

Margaret Kivelson is Distinguished Professor of Space Physics, Emerita, at UCLA. She has held appointments in the Institute of Geophysics and Planetary Physics (Acting Director: 1999-2000) and the Department of Earth and Space Sciences (Chair: 1984-1987) at UCLA where she served from 1967 to her retirement in 2009. She is currently also a Research Professor in the Department of Atmospheric, Oceanic, and Space Sciences at the University of Michigan (2010-).

Kivelson obtained her A.B. in 1950 and her A.M. and Ph.D. in 1952 and 1957, respectively, from Radcliffe College, Harvard University. She was awarded a Guggenheim Fellowship (1973-74), the Radcliffe Graduate Society Medal (1983), the Harvard University 350th Anniversary Alumni Medal (1986), several NASA Group Achievement Awards, the Alfvén medal of the European Geophysical Union, the Fleming medal of the American Geophysical Union and memberships in the American Academy of Arts and Sciences, the National Academy of Sciences (Councilor 2007-2010) and the American Philosophical Society. She is an elected Fellow of the American Geophysical Union, the American Physical Society, the International Academy of Astronautics, the American Association for the Advancement of Science and the Royal Astronomical Society (Great Britain). She has served on numerous advisory committees including the Space Studies Board of the National Research Council and on scientific Visiting Committees at Harvard, the University of Michigan, and various campuses of the University of California and the Jet Propulsion Laboratory.

Kivelson's research interests are in the areas of solar terrestrial physics and planetary science. Her recent research has focused on Earth, Jupiter, Saturn and Jupiter's Galilean moons. She was the Principal Investigator for the Magnetometer on the Galileo Orbiter that acquired data in Jupiter's magnetosphere for eight years and is a Co-I on various other investigations including the FGM (magnetometer) of the NASA-ESA Cluster mission and NASA's Themis mission and is a member of the Cassini magnetometer team.

Kivelson has published more than 340 research papers and is co-editor of a widely used textbook on space physics. In addition to her frequent presentations at university seminars and professional conferences, she has discussed space research with K-12 students and other general audiences. She has been active in efforts to identify the barriers faced by women as students, faculty and practitioners of the physical sciences and to improve the environment in which they function.

Details of CV from 2008 through spring 2012

HONORS AND AWARDS

2008: "Honor Adviser of the Editorial Committee" of the *J. of Chinese Space Sciences*.
2008: THEMIS team Group Achievement Award, (NASA Administrator Michael Griffin,).
2009 Editors' Citation (AGU) for Excellence in Refereeing: *Geophysical Research Letters*.
2010: Distinguished Achievement, Horace Mann School Alumni Association, New York.
2010: Editors' Citation for Excellence in Refereeing: *Journal of Geophysical Research*.
2010: Honorary Fellow of the Royal Astronomical Society. Kivelson, short biography **APPOINTMENT**
2010- : Research Professor (part time), University of Michigan, Ann Arbor, MI.

COMMITTEE SERVICE

2007-2010: Council of the National Academy of Sciences
also: Membership Committee and Committee on Scientific Programs.
2009-. Committee to Review and Assess Science Programs, JPL,
2009: Program Committee, Magnetospheres of the Outer Planets.
2010-2013: Plasma Science Committee, NRC.
2010- : Emeriti Relations Committee, Department of Earth and Space Sciences.

INVITED TALKS

1. Theories of Rotating Periodicities, Magnetospheres of the Outer Planets 2009, Cologne, Germany
2. Global MHD Simulations of Ganymede's Magnetosphere and Their Comparison with Observations, Magnetospheres of the Outer Planets 2009, Cologne, Germany,
3. Moons and Rings and the Plasmas of Their Environments, 308-FRI-O0830-1306, IAGA 11th Scientific Assembly 2009, Sopron, Hungary.
4. Learning about Earth's plasma processes from studies of other magnetospheres" Invited Plenary Talk, GEM Summer Workshop, Snowmass, CO. June 2010.
5. Jovian and Saturnian magnetospheric plasma interactions with their satellites, 5th Alfvén Conference on "Plasma interaction with non-magnetized planets/moons and its influence on planetary evolution" Sapporo, Japan: 4-8 October, 2010.
6. "Periodicities in Saturn's Magnetosphere: A Riddle Wrapped in a Mystery, Inside an Enigma", 2010 Fall Meeting, AGU, San Francisco, Dec 13-17, 2010.
7. "Magnetospheres of Planets and Moons: Links to Their Ionospheres" 2010 Fall Meeting, AGU, San Francisco, Dec 13-17, 2010.
8. Giant magnetospheres - small moons: Who's in the driver's seat?," EGU2011-2799, Vienna, Austria, April 2011.
9. "Magnetosphere: Structure and Dynamics," MOP, Boston University, July 2011.
10. "Can magnetospheric measurements provide insight into internal period?," Meeting on upper atmosphere, Caltech, March, 2011.
11. "Planetary Magnetospheres, or Adventures in Parameter Space" Inner Magnetosphere Coupling II Conference, Los Angeles, CA 19-22 March, 2012.

