

Sparks Short Courses

E100 Winter Term

Presents:



Crude Experiments

by Dr. E.S. Phinney, Professor
of Theoretical Astrophysics

The goal is to figure out how to measure, to no more than 1 significant figure, as many important physical quantities as we can, using no more equipment than can easily be found in the kitchen or hardware store (or possibly a nerdy home, like a cheap microscope or LED). Examples (students will be encouraged to think up others) could be the speed of light, atomic mass unit, Boltzmann's constant, flux of radiation from the sun, moon and stars, radius of the earth, earth's magnetic field, density of air and its refractive index, speed of sound, heat capacity of some materials and their heat conductivities, SPF factors of sunscreens and other materials, surface tension, diffusivity and viscosity of liquids, heat of vaporisation of water and of dry ice, coefficients of thermal expansion, human metabolic rate, power output, and calories in food.

Up to 12 students. Meet 1x a week for 1 hour brainstorming + design and experimentation

Up for the challenge?

*Sign Up
Today!*

