PHYSICAL REVIEW D PARTICLES, FIELDS, GRAVITATION, AND COSMOLOGY

Editors

ERICK J. WEINBERG D. L. NORDSTROM

Associate Editors SALLY DAWSON

Robert D. Pisarski

JONATHAN A. BAGGER

Assistant Editors

URS M. HELLER RAJAMANI NARAYANAN RASHMI RAY JOHN RIPKA

EDITORIAL BOARD

Term ending 31 December 2004 P. D. GRANNIS HOWARD E. HABER FRANK E. PAIGE SAUL A. TEUKOLSKY Term ending 31 December 2005 Beverly K. Berger Juan M. Maldacena Stuart Raby Stephen R. Sharpe

Published through the American Institute of Physics by The American Physical Society

> President HELEN R. QUINN

President-Elect MARVIN L. COHEN

Vice-President JOHN BAHCALL

Editor-in-Chief MARTIN BLUME

Treasurer and Publisher THOMAS J. MCILRATH

> Executive Officer JUDY R. FRANZ

Editorial Office:

The American Physical Society 1 Research Road, Box 9000 Ridge, NY 11961-9000

Phone: (631) 591-4040 Fax: (631) 591-4141 Email: prd@aps.org Web: http://publish.aps.org/ Submissions: prdtex@aps.org or http://publish.aps.org/ESUB/

Production and distribution by

American Institute of Physics Suite 1NO1 2 Huntington Quadrangle Melville, NY 11747-4502

> Phone: (516) 576-2200 Fax: (516) 576-2643 Email: prd15@aip.org

Manuscripts should be **submitted** electronically in acceptable format (see http://publish.aps.org/ ESUB/ or inquire at prdtex@aps.org). If this is not possible, send three copies to the Editorial Office. Submission is a representation that the manuscript has not been published previously and is not currently under consideration for publication elsewhere. Authors should provide indexing codes according to the PACS scheme (available at http://publish.aps.org/PACS/). An executed APS **copyright-transfer** form must be provided (effective only on acceptance for publication); the form is available on the APS Web server and appears at the end of the 5 December 2003 issue of *Physical Review Letters*. Information for contributors may be found on our Web server or in the January and July issues.

To help defray editorial and production expenses, authors of articles which are not submitted in acceptable electronic format are expected to pay a **publication charge** of \$110 plus \$110 per journal page. Acceptable formats are REVT_EX (preferred), L^AT_EX, plain T_EX; MS Word; PostScript figures. **Reprints** are offered for sale to authors.

For information about **subscription prices** and about the **online version** of the journal, see our Web server, or inquire at assocpub@aps.org. **Member** inquiries regarding **subscriptions**, renewals, address changes, missing or damaged copies, microfilm, and single-copy orders should be addressed to the APS Membership Department, One Physics Ellipse, College Park, MD 20740-3844 [phone: (301) 209-3280; fax: (301) 209-0867; email: membership@aps.org]. **Institutional subscribers** should address subscription inquiries to APS Subscription Services, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502 [phone: (516) 576-2270 or (800) 344-6902; fax: (516) 349-9704; email: subs@aps.org]. For address changes please send both old and new addresses, and if possible, send the mailing label from a recent issue.

Copyright 2004 by The American Physical Society

Rights and Permissions

Copying: No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the written permission of the publisher, except as stated below. Single copies of individual articles may be made for private use or research. Authorization is given to copy articles beyond the use permitted by Sections 107 and 108 of the U.S. Copyright Law, provided the copying fee of \$22.50 per copy per article is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA.

Reproduction of an entire Article in a reprint collection, or for advertising or promotional purposes, or republication in any form requires permission from APS. Permission must be sought from the Associate Publisher, The American Physical Society, One Physics Ellipse, College Park, MD 20740-3844.

Other Use: Permission is granted to quote from the journal with the customary acknowledgment of the source. Permission must be sought from the APS Associate Publisher to reproduce a figure, table, or excerpt of an Article. Authorization for private use or research does not extend to systematic or multiple reproduction, to copying for promotional purposes, to distribution in any format, or to republication in any form. In all such cases, specific permission from APS must be obtained.

Physical Review D (ISSN: 0556-2821; CODEN PRVDAQ; printed in USA) is published twice a month by The American Physical Society through the American Institute of Physics.

POSTMASTER: Send address changes to Physical Review D, APS Subscription Services, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502. The 2004 print + online base price is \$3600. Periodicals postage rates are paid at Huntington Station, NY, and additional mailing offices.