Peter L. Gonthier

Professional Preparation

Texas A&M University	Chemistry	B.A.	1975
Texas A&M University	Nuclear Chemistry	Ph.D.	1980
Max-Planck-Institut für Kernphysik, Heidelberg, Germany	Nuclear Physics	Post-doc	1980 – 1981
NASA – JOVE	Astrophysics	Fellow	1992 – 1995
NASA Summer Faculty Fellowship Program Summer, Goddard Space Flight Center	Astrophysics	Fellow	1996 – 1997

Appointments

Professor, Hope College	1999 – present
Affiliate Director – Hope College, Michigan Space Grant Consortium	1994 – present
Interim Chairperson of the Department of Physics	2007 – 2008
Associate Professor, Hope College	1989 – 1999
Visiting Research Scientist, Texas A&M University, Cyclotron Institute	1995 – 1996
Chairperson of Department of Physics, Hope College	1991 – 1992
Guest Professor, II Physikalisches Institut, Giessen, Germany	1990 – 1991
Assistant Professor, Hope College	1983 – 1989
Visiting Assistant Professor, Texas A&M University	1982 – 1983
Lecturer, Texas A&M University	1981 – 1982

Publications (significant)

Undergraduate co-authors are indicated with an asterisk

- *General relativistic corrections in the gamma-ray emission from pulsars*, P.L. Gonthier and A.K. Harding, ApJ, 425, 767-775 (1994).
- *Photon splitting in gamma-ray pulsars*, A.K. Harding, M.G. Baring and P.L. Gonthier, A&A, 120, 111 (1996).
- *Photon-splitting cascades in gamma-ray pulsars and the spectrum of PSR 1509-58*, A.K., Harding, M.G. Baring and P.L. Gonthier, ApJ, 476, 246 (1997).
- *Compton Scattering in Ultra-Strong Magnetic Fields: Numerical and Analytical Behavior in the Relativistic Regime*, P. L. Gonthier, A. K. Harding, M. G. Baring, R. M. Costello, and C. L. Mercer, 2000, ApJ, 540, 907 – 922.
- *Galactic Populations of Radio and Gamma-Ray Pulsars in the Polar Cap Model*, P. L. Gonthier, M. S. Ouellette*, J. Berrier*, S. O'Brien* and A. K. Harding, 2002, ApJ, 565, 482
- *The role of beam geometry in population statistics and pulse profiles of radio and γ-ray pulsars*, Peter L. Gonthier, Robert Van Guilder* and Alice K. Harding, 2004, ApJ, 604, 775-790
- *Radio-loud and radio-quiet, gamma-ray pulsars from the Galaxy and the Gould Belt*, P.L Gonthier, R. Van Guilder*, A.K. Harding, I.A. Grenier and C.A. Perrot, 2005 Astrophysics and Space Science, 297, 71
- *Spin-Dependent Cyclotron Decay Rates in Strong Magnetic Fields*, Matthew G. Baring, Peter L. Gonthier, and Alice K. Harding, 2005, ApJ, 630, 430

- *Population statistics study of radio and gamma-ray pulsars in the Galactic plane*, P.L. Gonthier, S.A. Story, B.D. Clow and A.K. Harding, 2007, Astrophysics and Space Science, 309, pp. 245-251

- *The Geminga Fraction*, A.K. Harding, I.A. Grenier, and P.L. Gonthier, 2007, Astrophysics and Space Science, 309, pp. 221-230

- *Developing radio beam geometry and luminosity models of pulsars,* P.L. Gonthier, S.A. Story, B.M. Giacherio, R.A. Arevalo, and A.K. Harding, 2006, Chinese Journal of Astronomy and Astrophysics, 6, pp. 97-104

- *Population synthesis of radio and γ-ray millisecond pulsars form the Galactic disk,* S.A. Story*, P.L. Gonthier, and A.K. Harding, 2007 ApJ, 671, 713.

- *Population statistics of radio and γ-ray pulsars form the Galactic disk,* P.L. Gonthier, S.A. Story, B.D. Clow, and A.K. Harding, 2007, Astrophysics of Compact Objects, Huangshan, China, July 1 – 7, 2007, edited by D. Lai, X.D. Li, and Y.F. Yuan, 2008, International Conference on Astrophysics of Compact Objects. AIP Conference Proceedings, Volume 968, pp. 112-114.

- *Cooling rates for relativistic electrons undergoing Compton scattering in strong magnetic fields*, Baring, M.G., Wadiasingh, Z., & Gonthier, P.L. 2011, ApJ, 733, 61 - 90

Synergistic Activities

- Teaching and development of general education courses associated with astronomy
- Develop of presentations for the general public in astronomy and cosmology
- Affiliate Director (Hope College) for the Michigan Space Grant Consortium

Collaborators ad Other Affiliations

J.B. Natowitz, Thesis Advisor and Collaborator (previous)
J.P. Wurm, Postdoctoral Advisor (previous)
H. Ho, Collaborator (previous)
V. Metag, Collaborator during Sabbatical (previous)
W. Kühn, Collaborator during Sabbatical (previous)
M. G. Baring, Collaborator (present)
A. Muslimov, Collaborator (present)
A. K. Harding, Collaborator (present)
I.A. Grenier, Collaborator (present)