

**ZMATH 2016f.01305**

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**Analysis of Thursday night NFL winning margins.**

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Summary: This paper introduces a dataset and associated analysis of the scores of National Football League (NFL) games over the 2012, 2013, and first five weeks of the 2014 season. In the face of current media attention to “lopsided” scores in Thursday night games in the early part of the 2014 season,  $t$ -test results indicate no statistically significant difference between the winning margins in Sunday games vs. Thursday games during the 2012 and 2013 seasons. Interestingly, there is a statistically significant difference between the Sunday vs. Thursday game margins over the first five weeks of the 2014 season. Moreover, statistical process control methods suggest an “out of control” condition for Thursday night game margins during the first five weeks of the 2014 season. The exercise provides students with an opportunity to apply a variety of hypothesis testing and graphical analysis tools to a question of current interest in the popular media.

*Classification:* K90 K70 K40 M90

*Keywords:* stochastics; statistics; university teaching; statistical methods courses applied statistics; sport; data sets;  $t$ -test; time series; statistical process control

<http://ww2.amstat.org/publications/jse/v23n1/vaughan.pdf>