

REPORT OF 050518

last update on Wed May 18 12:00:38 GMT 2005

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1 - Introduction

1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

ASAR unavailable from 18-May-2005 01:49:01 to 18-May-2005 07:37:26 due to tile PSU switch off.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-05-17 00:00:00 to 2005-05-18 12:00:38

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	11	4	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	11	4	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	11	4	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	11	4	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	0	0	23	6	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	0	0	23	6	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	0	0	23	6	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	0	0	23	6	0

2.3 - Browse Visual Inspection

2.2 - Browse Visual Inspection

No anomalies observed from browse visual inspection.

2.4 - Data Analysis

2.3 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050506 055519
H	20050505 062656

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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☒	
☒	
☒	

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.346781	0.006846	-0.030645
7	P1	-3.109481	0.013831	-0.021421
11	P1	-4.657542	0.027335	0.014440
15	P1	-5.545129	0.045111	0.048184
19	P1	-3.720307	0.004056	-0.034531
22	P1	-4.590272	0.013168	-0.023742
26	P1	-4.879541	0.018953	0.008767
30	P1	-7.138695	0.028654	-0.011622
3	P1	-15.715064	0.081812	0.070488
7	P1	-15.499787	0.097447	-0.025962
11	P1	-21.262789	0.230690	-0.198753
15	P1	-11.433750	0.032500	0.111515
19	P1	-14.333069	0.033975	-0.099125
22	P1	-15.938984	0.335434	-0.076646
26	P1	-17.626589	0.192357	-0.140879
30	P1	-17.864731	0.253898	-0.118061

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.052849	0.080201	-0.053645
7	P2	-22.231798	0.102899	-0.044904
11	P2	-14.132710	0.101969	0.152831
15	P2	-7.096646	0.088227	-0.083776
19	P2	-9.651419	0.091915	0.020329
22	P2	-16.887327	0.092165	-0.034757
26	P2	-16.486155	0.093492	-0.052092
30	P2	-18.820852	0.080919	-0.003167

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.167849	0.003581	-0.018246
7	P3	-8.167849	0.003581	-0.018246
11	P3	-8.167849	0.003581	-0.018246
15	P3	-8.167849	0.003581	-0.018246
19	P3	-8.167849	0.003581	-0.018246
22	P3	-8.167849	0.003581	-0.018246
26	P3	-8.167849	0.003581	-0.018246
30	P3	-8.167849	0.003581	-0.018246

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-2.768014	0.012136	-0.061239
7	P1	-2.994460	0.030788	0.074610
11	P1	-3.965951	0.017980	0.046793
15	P1	-3.525311	0.023262	-0.023059
19	P1	-3.629240	0.014791	0.006060
22	P1	-5.657536	0.049539	-0.004977
26	P1	-7.313748	0.022548	-0.006333
30	P1	-6.273498	0.059075	-0.006481
3	P1	-10.777365	0.045339	-0.177284
7	P1	-10.419391	0.153745	0.060965
11	P1	-12.548966	0.103433	0.030327
15	P1	-11.636714	0.068443	0.002588
19	P1	-15.620945	0.064708	-0.000123
22	P1	-25.402853	2.156763	-0.981768

26	P1	-15.672976	0.322388	0.030933
30	P1	-20.239838	1.229488	0.004636

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.769979	0.037700	-0.118763
7	P2	-22.267641	0.046046	0.096645
11	P2	-10.037016	0.052952	0.065794
15	P2	-5.080392	0.038005	-0.069648
19	P2	-6.899792	0.052495	-0.052791
22	P2	-7.103116	0.035397	-0.047851
26	P2	-23.915146	0.036506	-0.050198
30	P2	-21.938528	0.040068	-0.072433

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.003576	0.003551	-0.006930
7	P3	-8.003607	0.003537	-0.006357
11	P3	-8.003562	0.003546	-0.006750
15	P3	-8.003710	0.003549	-0.005587
19	P3	-8.003659	0.003544	-0.006266
22	P3	-8.003658	0.003531	-0.006406
26	P3	-8.003567	0.003546	-0.006134
30	P3	-8.003565	0.003559	-0.007247

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS

4.3.2 - Evolution for GM1

5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000464304
	stdev	2.22408e-07
MEAN Q	mean	0.000484539
	stdev	2.38536e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127164
	stdev	0.00104932
STDEV Q	mean	0.127410
	stdev	0.00106010



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005051[678]

The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050517_003632_000002312037_00202_16789_1758.N1	1	0









7 - Doppler Analysis

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

6.1 - Unbiased Doppler Error for WVS



Evolution of unbiased Doppler error (Real - Expected)

Acsending

Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

Acsending

Descending

6.3 - Doppler evolution versus ANX for WVS

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Acsending


Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

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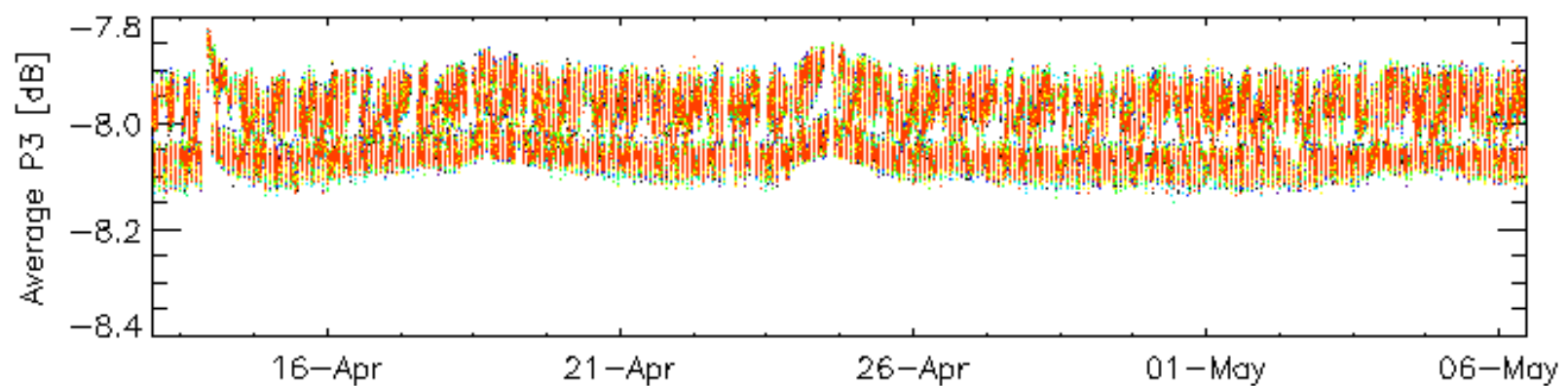
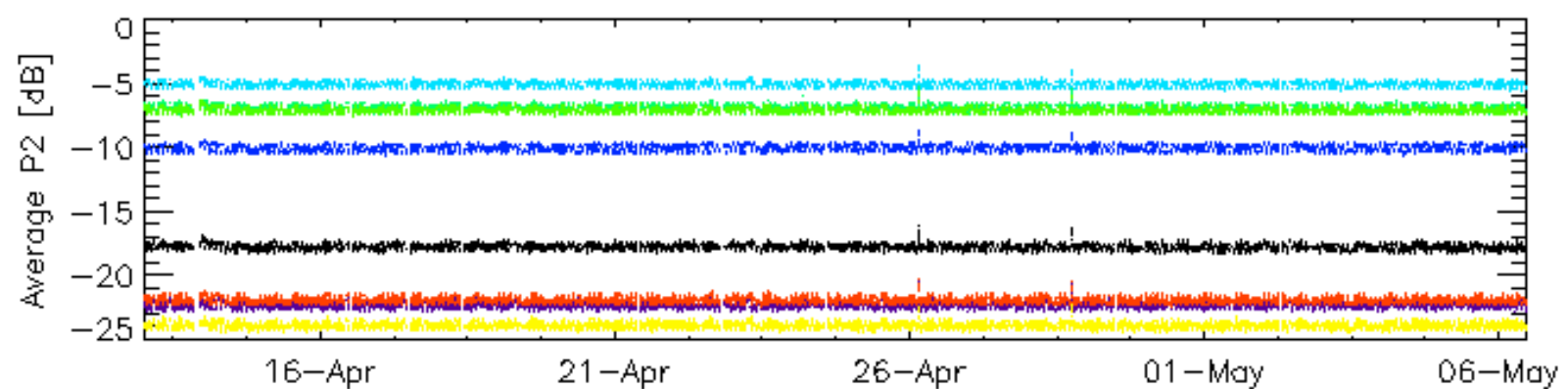
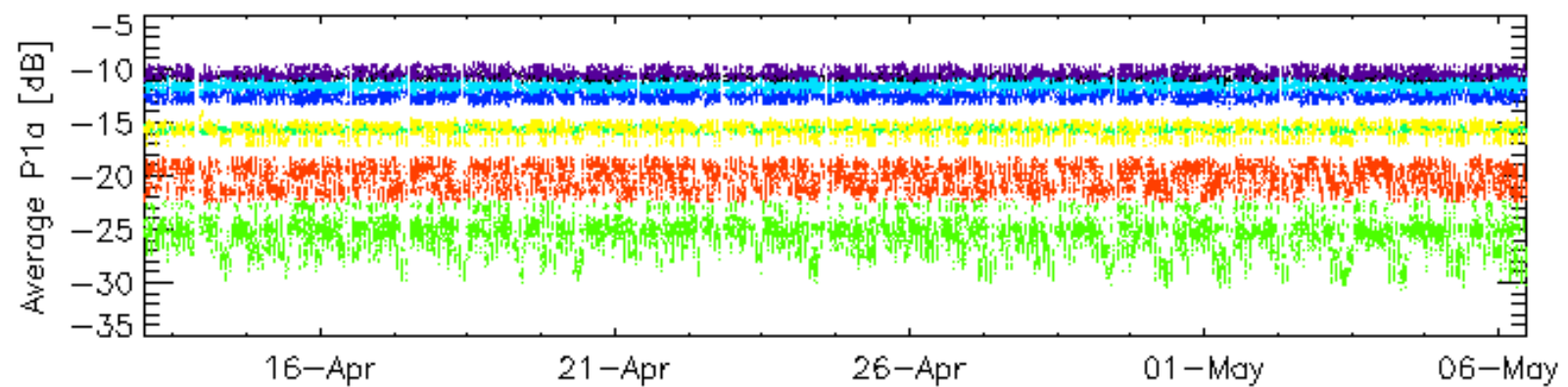
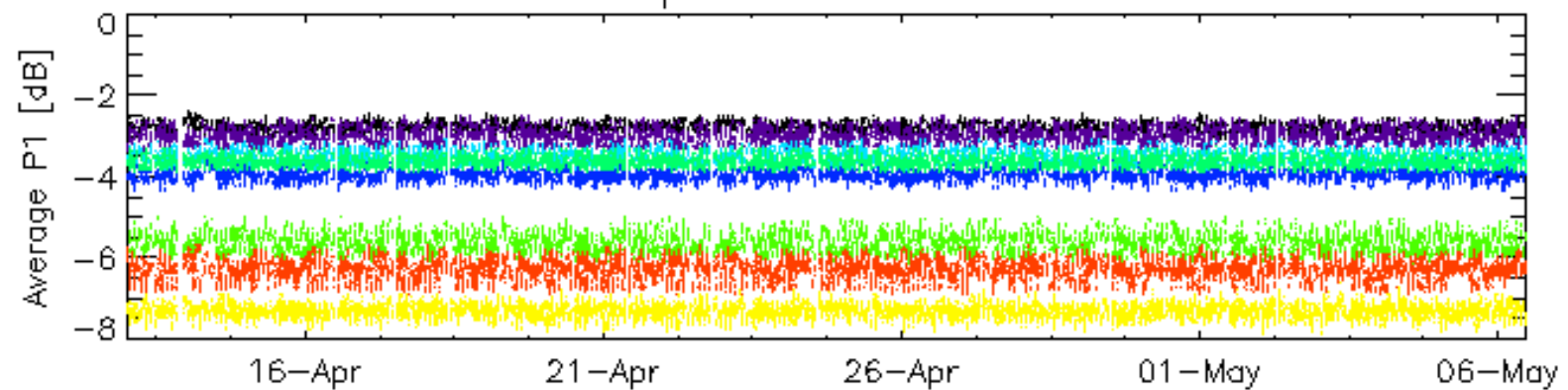
Ascending

