

The Observation Network of the Icelandic Meteorological Office

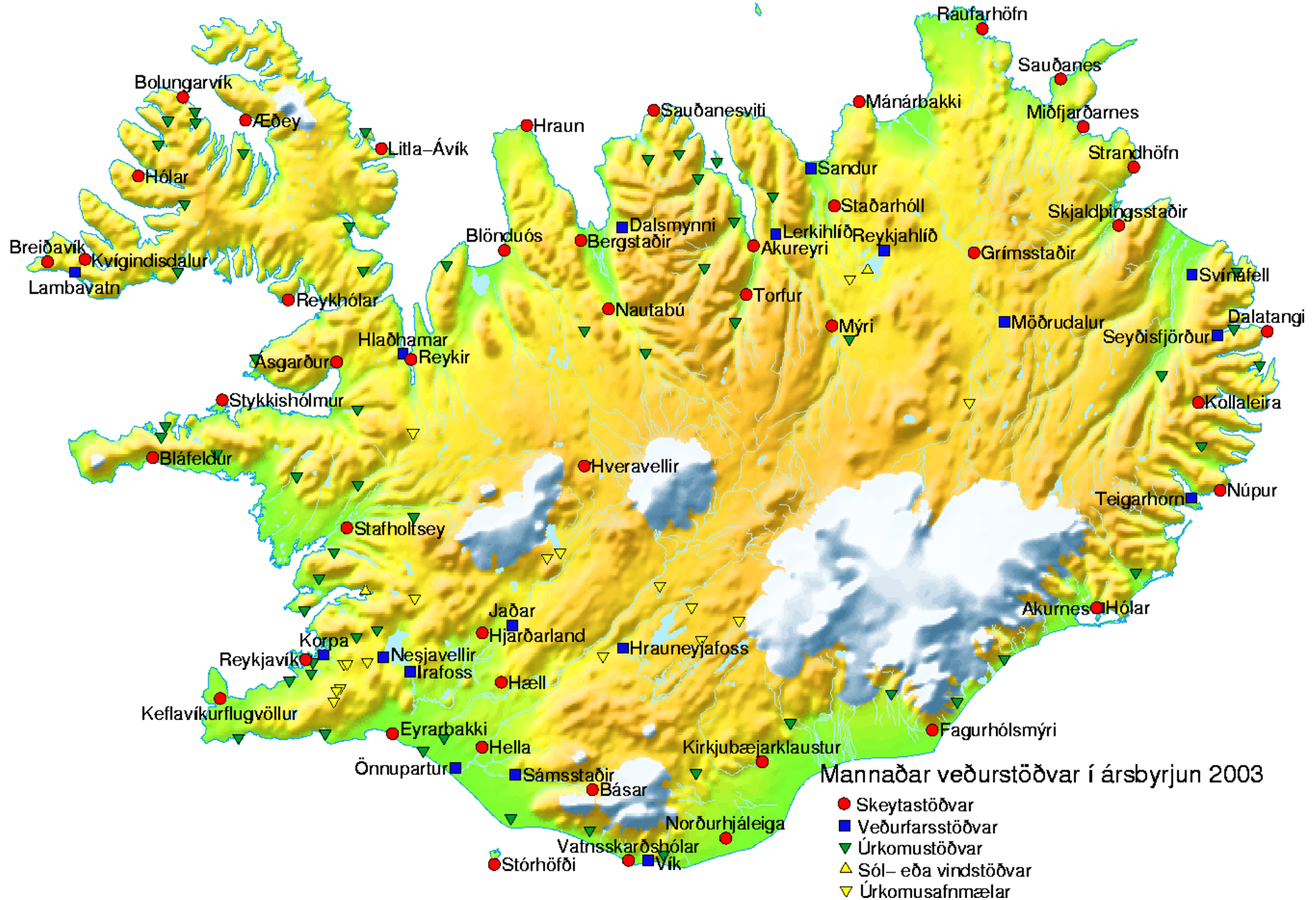
Manned Weather Stations

- Synoptic stations (44), only 11 report every 3 hours; total of about 250 observations per day
- Climatic stations (19), three observations per day; monthly report
- Precipitation stations (56) reporting once per day



