



The Newsletter
Volume 5, Issue 4
8th April 2008

Covers events between 1st December 2007 and 29th February 2008

List of Contents

General.....	1
New Staff Members.....	1
Visitors.....	2
Appointments (e.g. Editorial Boards or Committees).....	2
Proposals	2
Grants and Contracts Awarded.....	2
Mission Status and Developments.....	2
Publications - Refereed.....	3
Invited Talks and Conferences	6
Media Broadcasts and Features	7
Outreach.....	7
Press Releases	7
Next Issue	7

General

Congratulations go to Catherine Brocksopp on the birth of her baby boy and to Chris Owen who was married on February 29.

We are pleased to welcome two new PhD students. Robert Bedington will be working on MEMs with Dhiren Kataria and Marta Entradas will work (50%) on ExoMars and life fluorescence signatures (supervised by Andrew Coates). The rest of Marta’s time will be spent at UCL in Science and Technology Studies, supervised by Prof Steve Miller.

New Staff Members

Dr Carlos Allende Prieto joined in January to work on the Gaia DPAC project.

Bernhard Kliem has joined the Solar & Stellar Group and will be working on solar eruptive events, combining his expertise in numerical simulations with observations from spacecraft such as Hinode and STEREO.

Dr Myrto Symeonidis has joined the Astrophysics group.

Dr Paul Ward has joined to work with members of the Swift team.

Visitors

Prof Richard Catlow, FRS, the Executive Dean of the MAPS Faculty, visited on 21 January.

Many international collaborators on the Solar Orbiter Solar Wind Analysers (including from SwRI, University of Michigan, CESR Toulouse, IFSI Rome and Max Planck Lindau) worked at MSSL on the ESA proposal between 3 and 8 January.

As part of the Plasma Group Seminar Series, the following visitors gave seminars:

- Dr Nick Achilleos from the Atmospheric Physics Laboratory, UCL, on 'Large- and small-scale dynamics of Saturn's magnetosphere';
- Dr Alexis Rouillard from the University of Southampton & Rutherford Appleton Laboratory on 'Recent observations and modeling of the solar wind: implications for the space environment of the planets located in the very inner heliosphere';
- Dr Elizabeth Lucek from Imperial College London on 'Cluster observations of the Earth's quasi-parallel bow shock'.

Europlanet grants funded:

Elias Roussos (MPS Lindau) for 3 days at MSSL with Geraint Jones and the Planetary Science Group. He presented a seminar on icy moons and energetic charged particles in Saturn's magnetosphere: Cassini/MIMI observations.

Nicolas André to visit the Planetary Science group to work on Cassini data.

Chris Arridge's visit to University of Michigan.

Appointments (e.g. Editorial Boards or Committees)

Chris Owen has been appointed an associate editor of the Journal of Geophysical Research - Space Physics from January 2008 for a two-year term.

Andrew Coates is on the European and Joint Science Definition teams for Tandem (Titan and Enceladus mission).

Proposals

The Solar Orbiter SWA proposal was submitted on January 15 to ESA. Chris Owen would like to thank the whole team that worked extremely hard putting together the SO SWA proposal - a great team effort!

ExoMars – a grant for the next 2 years has been applied for.

Proposal for Sentinel-3 IPF2 development submitted to ESA (Steve Baker).

Proposal for Expert Support of ENVISAT RA2 for 2008-2010 submitted to ESA (Steve Baker).

Grants and Contracts Awarded

Jenny Barnes was awarded a grant from The Legacies Fund of The Royal Meteorological Society to allow her to visit Entebbe, Uganda. The occasion was the 21st Climate Outlook Forum for the Greater Horn of Africa, where the March-May seasonal outlook was presented. The experience allowed Jenny to make contacts with climate forecasters in East Africa and gain knowledge of their methods to help benefit her PhD research.

Roberto Soria visited the School of Physics at the University of Sydney on an International Fellowship Grant, to work on accretion disk modelling, with Dr Zdenka Kuncic and Dr Geoff Bicknell (ANU).

Mission Status and Developments

Cassini – the instrument is working well; there have been many science presentations at meetings.

Cluster – the PEACE instruments on all four Cluster spacecraft are functioning well and collecting data.

