

Science

http://www.aaas.org

Published by the **American Association for the Advancement of Science (AAAS)**, *Science* serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordingly, all articles published in *Science*—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors are affiliated.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objectives are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, to advance education in science, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.

Membership/Circulation

Director: Michael Spinella
Deputy Director: Marlene Zendell
Member Services: Rebecca Dickerson, *Manager*; Mary Curry, *Supervisor*; Pat Butler, Helen Williams, Laurie Baker, *Representatives*
Marketing: Dee Valencia, *Manager*; Jane Pennington, *Europe Manager*; Hilary Baar, *Associate*; Angela Mumeka, *Coordinator*
Research: Renuka Chander, *Manager*
Business and Finance: Robert Smariga, *Manager*; Kevin Bullock, Nina Araujo de Kobes, *Coordinators*
Science Member Services
 Danbury, CT: 800-731-4939
 Washington, DC: 202-326-6417
Other AAAS Programs: 202-326-6400

Advertising and Finance

Associate Publisher: Beth Rosner
Advertising Sales Manager: Susan A. Meredith
Recruitment Advertising Manager: Janis Crowley
Business Manager: Deborah Rivera-Wienhold
Finance: Randy Yi, *Senior Analyst*; Shawn Williams, *Analyst*
Marketing: John Meyers, *Manager*; Allison Pritchard, *Associate*
Traffic: Carol Maddox, *Manager*; Christine Pierpoint, *Associate*
Recruitment: Terri Seiter Azie, *Assistant Manager*; Pamela Sams, *Production Associate*; Celeste Miller, Bethany Ritchey, Rachael Wilson, *Sales*; Debbie Cummings, *European Sales*
Reprints: Ordering/Billing, 800-407-9191; Corrections, 202-326-6501
Permissions: Lincoln Richman
Exhibits Coordinator: Arlene Ennis
Administrative Assistant: Caroline Althuis
PRODUCT ADVERTISING SALES: East Coast/E.
 Canada: Richard Teeling, 201-904-9774, FAX 201-904-9701 •
 Midwest/Southeast: Elizabeth Mosko, 312-665-1150, FAX 312-665-2129 •
 West Coast/W. Canada: Neil Boylan, 415-673-9265, FAX 415-673-9267 •
 UK, Scandinavia, France, Italy, Belgium, Netherlands: Andrew Davies, (44) 1-457-838-519, FAX (44) 1-457-838-898 •
 Germany/Switzerland/Austria: Tracey Peers, (44) 1-270-760-108, FAX (44) 1-270-759-597 •
 Japan: Mashy Yoshikawa, (3) 3235-5961, FAX (3) 3235-5852
RECRUITMENT ADVERTISING SALES: US: 202-326-6555, FAX 202-682-0816 •
 Europe: Debbie Cummings, +44 (0) 1223-302067, FAX +44 (0) 1223-576208 •
 Australia/New Zealand: Keith Sandell, (61) 02-9222-2977, FAX (61) 02-922-1100
 Send materials to *Science Advertising*, 1333 H Street, NW, Washington, DC 20005.

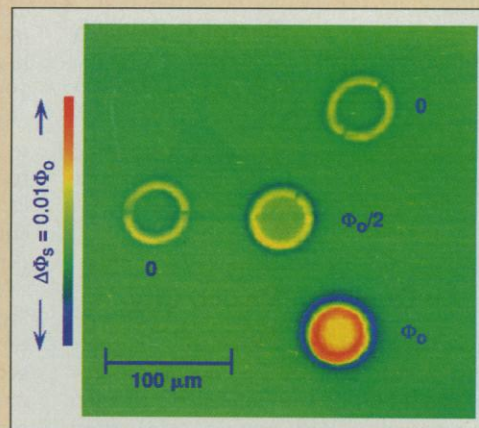
Information for Contributors appears on pages 93–94 of the 5 January 1996 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005.

Science World Wide Web address: http://www.aaas.org
Other Internet addresses: science_editors@aaas.org (for general editorial queries); science_letters@aaas.org (for letters to the editor); science_reviews@aaas.org (for returning manuscript reviews); membership@aaas.org (for member services); science_classifieds@aaas.org (for submitting classified advertisements); science_advertising@aaas.org (for product advertising)

LETTERS

The cutting edge

This week's Letters section opens with a comment about the latest wave of high-temperature superconductivity experiments (at right, superconductor symmetry). Another writer recalls how the creation of a supercool Bose-Einstein condensate, achieved in 1995, was foretold by physicist Fritz London in 1946. Climate experts debate the importance of liquefied petroleum gas (used for home cooking and heating), which has been recently tagged as a fuel contributing to air pollution over Mexico City. An earlier letter questioning the scientific consensus about global warming is answered. And a test for measuring the amount of human immunodeficiency virus in tissue is noted.



Superconductivity Researchers

Daniel Clery (Research News, 19 Jan., p. 288) did a good job of reporting the current status of the s-wave versus d-wave controversy in the field of high-temperature superconductivity. However, one key experiment was omitted. In 1995, Fred Wellstood and his co-workers presented a convincing interferometry experiment (1) using a superconducting quantum interference device (SQUID) in favor of d-wave symmetry. Wellstood's experiment answered questions raised about crucial omissions in the earlier experiments of van Harlingen *et al.* (2) and Brawner and Ott (3). In addition, Wellstood was the inventor of the scanning SQUID microscope (4), which enabled Tsuei *et al.* to perform their beautiful tri-crystal ring experiments (Research Article, 19 Jan., p. 329) (5). Wellstood's institution (the University of Maryland at College Park) has been granted the patent on the scanning SQUID microscope, which has many potential uses beyond the experiments reported by Clery.

Richard L. Greene

*Director,
 Center for Superconductivity Research,
 University of Maryland,
 College Park, MD 20742, USA
 E-mail: rgreene@squid.umd.edu*

References

1. A. Mathai, Y. Gim, R. C. Black, A. Amar, F. C. Wellstood *Phys. Rev. Lett.* **74**, 4523 (1995).

2. D. van Harlingen *et al.*, *ibid.* **71**, 2134 (1993).
3. D. Brawner and H. R. Ott, *Phys. Rev.* **B50**, 6580 (1994).
4. A. Mathai, D. Song, Y. Gim, F. C. Wellstood, *Appl. Phys. Lett.* **61**, 598 (1992).
5. R. C. Black *et al.*, *ibid.* **62**, 2128 (1993).

A Prediction of the Bose-Einstein Condensate

I very much enjoyed the special article "A new form of matter unveiled," by Elizabeth Culotta (p. 1902), about the Bose-Einstein condensate as well as Floyd E. Bloom's fine editorial "Molecule of the Year 1995" (p. 1901) in the 22 December issue. I am writing to remind your readers that the idea of the macroscopic wave function for the condensate was put forward by Fritz London, who with his younger brother had already developed the idea for superconducting electrons.

A major international physics conference held after World War II was organized at Cambridge in July 1946 by Sir Lawrence Bragg and J. F. Allen. People attended who had not seen each other for many years. There were two topics, fundamental particles and low temperatures. London, then at Duke University, gave the opening lecture of the low temperature part, which he named "The present state of the theory of liquid helium." His first paragraph refers to superconductivity and superfluidity (1).