

2024 年米国地球物理学連合秋季大会における熱帯気象学研究の発表
Presentation about tropical convention at 2024 AGU Fall Meeting

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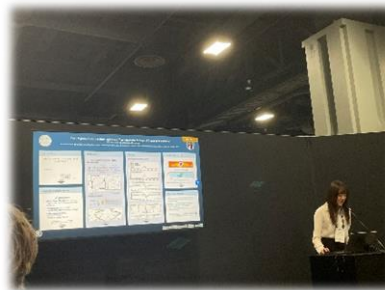
2024 American Geophysical Union (AGU) Fall Meeting was held in Washington D.C. on 12/9-12/13 this year. This is the international conference accumulated with many geophysical experts to show and share the experience.

I presented my recent research at the conference, which talked about the variability and regionality of vertical structure during the convective lifecycle. In my study, the ERA5 reanalysis data and satellite measurements from the TRMM PR and GSMaP product are combined to examine the variability in the large-scale vertical motion and diabatic heating profiles over tropical oceans. In addition, composite time series are constructed using the precipitation maxima identified with GSMaP rainfall as the reference for understanding the development processes of the precipitation and the top-heaviness of the vertical motion and heating. The key points of this results are 1) Top-heaviness of vertical velocity and diabatic heating follows the typical life cycle of a mesoscale convective system, 2) The leading mode of the vertical structure shows the regionality, 3) The contribution of convective modes varies with different rain types.

This time, I presented my research in the eLightning format at AGU, which combines oral presentations with ePosters. During the two-hour face-to-face discussion session, I received numerous suggestions and ideas. Some scholars offered insightful advice, encouraging me to identify key points that could inspire new

perspectives and help clarify ambiguities in my research. Additionally, in the poster session, I had the opportunity to connect with many young scientists in my field. We exchanged ideas and shared our research experiences, which was both stimulating and rewarding. This experience has given me greater motivation and enthusiasm to advance my research to the next stage.

I am truly grateful for the opportunity to attend this international conference. Engaging in discussions with other scientists and presenting my research allowed me to connect with fellow researchers in the atmospheric sciences field. This experience not only inspired me to move forward with my work but also encouraged me to pursue new ideas. I will stay in touch with the scholars I met during the conference to foster further collaboration and interaction in the future.



Pic.1 Flash talk of eLightning



Pic.2 ePoster of my research

Acknowledgements

I sincerely extend my gratitude to the bereaved family of the late Emeritus Professor Yosuke Kamide from ISEE at Nagoya University for their generous donation, which partially covered my travel expenses. I also deeply appreciate the support and guidance of my supervisor, Prof. 増永浩彦.