

University of Notre Dame
College of Science
Department of Physics

NUCLEAR SEMINAR

Ion Beam Analysis and Applications

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Monday, September 20, 2010 4:00 p.m. NSH 124
(Refreshments will be served prior to the seminar in 124 NSH)

Recent applications of ion beam analysis have been developed in forensic science, biochemistry, and even environmental geochemistry at the Hope College Ion Beam Analysis Laboratory. The traditional nuclear physics techniques used in these analyses include Particle-Induced X-ray Emission (PIXE), Rutherford Back-Scattering (RBS), Proton Elastic Scattering Analysis (PESA) and Ion Beam Induced Luminescence (IBIL). A survey of several ongoing ion beam analysis projects will be presented where these techniques were applied to a wide array of targets as diverse as automotive glass, metalloproteins, mineral grains, paint and lake sediment. In each case quantitative analysis of the data yields new results and in some cases significant results that are not accessible readily by other analytical methods. These projects are particularly accessible to undergraduate research students and demonstrate that interdisciplinary applications of ion beam analysis with modern facilities can attract students into nuclear science.

ALL INTERESTED PERSONS ARE CORDIALLY INVITED TO ATTEND