

wavelengths (317–905 nanometers) with a spatial resolution of 8–14 kilometers. Another, NISTAR, would record the energy reflected by the full sunlit Earth at ultraviolet, visible, and infrared wavelengths (0.2–4 micrometers) as a function of time. NISTAR would also measure the planet's total thermal radiation for longer wavelengths, out to the far infrared (4–100 micrometers), which arise mainly from emission. A third set of instruments would monitor solar flares and the solar wind to study and predict space weather.

Despite its strong scientific credentials, the satellite nicknamed GoreSat has not managed to shake off the albattross of its White House conception, which put it on the fast track but tarred it politically. "Gore cut loose from Triana. He floated the idea, but it went forward without his help," says Wiscombe. "[Gore's] original idea of a TV camera in the sky was dead on arrival. We quickly moved well beyond that."

NASA invited space scientists to submit competing ideas for a mission to L1, but never asked if they wanted to go there. The omission backlashed: Triana has been beset with complaints that it bypassed peer review. The complaints eased a bit after the National Academy of Sciences, at Congress's bidding, issued a report on Triana early last year. But critics refuse to forget that the academy's endorsement of Triana's goals came late in the satellite's planning.

Another sticking point is Triana's estimated cost, which ballooned to about \$100 million. Depending on who's counting, the launch is either a free hitch with the shuttle, or it as much as doubles the tab.

Triana lost its launch when NASA, in accord with President Bush's proposed 2002 budget, cut back the number of shuttle flights from eight or nine a year to six. After payloads bound for the International Space Station, the agency's priorities are a maintenance mission to the Hubble Space Telescope and a microgravity experiment. NASA's tight budget and an expected \$4 billion overrun on the space station have dealt blows to many projects—a mission to Pluto, the Vegetation Canopy Lidar, prototype reusable launchers X-33 and X-34, and a habitation module and other space station accessories, to name a few. But putting Triana on ice is unusual because the satellite is built and ready to go.

"Not to proceed at this point would be a major, embarrassing waste of scientific talent and taxpayers' money.

New York Academy Pulls Plug on *The Sciences*

The six staffers at *The Sciences* all got pink slips on 1 June.

The New York Academy of Sciences folded its 40-year-old, award-winning magazine because, says academy president Rodney Nichols, putting resources into other activities "will be more effective in raising the visibility and impact of the academy's programs."

"*The Sciences* was never the voice of the academy. It was a free-standing magazine for which we were the angel for many hundreds of thousands of dollars a year—most of our discretionary spending went to the magazine," says Nichols. "Even if we had considerably more money, we would be reallocating resources to what we see as our central mission." A newsletter detailing academy affairs will be expanded, and the academy will focus on, among other things, three new interdisciplinary centers, international conferences, its book series, and its Web site, he adds.

Readers, however, have consistently rated *The Sciences* one of the chief benefits of academy membership. It had a circulation of 46 000.

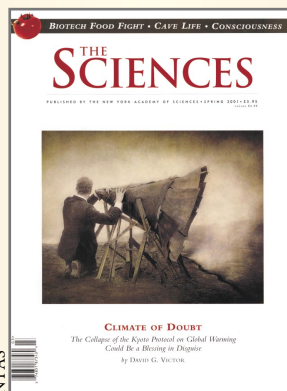
"I have always faulted [the academy] for not marketing more," says Hans Christian von Baeyer, a physicist at the College of William and Mary in Williamsburg, Virginia, and a contributor to *The Sciences* for 15 years. "Many of the scientists to whom I have shown the magazine had never heard of it before, but none failed to be bowled over."

"There are several good popular science magazines," von Baeyer adds. "But

this one was absolutely unique and was by far the most sophisticated. It was hip. This magazine spoke to people who made great demands on literature and art. It bridged the gulf between the humanities and the sciences."

In February, *The Sciences* was cut back from six to four issues a year. "We knew something was going to happen. What we didn't know was that they were going to shut it down altogether," says Jeffrey Winters, a senior editor at the magazine, who forwent his severance package—a week's salary per year of service—for the freedom to talk. "In my heart, I think that the head of the academy was never a strong supporter of the magazine. If he had to make some cuts, he would prefer to cut the magazine than other projects."

"I fought against the decision [to close *The Sciences*] for a year. I think it's treacherous," says Jacqueline Leo, who oversees online editorial operations for the media and marketing company Meredith Corp and is a member of the academy's board of governors. "I am sympathetic to the financial situation at the academy and want to make sure it's healthy and viable for the long run. But what would have happened if they had tested a less expensive membership fee? Would the economics have drawn a critical mass? We never tested the package." Still, Leo voted to close the magazine rather than try to keep it on life support because, she says, a sudden, dramatic end increases the likelihood that the magazine will be rescued. **TONI FEDER**



THE FINAL COVER of *The Sciences*.

We must push forward," says Valero. He is exploring various launch options, including a later shuttle ride, an expendable rocket, and flying on the European Space Agency's Ariane 5 rocket. Keeping politics in the mix, Valero points to the Bush administration's interest in global warming as perhaps boding well for Triana.

