

Radio and Space Plasma Physics Group Publications

Group authors are shown in **bold** type

Calendar Year 2013

Refereed research papers

- 13-1 Archer, M.O., T.S. Horbury, J.P. Eastwood, J.M. Weygand, and **T.K. Yeoman**, Magnetospheric response to magnetosheath pressure pulses: A low-pass filter effect, *J. Geophys. Res. Space Physics*, **118**, 5454–5466, <http://dx.doi.org/10.1002/jgra.50519>, 2013.
- 13-2 Belenkaya, E.S., **S.W.H. Cowley**, V.V. Kalegaev, O.G. Barinov and W.A. Barinova, Magnetic interconnection of Saturn's polar regions: Comparison of modelling results with Hubble Space Telescope UV auroral images, *Ann. Geophys.*, **31**, 1447-1458, doi:10.5194/angeo-31-1447-2013.
- 13-3 Blagoveshchenskaya, N. F., T.D. Borisova, **T.K. Yeoman**, M.T. Rietveld, I. Häggström, and I.M. Ivanova, Plasma modifications induced by an X-mode HF heater wave in the high latitude F region of the ionosphere, *J. Atmos. Solar-Terres. Phys*, **105-106**, 231–244, <http://dx.doi.org/10.1016/j.jastp.2012.10.001>, 2013.
- 13-4 **Cowley, S.W.H.**, Response of Uranus' auroras to solar wind compressions at equinox, *J. Geophys. Res. Space Physics*, **118**, 2897-2902, doi: 10.1002/jgra.50323, 2013.
- 13-5 **Cowley S.W.H.**, and **G. Provan**, Saturn's magnetospheric planetary period oscillations, neutral atmosphere circulation, and thunderstorm activity: Implications, or otherwise, for physical links, *J. Geophys. Res. Space Physics*, **118**, 7246–7261, doi:10.1002/2013JA019200, 2013.
- 13-6 De Larquier, S., P. Ponomarenko, A.J. Ribeiro, J.M. Ruohoniemi, J.B.H. Baker, **M. Lester**, and K. Sterne, On the spatial distribution of decameter-scale sub-auroral ionospheric irregularities observed by SuperDARN radars, *J. Geophys. Res. Space Physics*, **118**, 5244-5254, doi: 10.1002/jgra.50475, 2013.
- 13-7 Engebretson, M.J., **T.K. Yeoman**, K. Oksavik, F. Søråas, F. Sigernes, J.I. Moen, M.G. Johnsen, V.A. Pilipenko, J.L. Posch, M.R. Lessard, B. Lavraud, M.D. Hartinger, L.B.N. Clausen, T. Raita, and C. Stolle, Multi-instrument observations from Svalbard of a traveling convection vortex, electromagnetic ion cyclotron wave burst, and proton precipitation associated with a bow shock instability, *J. Geophys. Res. Space Physics*, **118**, 2975–2997, <http://dx.doi.org/10.1002/jgra.50291>, 2013.
- 13-8 Gérard, J.C., J. Gustin, W.R. Pryor, D. Grodent, B. Bonfond, A. Radioti, G.R. Gladstone, J.T. Clarke, and **J.D. Nichols**, Remote sensing of the energy of auroral electrons in Saturn's atmosphere: Hubble and Cassini spectral observations, *Icarus*, **223(1)**, 211–221, doi:10.1016/j.icarus.2012.11.033, 2013.
- 13-9 Gordeev, E., G. Facskó, V. Sergeev, I. Honkonen, M. Palmroth, P. Janhunen, and **S.E. Milan**, Verification of the GUMICS-4 global MHD code using empirical relationships, *J. Geophys. Res. Space Physics*, **118**, 3138-3146, doi: 10.1002/jgra.50359, 2013.

