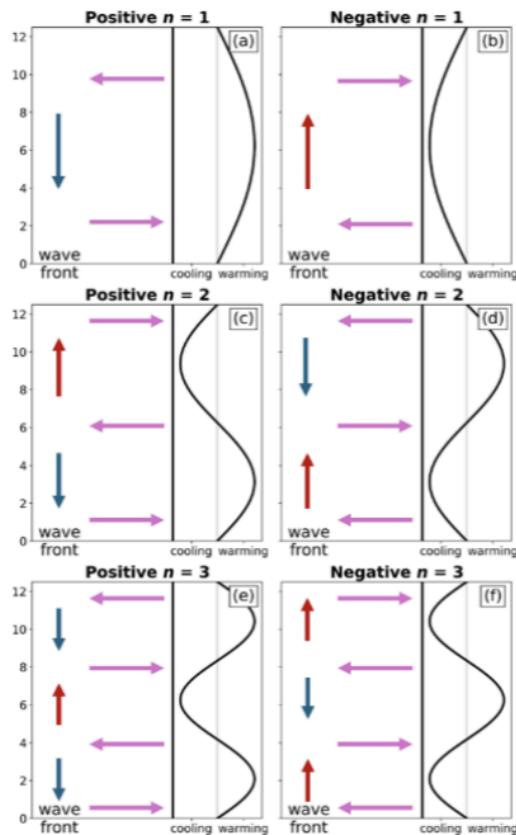


Dr. Dillon Blount is an assistant meteorology professor in the geography department at Ohio University. He earned his bachelor's of science from the University of South Alabama and his master's degree in atmospheric science from the University of Wisconsin-Milwaukee. He then stayed at UW-Milwaukee where he did his Ph.D. research on the contributions of convectively generated gravity waves, line-end vortices, and environmental flow to mesoscale convective system (MCS) rear inflow using numerical modeling.



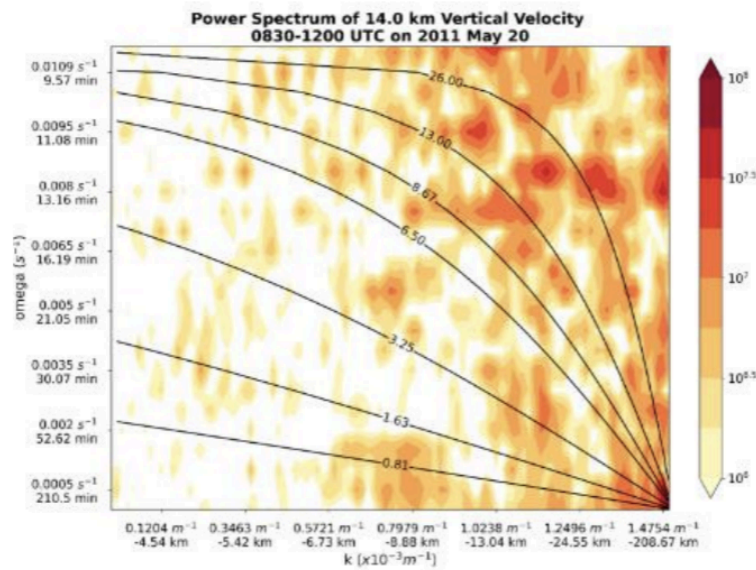
Dr. Dillon Blount

Mesoscale convective systems (MCS) are multiple convective storms that are connected to a linear structure. The goal of his research was to study how gravity waves, line-end vortices, and environmental winds can individually impact these storm systems. The reason this research is so important is because computer models have a very hard time calculating these variables and forecasting their effects. One part of the study took a supercomputer 21 days to complete, which is not nearly efficient enough. To study the impacts of these variables, two individual cases of MCS systems were selected. Field campaigns were then selected to isolate the variables and better understand how they strength or weaken these systems.



Graphic of gravity waves from Dr. Blount's dissertation. (Fig. 1, Blount)

There were observed changes during the study but through this study it was determined that the contribution of gravity waves to how strong the flow is was minimal. It did impact the structure of the storm to a greater degree. Blount says that this research opens the gate to narrow down the study and get more specific in the future to learn more about the impacts of these variables.

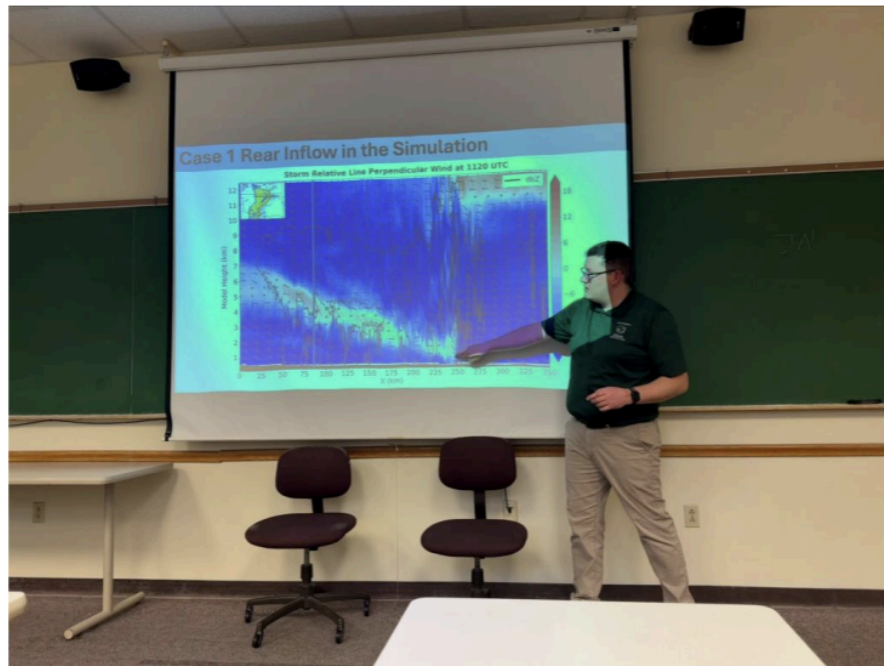


Graph of how gravity waves behaved in Case 1 of study (Fig. 5, Blount)

When asked what originally motivated him to pursue this topic, Blount said these storms can create damaging winds so further understanding what contributes to these winds and extremely important to increasing public safety with these events take place.

Dr. Blount said that the biggest challenge he faced was modeling the systems in general. Trying to recreate storms from years ago leads to low resolution. This means that creating the correct data set to study these systems was incredible tedious and difficult to accomplish.

The part of the research process that Dr. Blount said he enjoyed the most was learning the modeling process. Specifically, challenging himself to go down to a very small grid space on three different domains of modeling. While it was extremely difficult, Dr. Blount said it was very rewarding. The higher resolution models that he was able to work with a key part of his research process.



Dr. Blount presenting his current research, March 5th, 2026

Outside of research Dillon Blount is a member of the American Meteorological Society and is also part of numerous AMS groups. He teaches numerous classes at Ohio University including introduction to metrology, synoptic meteorology, mesoscale meteorology, and radar meteorology. He plans to continue his research on how MCSs are impacted by the Appalachian Mountains and how the inflow is impacted.