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Princeton University: A. B., Physics, 1983  
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University of Colorado at Boulder: M.A., Physics, 1985; Ph.D., Physics, 1989  
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*Relevant Employment :*

July 2007 –	Curator, Department of Astrophysics, American Museum of Natural History
July 2007 –	Adjunct Professor, Department of Astronomy, Columbia University
April 2012 –	Visiting Research Professor, Department of Physics, Drexel University
July 2007 – June 2012	Chair, Division of Physical Sciences, American Museum of Natural History
July 2005 – June 2012	Curator-in-Charge, Department of Astrophysics, American Museum of Natural History
July 2002 – June 2007	Associate Curator, Department of Astrophysics, American Museum of Natural History
July 2002 – June 2007	Adjunct Associate Professor, Department of Astronomy, Columbia University
May 1999 – June 2002	Assistant Curator, Department of Astrophysics, American Museum of Natural History
May 1999 – June 2002	Adjunct Assistant Professor, Department of Astronomy, Columbia University
Sept. 1995 – April 1999	Scientist, Max-Planck-Institut für Astronomie
January 1994 – August 1995	Research Associate, Department of Astronomy, Univ. of Illinois at Urbana-Champaign
September 1992 – August 1995	Research Associate, Department of Astronomy & Astrophysics, University of Chicago

January 1991 – August 1992	Research Associate, Center for Star Formation Studies, University of California at Berkeley
January 1989 – December 1990	National Research Council Postdoctoral Fellow, NASA Ames Research Center
September 1983 – December 1988	Research Assistant, Joint Institute for Laboratory Astrophysics, University of Colorado and National Bureau of Standards
Summer 1984	Programmer, Space Astronomy Laboratory, University of Wisconsin at Madison
Summer 1982	Undergraduate Research Fellow, Division of Geological and Planetary Sciences, California Institute of Technology

*Fellowships & Honors:*

- University of Colorado Graduate School Fellowship, 1983-1984, 1985-1986
- National Research Council Fellowship, 1989-1990
- Humboldt Research Prize, 2014

*Professional Associations :* International Astronomical Union, American Astronomical Society, American Physical Society

*Fields of Interest :* Star Formation, Planet Formation, Structure of the Interstellar Medium and Molecular Clouds, Computational Gas Dynamics and Magnetohydrodynamics

*Citizenship :* United States

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## Ph. D. Dissertation

“Interactions of Massive Stars with the Interstellar Medium: Bow Shocks and Superbubbles,” 1989, Department of Physics, University of Colorado at Boulder.

