Scientific Publications (Refereed)

J. A. Carter, S. E. Milan, C. Forsyth, M. E. Lester, **M.-T. Walach**, J. Gjerloev,et al. (**2023**), *Mean energy flux, associated derived height-integrated conductances, and field-aligned current magnitudes evolve differently during a substorm*, Journal of Geophysical Research: Space Physics, 128, e2022JA030942, doi: 10.1029/2022JA030942..

M.-T. Walach, A. Grocott, E. Thomas, F. Staples (**2022**), *Dusk-Dawn Asymmetries in SuperDARN Convection Maps*, Journal of Geophysical Research: Space Physics, 127, e2022JA030906, doi: 10.1029/2022JA030906.

L. Orr, A. Grocott, **M.-T. Walach**, G. Chisham, M. P. Freeman, M. P., M. M. Lam, & R. M. Shore, (**2023**), *A quantitative comparison of high latitude electric field models during a large geomagnetic storm*, Space Weather, 21, e2022SW003301, doi: 10.1029/2022SW003301.

M.-T. Walach, O. Agiwal, O. Allanson, M. Owens, I.J. Rae, J. K. Sandhu and A. Smith (**2022**), *UK Magnetosphere, Ionosphere & Solar-Terrestrial (MIST) Awards Taskforce: A Perspective*, Front. Astron. Space Sci. 9:1011839, doi: 10.3389/fspas.2022.1011839.

S. D. Walton, C. Forsyth, I.J. Rae, N.P. Meredith, J.K. Sandhu, **M.-T. Walach**, and K.R. Murphy (**2022**), *Statistical Comparison of Electron Loss and Enhancement in the Outer Radiation Belt During Storms,* **J. Geophys. Res.: Space Physics**, 127, e2021JA030069, doi:10.1029/2021JA030069.

Z.M. Lewis, J.A. Wild, M. Allcock, and **M.-T. Walach** (**2022**), *Assessing the impact of weak and moderate geomagnetic storms on UK power station transformers*, **Space Weather**, 20, e2021SW003021, doi:10.1029/2021SW003021.

M.-T. Walach, A. Grocott, F. Staples, and E. Thomas (**2022**), *Super Dual Auroral Radar Network Expansion and its Influence on the Derived Ionospheric Convection Pattern*, **J. Geophys. Res.: Space Physics**, 127, e2021JA029559, doi:10.1029/2021JA029559.

T. Elsden, T.K. Yeoman, S.J. Wharton, I.J. Rae, J.K. Sandhu, **M.-T. Walach**, et al. (**2022**), *Modeling the varying location of field line resonances during geomagnetic storms*, **J. Geophys. Res.: Space Physics**, 127, e2021JA02980, doi:10.1029/2021JA029804.

J. H. Lane, A. Grocott, N. A. Case, and **M.-T. Walach** (**2021**), *Dynamics of variable dusk-dawn flow associated with magnetotail current sheet flapping*, **Ann. Geophys.**, 39, doi:10.5194/angeo-39-1037-2021.

S. D. Walton, C. Forsyth, I. J. Rae, C. E. J. Watt, R. L. Thompson, R. B. Horne, N. P. Meredith, C. J. Rodger, **M.-T. Walach**, M. A. Cliver and S. A. Glauert (**2021**), *Cross-L* coherence of the outer radiation belt during storms and the role of the plasmapause*, **J. Geophys. Res.: Space Physics**, 126, e2021JA029308. doi: 10.1029/2021JA029308.

J. K. Sandhu, I. J. Rae, F. A. Staples, D. P. Hartley, **M.-T. Walach**, T. Elsden, and K. R. Murphy, (**2021**), *The roles of the magnetopause and plasmapause in storm-time ULF wave power enhancements*, **Journal of Geophysical Research: Space Physics**, 126, e2021JA029337. doi:10.1029/2021JA029337.

J. K. Sandhu, I. J. Rae, J. R. Wygant, A. W. Breneman, S. Tian, C. E. J. Watt, R. B. Horne, L. G. Ozeke, M. Georgiou, and **M.-T. Walach** (**2021**)**,** *ULF Wave Driven Radial Diffusion During Geomagnetic Storms: A statistical analysis of Van Allen Probes observations*, **Journal of Geophysical Research: Space Physics**, 126, e2020JA029024. doi:10.1029/2020JA029024.

