

APPENDIX A

Daily Field Reports



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 13, 2016
Time: 1200 UTC

Current Position

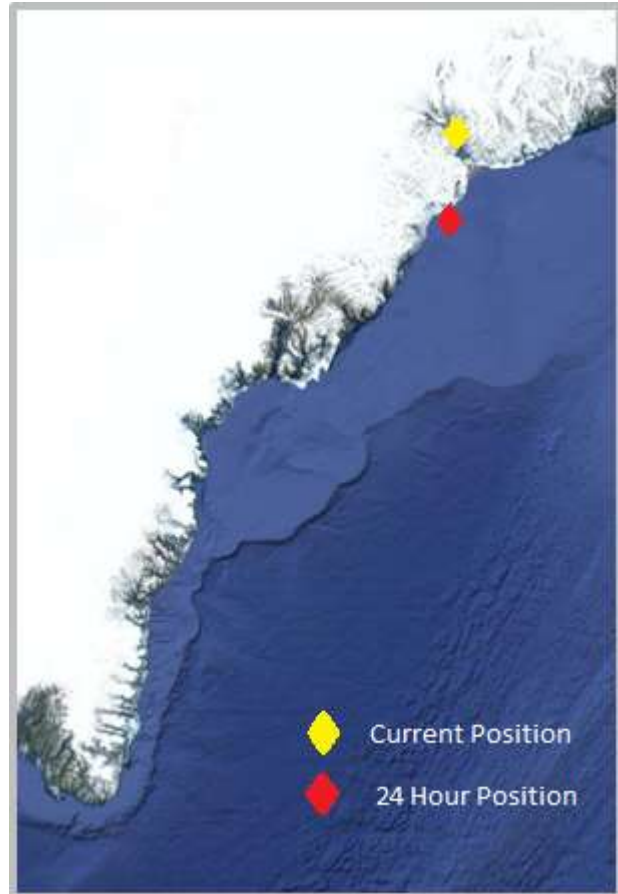
Latitude: 68° 15' 07" N
Longitude: 31° 42' 44" W
Location: Frederiksborg Fjord, Greenland

Current Weather

Temperature: 8°C
Wind Speed: 3m/sec
Sea State: No swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 157 NM
Survey Line Miles (Total): 157 NM
CTD Casts (Day): 5
CTD Casts (Total): 5
Underway Days: 2 Days
Average Speed: 3.9 Knots



Progress Tracking: 0

Previous 24 hour Summary – Sept 12th

Logged MBES data on the crossline entering the north project area to verify gravity data. Mapped Kong Christian Fjord and started transit to next fjord South

Next 24 hour Summary – Sept 13th

Complete mapping in Kangerlussuaq Fjord and transit to Polatric. Survey Polatric and Deception

Marine Wildlife Observations – Sept 12th

116 sightings of birds
10 sightings of seals
5 sightings of whales

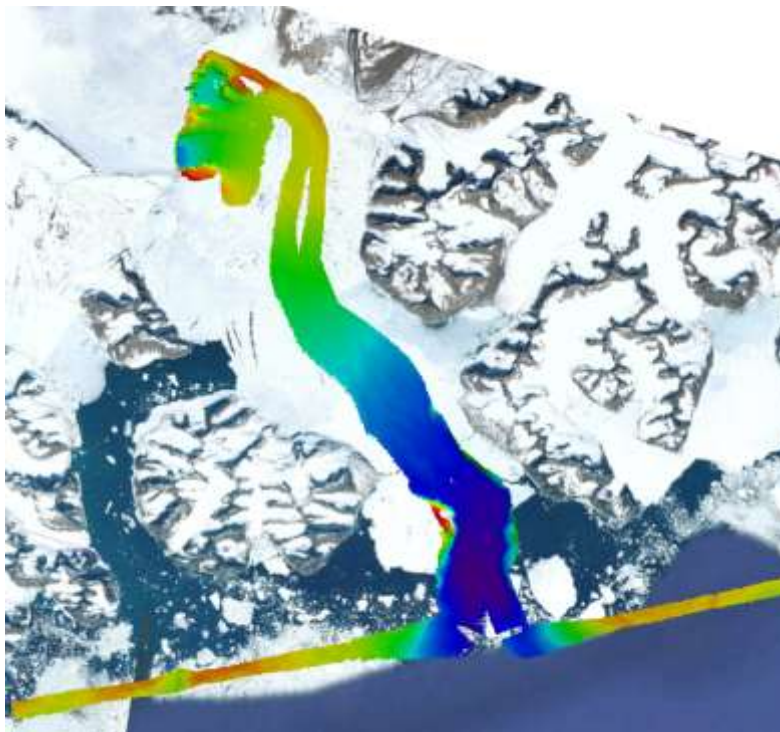


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Oceans Melting Greenland (OMG)

Bathymetric Survey Daily Field Report

Daily Coverage Map





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Wednesday 0000 UTC

Wednesday 1200 UTC



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 14, 2016
Time: 1200 UTC

Current Position

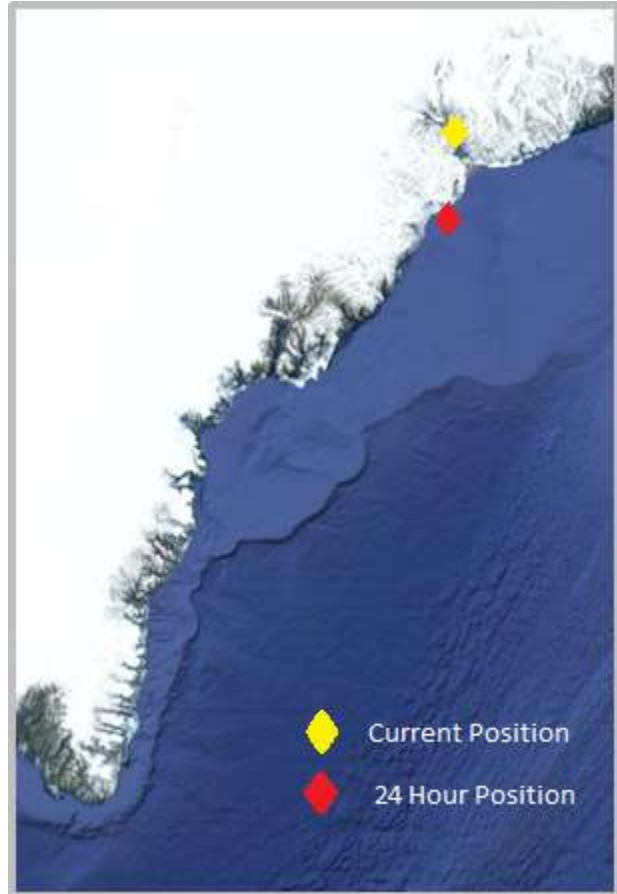
Latitude: 68° 24' 46" N
Longitude: 32° 26' 10" W
Location: Kangerlussuaq Fjord, Greenland

Current Weather

Temperature: 6°C
Wind Speed: 2m/sec
Sea State: No swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 101 NM
Survey Line Miles (Total): 258 NM
CTD Casts (Day): 5
CTD Casts (Total): 10
Underway Days: 3 Days
Average Speed: 3.9 Knots



Progress Tracking: 4 hrs ahead

Previous 24 hour Summary – Sept 13th

Transit to Kangerlussuaq Fjord, survey Frederiksborg Fjord and start to survey Kangerlussuaq proper.

Next 24 hour Summary – Sept 14th

Complete Kangerlussuaq Fjord and transit to Polaric.

Marine Wildlife Observation Summary – Sept 13th

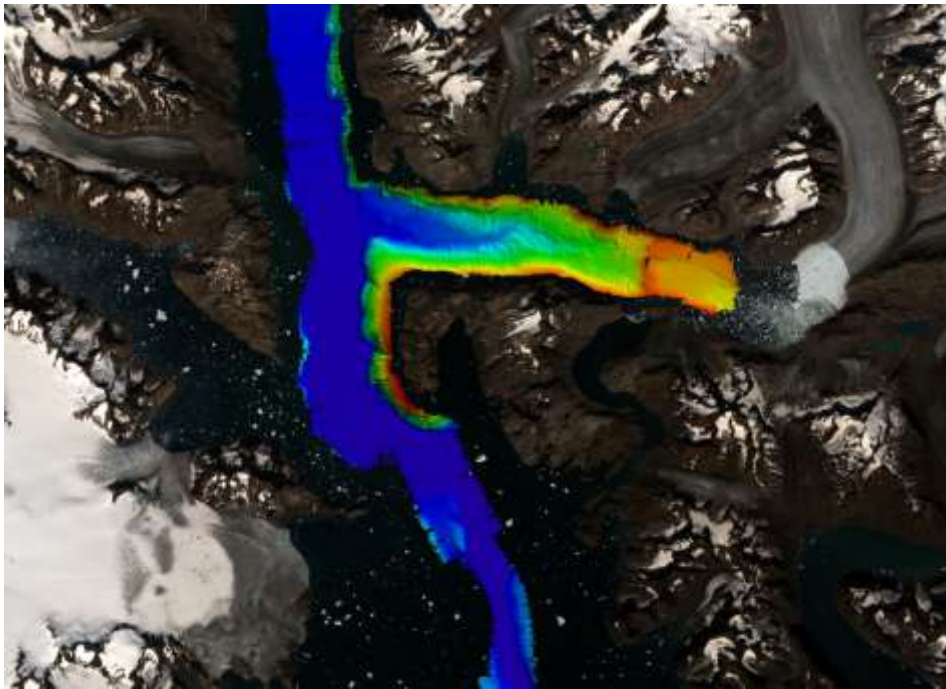
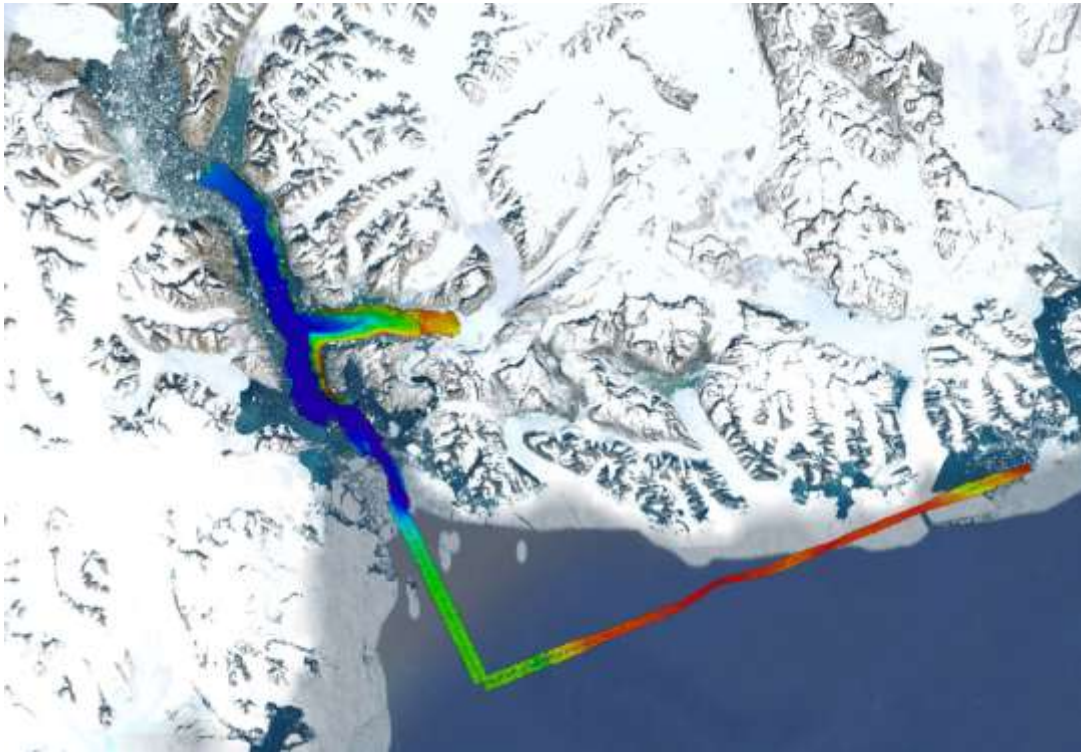
19 sightings of birds
10 sightings of seals
1 sightings of Polar bear



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Coverage Map

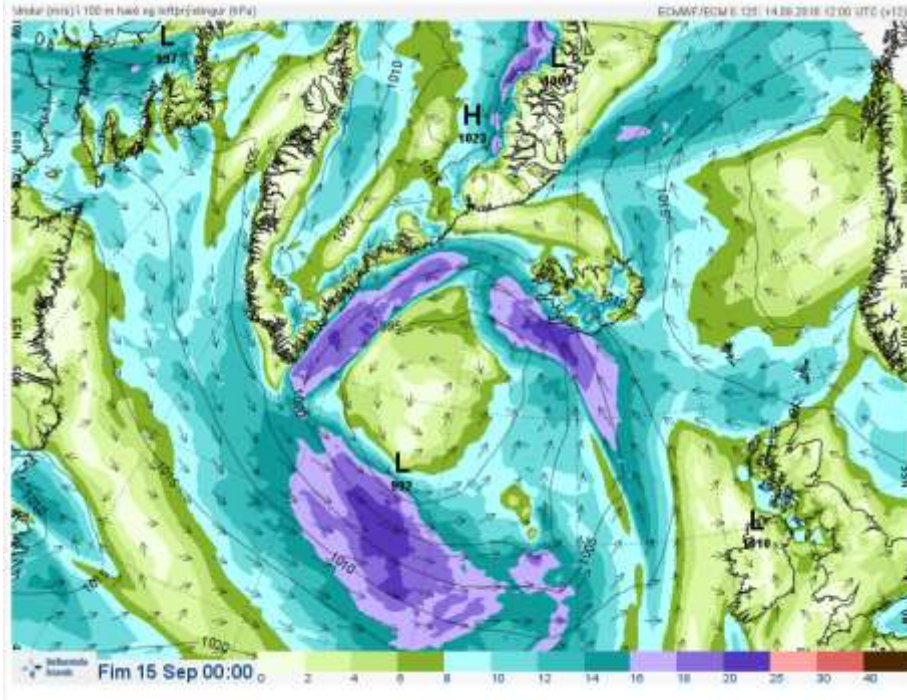


Frederiksborg Fjord

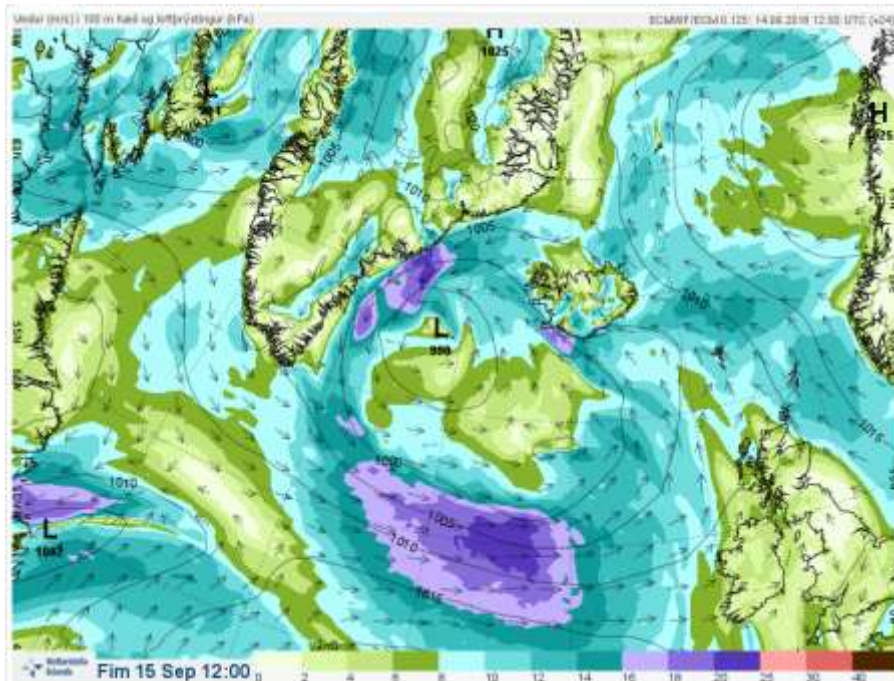


12/24 Hour Weather Forecast:

Thursday 0000 UTC



Thursday 1200 UTC





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Bathymetric Survey Daily Field Report

Daily Photo





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Bathymetric Survey Daily Field Report

Date: Sept. 15, 2016
Time: 1200 UTC

Current Position

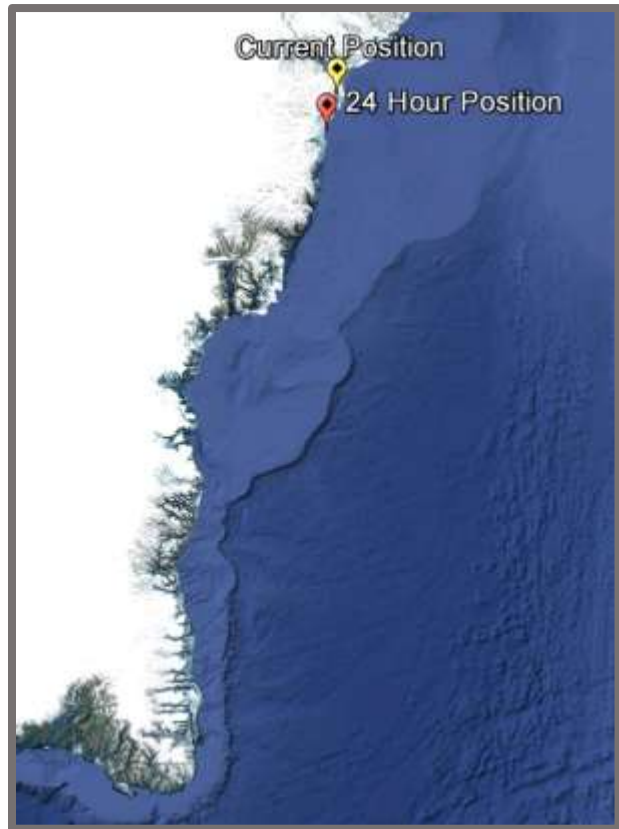
Latitude: 68° 24' 46" N
Longitude: 32° 26' 10" W
Location: Polaric, Greenland

Current Weather

Temperature: 8°C
Wind Speed: 3m/sec
Sea State: No swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 89 NM
Survey Line Miles (Total): 347 NM
CTD Casts (Day): 6
CTD Casts (Total): 16
Underway Days: 4 Days
Average Speed: 4.6 Knots



Progress Tracking: 8 hrs behind

Previous 24 hour Summary – Sept 14th

Complete mapping in Kangerlussuaq Fjord and transit to Polaric Glacier.

Next 24 hour Summary – Sept 15th

Survey Polaric Glacier, Deception ON, Polaric S and Deception OCN

Marine Wildlife Observation Summary – Sept 14th

2 Whales

20 seals

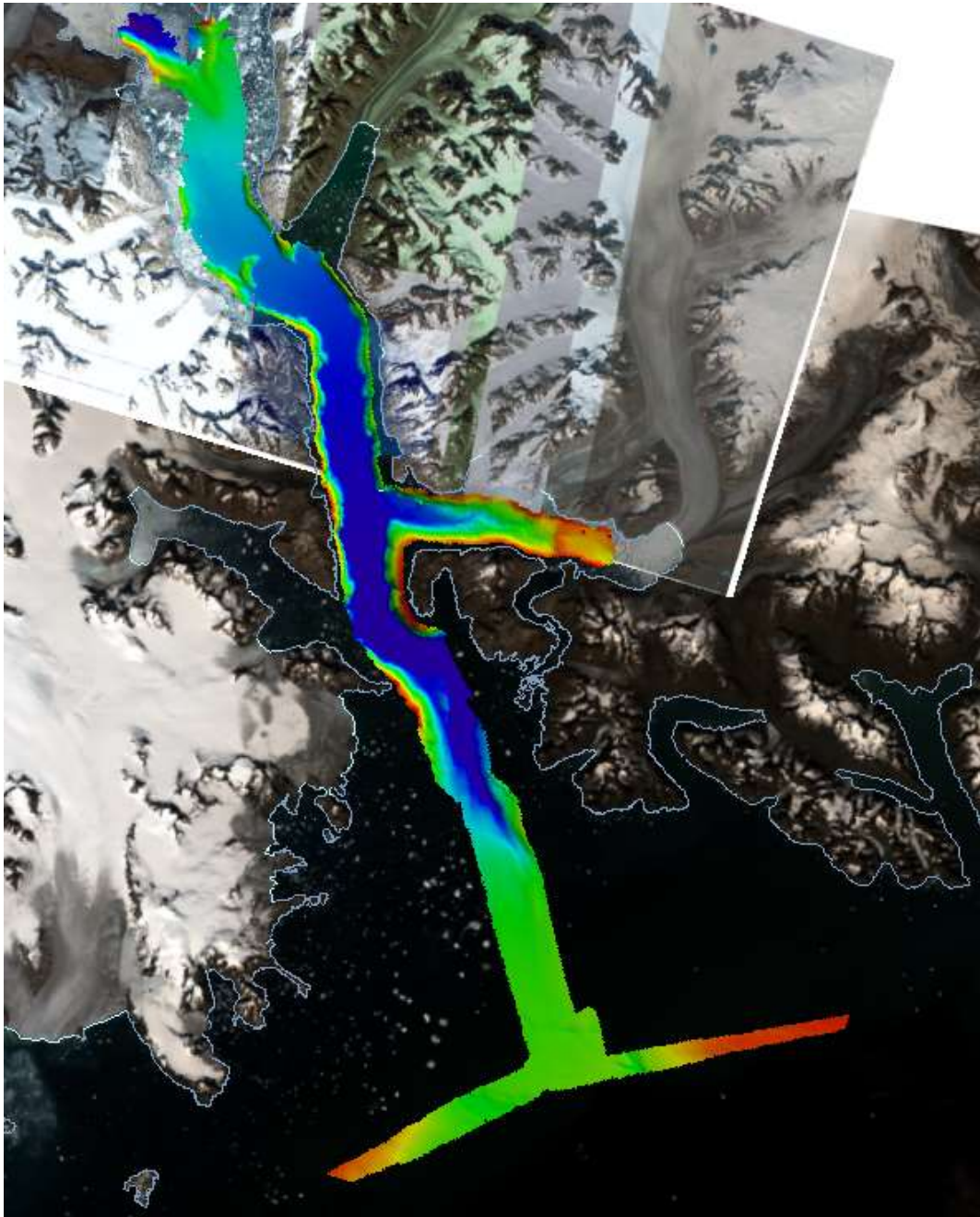
13 birds



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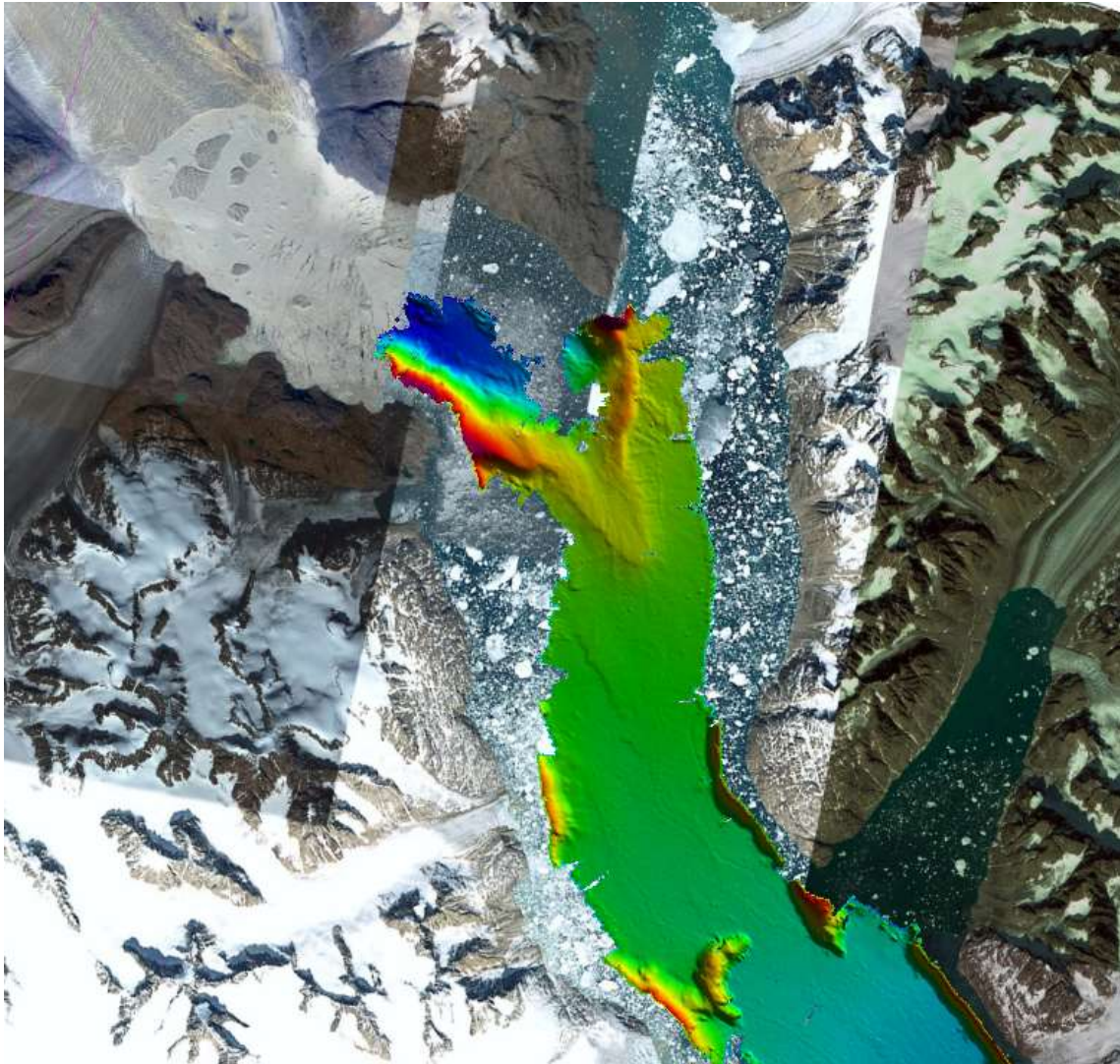
Daily Coverage Map





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Bathymetric Survey Daily Field Report



Kangerlussuaq Fjord

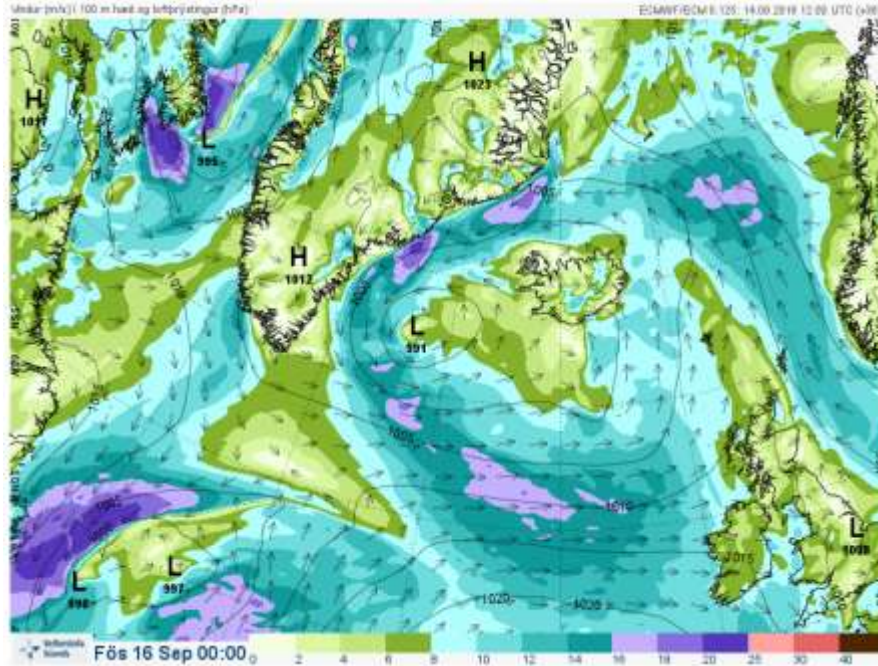


NASA Jet Propulsion Laboratory (JPL)

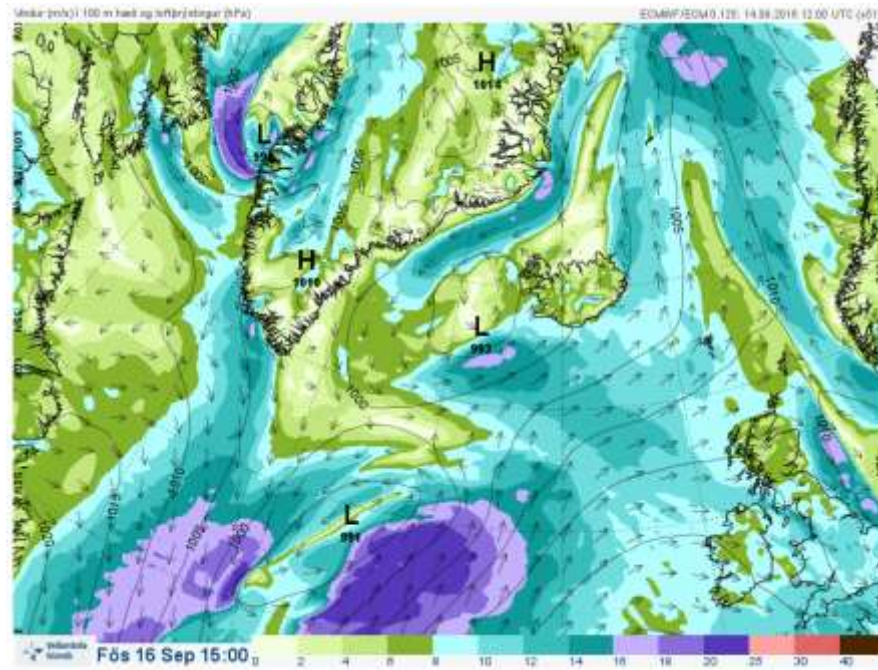
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Friday 0000 UTC



Friday 1200 UTC





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Dawn breaks in the Kangerlussuaq Fjord.



