



**Australian
National
University**

Position Description

College/Division:	ANU College Sciences
Faculty/School/Centre:	Research School of Astronomy and Astrophysics
Department/Unit:	Siding Spring Observatory
Position Title:	Senior Technical Officer (Mechatronics Engineer)
Classification:	ANU Officer 7 (Technical)
Position No:	6111
Responsible to:	SSO Observatory Manager
Number of positions that report to this role:	4
Delegation(s) Assigned:	D6

PURPOSE STATEMENT:

Siding Spring Observatory (SSO) is home to Australia's largest optical observatory, supporting research for The Australian National University's Research School of Astronomy and Astrophysics (RSAA), consortium members of the Anglo-Australian Telescope (AAT), and several national and international telescopes.

RSAA develops and maintains instrumentation for astronomy and space science. Examples include the robotic 2df fibre positioner, which can simultaneously observe hundreds of galaxies and stars, WiFeS, which is an integral-field, spectrograph, meaning that it records a spectrum from each pixel of the region that is imaged.

The Senior Technician Officer supports high-quality research by designing, modifying, installing and maintaining experimental equipment and apparatus at the Observatory. The Senior Technical Officer will conduct and oversee projects and changes to technical equipment.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

Under the broad direction of the SSO Observatory Manager and SSO Director, and in collaboration with the heads of RSAA technical and academic departments, the Senior Technical Officer will supervise the SSO telescopes and instruments team in maintaining telescopes and instruments at Siding Spring Observatory. The occupant of this position must develop and maintain effective working relationships with all ANU staff as well as staff from other organisations represented at SSO, and personnel external to the observatory.

Role Statement:

Under the broad direction of the SSO Observatory Manager and SSO Director, the Senior Technical Officer will:

1. Manage the SSO instruments and technical team and supervise technical staff in the performance of their general and technical responsibilities and obligations.
2. Manage, coordinate and perform the preparation and validation of telescope and instrument systems and ensure compliance with observers' requirements.
3. Manage, coordinate and perform maintenance on telescope systems, instrumentation, ancillary and test equipment and associated mechanical and computing systems.
4. Evaluate, recommend and perform detailed design, construction, assembly, installation, validation and documentation of instruments and telescopes.
5. Evaluate, recommend and develop new and innovative operational maintenance techniques, procedures, tests and documentation to ensure the continued efficient operation of telescope systems.
6. Provide assistance as required with publicity, outreach activities and community involvement in major events such as Open Days, VIP visits and key astronomical opportunities.

7. Participate as a team member in instrument changes and setting telescope to work for observing on a day to day basis.
8. Comply with all ANU policies and procedures and in particular those relating to work health and safety and equal opportunity.
9. Perform other duties consistent with the classification of the position.

Please Note: This position may require work outside of the normal span of hours and/or working at heights or in enclosed spaces. This position will require the occupant to hold a valid driver's license.

SELECTION CRITERIA:

1. Degree with a strong electronics component, Certificate of Technology in Electronics or equivalent training, or Mechatronics Engineering degree and/or relevant experience. Working knowledge of astronomy and observational techniques and requirements is highly desirable.
2. Demonstrated experience in one or more of the following:
 - i. The design, construction, and maintenance of analogue and digital electronics and electro-mechanical equipment, and trouble shooting and rectifying causes of failure of such equipment at the component level.
 - ii. The use of Computer Aided Design (CAD) for electronic circuit design and printed circuit board (PCB) layout.
 - iii. Programmable Logic Controllers and real-time computer-controlled equipment.
 - iv. Mechatronics, or design, prototyping, assembly and testing of high precision robotics.
 - v. Development of software to support robotic systems and astronomical instruments.
3. Demonstrated proficiency in supervising, leading, mentoring and training technical support staff to prioritise work and meet deadlines.
4. Experience in project management with formal qualifications highly desirable.
5. Highly developed interpersonal and communication skills, both written and verbal, including the ability to consult, negotiate and liaise effectively with a diverse range of stakeholders both internal and external to the University.
6. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Delegate Signature:		Date:	August 2019
Printed Name:	Associate Professor Chris Lidman	Uni ID:	

References:

[General Staff Classification Descriptors](#)



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Pre-Employment Work Environment Report

Position Details

College/Div/Centre	College of Science	Dept/School/Section	RSAA, SSO
Position Title	Senior Technical Officer	Classification	ANU07 (Technical)
Position No.	6111	Reference No.	

In accordance with the Occupational Health and Safety Act 1991 the University has a duty of care to provide a safe workplace for all staff.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment issues prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see . http://info.anu.edu.au/hr/OHS/_Health_Surveillance_Program/index.asp Enrolment on relevant OHS training courses should also be arranged – see http://info.anu.edu.au/hr/Training_and_Development/OHS_Training/index.asp
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	laboratory work	<input checked="" type="checkbox"/>	<input type="checkbox"/>
lifting, manual handling	<input type="checkbox"/>	<input checked="" type="checkbox"/>	work at heights	<input type="checkbox"/>	<input checked="" type="checkbox"/>
repetitive manual tasks	<input type="checkbox"/>	<input type="checkbox"/>	work in confined spaces	<input type="checkbox"/>	<input checked="" type="checkbox"/>
catering / food preparation	<input type="checkbox"/>	<input type="checkbox"/>	noise / vibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
fieldwork & travel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	electricity	<input checked="" type="checkbox"/>	<input type="checkbox"/>
driving a vehicle	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
NON-IONIZING RADIATION			IONIZING RADIATION		
solar	<input type="checkbox"/>	<input type="checkbox"/>	gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	beta particles	<input type="checkbox"/>	<input type="checkbox"/>
infra red	<input type="checkbox"/>	<input type="checkbox"/>	nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>
laser	<input type="checkbox"/>	<input type="checkbox"/>			
radio frequency	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>
allergens	<input type="checkbox"/>	<input type="checkbox"/>	potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>
mutagens/teratogens/ carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>
			immunisations	<input type="checkbox"/>	<input type="checkbox"/>

OTHER POTENTIAL HAZARDS (please specify):

Supervisor's Signature:		Print Name:	Associate Professor Chris Lidman	Date:	
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