
Science Flight Report

Operation IceBridge Arctic 2012



Flight: Falcon 08, 09
Mission: Qajuuttap Glacier (land ice)

Flight Report Summary

| | |
|----------------------------|--|
| Aircraft | Falcon (HU-25) N525 |
| Flight Number | Falcon 07 |
| Flight Log number | 12F001 |
| Date | Saturday, May 5, 2012 (Z) |
| Purpose of Flight | The flight was to southern Greenland with refueling in Narsarsuaq with the purpose of surveying the Qajuuttap glacier. |
| Take off time | 1030 Zulu at Kangerlussuaq (with refuel at Narsarsuaq airport) |
| Landing time | 1820 Zulu at Kangerlussuaq |
| Flight Hours | Each leg was 3.5 hrs for a 7 hr total. |
| Aircraft Status | Airworthy. |
| Sensor Status | All installed sensors operational. |
| Significant Issues | None. |
| Accomplishments | • Flew first detailed survey of Qajuuttap glacier |
| Geographic Keywords | Southern Greenland |
| Satellite Tracks | none |
| Repeat Mission | no |

Science Data Report Summary

| Instrument | Data Volume | | | Instrument Issues |
|--------------|-------------------------------------|-------------------------------------|-------|-------------------|
| | Survey Area | Entire Flight | | |
| LVIS | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 56 GB | None |
| LVIS cameras | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 78 GB | None |

Mission Report (Seelye Martin, Acting Project Manager)

Flew to southern Greenland to survey Qajuuttap Glacier. Survey divided into two 3.5 hr legs separated by refuel at Narsarsuaq. Weather showed this region of southern Greenland was the only clear area on the continent. The aircraft found that as predicted, the weather was good and generally cloud-free. At Narsarsuaq airport, laser was turned off, but but Applanix, GPS, and camera were left on.

A total of 12 lines were flown over the glacier, 9 in the first leg, and 3 in the second. Each line had a length of 100 km. After completion of the glacier survey, the plane flew southeast to the coastline, then started up ICESat track #166. The ICESat line was terminated when clouds were encountered. Here are the lengths of the lines flown in the various parts of the mission:

Total (with transit and turns): 4,764 km

Glacier survey: 1,200 km (neglects turns)

ICESat line: 575 km

Total data lines: 1,750 km

Preliminary examination of the camera and LVIS data shows that the instruments worked well.

Individual instrument reports from experimenters on board the aircraft:

LVIS: The LVIS system worked well and collected data for all of the glacier and ICESat track flights. No data from area around Kanger because of clouds.

LVIS-cameras: worked well.

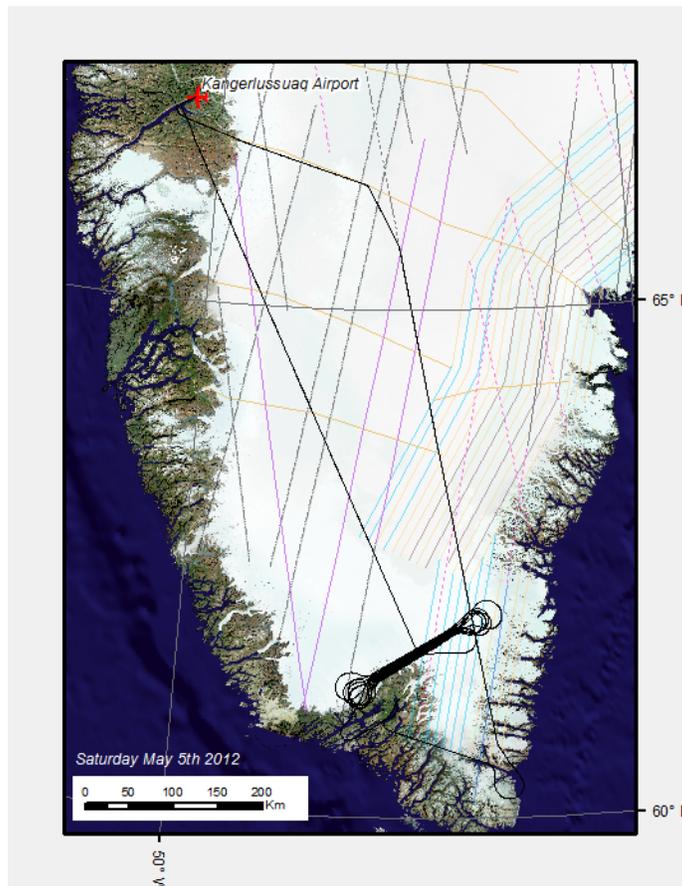


Figure 1: The trajectory for Qajuuttap Glacier flight.