

Scott D. Bergeson

Department of Physics and Astronomy
Brigham Young University
N267 ESC
Provo, UT 84602-4640

phone: 801-422-6161 (office)
fax: 801-422-0553
email: scott.bergeson@byu.edu
<http://www.physics.byu.edu/faculty/bergeson/>

Education

Ph.D., University of Wisconsin (1995), Thesis advisor: Professor James E. Lawler

B.S., Brigham Young University (1990)

Appointments

Associate Professor, Department of Physics and Astronomy, Brigham Young University (2004–present)

Assistant Professor, Department of Physics and Astronomy, Brigham Young University (1998–2004)

Consultant, biophotonic instrumentation development (2002–present)

NIST/NRC Postdoctoral Research Fellow, National Institute of Standards and Technology, Gaithersburg MD (1996–1998) Advisors: Dr. Thomas B. Lucatorto, Dr. Steven L. Rolston

Postdoctoral Research, University of Connecticut (1995–1996), Advisor: Professor Edward E. Eyler

Honors and Awards

National Science Foundation research award, “Non-equilibrium dynamics of ultracold neutral plasmas,” (2006-2009)

Alexander von Humboldt research fellow, Max Planck Institute for Quantum Optics, Garching, Germany (2005-2006), Academic Host: Prof. Dr. T. W. Haensch

National Science Foundation CAREER award, “Highly excited ultracold atoms,” (2000-2005)

NIST/NRC Postdoctoral Research Fellowship, National Institute of Standards and Technology, Gaithersburg MD (1996-1998)

Research interests

Ultracold neutral plasmas, strongly coupled coulomb systems, laser cooling and trapping, precision atomic spectroscopy, laser frequency combs, biophotonics instrumentation, x-ray diagnostics

Professional volunteer work

Program Committee, Division of Atomic, Molecular, and Optical Physics, American Physical Society (2006–2009)

Atomic Physics Topical Editor, *Journal of the Optical Society of America B*, 2000–2005.

Manuscript reviewer, *Physical Review Letters*, *Physical Review A*, *Optics Letters*, National Science Foundation, Research Corporation

Patents

7558619 “Raman instrument for measuring weak signals in the presence of strong background fluorescence,” July 2009.

Peer-reviewed publications

38. A. Denning, S. Bergeson, and F. Robicheaux, “Measurement and simulation of laser-induced fluorescence from ultracold neutral plasmas,” *Phys. Rev. A* 80, 033415 (2009)
37. A. Denning, A. Booth, S. Lee, M. Amonson, and S. D. Bergeson, “Comment on ‘Generation of cold low divergent atomic beam of indium by laser ablation’ [Rev. Sci. Instrum. 76, 113302 (2005)],” *Rev. Sci. Instrum.* 80, 047101 (2009)
36. S. D. Bergeson and F. Robicheaux, “Recombination fluorescence in ultracold neutral plasmas,” *Phys. Rev. Lett.* 101, 073202 (2008)
35. S. D. Bergeson, J. B. Peatross, N. J. Eyring, J. F. Fralick, D. N. Stevenson, and S. B. Ferguson, “Resonance Raman measurements of carotenoids using light emitting diodes,” *Journal of Biomedical Optics* 14, 0440206 (2008)
34. S. D. Bergeson, J. B. Peatross, N. J. Eyring, J. F. Fralick, and S. B. Ferguson, “Divided shifted Raman spectroscopy for carotenoid detection,” *Proc. SPIE* 6853, 68530A (2008)
33. P. Fendel, S. D. Bergeson, and T. W. Haensch, “Two-photon frequency comb spectroscopy of the 6s-8s transition in cesium” *Optics Letters* 32, 701 - 703 (2007)
32. J. Peatross and S. D. Bergeson, “Fourier spectroscopy of ultrashort laser pulses,” *Am. J. Physics* 74, 842 - 845 (2006)
31. N. Kolachevsky, J. Alnis, S. D. Bergeson, T. W. Haensch, “Compact solid-state laser source for 1S-2S spectroscopy in atomic hydrogen,” *Phys Rev. A* 73, 021801 (2006)
30. T. Weeks, M. Harrison, M. Johnson, A. P. Shevelko, J. Ellsworth, S. Bergeson, M. Asplund, and L. V. Knight, “Absolute soft x-ray calibration of laser produced plasmas using a focusing crystal von Hamos spectrometer,” *Proc. SPIE Int. Soc. Opt. Eng.* 5918, 59180R (2005)
29. E. A. Cummings, J. E. Daily, D. S. Durfee, and S. D. Bergeson, “Ultracold neutral plasma expansion in two dimensions,” *Phys. Plasmas* 12, 123501 (2005)
28. E. A. Cummings, J. E. Daily, D. S. Durfee, and S. D. Bergeson, “Fluorescence measurement of expanding strongly-coupled neutral plasmas,” *Phys. Rev. Lett.* 95, 235001 (2005)

