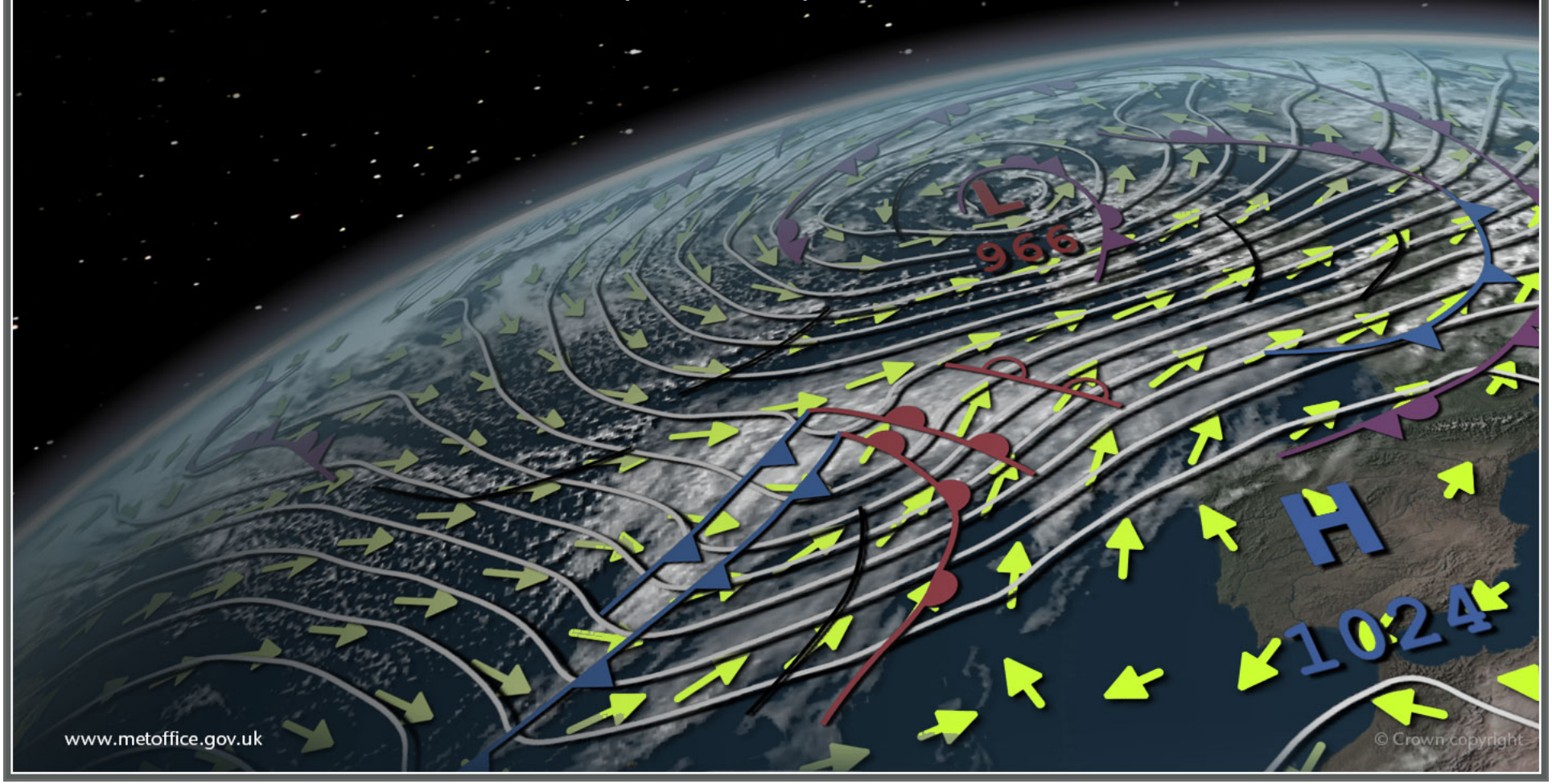
# Overview of ISMAR Campaigns

Stuart Fox

ISMAR workshop, Paris, September 2015



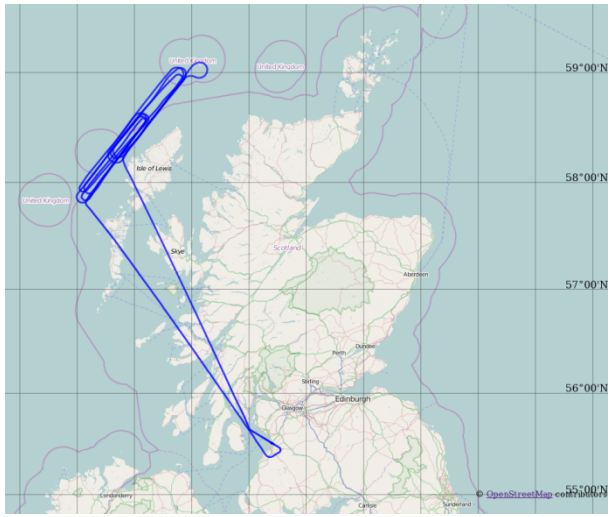

www.metoffice.gov.uk

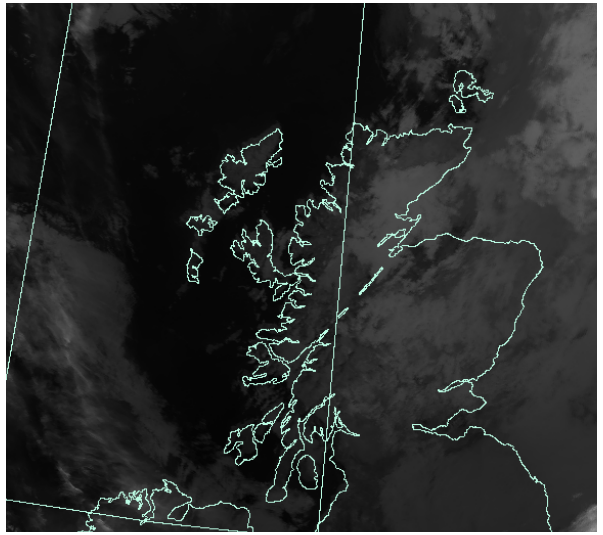
# STICCS

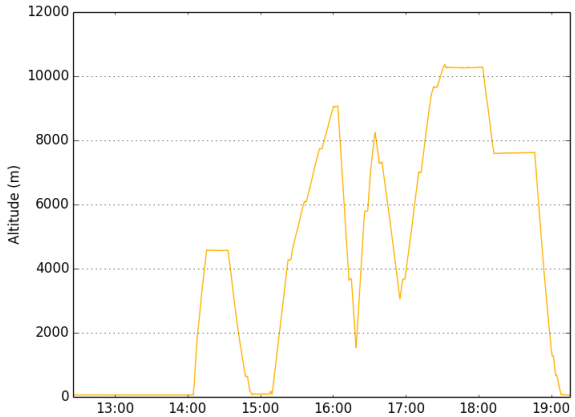
- Submillimetre Trials in Clear and Cloudy Skies
- November/December 2014
- Based in Prestwick, Scotland
- First ISMAR campaign:
  - Perform flights in a variety of conditions
  - Identify any issues with the instrument
  - Understand in-flight performance
  - Gather data for initial scientific studies

