

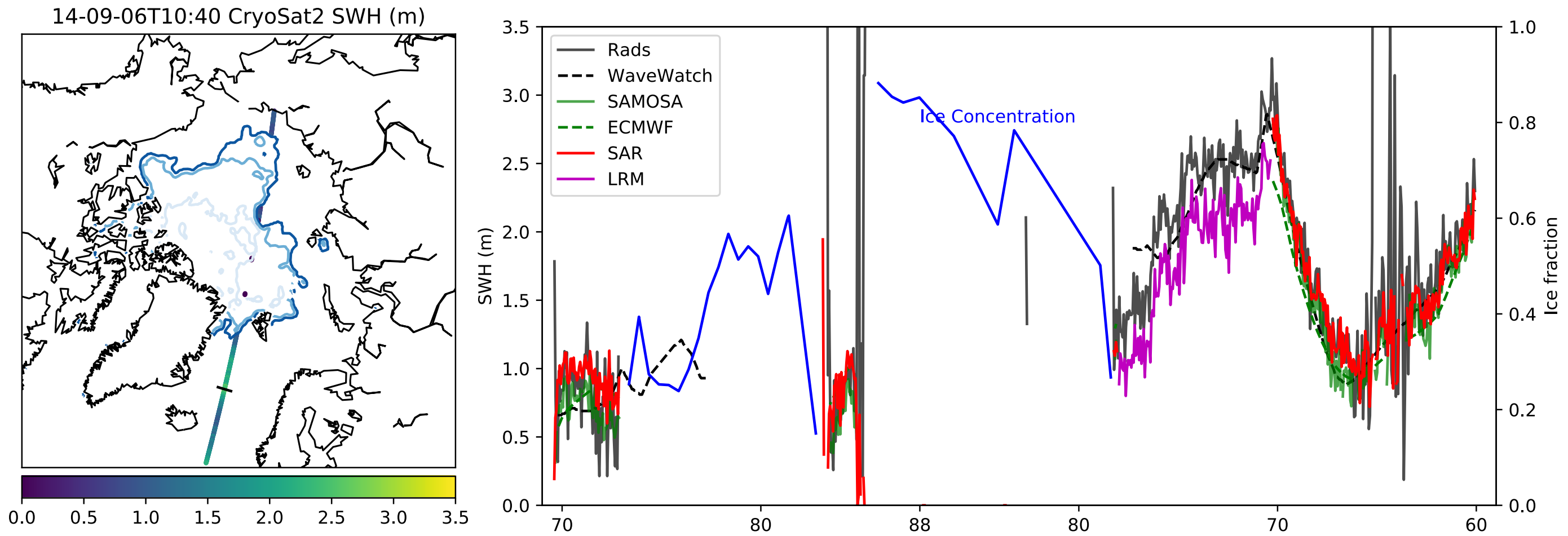
# **CryoSat2 Significant Wave Height and Dynamic Ocean Topography**