SEMINARS

1. "Periodicity at Saturn: Fields, Particles, Radio Emission, UCLA Space Physics Seminar, Nov. 4, 2009.
2. "Stirring Saturn's magnetosphere with vortical winds in the upper atmosphere" Observatory of Paris, Meudon, 10 October 2011
3. "Driving Saturn's magnetospheric periodicities from its upper atmosphere", IGPP Seminar, Oct. 18, 2011

PUBLISHED PAPERS (from 2008)

1. Kivelson, M.G. (2008), The Rest of the Solar System, *Annu. Rev. Earth Planet. Sci.*. First published online as a Review, in Advance on December 18, 2007, ANRV341-EA36-01.
2. Kivelson, M.G., and A.J. Ridley (2008), Saturation of the polar cap potential: Inference from Alfvén wing arguments, *J. Geophys. Res.*, *113*, A05214, doi:10.1029/2007JA012302. (IGPP Pub. No.6339).
3. Matthaeus, W.H., J.M. Weygand, P. Chuychai, S. Dasso, C.W. Smith, and M.G. Kivelson (2008), Interplanetary magnetic Taylor microscale and implications for the plasma dissipation, *The Astrophysics Journal*, *678*: L141.
4. Jia, X., R.J. Walker, M.G. Kivelson, K.K. Khurana, and J.A. Linker (2008), Three-dimensional MHD simulations of Ganymede's magnetosphere, *J. Geophys. Res.*, *113*, A06212, doi: 10.1029/2007JA012748
5. Dasso, S., W.H. Matthaeus, J.M. Weygand, P. Chuychai, L.J. Milano, C.W. Smith, and M.G. Kivelson (2008), ACE/Wind multispacecraft analysis of the magnetic correlation in the solar wind, *Proceedings of the 30th International Cosmic Ray Conference*, Vol. 1 (SH), pages 625–628, Mexico City, Mexico.
6. H. Zhang, K.K. Khurana, M.G. Kivelson, V. Angelopoulos, Z.Y. Pu, Q.-G. Zong, J. Liu and X.-Z. Zhou (2008), Modeling a force-free flux-transfer event probed by multiple THEMIS spacecraft, *J. Geophys. Res.*, *113*, A00C05, doi:10.1029/2008JA013451.

