

Radio Emission in Atmospheric Air Showers Measured by LOPES in Coincidence with KASCADE-Grande Observations

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When Ultra High Energy Cosmic Rays interact with particles in the Earth's atmosphere, they produce a shower of secondary particles propagating toward the ground. LOPES (LOFAR Prototype Station) is an absolutely calibrated array of 30 dipole antennas investigating the radio emission from these showers in detail and clarifying if the technique is useful for large scale applications like LOFAR (Low Frequency Array) and the Pierre Auger Observatory. The LOPES experiment is co-located and measures in coincidence with the air shower experiment KASCADE-Grande in Forschungszentrum Karlsruhe, Germany.