

# Calem R. Hoffman

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EDUCATION	Ph.D., Physics, Florida State University, Spring 2009 B.S., Physics, Florida State University, Fall 2003
POSITIONS HELD	<b>Assistant Physicist</b> Physics Division, Argonne National Laboratory, August 2012 - Present <b>Director's Postdoctoral Fellow</b> Physics Division, Argonne National Laboratory, October 2010 - August 2012 <b>Postdoctoral Researcher</b> Physics Division, Argonne National Laboratory, May 2009 - October 2010 <b>Graduate Research Assistant</b> Department of Physics, Florida State University, May 2005 - May 2009 <b>Graduate Teaching Assistant</b> Department of Physics, Florida State University, January 2005 - May 2005 Department of Physics, Michigan State University, September 2004 - December 2004
AWARDS	<b>Dissertation Award in Nuclear Physics</b> American Physical Society Division of Nuclear Physics, February 2010 <b>John D. Fox Award in Nuclear Physics</b> Department of Physics, Florida State University, April 2007
RESEARCH INTERESTS	Low energy nuclear structure physics, with a focus on the single-particle shell structure of exotic nuclei.
PUBLICATIONS	<b>Yrast structure of <math>^{206}\text{Bi}</math>: Isomeric states and one-proton-particle, three-neutron-hole excitations</b> N. Cieplicka, K. H. Maier, B. Fornal, B. Szpak, R. V. F. Janssens, M. Alcorta, R. Broda, M. P. Carpenter, C. J. Chiara, <u>C. R. Hoffman</u> , B. P. Kay, F. G. Kondev, W. and Królas, T. Lauritsen, C. J. Lister, E. A. McCutchan, T. Pawlat, A. M. Rogers, D. Seweryniak, N. Sharp, W. B. Walters, J. Wrzesiński, J. and S. Zhu, Phys. Rev. C <b>86</b> , 054322 (2012) <b>Neutron unbound states in <math>^{28}\text{Ne}</math> and <math>^{25}\text{F}</math></b> J. K. Smith, T. Baumann, B. A. Brown, G. Christian, J. E. Finck, <u>C. R. Hoffman</u> , Z. Kohley, S. Mosby, J. F. Novak, S. J. Quinn, J. Snyder, A. Spyrou, M. J. Strongman, and M. Thoennessen, Phys. Rev C <b>86</b> , 057302 (2012) <b>Well Developed Deformation in <math>^{42}\text{Si}</math></b> S. Takeuchi, M. Matsushita, N. Aoi, P. Doornenbal, K. Li, T. Motobayashi, H. Scheit, D. Steppenbeck, H. Wang, H. Baba, D. Bazin, L. Cáceres, H. Crawford, P. Fallon, R. Gernhäuser, J. Gibelin, S. Go, S. Grévy, C. Hinke, <u>C. R. Hoffman</u> , R. Hughes, E. Ideguchi, D. Jenkins, N. Kobayashi, Y. Kondo, R. Krücken, T. Le Bleis, J. Lee, G. Lee, A. Matta, S. Michimasa, T. Nakamura, S. Ota, M. Petri, T. Sako, H. Sakurai, S. Shimoura, K. Steiger, K. Takahashi, M. Takechi, Y. Togano, R. Winkler, and K. Yoneda, Phys. Rev. Lett. <b>109</b> , 182501 (2012) <b>Low-spin states and the non-observation of a proposed 2202-keV, <math>0^+</math> isomer in <math>^{68}\text{Ni}</math></b> C. J. Chiara, R. Broda, W. B. Walters, R. V. F. Janssens, M. Albers, M. Alcorta, P. F. Bertone, M. P. Carpenter, <u>C. R. Hoffman</u> , T. Lauritsen, T. A. M. Rogers, D. Seweryniak, S. Zhu, F. G. Kondev, B. Fornal, W. Królas, J. Wrzesiński, N. Larson, S. N. Liddick, C. Prokop, S. Suchyta, H. M. David, and D. T. Doherty, Phys. Rev. C <b>86</b> , 041304(R) (2012) <b>Competing single-particle and collective behavior in <math>^{71}\text{Se}</math></b> A. R. Howe, R. A. Haring-Kaye, J. Döring, N. R. Baker, S. J. Kuhn, S. L. Tabor, S. R. Arora, J. K. Bruckman, and <u>C. R. Hoffman</u> , Phys. Rev. C <b>86</b> , 014328 (2012) <b>Lifetime of the <math>2_1^+</math> state in <math>^{10}\text{C}</math></b> E. A. McCutchan, C. J. Lister, Steven C. Pieper, R. B. Wiringa, D. Seweryniak, J. P. Greene, P. F.

