Dr. Adam G. Ginsburg

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Educational Background:

2013 PhD Astrophysics University of Colorado, Boulder 2009 M.S. Astrophysics University of Colorado, Boulder

2006 B.S. Astrophysics Rice University

Professional Employment:

2019 -	Assistant Professor	University of Florida
		Gainesville, Florida
2016 - 2019	Jansky Fellow	National Radio Astronomy Observatory
		Socorro, New Mexico
2013 - 2016	ESO Fellow	European Southern Observatory
		Garching, Germany
2007 - 2013	Graduate Research	Center for Astrophysics and Space Astronomy,
	Assistant	University of Colorado, Boulder, CO
2010 - 2013	Instructor	Department of Astrophysical and Planetary Sciences,
		University of Colorado, Boulder, CO
2007 - 2011	Teaching Assistant	Department of Astrophysical and Planetary Sciences,
		University of Colorado, Boulder, CO
2007	Research Assistant	Department of Physics and Astronomy,
		University of Denver, Denver, CO

Areas of Research:

- The astrophysics of massive star formation and the stellar initial mass function.
- The physical properties of the molecular interstellar medium.
- Development of molecular probes of gas physical conditions.
- Observations at several wavelengths, especially radio and infrared.
- The development of astronomical software tools, especially for large data cubes and archival data access.

Refereed Publications as of October 10, 2021 17 first author, 106 total, with 6176 citations and h-index 31:

