



## ADVERTISEMENT

### SKA Mid - Senior Data Analyst

Contract type: Permanent

Job Level: Management

Work Location: Cape Town, Western Cape

The National Research Foundation (NRF) ([www.nrf.ac.za](http://www.nrf.ac.za)) supports and promotes research and human capital development through funding, the provision of National Research Facilities and science outreach platforms and programmes to the broader community in all fields of science and technology, including natural sciences, engineering, social sciences and humanities.

The South African Radio Astronomy Observatory (SARAO) ([www.sarao.ac.za](http://www.sarao.ac.za)) spearheads South Africa's activities in the Square Kilometre Array Radio Telescope, commonly known as the SKA, in engineering, science and construction. SARAO is a National Facility managed by the National Research Foundation and incorporates radio astronomy instruments and programmes such as the MeerKAT in the Karoo, the Hartebeesthoek Radio Astronomy Observatory (HartRAO) in Gauteng, the African Very Long Baseline Interferometry (AVN) programme in nine African countries as well as the associated human capital development and commercialisation endeavours.

The Square Kilometre Array Observatory (SKAO) ([www.skao.int](http://www.skao.int)) 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-Mid in South Africa and SKA-Low in Western Australia. South Africa 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 operations globally.

The Senior Data Analyst will be responsible for the development of operator procedures and documentation, and for the mentoring and training of the data analyst/operators under their supervision.

#### Key Responsibilities:

- \* Manage performance of data analyst/operator team
- \* Play a leading role in the designing and documenting of operating procedures for SKAO
- \* Conduct, monitor and calibrate astronomical observations and use appropriate computing resources towards successful operation of the telescope array
- \* Undertake quality assurance of data
- \* Support communication between engineering and technical staff and scientific stakeholders.

#### Key Requirements:

##### Qualification:

- \* MSc in physics, astronomy or related discipline, coupled with 4 years experience in a technical or scientific environment.
- \* OR
- \* BSc (Hons) in physics, astronomy or related discipline, coupled with 5 years experience in a technical or scientific environment.

##### Experience:

- \* MSc in physics, astronomy or related discipline, coupled with 4 years experience in a technical or scientific environment.
- \* OR
- \* BSc (Hons) in physics, astronomy or related discipline, coupled with 5 years experience in a technical or scientific environment.

##### Knowledge:

- \* Experience in leading a team
- \* Principles of radio astronomy and interferometric calibration
- \* Radio astronomy reduction software
- \* Control and monitoring systems
- \* Scientific computing in python

#### Additional Notes:

##### Skills/Ability/Competencies

##### Related Skills:

Linux operating systems

Control and monitoring software

Technical report writing

Data analysis

**Extreme Importance (Essential):**

Domain knowledge: Experience in radio astronomy observations and data reduction pipelines

High level analytical capability: Demonstrated problem-solving ability

Teamwork and collaboration: Cooperates with others to achieve organisational objectives and may share team resources to do this

Well-developed verbal and written communication skills in English.

Documentation: Aptitude to contribute to the definition and development of operational procedures, monitoring dashboards and documentation. Rigor in maintaining reports and documentation.

Scientific computing: Understanding of software development and data analysis using Python, C or C++ in Linux environment

Resource Management/Leadership: Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience and plans, seeks, allocates and monitors resources to achieve outcomes.

Judgement and Problem Solving: Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.

Equity, diversity and inclusivity: An awareness of, and commitment to, equitable practices, including accessibility, to facilitate broad access to the Observatory

Must be able to work on a 24/7 rotational basis, including weekends and public holidays

**Desirable:**

Aptitude to control and operate a scientific research facility including familiarity with monitoring, controlling, and scheduling

Demonstrated ability to work and cope under pressure in time sensitive environments with multiple priorities

Familiarity with SAFE or Agile code development practices

**Additional Notes:**

Organisational Values

The SKA-Mid Senior Data Analyst will be expected to demonstrate the SARAQ and SKAQ's values, and to work actively to instil those behaviours in all SKA-Mid staff in South Africa.

SKAQ's values are:

1. Diversity and Inclusion
2. Excellence
3. Collaboration
4. Creativity and Innovation
5. Sustainability

SARAQ's values are:

1. Passion for Excellence
2. World-class service
3. People-centered
4. Respect
5. Integrity and Ethics
6. Accountability

Both SARAQ and SKAQ value and respect difference and 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. Some roles lend themselves to flexible options more than others, so if this is important to you, please raise this during your interview, as we are open to discussing flexible working opportunities during the hiring process.

**Information:**

The website [www.nrf.ac.za](http://www.nrf.ac.za) provides more details on the NRF initiatives and activities.

## **Applications:**

Applicants should submit a comprehensive CV by logging to <https://ess.nrf.ac.za/Account/Recruitment> and apply online. Applications should be accompanied by a letter of motivation indicating the applicant's suitability for the position. The names and contact details of at least three referees should be provided.

## **Closing Date: 30 June 2024**

The NRF offers a challenging career and competitive remuneration package which is commensurate with qualifications and experience. The NRF is committed to employment equity and redress and the appointment to the position will be made in line with the NRF Employment Equity Plan.

The NRF reserves the right not to make an appointment.

Correspondence will be sent to short-listed candidates only