



### *Notes from the Head*

Welcome to the first issue of *Atmos Briefings!*

The primary purpose of this monthly newsletter is to inform faculty, staff, and students of all the wonderful work taking place within the department. I hope you share my excitement in seeing the many student-led publications this month. I now have my September reading assignment!

We'll also use the newsletter to bring to your attention upcoming deadlines, such as abstract submission and registration for MSCAR.

Finally, I hope we can use Atmos Briefings to share other information about our DAS family. I'll start: I enjoy listening to podcasts during my daily commute from Mahomet. Deanna introduced me to 99% Invisible, which is great. Freakonomics Radio is also great. I would additionally recommend the TED Radio Hour, especially the recent episode on "Inquiry", which includes a talk and interview by Naomi Oreskes, Professor of the History of Science at Harvard University. I'll be interested to hear your opinion on Prof. Oreskes' perspective on the scientific method.

Have a great month!

## *Publications*

Chang, C.-C., & Wang, Z. (2018). Relative impacts of local and remote forcing on tropical cyclone frequency in numerical model simulations. *Geophysical Research Letters*, 45. <https://doi.org/10.1029/2018GL078606>

Diner, D.J., et al., 2018: Advances in multiangle satellite remote sensing of speciated airborne particulate matter and association with adverse health effects: from MISR to MAIA. *J. Appl. Remote Sens.* 12(4), 042603, doi: 10.1117/1.JRS.12.042603. – *Larry DiGirolamo*

Dominguez, F., Dall'erba, S., Huang, S., Avelino, A., Mehran, A., Hu, H., Schmidt, A., Schick, L., and Lettenmaier, D.: Tracking an Atmospheric River in a Warmer Climate: from Water Vapor to Economic Impacts, 2018, *Earth Syst. Dynam.*, V. 9, pp 249-266 <https://doi.org/10.5194/esd-9-249-2018>

Harper A, T Powell, PM Cox, J House, C Huntingford, TM Lenton, S Sitch, E Burke, SE Chadburn, WJ Collins, E Comyn-Platt, V Daioglou, JC Doelman, G Hayman, E Robertson, D van Vuuren, A Wiltshire, CP Webber, A Bastos, L Boysen, P Ciais, N Devaraju, AK Jain, A Krause, B Poulter, S Shu (2018): Land-use emissions play a critical role in land-based mitigation for Paris climate targets, *Nature Communication*, 9, 2938, 10.1038/s41467-018-05340-z

Haupt S.E., R. M. Rauber, B. Carmichael, J. C. Knierve, J. L. Cogan, and P. A. Clark: 100 years of Progress in Applied Meteorology. Part 1: Basic Applications. AMS 100 year anniversary monograph. In press.

Hu, H., F. Dominguez, P. Kumar, J. McDonnell, D. Gochis: A Numerical Water Tracer Model for Understanding Event-Scale Hydrometeorological Phenomena. 2018 *J. Hydrometeorol.* V. 19, pp 947-967. DOI: 10.1175/JHM-D-17-0202.1

Moser, D. H., and S. Lasher-Trapp, Cloud Spacing Effects upon Entrainment and Rainfall along a Convective Line, 2018, *J. Appl. Meteor. Clim.*, 1865-1882, <https://doi.org/10.1175/JAMC-D-17-0363.1>

Mulholland, J.P., S.W. Nesbitt, R.J. Trapp, K.L. Rasmussen, and P.V. Salio, 2018: Convective Storm Life Cycle and Environments near the Sierras de Córdoba, Argentina. *Mon. Wea. Rev.*, 146, 2541-2557, <https://doi.org/10.1175/MWR-D-18-0081.1>

Singh, I, F. Dominguez, E. Demaria, J. Walter, (2018) Extreme landfalling atmospheric river events in Arizona: Possible future changes. *J. Geophys. Res.*, 123, 7076-7097. <https://doi.org/10.1029/2017JD027866>

Tessendorf, S.A., J. French, K. Friedrich, B. Geerts, R.M. Rauber, R. M. Rasmussen, L. Xue, K. Ikeda D. Blestrud, M. Kunkel, S. Parkinson, J. R. Snider, J. Aikins, S. Faber, A. Majewski, C. Grasmick, P. Bergmaier, A. Janiszkeski, A. Springer, C. Weeks, D. J. Serke, and R. Bruintjes, 2018: Transformational approach to winter orographic weather modification research: The SNOWIE Project. *Bull. Amer. Meteor. Soc.*, in press.

Trapp, R. J., & Hoogewind, K. A. (2018). Exploring a possible connection between U.S. tornado activity and Arctic sea ice. *Npj Climate and Atmospheric Science*, 1(1), 14. <https://doi.org/10.1038/s41612-018-0025-9>

## *Publications Continued*

Wuebbles, D. J., 2018: Climate Change in the 21st Century: Looking Beyond the Paris Agreement. In *Climate Change and Its Impacts: Risks and Inequalities*, (Eds) C. Murphy, P. Gardoni, and R. McKim, Springer.