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 16, 2016

Time: 1200 UTC

Current Position

Latitude: 66°35'01" N

Longitude: 34°30'17" W

Location: Laube S, Greenland

Current Weather

Temperature: 3°C

Wind Speed: 3m/sec

Sea State: 2-3m swell

Sun Rise:

Sun Set:

Statistics

Survey Line Miles (Day): 142 NM

Survey Line Miles (Total): 489 NM

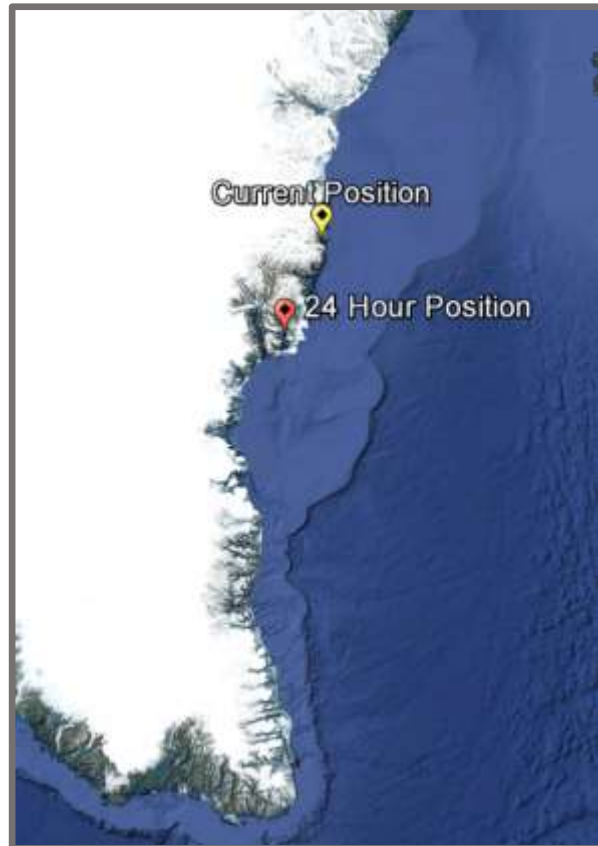
CTD Casts (Day): 6

CTD Casts (Total): 22

Underway Days: 5 Days

Average Speed: 4.6 Knots

Progress Tracking:



Previous 24 hour Summary – Sept 15th

Survey Polaric Glacier. Deception ON, Polaric S and Deception OC had a large swell of 2-3 m with a very abrupt period as well as ice the sounded the glaciers with large icebergs. These conditions made survey to the glacier not possible by the vessel.

Next 24 hour Summary – Sept 16th

Survey at Laube S and KIV Steenstrup Nodre Brae. Transit to Kulusk around 6pm. Arrive in Kulusk around 7am on 9/17/2016.

Marine Wildlife Observation Summary – Sept 14th

48 sightings of birds

12 sightings of seals

1 sighting of Killer Whale



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Bathymetric Survey Daily Field Report

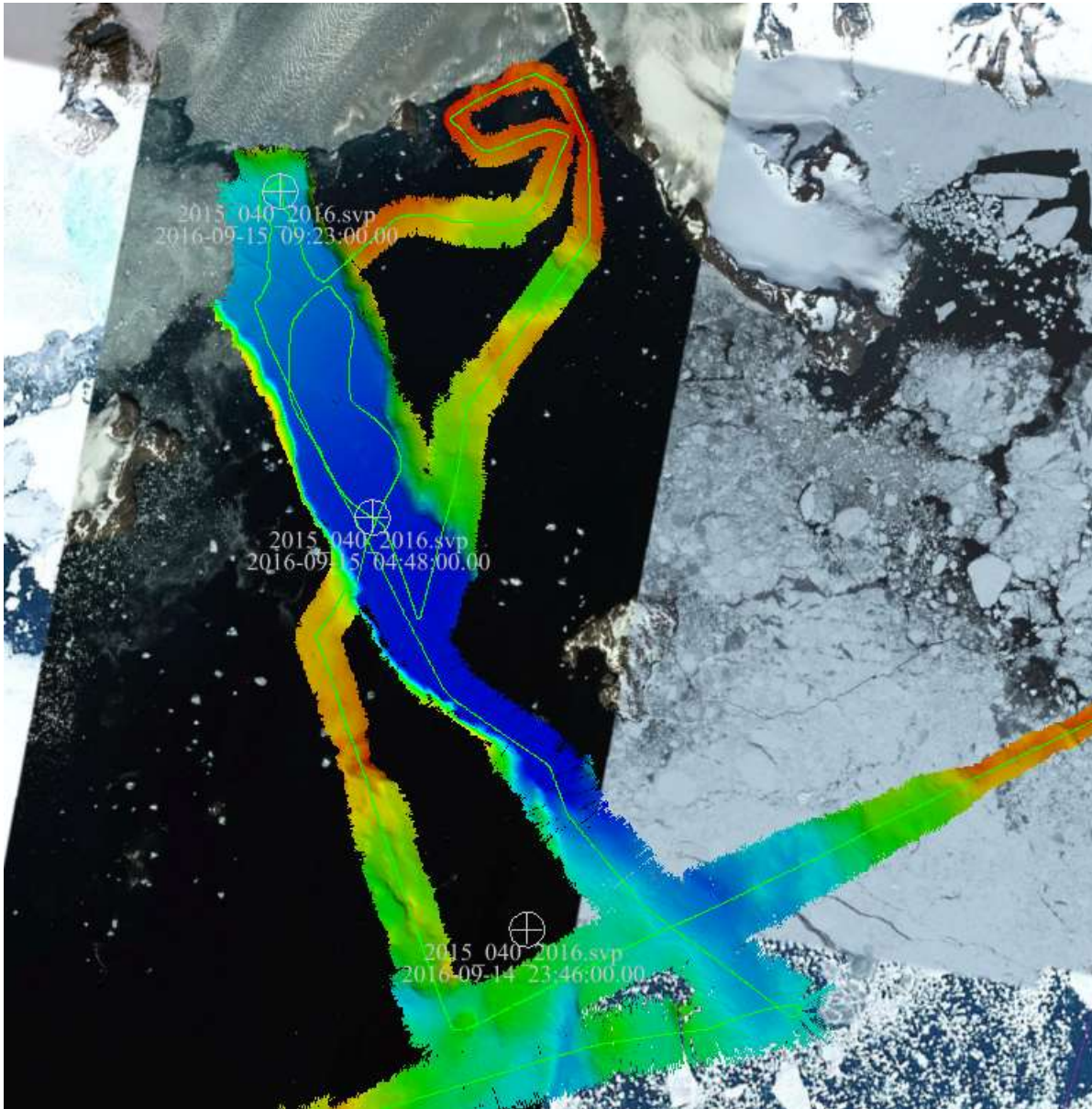
Daily Coverage Map





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Bathymetric Survey Daily Field Report

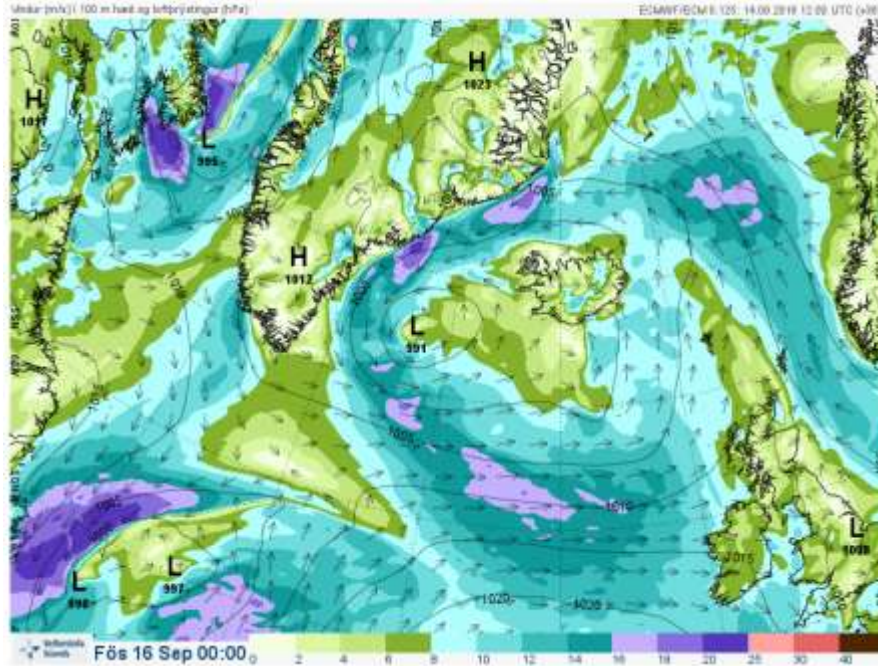


Coverage at Polaric Glescher. 3 SVP casts were completed in the area. The vessel varied from trackline once the trough into the glacier was located. Data to the right hand side of the screen was collected because we reached the glacier with two hours before sunrise.

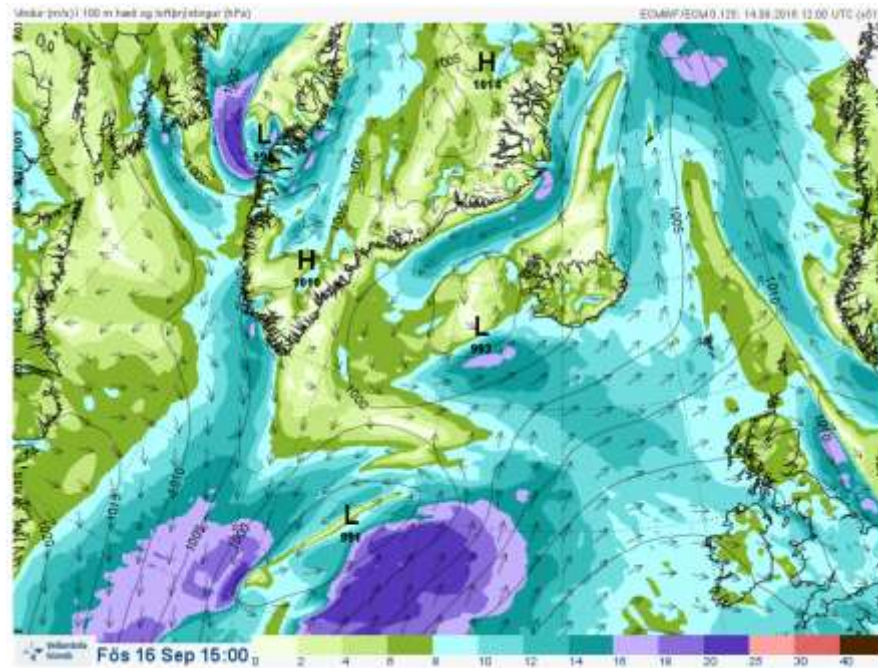


12/24 Hour Weather Forecast:

Friday 0000 UTC



Friday 1200 UTC





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Bathymetric Survey Daily Field Report

Daily Photo



Photo taken at Unnamed Deception ON. Around $68^{\circ}48'58''\text{N}$ and $32^{\circ}30'26''\text{W}$.



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 17, 2016
Time: 1200 UTC

Current Position

Latitude: 65.4701° N
Longitude: -37.4920 W
Location: Kulusuk, Greenland

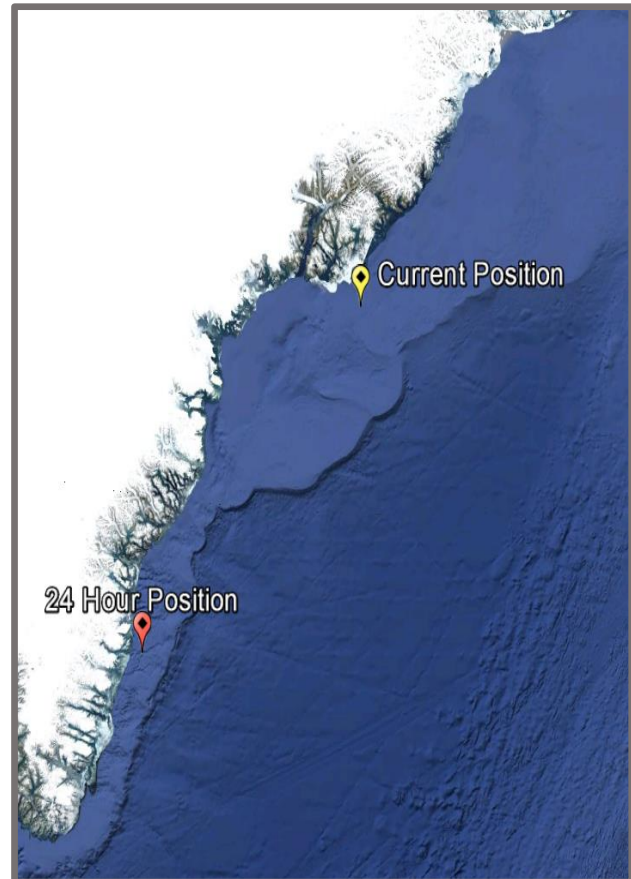
Current Weather

Temperature: 5°C
Wind Speed: 3m/sec
Sea State: 1m swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 155 NM

Survey Line Miles (Total): 644 NM
CTD Casts (Day): 8
CTD Casts (Total): 30
Underway Days: 6 Days
Average Speed: 4.8 Knots
Progress Tracking:



Previous 24 hour Summary – Sept 16th

Completed survey of Laube S and KIV Steenstrup. Additional data was collected in the fjord to the west of Laube S. Arrived onto site during the night and surveyed up the fjord next to Laube S as it was ice free. Started transit to Kulusuk.

Next 24 hour Summary – Sept 17th

Transit to southern survey area.

Marine Wildlife Observation Summary – Sept 16th

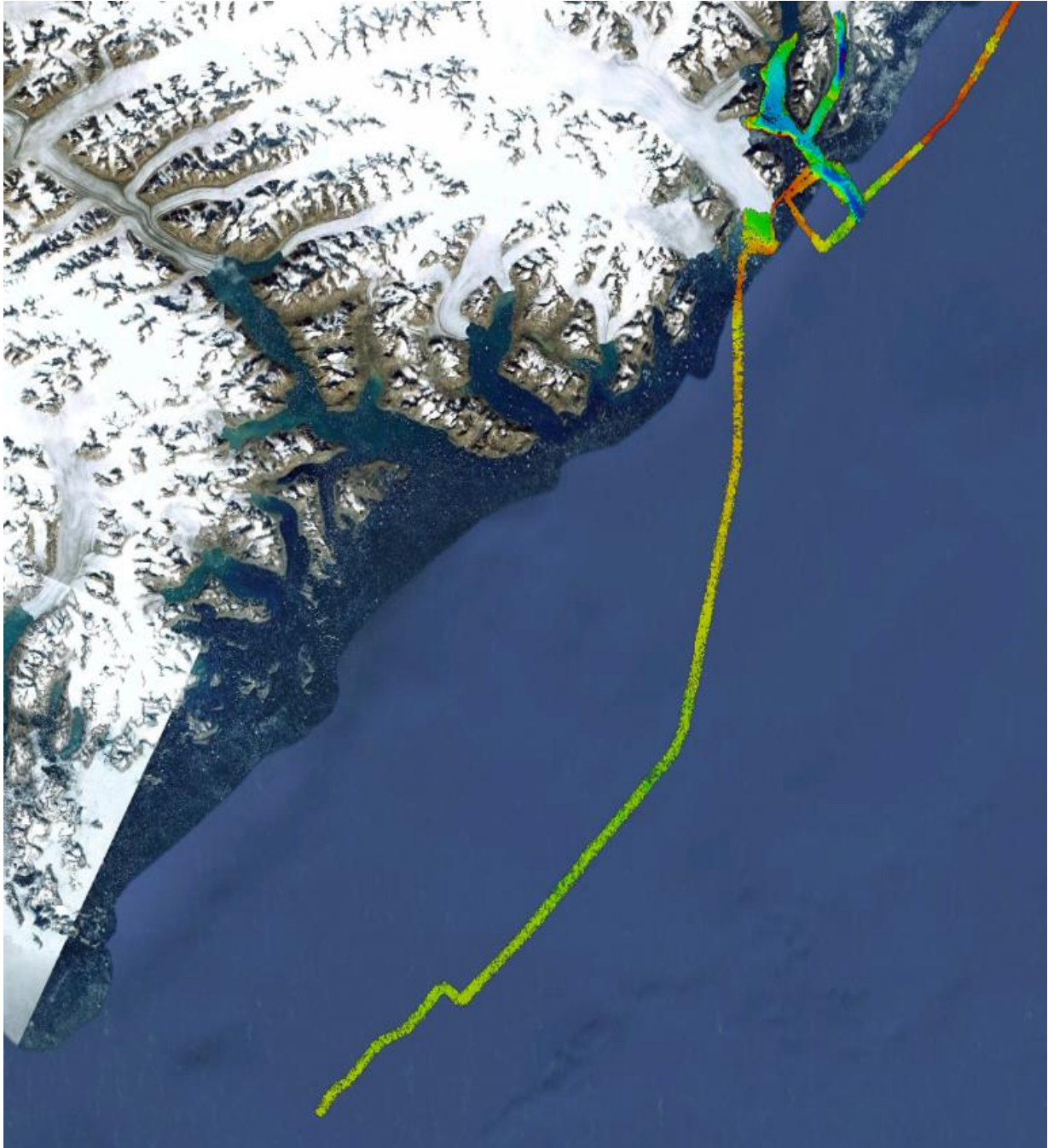
48 sightings of birds
12 sightings of seals
1 sighting of Killer Whale



NASA Jet Propulsion Laboratory (JPL)

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Bathymetric Survey Daily Field Report

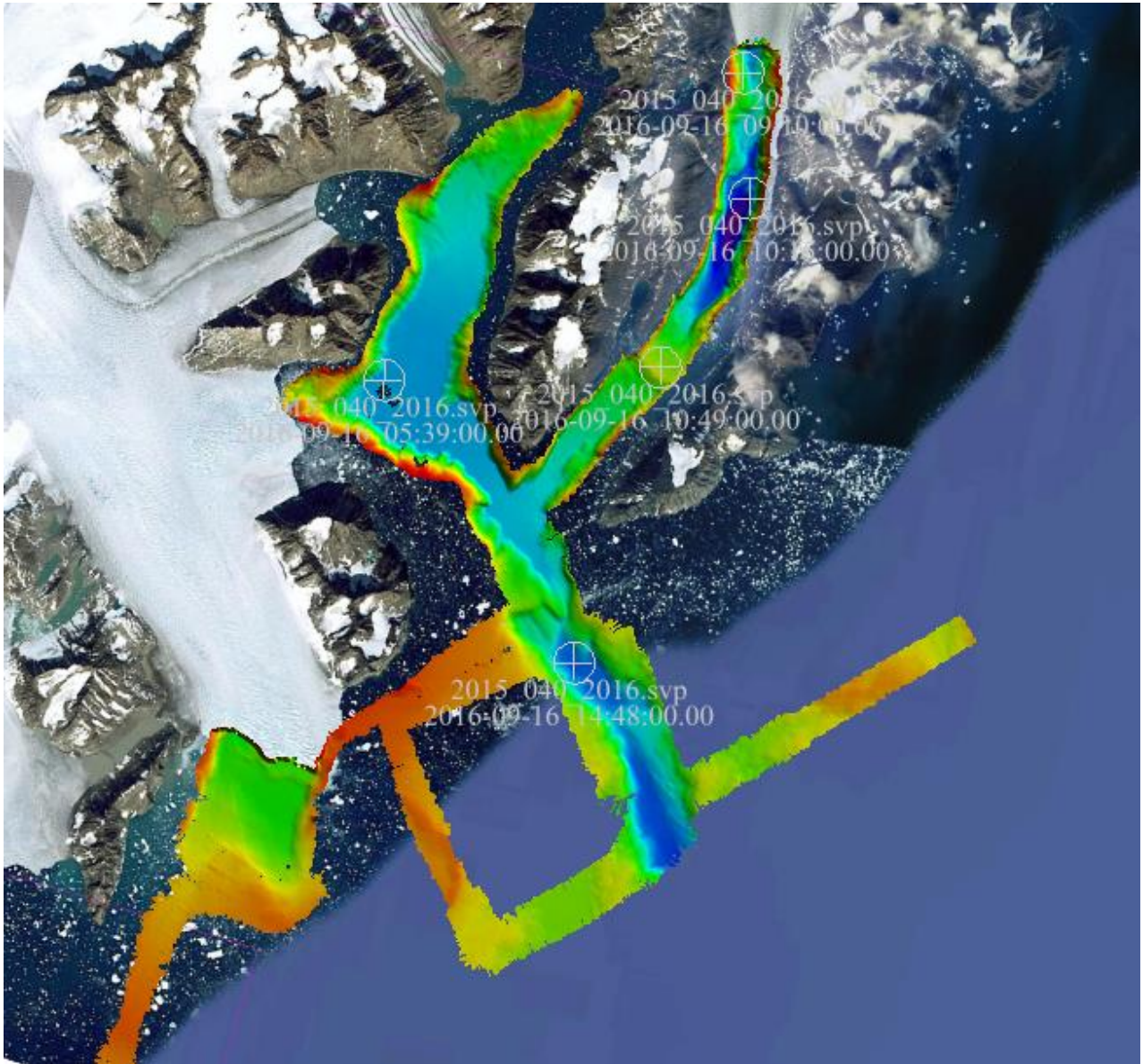
Daily Coverage Map





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Bathymetric Survey Daily Field Report

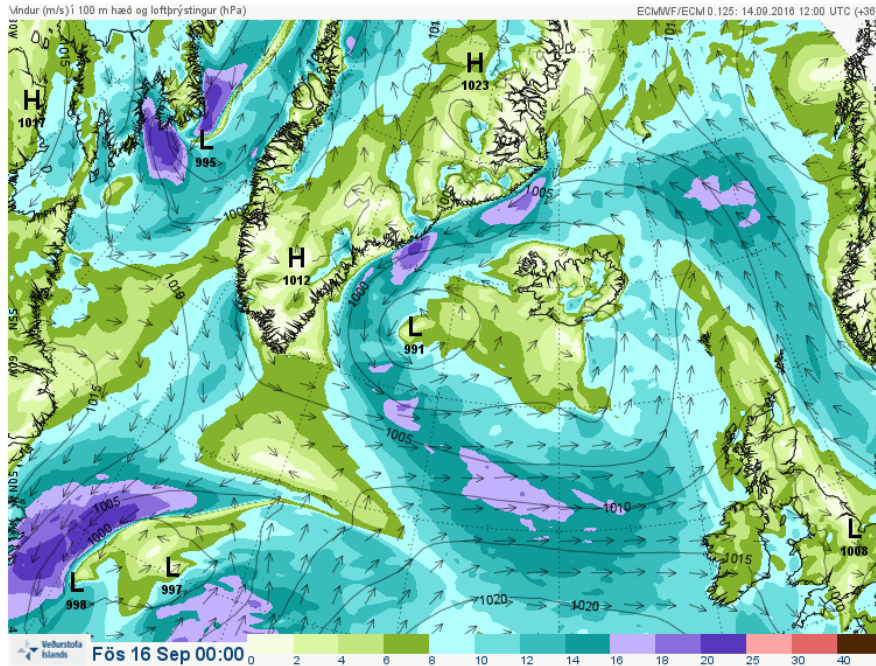


Coverage for JD260. With several of the Fjords not available to survey on Sept 15th, transit to Laube S was completed. Arrival on site was around 1 am on the 16th. The survey of the trench leading into the Fjord was completed. With time before dawn remaining the crew completed the fjord to the southwest of Laube, this appears to be another side of KIV Steenstrup Nodre Brae. Cast were completed in the fjords as well.