- [1] Battersby, C. et al., CMZoom: Survey Overview and First Data Release, August, 2020, ApJS, 249, 35, 3 Citation(s)
- [2] Choudhury, S. et al., Ubiquitous NH₃ supersonic component in L1688 coherent cores, August, 2020, A&A, 640, L6, 0 Citation(s)
- [3] Rivera-Soto, R., Galván-Madrid, R., **Ginsburg**, A., & Kurtz, S., Recombination Lines and Molecular Gas from Hypercompact HII regions in W51 A, August, 2020, ApJ, 899, 94, 0 Citation(s)
- [4] Henshaw, J. D. et al., Ubiquitous velocity fluctuations throughout the molecular interstellar medium, July, 2020, Nature Astronomy, 6 Citation(s)
- [5] Ginsburg, A. et al., The MUSTANG Galactic Plane Survey (MGPS90) Pilot, June, 2020, ApJS, 248, 24, 2 Citation(s)
- [6] Lu, X. et al., ALMA Observations of Massive Clouds in the Central Molecular Zone: Jeans Fragmentation and Cluster Formation, May, 2020, ApJ, 894, L14, 0 Citation(s)
- [7] Rosen, A. L., Offner, S. S. R., Sadavoy, S. I., Bhandare, A., Vázquez-Semadeni, E., & **Ginsburg**, A., Zooming in on Individual Star Formation: Low- and High-Mass Stars, May, 2020, SSR, 216, 62, 4 Citation(s)
- [8] Chen, C.-Y. et al., Relative alignment between dense molecular cores and ambient magnetic field: the synergy of numerical models and observations, March, 2020, MNRAS, 494, 1971, 1 Citation(s)
- [9] Bally, J., Ginsburg, A., Forbrich, J., & Vargas-González, J., The Orion Protostellar Explosion and Runaway Stars Revisited: Stellar Masses, Disk Retention, and an Outflow from the BecklinNeugebauer Object, February, 2020, ApJ, 889, 178, 2 Citation(s)
- [10] Butterfield, N. O. et al., 6.7 GHz CH₃OH Absorption toward the N3 Galactic Center Point Source, February, 2020, ApJ, 889, 174, 0 Citation(s)
- [11] Wright, M. et al., Observations of the Orion Source I Disk and Outflow Interface, February, 2020, ApJ, 889, 155, 2 Citation(s)
- [12] **Ginsburg**, A. & Goddi, C., First detection of CS masers around a high-mass young stellar object, W51 e2e, November, 2019, AJ, 158, 208, O Citation(s)
- [13] McLeod, A. F. et al., Feedback from massive stars at low metallicities: MUSE observations of N44 and N180 in the Large Magellanic Cloud, July, 2019, MNRAS, 486, 5263, 12 Citation(s)
- [14] How-Huan Chen, H. et al., Droplets I: Pressure-Dominated Sub-0.1 pc Coherent Structures in L1688 and B18, June, 2019, ApJ, 877, 93, 20 Citation(s)
- [15] **Ginsburg**, A., Mills, E. A. C., Battersby, C. D., Longmore, S. N., & Kruijssen, J. M. D., Astro2020 Science White Paper: What is the lifecycle of gas and stars in galaxy centers?, May, 2019, BAAS, 51, 220, 0 Citation(s)
- [16] Colombo, D. et al., The integrated properties of the molecular clouds from the JCMT CO(3-2) High Resolution Survey, March, 2019, MNRAS, 483, 4290, 15 Citation(s)
- [17] Ginsburg, A. et al., astroquery: An Astronomical Web-Querying Package in Python, March, 2019, AJ, 157, 98, 39 Citation(s)
- [18] Suri, S. T. et al., The CARMA-NRO Orion Survey: The filamentary structure as seen in C¹⁸O emission, March, 2019, A&A, 623, A142, 10 Citation(s)
- [19] Liu, H. B. et al., Investigating fragmentation of gas structures in OB cluster-forming molecular clump G33.92+0.11 with 1000 AU resolution observations of ALMA, February, 2019, ApJ, 871, 185, 11 Citation(s)
- [20] Mangum, J. G., Ginsburg, A. G., Henkel, C., Menten, K. M., Aalto, S., & van der Werf, P., Fire in the Heart: A Characterization of the High Kinetic Temperatures and Heating Sources in the Nucleus of NGC253, February, 2019, ApJ, 871, 170, 7 Citation(s)
- [21] Ginsburg, A., McGuire, B., Plambeck, R., Bally, J., Goddi, C., & Wright, M., Orion Source I's disk is salty, February, 2019, ApJ, 872, 54, 8 Citation(s)
- $[22] \quad \text{Mills, E. A. C. et al., } \textit{Discovery of 14NH3 (2,2) maser emission in Sgr B2-Main, December, 2018, ApJ, 869, L14, 3 \textit{ Citation(s)} \\$
- [23] —, The Dense Gas Fraction in Galactic Center Clouds, November, 2018, ApJ, 868, 7, 10 Citation(s)
- [24] Astropy Collaboration et al., The Astropy Project: Building an Open-science Project and Status of the v2.0 Core Package, September, 2018, AJ, 156, 123, 1220 Citation(s)
- [25] Ginsburg, A. & Kruijssen, J. M. D., A High Cluster Formation Efficiency in the Sagittarius B2 Complex, September, 2018, ApJ, 864, L17, 11 Citation(s)
- [26] Monsch, K. et al., Dense Gas Kinematics and a Narrow Filament in the Orion A OMC1 Region Using NH₃, July, 2018, ApJ, 861, 77, 16 Citation(s)

