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Solar variation and climate: correlation and causation

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Many correlations have been found between variables representing aspects of solar activity and those representing aspects of Earth's climate, but how much do they mean? Some novel examples for the 20th century, the only one for which we have good observational coverage, will be presented, which emphasize the importance of reliable uncertainty ranges - without them, after all, all we can say about a best guess is that it has zero likelihood of being correct.

GCM examples which show the importance of the difference between the patterns (in space and time) of climate forcing and those of climate response will also be presented. This sort of material is familiar within the GCM community, but less appreciated outside it.

Some comments will also be made about the use of Fourier filtering, and on evidence for "solar amplification" from GCM simulations.