Sámsstaðir S-Iceland

Manned weather stations 2003



Automatic Weather Stations

- Most stations register measurements every 10 min
- IMO operates 72 AWS
- Other gov. agencies operate 98 AWS
- IMO has access to over 150 AWS
- Data is retrieved from 120-140 AWS every hour

Automatic Weather Stations

Most stations measure

- Air temperature (at 2 m above ground)
- Air humidity (at 2 m above ground)
- Wind (at 10 m above ground, ave speed, gust, SD, ave direction, SD)

Many measure

- Air pressure
- Precipitation

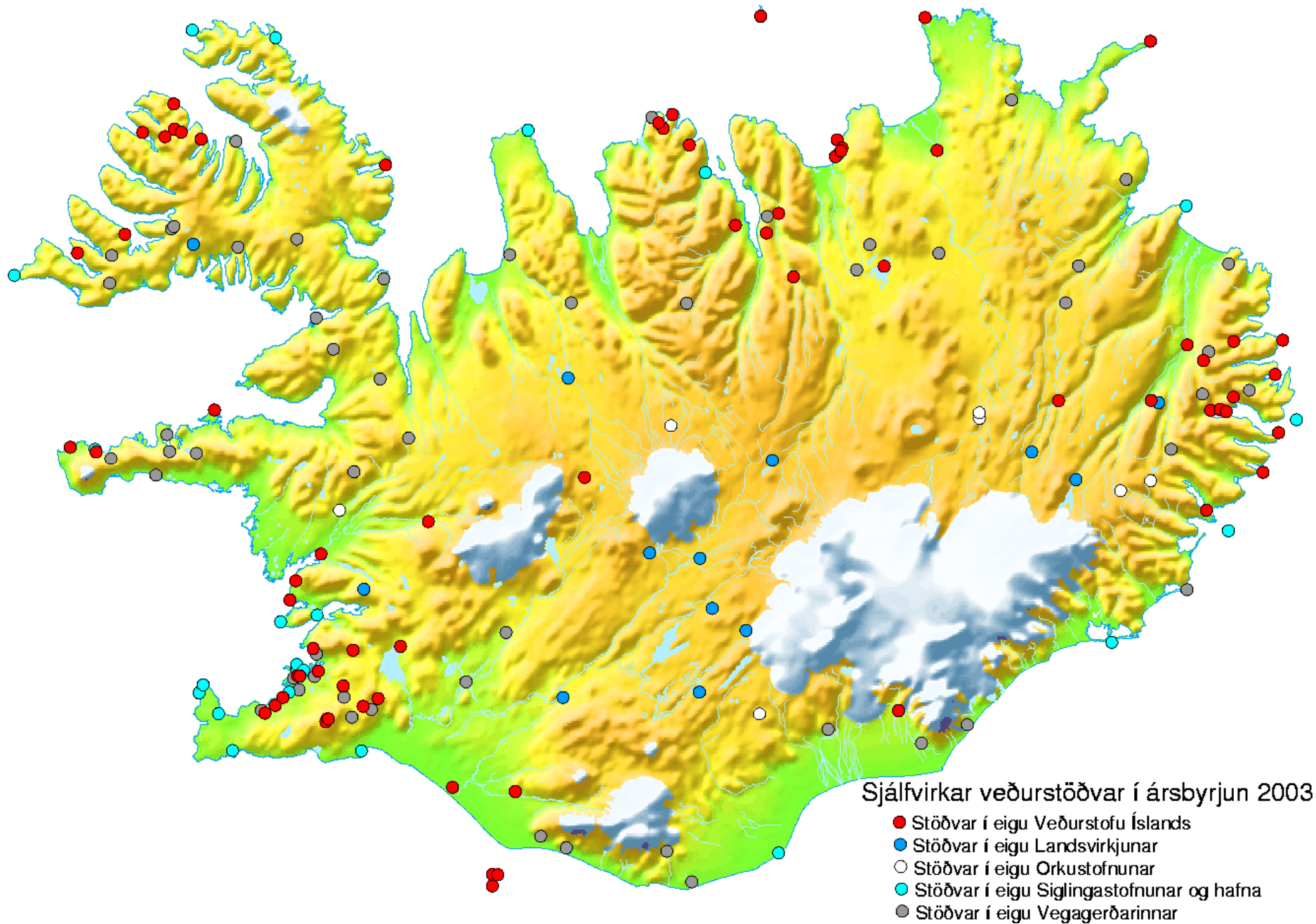
