Abstract Submitted
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Testing the Accuracy of a Projectile Motion Apparatus BRET HENDERSON, ERIC MARTELL, Millikin University — The purpose of this research is to predict where a ball would land given initial velocity, angular velocity, and atmospheric conditions. A spinning spherical object flying through air is affected by gravity, quadratic drag forces, and the Magnus force. Mathematica was used to numerically solve predictions for the equations of motion. These predictions were compared with experimental data gathered by launching tennis balls, baseballs, and/or soccer balls from a machine we designed to propel the balls with a pre-determined initial velocity and initial angular velocity.

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