

Benjamin POPE

NASA SAGAN FELLOW

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EDUCATION AND PREVIOUS POSITIONS

2017	Postdoctoral Research Associate, University of Sydney Advisor: Prof. Peter TUTHILL
2013-2017	Doctor of Philosophy in ASTROPHYSICS, University of Oxford Thesis: “Observing Bright Stars and their Planets from the Earth and from Space” Balliol College Supervisors: Prof. Suzanne AIGRAIN, Prof. Patrick ROCHE
2013-14	Master of Science in ASTROPHYSICS, University of Sydney Thesis: “Vision and Revision: Wavefront Sensing from the Image Domain” Supervisor: Prof. Peter TUTHILL
2012	Bachelor of Science (Advanced) with Honours in PHYSICS, University of Sydney <i>First Class Honours, with the University Medal</i> Thesis: “Dancing in the Dark: Kernel Phase Interferometry of Ultracool Dwarfs” Supervisors: Prof. Peter TUTHILL, Dr. Frantz MARTINACHE

SELECTED REFEREED PUBLICATIONS

12. *Exoplanet Transits with Next-Generation Radio Telescopes*. **Benjamin J. S. Pope**, Paul Withers, Joseph R. Callingham, and Marissa F. Vogt. Accepted, MNRAS. arXiv: [1810.11493](https://arxiv.org/abs/1810.11493).
11. *Anisotropic winds in Wolf-Rayet colliding-wind binary identify potential gamma-ray burst progenitor*. J. R. Callingham, P. G. Tuthill, **B. J. S. Pope** et al. *Nature Astronomy*, 2018. <https://doi.org/10.1038/s41550-018-0617-7>
10. *Aldebaran b’s temperate past uncovered in planet search data*. Farr, Will M., **Pope, Benjamin J. S.** et al. ApJL Volume 865, Issue 2, article id. L20, 12 pp. (2018)
9. *Beyond the Kepler/K2 bright limit: variability in the seven brightest members of the Pleiades*. White, T. R.; **Pope, B. J. S.** et al. MNRAS (2017). 11 citations.
8. *Anchoring historical sequences using a new source of astro-chronological tie-points*. Michael Dee, **Benjamin Pope**. Proc. R. Soc. A 20160263 (2016). <http://dx.doi.org/10.1098/rspa.160263>. 7 citations.
7. *Kernel Phase and Kernel Amplitude in Fizeau imaging*. **Benjamin Pope**. MNRAS (2016). 2 citations.
6. *Transiting exoplanet candidates from K2 Campaigns 5 and 6*. **Benjamin Pope**, Hannu Parviainen, Suzanne Aigrain. MNRAS, Volume 461, Issue 4, p.3399-3409 (2016). 33 citations.
5. *K2SC: Flexible systematics correction and detrending of K2 light curves using Gaussian Process regression*. Suzanne Aigrain, Hannu Parviainen, **Benjamin Pope**. MNRAS, 2016. 78 citations.

4. *The Palomar Kernel Phase Experiment: Testing Kernel Phase Interferometry for Ground-based Astronomical Observations.* **Benjamin Pope**, Peter Tuthill, Sasha Hinkley, Michael J. Ireland, Alexandra Greenbaum, Alexey Latyshev, John D. Monnier, Frantz Martinache. MNRAS, Volume 455, Issue 2, p.1647-1653 (2015). 5 citations.
3. *Photometry of Very Bright Stars with Kepler and K2 Smear Data.* **Benjamin Pope**, Timothy White, Daniel Huber, Simon Murphy, Tim Bedding, Douglas Caldwell, Aleksa Sarai, Suzanne Aigrain, Thomas Barclay. MNRAS Letters, Volume 455, Issue 1, p.L36-L40 (2015). 13 citations.
2. *A Demonstration of Wavefront Sensing from the Image Domain.* **Benjamin Pope**, Nick Cvetojevic, Anthony Cheetham, Frantz Martinache, Barnaby Norris, Peter Tuthill. MNRAS, Volume 440, Issue 1, p.125-133 (2014). 21 citations.
1. *Dancing In The Dark: New Brown Dwarf Binaries From Kernel Phase Interferometry.* **Benjamin Pope**, Frantz Martinache, Peter Tuthill. ApJ, V. 767, Issue 2, article id. 110, 14 (2013). 24 citations.

