

EFW publications 2005

Refereed papers, published (members of the PI team are given in boldface)

Backrud, M., A. Tjulin, **A. Vaivads, M. André** and A. Fazakerley, Interferometric identification of ion acoustic broadband waves in the auroral region: CLUSTER observations, *Geophys. Res. Lett.*, 32, L21109, doi:10.1029/2005GL022640, 2005.

Backrud-Ivgren, M., G. Stenberg, M. André, M. Morooka, Y. Hobara, S. Joko, K. Rönnmark, N. Cornilleau-Wehrlin, A. Fazakerley and H. Rème, Cluster observations and theoretical identification of broadband waves in the auroral region, *Ann. Geophys.*, 23, 3739-3752, SRef-ID: 1432-0576/ag/2005-23-3739, 2005.

Bale, S. D., P. J. Kellogg, F. S. Mozer, T. S. Horbury and H. Reme, Measurement of the electric fluctuation spectrum of magnetohydrodynamic turbulence, *Phys. Rev. Lett.*, 94, 215002, 2005.

Balikhin, M., S. Walker, R. Treumann, H. Alleyne, V. Krasnoselskikh, M. Gedalin, **M. André**, M. Dunlop and A. Fazakerley, Ion sound wave packets at the quasiperpendicular shock front, *Geophys. Res. Lett.*, 32, L24106, doi:10.1029/2005GL024660, 2005.

Béghin, C., P. M. E. Décréau, J. Pickett, **D. Sundkvist** and B. Lefebvre, Modeling of CLUSTER's electric antennas in space: application to plasma diagnostics, *Radio Science*, 40, RS6008, doi:10.1029/2005RS003264, 2005.

Behlke, R., H. Kucharek, S. D. Bale, **M. André** and E. A. Lucek, The electric potential at the Earth's quasi-parallel bow shock: Initial Cluster results, American Institute of Physics, *The Physics of Collisioless Shocks*, 0-7354-0268-X/05/\$22.50, 2005.

Borålv, E., H. J. Opgenoorth, K. Kauristie, M. Lester, J.-M. Bosqued, J. P. Dewhurst, C. J. Owen, M. Dunlop, J. A. Slavin, A. Fazakerley and C. Perry, Correlation between ground-based observations of substorm signatures and magnetotail dynamics, *Ann. Geophys.*, 23, 997-1011, SRef-ID: 1432-0576/ag/2005-23-997, 2005.

Cattell, C., J. Dombeck, J. Wygant, J. F. Drake, M. Swisdak, M. L. Goldstein, W. Keith, A. Fazakerly, **M. André**, E. Lucek and A. Balogh, Cluster observations of electron holes in association with magnetotail reconnection and comparison to simulations, *J. Geophys. Res.*, 110, 2004JA010519, 2005.

Chaston, C. C., T. D. Phan, J. W. Bonnell, F. S. Mozer, M. Acuna, M. L. Goldstein, A. Balogh, **M. André** and A. Fazakerley, Drift-kinetic Alfvén waves observed near a reconnection X line in the Earth's magnetopause, *Phys. Rev. Lett.*, 95, 065002, 2005.

Chaston, C. C., L. M. Peticolas, C. W. Carlson, J. P. McFadden, F. Mozer, M. Wilber, G. K. Parks, A. Hull, R. E. Ergun, R. J. Strangeway, **M. André**, **Y. Khotyaintsev**, M. L. Goldstein, M. Acuna, E. J. Lund, H. Reme, I. Dandouras, A. N. Fazakerley and A. Balogh, Energy deposition by Alfvén waves into the dayside auroral oval: Cluster and FAST observations, *J. Geophys. Res.*, 110, A02211, doi: 10.1029/2004JA010483, 2005.

Décréau, P. M. E., E. Le Guiriec, J. L. Rauch, J. G. Trotignon, P. Canu, F. Darrouzet, J. Lemaire, A. Masson, F. Sedgemore and **M. André**, Density irregularities in the plasmasphere boundary layer: Cluster observations in the dusk sector, *Adv. Space Res.*, 36(10) 1964-1969, doi:10.1016/j.asr.2005.08.050, 2005.

De Keyser, J., M. W. Dunlop, C. J. Owen, B. U. A. O. Sonnerup, S. E. Haaland, **A. Vaivads**, G. Paschmann, R. Lundin and L. Rezeau, Magnetopause and boundary layer, *Space Sci. Rev.*, 118(1-4), 231-320, doi:10.1007/s11214-005-3834-1, 2005.

