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Interactive comment on "Trends in evaporative demand in Great Britain using high-resolution meteorological data" *by* E. L. Robinson et al.

Anonymous Referee #1

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General Comments:

This manuscript presents a new spatial, daily meteorological dataset for Great Britain for the years 1961-2012, whereby a special focus is given on trend estimation of potential evapotranspiration with and without considering interception storage and the effect of interception rain on stomatal opening. The paper is well structured and written, methods are clearly listed in the text or summarized in tables, using a good balance between explicit formulation and reference to former literature.

As a potential user of this data set and also in order to evaluate the derived trends, I would be interest on the overall quality of the data set itself and on the derived ETp estimates (incl. trends). Have there been evaluation (cross validation) of the spatial fields of meteorological variables such as radiation components, T, rH, wind speed etc.

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Discussion paper

Possible these are analysed or mentioned in the original literature, but at least the reader should explicitly get an idea of a possible range of uncertainties in that product.

The authors put some effort in addressing the effect of intercepted water on the "operation/functioning" of the stomata system. While my area of research is not in plant ecology, my general understanding is, that for most of the plant the stomata are located at the lower epidermis – how can snow and rain strongly influence stomata control by closing the stomata openings?

I would like to see those two points at least addressed in a revised version of the manuscript. As a result of my evaluation I would suggest moderate revisions of the manuscript before a possible publication in HESS.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2015-520, 2016.