

Yuki Harada

Assistant Professor

Department of Geophysics, Kyoto University

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Education:

- Ph.D. in Science, 2014, Graduate School of Science, Kyoto University, Thesis title: *Interactions of Earth's Magnetotail Plasma with the Surface, Plasma, and Magnetic Anomalies of the Moon*
- M.S. in Geophysics, 2011, Graduate School of Science, Kyoto University
- B.S., 2009, Department of Geophysics, Kyoto University

Research Experience:

- 2018 – present: Assistant Professor, Kyoto University
- 2017 – 2018: Assistant Research Scientist, University of Iowa
- 2014 – 2017: Postdoctoral Scholar, SSL/Univ. of California, Berkeley

Technical Experience:

- Programming: IDL, Fortran, C.
- Data analysis experience: Kaguya PACE/LMAG, ARTEMIS ESA/FGM/EFI/SCM, Chandrayaan-1 SWIM/CENA, WIND 3DP, MAVEN SWIA/STATIC/SWEA/MAG/LPW, Mars Express/MARSIS

Professional Societies and Activities:

- Reviewer for professional journals: *Geophysical Research Letters*, *Journal of Geophysical Research: Space Physics*, *Earth, Planets and Space*
- Member: Society of Geomagnetism and Earth, Planetary and Space Science (SGEPSS), Japan Geoscience Union (JpGU), American Geophysical Union (AGU)

Research Interests:

- Plasma dynamics at unmagnetized and weakly-magnetized bodies
- Plasma-surface interaction in space

Awards:

- 2019 Editors' Citation for Excellence in Refereeing for JGR-Space Physics
- NASA Group Achievement Award for MAVEN Science Team, June 2016
- NASA RHG Exceptional Achievement for Science for MAVEN Science Team, March 2016
- Outstanding Master's Thesis Award, Department of Geophysics, Graduate School of Science, Kyoto University, February 2011
- SGEPSS Student Presentation Award (Aurora Medal), Society of Geomagnetism and Earth, Planetary and Space Sciences Fall Meeting, May 2010

Invited Presentations and Seminars:

Harada, Y., Plasma Environments of the Moon and Mercury, 21st Symposium on Planetary Sciences, 2020-02-18, Sendai, Japan

Harada, Y., Solar wind and plasma environment of the Moon, ISSI workshop on Surface Bounded Exospheres and Interactions in the Solar System, 2020-01-21, Bern, Switzerland

Harada, Y., The Foremoon: A Complex Upstream Region of the Moon, Space Physics Seminar, 2016-02-12, UCLA

Harada, Y., Y. Futaana, S. Barabash, M. Wieser, P. Wurz, A. Bhardwaj, K. Asamura, Y. Saito, S. Yokota, H. Tsunakawa, S. Machida, Terrestrial Plasma Sheet Interactions with Lunar Magnetic Anomalies: Chandrayaan-1 and Kaguya Observations, AOGS 11th Annual Meeting, PS01-A009, 2014-07-30, Sapporo, Japan

Harada, Y., S. Machida, Y. Saito, S. Yokota, K. Asamura, M. N. Nishino, H. Tsunakawa, H. Shibuya, F. Takahashi, M. Matsushima, and H. Shimizu, Small-scale Magnetic Fields on the Lunar Surface Inferred from Plasma Sheet Electrons, SELENE Symposium 2013, 2013-01-23, Sagamihara, Japan

Publications:

Xu, S., A. R. Poppe, J. S. Halekas, **Y. Harada**, Reflected protons in the lunar wake and their effects on wake potentials, *J. Geophys. Res. Space Physics*, 125, <https://doi.org/10.1029/2020JA028154>, 2020.

Nishino, M. N., Y. Saito, H. Tsunakawa, **Y. Harada**, F. Takahashi, S. Yokota, M. Matsushima, H. Shibuya, H. Shimizu, Y. Miyashita, Decrease of the interplanetary magnetic field strength on the lunar dayside and over the polar region, *Icarus*, <https://doi.org/10.1016/j.icarus.2019.113392>, 2019.

