

Jeffrey Scott Thompson
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Appointments

Dean, College of Science, University of Nevada, Reno, 2008-present
Director, Mackay School of Earth Sciences and Engineering, 2008-2011
Interim Dean, College of Science, University of Nevada, Reno, 2007-2008
Interim Director, Nevada Terawatt Facility, University of Nevada, Reno 2005-07
Associate Dean, College of Science, University of Nevada, Reno, 2004-2007
Chair, Physics Department, University of Nevada, Reno, 2001-2003
Professor, Physics Department, University of Nevada, Reno
Associate Professor, Physics Department, University of Nevada, Reno
Assistant Professor, Physics Department, University of Nevada, Reno

Education

Ph.D. Physics, The University of Tennessee, Knoxville, 1989, Advisor, David J. Pegg
B.S. Physics, The University of California, Los Angeles, 1982

Postdoctoral appointments

Atomic Physics, Joint Institute for Laboratory Astrophysics of the University of Colorado and the National Institute for Standards and Technology, 1989-1991, Advisor, Gordon H. Dunn
Atomic Physics, The University of Tennessee, Knoxville, 1989, Advisor, David J. Pegg

Professional Development

Transformational Gifts: Attaining the Gift of a Lifetime, Academic Impressions, 2018
Structuring Major Gifts, Council for Advancement and Support of Education, 2013
Development for Deans, Council for Advancement and Support of Education, 2010
Managing Technical Professionals and Organizations, Sloan School of Management, Massachusetts Institute of Technology, 2005
Development for Deans, Council for Advancement and Support of Education, 2005
Advanced Management Program, College of Business Administration, University of Nevada, Reno, 2004

Membership

Board of Directors, Nevada Mining Association, 2009-present
Board of Directors, Nevada Research and Innovation Corporation, 2016-present
Standing Committee on Research Institutions, Council of Colleges of Arts and Sciences, 2015-2016

Research Interests

Experimental atomic and molecular physics, accelerator-based studies of atomic and molecular anions, laser photoelectron spectroscopy of negative ions, velocity mapping of photoelectrons, synchrotron-based photodetachment studies, electron affinities, cross sections, angular distributions, electron correlation.

Experimental condensed matter physics, studies of polymers at high pressure, laser induced fluorescence and Raman spectroscopy, diamond anvil cells.

Funding History (2005-Present)

United States Geological Survey- University of Nevada, Reno Cooperative Agreement, \$350,000, 20013-18.

Nevada Division of Minerals, \$2,000,000, Educational Support for the Mackay School of Earth Sciences and Engineering, 2013-2018.

United States Geological Survey- University of Nevada, Reno Cooperative Agreement, \$350,000, 2008-13.

Nevada Division of Minerals, \$2,000,000, Educational Support for the Mackay School of Earth Sciences and Engineering, 2007-2012.

"Research on strongly magnetized high energy density matter, high-energy short-pulse laser research and highly diagnosed studies of exploding wire arrays and implosion dynamics," DOE/NNSA-UNR Cooperative Agreement for High Energy Density Stewardship Science/ J. S. Thompson, \$6,700,000, 2007-08.

"Stockpile Stewardship Research at the Nevada Terawatt Facility," Department of Energy, NNSA, T. E. Cowan, J. S. Thompson and K. R. McCall, \$1,840,000, 2005-07, ("Dynamic experiments on correlated f-electron materials," J. S. Thompson, \$750,000, 2005-07).

"Development and characterization of an intense beam of Hf ions," DARPA ORNL, J. S. Thompson, \$163,375, 2003-05.