A few measure

- Ground temperature (at 5 cm above ground)
- Soil temperature (at 10, 20, 50, 100 cm depth)
- Global radiation
- Snow depth
- Sea temperature



Vattarnes E-Iceland

Automatic weather stations 2003



Ship Observations

- Ten ships are reporting weather every 3 hours when at sea
- These include merchant, research and coast guard vessels

Upper-Air station at Keflavík Airport

- In cooperation with ICAO and US Navy
- Two soundings per day, at 00 and 12 UTC

ASAP

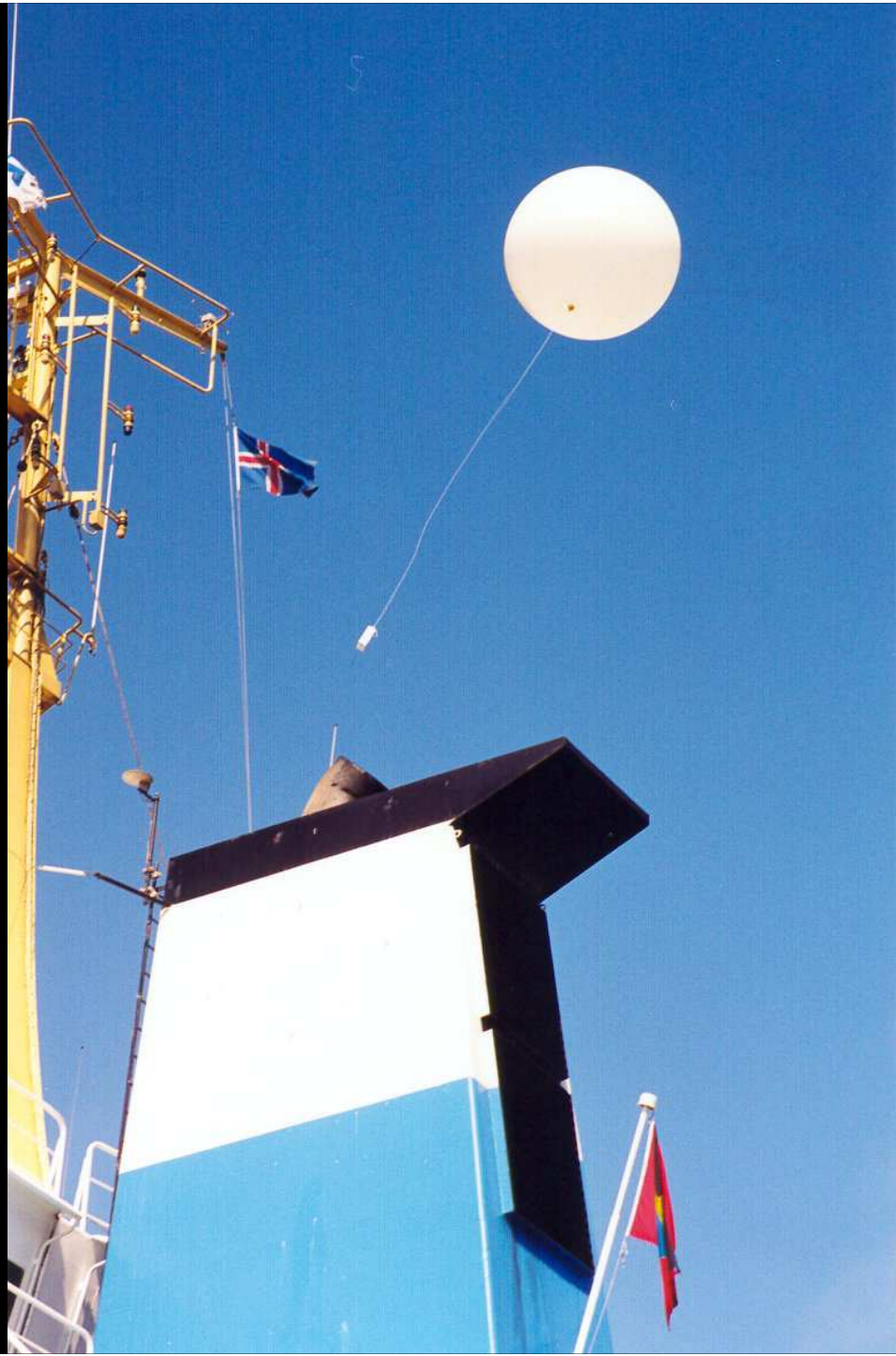
Automated Shipboard Aerological Programme