27. J. E. Daily, R. Gommers, E. A. Cummings, D. S. Durfee, and S. D. Bergeson, "Two-photon photionization of the Ca 4s3d 1D2 level in an optical dipole trap," *Phys. Rev. A* **71**, 043406 (2005)
26. R. Olson, R. Merrill, J. Paul, S. D. Bergeson, and D. S. Durfee, "Self-referencing prism deflection measurement schemes with microradian precision," *Appl. Optics* **44**, 4639-4647 (2005)
25. Rebecca Merrill, Rebecca Olson, Scott Bergeson, and Dallin S. Durfee, "Increasing the output of a Littman-type laser by use of an intracavity Faraday rotator," *Appl. Optics* **43**, 3910-3914 (2004)
24. T. C. Killian, V. S. Ashoka, P. Gupta, S. Laha, S. B. Nagel, C. E. Simien, S. Kulin, S. L. Rolston, and S. D. Bergeson, "Ultracold neutral plasmas: recent experiments and new prospects," *J. Phys. A: Math. Gen.* **36**, 6077-6085 (2003)
23. S. D. Bergeson and R. L. Spencer, "Neutral plasma oscillations at zero temperature," *Phys. Rev. E* **67**, 026414, pp. 1-5, (2003)
22. E. A. Cummings, M. S. Hicken, and S. D. Bergeson, "Demonstration of a 1-W injection-locked continuous-wave titanium:sapphire laser," *Applied Optics* **36**, 7583-7587 (2002)
21. A. Ludlow, H. M. Nelson, and S. D. Bergeson, "Two-photon absorption in potassium niobate," *J. Opt. Soc. Am. B* **18**, 1913-1820 (2001)
20. T. C. Killian, M. J. Lim, S. Kulin, R. Dumke, S. D. Bergeson, and S.L. Rolston, "Formation of Rydberg atoms in an expanding ultracold neutral plasma," *Phys. Rev. Lett.* **86**, 3759-3762 (2001)
19. S. D. Bergeson, K. G. H. Baldwin, T. B. Lucatorto, T. J. McIlrath, C. H. Cheng, and E. E. Eyler, "Doppler-free two-photon spectroscopy in the VUV: the helium $1^1S - 2^1S$ transition," *J. Opt. Soc. Am. B* **17**, 1599-1606 (2000)
18. S. Kulin, T. C. Killian, S. D. Bergeson and S. L. Rolston, "Plasma oscillations and expansion of an ultracold neutral plasma," *Phys. Rev. Lett.* **85**, 318-321 (2000)
17. T. Killian, S. Kulin, S. D. Bergeson, L. Orozco, and S. L. Rolston, "Creation of an ultracold neutral plasma," *Phys. Rev. Lett.* **83**, 4776-4779 (1999)
16. J. E. Lawler, S. D. Bergeson, J. A. Fedchak, and K. L. Mullman, "VUV f-values of astrophysical interest from high sensitivity absorption spectroscopy on atomic ions," *Physica Scripta* **T83**, 11-18 (1999)
15. S. D. Bergeson, A. Balakrishnan, K. G. H. Baldwin, T. B. Lucatorto, J. P. Marangos, T. J. McIlrath, T. R. O'Brian, S. L. Rolston, C. J. Sansonetti, Jesse Wen, C. H. Cheng, and E. E. Eyler, "Precision spectroscopy in He as a test of QED," *Physica Scripta* **T83**, 76-82 (1999)
14. C. Orzel, S. D. Bergeson, S. Kulin, and S. L. Rolston, "Time-resolved studies of ionizing collisions," *Phys. Rev. Lett.* **80**, 5093-5096 (1998)
13. S. D. Bergeson, A. Balakrishnan, K. G. H. Baldwin, T. B. Lucatorto, J. P. Marangos, T. J. McIlrath, T. R. O'Brien, S. L. Rolston, C. J. Sansonetti, Jesse Wen, N. Westbrook, C. H. Cheng, and E. E. Eyler, "Measurement of the He ground state Lamb shift via the two-photon $1^1S - 2^1S$ transition," *Phys. Rev. Lett.* **80**, 3475-3478 (1998)
12. J. E. Lawler, M. A. Childs, K. L. Menningen, L. W. Anderson, S. D. Bergeson, and K. L. Mullman, "UV/VUV high sensitivity absorption spectroscopy for diagnosing lighting and processing plasmas and for basic data," *AIP Conf. Proc.* **363**, 1 (1996)
11. S. D. Bergeson, K. L. Mullman, and J. E. Lawler, "High sensitivity absorption spectroscopy in Fe II," *Astrophys. J.* **464**, 1050-1053 (1996)
10. S. D. Bergeson, K. L. Mullman, M. E. Wickliffe, J. E. Lawler, U. Litzen, and S. Johansson, "Branching fractions and oscillator strengths for Fe II transitions from the $3d^6(5D)4p$ subconfiguration," *Astrophys. J.* **464**, 1044-1049 (1996)