M.-T. Walach, A. Grocott, and S. E. Milan (**2021**), *Average Ionospheric Electric Field Morphologies during Geomagnetic Storm Phases*, **Journal of Geophysical Research: Space Physics**, 126, e2020JA028512. doi:10.1029/2020JA028512.

J. K. Sandhu, I. J. Rae, and **M.-T. Walach** (**2021**), *Challenging the use of ring current indices during geomagnetic storms*, **Journal of Geophysical Research: Space Physics**, 126, e2020JA028423. doi:10.1029/2020JA028423.

S. J. Wharton, I. J. Rae, J. K. Sandhu, **M.-T. Walach**, D. M. Wright, and T. K. Yeoman, (**2020**) *The changing eigenfrequency continuum during geomagnetic storms: Implications for plasma mass dynamics and ULF wave coupling*, **Journal of Geophysical Research: Space Physics**, 125, e2019JA027648, doi: 10.1029/2019JA027648.

M.-T. Walach, and A. Grocott (**2019**), *SuperDARN scatter during geomagnetic storms and geomagnetically active times,* **J. Geophys. Res.: Space Physics**, 124, 5828-5847, doi: 10.1029/2019JA026816.

D.R. Jackson, T. J. Fuller-Rowell, D. J. Griffin, M. J. Griffith, C. W. Kelly, D. R. Marsh, and **M.-T. Walach** (**2019**). *Future directions for whole atmosphere modeling: Developments in the context of space weather*. **Space Weather**, 17, doi: 10.1029/2019SW002267.

J. K. Sandhu, I. J. Rae, M. P. Freeman, M. Gkioulidou, C. Forsyth, G. D. Reeves, K. R. Murphy, and **M.-T. Walach**, (**2019**). *Substorm-Ring Current Coupling: A comparison of isolated and compound substorms*, **J. Geophys. Res.: Space Physics**, 124, 6776– 6791, doi:10.1029/2019JA026766.

D. D. Billett, A. Grocott, J. A. Wild, A. Aruliah, A. Ronksley, **M.-T. Walach**, and M. Lester, (**2019**). *Spatially resolved neutral wind responses during high geomagnetically active times above Svalbard*, **J. Geophys. Res.: Space Physics**, 124, 6950-6960. doi: 10.1029/2019JA026627.

S. E. Milan, **M.-T. Walach**, J. A. Carter, H. Sangha, B. J. Anderson (**2019**). *Substorm onset latitude and the steadiness of magnetospheric convection*, **J. Geophys. Res.: Space Physics**, 124, 1738-1752, doi: 10.1029/2018JA025969.

D. D. Billett, A. Grocott, J. A. Wild, **M.-T. Walach**, and M. J. Kosch (**2018**). *Diurnal variations in global Joule heating morphology and magnitude due to neutral winds*., **J. Geophys. Res.: Space Physics**, 123, 2398-2411, doi: 10.1002/2017JA025141.

M.-T. Walach, S. E. Milan, K. R. Murphy, J. A. Carter, B. A. Hubert, and A. Grocott (**2017**), *Comparative study of large-scale auroral signatures of substorms, steady magnetospheric convection events, and sawtooth events*, **J. Geophys. Res.: Space Physics**, 122, 6357–6373, doi: 10.1002/2017JA023991.

M.-T. Walach, (**2017**), *Ionospheric Convection and Auroral Responses to Solar Wind Driving*, **PhD Thesis**, University of Leicester, http://hdl.handle.net/2381/39717.

M.-T. Walach, S. E. Milan, T. K. Yeoman, B. A. Hubert, and M. R. Hairston (**2017**), *Testing nowcasts of the ionospheric convection from the expanding and contracting polar cap model*, **Space Weather**, 15, 623–636, doi:10.1002/2017SW001615.

J. A. Carter, S. E. Milan, R. C. Fear, **M.-T. Walach**, Z. A. Harrison, L. J. Paxton, and B. Hubert (**2017**), *Transpolar arcs observed simultaneously in both hemispheres.*, **J. Geophys. Res. Space Physics**, 122, 6107–6120, doi: 10.1002/2016JA023830.

