

Physics Department Seminar

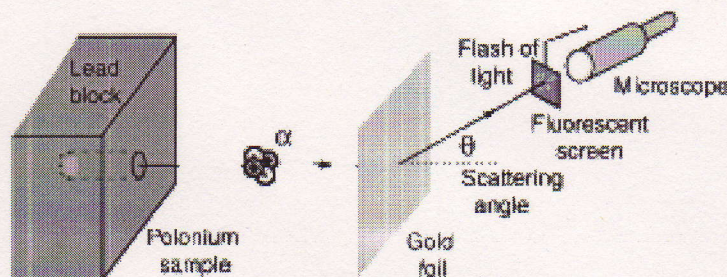
Friday April 11th, 2003

11:00am in PhSc 105



“The Ernest Rutherford Scattering Experiment”

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Abstract:

In September, 2002, Ernest Rutherford's scattering experiment was named by the New York Times to be one of the ten most beautiful physics experiments performed. Rutherford's experiment proved without a doubt that all positive charge and nearly all atomic mass lies in a dense "nucleus" at the center of each atom. Coupled with the work of Bohr, Heisenberg and Planck, this experiment yields a theory of atomic structure which remains valid to this day.

I will briefly discuss the atomic structure theory in existence before Rutherford, give a brief biography of Rutherford and present specifics of the experiment. The immediate and long-term effects of the discovery will also be discussed. I will include a small bit about the construction of the department's first scattering chamber with Eric Edlund, Bob Keith and Dr. John Young.