



Department of Space and Climate Physics Newsletter

Volume 2, Issue 3

5th January 2005

Covers events between 1st September 2004 and 30th November 2004

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General News

- It is sad to report the loss of John Raymont, who died recently after a long and brave battle against cancer. John was one of the original band of a dozen intrepid pioneers who moved down to Holmbury from UCL in the mid sixties, and he had worked here continuously until he was forced to retire on health grounds earlier this year. John recently completed an illustrated account of some of his experiences and the various missions he had been involved in. This should appear on our web site shortly.
- Tony Dibbens has left to enjoy his retirement in the Dordogne, France
- Nigel Meredith has taken up a new post at BAS, Cambridge.

- MSSL is involved in a new Centre for Astrobiology and Planetary Science at UCL (A.Coates, steering committee member).

New Staff Members/Appointments

Dr Richard Cole will be joining MSSL as Industrial Programme Manager from 1 Jan. He will support all MSSL industry contracts and bids.

Katie McGowan and Massimiliano de Pasquale have joined the astrophysics group to work as Burst Advocates on the Swift mission.

Guilio Del Zanna started as a postdoc in the Solar and Stellar Physics Group.

Branislav Mihaljcic has joined MSSL as Double Star Operations Research Fellow, following completion of his PhD in plasma physics at University of Manchester.

Matt Taylor is back from LANL and working with the Cluster/DoubleStar operations teams.

Gemma Attrill – PhD student supervised by Louise Harra.

Jo Bartlett – PhD student supervised by Ian Hepburn

Paul Henderson – PhD student in Space Plasmas, working on Cluster and DoubleStar magnetotail data, supervised by Chris Owen

Lewis Dartnell (CoMPLEX, UCL) – PhD student working on the radiation environment on planetary surfaces and implications for life, co-supervised by Andrew Coates and John Ward (Biochemistry & Molecular Biology, UCL)

Graham Hardy has been promoted to Cryogenic Space Research Officer.

Visitors

We welcomed the following visitors:

Professor Jintxui Wang from Beijing visited the Solar and Stellar Physics Group for one month.

Yukinaga Miyashita (Solar Terrestrial Environment Lab., Nagoya, Japan), visited the Plasma Group for a month (Oct-Nov) to work on Cluster-Geotail collaborative studies.

Cristina Mandrini from IAFE (Space Research Institute), Buenos Aires, Argentina visited in October and November to discuss solar magnetic field modelling, solar flares and coronal mass ejections.

Pascal Demoulin of Paris Observatory, France, visited in October to discuss theoretical aspects of solar flares and magnetic fields.

Lyndsay Fletcher of Glasgow University visited to discuss a solar flare event and start collaboration with the MSSL solar group.

Prizes and Awards

- Jason Dewhurst was awarded the Alan Johnstone Research Prize for his work on the analysis of Cluster PEACE data studying the dynamics of the Earth's magnetotail.

- Roberto Soria has started a one-year sabbatical, as part of his Marie Curie Fellowship, at the Harvard-Smithsonian Center for Astrophysics.

Appointments (eg Editorial Boards or Committees)

Louise Harra was appointed to the RAS Higher Education Committee.

Chris Owen was appointed to serve on the RAS Library Committee.

Lidia van Driel-Gesztelyi was re-elected as a member of the Editorial Board of the journal Solar Physics for a new four-year term (2005-2008).

Grants and Contracts Awarded

- A design review was successfully held on 30 Nov. 2004 for the ESA contract awarded to MSSL 'Demonstration Focal Plane Assembly' (Aug-04 to Apr-05 €k424, Phil Guttridge)
- The continuation of the Gaia-RVS contract with ESA kicked off on 26 Oct, with a progress meeting at MSSL on 9 Dec. The contract lasts for a year until after the main build-phase bid goes in from the industry teams to ESA in October. (Mark Cropper)

Telescope/Satellite Time Awards/Proposals

Ground-based telescopes:

JCMT - 16 hours to study the submillimetre emission from nearby type 2 QSOs (Mat Page).