7. Kivelson, M.G. (2008), The Rest of the Solar System, *Annu. Rev. Earth Planet. Sci.*. First published online as a Review, in Advance on December 18, 2007, ANRV341-EA36-01.
8. Kivelson, M.G., and A.J. Ridley (2008), Saturation of the polar cap potential: Inference from Alfvén wing arguments, *J. Geophys. Res.*, *113*, A05214, doi:10.1029/2007JA012302. (IGPP Pub. No.6339).
9. Matthaeus, W.H., J.M. Weygand, P. Chuychai, S. Dasso, C.W. Smith, and M.G. Kivelson (2008), Interplanetary magnetic Taylor microscale and implications for the plasma dissipation, *The Astrophysics Journal*, *678*: L141
10. Jia, X., R.J. Walker, M.G. Kivelson, K.K. Khurana, and J.A. Linker (2008), Three-dimensional MHD simulations of Ganymede's magnetosphere, *J. Geophys. Res.*, *113*, A06212, doi: 10.1029/2007JA012748.
11. Dasso, S., W.H. Matthaeus, J.M. Weygand, P. Chuychai, L.J. Milano, C.W. Smith, and M.G. Kivelson (2008), ACE/Wind multispacecraft analysis of the magnetic correlation in the solar wind, *Proceedings of the 30th International Cosmic Ray Conference*, Vol. 1 (SH), pages 625–628, Mexico City, Mexico.
12. H. Zhang, K.K. Khurana, M.G. Kivelson, V. Angelopoulos, Z.Y. Pu, Q.-G. Zong, J. Liu and X.-Z. Zhou (2008), Modeling a force-free flux-transfer event probed by multiple THEMIS spacecraft, *J. Geophys. Res.*, *113*, A00C05, doi:10.1029/2008JA013451
13. Southwood, D.J., and M.G. Kivelson (2009), The source of Saturn's periodic radio emission, *J. Geophys. Res.* *114*, A09201, doi:10.1029/2008JA013800.
14. Weygand, J.M., W. H. Matthaeus, S. Dasso, and M.G. Kivelson (2009), Anisotropy of the Taylor scale and the correlation scale in plasma sheet and solar wind magnetic field fluctuations, *J. Geophys. Res.*, *114*, A07213, doi:10.1029/2008JA013766 (IGPP Pub. No. 6388).
15. Blanc, M., Y. Alibert, N. Andre, S. Atreya, R. Beebe, W. Benz, S.J. Bolton, A. Coradini, A. Coustenis, V. Dehant, M. Dougherty, P. Drossart, M. Fujimoto, O. Grasset, L. Gurvits, P. Hartogh, H. Hussmann, Y. Kasaba, M. Kivelson, K. Khurana,
29. Nazarova, K., M. Kivelson, and J. Heirtzler, Valery Troitskaya (1917–2010) (obituary) *Eos Trans. AGU*, *91*, 16, doi:10.1029/2010EO160004, 201, 2010.
30. Vogt, M. F., M. G. Kivelson, K. K. Khurana, R. J. Walker, B. Bonfond, D. Grodent, and A. Radioti (2011), Improved mapping of Jupiter's auroral features to magnetospheric sources, *J. Geophys. Res.*, *116*, A03220, doi:10.1029/2010JA016148.
31. Ashour-Abdalla, M., M. El-Alaoui, M. L. Goldstein, M. Zhou, D. Schriver, R. Richard, R. Walker, M. G. Kivelson and K.-J. Hwang (2011), Observations and simulations of non-local acceleration of electrons in magnetotail magnetic reconnection events, *Nature Physics*, *7*, 360–365, doi:10.1038/nphys1903.
32. Went, D.R., M.G. Kivelson, N. Achilleos, C.S. Arridge, and M.K. Dougherty (2011), Outer magnetospheric structure: Jupiter and Saturn compared, *J. Geophys. Res.*, *116*, A04224, doi:10.1029/2010JA016045.
33. Khurana, K.K, X. Jia, M.G. Kivelson, F. Nimmo, G. Schubert and C.T. Russell (2011), Evidence of a global magma ocean in Io's interior, *Science*, *332*, 1186, DOI: 10.1126/Science. 1201415.
34. Blanc, M., Alibert, Y., André, N., Atreya, S., Beebe, R., Benz, W., Bolton, S.J., Coradini, A., Coustenis, A., Dehant, V., Dougherty, M., Drossart, P., Fujimoto, M., Grasset, O., Gurvits, L., Hartogh, P., Hussmann, H., Kasaba, Y., Kivelson, M., Khurana, K., Krupp, N., Louarn, P., Lunine, J., McGrath, M., Mimoun, D., Mousis, O., Oberst, J., Okada, T., Pappalardo, R., Prieto-Ballesteros, O., Prieur, D., Regnier, P., Roos-Serote, M., Sasaki, S., Schubert, G., Sotin, C., Spilker, T., Takahashi, Y., Takashima, T., Tosi, F., Turrini, D., Van Hoolst, T., Zelenyi, L.(2009), LAPLACE: A mission to Europa and the Jupiter system for ESA's Cosmic Vision programme, *Experimental Astronomy*, *23*, 849 - 892.

