Publications Under Consideration

[1] M. R. Muetzelfeldt, R. S. Plant, H. M. Christensen, Z. Zhang, T. Woollings, Z. Feng, and P. Li. Environmental conditions affecting global mesoscale convective system occurrence. *Submitted to: J. Atmos. Sci.*, 2024.

[2] Z. Zhang, H. M. Christensen, Z. Zhang, M. R. Muetzelfeldt, T. Woollings, R. S. Plant, A. J. Stirling, M. A. Whitall, M. W. Moncrieff, C.-C. Chen, and Z. Feng. Advancing organized convection representation in the Unified Model: Implementing and enhancing multiscale coherent structure parameterization. *Submitted to: J. Adv. Model. Earth Syst.*, 2024.

[3] G. A. Efstathiou, R. S. Plant, and F. K. Chow. Grey-zone simulations of shallow-to-deep convection transition using dynamic subgrid-scale turbulence models. *Submitted to: Q. J. R. Meteorol. Soc.*, 2023.

[4] J.-F. Gu, R. S. Plant, and C. E. Holloway. Connections between sub-cloud coherent structures and the life cycle of shallow cumulus clouds: Evidence from large eddy simulation. *Submitted to: J. Adv. Model. Earth Syst.*, 2023.

Publications Accepted

[1] S. L. Lavender, A. J. Stirling, M. Whitall, R. Stratton, C. L. Daleu, R. S. Plant, A. Lock, and J.-F. Gu. The use of idealised experiments in testing a new convective parameterization: Performance of CoMorph-A. *To appear in: Q. J. R. Meteorol. Soc.*, 2024.

[2] J.-F. Gu, R. S. Plant, C. E. Holloway, and P. A. Clark. Halo region around shallow cumulus clouds in large eddy simulations. *To appear in: Q. J. R. Meteorol. Soc.*, 2023.

Books

[1] R. S. Plant and J.-I. Yano, editors. *Parameterization of Atmospheric Convection. Volume 1: Theoretical Background and Formulation*. World Scientific, Imperial College Press, 2015. 515pp.

[2] R. S. Plant and J.-I. Yano, editors. *Parameterization of Atmospheric Convection. Volume 2: Current Issues and New Theories*. World Scientific, Imperial College Press, 2015. 617pp.

Journal Articles

[1] L. P. Blunn, R. S. Plant, O. Coceal, S. I. Bohnenstengel, H. W. Lean, and J. F. Barlow. The influence of resolved convective motions on scalar dispersion in hectometric scale numerical weather prediction models. *Q. J. R. Meteorol. Soc.*, 150:976–994, 2024.

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Conferences/Workshops/Seminars: Talks

[1] G. A. Efstathiou and R. S. Plant. A dynamic blending scheme for scale-dependent turbulent mixing at grey-zone resolutions, 2023. Talk at: 24th Symposium on Boundary Layers and Turbulence, AMS Annual Meeting, 8-12 January, Denver, USA.

[2] J.-F. Gu, R. S. Plant, C. Holloway, and M. Muetzelfeldt. Pressure drag for shallow cumulus clouds: From thermals to the cloud ensemble, 2023. Talk at: AOGS 20th Annual Meeting, Singapore, 30 July - 4 August.

[3] C. E. Holloway, M. C. Johnston, and R. S. Plant. Sensible heat fluxes control cloud trail strength, 2023. Talk at: 3rd Workshop on Cloud Organisation and Precipitation Extremes, ICTP, Trieste, 4-8 September.

[4] M. R. Muetzelfeldt, R. S. Plant, and H. C. Christensen. Environmental precursors to mesoscale convective systems, 2023. Talk at: EGU General Assembly 2023, 23-28 April, Vienna.

[5] M. R. Muetzelfeldt, R. S. Plant, Z. Zhang, T. Woollings, and H. C. Christensen. Environmental conditions affecting MCS occurrence and their importance for MCS parametrization, 2023. Talk at: NCAR seminar, 25 July, Boulder.

[6] M. R. Muetzelfeldt, Z. Zhang, R. S. Plant, T. Woollings, and H. C. Christensen. Towards a probabilistic parametrisation of mesoscale convective systems, 2023. Talk at: IUGG General Assembly 2023, 11-20 July, Berlin.

[7] R. S. Plant. Convection and parameterization, 2023. Talk at: NCAS Climate Modelling Summer School, 10–22 September, Cambridge.

[8] R. S. Plant, H. Christensen, M. R. Muetzelfeldt, T. Woollings, and Z. Zhang. Towards a stochastic parameterization of unresolved MCS impacts on large scales, 2023. Invited talk at: AOGS 20th Annual Meeting, Singapore, 30 July - 4 August.

[9] A. Power, R. S. Plant, P. A. Clark, G. A. Efstathiou, and T. R. Jones. Dynamically calculating mixing lengths in shallow cumulus convection, 2023. Royal Meteorological Society Student Conference, Reading, UK, 4–5 July.

[10] S. Sherwood, R. S. Plant T. Raupach, C. L. Daleu, and Y.-L. Hwong. CRM and LES estimates of tangent linear convective responses, 2023. Talk at: AOGS 20th Annual Meeting, Singapore, 30 July - 4 August.

[11] C. L. Daleu, R. S. Plant, A. J. Stirling, M. Whitall, and S. Lavender. Update on CAPE closure, 2022. Talk at: ParaCon Plenary Meeting, 19-20 December, online.

[12] J.-F. Gu, R. S. Plant, C. E. Holloway, and P. A. Clark. Halo size around shallow cumulus clouds in the large eddy simulations, 2022. Talk at: EGU General Assembly 2022, 23-27 May, Vienna, Austria.

[13] J.-F. Gu, R. S. Plant, C. E. Holloway, and P. A. Clark. Understanding the entrainment and detrainment processes in shallow cumulus clouds using Lagrangian trajectories, 2022. Talk at: 35th Conference on Hurricanes and Tropical Meteorology, 9-13, New Orleans, LA, USA.

[14] R. S. Plant. Beyond I_{org}: Advertisment for a suite of more robust organization measures, 2022. Talk at: ParaCon Plenary Meeting, 20-21 June, Met Office, Exeter.

[15] R. S. Plant, H. Christensen, M. R. Muetzelfeldt, Z. Zhang, M. W. Moncrieff, Z. Feng, R. Leung, A. J. Stirling, K. Williams, W. J. Tennant, and C. Piccolo. Introduction to MCS:PRIME, 2022. Talk at: ParaCon Plenary Meeting, 20-21 June, Met Office, Exeter.

[16] R. S. Plant and P. A. Clark. Representing uncertainties due to modest numbers of coherent sub-grid structures, 2022. ECMWF Workshop on Model Uncertainty, Reading, UK, 9-12 May 2022.

[17] A. Power, R. S. Plant, P. A. Clark, and G. A. Efstathiou. Modelling convective turbulence in shallow cumulus convection, 2022. Talk at: ParaCon Plenary Meeting, 19-20 December, online.

[18] L. P Blunn, O. Coceal, R. S. Plant, J. F. Barlow, H. W. Lean, and S. Bohnenstengel. High--resolution dispersion modelling in the convective boundary layer, 2021. Invited talk at: Urban Fluid Mechanics Special Interest Group Meeting: Heterogeneity, unsteadiness and uncertainty in urban environments, 29 March, online.

[19] C. L. Daleu and R. S. Plant. Design for representing shear-induced convection organiztion in CoMorph, 2021. Talk at: ParaCon Plenary Meeting, 29 June – 1 July, online.

[20] C. L. Daleu, R. S. Plant, S. J. Woolnough, A. Stirling, and N. Harvey. Memory properties in cloud-resolving simulations of the diurnal cycle of deep convection, 2021. Talk at: EGU General Assembly 2021, 19-30 April, online.

[21] C. L. Daleu, R. S. Plant, S. J. Woolnough, A. Stirling, and N. Harvey. Memory properties in cloud-resolving simulations of the diurnal cycle of deep convection, 2021. Talk at: Conference on Improvement and Calibration of Clouds in Models, 12-16 April, Meteo-France, Toulouse, France.

[22] J.-F. Gu, R. S. Plant, and C. E. Holloway. Can simplified cloud structures capture vertical fluxes?, 2021. Talk at: 34th Conference on Hurricanes and Tropical Meteorology Virtual Meeting, American Meteorological Society Virtual Meeting 10-14 May.

[23] J.-F. Gu, R. S. Plant, C. E. Holloway, T. R. Jones, A. Stirling, P. A. Clark, and S. J. Woolnough. The key components of convection for vertical transport of heat and moisture: A core-cloak conceptual model, 2021. Talk at: 34th Conference on Hurricanes and Tropical Meteorology Virtual Meeting, American Meteorological Society Virtual Meeting 10-14 May.

[24] J.-F. Gu, R. S. Plant, C. E. Holloway, and M. Muetzelfeldt. Pressure drag for shallow cumulus clouds: from thermals to the cloud ensemble, 2021. Talk at: EGU General Assembly 2021, 19-30 April, online.

[25] J.-F. Gu, R. S. Plant, C. E. Holloway, and M. Muetzelfeldt. Pressure drag for shallow cumulus clouds: From thermals to the cloud ensemble, 2021. Talk at: Conference on Improvement and Calibration of Clouds in Models, 12-16 April, Meteo-France, Toulouse, France.

[26] S. Hagos, J. Chen, K. Barber, K. Sakaguchi, Z. Feng, H. Xiao, and R. S. Plant. A machine learning assisted stochastic cloud population model as a parameterization of cumulus convection, 2021. Talk at: Conference on Improvement and Calibration of Clouds in Models, 12-16 April, Meteo-France, Toulouse, France.

[27] A. Hermoso, V. Homar, and R. S. Plant. Improving heavy precipitation forecasting over the western mediterranean: Benefits of stochastic techniques for model error sampling, 2021. Talk at: EGU General Assembly 2021, 19-30 April, online.

[28] C. E. Holloway, J.-F. Gu, R. S. Plant, and T. R. Jones. Composited structure of shallow cumulus clouds, 2021. Talk at: EGU General Assembly 2021, 19-30 April, online.