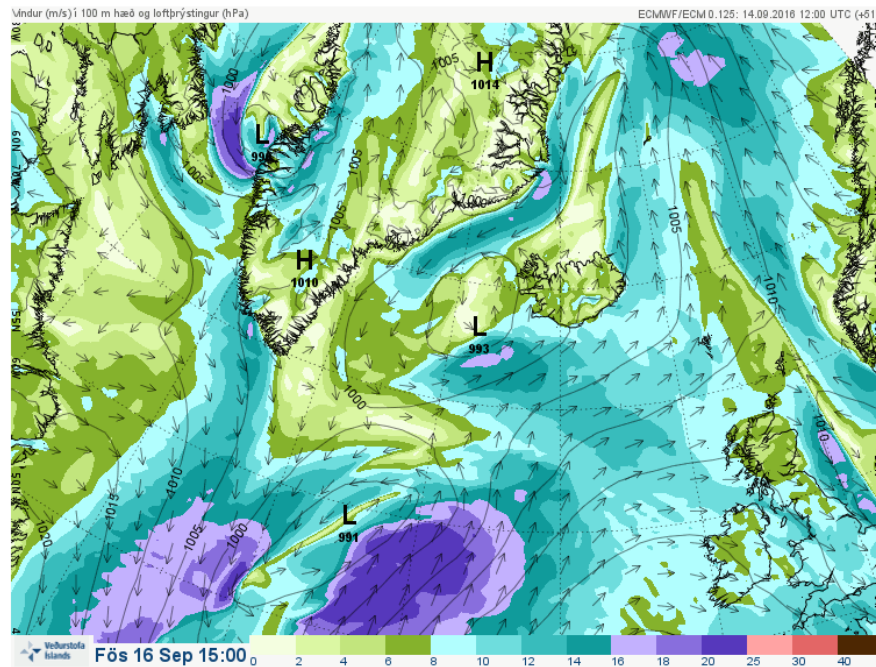


12/24 Hour Weather Forecast:

Friday 0000 UTC



Friday 1200 UTC





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Bathymetric Survey Daily Field Report

Daily Photo





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Bathymetric Survey Daily Field Report

Date: Sept. 18, 2016
Time: 1200 UTC

Current Position

Latitude: 62°33'57"N N
Longitude: 41°45'07"W
Location: Tingmiarmiut, Greenland

Current Weather

Temperature: 1°C
Wind Speed: 16 m/sec
Sea State: 3 m swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 181 NM
Survey Line Miles (Total): 825 NM
CTD Casts (Day): 7
CTD Casts (Total): 37
Underway Days: 7 Days
Average Speed: 4.2 Knots
Progress Tracking:



Previous 24 hour Summary – Sept 17th

Dropped Chris off in Kulusuk and transited towards southern survey area.

Next 24 hour Summary – Sept 18th

We will not reach Napasorsuaq until late evening. Deviation from survey plan to survey at Tingmiarmiut and Heimdal.

Marine Wildlife Observation Summary – Sept 16th

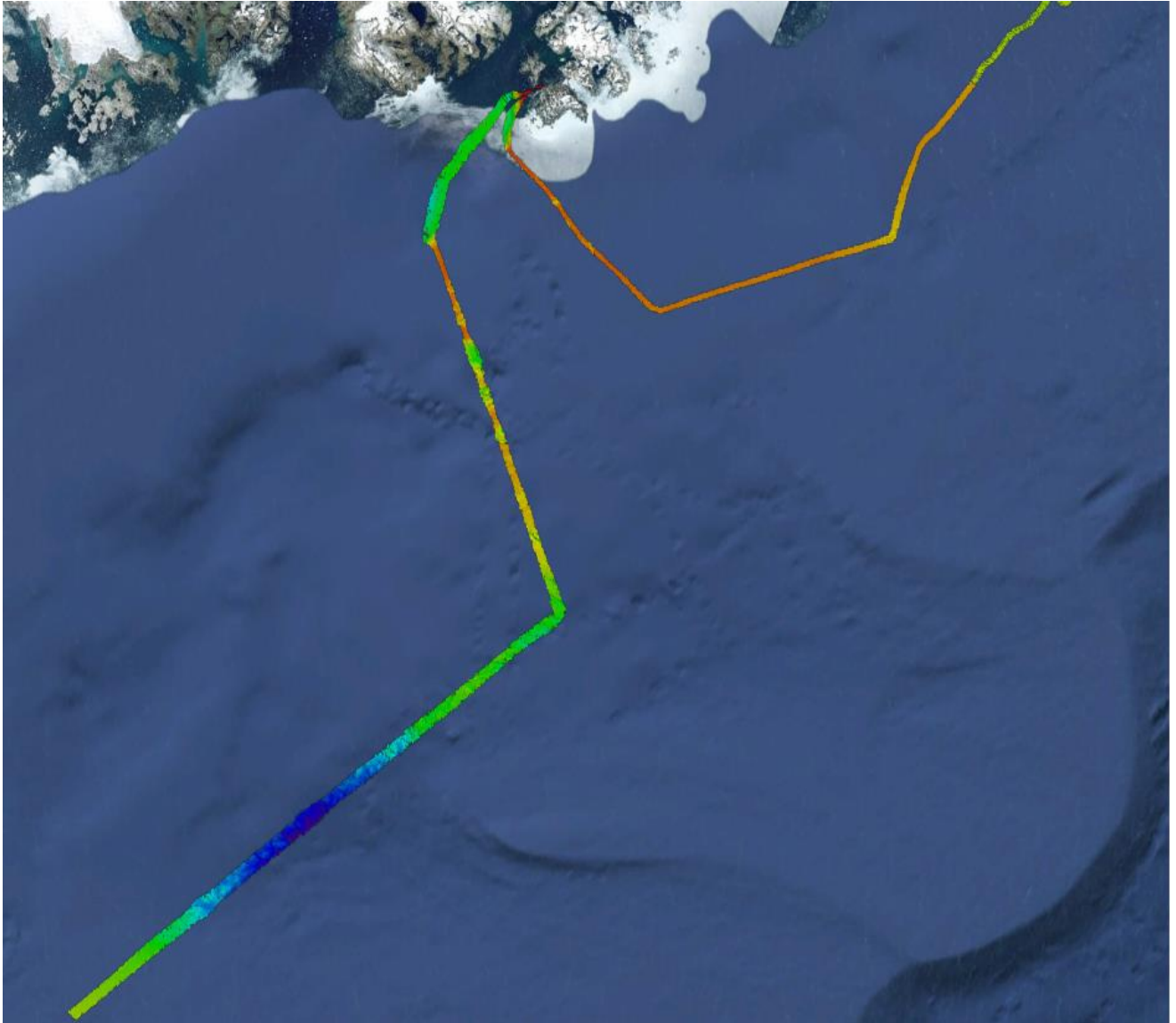
42 sightings of birds
0 sightings of seals
15 sighting of whales



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Daily Coverage Map





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Saturday 0000 UTC

No internet available

Saturday 1200 UTC

No internet available



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Bathymetric Survey Daily Field Report

Daily Photo



Image of MV Neptune from Village of Kulusuk, Greenland



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 19, 2016
Time: 1200 UTC

Current Position

Latitude: 62°38'10"N N
Longitude: 42°23'02"W
Location: Tingmiarmiut, Greenland

Current Weather

Temperature: 1°C
Wind Speed: 1 m/sec
No swell in the fjord
Sea State: fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 183 NM
Survey Line Miles (Total): 1008 NM
CTD Casts (Day): 5
CTD Casts (Total): 42
Underway Days: 8 Days
Average Speed: 5.25 Knots
Progress Tracking:



Previous 24 hour Summary – Sept 18th

Transited to Heimdal glacier. Completed survey at Heimdal glacier.

Next 24 hour Summary – Sept 19th

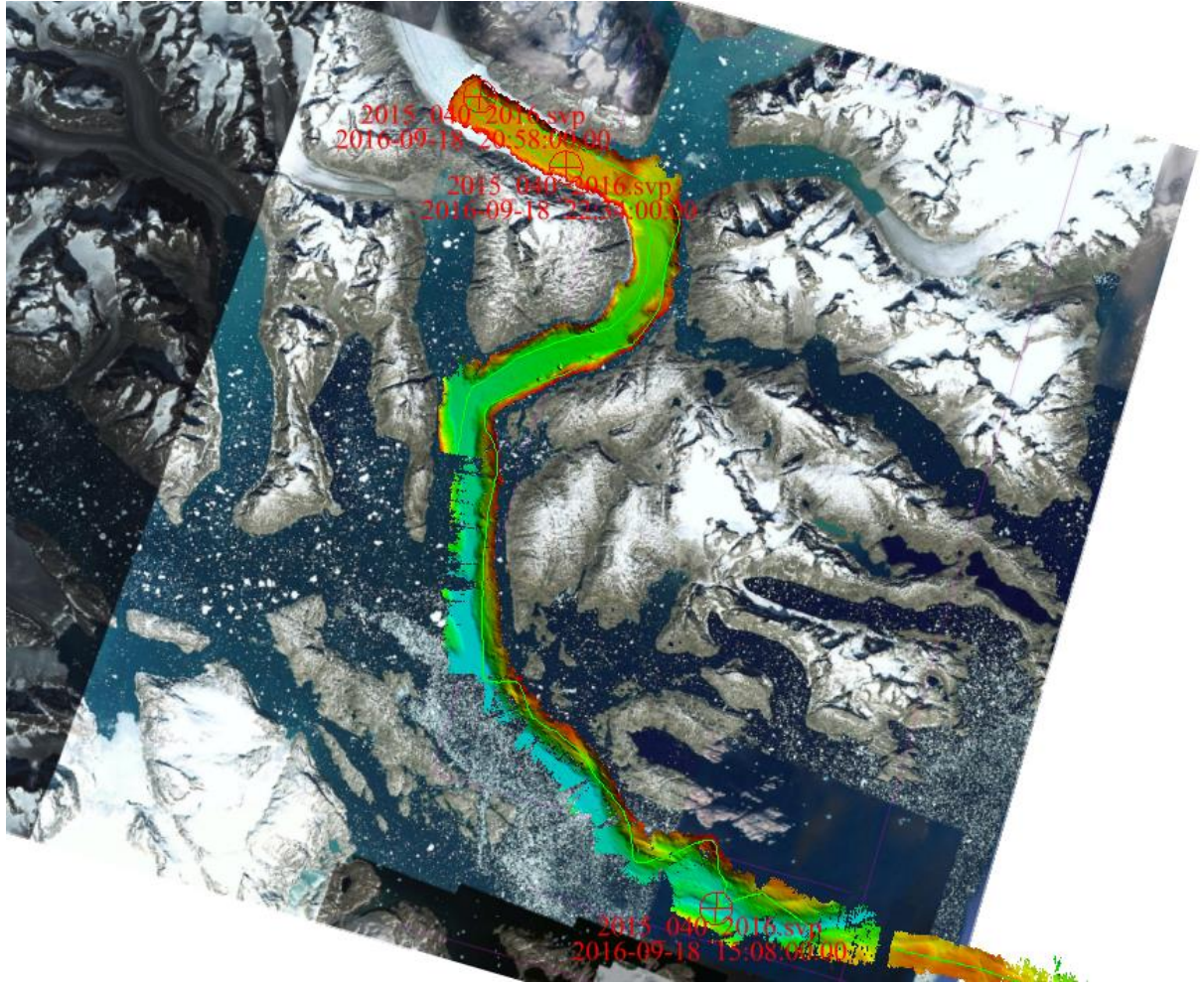
Complete what is possible at Tingmiarmiut and transit south.

Marine Wildlife Observation Summary – Sept 18th

30 sightings of birds
3 sightings of seals
4 sighting of whales



Daily Coverage Map





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Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Tuesday 0000 UTC

No internet available

Tuesday 1200 UTC

No internet available



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Bathymetric Survey Daily Field Report

Daily Photo





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Bathymetric Survey Daily Field Report

Date: Sept. 20, 2016
Time: 1200 UTC

Current Position

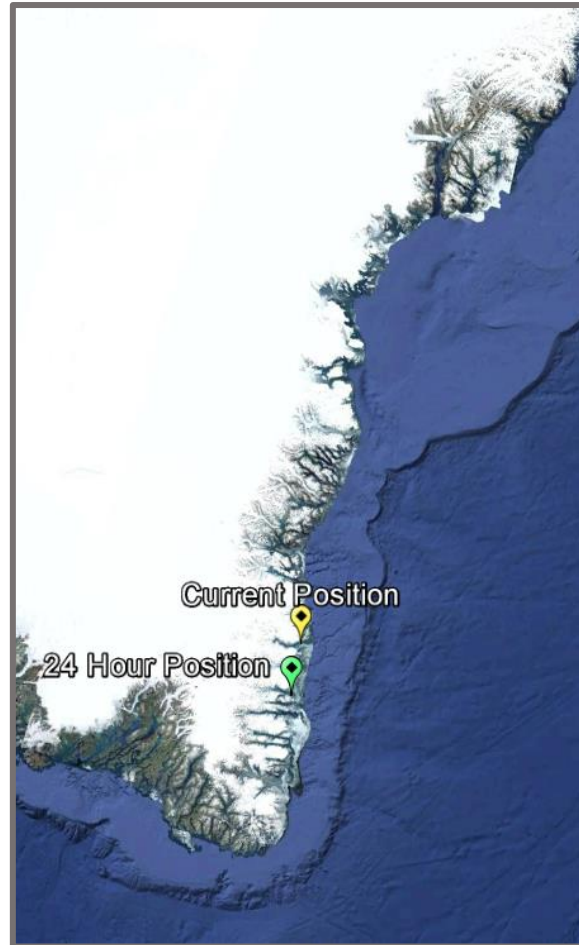
Latitude: 61°44'39"N N
Longitude: 42°12'09"W
Location: Napasorsuaq, Greenland

Current Weather

Temperature: 1°C
Wind Speed: 5 m/sec
No swell in the fjord
Sea State: fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 150 NM
Survey Line Miles (Total): 1158 NM
CTD Casts (Day): 8
CTD Casts (Total): 50
Underway Days: 9 Days
Average Speed: 5.5 Knots
Progress Tracking: 4 hours ahead



Previous 24 hour Summary – Sept 19th

Completed Tingmairmiut until the ice coverage and bergs were too dense to continue at a timely rate. Transited to Napasorsuaq.

Next 24 hour Summary – Sept 20th

Survey Napasorsuaq and Kangerlua N, C and S

Marine Wildlife Observation Summary – Sept 19th

21 sightings of birds
2 sightings of Polar bear
11 sightings of seals
5 sighting of whales



Daily Coverage Map

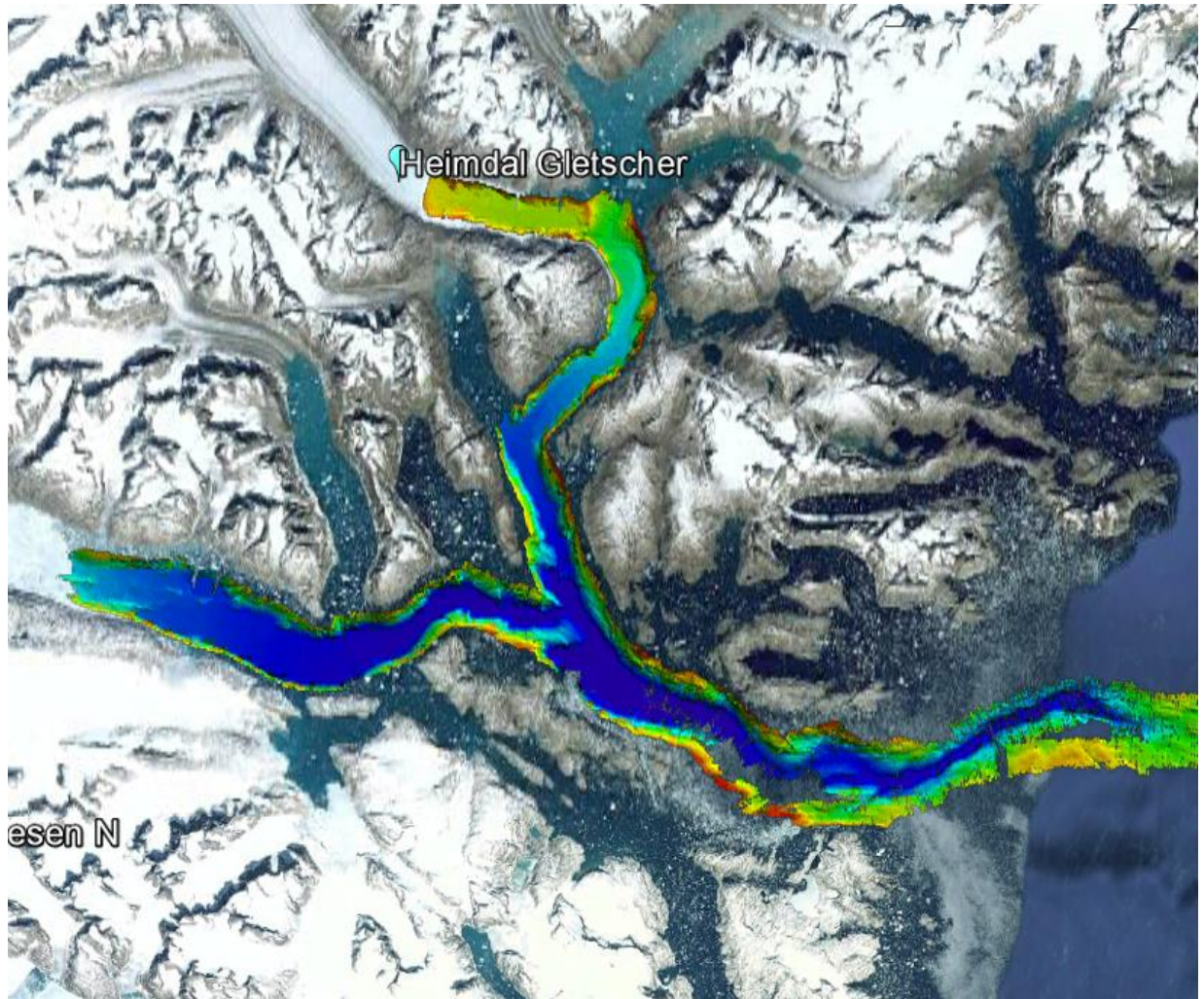


Figure 1 Heimdal Gletscher and Tingmiarmuit



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Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Wed 0000 UTC

No internet available

Wed 1200 UTC

No internet available



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Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 Polar bear photo taken in N Tingmairmiut



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Bathymetric Survey Daily Field Report

Date: Sept. 21, 2016
Time: 1200 UTC

Current Position

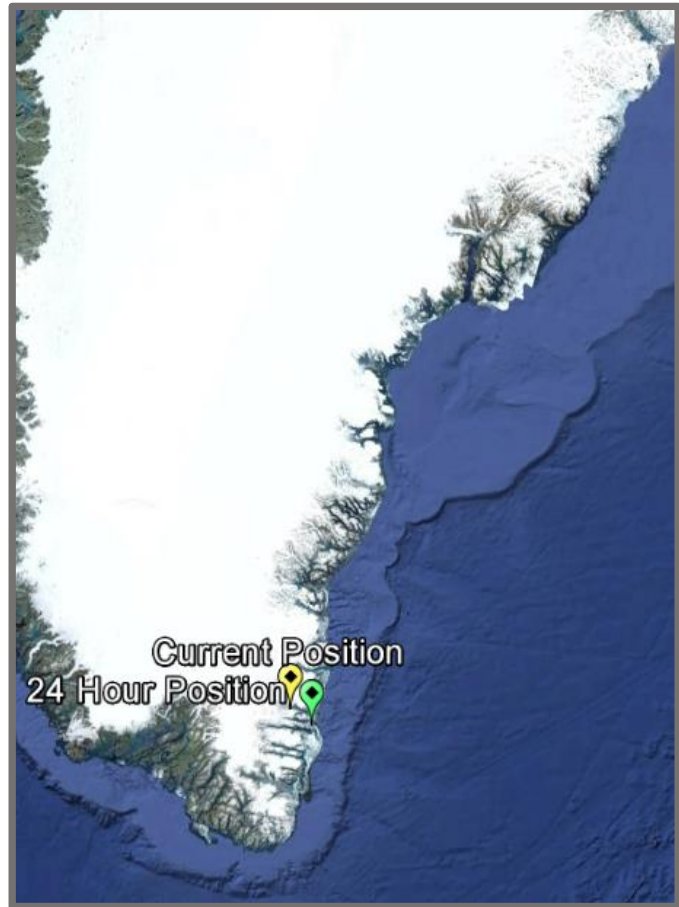
Latitude: 61°19'00" N
Longitude: 43°04'15" W
Location: Herluf Tolle N, Greenland

Current Weather

Temperature: 4°C
Wind Speed: 1 m/sec
No swell in the fjord
Sea State:
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 121 NM
Survey Line Miles (Total): 1279 NM
CTD Casts (Day): 10
CTD Casts (Total): 60
Underway Days: 10 Days
Average Speed: 5.3 Knots
Progress Tracking: 8 hours behind



Previous 24 hour Summary – Sept 20th

Surveyed Napasorsuaq and Kangerlua N, C, and S. Rapid cast has been working consistently.

Next 24 hour Summary – Sept 21st

Survey Herluf Trolle N and Herluf Trolle South.

Marine Wildlife Observation Summary – Sept 20th

36 sightings of birds
5 sightings of seals
5 sighting of whales



Daily Coverage Map

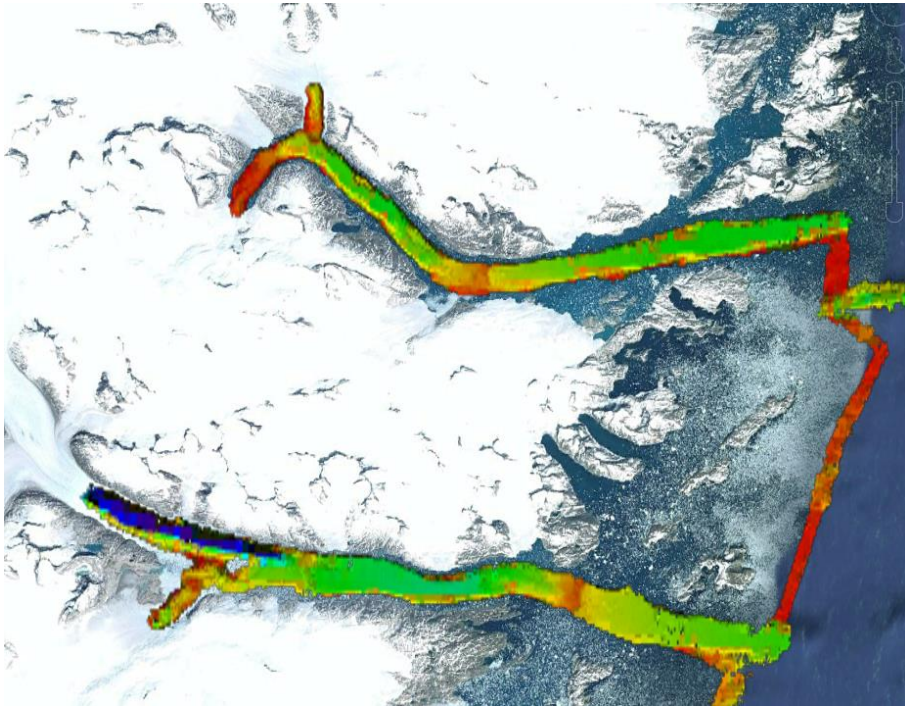


Figure 1 Napasorsuaq and Kangerlua N, C, and S

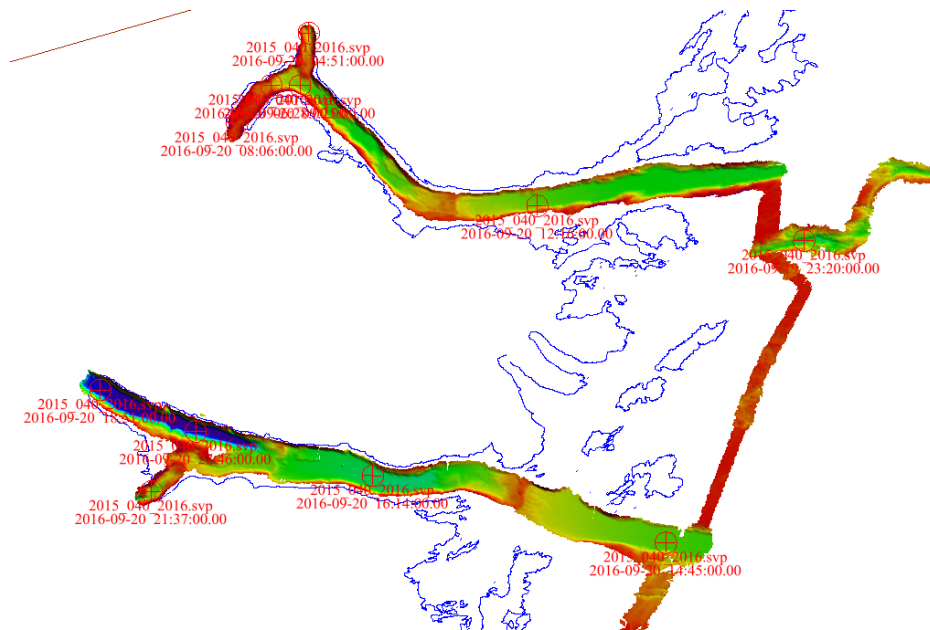


Figure 2 MBES coverage with SVP casts



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Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Thursday 0000 UTC

No internet available

Thursday 1200 UTC

No internet available



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Bathymetric Survey Daily Field Report

Daily Photo



Figure 3 Sperm Whale in Napasorsuaq Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 21, 2016
Time: 1200 UTC

Current Position

Latitude: 61° 4'15"N
Longitude: 42°46'51"W
Location: Kangerluluk, Greenland

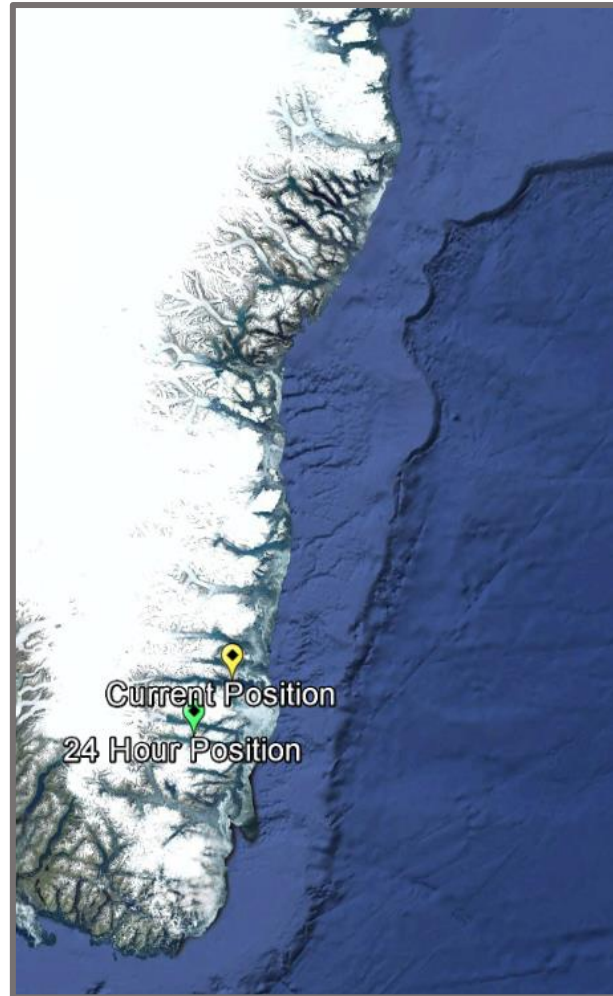
Current Weather

Temperature: 3°C
Wind Speed: 1 m/sec
No swell in the fjord
Sea State: fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 146 NM
Survey Line Miles (Total): 1425 NM
CTD Casts (Day): 8
CTD Casts (Total): 68
Underway Days: 12 Days
Average Speed: 5.8 Knots

Progress Tracking: 17 hours behind



Previous 24 hour Summary – Sept 21st

Survey Herluf Trolle N and Herluf Trolle South.

