# Position Details

## Research Projects- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Telescope Operator/ Data Analyst |
| Job Reference | 96331 |
| Tenure | Indefinite, Full-time or Part-time |
| Salary Range | AU$93,267 – AU$105,517 (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Kensington, 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 |
| Position reports to the | Team Leader, AIV (Assembly, Integration and Verification) |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Dori Krebsz (Talent Acquisition Specialist) via email dori.krebsz@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](mailto: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).

**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/technology-space/astronomy-space) 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

**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 sixteen countries around the world.

The SKAO 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.
* SKAO Engineering Operations Centre on Nhanhangardi, Naaguja, Wilynyu and Amangu Country in Geraldton.
* SKAO Science Operations Centre on Whadjuk Noongar Country in Perth.

**Role Overview**

The CSIRO Assembly, Integration and Verification (AIV) team is integrating the complex digital and RF electronic systems into the SKA LOW Telescope Signal Chain and then verifying the Telescope to defined Level 1 requirements. This role will initially be part of the AIV team and work collaboratively with the SKAO Science Operations team before transitioning fully to the Science Operations team on completion of the construction project. As such, competencies for both the AIV component and the SKAO component are required for the role. This role will evolve as the SKA-Low telescope is built.

During the construction phase, as part of the AIV team, this role will be responsible for developing and commissioning observations for integration and verification events and supporting the science commissioning teams. Observing during this phase is expected to be outside of traditional working hours.

Once construction is complete, as part of the Science Operations team, the Operator / Data Analyst will be responsible for the day-to-day observing of the SKA-Low telescope and provide analysis of the initial telescope data for quality assurance and science verification. Observing during this phase is expected to be 24/7 with the team working shift patterns.

Telescope control and data analysis will be undertaken from the Science Operations Centre in Perth where the AIV team is co-located and will work collaboratively with the SKAO Science Operations team. The role has an opportunity to potentially contribute to the development of science operations.

Both SKAO and CSIRO value and respect difference and are committed to providing a safe and inclusive workplace 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 maintain a healthy work/life balance. We are open to discussing flexible working opportunities with this role being offered on a full‐time or part‐time basis. Please indicate your preference in your application.

**Duties and Key Result Areas**

* Conduct, monitor and calibrate astronomical observations and use appropriate computing resources towards successful operation of the telescope array releases (when they become available and as required).
* Assist with system checks, maintenance handovers, array and correlator/beamformer configurations and setups.
* Undertake quality assurance of continuum, time domain and spectral line data obtained from early array releases using existing low frequency data sets, such as from the MWA or AAVS.
* Contribute to the design and documenting of operating procedures for SKAO.
* Support communication between engineering and technical staff and scientific stakeholders.
* Work collaboratively with colleagues, both within the AIV team and Science Operations Team and across the multi-disciplinary roles of the broader construction and operations activities.
* Adhere to the values of CSIRO and promote an inclusive workplace.
* Other duties as required.

**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, women, and people with a disability who meet the role criteria.

**Essential**

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

1. Experience using radio astronomy methods/observations.
2. Aptitude to control and operate a scientific research facility including familiarity with monitoring, controlling, and scheduling.
3. Appreciation of steps required for the acquisition and processing of scientific data.
4. Aptitude to contribute to the definition and development of operational procedures, monitoring dashboards and documentation.
5. Demonstrated aptitude to work collaboratively across disciplines, with engineers and scientists from a variety of cultures, contributing to an inclusive team environment.
6. An awareness of equitable practices, including accessibility, to facilitate broad access to the Observatory.

**Desirable**

1. PhD project involving astronomy observations and data reduction pipelines.
2. Familiarity with low frequency radio astronomy calibration techniques.

**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 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 may be required to undertake a pre-employment medical examination prior to commencement.

**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](https://www.csiro.au/en/about/policies/child-safe-policy).