

## Radio & Space Plasma Physics Group Publications

Group authors are shown boldface

### Calendar Year 2010

*Refereed research papers published*

- 10-1 **Andrews, D.J., S.W.H. Cowley**, M.K. Dougherty, and **G. Provan**, Magnetic field oscillations near the planetary period in Saturn's equatorial magnetosphere: Variation of amplitude and phase with radial distance and local time, *J. Geophys. Res.*, **115**, A04212, doi: 10.1029/2009JA0014729, 2010.
- 10-2 **Andrews, D.J.**, A.J. Coates, **S.W.H. Cowley**, M.K. Dougherty, L. Lamy, **G. Provan**, and P. Zarka, Magnetospheric period oscillations at Saturn: Comparison of equatorial and high-latitude magnetic field periods with north and south SKR periods, *J. Geophys. Res.*, **115**, A12252, doi: 10.1029/2010JA015666, 2010.
- 10-3 Amm, O., **A. Grocott, M. Lester** and **T.K. Yeoman**, Local determination of ionospheric plasma convection from coherent scatter radar data using the SECS technique, *J. Geophys. Res.*, **115**, A03304, doi:10.1029/2009JA014832, 2010
- 10-4 Belenkaya, E.S., I.I. Alexeev, M.S. Blokhina, E.J. Bunce, **S.W.H. Cowley, J.D. Nichols**, V.V. Kalegaev, V.G. Petrov, and **G. Provan**, IMF dependence of Saturn's auroras: Modelling study of HST and Cassini data from 12–15 February 2008, *Ann. Geophys.*, **28**, 1559-1570, 2010.
- 10-5 **Borderick, J. D., T. K. Yeoman**, C. L. Waters, and **D. M. Wright**, Observations and modelling of the wave mode evolution of an impulse-driven 3 mHz ULF wave, *Ann. Geophys.*, **28**, 1723-1735, 2010
- 10-6 Burchill, J. K., D. J. Knudsen, J. H. Clemmons, K. Oksavik, R. F. Pfaff, C. T. Steigies, A. W. Yau, and **T. K. Yeoman**, Thermal ion upflow in the cusp ionosphere and its dependence on soft electron energy flux, *J. Geophys. Res.*, **115**, A05206, doi:10.1029/2009JA015006, 2010.
- 10-7 Bunce, E.J., **S.W.H. Cowley**, D.L. Talboys, M.K. Dougherty, L. Lamy, W.S. Kurth, P. Schippers, B. Cecconi, P. Zarka, C.S. Arridge, and A.J. Coates, Extraordinary field-aligned current signatures in Saturn's high-latitude magnetosphere: Analysis of Cassini data during Revolution 89, *J. Geophys. Res.*, **115**, A10238, doi: 10.1029/2010JA015612, 2010.
- 10-8 **Clarke, K.E., D.J. Andrews**, C.S. Arridge, A.J. Coates, and **S.W.H. Cowley**, Magnetopause oscillations near the planetary period at Saturn: Occurrence, phase and amplitude, *J. Geophys. Res.*, **115**, A08209, doi: 10.1029/2009JA014745, 2010.
- 10-9 **Clarke, K.E., D.J. Andrews**, A.J. Coates, **S.W.H. Cowley**, and A. Masters, Magnetospheric period oscillations of Saturn's bow shock, *J. Geophys. Res.*, **115**, A05202, doi: 10.1029/2009JA015164, 2010.