⊗

Descending

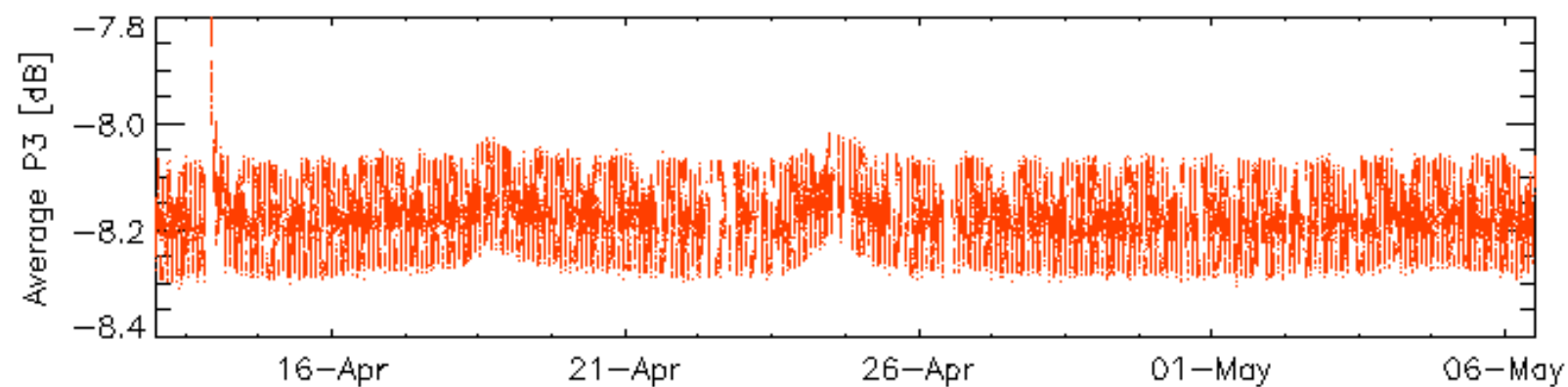
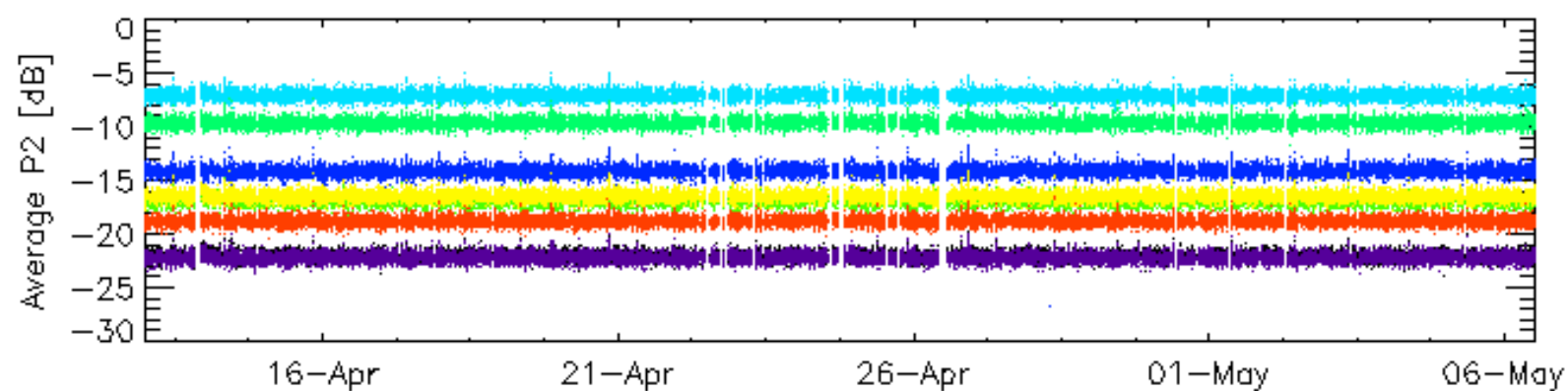
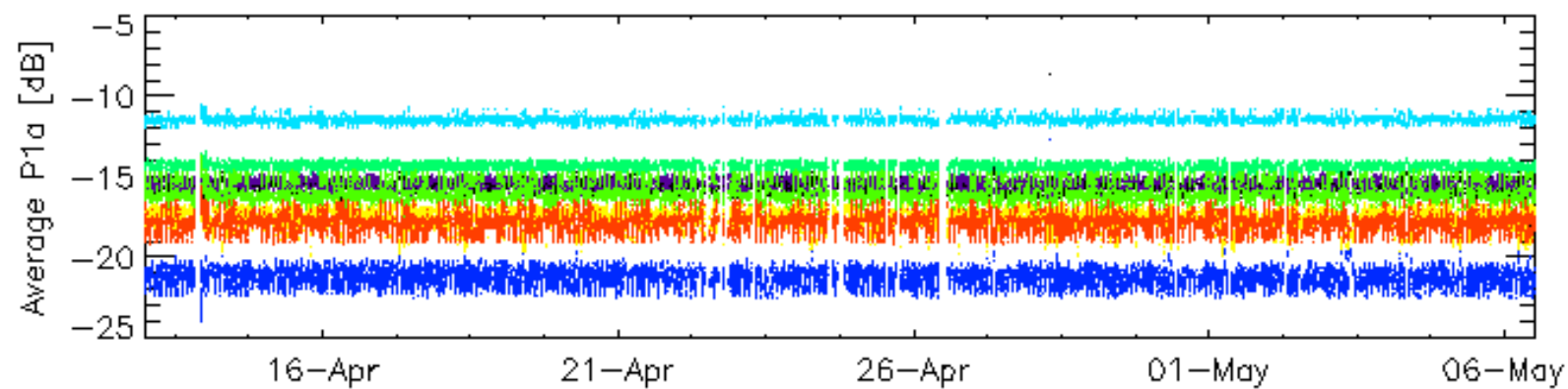
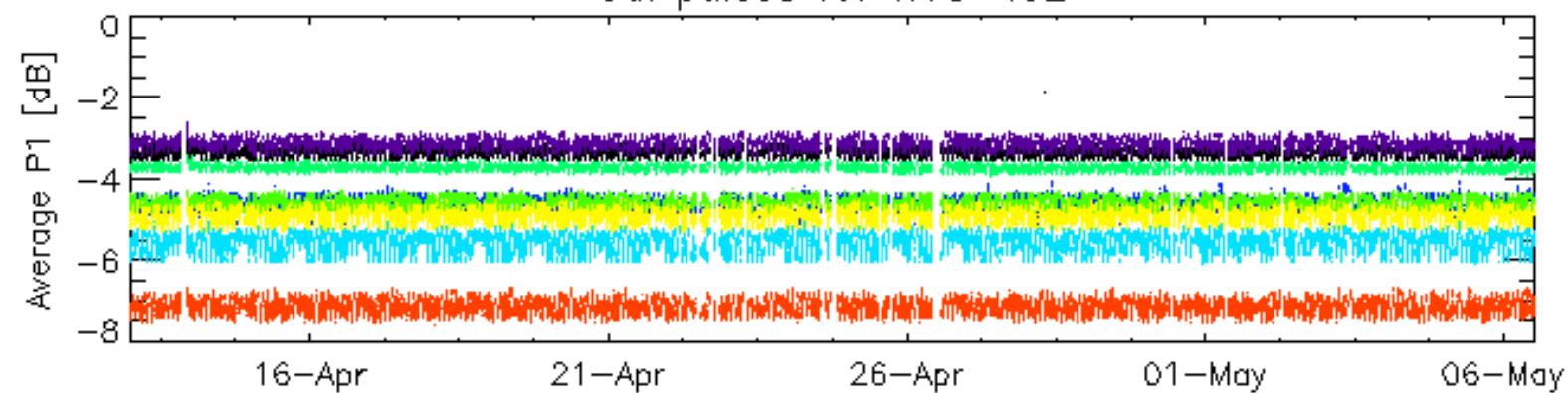
6.6 - Doppler evolution versus ANX for GM1

Cal pulses for GM1 SS3



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

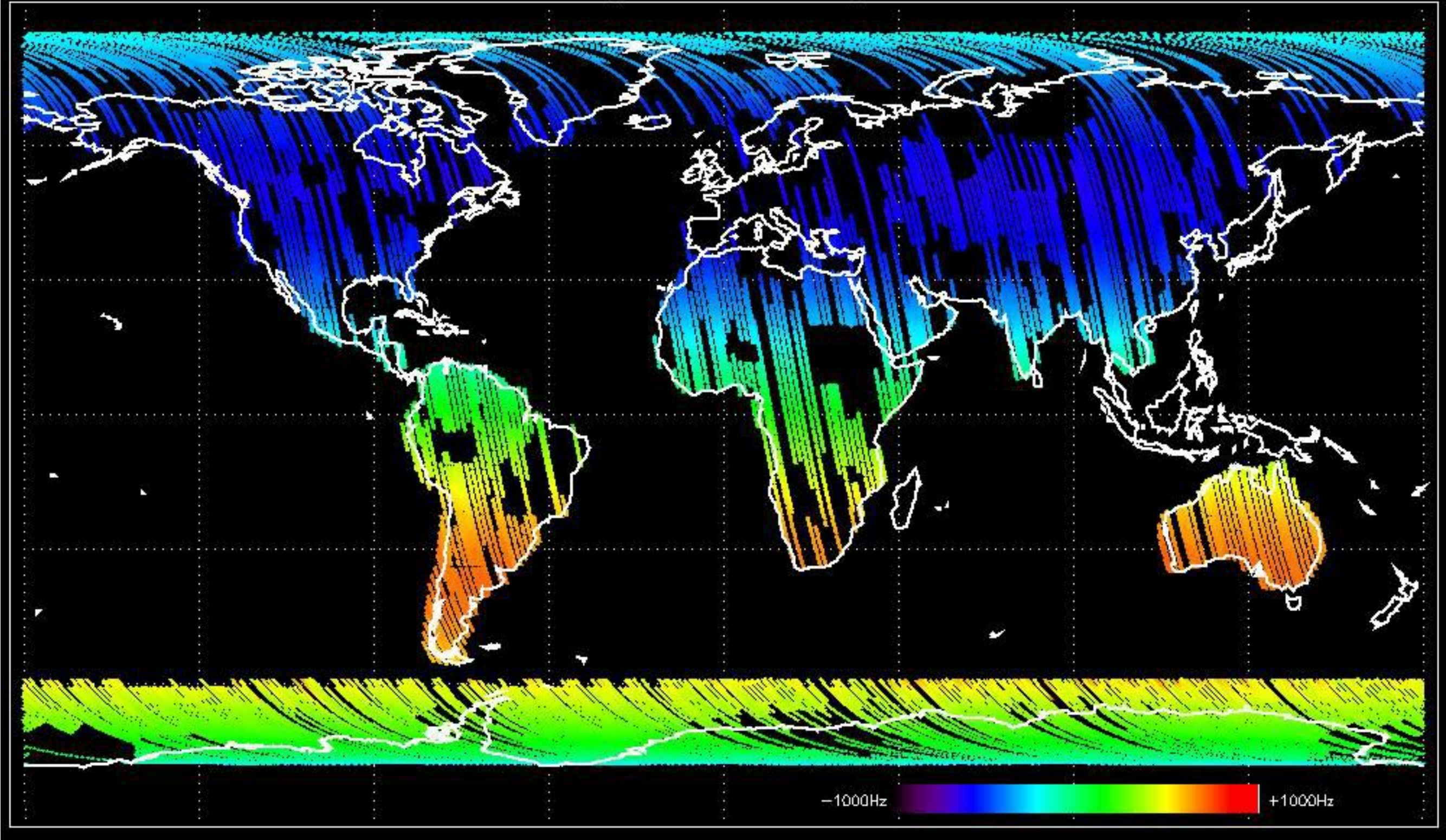
No anomalies observed from browse visual inspection.

No anomalies observed.