9. D. E. Nitz, S. D. Bergeson, and J. E. Lawler, "Radiative lifetimes in Co I," *J. Opt. Soc. Am. B* **12**, 377-383 (1995)
8. H. M. Anderson, S. D. Bergeson, D. Doughty, and J. E. Lawler, "Xe I 147 nm resonance f-value and trapped decay rates," *Phys. Rev. A* **51**, 211-217 (1995)
7. S. D. Bergeson, K. L. Mullman, and J. E. Lawler, "Oscillator Strengths for Fe II transitions at 224.918 and 226.008 nanometers," *Astrophys. J.* **435**, L157-L159 (1994)
6. A. G. Calamai, P. L. Smith, and S. D. Bergeson, "Transition Probabilities for the $3s^23p(^2P^o) - 3s3p(^4P)$ intersystem lines of Si II," *Astrophys. J.* 415, L59-L62 (1993)
5. S. D. Bergeson and J. E. Lawler, "Oscillator strengths of the Si II 181 nanometer resonance multiplet," *Astrophys. J.* 414, L137-L140 (1993)
4. S. D. Bergeson and J. E. Lawler, "Radiative lifetimes, branching ratios, and absolute transition probabilities in Cr II and Zn II," *Astrophys. J.* 408, 382-388 (1993)
3. J. E. Lawler, S. D. Bergeson, and R. C. Wamsley, "Advanced experimental techniques for measuring oscillator strengths of vacuum ultraviolet lines," *Physica Scripta T47*, 29-35 (1993)
2. S. D. Bergeson and J. E. Lawler, "Radiative lifetimes in Ni I," *J. Opt. Soc. Am. B* 10, 794-798 (1993)
1. A. Bizzarri, M. C. E. Huber, A. Noels, N. Grevesse, S. D. Bergeson, P. Tsekeris, and J. E. Lawler, "Ti-II transition probabilities and radiative lifetimes in Ti^+ and the solar titanium abundance," *Astron. Astrophys.* 273, 707-718 (1993)

