

Tomás Ahumada, PhD

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Research Interests

My research aims to better understand the most energetic events in the universe. I use optical telescopes to search for the electromagnetic counterparts to compact binary mergers (binary neutron star and neutron star–black hole) and collapsing massive stars. Each new discovery brings us closer to revealing the origin of the heaviest elements in the periodic table and provides insights into the extreme physics around black holes and their accretion disks. My work has focused on the follow-up of triggers from gamma-ray missions, such as the *Fermi* Space Telescope and the Neil Gehrels *Swift* Observatory, the X-ray mission Einstein Probe, as well as events from the Laser Interferometer Gravitational-Wave Observatory (LIGO). I use the Zwicky Transient Facility as a discovery engine, with my work primarily focused on optimizing the observing schedule and discovering fast-evolving transients in large databases. Additionally, I have experience coordinating follow-up observations across different time zones and analyzing pan-chromatic astronomical datasets using both analytical and Bayesian frameworks. I am also interested in machine learning applications to astronomical data, such as clustering gamma-ray bursts or employing novel neural networks for image subtraction.

Employment

NOIRLab

Assistant Scientist

Dec 2025 – Present

California Institute of Technology

Presidential Postdoctoral Fellow

Pasadena, CA

Sept 2022 – Sept 2025

NASA Goddard Space Flight Center

Graduate Research Assistant

Greenbelt, MD

Mar 2018 – July 2022

University of Maryland at College Park

Graduate Research Assistant

College Park, MD

Mar 2018 – Jul 2022

Gemini Observatory

Intern

La Serena, Chile

Feb 2017 – Aug 2017

Pontificia Universidad Católica de Chile

Undergraduate Research Assistant

Santiago, Chile

Mar 2016 – Dec 2016

Cerro Tololo Inter-American Observatory

Research Experience for Undergraduates

La Serena, Chile

Jan 2016 - Mar 2016

Education

University of Maryland at College Park

Ph.D. in Astronomy

College Park, MD

July 2022

Thesis: A portrait of the binary compact merger as a young: Short GRB, Gravitational wave, Afterglow, and Kilonova. Advisor: Dr. Leo Singer

M.Sc. in Astronomy

July 2019

Thesis: In search of the short gamma-ray burst optical counterpart with the Zwicky Transient Facility

Pontificia Universidad Católica de Chile

B.Sc. in Astronomy

Santiago, Chile

July 2016

Senior Thesis: Finding quasars in *ATLAS* fields through Machine Learning. Advisor: Prof. Felipe Barrientos and Prof. Karim Pichara

Fellowships and Awards

Presidential Postdoctoral Fellowship - Caltech (2022-2024)
Data Science Fellowship Program - LSST Collaboration(2021-2023)
Matrícula de Honor - P. Universidad Católica de Chile (2012, 2013)

Talks, conferences and meetings

Overarching goals of MMA at Rubin TVS <i>Invited Talk at the Rubin ToO Workshop 2026</i>	UCB, Talk <i>May 2026</i>
Looking for cosmic gold and finding X-ray transients with optical telescopes. <i>Colloquium at Universidad de La Serena</i>	ULS, Colloquium <i>March 2026</i>
A landscape from the Zwicky Transient Facility and the Einstein Probe <i>Contributed Talk at European Southern Observatory</i>	ESO, Talk <i>January 2026</i>
Baboon or Kilonova? Recent searches for compact binary mergers. <i>Colloquium at the South African Astronomical Observatory</i>	SAAO, Colloquium <i>November 2025</i>
Searching for gravitational wave optical counterparts with ZTF <i>Contributed Talk at Centro Brasileiro de Pesquisas Físicas</i>	CBPF, Talk <i>May 2025</i>
Unveiling Multi-Messenger and High-Energy sources from an OIR lens. <i>Colloquium at NOIRLab</i>	NOIRLab, Colloquium <i>March 2025</i>
Illuminating Multi-Messenger Sources with the Vera Rubin Observatory. <i>Talk at Stanford Linear Accelerator Center</i>	SLAC, Talk <i>January 2025</i>
Searching for gravitational wave optical counterparts with the ZTF during O4a <i>Seminar at Los Alamos National Laboratory</i>	LANL, Talk <i>July 2024</i>
Searching for gravitational wave optical counterparts with the ZTF. <i>Seminar at the Center for Astrophysics at Harvard</i>	CfA, Talk <i>April 2024</i>
The observer's perspective: How can AI aid the detection of compact binary mergers? <i>Invited Talk at AstroAI lunch at the Center for Astrophysics at Harvard</i>	CfA, Talk <i>April 2024</i>
Mining GRB afterglows and kilonovae with wide FOV telescopes <i>Contributed Talk at the Cosmic Streams conference</i>	Conference, Talk <i>December 2023</i>
In search of multi-messenger sources <i>Seminar at Pontificia Universidad Católica de Valparaíso</i>	PUCV, Seminar <i>December 2023</i>
In search of multi-messenger sources <i>Seminar at Pontificia Universidad Católica de Chile</i>	PUC, Seminar <i>December 2023</i>
The LIGO fourth observing run <i>Contributed Talk at the ZTF team meeting</i>	Conference, Talk <i>October 2023</i>
Optical searches of Fermi GRBs using the Zwicky Transient Facility <i>Invited Talk at the Australian National University, Canberra, Australia</i>	ANU, Talk <i>December 2022</i>
Optical searches of Fermi GRBs using the Zwicky Transient Facility <i>Invited Talk at the Swinburne University, Melbourne, Australia</i>	Swinburne, Talk <i>December 2022</i>

