
CURRICULUM VITAE

LEI HUANG

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EDUCATION

- Ph.D., Geological Sciences **May 2013**
Jackson School of Geosciences, The University of Texas at Austin, TX
Dissertation: *Transport Pathways of Fire Generated Tracers to the Upper Troposphere as Determined by A-Train Satellite Measurements*
Advisor: **Dr. Rong Fu**
- Master of Science, Atmospheric Sciences **June 2007**
Department of Atmospheric Sciences, School of Physics, Peking University, China
Thesis: *The Application of Image Matching Method in Satellite Data Processing*
Advisor: **Dr. Hongqing Wang**
- Bachelor of Science, Atmospheric Sciences **June 2004**
Department of Atmospheric Sciences, School of Physics, Peking University, China
Thesis: *Cloud Motion Wind Retrieval Based on Satellite Infrared Images*
Advisor: **Dr. Hongqing Wang**

RESEARCH INTERESTS

- Pollution transport to the UTLS
- Aerosol-cloud interaction
- Aerosol impacts on climate
- Multiple satellite data collocation and analysis

PROFESSIONAL EXPERIENCE

- Postdoctoral Scholar, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA (2013-present)
- Graduate Research Assistant, Department of Geological Sciences, The University of Texas at Austin, Austin, TX (2008-2013)
- Graduate summer internship, Jet Propulsion Laboratory Graduate Fellowship Program (JPLGF) (05/2012-08/2012, 06/2009-08/2009)
- Graduate Research Assistant, School of Earth & Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA (2007-2008)
- Graduate Research Assistant, Department of Atmospheric Sciences, Peking University, Beijing, China (2004-2007)

- Teaching Assistant, School of Physics, Peking University, Beijing, China (2005-2006)

PROFESSIONAL ACTIVITIES

Member of the American Geophysical Union (AGU) (2009-present)

Seminar chair of the Climate Brown Bag Seminar Series at UT Austin (2011)

Reviewer for scientific journals (**35** times): *Geophysical Research Letters* (IF: 4.46), *Journal of Geophysical Research* (IF: 3.44), *Atmospheric Chemistry and Physics* (IF: 5.30), *Scientific Reports* (IF: 5.08), *Advances in Atmospheric Sciences* (IF: 1.46), *Climate Dynamics* (IF: 4.62), *Remote Sensing* (IF: 3.18), *Advances in Meteorology* (IF: 0.95)

HONORS & AWARDS

COAA-Springer Excellent Ph.D. Dissertation Award (2014)

Ronald K. DeFord Field Scholarship (2012)

Jet Propulsion Laboratory Graduate Fellowship (2012)

Jet Propulsion Laboratory Graduate Fellowship (2009)

School of Physics Assistantship, Peking University (2004–2006)

PUBLICATIONS

Massie, S. T., Delano, J., Bardeen, C. G., Jiang, J. H., and **Huang, L.**, 2016: Changes in the shape of cloud ice water content vertical structure due to aerosol variations, *Atmos. Chem. Phys.*, 16, 6091-6105, doi:10.5194/acp-16-6091-2016.

Hu, Z., Zhao, C., Huang, J., Leung, L. R., Qian, Y., Yu, H., **Huang, L.**, and Kalashnikova, O.V., 2016: Trans-Pacific transport and evolution of aerosols: evaluation of quasi-global WRF-Chem simulation with multiple observations, *Geosci. Model Dev.*, 9, 1725–1746, doi:10.5194/gmd-9-1725-2016.

Huang, L., Jiang, J. H., Murray, L. T., Damon, M. R., Su, H., and Livesey, N. J., 2016: Evaluation of UTLS carbon monoxide simulations in GMI and GEOS-Chem chemical transport models using Aura MLS observations, *Atmos. Chem. Phys.*, 16, 5641–5663, doi:10.5194/acp-16-5641-2016.

Huang, L., Jiang, J. H., Wang, Z., Su, H., Deng, M., and Massie, S., 2015: Climatology of Cloud Water Content Associated with Different Cloud Types Observed by A-Train Satellites, *J. Geophys. Res. Atmos.*, 120, 4196–4212. doi: 10.1002/2014JD022779.

Huang, L., Fu, R., and Jiang, J. H., 2014: Impacts of fire emissions and transport pathways on the interannual variation of CO in the tropical upper troposphere, *Atmos. Chem. Phys.*, 14, 4087–4099, doi:10.5194/acp-14-4087-2014.

Fu, R., Yin, L., Li, W. H., Arias, P. A., Dickinson, R. E., **Huang, L.**, Chakraborty, S., Fernandes, K., Liebmann, B., Fisher, R., and Myneni, R. B., 2013: Increased dry-season length over southern Amazonia in recent decades and its implication for future climate projection, *P. Natl. Acad. Sci. USA*, 110(45), 18110–18115, doi: 10.1073/pnas.1302584110.

Huang, L., Jiang, J. H., Tackett, J. L., Su, H., and Fu, R., 2013: Seasonal and diurnal variations of aerosol extinction profile and type distribution from CALIPSO 5-year observations, *J. Geophys. Res. Atmos.*, 118, 4572–4596, doi:10.1002/jgrd.50407.

Huang, L., Fu, R., Jiang, J. H., Wright, J. S., and Luo, M., 2012: Geographic and seasonal distributions of CO transport pathways and their roles in determining CO centers in the upper troposphere, *Atmos. Chem. Phys.*, 12, 4683–4698, doi:10.5194/acp-12-4683-2012, 2012.