Gemini South - 19.25 hours to identify optically-faint hard-spectrum X-ray sources (Mat Page).

UK Schmidt and Isaac Newton Telescopes - to observe Deep Impact comet encounter (Andrew Coates with Geraint Jones, JPL et al.).

Gemini proposal to study the star-forming environment of a candidate intermediate-mass black hole in NGC4559 (optical spectroscopy). (Roberto Soria, PI)

VLT proposal to identify the point-like optical counterpart of an ultraluminous X-ray source in NGC5408. (Mark Copper, PI)

XMM-Newton proposals:

Study of the colliding galaxy pair NGC7714/15 and their ultra-luminous X-ray sources. (Roberto Soria, PI)

Search for X-ray emission in the nuclear star clusters of a sample of late-type spiral galaxies. (Roberto Soria, PI)

Study of the X-ray emission from galaxies in the M81 group (Doug Swartz et al., Roberto Soria, Co-I)

Study of the variability timescale of the candidate intermediate-mass black hole in NGC4559. (Tod Strohmayer et al, Roberto Soria, Co-I)

Mission Status and Developments

Aurora ExoMars - Input for industrial studies.

Cassini-Huygens – Titan's first close flyby on 26 Oct 2004; next on 13 Dec.

Cluster - Nominal operation on all 4 spacecraft; proposals for mission extension under consideration.

Double Star TC-1 (equatorial satellite) - MSSL PEACE instrument returning data.

Double Star TC-2 (polar satellite) - MSSL PEACE instrument returning data.

Magnetospheric MultiScale Mission (MMS) - visit to SwRI (PI) 30 Nov. 2004. Selection Jan. 2005?

Mars Express - Operations continue.

Solar-B EIS - For the last 3 months the EIS instrument has been going through electrical and mechanical interface tests on the Solar-B spacecraft. These will finish with the EMC test in December. To date there have been no major issues associated with EIS.

Swift – successfully launched from Cape Canaveral on 20 November 2004.

Venus Express - Spacecraft testing.

Publications - Refereed

S & CP authors are shown in upper case.

A. Published

Alonso-Herrero, A., Perez-Gonzalez, P.G., Rigby, J., Rieke, G.H., Le Floch, E., Barmby, P., PAGE, M.J., Papovich, C., Dole, H., Egami, E., Huang, J.-S., Rigopoulou, D., Cristobal-Hornillos, D., Eliche-Moral, C., Balcells, M., Prieto, M., Erwin, P., Engelbracht, C.W., Gordon, K.D., Werner, M., Willner, S.P., Fazio, G.G., Frayer, G.G., Hines, D., Kelly, D., Latter, W., Misselt, K., Miyazaki, S., Morrison, J., Rieke, M.J. & Wilson, G., The Nature of Luminous X-Ray Sources with Mid-Infrared Counterparts, *Astrophys. J. Supplement Series*, **154**, 155-159, 2004. This is one of the first results to come from the new Spitzer space telescope, used here in combination with XMM-Newton, to look at the spectral energy distributions of active galactic nuclei.

Audard, M., Telleschi, A., Güdel, M., Skinner, S.L., Pallavicini, R. & MITRA-KRAEV, U., [Some Like It Hot: The X-Ray Emission of the Giant Star YY Mensae](#), *Astrophys. J.*, **617**, 531-550, 2004. The authors present an analysis of the X-ray emission of the rapidly rotating giant star YY Mensae observed by Chandra HETGS and XMM-Newton. Emission measure distributions and coronal elemental abundances are derived using three different methods, all of which show that the emission measure peaks around 20–40 MK.

BLUSTIN, A.J., BRANDUARDI-RAYMONT, G., Behar, E., Kaastra, J.S., PAGE, M.J., Kahn, S.M., Sako, M. & Steenbrugge, K.C., High resolution spectroscopy of Seyfert warm absorbers with XMM-Newton, *Adv. Space Res.*, **34**, 2561-2565, 2004.