Harada, Y., S. Ruhunusiri, J. S. Halekas, J. Espley, G. A. DiBraccio, J. P. McFadden, D. L. Mitchell, C. Mazelle, G. Collinson, D. A. Brain, T. Hara, M. Nosé, S. Oimatsu, K. Yamamoto, and B. M. Jakosky, Locally generated ULF waves in the Martian magnetosphere: MAVEN observations, *J. Geophys. Res. Space Physics*, 124, <https://doi.org/10.1029/2019JA027312>, 2019.

Xu, S. A. R. Poppe, J. S. Halekas, D. L. Mitchell, J. P. McFadden, and **Y. Harada**, Mapping the lunar wake potential structure with ARTEMIS data. *Journal of Geophysical Research: Space Physics*, 124, 3360–3377, <https://doi.org/10.1029/2019JA026536>, 2019.

Angelopoulos, V., P. Cruce, A. Drozdov, E. W. Grimes, N. Hatzigeorgiu, D. A. King, D. Larson, J. W. Lewis, J. M. McTiernan, D. A. Roberts, C. L. Russell, T. Hori, Y. Kasahara, A. Kumamoto, A. Matsuoka, Y. Miyashita, Y. Miyoshi, I. Shinohara, M. Teramoto, J. B. Faden, A. J. Halford, M. McCarthy, R. M. Millan, J. G. Sample, D. M. Smith, L. A. Woodger, A. Masson, A. A. Narock, K. Asamura, T. F. Chang, C.-Y. Chiang, Y. Kazama, K. Keika, S. Matsuda, T. Segawa, K. Seki, M. Shoji, S. W. Y. Tam, N. Umemura, B.-J. Wang, S.-Y. Wang, R. Redmon, J. V. Rodriguez, H. J. Singer, J. Vandegriff, S. Abe, M. Nose, A. Shinbori, Y.-M. Tanaka, S. UeNo, L. Andersson, P. Dunn, C. Fowler, J. S. Halekas, T. Hara, **Y. Harada**, C. O. Lee, R. Lillis, D. L. Mitchell, M. R. Argall, K. Bromund, J. L. Burch, I. J. Cohen, M. Galloy, B. Giles, A. N. Jaynes, O. Le Contel, M. Oka, T. D. Phan, B. M. Walsh, J. Westlake, F. D. Wilder, S. D. Bale, R. Livi, M. Pulupa, P. Whittlesey, A. DeWolfé, B. Harter, E. Lucas, U. Auster, J. W. Bonnell, C. M. Cully, E. Donovan, R. E. Ergun, H. U. Frey, B. Jackel, A. Keiling, H. Korth, J. P. McFadden, Y. Nishimura, F. Plaschke, P. Robert, D. L. Turner, J. M. Weygand, R. M. Candey, R. C. Johnson, T. Kovalick, M. H. Liu, R. E.

- McGuire, A. Breneman, K. Kersten, P. Schroeder, The Space Physics Environment Data Analysis System (SPEDAS), *Space Sci. Rev.*, <https://doi.org/10.1007/s11214-018-0576-4>, 2019.
- Ruhunusiri, S., J. S. Halekas, J. R. Espley, F. Eparvier, D. Brain, C. Mazelle, **Y. Harada**, G. A. DiBraccio, Y. Dong, Y. Ma, E. M. B. Thiemann, D. L. Mitchell, and B. M. Jakosky, An Artificial Neural Network for Inferring Solar Wind Proxies at Mars, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2018GL079282>, 2018.
- Xu, S., D. L. Mitchell, J. P. McFadden, G. Collinson, **Y. Harada**, R. Lillis, C. Mazelle, and J. E. P. Connerney, Field-aligned potentials at Mars from MAVEN observations, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2018GL080136>, 2018.
- Soobiah, Y. I. J., J. R. Espley, J. E. P. Connerney, J. R. Gruesbeck, G. A. DiBraccio, J. S. Halekas, L. Andersson, C. M. Fowler, R. J. Lillis, D. L. Mitchell, C. Mazelle, **Y. Harada**, T. Hara, G. Collinson, D. Brain, S. Xu, S. M. Curry, J. P. Mcfadden, M. Benna, B. M. Jakosky, MAVEN case studies of plasma dynamics in low altitude crustal magnetic field at Mars 1: Dayside ion spikes associated with radial crustal magnetic fields, *J. Geophys. Res.*, <https://doi.org/10.1029/2018JA025569>, 2018.
- Halekas, J. S., A. R. Poppe, **Y. Harada**, J. W. Bonnell, R. E. Ergun, J. P. McFadden, A Tenuous Lunar Ionosphere in the Geomagnetic Tail, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2018GL079936>, 2018.
- Jakosky, B. M., 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. Correira, 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. Yiğit, R. Zurek, Loss of the martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time, *Icarus*, [doi:10.1016/j.icarus.2018.05.030](https://doi.org/10.1016/j.icarus.2018.05.030), 2018.
- Ma, Y., C. T. Russell, G. Toth, Y. Chen, A. F. Nagy, **Y. Harada**, J. McFadden, J. S. Halekas, R. Lillis, J. E. P. Connerney, J. Espley, G. A. DiBraccio, S. Markidis, I. B. Peng, X. Fang, and B. M. Jakosky, Reconnection in the Martian Magnetotail: Hall-MHD with Embedded Particle-in-Cell Simulations, *J. Geophys. Res.*, 2018.
- Hara, T., J. G. Luhmann, F. Leblanc, S. M. Curry, K. Seki, D. A. Brain, **Y. Harada**, J. P. McFadden, G. A. DiBraccio, Y. Soobiah, D. L. Mitchell, S. Xu, C. Mazelle, and B. M.

