

## Vita – David J. Raymond

Professor of Physics, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

- Professional preparation
  - 1961 - 1965: Rensselaer Polytechnic Institute – B.S. in Physics.
  - 1965 - 1970: Stanford University – Ph.D. in Physics. NSF Graduate Fellow for 4 years. Graduate advisor – Melvin Schwartz.
- Appointments
  - 2001-2002: Sabbatical leave, Centro de Ciencias de la Atmósfera, Universidad Nacional Autónoma de México.
  - 1985 - 1994: Chairman, Dept. of Physics, New Mexico Institute of Mining and Technology.
  - 1983 - present: Prof. of Physics, New Mexico Institute of Mining and Technology
  - 1979 - 1983: Assoc. Prof. of Physics, New Mexico Institute of Mining and Technology.
  - 1974 - 1979: Asst. Prof. of Physics, New Mexico Institute of Mining and Technology.
  - 1973 - 1974: Research Associate, New Mexico Institute of Mining and Technology.
  - 1970 - 1973: Assistant Meteorologist with Cloud Physics Observatory, Dept. of Meteorology, University of Hawaii, and Assistant Professor of Physics, Hilo College, Hilo, Hawaii.
- Five relevant publications

**Raymond**, D. J. and Sharon L. Sessions, 2007: Evolution of convection during tropical cyclogenesis. *Geophys. Res. Letters*, **34**, L06811, DOI: 10.1029/2006GL028607.

**Raymond**, D. J., and C. López Carrillo 2011: The vorticity budget of developing typhoon Nuri (2008). *Atmos. Chem. Phys.*, **11**, 147-163.

**Raymond**, D. J., S. L. Sessions, and C. López Carrillo, 2011: Thermodynamics of tropical cyclogenesis in the northwest Pacific. *J. Geophys. Res.*, **116**, D18101, doi:10.1029/2011JD015624.

**Raymond**, D. J. and M. J. Herman, 2012: Frictional convergence, atmospheric convection, and causality. *Atmosfera*, **25**, 253-267.

**Gjorgjievska**, S., and D. J. Raymond, 2014: Interaction between dynamics and thermodynamics during tropical cyclogenesis. *Atmos. Chem. Phys.*, **14**, 3065-3082.
- Five other significant publications

**Raymond**, D. J., 2000: Thermodynamic control of tropical rainfall. *Quart. J. Roy. Meteor. Soc.*, **126**, 889-898.

**Raymond**, D. J., and Ž. Fuchs, 2007: Convectively coupled gravity and moisture modes in a simple atmospheric model. *Tellus*, **59A**, 627-640.

**Raymond**, D. J., S. Sessions, A. Sobel, and Ž. Fuchs, 2009: The mechanics of gross moist stability. *J. Adv. Model. Earth Syst.*, **1**, Art. #9, 20 pp.

**Raymond**, D. J., and Ž. Fuchs, 2009: Moisture modes and the Madden-Julian oscillation. *J. Climate*, **22**, 3031-3046.

**Raymond**, D. J., and M. J. Herman, 2011: Convective quasi-equilibrium reconsidered. *J. Adv. Model. Earth Syst.*, **3**, Art. 2011MS000079, 14 pp.

- Synergistic activities
  - Created the Candis system for data analysis and display with the help of many graduate and undergraduate students.
  - Some research results incorporated into graduate-level course on convection.
- Collaborators in past 48 months – Željka Fuchs, University of Split, Croatia; Carlos López-Carillo, New Mexico Tech; Julio Marín, Universidad de Valparaíso, Chile; Sharon Sessions, New Mexico Tech; Adam Sobel, Columbia University; Michael Herman, New Mexico Tech; Saška Gjorgjievska, New Mexico Tech; Sanda Barkičić, University of Split.
- Graduate advisor – Dr. Melvin Schwartz (deceased).
- Thesis advisor – Saška Gjorgjievska, New Mexico Tech; Jorge Cisneros Sanchún, Albuquerque, NM; Julio Marín, Universidad de Valparaíso, Chile; Željka Fuchs, University of Split, Croatia; Xiping Zeng, University of Maryland, Baltimore County; Carlos López Carrillo, New Mexico Tech; Lucio López Cavazos, ITESM, Querétaro, México; Sharon Lewis, unknown; Hongli Jiang, Colorado State University; Odón Sánchez, ITESM, Monterrey, México; Adrián Marroquín, deceased; Michael Glaviano, unknown.