

## CURRICULUM VITAE—CARL HEILES

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**Professional Preparation:** B.A. (Engineering Physics), Cornell University, 1962; Ph.D. (Astrophysical Sciences), Princeton University, 1966. No postdoc positions.

### Appointments:

- Professor of the Graduate School, Univ of California, Berkeley, 2015-present
- Interim Director, Radio Astronomy Laboratory, Univ of California, Berkeley, 2010-2015
- Professor, Department of Astronomy, Univ of California, Berkeley, 1975-present
- Visiting Scientist, National Radio Astronomy Observatory, Green Bank, 1993
- Visiting Fellow, Joint Institute for Laboratory Astrophysics, Boulder, 1990
- Associate Director, Radio Astronomy Laboratory, Univ of California, Berkeley, 1987-1993
- Visiting Professor, Scientific and Medical, University of Grenoble, France, Fall 1983
- Associate Professor, Department of Astronomy, University of California, Berkeley, 1970-1975
- Research Astronomer, Arecibo Observatory, Cornell University, 1969-1970
- Assistant Professor, Department of Astronomy, University of California, Berkeley, 1966-1969

### Selected publications closely related to the proposed project:

- Meyer, D.M., Lauraesch, J.T., Peek, J.E.G., & Heiles, C. 2012, “The Remarkable High Pressure of the Local Leo Cold Cloud”, *ApJ*, 752, 119
- Begum, A., Stanimirovic, S., Goss, W.M., Heiles, C., Pavkovich, A.S., Hennebelle, P. 2010, “The Thermally Unstable Warm Neutral Medium: Key for Modeling the Interstellar Medium”, *ApJ* 725, 1779-1785
- Heiles, C. & Troland, T.H. 2005, “The Millennium Arecibo 21 Centimeter Absorption-Line Survey. IV. Statistics of Magnetic Field, Column Density, and Turbulence”, *ApJ*, 624, 773
- Heiles, C. & Crutcher, R. 2005, “Magnetic Fields in Diffuse HI and Molecular Clouds”, in *Cosmic Magnetic Fields*, 137
- Heiles, C., Haffner, L.M., Reynolds, R.J. 1999, “The Eridanus superbubble in its multiwavelength glory”, in *New Perspectives on the Interstellar Medium*, ASP Conf. Series, 168, 211-222

### Selected significant publications:

- Peek, J.E.G., Heiles, C., Douglas, K.A., Lee, M-Y, Grcevich, J., Stanimirovic, S., Putman, M.E., Korpela, E.J., Gibson, S.J., Begum, A., Saul, D., Robishaw, T., Krcko, M. 2011, “The GALFA-HI Survey: Data Release 1”, *ApJS*, 194, 20
- Heiles, C. & Haverkorn, J. 2012, “Magnetic Fields in the Multiphase Interstellar Medium”, *Space Sci Rev*, 166, 293
- Robishaw, T. & Heiles, C. 2009, “On Measuring Accurate 21cm Line Profiles with the Robert C. Byrd Green Bank Telescope”, *PASP*, 121, 272
- Heiles, C., Stinebring, D. 2007, “Observational Review of this SINS Meeting”, in *ASP Conference Series*, Vol. 365, 331
- Heiles, C. 2007, “A New Technique for Heterodyne Spectroscopy: Least-Squares Frequency Switching (LSFS)”, *PASP*, 119, 643

### Awards:

- National Academy of Sciences
- American Academy of Arts and Sciences
- Fellow, California Academy of Sciences

- Fellow, American Association for the Advancement of Science
- Honorary Ph.D. Degree, Ohio University, 2006
- Recipient of Berkeley Campus Noyce Prize for excellence in undergraduate teaching, 2002
- Recipient of Berkeley Campus Educational Initiative award, 1995
- Heineman Prize of American Astronomical Society/American Physical Society, 1988

