

# Philip S. Cowperthwaite

Publications

Updated Oct 29, 2019. The most recent version of this list may be found online at <http://pscastro.com>. ADS citation counts are shown in square brackets. I am an author on 51 publications (9 as first author), my *h*-index is 26 and my publications have 3897 citations.

## Publication List

51. EA Huerta, G Allen, I Andreoni, ..., **PS Cowperthwaite**, & et al. “*Enabling real-time multi-messenger astrophysics discoveries with deep learning.*” 2019, [Nature Reviews Physics](#) **1** 600-608 [6].
50. A Hajela, R Margutti, KD Alexander, ..., **PS Cowperthwaite**, & et al. “*Two years of non-thermal emission from the binary neutron star merger GW170817: rapid fading of the jet afterglow and first constraints on the kilonova fastest ejecta.*” 2019, ? [2].
49. W Fong, PK Blanchard, KD Alexander, ..., **PS Cowperthwaite**, & et al. “*The Optical Afterglow of GW170817: An Off-axis Structured Jet and Deep Constraints on a Globular Cluster Origin.*” 2019, [ApJL](#) **883** L1 [5].
48. S Gomez, G Hosseinzadeh, **PS Cowperthwaite**, & et al. “*A Galaxy-Targeted Search for the Optical Counterpart of the Candidate NS-BH Merger S190814bv with Magellan.*” 2019, [ApJL](#) **884** L55.
47. S Gomez, E Berger, M Nicholl, ..., **PS Cowperthwaite**, & et al. “*SN 2016iet: The Pulsational or Pair Instability Explosion of a Low-metallicity Massive CO Core Embedded in a Dense Hydrogen-poor Circumstellar Medium.*” 2019, [ApJ](#) **881** 87 [2].
46. G Hosseinzadeh, **PS Cowperthwaite**, S Gomez, & et al. “*Follow-up of the Neutron Star Bearing Gravitational-wave Candidate Events S190425z and S190426c with MMT and SOAR.*” 2019, [ApJL](#) **880** L4 [6].
45. I Andreoni, S Anand, FB Bianco, ..., **PS Cowperthwaite**, & et al. “*A Strategy for LSST to Unveil a Population of Kilonovae without Gravitational-wave Triggers.*” 2019, [PASP](#) **131** 068004 [7].
44. FB Bianco, MR Drout, ML Graham, ..., **PS Cowperthwaite**, & et al. “*Presto-Color: A Photometric Survey Cadence for Explosive Physics and Fast Transients.*” 2019, [PASP](#) **131** 068002 [2].
43. D Milisavljevic, R Margutti, R Chornock, ..., **PS Cowperthwaite**, & et al. “*Achieving Transformative Understanding of Extreme Stellar Explosions with ELT-enabled Late-time Spectroscopy.*” 2019, [BAAS](#) **51** 481.
42. **PS Cowperthwaite**, HY Chen, B Margalit, & et al. “*Joint Gravitational Wave and Electromagnetic Astronomy with LIGO and LSST in the 2020’s.*” 2019, [BAAS](#) **51** 361.
41. J Rho, D Milisavljevic, A Sarangi, ..., **PS Cowperthwaite**, & et al. “*Are Supernovae the Dust Producer in the Early Universe?.*” 2019, [BAAS](#) **51** 351.
40. M Graham, D Milisavljevic, A Rest, ..., **PS Cowperthwaite**, & et al. “*Discovery Frontiers of Explosive Transients: An ELT and LSST Perspective.*” 2019, [BAAS](#) **51** 339.
39. R Foley, KD Alexander, I Andreoni, ..., **PS Cowperthwaite**, & et al. “*Gravity and Light: Combining Gravitational Wave and Electromagnetic Observations in the 2020s.*” 2019, [BAAS](#) **51** 295 [1].
38. R Chornock, **PS Cowperthwaite**, R Margutti, & et al. “*Multi-Messenger Astronomy with Extremely Large Telescopes.*” 2019, [BAAS](#) **51** 237 [1].
37. M Soares-Santos, A Palmese, W Hartley, ..., **PS Cowperthwaite**, & et al. “*First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary Black-hole Merger GW170814.*” 2019, [ApJL](#) **876** L7 [27].