- 10-10 Edberg, N.J.T., **M. Lester**, **S.W.H. Cowley**, D.A. Brain, M. Franz, and S. Barabash, Magnetosonic Mach number effect of the position of the bow shock at Mars in comparison to Venus, *J. Geophys. Res.*, **115**, A07203, doi: 10.1029/2009JA00014998, 2010.
- 10-11 Edberg, N.J.T., H. Nilsson, **A. Williams**, **M. Lester**, **S.E. Milan**, **S.W.H. Cowley**, M. Franz, S. Barabash and Y. Futaana, Pumping out the atmosphere of Mars through solar wind pressure pulses, *Geophys. Res. Lett.*, **37**, L03107, doi:10.1029/2009GL041814, 2010.
- 10-12 **Fear, R. C.**, **S. E. Milan**, J. Raeder and D. G. Sibeck, Asymmetry in the bipolar signatures of flux transfer events, *J. Geophys. Res.*, **115**, A11217, doi:10.1029/2010JA015363, 2010.
- 10-13 **Fear, R.C.**, **S.E. Milan**, E.A. Lucek, **S.W.H. Cowley**, and A.N. Fazakerley, Mixed azimuthal scales of flux transfer events, in *The Cluster Active Archive - Studying the Earth's Space Plasma Environment* (edited by H. Laakso, M. Taylor and C.P. Escoubet), *Astrophys. Space Sci. Proc.*, p. 389-398, Springer, doi:10.1007/978-90-481-3499-1\_27, 2010.
- 10-14 Füllekrug, M, R.Roussel-Dupré, E.M.D. Symbalisty, O. Chanrion, **A. Odzimek**, O. van der Velde and T. Neubert, Relativistic runaway breakdown in low-frequency radio, *J. Geophys. Res.*, **115**, A00E09, doi:10.1029/2009JA014468, 2010.
- 10-15 Gillies, R., G. Hussey, G. Sofko , **D. M. Wright** , J. Davies, A comparison of EISCAT and SuperDARN F-region measurements with consideration of the refractive index in the scattering volume, *J. Geophys. Res.*, **115**, A06319, doi:10.1029/2009JA014694, 2010.
- 10-16 **Grocott, A.**, **S.E. Milan**, N. Sato, J.A. Wild, **T.K. Yeoman**, and A.S. Yukimatu. Superposed epoch analysis of the ionospheric convection evolution during substorms: IMF BY dependence. *J. Geophys. Res.*, **115**, A00I06, doi: 10.1029/2010JA015728, 2010.
- 10-17 Han, D.-S., H.-G. Yang, J. Liang, T. Iyemori, **S.W.H. Cowley**, and T. Araki , High-latitude reconnection effect observed at the dayside dip equator as a precursor of a sudden impulse, *J. Geophys. Res.*, **115**, A08214, doi: 10.1029/2009JA0014787, 2010.
- 10-18 Hosokawa, K., T. Motoba, A.S. Yukimatu, **S.E. Milan**, **M. Lester**, A. Kadokura, N. Sato and G. Bjornsson, Plasma irregularities adjacent to patches of diffuse aurora in the post-midnight sector, *J. Geophys. Res.*, **115**, A09303, doi:10.1029/2010JA015319, 2010.
- 10-19 Hubert, B., A.T. Aikio, O. Amm, T. Pitkänen, K. Kauristie, **S.E. Milan**, **S.W.H. Cowley**, and J.-C. Gérard, Comparison of the open-closed field line boundary location inferred using IMAGE-FUV SI12 images and EISCAT radar observations, *Ann. Geophysicae*, **28**, 883-892, 2010.
- 10-20 Jackman, C. M., C. S. Arridge, J. A. Slavin, **S. E. Milan**, L. Lamy, M. K. Dougherty, and A. J. Coates, In situ observations of the effect of a solar wind compression on Saturn's magnetotail, *J. Geophys. Res.*, **115**, A10240, doi: 10.1029/2010JA015312, 2010.
- 10-21 Juusola, L., K. Andréevová, O. Amm, K. Kauristie, **S. E. Milan**, M. Palmroth, and N. Partamies, Effects of a solar wind pressure pulse in the magnetosphere and in the ionosphere, *Ann. Geophys.*, **28**, 1945-1959, 2010.
- 10-22 Karpachev, A., N. Beloff, T.D. Carozzi, P. Denisenko, T.J.T. Karhunen and **M. Lester**, Detection of large scale TIDs associated with the dayside cusp using SuperDARN data, *J. Atmos. Solar Terr. Phys.*, **72**, 653 - 661, 2010.

