

DTV12 Reverse Frequency Transmit Off-Axis Summary

6/1/2012

OS1 (102.8W)            Beam 10

Antenna Gain Relative to -X axis

The antenna is left or right hand circularly polarized (LHCP, RHCP)

Three frequencies were analyzed, 17.305, 17.500, and 17.695 GHz

Total number of sheets = 6 (2 polarizations x 3 frequencies)

Each sheet has two header lines and four columns

column 1: Elevation angle relative to -x axis in degrees, rotation about z,  $\pm 60^\circ$  every  $5^\circ$  (negative toward

column 2: Azimuth angle relative to -x axis in degrees, rotation about y,  $\pm 30^\circ$  every  $5^\circ$  (positive toward l

column 3: Co-polarized antenna gain, dBi (RHCP gain for RHCP port or LHCP gain for LHCP port)

column 4: Cross-polarized antenna gain, dBi (LHCP gain for RHCP port or RHCP gain for LHCP port)

Kevin Clancy

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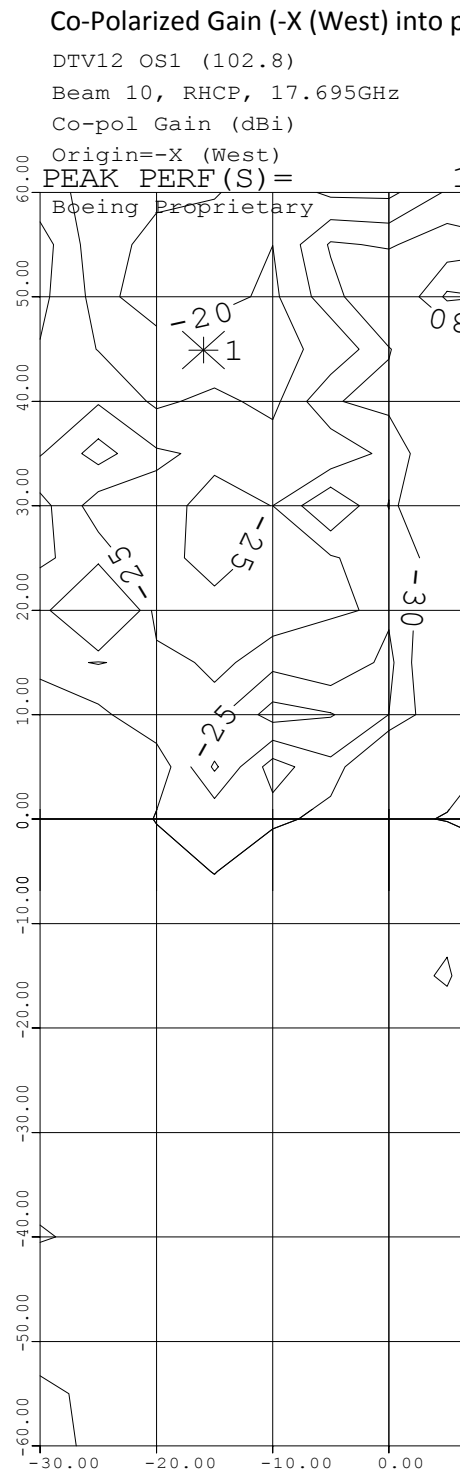
l south)  
Earth)

Beam 10 OS1 RHCP 17.695

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
-60	-30	-26.712	-20.504
-60	-25	-32.003	-23.687
-60	-20	-35.394	-23.689
-60	-15	-37.044	-25.289
-60	-10	-40.129	-33.793
-60	-5	-53.712	-30.65
-60	0	-39.392	-28.607
-60	5	-37.025	-26.666
-60	10	-31.269	-27.185
-60	15	-31.189	-37.21
-60	20	-32.191	-35.178
-60	25	-29.266	-27.79
-60	30	-27.416	-32.286
-55	-30	-27.664	-19.661
-55	-25	-32.415	-23.917
-55	-20	-31.221	-21.944
-55	-15	-37.139	-26.486
-55	-10	-37.189	-27.721
-55	-5	-33.248	-32.818
-55	0	-32.6	-28.246
-55	5	-32.972	-28.192
-55	10	-31.358	-33.094
-55	15	-32.712	-31.236
-55	20	-34.605	-30.555
-55	25	-27.189	-32.371
-55	30	-35.007	-32.992
-50	-30	-34.48	-24.637
-50	-25	-34.054	-24.187
-50	-20	-45.167	-30.84
-50	-15	-34.369	-25.582
-50	-10	-35.398	-25.03
-50	-5	-37.309	-25.973
-50	0	-33.17	-34.205
-50	5	-36.315	-32.229
-50	10	-34.415	-30.129
-50	15	-31.759	-28.043
-50	20	-33.899	-30.129
-50	25	-29.188	-31.831
-50	30	-32.483	-31.163
-45	-30	-36.499	-24.594

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BOTH AXES ARE

-45	-25	-35.865	-28.86
-45	-20	-43.671	-25.779
-45	-15	-39.309	-30.606
-45	-10	-41.689	-34.213
-45	-5	-39.091	-30.304
-45	0	-34.54	-26.283
-45	5	-41.04	-30.815
-45	10	-32.905	-27.992
-45	15	-51.504	-28.881
-45	20	-33.034	-29.889
-45	25	-31.772	-32.376
-45	30	-38.883	-27.824
-40	-30	-29.216	-22.18
-40	-25	-32.169	-23.802
-40	-20	-33.775	-23.837
-40	-15	-34.782	-34.536
-40	-10	-55.295	-27.506
-40	-5	-32.317	-35.454
-40	0	-32.413	-32.871
-40	5	-39.245	-29.17
-40	10	-38.888	-27.12
-40	15	-36.657	-27.281
-40	20	-29.746	-33.498
-40	25	-29.454	-29.398
-40	30	-27.24	-33.729
-35	-30	-32.685	-28.086
-35	-25	-39.696	-25.361
-35	-20	-35.751	-26.227
-35	-15	-43.5	-30.034
-35	-10	-38.845	-30.591
-35	-5	-32.573	-26.572
-35	0	-39.485	-31.574
-35	5	-48.661	-28.347
-35	10	-33.118	-30.894
-35	15	-36.567	-30.075
-35	20	-33.586	-30.393
-35	25	-34.478	-30.234
-35	30	-31.323	-30.996
-30	-30	-32.765	-24.963
-30	-25	-37.861	-26.441
-30	-20	-35.172	-28.624
-30	-15	-32.215	-27.985
-30	-10	-37.419	-33.082
-30	-5	-34.56	-33.609

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-30	20	-33.153	-30.792
-30	25	-27.17	-35.521
-30	30	-27.245	-34.17
-25	-30	-35.465	-24.232
-25	-25	-35.451	-25.225
-25	-20	-35.422	-24.895
-25	-15	-34.113	-37.531
-25	-10	-41.167	-28.891
-25	-5	-36.53	-28.578
-25	0	-40.102	-31.078
-25	5	-36.315	-28.619
-25	10	-33.334	-31.854
-25	15	-29.697	-32.907
-25	20	-28.148	-35.384
-25	25	-29.631	-30.925
-25	30	-44.115	-30.253
-20	-30	-37.509	-28.646
-20	-25	-39.779	-27.045
-20	-20	-46.031	-29.024
-20	-15	-44.014	-29.764
-20	-10	-34.265	-31.419
-20	-5	-32.618	-30.225
-20	0	-30.631	-34.893
-20	5	-37.519	-31.535
-20	10	-27.626	-36.007
-20	15	-42.204	-29.167
-20	20	-27.999	-32.546
-20	25	-32.109	-30.136
-20	30	-38.25	-30.191
-15	-30	-35.078	-25.371
-15	-25	-35.803	-27.927
-15	-20	-42.197	-30.79
-15	-15	-35.359	-29.414
-15	-10	-31.955	-31.687
-15	-5	-31.591	-30.414
-15	0	-36.637	-28.423
-15	5	-28.064	-35.556
-15	10	-51.111	-29.698
-15	15	-30.993	-29.839
-15	20	-27.055	-33.918

