Science Flight Report
Operation IceBridge Arctic 2010

Flight: 06
Mission: Jakobshavn 01

Flight Report Summary

Aircraft	**P-3B (N426NA)**
Flight Number	894
Flight Request	10P002, 10P007
Date	Friday, May 14, 2010 (Z)
Purpose of Flight	Operation IceBridge Mission Jakobshavn 01
Take off time	10:15 Zulu from Kangerlussuaq/Søndre Strømfjord Airport (BGSF)
Landing time	18:21 Zulu at Kangerlussuaq/Søndre Strømfjord Airport (BGSF)
Flight Hours	8.3
Aircraft Status	Airworthy.
Sensor Status	All installed sensors operational.
Significant Issues	None.
Accomplishments	• Low-altitude survey (1,500 ft AGL) of Jakobshavn Isbræ grid and ICESat lines 0300,0047,0166,0070, 0204,0285, and 0323. • ATM, DMS, MCoRDS, accumulation and Ku-band and snow radar were operated on the survey lines. • Gravimeter was in operation throughout the entire flight. • Conducted a ramp pass over Ilulissat for ATM instrument calibration. • Conducted a ramp pass at 2000 ft AGL over Kangerlussuaq/Søndre Strømfjord Airport for ATM instrument calibration.
Geographic Keywords	Greenland, Jakobshaven Isbræ, Ilulissat
ICESat Tracks	0300,0047,0166,0070, 0204,0285, 0323
Repeat Mission	Jakobshavn (2009 and earlier).

Science Data Report Summary

Instrument	Instrument Operational			Data Volume	Instrument Issues
	Survey Area	Entire Flight	High-alt. Transit		
ATM	☑	☒	☒	73 GB	T2 only
MCoRDS	☑	☒	☒	2.0 TB	None
Snow Radar	☑	☒	☑	420 GB	None
Ku-band Radar	☑	☒	☑	420 GB	None
Accumulation Radar	☒	☒	☑	300 GB	None
DMS	☑	☑	☑	153 GB	None
Gravimeter	☑	☑	☑	80 MB	None

Mission Report (Michael Studinger, Mission Scientist)

Today's mission is very similar to a 2009 IceBridge mission. The objective is to map the north-south lines of the ATM-established basic Jakobshavn grid, and to supplement this dense grid with a much larger grid based on ICESat ground tracks. The intention of the latter part is to capture inland spread of the thinning which started on the lower Jakobshavn trunk and which has, in recent years, spread beyond the basic grid. We also occupy an approximation to the Jakobshavn flowline, which has been monitored by ATM for almost two decades.

The weather in the area was very good as expected from the forecast.

Individual instrument reports from experimenters on board the aircraft:

ATM: The T3 laser was not in operation on today's flight and may not be recoverable.T2 worked well throughout the entire flight.

MCoRDS: The MCoRDS system worked well and collected 2.0 TB of data. Some fine tuning of the system was done.

Snow and Ku-band radar: Both systems worked well and collected each about 420 GB of data.

Accumulation Radar: The system worked well and collected 232 GB of data.

DMS: DMS worked well and collected 153 GB of data.

Gravimeter: System worked normally. No problems.

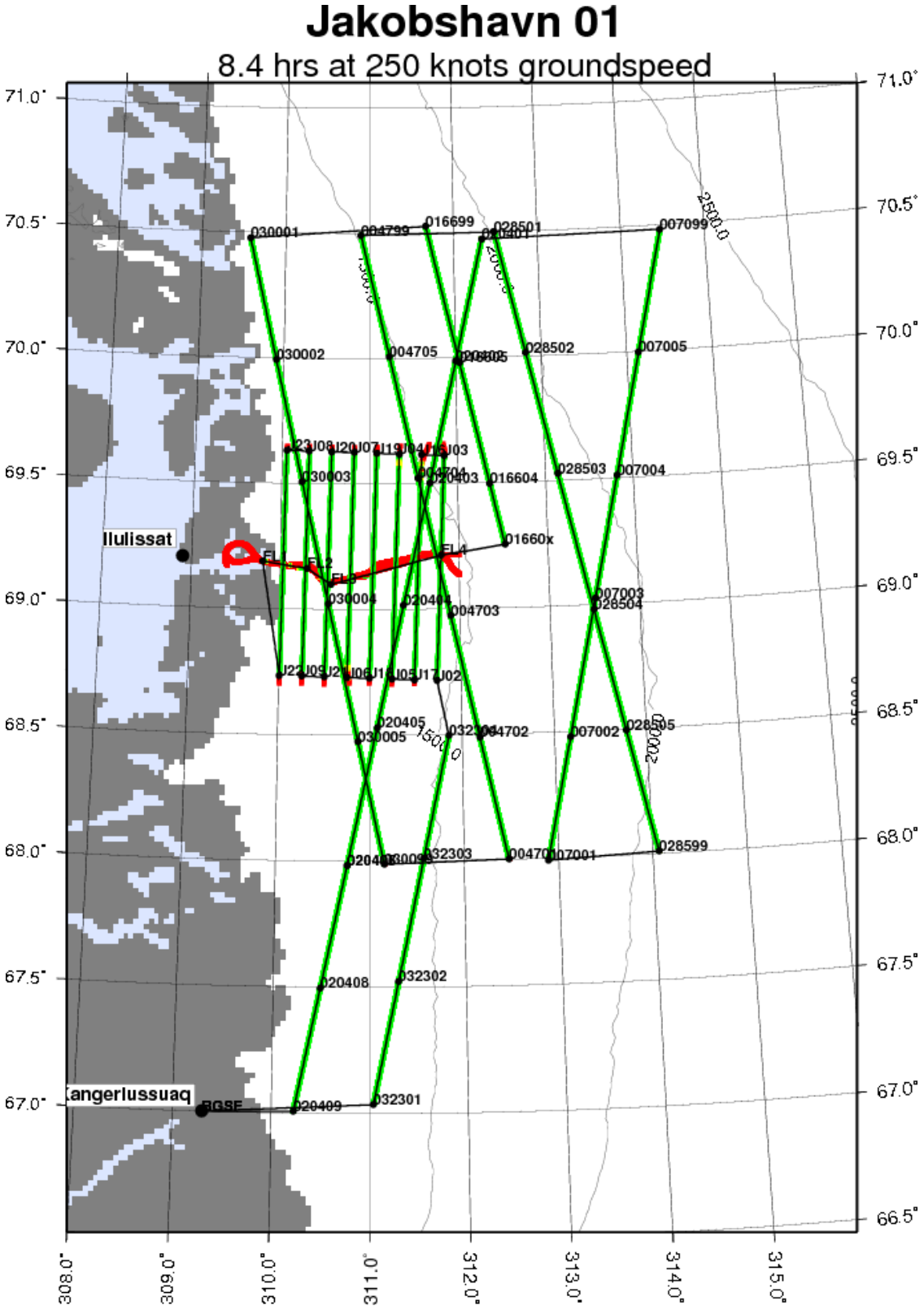

Figure 1: Waypoints and survey area of Flight 06 from John Sonntag.