

VSRT MEMO #011

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To: VSRT Group  
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Subject: Ku band satellite signals

The VSRT setup described in memo #4 without any filtering accepts signals from about 11.5 to 13.2 GHz since the I.F. extends from about 0.3 to 2 GHz. With this wide open bandwidth the Clarke belt signals limit observations of the Sun to within 15 degrees of the Clarke belt or a declination magnitude over 15 degrees. Typical satellite signals have a flux density about equal to the quiet Sun ( $\sim 5 \times 10^6 J$ ) but go up to about twice the quiet Sun. Limiting the I.F. to less than 900 MHz, which restricts the band from 11.5 to 12.1 GHz, makes little if any improvement. However, if the I.F. is limited to over 1600 MHz the satellite signals are eliminated down to the detection threshold of the VSRT.