Next 24 hour Summary – Sept 22nd

Survey Kangerluluk and Danell Fjord

Marine Wildlife Observation Summary – Sept 21st

61 sightings of birds
1 sightings of Polar bear
11 sightings of seals
3 sighting of whales



Daily Coverage Map

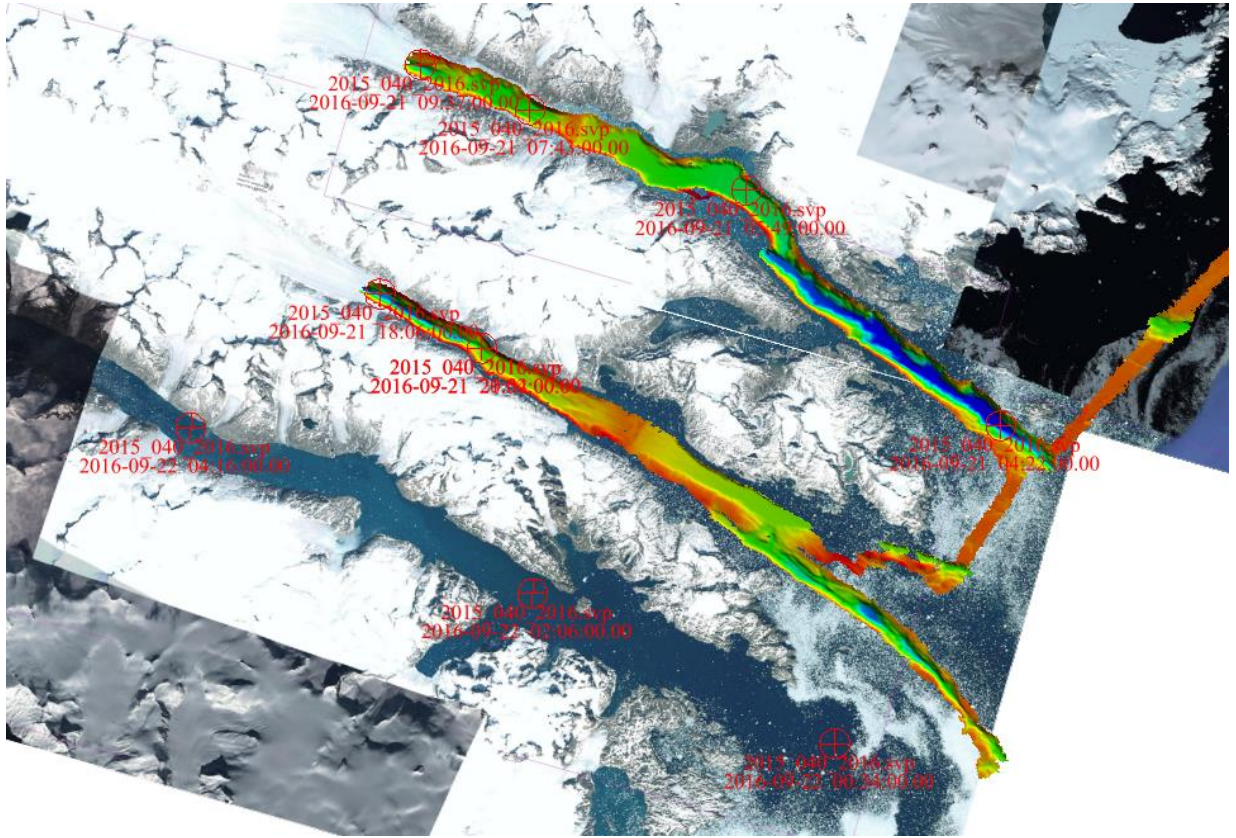


Figure 1 Herluf Trolle North and South

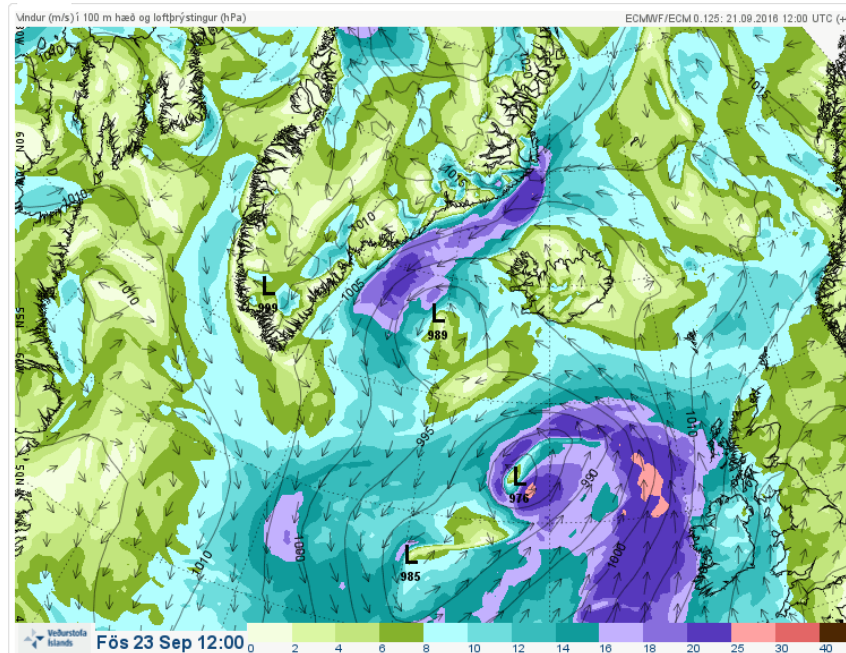
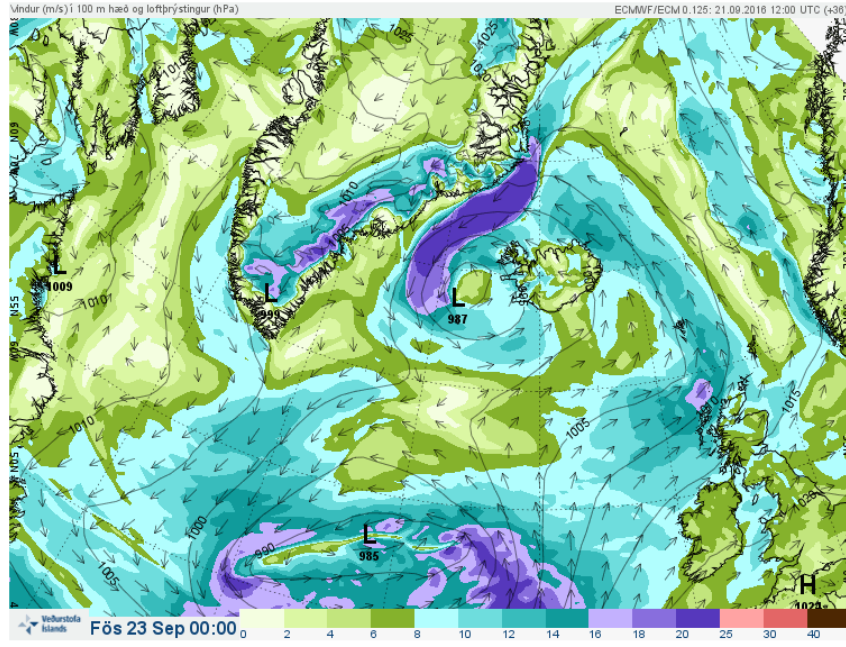


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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Friday 0000 UTC



Friday 1200 UTC



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 Herluf Trolle North at sunrise



Date: Sept. 22, 2016
Time: 1200 UTC

Current Position

Latitude: 61° 4'15"N
Longitude: 42°46'51"W
Location: NORREARM, Greenland

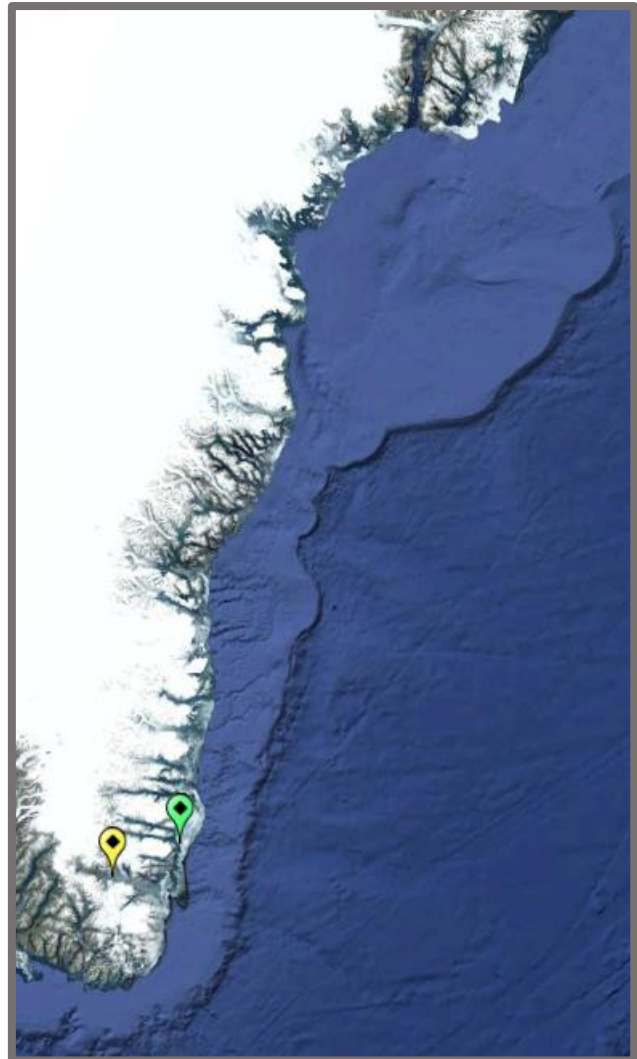
Current Weather

Temperature: -1°C
Wind Speed: 1 m/sec
No swell in the fjord
Sea State: fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 159 NM
Survey Line Miles (Total): 1584 NM
CTD Casts (Day): 9
CTD Casts (Total): 77
Underway Days: 13 Days
Average Speed: 5.9 Knots

Progress Tracking: 11 hours behind



Previous 24 hour Summary – Sept 21st

Survey Kangerluluk and Danell Fjord

Next 24 hour Summary – Sept 22nd

Survey at Norrearm Fjord.

Marine Wildlife Observation Summary – Sept 21st

43 sightings of birds
6 sightings of seals
5 sighting of whales



Daily Coverage Map

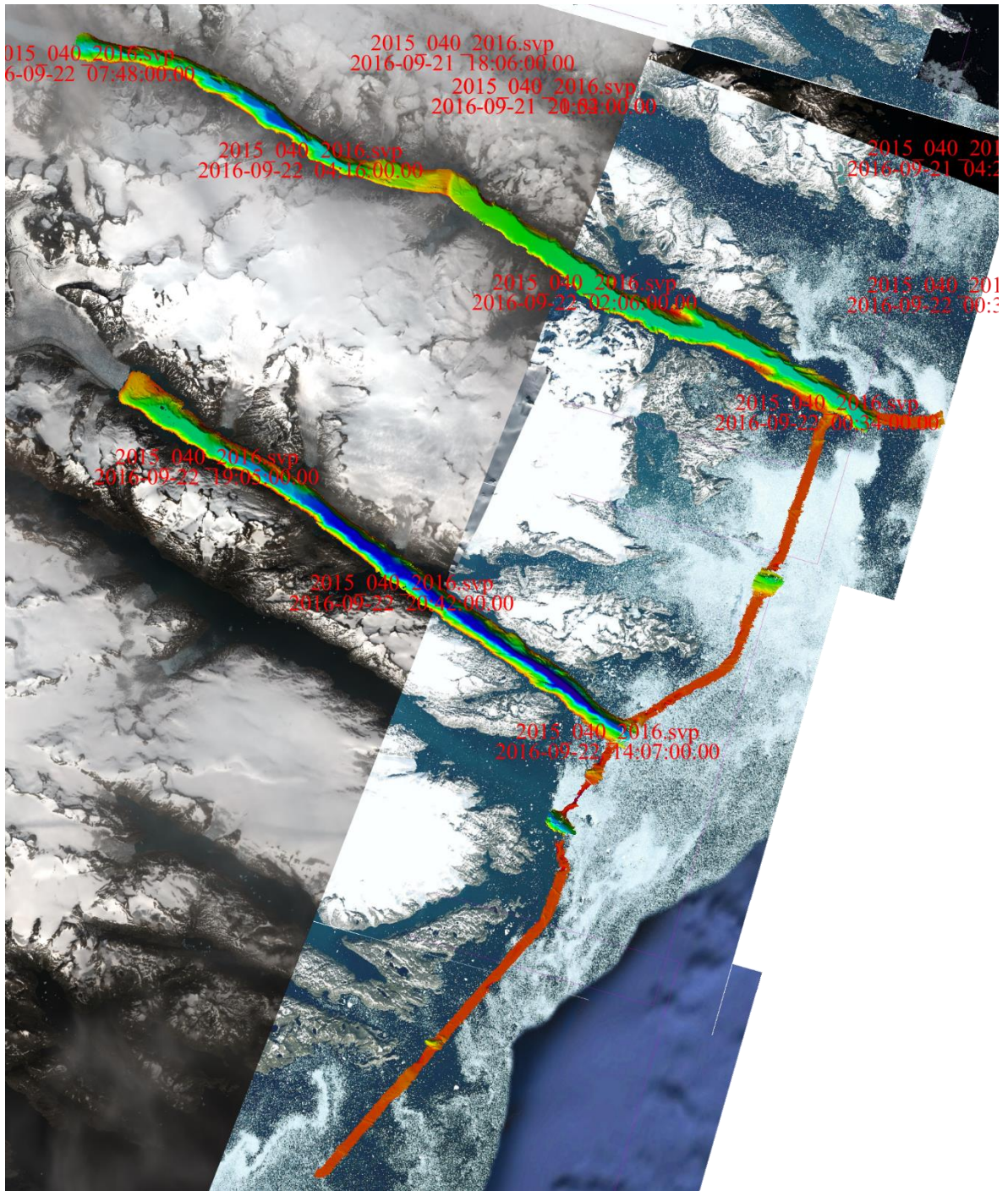


Figure 1 Coverage of Kangerluluk and Danell Fjord

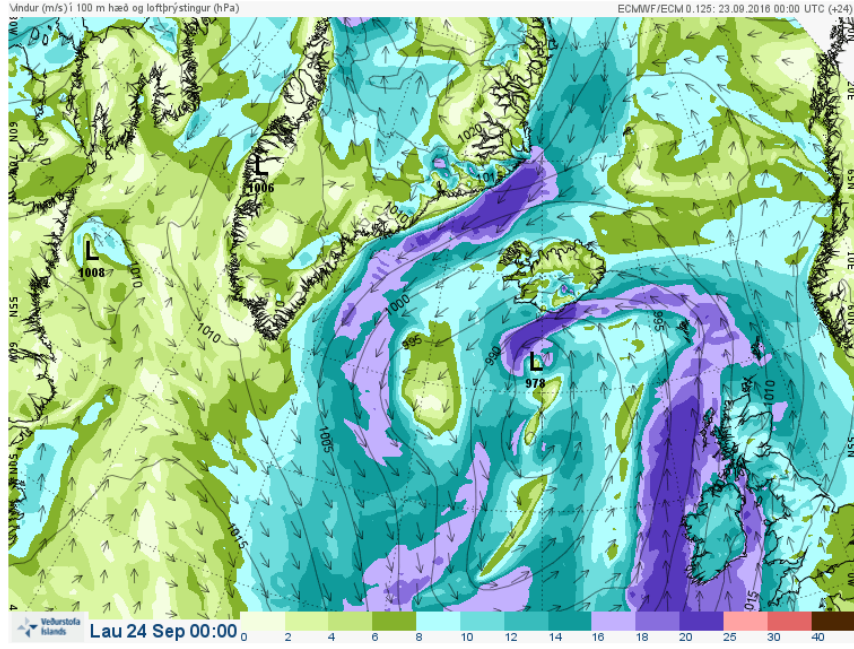


NASA Jet Propulsion Laboratory (JPL)

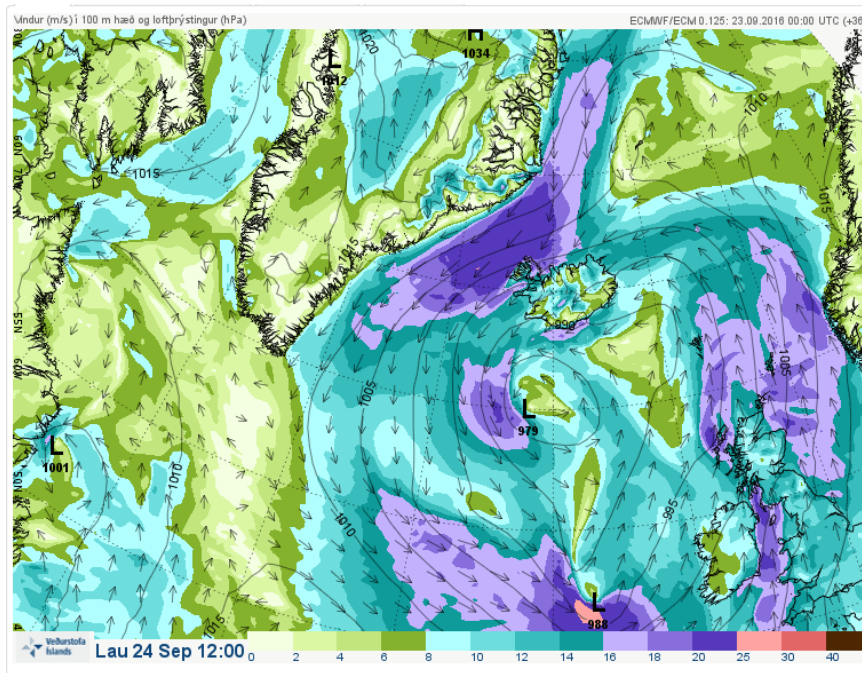
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Saturday 0000 UTC



Saturday 1200 UTC





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 Blue berg in Kangerluluk Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 23, 2016
Time: 1200 UTC

Current Position

Latitude: 61° 4'15"N
Longitude: 42°46'51"W
Location: South Danell, Greenland

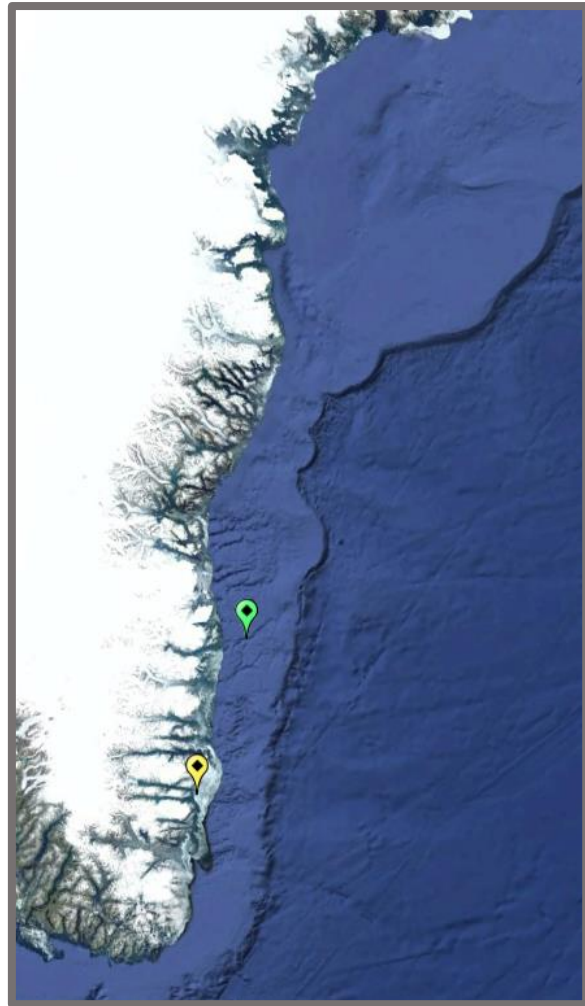
Current Weather

Temperature: 3°C
Wind Speed: 1 m/sec
No swell in the fjord
Sea State: fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 159 NM
Survey Line Miles (Total): 1743 NM
CTD Casts (Day): 11
CTD Casts (Total): 88
Underway Days: 14 Days
Average Speed: 5.8 Knots

Progress Tracking: 2 hours behind



Previous 24 hour Summary – Sept 23rd

Survey Norrearm and Lindenow Fjord

Next 24 hour Summary – Sept 24th

Survey at South Danell and transit offshore to Puisortoq.

Marine Wildlife Observation Summary – Sept 21st

15 sightings of birds
37 sightings of seals



Daily Coverage Map

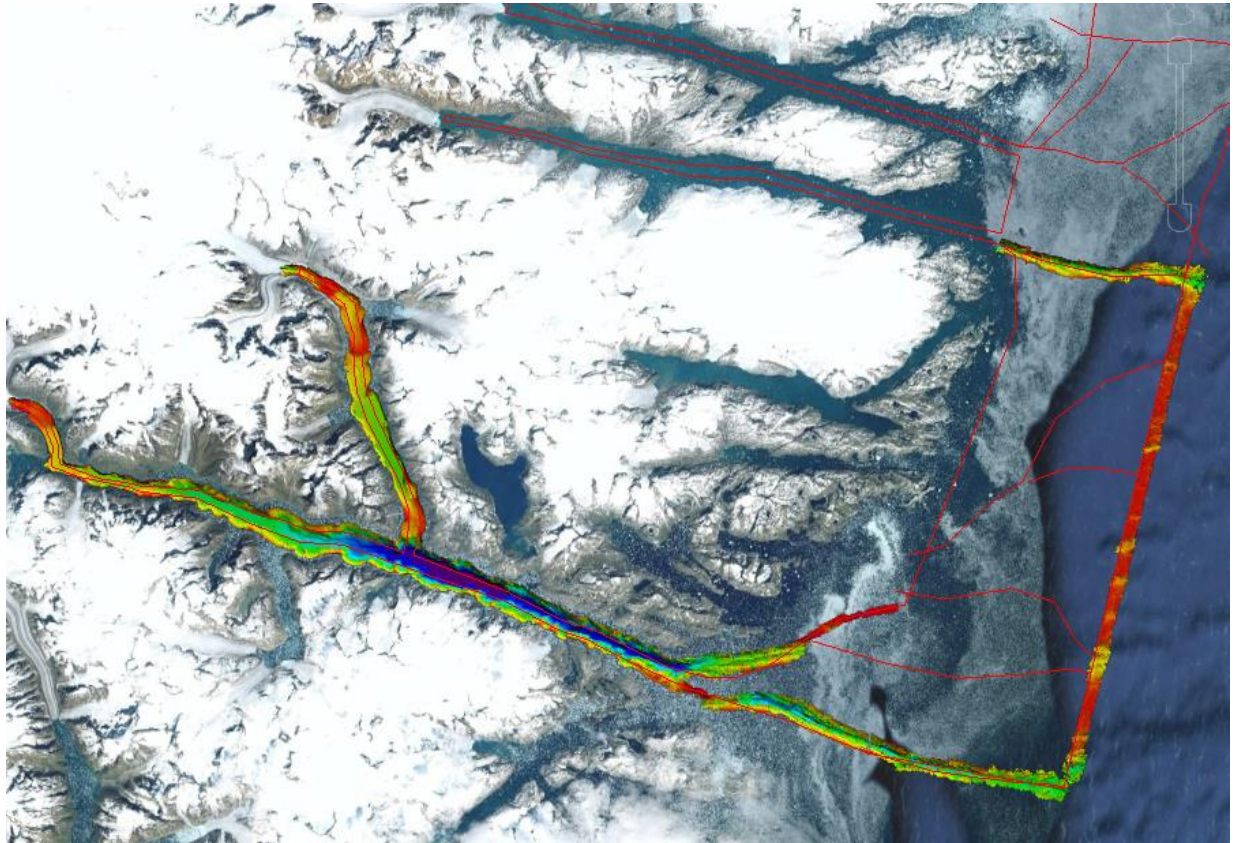
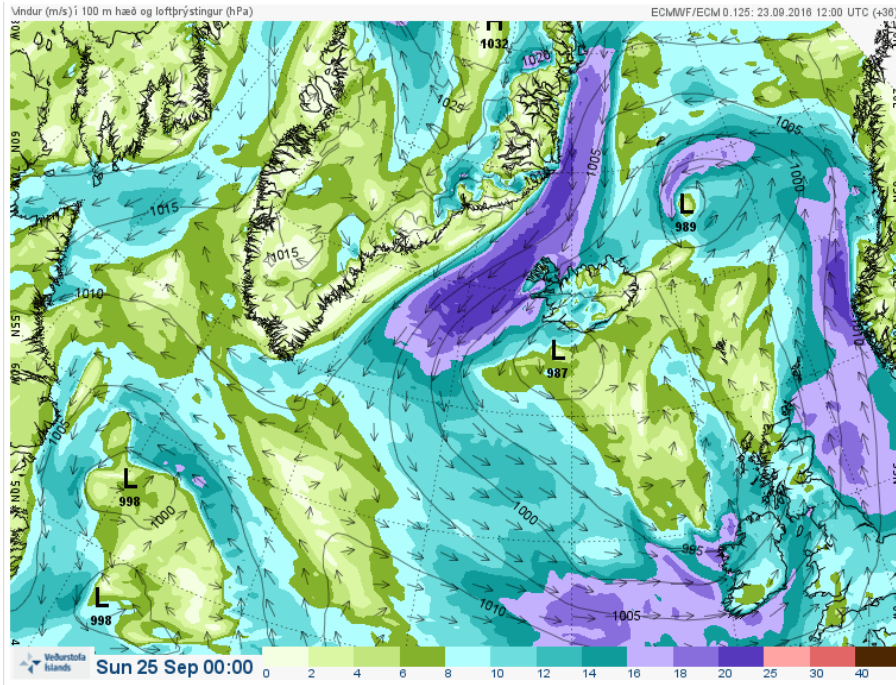


Figure 1 Coverage for Lindenow and Norream Fjords.

