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Radio polarisation measurements of meteor trail echoes with BRAMS

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BRAMS, the Belgian RAdio Meteor Stations, is a network of radio receiving stations using forward scatter techniques to detect and characterize meteors. The transmitter is a dedicated beacon located in Dourbes in the southwest of Belgium. It emits towards the zenith a purely sinusoidal wave circularly polarised, at a frequency of 49.97 MHz and with a power of 150 watts. The main goals of the project are to compute meteoroid flux rates and trajectories. Most receiving stations are using a 3 element Yagi antenna and are therefore only sensitive to one polarisation. The station located in Uccle has also a crossed 3 element Yagi antenna and therefore allows measurements of horizontal and vertical polarisations. We present the preliminary radio polarisation measurements of meteor trail echoes and compare them with the theoretical predictions of Jones & Jones (1991) for oblique scattering of radio waves from meteor trails.