

Brandon S. Hensley

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Education

Princeton University

Ph.D., Astrophysical Sciences

November 2015

Thesis: *On the Nature of Interstellar Grains*

Advisor: Bruce Draine

M.A., Astrophysical Sciences

September 2012

The California Institute of Technology

B.S., Physics with Honors

June 2010

Professional Appointments

Jet Propulsion Laboratory

Scientist

August 2023–Present

Princeton University

Associate Research Scholar

September 2022–August 2023

Lyman Spitzer, Jr. Postdoctoral Fellow

September 2018–August 2022

Jet Propulsion Laboratory

JPL Postdoctoral Fellow

September 2015–August 2018

Honors and Awards

Lyman Spitzer, Jr. Postdoctoral Fellowship, 2018–2022

Chambliss Astronomy Achievement Student Award, 2014

NSF Graduate Research Fellow, 2010–2013

George W. and Bernice E. Green Prize for undergraduate research, 2010

Caltech Perpall Speaking Competition–Second place, 2010

Caltech SURF Fellow 2007, 2008, 2009

ARCS Foundation Scholar, 2007–2010

Robert C. Byrd Honors Scholar, 2006–2010

Grants and Observing Time

Grants as PI or Science PI

NASA ADAP, *Generating the First Polarized Submillimeter Emission Maps from the High-Frequency Planck Data*,
PI: A. Fraisse (2021–2023)

Grants as Co-I

NASA ADAP, *Galactic and Extra-Galactic Dust Emission after Planck and Gaia*, PI: O. Doré (2020–2023)

NASA TCAN, *Modeling Polarized Galactic Foregrounds For Cosmic Microwave Background Missions*, PI: J. Borrill (2018–2021)

Observing Time as PI

VLBA, *Is Cyg OB2-12 a Colliding Wind Binary?* (8.4 h, rated Top 10%)

Observing Time as Co-I (Selected Highlights)

GBT, *Closing the Loop: PAHs Toward Cyg OB2-12*, PI: B. McGuire (6.0 h)

VLBA, *Strong Extragalactic AME, or a New Population of Radio Sources at a Very High z*, PI: E Momjian (4.0 h)

JWST, *How Do the Small Survive: PAH's in Low Metallicity Starburst II Zw 40*, PI: T. Lai (4.2 h)

JWST, *The Vanishing Act: PAHs and Heavy Element Abundance in M101*, PI: JD Smith (7.1 h)

JWST, *Unveiling Grain Growth in Very Dense Galactic Cores*, PI: R. Paladini (60.4 h)

IRAM, *Unveiling Grain Growth in Very Dense Galactic Cores from NIR to mm Wavelengths*, PIs: K. Demyk and R. Paladini (57 h)

ALMA, *Unveiling the Physics of the Only Known Compact Extragalactic Source of AME Observable by ALMA*, PI: E. Murphy (4.1 h)

Collaboration Membership

Leadership

Simons Observatory Galactic Science Analysis Working Group, Co-lead

Pan-Experiment Galactic Science Group, Co-founder and Co-lead

Atacama Cosmology Telescope, Co-coordinator of Galactic Science analyses

PRIMA, Chair of Polarization Working Group

Membership

The Polar-Areas Stellar Imaging in Polarization High-Accuracy Experiment (PASIPHAЕ), 2015–Present

CO Mapping Array Project (COMAP), 2015–Present

Atacama Cosmology Telescope (ACT), 2019–Present

Simons Observatory (SO), 2019–Present

CMB-S4, 2019–Present

BLAST, 2020–Present

CCAT-prime, 2020–Present

LiteBIRD, 2021–Present

PRIMA FIR Probe, 2022–Present

Student Advising

Ph.D. Theses

Daniel Herman, University of Oslo

2019–Present

Cosmoglobe: Deconstructing the Microwave and Sub-mm Sky (Co-Advisor)

Master's Theses

Daniel Herman, University of Oslo 2018–2019
Thermal Dust Emission in the Microwave Frequency Range (Co-Advisor)

Undergraduate Theses

Myra Norton, Princeton University, Junior Paper January 2022
The Power of High Frequency Data in Mitigating Polarized Dust Foregrounds for CMB Science

Alexander Menegas, Princeton University, Junior Paper January 2020
Parameterizing the Frequency Dependence of Spinning Dust Emission

