

COSIMA EIBENSTEINER

Jansky Postdoctoral Fellow | National Radio Astronomy Observatory, Charlottesville, US

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Research Interest: cold interstellar medium (ISM) in galaxies; **neutral atomic hydrogen** - **(dense) molecular gas** - **star formation**; galaxy dynamics; radio interferometry; multi-wavelength analysis.

Education

University of Bonn International Max Planck Research School	Bonn, Germany
Ph.D. in Astrophysics	2019 - 2023
Advisor: Prof. Frank Bigiel, Second Advisor: Prof. Karl Menten	
<i>Thesis: Gas matters: The Molecular and Atomic Gas Budget in Nearby Galaxies from Centers to Outskirts</i>	Magna Cum Laude
University of Vienna	Vienna, Austria
M.Sc. in Astronomy	2016 - 2019
Advisor: Prof. Manuel Güdel	
<i>Thesis: Disks and Outflows of DG Tau using ALMA</i>	1.0 (full marks)
B.Sc. in Astronomy	2013-2016
B.A. in Journalism & Communication science	2015-2019

Research Overview

- o **Proposals and Telescope Observing:** [Full list [here](#)]
44 proposals accepted, **10 as leading role** (including **2 Large Programs: PI for VLA 540 hrs & co-PI for ALMA 110 hrs**) across 7 facilities. > 1,000 hours of PI telescope time.
- o **Publications:** [Full list [here](#)]
56 peer-reviewed papers [[ADS LINK](#)] + 2 conference proceedings, 7 are first- or second-author publications.
- **Citations:** 2087 total citations (102 first/second author citations); h-index = 23.
- o **Talks:** [Full list [here](#)] I have given over 26 science talks, (**10 of them invited**) and one Prize talk.
- o **Professional Experience:** [Full list [here](#)]
 - **Mentoring:** (co-) & supervised **8 students** (PhD, Master, Bachelor & Summer students), for 4 of them I was their day-to-day supervisor (including **direct supervisor for 3 students**)
 - **Teaching:** **1 Lecture** and **Teaching Assistance** for **4 Master and Bachelor courses**.
 - **Leader:** **Group leader** in the international 100+ members *PHANGS collaboration* leading the group on „Atomic gas and radio continuum science“ and pushing for exquisite HI coverage of 100+ nearby galaxies.
 - **Service:** referee for A&A, MNRAS, ApJ, funding agencies & NRAO Science Review Panel.
- o **Funding:** ~\$408,000 total in fellowship and grant funding

Professional Appointments

National Radio Astronomy Observatory (NRAO)	Charlottesville, VA, US
<i>Jansky Postdoctoral Fellow</i>	November 2023 - present
University of Bonn	Bonn, Germany
- <i>PhD Researcher</i>	September 2019 - October 2023
- <i>International Max Planck Research School (IMPRS) fellow</i>	
Max Planck for Radioastronomy (MPIfR)	Bonn, Germany
<i>Visiting Researcher</i>	September 2020 - September 2021

Digital Planetarium, Museum of Natural History Vienna
Operator, Presenter, Outreach (~10hrs/week)

Vienna, Austria
July 2018 - September 2019

Public Relation Agency, Grayling
Outreach (part-time)

Vienna, Austria
October 2018 - September 2019

ORF - The Austrian Broadcasting Station
Intern Science Journalist Ö1

Vienna, Austria
February 2017

Fellowship and Grant funding

Total: ~\$408,000

Travel grant For IAU GA 2024 in South Africa, ~\$500	2024
Jansky Fellowship, National Radio Astronomy Observatory Prize Fellowship, totaling ~\$267,000+\$15,000 for three years of funding as Principle Investigator	2023
Science communication and media training grant Online training for selected female researchers at the University of Bonn, training worth \$~30,000	2021
IMPRS Fellowship, Max Planck for Radioastronomy Prize fellowship, International Max Planck Research School, totaling ~\$95,000 for three years of graduate stipend	2019
Merit-based Award, University of Vienna Only awarded to the students with extraordinary study performance, totaling ~\$1,000 for one year	2017

Awards and Honors

Prize talk, Conference: Dust and Gas throughout cosmic time ; Hiroshima, Japan	2024
Jansky Fellowship, National Radio Astronomy Observatory	2023
Astro Plot of the Week, Fig5 in Eibensteiner et al. 2023	2023
Fellowship at International Max Planck Research School, Max Planck for Radioastronomy	2019
Merit-based Award, University of Vienna	2017

Teaching

Summer Research Lecture on Nearby Galaxies	Lecturer: C. Eibensteiner , <i>NRAO</i>	For REU&NAC summer students	2024
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As Teaching Assistant:

