

MARTIN F. WOODARD

NorthWest Research Associates
Colorado Research Associates Division
3380 Mitchell Lane, Boulder, CO 80301
Tel: (303) 415-9701
Internet: mfw@cora.nwra.com

PROFESSIONAL PREPARATION

1984: Ph.D., Physics, University of California, San Diego
1981: M.S., Physics, University of California, San Diego
1976: A.B., Physics, University of California, Berkeley

APPOINTMENTS

2003 - : Senior Research Scientist, NorthWest Research Associates
1997 - 2002: Associate Research Professor, New Jersey Institute of Technology
1996 - 1997: Senior Research Scientist, Windrush Research Corporation
1995 - 1996: Research Scientist, Bartol Research Institute, University of Delaware
1993 - 1994: Research Associate, The Pennsylvania State University
1992 - 1993: Lecturer in Physics, California Institute of Technology
1990 - 1993: Senior Research Fellow, California Institute of Technology
1987 - 1990: Postdoctoral Fellow, California Institute of Technology
1985 - 1987: Resident Research Associate, Jet Propulsion Laboratory,
California Institute of Technology
1985: Postdoctoral Fellow, Harvard-Smithsonian Center for Astrophysics
1984: Postdoctoral Fellow, University of California, San Diego

SELECTED PUBLICATIONS

Woodard, M. F. and Fan, Y.: 2004, "The Seismic Correlation Signature of Moderate-Scale Flow in the Sun", *Ap. J.* (submitted).
Woodard, M. F.: 2002, "Solar Subsurface Flow Inferred Directly from Frequency-Wavenumber Correlations in the Seismic Velocity Field", *Ap. J.* **565**, 634.
Woodard, M. F.: 2000, "Theoretical Signature of Solar Meridional Flow in Global Seismic Data", *Solar Phys.* **197**, 11.
Woodard, M. F.: 1998, "Effect of Subsurface Inhomogeneities on the Statistics of Solar Oscillation Power Spectra", *Solar Phys.* **180**, 19.
Woodard, M. F.: 1989, "Distortion of High-Degree Solar p-Mode Eigenfunctions by Latitudinal Differential Rotation", *Ap. J.* **347**, 1176.
Woodard, M. F., and Libbrecht, K. G.: 2003, "Spatial and Temporal Variations in the Solar Brightness", *Solar Phys.* **212**, 51.
Woodard, M. F., Korzennik, S. G., Rabello-Soares, M. C., Kumar, P., Tarbell, T. D., and Acton, S.: 2001, "Energy Distribution of Solar Oscillation Modes Inferred from Space-Based Measurements", *Ap. J.* **548**, L103.

- Woodard, M. F. and Chae, J.: 1999, "Evidence for Non-Potential Magnetic Fields in the Quiet Sun", *Solar Phys.* **184**, 239.
- Woodard, M. F., Kuhn, J. R., Murray, N., and Libbrecht, K. G.: 1991, "Short-Term Changes in Solar Oscillation Frequencies and Solar Activity", *Ap. J. Letters* **373**, L81.
- Woodard, M. F. and Marti, K.: 1985, "Clusters and Cycles in the Cosmic Ray Age Distributions of Meteorites", *International Cosmic Ray conference proceedings, La Jolla* **5**, 402.

SYNERGISTIC ACTIVITIES

Dr. Woodard has extensive experience in observational helioseismology and has been participating in the development of wave-theory based forward models for the interpretation of local helioseismic data. He plans to make the algorithms/codes which result from his research activity available to other researchers.

For a number of years he participated in giving summertime public tours of the Big Bear Solar Observatory and on occasion has served as a liaison to the popular press.

RECENT COLLABORATORS

S. Acton (Keck Observatory), D. C. Braun (NWRA/CoRA), Y. Fan (NCAR/HAO), P. Goode (BBSO), W. Kalkofen (CfA), S. G. Korzennik (CfA), A. Kosovichev (HEPL, Stanford U.), K. G. Libbrecht (Caltech), T. R. Rimmele (NSO), T. D. Tarbell (Lockheed-Martin), J. Varsik (BBSO)

ADVISORS

H. S. Hudson, UC Berkeley, Space Sciences Lab.
E. Smith, Jet Propulsion Laboratory, Caltech
K. G. Libbrecht, Caltech