**Harold Heorton (UCL), with Michel Tsamados (UCL), Jack Landy (Bristol) and Tom Armitage (JPL)**

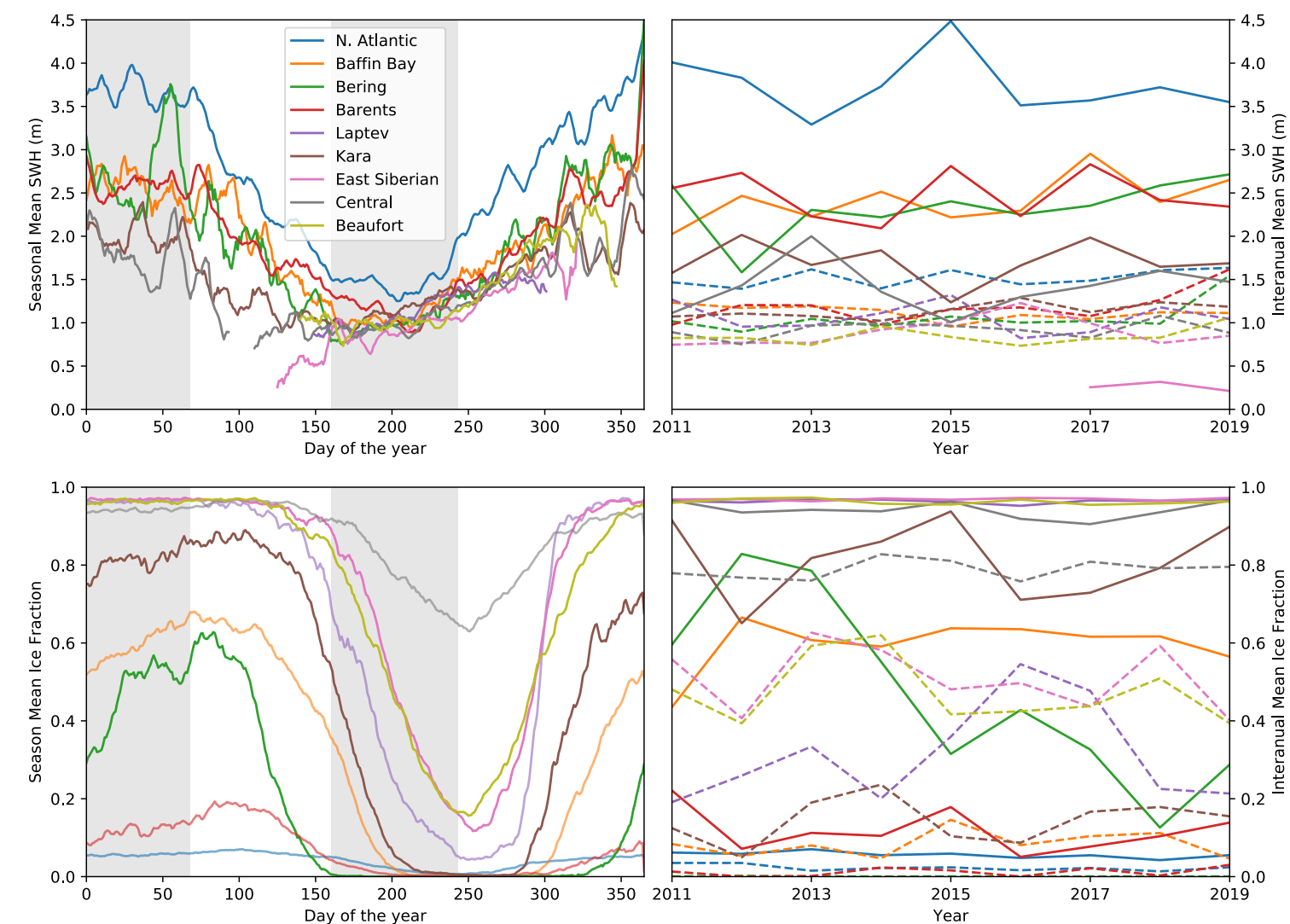
# 9 years of CryoSat2 Polar Ocean Wave Heights

## A new data product from UCL CPOM

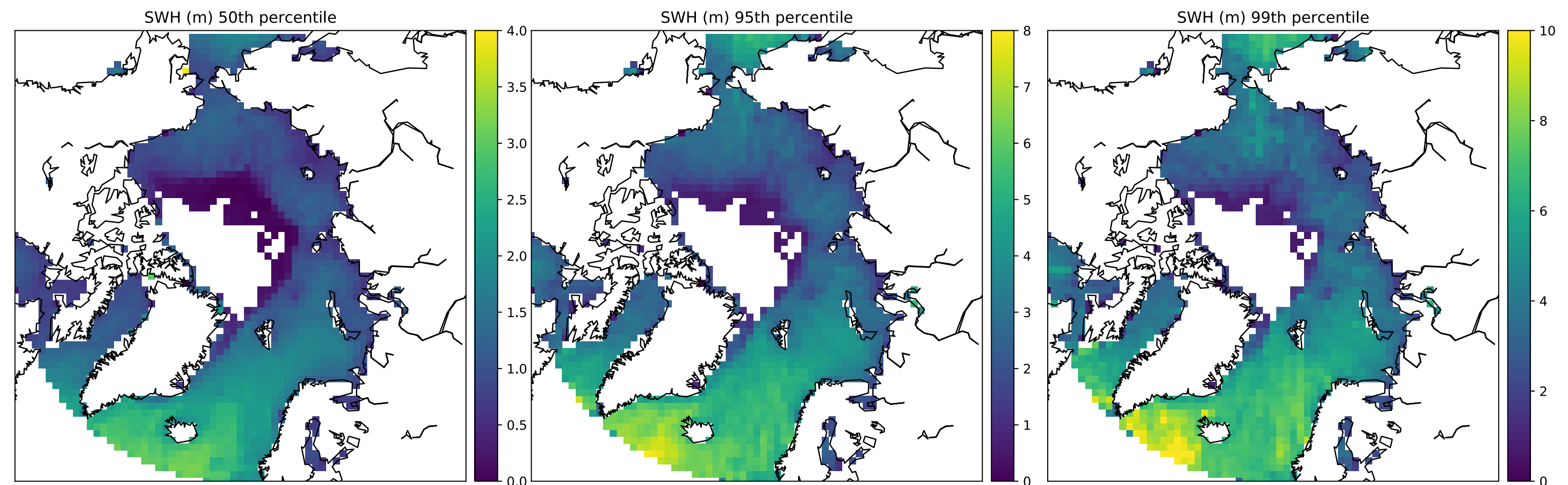
- A new semi-analytical physical retracker has been implemented
- Ocean surface significant wave heights have been retrieved from the full CryoSat2 data record for the polar regions (above 60N, below 50S)
- The data has improved data quality compared to previous retracers and compares better to buoy based observation in the Arctic.