Non-peer-reviewed publications

5. S. D. Bergeson and F. Robicheaux, "Recombination fluorescence in ultracold neutral plasmas," arXiv:0708.2922v1 [physics.atom-ph]
4. Scott Bergeson and Thomas Killian, "Ultracold plasmas and Rydberg gases," *Physics World* February 2003 pp 37-41
3. K. A. Jensen, R. L. Larson, S. D. Bergeson, and E. F. McCormack, "Exploring feedback control using experiments in optics," <http://arxiv.org/abs/physics/0106091> (6 pages)
2. P. W. Keaton et al., "A hypervelocity microparticle impacts laboratory with 100 km/s projectiles," *Int. J. Impact Engng.* 10, 295-308 (1990)
1. G. L. Stradling et al, "Searching for momentum enhancement in hypervelocity impacts," *Int. J. Impact Engng.* 10, 555-570 (1990)

Invited talks

11. "Ultracold neutral plasmas and other things that don't go together," Old Dominion University, Physics Department Colloquium, February 2009
10. "Ultracold plasmas and other oxymorons," Idaho State University, Physics Department Seminar, October 2007
9. "Frequency combs in astronomy," Optical Frequency Combs for Space, European Space Agency (ESA), National Physical Laboratory, Middlesex, Great Britain, October 2006
8. "Nearly two-dimensional ultracold plasmas," Cold and Ultracold Plasma and Rydberg Physics Workshop, Institute for Theoretical Atomic and Molecular Physics (ITAMP), Cambridge, MA September 2005

7. "Fluorescence studies of strongly-coupled neutral Coulomb systems," Haensch group Ringberg Seminar, Max Planck Institute for Quantum Optics, Ringberg, Germany, September 2005
6. "Fluorescence studies of ultracold plasmas," DAMOP (APS), Lincoln, NE, May 2005
5. "Nobel Prize in Physics 2004," Colloquium, Department of Physics and Astronomy, BYU, November 2004
4. "Ultracold neutral plasmas: too good to be true," Colloquium, Physics Department, Utah Valley State College, March (2004)
3. "When cold, dense gases become ionized," Colloquium, Department of Physics and Astronomy, BYU, September 2002
2. "Opportunities in cool physics with cold atoms," Research Seminar, MOXTEK Inc., Orem, Utah, January 2002
1. "Precision spectroscopy in He as a test of QED," 6th International Colloquium on Atomic Spectra and Oscillator Strengths, Victoria, B.C., Canada, August 1998

Contributed conference presentations

49. Scott Bergeson and Francis Robicheaux, "Calculations and measurements of laser-induced fluorescence in ultracold neutral plasmas," DAMOP (APS) Charlottesville, VA, USA, May 2009.
48. Bryce Allred, Jeff Kemp, Jershon Lopez, Larry Knight, Scott Bergeson, and Alexander Shevelko, "EUV Spectrometers for source development, characterization and optimization," 2008 Joint Fall Meeting of the Texas and Four Corners Sections of APS, AAPT, and Zones 13 and 16 of SPS, and the Societies of Hispanic & Black Physicists, El Paso, Texas, October 2008
47. Scott Bergeson, Bryce Allred, Jershon Lopez, Jeffrey Kemp, Larry Knight, and Alexander Shevelko, "EUV spectrometers for source development, characterization, and optimization" 2008 International EUVL Symposium (Semataech) Lake Tahoe, CA, USA, September 2008
46. S. Bergeson, N. Grey, M. Harrison, L. Knight, O. Yakushev and A. Shevelko, "EUV Transmission Grating Spectrometer for Absolute Intensity Measurements from 2 to 250 nm" 2008 International Workshop on EUV Lithography, Maui, Hawaii, USA, June 9-11, 2008
45. S. D. Bergeson and F. Robicheaux, "Saturation of recombination fluorescence in ultracold neutral plasmas," DAMOP (APS) Penn State, PA, USA, May 2008.
44. A. Denning and S. D. Bergeson, "Early Time Dynamics of Ultracold Neutral Plasmas," DAMOP (APS) Penn State, PA, USA, May 2008.
43. S. D. Bergeson, J. B. Peatross, N. J. Eyring, J. F. Fralick, and S. B. Ferguson, "Divided shifted Raman spectroscopy for carotenoid detection," SPIE BIOS 2008, San Jose, California, January 2008, Proc. SPIE 6853 68530A (2008)
42. Scott Bergeson and Francis Robicheaux, "Recombination fluorescence in ultracold plasmas," DAMOP (APS), Calgary, Canada, June 5-9, 2007
41. Adam Denning and Scott Bergeson, "Electron screening and ion temperature equilibration in ultracold plasmas," DAMOP (APS), Calgary, Canada, June 5-9, 2007
40. William Farmer, Michael Amonson, and Scott Bergeson, "A dual-stage laser ablation source for cold atoms?" DAMOP (APS), Calgary, Canada, June 5-9, 2007
39. T. Weeks, M. Johnson, M. Harrison, A. Shevelko, P Lebedev, S. Bergeson, M. Asplund, and L. Knight, "Absolute Soft X-Ray Calibration of Laser Produced Plasma Using a Focusing Crystal von Hamos Spectrometer," 50th Annual Meeting of the SPIE, Optics and Photonics, San Diego, CA, August 2005

