

## **STAR 2007 FIELD ACTIVITIES COME TO A SUCCESSFUL END**

STAR has been extremely successful thus far in our field activities. All equipment has worked well in collecting data including the research aircraft that has successfully flown through several weather events. STAR researchers also collaborated with IPY funded researcher Dr. James Ford to assist in a social science study focusing on Natural Hazards in Iqaluit. We have just begun data analysis of the data collected. By collaborating with the local Indian and Northern Affairs Office (INAC) and Qulliq Energy, four remote weather stations are providing real-time weather data. Note that STAR will be leaving behind these stations for future use by INAC and Qulliq Energy.

Along with our work in Iqaluit we have made 3 separate trips to Pangnirtung. During these trips we launched weather balloons, conducted other meteorological measurements and spoke to the community about winds and weather in the area. STAR collaborator Ron Goodson from Environment Canada also made several presentations at the local schools in Pangnirtung.

STAR hosted its successful Public Kick-off on November 14 at the Navigator Inn with special guest speakers Mayor Elisapee Sheutiapik (Iqaluit), Hon. Ed Picco (M.L.A. Iqaluit East), Dr. John Hanesiak (STAR/U of M), Erica Wilson (CFCAS), Simon Awa (Deputy Minister of the Environment, GN) and Solomon Awa (IPY committee member). Following the Kick-off the National Research Council (NRC) and Environment Canada collaborating scientists hosted a tour of the Convair 580 research aircraft for those in attendance at the Kick-off (Thanks again to Rick Armstrong and Andrew Dunford for their shuttle assistance). STAR also hosted a public lecture on the evening of November 14<sup>th</sup> led by John Hanesiak at the Nunatta Sunakkutaangit Museum.

## **SUMMARY OF INSTRUMENTS OPERATING DURING STAR**

Meteorological instruments were installed in the last week of September and remained operational throughout the project. (Oct 1-Nov 30)

- Small X-band Doppler Radar
- Sodar
- Microwave Radiometer
- Laser Precipitation Sensor
- Double fence precipitation measurements
- Visibility Sensor
- 5-minute Camera Stills
- Snowflake Camera
- Particle Counters (starting Nov 6)
- 11 Automatic Weather Stations located around southern Baffin Island
- In addition to data collected by all permanent instrumentation at the Iqaluit and Pangnirtung Environment Canada weather stations

## INTENSIVE OBSERVATION PERIODS DURING STAR

During the STAR project we conducted 11 intensive observation periods (IOPs) between the dates of October 10 – Nov 30. During these observation periods, radiosondes were launched and micro snowflake photography was conducted if there was precipitation. Coincident observations in the community of Pangnirtung were conducted for three of the IOPs, Nov 3-4, 5, 17-19, 2007.

**Table 1:** Summary of Intensive Observation Periods during Fall STAR campaign (October 10-November 30)

<i>IOP period</i>	<i>Iqaluit, NU</i>	<i>Pangnirtung, NU</i>
<i>October 17-18</i>		
<i>October 26-27</i>		
<i>October 29-30</i>		
<i>November 3-4</i>		
<i>November 5</i>		
<i>November 6</i>		
<i>November 7-8</i>		
<i>November 11-12</i>		
<i>November 17-19</i>		
<i>November 27</i>		
<i>November 28</i>		

During IOPs we released **57** radiosondes in Iqaluit, and **18** radiosondes in Pangnirtung.

## **NRC RESEARCH AIRCRAFT FLIGHT SUMMARY**

The NRC research aircraft arrived in Iqaluit on Nov 1 and left Iqaluit Nov 30, 2007. In total there were 14 flights, with variable mission objectives. Our first flight up in Iqaluit was into the remnants of Hurricane Noel, which was a deadly system in the Caribbean, and caused havoc on the eastern coast of Canada. While in contrast our final flight for the STAR project has a local focus, sampling the cloud system directly over Iqaluit. Additional flights took the research craft into Foxe Basin, Hudson Strait, Ungava Bay, Davis Strait, Cumberland Sound and locally in Frobisher Bay.

In total STAR flew 47 hours in the research aircraft and released 56 drop sondes.

## **SUMMARY OF INSTRUMENTS REMAINING FOR WINTER CAMPAIGN**

Now that the Fall campaign is complete, focus now be on the winter blowing snow project. This project will begin February 1 and end on February 28<sup>th</sup>. Data will continue to be collected from the following instruments:

- Particle Counters
- Visibility Sensor
- 5-min Camera Stills
- 11 Automatic Weather Stations located around southern Baffin Island
- In addition to data collected by all permanent instrumentation at the Iqaluit and Pangnirtung Environment Canada weather stations