

Interactive comment on “A global historical Radiosondes and Tracked Balloons Archive on standard pressure levels back to the 1920s” by L. Ramella Pralungo et al.

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We thank all reviewers for their thoughtful comments. We believe they helped us considerably to improve the manuscript as well as the described dataset itself. Regarding the dataset: The reviewers were satisfied with the GRASP archive and its format, with two exceptions:

Referee #1 had concerns regarding the time interpolation of temperature data since the observation bias may have strong solar elevation dependence. While we do not try to estimate that dependence in this paper, we now have at least added the original

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reporting times to the netCDF files. This will allow any future homogenization effort to take the time of the original observation into account.

Referee #2 states that the dataset should not be published without proper homogeneity adjustments and suggests that these should be added to the dataset. We insist that this manuscript should describe only the merging and interpolation procedures but not the homogenization since this would result in a too long paper. However, we decided to make the manuscript part I of a two-part paper. Part II has just been submitted to ESSD, and describes homogeneity adjustments for the GRASP wind dataset which can be downloaded together with the original dataset. Temperature adjustments using NOAA-20CR analyses as reference are considered not yet mature enough to be published. It is made clear in this manuscript as well as on the web site that the dataset should not be used for climate analysis without homogeneity adjustments.

All referees criticized the poor quality regarding the language. We apologize for that and have tried to improve both grammar and style. We have tried to implement the many suggestions accordingly.

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