



Version History

Version	Released	Updated by
1	2003	Steve Cook, Chair of SOOPIP
2	May 2005	Steve Cook, Chair of SOOPIP
3	June 2008	Graeme Ball, Chair of SOT, for the SOT Task Team on VRPP
4		
5		
6		
7		
8		
9		
10		

(slide does not show)

Voluntary Observing Ship Scheme

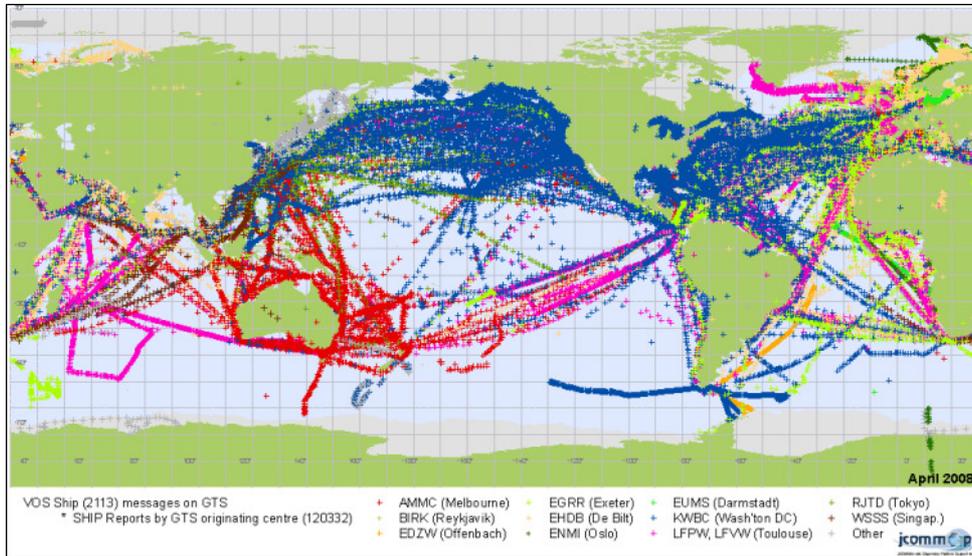
- Weather reports from all oceans and coastal areas:
 - Atmospheric pressure.
 - Air temperature & Humidity.
 - Sea Surface Temperature.
 - Wind Speed & Direction.
 - Visibility, Present & Past Weather.
 - Cloud Type, Height & Amount.
 - Sea & Swell.

- A weather observation, including message preparation & transmission, takes 10 - 15 minutes to complete.

Voluntary Observing Ship Scheme (cont)

- Observations are usually made every 6 hrs and sent free-of-charge from ship to shore. The reports are distributed globally for use by all National Meteorological Services.
- 4833 VOS (December 2007, ~ 1,550 active).
- 226 VOS with an AWS (December 2007, ~ 180 active).
- Supported by Port Meteorological Officers at major ports to service nationally-recruited & foreign-recruited VOS.

Real-time SHIP Messages



Manual VOS Equipment



Left (top to bottom)

Precision Aneroid barometer (aka Digital Aneroid)

Electronic barometer (Vaisala)

Aneroid barometer (Fuess)

Middle

Marine barograph – permanent pressure record & pressure tendency (amount & characteristic) over last three hours

Human eye – cloud, sea, swell, present & past weather and reading the instruments

Right (top to bottom)

Marine screen (housing wet and dry bulb liquid-in-glass thermometers)

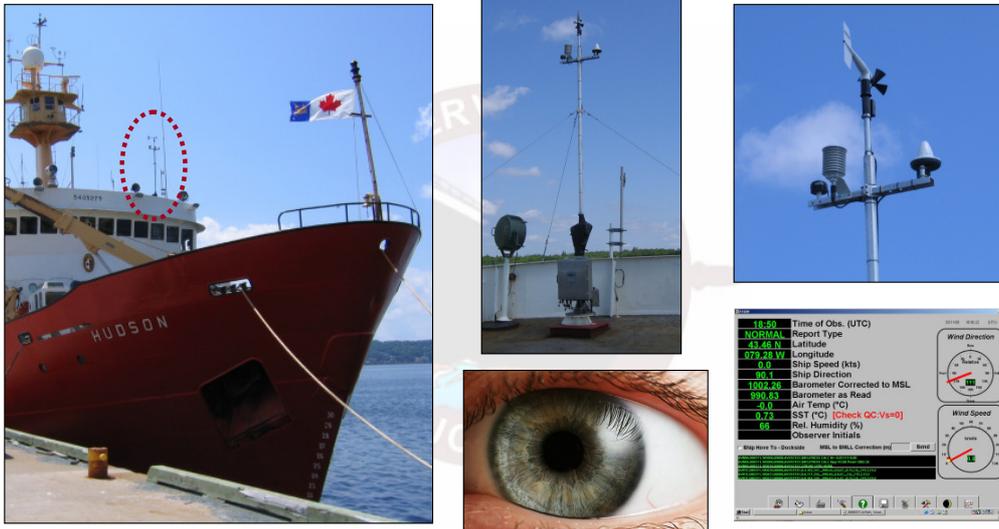
Whirling (sling) psychrometer (wet and dry bulb liquid-in-glass thermometers)

Electronic Logbook Software



- Computer software, e.g. ObsJMA (JP), SEAS (US) & TurboWin (NL), logs the observed data entered by the Observing Officer and prepares a coded message for transmission.
- TurboWin (left) is in widespread use outside of JP & US, and contains extensive Quality Control & help. Photos assist in selecting the correct cloud types or estimating sea state.

Shipboard Automatic Weather Station



The Canadian AVOS system installed on the “Hudson”.

The touch screen on the Bridge displays the current conditions and allows for the manual input of visual parameters.



VOS Climate Project

- VOSCLim is a high quality reference subset of the VOS Scheme used for:
 - Climate research.
 - Modelling applications.
 - Benchmarking.
- Global target = 250 ships (achieved by December 2007).