- 10-23 **Kellett, S.**, C.S. Arridge, E.J. Bunce, A.J. Coates, **S.W.H. Cowley**, M.K. Dougherty, A.M. Persoon, N. Sergis, and R.J. Wilson, Nature of the ring current in Saturn's dayside magnetosphere, *J. Geophys. Res.*, **115**, A08201, doi:10.1029/2009JA015146, 2010.
- 10-24 **Lam, M.M.**, R.B. Horne, N.P. Meredith, S.A. Glauert, T. Moffat-Griffin, J.C. Green, Origin of energetic electron precipitation >30keV into the atmosphere, *J. Geophys. Res.*, **115**, A00F08, doi: 10.1029/2009JA014619, 2010
- 10-25 **Melin, H., T. Stallard**, S. Miller, M.B. Lystrup, L. M. Trafton, T.C. Booth, and C. Rivers, New limits on H3+ abundance on Neptune using Keck NIRSPEC, *MNRAS*, doi:10.1111/j.1365-2966.2010.17468.
- 10-26 **Milan, S.E., A. Grocott**, and B. Hubert. A superposed epoch analysis of auroral evolution during substorms: local time of onset region. *J. Geophys. Res.*, **115**, A00104, doi:10.1029/2010JA015663, 2010.
- 10-27 **Milan, S.E.**, T.A. Evans, and B. Hubert, Average auroral configuration parameterized by geomagnetic activity and solar wind conditions, *Ann. Geophys.*, **28**, 1003-1012, 2010.
- 10-28 Mitchell, T.R., W.F. Welsh, P.B. Etzel, R. J Barber, S. Miller, **T.S. Stallard**, and J. Tennyson, R-band light curve of Comet 9P/Tempel 1 during the Deep Impact event *Icarus*, **205**, 619-626, 2010.
- 10-29 **Nichols, J.D.**, B. Cecconi, J.T. Clarke, **S.W.H. Cowley**, J.-C. Gérard, **A. Grocott**, D. Grodent, L. Lamy, and P. Zarka, Variation of Saturn's UV aurora with SKR phase, *Geophys. Res. Lett.*, **37**, L15102, doi: 10.1029/2010GL044057, 2010.
- 10-30 **Nichols, J.D., S.W.H. Cowley**, and L. Lamy, Dawn-dusk oscillation of Saturn's conjugate auroral ovals, *Geophys. Res. Lett.*, **37**, L24102, doi:10.1029/2010GL045818, 2010.
- 10-31 Odzimek, A, **M. Lester** and M. Kubicki, EGATEC – a new high-resolution engineering model of the global atmospheric electric circuit. 1. Currents in the lower atmosphere, *J. Geophys. Res. (Atmospheres)*, **115**, D18207, doi:10.1029/2009JD013341, 2010.
- 10-32 Oksavik, K., V. Barth, J. Moen and **M. Lester**, On the entry and transit of high-density plasma across the polar cap, *J. Geophys. Res.*, **115**, A12308, doi:10.1029/2010JA015817, 2010.
- 10-33 Opgenoorth, H.J., **R.S. Dhillon**, L. Rosenqvist, **M. Lester**, N.J.T. Edberg, **S.E. Milan**, P. Whithers and D. Brain, Dayside Ionospheric Conductivities at Mars, *Planet. Space Sci.*, **58**, 1139-1151, doi:10.1016/j.pss.2010.04.004., 2010.
- 10-34 Palmroth, M., H.E.J. Koskinen, T.I. Pulkkinen, P. K. Toivanen, P. Janhunen, **S.E. Milan**, and **M. Lester**, Magnetospheric feedback in solar wind energy transfer, *J. Geophys. Res.*, **115**, A00I10, doi:10.1029/2010JA015746, 2010.
- 10-35 Rae, I. J., K. Kabin, J.-Y. Lu, R. Rankin, **S. E. Milan**, F. R. Fenrich, C. E. J. Watt, J.-C. Zhang, A. J. Ridley, T. I. Gombosi, C. R. Clauer, G. Tóth, and D. L. De Zeeuw, Open-closed separatrix determination using global magnetospheric simulation and observational data, *J. Geophys. Res.*, **115**, A08216, doi: 10.1029/2009JA015068, 2010.
- 10-36 Rodger, C.J., M.A. Clilverd, J.C. Green, and **M.M. Lam**, Use of POES SEM-2 observations to examine radiation belt dynamics and energetic electron precipitation into the atmosphere *J. Geophys. Res.*, **115**, A04202, doi: 10.1029/2008JA014023, 2010.