- BLUSTIN, A.J., BRANDUARDI-RAYMONT, G., Crawford, M.L., BREEVELD, A.A., Kaastra, J.S. & Kahn, S.M., [Ultraviolet images of galaxies from the Optical Monitor on XMM-Newton](#), *Adv. Space Res.*, **34**, 2540-2543, 2004. This paper presents ultraviolet images of galaxies from the Optical Monitor, which was built at MSSL, on-board XMM-Newton. It explores some possible uses for the images in further research. [10.1016/j.asr.2003.02.079](#)
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- GOFF, C.P., MATTHEWS, S.A., VAN DRIEL-GESZTELYI, L. & HARRA, L.K., Relating magnetic field strengths to hard X-ray emission in solar flares, *Astronomy and Astrophysics Supplements*, **423**, 363-372, 2004. Relating magnetic field strengths to hard X-ray emission in solar flares. [10.1051/0004-6361:20040392](#)
- ILES, R.H.A., JONES, J.B.L., Taylor, G.C., Blake, J.B., BENTLEY, R.D., HUNTER, R., HARRA, L.K. & COATES, A.J., The effect of Solar Energetic Particle (SEP) events on the radiation exposure levels to aircraft passengers and crew: Case study of 14th July 2000 SEP event, *J. Geophys. Res.*, **109**, No. **A111**, 2004. [10.1029/2003JA010343](#)
- Lundin, R., Barabash, S., Andersson, H., Holmström, M., Grigoriev, A., Yamauchi, M., Sauvaud, J.-A., Federov, A., Budnik, E., Thocaven, J.-J., Winningham, D., Frahm, R., Scherrer, J., Sharber, J., Asamura, K., Hayakawa, H., COATES, A.J., LINDER, D.R., Curtis, C., Hsieh, K.C., Sandel, B.R., Grande, M., CARTER, M., Reading, D.H., Koskinen, H., Kallio, E., Riihela, P., Schmidt, W., Säles, T., Kozyra, J., Krupp, N., Woch, J., Luhmann, J., McKenna-Lawlor, S., Cerulli-Irelli, R., Orsini, S., Maggi, M., Mura, A., Milillo, A., Roelof, E., Williams, D., Livi, S., Bradt, P., Wurz, P. & Bochsler, P., Solar wind induced atmospheric erosion at Mars - first results from ASPERA-3 on Mars Express, *Science*, **305**, 1933-1936, 2004.
- MASON, K.O., BRANDUARDI-RAYMONT, G., Ogle, P.M., PAGE, M.J., PUCHNAREWICZ, E.M. & SALVI, N.J., X-ray broad line emission in Seyfert galaxies: Mrk 766 and NGC 4051, *Adv. Space Res.*, **34**, 2610-2613, 2004.
- PAGE, M.J., Stevens, J.A., Ivison, R.J. & Carrera, F.J., The Evolutionary Sequence of Active Galactic Nuclei and Galaxy Formation Revealed, *Astrophys. J. Lett.*, **611**, 85-88, 2004. The combination of X-ray and submillimetre observations is revealing how the growth of supermassive black holes relates to galaxy formation.
- TAYLOR, M.G.G.T., Dunlop, M.W., Lavraud, B., Vontrat-Reberac, A., OWEN, C.J., Décréau, P., Trávníček, P., Elphic, R.C., Friedel, R.H.W., DEWHURST, J.P., Wang, Y., FAZAKERLEY, A.N., Balogh, A., Rème, H. & Daly, P.W., Cluster observations of a complex high-altitude cusp passage during highly variable IMF, *Ann. Geophys.*, **22**, 3707-3719, 2004.
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B. In Press

