

Interactive comment on “HadISD: a quality controlled global synoptic report database for selected variables at long-term stations from 1973–2010” by R. J. H. Dunn et al.

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We thank the referee for their positive review and address each comment they raised below.

Referee:

Would it be possible to provide information on the total number of observations before and after quality control, and stratified with respect to geophysical quantity?

Response:

We have calculated the total number of temperature, dewpoint, sea level pressure and

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| | Temperature | Dewpoint | SLP | Wind speed |
|------------|-------------|-----------|-----------|------------|
| Before QC | 819458600 | 808398774 | 619064150 | 823681776 |
| After QC | 814145111 | 798747714 | 616133295 | 822099052 |
| Difference | 5313489 | 9651060 | 2930855 | 1582724 |
| (per cent) | 0.648 | 1.194 | 0.473 | 0.192 |

Table 1. Number of observations before and after QC, with actual and percentage difference

wind speed observations before and after the QC for the 6103 stations in the dataset (Table 1). The difference in actual numbers and as a percentage of the total before QC are also shown.

We are not intending to include these numbers in the manuscript, as Figure 19 and Table 6 give more detailed information. These numbers refer to the state of the dataset after the changes outlined in the response to Neal Lott had been implemented.

Referee:

Are there any plans to incorporate ISD data from 1901 in future releases, despite its limited coverage before 1973?

Response:

It is our intention to extend HadISD to pre-1973 in a future release, but the timescale over which this will occur has not yet been determined.

Referee:

Are there any plans to estimate bias corrections in future releases?

Response:

The homogenisation of high time-resolution data is quite a new area of research, with little consensus on how to reliably apply adjustments to hourly data while retaining the higher order moments of the data. Therefore, in the first instance, we intend to try and

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identify homogenous periods within each HadISD station record using lower resolution data such as pentad or monthly means but not actually perform any adjustment to the data. The locations of any detected break points will be made available to users. There may be a subset of stations that we can identify as relatively free from gross inhomogeneity.

Referee:

The summary mentions the availability of HadISD at the www.metoffice.gov.uk/hadobs/hadisd website. Although I found a number of data sets at that location I failed to encounter HadISD. Will that be resolved soon?

Response:

The dataset will be made available on the hadobs website on acceptance of the paper. We did not want to release the dataset before the paper detailing its creation had been peer reviewed.

Referee:

Is it true that all input observations, regardless of any quality control, are available in the '.all' dataset?

Response:

In both the ".all" and ".clim" datasets, observations which have been flagged have been removed from the main data structures in the netcdf files. However these observations have been stored in a separate data structure within the netcdf file and so can be recovered if a user wishes.

Interactive comment on Clim. Past Discuss., 8, 1763, 2012.

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