

Rebecca C. Levy

National Science Foundation Astronomy & Astrophysics Postdoctoral Fellow

Department of Astronomy/
Steward Observatory
University of Arizona
Tucson, AZ 85721

rebeccalevy@arizona.edu
rlevy.astro@gmail.com
<https://rlevy.github.io>
Pronouns: she/her/hers

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

| | |
|----------------------|--|
| Oct 2021 – present | 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 <i>“Investigating Star Formation Feedback through Gas Kinematics in Nearby Galaxies”</i> Advisor: Prof. Alberto Bolatto |
| Dec 2017 | M.S. in Astronomy University of Maryland, College Park, MD <i>“The EDGE-CALIFA Survey: Molecular and Ionized Gas Kinematics”</i> 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: 38 papers — 943 citations — h-index = 16

First-authored & supervised: 6 papers — 137 citations

[Link to current publications in ADS](#)

A full publication list can be found at the end

First-Authored & Supervised Publications

- [7] “A *JWST* View of Star Clusters in the Center of M82”
Levy, R. C., et al. 2023, ApJL, in prep.
- [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 & Awards

| | | |
|-------------|---|---|
| 2021 | IAU PhD Prize Honorable Mention | Div. H Interstellar Matter & Local Universe |
| 2020 | Andrew S. Wilson Prize for Excellence in Research | U. Maryland, Dept. of Astronomy |
| 2020 | Philip E. Angerhofer Outstanding Teaching Assistant Award | U. Maryland, Dept. of Astronomy |
| 2020 | Prize for Excellence in Mentoring | U. Maryland, Dept. of Astronomy |
| 2018 – 2019 | Outstanding Research Assistant Award | U. Maryland, Graduate School |
| 2016 | Graduate Research Fellowship Program Honorable Mention | National Science Foundation |

Grants Awarded

| | | | |
|------|-----------|--------------------------|--|
| 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 <i>GREAT Cigar</i> : 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 |

Recent Scientific Presentations

Invited Reviews and Colloquia

| | | |
|----------|---|--------------------------------------|
| Oct 2023 | Instituto de Astrofísica de Andalucía Colloquium | (Virtual, Recorded) |
| Oct 2023 | Radboud U. Astronomy Colloquium | (Virtual) |
| Apr 2023 | The Galactic Centre Workshop — Review Talk | Granada, Spain |
| Apr 2023 | Hamburg Observatory Colloquium | (Virtual) |
| Apr 2023 | Michigan State U. Astronomy Seminar | (Virtual) |
| Oct 2022 | U. Kansas Physics and Astronomy Department Colloquium | Lawrence, KS |
| Oct 2019 | The Warm Ionized Medium (WIM) Workshop — Review Talk | Green Bank, WV |

Invited Talks

| | | |
|-----------|---|---------------------|
| Dec 2023 | ALMA at Ten Years: Past, Present and Future | Puerto Varas, 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 galaxy evolution?” Virtual Seminar | (Virtual) |
| Oct 2020 | CCAPP Seminar | (Virtual) |

Selected Contributed Talks

| | | |
|-----------|--|---------------------|
| 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, Germany |
| Sept 2022 | Puzzles of the Galactic Centre | Heidelberg, Germany |
| Aug 2022 | UVa/ NRAO Astronomy Lunch Talk Series | (Virtual) |
| July 2022 | A Holistic View of Stellar Feedback and Galaxy Evolution | Ascona, Switzerland |
| June 2022 | The 240 th Meeting of the American Astronomical Society | Pasadena, CA |
| May 2022 | Ringberg Virtual Seminar Series | (Virtual) |
| Apr 2022 | NOIRLab FLASH Talk | (Virtual) |
| Jan 2022 | 2022 NSF 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, Italy |
| June 2019 | Radio/Millimeter Astrophysical Frontiers in the Next Decade | Charlottesville, VA |

Press, Media, & Other Coverage

| | |
|----------|--|
| Aug 2022 | Results from Levy et al. 2022, ApJ cited in the Wikipedia page for NGC253 |
| May 2021 | NRAO eNews Vol. 14, Issue 5 <i>“Outflows from Super Star Clusters in NGC253”</i> |
| Apr 2021 | U. Maryland College of Computer, Mathematical, and Natural Sciences News <i>“Astronomy Ph.D. Student Awarded Prestigious NSF Postdoctoral Fellowship”</i> |