- 13-10 **Grocott, A.**, K. Hosokawa, T. Ishida, **M. Lester**, **S.E. Milan**, M.P. Freeman, N. Sato, and A.S. Yukimatu, Characteristics of medium-scale travelling ionospheric disturbances observed near the Antarctic peninsula by HF radar, *J. Geophys. Res. Space Physics*, **118**, 5830-5841, doi: 10.1002/jgra.50515, 2013.
- 13-11 Hosokawa, K., **S. E. Milan**, **M. Lester**, A. Kodokura, N. Sato, and G. Bjornsson, Large flow shears around auroral beads at substorm onset, *Geophys. Res. Lett.*, **40**, doi: 10.1002/grl.50958, 2013.
- 13-12 **Imber, S.M.**, **S.E. Milan**, and **M. Lester**, The Heppner-Maynard boundary measured by SuperDARN as a proxy for the latitude of the auroral oval, *J. Geophys. Res. Space Physics*, **118**, 685–697, doi:10.1029/2012JA018222, 2013.
- 13-13 **Imber, S.M.**, **S.E. Milan**, and **M. Lester**, Solar cycle variations in polar cap area measured by the superDARN radars, *J. Geophys. Res. Space Physics*, **118**, 6188–6196, doi:10.1002/jgra.50509, 2013.
- 13-14 Jackman, C.M., N. Achilleos, **S.W.H. Cowley**, E.J. Bunce, A. Radioti, D. Grodent, S.V. Badman, M.K. Dougherty, and W. Pryor, Auroral counterpart of magnetic field dipolarizations in Saturn’s tail, *Planet. Space Sci.*, **82**, 34-42, 2013.
- 13-15 **James, M.K.**, **T.K. Yeoman**, P.N. Mager, and D.Y. Klimushkin, The spatio-temporal characteristics of ULF waves driven by substorm injected particles, *J. Geophys. Res. Space Physics*, **118**, 1737–1749, <http://dx.doi.org/10.1002/jgra.50131>, 2013.
- 13-16 Lamy, L., R. Prangé, W. Pryor, J. Gustin, S.V. Badman, **H. Melin**, **T. Stallard**, D.G. Mitchell, and P.C. Brandt, Multispectral simultaneous diagnosis of Saturn’s aurorae throughout a planetary rotation, *J. Geophys. Res. Space Physics*, **118**, 4817-4843, doi:10.1002/jgra.50404, 2013.
- 13-17 **Lester, M.**, The Super Dual Auroral Radar Network (SuperDARN): An overview of its development and science, *Adv. Polar Sci.*, **24**, 1-11, doi: 10.3724/SP.J.1085.2013.00001, 2013.
- 13-18 Lilensten, J., **G. Provan**, S. Grimald, A. Brekke, E. Flückiger, P. Vanlommel, C.S. Wedlund, M. Barthélémy and P. Garnier, The Planeterra experiment: from individual initiative to networking, *J. Space Weather Space Clim.*, **3**, A07, 2013.
- 13-19 **Melin, H.**, **T.S. Stallard**, S. Miller, T.R. Geballe, L.R. Trafton, and **J. O’Donoghue**, Post-equinoctial observations of the ionosphere of Uranus, *Icarus*, **223**, 741-748, doi:10.1016/j.icarus.2013.01.012, 2013.
- 13-20 **Meredith, C.J.**, **S.W.H. Cowley**, K.C. Hansen, **J.D. Nichols**, and **T.K. Yeoman**, Simultaneous conjugate observations of small-scale structures in Saturn’s dayside ultraviolet auroras - implications for physical origins, *J. Geophys. Res. Space Physics*, **118**, 2244-2266, doi:10.1002/jgra.50270, 2013.
- 13-21 **Milan, S.E.**, Modelling Birkeland currents in the expanding/contracting polar cap paradigm, *J. Geophys. Res. Space Physics*, **118**, doi:10.1002/jgra.50393, 2013.
- 13-22 **Milan, S.E.**, **A. Grocott**, S. de Larquier, **M. Lester**, **T.K. Yeoman**, M.P. Freeman, and G. Chisham, Traveling ionospheric disturbances in the Weddell Sea Anomaly associated with geomagnetic activity, *J. Geophys. Res. Space Physics*, **118**, 6608–6617, doi:10.1002/jgra.50566, 2013.
- 13-23 Miller, S., **T. Stallard**, J. Tennyson, and **H. Melin**, Cooling by H₃⁺ emission, *J. Phys. Chem.*

