

PRELIMINARY REPORT OF 060106

last update on Fri Jan 6 16:45:44 GMT 2006

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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

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2006-01-05 00:00:00 to 2006-01-06 16:45:44

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	0	5	0	38
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	39	0	5	0	38
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	0	5	0	38
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	0	5	0	38

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	51	34	8	65
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	51	34	8	65
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	51	34	8	65
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	51	34	8	65

2.3 - Browse Visual Inspection

2.4 - 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	20060106 055503
H	20060105 062640

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
<input type="checkbox"/>
<input type="checkbox"/>

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
<input type="checkbox"/>

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	-3.834553	0.198217	-1.051704
7	P1	-2.837529	0.104640	-0.749213
11	P1	-4.130970	0.037337	0.105484
15	P1	-5.432524	1.354242	-2.969606
19	P1	-3.113099	0.054111	-0.570387
22	P1	-4.456456	0.023579	-0.163785
26	P1	-4.335168	0.052191	0.525944
30	P1	-5.694573	0.029673	-0.349982
3	P1	-16.198317	2.284231	-3.738326
7	P1	-15.755414	2.200854	-3.771310
11	P1	-16.412245	0.464012	-0.881243
15	P1	-12.899722	0.743176	-1.845959
19	P1	-13.594206	0.316207	-1.307997
22	P1	-15.950631	0.605213	-0.263710
26	P1	-15.307754	0.899636	-2.115862
30	P1	-15.927825	2.020411	-3.261224

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.741587	0.111935	0.329237
7	P2	-22.530653	0.104481	0.053379
11	P2	-16.437119	0.126598	0.396710
15	P2	-7.262522	0.106157	0.100455
19	P2	-9.205794	0.104100	0.026314
22	P2	-17.903868	0.109101	-0.179000
26	P2	-16.329279	0.128190	0.443361
30	P2	-19.749315	0.111309	0.349815

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.231486	0.007713	0.032613
7	P3	-8.231486	0.007713	0.032613
11	P3	-8.231486	0.007713	0.032613
15	P3	-8.231486	0.007713	0.032613
19	P3	-8.231486	0.007713	0.032613
22	P3	-8.231486	0.007713	0.032613
26	P3	-8.231486	0.007713	0.032613
30	P3	-8.231486	0.007713	0.032613

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

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	-3.713176	0.008554	-0.030949
7	P1	-2.765827	0.007849	0.003176
11	P1	-2.874802	0.009727	0.011478
15	P1	-3.425556	0.017266	-0.063940
19	P1	-3.391238	0.014170	0.011447
22	P1	-5.123011	0.019678	0.001566
26	P1	-5.853844	0.015630	-0.018341
30	P1	-5.273859	0.033110	0.042589
3	P1	-11.493035	0.039003	-0.053188
7	P1	-9.959022	0.048222	0.070812
11	P1	-10.058314	0.056219	-0.035100
15	P1	-10.570426	0.072840	-0.108836
19	P1	-15.515166	0.072044	0.055597
22	P1	-20.892773	0.982750	0.555656
26	P1	-17.081720	0.302221	0.444645
30	P1	-18.167562	0.281358	0.116060

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.561914	0.031024	0.198173
7	P2	-23.015961	0.057265	0.221871
11	P2	-11.542815	0.020644	0.202379
15	P2	-4.980656	0.022249	0.094658
19	P2	-6.966725	0.022263	0.067699
22	P2	-8.211300	0.022269	0.006271
26	P2	-24.035910	0.030260	0.118775
30	P2	-22.131794	0.017836	0.044399

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.074819	0.002539	0.025109
7	P3	-8.074980	0.002541	0.025540
11	P3	-8.075060	0.002523	0.025103
15	P3	-8.074949	0.002519	0.025232
19	P3	-8.075027	0.002539	0.025436
22	P3	-8.074861	0.002525	0.025591
26	P3	-8.074843	0.002511	0.025912
30	P3	-8.074802	0.002527	0.024769

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	0.000484677
	stdev	2.09415e-07
MEAN Q	mean	0.000481362
	stdev	2.32733e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.131748
	stdev	0.00117860
STDEV Q	mean	0.132054
	stdev	0.00119340



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006010[456]

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_1PNPDE20060104_004520_000001852044_00016_20110_5463.N1	1	0
ASA_IMM_1PNPDE20060104_155357_000000402044_00025_20119_5538.N1	1	0
ASA_IMM_1PNPDE20060106_054348_000000372044_00048_20142_5727.N1	1	0
ASA_WSM_1PNPDE20060105_010633_000002812044_00031_20125_7017.N1	0	44







7 - Doppler Analysis

Preliminary report. The data is not yet controlled



7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

Descending


7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX



7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)


Acsending

<input type="checkbox"/>
Descending

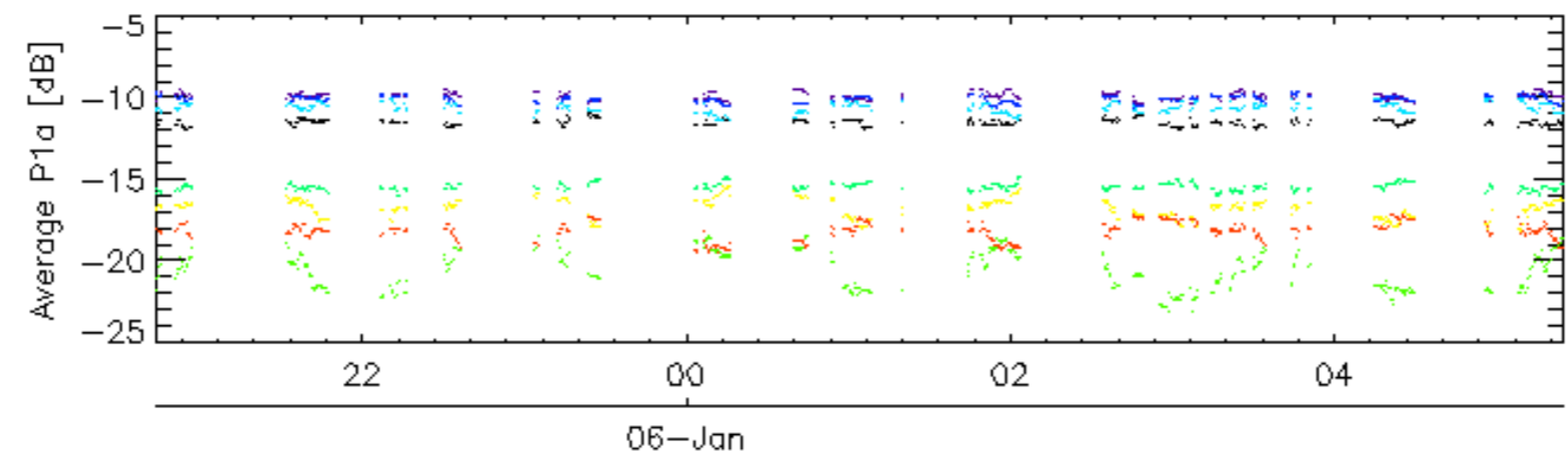
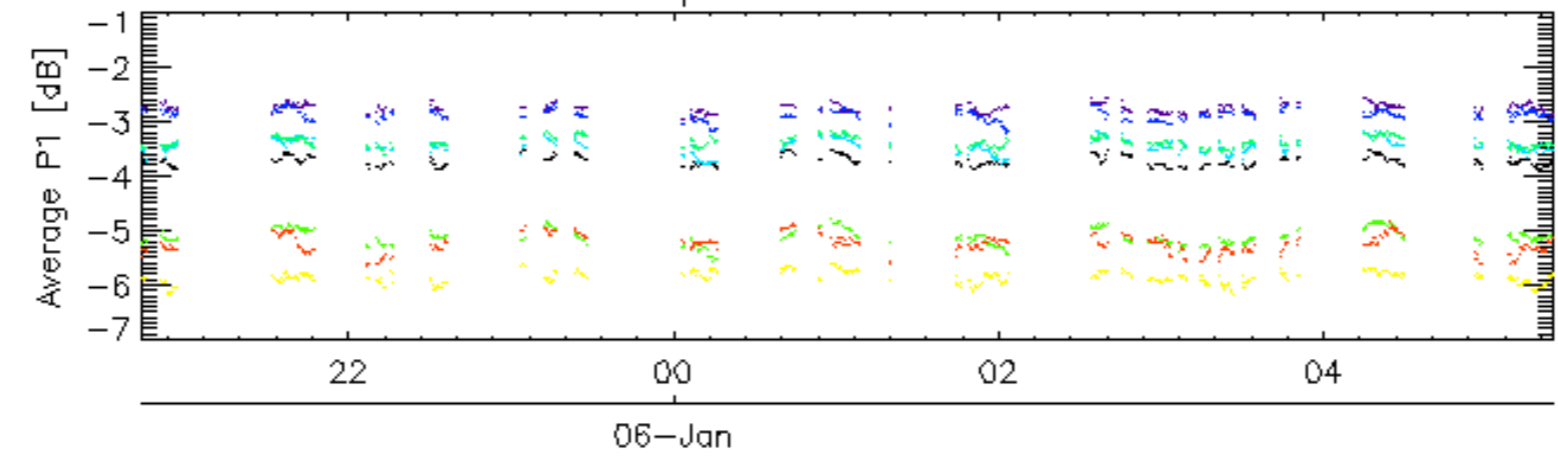
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

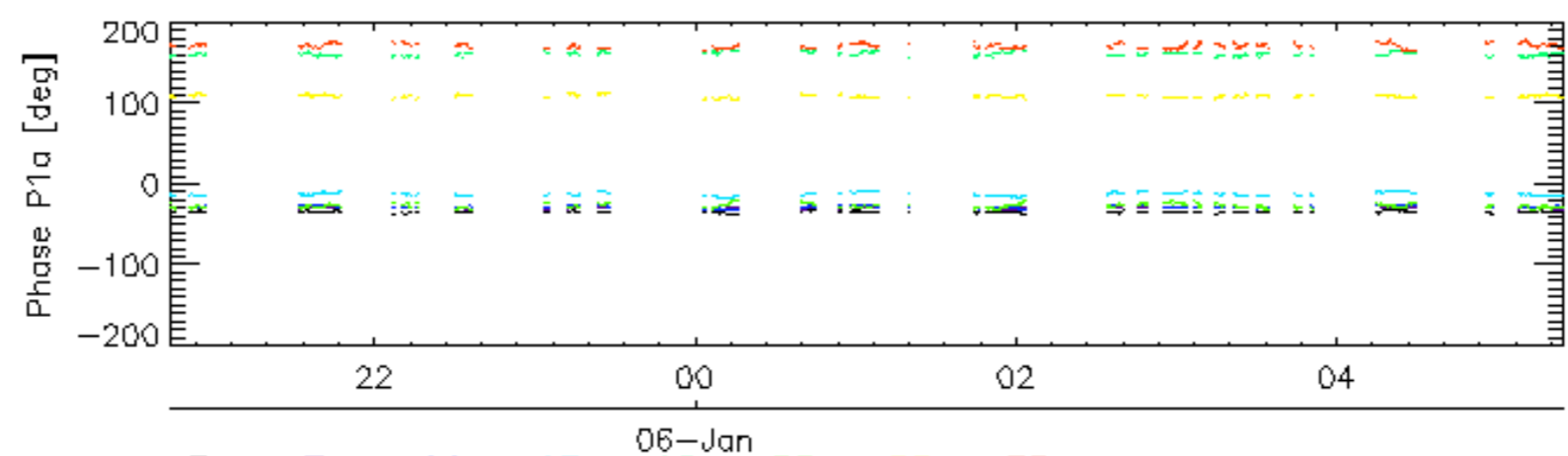
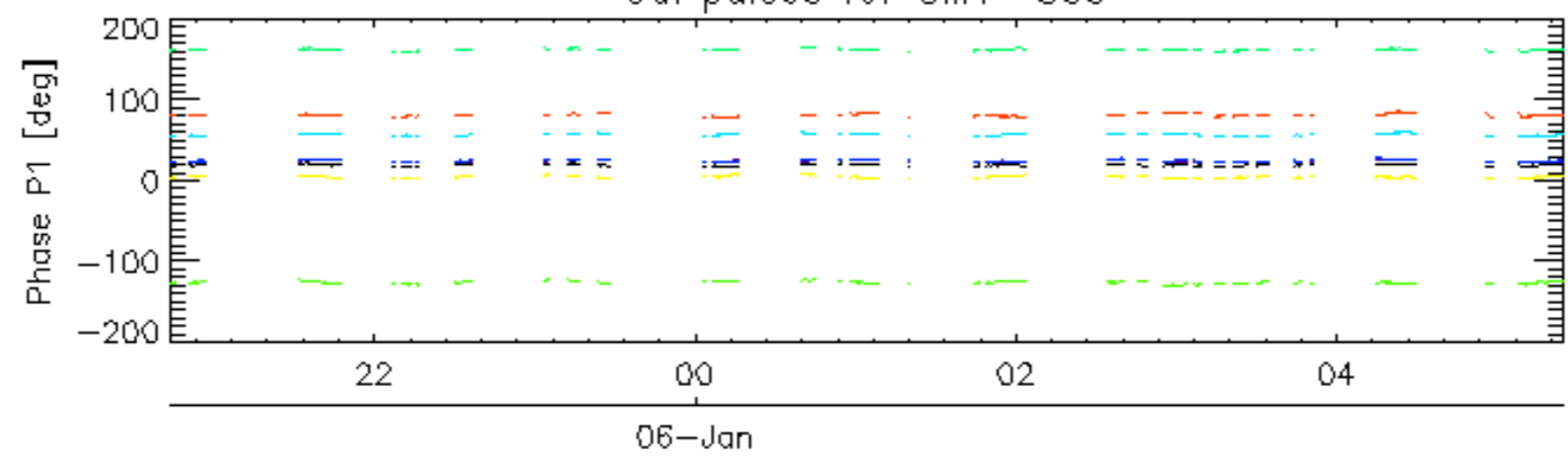
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