-15	25	-27.687	-31.457
-15	30	-34.347	-30.456
-10	-30	-40.632	-25.949
-10	-25	-38.728	-25.601
-10	-20	-40.507	-30.622
-10	-15	-37.678	-28.921
-10	-10	-37.48	-29.087
-10	-5	-38.455	-26.792
-10	0	-34.994	-29.943
-10	5	-33.475	-30.768
-10	10	-33.115	-32.725
-10	15	-41.018	-28.555
-10	20	-31.713	-30.329
-10	25	-31.45	-32.792
-10	30	-27.04	-32.383
-5	-30	-38.305	-28.34
-5	-25	-57.23	-28.968
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-5	25	-30.562	-32.57
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0	-30	-39.24	-29.605
0	-25	-41.134	-29.982
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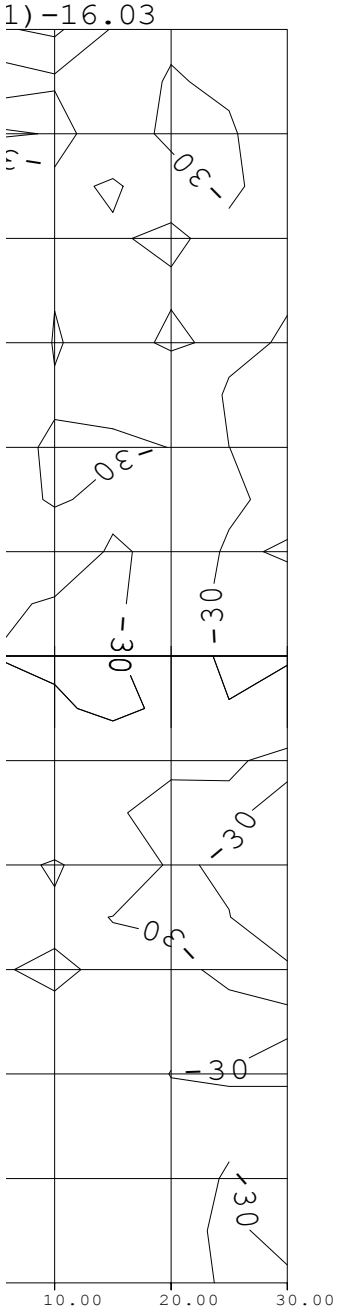
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35	5	-35.555	-30.104
35	10	-30.946	-29.214
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35	25	-33.696	-30.811
35	30	-31.865	-31.275



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40	-25	-24.507	-31.362
40	-20	-19.064	-19.462
40	-15	-21.329	-20.48
40	-10	-18.498	-22.048
40	-5	-29.681	-32.208
40	0	-31.204	-28.309
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40	10	-34.531	-32.276
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40	20	-27.499	-31.823
40	25	-34.897	-30.449
40	30	-35.291	-31.575
45	-30	-24.713	-29.243
45	-25	-19.809	-25.428
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45	-15	-16.119	-16.017
45	-10	-19.452	-23.193
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45	5	-36.737	-29.506
45	10	-32.6	-31.535
45	15	-28.723	-33.031
45	20	-35.926	-29.624
45	25	-26.352	-32.602
45	30	-39.997	-30.739
50	-30	-26.285	-20.352
50	-25	-18.219	-18.235
50	-20	-23.019	-20.655
50	-15	-21.737	-17.373
50	-10	-18.933	-25.979
50	-5	-28.026	-33.857
50	0	-36.374	-32.615
50	5	-24.049	-36.613
50	10	-25.402	-39.105
50	15	-37.612	-30.802
50	20	-26.933	-34.661
50	25	-27.131	-33.082
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55	15	-39.324	-28.49
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55	25	-33.586	-32.421
55	30	-36.586	-29.074
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60	-25	-18.37	-20.421
60	-20	-18.437	-27.558
60	-15	-19.543	-19.492
60	-10	-23.564	-26.109
60	-5	-18.902	-25.276
60	0	-18.713	-23.493
60	5	-25.612	-37.637
60	10	-24.002	-40.294
60	15	-30.402	-30.783
60	20	-33.417	-32.844
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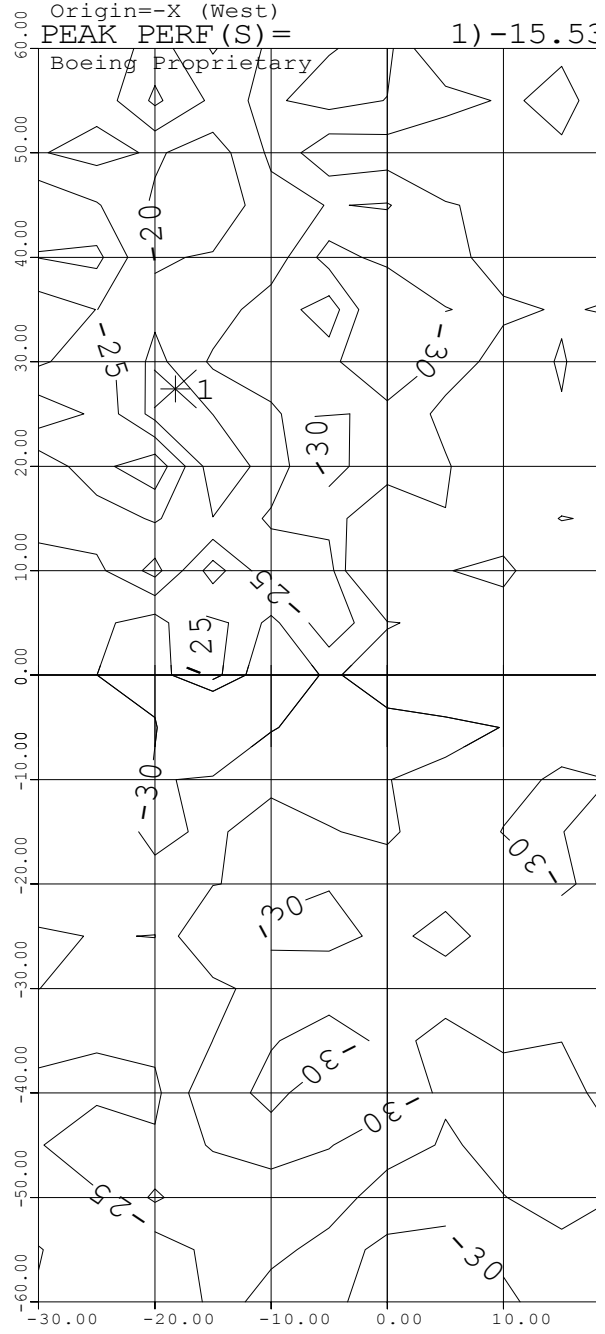
page)



IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)  
 Beam 10, RHCP, 17.695GHz  
 Cross-pol Gain (dBi)



BOTH AXES ARE IN DEG

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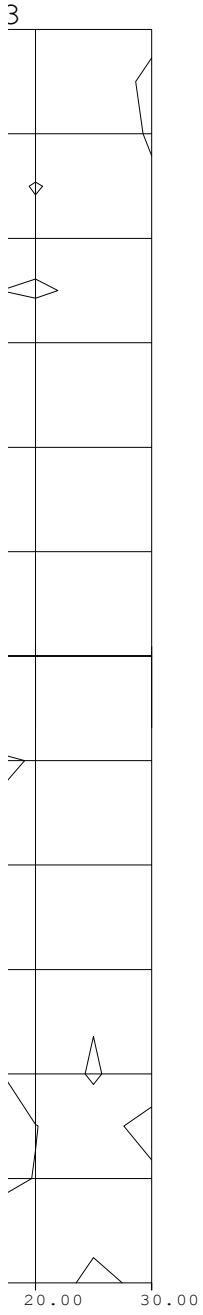










