Eric W. Koch
Curriculum Vitæ

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Education

2016-2020 *University of Alberta*
PhD. (Physics)
Thesis: "Connecting galactic to local scales in the neutral interstellar medium across the Local Group"
Adviser: Prof. Erik Rosolowsky

2014-2016 *University of Alberta*
MSc. (Physics)
Thesis: "The Atomic Interstellar Medium in M33"
Adviser: Prof. Erik Rosolowsky

2010-2014 *University of British Columbia*
Hon. BSc. (Physics)

Employment

2022–present *Center for Astrophysics Harvard & Smithsonian*
Natural Sciences and Engineering Research Council of Canada (NSERC) Postdoctoral Fellow

2020–present *Center for Astrophysics Harvard & Smithsonian*
Submillimeter Array Postdoctoral Fellow

2014–2020 *University of Alberta*
Graduate Research and Teaching Assistant

2013-2014 *University of British Columbia, Okanagan*
Undergraduate Research Assistant with Prof. Jason Loeppky

2012 *University of British Columbia, Okanagan*
Undergraduate Work-Study Program with Prof. Erik Rosolowsky

2011-2014 *University of British Columbia, Okanagan*
Undergraduate Teaching Assistant

Awards

2020 *University of Alberta*
Alberta Graduate Excellence Scholarship

2019 *University of Alberta*
Mary Louise Imrie Graduate Student Award

2019 *University of Alberta*
Andrew Stewart Memorial Graduate Prize

2019 *University of Alberta/The Ohio State University*
Natural Sciences and Engineering Research Council of Canada Michael Smith Foreign Study Supplements with Prof. Adam Leroy

2018 *University of Alberta*
Queen Elizabeth II Graduate Scholarship - Doctorate

2017-2019 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Canada Graduate Scholarship - Doctorate

2016 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship - Doctorate

2015 *University of Alberta*
Queen Elizabeth II Graduate Scholarship - Masters

2010-2014 *University of British Columbia, Okanagan*
Deputy Vice Chancellor Scholarship

2014 *University of British Columbia, Okanagan*
Distinguished Graduate Award - Physics, Math, Statistics & Computer Science

2014 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Canada Graduate Scholarship - Masters

2013 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Award with Prof. Craig Heinke

2013 *University of British Columbia, Okanagan*
Top Oral Presenter - UBC-O Undergraduate Research Conference

2013 *University of British Columbia, Okanagan*
Upper Year Physics Award

2012 *University of British Columbia, Okanagan*
Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Award with Prof. Erik Rosolowsky

2010 *University of British Columbia, Okanagan*
President's Entrance Scholarship

External Funding

2023 **PI** - *: Unmixing the ISM: Identifying Dominant Physical Effects with JWST/MIRI Mapping of M33*
JWST Cycle 2 GO-3436
$65,000 USD

2023 **PI** - *Spatio-spectral modeling of ALMA data cubes: Insights and Challenges for ALMA-2030*
NAASC Workshop Funding
$22,000 USD

2022 **co-I** - *The influence of superbubble feedback on molecular gas and star formation across galactic environments*
Smithsonian Scholarly Studies Program
$10,635 USD

2022 **co-PI** - *Linking the Resolved Filamentary Molecular ISM to Massive Star Formation across M33*
NRAO Student Observing Support
$20,670 USD

2021 **co-PI** - *Molecular Gas in the Milky Way analog NGC 891*
Smithsonian Scholarly Studies Program
$27,932 USD

2019 **co-I** - *Link CASA to the astropy ecosystem*
ALMA Development Study - Cycle 7 (PI: A. Ginsburg)
$199,905 USD

Professional Talks — Invited

2023 Sept *University of Alberta: Graduate Physics Symposium*

2023 Jun *Hertfordshire Astronomy Seminar*

2023 Feb *Tufts Astronomy Seminar*

2023 Jan *AAS241 - ALMA Status and Plans for Increased Capability*

2022 Dec *McGill Astronomy Seminar*

2022 Mar *CfA Seminar*

2022 Feb *Green Bank Observatory Community Talk*

2021 Nov *University of Wisconsin Madison Seminar*
2021 October *GBO colloquium*
2021 October *ICRAR/Curtin Colloquium*
2021 August *NRAO/UVirginia Colloquium*
2021 April *Tsinghau University Colloquium (remote)*
2021 March *University of Connecticut Astronomy Seminar (remote)*
2020 July *University of Florida Colloquium (remote)*
2020 July *Michigan State University Astronomy Seminar (remote)*
2019 January *Big Apple Magnetic Fields Workshop, New York*

