Rebecca C. Levy

STScI Postdoctoral Fellow

Space Telescope Science Institute 3700 San Martin Dr. Baltimore, MD 21218 rlevy@stsci.edu rlevy.astro@gmail.com https://rclevy.github.io

Research Interests.

- The role of stellar feedback in shaping the interstellar medium and galaxy evolution
- Multiphase gas kinematics and dynamics in nearby galaxies
- Young, embedded star clusters and galaxy centers
- Multiwavelength spectroscopic observations: radio, (sub-)millimeter, near-far infrared, optical IFU

Experience _	
Sept 2024 – present	STScI Postdoctoral Fellow Space Telescope Science Institute, Baltimore, MD
Oct 2021 – Sept 2024	NSF Astronomy & Astrophysics Postdoctoral Fellow Dept. of Astronomy/Steward Observatory, University of Arizona, Tucson, AZ
Aug 2015 – Sept 2021	Graduate Research Assistant Dept. of Astronomy, University of Maryland, College Park, MD
Aug 2019 – May 2020	Graduate Teaching/Lab Assistant Dept. of Astronomy, University of Maryland, College Park, MD
Education	
Dec 2021	Ph.D. in Astronomy University of Maryland, College Park, MD "Investigating Star Formation Feedback through Gas Kinematics in Nearby Galaxies" Advisor: Prof. Alberto Bolatto
Dec 2017	M.S. in Astronomy University of Maryland, College Park, MD "The EDGE-CALIFA Survey: Molecular and Ionized Gas Kinematics" Advisor: Prof. Alberto Bolatto
May 2015	B.S. in Astronomy, B.S. in Physics University of Arizona, Tucson, AZ Cum Laude with Honors

Publication Summary _

Total: 46 papers - 1206 citations - h-index = 19

First-authored & supervised: 8 papers — 197 citations

A full publication list can be found at the end

First-Authored & Supervised Publications _

[8] "JWST Observations of Starbursts: Massive Star Clusters in the Central Starburst of M82" Levy, R. C., et al. 2024, ApJL, 973, 55

[7] "Milky Way and Nearby Galaxies Science with the SALTUS Space Observatory" Levy, R. C., et al. 2024, JATIS, 10, 042304

- [6] "[CII] Spectral Mapping of the Galactic Wind and Starbursting Disk of M82 with SOFIA" Levy, R. C., et al. 2023, ApJ, 958, 109
- [5] "The Morpho-Kinematic Architecture of Super Star Clusters in the Center of NGC 253" Levy, R. C., et al. 2022, ApJ, 935, 19
- [4] "Cuspy Dark Matter Density Profiles in Massive Dwarf Galaxies" Cooke, L. H., Levy, R. C., et al. 2022, MNRAS, 512, 1012
- [3] "Outflows from Super Star Clusters in the Central Starburst of NGC 253" Levy, R. C., et al. 2021, ApJ, 912, 4
- [2] "The EDGE-CALIFA Survey: Evidence for Pervasive Extraplanar Diffuse Ionized Gas in Nearby Edge-On Galaxies"
 Levy, R. C., et al. 2019, ApJ, 882, 84
- [1] "The EDGE-CALIFA Survey: Molecular and Ionized Gas Kinematics in Nearby Galaxies" Levy, R. C., et al. 2018, ApJ, 860, 92

Honors & Awa	ards		
2021	IAU PhD P	rize Honorable Mention	Div. H Interstellar Matter & Local Universe
2020	Andrew S. V Excellence is	Wilson Prize for n Research	U. Maryland, Dept. of Astronomy
2020	Philip E. An Outstanding	ngerhofer g Teaching Assistant Award	U. Maryland, Dept. of Astronomy
2020	Prize for Ex	cellence in Mentoring	U. Maryland, Dept. of Astronomy
2018 - 2019	Outstanding Research Assistant Award		U. Maryland, Graduate School
2016	Graduate R Honorable M	esearch Fellowship Program Mention	National Science Foundation
Grants Award	led		
2022	\$44,473	NSF	"21st Annual Symposium of the NSF Astronomy and Astrophysics Postdoctoral Fellows"
2021	\$310,000	NSF AAPF	"A Multiscale View of the Effects of Stellar Feedback in the Local Universe"
2019	\$35,000	NRAO	Student Observing Support for ALMA proposal 2019.1.00473.S (PI: R. Levy)
2019	\$90,000	SOFIA/USRA/NASA	"The GREAT Cigar: Mapping [CII] in the Disk and Outflow of M82"
2019	\$225	U. Maryland Grad. School	International Conference Student Support Award
2019	\$600	U. Maryland Grad. School	The Jacob K. Goldhaber Travel Grant
2017	\$262	U. Maryland Grad. School	International Conference Student Support Award
2017	\$600	U. Maryland Grad. School	The Jacob K. Goldhaber Travel Grant

