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Education

2003 PhD. in Atmospheric Science, State University of New York, Albany
1998 M.S. in Atmospheric Science, State University of New York, Albany
1994 M.Sc. in Physics, Indian Institute of Technology, Kharagpur
1992 B.Sc. in Physics, Indian Institute of Technology, Kharagpur

Employment

2012–present Associate Professor, Department of Marine, Earth and Atmospheric Sciences,
North Carolina State University
2006–2012 Assistant Professor, Department of Marine, Earth and Atmospheric Sciences,
North Carolina State University
2003–2006 Research Associate, State University of New York, Albany

Notable Recognitions

2011 LeRoy and Elva Martin Award For Teaching Effectiveness: North Carolina State
University
2009 National Science Foundation Faculty Early Career Development (CAREER) Pro-
posal
2004 Narayan R. Ghokale Award for Outstanding Research: Department of Earth and
Atmospheric Sciences, University at Albany, State University of New York, 2004
1998 Max A. Eaton Prize: American Meteorological Society.

Selected Professional and Academic Service

2016 Co-Chair Committee of Visitors, National Science Foundation
2003–present Peer reviewer: J. Atmos. Sc., Mon. Wea. Rev., J. Clim.
2006–present Proposal reviewer: NSF, NOAA
2014 NSF GRFP review panel member
2008 Max Eaton Award judges panel, 28th Conference on Hurricanes and Tropical Me-
teorology. Orlando, FL
2006 CMAQ Peer Review, Environmental Protection Agency, Research Triangle Park,
North Carolina

Publications

1. Russell, J.O. and A. Aiyyer, 2020: The Potential Vorticity Structure and Dynamics of African Easterly Waves. *J. Atmos. Sci.*, 0, <https://doi.org/10.1175/JAS-D-19-0019.1>.
2. Russell, J. O. H., Aiyyer, A., and White, J. D. 2020. African easterly wave dynamics in convection-permitting simulations: Rotational stratiform instability as a conceptual model. *Journal of Advances in Modeling Earth Systems*, 12, e2019MS001706.
3. Hannah W. and A. Aiyyer 2017: Reduced African Easterly Wave Activity with Quadrupled CO₂ in the Super-Parameterized CESM, *J. Clim.*, 30, 8253-8274
4. Russell, J. O., A. Aiyyer, J. D. White and W. Hannah 2016: Revisiting the connection between African Easterly Waves and Atlantic tropical cyclogenesis. *Geophys. Res. Lett.*, 44, 587-595.
5. A. Aiyyer, 2015: Recurring Western North Pacific Tropical Cyclones and Mid-Latitude Predictability. *Geophys. Res. Lett.*, 7799-7807.
6. Diaz, M. and A. Aiyyer, 2015: Absolute and Convective Instability of the African Easterly Jet. *J. Atmos. Sci.*, 72, 1805-1826
7. Tyner, B., A. Aiyyer, J. Blaes, and D. R. Hawkins 2015: A Climatological Examination of Sustained Wind Speeds, Wind Gusts and Wind Forecasts for Recent Tropical Cyclones in the Mid-Atlantic Region of the United States. *Wea. Forecasting*, 30, 153-176
8. Diaz, M. and A. Aiyyer, 2013: Genesis of African Easterly Waves by Upstream Energy Dispersion. *J. Atmos. Sci.*, 70, 3492-3512.
9. Mallard, M., G. M. Lackmann and A. Aiyyer, 2013: Atlantic Hurricanes and Climate Change. Part II: Role of Thermodynamic Changes in Decreased Hurricane Frequency. *J. Clim.*, 26, 8513-8528
10. Mallard, M., G. M. Lackmann, A. Aiyyer, K. Hill, 2013: Atlantic Hurricanes and Climate Change. Part I: Experimental Design and Isolation of Thermodynamic Effects. *J. Clim.*, 26, 4876-4893.
11. Tyner, B. P. and A. Aiyyer, 2012: Evolution of African Easterly Waves in Isentropic Potential Vorticity Fields. *Mon. Wea. Rev.*, 140, 3634-3652.
12. Aiyyer, A., A. Mekonnen and C. Shreck-III, 2012: Projection of Tropical Cyclones on Wavenumber Frequency Filtered Equatorial Waves. *J. Clim.*, 25, 3653-3658.
13. Schreck, C., J. Molinari and A. Aiyyer, 2012: A Global View of Equatorial Waves and Tropical Cyclogenesis. *Mon. Wea. Rev.*, 140, 774-788.
14. Aiyyer A. and C. Thorncroft, 2011: Interannual to multidecadal variability of vertical shear in the tropics. *J. Clim.*, 24, 2949-2962.
15. Novak. D. R., B. A. Colle and A. R. Aiyyer, 2010: Evolution of Mesoscale Precipitation Band Environments within the Comma Head of Northeast U.S. Cyclones. *Mon. Wea. Rev.*, 138, 2354-2374.
16. N. Meskhidze, L. A. Remer, S. Platnick, R. Negron Juarez, A. M. Lichtenberger, and A. R. Aiyyer (2009), Exploring the differences in cloud properties observed by the Terra and Aqua MODIS sensors, *Atmos. Chem. Phys. Discuss.*, 9, 1489-1520.
17. Galarneau, T. J., Jr., L. F. Bosart, and A. R. Aiyyer, 2008: Closed anticyclones of the subtropics and middle latitudes: A 54-yr climatology (1950-2003) and three case studies. *Synoptic-Dynamic Meteorology and Weather Analysis and Forecasting: A Tribute to Fred Sanders*, Meteor. Monogr., No. 55, Amer. Meteor. Soc., 349-392.
18. Aiyyer, A. R., and J. Molinari, 2008: MJO and Tropical Cyclogenesis in the Gulf of Mexico