Publications

"Single Photoionization of Zn II in the Photon Energy Range of 17.5 to 90.0 eV," G. Hinojosa, V. T. Davis, A. M. Covington, J. S. Thompson, D. Kilcoyne, A. Antillon, E. M. Hernandez, D. Calabrese, A. Morales-Mori, A. M. Juarez, O. Windelius, and B. M. McLaughlin, MNRAS 470, 4048-4060 (2017)

"Radiative Lifetimes of Bound Excited States of Pt⁻," K. C. Chartkunchand, M. Kaminska, E. K. Anderson, M. K. Kristiansson, G. Eklund, O. M. Hole, R. F. Nascimento, M. Blom, M. Bjorkhage, A. Kallberg, P. Lofgren, P. Reinhed, S. Rosen, A. Simonsson, R. D. Thomas, S. Mannervik, V. T. Davis, P. A. Neill, J. S. Thompson, D. Hanstorp, H. Zettergren, H. Cederquist, and H. T. Schmidt, Physical Review A **94** 032501 (2016).

"Lifetime of the bound excited level in Ni⁻," M. Kaminska, V. T. Davis, O. M. Hole, R. F. Nascimento, K. C. Chartkunchand, M. Blom, M. Bjorkhage, A. Kallberg, P. Lofgren, P. Reinhed, S. Rosen, A. Simonsson, R. D. Thomas, S. Mannervik, P. A. Neill, J. S. Thompson, H. T. Schmidt, H. Cederquist, and D. Hanstorp, Physical Review A **93**, 012512 (2016).

"Production of SiO_n⁻ and (SiO₂)_n⁻, n= 2, 3, 4 molecular and cluster anion beams from a cesium-sputter-type negative ion source," V. T. Davis, D. D. Davis, K. Chartkunchand, J. S. Thompson and A. M. Covington, AIP Conf. Proc. 1525, 251 (2013); 10.1063/1.4802329.

"Infrared Absorption Spectroscopy of Polycarbonate at High Pressure," R. G. Kraus, E. D. Emmons, J. S. Thompson and A. M. Covington, *Journal of Polymer Science: Part B: Polymer Physics*, DOI:10.1002/polb.21405, 734 (2008).

"Measurement of partial cross sections and photoelectron angular distributions for the photodetachment of Fe⁻ and Cu⁻ at visible photon wavelengths," A. M. Covington, Srividya Duvvuri, E. D. Emmons, R. G. Kraus, W. W. Williams, J. S. Thompson, D. Calabrese, D. L. Carpenter, R. D. Collier, T. J. Kvale and V. T. Davis, *Physical Review A* **75**, 022711 (2007).

"Inner-shell photodetachment from the K⁻ ion," A. M. Covington, R. G. Kraus, E. D. Emmons, S. S. Duvvuri, V. T. Davis, D. Calabrese, D. D. Davis, C. Cisneros, A. S. Schlachter, M. S. Gulley, D. Hanstorp, J. S. Thompson, D. J. Pegg, *J. Phys. B: At. Mol. Opt. Phys.* **40**, 935 (2007).

"High-Pressure Infrared Absorption Spectroscopy of Poly(Methyl Methacrylate)," E. D. Emmons, R. G. Kraus, Srividya S. Duvvuri, J. S. Thompson, A. M. Covington, *Journal of Polymer Science: Part B: Polymer Physics*, DOI:10.1002/polb.21038, 358 (2007).

"Production of Rare-Earth atomic negative ion beams in a cesium-sputter-type negative ion source," V. T. Davis, A. M. Covington, S. Duvvuri, R. C. Kraus, E. D. Emmons, T. Kvale, J. S. Thompson, *Nucl. Instrum. Meth. B*, **261**, 157 (2007).

"Triple Detachment from the Cl⁻ Ion," J. Sandstrom, I. Alvarez, D. Calabrese, A. M. Covington, V. T. Davis, M. S. Gulley, M. Halka, D. Hanstorp, F. S. Schlachter, J. S. Thompson, D. J. Pegg, *Phys. Rev. A* **72** 034702 (2005).

"Photo-double detachment from the F⁻ ion," V. T. Davis, A. Aguilar, A. M. Covington, J. S. Thompson, D. Calabrese, C. Cisneros, M. S. Gulley, M. Halka, D. Hanstorp, J. Sandstrom, B. M. McLaughlin, G. F. Gribakin, D. J. Pegg, *Journal of Physics B: At. Mol. Opt. Phys.* **38**, 14 (2005).