Oct 2023 Instituto de Astrofísica de Andalucía Colloquium (Virtual, Rec Oct 2023 Radboud U. Astronomy Colloquium (Virtual) Apr 2023 The Galactic Centre Workshop — Review Talk Granada, Sp	ain
Oct 2023 Radboud U. Astronomy Colloquium (Virtual) Apr 2023 The Galactic Centre Workshop — Review Talk Granada, Sp	ain
Apr 2023 The Galactic Centre Workshop — Review Talk Granada, Sp	
Apr 2023 Hamburg Observatory Colloquium (Virtual)	C
	C
Apr 2023 Michigan State U. Astronomy Seminar (Virtual)	
Oct 2022 U. Kansas Physics and Astronomy Department Colloquium Lawrence, K	
Oct 2019 The Warm Ionized Medium (WIM) Workshop — Review Talk Green Bank,	WV
Invited Talks	
Oct 2024 CfA Seminar Cambridge, I	MA
Apr 2024 UW-Madison Monday Science Seminar (Virtual)	
Dec 2023 ALMA at Ten Years: Past, Present and Future Puerto Varas	s, Chile
July 2021 The Grande Cascade (Virtual)	
May 2021 Cornell Galaxy Lunch Seminar (Virtual)	
Feb 2021 Princeton Star Formation/ISM Rendezvous (Virtual)	
Nov 2020 Ringberg Workshop on "How does small-scale physics drive (Virtual)	
galaxy evolution?" Virtual Seminar Oct 2020 CCAPP Seminar (Virtual)	
Selected Contributed Talks	
Nov 2024 Follow the Monarchs: A Journey to Explore the Cosmos at Morelia, Mex (Sub)milliarcsecond Scales with the ngVLA	cico
May 2024 STScI Low Density Universe Meeting Baltimore, M	ID
Jan 2024 The 243 st Meeting of the American Astronomical Society New Orleans	, LA
Jan 2024 2024 NSF-AST Fellows Symposium New Orleans	, LA
Jan 2023 The 241 st Meeting of the American Astronomical Society Seattle, WA	
Sept 2022 MPIA Galaxy Coffee Seminar Heidelberg, G	
Sept 2022 Puzzles of the Galactic Centre Heidelberg, C	Germany
Aug 2022 UVa/ NRAO Astronomy Lunch Talk Series (Virtual)	
July 2022 A Holistic View of Stellar Feedback and Galaxy Evolution Ascona, Swit	
June 2022 The 240 th Meeting of the American Astronomical Society Pasadena, C.	A
May 2022 Ringberg Virtual Seminar Series (Virtual)	
Apr 2022 NOIRLab FLASH Talk (Virtual) Jan 2022 NSF AAPF Fellows Symposium (Virtual)	
Jan 2022 VSF AAPF Fellows Symposium (Virtual) Oct 2021 Caltech Astronomy Tea Talk (Virtual)	
Nov 2020 UVa/ NRAO Astronomy Lunch Talk Series (Virtual)	
Nov 2020 Steward/NOAO Galaxy Group Seminar (Virtual) Nov 2020 UT Austin ISM Seminar (Virtual)	
Oct 2020 UCLA Astronomy & Physics Lunch Talk Series (Virtual)	
Oct 2020 STScI Galaxy Journal Club (Virtual)	
Sept 2020 SMA Seminar (Virtual)	
Oct 2019 ALMA 2019: Science Results and Cross-Facility Synergies Cagliari, Ital	y

Apr 2024	Quoted in NASA Press Release "NASA's Webb Probes an Extreme Starburst Galaxy" Cross-posted by ESA, Webb Telescope, Space.com, U. Arizona, U. Maryland, MPIA, etc.
$\mathrm{Aug}\ 2022$	Results from Levy et al. 2022, ApJ cited in the Wikipedia page for NGC253
May 2021	NRAO eNews Vol. 14, Issue 5: "Outflows from Super Star Clusters in NGC253"
Apr 2021	U. Maryland College of Computer, Mathematical, and Natural Sciences News: "Astronomy Ph.D. Student Awarded Prestigious NSF Postdoctoral Fellowship"

Students	Mentored
DUUUUUS	memorea

Keaton Donaghue	Oct 2022 –	Primary mentor was Prof. Elisabeth Mills Publication: Donaghue, Mills, Levy, et al. in prep. Undergrad at U. Kansas — Now: NSF GRFP at U. Maryland
Lauren Cooke	May 2020, Summer 2019	Publication: Cooke, Levy, et al., 2022, MNRAS, 512, 1012 High school senior — Now: Master's student at Harvard U.
Brandon Davey	Jan 2020	GRAD-MAP Winter Workshop Publication: Cooke, Levy, et al. (incl. Davey) 2022, MNRAS, 512, 1012 Undergrad of U. of South Florida — Now: Quality Technician
Nathnael Feleke	Summer 2019, Jan 2019	GRAD-MAP Summer Scholars & Winter Workshop Summer Scholars co-mentors: Prof. Alberto Bolatto, Prof. Stuart Vogel, Dr. Peter Teuben Undergrad at Montgomery College - Takoma Park — Now: Undergrad at Florida Institute of Technology
Aurora Cid	Jan 2018	GRAD-MAP Winter Workshop Undergrad at CUNY College of Staten Island
Natalia Ramírez Vega	Jan 2017	GRAD-MAP Winter Workshop Undergrad at U. Costa Rica & Fidélitas U. — Now: Data Engineer

Selected Observational Experience _____

ALMA		
Cycle 11	PI	"Unveiling Embedded Star Formation and Feedback in the Prototypical Merger-Starburst VV 114"
Cycle 10 Cycle 9 Cycle 8 ACA	Co-I on 6 projects Co-I on 10 projects Co-I on 3 projects PI	"Complete Molecular Gas Coverage in Nearby Low-Luminosity AGN "
Cycle 8 Cycle 7 ACA Cycle 7	Co-I on 3 projects Co-I on 1 project PI	"Ionized Gas, Radiation Field, Masses, and Dust Temperature in Forming Massive Star Clusters in the NGC253 Starburst" Rank: A — Awarded 24.1 hours
Cycle 7 Cycle 6 Cycle 4	Co-I on 1 project Co-I on 2 projects Co-I on 1 project	

