Publications, Dr. Katariina Nykyri

Biographical Information

Name: Heidi Katariina Nykyri
Place of Birth: Tampere, Finland
Date of Birth: January 1st, 1975

Peer Reviewed Research Publications

[27.] Dougal, E. R**., Nykyri, K.,** and Moore, T. W.: Mapping of the quasi-periodic oscillations at the flank magnetopause into the ionosphere, Ann. Geophys., 31, 1993-2011, doi:10.5194/angeo-31-1993-2013, 2013.

[26.] **Nykyri, K.,** and C. Foullon, First magnetic seismology of the CME reconnection outflow layer in the low corona with 2.5-D MHD simulations of the Kelvin-Helmholtz instability, Geophys. Res. Lett., 40, doi:10.1002/grl.50807., 2013

[25.] Nykyri, K., Impact of MHD shock physics on magnetosheath asymmetry and Kelvin-Helmholtz instability, J. Geophys. Res. Space Physics, 118, doi:10.1002/jgra.50499.,2013

[24.] Dimmock, A. P., and **K. Nykyri** , The statistical mapping of magnetosheath plasma properties based on THEMIS measurements in the magnetosheath interplanetary medium reference frame, J. Geophys. Res. Space Phys., 118, doi:10.1002/jgra.50465., 2013

[23.]Foullon, C; Verwichte, E; **Nykyri, K** Aschwanden, M. J.; Hannah, I. G. (2013) Kelvin-Helmholtz Instability of the CME Reconnection Outflow Layer in the Low Corona. *The Astrophysical Journal,* 767 (2), 170.

[22.] Lavraud, B.; Larroque, E.; Budnik, E.; Génot, V.; Borovsky, J. E.; Dunlop, M. W.; Foullon, C.; Hasegawa, H.; Jacquey, C.; **Nykyri, K.;** Ruffenach, A.; Taylor, M. G. G. T.; et al., H. Asymmetry of magnetosheath flows and magnetopause shape during low Alfvén Mach number solar wind. *JGR* 118 (3), 1089-1100,2013

[21.] Adamson, E., Otto, A., and **K. Nykyri**.: 3-D mesoscale MHD simulations of magnetospheric cusp-like configurations: cusp diamagnetic cavities and boundary structure, Ann. Geophys., 30, 325-341, doi:10.5194/angeo-30-325-2012, 2012.

[20.] Foullon, C.; Verwichte, E.; Nakariakov, V .M.; **Nykyri, K.**; Farrugia, C., Magnetic Kelvin-Helmholtz Instability at the Sun ,*Astrophysical Journal Letters, APJ,* **729** L8 doi:10.1088/2041-8205/729/1/L8,2011

[19.] K. J. Trattner, S. M. Petrinec, S. A. Fuselier, **K. Nykyri**, and E. Kronberg, Cluster observations of bow shock energetic ion transport through the magnetosheath into the cusp, JGR, VOL. 116, A09207, 12 PP., 2011, doi:10.1029/2011JA016617

[18.] K. Nykyri, Otto, A., Adamson E., Kronberg E., Daly P., On the Origin of High-Energy Particles in the Cusp Diamagnetic Cavity, In press for Special Issue on Cusp Physics, JASTP, 2012, doi:10.1016/j.jastp.2011.08.012,

[17.] Adamson, E.; Otto A., **K. Nykyri,** 3-D mesoscale MHD simulations of a cusp-like magnetic configuration: method and first results, Ann. Geophys., 29, 759-770, 2011, doi:10.5194/angeo-29-759-2011

[16.] **K. Nykyri;** Otto, A.; Adamson, E.; Tjulin, A., On the origin of fluctuations in the cusp diamagnetic cavity,

JGR,VOL. 116, A06208, 13 PP., 2011, doi:10.1029/2010JA015888

[15.] K. Nykyri; Otto, A.; Adamson, Dougal, E; Mumme, J.: Cluster observations of a cusp diamagnetic cavity: Structure, size, and dynamics, JGR, VOL. 116, A03228, 27 PP., 2011,doi:10.1029/2010JA015897

[14.] Taylor, M, B. Lavraud, C. Escoubet, S. Milan, **K. Nykyri**, K., Dunlop,M.W., Davies,J.A., Friedel, R.H.W., Frey,H., Bogdanova,Y.V.,Åsnes,A., et al., The plasma sheet and boundary layers under northward, IMF: a multi-point and multi-instrument perspective, Advances in Space Research, doi:10.1016/j.asr.2007.10.013, 2008

[13.] K. Nykyri, Plasma – A View from Space, Featured Review in Physics World, Volume 20, Issue 4, 2007

[12.] **K. Nykyri,** A. Otto, Lavraud B., Mouikis C., Kistler L., Balogh A., Reme H, **"**Cluster Observations of Reconnection due to the Kelvin-Helmholtz Instability at the Dawnside Magnetospheric Flank," *Annales Geophysicae* (2006) 24: 2619 – 2643.

[11.] K. Nykyri, Grison B., Cargill P. J., Lavraud B., Lucek E., Dandouras I., Balogh A., Reme H., Cornilleau-Wehrlin N, "Origin of the Turbulent Spectra in the High-Altitude Cusp: Cluster Spacecraft Observations," *Annales Geophysicae* (2006) 24: 1057 – 1075.