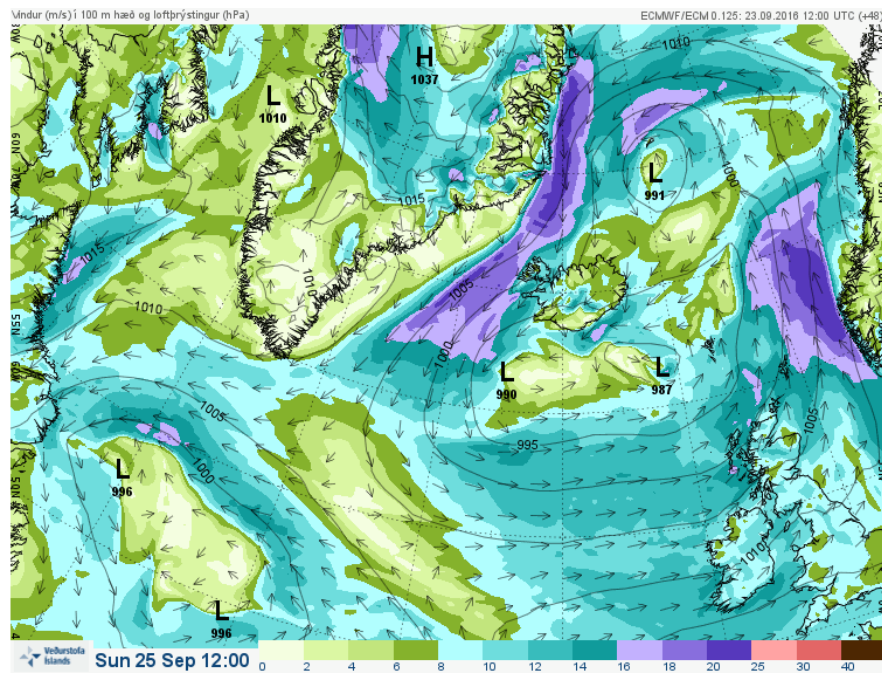


12/24 Hour Weather Forecast:

Sunday 0000 UTC



Sunday 1200 UTC





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Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 South portion of Norrearm glacier at dawn



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 24, 2016
Time: 1200 UTC

Current Position

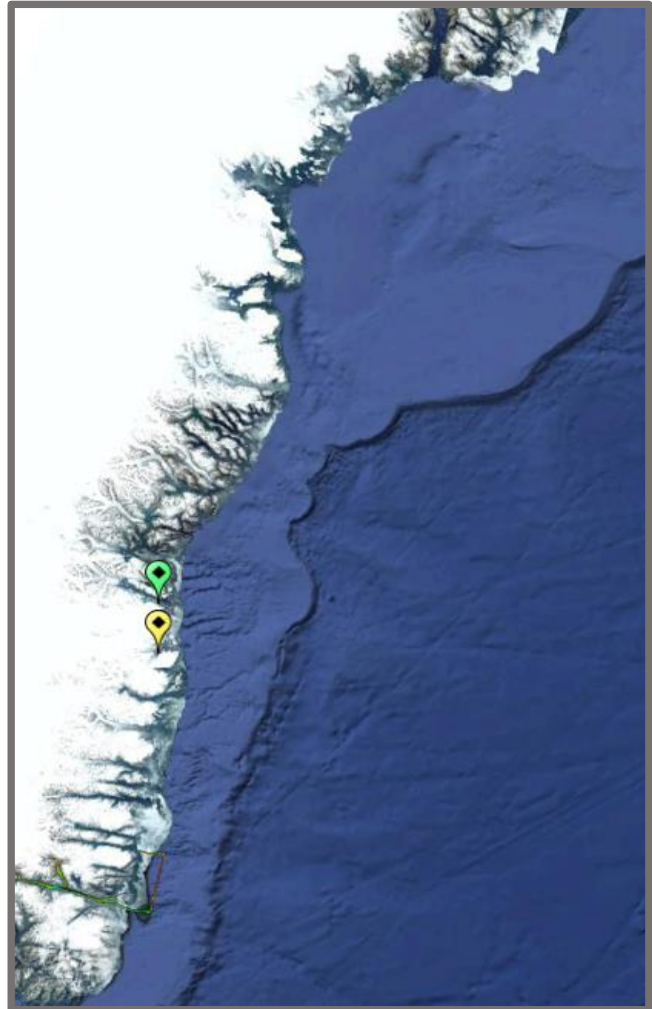
Latitude: 61° 4'15"N
Longitude: 42°46'51"W
Location: Puisortoq, Greenland

Current Weather

Temperature: 3°C
Wind Speed: 2 m/sec
Sea State: No swell in the fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 152 NM
Survey Line Miles (Total): 1895 NM
CTD Casts (Day): 9
CTD Casts (Total): 97
Underway Days: 15 Days
Average Speed: 5.9 Knots



Progress Tracking: 2 hours ahead

Previous 24 hour Summary – Sept 24th

Survey at South Danell and transit offshore to Puisortoq. Inshoreline leaving South Danell transiting to Puisortoq was run further to the west then the planned lined due to rocks and small islets in the area.

Next 24 hour Summary – Sept 25th

Survey Puisortoq and transit to Mogens

Marine Wildlife Observation Summary – Sept 24th

14 sightings of birds
1 sighting of Polar bear
5 sightings of seals
1 sighting of whale



Daily Coverage Map

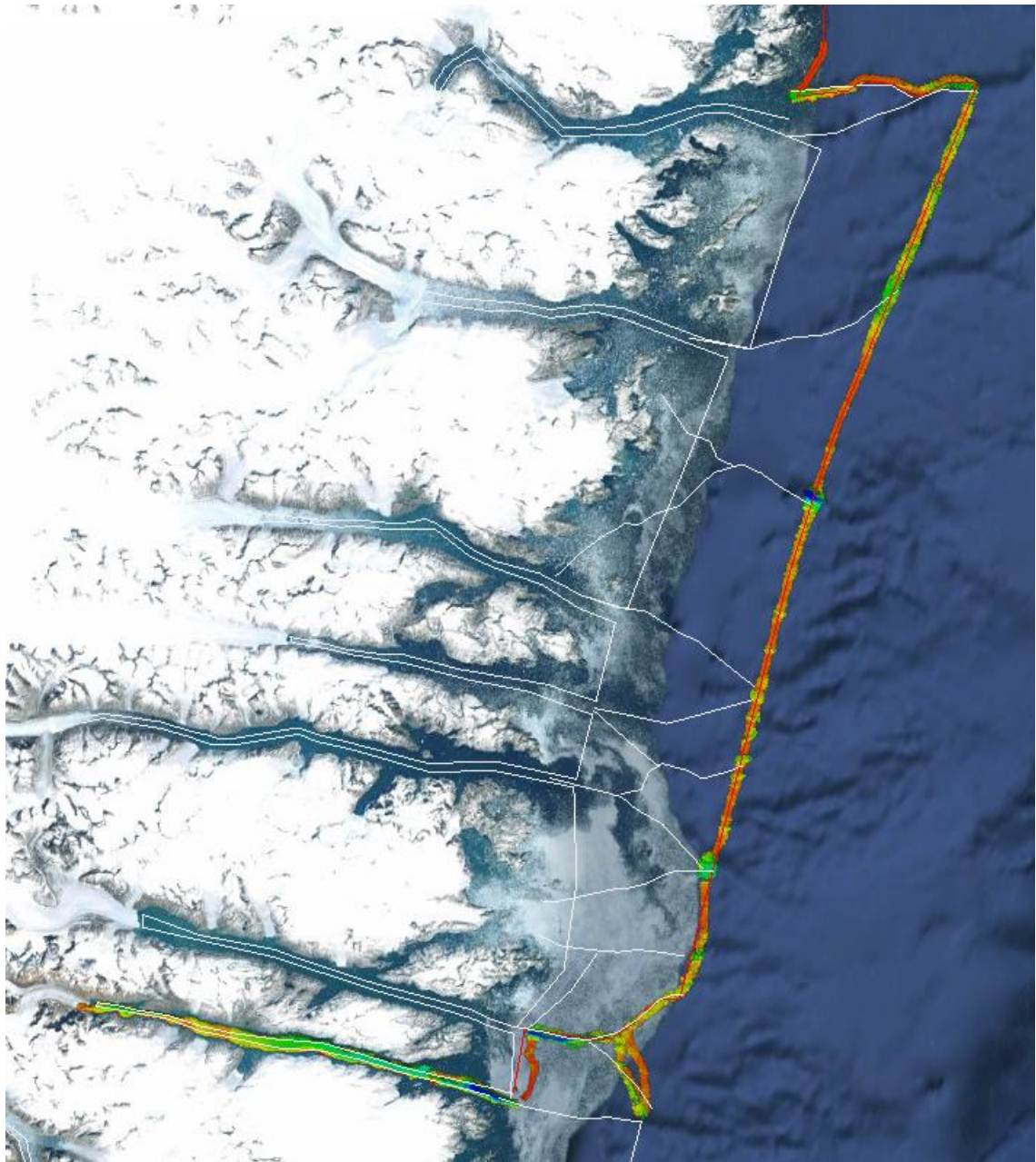


Figure 1 Coverage for South Danell and transit. White lines are the planned lines.

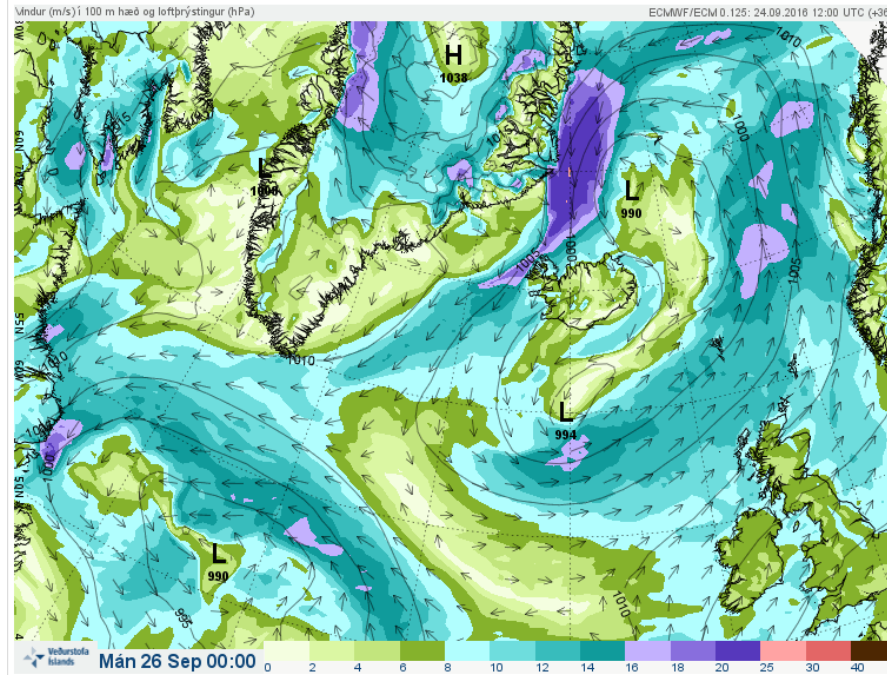


NASA Jet Propulsion Laboratory (JPL)

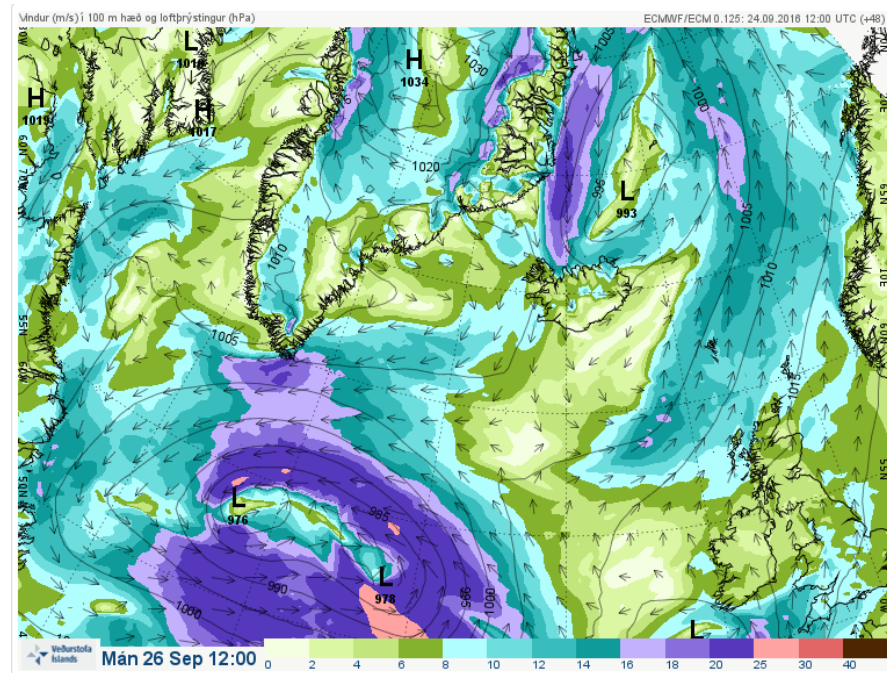
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Monday 0000 UTC



Monday 1200 UTC





NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 Ice and autumn colors in South Danell Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 24, 2016
Time: 1200 UTC

Current Position

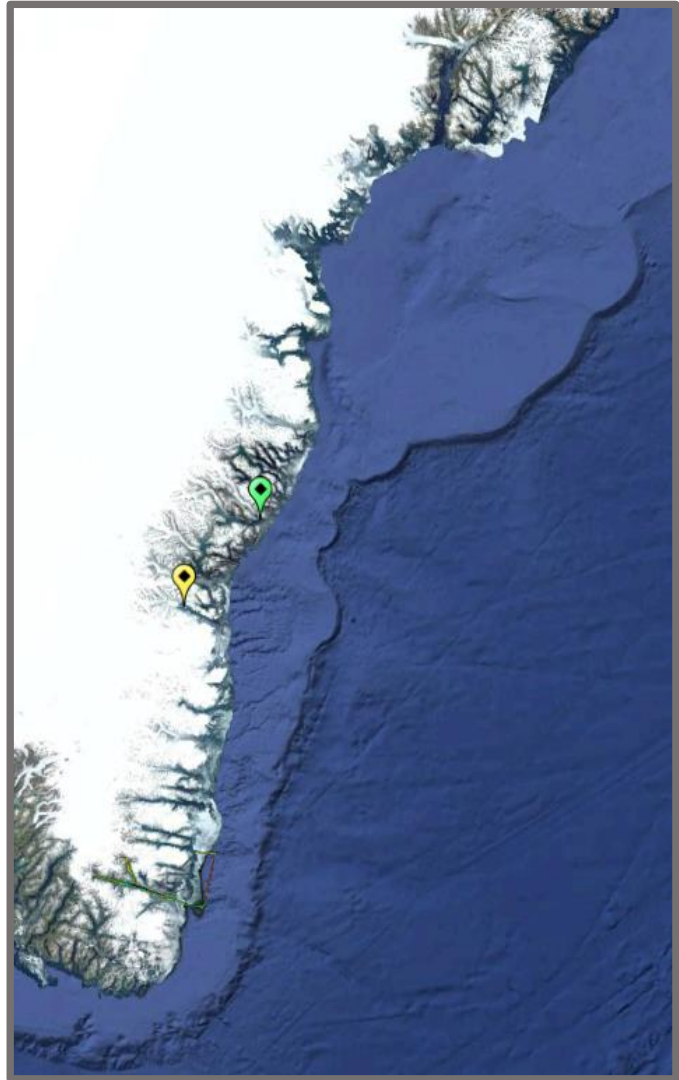
Latitude: 621° 26'51"N
Longitude: 42°43'3551"W
Location: Mogens Heinesen, Greenland

Current Weather

Temperature: 3°C
Wind Speed: 2 m/sec
Sea State: No swell in the fjord
Sun Rise:
Sun Set:

Statistics

Survey Line Miles (Day): 102 NM
Survey Line Miles (Total): 1997 NM
CTD Casts (Day): 7
CTD Casts (Total): 104
Underway Days: 16 Days
Average Speed: 5.8 Knots



Progress Tracking: 2 hours ahead

Previous 24 hour Summary – Sept 25th

Survey Puisortoq and transit to Mogens Heinesen

Next 24 hour Summary – Sept 26th

Survey Mogens Heinesen and transit to Rimfaxe.

Marine Wildlife Observation Summary – Sept 25th

7 sightings of birds
11 sightings of seals

Daily Coverage Map

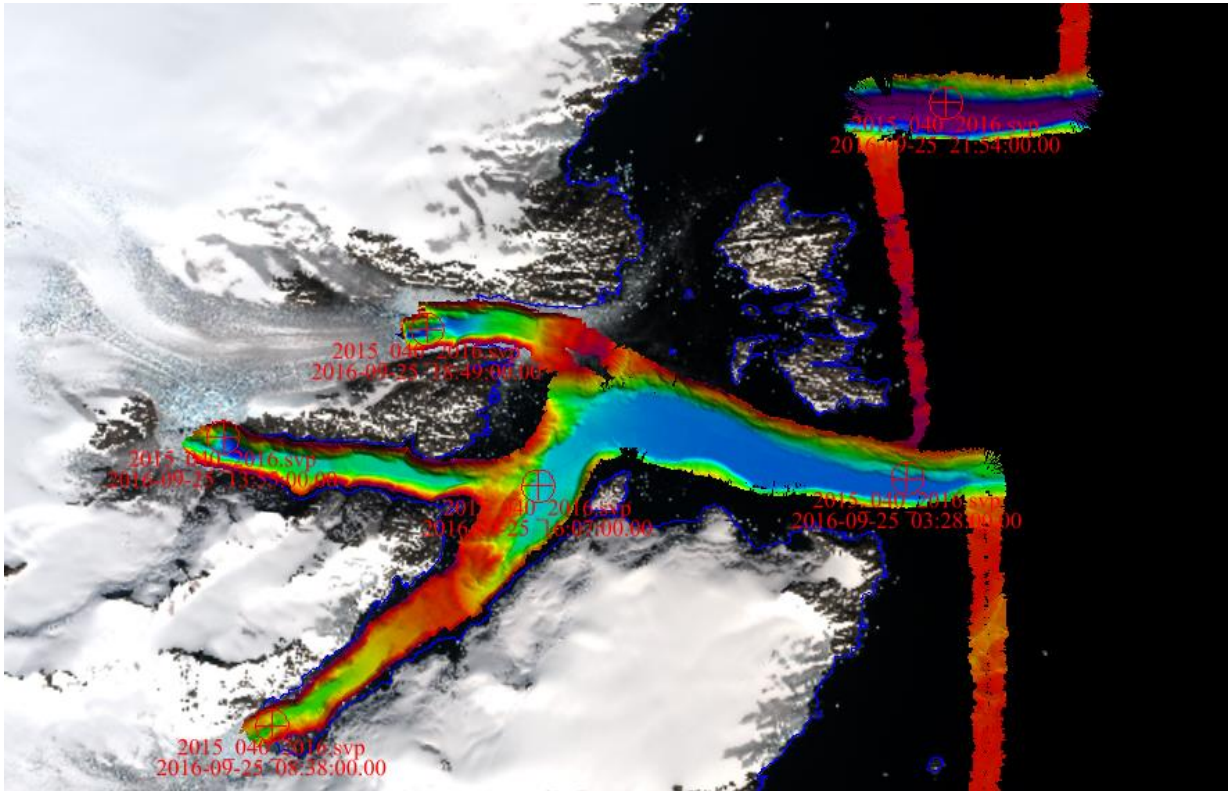


Figure 1 Puitsortoq

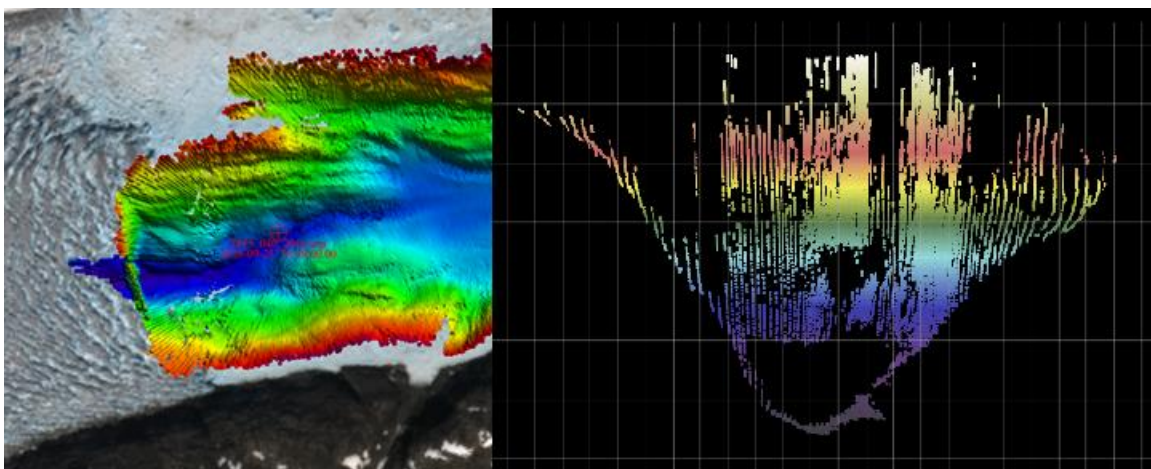
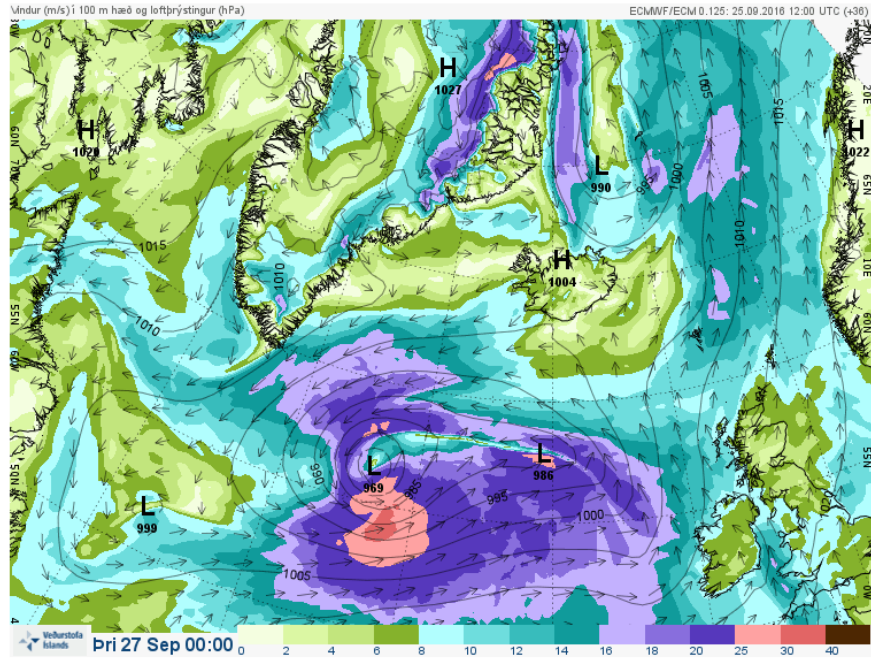


Figure 2 Melt water channel in Puitsortoq North, around 130m high by 260m wide

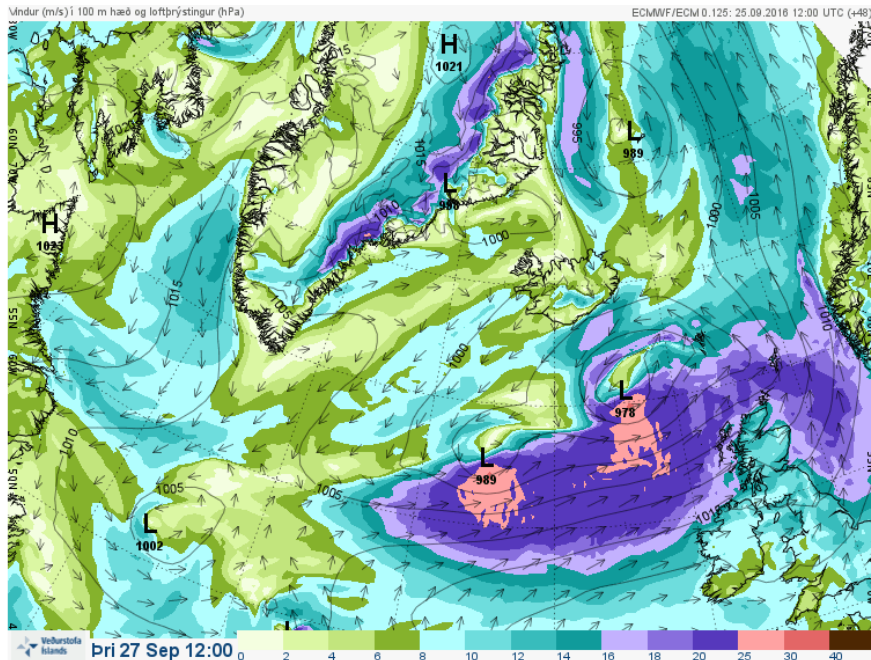


12/24 Hour Weather Forecast:

Tuesday 0000 UTC



Tuesday 1200 UTC





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 3 Northern lights during transit



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 26, 2016

Time: 1200 UTC

Current

Position

Latitude: 63° 01'32"N

Longitude: 41°29'52"W

Location: Rimfaxe, Greenland

Current

Weather

Temperature: -2°C

Wind Speed: 1 m/sec

No swell in

Sea State: the fjord

Sun Rise:

Sun Set:

Statistics

Survey Line Miles

(Day): 100 NM

Survey Line Miles

(Total): 2097 NM

CTD Casts (Day): 8

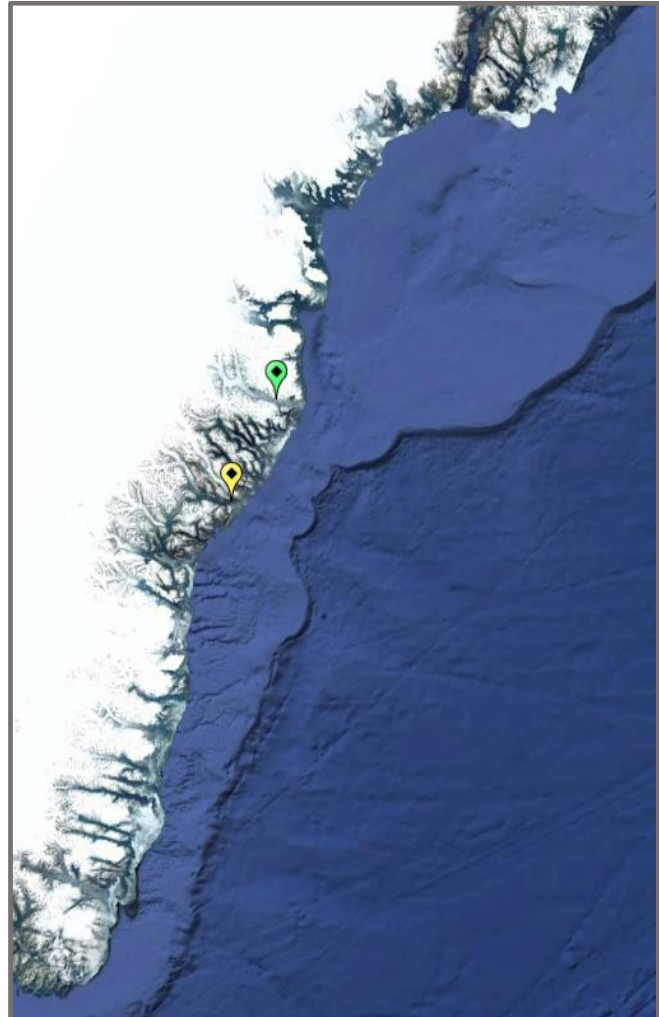
CTD Casts (Total): 112

Underway Days: 17 Days

Average Speed: 5.7 Knots

2 hours

Progress Tracking: behind



Previous 24 hour Summary – Sept 26th

Survey Mogens Heinesen and transit to Rimfaxe.

Next 24 hour Summary – Sept 27th

Survey Rimfaxe and Skinfaxe fjords.