- Aikio, A., Mursula, K., Buchert, S., Forme, F., Amm, O., Marklund, G., Dunlop, M., Fontaine, D., Vaivads, A. & FAZAKERLEY, A., Temporal evolution of two auroral arcs as measured by the Cluster satellite and coordinated ground-based instruments, *Ann. Geophys.*, 2004.
- Alexeev, I.V., OWEN, C.J., FAZAKERLEY, A.N., Runov, A., DEWHURST, J.P., Balogh, A., Reme, H., Klecker, B. & Kistler, L., Cluster observations of currents in the plasma sheet during reconnection, *Geophys. Res. Let.*, .
- Bhardwaj, A., BRANDUARDI-RAYMONT, G., Elsner, R.F., Gladstone, G.R., RAMSAY, G., Rodriguez, P., SORIA, R., & WAITE Jr., J.H., Solar control on Jupiter's equatorial X-ray emissions: 26-29 November 2003 XMM-Newton observations, *Geophys. Res. Let.*, 2004. A 69 hour XMM-Newton observation of Jupiter in Nov. 2003 shows similar day-to-day variability in Jovian equatorial X-rays as in the solar X-rays observed by TIMED/SEE and GOES. A large solar X-ray flare occurring on the Jupiter-facing side of the Sun is found as a corresponding feature in the Jovian X-rays. This suggests that low-latitude Jovian X-rays are due to the scattering of solar X-rays in the planet's upper atmosphere, i.e. the Sun directly controls the non-auroral X-rays from Jupiter's disk.
- BLUSTIN, A.J., PAGE, M.J., FUERST, S.V., BRANDUARDI-RAYMONT, G. & ASHTON, C.E., [The nature and origin of Seyfert warm absorbers](#), *Astron. & Astrophys.*, 2004. This paper is a wide-ranging survey of the properties of ionised gaseous outflows from Active Galactic Nuclei (AGN), as revealed by high resolution X-ray spectroscopy using XMM-Newton and Chandra. We find that, although the outflow accounts for less than 1% of the energy output of the AGN, the transfer of mass is probably significant enough to have a major influence on the evolution of the host galaxy and of the AGN itself.
- BOGDANOVA, Y.V., FAZAKERLEY, A.N., OWEN, C.J., Klecker, B., Cornilleau-Wehrlin, N., Grison, B., Andre, M., Cargill, P., Reme, H., Bosqued, J.M., Kistler, L.M. & Balogh, A., Correlation between suprathermal electron burst, BBELF waves and ion heating in the mid-altitude cleft/LLBL observed by Cluster, *J. Geophys. Res.*, 2004.
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- Dunlop, M.W., Lavraud, B., Cargill, P., TAYLOR, M.G.G.T., Balogh, A., Reme, H., Decreau, P., Glassmeier, K.-H., Elphic, R.C., Bosqued, J.-M., FAZAKERLEY, A.N., Dandouras, I., Escoubet, C.P., Laakso, H. & MARCHAUDON, A., Cluster observations of the cusp: magnetic structure and dynamics, *Space Sci. Rev.*, 2004.
- Hakala, P., RAMSAY, G, Muhli, P, Charles, P, Hannikainen, D, Mukai, & Vilhu, O, XMM-Newton observations of UW CrB - detection of X-ray bursts and evidence for accretion disc evolution, *Mon. Not. R. astr. Soc.*, 2004. XMM-Newton observations of this system show several X-ray bursts lasting a few seconds, which strengthens the case for this object having a neutron star primary. White light observations made using the OM show very different light curves several days apart suggesting the disc is warped.
- Keith, W.R., Winningham, J.D., FAZAKERLEY, A.N., Reme, H., Goldstein, M.L., Fritz, T.A. & Cornilleau-Wehrin, N., Observations of a unique cusp signature at low and mid altitudes, *Space Sci. Rev.*, 2004.
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- RAMSAY, G, Hakala, P, WU, K, CROPPER, M, MASON, K. O, Cordova, & Priedhorsky, W, XMM-Newton observations of the ultra-compact binary RX J1914+24, *Mon. Not. R. astr. Soc.*, 2004. We find that this ultra-compact binary system is spinning up at a rate consistent with that expected from gravitational radiation. Further, we find its has an unusual X-ray spectrum showing an emission feature near 0.6keV
- Starling, R.L.C., PAGE, M.J., BRANDUARDI-RAYMONT, G., BREEVELD, A.A., SORIA, R. & WU, K., The X-ray spectrum of NGC7213 and the Seyfert-LINER connection, *Mon. Not. R. astr. Soc.*, 2004. NGC7213 is a transition object between a low-luminosity LINER galaxy and a high-luminosity Seyfert galaxy. The X-ray spectrum shows characteristics of both classes, suggesting a continuous sequence of X-ray spectra from supermassive black holes.

