

**PERSONAL DATA:**

**Michael R. Combi**, Freeman D. Miller Collegiate Research Professor  
Dept. of Climate and Space Sciences and Engineering  
University of Michigan  
2455 Hayward Street  
Ann Arbor, MI 48109-2143  
Tel: 1-734-764-7226  
Fax: 1-734-647-3083  
Email: mcombi@umich.edu

**EDUCATION:**

- Ph.D. (Physics), University of Toledo, Toledo, OH, 1979
- M.S. (Physics), University of Toledo, Toledo, OH, 1976
- B.S. (Physics), Manhattan College, Bronx, NY, 1973

**HONORS/AWARDS:**

- Sigma Xi (1978)
- William H. Leckie Scholar Award, University of Toledo (1978)
- Editor's Letter of Commendation as a referee for the journal *Icarus* (1990 and 1991)
- University of Michigan, College of Engineering, Outstanding Research Scientist Award (1996-1997)
- University of Michigan, Distinguished Research Scientist Award (2003)
- University of Toledo, John J. Turin Outstanding Career Accomplishments Award (2004)
- European Space Agency, Recognition for Outstanding Contribution to the ROSETTA Mission (2005)
- Asteroid 17060 (1999 GX7) named *Mikecombi*. Citation.  
Michael R. Combi (b. 1952) of the University of Michigan is a planetary astronomer who specializes in the detailed modeling of cometary comae. His model for the distribution of water molecules and associated byproducts has been invaluable in understanding a wide variety of coma observations. (2005)
- University of Michigan, Award for Service on SACUA (2007)
- Freeman D. Miller Collegiate Research Professorship (2013)
- NASA RHG Exceptional Achievement for Science for MAVEN (2016)
- NASA Group Achievement Award to MAVEN Science Team (2016)
- Certificate of Appreciation MAVEN Mission (2017)
- NASA Group Achievement Award to University of Michigan Rosetta Modeling Team (2017)
- European Space Agency Certificate in Recognition for Outstanding Contribution to the ESA Rosetta Mission (2017)
- NASA Group Achievement Award to MAVEN Mission Team for unlocking the mysteries of Mars atmosphere loss through exceptional operation and utilization of MAVEN (2018)

**PROFESSIONAL EXPERIENCE:**

- 2013-present, Freeman D. Miller Collegiate Research Professor, Dept. of Climate and Space Sciences and Engineering, Univ. of Michigan,
- 2003-2013, Research Professor and Distinguished Senior Research Scientist, Dept. of Atmospheric, Oceanic and Space Sciences, Univ. of Michigan,
- 2001-2003 Senior Research Scientist, Dept. of Atmospheric, Oceanic and Space Sciences, Univ. of Michigan
- 1993-2001 Research Scientist, Dept. of Atmospheric, Oceanic and Space Sciences, Univ. of Michigan,
- 1989-1993, Associate Research Scientist, Dept. of Atmospheric, Oceanic and Space

## DR. MICHAEL R. COMBI

- Sciences, Univ. of Michigan
- 1981-1989, Staff Scientist and Senior Staff Scientist, Atmospheric and Environmental Research, Inc., Cambridge, MA.
- 1979-1981, Post-Doctoral Research Associate, Department of Physics and Astronomy, University of Toledo, Toledo, OH.

### PROFFESIONAL MEMBERSHIPS:

- American Astronomical Society (and Division for Planetary Sciences)
- American Geophysical Union
- International Astronomical Union
- American Association for the Advancement of Science
- European Geophysical Union

### PROFESSIONAL ACTIVITIES:

- Editor, planetary science journal *Icarus*
- SSB Committee for Planetary and Lunar Exploration (COMPLEX)
- Co-Editor, Comets III
- NASA Planetary System Science Management Operations Working Group
- Science Definition Team: Comet Surface Sample Return Mission
- NASA Planetary Astronomy Review Panel Chair and Member, CRAF Peer Review Panel, Planetary Data Systems/Small Bodies Nodes Review Panel, and Hubble Space Telescope Solar System Review Panel
- Scientific Organizing Committee, First International Conference on Comet Hale-Bopp
- Proceedings Editor and Scientific Organizing Committee Advisor, Cometary Science after Hale-Bopp, IAU Colloquium No. 186
- Scientific Organizing Committee for *Comets II*, University of Arizona Press
- Program Committee, 2002 Division for Planetary Sciences Meeting
- Scientific Organizing Committee, Deep Impact as a World Observatory Event
- Director SPRL Research Experiences for Undergraduates Program (1996-2014)
- Principal Investigator and Co-Investigator on numerous projects dealing with distributions of gas and dust in cometary and planetary satellite atmospheres

### SCIENTIFIC ACTIVITIES:

- Team Member for the CRAF Visual and Infrared Mapping Spectrometer
- Member of the CRAF Coma and Tail Science Working Group
- Hubble Space Telescope Guest Observer
- International Ultraviolet Explorer Guest Observer
- SOHO Guest Investigator
- Co-Investigator, Rosetta VIRTIS Team
- Co-Investigator, Rosetta ROSINA Team
- Collaborator, Rosetta ALICE Team
- Participating Scientist, MAVEN mission

### UNIVERSITY ACTIVITIES:

- Executive Committee, Department of Atmospheric, Oceanic and Space Sciences (now Department of Climate and Spaces Sciences and Engineering)
- Advisory Committee, Space Physics Research Laboratory
- College of Engineering Awards Committee
- University Research Scientist Awards Committee
- Faculty Senate Assembly
- Senate Advisory Committee on University Affairs
- Research Policies Committee
- Senate Assembly Committee on Financial Affairs
- Government Relations Advisory Committee

## **DR. MICHAEL R. COMBI**

- Vice President for Research Search Advisory Committee
- Dean of Engineering Search Advisory Committee
- College of Engineering Research Advisory Committee
- AOSS Chair Search Advisory Committee
- AOSS Internal Review Committee
- AOSS Awards Committee
- CLaSP Chair Search Advisory Committee
- Chair and member of numerous promotion and hiring committees

### **PH.D. THESIS COMMITTEE CHAIR:**

- Konstantin Kabin – 2000
- Valeriy Tenishev – 2006
- Ying-Dong Jia – 2007
- Arnaud Valeille – 2009
- Nicolas Fougere – 2014
- Yuni Lee – 2014
- Yinsi Shou – 2016

### **PH.D. THESIS COMMITTEE MEMBER:**

- Claudia Alexander (AOSS) – 1993
- Taro Ueki (NERS) – 1998
- Danny Ray Tolar, Jr. (NERS) – 1999
- Yifan Liu (AOSS) – 2000
- Kenneth C. Hansen (AOSS) – 2001
- Kandis Lea Jessup (AOSS) – 2001
- Xiaohua Fang (AOSS) – 2006
- Jonathan Burt (Aero) – 2006
- Thomas Schwarzenruber (Aero) – 2007
- Eugene Fahnestock (Aero) – 2009
- Sharyl Byram (Aero) – 2009
- Jinan Yang (NERS) – 2011
- Christopher Moore (U. Texas) -- 2011
- Eunji Jun (Aero) -- 2012
- Ashley Verhoff (Aero) -- 2015
- Changyuan Liu (NERS) -- 2015
- Shaosui Xu (CLaSP - formerly AOSS) -- 2015

### **M.S. THESIS RESEARCH ADVISOR:**

- Scott Cochran – 1994-1996
- Gregory Bee – 2007-2009

### **UNDERGRADUATE RESEARCH ADVISOR:**

- Brent Bos – 1991 (REU)
- Scott Cochran – 1992 (REU)
- Patrick Beaudette – 1993 (REU)
- Joseph Formaggio – 1994 (REU)

## DR. MICHAEL R. COMBI

- Mark Lennigan – 1996 (REU)
- Ryan Tyler – 1998 (Independent Study project)
- Nathaniel Henry – 2005 (UROP); 2006-2007 (Independent research)
- Yuni Lee – 2006-2008 (UROP)
- Zachary Boyd – 2008 (UROP); 2009-2012 (Independent research)
- Tapan Patel – 2009 (UROP); 2010-2012 (Independent research)
- Vidya Sagar Reddy Avuthu -2010-2011 (Independent Study project)
- Gabriel Aptekar -2012-2013 (UROP)
- Samuel Reed - 2013-2014 (UROP)
- Courtney Wright - 2014-2015 (UROP)
- Megan Avery - 2015-2016 (UROP)
- Ruben Coronel - 2018-2019 (UROP)

### POSTDOCTORAL FELLOWS:

- Roman Häberli (1995-1997)
- Rainer Bauske (1998-2000)
- Valeriy Tenishev (2006-2007)
- O.J. Tucker (2012- 2014)
- Nicolas Fougere (2014 - 2017)
- Yuni Lee (2014 - 2016)
- Yinsi Shou (2017 - )

### BOOK REVIEW:

Physics and Chemistry of Comets, edited by W.F. Huebner, Springer Verlag, Berlin, 1990, published in Icarus, vol. 94, 256 (1991)

### BOOKS EDITED:

1. Cometary Science after Hale-Bopp, Volumes 1 and 2, Eds. H. Boehnhardt, M. Combi, M. Kidger, and R. Schultz, Kluwer, Dordrecht (2002)
2. Deep Impact at Comet Tempel 1, Eds. M.F. A'Hearn and M.R. Combi, Elsevier, San Diego, (2007)

### REFEREED BOOK CHAPTERS:

1. Gas Dynamics and Kinetics in the Cometary Coma: Theory and Observations. M.R. Combi, W.M. Harris, W.H. Smyth. In *Comets II* (M.C. Festou, H. U. Keller, H. A. Weaver, eds.), U. Arizona Press, Tucson, p. 523-552, 2004.
2. Spectroscopic Investigations of Fragment Species in the Coma. P.D. Feldman, A.L. Cochran, M.R. Combi. In *Comets II* (M.C. Festou, H. U. Keller, H. A. Weaver, eds.), U. Arizona Press, Tucson, p. 425-447, 2004.
3. The plasma environment of Comet 67P/Churyumov-Gerasimenko throughout the Rosetta main mission. Hansen, K.C., T. Bagdonat, U. Motschmann, C. Alexander, M.R. Combi, T.E. Cravens, T.I. Gombosi, Y.-D. Jia, and I.P. Robertson. In *Rosetta: ESA's Mission to the Origin of the Solar System*, edited by R. Schultz, C. Alexander, H. Boehnhardt, C.-H. Glassmeier, Springer, 2008.
4. Plasma Flow and Related Phenomena in Planetary Aeronomy. Y.-J. Ma, K. Altwegg, T. Breus, M.R. Combi, T.E. Cravens, E. Kallio, S.A. Ledvina, J.G. Luhmann S. Miller, A.F. Nagy, A.J. Ridley, D.F. Strobel. In *Comparative Aeronomy*, edited by Andrew F. Nagy, André Balogh, Thomas E. Cravens, Michael Mendillo, Ingo Müller-Wodarg, Springer, 2008.

## DR. MICHAEL R. COMBI

5. Neutral Upper Atmosphere and Ionosphere Modeling. Bougher, Stephen W., Blevy, Pierre-Louis, Combi, Michael, Fox, Jane L., Mueller-Wodarg, Ingo, Ridley, Aaron, Roble, Raymond G. In *Comparative Aeronomy*, edited by Andrew F. Nagy, André Balogh, Thomas E. Cravens, Michael Mendillo, Ingo Müller-Wodarg, Springer, 2008.
6. Exospheres and Atmospheric Escape. Johnson R.E., M.R. Combi, J.L. Fox, W.-H. Ip, F. Leblanc, M.A. McGrath, V.I. Shematovich, D.F. Strobel, J.H. Waite Jr. In *Comparative Aeronomy*, edited by Andrew F. Nagy, André Balogh, Thomas E. Cravens, Michael Mendillo, Ingo Müller-Wodarg, Springer, 2008.

### EDITORIALS:

1. Deep Impact at Comet Tempel 1. M.F. A'Hearn, M.R. Combi. *Icarus* **187**, 1-3, 2007.
2. Deep Impact at Comet Tempel 1: Part 2. M.F. A'Hearn, M.R. Combi. *Icarus* **190**, 283, 2007.
3. The solar wind interaction with Mars: Recent progress and future directions. Brain, D. A., Hurley, D., Combi, M. R. *Icarus* **206**, 1-4, 2010.
4. Introduction: Low-budget extended missions to comets. M.F. A'Hearn, M.R. Combi, J. Veverka. *Icarus* **222**, 421-423.

### REFEREED JOURNAL PUBLICATIONS:

1. Production Rate and Possible Origin of O(<sup>1</sup>D) in Comet Bennett. A.H. Delsemme and M.R. Combi. *Astrophys.J. Lett.* **209**, L149-L151, 1976.
2. Production Rate and Origin of H<sub>2</sub>O<sup>+</sup> in Comet Bennett. A.H. Delsemme and M.R. Combi. *Astrophys.J. Lett.* **209**, L153-L156, 1976.
3. Convolution of Cometary Brightness Profiles by Circular Diaphragms. M.R. Combi. *Astron. J.* **83**, 1459-1466, 1978.
4. O(<sup>1</sup>D) and H<sub>2</sub>O<sup>+</sup> in Comet Bennett (1970II). A.H. Delsemme and M.R. Combi. *Astrophys. J.* **228**, 330-337, 1979.
5. Neutral Cometary Atmospheres. I. An Average Random Walk Model for Photodissociation in Comets. M.R. Combi and A.H. Delsemme. *Astrophys. J.* **237**, 633-640, 1980.
6. Neutral Cometary Atmospheres. II. The Production of CN in Comets. M.R. Combi and A.H. Delsemme. *Astrophys. J.* **237**, 641-645, 1980.
7. Brightness Profiles of CO<sup>+</sup> in the Ionosphere of Comet West. M.R. Combi and A.H. Delsemme. *Astrophys. J.* **238**, 381-387, 1980.
8. Neutral Cometary Atmospheres. III. The Acceleration of Cometary CN by Solar Radiation Pressure. M.R. Combi. *Astrophys. J.* **241**, 830-837, 1980.
9. Neutral Cometary Atmospheres. IV. Brightness Profiles in the Inner Coma of Comet Kohoutek (1973XII). A.H. Delsemme and M.R. Combi. *Astrophys. J.* **271**, 388-397, 1983.
10. Io's Sodium Directional Features: Direct Evidence for a Magnetospheric-Wind-Driven Gas Escape Mechanism. C.B. Pilcher, W.H. Smyth, M.R. Combi and J.H. Fertel. *Astrophys. J.* **287**, 427-444, 1984.
11. Pioneer Venus Lyman- $\alpha$  Observations of Comet P/Giacobini-Zinner and the Life Expectancy of Cometary Hydrogen. M.R. Combi, A.I.F. Stewart, and W.H. Smyth. *Geophys. Res. Lett.* **13**, 385-388, 1986.
12. Neutral Cometary Atmospheres. V. C<sub>2</sub> and CN in Comets. M.R. Combi and A.H. Delsemme. *Astrophys. J.* **308**, 472-484, 1986.
13. Sources of Cometary Radicals and Their Jets: Gases or Grains. M.R. Combi, *Icarus* **71**, 178-191, 1987.
14. Correlating East-West Asymmetries in the Jovian Magnetosphere and the Io Sodium Cloud. W.H. Smyth and M.R. Combi. *Geophys. Res. Lett.* **14**, 973-976, 1987.
15. Monte Carlo Particle Trajectory Models for Neutral Cometary Gases. I. Models and Equations. M.R. Combi and W.H. Smyth. *Astrophys. J.* **327**, 1026-1043, 1988.

DR. MICHAEL R. COMBI

16. Monte Carlo Particle Trajectory Models for Neutral Cometary Gases. II. The Spatial Morphology of the Lyman-alpha Coma. M.R. Combi and W.H. Smyth. *Astrophys. J.* **327**, 1044-1059, 1988.
17. A General Model for Io's Neutral Gas Clouds: Mathematical Description. W.H. Smyth and M.R. Combi. *Astrophys. J. Suppl.* **66**, 397-411, 1988.
18. A General Model for Io's Neutral Gas Clouds: Application to the Sodium Cloud. W.H. Smyth and M.R. Combi. *Astrophys. J.* **328**, 888-918, 1988.
19. The Outflow Speed of the Coma of Halley's Comet. Michael R. Combi. *Icarus* **81**, 41-50, 1989.
20. High Resolution Spectra of the 6300Å Region in Comet P/Halley. M.R. Combi and R.E. McCrosky. *Icarus* **91**, 270-279, 1991.
21. Analysis of the Pioneer-Venus Lyman- $\alpha$  Image of the Hydrogen Coma of Comet P/Halley. William H. Smyth, Michael R. Combi and A. I. F. Stewart. *Science* **253**, 1008-1010, 1991.
22. P/Halley: Spatial Distributions and Scale Lengths for C<sub>2</sub>, CN, NH<sub>2</sub> and H<sub>2</sub>O. Uwe Fink, Michael R. Combi, and Michael A. DiSanti. *Astrophys. J.* **383**, 356-371, 1991.
23. The Sodium Zenocorona. William H. Smyth and Michael R. Combi. *J. Geophys. Res.* **96**, 22711-22727, 1991.
24. IUE Observations of HI Lyman- $\alpha$  in Comet P/Giacobini-Zinner. Michael R. Combi and Paul D. Feldman. *Icarus* **97**, 260-268, 1992.
25. The OH Distribution in Cometary Atmospheres: A Collisional Monte Carlo Model for Heavy Species. M.R. Combi, B.J. Bos and W.H. Smyth. *Astrophys. J.* **408**, 668-677, 1993.
26. P/Halley: Effects of time-dependent production rates on spatial emission profiles. M.R. Combi and U. Fink. *Astrophys. J.* **409**, 186-194, 1993.
27. Water Production Rates in Comet P/Halley from IUE Observations of HI Lyman- $\alpha$ . M.R. Combi and P.D. Feldman. *Icarus* **105**, 557-567, 1993.
28. A Coulomb Collision Algorithm for Weighted Particle Simulations. R.H. Miller and M.R. Combi. *Geophys. Res. Lett.* **21**, 1735-1738, 1994.
29. The Fragmentation of Dust in the Inner Comae of Comets. M.R. Combi. *Astron. J.* **108**, 304-312, 1994.
30. Time-Dependent Analysis of 8 Days of CN Spatial Profiles in Comet P/Halley. M. Combi, B. Huang, A. Cochran, U. Fink, R. Schulz. *Astrophys. J.* **435**, 870-873, 1994.
31. Observations and Analysis of O(<sup>1</sup>D) and NH<sub>2</sub> Line Profiles for the Coma of Comet P/Halley. W.H. Smyth, M.R. Combi, F.L. Roesler, and F. Scherb. *Astrophys. J.* **440**, 349-360, 1995.
32. Analysis of Hydrogen Lyman- $\alpha$  Observations of the Coma of Comet P/Halley near Perihelion. W.H. Smyth, M.L. Marconi, and M.R. Combi. *Icarus* **113**, 119-128, 1995.
33. Far-ultraviolet Emissions during the Impact of Comet Shoemaker-Levy 9 with Jupiter. Ballester, G. et al. (including M. R. Combi). *Geophys. Res. Lett.* **22**, 2425-2428, 1995.
34. Ponderomotive Acceleration in the Auroral Region: A Kinetic Simulation. R. Miller, C. Rasmussen, M. Combi, T. Gombosi, and D. Winske. *J. Geophys. Res.* **100**, 23901-23916, 1995.
35. Time-Dependent Gas Kinetics in Tenuous Planetary Atmospheres: The Cometary Coma. M.R. Combi. *Icarus* **123**, 207-226, 1996.
36. Io's Sodium Corona and Spatially Extended Cloud: A Consistent Flux Speed Distribution. Smyth, W.H. and M.R. Combi. *Icarus* **126**, 58-77, 1997.
37. Modeling of Cometary X-rays Caused by Solar Wind Minor Ions. Häberli, R.M., T.I. Gombosi, D.L. DeZeeuw, M.R. Combi, and K.G. Powell. *Science* **276**, 939-942, 1997.
38. A Critical Study of Molecular Photodissociation and CHON Grain Sources for Cometary C<sub>2</sub>. Combi, M.R. and U. Fink. *Astrophys. J.* **484**, 879-890 1997.

DR. MICHAEL R. COMBI

39. Evidence for Interacting Gas Flows and an Extended Volatile Source Distribution in the Coma of Comet C/1996 B2 (Hyakutake). W. M. Harris, M.R. Combi, R.K. Honeycutt, B.E.A. Mueller, F. Scherb. *Science* **277**, 676-681, 1997.
40. The Spatial Distribution of Gaseous Atomic Sodium in the Comae of Comets: Evidence for Direct Nucleus and Extended Plasma Sources. M.R. Combi, M.A. DiSanti, U. Fink. *Icarus* **130**, 336-354, 1997.
41. Quantitative Analysis of H<sub>2</sub>O<sup>+</sup> Coma Images Using a Multiscale MHD Model with Detailed Ion Chemistry. R.M. Haberli, M.R. Combi, T.I. Gombosi, D.L. DeZeeuw, K.G. Powell. *Icarus* **130**, 373-386, 1997.
42. Hubble Space Telescope Ultraviolet Imaging and High Resolution Spectroscopy of Water Photodissociation Products in Comet Hyakutake (C/1996 B2). M.R. Combi, M.E. Brown, P.D. Feldman, H.U. Keller, R.R. Meier, W.H. Smyth. *Astrophys. J.* **494**, 816-821, 1998.
43. Io's Plasma Environment during the Galileo Flyby: Global Three-Dimensional MHD Modeling with Adaptive Mesh Refinement. M.R. Combi, K. Kabin, T.I. Gombosi, D.L. DeZeeuw, K.G. Powell. *J. Geophys. Res.* **103** (A5), 9071-9081 1998.
44. VIRTIS : An Imaging Spectrometer for the Rosetta Mission. A. Coradini et al. (including M.R. Combi). *Planetary and Space Science* **46**, 1291-1304, 1998.
45. Observation and Analysis of High-Resolution Optical Line Profiles in Comet Hyakutake (C/1996 B2). M.R. Combi, A.L. Cochran, W.D. Cochran, D.L. Lambert, and C.M. Johns-Krull. *Astrophys. J.* **521**, 961-968, 1999.
46. On Europa's Magneospheric Interaction: An MHD Simulation of the E4 Flyby. K.Kabin, M.R. Combi, T.I. Gombosi, A.F. Nagy, D.L. DeZeeuw, and K.G. Powell. *J. Geophys. Res.* **104**, 19983-19992, 1999.
47. Dust-Gas Interrelations in Comets: Observations and Theory. M.R. Combi, K. Kabin, D.L. DeZeeuw, T.I. Gombosi, and K.G. Powell. *Earth, Moon, & Planets* **79**, 275-306, 1997-1999.
48. Modeling the Solar Wind-Comet Interaction. T.I. Gombosi, K. Hansen, D.L. DeZeeuw, M.R. Combi, and K.G. Powell. *Earth, Moon, & Planets* **79**, 179-207, 1997-1999.
49. Analysis of Mid-Latitude Auroral Emissions Observed During the Impact of Comet Shoemaker-Levy 9 With Jupiter. R. Bauske, M.R. Combi, J.T. Clarke. *Icarus* **142**, 106-115, 1999.
50. Multiple Scattering of Hydrogen Lyman- $\alpha$  Radiation in the Coma of Comet Hyakutake (C/1996 B2). K. Richter, M.R. Combi, H.U. Keller, and R.R. Meier. *Astrophys. J.* **531**, 599-611, 2000.
51. SOHO/SWAN Observations of the Structure and Evolution of the Hydrogen Lyman- $\alpha$  Coma of Comet Hale-Bopp (1995 O1). M.R. Combi, A.A. Reinard, J.-L. Bertaux, E. Quemerais, and T. Mäkinen. *Icarus* **144**, 191-202, 2000.
52. Two-Species 3D MHD Simulation of Europa's Interaction with Jupiter's Magnetosphere. Y. Liu, A.F. Nagy, K. Kabin, M.R. Combi, D.L. DeZeeuw, T.I. Gombosi, K.G. Powell. *Geophys. Res. Lett.* **27**, 1791-1794, 2000.
53. Global MHD Simulations of Space Plasma Environments: Heliosphere, Comets, Magnetospheres of Planets and Satellites. K. Kabin, K.C. Hansen, T.I. Gombosi, M.R. Combi, T.J. Linde, D.L. DeZeeuw, C.P.T. Groth, K.G. Powell, A.F. Nagy. *Astrophys. Space Sci.* **274**, 407-421, 2000.
54. Io's Magnetospheric Interaction: An MHD Model with Day-Night Asymmetry. K. Kabin, M.R. Combi, T.I. Gombosi, K.C. Hansen, K.G. Powell. *Planet. Space Sci.* **49**, 337-343, 2001.
55. The Interaction between the Magnetosphere of Saturn and Titan's Ionosphere. Nagy, A.F., Y. Liu, K.C. Hansen, K. Kabin, T.I. Gombosi, M.R. Combi, D.L. DeZeeuw, K.G. Powell and A.U. Kliore. *J. Geophys. Res.* **106**, 6151-6160, 2001.

DR. MICHAEL R. COMBI

56. Water Production of Comet 1999 S4 LINEAR Observed with the SWAN instrument. Mäkinen, J.T., J.-L. Bertaux, M.R. Combi, and E. Quémerais. *Science* **292**, 1326-1329, 2001.
57. HST and VLT Investigations of the Fragments of Comet C/1999 S4 (LINEAR). Weaver, H.A. Z. Sekanina, I. Toth, C.E. Delahodde, O.R. Hainaut, P.L Lamy, J. M. Bauer, M.F. A'Hearn, C. Arpigny, M.R. Combi, J.K. Davies, P.D. Feldman, M. C. Festou, R. Hook, L. Jorda, M.S.W. Keesey, C.M. Lisse, B.G. Marsden, K.J. Meech, G.P. Tozzi, R. West. *Science* **292**, 1329-1333, 2001.
58. Large Aperture [OI] 6300 Å Photometry of Comet Hale-Bopp: Implications for the Photochemistry of OH. J.P Morgenthaler, W.M. Harris, F. Scherb, C.M. Anderson, R.J. Oliverson, N.E. Doane, M.R. Combi, M.L. Marconi, W.H. Smyth. *Astrophys. J.* **563**, 451-461, 2001.
59. Plasma Flow Past Cometary and Planetary Satellite Atmospheres, M.R. Combi, T.I. Gombosi, K. Kabin. In *Atmospheres in the Solar System : Comparative Aeronomy, Geophysical Monograph 130*, 151-167, 2002.
60. A Search for Argon and O VI in Three Comets Using FUSE. H.A. Weaver, P.D. Feldman, M.R. Combi, V. Krasnopolsky, C. M. Lisse, and D. E. Shemansky. *Astrophys.J. (Lett)*, **576**, L95-98, 2002.
61. Hale-Bopp: What Makes a Big Comet Different. Coma Dynamics: Observations and Theory. M. R. Combi. *Earth, Moon, & Planets*, **89**, 73-90, 2000 (published 2002).
62. The Outer Source of Pickup Ions and Anomalous Cosmic Rays. N Schwadron, M. Combi, W. Huebner, and D.J. McComas. *Geophys. Res. Lett.* **29**, 54-1 - 54-4, 10.1029/2002GL015829, 2002.
63. The Effect of Using Different Scale Lengths on the Production Rates of Comet 46P/Wirtanen. U. Fink, M.R. Combi. *Planet. Space Sci.* **52**, 573-580, 2004.
64. On the Effect of Electron Collisions in the Excitation of Cometary HCN. A.J. Lovell, N. Kallivayalil, F. P. Schloerb, M.R. Combi, K.C. Hansen, T.I. Gombosi. *Astrophys. J.* **613**, 615-621, 2004.
65. Temporal Deconvolution of the Hydrogen Coma. I. A Hybrid Model. J.T.T. Mäkinen and M.R. Combi. *Icarus* **177**, 217-227, 2005.
66. Temporal Deconvolution of the Hydrogen Coma. II. Pre- and Post-Perihelion Activity of Comet Hyakutake (1996 B2). M. R. Combi, J.T.T. Mäkinen, J.-L. Bertaux, E. Quemérais. *Icarus* **177**, 228-245, 2005.
67. Chandra Observations of Comet 2P/Encke 2003: First Detection of a Collisionally Thin, Fast Solar Wind Charge Exchange System. C. M. Lisse, D. J. Christian, K. Dennerl, S. J. Wolk, D. Bodewits, R. Hoekstra, M. R. Combi, T. Mäkinen, M. Dryer, C. D. Fry, and H. Weaver. *Astrophys. J.* **635**, 1329-1347, 2005.
68. Effects of Kinetic Processes in Shaping Io's Global Plasma Environment: A 3D Hybrid Model. A. S. Lipatov and M.R. Combi. *Icarus* **180**, 412-427 2006.
69. The Atmospheric Plume of Enceladus as Observed by the Cassini Ion neutral Mass Spectrometer. J. Hunter Waite, Jr., Michael Combi, Wing-Huen Ip, Thomas E. Cravens, Ralph L. McNutt, Jr., Wayne Kasprzak, Roger Yelle, Janet Luhmann, Hasso Niemann, David Gell, Brian Magee, Greg Fletcher, Jonathan Lunine, Wei-Ling Tseng. *Science* **311**, 1419-1422, 2006.
70. The Plasma Environment of Comet 67P/Churyumov-Gerasimenko Throughout the Rosetta Main Mission. Hansen, K.C., T. Bogdonat, U. Motschmann, C. Alexander, M.R. Combi, T.E. Cravens, T.I. Gombosi, Y.-D. Jia, I.P. Robertson, *Space Sci. Rev.* **128**, 133-166, 2007.
71. Virtis: An Imaging Spectrometer for the Rosetta Mission. A. Coradini, F. Capaccioni, P. Drossart, G. Arnold, E. Ammannito, F. Angrilli, A. Barucci, G. Bellucci, J. Benkhoff, G. Bianchini, J. P. Bibring, M. Blecka, D. Bockelee-Morvan, M. T. Capria, R. Carlson, U. Carsenty, P. Cerroni, L. Colangeli, M. Combes, M. Combi, J. Crovisier, M. C. Desanctis, E. T. Encrenaz, S. Erard, C. Federico, G. Filacchione, U. Fink, S. Fonti, V. Formisano, W. H. Ip, R. Jaumann, E. Kührt, Y. Langevin, G. Magni, T. McCord, V. Mennella, S.



