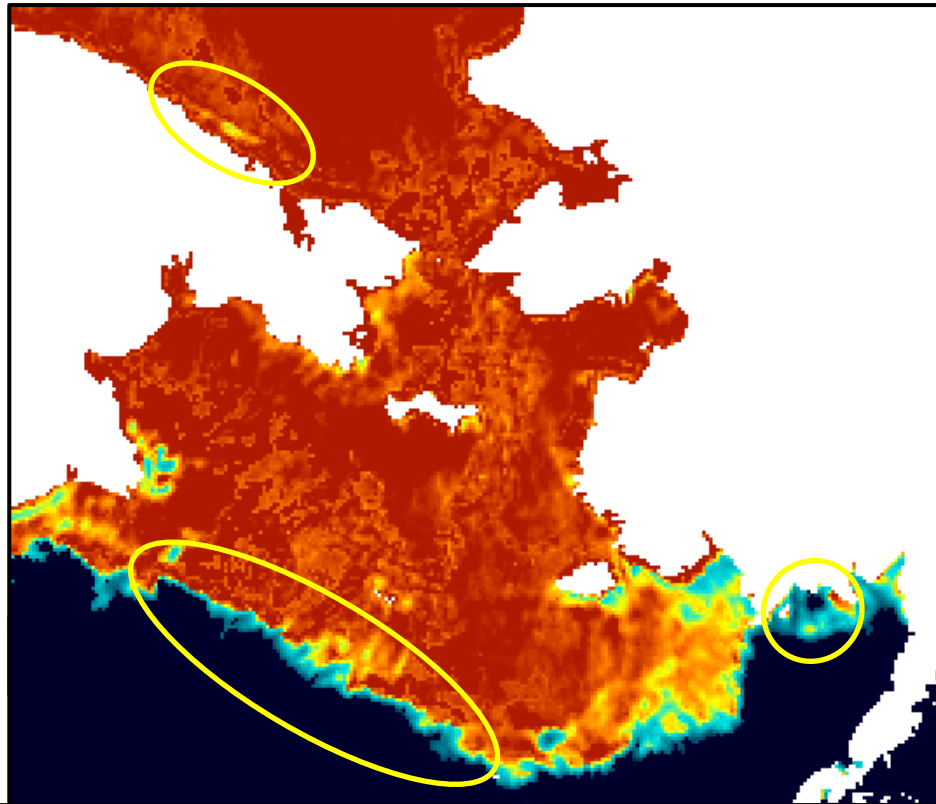
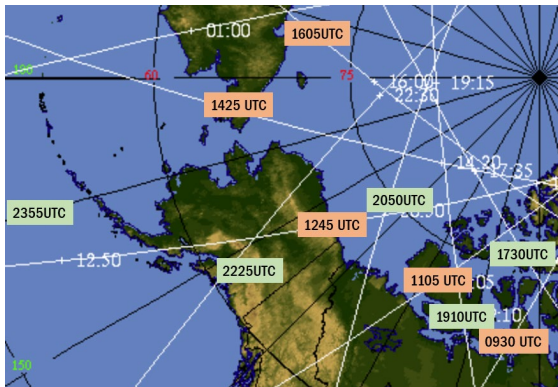


Why is Enhanced Sea Ice Detection Important?

Sea Ice Detection is vital as a navigational aid and yields important information for coastal communities. This AMSR-2 product fills gaps in between very high-resolution Synthetic Aperture Radar (SAR) observations. This AMSR-2 product uses high resolution (6.25 km) microwave data (36 and 18 GHz) from AMSR-2. Results from special signal processing from multiple GCOM-W1 overpasses yield a morning and evening composite that can give information when/where high-resolution SAR data are not present



The image above shows AMSR-2 sea ice concentration on 22 March 2022. Note the ragged sea ice edge, regions of open water, and leads (all circled in yellow). These details are not present in microwave data with coarser resolution.



Impact on Operations

Sea Ice Edge Detection: The sea ice edge is of great importance for navigation and fisheries management.

Daily observations: Multiple observations during the day can help monitor changes in the sea ice, especially during times when Synthetic Aperture Radar (SAR) observations of sea ice are not available.

Limitations

Data Latency: Data are available approximately 3 hours after the satellite overpass.

Data Sources: Data are produced from only the AMSR-2 instrument that is carried on the GCOM-W1 satellite.

Resources

[CIMSS Blog Post #1 on this product](#)

[CIMSS Blog Post #2 on this product](#)

Hyperlinks not available when viewing material in AIR Tool