GBT	Co-I	"CDT EDCE: A Democratative Curvey of the x-0 Universe with
2021b	Co-I PI: A. Bolatto	"GBT EDGE: A Representative Survey of the z=0 Universe with Full IFU Spectroscopy" Awarded 300 hours
2021a	Co-I PI: K. Emig	"Feedback from Diffuse Ionized Gas in the Cygnus X Star-Forming Region"
HST		
Cycle 32	Co-I PI: D. Thilker	"Decoding stellar feedback in action with an HST+MUSE+JWST full-disk survey of starburst galaxy prototype NGC 253"
Cycle 31	Co-I PI: D. Thilker	"Resolving gas, star formation and feedback in nearby galaxies with an HST+JWST+ALMA Treasury" Awarded 169 primary orbits, 74 parallel orbits
NOEMA _		
2022a	Co-I PI: D. Colombo	"Resolving the Star Formation Quenching Mechanisms of Green Valley Galaxies"
2021b	Co-I PI: F. Walter	"Dense Molecular Gas in the Outflow of M82"
JWST		
Cycle 3	Co-I PI: E. Schinnerer	"Unveiling the physics that govern massive star-formation in extragalactic Central Molecular Zones (eCMZs)"
Cycle 2	Co-I PI: A. Leroy	"A JWST Census of the Local Galaxy Population: Anchoring the Physics of the Matter Cycle" Awarded 109.4 hours
Cycle 2	Co-I PI: J.Sun	"Beholding star cluster formation, feedback, and evolution with the 'Evil Eye'"
Cycle 2	Co-I PI: A. Leroy	"Resolving HII Regions and ISM Structure Across the Milky Way Analog NGC 253"
Cycle 1	Co-I* PI: A. Bolatto	"Dissecting the Prototypical Starbursts NGC 253 and M 82 and Their Cool Galactic Winds" Awarded 42.8 hours *I led the technical planning and justification for this proposal.
Cycle 1	Co-I PI: I. De Looze	"Structure Formation and Baryonic Cycling in the Edge-on Galaxy NGC891"
LMT		
2021-S1	Co-I PI: S. Sánchez	"The Connection between Molecular Gas Density, Star -formation and Quenching"
SMA		
2018b	Co-I	"Searching for Embedded Super Star Clusters in M82"

PI: M. Jiménez Donaire

SOFIA		
Cycle 8/7	PI	"The GREAT Cigar: Mapping [CII] in the Disk and Outflow of M82" Rank: A/B — Awarded 9 hours and \$90,000
Cycle 8/7	Co-I PI: A. Bolatto	"Studying the Energetics of Galaxies with Velocity-Resolved "[CII] Observations in an IFU-Selected Galaxy Sample"
Cycle 7	Co-I PI: J. Spilker	"Are Galactic Winds Metal-Enriched Compared to their Host Galaxies?"
VLA		
2024b	Co-I PI: J. Sun	"A Census of Young Massive Clusters and Supernova Remnants in a Nuclear Starburst"
2022b	Co-I PI: E. Mills	"JACKS: JVLA Ammonia CMZ K-band Survey"
2022b	Co-I PI: K. Emig	"Recombination Lines from Diffuse Ionized Gas in the M82 Starburst"
2022a	Co-I PI: E. Mills	"High-Resolution Thermal Continuum Imaging of the M82 Starburst"
2022a	Co-I PI: K. Emig	"Diffuse Ionized Gas in the Central Starburst of NGC253"

Professional Service & Memberships _ Referee for ApJ, MNRAS, A&A Meetings organized Spatio-spectral Modeling of Interferometric Data: Preparing for the Wideband Era (SOC), May 2024 2023 NSF AAPF Symposium (co-organizer), Jan 2023 The Warm Ionized Medium Workshop (SOC), October 2019 Steward Obs. Science Coffee arXiv discussion, 2022 - 2023 Seminars organized UMD Dept. of Astronomy weekly arXiv discussion, 2019 – 2020 Review panels NASA Review Panel - Executive Secretary NSF Review Panel HST TAC Committee service UMD Dept. of Astronomy Faculty Search Committee, Spring 2020 UMD Dept. of Astronomy Graduate Student Council Rep., 2017 – 2020 Collaboration membership ACES/JACKS, Apr 2023 PHANGS, Dec 2022 SALTUS Extragalactic Science Working Group (Lead: Milky Way & Nearby Galaxies), Apr 2022

American Astronomical Society, Full Member

DEGAS, Jan 2018

Society membership

EDGE-CALIFA, Aug 2015

Green Bank Telescope (remote), 2018 –

Certified to operate

Nov 2022

2016 - 2020

certified to operate	Green Bank Telescope (Temote), 2010	
Teaching Experience _		
Apr 2023	Guest Lecturer — Translational Science Communication ACBS 493/ECOL 499/GEOS 393/NSCS 393: The Bio/Diversity Project Internship Program	U. Arizona
Spring 2020	Teaching and Lab Assistant Astronomy 121: Introductory Astrophysics II — Stars and Beyond	U. Maryland
Fall 2019	Teaching Assistant Astronomy 120: Introductory Astrophysics — Solar System	U. Maryland
Sept 2018	Guest Lecturer — LaTeX Examples with Overleaf Astronomy 695: First Year Seminar	U. Maryland
Spring 2014	Preceptor Physics 141: Introductory Mechanics	U. Arizona
Spring 2013	Undergraduate Teaching Coordinator Math 100/100AX: Prep. for College Algebra	U. Arizona
Fall 2012	Undergraduate Teaching Coordinator Math 100/100AX: Prep. for College Algebra	U. Arizona
Spring 2012	Lead Undergraduate Teaching Assistant Math 100/100AX: Prep. for College Algebra	U. Arizona
Fall 2011	Undergraduate Teaching Assistant Math 100/100AX: Prep. for College Algebra	U. Arizona
Selected Outreach Exp	perience	
Aug 2023 – Sept 2024	Imagine Your STEM Future Curriculum Development Developed and implemented a hands-on astronomy lesson for the Women in Science and Engineering Imagine Your Strongram. Materials for my lesson about the phases of the Mond in this Google Drive repository.	and activity FEM Future
Mar 2024 Feb 2023	Imagine Your STEM Future Guest Lecture Guest lecturer for the Women in Science and Engineering In STEM Future program.	nagine Your
Dec 2022	Tucson Amateur Astronomy Association Lecture "A JWST View of Starburst Galaxies: Sweet Data Coming S	oon!"

GRAD-MAP (Graduate Resources Advancing Diversity with Maryland Astronomy and Physics)

- Research mentor for four students over four years during the week-long Winter Workshop.
- Co-mentor for one student during the Summer Scholars program.

