

nucleate healthy debates about new ideas. But it has other virtues. Recently, I was one of two referees who strongly recommended against publication of a paper. Had our reviews been published, the embarrassing publicity generated by the subsequent appearance of flawed work would have been dampened.

Don't be surprised if *Physical Review R* is the most read journal each month.

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UN, ESA Workshops on Space Science Aimed at Developing Nations

Having read with pleasure Roman Jackiw's letter on the first Sinai Meeting on Physics (February, page 11), I would like to inform your readers about an international initiative that focuses on planetary exploration and astronomy and that enables developing countries to benefit from advances made by the world's space-faring nations and to strengthen scientific ties with them.

The initiative is organized under the umbrella of the United Nations in cooperation with the European Space Agency, the Planetary Society and other space research-related organizations. It consists of an ongoing series of regional meetings known as the UN/ESA Workshops on Basic Space Science, which are held at sites around the world about once a year.

The most recent workshop was held in Colombo, Sri Lanka, last January and attracted 74 astronomers and space scientists from 25 countries. It covered such key topics as research and education with small telescopes (those with mirrors less than 1 m in diameter); telescope projects, robotic telescopes and telescope networking; observing binary stars with telescopes of less than 1 m; the quest for the Big Bang and solar neutrinos; and data archiving and astronomical software packages.

One of the workshop highlights was the inauguration of a 45 cm reflector telescope donated to Sri Lanka by Japan as a follow-up to the 1991 workshop. This instrument was intended to be the heart of an astronomical telescope facility on the roof of a new building of the Arthur C. Clarke Centre for Modern Technologies. (Clarke himself, who lives in Sri Lanka, spoke to the workshop attendees on the subject of space travel.) Although designed primarily for photometric observational studies

of variable stars, the telescope also allows for the observation of comets and asteroids, as well as the study of studying atmospheric, interplanetary and interstellar phenomena. Accordingly, the workshop featured a full range of presentations on these topics.

One workshop session focused on the status of four projects initiated as follow-ups to the previous workshops, which were held in Bangalore, India (1991); San José, Costa Rica, and Bogotá, Colombia (1992); Lagos, Nigeria (1993); and Cairo, Egypt (1994). Maria Christina Pineda de Carias, director of the astronomical observatory of the National Autonomous University of Honduras, explained that the observatory was now fully operational and taking the lead in developing astronomy in Central America. Sergio Torres of the National University of Colombia gave a progress report on the Galactic Emission Mapping (GEM) Project, a collaborative international effort to establish an astronomical observatory in Colombia. Joseph Sidky Mikhail of Egypt's National Research Institute of Astronomy and Geophysics (NRIAG) and Peter Köhler, a German physicist specializing in telescope engineering, provided an update on the refurbishing of Egypt's 1.88 m Kottamia telescope, the largest telescope in the Middle East (first light was forecast for the first half of 1997). M. A. Mosallam Shaltout of NRIAG discussed a Planetary Society-sponsored project in which a team of Egyptian scientists, in collaboration with American, Russian and European colleagues, has begun work on designing, building and testing a drill for obtaining subsurface samples on Mars as part of the Russian mission to that planet in 1998. In addition, Rolf Schwartz of Germany's Max Planck Institute for Radio Astronomy gave an overview of the research program in radio astronomy being conducted by the institute, which will be the host of the next UN/ESA workshop, scheduled for 9–13 September of this year.

The Colombo workshop concluded with some special presentations and the adoption of a major recommendation. Mario R. Perez of the US presented a study of astronomical software packages, and also explained how to use the World Wide Web to obtain them free of charge. Willem Wamsteker of the ESA gave a presentation on the electronic accessibility of astronomical data archives maintained by the world's space agencies. Finally, the workshop participants recommended that the world's nations cooperate on designing and constructing a World Space Observatory, preferably for the ultraviolet part of the spectrum.

Further information on the UN/ESA workshops—and specifically the upcoming workshop set for Bonn, Germany—is available on the Internet at [ftp://ecf.hq.eso.org/pub/un/un-homepage.html](http://ecf.hq.eso.org/pub/un/un-homepage.html).

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Derivatives Trading Again: Finance Pros Take on Physicists

Imagine the reaction of your readers to the appearance in the *Journal of Finance* of an article criticizing the Schrödinger equation on the grounds that it fails to correctly predict the Lamb shift in hydrogen, and, moreover, requires for its application the absurd assumption that a quantum system can be perfectly isolated from its environment. Oh, and by the way, the equation also is the cause of nuclear weapons. Then, after dispensing in a few short sentences with conventional quantum mechanics, the authors mention that they have found a simple and superior alternative theory, which will soon be adopted by physicists as finance professionals provide them with insights.

If you can imagine all that, perhaps you can understand our reaction to the letter to the editor on derivatives trading by Jean-Philippe Bouchaud and Didier Sornette (March, page 15): Great bewilderment as to why you chose to publish it.

Because most readers of PHYSICS TODAY are presumably physicists rather than finance professionals, but may be interested in the subject, allow us to comment on several of the points raised in the letter.

The limitations of the Black-Scholes theory and its extensions are quite familiar to practitioners. For example, the nonnormal distribution of actual asset returns produces the well-known phenomenon of "volatility smiles," the colorful name used by traders for how the distribution affects pricing with the Black-Scholes model. No options trader would remain a trader for long if he or she ignored this market behavior. (Generally, traders don't tend to be the easily anesthetized sort.)

The thorny problems posed by having to deal with the real-world complexities of hedging versus the idealization of continuous frictionless markets have also been intensively studied both by academics and by researchers at the institutions that trade such things as barrier options