CURRICULUM VITAE

GRAHAM FEINGOLD

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Education:

1986 – 1989:	Ph.D – Geophysics (*summa cum laude*), Department of Geophysics and Planetary Sciences, Tel Aviv University. Thesis: On the evolution of raindrop spectra and their effect on the atmosphere below cloud base: numerical models and comparisons with observations. Advisor: Prof. Zev Levin.
1983 – 1985:	M.Sc – Geophysics (*summa cum laude*), Department of Geophysics and Planetary Sciences, Tel Aviv University. Thesis: The size distribution of raindrops in Israel: application to rainfall processes and radar measurements. Advisor: Prof. Zev Levin.
1980 – 1982:	B.Sc – Geophysics and Atmospheric Sciences, Department of Geophysics and Atmospheric Sciences, Tel Aviv University.
1978:	B.Sc – Mechanical Engineering (1st year), Faculty of Engineering, University of the Witwatersrand, Johannesburg, South Africa.

Research Experience:

2005 – Present:	Physicist, Chemical Sciences Division, NOAA Earth System Research Laboratory, Boulder, Colorado.
2000 – 2005:	Physicist, Optical Remote Sensing Division, NOAA Environmental Technology Laboratory,

	Boulder, Colorado.
2000 – 2003:	Affiliate Faculty, Department of Atmospheric Science, Colorado State University, Fort Collins.
1997 – 2000:	Research Scientist, CIRA, (Cooperative agreement with NOAA Environmental Technology Laboratory) Colorado State University, Fort Collins.
1994 – 1997:	Research Associate, CIRA.
1991 – 1994:	Research Associate, CIRES, (Cooperative agreement with NOAA Environmental Technology Laboratory) University of Colorado, Boulder.
1993 – 1994:	Affiliate Faculty, Department of Atmospheric Science Colorado State University, Fort Collins.
1990 – 1991:	Post-doctoral fellow at Mesoscale and Microscale Meteorology Division, NCAR.
1983 – 1989:	Research assistant, Cloud Physics Laboratory, Department of Geophysics and Planetary Sciences, Tel Aviv University.

Teaching Experience:

2008:	Distinguished Lecturer, Peking University, December 2008. (Aerosol-Cloud Interactions and Climate Change)
2008:	Lecturer, International Summer School on Atmospheric and Oceanic Sciences, L'Aquila, Italy, September 2008. (Aerosols and Climate Change)
2006:	Guest Lecturer, Department of Geophysics and Planetary Sciences, Tel Aviv University. Selected Topics in Aerosol-Cloud Interactions (Gordon Center for Energy; 2 credit course)
1986 – 1989:	Teaching assistant, Department of Geophysics and Planetary Sciences, Tel Aviv University. Tutor: An Introduction to Atmospheric Physics Tutor: The Physics of Clouds and Precipitation

Field Work:

2020:	Atlantic Tradewind OceanAtmosphere Mesoscale Interaction Campaign (ATOMIC), Barbados

2010:	Barbados Cumulus Experiment (BACEX), Barbados
2009:	RACORO, Jan - Jun, Oklahoma
2008:	VOCALS, Chile
2007:	MASE-II, Marina, CA
2006:	GoMACCS, Houston, TX
2004:	ICARTT, New England
2003:	DOE/ARM Aerosol IOP, OK
2000:	DYCOMS-II, San Diego, CA
1999:	Southern Oxidants Study, Nashville, TN

Other Professional Activities:

2018 –	NASA Aerosol and Cloud-Convection-and-Precipitation (A-CCP) Scientific Community Cohort (SCC) Advisory Group
2016 –	DOE/EBSD Directorate Advisory Committee (PNNL)
2014:	Co-Chair DOE/ASR High Resolution Modeling Workshop
2011 – 2013:	Lead Author, Chapter 7, IPCC Fifth Assessment Report
2007 – 2011:	Chair, Aerosol Climate Initiative Advisory Committee, DOE/PNNL
2008 – 2013:	IGAC Scientific Steering Committee
2008 – Present:	ACPC Scientific Steering Committee
2007 – 2012:	NOAA Representative to EarthCare
2006:	Reviewer IPCC Fourth Assessment Report
2005, 2007, 2010:	AGU Special Session Convener
2011	Session Convenor IUGG (Melbourne)
2004 – 2008:	Chapter author International Aerosol-Precipitation Science Assessment Group (IAPSAG)
2004 – 2009:	Climate Change Science Program Assessment
2004 – 2012:	International Commission on Clouds and Precipitation (ICCP) Committee Member
2003 – Present:	Editor Atmospheric Chemistry and Physics
2006 – 2020:	CIRA Fellow
2003 – Present:	CIRES Fellow
2001 – 2005:	Member: NOAA/ETL Strategic Planning Team
2000:	Reviewer IPCC Third Assessment Report
2000:	Member: NOAA/ETL Millenium Team
1993 – Present:	Member American Meteorological Society
1994 – Present:	Member American Geophysical Union
1984 – 1990:	Member Israel Association for Aerosol Research