# STICCS flights – B875

## Clear skies

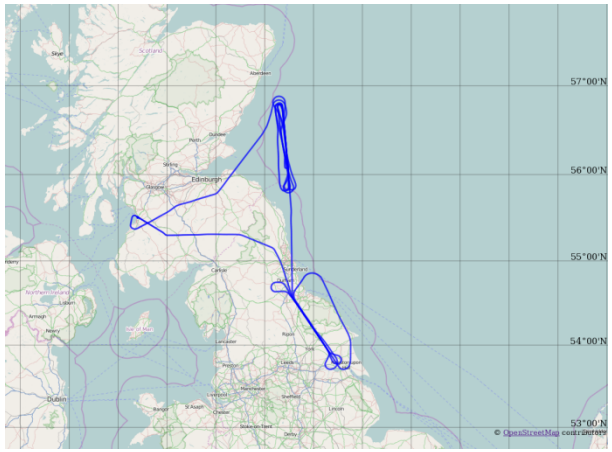


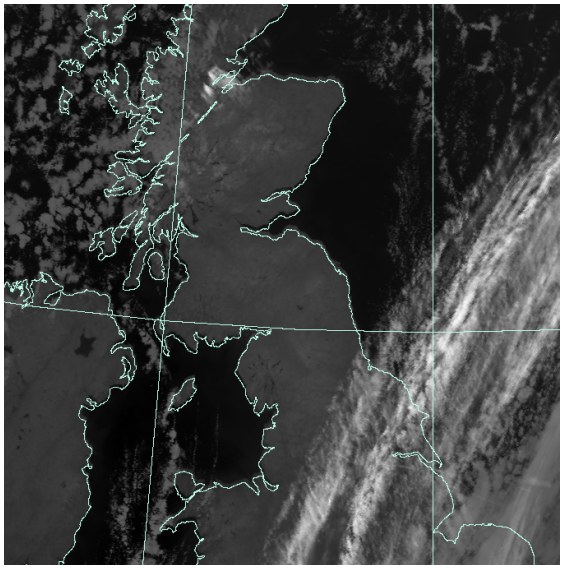



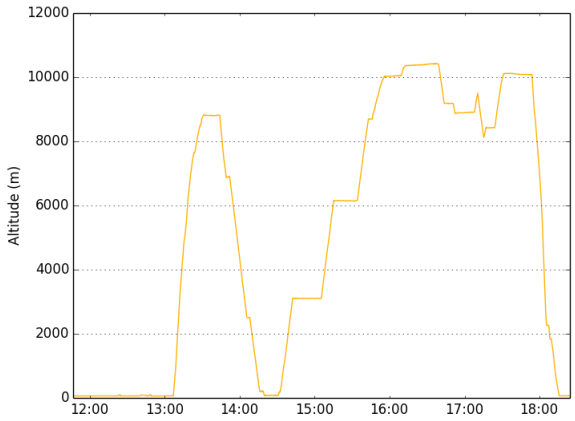



# STICCS flights – B878

Clear skies + Ci

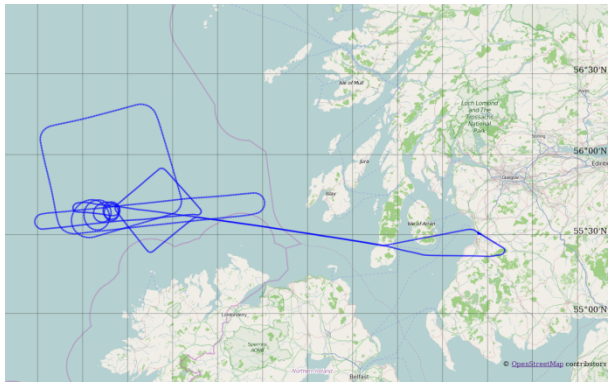


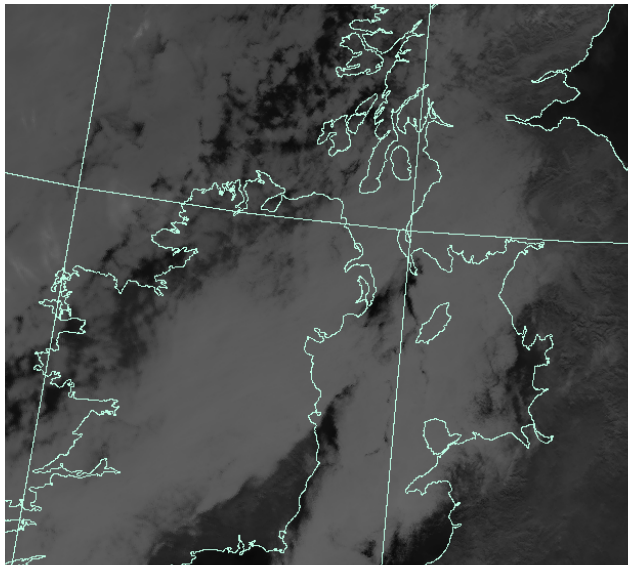



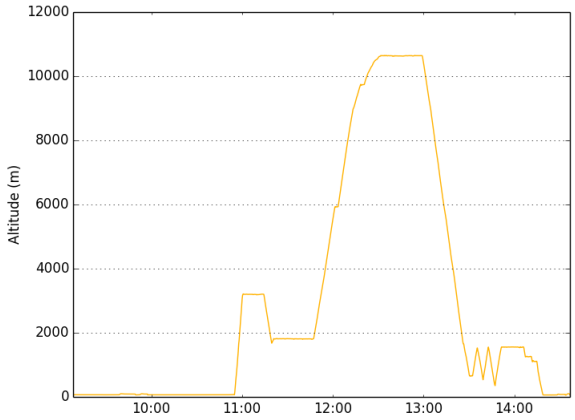