## Scientific Papers in Refereed Journals

1. “Molecular Processes and Gravitational Collapse in Intergalactic Shocks,” Mac Low, M.-M., and Shull, J. M. 1986, *Astrophys. J.*, 302, 585–589.
2. “Merging of Vortices in the Atmosphere of Jupiter: An Analysis of Voyager Images,” Mac Low, M.-M., and Ingersoll, A. P. 1986, *Icarus*, 65, 353–369.
3. “Superbubbles in Disk Galaxies,” Mac Low, M.-M., and McCray, R. 1988, *Astrophys. J.*, 324, 776–785.
4. “Superbubble Blowout Dynamics,” Mac Low, M.-M., McCray, R., and Norman, M. L. 1989, *Astrophys. J.*, 337, 141–154.
5. “Cometary Compact H II Regions are Stellar Wind Bow Shocks,” Van Buren, D., Mac Low, M.-M., Wood, D. O. S., and Churchwell, E. 1990, *Astrophys. J.*, 353, 570–578.
6. “X-Ray Emission From Colliding Stellar Winds,” Luo, D., McCray, R., and Mac Low, M.-M. 1990, *Astrophys. J.*, 362, 267–273.
7. “X-Rays From Superbubbles in the Large Magellanic Clouds,” Chu, Y.-H., and Mac Low, M.-M. 1990, *Astrophys. J.*, 365, 510–521.
8. “Bow Shock Models of Ultracompact H II Regions,” Mac Low, M.-M., Van Buren, D., Wood, D. O. S., and Churchwell, E. 1991, *Astrophys. J.*, 369, 395–409.
9. “Expansion of a Superbubble in a Uniform Magnetic Field,” Ferrière, K. M., Mac Low, M.-M., and Zweibel, E. G. 1991, *Astrophys. J.*, 375, 239–253.
10. “The Semicircular Shell of CTB 109,” Wang, Z., Qu, Q., Luo, D., McCray, R., and Mac Low, M.-M. 1992, *Astrophys. J.*, 388, 127–130.
11. “Water Masers in W49N—The Youngest Stellar Jet?,” Mac Low, M.-M. and Elitzur, M. 1992, *Astrophys. J. (Letters)*, 393, L33–L36.
12. “Bow Shock Models for the Velocity Structure of Ultracompact H II Regions,” Van Buren, D., and Mac Low, M.-M. 1992, *Astrophys. J.*, 394, 534.
13. “Nonlinear Growth of Dynamical Overstabilities in Blast Waves,” Mac Low, M.-M. and Norman, M. L. 1993, *Astrophys. J.*, 407, 207–218.
14. “Hidden Supernova Remnants in the Large Magellanic Cloud H II Complex N44,” Chu, Y.-H., Mac Low, M.-M., García-Segura, G., Wakker, B., and Kennicutt, R. C., Jr. 1993, *Astrophys. J.*, 414, 213–218.
15. “A Protostellar Jet Model for the Water Masers in W49N,” Mac Low, M.-M., Elitzur, M., Stone, J. M., and Königl, A. 1994, *Astrophys. J.*, 427, 914–918.
16. “The Collision of Comet Shoemaker-Levy 9 and Jupiter,” Zahnle, K., and Mac Low, M.-M. 1994, *Icarus*, 108, 1–17.

17. "Two New Supernova Remnants in OB Associations in the Large Magellanic Cloud," Smith, R. C., Chu, Y.-H., Mac Low, M.-M., Oey, M. S., & Klein U. 1994, *Astron. J.*, 108, 1266–1275.
18. "Shock Interactions with Magnetized Interstellar Clouds: I. Steady Shocks Hitting Nonradiative Clouds," Mac Low, M.-M., McKee, C. F., Klein, R. I., Stone, J. M., and Norman, M. L., 1994, *Astrophys. J.*, 433, 757–777.
19. "Explosion of Comet Shoemaker-Levy 9 on Entry into the Jovian Atmosphere," Mac Low, M.-M., and Zahnle, K. 1994, *Astrophys. J. (Letters)*, 434, L33–L36.
20. "Ultraviolet Interstellar Absorption Lines in the Large Magellanic Cloud: Searching for Hidden Supernova Remnants," Chu, Y.-H., Wakker, B., Mac Low, M.-M., and García-Segura, G. 1994, *Astron. J.*, 108, 1696.
21. "Incorporation of Ambipolar Diffusion into the ZEUS Magnetohydrodynamics Code," Mac Low, M.-M., Norman, M. L., Königl, A., and Wardle, M. 1995, *Astrophys. J.*, 442, 726–735.
22. "Collision of Comet Shoemaker-Levy 9 with Jupiter Observed by the NASA Infrared Telescope Facility," Orton, G. O., et al. 1995, *Science*, 267, 1277–1282.
23. "X-Rays from Superbubbles in the Large Magellanic Cloud. III. X-ray Dim Superbubbles," Chu, Y.-H., Chang, H.-W., Su, Y.-L., and Mac Low, M.-M. 1995, *Astrophys. J.*, 450, 157.
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25. "A Simple Model for the Light Curve Generated by a Shoemaker-Levy 9 Impact," Zahnle, K., and Mac Low, M.-M. 1995, *J. Geophys. Res., Planets*, 100, 16885–16894.
26. "Wolf-Rayet Bubbles. I. Analytic Solutions," García-Segura, G., and Mac Low, M.-M. 1995, *Astrophys. J.*, 455, 145–159.
27. "Wolf-Rayet Bubbles. II. Gasdynamical Simulations," García-Segura, G., and Mac Low, M.-M. 1995, *Astrophys. J.*, 455, 160.
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30. "The OMC-1 Molecular Hydrogen Outflow as a Fragmented Stellar Wind Bubble," McCaughrean, M. J., and Mac Low, M.-M. 1997, *Astron. J.*, 113, 391–400.
31. "An Interstellar Conduction Front Surrounding a Wolf-Rayet Ring Nebula Observed with the *GHRSS*," Boroson, B., McCray, R., Clark, C. O., Slavin, J., Mac Low, M.-M., Chu, Y.-H., and Van Buren, D. 1997, *Astrophys. J.*, 478, 638 (Erratum 485, 436).
32. "The formation of C-shocks: structure and signatures," Smith, M. D., and Mac Low, M.-M. 1997, *Astron & Astrophys.*, 326, 801–810.
33. "Nonlinear Development and Observational Consequences of Wardle C-Shock Instabilities," Mac Low, M.-M., and Smith, M. D. 1997, *Astrophys. J.*, 491, 596.