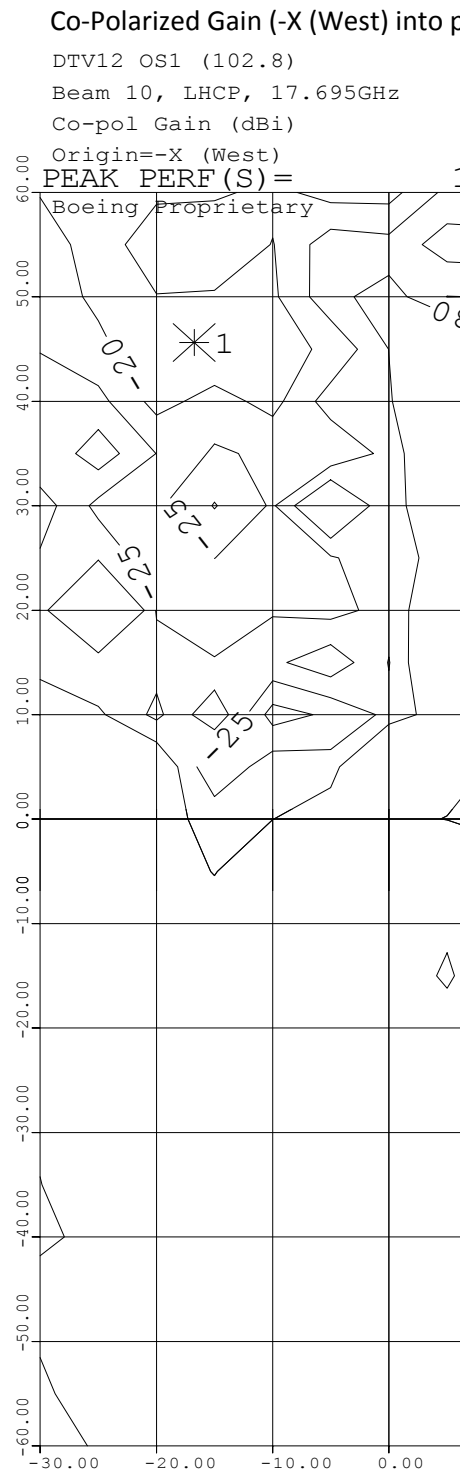


EG

Beam 10 OS1 LHCP 17.695

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
-60	-30	-27.103	-21.514
-60	-25	-30.659	-23.404
-60	-20	-35.761	-23.925
-60	-15	-36.344	-25.642
-60	-10	-35.15	-35.395
-60	-5	-47.845	-30.432
-60	0	-38.428	-27.976
-60	5	-33.143	-27.511
-60	10	-30.912	-26.273
-60	15	-32.108	-40.337
-60	20	-32.801	-38.114
-60	25	-27.67	-26.424
-60	30	-27.26	-29.344
-55	-30	-29.349	-20.172
-55	-25	-31.851	-23.928
-55	-20	-33.007	-22.289
-55	-15	-34.496	-28.181
-55	-10	-36.115	-28.352
-55	-5	-36.496	-30.863
-55	0	-33.271	-27.332
-55	5	-31.304	-27.374
-55	10	-32.625	-31.651
-55	15	-36.113	-33.295
-55	20	-35.314	-31.036
-55	25	-26.547	-29.283
-55	30	-34.981	-33.942
-50	-30	-30.288	-23.655
-50	-25	-33.07	-24.756
-50	-20	-35.346	-28.918
-50	-15	-35.426	-24.514
-50	-10	-33.426	-25.668
-50	-5	-33.376	-26.87
-50	0	-35.727	-39.521
-50	5	-35.808	-31.599
-50	10	-34.483	-30.378
-50	15	-29.391	-27.144
-50	20	-36.648	-31.067
-50	25	-28.814	-29.549
-50	30	-31.973	-29.571
-45	-30	-31.613	-23.446

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BOTH AXES ARE

-45	-25	-31.74	-29.895
-45	-20	-47.336	-25.63
-45	-15	-44.539	-30.749
-45	-10	-43.683	-34.856
-45	-5	-38.22	-29.769
-45	0	-31.5	-26.121
-45	5	-44.483	-31.776
-45	10	-30.295	-27.3
-45	15	-41.972	-28.663
-45	20	-36.294	-30.979
-45	25	-30.294	-31.165
-45	30	-39.337	-27.451
-40	-30	-29.089	-23.248
-40	-25	-31.28	-24.866
-40	-20	-33.052	-24.45
-40	-15	-36.859	-31.281
-40	-10	-42.934	-28.129
-40	-5	-34.652	-36.561
-40	0	-31.732	-31.284
-40	5	-37.276	-29.633
-40	10	-34.739	-26.906
-40	15	-33.086	-26.851
-40	20	-30.581	-33.727
-40	25	-31.359	-31.222
-40	30	-26.818	-30.804
-35	-30	-29.661	-28.506
-35	-25	-40.789	-25.261
-35	-20	-36.46	-25.46
-35	-15	-46.521	-29.879
-35	-10	-42.242	-33.426
-35	-5	-30.467	-25.921
-35	0	-41.346	-32.155
-35	5	-39.651	-28.863
-35	10	-33.613	-31.166
-35	15	-38.803	-31.549
-35	20	-33.567	-30.235
-35	25	-32.24	-29.694
-35	30	-30.295	-28.971
-30	-30	-31.95	-25.599
-30	-25	-34.98	-27.862
-30	-20	-37.656	-27.907
-30	-15	-32.388	-26.907
-30	-10	-38.251	-33.001
-30	-5	-36.157	-35.912

-30	0	-37.839	-31.478
-30	5	-32.257	-35.268
-30	10	-27.375	-34.047
-30	15	-32.765	-30.701
-30	20	-31.43	-30.078
-30	25	-27.473	-35.73
-30	30	-27.6	-34.424
-25	-30	-35.247	-24.663
-25	-25	-33.444	-26.084
-25	-20	-33.217	-25.189
-25	-15	-35.349	-35.56
-25	-10	-39.621	-28.977
-25	-5	-34.359	-28.579
-25	0	-42.289	-31.786
-25	5	-33.504	-27.697
-25	10	-33.841	-31.971
-25	15	-30.663	-34.23
-25	20	-27.649	-35.791
-25	25	-29.953	-32.778
-25	30	-40.256	-28.818
-20	-30	-33.96	-30.261
-20	-25	-40.144	-26.905
-20	-20	-40.15	-30.21
-20	-15	-43.125	-30.591
-20	-10	-36.829	-32.831
-20	-5	-31.332	-29.391
-20	0	-30.113	-33.447
-20	5	-37.673	-31.713
-20	10	-27.252	-33.583
-20	15	-46.058	-28.729
-20	20	-26.907	-30.194
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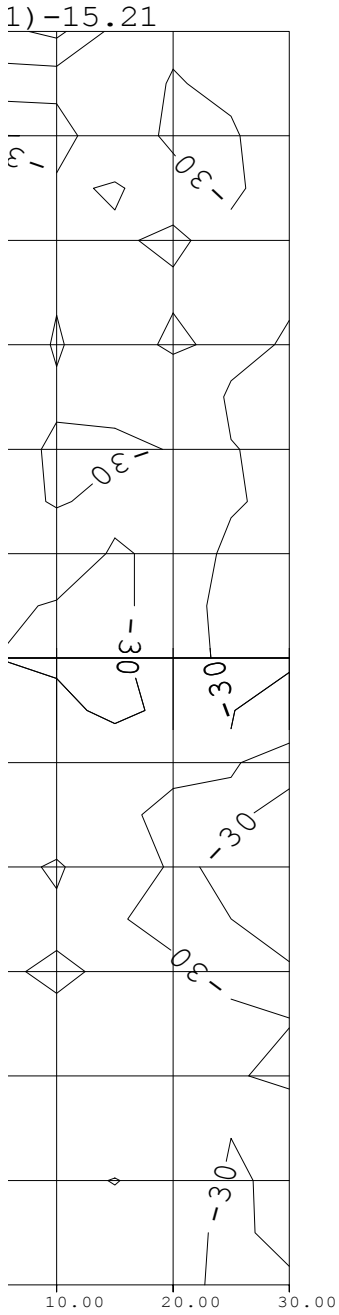


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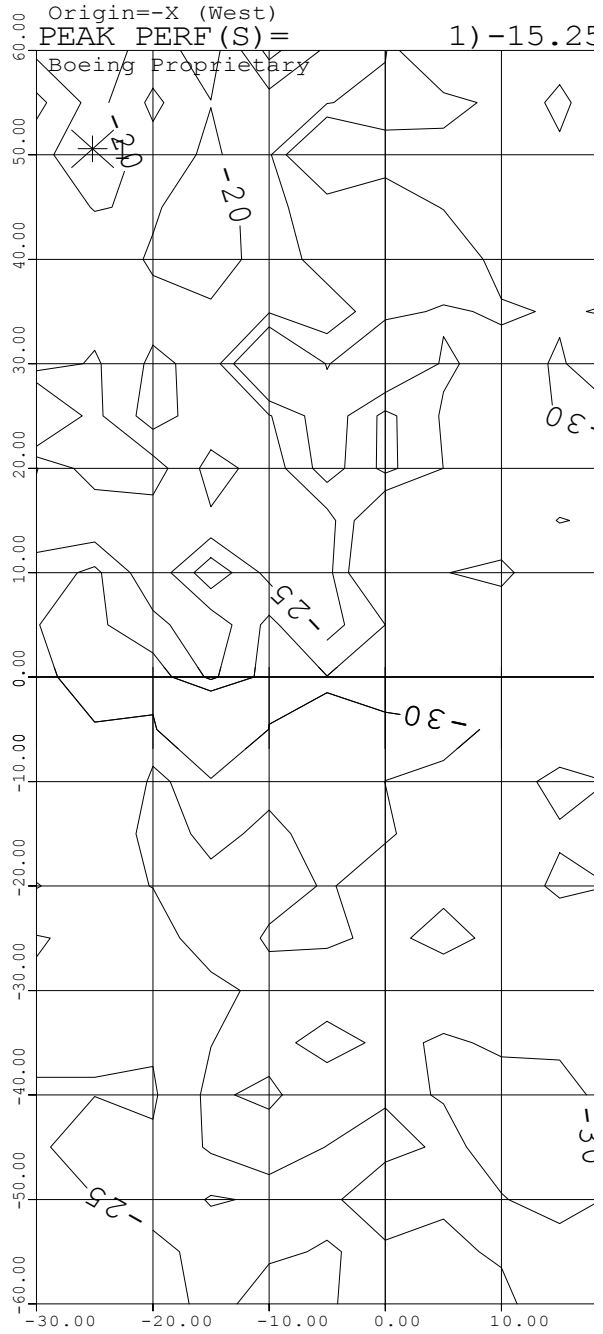
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IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)  
Beam 10, LHCP, 17.695GHz  
Cross-pol Gain (dBi)



