

Publications Rang A – période 2020-2025

21 publiées, 5 en révision, 1 soumise

Steichen, V., A. Piney, F. Leblanc, J.-J. Berthelier, C. Montaron, F. Ferreira, C. Dorland, G. Guignan, Y. Inoue, N. Hong, J.-C. Matéo-Vélez, P. Henri and **A. Marchaudon**, Prelude - Sat Electron Emitter (PSEE): A compact, low power electron emitter for planetary instrumentation, soumis à *Review of Scientific Instruments*, 2025.

Geethakumari, G. P., A. T. Aikio, L. Cai, H. Vanhamäki, I. I. Virtanen, A. Coster, A. Maute, **A. Marchaudon**, P.-L. Blelly, Role of Large-Scale Traveling Ionospheric Disturbances in the Positive Storm Phase Observed by the Millstone Hill Radar and GNSS TEC Measurements, en révision à *Journal of Geophysical Research: Space Physics*, 2025.

Nakamura, R., T. Dudok de Wit, G. H. Jones, M. G. G. Taylor et al., Establishing a European Heliophysics Community (EHC), en révision à *Ann. Geophys.*, 2025.
<https://egusphere.copernicus.org/preprints/2025/egusphere-2025-3814>.

Resseguier, A., P.-L. Blelly, **A. Marchaudon**, A new geomagnetic coordinate system: the Generalized Eccentric Dipole, en révision à *Journal of Geophysical Research: Space Physics*, 2025.

Gallardo-Lacourt, B., M. Grandin, **A. Marchaudon**, M. Barthélémy, Unresolved Questions in Subauroral Science: Exploring Key Challenges in Physics and Chemistry, en révision à *Surveys in Geophysics*, 2025. *Workshop ISSI "Physical Links Between Weather and Climate in Space and the Lower Atmosphere"*.

Laundal, K. M., **A. Marchaudon**, A. Maute, S. M. Hatch, F. Enengl, T. Matsuo, M. Decotte, M. Madelaire, V. G. Merkin, A. Sciola, V. Haberle, A. S. Skeidsvoll, Next generation data assimilation methods for polar ionospheric electrodynamics, en révision à *Surveys in Geophysics*, 2025. *Workshop ISSI "Physical Links Between Weather and Climate in Space and the Lower Atmosphere"*.

Harvey, V. L., D. Aggarwal, E. Becker, M. Bittner, B. Funke, L. Goncharenko, J. Jia, R. Lieberman, H.-L. Liu, V. Maliniemi, **A. Marchaudon**, H. Nesse, N. Partamies, N. Pedatella, C. Schmidt, G. Shi, C. Stephan, G. Stober, W. Van Caspel, S. Wuest, Y. Yamazaki (2025), Signatures of Polar Vortex Weakening in the MLTI: A Review, *Survey Geophysics*, <https://doi.org/10.1007/s10712-025-09899-3>. *Workshop ISSI "Physical Links Between Weather and Climate in Space and the Lower Atmosphere"*.

Santerne, A., H. Meheut, D. Barret, O. Berné, E. Berthier, A. Ducharne, J. Knödseder, **A. Marchaudon**, T. Pellarin, A. Spiga, P. Wolf (2025), Towards sustainable space research in France, soumis à *Nature Astronomy, Correspondence*, <https://doi.org/10.1038/s41550-025-02506-w>.

Kieokaew, R., V. Haberle, **A. Marchaudon**, A. Chambodut, P.-L. Blelly (2025), Neural network modeling of geomagnetic baseline for ground magnetic measurements at mid-latitude, *Space Weather*, 23, e2024SW004192, <https://doi.org/10.1029/2024SW004192>.

Wahlund, J. E., J. E. S. Bergman, L. Åhlén, et al. (2025), The Radio & Plasma Wave Investigation (RPWI) for the JUper ICy moons Explorer (JUICE). *Space Sci Rev* 221, 1, <https://doi.org/10.1007/s11214-024-01110-0>

Belehaki, A., I. Häggström et al. (2025), PITHIA-NRF, Integrating plasmasphere, ionosphere and thermosphere observations and models into a standardised open access research environment: The PITHIA-NRF international project, *Advances in Space Research*, Volume 75, Issue 3, Pages 3082-3114, <https://doi.org/10.1016/j.asr.2024.11.065>.