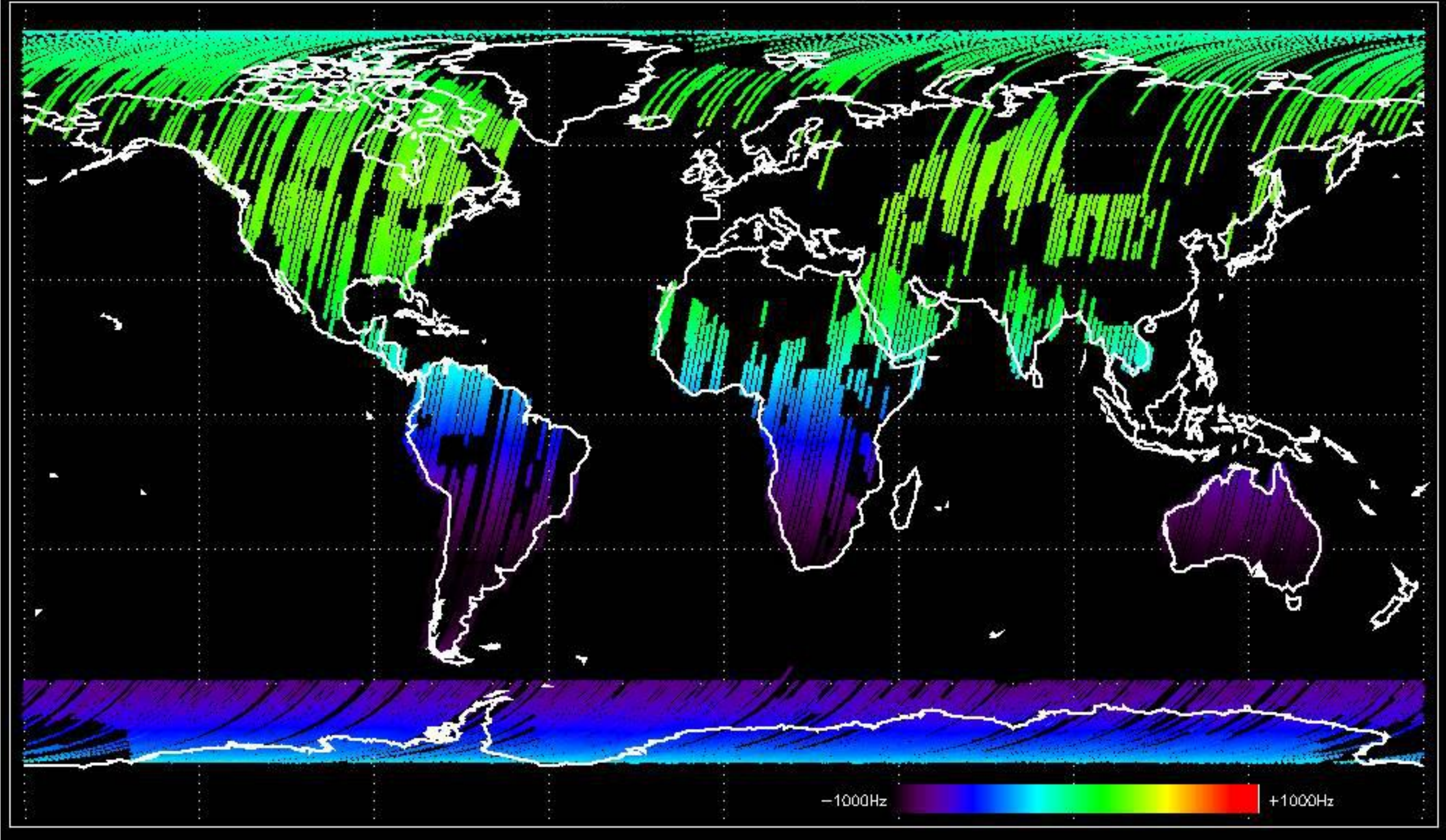
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

