate well
 5

Motivation and working relationships

Highly motivated; seeks and accepts responsibility at all times
 1 2 3 4

Poor motivation; limited interactions with others; misses opportunities
 5

Good team spirit; open, friendly and active in group situations
 1 2 3 4

Poor team spirit; sits back and lets others do the work
 5

Tactful and sensitive in dealing with colleagues and others
 1 2 3 4

Tactless, can be abrasive dealing with colleagues and others
 5

Reliable, can be trusted
 1 2 3 4

Unreliable, low integrity
 5

Please provide a summary assessment and any other comments about this candidate which you think may be relevant (continue on a separate sheet if necessary). Thank you for your time in completing this form.

Please indicate the confidence that you have in your assessment of this candidate.

Confidence of Assessment High/Average/Low (please delete where appropriate)

Signature:

Date:

ARMAGH OBSERVATORY

Armagh, Northern Ireland

JOB INFORMATION: POSTDOCTORAL RESEARCHER

The Post – Postdoctoral Researcher (Solar Physics)

Essential and Desirable Criteria

Candidates must have, or be about to obtain, a PhD in a relevant discipline. In addition, they must have expertise in solar physics, in particular the interpretation and/or modelling of small-scale solar transient features. Expertise in the use of data from different instruments and in particular their co-alignment is essential. The research will involve looking closely at various assumptions relating to spectral line formation and the use of such data plus MHD modelling and magnetic field extrapolation data in the interpretation of the observational data.

Main Duties and Responsibilities

The Postdoctoral Researcher will carry out and publish frontline scientific research and play a full role in the group of postdoctoral researchers, PhD students and occasional visitors of which he/she will be a part. This includes playing a leading role in developing and improving the Observatory's research profile, attending regional, national or international astronomical conferences, and promoting the activities of the Armagh Observatory locally, nationally and at international levels whenever circumstances permit. It may also involve undertaking astronomical fieldtrips (which may occur at unsocial times, e.g. Christmas) and assisting the supervision of PhD and other students (e.g. summer or work-experience students). He or she will be expected to contribute to efforts to obtain external funding from UK and other sources to help support, develop and expand the Armagh Observatory's research programmes, and to carry out any other duties commensurate with the grade as deemed necessary by the Principal Investigator or the Director of the Observatory.

Salary and Other Benefits

POST:	POSTDOCTORAL RESEARCHER
SALARY RANGE:	The salary, which is pensionable, is based on the Universities and Colleges Employers Association illustrative pay scales for Higher Education Staff, and will commence at £25,958 with annual increments.
SUPERANNUATION:	The Postdoctoral Researcher will be entitled to join the Northern Ireland Local Government Officers Superannuation Scheme. Full details are available at http://www.nilgosc.org.uk/ .
RESPONSIBLE TO:	Professor J. Gerry Doyle, Research Astronomer, Armagh Observatory
DURATION:	The position is a fixed-term post for up to 16 months, available from 2010 July 1 or as soon as possible thereafter. The post is funded by a grant from the STFC.
CONTACT ADDRESS:	Armagh Observatory, College Hill, Armagh, BT61 9DG, Northern Ireland, UK. Tel: +44-(0)28-3752-2928; FAX: +44-(0)28-3752-7174; e-mail: info@arm.ac.uk ; web-site: http://star.arm.ac.uk/ .

Eligibility to Apply for Work at the Armagh Observatory

United Kingdom (UK) immigration rules make it a criminal offence for employers to employ someone who is not entitled to work in the UK. It is therefore a condition of employment that the successful candidate must provide documentary evidence that they are legally entitled to work in the UK.

In particular, applicants who would need a work visa if appointed to the post are requested to note that under the UK's new points-based immigration system they will need to demonstrate that they have sufficient points, and that (i) they have sufficient English language skills (evidenced by having passed a test in basic English, *or* coming from a majority English-speaking country *or* having taken a degree taught in English) *and* (ii) that they have sufficient funds to maintain themselves and any dependants until they receive their first salary payment.

For further information, see: <http://www.ukba.homeoffice.gov.uk/workingintheuk/tier2/general/>

Application Procedure

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Dates to Remember

The Armagh Observatory is fortunate in attracting strong candidates for specific vacancies. Applications will be acknowledged, and shortlisting will take place as soon as practicable after the closing date. Short-listed candidates may be invited to Armagh for an interview.

In making the appointment we will adhere to the timetable set out below, unless you are subsequently notified otherwise.

CLOSING DATE:	2010 April 16. Late applications may be considered until the position is filled.
START DATE:	2010 July 1 or as soon as possible thereafter.

General Information

The Vision of the Armagh Observatory is:

“To build on its position as a thriving astronomical research institute, and to continue to expand our understanding of the Universe and of humanity’s place in it.”

The Mission is:

“To advance the knowledge and understanding of astronomy and related sciences through the execution, promotion and dissemination of astronomical research nationally and internationally in order to enrich the intellectual, economic, social and cultural life of the community.”

