

Radio & Space Plasma Physics Group Publications

Group authors are shown boldface

Calendar Year 2008

Refereed research papers

- 08-01 Andrews, D.J., E.J. Bunce, **S.W.H. Cowley**, M.K. Dougherty, **G. Provan**, and D.J. Southwood, Planetary period oscillations in Saturn's magnetosphere: Phase relation of equatorial magnetic field oscillations and SKR modulation, *J. Geophys. Res.*, **113**, A09205, doi: 10.1029/2007JA012937, 2008.
- 08-02 **Arnone, E.**, P. Berg, **N.F. Arnold**, B. Christiansen, and P. Thejll, An estimate of the impact of transient luminous events on the atmospheric temperature, *Adv. Geosc.*, **13**, 37-43, 2008.
- 08-03 **Arnone, E.**, B.M. Kero, C.-F. Enell, **N.F. Arnold**, E. Papandrea, C.J. Rodger, M. Carlotti, M. Ridolfi, and E. Turanen, Seeking sprite-induced signatures in remotely sensed middle atmosphere NO₂, *Geophys. Res. Lett.*, **35**, L05807, doi: 10.1029/2007GL031791.
- 08-04 Arridge, C.S., C.T. Russell, K.K. Khurana, N. Achilleos, **S.W.H. Cowley**, M.K. Dougherty, D.J. Southwood, and E.J. Bunce, Saturn's magnetodisc current sheet, *J. Geophys. Res.*, **113**, A04214, doi: 10.1029/2007JA012540, 2008.
- 08-05 **Badman, S.V.**, **S.W.H. Cowley**, B. Cecconi, L. Lamy, and P. Zarka, Relationship between solar wind corotating interaction region compressions and the phasing and intensity of Saturn kilometric radiation bursts, *Ann. Geophysicae*, **26**, 3641-3651, 2008.
- 08-06 **Badman, S.V.**, **S.W.H. Cowley**, L. Lamy, B. Cecconi, and P. Zarka, Saturn's radio clock, *Astron. Geophysics.*, **49**, 4.13-4.15, 2008.
- 08-07 Belenkaya, E.S., **S.W.H. Cowley**, **S.V. Badman**, M.S. Blokhina, and V.V. Kalegaev, Dependence of the open-closed field line boundary in Saturn's ionosphere on both the IMF and solar wind dynamic pressure: Comparison with the UV auroral oval observed by the HST, *Ann. Geophysicae*, **26**, 159-166, 2008.
- 08-08 **Boakes, P.D.**, **S.E. Milan**, G.A. Abel, M.P. Freeman, G. Chisham, B. Hubert, and T. Sotirelis, On the use of IMAGE FUV for estimating the latitude of the open/closed field line boundary in the ionosphere, *Ann. Geophysicae*, **26**, 2579-2769, 2008.
- 08-09 Bunce, E.J., C.S. Arridge, J.T. Clarke, A.J. Coates, **S.W.H. Cowley**, M.K. Dougherty, J.-C. Gérard, D. Grodent, K.C. Hansen, **J.D. Nichols**, D.J. Southwood, and D.L. Talboys, Origins of Saturn's aurora: Simultaneous observations by Cassini and the Hubble Space Telescope, *J. Geophys. Res.*, **113**, A09209, doi: 10.1029/2008JA013257, 2008.