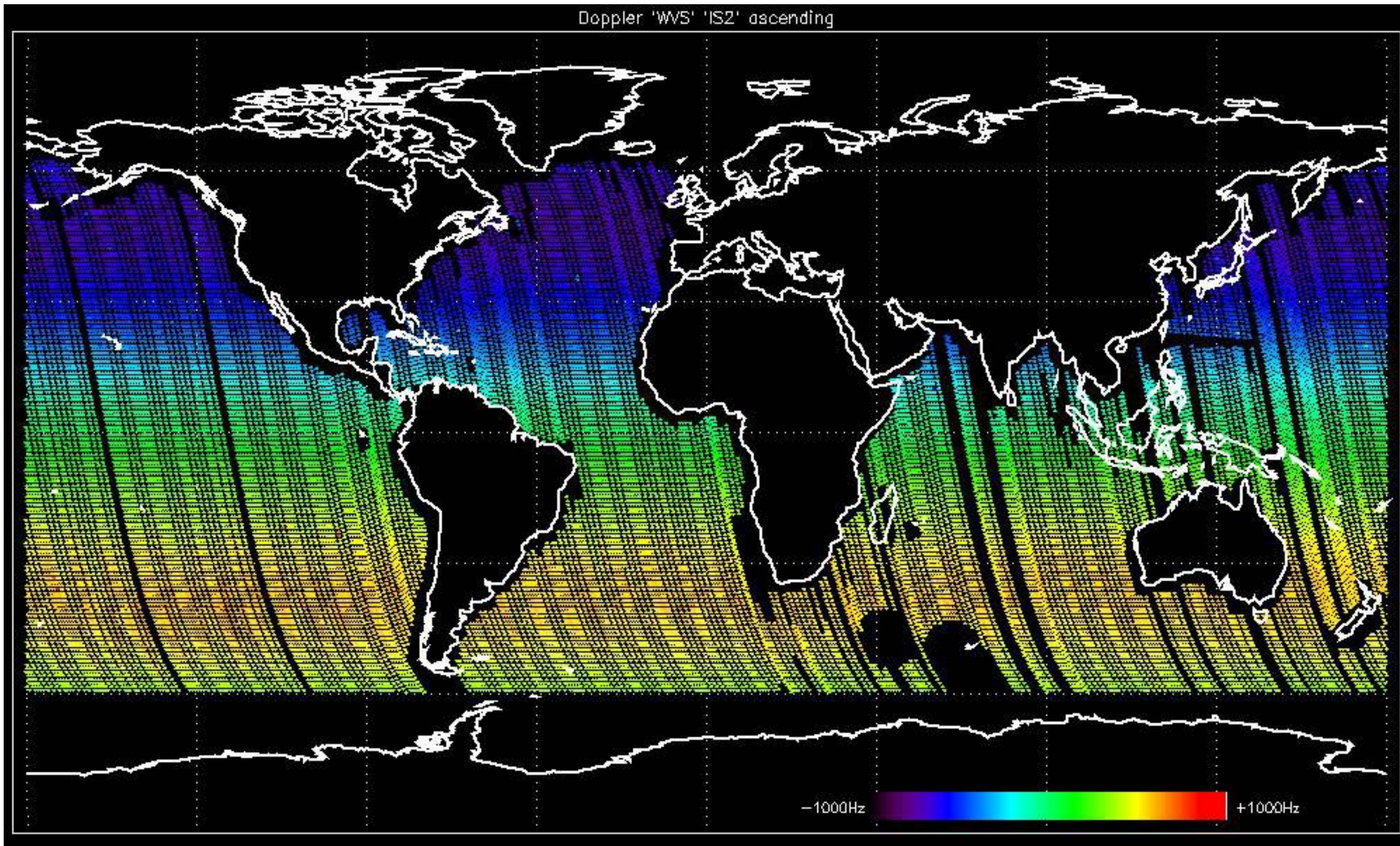
Doppler 'GM1' 'SS1' ascending



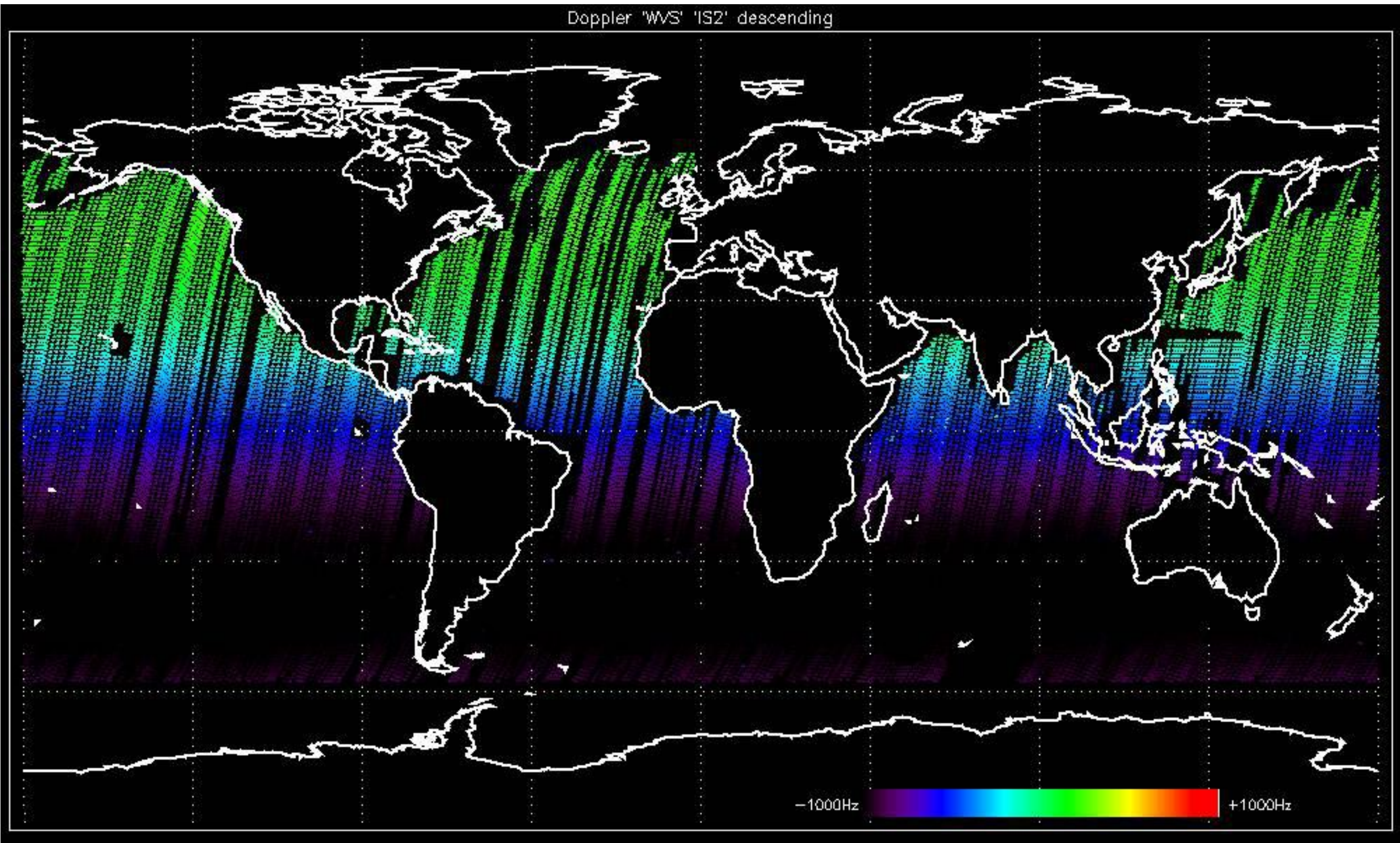
Doppler 'GM1' 'SS1' descending



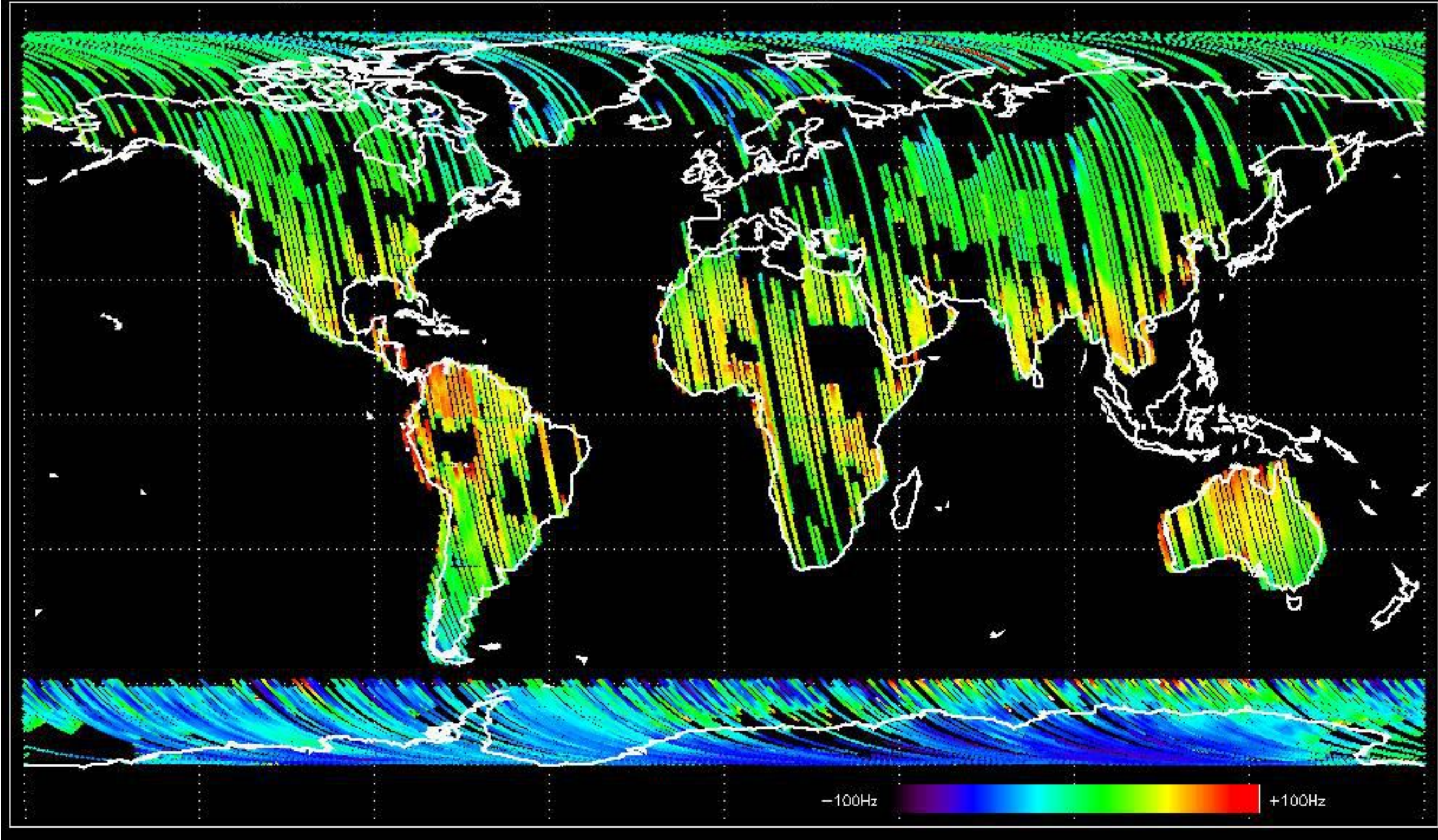
Doppler 'WVS' 'IS2' ascending



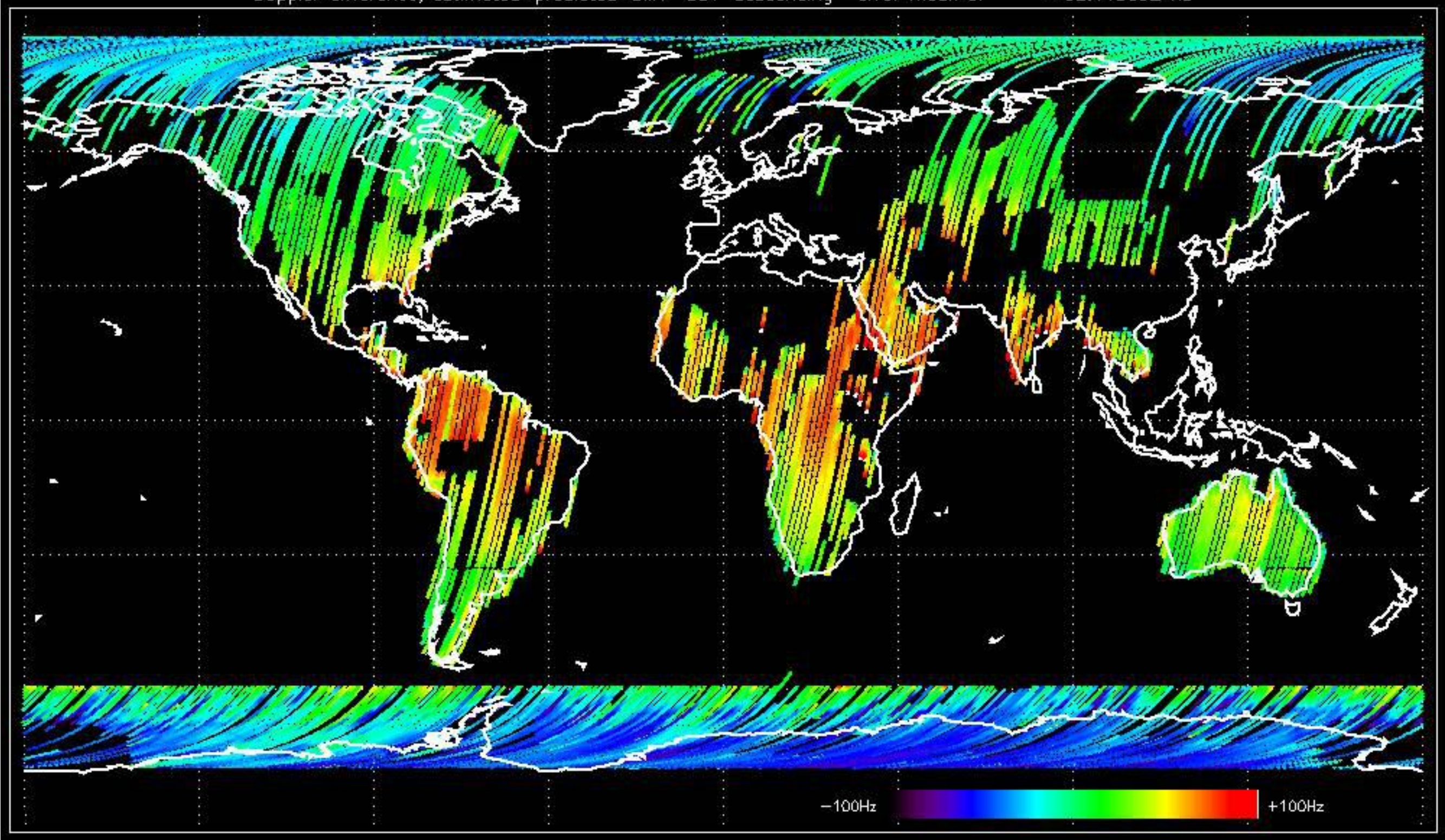
Doppler 'WVS' 'IS2' descending



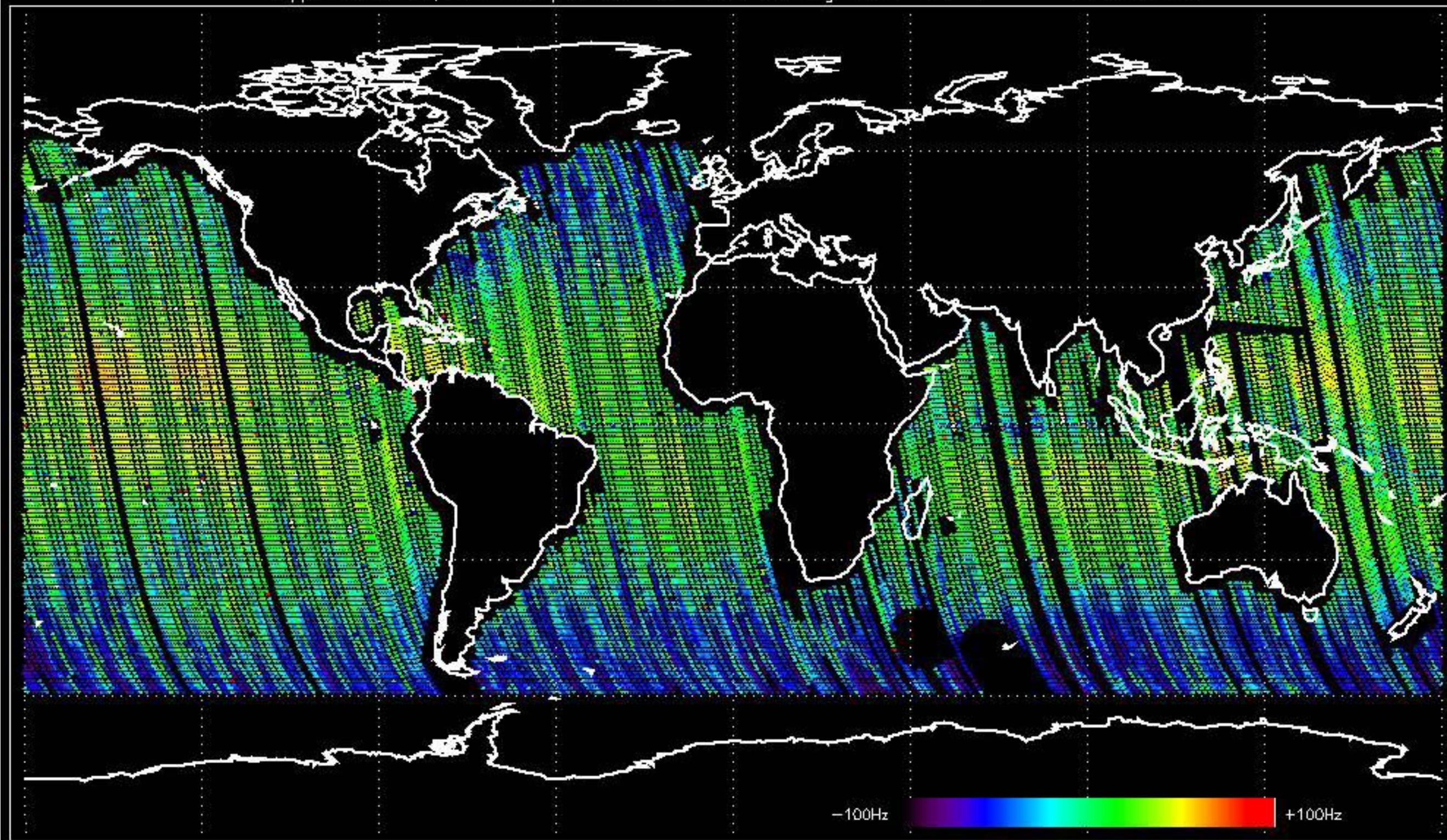
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -40.627558 Hz



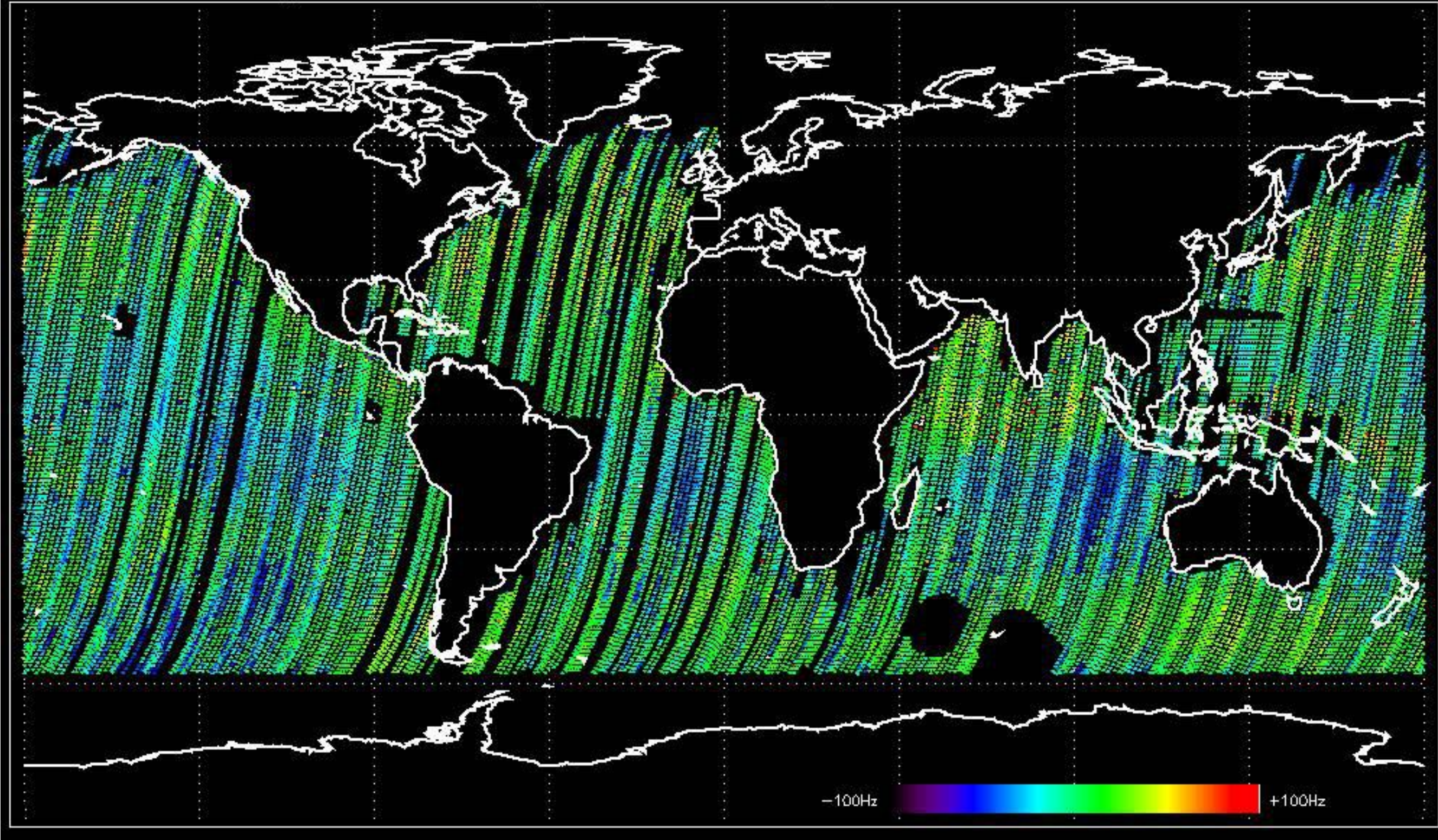
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -32.115692 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -32.186196 Hz