Professional Talks — Other

2023 Sept *CfA ITC Lunch Talks*
2023 Jul *Interstellar Institute VI*
2022 Sep *From Cells to Galaxies*
2022 Jul *With Two Eyes - Interstellar Institute V*
2022 Mar *CfA ITC Luncheon*
2021 August *The Past, Present, and Future of the VLA: Celebrating 40 Years*
2021 July *The Grand Cascade*
2021 March *A precursor view of the SKA sky*
2020 December *Harvard-Heidelburg Star Formation Workshop*
2019 September *So-Star, Paris, France*
2019 April *Center for Astrophysics, Cambridge, USA*
2019 April *Green Bank Telescope, Green Bank, USA*
2019 March *NRAO, Charlottesville, USA*
2019 March *University of Texas, Austin, USA*
2018 August *CHANG-ES Team Meeting, Calgary, Canada*
2018 July *PHAT/M33 Team Meeting, Ringberg, Germany*
2018 May *Olympian Symposium, Paralia Katerini, Greece*
2017 June *Canadian Astronomical Society Meeting, Edmonton, Canada*
2016 August *Lorentz Centre - Apples to Apples Workshop: Comparing Simulations \& Observations*
2016 February *Max Planck Institute for Extraterrestrial Physics*
2016 February *Max Planck Institute for Radio Astronomy*
2015 May *Florence Comparing Simulations \& Observations Workshop*
2014 April *UBC-O Undergraduate Research Conference*
2013 November *UBC-O Brown Bag Series*
2013 April *UBC-O Undergraduate Research Conference*

Research Advising

2023-Present *The GMC population in the edge-on Milky Way Analog NGC891*
Karl Nicholson (Trinity College Dublin/SAO; advised with David Wilner)
ALMA SOS & Harvard Dept. of Astronomy - Summer Research

2023-Present *A 4 pc view of molecular clouds across M33*
Sirina Prasad (Harvard; advised with Qizhou Zhang)
ALMA SOS & Harvard Dept. of Astronomy - Summer Research

Summer 2023 *The influence of superbubble feedback on molecular gas and star formation in M33*
Tovi Sonnenberg (Harvard; advised with Michael Foley, Sarah Jeffreson)
Harvard Dept. of Astronomy - Summer Research

Summer 2023 *The Radiowave Hunt for Young Exoplanetary Systems and Disks (RADIOHEAD)*

	Ramisa Rahman (WMU/SAO; advised with Josh Lovell, David Wilner) SAO REU Program
Summer 2023	*Quantifying the Filamentary ISM: How Well Do Statistics Reconstruct Reality?* Devisree Tallapaneni (Cornell/SAO; advised with Andrew Saydjari, Doug Finkbeiner) SAO REU Program
2022-2023	*Do Spiral Arms Form Molecular Clouds?* Courtney Carreira (JHU/SAO; advised with Sarah Jeffreson) SAO REU Program & NRAO SOS
Summer 2022	*The resolved molecular gas in a nascent tidal dwarf galaxy* Kimberly Armas (Harvard; advised with Qizhou Zhang) Harvard Dept. of Astronomy - Summer Research
2021-2023	*Resolving the radio continuum in the giant* HII *region NGC 604* Hailey Moore (MSU; advised with Laura Chomiuk) Graduate research project
Summer 2021	*Resolved molecular filaments in M33* Noa Choi (Harvard, advised with Alyssa Goodman & Catherine Zucker) Harvard College Research Program
Summer 2021	*Tracing feedback-driven outflows in Sextans A* Wasiim Ouro-Sama (UMass Lowell/SAO) CfA Latino Initiative Program
Summer 2020	*Using multi-dimensional graphs to describe filamentary networks* Sam Fielder (UAlberta; advised with Erik Rosolowsky) Undergraduate Physics research
Summer 2018	*Interpreting filaments in three dimensions* Dewanshu Haswani (UAlberta; advised with Erik Rosolowsky) MITACS Internship
Fall 2018	*Spiral Arm Propagation in M33 and its Implications on Molecular Cloud Formation* Steffen Senchyna (UAlberta; advised with Erik Rosolowsky) Physics Honours Research Project
Fall 2018	*ISM Properties near Supernova Remnants in M33* Weizhuo Zhang (UAlberta; advised with Erik Rosolowsky) Physics Honours Research Project

