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Postdoctoral Research Fellow

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Educational Background

PhD	2012 – 2019	Earth Systems Science	National Central University Taiwan	Thesis: “Wave-Mean Flow Transport of CO ₂ in the Mesosphere and Lower Thermosphere”
BS	2008 – 2012	Applied Physics	Ateneo de Manila University Philippines	Thesis: “Validation of Satellite-based Precipitation Measurements over the Philippines”

Professional Experience

2019/02 – present	Postdoctoral Research Fellow	Graduate Institute of Space Science, National Central University, Taiwan
2017/06 – 2017/08	Scientific Visit	NCAR High Altitude Observatory, Boulder, Colorado
2014/09 – 2019/01	Graduate Research Assistant	Graduate Institute of Space Science, National Central University, Taiwan
2012/09 – 2019/01	Graduate Research Assistant	Institute of Earth Science, Academia Sinica, Taiwan

Honors and Awards

2018/12	Outstanding Student Paper Awardee, Space Physics and Aeronomy Section, American Geophysical Union Fall Meeting 2018
2017/02	3 rd Place, Space Science Section, Taiwan Atmospheric Science Workshop Student Poster Competition

2016/06	2 nd Place, MLT Section, CEDAR Workshop Student Poster Competition
2016/05	3 rd Place, Space Science Section, Taiwan Geosciences Assembly Student Poster Competition
2015/02	1 st Place, Space Science Section, Taiwan Meteorological Society Student Poster Competition

Research Grants

Duration	Title	Funding Agency	Grant No.
2019/02/01 – 2020/01/31	Postdoctoral Fellowship Grant	Taiwan Ministry of Science and Technology	MOST 108-2811-M-008-505

Peer-Reviewed Publications

- Salinas, C.C.J.H.**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2016), Impact of Global Mean CO₂-based Eddy Diffusion Coefficients in the Lower Thermosphere Region on the Ionosphere/Thermosphere, *J. Geophys. Res. Space Physics*, 121, doi:10.1002/2016JA023161.
- Salinas, C. C. J. H.**, & Chang, L. C. (2018). EOF analysis of COSMIC observations on the global zonal mean temperature structure of the Upper Troposphere and Lower Stratosphere from 2007 to 2013. *Journal of Atmospheric and Solar-Terrestrial Physics*, 171, 12-20.
- Chang, L. C., Chiu, P. Y., **Salinas, C. C. J. H.**, Chen, S. P., Duann, Y., Liu, J. Y., ... & Sun, Y. Y. (2018). On the Relationship between E Region Scintillation and ENSO Observed by FORMOSAT-3/COSMIC. *Journal of Geophysical Research: Space Physics*.
- Salinas, C.C.J.H.**, Chang, L.C., Liang, M.C., Qian, L., Yue, J., Lee, J.N., Russel, J., Mlynczak, M and Wu, D.L. (2018), Solar Cycle Response of CO₂ in the Austral Winter Mesosphere and Lower Thermosphere Region, *Journal of Geophysical Research: Space Physics*, 123. <https://doi.org/10.1029/2018JA025575>
- Swenson, G., **Salinas, C.C.J.H.**, Vargas, F., Zhu, Y., Kaufmann, M., Yee, S., Jones Jr, M., Drob, D., Liu, A. and Yue, J. (2019), Mesospheric atomic oxygen diffusive (eddy) transport determined from SCIAMACHY O(¹S) and OH, and SABER OH and CO₂ global mean climatologies, under review in *Journal of Geophysical Research: Atmospheres*.
- Salinas, C.C.J.H.**, Chang, L.C., Liang, M.C., Yue, J., Qian, L., Gan, Q., Russel, J. and Mlynczak, M, Local-time Variations of SABER CO₂ in the Mesosphere and Lower Thermosphere, in preparation.

Conference Presentations

- Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Qian, L. Russel, J. and Mlynczak, M. (2018, July), Local-time Variations of Low Latitude Lower Thermospheric SABER CO₂ during Equinoctial Solar Minimum, Oral Presentation at the 2018 Vertical Coupling of the Atmosphere-Ionosphere System, Potsdam, Germany
- Salinas, C.C.J**, Chang, L.C., Liang, M.C., Qian, L., Yue, J., Lee, J.N., Russel, J., Mlynczak, M and Wu, D.L. (2018, July), Solar Cycle Response of CO₂ in the Austral Winter Mesosphere and Lower

Thermosphere Region, Oral Presentation at the 2018 Vertical Coupling of the Atmosphere-Ionosphere System, Potsdam, Germany

3. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2018, June), Local-time Variations of Low Latitude Lower Thermospheric SABER CO₂ during Equinoctial Solar Minimum, Poster Presentation at the 2018 CEDAR Workshop, Santa Fe, New Mexico, USA
4. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2018, May), Local-time Variations of Low Latitude Lower Thermospheric SABER CO₂ during Equinoctial Solar Minimum, Oral Presentation at the 10th Workshop on Long Term Changes and Trends in the Atmosphere, Hefei, China
5. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Qian, L., Yue, J., Lee, J.N., Russel, J., Mlynczak, M and Wu, D.L. (2018, May), Solar Cycle Response of CO₂ in the Austral Winter Mesosphere and Lower Thermosphere Region, Oral Presentation at the 10th Workshop on Long Term Changes and Trends in the Atmosphere, Hefei, China
6. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2017, December), Solar Cycle Variations of SABER CO₂ and MLS H₂O in the Mesosphere and Lower Thermosphere, Poster Presentation at the AGU Fall Meeting 2017, New Orleans, USA
7. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2017, August), Solar Cycle Variations of SABER CO₂ and MLS H₂O in the Mesosphere and Lower Thermosphere, Oral Presentation at the Joint IAPSO-IAMAS-IGA Meeting 2017, Cape Town, South Africa
8. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2017, August), Impact of Global Mean CO₂-based Eddy Diffusion Coefficients in the Mesosphere and Lower Thermosphere Region on the Ionosphere/Thermosphere Region, Oral Presentation at the Joint IAPSO-IAMAS-IGA Meeting 2017, Cape Town, South Africa
9. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2017, June), Solar Cycle Variation of SABER CO₂ in the Mesosphere and Lower Thermosphere Region, Poster Presentation at the 2017 CEDAR Workshop, Keystone, Boulder, USA
10. **Salinas, C.C.J**, Duann, Y., Chang, L.C., Chao, C.K. and Chandran, M., The INSPIRESat-1 FlatSat: Results and Lessons Learned from a US-Taiwan-India Scientific CubeSat Collaboration, Poster Presentation at the Small Satellite Conference, Utah, USA
11. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2017, February), Linear Trend in SABER CO₂-derived Eddy Diffusion Coefficients and COSMIC-observed F-region Electron Density, Poster Presentation at the 2017 Taiwan Atmospheric Science Workshop, Miaoli, Taiwan
12. Chiu, P.Y., Chang, L.C., **Salinas, C.C.J**, Liu, J.Y. and Lin, C.H. (2017, February), On the Relation between Sporadic-E and ENSO Observed by FormoSAT-3/COSMIC, Poster Presentation at the 2017 Taiwan Atmospheric Science Workshop, Miaoli, Taiwan
13. **Salinas, C.C.J**, Chang, L.C., Liang, Wang, J., Yi, D., Chiu, Y.C., Su, J.Y., Chang, C.K. and Cheng, C.E., (2016, October), Feasibility Study on INSPIRESAT-1: An Operational Test for the Doppler Wind and Temperature Sounder, Poster Presentation at the 2016 APSCO & ISSI-BJ Space Science School, Chon Buri, Thailand
14. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2016, July), Impact of Global Mean CO₂-based Eddy Diffusion Coefficients in the Mesosphere and Lower Thermosphere Region on the Ionosphere/Thermosphere Region, Oral Presentation at the 2016 Vertical Coupling of the Atmosphere-Ionosphere System, Taipei, Taiwan
15. **Salinas, C.C.J**, Chang, L.C., Liang, Wang, J., Yi, D., Chiu, Y.C., Su, J.Y., Chang, C.K. and Cheng, C.E., (2016, July), Feasibility Study on INSPIRESAT-1: An Operational Test for the Doppler Wind and Temperature Sounder, Oral Presentation at the 2016 INSPIRE Workshop, Zhongli, Taiwan
16. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2016, June), Impact of Global Mean CO₂-based Eddy Diffusion Coefficients in the Mesosphere and Lower Thermosphere Region on the Ionosphere/Thermosphere Region, Poster Presentation at the 2016 CEDAR Workshop, Santa Fe, New Mexico, USA
17. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2016, May), Variations of SABER/TIMED CO₂ Profiles and CO₂-based Effective Eddy Diffusion Coefficients in the Mesosphere

and Lower Thermosphere Region, Poster Presentation at the 2016 Taiwan Geosciences Assembly, Taipei, Taiwan