Mentoring

High School Mentor of the Mallika Sheshadri (now an undergraduate at Northwestern University)	<i>Summer 2025</i>
Undergraduate	<i>Summer 2024</i>

Mentor of the LIGO-SURF student Anurathi Madasi (now a masters student at CUNY)

High School *Summer 2024*

Mentor of the Summer Research Connection students Mallika Sheshadri and Sofía Tejada

Undergraduate *Summer 2023*

Mentor of the LIGO-SURF student Marianna Pezzella (now a graduate student at The University of Tennessee)

Undergraduate *January 2021*

Mentor of Lenin Nolasco and Maria-Clara Heringer at the [GRADMAP](#) Winter Workshop

Teaching Experience

Head Teaching Assistant *August 2021*

Head TA at the virtual [ZTF](#) summer school

Lecturer *July 2021*

Lecturer in the Python seminars for [PAARC](#)

Lecturer *January 2021*

Lecturer of the Python module on image analysis at the [GRADMAP](#) Winter Workshop

Graduate Teaching Assistant *November 2020*

TA at the virtual [GROWTH](#) school

Graduate Teaching Assistant, University of Maryland *September 2017 - December 2017*

Graduate Teaching assistant to: Solar System Astronomy and Stars and Stellar Systems.

Teaching Assistant, Pontificia Universidad Católica de Chile *2013 - 2016*

Teaching assistant to: Modern Physics, General Physics, Astronomy workshop and various labs.

Physics Teacher *Apr 2014 - Jun 2016*

Teach physics in a free online-streaming college preparation course, available on [Youtube](#)

Service

- TAC Caltech Optical Observatories Fall 2024
- TAC NOIRLab
- SOC Rubin ToO Workshop 2026
- SOC Rubin2036

Allocated time and observing experience

- PI Keck II (15hrs) - 2024B, 2025A.
- PI Gemini North and South (55+hrs) - 2021A, 2023A, 2023B.
- PI Dark Energy Camera (30hrs) 2024A, 2025A.
- PI SOAR telescope (12hrs) 2025A.
- PI Las Cumbres Observatory (50+hrs) 2022B, 2023A, 2023B.
- PI Palomar 200-inch Telescope (50+hrs) 2024A, 2024B, 2025A.
- PI Palomar 60-inch Telescope (50+hrs) 2022B, 2023A, 2023B, 2024A, 2024B, 2025A.
- PI Palomar 48-inch Telescope (50+hrs) 2024A, 2024B, 2025A.
- Co-I Lowell Discovery Telescope (21hrs) 2021A, 2021B.
- PI Las Cumbres Observatory (24hrs) 2023B, 2024A.
- Co-I Las Cumbres Observatory (27hrs) 2019A, 2019B, 2020A, 2020B.
- Co-I Dark Energy Camera (20+hrs) 2020A, 2023B.
- Co-I SOAR telescope (12hrs) 2020A, 2023B.
- Co-I Gemini North and South (12hrs) 2020A.

Observing experience.....