"Photoelectron angular distribution measurements of s and d electrons from the photodetachment of V⁻ at visible wavelengths," D. Calabrese, A. M. Covington, W. W. Williams, J. S. Thompson, T. J. Kvale, *Phys. Rev. A* **74** 042708 (2005).

"Photo-double detachment from the Cl⁻ ion," A. Aguilar, J. S. Thompson, D. Calabrese, A. M. Covington, C. Cisneros, V. T. Davis, M. S. Gulley, M. Halka, D. Hanstorp, J. Sandstrom, B. M. McLaughlin, D. J. Pegg, *Phys. Rev. A* 022711 (2004).

"An experimental investigation of the atomic europium anion," V. T. Davis and J. S. Thompson, *J. Phys. B: At. Mol. Opt. Phys* **37** 1961 (2004).

"Measurement of the Electron Affinity of Ce," V. T. Davis and J. S. Thompson, *Phys. Rev. Lett.* **88**, 073003.

"Fine-structure resolved measurements of photoelectron angular distributions by single photon detachment of Sn⁻ at visible wavelengths," V. T. Davis, J. Ashokkumar and J. S. Thompson, *Phys. Rev. A* 65 024702 (2002).

"Measurement of the electron affinity of thulium," V. T. Davis and J. S. Thompson, *Phys. Rev. A* **65**, 010501R.

"Correlated processes in inner-shell photodetachment of the Na^- ion," A. M. Covington, A. Aguilar, V. T. Davis, I. Alvarez, H. C. Bryan, C. Cisneros, M. Halka, D. Hanstorp, G. Hinojosa, A. S. Schlachter, J. S. Thompson, D. J. Pegg, *J. Phys. B: At. Mol. Opt. Phys.* **34**, L735 (2001).

"Measurement of the Electron Affinity of Praseodymium," V. T. Davis and J. S. Thompson, *J. Phys. B: At. Mol. Opt. Phys.* **34**, L1 (2001).

"Measurement of the Electron Affinity of Lutetium," V. T. Davis and J. S. Thompson, *J. Phys. B: At. Mol. Opt. Phys.* **34**, L433 (2001).

"Laser Photodetachment of Heavy Negative Ions," J. S. Thompson, J. Ashokkumar, D. Calabrese, D. Carpenter, A. M. Covington, W. W. Williams and V. T. Davis, *Atoms and Molecules in a New Light*, H. Bryant Ed., Mexican Physical Society (2001).

"Laser-photodetachment-electron spectroscopy of Tl^- ," D. L. Carpenter, A. M. Covington, and J. S. Thompson, *Phys. Rev. A* **61** 042501.

"Low energy electron capture by Cl^{7+} from D using merged beams," J. S. Thompson, A. M. Covington, P. S. Krstic, M. Pieksma, J. L. Shinpaugh, P. C. Stancil and C. C. Havener, *Phys. Rev. A* **63** 012717.

"Fine-Structure Resolved Measurements of Photoelectron Angular Distributions of Ge^- at Visible Photon Wavelengths," W. W. Williams, D. L. Carpenter, A. M. Covington, and J. S. Thompson, *Phys. Rev. A* **59**, 4368 (1999).

"Fine-Structure Resolved Laser Photodetachment Electron Spectroscopy of In^- ," W. W. Williams, D. L. Carpenter, A. M. Covington, J. S. Thompson, T. J. Kvale, D. G. Seely, *Phys. Rev. A* **58**, 3558 (1998).

"Laser Photodetachment Spectrometry of Negative Ions," J. S. Thompson, A. M. Covington, M. C. Koepnick, D. Calabrese, and J. S. Thompson, *Proceedings of the 44th International Instrumentation Symposium*, Instrument Society of America, 732 (1998).

"Measurement of the Electron Affinity of Lanthanum," A. M. Covington, D. Calabrese, J. S. Thompson, and T. J. Kvale, *J. Phys. B: At. Mol. Opt. Phys.*, **31**, L855 (1998).

