

# In-situ absolute calibration of electric-field amplitude measurements with the radio detector stations of the Pierre Auger Observatory

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With the Auger Engineering Radio Array (AERA) located at the Pierre Auger Observatory, radio emission of extensive air showers is observed. To exploit the physics potential of AERA, electric-field amplitude measurements with the radio detector stations need to be well-calibrated on an absolute level. A convenient tool for far-field calibration campaigns is a flying drone. Here we make use of an octocopter to place a calibrated source at freely chosen positions above the radio detector array which allows different types of calibrations to be performed. Special emphasis is put on the reconstruction of the octocopter position and its accuracy during the flights.

The directional antenna response pattern of the radio detector stations was measured in a recent calibration campaign. Results of these measurements are presented and compared to simulations. It is found that measurements and simulations are in agreement except for small frequencies and small zenith angles.

## Summary

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