# PHYSICAL REVIEW $C_{\text{\tiny TM}}$ NUCLEAR PHYSICS

Editor BENJAMIN F. GIBSON

SIMON C. CAPSTICK WILLIAM R. GIBBS

Associate Editors
RICHARD F. CASTEN
JOSEPH I. KAPUSTA
CHRISTOPHER WESSELBORG

BRADLEY W. FILIPPONE D. JOHN MILLENER

Senior Editorial Assistant LIN ZHANG

## EDITORIAL BOARD

Term ending 31 December 2011

JUHA ÄYSTÖ

MICHAEL BENDER

NAOMI C. R. MAKINS

ROCCO SCHIAVILLA

HENRY R. WELLER

Term ending 31 December 2012

KLAUS BLAUM

JEFFREY S. NICO

RICHARD SETO

DINESH K. SRIVASTAVA

JEFFREY A. TOSTEVIN

Term ending 31 December 2013
CARL R. BRUNE
SIEGFRIED F. KREWALD
AUGUSTO O. MACCHIAVELLI
ALFREDO POVES
CRAIG D. ROBERTS

# American Physical Society

#### Officers

President
President-Elect
Vice-President
Past President
Editor in Chief
Treasurer and Publisher
Executive Officer

BARRY C. BARISH
ROBERT L. BYER
MICHAEL S. TURNER
CURTIS G. CALLAN, JR.
GENE D. SPROUSE
JOSEPH W. SERENE
KATE P. KIRBY

One Physics Ellipse College Park, MD 20740-3844

# APS Editorial Office Directors

Editorial

Journal Information Systems

ROBERT A. KELLY

Journal Operations

CHRISTINE M. GIACCONE

1 Research Road
Ridge, NY 11961-2701
Phone: (631) 591-4030 Fax: (631) 591-4141
Email: prc@aps.org
Web: http://publish.aps.org/
Submissions: prctex@aps.org or
http://authors.aps.org/ESUB/

Member Subscriptions:

## **APS Membership Department**

One Physics Ellipse College Park, MD 20740-3844 Phone: (301) 209-3280 Fax: (301) 209-0867 Email: membership@aps.org

Institutional Subscriptions:

**APS Subscription Services** 

Suite 1NO1 2 Huntington Quadrangle Melville, NY 11747-4502 Toll free: (800) 344-6902

Phone: (516) 576-2270 Fax: (516) 349-9704 Email: subs@aps.org Manuscripts should be submitted electronically in acceptable format (see http://authors.aps.org/ESUB/ or inquire at prctex@aps.org). If this is not possible, send one copy 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 via our Web submission server and via http://authors.aps.org/. 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 manuscripts which are not submitted in acceptable electronic format are expected to pay a **publication charge** of \$1285/article, \$800/Rapid Communication or Brief Report, \$290/Comment or Reply. Acceptable formats are REVTEX (preferred), LATEX, plain TEX; MS Word; PostScript figures (preferred). **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, and single-copy orders should be addressed to the APS Membership Department. **Institutional subscribers** should address subscription inquiries to APS Subscription Services. For address changes please send both old and new addresses, and if possible, send the mailing label from a recent issue.

Copyright © 2011 American Physical Society. All rights reserved. Physical Review  $C_{TM}$  is a trademark of the American Physical Society.

 $\textbf{Rights and Permissions: See } \verb|http://forms.aps.org/author/copyfaq.html|.$ 

**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 \$25.00 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, American Physical Society, One Physics Ellipse, College Park, MD 20740-3844; email: assocpub@aps.org.

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  $C_{TM}$ [ISSN: 0556-2813 (print), 1089-490X (online); CODEN PRVCAN; printed in USA] is published monthly by the American Physical Society, 1 Research Road, Ridge, NY 11961-2701.

POSTMASTER: Send address changes to Physical Review  $C_{\rm TM}$ , APS Subscription Services, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502. The 2011 print + online base price is \$1095. Periodicals postage rates are paid at Huntington Station, NY, and additional mailing offices.