- [27] Ginsburg, A., Bally, J., Goddi, C., Plambeck, R., & Wright, M., A Keplerian Disk around Orion SrCI, a 15 Msun YSO, June, 2018, ApJ, 860, 119, 29 Citation(s)
- [28] Kong, S. et al., The CARMA-NRO Orion Survey, June, 2018, ApJS, 236, 25, 31 Citation(s)
- [29] Goddi, C., **Ginsburg**, A., Maud, L., Zhang, Q., & Zapata, L., Accretion and outflow structures within 1000 AU from high-mass protostars with ALMA longest baselines, May, 2018, arXiv e-prints, arXiv:1805.05364, 14 Citation(s)
- [30] Youngblood, A., France, K., Ginsburg, A., Hoadley, K., & Bally, J., The Orion Fingers: H₂ Temperatures and Excitation in an Explosive Outflow, April, 2018, ApJ, 857, 7, 1 Citation(s)
- [31] Smith, N., **Ginsburg**, A., & Bally, J., A disrupted molecular torus around Eta Carinae as seen in 12CO with ALMA, March, 2018, MNRAS, 474, 4988, 14 Citation(s)
- [32] **Ginsburg**, A. et al., Distributed Star Formation throughout the Galactic Center Cloud Sgr B2, February, 2018, ApJ, 853, 171, 42 Citation(s)
- [33] Walker, D. L. et al., Star formation in a high-pressure environment: An SMA view of the Galactic centre dust ridge, February, 2018, MNRAS, 474, 2373, 20 Citation(s)
- [34] Sánchez-Monge, Á., Schilke, P., **Ginsburg**, A., Cesaroni, R., & Schmiedeke, A., STATCONT: A statistical continuum level determination method for line- rich sources, January, 2018, A&A, 609, A101, 18 Citation(s)
- [35] Redaelli, E. et al., The Green Bank Ammonia Survey: Unveiling the Dynamics of the Barnard 59 star-forming Clump, December, 2017, ApJ, 850, 202, 7 Citation(s)
- [36] Keown, J. et al., The Green Bank Ammonia Survey: Observations of Hierarchical Dense Gas Structures in Cepheus-L1251, November, 2017, ApJ, 850, 3, 15 Citation(s)
- [37] Krieger, N. et al., The Survey of Water and Ammonia in the Galactic Center (SWAG): Molecular Cloud Evolution in the Central Molecular Zone, November, 2017, ApJ, 850, 77, 33 Citation(s)
- [38] Kirk, H. et al., The Green Bank Ammonia Survey: Dense Cores Under Pressure in Orion A, September, 2017, ApJ, 846, 144, 36 Citation(s)
- [39] Friesen, R. K. et al., The Green Bank Ammonia Survey: First Results of NH₃ Mapping of the Gould Belt, July, 2017, ApJ, 843, 63, 75 Citation(s)
- [40] Sánchez-Monge, Á. et al., The physical and chemical structure of Sagittarius B2. II. Continuum millimeter emission of Sgr B2(M) and Sqr B2(N) with ALMA, July, 2017, A&A, 604, A6, 30 Citation(s)
- [41] **Ginsburg**, A. et al., Thermal Feedback in the High-mass Star- and Cluster-forming Region W51, June, 2017, ApJ, 842, 92, 22 Citation(s)
- [42] Lin, Y. et al., Cloud structure of three Galactic infrared dark star-forming regions from combining ground and space based bolometric observations, May, 2017, ApJ, 840, 22, 21 Citation(s)
- [43] Schuller, F. et al., SEDIGISM: Structure, excitation, and dynamics of the inner Galactic interstellar medium, May, 2017, A&A, 601, A124, 35 Citation(s)
- [44] Lu, X. et al., The Molecular Gas Environment in the 20 km s⁻¹ Cloud in the Central Molecular Zone, April, 2017, ApJ, 839, 1, 19 Citation(s)
- [45] Bally, J. et al., The ALMA View of the OMC1 Explosion in Orion, March, 2017, ApJ, 837, 60, 58 Citation(s)
- [46] Schap, III, W. J., Barnes, P. J., Ordoñez, A., Ginsburg, A., Yonekura, Y., & Fukui, Y., HCN hyperfine ratio analysis of massive molecular clumps, March, 2017, MNRAS, 465, 2559, 3 Citation(s)
- [47] Immer, K., Kauffmann, J., Pillai, T., **Ginsburg**, A., & Menten, K. M., Temperature structures in Galactic Center clouds Direct evidence for gas heating via turbulence, November, 2016, A&A, 595, A94, 19 Citation(s)
- [48] McLeod, A. F. et al., Connecting the dots: a correlation between ionising radiation and cloud mass-loss rate traced by optical integral field spectroscopy, November, 2016, MNRAS, 462, 3537, 20 Citation(s)
- [49] Galametz, M. et al., Water, methanol and dense gas tracers in the local ULIRG Arp 220: results from the new SEPIA Band 5 Science Verification campaign, October, 2016, MNRAS, 462, L36, 12 Citation(s)
- [50] Ginsburg, A. et al., Toward gas exhaustion in the W51 high-mass protoclusters, October, 2016, A&A, 595, A27, 41 Citation(s)
- [51] Lin, Y. et al., Cloud Structure of Galactic OB Cluster-forming Regions from Combining Ground- and Space-based Bolometric Observations, September, 2016, ApJ, 828, 32, 26 Citation(s)
- [52] Eisner, J. A., Bally, J. M., Ginsburg, A., & Sheehan, P. D., Protoplanetary Disks in the Orion OMC1 Region Imaged with ALMA, July, 2016, ApJ, 826, 16, 30 Citation(s)