S. E. Milan, L. B. N. Clausen, J. C. Coxon, J. A. Carter, **M.-T. Walach**, K. Laundal, N. Østgaard, P. Tenfjord, J. Reistad, K. Snekvik, H. Korth, and B. J. Anderson (**2017**), *Overview of Solar Wind–Magnetosphere–Ionosphere–Atmosphere Coupling and the Generation of Magnetospheric Currents.,* **Space Sci. Rev.**, 206: 547, doi: 10.1007/s11214-017-0333-0.

J. A. Carter*,* S. E. Milan*,* J. C. Coxon*,* **M.-T. Walach***,* and B. J. Anderson (**2016***), Average field-aligned current configuration parameterized by solar wind conditions,* **J. Geophys. Res.: Space Physics***,* 121*,* 1294–1307*,* doi*:* 10.1002/2015JA021567.

S. E. Milan*,* S. M. Imber*,* J. A. Carter*,* **M.-T. Walach***,* and B. Hubert (**2016***), What controls the local time extent of flux transfer events?,* J. Geophys. Res.: Space Physics*,* 121*,* 1391–1401*,* doi: 10.1002/2015JA022012.

M.-T. Walach, and S. E. Milan (**2015**), *Are Steady Magnetospheric Convection Events Prolonged Substorms?*. **J. Geophys. Res.: Space Physics**, 120, 1751–1758, doi: 10.1002/2014JA020631.

Software (Refereed)

SuperDARN Radar Software Toolkit (RST) 5.0.: SuperDARN Data Analysis Working Group; E.G. Thomas, A.S. Reimer, E.C. Bland, A.G. Burrell, A. Grocott, P.V. Ponomarenko, M.T. Schmidt, S.G. Shepherd, K.T. Sterne, **M.-T. Walach**, **2022**, doi: 10.5281/zenodo.7467337.

SuperDARN Radar Software Toolkit (RST) 4.7.: SuperDARN Data Analysis Working Group**;** A.G. Burrell, E.G. Thomas, M.T. Schmidt**,** E.C. Bland, I. Coco, P. V. Ponomarenko, K.T. Sterne, **M.-T. Walach**, **2021**, doi: 10.5281/zenodo.6473603.

SuperDARN Radar Software Toolkit (RST) 4.6.: SuperDARN Data Analysis Working Group**;** M.T. Schmidt**,** E.C. Bland, E.G. Thomas, A.G. Burrell, I. Coco, P. V. Ponomarenko, A.S. Reimer, K.T. Sterne, **M.-T. Walach**, **2021**, doi: 10.5281/zenodo.5156752.

SuperDARN Radar Software Toolkit (RST) 4.5.: SuperDARN Data Analysis Working Group**;** E.G. Thomas, M.T. Schmidt**,** E.C. Bland, A.G. Burrell, P. V. Ponomarenko, A.S. Reimer, K.T. Sterne, **M.-T. Walach**, **2021**, doi: 10.5281/zenodo.4435297.

SuperDARN Radar Software Toolkit (RST) 4.4.1.: D.D. Billett, E.C. Bland, A.G. Burrell, K. Kotyk, P. V Ponomarenko, …, **M.-T. Walach**, **2020**, doi: 10.5281/zenodo.3994968.

SuperDARN Radar Software Toolkit (RST) 4.4.: D.D. Billett, E.C. Bland, A.G. Burrell, K. Kotyk, P. V Ponomarenko, …, **M.-T. Walach**, **2020**, doi: 10.5281/zenodo.3934368.

SuperDARN Radar Software Toolkit (RST) 4.3.2.: E.G. Thomas, K. T. Sterne, S. Shepherd, K. Kotyk, M. Schmidt, P. V. Ponomarenko, E. C. Bland, **M.-T. Walach**, A. S. Reimer, and A. G. Burrell, **2020**. doi: 10.5281/zenodo.3775981.

SuperDARN Radar Software Toolkit (RST) 4.3.1.: E.G. Thomas, K.T. Sterne, S. Shepherd, K. Kotyk, M. Schmidt, P.V. Ponomarenko, A. J. Ribeiro, E.C. Bland, **M.-T. Walach**, A.S. Reimer, A.G. Burrell, D. Billett, W.A. Bristow, B. Tim, S. Marple, M. Rafiq, M. Krysztofowicz. **2019**. doi: 10.5281/zenodo.3634732.