34. "X-Rays from Superbubbles in the Large Magellanic Cloud. V. The H II Complex N11," Mac Low, M.-M., Chang, T. H., Chu, Y.-H., Points, S. D., Smith, R. C., and Wakker, B. P. 1998, *Astrophys. J.*, 493, 260.
35. "Kinetic Energy Decay Rates of Supersonic and Super-Alfvénic Turbulence in Star-Forming Clouds," Mac Low, M.-M., Klessen, R. S., Burkert, A., and Smith, M. D. 1998, *Phys. Rev. Lett.*, 80, 2754–2757.
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39. "Characterizing the structure of interstellar turbulence," Mac Low, M.-M., and Ossenkopf, V. 1999, *Astron. & Astrophys.*, 353, 339–348.
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47. "High Resolution Calculations of Asteroid Impacts into the Venusian Atmosphere II: 3D Models," Korycansky, D. G., Zahnle, K. J., & Mac Low, M.-M. 2002, *Icarus*, 157, 1–23.
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49. "Turbulent Velocity Structure in Molecular Clouds," Ossenkopf, V., & Mac Low, M.-M. 2002, *Astron. Astrophys.*, 390, 307–326.
50. "Hydrodynamical simulations of the decay of high-speed molecular turbulence. I. Dense molecular regions," Pavlovski, G., Smith, M. D., Mac Low, M.-M., & Rosen, A. 2002, *Monthly Not. Roy. Astron. Soc.*, 337, 477–487.

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53. "The Influence of Supershells and Galactic Outflows on the Escape of Ionizing Radiation from Dwarf Starburst Galaxies," Fujita, A., Martin, C., Mac Low, M.-M., & Abel, T. 2003, *Astrophys. J.*, 599, 50–69.
54. "The Control of Star Formation by Supersonic Turbulence," Mac Low, M.-M., & Klessen, R. S., 2004, *Rev. Mod. Phys.*, 76, 125–194.
55. "Modification of Projected Velocity Power Spectra by Density Inhomogeneities in Compressible Supersonic Turbulence," Brunt, C. M., & Mac Low, M.-M. 2004, *Astrophys. J.*, 604, 196–212.
56. "The Formation of Self-Gravitating Cores in Turbulent Magnetized Clouds," Li, P. S., Norman, M. L., Mac Low, M.-M., & Heitsch, F. 2004, *Astrophys. J.*, 605, 800–818.
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60. "Amplification of Interstellar Magnetic Fields by Supernova-Driven Turbulence," Balsara, D. S., Kim, J., Mac Low, M.-M., & Mathews, G. J. 2004, *Astrophys. J.*, 617, 339–349.
61. "Formation of Globular Clusters in Galaxy Mergers," Li, Y., Mac Low, M.-M., & Klessen, R. S. 2004, *Astrophys. J. (Letters)*, 614, L29–L32.
62. "Control of Star Formation in Galaxies by Gravitational Instability," Li, Y., Mac Low, M.-M., & Klessen, R. S. 2005, *Astrophys. J. (Letters)*, 620, L19–L22.
63. "The Stellar Mass Spectrum from Non-Isothermal Gravoturbulent Fragmentation," Jappsen, A.-K., Klessen, R. S., Larson, R. B., Li, Y., & Mac Low, M.-M. 2005, *Astron. Astrophys.*, 435, 611–623.
64. "Star Formation in Isolated Disk Galaxies. I. Models and Star Formation Characteristics," Li, Y., Mac Low, M.-M., & Klessen, R. S. 2005, *Astrophys. J.*, 626, 823–843.
65. "The Distribution of Pressures in a Supernova-Driven Interstellar Medium. I. Magnetized Medium," Mac Low, M.-M., Balsara, D., Kim, J., & Avillez, M. A. 2005, *Astrophys. J.*, 626, 864–876.
66. "The Inability of Ambipolar Diffusion to Set a Characteristic Mass Scale in Molecular Clouds," Oishi, J. S., & Mac Low, M.-M. 2006, *Astrophys. J.*, 638, 281–285.
67. "Star Formation in Isolated Disk Galaxies. II. Schmidt Laws and Gravitational Collapse Efficiency," Li, Y., Mac Low, M.-M., & Klessen, R. S. 2006, *Astrophys. J.*, 639, 879–896.