- Cooperation between IMO and SMHI
- One ship, the Skógarfoss of the Eimskip-Line
- Route between Iceland and USA
- Soundings at 00 and 12 UTC
- 158 Upper-Air soundings in 2002

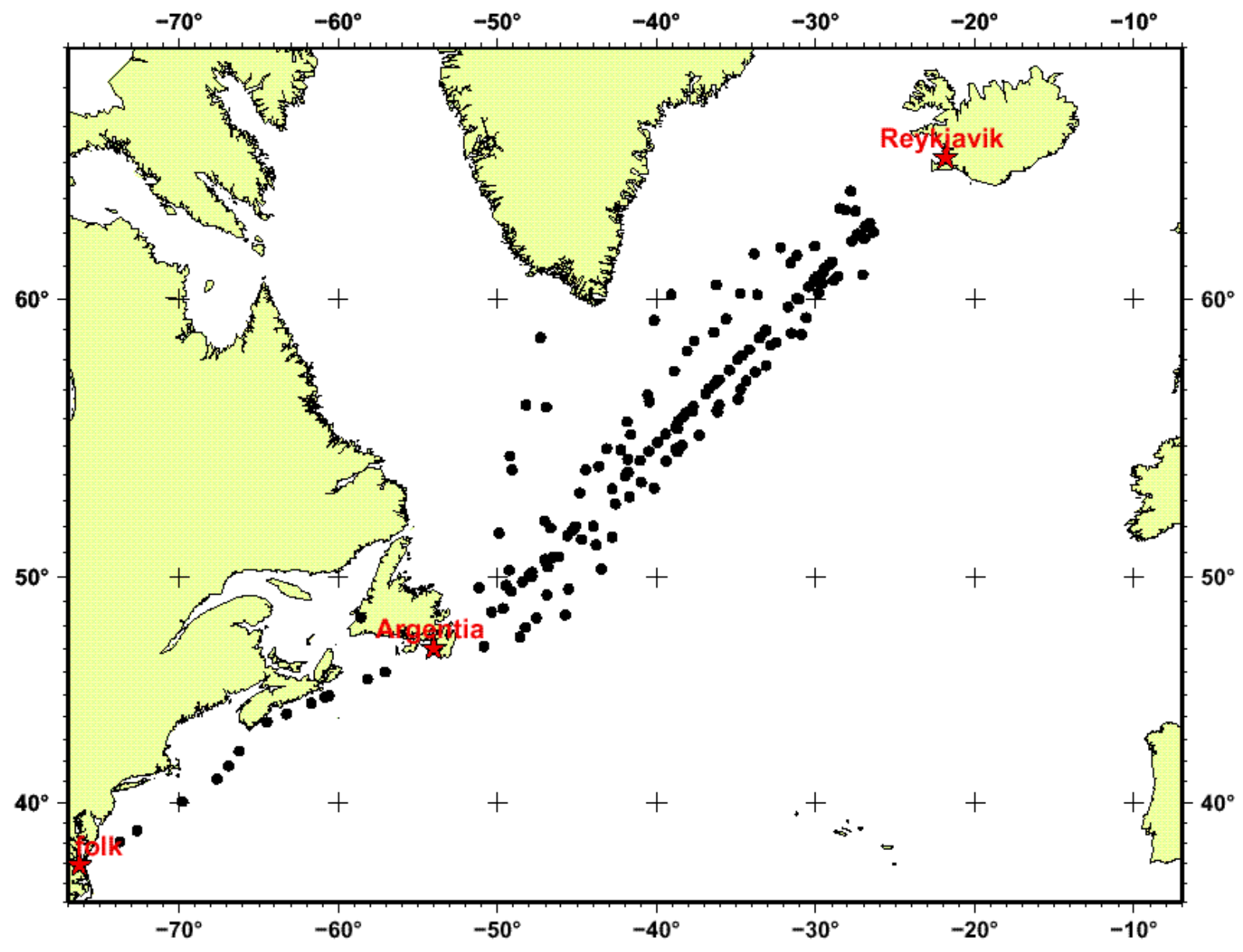








ASAP soundings in 2022