- Jakosky, Evidence for crustal magnetic field control of ions precipitating into the upper atmosphere of Mars, *J. Geophys. Res.*, 2018.
- Fowler, C. M., L. Andersson, R. E. Ergun, **Y. Harada**, T. Hara, G. Collinson, W. K. Peterson, J. Espley, J. S. Halekas, J. P. McFadden, D. L. Mitchell, C. Mazelle, M. Benna, and B. M. Jakosky, MAVEN observations of solar wind driven magnetosonic waves heating the Martian dayside ionosphere, *J. Geophys. Res.*, 2018.
- DiBraccio, G. A., J. G. Luhmann, S. M. Curry, J. R. Espley, S. Xu, D. L. Mitchell, Y. J. Ma, C. Dong, J. R. Gruesbeck, J. E.P. Connerney, **Y. Harada**, S. Ruhunusiri, J. S. Halekas, Y. Soobiah, T. Hara, D. A. Brain, and B. M. Jakosky, The Twisted Configuration of the Martian Magnetotail: MAVEN Observations, *Geophys. Res. Lett.*, 2018.
- Ruhunusiri, S., J. S. Halekas, J. R. Espley, F. Eparvier, D. Brain, C. Mazelle, **Y. Harada**, G. A. DiBraccio, E. M. B. Thiemann, D. E. Larson, D. L. Mitchell, B. M. Jakosky, and A. Sulaiman, Seasonal variations of one Hertz waves at Mars: MAVEN observations, *J. Geophys. Res.*, 2018.
- Harada, Y.**, J. S. Halekas, G. A. DiBraccio, S. Xu, J. Espley, J. P. McFadden, D. L. Mitchell, C. Mazelle, D. A. Brain, T. Hara, Y. J. Ma, S. Ruhunusiri, and B. M. Jakosky, Magnetic reconnection on dayside crustal magnetic fields at Mars: MAVEN observations, *Geophys. Res. Lett.*, doi:10.1002/2018GL077281, 2018.
- Harada, Y.**, D. A. Gurnett, A. J. Kopf, J. S. Halekas, S. Ruhunusiri, G. A. DiBraccio, J. Espley, and D. A. Brain, MARSIS observations of the Martian nightside ionosphere during the September 2017 solar event, *Geophys. Res. Lett.*, doi:10.1002/2018GL077622, 2018.
- Harada Y.**, D. A. Gurnett, A. J. Kopf, J. S. Halekas, and S. Ruhunusiri, Ionospheric irregularities at Mars probed by MARSIS topside sounding, *J. Geophys. Res.*, 123, doi:10.1002/2017JA024913, 2018.
- Halekas, J. S., D. A. Brain, J. G. Luhmann, G. A. DiBraccio, S. Ruhunusiri, **Y. Harada**, C. M. Fowler, D. L. Mitchell, J. E. P. Connerney, J. R. Espley, C. Mazelle, and B. M. Jakosky, Flows, fields, and forces in the Mars-solar wind interaction, *J. Geophys. Res.*, doi:10.1002/2017JA024772, 2017.
- Xu, S., D. Mitchell, J. Luhmann, Y. Ma, X. Fang, **Y. Harada**, T. Hara, D. Brain, T. Webber, C. Mazelle, and G. A. DiBraccio, High-altitude closed magnetic loops at Mars observed by MAVEN, *Geophys. Res. Lett.*, doi:10.1002/2017GL075831, 2017.
- Harada, Y.**, D. A. Gurnett, A. J. Kopf, J. S. Halekas, S. Ruhunusiri, C. O. Lee, T. Hara, J. Espley, G. A. DiBraccio, D. L. Mitchell, C. Mazelle, D. E. Larson, and B. M. Jakosky, Dynamic response of the Martian ionosphere to an interplanetary shock: Mars Express and MAVEN observations, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL074897, 2017.
- Hara, T., **Y. Harada**, D. L. Mitchell, G. A. DiBraccio, J. R. Espley, D. A. Brain, J. S. Halekas, K. Seki, J. G. Luhmann, J. P. McFadden, C. Mazelle, and B. M. Jakosky, On the origins of magnetic flux ropes in near-Mars magnetotail current sheets, *Geophys. Res. Lett.*, doi:10.1002/2017GL073754, 2017.
- Harada, Y.**, A. R. Poppe, J. S. Halekas, P. C. Chamberlin, and J. P. McFadden, Photoemission and electrostatic potentials on the dayside lunar surface in the terrestrial magnetotail lobes, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL073419, 2017.
- Nishino, M. N., **Y. Harada**, Y. Saito, H. Tsunakawa, F. Takahashi, S. Yokota, M. Matsushima, H. Shibuya, and H. Shimizu, Kaguya observations of the lunar wake in the terrestrial foreshock: Surface potential change by bow-shock reflected ions, *Icarus*, doi:10.1016/j.icarus.2017.04.005, 2017.