35. Weygand, J. M., W. H. Matthaeus, S. Dasso, and M. G. Kivelson (2011), Correlation and Taylor scale variability in the interplanetary magnetic field fluctuations as a function of solar wind speed, *J. Geophys. Res.*, *116*, A08102, doi:10.1029/2011JA016621.
36. Zhang, H., M.G. Kivelson, V. Angelopoulos, K.K. Khurana, R. J., Walker, Y. D. Jia, J. McFadden, and H.U. Auster (2011), Flow vortices associated with flux transfer events moving along the magnetopause: Observations and an MHD simulation, *J. Geophys. Res.*, doi:10.1029/2011JA016500.
37. Jiang, F., M. G. Kivelson, R. J. Walker, K. K. Khurana, V. Angelopoulos, and T. Hsu (2011), A statistical study of the inner edge of the electron plasma sheet and the net convection potential as a function of geomagnetic activity, *J. Geophys. Res.*, *116*, A06215, doi:10.1029/2010JA016179.
38. Khurana, K.K, X. Jia, M.G. Kivelson, F. Nimmo, G. Schubert and C.T. Russell (2011), Evidence of a global magma ocean in Io's interior, *Science*, doi:10.1126/Science.
39. Gao, Y., M. G. Kivelson, A. J. Ridley, J. M. Weygand, R. J. Walker (2012), Long-term variation of driven and unloading effects on polar cap dynamics, *J. Geophys. Res.*, A02203, doi:10.1029/2011JA017149.
40. Jia, X., M. G. Kivelson and T. I. Gombosi (2012), Driving Saturn's magnetospheric periodicities from the upper atmosphere/ionosphere, *J. Geophys. Res.*, A04215, 2011JA017367.
41. Jia, X., K. C. Hansen, T. I. Gombosi, M. G. Kivelson, G. Tóth, D. L. DeZeeuw, and A. J. Ridley (2012), Magnetospheric configuration and dynamics of Saturn's magnetosphere: A global MHD simulation, *J. Geophys. Res.*, *117*, A05225, doi:10.1029/2012JA017575.
42. Zhang, H., M. G. Kivelson, V. Angelopoulos, K. K. Khurana, Z. Y. Pu, R. J. Walker, R. L. McPherron, T.-S. Hsu, Q. G. Zong, and T. Phan (2012), Generation and properties of in vivo flux transfer events, *J. Geophys. Res.*, *117*, A05224, doi:10.1029/2011JA017166.
43. Gao, Y., M. G. Kivelson, R. J. Walker, and J. M. Weygand (2012), Long-term variation of driven and unloading effects on polar cap dynamics, *J. Geophys. Res.*, *117*, A02203, doi:10.1029/2011JA017149.
44. Gao, Y., M. G. Kivelson, and R. J. Walker (2012), The linear dependence of polar cap index on its controlling factors in solar wind and magnetotail, *J. Geophys. Res.*, *117*, A05213, doi:10.1029/2011JA017229.
45. Hartinger, M., V. Angelopoulos, M. B. Moldwin, Y. Nishimura, D. L. Turner, K.-H. Glassmeier, M. G. Kivelson, J. Matzka, and C. Stolle (2012), Observations of a Pc5 global (cavity/waveguide) mode outside the plasmasphere by THEMIS, *J. Geophys. Res.*, *117*, A06202, doi:10.1029/2011JA017266.
46. Jiang, F., R. J. Strangeway, M. G. Kivelson, J. M. Weygand, R. J. Walker, K. K. Khurana, Y. Nishimura, V. Angelopoulos, and E. Donovan (2012), In-situ observations of the "preexisting auroral arc" by THEMIS All Sky Imagers and the FAST spacecraft: *J. Geophys. Res.*, *117*, doi:10.1029/2011JA017128.

PRESENTATIONS AT CONFERENCES

MGK is coauthor of 78 abstracts of talks or posters presented at meetings from 2008 to the present and has presented multiple talks presented at spacecraft project meetings.

Ph.D. STUDENTS SUPERVISED (and completion years)

Steve Joy, 2009 (Now at: UCLA)

Marissa Vogt, 2012 (now at University of Leicester as a Postdoctoral Fellow)

POSTDOCTORAL SCHOLARS SUPERVISED

Bertrand Bonfond, 2010-2011 (Now at University of Liege, Belgium).

Hui Zhang, 2006-2011 (Now at Geophysical Institute, Beijing, China).