Peter R. Williams

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Education

University of California, Los Angeles, Los Angeles, California — Expected June 2021
Ph.D. candidate in Astronomy & Astrophysics
Advisor: Tommaso Treu

University of California, Los Angeles, Los Angeles, California — June 2017
M.S. in Astronomy
Advisor: Tommaso Treu

University of Southern California, Los Angeles, California — May 2015
B.S. in Physics, B.A. in Mathematics, Minor in Astronomy, *magna cum laude*

Awards and Honors

Dissertation Year Fellowship, *UCLA*	2020 – 2021
Michael and Gretchen Kriss Teaching Assistant Award, *UCLA*	2016
Provost's Undergraduate Research Fellowship, *USC*	2014 – 2015
Department of Physics & Astronomy Charles Lick Scholarship, *USC*	2014
Phi Beta Kappa Honor Society, *USC*	2014

Publications

First author/major contribution

1. **P. R. Williams**, T. Treu, H. Dahle, et al., "The black hole mass of the $z = 2.805$ multiply imaged quasar SDSS J2222+2745 from velocity-resolved time lags of the C IV emission line," 2020, *submitted to ApJ*, *arXiv:2011.02007*
2. **P. R. Williams**, A. Pancoast, T. Treu, et al., "Space Telescope and Optical Reverberation Mapping Project. XII. Broad-line Region Modeling of NGC 5548," 2020, *ApJ, 902, 74*
3. S. W. Mangham, C. Knigge, **P. R. Williams**, et al., "Do reverberation mapping analyses provide an accurate picture of the broad-line region?" 2019, *MNRAS, 488, 2780-2799*
4. **P. R. Williams**, A. Pancoast, T. Treu, et al., "The Lick AGN Monitoring Project 2011: Dynamical Modeling of the Broad-line Region," 2018, *ApJ, 866, 75*
5. **P. R. Williams**, A. Agnello, T. Treu, "Discovery of three strongly lensed quasars in the Sloan Digital Sky Survey," 2018, *MNRAS Letters, 477, L70-L74*
6. **P. R. Williams**, A. Agnello, T. Treu, "Population mixtures and searches of lensed and extended quasars across photometric surveys," 2017, *MNRAS, 466, 3088-3102*

Co-author

1. A. J. Shajib, E. Molina, A. Agnello, **P. R. Williams**, et al., "High-resolution imaging follow-up of doubly imaged quasars," 2020, *submitted to MNRAS*, *arXiv:2011.01971*
2. S. I. Raimundo, M. Vestergaard, M. R. Goad, C. J. Grier, **P. R. Williams**, et al., "Modelling the AGN broad line region using single-epoch spectra II. Nearby AGNs," 2020, *MNRAS, 493, 1227-1248*

3. M. Millon, F. Courbin, B. Bonvin, et al., (incl. **P. R. Williams**), "TDCOSMO II: 6 new time delays in lensed quasars from high-cadence monitoring at the MPIA 2.2m telescope," 2020, *Astronomy & Astrophysics, 642, A193*

4. V. Bonvin, M. Millon, J. H.-H. Chan, et al., (incl. **P. R. Williams**), "COSMOGRAIL. XVIII. time delays of the quadruply lensed quasar WFI2033-4723," 2019, *Astronomy & Astrophysics, 629, A97*

5. V. Bonvin, J. H.-H. Chan, M. Millon, et al., (incl. **P. R. Williams**), "COSMOGRAIL. XVII. Time delays for the quadruply imaged quasar PG 1115+080," 2018, *Astronomy & Astrophysics, 616, A183*

6. F. Courbin, V. Bonvin, E. Buckley-Geer, et al., (incl. **P. R. Williams**), "COSMOGRAIL: the COSmological MOnitoring of GRAvItational Lenses. XVI. Time delays for the quadruply imaged quasar DES J0408-5354 with high-cadence photometric monitoring," 2018, *Astronomy & Astrophysics, 609, A71*

7. C. D. Kilpatrick, R. J. Foley, L. E. Abramson, et al., (incl. **P. R. Williams**), "On the progenitor of the Type IIb supernova 2016gkg," 2017, *MNRAS, 465, 4650-4657*

8. C. D. Kilpatrick, M. R. Siebert, R. J. Foley, et al., (incl. **P. R. Williams**), "Progenitor Candidate for SN 2016gkg in NGC 613," 2016, *ATel 9536*

Conferences and Seminars

Mapping Central Regions of Active Galactic Nuclei, Guilin, China	September 2019
Department of Astrophysics Seminar, Shanghai Jiao Tong University, Shanghai, China	September 2019
Quasar Tea, Harvard-Smithsonian Center for Astrophysics	July 2018
AGN Winds on the Georgia Coast, Jekyll Island, Georgia, USA	June 2017
Statistical Challenges in Modern Astronomy VI, Carnegie Mellon University (Poster)	June 2016

Observing experience

KAST, Shane Telescope, Lick Observatory, 17 nights	2016 – 2020
LRIS, Keck II, Keck Observatory, 2 nights	2019
KCWI, Keck II, Keck Observatory, 1 night	2018
MPG/ESO 2.2m, La Silla Observatory, 16 nights	2017 – 2018
OSIRIS, Keck II, Keck Observatory, 1 night	2016
ESI, Keck I, Keck Observatory, 2 nights	2016
NIRC2, Keck II, Keck Observatory, 3 nights	2016

Technical skills

Python, C++, cluster computing, IRAF/PyRAF, DS9, SQL, Mathematica, LaTeX, Javascript, HTML/CSS

Teaching experience

Teaching Assistant, Department of Physics & Astronomy, UCLA

Astronomy 3: General astronomy lab for undergraduates	Fall 2015, Spring 2016
Astronomy 6: Cosmology course for undergraduates	Winter 2016
Physics 12: Physics of sustainable energy course for undergraduates	Winter 2019

Outreach

UCLA Planetarium Coordinator	June 2017 – Present
Planetarium lectures to the general public and school groups	∼6/year, 2015 – Present
Exploring Your Universe, UCLA, volunteer	Fall quarter, 2015 – Present