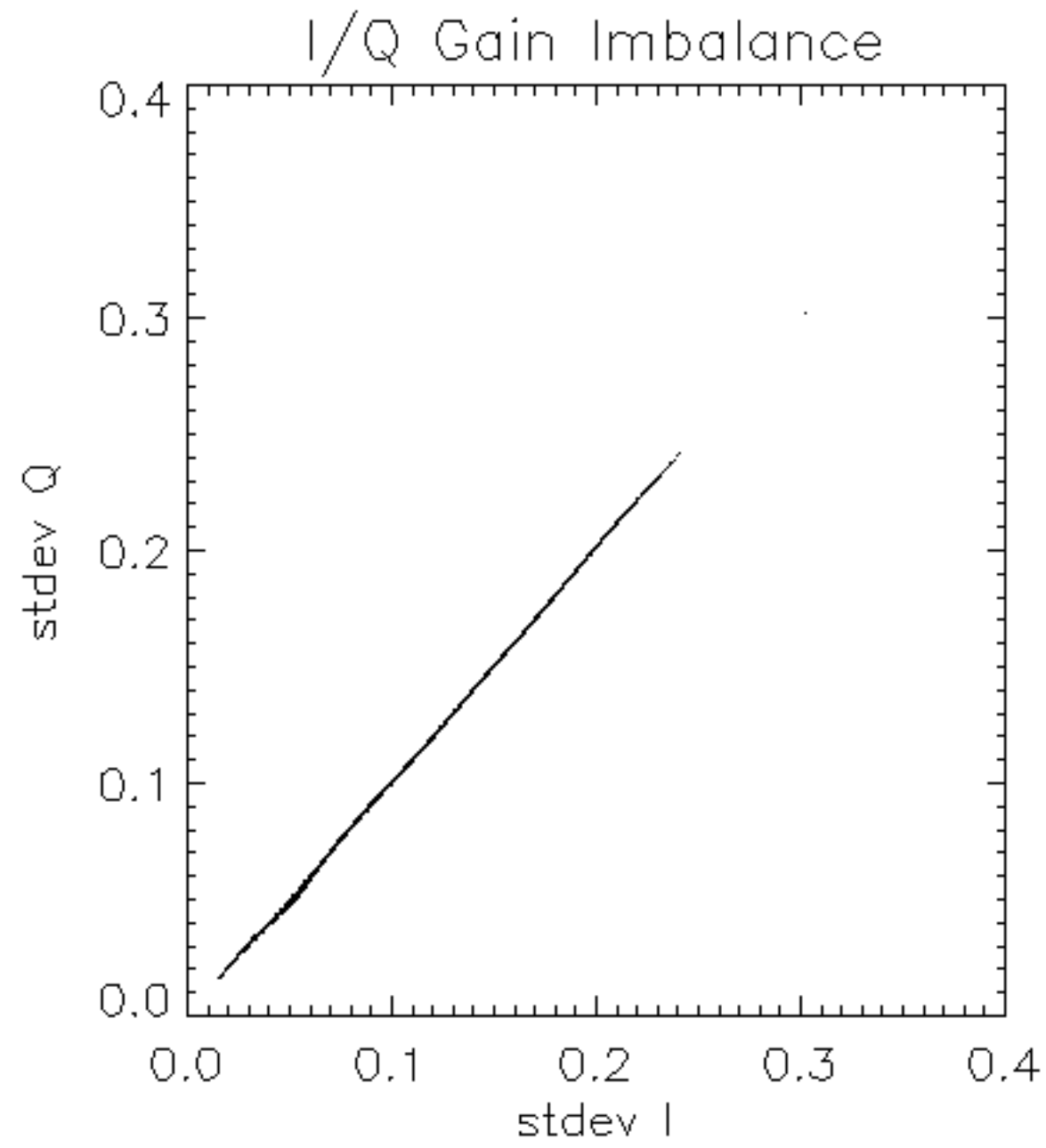


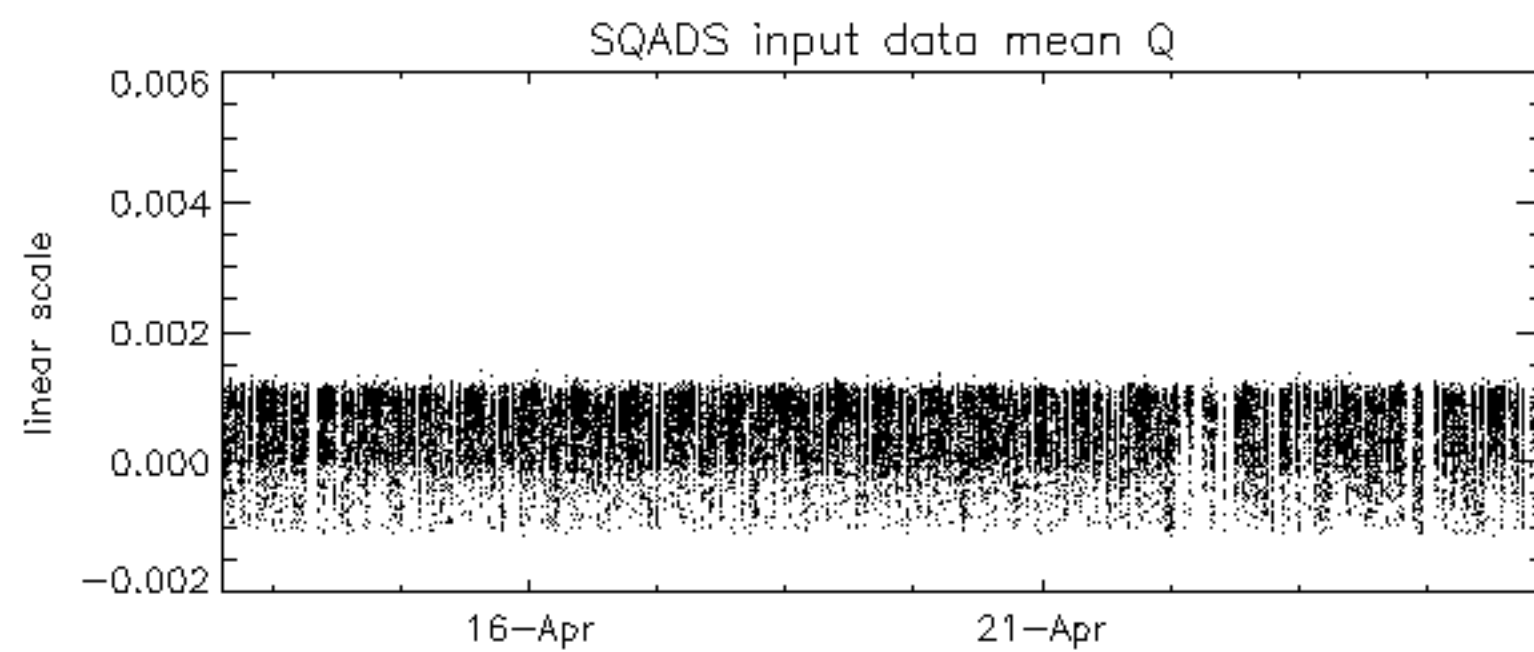
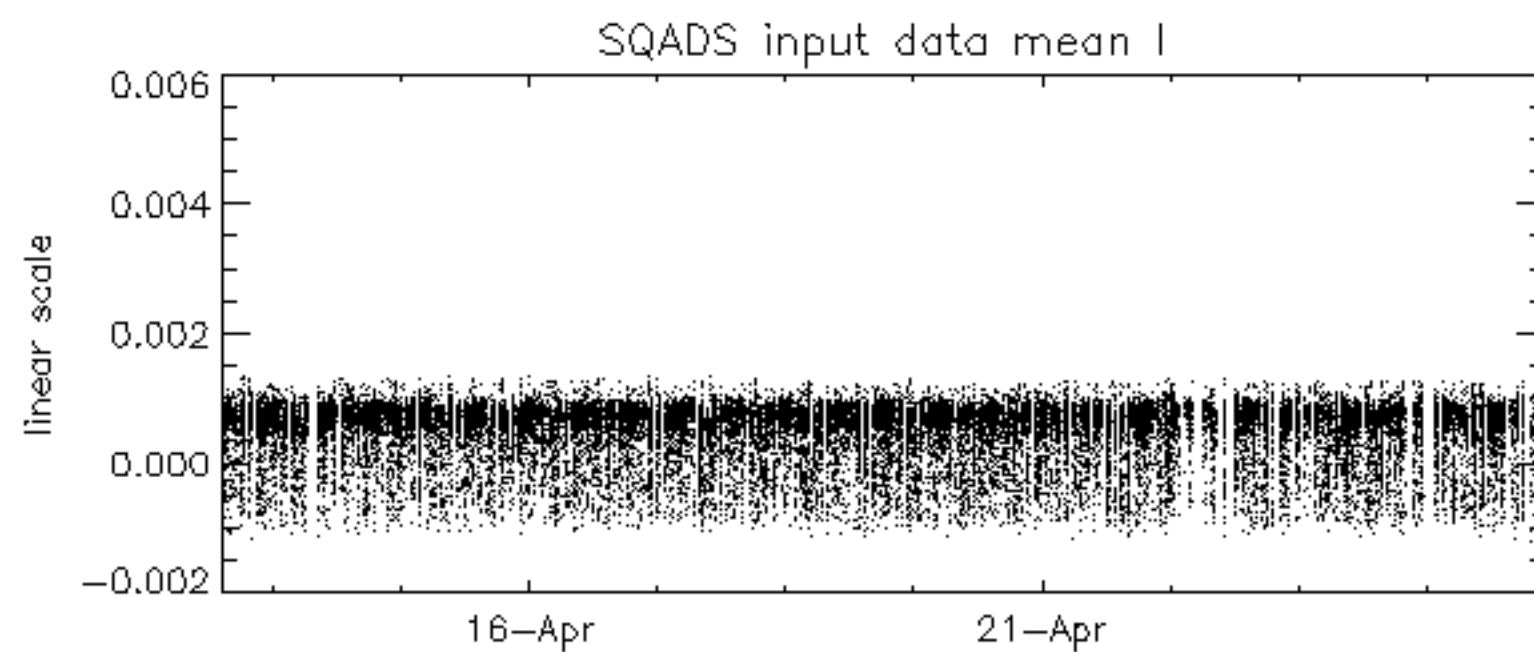
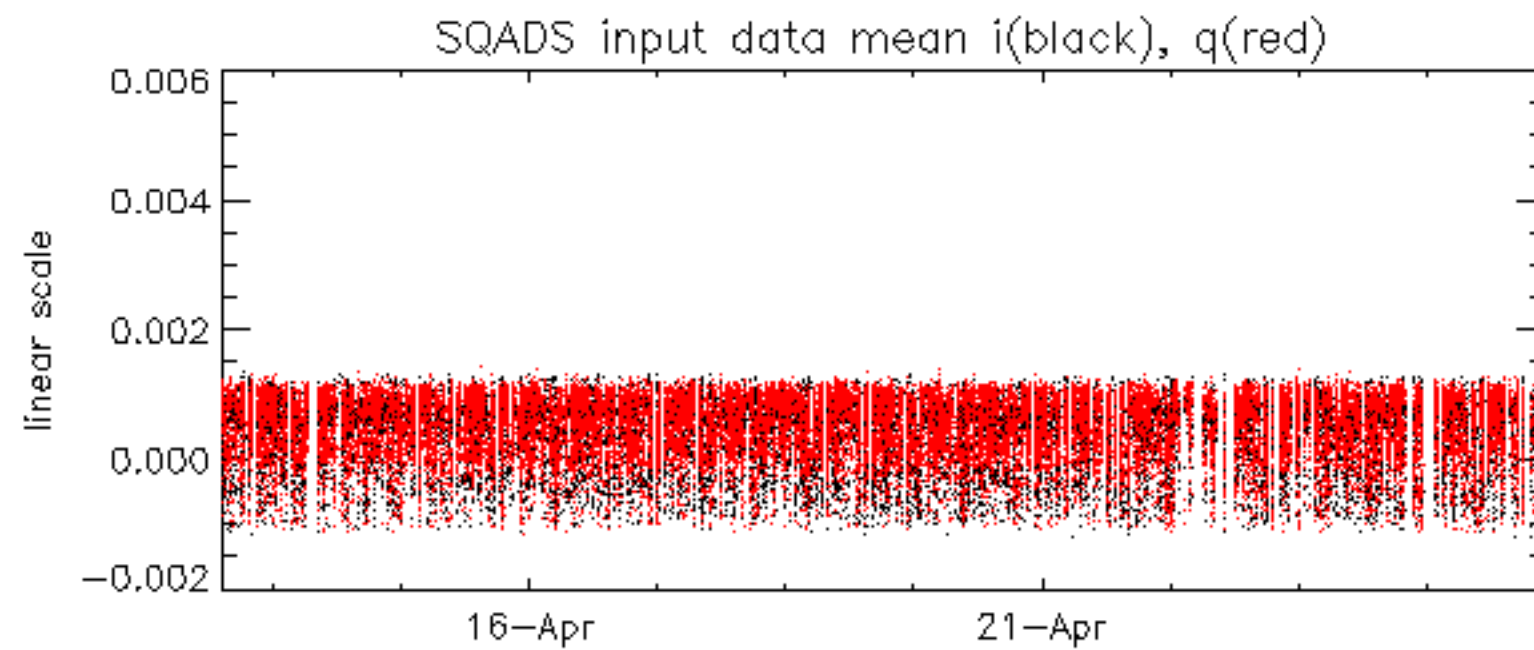
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.360256 Hz