Ph.D. Student Projects

Elizabeth Meador, University of Pittsburgh 2021–Present
First year PhD Project (Co-Advisor)

Rodrigo Córdoba Rosado, Princeton University 2020–Present
Galactic Dust Structure and the Cosmic PAH Background in Cross-correlation with WISE
Submitted to ApJ. [arXiv:2307.06352](https://arxiv.org/abs/2307.06352)

Yilun Guan, University of Pittsburgh 2020–2021
The Atacama Cosmology Telescope: Microwave Intensity and Polarization Maps of the Galactic Center
2021, [ApJ](https://doi.org/10.1086/7140), 920, 6

Valentina Fanfani, University of Milan 2019–Present
The Simons Observatory: Galactic Science Goals and Forecasts
2022, [ApJ](https://doi.org/10.1086/7140), 929, 166

ACT Galactic Science Project

Daniel Herman, University of Oslo 2019–Present
Limits on Large-Scale Polarized Anomalous Microwave Emission from Planck LFI and WMAP
2023, [A&A](https://doi.org/10.1086/7140), 675, 15

Guochao (Jason) Sun, Caltech 2018–2019
A Self-Consistent Framework for Multi-Line Modeling in Line Intensity Mapping Experiments
2019, [ApJ](https://doi.org/10.1086/7140), 887, 136

Cheng Zhang, Caltech 2018–2019
An Imprint of the Galactic Magnetic Field in the Diffuse Unpolarized Dust Emission
2019, [ApJ](https://doi.org/10.1086/7140), 887, 159

Undergraduate Summer Research Fellows

Myra Norton, Princeton University Summer 2021
The Power of High Frequency Data in Mitigating Polarized Dust Foregrounds for CMB Science
Princeton Undergraduate Summer Research Program

Mark Dodici, Princeton University Summer 2020
In Search of a Link Between Anomalous Microwave Emission and the Cold Neutral Medium
Princeton Undergraduate Summer Research Program
2022, [ApJ](https://doi.org/10.1086/7140), 929, 23

Alexander Menegas, Princeton University Summer 2019
Parameterizing the Frequency Dependence of Spinning Dust Emission
Princeton Undergraduate Summer Research Program

Eduardo Zamora, UC Riverside Summer 2017
Impact of Frequency Decorrelation in Polarized Dust Emission on Future CMB Polarization Experiments
NASA MUREP (Minority University Research and Education Project) and FIELDS (Fellowships and Internships in Extremely Large Data Sets) Programs

Eve Matthaey, Princeton University Summer 2013
Constructing and Interpreting a Spectrum of the Diffuse Galactic Light
Princeton Undergraduate Summer Research Program (Co-Advisor)
2022, [ApJ](https://doi.org/10.1086/7140), 932, 112

Selected Invited Talks

NASA Goddard Astrophysics Colloquium, February 2024
ASIAA Astrophysics Colloquium, January 2024
Cosmic Dust, Göteborg, Sweden, September 2023
From the Galaxy to the Big Bang, Banyuls-mer, France, June 2023
Oxford Cosmology Seminar, May 2023
First UVEX Community Workshop, Caltech, March 2023
Southern Methodist Physics Colloquium, February 2023
Cornell Astronomy Colloquium, January 2023
JPL Astrophysics Colloquium, January 2023
SAGI Seminar, ICISE, Vietnam, October 2022
Supernova/Dust Teletalk, October 2022
CMB-S4 Sources and Transients Workshop, July 2022
CMB-S4 Spring Workshop, May 2022
CITA Seminar, April 2022
University of Florida Astronomy Colloquium, December 2021
NASA Goddard Astrophysics Colloquium, October 2021
CITA Seminar, August 2021
Magnetic Fields and the Structure of the Filamentary ISM, SOFIA Workshop, June 2021
Invited Review, Looking at the Polarized Universe: Past, Present, and Future, Crete, May 2021
DRAO Seminar Series, March 2021
KICP Seminar, University of Chicago, November 2020
Great Western Seminar Series (Bath/Bristol/Cardiff), October 2020
University of Toledo Physics/Astrophysics Colloquium, October 2020
CMB-S4 Collaboration Workshop Plenary, August 2020
The Interstellar Medium in the Era of Big Data, AAS Summer Meeting 2020
Caffe Lattes Conference, Lattes, France, May 2020 (Cancelled)
CAS Seminar, MPE, March 2019
Big Apple Magnetic Fields, CCA, January 2019
Villanova Physics Seminar, November 2018
Cosmic Dust and Magnetism, KASI, November 2018
CMB Foregrounds for B-Mode Studies. October 2018
2018 Gruber Cosmology Conference, Yale, September 2018
Cosmic Dust 2018. ISAS/JAXA, August 2018
UCSD Astrophysics Seminar, January 2018