Awards and Fellowships:

2018:	The Wageningen Institute for Environment and Climate Research (WIMEK) Visiting Fellowship, Netherlands

2014:	NOAA Administrator's Award
2013:	AGU Fellow
2008:	NOAA Administrator's Award
2003:	NOAA Office of Atmospheric Research Outstanding Paper Award
2002:	NOAA Office of Atmospheric Research Outstanding Paper Award
1998:	NOAA Environmental Technology Laboratory Award for Innovative Research in the Modeling of Complex Cloud and Aerosol Interactions
1990:	Rothschild Fellowship for Post-Doctoral Research Fulbright Fellowship for Post-Doctoral Research Canadian NSERC Fellowship for Post-Doctoral Research (declined)
1986 – 1989:	Fellowship from the Joseph Buchmann Fund
1987:	Landau Prize for Outstanding Research (Israel) Deutsche Akademischer Austauschdienst (DAAD) scholarship
1982 – 1985:	Certificates of Merit for academic achievment, Faculty of Exact Sciences, Tel Aviv University
1978 – 1979:	Undergraduate Scholarship, South African Council For Scientific and Industrial Research (CSIR)

Invited Talks (not including seminars):

Feingold, G., and F. Hoffmann, 2019, *Aerosol-cloud interactions: outstanding questions and how they might be addressed in a new cloud chamber facility.* Workshop to Explore Science Opportunities and Concepts for a Large-Scale Aerosol-Cloud-Turbulence Research Facility, NCAR November 21-22, 2019.

Feingold, G., 2019, *Top-down and bottom-up approaches to the complex atmospheric system.* Keynote speaker, Gordon Research Seminar, Radiation and Climate, July, 2019.

Feingold, G., 2017 *What process-level understanding of Aerosol-Cloud Interactions has taught us about the potential for successful Marine Cloud Brightening,* Gordon Conference on Clouds and Radiation, Newry, ME, July 2017.

Feingold, G., 2017: *Aerosol, Clouds, Precipitation, and Radiation at the Mesoscale.* GEWEX Aerosol Precipitation (GAP) initiative Workshop 2017, June 2017.

Feingold, G., 2016: *Do aerosol particles affect clouds?* Honrath Memorial Lecture, Houghton, Michigan, September 2016.

Feingold, G., and I. Koren: *Aerosol Effects on Marine Boundary Layer Cloud Systems: From Microphysics to Emergence.* Invited presentation Kaufman Memorial Symposium, June 2016.

Feingold, G., *Quantifying Aerosol Influences on the Cloud Radiative Effect.* NASA

Goddard Scientific Colloquium, May 2015.

Feingold, G., *Thoughts on Approaches to Quantification of Aerosol Indirect Effects in Warm Clouds* , Keynote talk, Waves to Weather, Memmingen, Germany, November 2015.

Feingold, G., Discussion Leader: Cloud-Scale Processes, Gordon Conference on Radiation and Climate, Lewiston, ME, 2015.

Feingold, G., *Thoughts on new approaches to quantification of aerosol indirect effects in warm clouds,* Sackler Colloquia, Irvine, CA, 2015.

Feingold, G., *Dynamical System Analogues to Cloud Systems,* Midwest Mathematics and Climate Conference, University of Kansas, April 2015.

Feingold, G., *Aerosol influences on warm cloud precipitation and why it is so difficult to provide observational constraints,* Telluride Science Research Center workshop, 2014.

Feingold, G., *Panelist: GEWEX Conference,* Den Haag, Netherlands, 2014.

Feingold, G., *From Droplet Nucleation to Precipitation: Following in Sean Twomey's Giant Footsteps.* AMS Cloud Physics Conference, July 2014.

