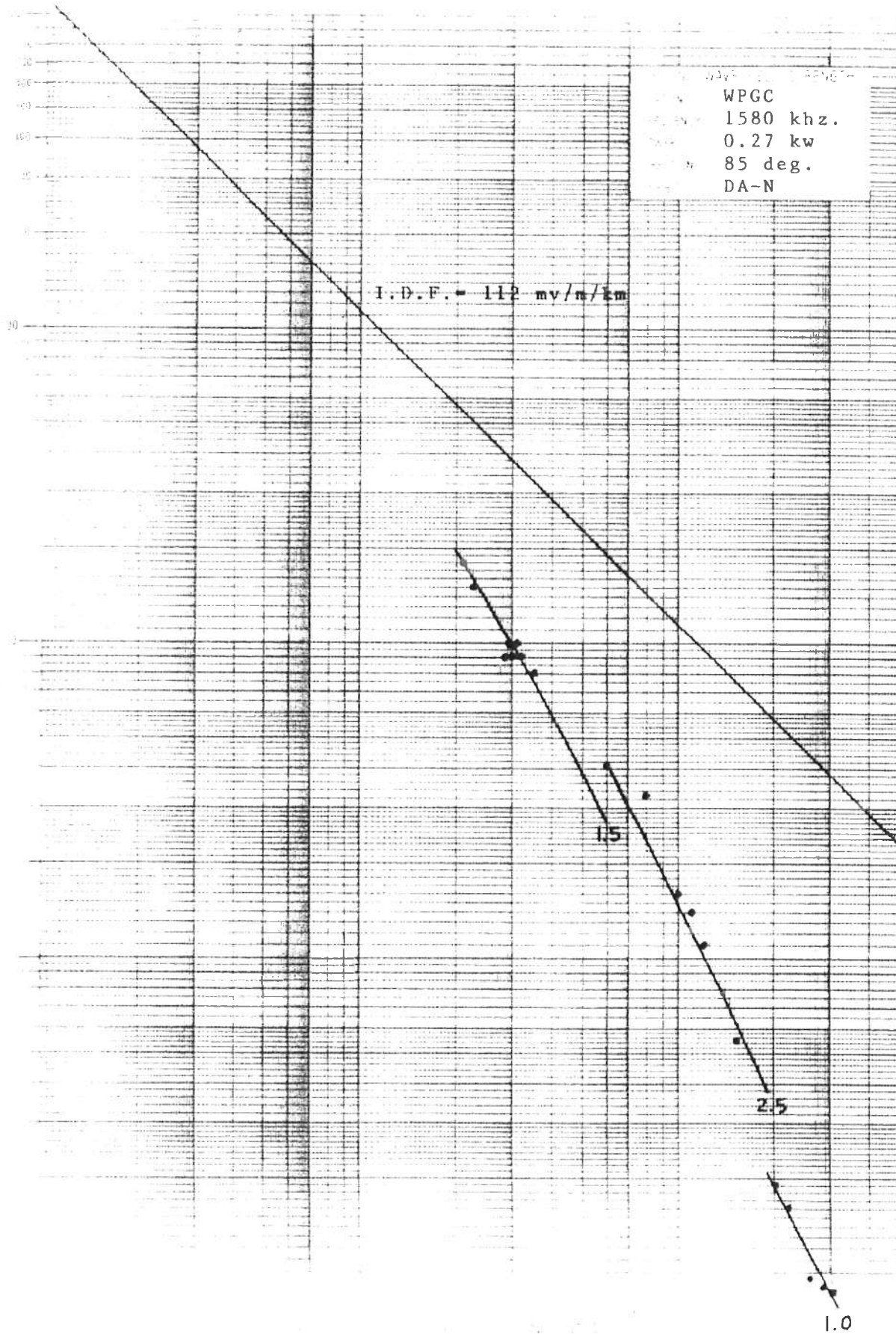


MILLIVOLTS/METER



DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

RADIAL 115.5 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N DATE	MEASUREMENT TIME
1	0.29	11-13-90	RD 1445		
2	0.35	"	1443		
3	0.41	"	1441		
4	0.60	"	1439		
5	0.71	"	1430		
6	0.83	"	1435		
7	0.94	"	1426		
8	1.20	"	1349		
9	1.31	"	1347		
10	1.44	"	1345		
11	1.55	"	1340		
12	1.81	"	1333	12-07-90	RD 1458
13	1.90	"	1331	"	1456
14	2.02	"	1326	"	1451
15	2.20	"	1323	"	1449
16	2.50	11-12-90	RD 1500	"	1447
17	3.11	"	1457		
18	4.45	"	1450	"	1440
19	4.72	"	1445	"	1322
20	5.80	"	1439	"	1327
21	6.80	"	1433	"	1331
22	8.50	"	1425	"	1336
23	10.10	"	1415	"	1342
24	11.25	"	1405	"	1355
25	12.50	"	1401	"	1351
26	12.90	"	1353	"	1357
27	13.22	"	1350	"	1400
28	14.90	"	1340	"	1406
29	16.80	"	1330	"	1413
30	19.80	"	1317		
31	20.10	"	1312		
32	22.25	"	1259		
33	22.73	"	1217		
34	24.71	"	1241		

WPGC RADIATION ANALYSIS at 115.5 degrees True

Point Number	Distance (kM)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.29	3100		
2	0.35	2600		
3	0.41	1600		
4	0.60	1600		
5	0.71	1200		
6	0.83	1000		
7	0.94	810		
8	1.20	475		
9	1.31	500		
10	1.44	550		
11	1.55	350		
12	1.81	270	2.40	-2.0512
13	1.90	280	3.40	-1.9157
14	2.02	260	2.50	-2.0170
15	2.20	300	3.50	-1.9331
16	2.50	230	2.70	-1.9304
17	3.11	155		
18	4.45	45.0	0.60	-1.8751
19	4.72	48.0	0.50	-1.9823
20	5.80	52.0	0.52	-2.0000
21	6.80	43.0	0.54	-1.9011
22	8.50	18.5	0.17	-2.0367
23	10.10	10.0	0.14	-1.8539
24	11.25	8.80	.090	-1.9902
25	12.50	8.00	.080	-2.0000
26	12.90	9.20	.085	-2.0344
27	13.22	7.20	.070	-2.0122
28	14.90	7.60	.080	-1.9777
29	16.80	4.00	.045	-1.9488
30	19.80	2.10		
31	20.10	2.40		
32	22.25	2.10		
33	22.73	1.60		
34	24.71	1.70		