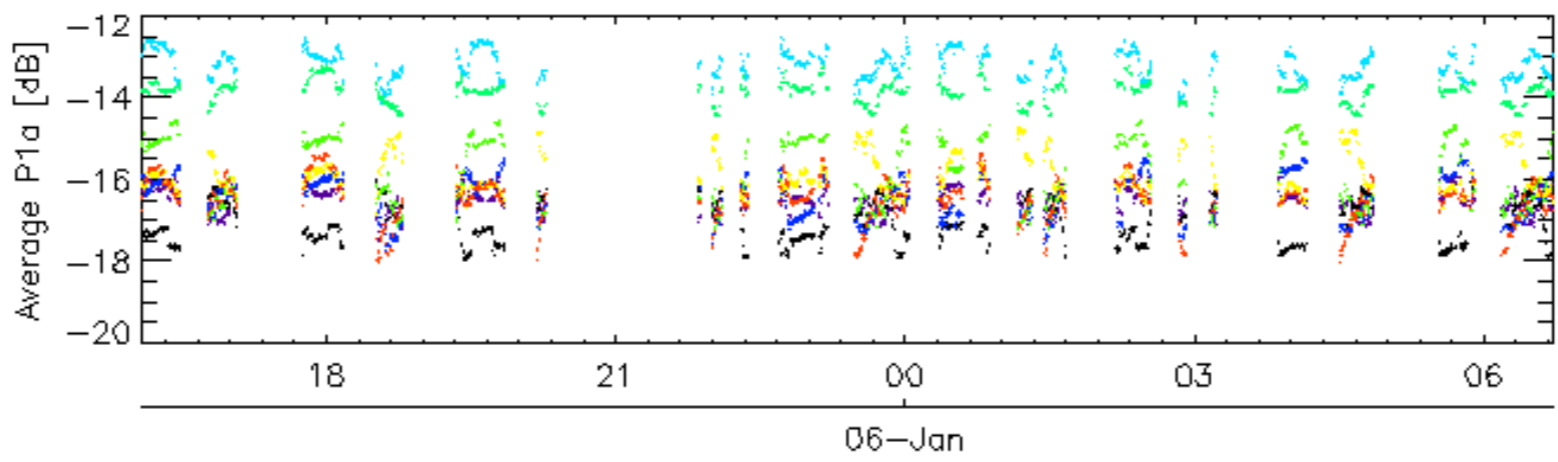
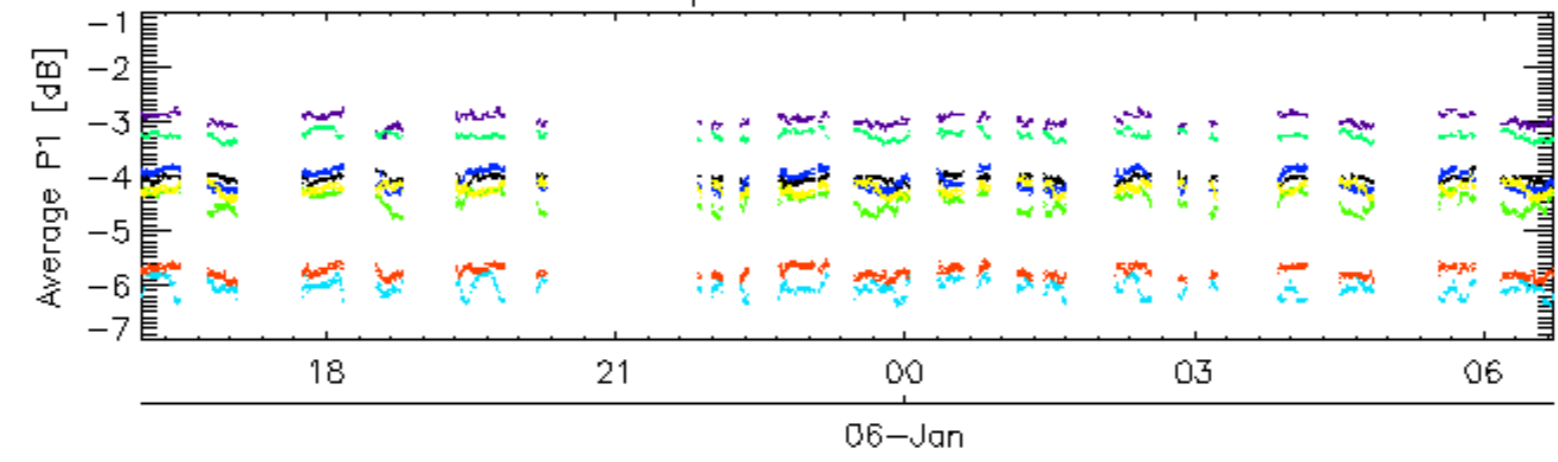


Cal pulses for GM1 SS3

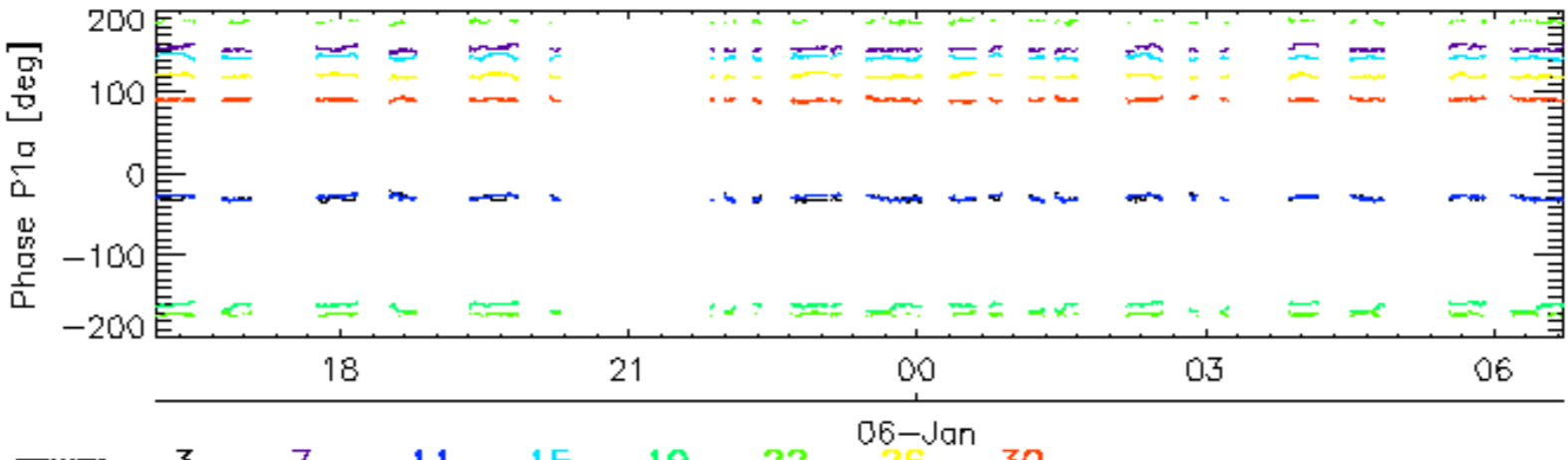
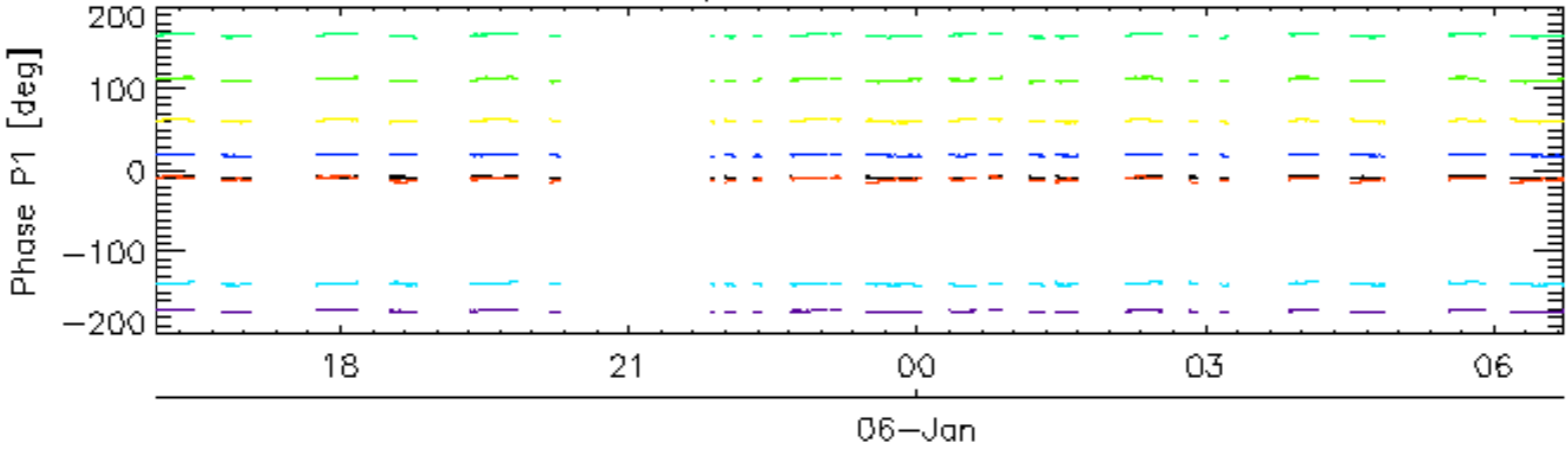


