

Meteor Tests in Southern Africa

By Ray G2AHU

The late Dr Fred Anderson, ZSILA from Worcester, Cape Province, invited me as ZE2JV to join in meteor scatter tests from the first 90 MHz FM Broadcast station in Southern Africa. It was located near Johannesburg. Fred was approximately 1000 km west of south and I was approximately 1000 km east of North from the transmitter, which was about to be tested. The transmitter had about 25 kW power output into a tall array of vertical dipoles. Receiving equipment at ZE2JV was an ex-RAF converter into the station receiver, fed by a horizontal dipole about 10 ft above ground. A tape recorder and a mechanical timer were used to switch on the equipment 0600-0700 daily for three months and similar equipment was used at ZSILA.

Results.

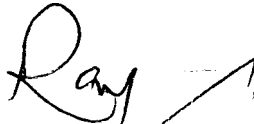
Results were calculated as the number of pulses per hour (pph) received at each station.

1. Reliability: 100% - no days' test was without reception.
2. Best day reception: 168 pph
3. Worst day reception: 71 pph
4. Interference: Nil

Results at ZSILA were similar but by no means identical.

Further Tests.

It would not be possible to use a VHF FM TX in Europe today due to QRM. If a similar test was planned we should have to use a high power 50 MHz transmitter and long yagi antenna for sending and receiving. Directive beams should of course not be pointed at the transmitter and both should be directed at the source of the meteor. These test results were quoted from memory and took place about 45 years ago, strict accuracy cannot be guaranteed. Very high power is not necessary for QSO's. Remarkably low power can be used for meteor scatter. High power might be necessary for similar results to those quoted above however.



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