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Climate data: homogenized surface pressure data

Long-term homogenized station and sea level pressure data have been specifically developed for climate research in Canada. The data consist of hourly and monthly mean station and sea level pressures for more than 600 locations. Series start from 1953 or later and all stations have at least 10 years of continuous observations.

The original data includes hourly station pressure and sea level pressure extracted from the National Climate Data Archive of Environment Canada. There are no joined stations.

A physically based model and a statistical test were both applied for detecting random and systematic shifts in the time series (Wan et al. 2007; Alexandersson 1986): all adjustments were applied to the hourly data.

Systematic shifts (non-climatic steps) identified were mainly due to the use of non-updated station elevation, station relocation, and other errors occurring during the digitization process (Wan et al. 2007). Whenever possible, the main causes of the identified inhomogeneities were retrieved through historical evidence such as the inspection reports.

- [Homogenized surface pressure data](#)

References

Alexandersson, H., 1986: A homogeneity test applied to precipitation data. *J. climatol.*, 6, 661-675.

Wan, H., X. L. Wang, V. R. Swail, 2007: A quality assurance system for Canadian hourly pressure data. *J. Appl. Meteor. Climatol.*, 46, 1804-1817.

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