- Physics of the Interstellar Medium	Lecturer: F. Bigiel, <i>Univ. Bonn</i>	Graduate level	2022
- Introduction to Astronomy	Lecturer: F. Bigiel, <i>Univ. Bonn</i>	Undergraduate level	2022
- Presentation skills for Physicists	co-lead with R. Mauersberger, <i>Univ. Bonn</i>	Undergraduate level	2021
- Introduction to Astronomy	Lecturer: F. Bigiel, <i>Univ. Bonn</i>	Undergraduate level	2021
- Physics of the Interstellar Medium	Lecturer: F. Bigiel, <i>Univ. Bonn</i>	Graduate level	2020

Pedagogy Training

How to teach and tutor successfully, offered by IMPRS (<i>online</i>)	2020
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Supervising and Mentoring

Ellie Spande	REU summer student	NRAO	Summer 2025 / 10 weeks
Sebastian Laudage	Master thesis project (Published paper)	University Bonn	2022-2023
Josephine Benna	Bachelor thesis project	University Bonn	2023
Roberto Emulo	Master thesis project (Graduate student)	University Bonn	2020-2021

As Co-Advisor:

Anna Dignan	Graduate student	Univ. of Virginia	2024 - ongoing
Nerea Real Nsi	REU summer student (Poster at AAS)	NRAO	Summer 2025 / 10 weeks
Breanna Yeboah	NAC summer student (Poster at AAS)	NRAO	Summer 2024 / 8 weeks
Anna Dignan	Post-Bacc (Published paper)	NRAO	11/2023 - 08/2024

Media Coverage

Science spotlight: Atomic-to-Molecular Gas Transition in Galaxies (Cosima Eibensteiner)	NRAO eNews	July 2025
The SWAN View Of Dense Gas In the Whirlpool — A Cloud-scale Comparison Of N ₂ H ⁺ , HCO ⁺ , HNC And HCN Emission In M51	Astrobiology news	July 2025
Cosmic Horizons: AI-Powered Insights	NRAO eNews	June 2025
NRAO Jansky Postdoctoral Fellows participated in the 53rd Young European Radio Astronomers Conference (YERAC)	NRAO eNews	Sept. 2024
Unraveling the Mysteries of Star Creation in the Whirlpool Galaxy	SciTechDaily	Jan. 2024
2023 Jansky Fellows Awarded	NRAO Press International Max	April 2023
2023 Jansky Fellowships awarded to IMPRS Alumnae Cosima Eibensteiner	Planck Research School eNews	2023

Collaborations

Physics at High Angular Resolution in Nearby Galaxies (PHANGS)	2019 - Present
<i>Team lead:</i> Eva Schinnerer; <i>Team project scientist:</i> Adam Leroy; <i>Team manager:</i> Erik Rosolowsky	
Multi-wavelength high resolution view of nearby galaxies (ALMA, JWST, HST, VLT/MUSE, VLA, MeerKAT, AstroSat)	
Science Working Group Leader in PHANGS: „HI and Radio Continuum“ (bi-weekly meetings)	2024 - Present
PHANGS Advisory Board	2024 - Present
Technical Working Group Leader in PHANGS: „HI and Radio Continuum“ (moved to science)	2022 - 2024

The Local Group L-Band Survey (LGLBS)	2024 - Present
<i>PI:</i> Adam Leroy, Laura Chomiuk, Julianne Dalcanton, Erik Rosolowsky, Snezana Stanimirovic, Fabian Walter	
Leading multi-wavelength efforts	
VLA X-Large Program // deepest and highest spatial & velocity resolution of HI and L-band continuum emission of six actively star-forming Local Group galaxies	

Multiphase Astrophysics to Unveil the Virgo Environment (MAUVE)	2025 - Present
<i>Team leads:</i> Barbara Catinella, Luca Cortese, Toby Brown, Jiayi Sun, David Thinker	
ALMA quality assurance	
A multi-wavelength program designed to investigate how the cluster environment shapes the gas–star formation cycle in galaxies falling into the Virgo Cluster	

Great Observatories All-sky LIRG Survey (GOALS-east @UVa/NRAO)	2024 - Present
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Team leads: Aaron Evans & Lee Armus

Leading the weekly group meetings at NRAO; co-PI ALMA Large Program

Multi-wavelength high resolution view of LIRGS and ULIRGS
(personal interest: ALMA's view of these targets)

Extragalactic Star Formation, Star Formation Radio Survey (SFRS, @NRAO)

2024 - Present

Team lead: Eric Murphy

Mentoring students

Studying of star formation sites (&AME) via continuum observations using VLA+GBT

Starburst Heaters (@NRAO)

2024 - Present

Team leads: Jeff Mangum, Serena Viti

Pushing proposals and contribute to student paper

Investigating multiple molecules at high resolution in the CMZ of the starburst galaxy NGC253 based on ALMA projects that emerged from the ALCHEMI survey.