68. "Hydrodynamical simulations of the decay of high-speed molecular turbulence. II. Divergence from isothermality," Pavlovski, G., Smith, M. D. & Mac Low, M.-M. 2006, *Monthly Not. Roy. Astron. Soc.*, 368, 943–958.
69. "Simulating Radiating and Magnetized Flows in Multi-Dimensions with ZEUS-MP," Hayes, J. C., Norman, M. L., Fiedler, R. A., Bordner, J. O., Li, P. S., Clark, S. E., ud-Doula, A., & Mac Low, M.-M. 2006, *Astrophys. J. Suppl.*, 165, 188–228.
70. "Turbulent Structure of a Stratified Supernova-Driven Interstellar Medium," Joung, M. K. R., & Mac Low, M.-M. 2006, *Astrophys. J.*, 653, 1266–1279.
71. "Star Formation at Very Low Metallicity. II: On the Insignificance of Metal-Line Cooling During the Early Stages of Gravitational Collapse," Jappsen, A.-K., Glover, S. C. O., Klessen, R. S., & Mac Low, M.-M. 2007, *Astrophys. J.*, 660, 1332–1343.
72. "Simulating the formation of molecular clouds. I. Slow formation by gravitational collapse from static initial conditions," Glover, S. C. O., & Mac Low, M.-M. 2007, *Astrophys. J. Suppl.*, 169, 239–268.
73. "Simulating the formation of molecular clouds. II. Rapid formation from turbulent initial conditions," Glover, S. C. O., & Mac Low, M.-M. 2007, *Astrophys. J.*, 659, 1317–1337.
74. "Correlations Between Central Massive Objects and Their Host Galaxies: From Bulgeless Spirals to Ellipticals," Li, Y., Haiman, Z., & Mac Low, M.-M. 2007, *Astrophys. J.*, 663, 61–70.
75. "Rapid Planetesimal Formation in Turbulent Circumstellar Discs," Johansen, A., Oishi, J. S., Mac Low, M.-M., Klahr, H., Henning, Th., & Youdin, A. 2007, *Nature*, 448, 1022–1025.
76. "Dynamical Expansion of H II Regions from Ultracompact to Compact Sizes in Turbulent, Self-Gravitating Molecular Clouds," Mac Low, M.-M., Toraskar, J., Oishi, J. S., & Abel, T. 2007, *Astrophys. J.*, 668, 980–992.
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78. "Large-scale Gravitational Instability and Star Formation in the Large Magellanic Cloud," Yang, C.-C., Gruendl, R., Chu, Y.-H., Mac Low, M.-M., & Fukui, Y. 2007, *Astrophys. J.*, 671, 374–379.
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87. “Turbulent Driving Scales in Molecular Clouds,” Brunt, C. M., Heyer, M. H., & Mac Low, M.-M. 2009, *Astron. Astrophys.*, 504, 883–890.
88. “Dependence of Interstellar Turbulent Pressure on Supernova Rate,” Joung, M. R., Mac Low, M.-M., & Bryan, G. L. 2009, *Astrophys. J.*, 704, 137–149.
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111. "AstroCom NYC: Expanding the Partnership." Paglione, T., Ford, S., Agueros, M. A., Mac Low, M.-M., Robbins, D. 2015, *Bull. Amer. Astron. Soc.*, 225, #240.06.
112. "Preparing new Earth Science teachers via a collaborative program between Research Scientists and Educators," Grcevich, J., Pagnotta, A., Mac Low, M.-M., Shara, M., Flores, K., Nadeau, P.A., Sessa, J., Ustunisik, G., Zirakparvar, N., Ebel, D., Harlow, G., Webster, J.D., Kinzler, R., MacDonald, M.B., Contino, J., Cooke-Nieves, N., Howes, E., & Zachowski, M. 2015, *Bull. Amer. Astron. Soc.*, 225, #240.04.
113. "AstroCom NYC: A Partnership to Support Underrepresented Minorities in Astronomy and Astrophysics Research and Education," Ford, K. E. S., Paglione, T., Robbins, D., Mac Low, M.-M., & Agueros, M. A. 2015, *Bull. Amer. Astron. Soc.*, 225, #233.05.
114. "Radio Recombination Line Observations of Flickering Ultracompact HII Regions," De Pree, C.G., Peters, T., Mac Low, M.-M., Wilner, D.J., Galvan-Madrid, R., Goss, M., Keto, E.R., Klessen, R., Monsrud, A., Amason, C., & Butler, K. 2015, *Bull. Amer. Astron. Soc.*, 225, #141.33.

