

did have discord among themselves. But it wasn't any worse than collaborations in, say, the US or Japan. And it should not be the reason for cutting off already-allocated funding."

Scientists in South Korea are worried that HANUL's cancellation has sullied their reputations, both as individuals and as a community. "It is domestic physicists who are left to bear sorrows, take blame, and are unjustly victimized," says Kang. "We have a long way to go to build up a sound research infrastructure in Korea and we badly need a lot of high-energy programs including HANUL-like ones." In addition to the cancellation's giving South Korean high-energy physics a bad image, Song notes the greatest loss "is not being able to give young people the opportunity to join this project."

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IN BRIEF

Antiquarian annals. The sale of the Turner collection by the UK's Keele University was legal, and the price was alright, but the university should have discussed the matter more openly. Those are the main conclusions of an internal review completed late last year in response to public outcry over the university's secret July 1998 sale of some 1600 rare math and physics texts (see PHYSICS TODAY, April 1999, page 64). In the case of comparable future sales, the review recommends "wider and more formal consultation should take place, both internally and externally, notwithstanding any adverse effects which may be envisaged." Scholars had protested that in taking the collection from the public domain, the sale flew in the face of the intentions of the late Charles Turner, who

had donated his collection to the university in 1968. They feel somewhat vindicated by the review's findings, but are disappointed that "Keele University still hasn't accepted that it made grave errors of judgment and management," as John Fauvel, a member of the British Society for the History of Mathematics, puts it. Meanwhile, some sources say that much of the Turner collection went to Microsoft Corp cofounder Paul Allen, who was also the anonymous buyer two years ago of the 10th-century Archimedes palimpsest.

Nuclear accident victim dies. Of the three workers present when a uranium solution went critical at a nuclear fuel reprocessing plant on 30 September in Tokaimura, Japan (see PHYSICS TODAY, December 1999, page 52), Hisashi Ouchi, 35, was the

Middle East Synchrotron Project Moves Ahead

Funding has been found for dismantling Germany's synchrotron light source BESSY I. The pieces will be carefully packed and tracked in preparation for putting the facility back together somewhere in the Middle East (see PHYSICS TODAY, August 1999, page 54).

Meeting a Christmas Eve deadline imposed by the German government, in December the eleven member countries of SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) each pledged \$20 000 toward the synchrotron's orderly disassembly, documentation, and packing. The US and Sweden also plan to contribute, and Koichiro Matsuura, the new director general of the United Nations Educational, Scientific and Cultural Organization (UNESCO), which is serving as midwife to the project, has kicked in \$400 000. The German government can now formally approve the gift, says Herwig Schopper, a former director of CERN, and chair of the SESAME interim council. "They wanted assurance that people are really engaged in the project."

The immediate financial crunch has been met, but the SESAME participants still need to come up with about \$21 million to move, set up, and upgrade the synchrotron. Then, over the next few years, they'll have to find the same amount again to build beamlines and user laboratories. "One step at a time," says Schopper. "I have asked project delegates to work on their governments to redirect some of the funds which have been promised [in aid from other countries]—for water projects and other things—to SESAME."

In the meantime, seven governments have formally bid to host

SESAME. The seven—Egypt, Iran, Jordan, the Palestinian Authority, Turkey, and new members Armenia and Oman—have proposed a total of 18 sites. "All of the sites would fulfill the technical conditions for the establishment of an international center," says Schopper. "So political and financial considerations will be taken into account."

Delegates from SESAME member countries—which, in addition to those that have submitted site proposals, include Cyprus, Greece, Israel, and Morocco—will choose the final site. They've all committed to participate in SESAME's activities regardless of where the facility ends up. A final decision is expected by June.

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WHERE MIGHT SESAME OPEN? Jordan's King Abdullah II (second from right) proposed that his country host SESAME after he and Prince Ghazi ben Mohammad (far right) met last fall with the SESAME interim council chair, Herwig Schopper (left), and UNESCO's Maurizio Iaccarino. (Courtesy of the Jordanian Royal Court.)

most severely exposed to radiation. He died on 22 December, apparently of multiple organ failure. At press time, a second worker remains in critical condition, and the least severely exposed man was released from the hospital on 20 December. The Japanese government has revised its estimates of the total number of people exposed to radiation; it has raised the count from 69 to 150 by including 81 more individuals who had been involved in cleanup and investigation activities following the accident.

Physics, history, and philosophy.

Physics in Perspective is a new print journal that covers historical and philosophical issues related to physics. Its editors, John Rigden of the American Institute of Physics and Roger Stuewer of the University of Minnesota, aim to reach a broad audience with the new journal, which is being published quarterly by Birkhäuser Verlag in Switzerland. Subscription information is available on the Web at http://www.birkhauser.ch/journals/1600/1600_tit.htm, and prospective subscribers can access one issue for free, at <http://www.birkhauser.ch/journals/1600/tocs/cont9001002.htm>.

Harder x rays at ALS. Thanks to \$8.05 million from the Howard Hugh-

es Medical Institute (HHMI), the output of the Advanced Light Source at Lawrence Berkeley National Laboratory will be extended to about 40 keV, up from 15 keV. By next year, two of the synchrotron's beamlines will be refitted with 5-tesla superconducting magnets that will steer stored electrons along a more sharply curved path than before, causing them to emit harder x rays. Says biophysicist Thomas Earnest, who oversees crystallography studies at ALS, "This will help meet the growing user demand for protein crystallography studies, without changing the core of the machine."

Three-quarters of the experiment time on the two new beamlines will go to scientists who have grants from HHMI, which funds biomedical research. In other HHMI news, chemistry Nobelist Thomas Cech became president of the institute on 1 January.

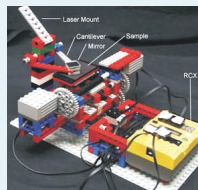


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Web Watch

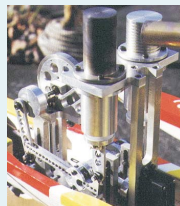
<http://www.mrsec.wisc.edu/edetc/MFM.html>

Refrigerator Magnets have a complex and ingenious magnetic structure, according to a Web site from the nanostructured materials and interfaces group at the University of Wisconsin—Madison. The magnets are educational, too. The Madison group uses the devices in lab demonstrations of such physical phenomena as self-assembly, salt cleavage, metal deformation, and magnetic force microscopy.



<http://www.bekkoame.or.jp/~khirata/indexe.htm>

Japanese naval engineer Koichi Hirata's job and hobby is the **Stirling Engine**, a fuel-efficient method for converting thermal to mechanical energy that was invented in 1816 by a Scottish minister named Robert Stirling. Hirata's comprehensive site contains tutorials on the operating principles of the Stirling engine, a gallery of working engines, instructions on building your own engine, and descriptions of the more than 40 model engines that he has built.



<http://www.phys.unsw.edu.au/music/flute>

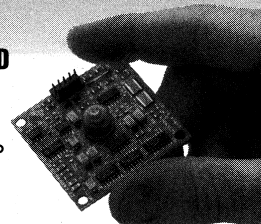
On their Web site **Flute Acoustics**, acousticians John Smith, John Tann, and Joe Wolfe of the University of New South Wales describe how a flute produces sound. The site offers not only general information about musical acoustics, but also, for each of the standard flute fingerings, the corresponding sound and impedance spectra and an audio file of the note.



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