Cosmic Visions – involvement in Tandem (plasma, aerosols, penetrators), Laplace (plasma, X-ray, penetrators), Marco Polo (cameras, charging/radiation monitor) is being pursued. First Tandem and Laplace Science Definition Team meetings attended by AJC.

Cross-Scale - a number of meetings of the ESA Cross-Scale science definition team have been held surrounding the ESA concurrent design facility study in December and the lead up to the release of the

ITT for Cross-Scale which is due to be issued in March. Chris Owen is a member of this team. In the UK, we have been active in responding to requests from STFC as it attempts to define a position and priorities for the Cosmic Vision 2015-2025 Missions.

CryoSat-2 - launch now scheduled for 2009 - probably Q3.

Double Star - TC-2 continues to operate although financial support from ESA/STFC has been discontinued.

ExoMars - design progressing, including proposed PanCam Interface Box.

Mars Express – the instrument is working well.

Solar Orbiter – many lab members worked really hard over the Christmas and New year period to get the proposal for the Solar Wind Analysers prepared before the January 15 deadline. MSSL is the PI institute for Solar Orbiter SWA.

Venus Express – the instrument is working well.

Publications - Refereed

S & CP authors are shown in upper case.

A. Published

Asano, Y., Nakamura, R., Shinohara, I., Fujimoto, M., Takada, T., Baumjohann, W., OWEN, C.J. & FAZAKERLEY, A.N., Electron flat-top distributions around the magnetic reconnection region, *J. Geophys. Res.*, **113**, A1, A01207, 2008. [10.1029/2007JA012461](https://doi.org/10.1029/2007JA012461)

Barabash, S., Fedorov, A., Sauvaud, J.A., Lundin, R., Russell, C.T., Futaana, Y., Zhang, T.L., Andersson, H., Brinkfeldt, K., Grigoriev, A., Holmstrom, M., Yamauchi, M., Asamura, K., Baumjohann, W., Lammer, H., COATES, A.J., KATARIA, D.O., LINDER, D.R., Curtis, C.C., Hsieh, K.C., Sandel, B.R., Grande, M., Gunell, H., Koskinen, H.E.J., Kallio, E., Riihela, P., Sales, T., Schmidt, W., Kozyra, J., Krupp, N., Franz, M., Woch, J., Luhmann, J., McKenna-Lawlor, S., Mazelle, C., Thocaven, J.-J., Orsini, S., Cerulli-Irelli, R., Mura, M., Milillo, M., Maggi, M., Roelof, E., Brandt, P., Szego, K., Winningham, J.D., Frahm, R.A., Scherrer, J., Sharber, J.R., Wurz, P. & Bochsler, P., The loss of ions from Venus through the plasma wake, *Nature*, **450**, 650-653, 2007. [10.1038/nature06434](https://doi.org/10.1038/nature06434)

Barabash, S., Sauvaud, J.-A., Gunell, H., Andersson, H., Grigoriev, A., Brinkfeldt, K., Holmstrom, M., Lundin, R., Yamauchi, M., Asamura, K., Baumjohann, W., Zhang, T., COATES, A.J., LINDER, D.R., KATARIA, D.O., Curtis, C.C., Hsieh, K.C., Sandel, B.R., Fedorov, A., Mazelle, C., Thocaven, J.-J., Grande, M., Koskinen, H.E.J., Kallio, E., Sales, T., Riihela, P., Kozyra, J., Krupp, N., Woch, J., Luhmann, J., McKenna-Lawlor, S., Orsini, S., Cerulli-Irelli, R., Mura, M., Milillo, M., Maggi, M., Roelof, E., Brandt, P., Russell, C.T., Szego, K., Winningham, J.D., Frahm, R.A., Scherrer, J., Sharber, J.R., Wurz, P. & Bochsler, P., The Analyser of Space Plasmas and Energetic Atoms (ASPERA-4) for the Venus Express mission, *Planet. Space Sci.*, **55**, 12, 1772-1792, 2007.