- CTIO 0.9m
- Kitt Peak 2.1m (KPED, SEDMv2)
- Keck I (LRIS)
- Keck II (KCWI, DEIMOS)
- Gemini North and Gemini South (GMOS)
- Lowell Discovery Telescope (LMI)
- Palomar 200-inch Telescope (DBSP, WASP, WIRC)

Additional

- Programming Languages: Python, C.
- OS: Linux, Mac, Windows.
- Native in Spanish, full professional proficiency in English (TOEFL score 102), basic knowledge in Italian, Portuguese and French.

Publications

In addition to the articles listed below, I have contributed to 80+ (20+ first author) non-referred publications, i.e. GCN. See the full list [NASA/ADS](#).

Major contribution

1. Xander J. Hall, **Tomás Ahumada**, Julius Gassert, Antonella Palmese, Brian D. Metzger, Mansi M. Kasliwal, Mattia Bulla, et al. Electromagnetic Follow-up of the Sub-Solar Mass Gravitational Wave Candidate S251112cm: Kilonova Constraints and a Coincident IIb Supernova. *arXiv e-prints*, page arXiv:2605.10940, May 2026
2. Gokul P. Srinivasaragavan, Dongyue Li, Xander J. Hall, Ore Gottlieb, Genevieve Schroeder, Heyang Liu, Brendan O'Connor, Chichuan Jin, Mansi Kasliwal, **Tomás Ahumada**, et al. EP250827b/SN 2025wkm: An X-ray Flash-Supernova Powered by a Central Engine and Circumstellar Interaction. *arXiv e-prints*, page arXiv:2512.10239, December 2025
3. Mansi M. Kasliwal, **Tomás Ahumada**, Robert Stein, Viraj Karambelkar, Xander J. Hall, Avinash Singh, Christoffer Fremling, Brian D. Metzger, Mattia Bulla, et al. ZTF25abjmnps (AT2025ulz) and S250818k: A Candidate Superkilonova from a Subthreshold Subsolar Gravitational-wave Trigger. , 995(2):L59, December 2025
4. Vishwajeet Swain, **Tomás Ahumada**, et al. GRB 250704B: An Off-axis Short GRB with a Long-lived Afterglow Plateau. , 996(2):L38, January 2026
5. Robert Stein, Anna Y. Q. Ho, Anjasha Gangopadhyay, **Tomás Ahumada**, et al. SN 2023uqf: An Interacting Supernova Coincident with a High-Energy Neutrino. *arXiv e-prints*, page arXiv:2508.08355, August 2025
6. **Tomás Ahumada**, Shreya Anand, Mattia Bulla, Vaidehi Gupta, Mansi Kasliwal, Robert Stein, Viraj Karambelkar, Eric C. Bellm, Theophile Jegou du Laz, Michael W. Coughlin, Igor Andreoni, et al. LIGO/Virgo/KAGRA neutron star merger candidate S250206dm: Zwicky Transient Facility observations. *arXiv e-prints*, page arXiv:2507.00357, July 2025
7. **Tomás Ahumada**, Shreya Anand, Michael W. Coughlin, Vaidehi Gupta, Mansi M. Kasliwal, et al. Searching for gravitational wave optical counterparts with the zwicky transient facility: Summary of o4a. *Publications of the Astronomical Society of the Pacific*, 136(11):114201, nov 2024
8. Fabio Ragosta, **Tomás Ahumada**, Silvia Piranomonte, Igor Andreoni, Andrea Melandri, Alberto Colombo, and Michael W. Coughlin. Kilonova Parameter Estimation with LSST at Vera C. Rubin Observatory. , 966(2):214, May 2024
9. **Tomás Ahumada**, Shreya Anand, Michael W. Coughlin, Igor Andreoni, Erik C. Kool, et al. In Search of Short Gamma-Ray Burst Optical Counterparts with the Zwicky Transient Facility. , 932(1):40, June 2022
10. **Tomás Ahumada**, Leo Singer, Shreya Anand, Michael W Coughlin, Mansi M Kasliwal, et al. Discovery and confirmation of the shortest gamma ray burst from a collapsar. *Nature astronomy*, 2021
11. Shreya Anand, Michael W Coughlin, Mansi M Kasliwal, Mattia Bulla, **Tomás Ahumada**, et al. Optical follow-up of the neutron star–black hole mergers s200105ae and s200115j. *Nature astronomy*, 5(1):46–53, 2021
12. Mansi M Kasliwal, Shreya Anand, **Tomás Ahumada**, et al. Kilonova luminosity function constraints based on zwicky transient facility searches for 13 neutron star merger triggers during o3. *The Astrophysical Journal*, 905(2):145, 2020
13. Michael W Coughlin, **Tomás Ahumada**, et al. Growth on s190425z: searching thousands of square degrees to identify an optical or infrared counterpart to a binary neutron star merger with the zwicky transient facility and palomar gattini-ir. *The Astrophysical Journal Letters*, 885(1):L19, 2019