Weather Radar

Located at Keflavík Airport

- Installed in 1990
- Ericsson Digital non-Doppler
- C-band
- Range 240 km



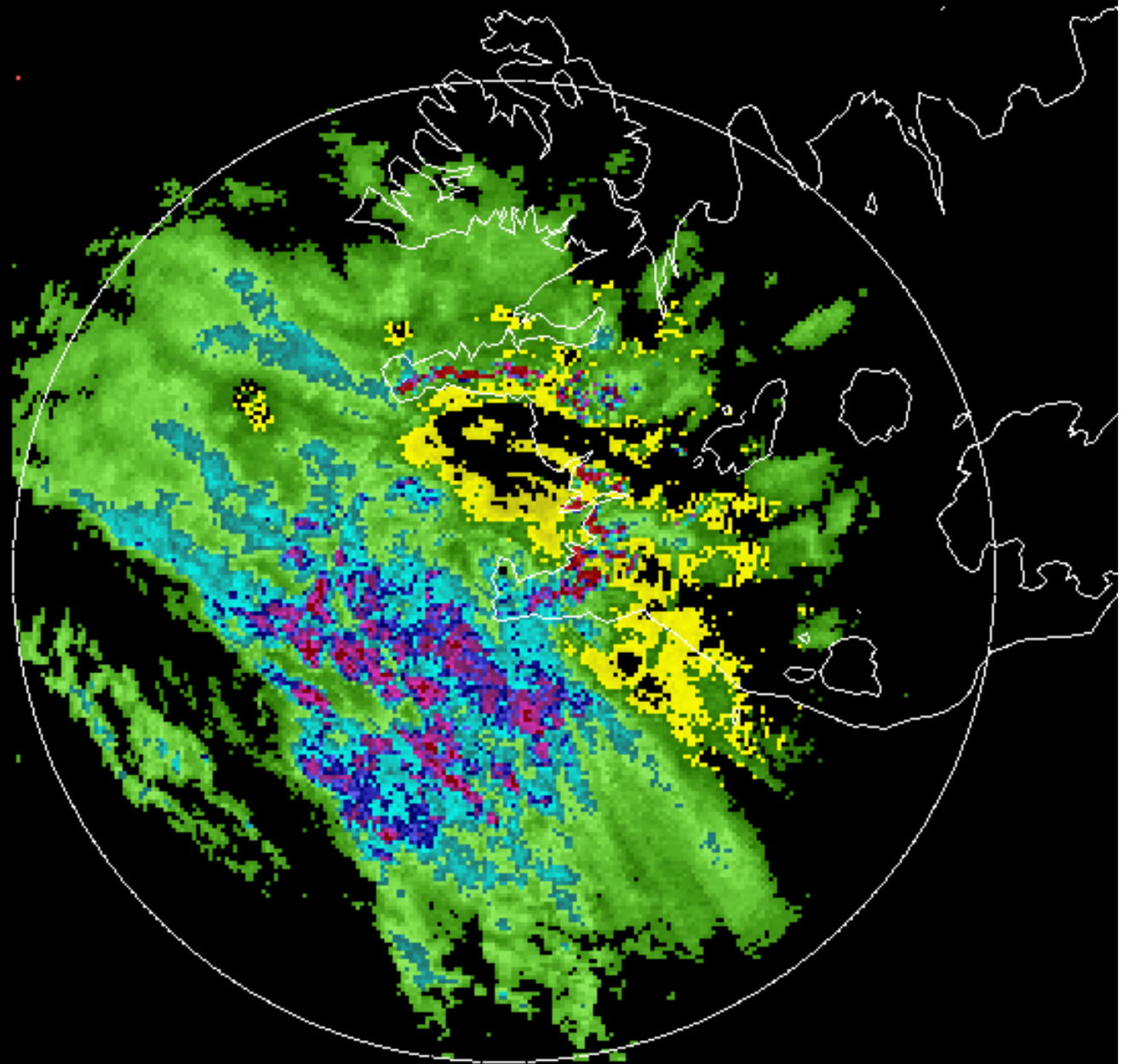
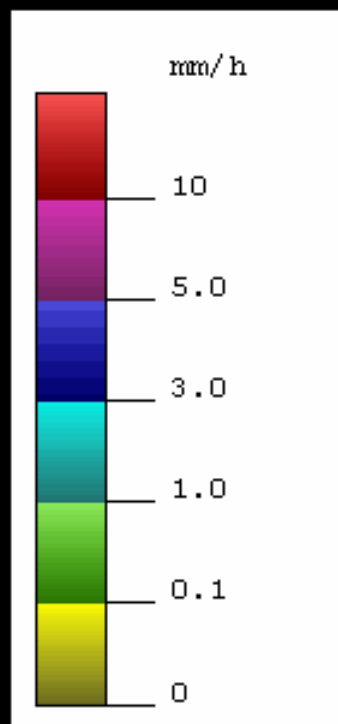
Keflavik

PseudoCappi nor

Rain

Date : 03-02-13

Time : 00:00:00



EGOS drifting buoys

European Group on Ocean Stations

- Cooperation between nine European countries
- Calibration of buoys prior to deployment
- Deployment on route between Iceland and USA
- Quality control and timeliness of data