TONI FEDER

McTague Takes Reins at UC's DOE Labs

John McTague, a retired vice president of technical affairs for Ford Motor Co, has been tapped by the University of

California to oversee the management of three Department of Energy national laboratories: Lawrence Berkeley and two weapons labs, Los Alamos and Lawrence Livermore. UC has run the labs since they were created, but recently faced the possibility of losing its \$3-billion annual contract because of a series of widely publicized management problems. To keep the contract for the two weapons labs, UC created McTague's \$300 000-a-year job and brought in outside contractors to review the labs' security, safety, and project management.

Following the 1999 arrest of Los Alamos physicist Wen Ho Lee amid allegations of spying and the tempo-



McTAGUE

rary disappearance of computer disks containing nuclear secrets, McTague led a National Research Council report on security at the weapons labs. After the report came out, staff education on security procedures improved, says McTague. But more effort is needed to focus security measures on the areas where they are strictly necessary, he adds. "And morale at the labs is better, but not good enough."

Also in 1999, Livermore admitted massive cost overruns in the construction of its National Ignition Facility, a key component of DOE's program to study and maintain nuclear weapons in the absence of nuclear testing. The ensuing task force on NIF, chaired by McTague, recommended that management should be overhauled, but construction could continue (see PHYSICS TODAY, January 2001, page 21). Now, says McTague, "All indications I've seen are that project management out there is robust. The communications issue that existed between the university and the DOE has been overcome."

And even more important than focusing on facilities, says McTague, is "continued attention to making the labs a place of choice for talented scientists and engineers to work and develop their careers."

LYNLEY HARGREAVES

NEWS NOTES

Quantum computing journal. The journal *Quantum Information and Computation (QIC)* made its debut last month. Most papers published in this field currently appear in the Los Alamos electronic preprint archives, and in a handful of journals in the physics, mathematics, and computer sciences arenas, says Hoi-Kwong Lo, one of the new journal's managing editors and the chief scientist at MagiQ Technologies Inc in New York City. "It is getting difficult to keep track of all those papers and distinguish the good ones from the bad ones. We hope to bring a diverse community together and broaden the perspectives of researchers." The first issue of *QIC*, which will appear every two months, focuses on quantum entanglement. The electronic version of the journal

will be free until the end of the year and can be accessed online at <http://www.rinton.com/journals/qiconline.html>.

Math research prizes. Sergei Gukov, a 24-year-old postdoc studying string theory, just won his salary for the next five years. Gukov is one of four prize fellows named this year by the Clay Math Institute—a three-year-old private foundation in Cambridge, Massachusetts, that is perhaps best known for its ongoing offer of \$1 million to the first person to solve any of seven historically troubling math problems. Through the fellowships, first offered last year, the institute sponsors scientists for up to five years of research at any location. So far, one winner a year has worked in physics. "Most postdocs have to teach," says Gukov, who will instead focus on research at Harvard University. The winners, who must be under the age of 30, need to have already achieved significant research results, says Arthur Jaffe, the institute's president. "We first and foremost want to encourage the most original researchers."

NAE reelects Wulf. The National Academy of Engineering has reelected William A. Wulf to head the organization for six more years. He took over as interim president in 1997, and has since been on leave from the Uni-

versity of Virginia. Wulf believes that the increasing global population—most of which will end up in new giant cities—will lead to unique engineering challenges in energy, water, waste management, and transportation. "By the time I leave office, I want engineering to do a better job of supplying information on which public policy can be based," he says.

DOD funds space materials center. The University of Chicago has won a \$5 million grant over five years from the US Department of Defense to lead the creation of a Center for Materials Chemistry in the Space Environment. The center will search for materials that can survive bombardment by stray oxygen atoms—which make up much of the lower atmosphere and react strongly with many materials—as well as electrons, orbital debris, ions, and ultraviolet radiation. "The current materials being used are still what I would call first-generation space materials that just happen to work at some level," says Chicago physical chemist Steven Sibener, the new center's leader. "We intend to go beyond such fortuitous situations." The center brings together researchers from six universities and is part of the DOD's Multidisciplinary University Research Initiative, which funds basic research to the tune of \$125 million a year. ■



Web Watch

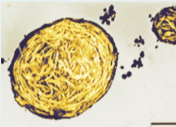
<http://es.rice.edu/ES/humsoc/Galileo>

With the aim of preparing students to read the works of Galileo Galilei, Albert van Helden, a historian at Rice University, and Elizabeth Burr, the university's electronic text and images librarian, collaborated to produce the **Galileo Project**. The illustrated Web site offers information on the life and work of Galileo (1564–1642) and the science of his time.



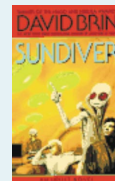
<http://www.foodsci.uoguelph.ca/dairyedu/icecream.html>

In great and extensive detail, Doug Goff of the University of Guelph in Ontario, Canada, describes the history and science of **Ice Cream**. This much-loved food product, points out Goff on one of the site's pages, is both an emulsion and a foam whose melting properties are influenced in part by the stability of colloidal particles known as casein micelles.



<http://lafite.phys.uregina.ca/sparro/huber/eclectic.html>

The Web abounds with sites that contain brief physics-related quotations. But in **Garth's Eclectic Collection of Physics-Related Quotations** you'll find a collection of long extracts from several science fiction novels, each related to an aspect of physics. The collection's compiler, Garth Huber, is a particle physicist at the University of Regina in Saskatchewan, Canada.



To suggest topics or sites for Web Watch, please e-mail us at ptwww@aip.org.

Compiled by CHARLES DAY