SuperDARN Radar Software Toolkit (RST) 4.3.: E.G. Thomas, K.T. Sterne, S. Shepherd, K. Kotyk, M. Schmidt, P.V. Ponomarenko, A. J. Ribeiro, E.C. Bland, **M.-T. Walach**, A.S. Reimer, A.G. Burrell, D. Billett, W.A. Bristow, B. Tim, S. Marple, M. Rafiq, M. Krysztofowicz. **2019**. doi: 10.5281/zenodo.3401622.

SuperDARN Radar Software Toolkit (RST) 4.2.: E.G. Thomas, P.V. Ponomarenko, D.D. Billett, E.C. Bland, A. G. Burrell, K. Kotyk, A. S. Reimer, M. Schmidt, S.G. Shepherd, K. T. Sterne, **M.-T. Walach**. **2018**. doi: 10.5281/zenodo.1403226.

SuperDARN Radar Software Toolkit (RST) 4.1.: E.G. Thomas, P.V. Ponomarenko, E.C. Bland, A. G. Burrell, K. Kotyk, K. T. Sterne, **M.-T. Walach**. **2018**. doi:10.5281/zenodo.1143675.

Scientific Publications (Non-Refereed)

M.-T. Walach, *Dancing Lights from Space: Investigating the Aurora* (**2023**), BBC Sky at Night Magazine, published by Immediate Media, print: March 2023 issue, online: https://www.skyatnightmagazine.com/space-science/what-causes-the-aurora/.

J. A. Carter, **M.-T. Walach**, M. Mooney (**2022**), *RAS Specialist Discussion Meeting report*, Astronomy & Geophysics, Volume 63, Issue 4, August 2022, Pages 4.38–4.42, https://doi.org/10.1093/astrogeo/atac054.

J. Wiggs, R. Hodnett, **M.-T. Walach** and S. Walton (**2022**), *Meandering through the virtual MIST*, **Astronomy and Geophysics**, *63*(3), 3.40-3.42 editor: S. Bowler, publisher: Oxford University Press on behalf of the Royal Astronomical Society, doi:10.1093/astrogeo/atac041.

M.-T. Walach, G. Hunt, A. R. Fogg, A. Bader (**2020**), *Autumn MIST 2019*, **Astronomy & Geophysics**, 61 (4), 4.26–4.28, editor: S. Bowler, publisher: Oxford University Press on behalf of the Royal Astronomical Society, doi: 10.1093/astrogeo/ataa056.

J. K. Sandhu, **M.-T. Walach**, H. Allison, C. Watt **(2019)**, *A global view of storms and substorms*, **Astronomy & Geophysics**, Vol. 60 (3), 3.13–3.19, editor: S. Bowler, publisher: Oxford University Press on behalf of the Royal Astronomical Society, doi: 10.1093/astrogeo/atz144.

M.-T. Walach (**2018**)**,** *Changing the Perspective: Looking at the Aurora from Space*, AuroraWatch UK Blog post, http://wp.lancs.ac.uk/aurorawatchuk/2018/02/09/changing-the-perspective-looking-at-the-aurora-from-space/.

M.-T. Walach, S. E. Milan (**2016**), *The Irregular Pulse of the Magnetosphere*, **Astronomy & Geophysics**, vol. 57 (1): 1.34-1.36, editor: S. Bowler, publisher: Oxford University Press on behalf of the Royal Astronomical Society, doi: 10.1093/astrogeo/atw041.

Published Datasets

Data for the manuscript "Dusk-Dawn Asymmetries in SuperDARN convection maps", **M.-T. Walach** (Creator), Lancaster University, 28/10/**2022**, DOI: 10.17635/lancaster/researchdata/571

Data from Super Dual Auroral Radar Network Expansion and its Influence on the Derived Ionospheric Convection Pattern, **Walach, M.-T.** (Creator), Lancaster University, 24/01/**2022**, Text available via DOI: 10.17635/lancaster/researchdata/503.

Ionospheric Electric Field Morphologies during Geomagnetic Storm Phases 2.0, **Walach, M.-T.** (Creator), Lancaster University, 19/01/**2021**, Text available via DOI: 10.17635/lancaster/researchdata/417.