Haberle, V., **A. Marchaudon**, A. Chambodut, P.-L. Blelly (2024), An Operational Geomagnetic Baseline Derivation Method for Magnetic Observatories located in Mid-Latitudes, *Space Weather*, 22, e2024SW004048, <https://doi.org/10.1029/2024SW004048>

Geethakumari, G. P., A. T. Aikio, L. Cai, H. Vanhamäki, I. I. Virtanen, A. Coster, **A. Marchaudon**, P.-L. Blelly, A. Maute, J. Norberg, S. Oyama, Y. Zhang, S. Chakraborty and B. Kunduri (2024), Total electron

content variations during an HSS/SIR-driven geomagnetic storm at high and mid-latitudes, *Journal of Geophysical Research: Space Physics*, 129, e2024JA033192, <https://doi.org/10.1029/2024JA033192>

Ellahouny, N. M., A. Aikio, H. Vanhamäki, I. Virtanen, L. Cai, **A. Marchaudon**, P.-L. Blelly, A. Coster, J. Norberg, A. Maute, S.-I. Oyama (2024), EISCAT observations of depleted high-latitude F-region 2 during an HSS/SIR-driven magnetic storm, *Journal of Geophysical Research: Space Physics*, 129, e2024JA032910, <https://doi.org/10.1029/2024JA032910>.

Sarris, T. E., Tourgaidis S., et al. (2023), Daedalus MASE (mission assessment through simulation exercise): A toolset for analysis of in situ missions and for processing global circulation model outputs in the lower thermosphere-ionosphere., *Front. Astron. Space Sci.*, 9:1048318, <https://doi.org/10.3389/fspas.2022.1048318>.

Dahani, S., R. Kieokaew, V. Génot, B. Lavraud, Y. Chen, B. M. de Welle, N. Aunai, G. Toth, P. Cassak, N. Fargette, R. C. Fear, **A. Marchaudon**, D. Gershman, B. Giles, R. Torbert, and J. Burch (2022), The Helicity Sign of Flux Transfer Event Flux Ropes and its Relationship to the Guide Field and Hall Physics in Magnetic Reconnection at the Magnetopause, *Journal of Geophysical Research: Space Physics*, e2022JA030686. <https://doi.org/10.1029/2022JA030686>.

Rae, J., Forsyth, C. et al. (2022), What are the fundamental modes of energy transfer and partitioning in the coupled Magnetosphere-Ionosphere system?, *Experimental Astronomy*, Volume 54, pages 391–426, <https://doi.org/10.1007/s10686-022-09861-w>

Berngardt, O. I., St- Maurice, J.-P., Ruohoniemi, J. M., & **Marchaudon, A.** (2022). Seasonal and diurnal dynamics of radio noise for 8–20 MHz poleward-oriented mid-latitude radars. *Radio Science*, 57, e2021RS007338. <https://doi.org/10.1029/2021RS007338>.

Haberle, V., **Marchaudon, A.**, Chambodut, A., & Blelly, P.-L. (2022), Direct determination of geomagnetic baselines during quiet periods for low and mid-latitude observatories. *Journal of Geophysical Research: Space Physics*, 127, e2022JA030407. <https://doi.org/10.1029/2022JA030407>.

Wang, Y., M. Blanc et al. (2021), A preliminary study of Magnetosphere-Ionosphere-Thermosphere coupling at Jupiter: Juno multi-instrument measurements and modelling tools, *J. Geophys. Res. Space Physics*, <https://doi.org/10.1029/2021JA029469>.

Marcucci, M. F., I. Coco, S. Massetti, A. Pignalberi, V. Forsythe, M. Pezzopane, A. Koustov, S. Longo, D. Biondi, E. Simeoli, G. Consolini, M. Laurenza, **A. Marchaudon**, A. Satta, A. Cirioni, A. De Simone, A. Olivieri, A. Bau, A. Salvati (2021), Echo occurrence in the southern polar ionosphere for the SuperDARN Dome C East and Dome C North radars, *Polar Science*, 28, <https://doi.org/10.1016/j.polar.2021.100684>.

Chisham, G., A. G. Burrell, **A. Marchaudon**, S. G. Shepherd, E. G. Thomas, P. Ponomarenko (2021), Improving the geopositioning of SuperDARN echoes through interferometer calibration, *Polar Science*, 28, <https://doi.org/10.1016/j.polar.2021.100638>.

Palmroth, M., Grandin, M., Sarris, T., Doornbos, E., Tourgaidis, S., Aikio, A., Buchert, S., Clilverd, M., Dandouras, I., Heelis, R., Hoffmann, A., Ivchenko, N., Kervalishvili, G., Knudsen, D., Kotova, A., Liu, H.-L., Malaspina, D., March, G., **Marchaudon, A.**, Marghitu, O., Matsuo, T., Miloch, W., Moretto-Jørgensen, T., Mpaloukidis, D., Olsen, N., Papadakis, K., Pfaff, R., Pirnaris, P., Siemes, C., Stolle, C., Suni, J., van den Ijssel, J., Verronen, P.T., Visser, P., and Yamauchi, M. (2021), Lower thermosphere - ionosphere (LTI) quantities: Current status of measuring techniques and models, *Ann. Geophys.*, <https://doi.org/10.5194/angeo-2020-42>.