36. **PS Cowperthwaite**, VA Villar, DM Scolnic, E Berger, & et al. “*LSST Target-of-opportunity Observations of Gravitational-wave Events: Essential and Efficient.*” 2019, [ApJ 874 88](#) [11].
35. Z Doctor, R Kessler, K Herner, . . . , **PS Cowperthwaite**, & et al. “*A Search for Optical Emission from Binary Black Hole Merger GW170814 with the Dark Energy Camera.*” 2019, [ApJL 873 L24](#) [7].
34. A Ginsburg, BM Sipőcz, CE Brasseur, **PS Cowperthwaite**, & et al. “*astroquery: An Astronomical Web-querying Package in Python.*” 2019, [AJ 157 98](#) [6].
33. R Margutti, **P Cowperthwaite**, Z Doctor, & et al. “*Target of Opportunity Observations of Gravitational Wave Events with LSST.*” 2018, ? [4].
32. KD Alexander, R Margutti, PK Blanchard, . . . , **PS Cowperthwaite**, & et al. “*A Decline in the X-Ray through Radio Emission from GW170817 Continues to Support an Off-axis Structured Jet.*” 2018, [ApJ 863 L18](#) [75].
31. VA Villar, **PS Cowperthwaite**, E Berger, & et al. “*Spitzer Space Telescope Infrared Observations of the Binary Neutron Star Merger GW170817.*” 2018, [ApJ 862 L11](#) [12].
30. J Guillochon, **PS Cowperthwaite**, & et al. “*Open Astronomy Catalogs API.*” 2018, [Research Notes of the American Astronomical Society 2 27](#) [2].
29. **PS Cowperthwaite**, E Berger, A Rest, & et al. “*An Empirical Study of Contamination in Deep, Rapid, and Wide-field Optical Follow-up of Gravitational Wave Events.*” 2018, [ApJ 858 18](#) [7].
28. R Margutti, KD Alexander, X Xie, . . . , **PS Cowperthwaite**, & et al. “*The Binary Neutron Star Event LIGO/Virgo GW170817 160 Days after Merger: Synchrotron Emission across the Electromagnetic Spectrum.*” 2018, [ApJ 856 L18](#) [149].
27. M Cantiello, JB Jensen, JP Blakeslee, . . . , **PS Cowperthwaite**, & et al. “*A Precise Distance to the Host Galaxy of the Binary Neutron Star Merger GW170817 Using Surface Brightness Fluctuations.*” 2018, [ApJ 854 L31](#) [42].
26. D Scolnic, R Kessler, D Brout, **PS Cowperthwaite**, & et al. “*How Many Kilonovae Can Be Found in Past, Present, and Future Survey Data Sets?.*” 2018, [ApJ 852 L3](#) [27].
25. VA Villar, J Guillochon, E Berger, . . . , **PS Cowperthwaite**, & et al. “*The Combined Ultraviolet, Optical, and Near-infrared Light Curves of the Kilonova Associated with the Binary Neutron Star Merger GW170817: Unified Data Set, Analytic Models, and Physical Implications.*” 2017, [ApJL 851 L21](#) [134].
24. C Guidorzi, R Margutti, D Brout, . . . , **PS Cowperthwaite**, & et al. “*Improved Constraints on  $H_0$  from a Combined Analysis of Gravitational-wave and Electromagnetic Emission from GW170817.*” 2017, [ApJ 851 L36](#) [46].
23. BP Abbott, R Abbott, TD Abbott, . . . , **PS Cowperthwaite**, & et al. “*A gravitational-wave standard siren measurement of the Hubble constant.*” 2017, [Nature 551 85-88](#) [293].
22. W Fong, E Berger, PK Blanchard, . . . , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. VIII. A Comparison to Cosmological Short-duration Gamma-Ray Bursts.*” 2017, [ApJL 848 L23](#) [60].
21. PK Blanchard, E Berger, W Fong, . . . , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. VII. Properties of the Host Galaxy and Constraints on the Merger Timescale.*” 2017, [ApJL 848 L22](#) [55].
20. KD Alexander, E Berger, W Fong, . . . , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. VI. Radio Constraints on a Relativistic Jet and Predictions for Late-time Emission from the Kilonova Ejecta.*” 2017, [ApJL 848 L21](#) [157].