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

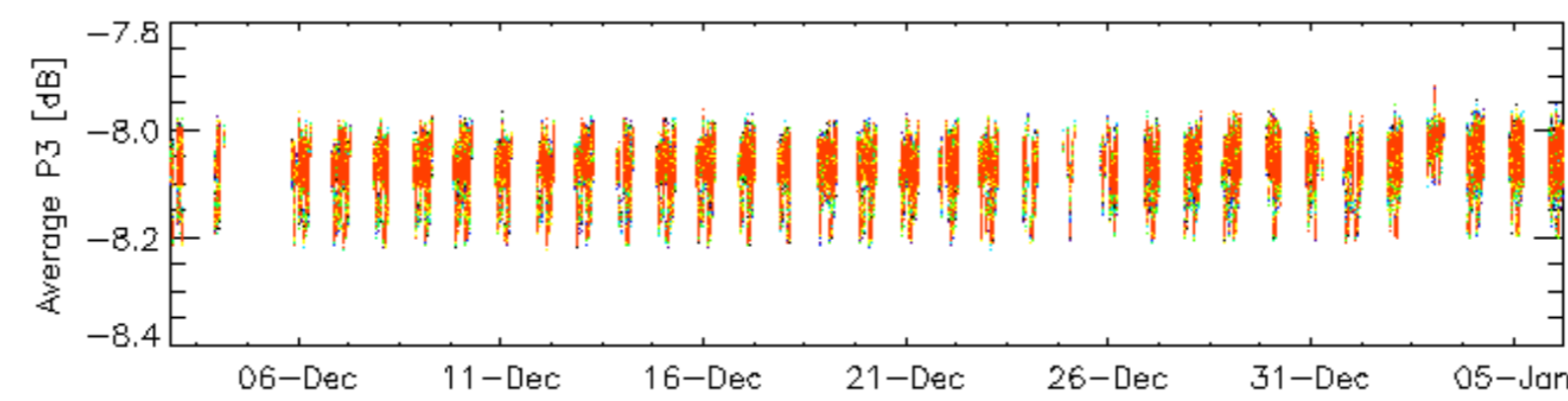
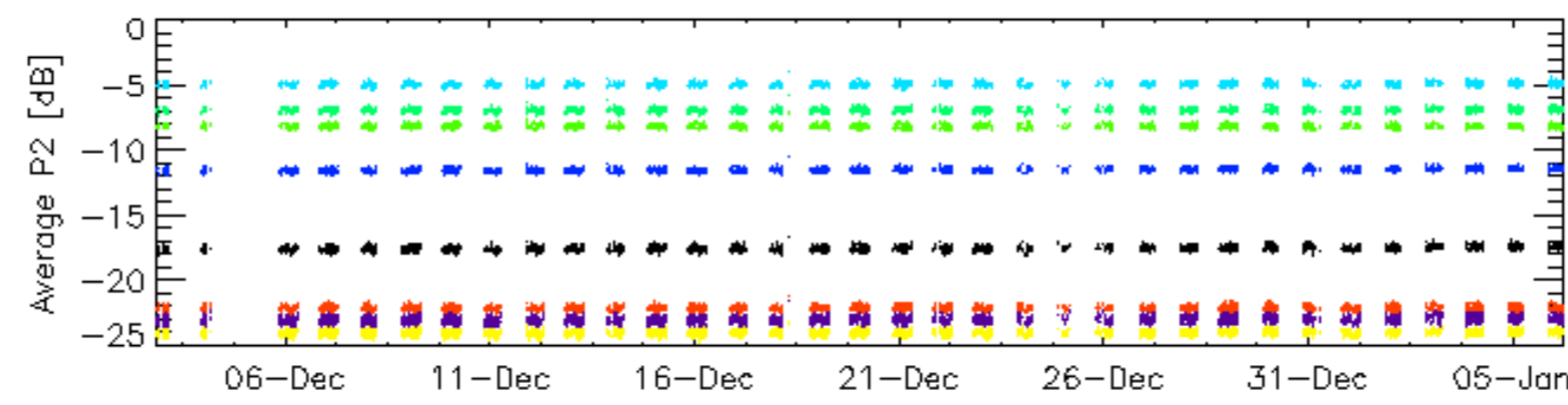
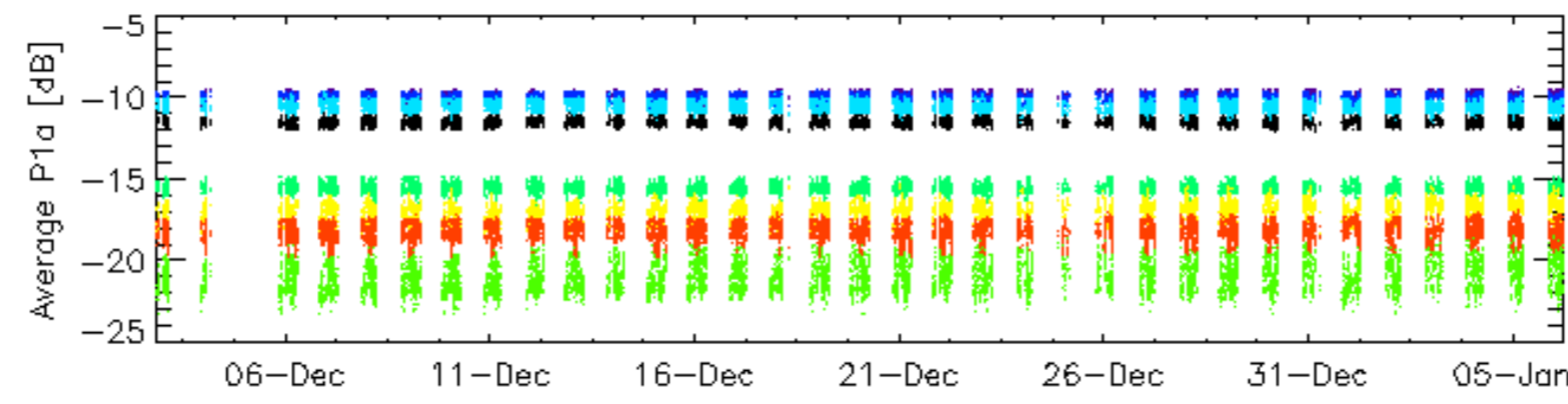
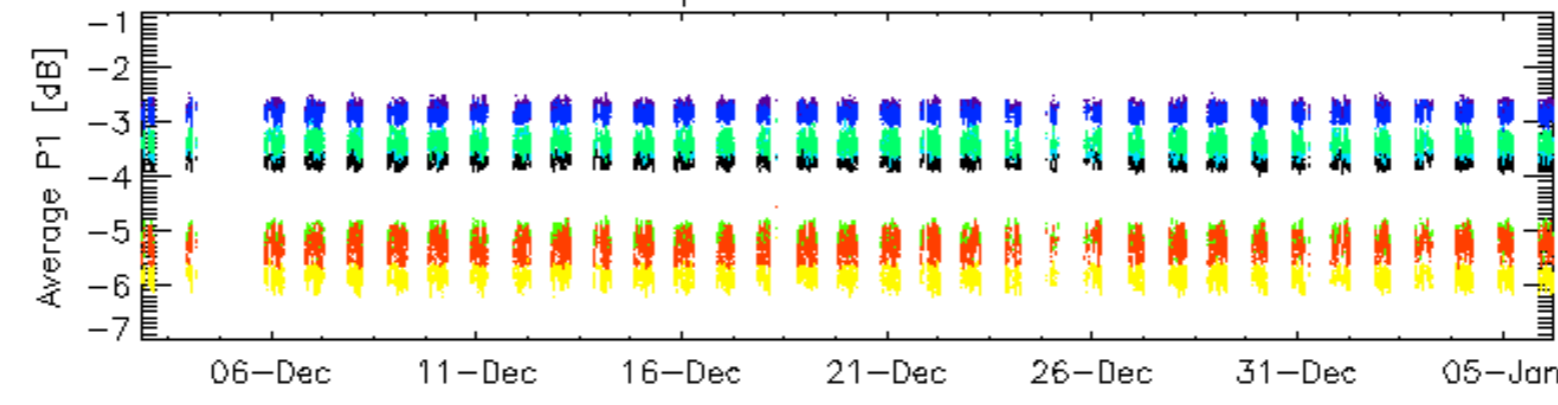


Cal pulses for WVS IS2



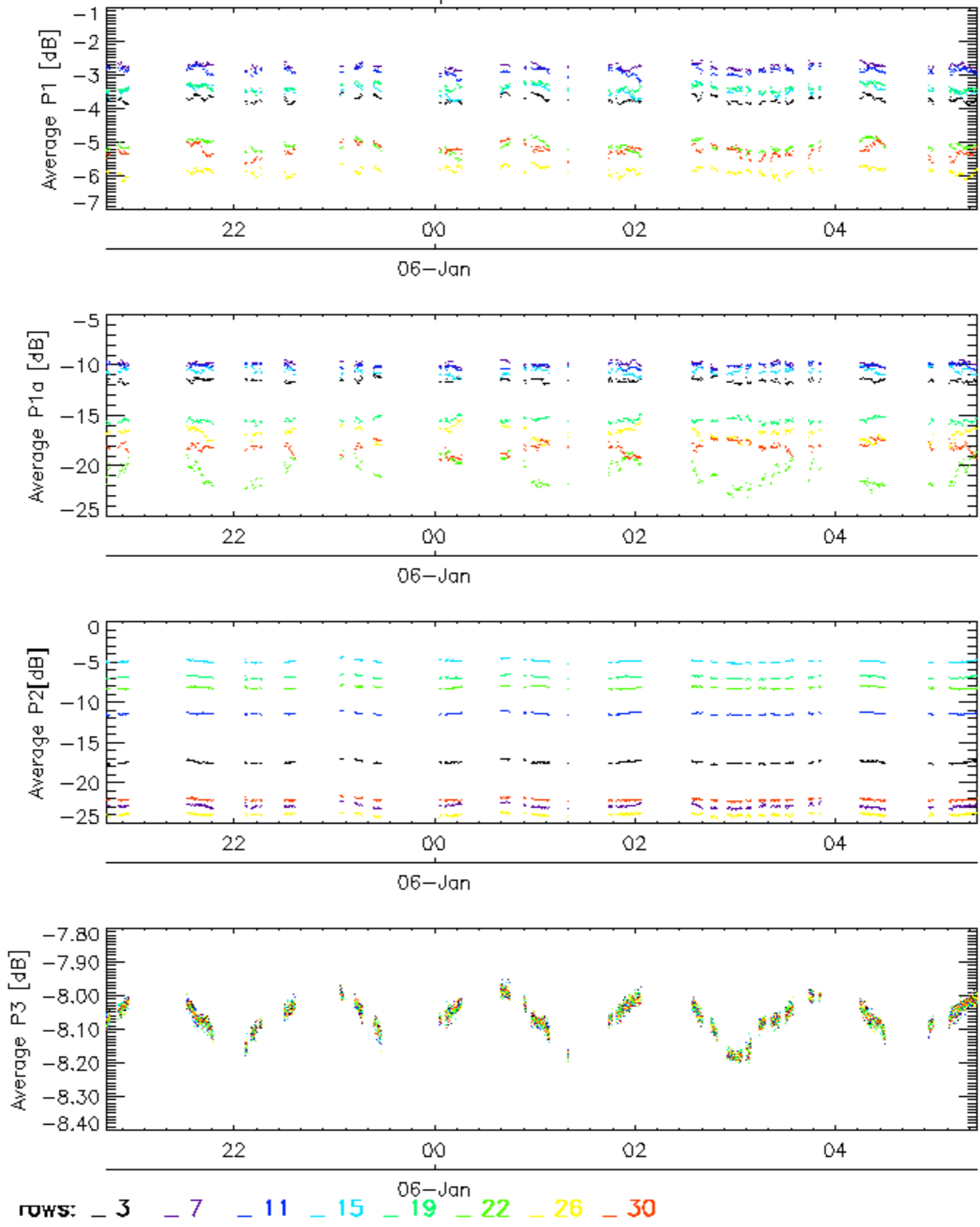
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

