

Yoshizumi Miyoshi, Ph.D.

Affiliation:

Institute for Space-Earth Environmental Research, Nagoya University
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Current Position:

Professor, Institute of Space-Earth Environmental Research, Nagoya University, Japan
Professor, Graduate School of Engineering, Nagoya University, Japan
Visiting Professor, Institute for Space and Astronautical Science (ISAS)/Japan Aerospace
Exploration Agency (JAXA)

Former Positions:

2015 - 2018 Associate Professor, Institute for Space-Earth Environmental Research,
Nagoya University
2012 - 2015 Associate Professor, Solar-Terrestrial Environment Laboratory, Nagoya University
2004 - 2012 Assistant Professor, Solar-Terrestrial Environment Laboratory, Nagoya University
2002 - 2003 Visiting Researcher, University of New Hampshire, US
2001 - 2004 Research Fellow of Japan Society for the Promotion of Science

Education:

1996.3 B. Sci., Department of Science, Tohoku University, Japan
1998.3 M. Sci., Graduate School of Science, Tohoku University, Japan
2001.3 Ph.D., Graduate School of Science, Tohoku University, Japan

Services in National/International Committees:

- Editor of Earth and Planetary Physics, Chinese Geophysical Society, 2017-present
- Editor of Annales Geophysicae, European Geophysical Union, 2016-present
- Co-leader of SPeCIMEN/VarSITI, SCOSTEP, 2016-present
- Steering Committee, NSF/GEM, 2015-present
- Steering Committee, ISAS/JAXA, 2014-present
- Visiting Associate Professor, ISAS/JAXA, 2014-2018
- Vice Chair of COSPAR/PRBEM, 2010-2018
- Guest Editor of Journal of Geophysical Research(2015), Geophysical Research Letters (2018), AGU
- Associate Editor of Journal of Geophysical Research, AGU, 2012-2014

Honors:

- Tanakadate Award, Society of Geomagnetism and Earth, Planetary and Space Sciences, Japan, 2017
- Nishida Prize, Japan Geoscience Union, 2015
- The Young Scientist's Prize, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Japan, 2013
- Morita Prize, Tohoku University, Japan, 2009
- Obayashi Prize, Society of Geomagnetism and Earth, Planetary and Space Sciences, Japan, 2006

Experiences for Space missions:

- Project Scientist: Geospace Exploration Project (Arase/ERG)
- Co-I: JUICE/RPWI, Van Allen Probes/RBSPICE, BepiColombo MMO/MPPE/PWI

Research Interests:

Dr. Miyoshi has studied the magnetospheric system science, especially, solar wind – inner magnetosphere/radiation belts coupling process and its application to space weather forecast, and energetic electron accelerations and precipitations processes by various kinds of plasma waves. He analyzed various kinds of data from satellites and ground-based observations and conducted computer simulations. For example, he discovered different responses of radiation belts associated with large scale solar wind structure, CMEs and CIRs. He also found that the southward IMF controls large flux enhancements of the outer belt electrons. Recently, he identified the origin of micro-structure of the pulsating aurora by comparison studies between observations and simulations, and he studied radiation belt-atmosphere couplings through precipitations of energetic electrons.

Publications and Presentations:

- 237 refereed publications, Three Books (author, co-author and Editor)
- 70 invited talks and lectures at international conference

Selected Papers:

- Miyoshi, Y. et al.. Rebuilding process of the outer radiation belt during the November 3, 1993, magnetic storm - NOAA and EXOS-D observations, *J. Geophys. Res.*, **108**, 1004, doi:10.1029/2001JA007542, 2003.
- Miyoshi, Y., and R. Kataoka, Ring current ions and radiation belt electrons during geomagnetic storms driven by coronal mass ejections and corotating interaction regions, *Geophys. Res. Lett.*, **32**, L21105, doi:10.1029/2005GL024590, 2005.
- Miyoshi, Y., K. Sakaguchi, K. Shiokawa, D. Evans, J. Albert, M. Connors, and V. Jordanova, Precipitation of radiation belt electrons by EMIC waves, observed from ground and space, *Geophys. Res. Lett.*, **35**, L23101, doi:10.1029/2008GL035727, 2008.
- Miyoshi, Y., Y. Katoh, T. Nishiyama, T. Sakanoi, K. Asamura, and M. Hirahara, Time of flight analysis of pulsating aurora electrons, considering wave-particle interactions with propagating whistler mode waves, *J. Geophys. Res.*, **115**, A10312, doi:10.1029/2009JA015127, 2010.
- Miyoshi, Y. et al.. High-speed solar wind with southward interplanetary magnetic field causes relativistic electron flux enhancement of the outer radiation belt via enhanced condition of whistler waves, *Geophys. Res. Lett.*, **40**, doi:10.1002/grl.50916, 2013.
- Miyoshi, Y. et al.. Energetic electron precipitation associated with pulsating aurora: EISCAT and Van Allen Probes observations, *J. Geophys. Res.*, **120**, doi:10.1002/2014JA020690, 2015a.
- Miyoshi, Y., S. Saito, K. Seki, T. Nishiyama, R. Kataoka, K. Asamura, Y. Katoh, Y. Ebihara, T. Sakanoi, M. Hirahara, S. Oyama, S. Kurita, and O. Santolik, Relation between energy spectra of pulsating aurora electrons and frequency spectra of whistler-mode chorus waves, *J. Geophys. Res.*, **120**, 7728-7736, doi:10.1002/2015JA021562, 2015b.
- Miyoshi, Y. et al.. Geospace Exploration Project ERG, *Earth, Planets and Space*, **70**, doi:10.1186/s40623-018-0862-0, 2018.