BOTH AXES ARE IN DEG

qq925b FP: Jun 1 12 1:42:17P







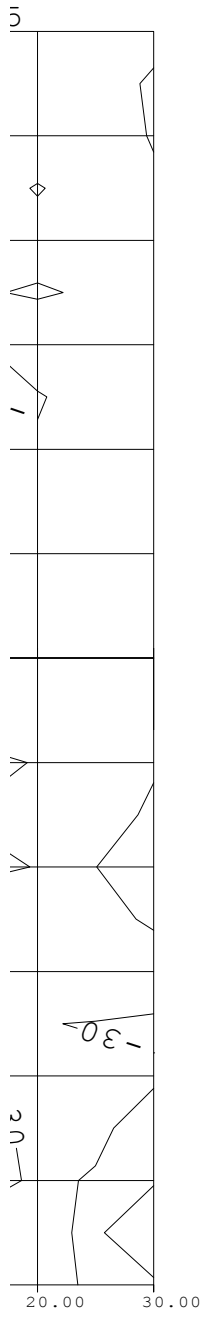








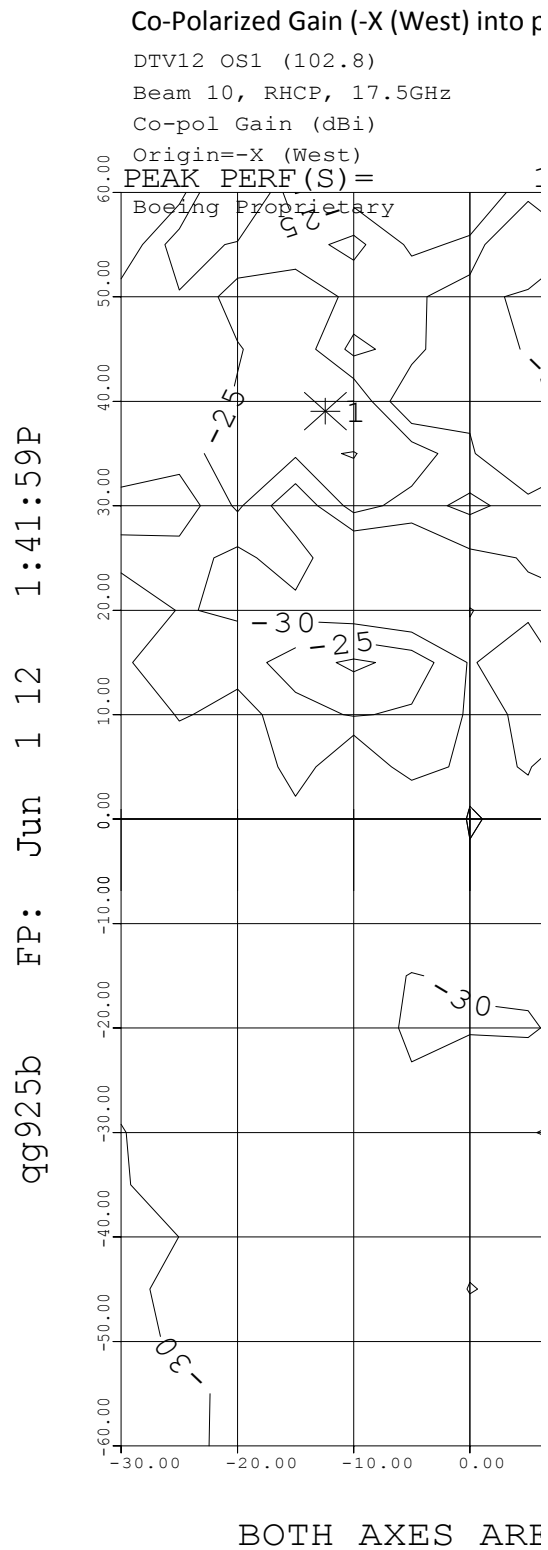




EG

Beam 10 OS1 RHCP 17.5

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
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-60	20	-39.228	-24.938
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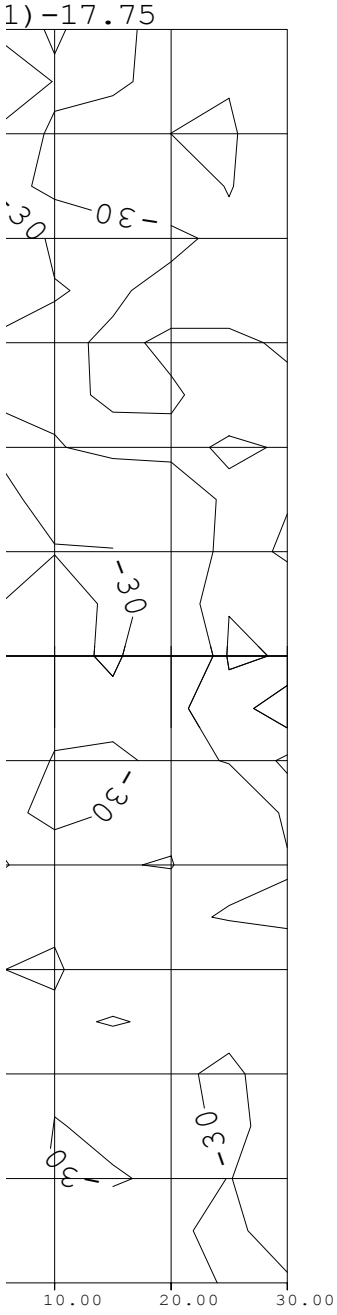
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40	-15	-20.187	-24.16
40	-10	-19.978	-29.616
40	-5	-36.042	-29.342
40	0	-31.494	-30.785
40	5	-41.603	-28.269
40	10	-27.573	-30.316
40	15	-26.883	-30.467
40	20	-26.355	-30.445
40	25	-34.111	-28.286
40	30	-43.804	-29.192
45	-30	-28.39	-20.422
45	-25	-28.372	-20.445
45	-20	-25.384	-19.282
45	-15	-21.558	-30.692
45	-10	-31.548	-26.396
45	-5	-27.387	-29.632
45	0	-38.242	-24.746
45	5	-28.723	-29.58
45	10	-30.839	-30.005
45	15	-34.315	-28.372
45	20	-41.218	-27.948
45	25	-28.929	-28.494
45	30	-42.584	-28.265
50	-30	-27.509	-19.982
50	-25	-29.526	-23.753
50	-20	-22.697	-26.487
50	-15	-21.788	-24.315
50	-10	-26.16	-29.264
50	-5	-28.948	-26.212
50	0	-33.014	-27.871
50	5	-27.947	-29.262
50	10	-30.454	-28.69
50	15	-32.73	-29.412
50	20	-29.968	-28.771
50	25	-26.278	-29.068
50	30	-52.084	-27.235
55	-30	-20.21	-21.37
55	-25	-33.224	-31.548
55	-20	-29.112	-22.403
55	-15	-27.829	-23.52
55	-10	-31.645	-26.987

55	-5	-23.909	-25.029
55	0	-25.906	-22.839
55	5	-41.943	-26.569
55	10	-29.404	-28.537
55	15	-28.999	-31.254
55	20	-31.88	-29.475
55	25	-31.747	-28.636
55	30	-35.006	-28.13
60	-30	-19.857	-22.994
60	-25	-22.581	-23.521
60	-20	-43.562	-24.313
60	-15	-19.797	-31.415
60	-10	-22.377	-19.772
60	-5	-23.072	-23.284
60	0	-20.725	-30.502
60	5	-27.581	-30.61
60	10	-30.536	-28.81
60	15	-27.664	-29.779
60	20	-33.297	-27.762
60	25	-34.282	-28.299
60	30	-27.508	-31.179

page)



IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)

Beam 10, RHCP, 17.5GHz

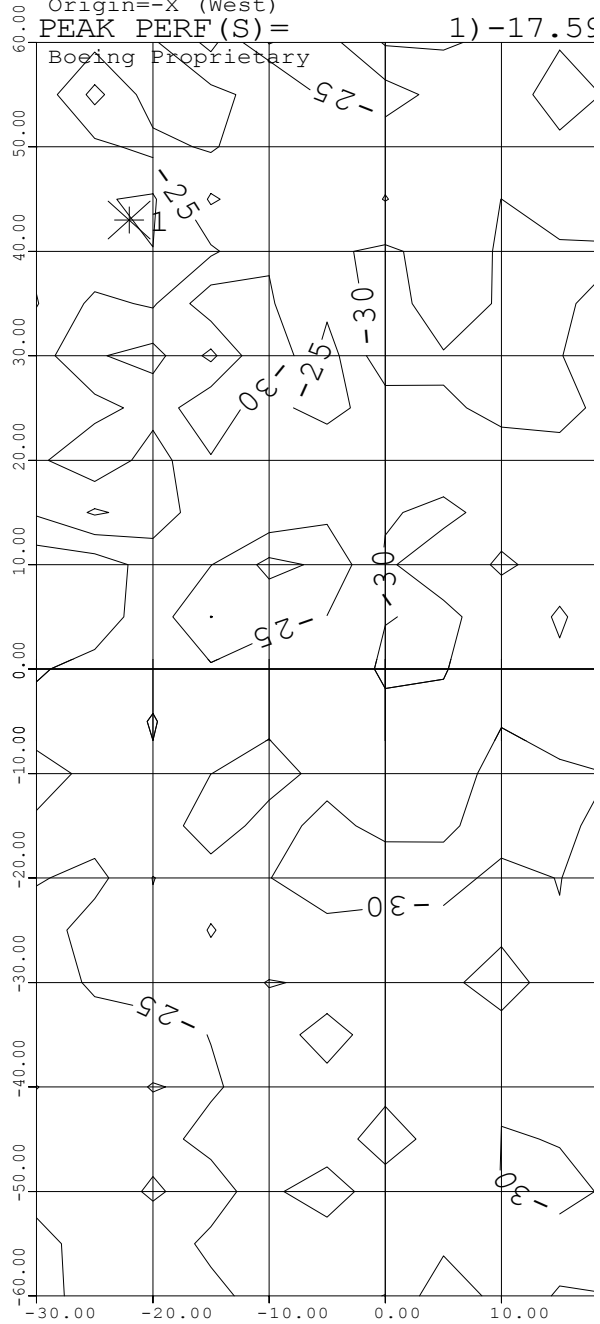
Cross-pol Gain (dBi)

