



Carlos Lopez Carrillo, Ph.D.

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Employment

2015 – present	Assistant Professor of Physics , New Mexico Tech.
2013–2015	Sr. Laboratory Associate. Physics Department, New Mexico Tech.
2003–2013	Research Scientist. Geophysical Research Center, New Mexico Tech.
2001–2003	Postdoctoral Research Physicist. Geophysical Research Center, New Mexico Tech.
1994–2001	Research Assistant, New Mexico Tech.
1990–1993	College Instructor, Technological and Higher Studies Institute of Monterrey.

Education

2001	Ph.D., New Mexico Tech Physics.
1987	B.S. Autonomous University of Nuevo Leon Physics.

Certifications

2006	New Mexico Assessment of Teacher Basic Skills.
2007	New Mexico Assessment of Teacher Competency- Secondary.
2011	New Mexico Mathematics Endorsement Content Knowledge Assessment.
2011	New Mexico Spanish Endorsement Content Knowledge Assessment.

Skills

Languages	Competent in English and Spanish.
Coding	C, Python, L ^A T _E X
Modeling	working with the Weather and Forecast Research Model.
Expertise	in numerical analysis, data processing, inverse theory, and nonlinear programming.
Familiarity	with Unix, Linux, and Windows environments.

Teaching Experience

Laboratory	Overseeing the operation of the First and Second year Physics laboratories, including supervising Teaching assistants and developing lab and demonstration materials.
Classes	Physics I and II (1st-year level), Vibrations and Waves (2nd-year level), Weather and Climate (3ed-year level), Thermal Physics (4th-year level).

Research Activity

- Collaborations with the Climate and Weather Consortium at New Mexico Tech and The Office of Naval Research, Tropical Cyclone Rapid Intensification program.

Memberships

2001- present **AMS**American Meteorological Society, **AGU** American Geophysical Union, $\Sigma\Pi\Sigma$
Physics Honor Society

Research Publications

- D. J. Raymond, S. L. Sessions, and C. López-Carrillo, 2011: Thermodynamics of Tropical Cyclogenesis in the Northwest Pacific. *Journal of Geophysical Research*.
- Carlos López-Carrillo and D. J. Raymond, 2010: Retrieval of Three-Dimensional Wind Fields from Doppler Radar Data using an efficient two-step approach. *Atmospheric Measurements Techniques*.
- D. J. Raymond and Carlos López-Carrillo, 2010: The Vorticity Budget of Developing Typhoon Nuri (2008) *Atmospheric Chemistry and Physics*.
- Carlos López-Carrillo and D. J. Raymond, 2005: Moisture tendency equations in a tropical atmosphere. *Journal of the Atmospheric Sciences*.
- D. J. Raymond, Graciela Raga, Chris Bretherton, John Molinari, Carlos López-Carrillo, Zeljka Fuchs, 2003: Convective Forcing in the Intertropical Convergence Zone of the East Pacific *Journal of the Atmospheric Sciences*, **60**, 2064-2082.
- D. J. Raymond, Carlos López-Carrillo, and Lucio López Cavazos, 1998: Case-studies of developing east Pacific easterly waves. *Quart. J. Roy. Meteor. Soc.*, **124**, 2005-2034.

Field Experience

- **CPEX** Jun 2 – Jun 25, 2017. CO-PI in the NASA Program, Convective Processes Experiment.
- **HS3** Aug 26 – Sep 15, 2012. Flight planer apprentice during the NASA campaign, Hurricane and Severe Storm Sentinel.
- **PREDICT** Sep 3 – Oct 1, 2010. Mission Scientist on nine flights during the Pre-Depression Investigation of Cloud-systems in the Tropics.
- **TCS08** Aug 1 – Oct 1, 2008. Communication officer in five missions on board the P-3 aircraft from the U.S Naval Research Laboratory during the Tropical Cyclone Structure-08 Campaign.
- **IFEX** Jul 1 – Jul 20, 2005. Scientific Observer on board the NOAA-P3-42 in one research mission during the Intensity Forecasting Experiment.
- **EPIC** Sep 1 – Oct 12, 2001. Research scientist on board the NOAA-WP3-43 in 8 missions during the Eastern Pacific Investigation Of Climate.

References

- Available on Request