Professional Service

2023-Present	Member of CfA EDIB committee
2023-Present	Member of SKA SWGs: HI and extragalactic spectral lines
2023	JWST Cycle 2 External panelist - Stellar pops and ISM
2022-Present	SMA time allocation comittee member
2022-Present	ngVLA SWG3: Galaxies and Galaxy Evolution Member
2022-2023	HST Cycle 30 & 31 external reviewer
2022	SOC and LOC for Seeing the Future – A Conference in Honor of Alyssa Goodman
2021-2023	SMA Science Seminar Organizer
2021	Project advisor for the International Summer School on the Interstellar Medium of Galaxies
2021-Pressent	LOC, Instructor, and Lecturer for the 2021, 2022, and 2023 SMA Interferometry Schools
2021-Present	Member of American Astronomical Society
2018-Present	Referee for MNRAS, A&A, ApJ, PASP
2017-2019	Seminar and journal club organizer for UAlberta Astronomy Group
2017-2020	Student Member of Canadian Astronomical Society (CASCA)
2017	UAlberta Graduate Teaching and Learning Level 1 Certificate – 14 hr of workshops
2016-2017	UAlberta representative on the Canadian Astronomical Society Graduate Student Committee
2013-2014	UBC-Okanagan Physics representative on Quantitative Sciences Course Union Council

Software

I actively develop several python software packages for astronomical analyses. Below is a selection of my primary projects, and a full list is available on my github profile (github.com/e-koch).

- `TurbuStat` (https://turbustat.readthedocs.io): A common implementation of many observational turbulence statistics. (Koch et al. 2019).
- `FilFinder` (https://fil-finder.readthedocs.io): Morphological-based filament detection algorithm (Koch & Rosolowsky 2015).
- `spectral-cube` (https://spectral-cube.readthedocs.io): A library for operations on radio spectral-line data cubes, including handling for massive data (DOI: 10.5281/zenodo.2573901).
- `radio-beam` (https://github.com/radio-astro-tools/radio-beam): Tools for reading and manipulating two-dimensional Gaussian beams.

Teaching

2022-2023	*Harvard - Astronomy 191* SMA Project co-Instructor
2014-2018	*University of Alberta* Teaching Assistant for six Engineering Physics labs; Marker for 300 level Astronomy courses
2011-2013	*University of British Columbia, Okanagan* Teaching Assistant for eight 100 and 200 level Physics labs; Marker for three 100 level Physics & Astronomy courses

Outreach

2020 November	Astronomy Research Stories Cronyn Observatory Virtual Public Night
2019 October	Judge for NASA/CSA Space Apps Challenge Edmonton, Canada
2019 May	Frigid Fuel for Star Formation Pint of Science, Edmonton, Canada
2018 December	Unravelling Star Formation Royal Astronomical Society of Canada (Edmonton Centre)
2018 May	Viewing the Sky with Radio Interferometry Northern Alberta Radio Club (Edmonton)
2017 February	Blowing Bubbles in a Galaxy University of Alberta Observatory Public Observing Night
2016–2019	Over 100 Public Observing and Astronomy presentations for School & Community Groups University of Alberta Observatory

Refereed Publications

Link to my ADS library

50. den Brok et al.. *"Resolved low-J12CO excitation at 190 parsec resolution across NGC 2903 and NGC 3627."* 2023, MNRAS tmp 2956.

49. Sandstrom et al.. *"PHANGS-JWST First Results: Tracing the Diffuse Interstellar Medium with JWST Imaging of Polycyclic Aromatic Hydrocarbon Emission in Nearby Galaxies."* 2023, ApJL 944 L8.

