Department of Physics
Clarendon Laboratory
Parks Road, Oxford OX1 3PU

UNIVERSITY OF OXFORD

Job Description and Selection Criteria

Job title	Postdoctoral Research Assistant in Exoplanet Discovery with the PLATO Mission
Division	Mathematical Physical and Life Sciences
Department	Physics
Location	Denys Wilkinson Building, Keble Road, Oxford, OX1 3RH
Grade and salary	Grade 7RS: £40,178 -£48,700 per annum
Hours	Full time
Contract type	Fixed-term (24 months)
Reporting to	Professor Suzanne Aigrain
Vacancy reference	189890
Additional information	Closing date – midday on Thursday 17 December 2026

Research topic	Exoplanet discovery with the PLATO Mission
Principal Investigator / supervisor	Professor Suzanne Aigrain
Funding partner	The funds supporting this research project are provided by the UK Space Agency

Race Equality Charter Bronze Award
Athena SWAN Gold Award
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The role

This role will be working with Prof Suzanne Aigrain on the scientific exploitation of the Plato space mission (https://www.cosmos.esa.int/web/plato/). Scheduled for launch in April 2027, Plato will monitor 100'000's bright stars spanning >40% of the entire sky to search for planetary transits and measure stellar oscillations. It will be sensitive to terrestrial planets orbiting in their host star's habitable zone, and focuses on bright stars to enable detailed follow-up studies.

PLATO is currently undergoing final tests at the European Space Agency's ESTEC facility in the Netherlands, and will shortly be shipped to the European Space Port in Kourou ahead of its launch, which is currently scheduled for April 2027. The post-holder will start as soon as possible after 1 April 2027, and will join Prof. Suzanne Aigrain's group in Oxford. Our contribution to the mission focuses mainly on the interaction between stellar and planetary signals, and between those two types of signals and residual instrumental effects. Stellar variability is both a problematic noise source, which must be handled carefully to enable the detection of the planets, and a valuable source of information about the host stars, which can be exploited to optimize the characterisation of the planets. This post is funded by a grant from the UK Space Agency, which supports Oxford's participation in PLATO until March 2030 (continued funding for the remainder of the operations phase of the mission will be applied for in due course).

During the first year of operations, the post-holder will contribute to the verification and validation of the exoplanet component of PLATO's science pipeline, known as the Exoplanet Analysis System (EAS), which performs the detection, vetting and modelling of both candidates and confirmed planets. They will also help to troubleshoot its interface with the Ground-based Observations Program (GOP), which carries out radial velocity follow-up to confirm the planets and measure their masses, and have the opportunity to get involved in "Early Science" projects to demonstrate PLATO's performance using data collected during the commissioning phase. From October 2027 onwards, they will work closely with a PhD student who will also be recruited to work on the project. As the operations phase of the mission progresses, both will be encouraged to lead scientific publications on the discovery, characterisation, and/or demographics of exoplanets with PLATO.

The PDRA will join a diverse, dynamic and supportive research group working on a range of topics related to exoplanet observations, in a world-class institution sporting a strong astrophysics and exoplanet community. They will be encouraged to attend weekly journal clubs and seminars, and to become involved in the supervision of undergraduate research projects.

Responsibilities

- Develop, test and optimize methods for the detection of transiting exoplanets in the presence of stellar variability.
- Agree clear task objectives and timescales.
- Participate in regular Plato team meetings and teleconferences.
- Document algorithms and software produced in the research group so that they can be used by other members of the Plato Mission Consortium (PMC).
- Write technical notes for the PMC and research articles for peer-reviewed journals.
- Present papers at national and international conferences to disseminate research findings.
- The post-holder will have the opportunity to teach. This may include lecturing, small group teaching, and tutoring of undergraduates and graduate students.

Selection criteria

Essential selection criteria

- Hold, or be close to obtaining, a PhD in Astronomy, Astrophysics, Applied Mathematics or a related discipline.
- Familiarity with basic physics relating to planetary transits and stellar activity.

- A solid background in probability theory and/or applied statistics.
- Experience with relevant computational methods, including programming in high-level languages (preferably Python).
- Clear evidence of the ability to perform basic research, with a degree of independence.
- Good written communication skills, demonstrated by publication record commensurate with career stage.
- Good oral communication and interpersonal skills, and a demonstrated ability to work as part of a team.

Desirable selection criteria

- Experience with analysing data from ground- or space-based transit surveys
- Experience with radial velocity planet searches
- Experience of working as part of a large scientific project
- Software development skills and experience

Standard checks

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide: proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) we will contact the referees you have nominated. If you have previously worked for the University we will also verify key information such as your dates of employment and reason for leaving your previous role with the department/unit where you worked. You will also be asked to complete a health declaration so that you can tell us about any health conditions or disabilities for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at: https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/pre-employment-screening

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information, please visit https://www.ox.ac.uk/about.

Department of Physics

Oxford Physics is one of the largest and most eminent departments in Europe – pursuing forefront research alongside training the next generation of leaders in Physics.

With an academic staff of over one hundred our activities range from fundamental particles to the furthest reaches of the universe to manipulating matter on an atomic scale. Oxford physicists are probing new ways to harness solar energy, modelling the Earth's atmosphere to predict the future climate, exploring computation on the quantum scale and executing calculations that reveal the fundamental structure of space and time.

