

**Publications** (<http://www.nwra.com/resumes/schecter/pubs>)

Journal Papers

D.A. Schecter and T.J. Dunkerton, "Hurricane formation in Diabatic Ekman Turbulence," in review. Preprint available upon request.

D.A. Schecter, "The spontaneous imbalance of an atmospheric vortex at high Rossby number," *J. Atmos. Sci.*, in press (2008). Preprint available upon request.

D.A. Schecter, M.E. Nicholls, J. Persing, A.J. Bedard Jr. and R.A. Pielke, "Infrasound emitted by tornado-like vortices: Basic theory and a numerical comparison to the acoustic radiation of a single-cell thunderstorm," *J. Atmos. Sci.*, **65**, 685-713 (2008).

D. A. Schecter and M.T. Montgomery, "Waves in a cloudy vortex," *J. Atmos. Sci.*, **64**, 314-337 (2007).

D. A. Schecter and M.T. Montgomery, "Conditions that inhibit the spontaneous radiation of spiral inertia-gravity waves from an intense mesoscale cyclone," *J. Atmos. Sci.*, **63**, 435-456 (2006).

D. A. Schecter and M.T. Montgomery, "Damping and pumping of a vortex Rossby wave in a monotonic cyclone: critical layer stirring versus inertia-buoyancy wave emission," *Phys. Fluids* **16**, 1334-1348 (2004).

D. A. Schecter, "Maximum entropy theory and the rapid relaxation of three-dimensional quasi-geostrophic turbulence," *Phys. Rev. E* **68**, 066309 1-8 (2003).

D. A. Schecter and M. T. Montgomery, "On the symmetrization rate of an intense geophysical vortex," *Dyn. Atmos. Oceans* **37**, 55-88 (2003).

D. A. Schecter, M. T. Montgomery and P. D. Reasor, "A theory for the vertical alignment of a quasigeostrophic vortex," *J. Atmos. Sci.* **59**, 150-168 (2002).

D. A. Schecter and D. H. E. Dubin, "Theory and simulations of vortex motion driven by a background vorticity gradient," *Phys. Fluids* **13**, 1704-1723 (2001).

D. A. Schecter, J. F. Boyd and P. A. Gilman, " 'Shallow water' magnetohydrodynamic waves in the solar tachocline," *APJ* **551**, L185-L188 (2001).

D. A. Schecter, D. H. E. Dubin, A. C. Cass, C. F. Driscoll, I. M. Lansky and T. M. O'Neil, "Inviscid damping of asymmetries on a two-dimensional vortex," *Phys. of Fluids* **12**, 2397-2412 (2000).

D. A. Schecter and D. H. E. Dubin, "Vortex motion driven by a background vorticity gradient," *Phys. Rev. Lett.* **83**, 2191-2194 (1999).

D. A. Schecter, D. H. E. Dubin, K. S. Fine and C. F. Driscoll, "Vortex crystals from 2D Euler flow: Experiment and simulation", *Phys. Fluids* **11**, 905-914 (1999).

Journal Papers (cont.)

I. M. Lansky, T. M. O'Neil and D. A. Schecter, "A theory of vortex merger," *Phys. Rev. Lett.* **79**, 1479-1482 (1997).

C.-H. Liu, S. R. Nagel, D. A. Schecter, S. N. Coppersmith, S. Majumdar, O. Narayan and T. A. Witten, "Force fluctuations in bead packs," *Science* **269**, 513-515 (1995).

Conference Papers

D. A. Schecter and M.T. Montgomery, "Waves in a cloudy vortex," *27<sup>th</sup> Conference on Hurricanes and Tropical Meteorology*, Monterey, American Meteorological Society, paper 11B.7, available online, 2006.

D. A. Schecter and M.T. Montgomery, "Damping and pumping of a vortex Rossby wave in a monotonic cyclone: critical layer stirring versus inertia-buoyancy wave emission," *26<sup>th</sup> Conference on Hurricanes and Tropical Meteorology*, pp. 370-371. Miami, American Meteorological Society, 2004.

D. A. Schecter, "Maximum entropy theory and the decay of 3D quasi-geostrophic turbulence," *14<sup>th</sup> Conference on Atmospheric and Oceanic Fluid Dynamics*, pp. 37-39. San Antonio, American Meteorological Society, 2003.

D. A. Schecter and M. T. Montgomery, "The symmetrization rate of a geophysical vortex: extension of theory to large Rossby numbers," *14<sup>th</sup> Conference on Atmospheric and Oceanic Fluid Dynamics*, pp. 48-51. San Antonio, American Meteorological Society.

C. F. Driscoll, D. Z. Jin, D. A. Schecter and D. H. E. Dubin, "Vortex dynamics of 2D electron plasmas," *Physica C* **369**, 21-27 (2002).

D. A. Schecter, M. T. Montgomery and P. D. Reasor, "The vertical alignment of an incipient tropical cyclone," in *25<sup>th</sup> Conference on Hurricanes and Tropical Meteorology*, pp. 399-400. San Diego: American Meteorological Society (2002).

D. A. Schecter, "Two-dimensional vortex dynamics with background vorticity," in *Nonneutral Plasma Physics IV*, pp. 443-452. Melville, New York: AIP (2002).

A. A. Kabantsev, C. F. Driscoll, D. H. E. Dubin and D. A. Schecter, "Experiments and theory on 2D electron vortex dynamics in sheared flows," *J. Plasma Fusion Res. SERIES* **4**, 117-123 (2001).

D. A. Schecter, M. T. Montgomery and P. D. Reasor, "A theory for the vertical alignment of a geophysical vortex," in *13<sup>th</sup> Conference on Atmospheric and Oceanic Fluid Dynamics*, pp. 94-98. Boston: American Meteorological Society (2001).

Conference Papers (cont.)

C. F. Driscoll, D. Z. Jin, D. A. Schecter, E. J. Moreau and D. H. E. Dubin, "Dynamics, statistics and vortex crystals in the relaxation of 2D turbulence," *Physica Scripta* **T84**, 76-80 (2000).

D. A. Schecter, D. H. E. Dubin, A. C. Cass, C. F. Driscoll, I. M. Lansky and T. M. O'Neil, "Inviscid damping of elliptical perturbations on a 2D vortex," in *Nonneutral Plasma Physics III* (J. J. Bollinger, R.L. Spencer and R. C. Davidson, eds.), pp. 115-122. New York: American Institute of Physics (1999).

C. F. Driscoll, D. A. Schecter, D. Z. Jin, D. H. E. Dubin, K. S. Fine and A. C. Cass, "Relaxation of 2D turbulence to vortex crystals," *Physica A* **263**, 284-292 (1999).