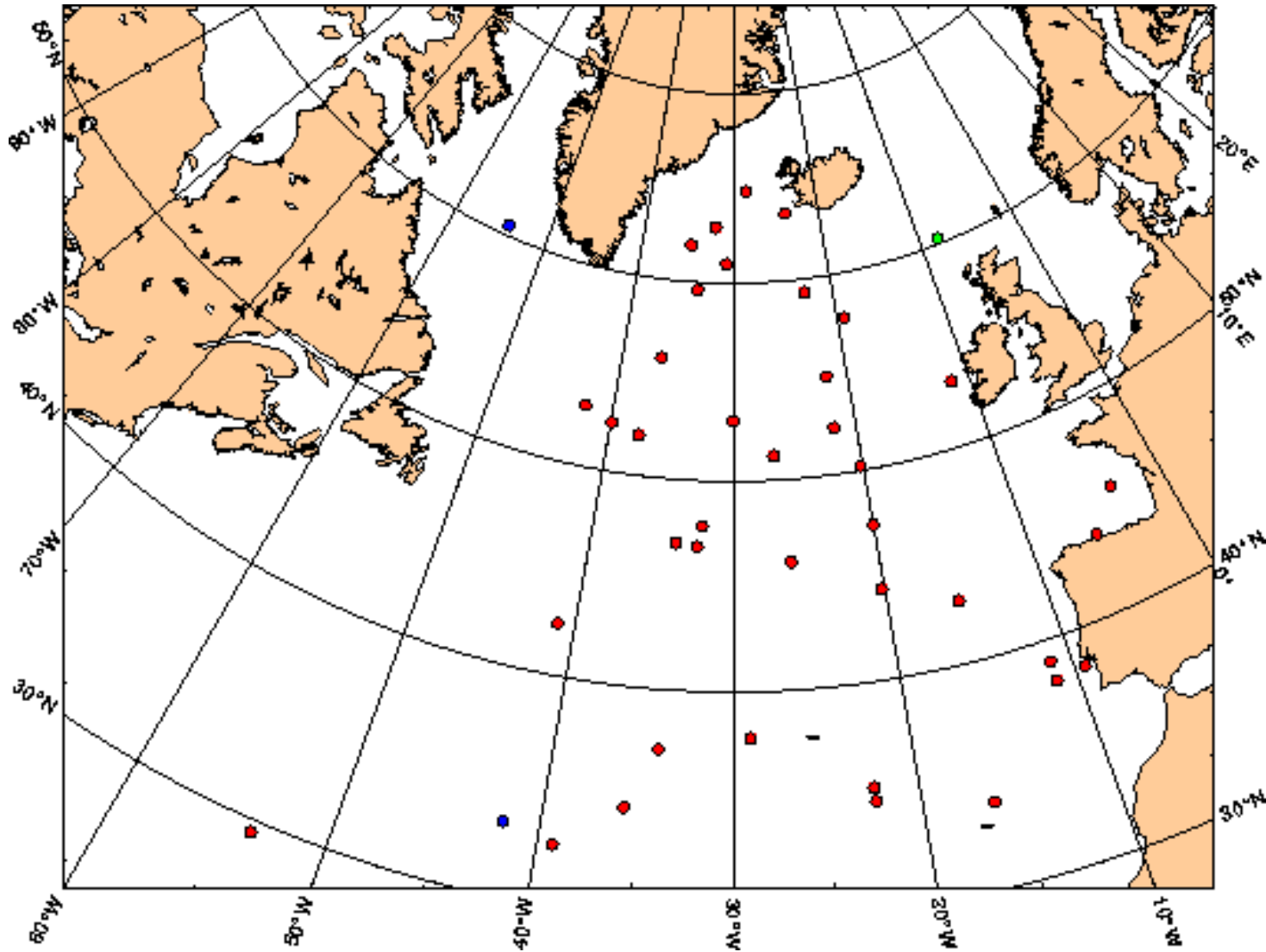






EGOS drifting buoys

on 12 February 2003



Other Activities

- Ozone soundings
- Monitoring of atmospheric trace gases and heavy metals and POPs
- Lightning location systems