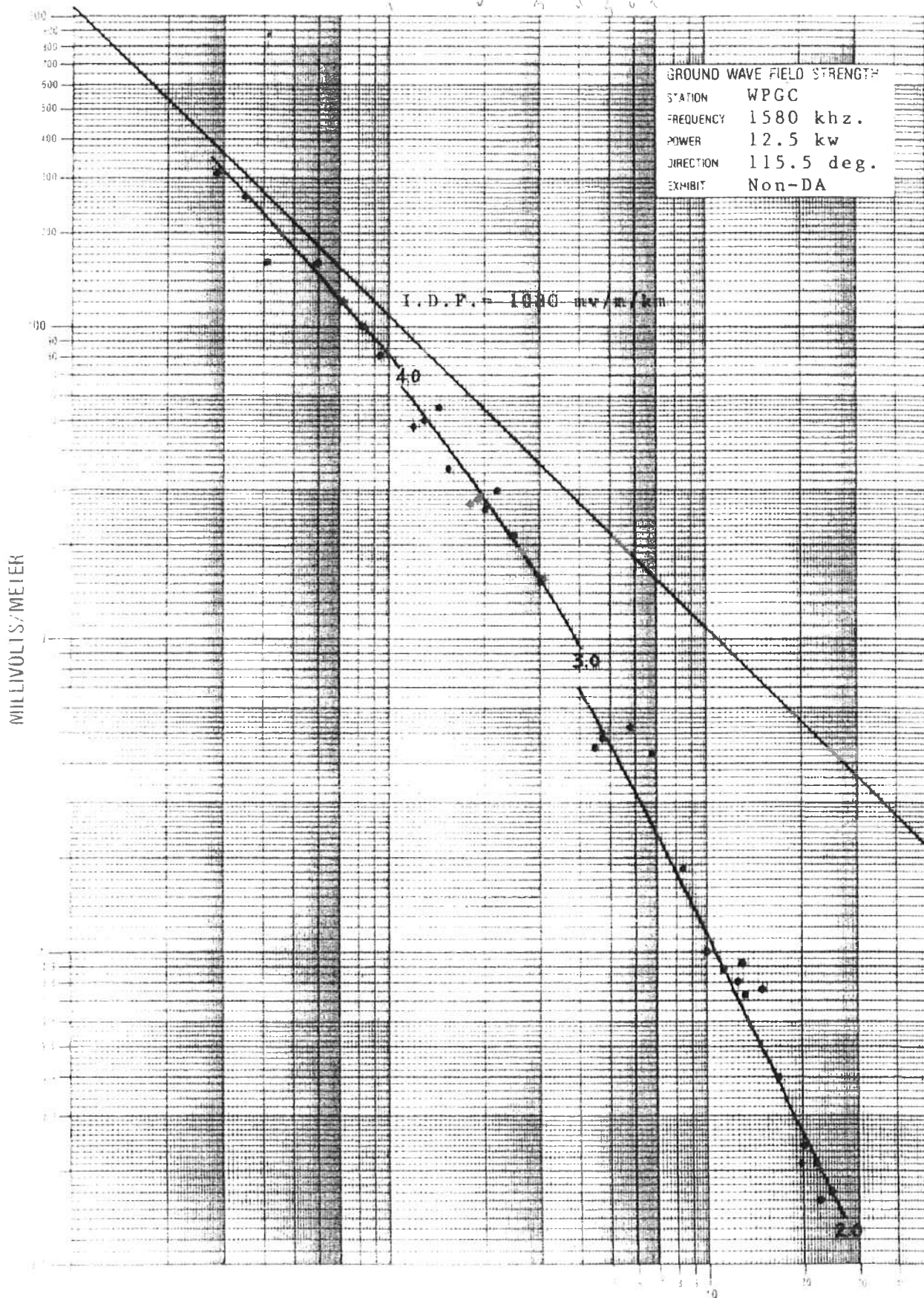
Average Log Ratio: -1.9682

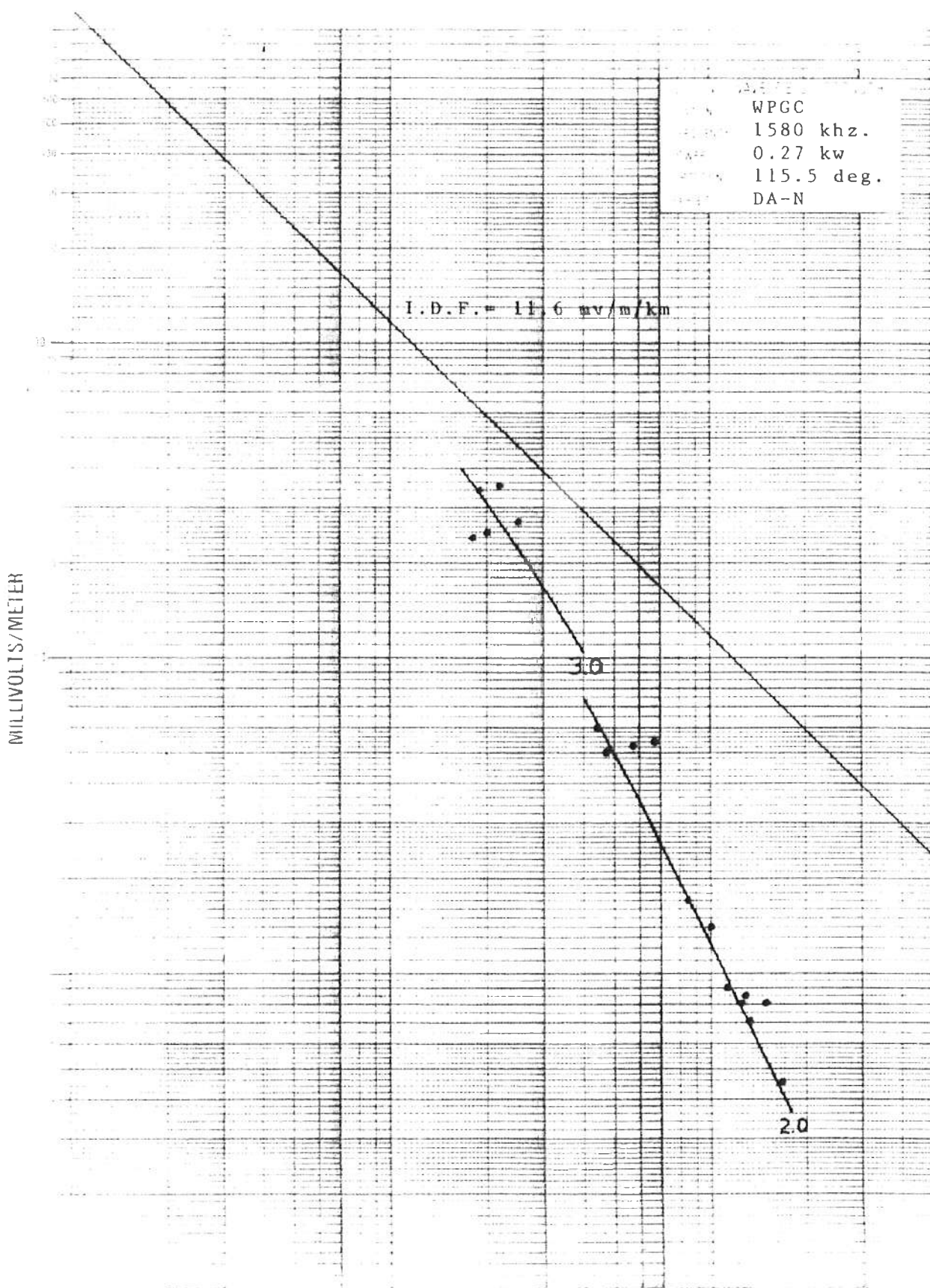
Antilog: .0108

Nondirectional Analyzed Field Strength (mV/m): 1080

Directional Analyzed Field Strength (mV/m): 11.6

KILOMETERS FROM ANTENNA





DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

RADIAL 141 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N MEASUREMENT DATE	TIME
1	0.29	11-30-90	EB 1455		
2	0.44	"	1451		
3	0.61	"	1446		
4	0.77	"	1442		
5	1.01	"	1435		
6	1.21	"	1430		
7	1.40	"	1422		
8	1.58	"	1417		
9	1.72	"	1411		
10	1.93	"	1401	12-10-90	EB 1428
11	2.11	"	1355	"	1425
12	2.29	"	1348	"	1422
13	2.45	"	1340	"	1418
14	2.59	"	1334	"	1415
15	2.69	"	1329	"	1413
17	3.06	"	1320	"	1408
19	3.94	"	1310	"	1402
21	4.67	11-29-90	EB 1510	"	1355
23	5.47	"	1500	"	1349
25	7.16	"	1449	"	1343
26	7.57	"	1442	"	1339
28	9.66	"	1430	"	1333
30	11.27	"	1420	"	1328
32	12.72	"	1411	"	1321
34	14.72	"	1403	"	1317
36	16.42	"	1350	"	1312
38	18.35	"	1336	"	1306
40	21.17	11-28-90	EB 1505	12-13-90	EB 1447
42	23.59	"	1445	"	1439
44	26.44	"	1422	"	1429
46	29.54	"	1350	"	1420

WPGC RADIATION ANALYSIS at 141.0 degrees True

Point Number	Distance (kM)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.29	2400		
2	0.44	1700		
3	0.61	1450		
4	0.77	1120		
5	1.01	680		
6	1.21	540		
7	1.40	370		
8	1.58	320		
9	1.72	330		
10	1.93	245	38.0	-0.8094
11	2.11	225	30.0	-0.8751
12	2.29	150	19.5	-0.8861
13	2.45	180	24.0	-0.8751
14	2.59	170	23.0	-0.8687
15	2.69	155	19.6	-0.8981
17	3.06	145	19.0	-0.8826
19	3.94	138	17.5	-0.8968
21	4.67	118	20.0	-0.7709
23	5.47	65.0	9.00	-0.8587
25	7.16	33.0	4.10	-0.9057
26	7.57	38.0	5.10	-0.8722
28	9.66	14.5	2.35	-0.7903
30	11.27	10.5	1.45	-0.8598
32	12.72	5.40	0.74	-0.8632
34	14.72	4.60	0.61	-0.8774
36	16.42	2.60	0.35	-0.8709
38	18.35	2.45	0.35	-0.8451
40	21.17	2.20	0.28	-0.8953
42	23.59	1.86	0.25	-0.8716
44	26.44	1.35	0.19	-0.8516
46	29.54	1.50	0.22	-0.8337

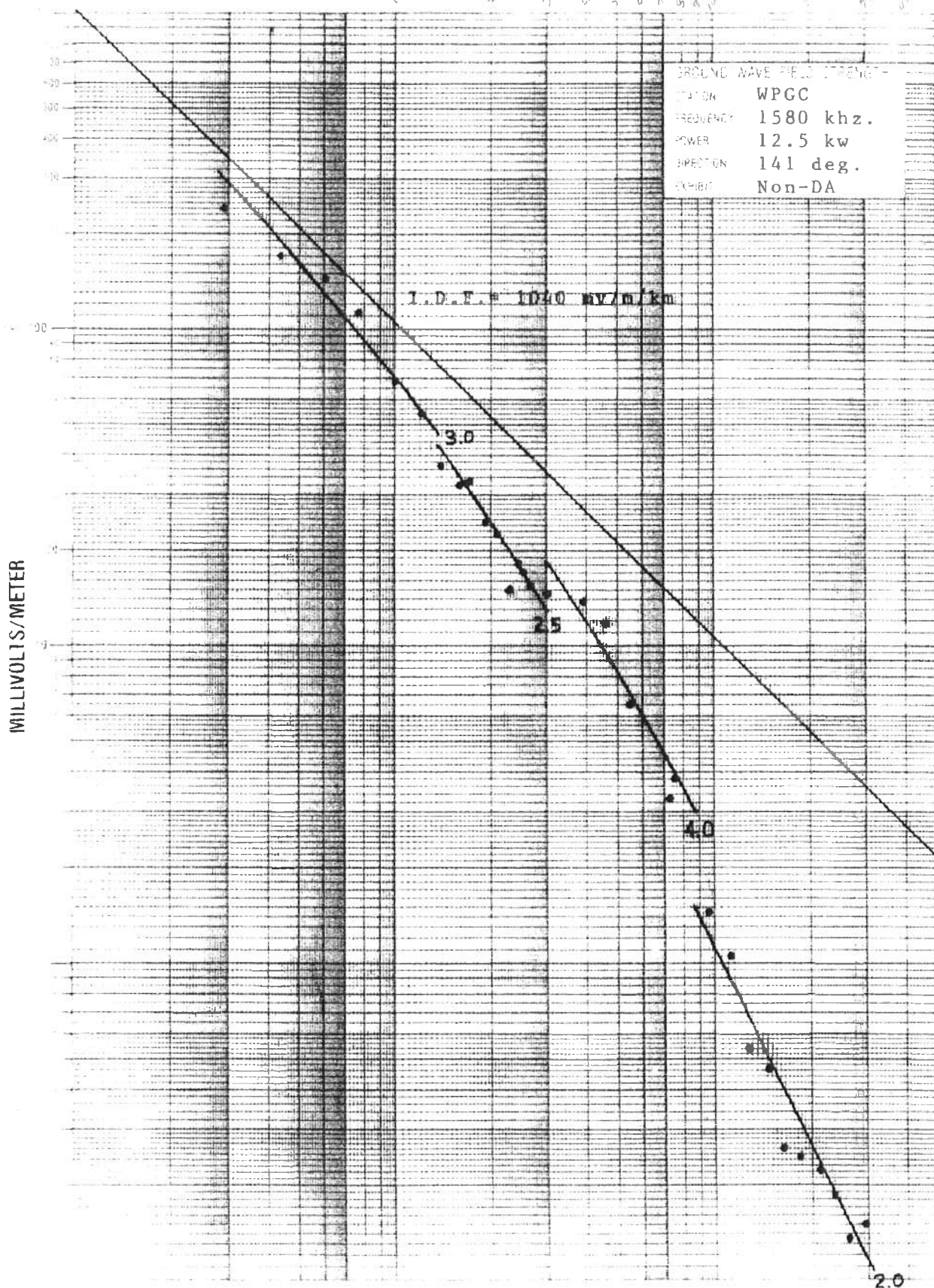
Average Log Ratio: -0.8617

Antilog: .1375

Nondirectional Analyzed Field Strength (mV/m): 1040

Directional Analyzed Field Strength (mV/m): 143

KILOMETERS FROM ANTENNA



METERS FROM ANTENNA

DATE AND TIME MEASUREMENT LOG
 DA-N PROOF OF PERFORMANCE
 WPGC-AM 1580 KHZ. 50/.27 KW DA-2
 MORNINGSIDE, MARYLAND
 DECEMBER, 1990

RADIAL 183.5 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N DATE	MEASUREMENT TIME
1	0.23	11-26-90	RD 1355		
2	0.32	"	1402		
3	0.41	"	1409		
4	0.58	"	1418		
5	0.63	"	1425		
6	1.10	"	1430		
7	1.21	"	1434		
8	1.39	"	1437		
9	1.50	"	1441		
10	1.74	"	1443		
11	1.82	"	1446	12-14-90	RD 1237
12	1.90	"	1450	"	1239
13	2.21	"	1500	"	1233
14	2.32	"	1502	"	1232
15	2.65	"	1512	"	1218
16	2.75	"	1516	"	1222
17	2.93	"	1525	"	1225
18	3.90	11-27-90	RD 1414	"	1300
19	4.35	"	1411	"	1303
20	5.15	"	1424	"	1312
21	5.85	"	1430	"	1315
22	6.30	"	1433	"	1319
23	6.85	"	1439	"	1326
24	8.10	"	1447	"	1330
25	9.20	"	1455	"	1334
26	9.80	11-30-90	RD 1404	"	1340
27	10.65	"	1359	"	1443
28	11.71	"	1349	"	1346
29	12.60	"	1337	"	1350
30	13.30	"	1328	"	1355
31	14.68	"	1321	"	1400
32	18.40	"	1255	"	1414
33	20.40	"	1242	"	1420
34	24.30	"	1232	"	1426
35	24.62	"	1227	"	1429
36	26.10	"	1215	"	1436
37	26.80	"	1210	"	1440