## Popular Books

"Inside Stars," Abramson, A. & Mac Low, M.-M. 2011 (New York: Sterling), 48 pp.



## Popular Articles

1. "Computing the Galactic Ecology," Mac Low, M.-M., 1991, On Line [NASA Ames Computer Center Newsletter], 13, No. 6, p. 1.
2. "La Radiacion X Difusa de Burbujas Alrededor de Estrellas Wolf-Rayet," García-Segura, G., Mac Low, M.-M., Chu, Y.-H. 1993, Inst. Astr. Canarias Not., 1, 6.
3. Articles on "Planet Formation," "Planetary Systems," and "Coriolis Forces," 1996, Macmillan Encyclopedia of Physics.
4. Book Review (in German) of Relativity and Scientific Computing, 1996, Stern und Weltraum.
5. "The Virtual Universe," Mac Low, M.-M. 2000, Natural History, 109, No. 1, 88.
6. "Miscalculation" (Letter to the Editor), Mac Low, M.-M., 1999, Nature, 398, 657
7. "Astrophysical Computer Modeling," Mac Low, M.-M. 2001, in Cosmic Horizons, eds. S. Soter & N. D. Tyson (New York: New Press), 202.
8. "Critical Mass: Some Reflections," Mac Low, M.-M., 2003, in Critical Mass: Happenings, Fluxus, Performance, Intermedia and Rutgers University 1958-1972, edited by G. Hendricks (Rutgers U. Press, Rutgers, NJ), 1.
9. "Uno sguardo sull vastità dell'universo," Mac Low, M.-M. 2007, in La Ragione Esigenza di Infinito, ed. G. Vittadini (Mondadori Università, Milan), 102

## Grants

Science PI is listed first in every case.

