Comments on “Cross-Spectral Analysis of Sunspots and Monthly Mean Temperature and Precipitation for the Contiguous United States”

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I wish to take exception to the claim by Hancock and Yarger (1979) of a statistical relationship between the double sunspot cycle and the “January thaw” phenomenon along the East Coast. I do not wish to dispute any claims of a possible relationship between the double sunspot cycle and January mean temperature in the East; however, an association with the January thaw has not been shown since only monthly mean temperature was used.

Consistent among the many studies of the January thaw phenomenon is the use of daily or weekly time averages for characterizing this warm spell. Typically, 20–23 January has been cited as the time of occurrence. Most notably, Wahl (1952, 1953) has obtained a measure of credibility for this particular singularity through the use of daily averages of temperature and other meteorological parameters.

Through the use of daily mean sea level pressure maps, he was able to trace the eastward progression of the mean trough (surface cold front) which terminates the warm spell. The mean trough, which is located in the Great Plains on the 20th is well off the East Coast by the 27th. The associated warming spell is clearly a synoptic event and is not necessarily related to January mean temperature.

REFERENCES