WPGC RADIATION ANALYSIS at 183.5 degrees True

Point Number	Distance (km)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA=N (mV/m)	
1	0.23	3700		
2	0.32	3000		
3	0.41	2600		
4	0.58	1300		
5	0.63	1300		
6	1.10	800		
7	1.21	680		
8	1.39	720		
9	1.50	540		
10	1.74	500		
11	1.82	490	78.0	-0.7981
12	1.90	400	60.0	-0.8239
13	2.21	280	53.0	-0.7229
14	2.32	320	64.0	-0.6990
15	2.65	265	50.0	-0.7243
16	2.75	260	54.0	-0.6826
17	2.93	225	38.0	-0.7724
18	3.90	100	20.0	-0.6990
19	4.35	100	19.0	-0.7212
20	5.15	71.0	13.0	-0.7373
21	5.85	42.0	7.00	-0.7782
22	6.30	39.0	6.80	-0.7586
23	6.85	35.0	6.70	-0.7180
24	8.10	25.0	4.70	-0.7258
25	9.20	14.0	3.25	-0.6342
26	9.80	11.0	2.60	-0.6264
27	10.65	13.5	3.10	-0.6390
28	11.71	8.50	1.80	-0.6741
29	12.60	7.50	1.50	-0.6990
30	13.30	9.10	1.90	-0.6803
31	14.68	5.60	1.10	-0.7068
32	18.40	2.60	0.65	-0.6021
33	20.40	1.90	0.40	-0.6767
34	24.30	1.70	0.32	-0.7253
35	24.62	1.65	0.30	-0.7404
36	26.10	1.75	0.28	-0.7959
37	26.80	1.40	0.28	-0.6990

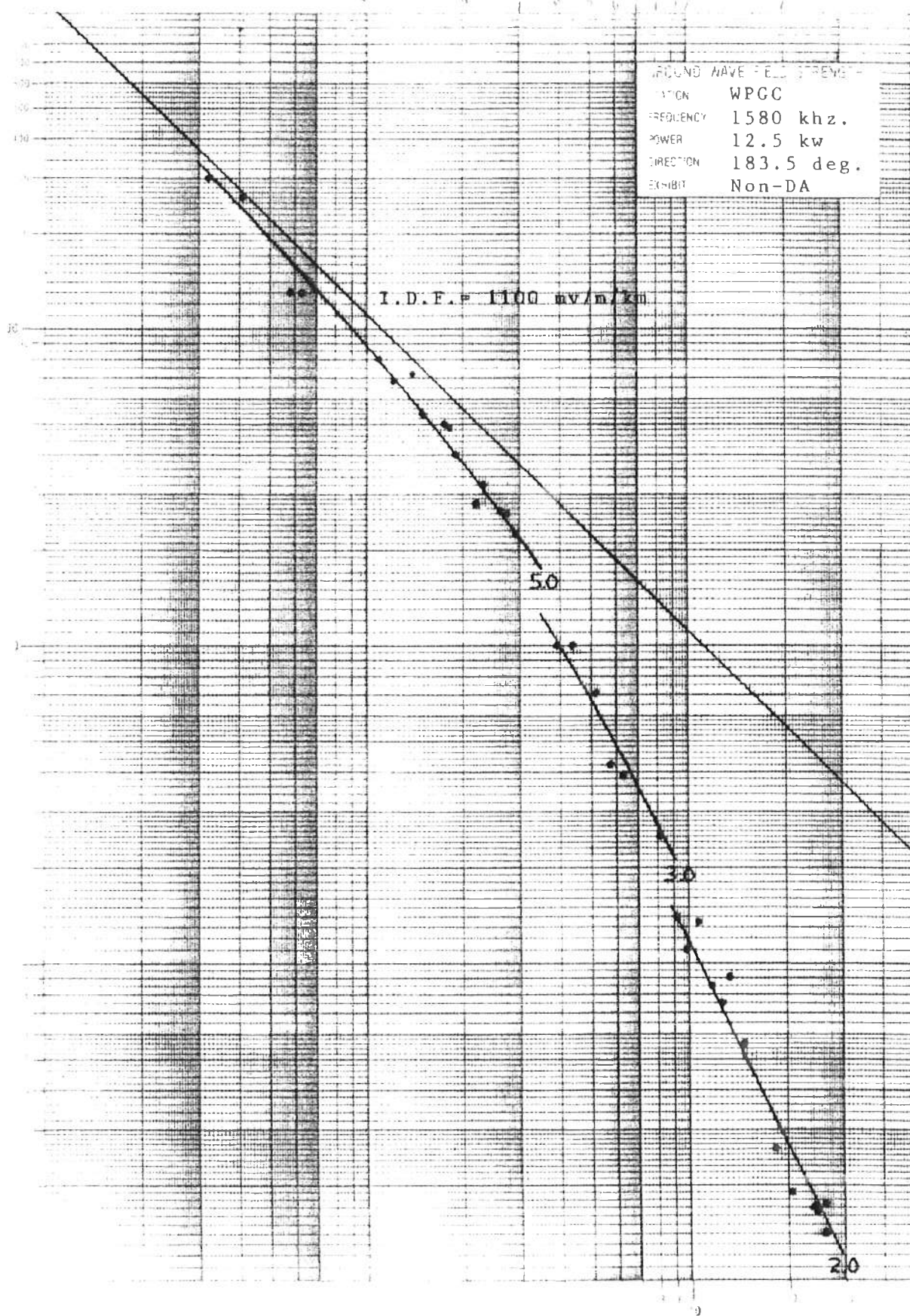
Average Log Ratio: -0.7133

Antilog: .1935

Nondirectional Analyzed Field Strength (mV/m): 1100

Directional Analyzed Field Strength (mV/m): 213

MILLIVOLTS/METER



DISTANCE FROM ANTENNA

MILLIVOLTS/METER

20

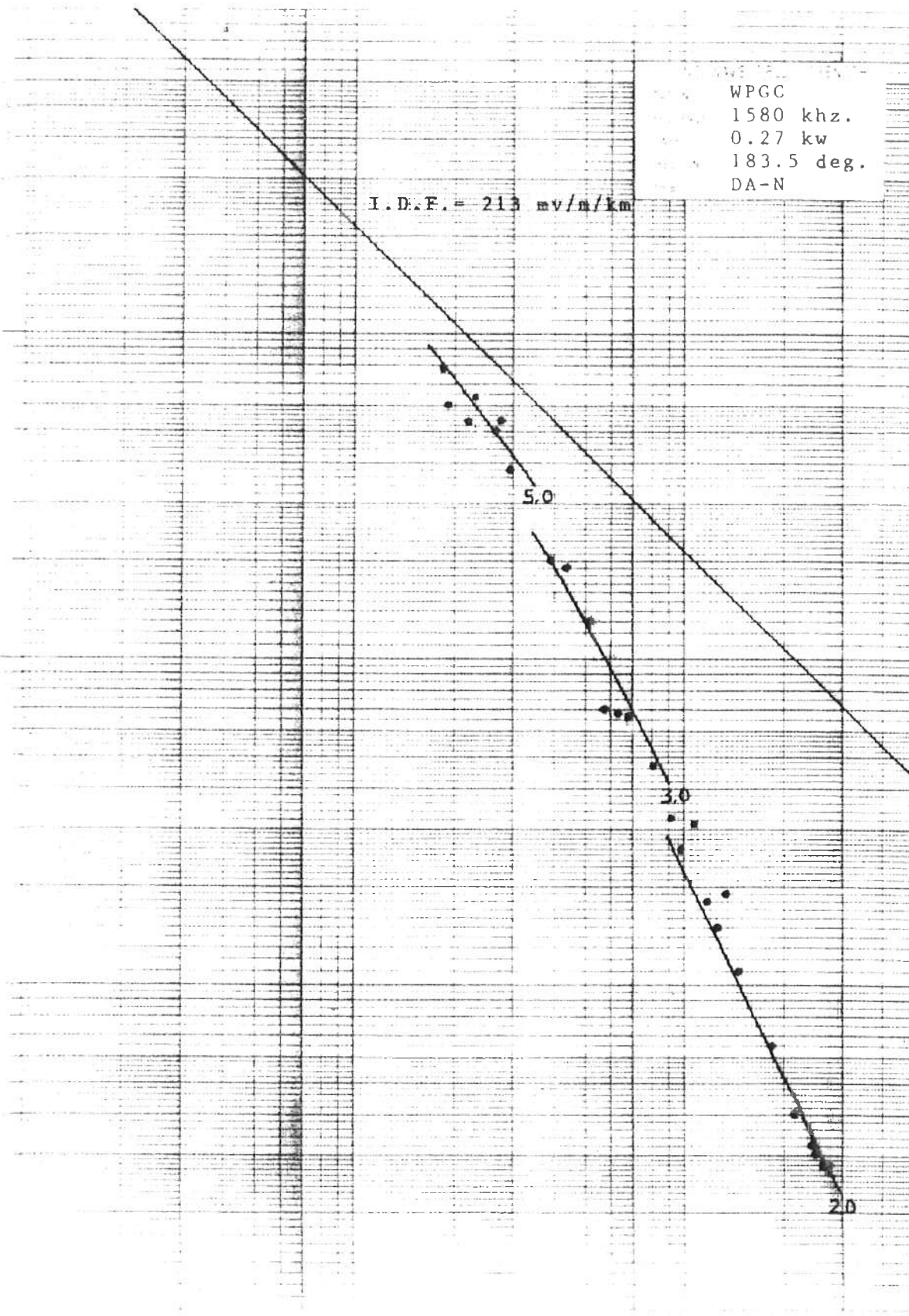
I.D.F. = 213 mv/m/km

5.0

3.0

2.0

WPGC
1580 khz.
0.27 kw
183.5 deg.
DA-N



DATE AND TIME MEASUREMENT LOG
 DA-N PROOF OF PERFORMANCE
 WPGC-AM 1580 KHZ. 50/.27 KW DA-2
 MORNINGSIDE, MARYLAND
 DECEMBER, 1990

RADIAL 205 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT		DA-N MEASUREMENT	
		DATE	TIME	DATE	TIME
1	0.27	11-26-90	EB 1405		
2	0.37	"	1412		
3	0.45	"	1416		
4	0.69	"	1426		
5	0.81	"	1435		
6	1.05	"	1442		
7	1.22	"	1447		
8	1.42	"	1455		
9	1.55	"	1500		
10	1.85	11-24-90	EB 1321	12-11-90	EB 1331
12	2.25	"	1328	"	1336
14	3.06	"	1347	"	1348
17	3.61	"	1353	"	1353
19	4.09	"	1359	"	1357
21	4.96	"	1410	"	1412
24	5.65	"	1425	"	1417
26	6.09	"	1432	"	1421
28	6.76	"	1439	"	1425
31	7.86	"	1455	"	1431
34	8.86	"	1510	"	1439
37	11.14	11-25-90	EB 1245	12-12-90	EB 1326
40	12.64	"	1254	"	1331
42	13.83	"	1307	"	1336
43	14.97	"	1320	"	1342
46	18.52	"	1334	"	1349
48	19.32	"	1341	"	1353
50	22.38	"	1355	"	1359
52	24.10	"	1410	"	1409
54	27.70	"	1424	"	1418
56	31.10	"	1445	"	1429
57	33.50	"	1500	"	1435

WPGC RADIATION ANALYSIS at 205.0 degrees True

Point Number	Distance (km)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.27	3200		
2	0.37	2700		
3	0.45	2400		
4	0.69	1550		
5	0.81	1260		
6	1.05	700		
7	1.22	700		
8	1.42	650		
9	1.55	500		
10	1.85	480	90.0	-0.7270
12	2.25	350	65.0	-0.7312
14	3.06	180	36.0	-0.6990
17	3.61	148	29.0	-0.7079
19	4.09	90.0	13.0	-0.8403
21	4.96	65.0	11.2	-0.7637
24	5.65	80.0	18.0	-0.6478
26	6.09	53.0	10.4	-0.7072
28	6.76	54.0	11.0	-0.6910
31	7.86	32.0	7.00	-0.6601
34	8.86	27.5	6.50	-0.6264
37	11.14	12.0	2.50	-0.6812
40	12.64	8.00	1.62	-0.6936
42	13.83	6.20	1.20	-0.7132
43	14.97	4.90	0.96	-0.7079
46	18.52	2.55	0.50	-0.7076
48	19.32	2.70	0.50	-0.7324
50	22.38	2.60	0.50	-0.7160
52	24.10	2.25	0.44	-0.7087
54	27.70	1.25	0.24	-0.7167
56	31.10	1.00	0.22	-0.6576
57	33.50	0.94	0.18	-0.7179