- Harada, Y.**, J. S. Halekas, J. P. McFadden, J. Espley, G. A. DiBraccio, D. L. Mitchell, C. Mazelle, D. A. Brain, L. Andersson, Y. J. Ma, D. E. Larson, S. Xu, T. Hara, S. Ruhunusiri, R. Livi, and B. M. Jakosky, Survey of magnetic reconnection signatures in the Martian magnetotail with MAVEN, *J. Geophys. Res.*, 122, doi:10.1002/2017JA023952, 2017.
- DiBraccio, G. A., J. Dann, J. R. Espley, J. R. Gruesbeck, Y. Soobiah, J. E. P. Connerney, J. S. Halekas, **Y. Harada**, C. Bowers, D. A. Brain, S. Ruhunusiri, T. Hara, and B. M. Jakosky, MAVEN observations of tail current sheet flapping at Mars, *J. Geophys. Res.*, 122, doi:10.1002/2016JA023488, 2017.
- Uchino, H, S. Kurita, **Y. Harada**, S. Machida, and V. Angelopoulos, Waves in the innermost open boundary layer formed by dayside magnetopause reconnection, *J. Geophys. Res.*, 122, doi:10.1002/2016JA023300, 2017.
- Ruhunusiri, S., J. S. Halekas, J. R. Espley, C. Mazelle, D. Brain, **Y. Harada**, G. A. DiBraccio, R. Livi, D. E. Larson, D. L. Mitchell, B. M. Jakosky, and G. G. Howes, Characterization of turbulence in the Mars plasma environment with MAVEN observations, *J. Geophys. Res.*, 122, doi:10.1002/2016JA023456, 2017.
- Hara, T., J. G. Luhmann, F. Leblanc, S. M. Curry, K. Seki, D. A. Brain, J. S. Halekas, **Y. Harada**, J. P. McFadden, R. Livi, G. A. DiBraccio, J. E. P. Connerney, and B. M. Jakosky, MAVEN observations on a hemispheric asymmetry of precipitating ions toward the Martian upper atmosphere according to the upstream solar wind electric field, *J. Geophys. Res.*, 122, doi:10.1002/2016JA023348, 2017.
- Hara, T., D. A. Brain, D. L. Mitchell, J. G. Luhmann, K. Seki, H. Hasegawa, J. P. McFadden, J. S. Halekas, J. R. Espley, **Y. Harada**, R. Livi, G. A. DiBraccio, J. E. P. Connerney, C. Mazelle, L. Andersson, and B. M. Jakosky, MAVEN observations of a giant ionospheric flux rope near Mars resulting from interaction between the crustal and interplanetary draped magnetic fields, *J. Geophys. Res.*, 121, doi:10.1002/2016JA023347, 2016.
- Harada, Y.**, L. Andersson, C. M. Fowler, D. L. Mitchell, J. S. Halekas, C. Mazelle, J. Espley, G. A. DiBraccio, J. P. McFadden, D. A. Brain, S. Xu, S. Ruhunusiri, D. E. Larson, R. J. Lillis, T. Hara, R. Livi, and B. M. Jakosky, MAVEN observations of electron-induced whistler mode waves in the Martian magnetosphere, *J. Geophys. Res.*, 121, doi:10.1002/2016JA023194, 2016.
- Halekas, J. S., S. Ruhunusiri, **Y. Harada**, G. Collinson, D. L. Mitchell, C. Mazelle, J.P. McFadden, J. E. P. Connerney, J. R. Espley, F. Eparvier, J. G. Luhmann, and B. M. Jakosky, Structure, Dynamics, and Seasonal Variability of the Mars-Solar Wind Interaction: MAVEN Solar Wind Ion Analyzer Inflight Performance and Science Results, *J. Geophys. Res.*, 121, doi:10.1002/2016JA023167, 2016.
- Hara, T., J. G. Luhmann, J. S. Halekas, J. R. Espley, K. Seki, D. A. Brain, H. Hasegawa, J. P. McFadden, D. L. Mitchell, C. Mazelle, **Y. Harada**, R. Livi, G. A. DiBraccio, J. E. P. Connerney, L. Andersson, and B. M. Jakosky, MAVEN observations of magnetic flux ropes with a strong field amplitude in the Martian magnetosheath during the ICME passage on 8 March 2015, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL068960, 2016.
- Ruhunusiri, S., J. S. Halekas, J. P. McFadden, J. E. P. Connerney, J. R. Espley, **Y. Harada**, R. Livi, K. Seki, C. Mazelle, D. Brain, T. Hara, G. A. DiBraccio, D. E. Larson, D. L. Mitchell, B. M. Jakosky, and H. Hasegawa, MAVEN observations of partially developed Kelvin Helmholtz vortices at Mars, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL068926, 2016.
- Ruhunusiri, S., J. S. Halekas, J. E. P. Connerney, J. R. Espley, J. P. McFadden, C. Mazelle, D. Brain, G. Collinson, **Y. Harada**, D. E. Larson, D. L. Mitchell, R. Livi, and B. M. Jakosky,

