

NIGHTTIME CLIPPING STUDY DATA SHEET

STATION Prop. New LOCATION Fargo, ND SITE: N 46° 58' 29" W 96° 30' 12" DATE 01-13-97

Call	Latitude	Longitude	Dist(km)	Bear(°T)	RSS	Req-Pro	θmin	θmax	MPL	SWF	Max mv/m @
CBL -0	54-03-01	79-49-03	1412.5	50.0	---	0.500	4.5	4.5	---	31.16	80.2s
-220	42-06-14	81-28-04	1306.0	109.0	---	0.728	5.4	5.4	---	38.08	95.6s
-230	41-42-05	82-44-50	1238.6	113.2	---	0.962	6.0	6.0	---	43.01	111.8s
-260	43-13-38	82-18-48	1186.9	105.4	---	0.706	6.5	6.5	---	47.00	75.1s
-280	43-51-04	82-10-46	1168.7	102.1	---	0.657	6.7	6.7	---	48.46	67.8s
-316	50-35-05	91-17-27	553.7	41.6	---	0.500	17.8	17.8	---	117.03	21.4s
-320	51-08-36	90-33-11	634.2	40.9	---	0.500	15.4	15.4	---	107.21	23.3s
-323	51-32-13	89-56-57	694.8	40.7	---	0.500	13.8	13.8	---	99.92	25.0s
-330	52-21-44	88-22-43	836.0	41.3	---	0.500	11.0	11.0	---	82.54	30.3s
-340	53-16-56	85-47-15	1034.9	43.4	---	0.500	8.2	8.2	---	60.62	41.2s
-350	53-51-20	82-53-09	1227.7	46.5	---	0.500	6.1	6.1	---	43.82	57.0s
CBL-A	44-05-10	81-45-32	1190.4	100.3	---	0.554	6.5	6.5	---	46.74	59.3s
-B	45-12-40	81-43-22	1154.6	94.4	---	0.805	6.8	6.8	---	49.64	81.1s
-C	45-53-25	83-29-23	1003.3	92.1	---	1.015	8.5	8.5	---	63.83	79.5s
-D	46-27-40	84-30-45	914.9	89.2	---	1.017	9.8	9.8	---	72.51	70.1
-E	46-58-45	84-46-18	889.1	85.7	---	1.006	10.2	10.2	---	75.42	66.7s
-F	47-42-50	85-56-30	799.3	80.2	---	0.951	11.7	11.7	---	86.50	55.0s
-G	48-00-00	89-30-23	537.7	75.2	---	0.731	18.4	18.4	---	119.16	30.7s
-H	48-07-00	90-44-00	451.1	71.5	---	0.658	22.0	22.0	---	132.59	24.8s
-I	48-05-50	91-33-30	391.5	69.6	---	0.608	25.2	25.2	---	145.50	20.9s
-J	48-13-30	92-22-47	338.9	64.3	---	0.557	28.7	28.7	---	159.66	17.4s
-K	48-28-10	92-41-00	330.5	58.4	---	0.527	29.4	29.4	---	162.52	16.2s
-L	48-37-40	93-05-05	314.5	53.0	---	0.500	30.6	30.6	---	167.94	14.9s
-M	49-00-00	92-49-14	354.6	49.2	---	0.500	27.6	27.6	---	154.73	16.2s
-N	49-30-00	92-24-49	412.9	45.7	---	0.500	24.0	24.0	---	140.65	17.8s
-O	50-00-00	91-56-27	475.4	43.3	---	0.500	20.9	20.9	---	128.43	19.5s
CBX	53-19-10	113-26-43	1393.0	306.6	2.801	1.253	4.7	4.7	---	32.34	193.7f
Pt.A	54-56-22	112-26-50	1419.5	314.4	2.801	1.253	4.5	4.5	---	30.79	203.5f
Pt.B	53-57-30	111-32-08	1312.7	311.8	2.801	1.253	5.3	5.3	---	37.62	166.5f
Pt.C	53-04-46	111-55-25	1289.7	307.4	2.801	1.253	5.5	5.5	---	39.24	159.7f
Pt.D	52-39-43	113-40-27	1379.8	303.6	2.801	1.253	4.8	4.8	---	33.20	188.7f
KTWK	39-05-02	104-42-41	1110.8	220.1	9.158	2.289	5.0	9.8	52.5	29.83	383.8
Pt.A	38-40-20	104-28-15	1127.5	217.9	9.158	2.289	4.7	9.4		28.82	397.1
Pt.B	39-03-45	104-29-55	1092.6	219.3	9.158	2.289	5.0	9.9		30.24	378.5
Pt.C	39-16-15	104-37-55	1079.8	220.5	9.158	2.289	5.2	10.0		30.74	372.3
Pt.D	39-16-45	104-46-15	1085.9	221.0	9.158	2.289	5.1	10.0		30.43	376.1
KRMG	36-04-50	96-17-09	1211.3	179.1	8.981	2.245	4.0	8.4	51.5	26.32	426.6
Pt.A	36-01-00	95-03-30	1224.2	173.9	8.981	2.245	3.9	8.3		25.75	435.9
Pt.B	36-14-45	95-36-10	1195.2	176.1	8.981	2.245	4.2	8.6		26.81	418.7
Pt.C	36-19-05	96-29-10	1184.8	179.9	8.981	2.245	4.3	8.7		27.27	411.6
Pt.D	36-09-10	96-42-50	1203.3	180.9	8.981	2.245	4.1	8.5		26.62	421.7
Pt.E	35-23-25	97-22-45	1290.0	183.6	8.981	2.245	3.5	7.6		23.87	470.3

