

Job Description

Job Title:	ACE Operations Specialist
Department:	Chemistry
Reports To:	Chemistry Department Chair / ACE Mission Scientist
Jobs Reporting:	None
Salary Grade:	USG 8
Effective Date:	May 2022

Primary Purpose

Launched in August 2003, SCISAT continues to operate successfully to this day whereby years of measurements have been accumulated, and the satellite's operation is anticipated to continue for many more years. Over five hundred scientific publications have used data produced by the Atmospheric Chemistry Experiment (ACE) mission.

Under the guidance of the Principal Investigator, the primary purpose of the Operations Specialist is the creation of weekly schedules for the ACE-FTS and MAESTRO instruments on board the SCISAT satellite. The ACE Operations Specialist also maintains and extends the functionality of the mission's website, thereby providing ACE data products to an extensive network of data users, and general mission information to the public. Other duties include the tracking publications that use ACE data, and the monitoring of multiple mission metrics

Key Accountabilities

Instrument scheduling and monitoring:

- Create measurement schedule for ACE-FTS and MAESTRO instruments
- Track satellite performance metrics
- Regular contact with the Canadian Space Agency and with Mission Operations Center
- Perform calibration measurements before and after a period of detector decontamination; analysis and reporting of calibration data

Data product management:

- Manage data user administration, authentication and requests
- Track data use metrics
- Locate publications that use ACE data
- Generation of data packages for special projects

Reporting:

- Contribute to quarterly mission reports
- Present mission metrics and status of projects at semi-annual ACE meeting
- Compile annual ACE-FTS diagnostics reports
- Fill in for some Project Manager duties when PM is unavailable

Database Management

- Maintain the integrity of multiple databases, perform backups and repairs
- Insert/modify records via command line and scripts
- Identification of program documentation from all phases of operations

Website Development

- Maintain and update website content
- Create new web applications

Job Description



**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

Required Qualifications

Education <ul style="list-style-type: none">• Bachelor's degree in Computer Science, Physics, Engineering, Math, or Chemistry, or equivalent education and experience required
Experience <ul style="list-style-type: none">• Experience with data management, data analysis, and website management
Knowledge/Skills/Abilities <ul style="list-style-type: none">• Proficiency with:<ul style="list-style-type: none">○ Linux operating system○ SQL○ Python○ Django○ Microsoft Office Suite (Word, Excel, PowerPoint)• Familiarity with Systems Tool Kit (STK) satellite analysis software is an asset• Ability to communicate complex topics, and collaborate effectively, both in person and remotely• Ability to learn new skills quickly

Nature and Scope

- **Contacts:** This position entails regular communication with other members of the ACE team, satellite operators at the Canadian Space Agency (CSA), and data users located around the world.
- **Level of Responsibility:** This position is at the ACE Science Operations Centre (SOC), in which each member possesses their own unique skill set and experience.
- **Decision-Making Authority:** Limited to the items listed above, where consultation with other team members is required.
- **Physical and Sensory Demands:** : Limited to the working environment of a modern office.
- **Working Environment:** A continuously evolving environment of state-of-the-art computing facilities and data delivery services.