## DR. MICHAEL R. COMBI

- Mottola, G. Neukum, P. Palumbo, G. Piccioni, H. Rauer, B. Saggin, B. Schmitt, D. Tiphene and G. Tozzi. *Space Sci. Rev.* (on line DOI 10.1007/s11214-006-9127-5) 2007.
72. SWAN Observations of 9P/Tempel 1 Around the Deep Impact Event. Mäkinen, J.T.T., M.R. Combi, J.-L. Bertaux, E. Quémerais. *Icarus* **187**, 109-112, 2007.
  73. Large Aperture OI 6300Å Observations of Comet Hyakutake: Implications for the Photochemistry of OH and OI Production in Comet Hale-Bopp. Morgenthaler, J.P., W.M. Harris F. Scherb, M.R. Combi. *Astrophys. J.* **657**, 1162-1171, 2007.
  74. Comparison of the dust distributions in the innermost comae of comets 1P/Halley and 19P/Borrelly spacecraft observations. Ho, T.-M., N. Thomas, D.C. Boice, M. Combi, L. Soderblom, V. Tennishev. *Planet. Space Sci.* **55**, 974-985, 2007.
  75. A global model of cometary tail disconnection events triggered by solar wind magnetic variations. Jia, Y.-D., M.R. Combi, K.C. Hansen, T.I. Gombosi. *J. Geophys. Res.* **112**, A05223, doi:10.1029/2006JA012175, 2007.
  76. *Chandra* Observations of Comet 9P/Tempel 1 During the Deep Impact Campaign. Lisse, C.M., D. Bodewits, D. J. Christian, S. J. Wolk, K. Dennerl, T.H. Zurbuchen, K.C. Hansen, R. Hoekstra, M. Combi, C. D. Fry, M. Dryer, T. Mäkinen, W. Sun. *Icarus* **190**, 391-405, 2007.
  77. Encounter of the Ulysses Spacecraft with the Ion Tail of Comet McNaught. Neugebauer, M., G. Gloeckler, J. T. Gosling, A. Rees, R. Skoug, B. E. Goldstein, T. P. Armstrong, M. R. Combi, T. Mäkinen, D. J. McComas, R. von Steiger, T. H. Zurbuchen, E. J. Smith, J. Geiss, and L. J. Lanzerotti. *Astrophys. J.* **667**, 1262-1266, 2007.
  78. Models for the comet dynamical environment. Byram, S.M., D.J. Scheers, M.R. Combi. *Journal of Guidance Control and Dynamics* **30** (5), 1445-1454, 2007.
  79. SOHO/SWAN Observations of Five Moderately Bright Comets: 1999-2002. Combi, M.R., J.T.T. Mäkinen, N.J. Henry, J.-L. Bertaux and E. Quémerais. *Astron. J.* **135**, 1533-1550, 2008.
  80. A 3-D global MHD model for the effect of neutral jets during the Deep Space 1 comet 19P/Borrelly flyby. Jia, Y.D., M.R. Combi, K.C. Hansen, T.I. Gombosi, F.J. Crary, and D.T. Young. *Icarus* **196**, 249-257, 2008.
  81. Plasma Flow and Related Phenomena in Planetary Aeronomy. Y.-J. Ma, K. Altwegg, T. Breus, M.R. Combi, T.E. Cravens, E. Kallio, S.A. Ledvina, J.G. Luhmann S. Miller, A.F. Nagy, A.J. Ridley, D.F. Strobel. *Space Sci. Rev.* **139**, 311-353, DOI 10.1007/s11214-008-9389-1, 2008.
  82. Neutral Upper Atmosphere and Ionosphere Modeling. Bougher, Stephen W., Bliely, Pierre-Louis, Combi, Michael, Fox, Jane L., Mueller-Wodarg, Ingo, Ridley, Aaron, Roble, Raymond G. *Space Sci. Rev.* 107-141, DOI 10.1007/s11214-008-9401-9, 2008.
  83. Exospheres and Atmospheric Escape. Johnson R.E., M.R. Combi, J.L. Fox, W.-H. Ip, F. Leblanc, M.A. McGrath, V.I. Shematovich, D.F. Strobel, J.H. Waite Jr. *Space Sci. Rev.* **139**, 355-397, DOI 10.1007/s11214-008-9415-3, 2008.
  84. A global kinetic model for cometary comae: The evolution of the coma of the Rosetta target comet Churyumov-Gerasimenko throughout the mission. V.M. Tennishev, M.R. Combi, and B.J.R. Davidsson. *Astrophys. J.* **685**, 659-677, 2008.
  85. Ion composition and chemistry in the coma of comet 1P/Halley - A comparison between Giotto's Ion Mass Spectrometer and our Ion-Chemical Network. Rubin, M., K.C. Hansen, T.I. Gombosi, M.R. Combi, K. Altwegg, H. Balsiger. *Icarus* **199**, 505-519, doi 10.1016/j.icarus.2008.10.009, 2009.
  86. Study of the April 20, 2007, CME-comet interaction event with an MHD model. Jia, Y.-D., C.T. Russell, L.K. Jian, W.B. Manchester, O. Cohen, K.C. Hansen, M.R. Combi, T.I. Gombosi, A. Vourlidas. *Astrophys. J. (Lett)* **696**, L56-L60, 2009.
  87. Water production in comets 2001 Q4 (NEAT) and 2002 T7 (LINEAR) determined from SOHO/SWAN observations. M.R. Combi, J.T.T. Mäkinen, J.-L. Bertaux, Y. Lee and E. Quémerais. *Astron. J.* **137**, 4734-4743, 2009.
  88. 3D study of Mars upper-thermosphere/ionosphere and hot oxygen corona: (1) General description and results at equinox for solar low conditions. Valeille, A., V. Tennishev,

DR. MICHAEL R. COMBI

- S.W. Bougher, M.R. Combi, and A.F. Nagy. *J. Geophys. Res.*, **114**, E11005, doi:10.1029/2009JE003388, 2009.
89. 3D study of Mars upper-thermosphere/ionosphere and hot oxygen corona: (2) Solar cycle, seasonal variations and evolution over history. Valeille, A., M.R. Combi, S.W. Bougher, V. Tenishev, A.F. Nagy. *J. Geophys. Res.* **114**, E11006, doi:10.1029/2009JE003389, 2009.
90. A study of suprathermal oxygen atoms in Mars upper thermosphere and exosphere over the range of limiting conditions. Valeille, A., M.R. Combi, V. Tenishev, S.W. Bougher, A.F. Nagy. *Icarus* **206**, 18-27, doi 10.1016/j.icarus.2008.08.018, 2010.
91. Water loss and evolution of the upper atmosphere and exosphere over Martian history. Valeille, A., S.W. Bougher, V. Tenishev, M.R. Combi and A.F. Nagy. *Icarus* **206**, 28-39, doi: 10.1016/j.icarus.2009.04.036, 2010.
92. Martian atmosphere as observed by VIRTIS-M on Rosetta spacecraft. Coradini, A., Grassi, D., Capaccioni, F., Filacchione, G., Tosi, F., Ammannito, E., De Sanctis, M. C., Formisano, V., Wolkenberg, P., Rinaldi, G., Arnold, G., Barucci, M. A., Bellucci, G., Benkhoff, J., Bibring, J. P., Blanco, A., Bockelee-Morvan, D., Capria, M. T., Carlson, R., Carsenty, U., Cerroni, P., Colangeli, L., Combes, M., Combi, M., Crovisier, J., Drossart, P., Encrenaz, T., Erard, S., Federico, C., Fink, U., Fonti, S., Ip, W.-H., Irwin, P. G. J., Jaumann, R., Kührt, E., Langevin, Y., Magni, G., McCord, T., Mennella, V., Mottola, S., Neukum, G., Orofino, V., Palumbo, P., Piccioni, G., Rauer, H., Schmitt, B., Tiphene, D., Taylor, F. W., Tozzi, G. P. *J. Geophys. Res.*, **115**, Issue E4, CiteID E04004 10.1029/2009JE003345, 2010.
93. An approach to numerical simulation of the gas distribution in the atmosphere of Enceladus, Tenishev, V., M. R. Combi, B. D. Teolis, and J. H. Waite. *J. Geophys. Res.*, **115**, A09302, doi:10.1029/2009JA015223, 2010.
94. GALEX FUV Observations of Comet C/2004 Q2 (MACHHOLZ): The Ionization Lifetime of Carbon. Morgenthaler, Jeffrey P., Harris, Walter M., Combi, Michael R., Feldman, Paul D., Weaver, Harold A. *Astrophys. J.* **726:8**, (10pp.) 10.1088/0004-637X/726/1/8, 2011.
95. Kinetic simulation of neutral/ionized gas and electrically charged dust in the coma of comet 67P/Churyumov-Gerasimenko. Tenishev, Valeriy, Rubin. Martin, Combi, Michael R. 27TH INTERNATIONAL SYMPOSIUM ON RAREFIED GAS DYNAMICS, 2010, AIP Conference Proceedings Volume: 1333 Pages: 1169-1174 DOI: 10.1063/1.3562802, 2011.
96. SOHO/SWAN Observations of Short-Period Spacecraft Target Comets. M.R. Combi, Y. Lee, T.S. Patel, J.T.T. Mäkinen, J.-L. Bertaux, E. Quémerais. *Astron. J.* **141:128** (13pp), doi:10.1088/0004-6256/141/4/128, 2011.
97. Numerical Simulation of Dust in a Cometary Coma: Application to Comet 67P/Churyumov-Gerasimenko. Tenishev, V.M., M.R. Combi, M. Rubin. *Astrophys. J.* **732:104** (17pp), doi:10.1088/0004-637X/732/2/104, 2011.
98. EPOXI: 103P/Hartley 2 Observations from a Worldwide Campaign. K.J. Meech et al. (including M.R. Combi). *Astrophys. J.* **734, L1**, doi:10.1088/2041-8205/734/1/L1, 2011.
99. Water Production by Comet 103P/Hartley 2 Observed with the SWAN Instrument on the SOHO Spacecraft. M.R. Combi, J.-L. Bertaux, E. Quémerais, S. Ferron, J.T.T. Mäkinen. *Astrophys. J.* **734, L6**, doi:10.1088/2041-8205/734/1/L6, 2011.
100. Monte Carlo modeling of neutral gas and dust in the coma of comet 1P/Halley. M. Rubin, V.M. Tenishev, M.R. Combi, K.C. Hansen, T.I. Gombosi, K. Altwegg, H. Balsiger. *Icarus* **213**, 655-677, doi:10.1016/j.icarus.2011.04.006, 2011.
101. The Surface Composition and Temperature of Asteroid 21 Lutetia as observed by ROSETTA/VIRTIS. A. Coradini, F. Capaccioni, S. Erard, G. Arnold, M.C. De Sanctis, G. Filacchione, F. Tosi, A. Barucci, M. T. Capria, E. Ammannito, D. Grassi, G. Piccioni, S. Giuppi, G. Bellucci, J. Benkhoff, J. P. Bibring, A. Blanco. M. Blecka, D. Bockelee-Morvan, F. Carraro, R. Carlson, U. Carsenty, P. Cerroni, L. Colangeli, M.

- Combes, M. Combi, J. Crovisier, P. Drossart, E. T. Encrenaz, C. Federico, U. Fink, S. Fonti, L. Giacomini, W. H. Ip, R. Jaumann, E. Kühr, Y. Langevin, G. Magni, T. McCord, V. Mennella, S. Mottola, G. Neukum, V. Orfino, P. Palumbo, U. Schade, B. Schmitt, F. Taylor, D. Tiphene, G. Tozzi. *Science* **334**, 492-494, 2011.
102. SOHO/SWAN Observations of Comets with Small Perihelia: C/2002 V1 (NEAT), C/2002 X5 (Kudo-Fujikawa), 2006 P1 (McNaught) and 96P/Machholz 1. M.R. Combi, Z. Boyd, Y. Lee, T.S. Patel, J.-L. Bertaux, E. Quémerais, and J.T.T. Mäkinen. *Icarus* **216**, 449-461, doi:10.1016/j.icarus.2011.09.019, 2011.
103. Narrow Dust Jets in a Diffuse Gas Coma: A Natural Product of Small Active Regions on Comets. M.R. Combi, V.M. Tennishev, N. Rubin, N. Fougere, and T.I. Gombosi. *Astrophys. J.* **749:29** (13pp), doi:10.1088/0004-637X/749/1/29, 2012.
104. Solar system X-rays from charge exchange processes. K. Dennerl, C.M. Lisse, A. Bhardwaj, D.J. Christian, S.J. Wolk, D. Bodewits, T.H. Zurbuchen, M. Combi, and S. Lepri. *Astron. Nachr. /AN* **333**, No. 4, 324-334, doi:10.1002/asna.20121163, 2012.
105. Kelvin-Helmholtz instabilities at the magnetic cavity boundary of comet 67P/Churyumov-Gerasimenko. M. Rubin, K.C. Hansen, M.R. Combi, L.K.S. Daldorff, T.I. Gombosi, V.M. Tennishev. *J. Geophys. Res.* **117**, A06227, doi:10.1029/2011JA017300, 2012.
106. Understanding Measured Water Rotational Temperatures and Column Densities in the Very Innermost Coma of Comet 73P/Schwassmann-Wachmann 3 B, N. Fougere. M.R. Combi, V.M. Tennishev, M. Rubin, B.P. Bonev, M. J. Mumma. *Icarus* **221**, 174-185, 2012.
107. Chandra ACIS-S Imaging Spectroscopy of Anomalous Faint X-ray Emission From Comet 103P/Hartley 2 During the EPOXI Encounter. C.M. Lisse, D.J. Christian, S.J. Wolk, K. Dennerl, D. Bodewits, M.R. Combi, S.T. Lepri, T.H. Zurbuchen, J.Y. Li, N. Dello-Russo, M.J.S. Belton, and M.M. Knight. *Icarus* **222**, 752-765, 2013.
108. Water Production Rate of Comet C/2009 P1 (Garradd) throughout the 2011-2012 Apparition: Evidence for an Icy Grain Halo. M.R. Combi, J.T.T. Mäkinen, J.-L. Bertaux, E. Quémerais, S. Ferron, and N. Fougere. *Icarus* **225**, 740-748, 2013.
109. Modeling the Heterogeneous Ice and Gas Coma of Comet 103P/Hartley 2. N. Fougere, M.R. Combi, M. Rubin, V. Tennishev. *Icarus* **225**, 688-702, 2013.
110. ROSINA/DFMS capabilities to measure isotopic ratios of water at comet 67P/Churyumov-Gerasimenko. M. Hässig, K. Altwegg, H. Balsiger, J.J. Berthelier, U. Calmonte, J. De Keyser, B. Fiethe, S.A. Fuselier, M. Combi, M. Rubin. *Planet. Sp. Sci.* **84**, 148-152, 2013.
111. Kinetic Modeling of Sodium in the Lunar Exosphere. V. Tennishev, M. Rubin, O.J. Tucker, M.R. Combi, M. Sarantos. *Icarus* **226**, 1538-1549, 2013.
112. Comet 1P/Halley multifluid MHD model for the GIOTTO fly-by. R. Rubin, M.R. Combi, K.S. Daldorff, T.I. Gombosi, K.C. Hansen, Y. Shou, V.M. Tennishev, G. Tóth, B. van der Holst, K. Altwegg. *Astrophys. J.* **781:86** (13pp), 2014.
113. The water production rate of Rosetta target Comet 67P/Churyumov-Gerasimenko near perihelion in 1996, 2002 and 2009 from Lyman- $\alpha$  observations with SWAN/SOHO. J.-L. Bertaux, M.R. Combi, E. Quémerais, W. Schmidt. *Planet. Space Sci.* **91**, 14-19, 2014.
114. Searches for HCl and HF in comets 103P/Hartley 2 and C/2009 P1 (Garradd) with the Herschel space observatory. D. Bockelée-Morvan, N. Biver, J. Crovisier, D.C. Lis, P. Hartogh, R. Moreno, M. de Val-Borro, G.A. Blake, S. Szutowicz, J. Boissier, J. Cernicharo, S.B. Charnley, M. Combi, M.A. Cordiner, T. de Graauw, P. Encrenaz, C. Jarchow, M. Kidger, M. Küppers, S.N. Milam, H.S.P. Müller, T.G. Phillips, and M. Rengel. *Astron. Astrophys.* **562**, A5, 2014.
115. Water production in comets C/2011 L4 (PanSTARRS) and C/2012 F6 (Lemmon) from observations with SOHO/SWAN. M.R. Combi, J.-L. Bertaux, E. Quémerais, S. Ferron, J.T.T. Mäkinen, G. Apteekar. *Astron. J.* **147:126**, 2014.
116. Hot carbon corona in Mars' upper thermosphere and exosphere: 1. Mechanisms and structure of the hot corona for low solar activity at equinox. Y. Lee, M.R. Combi, V. Tennishev, S.W. Bougher. *J. Geophys. Res.: Planets* **119**, 905-924, doi:10.1002/2013JE004552, 2014.

117. Unusual water production activity of comet C/2012 S1 (ISON): Outbursts and continuous fragmentation. M.R. Combi, N. Fougere, J.T.T. Mäkinen, J.-L. Bertaux, E. Quémerais, S. Ferron. *Astrophys. J. Lett.* **788:L7** (5pp), 2014.
118. Mass transport around comets and its impact on the seasonal differences in water production rates. M. Rubin, N. Fougere, K. Altwegg, M.R. Combi, L. Le Roy, V.M. Tenishev, N. Thomas. *Astrophys. J.* **788:168** (8pp), 2014.
119. Science Enhancements by the MAVEN Participating Scientists. Science Enhancements by the MAVEN Participating Scientists. Joseph Grebowsky, Kelley Fast, Elsayd Talaat, Michael Combi, Frank Crary, Scott England, Yingjuan Ma, Michael Mendillo, Pascal Rosenblatt, Kanako Seki, Michael Stevens, Paul Withers. *Space Sci. Rev.* **195**, 319-355, DOI 10.1007/s11214-014-0080-4, 2015.
120. Plasma environment of a weak comet - predictions for comet 67P/Churyumov-Gerasimenko from multifluid-MHD and Hybrid models. Martin Rubin, Christoph Koenders, Kathrin Altwegg, Michael R. Combi, Karl-Heinz Glassmeier, Tamas I. Gombosi, Kenneth C. Hansen, Uwe Motschmann, Ingo Richter, Valeriy M. Tenishev, Gábor Tóth. *Icarus* **242**, 38-49, (doi: 10.1016/j.icarus.2014.07.021), 2014.
121. Effect of the Tiger Stripes on the water vapor distribution in Enceladus' atmosphere. Valeriy Tenishev, Doga Can Su Öztürk, Michael R. Combi, Martin Rubin, Jack Hunter Waite, Mark Perry. *J. Geophys. Res.* **119**, 2658-2667, doi: 10.1002/2014JE004700, 2014.
122. Hot carbon corona in Mars' upper therosphere and exosphere: 2. Solar cycle and seasonal variability. Yuni Lee, Michael R. Combi, Valeriy Tenishev, Stephen Bougher. *J. Geophys. Res.* **119**, 2487-2509, doi: 10.1002/2014JE004669, 2014.
123. 67P/Churyumov-Gerasimenko, a Jupiter family comet with a high D/H ratio. K. Altwegg, H. Balsiger, A. Bar-Nun, J. J. Berthelier A. Bieler, P. Bochsler, C. Briois, U. Calmonte, M. Combi, J. De Keyser, P. Eberhardt, B. Fiethe, S. Fuselier, S. Gasc, T. I. Gombosi, K.C. Hansen, M. Hässig, A. Jäckel, E. Kopp, A. Korth, L. LeRoy, U. Mall, B. Marty, O. Mousis ,E. Neefs, T. Owen, H. Rème, M. Rubin, T. Sémon, C.-Y. Tzou, H. Waite, P. Wurz. *Science*, **347**, doi 10.1126/science.1261952, 2015.
124. The organic-rich surface of comet 67P/Churyumov-Gerasimenko as seen by VIRTIS/Rosetta. F. Capaccioni, A. Coradini, G. Filacchione, S. Erard, G. Arnold, P. Drossart, M. C. De Sanctis, D. Bockelee-Morvan, M. T. Capria, F. Tosi, C. Leyrat, B. Schmitt, E. Quirico, P. Cerroni, V. Mennella, A. Raponi, M. Ciarniello, T. McCord, L. Moroz, E. Palomba, E. Ammannito, M. A. Barucci, G. Bellucci, J. Benkhoff, J. P. Bibring, A. Blanco, M. Blecka, R. Carlson, U. Carsenty, L. Colangeli, M. Combes, M. Combi, J. Crovisier, T. Encrenaz, C. Federico, U. Fink, S. Fonti, W. H. Ip, P. Irwin, R. Jaumann,, E. Kührt, Y. Langevin, G. Magni, S. Mottola, V. Orofino, P. Palumbo, G. Piccioni, U. Schade, F. Taylor, D. Tiphene, G. P. Tozzi, P. Beck, N. Biver, L. Bonal, J.-Ph. Combe, D. Despan, E. Flamini, S. Fornasier, A. Frigeri, D. Grassi, M. Gudipati,, A. Longobardo, K. Markus, F. Merlin, R. Orosei, G. Rinaldi, K. Stephan, M. Cartacci, A. Cicchetti, S. Giuppi, Y. Hello, F. Henry, S. Jacquiod, R. Noschese, G. Peter, R. Politi, J. M. Reess, A. Semery. *Science*, **347**, doi 10.1126/science.aaa0628, 2015.
125. Time variability and heterogeneity in the coma of 67P/Churyumov-Gerasimenko. M. Hässig, K. Altwegg, H. Balsiger, A. Bar-Nun, J. J. Berthelier, A. Bieler, P. Bochsler, C. Briois, U. Calmonte, M. Combi, J. De Keyser, P. Eberhardt, B. Fiethe, S. A. Fuselier, M. Galand, S. Gasc, T. I. Gombosi, K. C. Hansen, A. Jäckel, H. U. Keller, E. Kopp, A. Korth, E. Kührt, L. Le Roy, U. Mall, B. Marty, O. Mousis, E. Neefs, T. Owen, H. Rème, M. Rubin, T. Sémon, C. Tornow, C.-Y. Tzou, J. H. Waite, P. Wurz. *Science*, **347**, doi 10.1126/science.aaa0276, 2015.
126. Molecular nitrogen in comet 67P/Churyumov-Gerasimenko indicates a low formation temperature. M. Rubin, K. Altwegg, H. Balsiger, A. Bar-Nun, J.-J. Berthelier, A. Bieler, P. Bochsler, C. Briois, U. Calmonte, M. Combi, J. De Keyser, F. Dhooghe, P. Eberhardt,† B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, M. Hässig, A. Jäckel, E. Kopp, A. Korth, L. Le Roy, U. Mall, B. Marty, O. Mousis, T. Owen, H.

