CURRICULUM VITAE

YOUNG-HA KIM

CONTACT IMFORMATION

Severe Storm Research Center,
Ewha Womans University,
52 Ewhayeodae-gil, Seodaemun-gu,
Seoul 03760, South Korea

Phone: +82-10-3232-7768
E-mail: young-ha.kim@ewha.ac.kr
Homepage: young-ha.kim

EMPLOYMENT

Postdoctoral Researcher

- ○ Severe Storm Research Center, Ewha Womans University, South Korea (Mar. 2016 – present)
- ○ Department of Atmospheric Sciences, Yonsei University, South Korea (Sep. 2014 – Feb. 2016)

EDUCATION

Ph. D. in Atmospheric Sciences (Mar. 2008 – Aug. 2014)

- ○ Department of Atmospheric Sciences, Yonsei University, South Korea
- ○ Advisor: Prof. Hye-Yeong Chun
- ○ Dissertation title: *Equatorial planetary and gravity waves in the stratosphere and their contribution to the QBO*

M. S. in Atmospheric Sciences (Mar. 2006 – Feb. 2008)

- ○ Department of Atmospheric Sciences, Yonsei University, South Korea
- ○ Advisor: Prof. Hye-Yeong Chun
- ○ Thesis title: *Characteristics of mesospheric gravity waves in Korean Peninsula and the effects of the secondary waves*

B. S. in Atmospheric Sciences (Mar. 2002 – Feb. 2006)

- ○ Department of Atmospheric Sciences, Yonsei University, South Korea

HONORS / AWARDS

- ● WMO Professor Mariolopoulos Trust Fund Award (2018) [*Kim and Chun*, 2015, JGR]
- ● European Geosciences Union (EGU) Outstanding Student Poster (OSP) Awards (2014)
- ● Korean Meteorological Society Thesis Award (2014)
- ● Graduate School of Yonsei University Thesis Award (2014)

RESEARCH ACTIVITY

Contributor/Author

- ○ 2014–present: *SPARC QBOi — Towards Improving the Quasi-Biennial Oscillation in Global Climate Models*
  (coordinators: S. Osprey, N. Butchart, K. Hamilton, and J. Anstey)
- ○ 2014–present: *SPARC Reanalysis Intercomparison Project (S-RIP)*
  (coordinators: M. Fujiwara, G. Manney, and L. Gray)
  - *Chapter 8: Tropical Tropopause Layer*
  - *Chapter 9: Quasi-Biennial Oscillation and Tropical Variability*

RESEARCH PROJECT EXPERIENCE

Principal Investigator

○ 2015–2017: *Investigation of the Quasi-Biennial Oscillation effect on the midlatitude climate over Asia* [NRF]

Research Assistant

○ 2012–2014: *Effects of Convective Gravity Wave Parameterization in a Climate Change Prediction Model* [KMA]

○ 2014: *Development and Implementation of Parameterization of Gravity Waves from Jet/Front System* [Korea Institute of Atmospheric Prediction Systems]

○ 2013: *Development of Method to Diagnose Gravity Wave Generations for Parameterization of Gravity Waves from Jet/Front System* [Korea Institute of Atmospheric Prediction Systems]

○ 2010: *Improvement of Next-Generation Numerical Weather Prediction Model (II)* [KMA]

○ 2009: *Development of Next-Generation Numerical Weather Prediction Model (I)* [KMA]

○ 2006–2009: *Development of Next-Generation Gravity-Wave Parameterization* [National Research Laboratory Program / NRF]

NRF: National Research Foundation of Korea
KMA: Korea Meteorological Administration

OTHER EXPERIENCES

Visiting for Collaboration

○ Stratosphere and Large-Scale Dynamics group, Met Office, Exeter, UK (Drs. David R. Jackson and Andrew C. Bushell): Feb. – Apr. 2012
- *Kim et al.* (2013, GRL)

