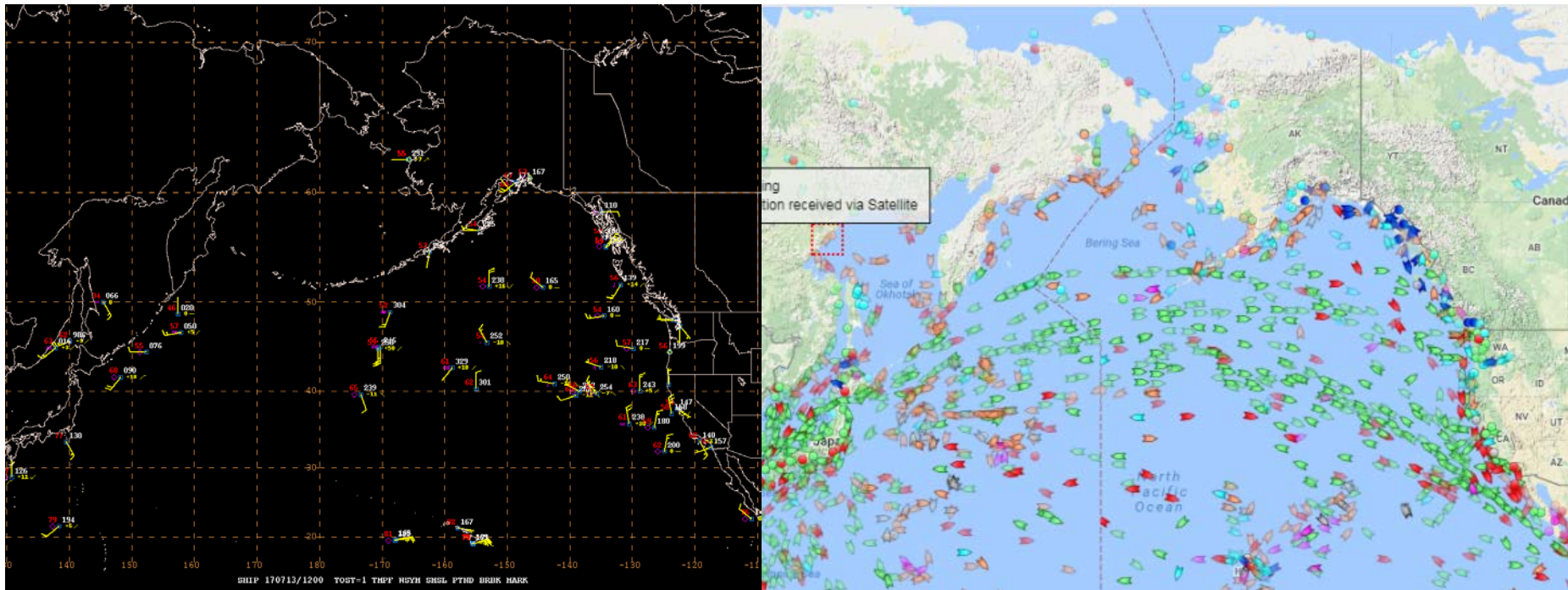


Ship Observations

Joe Sienkiewicz, NOAA/NWS Ocean Prediction Center



Comparison of received ship weather observations (left) for 1200 UTC 13 July 2017 and AIS positions of ships via MarineTraffic.com (right).

Forecast Process

Joe Sienkiewicz, NOAA/NWS Ocean Prediction Center

Input

Output

Observations

Numerical Models
Deterministic
Probabilistic

Guidance Products
Post-processed



Warnings &
Forecasts

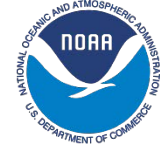
Graphical

Gridded

Text Bulletins

(Days 1-5)

Add value
Filter
Experience / familiarity/
Interpretation



Ship Observations

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Observations

- Critical to the warning and forecast loop
 - Forecasters, numerical models, verification
- Source regions for numerical model errors or uncertainty
 - over the oceans
- Small percentage of ships are reporting weather
- Need for more frequent and accurate weather observations from ships
- SOLAS – Chapter V - Safety of Navigation



Ship Observations

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SOLAS – Ch. V - Safety of Navigation

- Reg. 5 – Meteorological services and warnings
 - Items 4-9 Key word “encourage”
- Reg. 31 – Danger messages
 - “bound” to communicate ice, derelict, danger to navigation, tropical storm, sub-freezing temperature with gale force winds causing severe icing, winds of force 10 or higher for which no storm warning has been received
- Reg. 32 – Information required in danger messages
 - 3 and 4 – tropical cyclone and for winds of force 10 and higher
 - Barometric pressure, barometric tendency, true wind direction, wind force, state of sea, swell (also period and length), true course and speed of ship