- [53] Youngblood, A., Ginsburg, A., & Bally, J., The Orion fingers: Near-IR spectral imaging of an explosive outflow, June, 2016, AJ, 151, 173, 11 Citation(s)
- [54] Goddi, C., Ginsburg, A., & Zhang, Q., Hot ammonia around young O-type stars. III. High-mass star formation and hot core activity in W51 Main, May, 2016, A&A, 589, A44, 7 Citation(s)
- [55] Svoboda, B. E. et al., The Bolocam Galactic Plane Survey. XIV. Physical Properties of Massive Starless and Star-forming Clumps, May, 2016, ApJ, 822, 59, 44 Citation(s)
- [56] Henshaw, J. D. et al., Molecular gas kinematics within the central 250 pc of the Milky Way, April, 2016, MNRAS, 457, 2675, 110 Citation(s)
- [57] Mc Leod, A. F., Weilbacher, P. M., Ginsburg, A., Dale, J. E., Ramsay, S., & Testi, L., A nebular analysis of the central Orion nebula with MUSE, February, 2016, MNRAS, 455, 4057, 12 Citation(s)
- [58] Ginsburg, A. et al., Dense gas in the Galactic central molecular zone is warm and heated by turbulence, February, 2016, A&A, 586, A50, 112 Citation(s)
- [59] Colombo, D., Rosolowsky, E., Ginsburg, A., Duarte-Cabral, A., & Hughes, A., Graph-based interpretation of the Molecular Interstellar Medium Segmentation, December, 2015, MNRAS, 454, 2067, 37 Citation(s)
- [60] **Ginsburg**, A. et al., High-mass star-forming cloud G0.38+0.04 in the Galactic Center Dust Ridge contains H2CO and SiO masers, December, 2015, A&A, 584, L7, 23 Citation(s)
- [61] Weilbacher, P. M. et al., A MUSE map of the central Orion Nebula (M 42), October, 2015, A&A, 582, A114, 47 Citation(s)
- [62] Bally, J., Ginsburg, A., Silvia, D., & Youngblood, A., The Orion fingers: Near-IR adaptive optics imaging of an explosive protostellar outflow, July, 2015, A&A, 579, A130, 31 Citation(s)
- [63] ALMA Partnership et al., The 2014 ALMA Long Baseline Campaign: An Overview, July, 2015, ApJ, 808, L1, 73 Citation(s)
- [64] Wang, K., Testi, L., Ginsburg, A., Walmsley, C. M., Molinari, S., & Schisano, E., Large-scale filaments associated with Milky Way spiral arms, July, 2015, MNRAS, 450, 4043, 75 Citation(s)
- [65] Ellsworth-Bowers, T. P. et al., The Bolocam Galactic Plane Survey. XIII. Physical Properties and Mass Functions of Dense Molecular Cloud Structures, June, 2015, ApJ, 805, 157, 10 Citation(s)
- [66] McLeod, A. F. et al., The Pillars of Creation revisited with MUSE: gas kinematics and high-mass stellar feedback traced by optical spectroscopy, June, 2015, MNRAS, 450, 1057, 34 Citation(s)