**MeerKAT HI Observations of Nearby Galactic Objects -
Observing Southern Emitters (MHONGOOSE)**

2024 - Present

PI: W.J.G. de Blok

Leading and pushing CO coverage of these galaxies

A Large Survey Project to obtain extremely sensitive observations of neutral hydrogen distributions in a sample of 30 nearby star-forming galaxies

Professional Experiences

Referee for astronomical journals and funding proposals

A&A (since 2023), MNRAS (since 2024), ApJ (since 2025)
Fondecyt Research Initiation Project Competition 2025

Conference Organization

Organizer for NRAO TUNA (WUNA, FUNA) Lunch Talk Series	March 2024 - Present
OC — NRAO/GBO Postdoc Symposium 2024 (in Green Bank at GBO)	March 2024
LOC and host, 7th IMPRS Conference	May 2021
LOC, IAU Summer School: Basics of Astrobiology, University of Vienna, Austria	August 2018
Volunteer, IAU GA 2018, Vienna, Austria	August 2018

Astronomical Community

NRAO Science Review Panel	2026 - Present
SWG AtLAST	2025 - Present
SWG ngVLA	2024 - Present
Member of SFB 956 Gender Board	2021-2023

Observing

SMT observations (<i>10 nights</i>)	April/May 2025
IRAM 30m observation for Project: 140-23 (<i>6 nights</i>)	March 2024
IRAM 30m observation for Project: 197-20 (<i>3 nights</i>)	Dec. 2020
Observing scripts for: VLA, NOEMA, SMA	

Data reduction and analysis

CASA for VLA, ALMA and SMA data reduction, calibration and imaging; GILDAS
Programming languages: Python
Astronomy Packages/Tools: Matplotlib, AstroPy, SpectralCube, APLpy, linmix, ds9, CARTA

Astronomy Training

CosmicAI Bootcamp	May 2025
SMA Interferometry School (<i>online</i>)	Jan. 2022
<i>Project: CO isotopologues ratios in the center of M82</i>	
10 th IRAM 30m Winter School (<i>online</i>)	Nov. 2021
ISM Summer School (<i>online</i>)	June 2021
<i>Project: Shocks in ISM with Sylvie Cabrit & Tram le Ngoc</i>	
7 th NRAO-VLA Data Reduction Workshop, Socorro, New Mexico & Collaboration meetings with Jürgen Ott and David Meier	Oct. 2019

Outreach and Training (in *brown* are additional jobs I had during my (under)graduate to fund my Astronomy studies)

Outreach Talks <i>for example for Charlottesville Astronomical Society</i> >6,000 views in the first month on Youtube: [LINK]	August 2025
PHANGS Youtube Account <i>Content Management and video editing</i> [LINK]	2023-present
PHANGS Twitter Account <i>Content Management</i>	2022-2023
Organiser of Astronomy on Tap (AoT) Bonn <i>Moderation and organization of AoT events</i>	2022-2023
Organiser of AstroClub Bonn <i>Organiser and Social Media for Astroclub Bonn</i>	2021-2023
German Member of SKA Communications and Outreach Network (SKACON) <i>Represented and actively contributed together with Norbert Junkes the German side of outreach related questions</i>	2019-2023
<i>Planetarium Operator</i>, Museum of Natural History Vienna <i>Operation and moderation of live star shows to an audience of ~60 people</i>	2018-2019
<i>Public Relation</i>, Grayling Austria <i>Austria's leading international communications consultancy; Unit Technology</i>	2018-2019
Press office <i>with Lars Lindberg Christensen IAU Press Officer, IAU GA 2018</i>	Aug. 2018
<i>Scientific Journalist</i> , Österreichischer Rundfunk <i>Writing german articles for general public based on english scientific papers - science.orf.at</i> <i>Creating, interviewing, voicing, editing same subject for the radio Ö1</i> <i>For example, astronomy related article: [LINK]</i> <i>Environment related article: [LINK]</i>	2017
Softskills Seminars #UnsichtbarWarGestern/Outreach training for Women in Science (<i>online</i>) Efficiency Skills for Scientists, offered by IMPRS (<i>online</i>) How to teach and tutor successfully, offered by IMPRS (<i>online</i>) Mental strategies - Stress management for doctoral students, offered by IMPRS	2021-2022 2021 2020 2020

