

Curriculum Vitae of Austin Hoag

May 2, 2017

Professional Experience

- **06/2013 - present** – Graduate student researcher, Department of Physics, University of California, Davis
- 05/2012-08/2012 - Technical consultant, Vizio Medical Devices LLC, Lowell, MA 01852
- 06/2011-08/2011 – Undergraduate research assistant, Department of Physics and Astronomy, Colby College
- 03/2011-06/2011 – Undergraduate research assistant, Department of Atmospheric, Oceanic and Planetary Physics, Oxford University
- 05/2009-08/2009; 05/2010-08/2010 – Data analyst, VeruTEK Technologies, Inc., Bloomfield, CT 06002

Education

- **2012 - present** – Pursuing Ph.D. in Physics at University of California, Davis. Current GPA: **3.80**
- 2008 - 2012 – B.A. in Physics, *cum laude* at Colby College. Cumulative GPA: 3.81
- 2010 - 2011 – Visiting Student at St Anne's College, Oxford University

Fellowships and Awards

- NASA Earth and Space Science Fellowship, September 2014-August 2017 (3 yr fellowship; 6% success rate). \$30k / yr.
- UC Davis Graduate Student Travel Award, fall 2016. \$1500.
- UC Davis Graduate Student Researcher Award, summer 2014. \$9,123 / 3 months.
- Ray and Constance Chandler Fellowship, UC Davis, fall 2012. \$5k.

Technical Skills

- Computing: Python - (proficient, 4 years), Bash/csh - (proficient, 4 years), C - (interm.), Mathematica (interm.), Matlab (interm.)
- Other: LaTeX - (proficient, 5 years), HTML (interm.), Github (interm.)
- Operating systems: OS X, Linux

Peer-reviewed Publications

- **A. Hoag**, M. Bradač, M. Trenti, T. Treu, K. B. Schmidt, K.-H. Huang, B. C. Lemaux, J. He, S. R. Bernard, L. E. Abramsom, C. A. Mason, T. Morishita, L. Pentericci, T. Schrabback. *Spectroscopic Confirmation of an Ultra-Faint Galaxy at the Epoch of Reionization*. *Nature Astronomy*, Volume 1, id. 0091 (2017).
- **A. Hoag**, K.-H. Huang, T. Treu, M. Bradač, K. B. Schmidt, X. Wang, G. B. Brammer, A. Broussard, R. Amorin, M. Castellano, A. Fontana, E. Merlin, T. Schrabback, M. Trenti, B. Vulcani. *The Grism Lens-Amplified Survey from Space (GLASS). VI. Comparing the Mass and Light in MACSJ0416.1-2403 using Frontier Field imaging and GLASS spectroscopy*. *The Astrophysical Journal*, Volume 831, Issue 2, article id. 182, 20 pp. (2016)
- **A. Hoag**, M. Bradač, K. H. Huang, R. E. Ryan, K. Sharon, T. Schrabback, K. B. Schmidt, B. Cain, A. H. Gonzalez, H. Hildebrandt, J. Hinz, B. C. Lemaux, A. von der Linden, L. M. Lubin, T. Treu, D. Zaritsky. *RCS2 J232727.6-020437: An Efficient Cosmic Telescope at $z=0.6986$* . *The Astrophysical Journal*, Volume 813, Issue 1, article id. 37, 16 pp. (2015).
- X. Wang, **A. Hoag**, K.-H. Huang, T. Treu, M. Bradač, K. B. Schmidt, G. B. Brammer, B. Vulcani, T. A. Jones, R. E. Ryan, R. Amorn, M. Castellano, A. Fontana, E. Merlin, M. Trenti. *The Grism Lens-amplified Survey from Space (GLASS). IV. Mass Reconstruction of the Lensing Cluster Abell 2744 from Frontier Field Imaging and GLASS Spectroscopy*. *The Astrophysical Journal*, Volume 811, Issue 1, article id. 29, 26 pp. (2015).
- K. B. Schmidt, K. .H. Huang, T. Treu, **A. Hoag**, M. Bradač, A. Henry, T. A. Jones, C. Mason, M. Malkan, T. Morishita, L. Pentericci, M. Trenti, B. Vulcani, X. Wang. *The Grism Lens-Amplified Survey from Space (GLASS). XI. Detection of C iv in Multiple Images of the $z = 6.11$ Ly α Emitter behind RXC J2248.7-4431*. *The Astrophysical Journal*, Volume 839, Issue 1, article id. 17, 16 pp. (2017).
- K.-H. Huang, B. C. Lemaux, K. B. Schmidt, **A. Hoag**, M. Bradač, T. Treu, M. Dijkstra, A. Fontana, A. Henry, M. Malkan, C. A. Mason, T. Morishita, L. Pentericci, R. E. Ryan, M. Trenti, and X. Wang. *Detection of Lyman-alpha Emission from a Triply Imaged $z = 6.85$ Galaxy behind MACS J2129.4-0741*. *The Astrophysical Journal Letters*, Volume 823, Issue 1, article id. L14, 6 pp. (2016)
- K. B. Schmidt, T. Treu, M. Bradač, B. Vulcani, K.-H. Huang, **A. Hoag**, M. Maseda, L. Guaita, L. Pentericci, G. B. Brammer, M. Dijkstra, A. Dressler, A. Fontana, A. L. Henry, T. A. Jones, C. Mason, M. Trenti, X. Wang. *The Grism Lens-Amplified Survey from Space (GLASS). III. A Census of Ly α Emission at $z \gtrsim 7$ from HST Spectroscopy*. *The Astrophysical Journal*, Volume 818, Issue 1, article id. 38, 22 pp. (2016).