Marine Wildlife Observation Summary – Sept 26th

5 sightings of birds

4 sightings of Polar bear

16 sightings of seals



Daily Coverage Map

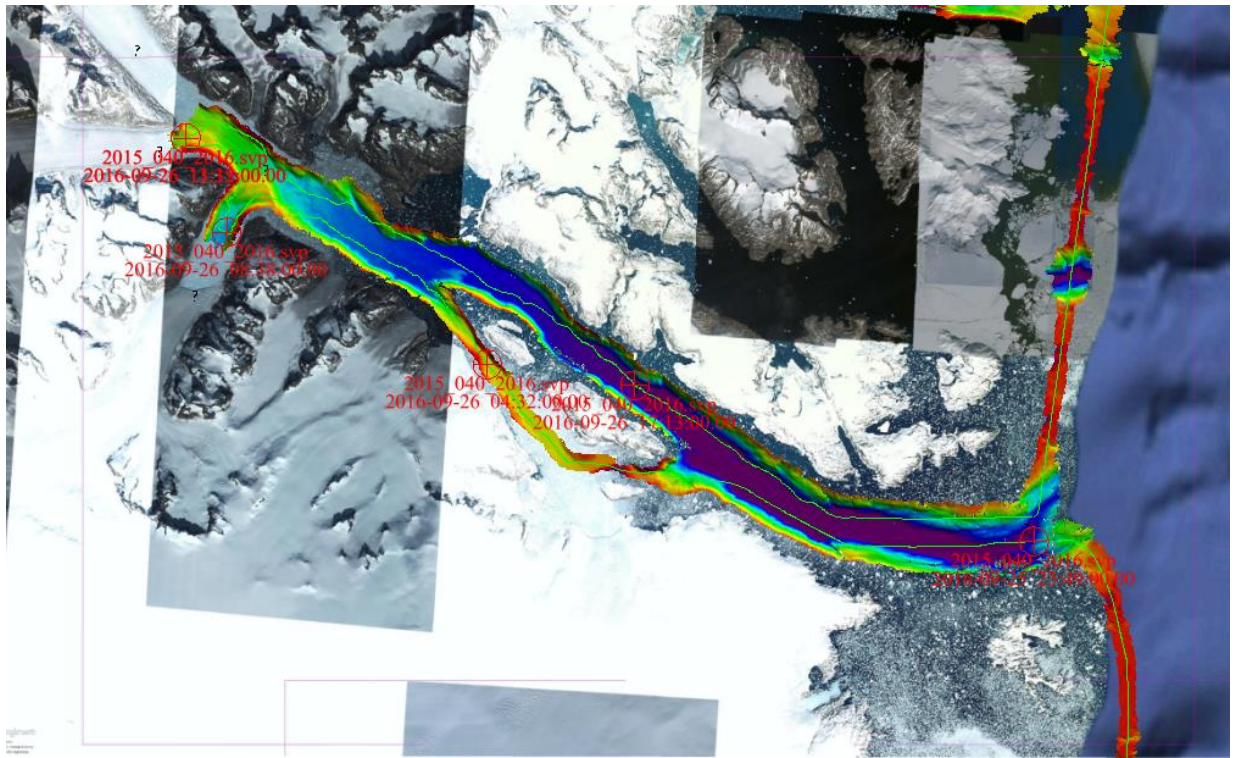


Figure 1 MBES coverage and SVP locations Mogen Heinesen

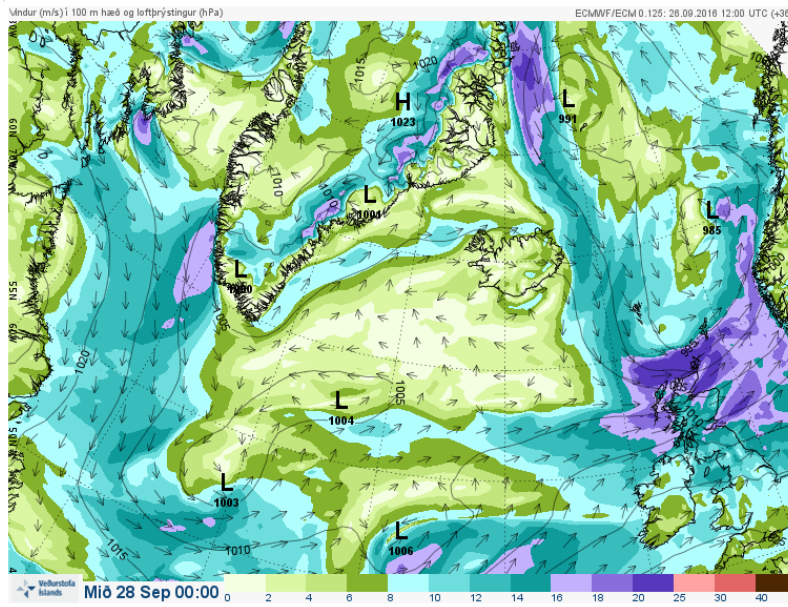


NASA Jet Propulsion Laboratory (JPL)

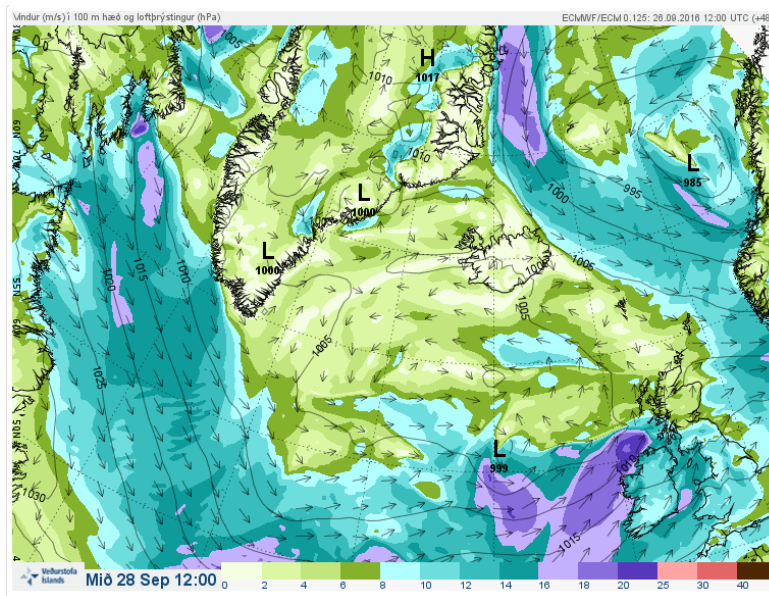
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Wed 0000 UTC



Wed 1200 UTC



Daily Photo



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report



Figure 2 Polar bear seen in Mogens Heinesen Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 27, 2016

Time: 1200 UTC

Current

Position

Latitude: 63° 47'23"N

Longitude: 41°31'39"W

Location: Bernstorff, Greenland

Current

Weather

Temperature: 0°C

Wind Speed: 1 m/sec

No swell in

Sea State: the fjord

Sun Rise:

Sun Set:

Statistics

Survey Line Miles

(Day): 117 NM

Survey Line Miles

(Total): 2214 NM

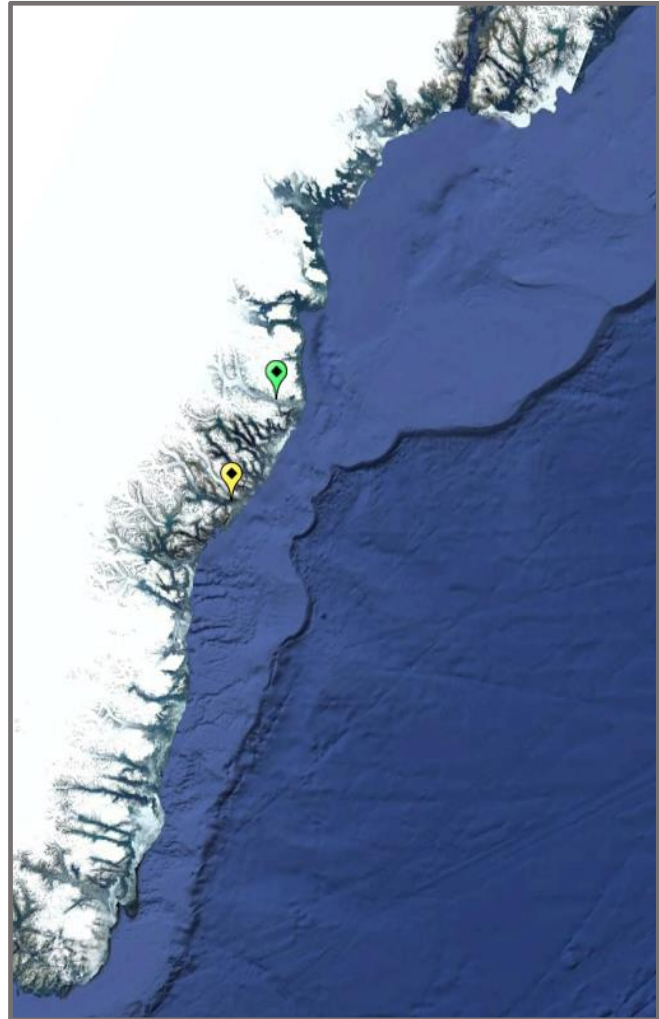
CTD Casts (Day): 108

CTD Casts (Total): 122

Underway Days: 18 Days

Average Speed: 5.7 Knots

Progress Tracking: 0 hours



Previous 24 hour Summary – Sept 27th

Survey Rimfaxe and Skinfaxe fjords. Transit to Bernstorff Fjord.

Next 24 hour Summary – Sept 28th

Survey in Bernstorff Fjord. Pick up film crew.

Marine Wildlife Observation Summary – Sept 27th

17 sightings of birds

9 sightings of seals



Daily Coverage Map

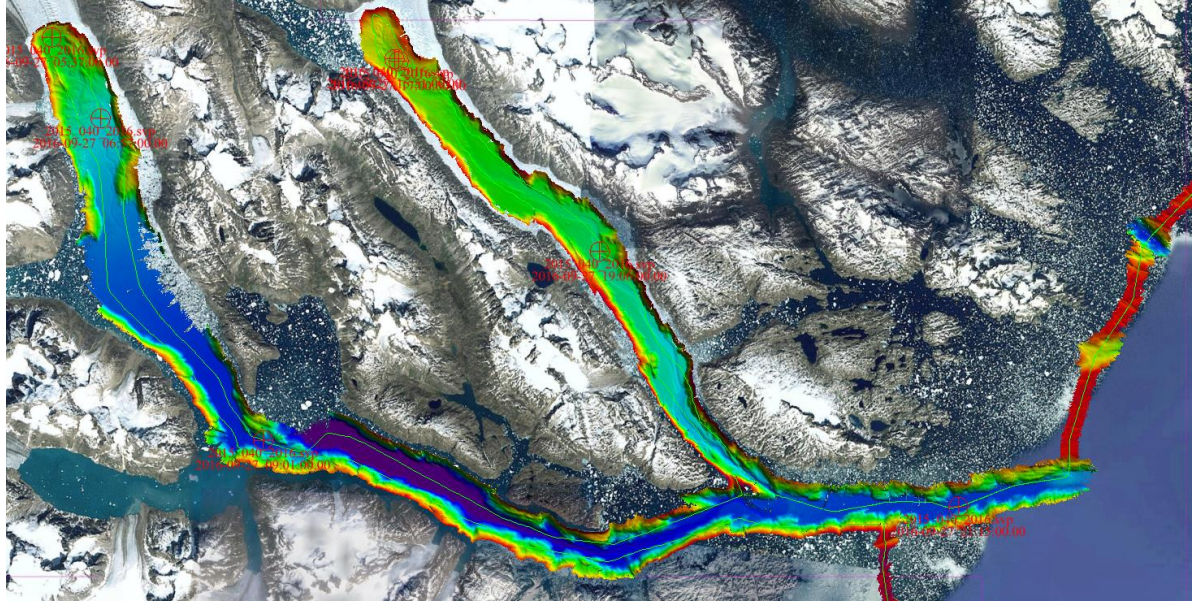


Figure 1 Rimfaxe and Skinfaxe with CTD

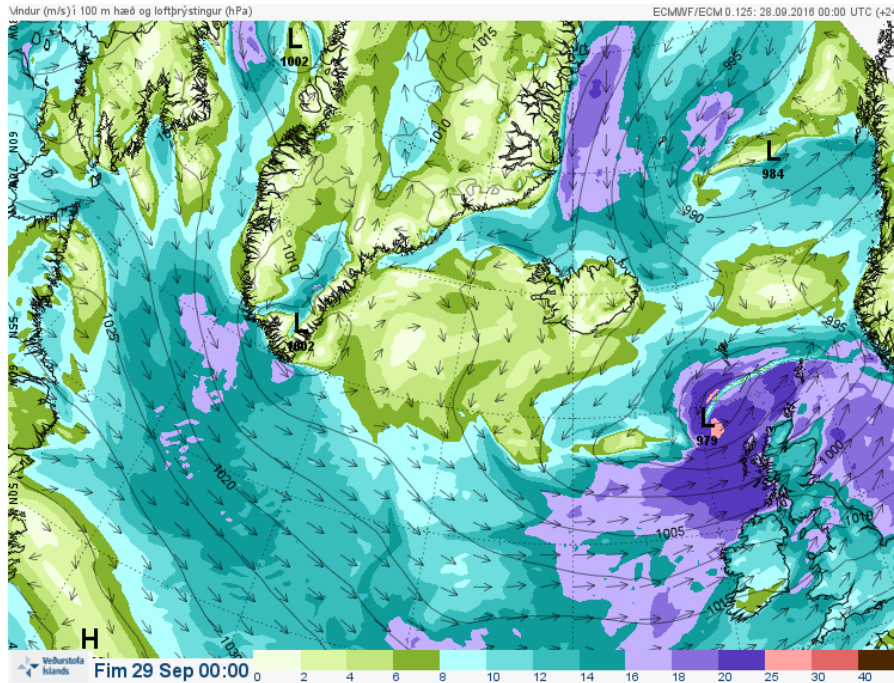


NASA Jet Propulsion Laboratory (JPL)

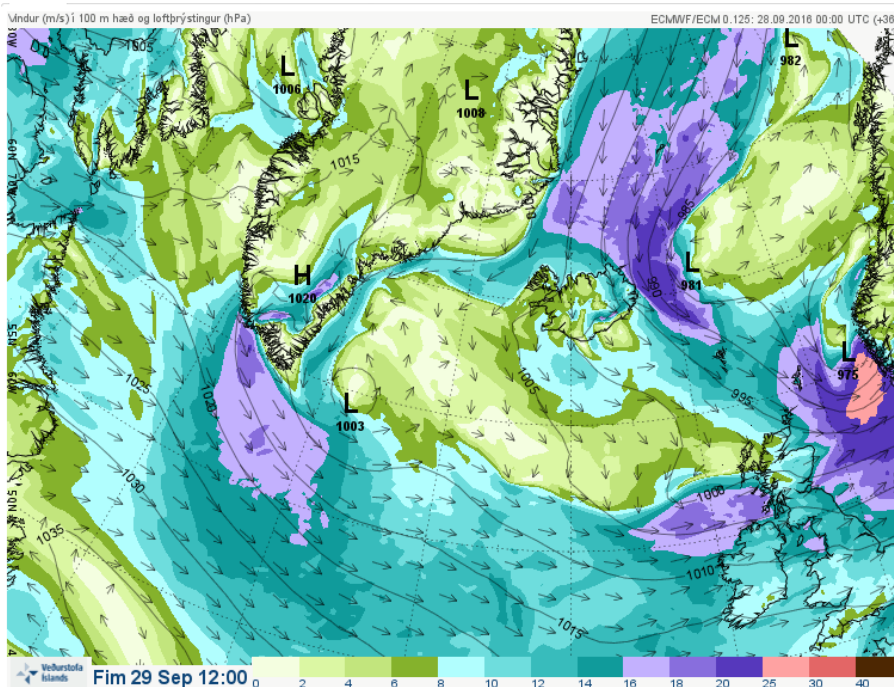
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Thurs 0000 UTC



Thurs 1200UTC



Iridium #: +1-480-768-2500 at Prompt 8816-3161-4885

Neptune Bridge #: +354 851 2015

Neptune Vessel Tracking: <https://share.delorme.com/Neptune>



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 2 Sunset during transit.



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 28, 2016

Time: 1200 UTC

Current

Position

Latitude: 64° 02'56"N

Longitude: 40°22'57"W

Location: Gyldenlove, Greenland

Current

Weather

Temperature: -1°C

Wind Speed: 10 m/sec

Sea State: 1m swell

Sun Rise:

Sun Set:

Statistics

Survey Line Miles

(Day): 76 NM

Survey Line Miles

(Total): 2290 NM

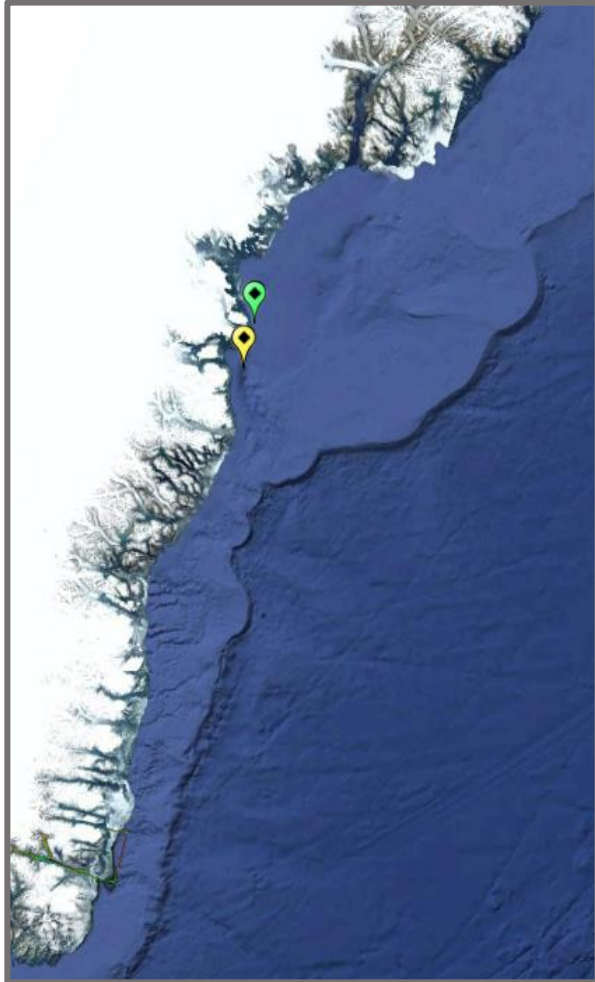
CTD Casts (Day): 3

CTD Casts (Total): 125

Underway Days: 19 Days

Average Speed: 5.7 Knots

Progress Tracking: -4 hours



Previous 24 hour Summary – Sept 28th

Survey Fimbulgletscher/Bernstorff. Met with film crew for two hours of photography on board the Neptune.

Next 24 hour Summary – Sept 29th

Survey out of Fimbulgletscher/Bernstorff. Transit and survey Gyldenlove. Gyldenlove appears to be as full as the previous fjord.

Marine Wildlife Observation Summary – Sept 28th

1 sighting of a seal



Daily Coverage Map

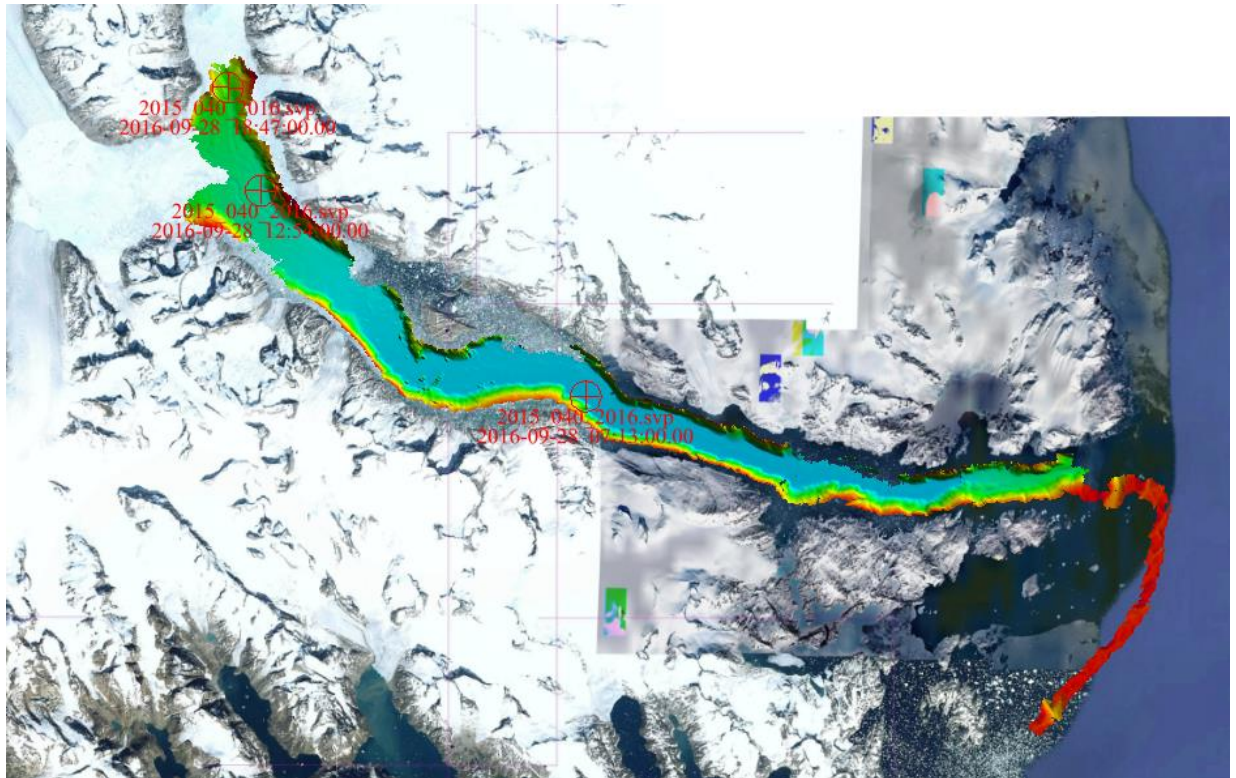


Figure 1 Survey Fimbulgletscher/Bernstorff with CTD



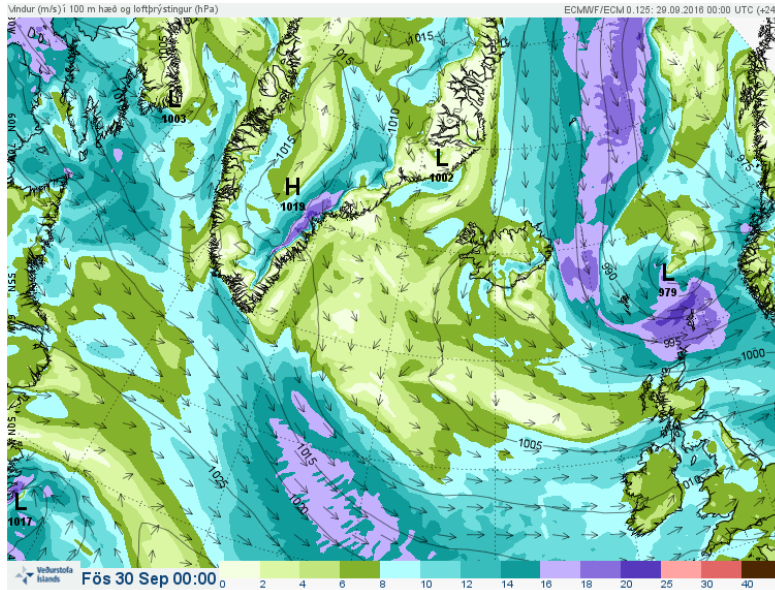
NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)

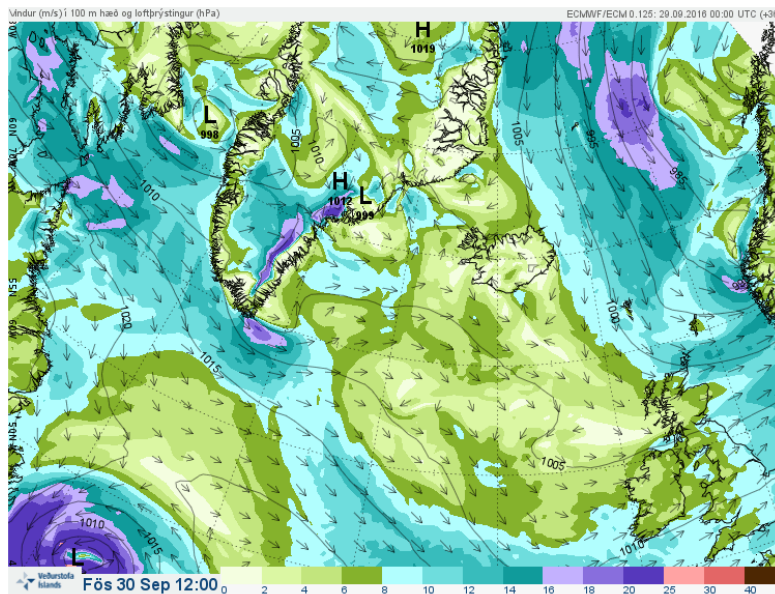
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Fri 0000 UTC



Fri 1200UTC





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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 2



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 29, 2016

Time: 1200 UTC

Current

Position

Latitude: 64° 47'37"N

Longitude: 40°01'07"W

Location: Koge, Greenland

Current

Weather

Temperature: -3°C

Wind Speed: 10 m/sec

Sea State: 1m swell

Sun Rise:

Sun Set:

Statistics

Survey Line Miles

(Day): 84 NM

Survey Line Miles

(Total): 2374 NM

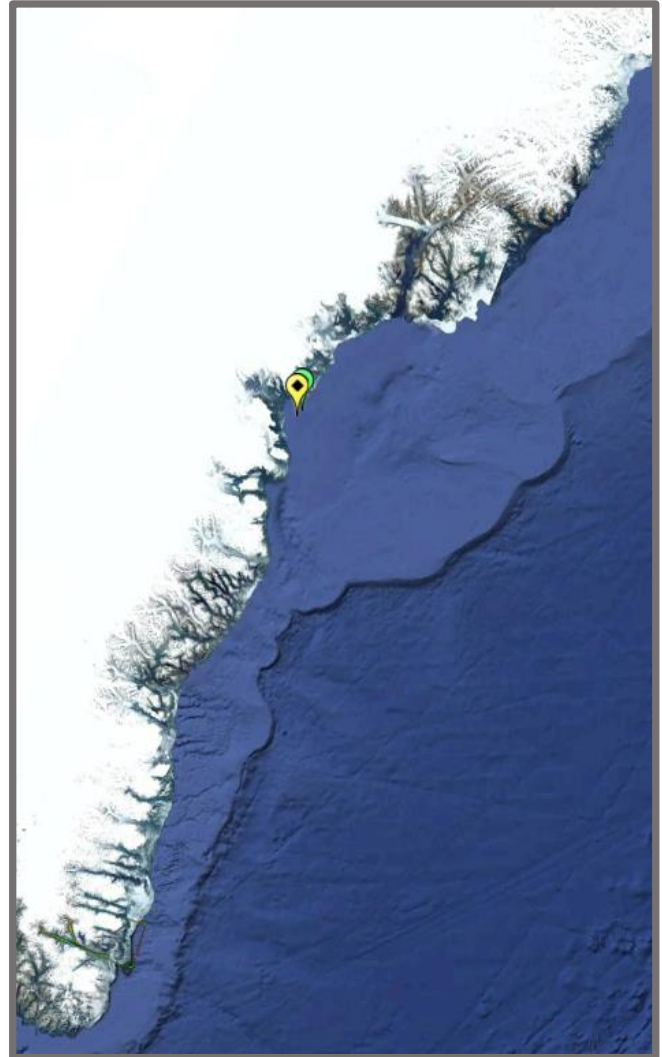
CTD Casts (Day): 3

CTD Casts (Total): 128

Underway Days: 20 Days

Average Speed: 5.6 Knots

Progress Tracking: -10 hours



Previous 24 hour Summary – Sept 29th

Survey out of Fimbulgletscher/Bernstorff. Transit and survey Gyldenlove. The ice in Gyldenlove became too dense for timely progress, the survey did not make it to the glaciers.

Next 24 hour Summary – Sept 30th

Survey out of Gyldenlove transit to Koge. Based on time and impending weather Umiivik will be passed.

