Susan E. Clark

Curriculum Vitae

Physics Department 382 Via Pueblo Mall Stanford, CA 94305

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APPOINTMENTS

Assistant Professor, Stanford University Department of Physics	$2021-{ m present}$
Member, Institute for Advanced Study	2017-2021
NASA Hubble Fellow, Institute for Advanced Study	2017-2020

EDUCATION

DUCATION	
Columbia University	
Ph.D., Astrophysics	2017
Dissertation: Magnetic Fields in the Interstellar Medium	
M.A., M.Phil, Astrophysics	2014
The University of North Carolina at Chapel Hill	2012
B.S., Physics	2012

HONORS & AWARDS

Terman Faculty Fellow, Stanford University	2021
Hubble Fellowship	2017 - 2020
Institute for Advanced Study School of Natural Sciences Fellowship	2020 - 2022
Unsung Hero Award, Princeton Prison Teaching Initiative	2019
ASNY Graduate Student Paper Prize	2016
CCAPP Price Prize in Cosmology and AstroParticle Physics	2016
PRL Editors' Recommendation Paper	2015
NSF Graduate Research Fellowship	2012-2017
Columbia Dean's Fellowship	2012-2017
Morehead-Cain Scholarship	2008 - 2012
Full scholarship to UNC-Chapel Hill	

PUBLICATIONS

Complete ADS record

First- and single-author refereed journal articles

- 8. S.E. Clark, Chang-Goo Kim, J. Colin Hill, B.S. Hensley. The Origin of Parity Violation in Polarized Dust Emission and Implications for Cosmic Birefringence. 2021, ApJ 919, 53. arXiv:2105.00120
- 7. S.E. Clark & B.S. Hensley. Mapping the Magnetic Interstellar Medium in Three Dimensions Over the Full Sky with Neutral Hydrogen. 2019, ApJ 887, 2. arXiv:1909.11673
- 6. S.E. Clark, J.E.G. Peek, M.-A. Miville-Deschênes. The physical nature of neutral hydrogen intensity structure. 2019, ApJ 874, 171. arXiv:1902.01409

