

tionnaire sent out by the participating societies. "Unemployment is low"—1.8%—"and starting salaries are high." And, for the second straight year, the proportion accepting potentially permanent work edged out those going into postdocs.

In the Earth and space sciences, by comparison, unemployment was 3.9%, and 8% of respondents said they were working part-time. This is the first time that AGU has attempted such a survey, says Jennifer Giesler, who heads AGU's newly created career services program. Although the data were "pretty much what we expected," she says, one concern is that the Earth and space sciences had the highest share of respondents who were employed but still looking for a new job. "So people are finding jobs, which is good, but they may not be happy with the positions they're finding." AGU plans to continue polling new PhDs, Giesler says, as part of a larger effort to offer its members more career-related information.

Other scientific societies may also continue surveying their members, says Gaddy, though initial funding for the CPST study has been exhausted. "My hope is that administrators in higher education will support the professional societies to conduct such surveys," says Gaddy. "And that graduate students, PhDs and postdocs will continue to be vocal about wanting such data."

Results of the survey are posted on the American Association for the Advancement of Science's Next Wave Web site, <http://www.nextwave.org/>. AIP has also posted physics-specific data at <http://www.aip.org/statistics>.

JEAN KUMAGAI

Europe's Radio Astronomers Score in Spectrum Battle

Persistence has paid off for Europe's radio astronomers: After months of acrimonious negotiations, Iridium LLC has agreed to limit signal spillover from its mobile telephone satellites, starting in the year 2006. The satellites operate in the frequency range 1621.35–1626.50 MHz, and can disrupt observations in the nearby 1610.6–1613.8 MHz hydroxyl band used by radio astronomers.

The satellite company's plans to begin offering phone service by late September added urgency to the negotiations, as some European governments were withholding operating licenses until agreement was reached with radio astronomers.

The deal, signed in August by Irid-

ium and, on behalf of radio astronomers, the European Science Foundation, specifies that both before March 1999 and as of 1 January 2006, electromagnetic pollution from the satellites may not exceed $-238 \text{ dB W/m}^2 \text{ Hz}$.

The year 2006 was chosen because that's when Russia's global positioning satellite system, GLONASS, is supposed to stop polluting the hydroxyl band; that's also when Iridium's 66 satellites will be due to be replaced. "The next-generation satellites will have to be clean," says Willem Baan, director of the Westerbork Observatory in The Netherlands and chair of the Commission on Frequency Allocation for Radio Astronomy and Space Science. This guarantee is missing from the deal made last spring in the US, he notes (see PHYSICS TODAY, June, page 57), though the European agreement should benefit radio astronomers worldwide. But even after signal spillover has been eliminated, Baan adds, about 10% of observing time will be lost as a result of Iridium's satellites blocking radio telescope fields of view.

The two sides still must work out a time-sharing arrangement for the 1999–2005 period. Radio astronomers have proposed to split the time "50–50" for the interim, says Baan, who worries that the next round of talks will be difficult. If radio astronomers and Iridium fail to reach an agreement on their own by next March, they'll be forced to accept whatever decision is handed down by the Milestone Review Committee, a body set up last year to advise European governments on satellite licensing issues.

TONI FEDER

Faraday Cages Make Train Travel Quieter

Train travelers who get rankled by the sound of fellow passengers yammering away on cellular phones will soon have some relief. Some of the new train cars on Chiltern Railways' London–Birmingham route will sport metal-coated windows, rendering them Faraday cages and therefore impermeable to phone signals.

The coating consists of a few hundred nanometers of silver or "something like" the semiconductor tin oxide, says Mervyn Davies, project manager for Pilkington Group Technology, the company that developed the trademark Datastop glass. The coated glass, which is also used in some air traffic control towers to help block radar interference, reduces the signal penetrating the windows by about 30 dB, Davies says. "The trick is get-



ting the coating colorless in reflection, and inexpensive enough to be put down on large areas."

Chiltern Railways, one of the smallest of the UK's dozen or so railroad companies, decided to offer phone-free travel because of customer complaints, says Roger Larkin of ADtranz, the company that is overseeing the project. "Various people muttered and moaned about phones ringing and about people shouting into them."

TONI FEDER

Congressional Fellows Bring Science to Government

Each year, a number of professional societies sponsor fellowships for working scientists who are interested in understanding how the US government works and in lending their expertise to policymakers. Although this year may go down in US political history as the Year of Monica, there has been plenty to keep the Congressional science fellows busy.

Perhaps the biggest development in science funding circles has been the push to nearly double the government's civilian R&D support by the year 2010. Helping to draft the Senate version of that legislation (S. 2217) has been a major goal for American Physical Society (APS) fellow Peter Rooney, who has been working for Connecticut Democrat Joseph Lieberman, an early supporter of the funding boost. Lieberman's seat on the Senate Armed Services Committee has also meant that Rooney has had to keep up to date with defense-related R&D, including some behind-the-scenes work on re-vamping DARPA, the Defense Ad-



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