Chaston, C.C., Wilber, M., Mozer, F.S., Fujimoto, M., Goldstein, M.L., Acuna, M., Reme, H. & FAZAKERLEY, A., Mode conversion and anomalous transport in Kelvin-Helmholtz vortices and kinetic Alfvén waves at the Earth's magnetopause, *Physical Review Letters*, **99**, 17, 2007. [10.1103/PhysRevLett.99.175004](https://doi.org/10.1103/PhysRevLett.99.175004)

COATES, A.J., Crary, F.J., LEWIS, G.R., Young, D.T., Waite, Jr, J.H & Sittler, Jr, E.C., Discovery of heavy negative ions in Titan's ionosphere, *Geophys. Res. Lett.*, **34**, 2007. [10.1029/2007GL030978](https://doi.org/10.1029/2007GL030978)

COATES, A.J., Crary, F., Young, D.T., Szego, K., ARRIDGE, C.S., Bebesi, Z., Sittler, E.C., Hartle, R.E. & Hill, T.W., Ionospheric electrons in Titan's tail: plasma structure during the Cassini T9 encounter, *Geophysical Research Letters*, **34**, L24S065, 2007. [10.1029/2007GL030919](https://doi.org/10.1029/2007GL030919)

Esposito, P., Mereghetti, S., Tiengo, A., ZANE, S., TUROLLA, R., Gotz, D., Rea, N., Kaway, N., Ueno, M., Israel, G.L., Stella, L., & Feroci, M., SGR 1806-20 about two years after the giant flare: Suzaku, XMM-Newton and INTEGRAL observations, *Astron. & Astrophys.*, **476**, 321-330, 2007. [10.1051/0004-6361:20078562](https://doi.org/10.1051/0004-6361:20078562)

Hill, T.W., Thomsen, M.F., Henderson, M.G., Tokar, R.L., COATES, A.J., McAndrews, H.J., LEWIS, G.R., Mitchell, D.G., Jackman, C.M., Russell, C.T., Dougherty, M.K., Crary, F.J. & Young, D.T., Plasmoids in Saturn's magnetotail, *J. Geophys. Res.*, **113**, A1, A91214, 2008.

