

# PHYSICAL REVIEW C

covering nuclear physics

## Editor

BENJAMIN F. GIBSON

## Managing Editor

CHRISTOPHER WESSELBORG

## Associate Editors

RICHARD F. CASTEN  
JOSEPH I. KAPUSTA  
ROB G.E. TIMMERMANS

BRADLEY W. FILIPPONE  
GABRIEL MARTÍNEZ-PINEDO

WILLIAM R. GIBBS  
D. JOHN MILLENER

## Senior Assistant Editor

BRADLEY RUBIN

## Assistant Editor

LIN ZHANG

## EDITORIAL BOARD

### Term ending 31 December 2017

SANJAY K. REDDY  
REINHARD A. SHUMACHER  
HIROKAZU TAMURA  
UBIRAJARA VAN KOLCK  
REMCO G. T. ZEGERS

### Term ending 31 December 2018

STEFFEN A. BASS  
KRISHNA S. KUMAR  
JAMES L. NAGLE  
ANDREAS NOGGA  
BERTA RUBIO

### Term ending 31 December 2019

SIMONETTA LIUTI  
JAMES J. NAPOLITANO  
DAVID C. RADFORD  
ACHIM SCHWENK  
SUSUMU SHIMOURA

## American Physical Society

President LAURA GREENE  
Speaker of Council DAN KLEPPNER  
Chief Executive Officer KATE P. KIRBY  
Editor in Chief PIERRE MEYSTRE  
Publisher MATTHEW SALTER  
Chief Information Officer MARK D. DOYLE  
Chief Financial Officer JANE HOPKINS GOULD  
Deputy Executive Officer and  
Chief Operating Officer JAMES TAYLOR

One Physics Ellipse  
College Park, MD 20740-3844

## APS Editorial Office

### Directors

Editorial DANIEL T. KULP  
Journal Operations CHRISTINE M. GIACCONE

1 Research Road  
Ridge, NY 11961-2701  
Phone: (631) 591-4030  
Email: prc@aps.org

Web: <http://journals.aps.org/>

Submissions: <http://authors.aps.org/Submissions/>

### 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](mailto:membership@aps.org)

### Institutional Subscriptions:

#### APS Subscription Services

P.O. Box 41  
Annapolis Junction, MD 20701  
Toll free: (888) 339-9655  
Phone: (301) 617-7809 Email: [subs@aps.org](mailto:subs@aps.org)

**Manuscripts** should be submitted electronically in acceptable format (see <http://authors.aps.org/Submissions/>). Submission is a representation that the manuscript has not been published previously and is not currently under consideration for publication elsewhere. An executed APS **copyright-transfer** form must be provided (effective only on acceptance for publication). Information for Contributors and a description of editorial Policies and Practices can be found at <http://journals.aps.org/prc/authors>.

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 \$1490/article, \$930/Rapid Communication, \$340/Comment or Reply. Acceptable formats are REV<sub>TEX</sub> (preferred), L<sup>A</sup>T<sub>EX</sub>, plain T<sub>EX</sub>; MS Word; PostScript figures (preferred). **Reprints** are offered for sale to authors.

For additional information regarding the online version of this journal, please visit: <http://journals.aps.org/prc>. Institutional subscribers requesting address changes, filing claims, or requesting additional information, please contact the APS Services at [subs@aps.org](mailto:subs@aps.org). Member subscribers requiring changes, claims or additional information should contact the APS Membership Department at [membership@aps.org](mailto:membership@aps.org).

## Copyright © 2017 American Physical Society. All rights reserved.

*Physical Review C*<sup>TM</sup> is a trademark of the American Physical Society, registered in the United States, Canada, European Union and Japan.

### Rights and Permissions: <http://journals.aps.org/copyrightFAQ.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 via the Copyright Clearance Center (CCC) RightsLink system. To request permission to republish, refer to the Reuse and Permissions link that can be found on each APS article page and provide the requested information.

**Other Use:** Permission is granted to quote from the journal with the customary acknowledgment of the source. Permission must be sought using the Copyright Clearance Center (CCC) RightsLink system. To request permission to reproduce a figure, table, or excerpt of an article refer to the Reuse and Permissions link that can be found on each APS article page and provide the requested information. 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* [ISSN: 2469-9985 (print), 2469-9993 (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*, APS Subscription Services, P.O. Box 41, Annapolis Junction, MD 20701. The 2017 print + online base price is \$2050. Periodicals postage rates are paid at College Park, MD, and additional mailing offices.