

## 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 - ERWIN mesospheric wind data

\* How should the data be cited (as unpublished data or a journal reference)?  
Currently the data is unpublished. Publications will be provided as they arise  
(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 field widened Michelson interferometer, ERWIN II, is used to measure Doppler shifts and irradiance in airglow emissions during Polar night. Shifts in the phase of interference fringes associated with Doppler shifts due to bulk air motions are used to determine line-of-sight winds and irradiance. The instrument views the four cardinal directions and the vertical simultaneously for three airglow emissions, the atomic oxygen green line, lines in the molecular oxygen atmospheric band and lines in the hydroxyl Meinel bands. These emissions provide information at different heights, ~95, ~92 and ~87 km respectively. Winds and emission rate are determined from each of these emission sequentially with the full cycle including calibrations taking 2-3 minutes. The wind and irradiance data is then analysed to determine the mean winds and irradiance and wave signatures.

(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)  
Prof. William Ward (wward@unb.ca)

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

<http://www.candac.ca>

Prof. William Ward ([wward@unb.ca](mailto:wward@unb.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: 2008

\* End Year:

\* Start Month: 02

\* End Month:

\* Start Day: 18

\* End Day:

### 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: Photochemistry

- \* Keyword 4: Atmosphere
- \* Keyword 5: Waves
- Keyword 6: Monitoring
- Keyword 7: Observatory
- Keyword 8: Optics
- Keyword 9: Remote Sensing Data
- Keyword 10: Wind

## Security

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