[29] Y.-L. Hwong, S. Song, S. Sherwood, A. Stirling, C. Rio, R. Roehrig, C. L. Daleu, R. S. Plant, D. Fuchs, P. Maher, and L. Touze-Peiffer. Characterising convection schemes using their linearised responses to convective tendency perturbations, 2021. Talk at: Conference on Improvement and Calibration of Clouds in Models, 12-16 April, Meteo-France, Toulouse, France.

[30] M. C. Johnston, C. E. Holloway, and R. S. Plant. Role of wind speed in organizing shallow convection on small islands in idealized simulations, 2021. Talk at: 34th Conference on Hurricanes and Tropical Meteorology Virtual Meeting, American Meteorological Society Virtual Meeting 10-14 May.

[31] R. S. Plant. Representing convection in numerical weather prediction models and its implications, 2021. Invited talk at: Royal Met Soc Meteorological Masterclass Series, 10 March.

[32] D. Shipley, P. A. Clark, R. S. Plant, and H. Weller. Capturing linear instability in two-fluid convection, 2021. Talk at: ParaCon Plenary Meeting, 13-14 December, Leeds.

[33] L. P Blunn, O. Coceal, R. S. Plant, J. F. Barlow, H. W. Lean, S. Bohnenstengel, and N. Nazarian. Neighbourhood-scale urban dispersion modelling using a canopy approach, 2020. Talk at: 21st Joint Conference on the Applications of Air Pollution Meteorology, 12-16 January, Boston Convention and Exhibition Center, Boston, USA.

[34] C. L. Daleu, R. S. Plant, A. J. Stirling, M. Whitall, and S. Lavender. Characterising convective schemes by their linearised responses, 2020. Talk at: ParaCon Plenary Meeting, 8-10 July, Exeter.

[35] L. P Blunn, O. Coceal, R. S. Plant, J. F. Barlow, H. W. Lean, S. Bohnenstengel, and N. Nazarian. Neighbourhood-scale urban dispersion modelling using a canopy approach, 2019. Talk at: 2019 NCAS Air Quality Symposium, 27-28 November, University of Leeds, Leeds, UK.

[36] C. L. Daleu, N. Harvey, R. S. Plant, and S. J. Woolonough. Idealized modelling of the diurnal cycle of deep convection using the new met office cloud-resolving model (MONC), 2019. Talk at: UM User Workshop 2019, 17–21 June, Met Office, Exeter.

[37] C. L. Daleu, N. Harvey, R. S. Plant, and S. J. Woolonough. The simulation of the diurnal cycle of deep convection over land in a new Met Office cloud-resolving model, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[38] S. L. Gray and R. S. Plant. Workshop summary and thanks, 2019. Talk at at: 5th OpenIFS User Workshop, Reading, 17-21 June.

[39] J.-F. Gu, R. S. Plant, and C. E Holloway. Parameterizing the sub-grid vertical fluxes with composited distributions of variables within the cloud, 2019. Talk at: ParaCon Plenary Meeting, 15-16 May, Leeds.

[40] J.-F. Gu, R. S. Plant, C. E. Holloway, T. R. Jones, A. Stirling, P. A. Clark, and S. J. Woolnough. Evaluation of bulk mass flux formulation using large-eddy simulations, 2019. Talk at: Nanjing University Seminar, 25 October, Nanjing, China.

[41] J.-F. Gu, R. S. Plant, C. E. Holloway, T. R. Jones, A. Stirling, P. A. Clark, S. J. Woolnough, and T. Webb. Key components of convection for vertical transport of heat and moisture: A core-cloak conceptual model, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[42] S. Hagos, Z. Feng, R. A. Houze Jr, R. S. Plant, and A. Protat. A machine learning assisted development of a model for the population dynamics of clouds, 2019. Talk at: EGU General Assembly, 7–12 April 2019, Vienna, Austria.

[43] S. Hagos, Z. Feng, R. A. Houze Jr, R. S. Plant, and A. Protat. A stochastic transition matrix approach to modeling of the population dynamics of clouds, 2019. Talk at: 2019 AMS Annual Meeting, 6-10 January, Phoenix, Arizona, USA.

[44] M. C. Johnston, C. E. Holloway, and R. S. Plant. Cloud trails: Are the clouds important?, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[45] T. R. Jones, P. A. Clark, R. S. Plant, C. E. Holloway, and S. J. Woolnough. Radiative convective equilibrium across the gray zone, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[46] M. R. Muetzelfeldt, R. S. Plant, P. A. Clark, and A. Stirling. Using a cloud-resolving model to diagnose the effects of different wind shear profiles on deep convective cloud fields, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[47] R. S. Plant, J.-F. Gu, T. R. Jones, C. E. Holloway, and the ParaCon team. Convective parameterization development from cloud resolving simulations of convective equilibrium: what can we still learn?, 2019. Invited talk at: EGU General Assembly, 7–12 April 2019, Vienna, Austria.

[48] R. S. Plant, A. Stirling, P. A. Clark, J. Thuburn, A. Ross, M. Herzog, H. Weller, and the ParaCon Team. The ParaCon programme: New approaches for modelling convection, 2019. Invited talk at: Weather and Climate Modelling Special Interest Group Seminar, Centre for High Performance Computing Conference 2019, Johannesburg, South Africa, 1-5 December.

[49] A. Stirling, P. A. Clark, R. S. Plant, D. J. Parker, M. Herzog, and J. Thuburn. Paracon's parametrisation of convection at kilometre scales, 2019. Talk at: UCP2019 Understanding Clouds and Precipitation, Berlin, 25 February - 1 March.

[50] M. A. W. Whittall, P. Bechtold, A. Shimikobe, E. Dunne, R. Roehrig, D. Paquin-Ricard, J.-W. Bao, L. Gerard, R. S. Plant, J. Thuburn, H. E. Weller, D. Shipley, and Y. Cohen. The "nitty gritty" of convection scheme development, 2019. Talk at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[51] L. P. Blunn, O. Coceal, R. S. Plant, J. F. Barlow, S. Bohnenstengel, and H. W. Lean. High--resolution modelling of the boundary layer and implications for urban air quality forecasting, 2018. Talk at: RMetS/NCAS Atmospheric Science Conference: Weather, Climate and Air Quality, 3-4 July, University of York.

[52] M.-J. Bopape, F. Engelbrecht, B. Abiodun, A. Beraki, J. McGregor, T. Ndarana, L. Ntsangwane, R. S. Plant, D. Randall, H. Rautenbach, H. Sithole, M. Sovara, and J. Witi. Weather and climate numerical models development programme in South Africa, 2018. Talk at: 34th Annual Conference of the South African Society for Atmospheric Sciences, 20–21 September, University of KwaZulu-Natal, Durban, South Africa.

[53] C. L. Daleu, N. Harvey, R. S. Plant, and S. J. Woolnough. Diurnal cycle of deep convection using MONC, 2018. Talk at: ParaCon Plenary Meeting, December, Met Office, Exeter.

[54] J.-F. Gu, R. S. Plant, and C. E Holloway. A composite study of cloud structures, 2018. Talk at: ParaCon Plenary Meeting, 3-4 December, Met Office, Exeter.

[55] S. Hagos, Z. Feng, R. S. Plant, R. A. Houze Jr, and A. Protat. A stochastic framework for modeling the population dynamics of convective clouds, 2018. Talk at: 2nd Global Atmospheric System Studies (GASS) Conference, 26 February – 2 March, Lorne, Victoria, Australia.

[56] T. R. Jones, P. A. Clark, R. S. Plant, C. E. Holloway, and S. J. Woolnough. Radiative convective equilibrium across the gray zone, 2018. Talk at: AGU Fall Meeting, 10-14 December, Washington, USA.

[57] M. Muetzelfeldt, R. S. Plant, P. A. Clark, and A. J. Stirling. A climatology of tropical wind shear produced by clustering wind profiles from a climate model, 2018. Talk at: ParaCon Plenary Meeting, 3-4 December, Met Office, Exeter.

[58] R. S. Plant. Sources of heterogeneity for convection and some implications, 2018. Invited talk at: Boundary-layer moist-convection coupling workshop, 5-6 March, Leeds University.

[59] C. L. Daleu, N. Harvey, R. S. Plant, and S. J. Woolnough. The diurnal cycle in MONC, 2017. Talk at: ParaCon Plenary Meeting, December, Exeter.

[60] G. A. Efstathiou, R. S. Plant, M. M. Bopape, and R. J. Beare. Dynamic sub-grid modelling of an evolving CBL at greyzone resolutions, 2017. Talk at: Shedding light on the greyzone, ECMWF Workshop, 13-16 November, ECMWF, Reading.

[61] D. L. A. Flack, P. A. Clark, S. L. Gray, R. S. Plant, C. E. Halliwell, H. W. Lean, and N. M. Roberts. Convective-scale perturbation growth across a spectrum of convective cases, 2017. Talk at: 17th AMS Conference on Mesoscale Processes, 23-27 July, San Diego.

[62] S. Hagos, Z. Feng, R. S. Plant, R. A. Houze Jr, and H. Xiao. Development of stochastic models of convective cloud populations, 2017. Talk at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands.

[63] R. S. Plant. Implementing stochastic parameterizations: Noise we want and noise we don't, 2017. Invited talk at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands.

[64] R. S. Plant. Stochastic aspects of convection-permitting models, 2017. Invited talk at: Scaling Cascades in Complex Systems 2017, 27-29 March, Freie Universitat, Berlin, Germany.

[65] R. S. Plant, C. Daleu, and S. J. Woolnough. Parameterizing large-scale circulations based on the weak temperature gradient approximation, 2017. Talk at: GAFD Seminar, 13 March, Exeter University.

[66] R. S. Plant, C. Daleu, and S. J. Woolnough. Parameterizing large-scale circulations based on the weak temperature gradient approximation, 2017. Talk at: Convection Seminar, 23 May, Leeds University.