14. Michael W Coughlin, **Tomás Ahumada**, et al. 2900 square degree search for the optical counterpart of short gamma-ray burst grb 180523b with the zwicky transient facility. *Publications of the Astronomical Society of the Pacific*, 131(998):048001, 2019
15. Bryan W. Miller, **Tomás Ahumada**, Thomas H. Puzia, Graeme N. Candlish, Stacy S. McGaugh, J. Christopher Mihos, Robyn E. Sanderson, Mischa Schirmer, Rory Smith, and Matthew A. Taylor. The Extended Baryonic Halo of NGC 3923. *Galaxies*, 5(3):29, July 2017

Significant contribution

16. Tomás Cabrera, Antonella Palmese, Lei Hu, Brendan O'Connor, K. E. Saavik Ford, Barry McKernan, Igor Andreoni, **Tomás Ahumada**, et al. Searching for electromagnetic emission in an AGN from the gravitational wave binary black hole merger candidate S230922g. *arXiv e-prints*, page arXiv:2407.10698, July 2024
17. Daniel A. Perley, Anna Y. Q. Ho, Michael Fausnaugh, Gavin P. Lamb, Mansi M. Kasliwal, **Tomás Ahumada**, et al. AT2019pim: A Luminous Orphan Afterglow from a Moderately Relativistic Outflow. *arXiv e-prints*, page arXiv:2401.16470, January 2024
18. Gokul P. Srinivasaragavan, Vishwajeet Swain, Brendan M. O'Connor, Shreya Anand, **Tomás Ahumada**, Daniel A. Perley, et al. Characterizing the Ordinary Broad-line Type Ic SN 2023pel from the Energetic GRB 230812B. , 960(2):L18, January 2024
19. T. Hussenot-Desenonges, T. Wouters, N. Guessoum, and others (includes **Tomás Ahumada**). Multi-band analyses of the bright GRB 230812B and the associated SN2023pel. , 530(1):1–19, May 2024
20. Niharika Sravan, Matthew J. Graham, Michael W. Coughlin, **Tomás Ahumada**, and Shreya Anand. Machine-directed gravitational-wave counterpart discovery. *arXiv e-prints*, page arXiv:2307.09213, July 2023
21. Igor Andreoni, Michael W. Coughlin, Daniel A. Perley, and others (includes **Tomás Ahumada**). A very luminous jet from the disruption of a star by a massive black hole. , 612(7940):430–434, December 2022
22. Igor Andreoni, Erik C Kool, Ana Sagués Carracedo, Mansi M Kasliwal, Mattia Bulla, **Tomás Ahumada**, et al. Constraining the kilonova rate with zwicky transient facility searches independent of gravitational wave and short gamma-ray burst triggers. *The Astrophysical Journal*, 904(2):155, 2020
23. Igor Andreoni, Daniel A Goldstein, Shreya Anand, Michael W Coughlin, Leo P Singer, **Tomás Ahumada**, et al. Growth on s190510g: Decam observation planning and follow-up of a distant binary neutron star merger candidate. *The Astrophysical Journal Letters*, 881(1):L16, 2019

Minor contribution

24. Kaustav K. Das, Anders Jerkstrand, Mansi M. Kasliwal, Jesper Sollerman, and others (includes **Tomás Ahumada**). Low-Luminosity Type IIP Supernovae from the Zwicky Transient Facility Census of the Local Universe. III: Hunting for electron-capture supernovae using nebular spectroscopy. *arXiv e-prints*, page arXiv:2605.18960, May 2026
25. Kruthi Krishna, Andrew Levan, Samaya Nissanke, Morgan Fraser, **Tomás Ahumada**, et al. Insights from GRBs for optical follow-up of gravitational wave counterparts. *arXiv e-prints*, page arXiv:2604.01485, April 2026
26. Utkarsh Pathak, Sameer K. Patil, Hitesh Tanenia, Tanishk Mohan, Xander J. Hall, and others (includes **Tomás Ahumada**). Long GRB 250916A: an Off-axis Powerlaw Jet with Thermal Cocoon. *arXiv e-prints*, page arXiv:2603.11170, March 2026
27. Vishwajeet Swain, Varun Bhalerao, Harsh Kumar, Mehul Goyal, Ankur Ghosh, Utkarsh Pathak, Poonam Chandra, **Tomás Ahumada**, et al. GRB 230204B: GIT Discovery of a Fast Fading Afterglow Associated with an Energetic Gamma-Ray Burst from a Massive Star Progenitor. , 1000(1):58, March 2026