- 08-10 Bunce, E.J., C.S. Arridge, **S.W.H. Cowley**, and M.K. Dougherty, Magnetic field structure of Saturn's dayside magnetosphere and its mapping to the ionosphere: Results from ring current modelling, *J. Geophys. Res.*, **113**, A02207, doi: 10.1029/2007JA012538, 2008.
- 08-11 Chisham, G., M.P. Freeman, G.A. Abel, M.M. Lam, M. Pinnock, I.J. Coleman, **S.E. Milan**, **M. Lester**, W.A. Bristow, R.A. Greenwald, G.J. Sofko, and J.-P. Villain, Remote sensing the spatial and temporal structure of magnetopause and magnetotail reconnection from the ionosphere, *Rev. Geophys.*, **46**, RG1004, doi: 10.1029/2007RG000233, 2008.
- 08-12 Chisham, G., **T.K. Yeoman**, and G.J. Sofko, Mapping ionospheric backscatter measured by the SuperDARN HF radars – Part 1: A new empirical virtual height model, *Ann Geophysicae*, **26**, 823–841, 2008.
- 08-13 **Clausen, L.B.N.**, **T.K. Yeoman**, R. Behlke, and E.A. Lucek, Multi-instrument observations of a large scale Pc4 pulsation, *Ann. Geophysicae*, **26**, 185-199, 2008.
- 08-14 **Clausen, L.B.N.**, **T.K. Yeoman**, **D.M. Wright**, **T.R. Robinson**, **R.S. Dhillon**, and **S.C. Gane**, First results of a ULF wave injected on open field lines by Space Plasma Exploration by Active Radar (SPEAR), *J. Geophys. Res.*, **113**, A01305, doi: 10.1029/2007JA012617, 2008.
- 08-15 **Cnossen, I.**, and A.D. Richmond, Modelling the effects of changes in the Earth's magnetic field from 1957 to 1997 on the ionospheric hmF2 and foF2 parameters, *J. Atm. Solar-Terr. Phys.*, **70**, 11-12, 1512-1524, doi: 10.1016/j.jastp.2008.
- 08-16 **Cowley, S.W.H.**, A.S. Deason, and E.J. Bunce, Axisymmetric model of auroral current systems in Jupiter's magnetosphere with predictions for the Juno mission, *Ann. Geophysicae*, **26**, 4051-4074, 2008.
- 08-17 **Cowley, S.W.H.**, **S.V. Badman**, **S.M. Imber**, and **S.E. Milan**, Comment on “Jupiter: A fundamentally different magnetospheric interaction with the solar wind” by D.J. McComas and F. Bagenal, *Geophys. Res. Lett.*, **35**, L10101, doi: 10.1029/2007GL032645, 2008.
- 08-18 **Cowley, S.W.H.**, C.S. Arridge, E.J. Bunce, J.T. Clarke, A.J. Coates, M.K. Dougherty, J.-C. Gérard, D. Grodent, **J.D. Nichols**, and D.L. Talboys, Auroral current systems in Saturn's magnetosphere: Comparison of theoretical models with Cassini and HST observations, *Ann. Geophysicae.*, **26**, 2613-2630, 2008.
- 08-19 Daum, P., J.A. Wild, T. Penz, H. Reme, A.N. Fazakerley, P.J. Daly, and **M. Lester**, Global MHD simulation of flux transfer events at the high-latitude magnetopause as observed by the Cluster spacecraft and the SuperDARN radar system, *J. Geophys. Res.*, **113**, A07S22, doi: 10.1029/2007JA012749, 2008.
- 08-20 **Edberg, N.J.T.**, **M. Lester**, **S.W.H. Cowley**, and A.I. Eriksson, Statistical analysis of the location of the Martian magnetic pileup boundary and bow shock and the influence of crustal magnetic fields, *J. Geophys. Res.*, A08206, doi: 10.1029/2008JA013096, 2008.
- 08-21 Enell, C-F, **E. Arnone**, O. Chanrion, T. Adachi, P.T. Verronen, and A. Seppälä, Parameterisation of the chemical effect of sprites in the middle atmosphere. *Ann. Geophysicae*, **26**, 13-27, 2008.

- 08-22 Farrugia, C.J., F.T. Gratton, E.J. Lund, P.E. Sandholt, **S.W.H. Cowley**, R.B. Torbert, G. Gnani, I.R. Mann, L. Bilbao, C. Mioukis, L. Kistler, C.W. Smith, H.J. Singer, and J.F. Watermann, Two-stage oscillatory response of the magnetopause to a tangential discontinuity/vortex sheet followed by northward IMF: Cluster observations, *J. Geophys. Res.*, **113**, A03208, doi: 10.1029/2007JA012800, 2008.
- 08-23 **Fear, R.C.**, **S.E. Milan**, A.N. Fazakerley, E.A. Lucek, **S.W.H. Cowley**, and I. Dandouras, The azimuthal extent of three flux transfer events, *Ann. Geophysicae*, **26**, 2353-2369, 2008.
- 08-24 **Forsyth, C.**, **M. Lester**, **S.W.H. Cowley**, I. Dandouras, A.N. Fazakerley, **R.C. Fear**, H.U. Frey, **A. Grocott**, A. Kadokura, E. Lucek, H. Rème, **S.E. Milan**, and J. Watermann, Observed tail current systems associated with bursty bulk flows and auroral streamers during a period of multiple substorms, *Ann. Geophysicae*, **26**, 167-184, 2008.
- 08-25 **Goudarzi, A.**, **M. Lester**, **S.E. Milan**, and H.U. Frey, Multi-instrument observations of a trans-polar arc in the northern hemisphere, *Ann. Geophysicae.*, **26**, 201-210, 2008.
- 08-26 **Grocott, A.**, **S.E. Milan**, and **T.K. Yeoman**, Interplanetary magnetic field control of fast azimuthal flows in the nightside high-latitude ionosphere, *Geophys. Res. Lett.*, **35**, L08102, doi: 10.1029/2008GL033545, 2008.
- 08-27 Hosokawa, K., A. Kadokura, N. Sato, **S.E. Milan**, **M. Lester**, G. Bjornsson, and T. Saemundsson, Electric field modulation behind pulsating aurora, *J. Geophys. Res.*, **113**, A11322, doi: 10.1029/2008JA013601, 2008.
- 08-28 Hubert, B., **S.E. Milan**, **A. Grocott**, **S.W.H. Cowley**, and J.-C. Gérard, Open magnetic flux and magnetic flux closure during sawtooth events, *Geophys. Res. Lett.*, **35**, L23301, doi: 10.1029/2008GL035889, 2008.
- 08-29 **Lester, M.**, SuperDARN: A network approach to geospace science in the 21st century, *J. Atmos. Solar Terr. Phys.*, **70**, 2309-2323, doi:10.1016/j.jastp.2008.08.003, 2008.
- 08-30 Lui, A.T.Y., M. Volwerk, M.W. Dunlop, I.V. Alexeev, A.N. Fazakerley, A.P. Walsh, **M. Lester**, **A. Grocott**, C. Mouikis, M.G. Henderson, L.M. Kistler, C. Shen, J.K. Shi, T.L. Zhang, and H. Reme, Near-Earth substorm features from multiple satellite observations, *J. Geophys. Res.*, **113**, A07S26, doi: 10.1029/2007JA012738, 2008.
- 08-31 Marcucci, M.F., I. Coco, D. Ambrosino, E. Amata, **S.E. Milan**, M.B. Bavassano-Cattaneo, and A. Retinò, Extended SuperDARN and IMAGE observations for northward IMF: evidence for dual lobe reconnection, *J. Geophys. Res.*, **113**, A02204, doi: 10.1029/2007JA012466, 2008.
- 08-32 **Milan, S.E.**, K. Hosokawa, **M. Lester**, N. Sato, and H. Yamagishi, A new population of D-region and lower E-region HF radar echoes, *Ann. Geophysicae*, **26**, 1897-1904, 2008.
- 08-33 **Milan, S.E.**, **P.D. Boakes**, and B. Hubert, Response of the expanding/contracting polar cap to weak and strong solar wind driving: implications for substorm onset, *J. Geophys. Res.*, **113**, AO9215, doi: 10.1029/2008JA013340, 2008.