- 5. **S.E.** Clark. A new probe of line-of-sight magnetic field tangling. 2018, ApJL 857, L10. arXiv:1802.00011
- 4. S.E. Clark & J.S. Oishi. The weakly nonlinear magnetorotational instability in a global, cylindrical Taylor-Couette flow. 2017, ApJ 841, 2. arXiv:1610.01603
- 3. S.E. Clark & J.S. Oishi. The weakly nonlinear magnetorotational instability in a local geometry. 2017, ApJ 841, 1. arXiv:1610.01616
- 2. S.E. Clark, J. Colin Hill, J.E.G. Peek, M.E. Putman, B.L. Babler. Neutral hydrogen structures trace dust polarization angle: Implications for cosmic microwave background foregrounds. 2015, PRL 115, 241302. Selected as PRL Editors' Recommendation. arXiv:1508.07705
- 1. S.E. Clark, J.E.G. Peek, M.E. Putman. Magnetically aligned HI fibers and the Rolling Hough Transform. 2014, ApJ 789, 82. arXiv:1312.1338
- Other refereed journal articles [* = mentored student lead, <u>underline</u> = Clark group member]
- 42. R. Córdova Rosado*, B. Hensley, **S.E. Clark**, A. Duivenvoorden, et al. *The Atacama Cosmology Telescope: Galactic Dust Structure and the Cosmic PAH Background in Cross-correlation with WISE*. 2023, submitted to ApJ. arXiv:2307.06352
- 41. W.R. Coulton, M. Madhavacheril, A. Duivenvoorden, J.C. Hill, et al. incl. S.E. Clark. The Atacama Cosmology Telescope: High-resolution component-separated maps across one-third of the sky. 2023, submitted. arXiv:2307.01258
- 40. <u>G. Halal*</u>, **S.E. Clark**, <u>A. Cukierman</u>, D. Beck, C.-L. Kuo. *Filamentary Dust Polarization and the Morphology of Neutral Hydrogen Structures*. 2023, submitted to ApJ. arXiv:2306.10107
- 39. F. Qu et al. incl. **S.E. Clark**. The Atacama Cosmology Telescope: A Measurement of the DR6 CMB Lensing Power Spectrum and its Implications for Structure Growth. 2023, submitted to ApJ. arXiv:2304.05202
- 38. M. Madhavacheril et al. incl. S.E. Clark. The Atacama Cosmology Telescope: DR6 Gravitational Lensing Map and Cosmological Parameters. 2023, submitted to ApJ. arXiv:2304.05203
- 37. <u>A. Borlaff, E. Lopez-Rodriguez, R. Beck, Rainer S.E. Clark, E. Ntormousi, et al. Extragalactic magnetism with SOFIA (SALSA Legacy Program) V: First results on the magnetic field orientation of galaxies. 2023, ApJ 952, 4. arXiv:2303.13586</u>
- 36. W. Surgent*, E. Lopez-Rodriguez, S.E. Clark. The structure of magnetic fields in spiral galaxies: a radio and far-infrared polarimetric analysis. 2023, in press at ApJ. arXiv:2302.07278
- 35. M. Lei* & S.E. Clark. Probing the cold neutral medium through HI emission morphology with the scattering transform. 2023, ApJ 947, 74. arXiv:2212.06182
- 34. J. Clancy, G. Puglisi, S.E. Clark, G. Coppi et al. Polarization fraction of Planck Galactic cold clumps and forecasts for the Simons Observatory. 2023, accepted to MNRAS. arXiv:2303.02788
- 33. U. Fuskeland et al. incl. **S.E. Clark**. Tensor-to-scalar ratio forecasts for extended LiteBIRD frequency configurations. 2023, submitted to A&A. arXiv:2302.05228
- 32. Y.K. Ma, N. McClure-Griffiths, S.E. Clark, S.J. Gibson, et al. H I filaments as potential compass needles? Comparing the magnetic field structure of the Small Magellanic Cloud to the orientation of GASKAP-H I filaments. 2023, MNRAS 521, 60. arXiv:2302.04880
- 31. BICEP/Keck Collaboration* incl. S.E. Clark. BICEP / Keck XVI: Characterizing Dust Polarization Through Correlations with Neutral Hydrogen. 2023, ApJ 945, 72. arXiv:2210.05684 Led by George Halal*.