28. Xander J. Hall, Malte Busmann, Hauke Koehn, Keerthi Kunnumkai, Antonella Palmese, Brendan O'Connor, and others (includes **Tomás Ahumada**). AT2025ulz and S250818k: Investigating early time observations of a subsolar mass gravitational-wave binary neutron star merger candidate. *arXiv e-prints*, page arXiv:2510.24620, October 2025
29. Jonathan Carney, Igor Andreoni, Brendan O'Connor, James Freeburn, Hannah Skobe, and others (includes **Tomás Ahumada**). Optical/Infrared Observations of the Extraordinary GRB 250702B: A Highly Obscured Afterglow in a Massive Galaxy Consistent with Multiple Possible Progenitors. , 994(2):L46, December 2025
30. Natalya Plestkova, Niharika Sravan, R. Weizmann Kiendrebeogo, Michael W. Coughlin, Derek Davis, Andrew Toivonen, Theophile Jegou du Laz, **Tomás Ahumada**, et al. Low-latency Forecasts of Kilonova Light Curves for Rubin and ZTF. *arXiv e-prints*, page arXiv:2507.11785, July 2025
31. Nabeel Rehemtulla, W. V. Jacobson-Galán, Avinash Singh, Adam A. Miller, Charles D. Kilpatrick, and others (includes **Tomás Ahumada**). The BTSbot-nearby discovery of SN 2024jlf: rapid, autonomous follow-up probes interaction in an 18.5 Mpc Type IIP supernova. *arXiv e-prints*, page arXiv:2501.18686, January 2025
32. Gokul P. Srinivasaragavan, Daniel A. Perley, Anna Y. Q. Ho, Brendan O'Connor, Antonio de Ugarte Postigo, Nikhil Sarin, S. Bradley Cenko, Jesper Sollerman, and others (includes **Tomás Ahumada**). Multi-Wavelength Analysis of AT 2023sva: a Luminous Orphan Afterglow With Evidence for a Structured Jet. *arXiv e-prints*, page arXiv:2501.03337, January 2025
33. Antonio C. Rodriguez, Kareem El-Badry, Pasi Hakala, Pablo Rodríguez-Gil, Tong Bao, and others (includes **Tomás Ahumada**). A Link Between White Dwarf Pulsars and Polars: Multiwavelength Observations of the 9.36-Minute Period Variable Gaia22ayj. *arXiv e-prints*, page arXiv:2501.01490, January 2025
34. Igor Andreoni, Raffaella Margutti, and others (includes **Tomás Ahumada**). Rubin ToO 2024: Envisioning the Vera C. Rubin Observatory LSST Target of Opportunity program. *arXiv e-prints*, page arXiv:2411.04793, November 2024
35. H. Sun, W. X. Li, L. D. Liu, Gao, **Tomás Ahumada**, and others (includes **Tomás Ahumada**). Extragalactic fast X-ray transient from a weak relativistic jet associated with a Type Ic-BL supernova. *arXiv e-prints*, page arXiv:2410.02315, October 2024
36. B. T. Bolin, F. J. Masci, M. W. Coughlin, and others (includes **Tomás Ahumada**). Duev. The Palomar twilight survey of 'Ayló'chaxnim, Atiras, and comets. *arXiv e-prints*, page arXiv:2409.15263, September 2024
37. Yashvi Sharma, Jesper Sollerman, Shrinivas R. Kulkarni, and others (includes **Tomás Ahumada**). Dramatic Rebrightening of the Type-changing Stripped-envelope Supernova SN 2023aew. , 966(2):199, May 2024
38. Michael A. Kuhn, Lynne A. Hillenbrand, and others (includes **Tomás Ahumada**). The 2022-2023 accretion outburst of the young star V1741 Sgr. , 529(3):2630–2646, April 2024
39. Kiendrebeogo and others (includes **Tomás Ahumada**). Updated Observing Scenarios and Multimessenger Implications for the International Gravitational-wave Networks O4 and O5. , 958(2):158, December 2023
40. Michael W. Coughlin, Joshua S. Bloom, and others (includes **Tomás Ahumada**). A Data Science Platform to Enable Time-domain Astronomy. , 267(2):31, August 2023
41. Shreya Anand, Jennifer Barnes, Sheng Yang, Mansi M. Kasliwal, , and others (includes **Tomás Ahumada**). Collapsars as Sites of r-process Nucleosynthesis: Systematic Photometric Near-infrared Follow-up of Type Ic-BL Supernovae. , 962(1):68, February 2024
42. Vikram Ravi and others (includes **Tomás Ahumada**). Deep Synoptic Array Science: Discovery of the Host Galaxy of FRB 20220912A. , 949(1):L3, May 2023
43. Katelyn Breivik, Andrew J. Connolly, K. E. Saavik Ford, Mario Jurić, and others (includes **Tomás Ahumada**). From Data to Software to Science with the Rubin Observatory LSST. *arXiv e-prints*,