Kieokaew, R., B. Lavraud, N. Fargette, **A. Marchaudon**, V. Génot, C. Jacquy, D. Gershman, B. Giles, R. Torbert, J. Burch (2021), Statistical Relationship between Interplanetary Magnetic Field Conditions and the Helicity Sign of Flux Transfer Event Flux Ropes, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2020GL091257>.

Pitout, F., **A. Marchaudon**, K. Trattner, J. Berchem, H. Laakso, C. P. Escoubet (2020), Simultaneous Polar and Cluster observations in the northern and southern mid-altitude polar cusps around equinox, *J. Geophys. Res. Space Physics*, <https://doi.org/10.1029/2020JA028346>.

Poedts S. et al., EUropean Heliospheric FORecasting Information Asset 2.0 (2020), *Journal of Space Weather and Space Climate*, 10, 57, <https://doi.org/10.1051/swsc/2020055>.

Marchaudon, A. and P.-L. Blelly (2020), Impact of the dipole tilt angle on the ionospheric plasma as modeled with IPIM, *J. Geophys. Res. Space Physics*, 125, <https://doi.org/10.1029/2019JA027672>.

Conférences invitées – période 2020-2025

Marchaudon A., How can the effects of the middle atmosphere be taken into account to model the ionosphere accurately?, *ISSI Workshop “Physical Links Between Weather and Climate in Space and the Lower Atmosphere”*, Berne, Suisse, Janvier 2024.

Marchaudon, A., Ground-based efforts toward a better description of the ionosphere-thermosphere system and a better assimilation of data in first-principle models, *Royal Astronomical Society’s Specialist Discussion Meeting Global Monitoring of Geospace*, Meeting en ligne, Janvier 2022.

Marchaudon, A., Overview of the equatorial electrodynamics at Earth, *Royal Astronomical Society Meeting: Comparative Equatorial Thermosphere-Ionosphere-Magnetosphere*, Meeting en ligne, Février 2021.

Publications sans comité de lecture – 2020-2025

Marchaudon, A., and P.-L. Blelly (2024), Understanding the near-Earth space environment: a challenge for both solar-terrestrial relations and coupling with the lower atmosphere, *SF2A-2024: Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics*. Eds.: M. Béthermin, K. Baillié, N. Lagarde, J. Malzac, R.-M. Ouazzani, J. Richard, O. Venot, A. Siebert (eds), meeting à Marseille, France, 4-7 Juin 2024, p. 27-32 <https://ui.adsabs.harvard.edu/abs/2024sf2a.conf...27M>.

Sarris, T., et al. (2023), Plasma-Neutral Interactions in the Lower Thermosphere-Ionosphere: The need for in situ measurements to address focused questions, *Whitepaper #351 in the Decadal Survey for Solar and Space Physics (Heliophysics) 2024-2033*. Main topics: basic research. Additional topics: planetary ionospheres/upper atmospheres; space-based missions/projects, <https://doi.org/10.3847/25c2cfcb.ad2e5fe9>.

Rae, J. et al. (2020), What are the fundamental modes of energy transfer and partitioning in the coupled Magnetosphere-Ionosphere system?, *European Space Agency’s “Call for White Papers for the Voyage 2050 long-term plan in the ESA Science Programme”*.

Communications nationales et internationales (1^{ère} autrice) – 2020-2025

Marchaudon, A., Comprendre l’environnement spatial proche de la Terre : enjeu aussi bien pour les relations Soleil-Terre que pour les couplages avec la basse atmosphère, *Session plénière du Colloque de la SF2A*, Marseille, France, Juin 2024.

Marchaudon, A., P.-L. Blelly, F. Pitout, J. Eisenbeis, S. Thomas, Importance de la composante thermosphérique dans la dynamique du couplage ionosphère-magnétosphère : impact pour la Météorologie de l’Espace, *Colloque du PNST*, Marseille, France, Mai 2022.