"Laser Photodetachment Electron Spectrometry of Ga^- ," W. W. Williams, D. L. Carpenter, A. M. Covington, M. C. Koepnick, D. Calabrese, and J. S. Thompson, *J. Phys. B: At. Mol. Opt. Phys.* **31**, L341 (1998).

"Measurements of Photoelectron Angular Distributions by Single-Photon Detachment of Al^- , Si^- , and P^- at Visible Photon Wavelengths," A. M. Covington, D. Calabrese, W. W. Williams, J. S. Thompson, and T. J. Kvale, *Phys. Rev. A* **56**, 4746 (1997).

"Photoelectron Angular Distribution Measurements of C^- at Visible Wavelengths," D. Calabrese, A. M. Covington, D. L. Carpenter, J. S. Thompson, T. J. Kvale, and R. Collier, *J. Phys. B: At. Mol. Opt. Phys.* **30**, 4791 (1997).

"Evidence of Small Odd-Numbered Dianionic Carbon Cluster Beams from a Cesium-Sputter Negative Ion Source," D. Calabrese, A. M. Covington, and J. S. Thompson, *J. Chem. Phys. Letters to the Editor* **105**, 2936 (1996).

"Near-Threshold Infrared Photodetachment of Al⁻: A Determination of the Electron Affinity of Aluminum and the Range of Validity of the Wigner Law," D. Calabrese, A. M. Covington, J. S. Thompson, R. W. Marawar, and John W. Farley, *Phys. Rev A* **54**, 2797 (1996).

"Production of Group IIA Atomic and Molecular Negative Ion Beams in a Cesium-Sputter Negative Ion Source," D. Calabrese, A. M. Covington, and J. S. Thompson, *Nucl. Instrum. Meth. A* **379**, 192 (1996).

"Cross Sections for the Photodetachment of B⁻," D. H. Lee, C. Y. Yang, J. S. Thompson, W. D. Brandon, U. Ljungblad, D. Hanstorp, D. J. Pegg, J. Dellwo, G. D. Alton, *Phys. Rev. A* **51**, 4284 (1995).

"A Multiwavelength Investigation of the Merging Galaxy HCG 95C," M. Rodrigue, A. Schultz, J. Thompson, T. Colegrove, L. D. Spight, M. DiSanti, U. Fink, W. Grundy, K. Fricke and P. Papaderos, *The Astronomical Journal* **109**, 2362 (1995).

"Merged-Beams Energy-Loss Technique for Electron Excitation: Absolute Total Cross Sections for O⁵⁺(2s→2p)," E. W. Bell, X. Q. Guo, J. L. Forand, K. Rinn, D. R. Swenson, J. S. Thompson, G. H. Dunn, M. E. Bannister, D. C. Gregory, R. A. Phaneuf, A. C. H. Smith, A. Müller, C. A. Timmer, E. K. Wählin, B. D. Depoala, D. S. Belic, *Phys. Rev. A* **49**, 4585 (1994).

"Absolute Cross-Section Measurements for Electron-Impact Single Ionization of Si⁴⁺ and Si⁵⁺," J. S. Thompson and D. C. Gregory, *Phys. Rev. A* **50**, 1377 (1994).

"Electron-Impact Ionization of Si⁶⁺ and Si⁷⁺ Ions," P. A. Zeijlmans van Emmichoven, M. E. Bannister, D. C. Gregory, C. C. Havener, R. A. Phaneuf, E. W. Bell, X. Q. Guo, J. S. Thompson, M. Sataka, *Phys. Rev. A* **47**, 288 (1993).

"Evidence for Significant Backscattering in Near Threshold Electron-Impact Excitation of Ar⁷⁺ (3s→3p)," X. Q. Guo, E. W. Bell, J. S. Thompson, G. H. Dunn, M. E. Bannister, R. A. Phaneuf, A. C. H. Smith, *Phys. Rev A* **47**, R9 (1993).

"Electron-Impact Excitation Of Multiply-Charged Ions Using Energy Loss in Merged Beams: e + Si³⁺(3s ²S_{1/2}) → e + Si³⁺(3p ²P_{1/2,3/2})," E. K. Wählin, J. S. Thompson, G. H. Dunn, R. A. Phaneuf, D. C. Gregory, A. C. H. Smith, *Z. Phys. D* **21**, S35 (1991).