Yang, Z, F. Dominguez, X. Zeng: Large and Local-Scale Features Associated with Heat Waves in the United States in MERRA and the NARCCAP Model Ensemble, 2018, *Clim. Dyn.* In press.

## *Presentations*



Di Girolamo, L., Y. Zhan, G. Zhao, and Y. Hong, 2018: Cloud masking for MAIA. MAIA Science Team Meeting, Pasadena, CA, Aug. 7-8, 2018

Di Girolamo, L., Y. Zhan, and G. Zhao, 2018: MAIA Cloud Mask (MCM): Testing and Validation. MAIA Science Team Meeting, , Pasadena, CA Aug 7 – 8, 2018

Jain A K, Impacts of Various Environmental Factors and Management Strategies of Food Crops in the South and Southeast Asia (SSEA) Region Meeting: An international meeting on Land Use/Cover Change and Water, Energy and Food (WEF) Nexus in Southeast Asia Vientiane, Laos, August 11–17, 2018

Lasher-Trapp, S., and R. J. Trapp, Hail Production Under Anthropogenic Climate Change Investigated with a Pseudo-global Warming Approach, North American Hail Workshop, Boulder, CO, Aug 14 2018

Trapp, J, "Hail Occurrence Under Anthropogenic Climate Change as Investigated with Convection Permitting Dynamical Downscaling", North American Workshop on Hail and Hailstorms, Boulder, CO, August 14, 2018.

Wuebbles, Severe Weather in a Changing Climate, ORCHSE, Washington, DC, August 7-8, 2018

## *Activities and Awards*



Francina Dominguez was part of the Search committee: Illinois State Water Survey Associate Research Scientist. Climatology position.

Atul Jain Co-hosted the following NASA meeting: An international meeting on Land Use/Cover Change and Water, Energy and Food (WEF) Nexus in Southeast Asia

Location: Vientiane, LAOS

Dates: August 11-17, 2018

Steve Nesbitt led the Department of Energy Atmospheric Radiation Measurement Mobile Facility Workshop session on "AMF Deep Convective Deployment in the Southeast US"

Steve Nesbitt received a new grant from

NSF RAPID Program "A scientific deployment of a C-Band radar to observe heavy precipitation and convective system dynamic processes in RELAMPAGO" for \$184k

Steve Nesbitt received supplement to Grant to NSF Grant AGS#1628708: "Collaborative Research: Using RELAMPAGO Observations to Understand the Thermodynamic, Kinematic, and Dynamic Processes Leading to Heavy Precipitation" for \$118k

Jeff Trapp was part of the DOE ARM Science Board Panel Review, August 7, 2018

Zhuo Wang was part of the US CLIVAR, Predictability, Predictions, and Applications Interface (PPAI) Panel, 8/22-8/23

Don Wuebbles was named the winner of the Bert Bolin Global Environmental Change Award by the American Geophysical Union

Don Wuebbles led the workshop on development the Illinois center for Urban Resilience and environmental Sustainability, Champaign, August 20-21.

Don Wuebbles was part of the One NOAA Seminar, The Fourth U.S. National Climate Assessment: An Overview of Volume 1, August 28, online.

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*Photos from SESE Beginning of School Year BBQ*



**ATMOSPHERIC SCIENCES**  
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## *For Your Information*



### Upcoming Events

- ◆ Sept. Seminars
  - ◆ Jeff Trapp 9.11
  - ◆ Divyansh Chug 9.18
  - ◆ Jiwen Fan 9.25
- ◆ MSCAR Conference  
October 27-28

### Call for Briefing Submissions

Remember to submit your publications, presentations, activities, and awards for the month of September. Updated to website allows for submissions to be emailed to submitter. Also you are now able to submit events you may want published. We are now taking submissions for the month of September <https://forms.illinois.edu/sec/4528701>

### MSCAR Conference

The Midwestern Student Conference on Atmospheric Research is hosting their 2nd annual conference hosted here at the University of Illinois. For more information please visit. <https://www.atmos.illinois.edu/cms/One.aspx?portalId=127458&pageId=622549>

### AMS Registration

Registration for AMS 99th Annual Meeting in in Phoenix , AZ from January 6-10, 2019. Don't forget to register before its too late. <https://annual.ametsoc.org/index.cfm/2019/>

### Travel Instructions

If you plan on doing business travel please fill out the travel pre-approval form as soon as you know you are traveling. [https://www.earth.illinois.edu/business\\_affairs/travel\\_reimbursements](https://www.earth.illinois.edu/business_affairs/travel_reimbursements)