

# Influence of atmospheric electric fields on air-shower radio emission measured with AERA

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The Auger Engineering Radio Array (AERA) at the Pierre Auger Observatory with its 153 antenna stations distributed over 17 km<sup>2</sup> is the largest experiment to measure the radio emission of extensive air showers.

The radio emission is known to be influenced by strong atmospheric E-fields such as those in thunderstorm conditions. Based on the measurement of the atmospheric E-field on the ground, criteria for the selection of affected events have been derived. A corresponding event selection has been studied with respect to the amplitude and polarization in comparison with simulations. In addition, selected events have been simulated with a two-layered atmospheric E-field model and compared with the measurements.

## Summary

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