Marchaudon, A., P.-L. Blelly, F. Pitout, L. Noguès, H.C. Séran, L. Bautista, A. Resseguier, Installations ionosphériques HF françaises : état du radar SuperDARn de Kerguelen et installation d’une ionosonde

au Centre de Recherche Atmosphérique de Lannemezan, *Colloque de prospective du PNST*, Marseille, France, Janvier 2024. (poster)

Marchaudon A., P.-L. Blelly, A. Aikio, A. Maute, S. Thomas, J. Eisenbeis, Applications du modèle IPIM aux événements intenses : éjections de masse coronale (CME) et régions d'interaction en corotation (CIR), *Colloque de prospective du PNST*, Marseille, France, Janvier 2024. (poster)

Marchaudon, A., P.-L. Blelly, F. Pitout, L. Noguès, H.C. Séran, L. Bautista, A. Resseguier, French HF ionospheric facilities: SuperDARN radar and Ionosonde, *European Space Weather Week 2023*, Toulouse, Novembre, 2023. (poster)

Communications internationales (jeunes chercheurs encadrés) – 2020-2025

Resseguier, A., P.-L. Blelly, A. Marchaudon, Implementation of a low and mid-latitudes electrodynamical module in the IRAP Plasmasphere-Ionosphere Model (IPIM), *EGU General Assembly 2024*, Vienne, Autriche, Avril 2025. (poster)

Haberle, V., **Marchaudon, A.**, Chambodut, A., and Blelly, P.-L.: An operational geomagnetic baseline derivation for ground magnetometer data located in mid-latitudinal regions, *EGU General Assembly 2024*, Vienne, Autriche, Avril 2024. (poster)

Kieokaew, R., V. Haberle, **A. Marchaudon**, A. Chambodut, P.-L. Blelly, Neural network modeling of the ground magnetic perturbation at mid-latitude: towards future application of geomagnetic storm prediction, *European Space Weather Week 2023*, Toulouse, Novembre 2023.

Haberle, V., **Marchaudon, A.**, Chambodut, A., and Blelly, P.-L.: Extraction of solar forcing signatures in ground magnetometer data from sub-auroral regions, *EGU General Assembly 2023*, Vienne, Autriche, Avril 2023. (poster)

Haberle, V., **A. Marchaudon**, A. Chambodut, P.-L. Blelly, Extraction of ground magnetic signatures from solar quiet current systems in sub-auroral regions, *EGU General Assembly*, Avril 2022.

Eisenbeis, J., P.-L. Blelly, S. R. Thomas, **A. Marchaudon**, Modeling horizontal currents and magnetic ground perturbations with the IPIM model, *EGU General Assembly*, Avril 2022.

Thomas, S. R., S. Bird, P.-L. Blelly, **A. Marchaudon**, J. Eisenbeis, Using IPIM to Simulate the Ionosphere's Response to Extreme Space Weather, *EGU General Assembly*, Avril 2022.

Eisenbeis, J., P.-L. Blelly, S. R. Thomas, **A. Marchaudon**, Modeling horizontal currents and ground induced currents with the IPIM model, *AGU Fall Meeting*, Décembre 2021.

Thomas, S. R., P.-L. Blelly, **A. Marchaudon**, J. Eisenbeis, S. Bird, Applying Solar Wind Observations to the IPIM Ionospheric Model, *AGU Fall Meeting*, Décembre 2021.

Haberle, V., **A. Marchaudon**, A. Chambodut, P.-L. Blelly, Local diurnal variations of the geomagnetic field during magnetically quiet conditions, *EGU General Assembly*, Avril 2021.

Thomas, S. R., P.-L. Blelly, **A. Marchaudon**, J. Eisenbeis, S. Bird, Applying Solar Wind Observations to the IPIM Ionospheric Model, *EGU General Assembly*, Avril 2021.