### Peer-Reviewed Science Grants

1. "Supernova Remnants Hidden in Superbubbles," Mac Low, M.-M., & Chu, Y.-H. 1993, NASA ROSAT Observation, \$15 000
2. "Astronomy Wilderness Experience," Mac Low, M.-M., & Brown, B. B. 1993, NASA Astrophysical Grant Supplement for Education, \$5 200
3. "Internet DuSable!," York, D. G., Brown, B. B., Mac Low, M.-M., Lauroesch, J. T., & Charleston, P. C. 1994, NASA Initiative to Develop Education through Astronomy, \$20 000
4. "Mechanisms for X-ray Emissions from Superbubbles," Chu, Y.-H. & Mac Low, M.-M. 1994, NASA ROSAT Observation, \$15 000
5. "Impact of Comet Shoemaker-Levy 9 on Jupiter: Modelling the First 200 Seconds," Mac Low, M.-M. & Zahnle, K. 1994, NSF Planetary Astronomy, \$29 306
6. "CAREER: Structure Formation and Support by Supersonic Turbulence in the Interstellar Medium and Star-Forming Regions," Mac Low, M.-M. 2000, NSF Galactic Astronomy, \$350 000
7. "Protostellar Core Formation by Supersonic MHD Turbulence," Mac Low, M.-M. 2000, NASA Astrophysical Theory Program, \$153 516

8. "New Directions in Cluster Computing: A Conference at the American Museum of Natural History," Wheeler, W. C., & Mac Low, M.-M. 2001, NSF, \$15 000
9. "Collaborative Research: Fireworks at the Ballet: Globular Cluster Formation, Bulge Dynamics and the Role of Central Black Holes in Galaxy Mergers," Mac Low, M.-M., & Haiman, Z. 2003, NSF Extragalactic Astronomy, \$209 537
10. "Comparing Theory with Observation Using Chemical Probes of Turbulent Molecular Clouds," Glover, S. C. O., & Mac Low, M.-M. 2003, NSF Galactic Astronomy, \$149 912
11. "REU Site: Research Experiences for Undergraduates in Earth Science, Planetary Science and Astrophysics at the American Museum of Natural History," Mac Low, M.-M., & Webster, J. D. 2003, NSF Research Experiences for Undergraduates, \$148 850
12. "Star Formation in the Large Magellanic Cloud," Chu, Y.-H., Gruendl, R. Looney, L., Chen, R., Williams, R., Mac Low, M.-M., Hartmann, L., Calvet, N., Brandner, W., Smith, C., Points, S., Dickel, J. Spitzer Space Telescope Archival Research Program, \$100 000
13. "Gas Entrainment and Shock Physics in Giant Protostellar Outflows," Arce, H., Mac Low, M.-M., & Noriega-Crespo, A. 2006, NASA Spitzer Space Telescope, \$83 580
14. "Stellar Duets in Theory and Observations. Common envelopes, planetary nebulae, and the origin of close binaries," De Marco, O., & Mac Low, M.-M. 2006, NSF Galactic Astronomy, \$410 019
15. "New techniques for improving the accuracy of gradients for particle and grid simulations of magnetohydrodynamic turbulence," Jason L. Maron, & Mac Low, M.-M. 2006, NSF Program on Interactions Between Mathematics and the Physical Sciences, \$239 174
16. "Planetary Migration in Partially and Fully Magnetized Turbulent Disks," Mac Low, M.-M., & Menou, K. M. 2006, NASA Origins of Solar Systems Program, \$192 000
17. "CDI Type I: Combined Global Physical, Chemical, and Mineralogical Models of Protoplanetary Disks," Mac Low, M.-M., Maron, J., Ebel, D. 2008, NSF Cyberenabled Discovery Initiative, \$575 192
18. "Dwarf Galaxies, Abundance Distributions and the Physics of Galaxy Formation," Johnston, K., Bryan, G., Mac Low, M.-M. 2008, NSF Galactic Astronomy, subaward from Columbia U. AMNH share \$17 679
19. "Dynamical Evolution of Young Clusters in Merging Galaxies," Vesperini, E., McMillan, S., Mac Low, M.-M. 2008, NASA Hubble Space Telescope, \$70K
20. "Simulating Star Formation in Space and Time," Krumholz, M., Mac Low, M.-M., 2008, NASA Spitzer Science Center, AMNH share \$16 888
21. "Layered accretion, vortex excitation, and planet formation in circumstellar disks," Lyra, W., & Mac Low, M.-M. 2010, NSF Stellar Astronomy, \$460 911
22. "Chandra Constraints on Feedback from Starburst Winds," 2010, M.-M. Mac Low, C. Martin, NASA Chandra X-ray Center, \$121 003
23. "What Controls Star Formation in Galaxies?," Mac Low, M.-M., Joung, M. K. R., Klessen, R. S., Peters, T. 2011, NSF Galactic Astronomy, \$451 231