- Rème, T. Sémon, C.-Y. Tzou, J. H. Waite, P. Wurz. *Science*, **348**, 232-235, 10.1126/science.aaa6100, 2015.
127. Self-consistent multifluid MHD simulations of Europa's exospheric interaction with Jupiter's magnetosphere. M. Rubin, X. Jia, K. Altwegg, M. Combi, L. K. S. Daldorff, T. I. Gombosi, K. Khurana, M. G. Kivelson, V. M. Tennishev, G. Tóth, B. van der Holst, and P. Wurz. *J. Geophys. Res.* **120**, 3503-3524, doi:10.1002/2015JA021149, 2015.
  128. 2D models of gas flow and ice grain acceleration in Enceladus' vents using DSMC methods. Orenthal J. Tucker, Michael R. Combi, Valeriy M. Tennishev. *Icarus* **257**, 362-376, 2015.
  129. The plasma environment in comets over a wide range of heliocentric distances: Application to comet C/2006 P1 (McNaught). Y. Shou, M. Combi, Y.-D. Jia, T. Gombosi, G. Toth, M. Rubin. *Astrophys. J.* **809**:156, 2015.
  130. Detection of argon in the coma of comet 67P/Churyumov-Gerasimenko, H. Balsiger, Altwegg, A. Bar-Nun, J.-J. Berthelier, A. Bieler, P. Bochslers, C. Briois, U. Calmonte, M. Combi, J. De Keyser, F. Dhooghe, P. Eberhardt,† B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, M. Hässig, A. Jäckel, E. Kopp, A. Korth, L. Le Roy, U. Mall, B. Marty, O. Mousis, T. Owen, H. Rème, M. Rubin, T. Sémon, C.-Y. Tzou, J. H. Waite, P. Wurz. *Science Advances*, 2015, 1:doi: 10.1126/sciadv.15003772015.
  131. Characterizing atmospheric escape from Mars today and through time. R.J. Lillis, D. A. Brain, S.W. Bougher, F. Leblanc, J.G. Luhmann, B.M. Jakosky, R. Modolo, J. Fox, J. Deighan, X. Fang, Y.C. Wang, Y. Lee, C. Dong, Y. Ma, T. Cravens, L. Andersson, S.M. Curry, N. Schneider, M. Combi, I., Stewart, J. Clarke, J. Grebowsky, D.L. Mitchell, R. Yelle, A.F. Nagy, D. Baker, R.P. Lin. *Space Sci. Rev.* **195**, 357-422, DOI 10.1007/s11214-015-0165-82015, 2015.
  132. Comparison of 3D kinetic and hydrodynamic models to ROSINA-COPS measurements of the neutral coma of 67P/Churyumov-Gerasimenko. A. Bieler, K. Altwegg, H. Balsiger, J.-J. Berthelier, U. Calmonte, M. Combi, J. De Keyser, B. Fiethe, N. Fougere, S. Fuselier, S. Gasc, T. Gombosi, K. Hansen, M. Hässig, Z. Huang, A. Jäckel, X. Jia, L. Le Roy, U. Mall, H. Rème, M. Rubin, V. Tennishev, G. Tóth, C.-Y. Tzou, P. Wurz. *Astron. Astrophys.* **583**, A7, 2015, DOI: 10.1051/0004-6361/201526178
  133. ROSINA/DFMS and IES observations at 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. S. A. Fuselier, K. Altwegg, H. Balsiger, J. J. Berthelier, A. Bieler, C. Briois, T. W. Broiles, J. L. Burch, U. Calmonte, G. Cessateur, M. Combi, J. De Keyser, B. Fiethe, M. Galand, S. Gasc, T. I. Gombosi, H. Gunell, K. C. Hansen, M. Hässig, A. Jäckel, A. Korth, L. Le Roy, U. Mall, K. E. Mandt, S. M. Petrinec, S. Raghuram, H. Rème, M. Rinaldi, M. Rubin, T. Sémon, K. J. Trattner, C.-Y. Tzou, E. Vigren, J. H. Waite, and P. Wurz. *Astron. Astrophys.* **583**, A2, 2015, DOI: 10.1051/0004-6361/201526210
  134. The diurnal cycle of water ice on cometary nuclei. M.C. De Sanctis, F. Capaccioni, M. Ciarniello, G. Filacchione, M. Formisano, S. Mottola, A. Raponi, F. Tosi, D. Bockelée-Morvan, S. Erard, C. Leyrat, B. Schmitt, E. Ammannito, G. Arnold, M.A. Barucci, M. Combi, M.T. Capria, P. Cerroni, W.-H. Ip, E. Kührt, T. B. McCord, E. Palomba, P. Beck, E. Quirico and VIRTIS team. *Nature LETTER*, doi:10.1038/nature14869, 2015.
  135. First observations of H<sub>2</sub>O and CO<sub>2</sub> vapor in comet 67P/Churyumov-Gerasimenko made by VIRTIS onboard Rosetta. D. Bockelée-Morvan, V. Debout, S. Erard, C. Leyrat, F. Capaccioni, G. Filacchione, N. Fougere, P. Drossart, G. Arnold, M. Combi, B. Schmitt, J. Crovisier, M.-C. de Sanctis, T. Encrenaz, E. Kührt, E. Palomba, F. W. Taylor, F. Tosi, G. Piccioni, U. Fink, G. Tozzi, A. Barucci, N. Biver, M.-T. Capria, M. Combes, W. Ip, M. Blecka, F. Henry, S. Jacquino, J.-M. Reess, A. Semery, and D. Tiphene. *Astron. Astrophys.* **583**, A6, 2015, DOI: 10.1051/0004-6361/201526303.
  136. Inventory of the volatiles on comet 67P/Churyumov-Gerasimenko from Rosetta/ROSINA. Léna Le Roy, Kathrin Altwegg, Hans Balsiger, Jean-Jacques Berthelier, Andre Bieler, Christelle Briois, Ursina Calmonte, Michael R. Combi, Johan De Keyser, Frederik Dhooghe, Björn Fiethe, Stephen A. Fuselier, Sébastien Gasc, Tamas I. Gombosi, Myrtha

DR. MICHAEL R. COMBI

- Hässig, Annette Jäckel, Martin Rubin, and Chia-Yu Tzou. *Astron. Astrophys.* **583**, A1, 2015, DOI: 10.1051/0004-6361/201526450.
137. Abundant molecular oxygen in the coma of comet 67P/Churyumov-Gerasimenko. A. Bieler, K. Altwegg, H. Balsiger, A. Bar-Nun, J.-J. Berthelier, P. Bochslers, C. Briouis, U. Calmonte, M. Combi, J. De Keyser, E. F. van Dishoeck, B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, M. Hässig, A. Jäckel, E. Kopp, A. Korth, L. LeRoy, U. Mall, R. Maggiolo, B. Marty, O. Mousis, T. Owen, H. Réme, M. Rubin, T. Sémon, C.-Y. Tzou, J. H. Waite, C. Walsh & P. Würz. *Nature Letter* doi:10.1038/nature15707, 2015.
138. Solar wind interaction with the Martian upper atmosphere: Crustal field orientation, solar cycle, and seasonal variations. Chuanfei Dong, Stephen W. Bougher, Yingjuan Ma, Gabor Toth, Yuni Lee, Andrew F. Nagy, Valeriy Tenishev, Dave J. Pawlowski, Michael R. Combi, and Dalal Najib. *J. Geophys. Res. Space Physics*, **120**, 7857–7872, doi:10.1002/2015JA020990
139. A Comparison of 3D Model Predictions of Mars' Oxygen Corona with Early MAVEN IUVS Observations. Yuni Lee, Michael R. Combi, Valeriy Tenishev, Stephen W. Bougher, Justin Deighan, Nicholas M. Schneider, William E. McClintock, and Bruce M. Jakosky. *Geophys. Res. Lett.* **42**, 9105-9022, 10.1002/2015GL065291, 2015.
140. Ultraviolet Observations of the Hydrogen Coma of Comet C/2013 A1 (Siding Spring) by MAVEN/IUVS. Matteo M. J. Crismani, Nicholas M. Schneider, Justin I. Deighan, A. Ian Steward, Michael Combi, Michael S. Chan, Nicolas Fougere, Sonal K. Jain, Arnaud Stiepen, Roger V. Yelle, William E. McClintock, John T. Clarke, Gregory, M. Holsclaw, Frank Montmessin, Bruce M. Jakosky. *Geophys. Res. Lett.* **42**, 9903-8809, 10.1002/2015GL065290, 2015.
141. A comet engulfs Mars: MAVEN observations of comet Siding Spring's influence on the Martian magnetosphere. Jared R. Espley, Gina A. DiBraccio, John E. P. Connerney, David Brain, Jacob Gruesbeck, Yasir Soobiah, Jasper Halekas, Michael Combi, Janet Luhmann, Yingjuan Ma, Yingdong Jia, and Bruce Jakosky, *Geophys. Res. Lett.* **42**, 8810-8818, 10.1002/2015GL066300, 2015.
142. MAVEN Observations of the Response of Mars to an Interplanetary Coronal Mass Ejection. B. Jakosky, J. Grebowsky, J. Luhmann, J. Connerney, F. Eparvier, R. Ergun, J. Halekas, D. Larson, P. Mahaffy, J. McFadden, D. F. Mitchell, N. Schneider, R. Zurek, S. Bougher, D. Brain, Y. Ma, C. Mazelle, L. Andersson, D. Andrews, D. Baird, D. Baker, J.M. Bell, M. Benna, M. Chaffin, P. Chamberlin, Y.-Y. Chaufray, J. Clarke, G. Collinson, M. Combi, F. Crary, T. Cravens, M. Crismani, S. Curry, D. Curtis, J. Deighan, G. Delory, R. Dewey, G. DiBraccio, C. Dong, Y. Dong, P. Dunn, M. Elrod, S. England, A. Eriksson, J. Espley, S. Evans, X. Fang, M. Fillingim, K. Fortier, C. Fowler, J. Fox, H. Groeller, S. Guzewich, T. Hara, Y. Harada, G. Holsclaw, S. K. Jain, R. Jolitz, F. Leblanc, C.O. Lee, Y. Lee, F. Lefevre, R. Lillis, R. Livi, D. Lo, M. Mayyasi, W. McClintock, T. McEnulty, R. Modolo, F. Montmessin, M. Morooka, A. Nagy, K. Olsen, W. Peterson, A. Rahmati, S. Ruhnusiri, C. Russell, S. Sakai, J.-A. Sauvaud, K. Seki, M. Steckiewicz, M. Stevens, A.I.F. Stewart, A. Stiepen, S. Stone, V. Tenishev, E. Thiemann, R. Tolson, D. Toubanc, M. Vogt, T. Weber, P. Withers, T. Woods, and R. Yelle. *Science*, vol **350** issue 6261 (aad0210-2), 2015.
143. Early MAVEN Deep Dip Campaign Reveals Thermosphere and Ionosphere Variability. S. Bougher, B. Jakosky, J. Halekas, J. Grebowsky, J. Luhmann, P. Mahaffy, J. Connerney, F. Eparvier, R. Ergun, D. Larson, J. McFadden, D. Mitchell, N. Schneider, R. Zurek, C. Mazelle, L. Andersson, D. Andrews, D. Baird, D. Baker, J.M. Bell, M. Benna, D. Brain, M. Chaffin, P. Chamberlin, Y.-Y. Chaufray, J. Clarke, G. Collinson, M. Combi, F. Crary, T. Cravens, M. Crismani, S. Curry, D. Curtis, J. Deighan, G. Delory, R. Dewey, G. DiBraccio, C. Dong, Y. Dong, P. Dunn, M. Elrod, S. England, A. Eriksson, J. Espley, S. Evans, X. Fang, M. Fillingim, K. Fortier, C. M. Fowler, J. Fox, H. Gröller, S. Guzewich, T. Hara, Y. Harada, G. Holsclaw, S. Jain, R. Jolitz, F. Leblanc, C.O. Lee, Y. Lee, F. Lefevre, R. Lillis, R. Livi, D. Lo, Y. Ma, M. Matta, W. McClintock, T. McEnulty, R.

- Modolo, F. Montmessin, M. Morooka, A. Nagy, K. Olsen, W. Peterson, A. Rahmati, S. Ruhunusiri, C. T. Russell, S. Sakai, J.-A. Sauvaud, K. Seki, M. Steckiewicz, M. Stevens, A.I.F. Stewart, A. Stiepen, S. Stone, V. Tenishev, E. Thiemann, R. Tolson, D. Toubanc, M. Vogt, T. Weber, P. Withers, T. Woods, and R. Yelle. *Science*, vol **350** issue 6261 (aad0459-2), 2015.
144. Hot Oxygen Corona at Mars and the Photochemical Escape of Oxygen - Improved Description of the Thermosphere, Ionosphere and Exosphere. Yuni Lee, Michael R. Combi, Valeriy Tenishev, Stephen W. Bougher, and Robert J. Lillis. *J. Geophys. Res.* **120**, 1880-1892, 2015.
145. In situ plasma measurements of fragmented comet 73P Schwassmann-Wachmann 3, J.A. Gilbert, S.T. Lepri, M. Rubin, M. Combi, T.H. Zurbuchen. *Astrophys. J.* **815:12** (10pp), 2015.
146. Exposed water ice in bright albedo patches in the Imhotep region of comet 67P/CG. G. Filacchione, M. C. De Sanctis, F. Capaccioni, A. Raponi, F. Tosi, M. Ciarniello, P. Cerroni, G. Piccioni, M. T. Capria, E. Palomba, G. Bellucci, S. Erard, D. Bockelee-Morvan, C. Leyrat, G. Arnold, M. A. Barucci, M. Fulchignoni, B. Schmitt, E. Quirico, R. Jaumann, K. Stephan, A. Longobardo, V. Mennella, A. Migliorini, E. Ammannito, J. Benkhoff, J. P. Bibring, A. Blanco, M. Blecka, R. Carlson, U. Carsenty, L. Colangeli, M. Combes, M. Combi, J. Crovisier, P. Drossart, T. Encrenaz, C. Federico, U. Fink, S. Fonti, W. H. Ip, P. Irwin, E. Kuehrt, Y. Langevin, G. Magni, T. McCord, L. Moroz, S. Mottola, V. Orfino, P. Palumbo, U. Schade, F. Taylor, D. Tiphene, G. P. Tozzi, P. Beck, N. Biver, L. Bonal, J-Ph. Combe, D. Despan, E. Flamini, S. Fornasier, A. Frigeri, D. Grassi, M. Gudipati, F. Mancarella, K. Markus, F. Merlin, R. Orosei, G. Rinaldi, M. Cartacci, A. Cicchetti, S. Giuppi, Y. Hello, F. Henry, S. Jacquiod, J. M. Reess, R. Noschese, R. Politi, G. Peter. *Nature* **529**, 368-372 2016.
147. Chandra Observations of Comets C/2012 S1 (ISON) and C/2011 L4 (PanSTARRS). B. Snios, V. Kharchencko, C.B. Lisse, S.J., Wolk, K. Dennerl, M. R. Combi. *Astrophys. J.* **818:199**, 2016.
148. Photochemistry of forbidden oxygen lines in the inner coma of 67P/Churyumov-Gerasimenko. G. Cessateur, J. De Keyser, R. Maggiolo, A. Gibbons, G. Gronoff, H. Gunell, F. Dhooghe, J. Loreau, N. Vaeck, K. Altwegg, A. Bieler, C. Briois, U. Calmonte, M. R. Combi, B. Fiethe, S. A. Fuselier, T. I. Gombosi, M. Hässig, L. Le Roy, E. Neefs, M. Rubin, and T. Sémon. *J. Geophys. Res.* **121**, 804-816 doi:10.1002/2015JA022013, 2016.
149. High Time Resolution in situ Investigation of Major Cometary Volatiles around 67P/C-G at 3.1-2.3 au Measured with ROSINA-RTOF. U. Mall, K. Altwegg, H. Balisiger, A. Barnun, J.-J. Berthelier, A. Bieler, P. Bochslers, C. Brois, U. Calmonte, M.R. Combi, J. DeKeyser, F. Dhooghe, B. Fiethe, S.A. Fuselier, A. Galli, P. Garnier, S. Gasc, T.I. Gombosi, K.C. Hansen, M Hässig, M. Hoang, A. Jäckel, E. Kopp, A. Korth, L. LeRoy, B. Magee, B. Marty, O. Mousis, H. Réme, M. Rubin, T. Sémon, C.-Y. Tzou, J.H. Waite, and P. Wurz. *Astrophys. J.* **819:126** (9pp), 2016.
150. 3D DSMC Modeling of the Coma of Comet 67P/Churyumov-Gerasimenko Observed by the VIRTIS and ROSINA Instruments on board of the Rosetta Spacecraft. N. Fougere, K. Altwegg, J.-J. Berthelier, A. Bieler, D. Bockelée-Morvan, U. Calmonte, F. Capaccioni, M. R. Combi, J. De Keyser, V. Debout, S. Erard, B. Fiethe, G. Filacchione, U. Fink, S. A. Fuselier, T. I. Gombosi, K. C. Hansen, M. Hässig, Z. Huang, L. Le Roy, C. Leyrat, A. Migliorini, G. Piccioni, G. Rinaldi, M. Rubin, Y. Shou, V. Tenishev, G. Toth, C.-Y. Tzou, the VIRTIS team, and the ROSINA team. *Astron. Astrophys.* **588**, **A134**, 2016.
151. Water and Carbon Dioxide Distribution in 67P/Churyumov-Gerasimenko Coma from VIRTIS-M Infrared Observations. A. Migliorini, G. Piccioni, F. Capaccioni, G. Filacchione, D. Bockelée-Morvan, S. Erard, C. Leyrat, M.R. Combi, N. Fougere, J. Crovisier, F.W. Taylor, M.C. De Sanctis, M.T. Capria, and D. Grassi, G. Rinaldi, G.P. Tozzi, U. Fink. *Astron. Astrophys.* **589**, **A45**, 2016.

152. Examining the exobase approximation: DSMC models of Titan's upper atmosphere. Orenthal J. Tucker, William Waalkes, Valeriy M. Tenishev, Robert E. Johnson, Andre Bieler, Michael R. Combi, Andrew F. Nagy. *Icarus* **272**, 290-300, 2016.
153. Prebiotic chemicals - amino acid and phosphorus - in the coma of comet 67P/Churyumov-Gerasimenko. K. Altwegg, H. Balsiger, A. Bar-Nun, J.-J. Berthelier, A. Bieler, P. Bochler, C. Briois, U. Calmonte, M. Combi, H. Cottin, J. De Keyser, F. Dhooghe, B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, M. Hässig, A. Jäckel, E. Kopp, A. Korth, L. Le Roy, U. Mall, B. Marty, O. Mousis, T. Owen, H. Rème, M. Rubin, T. Sémon, C.-Y. Tzou, J. H. Waite, P. Wurz. *Science Advances*, Vol. 2, No. 5, e1600285, 2016.
154. Investigation into the disparate origin of CO<sub>2</sub> and H<sub>2</sub>O outgassing for comet 67P. Uwe Fink, Lyn Doose, Giovanna Rinaldi, André Bieler, Fabrizio Capaccioni, Dominique Bockelée-Morvan, Gianrico Filacchione, Stephane Erard, Cedric Leyrat, Maria Blecka, Maria Teresa Capria, Michael Combi, Jacques Crovisier, Maria Cristina De Sanctis, Nicolas Fougere, Fred Taylor, Alessandra Migliorini, Giuseppe Piccione. *Icarus* **277**, 78-97, 2016.
155. Four-fluid MDH simulations of the plasma and neutral gas environment of comet 67P/Churyumov-Gerasimenko near perihelion. Zhenuang Huang, Gábor Tóth, Tamas I. Gombosi, Xianzhe Jia, Martin Rubin, Nicolas Fougere, Valeriy Tenishev, Andre Bieler, Kenneth C. Hansen, Yinsi Shou, Kathrin Altwegg. *J. Geophys. Res.* **121**, 4247-4268, 2016.
156. Direct Simulation Monte-Carlo Modeling of the Major Species in the Coma of Comet 67P/Churyumov-Gerasimenko. Nicolas Fougere, K. Altwegg, J.-J. Berthelier, A. Bieler, D. Bockelée-Morvan, U. Calmonte, F. Capaccioni, M. R. Combi, J. De Keyser, V. Debout, S. Erard, B. Fiethe, G. Filacchione, U. Fink, S. A. Fuselier, T. I. Gombosi, K. C. Hansen, M. Hässig, Z. Huang, L. Le Roy, C. Leyrat, A. Migliorini, G. Piccioni, G. Rinaldi, M. Rubin, Y. Shou, V. Tenishev, G. Toth, C.-Y. Tzou, the VIRTIS and the ROSINA teams. *Monthly Notices of the Royal Astronomical Society*, **462**, S156-S169, 2016.
157. Evolution of water production of 67P/Churyumov-Gerasimenko: An empirical model and a multi-instrument study. Kenneth C. Hansen, K. Altwegg, J.-J. Berthelier, A. Bieler, N. Biver, D. Bockelée-Morvan, U. Calmonte, F. Capaccioni, M. R. Combi, J. De Keyser, B. Fiethe, N. Fougere, S. A. Fuselier, S. Gasc, T. I. Gombosi, Z. Huang, L. Le Roy, S. Lee, H. Nilsson, M. Rubin, Y. Shou, C. Snodgrass, V. Tenishev, G. Toth, C.-Y. Tzou, C. Simon Wedlund, the ROSINA team. *Monthly Notices of the Royal Astronomical Society*, **462**, S491-S506, 2016.
158. Evolution of CO<sub>2</sub>, CH<sub>4</sub>, and OCS abundances relative to H<sub>2</sub>O in the coma of comet 67P around perihelion from Rosetta/VIRTIS-H observations. Dominique Bockelée-Morvan, J. Crovisier, S. Erard, F. Capaccioni, C. Leyrat, G. Filacchione, P. Drossart, T. Encrenaz, N. Biver, M.-C. de Sanctis, B. Schmitt, E. Kührt, M.-T. Capria, M. Combes, M. Combi, N. Fougere, G. Arnold, U. Fink, W. Ip, A. Migliorini, G. Piccioni, G. Tozzi. *Monthly Notices of the Royal Astronomical Society*, **462**, S170-S183, 2016.
159. A New 3D Multi-Fluid Model: A Study Of Kinetic Effects And Variations Of Physical Conditions In The Cometary Coma. Y. Shou, M. Combi, G. Toth, V. Tenishev, N. Fougere, X. Jia, M. Rubin, Z. Huang, K. Hansen, T. Gombosi, and A. Biele. *Astrophys. J.* **833:160** (13pp), 2016.
160. Analysis of the dust jet imaged by Rosetta VIRTIS-M in the coma of comet 67P/Churyumov-Gerasimenko on April 12, 2015. V. Tenishev, N. Fougere, D. Borovikov, M. R. Combi, A. Bieler, K. C. Hansen, T. I. Gombosi, A. Migliorini, F. Capaccioni, G. Rinaldi, G. Filacchione, L. Kolokolova, and U. Fink. *Monthly Notices of the Royal Astronomical Society*, **462**, S370-S375, 2016.
161. Ion chemistry in the coma of comet 67P near perihelion. S. A. Fuselier, K. Altwegg, H. Balsiger, J. J. Berthelier, A. Beth, A. Bieler, C. Briois, T. W. Broiles, J. L. Burch, U. Calmonte, G. Cessateur, M. Combi, J. De Keyser, B. Fiethe, M. Galand, S. Gasc, T. I.



- Gombosi, H. Gunell, K. C. Hansen, M. Hässig, K. L. Heritier, A. Korth, L. Le Roy, A. Luspay-Kuti, U. Mall, K. E. Mandt, S. M. Petriner, H. Rème, M. Rinaldi, M. Rubin, T. Sémon, K. J. Trattner, C.-Y. Tzou, E. Vigren, J. H. Waite, and P. Wurz. *Monthly Notices of the Royal Astronomical Society*, **462**, S167-S77, 2016.
162. Seasonal exposure of carbon dioxide ice on the nucleus of comet 67P/Churyumov-Gerasimenko. Filacchione, G., Raponi, A., Capaccioni, F., Ciarniello, M., Tosi, F., Capria, M. T., De Sanctis, M. C., Migliorini, A., Piccioni, G., Cerroni, P., Barucci, M. A., Fornasier, S., Schmitt, B., Quirico, E., Erard, S., Bockelee-Morvan, D., Leyrat, C., Arnold, G., Mennella, V., Ammannito, E., Bellucci, G., Benkhoff, J., Bibring, J. P., Blanco, A., Blecka, M. I., Carlson, R., Carsenty, U., Colangeli, L., Combes, M., Combi, M., Crovisier, J., Drossart, P., Encrenaz, T., Federico, C., Fink, U., Fonti, S., Fulchignoni, M., Ip, W.-H., Irwin, P., Jaumann, R., Kuehrt, E., Langevin, Y., Magni, G., McCord, T., Moroz, L., Mottola, S., Palomba, E., Schade, U., Stephan, K., Taylor, F., Tiphene, D., Tozzi, G. P., Beck, P., Biver, N., Bonal, L., Combe, J.-Ph., Despan, D., Flamini, E., Formisano, M., Frigeri, A., Grassi, D., Gudipati, M. S., Kappel, D., Longobardo, A., Mancarella, F., Markus, K., Merlin, F., Orosei, R., Rinaldi, G., Cartacci, M., Cicchetti, A., Hello, Y., Henry, F., Jacquino, S., Reess, J. M., Noschese, R., Politi, R., Peter, G. *Science*, **354**, 1563-1566, 2016.
163. Properties of the dust in the coma of 67P/Churyumov-Gerasimenko observed with VIRTIS-M. G. Rinaldi, U. Fink, L. Dose, G.P. Tozzi, F. Capaccioni, G. Filacchione, D. Bockelee-Morvan, C. Leyrat, G. Piccioni, S. Erard, A. Bieler, M. Błęcka, M. Ciarniello, M. Combi, N. Fougere, A. Migliorini, E. Palomba, A. Raponi, and F. Taylor. *Monthly Notices of the Royal Astronomical Society*, **462**, S547-S561, 2016.
164. A possible mechanism for the formation of magnetic field dropouts in the coma of 67P/Churyumov-Gerasimenko. Z. Huang, G. Tóth, T. I. Gombosi, A. Bieler, M. R. Combi, K. C. Hansen, X. Jia, N. Fougere, Y. Shou, T. E. Cravens, V. Tenishev, K. Altwegg, and M. Rubin. *Monthly Notices of the Royal Astronomical Society*, **462**, S468-S475, 2016.
165. First in-situ detection of the cometary ammonium ion  $\text{NH}_4^+$  (protonated ammonia  $\text{NH}_3$ ) in the coma of 67P/C-G near perihelion. Beth, A., Altwegg, K., Balsiger, H., Berthelier, J.-J., Calmonte, U., Combi, M. R., De Keyser, J., Dhooghe, F., Fiethe, B., Fuselier, S. A., Galand, M., Gasc, S., Gombosi, T. I., Hansen, K. C., Hässig, M., Héritier, K. L., Kopp, E., Le Roy, L., Mandt, K. E., Peroy, S., Rubin, M., Sémon, T., Tzou, C.-Y., Vigren, E. *Monthly Notices of the Royal Astronomical Society*, **462**, S562-S572, 2016.
166. Imaging observations of the hydrogen coma of comet 67P/Chuyumov-Gerasimenko in 2015 September by the PROCYON/CAICA. Shinnaka, Yoshiharu, Fougere, Nicolas, Kawakita, Hideyo, Kameda, Shingo, Combi, Michael R., Ikezawa, Shota, Seki, Ayana, Kuwabara, Masaki, Sato, Masaki, Taguchi, Makoto, Yoshikawa, Ichiro. *Astron. J.* **153**, 76S, 6pp, 2017.
167. Hot oxygen escape from Mars: Simple scaling with solar EUV Irradiance. T. E. Cravens, A. Rahmati, Jane L. Fox, R. Lillis, S. Bougher, J. Luhmann, S. Sakai, J. Deighan, Yuni Lee, M. Combi, B. Jakosky. *J. Geophys. Res.* **122**, 1102-1116, 2017.
168. Photochemical Escape of Oxygen from Mars: first results from MAVEN in situ data. Robert J. Lillis, Justin Deighan, Jane Fox, Stephen W. Bougher, Yuni Lee, Michael R. Combi, Thomas E. Cravens, Ali Rahmati, Paul Mahaffy, Mehdi Benna, Meredith K. Elrod, James P. McFadden, Robert. E. Ergun, Laila Andersson, Christopher M. Fowler, Bruce M. Jakosky, Ed Thiemann, Frank Eparvier, Jasper Halekas, François Leblanc, Jean-Yves Chaufray *J. Geophys. Res.* **122**, 3815-3836, 2017.
169. The heterogeneous coma of comet 67P/Churyumov-Gerasimenko as seen by ROSINA:  $\text{H}_2\text{O}$ ,  $\text{CO}_2$ , and  $\text{CO}$  from September 2014 to February 2016. Hoang, M., Altwegg, K., Balsiger, H., Beth, A., Bieler, A., Calmonte, U., Combi, M. R., De Keyser, J., Fiethe, B., Fougere, N., Fuselier, S. A., Galli, A., Garnier, P., Gasc, S., Gombosi, T., Hansen, K. C., Jäckel, A., Korth, A., Lasue, J., Le Roy, L., Mall, U., Rème, H., Rubin, M., Sémon, T.,