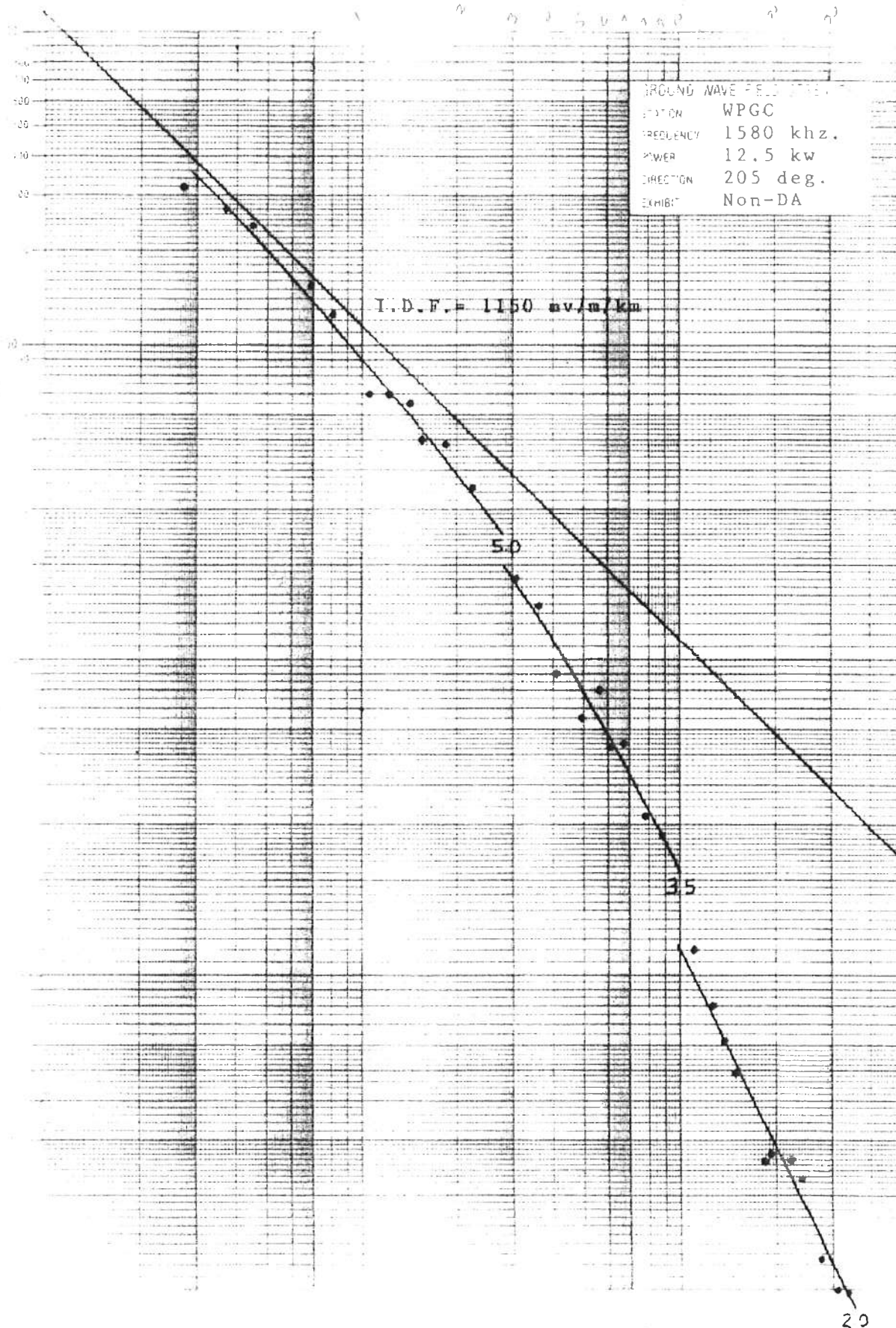
Average Log Ratio: -0.7070

Antilog: .1963

Nondirectional Analyzed Field Strength (mV/m): 1150

Directional Analyzed Field Strength (mV/m): 226

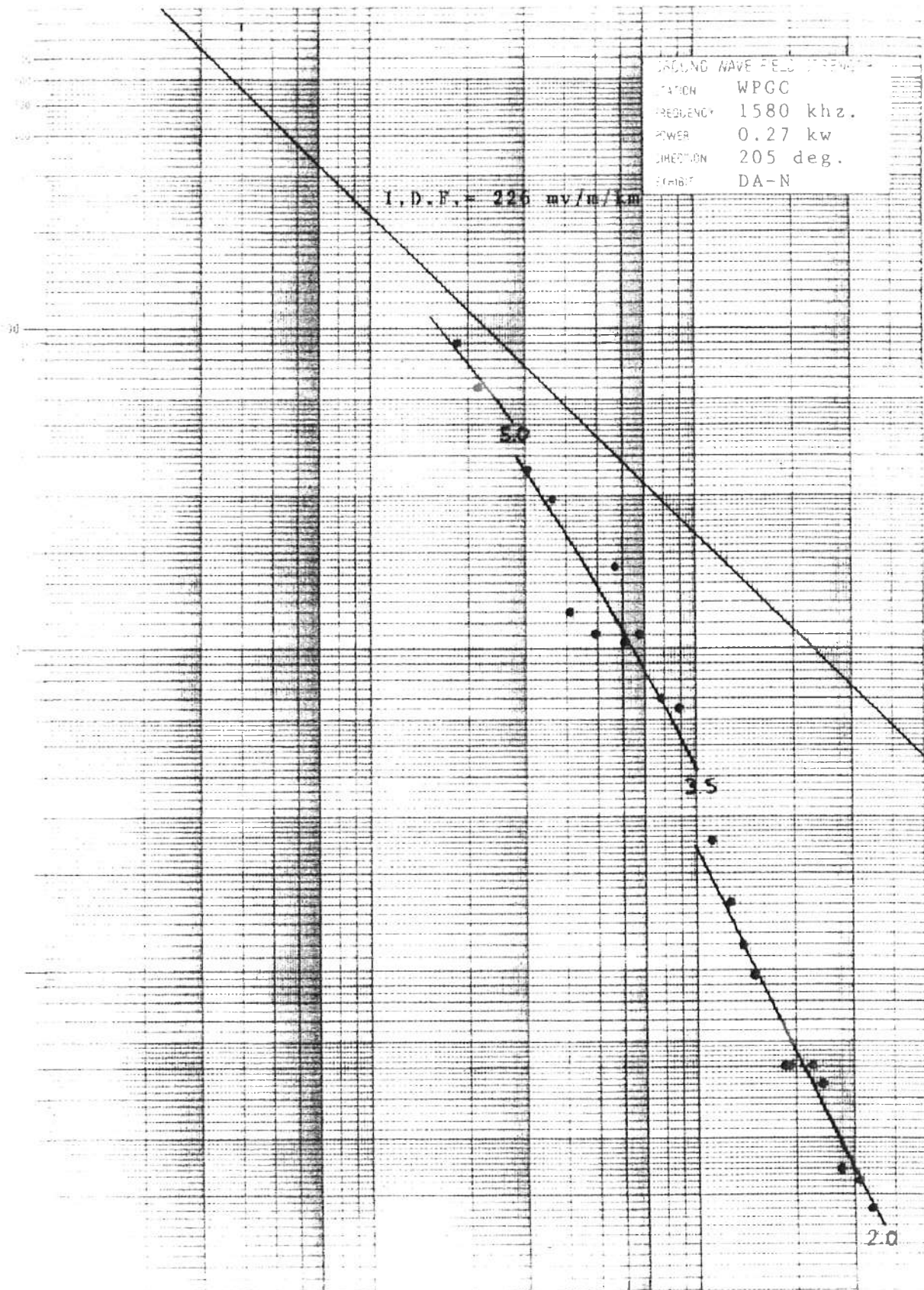
MILLIVOLTS/METER



MILLIVOLTS/METER

GROUND WAVE FIELD STRENGTH
 STATION WPGC
 FREQUENCY 1580 khz.
 POWER 0.27 kw
 DIRECTION 205 deg.
 EXHIBIT DA-N

I.D.F. = 225 mv/m/km



DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

RADIAL 254.5 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N DATE	MEASUREMENT TIME
1	0.20	11-29-90	RD 1450		
2	0.81	"	1441		
3	0.90	"	1436		
4	1.05	"	1432		
5	1.18	"	1424		
6	1.25	"	1427		
7	1.50	"	1417		
8	1.70	"	1406		
9	1.87	"	1410		
10	2.00	"	1401	12-13-90	RD 1318
11	2.11	"	1358	"	1322
12	2.40	"	1347	"	1327
13	2.53	"	1339	"	1330
14	2.80	"	1334	"	1333
15	2.89	"	1331	"	1335
16	3.10	"	1326	"	1337
17	3.30	"	1321	"	1339
18	4.02	"	1312	"	1345
19	4.39	11-27-90	RD 1327	"	1348
20	4.89	"	1330	"	1351
21	5.50	"	1339	"	1358
22	6.00	"	1444	"	1404
23	6.35	"	1347	"	1407
24	7.02	"	1359	"	1412
25	7.50	11-29-90	RD 1212	"	1418
26	8.10	"	1220	"	1423
27	8.38	"	1233	"	1429
28	8.95	"	1240	"	1435
29	9.33	"	1247	"	1439
30	9.87	11-20-90	TM 1517	12-14-90	TM 1503
31	10.20	"	1508	"	1459
32	13.52	"	1442	"	1440
33	14.30	"	1433	"	1431
34	14.72	"	1424	"	1427
35	15.63	"	1412	"	1422
36	16.71	"	1405	"	1418
37	17.45	"	1346	"	1413
38	18.84	"	1354	"	1407
39	19.85	11-29-90	TM 1532	"	1401
40	20.66	"	1526	"	1355

RADIAL 254.5 DEGREES CONTINUED

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N DATE	MEASUREMENT TIME
41	21.25	11-29-90	TM 1510	12-14-90	TM 1350
42	22.60	"	1500	"	1344
43	23.38	"	1445	"	1339
44	24.01	"	1440	"	1336
45	24.38	"	1431	"	1332
46	25.91	"	1418	"	1326
47	26.93	"	1403	"	1322
48	27.31	"	1358	"	1318
49	28.39	"	1350	"	1313
50	29.13	"	1343	"	1309