B-Mode from Space Workshop, December 2017

U.S. Radio/Millimeter/Submillimeter Science Futures II, August 2016

European Week of Astronomy and Space Science 2016, July 2016

B-Mode from Space Workshop, Kavli IPMU, December 2015

JPL Astrophysics Colloquium, June 2015

Measuring B-Mode Polarization from Greenland, Niels Bohr Institute, February 2015

Teaching

Invited Lecturer

Cosmological Component Separation, University of Oslo

Fall 2018 & 2019

Seven lectures for Master's and PhD credit (AST 9240) for the 2018 and 2019 schools

Substitute Lecturer

Diffuse Matter in Space, Princeton University

April 2019

Two lectures in graduate-level ISM as substitute for primary instructor Bruce Draine (AST 517)

Volunteer Lecturer

Princeton Prison Teaching Initiative

Fall 2011–Spring 2015

Accredited college algebra, calculus, and astronomy

Team lead for college algebra (Math 135)

Evergreen Forum

March 2012

One lecture in a series for local retirees

Teaching Assistant

Planets in the Universe, Princeton University

Fall 2013

Undergraduate science elective. Primary instructor Gáspár Bakos (AST 205)

Miscellaneous

Princeton Astronomy Senior Thesis Writing Group Leader

AY 2013-2014

Leader of monthly undergraduate workshop for thesis writing

Professional Service

Conference and Colloquium Organization

SOC Chair, Illuminating the Dusty Universe: A Tribute to the Work of Bruce Draine, October 2023

SOC, Galactic Science and CMB foregrounds, December 2022

LOC, ACT Collaboration Meeting, October 2022

SOC, CMB-S4 Summer Workshop, August 2021

Co-Organizer, Princeton/IAS Astrophysics Colloquium, AY 2020–2021

SOC, CMB & CO in the Fjords, July 2020 (Cancelled)

Session Organizer, CMB-S4 Face to Face Meeting, October 2019

Refereeing and Reviewing

Referee for A&A, ApJ, ApJL, Icarus, MNRAS, Nature Astronomy, Planetary and Space Science, and Royal Society Open Science

Reviewer for the National Science Foundation (NSF), the French National Research Agency (ANR), and the National Science Centre, Poland (NCN)

Outreach

NASA's Universe of Learning Science Briefing, March 2023
Astronomy on Tap: Trenton, Astronomy Trivia Author, 2019
Princeton Prison Teaching Initiative, Fall 2011–Spring 2015
Princeton Public Observing, Fall 2010–Spring 2015
Caltech Y RISE Tutoring Program, February 2007–June 2010

Equity and Diversity

Princeton Astrophysical Sciences Committee on Mentoring, 2020–2023
NASA MUREP (Minority University Research and Education Project) mentor, Summer 2017

Publications

Citation Metrics

79 papers and associated metrics available as an [ADS library](#)