38. M. Harrison, T. Weeks, M. Johnson, A. Shevelko, J. Ellsworth, M. Asplund, S. Bergeson, and L. Knight, "Using a Conical von Spectrometer to Monitor X-ray Emission from Laser Produced Plasmas," Fall 2005 Meeting of the Four Corners Section for the American Physical Society (APS), Boulder, CO, October, 2005.
37. B. Neyenhuis, R. Tang, S. Bergeson, and D. Durfee, "Progress Towards a Hz Stable 657 nm Diode Laser," Annual Meeting of the Optical Society of America, Symposium on Undergraduate Research (OSA/APS Laser Science XXI), Tucson, AZ, October, 2005
36. R. Tang, B. Neyenhuis, S. Bergeson, and D. Durfee, "An External Cavity Diode Laser with an Intracavity Faraday Isolator," Annual Meeting of the Optical Society of America, Symposium on Undergraduate Research (OSA/APS Laser Science XXI), Tucson, AZ, October, 2005
35. Christopher Erickson, Dallin Durfee, and Scott Bergeson, "High Temperature Calcium Vapor Cell for Absorption Spectroscopy on the Intercombination Line," DAMOP (APS), Lincoln, NE, May 1721 (2005)
34. Chris Erickson, Brian Neyenhuis, Justin Paul, Greg Doermann, Scott Bergeson, Dallin Durfee, "Design and Construction of a Ca/Sr Atom Interferometer," DAMOP (APS), Lincoln, NE, May 1721 (2005)
33. Jared Daily, Ralf Gommers, Elizabeth Cummings, Dallin Durfee, Scott Bergeson, "Two-photon photo-ionization of the Ca $4s3d^1D_2$ level in an optical dipole trap," DAMOP (APS), Lincoln, NE, May 1721 (2005)
32. Jay Eyring, Justin Peatross, and Scott Bergeson, "How to screw up your relative intensity measurement," DAMOP (APS), Lincoln, NE, May 1721 (2005)
31. Tyler Weeks, Mike Johnson, Matt Harrison, Scott Bergeson, Alexander Shevelko, "Absolute soft x-ray calibration of laser produced plasmas using a focusing crystal von Hamos spectrometer," DAMOP (APS), Lincoln, NE, May 1721 (2005)
30. E. Cummings, J. Daily, D. Durfee, and S. D. Bergeson, "Optical detection of ultracold neutral calcium plasmas," DAMOP (APS), Tucson, AZ, May 25-29 (2004), Bull. Am. Phys. Soc., Vol. 49, No. 3, p. 50, May, 2004
29. J. Daily, E. Cummings, D. Durfee, and S. D. Bergeson, "1-dimensional calcium FORT", DAMOP (APS), Tucson, AZ, May 25-29 (2004), Bull. Am. Phys. Soc., Vol. 49, No. 3, p. 59, May, 2004
28. C. Erickson, R. Olson, B. Neyenhuis, S. D. Bergeson, and D. Durfee, "Progress towards a diode laser resonant with the 657 nm calcium intercombination line with Hertz-level stability," DAMOP (APS), Tucson, AZ, May 25-29 (2004), Bull. Am. Phys. Soc., Vol. 49, No. 3, p. 112, May 2004
27. D. Durfee, R. Merrill, R. Olson, S. D. Bergeson, "Improving the output of a Littman-Metcalf diode laser using an intra-cavity Faraday-effect isolator," DAMOP (APS), Tucson, AZ, May 25-29 (2004), Bull. Am. Phys. Soc., Vol. 49, No. 3, p. 133, May, 2004
26. R. Merrill, R. Olson, D. Durfee, and S. Bergeson, "A new scheme for diode laser stabilization," DAMOP (APS), Boulder, CO, May 21-24 (2003)
25. J. Hart, R. Spencer, D. Durfee, and S. Bergeson, "Electron Temperatures in Ultracold Plasmas," DAMOP (APS), Boulder, CO, May 21-24 (2003)
24. B. McLaughlin, J. Daily, D. Durfee, and S. Bergeson, "How to build your own green laser," DAMOP (APS), Boulder, CO, May 21-24 (2003)
23. R. Merrill, R. Olson, D. Durfee, S. Bergeson, "A new scheme for external-cavity diode laser stabilization," APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)
22. M. Cannon, N. Eyring, S. Bergeson, and D. Durfee, "Current driver and optical coatings for frequency-stabilized laser diodes," APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)
21. B. McLaughlin, J. Daily, S. Bergeson and D. Durfee, "A high power diode pumped cw green laser," APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)

