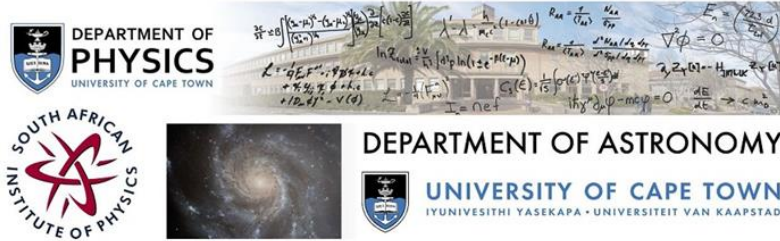


SAIP2016



Contribution ID : 220

Calculation of air density through measurements of falling spheres

Wednesday 06 Jul 2016 at 16:10 (01h50')

Abstract :

We present experimental results from ball drop experiments to infer air density. Using a quadcopter drone to raise the ball to over 1000 ft, measurements of the velocity of the ball are made to infer the mass density. Using the measured terminal velocity enables an accurate measurement of the air density using falling spheres with known cross section and aerodynamic drag coefficient. Comparison with air density measurements using the measured meteorological parameters (temperature, pressure and humidity) will validate the results.

Award :

Yes

Level :

Hons

Supervisor :

Mark Moldwin University of Michigan

Paper :

No

Permission :

Yes

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Session classification : Poster Session (2)

Track classification : Track D2 - Space Science

Type : Poster Presentation