19. R Margutti, E Berger, W Fong,  $\dots$ , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. V. Rising X-Ray Emission from an Off-axis Jet.*” 2017, [ApJL 848 L20](#) [183].
18. R Chornock, E Berger, D Kasen,  $\dots$ , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. IV. Detection of Near-infrared Signatures of r-process Nucleosynthesis with Gemini-South.*” 2017, [ApJL 848 L19](#) [179].
17. M Nicholl, E Berger, D Kasen,  $\dots$ , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. III. Optical and UV Spectra of a Blue Kilonova from Fast Polar Ejecta.*” 2017, [ApJL 848 L18](#) [164].
16. **PS Cowperthwaite**, E Berger, VA Villar, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. II. UV, Optical, and Near-infrared Light Curves and Comparison to Kilonova Models.*” 2017, [ApJL 848 L17](#) [291].
15. M Soares-Santos, DE Holz, J Annis,  $\dots$ , **PS Cowperthwaite**, & et al. “*The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. I. Discovery of the Optical Counterpart Using the Dark Energy Camera.*” 2017, [ApJL 848 L16](#) [194].
14. BP Abbott, R Abbott, TD Abbott,  $\dots$ , **PS Cowperthwaite**, & et al. “*Multi-messenger Observations of a Binary Neutron Star Merger.*” 2017, [ApJL 848 L12](#) [1088].
13. R Lunnan, R Chornock, E Berger,  $\dots$ , **PS Cowperthwaite**, & et al. “*PS1-14bj: A Hydrogen-poor Superluminous Supernova With a Long Rise and Slow Decay.*” 2016, [ApJ 831 144](#) [52].
12. M Nicholl, E Berger, R Margutti,  $\dots$ , **PS Cowperthwaite**, & et al. “*Superluminous Supernova SN 2015bn in the Nebular Phase: Evidence for the Engine-powered Explosion of a Stripped Massive Star.*” 2016, [ApJL 828 L18](#) [46].
11. **PS Cowperthwaite**, E Berger, M Soares-Santos, & et al. “*A DECam Search for an Optical Counterpart to the LIGO Gravitational-wave Event GW151226.*” 2016, [ApJL 826 L29](#) [40].
10. BP Abbott, R Abbott, TD Abbott,  $\dots$ , **PS Cowperthwaite**, & et al. “*Supplement: Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914 (2016, ApJL, 826, L13).*” 2016, [ApJS 225 8](#) [41].
9. BP Abbott, R Abbott, TD Abbott,  $\dots$ , **PS Cowperthwaite**, & et al. “*Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914.*” 2016, [ApJL 826 L13](#) [197].
8. M Nicholl, E Berger, SJ Smartt,  $\dots$ , **PS Cowperthwaite**, & et al. “*SN 2015BN: A Detailed Multi-wavelength View of a Nearby Superluminous Supernova.*” 2016, [ApJ 826 39](#) [74].
7. J Annis, M Soares-Santos, E Berger,  $\dots$ , **PS Cowperthwaite**, & et al. “*A Dark Energy Camera Search for Missing Supergiants in the LMC after the Advanced LIGO Gravitational-wave Event GW150914.*” 2016, [ApJL 823 L34](#) [23].
6. M Soares-Santos, R Kessler, E Berger,  $\dots$ , **PS Cowperthwaite**, & et al. “*A Dark Energy Camera Search for an Optical Counterpart to the First Advanced LIGO Gravitational Wave Event GW150914.*” 2016, [ApJL 823 L33](#) [56].
5. **PS Cowperthwaite**, E Berger “*A Comprehensive Study of Detectability and Contamination in Deep Rapid Optical Searches for Gravitational Wave Counterparts.*” 2015, [ApJ 814 25](#) [43].
4. **PS Cowperthwaite**, CS Reynolds “*Nonlinear Dynamics of Accretion Disks with Stochastic Viscosity.*” 2014, [ApJ 791 126](#) [15].

3. F Massaro, M Giroletti, R D'Abrusco, . . . , **PS Cowperthwaite**, & et al. “*The Low-frequency Radio Catalog of Flat-spectrum Sources.*” 2014, [ApJS 213 3](#) [26].
2. **PS Cowperthwaite**, F Massaro, R D'Abrusco, & et al. “*Identification of New Gamma-Ray Blazar Candidates with Multifrequency Archival Observations.*” 2013, [AJ 146 110](#) [14].
1. **PS Cowperthwaite**, CS Reynolds “*The Central Engine Structure of 3C120: Evidence for a Retrograde Black Hole or a Refilling Accretion Disk.*” 2012, [ApJL 752 L21](#) [25].