DR. MICHAEL R. COMBI

- Toublanc, D., Tzou, C.-Y., Waite, J. H., Wurz, P. *Astron. Astrophys.* **600**, A77, 13pp, 2017.
170. Evidence for depletion of heavy silicon isotopes at comet 67P/Churyumov-Gerasimenko. M. Rubin, K. Altwegg, H. Balsiger, J.-J. Berthelier, A. Bieler, U. Calmonte, M. Combi, J. De Keyser, C. Engrand, B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, M. Hässig, L. Le Roy, K. Mezger, C.-Y. Tzou, S. F. Wampfler, and P. Wurz. *Astron. Astrophys.*, **601**, A123, 2017, DOI: 10.1051/0004-6361/201730584, 2017.
171. Xenon isotopes in 67P/Churyumov-Gerasimenko show that comets contributed to Earth's atmosphere. Marty, B., Altwegg, K., Balsiger, H., Bar-Nun, A., Bekaert, D. V., Berthelier, J.-J., Bieler, A., Briois, C., Calmonte, U., Combi, M., De Keyser, J., Fiethe, B., Fuselier, S. A., Gasc, S., Gombosi, T. I., Hansen, K. C., Hässig, M., Jäckel, A., Kopp, E., Korth, A., Le Roy, L., Mall, U., Mousis, O., Owen, T., Rème, H., Rubin, M., Sémon, T., Tzou, C.-Y., Waite, J. H., Wurz, P. *Science*, **356**, 1069-1072, 2017.
172. Ion composition at comet 67P near perihelion: Rosetta observations and model-based interpretation. Heritier, K. L., Altwegg, K., Balsiger, H., Berthelier, J.-J., Beth, A., Bieler, A., Biver, N., Calmonte, U., Combi, M. R., De Keyser, J., Eriksson, A. I., Fiethe, B., Fougere, N., Fuselier, S. A., Galand, M., Gasc, S., Gombosi, T. I., Hansen, K. C., Hassig, M., Kopp, E., Odelstad, E., Rubin, M., Tzou, C.-Y., Vigren, E., Vuitton, V. *Monthly Notices of the Royal Astronomical Society*, **469**, S427-S442, 2017.
173. Halogens as tracers of protosolar nebula material in comet 67P/Churyumov-Gerasimenko. Dhooghe, Frederik, De Keyser, Johan, Altwegg, Kathrin, Briois, Christelle, Balsiger, Hans, Berthelier, Jean-Jacques, Calmonte, Ursina, Cessateur, Gaël, Combi, Michael R., Equeter, Eddy, Fiethe, Björn, Fray, Nicolas, Fuselier, Stephen, Gasc, Sébastien, Gibbons, Andrew, Gombosi, Tamas, Gunell, Herbert, Hässig, Myrtha, Hilchenbach, Martin, Le Roy, Léna, Maggilo, Romain, Mall, Urs, Marty, Bernard, Neefs, Eddy, Rème, Henri, Rubin, Martin, Sémon, Thierry, Tzou, Chia-Yu, Wurz, Peter. *Monthly Notices of the Royal Astronomical Society*, **472**, 1336-1345, 2017.
174. Evidence for distributed gas sources of hydrogen halides in the coma of comet 67P/Churyumov-Gerasimenko. Johan De Keyser, Frederik Dhooghe, Kathrin Altwegg, Hans Balsiger, Jean-Jacques Berthelier, Christelle Briois, Ursina Calmonte, Gaël Cessateur, Michael R. Combi, Eddy Equeter, Björn Fiethe, Stephen Fuselier, Sébastien Gasc, Andrew Gibbons, Tamas Gombosi, Herbert Gunell, Myrtha Hässig, Léna Le Roy, Romain Maggilo, Urs Mall, Bernard Marty, Eddy Neefs, Henri Rème, Martin Rubin, Thierry Sémon, Chia-Yu Tzou, Peter Wurz. *Monthly Notices of the Royal Astronomical Society* **469**, S695-S711, <https://doi.org/10.1093/mnras/stx2725>, 2017.
175. The Main Belt Comets and ice in the Solar System. Colin Snodgrass, Jessica Agarwal, Michael Combi, Alan Fitzsimmons, Aurelie Guilbert-Lepoutre, Henry H. Hsieh, Man-To Hui, Emmanuel Jehin, Michael S. P. Kelley, Matthew M. Knight, Cyrielle Opitom, Roberto Oroseil, Miguel de Val-Borro, Bin Yang. *Astron Astrophys. Rev.* **25:5**, 2017.
176. A new 3D multi-fluid dust model: a study of the effects of activity and nucleus rotation on dust grain behavior at comet 67P/Churyumov-Gerasimenko. Shou, Y., Combi, M. Tennishev, V. Fougere, N. Jia, X., Rubin, M., Huang, Z., Hansen, K., Gombosi, T. *Astrophys. J.* **850**:72 (14pp), 2017.
177. Water production activity of nine long-period comets from SOHO/SWAN observations of hydrogen Lyman-alpha: 2013-2016. Combi, M. R., Mäkinen, T. T., Bertaux, J.-L., Quémerais, E., Ferron, S., Avery, M., Wright, C. *Icarus* **300**, 33-46, 2018.
178. Hall effect in the coma of 67P/Churyumov-Gerasimenko. Huang, Z., G. Tóth, T.I. Gombosi, X. Jia, M.R. Combi, K.C. Hansen, N. Fougere, Y. Shou, V. Tennishev, K. Altwegg, M. Rubin. *Monthly Notices of the Royal Astronomical Society* **475**, 2835-2841, 2018.
179. Far-ultraviolet Spectroscopy of Recent Comets with the Cosmic Origins Spectrograph on the Hubble Space Telescope. Feldman, Paul D., Weaver, Harold A., A'Hearn, Michael F., Combi, Michael R., Dello Russo, Neil. *Astron. J.* **155**:193, (8pp), 2018.

180. Krypton Isotopes and Noble Gas Abundances in the Coma of Comet 67P/Churyumov-Gerasimenko. M. Rubin K. Altwegg, H. Balsiger, A. Bar-Nun<sup>3</sup>, J.-J. Berthelier, C. Briois, U. Calmonte, M. Combi, J. De Keyser, B. Fiethe, S. A. Fuselier, S. Gasc, T. I. Gombosi, K. C. Hansen, E. Kopp, A. Korth, D. Laufer, L. Le Roy, U. Mall, B. Marty, O. Mousis, T. Owen, H. Rème, T. Sémon, C.-Y. Tzou, J. H. Waite, P. Wurz. *Science Advances* 4:eaar6297 (10 pp.), 2018.
181. Effects of a Solar Flare on the Martian Hot O Corona and Photochemical Escape. Yuni Lee, Chuanfei Dong, Dave Pawlowski, Edward Thiemann, Valeriy Tenishev, Paul Mahaffy, Mehdi Benna, Michael Combi, Stephen Bougher, and Frank Eparvier. *Geophys. Res. Lett.* **45**, 6814–6822, doi: 10.1029/2018GL077732, 2018.
182. Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. B.M. Jakosky, D. Brain, M. Chaffin, S. Curry, J. Deighan, J. Grebowsky, J. Halekas, F. Leblanc, R. Lillis, J.G. Luhmann, L. Andersson, N. Andre, D. Andrews, D. Baird, D. Baker, J. Bell, M. Benna, D. Bhattacharyya, S. Bougher, C. Bowers, P. Chamberlin, J.-Y. Chaufray, J. Clarke, G. Collinson, M. Combi, J. Connerney, K. Connour, J. Correia, K. Crabb, F. Crary, T. Cravens, M. Crismani, G. Delory, R. Dewey, G. DiBraccio, C. Dong, Y. Dong, P. Dunn, H. Egan, M. Elrod, S. England, F. Eparvier, R. Ergun, A. Eriksson, T. Esman, J. Espley, S. Evans, K. Fallows, X. Fang, M. Fillingim, C. Flynn, A. Fogle, C. Fowler, J. Fox, M. Fujimoto, P. Garnier, Z. Girazian, H. Groeller, J. Gruesbeck, O. Hamil, K.G. Hanley, T. Hara, Y. Harada, J. Hermann, M. Holmberg, G. Holsclaw, S. Houston, S. Inui, S. Jain, R. Jolitz, A. Kotova, T. Kuroda, D. Larson, Y. Lee, C. Lee, F. Lefevre, C. Lentz, D. Lo, R. Lugo, Y.-J. Ma, P. Mahaffy, M.L. Marquette, Y. Matsumoto, M. Mayyasi, C. Mazelle, W. McClintock, J. McFadden, A. Medvedev, M. Mendillo, K. Meziane, Z. Milby, D. Mitchell, R. Modolo, F. Montmessin, A. Nagy, H. Nakagawa, C. Narvaez, K. Olsen, D. Pawlowski, W. Peterson, A. Rahmati, K. Roeten, N. Romanelli, S. Ruhunusiri, C. Russell, S. Sakai, N. Schneider, K. Seki, R. Sharrar, S. Shaver, D.E. Siskind, M. Slipski, Y. Soobiah, M. Steckiewicz, M.H. Stevens, I. Stewart, A. Stiepen, S. Stone, V. Tenishev, N. Terada, K. Terada, E. Thiemann, R. Tolson, G. Toth, J. Trovato, M. Vogt, T. Weber, P. Withers, S. Xu, R. Yelle, E. Yi, R. Zurek *Icarus*, **315**, 146-157, doi: 10.1016/j.icarus.2018.05.030, 2018.
183. Solar wind interaction with the Martian upper atmosphere: Roles of the variable 3D cold thermosphere and hot oxygen corona. Chuanfei Dong, Stephen W. Bougher, Yingjuan Ma, Yuni Lee, Gabor Toth, Andrew F. Nagy, Xiaohua Fang, Janet Luhmann,<sup>7</sup> Michael W. Liemohn, Jasper S. Halekas, Valeriy Tenishev, David J. Pawlowski, Michael R. Combi. *J. Geophys. Res.* **123**, 6639–6654, doi: 10.1029/2018ja025543, 2018.
184. A Survey of Water Production in 61 Comets from SOHO/SWAN Observations of Hydrogen Lyman-alpha: Twenty-One Years 1996-2016. Combi, M. R., Mäkinen, T. T., Bertaux, J.-L., Quémerais, E., Ferron, S. *Icarus* **317**, 610-620, doi: 10.1016/j.icarus.2018.08.031, 2019.
185. Elemental and Molecular Abundances in Comet 67P/Churyumov-Gerasimenko. Rubin, Martin, Altwegg, Kathrin, Balsiger, Hans, Berthelier, Jean-Jacques, Combi, Michael R., De Keyser, Johan, Drozdovskaya, Maria, Fiethe, Björn, Fuselier, Stephen A., Gasc, Sébastien, Gombosi, Tamas I., Hänni, Nora, Hansen, Kenneth C., Mall, Urs, Rème, Henri, Schroeder, Isaac R. H. G., Schuhmann, Markus, Sémon, Thierry, Waite, Jack H., Wampfler, Susanne F., Wurz, Peter. *Monthly Notices of the Royal Astronomical Society* (in press), doi:10.1093/mnras/stz2086, 2019.
186. A comparison between the two lobes of comet 67P / Churyumov-Gerasimenko based on D/H ratios in H<sub>2</sub>O measured with the Rosetta / ROSINA DFMS. Isaac R.H.G. Schroeder I, Kathrin Altwegg, Hans Balsiger, Jean-Jacques Berthelier, Michael R. Combi, Johan De Keyser, Björn Fiethe, Stephen A. Fuselier, Tamas I. Gombosi, Kenneth C. Hansen, Martin Rubin, Yinsi Shou, Valeriy M. Tenishev, Thierry Sémon, Susanne F. Wampfler, Peter Wurz. *Monthly Notices of the Royal Astronomical Society* **489**, 4734-4740, 2019.

## DR. MICHAEL R. COMBI

187. Comet C/2017 S3 (PanSTARRS): Outbursts and Disintegration. M.R. Combi, T. Mäkinen, J.-L. Bertaux, E. Quémerais, S. Ferron, and R. Coronel. *Astrophysical Journal Letters* **884**, L39 (6pp), doi.org/10.3847/2041-8213/ab4887, 2019
188. The surface distributions of the production of the major volatile species, H<sub>2</sub>O, CO<sub>2</sub>, CO and O<sub>2</sub>, from the nucleus of comet 67P/Churyumov-Gerasimenko throughout the Rosetta Mission as measured by the ROSINA double focusing mass spectrometer. Michael Combi, Yinsi Shou, Nicolas Fougere, Valeriy Tenishev, Kathrin Altwegg, Martin Rubin, Dominique Bockelée-Morvan, Fabrizio Capaccioni, Yu-Chi Cheng, Uwe Fink, Tamas Gombosi, Kenneth C. Hansen, Zhenguang Huang, David Marshall, Gabor Toth. *Icarus* **335**, 113421, doi:10.1016/j.icarus.2019.113431, 2020.
189. Probing the evolutionary history of comet: An investigation of the hypervolatiles CO, CH<sub>4</sub>, and C<sub>2</sub>H<sub>6</sub> in Jupiter-family comet 21P/Giacobini-Zinner. N.X. Roth, E.L. Gibb, B.P. Bonev, M.A. DiSanti, N. Dello Russo, A.J. McKay, R.J. Vervack, Jr., H. Kawakita, M. Saki, N. Biver, D. Bockée-Morvan, L. M. Feaga, N. Flugere, A.L. Cochran, M. Combi, Y. Shou. *Astronomical Journal* **159**:42, 2020.
190. Evidence of ammonium salts in comet 67P as explanation for the nitrogen depletion in cometary comae. Kathrin Altwegg, Hans Balsiger, Nora Hänni, Martin Rubin, Markus Schuhmann, Isaac Schroeder, Thierry Sémo, Susanne Wampfler, Jean-Jacques Berthelier, Christelle Briois, Mike Combi, Tamas I. Gombosi, Hervé Cottin, Johan De Keyser, Frederik Dhooghe, Björn Fiethe and Steven A. Fuselier. *Nature Astronomy* doi:10.1038/s41550-019-0991-9, 2020.
191. Effects of Global and Regional Dust Storms on the Martian Hot O Corona and Photochemical Loss. Yuni Lee, Xiaohua Fang, Marko Gacesa, Yingjuan Ma, Valeriy Tenishev, Paul Mahaffy, Chuanfei Dong, Michael Combi, Stephen Boughter, Bruce Jakosky. *J. Geophys. Res.* **125**, e2019JA027115. <https://doi.org/10.1029/2019JA027115>, 2020.

### REVIEWED CONFERENCE PROCEEDINGS:

1. Development of a General Purpose 3D DSMC Flow Solver on Unstructured Meshes. V. Tenishev and M.R. Combi. AIAA Paper 2003-3776, 2003.
2. DSMC Simulation of the Cometary Coma. V.M. Tenishev, M.R. Combi. Rarefied Gas Dynamics: 23rd International Symposium. AIP Conference Proceedings, Volume 663, pp. 696-703, 2003.
3. Numerical Studies of the Solar Energetic Particle Transport and Acceleration. V. Tenishev, M. Combi, I. Sokolov, I. Roussev, T. Gombosi. AIAA-2005-4928, 2005.
4. Navigation Models of Comet Outgassing Jets. S.M. Byram, D.J. Scheeres, M.R. Combi. AIAA Paper 2006-6288, 2006.

### CONFERENCE PRESENTATIONS, REPORTS, THESES:

1. Production Rates of OI and H<sub>2</sub>O<sup>+</sup> in Comet Bennett (1970II). A.H. Delsemme and M.R. Combi. *Bull. A. A. S.* **7**, 507 (abstract), 1975.
2. The Production Rate and Possible Origin of O(<sup>1</sup>D) in Comet Bennett. A.H. Delsemme and M.R. Combi. *IAU Colloq. No. 39*, p. 18, 9.2 (abstract), 1976.
3. The Production Rate and Origin of H<sub>2</sub>O<sup>+</sup> in Comet Bennett. A.H. Delsemme and M.R. Combi. *IAU Colloq. No. 39*, p. 18, 9.7 (abstract), 1976.
4. Ionized Water and Forbidden Oxygen Emissions in Comet Bennett (1970 II), Michael R. Combi, M.S. Thesis, University of Toledo, 1976.
5. Ionic Brightness Profiles of Comet West. A.H. Delsemme and M.R. Combi. *Proc. 16th General Assembly, Trans. IAU* (Reidel, Dordrecht), vol. XVI B., 1977.
6. The Convolution of Cometary Brightness Profiles by Circular Diaphragms. M.R. Combi. *Bull. A. A. S.* **10**, 460 (abstract), 1978.

## DR. MICHAEL R. COMBI

7. The Production and Spatial Distribution of Observed Molecular Fragments in Cometary Comae, Michael R. Combi, Ph.D. Thesis, University of Toledo, 1979.
8. H and H<sup>+</sup> in Saturn's System: Understanding the Role of Titan. M.R. Combi and W.H. Smyth, Fifth Conference on the Physics of the Jovian and Saturnian Magnetospheres, MIT, Cambridge, MA, June 22, 1983.
9. Escape of Oxygen and Sulfur from Io and Their Interaction with the Magnetosphere of Jupiter. W.H. Smyth and M.R. Combi. Fifth Conference on the Physics of the Jovian and Saturnian Magnetospheres, MIT, Cambridge, MA, June 21, 1983.
10. Io's Sodium Directional Features: Direct Evidence for a Magnetospheric-Driven Gas Escape Mechanism. C.B. Pilcher, W.H. Smyth, M.R. Combi and J.H. Fertel. *Bull. A. A. S.* **14**, (abstract), 1983.
11. Io's Sodium Cloud: A Model for its Interaction with the Plasma Torus. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **14**, (abstract), 1983.
12. An Analysis of Pioneer Venus Hydrogen Lyman-alpha Observations of Comet P/Encke. M.R. Combi, A.I.F. Stewart, and W.H. Smyth. *Bull. A. A. S.* **16**, 638 (abstract), 1984.
13. Understanding the Escape of Material from Io and its Role in the Planetary Magnetosphere. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **16**, 633 (abstract), 1984.
14. Modeling the Neutral Clouds of Io. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **16**, 712 (exhibit), 1984.
15. The Distribution of Hydrogen in Saturn's Magnetosphere. D.E. Shemansky, W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **16**, 712 (exhibit), 1984.
16. Lyman-alpha Measurements of P/Giacobini-Zinner. A.I.F. Stewart, M.R. Combi and W.H. Smyth. *Bull. A. A. S.* **17**, 686 (abstract), 1985.
17. Understanding the Observed Spatial Distributions of Cometary Radicals. M.R. Combi and A.H. Delsemme. *Bull. A. A. S.* **17**, 689 (abstract), 1985.
18. Correlating East-West Asymmetries in the Jovian Magnetosphere and the Io Sodium Cloud. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **17**, 695 (abstract), 1985.
19. Escape of Io's Atmosphere and its Impact on the Plasma Torus. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **17**, 695 (exhibit), 1985.
20. Particle-Trajectory Models for the Spatial Distributions of Neutral Cometary Gases. M.R. Combi and W.H. Smyth. *Bull. A. A. S.* **17**, 724 (exhibit), 1985.
21. Understanding the Escape of Material from Io and Its Role in the Planetary Magnetosphere. W.H. Smyth and M.R. Combi. Second Neil Brice Memorial Symposium on the Magnetospheres of the Outer Planets. Iowa City, Iowa. 1986.
22. The Thermalization of Cometary Hydrogen. M.R. Combi and W.H. Smyth. Exploration of Halley's Comet, ESA SP-250, 370, (abstract), 1986.
23. CCD Images and High Resolution Spectra of Comet P/Halley, M.R. Combi and R.E. McCrosky. Exploration of Halley's Comet, ESA SP-250, 393, (abstract), 1986.
24. CCD Imaging and High Resolution Spectroscopy of Comet P/Halley. M.R. Combi and R.E. McCrosky. *Bull. A. A. S.* **18**, 825 (abstract), 1986.
25. The Role of Hydrogen Thermalization in Shaping the Lyman-alpha Coma. M.R. Combi and W.H. Smyth. Diversity and Similarity of Comets, ed. by E.J. Rolfe and B. Battrock, **ESA SP-278**, 621, 1987.
26. IR-Dust Observations of Comet Tempel 2 with CRAF VIMS. M.R. Combi, T.B. McCord, J.F. Bell, R.H. Brown, R.N. Clark, D.P. Cruikshank, T.V. Johnson, L.A. Lebofsky, and D.L. Matson. The Comet Dust Workshop, Cornell University, Ithaca, NY, August 10-12, 1987.
27. Time Variability of the Io Sodium Cloud. W.H. Smyth and M.R. Combi. International Workshop on Time-Variable Phenomena in the Jovian System, Flagstaff Arizona, August 25-27, 1987.
28. Nature of Io's Atmosphere and Its Interaction with the Planetary Magnetosphere. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **19**, 855 (abstract), 1987.

DR. MICHAEL R. COMBI

29. Self-Consistent Modeling of the Inner Coma and the Extended H Coma of Comets. M.R. Combi and W.H. Smyth. *Bull. A. A. S.* **19**, 888 (abstract), 1987.
30. IR-dust observations of Comet Tempel 2 with CRAF VIMS, Combi, M.R., T.B. McCord, J.F. Bell, R.H. Brown, R.N. Clark, D.P. Cruikshank, T.V. Johnson, L.A. Lebofsky, D. L. Matson, In NASA, Washington, Infrared Observations of Comets Halley and Wilson and Properties of the Grains p 136 (SEE N89-13330 04-89), 1988.
31. The Outflow Speed of the Coma of Comet Halley. M.R. Combi. *Bull. A. A. S.* **20**, 829 (abstract), 1988.
32. Emission Profiles for Comet P/Halley. Uwe Fink, M. DiSanti, A. Schultz and M. Combi. *Bull. A. A. S.* **20**, 828 (abstract), 1988.
33. An Analysis of the Pioneer Venus Orbiter Lyman- $\alpha$  Image of Halley's Comet. A.I.F. Stewart, M.R. Combi and W.H. Smyth. *Bull. A. A. S.* **21**, 933, (abstract), 1989.
34. High Resolution Spectra of the 6300Å Region in Comet Halley. M.R. Combi and R.E. McCrosky. *Bull. A. A. S.* **21**, 938, (abstract), 1989.
35. Spatial Profiles and Scale Lengths for P/Halley Emission Species C<sub>2</sub>, CN, NH<sub>2</sub>, and OI. U. Fink, M.R. Combi, M.A. DiSanti and A.B. Schultz. *Bull. A. A. S.* **22**, 1095, (abstract), 1990.
36. Models for the Sodium Distribution Far from Jupiter. M.R. Combi and W.H. Smyth. *Bull. A. A. S.* **22**, 1111, (abstract), 1990.
37. P/Halley: Spatial Distributions and Scale Lengths for C<sub>2</sub>, CN, NH<sub>2</sub> and H<sub>2</sub>O. Uwe Fink, Michael R. Combi and Michael A. DiSanti. In *Asteroids, Comets, Meteors 1991*. In Lunar and Planetary Inst., Asteroids, Comets, Meteors 1991 p 187-189 (SEE N93-19113 06-90) Flagstaff, Arizona, June 24-28, 1991.
38. The Appearance of the 7.4-day Periodic Variation in the Spatial Profiles of C<sub>2</sub>, CN, NH<sub>2</sub> and O(<sup>1</sup>D) in Comet Halley. In *Asteroids, Comets, Meteors 1991*. Flagstaff, Arizona, June 24-28, 1991.
39. Modeling the Observed Water Production Rate in Comets. M.R. Combi and B.J. Bos. *Bull. A. A. S.* **23**, 1161, 1991.
40. Implications of the Sodium Zenocorona. W.H. Smyth and M.R. Combi. *Bull. A. A. S.* **23**, 1230, 1991.
41. Time-Dependent Aspherical Modeling of the Spatial Profiles of Dust in Comet Halley. M.R. Combi and U.Fink. *Bull. A. A. S.* **24**, 1018, 1992.
42. The Fragmentation of Dust in the Inner Comae of Comets. M.R. Combi. *Bull. A. A. S.* **25**, 1066, 1993.
43. Time-Dependent Model Analysis of 8-Days of CN Spatial Profiles in P/Halley. B. Huang, M. Combi, A. Cochran, U. Fink and R. Schulz. *Bull. A. A. S.* **25**, 1049, 1993.
44. Sodium D Emission in Comet P/Halley (1986 III). M. DiSanti, U. Fink, M. Combi and A.B. Schultz. Presented at "Sodium Atmospheres, Exospheres, and Coronae in the Solar System. San Juan Capistrano, February 2-4, 1993.
45. Jupiter and Comet 1993e, M. Kesteven, R.M. Price, I. DePater, G.A. Dulk, Y. LeBlanc, W.M. Harris, T.A. Livengood, M. McGrath, R. Prange, G.E. Ballester, S. Budzien, M. Combi, C. Emerich, G. Fireman, D.T. Hall, K.L. Jessup, A. Talavera, M.B. Vincent, L. Woodney, IAU Circular, No. 6040, 1 (1994). Edited by Green, D. W. E. July, 1994.
46. Jupiter and Comet 1993e, Prange, R., C. Emerich, A. Talavera, W. Harris, G. Ballester, M. Combi, T. Livengood, M. McGrath, IAU Circular, No. 6041, 1 (1994). Edited by Green, D. W. E. July, 1994.
47. Ultraviolet Observations of Io with HST: WFPC2 Imaging and GHRS and FOS Spectroscopy. G.E. Ballester, J. Clarke, J. Trauger, J. Stapelfeldt, D. Crisp, the WFPC2 GTO team, J. Ajello, M. Combi, M. McGrath, N. Schneider, and D. Strobel, *Bull. A. A. S.* **26**, 1136, 1994.
48. Direct Monte Carlo Simulation for Tenuous Planetary Atmospheres: 1-D and 2-D Cometary Coma Outflow. M.R. Combi, *Bull. A. A. S.* **26**, 1127, 1994.