Origin=-X (West)

PEAK PERF (S) =

1) -17.50

qg925b FP: Jun 1 12 1:42: 5P



BOTH AXES ARE IN D







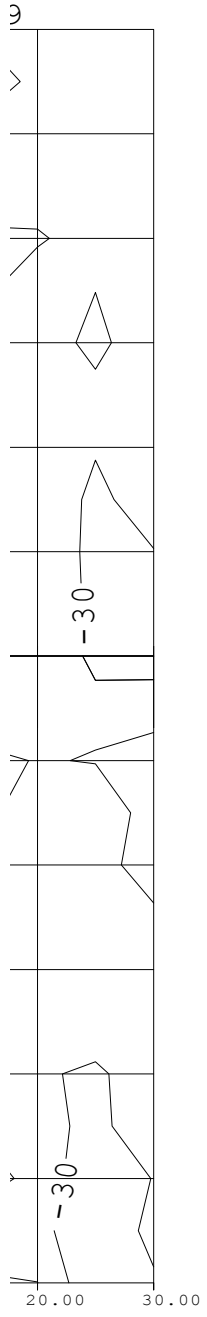








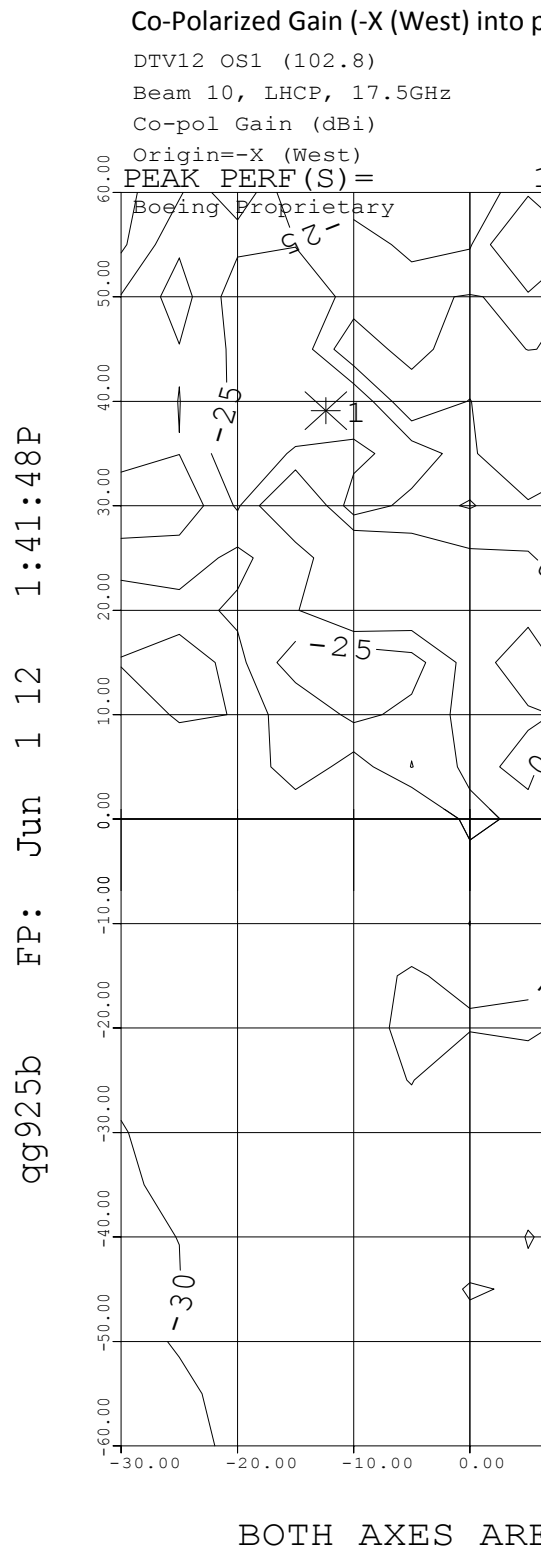




EG

Beam 10 OS1 LHCP 17.5

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
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-60	-25	-25.968	-22.644
-60	-20	-32.577	-21.533
-60	-15	-33.88	-23.964
-60	-10	-32.115	-25.592
-60	-5	-33.906	-24.478
-60	0	-36.952	-24.985
-60	5	-30.532	-31.544
-60	10	-37.962	-29.479
-60	15	-32.696	-24.122
-60	20	-33.945	-24.824
-60	25	-27.576	-35.502
-60	30	-29.746	-33.873
-55	-30	-28.445	-18.059
-55	-25	-27.676	-22.882
-55	-20	-33.608	-21.631
-55	-15	-34.991	-26.863
-55	-10	-34.426	-29.408
-55	-5	-48.545	-25.585
-55	0	-40.797	-27.052
-55	5	-35.281	-31.436
-55	10	-35.669	-27.478
-55	15	-38.13	-26.88
-55	20	-30.087	-27.352
-55	25	-27.232	-36.737
-55	30	-38.447	-30.094
-50	-30	-26.101	-21.843
-50	-25	-31.019	-21.582
-50	-20	-30.937	-24.166
-50	-15	-37.566	-21.836
-50	-10	-39.126	-29.701
-50	-5	-31.469	-31.909
-50	0	-34.276	-24.816
-50	5	-40.544	-26.366
-50	10	-29.487	-28.24
-50	15	-26.658	-29.102
-50	20	-33.433	-28.183
-50	25	-29.643	-30.483
-50	30	-33.313	-28.951
-45	-30	-26.824	-22.244



-45	-25	-29.545	-25.162
-45	-20	-42.007	-22.411
-45	-15	-42.535	-27.4
-45	-10	-31.847	-24.089
-45	-5	-37.597	-25.623
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-45	10	-26.993	-28.115
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-45	20	-33.215	-28.519
-45	25	-26.997	-29.494
-45	30	-36.874	-27.179
-40	-30	-28.735	-20.307
-40	-25	-30.081	-24.026
-40	-20	-37.216	-25.976
-40	-15	-36.277	-23.592
-40	-10	-42.622	-28.032
-40	-5	-38.373	-27.151
-40	0	-37.857	-29.135
-40	5	-29.545	-25.854
-40	10	-33.866	-26.644
-40	15	-36.145	-25.819
-40	20	-33.947	-29.869
-40	25	-26.986	-33.218
-40	30	-35.164	-26.526
-35	-30	-26.696	-25.488
-35	-25	-35.054	-22.537
-35	-20	-37.981	-22.618
-35	-15	-33.852	-24.449
-35	-10	-32.889	-25.445
-35	-5	-30.794	-32.923
-35	0	-37.268	-26.045
-35	5	-33.087	-25.465
-35	10	-31.102	-27.219
-35	15	-29.456	-31.2
-35	20	-31.919	-27.906
-35	25	-37.807	-28.851
-35	30	-33.04	-28.607
-30	-30	-28.922	-23.671
-30	-25	-37.603	-25.855
-30	-20	-39.033	-27.285
-30	-15	-41.297	-27.071
-30	-10	-36.355	-24.75
-30	-5	-42.246	-25.527

-30	0	-34.257	-26.101
-30	5	-32.261	-30.335
-30	10	-27.104	-30.385
-30	15	-40.523	-27.53
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-30	30	-39.824	-27.454
-25	-30	-33.677	-21.961
-25	-25	-33.958	-29.129
-25	-20	-40.2	-30.267
-25	-15	-37.714	-24.496
-25	-10	-43.242	-29.333
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-25	20	-30.022	-26.935
-25	25	-26.882	-27.611
-25	30	-28.249	-30.815
-20	-30	-33.807	-25.634
-20	-25	-39.783	-23.564
-20	-20	-33.088	-28.381
-20	-15	-30.704	-25.959
-20	-10	-32.755	-29.43
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-15	-30	-32.902	-27.317
-15	-25	-38.72	-27.345
-15	-20	-32.495	-25.452
-15	-15	-31.096	-32.456
-15	-10	-34.191	-27.584
-15	-5	-28.572	-29.966
-15	0	-33.631	-28.543
-15	5	-31.205	-28.331
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-15	15	-29.868	-30.433
-15	20	-32.173	-28.003