- 30. E. Lopez-Rodriguez, A.S. Borlaff, R. Beck, et al. incl. S. Martin-Alvarez and S.E. Clark. Extragalactic magnetism with SOFIA (SALSA Legacy Program). VI. The magnetic fields in the multiphase interstellar medium of the Antennae galaxies. 2022, ApJ Letters, 942, 13. arXiv:2211.00012
- 29. A. Kim*, S.E. Clark, M. Putman, L. Li. The Kinematic Structure of Magnetically Aligned HI Filaments. 2022, submitted to MNRAS.
- 28. <u>A. Cukierman</u>, **S.E. Clark**, <u>G. Halal</u>. *Magnetic Misalignment of Interstellar Dust Filaments*. 2023, ApJ 946, 106. arXiv:2208.07382
- 27. E. Lopez-Rodriguez, S.A. Mao, R. Beck, et al. incl. **S.E. Clark**. Extragalactic magnetism with SOFIA (SALSA Legacy Program) IV: Program overview and first results on the polarization fraction. 2022, ApJ 936, 92. arXiv:2205.01105
- 26. E. Lopez-Rodriguez, M. Clarke, S. Shenoy, et al. incl. S.E. Clark. Extragalactic magnetism with SOFIA (SALSA Legacy Program) III: First data release and on-the-fly polarization mapping characterization. 2022, ApJ 936, 65. arXiv:2204.13611
- 25. B.S. Hensley, S.E. Clark, V. Fanfani, N. Krachmalnicoff, et al. *The Simons Observatory: Galactic Science Goals and Forecasts.* 2022, ApJ 929, 166. arXiv:2111.02425
- 24. I. Lowe et al. incl S.E. Clark. A study of 90 GHz dust emissivity on molecular cloud and filament scales. 2022, ApJ 929, 102. arXiv:2105.13432
- 23. A. Hacar, S.E. Clark, F. Heitsch, et al. *Initial Conditions for Star Formation: A Physical Description of the Filamentary ISM.* 2022, To appear in Protostars and Planets VII, Editors: Shu-ichiro Inutsuka, Yuri Aikawa, Takayuki Muto, Kengo Tomida, and Motohide Tamura. arXiv:2203.09562
- 22. J.L. Campbell*, S.E. Clark, B.M. Gaensler et al. A Comparison of Multi-Phase Magnetic Field Tracers in a High-Galactic Latitude Region of the Filamentary Interstellar Medium. 2022, ApJ 927, 49. arXiv:2112.03247
- 21. LiteBIRD Collaboration et al. incl. S.E. Clark. Probing Cosmic Inflation with the LiteBIRD Cosmic Microwave Background Polarization Survey. 2022, submitted to PTEP. arXiv: 2202.02773
- 20. N. M. Pingel, J. Dempsey, N. M. McClure-Griffiths, et al. incl. S.E. Clark. GASKAP-HI Pilot Survey Science I: ASKAP Zoom Observations of HI Emission in the Small Magellanic Cloud. 2022, PASA 39, 5. arXiv:2111.05339
- J.M. Dickey, J.M. Dempsey, N.M. Pingel, N.M. McClure-Griffiths, K. Jameson, J.R. Dawson, H. Dnes, S.E. Clark, D. Leahy, Min-Young Lee, M.-A. Miville-Deschênes, S. Stanimirović, C.D. Tremblay, J. Th. van Loon. GASKAP Pilot Survey Science II: ASKAP Zoom Observations of Galactic 21-cm Absorption. 2022, ApJ 926, 186. arXiv:2111.04545
- S. Pearson, S.E. Clark, A.J. Demirjian, K.V. Johnston, M.K. Ness, T.K. Starkenburg, B.F. Williams, R.A. Ibata. The Hough Stream Spotter: A new Method for Detecting Linear Structure in Resolved Stars and Application to the Stellar Halo of M31. 2022, ApJ 926, 166. arXiv:2107.00017
- 17. G. Panopoulou, S.E. Clark, A. Hacar, F. Heitsch, J. Kainulainen, E. Ntormousi, D. Seifried, R. J. Smith. The width of Herschel filaments varies with distance. 2022, A&AL 657, 13. arXiv:2111.08125
- 16. CCAT-Prime collaboration incl. **S.E. Clark**, *CCAT-prime Collaboration: Science Goals and Forecasts with Prime-Cam on the Fred Young Submillimeter Telescope*. 2022, ApJ Supplements 264, 7. arXiv:2107.10364
- 15. <u>E. Lopez-Rodriguez</u>, R. Beck, **S.E. Clark**, A. Hughes, A. Borlaff, E. Ntormousi, <u>L. Grosset</u>, K. Tassis, J. Beckman, K. Subramanian, D. Dale, T. Díaz-Santos. *Extragalactic magnetism with*