List of Talks

26 Total talks

10 Invited Talks, 10 Contributed

<i>Scheduled; Invited Talk</i>	CTC Seminar Series at UMD Astronomy Department	<i>Spring 2026</i>
Contributed Talk	Stellar Origins 2025 , Vienna, Austria	Sep. 2025
Invited Talk	Galactic Ecosystems under the Microscope: Lessons from highly-resolved studies , Garching, Germany	July 2025
Invited Talk	NRAO/GBO PostDoc Symposium , Charlottesville, USA	May. 2025
Contributed Talk	PHANGS collab. meeting: Nice, France	Feb. 2025
Poster Talk	AAS National Harbor, Maryland, USA (my first AAS meeting)	Jan. 2025
Prize Talk	Dust and Gas throughout Cosmic Time , Hiroshima, Japan	Dec. 2024
Contributed Talk	UVa/NRAO PostDoc Symposium	Oct. 2024
Contributed Talk	GOALS team meeting, Pasadena, USA	Sep. 2024
Contributed Talk	YERAC 2024 , Madrid, Spain	Sep. 2024
Contributed Talk	IAU GA 2024 , FM2, Cape Town, South Africa	Aug. 2024
Invited Talk	NRAO/GBO PostDoc Symposium , Green Bank, USA	Mar. 2024
Invited Talk	PHANGS collab. meeting: Garching, Germany	Feb. 2024
Contributed Talk	MeerKAT@5 , Stellenbosch, South Africa	Feb. 2024
Invited Talk	NRAO/UVa Colloquia, Charlottesville, Virginia, USA	Feb. 2024
PhD Colloquium	Promotionskolloquium, MPIfR/AIfA, Bonn, Germany	Oct. 2023
Invited Talk	PHANGS collab. meeting: Pasadena, USA	Feb. 2023
Invited Talk	NRAO Astronomy (TUNA) Lunch Talks (<i>online</i>)	Nov. 2022
Invited Talk	SMA Science Seminar at CfA (<i>online</i>)	Nov. 2022
Contributed Talk	Chile-Cologne-Bonn Symposium 2022 , Puerto Varas, Chile	Sept. 2022
Invited Talk	Puzzles of the galactic centre , Heidelberg, Germany <i>Central Molecular Zones from a different angle</i>	Sept. 2022
Poster Talk	From Stars to Galaxies II, Gothenburg, Sweden	June 2022
Poster Talk	Multi-line Diagnostics of the Interstellar Medium, Nice, France	April 2022
Poster Talk	ISM Beirut 2021 (<i>online</i>)	May 2021
Contributed Talk	IMPRS 6th Conference (<i>online</i>)	Nov.2020
Contributed Talk	PHANGS collab. meeting: Royal Observatory of Madrid, Spain	Jan. 2020
Outreach Talk	Charlottesville Astronomical Society (CAS)	Aug. 2025

List of Observing Programs

44 Total (6 as PI, 4 as co-PI)

		Telescope	Title	Time
As leading role				
10	PI: Eibensteiner	VLA 26A B-ranked	Large Program: High Quality HI Coverage of the Northern PHANGS JWST+HST+ALMA Targets	541 hours
9	co-PI: Eibensteiner (PI: Linden)	ALMA C12 A-ranked	Large Program: Meet in the Middle: An ALMA Treasury of Mid-Stage Mergers	111.0 hours 12m
8	PI: Eibensteiner	ALMA C11 A-ranked	The AGN-ISM interplay in the molecular disk of the iconic Seyfert II galaxy — Circinus	3.2 hours 12m
7	PI: Eibensteiner	ALMA C11 B-ranked	CO 2-1 observations of nearby intermediate massive galaxies of MeerKAT's MHONGOOSE survey	27.6 hours 12m
6	co-PI: Eibensteiner	SMT	Dense gas mapping in the nearby face-on starburst galaxy NGC6946	~240 hours
5	PI: Eibensteiner	SMA B-ranked	Untangling the molecular gas physics in the center of the starburst galaxy NGC 6946	20 hours
4	co-PI: Eibensteiner	IRAM 30m	DDT: CO isotopologues ratios in the center of M82	2.5 hours
3	, Beslic, den Brok	SMA 2022	<i>SMA school:</i> CO isotopologues ratios in the center of M82	10 hours
2	PI: Eibensteiner	NOEMA 2021 B-ranked	Deriving Gas Masses with CO isotopologues in the Central 400pc of the Fireworks Galaxy, NGC6946	10 hours
1	PI: Eibensteiner	VLA 22 A B-ranked	Fireworks of Ammonia: Temperature Constraints in NGC6946	25 hours
As co-I				
34	as Co-I (PI: Pisano)	MeerKAT 2026	Extra Large Program: The MeerKAT Local Universe Legacy Survey	798 hours
33	as Co-I (PI: A. Leroy)	ALMA C12 A-ranked	Large Program: The 10 pc Survey of Molecular Clouds and Stellar Feedback	107.1 hours 12m
32	as Co-I (PI: A. Leroy)	JWST Cycle 2	Treasury Program: A JWST Census of the Local Galaxy Population: Anchoring the Physics of the Matter Cycle	148.8 hours
31	as Co-I (PI: Dignan)	MeerKAT 2026 A-ranked	HIGH-RESOLUTION S-BAND IMAGING OF 19 PHANGS-ALMA GALAXIES	81 hours
30	as Co-I (PI: Krummer)	MeerKAT 2026	MeerXUV: A High-Resolution Study of HI Gas and Outer Disk Star Formation in Nearby XUV Disk Galaxies	50 hours
29	as Co-I (PI: Johnstone)	VLBA B-ranked	VLBA Follow-up of a Sub-100pc Dual AGN Candidate	4 hours
28	as Co-I (PI: Dignan)	VLA 26A A-ranked	REIMEGINING: Radio Emission of IMEGIN-Investigated Nearby Galaxies	93.1 hours
27	as Co-I (PI: Cronin)	VLA 26A A-ranked	Saying "HI" to the Deepest and Sharpest View of M82's HI Halo	87.5 hours

