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# Microwave detection of air showers with MIDAS

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Microwave emission due to molecular bremsstrahlung in the free electron collisions with the neutral molecules in the atmosphere (within the plasma produced by the cascade ionization) could be used to detect extensive air showers. Measurements show that molecular bremsstrahlung scales quadratically with the primary energy and is isotropic and unpolarized, and thus it could be used to obtain near calorimetric measurement of the cosmic ray energy and good sensitivity to the mass of the primary in an air shower detector. MIDAS (MIcrowave Detector of Air Showers) is a prototype of a microwave telescope to detect extensive air showers: it images a 20x10 degrees field of view with a 4.5 meters parabolic reflector and 53 4GHz feeds in the focal plane. It has been commissioned in March 2010 and is currently taking data. We will present the design, performance and first results of Midas.

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**Classification de Session:** Auger and the radio projects, reviews and results