



## **SMOS validation using SSS data from Barcelona World Race and Argo profilers**

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The organisers of the Barcelona World Race (BWR), the Institute of Marine Sciences (ICM-CSIC) and the Maritime Catalan Forum (FMC) agreed on equipping the FMC boat, participating in the race, with a SeaBird MiniCTD. The idea was for the first time to explore how such oceanic races could help to monitor surface temperature and salinity all around the world ocean in real time. The boat spent 112 days to complete the round trip, sending 12-30 real-time samples/day via ARGOS satellites, using a transmitter developed at the ICM. Data was also stored in the instrument, at 192 samples/day to allow further final global analyses.

In the SMOS (Soil Moisture and Ocean Salinity) satellite mission processing chain, sea surface salinity (SSS) values are retrieved from brightness temperature data at level 2 (L2). Global maps of SSS are being generated at level 3 (L3) using spatial and temporal weighted averages. Finally, improved representations of the SSS field are obtained at level 4 (L4) where satellite data is blended with data from other sensors. In the present study, validation of L2, L3 and L4 products using data from BWR and ARGO buoys is presented, covering the race period from January to April 2011. Differences between these two sets of data are also investigated as the uppermost robust measurements from Argo profilers have larger depths than the ones associated to the BWR boat.