Andrew B Perry* (aperry@springfieldcollege.edu). Pythagorean Expectation As Predictor in Major League Baseball.

In its original form, Bill James’ Pythagorean Model posits that a major league baseball team’s winning percentage will be approximately equal to its “Pythagorean Winning Percentage” (PWP), which is defined as $PWP = \frac{RS^2}{(RS^2 + RA^2)}$, where RS = runs scored and RA = runs allowed. Considered at some point during a baseball season (such as the All Star Break) taking a weight, PWP tends to be a slightly better predictor of future winning percentage than ordinary winning percentage (OWP). Might it be possible to obtain a more accurate predictor of late-season success by taking a weighted average of PWP and OWP? Or perhaps by weighting the wins, losses, runs scored and runs allowed of more recent games more heavily? We consider the general question of how best to predict a baseball team’s future success based solely on the scores of the games played to date in the current season. (Received September 09, 2019)