

of a 13-year-old dispute. In 1986 and 1988, Barschall reported that Gordon and Breach (G&B) journals are costlier than other physics journals (see *PHYSICS TODAY*, October 1997, page 93; July 1988, page 56; December 1986, page 34). Some libraries use such studies as part of their purchasing decisions. Claiming that Barschall's articles constituted unfair competition, G&B filed suits in France, Germany, Switzerland, and the US.

AIP and its codefendants have repeatedly prevailed. Only in France did the court initially find in favor of G&B, citing a French advertising law that prohibits any comparison of non-identical products. But that decision was later reversed, with the court stating that US law applied. G&B appealed, and although the court recognized the French advertising law, this past June it ruled against G&B, arguing that the studies contain "no element [that] leads one to doubt the trustworthiness of the results." It awarded AIP, APS, and Barschall's estate a total of roughly Fr 100 000 (\$14 352). That won't cover the cost of fighting the case, says APS treasurer Tom McIlrath, "but we felt an obligation to protect our ability to freely discuss what we do."

Such protection was what the American Mathematical Society may have needed in a similar long-running battle with G&B in the 1980s. The AMS ultimately decided that the costs of litigation were too high to pass on to their readers. This and similar cases, wrote Judge Sand in his 1997 US decision favoring AIP and APS, are evidence of "a global campaign by G&B to suppress all comment upon its journals."

Chris Schneider, a spokesman for G&B, says Barschall's comparison of research and review journals is unfair—"It's like comparing apples and oranges." G&B also maintains that the survey had substantial factual errors, a claim rejected by all of the courts. G&B plans to appeal to the French supreme court.

LYNLEY HARGREAVES

IN BRIEF

ESO expands. On 1 January, pending final ratification, Portugal will become the ninth member country of the European Southern Observatory, which owns a host of telescopes in Chile, including the Very Large Telescope, and participates in the Atacama Large Millimeter Array (ALMA).

At a signing ceremony this past June, science and technology minister José Mariano Gago said Portugal's joining ESO is possible because of "rapid Portuguese scientific development and [because of] the growth and internationalization of its scientific community." The country will pay an entry fee of DM 8 million (\$3.8 million), plus about DM 3 million annually; ESO's

2000 budget is about DM 190 million. The UK is struggling to scrape together money to join ESO (see the story on page 55), and Finland is also considering becoming a member.

Middle East synchrotron. Members of SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) in June confirmed

Slice of Millimeter Spectrum Saved for Science

Radio astronomy and passive Earth sensing have gained protection in large chunks of the electromagnetic spectrum at millimeter wavelengths between 1.1 and 4.2 mm (71–275 GHz). The spectrum reallocations, agreed to this past May at the monthlong World Radiocommunications Conference (WRC) in Istanbul, Turkey, were the most extensive since 1979—when those high frequencies were still untapped by both science and the commercial satellites whose emissions can drown out the fainter signals radio astronomers look for.

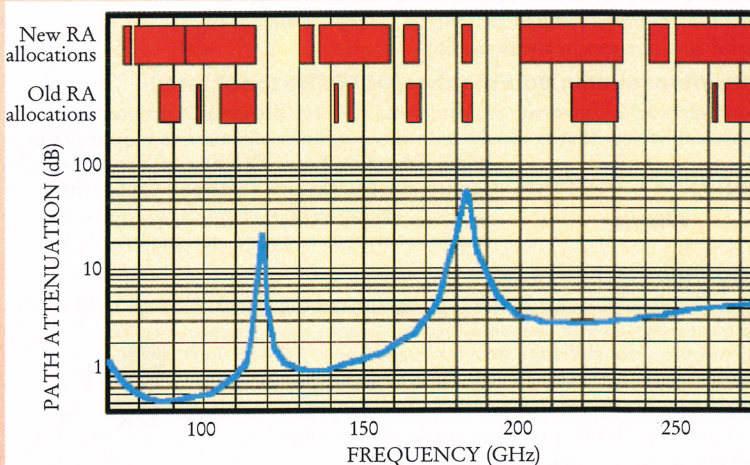
These days, though, radio astronomers use thousands of molecular lines in the millimeter range to study the births of stars and galaxies, among other things. And, says Tomas Gergely, who oversees spectrum use for the US National Science Foundation, "there is an upward creep" in the frequencies commercial telecommunications satellites use. "Radio astronomy would like to have large contiguous segments of the spectrum for observing. As much as possible, we pushed satellite downlinks to the edges of windows," he says.