"A JWST View of Starburst Galaxies: Sweet Data Coming Soon!"

Steward Observatory Public Evening Lecture Series

• Helped plan Winter Workshops and Summer Scholars programs.

- Developed and led professional development sessions during the Winter Workshops and Summer Scholars programs.
- Co-organized and led two weekend trips to the Green Bank Observatory.
- Helped organize and run the annual Open House, including helping to develop the inaugural Open House.
- Attended Collaborative Seminar Series at local institutions.

Aug 2013 – July 2015, Apr 2016, June 2016

NOIRLab Education and Public Outreach Department

- Key developer of all aspects of the United Nations sanctioned International Year of Light 2015 Quality Lighting Teaching Kit (cornerstone project), including activity creation and development, materials sourcing, instructional guide and media writing, state and national educational standards verification, and classroom testing. These kits have been disseminated internationally and are available for retail sale.
- Guest lecturer and support staff for two Colors of Nature Summer Academies in Tucson, AZ. This NSF-funded educational research study investigated the development of middle-school girls' identities as scientists as they explored the intersections of art and science (STEAM) in a two-week summer academy.
- Worked extensively with the public, K-12 students, K-12 teachers, and members of the Tohono O'odham Nation.
- Developed, planned, led, and/or supported 1–2 outreach activities per week (on average) focused on astronomy and dark skies education.
- Developed, planned, led, and/or supported local, national, and international teacher training workshops and outreach events (e.g., at AAS, AGU, and IAU meetings, US Science and Engineering Festival).
- Involvement in the Globe at Night citizen-science campaign including website design, social media, development of materials, newsletter writing, podcast writing and recording, and facilitating translation of materials.
- Hired, trained, mentored, and evaluated other student employees.

Link to current publications in ADS

- [46] Rodríguez, M. J., Lee, J. C., Indebetouw, R., Whitmore, B. C., Maschmann, D., Williams, T. G., Chandar, R., Barnes, A. T., Gnedin, O. Y., Sandstrom, K. M., Rosolowsky, E., Sun, J., Klessen, R. S., Groves, B., Wofford, A., Boquien, M., Dale, D. A., Leroy, A. K., Thilker, D. A., Kim, H., Levy, R. C., Sarbadhicary, S. K., Ubeda, L., Larson, K. L., Johnson, K. E., Bigiel, F., Hassani, H., Grasha, K. 2024, ApJ, submitted, "Tracing the earliest stages of star and cluster formation in 19 nearby galaxies with PHANGS-JWST and HST: compact 3.3 μm PAH emitters and their relation to the optical census of star clusters", arXiv: 2412.07862.
- [45] Chin, G., Anderson, C. M., Bergner, J., Biver, N., Bjoraker, G. L., Cavalie, T., DiSanti, M., Gao, J.-R., Hartogh, P., Harding, L. K., Hu, Q., Kim, D., Kulesa, C., de Lange, G., Leisawitz, D. T., Levy, R. C., Lichtenberger, A., Marrone, D. P., Najita, J., Newswander, T., Rieke, G. H., Rigopoulou, D., Roefsema, P., Roth, N. X., Schwarz, K., Shirley, Y., Spilker, J., Stark, A. A., van der Tak, F., Takashima, Y., Tielens, A., Willner, D. J., Wollack, E. J., Yates, S., Young, E., Walker, C. K. 2024, JATIS, 10, accepted, "Single Aperture Large Telescope for Universe Studies (SALTUS): Science Overview", arXiv: 2405.12829.

[44] Lenkić, L., Fisher, D. B., Bolatto, A. D., Teuben, P. J., Levy, R. C., Sun, J., Herrera-Camus, R., Glazebrook, K., Obreschkow, D., Abraham, R. 2024, ApJ, 976, 88, "Disk Turbulence and Star Formation Regulation in High-z Main-sequence Analog Galaxies", doi: 10.3847/1538-4357/ad758c.