DR. MICHAEL R. COMBI

49. A Self-Consistent Multi-Species Kinetic Simulation of Polar Outflow from 200 km. Miller, R.H., C.R. Rasmussen, T.I. Gombosi, M.R. Combi, D. Winske. *Eos, Trans. A.G.U.* **75**, 319, 1994.
50. Io's Sodium Corona and Spatially Extended Cloud: A Consistent Flux Speed Distribution. W.H. Smyth and M.R. Combi. Presented at the Io Torus Workshop, Las Cruces, New Mexico, May, 1995.
51. Sources of Cometary C<sub>2</sub>: A Third Generation Dissociation or a CHON Grain Halo. Combi, M.R. and U. Fink. 1995. *Bull. A. A. S.* **27**, 1145, (abstract), 1995.
52. A Consistent Sodium Flux-Speed Distribution at Io's Exobase. Smyth, W.H. and M.R. Combi. *Bull. A. A. S.* **27**, 1155, (abstract), 1995.
53. A Plasmagenic Source for Observed Sodium in Comets. Combi, M.R., M.A. DiSanti, & U. Fink. Presented at Asteroids, Comets, Meteors 1996, in Versailles, France, (abstract), 1996.
54. VIRTIS Visible Infrared Thermal Imaging Spectrometer for Rosetta Mission. Coradini, A., Capaccioni, F., Capria, M.T., Cerroni, P., DeSanctis, M.C., Magni, G., Reininger, F., Drossart, P., Barucci, M.A., Bockelée-Morvan, D., Combes, M., Crovisier, J., Encrenaz, T., Tiphene, D., Arnold, G., Carsenty, U., Michaelis, H., Mottola, S., Neikem, G., Schade, U., Taylor, F., Calcutt, S., Vellacott, T., Venters, P., Watkins, R.E., Bellucci, G., Formisano, V., Angrilli, F., Bianchini, G., Saggin, B., Bussoletti, E., Colangeli, L., Mennella, V., Bibring, J.P., Langevin, Y., Schmitt, B., Combi, M., Fink, U., McCord, T., Ip, W., Carlson, R.W., Jennings, D.E. *Lunar and Planetary Science*, **27**, 253, 1996.
55. VIRTIS Visible Infrared Thermal Imaging Spectrometer for Rosetta Mission. Coradini A., Capaccioni F., Capria M.T., Cerroni P., De Sanctis M.C., Magni G., Drossart P., Barucci M.A., Bockelee-Morvan D., Combes M., Crovisier J., Encrenaz T., Tiphene D., Arnold G., Carsenty U., Michaelis H., Mottola S., Neukum G., Schade U., Taylor F., Calcutt S., Vellacott T., Venters P., Watkins R.E., Bellucci G., Formisano V., Angrilli F., Bianchini G., Saggin B., Bussoletti E., Colangeli L., Mennella V., Fonti S., Tozzi G., Bibring J.P., Langevin Y., Schmitt B., Combi M., Fink U., McCord T., Ip W., R. W. Carlson, D. E. Jennings. *Annales Geophysicae* **14 (III)**, 1996.
56. VIRTIS Visible Infrared Thermal Imaging Spectrometer for Rosetta mission. Coradini A., Capaccioni F., Capria M.T., Cerroni P., De Sanctis M.C., Magni G., Drossart P., Barucci M.A., Bockelee-Morvan D., Combes M., Crovisier J., Encrenaz T., Tiphene D., Arnold G., Carsenty U., Michaelis H., Mottola S., Neukum G., Schade U., Taylor F., Calcutt S., Vellacott T., Venters P., Watkins R.E., Bellucci G., Formisano V., Angrilli F., Bianchini G., Saggin B., Bussoletti E., Colangeli L., Mennella V., Fonti S., Tozzi G., Bibring J.P., Langevin Y., Schmitt B., Combi M., Fink U., McCord T., Ip W., R. W. Carlson, D. E. Jennings. In *Proc. of The Cassini Huygens mission: the exploration of the Saturn system, 1996*, p. 112-114, 1996.
57. VIRTIS: Visible Infrared Thermal Imaging Spectrometer for the Rosetta mission. Reininger, F.M. Coradini, A., Capaccioni, F., Capria, M.T., Cerroni, P., DeSanctis, M.C., Magni, G., Drossart, P., Barucci, M.A., Bockelée-Morvan, D., Combes, M., Crovisier, J., Encrenaz, T., Tiphene, D., Arnold, G., Carsenty, U., Michaelis, H., Mottola, S., Neikem, G., Schade, U., Taylor, F., Calcutt, S., Vellacott, T., Venters, P., Watkins, R.E., Bellucci, G., Formisano, V., Angrilli, F., Bianchini, G., Saggin, B., Bussoletti, E., Colangeli, L., Mennella, V., Bibring, J.P., Langevin, Y., Schmitt, B., Combi, M., Fink, U., McCord, T., Ip, W., Carlson, R.W., Jennings, D.E. *Proc. SPIE Vol. 2819 Imaging Spectrometry II*, M.R. Descour, J.M. Mooney, Eds. p. 66-77, 1996.
58. A Comprehensive Study of the H Lyman- $\alpha$  Line Profile and Water Photochemistry in Comet Hyakutake (1996 B2). Combi, M.R. et al. *Bull. A. A. S.* **28**, 1094, (abstract), 1996
59. The Dynamical Structure of the Nucleus and Inner Coma of Comet 1996 B2 (Hyakutake). Harris, W.M., F. Scherb, M.R. Combi, and B.E.A. Mueller. *Bull. A. A. S.* **28**, 1088, (abstract), 1996

DR. MICHAEL R. COMBI

60. Quantitative Analysis of Measured H<sub>2</sub>O<sup>+</sup> Column Densities from Comet P/Halley. Häberli, R.M., M.R. Combi, T.I. Gombosi, D.L. DeZeeuw, K.G. Powell. *Bull. A. A. S.* **28**, 1085, (abstract), 1996
61. Characteristics of Io's Far-UV Neutral Oxygen and Sulfur Emissions Derived from Recent HST Observations. Ballester, G.E., J.T. Clarke, D. Rego, M. Combi, N. Larsenn, J. Ajello, D.F. Strobel, N.M. Schneider, M. McGrath. *Bull. A. A. S.* **28**, 1156, (abstract), 1996
62. Global Modeling of H<sub>2</sub>O<sup>+</sup> in the Coma of Comet P/Halley. Häberli, R.M., T.I. Gombosi, M.R. Combi, D.L. DeZeeuw, K.G. Powell. *Eos Transactions, AGU*, **77**, F 443, (abstract), 1996
63. 3D Modeling of Dusty-Gas Flows near Cometary Nuclei Using Solution-Adaptive Grids. Kabin, K.S., T.I. Gombosi, M.R. Combi, D.L. DeZeeuw, K.G. Powell. *Eos Transactions, AGU*, **77**, F443, (abstract), 1996
64. Interaction of Io's Atmosphere with Jupiter's Magnetosphere: A 3D multiscale MHD Simulation. Combi, M.R., T.I. Gombosi, M.R. Combi, D.L. DeZeeuw, K.G. Powell, Kabin, K. European Geophysical Society meeting, (abstract), Vienna, April 1997.
65. Modeling of Cometary X-rays Caused by Solar Wind Minor Ions. T.I. Gombosi, Häberli, R.M., D.L. DeZeeuw, M.R. Combi, and K.G. Powell. European Geophysical Society meeting, (abstract), Vienna, April 1997.
66. Io's Far-Ultraviolet Emissions as Observed with HST and IUE, G.E. Ballester, J.T. Clarke, M.R. Combi, D.F. Strobel, N. Larsen, M. McGrath, M. Lenigan, N.M. Schneider, D. Rego, *Bull. A. A. S.* **29**, 980 (abstract), 1997.
67. HST/FOS Observations of Io in the Near Ultraviolet, K.L. Jessup, J.T. Clarke, D.F. Strobel, N. Schneider, M. McGrath, M. Combi, J. Ajello, J.L. Luhmann, X. Zhu, *Bull. A. A. S.* **29**, 980 (abstract), 1997.
68. Interaction of Europa's Atmosphere with Jupiter's Magnetosphere: a 3D Multiscale MHD Simulation. K. Kabin, M.R. Combi, T.I. Gombosi, A.F. Nagy, D.L. DeZeeuw, and K.G. Powell. *Bull. A. A. S.* **29**, 985 (abstract), 1997.
69. Observations and Analysis of High Resolution Optical Line Profiles in Comet Hyakutake (C/1996 B2). M.R. Combi and A.L. Cochran. *Bull. A. A. S.* **29**, 1048 (abstract), 1997.
70. Dust-Gas Interrelations in Comets: Observations and Theory. M.R. Combi, K. Kabin, D.L. DeZeeuw, T.I. Gombosi, and K.G. Powell. Invited talk Presented at the First International Conference on Comet Hale-Bopp, Feb. 2-5, 1998, Tenerife, Canary Islands, Spain.
71. Modeling the Solar Wind-Comet Interaction. T.I. Gombosi, K. Hansen, M.R. Combi, D.L. DeZeeuw, and K.G. Powell. Presented at the First International Conference on Comet Hale-Bopp, Feb. 2-5, 1998, Tenerife, Canary Islands, Spain.
72. Tales of a Bright Comet: Comet Hale-Bopp (C/1995 O1). M.R. Combi, *Bull. A. A. S.* **30**, 1062 (abstract; invited talk), 1998.
73. An Analysis of IUE Observations of the Hydrogen Lyman- $\alpha$  Comae of Comets during Solar Maximum, A.A. Reinard and M.R. Combi. *Bull. A. A. S.* **30**, 1065 (abstract), 1998.
74. An Analysis of SOHO/SWAN Observations of the Structure and Evolution of the Lydogen Lyman-  $\alpha$  Coma of Comet Hale-Bopp. M.R. Combi, A.A. Reinard, J.-L. Bertaux, and the SOHO/SWAN Team. *Bull. A. A. S.* **30**, 1065 (abstract), 1998.
75. The H<sub>2</sub>O<sup>+</sup> Velocity Field in Comet Hale-Bopp, Observations and MHD Models. C.M. Anderson, M.R. Combi, T.I. Gombosi, and K.C. Hansen. *Bull. A. A. S.* **30**, 1065 (abstract), 1998.
76. Three-Dimensional Kinetic Modeling of Io's Atmosphere: First Results of a New Direct Monte Carlo Simulation. R. Bauske and M.R. Combi. *Eos Transactions, AGU, Eos Transactions, AGU*, **79**, S200, 1998.
77. The Interaction of Io's Plasma Environment and the Neutral Atmosphere: Case Study with a 3D Ion-Neutral Direct Simulation Monte Carlo Model. R. Bauske and M.R. Combi. *Eos Transactions, AGU*, **79**, F551, 1998.



DR. MICHAEL R. COMBI

78. Multiscale MHD Simulations of the Coupled Saturn-Titan System. K.C. Hansen, K. Kabin, T.I. Gombosi, D.L. DeZeeuw, C.P.T. Groth, K.G. Powell, and M.R. Combi. Presented at "Magnetospheres of the Outer Planets" Paris, France, 9-14 August, 1999.
79. Hubble Space Telescope - Galileo Io Campaign. F. Bagenal et al. (including M.R. Combi). Presented at "Magnetospheres of the Outer Planets" Paris, France, 9-14 August, 1999.
80. Interactions of Jupiter's Plasma Torus with the Galilean Satellites: Io and Europa. M.R. Combi, K. Kabin, T.I. Gombosi, D.L. DeZeeuw, and K.G. Powell. Presented at "Magnetospheres of the Outer Planets" Paris, France, 9-14 August, 1999.
81. The Interaction of Io's Plasma Environment with the Neutral Atmosphere: Direct Monte Carlo Simulation of Io's Atmosphere from the Ground to 30 R-Io. R. Bauske and M.R. Combi. Presented at "Magnetospheres of the Outer Planets" Paris, France, 9-14 August, 1999.
82. A Model of the Neutral Coma of Comet Hale-Bopp (1995 O1) from the Surface of the Nucleus to One Million Kilometers. M.R. Combi, Kabin, T.I. Gombosi, D.L. DeZeeuw, and K.G. Powell. *Bull. A. A. S.* **31**, 1100, 1999.
83. HCO<sup>+</sup> in Comet Hale-Bopp: A Comparison of Observations and MHD Models. A.J. Lovell, A.L. Iler, F.P. Schloerb, K.C. Hansen, M.R. Combi, R.M. Häberli, and T.I. Gombosi. *Bull. A. A. S.* **31**, 1100, 1999.
84. A Review of HST/FOS NUV Spectra of Io Obtained on 1994 and 1996. K.-L. Jessup, G.E. Ballester, J.T. Clarke, X.Zhu, D. Strobel, N. Schneider, M. McGrath, M. Combi, and J. Ajello. *Bull. A. A. S.* **31**, 1188, 1999.
85. Io in the Jupiter's Magnetosphere: Further MHD Simulations of the Galileo December 1995 Flyby. K. Kabin, M. R. Combi, T. I. Gombosi, K. C. Hansen, D. L. DeZeeuw, K. G. Powell. *Eos Transactions, AGU*, P41A-01, 1999.
86. HST-Galileo Io Campaign: Images of Sodium and Oxygen Emissions in Eclipse. K. D. Retherford, F. Bagenal, G. E. Ballester, M. Belton, M. Combi, P. D. Feldman, W. Harris, M. A. McGrath, H. W. Moos, R. *Eos Transactions, AGU*, P41A-05, 1999.
87. A review of HST/FOS Spectra of Io in the NUV. K. Jessup, G. E. Ballester, J. T. Clarke, X. Zhu, D. Strobel, N. Schneider, M. Combi, J. Ajello. *Eos Transactions, AGU*, P41A-21, 1999.
88. Two-species MHD Simulation on Europa's Magnetospheric Interaction. Y. Liu, K. Kabin, K. C. Hansen, A. F. Nagy, M. R. Combi, T. I. Gombosi, D. L. DeZeeuw, K. G. Powell. *Eos Transactions, AGU*, SM32A-17, 1999.
89. Global Structure of the Coupled Saturn--Titan System. K. C. Hansen, T. I. Gombosi, D. L. DeZeeuw, C. C. Groth, K. G. Powell, K. Kabin, M. R. Combi. *Eos Transactions, AGU*, SM32A-33, 1999.
90. Cometary and Satellite Atmospheres: Non-Equilibrium Chemistry and Energetics. M.R. Combi. Presented at "Comparative Aeronomy in the Solar System" conference at Yosemite 2000, Yosemite, California, February 9, 2000.
91. Global Simulations with Satellite Plasma Sources. T. I., Gombosi, M. R. Combi, D. L. DeZeeuw, K. C. Hansen, K. Kabin, Y. Liu, A.N. Nagy, K. G. Powell. *Eos Transactions, AGU*, SM22B-08 INVITED, May 2000.
92. Titan's interaction with the magnetosphere of Saturn: Results of a 3D multi-species MHD simulation. Y. Liu, A. F. Nagy, T. I. Gombosi, D. L. DeZeeuw, K. Kabin, M. R. Combi. *Eos Transactions, AGU*, SM32C-10, 2000.
93. HST and VLT Investigations of the Fragments of C/1999 S4 (LINEAR). H.A. Weaver, R. West, M.F. A'Hearn, C. Arpigny, J.M. Bauer, M.R. Combi, J.K. Davies, C.E. Delahodde, P.D. Feldman, M.C. Fes tou, O.R. Hainaut, R. Hook, L. Jorda, M.S.W. Keesey, P.L. Lamy, C.M. Lisse, B.G. Marsden, K.J. Meech, Z. Sekanina, I. Toth, G.-P. Tozzi. *Bull. A. A. S.* **32**, 1061, 2000.
94. The Production of O(<sup>1</sup>D) in Comet Hale-Bopp. J. P. Morgenthaler, W. Harris, F. Scherb, C. M. Anderson, N. E. Doane, F. L. Roesler, R. J. Oliverson, M. R. Combi. *Bull. A. A. S.* **32**, 1072, 2000.

## DR. MICHAEL R. COMBI

95. Temporal Evolution of Interacting Gas Flows in the Tail of Comet C/1996B2 (Hyakutake). W. M. Harris, M. Combi, J. Morgenthaler. *Bull. A. A. S.* **32**, 1073, 2000.
96. Gas Arcs in Comet Hyakutake: Revisited. M.R. Combi, W.M. Harris, K. Kabin. *Bull. A. A. S.* **32**, 1073, 2000.
97. Collisional Excitation of HCN by Electrons in Comets Hyakutake and Hale-Bopp. A.J. Lovell, N. Kallivayalil, F.P. Schloerb, M.R. Combi, K.C. Hansen, T.I. Gombosi. *Bull. A. A. S.* **32**, 1081, 2000.
98. The Solar Connections Observatory for Planetary Environments (SCOPE). Oliverson, R., Harris, W., Ballester, G., Bougher, S., Broadfoot, L., Combi, M., Cravens, T., Gombosi, T., Herbert, F., Joseph, C., Kozyra, J., Limaye, S., Morgenthaler, J., Paxton, L., Roesler, F., Sandel, W., Ben Jaffel, L. *American Astronomical Society Meeting 199*, #157.05, 2001.
99. Io's Changing Atmosphere: Constraints on the ambient temperature and SO/SO<sub>2</sub> ratio as a function of orbital phase, K.-L. Jessup, G.E. Ballester, X. Zhu, M. Combi, *American Astronomical Society, DPS meeting #32, Late Abstracts, #65.19*, 2000.
100. Global MHD Simulations of Comet Borrelly's Plasma Environment: Effects of a Strong Neutral Jet, K.C. Hansen, M.R. Combi, F.J. Crary, D.L. DeZeeuw, T.I. Gombosi, *American Astronomical Society, DPS meeting #33, #20.04*, 2001.
101. Global MHD Simulations of Jupiter's Magnetosphere and Ionosphere for Cassini-Galileo Conditions, K.C. Hansen, T.I. Gombosi, M.R. Combi, D.L. DeZeeuw, K.G. Powell, A.J. Ridley, *American Geophysical Union, Fall Meeting 2001, abstract #SM12A-0830*, 2001.
102. Axisymmetric Dusty Gas-Kinetic Models for Comet 46P/Wirtanen, M.R. Combi, T.-M. Ho, N. Thomas, *American Astronomical Society, DPS meeting #33, #20.18*, 2001.
103. Measurements of the interaction between comet Borrelly and the solar wind, F.J. Crary, D.T. Young, K.C. Hansen, M.R. Combi, *American Astronomical Society, DPS meeting #33, #28.06*, 2001.
104. Deep Space One Measurements of the Interaction between the Solar Wind and Comet Borrelly, F.J. Crary, D.T. Young, K.C. Hansen, M.R. Combi, *American Geophysical Union, Fall Meeting 2001, abstract #P52C-04*, 2001.
105. Hale-Bopp: what makes a big comet different? Coma dynamics: observations and theory, M.R. Combi, *Cometary Science after Hale-Bopp, IAU Coll. No. 186*, January, 2002.
106. SWAN observations of C/1995 O1 (Hale-Bopp), J.T.T. Mäkinen, J.-L. Bertaux, M.R. Combi, E. Quemerais, *Cometary Science after Hale-Bopp, IAU Coll. No. 186*, January, 2002.
107. Water production in disappearing comets, J.T.T. Mäkinen, J.-L. Bertaux, M.R. Combi, E. Quemerais, *Cometary Science after Hale-Bopp, IAU Coll. No. 186*, January, 2002.
108. SWAN observations of the splitting comet C/2001 A2 (LINEAR), J.T.T. Mäkinen, J.-L. Bertaux, M.R. Combi, E. Quemerais, *Cometary Science after Hale-Bopp, IAU Coll. No. 186*, January, 2002.
109. The Solar Connections Observatory for Planetary Environments (SCOPE), R. Oliverson, W. Harris, G. Ballester, S. Bougher, L. Broadfoot, M. Combi, T. Cravens, T. Gombosi, F. Herbert, C. Joseph, J. Kozyra, S. Limaye, J. Morgenthaler, L. Paxton, F. Roesler, W. Sandel, L. Ben Jaffel, *American Astronomical Society, AAS meeting #19, #157.05*, 2001.
110. The Study of Comets. M.R. Combi, M.T. Capria, G. Cremonese, M.C. de Sanctis, T.L. Farnham, Y.R. Fernandez, M.C. Festou, U. Fink, J.R. Green, W.M. Harris, C.W. Hergenrother, P.L. Lamy, S.M. Larson, H.F. Levison, D.J. Lien, C.M. Lisse, D.D. Meisel, D.T.F. Moehlmann, B.E.A. Mueller, N.H. Samarasinha, M.L. Sitko, H.A. Weaver, P.R. Weissman. In "The Future of Solar System Exploration, 2003-2013 -- Community Contributions to the NRC Solar System Exploration Decadal Survey." ASP Conference Proceedings, Vol. 272, Ed. by M.V. Sykes. ISBN: 1-58381-113-3. San Francisco, Astronomical Society of the Pacific, pp. 323-336, 2002.

DR. MICHAEL R. COMBI

111. The Study of Comets. M.R. Combi, M.T. Capria, G. Cremonese, M.C. de Sanctis, T.L. Farnham, Y.R. Fernandez, M.C. Festou, U. Fink, J.R. Green, W.M. Harris, C.W. Hergenrother, P.L. Lamy, S.M. Larson, H.F. Levison, D.J. Lien, C.M. Lisse, D.D. Meisel, D.T.F. Moehlmann, B.E.A. Mueller, N.H. Samarasinha, M.L. Sitko, H.A. Weaver, P.R. Weissman. *Astronomical Instrumentation and Astrophysics. ASP Conference Proceedings*, Vol. 270. Edited by Frank N. Bash and Christopher Sneden. ISBN: 1-58381-110-9. San Francisco, Astronomical Society of the Pacific, p.323, 2002.
112. Spatially-resolved Spectroscopy of C/2002 C1 (Ikeya-Zhang) with HST. H.A. Weaver, P.D. Feldman, M. F. A'Hearn, C. Arpigny, M.R. Combi, M.C. Festou, G.-P. Tozzi. *American Astronomical Society, DPS meeting #34, #12.04, 2002.*
113. 3D Boltzmann Simulation of the Io's Plasma Environment with Adaptive Mesh and Particle Refinem. Al. S. Lipatov and M.R. Combi. *Eos Trans. AGU, 83(47), Fall Meeting Suppl., Abstract #SM21A-0529, 2002.*
114. Development of a General Purpose 3D DSMC Flow Solver on Unstructured Meshes. V. Tenishev and M.R. Combi. *AIAA Paper 2003-3776, 2003.*
115. Pre- and Post-Perihelion Activity of C/1996 B2 (Hyakutake). M. Combi, J. T. Mäkinen, J.-L. Bertaux. Formation of Cometary Material, 25th meeting of the IAU, Joint Discussion 14, 22 July 2003, Sydney, Australia
116. Cometary Science after Hale-Bopp - Invited Review Papers. H. Boehnhardt, M. Combi, M. Kidger, R. Schulz. Cometary Science after Hale-Bopp - Invited Review Papers. Proceedings of IAU Colloquium 186, 21-25 January 2002, Tenerife, Spain. Edited by H. Boehnhardt, European Southern Observatory, Santiago, Chile, M. Combi, University of Michigan, Ann Arbor, U.S.A., M.R. Kidger, Instituto de Astrofisica de Canarias, Tenerife, Spain, R. Schulz, European Space Agency, Noordwijk, The Netherlands. Reprinted from *Earth, Moon, and Planets*, Volume 98, Nos. 1-4, 2000. Kluwer Academic Publishers, Dordrecht.
117. Ultraviolet Investigations of C/2000 WM1 (LINEAR). H.A. Weaver, P.D. Feldman, M.F. A'Hearn, C. Arpigny, M. R. Combi, M.C. Festou, V. Krasnopolsky, C.M. Lisse, D.E. Shemansky, G.-P. Tozzi. *American Astronomical Society, DPS meeting #35, #28.04, 2003.*
118. Study of the Solar Wind Interaction with Comet 19P/Borrelly. Y. Jia, K.C. Hansen, M.R. Combi, T.I. Gombosi, F. Crary, D.T. Young. *American Astronomical Society, DPS meeting #35, #38.19, 2003.*
119. Deconvolving Cometary Hydrogen Coma. J.T.T. Mäkinen, M.R. Combi. *American Astronomical Society, DPS meeting #35, #38.23, 2003.*
120. 3D Boltzman Simulation of Io's Plasma Environment: Comparison with Observational Data. M. R. Combi, A.S. Lipatov. *American Geophysical Union, Fall Meeting 2003, abstract #P32A-1064, 2003.*
121. 3D Hybrid Simulation of the Cometary Plasma Environment with Adaptive Mesh and Particle Refinement. A.S. Lipatov and M.R. Combi. *American Geophysical Union, Fall Meeting 2003, abstract #SM31C-1121, 2003.*
122. Study of Dusty Cometary Comae: Application to Comet Borrelly. V.M. Tenishev, M. Combi. *EGS - AGU - EUG Joint Assembly, Abstracts from the meeting held in Nice, France, 6-11 April 2003, abstract #10477, 2003.*
123. DSMC Simulation of the Cometary Coma. V.M. Tenishev, M.R. Combi. *Rarefied Gas Dynamics: 23rd International Symposium. AIP Conference Proceedings, Volume 663, pp. 696-703, 2003.*
124. Numerical Study of the Dust and Gas Distribution in the Inner Coma of Comet Borrelly. V.M. Tenishev, M. R. Combi. *American Astronomical Society, DPS Meeting #35, #38.01, 2003.*
125. Chandra Observations of a Collisionally and Optically Thin Charge Exchange System - Comet 2P/Encke. Christian, D. J., Lisse, C. M., Dennerl, K., Wolk, S. J., Bodewits, D.,

## DR. MICHAEL R. COMBI

- Combi, M. R., Hoekstra, R., Makinen, J. T. T., Weaver, H. A. AAS/Division for Planetary Sciences Meeting Abstracts #36, #21.05, 2004.
126. Detection of Deuterium Emission from C/2001 Q4 (NEAT). Weaver, H. A., A'Hearn, M. F., Arpigny, C., Combi, M. R., Feldman, P. D., Festou, M. C., Tozzi, G.-P. AAS/Division for Planetary Sciences Meeting Abstracts #36, #23.01, 2004.
127. FUSE Observations of Comet C/2001 Q4 (NEAT). Feldman, P. D., Weaver, H. A., Christian, D., Combi, M. R., Krasnopolsky, V., Lisse, C. M., Mumma, M. J., Shemansky, D. E., Stern, S. A. AAS/Division for Planetary Sciences Meeting Abstracts #36, #23.03, 2004.
128. Large aperture [O I] photometry of comets Hyakutake, Halley, and Austin: implications for the photochemistry of OH. Morgenthaler, J. P., Harris, W. M., Scherb, F., Combi, M. R. AAS/Division for Planetary Sciences Meeting Abstracts #36, #33.12, 2004.
129. Kinetic dusty-gas coma models for comet 67P/Churyumov-Gerasimenko. Tennishev, V., Combi, M., Davidsson, B. AAS/Division for Planetary Sciences Meeting Abstracts #36, #33.16, 2004.
130. The plasma environment of comet 67P/Churyumov-Gerasimenko throughout the Rosetta mission. Jia, Y.-D. K.C. Hansen, M.R. Combi, T.I. Gombosi. AAS/Division for Planetary Sciences Meeting Abstracts #36, #34.08, 2004.
131. Pre- and Post-Perihelion Activity of Comet Hyakutake (1996 B2). Combi, M.R., J.T.T. Mäkinen, J.-L. Bertaux, E. Quémerais. AAS/Division for Planetary Sciences Meeting Abstracts #36, #33.11, 2004.
132. New Chandra Observations of Comets, 2003-2005. Lisse, C.M., D.J. Christian, K. Dennerl, S.J. Wolk, D. Bodewits, R. Hoeksra, M.R. Combi, T. Mäkinen, H. A. Weaver, T. Sassen, M. Hurwitz. American Geophysical Union, Spring Meeting 2005, abstract #P42A-05, 2005.
133. The Effects of Extended Sources of Gas on Cometary Coma Dynamics. Combi, M.R. and V.M. Tennishev. American Astronomical Society, DPS meeting #37, #16.04, 2005.
134. Rosetta-ISSI Comet 67P/Churyumov-Gerasimenko Environment Model. Hansen, K. C., Alexander, C. J., Altwegg, K., Bagdonat, T., Bertini, I., Coates, A. J., Combi, M. R., Cravens, T. E., Davidsson, B. J. R., Geiss, J., and 9 coauthors. American Astronomical Society, DPS meeting #37, #16.08, 2005.
135. Wide-field spectroscopic observations of comets in the UV: GALEX observations of C/2004 Q2 (Machholz). Morgenthaler, J. P., Harris, W. M., Combi, M. R., Weaver, H. A., Feldman, P. D. American Astronomical Society, DPS meeting #37, #16.13, 2005.
136. Chandra Observations of the Deep Impact Encounter with Comet 9P/Tempel 1. Lisse, C. M., Christian, D. J., Dennerl, K., Wolk, S. J., Bodewits, D., Combi, M. R., Hoekstra, R., Makinen, T., Schultz, P. H., Weaver, H. A. American Astronomical Society, DPS meeting #37, #43.10, 2005.
137. Spitzer and Chanda Observations of the Deep Impact Encounter with Comet 9P/Tempel 1. Lisse, C.M., A'Hearn, M.F., Belton, M.J.S., Bodewits, D. Christian, D.J., VanCleve, J. Combi, M., Dennerl, K, Farnham, T.L., Fernandex, Y.R. , Groussin, O., Hoekstra, R., Mäkinen, T., McFadden, L.A., Meech, K.J., Schultz, P., Weaver, H., Wolk, S., American Astronomical Society Meeting #207, #189.08, 2005.
138. Modeling the Coma Dynamics of a Comet with an Icy Grain Halo, Combi, M.R., Tennishev, V.M., American Geophysical Union, Fall Meeting 2005, abstract P11A-0101, 2005.
139. Large Aperture [OI] 6300 Å Observations of Comet Hyakutake: Implications for the Photochemistry of OH and [OI] Production in Comet Hale-Bopp, Morgenthaler, J.P., Harris, W.M., Combi, M.R., American Astronomical Society, DPS meeting #38, #20.07 , 2006.
140. Chandra Observations during the Deep Impact Campaign, Bodewits, D., Lisse, C., Christian, D.J., Wolk, S., Dennerl, K., Zurbuchen, T.H., Hansen, K., Hoekstra, R., Combi, M. Fry, C.D., Dryer, M., Mäkinen, T., Sun, S., American Astronomical Society, DPS meeting #38, #28.01 , 2006.

