

says that Mauna Kea, with its dry, cloud-free, and stable atmosphere, "is probably the best place in the world for ground-based optical astronomy."

LYNLEY HARGREAVES

Darwin Returns to Kansas

Scientists and educators in Kansas are breathing easier now that two of the six anti-evolutionists on the state's board of education lost their primary elections in August and a third resigned, assuring that the theory of evolution will be reinstated in the state's K-12 science standards.

"We're headed in the right direction," said John Staver, director of the Center for Science Education at Kansas State University. The board's new makeup means that a majority will be "back in the moderate direction," he said.

Staver was a cochair of the 27-member committee of science teachers, educators, and scientists that two years ago wrote a lengthy set of standards for K-12 science education in Kansas. The board adopted the standards, but only after voting 6 to 4 to revise them and cut all references to Darwinian evolution, the Big Bang, the age of both the universe and Earth, and, curiously, global warming. (See PHYSICS TODAY, November 1999, page 59.)

The standards are the basis for the statewide achievement tests all students must take beginning in 2001. While the board didn't ban the teaching of evolution and cosmology outright, scientists and educators alike feared that without the standards to back them up, many teachers would avoid what to some are controversial subjects.

The state's 1 August Republican primary election became a referendum on evolution versus creationism when three of the conservative incumbents were challenged by Republican moderates who campaigned on the issue of putting real science back in the standards. The outcome is seen as a victory for grassroots organizing by scientists and others in the state. The most telling defeat was of Linda Hol-loway, who spearheaded the anti-evolution effort and spent about \$90 000 on her reelection bid. Her challenger, Sue Gamble, spent about \$36 000 and won 60% of the vote.

"I would like to think public education by the Kansas Citizens for Science [a group that coalesced around the science standards issue] made the

difference," said Adrian Melott, a University of Kansas cosmologist. "Our focus has been not to campaign, but education. We held public lectures and we targeted newspapers and radio. We didn't let any of [the anti-evolution claims] go unchallenged."

While the original 27-member science standards committee was disbanded after turning in its recommendations more than a year ago, Staver planned to call the group back together on 9 September to review its original standards and have them ready for the new board, which takes office 1 January.

There is still the general board of education election in November, but for this issue who wins doesn't matter because the majority of the Republican and Democratic candidates have stated they will overturn the anti-evolution vote.

This battle has been won in Kansas, Staver said, "but there will never be a time to relax because this kind of thing has been going on since Darwin published the *Origin of Species*. The folks on the [creationist] side of this issue believe they are right, and they believe absolutely."

JIM DAWSON

Newton's Alma Mater Bids for His Papers

The University of Cambridge is attempting to buy one of the most



LETTERS FROM ISAAC NEWTON in the Macclesfield collection could give scholars new insight into the writing of *The Principia*.

important collections of scientific papers from the 17th century still in private hands. The Macclesfield collection includes 50 letters from Isaac Newton, which were mainly written in his twenties and thirties, as well as manuscripts and correspondence from the Irish chemist Robert Boyle and letters from Isaac Barrow, Newton's predecessor in the Lucasian professorship of mathematics at Cambridge. Only a few scholars have gained access to the manuscripts since the 1830s—details about them are known mostly from Stephen



Web Watch

<http://star.tau.ac.il/QUIZ/>

Each month, Yakov Kantor, a condensed matter physicist from Tel Aviv University in Israel, updates his *Physics Questions/Problems* Web page with a new puzzle. If you submit an answer, Kantor will review it and, if he thinks yours is the best, he'll publish it on the site. The latest puzzle concerns a radiating spherical shell with a time-dependent radius.



<http://www.nobel.se/physics/articles/fusion/index.html>

The official Web site of the Nobel Foundation currently highlights an article by John Bahcall of Princeton's Institute for Advanced Study. Entitled *How the Sun Shines*, Bahcall's article takes a historical approach, beginning with 19th-century estimates of the Sun's age and ending with the discovery last year of neutrino oscillations.

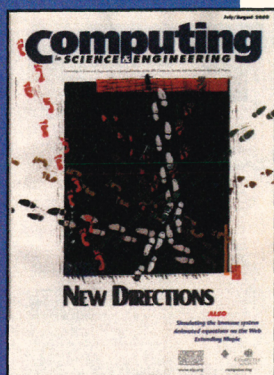
<http://physics.nist.gov/GenInt/Curie/main.html>

From the physics laboratory of the National Institute of Standards and Technology comes Marie Curie and the NBS Radium Standards, an extensive Web site that describes Curie's role in establishing radiation standards at NIST's forbear, the National Bureau of Standards. Curie died in 1934, but the Web site continues with the story of radiation standards right up to the present day.



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Rigaud's 1841 book, *Correspondence of Scientific Men of the Seventeenth Century*.

Most of the collection's 350 or so letters are addressed to John Collins, the librarian of the Royal Society, who acted as a scientific clearinghouse for mathematicians in the late 17th century. After his death the collection was passed on to his friend and colleague William Jones, a mathematics teacher, who tutored the son of the first earl of Macclesfield. He eventually bequeathed the collection to his pupil. Now the ninth earl is selling the manuscripts through Sotheby's auctioneers to help maintain his ancestral home. He is giving the university first refusal on the collection for £6.37 million (\$9.24 million).

Historians are delighted that an academic institution has been offered the collection at a reasonable price, because private collectors—such as Microsoft cofounder Bill Gates, who paid \$30.8 million for Leonardo Da Vinci's "Codex" in 1994—have been buying increasing numbers of early scientific manuscripts. "Cambridge is the ideal place for Newton's papers," says Timothy Gowers, a mathematician at the University of Cambridge.

The university already owns the most important collection of Newton's scientific documents, which were donated in 1872. The Macclesfield collection will complement these manuscripts as it contains responses to many letters that are held by the university. "The opportunities which the two collections together would present to scholars are unparalleled," Gowers says. "These papers are important as they show how his [Newton's] ideas developed," says Stephen Hawking, the current Lucasian professor at Cambridge. "Science doesn't appear out of the blue. It's a series of steps."

The UK National Lottery has agreed to give the university £4.79 million on the conditions that the university library be open on Saturday afternoons, and that it host a special exhibition on Isaac Newton next year. That still leaves £1.58 million for the university to come up with. Patrick Zutshi, keeper of the manuscripts and archives at Cambridge, is convinced that the university will be successful. "We are optimistic about completing the purchase," he says, "but this is dependent on our raising further funds. So far, the signs have been encouraging." The university hopes to raise the money in the next two months.

PAUL GUINNESSY ■