- 08-34 Neubert, T., M. Rycroft, T. Farges, E. Blanc, O. Chanrion, E. Arnone, **A. Odzimek**, **N.F. Arnold**, C.-F. Enell, E. Turunen, A. Mika, C. Haldoupis, R. Steiner, T. Bösinger, O. van der Velde, S. Soula, P. Berg, F. Boberg, P. Thejll, B. Christiansen, M. Ignaccolo, P.T. Veronen, M. Füllekrug, J. Montanya, and N. Crosby, Recent results from studies of electrical discharges in the mesosphere, *Surv. Geophys.* Doi: 10.1007/s10712-008-9043-1, 2008.
- 08-35 **Nichols, J.D.**, J.T. Clarke, **S.W.H. Cowley**, J. Duval, A.J. Farmer, J.-C. Gérard, D. Grodent, and S. Wannawichian, The oscillation of Saturn's southern auroral oval, *J. Geophys. Res.*, **113**, A11205, doi: 10.1029/2008JA013444, 2008.
- 08-36 Owen, C.J., A. Marchaudon, M.W. Dunlop, A.N. Fazakerley, J.-M. Bosqued, J.P. Dewhurst, **R.C. Fear**, S.A. Fuselier, A. Balogh, and H. Rème, Cluster observations of 'crater' flux transfer events at the dayside high-latitude magnetopause, *J. Geophys. Res.*, **113**, A07S04, doi: 10.1029/2007JA012701, 2008
- 08-37 Safargaleev, V., A. Kozlovsky, T. Sergienko, **T.K. Yeoman**, M. Uspensky, **D.M. Wright**, H. Nilsson, T. Turunen, and A. Kotikov, Optical, radar, and magnetic observations of magnetosheath plasma capture during a positive IMF Bz impulse, *Ann. Geophysicae*, **26**, 517–531, 2008.
- 08-38 **Stallard, T.S.**, S. Miller, H. Melin, M. Lystrup, **S.W.H. Cowley**, E.J. Bunce, N. Achilleos, and M. Dougherty, Jovian-like aurorae on Saturn, *Nature*, **453**, 1083-1085, 2008.
- 08-39 **Stallard, T.S.**, S. Miller, M. Lystrup, N. Achilleos, E.J. Bunce, C.S. Arridge, M.K. Dougherty, **S.W.H. Cowley**, **S.V. Badman**, D.L. Talboys, R.H. Brown, K.H. Baines, B.J. Buratti, R.N. Clark, C. Sotin, P.D. Nicholson, and P. Drossart, Complex structure within Saturn's infrared aurora, *Nature*, **456**, 214-217 doi: 10.1038/nature07440, 2008.
- 08-40 **Stallard, T.**, M. Lystrup, and S. Miller, Emission-line imaging of Saturn's H3+ aurora. *Ap.J.*, **675**, L117-L120, 2008.
- 08-41 **Stallard, T.**, S. Miller, M. Lystrup, N. Achilleos, C.S. Arridge, and M.K. Dougherty, Dusk-brightening Event in Saturn's H3+ Aurora. *Ap.J.*, **673**, L203-L206, 2008.
- 08-42 Taylor, M.G.G.T., B. Lavraud, C.P. Escoubet, **S.E. Milan**, K. Nykyri, M.W. Dunlop, J.A. Davies, R.H.W. Friedel, H. Frey, Y.V. Bogdanova, Å. Asnes, H. Laakso, P. Travnicek, A. Masson, H. Opgenoorth, C. Vallat, A.N. Fazakerley, A.D. Lahiff, C.J. Owen, F. Pitout, Z. Pu, C. Shen, Q.G. Zong, H. Rème, J. Scudder, and T.L. Zhang, The plasma sheet and boundary layers under northward IMF: A multi-point and multi-instrument perspective, *Adv. Space. Res.*, **41**, 1619-1629, 2008.
- 08-43 Trattner, K.J., S.A. Fuselier, S.M. Petriner, **T.K. Yeoman**, C.P. Escoubet, and H. Rème, The reconnection site of temporal cusp structures, structures, *J. Geophys. Res.*, **113**, A07S14, doi:10.1029/2007JA012776, 2008.
- 08-44 Volwerk, M., A.T.Y. Lui, **M. Lester**, A.P. Walsh, I. Alexeev, X. Cao, M.W. Dunlop, A.N. Fazakerley, **A. Grocott**, L. Kistler, X. Lun, C. Mouikis, Z. Pu, C. Shen, J.K. Shi, M.G.G.T. Taylor, W. Baumjohann, R. Nakamura, A. Runov, Z. Voros, T.L. Zhang, T. Takada, H. Rème, B. Klecker, and C.M. Carr, Magnetotail dipolarization and associated current systems observed by Cluster and DoubleStar, *J. Geophys. Res.*, **113**, A08S90, doi:10.1029/2007JA012729, 2008.