## DR. MICHAEL R. COMBI

141. Water Production Rates from SOHO/SWAN H Lyman-alpha Observations of Active and Moderately Active Comets, Combi, M.R., Mäkinen, J.T.T., Henry, N.J., Bertaux, J.L., Quemérais, E., American Astronomical Society, DPS meeting #38, #29.05, 2006.
142. A Study of the Effect of Extended Sources on the Structure of the Gas Outflow in Cometary Comae, Tenishev, V., Combi, M. American Astronomical Society, DPS meeting #38, #29.09, 2006.
143. A Global Two-Species MHD Model of the Cometary Plasma Environment, Jia, Y.-D., Tenishev V., Hansen, K., Combi, M., Gombosi, T., American Astronomical Society, DPS meeting #38, #29.17, 2006.
144. Wide-field Spectroscopic Observations of comet C/2004 Q2 (Machholz) by GALEX. Morgenthaler, J.P., W.M. Harris, M.R. Combi, P.D. Feldman, H.A. Weaver. AAS/AAPT Joint Meeting #209, #25.15, 2006.
145. A Multi-species MHD Model of Io's interaction with the Io Plasma Torus. Jia, Y., M. Combi, K. Hansen, T. Gombosi. American Geophysical Union, Fall Meeting 2006, abstract #P41A-1263, 2006.
146. Implications of Outgassing Jets for the Comet Dynamical Environment. Byram, S.M., D.J. Scheeres, M.R. Combi. 38th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXVIII), held March 12-16, 2007 in League City, Texas. LPI Contribution No. 1338, p.1694, 2007.
147. Encounter of Ulysses with Comet McNaught. Gosling, J.T., M. Neugebauer, D.J. McComas, B.E. Goldstein, R. M. Skoug, G. Gloeckler, T. Zurbuchen, R. von Steiger, A. Balogh, A. Rees, M. Combi. 2007 Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract SH23C-05, 2007.
148. 2D Numerical Study of Superthermal Particles in Martian Exosphere. Valeille, A., V. Tenishev, S.W. Bougher, M.R. Combi, A.F. Nagy. Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract SA31B-02, 2007.
149. A numerical approach for simulation of the dust-gas Enceladus' atmosphere. Tenishev, V., M. Combi, H. Waite. Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract P43A-02, 2007.
150. Complete study of suprathermal oxygen particles in Mars upper thermosphere and exosphere over the range of limiting conditions. A. Valeille, V. Tenishev, S. W. Bougher, M.R. Combi, A.F. Nagy. American Astronomical Society, DPS meeting #39, #24.01, 2007.
151. A multi-plume Monte Carlo kinetic model of Enceladus' atmosphere. Tenishev, V., M.R. Combi and J.H. Waite. American Astronomical Society, DPS meeting #39, #41.06, 2007.
152. Water production rates from SOHO/SWAN H Lyman-alpha observations of comets. Combi, M.R., J.T. Mäkinen, N.J. Henry, Y. Lee, J.-L. Bertaux, E. Quémerais. American Astronomical Society, DPS meeting #39, #53.03, 2007.
153. Modeled ion densities of comet 1P/Halley: A comparison with Giotto's ion mass spectrometer. Rubin, M., K.C. Hansen, T.I. Gombosi, M.R. Combi, K. Altwegg, H. Balsiger. American Astronomical Society, DPS meeting #39, #53.10, 2007.
154. Evolution of exospheric suprathermal oxygen over Martian history. Valeille, A., V. Tenishev, S.W. Bougher, M.R. Combi, A.F. Nagy. American Geophysical Union, Fall Meeting 2007, abstract #P11A-0244.
155. A numerical study of dust distribution in the Enceladus atmosphere. Tenishev, V., M. Combi, H. Waite. . American Geophysical Union, Fall Meeting 2007, abstract #P21B-0538.
156. Modeled ion densities of comet 1P/Halley: A comparison with Giotto's ion mass spectrometer. M. Rubin, K.C. Hansen, T.I. Gombosi, M.R. Combi, K. Altwegg, H. Balsiger. American Geophysical Union, Fall Meeting 2007, abstract #P41A-0199.
157. Numerical simulations of the interaction of Enceladus's atmosphere with Saturn's magnetosphere using a 3D multi-species, Hall MHD model. D. Najib, A.F. Nagy, G. Toth, M. R. Combi, Y.J. Ma, K. Khurana, F.F. Crary, A.J. Coates. American Geophysical Union, Fall Meeting 2007, abstract #P43A-1009.

**DR. MICHAEL R. COMBI**

158. Comet 17P/Holmes. M.R. Combi, J.T.T. Mäkinen, J.-L. Bertaux, E. Quemerais, S. Ferron. IAU Circ. 8905, 1 (2007), edited by D.W.E. Green.
159. A Six-species MHD model for the water group ions around comet Halley. Jia, Yingdong, Combi, Michael, Hansen, Kenneth, Gombosi, Tamas, Russell, Christopher. 37th COSPAR Scientific Assembly. Held 13-20 July 2008, in Montréal, Canada., p.1374, 2008.
160. Complete study of suprathermal oxygen particles in Mars upper thermosphere and exosphere over the range of limiting conditions. Valeille, Arnaud, Combi, Michael, Tenishev, Valeriy, Bougher, Stephen, Nagy, Andrew, 37th COSPAR Scientific Assembly. Held 13-20 July 2008, in Montréal, Canada., p.3275, 2008.
161. Atomic Deuterium Emission and the D/H Ratio in Comets. Weaver, H. A., A'Hearn, M. F., Arpigny, C., Combi, M. R., Feldman, P. D., Tozzi, G.-P., Dello Russo, N., Festou, M. C. Asteroids, Comets, Meteors 2008 held July 14-18, 2008 in Baltimore, Maryland. LPI Contribution No. 1405, paper id. 8216, 2008.
162. Modeling the Dust Coma and Tail of Comet 19P/Borrelly Observed from Ground During the Deep Space 1 Encounter. Ho, T. M., Thomas, N., Bertini, I., Bonev, T., Combi, M., Tenishev, V. Asteroids, Comets, Meteors 2008 held July 14-18, 2008 in Baltimore, Maryland. LPI Contribution No. 1405, paper id. 8236, 2008.
163. Complete Study Of Suprathermal Oxygen Atoms In Mars Exosphere Over The Range Of Limiting Conditions. Valeille, Arnaud, Tenishev, V., Bougher, S. W., Combi, M. R., Nagy, A. F. American Astronomical Society, DPS meeting #40, #14.08, 2008.
164. SOHO/SWAN H Lyman-alpha Observations Of Comets C/2002 X5 Kudo-Fujikawa, C/2002 V1 NEAT, C/2002 Q2 Machholz And 21P/Giacobini- Zinner. Combi, Michael R., Makinen, J. T. T., Lee, Y., Bertaux, J. L., Quemerais, E. American Astronomical Society, DPS meeting #40, #16.08, 2008.
165. Wide-field Spectroscopic Observations of Comet 8P/Tuttle by GALEX. Morgenthaler, Jeffrey P., Harris, W. M., Combi, M. R., Feldman, P. D., Weaver, H. A. American Astronomical Society, DPS meeting #40, #16.22, 2008.
166. A Fully-Kinetic Approach to Modeling Titan's Upper Atmosphere. Tenishev, Valeriy, Combi, M. American Astronomical Society, DPS meeting #40, #31.11, 2008.
167. 3D Study of Suprathermal Oxygen Atoms in Mars Upper Thermosphere and Exosphere over the Range of Limiting Conditions. Valeille, A., Tenishev, V., Combi, M. R., Bougher, S. W., Nagy, A. F. American Geophysical Union, Fall Meeting 2008, abstract #P11A-1249, 2008.
168. Kinetic simulation of the distribution and escape of minor components of Titan's exosphere. Tenishev, V., Combi, M. American Geophysical Union, Fall Meeting 2008, abstract #P21A-1332, 2008.
169. Modeled Neutral Densities of Comet 1P/Halley: a Comparison With Giotto's Neutral Mass Spectrometer. Rubin, M., Tenishev, V. M., Combi, M. R., Hansen, K. C., Gombosi, T. I., Altwegg, K., Balsiger, H. American Geophysical Union, Fall Meeting 2008, abstract #P51C-1420, 2008.
170. Comet C/2007 N3 (Lulin). Combi, M. R., Bertaux, J.-L., Quemerais, E., Maekinen, J. T. T. IAU Circ., 9020, 1 (2009). Edited by Green, D. W. E. 2009.
171. SOHO/SWAN H Lyman-alpha Observations Of Comets C/2006 P1 McNaught, C/2006 M4 SWAN, C/2007 N1 Lulin And 67P/Churyumov-Gerasimenko. Combi, Michael R., Boyd, Z. W., Bertaux, J., Quémerais, E., Mäkinen, J. T. T., American Astronomical Society, DPS meeting #41, #15.10, 2009.
172. The GALEX Comets. Morgenthaler, Jeffrey P., Harris, W. M., Combi, M. R., Feldman, P. D., Weaver, H. A. American Astronomical Society, DPS meeting #41, #15.11, 2009.
173. Modeled Neutral Gas Densities in the Coma of Comet 1P/Halley. Rubin, Martin, Tenishev, V. M., Combi, M. R., Hansen, K. C., Gombosi, T. I., Altwegg, K., Balsiger, H. American Astronomical Society, DPS meeting #41, #37.01, 2009.

DR. MICHAEL R. COMBI

174. A Kinetic Multi-Plume Model of the Enceladus' Atmosphere. Tenishev, Valeriy, Combi, M., Teolis, B., Waite, H. American Astronomical Society, DPS meeting #41, #38.10, 2009.
175. Kinetic modeling of neutral and ionized components of the lunar exosphere. Tenishev, V., Hansen, K. C., Combi, M. R. American Geophysical Union, Fall Meeting 2009, abstract #P23C-1267, 2009.
176. Solar Cycle and Seasonal Variations of the Mars Thermosphere-Ionosphere and Associated Impacts upon Atmospheric Escape (Invited). Bougher, S. W., Combi, M. R., Valeille, A., Tenishev, V. American Geophysical Union, Fall Meeting 2009, abstract #P53A-01, 2009.
177. Modeled Ion and Neutral Particle Distributions around Jupiter's Moon Europa. Rubin, M., Tenishev, V., Hansen, K. C., Jia, X., Combi, M. R., Gombosi, T. I. American Geophysical Union, Fall Meeting 2009, abstract #SM23B-1608, 2009.
178. Two-species MHD study of the comet tail disconnection event. Jia, Yingdong, Russell, C. T., Jian, Lan, Combi, Michael, Manchester, Ward, IV, Gombosi, Tamas. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.7, 2010.
179. Modeling the Neutral Gas and Plasma Environment of Jupiter's Moon Europa. Rubin, Martin, Tenishev, Valeriy, Hansen, Kenneth, Jia, Xianzhe, Combi, Michael, Gombosi, Tamas. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.7, 2010.
180. SOHO/SWAN Observations of Water Production from Spacecraft Target Comets: Past and Future. Combi, Michael, Bertaux, Jean-Loup, Lee, Yuni, Boyd, Zachary, Patel, Tapan, Mäkinen, Teemu, Quemerais, E. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.8, 2010.
181. Comet 67P/Churyumov-Gerasimenko during the Rosetta mission: numerical simulation of dusty gas coma. Tenishev, Valeriy, Combi, Michael, Rubin, Martin, Hansen, Kenneth, Gombosi, Tamas. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.6, 2010.
182. Modeling the neutral gas and dust coma of Comet 1P/Halley. Rubin, Martin, Tenishev, Valeriy M., Combi, Michael R., Hansen, Kenneth C., Gombosi, Tamas I., Altwegg, Kathrin, Balsiger, Hans. EGU General Assembly 2010, held 2-7 May, 2010 in Vienna, Austria, p.689, 2010.
183. SQCX X-ray Observations Of The Deep Impact Spacecraft Close Encounters With Comets 9P/Tempel 1 and 103P/Hartley 2. Lisse, Carey M., Dennerl, K., Wolk, S. J., Christian, D. J., Bodewits, D., Zurbuchen, T. H., Combi, M. American Astronomical Society, HEAD meeting #11, #17.14, 2010.
184. Comet 67P/Churyumov-Gerasimenko. Combi, M. R., Bertaux, J.-L., Quémerais, E., Mäkinen, J. T. T. IAU Circ., 9121, 2 (2010). Edited by Green, D. W. E., 2010.
185. Gas And Dust Production From A Comet With A Small Active Area: Application To The Rosetta Target Comet 67p/Churyumov-Gerasimenko. Combi, Michael R., Tenishev, V., Rubin, M., Fougere, N. American Astronomical Society, DPS meeting #42, #28.05, Bulletin of the American Astronomical Society, Vol. 42, p.960, 2010.
186. Comet 67P/Churyumov-Gerasimenko's Plasma Environment during Rosetta's Early Comet Phase. Rubin, Martin, Combi, M. R., Gombosi, T. I., Hansen, K. C., Tenishev, V. M. American Astronomical Society, DPS meeting #42, #28.06, Bulletin of the American Astronomical Society, Vol. 42, p.960, 2010.
187. Numerical Simulation Of The Neutral And Electrically Charged Dust Distribution In The Coma Of Comet 67P/Churyumov-Gerasimenko. Tenishev, Valeriy, Combi, M. R., Rubin, M. American Astronomical Society, DPS meeting #42, #28.37. 2010.
188. An approach to numerical simulation of the gas distribution in the atmosphere of Enceladus. Tenishev, V., Combi, M. R., Waite, J. H. American Geophysical Union, Fall Meeting 2010, abstract #P23C-10, 2010.

## DR. MICHAEL R. COMBI

189. Surface Irradiation of Jupiter's Moon Europa. Rubin, M., Tenishev, V., Combi, M. R., Jia, X., Hansen, K. C., Gombosi, T. I. American Geophysical Union, Fall Meeting 2010, abstract #SM13D-02, 2010.
190. Comet 103P/Hartley-2: Rotational and Spin Temperatures of H<sub>2</sub>O and Evolution of Water Production Rate During the 2010 Apparition. Bonev, B. P., Villanueva, G. L., Keane, J., Disanti, M. A., Gibb, E. L., Paganini, L., Blake, G. A., Ellis, R. S., Magee-Sauer, K., Combi, M., Boehnhardt, H., Lippi, M., Meech, K., Mumma, M. J. 42nd Lunar and Planetary Science Conference, held March 7–11, 2011 at The Woodlands, Texas. LPI Contribution No. 1608, p.2419, 2011.
191. Primary Volatiles During the 2010 Apparition of Comet 103P/Hartley-2 as Revealed at Infrared Wavelengths: Production Rates and Spatial Profiles. Mumma, M. J., DiSanti, M. A., Bonev, B. P., Paganini, L., Villanueva, G. L., Gibb, E. L., Keane, J., Blake, G. A., Ellis, R. S., Magee-Sauer, K., Combi, M., Boehnhardt, H., Lippi, M., Meech, K. 42nd Lunar and Planetary Science Conference, held March 7–11, 2011 at The Woodlands, Texas. LPI Contribution No. 1608, p.2428, 2011.
192. The distribution of electrically charged dust and its effect on the plasma flow in the coma of comet 67P/Churyumov-Gerasimenko. V. Tenishev, M. R. Combi, M. Rubin, K. C. Hansen, and T. I. Gombosi. EPSC Abstracts, Vol. 6, EPSC-DPS2011-427, EPSC-DPS Joint Meeting 2011.
193. Water Production Rate Variation of Comet 103P/Hartley 2. M. Combi, J.-L. Bertaux, E. Quémerais, S. Ferron, and J.T.T. Mäkinen. EPSC-DPS2011-1295, EPSC-DPS Joint Meeting 2011.
194. Chandra ACIS-S X-ray Imaging Spectroscopy of Comet 103P/Hartley 2. C.M. Lisse, D.J. Christian, S.J. Wolk, D. Bodewits, K. Dennerl, M.R. Combi, S.T. Lepri, and T.H. Zurbuchen. EPSC Abstracts, Vol. 6, EPSC-DPS2011-1745, EPSC-DPS Joint Meeting 2011.
195. Understanding Measured Rotational Temperatures in the Very Inner Coma of Comet 73P/Schwassmann-Wachmann 3. N. Fougere, M. R. Combi, V. M. Tenishev, M. Rubin, B. P. Bonev, and M. J. Mumma. EPSC Abstracts, Vol. 6, EPSC-DPS2011-294, EPSC-DPS Joint Meeting 2011.
196. The Ionization Lifetime of Carbon and the Dissociative Lifetime of CO as Determined by GALEX FUV Observations of Comet C/2004 Q2 (Machholz). J. P. Morgenthaler, W. M. Harris, M. R. Combi, P. D. Feldman, and H. A. Weaver. EPSC Abstracts, Vol. 6, EPSC-DPS2011-1254, EPSC-DPS Joint Meeting 2011.
197. Kelvin-Helmholtz instabilities at the magnetic cavity boundary of comet 67P/Churyumov-Gerasimenko. M. Rubin, M. R. Combi, L. K. S. Daldorff, T. I. Gombosi, K. C. Hansen, and V. M. Tenishev. EPSC Abstracts, Vol. 6, EPSC-DPS2011-260, EPSC-DPS Joint Meeting 2011.
198. First in-situ measurements of a highly fragmented comet: ACE SWICS and WIND STICS measurements. Susan T. Lepri, Jason A. Gilbert, Martin Rubin, Thomas Zurbuchen, Michael R. Combi. American Geophysical Union, Fall Meeting 2011, Abstract #P11A-1574, 2011.
199. Atmosphere of Mars: New Findings From Modeling and Observations. Yuni Lee, Michael R. Combi, Valeriy Tenishev, Stephen W. Bougher. American Geophysical Union, Fall Meeting 2011, Abstract #P23E-03, 2011.
200. Moon-Magnetosphere Interactions Throughout the Solar System I. Martin Rubin, Michael R. Combi, Lars K S Daldorff, Tamas I. Gombosi, Kenneth C. Hansen, Xianzhe Jia, Margaret G. Kivelson, Valeriy Tenishev. American Geophysical Union, Fall Meeting 2011, Abstract #SM21B-2008, 2011.
201. Combined modeling of Mercury's interaction with solar wind, and the sodium population in its exosphere and magnetosphere. Valeriy Tenishev, Xianzhe Jia, Michael R. Combi, Tamas I. Gombosi, Bart van der Holst, Thomas Zurbuchen, James A. Slavin. American Geophysical Union, Fall Meeting 2011, Abstract #P41A-1598, 2011.



## DR. MICHAEL R. COMBI

202. Comet C/2012 E2 (SWAN). M.R. Combi, J.-L. Bertaux, E. Quémerais, J.T.T. Mäkinen. IAU Circ. No. 9252, 2012.
203. Chandra ACIS-S X-Ray Imaging Spectroscopy of EPOXI Target Comet 103P/Hartley 2. Lisse, C. M., Christian, D. J., Wolk, S. J., Dennerl, K., Bodewits, D., Li, J.-Y., Combi, M. R., Lepri, S. T., Zurbuchen, T. H., Dello Russo, N., Knight, M. M. Asteroids, Comets, Meteors 2012, Proceedings of the conference held May 16-20, 2012 in Niigata, Japan. LPI Contribution No. 1667, id.6252, 2012.
204. Ultraviolet Spectroscopy of C/2009 P1 (Garradd) with the Hubble Space Telescope. Feldman, P. D., Weaver, H. A., A'Hearn, M. F., Combi, M. R., Dello Russo, N. Asteroids, Comets, Meteors 2012, Proceedings of the conference held May 16-20, 2012 in Niigata, Japan. LPI Contribution No. 1667, id.6165, 2012.
205. Coupled modeling of neutral and ionized sodium in the exosphere and magnetosphere of Mercury. Tenishev, V., Jia, X., Combi, M., Slavin, J., Zurbuchen, T., Raines, J., Rubin, M., Gombosi, T. EGU General Assembly 2012, held 22-27 April, 2012 in Vienna, Austria, p.12940, 2012.
206. Multi-plume Modeling Of Enceladus' Neutral Atmosphere. Tenishev, Valeriy, Combi, M. R., Waite, J. H., Hansen, C., Rubin, M. American Astronomical Society, DPS meeting #44, #112.06, 2012.
207. Study of Photochemical Escape of Hot Atomic Carbon in Mars' Upper Thermosphere and Exosphere. Lee, Yuni, Combi, M. R., Tenishev, V., Bougher, S. W. American Astronomical Society, DPS meeting #44, #214.02, 2012.
208. Evidence for Two Modes of Water Release in Comet 103P/Hartley 2: Distributions of Column Density, Rotational Temperature, and Ortho-Para Ratio. Bonev, Boncho, Villanueva, G. L., Paganini, L., DiSanti, M. A., Gibb, E. L., Keane, J. V., Meech, K. J., Combi, M. R., Mumma, M. J. American Astronomical Society, DPS meeting #44, #313.03, 2012.
209. The Coma Of A Comet With Areas Of Diverse Compositions: Comet 103P/Hartley 2. Fougere, Nicolas, Combi, M. R., Rubin, M., Tenishev, V. American Astronomical Society, DPS meeting #44, #313.04, 2012.
210. The Water Production Rate of Comet 2009 P1 (Garradd) throughout the 2011-2012 Apparition. Combi, Michael R., Mäkinen, J. T. T., Bertaux, J., Quémerais, E., Ferron, S. American Astronomical Society, DPS meeting #44, #313.05, 2012.
211. A Numerical Study of Comet McNaught over a Wide Range of Heliocentric Distances. Shou, Yinsi, Combi, M. R., Rubin, M., Toth, G. American Astronomical Society, DPS meeting #44, #314.12, 2012.
212. Modeling the Sodium Atmosphere of the Moon. Tucker, Orenthal, Tenishev, V., Rubin, M., Combi, M. R., Sarantos, M. American Astronomical Society, DPS meeting #44, #410.03, 2012.
213. Hall MHD Simulations of Comet 67P/Churyumov-Gerasimenko Y. Shou, M.R. Combi, M. Rubin, K.C. Hansen, G. Toth, T.I. Gombosi. American Geophysical Union, Fall Meeting 2012, Abstract #P43C-1932, 2012.
214. Global Dynamics of Hot Atomic Oxygen in Mars' Upper Atmosphere and Comparison with Recent Observation Y. Lee, M.R. Combi, V. Tenishev, S.W. Bougher. American Geophysical Union, Fall Meeting 2012, Abstract #SA51A-2146, 2012.
215. Solar System X-rays from Charge Exchange Processes. Lisse, Carey M., Christian, D. J., Bhardwaj, A., Dennerl, K., Wolk, S. J., Bodewits, D., Combi, M. R., Zurbuchen, T. H., Lepri, S. T. American Astronomical Society, HEAD meeting #13, #303.01, 2013.
216. Modeling comet 1P/Halley's plasma environment using multifluid MHD. Rubin, M., Combi, M. R., Daldorff, L. K. S., Gombosi, T. I., Hansen, K. C., Shou, Y., Tenishev, V. M., Tóth, G., van der Holst, B., Altwegg, K. European Planetary Science Congress 2013, held 8-13 September in London, UK. id.EPSC2013-87, 2013.
217. Water Production in Comets C/2011 L4 (PanSTARRS) and C/2012 F6 (Lemmon) with SOHO/SWAN. Combi, M., Bertaux, J.-L., Quémerais, E., Ferron, S., Mäkinen, J. T. T.,

DR. MICHAEL R. COMBI

- Aptekar, G. European Planetary Science Congress 2013, held 8-13 September in London, UK. id.EPSC2013-794, 2013.
218. Comet C/2012 S1 (ISON). Weaver, H., Feldman, P., McCandliss, S., A'Hearn, M., Combi, M., Dello Russo, N. Central Bureau Electronic Telegrams, 3680, 1 (2013). Edited by Green, D. W. E. 2013.
219. Kinetic modeling of the sodium distribution in the Hermean surface-bound exosphere. enishev, Valeriy, Combi, M. R., Jia, X., Rubin, M., Raines, J. American Astronomical Society, DPS meeting #45, #114.02, 2013.
220. Hot Carbon Corona in Mars' Upper Thermosphere and Exosphere. Lee, Yuni, Combi, M., Tenishev, V., Bougher, S. American Astronomical Society, DPS meeting #45, #313.19, 2013.
221. Ultraviolet Observations Of C/2012 S1 (ISON) By MAVEN. Crismani, Matteo, Schneider, N., Stewart, I., Combi, M., Fougere, N. American Astronomical Society, DPS meeting #45, #413.09, 2013.
222. Global 3D kinetic model of cometary rarefied atmosphere toward a description of the coma of Comet 103P/Hartley 2. Fougere, Nicolas, Combi, M. R., Tenishev, V. American Astronomical Society, DPS meeting #45, #413.21, 2013.
223. Direct Monte Carlo Simulations of Gas Flow from Enceladus' Nozzle-like Vents. Tucker, Orenthal, Combi, M. R., Tenishev, V. American Astronomical Society, DPS meeting #45, #416.02, 2013.
224. Capabilities to measure isotopic ratios in water at comet 67P/Churyumov-Gerasimenko with ROSINA/DFMS. Hässig, Myrtha, Altwegg, K., Balsiger, H., Berthelier, J., Calmonte, U., Combi, M. R., De Keyser, J., Fiethe, B., Fuselier, S. A., Rubin, M., ROSINA-Team. American Astronomical Society, DPS meeting #45, #505.08, 2013.
225. Comet C/2012 S1 (ISON). Lisse, C. M., Wolk, S. J., Christian, D. J., Dennerl, K., Bodewits, D., Combi, M. R., Lepri, S. T., Zurbuchen, T. H., Geophys, J., Opitom, C., Jehin, E., Manfroid, J., Gillon, M., Souza, W., Baroni, S., Granslo, B. H., Cernis, K., Paradowski, M. L., Chambo, J. J., Yoshimoto, K., Gonzalez, J. J., Bortle, J. E. Central Bureau Electronic Telegrams, 3719, 1 (2013). Edited by Green, D. W. E., 2013.
226. Comet C/2012 S1 (ISON). Combi, M. R., Bertaux, J.-L., Quemerais, E., Maekinen, J. T. T., Ferron, S. IAU Circ., 9266, 1 (2013). Edited by Green, D. W. E., 2013.
227. Solar wind interaction with Mars' upper atmosphere: Results from 3-D studies using one-way coupling between the Multifluid MHD, the M-GITM and the AMPS models C. Dong, S.W. Bougher, Y. Ma, G. Toth, Y. Lee, A.F. Nagy, V. Tenishev, D.J. Pawlowski, X. Meng, M.R. Combi. American Geophysical Union, Fall Meeting 2013, #P12A-01, 2013.
228. Hot Oxygen Corona in Mars' Upper Thermosphere and Exosphere: A Comparison of Results Using the MGITM and MTGCM Y. Lee, M.R. Combi, V. Tenishev, S.W. Bougher, American Geophysical Union, Fall Meeting 2013, #P21A-1684, 2013.
229. A numerical study of comet ISON near perihelion Y. Shou, M.R. Combi, X. Jia, K.C. Hansen, American Geophysical Union, Fall Meeting 2013, #P31A-1791, 2013.
230. Kinetic modeling of Europa's neutral atmosphere and pick-up ions V. Tenishev, M. Rubin, D. Borovikov, X. Jia, M.R. Combi, T.I. Gombosi, American Geophysical Union, Fall Meeting 2013, #P53A-1833, 2013.
231. Diffusion and thermal escape of CH<sub>4</sub> and H<sub>2</sub> from Titan's upper atmosphere: Direct Monte Carlo simulations O.J. Tucker, V. Tenishev, M.R. Combi, A.F. Nagy, R.E. Johnson, American Geophysical Union, Fall Meeting 2013, #P53C-1881, 2013.
232. Kinetic Modeling of Neutral and Ionized Sodium in the Moon's Exosphere. Tenishev, V., Rubin, M., Shou, Y., Combi, M. R. 45th Lunar and Planetary Science Conference, held 17-21 March, 2014 at The Woodlands, Texas. LPI Contribution No. 1777, p.1305, 2014.
233. Gas and Dust Redeposition on the Surface of Comet 67P/Churyumov-Gerasimenko. Rubin, M., Fougere, N., Altwegg, K., Combi, M. R., Le Roy, L., Tenishev, V. M., Thomas, N. 45th Lunar and Planetary Science Conference, held 17-21 March, 2014 at The Woodlands, Texas. LPI Contribution No. 1777, p.1860, 2014.