Publications - Non-refereed

- BOGDANOVA, Y.V., Klecker, B., Paschmann, G., Kistler, L.M., Mouikis, C., Moebius, E., Reme, H., Bosqued, J.-M., Dandouras, I., Sauvaud, J.A., Cornilleau-Wehrin, N., Laakso, H., Korth, A., Bavassano-Cataneo, M.B., Phan, T., Carlson, C., Parks, G., McFadden, J.P., McCarthy, M. & Lundin, R., Investigation of the source region of ionospheric oxygen outflow in the cusp using multi-spacecraft observations by CIS onboard Cluster, *Adv. Space Res.*, **34/11**, 2459-2464, 2004.
- DWELLY, T. & PAGE, M.J., X-ray colours of AGN in the 13H XMM-Newton/Chandra deep field, in Proceedings of the Guillermo Haro Conference 2003: Multiwavelength AGN surveys, Cozumel, Mexico, 08/12/03, **1**, 35-36, R. Mujica & R. Maiolino (Eds.), World Scientific, 2004. We compare the distribution of X-ray colours of Active Galactic Nuclei found in our deep XMM-Newton/Chandra observations, with the predictions of a number of models for absorption in the AGN population.
- LEA, A. & SAUNDERS, M.A., [September forecast update for Australian region tropical storm activity in 2004/5](#), 3pp, 2004.
- LEA, A. & SAUNDERS, M.A., [October forecast update for Australian region tropical storm activity in 2004/5](#), 3pp, 2004.
- LEA, A. & SAUNDERS, M.A., [North Atlantic storminess forecast for winter 2004/5](#), 3pp, 2004.
- LEA, A. & SAUNDERS, M.A., [November forecast update for Australian region tropical storm activity in 2004/5](#), 3pp, 2004.
- SAUNDERS, M.A., [Tropical cyclones in a warmer world](#), in Proceedings of Benfield Hazard Research Centre Workshop on Natural Hazards in a Warmer World, The City Club, London, 14 Oct. 2004, 14pp, (Eds.), , 2004. .
- SAUNDERS, M.A. & LEA, A., [North Atlantic Oscillation forecast for winter 2004/5](#), 3pp, 2004.
- STARLING, R.L.C., PAGE, M.J., BRANDUARDI-RAYMONT, G., BREEVELD, A.A., SORIA, R. & WU, K., [The Seyfert-LINER galaxy NGC 7213: an XMM-Newton observation](#), *From X-ray binaries to quasars: black hole accretion on all mass scales*, 2004.

B. In Press

- VAN DRIEL-GESZTELYI, L., Demoulin, P., Mandrini, C.H., HARRA, L.K. & Klimchuk, J., An observational test for coronal heating models, *Stars as Suns: Activity, evolution and planets*, 473-477, 2004.

PhDs Awarded

- Alexander Blustin, "The nature and origins of warm absorbers in AGN".
- Christian Bridge, "A Study of the Accretion Flow in Eclipsing Polars".

Invited Talks and Lectures (National and International)

Alexander Blustin

- “The UK contribution to Swift”, at the Swift launch event at the National Space Centre in Leicester on 20 Nov. 2004.

Yulia V. Bogdanova

- “Structure of the mid-altitude cusp”, at The Royal Astronomical Society meeting ‘The magnetospheric cusps revealed: Results from the CLUSTER mission’, 8 Oct. 2004, London.