[10.] Cargill P.J, Lavraud B., Owen C.J, Grison B., Dunlop M.W , Cornilleau-Wehrlin N., Escoubet C.P, Paschmann G., Phan T.D, Rezeau L., Bogdanova Y., and **Nykyri K.,** Cluster at the magnetospheric cusps, *Space science series Book of ISSI, "Outer Magnetospheric Boundaries: Cluster results", ISSI Space Science Series, Springer, Reprinted from Space Science Reviews, Volume 118, Nos. 1-4, 2005 2005*

[9.] M.W.Dunlop, M.G.G.T.Taylor, J.A.Davies, C.J.Owen, F.Pitout, A.N.Fazakerley, Z.Pu, H.Laakso, Y.V.Bogdanova, Q.-G.Zong, C.Shen, **K. Nykyri**, B.Lavraud, S.E.Milan, T.D.Phan, H.Rème et al., Coordinated Cluster/Double Star observations of dayside reconnection signatures, *Annales Geophysicae VOL 23, 2867, 2005*

[8.] K. Nykyri and A. Otto, "Influence of the Hall Term on KH Instability and Reconnection inside KH vortices," *Annales Geophysicae* (2004) 22: 935 - 949.

[7.] K. Nykyri Cargill P. J., Lucek E.A., Horbury T. S., Lavraud B., Balogh A., Dunlop M. W., Bogdanova Y., Fazarkerley A., Dandouras I. and Reme H, "Cluster Observations of Magnetic Field Fluctuations in the High-Altitude Cusp," *Annales Geophysicae* (2004) 22: 2413 - 2429.

[6.] Cargill P. J., Dunlop M.W, Lavraud B., Elphic R.C., Holland D. L., **Nykyri K.**, Balogh A.., Dandouras I. and Reme H., CLUSTER encounters with the high altitude cusp: Boundary structure and magnetic field depletions, *Annales Geophysicae, VOL.22,1739,2004*

[5.] Cargill P.J, Lavraud B., Owen C.J, Grison B., Dunlop M.W , Cornilleau-Wehrlin N., Escoubet C.P, Paschmann G., Phan T.D, Rezeau L., Bogdanova Y., and **Nykyri K.,** Cluster at the magnetospheric cusps, *Space science series Book of ISSI, "Outer Magnetospheric Boundaries: Cluster results", ISSI Space Science Series, Springer, Reprinted from Space Science Reviews, Volume 118, Nos. 1-4, 2005 2005*

[4.] K. Nykyri .,Cargill P. J., Lucek E. A., Horbury T. S., Balogh A., Lavraud B., Dandouras I., Reme H., **"**Ion Cyclotron Waves in the High-Altitude cusp: CLUSTER Observations at Varying Spacecraft Separations," *Geophysical Research Letters*, Volume 30, Issue 24, pp. SSC 12-1, CiteID 2263, DOI 10.1029/2003GL018594.

[3.] **K. Nykyri,** Otto A., Buchner J., Nikutowski B., Baumjohann W., Kistler L. M. And Mouikis C, "Equator-S Observations of Boundary Signatures: FTE's or Kelvin- Helmholtz Waves," *Geophysical Monograph 133*, Earth's Low-Latitude Boundary Layer, 202, 2002

[2.] A. Otto and K. **Nykyri** "Kelvin-Helmholtz Instability and Magnetic Reconnection: Mass Transport at the LLBL", Geophysical Monograph 133, Earth' s Low-Latitude Boundary Layer, 53 , 2002.

[1.] **K. Nykyri** and A. Otto, **"**Plasma Transport at the Magnetospheric Boundary due to Reconnection in Kelvin-Helmholtz vortices," *Geophysical Research Letters*, Volume 28, Issue 18, p. 3565-3568, 2001.

Other Peer Reviewed Publications:

[1.] Turner, N. E., W. Murtagh, K. Guthrie, **K. Nykyri**, W. A. Radasky, and E. Senkowicz (2012), Florida Energy Assurance Plan, Space Weather, 10, S08015, doi.10.1029/2012SW000834.

Other Publications:

[1.] Steven Petrinec and **Katariina Nykyri**, The Magnetosheath Whitepaper, 2012, http://aten.igpp.ucla.edu/gemwiki/images/d/d7/GEM_Msheath_FG_white_paper_V1.pdf

2.] Lotko, W. , Lead (Dartmouth College), W.
Jeffrey Hughes (Boston University), Michael W. Liemohn (University of Michigan) and **Katariina Nykyri** (Em bry−Riddle Aeronautical University), GEM White paper: The Geospace Environment Modeling Program Need, Goals, Accomplishments, Implementation, 2013, http://spc.igpp.ucla.edu/gem/pdf/GEMWhitePaper-2013.07.01.pdf

Theses:

- M.Sci Thesis in Theoretical physics, University of Helsinki, Finland 1998: Magnetic field model for planet Mercury (I modified Tsyganenko field model for Mercury and fitted the free parameters in the model with Mariner 10 data)

- Ph.D thesis in Physics, 2002, University of Alaska, Fairbanks, 2002: On the Influence of Kelvin-Helmholtz Instability (KHI) on the Plasma Transport at the Magnetospheric Boundary (I developed 2-D MHD and Hall-MHD simulations of the KHI and compared these with Equator-S and Cluster spacecraft data and ionospheric observations)