

Falling Pebble with and without Air Drag

equation of motion: $ma = mg - c_1rv - c_2r^2v^2$ $c_1=3.1e-4(\text{kg/m})/\text{sec}$ $r=0.01\text{m}$ $y_0=475\text{m}$ (Empire State Bldg)
 $c_2=0.85\text{kg/m}^3$ $m=0.01\text{kg}$ $v_0=0\text{m/sec}$