In depth satellite track data analysis

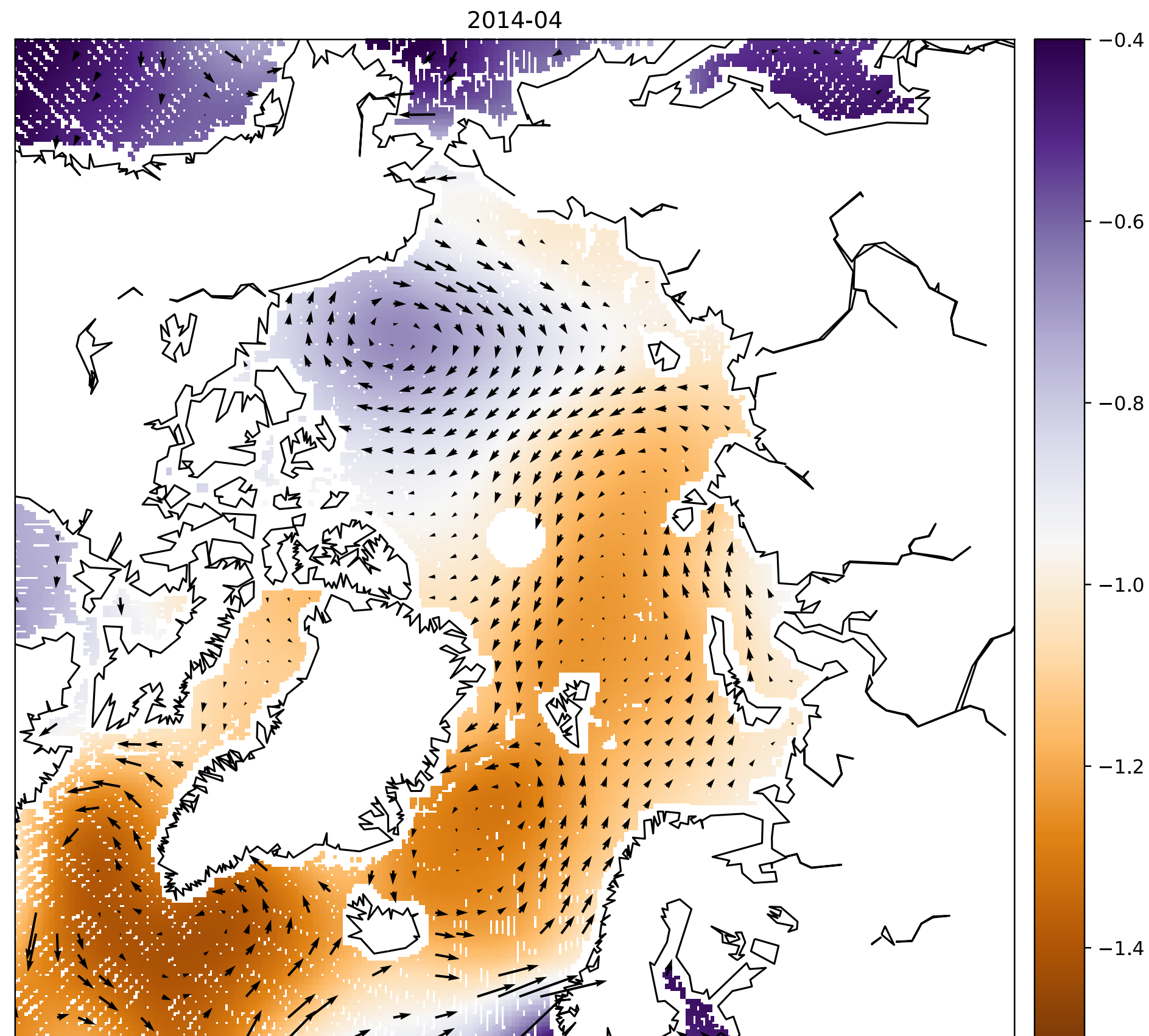


Analysis of the Arctic ocean wave climate



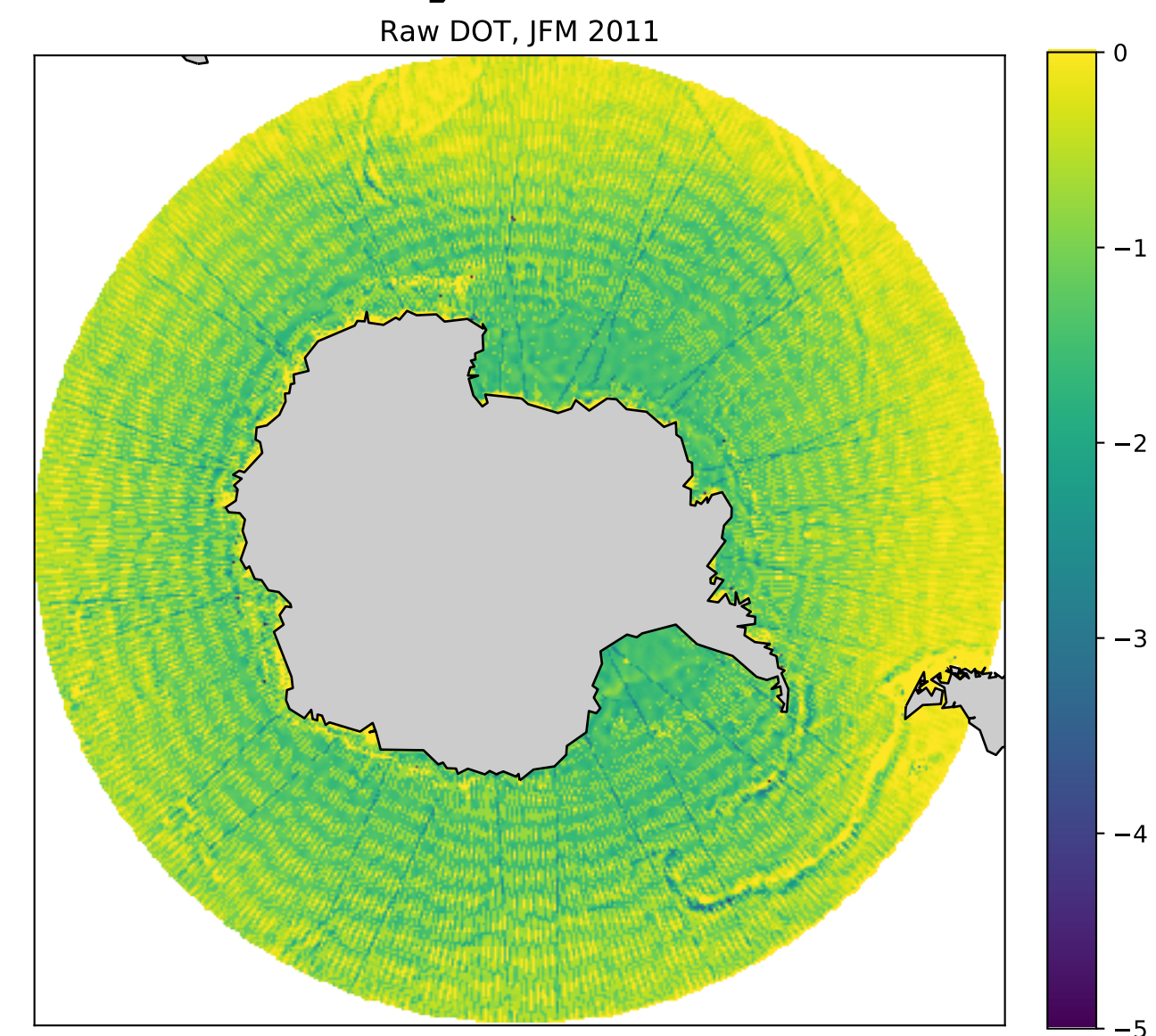
Full gridded data products available for the Arctic and Antarctic

# 9 years of CryoSat2 Dynamic Ocean Topography and Geostrophic Surface Currents



Final Dynamic Ocean Topography and Geostrophic Surface Currents

- We combine ocean surface elevation from all 4 oceanic modes of CryoSat2 (Pulse limited, SAR ocean, SAR lead and SARIN)
- By comparing the ocean surface elevation to the Geoid data the monthly average ocean surface Dynamic Ocean Topography is calculated
- The slope of the Dynamic Ocean Topography gives ocean surface currents for the entire Arctic and Southern Oceans



Raw Ocean Surface Elevation