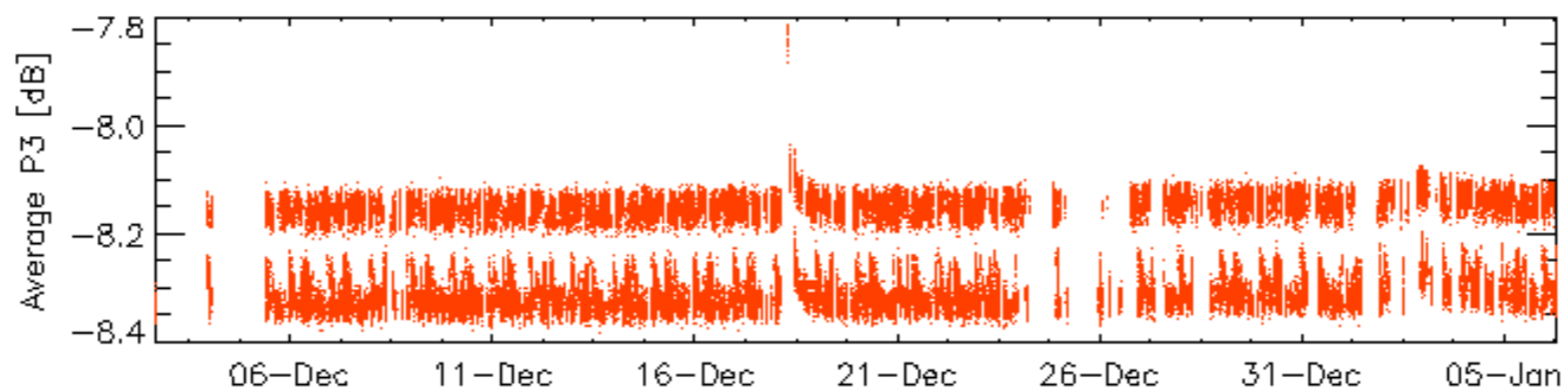
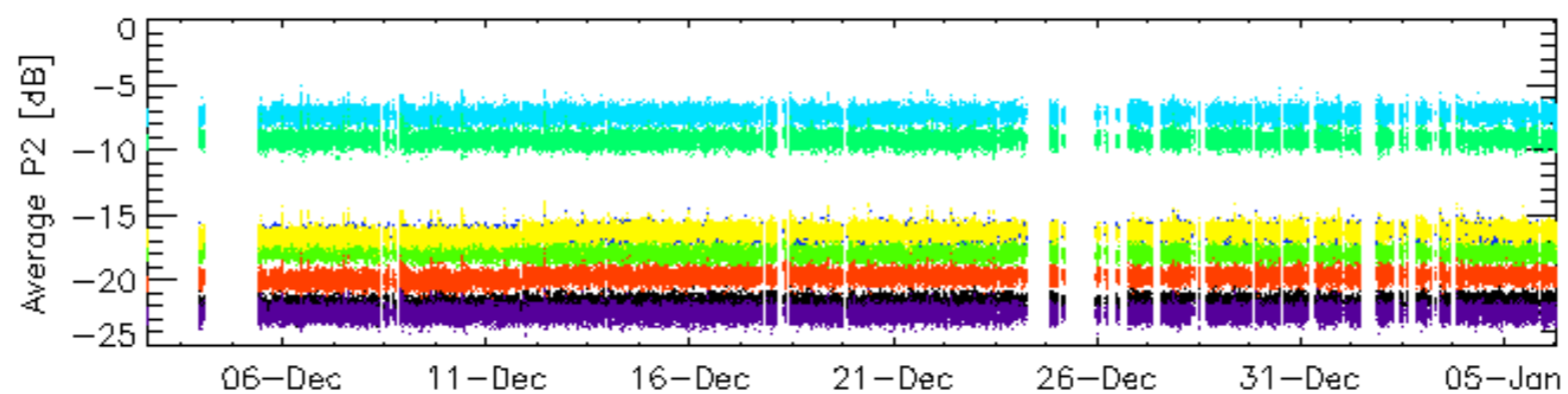
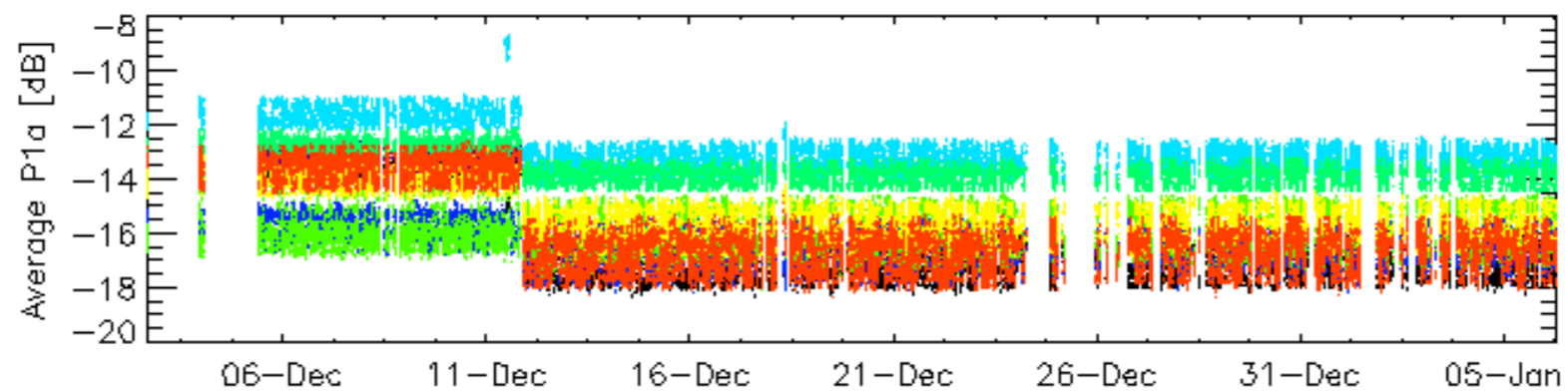
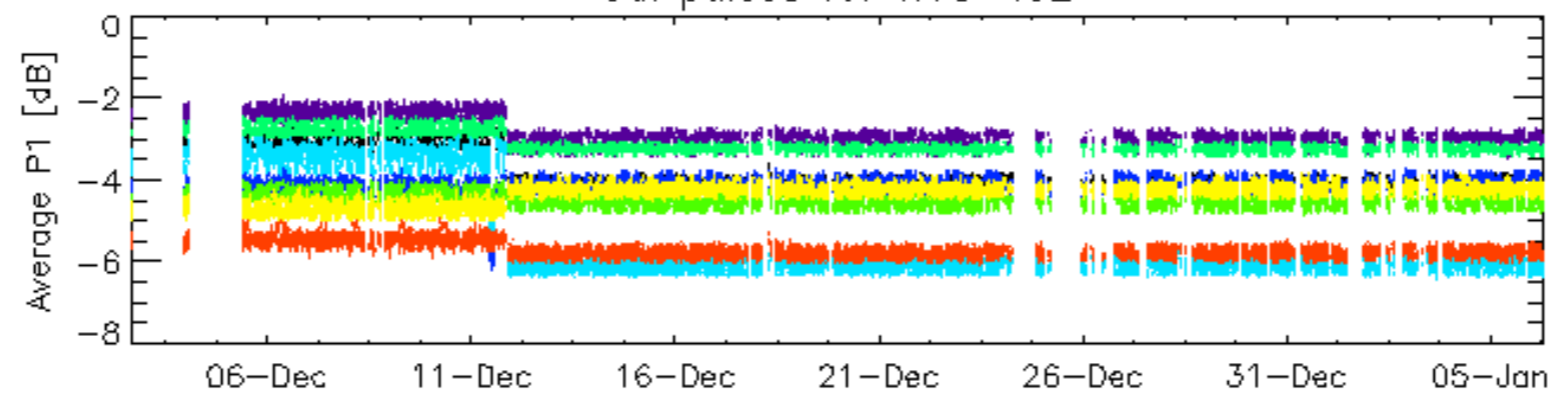