- [67] Merello, M. et al., The Bolocam Galactic Plane Survey. XI. Temperatures and Substructure of Galactic Clumps Based On 350 μm Observations, May, 2015, ApJS, 218, 1, 14 Citation(s)
- [68] Thompson, M. et al., The ionised, radical and molecular Milky Way: spectroscopic surveys with the SKA, April, 2015, Advancing Astrophysics with the Square Kilometre Array (AASKA14), 126, 2 Citation(s)
- [69] Ellsworth-Bowers, T. P. et al., The Bolocam Galactic Plane Survey. XII. Distance Catalog Expansion Using Kinematic Isolation of Dense Molecular Cloud Structures with ¹³ CO(1-0), January, 2015, ApJ, 799, 29, 37 Citation(s)
- [70] Ginsburg, A. et al., The dense gas mass fraction in the W51 cloud and its protoclusters, January, 2015, A&A, 573, A106, 35 Citation(s)
- [71] Bally, J., **Ginsburg**, A., Probst, R., Reipurth, B., Shirley, Y. L., & Stringfellow, G. S., Outflows, Dusty Cores, and a Burst of Star Formation in the North America and Pelican Nebulae, December, 2014, AJ, 148, 120, 11 Citation(s)
- [72] Bally, J. et al., Absorption Filaments toward the Massive Clump G0.253+0.016, November, 2014, ApJ, 795, 28, 12 Citation(s)
- [73] Battersby, C., **Ginsburg**, A., Bally, J., Longmore, S., Dunham, M., & Darling, J., The Onset of Massive Star Formation: The Evolution of Temperature and Density Structure in an Infrared Dark Cloud, June, 2014, ApJ, 787, 113, 33 Citation(s)
- [74] Battersby, C., Bally, J., Dunham, M., **Ginsburg**, A., Longmore, S., & Darling, J., The Comparison of Physical Properties Derived from Gas and Dust in a Massive Star-forming Region, May, 2014, ApJ, 786, 116, 24 Citation(s)
- [75] Levesque, E. M., Stringfellow, G. S., **Ginsburg**, A. G., Bally, J., & Keeney, B. A., The Peculiar Balmer Decrement of SN 2009ip: Constraints on Circumstellar Geometry, January, 2014, AJ, 147, 23, 55 Citation(s)
- [76] Margutti, R. et al., A Panchromatic View of the Restless SN 2009ip Reveals the Explosive Ejection of a Massive Star Envelope, January, 2014, ApJ, 780, 21, 150 Citation(s)
- [77] **Ginsburg**, A., Federrath, C., & Darling, J., A Measurement of the Turbulence-driven Density Distribution in a Non-star-forming Molecular Cloud, December, 2013, ApJ, 779, 50, 26 Citation(s)
- [78] Shirley, Y. L. et al., The Bolocam Galactic Plane Survey. X. A Complete Spectroscopic Catalog of Dense Molecular Gas Observed toward 1.1 mm Dust Continuum Sources with 7.5 ≤ l ≤ 194, November, 2013, ApJS, 209, 2, 54 Citation(s)