[67] M.-J. Bopape, O. Coceal, and R. S. Plant. A comparison of LES sub-grid turbulence models at different grid resolutions in a convective BL, 2016. Talk at: 22nd AMS Symposium on Boundary Layers and Turbulence, 20-24 June 2016, Salt Lake City, USA.

[68] M.-J. Bopape, F. A. Engelbecht, T. Ndarana, R. S. Plant, O. Coceal, and M. Thatcher. Simulating the Earth system with filtered Navier Stokes equations, 2016. Invited talk at: 10th CHPC National Meeting, 5-9 December, East London ICC, South Africa.

[69] M.-J. Bopape, R. S. Plant, and O. Coceal. Simulating the convective boundary layer with a dynamic Smagorinsky model, 2016. Talk at: 32nd Annual Conference of the South African Society for Atmospheric Sciences, 31 October – 1 November, University of Cape Town, South Africa.

[70] M.-J. Bopape, R. S. Plant, and O. Coceal. Simulations of a convective boundary layer with a dynamic Smagorinsky scheme, 2016. Talk at: 31st annual meeting of the Working Group on Numerical Experimentation (WGNE), 26-29 April, CSIR, South Africa.

[71] C. Daleu, R. S. Plant, S. J. Woolnough, A. Sobel, S. Wang, S. Sessions, M. Herman, G. Bellon, F. Ferry, P. Peyrille, A. Cheng, P. Siebesma, B. Van Ulft, and D. Kim. Intercomparison of methods of coupling between convection and large-scale circulation, 2016. Talk at: Understanding Clouds and Precipitation Conference, HD(CP)2, 15–19 February, Berlin.

[72] A. Deluca, R. S. Plant, C. E. Holloway, and H. Kantz. Self-organised convection in a cloud-resolving model: realistic and idealistic simulations, 2016. Talk at: Centre for Dynamics Workshop, Technische Universitat, Dresden.

[73] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Model physics perturbations in different convective regimes, 2016. Talk at: Early-Career Researchers' FFIR Meeting, January 2016, Hull.

[74] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Model physics perturbations in different convective regimes, 2016. Talk at: FRANC Annual Science Meeting, 22 June 2016, Reading.

[75] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Model physics perturbations in different convective regimes, 2016. Talk at: Ludwig Maximilian University seminar, 16 June 2016, Munich, Germany.

[76] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Model physics perturbations in different convective regimes, 2016. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[77] R. S. Plant. Regime transitions in a parameterized world: where are/should the decisions be taken?, 2016. Talk at: US DoE ASR Workshop on the Representation of Convection in Next-Generation Climate Models, 3-5 February, PNNL, Richland, Washington, USA.

[78] R. S. Plant, E. Carter, P. Clark, H. Guy, C. Haliwell, K. E. Hanley, R. J. Hogan, H. W. Lean, T. H. M. Stein, and M. Weeks. Characteristics of precipitating convection in the UM at $\Delta x \approx$200m-2km, 2016. Talk at: RMetS NCAS Conference, 6-8 July 2016, Manchester.

[79] T. Stein, R. J. Hogan, K. E. Hanley, P. A. Clark, C. Halliwell, H. W. Lean, J . Nicol, and R. S. Plant. The DYMECS project: A statistical approach for the evaluation of convective storms in high-resolution NWP models, 2016. Talk at: EGU General Assembly, 18–22 April 2016, Vienna, Austria.

[80] M.-J. Bopape, R. S. Plant, and O. Coceal. Resolution dependence of the temperature flux in the convective boundary layer, 2015. Talk at: NCAS Science Conference 2015, 16–17 July, York.

[81] M.-J. Bopape, R. S. Plant, and O. Coceal. Resolution dependence of the temperature flux in the convective boundary layer, 2015. Talk at: NCAS Early Career Research Forum 2015, 6 May, Reading.

[82] M.-J. Bopape, R. S. Plant, O. Coceal, G. Efstathiou, R. J. Beare, A. P. Lock, and H. W. Lean. Simulations of the boundary layer with a dynamic Smagorinsky model, 2015. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[83] C. Daleu, R. S. Plant, S. J. Woolnough, A. Sobel, S. Wang, S. Sessions, M. Herman, G. Bellon, F. Ferry, P. Peyrille, A. Cheng, P. Siebesma, B. Van Ulft, and D. Kim. Intercomparison of methods of coupling between convection and large-scale circulation, 2015. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[84] C. Daleu, R. S. Plant, S. J. Woolnough, A. Sobel, S. Wang, S. Sessions, M. Herman, G. Bellon, F. Ferry, P. Peyrille, A. Cheng, P. Siebesma, B. Van Ulft, and D. Kim. Intercomparison of methods of coupling between convection and large-scale circulation, 2015. Talk at: New Mexico Institute of Mining and Technology, September.

[85] C. Daleu, R. S. Plant, S. J. Woolnough, A. Sobel, S. Wang, S. Sessions, M. Herman, G. Bellon, F. Ferry, P. Peyrille, A. Cheng, P. Siebesma, B. Van Ulft, and D. Kim. Intercomparison of methods of coupling between convection and large-scale circulation, 2015. Talk at: NCAS Science Conference 2015, 16–17 July, York.

[86] S. Dey, R. S. Plant, N. Roberts, and S. Migliorini. A look at the spatial characteristics of convective storms in high resolution ensembles, 2015. Talk at: Departmental Seminar, Department of Meteorology, University of Reading.

[87] S. Dey, R. S. Plant, N. Roberts, and S. Migliorini. A new method for the characterization and verification of local spatial predictability for convective-scale ensembles, 2015. Talk at: 27th Conference On Weather Analysis And Forecasting / 23rd Conference On Numerical Weather Prediction, American Meteorological Society, 28 June – 3 July, Chicago, USA.

[88] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Characterising convective regimes over the uk, 2015. FRANC Annual Meeting, Met Office, Exeter, UK, 27 April 2015.

[89] J. Nicol, R. J. Hogan, T. H. M. Stein, R. J. Hogan, R. S. Plant, P. A. Clark, C. Haliwell, K. E. Hanley, H. W. Lean, M. Clarke, A. Doo, and D. Ladd. DYMECS: A statistical evaluation of convective storms in high-resolution Unified Model simulations, 2015. Talk at: Met Office seminar, 23 January, Exeter.

[90] R. S. Plant. Convection closure and energy cycle, 2015. Talk at: Workshop on Statistical Cumulus Dynamics, 15 June, National Meteorological Administration, Bucharest, Romania.

[91] O. Coceal, M.-J. Bopape, and R. S. Plant. Evaluation of a tensor eddy–diffusivity model for the terra incognita, 2014. Talk at: 21st AMS Symposium on Boundary Layers and Turbulence, 9-13 June 2014, Leeds.

[92] O. Coceal, M.-J. Bopape, and R. S. Plant. Performance of a tensor eddy-diffusivity model for a neutral and convective boundary layer at grey-zone resolutions, 2014. Talk at: NCAS Science Conference 2014, 17–18 July, Bristol.

[93] C. L. Daleu, S. J. Woolnough, R. S. Plant, A. H. Sobel, D. J. Raymond, S. Sessions, S. Wang, and G. Bellon. Intercomparison of methods of coupling between convection and large-scale circulation, 2014. Talk at: AGU Fall Meeting, 15-19 December, San Fransisco, USA.

[94] S. Dey, R. S. Plant, S. Migliorini, and N. Roberts. A look at the spatial location and predictability of convective storms over the UK, 2014. Talk at: Royal Meteorological Society, SE Centre Meeting, 3 December, Reading.

[95] S. R. A. Dey, R. S. Plant, N. M. Roberts, and S. Migliorini. A look at the spatial characteristics of convective storms in MOGREPS-UK, 2014. Talk at: Met Office seminar, 14 November, Exeter, UK.

[96] G. Efstathiou, R. J. Beare, M.-J. Bopape, O. Coceal, and R. S. Plant. Modelling grey zone boundary layers: The GreyBLs project, 2014. Talk at: WGNE/GASS Workshop: The Grey Zone Project, Max Planck Institute for Meteorology, 1-3 December, Hamburg, Germany.

[97] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. The appropriate use of a convective adjustment timescale to distinguish between regimes of predictability, 2014. Royal Meteorological Society Student Conference, Manchester, UK, July 2014.

[98] H. W. Lean, P. A. Clark, C. Halliwell, K. E. Hanley, R. J. Hogan, J. Nicol, R. S. Plant, and T. Stein. Statistical analysis of UK convection and its representation in high resolution NWP models, 2014. World Weather Open Science Conference 2014, Montreal, Canada, 16-21 August.

[99] H. W. Lean, K. E. Hanley, C. Halliwell, T. H. M. Stein, R. J. Hogan, J. Nicol, R. S. Plant, and P. Clark. Use of DYMECS observations to validate the representation of convection over the UK in high resolution versions of the Unified Model, 2014. Talk at: 26th Conference on Weather Analysis and Forecasting / 22nd Conference on Numerical Weather Prediction, 2-6 February, Atlanta, Georgia, USA.

[100] O. Martinez-Alvarado, L. Baker, S. L. Gray, J. Methven, and R. S. Plant. Distinguishing the cold conveyor belt and sting jet air streams in an intense extratropical cyclone, 2014. World Weather Open Science Conference 2014, Montreal, Canada, 16-21 August.

[101] R. S. Plant. Boundary layer parameterization, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[102] R. S. Plant. Convection parameterization: Part II, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[103] R. S. Plant. Convection parameterization: Part I, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[104] R. S. Plant. Convection "resolving" models: How well is the convection actually resolved?, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[105] R. S. Plant. Microphysics parameterization, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[106] R. S. Plant. Overview and cloud cover parameterization, 2014. Talk at: Summer School on Physics and Dynamics of Numerical Weather Prediction, 28 – 31 July, Nanjing University, China.

[107] T. H. M. Stein, R. J. Hogan, P. A. Clark, C. E. Haliwell, K. E. Hanley, H. W. Lean, J. C. Nicol, and R. S. Plant. The DYMECS project: A statistical approach for the evaluation of convective storms in high-resolution models, 2014. Talk at: WGNE/GASS Workshop: The Grey Zone Project, Max Planck Institute for Meteorology, 1-3 December, Hamburg, Germany.