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

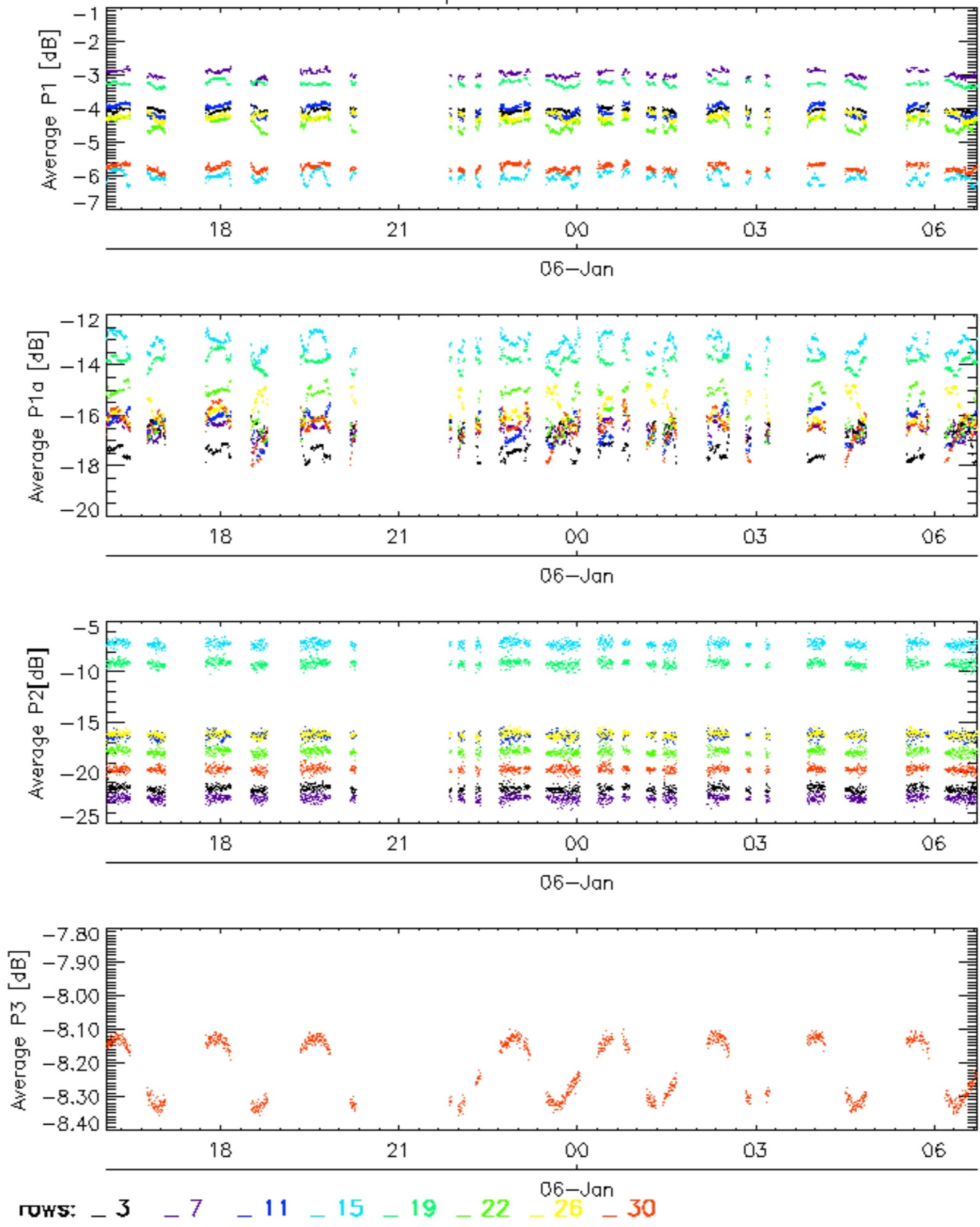


Cal pulses for WVS IS2

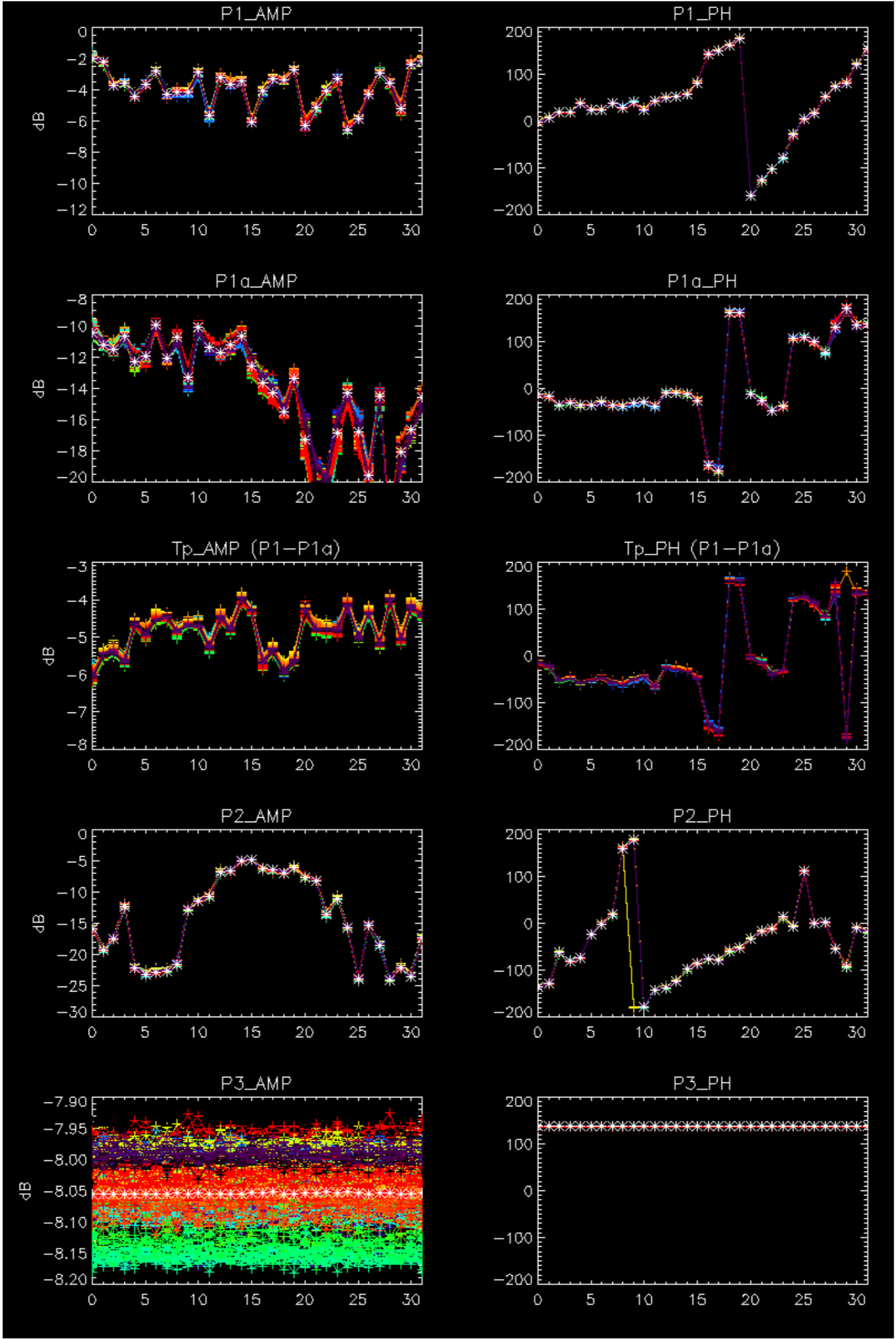


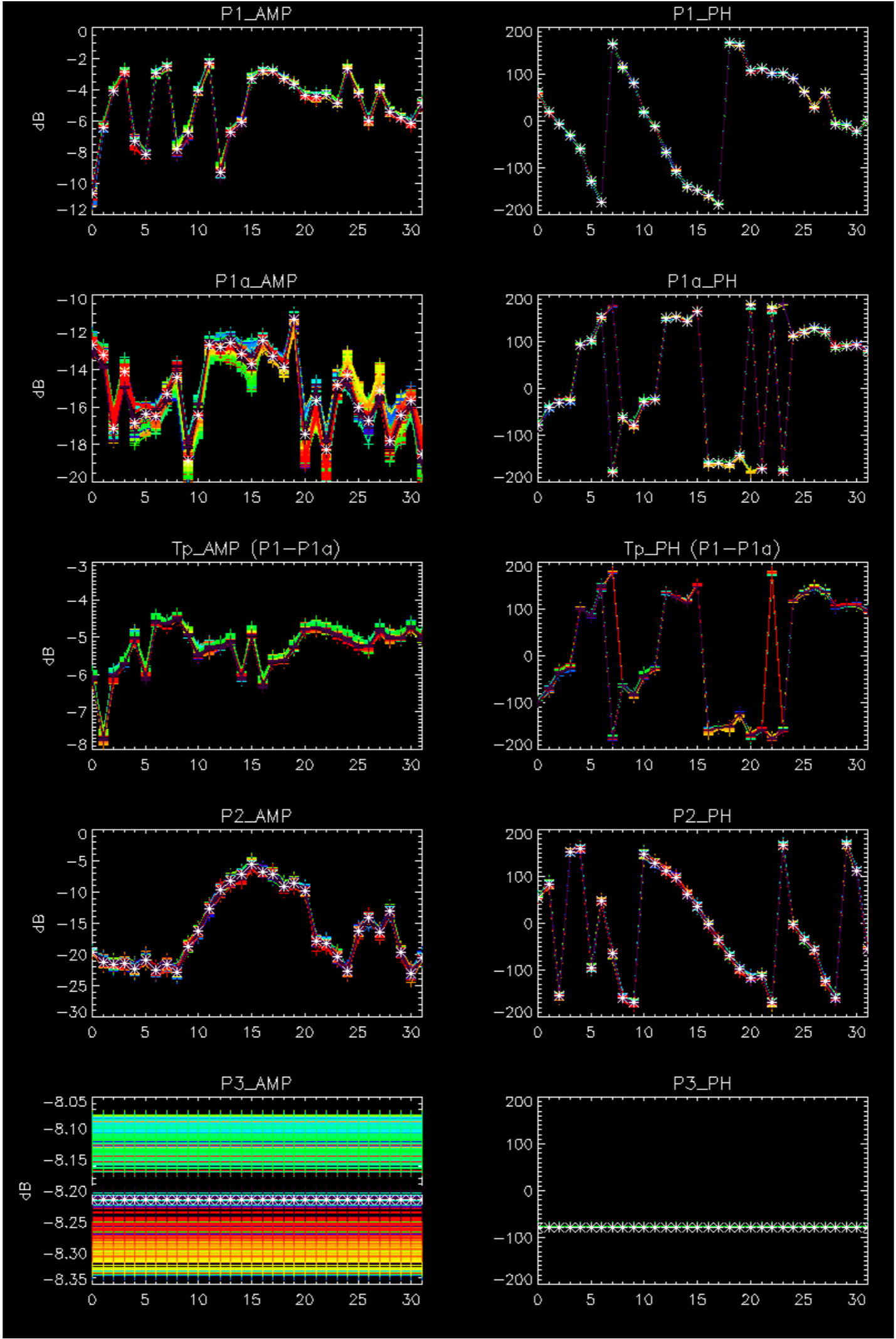
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



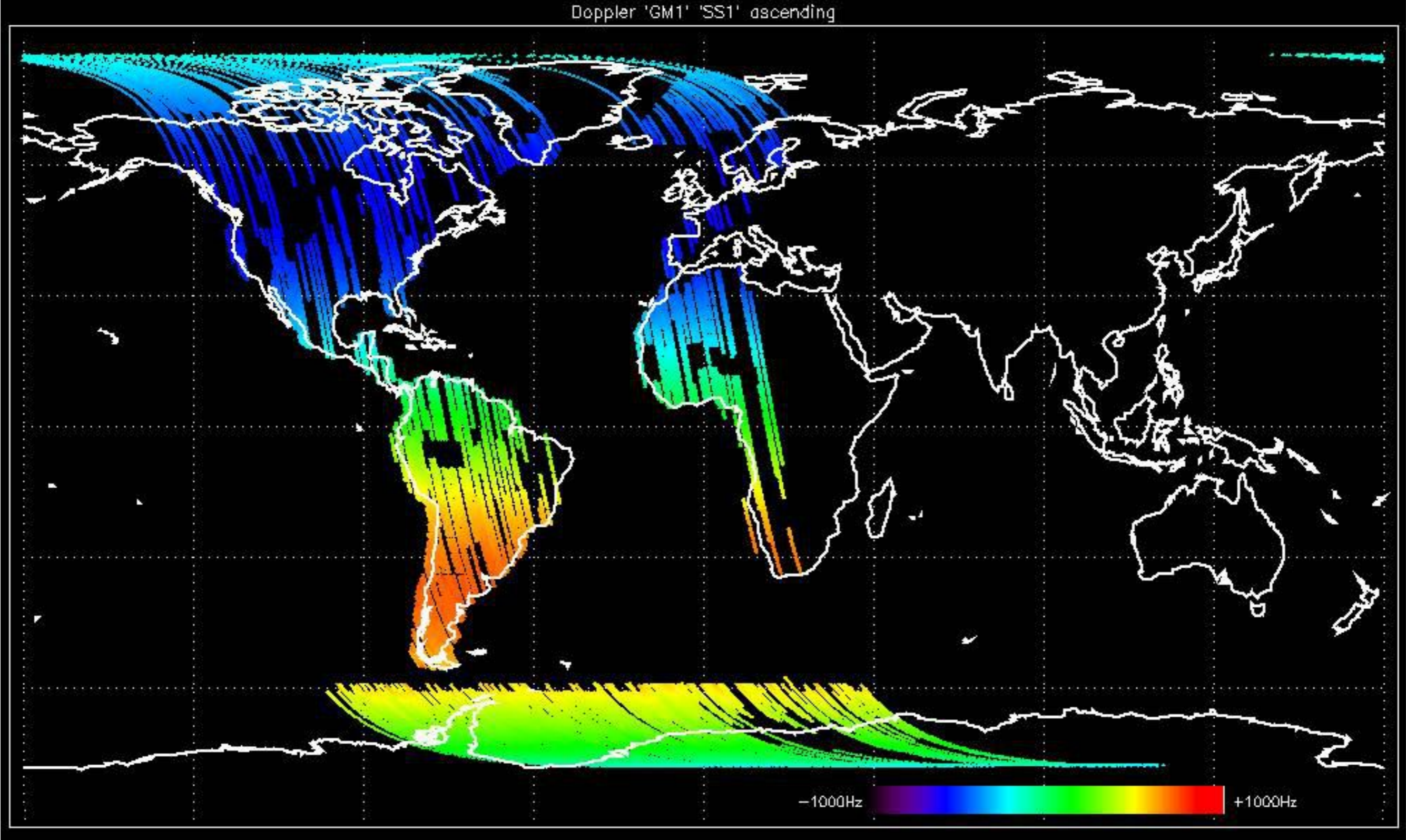
No anomalies observed.