- MAVEN observation of an obliquely propagating low frequency wave upstream of Mars, *J. Geophys. Res.*, 121, doi:10.1002/2015JA022306, 2016.
- Harada, Y.**, and J. S. Halekas, Upstream Waves and Particles at the Moon, in *Low-frequency Waves in Space Plasmas* (eds A. Keiling, D.-H. Lee, K.-H. Glassmeier, and V. Nakariakov), John Wiley & Sons, Inc, Hoboken, NJ., doi:10.1002/9781119055006.ch18, 2016.
- Halekas, J. S., D. A. Brain, S. Ruhunusiri, J. P. McFadden, D. L. Mitchell, C. Mazelle, J. E. P. Connerney, **Y. Harada**, T. Hara, J. R. Espley, G.A. DiBraccio, B. M. Jakosky, Plasma Clouds and Snowplows: Bulk Plasma Escape From Mars Observed by MAVEN, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL067752, 2016.
- Harada, Y.**, D. L. Mitchell, J. S. Halekas, J. P. McFadden, C. Mazelle, J. E. P. Connerney, J. Espley, D. A. Brain, D. E. Larson, R. J. Lillis, T. Hara, R. Livi, G. A. DiBraccio, S. Ruhunusiri, and B. M. Jakosky, MAVEN observations of energy-time dispersed electron signatures in Martian crustal magnetic fields, *Geophys. Res. Lett.*, 43, doi:10.1002/2015GL067040, 2016.
- Bougher, S., 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, 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. Fowler, J. Fox, H. Groeller, 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, C. Mazelle, W. McClintock, T. McEnulty, R. Modolo, F. Montmessin, M. Morooka, A. Nagy, K. Olsen, W. Peterson, A. Rahmati, S. Ruhunusiri, 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, Early MAVEN Deep Dip Campaigns: First Results and Implications, *Science*, 350, doi:10.1126/science.aad0459, 2015.
- Jakosky, B., 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. Ruhunusiri, 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, MAVEN Observations of the Response of Mars to an Interplanetary Coronal Mass Ejection, *Science*, 350, doi:10.1126/science.aad0210, 2015.
- Brain, D. A., J. P. McFadden, J. S. Halekas, J. E. P. Connerney, S. W. Bougher, S. Curry, C. F. Dong, Y. Dong, F. Eparvier, X. Fang, K. Fortier, T. Hara, **Y. Harada**, B. M. Jakosky, R. J. Lillis, R. Livi, J. G. Luhmann, Y. Ma, R. Modolo, and K. Seki, The Spatial Distribution of