Feingold, G., and I. Koren, *Keynote: Low-Dimensional Models of Complex Aerosol-Cloud Interactions.* Goldschmidt Conference, Florence, Italy, 2013.

Feingold, G., *How Resilient are Cloud Systems to Aerosol Perturbations?* 19th International Conference on Nucleation and Atmospheric Aerosols, 24-28 June 2013, Fort Collins, CO 2013.

Feingold, G., and I. Koren, *Old and new paradigms for aerosol-cloud-precipitation studies,* Keynote, DOE/ASR Science Team Meeting, March 2012.

Feingold, G., and I. Koren, *Pattern Formation in the Aerosol-Cloud-Precipitation System,* Dynamics Days, Oldenburg, Germany, September 2011.

Feingold, G. and I. Koren, *The Aerosol-Cloud-Precipitation System: In Search of Simplicity,* Gordon Conference on Clouds and Radiation, Colby College, NH, July 2011.

Feingold, G., *Precipitation-generated oscillations in open-cellular cloud fields,* Max-Planck Institute, Hamburg, 2010.

Feingold, G., *Self Organization in Cloud Systems* , University of California, Berkeley 2010.

Feingold, G., *Life beyond 1st, 2nd... Indirect Effects: New paradigms for studying aerosol-cloud interactions,* Telluride workshop, 2010.

Feingold, G., and H. Wang, *Self organization in a bowl of soup.* Goldschmidt Conference, Davos Switzerland, June 2009.

Feingold, G., *Summary of the ARM Mobile Facility Deployment at Pt Reyes, California.* ARM Science Team Meeting, Louisville, KY, April 2009.

Feingold, G., Keynote speaker, *The Importance of Small Cumulus Clouds in the Climate System.* International Laser Radar Conference. June, 2008.

Feingold, G., Invited participant, *Perturbed Clouds in the Climate System.* Frankfurt

Institute for Advanced Studies. March 2-7, 2008.

Feingold, G., Invited speaker Aerosol Indirect Effects Workshop, Victoria, BC, Nov. 13-14, 2007.

Feingold, G., Invited speaker Gordon Conference on Radiation and Climate. Colby-Sawyer College, July 2007.

Feingold, G., H. Jiang, H. Xue, B. Stevens, P. Zuidema, 2007: *Aerosol Effects on Precipitation and Cloud Lifetime at the Large Eddy Scale.* Interdisciplinary Tropospheric Research (INTROP): Aerosols- properties, processes, and climate. Crete, April 2007.

Feingold, G., Discussion Leader: Aerosol and Clouds Session. Gordon Conference on Chemistry, Big Sky, Montana, 2005.

Feingold G., and H. Jiang, 2005: *Aerosol-cloud-radiation and surface flux interactions simulated in a large eddy model.* 1st iLEAPS Science Conference, Boulder, Colorado, Jan 2006.

Feingold, G., 2005: *Aerosols, Clouds and Climate.* NASA Goddard Space Flight Center's Distinguished Lecture series. June 2005.

Feingold, G., 2005: *Small-scale modeling of aerosol-cloud interactions.* NOAA/IGAC Specialty Workshop on the Aerosol Indirect effect. Manchester, UK., January 5-7, 2005.

Feingold, G., 2003: *Surface-based remote sensing and modeling of the aerosol indirect effect.* Sixth International Symposium on Tropospheric Profiling, Leipzig, September 2003.

Feingold, G., 2003: *Observations and Modeling of Aerosol-Cloud Interactions at the Large Eddy Scale.* European Geophysical Society/American Geophysical Union Meeting, Nice, April 2003.

Feingold, G., S. M. Kreidenweis, H. Jiang, and W. R. Cotton, 2002: *Large Eddy Simulations of Aerosol-Cloud-Chemistry Interactions.* American Geophysical Union Fall Meeting, December 2002.

Feingold, G., 2002: *Modeling the Indirect Effect in Large Eddy Simulations.* Round Table on Boundary Layer Clouds, Toulouse, June 2002.

Feingold, G., 2001: *Aerosol-Cloud-Climate Feedbacks.* Invited presentation to National Research Council's NRC Climate Change Feedbacks Workshop. Boulder, Colorado, August 2001.

Feingold, G., 2000: *Cloud-scale modeling of aerosol-cloud interactions.*Presented at the 4th Workshop on the Regional Aerosol Climate Model, Toronto, Canada, March 2000.