14 as first author, 16 as second author, 7 as third author

h-index: 25

Total citations: 2386

Graduate student advisees and close collaborators in underline

Undergraduate student advisees and close collaborators in double underline

Refereed Publications and Preprints

First Author and Student-led Publications

18. Córdova Rosado, R., **B. Hensley**, et al. “The Atacama Cosmology Telescope: Galactic Dust Structure and the Cosmic PAH Background in Cross-correlation with WISE.” Submitted to ApJ. [arXiv:2307.06352](#)
17. Herman, D., **B. Hensley**, et al. “BeyondPlanck XV. Limits on large-scale polarized anomalous microwave emission from Planck LFI and WMAP.” 2023, [A&A](#), 675, 15
16. **Hensley, B.** and B. T. Draine. “The AstroDust+PAH Model: A Unified Description of the Extinction, Emission, and Polarization from Dust in the Diffuse Interstellar Medium.” 2023, [ApJ](#), 948, 55
15. **Hensley, B.**, S. E. Clark, V. Fanfani, et al. “The Simons Observatory: Galactic Science Goals and Forecasts.” 2022, [ApJ](#), 929, 166
14. **Hensley, B.**, C. E. Murray, and M. Dodici. “Polycyclic Aromatic Hydrocarbons, the Anomalous Microwave Emission, and Their Connection to the Cold Neutral Medium.” 2022, [ApJ](#), 926, 23
13. Guan, Y., S. E. Clark, **B. Hensley**, et al. “The Atacama Cosmology Telescope: Microwave Intensity and Polarization Maps of the Galactic Center.” 2021, [ApJ](#), 920, 6
12. **Hensley, B.** and B. T. Draine. “Observational Constraints on the Physical Properties of Interstellar Dust in the Post-Planck Era.” 2021, [ApJ](#), 906, 73
11. **Hensley, B.** and B. T. Draine. “Detection of PAH Absorption and Determination of the Mid-Infrared Diffuse Interstellar Extinction Curve from the Sightline Toward Cyg OB2–12.” 2020, [ApJ](#), 895, 38
10. **Hensley, B.**, C. Zhang, and J. Bock. “An Imprint of the Galactic Magnetic Field in the Diffuse Unpolarized Dust Emission.” 2019, [ApJ](#), 887, 159
9. Sun, G., **B. Hensley**, et al. “A Self-Consistent Framework for Multi-Line Modeling in Line Intensity Mapping Experiments.” 2019, [ApJ](#), 887, 142
8. **Hensley, B.** and P. Bull. “Mitigating Complex Dust Foregrounds in Future CMB Polarization Experiments.” 2018, [ApJ](#), 853, 2

7. **Hensley, B.** and B. T. Draine. “Modeling the Anomalous Microwave Emission with Spinning Nanoparticles: No PAHs Required.” 2017, [ApJ](#), 836, 2
6. **Hensley, B.** and B. T. Draine. “Thermodynamics and Charging of Interstellar Iron Nanoparticles.” 2017, [ApJ](#), 834, 134
5. **Hensley, B.**, B. T. Draine, and A. Meisner. “A Case Against Spinning PAHs as the Source of the Anomalous Microwave Emission.” 2016, [ApJ](#), 827, 1
4. **Hensley, B.**, E. J. Murphy, and J. Staguhn. “Characterizing Extragalactic Anomalous Microwave Emission in NGC 6946 with CARMA.” 2015, [MNRAS](#), 449, 809
3. **Hensley, B.**, J. P. Ostriker, and L. Ciotti. “Grain Physics and Infrared Dust Emission in Active Galactic Nucleus Environments.” 2014, [ApJ](#), 789, 78
2. **Hensley, B.**, V. Pavlidou, and J. M. Siegal-Gaskins. “Novel Techniques for Decomposing Diffuse Backgrounds.” 2013, [MNRAS](#), 433, 591
1. **Hensley, B.**, J. M. Siegal-Gaskins, and V. Pavlidou. “The Detectability of Dark Matter Annihilation with *Fermi* Using the Anisotropy Energy Spectrum of the Gamma-ray Background.” 2010, [ApJ](#), 723, 277

