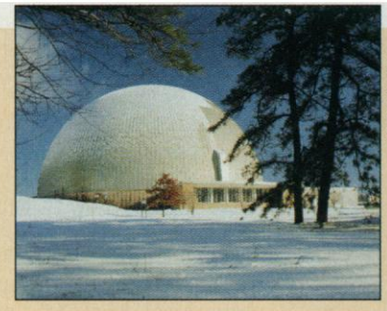
LETTERS

"The core spirit of science"


BROOKHAVEN

Responding to an editorial by Li Peng, premier of China, readers note that science "teaches people to think independently" and that "science and technology alone cannot solve China's agricultural problems." On other topics, it is pointed out that "over 1000 scientists" participate in research that uses neutron beams every year in the United States. (At right, Brookhaven National Laboratory's high-flux beam reactor.) The "present, unsustainable system" of public funding of research is criticized. And the danger model of immunity is discussed.

Neutron Research Community

The News & Comment article "U.S. neutron scientists settle for less" by Andrew Lawler (9 Aug., p. 728) provides a sobering assessment of the current status of neutron facilities in the United States and prospects for new ones. I take issue, however, with the description of the neutron research community as "small and fractious." The "fractious" aspects of our community (as Lawler amply demonstrates) are mainly within the U.S. Department of Energy and its competing national laboratories, not among neutron researchers, the large majority of whom come from universities and industries. Nor is our community "small." Well over 1000 physicists, chemists, materials scientists, and engineers participate in research in the United States every year using neutron beams, and this number has doubled in the last decade. As an example, researchers using the reactor at the National Institute of Standards and Technology, which has recently developed the only internationally competitive cold neutron research facility (CNRF) in the United States, have tripled since the opening of the CNRF in 1990. Moreover, these numbers do not reflect broad and critical U.S. needs for isotopes and irradiation facilities applied to medicine and technology, which also require modern neutron sources.

Unfortunately, our community has not benefited from development of a totally new neutron source in this country for more than 25 years, and we are continuing to fall behind our international competitors, a point clearly documented by Lawler. We must find a way to meet the increasing neutron research needs of modern U.S. science and technology. Even in the face of tight budgets, we in our field must unite to make a coherent case and set priorities for critically needed investments for a new neutron source and for upgrades to existing neutron facilities. This effort must be less concerned with the needs of any particular national laboratory than with providing the best capabilities for the nation. Failure to succeed in this mission could lead to a loss of any chance for the United States to be competitive in vital neutron measurements, nuclear medicine, and related technologies, as we move into the next century.

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Science in China

The editorial by Li Peng, premier of China (5 July, p. 13), gives a positive signal that the Chinese government finally realizes that it is time to replace the empty "ism" with science. Science is not merely a collection of utilitarian tools for planting rice, building highways, and so forth.

The core spirit of science is to seek truths through unrelenting effort and utmost honesty and to uphold truths with courage and integrity. These are vital elements for all societies, especially for today's China. Science also teaches people to think indepen-

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