[108] T. H. M. Stein, R. J. Hogan, J. Nicol, R. S. Plant, P. A. Clark, K. E. Hanley, C. Halliwell, and H. W. Lean. The DYMECS project: A statistical approach for the evaluation of convective storms in high-resolution models, 2014. Talk at: Cascade Downstream Workshop on Convection Modelling, 7-8 October, Reading.

[109] S. Dey, R. S. Plant, S. Migliorini, and N. Roberts. High resolution ensemble analysis: linking correlations and spread to physical processes, 2013. Talk at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[110] K. E. Hanley, R. S. Plant, H. W. Lean, C. Halliwell, T. Stein, and R. Hogan. Mixing length controls on high resolution simulations of convective storms, 2013. Talk at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[111] K. E. Hanley, R. S. Plant, H. W. Lean, C. Halliwell, T. Stein, and R. J. Hogan. Mixing length controls on high resolution simulations of convective storms, 2013. Talk at: European Geosciences Union General Assembly, 7-12 April, Vienna, Austria.

[112] K. E. Hanley, R. S. Plant, T. H. Stein, R. J. Hogan, H. Lean, and C. Halliwell. DYMECS: Dynamical and microphysical evolution of convective storms, 2013. Talk at: JWCRP Workshop on Understanding and Representing Atmospheric Convection Across Scales, 28-30 January, Dartington, UK.

[113] R. J. Hogan, T. Stein, J. Nicol, R. S. Plant, K. Hanley, H. Lean, C. Halliwell, and E. Carter. Radar evaluation of the structure of thunderstorms in high resolution forecasts, 2013. Talk at: RMetS National Meeting, 20th March, London, UK.

[114] R. J. Keane, R. S. Plant, and W. J. Tennant. The Plant-Craig stochastic convection scheme in MOGREPS, 2013. Talk at: Joint SRNWP Workshop on Model Physics and Ensemble Prediction Systems, 18-20 June, AEMET, Madrid, Spain.

[115] O. Martinez-Alvarado, L. Baker, S. L. Gray, J. Methven, and R. S. Plant. Airstreams in regions of strong winds in extratropical cyclone Friedhelm: Model results and observational evidence, 2013. Talk at: RACEWIN Workshop on European Storms, 2-4 September, Hadley Centre, Exeter.

[116] O. Martinez-Alvarado, L. Baker, S. L. Gray, J. Methven, and R. S. Plant. Progress on the analysis of IOP-8, 11 December 2011, 2013. Talk at: DIAMET Science Meeting, 7-8 March, Manchester.

[117] O. Martinez-Alvarado, H. Joos, J. Chagnon, M. Bottcher, S. L. Gray, R. S. Plant, J. Methven, and H. Wernli. Progress on the analysis of the warm conveyor belt in the T-NAWDEX-III case 23-25 November 2009, 2013. Talk at: DIAMET Science Meeting, 7-8 March, Manchester.

[118] O. Martinez-Alvarado, H. Joos, J. M. Chagnon, M. Bottcher, S. L. Gray, R. S. Plant, and H. Wernli. Diabatic processes and branch splitting of a warm conveyor belt in MetUM and COSMO model simulations, 2013. Talk at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[119] O. Martinez-Alvarado and R. S. Plant. Liquid detrainment in convection embedded in a cold front, 2013. Talk at: DIAMET Science Meeting, 7-8 March, Manchester.

[120] O. Martinez-Alvarado and R. S. Plant. Progress on the analysis 30 September 2011 DIAMET case, 2013. Talk at: DIAMET Science Meeting, 7-8 March, Manchester.

[121] O. Martinez-Alvarado and R. S. Plant. Resolved versus parameterised convection in numerical simulations of extratropical cyclones, 2013. Talk at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[122] O. Martinez-Alvarado, R. S. Plant, L. Baker, J. Chagnon, S. L. Gray, J. Methven, H. Joos, M. Bottcher, and H. Wernli. Understanding the mesoscale structure of extratropical cyclones: Three case studies during the DIAMET project, 2013. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[123] D. McNamara, R. S. Plant, and S. E. Belcher. A global climatology of boundary layer ventilation, 2013. Talk at: European Geosciences Union General Assembly, 7-12 April, Vienna, Austria.

[124] R. S. Plant. The ingredients of a typical mass flux scheme, 2013. Talk at: COST ES0905 Final Training School, 29 September – 9 October, Brac, Croatia.

[125] R. S. Plant. Parameterization in the grey zone: what should it recognize?, 2013. Talk at: JWCRP Workshop on Understanding and Representing Atmospheric Convection Across Scales, 28-30 January, Dartington, UK.

[126] R. S. Plant, E. Carter, P. A. Clark, C. Halliwell, K. E. Hanley, R. J. Hogan, D. E. Kirshbaum, H. W. Lean, J. Nicol, T. Stein, and R. A. Warren. Convective-scale numerical modelling. how accurate is "realistic-looking"?, 2013. Talk at: Space and Atmospheric Physics Seminar Series, 18th June, Imperial College.

[127] T. Stein, R. J. Hogan, E. Carter, C. Halliwell, K. E. Hanley, H. Lean, J. Nicol, and R. S. Plant. The three-dimensional microphysical and dynamical structure of convective storms, 2013. Talk at: 7th European Conference on Severe Storms, 3-7 June, Helsinki, Finland.

[128] T. H. M. Stein, R. J. Hogan, P. Clark, C. Halliwell, K. E. Hanley, H. W. Lean, J. Nicol, and R. S. Plant. The three-dimensional microphysical and dynamical structure of convective storms, 2013. Talk at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[129] T. H. M. Stein, R. J. Hogan, J. Nicol, R. S. Plant, P. A. Clark, K. E. Hanley, C. Halliwell, and H. W. Lean. Evaluation of three-dimensional cloud structures in DYMECS, 2013. Talk at: Workshop on Convection in Met Office models at high resolution, 13 June, Reading.

[130] R. A. Warren, D. J. Kirshbaum, R. S. Plant, and H. W. Lean. A quasi-stationary convective system associated with sea breeze convergence, 2013. Talk at: 15th AMS Conference on Mesoscale Processes, 6-9 August, Portland, Oregon, USA.

[131] M. A. Whitall and R. S. Plant. Using stochastic parameterisations to study the sensitivity of the atmosphere to variability at scales poorly resolved in GCMs, 2013. Talk at: Met Office seminar, Exeter, UK.

[132] L. Baker, O. Martinez-Alvarado, S. L. Gray, J. Methven, N. Roberts, and R. S. Plant. Analysis of cyclone Friedhelm, 8 December 2011 (DIAMET IOP-8), 2012. Talk at: DIAMET Science Meeting, 6 November, Manchester.

[133] K. N. Bower, T. W. Choularton, J. Crosier, G. Lloyd, J. R. Dorsey, M. W. Gallagher, P. Connolly, C. Dearden, G. Vaughan, and the DIAMET Team. The microphysics of cold fronts measured during DIAMET, 2012. Talk at: European Geosciences Union General Assembly, 22-27 April, Vienna, Austria.

[134] C. L. Daleu, R. S. Plant, and S. J. Woolnough. Modelling the interactions between tropical convection and large-scale dynamics, 2012. Talk at: 1st Pan-GASS Meeting: Advances in the Modelling of Atmospheric Physical Processes, 10-14 September, Boulder, Colarado, USA.

[135] R. J. Hogan, R. S. Plant, T. Stein, K. Hanley, J. Nicol, H. Lean, and C. Halliwell. DYMECS: Dynamical and microphysical evolution of convective storms, 2012. Talk at: COPE Science Meeting, 25th October, Reading, UK.

[136] O. Martinez-Alvarado, J. Chagnon, S. L. Gray, R. S. Plant, J. Methven, H. Joos, M. Bötcher, and H. Wernli. Diabatic processes and the structure of the warm conveyor belt, 2012. Talk at: 2nd European Windstorms Workshop, 3–5 September 2012, Leeds, UK.

[137] O. Martinez-Alvarado and R. S. Plant. Diagnosis of convective parameterisation schemes in extratropical cyclones, 2012. Talk at: Workshop on Concepts for Convective Parmeterisations in Large-Scale Models, 20-22 March, CIMA Foundation, Savona, Italy.

[138] O. Martinez-Alvarado and R. S. Plant. Liquid detrainment in convection embedded in a cold front, 2012. Talk at: COST Action WG1+2 Meeting on Entrainment and Detrainment, 22-23 February, KNMI, Utrecht, Netherlands.

[139] O. Martinez-Alvarado, R. S. Plant, J. Chagnon, S. L. Gray, J. Methven, H. Joos, M. Bottcher, and H. Wernli. Diabatic processes and the structure of extratropical cyclones, 2012. Talk at: Geophysical and Nonlinear Fluid Dynamics Seminar, AOPP, 23 October, Oxford.

[140] R. S. Plant. Spectral and bulk mass-flux convective parameterizations, 2012. Talk at: Workshop on Concepts for Convective Parmeterisations in Large-Scale Models, 20-22 March, CIMA Foundation, Savona, Italy.

[141] T. H. M. Stein, K. E. Hanley, R. Hogan, J. Nicol, R. S. Plant, E. Carter, C. Halliwell, H. W. Lean, A. Macallan, M. Clarke, A. Doo, and D. Ladd. DYMECS: The evolution of thunderstorms in the Met Office Unified Model, 2012. Talk at: NCAS Weather Rainfall Forum, 27 July, Manchester.

[142] T. H. M. Stein, K. E. Hanley, R. Hogan, R. S. Plant, E. Carter, H. W. Lean, J. Nicol, C. Halliwell, and A. Macallan. Tracking the three-dimensional evolution of convective storms in radar observations and high-resolution models, 2012. Talk at: 26th Conference on Severe Local Storms, 5–8 November, Nashville, USA.

