WORLD METEOROLOGICAL ORGANIZATION

Submission to PAME I-2019 meeting

Participation in the Voluntary Observing Ships Scheme

The international scheme by which ships plying the various oceans and seas of the world are recruited by National Meteorological Services (NMS) for taking and transmitting meteorological observations is called the Voluntary Observing Ship (VOS) scheme, a programme of the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) of World Meteorological Organization (WMO) and UNESCO's Intergovernmental Oceanographic Commission (IOC), with a forerunner of the scheme dating back as far as 1853 (see attached VOS brochure).

Ships' meteorological observations are recognized as being essential for the provision of safety-related services for ships at sea, marine pollution prevention and climate change studies. Ship-based meteorological and oceanographic reports are often the only data available from data-sparse areas such as the Arctic region.
The International Maritime Organization (IMO) is giving the VOS scheme high priority and revised and approved at its ninety-ninth session (16 to 25 May 2018) MSC.1/Circ.1293 in response to a request from WMO (see attached circular).

While the real-time meteorological and oceanographic data collected on board ships help increase the safety of the contributing vessels regarding weather and sea conditions, some shipowners and masters have raised concerns regarding the publication of ship identification and position data. WMO has therefore established a high-level dialogue, involving affected Members, IMO, ICS, shipping companies, relevant organizations and technical commissions, which resulted in the establishment of a new VOS identification scheme without direct ship-link (such as call-signs or IMO numbers) for non-authorized data users. This solution addresses shipowners' and masters' concerns as well as those of the JCOMM community regarding data monitoring and data quality.

It is essential that the volume of data provided by ships be maximized and, as such, that the number of ships participating in JCOMM marine observation programmes be increased wherever/whenever possible. It should be made clear that participation in JCOMM ship-based observation programmes is entirely voluntary and no charges are incurred by the ship, shipowner or ship operator, as the meteorological instruments and, in most cases, the cost of the observation transmission are borne by meteorological services. The ship-based observation programmes do additionally welcome voluntary contributions from ships using ship-owned instruments.

IMO has invited Member States to bring the relevant information to the attention of shipowners, ship operators, ship managers, masters and crews, non-governmental organizations and other parties concerned; and to encourage them to support JCOMM efforts and therewith National Meteorological Services (NMS), by offering their ships to participate in marine observations programmes, particularly the VOS scheme.

With a heavy concentration of real-time VOS reports along the major shipping routes, primarily in the North Atlantic and North Pacific Oceans, figure 1 also shows the lack of data from the Arctic region. While this situation reflects the relatively small numbers of ships sailing in these waters, it also shows the importance for encouraging all ships in such waters to volunteer and join the VOS scheme; even if their voyage through the data-sparse region is temporary, the observations form that limited time period are of great value.

It should be noted that the flag state of the participating ship is of smaller importance and does often not reflect where the recruiting NMS is situated. Table 1 gives an overview on how many ships recruited by which NMS collected weather observations in a rather active month for the Arctic region.

In response to the corresponding PAME II-2018 decision, PAME is encouraged to support VOS and JCOMM activities by all available means. Contacts and support can be provided by the Ship Coordinator of the JCOMM Observations Programme Support Center (JCOMMOPS).