"Angular Distributions of Electrons Photodetached from the B⁻ Ion," Y. Liu, D. J. Pegg, J. S. Thompson, J. Dellwo, G. D. Alton, *J. Phys. B* **24**, L1 (1991).

"Photodetachment of He⁻," J. S. Thompson, D. J. Pegg, J. Dellwo, R. N. Compton, G. D. Alton, *Nucl. Instrum. Methods B* **56/57**, 211 (1991).

"Electron Impact Excitation of Si³⁺(3s→3p) Using a Merged Beams Electron Energy Loss Technique," E. K. Wählin, J. S. Thompson, G. H. Dunn, R. A. Phaneuf, D. C. Gregory, A. C. H. Smith, *Phys. Rev. Lett.* **66**, 157 (1991).

"Angular Distributions of Electrons from the Photodetachment of Metastable He⁻," J. S. Thompson, D. J. Pegg, R. N. Compton, G. D. Alton, *J. Phys. B* **23**, L15 (1990).

"Partial Cross Sections for the Photodetachment of Metastable He⁻," D. J. Pegg, J. S. Thompson, J. Dellwo, R. N. Compton, G. D. Alton, *Phys. Rev. Lett.* **64**, 278 (1990).

"Energy- and Angle-Resolved Photoelectron Spectroscopy of Negative Ions," D. J. Pegg, J. S. Thompson, R. N. Compton, G. D. Alton, *Nucl. Instrum. Methods* **B40/41**, 221 (1989).

"Evidence for a Stable Negative Ion of Calcium," D. J. Pegg, J. S. Thompson, R. N. Compton, G. D. Alton, *Phys. Rev. Lett.* **59**, 2267 (1987).

"Autodetachment Spectroscopy of Metastable Negative Ions," T. J. Kvale, R. N. Compton, G. D. Alton, D. J. Pegg, J. S. Thompson, *Nucl. Instrum. Methods* **B24/25**, 325 (1987).

"Autodetachment Spectroscopy of Metastable He₂⁻," T. J. Kvale, R. N. Compton, G. D. Alton, J. S. Thompson, D. J. Pegg, *Phys. Rev. Lett.* **56**, 592 (1986).

"The Production of Ca⁻ Through Sequential Charge Exchange with Li Vapor," G. D. Alton, T. J. Kvale, R. N. Compton, D. J. Pegg, J. S. Thompson, *Nucl. Instrum. Methods* **A244**, 142 (1986).

"Experimental Determination of the Energy Level of Be⁻(1s²2s2p²) ⁴P," T. J. Kvale, G. D. Alton, R. N. Compton, D. J. Pegg, J. S. Thompson, *Phys. Rev. Lett.* **55**, 484 (1985).

Invited Talks and Presentations

"Production, destruction and structure measurements of multi-electron negative ions," University of Goteborg, Goteborg, Sweden, 2009.

"An Overview of Progress at the Nevada Terawatt Facility," 2007 Stewardship Science Academic Alliance Workshop, February 5-7, 2007, Washington, D.C.

"An experimental investigation of negative ions," Rocket Propulsion Laboratory, Edwards Air Force Base, 2004.

"Giant Molecular Clouds," Public Seminar, Western Nevada Community College, 2003.

"An experimental investigation of lanthanide negative ions," J. S. Thompson and T. J. Kvale, Conference on Accelerators in Research and Industry, Denton, Texas, 2002.

"Laser-based photodetachment experiments on multi-electron anions," Pan American Science Institute, Angra dos Reis, Brazil, 2000.

"Laser photodetachment of heavy negative ions," Conference on Accelerators in Research and Industry, Denton, Texas, 2000.

"Laser Photodetachment Electron Spectroscopy of Heavy Negative Ions," Fifteenth International Conference on the Application of Accelerators in Research and Industry, Denton, Texas, 1998.