Students Mentored

| | | |
|----------------------|-----------------------|--|
| Keaton Donaghue | Oct 2022 – | Primary mentor is Prof. Elisabeth Mills Publication: Donaghue, Mills, Levy, et al. in prep. Undergrad at U. Kansas |
| Lauren Cooke | May 2020, Summer 2019 | Publication: Cooke, Levy, et al., 2022, MNRAS , 512 , 1012 High school senior — Now: Undergrad 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 10 | Co-I on 10 projects | |
| Cycle 9 | Co-I on 3 projects | |
| Cycle 8 ACA | PI | <i>“Complete Molecular Gas Coverage in Nearby Low-Luminosity AGN”</i> |
| Cycle 8 | Co-I on 3 projects | |
| Cycle 7 ACA | Co-I on 1 project | |
| Cycle 7 | PI | <i>“Ionized Gas, Radiation Field, Masses, and Dust Temperature in Forming Massive Star Clusters in the NGC253 Starburst”</i> Rank: A — Awarded 24.1 hours |
| Cycle 7 | Co-I on 1 project | |
| Cycle 6 | Co-I on 2 projects | |
| Cycle 4 | Co-I on 1 project | |

GBT

| | | |
|-------|------------------------|---|
| 2021b | Co-I PI: A. Bolatto | <i>“GBT EDGE: A Representative Survey of the $z=0$ Universe with Full IFU Spectroscopy”</i> Awarded 300 hours |
| 2021a | Co-I PI: K. Emig | <i>“Feedback from Diffuse Ionized Gas in the Cygnus X Star-Forming Region”</i> |

HST

| | | |
|----------|------------------------|---|
| Cycle 31 | Co-I PI: D. Thilker | <i>“Resolving gas, star formation and feedback in nearby galaxies with an HST+JWST+ALMA Treasury”</i> Awarded 169 primary orbits, 74 parallel orbits |
|----------|------------------------|---|

NOEMA

| | | |
|-------|------------------------|---|
| 2022a | Co-I PI: D. Colombo | <i>“Resolving the Star Formation Quenching Mechanisms of Green Valley Galaxies”</i> |
| 2021b | Co-I PI: F. Walter | <i>“Dense Molecular Gas in the Outflow of M82”</i> |

JWST

| | | |
|---------|--------------------------------|--|
| Cycle 2 | Co-I PI: A. Leroy | <i>“A JWST Census of the Local Galaxy Population: Anchoring the Physics of the Matter Cycle”</i> Awarded 109.4 hours |
| Cycle 2 | Co-I PI: J.Sun | <i>“Beholding star cluster formation, feedback, and evolution with the ‘Evil Eye’”</i> |
| Cycle 2 | Co-I PI: A. Leroy | <i>“Resolving HII Regions and ISM Structure Across the Milky Way Analog NGC 253”</i> |
| Cycle 1 | Co-I* PI: A. Bolatto | <i>“Dissecting the Prototypical Starbursts NGC 253 and M 82 and Their Cool Galactic Winds”</i> Awarded 42.8 hours *I led the technical planning and justification for this proposal. |
| Cycle 1 | Co-I PI: I. De Looze | <i>“Structure Formation and Baryonic Cycling in the Edge-on Galaxy NGC891”</i> |

LMT

| | | |
|---------|------------------------|---|
| 2021-S1 | Co-I PI: S. Sánchez | <i>“The Connection between Molecular Gas Density, Star-formation and Quenching”</i> |
|---------|------------------------|---|

SMA

| | | |
|-------|--------------------------------|--|
| 2018b | Co-I PI: M. Jiménez Donaire | <i>“Searching for Embedded Super Star Clusters in M82”</i> |
|-------|--------------------------------|--|

SOFIA

| | | |
|-----------|-----------|--|
| Cycle 8/7 | PI | <i>“The GREAT Cigar: Mapping [CII] in the Disk and Outflow of M82”</i> Rank: A/B — Awarded 9 hours and \$90,000 |
|-----------|-----------|--|

| | | |
|-----------|------------------------|---|
| Cycle 8/7 | Co-I PI: A. Bolatto | <i>“Studying the Energetics of Galaxies with Velocity-Resolved [CII] Observations in an IFU-Selected Galaxy Sample”</i> |
| Cycle 7 | Co-I PI: J. Spilker | <i>“Are Galactic Winds Metal-Enriched Compared to their Host Galaxies?”</i> |

VLA

| | | |
|-------|----------------------|--|
| 2022b | Co-I PI: E. Mills | <i>“JACKS: JVLA Ammonia CMZ K-band Survey”</i> |
| 2022b | Co-I PI: K. Emig | <i>“Recombination Lines from Diffuse Ionized Gas in the M82 Starburst”</i> |
| 2022a | Co-I PI: E. Mills | <i>“High-Resolution Thermal Continuum Imaging of the M82 Starburst”</i> |
| 2022a | Co-I PI: K. Emig | <i>“Diffuse Ionized Gas in the Central Starburst of NGC253”</i> |