Second and Third Author Publications

37. Narayanan, D., J. D. Smith, **B. Hensley**, et al. “A Framework for Modeling Polycyclic Aromatic Hydrocarbon Emission in Galaxy Evolution Simulations.” 2023, [ApJ](#), 951, 100
36. McBride, L., P. Bull, and **B. Hensley**. “Characterizing line-of-sight variability of polarized dust emission with future CMB experiments.” 2023, [MNRAS](#), 519, 4370
35. Chuss, D., **B. Hensley**, et al. “Tracing PAH Emission in λ -Orionis Using COBE/DIRBE Data.” 2022, [ApJ](#), 940, 59
34. Chastenet, J., I. De Looze, **B. Hensley**, et al. “SOFIA/HAWC+ Observations of the Crab Nebula: Dust Properties from Polarised Emission.” 2022, [MNRAS](#), 516, 4229
33. Chellew, B., T. D. Brandt, **B. Hensley**, B. T. Draine, and E. Matthaey. “An Optical Spectrum of the Diffuse Galactic Light from BOSS and IRIS.” 2022, [ApJ](#), 932, 112
32. Draine, B. T. and **B. Hensley**. “Using the Starlight Polarization Efficiency Integral to Constrain Shapes and Porosities of Interstellar Grains.” 2021, [ApJ](#), 919, 65
31. Draine, B. T., A. Li, **B. Hensley**, et al. “Excitation of PAH Emission: Dependence on Starlight Spectrum, Intensity, PAH Size Distribution, and PAH Ionization.” 2021, [ApJ](#), 917, 3
30. Draine, B. T. and **B. Hensley**. “On the Shapes of Interstellar Grains: Modeling Extinction and Polarization by Spheroids and Continuous Distributions of Ellipsoids.” 2021, [ApJ](#), 910, 47
29. Draine, B. T. and **B. Hensley**. “The Dielectric Function of ‘Astrodust’ and Predictions for Polarization in the 3.4 μm and 10 μm Features.” 2021, [ApJ](#), 909, 94
28. Pelgrims, V., S. E. Clark, **B. Hensley**, et al. “Evidence for Line-of-Sight Frequency Decorrelation of Polarized Dust Emission in *Planck* Data.” 2021, [A&A](#), 647, 16. **Nature Astronomy Research Highlight**
27. Murphy, E., **B. Hensley**, et al. “Where’s the Dust?: The Deepening Anomaly of Microwave Emission in NGC 4725 B.” 2020, [ApJL](#), 905, 23
26. Gan, Z., **B. Hensley**, et al. “Infrared Emission from Cold Gas Dusty Disks in Massive Ellipticals.” 2020, [ApJ](#), 901, 7
25. Clark, S. E. and **B. Hensley**. “Mapping the Magnetic Interstellar Medium in Three Dimensions Over the Full Sky with Neutral Hydrogen.” 2019, [ApJ](#), 887, 136
24. Panopoulou, G., **B. Hensley**, et al. “Extreme Starlight Polarization in a Region with Highly Polarized Dust Emission.” 2019, [A&AL](#), 624L, 8

23. Lenz, D., **B. Hensley**, and O. Doré. “A New, Large-scale Map of Interstellar Reddening Derived From H I Emission.” 2017, [ApJ](#), 846, 38
22. Draine, B. T. and **B. Hensley**. “Quantum Suppression of Alignment in Ultrasmall Grains: Microwave Emission from Spinning Dust will be Negligibly Polarized.” 2016, [ApJ](#), 831, 59
21. Ferraro, S. and **B. Hensley**. “Background Subtraction Uncertainty from Submillimetre to Millimetre Wavelengths.” 2015, [MNRAS](#), 451, 1606
20. Draine, B. T. and **B. Hensley**. “Magnetic Nanoparticles in the Interstellar Medium: Emission Spectrum and Polarization.” 2013, [ApJ](#), 765, 159
19. Draine, B. T. and **B. Hensley**. “The Submillimeter and Millimeter Excess of the Small Magellanic Cloud: Magnetic Dipole Emission from Magnetic Nanoparticles?” 2012, [ApJ](#), 757, 103

