Projectile Aerodynamic Approximations Derived in Closed Form from Limited Data

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These approximations provide simple, easy-to-calculate one-dimensional values for various aerodynamic functions for projectiles, such as range as a function of velocity, time as a function either of range or velocity, and drag as a function of velocity, assuming there are data on any one of them. In the absence of actual data or full three-dimensional computational methods, these approximations enable trajectory calculations not otherwise possible.