20. B. Cummings, J. Hopper, D. Durfee, and S. Bergeson, "Absorptive imaging of laser-cooled calcium atoms " APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)
19. J. Hart, S. Bergeson, and R. Spencer, "Simulations of ultracold plasmas," APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)
18. Z. Yasin, R. Spencer, and S. Bergeson, "Modeling of ultracold plasma expansion," APS 4-Corners Meeting, Salt Lake City, UT, October 4-5 (2002)
17. E. A. Cummings, M. S. Hicken, and S. D. Bergeson, "A 1 Watt inductance-seeded Ti:sapphire laser," DAMOP (APS), Williamsburg, VA, May 29-June 1 (2002)
16. A. Ludlow, H. M. Nelson, and S. D. Bergeson, "Two-photon absorption in potassium niobate," OSA Annual Meeting, Long Beach, CA, October 14-18 (2001)
15. S. D. Bergeson, "Progress towards cold, dense calcium plasmas," OSA Annual Meeting, Long Beach, CA, October 14-18 (2001)
14. K. A. Jensen, R. J. Larson, S. D. Bergeson, "Feedback control of a laser pointing device," OSA Annual Meeting, Long Beach, CA, October 14-18 (2001)
13. S. D. Bergeson, A. Ludlow, and H. M. Nelson, "Thermal self-locking in cw second harmonic generation," OSA Annual Meeting, Providence, RI, October 22-26 (2000)
12. S. D. Bergeson and H. Mark Nelson, "Ultracold calcium plasmas," OSA Annual Meeting, Providence, RI, October 22-26 (2000)
11. S. Bergeson, "500 nK in calcium: improving the optical frequency standard," DAMOP (APS), Storrs, CT, June 14-17 (2000)
10. S. D. Bergeson, "Experiments in highly excited ultracold calcium," Gordon Conference on Atomic Physics, Plymouth, NH, July 4-9, 1999
9. S. Bergeson, S. Kulin, C. Orzel, and S. Rolston, "An ultracold strongly coupled neutral plasma," APS 4-Corners Meeting, Provo, UT, October 16-17 (1998)
8. S. Bergeson, S. Kulin, C. Orzel, S. Rolston, "An ultracold strongly coupled neutral plasma," OSA annual meeting, Baltimore, MD, October 4-9 (1998)
7. Scott Bergeson, "Ultra-cold Plasma Physics at NIST," Fifth Annual Sigma Xi Postdoctoral Poster Presentations, NIST, Gaithersburg, MD, February (1998)
6. Scott D. Bergeson, Jesse Wen, and Thomas B. Lucatorto, "Doppler-free resonance ionization spectroscopy of the He $1s^2 \ ^1S - 1s2s \ ^1S$ transition at 120.3 nm," Fourth Annual Sigma Xi Postdoctoral Poster Presentations, NIST, Gaithersburg, MD, February (1997)
5. S. D. Bergeson, A. Balakrishnan, K. G. H. Baldwin, T. B. Lucatorto, J. P. Marangos, T. J. McIlrath, T. R. O'Brien, S. L. Rolston, and N. Vansteenkiste, "Doppler-free resonance ionization spectroscopy of the He $1s^2 \ ^1S - 1s2s \ ^1S$ transition at 120.3 nm," Eighth international symposium on Resonance Ionization Spectroscopy, AIP Conference Proceedings 338, June 30 - July 5 (1996)
4. S. D. Bergeson, H. Anderson, D. A. Doughty, and J. E. Lawler, "Measurement of the XeI 147 nm Resonance f-value," 47th Annual Gaseous Electronics Conference, Gaithersburg, Maryland, October 17-21 (1994)
3. J. E. Lawler, H. Anderson, S. D. Bergeson, and D. A. Doughty, "Radiation Trapping Simulations for the XeI 147 nm Resonance Line," 47th Annual Gaseous Electronics Conference, Gaithersburg, Maryland, October 17-21 (1994)
2. S. D. Bergeson and J. E. Lawler, "Advanced experimental techniques for measuring oscillator strengths of ultraviolet and vacuum ultraviolet transitions," ICAP 14, Boulder, CO, July 31 - August 5 (1994)