*n*th Author Publications

79. Lai, T. S.-Y. et al. “GOALS-JWST: Small neutral grains and enhanced 3.3 micron PAH emission in the Seyfert galaxy NGC 7469.” Submitted to [ApJL](#). [arXiv:2307.15169](#)
78. Coulton, W. R. et al. “The Atacama Cosmology Telescope: High-resolution component-separated maps across one-third of the sky.” Submitted to PRD. [arXiv:2307.01258](#)
77. Watts, D. J. et al. “From BeyondPlanck to Cosmoglob: Preliminary WMAP Q-band analysis.” 2023, [A&A](#), 675, 16
76. Svalheim, T. L. et al. “BeyondPlanck XIV. Polarized foreground emission between 30 and 70 GHz.” 2023, [A&A](#), 675, 14
75. Andersen, K. J. et al. “BeyondPlanck XIII. Intensity foreground sampling, degeneracies, and priors.” 2023, [A&A](#), 675, 13
74. Paradiso, S. et al. “BeyondPlanck XII. Cosmological parameter constraints with end-to-end error propagation.” 2023, [A&A](#), 675, 12
73. Colombo, L. P. L. et al. “BeyondPlanck XI. Bayesian CMB analysis with sample-based end-to-end error propagation.” 2023, [A&A](#), 675, 11
72. Basyrov, A. et al. “BeyondPlanck X. Planck Low Frequency Instrument frequency maps with sample-based error propagation.” 2023, [A&A](#), 675, 10
71. Svalheim, T. L. et al. “BeyondPlanck IX. Bandpass and beam leakage corrections.” 2023, [A&A](#), 675, 9
70. Galloway, M. et al. “BeyondPlanck VIII. Efficient Sidelobe Convolution and Corrections through spin harmonics.” 2023, [A&A](#), 675, 8
69. Gjerløw, E. et al. “BeyondPlanck VII. Bayesian estimation of gain and absolute calibration for CMB experiments.” 2023, [A&A](#), 675, 7
68. Ihle, H. T. et al. “BeyondPlanck VI. Noise characterization and modelling.” 2023, [A&A](#), 675, 6
67. Herman, D. et al. “BeyondPlanck V. Minimal ADC Corrections for Planck LFI.” 2023, [A&A](#), 675, 5
66. Brilenkov, M. et al. “BeyondPlanck IV. Simulations and validation” 2023, [A&A](#), 675, 4
65. Galloway, M. et al. “BeyondPlanck III. Commander3.” 2023, [A&A](#), 675, 3
64. Keihänen, E. et al. “BeyondPlanck II. CMB map-making through Gibbs sampling.” 2023, [A&A](#), 675, 2
63. BeyondPlanck Collaboration et al. “BeyondPlanck I. Global Bayesian analysis of the Planck Low Frequency Instrument data.” 2023, [A&A](#), 675, 1
62. Aurlien, R. et al. “Foreground Separation and Constraints on Primordial Gravitational Waves with the PICO Space Mission.” 2023, [JCAP](#), 6, 34

61. Eskilt, J. R. et al. “Cosmoglobe DR1 results. II. Constraints on isotropic cosmic birefringence from reprocessed WMAP and Planck LFI data.” Submitted to A&A. [arXiv:2305.02268](#)
60. Madhavacheril, M. et al. “The Atacama Cosmology Telescope: DR6 Gravitational Lensing Map and Cosmological Parameters.” Submitted to ApJ. [arXiv:2304.05203](#)
59. Qu, F. J. et al. “The Atacama Cosmology Telescope: A Measurement of the DR6 CMB Lensing Power Spectrum and Its Implications for Structure Growth.” Submitted to ApJ. [arXiv:2304.05202](#)
58. LiteBIRD Collaboration. “Probing Cosmic Inflation with the LiteBIRD Cosmic Microwave Background Polarization Survey.” 2023, [PTEP](#), 2023, 4
57. Kogut, A. et al. “Systematic error mitigation for the PIXIE Fourier transform spectrometer.” Submitted to JCAP. [arXiv:2303.08095](#)
56. Watts, D. J. et al. “Cosmoglobe DR1 results. I. Improved Wilkinson Microwave Anisotropy Probe maps through Bayesian end-to-end analysis.” Submitted to A&A. [arXiv:2303.08095](#)
55. Gerakakis, S. et al. “From BeyondPlanck to Cosmoglobe: Open Science, Reproducibility, and Data Longevity.” 2023, [OJA](#), 6, 10
54. Limbach, M. A. et al. “The TEMPO Survey I: Predicting Yields of the Transiting Exosatellites, Moons, and Planets from a 30-day Survey of Orion with the Nancy Grace Roman Space Telescope.” 2023, [PASP](#), 135, 1043
53. CCAT-Prime Collaboration. “CCAT-prime Collaboration: Science Goals and Forecasts with Prime-Cam on the Fred Young Submillimeter Telescope.” 2023, [ApJS](#), 264, 7
52. Errard, J. et al. “Constraints on the Optical Depth to Reionization from Balloon-Borne CMB Measurements.” 2022, [ApJ](#), 940, 68
51. Rennie, T. et al. “COMAP Early Science: VI. A First Look at the COMAP Galactic Plane Survey.” 2022, [ApJ](#), 933, 187
50. Chung, D. et al. “COMAP Early Science: V. Constraints and Forecasts at $z \sim 3$.” 2022, [ApJ](#), 933, 186
49. Cleary, K. et al. “COMAP Early Science: I. Overview.” 2022, [ApJ](#), 933, 182
48. Lowe, I. et al. “A Study of 90 GHz Dust Emissivity on Molecular Cloud and Filament Scales.” 2022, [ApJ](#), 929, 102
47. The CMB-S4 Collaboration. “CMB-S4: Forecasting Constraints on Primordial Gravitational Waves.” [ApJ](#), 926, 54
46. Clark, S. E., C.-G. Kim, J. C. Hill, and **B. Hensley**. “The Origin of Parity Violation in Polarized Dust Emission and Implications for Cosmic Birefringence.” 2021, [ApJ](#), 919, 53
45. Glenn, J. et al. “Galaxy Evolution Probe.” 2021, [JATIS](#), 7(3), 034004
44. Chastenet, J. et al. “Benchmarking Dust Emission Models in M101.” 2021, [ApJ](#), 912, 103
43. Casassus, S. et al. “Resolved Spectral Variations of the Centimetre-wavelength Continuum from the ρ Oph W Photo-dissociation Region.” 2021, [MNRAS](#), 502, 589
42. Aiola, S. et al. “The Atacama Cosmology Telescope: DR4 Maps and Cosmological Parameters.” 2020, [JCAP](#), 12, 47
41. Choi, S. et al. “The Atacama Cosmology Telescope: A Measurement of the Cosmic Microwave Background Power Spectra at 98 and 150 GHz.” 2020, [JCAP](#), 12, 45
40. Arce-Tord, C. et al. “Resolved observations at 31 GHz of spinning dust emissivity variations in ρ Oph.” 2020, [MNRAS](#), 495, 3
39. Murphy, E. et al. “A New Detection of Extragalactic Anomalous Microwave Emission in a Compact, Optically-Faint Region of NGC 4725.” 2018, [ApJ](#), 862, 20
38. Dickinson, C. et al. “The State-of-Play of Anomalous Microwave Emission (AME) Research.” 2018, [New Astronomy Reviews](#), 80, 1. Lead author of Theory section

