

## AMS/NWA MEMPHIS CHAPTER 15 JAN 2019 MEETING MINUTES

1. The President welcomed and thanked everyone for attending.
2. Plans are in the works for this year's scholarship. Applications will be sent out this spring and a reviewing committee may be needed.
3. The upcoming 2019 Southeast Severe Weather Symposium at Mississippi State University (MSU) will be held on March 23-24. Please see Tom, Chapter President, for additional information.
4. Treasurer's report was given.
5. The president commented that this meeting was originally going to be a Google Hangout with the Alaska Aviation Weather Unit, but the government shutdown prevented it from occurring. We have in the meantime rescheduled this tour through Google Hangouts for February 19<sup>th</sup>. Rescheduling the meeting will allow for other participants, such as MSU and Jackson State.
6. The president then announced the first speaker of the night, Preston Bradley. Preston is currently working on his Masters in the Geoscience department at the University of Memphis. His presentation was titled "Convective Climatology of the Mid-South." Preston first refreshed attendees with tornado climatology, various radar tools and terminology, and a map showing the current radar sites over the area. He then went into his collection of 96 tornadoes contributing to 48 distinct tornado days that occurred in the Mid-South from 2012-2018. His plans are to find a relationship of rotational velocity (Vrot) versus tornado detection and intensity, similar to the relationship done by Smith, et. al in the Plains. He hopes to find a Vrot to verify at least 75% of all tornadoes. This in turn would help operational forecasters achieve better overall lead-times. He hopes to complete the project in 2020. Preston also displayed a recent radar case in northeast Ohio where a rapid drop of Vertically Integrated Liquid Water (VIL) was observed just before the storm produced a weak tornado. Could this type of occurrence aide in tornado detection as well?
7. The next speaker was Tom Salem, the Science and Operations Office at NWS Memphis. Tom first displayed a slide showing the different ways that students can volunteer with the National Weather Service. There are paths for high school or college students. If interested, or you would like more information, please see Tom or contact him. Tom then went on to present a study that he helped a summer student complete titled "Mid-South Tornado Patterns and Synoptic Patterns." This study involved 48 cases from 1999 through 2018, of which only days where at least two tornadoes occurred in the Mid-South. The study used a 9-point grid over key ingredients necessary for severe storms to form. They included surface low pressure, 850 millibar (mb) jet location, 500mb trough, and the 300mb upper level jet location. Results concluded that the majority of Mid-South tornadoes formed to the southeast of surface lows, in the middle of the 850mb jet, to the right/east of the 500mb trough and in the upper right quadrant of the 300mb jet.
8. The president thanked everyone for attending and reminded everyone of our next meeting slotted for 19 Feb. If the government is still shutdown we will postpone the meeting until March and have our winter luncheon instead.

Approved,  
Tom Salem, President