

Data Rescue, Digitisation, and related Data Products in the Climatology Group at Univ. Bern

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To be able to put modern climate change into a broader context, it is desirable to have preferably long, high quality observational data series. The recovery, digitisation, and quality control of historical meteorological data form the basis for studies of climate variability during the past 250 years, as well as for derived data products such as statistical reconstructions. But even shorter old observational series can be helpful, e.g. for the assimilation into future reanalysis projects such as ERA-75/ERA-CLIM, especially when they cover data sparse regions or time periods, like the Tropics or the time before 1948.

Here we present recent data rescue and digitisation efforts in the climatology group at ETH Zurich (now at the Oeschger Centre/University of Bern) as well as derived data products that have been documented and made available to the public. These encompass a) activities in the context of the DigiHom project, a collaboration with MeteoSwiss dealing with old Swiss surface data back to the 18th century, b) the digitisation, quality control and correction of a large number of global upper air records (Comprehensive Historical Upper-Air Network (CHUAN), Stickler et al., 2010), and c) global, statistical reconstructions of temperature and GPH fields, and circulation indices back to 1880 and 1900, respectively (Griesser et al., 2010; Brönnimann et al., 2009,2010).

As an example for the application of the data, we show some results of a comparison of CHUAN pilot balloon wind data with the NCEP/NCAR Reanalysis and the Twentieth Century Reanalysis (Compo et al., 2010) over the West African and Asian monsoon regions.