Publications Rang A – période 2004-2019

48. **Marchaudon, A.** (2019). New Insights in Far-Space Measurements: Large-Scale Structures and Processes in the Solar Wind and Terrestrial Magnetosphere. In M. Manda, M. Korte, A. Yau, & E. Petrovsky (Eds.), *Geomagnetism, Aeronomy and Space Weather: A Journey from the Earth's Core to the Sun* (Special Publications of the International Union of Geodesy and Geophysics, pp. 98-112). Cambridge: Cambridge University Press, ISBN: 9781108418485, <https://doi.org/10.1017/9781108290135.009>.
47. Marcucci, M.F., I. Coco, S. Massetti, S. Longo, D. Biondi, E. Simeoli, **A. Marchaudon**, A. Koustov, G. Pallochia, G. Consolini, M. Laurenza, and E. Amata (2019), Dome C East radar: preliminary analysis of echo statistics, *Il Nuovo Cimento C*, 1, <https://doi.org/10.1393/ncc/i2019-19046-5>.
46. Fadanelli, S., Lavraud, B., Califano, F., Jacquy, C., Vernisse, Y., Kacem, I., ..., **A. Marchaudon** et al (2019). Four-spacecraft measurements of the shape and dimensionality of magnetic structures in the near-Earth plasma environment, *J. Geophys. Res. Space Physics*, 124. <https://doi.org/10.1029/2019JA026747>.
45. Bergardt, O. I., Ruohoniemi, J. M., St-Maurice, J.-P., **Marchaudon, A.**, Kosch, M. J., Yukimatu, A. S., et al. (2019). Global diagnostics of ionospheric absorption during X-ray solar flares based on 8- to 20-MHz noise measured by over-the-horizon radars, *Space Weather*, 17, 907–924, <https://doi.org/10.1029/2018SW002130>.
44. Blelly, P.-L., **A. Marchaudon**, M. Indurain, O. Witasse, J. Amaya, B. Chide, N. André, V. Génot, A. Goutenoir, M. Bouchemit (2019), Transplanet: a web service dedicated to modeling of planetary ionospheres, *Planetary and Space Science*, 169, 35-44, <https://doi.org/10.1016/j.pss.2019.02.008>.
43. Nishitani, N., J. M. Ruohoniemi M. Lester, J. B. H. Baker, A. S. Koustov, S. G. Shepherd, G. Chisham, T. Hori, E. G. Thomas R. A. Makarevich, **A. Marchaudon**, P. Ponomarenko, J. A. Wild, S. E. Milan, W. A. Bristow, J. Devlin, E. S. Miller (2019), Review of the accomplishments of mid-latitude SuperDARN, *Earth and Planetary Science*, 6:27, <https://doi.org/10.1186/s40645-019-0270-5>.
42. **Marchaudon, A.**, P.-L. Blelly, M. Grandin, A. Aikio, A. Kozlovsky, and I. Virtanen (2018), IPIM modeling of the ionospheric F2-layer depletion at high-latitudes during a high-speed stream event, *J. Geophys. Res. Space Physics*, 123, 7051-7066, <https://doi.org/10.1029/2018JA025744>.
41. Kacem I., C. Jacquy, V. Génot, B. Lavraud, Y. Vernisse, **A. Marchaudon**, et al. (2018), Magnetic Reconnection at a Thin Current Sheet Separating Two Interlaced Flux Tubes at the Earth's Magnetopause, *J. Geophys. Res. Space Physics*, <https://doi.org/10.1002/2017JA024537>.
40. Bocchialini, K., M. Menvielle, A. Chambodut, N. Cornilleau-Wehrin, D. Fontaine, B. Grison, **A. Marchaudon**, M. Pick, F. Pitout, B. Schmieder, S. Régnier, Y. Zouganelis (2018), Statistical Analysis of Solar Events Associated with Storms Sudden Commencements (SSCs) over One Year of Solar Maximum during Cycle 23: Propagation and Effects from the Sun to the Earth, *Solar Physics*, 293: 75. <https://doi.org/10.1007/s11207-018-1278-5>.
39. André, N., M. Grande, N. Achilleos, M. Barthélémy, M. Bouchemit, K. Benson, P.-L. Blelly, E. Budnik, S. Caussarieu, B. Cecconi, A. Cook, V. Génot, P. Guio, A. Goutenoir, B. Grison, R. Hueso, M. Indurain, G. Jones, J. Liliensten, **A. Marchaudon**, D. Matthiä, A. Opitz, A. Rouillard, I. Stanislawski, J. Soucek, C. Tao, L. Tomasik, J. Vaubillon (2018), Virtual Planetary Space Weather Services offered by the Europlanet H2020 Research Infrastructure, *Planetary and Space Science*, 150: 50-59, <https://doi.org/10.1016/j.pss.2017.04.020>.
38. Zhang Y., B. Lavraud, L. Dai, C. Wang, **A. Marchaudon**, L. Avakov, J. Burch, M. Chandler, J. Dorelli, S. Duan, R. Ergun, D. Gershman, B. Giles, Y. Khotyaintsev, P.-A. Lindqvist, W. Paterson, C. T. Russell, C. Schiff, B. Tang, R. Torbert (2017), Quantitative analysis of a full Hall system in the exhaust of asymmetric magnetic reconnection, *J. Geophys. Res. Space Physics*, 122, <https://doi.org/10.1002/2016JA023620>.