- SOFIA (Legacy Program) II: The bimodal magnetic field in the starburst ring of NGC 1097. 2021, ApJ 923, 150. arXiv:2107.09063
- 14. A.S. Borlaff, E. Lopez-Rodriguez, R. Beck et al. incl. **S.E. Clark**. Extragalactic Magnetism with SOFIA (Legacy Program) I: The magnetic field in the multi-phase interstellar medium of M51. 2021, ApJ 921, 128. arXiv:2105.09315
- 13. Yilun Guan*, S.E. Clark, B.S. Hensley, P.A. Gallardo, S. Naess, et al. *The Atacama Cosmology Telescope: Microwave Intensity and Polarization Maps of the Galactic Center.* 2021, ApJ 920, 6. arXiv:2105.05267
- 12. A.J.M. Thomson, T.L. Landecker, N. McClure-Griffiths et al. incl. S.E. Clark. The Global Magneto-Ionic Medium Survey (GMIMS): The brightest polarized region in the Southern sky at 75 cm and its implications for Radio Loop II. 2021, MNRAS 507, 3495. arXiv:2106.12595
- 11. J.S. Oishi, K.J. Burns, **S.E. Clark**, E.H. Anders, B.P. Brown, G.M. Vasil, D Lecoanet. eigentools: A Python package for studying differential eigenvalue problems with an emphasis on robustness. 2021, JOSS 6(62), 3079. JOSS
- V. Pelgrims, S.E. Clark, B.S. Hensley, G. V. Panopoulou, V. Pavlidou, K. Tassis, H.K. Eriksen, I.K. Wehus. Evidence for Line-of-Sight Frequency Decorrelation of Polarized Dust Emission in Planck Data. 2021, A&A 647, A16. arXiv:2101.09291
- 9. Choi et al. incl. S.E. Clark. The Atacama Cosmology Telescope: A Measurement of the Cosmic Microwave Background Power Spectra at 98 and 150 GHz. 2020, JCAP 12, 45. arXiv:2007.07289
- 8. Aiola et al. incl. S.E. Clark. The Atacama Cosmology Telescope: DR4 Maps and Cosmological Parameters. 2020, JCAP 12, 47. arXiv:2007.07288
- 7. J.E.G. Peek & S.E. Clark. Small-Scale HI Channel Map Structure is Cold: Evidence from Na I Absorption at High Galactic Latitudes. 2019, ApJL 886, 1. arXiv:1909.09647
- 6. A.J.M. Thomson, T.L. Landecker, [11 authors], S.E. Clark, [2 authors]. Through thick or thin: Multiple components of the magneto-ionic medium towards the nearby HII region Sharpless 2-27 revealed by Faraday tomography. 2019, MNRAS 487, 4751. arXiv:1905.09285
- 5. J.E.G. Peek, B.L. Babler, Y. Zheng, **S.E. Clark**, K.A. Douglas, E.J. Korpela, M.E. Putman, S. Stanimirović, S.J. Gibson, C. Heiles. *The GALFA-HI Survey Data Release 2*. 2018, ApJS 234, 1. ADS
- 4. F. Heitsch, B. Bartell, S.E. Clark, J.E.G. Peek, D. Cheng, M.E. Putman. *Three-dimensional orientation of compact high velocity clouds*. 2016, MNRAS Letters 462, L46. arXiv:1606.06689
- J. Malinen, L. Montier, J. Montillaud, M. Juvela, I. Ristorcelli, S.E. Clark, O. Berné, J.-Ph. Bernard, V.-M. Pelkonen, D.C. Collins. Matching dust emission structures and magnetic field in high-latitude cloud L1642: comparing Herschel and Planck maps. 2016, MNRAS 460, 1934. arXiv:1512.03775
- 2. N.M. McClure-Griffiths, S. Stanimirović, [5 authors], **S.E. Clark**, [3 authors]. *Galactic and Magellanic evolution with the SKA*. 2015, from "Advancing Astrophysics with the Square Kilometre Array", PoS. arXiv:1501.01130
- 1. W.-H. Hsu, M.E. Putman, F. Heitsch, S. Stanimirović, J.E.G. Peek, **S.E. Clark**. *Physical properties of Complex C halo clouds*. 2011, AJ 141, 57. arXiv:1011.0011

Conference proceedings

3. I. Lowe, G. Coppi, et al. incl. S.E. Clark. The Balloon-borne Large Aperture Submillimeter Telescope Observatory. 2020, in Proc. SPIE 11445, Ground-based and Airborne Telescopes VIII, 114457A. arXiv:2012.01376

- 2. S.E. Clark. Galactic neutral hydrogen and the magnetic ISM foreground. 2017, in Jelić & van der Hulst (Eds.) Peering towards Cosmic Dawn, Proceedings of the International Astronomical Union, Symposium No. 333, Dubrovnik, Croatia
- 1. S.E. Clark, J.E.G. Peek, J. Colin Hill, M.E. Putman. Quantifying the magnetic alignment of HI and dust in the diffuse ISM. 2016, in P. Jablonka, Ph. André, F. van der Tak (Eds.) From Interstellar Clouds to Star-forming Galaxies: Universal Processes? Proceedings of the International Astronomical Union Symposia and Colloquia, IAU 315, Honolulu, Hawaii