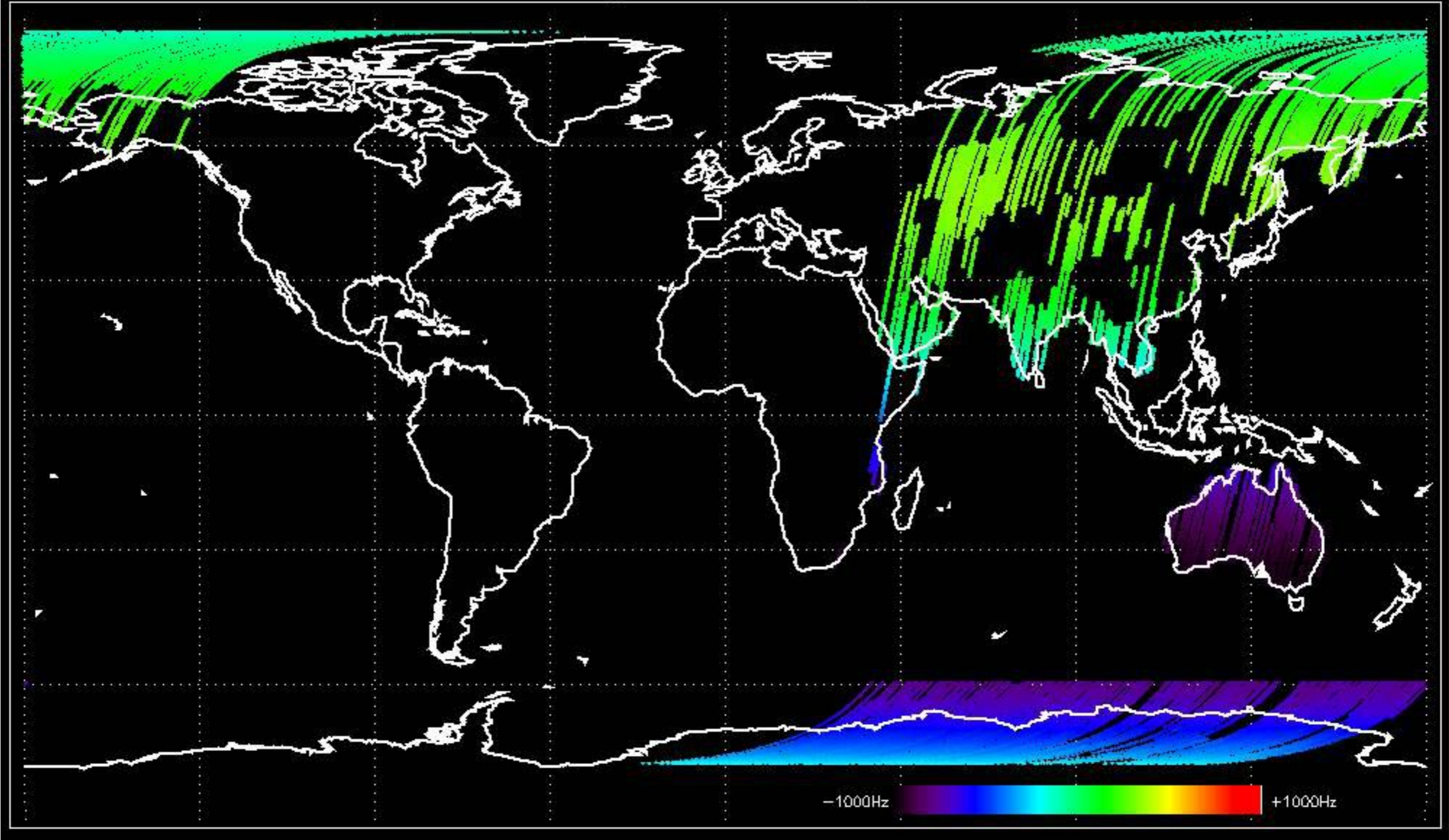


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

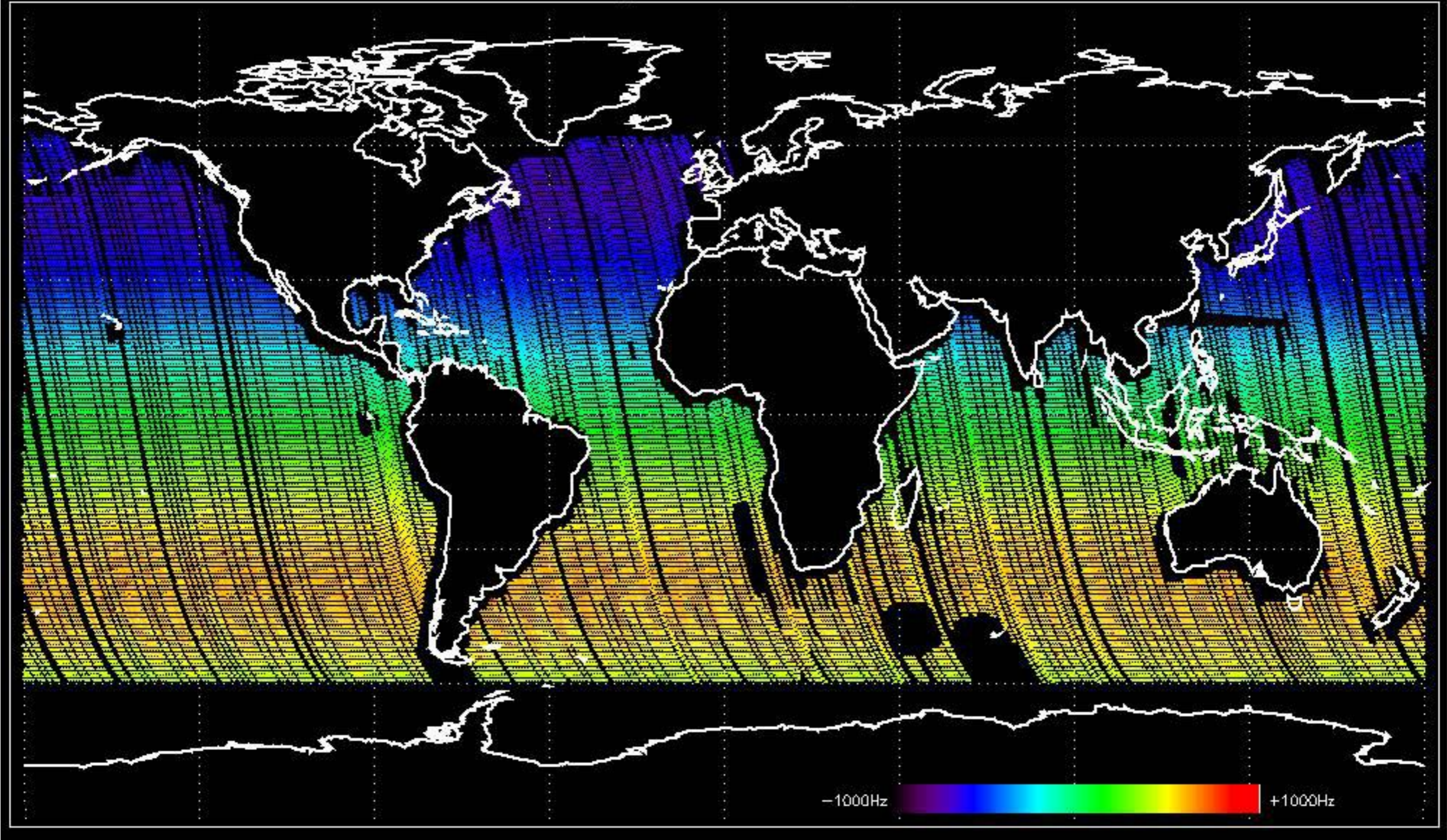
Doppler 'GM1' 'SS1' ascending



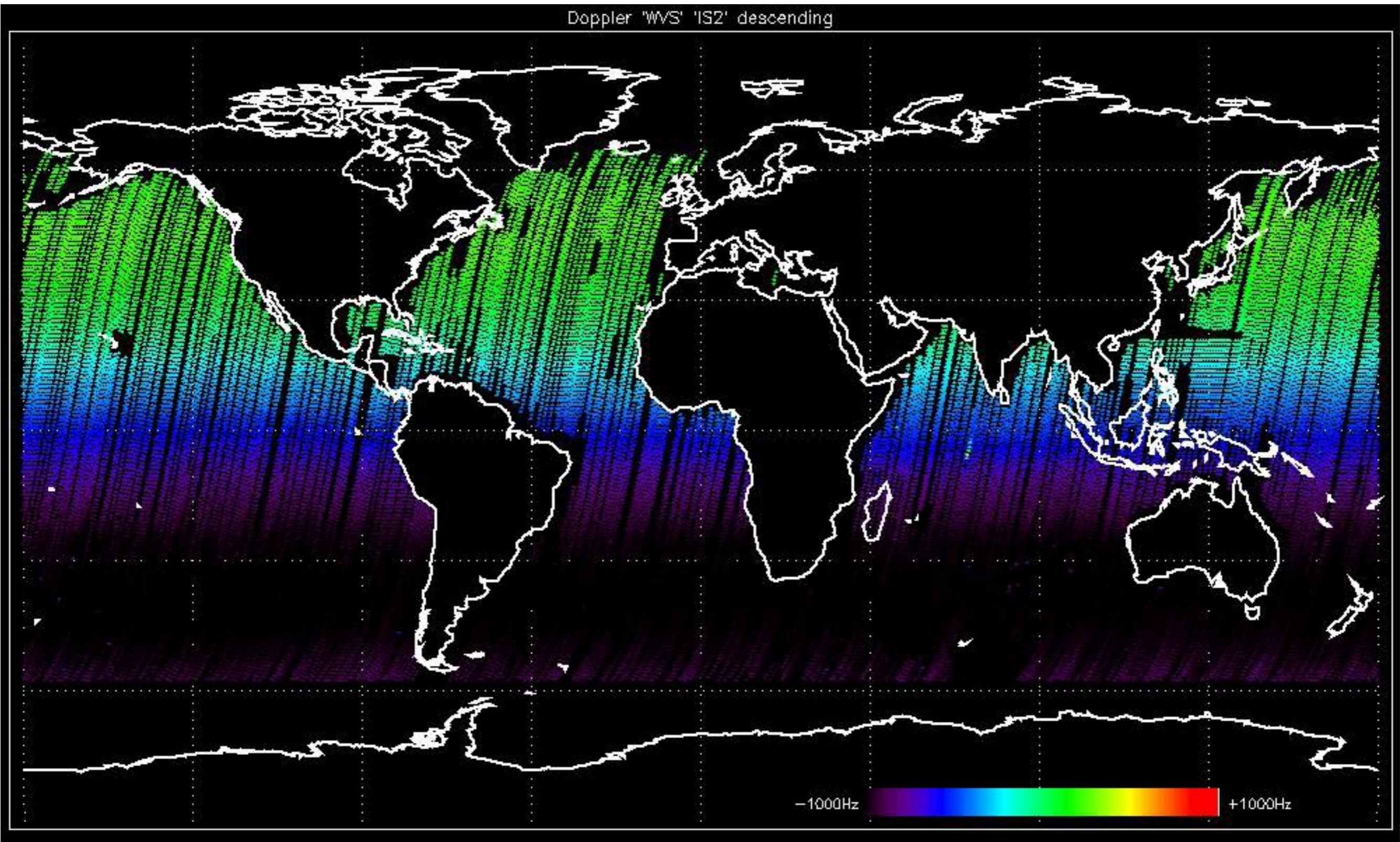
Doppler 'GM1' 'SS1' descending



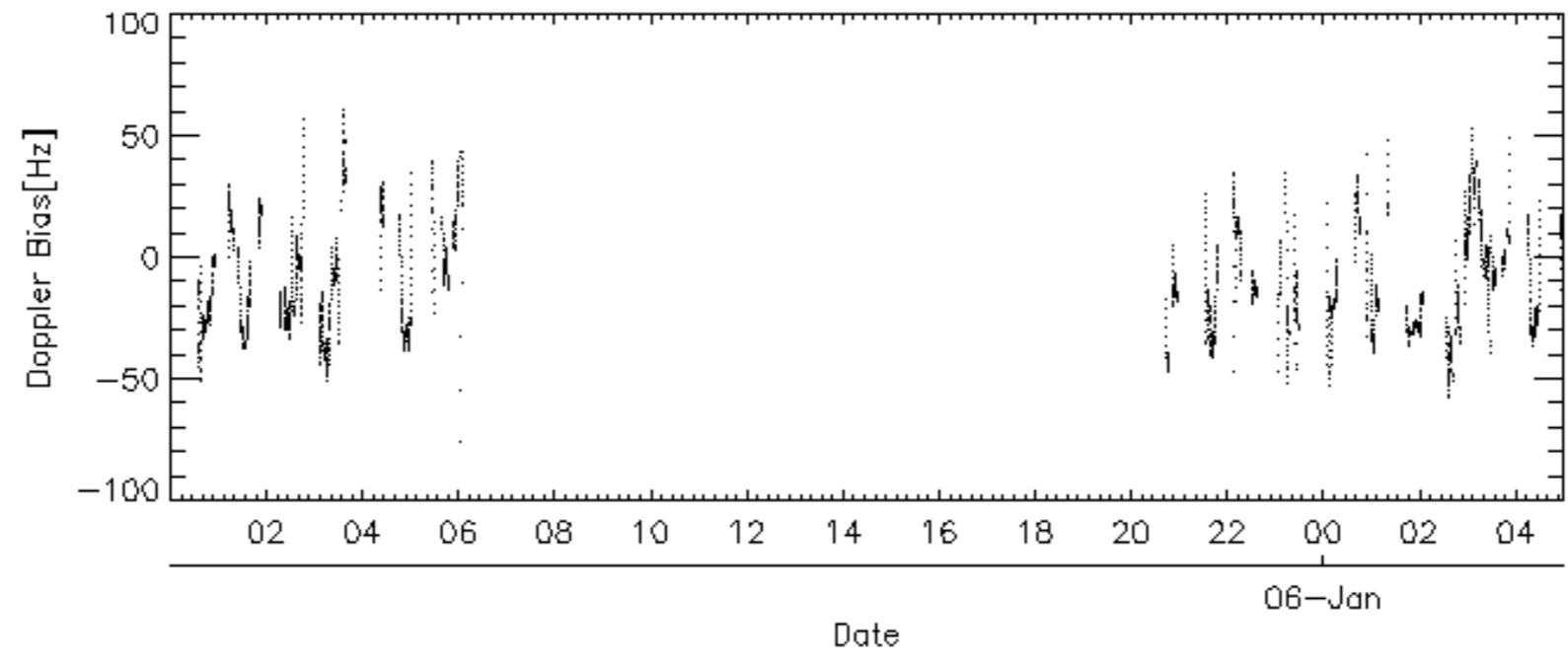
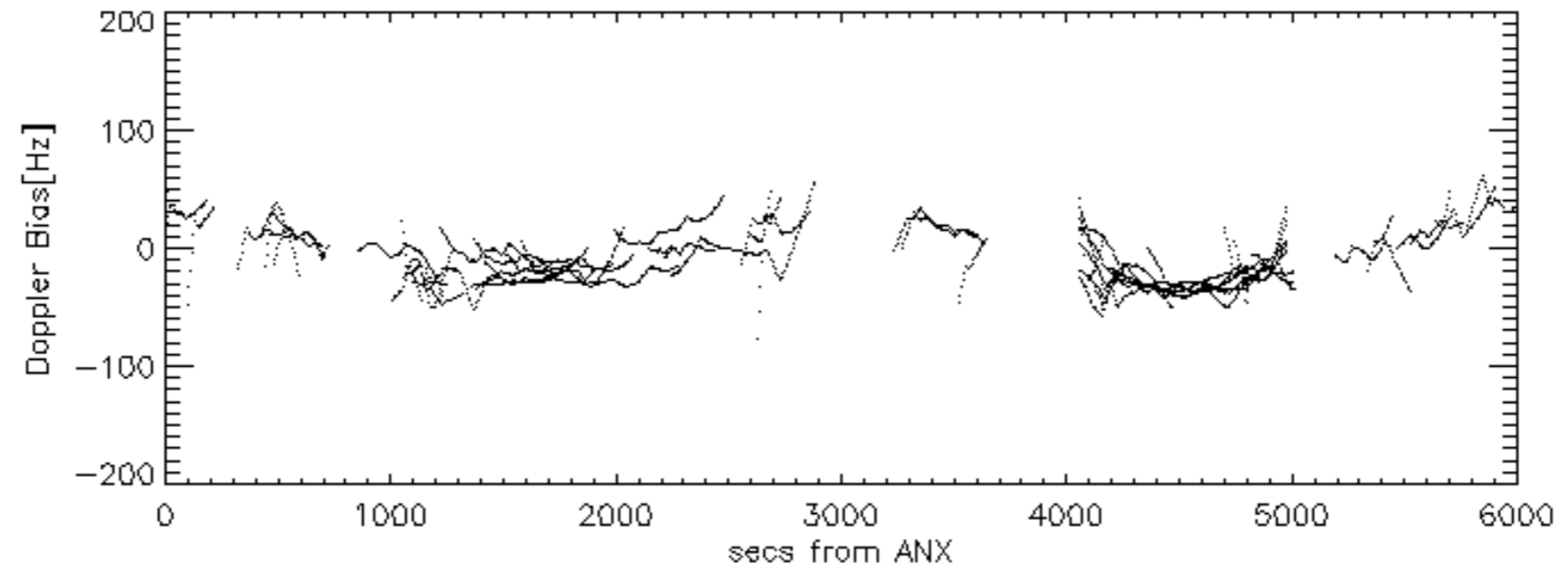
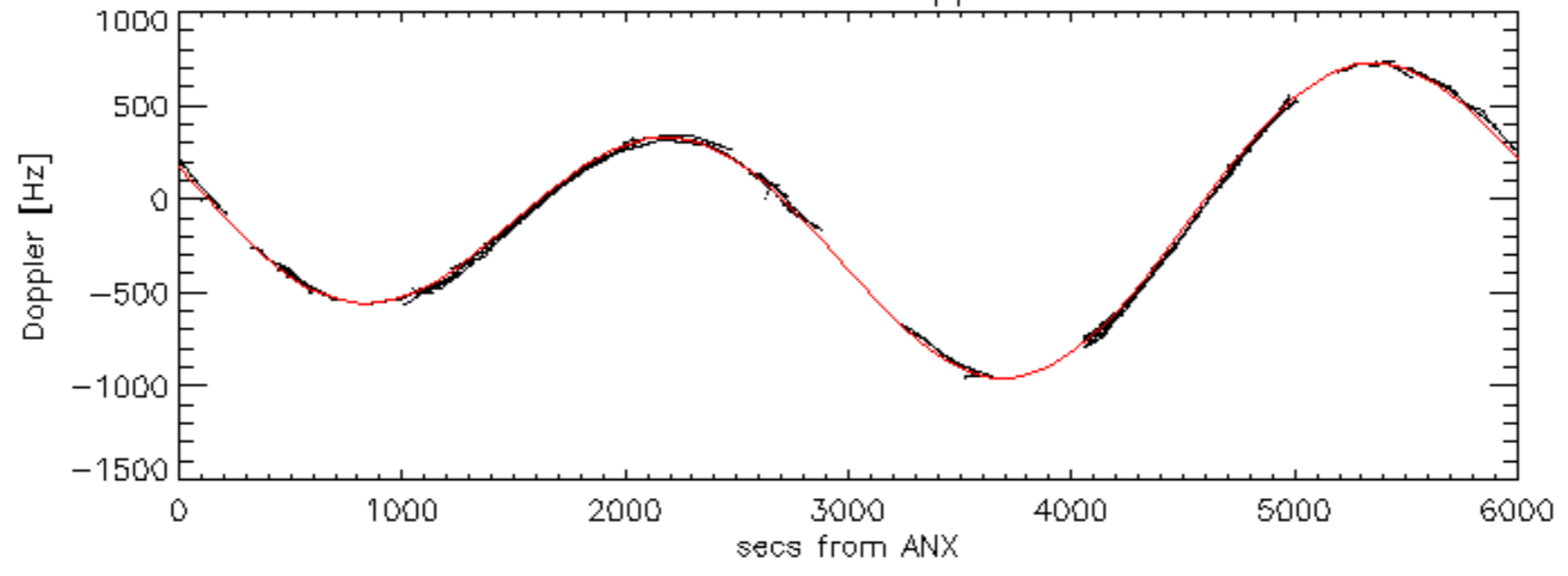
Doppler 'WVS' 'IS2' ascending