OTHER REFEREED PUBLICATIONS

5. *Asteroseismology of the Hyades red giant and planet host ϵ Tau.* T. Arentoft et al. Accepted to Astronomy & Astrophysics.
4. *Testing stellar evolution models with the retired A star HD 185351.* Hjørringgaard, J. G.; Silva Aguirre, V.; White, T. R.; Huber, D.; **Pope, B. J. S.**; Casagrande, L.; Justesen, A. B.; Christensen-Dalsgaard, J. MNRAS 2016.
3. *Supernovae and Single-Year Anomalies in the Atmospheric Radiocarbon Record.* Michael Dee, **Benjamin Pope**, Daniel Miles, Sturt Manning and Fusa Miyake. Radiocarbon, Available on CJO 2016. doi:10.1017/RDC.2016.50
2. *HII 2407: A Low-Mass Eclipsing Binary Revealed by K2 Observations of the Pleiades,* Trevor J. David, John Stauffer, Lynne A. Hillenbrand, Ann Marie Cody, Kyle Conroy, Keivan G. Stassun, **Benjamin Pope**, Suzanne Aigrain, Ed Gillen, Andrew Collier Cameron, David Barrado, L.M. Rebull, Howard Isaacson, Geoffrey W. Marcy, Celia Zhang, Reed L. Riddle, Carl Ziegler, Nicholas M. Law, Christoph Baranec. ApJ, 2015.
1. *Interferometric radii of bright Kepler stars with the CHARA Array: θ Cygni and 16 Cygni A and B,* White, T. R.; Huber, D.; Maestro, V.; Bedding, T. R.; Ireland, M. J.; Baron, F.; Boyajian, T. S.; Che, X.; Monnier, J. D.; **Pope, B. J. S.**; Roettenbacher, R. M.; Stello, D.; Tuthill, P. G.; Farrington, C. D.; Goldfinger, P. J.; McAlister, H. A.; Schaefer, G. H.; Sturmann, J.; Sturmann, L.; ten Brummelaar, T. A.; Turner, N. H. MNRAS, 2013.
0. *Spatial dispersion in three-dimensional drawn magnetic metamaterials,* Alessandro Tuniz, **Benjamin Pope**, Anna Wang, Maryanne C. J. Large, Shaghik Atakaramians, Seong-Sik Min, Elise M. Pogson, Roger A. Lewis, Avi Bendavid, Alexander Argyros, Simon C. Fleming, and Boris T. Kuhlmeiy. Opt. Express 20, 11924-11935 (2012)

OTHER PUBLICATIONS

7. *Magneto-Asteroseismic Study of ι Lib.* B. Buysschaert, C. Neiner, C. Aerts, T. R. White and **B. J. S. Pope**. Proceedings SF2A 2018.
6. *The TOLIMAN space telescope.* Peter Tuthill et al. SPIE 2018.
5. *Non-redundant masking ideas on JWST,* Sivaramakrishnan, Anand; Cheetham, Anthony; Greenbaum, Alexandra Z.; Tuthill, Peter G.; Acton, D. Scott; **Pope, Benjamin**; Martinache, Frantz; Thatte, Deepashri; Nelan, Edmund P. Proceedings of the SPIE, Volume 9143, id. 91433S 8 pp. 2014.

4. *Wavefront sensing from the image domain with the Oxford-SWIFT integral field spectrograph*, **Benjamin Pope**, Niranjana Thatte, Rick Burruss, Matthias Tecza, Fraser Clarke, Garret Cotter, SPIE Astronomical Telescopes and Instrumentation Proceedings, 2014.
3. *Spatial dispersion management in three-dimensional drawn magnetic metamaterials*, A. Tuniz et al. in CLEO: QELS-Fundamental Science, OSA Technical Digest (Optical Society of America, 2012), paper QTu3F.2.
2. *Photonic Technologies for a Pupil Remapping Interferometer*. Tuthill, Peter; Jovanovic, Nemanja; Lacour, Sylvestre; Lehmann, Andrew; Ams, Martin; Marshall, Graham; Lawrence, Jon; Withford, Michael; Robertson, Gordon; Ireland, Michael; **Pope, Benjamin**; Stewart, Paul. Proceedings of the SPIE, Volume 7734, id. 77341P (2010)
1. *PIMMS: Photonic Integrated Multimode Microspectrograph* (Proceedings Paper). Joss Bland-Hawthorn; Jon Lawrence; Gordon Robertson; Sam Campbell; **Ben Pope**; Chris Betters; Sergio Leon-Saval; Tim Birks; Roger Haynes; Nick Cvetojevic; Nem Jovanovic SPIE Proceedings Vol. 7735. Ground-based and Airborne Instrumentation for Astronomy III, Ian S. McLean; Suzanne K. Ramsay; Hideki Takami, Editors, 77350N

