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## Update of the Chronology of Natural Signals in the Near-Surface Mean Global Temperature Record and the Southern Oscillation Index

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### ABSTRACT

Time series for the Southern Oscillation Index and mean global near surface temperature anomalies are compared for the 1950 to 2012 period using recently released HadCRU4 data. The method avoids a focused statistical analysis of the data, in part because the study deals with smoothed data, which means there is the danger of spurious correlations, and in part because the El Niño Southern Oscillation is a cyclical phenomenon of irregular period. In these situations the results of regression analysis or similar statistical evaluation can be misleading. With the potential controversy arising over a particular statistical analysis removed, the findings indicate that El Niño-Southern Oscillation exercises a major influence on mean global temperature. The results show the potential of natural forcing mechanisms to account for mean global temperature variation, although the extent of the influence is difficult to quantify from among the variability of short-term influences.

### KEYWORDS

Climate Variability; Southern Oscillation Index; ENSO; Ocean/Atmosphere Interactions; Global Temperature

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