**Synergistic activities:**

- Created the fundamental concept and reduction/algorithm software for the GALFA-HI project; see <http://sites.google.com/site/galfahi>, [http://www.naic.edu/alfa/galfa/galfa\\_docs.shtml](http://www.naic.edu/alfa/galfa/galfa_docs.shtml)
- Created polarization and beam-properties calibration techniques for Arecibo and GBT; see [http://astro.berkeley.edu/~heiles/handouts/handouts\\_radio.html](http://astro.berkeley.edu/~heiles/handouts/handouts_radio.html)
- Created the award-winning undergraduate advanced radio astronomy lab course; see <http://www.ugastro.berkeley.edu/radio/index.html>
- Created the graduate course “Numerical techniques in Astronomy” with extensive writeups; see website materials at <http://astro.berkeley.edu/~heiles/ay204.2011/index.html>

**Collaborators and co-editors during the past 48 months (excluding current graduate students):**

Backer, D. C. deceased; Bania, Thomas M. Boston U. ; Begum, Ayesha, U. Wisconsin Madison; Blitz, Leo, UCB; Brogan, C. L. NRAO; Carretti, Ettore, Newcastle U. England; Chepurnov, A. U. Wisconsin Madison; Croft, S. UCB; Crutcher, R. M. U. Illinois Champaign-Urbana; Dame, T., Harvard; Darling, Jeremy, U. Colorado Boulder; Dickinson, C. CalTech; Di Francesco, James, Herzberg Institute; Douglas, Kevin, Arecibo Observatory; Falgarone, Edith, Obs. de Paris, CNRS, Paris; Ferland, G. J. U. Kentucky ; Finkbeiner, D. Harvard; Forster, R. retired; Gaensler, Bryan, U. Sydney, Australia; Gibson, Steven J. Western Kentucky U. ; Goss, W. M. NRAO; Grossan, B., UCB; Green, Anne, AU. Nottingham, England; Gutierrez-Kraybill, C. SRI; Harvey-Smith, Lisa, CSIRO ATNF Australia; Haverkorn, Marijke, ASTRON, The Netherlands; Hennebelle, Patrick, Lab. de Radioastronomie, CNRS, Paris; Heyer, Mark, U. Mass. Amherst; Jorgenson, Regina A. Institute of Astron, Cambridge; Kepley, Amanda A. U. Va. ; Klein, Uli, U. Bonn, Germany; Knee, Lewis, Herzberg Institute; Koo, Bon-Chul, Seoul National U. ; Korpela, Eric J. UCB; Lauroesch, J. T. U. of Louisville, KY; Law, C. J. UCB; Lazarian, A. U. Wisconsin Madison; Levine, Evan S. CIA; Mason, B. S. NRAO; Meyer, David M. Northwestern U. ; Mhle, Stefanie, JIVE, The Netherlands; Muratov, A. U. Michigan, Ann Arbor ; Peek, Joshua E. G. Columbia U. ; Peek, K. M. G. unknown; Prochaska, Jason X. UC Santa Cruz; Putman, Mary E. Columbia U. ; Quataert, Eliot, UCB; Robishaw, Timothy, DRAO; Sarma, A. P. DePaul, Chicago; Stanimirovic, Snezana, U. Wisconsin Madison; Thom, C. U. Chicago; Troland, T. H. U. Kentucky; Weinberg, Martin, U. Mass. Amherst; Wandelt, Benjamin, U. Illinois Champaign-Urbana; Wilcots, Eric M. U. Wisconsin Madison; Wilhelm, R. Texas Tech U. ; Wolfe, Arthur M. UC San Diego; Wolleben, Maik, DRAO; Yun, Min S. U. Mass. Amherst; Zweibel, Ellen, U. Wisconsin Madison

**My thesis advisor:** George Field, retired; no postdoc advisors

**People for whom I was thesis advisor (total is 13):**

- Alatalo, Katherine, IPAC, Caltech
- Chu, You-Hua, University of Illinois
- Fich, Michael, University of Waterloo (Canada)
- Frisch, Priscilla, University of Chicago
- Koo, Bon-Chul, Korean National University
- Kregenow, J., Penn State Univ.
- Kulkarni, Shri, Caltech
- McCullough, P., Space Telescope Science Institute
- McBride, James
- Peek, J. Goldston, Columbia Univ.
- Reach, William, IPAC Science Center
- Robishaw, Tim, DRAO, Penticton, Canada
- Tamanaha, Christopher, current affiliation unknown
- Troland, T., University of Kentucky