DR. MICHAEL R. COMBI

234. Chandra X-Ray Observatory Observations of Dynamically New Comet C/2012 S1 (ISON): First Detection of OVI Emission by the HRC-I from an X-Ray Bright Comet. Lisse, C. M., Christian, D. J., Wolk, S. J., Dennerl, K., Combi, M. R., Lepri, S. T., Zurbuchen, T. H. 45th Lunar and Planetary Science Conference, held 17-21 March, 2014 at The Woodlands, Texas. LPI Contribution No. 1777, p.2065, 2014.
235. Ultraviolet Spectroscopy of Comet ISON (2012 S1) with the Hubble Space Telescope. Weaver, H. A., A'Hearn, M. F., Bodewits, D., Combi, M. R., Dello Russo, N., Feldman, P. D., McCandliss, S. R. 45th Lunar and Planetary Science Conference, held 17-21 March, 2014 at The Woodlands, Texas. LPI Contribution No. 1777, p.2903, 2014.
236. Preliminary Inventory in the Early Coma of Comet 67P/Churyumov-Gerasimenko. Calmonte, Ursina, Altwegg, Kathrin, Le Roy, Léna, Rubin, Martin, Berthelier, Jean-Jacques, De Keyser, Johan, Fiethe, Björn, Fuselier, Steve A, Combi, Mike. American Astronomical Society, DPS meeting #46, #103.05, 2014.
237. NASA/IRTF, Chandra, and HST Observations of Comet C/2013 A1 (Siding Spring)'s Encounter with Mars. Lisse, Casey M., Li, Jian-Yang, Mutchler, Max, Wolk, Scott, Christian, Damian, Combi, Michael, Lepri, Susan, Zurbuchen, Thomas. American Astronomical Society, DPS meeting #46, #110.06, 2014.
238. The Water Production Rate of Recent Comets (2013-2014) by SOHO/SWAN: 2P/Encke (2013), C/2013 R1 (Lovejoy), and C/2013 A1 (Siding Spring). Combi, Michael R., Mäkinen, J. T., Bertaux, J. L., Quémerais, Eric, Ferron, Stéphane. American Astronomical Society, DPS meeting #46, #110.09, 2014.
239. Model Interpretation of Measured Water Rotational Temperatures and Column Abundances in the Coma of Comet C/2012 S1 (ISON). Fougere, Nicolas, Combi, Michael R., Bonev, Boncho P., Tenishev, Valeriy, Mumma, Michael J. American Astronomical Society, DPS meeting #46, #113.03, 2014.
240. Expected constraints on the outer solar system formation conditions from the Rosetta-ROSINA measurements. Mosis, Olivier, Altwegg, Kathrin, Bertaux, Jean-Loup, Berthelier, Jean-Jacques, Bieler, Andre, Bochslers, Peter, Briois, Christelle, Calmonte, Ursina, Combi, Michael R., De Keyser, Joan, Dhooghe, Frederik, Fiethe, Bjorn, Fuselier, Stephen A., Gasc, Sébastien, Gliem, Fritz, Gombosi, Tamas I., Haessig, Myrtha, Jäckel, Annette, Korth, Axel, Le Roy, Lena, Mall, Urs, Marty, Bernard, Mazelle, Christian, Owen, Tobias, Rème, Henri, Rubin, Martin, Sauvaud, Jean-André, Waite, Jack H., Wurz, Peter. American Astronomical Society, DPS meeting #46, #209.05, 2014.
241. Three-dimensional kinetic modeling of the near coma of comet 67P/Churyumov-Gerasimenko. Tenishev, Valeriy, Fougere, Nicolas, Bieler, Andre, Combi, Michael R., Gombosi, Tamas, Hansen, Kenneth, Altwegg, Kathrin, Rubin, Martin. American Astronomical Society, DPS meeting #46, #209.06, 2014.
242. Examining the Exobase Approximation: DSMC models of Titan's Thermosphere. Tucker, Orenthal, Tenishev, Valeriy M., Johnson, Robert E., Waalkes, William C., Combi, Michael R., Nagy, Andrew F. American Astronomical Society, DPS meeting #46, #211.17, 2014.
243. Impacts of the Martian crustal magnetic fields on the thermosphere, ionosphere, and hot oxygen corona. Lee, Yuni, Combi, Michael R., Tenishev, Valeriy, Bougher, Stephen W., Pawlowski, David, Franklin, Nathaniel. American Astronomical Society, DPS meeting #46, #306.01, 2014.
244. The Mars Magnetosphere in the Tail of Comet C/2013 A1(Siding Spring). Yingjuan Ma, Ying-Dong Jia, Christopher Russell, Andrew Nagy, Gabor Toth, Michael Combi, Roger Yelle, Chuanfei Dong, Stephen Bougher. American Geophysical Union, Fall Meeting 2013, #P43A-3971, 2014.
245. OH & H<sub>2</sub>O Production and Radial Distribution from Ultraviolet Observations of C/2013 A1 (Siding Spring) by MAVEN. Matteo Crismani, Nicholas Schneider, Justin Deigan, Ian Stewart, Michael Combi, Nicolas Fougere, Bruce Jakosky. American Geophysical Union, Fall Meeting 2013, # P43A-3974, 2014.

## DR. MICHAEL R. COMBI

246. A 3D Description of the Coma of Comet 67P/Churyumov-Gerasimenko Constrained by Rosetta Observations. Nicolas Fougere, Andre Bieler, Michael Combi, Tamas Gombosi, Kenneth Hansen, Xianzhe Jia, Yinsi Shou, Zhenguang Huang, Gabor Toth, Kathrin Altwegg, Peter Wurz, Hans Balsiger, Annette Jäckel, Lena Le Roy, Sébastien Gasc, Ursina Calmonte, Martin Rubin, Chia-yu Tzou, Myrtha Hässig, Stephen Fuselier, Johan De Keyser, Jean-Jacques Berthelier, Urs Mall, Henri Rème, Björn Fiethe. American Geophysical Union, Fall Meeting 2013, # P41C-3930, 2014.
247. Kinetic modeling of the composition and dynamics of volatile's distribution in Europa's exosphere. Valeriy Tenishev, Dmitry Borovikov, Orenthal Tucker, Michael Combi, Martin Rubin, Xianzhe Jia, Tamas Gombosi. American Geophysical Union, Fall Meeting 2013, # P53B-4011, 2014.
248. Direct Simulation Monte Carlo Modeling of the Spacecraft Environment of Rosetta. Andre Bieler, Valeriy Tenishev, Nicolas Fougere, Tamas Gombosi, Kenneth Hansen, Michael Combi, Zhenguang Huang, Xianzhe Jia, Gabor Toth, Kathrin Altwegg, Peter Wurz, Annette Jäckel, Lena Le Roy, Sébastien Gasc, Ursina Calmonte, Martin Rubin, Chia-yu Tzou, Myrtha Hässig, Stephen Fuselier, Johan De Keyser, Jean-Jacques Berthelier, Urs Mall, Henri Rème, Björn Fiethe, Hans Balsiger. American Geophysical Union, Fall Meeting 2013, # P41C-39313, 2014.
249. Subsurface Gas Flow and Ice Grain Acceleration within Enceladus and Europa Fissures: 2D DSMC Models. Orenthal Tucker, Michael Combi, Valeriy Tenishev. American Geophysical Union, Fall Meeting 2013, # P53B-4007, 2014.
250. Solar Wind Interaction with the Martian Upper Atmosphere at Early Mars/Extreme Solar Conditions. Chuanfei Dong, Stephen Bougher, Yingjuan Ma, Gabor Toth, Yuni Lee, Andrew Nagy, Valeriy Tenishev, David Pawlowski, Michael Combi. American Geophysical Union, Fall Meeting 2013, # P53C-4032, 2014.
251. Multifluid MHD Simulations of the Plasma Environment of Comet Churyumov-Gerasimenko at Different Heliocentric Distances. Zhenguang Huang, Xianzhe Jia, Martin Rubin, Nicolas Fougere, Tamas Gombosi, Valeriy Tenishev, Michael Combi, Andre Bieler, Gabor Toth, Kenneth Hansen, Yinsi Shou. American Geophysical Union, Fall Meeting 2013, # P41C-3928, 2014.
252. Multi-neutral-fluid model of comet 67P/Churyumov-Gerasimenko. Yinsi Shou, Michael Combi, Tamas Gombosi, Xianzhe Jia, Gabor Toth, Kenneth Hansen, Valeriy Tenishev, Nicolas Fougere. American Geophysical Union, Fall Meeting 2013, # P41C-3924A, 2014.
253. The Martian Hot Oxygen Corona at Ancient times. Yuni Lee, Michael Combi, Valeriy Tenishev, Stephen Bougher, Chuanfei Dong, David Pawlowski. American Geophysical Union, Fall Meeting 2013, # P32B-07 2014.
254. VIRTIS-Rosetta Observations of 67P/Churyumov-Gerasimenko Nucleus and Coma During the Mission Pre-Landing Phase. Fabrizio Capaccioni, Gianrico Filacchione, Stéphane Erard, Gabriele Arnold, Maria Teresa Capria, Maria Cristina De Sanctis, Federico Tosi, Mauro Ciarniello, Dominique Bockelée-Morvan, Cedric Leyrat, Ernesto Palomba, Giuseppe Piccioni, Andrea Raponi, Andrea Longobardo, Alessandra Migliorini, Eleonora Ammannito, Michael Combi, Uwe Fink, Thomas McCord, Robert Carlson, Ralf Jaumann, Pierre Drossart, Michelangelo Formisano, Bernard Schmitt, Alessandro Frigeri, Enrico Flamini. American Geophysical Union, Fall Meeting 2013, # P51G-06, 2014.
255. VIRTIS/Rosetta observations of the coma of comet 67P/Churyumov-Gerasimenko. Bockelee-Morvan, Dominique, Debout, Vincent, Erard, Stephane, Leyrat, Cedric, Capaccioni, Fabrizio, Filacchione, Gianrico, Drossart, Pierre, Arnold, Gabriele, Combi, Michael R., Piccioni, Giuseppe, Fougere, Nicolas, Encrenaz, Therese, VIRTIS team. IAU General Assembly, Meeting #29, #2255346, 2015.
256. Water production rates of recent comets (2014-2015) by SOHO/SWAN and the SOHO/SWAN survey. Combi, Michael R., Mäkinen, J. Teemu T., Bertaux, Jean-Loup, Quemerais, Eric, Ferron, Stephane, Wright, Courtney. IAU General Assembly, Meeting #29, #2248474, 2015.

DR. MICHAEL R. COMBI

257. UV illumination and photochemistry in the coma of 67P/Churyumov-Gerasimenko : Results from the Rosetta/ROSINA/DFMS Mass Spectrometer. De Keyser, Johan, Dhooghe, Frederik, Cessateur, Gaël, Maggiolo, Romain, Gunell, Herbert, Dominique, Marie, Calmonte, Ursina, Altwegg, Kathrin, Le Roy, Lena, Rubin, Martin, Berthelier, Jean-Jacques, Fiethe, Björn, Fuselier, Stephen, Combi, Michael EGU General Assembly 2015, held 12-17 April, 2015 in Vienna, Austria. id.9758, 2015.
258. The Heterogeneous Coma of Comet 67P/Churyumov-Gerasimenko from Rosetta Observations. Fougere, Nicolas, Tenishev, Valeriy, Bieler, Andre, Combi, Michael, Gombosi, Tamas, Toth, Gabor, Hansen, Kenneth, Shou, Yinsi, Huang, Zhenguang, Jia, Xianzhe, Rubin, Martin, Altwegg, Kathrin, Wurz, Peter, Balsiger, Hans, Jaeckel, Annette, Le Roy, Lena, Gasc, Sebastien, Calmonte, Ursina, Tzou, Chia-Yu, Hässig, Myrtha, Fuselier, Stephen, De Keyser, Johan, Berthelier, Jean-Jacques, Mall, Urs, Rème, Henri, Fiethe, Bjorn. EGU General Assembly 2015, held 12-17 April, 2015 in Vienna, Austria. id.4695, 2015.
259. Preliminary Inventory of the Coma at 67P/Churyumov-Gerasimenko and its Time Evolution. Calmonte, Ursina, Altwegg, Kathrin, Le Roy, Léna, Rubin, Martin, Berthelier, Jean-Jacques, De Keyser, Johan, Fiethe, Björn, Fuselier, Stephen, A., Combi, Mike. EGU General Assembly 2015, held 12-17 April, 2015 in Vienna, Austria. id.3852, 2015.
260. Subsurface Temperature of Comet 67P/C-G from ROSINA/DFMS? Luspay-Kuti, A., Haessig, M., Fuselier, S. A., Balsiger, H., Calmonte, U., Gasc, S., Jaeckel, A., LeRoy, L., Rubin, M., Semon, T., Tzou, C., Berthelier, J. J., De Keyser, J., Fiethe, B., Mall, U., Reme, H., Bieler, A., Combi, M., Gombosi, T., Mousis, O., Mandt, K. E. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2947, 2015.
261. MAVEN IUVS Observations of the Aftermath of Comet Siding Spring's Meteor Shower. Schneider, N. M., Stewart, A. I. F., McClintock, W. E., Mahaffy, P. R., Benna, M., Deighan, J., Jain, S. K., Stiepen, A., Elrod, M., Chaffin, M. H., Crismani, M., Plane, J., Sanchez, J. D. C., Yelle, R. V., Lo, D., Evans, J. S., Stevens, M. H., Combi, M., Clarke, J. T., Holsclaw, G. M., Montmessin, F., Jakosky, B. M. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2804, 2015.
262. Ultraviolet Observations of the Hydrogen Coma of Comet Siding Spring (C/2013 A1) by MAVEN/IUVS. Crismani, M., Schneider, N., Deigan, J., Stewart, I., Combi, M., Chaffin, M., Fougere, N., Jakosky, B. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2462, 2015.
263. A First Comparison Between First MAVEN Results and 3D Hot Oxygen Corona Model Predictions. Lee, Y., Combi, M. R., Tenishev, V., Bougher, S. W., Deighan, J., Schneider, N. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2055, 2015.
264. Detection of Transient Water Ice on Comet 67P/Churyumov-Gerasimenko. De Sanctis, M. C., Capaccioni, F., Filacchione, G., Ciarniello, M., Raponi, A., Tosi, F., Schmitt, B., Arnold, G., Erard, S., Bockelée-Morvan, D., Kührt, E., Mottola, S., Leyrat, C., Ammannito, E., Barucci, M. A., Beck, A., Capria, M. T., Combi, M., Drossart, P., Ip, W.-H., McCord, T. B., Quirico, E. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2021, 2015.
265. The Distribution of Gases in the Coma of Comet 67P/Churyumov-Gerasimenko from Rosetta Measurements. Combi, M. R., Fougere, N., Tenishev, V., Bieler, A., Altwegg, K., Berthelier, J. J., De Keyser, J., Fiethe, B., Fuselier, S. A., Gombosi, T. I., Hansen, K. C., Hässig, M., Huang, Z., Jia, X., Rubin, M., Shou, Y., Tzou, C.-Y., Rosetta Science Team. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.1714, 2015.
266. Photochemical Escape of Oxygen from the Martian Atmosphere: First Results from MAVEN. Lillis, R. J., Deighan, J. L., Fox, J. L., Bougher, S. W., Lee, Y., Combi, M., Leblanc, F., Cravens, T. E., Rahmati, A., Jakosky, B. M. 46th Lunar and Planetary

**DR. MICHAEL R. COMBI**

- Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.1568, 2015.
267. UV illumination and photochemistry in the coma of 67P/Churyumov-Gerasimenko : Results from the Rosetta/ROSINA/DFMS Mass Spectrometer. De Keyser, J., and 13 colleagues. EGU General Assembly Conference Abstracts 17, 9758. 2015.
268. The Heterogeneous Coma of Comet 67P/Churyumov-Gerasimenko from Rosetta Observations. Fougere, N., and 25 colleagues. EGU General Assembly Conference Abstracts 17, 4695. 2015.
269. Preliminary Inventory of the Coma at 67P/Churyumov-Gerasimenko and its Time Evolution. Calmonte, U., Altwegg, K., Le Roy, L., Rubin, M., Berthelier, J.-J., De Keyser, J., Fiethe, B., Fuselier, S., A., Combi, M. EGU General Assembly Conference Abstracts 17, 3852. 2015.
270. VIRTIS/Rosetta observations of the coma of comet 67P/Churyumov-Gerasimenko. Bockelee-Morvan, D., and 12 colleagues. IAU General Assembly 22, 55346. 2015.
271. Water production rates of recent comets (2014-2015) by SOHO/SWAN and the SOHO/SWAN survey. Combi, M. R., Mäkinen, J. T. T., Bertaux, J.-L., Quemerais, E., Ferron, S., Wright, C. IAU General Assembly 22, 48474. 2015.
272. Space Weather Phenomena at the Galilean Moons and Comets. Cessateur, G., and 16 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015</A>, id.EPSC2015-822 10, EPSC2015. 2015.
273. Minor species from comet 67P as measured from the VIRTIS-H instrument aboard Rosetta. Bockelee-Morvan, D., and 14 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015</A>, id.EPSC2015-581 10, EPSC2015. 2015.
274. Water and carbon dioxide sources on comet 67P nucleus as measured from the VIRTIS-H instrument aboard Rosetta. Bockelee-Morvan, D., and 14 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015</A>, id.EPSC2015-563 10, EPSC2015. 2015.
275. The volatile inventory of comet 67P/Churyumov-Gerasimenko from Rosetta/ROSINA at 3 AU. Le Roy, L., and 16 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015</A>, id.EPSC2015-462 10, EPSC2015. 2015.
276. Four-fluid MHD Simulations of the Plasma and Neutral Gas Environment of Comet Churyumov-Gerasimenko Near Perihelion. Huang, Z., and 11 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015</A>, id.EPSC2015-406 10, EPSC2015. 2015.
277. Analysis of dust in the coma of comet 67P using VIRTIS-M observations. Rinaldi, G., and 17 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <A href="http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015">

DR. MICHAEL R. COMBI

- <http://meetingorganizer.copernicus.org/EPSC2015>, id.EPSC2015-398 10, EPSC2015. 2015.
278. 3D DSMC Modeling of the Coma of Comet 67P/Churyumov-Gerasimenko Observed by the VIRTIS and ROSINA instruments. Fougere, N., and 19 colleagues. European Planetary Science Congress 2015, held 27 September - 2 October, 2015 in Nantes, France, Online at <http://meetingorganizer.copernicus.org/EPSC2015/EPSC2015>> <http://meetingorganizer.copernicus.org/EPSC2015>, id.EPSC2015-344 10, EPSC2015. 2015. Spatial-Spectral Studies of Cometary Volatiles and the Physical Environment of Inner Cometary Atmospheres. Bonev, B. P., Fougere, N., Villanueva, G. L., Mumma, M. J., Combi, M. R., DiSanti, M. A., Paganini, L., Cordiner, M., Gibb, E. L., Milam, S. N. AAS/Division for Planetary Sciences Meeting Abstracts 47, #506.06. 2015.
279. A Comet Engulfs Mars: MAVEN observations of Comet Siding Spring Effects on the Martian Magnetosphere. Espley, J. R., and 11 colleagues. AAS/Division for Planetary Sciences Meeting Abstracts 47, #505.04. 2015.
280. Impacts of an Interplanetary Coronal Mass Ejection and the Crustal Magnetic Fields to the Martian hot O corona. Lee, Y., Combi, M., Tenishev, V., Bougher, S. AAS/Division for Planetary Sciences Meeting Abstracts 47, #505.03. 2015.
281. Three-dimensional kinetic modeling of the neutral and charged dust in the coma of Rosetta's target comet 67P/Churyumov-Gerasimenko. Tenishev, V., and 13 colleagues. AAS/Division for Planetary Sciences Meeting Abstracts 47, #503.09. 2015.
282. Study of the characteristics of the grains in the coma background and in the jets in comet 67P/C-G, as observed by VIRTIS-M onboard of the Rosetta mission. Tozzi, G.-P., and 19 colleagues. AAS/Division for Planetary Sciences Meeting Abstracts 47, #503.07. 2015.
283. Water and carbon dioxide investigation in the inner coma of 67P/Churyumov-Gerasimenko. Migliorini, A., Piccioni, G., Capaccioni, F., Filacchione, G., Bockelée-Morvan, D., Erard, S., Leyrat, C., Combi, M., Fougere, N., De Sanctis, M. C. AAS/Division for Planetary Sciences Meeting Abstracts 47, #503.04. 2015.
284. The Plasma Environment in Comets Over a Wide Range of Heliocentric Distances: Application to Comet C/2006 P1 (McNaught). Shou, Y., Combi, M., Jia, Y., Gombosi, T., Toth, G., Rubin, M. AAS/Division for Planetary Sciences Meeting Abstracts 47, #415.19. 2015.
285. Water production rates of recent comets (2015) by SOHO/SWAN and the SOHO/SWAN survey. Combi, M. R., Mäkinen, J. T. T., Bertaux, J.-L., Quémerais, E., Ferron, S. AAS/Division for Planetary Sciences Meeting Abstracts 47, #413.14. 2015.
286. Modeling of the VIRTIS-M Observations of the Coma of Comet 67P/Churyumov-Gerasimenko. Fougere, N., and 27 colleagues. AAS/Division for Planetary Sciences Meeting Abstracts 47, #413.06. 2015.
287. Kinetic Modeling of the Neutral Gas, Ions, and Charged Dust in Europa's Exosphere. Tenishev, V., Borovikov, D., Rubin, M., Jia, X., Combi, M. R. American Geophysical Union, Fall Meeting 2015, abstract #P11C-2112.
288. A First Comparison between 3D Model Predictions of Mars' Oxygen Corona and Early MAVEN IUVS Observations. Lee, Y., Combi, M. R., Tenishev, V., Bougher, S. W., Deighan, J., Schneider, N. M., McClintock, W. E., Jakosky, B. M. American Geophysical Union, Fall Meeting 2015, abstract #P21A-2054
289. A multifluid magnetohydrodynamic simulation of the interaction between Jupiter's magnetosphere and its moon Europa. Rubin, M., Jia, X., Altwegg, K., Combi, M. R., Daldorff, L. K. S., Gombosi, T. I., Khurana, K. K., Kivelson, M., Tenishev, V., Toth, G., van der Holst, B., Wurz, P. American Geophysical Union, Fall Meeting 2015, abstract #P21B-01
290. Combining DSMC Simulations and ROSINA/COPS Data of Comet 67P/Churyumov-Gerasimenko to Develop a Realistic Empirical Coma Model and to Determine Accurate Production Rates. Hansen, K. C., Fougere, N., Bieler, A. M., Altwegg, K., Combi, M. R.,

DR. MICHAEL R. COMBI

- Gombosi, T. I., Huang, Z., Rubin, M., Tenishev, V., Toth, G., Tzou, C. Y. American Geophysical Union, Fall Meeting 2015, abstract #P31E-2104
291. Modeling of the Inner Coma of Comet 67P/Churyumov-Gerasimenko Constrained by VIRTIS and ROSINA Observations. Fougere, N., Combi, M. R., Tenishev, V., Bieler, A. M., Migliorini, A., Bockelée-Morvan, D., Toth, G., Huang, Z., Gombosi, T. I., Hansen, K. C., Capaccioni, F., Filacchione, G., Piccioni, G., Debout, V., Erard, S., Leyrat, C., Fink, U., Rubin, M., Altwegg, K., Tzou, C. Y., Le Roy, L., Calmonte, U., Berthelier, J. J., Rème, H., Hässig, M., Fuselier, S. A., Fiethe, B., De Keyser, J. American Geophysical Union, Fall Meeting 2015, abstract #P31E-2105
292. Halogens at Comet 67P/Churyumov-Gerasimenko seen with ROSINA-DFMS. Cessateur, G., Dhooghe, F., Altwegg, K., Berthelier, J. J., Briois, C., Calmonte, U., Combi, M. R., De Keyser, J., Equeter, E., Fiethe, B., Fuselier, S. A., Gibbons, A., Gombosi, T. I., Gunell, H., Hässig, M., Le Roy, L., Maggiolo, R., Mall, U., Marty, B., Neefs, E., Rubin, M., Sémon, T. American Geophysical Union, Fall Meeting 2015, abstract #P31E-2106
293. A study of the variation of physical conditions in the cometary coma based on a 3D multi-fluid model. Shou, Y., Combi, M. R., Fougere, N., Tenishev, V., Toth, G., Gombosi, T. I., Huang, Z., Jia, X., Bieler, A. M., Hansen, K. C. American Geophysical Union, Fall Meeting 2015, abstract #P31E-2114
294. Four-fluid MHD Simulations of the Plasma and Neutral Gas Environment of Comet Churyumov-Gerasimenko Near Perihelion. Huang, Z., Toth, G., Gombosi, T. I., Jia, X., Rubin, M., Hansen, K. C., Fougere, N., Bieler, A. M., Shou, Y., Altwegg, K., Combi, M. R., Tenishev, V. American Geophysical Union, Fall Meeting 2015, abstract #P31E-2116
295. Evolution of H<sub>2</sub>O related species in the neutral coma of 67P. Bieler, A. M., Altwegg, K., Balsiger, H. R., Bar-Nun, A., Berthelier, J. J., Bochsler, P. A., Briois, C., Calmonte, U., Combi, M. R., De Keyser, J., van Dishoeck, E., Fiethe, B., Fuselier, S. A., Gasc, S., Gombosi, T. I., Hansen, K. C., Hässig, M., Jäckel, A., Kopp, E., Korth, A., Le Roy, L., Mall, U., Maggiolo, R., Marty, B., Mousis, O., Owen, T. C., Rème, H., Rubin, M., Sémon, T., Tzou, C. Y., Waite, J. H., Jr., Walsh, C., Wurz, P. American Geophysical Union, Fall Meeting 2015, abstract #P33E-01
296. VIRTIS/Rosetta Observes Comet 67P/Churyumov-Gerasimenko: Nucleus and Coma Derived Composition and Physical Properties. Capaccioni, F., Filacchione, G., Erard, S., Arnold, G., De Sanctis, M. C., Bockelée-Morvan, D., Leyrat, C., Tosi, F., Ciarniello, M., Raponi, A., Migliorini, A., Quirico, E., Rinaldi, G., Schmitt, B., Carlson, R. W., Combi, M. R., Fink, U., Tozzi, G. P., Palomba, E., Longobardo, A., Formisano, M., Debout, V., Drossart, P., Piccioni, G., Fougere, N. American Geophysical Union, Fall Meeting 2015, abstract #P33E-04
297. Comet 73P Measurements of Solar Wind Interactions, Cometary Ion Pickup, and Spatial Distribution. Gilbert, J. A., Lepri, S. T., Rubin, M., Combi, M. R., Zurbuchen, T. American Geophysical Union, Fall Meeting 2015, abstract #P52A-07
298. Four-fluid MHD Simulations of the Plasma and Neutral Gas Environment of Comet 67P/Churyumov-Gerasimenko Near Perihelion. Huang, Zhenguang, Toth, Gabor, Gombosi, Tamas, Jia, Xianzhe, Rubin, Martin, Fougere, Nicolas, Tenishev, Valeriy, Combi, Michael, Bieler, Andre, Hansen, Kenneth, Shou, Yinsi, Altwegg, Kathrin. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.2214
299. A thermal model of Rosetta/ROSINA/DFMS to assess the effects of solar illumination and thermal inertia of the mass spectrometer on mass spectra at 67P/Churyumov-Gerasimenko. De Keyser, Johan, Gibbons, Andrew, Neefs, Eddy, Equeter, Eddy, Dhooghe, Frederik, Maggiolo, Romain, Cessateur, Gaël, Gunell, Herbert, Altwegg, Kathrin, Berthelier, Jean-Jacques, Briois, Christelle, Calmonte, Ursina, Combi, Michael R., Fiethe, Björn, Fuselier, Stephen, Gombosi, Tamas, Hässig, Myrththa, Le Roy, Léna, Rubin, Martin, Sémon, Thierry. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.2763
300. Relationship between inner coma water emissions and ice deposits in comet 67P/Churyumov-Gerasimenko. Migliorini, Alessandra, Filacchione, Gianrico, De