Marine Wildlife Observation Summary – Sept 29th

20 sightings of birds

22 sightings of seals

2 sightings of whales



Daily Coverage Map

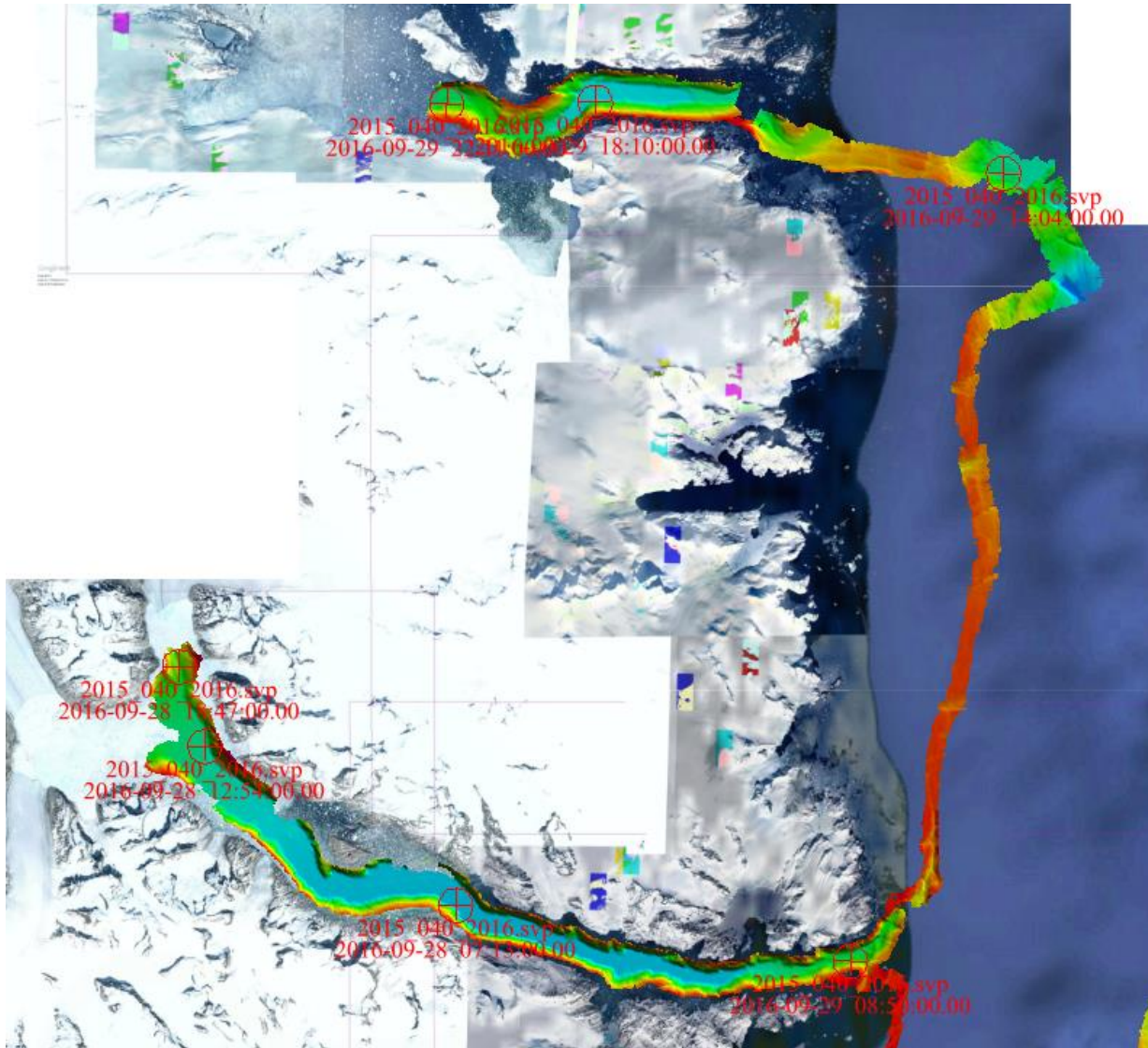


Figure 1 Survey out of Fimbulgetscher and into Gyldenlove

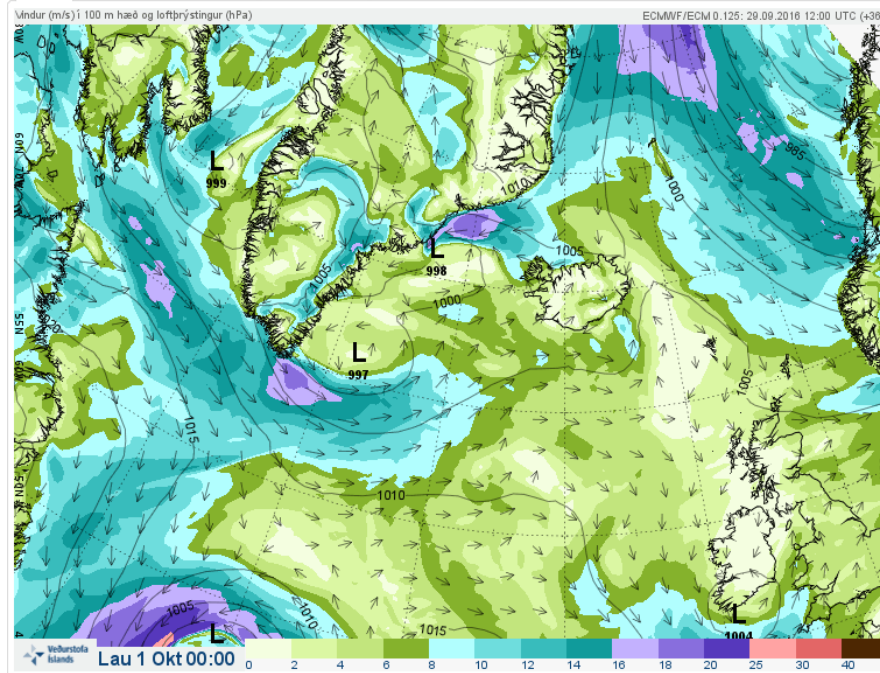


NASA Jet Propulsion Laboratory (JPL)

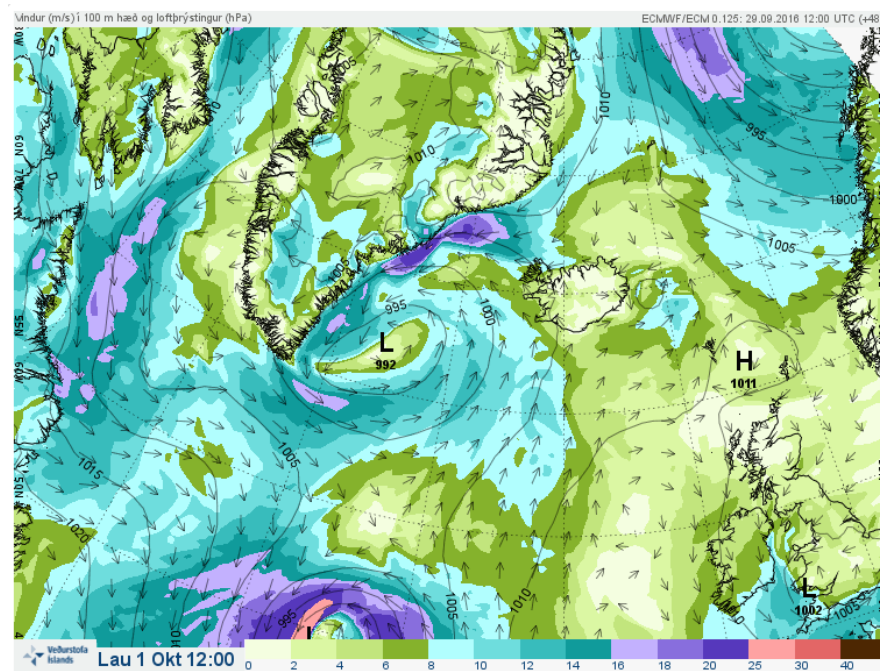
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Sat 0000 UTC



Sat 1200UTC





Daily Photo



Figure 2 Gyldenlove Fjord at dusk



Figure 3 Polar bear and cubs from Sept 26th.



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Sept. 30, 2016

Time: 1200 UTC

Current

Position

Latitude: 65°00'19"N

Longitude: 40°37'01"W

Location: Koge, Greenland

Current

Weather

Temperature: 0°C

Wind Speed: 6 m/sec

Sea State: 1m swell

Sun Rise:

Sun Set:

Statistics

Survey Line Miles
(Day): 120 NM

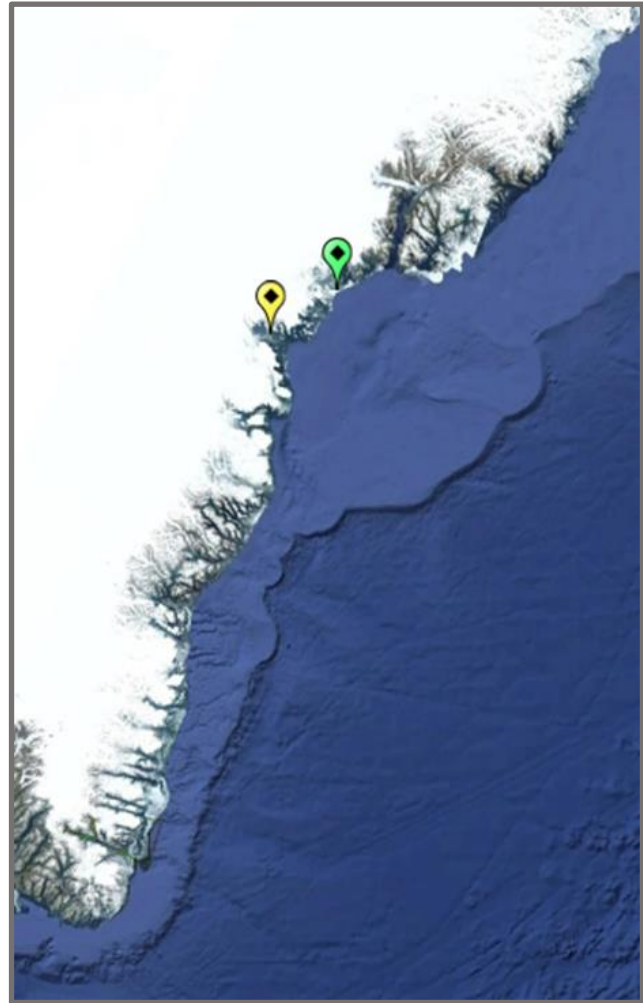
Survey Line Miles
(Total): 2494 NM

CTD Casts (Day): 4

CTD Casts (Total): 132

Underway Days: 21 Days

Average Speed: 5.6 Knots



Progress Tracking: -4 hours

Previous 24 hour Summary – Sept 30th

Survey out of Gyldenlove transit to Koge. Survey at Koge. Based on time and impending weather Umiivik will be passed

Next 24 hour Summary – Oct 1st

Complete survey at Koge. Weather appears to be holding on the coast until Sunday evening. We are planning to try to survey at Ikertivaq.

Marine Wildlife Observation Summary – Sept 30th

7 sightings of birds

27 sightings of seals

3 sightings of whales



Daily Coverage Map

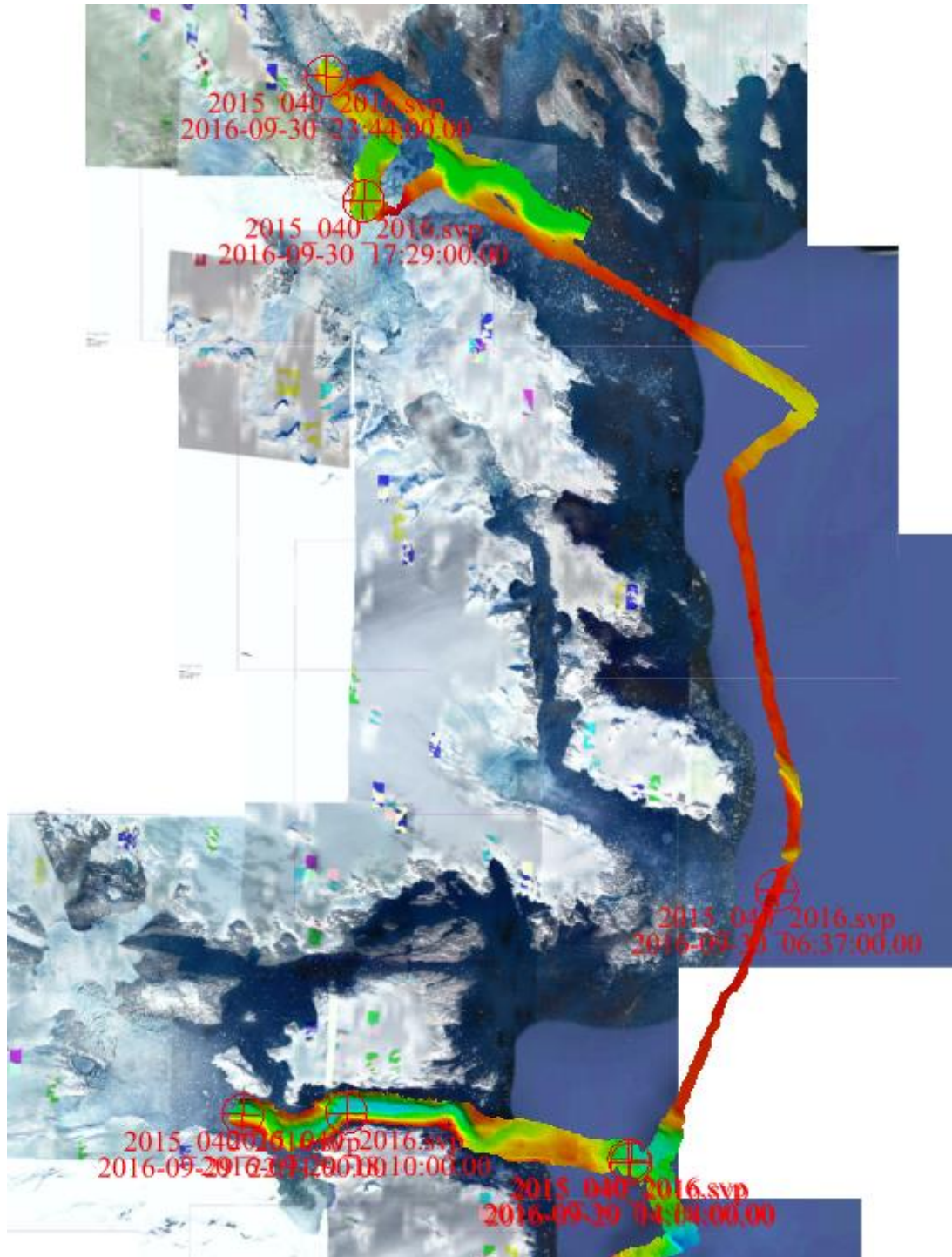


Figure 1 Survey Transit and Koge Fjord



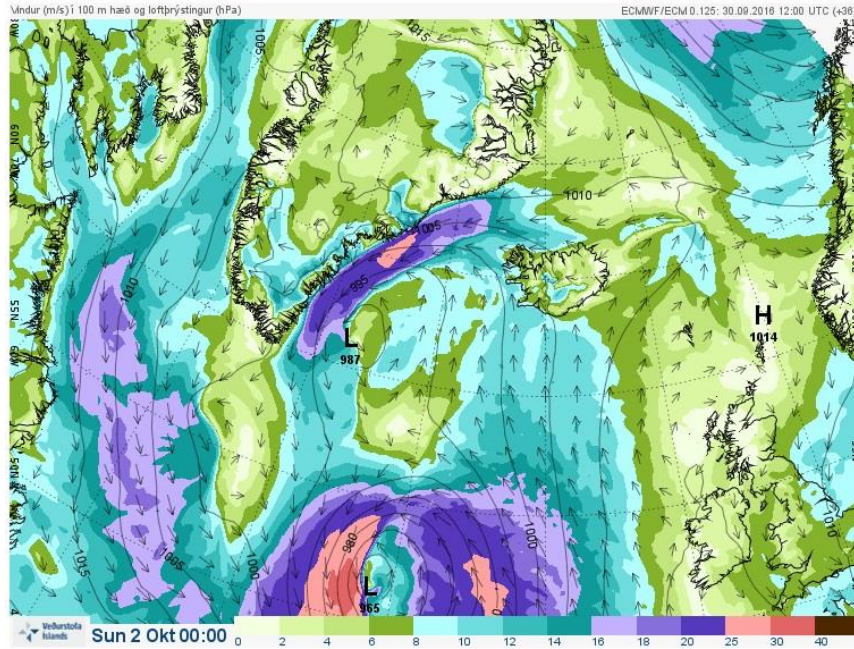
NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)

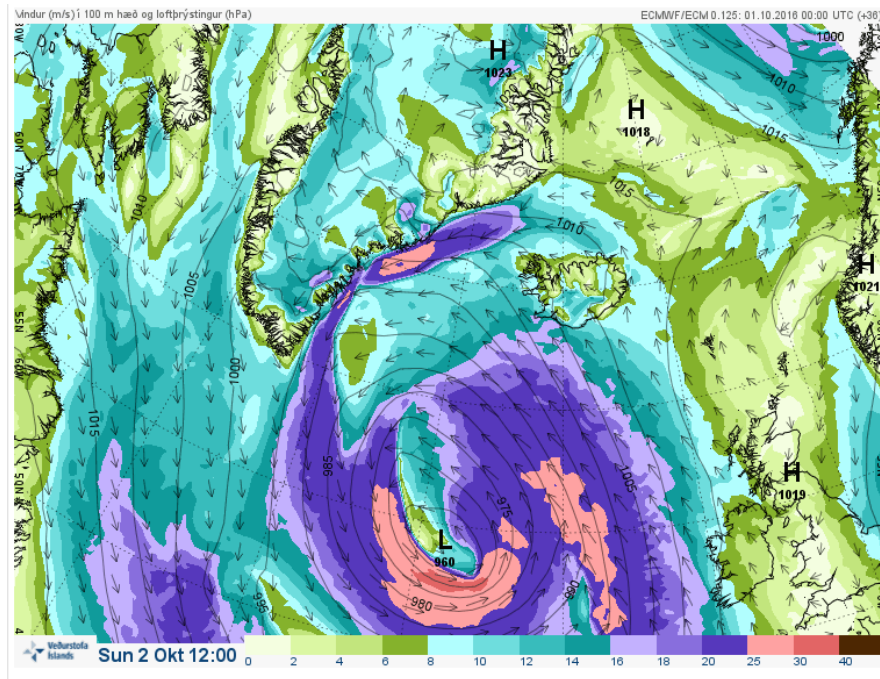
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Sun 0000 UTC



Sun 1200UTC





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Bathymetric Survey Daily Field Report

Daily Photo



Figure 1 MV Neptune in Koge Fjord



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Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Oct 1st, 2016
Time: 1200 UTC

Current Position

Latitude: 65°19'51"N
Longitude: 39°00'53"W
Location: Ikertivaq, Greenland

Current Weather

Temperature: 1°C
Wind Speed: 15 m/sec
Sea State: 2m swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles
(Day): 94 NM
Survey Line Miles
(Total): 2588 NM
CTD Casts (Day): 4
CTD Casts (Total): 136
Underway Days: 22 Days
Average Speed: 5.6 Knots
Progress Tracking: -4 hours



Previous 24 hour Summary – Oct 1st

Survey at Koge.

Next 24 hour Summary – Oct 2nd

Complete survey at Koge. Survey at Ikertivaq.

Marine Wildlife Observation Summary – Oct 1st



Daily Coverage Map

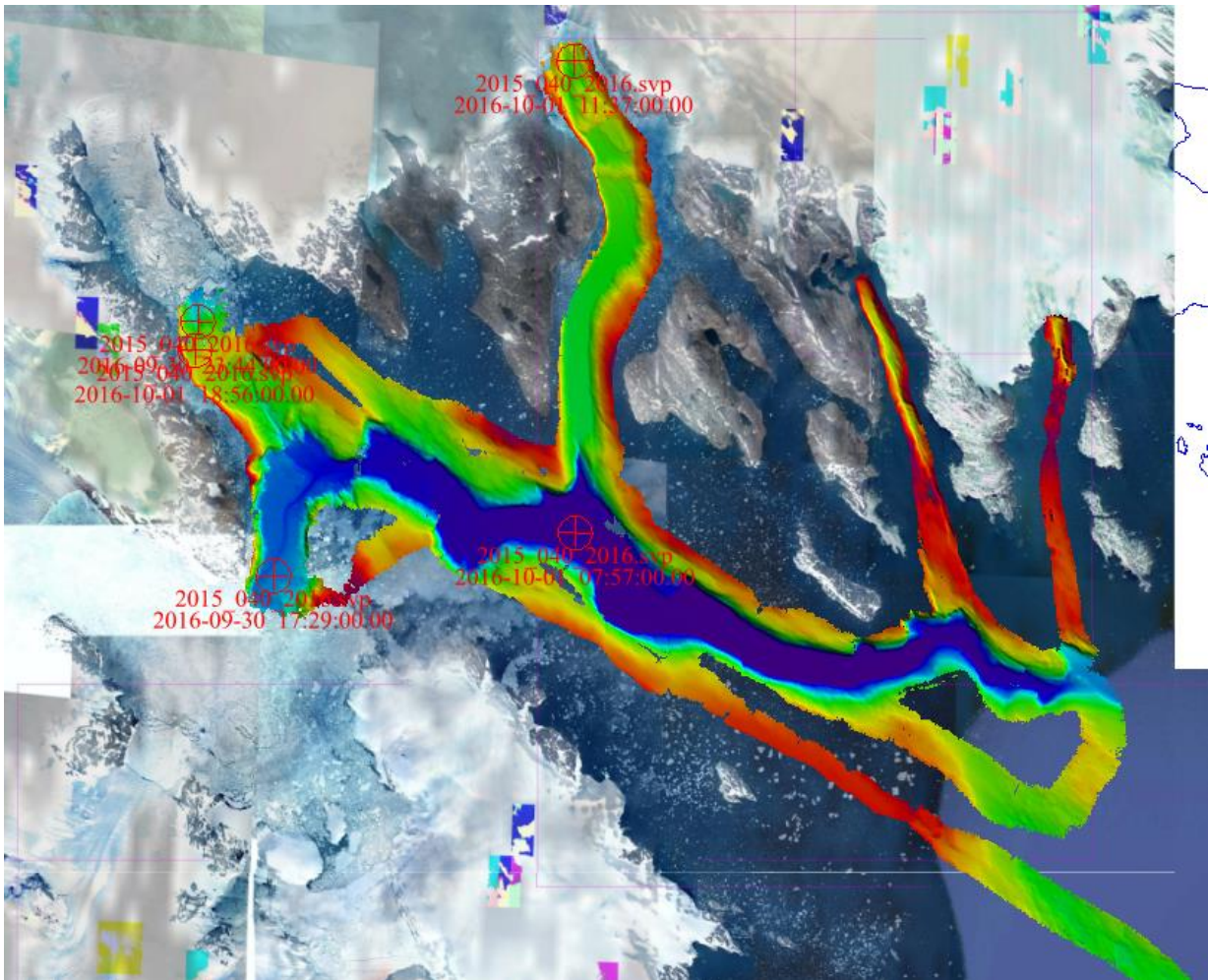
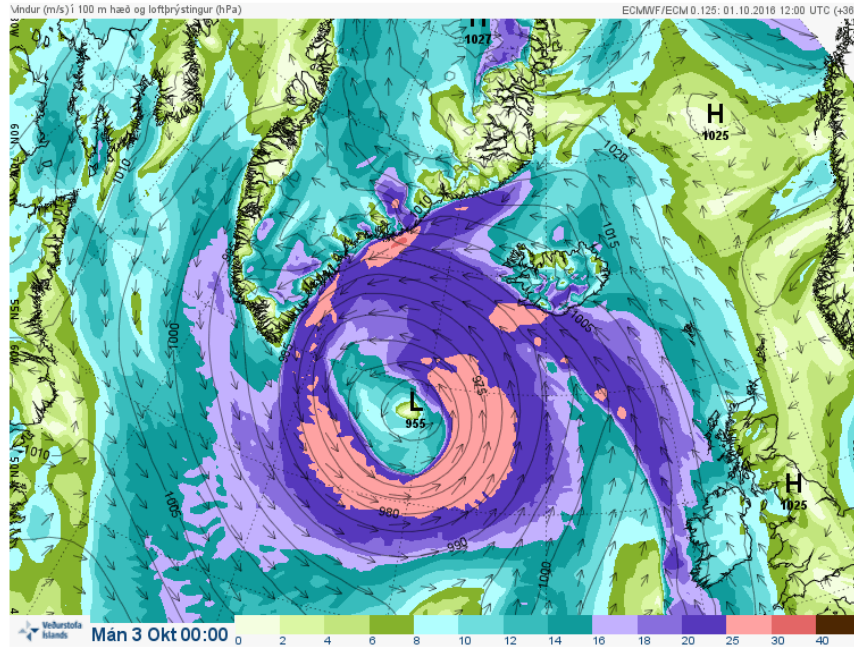


Figure 1 Koge Fjord Survey. This coverage map includes 2 days of coverage. The CTD cast at the end of the fjord will be shown on the coverage map for Oct. 2nd.