"Laser Photodetachment Spectrometry of Negative Ions," 44th International Instrumentation Symposium of the Instrumentation Society of America, Reno, Nevada, 1998.

"Are Negative Ions Good for You?", Western Nevada Community College, 1997.

"Production and Destruction of Negative Ions," Physics and Chemistry Department, Albion College, Michigan, 1995.

"Photodetachment of Negative Ions," Physics Department, University of Toledo, Ohio, 1995

"Collisional Investigations of Positive and Negative Ions," University of Louisville, Louisville, Kentucky, Physics Department Colloquium, 1991.

"Photodetachment of Metastable He⁻," Eleventh International Conference on the Application of Accelerators in Research and Industry, Denton, Texas, 1990.

"Photoelectron Spectroscopy of Negative Ions," University of Toledo, Toledo, Ohio, Physics Department Colloquium, 1989.

"Photodetachment of He⁻: Energy- and Angle-Resolved Measurements," Oak Ridge National Laboratory, Oak Ridge, Tennessee, Chemical Physics Seminar 1988.

"Observation of the Ca⁻ Ion by Photoelectron Spectroscopy," National Bureau of Standards, Gaithersburg, Maryland, Photon Physics Group Seminar, 1987.

"Autodetachment Spectroscopy of He₂⁻," Oak Ridge National Laboratory, Oak Ridge, Tennessee, Chemical Physics Seminar, 1985.

Contributed Papers

"Measuring the ²D_{3/2} Ni-excited state lifetime in DESIREE," K. C. Chartkunchand, O. M. Hole, E. Bäckström, R. F. Nascimento, M. Kaminska, V. T. Davis, P. A. Neill, R. D. Thomas, S. Mannervik, J. S. Thompson, D. Hanstorp, H. T. Schmidt, H. Cederquist, ICPEAC 2015, Toledo, Spain.

"Velocity Map Imaging Spectroscopy of the Lanthanide Negative Ions," Kiattichart Chartkunchand, Vernon Davis, Jeffrey Thompson, Aaron Covington, APS March Meeting, 2010.

"Infrared Photodetachment of Lanthanide Anions," K. C. Chartkunchand, Vernon T. Davis, S. S. Duvvuri, Z. A. McCormick, J.S. Thompson, Piotr P. Wiewior, A. M. Covington, Division of Atomic Molecular and Optical Physics, Charlottesville, VA 2009.

"Photodetachment Studies of the Hydrogen Molecular Anion," Chartkunchand, K. C., Davis, Vernon, Thompson, Jeffrey, Covington, Aaron, American Physical Society, APS Division of Atomic Molecular and Optical Physics, 2008.

"Photodetachment of Lanthanide Oxide Anions," A. M. Covington, E. D. Emmons, R. G. Kraus, J. S. Thompson, D. Calabrese, V. T. Davis APS Division of Atomic Molecular and Optical Physics, Alberta, Canada, 2007.

"Photoelectron Angular Distribution Measurements of p-electron photodetachment of Lu," A. M. Covington, S. S. Duvvuri, E. D. Emmons, R. G. Kraus, J. S. Thompson, V. T. Davis APS Division of Atomic Molecular and Optical Physics, Alberta, Canada, 2007.

"Investigations of the Influence of Materials Properties on HED Science," A. M. Covington, T. Darling, K. McCall, J. S. Thompson, D. Atherton, K. C. Chartkunchand, E. Emmons, G. Kaplan, J. Lenz, B. Allured, A. Cates, R. Kraus and C. Thomas, NNSA SSAA Symposium, Georgetown Maryland, Feb 2008.

"Photodetachment of Tb," A. M. Covington, V. T. Davis, S. Duvvuri, R. Kraus and J. S. Thompson, Division of Atomic Molecular and Optical Physics, Knoxville, TN, May 2006.

"Production of rare-earth atomic negative ion beams in a cesium-sputter-type negative ion source," V. T. Davis (invited presentation), A. M. Covington and J. S. Thompson, International Conference on the Application of Accelerators in Research and Industry, Fort Worth, Texas, August, 2006.