Feingold, G., 1999: *A review of cloud processing of aerosol in the marine boundary layer.* Gentner Symposium, Israel, October 1999.

Kreidenweis S. M., and G. Feingold, 1995: *Modeling of Aerosol and Cloud Microphysical Processes.* Tutorial presented at the Annual Meeting of the American Association for Aerosol Research, October 1995.

Thesis Reader:

Jennifer Small (UC Santa Cruz), Patrick McBride (CU Boulder), David Painemal (U. of Miami), Seoung-Soo Lee (Princeton), Sam LeBlanc (CU Boulder), Adriana Bailey (CU Boulder), Shi Song (CU Boulder), Camilla Weum Stjern (University of Oslo), Eduardo Barbaro (Wageningen University), Leehi Magaritz (Hebrew University), Fabian Hoffmann (University of Hannover), Brent McBride (University of Maryland, Baltimore County)

Refereed Publications:

Submitted/In Preparation/In Review:

Chen, Y.-S., T. Yamaguchi, P. A. Bogenschutz, and G. Feingold, 2021: Relationships between modeled low-level cloud controlling factors and cloud properties in observations and E3SM simulations, JAMES, in preparation.

Yoshida, R., T. Yamaguchi, G. Feingold, and D. A. Randall, 2021: A 2-D idealized Hadley circulation simulation for accelerating the development of physics schemes in global cloud system resolving models, JAMES, in preparation.

Published:

Glassmeier, F., F. Hoffmann, J. S. Johnson, T. Yamaguchi, K. S. Carslaw, and G. Feingold, 2021: Ship-track-based assessments overestimate the cloud-mediated cooling effect of anthropogenic aerosol, *Science,* in press.

Chiu, J. C., K. Yang, P. J. van Leeuwen, G. Feingold, R. Wood, Y. Blanchard, F. Mei, and J. Wang, 2020: Observational constraints on warm cloud microphysical processes using machine learning and optimization techniques. *Geophys. Res. Lett.,* DOI: 10.1029/2020GL091236.

Quaas, J., A. Arola, B. Cairns, M. Christensen, H. Deneke, A.M.L. Ekman, G. Feingold, A. Fridlind, E. Gryspeerdt, O. Hasekamp, Z. Li, A. Lipponen, P.-L. Ma, J. Mülmenstädt, A. Nenes, J. Penner, D. Rosenfeld, R. Schrödner, K. Sinclair, O. Sourdeval, P. Stier, M. Tesche, B. van Diedenhoven, and M. Wendisch, 2020: Constraining the Twomey effect from satellite observations: Issues and perspectives, *Atmos. Chem. Phys.,* doi:10.5194/acp-2020-279.

Riihimaki, L.D., C. Flynn, A. McComiskey, D. Lubin, Y. Blanchard, J.C. Chiu, G. Feingold, D.R. Feldman, J.J. Gristey, C. Herrera, G. Hodges, E. Kassianov, S.E. LeBlanc, A. Marshak, J.J. Michalsky, P. Pilewskie, S. Schmidt, R.C. Scott, Y. Shea, K. Thome, R. Wagener, and B. Wielicki, 2020: The shortwave spectral radiometer for atmospheric science: New capabilities, applications, and experience from the ARM user facility, *Bull. Amer. Meteor. Soc.,* https://doi.org/10.1175/BAMS-D-19-0227.1.

Angevine, W., M., J. Olson, J. J. Gristey, I. Glenn, G. Feingold, and D. D. Turner, 2020: Scale awareness, resolved circulations, and practical limits in the MYNN-EDMF boundary layer and shallow cumulus scheme. *Monthly Weath. Rev.,* https://doi.org/10.1175/MWR-D-20-0066.1.

Shaw, R. A., W. Cantrell, S. Chen, P. Y. Chuang, N. Donahue, G. Feingold, P. Kollias, A. Korolev, S. Kreidenweis, S. Krueger, J. P. Mellado, D. Niedermeier, and L. Xue, 2020: Cloud-Aerosol-Turbulence Interactions: Science Priorities and Concepts for a Large-Scale Laboratory Facility. *Bull. Amer. Meteor. Soc.,* https://doi.org/10.1175/BAMS-D-20-0009.1

Gristey, J. J., G. Feingold, I. B. Glenn, K. S Schmidt, and H. Chen, 2020: On the relationship between shallow cumulus cloud field properties and surface solar irradiance. *Geophys. Res. Lett.,* 47, e2020GL090152. https://doi.org/10.1029/2020GL090152.