- M. Bradač, D. Garcia-Appadoo, K.-H. Huang, L. Vallini, E. Finney, **A. Hoag**, B. C. Lemaux, K. B. Schmidt, T. Treu, C. Carilli, M. Dijkstra, A. Ferrara, A. Fontana, T. Jones, R. Ryan, J. Wagg. *ALMA [CII] detection of a redshift 7 lensed galaxy behind RXJ1347.1-1145*. The Astrophysical Journal Letters, Volume 836, Issue 1, article id. L2, 5 pp. (2017).
- K.-H. Huang, M. Bradač, B. C. Lemaux, R. Ryan, **A. Hoag**, M. Castellano, R. Amorin, A. Fontana, G. B. Brammer, B. Cain, L. M. Lubin, E. Merlin, K. B. Schmidt, T. Schrabback, T. Treu, A. H. Gonzalez, A. von der Linden, R. I. Knight. *Spitzer Ultra Faint Survey Program (SURFS UP). II. IRAC-detected Lyman-Break Galaxies at $6 \lesssim z \lesssim 10$ behind Strong-lensing Clusters*. The Astrophysical Journal, Volume 817, Issue 1, article id. 11, 22 pp. (2016)
- B. Vulcani, T. Treu, K. B. Schmidt, T. Morishita, A. Dressler, B. M. Poggianti, L. Abramson, M. Bradač, G. B. Brammer, **A. Hoag**, M. Malkan, L. Pentericci, M. Trenti. *The Grism Lens-Amplified Survey from Space (GLASS). VII. The Diversity of the Distribution of Star Formation in Cluster and Field Galaxies at 0.3 less than or equal to z less than or equal to 0.7*. The Astrophysical Journal, Volume 833, Issue 2, article id. 178, 23 pp. (2016)
- B. Vulcani, T. Treu, C. Nipoti, K. B. Schmidt, A. Dressler, T. Morishita, B. M. Poggianti, M. Malkan, **A. Hoag**, M. Bradač, L. Abramson, M. Trenti, L. Pentericci, A. von der Linden, G. Morris, X. Wang. *The Grism lens-amplified survey from space (GLASS). VIII. The influence of the cluster properties on H-alpha emitter galaxies at $0.3 < z < 0.7$* . Submitted to the Astrophysical Journal. <http://adsabs.harvard.edu/abs/2016arXiv161004615V>
- C. A. Mason, T. Treu, A. Fontana, T. Jones, T. Morishita, R. Amorin, M. Bradač, E. Finney, A. Henry, **A. Hoag**, K.-H. Huang, K. B. Schmidt, M. Trenti, and B. Vulcani. *First Results from the KMOS Lens-Amplified Spectroscopic Survey (KLASS) Kinematics of Lensed Galaxies at Cosmic Noon*. Submitted to ApJ, October 2016. ArXiv: <https://arxiv.org/abs/1610.03075>.
- T. Morishita, L. E. Abramson, T. Treu, B. Vulcani, K. B. Schmidt, A. Dressler, B. M. Poggianti, M. A. Malkan, X. Wang, K.-H. Huang, M. Trenti, M. Bradač, and **A. Hoag**. *The Grism Lens-Amplified Survey from Space (GLASS). IX. The dual origin of low-mass cluster galaxies as revealed by new structural analyses*. Submitted to ApJ, July 2016. ArXiv: <http://arxiv.org/abs/1607.00384>
- M. Meneghetti, P. Natarajan, D. Coe, E. Contini, G. De Lucia, C. Giocoli, A. Acebron, S. Borgani, M. Bradač, J. M. Diego, **A. Hoag**, M. Ishigaki, T. L. Johnson, E. Jullo, R. Kawamata, D. Lam, M. Limousin, J. Liesenborgs, M. Oguri, K. Sebesta, K. Sharon, L. L. R. Williams, and A. Zitrin. *The Frontier Fields Lens Modeling Comparison Project*. Submitted to MNRAS, June 2016. ArXiv: <http://arxiv.org/abs/1606.04548>

