

2022 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 convection at 2022 AGU Fall Meeting international conference

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2022 American Geophysical Union (AGU) Fall Meeting was hold in Chicago on 12/12-12/16 this year. This is the international conference accumulated with many geophysical experts to show and share the experience.

I presented my recent research on the conference, which talked about the vertical structure of the convection in dynamic and thermal dynamics. 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 latent 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 deep and shallow convections as well as stratiform precipitation. The analysis is focused on how the top-heaviness of vertical motion and latent heating profiles varies over time for the different precipitation types. The results show the top-heaviness changes during the convective life cycle resulting from the time-lag between the convective stratiform rains, as expected from the development of intense convection at an early stage and the vital role of stratiform rain at a later stage. However, the result can not be explained clearly at this stage. During the presentation and question session, I obtain some suggestions and ideas through the face-in-face discussion with the other scholars.

Some scholars gave me the advice to find the point in the equatorial waves and do the clearly research in the radiation data. It really inspires me with a bright idea to find out the ambiguity in my research. On the other hand, I also obtained many ideas and received advice in the poster session. I met some people who also work in similar research as me, they gave suggestions for my research directly, and gave them some advice and found out the point which can be improved. The discussion made everyone keep going on their research and do well.

I really appreciated having the opportunity to join the international conference. Discussing with people and presenting my research made me close to the atmospheric sciences field and inspired me to keep going to the next step. I will keep in touch with the scholars I met at the conference to have more interaction in the future.



Pic.1 Oral presentation



Pic.2 before the presentation

#### *Acknowledgements*

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