Glenn, I. B., G. Feingold, J. J. Gristey, and T. Yamaguchi, 2020: Quantification of the radiative effect of aerosol-cloud-interactions in shallow continental cumulus clouds. *J. Atmos. Sci.,* DOI 10.1175/JAS-D-19-0269.1.

Hoffmann, F., F. Glassmeier, T. Yamaguchi, and G. Feingold, 2020: Liquid Water Path Steady States in Stratocumulus: Insights From Process-Level Emulation and Mixed-Layer Theory. *J. Atmos. Sci.,* https://doi.org/10.1175/JAS-D-19-0241.1.

Lunderman, S., M. Morzfeld, F. Glassmeier, and G. Feingold, 2020: Estimating parameters of the nonlinear cloud and rain equation from large-eddy simulations, *Physica D,* https://doi.org/10.1016/j.physd.2020.132500.

Gristey, J. J., G. Feingold, I. B. Glenn, K. S Schmidt, and H. Chen, 2020: Surface solar irradiance in continental shallow cumulus fields: Observations and large eddy simulation *J. Atmos. Sci.,* https://doi.org/10.1175/JAS-D-19-0261.1.

Goren, T., J. Kazil, F. Hoffmann, T. Yamaguchi, and G. Feingold, 2019: Anthropogenic air pollution delays marine stratocumulus break-up to open-cells. *Geophys. Res. Lett.,* DOI: 10.1029/2019GL085412.

Yamaguchi, T., G. Feingold, and J. Kazil, 2019: Aerosol-cloud interactions in trade wind cumulus clouds and the role of vertical wind shear. *J. Geophys. Res.,* DOI: 10.1029/2019JD031073.

Bellouin, N., J. Quaas, E. Gryspeerdt, S. Kinne, P. Stier, D. Watson-Parris, O. Boucher, K. S. Carslaw, M. Christensen, A.-L. Daniau, J.-L. Dufresne, G. Feingold, S. Fiedler, P. Forster, A. Gettelman, J. M. Haywood, F. Malavelle, U. Lohmann, T. Mauritsen, D.T. McCoy, G. Myhre, J. Mülmenstädt, D. Neubauer, A. Possner, M. Rugenstein, Y. Sato, M. Schulz, S. E. Schwartz, O. Sourdeval, T. Storelvmo, V. Toll, D. Winker, and B. Stevens, 2019: Bounding aerosol radiative forcing of climate change. *Rev. Geophysics,* DOI: 10.1029/2019RG000660.

Pope, C. A., J. P. Gosling, S. Barber, J. Johnson, T. Yamaguchi, G. Feingold, and P. G. Blackwell, 2019: Gaussian process modeling of heterogeneity and discontinuities using Voronoi tessellations, *Technometrics,* https://doi.org/10.1080/00401706.2019.1692696.

Hoffmann, F., and G. Feingold, 2019: Entrainment and mixing in stratocumulus: Effects

of a new explicit subgrid-scale scheme for large-eddy simulations with particle-based microphysics. *J. Atmos. Sci.,* DOI: 10.1175/JAS-D-18-0318.1.

Glassmeier, F., Hoffmann, F., Johnson, J. S., Yamaguchi, T., Carslaw, K. S., and Feingold, G., 2019: An emulator approach to stratocumulus susceptibility, *Atmos. Chem. Phys.,* https://doi.org/10.5194/acp-2018-1342.

Witte, M., P. Y. Chuang; O. Ayala, L.-P. Wang, and G. Feingold, 2019: Comparison of observed and simulated drop size distributions from large eddy simulations with bin microphysics. *Monthly. Wea. Rev.,* **147**, 477 – 493. https://doi.org/10.1175/MWR-D-18-0242.1.

Klinger, C., G. Feingold, and T.Yamaguchi, 2019: Cloud Droplet Growth in Shallow Cumulus Clouds Considering 1D and 3D Thermal Radiative Effects. *Atmos. Chem. Phys.,* **19,** 6295 – 6313, https://doi.org/10.5194/acp-19-6295-2019.

Hoffmann, F., T. Yamaguchi, and G. Feingold, 2018: Inhomogeneous mixing in Lagrangian cloud models: Effects on the production of precipitation embryos. *J. Atmos. Sci.,* https://doi.org/10.1175/JAS-D-18-0087.1.

