
Preliminary Science Flight Report

Operation IceBridge Arctic 2011



Flight: F35
Mission: North Glaciers

Flight Report Summary

Aircraft	P-3B (N426NA)
Flight Number	035
Flight Request	11P006
Date	Monday, May 9, 2011 (Z)
Purpose of Flight	Mission North Glaciers
Take off time	11:07 Zulu from Thule Air Base (BGTL)
Landing time	18:56 Zulu at Thule Air Base (BGTL)
Flight Hours	8.1 hours.
Aircraft Status	Airworthy.
Sensor Status	All installed sensors operational.
Significant Issues	None
Accomplishments	<ul style="list-style-type: none">• Low-altitude survey (1,500 ft AGL) of several glaciers in north Greenland.• ATM, MCoRDS, accumulation, snow and Ku-band radars, gravimeter, magnetometer, POS/AV, and DMS were operated on the survey lines.• Ramp pass at Thule at 1,500 ft AGL for ATM calibration.• Pitch maneuvers over Fram Strait for snow and Ku-band radar.
Geographic Keywords	Steensby, Ryder, and Hagen Glaciers, Flade Ice Cap.
ICESat/CryoSat Track	0278 and 8-day orbit.
Repeat Mission	Yes.

Science Data Report Summary

Instrument	Instrument Operational			Data Volume	Instrument Issues
	Survey Area	Entire Flight	High-alt. Transit		
ATM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	70 GB	None
MCoRDS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.95 TB	None.
Snow Radar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	417 GB	None
Ku-band Radar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	417 GB	None
Accumulation Radar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	320 GB	None
DMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	115 GB	None
POS/AV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2 GB	None
Gravimeter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	640 MB	None
Magnetometer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	480 MB	None

Mission Report (Michael Studinger, Mission Scientist)

Today's mission is designed to resurvey historical ATM longitudinal surveys of several glaciers in northern Greenland, including Steensby, Ryder, and Hagen Glaciers. We also re-occupied ATM lines on the Flade Ice Cap, near Station Nord, and returned to Thule along the British North Greenland Expedition traverse line, which was also flown by ATM in 2002. Other than a small cloud bank between waypoints W100 and E100 the weather was perfect.

Individual instrument reports from experimenters on board the aircraft:

ATM: worked very well.

MCoRDS: worked well.

Snow and Ku-band radar: The snow and Ku-band radars worked well.

Accumulation radar: worked well.

Gravimeter: Worked well. No issues.

Magnetometer: worked well.

DMS: worked very well.