# STICCS flights – B879

## Stratocumulus

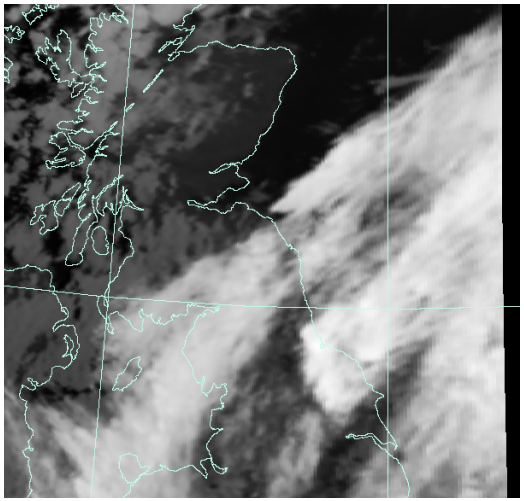


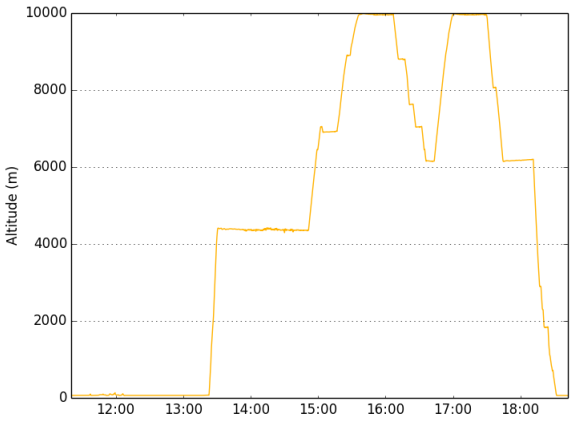





# STICCS flights – B884

## Cirrus



# Issues identified

- Thermal stability of receivers
- Intermittent excess noise
- Calibration target temperature biases

...but...

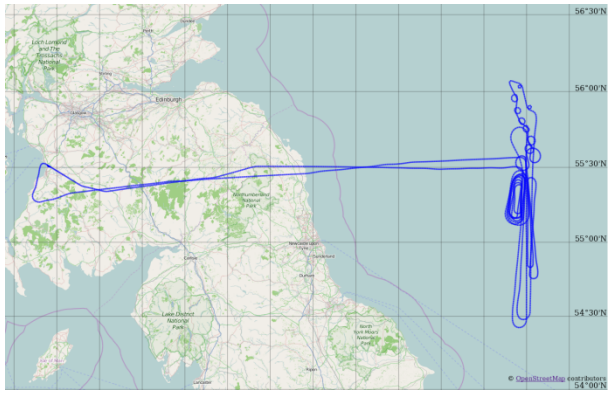
- Instrument survived aircraft lightning strike!