18. **Salinas, C.C.J** and Chang, L.C. (2016, May), Zonal Mean Temperature and Stationary Planetary Wave Amplitudes: EOF Analysis of FormoSAT-3/COSMIC RO Data, 2007- 2013, Oral Presentation at the 2016 Taiwan Geosciences Assembly, Taipei, Taiwan
19. **Salinas, C.C.J**, Chang, L.C., and Chao, B.F. (2016, March), EOF Analysis of Zonal Mean Temperature and Stationary Planetary Wave Temperature Amplitudes 2007 – 2013, Oral Presentation at the International Conference for GPS Radio Occultation, Taipei, Taiwan
20. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2015, August), Seasonal Variations of SABER/TIMED CO₂-based Eddy Diffusion Coefficients, Poster Presentation at the 2015 Asia Oceania Geosciences Society Conference, Singapore
21. **Salinas, C.C.J**, Chang, L.C., and Chao, B.F. (2015, August), Winter Hemisphere Anomalies in Zonal Mean Temperature and Stationary Planetary Wave Amplitudes, Poster Presentation at the 2015 Asia Oceania Geosciences Society Conference, Singapore
22. **Salinas, C.C.J**, Chang, L.C., Liang, M.C., Yue, J., Russel, J. and Mlynczak, M. (2015, February), Estimation of Eddy Diffusion Coefficients in the MLT Region using SABER/TIMED CO₂ Concentrations, Poster Presentation at the 2015 Taiwan Meteorological Society Workshop, Taizhong, Taiwan
23. **Salinas, C.C.J**, and Chao, B.F. (2014, August), Temperature Structure and Possible Climatic Modifications of the Brewer-Dobson Circulation: Least-squares Fit Analysis of GPS Radio Occultation Measurements from 2002 to 2012, Oral Presentation at the 2014 Asia Oceania Geosciences Society Conference, Sapporo, Japan
24. **Salinas, C.C.J**, and Chao, B.F. (2014, August), GPS Radio Occultation Observations of the Cold-point and Lapse-rate Tropopause Parameter Trends: Comparison with Model Observations and AIRS/AQUA and TRMM Satellite Observations, Poster Presentation at the 2014 Asia Oceania Geosciences Society Conference, Sapporo, Japan
25. **Salinas, C.C.J**, and Chao, B.F. (2013, April), EOF Analysis of the FORMOSAT-3/COSMIC Satellite Observations on the Longitudinally Averaged Vertical Thermal Structure of the Troposphere and Stratosphere in the Year 2008, Poster Presentation at the 2013 European Geosciences Union Conference, Vienna, Austria
26. **Salinas, C.C.J.**, Lagrosas, N. and Narisma, G. (2012, August), Validation of Satellite-based Rainfall Rate Measurements over the Philippines, Oral Presentation at the 2012 Asia Oceania Geosciences Society Conference, Singapore
27. **Salinas, C.C.J.**, Lagrosas, N. and Narisma, G. (2012, August), Satellite-based Rainfall Rate Per Rainfall Occurrence Measurements Over the Philippines from 1998 to 2010, Oral Presentation at the 2012 Asia Oceania Geosciences Society Conference, Singapore
28. Lagrosas, N., **Salinas, C.C.J.**, and Narisma, G. (2012, August), TRMM 3b42 Version 6 and Gridded Dataset-Based Detection of Climatological Changes in Rainfall Rate Per Rainfall Occurrence Over the Philippines from 1951 – 2010, Poster Presentation at the 2012 Asia Oceania Geosciences Society Conference, Singapore
29. **Salinas, C.C.J.** and Lagrosas, N. (2011, August), A Correlation of TRMM, GPCC and Ground-based Measurements of Monthly Rainfall Rate in the Manila Observatory, Poster Presentation at the 2011 Asia Oceania Geosciences Society Conference, Taipei, Taiwan

Conference Publications

1. Chang, L.C., **J. Salinas**, J.C. Wang, J.Y. Su, D. Yi, J. Hong, Y.C. Chiu, S.C.R. Chen, A. Chandran, M. McGrath, D. Fritts, L. Gordley, and J. Fisher (2016), A Preliminary Design for the INSPIRESat-1 Mission and Satellite Bus: Exploring the Middle and Upper Atmosphere with CubeSats, Proceedings of the AIAA/USU Conference on Small Satellites, LEO Missions, SSC16-WK-02.
<http://digitalcommons.usu.edu/smallsat/2016/S4LEOMis/5/>.
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Research Interests

- Solar and Geomagnetic Influence on Atmosphere – Ionosphere Coupling
 - Wave-Mean Flow Dynamics in the Stratosphere, Mesosphere and Lower Thermosphere
 - Atmosphere-Ionosphere Coupling
 - Climate Change in the Middle and Upper Atmosphere
 - Transport of Chemical Species in the Middle and Upper Atmosphere
 - Space Mission Design
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Professional Affiliations

Member, American Geophysical Union