



A NEW OUTLOOK FOR YOUR CAREER

Research Scientist – Active Remote Sensing

Executive Level 1

JOB REFERENCE NUMBER	60016334
CLASSIFICATION	Executive Level 1 (Senior Professional Officer Grade C)
GROUP	Science & Innovation
PROGRAM	Research
LOCATION	Melbourne
STATUS	Non-ongoing specified task until June 2022
WORKING HOURS	Both full time and part time will be considered
SALARY RANGE	\$98,209 - \$110,623, plus an additional 15.4% superannuation
CLOSING DATE	11:30pm AEST/AEDT Sunday 6 th December 2020
APPLICANTS	Australian Citizenship – see Eligibility Requirements
CONTACT OFFICER	Alain Protat Team Leader, Radar Science & Nowcasting Team Phone: (03) 9669 8128 Email: alain.protat@bom.gov.au



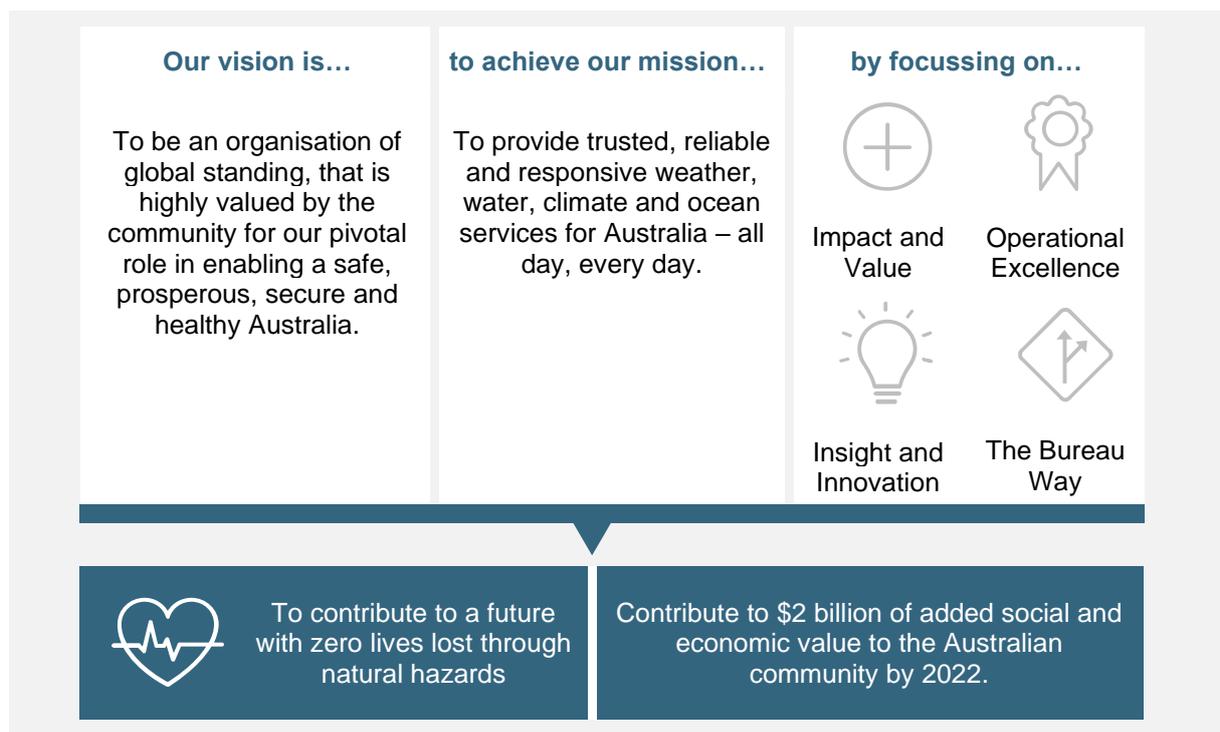
ABOUT US

The Bureau of Meteorology is one of the few organisations that touches the lives of all Australians and all Australia, every day. The Bureau works across Australia and remote islands, providing services from the Antarctic to beyond the equator, and from the Indian Ocean to the Pacific.

We are Australia's national weather, climate and water agency, in the Agriculture, Water and Environment portfolio of the Australian Government, operating under the authority of the Meteorology Act 1955 and the Water Act 2007. We provide data, information, knowledge, insight and wisdom to help Australians prepare and respond to the realities of their natural environment, including droughts, floods, fires, storms, tsunamis and tropical cyclones.

Our products and services include observations, forecasts, analysis and advice covering Australia's atmosphere, water, oceans and space environments. We undertake focussed scientific research in support of our operations and services. Through regular forecasts, warnings, monitoring and advice, we provide one of Australia's most fundamental and widely used public services.

We have strong relationships with our customers, partners and stakeholders in Australia, including the Australian Community and the emergency services sectors, all-levels of Government, and focus sectors including aviation, agriculture, energy and resources, national security and water.





WORKING AT THE BUREAU

The Bureau represents a dynamic and exciting opportunity. A role with the Bureau involves:

OUR WORK	OUR PEOPLE	OUR ENVIROMENT	OUR EXPIERIENCE
Purpose-driven impactful work that brings real benefit to the Australian Community, businesses and industry.	A deeply passionate and highly skilled workforce that continuously challenges the status quo to achieve greater impact and experiences for our colleagues and customers.	A world class organisation with excellent workplaces in great locations, access to cutting-edge technology and a safe and inclusive environment for everyone.	A commitment to professional development and growth, backed by clear career pathways and training opportunities, and complimented by a competitive remuneration package.

POSITION OVERVIEW

The Research Program of the Bureau of Meteorology is seeking a research scientist with expertise in active remote sensing retrievals to join a team of scientists and software engineers responsible for developing and implementing operational data processing systems that transform ground-based active remote sensing observations into actionable meteorological and environmental information in support of the Bureau's mission.

The successful applicant will undertake research using existing cloud radar and lidar observations collected at Davis station, Antarctica, to develop a climatological understanding of meteorological conditions at the Davis station, with a focus on conditions conducive to aviation hazard (rainfall, snowfall, clouds, fog, winds, and turbulence). This study will inform the assessment of the suitability of the development of an aerodrome for safe year-round aircraft operations near Davis station. Provided that the suitability is confirmed, the occupant will then contribute to setting up an observational program around Davis (starting with a scanning cloud radar and scanning Doppler lidar) and the development of operational aviation products for the monitoring and nowcasting of aviation-related meteorological hazards.

The occupant will also provide strategic advice and recommendations to the main stakeholder of the project, the Australian Antarctic Division (AAD) and to the Bureau project management team. The position requires some experience with customer engagement and responding to requests for information, data and product development to address customer needs. The successful applicant will possess a strong publication record in the development of active remote sensing retrieval techniques, demonstrating excellent communication and liaison skills.

The successful applicant will be a member of the Radar Science and Nowcasting team led by a Senior Principal Research Scientist. The Radar Science and Nowcasting team is one of five teams within the Weather and Environmental Prediction section which is responsible for research activities to improve the understanding of meteorological processes and development of applications and systems to enhance weather forecasting services.



ROLE RESPONSIBILITIES

The responsibilities of the role include but are not limited to:

1. Complying with all Bureau work, health and safety (WHS) policies and procedures, and taking reasonable care for your own health and safety and that of employees, contractors and visitors who may be affected by your conduct.
2. Undertake research using active remote sensing and all relevant weather data available at Davis station to build a climatology of aviation-related meteorological hazards.
3. Undertake data quality control, statistical analysis and interpretation of large ground-based datasets collected at Davis station, Antarctica.
4. Develop operational cloud, wind, and turbulence products from active remote sensing instruments at and around Davis station to ensure safe year-round aircraft operations at the future aerodrome.
5. Liaise with project stakeholders and customers for active remote sensing information, data and products.
6. Prepare research publications, presentations, and technical reports, including drafting an aviation hazard assessment report for AAD.
7. Be aware of and apply the principles of the Bureau's Commitment to Diversity and Inclusion

SELECTION CRITERIA

The Bureau encourages applications from all suitably qualified candidates. Applications will be considered based on alignment with selection criteria, which have been matched to the APSC Work Level Standard and Integrated Leadership Systems for Executive Level 1 positions.

1. **Demonstrated expertise in the development of active remote sensing retrieval techniques, primarily using cloud radars, Doppler lidars, and in-situ meteorological measurements.**

Deep knowledge and expertise in active remote sensing retrieval development, including experience in developing complex scientific applications suitable for operational use. Experience with Antarctic weather and climate would be desirable.

2. **Research and data analysis skills.**

Demonstrated experience in scientific research including the ability to develop retrieval techniques to produce geophysical parameters from raw active remote sensing measurements and in-situ meteorological measurements, apply these techniques to large data volumes and interpret the results. Knowledge and experience with variational/optimal estimation techniques, machine learning or deep learning methods is highly desirable.

3. **Software development and programming.**

Demonstrated ability to work effectively with computers, and a demonstrated ability to write computer software within a Linux environment is essential. Demonstrated experience with the Python language is highly desirable. Knowledge of modern collaborative software development practices including automated testing and deployment, version control, code reviews, and agile methodologies would be an advantage.

4. **People leadership and teamwork.**

Demonstrated ability to think and plan strategically to achieve team objectives. Ability to plan and manage tasks within projects that have evolving requirements. Demonstrated ability to



form and maintain effective working relationships with a range of colleagues and collaborators. Proven ability to work independently and as part of a team to achieve team goals.

5. Communication and liaison skills.

Demonstrated written and verbal communication skills including the ability to document and present results. Demonstrated ability to engage effectively with colleagues and customers in order to respond to requests for information, data and product development.

6. Diversity & Inclusion.

A good understanding of the Bureau's Commitment to Diversity & Inclusion and the APS Values and Code of Conduct and commitment to their implementation in the workplace.

Mandatory qualifications (if applicable):

A degree or diploma of an Australian educational institution, or a comparable overseas qualification, which is appropriate to the duties; OR other comparable qualifications, which are appropriate to the duties.

MERIT POOL

The selection process will establish a merit pool that may be used to fill similar positions within 12 months.

HOW TO APPLY

Applications can be lodged through [BOMCareers](#).

Your application will consist of resume, contact details for two referees and responses to the selection criteria (max 500 words per criterion) that considers:

- position overview
- job responsibilities
- selection criteria
- relevant sections of the [Integrated Leadership System \(ILS\)](#) and [APS work level standards](#).

The Bureau is an equal opportunities employer. We will support applicants with disability through our [RecruitAbility Program](#) and will provide reasonable adjustments such as access, equipment and other practical support at relevant stages of the recruitment process.

We recognise the need for our workforce to reflect the community we serve and provide an inclusive environment that respects and values diversity and is described in our [Diversity and Inclusion Statement of Commitment](#). We strongly encourage qualified applicants from diverse backgrounds to apply.

The Bureau offers flexible working options, reasonable workplace adjustments and an Employee Assistance Program (EAP). Should you have any questions or experience any difficulties with applying online, please contact the Recruitment Team on BOMCareers@bom.gov.au



COVID-19 RESTRICTIONS

We understand there are unique and evolving challenges due to the current COVID-19 pandemic. The Bureau is responsive and making changes to ensure the safety of all candidates and our team.

Under the relevant legislation and guidance of the National Chief Medical Officer:

- Currently all interviews will be held via audio/video conference (across a range of platforms to accommodate personal requirements) unless otherwise advised.
- The successful candidate may be required to carry out the duties remotely for either a period or until otherwise advised.

ADDITIONAL INFORMATION

To find out more about the employment conditions at the Bureau, please refer to the Bureau of Meteorology [Enterprise Agreement 2018](#).