

CAREER OPPORTUNITIES IN NUCLEAR SAFEGUARDS AT LOS ALAMOS

As a DOE lead laboratory in safeguards technology, the Los Alamos Scientific Laboratory is undergoing a major expansion of its broad-based program of design, development and in-plant test and evaluation of "near-real-time" materials control and accounting systems for safeguarding all types of nuclear facilities. In addition to ongoing basic measurement technology development and transfer, these activities include field demonstration and test and evaluation of new safeguards instruments and systems in existing and new DOE facilities, in U.S. commercial plants and, in the future (e.g., through possible cooperative bilateral/international R&D programs), in designated foreign and/or international demonstration facilities.

To meet these new R&D commitments, the Nuclear Safeguards Program at Los Alamos offers challenging career opportunities for scientists and support personnel in modern safeguards technology and materials management, including such activities as:

- materials measurement technology, R&D and applications
- NDA standards, calibration and measurement controls
- engineering liaison, in-plant test and evaluation
- instrumented test-loop development, process control R&D
- surveillance and verification technology, R&D and applications
- materials accountability and control
- safeguards subsystem development and evaluation
- fuel cycle integrated safeguards systems design
- modeling and simulation for safeguards effectiveness evaluation
- international safeguards, inspection/verification/assessment

If you have expertise and proven accomplishments in one or more of the above safeguards and materials management areas, you are invited to send a complete resume, in confidence to:

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los alamos

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siles on the ground. Without something close to radar-controlled automatic launch, a war can be lost in about half an hour. Soon, even the submarines hiding beneath the polar ice may not have time to await a Presidential decision to retaliate.

And yet radar automatic launch is a tactical nightmare. Sooner or later, a meteor swarm or some similar error would trigger an unintended holocaust.

There are only two alternatives to such an intolerable situation. Either all the missiles must be disarmed or they must be separated by much greater distances. Although no place on Earth is far enough away, the Moon is several days from an pre-emptive strike from Earth and the first O'Neill space colonies will be at similar distances. Military logic now demands either that we disarm immediately or that the space colonies must be established as fast as is humanly possible. Either way, it is good news for humanity. Vast resources will become available for peaceful purposes or we shall be in space much sooner than any of us dared to hope. The road that leads via the space colonies to the stars will begin to open. With just a little luck, some of our children will have time to escape the lethal politics of the mother planet.

All we have to do to make sure that we get one or other (and perhaps both!) of these great gifts is to impress upon our politicians that radar automatic launch of nuclear missiles is not an acceptable, human option.

MALCOLM THACKRAY
10/27/77
Stanford, California

Corrections

November 1977, page 34, figure 3—The labels on the two blue curves, "Silicon avalanche photodiode, 0.82 microns" and "Silicon photodiode, 0.82 microns," should be interchanged.

November, page 63, third paragraph, line 9 up—line should read "gases, so that the higher transport to, and . . ." The editorial revision implied that krypton and xenon have a higher transport to, and deposition in, the human lung, whereas it is rather uranium, thorium and daughters in coal that have higher transport and deposition.

Page 63, fourth paragraph, line 7—line should read ". . . comparable in order to make the . . ." The editorial substitution of "to coal hazards" makes the sentence erroneous. It is the radioactive hazards that are very roughly comparable, not the total hazards. It is the thrust of the author's findings that the total hazard of coal is orders of magnitude greater than that of fission.

December, page 26, column 3, lines 27/28—for "considerable stress" read "considerable success." □