Position Details

Technical Services – CSOF4

THE FOLLOWING INFORMATION IS FOR APPLICANTS	
Advertised Job Title	Field Engineer - SKA-Low Telescope
Job Reference	98654
Tenure	Indefinite Full-Time, Part-Time or Job-Share
Salary Range	AU$96,811 – AU$109,527 per annum, plus 15.4% superannuation
Location(s)	Geraldton, Western Australia
Relocation Assistance	Will be provided to the successful candidate if required
Applications are open to	Australian/New Zealand Citizens and Australian Permanent Residents
Client Focus – Internal	0%
Client Focus – External	100%
Position reports to the	This role will report to the SKA-Low Field Team Supervisor
Number of Direct Reports	0
Enquire about this job	To enquire about this role, please reach out to the Deployment and Maintenance Manager Pablo Carrillo, Pablo.Carrillo@skao.int for more information.
How to apply	Apply online at https://jobs.csiro.au/ Internal applicants please apply via **Jobs Central** If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220.

Acknowledgement of Country

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our vision towards reconciliation.

The CSIRO Experience

As an employee of CSIRO, you will be eligible for the many benefits of working at Australia's National Science Agency. You can read more here:

1. Life at CSIRO
2. Personal Development & Learning
3. Generous Leave & Conditions
4. Work / Life Balance

Background

The SKA Observatory (SKAO) is a next-generation radio astronomy facility that will revolutionise our understanding of the Universe and the laws of fundamental physics. Enabled by cutting-edge technology, it promises to have a major impact on society, in science and beyond. As an intergovernmental organisation, the SKAO brings together nations from sixteen countries around the world.

The Observatory has an international footprint and consists of the SKAO Global Headquarters in the UK, the SKAO's two telescopes at radio-quiet sites in South Africa and Australia, and associated facilities to support the operations of the telescopes.

Constructing and operating these telescopes will position the SKAO as the leading research infrastructure for radio astronomy globally, providing science capabilities to the international astronomical community for decades to come.

Australia will host the SKAO's low frequency telescope (SKA-Low) in remote Western Australia on Wajarri Yamaji Country.

The Traditional Owners and native title holders, the Wajarri Yamaji, have gifted CSIRO with the traditional name Inyarrimanha Ilgari Bundara for the CSIRO Murchison Radio-astronomy Observatory, home to the SKA-Low telescope. The traditional name means 'sharing sky and stars' in the Wajarri language.

In Australia, SKAO is collaborating with CSIRO to operate and support the construction of the SKA-Low Telescope. SKA-Low teams will operate out of:

- Inyarrimanha Ilgari Bundara, the CSIRO Murchison Radio-astronomy Observatory on Wajarri Yamaji Country.
- Our Engineering Operations Centre on Nhanhangardi, Naaguja, Wilynyu and Amangu Country in Geraldton.
- Our Science Operations Centre on Whadjuk Noongar Country in Perth.

Further Reading: Explore CSIRO and the SKA-Low Telescope Project

Role Overview

The SKA-Low Field Engineer is a critical member of the SKA-Low Deployment and Maintenance Team. This team is responsible for the assembly, deployment, and ongoing maintenance of the world's largest low-frequency radio telescope, SKA-Low. As a key technical resource, the Field Engineer provides hands-on technical, operational, and maintenance support for both the physical deployment of the telescope stations and the signal chain, which includes low noise receivers, Radio Frequency (RF) systems, optical and digital electronics.

This role requires technical skills in electronic systems, RF systems, and signal processing. The Field Engineer will contribute to the integration and verification of systems, perform troubleshooting, and provide solutions to technical issues on-site and at the Integration and Test Facility (ITF) at the Engineering Operations Centre. As the telescope moves from construction to operations, the Field Engineer will ensure the system continues to operate at peak performance, supporting ongoing maintenance and system upgrades.

This role will require regular domestic travel (by 9-seat charter flight) to the telescope site and occasionally to our Science Operations Centre in Perth.

CSIRO and the SKAO value and respect difference, and we are committed to building an inclusive culture by creating an environment where you can balance a successful career with your commitments and interests outside of work. We believe that you will do your best at work if you have a work / life balance. We are open to discussing flexible working opportunities with this role being offered on a full-time, part-time or job share basis. Please raise your preference in your application.