Invited Talks

Virtual Lecture: *How the aurora lights up space*, 10/03/**2023**, **Mars Week** 2023, organised by ESERO, UK.

Lecture: *Decoding the Northern Lights*, 20/10/**2022**, York Museum, **Yorkshire Philosophical Society**.

Festival Talk: *Decoding the Northern Lights*, 15/09/**2022**, **British Science Festival** 2022, organised by the British Science Association.

Conference Talk: *Ionosphere and Thermosphere Observations in the Context of Whole Atmosphere Modelling*, 15/07/**2022**, **National Astronomy Meeting,** University of Warwick, UK.

Virtual Seminar: *Ionospheric Convection Map Parameters Measured by the Super Dual Auroral Radar Network: A Journey Through Space And Time*, 28/06/**2022**, **University of Saskatchewan,** Canada.

Virtual Seminar: *Ionospheric Electrodynamics at Earth: The Eye of the Geomagnetic Storm*, 07/06/**2022**, **MIST Online Seminar Series,** UK.

Virtual Seminar: *Ionospheric Convection and Auroral Responses to Solar Wind Driving*, 21/03/**2022**, **Magnetospheres Online Seminar Series**, US.

Virtual Talk: *How the Aurora Lights up Space*, 16/03/**2022**, **Mars Week**, UK Space Education Office.

Virtual Seminar: *Super Dual Auroral Radar Network Expansion and Its Influence on the Derived Ionospheric Convection Pattern*, 24/02/**2022**, **Canadian Division of Atmospheric and Space Physics**, Canada.

Virtual Seminar: *High-latitude ionospheric convection during geomagnetic storms,* 02/03/**2021, Dartmouth College**, US.

Virtual Seminar: *Average Ionospheric Electric Field Morphologies during Geomagnetic Storm Phases*, 05/05/**2020**, Modelling GICs in the US project group, **Fairbanks**, Alaska, US.

Conference Talk: *Large scale analysis of sawtooth events, and isolated substorms*, 03/10/**2019**, **14th International Conference on Substorms**, Tromsø, Norway.

Seminar: *Time variability in high-latitude ionospheric convection at Earth*, 30/04/**2019**, **University of Southampton**, Southampton, UK.

Seminar: *Time variability in high-latitude ionospheric convection at Earth*, **Mullard** 19/03/**2019**, **Space Science Laboratory** (UCL), Surrey, UK.

Seminar: *Ionospheric Convection and Auroral Responses to Solar Wind Driving*, 16/01/**2019**, **University of Leicester**, Leicester, UK.

Seminar: *Tracking Irregular Pulses of Earth's Magnetosphere: Auroral Dynamics, Convection and Magnetospheric Modes*, 18/03/**2017**, **Lancaster University**, Lancaster, UK.

Seminar: *Magnetic Flux Transport and Plasma Flow in the Earth's Magnetosphere,* 03/02/**2016**, **IRF Uppsala**, Uppsala, Sweden.

Oral Conference Presentations

M.-T. Walach, A. Grocott, A. Aruliah, D. Marsh, W. Feng, L. Orr, G. Lu, E. Day, *Electrodynamic coupling of the magnetosphere-ionosphere-thermosphere*, **RAS Specialist Discussion Meeting**, 10/03/**2023**, Virtual.

M.-T. Walach, A. Grocott, E.G. Thomas, F. Staples, *Dusk-Dawn Asymmetries in SuperDARN Convection Maps*, **Virtual SuperDARN Workshop**, 30/05-03/06/**2022**, Virtual.

M.-T. Walach, A. Grocott, L. Orr, W. Feng, D. Marsh, A. Aruhliah, *Ionosphere and Thermosphere Observations in the Context of Whole Atmosphere Modelling*, **European Geophysical Union**, 27/05/**2022**, Vienna, Austria.

M.-T. Walach, A. Grocott, W. Feng, D. Marsh, A. Aruliah, *Ionosphere and Thermosphere Observations in the Context of Whole Atmosphere Modelling*, **National Astronomy Meeting**, 19/07/**2021**, Virtual.

M.-T. Walach, A. Grocott, *SuperDARN observations of the September 2017 storm*, **Royal Astronomical Society Discussion Meeting** on Space Weather Energy Pathways and Implications for Impacts, 08/01/**2021**, Virtual.