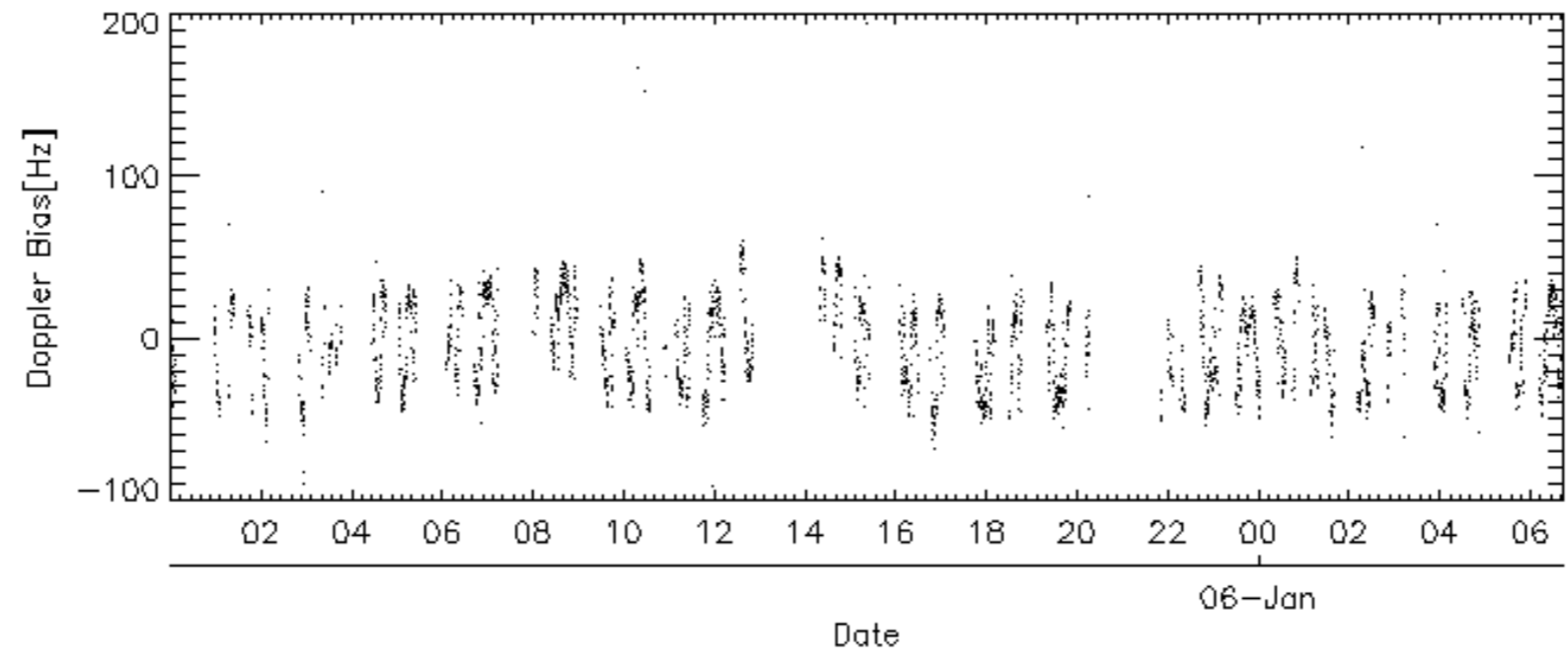
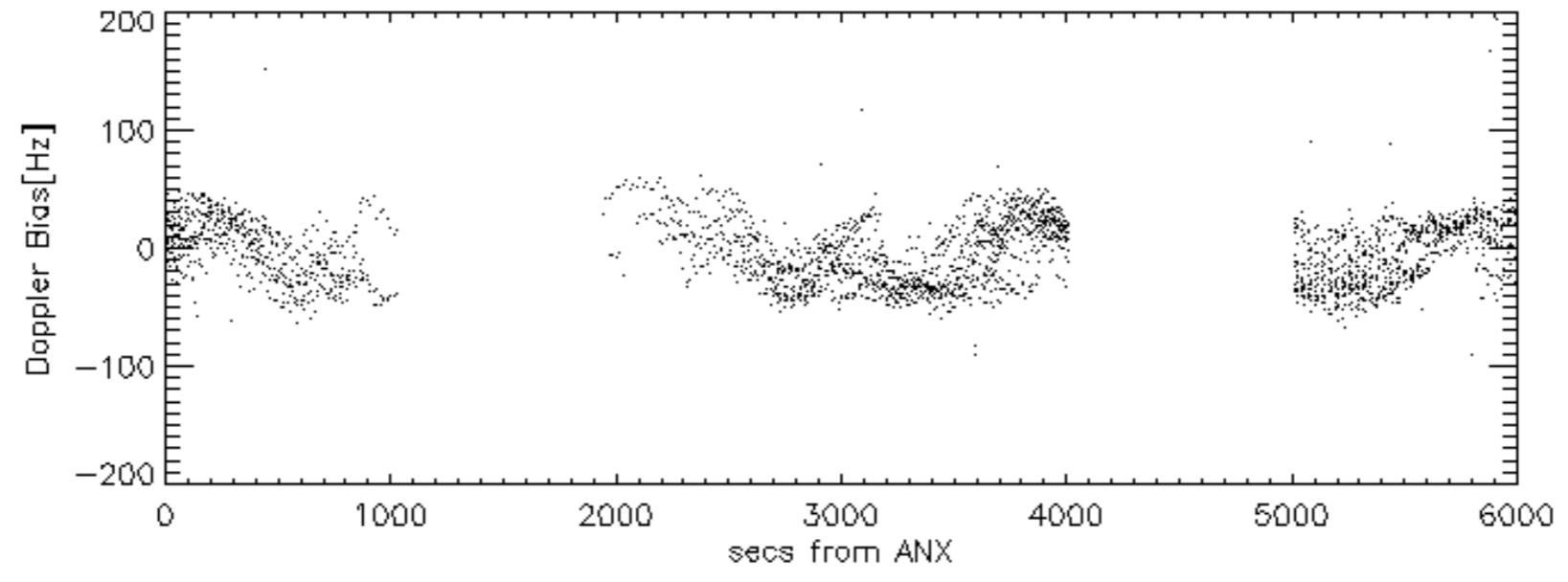
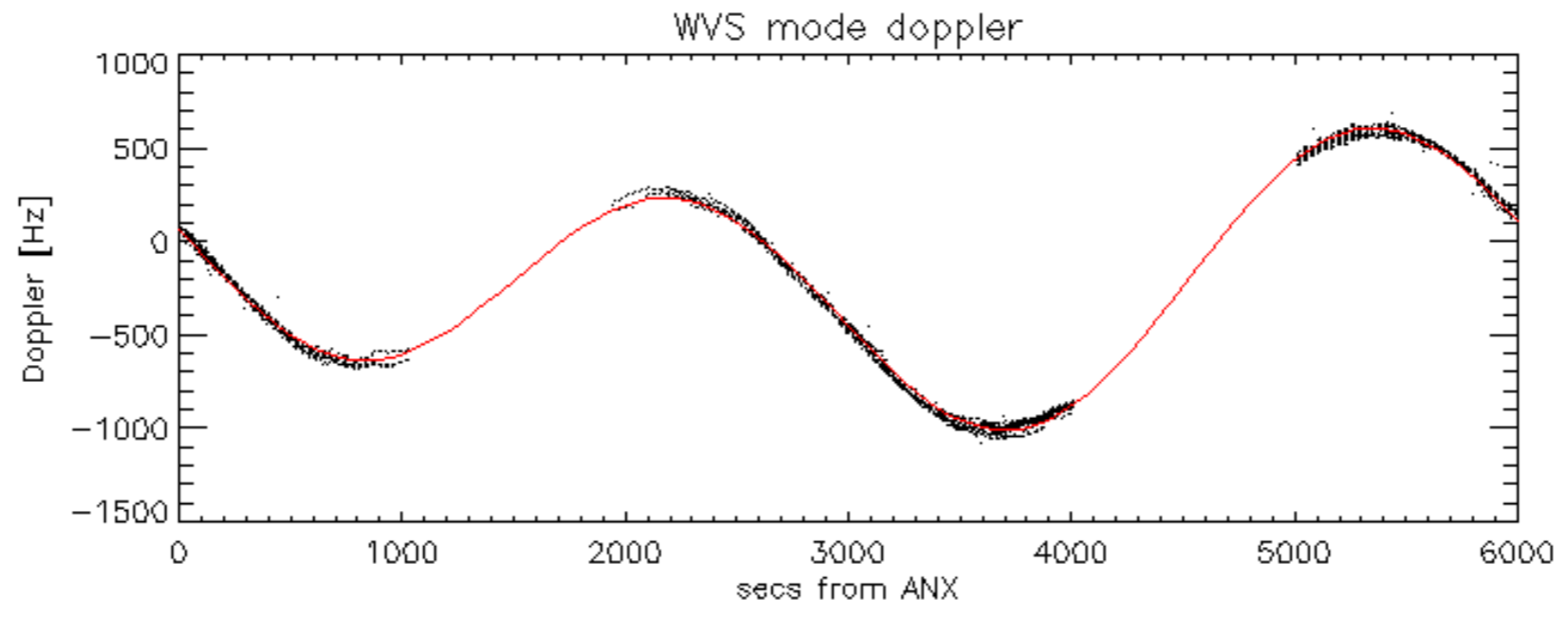