- and Eastern Pacific: Case Study and Idealized Numerical Modeling. *J. Atmos. Sci.*, 65, 2837-2855.
19. Archambault, H. M., L. F. Bosart, D. Keyser, and A. R. Aiyyer, 2008: Influence of Large-Scale Flow Regimes on Cool-Season Precipitation in the Northeastern United States. *Mon. Wea. Rev.*, 136, 2945-2963.
 20. Mekonnen, A., C. D. Thorncroft, A. R. Aiyyer, and G. N. Kiladis, 2008: Convectively coupled Kelvin waves over tropical Africa during the boreal summer: Structure and variability. *J. Clim.*, 21, 6649-6667.
 21. Holder, C. T., S. Yuter, A. H. Sobel, and A. R. Aiyyer, 2008: The Mesoscale Characteristics of Tropicalholder Oceanic Precipitation during Kelvin and Mixed Rossby-Gravity Wave Events. *Mon. Wea. Rev.*, 136, 3446-3464.
 22. Atallah, E., L. F. Bosart, and A. R. Aiyyer, 2007: Precipitation Distribution Associated with Landfalling Tropical Cyclones over the Eastern United States. *Mon. Wea. Rev.*, 135, 2185-2206.
 23. Hopsch, S. B., C. D. Thorncroft, K. Hodges, and A. Aiyyer, 2007: West African Storm Tracks and Their Relationship to Atlantic Tropical Cyclones. *J. Clim.*, 20, 2468-2483.
 24. Aiyyer, A., and C. D. Thorncroft, 2006: Climatology of Vertical Wind Shear over the Tropical Atlantic. *J. Clim.*, 19, 2969-2983.
 25. Corbosiero, K. L., J. Molinari, A. R. Aiyyer, and M. L. Black, 2006: The Structure and Evolution of Hurricane Elena (1985). Part II: Convective Asymmetries and Evidence for Vortex Rossby Waves. *Mon. Wea. Rev.*, 134, 3073-3091.
 26. Mekonnen, A., C. D. Thorncroft, and A. R. Aiyyer, 2006: Analysis of convection and its association with African easterly waves. *J. Clim.*, 19, 5405-5421.
 27. Lapenis, A., A. Shivdenko, D. Shepaschenko, S. Nilsson, and A. Aiyyer, 2005: Acclimation of Russian forests to recent changes in climate. *Global Change Biology*, 11, 2090-2102.
 28. Nagarajan, B., and A. Aiyyer, 2004: Performance of the ECMWF operational analyses over the tropical Indian ocean. *Mon. Wea. Rev.*, 132, 2275-2282.
 29. Aiyyer, A. R., and J. Molinari, 2003: Evolution of Mixed Rossby Gravity Waves in Idealized MJO Environments. , *J. Atmos. Sci.*, 60, 2837-2855.