26	as Co-I (PI: Tarantino)	VLA & GBT B-ranked	Close to the Edge: Expanding the Local Group L Band Survey to Sextans A and B	196 hours
25	as Co-I (PI: Pingel)	VLA 26A	High-Resolution Imaging of the 21-cm HI emission at the Edges of NGC6822 and M33	178.85 hours
24	as Co-I (PI: Linden)	HST Cycle 33	The Hidden Engines That Could: Tracing Clump Formation and Evolution in the Hearts of Infrared-Luminous AGN Hosts	16 orbits
23	as Co-I (PI: E. Koch)	ALMA C11 A-ranked	Linking Molecular Cloud Structure to Massive Star Formation: 5000 molecular clouds, filaments, and bubbles across M33	38.6 h 12m
22	As Co-I (PI: M.J.Jimenez-Donaire)	ALMA C11 A-ranked	Resolving N ₂ H+(1-0) emission for the first time across the galaxy disk of M100	69.9 h 7m
21	as Co-I (PI: E. Mills)	ALMA C11 B-ranked	The Definitive View of M83's Center: Completing A Deep Parsec-Scale Survey of the Nearest Nuclei	34.6 h 12m
20	as Co-I (PI: R. Chown)	ALMA C11 B-ranked	A Complete View of Low Metallicity Star Forming Complexes in the Local Group Dwarf NGC 6822	27.8 h 12m
19	as Co-I (PI: J. Sun)	ALMA C11 B-ranked	Beholding Massive Star Cluster Formation and Evolution with the "Evil Eye"	9.8 h 12m
18	as Co-I (PI: L. Barcos-Munoz)	ALMA C11 B-ranked	Studying CO SLEDs of local LIRGs at 100 pc resolution	30.1 h + 46.0 h
17	as Co-I (PI: J. den Brok)	ALMA C11 C-ranked	CO Excitation Across the Local Galaxy Population	
16	as Co-I (PI: L. Neumann)	ALMA C11 C-ranked	A Deep, Full-Galaxy Dense Gas Map of M99	
15	as Co-I (PI: E. Koch)	VLA 24B B-ranked	Resolved atomic ISM, HII regions and supernova remnants beyond the Local Group	176 hr
14	as Co-I (PI: J. Sun)	VLA 24B B-ranked	A Census of Young Massive Clusters and Supernova Remnants in a Nuclear Starburst	8.24 hr
13	as Co-I (PI: E. Schinnerer)	JWST Cycle 3	Unveiling the physics that govern massive star-formation in extragalactic Central Molecular Zones (eCMZs)	60.2 hours
12	as Co-I (PI: I. Beslic)	ALMA C10 C-ranked	NGC 4945: The Milky Way's not-so-distant Cousin - ACA Standalone Mapping of the Full Disk in Band 3 Dense Gas Tracers	
11	as Co-I (PI: J. den Brok)	ALMA C10 C-ranked	Cloud-Scale CO excitation drivers in nearby galaxies targeted with JWST	
10	as Co-I (PI: J. Sun)	JWST Cycle 2	Beholding star cluster formation, feedback, and evolution with the 'Evil Eye'	3.15 hours
9	as Co-I (PI: A. Leroy)	JWST Cycle 2	Resolving HII Regions and ISM Structure Across the Milky Way Analog NGC 253	22.06 hours
8	as Co-I (PI: den Brok)	SMA	A wide-band high-resolution molecular survey in the starburst M82	85 hours
7	as Co-I (PI: Pisano)	MeerKAT	A Complete Picture of Atomic Gas, Molecular Gas, and Star Formation in Ten of the Best-Studied MeerKAT-Visible Galaxies	60 hours

6	as Co-I (PI: A. Leroy)	ALMA Cycle 9	ACA CO 1-0 Maps to Match MeerKAT 21-cm Maps	84.3h 7m
5	as Co-I (PI: I. Beslic)	ALMA Cycle 9	Untangling the dynamics and structure of complex star-forming systems: bar-ends of the star-forming disc galaxy NGC 3627	17h 12m
4	as Co-I (PI: D. Thilker)	AstroSat	UVIT FUV imaging of M83, the prototypical XUV disk	58.8ks
3	as Co-I (PI: A. Barnes)	ALMA Cycle 8	Extragalactic Cloud Scale Observations of High Critical Density Tracers - Bridging the Gap to the Milky Way	24.3h + 109.4h ACA
2	as Co-I (PI: J. den Brok)	IRAM 30m 2020	A detailed census of the key drivers of CO excitation: Metallicity, Radiation Field and the CO(2-1)/CO(1-0) Ratio Across M101	80 hours
1	as Co-I (PI: E. Schinnerer, F. Bigiel)	NOEMA 2019	The First Cloud-by-Cloud Dense Gas Map of an External Galaxy	200 hours
	PI: F. Bigiel	VLA	Kinematic analysis of the super-extended HI disk of the nearby spiral galaxy M83	40 hours
	PI: E. Schinnerer	PdBI	A 2-3 mm high-resolution molecular line survey towards the centre of the nearby spiral galaxy NGC 6946	132 hours