SELECTED SCIENTIFIC TALKS

NOVEMBER 2018	MIT PICS Seminar.
NOVEMBER 2018	Harvard-Smithsonian CfA Stars Seminar.
JUNE 2018	Dunlap Institute Seminar, Toronto.
JANUARY 2018	NASA ExoPAG Invited Panel Speaker, <i>TESS and JWST</i> , AAS 2018.
NOVEMBER 2017	Sagan Fellows Symposium.
NOVEMBER 2016	Cambridge Exoplanet Group Seminar. <i>Transiting Planets and Asteroseismology of the Brightest Stars in Kepler and K2</i> .
NOVEMBER 2016	University of Bern, ETH Zurich, Observatory of Geneva. <i>Transiting Planets and Asteroseismology of the Brightest Stars in Kepler and K2</i> .
JULY 2016	Astronomical Society of Australia Annual Scientific Meeting, <i>Asteroseismology of the Brightest Stars in Kepler and K2</i> .
JUNE 2016	Aarhus University SAC Seminar, <i>Transiting Planets in K2 and Asteroseismology of Kepler's Brightest Stars</i> .
DECEMBER 2015	University of Birmingham Seminar, <i>Pushing the Limits of K2: Gaussian Process Systematics Correction and a Kepler/K2 Saturated Star Survey</i> .
JULY 2015	STSci Seminar, <i>The Palomar Kernel Phase Experiment</i> .
JULY 2015	UK National Astronomy Meeting, <i>Systematics Correction and Cluster Science with K2</i> .
MARCH 2015	UK Exoplanet Community Meeting, Warwick. <i>The Palomar Kernel Phase Experiment</i> .
AUGUST 2014, 2015	University of Sydney, Bayesian Reasoning Honours course, guest lecture. <i>Gaussian Processes for the General Practitioner</i> .
JULY 2014	SPIE Astronomical Telescopes and Instrumentation, <i>Vision and Revision: Wavefront Sensing from the Image Domain</i> .
DECEMBER 2013	MaxEnt 2013, <i>Bayesian Model Fitting in Optical Imaging and Interferometry</i> .
AUGUST 2013	University of Sydney, Bayesian Reasoning Honours course, guest lecture. <i>Introducing Affine Invariant Ensemble MCMC</i> .
JULY 2013	Astronomical Society of Australia Annual Scientific Meeting. BOK LECTURE: <i>Dancing in the Dark: Kernel Phase Interferometry of Ultracool Dwarfs</i> .

TEACHING

2014-2016	Tutor in Physics, Hertford College, Oxford Tutor in General Relativity and Cosmology.
2013	Optics Demonstrator, University of Oxford, Department of Physics Lab demonstrator for first and second year experimental optics.
2012-2013	Workshop and Lab Tutor, University of Sydney, School of Physics
2009-2013	Demonstrator, Kickstart Physics, University of Sydney, School of Physics

SCHOLARSHIPS AND PRIZES

BBC	WINNING UNIVERSITY CHALLENGE TEAM
Santander Universidades	SANTANDER SUMMER SCHOOL SCHOLARSHIP
University of Oxford	CLARENDON SCHOLARSHIP
Balliol College, Oxford	JOWETT SCHOLARSHIP
Astronomical Society of Australia	BOK PRIZE
University of Sydney	VICE-CHANCELLOR'S RESEARCH AWARD
	UNIVERSITY MEDAL
	SHIROKI PRIZE FOR PHYSICS
	HENRY CHAMBERLAIN RUSSELL PRIZE FOR ASTRONOMY
	DEAN'S HONOURS LIST