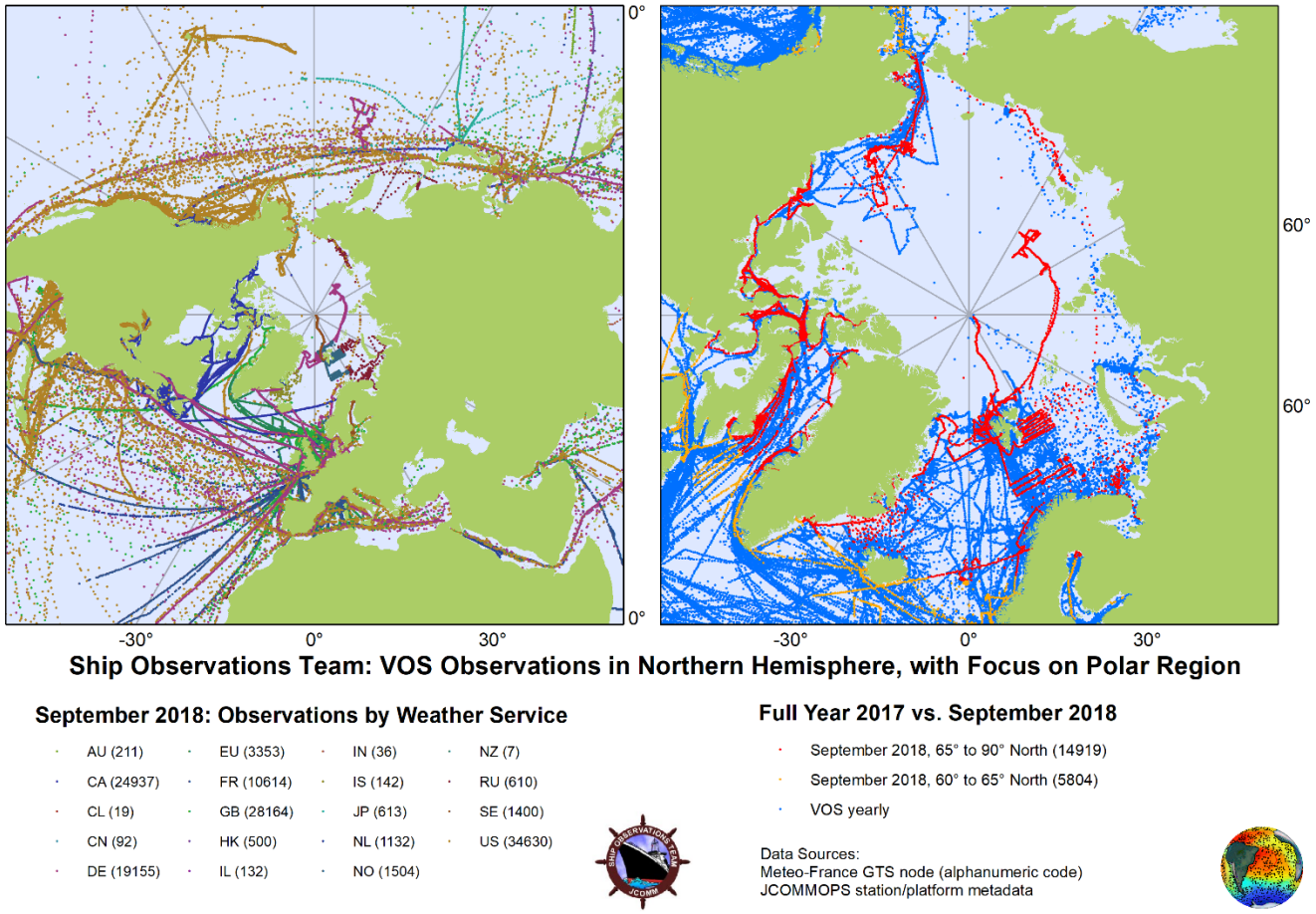

Figure 1: VOS observations in the Northern Hemisphere; the Arctic region is undersampled, even in a rather active period.

Country / Organization	Number of VOS > 65°N (09/18)	Number of reports > 65°N (09/18)
Canada (CA)	13	4299
Germany (DE)	6	1627
United States (US)	21	1125
Sweden (SE)	3	1109
Norway (NO)	3	1035
Russia (RU)	11	440
United Kingdom (GB)	4	429
The Netherlands (NL)	3	185
Iceland (IS)	2	134
EuMetNet (EU)	2	72
China (CN)	1	8

Table 1: Number of VOS and Observations > 65° North by country/organization in September 2018. From 69 participating ships in the area at that time, 28 where equipped with Automated Weather Stations (AWS); all other ships provided manually collected observations.

2 Attachments (as separate files)

- *IMO circiular letter (MSC.1/Circ.1293)*
- *VOS Brochure*