48. Leroy et al.. *"PHANGS-JWST First Results: Mid-infrared Emission Traces Both Gas Column Density and Heating at 100 pc Scales."* 2023, ApJL 944 L9.

47. Leroy et al.. *"PHANGS-JWST First Results: A Global and Moderately Resolved View of Mid-infrared and CO Line Emission from Galaxies at the Start of the JWST Era."* 2023, ApJL 944 L10.

46. Thilker et al.. *"PHANGS-JWST First Results: The Dust Filament Network of NGC 628 and Its Relation to Star Formation Activity."* 2023, ApJL 944 L13.

45. Lee et al.. *"The PHANGS-JWST Treasury Survey: Star Formation, Feedback, and Dust Physics at High Angular Resolution in Nearby GalaxieS."* 2023, ApJL 944 L17.

44. Meidt et al.. *"PHANGS-JWST First Results: Interstellar Medium Structure on the Turbulent Jeans Scale in Four Disk Galaxies Observed by JWST and the Atacama Large Millimeter/submillimeter Array."* 2023, ApJL 944 L18.

43. Barnes et al.. *"PHANGS-JWST First Results: Multiwavelength View of Feedback-driven Bubbles (the Phantom Voids) across NGC 628."* 2023, ApJL 944 L22.

42. Watkins et al.. *"PHANGS-JWST First Results: A Statistical View on Bubble Evolution in NGC 628."* 2023, ApJL 944 L24.

41. Sun et al.. *"Star Formation Laws and Efficiencies across 80 Nearby Galaxies."* 2023, ApJL 945 L19.

40. Chiang et al.. *"Kpc-scale properties of dust temperature in terms of dust mass and star formation activity."* 2023, MNRAS 520 5506-5520.

39. Zakardjian et al.. *"The impact of HII regions on Giant Molecular Cloud properties in nearby galaxies sampled by PHANGS ALMA and MUSE."* 2023, ?.

38. Eibensteiner et al.. *"Kinematic analysis of the super-extended H I disk of the nearby spiral galaxy M 83."* 2023, A&Ap 675 A37.

37. Peltonen et al.. *"Clusters, clouds, and correlations: relating young clusters to giant molecular clouds in M33 and M31."* 2023, MNRAS 522 6137-6149.

36. den Brok et al.. *"Wide-field CO isotopologue emission and the CO-to-H$_{2}$ factor across the nearby spiral galaxy M101."* 2023, A&Ap 676 A93.

35. Smercina et al.. *"The Panchromatic Hubble Andromeda Treasury: Triangulum Extended Region (PHATTER). V. The Structure of M33 in Resolved Stellar Populations."* 2023, ApJ 957 3.

34. Lee et al.. *"The PHANGS-HST Survey: Physics at High Angular Resolution in Nearby Galaxies with the Hubble Space Telescope."* 2022, ApJS 258 10.

33. Williams et al.. *"The 2D metallicity distribution and mixing scales of nearby galaxies."* 2022, MNRAS 509 1303-1322.

32. Emsellem et al.. *"The PHANGS-MUSE survey. Probing the chemo-dynamical evolution of disc galaxies."* 2022, A&Ap 659 A191.

31. Leroy et al.. *"Low-J CO Line Ratios from Single-dish CO Mapping Surveys and PHANGS-ALMA."* 2022, ApJ 927 149.

30. Sarbadhicary et al.. *"Testing the Momentum-driven Supernova Feedback Paradigm in M31."* 2022, ApJ 928 54.

29. Pessa et al.. *"Variations in the {\ensuremath{\Sigma}}$_{SFR}$ {\ensuremath{-}} {\ensuremath{\Sigma}}$_{mol}$ {\ensuremath{-}} {\ensuremath{\Sigma}}$_{{\ensuremath{\star}}}$ plane across galactic environments in PHANGS galaxies."* 2022, A&Ap 663 A61.

28. Sun et al.. *"Molecular Cloud Populations in the Context of Their Host Galaxy Environments: A Multiwavelength Perspective."* 2022, AJ 164 43.

27. Collaboration et al.. *"The Astropy Project: Sustaining and Growing a Community-oriented Open-source Project and the Latest Major Release (v5.0) of the Core Package."* 2022, ApJ 935 167.