[143] G. Vaughan and the DIAMET Team. The DIAMET campaign, 2012. Invited talk at: European Geosciences Union General Assembly, 22-27 April, Vienna, Austria.

[144] R. A. Warren, R. S. Plant, H. Lean, and D. Kirshbaum. Numerical simulations of a COPE–type case, 2012. Talk at: COPE Science Meeting, 25th October, Reading, UK.

[145] R. A. Warren, R. S. Plant, H. Lean, and D. Kirshbaum. Quasi-stationary convective storms in the UK: A case study, 2012. Talk at: RMetS Conference, 9-12 July, Leeds, UK.

[146] R. A. Warren, R. S. Plant, H. Lean, and D. Kirshbaum. A quasi-stationary convective system over the UK southwest peninsula, 2012. Talk at: 4th CNR–ISAC Summer School. Severe Convective Weather: Theory and Applications, 17-21 September, Lecce, Italy.

[147] O. Peters and R. S. Plant. The precipitation phase transition and climate modeling, 2011. Talk at: Workshop on Concepts for Convective Parameterizations in Large-Scale Models IV: Convective organisation, 23-25 March, Cambridge, UK.

[148] R. S. Plant. A modelling framework for statistical cumulus dynamics, 2011. Talk at: Workshop on Hamiltonian Approaches and Statistical Mechanics in Convection Parameterisation, 2-5 May, Ludwig Maximilian University, Munich, Germany.

[149] R. S. Plant. Novel parameterisations in the boundary layer, 2011. Talk at: NCAS Workshop on the Boundary Layer, 1 July, Exeter, UK.

[150] R. S. Plant. Stochastic parameterization: uncertainties from convection, 2011. ECMWF Workshop on Representing model uncertainty and error in numerical weather and climate prediction models, Reading, UK, 20-24 June 2011.

[151] S. E. Belcher, I. A. Boutle, R. J. Beare, A. R. Brown, and R. S. Plant. Synoptic controls on moist boundary layer structure, 2010. Talk at: 19th Symposium on Boundary Layers and Turbulence, 2-6th August, Keystone, Colorado, USA.

[152] A. Illingworth, J. Nicol, K. Bartholomew, R. Plant, G. Leoncini, S. Gray, D. Livings, R. Moore, S. Cole, and A. Robson. Enhancing storm and flood forecasting using radar, data assimilation and ensemble numerical weather prediction models, 2010. Talk at: Flood Risk from Extreme Events, Royal Meteorological Sociey National Meeting, 20th October 2010, Imperial College, London UK.

[153] R. J. Keane, R. S. Plant, N. E. Bowler, and W. J. Tennant. Development of a stochastic convection scheme, 2010. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[154] R. J. Keane, R. S. Plant, N. E. Bowler, and W. J. Tennant. Development of a stochastic convection scheme, 2010. Talk at: April, Ludwig-Maximilians-Universitat, Munich.

[155] R. S. Plant. Boundary layer controls on extratropical cyclone development, 2010. Talk at: Met, Ocean and Climate Seminar Series, 28th May, School of Environmental Sciences, University of East Anglia.

[156] R. S. Plant. Issues with convection. What is a useful framework beyond bulk models of large N, non-interacting, scale-separated, equilibrium systems?, 2010. Talk at: Workshop on Stochastic Methods in Climate Modelling, 23-27 August, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.

[157] R. S. Plant. Self-organized criticality in tropical convection?, 2010. Talk at: Climate Thermodynamics workshop, 21-22nd April, University of Reading, UK.

[158] R. S. Plant and M. A. Whitall. Stochastic parameterization: is sophistication useful?, 2010. Talk at: European Geosciences Union General Assembly, 2-7 May, Vienna, Austria.

[159] I. A. Boutle, S. E. Belcher, R. S. Plant, R. J. Beare, and A. R. Brown. Boundary layer dynamics in extra-tropical cyclones, 2009. Talk at: Applied Mathematics Seminar, 8 June, University of Exeter.

[160] I. A. Boutle, R. S. Plant, S. E. Belcher, R. J. Beare, and A. R. Brown. Moisture transport in baroclinic waves, 2009. Talk at: European Geosciences Union General Assembly, 19-24 April, Vienna, Austria.

[161] R. J. Keane and R. S. Plant. 3D experiments with a stochastic convective parameterisation scheme, 2009. Talk at: 9th European Conference on Applications of Meteorology, 28 September-2 October, Toulouse, France.

[162] R. J. Keane and R. S. Plant. 3D experiments with a stochastic convective parameterisation scheme, 2009. Talk at: 4th SRNWP Workshop on Short-range Ensemble Prediction Systems, 23-25 June, Met Office, Exeter, UK.

[163] G. Leoncini, R. S. Plant, and S. L. Gray. Convective scale NWP, 2009. Talk at: NERC FREE Workshop on Ensembles, 23-24 September 2009, Reading, UK.

[164] G. Leoncini, R. S. Plant, S. L. Gray, and P. Clark. Error growth at the convective scale, 2009. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[165] G. Leoncini, R. S. Plant, S. L. Gray, and P. A. Clark. Contrasting convective-scale perturbation growth in two cases over the UK, 2009. Talk at: 9th European Conference on Applications of Meteorology, 28 September-2 October, Toulouse, France.

[166] G. Leoncini, R. S. Plant, S. L. Gray, and P. A. Clark. Error growth at the convective scale, 2009. Talk at: 4th SRNWP Workshop on Short-range Ensemble Prediction Systems, 23-25 June, Met Office, Exeter, UK.

[167] T. I. Ngwana, M.-E. Demory, P.-L. Vidale, R. S. Plant, and M. P. Mbedzi. Impact of land cover changes on the South African climate, 2009. International Conference on Planetary Boundary Layer and Climate Change, Cape Town, South Africa, 26-28 October.

[168] R. S. Plant. Convective cloud lifecycles, 2009. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[169] R. S. Plant. Deep convective parameterization: Some issues (and some solutions?), 2009. Talk at: Centre for Atmospheric Science Seminar, 23rd February, Department of Chemistry, University of Cambridge.

[170] R. S. Plant. What (if any) constraints are desirable on near grid-scale noise?, 2009. Talk at: Mathematical Challenges in Climate Science workshop, 9-13th March, Lorentz Centre, Leiden, Netherlands.

[171] V. A. Sinclair, S. L. Gray, I. A. Boutle, R. S. Plant, and S. E. Belcher. Boundary layer ventilation by weather systems, 2009. Talk at: Symposium on Air Pollution, 9th July, Reading, UK.

[172] S. E. Belcher, I. A. Boutle, R. S. Plant, and R. J. Beare. The role of boundary layer processes in mid-latitude cyclones, 2008. Talk at: 18th Symposium on Boundary Layers and Turbulence, 9-13th June, Stockholm, Sweden.

[173] R. S. Plant. Theory of moist convection in statistical equilibrium, by analogy with Maxwell-Boltzmann statistics, 2008. Talk at: Workshop on Concepts for Convective Parmeterisations in Large-Scale Models, 12-14 February, MPI Hamburg, Germany.

[174] R. S. Plant and L. Davies. Limitations of equilibrium. Or: What if $\tau_{\mathrm{LS}} \not\gg \tau_{\mathrm{adj}}$?, 2008. Talk at: Workshop on Concepts for Convective Parmeterisations in Large-Scale Models, 12-14 February, MPI Hamburg, Germany.

[175] S. E. Belcher, R. J. Beare, I. A. Boutle, B. J. Hoskins, and R. S. Plant. Role of boundary layer processes in mid-latitude cyclones, 2007. Talk at: 15th Conference on Air-Sea Interaction, 20-24th August, Portland, Oregon, USA.

[176] I. A. Boutle, R. S. Plant, S. E. Belcher, R. J. Beare, and A. R. Brown. Friction in mid-latitude cyclones, 2007. Talk at: RMetS Student Assembly, 1-3rd September, Edinburgh, UK.

[177] L. Davies, R. S. Plant, and S. E. Derbsyhire. Investigating the equilibrium assumption between convection and the forcing, 2007. Talk at: RMetS Conference, 3-6th September, Edinburgh, UK.

[178] L. Davies, R. S. Plant, and S. E. Derbsyhire. What's quasi-equilibrium all about?, 2007. Talk at: Atmosphere-Ocean Convection in Climate Dynamics, Alpine Summer School Course XV, 18-27th June, Valsavarenche, Italy.

[179] A. Illingworth, S. Dance, R. Plant, S. Gray, S. Rennie, J. Nicol, G. Leoncini, K. Bartholomew, R. Moore, S. Cole, S. Ballard, and P. Clark. Overview of FREE project entitled: Exploitation of new data sources, data assimilation and ensemble techniques for storm and flood forecasting, 2007. Talk at: First FREE Science Meeting, 14-15 November 2007, Salford, UK.

[180] G. Leoncini, R. Plant, and S. Gray. Cloud ensemble simulations: Plans and preliminary results, 2007. Talk at: First FREE Science Meeting, 14-15 November 2007, Salford, UK.

[181] R. S. Plant. Cloud tracking in cloud-resolving models, 2007. Talk at: RMetS Conference, 3-6th September, Edinburgh, UK.

[182] S. E. Belcher, D. S. Adamson, B. J Hoskins, and R. S. Plant. The role of boundary layer friction in mid latitude weather systems, 2006. Talk at: DAMTP, Cambridge, UK.

[183] R. S. Plant. Lagrangian diagnostics, 2006. Talk at: UWERN Mesoscale Modelling Workshop, Reading, UK.

[184] R. S. Plant, G. C. Craig, and C. Keil. A stochastic parameterization for deep convection, 2006. Talk at: European Geosciences Union General Assembly, 2-7 April, Vienna, Austria.

[185] S. E. Belcher, D. S. Adamson, B. J Hoskins, and R. S. Plant. Friction in mid-latitude cyclones: More than Ekman pumping, 2005. Talk at: Met Office seminar, Exeter, UK.

[186] G. C. Craig, B. G. Cohen, and R. S. Plant. Statistical mechanics and stochastic convective parameterisation, 2005. ECMWF Workshop on Representation of Sub-grid Processes using Stochastic–Dynamic Models, Reading, UK, 6-8 June 2005.