Andrew Coates

- Talk and panel member in session ‘How critically is science covered on the radio’, at SCIRAB (Science in radio broadcasting) London symposium ‘Are scientists heard on the radio’, BBC Bush House, 27 Nov. 2004.
- “CAPS observations of Saturn’s plasma environment”, presented at ‘The Saturn Universe: a Cassini workshop’, Capri, Italy, 5-8 Oct. 2004. (AJC et al.)
- “Europe’s current and future planetary exploration programme”, presented at RAS Young Scientists Planetary Meeting, 15 Oct. 2004.
- “UK goes to the planets”, and “Mars and the search for life”, talks and press conference at BA festival of science, Exeter, 9 Sept. 2004
- “Structural framework: current and future space missions”, NERC/PPARC UK planetary science initiative meeting, Geological Society, 15 Sept. 2004.
- “Europe goes to Mars!”, UCL Alumnus Day, 9 Oct. 2004.
- “UK goes to the planets”, Institute of Physics, Southampton University, 11 Oct. 2004.
- “Space exploration – why bother?”, British Council event panel member, National Space Centre, 13 Oct. 2004.
- “UK goes to the planets”, for British Council, Krakow, Poland at opening of UK space exhibition, 4 Nov. 2004. Also internet chat on www.astronomia.pl, Polish TV interview on international cooperation in space.
- Seminar at Imperial College London, 10 Nov. 2004, on CAPS results at Saturn and ASPERA results at Mars.
- Talk at UCL planetary journal club, 12 Nov. 2004, on Cassini-Huygens to Saturn and Titan.
- Talk at British Association for Advancement of Science Wessex branch, Bournemouth University, 19 Nov 2004.
- Talk “First results from the Cassini plasma experiment CAPS at flyby TA: electron observations”, at London Titan Seminar series part III, 21-23 Nov. 2004.
- Talk (UK goes to the planets) and Café Scientifique (Why should we explore space?) for British Council at Zilina University, Slovakia, 26 Nov. 2004.

Andrew Fazakerley

- “Observation of waves and injections on the dawnside flank of the magnetosphere”, 2nd Double Star-Cluster Workshop, Nov., 2004, Beijing, China.

Robert Fear

- Flux transfer events in the cusp/magnetosphere boundary layer, Fear, R.C., Fazakerley, A.N., Owen, C.J., Lucek, E.A., Balogh, A., Kistler, L.M., Mouikis, C., Reme, H. RAS "G" meeting – The Magnetospheric Cusps Revealed, 8 Oct. 2004.

Katherine McGowan

- Invited talk 'Catching Gamma-ray Bursts on the Fly', Keele University, 24 Nov. 2004

Chris Owen

- 3 lectures – “The Magnetosphere I”, “The Magnetosphere II” and “Introduction to Space Weather”, to the PPARC Introductory Summer School, University of Glasgow, 2-3 Sept. 2004.

Lydia Van Driel-Gesztelyi

- "The smallest coronal mass ejection and magnetic cloud source region ever observed", seminar at University of Glasgow, Nov. 2004.

Conference and Workshop Presentations (National and International)

Yulia Bogdanova

- “Cluster observation of the electron-dominated cleft region at mid-altitudes: properties and statistical study of the size and location”, PEACE team meeting, 7-10 Sept. 2004, MSSL, UCL, London, UK. (Bogdanova, Y.V., C.J. Owen, Fazakerley, A.N. et al.)
- “A possible mechanism for the formation of the stagnant cusp observed by Cluster at high-altitudes”, UK MIST, 26 Nov. 2004, London. (Bogdanova, Y.V., Marchaudon, A., Owen, C.J. et al.)

Andrew Coates

- “Electron observations from Mars Express ASPERA-ELS”, International Mars Conference, 19-23 Sept. 2004, Ischia, Italy. (Coates, A.J., Soobiah, Y., Linder, D.R., et al. and the ASPERA-3 team)

Andrew Griffiths

- “The panoramic camera system for the ExoMars rover”, EANA conference, Open University, 22-25 Nov. 2004. (Griffiths, A.D., Coates, A.J., Jaumann, R. and Paar, G.)