- [43] Barrera-Ballesteros, J. K., Cruz-González, I., Colombo, D., Sánchez, S. F., Levy, R. C., Villanueva, V., Wong, T., Bolatto, A. D., Alanso Hernández, D. 2024, ApJ, accepted, "Central vs Global Quenching traced by the APEX-CALIFA survey".
- [42] Chastenet, J., De Looze, I., Relaño, M., Dale, D. A., Williams, T. G., Bianchi, S., Xilouris, E. M., Baes, M., Bolatto, A. D., Boyer, M. L., Casasola, V., Clark, C. J. R., Fraternali, F., Fritz, J., Galliano, F., Glover, S. C. O., Gordon, K. D., Hirashita, H., Kennicutt, R., Nagamine, K., Kirchschlager, F., Klessen, R. S., Koch, E. W., Levy, R. C., McCallum, L., Madden, S. C., McLeod, A. F., Meidt, S. E., Mosenkov, A. V., Richie, H. M., Saintonge, A., Sandstrom, K. M., Schneider, E. E., Sivkova, E. E., Smith, J. D. T., Smith, M. W. L., van der Wel, A., Walch, S., Walter, F., Wood, K. 2024, A&A, 690, A348, "JWST MIRI and NIRCam observations of NGC 891 and its circumgalactic medium", doi: 10.1051/0004-6361/202451033.
- [41] Laudage, S., Eibensteiner, C., Bigiel, F., Leroy, A. K., Meidt, S., Schinnerer, E., de Blok, W. J. G., Querejeta, M., Stuber, S., Colombo, D., Rosolowsky, E., Pisano, D. J., Utomo, D., Levy, R. C., Klessen, R., Cao, Y., Koch, E. W., Kurapati, S., Sanchez-Blazquez, P., Neumann, J., Neumann, L., Pan, H.-A., Williams, T. G. 2024, A&A, 690, A169, "Neutral atomic and molecular gas dynamics in the nearby spiral galaxies NGC 1512, NGC 4535, and NGC 7496", doi: 10.1051/0004-6361/202450265.
- [40] Levy, R. C., Bolatto, A. D., Mayya, D., Cuevas-Otahola, B., Tarantino, E., Boyer, M. L., Boogaard, L. A., Böker, T., Cronin, S. A., Dale, D. A., Donaghue, K., Emig, K. L., Fisher, D. B., Glover, S. C. O., Herrera-Camus, R., Jiménez-Donaire, M. J., Klessen, R. S., Lenkić, L., Leroy, A. K., De Looze, I., Meier, D. S., Mills, E. A. C., Ott, J., Relaño, M., Veilleux, S., Villanueva, V., Walter, F., van der Werf, P. P. 2024, ApJL, 973, L55, "JWST Observations of Starbursts: Massive Star Clusters in the Central Starburst of M82", doi: 10.3847/2041-8213/ad7af3.
- [39] Levy, R. C., Tielens, A., Spilker, J., Marrone, D. P., Narayanan, D., Walker, C. K. 2024, JATIS, 10, 042304, "Milky Way and Nearby Galaxies Science with the SALTUS Space Observatory", doi: 10.1117/1.JATIS.10.4.042304.
- [38] Spilker, J., Levy, R. C., Marrone, D., Alberts, S., Chapman, S. C., Dickinson, M., Egami, E., Endsley, R., Narayanan, D., Rieke, G., Stark, A. A., Tielens, A., Walker, C. K. 2024, JATIS, 10, 042305, "High-Redshift Extragalactic Science with the Single Aperture Large Telescope for Universe Studies (SALTUS) Space Observatory", doi: 10.1117/1.JATIS.10.4.042305.
- [37] Maschmann, D., Lee, J. C., Thilker, D. A., Whitmore, B. C., Deger, S., Boquien, M., Chandar, R., Dale, D. A., Wofford, A., Hannon, S., Larson, K. L., Leroy, A. K., Schinnerer, E., Rosolowsky, E., Úbeda, L., Barnes, A. T., Emsellem, E., Grasha, K., Groves, B., Indebetouw, R., Kim, H., Klessen, R. S., Kreckel, K., Levy, R. C., Pinna, F., Rodríguez, M. J., Tian, Q., Williams, T. G. 2024, ApJS, 273, 14, "PHANGS-HST Catalogs for ~100,000 Star Clusters and Compact Associations in 38 Galaxies. I. Observed Properties", doi: 10.3847/1538-4365/ad3cd3.
- [36] Sun, J., He, H., Batschkun, K., Levy, R. C., Emig, K., Rodríguez, M. J., Hassani, H., Leroy, A. K., Schinnerer, E., Ostriker, E. C., Wilson, C. D., Bolatto, A. D., Mills, E. A. C., Rosolowsky, E., Lee, J. C., Dale, D. A., Larson, K. L., Thilker, D. A., Ubeda, L., Whitmore, B. C., Williams, T. G., Barnes, A. T., Bigiel, F., Chevance, M., Glover, S. C. O., Grasha, K., Groves, B., Henshaw, J. D., Indebetouw, R., Jiménez-Donaire, M. J., Klessen, R. S., Koch, E. W., Liu, D., Mathur, S., Meidt, S., Menon, S. H., Neumann, J., Pinna, F., Querejeta, M., Sormani, M. C., Tress, R. G. 2024, ApJ, 967, 133, "Hidden Gems on a Ring: Infant Massive Clusters and Their Formation Timeline Unveiled by ALMA, HST, and JWST in NGC 3351", doi: 10.3847/1538-4357/ad3de6.

[35] Bolatto, A. D., Levy, R. C., Tarantino, E., Boyer, M. L., Fisher, D. B., Cronin, S. A., Leroy, A. K., Klessen, R. S., Smith, J. D., Berg, D. A., Böker, T., Boogaard, L. A., Ostriker, E. C., Thompson, T. A., Ott, J., Lenkić, L., Lopez, L. A., Dale, D. A., Veilleux, S., van der Werf, P. P., Glover, S. C. O., Sandstrom, K. M., Skillman, E. D., Chisholm, J., Villanueva, V., Lai, T. S. Y., Lopez, S., Mills, E. A. C., Emig, K. L., Armus, L., Mayya, D., Meier, D. S., De Looze, I., Herrera-Camus, R., Walter, F., Relaño, M., Koziol, H. B., Marvil, J., Jiménez-Donaire, M. J., Martini, P. 2024, ApJ, 967, 63, "JWST Observations of Starbursts: Polycyclic Aromatic Hydrocarbon Emission at the Base of the M82 Galactic Wind", doi: 10.3847/1538-4357/ad33c8.