[187] R. S. Plant and G. C. Craig. Stochastic representation of convection, 2005. Talk at: Royal Meteorological Society Dynamical Problems Group. Statistical/stochastic approaches to atmospheric physics, 9th June, Reading, UK. (Also presented as seminar at DLR-Institut fuer Physik der Atmosphaere, Germany).

[188] R. S. Plant, G. C. Craig, and C. Keil. Towards an ensemble system with a stochastic convection scheme, 2005. Talk at: RMetS Conference, 11-16th September, Exeter, UK.

[189] G. C. Craig, R. S. Plant, and B. G. Cohen. Stochastic cumulus parameterisation(?), 2004. Talk at: NCAS/Met Office Workshop on Convection, 6-8th January, Farnham Castle, UK.

[190] R. S. Plant and G. J. Keith. Occurence of Kelvin-Helmholtz billows in sea breezes, 2004. Talk at: UWERN Conference, 13-15th December, Salford, UK.

[191] G. C. Craig, B. G. Cohen, and R. S. Plant. Towards a stochastic convection scheme, 2003. Talk at: ECMWF seminar, Reading, UK.

[192] R. S. Plant. Mesoscale applications for microscale model?, 2003. Talk at: 2nd Microscale Model Meeting, Leeds, UK.

[193] R. S. Plant. PV generation in the boundary layer, 2003. Talk at: Departmental seminar, Department of Meteorology, University of Reading.

[194] R. S. Plant. Stochastic aspects of convection, 2003. Talk at: CSIP Planning Meeting, 14-15th October, Reading, UK.

[195] R. S. Plant and S. E. Belcher. Towards understanding the role of the boundary layer in cyclones: Beyond Ekman spindown, 2003. Talk at: EGS-AGU-EUG Joint Assembly, 7-11th April, Nice, France.

[196] R. S. Plant. Frictional damping of cyclones, 2002. Talk at: JCMM seminar, University of Reading.

[197] R. S. Plant and S. E. Belcher. Identifying the origins of PV anomalies, 2002. Talk at: UWERN Conference, 9-11th September, Colchester, UK.

[198] R. S. Plant, G. C. Craig, and S. L. Gray. A threefold classification of extratropical cyclogenesis, 2002. European Geographical Society XXVII General Assembly, 21-26th April, Nice, France.

[199] R. S. Plant and M. C. Birse. The $\pi^0\gamma\gamma^*$ form factor, 1997. Talk at: Particle Physics and the Early Universe Conference, 7-11th April, Cambridge, UK.

Conferences/Workshops: Posters

[1] Z. Zhang, H. C. Christensen, M. R. Muetzelfeldt, T. Woollings, R. S. Plant, A. J. Stirling, M. A. W. Whitall, M. Moncrieff, and C.-C. Chen. Improving and assessing organized convection parameterization in the unified model, 2024. Talk at: EGU General Assembly 2024, 14-19 April, Vienna.

[2] M. R. Muetzelfeldt, R. S. Plant, Z. Zhang, T. Woollings, and H. C. Christensen. MCS:PRIME. environmental precursors to Mesoscale Convective Systems, 2023. Poster at: 20th AMS Conference on Mesoscale Processes, 17-21 July, Madison, WI.

[3] A. Power, R. S. Plant, P. A. Clark, G. A. Efstathiou, and T. R. Jones. Mixing length scales in a shallow cumulus boundary layer simulation, 2023. Poster at: 24th Symposium on Boundary Layers and Turbulence, AMS Annual Meeting, 8-12 January, Denver, USA.

[4] Z. Zhang, M. R. Muetzelfeldt, H. C. Christensen, T. Woollings, R. S. Plant, A. J. Stirling, M. A. W. Whitall, and M. Moncrieff. Implementation of organized convection parameterization in the Met Office Unified Model, 2023. Poster at: 20th AMS Conference on Mesoscale Processes, 17-21 July, Madison, WI.

[5] P. A. Clark, R. S. Plant, D. L. A. Flack, C. Halliwell, S. L. Gray, N. M. Roberts, and H. W. Lean. Evaluation of a physically-based stochastic boundary-layer perturbation scheme using a super-ensemble, 2022. Poster at: ECMWF Workshop on Model Uncertainty, Reading, UK, 9-12 May 2022.

[6] C. L. Daleu, R. S. Plant, A. J. Stirling, and M. A. W. Whitall. Evaluating the comorph parameterization using idealised simulations of the two-way coupling between convection and large-scale dynamics, 2022. Poster at: 6th WGNE workshop on systematic errors in weather and climate models, ECMWF, Reading, 31 October - 4 November.

[7] J.-F. Gu, R. S. Plant, C. E. Holloway, and M. R. Muetzelfeldt. Pressure drag for shallow cumulus clouds: From thermals to the cloud ensemble, 2022. Poster at: 35th Conference on Hurricanes and Tropical Meteorology, 9-13, New Orleans, LA, USA.

[8] J.-F. Gu, R. S. Plant, C. E. Hollway, and P. A. Clark. Moist halo region around shallow cumulus clouds in large eddy simulations, 2022. Poster at: 6th WGNE workshop on systematic errors in weather and climate models, ECMWF, Reading, 31 October - 4 November.

[9] J.-F. Gu, R. S. Plant, C. E. Hollway, and M. R. Muetzelfeldt. Pressure drag for shallow cumulus clouds – from thermals to the cloud ensemble, 2022. Poster at: 6th WGNE workshop on systematic errors in weather and climate models, ECMWF, Reading, 31 October - 4 November.

[10] R. S. Plant, C. L. Daleu, M. A. W. Whitall, A. J. Stirling, and S. Lavender. Tests of the closure for the comorph cumulus parameterization, 2022. Poster at: 6th WGNE workshop on systematic errors in weather and climate models, ECMWF, Reading, 31 October - 4 November.

[11] S. Hagos, J. Chen, K. Barber, K. Sakaguchi, Z. Feng, H. Xiao, and R. S. Plant. A machine learning assisted cloud population model as a parameterization of cumulus convection, 2020. Poster at: AGU Fall Meeting, 1-17 December, Online Event.

[12] S. Hagos, Z. Feng, R. S. Plant, and A. Protat. A machine learning assisted development of a model for the populations of convective and stratiform clouds, 2020. Poster at: MOAP Machine Learning for Nowcasting Workshop 9-11 September, Met Office, Exeter.

[13] J.-F. Gu, R. S. Plant, C. E. Holloway, and T. R. Jones. A composite study of cloud structure and its implication for the parameterization of vertical fluxes, 2019. Poster at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[14] J.-F. Gu, R. S. Plant, C. E. Holloway, T. R. Jones, A. Stirling, P. A. Clark, and S. J. Woolnough. A core-cloak representation of convection, 2019. Poster at: UCP2019 Understanding Clouds and Precipitation, Berlin, 25 February - 1 March.

[15] S. Hagos, Z. Feng, R. S. Plant, and A. Protat. A machine learning assisted development of a model for the population dynamics of clouds, 2019. Poster at: 2019 Joint ARM User Facility and ASR PI Meeting, 10-13 June, Rockville, Maryland, USA.

[16] N. Harvey, C. L. Daleu, S. J. Woolnough, and R. S. Plant. Understanding the impact of surface heterogeneity on the diurnal cycle of deep convection, 2019. Poster at: Convection Parametrization: Progress and Challenges 2019, 15–19 July, Met Office, Exeter.

[17] C. E. Holloway, J.-F. Gu, W. A. Mcintyre, T. Webb, R. S. Plant, P. A. Clark, H. Weller, S. J. Woolnough, A. Stirling, H. W. Lean, C. C. Chui, C. L. Daleu, C. Halliwell, K. E. Hanley, N. Harvey, M. Johnston, T. R. Jones, M. R. Muetzelfeldt, A. Osprey, and D. Shipley. ParaCon at Reading: New approaches for modelling convection, 2019. Poster at: UCP2019 Understanding Clouds and Precipitation, Berlin, 25 February - 1 March.

[18] M. Johnston, C. E. Holloway, and R. S. Plant. Large-eddy resolution simulation of organised convection on a small island, 2019. Poster at: EGU General Assembly, 7–12 April 2019, Vienna, Austria.

[19] M. R. Muetzelfeldt, R. S. Plant, P. A. Clark, S. J. Woolnough, and A. Stirling. Using a cloud-resolving model to diagnose the effects of different wind shear profiles on deep convective

cloud fields, 2019. Poster at: UCP2019 Understanding Clouds and Precipitation, Berlin, 25 February - 1 March.

[20] R. S. Plant and G. Efstathiou. A dynamic extension of the pragmatic blending scheme for sub-grid mixing across the scales, 2019. Poster at: EGU General Assembly, 7–12 April 2019, Vienna, Austria.

[21] S. Song, Y.-L. Hwong, S. C Sherwood, A. Stirling, C. Rio, R. Roehrig, C. L. Daleu, and R. S. Plant. Characterising convective schemes by their linearised responses, 2019. Poster at: AGU Fall Meeting, 9-13 December, San Fransisco, USA.

[22] L. P. Blunn, D. Galea, O. Coceal, R. S. Plant, J. F. Barlow, S. Bohnenstengel, and H. W. Lean. Modelling passive scalar dispersion within and above an urban canopy, 2018. Talk at: 3rd Annual UK Fluids Conference, 4-6 September, University of Manchester.

[23] C. C. Chui, P. A. Clark, and R. S. Plant. A stochastic and prognostic convective parameterisation scheme for the "grey-zone", 2018. Poster at: EGU General Assembly, 8–13 April 2018, Vienna, Austria.

[24] S. Hagos, Z. Feng, R. S. Plant, R. A. Houze Jr, and A. Protat. A stochastic framework for modeling the population dynamics of convective clouds, 2018. Poster at: 2018 ARM/ASR PI Meeting, 19-23 March, Vienna, Virginia, USA.