Duties and Key Result Areas

- Provide hands-on technical support for the installation, integration, and verification of the SKA-Low signal chain and associated systems, including RF systems, electronic modules, and control systems.
- Work closely with the Assembly, Integration, and Verification (AIV) team to verify telescope systems at the Integration and Testing Facility (ITF) and on-site. This includes applying systematic testing procedures to ensure compliance with Level 1 requirements.
- Troubleshoot and maintain RF, electronic, and signal processing systems, diagnosing and resolving technical issues to ensure continuous system availability.
- Contribute to the development and implementation of standard operating procedures for system health checks, asset management, and logging of equipment performance and repairs using Computerized Maintenance Management Systems (CMMS) such as Limble.
- Utilize a variety of test and measurement instruments to troubleshoot RF systems and other complex electronic modules. Provide solutions to issues encountered during signal processing, antenna alignment, and overall system performance.
- Maintain accurate records for statutory maintenance requirements, as-built configuration, repair logs, and system updates. Ensure that equipment operating manuals, troubleshooting guides, and user documentation are up to date.
- Provide Technical advice to Field Technicians, building technical capacity in troubleshooting and maintaining the SKA-Low telescope's RF and electronic systems.
- Follow Health, Safety, and Environment (HSE) procedures and ensure compliance with SKAO and CSIRO safety policies, particularly when working in the field or handling high-frequency electronic systems.
- Develop and implement techniques and processes to improve system integration, maintenance efficiency, and troubleshooting. Proactively suggest and implement improvements to system designs and processes.

Fundamental requirements:

1. Ability to work outdoors in remote outback environments.
2. Willingness to traverse uneven terrain for extended distances.
3. Adaptability to a FIFO (fly-in, fly-out) roster from Geraldton. (4 days on/3 days off)
4. Physical capability to repetitively lift and carry objects up to 10kgs.

Selection Criteria

CSIRO is an Equal Opportunity employer working hard to recruit world-class talent that represents the diversity across our society. As part of our commitment to equitable employment outcomes for under-represented groups, preference will be given to Aboriginal and Torres Strait Islander people and women who meet the role criteria.

Essential

Under CSIRO policy only those who are able to demonstrate how they can meet the essential criteria may be appointed.

Selection Criteria

Essential:

- A relevant tertiary qualification in electrical, electronic, or Radio Frequency engineering, or equivalent experience.
- Proven experience in Radio Frequency or mixed signal systems, and using test and measurement instruments to troubleshoot electronic modules.
- Ability to systematically identify, diagnose, and resolve technical issues on complex systems, including RF, signal processing, and control systems.
- Experience with the integration, verification, and operational support of signal chain systems, such as low noise amplifiers and digital signal processing.
- Strong interpersonal and communication skills, with the ability to motivate and develop team members.

Desirable:

- Experience in writing test scripts or control software for test and measurement instruments (e.g., Python, Matlab).
- Experience with asset management and maintenance tools such as ALIM, Jira, Jama, Limble, or similar.
- Familiarity with Quality Assurance and calibration processes for RF systems and signal chain components.
- Experience working in remote locations, performing technical work under challenging field conditions, particularly in large-scale scientific installations.

Required Competencies

- **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other team as well as industry colleagues.
- **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
- **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
- **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.

- **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
- **Adaptability:** Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

Special Requirements

- The successful candidate will be required to gain a National Police Clearance or equivalent. This will be conducted by CSIRO, Talent Services, through our provider HireRight. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
- The successful candidate will be required to undertake a pre-employment medical examination prior to commencement.
- The successful candidate will be required to hold a "C" class drivers licence at a minimum.
- Inyarrimanha Ilgari Bundarra, The CSIRO Murchison Radio-astronomy Observatory is a remote location in the Australian outback. While this role is based at the Engineering Operations Centre in Geraldton, regular travel to site will be required to perform aspects of the role. Willingness to safely perform duties in outdoor remote environments is crucial to this role.

Child Safety

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our Child Safe Policy.

CSIRO and SKAO Values

Visit CSIRO Online and Space and Astronomy and SKAO online and SKAO Location for more information. In your application and at interview you will need to demonstrate behaviours aligned to our values of:

CSIRO	SKA Observatory
• People First • Further Together • Making it Real • Trusted	• Diversity and Inclusion • Excellence • Collaboration • Creativity and Innovation • Sustainability and Safety