-15	25	-37.731	-26.764
-15	30	-27.423	-29.823
-10	-30	-45.198	-21.955
-10	-25	-42.309	-26.981
-10	-20	-33.139	-25.086
-10	-15	-34.645	-31.685
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-10	30	-23.28	-31.621
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-5	-25	-44.61	-28.324
-5	-20	-33.997	-24.268
-5	-15	-36.598	-29.936
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0	-10	-34.13	-27.456
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0	5	-31.798	-29.104
0	10	-35.529	-27.958
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0	25	-23.727	-31.496
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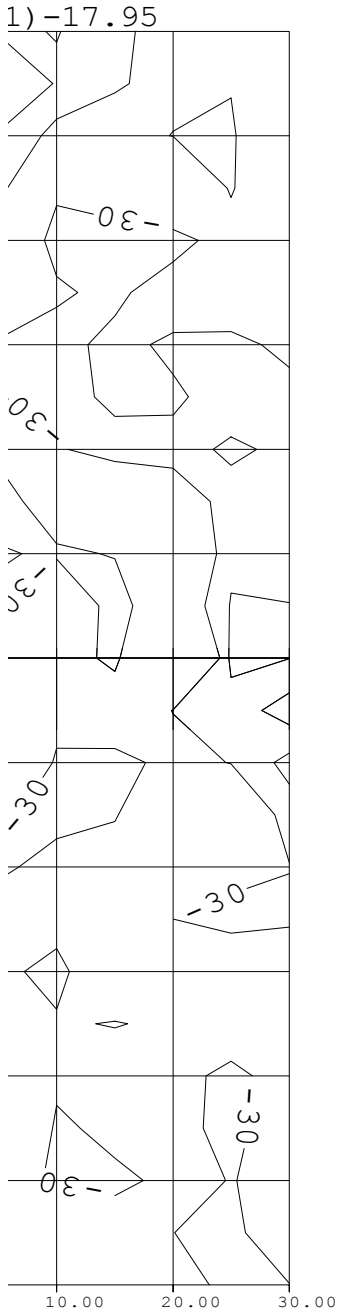
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5	25	-24.673	-30.495
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15	-15	-21.947	-32.245
15	-10	-20.15	-26.955
15	-5	-22.731	-23.977
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15	25	-27.93	-30.05
15	30	-29.843	-29.405
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20	-25	-32.074	-33.573
20	-20	-29.007	-22.514
20	-15	-29.575	-26.725
20	-10	-36.72	-27.919
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20	5	-31.385	-28.669

20	10	-30.429	-29.285
20	15	-28.195	-30.204
20	20	-27.899	-29.14
20	25	-30.928	-29.976
20	30	-28.799	-28.359
25	-30	-25.889	-22.165
25	-25	-26.849	-23.966
25	-20	-31.523	-28.483
25	-15	-25.921	-35.645
25	-10	-38.867	-26.465
25	-5	-33.036	-25.76
25	0	-31.17	-25.903
25	5	-30.277	-29.857
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30	-5	-26.624	-24.413
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30	10	-27.364	-31.331
30	15	-32.312	-29.933
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30	25	-27.701	-30.694
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35	25	-36.814	-29.781
35	30	-40.913	-29.214

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40	-10	-20.052	-30.963
40	-5	-35.094	-24.916
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40	10	-27.605	-30.485
40	15	-27.032	-30.615
40	20	-26.541	-30.846
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55	-10	-28.87	-25.23

55	-5	-22.897	-25.678
55	0	-24.489	-23.09
55	5	-40.242	-26.41
55	10	-29.26	-28.934
55	15	-29.395	-31.362
55	20	-31.854	-29.747
55	25	-31.388	-28.437
55	30	-36.063	-28.713
60	-30	-18.315	-21.727
60	-25	-24.322	-19.94
60	-20	-34.548	-22.589
60	-15	-20.526	-25.275
60	-10	-20.706	-20.087
60	-5	-22.157	-21.877
60	0	-20.366	-31.544
60	5	-29.164	-33.05
60	10	-30.194	-29.089
60	15	-27.46	-29.289
60	20	-34.763	-28.463
60	25	-35.722	-28.988
60	30	-27.645	-30.318

page)



IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)

Beam 10, LHCP, 17.5GHz

Cross-pol Gain (dBi)

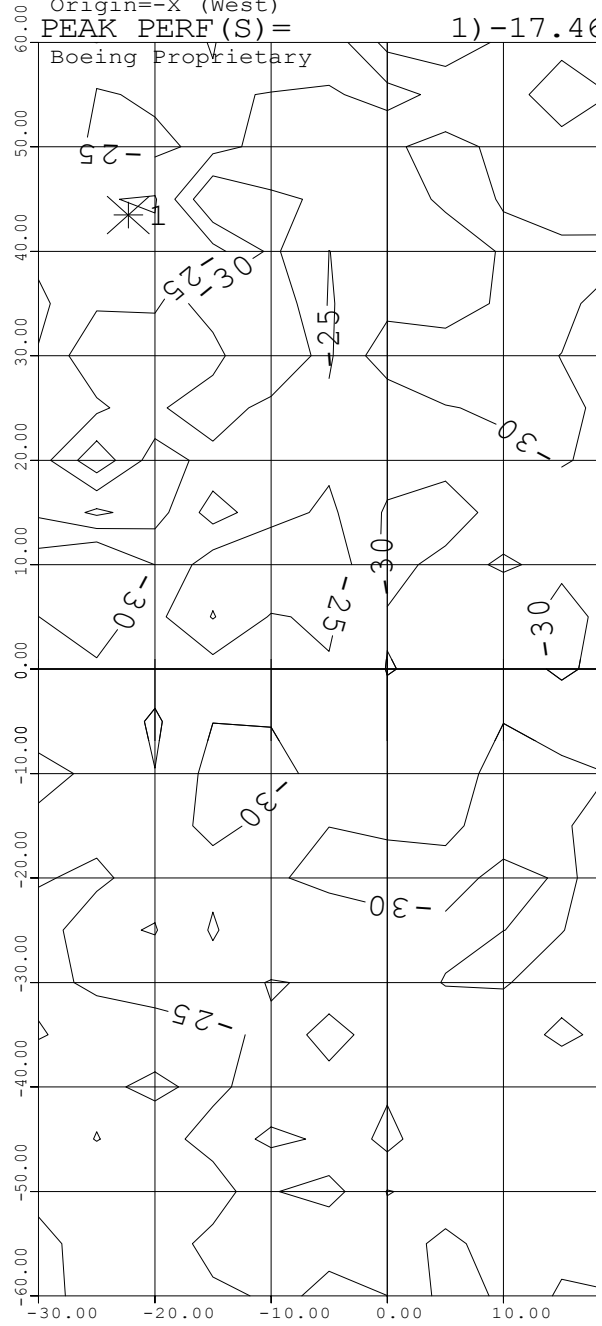
Origin=-X (West)

