

New Product 4K Compact Cryocooler



4K research cryostats

**Sample characterization,
optical and non optical**

**UHV, application specific and
custom interfaces available**

Proven low vibration design

The ARS 4.2K family

**0.8
watts**

**0.15
watts**

**0.5
watts**



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Technology Program (ATP) that could total up to \$101.6 million in funding to private companies over several years. The ATP awards are intended to help high-risk industrial R&D projects that have the potential to significantly help the US economy, but are too risky to receive full industry funding.

For the entire \$101.6 million to be granted, the companies involved would have to contribute \$92 million in shared costs. The awards are made on the basis of "rigorous competitive peer review considering scientific and technical merit," according to NIST. The 40 awards are the first of what is expected to be three sets of grants funded with fiscal year 2002 money.

Republican members of Congress have tried for several years to kill the program; they contend that the federal government shouldn't selectively choose and support some private companies over others in a competitive marketplace. Supporters of the program assert that it stimulates the development of critical leading-edge technology that otherwise might not be developed. The current awards cover research in biometrics, biotechnology, medical therapeutics, materials processing, and nanotechnology. —JLD

New NSF centers. NSF is establishing five new Centers for Learning and

Teaching. Three will focus on K-12 curriculum development and teacher training, and two will concentrate on education practices and faculty development at universities and colleges. Each center will receive \$10 million over the next five years.

The three new K-12 centers, at the University of Georgia at Athens, Washington University in St. Louis, Missouri, and the American Association for the Advancement of Science in Washington, DC, will bring to 10 the number of NSF K-12 learning and teaching centers nationwide. The seven existing centers were established in 2000 and 2001. The NSF plans to spend about \$100 million overall to increase the numbers, professionalism, and diversity of K-12 math and science teachers through the learning and teaching program.

The higher-education centers are a new component of the NSF program and are designed to focus on undergraduate education in science, mathematics, technology, and engineering, with the goal of developing future faculty. "We want to increase the mathematics and science achievement levels of our students and prepare them for a society increasingly shaped by science and technology," said Judith Ramaley, NSF's assistant director for education and human resources. —JLD ■

WEB WATCH

http://www.agu.org/sci_soc/MediaGuide.pdf



Getting your message across in an interview or press conference can be quite challenging, especially on live TV or radio. If your media savvy needs a boost, take a look at *You and the Media*, a 32-page booklet published by the American Geophysical Union and written by Herbert Funsten, a space physicist from Los Alamos National Laboratory.

<http://www.aip.org/history/syllabi>

On its *Learning History of Physics* page, AIP's Center for History of Physics has collected sample syllabuses from several noted experts. Among the offerings is *Science from Aristotle to Newton*, a course that Stephen Brush began teaching two years ago at the University of Maryland, College Park.



<http://www.exploratorium.edu/cooking/webcasts>



The Exploratorium in San Francisco produces a series of Webcasts on the science of food and cooking. Appropriately for the holiday season, December's program takes champagne as its topic. *Sparkling Science: Champagne* airs on the Web at 4 PM PST on 28 December. Audio and video recordings of the show will be available if you miss the live action.

To suggest topics or sites for Web Watch, please phone me at (301) 209-3036.
Compiled by CHARLES DAY