Dagan, G., I. Koren, O. Altaratz, and G. Feingold, 2018: Feedbacks of warm convective clouds in a warmer climate as demonstrated by changes in buoyancy. *Env. Res. Lett.,* 13, 10.1088/1748-9326/aac178.

Grosvenor, D., et al., 2018: Remote sensing of droplet number concentration in warm clouds: A review of the current state of knowledge and perspectives. *Reviews of Geophysics,* 10.1029/2017RG000593.

Mülmenstädt, J., and G. Feingold, 2018: The Radiative Forcing of Aerosol-Cloud Interactions in Liquid Clouds: Wrestling and Embracing Uncertainty. *Current Climate Change Reports,* Springer Verlag, doi.org/10.1007/s40641-018-0089-y.

Maahn, M., G. de Boer, J. M. Creamean, G. Feingold, G. M. McFarquhar, W. Wu, and F. Mei, 2017: The observed influence of local anthropogenic pollution on northern Alaskan cloud properties. *Atmos. Chem. Phys.,* **17,** 14709 -14726, dx.doi.org/10.5194/acp-17-14709-2017.

Yamaguchi, T., G. Feingold, and J. Kazil, 2017: Stratocumulus to cumulus transition by drizzle. *J. Adv. Model. Earth Syst.*, doi:10.1002/2017MS001104.

Kazil, J., T. Yamaguchi, and G. Feingold, 2017: Mesoscale organization, entrainment, and the properties of a closed-cell stratocumulus cloud. *J. Adv. Model. Earth Syst.*, doi:10.1002/2017MS001072.

Glassmeier, F., and G. Feingold, 2017: Network approach to patterns in stratocumulus clouds. *Proc. Natl. Acad. Sci.,* doi:10.1073/pnas.1706495114.

Feingold, G., J. Balsells, F. Glassmeier, T. Yamaguchi, J. Kazil, and A. McComiskey, 2017: Analysis of Albedo vs. Cloud Fraction Relationships using Heuristic models and Large Eddy Simulation. *J. Geophys. Res.,* **122**, doi:10.1002/2017JD026467.

Yamaguchi, T., G. Feingold, and V. Larson, 2017: Framework for Improvement by Vertical Enhancement: A Simple Approach to Improve Representation of Low and High Level Clouds in Large Scale Models. *J. Adv. Model. Earth Syst.,* **9,** 627 – 646,

doi:10.1002/2016MS000815.

Koren, I., E. Tziperman, and G. Feingold, 2017: Exploring the non-linear cloud and rain equation. *Chaos,* **27**, doi:10.1063/1.4973593.

Sena, E. T., A. McComiskey, and G. Feingold, 2016: A long-term study of aerosol-cloud interactions and their radiative effect at the Southern Great Plains using ground-based measurements. *Atmos. Chem. Phys.*, **16**, 11301-11318, doi:10.5194/acp-16-11301-2016.

Jung, E., B. A. Albrecht, G. Feingold, H. H. Jonsson, P. Chuang, and S. L. Donaher, 2016: Aerosols, Clouds, and Precipitation in the North-Atlantic Trades Observed During the Barbados Aerosol Cloud Experiment. Part I: Distributions and Variability. *Atmos. Chem. Phys.*, **16**, 8643-8666, doi:10.5194/acp-16-8643-2016.

Heiblum, R., I. Koren, O. Altaratz, G. Feingold et al., 2016: Characterization of cumulus cloud fields using trajectories in the center-of-gravity vs. water mass phase space. Part II: Aerosol effects on warm convective clouds. *J. Geophys. Res.,* doi: 10.1002/2015JD024193.

Heiblum, R., I. Koren, O. Altaratz, G. Feingold et al., 2016: Characterization of cumulus cloud fields using trajectories in the center-of-gravity vs. water mass phase space. Part I: Cloud tracking and phase space description. *J. Geophys. Res.,* doi: 10.1002/2015JD024186.

Seinfeld, J. H., C. S. Bretherton, K. S. Carslaw, H. Coe, P. J. DeMott, E. J. Dunlea, G. Feingold, S. J. Ghan, A. B. Guenther, R. A. Kahn, I. P. Kraucunas, S. M. Kreidenweis, M. J. Molina, A. Nenes, J. E. Penner, K. A. Prather, V. Ramanathan, V. Ramaswamy, P. J. Rasch, A.R. Ravishankara, D. Rosenfeld, G. Stephens, R. Wood, 2016: Improving Our Fundamental Understanding of the Role of Aerosol-Cloud Interactions in the Climate System. *Proc. Natl. Acad. Sci.,* 2016 113 (21) 5781-5790; doi:10.1073/pnas.1514043113.

