

EGU2020-11585

<https://doi.org/10.5194/egusphere-egu2020-11585>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



CLASSnmat: a new dataset of Night Marine Air Temperature back to 1880

Richard Cornes¹, Elizabeth Kent¹, David Berry¹, and John Kennedy²

¹National Oceanography Centre, Southampton, UK (ricorne@noc.ac.uk)

²Met Office Hadley Centre, Exeter, UK

We describe the construction of a new global dataset of Night Marine Air Temperature (NMAT), which provides monthly 5-degree values of NMAT back to 1880 with associated uncertainty estimates. The new dataset (CLASSnmat) builds on the HadNMAT2 dataset, which was released in 2013. CLASSnmat uses the ship-based NMAT values from the International Comprehensive Ocean-Atmosphere Data Set (ICOADS Release 3). However, a new method is used in CLASSnmat to remove duplicated values from the observations, and to infill missing ship identifiers. In addition, a revised method of correcting the warm-bias that occurs in the data during World 2 is applied, which allows the retention of more data than in HadNMAT2. As with its predecessor, the NMAT data in CLASSnmat are not interpolated to grid-cells devoid of observations, but a revised gridding method is used which improves the propagation of uncertainty from the individual measurements through to the gridded values. CLASSnmat is released with NMAT values corrected to 2, 10 and 20m height to allow direct comparison against other measures of temperature, e.g. land-based observations or reanalysis temperature values.