

Refereed Publications (A. Shapiro)

87. **Shapiro, A.**, E. Fedorovich, and J. G. Gebauer, 2018: Mesoscale ascent in nocturnal low-level jets. *J. Atmos. Sci.* (in review)
86. Gebauer, J. G., **A. Shapiro**, E. Fedorovich, and P. M. Klein, 2018: Convection initiation caused by heterogeneous Great Plains low-level jets. *Mon. Wea. Rev.* (in review)
85. Wienhoff, Z. B., H. B. Bluestein, L. J. Wicker, J. C. Snyder, **A. Shapiro**, C. K. Potvin, J. B. Houser, and D. W. Reif, 2018: Applications of a spatially variable advection correction technique for temporal correction of dual-Doppler analyses of tornadic supercells. *Mon. Wea. Rev.* (in review)
84. Fedorovich, E., J. A. Gibbs, and **A. Shapiro**, 2017: Numerical study of nocturnal low-level jets over gently sloping terrain. *J. Atmos. Sci.*, **74**, 2813–2834.
83. Haghi, K. R., D. B. Parsons, and **A. Shapiro**, 2017: Bores observed during IHOP_2002: The relationship of bores to the nocturnal environment. *Mon. Wea. Rev.*, **145**, 3929–3946.
82. Gebauer, J. G., F. Fedorovich, and **A. Shapiro**, 2017: A 1D theoretical analysis of northerly low-level jets over the Great Plains. *J. Atmos. Sci.*, **74**, 3419–3431.
81. Fedorovich, E., and **A. Shapiro**, 2017: Oscillations in Prandtl slope flow started from rest. *Quart. J. Roy. Meteor. Soc.*, **143**, 670–677.
80. Smith, E., E. Fedorovich, and **A. Shapiro**, 2017: Comparison of analytical descriptions of nocturnal low-level jets within the Ekman model framework. *Env. Fluid Mech.*, **17**, 485–495.
79. **Shapiro, A.**, E. Fedorovich, and S. Rahimi, 2016: A unified theory for the Great Plains nocturnal low-level jet. *J. Atmos. Sci.*, **73**, 3037–3057.
78. Dawson, D. T., M. Xue, **A. Shapiro**, J. A. Milbrandt, and A. D. Schenkman, 2016: Sensitivity of real-data simulations of the 3 May 1999 Oklahoma City tornadic supercell and associated tornadoes to multi-moment microphyscis. Part II: Analysis of buoyancy and dynamic pressure forces in simulated tornado-like vortices. *J. Atmos. Sci.*, **73**, 1039–1061.
77. Klein, P. M., X.-M. Hu, **A. Shapiro**, and M. Xue, 2016: Linkages between boundary-layer structure and the development of nocturnal low-level jets in central Oklahoma. *Bound.-Layer Meteor.*, **158**, 383–408.
76. Silva, F., A. Casanegra, **A. Shapiro**, M. Phan, B. Hawkins, L. Ji, J. Stoner, and A. Tafur, 2015: Impact of tornadoes on hospital admissions for acute cardiovascular events. *Thrombosis Res.*, **136**, 907–910.
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74. **Shapiro, A.**, E. Fedorovich, and J. A. Gibbs, 2015: An analytical verification test for numerically simulated convective flow above a thermally heterogeneous surface. *Geosci. Model Dev.*, **8**, 1809–1819.

73. Dawson, D. T., M. Xue, J. Milbrandt, and **A. Shapiro**, 2015: Sensitivity of real-data simulations of the 3 May 1999 Oklahoma City tornadic supercell and associated tornadoes to multi-moment microphysics. Part I: Storm- and tornado-scale numerical forecasts. *Mon. Wea. Rev.*, **143**, 2241–2265.
72. Gibbs, J., A., E. Fedorovich, and **A. Shapiro**, 2015: Revisiting surface heat-flux and temperature boundary conditions in models of stably stratified boundary-layer flows. *Bound.-Layer Meteor.*, **154**, 171–187.
71. **Shapiro, A.**, and E. Fedorovich, 2014: A boundary-layer scaling for turbulent katabatic flow. *Bound.-Layer Meteor.*, **153**, 1–17.
70. **Shapiro, A.**, and E. Fedorovich, 2013: Similarity models for unsteady free convection flows along a differentially cooled horizontal surface. *J. Fluid Mech.*, **736**, 444–463.
69. Hu, X.-M., P. M. Klein, M. Xue, **A. Shapiro**, and A. Nallapareddy, 2013: Enhanced vertical mixing associated with a nocturnal cold-front passage and its impact on near-surface temperature and ozone concentration. *J. Geophys. Res.*, **118**, 2714–2728.
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65. **Shapiro, A.**, B. Burkholder, and E. Fedorovich, 2012: Analytical and numerical investigation of two-dimensional katabatic flow resulting from local surface cooling. *Bound.-Layer Meteor.*, **145**, 249–272.
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48. Fedorovich, E., and **A. Shapiro**, 2009: Turbulence and waves in numerically simulated slope flows. *Mécanique et Industries*, **10**, 175–179.
47. **Shapiro, A.**, C. K. Potvin, and J. Gao, 2009: Use of a vertical vorticity equation in variational dual-Doppler wind analysis, *J. Atmos. Oceanic Technol.*, **26**, 2089–2106.
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- 43.** Wang, Y., T.-Y. Yu, M. Yeary, **A. Shapiro**, S. Nemati, M. Foster, D. L. Andra, Jr. and M. Jain, 2008: Tornado detection using a neuro-fuzzy system to integrate shear and spectral signatures. *J. Atmos. Oceanic Technol.*, **25**, 1136–1148.
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- 40.** **Shapiro, A.**, and E. Fedorovich, 2007: Katabatic flow along a differentially cooled sloping surface. *J. Fluid Mech.*, **571**, 149–175.
- 39.** Zrnic, D. S., J. F. Kimpel, D. E. Forsyth, **A. Shapiro**, G. Crain, R. Ferek, J. Heimmer, W. Benner, T. J. McNellis, and R. J. Vogt, 2007: Agile beam phased array radar for weather observations. *Bull. Amer. Meteor. Soc.*, **88**, 1753–1766.
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- 35.** Martin, W. J., and **A. Shapiro**, 2007: Discrimination of bird and insect radar echoes in clear-air using high-resolution radars. *J. Atmos. Oceanic Technol.*, **24**, 1215–1230.
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- 31.** **Shapiro, A.**, and E. Fedorovich, 2006: Natural convection in a stably stratified fluid along vertical plates and cylinders with temporally-periodic surface temperature variations. *J. Fluid Mech.*, **546**, 295–311.
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