- 10-37 Shergill, H., **T.R. Robinson**, **R.S. Dhillon**, **M. Lester**, **S.E. Milan** and **T. K. Yeoman**, A statistical study of the spatial distribution of Co-operative UK Twin Located Auroral Sounding System (CUTLASS) backscatter power during EISCAT heater beam-sweeping experiments, *J. Geophys. Res.*, **115**, A05307, doi:10.1029/2009JA014659, 2010.
- 10-38 Shi, J. K., Z. W. Cheng, T. L. Zhang, M. Dunlop, Z. X. Liu, K. Torkar, A. Fazakerley, E. Lucek, H. Rème, I. Dandouras, A. T. Y. Lui, Z. Y. Pu, A. P. Walsh, M. Volwerk, A. D. Lahiff, M.G.G.T. Taylor, **A. Grocott**, L.M. Kistler, **M.Lester**, C. Mouikis, and C. Shen, South-north asymmetry of field-aligned currents in the magnetotail observed by Cluster, *J. Geophys. Res.*, **115**, A07228, doi:10.1029/2009JA014446 , 2010.
- 10-39 **Stallard, T.S.**, **H. Melin**, **S.W.H. Cowley**, S. Miller, and M. Lystrup, Location and magnetospheric mapping of Saturn's mid-latitude infrared auroral oval, *Ap. J. Lett.*, **722**, L85-L89, 2010.
- 10-40 Tanaka, K.G., T. Yumura, M. Fujimoto, I. Shinohara, S.V. Badman, and **A. Grocott**, Merging of magnetic islands as an efficient accelerator of electrons, *Phys. Plasmas.*, **17**, 102902, doi:10.1063/1.3491123, 2010.
- 10-41 **Vickers, H.**, **T.R. Robinson**, and I.W. McCrea, A method for improving plasma temperature estimates from incoherent scatter analysis during artificial ionospheric modification experiments, *J. Geophys. Res.*, **115**, A11316, doi:10.1029/2010JA015606, 2010.
- 10-42 Wannawichian, S., J.T. Clarke, and **J.D. Nichols**, Ten-year HST observations of the variation of the Jovian satellites' auroral footprint brightness, *J. Geophys. Res.*, **115**, A02206, doi:10.1029/2009ja014456, 2010.
- 10-43 Woodfield, E. E., J. A. Wild, A. J. Kavanagh, A. Senior, and **S. E. Milan**, Combining incoherent scatter radar data and IRI2007 to monitor the open-closed field line boundary during substorms, *J. Geophys. Res.*, **115**, A00115, doi: 10.1029/2010JA015751, 2010.
- 10-44 Yan, X., **N.F. Arnold**, and J.J. Remedios, Global observations of gravity waves from HIRDLS temperature measurements: A year-long record of gravity wave temperature amplitude and vertical wavelength, *J. Geophys. Res.*, **115**, D10113, doi:10.1029/2008JD011511, 2010.
- 10-45 **Yeoman, T. K.**, D. Yu. Klimushkin, and P. N. Mager, Intermediate-m ULF waves generated by substorm injection: a case study, *Ann. Geophys.*, **28**, 1499–1509, doi:10.5194/angeo-28-1499-2010, 2010.
- 10-46 Zhang, Q.H., M.W. Dunlop, M. Lockwood, R.-Y. Liu, H. Hu, H-G. Yang, Z.-J. Hu, Y. Bogdanova, C. Shen, B. Zhang, D. Han, S.-H. Liu, I.W. McCrea, **M. Lester**, Simultaneous observations of reconnection pulses at Cluster and their effects on the cusp aurora observed at the Chinese Yellow River Station, *J. Geophys. Res.*, **115**, A10237, doi:10.1029/2010JA015526, 2010.

*Unrefereed research papers published*

- 10-47 Forsyth, C., C. S. Arridge, **S. E. Milan**, and A. Walsh, Magnetotails throughout the solar system, *Astro. Geophys.*, **51**, 6.28-6.30, 2010.