- T. Treu, G. Brammer, J. M. Diego, C. Grillo, P. L. Kelly, M. Oguri, S. A. Rodney, P. Rosati, K. Sharon, A. Zitrin, I. Balestra, M. Bradač, T. Broadhurst, G. B. Caminha, A. Halkola, **A. Hoag**, M. Ishigaki, T. L. Johnson, W. Karman, R. Kawamata, A. Mercurio, K. B. Schmidt, L.-G. Strolger, S. H. Suyu, A. V. Filippenko, R. J. Foley, S. W. Jha, and B. Patel. “*Refsdal*” Meets Popper: Comparing Predictions of the Re-appearance of the Multiply Imaged Supernova Behind MACSJ1149.5+2223. *The Astrophysical Journal*, Volume 817, Issue 1, article id. 60, 25 pp. (2016)
- B. Vulcani, T. Treu, K. B. Schmidt, B. M. Poggianti, A. Dressler, A. Fontana, M. Bradač, G. B. Brammer, **A. Hoag**, K.-H. Huang, M. Malkan, L. Pentericci, M. Trenti, A. von der Linden, L. Abramson, J. He, and G. Morris. *The Grism Lens-Amplified Survey from Space (Glass). V. Extent and Spatial Distribution of Star Formation in $z \sim 0.5$ Cluster Galaxies*. *The Astrophysical Journal*, Volume 814, Issue 2, article id. 161, 19 pp. (2015)
- T. Treu, K. B. Schmidt, G. B. Brammer, B. Vulcani, X. Wang, M. Bradač, M. Dijkstra, A. Dressler, A. Fontana, R. Gavazzi, A. L. Henry, **A. Hoag**, K.-H. Huang, T. A. Jones, P. L. Kelly, M. A. Malkan, C. A. Mason, L. Pentericci, B. Poggianti, M. Stiavelli, M. Trenti, and A. von der Linden. *The Grism Lens-Amplified Survey from Space (GLASS). I. Survey Overview and First Data Release*. *The Astrophysical Journal*, Volume 812, Issue 2, article id. 114, 21 pp. (2015)
- S. A. Rodney, B. Patel, D. Scolnic, R. J. Foley, A. Molino, G. Brammer, M. Jauzac, M. Bradač, T. Broadhurst, D. Coe, J. M. Diego, O. Graur, J. Hjorth, **A. Hoag**, S. W. Jha, T. L. Johnson, P. Kelly, D. Lam, C. McCully, E. Medezinski, M. Meneghetti, J. Merten, J. Richard, A. Riess, K. Sharon, L.-G. Strolger, T. Treu, X. Wang, L. L. R. Williams, A. Zitrin. *Illuminating a Dark Lens : A Type Ia Supernova Magnified by the Frontier Fields Galaxy Cluster Abell 2744*. *The Astrophysical Journal*, Volume 811, Issue 1, article id. 70, 19 pp. (2015)
- K. B. Schmidt, T. Treu, G. B. Brammer, M. Bradač, X. Wang, M. Dijkstra, A. Dressler, A. Fontana, R. Gavazzi, A. L. Henry, **A. Hoag**, T. A. Jones, P. L. Kelly, M. A. Malkan, C. A. Mason, L. Pentericci, B., Poggianti, M. Stiavelli, M. Trenti, A. von der Linden, and B. Vulcani. *Through the Looking GLASS: HST Spectroscopy of Faint Galaxies Lensed by the Frontier Fields Cluster MACSJ0717.5+3745*. *The Astrophysical Journal Letters*, Volume 782, Issue 2, article id. L36, 8 pp. (2014)

Invited Talks

- Colby College Physics and Astronomy Seminar - Waterville, Maine, November, 2016

- Strong Gravitational Lensing by Galaxies and Clusters (Upcoming Conference) - Aosta, Italy - June, 2017