- Planetary Ion Fluxes Near Mars Observed by MAVEN, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065293, 2015.
- Curry, S. M., J. G. Luhmann, Y. Ma, C. F. Dong, D. Brain, F. Leblanc, R. Modolo, Y. Dong, J. McFadden, J. Halekas, J. Connerney, J. Espley, T. Hara, **Y. Harada**, C. Lee, X. Fang, and B. Jakosky, Response of Mars O⁺ Pick-up Ions to the March 8th, 2015 ICME: Inferences from MAVEN Data-Based Models, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065304, 2015.
- Hara, T., D. L. Mitchell, J. P. McFadden, D. A. Brain, J. S. Halekas, **Y. Harada**, J. R. Espley, G. A. DiBraccio, J. E. P. Connerney, L. Andersson, and K. Seki, Estimation of spatial structure of detached magnetic flux rope around Mars based on MAVEN plasma and magnetic field simultaneous observations, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065720, 2015.
- Dong, Y., X. Fang, D. A. Brain, J. P. McFadden, J. S. Halekas, J. E. Connerney, S. M. Curry, **Y. Harada**, J. G. Luhmann, and B. M. Jakosky, Strong plume fluxes observed by MAVEN: An important planetary ion escape channel, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065346, 2015.
- DiBraccio, G. A., J. R. Espley, J. R. Gruesbeck, J. E. P. Connerney, D. A. Brain, J. S. Halekas, D. L. Mitchell, J. P. McFadden, **Y. Harada**, R. Livi, G. Collinson, T. Hara, and C. Mazelle, Magnetotail dynamics at Mars: Initial MAVEN observations, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065248, 2015.
- Harada, Y.**, J. S. Halekas, J. P. McFadden, D. L. Mitchell, C. Mazelle, J. E. P. Connerney, J. Espley, D. E. Larson, D. A. Brain, L. Andersson, G. A. DiBraccio, G. A. Collinson, R. Livi, T. Hara, S. Ruhunusiri, and B. M. Jakosky, Magnetic reconnection in the near-Mars magnetotail: MAVEN observations, *Geophys. Res. Lett.*, 42, 8838-8845, doi:10.1002/2015GL065004, 2015.
- Harada, Y.**, J. S. Halekas, J. P. McFadden, D. L. Mitchell, C. Mazelle, J. E. P. Connerney, J. Espley, D. E. Larson, D. A. Brain, G. A. DiBraccio, S. M. Curry, T. Hara, R. Livi, S. Ruhunusiri, and B. M. Jakosky, Marsward and tailward ions in the near-Mars magnetotail: MAVEN observations, *Geophys. Res. Lett.*, 42, 8925-8932, doi:10.1002/2015GL065005, 2015.
- Halekas, J. S., J. P. McFadden, J. E. P. Connerney, J. R. Espley, D. A. Brain, D. L. Mitchell, D. E. Larson, **Y. Harada**, T. Hara, S. Ruhunusiri, and B. M. Jakosky, Time-Dispersed Ion Signatures Observed in the Martian Magnetosphere by MAVEN, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL064781, 2015.
- Halekas, J. S., R. J. Lillis, D. L. Mitchell, T. E. Cravens, C. Mazelle, J. E. P. Connerney, J. R. Espley, P. R. Mahaffy, M. Benna, B. M. Jakosky, J. G. Luhmann, J. P. McFadden, D. E. Larson, **Y. Harada**, and S. Ruhunusiri, MAVEN observations of solar wind hydrogen deposition in the atmosphere of Mars, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL064693, 2015.
- Bhardwaj, A., M. B. Dhanya, A. Alok, S. Barabash, M. Wieser, Y. Futaana, P. Wurz, A. Vorburger, M. Holmström, C. Lue, **Y. Harada**, and K. Asamura, A new view on the solar wind interaction with the Moon, *Geosci. Lett.*, 2, doi:10.1186/s40562-015-0027-y, 2015.
- Harada, Y.**, J. S. Halekas, A. R. Poppe, Y. Tsugawa, S. Kurita, and J. P. McFadden, Statistical characterization of the forenoon particle and wave morphology: ARTEMIS observations, *J. Geophys. Res.*, 120, 4907-4921, doi:10.1002/2015JA021211, 2015.
- Nishino, M. N., Y. Saito, H. Tsunakawa, F. Takahashi, M. Fujimoto, **Y. Harada**, S. Yokota, M. Matsushima, H. Shibuya, and H. Shimizu, Electrons on closed field lines of lunar crustal fields in the solar wind wake, *Icarus*, 250, 238-248, doi:10.1016/j.icarus.2014.12.007, 2015.