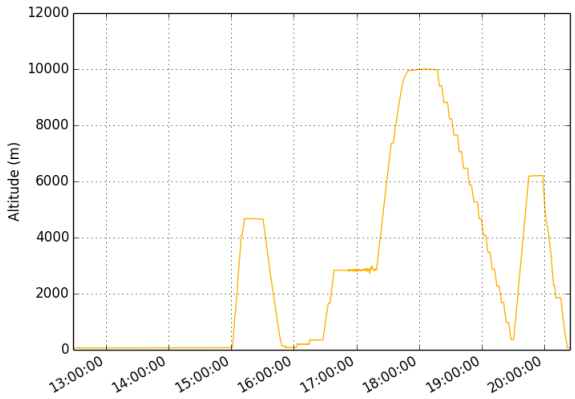
# COSMICS

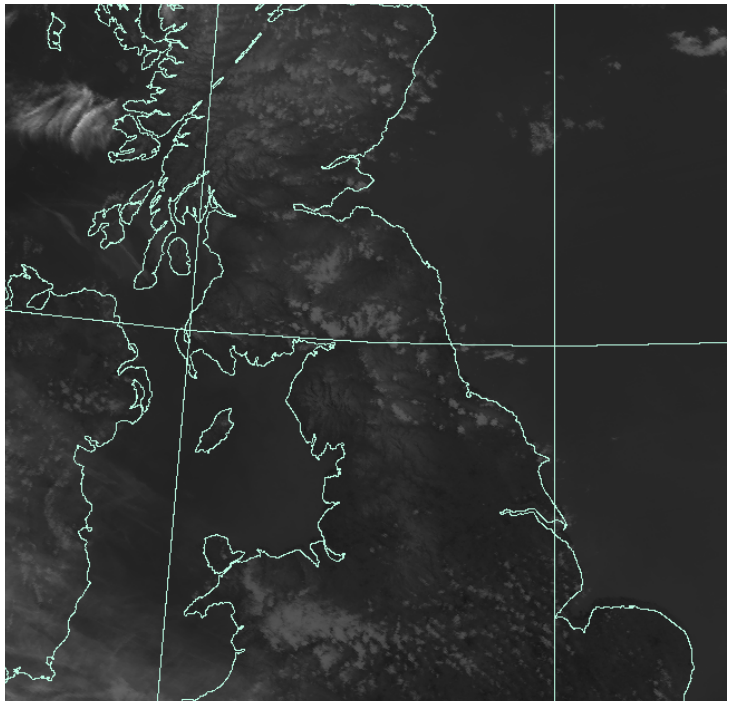
- Cold-air Outbreak and Sub-Millimetre Ice Cloud Study
- March 2015
- Based in Prestwick with mini-detachment to Keflavik, Iceland
- Further case-studies for ISMAR science, improvements to instrument from STICCS
- Problems with instrument initially led to a number of aborted flights – eventually resolved
- Aircraft power issues cut short some flights
- Still got 5 good science flights

