

Posting Date: 13 June 2017

DEPARTMENT OF PHYSICS
Faculty of Arts and Science
University of Toronto

JOB POSTING – POSTDOCTORAL FELLOW

AREA OF RESEARCH: Atmospheric Physics – Space Data Analysis

DESCRIPTION OF DUTIES:

The Measurements Of Pollution In the Troposphere (MOPITT) space experiment has been in orbit since 1999. It makes measurements of upwelling radiation in the infrared from the planet and these are interpreted in terms of carbon monoxide amounts globally. MOPITT is a Canadian instrument and is operated by a team at the University of Toronto. Data processing is performed by a team at the National Center for Atmospheric Research (NCAR) in Boulder, CO.

The methods used to interpret the radiances from the MOPITT instrument and their interpretation as carbon monoxide concentrations are the subject of continual improvement, and the area of focus of this appointment is the improvement of the methods of dealing with clouds in the instrument field of view.

The successful candidate for this position will be able to undertake a comprehensive study of the issue of “cloud clearing” of the MOPITT data and, in collaboration with the other researchers involved in the study, to implement improved algorithms in a staged manner: technique development, case studies and the full implementation. This will involve a deep understanding of the measurement methods and retrieval techniques used both for MOPITT and other similar space instrumentation and the ability to conceive of, and implement, improved algorithms. In addition to the above, the successful candidate will be expected to participate in other MOPITT and Canadian Space Agency activities as needed and to present research findings to the wider community.

SALARY: \$45,000-\$55,000. Dependent upon relevant experience.

REQUIRED QUALIFICATIONS:

Education: PhD in Physics or related discipline relevant to the position within the last three years

Experience: Ph.D. research should be in some area of retrieving atmospheric parameters from satellite measurements using physical techniques such as, but not limited to, optimal estimation methods.

Experience in the preparation and publication of results in recognised refereed academic journals.

Experience in the preparation of reports to sponsors and other similar material.

Experience in the presentation of results at meetings, workshops and conferences.

Other: Ability to work as part of a larger team dispersed geographically and over several timezones. Strong communication skills both written and oral. Familiarity with computer

systems and programming relevant to the processing of satellite data. Self motivated and able to organise time and work to meet required deadlines.

Travel: Travel to consult with other researchers will be required as well as participation in off-site meetings, conferences and workshops. Some of this travel will be to the USA (including to the National Center for Atmospheric Research, Boulder CO).

APPLICATION INSTRUCTIONS:

All individuals interested in this position must submit a covering letter, curriculum vitae and three reference names with their contact addresses and phone numbers to james.drummond@utoronto.ca by the closing date.

CLOSING DATE: 30 June 2017

SUPERVISOR: Prof. James R. Drummond

EXPECTED START DATE: September 1, 2017 or by mutual agreement

TERM: 3 years maximum (1 year minimum).

FTE: 100%

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

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The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.