Abstract Submitted
for the TSF15 Meeting of
The American Physical Society

The Numerical Analysis of Baseball's Trajectory in Flight
RICHARD GARCIA, McMurry University — Research has shown that in addition to gravitational force there are several different factors which contribute to the trajectory of a baseball in flight, such as wind and drag due to the air resistance. A numerical analysis based on the RK4 computational method was performed to predict a baseballs trajectory, considering the drag factors acting on the baseball. Analysis resulted in a code which successfully produced a graph of a baseballs trajectory for a given set of initial conditions. Video analysis was performed on a baseball shot out of a Juggs pitching machine to produce trajectory graphs in a simulated, real-life scenario. The graph produced by the video analysis was compared with the graph produced by the code to verify the reliability of the numerical analysis.

Tikhon Bykov
McMurry University

Date submitted: 26 Oct 2015 Electronic form version 1.4