List of Publications¹

A full listing of my publications can be found on [\[ADS link\]](#)
2087 total citations (5 papers have 100+ citations), **h-index = 23** (as of Jan 15, 2026)
mentees marked in **brown colors**

First- or second-author publications (5 refereed + 1 pending, 102 citations):

- 7 Eibensteiner, Leroy, Sun, et al. "Adding multi-wavelength data to the Local Group L-Band Survey II: Star formation scaling relations of Local Group galaxies", collaboration review
- 6 Eibensteiner, Leroy, Sun, et al. "Adding multi-wavelength data to the Local Group L-Band Survey I: Atlas and radial profiles of Local Group galaxies", collaboration review
5. **Eibensteiner**, Sun, Bigiel, Leroy, Schinnerer, [+34 authors], 2024 "PHANGS-MeerKAT and MHONGOOSE HI observations of nearby spiral galaxies: physical drivers of the molecular gas fraction, R_{mol}", A&A 691, id.A163 — 24pp; 19 citations
4. **Laudage**, **Eibensteiner**, Bigiel, Leroy, [+19 authors], 2024 "Neutral atomic and molecular gas dynamics in the nearby spiral galaxies NGC 1512, NGC 4535, NGC 7496", A&A 690, id.A169 — 15pp; 6 citations
3. **Eibensteiner**, Bigiel, Leroy, Koch, Rosolowsky, [+32 authors], 2023 "Kinematic analysis of the super-extended HI disk of the nearby spiral galaxy M 83 ", A&A, 675, A37 — 24pp; 17 citations
2. **Eibensteiner**, Barnes, Bigiel, Schinnerer, [+29 authors], 2022 "A 2-3 mm high-resolution molecular line survey towards the centre of the nearby spiral galaxy NGC 6946", A&A, 659, 37 — 37pp; 28 citations
1. Güdel, **Eibensteiner**, Dionatos, [+7 authors], 2018, "ALMA detects a radial disk wind in DG Tauri" A&A Letters 620, L1 — 7pp; 32 citations

Co-authored publications (51 refereed papers, [+2 unrefereed papers], 1000+ citations):

51. Stelea et al. (**incl. Eibensteiner**), 2025 "The Local Group L-band Survey: Probing Cold Atomic Gas in IC10 with Neutral Hydrogen Absorption", accepted for publication in ApJ
50. Pathak et al. (**incl. Eibensteiner**), 2025 "Masses, Star-Formation Efficiencies, and Dynamical Evolution of 18,000 HII Regions", ApJL, 993, 1, id.L20
49. Dage et al. (**incl. Eibensteiner**), 2025, "Classifying Compact Radio Emission in Nearby Galaxies: a 10GHz Study of Active Galactic Nuclei, Supernovae, Anomalous Microwave Emission and Star Forming Regions", AJ, 170, 4, id.201
48. Stuber et al. (**incl. Eibensteiner**), 2025, "The SWAN view of dense gas in the Whirlpool -- A cloud-scale comparison of N₂H⁺, HCO⁺, HNC and HCN emission in M51", A&A, 702, id.A66
47. Koch et al. (**incl. Eibensteiner**), 2025 "The Karl G. Jansky Very Large Array Local Group L-band Survey (LGLBS)" ApJ Supplement Series, 279, 2
46. **Dignan**, Murphy, Manson, **Eibensteiner** et al., 2025, "The Star Formation in Radio Survey: Adding 90 GHz Data to 3-33 GHz Observations of Star-forming Regions in Nearby Galaxies", ApJ, 988, 2, id.216
45. Chown et al. (**incl. Eibensteiner**), 2025, "Relationships between PAHs, Small Dust Grains, H₂, and HI in Local Group Dwarf Galaxies NGC6822 and WLM Using JWST, ALMA and the VLA", ApJ, 987, 1, id.91

¹ 25 ADS citations or more are marked with , 50 citation or more with , 100 citations or more with , 200 citations or more with  