1. S. D. Bergeson and J. E. Lawler, "Oscillator Strengths of the Si II 181 nanometer Resonance Multiplet," 183rd Meeting of the American Astronomical Society, Washington, D. C., January (1994) [See also BAPS 25, No. 4, January 1994]

Plus a few dozen presentations at the Brigham Young University Annual Spring Research Conference

Student Mentoring

Undergraduate Students

Michael Amonson, Joel Allred, Aaron Astle, Levi Barnes, Alex Booth, Peter Bradford, LeAnn Brown, Matt Cannon, Miriam Conde, Beth Cummings, Jared Daily, Chris Erickson, N. Jay Eyring, William Farmer, Daniel Farrell, Brian Hansen, James Hart, Joe Hopper, Katie Jenson, Steve Kunz, Robert Larson, Sheng Lee, Chanelle Lockard, Andrew Ludlow, Angela Johnson Mains, Bonnie McLaughlin, Rebecca Merrill, Nathan Moody, Rebecca Olson, Colter Paulson, Jared Smith, Richard Sandberg, Jared Smith, George Walker, Eva Wilcox, Rosie Wilcox

Graduate Students

Beth Cummings, Jared Daily, Adam Denning, Malcolm Hicken, Mary Lyon, Ribekah Takahashi, Zafar Yasin

RET – High School Teachers

Don Bastian, Duane Bickmore, John Bromley, Lisa Covert, Rhomas Erekson, Mack Harden, Brad Talbert,

Funding

1. 1999 Research Innovations grant from the Research Corporation, \$34,900
2. 2000 National Science Foundation CAREER award \$525,311
3. 2004 Moxtex Laser Gift-in-Kind \$110,000
4. 2006 National Science Foundation \$421,625
5. 2009 University of Nevada–Reno \$13,521