

Relationships Between Thunderstorms and Lightning Activity in Florida.

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The U.S. state of Florida has a warm subtropical climate with mild winters and long, hot and humid summers that are characterized by intense thunderstorm activity. As a result, Florida is considered one of the most lightning prone regions in the U.S.A, with an annual average lightning flash density of around 35 flashes/km²/yr. In this study we use the infrasound data from the IRIS Data Management Center (DMC)'s Infrasound Event Database and the lightning data from the World Wide Lightning Location Network (WWLLN) to characterize the thunderstorm activity in Florida, for the five year period, 2011 to 2015. We also use the complementary thunderstorm datasets from the NOAA National Severe Storms Laboratory and the climatological datasets from the Florida Climate Center for the same period to investigate the relationships between other key meteorological parameters such as wind, temperature and precipitation and the temporal and spatial distributions of lightning and thunderstorm activity in Florida.

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