White papers, mission proposals, and Astronomer's Telegrams

- 12. J. J. Han et al. incl. S.E. Clark. NANCY: Next-generation All-sky Near-infrared Community surve Y. arXiv:2306.11784
- 11. K. Abazajian et al. incl. S.E. Clark. Snowmass 2021 CMB-S4 White Paper. arXiv:2203.08024
- 10. C. Chang et al. incl S.E. Clark. Snowmass2021 Cosmic Frontier: Cosmic Microwave Background Measurements White Paper. arXiv:2203.07638
- 9. K. Alexander, N. Battalia, T. Bhandarkar, S.E. Clark. *GBT/MUSTANG-2 90 GHz Observations of AT2022cmc*. The Astronomer's Telegram, No. 15269. March 2022. ADS
- 8. A. Lee et al. incl. S.E. Clark. The Simons Observatory. 2019, Astro2020 Decadal APC White Paper. ADS
- 7. S. Hanany et al. incl. S.E. Clark. *PICO: Probe of Inflation and Cosmic Origins*. 2019, Astro2020 Decadal APC White Paper. arXiv:1908.07495
- 6. The Simons Observatory Collaboration, incl. S.E. Clark. The Simons Observatory: Astro2020 Decadal Project Whitepaper. 2019. arXiv:1907.08284
- 5. L. Fissel, C.L.H. Hull, S.E. Clark, D.T. Chuss et al. Studying Magnetic Fields in Star Formation and the Turbulent Interstellar Medium. 2019, Astro2020 Science White Paper. arXiv:1903.08757
- 4. S.E. Clark, C. Heiles, T. Robishaw. Magnetic Fields and Polarization in the Diffuse Interstellar Medium. 2019, Astro2020 Science White Paper. arXiv:1903.07671
- 3. D. Stinebring, S. Chatterjee, S.E. Clark., J.M. Cordes, T. Dolch, C. Heiles, [12 authors]. Twelve Decades: Probing the ISM from kiloparsec to sub-AU scales. 2019, Astro2020 Science White Paper. arXiv:1903.073701
- 2. B. Hensley et al. incl. S.E. Clark. Determining the Composition of Interstellar Dust with Far-Infrared Polarimetry. 2019, Astro2020 Science White Paper. ADS
- 1. S. Hanany et al. incl. S.E. Clark. *PICO: Probe of Inflation and Cosmic Origins*. 2019, Probe class mission study for NASA and 2020 Decadal Panel. arXiv:1902.10541

SCIENTIFIC PRESENTATIONS

Significant presentations since 2019. Career total: 103 presentations, including 75 invited talks/colloquia

Invited Conference Talks

50. The Interstellar Institute: With Two Eyes July 2022

49. COSPAR 44th Scientific Assembly: Origins of Cosmic Rays

July 2022

48. Our Galactic Ecosystem: Opportunities and Diagnostics in the Infrared and Beyond, Feb. 2022 Lake Arrowhead, California

