UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in ALMA Studies of Protoplanetary Disks, School of Physics and Astronomy

Salary: Grade 7 (£32,548 – £38,833 p.a.) Due to funding limitations it is unlikely the starting salary will be above £32,548 p.a.

Reference: MAPPA1049

Closing date: 15 January 2018

Fixed-term for two years, from 1 April 2018

We will consider job share/flexible working arrangements

Research Fellow in ALMA Studies of Protoplanetary Disks School of Physics and Astronomy, Faculty of Mathematics and Physical Sciences

Are you an ambitious researcher looking for your next challenge? Do you have an established background in (sub)millimeter or radio observations of star- and/or planet-forming regions and an interest in the field of astrochemistry? Do you want to further your career in one of the UK's leading research intensive universities?

We are looking for a Research Fellow to work on an STFC-funded project with Dr Catherine Walsh in the Astrophysics Group, investigating the chemistry of complex organic molecules in planet-forming disks around nearby young stars.

You will carry out a research programme to search for emission from complex organic molecules in nearby protoplanetary disks using observations from the Atacama Large Millimeter/submillimeter Array (ALMA). You will conduct analyses of the data to derive the distribution and abundance of complex organic molecules using molecular line radiative transfer methods. In addition, you will aid interpretation of the data by running astrochemical models to determine the chemical origin of complex organic molecules in protoplanetary disks.

With a PhD in Astrophysics or a related field (or if you will have submitted your thesis prior to taking up the appointment), you will have experience in the reduction and analysis of observational data at (sub)millimeter or radio wavelengths and a developing track record of peer reviewed publications in international journals.

What does the role entail?

As Research Fellow your main duties will include:

- Designing, planning and conducting a programme of investigations into the origin of complex organic molecules in protoplanetary disks using ALMA observations, in collaboration with Dr Catherine Walsh;
- Working closely with the Leeds group's active research on radio and (sub)millimeter interferometric studies of protoplanetary disks, using radiative transfer modelling and astrochemical models to interpret the data;
- Generating independent and original research methods that can be applied to



(sub)millimeter studies of protoplanetary disks at high spectral and spatial resolution;
- Contributing to the preparation of observational proposals;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals, and by presentation at national and international meetings;
- Working independently and as part of a larger team of researchers, both internally and externally to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- Contributing to the supervision of junior researchers and PhD students;
- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations to your own research;
- Contributing to and encouraging a safe working environment.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:
- A PhD (or you will have submitted your thesis prior to taking up the appointment) in Astrophysics or a related field;
- Experience in (sub)millimeter or radio observations;
- The ability to design, execute and write up research independently;
- A developing track record of peer reviewed publications in international journals;
- Excellent communication skills, both written and verbal and the ability to communicate your research at national and international conferences;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both independently and as part of a team;
- The ability to work accurately and carefully;
- A willingness and motivation to learn new techniques;
- A strong commitment to your own continuous professional development.



You may also have:

- Experience in observational interferometry;
- Experience in observational studies of protoplanetary disks;
- Experience in chemical kinetics modelling;
- Experience in molecular line radiative transfer modelling.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Dr Catherine Walsh, University Academic Fellow
Tel: +44 (0)113 343 0958
Email: c.walsh1@leeds.ac.uk

Additional information

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.



Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position, however, all applicants will be required to declare if they have any ‘unspent’ criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations on our Criminal Records information page.