WPGC RADIATION ANALYSIS at 254.5 degrees True

Point Number	Distance (km)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.20	5000		
2	0.81	970		
3	0.90	880		
4	1.05	700		
5	1.18	640		
6	1.25	580		
7	1.50	500		
8	1.70	410		
9	1.87	275		
10	2.00	250	64.0	-0.5918
11	2.11	215	62.0	-0.5400
12	2.40	170	52.0	-0.5144
13	2.53	163	48.0	-0.5309
14	2.80	142	40.0	-0.5502
15	2.89	130	40.0	-0.5119
16	3.10	110	31.0	-0.5500
17	3.30	120	35.0	-0.5351
18	4.02	90.0	25.0	-0.5563
19	4.39	80.0	21.5	-0.5707
20	4.89	64.0	17.2	-0.5707
21	5.50	54.0	15.0	-0.5563
22	6.00	52.0	14.2	-0.5637
23	6.35	40.0	11.8	-0.5302
24	7.02	23.0	5.80	-0.5983
25	7.50	22.0	6.40	-0.5362
26	8.10	22.0	6.20	-0.5500
27	8.38	27.0	5.90	-0.6605
28	8.95	18.0	5.00	-0.5563
29	9.33	17.5	4.70	-0.5709
30	9.87	11.8	3.15	-0.5736
31	10.20	13.4	3.60	-0.5708
32	13.52	9.80	2.55	-0.5847
33	14.30	9.70	2.50	-0.5888
34	14.72	9.30	2.52	-0.5671
35	15.63	7.20	1.90	-0.5786
36	16.71	5.80	1.53	-0.5787
38	17.45	4.85	1.40	-0.5396
37	18.84	4.20	1.20	-0.5441
39	19.85	3.60	0.88	-0.6118
40	20.66	3.10	0.76	-0.6105
41	21.25	2.10	0.58	-0.5588
42	22.60	3.00	0.52	-0.7611
43	23.38	2.12	0.50	-0.6274
44	24.01	1.60	0.37	-0.6359
45	24.38	1.48	0.37	-0.6021
46	25.91	1.77	0.41	-0.6352
47	26.93	1.45	0.36	-0.6051
48	27.31	1.30	0.28	-0.6668
49	28.39	1.50	0.40	-0.5740
50	29.13	1.20	0.21	-0.7570

Average Log Ratio: -0.5833

Antilog: .2610

Nondirectional Analyzed Field Strength (mV/m): 1125

Directional Analyzed Field Strength (mV/m): 294

WPGC, FROM ANTENNA

MILLIVOLTS/METER

WPGC
1580 khz.
12.5 kw
254.5 deg.
Non-DA

I.D.F. = 1125 mv/m/km

3.0

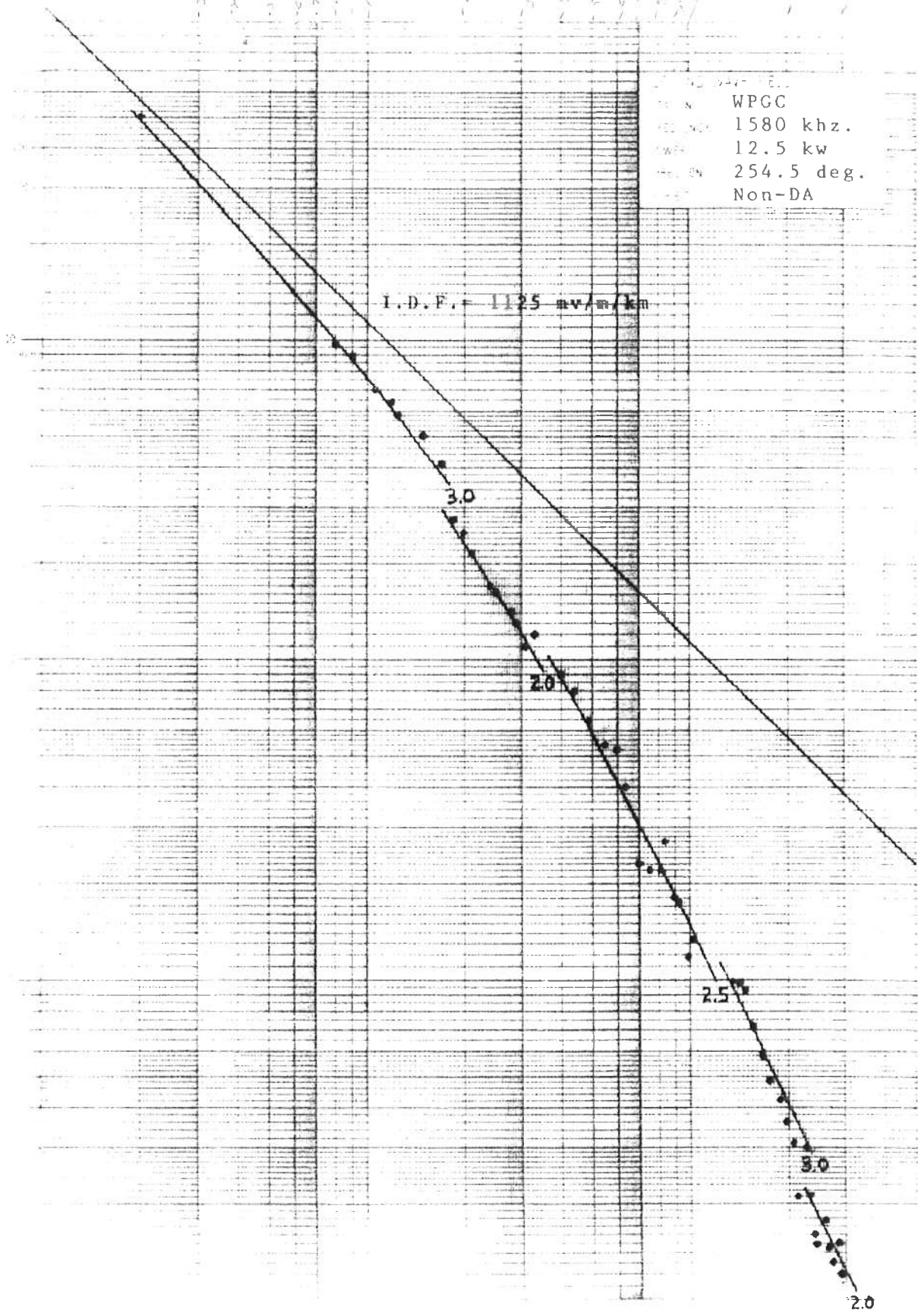
2.0

2.5

3.0

2.0

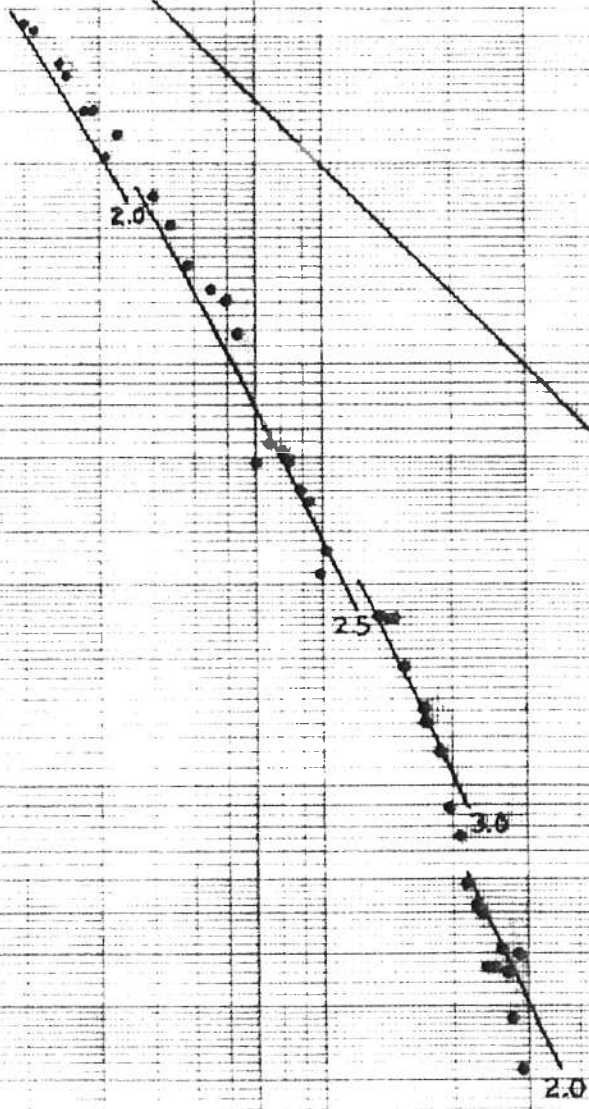
WPGC, FROM ANTENNA



WPGC 1580 kHz

I.D.F. # 294
mv/m/km

WPGC
1580 khz.
0.27 kw
254.5 deg.
DA-N



DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

RADIAL 277 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N MEASUREMENT DATE	TIME
1	0.48	11-28-90 RD	1340		
2	0.64	"	1343		
3	0.81	"	1346		
4	1.05	"	1353		
5	1.14	"	1350		
6	1.29	"	1357		
8	1.61	"	1406		
9	1.77	"	1412		
10	2.01	"	1415	12-12-90 RD	1336
11	2.11	"	1419	"	1338
12	2.30	"	1421	"	1340
13	2.41	"	1423	"	1344
14	2.49	"	1427	"	1346
15	2.70	"	1440	"	1353
16	2.93	"	1437	"	1349
17	3.00	"	1445	"	1352
18	3.84	"	1456	"	1356
19	4.55	"	1505	"	1408
23	5.99	11-25-90 RD	1335		
24	6.28	"	1340	"	1417
25	7.62	"	1349	"	1420
26	8.05	"	1357	"	1423
27	8.29	"	1400	"	1426
28	8.69	"	1404	"	1429
29	9.13	"	1408	"	1434
30	9.60	"	1413	"	1437
31	10.23	"	1418	"	1439
32	11.45	"	1427	"	1443
33	12.88	"	1442	"	1447
34	14.85	"	1452	"	1454
35	16.71	"	1506	"	1502
36	17.45	11-26-90 TM	1449	12-13-90 TM	1406
37	18.60	"	1440	"	1400
39	20.27	"	1428	"	1355
41	22.80	"	1418	"	1350
43	25.62	"	1404	"	1343
45	28.25	"	1344	"	1335
47	30.18	"	1330	"	1326