Astrophysics Sub-department

The post-holder will be based in the Astrophysics sub-department, which is one of the six sub-departments that together make up the Department of Physics; these are Astrophysics, Atomic and Laser Physics, Atmospheric, Oceanic and Planetary Physics, Condensed Matter Physics, Particle Physics and Theoretical Physics, with a seventh function (Central Physics) providing administrative and technical support to these sub-departments. Members of all sub-departments take part in research, teaching and matters such as examinations, discussion of syllabi, lectures and liaison with undergraduates and postgraduate students.

For more information please visit: http://www2.physics.ox.ac.uk/

Mathematical, Physical & Life Sciences Division

The Mathematical, Physical and Life Sciences (MPLS) Division is one of the four academic divisions of the University of Oxford.

The MPLS Division's 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

For more information please visit: http://www.mpls.ox.ac.uk/

Athena Swan Charter

The Department of Physics holds a Gold Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

How to apply

Applications are made through our online recruitment portal. Information about how to apply is available on our Jobs website https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/how-to-apply

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

As part of your application you will be asked to provide details of two referees. Your referees should be asked to send their letters, before the application deadline, to leanne.odonnell@physics.ox.ac.uk

You will also be required to upload a maximum-3-page statement of research interests, list of publications and CV. The supporting statement should explain your relevant experience which may have been gained in employment, education, or you may have taken time away from these activities in order to raise a family, care for a dependant, or travel for example. Your application will be judged solely on the basis of how you demonstrate that that you meet

the selection criteria outlined above and we are happy to consider evidence of transferable skills or experience which you may have gained outside the context of paid employment or education.

Please upload all documents **as PDF files** with your name and the document type in the filename

All applications must be received by **midday** UK time on the closing date stated in the online advertisement.

Information for internal candidates

If you currently work at the University please note that:

- as part of the referencing process, we will contact your current department to confirm basic employment details including reason for leaving and information about your performance.
- although employees may hold multiple part-time posts, they may not hold more than the equivalent of a full time post. If you are offered this post, and accepting it would take you over the equivalent of full-time hours, you will be expected to resign from, or reduce hours in, your other posts(s) before starting work in the new post.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

If you need help

Application FAQs, including technical troubleshooting advice is available at: https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/support-with-online-applications

Non-technical questions about this job should be addressed to the recruiting department directly *Physics Recruitment* *recruitment@physics.ox.ac.uk*

To return to the online application at any stage, please go to: https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/how-to-apply

Please note that you will receive an automated email from our online recruitment portal to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.

Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: https://www.ox.ac.uk/about/how-we-are-run/policies-and-statements/policy-hub/job-applicant-privacy-policy. The University's Policy on Data Protection is available at: https://www.ox.ac.uk/about/how-we-are-run/policies-and-statements/policy-hub/data-protection-policy

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for very senior research posts at **grade RSIV/D35 and clinical equivalents E62 and E82** of 30 September before the 70th birthday.

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: https://unioxfordnexus.sharepoint.com/sites/OXINTRANET-working-here/SitePages/the-ejra.aspx

There is no normal or fixed age at which staff in posts at other grades have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equal Opportunity

The University of Oxford is committed to equal opportunity, and to being a place where everyone belongs and is supported to succeed. We recognise how the diversity of our community enriches our ability to deliver on our academic mission.

We welcome applications from individuals from all backgrounds, including those under-represented within higher education. No applicant or members of staff shall be unlawfully discriminated against on the basis of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Employment with the University and progression within employment will be determined according to personal merit and the application of criteria related to the duties and conditions of the post. In all cases, the primary consideration will be the ability to perform the job.

As stated in the University's Equality Policy and Equality, Diversity and Inclusion Strategic Plan, our commitment to equality and diversity goes hand in hand with our commitment to academic freedom and free speech.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, flexible working options, support for sustainable travel and other discounts. Staff can also access a huge range of personal and professional development opportunities. See https://www.ox.ac.uk/about/jobs/working-here .

Employee Assistance Programme

As part of our wellbeing offering staff get free access to a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more at https://www.ox.ac.uk/about/jobs/life-in-oxford/healthcare-and-wellbeing

University Club and sports facilities

Membership of the University Club is free for University staff. It offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and https://www.sport.ox.ac.uk/.

Information for staff new to Oxford

Please see our Life in Oxford webpage for information on relocating to and settling into the Oxford area. The website offers valuable guidance, including information on where to find more details about housing, transportation, finances, healthcare, and other key aspects of living in Oxford and the surrounding region. See https://www.ox.ac.uk/about/jobs/life-in-oxford

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/visas-and-immigration

Family-friendly benefits

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/terms-and-conditions-of-employment Our Childcare Services team provides guidance and support on childcare provision, and offers a range of high-quality childcare options at affordable prices for staff. In addition to 5 University nurseries, we partner with a number of local providers to offer in excess of 450 full time nursery places to our staff. Eligible parents are able to pay for childcare through salary sacrifice, further reducing costs. See https://www.ox.ac.uk/about/jobs/life-in-oxford/childcare-and-schooling/childcare.

Supporting disability and health-related issues (inc menopause)

We are committed to supporting members of staff with disabilities or long-term health conditions, including those experiencing negative effects of menopause. Contact the University's Staff Disability Advisor at staffdisability@admin.ox.ac.uk for further information.

Staff networks

The University has a number of staff networks including for research staff, BME staff, LGBT+ staff, disabled staff network and those going through menopause.

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk

Research staff

The Researcher Hub supports all researchers on fixed-term contracts. They aim to help you settle in comfortably, make connections, grow as a person, extend your research expertise and approach your next career step with confidence. Find out more https://www.ox.ac.uk/research/support/researcher-hub/about