Ben Lloyd-Hughes

- “Waterworld versus wasteland: flood versus drought in the 21st century”, Benfield Hazard Research Centre Workshop on Natural Hazards in a Warmer World, London, 14 Oct. 2004.

Aurelie Marchaudon

- “Observation of FTEs by Double Star and injections by Cluster, on the dawnside flank of the magnetosphere”, Autumn MIST Meeting, Nov. 2004, London, UK. (Marchaudon A., Owen, C. J., Fazakerley, A.N., Lahiff, A.D., et al.)

- “Ionospheric signatures of plasma injections in the cusp triggered by solar wind pressure pulses Δ 14/07/2001”, The Cusp Meeting, Royal Astronomical Society, Oct. 2004, London, UK. (Marchaudon A., Cerisier, J.-C., Bosqued, J.-M., et al.)
- “Conjunction between magnetospheric and magnetosheath FTEs observed by Cluster and PIFs observed by SuperDARN”, 8th Cluster Workshop, Oct. 2004, Durham, USA. (Marchaudon A., Bogdanova, Y., Owen, C., et al.)
- “High-altitude stagnant cusp crossing on 16 March 2002: electron behaviour and conjunction with the ionosphere”, 8th Cluster Workshop, New Hampshire, USA, 27 Sept. - 1 Oct. 2004. (Bogdanova, Y.V., Marchaudon, A., et al.)

Hazel McAndrews

- “An overview of results from Saturn Orbit Insertion for the Cassini CAPS electron spectrometer”, RAS Young Scientists Planetary Meeting, 15 Oct 04. (McAndrews, H.J., Owen, C.J., Coates, A.J., Rymer, A.M. for CAPS team,)
- “Initial results from the Cassini CAPS-ELS instrument at the magnetopause of Saturn”, RAS MIST meeting, 26 Nov. 2004. (McAndrews, H.J., Owen, C.J., Coates, A.J., et al.)

Andrew Orr

- “Characteristics of stable flows over southern Greenland”, Environmental Systems Science Centre (ESSC), University of Reading, 4 Nov. 2004.
- “Climate change in the UK”, University of Portsmouth, 24 Nov. 2004.

Chris Owen

- “Cluster observations of the electron-dominated cleft region at mid-altitudes: properties and statistical study of size and location”, 8th Cluster Workshop, New Hampshire, USA, 27 Sept. - 01 Oct. 2004. (Bogdanova, Y.V., Owen, C.J. et al)

Abi Rymer

- “The plasma environment of Titan: introduction and expectations of Cassini-ELS measurements in the vicinity of Titan”, RAS Young Scientists Planetary Meeting, 15 Oct 2004. (Rymer A.M. and Coates, A.J.)

Mark Saunders

- “Tropical cyclones in a warmer world”, Benfield Hazard Research Centre Workshop on Natural Hazards in a Warmer World, London, 14 Oct. 2004.
- “US hurricane seasonal forecasting and risk reduction”, Lighthill Institute of Mathematical Sciences international conference on Climate Extremes and Risk Reduction, Senate House, London, 30 Nov. 2004.

Yasir Soobiah

- “Observations of magnetic anomaly signatures in Mars Express ASPERA-ELS data”, International Mars Conference, 19-23 Sept. 2004, Ischia, Italy. (Soobiah, Y., Coates, A.J., Linder, D.R., et al. and the ASPERA-3 team.)
- “Observations of magnetic anomaly signatures in Mars Express ASPERA-ELS data”, RAS Young Scientists Planetary Meeting, 15 Oct 04. (Soobiah, Y., Coates, A.J., Linder, D.R., et al. and the ASPERA team)

- "Observations of magnetic anomaly signatures in Mars Express ASPERA-ELS data", RAS MIST meeting, 26 Nov. 2004. (Soobiah, Y., Coates, A.J., Linder, D.R., et al.)