Eriksson, P. T. I., L. G. Blomberg and K.-H. Glassmeier, Cluster Satellite Observations of mHz Pulsations in the Dayside Magnetosphere, *Adv. Space Res.*, doi:10.1016/j.asr.2005.04.103, 2005.

Eriksson, P. T. I., L. G. Blomberg, A. D. M. Walker and K. H. Glassmeier, Poloidal ULF oscillations in the dayside magnetosphere: a Cluster study, *Ann. Geophys.*, 23, 2679-2686, 2005.

Figueiredo, S., G. T. Marklund, T. Karlsson, T Johansson, Y. Ebihara, M. Ejiri, N. Ivchenko, P.-A. Lindqvist, H. Nilsson and A. Fazakerley, Temporal and spatial evolution of discrete auroral arcs as seen by Cluster, *Ann. Geophys.*, 23, 2531-2557, 2005.

Grison, B., F. Sahraoui, B. Lavraud, T. Chust, N. Cornilleau-Wehrlin, H. Rème, A. Balogh and **M. André**, Wave particle interactions in the high-altitude cusp: a Cluster study, *Ann. Geophys.*, 23, 3699-3713, 1432-0576/ag/2005-23-3699, 2005.

Johansson, T., T. Karlsson, G. Marklund, S. Figueiredo, P.-A. Lindqvist and **S. Buchert**, A statistical study of intense electric fields at 4-7 R_E geocentric distance using Cluster, *Ann. Geophys.*, 23, 2579-2588, 1432-0576/2005-23-2579, 2005.

Mozer, F. S., S. D. Bale, J. P. McFadden and R. B. Torbert, New features of electron diffusion regions observed at subsolar magnetic reconnection sites, *Geophys. Res. Lett.*, 32(24), L24102, 2005.

Mursula, K., R. Kerttula, T. Asikainen, R. Friedel, **A. Vaivads**, F. Soraas, M. Grande, M. Carter, P. W. Daly, T. A. Fritz, J. F. Fennell and A. Balogh, Cluster/RAPID energetic electron observations at the dayside magnetospheric boundary, *Adv. Space Res.*, 36(10), 1904-1908, doi:10.1061/j.asr.2004.03.021, 2005.

Nakamura, R., O. Amm, H. Laakso, N. C. Draper, M. Lester, A. Grocott, B. Klecker, I. W. McRea, A. Balogh, H. Rème and **M. André**, Localized fast flow disturbance observed in the plasma sheet and in the ionosphere, *Ann. Geophys.*, 23, 553-566, 1432-0576/ag/2005-23-553, 2005.

Paschmann, G., S. Haaland, B. U. Ö. Sonnerup, H. Hasegawa, E. Georgescu, B. Klecker, T. D. Phan, H. Rème and **A. Vaivads**, Characteristics of the near-tail dawn magnetopause and boundary layer, *Ann. Geophys.*, 23(4) 1481-1497, SRef-ID: 1432-0576/ag/2005-23-1481, 2005

Phan, T. D., C. P. Escoubet, L. Rezeau, R. A. Treumann, **A. Vaivads**, G. Paschmann, S. A. Fuselier, D. Attié, B. Rogers, and B. U. Ö. Sonnerup, Magnetopause Processes, *Space Sci. Rev.*, 118(1-4), 367-424, doi:10.1007/s11214-005-3836-z, 2005.

Retinò, A., M. B. Bavassano-Cattaneo, M. F. Marcucci, **A. Vaivads**, **M. André**, Y. Khotyaintsev, T. Phan, G. Pallochia, H. Rème, E. Moebius, B. Klecker, C.W. Carlson, M. McCarthy, A. Korth, R. Lundin and A. Balogh, Cluster multispacecraft observations at the high latitude duskside magnetopause: implications for continuous and component magnetic reconnection, *Ann. Geophys.*, 23, 461-473, 2005.

Rosenqvist, L., H. Opgenoorth, **S. Buchert**, O. Amm, I. McRea and C. Lathuillere, Extreme solar-terrestrial events of October 2003: high latitude and Cluster observations of the large geomagnetic disturbance on October 30, *J. Geophys. Res.*, 110, doi:1029/2004JA010927, 2005.

Silin, I., J. Buchner and **A. Vaivads**, Anomalous resistivity due to nonlinear lower-hybrid drift waves, *Phys. Plasmas*, 12, 062902, doi:10.1063/1.1927096, 2005.

Stenberg, G., T. Oscarsson, **M. André**, **A. Vaivads**, **M. Morooka**, N. Cornilleau-Wehrlin, A. Fazakerley, R. Lavraud and P. M. E. Décréau, Electron-scale sheets of whistlers close to the magnetopause, *Ann. Geophys.*, 3715-3725, SRef-ID: 1432-0576/ag/2005-23-3715, 2005.