26. Tabatabaei et al.. *"Cloud-scale radio surveys of star formation and feedback in Triangulum Galaxy M 33: VLA observations."* 2022, MNRAS 517 2990-3007.

25. Smith et al.. *"The HASHTAG Project: The First Submillimeter Images of the Andromeda Galaxy from the Ground."* 2021, ApJS 257 52.

24. Cronin et al.. *"Local Environments of Low-redshift Supernovae."* 2021, ApJ 923 86.

23. Zucker et al.. *"On the Three-dimensional Structure of Local Molecular Clouds."* 2021, ApJ 919 35.

22. Leroy et al.. *"PHANGS-ALMA Data Processing and Pipeline."* 2021, ApJS 255 19.

21. Leroy et al.. *"PHANGS-ALMA: Arcsecond CO(2-1) Imaging of Nearby Star-Forming Galaxies."* 2021, ApJS 257 43.

20. Pessa et al.. *"Star formation scaling relations at 100 pc from PHANGS: Impact of completeness and spatial scale."* 2021, A&A 650 A134.

19. Koch et al.. *"A lack of constraints on the cold opaque H I mass: H I spectra in M31 and M33 prefer multicomponent models over a single cold opaque component."* 2021, MNRAS 504 1801-1824.

18. Chastenet et al.. *"Benchmarking Dust Emission Models in M101."* 2021, ApJ 912 103.

17. Williams et al.. *"The Panchromatic Hubble Andromeda Treasury: Triangulum Extended Region (PHATTER). I. Ultraviolet to Infrared Photometry of 22 Million Stars in M33."* 2021, ApJS 253 53.

16. Chiang et al.. *"Resolving the Dust-to-Metals Ratio and CO-to-H$_{2}$ Conversion Factor in the Nearby Universe."* 2021, ApJ 907 29.

15. Eden et al.. *"CHIMPS2: survey description and ^{12}CO emission in the Galactic Centre."* 2020, MNRAS 498 5936-5951.

14. Krieger et al.. *"The turbulent gas structure in the centers of NGC253 and the Milky Way."* 2020, ApJ 899 158.

13. Henshaw et al.. *"Ubiquitous velocity fluctuations throughout the molecular interstellar medium."* 2020, NatAs 4 1064H.

12. Heinke et al.. *"The X-ray Emissivity of Low-Density Stellar Populations."* 2020, MNRAS 492 5684.

11. Koch et al.. *"Spatial Power Spectra of Dust across the Local Group: No Constraint on Disc Scale Height."* 2020, MNRAS 492 2663.

10. Koch et al.. *"TurbuStat: Turbulence Statistics in Python."* 2019, AJ 158 1.

9. Koch et al.. *"Relationship between the Line Width of the Atomic and Molecular ISM in M33."* 2019, MNRAS 485 2324.

8. Koch et al.. *"Kinematics of the atomic ISM in M33 on 80 pc scales."* 2018, MNRAS 479 2505-2533.

7. Boyden et al.. *"Assessing the Impact of Astrochemistry on Molecular Cloud Turbulence Statistics."* 2018, ApJ 860 157.

6. Koch et al.. *"Identifying Tools for Comparing Simulations of Star Formation."* 2017, MNRAS 471 1506-1530.

5. Lin et al.. *"Cloud Structure of Three Galactic Infrared Dark Star-forming Regions from Combining Ground- and Space-based Bolometric Observations."* 2017, ApJ 840 22.

4. Boyden et al.. *"An Exploration of the Statistical Signatures of Stellar Feedback."* 2016, ApJ 833 233.

3. Lin et al.. *"Cloud Structure of Galactic OB Cluster-forming Regions from Combining Ground and Space-based Bolometric Observations."* 2016, ApJ 828 32.

2. Koch & Rosolowsky. *"Filament Identification through Mathematical Morphology."* 2015, MNRAS 452 3435-3450.

1. Koch et al.. *"The 2013 outburst of a transient very faint X-ray binary, 23 arcsec from Sgr A$*$."* 2014, MNRAS 442 372-381.