- Israel, G.L., Gotz, D., ZANE, S., Dall'Osso, S., Rea, N. & Stella, L., Linking the X-ray timing and spectral properties of the glitching AXP 1RXS J170849-400910, *Astron. & Astrophys.*, **476**, L9--L12, 2007. [10.1051/0004-6361:20078215](https://doi.org/10.1051/0004-6361:20078215)
- Lefebvre, B., Schwartz, S.J. & FAZALERLEY, A., Electron dynamics and cross-shock potential at the quasi-perpendicular Earth's bow shock, *J. Geophys. Res.*, **112**, A9, A09212, 2007. [10.1029/2007JA012277](https://doi.org/10.1029/2007JA012277)
- Ma, Y., Nagy, A.F., Toth, G., Cravens, T.E., Russell, C.T., Wahlund, J.-E., Crary, F.J., COATES, A.J., Bertucci, C.L. & Neubauer, F.M., 3D global multi-species Hall-MHD simulation of the Cassini T9 flyby, *Geophys. Res. Lett.*, **34**, L24S10, 2007. [10.1029/2007GL031627](https://doi.org/10.1029/2007GL031627)
- Masters, A., ARRIDGE, C.S., Dougherty, M.K., Bertucci, C., Billingham, L., Schwartz, S.J., Jackman, C.M., Bebesi, Z., COATES, A.J. & Thomsen, M.F., Cassini encounters with hot flow anomaly-like phenomena at Saturn's bow shock, *Geophys. Res. Lett.*, **35**, L02202, 2008. [10.1029/2007GL032371](https://doi.org/10.1029/2007GL032371)
- Modolo, R., Wahlund, J.-E., Boström, R., Canu, P., Kurth, W.S., Gurnett, D., LEWIS, G.R. & COATES, A.J., Far plasma wake of Titan from the RPWS observations - a case study, *Geophys. Res. Lett.*, **34**, 2007. [10.1029/2007GL030482](https://doi.org/10.1029/2007GL030482)
- MURRAY, M.J. & Hood, A.W., Emerging flux tubes from the solar interior into the atmosphere: effects of non-constant twist, *Astron. & Astrophys.*, **479**, 567-577, 2008. Using numerical simulations, we investigate the role and signatures of twist when flux emerges from the solar interior into the atmosphere. We find that, although a certain level of twist is necessary for flux to emerge, most specific details of the twist are lost during the emergence process. [10.1051/0004-6361:20078852](https://doi.org/10.1051/0004-6361:20078852)
- Pellegrini, S., Baldi, S., Kim, D.W., Fabiano, G., SORIA, R., Siemiginowska, A. & Elvis, M., A deep Chandra look at the Low-LB elliptical NGC821, *Astrophys. J.*, **667**, 2, 731-748, 2007. [10.1086/520710](https://doi.org/10.1086/520710)
- Rymer, A.M., Mauk, B.H., Hill, T.W., Paranicas, C., Mitchell, D.G., COATES, A.J. & Young, D.T., Electron circulation in Saturn's magnetosphere, *J. Geophys. Res.*, **113**, A01201, 2008. [10.1029/2007JA012589](https://doi.org/10.1029/2007JA012589)
- SAUNDERS, M.A. & LEA, A.S., Large contribution of sea surface warming to recent increase in Atlantic hurricane activity, *Nature*, **450**, 557-560, 2008. The study is the first to quantify how much of the recent increase in North Atlantic hurricane activity/frequency is due to warming sea surface temperatures. The current sensitivity of hurricane activity to sea surface warming is large with a 0.5°C increase in sea surface temperature being associated with a ~40% increase in activity. [10.1038/nature06422](https://doi.org/10.1038/nature06422)
- Schrijver, C.J., Elmore, C., KLIEM, B., TOEROEK, T. & Title, A.M., Observations and Modeling of the Early Acceleration Phase of Erupting Filaments Involved in Coronal Mass Ejections, *Astrophys. J.*, **674**, 1, 586-595, 2008. The rise profiles of two erupting prominences on the Sun observed in the EUV by the TRACE satellite were determined to a higher precision than reached earlier for such events. A power law with an index near 3 fits both profiles better than an exponential, and both support the hypothesis that the main acceleration of the ejected material was provided by the torus instability. [10.1086/524294](https://doi.org/10.1086/524294)
- SORIA, R., Baldi, A., Risaliti, G., Fabbiano, G., King, A.R., LaParola, V. & Zezas, A., New flaring of an ultraluminous X-ray source in NGC 1365, *Mon. Not. R. astr. Soc.*, **379**, 4, 1313-1324, 2007. Study of an accreting black hole in the galaxy NGC1365, which became one of the brightest of its class then faded sharply within one week, possibly when the accreting gas was blown away in an outflow. We discuss the mass and the accretion state of this black hole. [10.1111/j.1365-2966.2007.12031.x](https://doi.org/10.1111/j.1365-2966.2007.12031.x)
- Stallard, T.S., Miller, S., Lystrup, M., Achilleos, N., ARRIDGE, C.S. & Dougherty, M., Dusk-brightening event in Saturn's H+3 aurora, *Astrophys. J.*, **673**, 2, L203-L206, 2008. [10.1086/527545](https://doi.org/10.1086/527545)
- Szego, K., Bebesi, Z., Bertucci, C., COATES, A.J., Crary, F., Erdos, G., Hartle, R., Sittler, E.C. & Young, D.T., The charged particle environment of Titan during the T9 flyby, *Geophys. Res. Lett.*, **34**, 2007. [10.1029/2007GL030677](https://doi.org/10.1029/2007GL030677)
- Yukita, M., Swartz, D.A., SORIA, R. & Tennant, A.F., Discovery of a transient X-ray source in the compact stellar nucleus of NGC2403, *Astrophys. J.*, **664**, 1, 277-283, 2007. [10.1086/518237](https://doi.org/10.1086/518237)