37. Grandin M., P.-L. Blelly, O.G. Witasse, and **A. Marchaudon** (2016), Reply to Comment by Pätzold et al. on “Mars Express Radio-Occultation Data: a Novel Analysis Approach”, *J. Geophys. Res. Space Physics*, 121, <https://doi.org/10.1002/2015JA022229>.
36. Vernisse, Y., et al. (2016), Signatures of complex magnetic topologies from multiple reconnection sites induced by Kelvin-Helmholtz instability, *J. Geophys. Res. Space Physics*, 121, <https://doi.org/10.1002/2016JA023051>.
35. Zhang, Y. C., C. Shen, **A. Marchaudon**, Z. J. Rong, B. Lavraud, A. Fazakerley, Z. H. Yao, B. Mihaljic, Y. Ji, Y. H. Ma, Z. X. Liu (2016), First In Situ Evidence of Electron Pitch Angle Scattering Due to Magnetic Field Line Curvature in the Ion Diffusion Region, *J. Geophys. Res. Space Physics*, 121, <https://doi.org/10.1002/2016JA022409>.
34. Lavraud, B., et al. (2016), Currents and associated electron scattering and bouncing near the diffusion region at Earth's magnetopause, *Geophys. Res. Lett.*, 43, 3042–3050, <https://doi.org/10.1002/2016GL068359>.
33. Chambodut, A., **A. Marchaudon**, C. Lathuillère, M. Menvielle, and E. Foucault (2015), New hemispheric geomagnetic indices α with 15 min time resolution, *J. Geophys. Res. Space Physics*, 120, 9943–9958, <https://doi.org/10.1002/2015JA021479>.
32. **Marchaudon, A.**, and P.-L. Blelly (2015), A new interhemispheric 16-moment model of the plasmasphere-ionosphere system: IPIM, *J. Geophys. Res. Space Physics*, 120, 5728–5745, <https://doi.org/10.1002/2015JA021193>.
31. Pitout, F., **A. Marchaudon**, P.-L. Blelly, X. Bai, F. Forme, S. C. Buchert, and D. A. Lorentzen (2015), Swarm and ESR observations of the ionospheric response to a field-aligned current system in the high-latitude midnight sector, *Geophys. Res. Lett.*, 42, 4270–4279, <https://doi.org/10.1002/2015GL064231>.
30. Grandin, M., P.-L. Blelly, O. Witasse, and **A. Marchaudon** (2014), Mars Express radio-occultation data: A novel analysis approach, *J. Geophys. Res. Space Physics*, 119, pages 10621–10632, <https://doi.org/10.1002/2014JA020698>.
29. Chambodut, A., **A. Marchaudon**, M. Menvielle, F. El-Lemdani Mazouz, and C. Lathuillère (2013), The K-derived MLT sector geomagnetic indices, *Geophys. Res. Lett.*, 40, 4808–4812, <https://doi.org/10.1002/grl.50947>.
28. Zhang, Y. C., C. Shen, Z. X. Liu, Z. J. Rong, T. L. Zhang, **A. Marchaudon**, H. Zhang, S. P. Duan, Y. H. Ma, Two different types of plasmoids in the plasma sheet: Cluster multi-satellite analysis application (2013), *J. Geophys. Res. Space Physics*, 118, 5437–5444, <https://doi.org/10.1002/jgra.50542>.
27. Berthomier M. and A.N. Fazakerley et al. (2012), Alfvén: Magnetosphere-Ionosphere Connection Explorers, *Experimental Astronomy*, <https://doi.org/10.1007/s10686-011-9273-y>.
26. Zhang, Y. C., C. Shen, Z. X. Liu, Z. Y. Pu, I. Dandouras, **A. Marchaudon**, C. M. Carr, and E. Lucek (2011), Magnetopause response to variations in the solar wind: Conjunction observations between Cluster, TC-1, and SuperDARN, *J. Geophys. Res.*, 116, A08209, <https://doi.org/10.1029/2011JA016462>.
25. Menvielle, M., T. Iyemori, **A. Marchaudon** (2011), and M. Nose, Geomagnetic indices, *IAGA volume on Geomagnetic Observations and Models*, Springer (ed.) SBM NL, <https://doi.org/10.1007/978-90-481-9858-0>.
24. Chisham, G., M. P. Freeman, G. A. Abel, W. A. Bristow, **A. Marchaudon**, J. M. Ruohoniemi, and G. J. Sofko (2009), Spatial distribution of average vorticity in the high-latitude ionosphere and its variation with interplanetary magnetic field direction and season, *J. Geophys. Res.*, 114, A09301, <https://doi.org/10.1029/2009JA014263>.
23. Bosqued J. M., M. Ashour-Abdalla, T. Umeda, M. El Alaoui, V. Perroomian, H. U. Frey, **A. Marchaudon**, H. Laakso (2009), Cluster observations and numerical modeling of energy-dispersed

ionospheric H⁺ ions bouncing at the plasma sheet boundary layer, *J. Geophys. Res.*, 114, A04216, <https://doi.org/10.1029/2008JA013562>.