24. "Confronting Simulations of Dwarf Galaxy Formation with Observations of Resolved Stellar Populations," Bryan, G., Johnston, K., & Mac Low, M.-M., 2012, NASA Astrophysical Theory Program, \$368 987
25. "Director's Discretionary Time: Ionization and Light Echoes in the T Pyxidis Nebula," Shara, M. M., Mac Low, M.-M., Toraskar, J. , Zurek, D. 2012, NASA Space Telescope Science Institute, \$70 304
26. "Formation and Assembly of Massive Star Clusters," McMillan, S., Mac Low, M.-M., Olson, K., Portegies-Zwart, S. 2014, NASA Astrophysics Theory Program, \$419 266
27. "High Temperature Mineral Formation by Short Circuits in Protoplanetary Disks," Hubbard, A., Mac Low, M.-M. 2014, NASA Origins of Solar Systems, \$514 673

## Peer Reviewed Computing and Observing Allocations since 2007

I am PI unless otherwise noted.

1. "Time-Dependent Dynamics in W49A: Confirmation that UC HII Regions Flicker," PI C. De Pree, Jansky Very Large Array radio telescope, 16 hours observation time, semesters 2015A2016A,
2. "Star Formation in the Galactic Environment," NSF XSEDE, 3.793M million CPU-hours (valued at \$132K), 2015
3. "The Evolution of Satellite Dwarf Galaxies via Ram Pressure Stripping and Supernova Feedback in a Milky Way type Halo," PI A. Emerick, NSF XSEDE, 50K CPU-hours, 2015
4. "Modeling infall in Milky Way-like galaxies," PI A. S. Hill, NASA High End Computing, 600K CPU-hours, 2015
5. "Short Circuits in Protoplanetary Disks," PI A. Hubbard, NASA High End Computing, 600K CPU-hours, 2015
6. "Simulations of the formation of stars and structure of protoplanetary disks," NSF XSEDE, 3.7M CPU-hours, 2013
7. "Accretion of high-velocity gas," PI: A. S. Hill, ASTAC (Australia), 200K CPU-hours ( ~\$15K at commercial rates), 2012
8. "Simulations of the Formation of Stars and Planets in Disks," NSF XSEDE, 10.989M CPU-hours ( ~\$825K at commercial rates), 2012
9. "Planetesimal Migration in Turbulent Protoplanetary Disks," NASA High End Computing, 3.38M CPU-hours, 2011
10. "Dynamic UC HII Regions in Sgr B2: Flickering and Ionized Flows," Very Large Array radio telescope, 20 hours observing time, 2011
11. "Towards an Initial Mass Function of Planetesimals," PI: A. Johansen, Partnership for Advanced Computing in Europe (PRACE), 6.2M CPU-hours, 2010
12. "Simulations of the Formation of Galaxies, Stars, and Planets," NSF Teragrid, 11.1M CPU-hours, 2010

13. "Planetesimal Dynamics in a Turbulent Protoplanetary Disk," NASA High End Computing, 3.26M CPU-Hours, 2009
14. "The Great Nebula in Carina: Protoplanetary Disks to Starburst Galaxies," PI: L. Townsley, NASA Chandra X-ray Observatory, 1.2Msec observing time, 2008
15. "Astrophysical Simulation of Planet and Star Formation," NSF Teragrid, 945K CPU-hours, 2008
16. "Planetesimal Dynamics in a Turbulent Protoplanetary Disk," NASA High-End Computing, 1.015M CPU-hours, 2008