M.-T. Walach, A. Grocott, *Modelling the Time-Variability of the Ionospheric Electric Field: Introducing the TiVIE model*, **European Space Weather Symposium**, 5/11/**2020**, Virtual.

M.-T. Walach, A. Grocott, S. E. Milan, *Average Ionospheric Electric Field Morphologies during Geomagnetic Storm Phases***, Virtual SuperDARN Workshop 2020,** 01/06/2020 -05/06/**2020**, Virtual**.**

M.-T. Walach, A. Grocott, S. E. Milan, *Average Ionospheric Electric Field Morphologies during Geomagnetic Storms,* **AGU Fall Meeting**, 12/12/**2019**, San Francisco, USA.

M.-T. Walach, A. Grocott, S. E. Milan, *Average Ionospheric Electric Field Morphologies during Geomagnetic Storms,* **European Space Weather Week**, 22/11/**2019**, Liège, Belgium.

M.-T. Walach, *Outreach via existing platforms: "I'm a Scientist, Get me out of here",* **National Astronomy Meeting**, 02/07/**2019**, Lancaster, UK.

M.-T. Walach, A. Grocott, *SuperDARN observations during geomagnetic storms, geomagnetically active times and enhanced solar wind driving,* **National Astronomy Meeting**, 01/07/**2019**, Lancaster, UK.

M.-T. Walach, A. Grocott*, High latitude ionospheric convection during storm times: TiVIE & SuperDARN*, **Extended Unified Model Workshop**, 27/06/**2019**, MetOffice, Exeter, UK.

M.-T. Walach, A. Grocott, F. Staples, E. G. Thomas, *Influences of the equatorial expansion on data coverage and measured parameters*, **SuperDARN Workshop**, 07/06/**2019**, Fujiyoshida, Japan.

M.-T. Walach, A. Grocott, *SuperDARN observations during geomagnetic storms, geomagnetically active times and enhanced solar wind driving*, **SuperDARN Workshop**, 06/06/**2019**, Fujiyoshida, Japan.

M.-T. Walach, A. Grocott, and D. D. Billett, *Improving Joule Heating and Electric Field Models of the High-latitude Ionosphere,* **Extended Unified Model Workshop**, 02/07/**2018**, University College London, UK.

M.-T. Walach, A. Grocott, *Characterising and understanding temporal variability in ionospheric flows using SuperDARN data*, **Whole Atmospheric Modelling Workshop**, 14/06/**2018**, Deimos Space, Tres-Cantos, Spain.

M.-T. Walach, A. Grocott, S. E. Milan and D. D. Billett, *Characterising and understanding temporal variability in ionospheric flows using SuperDARN data,* **SuperDARN Workshop**, 07/06/**2018**, Banyuls-sur-Mer, France.

M.-T. Walach, A. Grocott, S. E. Milan and D. D. Billett, *Comparison of ionospheric convection signatures of sawtooth events and substorms,* **SuperDARN Workshop**, 04/06/**2018**, Banyuls-sur-Mer, France.

M.-T. Walach, A. Grocott, and D. D. Billett, *Characterising temporal variability in ionospheric flows using SuperDARN data*, **RAS Specialist Discussion Meeting on Joule Heating**, 07/06/**2018**, British Antarctic Survey, Cambridge, UK.

M.-T. Walach, A. Grocott, *Characterising temporal variability in ionospheric flows using SuperDARN data*, **MIST Meeting**, 26/03/**2018**, Southampton, UK.

M.-T. Walach, D. D. Billett, A. Grocott, A. Aruliah, A. Ronksley, *Time Variability in the Ionospheric Electric Field*, **Extended Unified Model Workshop**, 24/07/**2017**, Bath, UK.

A. Grocott, **M.-T. Walach**, *Timescales of convection pattern reconfiguration following IMF transitions*, **SuperDARN Workshop**, 08/06/**2017**, San Quirico D'Orcia, Italy.

M.-T. Walach, S. E. Milan, K. R. Murphy, J. A. Carter, B. A. Hubert, Large-Scale Auroral Responses During Magnetospheric Modes, **RAS Specialist Discussion Meeting on Multi-Scale Auroral Dynamics**, 13/01/**2017**, London, UK.

