

## Olivier Pauluis

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### Professional Experience

New York University New York, NY  
Courant Institute of Mathematical Sciences  
(June 2013-present: Professor)  
(June 2010-June 2013: Associate Professor)  
(Sept. 2004:June 2010: Assistant Professor)

Princeton University Princeton, NJ  
Research Associate. Atmospheric and Oceanic Sciences Program  
(August 2002 – August 2004)

Massachusetts Institute of Technology Cambridge, MA  
Postdoctoral Fellow. Department of Earth, Planetary and Atmospheric Sciences.  
(February 2000 – July 2002).

### Education

Princeton University Princeton, NJ  
Ph.D. in Atmospheric and Oceanic Sciences (September 1995 - January 2000).

Université Catholique de Louvain, Louvain-La-Neuve, Belgium  
Diplome d'ingénieur civil en Mathématiques Appliquées. (September 1990 –  
September 1995). This degree would be equivalent to a B.S. in Engineering and an  
M.S. in Applied Mathematics

### Research interests:

General circulation of the atmosphere and climate. Moist convection. Tropical meteorology.  
Atmospheric thermodynamics.

### Services:

Editor for the *Journal of the Atmospheric Sciences* (2015-present).

Director of Graduate Studies for Center for Atmosphere-Ocean Science at the Courant Institute.

Reviewer for NSF, NASA, DOE, NOAA.

Reviewer for several scientific publications.

### Grants and awards

UAEREP: “Using Advanced Experimental - Numerical Approaches To Untangle Rain  
Enhancement” co-PI with Dr. Lulin Xue (2018-2020).

NYU Abu Dhabi Research Institute: “Center for Prototype Climate Modeling”, with Dr. Majda and Dr. Smith (2011-2016)

NSF-CMG “Numerical modeling of the atmosphere and oceans, with Dr. Majda and Dr. Smith (2010-2013)

NSF AGS “The Role of Water Vapor in Midlatitude Stormtracks and the Global Circulation” (2010-2013)

NSF CAREER “The maintenance of the atmospheric circulation: the entropy perspective.” (2006-2010)

NOAA Postdoctoral program in Climate and Global Change Fellowship (1999 - 2001).

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3. Pauluis, Olivier M., and Fuqing Zhang. “Reconstruction of Thermodynamic Cycles in a High-Resolution Simulation of a Hurricane.” *Journal of the Atmospheric Sciences* 74, no. 10 (2017): 3367–81.
4. Dauhut, Thibaut, Jean-Pierre Chaboureaud, Patrick Mascart, and Olivier Pauluis. “The Atmospheric Overturning Induced by Hector the Convecton.” *Journal of the Atmospheric Sciences* 74, no. 10 (2017): 3271–84.
5. Pauluis, Olivier M. “The Mean Air Flow as Lagrangian Dynamics Approximation and Its Application to Moist Convection.” *Journal of the Atmospheric Sciences* 73, no. 11 (2016): 4407–25.
6. Lachkar, Zouhair, Shafer Smith, Marina Levy, and Olivier Pauluis. “Eddies Reduce Denitrification and Compress Habitats in the Arabian Sea.” *Geophysical Research Letters* 43, no. 17 (2016): 9148–56.
7. Yamada, Ray, and Olivier Pauluis. “Momentum Balance and Eliassen–Palm Flux on Moist Isentropic Surfaces.” *Journal of the Atmospheric Sciences* 73, no. 3 (2015): 1293–1314.
8. Yamada, Ray, and Olivier Pauluis. “Annular Mode Variability of the Atmospheric Meridional Energy Transport and Circulation.” *Journal of the Atmospheric Sciences* 72, no. 5 (2015): 2070–89.
9. Wu, Yutian, and Olivier Pauluis. “What Is the Representation of the Moisture–Tropopause Relationship in CMIP5 Models?” *Journal of Climate* 28, no. 12 (2015): 4877–89
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12. Pauluis, Olivier M. “The Global Engine That Could.” *Science* 347, no. 6221 (2015): 475–76.
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16. Wu, Yutian, and Olivier Pauluis. "Midlatitude Tropopause and Low-Level Moisture." *Journal of the Atmospheric Sciences* 71, no. 3 (2013): 1187–1200.
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21. Weidauer, Thomas, Olivier Pauluis, and Joerg Schumacher. "Cloud Patterns and Mixing Properties in Shallow Moist Rayleigh-Benard Convection." *New Journal of Physics* 14 (2012): 079501.
22. Shaw, Tiffany A., and Olivier Pauluis. "Tropical and Subtropical Meridional Latent Heat Transports by Disturbances to the Zonal Mean and Their Role in the General Circulation." *Journal of the Atmospheric Sciences* 69, no. 6 (2012): 1872–89.
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