# Position Details

## Research Projects- CSOF4

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| The following information is for applicants |
| Advertised Job Title | System Test Engineer  |
| Job Reference | 86044 |
| Tenure | Specified term ending 28 May, 2027Full-time or part-time (minimum 0.8 FTE) |
| Salary Range | AU$87k - AU$98k pa (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Perth or Geraldton (Western Australia), or Sydney (NSW) |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian or New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | AIV Team Leader |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Allison Weidenbaum via email Allison.Weidenbaum@csiro.au  |
| 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](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Background

### The SKA Observatory 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 SKA Observatory, an intergovernmental organisation headquartered at Jodrell Bank, near Manchester in the United Kingdom, responsible for SKA Observatory construction and operation globally.

### Among the major science goals for the first phase will be to study the history and role of neutral Hydrogen in the Universe from the dark ages to the present-day, and to employ pulsars as probes of fundamental physics.

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

### Australia will host the low-frequency telescope. SKA-Low will comprise up to 131,072 antennas in clusters along spiral arms spanning 65km at CSIRO’s Murchison Radio-astronomy Observatory (MRO) in Western Australia. SKA-Low will receive signals from 50MHz to 350MHz

### South Africa will host the mid-frequency telescope. SKA-Mid will comprise up to 197 dishes spread along spiral arms spanning 150km. SKA-Mid will receive signals from 70MHz to 10GHz.

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

### Operating partner: The SKA Observatory 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 Murchison Radio-astronomy Observatory 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

### CSIRO is expanding the Assembly, Integration and Verification (AIV) Team to include a System Test Engineer for verification testing and observations, to grow with the AIV Team and support Science Commissioning and Operations, to deliver the SKA Low Telescope.

### The System Test Engineer will programme and execute testing activities for the SKA-Low Telescope, and develop software test and observing scripts for the SKA-Low Telescope with the AIV team. The position is crucial to fault finding, root cause analysis and rectification activities for the SKA-Low Telescope as part of the AIV team.

### The System Test Engineer will be responsible for the setup of the SKA-Low Telescope for observations during Integration and Verification Events, including the scheduling and running of the observations, gathering data and running system and diagnostic reports. The role is responsible for identifying any issues from the observations and will work collaboratively with AIV team members to resolve them.

### This position reports to the AIV Team Manager who has the overall responsibility for the successful integration and verification of the SKA-Low Telescope. It can be based at any of the CSIRO offices in Perth, Geraldton or Sydney but may involve mutually agreed occasional domestic and international travel to the SKA-Low Construction site, other CSIRO offices and supplier locations.

### The AIV team works closely with the SKA science, engineering and project communities around the world and is as diverse in culture, skills and location as they are. We recruit and support world-class talent that represents the diversity across our society. The position will grow with the team as the project progresses.

### Duties and Key Result Areas

* Translate user needs to test scripts for hardware and software interactions at many levels including design, execution and reporting of the tests.
* Develop software test and observation scripts for the SKA Low Telescope.
* Conduct testing campaigns at the project test facilities and at the SKA-Low Telescope.
* Use test experiences to contribute to the development of User Interfaces.
* Make decisions as an autonomous logical thinker, to solve technical problems as part of the AIV team.
* Liaise with diverse stakeholders at all levels across multiple teams, time zones and cultures in the SKA-Low Telescope.
* Contribute to the development of operational procedures based on learned experience of SKA-Low Telescope operations.
* Contribute to AIV Low activities within a Scaled Agile Framework (SAFe).
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO's reputation.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed research team, to carry out AIV tasks in support of CSIRO's scientific objectives.
* Adhere to the spirit and practice of CSIRO's Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

These are the criteria that will be used to assess the applications. Please directly address the essential and any relevant desirable criteria in your cover letter and try to highlight your relevant experience in your CV/resume.

#### Essential

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

1. A degree or equivalent experience in a relevant Engineering/Science discipline, with a focus on one or more of the following: data processing, instrumentation development, software testing, engineering operations.
2. Demonstrated experience with software testing and creating tests in modern Python or equivalent scripting language.
3. Evidence of capability to pro-actively identify and resolve technical issues as part of a team.
4. Proven ability to communicate and translate project needs into test and observing scripts and then use the output from testing events to improve operations.
5. Knowledge and appreciation of the advantages of a supportive, multicultural team.
6. The ability to effectively manage competing priorities in a rapidly changing environment.

**Desirable:**

1. Experience in scheduling, set up and running of a sequence of operations in an observatory facility or engineering operations environment.
2. Experience with Behaviour-Driven Development.
3. Working knowledge of development tools such as Jira, Jama, Confluence, Miro, GitLab, CI/CD.
4. Experience using dashboard-based user interfaces (UI) such as Grafana or other dynamic operator UIs.
5. Understanding of, and experience in, radio astronomy.

## **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 teams 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:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **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:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **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.
* Some possibility of supporting activities or meetings outside of normal working hours given the distributed time zones of the team. Work outside of normal working hours will not be required to be done in the office.
* Occasional interstate or international travel for specific project events may be requested.

## **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