WPGC RADIATION ANALYSIS at 277.0 degrees True

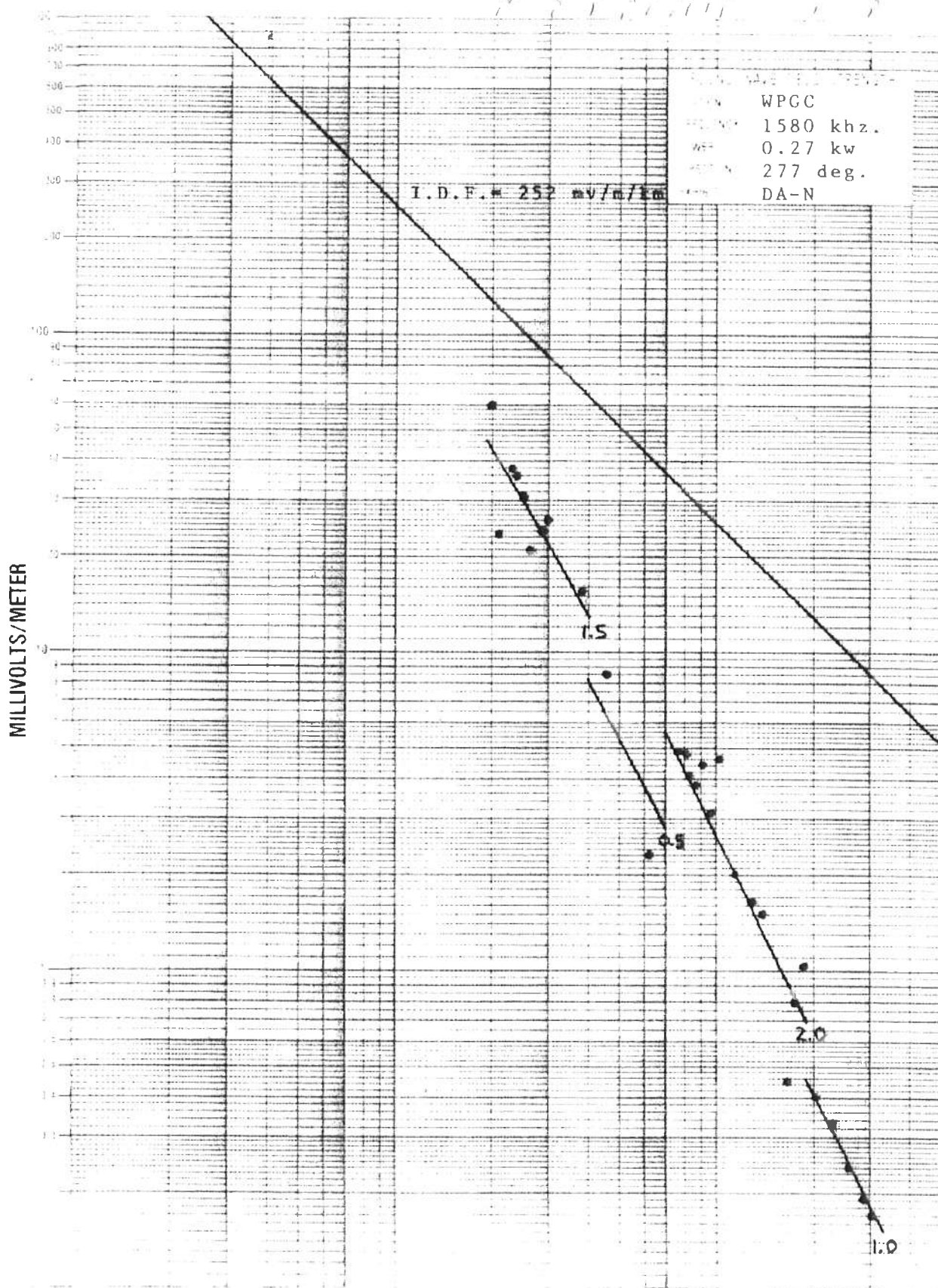
Point Number	Distance (km)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.48	1700		
2	0.64	1000		
3	0.81	720		
4	1.05	520		
5	1.14	500		
6	1.29	450		
8	1.61	310		
9	1.77	290		
10	2.01	280	60.0	=0.6690
11	2.11	100	23.5	=0.6289
12	2.30	165	38.0	-0.6377
13	2.41	150	36.0	=0.6198
14	2.49	135	31.0	-0.6390
15	2.70	100	21.0	-0.6778
16	2.93	100	24.0	-0.6198
17	3.00	110	26.0	-0.6264
18	3.84	73.0	15.5	=0.6730
19	4.55	33.0	8.50	-0.5891
23	5.99	17.5		
24	6.28	10.8	2.30	=0.6717
25	7.62	22.0	4.90	-0.6522
26	8.05	19.0	4.80	=0.5975
27	8.29	19.2	4.10	=0.6705
28	8.69	16.0	3.80	-0.6243
29	9.13	20.0	4.40	=0.6576
30	9.60	13.2	3.10	=0.6292
31	10.23	20.0	4.60	-0.6383
32	11.45	8.20	2.00	=0.6128
33	12.88	7.00	1.65	-0.6276
34	14.85	6.50	1.50	=0.6368
35	16.71	2.30	0.45	-0.7085
36	17.45	3.50	0.80	=0.6410
37	18.60	3.80	1.05	-0.5586
39	20.27	1.80	0.40	-0.6532
41	22.80	1.55	0.33	-0.6718
43	25.62	1.15	0.24	-0.6805
45	28.25	0.80	0.19	=0.6243
47	30.18	0.72	0.17	-0.6269

Average Log Ratio: =0.6401

Antilog: .2290

Nondirectional Analyzed Field Strength (mV/m): 1100

Directional Analyzed Field Strength (mV/m): 252



DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

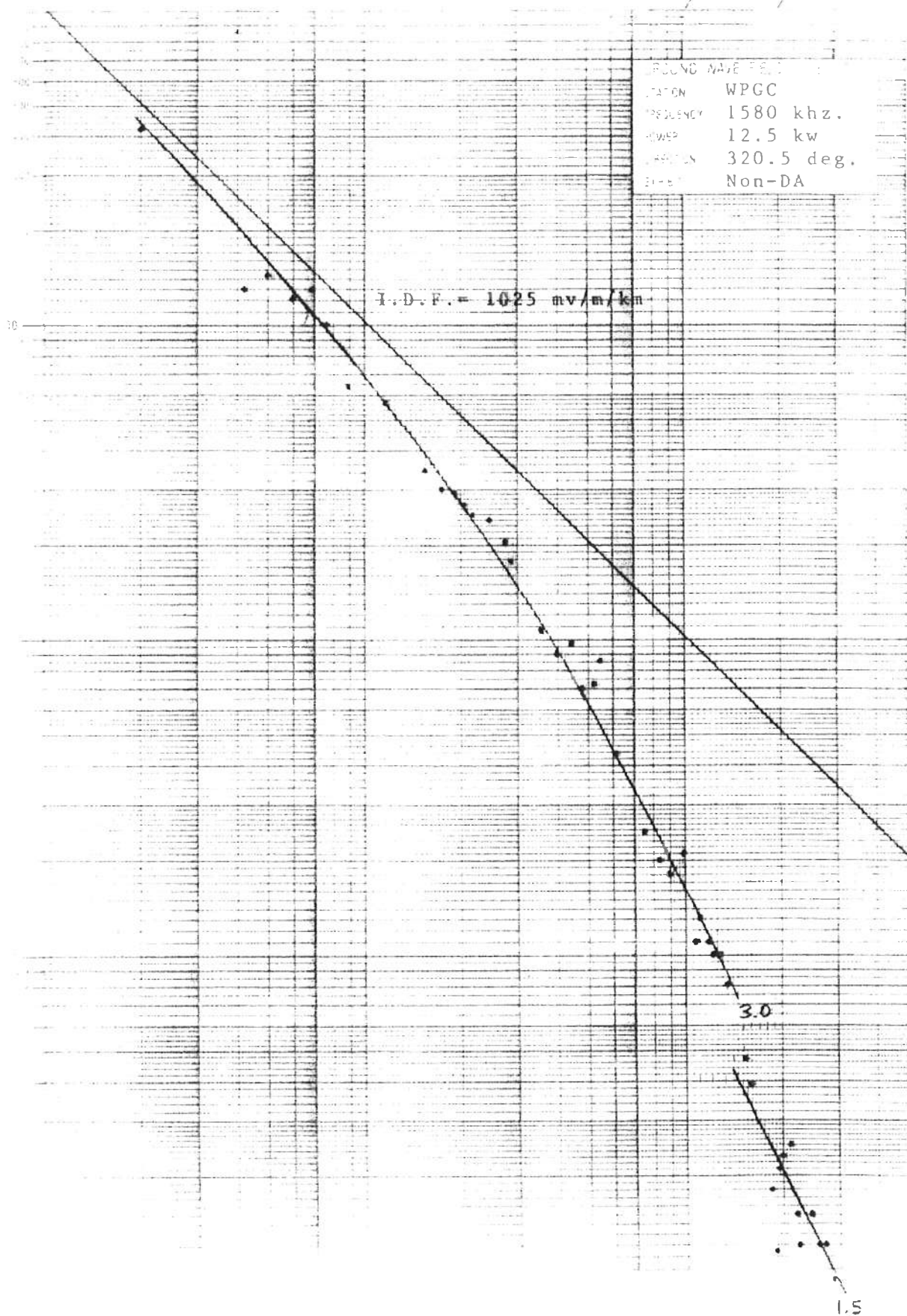
RADIAL 320.5 DEGREES

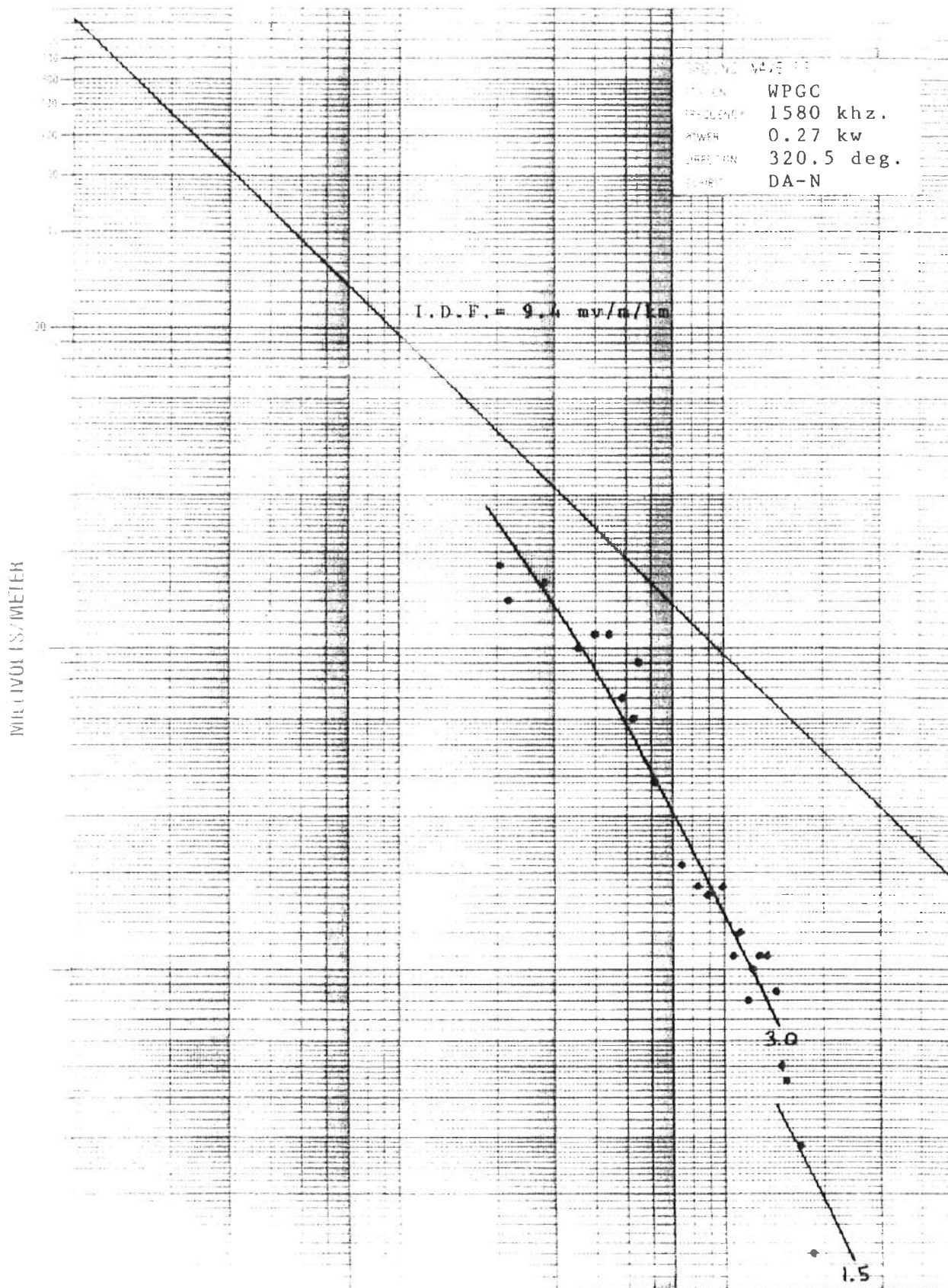
POINT #	DIST.	Non-DA MEASUREMENT		DA-N MEASUREMENT	
		DATE	TIME	DATE	TIME
1	0.20	11-30-90	TM 1512		
2	0.42	"	1440		
3	0.50	"	1446		
4	0.60	"	1448		
5	0.69	"	1450		
6	0.76	"	1430		
7	0.89	"	1426		
8	1.16	"	1420		
9	1.54	"	1416		
10	1.78	"	1413		
11	1.91	"	1407		
12	2.04	11-19-90	TM 1349	12-05-90	TM 1330
13	2.17	"	1352	"	1332
14	2.44	"	1355		
15	2.69	"	1400		
16	2.80	"	1403	"	1341
17	3.53	"	1408	"	1345
18	4.00	"	1413	"	1350
19	4.40	"	1416	"	1353
20	4.87	"	1420	"	1356
21	5.19	"	1423	"	1400
22	5.40	"	1427	"	1404
23	6.12	"	1435	"	1410
24	7.46	"	1440	"	1414
25	8.30	11-14-90	RD 1135	12-06-90	RD 1440
26	8.97	"	1145	"	1505
27	9.96	"	1148	"	1444
28	10.70	"	1203	"	1453
29	11.09	"	1207	"	1451
30	11.77	"	1212	"	1457
31	12.08	"	1219	"	1309
32	12.68	"	1225	"	1313
33	13.43	"	1229	"	1319
34	14.22	"	1249	"	1325
35	14.90	"	1300	"	1330
36	15.35	"	1318	"	1336
37	16.95	"	1334	"	1353
38	18.43	"	1340	"	1400
39	18.80	"	1357		
40	19.45	"	1403		