Huang, L., Lv, S. H., Zhang, Y., Wang, H. Q., 2008: Geometric Method for Determining Cloud-Top Height from Stereoscopic Observation. *Acta Scientiarum Naturalium Universitatis Pekinensis*. 44(1), 129–134.

CONFERENCE PRESENTATIONS

2016: J. H. Jiang, **L. Huang**, H. Su, A. Omar, Z. Wang, Interactions between Different Aerosol and Cloud Types as Determined by CALIPSO/CloudSat and A-Train Satellite Observations, *CloudSat/CALIPSO Science Team Meeting*, Newport News, VA, 02 March

2015: **L. Huang**, J. H. Jiang, L. Murray, M. Damon, H. Su, Evaluation of CO Distribution and Variation in the UTLS from GMI and GEOS-Chem Simulations by Using Aura MLS Observations (poster), *AGU Fall meeting*, San Francisco, CA, 17 December

2015: **L. Huang**, Distribution, Variation and Transport of CO in the Upper Troposphere from Satellite Observation and Model Simulation (invited talk), Caltech yuk lunch seminar, Pasadena, 01 December

2015: **L. Huang**, J. H. Jiang, L. Murray, M. Damon, H. Su, Evaluation of CO Distribution and Variation in the UTLS from GMI and GEOS-Chem Simulations by Using Aura MLS Observations (poster), *7th International GEOS-Chem Meeting*, Harvard University, Cambridge, MA, 05 May

2014: **L. Huang**, J. H. Jiang, Z. Wang, H. Su, M. Deng, S. Massie, Vertical Distributions of Cloud Water Content Associated with Different Cloud Types as Observed by A-Train Satellites (poster), *AGU Fall meeting*, San Francisco, CA, 18 December

2014: J. H. Jiang, **L. Huang**, H. Su, S. Massie, Z. Wang, M. Deng, A study of aerosol and cloud types using CloudSat/CALIPSO data, *CloudSat/CALIPSO Science Team Meeting*, Washington, D.C., 05 November

2014, **L. Huang**, Vertical distributions of cloud water content associated with different cloud types as observed by A-Train satellites (invited talk), Caltech yuk lunch seminar, Pasadena, 07 October

2013: **L. Huang**, R. Fu, J. H. Jiang, Impacts of Fire Emissions and Transport Pathways on the Interannual Variation of CO in the Tropical Upper Troposphere, *AGU Fall meeting*, San Francisco, CA, 11 December

2012: **L. Huang**, J. H. Jiang, J. L. Tackett, H. Su, R. Fu, Seasonal and Diurnal Variation of Aerosol Extinction Profile and Type Distribution from CALIPSO 5-year Observations (poster), *AGU Fall meeting*, San Francisco, CA, 07 December

2012: **L. Huang**, Aerosol Study Using CALIPSO Lv2 and Lv3 Aerosol Products, *EOS Aura MLS team meeting*, Jet Propulsion Laboratory, Pasadena, CA, 02 August

2012: **L. Huang**, R. Fu, J. Jiang, and J. Wright, Role of Transport Pathways in Determining CO Centers in the Tropical Upper Troposphere (poster), *92nd AMS Annual Meeting*, New Orleans, LA, 23 January

2011: **L. Huang**, R. Fu, J. Jiang, and J. Wright, Geographic and Seasonal Distribution of CO Transport Pathways and Their Role in Determining CO Centers in the Upper Troposphere, *EOS Aura Science Team Meeting*, Helsinki, Finland, 13 September

2011: Jung H. Chae, R. Fu, and **L. Huang**, Relative influences of tropospheric convection and large-scale upwelling on annual and inter-annual variation of CO transport from upper troposphere to lower stratosphere, *EOS Aura Science Team Meeting*, Helsinki, Finland, 14 September

- 2011: **L. Huang**, Transport Pathways of Fire Generated CO to the Upper Troposphere in the Tropics, *Climate Brown Bag Seminar Series*, Department of Geological Sciences, The University of Texas at Austin, Austin, TX, 25 April
- 2010: **L. Huang**, R. Fu, and J. Jiang, Influence of Convective Entrainment and Detrainment on CO Transport to the Upper Troposphere as Determined by A-Train Satellite Measurements (poster), *EOS Aura Science Team Meeting*, Boulder, CO, 28 September
- 2010: **L. Huang**, R. Fu, and J. Jiang, Long-Range CO Transport to the Upper Troposphere over South America and Africa as Determined by A-train Satellite Measurements (poster), *Western Pacific Geophysics Meeting*, Taipei, Taiwan, 22 June
- 2009: **L. Huang**, R. Fu, and J. Jiang, Transport Pathways of Fire Generated Tracers to the Upper Troposphere over South America and Africa: Analyses Using A-Train Satellite Measurements (poster), *AGU Fall meeting*, San Francisco, CA, 15 December
- 2009: Rong Fu, **L. Huang**, J. Jiang, and Y. Zhang, Transport of Fire Generated Tracers to the Tropical Tropopause Layer as detected by A-Train Measurements, *EOS Aura Science Team Meeting*, Leiden, Netherlands, 17 September
- 2009: **L. Huang**, Identifying Pathways for Transport of Fire Generated Tracers to the TTL, *EOS Aura MLS team meeting*, Jet Propulsion Laboratory, Pasadena, CA, 06 August
- 2008: Rong Fu, W. Li, **L. Huang**, Explore temporal variability of the summer droughts in the SE US and its SST forcing, *NOAA CPPA PI Meeting*, Silver Spring, MD, 30 September