

CMET Seminar:

- › December 6, 2007
- › 10:30 A.M. (refreshments available at 10 A.M.)
- › 366 Colburn Laboratory



Dan Neumann in the backscattering spectrometer

Dan Neumann
National Institute of Standards and Technology (NIST)

Dan Neumann is the leader of Neutron Condensed Matter Science in the NIST Center for Neutron Research (NCNR) of the Materials Science and Engineering Laboratory at the National Institute of Standards and Technology

in Gaithersburg, MD. He designed and is involved in the operation of a cold neutron backscattering spectrometer on NG2. He is also involved in the operation of the thermal neutron triple-axis/filter-analyzer spectrometer at BT4. This instrument is in the process of being replaced by the Filter Analyzer Neutron Spectrometer (FANS) which he also designed.

Dan received his B.S. in Physics from Arizona State University (1981), his M.S. in Physics from the University of Illinois at Urbana-Champaign (1982), and his Ph.D. in Physics from the University of Illinois at Urbana-Champaign (1987).

“The NIST Center for Neutron Research”

Neutron scattering is a key method for elucidating structural and dynamical aspects of materials. Here I will describe the fundamental properties of the neutron that make them such an important research tool. I will then turn to the NIST Center for Neutron Research and describe the many capabilities that we make available to the scientific and technical community. The application of these instruments will be illustrated through a wide variety of examples ranging from concrete to superconductors, from polymers to biomembranes, and even from archaeology to the standard model of particle physics. I will end with a discussion of plans for developing new neutron facilities at NIST funded as part of the American Competitiveness Initiative.