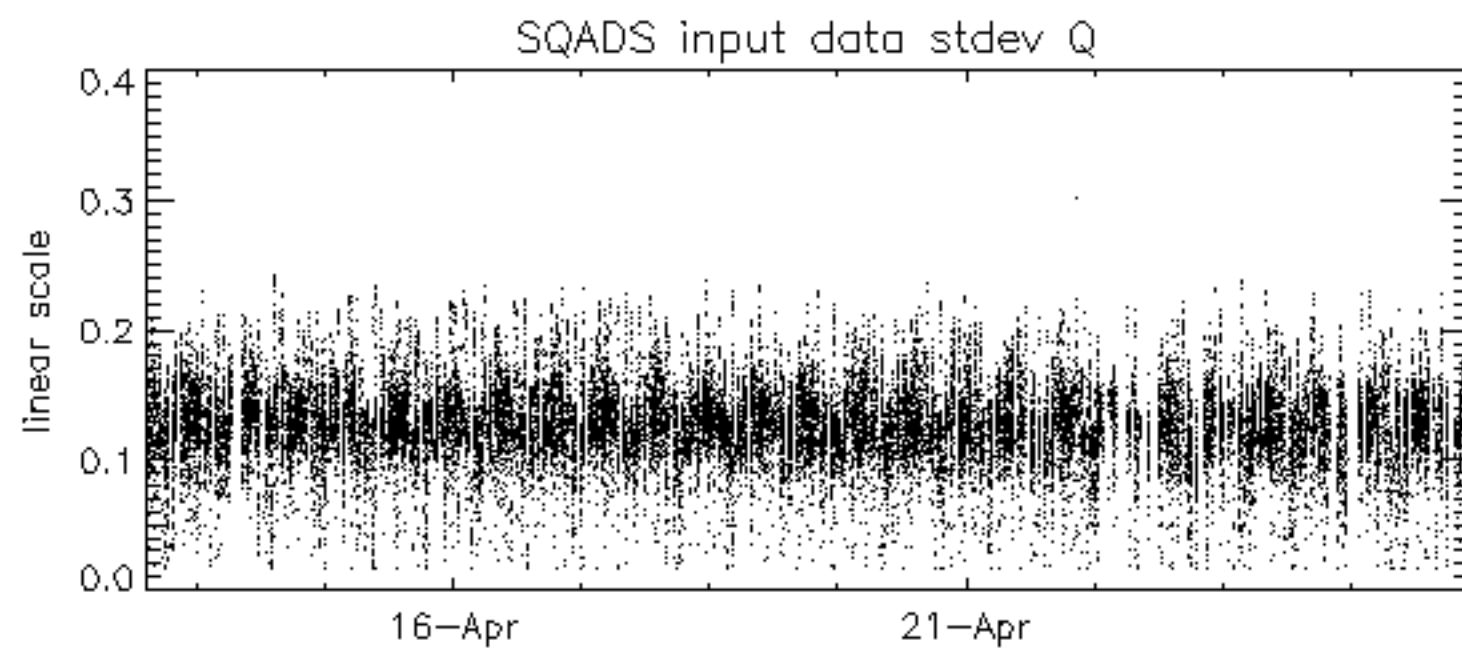
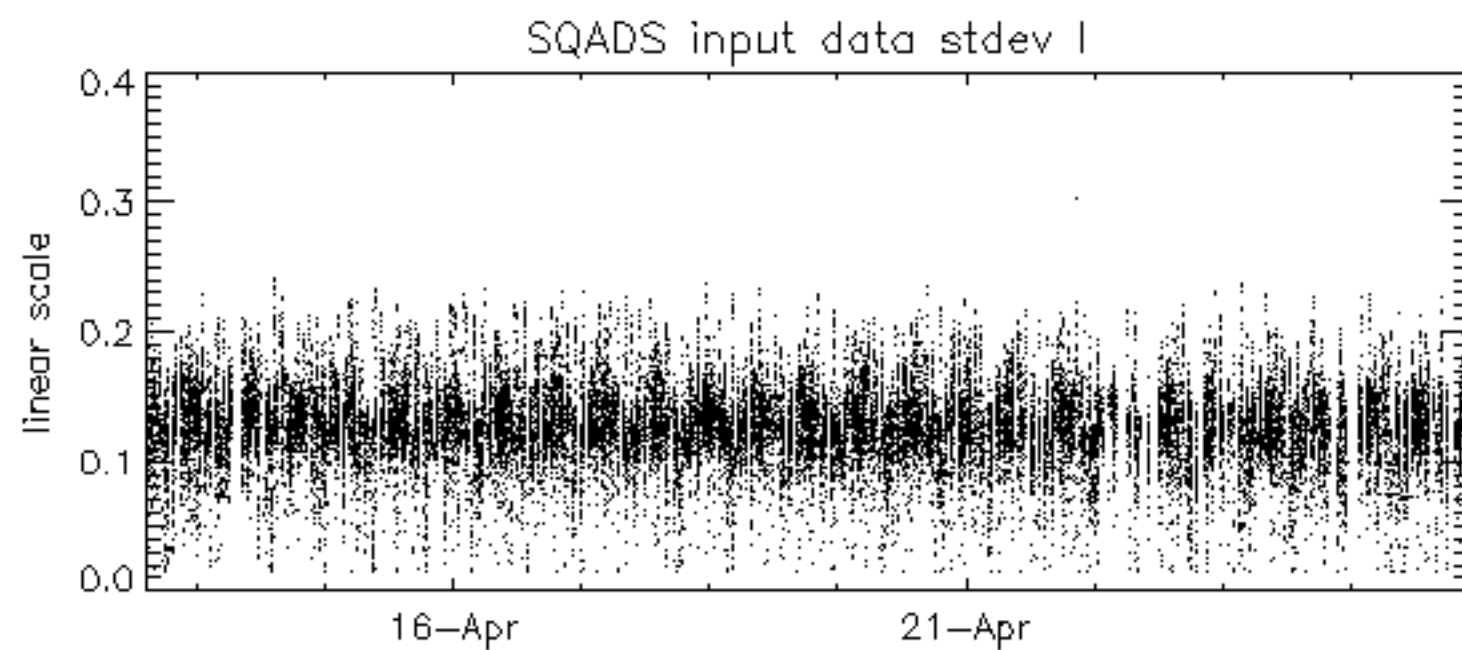
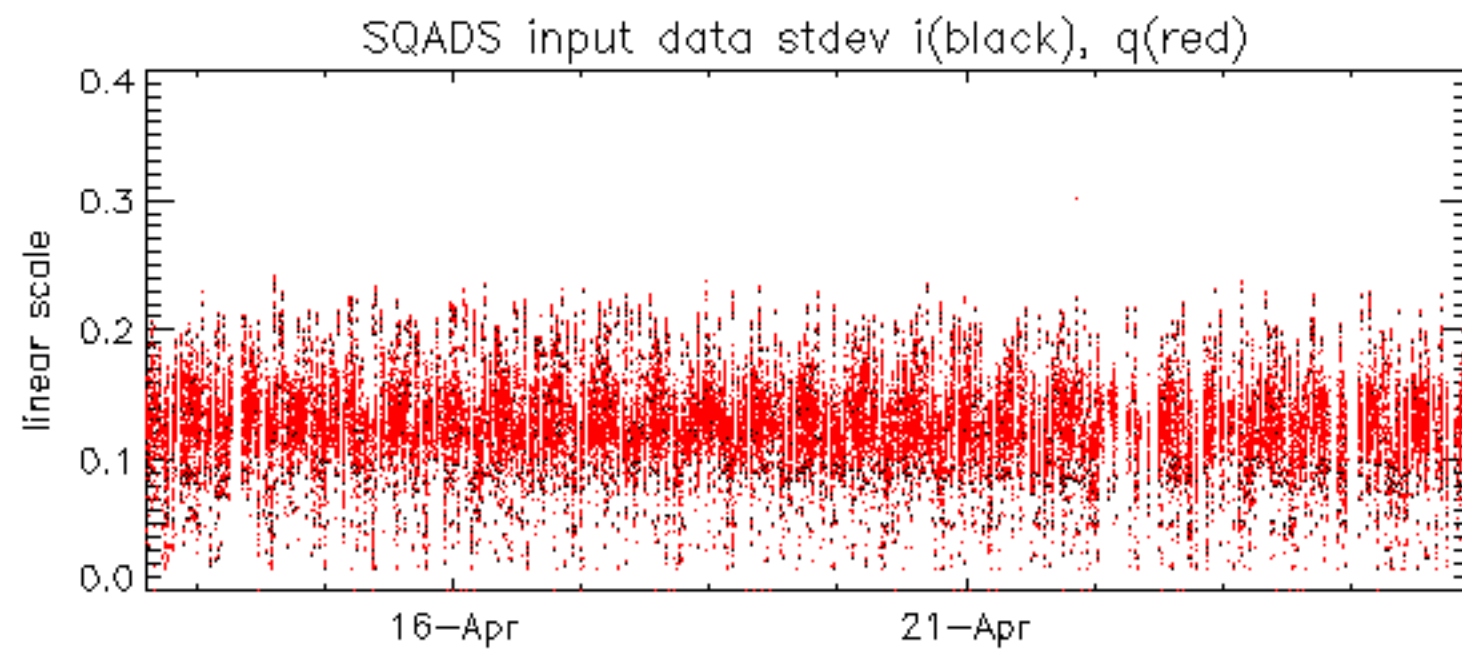


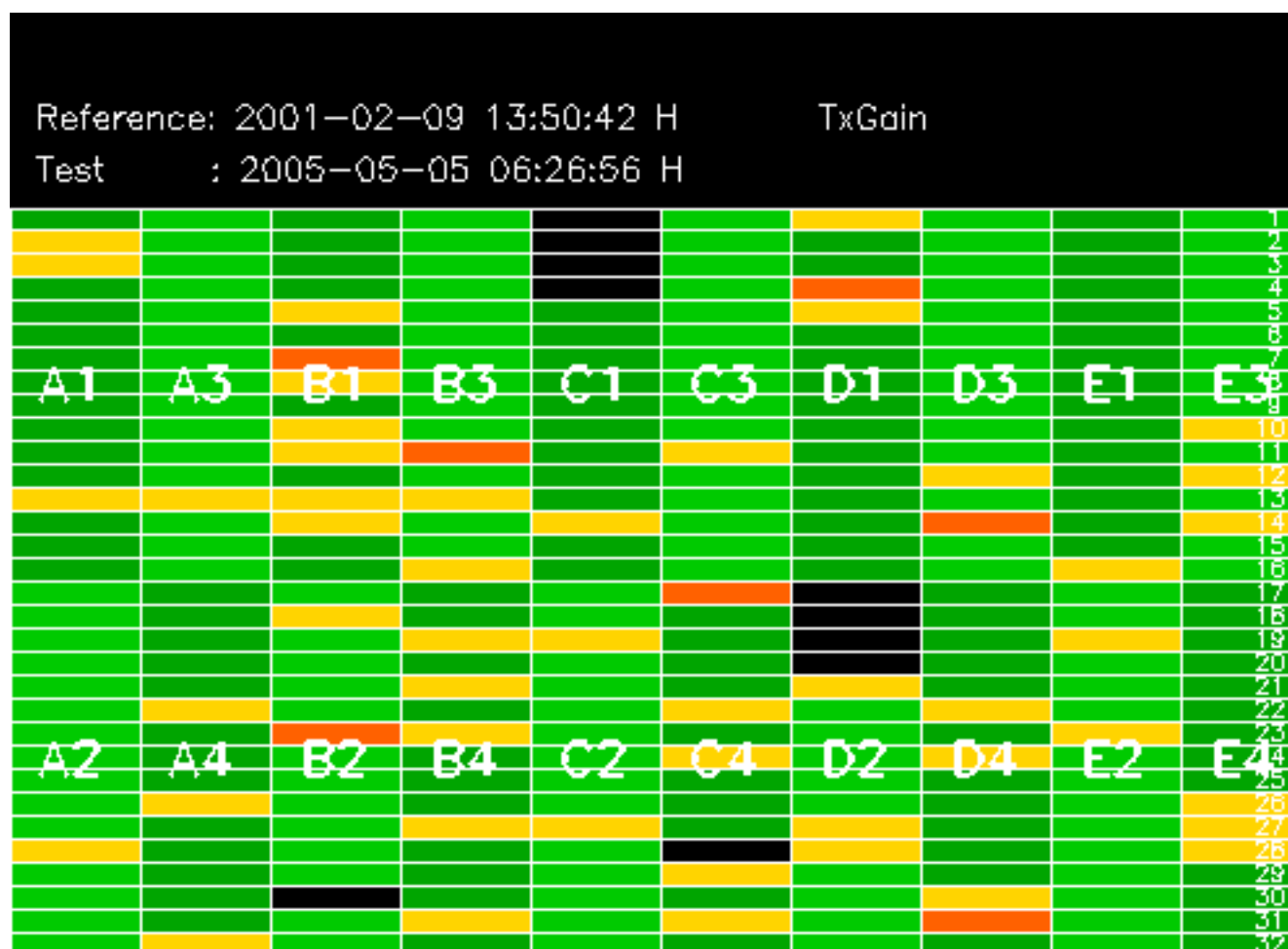
No anomalies observed on available MS products:

No anomalies observed.



