

## 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)  
Aircraft data

How should the data be cited: \*(As unpublished data or a journal reference)

(Maximum characters: 500, including spaces)

Study Site: \*  
Environment Canada Weather Office in Iqaluit, NU

Purpose: \* (A summary of the intentions with which the data set was developed)  
Provide 1D&2D analysis, radar reflectivity(Ka/W/X-band), W-band doppler velocity, dropsondes as well as flight tracks  
(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.)

The National Research Council of Canada's (NRC) Convair-580 research aircraft was used to collect internal storm measurements of cloud microphysics, thermodynamics, wind and the 4-D dynamic and precipitation structures of storms within a 500 km radius of Iqaluit, November 5 - 30, 2007 . The aircraft enabled STAR to probe storm events as they approached the area, during their passage and departure over the study area. The aircraft also provided the only sensor validation flights for CloudSat overpasses in the Arctic. The aircraft was equipped with meteorological instruments that measured temperature, humidity, 3-Dimensional wind fields, cloud and microphysics (liquid water probes, icing probes, dropsondes), Ka band upward/downward looking radar and a dual wavelength (W and X-band) polarimetric up/down/sideways Doppler radar. The NRC aircraft flew approximately 48 hours during the project. This time was divided over 14 missions, with variable objectives. The first flight was into the remnants of Hurricane Noel, which was the most severe hurricane of 2007 in terms of casualties (> 150) (NOAA, 2007). While in contrast, the final flight had a very local focus, sampling the cloud system directly over Iqaluit for remote sensing validation purposes. Additional flights took the research aircraft into Foxe Basin, Hudson Strait, Ungava Bay, Davis Strait, Cumberland Sound Peninsula and locally in Frobisher Bay. During these missions, a total of 55 dropsondes were deployed from nine of t

(Maximum characters: 1500, including spaces)

Data Originators: \*(e.g. name of data collector(s))  
(Do not enter duplicate originators)  
Ron Stewart, University of Manitoba CEOS, Winnipeg, MB

John Hanesiak, University of Manitoba CEOS, Winnipeg, MB

Kent Moore, University of Toronto, Toronto, ON

Peter Taylor, York University, Toronto, ON

Walter Strapp, Cloud Physics and Severe Weather Division, Environment Canada, Ottawa, ON

Mengistu Wolde, Flight Research Laboratory, National Research Council of Canada, Ottawa, ON

Links to data (if available, [enter NI Email address if direct link is not yet available](#)):

Status of data: \* [Click on grey rectangle to view scroll down menu](#)  
Completed

Maintenance and update frequency: \* [Click on grey rectangle to view scroll down menu](#)  
As needed

### Geographic Coordinates (in decimal format)

#### Research Area \*

[Coordinates should be in the range of -90.0000 to 90.0000 for the latitude and -180.0000 to 180.0000 for the longitude](#)

North (latitude N): 69°03.07'

South (latitude N): 53°19.38'

West (longitude W): 66°27.38'

East (longitude W): 61°59.63'

### Time Period (covered by the data set)

\* [Select entry from scroll down menu on website](#)

Start Year: \* 2007

End Year: \* 2007

Start Month: \* Nov

End Month: \* Nov

Start Day: \* 05

End Day: \* 28

### Keywords (see Keywords Library)

(e.g., Air, temperature, Precipitation, Photosynthesis, Ocean, Soil, Bacterial production, Climate, Land, Policy, Charr)

\* Select entry from the scroll down menu on the website or consult the [Keywords Library](#)

Keyword 1: \*Ka/W/X-band reflectivity

Keyword 2: \*W-band doppler velocity

Keyword 3: \*Flight Track

Keyword 4: \*1D&2D analysis

Keyword 5: \*Dropsondes

Keyword 6:

Keyword 7:

Keyword 8:

Keyword 9:

Keyword 10:

## Security

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

Public