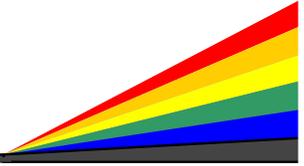


APS COLLOQUIUM SERIES



SPEAKER: Theodore A. Postol
Massachusetts Institute of Technology

Theodore A. Postol is a Professor of Science, Technology and National Security Policy in the Program in Science, Technology, and Society at MIT. He did his undergraduate work in Physics and his graduate work in Nuclear Engineering at the Massachusetts Institute of Technology. After receiving his PhD, Dr. Postol joined the staff of Argonne National Laboratory, where he studied the microscopic dynamics and structure of liquids and disordered solids. Subsequently he went to the Congressional Office of Technology Assessment to study methods of basing the MX Missile, and later worked as a scientific adviser to the Chief of Naval Operations. After leaving the Pentagon, Dr. Postol helped to build a program at Stanford University to train mid-career scientists to study developments in weapons technology of relevance to defense and arms control policy. In 1990 Dr. Postol was awarded the Leo Szilard Prize from the American Physical Society. In 1995, he received the Hilliard Roderick Prize from the American Association for the Advancement of Science.

TITLE: Two Blind Mice: The Dangers of Nuclear Confrontation in the 90's

The Nuclear Danger from Shortfalls in Strategic Early Warning Systems Shortly after dawn on 25 January 1995 a lone sounding rocket rose on a near-vertical powered-flight trajectory from Andoya Island - a site located near the northwest coast of Norway. The sounding rocket was simply a scientific experiment designed to make measurements in the complex environment of the northern upper earth-atmosphere. Roughly one minute after its launch, the rocket's fourth stage ignited as it rose over the radar horizon of Russian early warning radars. Unknown to all involved, the observable characteristics of the rocket were similar to those of a Trident missile, and this led to the issuance of a false attack warning by the Russian early warning system. The warning was passed through the Russian command structure, eventually reaching President Yeltsin, where after an extended time a Presidential decision was made to not launch Russian nuclear forces. The cause of this false warning event can be traced to serious shortfalls and the worsening condition of Russia's nuclear early warning system. The specific limitations of Russian space and ground-based early warning systems that led to the false alert of 1995 will be discussed in this talk. These limitations could lead to other such events in the future. Cooperative ways of reducing the danger to both Russia and the West from the inadequacies of strategic early warning systems will also be discussed.

DATE: Wednesday, June 22, 2000

TIME: 4:15 p.m.

LOCATION: 402 Auditorium