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Interactive comment on "Description of the ERA-CLIM historical upper-air data" *by* A. Stickler et al.

Anonymous Referee #1

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Review of Paper submitted to Earth System Science Data

Description of the ERA-CLIM historical upper-air data by A. Stickler, S. Brönnimann, S. Jourdain, E. Roucaute, A. Sterin, D. Nikolaev, M. A. Valente, R. Wartenburger, H. Hersbach, L. Ramella-Pralungo, and D. Dee

Abstract In this paper the authors discuss the upper-air data sets that are presently available and that have been used in different reanalyses projects. In the framework of the European project ERA-CLIM, significant amounts of additional upper-air data have been catalogued (> 1.3 miostationdays), imaged (> 200000 images) and digitised (> 700000 stationdays) in order to prepare a new input dataset for upcoming reanalyses. The records cover large parts of the globe, focussing on so far

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less well covered regions such as the Tropics, the polar regions and the Oceans, and on very early upper-air data from Europe and the US. The total number of digitised/inventoried records is 61/101 for moving upper-air data, i.e. data from ships etc., and 735/1783 for fixed upper-air stations. Here, we give a detailed description of the resulting dataset including the metadata and the quality checking procedures applied. The data will be included in the next version of CHUAN. The data are available on http://doi.pangaea.de/10.1594/PANGAEA.821222.

General comments:

This paper provides very important information on upper air measurements that were available in the past, and on new records that have recently been digitized and inventoried primarily in the frame of the European ERA-CLIM project. The authors explain the different procedures used to make the data available and how crosschecks and quality control as well as homognisation methods have been used to improve the measurements. The paper also describes how and where the data records are now available for.

Specific comments:

The paper is well structured with different data sets for specific time periods and specific geographical locations treated separately. Unit conversion, reformatting and quality control has been adequately addressed for the different data sets at different universities. Conclusions and outlook are clear and are complementary to the abstract.

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