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 |
| Seminars organized | Steward Obs. Science Coffee arXiv discussion, 2022 – 2023 UMD Dept. of Astronomy weekly arXiv discussion, 2019 – 2020 |
| Review panels | 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, Apr 2022 DEGAS, Jan 2018 EDGE-CALIFA, Aug 2015 |
| Society membership | American Astronomical Society, Full Member |
| Certified to operate | Green Bank Telescope (remote), 2018 – |

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 Experience

| | |
|-----------------------|--|
| Aug 2023 – | Imagine Your STEM Future Curriculum Development Developing hands-on astronomy lessons and activities for the Women in Science and Engineering Imagine Your STEM Future program. Materials for my lesson about the phases of the Moon can be found in this Google Drive repository . |
| Feb 2023 | Imagine Your STEM Future Guest Lecture Guest lecturer for the Women in Science and Engineering Imagine Your STEM Future program. |
| Dec 2022 | Tucson Amateur Astronomy Association Lecture <i>“A JWST View of Starburst Galaxies: Sweet Data Coming Soon!”</i> |
| Nov 2022 | Steward Observatory Public Evening Lecture Series <i>“A JWST View of Starburst Galaxies: Sweet Data Coming Soon!”</i> |
| 2016 – 2020 | GRAD-MAP (Graduate Resources Advancing Diversity with Maryland Astronomy and Physics) <ul style="list-style-type: none"> • Research mentor for four students over four years during the week-long Winter Workshop. • Co-mentor for one student during the Summer Scholars program. • 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, | NOIRLab Education and Public Outreach Department |

Apr 2016, June 2016

- 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.

Publication List

Total: 38 papers — 943 citations — h-index = 16

[Link to current publications in ADS](#)

- [38] Bolatto, A. D., **Levy, R. C.**, Tarantino, E., Boyer, M. L., Fisher, D. B., Leroy, A. K., Klessen, R. S., Smith, J. D., Berg, D. A., Boeker, T., Boogaard, L. A., Cronin, S. 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. 2024, *ApJ*, submitted, “*JWST Observations of Starbursts: Polycyclic Aromatic Hydrocarbon Emission at the base of the M82 Galactic Wind*”
- [37] Sun, J., He, H., Batschkun, K., **Levy, R. C.**, Emig, K., Jimena Rodriguez, M., 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., Jimenez-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*, submitted, “*Hidden Gems on a Ring: Infant Massive Clusters and Their Formation Timeline Unveiled by ALMA, HST, and JWST in NGC 3351*”, doi: <https://ui.adsabs.harvard.edu/abs/2024arXiv240114453S/abstract>
- [36] 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., Teuben, P., Utomo, D., Villanueva, V., Vogel, S. N., Wang, X., 2024, *ApJS*, accepted, “*The EDGE-CALIFA Survey: An Extragalactic Database*”

- for *Galaxy Evolution Studies*”, doi: <https://ui.adsabs.harvard.edu/abs/2024arXiv240113181W/abstract>
- [35] 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. 2023, ApJ, submitted, “*Disk Turbulence and Star Formation Regulation in High- z Main Sequence Analog Galaxies*”
 - [34] **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](https://doi.org/10.3847/1538-4357/acff6e)
 - [33] 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., Rodriguez, J. M., Tian, Q., Williams, T. G. 2023, ApJS, submitted, “*PHANGS-HST catalogs for $\sim 100,000$ star clusters and compact associations in 38 galaxies: I. Observed properties*”
 - [32] Villanueva, V., Bolatto, A. D., Vogel, S. N., Wong, T., Leroy, A. K., Sanchez, S. F., **Levy, R. C.**, Rosolowsky, E., Colombo, D., Kalinova, V., Cronin, S., Teuben, P., Rubio, M., Bazzi, Z. 2023, ApJ, accepted, “*The EDGE-CALIFA survey: Molecular Gas and Star Formation Activity Across the Green Valley*”, doi: [10.48550/arXiv.2312.03995](https://doi.org/10.48550/arXiv.2312.03995)
 - [31] 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., Puschig, J., Villanueva, V., Rubio, M. 2023, ApJS, 268, 3, “*The EDGE-CALIFA Survey: Spatially Resolved $^{13}\text{CO}(1-0)$ Observations and Variations in $^{12}\text{CO}(1-0)/^{13}\text{CO}(1-0)$ in Nearby Galaxies on Kiloparsec Scales*”, doi: [10.3847/1538-4365/acd840](https://doi.org/10.3847/1538-4365/acd840)
 - [30] 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. 2023, ApJ, submitted, “*Central vs Global Quenching Traced by the APEX Survey*”
 - [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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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_{SFR} , and Σ_{mol} that regulate star formation*”, doi: [10.1093/mnras/stab442](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/10.3847/1538-4357/835/2/265)