- [34] Fisher, D. B., Bolatto, A. D., Chisholm, J., Fielding, D., Levy, R. C., Tarantino, E., Boyer, M. L., Cronin, S. A., Lopez, L. A., Smith, J. D., Berg, D. A., Lopez, S., Veilleux, S., van der Werf, P. P., Böker, T., Boogaard, L. A., Lenkić, L., Glover, S. C. O., Villanueva, V., Mayya, D., Lai, T. S. Y., Dale, D. A., Emig, K. L., Walter, F., Relaño, M., De Looze, I., Mills, E. A. C., Leroy, A. K., Meier, D. S., Herrera-Camus, R., Klessen, R. S. 2024, MNRAS, submitted, "JWST Observations of Starbursts: Cold Clouds and Plumes Launching in the M82 Outflow", arXiv: 2405.03686.
- [33] Wong, T., Cao, Y., Luo, Y., Bolatto, A. D., Sánchez, S. F., Barrera-Ballesteros, J. K., Blitz, L., Colombo, D., Dannerbauer, H., Green, A., Kalinova, V., Khan, F., Kim, A., Lacerda, E. A. D., Leroy, A. K., Levy, R. C., Lin, X., Luo, Y., Rosolowsky, E. W., Rubio, M., Teuben, P., Utomo, D., Villanueva, V., Vogel, S. N., Wang, X. 2024, ApJS, 271, 35, "The EDGE-CALIFA Survey: An Extragalactic Database for Galaxy Evolution Studies", doi: 10.3847/1538-4365/ad20c9.
- [32] Villanueva, V., Bolatto, A. D., Vogel, S. N., Wong, T., Leroy, A. K., Sánchez, S. F., Levy, R. C., Rosolowsky, E., Colombo, D., Kalinova, V., Cronin, S., Teuben, P., Rubio, M., Bazzi, Z. 2024, ApJ, 962, 88, "The EDGE-CALIFA Survey: Molecular Gas and Star Formation Activity across the Green Valley", doi: 10.3847/1538-4357/ad1387.
- [31] Levy, R. C., Bolatto, A. D., Tarantino, E., Leroy, A. K., Armus, L., Emig, K. L., Herrera-Camus, R., Marrone, D. P., Mills, E., Ricken, O., Stutzki, J., Veilleux, S., Walter, F. 2023, ApJ, 958, 109, "[CII] Spectral Mapping of the Galactic Wind and Starbursting Disk of M82 with SOFIA", doi: 10.3847/1538-4357/acff6e.
- [30] Cao, Y., Wong, T., Bolatto, A. D., Leroy, A. K., Rosolowsky, E., Utomo, D., Sánchez, S. F., Barrera-Ballesteros, J. K., Levy, R. C., Colombo, D., Blitz, L., Vogel, S. N., Puschnig, J., Villanueva, V., Rubio, M. 2023, ApJS, 268, 3, "The EDGE-CALIFA Survey: Spatially Resolved ¹³CO(1-0) Observations and Variations in ¹²CO(1-0)/¹³CO(1-0) in Nearby Galaxies on Kiloparsec Scales", doi: 10.3847/1538-4365/acd840.
- [29] Sormani, M. C., Barnes, A. T., Sun, J., Stuber, S. K., Schinnerer, E., Emsellem, E., Leroy, A. K., Glover, S. C. O., Henshaw, J. D., Meidt, S. E., Neumann, J., Querejeta, M., Williams, T. G., Bigiel, F., Eibensteiner, C., Fragkoudi, F., Levy, R. C., Grasha, K., Klessen, R. S., Kruijssen, J. M. D., Neumayer, N., Pinna, F., Rosolowsky, E. W., Smith, R. J., Teng, Y.-H., Tress, R. G., Watkins, E. J. 2023, MNRAS, 523, 2918, "Fuelling the nuclear ring of NGC 1097", doi: 10.1093/mnras/stad1554.
- [28] Lenkić, L., Bolatto, A. D., Fisher, D. B., Abraham, R., Glazebrook, K., Herrera-Camus, R., Levy, R. C., Obreschkow, D., Volpert, C. G. 2023, ApJ, 945, 9, "CO Excitation in High-z Main-sequence Analogues: Resolved CO(4-3)/CO(3-2) Line Ratios in DYNAMO Galaxies", doi: 10.3847/1538-4357/acb3b2.
- [27] Leroy, A. K., Bolatto, A. D., Sandstrom, K., Rosolowsky, E., Barnes, A. T., Bigiel, F., Boquien, M., den Brok, J. S., Cao, Y., Chastenet, J., Chevance, M., Chiang, I.-D., Chown, R., Colombo, D., Ellison, S. L., Emsellem, E., Grasha, K., Henshaw, J. D., Hughes, A., Klessen, R. S., Koch, E. W., Kim, J., Kreckel, K., Kruijssen, J. M. D., Larson, K. L., Lee, J. C., Levy, R. C., Lin, L., Liu, D., Meidt, S. E., Pety, J., Querejeta, M., Rubio, M., Saito, T., Salim, S., Schinnerer, E., Sormani, M. C., Sun, J., Thilker, D. A., Usero, A., Vogel, S. N., Watkins, E. J., Whitcomb, C. M., Williams, T. G., Wilson, C. D. 2023, ApJL, 944, L10, "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", doi: 10.3847/2041-8213/acab01.

