# Position Details

## Research Projects- CSOF5

|  |
| --- |
| The following information is for applicants |
| Advertised Job Title | Verification System Engineer (Low System ITF Test Engineer) - Square Kilometre Array Low Telescope (SKA-Low) |
| Job Reference | 77347 |
| Tenure | Specified Term of 5 years, full-time (with flexible work options) |
| Salary Range | AU$100k - AU$108k per annum, plus up to 15.4% superannuation |
| Location(s) | Geraldton, Western Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Line management reporting, initially by the CSIRO AIV Lead, with work directed by the SKAO LOW System ITF Manager. |
| Number of Direct Reports | 0 |
| Enquire about this job | Allison Weidenbaum by email: Allison.Weidenbaum@csiro.auLucio Tirone by email: Lucio.Tirone@skao.int |
| 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. |

### Background

The Square Kilometre Array Observatory (SKAO) is a next-generation global radio-astronomy facility that will revolutionise our understanding of the Universe and the laws of fundamental physics. It is one observatory with two telescopes – SKA-Low in Western Australia and SKA-Mid in South Africa. Australia is a co-host member of the SKAO, an intergovernmental organisation headquartered at Jodrell Bank (near Manchester in the United Kingdom) responsible for SKAO construction and operation globally.

The first phase of the SKA will consist of two telescopes:

* Australia will host the SKA’s low-frequency telescope (SKA1-Low). SKA-Low will comprise up to 131,072 antennas in clusters along spiral arms spanning 65 km at CSIRO’s Murchison Radio-astronomy Observatory (MRO) in Western Australia.
* South Africa will host the mid-frequency telescope (SKA-Mid). SKA-Mid will comprise up to 197 dishes spread along spiral arms spanning 150 km.

CSIRO is involved in several facets of the SKA-Low in Australia:

* Operating partner: SKAO will partner with CSIRO to operate the SKA-Low Telescope and support construction.
* Construction: CSIRO has been allocated work in digital processing, infrastructure, and antenna station management and deployment, integration and verification, and software.

CSIRO also operates the MRO which hosts multiple national and international radio astronomy telescopes and is where the SKA-Low Telescope will be located. CSIRO is responsible for land management, subleases, maintaining radio quiet protections, provision of services to the telescopes, and managing the Indigenous Land Use Agreement.

### Role Overview

Under the collaboration agreement with SKAO, CSIRO is looking for a Verification System Engineer (Low System ITF Test Engineer) to play a key role in the construction of the SKA Observatory Low Radio Telescope in Australia. This role will be based in Geraldton, Australia, and will be known internally as Low System ITF Test Engineer.

The Low Verification System Engineer will report to the Low System ITF Manager who has the responsibility to coordinate the integration, testing, verification and debugging of products arriving from suppliers at the Integration Test Facility (ITF) and on-site.

The Low Verification System Engineer will be responsible for carrying out integration and tests, for developing and/or coordinating the development of scripts and procedures, and for supporting the overall verification of the Low Telescope System Requirements.

The Low Verification System Engineer is a member of the Low AIV Telescope Delivery Team (TDT), a multidisciplinary team responsible for the “delivery” of integration of the Low products. Within the Low AIV TDT the Low Verification System Engineer provides engineering support, both in their specific discipline and across the entire Low Telescope.

### Duties and Key Result Areas

* Integrate and maintain a subset of the Low Telescope (System Under Test) and its Test Environment at the Integration and Testing Facility (ITF) and on-site, developing, validating and performing procedures and scripts for automatic and remote testing and logging of the System Under Test.
* Provide technical expertise for evaluation, verification, and performance review of the System Under Test.
* Support the Low Telescope System Requirements verification in the ITF and on-site, coordinate with the AIV (Assembly Integration and Verification) Low Team workflows and procedures at the ITF and being followed on-site.
* Attend training provided by international suppliers and support the provision of technical training to the AIV Low Team, Science Commissioning and Operation users.
* Support the development, reviewing and optimization of the planning and preparation of the Integration Test Facility and on-site AIV activities.
* Attending and supporting test activities at suppliers and prototype integration facilities.
* Undertake occasional national and international travel to suppliers (typically 3-4 times a year for one or two weeks).
* Communicate openly, effectively, and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of SKAO and CSIRO’s reputation.
* Work collaboratively as part of a professional regionally and internationally dispersed team.
* Adhere to the spirit and practice of both SKAO and CSIRO’s Values as well as the Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A relevant trade certificate/diploma/bachelor’s degree or equivalent relevant work experience in Electronic, Systems or Software Engineering.
2. A good understanding of Systems Engineering and Requirements Management principles and experience in their application in the integration, testing and verification of high technology projects.
3. Demonstrated experience addressing hardware and software issues with suppliers, with the ability to identify and solve complex and novel technical issues through engineering analysis and out of the box thinking.
4. Proven ability to communicate and effectively interact with senior technical experts.
5. Strong team skills with a flexible approach and ability to readily adapt to change.
6. Experience working effectively in a multicultural environment.

## **Desirable**

1. Membership of, or eligibility for membership of recognised national or international systems engineering institutes.
2. Experience in design verification for volume production and/or in large-scale manufacturing and assembly.
3. Experience in the area of Quality Assurance.
4. Software development and integration for scientific projects.
5. Knowledge of Scaled Agile Framework (SAFe).
6. Understanding of Configuration Management basic principles.

## **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 asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test- <https://ielts.com.au/>).
* The successful candidate must be able and willing to undertake travel as required (typically 3-4 times a year for one or two weeks).

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Space and Astronomy](https://www.csiro.au/en/Research/Astronomy) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted

## **About SKAO**

SKAO is coordinating a global effort to deliver the largest science facility on the planet. The SKA Observatory will build next-generation radio telescopes that will help to answer key questions in astrophysics, drive technological innovation and support human capital development. Visit [SKA Observatory](https://www.skatelescope.org/) online for more information.

SKAO’s values are:

* Diversity and Inclusion
* Excellence
* Collaboration
* Creativity and Innovation
* Sustainability