# COSMICS flights – B893

## Clear skies



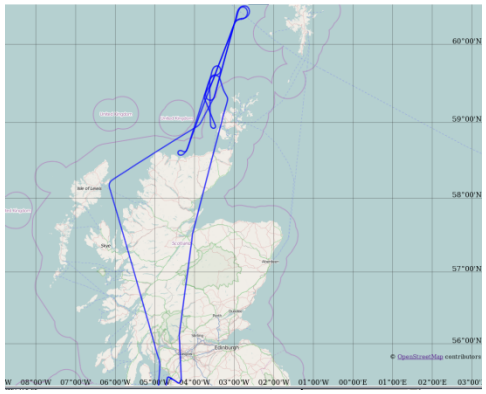



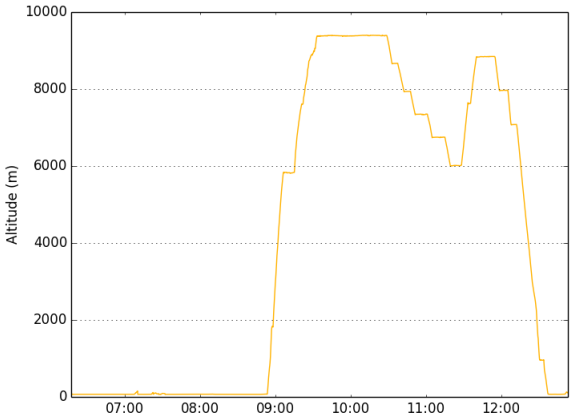



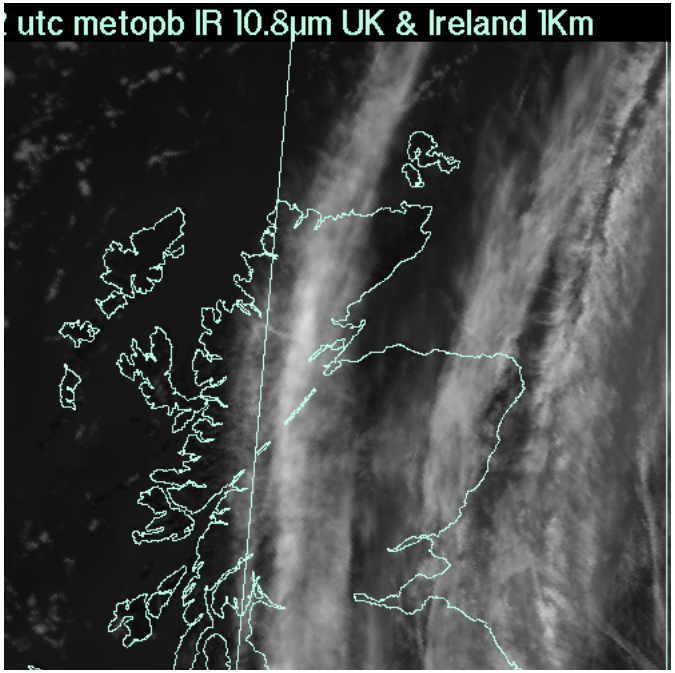
www.metoffice.gov.uk

# COSMICS flights – B895

## Cirrus

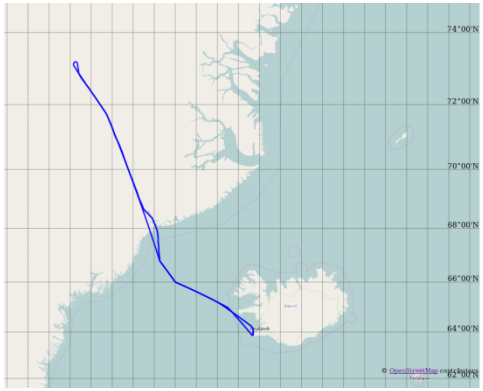


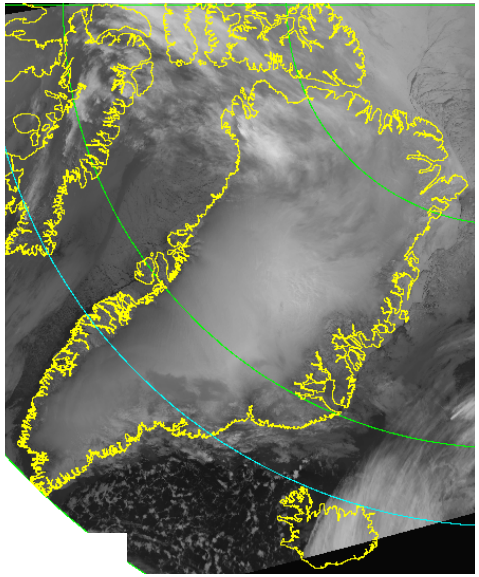


