

Mark Andrew Gurwell  
Curriculum Vitae

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### Contact Information

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### Biographical Information

Date of Birth: 25 March 1968, Yakima WA  
Citizenship: United States of America

### Education

1996 Ph.D. Planetary Science, California Institute of Technology (Pasadena, CA).  
Thesis: *Planetary Atmospheres: Probing Structure through Millimeterwave  
Observations of Carbon Monoxide* (Advisor: Duane O. Muhleman).  
Minor in Astronomy

1992 M.S. Planetary Science, California Institute of Technology

1990 B.S. Astronomy, University of Washington (Seattle, WA)

### Research Positions

1998 - present Astrophysicist, Smithsonian Astrophysical Observatory

1995 - 1998 Postdoctoral Fellow, Smithsonian Astrophysical Observatory

1990 - 1995 Graduate Research Assistant, California Institute of Technol

1989 - 1990 Undergraduate Research Assistant, University of Washington

### Research Interests

Atmospheric remote sensing in the solar system.  
Planetary atmospheric photochemistry and dynamics.  
Planetary sources and the millimeter/submillimeter absolute flux scale  
Radio astronomy: aperture synthesis observations and techniques at millimeter  
and submillimeter wavelengths.

### Project Experience and Service

2002 - 2004 Testing program lead, Smithsonian Submillimeter Array (SMA)

2003 - present Time Allocation Committee Member (SMA)

1998 - present Staff Scientist (SMA)

- 1998 - present SMA Postdoctoral Fellow Search Committee
- 1995 - present Major observatory support and software development (SMA)
- 1999 - present Invited Investigator for Planetary Studies, Submillimeter Wave Astronomy Satellite Project (SWAS)

### **Proposed Flight Missions and Instruments**

- 2001 - present Science team  
Mars Atmospheric Microwave Brightness Observer (MAMBO)  
PI: F. Forget; postponed indefinitely
- 2001 - present Science team  
Mars Atmospheric Constellation Observatory (MACO)  
PI: Kursinski; under development

### **Grants and Contracts**

- 1998 - 2003 PI: "Millimeter and Submillimeter Spectroscopy of Titan"  
NASA Planetary Astronomy Program (NAG5-7946)
- 2001 - present Co-I: "U.S. Participation in the Mars Atmospheric Microwave Brightness  
(postponed) Observer (MAMBO) Experiment on the Premier 2007 Mission"  
NASA Mars Scout Program

### **Advisory Committees**

- 2003 - present Atacama Large Millimeter Array (ALMA) North America  
Science Advisory Committee
- 1998 - 2003 ALMA Science Advisory Committee
- 2001 - 2004 NRAO User's Committee member
- 1995 - present NRAO Millimeter Array Science Working Group (Solar System)

### **Award Committees**

- 2004 - 2006 CfA Prize Postdoctoral Fellowship Committee

### **Referee Activities**

- 2001 - 2004 NRAO VLA/VLBA Proposal referee
- 1999 NASA Planetary Astronomy Review Panel (PARP) member
- 1998 - present NASA Planetary Instrument Definition and Development Program (PIDDP)  
referee
- 1992 - present Publication referee for Icarus, JGR, and other peer-review journals

### **Educational Activities-Teaching Experience**

- 2001 Guest Lecturer, Radio Astronomy, Harvard University
- 2000 Undergraduate thesis co-advisor, Haverford College
- 1999 Science co-advisor, SAO Summer Intern Program
- 1994 Teaching assistant and lecturer, Planetary Radio Astronomy,

California Institute of Technology  
1992 Teaching assistant, Introduction to Planetary Science,  
California Institute of Technology

### **Educational Activities-Outreach**

2005 Television Appearance  
"Greater Boston" (WGBH, PBS), July 5  
Discussion of the Deep Impact mission

2001 - present Creation and distribution of materials (primarily planetary images)  
for young children

2000 'Q&A' via email with 3rd grade students  
Canyon View Elementary School, Kennewick WA

### **Meeting Organization**

2006 SOC "2nd International Meeting for Science with the Atacama Large  
Millimeter Array" (*title to be finalized*), Madrid, Spain, 13-16 November

2005 LOC "Submillimeter Astronomy: in the era of the SMA",  
Harvard University, Cambridge, MA, 13-16 June

2004 Organizing Committee, "Star and Planet Formation Internal Symposium",  
CfA,  
Cambridge, MA , 13-15 September

1999 Scientific Organizing Committee, "Science with the Atacama Large  
Millimeter Array (ALMA)", Washington, D.C., 6-8 October

### **Professional Societies**

Division for Planetary Science of the American Astronomical Society  
American Geophysical Union

### **Honors and Awards**

2002 Certificate of Award for service to the SMA, Smithsonian Astrophysical  
Observatory

1990 Graduated Magna Cum Laude with College Honors, University of  
Washington

1986 National Merit Scholar