47. The Grand Cascade: The Evolution of Baryons Across Scales (virtual)

July 2021

46. CMB-S4 Collaboration Meeting (virtual)

March 2021

45. Arecibo Observatory Open House, AAS, Honolulu, Hawaii Jan. 2020

	B-Modes from Space, Garching, Germany IEEE Workshop on Hyperspectral Image and Signal Processing, Amsterdam, The Netherlands	Dec. 2019 Sept. 2019
	The Self-Organized Star Formation Process, Orsay, France	Sept. 2019
41.	Pathways to the Future of Arecibo Observatory, San Juan, Puerto Rico	Feb. 2019
Invi	ited Colloquia and Seminars	
40.	Colloquium, University of Arizona Theory Colloquium	April 2023
	Canadian Institute for Theoretical Astrophysics (CITA) Seminar, Toronto, Canada	April 2023
	Colloquium, Southern Methodist University	Dec. 2022
	Cardiff Astro Seminar (virtual)	Dec. 2022
	IAPS Seminar, Istituto Nazionale di Astrofisica, Rome (virtual)	Oct. 2022
	Colloquium, University of Nevada Las Vegas (virtual)	April 2022
	Seminar, DESY Zeuthen (virtual) Colloquium, University of Southern California (virtual)	April 2022 Dec. 2021
	Colloquium, SOFIA Observatory (virtual)	Nov. 2021
	Colloquium, SLAC National Lab (virtual)	Nov. 2021
	Colloquium, Oskar Klein Center, Stockholm University (virtual)	June 2021
	Colloquium, Munich Joint Astronomy Colloquium (virtual)	April 2021
28.	Colloquium, Johns Hopkins University (virtual)	April 2021
27.	Colloquium, University of British Columbia (virtual)	March 2021
26.	Tuesday Astrophysics Seminar, University of Chicago (virtual)	March 2021
25.	Colloquium, Columbia University (virtual)	Feb. 2021
24.	Colloquium, Stanford Physics & Applied Physics (virtual)	Oct. 2020
	Colloquium, Caltech	March 2020
	Colloquium, UC Santa Cruz	Feb. 2020
	Colloquium, UC Berkeley	Feb. 2020
	Colloquium, University of Toronto	Feb. 2020
	Colloquium, UC Santa Barbara	Jan. 2020
	Colloquium, Stanford University	Jan. 2020
	Colloquium, University of Virginia/NRAO Colloquium, Cornell University	Nov. 2019 Nov. 2019
	McGill Space Institute Seminar, Montreal, Canada	Nov. 2019 Nov. 2019
	Queen's University Seminar, Kingston, Canada	Nov. 2019
	Colloquium, University of Maryland, College Park	Oct. 2019
	CITA Seminar, Toronto, Canada	Oct. 2019
	Princeton Gravity Group Seminar, Princeton, New Jersey	Feb. 2019
Cor	atributed Talks	
10.	Scientific Frontiers for the DSA-2000 Radio Camera, Caltech, California	March 2023
	CCAT-prime collaboration meeting (virtual)	April 2022
	Modeling the Galactic Magnetic Field Conference (virtual)	Oct. 2021
7.	IBEX Group Meeting (virtual)	Oct. 2021
6.	Molecular Clouds, HII Regions, Interstellar Medium, AAS, Honolulu, Hawaii	Jan. 2020
5.	Princeton/IAS Cosmology Lunch, Princeton, New Jersey	Oct. 2019
4.	r day r day	Oct. 2019
3.	New Perspectives on Galactic Magnetism, Newcastle upon Tyne, England	June 2019

 Hubble Fellows Symposium, Baltimore, Maryland Big Apple Magnetic Fields, New York, New York 	Mar. 2019 Jan. 2019
COURSES TAUGHT	
Stanford University Physics 15: Stars and Planets in a Habitable Universe Physics 367: Physics of the Interstellar and Intergalactic Medium	Winter 2023 Spring 2022
Previously Introduction to Astrophysics, Wagner Youth Correctional Facility Introduction to Astrophysics, East Jersey State Prison	2019 2018
STUDENTS ADVISED	
Graduate Students Stanford Minjie Lei, primary PhD advisor Marta Nowotka, primary PhD advisor George Halal, primary PhD advisor	2022 – present 2021 – present 2020 – present
Stanford PhD rotation and Master's students Tara Dacunha, PhD rotation student Viraj Manwadkar, PhD rotation student Jack Dinsmore, PhD rotation student Charles Yang, PhD rotation student Iñigo Valenzuela Lombera, Applied Physics coterm student project	2022 - present 2022 2022 2022 2020 - 2021
Outside Stanford Elizabeth Meador, Pittsburgh University, graduate student Rodrigo Córdova Rosado, Princeton University, graduate student Doyeon Avery Kim, Columbia University, graduate student Jessica Campbell, University of Toronto, graduate student	2021 – present 2020 – present 2018 – present 2017 – 2022
Undergraduate Students Stanford or Summer Research Programs at Stanford	
2023 Yujina Basnet, Khwaish Billore, Gisselle Jimenez, Diego Brandon Maglione Surgent, Patrick Tupoumalohi, Mark Ting Hong Zhu	e, Anthony Nuñez, Will
2022 Laywood Fayne, Francesca Fernandes, Eliza Gallagher, Monica Hicks, Israe Will Surgent, Gabriel Muñoz Zarazua, Kendall Zylstra	l Reyes, Abraar Saleem,
2021 Laywood Fayne, Sally Jiang	
Outside Stanford Alexis Demirjian, Barnard College, undergraduate research Larry Li, Columbia University, undergraduate research Garrison Grogan, Columbia University, undergraduate research Lowell Schudel, Columbia University, undergraduate research	$2019 \\ 2016 - 2019 \\ 2016 - 2017 \\ 2014 - 2015$