page arXiv:2208.02781, August 2022

44. Harsh Kumar, Rahul Gupta, Divita Saraogi, and **Tomás Ahumada** and others. The long-active afterglow of GRB 210204A: detection of the most delayed flares in a gamma-ray burst. , 513(2):2777–2793, June 2022
45. Robert Stein, Simeon Reusch, Anna Franckowiak, Marek Kowalski, and others (includes **Tomás Ahumada**). Neutrino follow-up with the Zwicky transient facility: results from the first 24 campaigns. , 521(4):5046–5063, June 2023
46. Simeon Reusch, Robert Stein, Marek Kowalski, Sjoert van Velzen, Anna Franckowiak, and others (includes **Tomás Ahumada**). Candidate Tidal Disruption Event AT2019fdr Coincident with a High-Energy Neutrino. , 128(22):221101, June 2022
47. Siddharth R. Mohite, Priyadarshini Rajkumar, Shreya Anand, David L. Kaplan, Michael W. Coughlin, and others (includes **Tomás Ahumada**). Inferring Kilonova Population Properties with a Hierarchical Bayesian Framework. I. Nondetection Methodology and Single-event Analyses. , 925(1):58, January 2022
48. Igor Andreoni, Michael W. Coughlin, , and others (includes **Tomás Ahumada**). Fast-transient Searches in Real Time with ZTFReST: Identification of Three Optically Discovered Gamma-Ray Burst Afterglows and New Constraints on the Kilonova Rate. , 918(2):63, September 2021
49. Josiah N Purdum and others (includes **Tomás Ahumada**). Time-series and phasecurve photometry of episodically-active asteroid (6478) gault in a quiescent state using apo, growth, p200 and ztf. *arXiv preprint arXiv:2102.13017*, 2021
50. Mouza Almualla and others (includes **Tomás Ahumada**). Towards regular serendipitous detections of kilonovae by wide-field surveys. *arXiv preprint arXiv:2011.10421*, 2020
51. Bryce T Bolin and others (includes **Tomás Ahumada**). Characterization of temporarily captured minimum 2020 cd3 by keck time-resolved spectrophotometry. *The Astrophysical Journal Letters*, 900(2):L45, 2020
52. Robert Stein and others (includes **Tomás Ahumada**). A high-energy neutrino coincident with a tidal disruption event. *arXiv preprint arXiv:2005.05340*, 2020
53. Igor Andreoni and others (includes **Tomás Ahumada**). Growth on s190814bv: Deep synoptic limits on the optical/near-infrared counterpart to a neutron star–black hole merger. *The Astrophysical Journal*, 890(2):131, 2020
54. Daniel A Goldstein and others (includes **Tomás Ahumada**). Growth on s190426c: Real-time search for a counterpart to the probable neutron star–black hole merger using an automated difference imaging pipeline for decam. *The Astrophysical Journal Letters*, 881(1):L7, 2019
55. Michael W Coughlin and others (includes **Tomás Ahumada**). The kitt peak electron multiplying ccd demonstrator. *Monthly Notices of the Royal Astronomical Society*, 485(1):1412–1419, 2019
56. Daniel A Perley and others (includes **Tomás Ahumada**). The fast, luminous ultraviolet transient at2018cow: extreme supernova, or disruption of a star by an intermediate-mass black hole? *Monthly Notices of the Royal Astronomical Society*, 484(1):1031–1049, 2019