

S7T4

The potential for improvements to ICOADS: lessons from ship tracking

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The International Comprehensive Ocean-Atmosphere Data Set (ICOADS) is the most complete archive of surface marine observations and is widely used in the construction of marine climate records and in reanalysis. ICOADS has set the standard for open, traceable, data access and importantly keeps the multivariate marine record together in a common format.

In recent years the importance of identifying observations made on the same ship or platform has become more apparent as the sophistication of error models for marine data has increased. Unfortunately the marine data in ICOADS contains many observations without identifiers as substantial amounts of historical data were derived from sources that had not retained ship identifier information. As part of the Historical Ocean Surface Temperatures :Accuracy, Characterisation and Evaluation (HOSTACE) project an attempt was made to cluster together observations made by the same ship, but missing ship identifier information, using a probabilistic trajectory estimation method. The ship tracking process proved rather more difficult than anticipated and revealed many interesting features of data characteristics within the ICOADS archive. We will describe features of these data characteristics that are presently problematic for the accurate construction of marine climate records. We will also illustrate how a reprocessing of the historical ICOADS data holdings would improve the quality of the marine climate record.

Oral

- **Data management recovery and reprocessing (digitisation efforts and reprocessing of previously digitised data)**