

Appendix 1

Sea Ice information in

WORLDWIDE MARINE RADIOFACSIMILE

BROADCAST SCHEDULES

Canada

Radiofax broadcasts in Canada are operated by the Canadian Coast Guard (MCTS) and by the Canadian Forces (METOC). Broadcasts are documented in "Radio Aids to Marine Navigation" available at the CCG website http://www.ccg-gcc.gc.ca/mcts-sctm/ramn/docs/index_e.htm.

A PDF file of Chapter 5 of RAMN deals with radio broadcasts of weather and ice information. Ice chart broadcast schedules are contained on pages 5-35 and 5-38.

Denmark

DMI is still distributing ice charts on facsimile as per the schedule below. (some minor errors in the document schedule need to be corrected). The ice charts cover areas as follow:

Chart1: Cape Farewell area (South Greenland) (normally updated 2-5 weekly but infrequently)
Chart2: East or West Greenland (normally updated 3-5 times weekly infrequently)

The distribution on facsimilie will continue at least until the end of 2007. Expected to close during 2008 but no decision yet. The facsimilie distribution is now a bottleneck and 01 April 2007 a revised webpage for ice charts at www.dmi.dk will be launched with a more detailed geographical product list. However chart1 (the most important area) will always be the same at www.dmi.dk and the facsimilie system.

DMI is continuing to maintain distribution of B/W ice charts <http://www.dmi.dk/dmi/index/gronland/iskort.htm> and support an initiative if the Hamburg transmitter can be used for radio transmission of ice charts in parallel with products from other ice services

Germany.

Germany is transmitting fax ice charts from Pinneberg.
Frequencies 3855, 7880 and 13882.5 khz.

Timeslots for ice charts are:

09:30 UTC retransmission of IIP or canadian chart Northwestatlantic
10:07 UTC ice chart western Baltic (no transmission at the moment, as no ice is present.
15:20 UTC ice chart Baltic (swedish chart) or specialized chart
15:40 UTC ice chart Baltic (swedish chart) or specialized chart
21:00 UTC retransmission of IIP or canadian chart Northwestatlantic
21:15 UTC ice chart Baltic (swedish chart) or specialized chart

Outside the Baltic winter season, the timeslots at 10:07, 15:20, 15:40 and 21:15 should be available for Arctic ice charts. During northern winter the 10:07 timeslot is only used in strong winters and one of the 15:20/15:40 slots could probably also be used for the Arctic.

It must be seen, what chart is best used. BSH discussed it also with the University of Bremen and came to a first, attached draft chart as one possibility (automatic daily chart from AMSR-data).

Norway

The norwegian ice service does not broadcast any products by radio. All products are available through our webpage: http://met.no/kyst_og_hav/iskart.html Products that could be useful to mariners are:

1. Daily (monday - friday), iceconcentration chart over atlantic arctic. In color and b/w
2. High resolution icechart over Svalbard, also in color and b/w
3. weekly iceedge position textfile (every tuesday before 2 pm CET)

Russia

The Moscow Radiometeorological Center issues only synoptic charts.

The Arctic and Antarctic Research Institute produces several products which could be useful to mariners if transmitted via the radiofacsimile and are available via AARI web-site:

1. Weekly general sea-ice conditions charts of the Arctic Ocean:

<http://www.aari.ru/odata/d0015.php?lang=1&mod=1>

2. Daily diagnosis and forecast charts of mean daily and instantaneous ice drift in the Arctic Ocean for period 0d...+6d on the basis of dynamic AARI sea ice model:

http://www.aari.ru/clgmi/forecast/show_drift.asp?fign=0&lang=0 or

<http://ocean8x.aari.ru/item6/m2-4ecimo.php>

USA

The National Ice Center does not broadcast a radio facsimilie broadcast. All of NIC products can be accessed through the World Wide Web site www.natice.noaa.gov . At this time, NIC does not "push" or transmit products. NIC might however, be able to provide products through the NOAA Gateway FTPMAIL service.

The National Ice Center produces several products that could be useful to mariners. Some examples of this are:

1. Daily Northern and Southern Hemisphere Ice Edge These are currently issued in ASCII text with latitude and longitude pairs.

2. Weekly black and white sea ice (Egg) charts of the Northern Atlantic Ocean from the northern East Greenland Sea east to the Kara Sea, the Arctic Basin and the Bering, Chukchi and Beaufort Seas and the Chesapeake/Delaware Bay areas when ice is present. These are currently issued in jpeg format.

3. Twice per month black and white charts of both the Northern and Southern Hemisphere seas on opposite weeks. These are currently issued in jpeg format.

Appendix 2 – Sample meteocharts from received via RFax from Germany and Canada during August – September 2009 high Arctic circumpolar expedition (northward of 82°N) onboard icebreaker Yamal