In Press

- Bunce, E.J., ARRIDGE, C.S., Cowley, S.W.H. & Dougherty, M.K., Magnetic field structure of Saturn's dayside magnetosphere and its mapping to the ionosphere: Results from ring current modeling, *J. Geophys. Res. - Space Physics*, 2007.
- COATES, A.J., Frahm, R.A., LINDER, D.R., KATARIA, D.O., SOOBIAH, Y., COLLINSON, G., et al., Ionospheric photoelectrons at Venus: initial observations by ASPERA-4 ELS, *Planetary and Space Science Letters*, 2008.
- Coustenis et al., TandEM: Titan and Enceladus mission, *Astrophysical Instruments and Methods*, 2008.
- DARTNELL, L.R., Desorgher, L., Ward, J.M. & COATES, A.J., Martian sub-surface ionising radiation: biosignatures and geology, *Biogeosciences*, 2007.
- Futaana, Y., Barabash, S., et al., (with COATES, A.J., LINDER, D.R., KATARIA, D.O.), Mars Express and Venus Express multi-point observations of geoeffective solar flare events in December 2006, *Planetary and Space Science Letters*, 2008.
- JONES, G.H., Roussos, E., Krupp, N., Beckmann, U., COATES, A.J. et al., The dust halo of Saturn's largest icy moon: evidence of material orbiting Rhea, *Science*, 2008.
- Kallio, E., Zhang, T.L., et al., (with COATES, A.J., KATARIA, D.O.), The Venusian induced magnetosphere: a case study of plasma and magnetic field measurements on the Venus Express mission, *Planetary and Space Science Letters*, 2008.
- LEWIS, G.R., André, N., ARRIDGE, C.R., COATES, A.J., GILBERT, L.K., LINDER, D.R. & Rymer, A.M., Derivation of density and temperature from the Cassini-Huygens CAPS electron spectrometer, *Planet. Space Sci.*, 2008.
- Martinez, C., Fraenz, M., et al., (with COATES, A.J., LINDER, D.R., KATARIA, D.O.), Location of the bow shock and ion composition boundaries at Venus - initial determinations from Venus Express ASPERA-4, *Planetary and Space Science Letters*, 2008.
- McAndrews, H.J., OWEN, C.J., Thomsen, M.F., COATES, A.J., Dougherty, M.K. & Young, D.T., Evidence for reconnection in low-energy plasma at Saturn's magnetopause, *J. Geophys. Res.*, 2007.
- Menietti, J.D., Santolik, O., Rymer, A.M., Hospodarsky, G.B., Persoon, A.M., Gurnett, D.A., COATES, A.J. & Young, D.T., Analysis of plasma waves observed within local plasma injections seen in Saturn's magnetosphere, *J. Geophys. Res.*, 2008.
- Mura, A., Orsini, S., et al., (with COATES, A.J.), ENA detection in the dayside of Mars: ASPERA-3 NPD statistical study, *Planetary and Space Science Letters*, 2008.
- Nobili, L., TUROLLA, R. & ZANE, S., X-ray spectra from magnetar candidates. I. Monte Carlo simulations in the non-relativistic regime, *Mon. Not. R. astr. Soc.*, 2008.
- Perna, R., SORIA, R., Pooley, D. & Stella, L., How rapidly do neutron stars spin at birth? Constraints from archival X-ray observations of extragalactic supernovae, , 2008.
- Swartz, D.A., SORIA, R. & Tennant, A.F., Do ultraluminous X-ray sources exist in dwarf galaxies?, *Astrophys. J.*, 2008.
- Testa, V., Rea, N., MIGNANI, R.P., Israel, G.L., Perna, R., Chaty, S., Stella, L., Covino, S., TUROLLA, R., ZANE, S., Lo Curto, G., Campana, S., Marconi, G. & Mereghetti, S., Near-infrared Observations of Magnetars: XTE J1810-197, 1RXS J1708-4009, 1E 1841-045 and SGR 1900+14, *Astron. & Astrophys.*, 2008.
- Zhang, Q.-H., Liu, R.-Y., Huang, J.-Y., Dunlop, M.W., Hu, H.-G., Shen, C. & BOGDANOVA, Y.V., Characteristics of the magnetic flux transfer events on 1 April 2004, *Chinese Journal of Polar Research*, 2007.

Publications - Non-refereed

- COATES, A.J., Venus Express - Earth's evil twin, *Astronomy Now*, 30-34, 2008.
- DE PASQUALE, M., OATES, S.R., Beardmore, A., Page, K.L., BLUSTIN, A.J., BLUSTIN, A.J., ZANE, S., PAGE, M.J., PAGE, M.J., MASON, K., Burrows, D.N., Burrows, D.N., Palmer, D., Geherls, N., Nousek, J., Nousek, J., Roming, P., Price, P., Zhang, B & Zhang, B., Energy injection in GRB afterglows: the cases of Swift GRBs 050401, 050801 and 050802, in *THE MULTICOLORED*

LANDSCAPE OF COMPACT OBJECTS AND THEIR EXPLOSIVE ORIGINS, Cefalu, Italy, Sept 2006, **924**, 437-440, Di Salvo, Antonelli, Israel, Piersanti, Tornambe, Burderi, Fiore, Matt, Menna (Eds.), AIP Conference Proceedings, 2007. [10.1063/1.2774892](https://doi.org/10.1063/1.2774892)