- [79] Astropy Collaboration et al., Astropy: A community Python package for astronomy, October, 2013, A&A, 558, A33, 3408 Citation(s)
- [80] Ginsburg, A. et al., The Bolocam Galactic Plane Survey. IX. Data Release 2 and Outer Galaxy Extension, October, 2013, ApJS, 208, 14, 96 Citation(s)
- [81] Kendrew, S. et al., Early-stage Massive Star Formation near the Galactic Center: Sgr C, October, 2013, ApJ, 775, L50, 24 Citation(s)
- [82] Fallscheer, C. et al., Herschel Reveals Massive Cold Clumps in NGC 7538, August, 2013, ApJ, 773, 102, 18 Citation(s)
- [83] Ellsworth-Bowers, T. P. et al., The Bolocam Galactic Plane Survey. VIII. A Mid-infrared Kinematic Distance Discrimination Method, June, 2013, ApJ, 770, 39, 44 Citation(s)
- [84] Harvey, P. M. et al., A First Look at the Auriga-California Giant Molecular Cloud with Herschel and the CSO: Census of the Young Stellar Objects and the Dense Gas, February, 2013, ApJ, 764, 133, 39 Citation(s)
- [85] Smith, N., Arnett, W. D., Bally, J., Ginsburg, A., & Filippenko, A. V., The ring nebula around the blue supergiant SBW1: pre-explosion snapshot of an SN 1987A twin, February, 2013, MNRAS, 429, 1324, 29 Citation(s)
- [86] Bressert, E., Ginsburg, A., Bally, J., Battersby, C., Longmore, S., & Testi, L., How to Find Young Massive Cluster Progenitors, October, 2012, ApJ, 758, L28, 59 Citation(s)
- [87] Ginsburg, A., Bressert, E., Bally, J., & Battersby, C., There are No Starless Massive Proto-clusters in the First Quadrant of the Galaxy, October, 2012, ApJ, 758, L29, 75 Citation(s)
- [88] Bally, J., Youngblood, A., & **Ginsburg**, A., The Spindle: An Irradiated Disk and Bent Protostellar Jet in Orion, September, 2012, ApJ, 756, 137, 6 Citation(s)
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- [90] Battersby, C. et al., Characterizing precursors to stellar clusters with Herschel, November, 2011, A&A, 535, A128, 111 Citation(s)
- [91] Ginsburg, A., Darling, J., Battersby, C., Zeiger, B., & Bally, J., Galactic H₂CO Densitometry. I. Pilot Survey of Ultracompact H II Regions and Methodology, August, 2011, ApJ, 736, 149, 25 Citation(s)
- [92] Schlingman, W. M. et al., The Bolocam Galactic Plane Survey: V. HCO⁺ and N₂H⁺ Spectroscopy of 1.1 mm Dust Continuum Sources, August, 2011, ApJS, 195, 14, 56 Citation(s)
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- [94] Aguirre, J. E. et al., The Bolocam Galactic Plane Survey: Survey Description and Data Reduction, January, 2011, ApJS, 192, 4, 221 Citation(s)
- [95] Bally, J. et al., The Bolocam Galactic Plane Survey: λ = 1.1 and 0.35 mm Dust Continuum Emission in the Galactic Center Region, September, 2010, ApJ, 721, 137, 86 Citation(s)
- [96] Battersby, C. et al., An Infrared Through Radio Study of the Properties and Evolution of IRDC Clumps, September, 2010, ApJ, 721, 222, 68 Citation(s)
- [97] Yan, C.-H., Minh, Y. C., Wang, S.-Y., Su, Y.-N., & **Ginsburg**, A., Star-forming Region Sh 2-233IR. I. Deep Near-infrared Observations toward the Embedded Stellar Clusters, September, 2010, ApJ, 720, 1, 7 Citation(s)
- [98] Bally, J. et al., Herschel observations of the W43 "mini-starburst", July, 2010, A&A, 518, L90+, 53 Citation(s)
- [99] Dunham, M. K. et al., The Bolocam Galactic Plane Survey: III. Characterizing Physical Properties of Massive Star-forming Regions in the Gemini OB1 Molecular Cloud, July, 2010, ApJ, 717, 1157, 52 Citation(s)
- [100] Rosolowsky, E. et al., The Bolocam Galactic Plane Survey: II. Catalog of the Image Data, May, 2010, ApJS, 188, 123, 195 Citation(s)
- [101] Ginsburg, A. G., Bally, J., Yan, C.-H., & Williams, J. P., Outflows and Massive Stars in the Protocluster IRAS 05358+3543, December, 2009, ApJ, 707, 310, 11 Citation(s)
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- [103] Stringfellow, G. S., Bally, J., & **Ginsburg**, A., Young Stellar Jets and Outflows in the Massive Star Forming Complex W5, 2009, Astrophysics and Space Science Proceedings, 13, 623, 0 Citation(s)
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