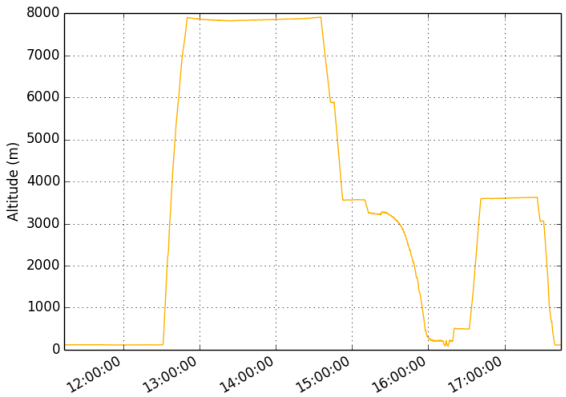



# COSMICS flights – B896

## Cold surfaces

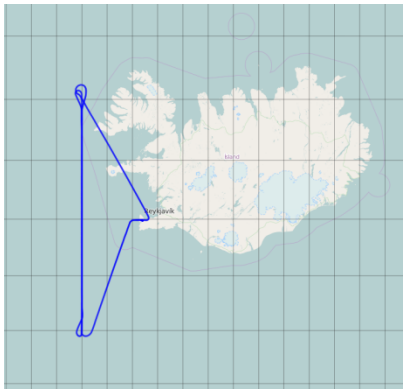


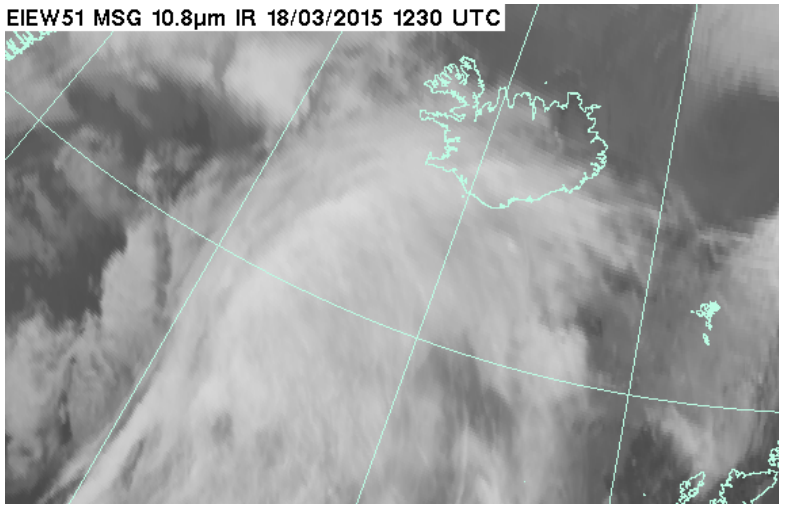



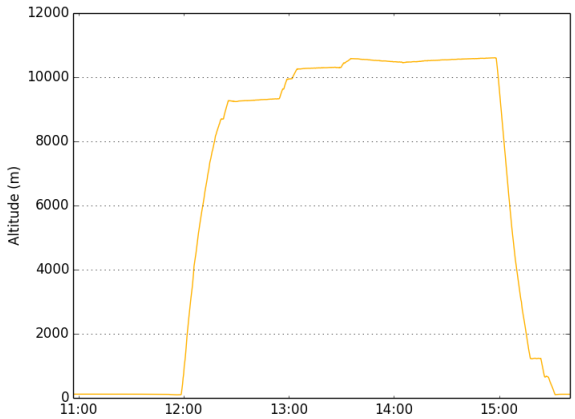


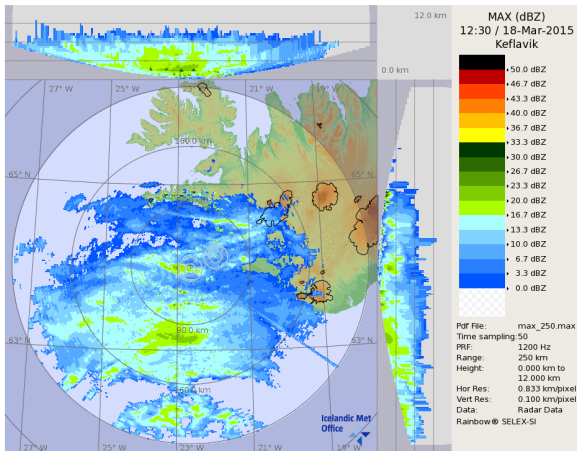