PEAK PERF(S) =

1) -17.46

Boeing Proprietary

qg925b FP: Jun 1 12 1:41:53P



BOTH AXES ARE IN DEG







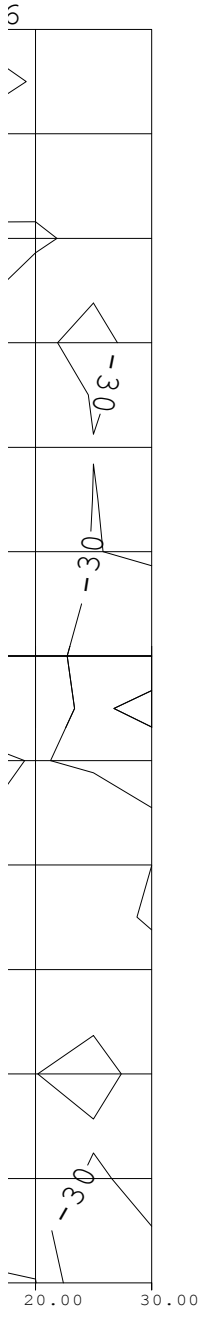






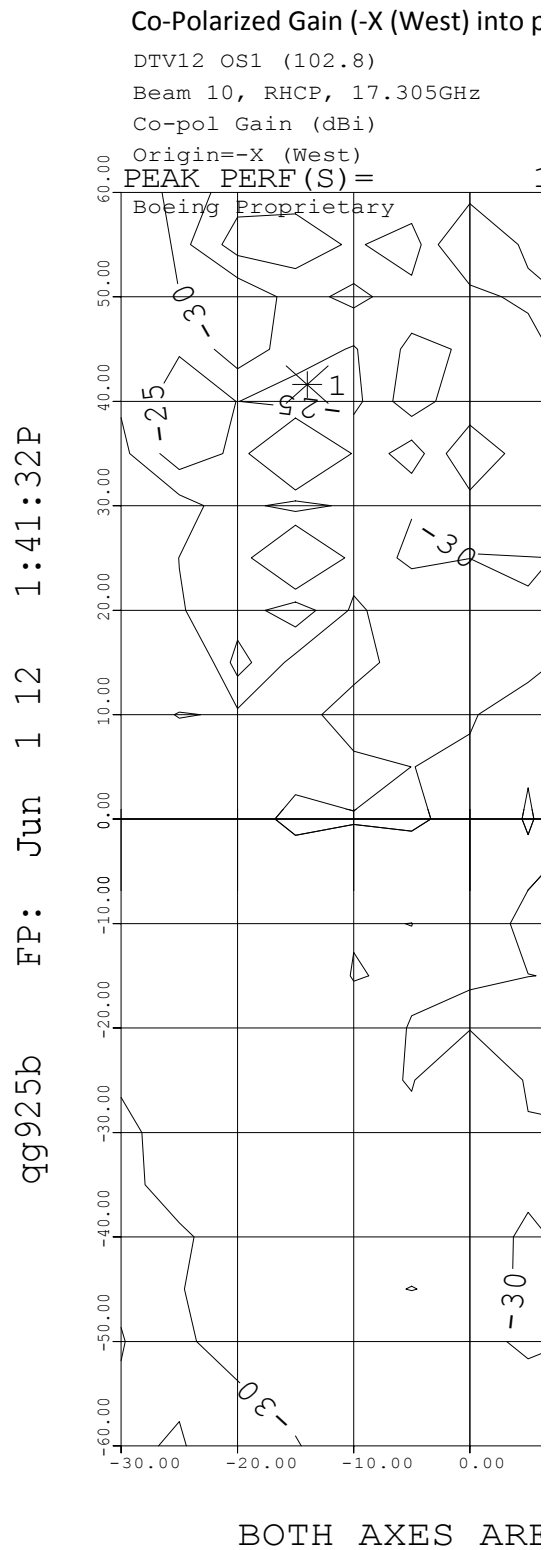






Beam 10 OS1 RHCP 17.305

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
-60	-30	-26.118	-16.58
-60	-25	-24.377	-21.197
-60	-20	-29.548	-20.044
-60	-15	-28.881	-22.404
-60	-10	-40.47	-22.328
-60	-5	-48.971	-21.814
-60	0	-31.923	-26.74
-60	5	-38.856	-23.043
-60	10	-38.928	-26.613
-60	15	-27.708	-31.811
-60	20	-27.331	-30.248
-60	25	-35.277	-24.44
-60	30	-37.562	-25.035
-55	-30	-25.453	-17.973
-55	-25	-25.722	-20.615
-55	-20	-28.782	-20.738
-55	-15	-34.82	-23.578
-55	-10	-31.215	-26.595
-55	-5	-35.545	-24.863
-55	0	-41.919	-25.972
-55	5	-32.338	-24.926
-55	10	-35.474	-27.545
-55	15	-35.701	-27.55
-55	20	-28.722	-30.355
-55	25	-29.649	-26.53
-55	30	-50.326	-25.844
-50	-30	-24.731	-18.988
-50	-25	-28.578	-19.767
-50	-20	-33.348	-22.376
-50	-15	-32.431	-21.853
-50	-10	-41.127	-25.752
-50	-5	-49.328	-23.742
-50	0	-32.059	-27.399
-50	5	-28.81	-28.335
-50	10	-30.409	-28.03
-50	15	-27.319	-29.888
-50	20	-31.139	-29.279
-50	25	-30.167	-29.494
-50	30	-33.919	-28.684
-45	-30	-25.744	-19.571



-45	-25	-29.069	-21.699
-45	-20	-39.736	-20.417
-45	-15	-31.744	-27.318
-45	-10	-35.613	-23.656
-45	-5	-29.344	-31.407
-45	0	-36.703	-24.695
-45	5	-27.61	-31.426
-45	10	-27.212	-31.489
-45	15	-32.702	-28.533
-45	20	-30.304	-28.338
-45	25	-26.722	-30.27
-45	30	-28.608	-27.012
-40	-30	-25.869	-18.759
-40	-25	-27.806	-22.122
-40	-20	-36.364	-23.491
-40	-15	-35.673	-24.209
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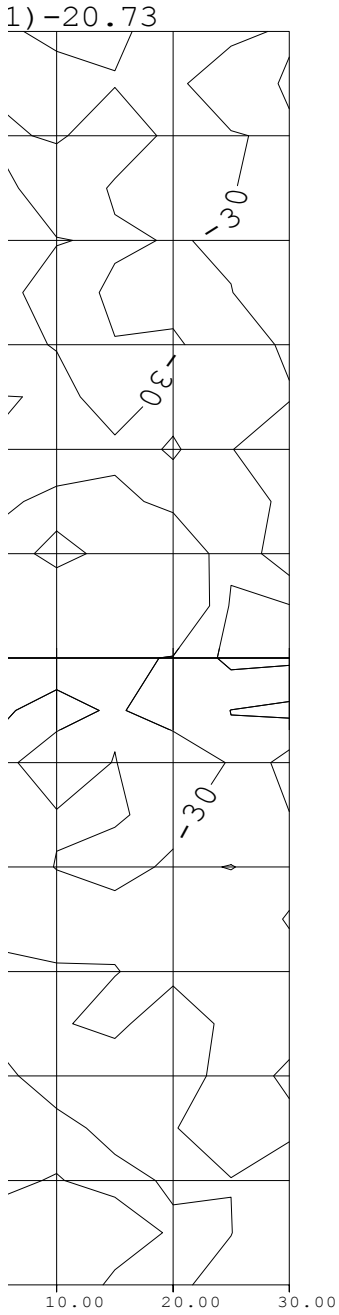
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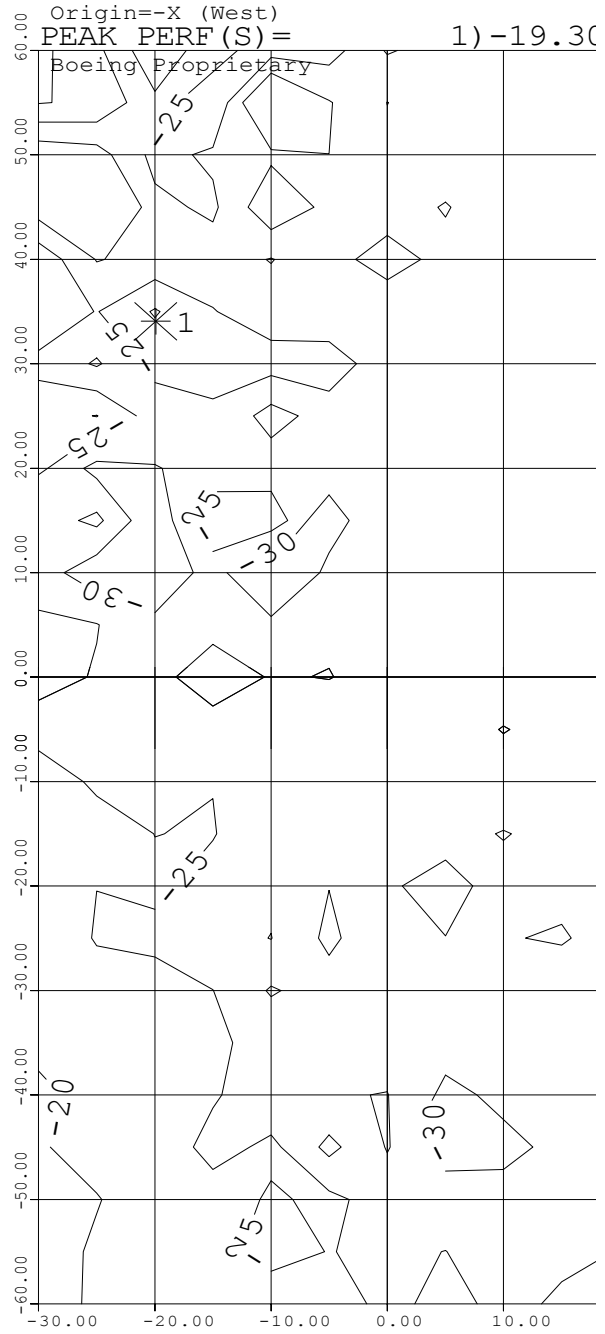
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IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)  
Beam 10, RHCP, 17.305GHz  
Cross-pol Gain (dBi)