DR. MICHAEL R. COMBI

- Sanctis, Maria Cristina, Capaccioni, Fabrizio, Piccioni, Giuseppe, Bockelée-Morvan, Dominique, Erard, Stephane, Leyrat, Cedric, Ciarniello, Mauro, Combi, Michael, Fougere, Nicolas, Taylor, Fred. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.7911
301. Photochemistry of O(1D) and O(1S) lines in the coma of 67P/Churyumov-Gerasimenko. Cessateur, Gaël, De Keyser, Johan, Maggiolo, Romain, Gibbons, Andrew, Gronoff, Guillaume, Gunell, Herbert, Dhooghe, Frederik, Loreau, Jérôme, Vaeck, Nathalie, Altwegg, Kathrin, Bieler, Andre, Briois, Christelle, Calmonte, Ursina, Combi, Michael, Fuselier, Stephen, Gombosi, Tamas, Haessig, Myrtha, Le Roy, Lena, Neefs, Eddy, Rubin, Martin. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.13043
302. Variation of the water production rate of comet C/2013 US10 (Catalina) from SOHO/SWAN observations throughout its apparition. Combi, Michael, Mäkinen, Terhi, Bertaux, Jean-Loup, Quémerais, Eric, Ferron, Stéphane. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.17532
303. The Coma of Comet 67P/Churyumov-Gerasimenko Pre- and Post- Equinox. Fougere, Nicolas, Altwegg, Kathrin, Berthelier, Jean-Jacques, Bieler, Andre, Bockelee-Morvan, Dominique, Calmonte, Ursina, Capaccioni, Fabrizio, Combi, Mike, Dekeyser, Johan, Debout, Vincent, Erard, Stephane, Fiethe, Bjorn, Fillacchione, Gianrico, Fink, Uwe, Fuselier, Stephen, Gombosi, Tamas, Hansen, Kenneth, Hassig, Myrtha, Huang, Zhenguang, Leroy, Lena, Leyrat, Cedric, Migliorini, Alessandra, Piccioni, Giuseppe, Rinaldi, Giovanna, Rubin, Martin, Tennishev, Valeriy, Toth, Gabor, Tzou, Chia-Yu, Shou, Yinsi. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.17897
304. Pre- and Post-equinox ROSINA production rates calculated using a realistic empirical coma model derived from AMPS-DSMC simulations of comet 67P/Churyumov-Gerasimenko. Hansen, Kenneth, Altwegg, Kathrin, Berthelier, Jean-Jacques, Bieler, Andre, Calmonte, Ursina, Combi, Michael, De Keyser, Johan, Fiethe, Björn, Fougere, Nicolas, Fuselier, Stephen, Gombosi, Tamas, Hässig, Myrtha, Huang, Zhenguang, Le Roy, Lena, Rubin, Martin, Tennishev, Valeriy, Toth, Gabor, Tzou, Chia-Yu. EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.17905
305. Ion composition at comet 67P near perihelion: Rosetta/ROSINA measurements and modeling. Beth, Arnaud, Altwegg, Kathrin, Balsiger, Hans, Berthelier, Jean-Jacques, Calmonte, Ursina, Combi, Michael R., De Keyser, Johan, Dhooghe, Frederik, Fiethe, Björn, Fuselier, Stephen, Galand, Marina, Gasc, Sébastien, Gombosi, T. I., Hansen, Kenneth C., Hässig, Myrtha, Héritier, Kévin, Kopp, Ernest, Le Roy, Léna, Peroy, Solène, Rubin, Martin, Sémon, Thierry, Tzou, Chia-Yu, Vigren, Erik. American Astronomical Society, DPS meeting #48, id.116.06, 2016.
306. Direct Simulation Monte-Carlo Modeling of the Major Volatile Species of Comet 67P/Churyumov-Gerasimenko observed by ROSINA and VIRTIS. Fougere, Nicolas, Altwegg, Kathrin, Berthelier, Jean-Jacques, Bieler, Andre, Bockelee-Morvan, Dominique, Calmonte, Ursina, Capaccioni, Fabrizio, Combi, Michael R., De Keyser, Johan, Debout, Vincent, Erard, Stéphane, Fiethe, Björn, Filacchione, Gianrico, Fink, Uwe, Fuselier, Stephen, Gombosi, T. I., Hansen, Kenneth C., Hässig, Myrtha, Huang, Zhenguang, Le Roy, Léna, Migliorini, Alessandra, Piccioni, Giuseppe, Rinaldi, Giovanna, Rubin, Martin, Shou, Yinsi, Tennishev, Valeriy, Toth, Gabor, Tzou, Chia-Yu, VIRTIS Team and ROSINA Team. American Astronomical Society, DPS meeting #48, id.116.10, 2016.
307. A Possible Mechanism for the Formation of Magnetic Field Dropouts Observed by RPC-MAG in the Inner Coma of Comet 67P/Churyumov-Gerasimenko. Huang, Zhenguang, Toth, Gabor, Gombosi, T. I., Bieler, Andre, Combi, Michael R., Hansen, Kenneth C., Jia, Xianzhe, Fougere, Nicolas, Shou, Yinsi, Cravens, Thomas, Tennishev, Valeriy, Rubin, Martin, Altwegg, Kathrin. American Astronomical Society, DPS meeting #48, id.116.20, 2016.
308. An empirical model of H<sub>2</sub>O, CO<sub>2</sub> and CO coma distributions and production rates for comet 67P/Churyumov-Gerasimenko based on ROSINA/DFMS measurements and AMPS-

## DR. MICHAEL R. COMBI

- DSMC simulations. Hansen, Kenneth C., Altwegg, Kathrin, Bieler, Andre, Berthelier, Jean-Jacques, Calmonte, Ursina, Combi, Michael R., De Keyser, Johan, Fiethe, Björn, Fougere, Nicolas, Fuselier, Stephen, Gombosi, T. I., Hässig, Myrtha, Huang, Zhenguang, Le Roy, Léna, Rubin, Martin, Tenishev, Valeriy, Toth, Gabor, Tzou, Chia-Yu, ROSINA Team. American Astronomical Society, DPS meeting #48, id.116.23, 2016.
309. The outburst sequence of 67/P on 2015 September 13 as seen by VIRTIS/Rosetta. Rinaldi, Giovanna, Bockelee-Morvan, Dominique, Leyrat, Cedric, Capaccioni, Fabrizio, Filacchione, Gianrico, Érard, Stéphane, Steckloff, Jordan, Tozzi, Gian-Paolo, Fink, Uwe, Dose, Lyn, Piccioni, Giuseppe, Capria, Maria Teresa, Combi, Michael R., De Sanctis, Maria Cristina, Kappel, David, Longobardo, Andrea, Migliorini, Alessandra, Palomba, Ernesto, Taylor, Fredric W., Tosi, Federico, VIRTIS-Team. American Astronomical Society, DPS meeting #48, id.206.05, 2016.
310. Investigating the correlations between water coma emissions and active regions in comet 67P/ Churyumov-Gerasimenko. Migliorini, Alessandra, Filacchione, Gianrico, Capaccioni, Fabrizio, Piccioni, Giuseppe, Bockelee-Morvan, Dominique, Érard, Stéphane, Leyrat, Cedric, Combi, Michael R., Fougere, Nicolas, Rinaldi, Giovanna, VIRTIS Team. American Astronomical Society, DPS meeting #48, id.206.08, 2016.
311. A new 3D multi-fluid model: a study of kinetic effects and variations of physical conditions in the cometary coma. Shou, Yinsi, Combi, Michael R., Toth, Gabor, Huang, Zhenguang, Jia, Xianzhe, Fougere, Nicolas, Tenishev, Valeriy, Gombosi, T. I., Hansen, Kenneth C., Bieler, Andre. American Astronomical Society, DPS meeting #48, id.217.05, 2016.
312. Variation of the water production rate of comet C/2013 X1 (PanSTARRS) from SOHO/SWAN observations throughout its apparition. Combi, Michael R., Makinen, Terhi, Bertaux, Jean-Loup, Quémerais, Eric, Ferron, Stephane. American Astronomical Society, DPS meeting #48, id.217.07, 2016.
313. A Comparison between 3D Model Predictions for Martian Exospheric Hot Oxygen and MAVEN IUVS observations: Sensitivity to Model Parameters. Lee, Yuni, Combi, Michael R., Tenishev, Valeriy, Bougher, Stephen W., Deighan, Justin, Schneider, Nicholas M., McClintock, William, Jakosky, Bruce, Johnson, Robert E., Tully, Catherine T. American Astronomical Society, DPS meeting #48, id.220.01, 2016.
314. Far-ultraviolet Spectroscopy of Recent Comets with the Cosmic Origins Spectrograph on the Hubble Space Telescope. Feldman, Paul D., Weaver, Harold A., A'Hearn, Michael F., Combi, Michael R., Dello Russo, Neil. American Astronomical Society, DPS meeting #48, id.308.05, 2016.
315. Distribution and escape of the major neutral species from Titan's atmosphere. Tenishev, Valeriy, Tucker, Orenthal, Borovikov, Dmitry, Combi, Michael R. American Astronomical Society, DPS meeting #48, id.424.02, 2016.
316. Seasonal evolution of comet 67P activity from Rosetta/VIRTIS-H observations. Bockelée-Morvan, D., Crovisier, J., Erard, S., Capaccioni, F., Leyrat, C., Filacchione, G., Drossart, P., Encrenaz, T., Biver, N., De Sanctis, M. C., Schmitt, B., Kühr, E., Capria, M. T., Combes, M., Combi, M., Fougere, N., Arnold, G., Fink, U., Ip, W.-H., Migliorini, A., Piccioni, G., Tozzi, G. Comets Symposium: A new vision after Rosetta and Philae, Toulouse 14-18 November 2016.
317. CN and OH emissions in the 67P/Churyumov-Gerasimenko coma with Rosetta/VIRTIS-M spectrometer. Migliorini, A., Filacchione, G., Capaccioni, F., Piccioni, G., Bockelee-Morvan, D., Erard, S., Leyrat, C., Combi, M., Fougere, N. Comets Symposium: A new vision after Rosetta and Philae, Toulouse 14-18 November 2016.
318. A Comparison between 3D Model Results Using Two Different Collision Schemes: Forward Scattering vs. Hard Sphere Collision. Lee, Y., Combi, M. R., Tenishev, V., Bougher, S. W., Johnson, R. E., Tully, C. American Geophysical Union, Fall General Assembly 2016, abstract #P13A-1900, 2016.
319. Photochemical escape of oxygen from Mars: constraints from MAVEN in situ measurements. Lillis, R. J., Deighan, J., Fox, J. L., Bougher, S. W., Lee, Y., Cravens, T., Rahmati, A., Mahaffy, P. R., Andersson, L., Combi, M. R., Benna, M., Jakosky, B. M.,

**DR. MICHAEL R. COMBI**

- Gröller, H., American Geophysical Union, Fall General Assembly 2016, abstract #P13A-1906, 2016.
320. Increased electron pressure as possible origin of magnetic field dropouts observed by RPC-MAG of comet 67P/Churyumov-Gerasimenko. Huang, Z., Toth, G., Gombosi, T. I., Bieler, A. M., Combi, M. R., Hansen, K. C., Jia, X., Fougere, N., Shou, Y., Cravens, T., Tenishev, V., Altwegg, K., Rubin, M., American Geophysical Union, Fall General Assembly 2016, abstract #P43A-2091, 2016.
321. A new 3D multi-fluid dust model: a study of the effects of activity and nucleus rotation on the dust grains' behavior in the cometary environment. Shou, Y., Combi, M. R., Toth, G., Fougere, N., Tenishev, V., Huang, Z., Jia, X., Hansen, K. C., Gombosi, T. I., Bieler, A. M., Rubin, M., American Geophysical Union, Fall General Assembly 2016, abstract #P43A-2099, 2016.
322. Noble gases Ar, Kr and Xe measured in the coma of Comet 67P/Churyumov-Gerasimenko: implications to early solar system formation. Balsiger, H. R., Altwegg, K., Bar-Nun, A., Berthelier, J. J., Bieler, A. M., Bochsler, P., Briois, C., Calmonte, U., Combi, M. R., De Keyser, J., Fiethe, B., Fuselier, S. A., Gasc, S., Gombosi, T. I., Hansen, K. C., Hässig, M., Kopp, E., Korth, A., Le Roy, L., Mall, U., Marty, B., Mouis, O., Owen, T. C., Reme, H., Rubin, M., Semon, T., Tzou, C. Y., Waite, J. H., Jr., Wurz, P., American Geophysical Union, Fall General Assembly 2016, abstract #P43D-08, 2016.
323. Ion and neutral populations in Europa's exosphere. Tenishev, V., Borovikov, D., Rubin, M., Jia, X., Combi, M. R., American Geophysical Union, Fall General Assembly 2016, abstract #SM34A-04, 2016.
324. Photochemical Escape of the Martian Atmosphere, Today and through Time. Lillis, R. J., Deighan, J., Fox, J. L., Bougher, S. W., Lee, Y., Combi, M., Leblanc, F., Cravens, T. E., Rahmati, A., Jakosky, B. M., The Sixth International Workshop on the Mars Atmosphere: Modelling and observation was held on January 17-20 2017, in Granada, Spain, 2017.
325. Photochemical Escape of Oxygen from Mars: Consequences for Climate History. Lillis, R. J., Deighan, J., Fox, J. L., Bougher, S. W., Lee, Y., Combi, M., Leblanc, F., Cravens, T. E., Rahmati, A., Grolller, H., Jakosky, B. M., 48th Lunar and Planetary Science Conference, held 20-24 March 2017, at The Woodlands, Texas. LPI Contribution No. 1964, id.1793, 2017.
326. Constraining the Water Production Rate and Impact on Mars' Ionosphere of Comet Siding Spring. Mayyasi, M., Clarke, J., Bhattacharyya, D., Mendillo, M., Combi, M., Fougere, N., Quemerais, E., Katushkina, O., Benna, M., Schneider, N., European Planetary Science Congress 2017, held 17-22 September, 2017 in Riga Latvia, id. EPSC2017-309, 2017.
327. The Inner Coma Physical Environments of Ecliptic Comets 45P/Honda-Mrkos-Pajdusakova, 2P/Encke, and 41P/Tuttle-Giacobini-Kresak Revealed Through Long-Slit Spectroscopy at NASA IRTF. Bonev, Boncho P., DiSanti, Michael A., Roth, Nathan, Dello Russo, Neil, Vervack, Ronald J., Gibb, Erika L., Villanueva, Geronimo Luis, Combi, Michael R., Fougere, Nicolas, Kawakita, Hideyo, McKay, Adam J., Saki, Mohammad, Cordiner, Martin, Protopapa, Silvia, de Val-Borro, Miguel, American Astronomical Society, DPS meeting #49, id.414.06., 2017.
328. Water production rates of recent comets (2016-2017) by SOHO/SWAN: 2P/Encke, 41P/Tuttle-Giacobini-Kresak, 45P/ Honda-Mrkos-Pajdusakova, and C/2015 ER61 (PanSTARRS). Combi, Michael R., Mäkinen, Terhi, Bertaux, Jean-Loup, Quémerais, Eric, Ferron, Stephane, American Astronomical Society, DPS meeting #49, id.414.07, 2017.
329. Surface Activity Distributions of Comet 67P/Churyumov-Gerasimenko Derived from VIRTIS Images. Fougere, Nicolas, Combi, Michael R., Tenishev, Valeriy, Migliorini, Alessandra, Bockelee-Morvan, Dominique, Fink, Uwe, Filacchione, Gianrico, Rinaldi, Giovanna, Capaccioni, Fabrizio, Toth, Gabor, Gombosi, T. I., Hansen, Kenneth C.,

## DR. MICHAEL R. COMBI

- Huang, Zhenguang, Shou, Yinsi, VIRTIS Team, American Astronomical Society, DPS meeting #49, id.415.01, 2017.
330. Spatial and Temporal Variations of Atomic Species in the Coma of Comet 67P/Churyumov-Gerasimenko as Observed by Rosetta's ALICE UV Spectrograph during Great Circle Scans. Knight, Matthew M., Weaver, Harold A., Vervack, Ronald J., A'Hearn, Michael, Bertaux, Jean-Loup, Feaga, Lori M., Feldman, Paul D., Parker, Joel Wm., Schindhelm, Eric, Steffl, Andrew J., Stern, S. Alan, Bieler, Andre, Combi, Michael R., Fougere, Nicolas, Keeney, Brian A., Medina, Richard, Noonan, John, Pineau, Jon, Versteeg, Maarten H., American Astronomical Society, DPS meeting #49, id.509.04, 2017.
331. Analysis of the ROSINA/COPS end-of-mission measurements of the coma of comet 67P/Churyumov-Gerasimenko. Tenishev, Valeriy, Combi, Michael R., Fougere, Nicolas, Rubin, Martin, Tzou, Chia-Yu, Shou, Yinsi, Gombosi, T. I., Altwegg, Kathrin, Huang, Zhenguang, Toth, Gabor, Hansen, Kenneth C., American Astronomical Society, DPS meeting #49, id.509.05, 2017.
332. Photochemical Escape of Oxygen from Mars: Consequences for Climate History. Lillis, R. J., Deighan, J., Fox, J. L., Bougher, S. W., Lee, Y., Combi, M., Leblanc, F., Chaufray, J.-Y., Cravens, T. E., Rahmati, A., Groller, H., Yelle, R., Jakosky, B. M., Fourth International Conference on Early Mars: Geologic, Hydrologic, and Climatic Evolution and the Implications for Life, Proceedings of the conference held 2-6 October, 2017 in Flagstaff, Arizona. LPI Contribution No. 2014, 2017, id.3023, 2017.
333. Huang, Z., Toth, G., Gombosi, T. I., Jia, X., Hansen, K. C., Combi, M. R., Tenishev, V., Shou, Y., Fougere, N., Rubin, M., Altwegg, K. Five-moment multi-fluid plasma simulation for comet 67P/Churyumov-Gerasimenko. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2629, 2017.
334. Hoang, M., Garnier, P., Lasue, J., Reme, H., Altwegg, K., Balsiger, H. R., Bieler, A. M., Calmonte, U., Capria, M. T., Combi, M. R., De Keyser, J. M., Fiethe, B., Fougere, N., Fuselier, S. A., Galli, A., Gasc, S., Gombosi, T. I., Hansen, K. C., Jäckel, A., Korth, A., Mall, U., Migliorini, A., Rubin, M., Sémon, T., Tzou, C. Y., Waite, J. H., Jr., Wurz, P. 2 years with comet 67P/Churyumov-Gerasimenko: H<sub>2</sub>O, CO<sub>2</sub>, CO as seen by ROSINA RTOF. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2630, 2017.
335. Tenishev, V., Fougere, N., Rubin, M., Tzou, C. Y., Combi, M. R., Altwegg, K., Gombosi, T. I., Shou, Y., Huang, Z., Hansen, K. C., Toth, G. End-of-mission ROSINA/COPS measurements as a probe of the innermost coma of comet 67P/Churyumov-Gerasimenko. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2634, 2017.
336. Combi, M. R., Mäkinen, T., Bertaux, J. L., Quemerais, E., Ferron, S. The SOHO/SWAN Survey of Water Production in 61 Comets. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2639, 2017.
337. Shou, Y., Combi, M. R., Tenishev, V., Toth, G., Hansen, K. C., Huang, Z., Gombosi, T. I., Fougere, N., Rubin, M. A new hybrid particle/fluid model for cometary dust. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2641, 2017.
338. Fougere, N., Combi, M. R., Tenishev, V., Migliorini, A., Bockelée-Morvan, D., Fink, U., Filacchione, G., Rinaldi, G., Capaccioni, F., Toth, G., Gombosi, T. I., Hansen, K. C., Huang, Z., Shou, Y. Surface Activity Distributions of Comet 67P/Churyumov-Gerasimenko Derived from VIRTIS Images. American Geophysical Union, Fall Meeting 2017, abstract #P51D-2642, 2017.
339. Rubin, M., Altwegg, K., Balsiger, H. R., Berthelier, J. J., Briouis, C., Combi, M. R., De Keyser, J., Fiethe, B., Fuselier, S. A., Gasc, S., Gombosi, T. I., Hansen, K. C., Jäckel, A., Kopp, E., Korth, A., Mall, U., Marty, B., Mousis, O., Owen, T., Reme, H., Schuhmann, M., Schroeder, I. R. H. G., Semon, T., Tzou, C. Y., Waite, J. H., Jr., Wurz, P. The Noble Gas Abundances in the Coma of Comet 67P/Churyumov-Gerasimenko from Rosetta/ROSINA. American Geophysical Union, Fall Meeting 2017, abstract #P54D-02, 2017.
340. Hansen, K. C., Altwegg, K., Berthelier, J. J., Combi, M. R., De Keyser, J., Fiethe, B., Fougere, N., Fuselier, S. A., Gombosi, T. I., Huang, Z., Rubin, M., Tenishev, V., Toth,

## DR. MICHAEL R. COMBI

- G., Tzou, C. Y. Gas Production at Comet 67P/Churyumov-Gerasimenko as Measured by the ROSINA Instrument: Long Term Trends and Correlations with H<sub>2</sub>O and CO<sub>2</sub>. American Geophysical Union, Fall Meeting 2017, abstract #P54D-03, 2017.
341. Tennishev, V., Gombosi, T. I., Combi, M. R., Borovikov, D., Regoli, L. Distribution and Energization of the Heavy Ions in Saturn's Magnetosphere. American Geophysical Union, Fall Meeting 2017, abstract #SM33C-2690, 2017. 342. Lee, Y., Mahaffy, P. R., Benna, M., Bougher, S. W., Ma, Y., Fang, X., Dong, C., Tennishev, V., Pawlowski, D. J., Combi, M. R. Variability of the Martian Ionospheric Peak and Hot O Corona - Observations and Simulation. American Geophysical Union, Fall Meeting 2018, abstract #P43K-3913, 2018.
343. Shou, Y., Combi, M. R., Fougere, N., Tennishev, V., Migliorini, A., Fink, U., Capaccioni, F., Filacchione, G., Bockelée-Morvan, D. Determining the volatile surface activity of comet 67P/CG from Rosetta remote sensing measurements. American Geophysical Union, Fall Meeting 2018, abstract #P23G-3528, 2018.
344. Lee, Yuni, Dong, Chuanfei, Pawlowski, David, Thiemann, Edward, Tennishev, Valeriy, Mahaffy, Paul, Benna, Mehdi, Combi, Michael, Bougher, Stephen, Eparvier, Francis. Effects of a Solar Flare on the Martian Hot O Corona and Photochemical Escape. American Astronomical Society, DPS meeting #50, id.313.06, 2018.
345. Snios, Bradford, Dunn, William R., Lisse, Carey M., Branduardi-Raymont, Graziella, Dennerl, Konrad, Bhardwaj, Anil, Gladstone, G. Randall, Nulsen, Susan, Bodewits, Dennis, Jackman, Caitriona M., Alvarado-Gómez, Julián D., Bunce, Emma J., Combi, Michael R., Cravens, Thomas E., Cumbee, Renata S., Drake, Jeremy J., Elsner, Ronald F., Grodent, Denis, Hong, Jae Sub, Kharchenko, Vasili Kraft, Ralph P., Marler, Joan P., Moschou, Sofia P., Mullen, Patrick D., Wolk, Scott J., Yao, Zhonghua. X-rays Studies of the Solar System. Bulletin of the American Astronomical Society, Vol. 51, Issue 3, id. 25, 2019.
346. Feaga, Lori M., Sunshine, Jessica, Bonev, Boncho, Dello Russo, Neil, Combi, Michael, Groussin, Olivier, DiSanti, Michael. Spatial heterogeneities of organic gases in the coma of 103P/Hartley 2. EPSC-DPS Joint Meeting 2019, held 15-20 September 2019 in Geneva, Switzerland, id. EPSC-DPS2019-384, 2019.
347. Gibb, Erika, Roth, Nathan, Bonev, Boncho, DiSanti, Michael, Dello Russo, Neil, Vervack, Ronald, McKay, Adam, Kawakita, Hideyo, Saki, Mahammad, Biver, Nicholas, Bockelee-Morvan, Dominique, Cochran, Anita, Combi, Michael, Cordiner, Martin, Crovisier, Jacques, Feaga, Lori, Fougere, Nicolas, Protopapa, Silva, Shou, Yinsi. Volatile Compositions of Short Period Comets 2P/Encke and 21P/Giacobini-Zinner Across Apparitions. EPSC-DPS Joint Meeting 2019, held 15-20 September 2019 in Geneva, Switzerland, id. EPSC-DPS2019-818, 2019.
348. Bonev, Boncho, Dello Russo, Neil, DiSanti, Michael, Martin, Emily, Doppmann, Gregory, Vervack, Ronald, Jr., Villanueva, Geronimo, Kawakita, Hideyo, Gibb, Erika, Roth, Nathan, Saki, Mohammad, Bodewits, Dennis, Combi, Michael, McKay, Adam, Crovisier, Jacques, Biver, Nicolas, Cordiner, Martin, Cochran, Anita. Volatile composition and outgassing in comet 46P/Wirtanen: Keck 2 observations with the newly upgraded NIRSPEC instrument. EPSC-DPS Joint Meeting 2019, held 15-20 September 2019 in Geneva, Switzerland, id. EPSC-DPS2019-955, 2019.
349. Ma, Y., Combi, M. R., Bougher, S. W., Tennishev, V., Shou, Y. The Effects of the Upper Atmosphere and Corona on the Solar Wind Interaction with Venus. American Geophysical Union, Fall Meeting 2019, abstract #P33H-3512, 2019.
350. Combi, M. R., Shou, Y., Feaga, L. M., Tennishev, V. Determining the potential surface distribution of CO<sub>2</sub> and H<sub>2</sub>O on the nucleus of comet 103P/Hartley 2 from EPOXI IR images. American Geophysical Union, Fall Meeting 2019, abstract #P43C-3479, 2019.
351. Shou, Y., Combi, M. R., Fougere, N., Tennishev, V., Migliorini, A., Fink, U., Capaccioni, F., Bockelée-Morvan, D., Filacchione, G. Determining the volatile surface activity of comet 67P/CG from Rosetta remote sensing measurements. American Geophysical Union, Fall Meeting 2019, abstract #P43C-3480, 2019.

**DR. MICHAEL R. COMBI**

352. Rubin, M., Altwegg, K., Balsiger, H., Berthelier, J. J., Combi, M. R., De Keyser, J., Drozdovskaya, M. N., Fiethe, B., Fuselier, S. A., Gasc, S., Gombosi, T. I., Hänni, N. P., Hansen, K. C., Mall, U., Reme, H., Schroeder, I. R. H. G., Schuhmann, M., Semon, T., Waite, J. H., Jr., Wampfler, S. F. Wurz, P. The Carbon Content in Comet 67P/Churyumov-Gerasimenko from Rosetta/ROSINA. American Geophysical Union, Fall Meeting 2019, abstract #P43C-3489, 2019.