- [26] Leroy, A. K., Sandstrom, K., Rosolowsky, E., Belfiore, F., Bolatto, A. D., Cao, Y., Koch, E. W., Schinnerer, E., Barnes, A. T., Bešlić, I., Bigiel, F., Blanc, G. A., Chastenet, J., Chen, N. M., Chevance, M., Chown, R., Congiu, E., Dale, D. A., Egorov, O. V., Emsellem, E., Eibensteiner, C., Faesi, C. M., Glover, S. C. O., Grasha, K., Groves, B., Hassani, H., Henshaw, J. D., Hughes, A., Jiménez-Donaire, M. J., Kim, J., Klessen, R. S., Kreckel, K., Kruijssen, J. M. D., Larson, K. L., Lee, J. C., Levy, R. C., Liu, D., Lopez, L. A., Meidt, S. E., Murphy, E. J., Neumann, J., Pessa, I., Pety, J., Saito, T., Sardone, A., Sun, J., Thilker, D. A., Usero, A., Watkins, E. J., Whitcomb, C. M., Williams, T. G. 2023, ApJL, 944, L9, "PHANGS-JWST First Results: Mid-infrared Emission Traces Both Gas Column Density and Heating at 100 pc Scales", doi: 10.3847/2041-8213/acaf85.
- [25] Yu, S.-Y., Kalinova, V., Colombo, D., Bolatto, A. D., Wong, T., Levy, R. C., Villanueva, V., Sánchez, S. F., Ho, L. C., Vogel, S. N., Teuben, P., Rubio, M. 2022, A&A, 666, A175, "The EDGE-CALIFA survey: The role of spiral arms and bars in driving central molecular gas concentrations", doi: 10.1051/0004-6361/202244306.
- [24] Levy, R. C., Bolatto, A. D., Leroy, A. K., Sormani, M. C., Emig, K. L., Gorski, M., Lenkić, L., Mills, E. A. C., Tarantino, E., Teuben, P., Veilleux, S., Walter, F. 2022, ApJ, 935, 19, "The Morpho-kinematic Architecture of Super Star Clusters in the Center of NGC 253", doi: 10.3847/1538-4357/ac7b7a.
- [23] Cooke, L. H., Levy, R. C., Bolatto, A. D., Simon, J. D., Newman, A. B., Teuben, P., Davey, B. D., Wright, M., Tarantino, E., Lenkić, L., Villanueva, V. 2022, MNRAS, 512, 1012, "Cuspy dark matter density profiles in massive dwarf galaxies", doi: 10.1093/mnras/stac588.
- [22] Bolatto, A. D., Leroy, A. K., Levy, R. C., Meier, D. S., Mills, E. A. C., Thompson, T. A., Emig, K. L., Veilleux, S., Ott, J., Gorski, M., Walter, F., Lopez, L. A., Lenkić, L. 2021, ApJ, 923, 83, "ALMA Imaging of a Galactic Molecular Outflow in NGC 4945", doi: 10.3847/1538-4357/ac2c08.
- [21] Villanueva, V., Bolatto, A., Vogel, S., Levy, R. C., Sánchez, S. F., Barrera-Ballesteros, J., Wong, T., Rosolowsky, E., Colombo, D., Rubio, M., Cao, Y., Kalinova, V., Leroy, A., Utomo, D., Herrera-Camus, R., Blitz, L., Luo, Y. 2021, ApJ, 923, 60, "The EDGE-CALIFA Survey: The Resolved Star Formation Efficiency and Local Physical Conditions", doi: 10.3847/1538-4357/ac2b29.
- [20] Mills, E. A. C., Gorski, M., Emig, K. L., Bolatto, A. D., Levy, R. C., Leroy, A. K., Ginsburg, A., Henshaw, J. D., Zschaechner, L. K., Veilleux, S., Tanaka, K., Meier, D. S., Walter, F., Krieger, N., Ott, J. 2021, ApJ, 919, 105, "Clustered Star Formation in the Center of NGC 253 Contributes to Driving the Ionized Nuclear Wind", doi: 10.3847/1538-4357/ac0fe8.
- [19] Krieger, N., Walter, F., Bolatto, A. D., Guillard, P., Lehnert, M., Leroy, A. K., Pety, J., Emig, K. L., Levy, R. C., Krips, M., Rix, H.-W., Salak, D., Weiss, A., Veilleux, S. 2021, ApJL, 915, L3, "NOEMA High-fidelity Imaging of the Molecular Gas in and around M82", doi: 10.3847/2041-8213/ac01e9.
- [18] Tarantino, E., Bolatto, A. D., Herrera-Camus, R., Harris, A. I., Wolfire, M., Buchbender, C., Croxall, K. V., Dale, D. A., Groves, B., Levy, R. C., Riquelme, D., Smith, J. D. T., Stutzki, J. 2021, ApJ, 915, 92, "Characterizing the Multiphase Origin of [C II] Emission in M101 and NGC 6946 with Velocity-resolved Spectroscopy", doi: 10.3847/1538-4357/abfcc6.
- [17] Barrera-Ballesteros, J. K., Sánchez, S. F., Heckman, T., Wong, T., Bolatto, A., Ostriker, E., Rosolowsky, E., Carigi, L., Vogel, S., Levy, R. C., Colombo, D., Luo, Y., Cao, Y. 2021, MNRAS, 503, 3643, "The EDGE-CALIFA survey: self-regulation of star formation at kpc scales", doi: 10.1093/mnras/stab755.
- [16] Levy, R. C., Bolatto, A. D., Leroy, A. K., Emig, K. L., Gorski, M., Krieger, N., Lenkić, L., Meier, D. S., Mills, E. A. C., Ott, J., Rosolowsky, E., Tarantino, E., Veilleux, S., Walter, F., Weiß, A., Zwaan, M. A. 2021, ApJ, 912, 4, "Outflows from Super Star Clusters in the Central Starburst of NGC 253", doi: 10.3847/1538-4357/abec84.

[15] Sánchez, S. F., Barrera-Ballesteros, J. K., Colombo, D., Wong, T., Bolatto, A., Rosolowsky, E., Vogel, S., Levy, R., Kalinova, V., Alvarez-Hurtado, P., Luo, Y., Cao, Y. 2021, MNRAS, 503, 1615, "The EDGE-CALIFA survey: the local and global relations between Σ**, Σ**, Σ** and Σ**mol that regulate star formation", doi: 10.1093/mnras/stab442.