The Armagh Observatory (see <http://star.arm.ac.uk/>) is a modern astronomical research institute, the oldest scientific institution in Northern Ireland. Founded by Archbishop Richard Robinson in 1789 as part of his desire to see the creation of a university in the City of Armagh, the Observatory stands close to the centre of the City of Armagh together with the Armagh Planetarium in approximately 14 acres of attractive, landscaped grounds known as the Armagh Astropark. The Observatory Grounds and Astropark include scale models of the Solar System and the Universe, two sundials and two historic telescopes, as well as telescope domes and other outdoor exhibits (see <http://star.arm.ac.uk/astropark/>). An innovative new public outreach facility, the Armagh Human Orrery (see <http://star.arm.ac.uk/orrery/>), is located close to the historic main building of the modern Observatory. The Observatory’s Library and Archives, and its specialist collection of scientific instruments and artefacts associated with the development of modern astronomy over more than two hundred years, rank amongst the leading collections of their kind in the UK and Ireland.

The principal function of the Armagh Observatory is to undertake original research of a world-class academic standard that broadens and expands our understanding of astronomy and related sciences. In recent years key programmes have focused on Stellar Astrophysics, the Sun, Solar System astronomy, and Solar System – Earth relationships including the Sun’s influence on climate and the impact of interplanetary dust, comets and asteroids on the Earth. Other activities include maintaining the unique more than 215-year meteorological series and data-bank (<http://climate.arm.ac.uk/>), the longest in the UK and Ireland from a single site, and playing a key role together with the Armagh Planetarium in promoting public understanding of astronomy and related sciences.

There is currently a fluctuating population of around 30 research staff including students, who are supported by a pool of 2 technical (computer-related) staff, 1 librarian, 1 secretary, 1 finance officer, and a senior administrator shared with the Armagh Planetarium. The 14 acres of landscaped Observatory Grounds and Astropark are maintained by an assistant groundsman and a senior grounds/meteorological support officer, the latter responsible also for taking the daily meteorological readings.

Research interests of Observatory staff are currently focused on four main areas of astronomy, namely:

- **Solar-System Science:** including celestial mechanics, planetary science, the dynamics of meteors and other small bodies, the origin of comets, and the interrelationships between comets, asteroids, meteoroids and interplanetary dust, and Near-Earth Objects (NEOs);
- **Solar Physics:** including the dynamic solar atmosphere, the chromosphere and corona, and Sun-Earth relationships including climate;
- **Stellar Astrophysics:** including hot stars, massive stars, stellar winds, degenerate and helium stars, asteroseismology, studies of binary stars (including their origins, physical properties, population studies, and the physical properties of ultra-compact binaries), and constraints on gamma-ray burst progenitors; and
- **Galactic Astronomy:** including brown dwarfs, star formation, globular and open clusters.

In addition, Observatory staff participate in a vibrant astronomy education and public outreach programme via lectures, popular astronomy articles and interviews with the press, radio and television. Further details concerning recent and current research interests of Armagh Observatory staff may be obtained from the Observatory web-site, at <http://star.arm.ac.uk/>.

Armagh Observatory staff regularly obtain telescope time on national and international facilities, such as the ESO Very Large Telescope (<http://www.eso.org/outreach/ut1f1/>) and various spacecraft missions (such as SoHO, TRACE, Hinode, XMM-Newton, and HST), and attract research grants from various grant awarding bodies (e.g. the STFC, the Royal Society, the British Council etc). The Observatory is also a member of the UK SALT Consortium (UKSC), providing access to the 10-metre class Southern African Large Telescope (SALT: see <http://star.arm.ac.uk/SALT/>), located at the Sutherland Observatory, South Africa. In addition, restoration of the Observatory’s historic telescopes has brought opportunities to reintroduce some professional

observing from Armagh for research and student training, while new computer and camera technology has enabled a variety of new automatic observational programmes to be introduced from Armagh, recording data autonomously whenever the sky is clear.

Technical equipment at Armagh, which is used primarily for numerical analysis, computer modelling and data reduction, is funded by the STFC, PRTLI, and the DCAL. Facilities presently comprise a number of iMac workstations, approximately 40 Linux workstations and peripherals, and a computer cluster comprising 25 dual-processor work nodes and one master node with a total of 50 GB memory. These computer facilities are used mainly for computationally intensive research projects in observational and theoretical astrophysics (including data reduction and modelling) in areas such as solar physics, stellar atmospheres, stellar winds, radiation hydrodynamics, numerical magneto-hydrodynamics, and solar system dynamics.

The internal network is a 1 Gbps backbone ethernet linked with switched hubs. The external network is connected to the Joint Academic Network (JANET) through a 100 Mbps link provided through the Observatory's participation in the Northern Ireland Regional Area Network (NIRAN). The Armagh Observatory has access to high-performance supercomputing at the Irish Centre for High-End Computing (ICHEC).

In addition to the institution's primary research role, the Observatory has an important responsibility to maintain and preserve the fabric of the historic buildings, the library, historic books and archives, and the collection of scientific instruments and other artefacts built up over more than 215 years of continuous astronomical activity in Armagh. The main historic buildings of the Observatory have unique architectural features and house one of the most valuable collections of scientific books, instruments and archives in Northern Ireland. Full details about the Armagh Observatory and its current research and other activities can be obtained from recent annual reports, at <http://star.arm.ac.uk/annrep/>.