Feingold, G., A. McComiskey, T. Yamaguchi, J. Johnson, K. Carslaw and K. S. Schmidt, 2016: New approaches to quantifying aerosol influence on the cloud radiative effect. *Proc. Nat. Acad. Sci.,* www.pnas.org/cgi/doi/10.1073/pnas.1514035112.

Kazil, J., G. Feingold and T. Yamaguchi, 2016: Wind speed response of marine non-precipitating stratocumulus clouds over a diurnal cycle in cloud-system resolving simulations. *Atmos. Chem. Phys.,* **16,** 5811 – 5839, doi:10.5194/acp-16-5811-2016.

Yamaguchi, T., G. Feingold, J. Kazil, and A. McComiskey, 2015: Stratocumulus to cumulus transition in the presence of elevated smoke layers. *Geophys. Res. Lett.,* **42,** doi:10.1002/2015GL066544.

Solomon, A., G. Feingold, and M. D. Shupe, 2015: The role of ice nuclei recycling in the maintenance of cloud ice in Arctic mixed-phase stratocumulus. *Atmos. Chem. Phys.,* **15,** 1063110643, doi:10.5194/acp-15-10631-2015.

Fielding, M. D., J. C. Chiu, R. J. Hogan, G. Feingold, E. Eloranta, E. J. O'Connor, and M. P. Cadeddu, 2015: Joint retrievals of cloud and drizzle in marine boundary layer clouds using ground-based radar, lidar and zenith radiances. *Atmos. Meas. Tech.,* **8,** 2663–2683, doi:10.5194/amt-8-2663-2015.

Lebo, Z. J., C. R. Williams, G. Feingold, and V. Larson, 2015: Parameterization of the spatial variability of rain for large-scale models and remote sensing *J. Appl. Meteor. Clim.,* **54,** 2027 - 2046, doi: http://dx.doi.org/10.1175/JAMC-D-15-0066.1.

Feingold, G., I. Koren, T. Yamaguchi, and J. Kazil, 2015: On the reversibility of transitions between closed and open cellular convection. *Atmos. Chem. Phys.,* **15,** 7351 – 7367, doi:10.5194/acp-15-7351-2015.

Yamaguchi, T. and G. Feingold, 2015: On the relationship between open cellular convective cloud patterns and the spatial distribution of precipitation. *Atmos. Chem. Phys.* **15,** 1237–1251.

Fielding, M. D., J. C. Chiu, R. Hogan, and G. Feingold, 2014: A novel ensemble method for retrieving cloud properties in 3D using ground-based scanning radar and zenith radiances. *J. Geophys. Res.,* 10.1002/2014JD021742.

Lee, S.-S., G. Feingold. A. C. McComiskey, T. Yamaguchi, I. Koren, J. V. Martins and H. Yu, 2014: Effect of gradients in biomass burning aerosol on circulations and clouds. *J. Geophys. Res.*, doi:10.1002/2014JD021819.

Lebo, Z. J., and G. Feingold, 2014: On the relationship between responses in cloud water and precipitation to changes in aerosol. *Atmos. Chem. Phys.,* 14, 13233 – 13269.

Witte, M. K., P. Y. Chuang, and G. Feingold, 2014: On clocks and clouds, *Atmos. Chem. Phys.,* 14, 6729 – 6738.

Heiblum, R. H., I. Koren, and G. Feingold, 2014: On the link between the Amazonian forest properties and shallow cumulus cloud fields. *Atmos. Chem. Phys.,* 14, 6063 – 6074.

Mechoso, C. R., R. Wood, R. Weller, C. S. Bretherton, A. D. Clarke, H. Coe, C. Fairall, J. T. Farrar, G. Feingold, R. Garreaud, C. Grados, J. McWilliams, S. P. de Szoeke, S. E. Yuter, P. Zuidema, 2013: Ocean-Cloud-Atmosphere-Land Interactions in the Southeastern Pacific: The VOCALS Program. *Bull. Amer. Meteor. Soc.,* 95, 357 – 375. doi: http://dx.doi.org/10.1175/BAMS-D-11-00246.1.

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