



## **A new night-time marine air temperature data set.**

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Night-time marine air temperature (NMAT) offers an alternative measure of global temperature changes to sea surface temperature; and can, in some cases, have smaller uncertainties.

We have produced a new NMAT data set with carefully quantified uncertainty estimates. It is based on *in situ* observations from the ICOADS database and offers a more complete geographical coverage than previous data sets. Corrections are applied to the data to account for changes in measurement conditions through time and a detailed analysis of uncertainties in these corrections is included.

An assessment of the total uncertainty in each gridded average is obtained by combining these bias correction related uncertainties with those arising from measurement errors and under-sampling of intra-grid box variability.