Sundkvist, D., **A. Vaivads**, **M. André**, **J.-E. Wahlund**, Y. Hobara, S. Joko, V.V. Krasnoselskikh, Y. V. Bogdanova, **S. C. Buchert**, N. Cornilleau-Wehrlin, A. Fazakerley, J.-O. Hall, H. Rème and **G. Stenberg**, Multi-spacecraft determination of wave characteristics near the proton gyrofrequency in high-altitude cusp, *Ann. Geophys.*, 23, 983-995, 2005.

Sundkvist, D., V. Krasnoselskikh, P. K. Shukla, **A. Vaivads**, **M. André**, **S. Buchert** and H. Rème, *In situ* multi-satellite detection of coherent vortices as a manifestation of Alfvénic turbulence, *Nature*, 436, 825-828, doi: 10:1038/nature03931, 2005.

Tjulin, A., J.-L. Pincon, **F. Sahraoui**, **M. André** and N. Cornilleau-Wehrlin, The k-filtering technique applied to wave electric and magnetic field measurements from the Cluster satellites, *J. Geophys. Res.*, 110, A11224, doi:10.1029/2005JA011125, 2005.

Torkar, K., M. Fehringer, C.P. Escoubet, **M. André**, A. Pedersen, K.R. Svenes and P.M.E. Décréau, Analysis of Cluster spacecraft potential during active control, *Adv. Space. Res.*, 36(10), 1922-1927, doi:10.1016/j.asr.2005.01.110, 2005.

Torkar, K., K.R. Svenes, A. Fazakerley, S. Szita, H. Rème, I. Dandouras, M. Fehringer, C.P. Escoubet and **M. André**, Improvement of plasma measurements onboard Cluster due to spacecraft potential control, *Adv. Space Res.*, 36(10), 1951-1957, doi:

Wygant, J. R., C. Cattell, R. Lysak, Y. Song, J. Dombeck, J. McFadden, F. S. Mozer, C. W Carlsson, G. Parks, E. A. Lucek, A. Balogh, **M. André**, H. Rème, M. Hesse and C. Mouikis, Cluster observations of an intense normal component of the electric field at a thin reconnecting current sheet in the tail and its role in the shock-like acceleration of the fluid into the separatrix region, *J. Geophys. Res.*, 110, A09206, doi:10.1029/2004JA010708, 2005

Zheng, Y., G. Le, J. A. Slavin, M. L. Goldstein, C. Cattell, A. Balogh, E. A. Lucek, H. Rème, J. P. Eastwood, M. Wilber, G. Parks, **A. Retinò** and A. Fazakerley, Cluster observation of continuous reconnection at dayside magnetopause in the vicinity of cusp, *Ann. Geophys.*, 23, 2199-2215, 2005.

Non-refereed

Engwall, E. and A. I. Eriksson. Cold magnetospheric plasma flows and spacecraft wakes: PicUp3D simulations and Cluster data. In *Proceedings of the 9th International Spacecraft Science Technology Conference (SCTC-9)*, 2005.

Engwall, E. and A. I. Eriksson. Cold magnetospheric plasma flows and spacecraft wakes: PicUp3D simulations and Cluster data. In *Proceedings of the 7th International Symposium for Space Simulations (ISSS-7)*, 2005.

Eriksson, A. I. and J.-E. Wahlund. Charging of a conductive spacecraft in the auroral zone. In *Proceedings of the 9th International Spacecraft Charging Technology Conference (SCTC-9)*, 2005.

Backrud, M., Cluster observations and theoretical explanations of broadband waves in the auroral region, PhD-thesis, Acta Universitatis Upsaliensis, ISBN 91-554-6258-8, urn:nbn:se:uu:diva-5809, 2005.

Behlke, R., Dissipation at the Earth's quasi-parallel bow shock, PhD-thesis, Acta Universitatis Upsaliensis, ISBN 91-554-6391-6, urn:nbn:se:uu:diva-6123, 2005.

Retinò, A., Magnetic reconnection at the Earth's magnetopause: CLUSTER spacecraft observations at different scales, Licentiate thesis, Department of astronomy and space physics, Uppsala university, October 2005.

Rosenqvist, L., The impact of a strongly magnetized high speed solar wind on the Earth's magnetosphere-ionosphere system, Licentiate thesis, Department of astronomy and space physics, Uppsala university, December 2005.

Sundkvist, D., Instabilities, Coherent Vortices and Covariant Parametrization, PhD-thesis, Acta Universitatis Upsaliensis, ISBN 91-554-6386X, urn:nbn:se:uu:diva-6051, 2005.