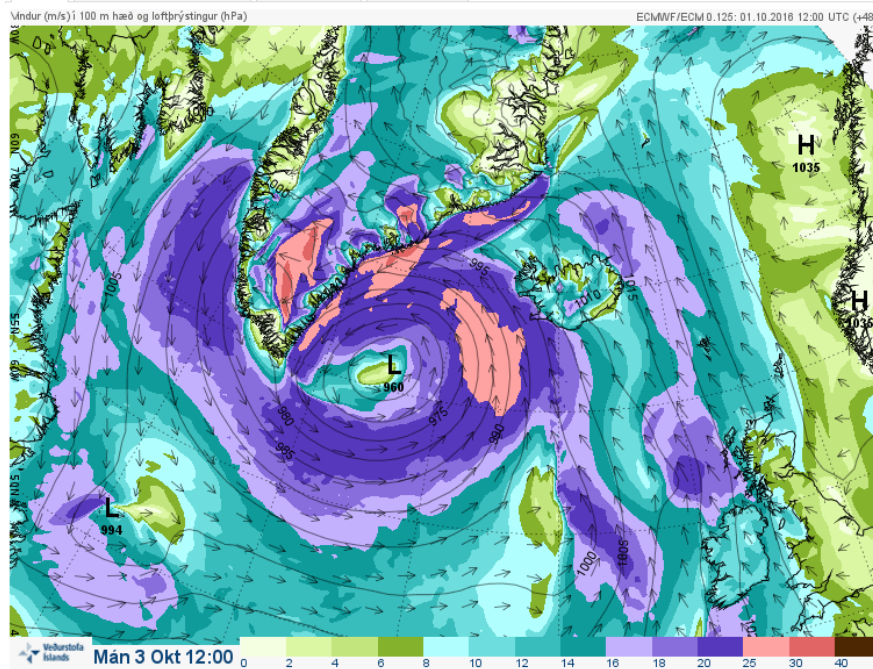


12/24 Hour Weather Forecast:

Mon 0000 UTC



Mon 1200UTC





NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 1 Koge Bugt Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Oct 2nd, 2016
Time: 1200 UTC

Current Position

Latitude: 65°33'36"N
Longitude: 39°26'47"W
Location: Ikertivaq, Greenland

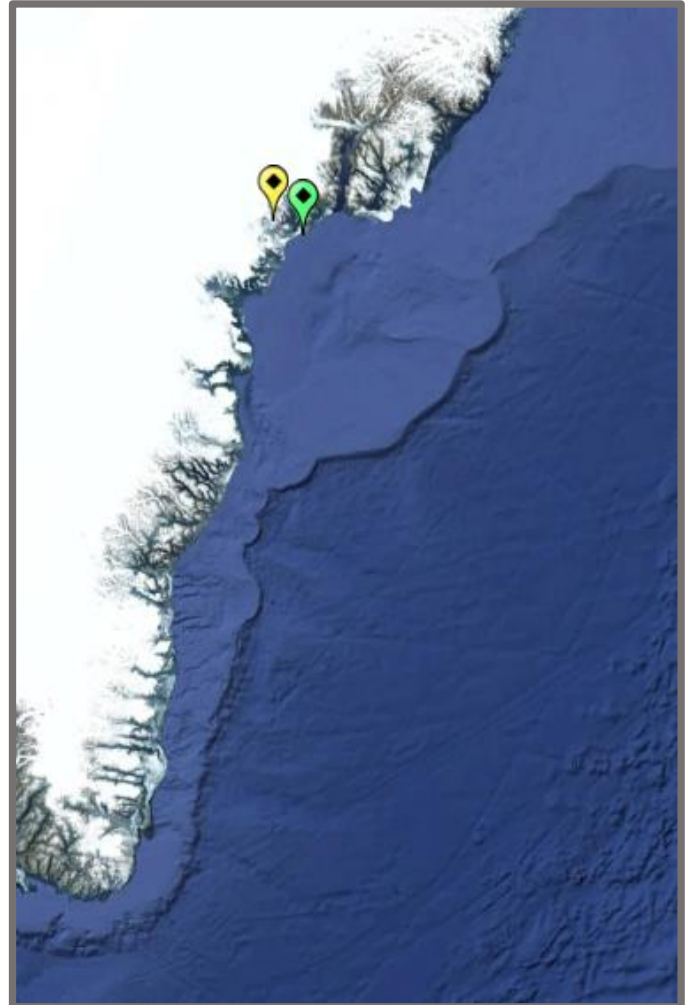
Current Weather

Temperature: 3°C
Wind Speed: 25 m/sec
Sea State: 2.5 m swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles
(Day): 126 NM
Survey Line Miles
(Total): 2714 NM
CTD Casts (Day): 8
CTD Casts (Total): 144
Underway Days: 23 Days
Average Speed: 5.4 Knots

Progress Tracking: -10 hours



Previous 24 hour Summary – Oct 2nd

Survey at Ikertivaq.

Next 24 hour Summary – Oct 3rd

Complete survey at Ikertaviq.

Marine Wildlife Observation Summary – Oct 2nd

8 sightings of birds
9 sightings of seals
4 sightings of whales



Daily Coverage Map

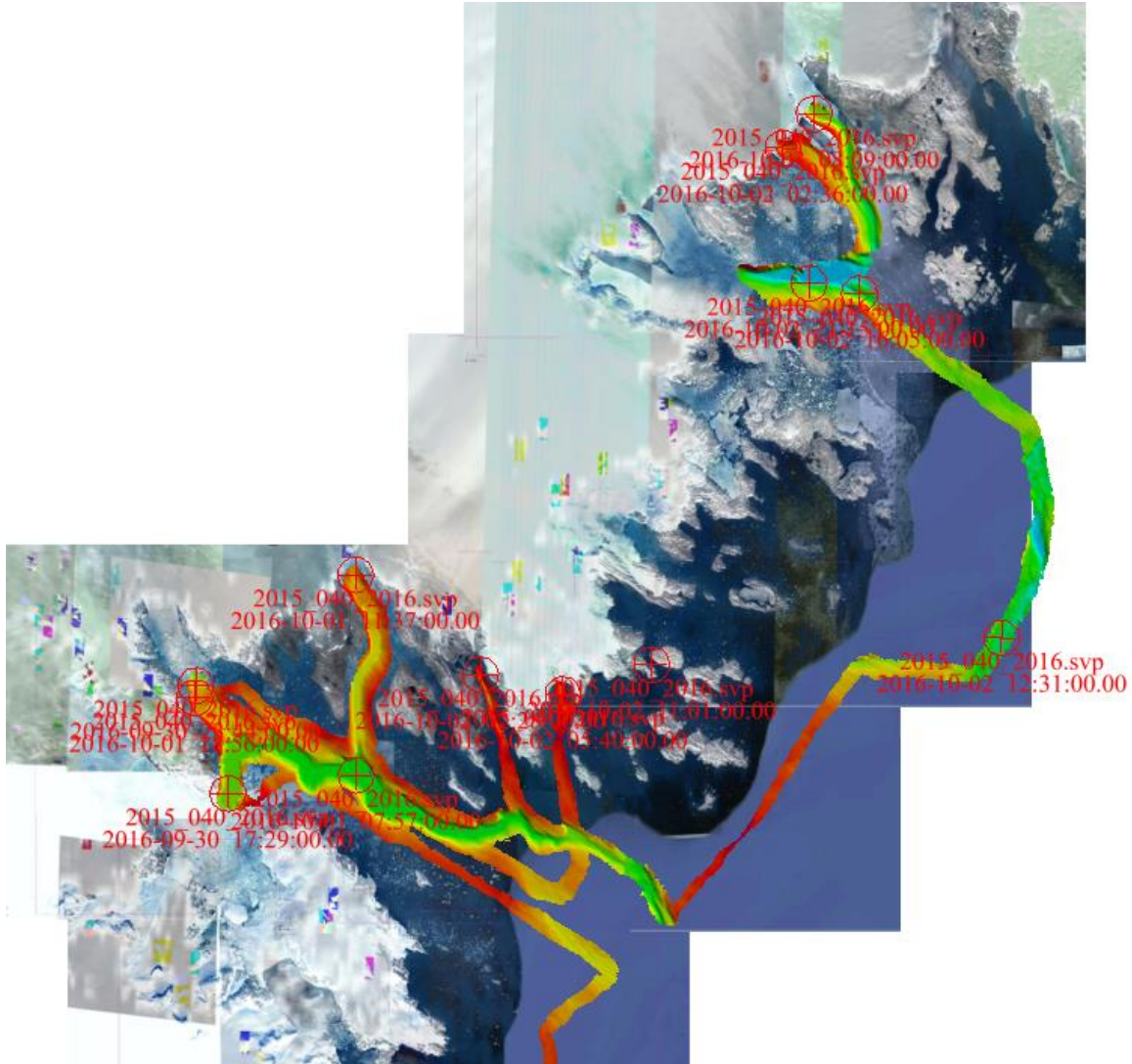


Figure 1 Koge Bugt and Ikertavik Fjords



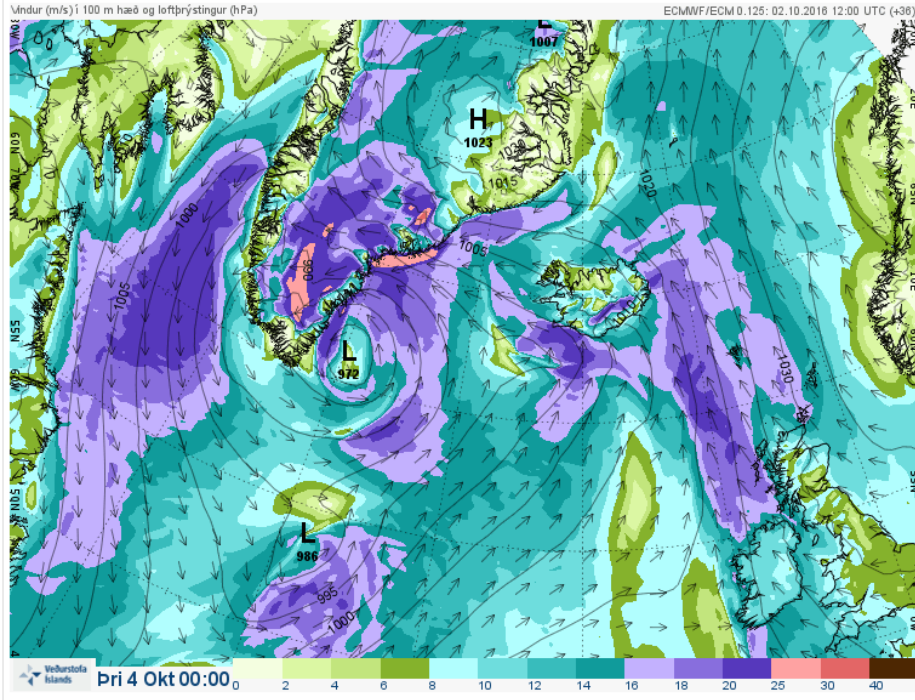
NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)

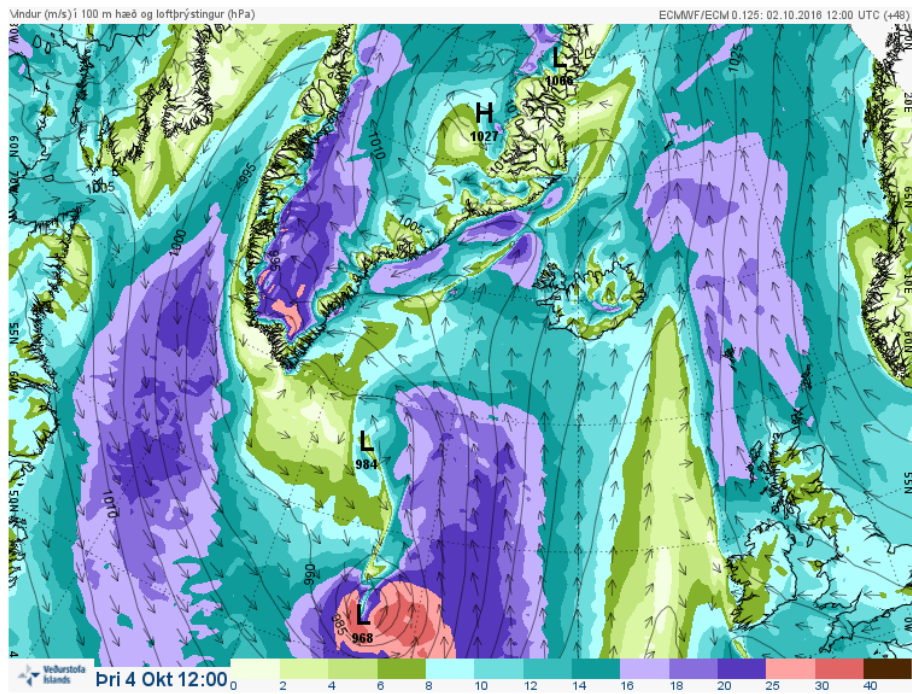
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Tues 0000 UTC



Tues 1200UTC





NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 1 Iceberg in Ikertavik Fjord



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Oct 3rd, 2016

Time: 1200 UTC

Current Position

Latitude: 65°35'52"N

Longitude: 38°04'24"W

Location: Heim Gletscher, Greenland

Current

Weather

Temperature: 5°C

Wind Speed: 25 m/sec

Sea State: 5 m swell

Sun Rise:

Sun Set:

Statistics

Survey Line Miles

(Day): 107 NM

Survey Line Miles

(Total): 2821 NM

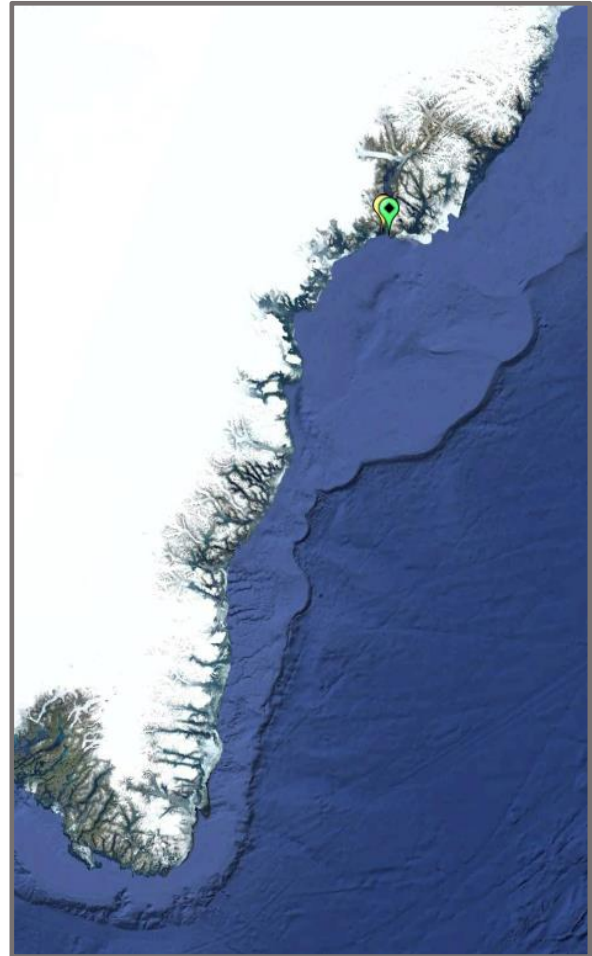
CTD Casts (Day): 6

CTD Casts (Total): 150

Underway Days: 24 Days

Average Speed: 5.4 Knots

Progress Tracking: -10 hours



Previous 24 hour Summary – Oct 3rd

Complete survey at Ikertivaq including two alternate lines

Next 24 hour Summary – Oct 4th

Survey alternate line, transit to Sermilik, survey at Sermilik

Marine Wildlife Observation Summary – Oct 3rd

Seals - 8

Birds - 6



Daily Coverage Map

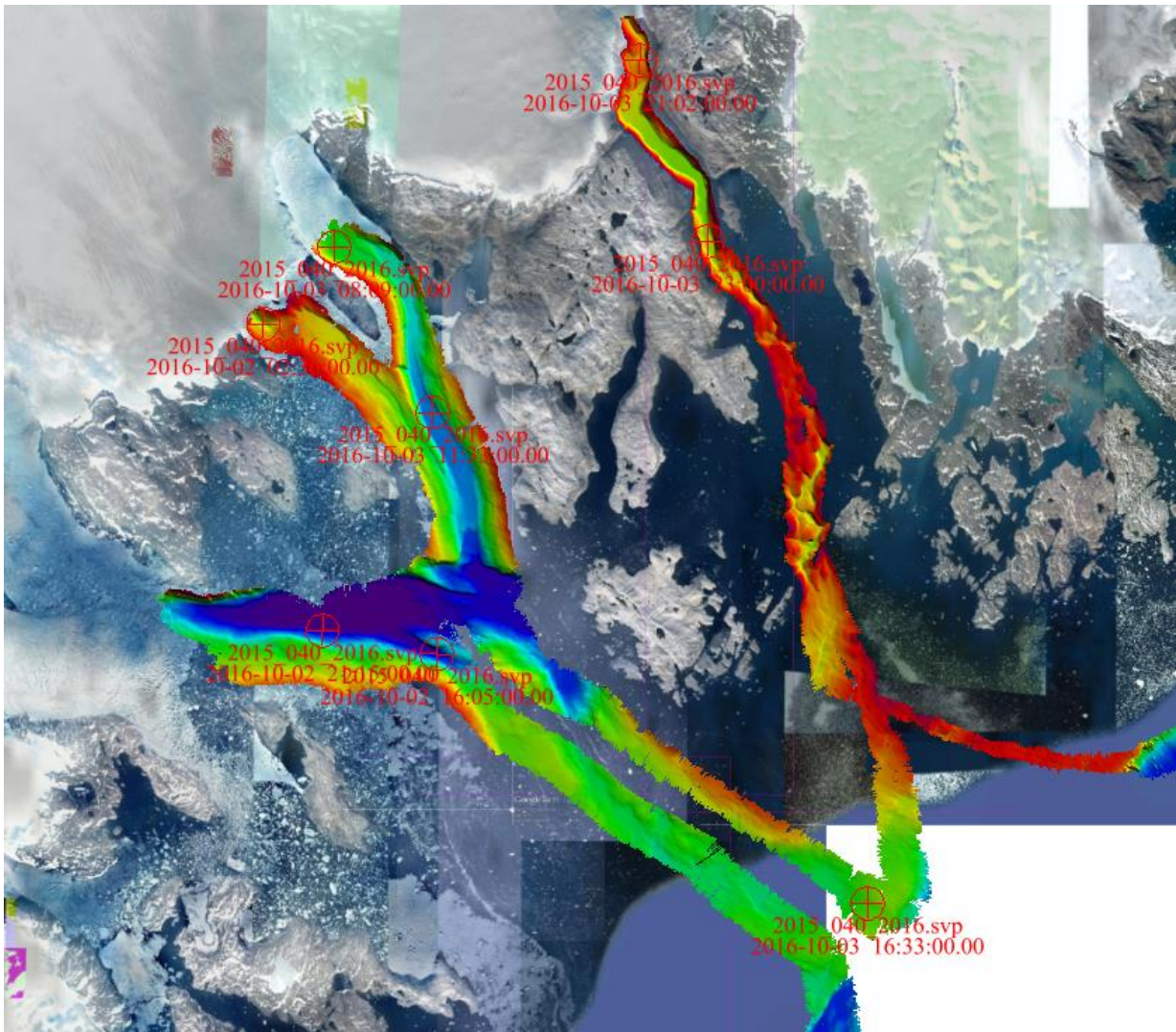


Figure 1 Ikertavik Fjords

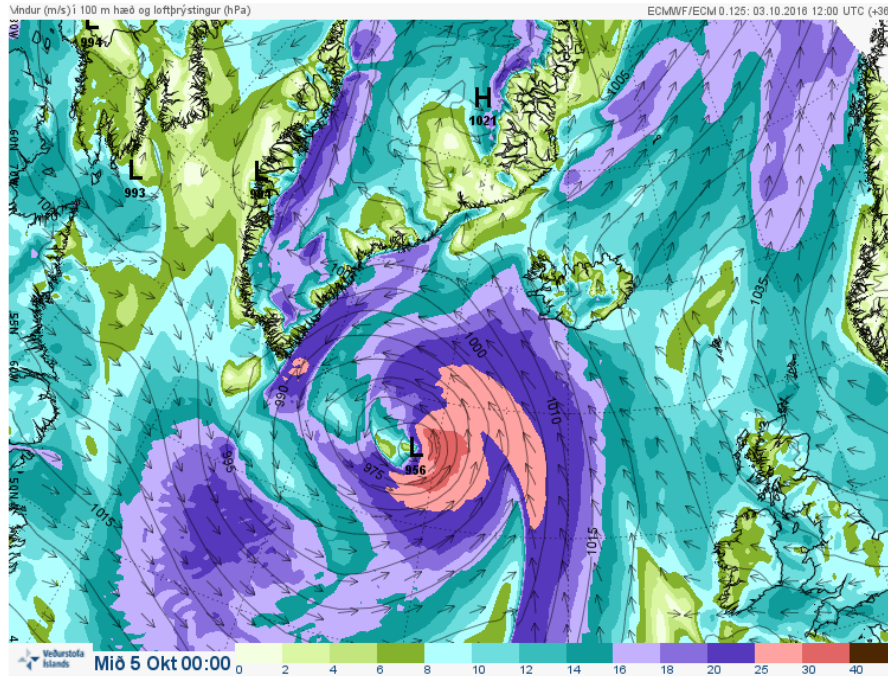


NASA Jet Propulsion Laboratory (JPL)

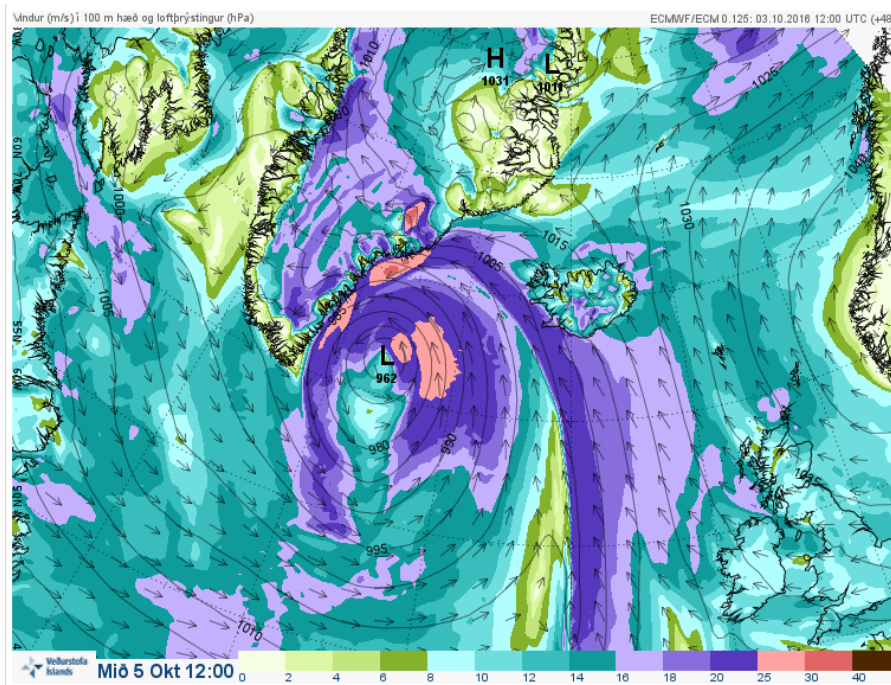
Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

12/24 Hour Weather Forecast:

Wed 0000 UTC



Wed 1200UTC





NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Daily Photo



Figure 1 AML CTD cast on night shift in Ikertivaq North-North



NASA Jet Propulsion Laboratory (JPL)

Oceans Melting Greenland (OMG)
Bathymetric Survey Daily Field Report

Date: Oct 4th, 2016
Time: 1200 UTC

Current Position

Latitude: 65°36'35"N
Longitude: 37°07'41"W
Location: Kulusuk, Greenland

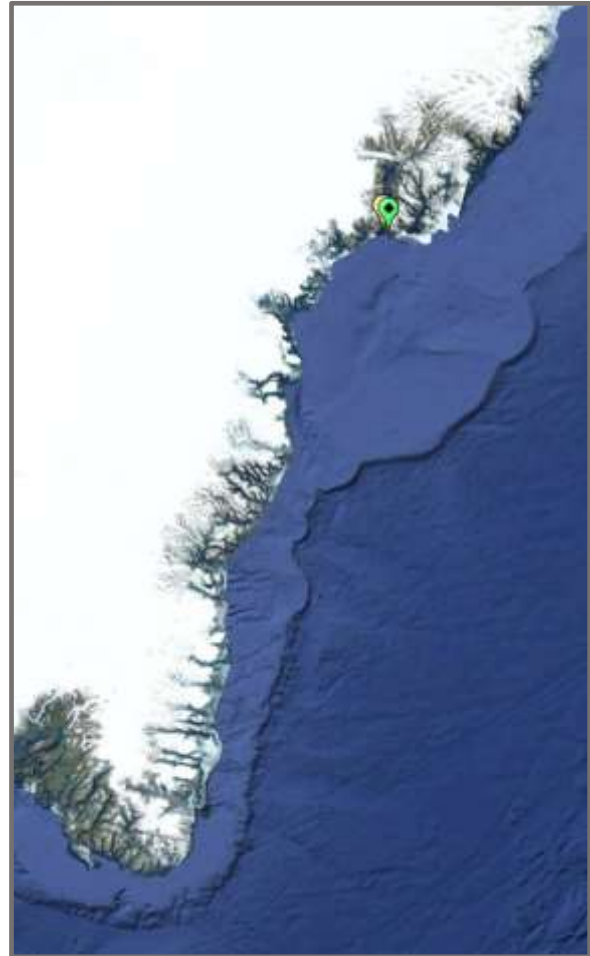
Current Weather

Temperature: 5°C
Wind Speed: 30 m/sec
Sea State: 8 m swell
Sun Rise:
Sun Set:

Statistics

Survey Line Miles
(Day): 121 NM
Survey Line Miles
(Total): 2942 NM
CTD Casts (Day): 6
CTD Casts (Total): 156
Underway Days: 25 Days
Average Speed: 5.4 Knots

Progress Tracking:



Previous 24 hour Summary – Oct 4th

Survey alternate line, transit to Sermilik, survey at Sermilik

Next 24 hour Summary – Oct 5th

Transit to Kulusuk, depart vessel

Marine Wildlife Observation Summary – Oct 4th



Daily Coverage Map

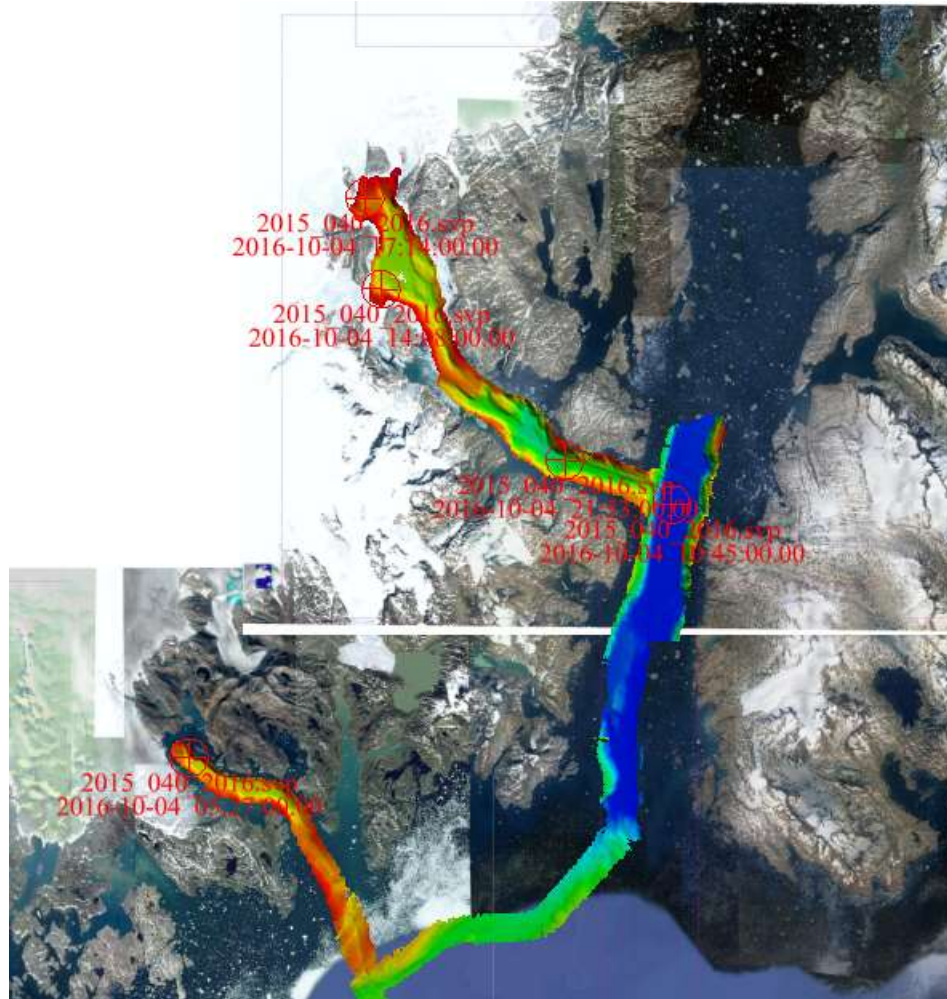


Figure 1 Heim Fjord