"Experimental Measurement of the Electron Affinity of Hafnium," V. T. Davis and J. S. Thompson, 2004 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Tucson, Arizona.

"An Experimental Investigation of Lanthanide Negative Ions," V. T. Davis and J. S. Thompson, 2003 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Boulder, Colorado.

"Photo-double detachment of F⁻ and Cl⁻," A. Aguilar, D. Calabrese, A. M. Covington, C. Cisneros, V. T. Davis, M. S. Gulley, M. Halka, D. Hanstorp, B. M. McLaughlin, J. Sandstrom, J. S. Thompson and D. J. Pegg, 2003 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society DAMOP, Boulder, Colorado.

"Exploratory experiments: photodetachment of negative ions by energetic photons," Thomas Kvale, Song Chen, David Seeley, and Jeffrey Thompson, SRC 36th User's Meeting, Madison, Wisconsin, October 2003.

"Laser Photodetachment of Heavy Negative Ions," J. S. Thompson, J. Ashokkumar, D. Calabrese, D. Carpenter, A. M. Covington, W. W. Williams and V. T. Davis, in *Atoms and Molecules in a New Light, Proceedings of Pan American Advanced Studies Institute*, Angra dos Reis, Brazil, May 2000.

"Measurement of photodetachment cross sections for Fe⁻ and Cu⁻ at visible photon wavelengths," A. M. Covington, D. L. Carpenter, W. W. Williams and J. S. Thompson, Atomic Processes in Plasma Meeting, Reno, Nevada, October 2000.

"Comparison of the Photoelectron Angular Distributions of C⁻, Si⁻, and Ge⁻ at Visible Photon Wavelengths," A. M. Covington, D. L. Carpenter, J. S. Thompson, and W. W. Williams, Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 1999.

"Measurement of the Electron Affinities of Indium and Thallium," J. S. Thompson, D. L. Carpenter, A. M. Covington, W. W. Williams, T. J. Kvale, and D. G. Seely, Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 1999.

"A Novel Extension of the Merged-Beams Technique to Access sub-eV/u Collisions with He," C. C. Havener and J. S. Thompson, Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 1999.

"Electron Capture in Slow Collisions of $q=7+$ Ions with Atomic Hydrogen," P. S. Krstic, P. C. Stancil, C. C. Havener, and J. S. Thompson, Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 1999.

"Laser Photodetachment Electron Spectrometry of Ga^- and Ge^- ," W. W. Williams, D. L. Carpenter, A. M. Covington, M. Koepnick, D. Calabrese, and J. S. Thompson, R. Collier, 1998 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Santa Fe, New Mexico.

"Measurement of the Electron Affinity of Lanthanum," A. M. Covington, D. Calabrese, J. S. Thompson, and T. J. Kvale, 1998 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Santa Fe, New Mexico.

"Photodetachment Cross Sections and Photoelectron Angular Distribution Measurements of Fe^- and Cu^- ," D. L. Carpenter, D. Calabrese, A. M. Covington, M. Koepnick, W. W. Williams, J. S. Thompson, R. Collier, 1998 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Santa Fe, New Mexico.

"Experimental Photoelectron Angular Distributions of C^- at Visible Wavelengths," D. Calabrese, A. M. Covington, D. Carpenter, J. S. Thompson, T. J. Kvale, and R. Collier, 1997 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Washington, D.C.

"Photoelectron Angular Distribution Measurements of Transition Metals, V, Fe, and Cu," J. S. Thompson, D. Calabrese, A. M. Covington, W. W. Williams, and T. J. Kvale, 1997 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Washington, D.C.

"Experimental Measurements of the Photoelectron Angular Distributions of Al^- , Si^- , and P^- ," A. M. Covington, D. Calabrese, W. W. Williams, J. S. Thompson, and T. J. Kvale, 1997 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Washington, D.C.

"Laser Photoelectron Spectroscopy of Atomic and Molecular Group IIA Anions," J. S. Thompson, D. Calabrese and A. M. Covington, 1996 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Ann Arbor, Michigan.