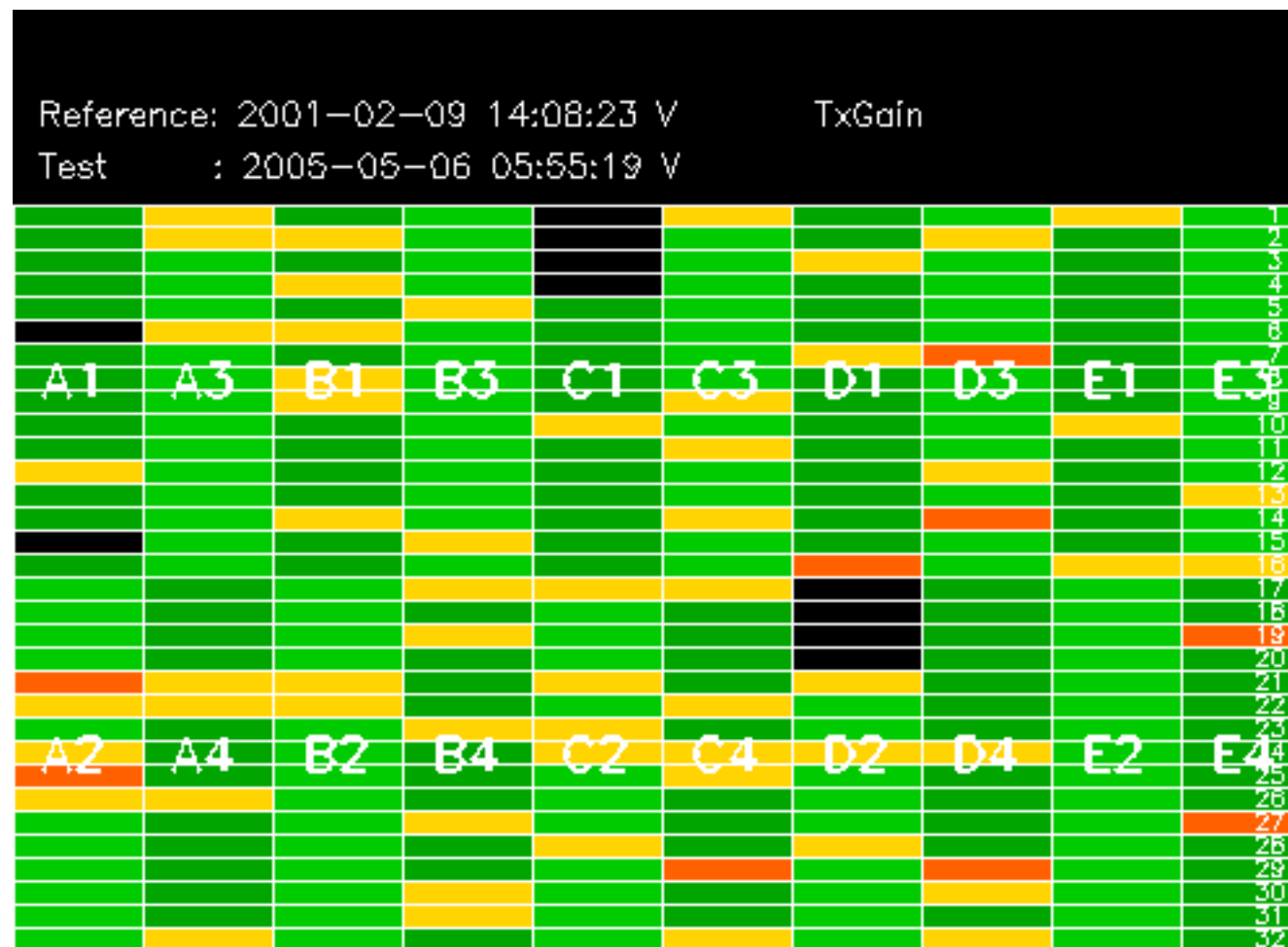






Reference: 2003-06-12 14:08:52 H TxGain
 Test : 2005-05-05 06:26:56 H

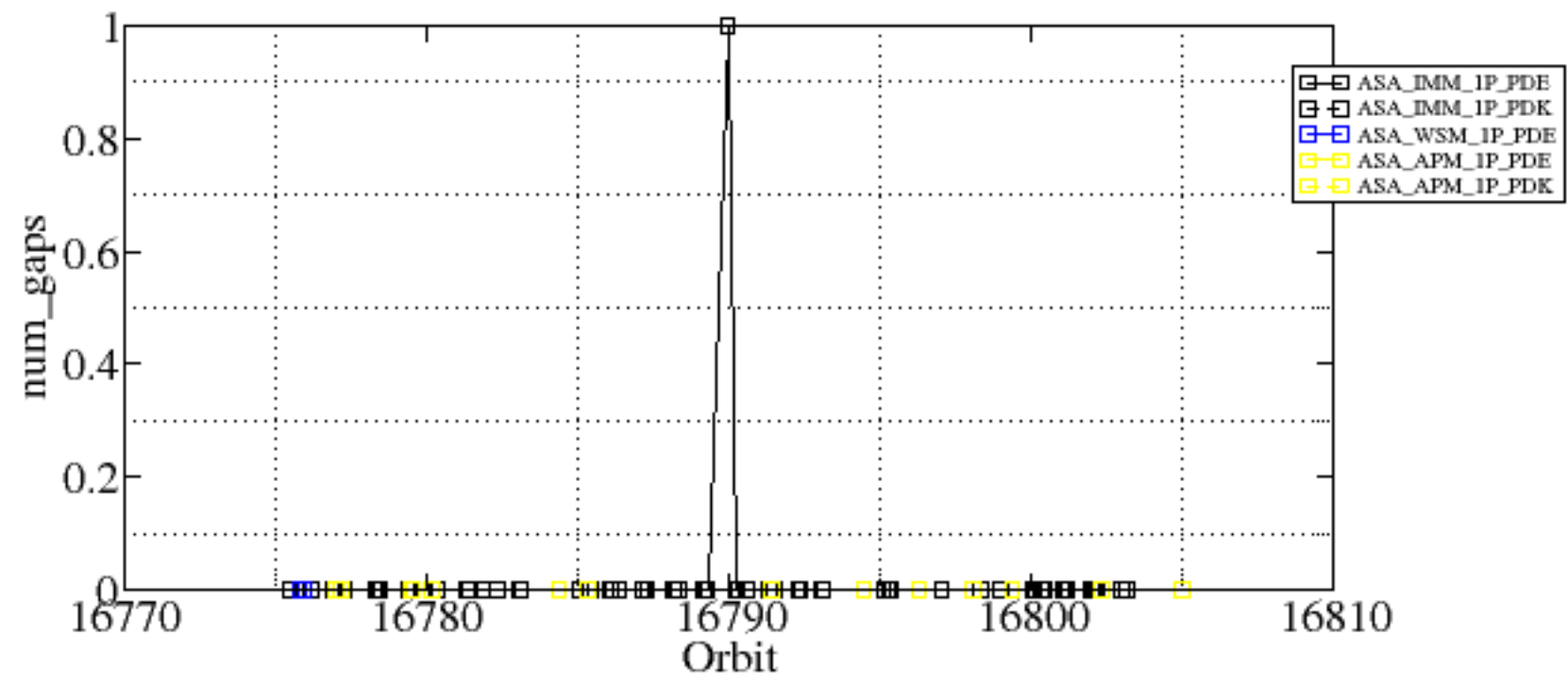


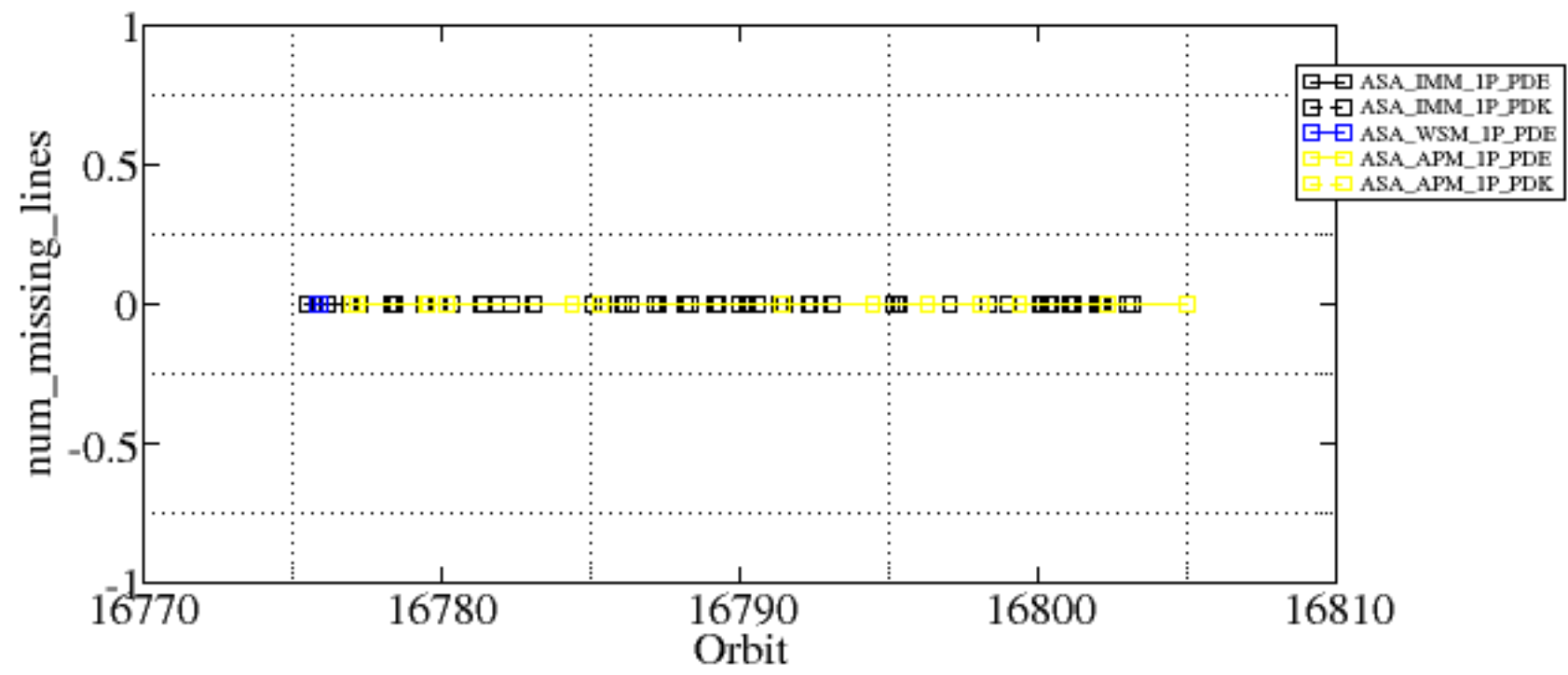


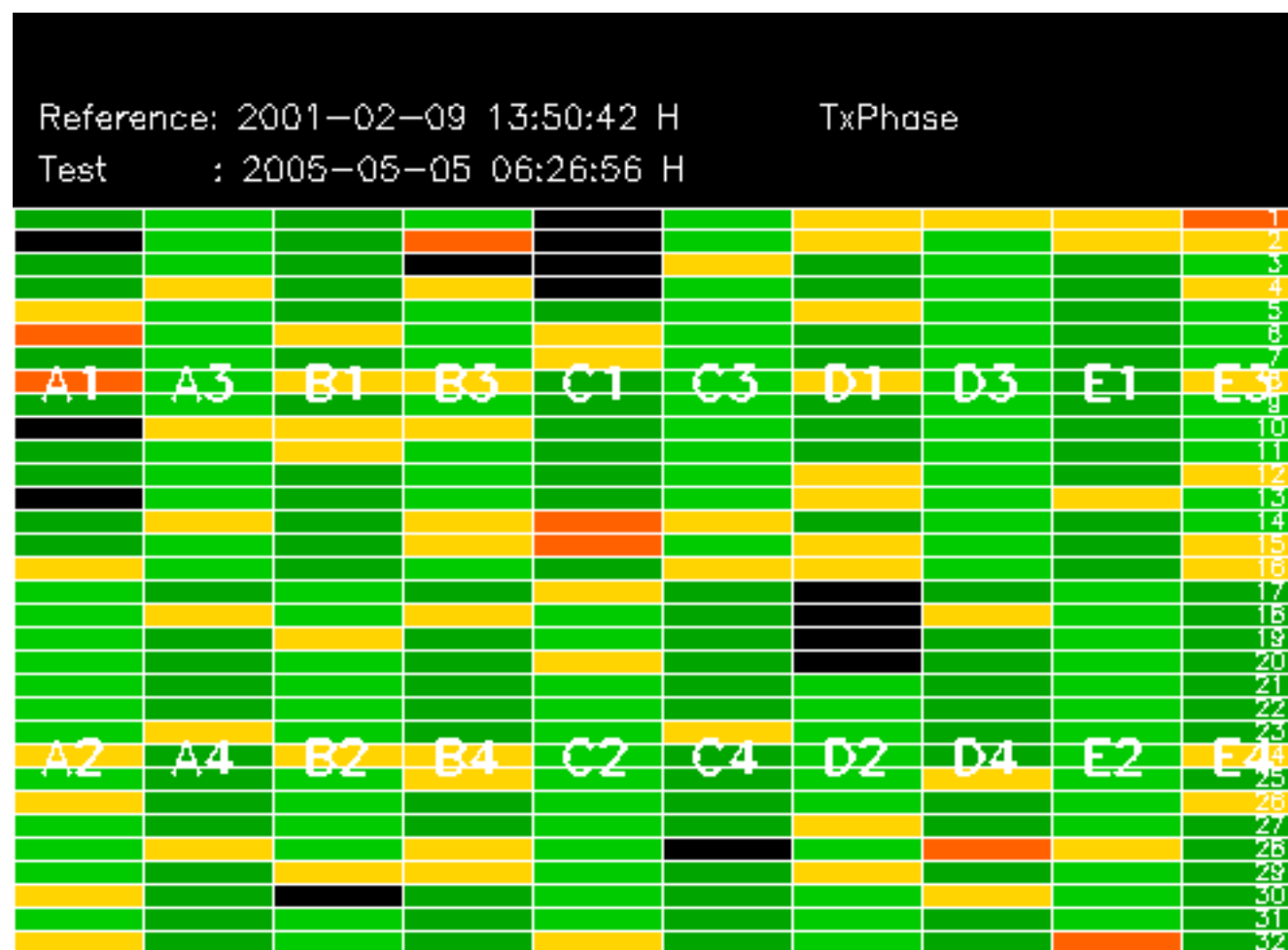
Summary of analysis for the last 3 days 2005051[678]

