

JOB DESCRIPTION
Post-doctoral Research Associate in Supernova Cosmology
Vacancy Ref: A3316

Job Title: Senior Research Associate in Supernova Cosmology	Present Grade: 7
Department/College: Physics	
Directly responsible to: Prof. Isobel Hook	
Supervisory responsibility for: Click here to enter text.	
Other contacts Internal: Isobel Hook's graduate students (currently two) and the wider Observational Astrophysics research group. External: Collaborators within the TiDES team (UK and overseas). Also collaborators in the LSST Dark Energy Science Collaboration (UK and overseas) and the Euclid Consortium (UK and overseas).	
Major Duties: The post-holder will work with Prof. Isobel Hook on observational cosmology using distant Type Ia supernovae. The work will focus on obtaining and analysing spectroscopic observations of supernovae as part of the Time Domain Extragalactic Survey (TiDES). The post-holder will work in the new observational astrophysics group within the Physics Department at Lancaster University. The work will involve travel to local, national and occasional international meetings and workshops. Under the guidance of Prof. Hook, the post holder will be expected to:- <ol style="list-style-type: none"> 1. Take responsibility for day-to-day time management to reach the goals of the research 2. Assist with supervision of postgraduate students 3. Contribute to the scientific preparation of TiDES, including optimization and implementation of target selection algorithms 4. Contribute to the real-time running of the TiDES survey and its interface with the LSST transient alert stream 5. Carry out data analysis including processing of TiDES transient spectra and derivation of host galaxy properties from the combination of LSST, TiDES and Euclid data. 6. Contribute to the cosmological analysis, making use of the parameters derived above. 7. Contribute to the interpretation of the results. 8. Draft scientific papers arising from the project. 9. Participate in national and international conferences, presenting the results of the project and learning about current advances in the field. 10. Collaborate with project team members, including external collaborators. 	