Submitted

4. Hassani, Rosolowsky, Koch. *"The PHANGS-AstroSat Atlas of Nearby Star Forming Galaxies."* 2023, ApJ submitted.

3. Peltonen et al.. *"JWST Reveals Star Formation Across a Spiral Arm in M33."* 2023, MNRAS submitted.

2. Sarbadhicary et al.. *"Where do stars explode in the ISM? The distribution of dense gas around massive stars and supernova remnants in M33."* 2023, ApJ submitted.

1. Chiang et al.. *"Resolved Maps of the CO-to-H2 Conversion Factor in 41 Nearby Galaxies."* 2023, ApJ submitted.

Non-Refereed Publications

6. Williams et al.. *"PRIMA General Observer Science Book: Linking magnetic fields from cloud to galactic scales."* 2023, arXiv:2310.20572, 333-337.

5. Dey et al.. *"RomAndromeda: The Roman Survey of the Andromeda Halo."* 2023, ?.

4. Koch et al.. *"The Multi-Tracer Era for Molecular Cloud Studies in Nearby Galaxies with the wSMA."* 2019, Center for Astrophysics Strategic Plan White Papers.

3. Rosolowsky et al.. *"Star Formation in the Galactic Ecosystem."* 2019, Proceedings of the Canadian Long Range Plan for Astronomy and Astrophysics White Papers, 17.

2. Koch, Rosolowsky, Leroy. *"Radio-line Broadening from a Spectral Response Function."* 2018, RNAAS 2 220.

1. Koch et al.. *"Detection of an OH 1665 MHz Maser in M33."* 2018, RNAAS 2 24.

Observing Proposals (as PI)

2023 — *Linking the Resolved Filamentary Molecular ISM to Massive Star Formation across M33*
ALMA — 40 hr

2022 — *Combining the SMA and JWST to confirm a young massive cluster progenitor in M33 (DDT)*
Submillimeter Array — 20 hr

2022 — *The resolved molecular gas in a nascent tidal dwarf galaxy (DDT)*
Submillimeter Array — 5 hr

2022 — *A resolved molecular gas survey of the edge-on galaxy NGC 891*
Submillimeter Array — 35 hr

2022 — *Resolving the molecular gas fuelling IC 10's starburst on 2.5 pc scales*
Submillimeter Array — 35 hr

2022 — *Linking the Resolved Filamentary Molecular ISM to Massive Star Formation across M33*
ALMA — 40 hr

2021 — *A Complete Molecular Gas Map of M33 with the ACA*
ALMA — 108 hr

2021 — *A resolved molecular gas survey of the edge-on galaxy NGC 891*
Submillimeter Array — 41 hr

2021 — *Resolving the molecular gas fuelling IC 10's starburst on 2.5 pc scales*
Submillimeter Array — 35 hr

2021 — *Completion of Dense Gas Formation through a Spiral Arm*
Green Bank Telescope — 12 hr

2019 — *Tracing accretion onto a YMC progenitor candidate in M33*
ALMA — 5 hr

2019 — *Dense Gas Formation through a Spiral Arm*
Green Bank Telescope — 41 hr

2017 — *Tracing the CNM and Feedback-driven holes across a Galactic Disk*
Very Large Array — 84 hr

2016 — *Feedback in a Giant HII Region: Impact on the Atomic and Molecular Medium*
Very Large Array — 48 hr

2016 — *Tracing the Atomic and Molecular Medium Across a Spiral Arm*
Very Large Array — 48 hr

Observing Proposals (as co-I)

2023 — *Radio emission from an ultra-luminous X-ray source: compact or extended jets?*
VLBA — PI: Arash Bahramian — 6 hr

2023 — *Modern 21-cm Observations for Nearby Galaxies with Upcoming JWST Observations*
VLA — PI: Karin Sandstrom — 14 hr

2023 — *DDT: 21-cm HI Observations of "Mist" in the Galactic CGM: A pilot survey*
VLA — PI: Jiwon Han — 14 hr

2023 *PHANGS AstroSat-Dwarfs: Star Formation in Low-Metallicity Medium*
Astrosat — PI: Hamid Hassani — 56 ks

2023 *PHANGS AstroSat-Color: Star Formation and dust attenuation properties of star-forming galaxies*
Astrosat — PI: Hamid Hassani — 43.2 ks