- [14] Colombo, D., Sanchez, S. F., Bolatto, A. D., Kalinova, V., Weiß, A., Wong, T., Rosolowsky, E., Vogel, S. N., Barrera-Ballesteros, J., Dannerbauer, H., Cao, Y., Levy, R. C., Utomo, D., Blitz, L. 2020, A&A, 644, A97, "The EDGE-CALIFA survey: exploring the role of molecular gas on galaxy star formation quenching", doi: 10.1051/0004-6361/202039005.
- [13] Emig, K. L., Bolatto, A. D., Leroy, A. K., Mills, E. A. C., Jiménez Donaire, M. J., Tielens, A. G. G. M., Ginsburg, A., Gorski, M., Krieger, N., Levy, R. C., Meier, D. S., Ott, J., Rosolowsky, E., Thompson, T. A., Veilleux, S. 2020, ApJ, 903, 50, "Super Star Clusters in the Central Starburst of NGC 4945", doi: 10.3847/1538-4357/abb67d.
- [12] Krieger, N., Bolatto, A. D., Koch, E. W., Leroy, A. K., Rosolowsky, E., Walter, F., Weiß, A., Eden, D. J., Levy, R. C., Meier, D. S., Mills, E. A. C., Moore, T., Ott, J., Su, Y., Veilleux, S. 2020, ApJ, 899, 158, "The Turbulent Gas Structure in the Centers of NGC 253 and the Milky Way", doi: 10.3847/1538-4357/aba903.
- [11] Krieger, N., Bolatto, A. D., Leroy, A. K., Levy, R. C., Mills, E. A. C., Meier, D. S., Ott, J., Veilleux, S., Walter, F., Weiß, A. 2020, ApJ, 897, 176, "The Molecular Interstellar Medium in the Super Star Clusters of the Starburst NGC 253", doi: 10.3847/1538-4357/ab9c23.
- [10] Barrera-Ballesteros, J. K., Utomo, D., Bolatto, A. D., Sánchez, S. F., Vogel, S. N., Wong, T., Levy, R. C., Colombo, D., Kalinova, V., Teuben, P., García-Benito, R., Husemann, B., Mast, D., Blitz, L. 2020, MNRAS, 492, 2651, "The EDGE-CALIFA survey: using optical extinction to probe the spatially resolved distribution of gas in nearby galaxies", doi: 10.1093/mnras/stz3553.
- [9] Levy, R. C., Bolatto, A. D., Sánchez, S. F., Blitz, L., Colombo, D., Kalinova, V., López-Cobá, C., Ostriker, E. C., Teuben, P., Utomo, D., Vogel, S. N., Wong, T. 2019, ApJ, 882, 84, "The EDGE-CALIFA Survey: Evidence for Pervasive Extraplanar Diffuse Ionized Gas in Nearby Edge-on Galaxies", doi: 10.3847/1538-4357/ab2ed4.
- [8] Krieger, N., Bolatto, A. D., Walter, F., Leroy, A. K., Zschaechner, L. K., Meier, D. S., Ott, J., Weiss, A., Mills, E. A. C., Levy, R. C., Veilleux, S., Gorski, M. 2019, ApJ, 881, 43, "The Molecular Outflow in NGC 253 at a Resolution of Two Parsecs", doi: 10.3847/1538-4357/ab2d9c.
- [7] Leroy, A. K., Bolatto, A. D., Ostriker, E. C., Walter, F., Gorski, M., Ginsburg, A., Krieger, N., Levy, R. C., Meier, D. S., Mills, E., Ott, J., Rosolowsky, E., Thompson, T. A., Veilleux, S., Zschaechner, L. K. 2018, ApJ, 869, 126, "Forming Super Star Clusters in the Central Starburst of NGC 253", doi: 10.3847/1538-4357/aaecd1.
- [6] Leung, G. Y. C., Leaman, R., van de Ven, G., Lyubenova, M., Zhu, L., Bolatto, A. D., Falcón-Barroso, J., Blitz, L., Dannerbauer, H., Fisher, D. B., Levy, R. C., Sanchez, S. F., Utomo, D., Vogel, S., Wong, T., Ziegler, B. 2018, MNRAS, 477, 254, "The EDGE-CALIFA survey: validating stellar dynamical mass models with CO kinematics", doi: 10.1093/mnras/sty288.
- [5] Levy, R. C., Bolatto, A. D., Teuben, P., Sánchez, S. F., Barrera-Ballesteros, J. K., Blitz, L., Colombo, D., García-Benito, R., Herrera-Camus, R., Husemann, B., Kalinova, V., Lan, T., Leung, G. Y. C., Mast, D., Utomo, D., van de Ven, G., Vogel, S. N., Wong, T. 2018, ApJ, 860, 92, "The EDGE-CALIFA Survey: Molecular and Ionized Gas Kinematics in Nearby Galaxies", doi: 10.3847/1538-4357/aac2e5.
- [4] Colombo, D., Kalinova, V., Utomo, D., Rosolowsky, E., Bolatto, A. D., **Levy, R. C.**, Wong, T., Sanchez, S. F., Leroy, A. K., Ostriker, E., Blitz, L., Vogel, S., Mast, D., García-Benito, R., Husemann, B., Dannerbauer, H., Ellmeier, L., Cao, Y. 2018, MNRAS, 475, 1791, "The EDGE-CALIFA survey: the influence of galactic rotation on the molecular depletion time across the Hubble sequence", doi: 10.1093/mnras/stx3233.

[3] Utomo, D., Bolatto, A. D., Wong, T., Ostriker, E. C., Blitz, L., Sanchez, S. F., Colombo, D., Leroy, A. K., Cao, Y., Dannerbauer, H., Garcia-Benito, R., Husemann, B., Kalinova, V., Levy, R. C., Mast, D., Rosolowsky, E., Vogel, S. N. 2017, ApJ, 849, 26, "The EDGE-CALIFA Survey: Variations in the Molecular Gas Depletion Time in Local Galaxies", doi: 10.3847/1538-4357/aa88c0.

- [2] Bolatto, A. D., Wong, T., Utomo, D., Blitz, L., Vogel, S. N., Sánchez, S. F., Barrera-Ballesteros, J., Cao, Y., Colombo, D., Dannerbauer, H., García-Benito, R., Herrera-Camus, R., Husemann, B., Kalinova, V., Leroy, A. K., Leung, G., Levy, R. C., Mast, D., Ostriker, E., Rosolowsky, E., Sandstrom, K. M., Teuben, P., van de Ven, G., Walter, F. 2017, ApJ, 846, 159, "The EDGE-CALIFA Survey: Interferometric Observations of 126 Galaxies with CARMA", doi: 10.3847/1538-4357/aa86aa.
- [1] Walter, F., Bolatto, A. D., Leroy, A. K., Veilleux, S., Warren, S. R., Hodge, J., Levy, R. C., Meier, D. S., Ostriker, E. C., Ott, J., Rosolowsky, E., Scoville, N., Weiss, A., Zschaechner, L., Zwaan, M. 2017, ApJ, 835, 265, "Dense Molecular Gas Tracers in the Outflow of the Starburst Galaxy NGC 253", doi: 10.3847/1538-4357/835/2/265.