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http://cosmo.nyu.edu/hogg/gp1/

position, velocity, acceleration

3 stories

bucket

(a few seconds?)

how long does it take to fall?

me
What can matter?
-mass, density, contents? spin?
-height
-initial conditions.
-acceleration due to gravity $g = 9.8 \text{ m/s}^2$

$$h = 12 \text{ m}$$

$$t = \sqrt{\frac{h}{g}}$$

dimensionless $(\sqrt{2})$
air resistance

what matters?

- surface area of bucket
- cross-sectional
- wind speed (and falling speed)
- air humidity, T, P
  - density, P
  - viscosity?

matters for "large" things
matters for "small" things.