Esposito, P., Tiengo, A., ZANE, S., TUROLLA, R., Mereghetti, S., Gotz, D., Israel, G.L. & Rea, N., The first Suzaku observation of SGR1806-20, in 40 YEARS OF PULSARS: Millisecond Pulsars, Magnetars and More, McGill University, Montreal, 12-17 Aug 2007, **983**, 286-288, C. Bassa, Z. Wang, A. Cumming, V.M. Kaspi (Eds.), American Institute of Physics., 2008. [10.1063/1.2900165](https://doi.org/10.1063/1.2900165)

Gotz, D., Mereghetti, S., Hurley, K., Esposito, P., Gotthelf, E.V., Israel, G.L., Rea, N., Tiengo, A., TUROLLA, R. & ZANE, S., Hard X-ray variability of Magnetar's Tails observed with INTEGRAL, in 40 Years of Pulsars, Millisecond Pulsars, Magnetars and More, McGill University, Montreal, August 12-17 2007, **983**, 289--291, C. Bassa, Z. Wang, A. Cumming, V.M. Kaspi (Eds.), AIPC, 2008. [10.1063/1.2900166](https://doi.org/10.1063/1.2900166)

Jagger, T.H., Elsner, J.B. & SAUNDERS, M.A., [Forecasting U.S. insured hurricane losses, Chapter 10, Climate extremes and society](#), 1-348, 2008.

Kondratiev, V.I., Burgay, M., Possenti, A., McLaughlin, M.A., Lorimer, D.R., TUROLLA, R., Popov, S. & ZANE, S., A Search for Pulsed and Bursty Radio Emission from X-ray Dim Isolated Neutron Stars, in 40 Years of Pulsars: Millisecond Pulsars, Magnetars, and More, McGill University, Montreal, August 12-17, 2007, **983**, 348-350, C. Bassa, Z. Wang, A. Cumming, V.M. Kaspi (Eds.), AIPC, 2008. [10.1063/1.2900180](https://doi.org/10.1063/1.2900180)

OATES, S.R., Mundell, C.G., Piranomonte, S., Page, K.L., DE PASQUALE, M., Monfardini, A., Melandri, A., ZANE, S., Guidorzi, C. & Malesani, D., Understanding the Nature of Dark Bursts with the Afterglow of GRB 060108, in THE MULTICOLORED LANDSCAPE OF COMPACT OBJECTS AND THEIR EXPLOSIVE ORIGINS. , Cefalu, Italy, Sept 2006, **924**, 449-452, Di Salvo, Antonelli, Israel, Piersanti, Tornambe, Burderi, Fiore, Matt, Menna (Eds.), AIP Conference Proceedings, 2007. [10.1063/1.2774894](https://doi.org/10.1063/1.2774894)

Pielke Jr, R.A., Gratz, J., Landsea, C.W., Collins, D., SAUNDERS, M.A & Musulin, R., [Normalized hurricane damages in the United States: 1900-2005](#), *Natural Hazards Review*, **9**, 29-42, 2008. The study provides the most accurate current record of annual US hurricane damages between 1900 and 2005. Increases in hurricane losses with time are due primarily to increases in population, infrastructure and wealth along the U.S. coastline.

ZANE, S., Campana, S., Rea, N., Israel, G.L. & Turolla, R., A new Swift observation of the AXP 1RXSJ170849.0-400910, in THE MULTICOLOURED LANDSCAPE OF COMPACT OBJECTS AND THEIR EXPLOSIVE ORIGINS, Cefalu, Italy, June 11-24, 2006, **924**, 174-179, Di Salvo, Antonelli, Israel, Piersanti, Tornambe, Burderi, Fiore, Matt, Menna (Eds.), AMERICAN INSTITUTE OF PHYSICS (AIP), 2007. [10.1063/1.2774856](https://doi.org/10.1063/1.2774856)

Invited Talks and Conferences

AGU Fall Meeting, San Francisco, 10-14 December 2007 – invited talks were given by CSA, AJC and GJ. Plasmas group members participated in 23 papers.

