

## Metadata Input Form (\* Mandatory fields)

### Data Identification Information (basic information about the data set)

**Please use this template and save in your files as a backup of your metadata. Simply copy/paste information onto website.**

**Click on grey rectangles to type text**

\* Title of data (e.g. climate data in northern Québec):  
CANDAC/PEARL DataSet - Atmospheric Composition Measurements with a Bruker 125HR Fourier Transform Infrared Spectrometer

\* How should the data be cited (as unpublished data or a journal reference)?  
R.L. Batchelor, K. Strong, R. Lindenmaier, R.L. Mittermeier, H. Fast, J.R. Drummond, and P.F. Fogal. A new Bruker IFS 125HR FTIR spectrometer for the Polar Environment Atmospheric Research Laboratory at Eureka, Canada - measurements and comparison with the existing Bomem DA8 spectrometer. J. Atmos. Oceanic Technology, in press, 2009.

\* For other times contact the authors for citation information.

(Maximum characters: 500, including spaces)

\* Study site:  
PEARL Observatory, Eureka, Nunavut  
(Maximum characters: 50, including spaces)

\* Purpose (a summary of the intentions with which the data set was developed):  
These data were collected as part of the ongoing program of the Polar Environment Atmospheric Research Laboratory (PEARL) at Eureka, Nunavut (80N, 86.4W). PEARL is operated by the Canadian Network for the Detection of Atmospheric Change (CANDAC). The mission of PEARL is to characterise the atmosphere in the altitude range of 0-100km and provide data for studies of air quality, ozone and climate change.  
(Maximum characters: 1500, including spaces)

\* Abstract (description of methodology and data type, e.g., interviews, physical and chemical variables, imagery, recordings, maps and other spatial data, profile, etc.):  
A Bruker 125HR Fourier transform infrared spectrometer was installed at the Polar Environment Research Laboratory (PEARL) in July 2006 as part of the CANDAC (Canadian Network for the Detection of Atmospheric Change) suite of instruments. Direct-sun solar absorption measurements covering the 760 to 4300 cm<sup>-1</sup> spectral region at a resolution of 0.0035 cm<sup>-1</sup> are recorded when there are clear conditions during the sunlit parts of the year (approximately mid-February to mid-October). The SFIT2 retrieval algorithm is used to retrieve vertical profiles of a wide range of trace gases, from which partial and total columns are derived. These gases include both stratospheric and tropospheric species, such as ozone, HCl, HF, NO, NO<sub>2</sub>, ClONO<sub>2</sub>, HNO<sub>3</sub>, N<sub>2</sub>O, CH<sub>4</sub>, CO, C<sub>2</sub>H<sub>6</sub>, and HCN.

(Maximum characters: 1500, including spaces)

Plain language summary (if available, please provide the text in more than one language):

Not Applicable

(Maximum characters: 1500, including spaces)

\* Data originators (e.g. name of data collector(s)):

(Do not enter duplicate originators)

Dr. Rebecca Batchelor

Ms. Rodica Lindenmaier

Prof. Kimberly Strong (principal researcher) <strong@atmosp.physics.utoronto.ca>

Links to data (if available, otherwise please enter principal researcher's email address):

<http://www.candac.ca>

Prof. Kimberly Strong (principal researcher)

<strong@atmosp.physics.utoronto.ca>

\* Status of data: Click on grey rectangle to view scroll down menu

\* Maintenance and update frequency: Click on grey rectangle to view scroll down menu

\* Research program: Select entry from scroll down menu on website; you may select more than one program.

CANDAC  
IPY-PEARL

### **Geographic Coordinates** (in decimal format)

**Research Area:** Coordinates MUST be between -90 and 90 for latitudes and between -180 and 180 for longitudes. All Canadian longitudinal co-ordinates will be negative and all latitudinal co-ordinates for the Antarctic will be negative.

- \* North (latitude N): 80
- \* South (latitude N): 80
- \* West (longitude E): -86.4
- \* East (longitude E): -86.4

### **Time Period** (during which the data was collected)

Select entry from scroll down menu on website

- \* Start Year: 2006
- \* End Year: Present
- \* Start Month: July
- \* End Month: Present
- \* Start Day: 25
- \* End Day: Present

### **Keywords** (see keywords library)

(e.g., Alaska, Nunavik, Resolute, Active layer, Caribou, Glaciers, Migration, Stratigraphy, Diet, Salmonella, Habitat vulnerability)

Select entry from the scroll down menu on the website or consult the Keywords Library

- \* Keyword 1: Ellesmere Island
- \* Keyword 2: Eureka Sound
- \* Keyword 3: Greenhouse gases

- \* Keyword 4: Atmosphere
- \* Keyword 5: Gases
- Keyword 6: Infrared
- Keyword 7: Monitoring
- Keyword 8: Observatory
- Keyword 9: Ozone
- Keyword 10: Remote Sensing Data

## Security

- \* Access: [Click on grey rectangle to view scroll down menu](#)