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Education

Ph. D. in Astronomy, Cornell University, Ithaca, NY 14853 January 1985
M. S. in Astronomy, Cornell University May 1982
B. A. in Physics and Mathematics, Oberlin College, Oberlin, OH 44074 May 1979

Selected Research Programs and Publications

New Horizons Jupiter Encounter Science Team 2003–2007

- M. R. Showalter, et al. 2007. Clump detections and limits on moons in Jupiter's ring system. *Science* 318, 232–234.
- J. R. Spencer, et al. 2007. Io volcanism seen by New Horizons: A major eruption of the Tvashtar volcano. *Science* 318, 240–243.

Hubble Space Telescope: Uranus 2003–present

- M. R. Showalter and J. J. Lissauer 2006. The second ring-moon system of Uranus: Discovery and dynamics. *Science* 311, 973–977.
- I. de Pater, H. B. Hammel, S. G. Gibbard and M. R. Showalter 2006. New dust belts of Uranus: One ring, two ring, red ring, blue ring. *Science* 312, 92–94.

Hubble Space Telescope: Jupiter 2002–2003

- M. R. Showalter, I. de Pater, G. Verbanac, D. P. Hamilton, and J. A. Burns 2008. Properties and dynamics of Jupiter's gossamer rings from Galileo, Voyager, Hubble and Keck images. *Icarus* 195, 361–377.

Cassini CIRS Team Associate 2000–present

- L. J. Spilker, et al. 2006. Cassini thermal observations of Saturn's main rings: Implications for particle rotation and vertical mixing. *Plan. Space Sci.* 54, 1167–1176.
- F. M. Flasar, et al. 2004. Exploring the Saturn system in the thermal infrared: The Composite Infrared Spectrometer. *Space Sci. Rev.* 115, 169–297.

Hubble Space Telescope: Mars 1999–2000

- M. R. Showalter, D. P. Hamilton, and P. D. Nicholson 2006. A deep search for Martian dust rings and inner moons using the Hubble Space Telescope. *Plan. Space Sci.* 54, 844–854.

The Rings Node for the Planetary Data System 1993–present

- <http://pds-rings.seti.org/>

Planetary Geology and Geophysics

1993–present

- I. de Pater, M. R. Showalter, and B. Macintosh 2008. Structure of the Jovian ring from Keck observations during RPX 2002–2003. *Icarus* **195**, in press.
- I. de Pater, H. B. Hammel, M. R. Showalter, and M. A. van Dam 2007. The dark side of the rings of Uranus. *Science* **317**, 1888–1890.
- A. Verbiscer, R. French, M. Showalter, and P. Helfenstein 2007. Enceladus: Cosmic graffiti artist caught in the act. *Science* **315**, 815.
- M. R. Showalter 2005. Saturn’s F ring becomes curiouser and curiouser. *Science* **310**.
- M. R. Showalter 2004. Disentangling Saturn’s F Ring. I. Clump orbits and lifetimes. *Icarus* **171**, 356–371.
- J. A. Burns, et al. 2004. Jupiter’s Ring-Moon System. In *Jupiter: The Planet, Satellites and Magnetosphere* (F. Bagenal, Ed.), Cambridge U. Press, pp. 241–262.
- I. de Pater, S. C. Martin and M. R. Showalter 2004. Keck near-infrared observations of Saturn’s E and G Rings during Earth’s ring plane crossing in August 1995. *Icarus* **172**, 446–454.
- J. A. Burns, D. P. Hamilton and M. R. Showalter 2002. Bejeweled Worlds. *Scientific American* **286**, No. 2, pp. 52–61.
- J. A. Burns, D. P. Hamilton, and M. R. Showalter 2001. Dusty rings and circum-planetary dust: Observations and simple physics. In *Interplanetary Dust* (E. Grün et al., Eds.), Springer-Verlag, Berlin, pp. 641–725.
- J. A. Burns, et al. 1999. The formation of Jupiter’s faint rings. *Science* **284**, 1146–1150.
- M. R. Showalter 1998. Detection of centimeter-sized meteoroid impact events in Saturn’s F Ring. *Science* **282**, 1099–1102.
- M. R. Showalter 1996. Saturn’s D Ring in the Voyager images. *Icarus* **124**, 677–689.
- M. R. Showalter 1995. Arcs and clumps in the Uranian λ ring. *Science* **267**, 490–493.
- M. R. Showalter and J. N. Cuzzi 1993. Seeing ghosts: Photometry of Saturn’s G Ring. *Icarus* **103**, 124–143.

Additional Research

- M. M. Hedman, et al. 2007. Saturn’s dynamic D ring. *Icarus* **188**, 89–107.
- R. H. Brown, et al. 2006. Observations in the Saturn system during approach and orbital insertion, with Cassini’s visual and infrared mapping spectrometer (VIMS). *Astron. Astrophys.* **446**, 707–716.
- P. D. Nicholson, et al. 1996. Observations of Saturn’s ring plane crossings in August and November 1995. *Science* **272**, 509–515.
- M. R. Showalter 1991. Visual detection of 1981S13, Saturn’s eighteenth satellite, and its role in the Encke Gap. *Nature* **351**, 709–713.
- M. R. Showalter, J. N. Cuzzi and S. M. Larson 1991. Structure and particle properties of Saturn’s E Ring. *Icarus* **94**, 451–473.
- M. R. Showalter and P. D. Nicholson 1990. Saturn’s rings through a microscope: Particle size constraints from the Voyager PPS scan. *Icarus* **87**, 285–306.
- M. R. Showalter, J. N. Cuzzi, E. A. Marouf and L. W. Esposito 1986. Satellite “wakes” and the orbit of the Encke Gap moonlet. *Icarus* **66**, 297–323.
- M. R. Showalter, J. A. Burns, J. N. Cuzzi and J. B. Pollack 1985. The discovery of Jupiter’s ‘gossamer’ ring. *Nature* **316**, 526–528.