

# PHYSICAL REVIEW D

## PARTICLES AND FIELDS

*Editor*

**D. L. NORDSTROM**

*Associate Editors*

**SALLY DAWSON      ROBERT D. PISARSKI**

*Senior Assistant to the Editor*

**MICHAEL MCGUIGAN**

*Assistant to the Editor*

**JOHN RIPKA**

### EDITORIAL BOARD

*Term ending 31 December 1996*

**MICHAEL S. CHANOWITZ  
ANDREW G. COHEN  
GARY HOROWITZ  
MARK SREDNICKI**

*Term ending 31 December 1997*

**RICCARDO BARBIERI  
ERIC BRAATEN  
LANCE DIXON  
MARC HENNEAUX**

*Term ending 31 December 1998*

**BENJAMÍN GRINSTEIN  
THEODORE A. JACOBSON  
SHELDON STONE  
RAYMOND S. WILLEY**

Published through the  
American Institute of Physics  
by

**The American Physical Society**

*President*

**J. ROBERT SCHRIEFFER**

*President-Elect*

**D. ALLAN BROMLEY**

*Vice-President*

**ANDREW M. SESSLER**

*Executive Officer*

**JUDY R. FRANZ**

*Treasurer*

**HARRY LUSTIG**

*Editor-in-Chief*

**BENJAMIN BEDERSON**

**Manuscripts** for publication should be submitted to the Editorial Office in triplicate. Information for contributors may be found in the January and July issues. Submission is a representation that the manuscript has not been published previously and is not currently under consideration for publication elsewhere. A signed APS **copyright-transfer** form (to take effect upon publication) must be provided, and should be included with the submission. The copyright-transfer form appears at the end of the 30 October 1995 issue of *Physical Review Letters* and is available from the Editorial Office (or via ftp to aps.org).

**To support** wide dissemination of research results through publication, the authors' institutions are requested to pay a publication charge of \$65 per page plus a \$65 abstract charge. For properly prepared electronic submissions (REVTeX or LaTeX format), no payment of charges is requested. Reprints are offered for sale to authors.

**Subscription prices** (table below) for **nonmembers subscribers** are for the period January–December 1996. Back-number price: Single copies, \$90.

|                                             |               | U.S.A.<br>&<br>Poss. | Can., Mex.,<br>Cntrl. & S.<br>Amer., & Carib. | Europe, Asia, Africa, &<br>Oceania |                |
|---------------------------------------------|---------------|----------------------|-----------------------------------------------|------------------------------------|----------------|
|                                             | No.<br>Issues |                      |                                               | Surface<br>Mail                    | Air<br>Freight |
| <b>Physical Review D</b>                    |               |                      |                                               |                                    |                |
| Nonmembers                                  | 24            | \$1900               | \$1965                                        | —                                  | \$2090         |
| <b>Physical Review A, B, C, D, E, Index</b> |               |                      |                                               |                                    |                |
| Nonmembers                                  | 108           | \$8000               | \$8395                                        | —                                  | \$9170         |

**Inquiries regarding subscriptions**, renewals, address changes, missing or damaged copies, microfilm, and single-copy orders should be addressed as follows:

**Members:** APS Membership Department, One Physics Ellipse, College Park, MD 20740-3844 [phone: (301) 209-3280; FAX: (301) 209-0867; e-mail: membership@aps.org].

**Nonmembers:** Circulation and Fulfillment Division, American Institute of Physics, 500 Sunnyside Blvd., Woodbury, NY 11797 [phone: (516) 576-2270, (800) 344-6902; FAX: (516) 349-9704; e-mail: subs@aip.org]. Allow at least six-weeks advance notice. For address changes please send both old and new addresses, and, if possible, include an address stencil imprint from the mailing wrapper of a recent issue. A change-of-address form is included in every issue of *Physics Today*.

**The Annual Index of Physical Review and Physical Review Letters** may be ordered by nonmembers for \$100. Back issues are available for \$100. There are mail surcharges for non-U.S. destinations.

### Copyright 1996 by The American Physical Society

**Permission** to quote excerpts or to reprint any figures or tables should be obtained directly from an author. The American Physical Society for its part hereby grants permission to quote excerpts and reprint up to 25 figures and/or tables from its journals with acknowledgment of the sources. Requests for permission to reprint in one publication more than 25 figures and/or tables from the totality of APS journals must be made in writing to the Associate Publisher (see address below). A \$10.00 fee per figure and/or table in excess of 25 will be charged.

**Individual** teachers, students, researchers, and libraries in nonprofit institutions acting for them are permitted to make hard copies of articles for use in teaching or research, provided such copies are not sold.

**Copying of articles for sale** by document delivery services or suppliers, or beyond the free copying allowed above, is permitted against payment of a copying fee. The current copying fee is \$10.00, per article, per copy. Express permission of APS is not required, except for purposes stated below, provided that the fee is paid through the Copyright Clearance Center, Inc. (CCC), 222 Rosewood Drive, Danvers, MA 01923. Contact the CCC for information on how to report copying and remit payments.

**Reproduction** in a reprint collection, or for advertising or promotional purposes, or republication in any form requires permission of one of the authors and a license from APS. Such a license must be sought from María Lebrón, Associate Publisher, The American Physical Society, One Physics Ellipse, College Park, MD 20740-3844. Permission from the author must be sought and obtained from him or her directly.

### Editorial Office:

**1 Research Road**

**Box 1000**

**Ridge, NY 11961**

**Telephone: (516) 924-5533**

**FAX: (516) 924-5294**

**INTERNET: \* prd@aps.org**

**\*Not for transmission of manuscripts**

**For electronic submission**

**of manuscripts use prdtex@aps.org**

### Production and distribution by

**American Institute of Physics**

**500 Sunnyside Blvd.**

**Woodbury, NY 11797**

**Telephone: (516) 576-2200**

**FAX: (516) 349-1802**