M.-T. Walach, S. E. Milan, T. K. Yeoman, B. A. Hubert, M. R. Hairston,*Testing Predictions of the Ionospheric Convection from the Expanding/Contracting Polar Cap Paradigm*, **AGU Fall Meeting**, 13-18/12/**2015**, San Francisco, USA.

M.-T. Walach, S. E. Milan, T. K. Yeoman, *Testing Predictions of the Ionospheric Convection from the Expanding/Contracting Polar Cap Paradigm*, **National Astronomy Meeting**, 05-09/07/**2015**, Llandudno, Wales. **Rishbeth Prize Winner**

M.-T. Walach, S. E. Milan, T. K. Yeoman, *Testing Predictions of the Ionospheric Convection from the Expanding/Contracting Polar Cap Paradigm*, **SuperDARN Meeting**, 31/05 – 05/06/**2015**, Leicester, UK.

M.-T. Walach, S. E. Milan, *Are Steady Magnetospheric Convection Events Prolonged Substorms?*, **MIST Meeting**, 28/11/**2015**, London, UK.

M.-T. Walach, S. E. Milan, *Are Steady Magnetospheric Convection Events Prolonged Substorms?*, **International Conference on Substorms (ICS-12)**, 09-14/11/**2015**, Ise-Shima, Japan.

M.-T. Walach, S. E. Milan, *Are Steady Magnetospheric Convection Events just Prolonged Substorms?*, **MIST Meeting**, 23-25/04/**2014**, Bath, UK.

Poster Presentations

M.-T. Walach, A. Grocott, E.G. Thomas, F. Staples, *Dusk-Dawn Asymmetries in SuperDARN Convection Maps*, Autumn MIST Meeting, 18/11/**2023**, Royal Geological Society, London, UK.

A. Grocott, **M.-T. Walach**, S.E. Milan, *SuperDARN observations of the two-component model of ionospheric convection*, Autumn MIST Meeting, 18/11/**2023**, Royal Geological Society, London, UK.

M.-T. Walach, A. Grocott, F. Staples, and E. Thomas, *SuperDARN map comparability: Statistical comparisons of radar network expansions*, **Autumn MIST Meeting**, 25-26/11/**2021**, Virtual.

M.-T. Walach, A. Grocott, F. Staples, E. G. Thomas, *Two decades of SuperDARN convection mapping: effects of an ever evolving network,* **AGU Fall Meeting 2020**, 01/12/2020-17/12/**2020**, Virtual.

M.-T. Walach, A. Grocott, S. E. Milan, *Average Ionospheric Electric Field Morphologies during Geomagnetic Storms,* **MIST Meeting**, 24/01/**2020**, Royal Astronomical Society, London, UK.

M.-T. Walach, A. Grocott, F. Staples, E. Thomas, *Influences of the equatorward SuperDARN expansion on data coverage and measured parameters,* **National Astronomy Meeting**, 03/07/**2019**, Lancaster, UK.

M.-T. Walach, A. Grocott*, SuperDARN scatter during geomagnetic storms and geomagnetically active times*, **RAS Specialist Discussion Meeting: Global Response of the Terrestrial Magnetosphere during Storms and Substorms**, 08/02/**2019**, London, UK.

M.-T. Walach, A. Grocott*, Characterising temporal variability in ionospheric flows using SuperDARN data: How well do IMF conditions constrain the SuperDARN data?*, **MIST Meeting**, 24/11/**2017**, London, UK.

M.-T. Walach, S. E. Milan, T. K. Yeoman, B. A. Hubert, M. R. Hairston, *Testing Predictions of the Ionospheric Convection from the Expanding/Contracting Polar Cap Paradigm,* **MIST Meeting**, 27/11/**2015**, London, UK.

M.-T. Walach, S. E. Milan, *Are Steady Magnetospheric Convection Events Prolonged Substorms?*, **SuperDARN Meeting**, 31/05 – 05/06/**2015**, Leicester, UK.

I.C. Whittaker, S. Sembay, J. A. Carter, A. M. Read, **M.-T. Walach**, *Magnetospheric Solar Wind Charge Exchange – A Comparison Between the GUMICS-4 MHD Model and XMM-Newton*, **AGU Fall Meeting**, 13-18/12/**2015**, San Francisco, US.