PROFESSIONAL ACTIVITIES

Selected recent service to Stanford/KIPAC Chair, Physics Department Recruiting & Outreach Committee Physics Department Equity & Inclusion Committee KIPAC Tea Committee KIPAC Colloquium Committee Co-Chair, KIPAC Equity & Inclusion Committee	2022 – present 2021 – present 2021 – present 2021 – present 2021 – present
IDEAL Pedagogy Physics team	2021
Selected recent service to the community	
Simons Observatory Publications Panel (elected position)	2022 - present
Simons Observatory Theory & Analysis Committee (elected position)	2022 – present
CMB-S4 - LiteBIRD Memorandum of Understanding writing team	2022
Department of Energy Analysis of Alternatives for CMB-S4: served on Tiger Team	2022
Scientific Organizing Committee: Galactic Science & CMB Foregrounds, Tenerife, Sp	pain
(2022); Interstellar Institute 6, Orsay, France (2023); Cosmology with CMB-S4, SLAC	C(2023)
CMB-S4 Collaboration Mentor	2021-2022
Board of Trustees, Association of Members of the Institute for Advanced Study	2020-present
Referee, ApJ , $A\mathcal{B}A$, $Nature$, $Nature$ $Astronomy$	
Reviewer/Panelist, NASA, NSF	
Collaboration leadership roles:	
Project Scientist, Advanced Simons Observatory	2023 - present
Co-lead, Simons Observatory Galactic Science Working Group	2019-present
Founder and co-lead, Pan-Experiment Galactic Science Group	2020-present

Active collaboration member:

Atacama Cosmology Telescope (ACT), BLAST, CCAT-Prime, CMB-S4, Galactic Australian SKA Pathfinder (GASKAP), Global Magneto-Ionic Medium Survey (GMIMS), LiteBIRD, PASIPHAE, Probe of Inflation and Cosmic Origins (PICO), Simons Observatory (SO)

2019-present

2020-present

2020 - 2021

SELECTED PUBLIC OUTREACH AND SERVICE

Co-lead, Atacama Cosmology Telescope Galactic Science Working Group

Deputy Lead, Magnetic Fields Science Working Group, CCAT-Prime collaboration

Lead, Filaments Working Group, Galactic Australian SKA Pathfinder (GASKAP)

KIPAC Public Lecture (live-streamed on YouTube)	2022
Organizer, Speaker, Stanford Physics, Equity, and Identity Program	2021 – 2022
Professional Development Coordinator, SO-NSBP Summer Research Program	2020
Team Leader, Instructor, Prison Teaching Initiative	2018 - 2019
Public Talk, Astronomy on Tap, Trenton, New Jersey	2019
Invited Panelist, Conference for Undergraduate Women in Physics	2018
Volunteer, Reading Team Math Program, Harlem, New York	2016 - 2017
Instructor, Rooftop Variables, Curtis High School, Staten Island, New York	2012 - 2017
Outreach Volunteer, bi-weekly community stargazing, Columbia University	2012 - 2017
Public Lecture, Our Magnetic Universe, Columbia Astronomy Outreach Lecture Series	2015
Founder, President, Carolina Women in Physics	2010 - 2012

OTHER PUBLISHED WRITING