"Production of Small ($n=7$ to 13) Dianionic Carbon Clusters with a Cesium-Sputter Negative Ion Source," A. M. Covington, D. Calabrese and J. S. Thompson, 1996 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Ann Arbor, Michigan.

"Measurement of the Infrared Photodetachment Cross Section Of Al," D. Calabrese, A. M. Covington, J. S. Thompson, R. W. Marawar, and John W. Farley, 1995 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Toronto, Canada.

"A New Apparatus for Studying Negative Ions Using Laser Photoelectron Spectroscopy," A. M. Covington, D. Calabrese, and J. S. Thompson, 1995 ICPEAC Meeting, Whistler, Canada.

"Measurement of Electron Detachment Cross Sections for Negative Ion Collisions with Metastable Atoms," G. S. Stefanelli, A. M. Covington, D. Calabrese, J. S. Thompson, and P. A. Neill, 1995 ICPEAC Meeting, Whistler, Canada.

"Low-energy Electron Capture Cross Sections for Heavy Multicharged Ion Collisions with Hydrogen Using Merged Beams," J. S. Thompson, A. M. Covington and C. C. Havener, 1994 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Crystal City, Virginia.

"Single Ionization Absolute Cross-Section Measurements for Electron-Impact of Ne-like Silicon Ions," J. S. Thompson and D. C. Gregory, 1993 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Reno, Nevada.

"Electron-Impact Ionization of Multicharged Silicon Ions," P. A. Zeijlmans van Emmichoven, D. C. Gregory, C. C. Havener, R. A. Phaneuf, J. S. Thompson, E. W. Bell, X. Q. Guo, 1992 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Chicago, Illinois.

"Electron-Impact Excitation of Ar⁷⁺ Using a Merged Beams Technique," X. Q. Guo, E. W. Bell, J. S. Thompson, G. H. Dunn, R. A. Phaneuf, D. C. Gregory, and A. C. H. Smith, 1992 Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Chicago, Illinois.

Course Instruction

Physics 100 Introductory Physics
 Astronomy 109 Planetary Astronomy
 Astronomy 110 Stellar Astronomy
 Physics 201 Physics for Scientists and Engineers I
 Physics 202 Physics for Scientists and Engineers II
 Physics 203 Physics for Scientists and Engineers III
 Physics 301 Mathematical Methods for Physicists
 Physics 351, 352 Classical Mechanics
 Physics 423, 424 Advanced Laboratory Techniques
 Physics 493 Special Problems
 Physics 693 Special Problems
 Physics 790 Graduate Seminar
 Physics 792 Special Problems
 Physics 797 Thesis
 Physics 799 Dissertation

Directed Research

V. T. Davis, "Measurement of the electron affinities of the lanthanides," Ph.D. Dissertation, 2002.

Jayant Ashokkumar, "Fine-structure resolved measurements of photoelectron angular distributions of Sn^- at visible photon wavelengths," M.S. Thesis, 2000.

W. W. Williams, "Laser photodetachment electron spectroscopy of the negative ions, Ga⁻, In⁻ and Ge⁻," Ph.D. Dissertation, 1999.

Patrick Tod Colegrove, "Open cluster ages and an apparent periodicity in the history of star formation in the solar neighborhood," Ph.D. Dissertation, 1999.

Daniel Landis Carpenter, "Laser Photodetachment Determination of the Electron Affinity of Thallium," M.S. Thesis, 1998.

Melodi Rodrigue, "A UV Survey of Activity in Hickson Compact Groups," Ph.D. Dissertation, 1998.

Aaron M. Covington, "Laser Photodetached Electron Spectroscopy of Atomic Negative Ions," Ph.D. Dissertation, 1998.

Physics Senior Theses

M. Lawrence

R. Edwards

D. Carpenter

R. Mery

M. Bannister

University Committee Assignments

Academic Standards Committee

Campus Affairs Committee

Salary and Benefits Committee

Work and Family Committee

Graduate Council

Council of Internship Coordinators

Affiliations

Member, Graduate Faculty, University of Nevada, Reno

Member, American Physical Society

Member, Sigma Xi

Board Member, Nevada Mining Association