44. Huang et al. (incl. **Eibensteiner**), 2025, "Investigating the chemical link between H₂CO and CH₃OH within the CMZ of NGC 253" A&A, 699, id.A70
43. Johnstone et al. (incl. **Eibensteiner**), 2025, "Searching for Compact Obscured Nuclei in Compton Thick AGN", ApJ, 985, 2, id.259
42. Bouvier, Viti, Magnum, **Eibensteiner** et al., 2025, "Complex Organic Molecules towards the central molecular zone of NGC 253", A&A, 698, id.A261
41. Leroy et al. (incl. **Eibensteiner**), 2025, "Cloud-scale gas properties, depletion times, and star formation efficiency per free-fall time in PHANGS—ALMA", ApJ, 985, 1, id.14
40. Chown et al. (incl. **Eibensteiner**), 2025, "Polycyclic Aromatic Hydrocarbon and CO(2–1) Emission at 50–150 pc Scales in 70 Nearby Galaxies", ApJ, 983, 1, id.64
39. Stuber et al. (incl. **Eibensteiner**), 2025, "Surveying the Whirlpool at Arcseconds with NOEMA (SWAN) II: Survey design and observations", A&A, 696, id.A182
38. Zhang et al. (incl. **Eibensteiner**) 2025 "Application of resolved low-J multi-CO line modeling with RADEX to constrain the molecular gas properties in the starburst M82", ApJ, 982, 1, id.21
37. Savaria et al. (incl. **Eibensteiner**), 2025, „The Arp 240 Galaxy Merger: A Detailed Look at the Molecular Kennicutt-Schmidt Star Formation Law on Sub-kpc Scales „ ApJ, 979, 2, id.217
36. den Brok et al. (incl. **Eibensteiner**), 2025, "CO isotopologue-derived molecular gas conditions and CO-to-H₂ conversion factors in M51", ApJ, 69, 1, id.18
35. Neumann et al. (incl. **Eibensteiner**), 2025, "Dense gas scaling relations at kiloparsec scales across nearby galaxies with the ALMA ALMOND and IRAM 30m EMPIRE surveys,, A&A, 693, id.L13

2024

34. Behrens et al. (incl. **Eibensteiner**), 2024, "Neural Network Constraints on the Cosmic-Ray Ionization Rate and Other Physical Conditions in NGC 253 with ALCHEMI Measurements of HCN and HNC",
33. Neumann et al. (incl. **Eibensteiner**), 2024, „A 260 pc resolution ALMA map of HCN(1-0) in the galaxy NGC 4321“, *accepted for publication* in A&A
32. Chown et al. (incl. **Eibensteiner**), 2024, „Polycyclic Aromatic Hydrocarbon and CO(2-1) Emission at 50-150 pc Scales in 70 Nearby Galaxies“, Submitted to ApJ
31. Pingel et al. (incl. **Eibensteiner**), 2024, „The Local Group L-Band Survey: The First Measurements of Localized Cold Neutral Medium Properties in the Low-Metallicity Dwarf Galaxy NGC 6822“, ApJ
30. Bešlić et al. (incl. **Eibensteiner**), 2024, "The properties and kinematics of HCN emission across the closest starburst galaxy NGC 253 observed with ALMA", *accepted for publication* in A&A
29. Williams et al. (incl. **Eibensteiner**), 2024, „PHANGS-JWST: Data Processing Pipeline and First Full Public Data Release“, *accepted for publication* in ApJS
28. Teng et al. (Incl. **Eibensteiner**), 2024, "Star Formation Efficiency in Nearby Galaxies Revealed with a New CO-to-H₂ Conversion Factor Prescription", ApJ, 961, 1, Id.42

2023

27. Stuber et al. (incl. **Eibensteiner**), 2023, "Surveying the Whirlpool at Arcseconds with NOEMA (SWAN). I. Mapping the HCN and N₂H+ 3mm lines", 2023, A&A, 680, A4
25. Querejeta et al. (incl. **Eibensteiner**), 2023, "A sensitive, high-resolution, wide-field IRAM NOEMA CO(1-0) survey of the very nearby spiral galaxy IC 342", 2023, A&A, 680, A4