22. **Marchaudon, A.**, J.-C. Cerisier, M. W. Dunlop, F. Pitout, J.-M. Bosqued, A. N. Fazakerley (2009), Shape, size, velocity and field-aligned currents of dayside plasma injections: a multi-altitude study, *Ann. Geophys.*, 27, 1251-1266, <https://doi.org/10.5194/angeo-27-1251-2009>.

21. Kullen, A., S. Buchert, T. Karlsson, S. Lileo, T. Johansson, **A. Marchaudon** and A. N. Fazakerley (2008), Plasma transport along discrete auroral arcs and its contribution to the ionospheric plasma convection, *Ann. Geophys.*, 26, 3279-3293, <https://doi.org/10.5194/angeo-26-3279-2008>.

20. Lathuillère, C., M. Menvielle, **A. Marchaudon**, and S. Bruinsma (2008), A statistical study of the observed and modeled global thermosphere response to magnetic activity at mid and low latitudes, *J. Geophys. Res.*, 113, A07311, <https://doi.org/10.1029/2007JA012991>.

19. Berchem, J., **A. Marchaudon**, M. W. Dunlop, C. P. Escoubet, J.-M. Bosqued, H. Reme, I. Dandouras, A. Balogh, E. Lucek, C. Carr, and Z. Pu (2008), Reconnection at the dayside magnetopause: Comparisons of global MHD simulation results with Cluster and Double Star observations, *J. Geophys. Res.*, 113, A07S12, <https://doi.org/10.1029/2007JA012743>.

18. 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. Reme (2008), Cluster observations of 'Crater' Flux Transfer Events at the Dayside High-Latitude Magnetopause, *J. Geophys. Res.*, 113, A07S04, <https://doi.org/10.1029/2007JA012701>.

17. Liléo, S., G. T. Marklund, T. Karlsson, T. Johansson, P.-A. Lindqvist, **A. Marchaudon**, A. Fazakerley, C. Mouikis, and L. M. Kistler (2008), Magnetosphere-ionosphere coupling during periods of extended high auroral activity: a case study, *Ann. Geophys.*, 26, 583-591, <https://doi.org/10.5194/angeo-26-583-2008>.

16. Wild J. A., S. E. Milan, J. A. Davies, M. W. Dunlop, D. M. Wright, C. M. Carr, A. Balogh, H. Rème, A. N. Fazakerley, and **A. Marchaudon** (2007), On the location of dayside magnetic reconnection during an interval of duskward oriented IMF, *Ann. Geophys.*, 25, 219-238, <https://doi.org/10.5194/angeo-25-219-2007>.

15. Menvielle, M., and **A. Marchaudon** (2007), Geomagnetic indices in Solar-Terrestrial physics and Space Weather, in *Space Weather Research towards Applications in Europe, Astrophysics and Space Science Library, Vol. 344*, J. Liliensten (ed.), The Netherlands: Springer, https://doi.org/10.1007/1-4020-5446-7_24.

14. **Marchaudon A.**, J.-C. Cerisier, J.-M. Bosqued, C. J. Owen, A. N. Fazakerley, A. D. Lahiff (2006), On the structure of field-aligned currents in the mid-altitude cusp, *Ann. Geophys.*, 24, 3391-3401 <https://doi.org/10.5194/angeo-24-3391-2006>.

13. Davies, J. A., M. W. Dunlop, C. H. Perry, I. Alexeev, M. G. G. T. Taylor, A. N. Fazakerley, C. J. Owen, **A. Marchaudon**, R. H. W. Friedel, X. H. Deng, M. Grande, and P. W. Daly (2006), Energetic Plasma Signatures in an Active Magnetotail Plasma Sheet, *Adv. Space Res.*, Vol. 38, 8, 1608-1614, <https://doi.org/10.1016/j.asr.2006.02.012>.

12. Ashour-Abdalla M., J. N. Leboeuf, D. Schriver, J.-M. Bosqued, N. Cornilleau-Wehrin, V. Sotnikov, **A. Marchaudon** and A. N. Fazakerley (2006), Instabilities Driven by Ion Shell Distributions in the Plasma Sheet Boundary Layer, *J. Geophys. Res.*, 111, A10223, <https://doi.org/10.1029/2005JA011490>.

11. Johansson, T., G. Marklund, T. Karlsson, S. Liléo, P.-A. Lindqvist, **A. Marchaudon**, H. Nilsson, and A. Fazakerley (2006), On the profile of intense high-altitude auroral electric fields at magnetospheric boundaries, *Ann. Geophys.*, 24, 1713-1723, <https://doi.org/10.5194/angeo-24-1713-2006>.