- 08-45 Wild, J.A., and **A. Grocott**, The influence of magnetospheric substorms on SuperDARN radar backscatter, *J. Geophys. Res.*, **113**, doi: 10.1029/2007 JA012910, 2008.
- 08-46 **Yeoman, T.K.**, H.C. Scofield, **D.M. Wright**, L.J. Baddeley, A.N. Vasilyev, and N.V. Semenova, Investigation of natural and artificial stimulation of the ionospheric Alfvén resonator at high latitude, *Adv. Space Res.*, **42**, 957–963, 2008.
- 08-47 **Yeoman, T.K.**, G. Chisham, L.J. Baddeley, **R.S. Dhillon**, T.J.T. Karhunen, **T.R. Robinson**, A. Senior, and **D.M. Wright**, Mapping ionospheric backscatter measured by the SuperDARN HF radars – Part 2: Assessing SuperDARN virtual height models, *Ann. Geophysicae*, **26**, 843–852, 2008.
- 08-48 **Yeoman, T.K.**, L.J. Baddeley, **R.S. Dhillon**, **T.R. Robinson**, and **D.M. Wright**, Bistatic observations of large and small scale ULF waves in SPEAR-induced HF coherent backscatter, *Ann. Geophysicae*, **26**, 2253–2263, 2008.
- 08-49 Zhang, Q.-H., R.Y. Liu, M.W. Dunlop, J.Y. Huang, H.Q. Hu, **M. Lester**, Y.H. Liu, Z.J. Hu, Q.Q. Shi, and M.G.G.T. Taylor, Simultaneous tracking of dayside reconnection: Cluster and conjugate SuperDARN observations on 1 April 2004, *Ann. Geophysicae*, **26**, 1545-1557, 2008.

Unrefereed research papers

- 08-50 **Arnone, E.**, P. Berg, F. Boberg, J. Bór, O. Chanrion, and C.-F. Enell, The Eurosprite 2005 campaign. In *Proc. 33rd Atmospheric Studies by Optical Methods*, IRF Sci. Rep. no. 292., Swedish Institute of Space Physics, Kiruna
- 08-51 **Cowley, S.W.H.**, Book review: “Exploring the Secrets of the Aurora” by S.-I. Akasofu, *The Observatory*, **128**, 130, 2008.

Ph.D. and M.Phil. Theses

- 08-52 **Imber, S.M.**, Auroral and ionospheric flow measurements of magnetopause reconnection during intervals of northward interplanetary magnetic field, Ph.D. thesis, University of Leicester, 2008.
- 08-53 **Forsyth, C.**, Bursty bulk flows and substorm-time tail dynamics, Ph.D. thesis, University of Leicester, 2008.