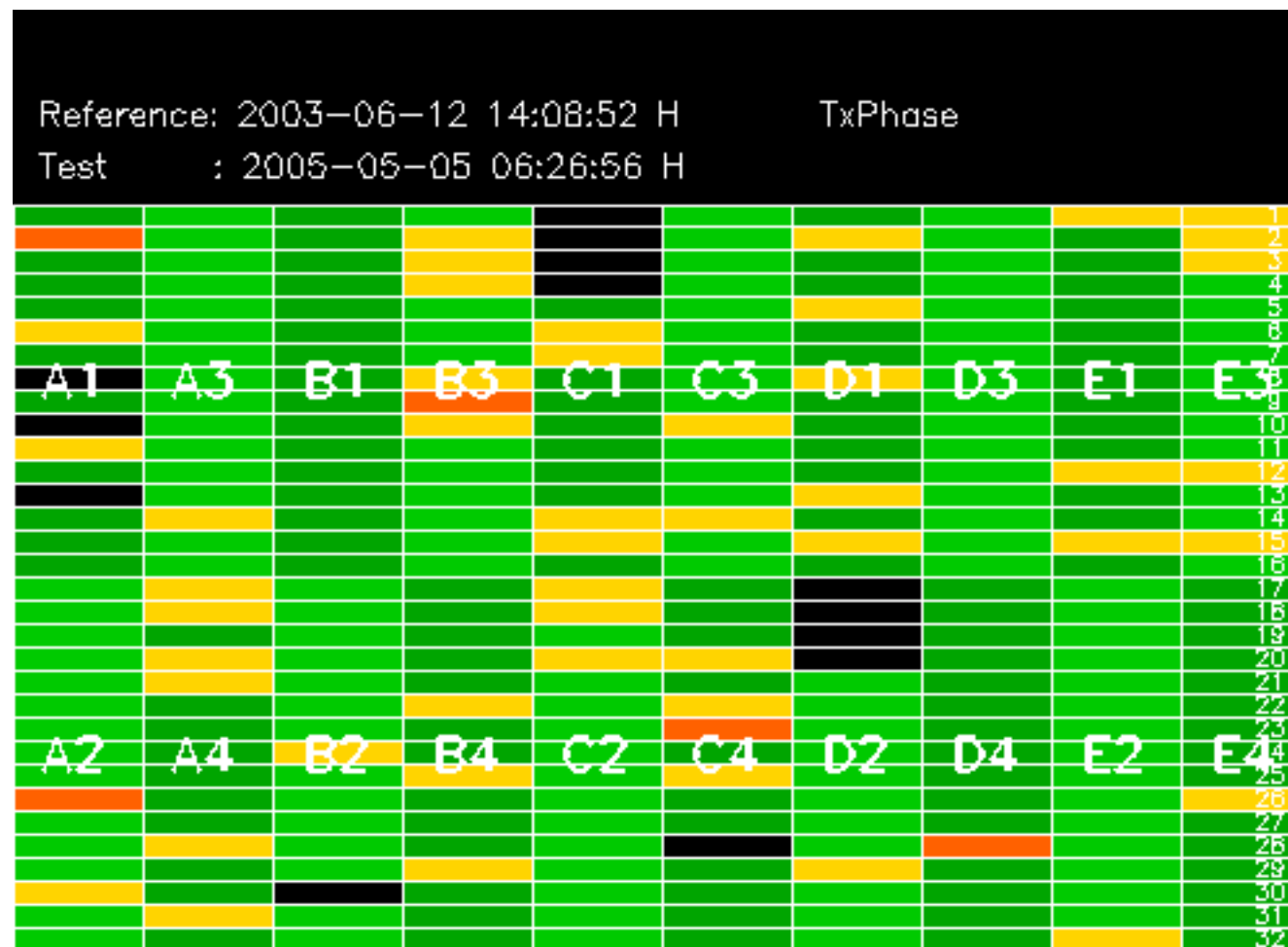
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050517_003632_000002312037_00202_16789_1758.N1	1	0

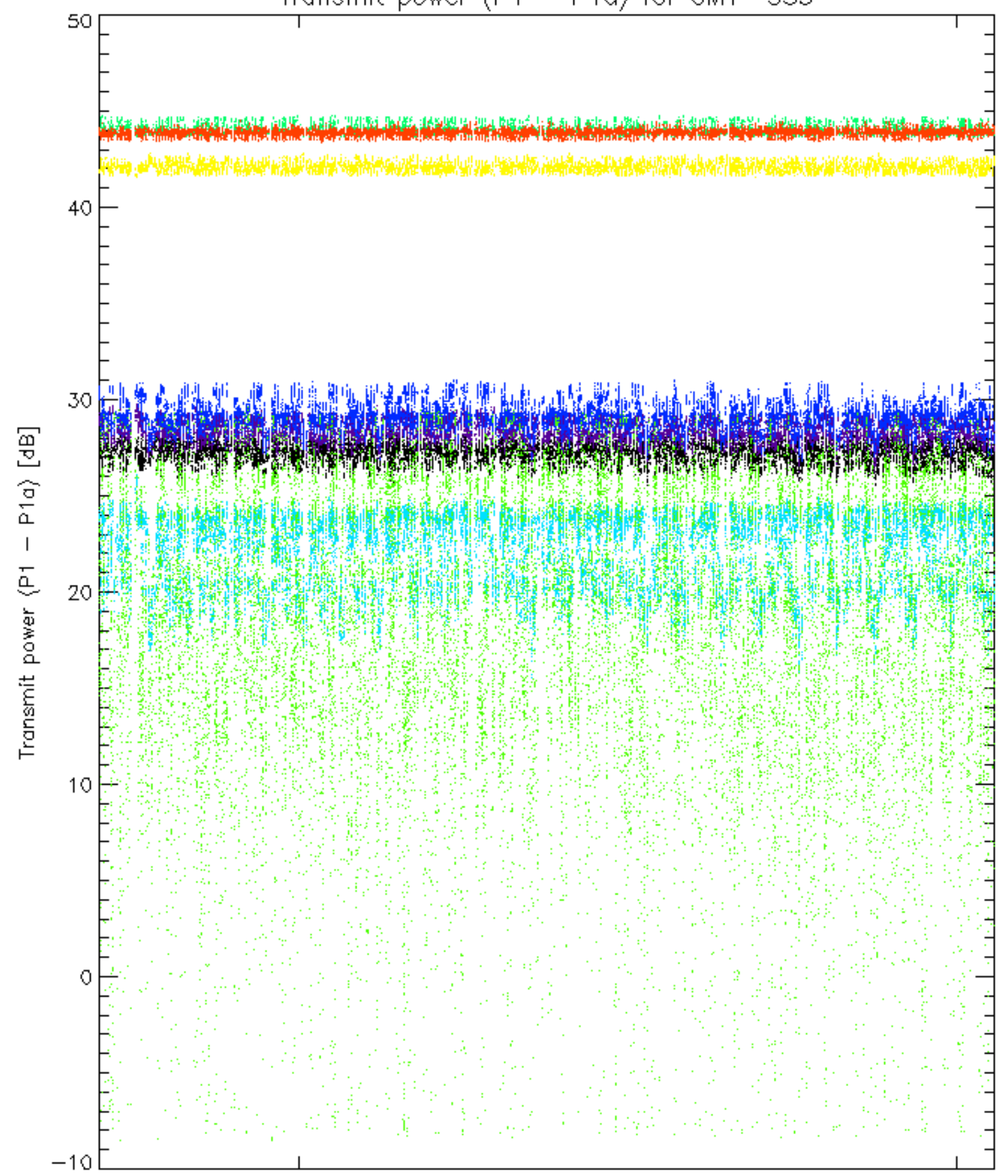




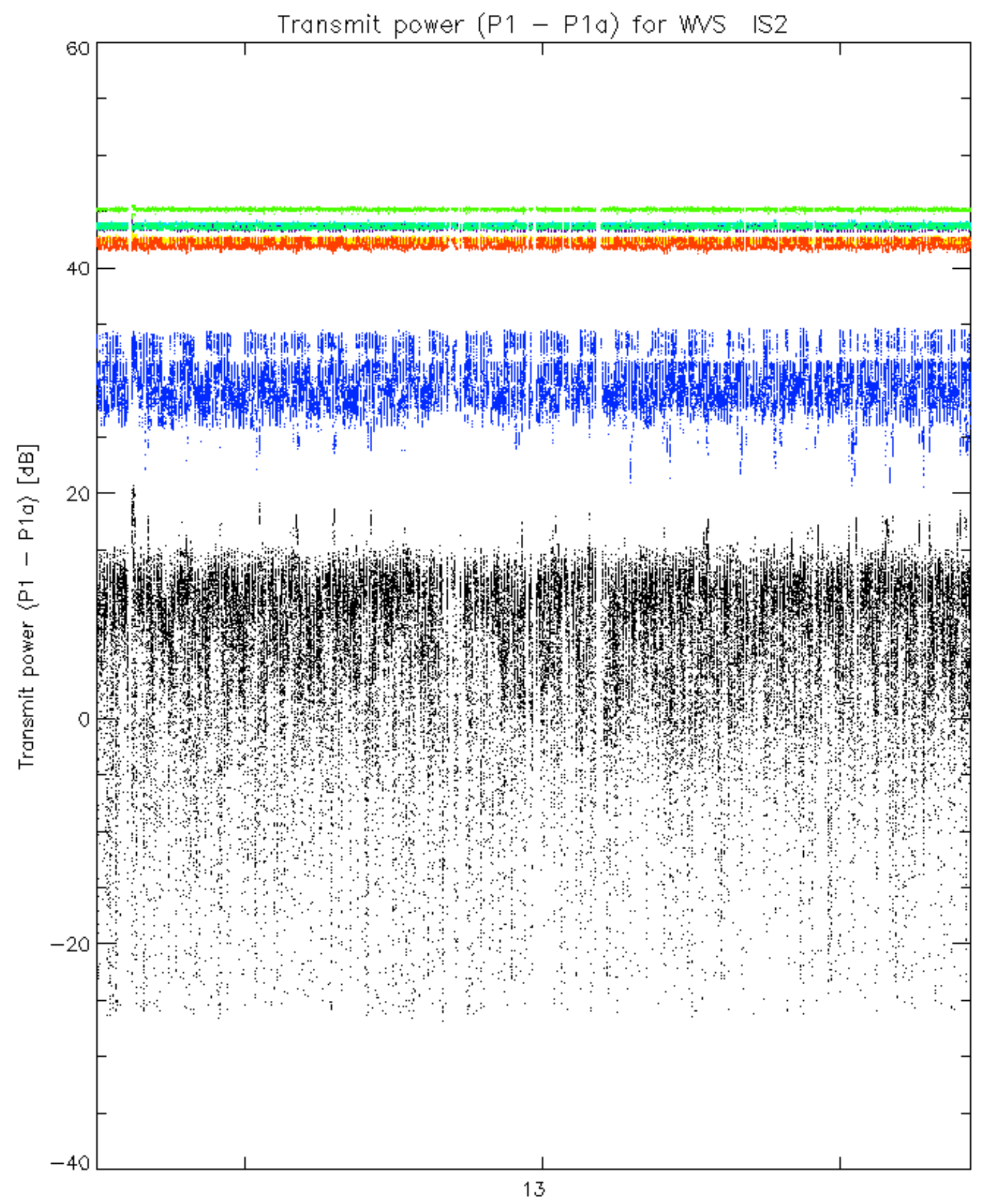




Transmit power (P1 - P1a) for GM1 SS3



rows: 3 7 11 15 19 22 26 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

ASAR unavailable from 18-May-2005 01:49:01 to 18-May-2005 07:37:26 due to tile PSU switch off.