10. Bosqued J.-M., M. Ashour-Abdalla, **A. Marchaudon**, H. Laakso, T. Umeda, M. El Alaoui, V. Peromian, H. Rème, G. Paschmann, M. Dunlop, and A. Fazakerley (2006), Cluster observations of

energetic ionospheric ion beams in the auroral region: Acceleration and associated energy-dispersed precipitation, *Geophys. Res. Lett.*, 33, L12102, <https://doi.org/10.1029/2006GL025708>.

9. **Marchaudon, A.**, C. J. Owen, J.-M. Bosqued, R. C. Fear, A. N. Fazakerley, M. W. Dunlop, A. D. Lahiff, C. Carr, A. Balogh, P.-A. Lindqvist and H. Rème (2005), Simultaneous Double Star and Cluster FTEs observations on the dawnside flank of the magnetosphere, *Ann. Geophys.*, 23, 2877-2887 <https://doi.org/10.5194/angeo-23-2877-2005>.

8. Amm, O., E. Donovan, H. Frey, M. Lester, R. Nakamura, J. Wild, A. Aikio, M. Dunlop, K. Kauristie, **A. Marchaudon**, I. McCrea, H. Opgenoorth, and A. Strømme (2005), Coordinated studies of the Geospace environment using Cluster, satellite and ground-based data: An interim review, *Ann. Geophys.*, 23, 2129-2170, <https://doi.org/10.5194/angeo-23-2129-2005>.

7. Cerisier, J.-C., **A. Marchaudon**, J.-M. Bosqued, K. McWilliams, H. Frey, M. Bouhram, H. Laakso, M. Dunlop, M. Förster, and A. Fazakerley (2005), Plasma injections and flow bursts in the dayside cusp triggered by solar wind pressure pulses, *J. Geophys. Res.*, 110, A08204, <https://doi.org/10.1029/2004JA010962>.

6. Bosqued, J.-M., C. P. Escoubet, H. U. Frey, M. Dunlop, J. Berchem, **A. Marchaudon**, J.-C. Cerisier, A. Fazerkerley, E. Budnik, B. Lavraud, H. Rème, H. Laakso, and A. Balogh (2005), Multipoint observations of transient reconnection signatures in the cusp precipitation: A CLUSTER-IMAGE detailed case study, *J. Geophys. Res.*, 110, A03219, <https://doi.org/10.1029/2004JA010621>.

5. Bogdanova, Y. V., **A. Marchaudon**, C. J. Owen, M. W. Dunlop, H. U. Frey, J. A. Wild, A. N. Fazakerley, B. Klecker, J. A. Davies, and S. E. Milan (2005), On the formation of the high-altitude stagnant cusp: Cluster observations, *Geophys. Res. Lett.*, 32, L12101, <https://doi.org/10.1029/2005GL022813>.

4. Dunlop, M. W., B. Lavraud, P. Cargill, M. G. G. T. Taylor, A. Balogh, H. Rème, P. Décréau, K.-H. Glassmeier, R. C. Elphic, J.-M. Bosqued, A. N. Fazakerley, I. Dandouras, C. P. Escoubet, H. Laakso, and **A. Marchaudon** (2005), Cluster Observations of the Cusp: Magnetic Structure and Dynamics, *Surv. Geophys.*, 26 (1-3), 5-55, https://doi.org/10.1007/1-4020-3605-1_2.

3. **Marchaudon, A.**, J.-C. Cerisier, R. Greenwald, and G. Sofko (2004), Electrodynamics of a FTE: Experimental test of the Southwood model, *Geophys. Res. Lett.*, 31, <https://doi.org/10.1029/2004GL019922>.

2. **Marchaudon, A.**, J.-C. Cerisier, J.-M. Bosqued, M. W. Dunlop, J. A. Wild, P. M. E. Décréau, M. Förster, D. Fontaine, and H. Laakso (2004), Transient plasma injections in the dayside magnetosphere: one-to-one correlated observations by Cluster and SuperDARN, *Ann. Geophys.*, 22, 141-158, <https://10.5194/angeo-22-141-2004>.

1. **Marchaudon, A.**, J.-C. Cerisier, O. Amm, M. Lester, C. W. Carlson and G. K. Parks (2004), Quantitative modelling of the closure of small-scale parallel currents in the nightside ionosphere, *Ann. Geophys.*, 22, 125-140, <https://doi.org/10.5194/angeo-22-125-2004>.