24. Zakardijian et al. (incl. **Eibensteiner**), 2023, “The impact of HII regions on Giant Molecular Cloud properties in nearby galaxies sampled by PHANGS ALMA and MUSE”, A&A, 678, id.A171
23. Belfiore et al. (incl. **Eibensteiner**), 2023, “Calibration of mid-infrared emission as a tracer of obscured star formation on HII-region scales in the era of JWST”, submitted to A&A
22. Sormani et al. (incl. **Eibensteiner**), 2023, “Fuelling the nuclear ring of NGC 1097”, MNRAS, 523
21. Jimenez-Donaire et al. (incl. **Eibensteiner**), 2023, “A constant N₂H+(1-0)-to-HCN(1-0) ratio on kpc scales”, 2023, A&A Letters
20. den Brok et al. (incl. **Eibensteiner**), 2023, “Wide-field CO isotopologue emission and the CO-to-H₂ factor across the nearby spiral galaxy M101”, A&A, 676, id.A93
19. Neumann et al. (incl. **Eibensteiner**), 2023, “Spectral stacking of radio-interferometric data”, A&A, 675, id.A104
18. Teng et al. (incl. **Eibensteiner**), 2023, “The Physical Drivers and Observational Tracers of CO-to-H₂ Conversion Factor Variations in Nearby Barred Galaxy Centers”, ApJ, 950, 2
17. Neumann et al. (incl. **Eibensteiner**), 2023, “The ALMOND Survey: Molecular cloud properties and gas density tracers across 25 nearby spiral galaxies with ALMA”, MNRAS, 521, 3
16. García-Rodríguez et al. (incl. **Eibensteiner**), 2022, “Sub-kpc empirical relations and excitation conditions of HCN and HCO+ J=3-2 in nearby star-forming galaxies”, A&A, 672, A96
15. Barnes et al. (incl. **Eibensteiner**), 2023, „PHANGS-JWST First Results: Multi-wavelength view of feedback-driven bubbles (The Phantom Voids) across NGC 628“, ApJL, 944, 2, id.L22
14. Lee et al. (incl. **Eibensteiner**), 2023, “The PHANGS-JWST Treasury Survey: „Star Formation, Feedback, and Dust Physics at High Angular resolution in Nearby Galaxies“, ApJL, 944, 2, id.L17
13. Schinnerer et al. (incl. **Eibensteiner**), 2023 “PHANGS-JWST First Results: Rapid Evolution of Star Formation in the Central Molecular Gas Ring of NGC 1365 “, ApJL, 944, 2, id.L15
12. Leroy et al. (incl. **Eibensteiner**), 2023, “PHANGS--JWST First Results: Mid-infrared emission traces both gas column density and heating at 100pc scales“, ApJL, 944, 2, id.L9

2022

11. Belfiore et al. (incl. **Eibensteiner**), 2022, “Calibration of hybrid resolved star formation rate recipes based on PHANGS--MUSE H α and H β maps“ A&A, 670, id.A67
10. Barnes et al. (incl. **Eibensteiner**), 2022, “Linking stellar populations to HII regions across nearby galaxies: I. Constraining pre-supernova feedback from young clusters in NGC1672“, A&A Letters, 662, L6
9. den Brok et al. (incl. **Eibensteiner**), 2022, “A CO isotopologue Line Atlas within the Whirlpool galaxy Survey (CLAWS)“, A&A, 662, A89, 29
8. Leroy et al. (incl. **Eibensteiner**), 2021, “Low-J CO Line Ratios From Single Dish CO Mapping Surveys and PHANGS-ALMA“, ApJ, 927, 2
7. Pan et al. (incl. **Eibensteiner**), 2022, “The Gas–Star Formation Cycle in Nearby Star-forming Galaxies II. Resolved Distributions of CO and H α Emission for 49 PHANGS Galaxies“, ApJ, 927, 1, 49
6. Emsellem et al. (incl. **Eibensteiner**), 2021, “The PHANGS-MUSE survey -- Probing the chemo-dynamical evolution of disc galaxies“ A&A, 659, A191, 47
5. Barnes et al. (incl. **Eibensteiner**), 2021, “Comparing the pre-SNe feedback and environmental pressures for 6000 H II regions across 19 nearby spiral galaxies“, MNRAS, 508, 4, 5362-5389

- ✪ 4. Leroy et al. (incl. **Eibensteiner**), 2021, “PHANGS-ALMA: Arcsecond CO(2-1) Imaging of Nearby Star-forming Galaxies”, ApJ Supplement Series, 257, 2, 61
- ✪ 3. Querejeta et al. (incl. **Eibensteiner**), 2021, “Stellar structures, molecular gas, and star formation across the PHANGS sample of nearby galaxies”, A&A 656, A133
- 2. Bešlić et al. (incl. **Eibensteiner**), 2021, “Dense molecular gas properties on 100 pc scales across the disc of NGC 3627”, MNRAS, 506, 963-988
- ✪ 1. Leroy et al. (incl. **Eibensteiner**), 2021, “PHANGS-ALMA Data Processing and Pipeline”, ApJS, 255, 19

Conference proceedings (total: 2):

1. **Eibensteiner**, Bigiel, Schinnerer, Barnes, Leroy and the PHANGS Collaboration, 2023, „Comparing physical properties of two extreme dynamical environments: The centers and outskirts of nearby disk galaxies“, Physics and Chemistry of Star Formation: The Dynamical ISM Across Time and Spatial Scales. Proceedings of the 7th Chile-Cologne-Bonn Symposium, held 26-30 September, 2022 in Puerto-Varas, Chile. Edited by V. Ossenkopf-Okada et al. ISBN: 978-3-00-074740-3. Published by Universitäts- und Stadtbibliothek Köln, 2023, p.57
2. Schinnerer, Pety, Beslic, **Eibensteiner**, and the PHANGS and PAWS Collaboration, 2022, „A Cloud-Scale View of the Molecular Gas Disk in the Whirlpool Galaxy and Beyond“, Multi-line Diagnostics of the Interstellar Medium, Nice, France, Edited by Bouscasse, L.; Kramer, C.; Gueth, F.; EPJ Web of Conferences, Volume 265, id.00010