

one proposal is to give up this independence." ESA was also irked by NASA's decision in July to send an orbiter to Mercury, because it means that ESA will have to rethink its own plans for visiting that planet. "It would have been more efficient to properly cooperate on a joint program," says Bonnet. "We need to make sure we do not duplicate, and that we have communication and cooperation." Bignami agrees: "Communication is more and more important. So far, contact is between the two executives—[NASA's head of space sciences Edward] Weiler and Bonnet—and by people knowing each other. But this is not enough. I would dare to propose a truly joint transatlantic advisory committee."

But if it sounds like ESA is following in the footsteps of "faster, better, cheaper," the motto set by NASA administrator Dan Goldin, it's not, insist European space scientists. "The success of NASA is not that convincing. There have been several failures," says Bonnet. Still, admits Cavallo, "We have to do it cheaper. To do that, it must be faster. And no one wants to do it worse."

TONI FEDER

Wagner Takes DESY Reins

On 8 July, Albrecht Wagner became the head of the German Electron-Synchrotron (DESY) facility, succeeding Björn Wiik, who died last February. (See Wagner's obituary of Wiik, PHYSICS TODAY, July, page 69.)

Wagner earned a PhD in physics in 1971 from the University of Heidelberg, where he later joined the faculty. Since 1991, he has been a member of the University of Hamburg's physics department as well as DESY's director of research. His research focuses on electroweak interactions, and on the development of gaseous and solid-state detectors.



WAGNER

Wagner plans to keep DESY on its present course. In particular, he says, "we will continue, in a very strong way, research with HERA," the Hadron-Electron Ring Accelerator facility, located at the lab's main site in Hamburg. Wagner's other top priority is moving TESLA toward approval. TESLA, the TeV Energy Superconducting Linear Accelerator, is a planned 500 GeV electron-positron collider with an integrated x-ray free electron laser. Of three such colliders

in the works worldwide, it's the only one designed to have superconducting cavities. That means luminosities four to five times higher than a comparable, room-temperature machine, explains Wagner. "Thanks to superconductivity, we can store the radiofrequency power for a millisecond in the cavities and therefore can accelerate and collide a lot of particles."

Electron-positron colliders are meant to complement higher-energy facilities such as the Large Hadron Collider being built at CERN, says Wagner. "The LHC will be able to detect the Higgs—one of the key questions because it is the key to our understanding of mass." But with a hadron collider, "there is a whole bag of reactions. The electron-positron collision is a much simpler system, so it's better for precision measurements such as determining the Higgs branching ratios and the Yukawa coupling of the Higgs to the top quark, essential for understanding the mechanism of mass generation."

Equally important, continues Wagner, is that an electron beam from TESLA "would be used to drive a free electron laser in the x-ray domain. We plan to build a big user facility." So far, a small test facility is in operation, with lasing at ultraviolet frequencies set to begin early this fall, and to be opened to users in 2003. The technical design and cost estimate for the full TESLA is scheduled to be submitted to the German government and to the project's international partners in the spring of 2001.

Other current projects at DESY include lattice gauge computations and neutrino astrophysics, both of which are carried out primarily at the lab's Zeuthen site, southeast of Berlin.

TONI FEDER

Physicist Tapped to Head EC Research

Philippe Busquin, a physicist and the leader of Belgium's francophone Socialist Party, has been nominated to direct the research activities of the European Commission, pending approval by the European Parliament. He would succeed France's Edith Cresson, who was accused of putting her dentist on the commission's payroll and was at the center of other allegations of mismanagement, fraud, and nepotism that led to the previous commission's mass resignation on 15 March.

The parliament is scheduled to vote this month on whether to confirm EC president-designate Romano Prodi and his commission nominees, including Busquin, for five-year terms. "You can't

assume it's a shoo-in," says a Prodi aide. "But Prodi's argument is that he's chosen the right people" to make a clean start.

Busquin's chief responsibilities would be to oversee the Joint Research Centre, which consists of seven research labs across Europe; to implement the EC's current five-year, \$15.8 million research budget, or Fifth Framework Programme; and to plan the successor program, which is slated to start in 2002. Prodi is proposing to add agricultural research to Busquin's responsibilities, and to move education out of the research portfolio and combine it with culture.

Busquin holds a 1962 bachelor's degree in physics from the Free University of Brussels, where he also pursued graduate studies in philosophy and the environment. He taught physics for 15 years, and then from 1978 to 1980 chaired the board of directors of Belgium's National Institute of Radioelements. Busquin has been involved in regional and national politics since 1977, and in June was elected to the European Parliament, although he will resign if he becomes commissioner for research.

TONI FEDER



BUSQUIN

AUDIOVISUAL LIBRARY, EC

AIP Agrees to Lesser Role in Russian Journals

The American Institute of Physics will continue to have a hand in the publication of English-language versions of Russian physics journals. On 23 June, after nearly two years of haggling, the Russian Academy of Sciences, AIP, and MAIK Nauka, a Moscow-based publishing house, signed a five-year, three-way agreement that takes effect in January.

Under the agreement, MAIK Nauka, which is 51% owned by the Russian Academy of Sciences, will be responsible for translating and publishing English-language versions of 14 journals, and AIP will market and distribute them, as well as publish them on-line. Eight of the journals are already being handled this way (minus the on-line part), but the other six are currently translated and published in English by AIP—an arrangement the journals' editors and AIP favored renewing.