NIGHTTIME CLIPPING STUDY DATA SHEET

STATION Prop. New LOCATION Fargo, ND SITE: N 46° 58' 29" W 96° 30' 12" DATE 06-14-02

Call	Latitude	Longitude	Dist(kM)	Bear(°T)	RSS	Req-Pro	θmin	θmax	MPL	SWF	Max mv/m @ θ
Supplemental CBL 50% Skywave Protection Points											
S-A'	53-54-26	82-13-20	1267.6	47.3	---	0.500	5.7	5.7	---	40.859	61.19
S-B'	50-00-00	89-53-08	592.1	53.0	---	0.600	16.6	16.6	---	112.388	26.69
S-C'	52-28-05	84-25-49	1059.0	50.4	---	0.600	7.9	7.9	---	58.402	51.37
S-D'	52-55-57	81-17-25	1270.2	53.0	---	0.600	5.7	5.7	---	40.668	73.77
S-E'	48-57-53	91-00-00	465.4	59.6	---	0.600	21.3	21.3	---	130.140	23.05
S-F'	51-33-22	87-13-50	842.8	49.4	---	0.600	10.9	10.9	---	81.894	36.63
S-G'	50-00-00	87-47-03	724.6	59.2	---	0.700	13.2	13.2	---	95.946	36.48
S-H'	51-50-00	82-18-45	1157.4	57.0	---	0.700	6.8	6.8	---	49.413	70.83
S-I'	52-00-00	80-00-00	1312.5	58.8	---	0.700	5.3	5.3	---	37.634	93.00
S-J'	49-05-30	89-03-32	601.1	64.2	---	0.700	16.3	16.3	---	111.294	31.45
S-K'	51-06-15	85-25-00	928.0	56.3	---	0.700	9.6	9.6	---	71.349	49.05
S-L'	50-00-00	85-36-00	870.0	63.3	---	0.800	10.5	10.5	---	78.210	51.14
S-M'	50-55-33	82-18-35	1123.3	61.8	---	0.800	7.1	7.1	---	52.600	76.05
S-N'	51-06-57	80-00-00	1284.3	62.9	---	0.800	5.6	5.6	---	39.634	100.92
S-O'	50-00-00	81-33-40	1149.0	67.5	---	0.900	6.9	6.9	---	50.109	89.80
CBL Nighttime Groundwave Protection Points											
G-A	42-32-19	80-05-27	1383.2	104.9	---	2.20	5.1	5.1	---	32.99	333.40
G-B	42-13-48	82-04-37	1255.4	109.6	---	0.50	5.8	5.8	---	41.75	59.87
G-C	42-27-35	82-31-23	1210.9	109.4	---	0.50	6.3	6.3	---	45.14	55.39
G-D	42-53-06	82-27-42	1193.0	107.3	---	0.80	6.4	6.4	---	46.53	85.96
G-E	43-35-10	81-41-34	1216.1	102.6	---	2.1	6.2	6.2	---	44.74	234.70
G-F	44-18-51	81-35-54	1193.7	98.9	---	1.2	6.4	6.4	---	46.48	129.10
G-G	45-04-08	81-30-00	1175.6	94.9	---	0.5	6.6	6.6	---	47.94	52.15
G-H	45-33-06	80-18-52	1252.1	91.3	---	0.5	5.9	5.9	---	42.00	59.53