qq925b FP: Jun 1 12 1:41:42P

BOTH AXES ARE IN DEGREES







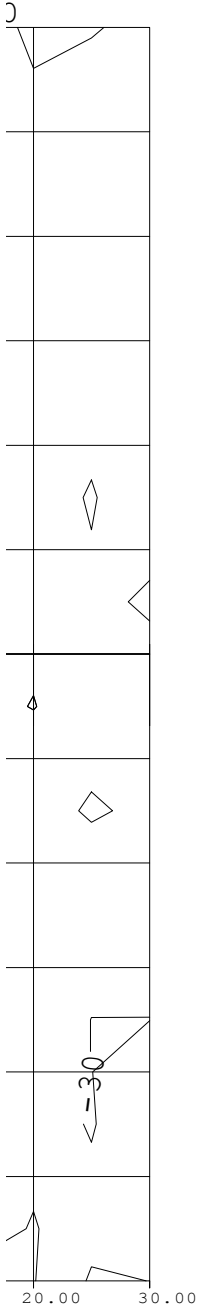








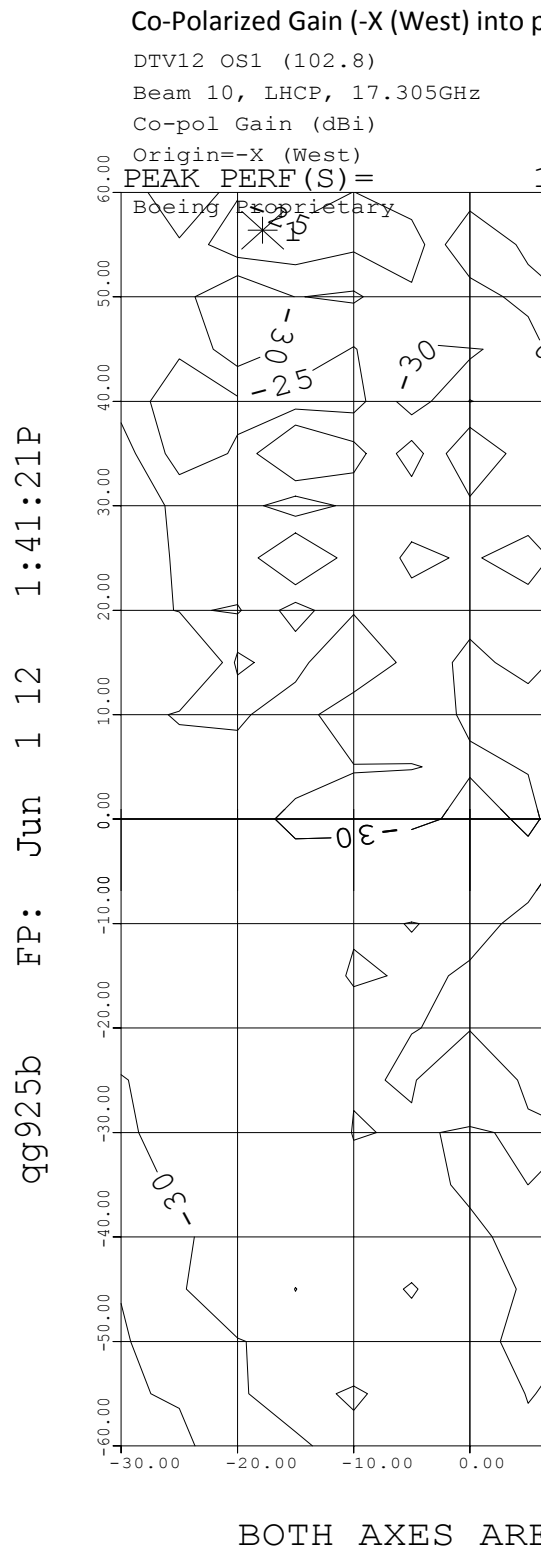




EG

Beam 10 OS1 LHCP 17.305

Z-Rotation (Deg.)	Y-Rotation (Deg.)	Co-pol Gain (dBi)	Cross-pol Gain (dBi)
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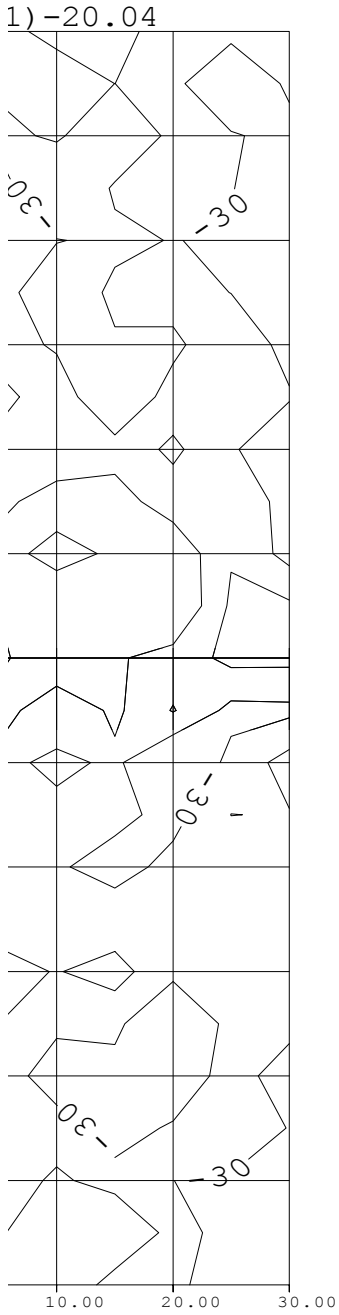
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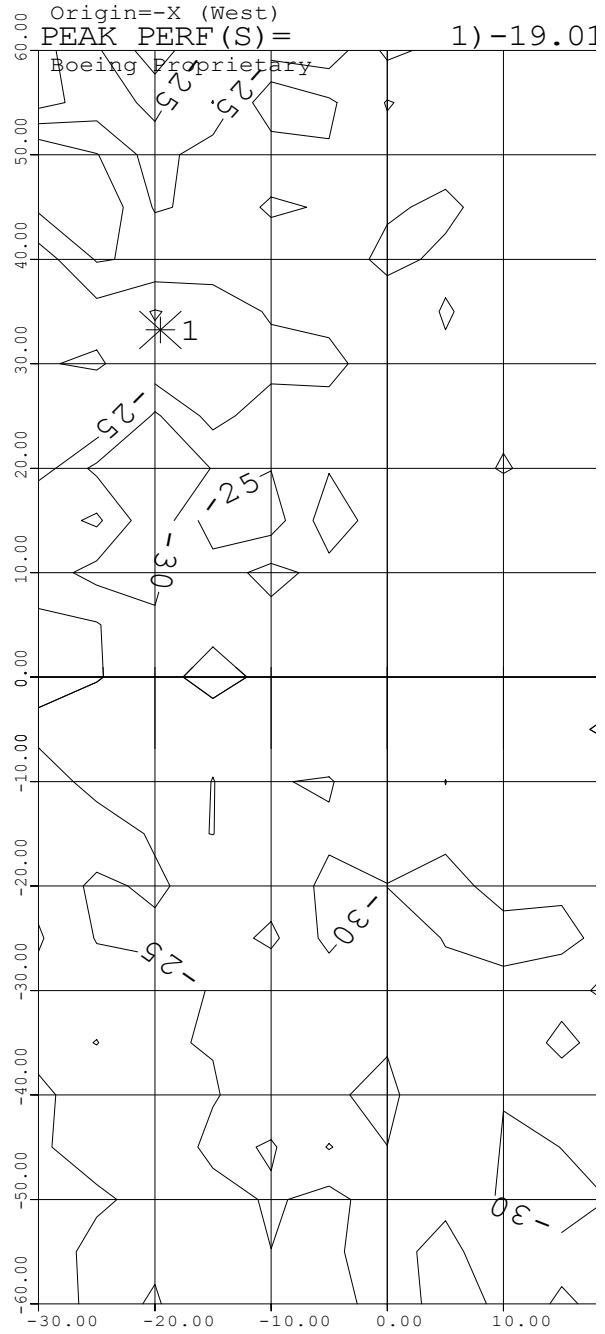
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IN DEG

### Cross-Polarized Gain (-X (West) into page)

DTV12 OS1 (102.8)  
Beam 10, LHCP, 17.305GHz  
Cross-pol Gain (dBi)



BOTH AXES ARE IN DEG

qq925b FP: Jun 1 12 1:41:27P







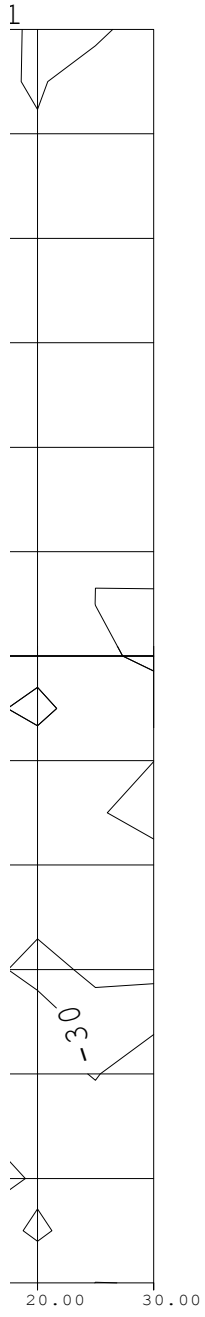












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