[25] M. Johnston, C. E. Holloway, and R. S. Plant. Environments that support organised shallow island convection, 2018. Poster at: EMS Annual Meeting, 3-7 September, Corvinus University of Budapest, Hungary.

[26] M. Muetzelfeldt, R. S. Plant, P. A. Clark, S. J. Woolnough, and A. Stirling. Clustering wind profiles to identify shear conditions in climate models, 2018. Poster at: Met Office Academic Partnership Meeting, 15-16 February 2018, Exeter.

[27] M. Muetzelfeldt, R. S. Plant, P. A. Clark, S. J. Woolnough, and A. Stirling. Effects of wind shear on cloud field organization, 2018. Poster at: EGU General Assembly, 8–13 April 2018, Vienna, Austria.

[28] W. N. S. Rupasinghe, T. R. Jones, and R. S. Plant. Do the properties of convective clouds converge at high resolution?, 2018. Poster at: RMetS Students & Early Career Scientist Conference, Evolution of Science: Past, Present and Future, 5-6 July, University of York.

[29] L. P. Blunn, O. Coceal, R. S. Plant, J. F. Barlow, S. Bohnenstengel, and H. W. Lean. Modelling the impact of meteorological conditions affecting urban air quality, 2017. Poster at: RMetS Student Conference, 11-12 July, Met Office, Exeter, UK. Also presented at: NCAS Staff Conference, 6-7 February 2018, Manchester, UK.

[30] C. C. Chui, P. A. Clark, and R. S. Plant. A convection parametrisation scheme for the grey-zone, 2017. Poster at: Met Office Academic Partnership Meeting, 22-23 February 2017, Exeter.

[31] C. C. Chui, P. A. Clark, and R. S. Plant. A convective parametrisation scheme with a prognostic vertical plume growth for the grey zone, 2017. Poster at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands. Also presented at: Shedding light on the greyzone, ECMWF Workshop, 13-16 November, ECMWF, Reading.

[32] C. L. Daleu, S. J. Woolnough, and R. S. Plant. Using the weak temperature gradient approximation to develop and evaluate convective parametrization schemes, 2017. Poster at: 5th WGNE workshop on systematic errors in weather and climate models, Montreal, Canada, 19-23 June, 2017.

[33] G. Efstathiou and R. S. Plant. Dynamic sub-grid modelling of shallow cumulus convection, 2017. Poster at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands.

[34] D. L. A. Flack, S. L. Gray, R. S. Plant, H. W. Lean, and G. C. Craig. Convective-scale practical predictability within different convective regimes, 2017. Poster at: 17th AMS Conference on Mesoscale Processes, 23-27 July, San Diego.

[35] M. Johnston, C. E. Holloway, and R. S. Plant. Satellite observations of Bermuda's island–induced clouds, 2017. Poster at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands.

[36] J. Kamieniecki, M. H. P. Ambaum, R. S. Plant, and S. J. Woolnough. Thermodynamic work done in a WTG-coupled two column model diagnosed using energy cycles, 2017. Poster at: EGU General Assembly, 23–28 April 2017, Vienna, Austria.

[37] R. J. Keane, R. S. Plant, and W. J. Tennant. Evaluation of the Plant-Craig stochastic convection parameterisation in MOGREPS, 2017. 5th WGNE workshop on systematic errors in weather and climate models, Montreal, Canada, 19-23 June, 2017.

[38] M. Muetzelfeldt, R. S. Plant, P. A. Clark, and A. Stirling. Effects of shear on cloud field organization, 2017. Poster at: Met Office Academic Partnership Meeting, 22-23 February 2017, Exeter.

[39] M. R. Muetzelfeldt, R. S. Plant, P. A. Clark, S. J. Woolnough, and A. Stirling. Effects of vertical shear on cloud field organization and variability, 2017. Poster at: The Future of Cumulus Parametrization, 10-14 July 2017, TU Delft, Netherlands.

[40] T. H. M. Stein, R. J. Hogan, P. A. Clark, C. Halliwell, K. E. Hanley, H. W. Lean, N. Marsden, J. Nicol, R. S. Plant, and R. Scovell. The DYMECS project: Evaluating convective storms in NWP models, 2017. Poster at: CFMIP Meeting on Clouds, Precipitation, Circulation, and Climate Sensitivity, 25-28 September, University of Tokyo, Japan.

[41] M.-J. Bopape, O. Coceal, and R. S. Plant. A comparison of LES sub-grid turbulence models at different grid resolutions in a convective BL, 2016. Poster at: RMetS NCAS Conference, 6-8 July 2016, Manchester.

[42] A. Deluca Silberberg, R. S. Plant, C. E. Holloway, and H. Kantz. Understanding the transition to strong convection in realistic and idealised cloud-resolving simulations of different aggregation scenarios, 2016. Poster at: Understanding Clouds and Precipitation Conference, HD(CP)2, 15–19 February, Berlin.

[43] D. Flack, G. C. Craig, S. L. Gray, H. W. Lean, and R. S. Plant. Perturbation growth structure in different convective regimes, 2016. Poster at: RMetS NCAS Conference, 6-8 July 2016, Manchestera.

[44] D. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Model physics perturbation growth within different convective regimes, 2016. Poster at: EGU General Assembly, 18–22 April 2016, Vienna, Austria.

[45] D. Flack, R. S. Plant, S. L. Gray, H. W. Lean, C. Keil, and G. C. Craig. Characterisation of convective regimes over the British Isles, 2016. Poster at: EGU General Assembly, 18–22 April 2016, Vienna, Austria.

[46] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, C. Keil, and G. C. Craig. Characterisation of convective regimes over the British Isles, 2016. Poster at: Met Office Academic Partnership Meeting, March 2016, Exeter.

[47] R. S. Plant, S. R. A. Dey, N. M. Roberts, and S. Migliorini. Assessing spatial precipitation uncertainties in a convective-scale ensemble, 2016. Poster at: ECMWF/WWRP Workshop on Model Uncertainty, Reading, UK, 11-15 April 2016. Also presented at: RMetS NCAS Conference, 6-8 July 2016, Manchester.

[48] N. M. Roberts, S. R. A. Dey, G. Leoncini, and R. S. Plant. The spatial behaviour and use of a convection–permitting ensemble, 2016. ECMWF/WWRP Workshop on Model Uncertainty, Reading, UK, 11-15 April 2016.

[49] J.-I. Yano and R. S. Plant. Generalized convective quasi-equilibrium closure, 2016. Poster at: EGU General Assembly, 18–22 April 2016, Vienna, Austria.

[50] C. L. Daleu, R. S. Plant, S. J. Woolnough, A. Sobel, S. Wang, S. Sessions, M. Herman, G. Bellon, F. Ferry, P. Peyrille, A. Cheng, P. Siebesma, B. Van Ulft, and D. Kim. Intercomparison of methods of coupling between convection and large-scale circulation, 2015. Talk at: Monsoons and ITCZ: The annual cycle in the Holocene and the future, Conference and Workshop, 15–19 September, Columbia University, New York, USA.

[51] A. Deluca, R. S. Plant, C. E. Holloway, and H. Kantz. Understanding the transition to strong convection in realistic and idealised cloud-resolving simulations of different aggregation scenarios, 2015. Poster at: AGU Fall Meeting, 14-18 December, San Fransisco, USA.

[52] M.-J. M. Bopape, R. S. Plant, and O. Coceal. Resolution dependence of the temperature flux in the convective boundary layer, 2014. Poster at: CHPC National Meeting, Kruger National Park, Mpumalanga, South Africa, 1–5 December.

[53] C. L. Daleu, S. J. Woolnough, and R. S. Plant. Intercomparison of methods of coupling between small scale and large-scale processes in the tropics, 2014. Poster at: 7th International Scientific Conference on the Global Energy and Water Cycle, 14-17 July, The Hague, Netherlands.

[54] C. L. Daleu, S. J. Woolnough, and R. S. Plant. Transition from suppressed to active convection modulated by a weak-temperature gradient derived large-scale circulation, 2014. Poster at: 7th International Scientific Conference on the Global Energy and Water Cycle, 14-17 July, The Hague, Netherlands.

[55] S. Dey, R. S. Plant, N. M. Roberts, and S. Migliorini. High resolution ensemble analysis: linking correlations and spread to physical processes, 2014. Poster at: Met Office Academic Partnership Poster Conference, 21 February, Exeter, UK.

[56] S. R. A. Dey, R. S. Plant, N. M. Roberts, and S. Migliorini. Summer convective storms: Spatial analysis of numerical weather forecasts, 2014. Poster at: SEPnet Graduate Network Summer School, 9–12 June 2014, National Physical Laboratory, UK.

[57] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Environmental controls on convective-scale error growth, 2014. Flooding from Intense Rainfall Programme Integration Meeting, Reading, UK, 27 June 2014.

[58] D. L. A. Flack, R. S. Plant, S. L. Gray, H. W. Lean, and G. C. Craig. Improving short–range weather forecasts: When do fine–scale observations matter?, 2014. ECMWF Training Course on Predictability and Ocean–Atmosphere Ensemble Forecasting, Reading, UK, 7-16 May 2014.

[59] R. J. Hogan, K. E. Hanley, T. H. M. Stein, H. W. Lean, R. S. Plant, J. Nicol, P. Clark, and C. Halliwell. The role of sub-grid mixing on the scale and evolution of convective storms in high resolution simulations, 2014. Poster at: 14th Conference on Cloud Physics, Boston, USA, 7-11 July.

[60] O. Martinez-Alvarado and R. S. Plant. Interaction of diabatic processes in numerical simulations of extratropical cyclones, 2014. Poster at: EGU General Assembly, 27 April – 2 May 2014, Vienna, Austria.

[61] T. Stein, R. J. Hogan, K. E. Hanley, J. Nicol, R. S. Plant, H. W. Lean, P. A. Clark, and Carol Halliwell. The DYMECS project: The Dynamical and Microphysical Evolution of Convective Storms, 2014. Poster at: EGU General Assembly, 27 April – 2 May 2014, Vienna, Austria.