# COSMICS flights – B897

## Precipitating frontal system





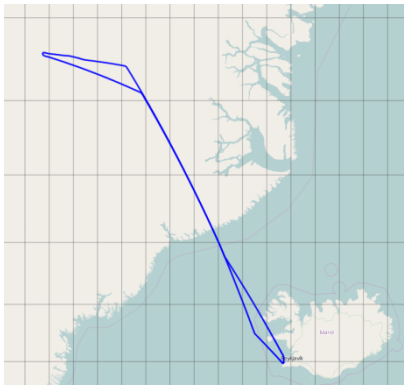



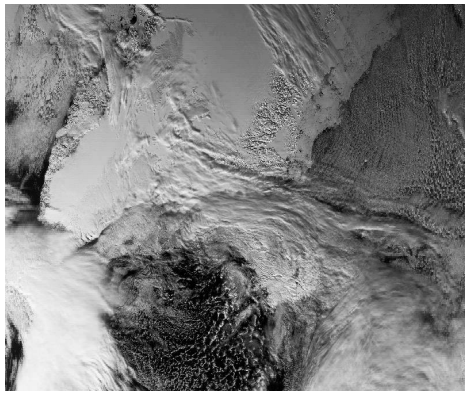



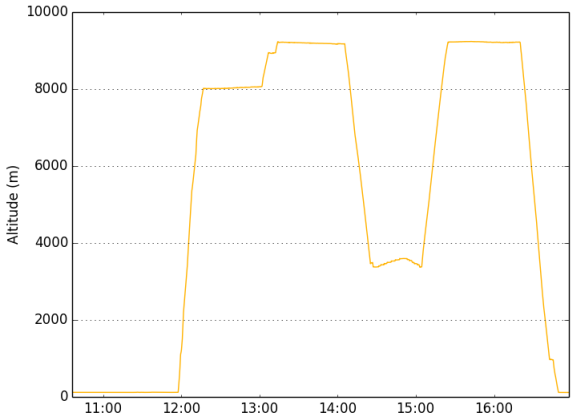

Radar from Icelandic Met Office

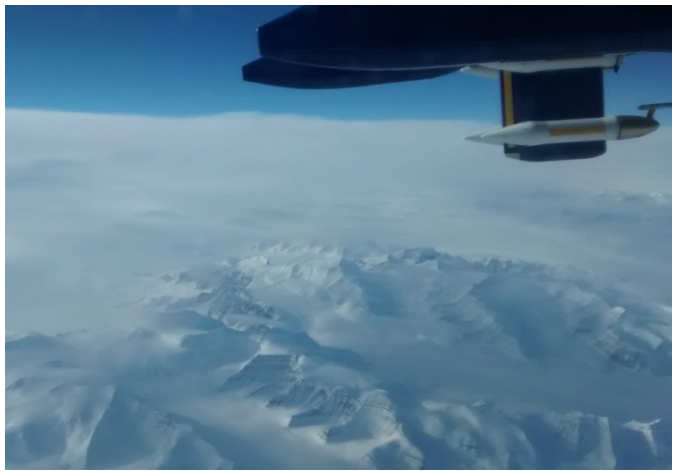
# COSMICS flights – B898

## Cold surfaces







Met Office

# Questions?