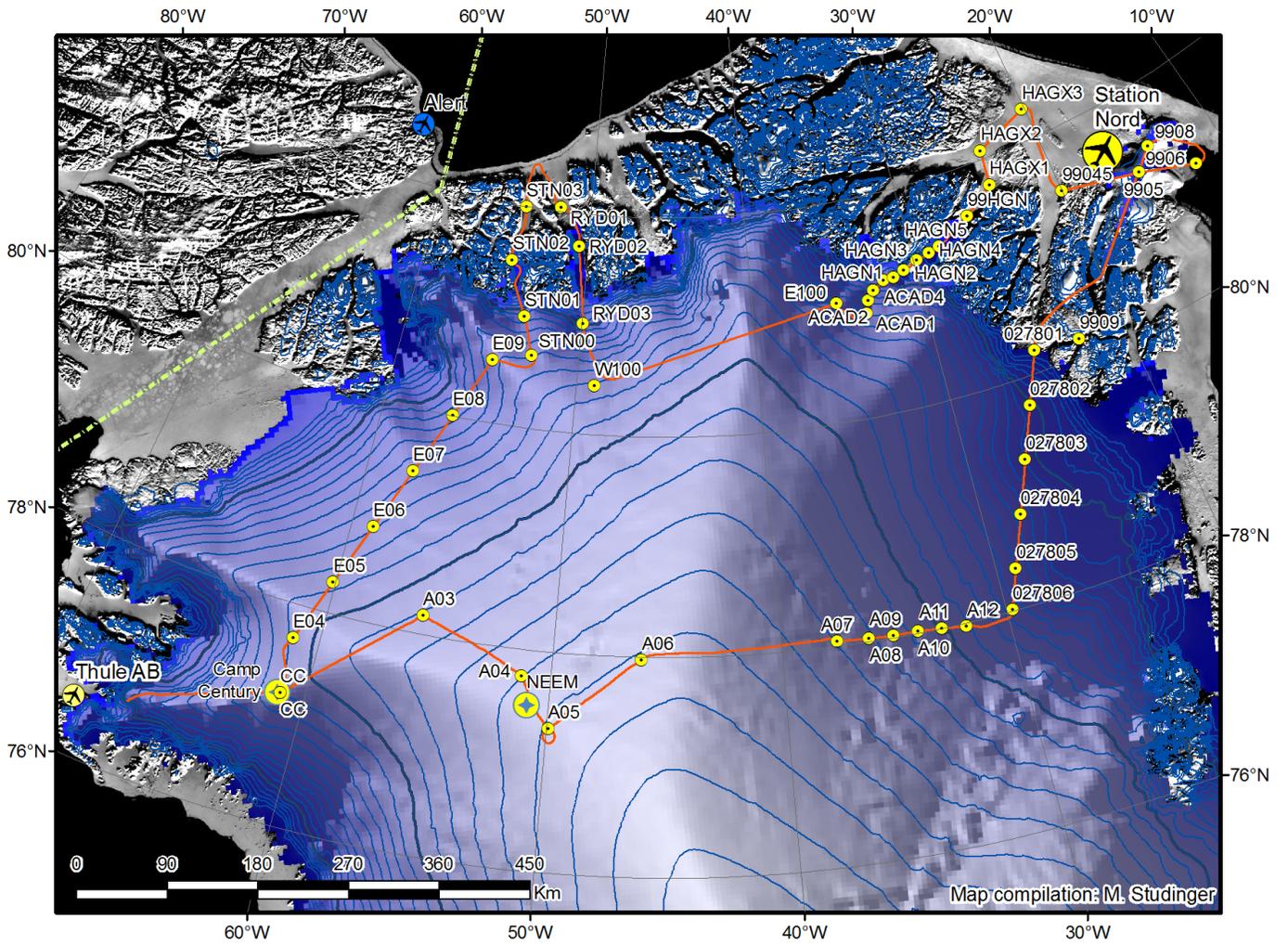


Figure 1: P-3 trajectory of today's flight in red.

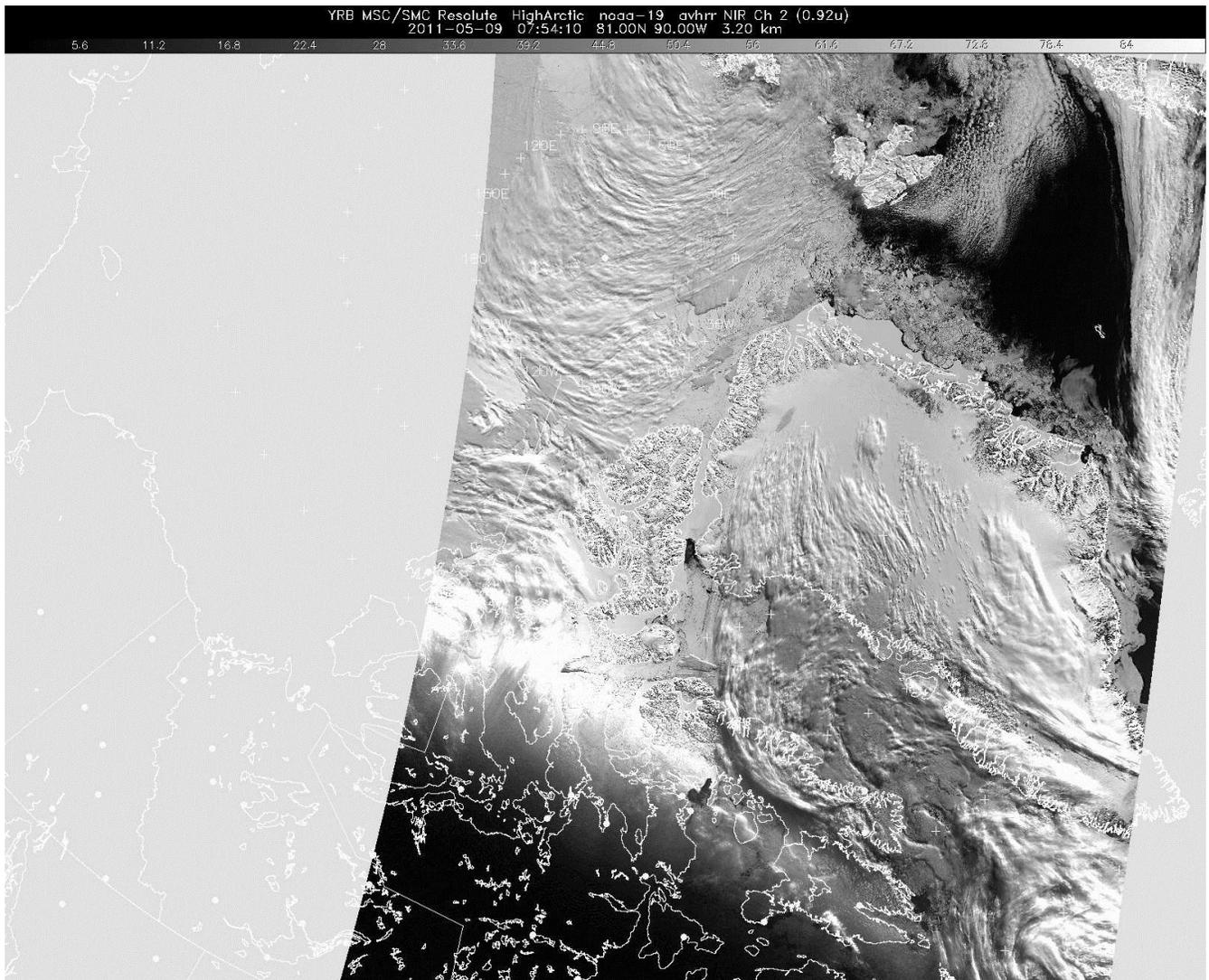


Figure 2: Visual satellite image downloaded shortly before takeoff.