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Jeff Hamrick* (hamrickj@rhodes.edu), 2000 N. Parkway, Memphis, TN 38112, and **John M Rasp** (jrasp@stetson.edu), 421 N. Woodland Blvd., Unit 8398, DeLand, FL 32720. *A Nonlinear Approach to Modeling Success in Baseball.*

Baseball is a game of truisms. “Championships are won on pitching and defense.” “Hitting performance is more consistent than pitching performance.” Claims such as these are often based upon intuition, and are sometimes abetted by statistical analysis. The traditional Pearson correlation is an important and useful tool in this situation. However, the assumptions associated with the Pearson correlation (linearity and homoscedasticity, for example) may not be valid for baseball data. By relaxing these requirements, we obtain a relatively new statistical tool, a “local correlation,” that measures the strength of the relationship at a given location in the distribution of the covariate. We then apply this technique in the context of several baseball situations, examining (for example) whether pitching and defense do correlate particularly well with success for the very best teams. (Received September 21, 2009)