"The millimeter spectrum is the El Dorado of molecular line spectroscopy," adds Klaus Ruf, who chairs IUCAF, the International Council for Science committee that deals with frequency allocations for radio astronomy and space science. "The reallocations simply guarantee our future."

The increased protection is good news for projects such as the US-European Atacama Large Millimeter Array (ALMA) being built in Chile and the US-Mexican Large Millimeter Telescope under construction in Mexico. Even with the new allocations, however, radio astronomers will have to coordinate the millimeter bands with other users, probably through quiet zones around telescopes.

In Istanbul a cap was also put for the first time on the spillover from satellite emissions into a nearby radio astronomy band, 15.35–15.4 GHz. Two other astrophysically key frequencies, 5000 MHz and 43 GHz, got tentative protection, but the spillover problem will be tackled again at the next WRC, in 2003. Higher frequencies, up to 1000 GHz, are on the agenda for 2006.

TONI FEDER



THE NEW (TOP) AND OLD SPECTRUM ALLOCATIONS for radio astronomy, 71–275 GHz. The blue curve shows the absorbance of radiation by the atmosphere: Signals come through to Earth's surface best in the flat valleys, and are most attenuated at the peaks. (Courtesy of John Whiteoak, Australia Telescope National Facility.)

Physics Olympiad 2000 Held in UK

The five high-school competitors from China each took home a gold medal from this year's International Physics Olympiad, which was held this past July in Leicester, UK. The team members from Russia, Hungary, Iran, and the US also all won medals.

The US team's Gregory Price of Arlington, Virginia, got a silver medal; and Anthony Miller of Pennington, New Jersey, returnee Jason Oh of Baltimore, Maryland, Michael Vrabble of Encinitas, California, and Joseph Yu of Irvine, California, each won a bronze.

With 296 students from 63 countries competing, this olympiad was the biggest ever. And the exams were longer than usual—only 15 students won golds, compared to 30 last year, and fewer than a quarter of students received medals, compared to more than half last year.

This year, voluntary contributions from two-thirds of the participating countries covered a quarter of the \$600 000 cost of hosting the olympiad. For the UK, raising the rest was not easy. "We have found it very difficult to obtain sponsors, and extremely difficult to get money from our government," says Cyril Isenberg, one of the organizers of this year's event.

"An obligatory fee should be introduced," adds Waldemar

Gorzowski, president of the International Physics Olympiads organization. "But it should not be too high. We cannot create financial barriers for poor countries," he says, pointing out that training and travel costs alone kept Suriname and the Philippines from returning this year.

At the closing ceremony, Martin Rees, head of the UK olympiad committee, mused that future competitions "could be held via screens and computers: The competitors could stay at home." But that would be a loss, he added: "Real reality can be better than 'virtual' reality."

LYNLEY HARGREAVES



THE BRONZE MEDAL WINNERS attend the olympiad's closing ceremony.

Web Watch

<http://www.aip.org/history/curie/contents.htm>

Marie Curie and the Science of Radioactivity is the latest online exhibition from the Center for History of Physics, a division of the American Institute of Physics. Written by Naomi Pasachoff of Williams College, the exhibition covers Curie's research—which earned her an unprecedented two Nobel prizes—as well as her eventful and, at times, scandalous, life.



