

Paul Goldsmith

Chief Technologist, Astronomy Physics and Space Technology Directorate and NASA Herschel Project Scientist
Jet Propulsion Laboratory, California Institute of Technology
4800 Oak Grove Drive, MS 180-703
Pasadena CA 91109 USA
(818) 393-0518

RELEVANT EXPERIENCE

Goldsmith has extensive experience with observations and modeling of molecular and atomic lines from the interstellar medium. He has used a wide range of ground-based telescopes from radio through optical wavelengths for imaging and spectroscopy. He was a member of the Submillimeter Wave Astronomy Satellite (SWAS) science team carrying out numerous projects with that SMEX mission. He also has had extensive technical experience in millimeter and submillimeter systems, with special expertise in the area of quasioptical system design. Goldsmith has designed equipment ranging from receivers for the Arecibo telescope at 4cm wavelength to submillimeter receivers used in SWAS and for ground-based observations. His scientific and technical research has resulted in over 200 articles, a monograph "Quasioptical Systems", and three edited books. He has carried out a wide variety of research projects on the interstellar medium and star formation, including major involvement in two Herschel Open Time Key Projects: "GOT-C+" (a survey of [CII] emission from the Milky Way) and the "Herschel Oxygen Project" (which has led to the first multi-transition detections of O₂ in interstellar space). He has also used IR observations of H₂ with Spitzer, and ground-based observations of CO and HI to study the structure of molecular clouds and how they are formed and evolve. Goldsmith is working on at Herschel OT2 project mapping [NII] from the Milky Way, and has SOFIA Cycle 1 and Cycle 2 observations probing the structure of molecular clouds and their surroundings. He is Project Scientist for the NASA balloon project "STO2" scheduled for flight in December 2015.

EDUCATION

University of California, Berkeley Ph.D. (Physics) 1975
University of California, Berkeley A.B. (Physics) 1969

POSITIONS HELD

2009- Adjunct Professor of Astronomy, University of Arizona, Tucson, AZ
2008 - Chief Technologist, Astronomy and Physics Directorate, Jet Propulsion Laboratory
2006 - NASA Project Scientist, Herschel Space Observatory
2006 - Visiting Associate, Department of Astronomy, Calif. Inst. Technology, Pasadena
2006 - Senior Research Scientist, Jet Propulsion Laboratory, Calif. Inst. Technology, Pasadena
2005 - 2006 Principal Scientist, Jet Propulsion Laboratory, Calif. Inst. Technology, Pasadena
2005 - Professor Emeritus of Astronomy, Cornell University
2000,2001,2004 Professeur Invité, Ecole Normale Supérieure, Paris, France
1999 - 2005 James Weeks Professor in the Physical Sciences, Department of Astronomy, Cornell University
1993 - 2002 Director, National Astronomy and Ionosphere Center
1993 - 2005 Professor, Department of Astronomy, Cornell University
1986 - 1992 Professor, Dept. of Physics & Astronomy, University of Massachusetts, Amherst
1981 - 1986 Associate Professor, Dept. of Physics & Astronomy, Univ. of Massachusetts, Amherst
1980 - 1992 Associate Director, Five College Radio Astronomy Observatory
1977 - 1981 Assistant Professor, Dept. of Physics & Astronomy, Univ. of Massachusetts, Amherst
1975 - 1977 Member Technical Staff, Bell Laboratories, Crawford Hill Laboratory, New Jersey

HONORS AND AWARDS

NASA Exceptional Scientific Achievement Medal, 2012
NASA Exceptional Achievement Medal, 2010
NASA Group Achievement Award, 2010
IEEE Microwave Theory & Techniques Society - Distinguished Lecturer, 1992
Fellow, Institute of Electrical and Electronics Engineers, 1991