- A., **117**, 9770–9777, doi:10.1021/jp312468b, 2013.
- 13-24 **O'Donoghue, J., T.S. Stallard, H. Melin, G.H. Jones; S.W.H. Cowley, S. Miller; K.H. Baines, and J.S.D. Blake**, The domination of Saturn's low-latitude ionosphere by ring 'rain', *Nature*, **496**, 193-195, doi:10.1038/nature12049, 2013.
- 13-25 **O'Donoghue, J., T.S. Stallard, H. Melin, S.W.H. Cowley, S.V. Badman, L. Moore, S. Miller, C. Tao, K.H. Baines, and J.S.D. Blake**, Conjugate observations of Saturn's northern and southern aurorae, *Icarus*, **229**, 214-220, doi:10.1016/j.icarus.2013.11.009, 2013.
- 13-26 Opgenoorth, H.J., D.J. Andrews, M. Fränz, **M. Lester**, N.J.T. Edberg, D. Morgan, F. Duru, O. Witassef, and A. Williams, Mars ionospheric response to solar wind variability, *J. Geophys. Res. Space Physics*, **118**, doi: 10.1002/jgra.50537, 2013.
- 13-27 **Provan, G.**, D.J. Andrews, **S.W.H. Cowley**, J. Sandhu, and M.K. Dougherty, Planetary period oscillations in Saturn's magnetosphere: Abrupt and non-monotonic transition to northern oscillation dominance two years after equinox, *J. Geophys. Res. Space Physics*, **118**, 3243-3264, doi:10.1002/jgra.50186, 2013.
- 13-28 **Shaikh, A.A.**, and A.C. Das, New low-frequency electromagnetic modes associated with neutral dynamics in partially ionised plasma, *Ann. Geophys.*, **31**, 983-993, doi:10.5194/angeo-31-983, 2013.
- 13-29 Szego, K., Z. Nemeth, L. Foldy, **S.W.H. Cowley**, and **G. Provan**, Dual periodicities in the flapping of Saturn's magnetodisk, *J. Geophys. Res. Space Physics*, **118**, 2883-2887, doi:10.1002/jgra.50316, 2013.
- 13-30 Volwerk, M., N. Andre, C.S. Arridge, C.M. Jackman, X. Jia, **S.E. Milan**, A. Radioti, M.F. Vogt, A.P. Walsh, R. Nakamura, A. Masters, and C. Forsyth, Comparative magnetotail flapping: An overview of selected events at Earth, Jupiter and Saturn, *Ann. Geophys.*, **31**, 817-833, doi:10.5194/angeo-31-817, 2013.
- 13-31 Wannawichian, S., J.T. Clarke, F. Bagenal, W.H. Smyth, C.A. Peterson, and **J.D. Nichols**, Longitudinal modulation of the brightness of Io's auroral footprint emission: Comparison with models, *J. Geophys. Res. Space Physics*, **118(6)**, 336–3345, doi:10.1002/jgra.50346, 2013.
- 13-32 Zhang, Q.H., B.C. Zhang, J. Moen, M. Lockwood, I.W. McCrea, H.-G. Yang, H.-Q. Hu, R.-Y. Liu, S.-R. Zhang, and **M. Lester**, Polar cap patch segmentation of the tongue of ionization in the morning convection cell, *Geophys. Res. Lett.*, **40**, 2918-2922, doi:10.1002/grl.50616, 2013.

Un-refereed Papers Published

- 13-33 Bryers, C., M. Kosch, A. Senior, **T.K. Yeoman**, and M. Rietveld, DIY northern lights, *Astron. Geophys.*, **54**, 6.43-6.44, 2013.
- 13-34 **Cowley, S.W.H.**, Book review: “Numerical Modeling of Space Plasma Flows: ASTRONUM-2011 (ASP Conference Series Vol. 459)” edited by N.V. Pogorelov, J.A. Font, E. Audit, and G.P. Zank, *The Observatory*, **133**, 51-52, 2013.
- 13-35 **Fear, R.**, and E.E. Woodfield, Autumn MIST 2012, *Astron. Geophys.*, **54**, 2.21-2.24, doi:10.1093/astrogeo/att033, 2013.
- 13-36 Moffatt-Griffin, T., **M. Lester**, and M.P. Freeman, From atmosphere to space: A new frontier, *Astron. Geophys.*, **54**, 3.21-3.22, 2013.