White Papers

- Hensley, B.** et al. “Determining the Composition of Interstellar Dust with Far-Infrared Polarimetry.” Astro2020 White Paper. 2019, [BAAS](#), 51, 224
- The CMB-S4 Collaboration. “Snowmass 2021 CMB-S4 White Paper.” [arXiv:2203.08024](#)
- Chang, C. L. et al. “Snowmass2021 Cosmic Frontier: Cosmic Microwave Background Measurements White Paper.” [arXiv:2203.07638](#)
- Fissel, L. et al. “Studying Magnetic Fields in Star Formation and the Turbulent Interstellar Medium.” Astro2020 White Paper. 2019, [BAAS](#), 51, 193
- Glenn, J. et al. “The Galaxy Evolution Probe.” 2019, [BAAS](#), 51, 112
- Hanany, S. et al. “PICO: Probe of Inflation and Cosmic Origins.” 2019, [BAAS](#), 51, 194
- Murphy, E. et al. “Unsolved Problems in Modern Astrophysics: Anomalous Microwave Emission.” Astro2020 White Paper. 2019, [BAAS](#), 51, 430
- Rocha, G. et al. “The need for better tools to design future CMB experiments.” Astro2020 APC White Paper. 2019, [BAAS](#), 51, 221
- The Simons Observatory Collaboration. “The Simons Observatory: Astro2020 Decadal Project Whitepaper.” 2019, [BAAS](#), 51, 147
- Tassis, K. et al. “PASIPHAE: A High-Galactic-Latitude, High-Accuracy Optopolarimetric Survey.” [arXiv:1810.05652](#)

Mission Studies

- Glenn, J. et al. “The Galaxy Evolution Probe: A Mid to Far-Infrared Space Observatory Concept to Characterize the Cosmic History of Star Formation.” 2019. [NASA Probe Study](#)
- Hanany, S. et al. “PICO: Probe of Inflation and Cosmic Origins.” 2019. [NASA Probe Study](#)

Conference Proceedings

- Lowe, I. et al. “The Balloon-borne Large Aperture Submillimeter Telescope Observatory.” 2020, Proceedings of the [SPIE](#), 114457A
- Glenn, J. et al. “The Galaxy Evolution Probe: a concept for a mid and far-infrared space observatory.” 2018, Proceedings of the [SPIE](#), 106980L
- Mahabal, A. et al. “Towards Real-time Classification of Astronomical Transients.” 2008, [AIP](#) Conference Proceedings, Volume 1082, pp. 287-293