RADIAL 320.5 DEGREES CONTINUED

POINT #	DIST.	Non-DA MEASUREMENT	
		DATE	TIME
41	20.15	11-14-90 RD	1410
42	21.12	"	1418
43	21.95	"	1425
44	22.25	"	1442
45	24.55	"	1450
46	25.80	"	1456
47	26.80	"	1504
48	28.20	"	1519
49	29.75	"	1527

MILLIVOLTS/METER





WPGC RADIATION ANALYSIS at 334.5 degrees True

Point Number	Distance (km)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.21	4000		
2	0.50	1650		
3	0.58	1300		
4	0.72	1200		
5	0.83	850		
6	1.03	620		
7	1.30	430		
8	1.48	290		
9	1.81	233		
10	2.08	230	3.70	-1.7935
11	2.27	202	4.70	-1.6333
12	2.39	197	3.60	-1.7382
13	2.58	188	2.30	-1.9124
14	2.74	132	2.30	-1.7588
15	3.30	103	1.40	-1.8667
16	3.72	100	1.80	-1.7447
17	4.30	97.0	1.30	-1.8728
18	4.64	73.0	2.00	-1.5623
19	4.75	65.0	1.40	-1.6668
20	5.00	60.0	1.80	-1.5229
21	6.10	31.0	0.75	-1.6163
22	6.55	30.0		
23	7.30	44.0	1.25	-1.5465
24	8.20	43.0	1.10	-1.5921
25	8.80	25.0	0.62	-1.6055
26	9.40	26.0	0.58	-1.6515
27	10.30	16.2	0.36	-1.6532
28	11.56	9.20	0.20	-1.6628
29	12.10	10.0	0.16	-1.8097
30	12.60	10.2	0.19	-1.7298
31	13.48	7.50	0.14	-1.7447
32	14.24	7.50	0.16	-1.6709
33	15.30	4.70	0.11	-1.6307
34	16.50	4.40	0.10	-1.6435
35	17.41	3.50	.070	-1.6990
36	17.91	2.50	.060	-1.6198
37	18.61	3.00	.065	-1.6642
38	19.80	2.50	.040	-1.7959
39	21.00	1.90	.035	-1.7347
40	22.24	1.80	.035	-1.7112
41	24.50	1.05		
42	25.32	1.10		
43	27.70	0.91		
44	29.10	1.40		
45	30.00	1.00		
46	30.50	0.98		

Average Log Ratio: -1.6952

Antilog: .0202

Nondirectional Analyzed Field Strength (mV/m): 1020
 Directional Analyzed Field Strength (mV/m): 20.6

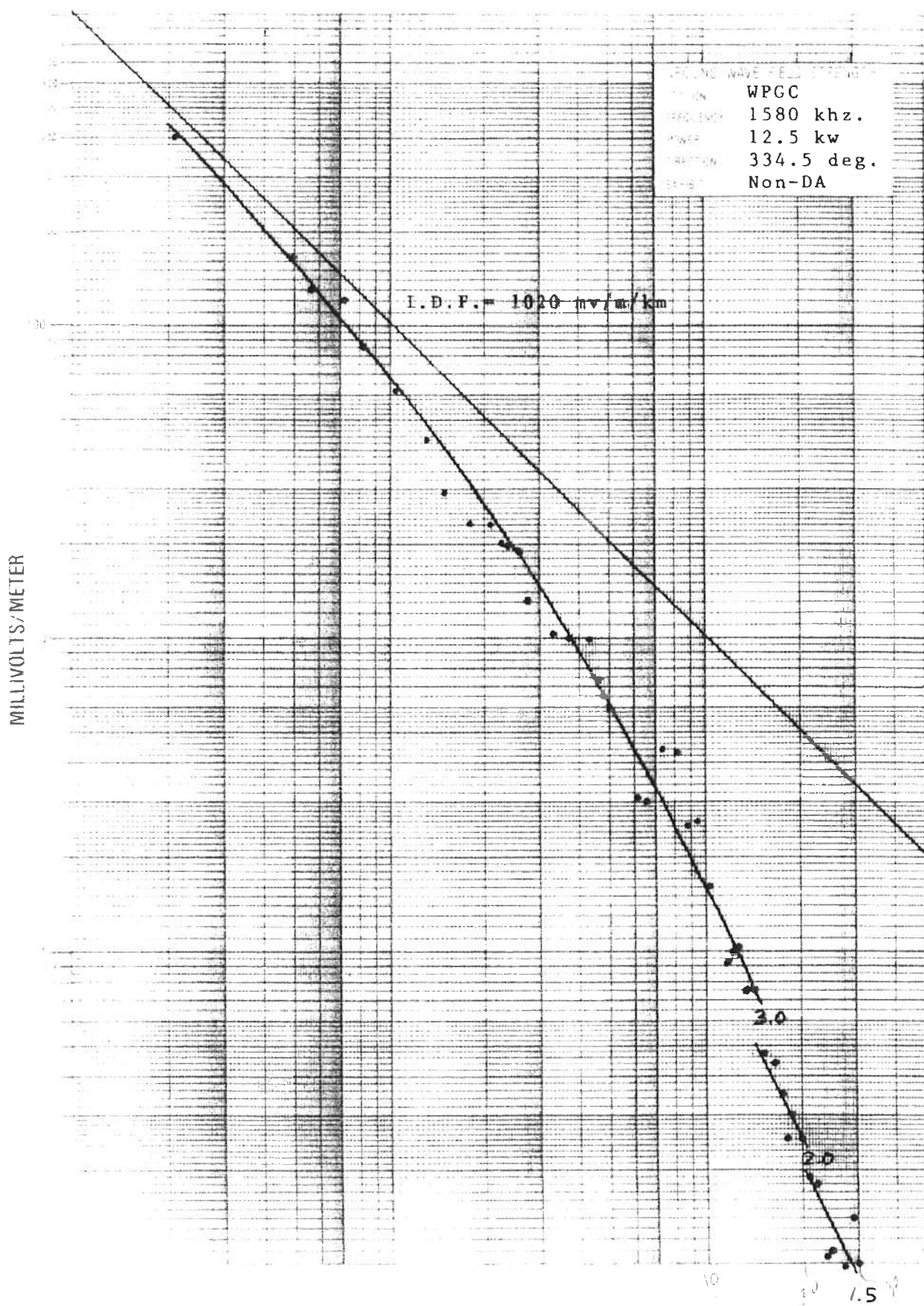
DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

RADIAL 334.5 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT		DA-N MEASUREMENT	
		DATE	TIME	DATE	TIME
1	0.21	11-24-90	TM 1515		
2	0.50	"	1430		
3	0.58	"	1432		
4	0.72	"	1437		
5	0.83	"	1445		
6	1.03	"	1425		
7	1.30	"	1419		
8	1.48	"	1414		
9	1.81	"	1408		
10	2.08	"	1405	12-06-90	TM 1508
11	2.27	"	1400	"	1505
12	2.39	"	1353	"	1458
13	2.58	"	1351	"	1500
14	2.74	"	1348	"	1503
15	3.30	"	1342	"	1450
16	3.72	"	1337	"	1446
17	4.30	"	1331	"	1442
18	4.64	"	1328	"	1439
19	4.75	"	1323	"	1435
20	5.00	"	1318	"	1430
21	6.10	11-23-90	RD 1447	"	1422
22	6.55	"	1454		
23	7.30	11-21-90	RD 1529	12-10-90	RD 1440
24	8.20	"	1525	"	1437
25	8.80	"	1517	"	1458
26	9.40	"	1512	"	1454
27	10.30	"	1500	"	1448
28	11.56	"	1450	"	1442
29	12.10	"	1442	"	1432
30	12.60	"	1432	"	1429
31	13.48	"	1423	"	1425
32	14.24	"	1412	"	1419
33	15.30	"	1403	"	1410
34	16.50	"	1356	"	1403
35	17.41	"	1342	"	1358
36	17.91	"	1337	"	1353
37	18.61	"	1324	"	1347
38	19.80	"	1315	"	1339

RADIAL 334.5 DEGREES CONTINUED

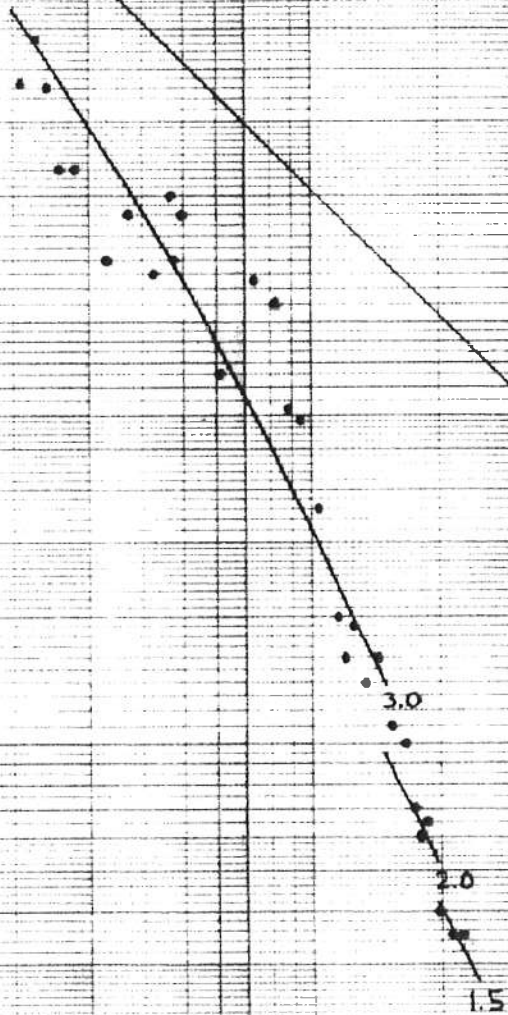
POINT #	DIST.	Non-DA MEASUREMENT		DA-N MEASUREMENT	
		DATE	TIME	DATE	TIME
39	21.00	11-19-90 RD	1412	12-10-90 RD	1330
40	22.24	"	1400	"	1316
41	24.50	"	1340		
42	25.32	"	1333		
43	27.70	11-24-90 RD	1456		
44	29.10	"	1442		
45	30.00	"	1430		
46	30.50	"	1435		