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**Studies of  $\beta$ -delayed proton decays of  $\text{N} \sim \text{Z}$  nuclei around  $100\text{Sn}$  at the GSI-ISOL facility**

I. Mukha, L. Batist, F. Becker, A. Blazhev, A. Bruchle, J. Döring, M. Gorska, H. Grawe, T. Faestermann, C. Hoffman, Z. Janas, A. Jungclaus, M. Karny, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, A. Plochocki, E. Roeckl, M. Romoli, M. Schadel, R. Schwengner, S. L. Tabor, M. Wiedeking and GSI ISOL Collaboration, Proceedings of the Sixth International Conference on Radioactive Nuclear Beams (RNB6), Nucl. Phys. A **746**, 66-70, 2004.

**INVITED TALKS****Characterizing neutron  $0p - 1s0d$  single-particle evolution in neutron-rich nuclei**

INT Workshop on the Structure of Light Nuclei, University of Washington, WA, October 8-12, 2012

**Characterizing shell evolution in the neutron-rich oxygen isotopes**

Physics Division Seminar, Argonne National Laboratory, Argonne, IL, June 8, 2012

**Shell Evolution and Magic Numbers in Neutron-Rich Nuclei**

Florida State University Colloquium, Tallahassee, FL, December 2, 2010

**Two-neutron cascade at the oxygen drip line**

Nuclear Structure 2010, Clark-Kerr Campus, U. C. Berkeley, CA, August 8-13, 2010

**Dissertation award in nuclear physics**

American Physical Society April Meeting, Washington, D. C., February 13-16, 2010

**Shell evolution at the oxygen drip line**

VIII Latin American Symposium on Nuclear Physics and Applications, Universidad de Chile, Santiago, Chile, December 15-19, 2009

**Spectroscopy of unbound states at the oxygen drip line**

Unbound Nuclei Workshop, INFN, Pisa, Italy, November 3-5, 2008

**Investigating the  $N = 16$  shell closure at the oxygen drip line**

Nuclear Structure 2008, Michigan State University, East Lansing, MI, June 3-6, 2008

**First Observation of  $^{25}\text{O}$**

National Superconducting Cyclotron Laboratory User Workshop, East Lansing, MI, August 16-17, 2007

**Unbound states of neutron-rich Oxygen isotopes**

JUSTIPEN-EFES workshop on shell structure of exotic nuclei 4th workshop by the DOE project JUSTIPEN and the JSPS core-to-core project EFES, RIKEN, Tokyo, Japan, June 23, 2007

**Unbound States of neutron-rich oxygen isotopes: Investigation into the  $N = 16$  shell gap**

Nuclear Structure: New Pictures in the Extended Isospin Space, Yukawa Institute for Theoretical Physics, Kyoto University, Kyoto, Japan, June 11-14, 2007

**Unbound states of neutron-rich oxygen isotopes: Investigation into the  $N = 16$  shell gap**

Direct Reactions with Exotic Beams, RIKEN, Tokyo, Japan, May 30 - June 2, 2007

ACTIVITIES

**Referee for the Physical Review Journals**

American Physical Society, January 2011 - Present

**Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)**

RIKEN, Tokyo, Japan, October 2010

**Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)**

RIKEN, Tokyo, Japan, June 2007

**The Fourth Rare Isotope Accelerator Summer School**

Lawrence Berkeley National Laboratory, Berkeley, CA, Summer 2005

**The Third Rare Isotope Accelerator Summer School**

Argonne National Laboratory, Argonne, IL, Summer 2004