<http://biosci.umn.edu/biophys/OLTB/Textbook.html>

Four years ago, University of Minnesota's Victor Bloomfield proposed to the Biophysical Society that it should sponsor an online collaborative biophysics textbook. Edited by Louis DeFelice of Vanderbilt University, the **Biophysics Textbook Online** now offers 20 expert-written chapters on topics such as photosynthesis and sequence analysis.

Biophysics Textbook Online

<http://globalchange.gov>

The US Global Change Research Program and the Global Change Data and Information System—both federal organizations—have teamed up to produce **globalchange.gov**, a clearinghouse for data and research reports on global change. Also available on the Web site are links to agencies that research global change and a question-and-answer feature "Ask Doctor Global Change."



<http://www.scotese.com>

Geologist Christopher R. Scotese, who's based at the University of Texas at Arlington, is the creator of the **Paleomap Project**, a Web site devoted to illustrating the plate tectonic development of Earth's continents and ocean basins. Among the site's many animations is one that shows how continental configuration will change over the next 250 million years.



<http://www.math.toronto.edu/mathnet/interactive.html>

For your edification and entertainment, the University of Toronto's mathematics department offers three kinds of **Interactive Activities and Games**—namely, Games with a Twist, Classic Fallacies, and Keep the Traffic Moving. The traffic game, whose aim is to minimize the time cars spend waiting at red lights, comes with the challenge: "See if you can beat the high scores for the three competition scenarios!"

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

Compiled by **CHARLES DAY**

Jordan as the host country for the planned revamped German synchrotron (see **PHYSICS TODAY**, June, page 51). Construction is scheduled to begin early next year in Allan, about 25 km northwest of the Jordanian capital Amman. Member countries will each contribute at least \$50 000 annually during the expected three-year construction phase. Yemen, Bahrain, and Tunisia intend to join SESAME, which would bring to 14 the number of member states. But before Germany will actually donate the synchrotron, the SESAME partners must still raise money by the end of this year for upgrading and running it. SESAME members selected the Yerevan Physics Institute in Armenia as a backup site should the Jordanian proposal fail. However, because Armenia is not in the Middle East, that choice would require new approval from Germany, and would compete with other options, such as giving the synchrotron to Poland.

Jordan's education minister. Khaled Toukan, a radiation physicist, is Jordan's new minister of education. He succeeds Izzat Jaradat. Toukan gave up the presidency of Al-Balqa' Applied University to take the post. One of his key tasks will be to improve computer literacy and multimedia-based learning in the country's schools and universi-



TOUKAN

ties. He also plans to step up official support for SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East), on whose council he serves.

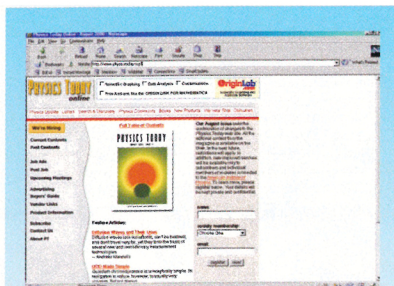
Biogeosciences. In June, the American Geophysical Union formed its first new section in 30 years, in biogeosciences. The idea is to bring together AGU scientists who work in fields of Earth and planetary sciences involving biology—from the transport of bacterial cells in groundwater to the evolution of life. Diane McKnight, acting president of the section, says better integration of biological understanding is especially needed in the Earth sciences to address issues such as climate change. The new status for biogeosciences, she adds, should lead to greater interaction with other bioscientists and to more comprehensive sessions in this area at AGU meetings.

The Physics Teacher. Clifford Swartz, longtime editor of *The Physics Teacher*, stepped down in June. He plans to continue his involvement in



SWARTZ

teacher education programs, work on his latest book, and prove that old physicists “not only don’t die, they don’t even fade away.” His successor is Karl Mamola of Appalachian State University, in Boone, North Carolina. *The Physics Teacher* will maintain its style, spirit, and “physics teaching is fun” philosophy, says Mamola. New features to watch for include reports of outstanding student and teacher accomplishments, increased coverage of educational opportunities, and a column recommending physics Web sites. ■



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