Curriculum Vitae

Changsub Shim

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Education

B.S. in Chemistry, Korea University, Seoul, South Korea (1997).
M.S. in Physical Chemistry, Korea University, Seoul, South Korea (1999).
M.S. in Environmental Sciences, Rutgers University, New Brunswick, NJ (2002).
Ph.D. in Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA (2006).

Research Interest

Analysis of global satellite data (e.g., TES) to understand mechanisms of atmospheric transformations and dynamics for tropospheric chemical species.

Application of modeling for understanding atmospheric chemistry and compositions; Natural and anthropogenic emissions and their impact on regional/global air quality and global climate (in conjunction with global CTM and inverse modeling).

Receptor modeling/Factor analysis for identifying source characteristics of sampled atmospheric tracers and aerosols.

Research experience

- Jet Propulsion Laboratory (Postdoctoral fellow: 2006 – present)
- Georgia Institute of Technology (Research Assistant: 2002 – 2006)
- Rutgers University (Research Assistant: 2000 – 2002)
- Korea University (Research & Teaching Assistant: 1997 – 2000)

Peer-reviewed journal publications

Wang, Y., **C. Shim** et al., Intercontinental transport of pollution manifested in the variability and seasonal trend of springtime O_3 at northern mid and high latitudes, *J. Geophys. Res.*, *108, D21*, 4683, 10.1029/2003JD003592, 2003.

Shim, C., Y. Wang, Y. Choi, P. Palmer, D. Abbot, and K. Chance, "Constraining global isoprene emissions with Global Ozone Monitoring Experiment (GOME) formaldehyde column measurements," *J. Geophys. Res*., 110, D24301, doi:10.1029/2004JD005629, 2005.

Yoshida, Y., Y. Wang, **C. Shim**, D. Cunnold, D. Blake, and G. Dutton, Inverse modeling of the global methyl chloride sources, *J. Geophys. Res.*, *111*, D16307, doi:10.1029/2005JD006696, 2006.

Shim, C., Y. Wang, H. B. Singh, D. R. Blake, and A. B. Guenther, Source characteristics of oxygenated volatile organic compounds and hydrogen cyanide, *J. Geophys. Res.*, 112, D10305, doi:10.1029.2006JD007543, 2007.

Shim, C., Y. Wang, Y. Yoshida, Evaluation of model simulated source contributions to tropospheric ozone with aircraft observations on the factor projected space, *Atmospheric Chemistry and Physics Discussions*, acpd-2007-0448, 2007.

Shim, C., Q. Li, M. Luo, S. Kulawik, H. Worden, J. Worden, A. Eldering, G. Diskin, G. Sachse, A. Weinheimer, D. Knapp, D. Montzca, and T. Campos, Characterizing mega-city pollution with TES O_3 and CO measurements, *Atmospheric Chemistry and Physics Discussions*, Special issue: MILAGRO Campaign 2006, acpd-2007-0377, 2007.

Martin, M. V., R. E. Honrath, R. C. Owen, Q. B. Li, and **C. Shim**, Seasonal variation of nitrogen oxides in the central North Atlantic lower free troposphere, *J. Geophys. Res*., submitted 2007.

Choi, Y., Y. Wang, Q. Yang, D. Cunnold, T. Zeng, **C. Shim**, M. Luo, A. Eldering, E. Bucsela, and J. Gleason, Spring to summer northward migration of high O_3 over the western North Atlantic, *Geophys. Res. Lett.*, submitted 2007.

Wang, S., H. M. Pickett, T. J. Pongetti, R. Cheung, Y. L. Yung, **C. Shim**, Q. Li, T. Canty, R. J. Salawitch, K. W. Jucks and S. P. Sander, Estimation of the OH column abundance in the lower atmosphere from space and ground-based measurements, manuscript in preparation, 2007.

Shim, C., Q. Li, D. Henze, R. V. Martin, A. Dankelaar, K. Singh, A. Sandu, M. Kupacz and K. Bowman, Adjoint inversion of global NOx emissions with SCIAMACHY NO_2 columns, manuscript in preparation, 2007.

Shim, C., Q. Li, Y. Zhao, and T. Warneke, Inverse study of the global hydrogen cyanide sources, manuscript in preparation, 2007.