- Harada, Y.**, J. S. Halekas, A. R. Poppe, S. Kurita, and J. P. McFadden, Extended lunar precursor regions: Electron-wave interaction, *J. Geophys. Res.*, 119, 9160-9173 doi:10.1002/2014JA020618, 2014.
- Harada, Y.**, Y. Futaana, S. Barabash, M. Wieser, P. Wurz, A. Bhardwaj, K. Asamura, Y. Saito, S. Yokota, H. Tsunakawa, and S. Machida, Backscattered energetic neutral atoms from the Moon in the Earth's plasma sheet observed by Chandrayaan-1/Sub-keV Atom Reflecting Analyzer instrument, *J. Geophys. Res.*, 119, 3573–3584, doi:10.1002/2013JA019682, 2014.
- Harada, Y.**, S. Machida, Y. Saito, S. Yokota, K. Asamura, M. N. Nishino, H. Tsunakawa, H. Shibuya, F. Takahashi, M. Matsushima, and H. Shimizu, Small-scale magnetic fields on the lunar surface inferred from plasma sheet electrons, *Geophys. Res. Lett.*, 40, 3362--3366, doi:10.1002/grl.50662, 2013.
- Harada, Y.**, S. Machida, J. S. Halekas, A. R. Poppe, and J. P. McFadden, ARTEMIS observations of lunar dayside plasma in the terrestrial magnetotail lobe, *J. Geophys. Res.*, 118, 3042--3054, doi:10.1002/jgra.50296, 2013.
- Harada, Y.**, S. Machida, Y. Saito, S. Yokota, K. Asamura, M. N. Nishino, H. Tsunakawa, H. Shibuya, F. Takahashi, M. Matsushima, and H. Shimizu, Nongyrotropic electron velocity distribution functions near the lunar surface, *J. Geophys. Res.*, 117, A07220, doi:10.1029/2012JA017642, 2012.
- Harada, Y.**, S. Machida, Y. Saito, S. Yokota, K. Asamura, M. N. Nishino, T. Tanaka, H. Tsunakawa, H. Shibuya, F. Takahashi, M. Matsushima, and H. Shimizu, Interaction between terrestrial plasma sheet electrons and the lunar surface: SELENE (Kaguya) observations, *Geophys. Res. Lett.*, 37, L19202, doi:10.1029/2010GL044574, 2010.