The new agreement was clinched just a week before AIP's deadline for next year's library and subscription catalogs, and for a long time had looked

iffy. Last September, the Russian Academy of Sciences' president passed up a scheduled signing in St. Petersburg at the 80th anniversary of the A. F. Ioffe Physical-Technical Institute. Hoping to up its own profits, the Russian Academy of Sciences had wanted AIP out of the loop, says Zhores Alferov, who edits *Technical Physics Letters*, one of the six affected journals.

Cooperation with AIP has been "close and fruitful" for over 40 years, says Alferov, and has kept up the quality of the English translations, attracted authors from the West, and forged ties to the US physics community. Russian physicists agree: More than 100 of them wrote letters this spring in an e-mail campaign to retain AIP as a partner to the *Journal of Theoretical and Experimental Physics Letters*. Says that journal's editor, Vsevolod Gantmakher, the letter writers "believe that the Russian institutions are part of the international community and that the existing links must not be cut, but tightened. Such a campaign is something new for Russia."

It's unclear how much such lobbying efforts swayed the outcome, but in late spring, the Russian Academy of Sciences suddenly "had a change of attitude," notes AIP head Marc Brodsky. Under the new agreement, he says, AIP "gave up significant financial benefits and translation quality control. But we feel a commitment to our colleagues in Russia, and their future is through electronic journals that are integrated with the international physics community."

Although the journals' editors are relieved that an agreement has been reached, they are concerned about the quality and preparation of the translations. As Alferov puts it, "If we are working well, why carry out changes?"

IN BRIEF

Argonne's search. Argonne National Laboratory has been without a permanent director since July 1998, when Dean Eastman left to accept a faculty position at the University of Chicago. Two months ago, interim director Frank Fradin said that he too was stepping down, to resume his previous post as associate laboratory director for physical, biological, and computing sciences. In Fradin's place, Argonne has appointed Yoon I. Chang, associate laboratory director for engineering research. A pioneer in advanced nuclear reactor design, Chang holds a PhD in nuclear science from the University of Michigan. His term in the post may be brief, however. At press time, Richard Quisenberry, who's heading the lab's search committee, expected a new di-

rector to be named "within several weeks." The committee had hoped to wrap up its work by mid-July, added Quisenberry. "However, the large number of nominees and potential candidates to be considered—over 140—has prolonged our work somewhat."

GSI's New Head. Even as it awaits a new director, Argonne National Laboratory will soon lose another top scientist: On 1 October, Walter Henning, director of the lab's physics division, will assume the directorship of the Center for Heavy Ion Research (GSI) in Darmstadt, Germany. Henning, who will succeed Hans-J. Specht, will also be joining the physics faculty at the University of Frankfurt. At Argonne, Henning's research has included studies of nuclear structure using the lab's ATLAS accelerator, and work on explosive nucleosynthesis and other nuclear astrophysics reactions. Henning has also pushed for the development of new accelerator designs capable of producing exotic radioactive atoms. He is currently chairman of the American Physical Society's division of nuclear physics.

Trivelpiece retiring. Elsewhere in the Department of Energy's national labs complex, Alvin Trivelpiece announced on 21 July that he would be stepping down as director of Oak Ridge National Laboratory as of 31 March next year. Trivelpiece, who joined the lab in 1989, previously served as director of DOE's Office of Energy Research during the Reagan administration and then as

head of the American Association for the Advancement of Science. DOE is already in the process of selecting a new contractor to take over the management and operation of Oak Ridge from Lockheed Martin Energy Research Corp, which said earlier this year that it would not renew its contract; once the new contractor is in place, Trivelpiece wrote in a memo to employees, "I will work with the selected contractor to ensure a smooth transition."

AIP education. On 1 August, Jack Hehn became manager of the American Institute of Physics's education division. Prior to joining AIP, Hehn was associate executive officer of the American Association of Physics Teachers and a program director in the National Science Foundation's division of undergraduate education. Recipient of a PhD in physics education from the University of North Texas, Hehn says one thing he is looking at "is the physics department itself, as an entity that involves many physicists . . . to see how their mutual interests come together and how they support each other, particularly in undergraduate education." Phillip (Bo) Hammer, who had been serving as AIP's acting manager of education since the departure of Dwight Neuenschwander two years ago, is now the institute's director of the Society of Physics Students and Sigma Pi Sigma and continues as assistant manager of education. ■

Web Watch

<http://www.cc.gatech.edu/gvu/animation>

Part of Georgia Institute of Technology's Graphics, Visualization & Usability Center, the Animation Lab conducts research on how to depict the motion of characters—terrestrial or otherwise—in computer animations and virtual environments. Award-winning examples of the lab's work are featured on its Web site.



<http://sprite.gi.alaska.edu/html/sprites.htm>

The short-lived optical flashes in the middle and upper atmosphere known as **Red Sprites** are the subject of a Web site developed by the University of Alaska Fairbanks. Red sprites (like their brethren, known as blue jets and elves) are caused by large cloud-to-ground lightning discharges.



<http://www.imedea.uib.es/~piro/PitchPage>

"Nonlinear Dynamics of the Perceived Pitch of Complex Sounds" is the title of a recent paper in *Physical Review Letters* (volume 82, page 5389) by Julian Cartwright, Diego González, and Oreste Prio. In their paper, the three researchers develop a nonlinear theory of how the brain perceives the pitch of sounds that contain more than one frequency component. On this Web site, they demonstrate their theory with audio examples—including the "Ode to Joy" portion of Beethoven's Ninth Symphony.

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

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