2023 *Astrosat FUV Mapping of the Local Volume*
Astrosat — PI: Erik Rosolowsky — 18 ks

2023 *Resolving gas, star formation and feedback in nearby galaxies with an HST+JWST+ALMA Treasury*
HST — PI: David Thilker — 169 orbits

2023 *A JWST Census of the Local Galaxy Population: Anchoring the Physics of the Matter Cycle*
JWST — PI: Adam Leroy — 148.9 hr

2023 *Unmixing the ISM: Identifying Dominant Physical Effects with JWST/MIRI Mapping of M33*
JWST — PI: Erik Rosolowsky — 10.2 hr

2023 *Beholding star cluster formation, feedback, and evolution with the 'Evil Eye'*
JWST — PI: Jiayi Sun — 3.2 hr

2023 *Resolving HII Regions and ISM Structure Across the Milky Way Analog NGC 253*
JWST — PI: Adam Leroy — 22.6 hr

2022 *e-MERLIN observations of the first JWST-detected supernova remnants in M33*
e-MERLIN — PI: Sumit Sarbadhicary — 48 hr

2022 *Modern 21-cm Observations for Nearby Galaxies with Upcoming JWST Observations*
VLA — PI: Karin Sandstrom — 122 hr

2022 *Accreting Massive Black Holes in Young Star Clusters*
VLA — PI: Kristen Dage — 10 hr

2022 *Modern 21-cm Observations for Nearby Galaxies with Upcoming JWST Observations*
VLA — PI: Karin Sandstrom — 35 hr

2022 *Connecting Gas and Dust: Mapping HI in 7 Herschel Galaxies*
VLA — PI: I-Da Chiang — 28 hr

2022 *A Complete Picture of Gas, Dust, and Stars in Ten of the Best-Studied MeerKAT-Visible Galaxies*
MeerKAT — PI: D.J. Pisano — 60 hr

2022 *Untangling the molecular gas physics in the center of the starburst galaxy NGC 6946*
Submillimeter Array — PI: Cosima Eibensteiner — 25 hr

2022 *Observations of the cold molecular gas in the barred spiral galaxy HE0045-2145*
Submillimeter Array — PI: Giovanni Fazio — 8 hr

2022 *A panoramic study of low-density star formation in XUV disk galaxy NGC 3621: Testing for environmental dependency of clusters, OB associations, and the stellar hierarchy*
HST — PI: David Thilker — 24 orbits

2021 *Quantifying the relation between exquisitely detailed dust extinction features and molecular gas using HST and ALMA*
HST — PI: David Thilker — None

2021 *The Beautiful and Enigmatic Spiral Galaxy NGC 7331*
Submillimeter Array — PI: Glen Petitpas — 18 hr

2020 *A VLA Local Group Legacy Survey - X-Proposal*
JWST — PI: Adam Leroy — 1820 hr

2020 *SOFIA GREAT Mapping of the LMC Northern Molecular Ridge*
VLT/MUSE — PI: Alberto Bolatto — 12 hr

2020 *The First Resolved View of Individual Star Formation Across a Spiral Arm*
JWST — PI: Erik Rosolowsky — 23 hr

2020 *A Complete Picture of Gas, Dust, and Stars in Six of the Best-Studied MeerKAT-Visible Galaxies*
MeerKAT — PI: Dyas Utomo — 48 hr

2019 *Turbulence in Central Molecular Zone clouds*

Very Large Array — PI: Jonathan Henshaw — 24 hr

2019 *Surveying Triangulum with the ACA: A Key Perspective on Molecular Clouds at High Resolution*
ALMA — PI: Erik Rosolowsky — 17 hr

2019 *Testing Accretion-Driven Turbulence in Central Molecular Zone Clouds*
Green Bank Telescope — PI: Jonathan Henshaw — 2.5 hr

2017 *Resolving the Cloud-Cluster Ecosystem in M33*
ALMA — PI: Erik Rosolowsky — 22 hr

2015 *Tracing Cloud Formation in a Spiral Arm*
NOEMA — PI: Jonathan Braine, Erik Rosolowsky — 16 hr