ATD Sferics Out-Station

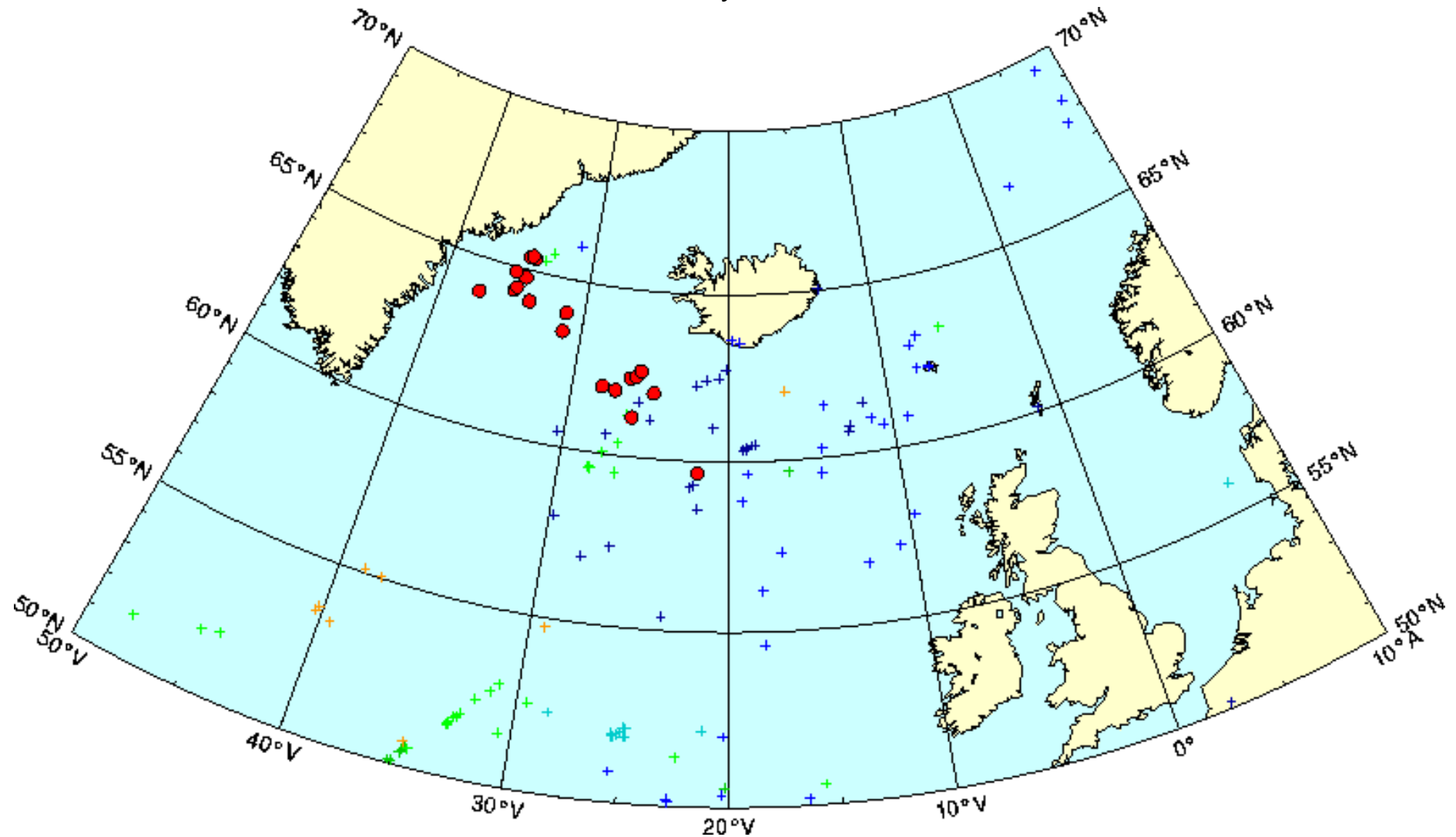
Located at the Upper-Air Station
at Keflavík Airport

- Owned and operated by the UK Met Office
- Part of a European-wide lightning location network
- Installed July 2002
- IMO gives local support
- IMO has access to the processed sferics data



Located lightnings during past week

13 February 2003 09:20



Future dreams

- Upgrading our Radar to a Doppler-radar
- Upper-Air station in E-Iceland
- Automatization of Upper-Air Stations
- ASAP soundings also at 06 and 18 UTC
- AMDAR in cooperation with Icelandair
- AWS onboard fishing ships
- More sophisticated AWS, with ceilometers, visibility and present weather sensors
- GPS derived integrated water vapor

GPS Stations Operated by IMO

Geophysics Department

