SBMS EIRP-MDS MW Tune Up Sat. 30 JULY 2016 Sheet 1

10 GHz: Range = 220 Ft. System Losses = 18.0 dB WG Flange = 5 dBi

FSPL = 89.3 dB EIRP Amp Gain = 15.2 dB MDS Attenuator 30 dB

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Callsign	Reflector Size (inches)	Ant. Effic. (%)	Calc. Ant. Gain (dBi)	Radio Output (dBm)	Calc. EIRP (dBm)	EIRP Reading (dBm)	Meas. EIRP (dBm)	Meas. vs. Calc. (dB)	Conditions	Sig. Gen. Out (dBm)	MDS Atten. (dB)	MDS SCORE
(DATA)	(DATA)	(DATA)	RESULT	(DATA)	RESULT	(DATA)	RESULT	(Delta)		(DATA)	(DATA)	RESULT
N6RMJ	29.5	0.64	36	39.1	75	-14.6	73	-2.8	OFFSET	-58	30	-101
N5BF	29.5	0.64	36	39.0	75	-15.7	71	-3.8	OFFSET	-54	30	-97
AG6QV	18.0	0.55	31	23.5	55	-37.2	50	-4.9	PRIME	-45	30	-88
W6QIW	30.0	0.64	36	41.7	78	-9.9	77	-0.9	OFFSET	-60	30	-103
AF6NA	32.8	0.64	37	39.0	76	-9.5	78	1.5	OFFSET	-61	30	-104
WB6NOA	24.0	0.55	34	31.8	66	-44.5	43	-23.0	PRIME - EIRP ONLY			
N6RMJ2	29.5	0.64	36	39.1	75	-13.6	74	-1.8	OFFSET - RETEST EIRP ONLY			

FSPL = Free Space Path Loss

EIRP Readings taken /w/ power meter or Spectrum Analyzer in peak mode

Meas. EIRP = Reading + Sys Loss + FS Path Loss - Amp Gain - WG Flange Gain

Ant Gain Calc = 10 x LOG (((4 x Pi x (Pi x R Squared)) x Efficiency %) / LAMBDA Squared)

MDS Signals Generated @ 144 MHz with VHF / UHF Signal Generator

MDS Score = Sig. Gen. Output - Atten. - Sys. Loss + WG Gain

System Losses = Test Fixture Conversion / Insertion Loss + 300 ft. Cable Loss

F.S. Path Loss = 37.5+20*LOG(Dist in feet)+20*LOG(Freq MHz) - same as prior years = 89.3 dB @ 10.368 GHz

300 ft. Cable Loss = 7.5 dB @ 144 MHz

Open WR-90 Gain assumed to be 5 dB