[62] R. A. Warren, R. S. Plant, H. W. Lean, D. J. Kirshbaum, and P. A. Clark. Idealised numerical simulations of peninsula sea breezes, 2014. Poster at: Met Office Academic Partnership Poster Conference, 21 February, Exeter, UK.

[63] R. A. Warren, R. S. Plant, H. W. Lean, D. J. Kirshbaum, and P. A. Clark. Sea breezes in along-shore flow: Idealised simulations and scaling, 2014. Poster at: ARC Centre of Excellence for Climate System Science Annual Workshop, 24–27 November, Pokolbin, Australia.

[64] O. Coceal and R. S. Plant. Evaluation of a tensor eddy-diffusivity model for the terra incognita using DNS data, 2013. Poster at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading. Also shown at: NCAS Annual Meeting, 16-17 July 2013, Birmingham.

[65] O. Martinez-Alvarado, L. H. Baker, S. L. Gray, J. Methven, and R. S. Plant. Multiple mesoscale airstreams within regions of strong winds in extratropical cyclone Friedhelm, 2013. Poster at: 13th EMS Annual Meeting and 11th European Conference on Applications of Meteorology, 9-13 September, Reading.

[66] T. Stein, R. J. Hogan, E. Carter, C. Halliwell, K. E. Hanley, H. Lean, J. Nicol, and R. S. Plant. High-resolution model evaluation of convective storm evolution using precipitation radar data, 2013. Poster at: 7th European Conference on Severe Storms, 3-7 June, Helsinki, Finland.

[67] T. Stein, R. J. Hogan, C. Halliwell, K. E. Hanley, H. W. Lean, J. Nicol, and R. S. Plant. The three-dimensional microphysical and dynamical structure of convective storms, 2013. Poster at: European Geosciences Union General Assembly, 7-12 April, Vienna, Austria.

[68] R. A. Warren, D. J. Kirshbaum, R. S. Plant, and H. W. Lean. A 'Boscastle-type' quasi-stationary convective system over the UK southwest peninsula, 2013. Poster at: European Geosciences Union General Assembly, 7-12 April, Vienna, Austria.

[69] R. A. Warren, R. S. Plant, H. W. Lean, and D. J. Kirshbaum. A climatology of heavy-rain-producing convective systems in the UK, 2013. Poster at: 15th AMS Conference on Mesoscale Processes, 6-9 August, Portland, Oregon, USA.

[70] C. L. Daleu, R. S. Plant, and S. J. Woolnough. Cloud-resolving model simulations with one and two-way couplings via the weak-temperature gradient approximation, 2012. Poster at: 1st Pan-GASS Meeting: Advances in the Modelling of Atmospheric Physical Processes, 10-14 September, Boulder, Colarado, USA. Also presented at NCAS Annual Meeting, 16-17 July 2013, Birmingham.

[71] K. E. Hanley, R. S. Plant, T. Stein, R. Hogan, J. Nicol, E. Carter, and H. W. Lean. Statistical analyses of convective updraughts using radar scans and model data, 2012. Poster at: 26th Conference on Severe Local Storms, 5–8 November, Nashville, USA.

[72] O. Martinez-Alvarado, J. Chagnon, R. S. Plant, and S. L. Gray. Lagrangian diagnostics for analysing budgets of heat, moisture, and potential vorticity in extratropical cyclones, 2012. Poster at: NERC Research Programmes Changing Water Cycle and Storm Risk Mitigation, Combined Integration Workshop and Joint Annual Meeting, 1–2 May 2012, Oxford, UK.

[73] O. Martinez-Alvarado and R. S. Plant. Diabatic processes in numerical simulations of extratropical cyclones, 2012. Poster at: AGU Fall Meeting, 3–7 December 2012, San Fransisco, USA.

[74] O. Martinez-Alvarado and R. S. Plant. New diagnostics for analysing diabatic processes in extratropical cyclones, 2012. Poster at: 2nd European Windstorms Workshop, 3–5 September 2012, Leeds, UK.

[75] D. J. McNamara, R. S. Plant, and S. E. Belcher. Boundary layer ventilation in mid-latitude cyclones, 2012. Poster at: Met Office Poster Conference, 24 February, Exeter, UK.

[76] R. A. Warren, R. S. Plant, H. W. Lean, and D. J. Kirshbaum. Quasi-stationary convective storms in the UK: A case study, 2012. Poster at: Met Office Poster Conference, 24 February, Exeter, UK.

[77] J.-I. Yano and R. S. Plant. A simple model for a discharge-recharge cycle of a convective system: Finite departure from convective quasi-equilibrium and periodic cycle, 2012. Poster at: European Geosciences Union General Assembly, 22-27 April, Vienna, Austria.

[78] C. L. Daleu, R. S. Plant, and S. J. Woolnough. Modelling the interactions between tropical convection and large-scale dynamics, 2011. Poster at: RMetS Conference, 27-30 June, Exeter, UK. Also presented at: RMetS Student Conference, 30 June - 2 July, Exeter, UK.

[79] R. S. Plant, G. Leoncini, and S. L. Gray. Comparing model-state and model-physics ensembles for high-resolution NWP simulation of the Boscastle flood, 2010. Poster at: Flood Risk from Extreme Events, Royal Meteorological Sociey National Meeting, 20th October 2010, Imperial College, London UK.

[80] M. A. Whitall and R. S. Plant. Sensitivity of the tropical atmosphere to the high-frequency variability associated with convection, 2010. Poster at: European Geosciences Union General Assembly, 2-7 May, Vienna, Austria.

[81] M. A. Whitall and R. S. Plant. Using stochastic parameterisations to study the sensitivity of the global atmosphere to variability in unresolved processes, 2010. Poster at: European Geosciences Union General Assembly, 2-7 May, Vienna, Austria. Also presented by RSP at: Workshop on Stochastic Methods in Climate Modelling, 23-27 August, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.

[82] I. A. Boutle, R. J. Beare, S. E. Belcher, A. R. Brown, and R. S. Plant. Moisture transport in cyclone waves, 2009. Poster at: RMetS Conference, 29 June-2 July, Reading, UK.

[83] R. J. Keane and R. S. Plant. 3D experiments with a stochastic convective parameterisation scheme, 2009. Poster at: RMetS Conference, 29 June-2 July, Reading, UK.

[84] G. Leoncini, R. S. Plant, and S. L. Gray. Error growth at the convective scale, 2009. Poster at: RMetS Conference, 29 June-2 July, Reading, UK.

[85] G. Leoncini, R. S. Plant, S. L. Gray, and P. A. Clark. Perturbation growth at the convective scale, 2009. Poster at: European Geosciences Union General Assembly, 19-24 April, Vienna, Austria.

[86] M. A. W. Whitall and R. S. Plant. Sensitivity of the global atmosphere to fast, small-scale variability in moist physical processes, 2009. Poster at: RMetS Conference, 29 June-2 July, Reading, UK.

[87] I. Boutle, S. Belcher, R. Plant, R. Beare, and A. Brown. Boundary layer processes in mid-latitude cyclones, 2008. Poster at: Atmospheric Boundary Layers: Concepts, Observations, and Numerical Simulations, 17-27 June 2008, Les Houches, France.

[88] I. Boutle, S. Belcher, R. Plant, R. Beare, and A. Brown. Boundary layer processes in mid-latitude cyclones, 2008. Poster at: RMetS National Meeting on Extratropical Weather Systems: From the Dynamics of Individual Storms to Stormtrack Behaviour, 16th January 2008, Reading, UK.

[89] G. Leoncini, R. S. Plant, and S. L. Gray. Error growth at the convective scale, 2008. Poster at: Second FREE Science Meeting, 12-13 November 2008, Reading, UK.

[90] L. Davies, R. S. Plant, and S. E. Derbyshire. Limitations of the equilibrium assumption between convection and the forcing, 2007. Poster at: European Geosciences Union General Assembly, 15-20 April, Vienna, Austria.

[91] R. S. Plant. Cloud tracking in cloud resolving models, 2007. Poster at: 4th European Conference on Severe Storms, 10-14th September, ICTP, Miramere, Trieste, Italy.

[92] G. C. Craig, C. Keil, and R. Plant. Tests of a physically-based stochastic convection scheme in a mesoscale ensemble, 2006. Poster at: Second THORPEX International Science Symposium, 4-8 December, Landshut, Germany.

[93] L. Davies, R. S. Plant, and S. E. Derbyshire. Investigating the effect of memory on a convective system, 2006. Poster at: European Geosciences Union General Assembly, 2-7 April, Vienna, Austria.

[94] L. Davies, R. S. Plant, and S. E. Derbyshire. What time scales throw convection out of equilibrium?, 2005. Poster at: RMetS Conference, 11-16th September, Exeter, UK.

[95] R. S. Plant and G. C. Craig. Stochastic convective parameterization with multiple plumes, 2004. Poster at: 14th International Conference on Clouds and Precipitation, 18-23 July 2004, Bologna, Italy.

[96] G. C. Craig and R. S. Plant. A stochastic cumulus parameterisation: Design and single column tests, 2003. Poster at: 5th International SRNWP Workshop on Non-hydrostatic Modelling, 27-29th October, Bad Orb, Germany.

[97] R. S. Plant and G. C. Craig. Building a stochastic convection scheme, 2003. Poster at: RMetS 3rd National Conference, 1-5th September, UEA, Norwich, UK.

[98] R. S. Plant, D. S. Adamson, and S. E. Belcher. Barotropic and baroclinic frictional damping of cyclone development, 2002. Poster at: European Geographical Society XXVII General Assembly, 21-26th April, Nice, France.

[99] R. S. Plant and B. W. Atkinson. Influences of coastal mesoscale processes on radar propagation, 2001. Poster at: RMetS 2nd National Conference, 12-14th September, UMIST, Manchester, UK.

[100] R. S. Plant. Structure of light mesons, 1996. Poster at: Department of Physics and Astronomy, University of Manchester.

Thesis

[1] R. S. Plant. *Meson Properties in an Extended Nonlocal NJL Model*. PhD thesis, University of Manchester, 1998. 216pp.