

Physics Colloquium

Michigan Technological University

Thursday, March 29, 2007

4:00 pm

Room 135, Fisher Hall

(Note: this is different than our usual room)

Who Nose? The Chemistry, Physiology, Psychology, Physics, Meteorology, and Fluid Mechanics of Canine Olfactory Tracking

Craig F. Bohren

Pennsylvania State University

Abstract

Olfaction cuts across many branches of science, from physics to physiology to psychology. Scientific interest in olfaction is increasing, both for its intrinsic interest and for practical reasons. Dogs are used for tracking, for detecting explosives, fire accelerants, buried mines, narcotics, and termites. Understanding how dogs and other animals, even insects, detect scent and distinguish one scent from another may enable better instruments to be designed. And olfaction is at the frontier of basic research on sensations. The scale of the olfactory world ranges from subatomic to organismic, even to the supra-organismic dog and handler team.

Biography

Craig Bohren is Distinguished Professor, Emeritus, in the Department of Meteorology at Penn State University. His scientific research has centered on scattering of electromagnetic waves by particles and on atmospheric optics. He is the author of many books, both scientific and popular, including the now classic "Absorption and Scattering of Light by Small Particles" (with D. Huffman) and "Clouds in a Glass of Beer: Simple Experiments in Atmospheric Physics." In addition to his scientific achievements Craig has earned the Tracking Dog Excellent (TDX) title with three dogs. He is an American Kennel Club (AKC) obedience judge and has earned AKC Obedience Championships on two dogs, as well as a Master Agility Championship on one dog.



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