- Arridge, C.S., Khurana, K.K., Russell, C.T., Sittler, E.C., Andre, N., McAndrews, H.J., Coates, A.J., Dougherty, M K, Periodic crossings of Saturn's magnetospheric current/plasma sheet observed by Cassini CAPS/ELS and MAG.
- Arridge, C.S., Khurana, K.K., Russell, C.T., Achilleos, N., André, N., Dougherty, M.K. and McAndrews, H.J. Solar wind and rotational effects on the 3d configuration of Saturn's magnetosphere: Observations, theory and modeling, in the Cassini era.
- Coates, A.J., Saturn's ring ionosphere.
- Coates, A.J., McAndrews, H.J., Arridge, C.S., Jones, G.H., Cray, F.J., Young, D.T., Szego, K., Sittler, E.C., Thomsen, M.F., Tokar, R.L., Bertucci, C., Dougherty, M.K., Titan at Saturn's magnetopause: CAPS results from T32.
- Jones, G.H., Roussos, E., Krupp, N., Beckmann, U., Coates, A.J., Cray, F., Dandouras, I., Dikarev, V., Dougherty, M.K., Garnier, P., Hansen, C.J., Hendrix, A.R., Hospodarsky, G.B., Johnson, R.E., Kempf, S., Khurana, K., Krimigis, S.M., Krueger, H., Kurth, W.S., Lagg, A., McAndrews, H.J., Mitchell, D.G., Paranicas, C., Postberg, F., Russell, C.T., Saur, J., Seiss, M., Spahn, F., Srama, R., Strobel, D.F., Tokar, R.L., Wahlund, J., Wilson, R.J., Woch, J., Young, D., Rhea's interaction with Saturn's magnetosphere.

The Royal Society Discussion meeting on Titan: atmosphere and space environment, 3-4 December 2007, was attended by Planetary Science group members.

- Coates, A.J. and CAPS team, Interaction of Titan's ionosphere with Saturn's magnetosphere (invited).
- Arridge, C.S., André, N., Bertucci, C., Coates, A.J., Dougherty, M., Jones, G.H., Wellbrock, A. and Marsh, C., Titan's plasma electron environment: periodicity and variability (poster).

AGU Chapman conference on Solar Wind Interaction with Mars, 22-25 January 2008, San Diego. Andrew Coates presented 1 paper and participated in another:

- Coates, A., Crary, F., Young, D., Frahm, R., Winningham, D., Lundin, R. and Barabash, S., Ionospheric Photoelectrons and their Role in Plasma Escape at Titan: Comparison to Mars.

3rd Europlanet N3 Cluster Ground-based Coordination Workshop looking at the interaction of global and local processes in Ionosphere-Magnetosphere coupling during magnetospheric substorms and coordinating Cluster/Double Star and THEMIS data with ground-based/IMAGE data. Chris Owen attended this workshop which was held at the Finnish Meteorological Institute, Helsinki, Finland, 30 January-1 February, 2008.

Kolkata conference, "Observational Evidence of Black Holes" (Feb 08).

- Roberto Soria gave an invited talk entitled, "Black hole masses in ultraluminous X-ray sources".

Media Broadcasts and Features

Andrew Coates gave interviews to:

- Daily Telegraph, Sunday Times, Surrey Advertiser;
- BBC World, BBC News 24, BBC 6 O'clock news, BBC Newsround, BBC website, BBC R4 Today (on UK space priorities with Ian Pearson, Science Minister) and BBC R5;
- NASA main and Cassini sites and ESA web portal (Titan).

Outreach

Andrew Coates gave talks on Venus Express at several astronomical societies and a UCL Lunch hour lecture entitled, "What Can Venus, Mars and Titan Tell Us About Earth?" (for staff, students and public).

Press Releases

Increased hurricane activity linked to sea surface warming. (<http://tsr.mssl.ucl.ac.uk/docs/natur-UCLrelease31Jan2008.pdf>) The Times, The Guardian, The FT, Radio 4's Today Programme, Radio 4's Science in Action, New Scientist, Nature, Reuters, The Press Association and over 100 other national and international outlets.

Press releases on Venus Express (STFC), Titan negative ion (UCL, NASA, ESA) papers 28 November 2007.

Next Issue

The next issue of the Department of Space and Climate Physics Newsletter (Volume 6, Issue 1) will be published in June 2008. This will cover activities from 1 April 2008 to 30 June 2008.