○ Institute for Energy and Climate – Stratosphere, Juelich Research Center, Juelich, Germany (Drs. Peter Preusse and Manfred Ern): May – Nov. 2011
- *Kim et al.* (2012, ACP); *Lehmann et al.* (2012, AMT)

COMPUTATION TOOL

Operating System: Linux/Unix, Microsoft Windows, MacOS
Programming: Fortran 77/90, Linux Shell [Bash, Csh], NCAR Command Language (NCL), IDL

PUBLICATION

International Peer-Reviewed Journal Articles

Kang, M.-J., H.-Y. Chun, and Y.-H. Kim, 2017: Momentum flux of convective gravity waves derived from an offline gravity wave parameterization. Part I: Spatiotemporal variations at source level. *J. Atmos. Sci.*, 74(10), 3167-3189, doi:10.1175/JAS-D-17-0053.1.

Song, I.-S., C. Lee, J.-H. Kim, G. Jee, Y.-H. Kim, H.-J. Choi, H.-Y. Chun, and Y. H. Kim, 2017: Meteor radar observations of vertically propagating low-

frequency inertia-gravity waves near the southern polar mesopause region. *J. Geophys. Res.*, 122(4), 4777-4800, doi:10.1002/2016JA022978.

Kim, Y.-H., H.-Y. Chun, S.-H. Park, I.-S. Song, and H.-J. Choi, 2016: Characteristics of gravity waves generated in the jet-front system in a baroclinic instability simulation. *Atmos. Chem. Phys.*, 16(8), 4799-4815, doi:10.5194/acp-16-4799-2016.

Kim, Y.-H., and H.-Y. Chun, 2015: Momentum forcing of the quasi-biennial oscillation by equatorial waves in recent reanalyses. *Atmos. Chem. Phys.*, 15(12), 6577-6587, doi:10.5194/acp-15-6577-2015.

Kim, Y.-H., and H.-Y. Chun, 2015: Contributions of equatorial wave modes and parameterized gravity waves to the tropical QBO in HadGEM2. *J. Geophys. Res.*, 120(3), 1065-1090, doi:10.1002/2014JD022174.

Kim, Y.-H., A. C. Bushell, D. R. Jackson, and H.-Y. Chun, 2013: Impacts of introducing a convective gravity-wave parameterization upon the QBO in the Met Office Unified Model. *Geophys. Res. Lett.*, 40(9), 1873-1877, doi:10.1002/grl.50353.

Kim, Y.-H., H.-Y. Chun, P. Preusse, M. Ern, and S.-Y. Kim, 2012: Gravity wave reflection and its influence on the consistency of temperature- and wind-based momentum fluxes simulated above Typhoon Ewiniar. *Atmos. Chem. Phys.*, 12(22), 10787-10795.

Lehmann, C., Y.-H. Kim, P. Preusse, H.-Y. Chun, M. Ern, and S.-Y. Kim, 2012: Consistency between Fourier transform and small-volume few-wave decomposition for spectral and spatial variability of gravity waves above a typhoon. *Atmos. Meas. Tech.*, 5(7), 1637-1651.

Chun, H.-Y., Y.-H. Kim, H.-J. Choi, and J.-Y. Kim, 2011: Influence of gravity waves in the tropical upwelling: WACCM simulations. *J. Atmos. Sci.*, 68, 2599-2612.

Kim, Y.-H., and H.-Y. Chun, 2009: Effects of the basic-state wind on secondary waves generated by the breaking of gravity waves in the mesosphere. *Asia-Pacific J. Atmos. Sci.*, 45(1), 91-100.

Chun, H.-Y., and Y.-H. Kim, 2008: Secondary waves generated by breaking of convective gravity waves in the mesosphere and their influence in the wave momentum flux. *J. Geophys. Res.*, 113, D23107, doi:10.1029/2008JD009792.

Chun, H.-Y., J.-S. Goh, and Y.-H. Kim, 2007: Characteristics of inertio-gravity waves revealed in rawinsonde data observed in Korea during 20 August to 5 September 2002. *J. Geophys. Res.*, 112, D16108, doi:10.1029/2006JD008348.