

Interactive comment on “Paleoclimate forcing by the solar De Vries/Suess cycle” by H.-J. Lüdecke et al.

Anonymous Referee #1

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General comments:

The manuscript describes a spectral and wavelet analysis of 1-year resolution hemispheric proxy records focusing on the ~200 years de Vries/Suess solar cycle. The topic is very interesting however, I think that the manuscript is not publishable in its present form.

The spectral and wavelet analysis is performed on differences by linear regression rather than on the original proxy records themselves. I'm not entirely convinced of the adequacy of this pre-processing, specifically how representative are the linear trends extracted in the (arbitrary) 100-yr windows. If the goal is to achieve some noise reduction, some non-parametric procedure such as loess smoothing would be probably preferable.

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The paper is written very succinctly, which is good, but maybe too much! Fig. 4 is barely discussed and Fig. 5 is not discussed at all! The 200 yr oscillation is not very clear in the wavelet spectra (Fig 6), this should be addressed and discussed.

Minor comments:

Fig 1: the crosses are barely visible (even in color!)

Line 109: maybe add “continuous” wavelet analysis (to distinguish from discrete wavelet analysis)

Line 110: Fig. 5 instead of Fig 6 (?)

Line 130: eq (5) of the negative Pearson correlation is common knowledge and not needed, could be removed

Fig. 6: the differences between the curves could be better appreciated showing the residuals (the differences of the curves)

Table 3: correlation values are provided without indication of the corresponding uncertainty! This is a serious issue that should be corrected in a revised version

Interactive comment on Clim. Past Discuss., 11, 279, 2015.

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