Roberto Soria

- "Intermediate-mass black holes: how do they fit in?", Federation Fellowship Astronomy Symposium 2004, Mount Stromlo Observatory, Australian National University, Nov. 2004.

Tibor Toeroek

- "The kink instability in a coronal magnetic loop as a trigger mechanism for solar eruptions", SOHO 15 conference on coronal heating, St Andrews, Scotland, 6-9 Sept. 2004.

Organisation of National/International Conferences

- Mark Saunders (jointly with M.K. Davey). Lighthill Institute of Mathematical Sciences international conference on Climate Extremes and Risk Reduction, Senate House, London. 30 Nov. 2004. Audience of 110.
- Chris Owen co-convened an RAS discussion meeting on 'The magnetospheric cusps revealed: Results from the CLUSTER mission', 8 Oct. 2004, London, UK.

Press Releases

- "SWIFT: CATCHING GAMMA-RAY BURSTS ON THE FLY...", Pre Swift Launch, (Martin dela Nougerede) 11 Nov. 2004.
- Dr Peter Yuen Joins TSR Consortium, 1 Sept. 2004 (Mark Saunders). <http://forecast.mssl.ucl.ac.uk/shadow/docs/TSRRelease01092004.pdf>

Media Broadcasts and Features

Andrew Coates - Over 15 media interviews including:

- Sky News (Genesis re-entry, 8 Sept.), Guardian and Independent (Mars life and water, 10 Sept.), BBC R4 Today programme (Rosetta, 30 Sep), BBC News 24 (Space Exploration and tourism, 27 Sept.), BBC4 Sky at Night (Mars Express ASPERA and PFS results, 28 Sept.), CNN (Space Exploration and tourism, 29 Sept.), BBC 1 O'clock news (Cassini Titan encounter, 26 Oct.), BBC News online (Cassini at Titan, 5 Nov).

Mark Saunders received media citations in:

- Reuters, The Daily Telegraph, The Times, Evening Standard, Insurance Day, Insurance Times, Reactions Financial Magazine, Business Insurance, Reinsurance, The Review, Post Magazine, Professional Broking, and New Scientist.
- Mark Saunders and Adam Lea participated in four US conference calls (each to an on-line insurance audience of over 100) to provide briefings on the 2004 North Atlantic hurricane season.

Proposals Submitted

Penetration of the solar wind plasma into the Earth's magnetosphere as observed by Cluster/Double Star, submitted to PPARC for the EURYI opportunity. (Yulia Bogdanova)

Other News Items/Activities

The TSR (Tropical Storm Risk) seasonal forecasts for Atlantic and US landfalling hurricane activity outperform those issued by NOAA and other leading US groups for the active 2004 hurricane season.

The TSR (Tropical Storm Risk) web site received over 250,000 hits between 1 Aug. and 31 Oct. (a factor of five rise on the same period in 2003).

"Gamma mission sets its sights on answers" (by Murray Wardrop) Post Swift Launch, Surrey Advertiser, 26 Nov. 2004.

"Pupils' close look at craters". (Steve Welch gave a talk/demo to Year 2 at St Leonard's School in Horsham) West Sussex County Times, 5 Nov. 2004.

"Space, the final frontier - these are the voyages of the Mullard Space Science Lab" (Swift launch coverage) Dorking Advertiser, 2 Dec. 2004.

Tracey Poole, Ceri Ashton and Dhiren Kataria hosted a visit from Horsham Brownies, who enjoyed an evening learning about the solar system, making star charts and looking through a telescope.

MSSL had a very eye-catching exhibition stand at the British Interplanetary Society's UK Space Weekend event in Brighton on the 30-31 Oct. 2004. (Alex Blustin)

Next Issue

The next issue of the Department of Space and Climate Physics Newsletter (Volume 2, Issue 4) will be published in mid-March 2005. This will cover activities from 1 December 2004 to 28 February 2005.