WPGC 1580 kHz

WPGC
1580 khz.
0.27 kw
334.5 deg.
DA-N

F.D.F. = 20.6 mv/m/km



WPGC RADIATION ANALYSIS at 351.5 degrees True

Point Number	Distance (kM)	Measured Field		Log Ratio (DA/ND)
		Non-DA (mV/m)	DA-N (mV/m)	
1	0.24	3400		
2	0.27	3200		
3	0.35	2400		
4	0.43	2000		
5	0.99	750		
6	1.17	520		
7	1.32	525		
8	1.47	358		
9	1.78	256		
10	2.10	252	2.60	-1.9864
11	2.49	207	1.05	-2.2948
12	2.67	142	0.80	-2.2492
13	2.81	144	1.30	-2.0444
14	3.30	121		
15	3.59	164	2.20	-1.8724
16	4.09	113	1.55	-1.8627
17	5.16	101	1.20	-1.9251
18	5.35	50.0	0.73	-1.8356
19	5.60	60.0		
20	6.03	37.0	0.30	-2.0911
21	6.60	49.0	0.24	-2.3100
22	7.00	40.0	0.27	-2.1707
23	7.92	34.0	0.19	-2.2527
24	8.85	26.0	0.31	-1.9236
25	9.40	23.0	0.27	-1.9304
26	9.85	18.0	0.15	-2.0792
27	11.04	13.0	0.14	-1.9678
28	11.96	11.0	0.11	-2.0000
29	13.97	6.20	.060	-2.0142
30	15.00	6.00	.070	-1.9331
31	16.40	5.40	.065	-1.9195
32	18.00	5.00	.040	-2.0969
33	19.17	3.30	.030	-2.0414
34	21.40	2.30		
35	21.95	2.70		
36	24.12	1.30		
37	25.00	2.00		
38	26.00	1.90		
39	26.65	1.62		

Average Log Ratio: -2.0364

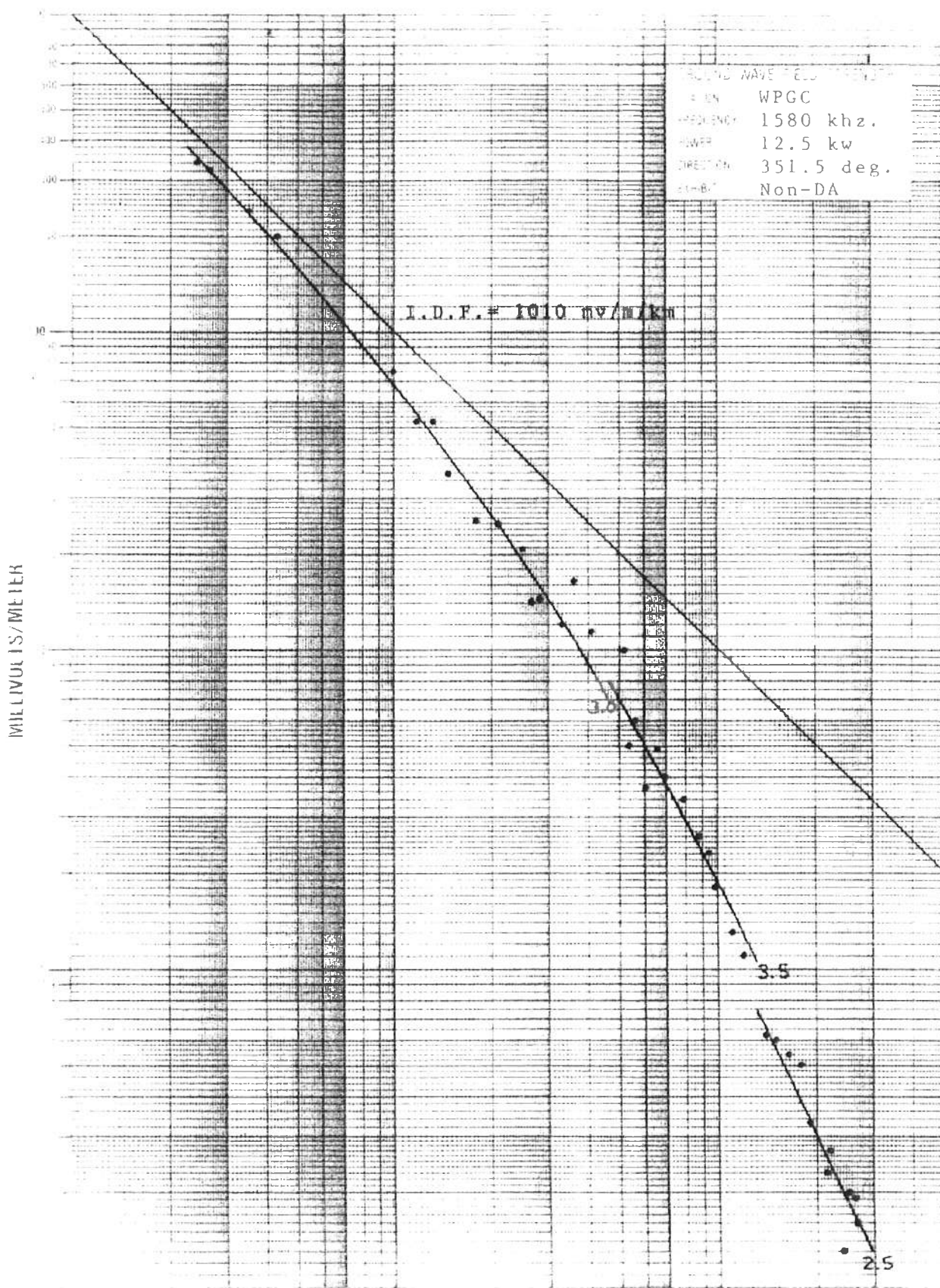
Antilog: .0092

Nondirectional Analyzed Field Strength (mV/m): 1010
 Directional Analyzed Field Strength (mV/m): 9.29

DATE AND TIME MEASUREMENT LOG
DA-N PROOF OF PERFORMANCE
WPGC-AM 1580 KHZ. 50/.27 KW DA-2
MORNINGSIDE, MARYLAND
DECEMBER, 1990

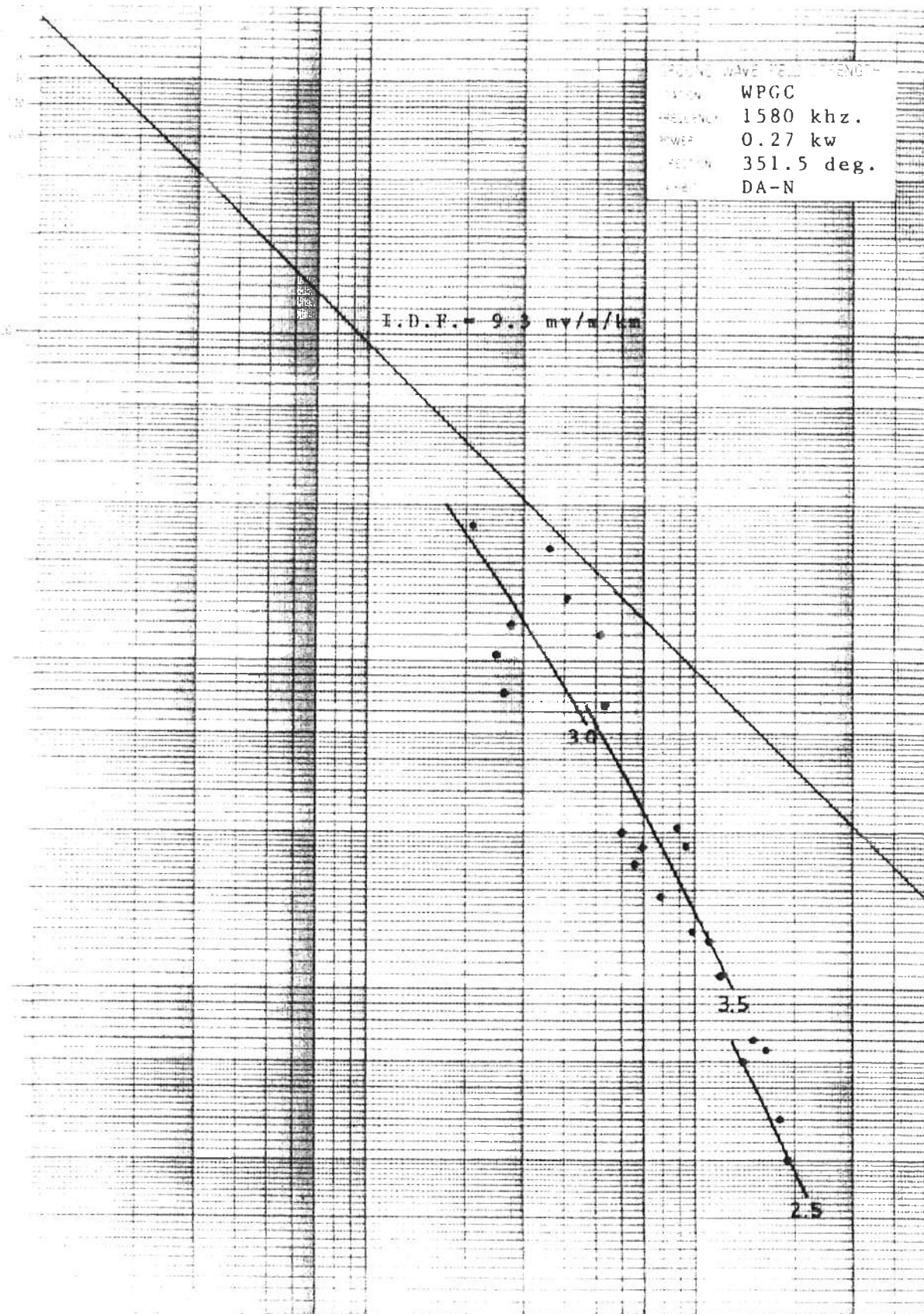
RADIAL 351.5 DEGREES

POINT #	DIST.	Non-DA MEASUREMENT DATE	TIME	DA-N DATE	MEASUREMENT TIME
1	0.24	11-28-90	TM 1412		
2	0.27	"	1416		
3	0.35	"	1422		
4	0.43	"	1435		
5	0.99	"	1448		
6	1.17	"	1504		
7	1.32	11-27-90	TM 1447		
8	1.47	"	1443		
9	1.78	"	1437		
10	2.10	"	1431	12-05-90	TM 1453
11	2.49	"	1426	"	1451
12	2.67	"	1422	"	1447
13	2.81	"	1419	"	1444
14	3.30	"	1411		
15	3.59	"	1401	"	1436
16	4.09	"	1357	"	1433
17	5.16	"	1351	"	1427
18	5.35	"	1346	"	1424
19	5.60	"	1341		
20	6.03	11-23-90	RD 1435	12-05-90	RD 1447
21	6.60	"	1427	"	1444
22	7.00	"	1415	"	1440
23	7.92	"	1410	"	1437
24	8.85	11-19-90	RD 1515	"	1430
25	9.40	"	1506	"	1424
26	9.85	"	1500	"	1420
27	11.04	"	1444	"	1408
28	11.96	"	1432	"	1405
29	13.97	"	1421	"	1354
30	15.00	11-20-90	RD 1356	"	1345
31	16.40	"	1340	"	1338
32	18.00	"	1325	"	1330
33	19.17	"	1318	"	1325
34	21.40	"	1300		
35	21.95	"	1257		
36	24.12	"	1247		
37	25.00	"	1237		
38	26.00	"	1226		
39	26.65	"	1217		



KILOMETERS FROM ANTENNA

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA