# Research Projects – CSOF3-CSOF4

Role summary for potential applicants

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| Advertised Job Title**:** | Atmospheric Trace Gas Experimental Scientist |
| Reference Number**:** | 57195 |
| Classification**:** | CSOF3 or CSOF4 |
| Salary Range: | CSOF3 AU $61,425 to AU $78,177 plus up to 15.4% superannuation  CSOF4: AU $80,833 to AU $91,451 plus up to 15.4% superannuation  \*Appointment will be made at level 3 or 4 depending on skills and experience |
| Location**:** | Aspendale VIC |
| Tenure: | Indefinite |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian/New Zealand Citizens and Permanent Residents Only |
| Functional Area**:** | Research Projects |
| % Client Focus - Internal: | 80% |
| % Client Focus - External: | 20% |
| Reports to the: | Team Leader, Major Greenhouse Gases |
| Number of Direct Reports: | 0 |

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| **Role Overview:** |
| The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational work, and in carrying out the more practical aspects of the work. At senior levels, Research Projects staff may be involved in providing consulting services, science management and/or industry liaison.  The role of the Atmospheric Trace Gas Experimental Scientist is to support delivery of all projects within the Atmospheric Composition and Chemistry Group that involve measurements of long-lived greenhouse gases (LL-GHGs). The role delivers directly into the baseline atmospheric monitoring associated with CSIRO’s global flask network (which tracks atmospheric composition changes across the globe), *in situ* GHG monitoring (including at Antarctic sites and on-board the *RV Investigator*) and the Cape Grim Science Program.  The Cape Grim Science Program delivers fundamental science and datasets that help to fulfil Australia’s obligations to the World Meteorological Organisation (WMO) Global Atmosphere Watch (GAW) Programme. The data generated feed directly into the Intergovernmental Panel on Climate Change (IPCC) process, United Nation Environment Programme (UNEP) Ozone Assessments, State of the Environment and State of the Climate reports, and Australia’s reporting to the United Nations Framework Convention on Climate Change (UNFCCC).  The role interacts closely with our capability for measuring the stable isotopes of CO2 (δ13CO2 and δ18O-CO2) through Isotope Ratio Mass Spectrometry (IRMS) and the suite of synthetic GHGs measured by our Medusa systems (Gas Chromatography-Mass Spectrometry (GC-MS)).  The successful applicant will join the Major Greenhouse Gases Team in Aspendale, playing a key role in the ongoing delivery of high quality data from the global flask network, Australia’s *in situ* Greenhouse Gas Observing Network, and the Cape Grim Science Program. The role requires someone who wants to be part of a team, has a keen interest in climate science and a strong drive to deliver science in support of the Paris Agreement.  **Note:** This position is advertised across two salary/competency levels. To be appointed at the higher CSOF level (CSOF4), candidates need to demonstrate the skills and expertise required for the higher level. The additional duties and selection criteria for the higher level are indicated below. |

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| **Duties and Key Result Areas:** |
| * To provide scientific support to the global flask network through making high quality gas chromatography (GC) measurements of flask samples and compressed gas calibration standards for carbon dioxide (CO2), methane (CH4), carbon monoxide (CO), nitrous oxide (N2O) and hydrogen (H2). * A significant component of this role is to perform on-going, data review for quality control, both on the discrete GC measurements and for the continuous data from *in situ* spectroscopic analysers. This element of the role requires great attention to detail, thorough work practices, commitment to quality, and persistence. * To participate in routine field trips (to Cape Schanck) to produce compressed air calibration standards for our internal operations and for external customers, and to other field sites as required. * To provide logistical support to the global flask program, including planning, communication with collaborating institutions and organisation of freight. * Contribute to the effective functioning of a research team. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Work as part of a research team, to carry out tasks under limited direction in support of scientific research. * Work collaboratively with colleagues within the team, the Business Unit and across CSIRO, to reach objectives. * Allocate activities, direct tasks and manage resources to meet objectives. * Foster open communication. * Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals. * Other duties as directed.   **For appointment at the higher salary level (CSOF4), duties will also include:**   * To operate and/or support the operation of *in situ* spectroscopic analysers for CO2, CH4, CO and N2O in the laboratory and at field sites. * Contribute to publication of findings in journal papers, conference abstracts, consultancy reports, brochures and web-pages. * Provide coaching and on-the-job training to both project support and research colleagues, as required. * Adapt and develop original experimental methods/equipment ideas in support of existing and further research. |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   1. **Education/Qualifications:** Relevant Bachelor or higher degree in science, preferably with major subjects in physical sciences including Atmospheric Science, Chemistry, Physics, Mathematics; or equivalent experience. 2. **Communication:** Excellent communication skills, both written and oral, including the ability to anticipate the interests and knowledge level of an audience and present information and feedback accordingly**.** 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment. 4. **Adaptability:** The ability to effectively manage a number of competing priorities simultaneously and carry out non-routine tasks under limited direction. 5. **Problem Solving:** Proven ability to investigate underlying issues of complex and ill-defined problems and develop appropriate responses by adapting/creating and testing alternative solutions**.**   ***Essential Criteria:***   1. Familiarity with a laboratory work environment and analytical measurement techniques. 2. Demonstrated ability to document methods for adoption by other users. 3. **Ability to work effectively as part of a multi-disciplinary team and to** form and maintain effective working relationships with a broad range of collaborators. 4. A current driver’s licence.   ***Additional Essential Criteria for CSOF4 Appointment***   1. Demonstrated ability to lead the development of scientific instrumentation and methods. 2. Demonstrated experience showing initiative and leadership within a team, leading to improved work practices, efficiencies, and/or efficacy.   **Desirable Criteria:**   1. Working knowledge of atmospheric science and experience working with gas chromatography and spectroscopic instrumentation for quantitative analysis of chemical species in the gas phase. 2. Demonstrated experience in the processing and/or quality control of observational data, with a high degree of attention to detail. 3. A willingness and ability to travel to field sites, including those in Australia’s Antarctic Territories, to perform maintenance tasks and/or characterisation experiments on field instruments. 4. Proficiency in using PC based software for scientific analysis, experience with using databases, and/or programming experience with Python, IDL or similar languages. 5. First aid qualifications.   ***Additional Desirable Criteria for CSOF4 Appointment***   1. Demonstrated experience in optical (spectroscopic) analytical techniques, with an interest in isotopic composition.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   **In your application and at interview you will need to demonstrate alignment with these behaviours.** |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at <https://jobs.csiro.au/> and enter requisition number **57195**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  Please load your CV and cover letter (Maximum 2MB). You may also be required to respond to some screening questions.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: Please provide contact details of two previous supervisor or academic/professional referees in your resume/CV. We will ask your permission before making contact.  **Contact:** If after reading the position details above you require more information please contact:  Paul Krummelvia email: [paul.krummel@csiro.au](mailto:paul.krummel@csiro.au) or phone: 03 9239 4568  Please do not email your application directly to Paul Krummel. Applications received via this method will not be considered.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.  Find out more! [CSIRO Balance](https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance)  **CSIRO’s** [**Ocean and Atmosphere**](http://www.csiro.au/en/Research/OandA/About)research is uniquely placed to deliver significant economic, social and environmental benefits for Australia and the region. We seek to secure Australia’s future through our seas and skies.  Understanding our oceans, coasts, climate and atmosphere is fundamental to Australia’s sustainable development and prosperity. |