Doppler 'WVS' 'IS2' descending

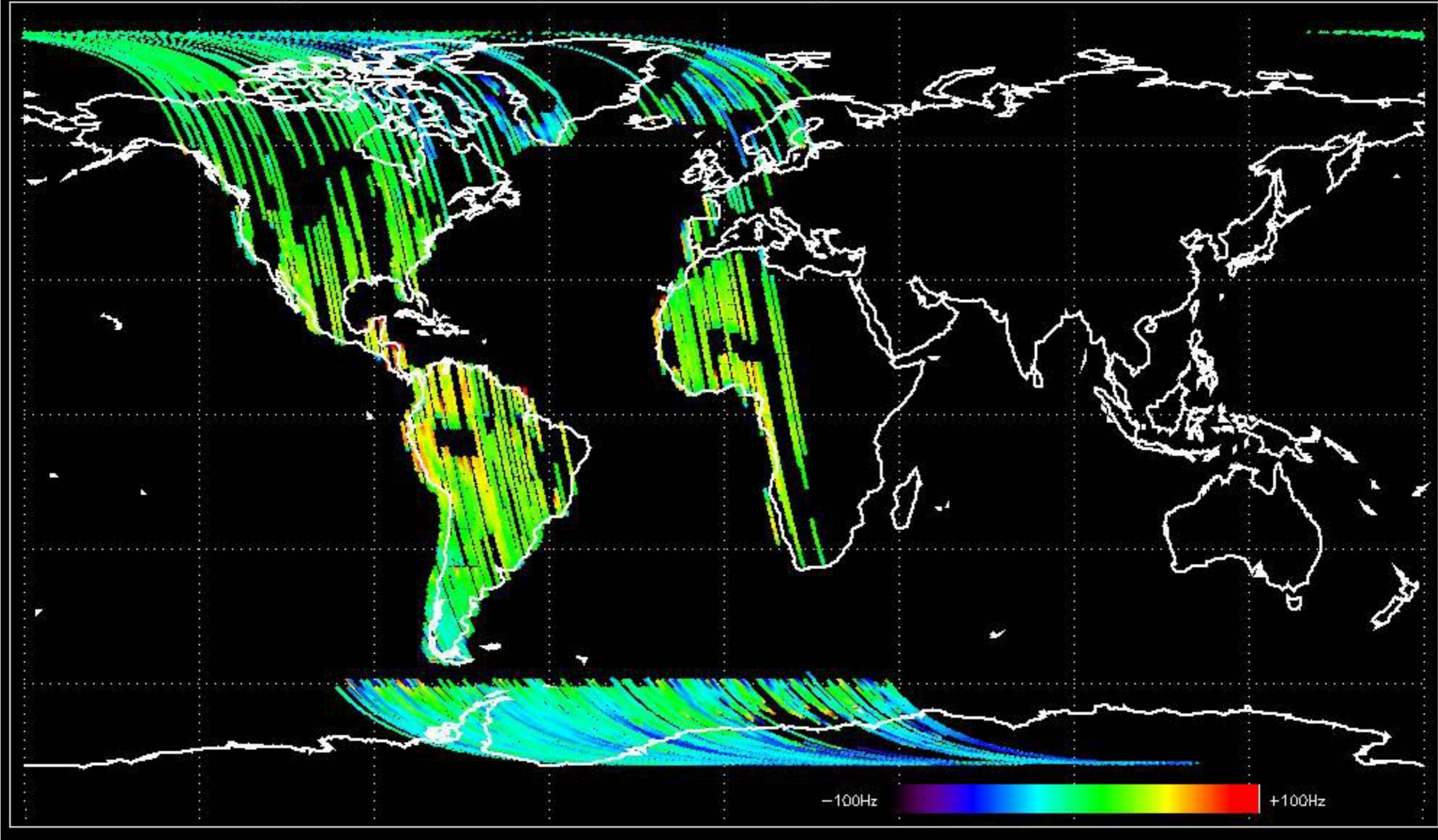


GM1 mode doppler

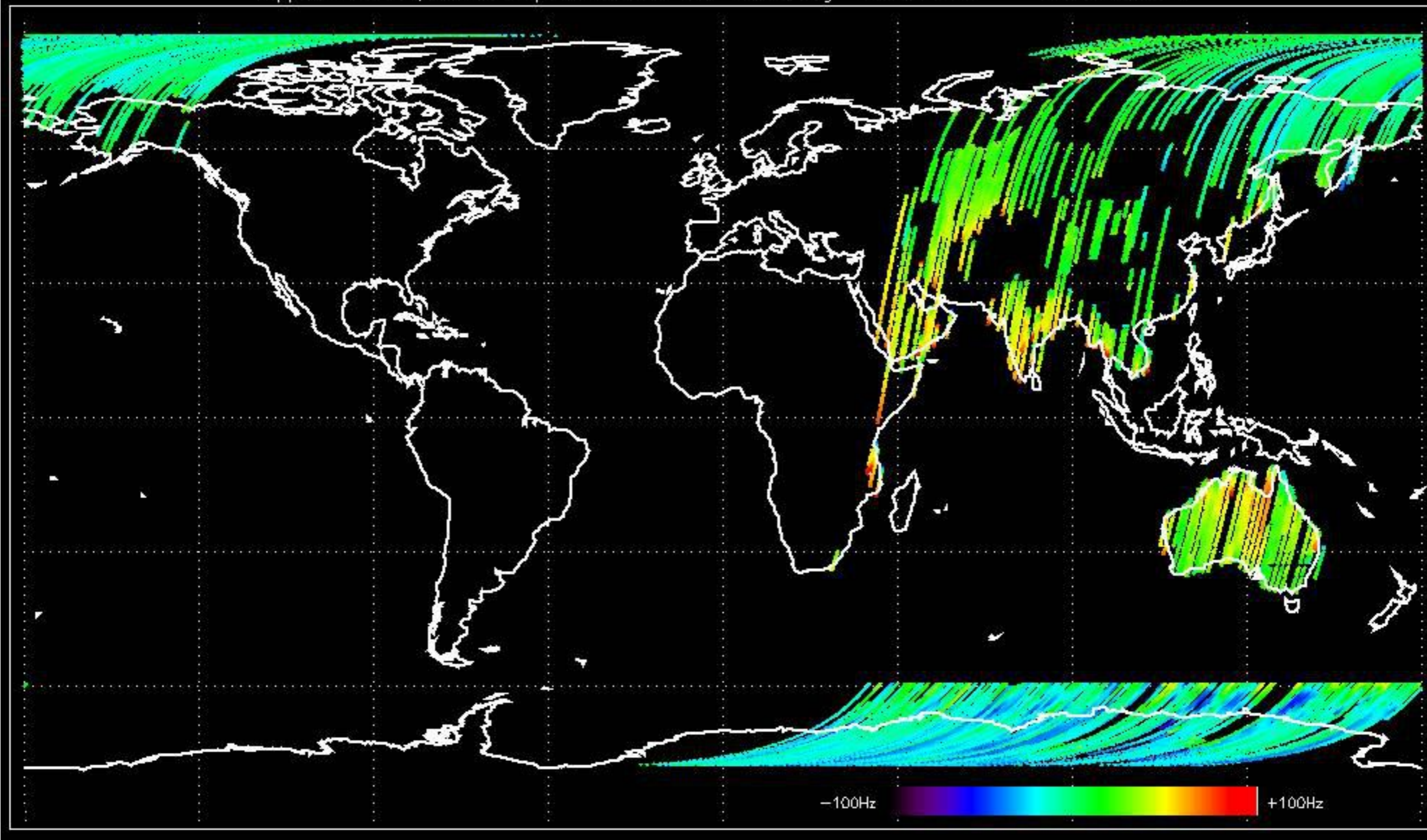




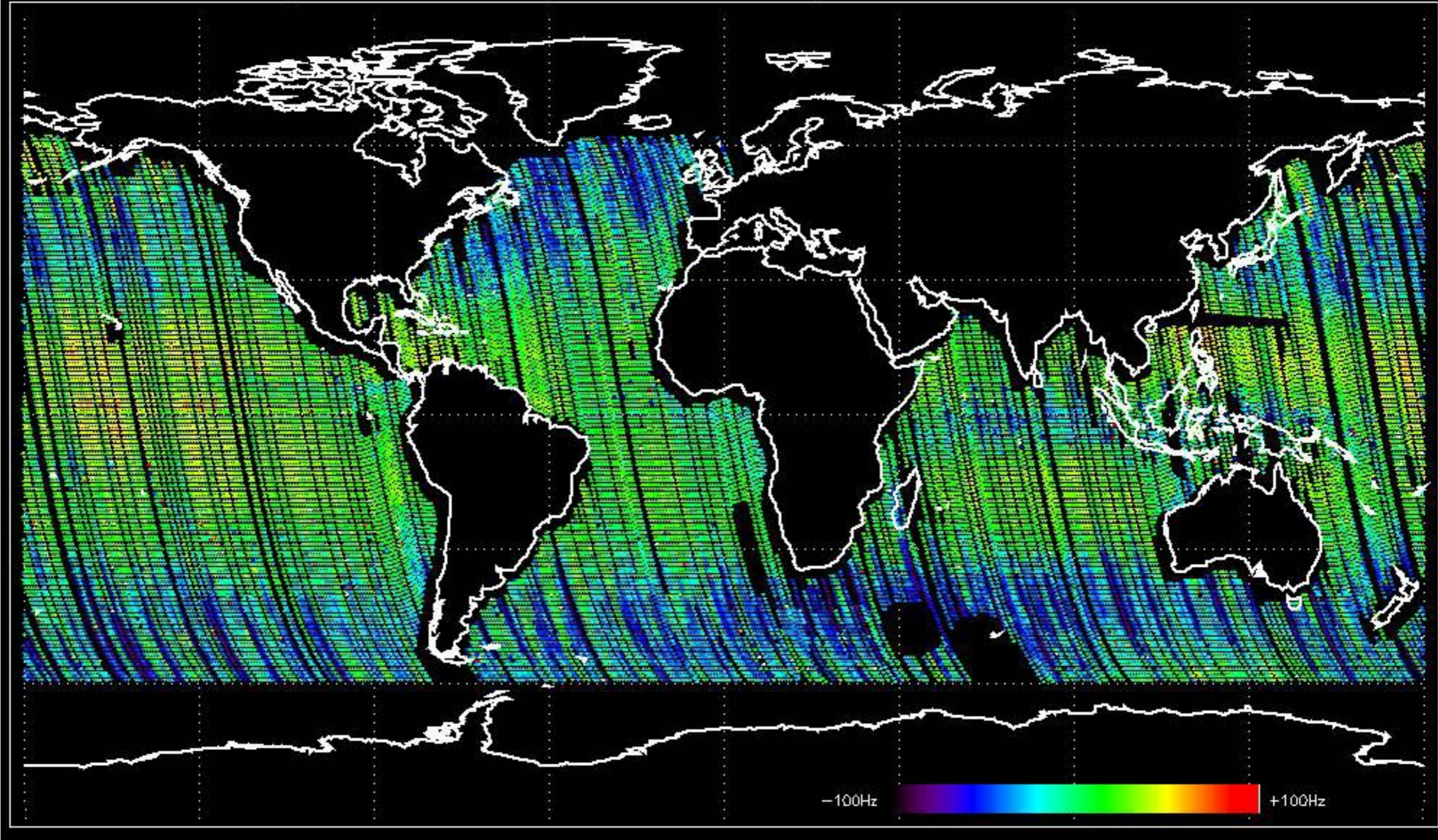
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.192080 Hz



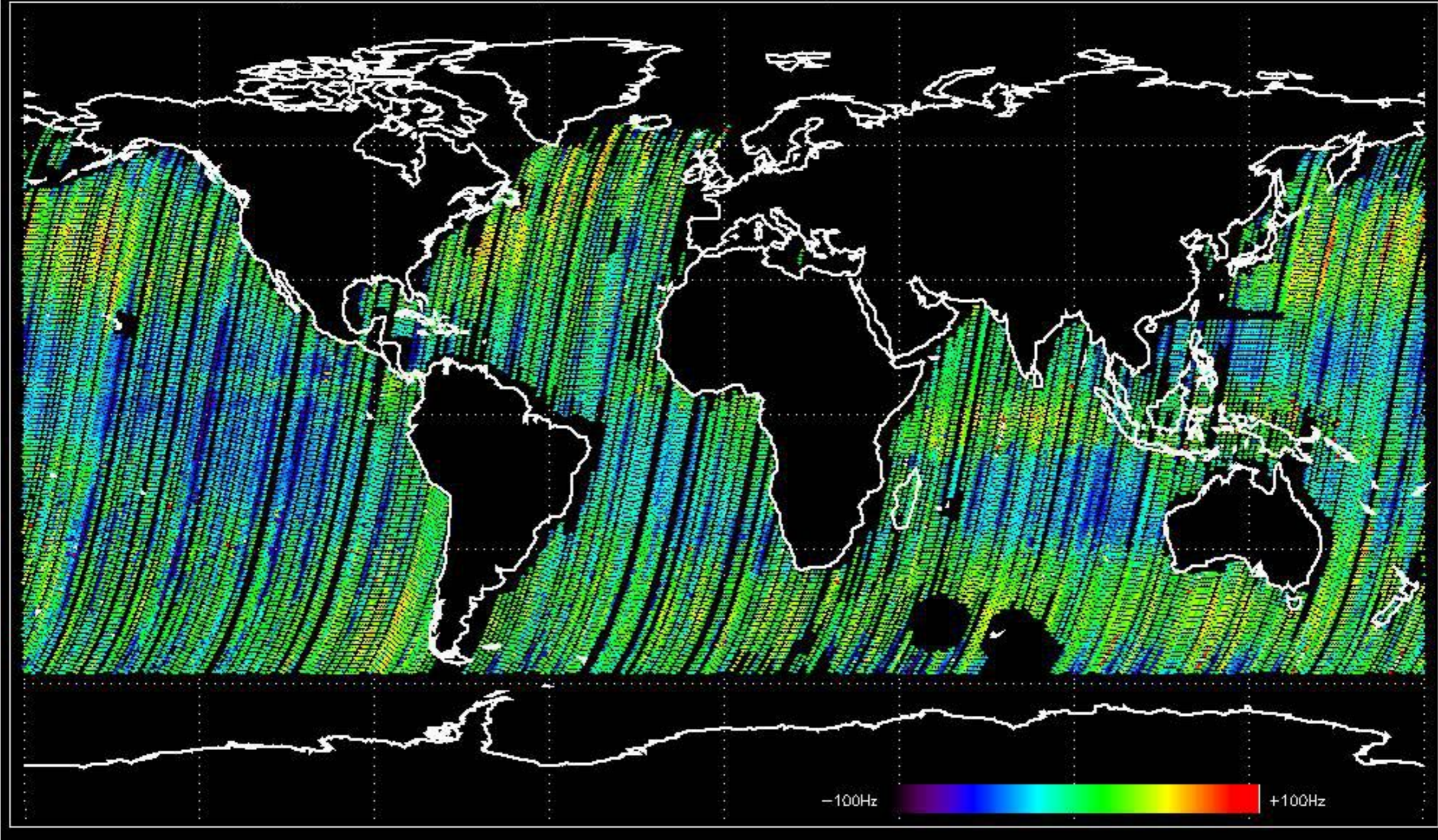
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.116566 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.4932387 Hz

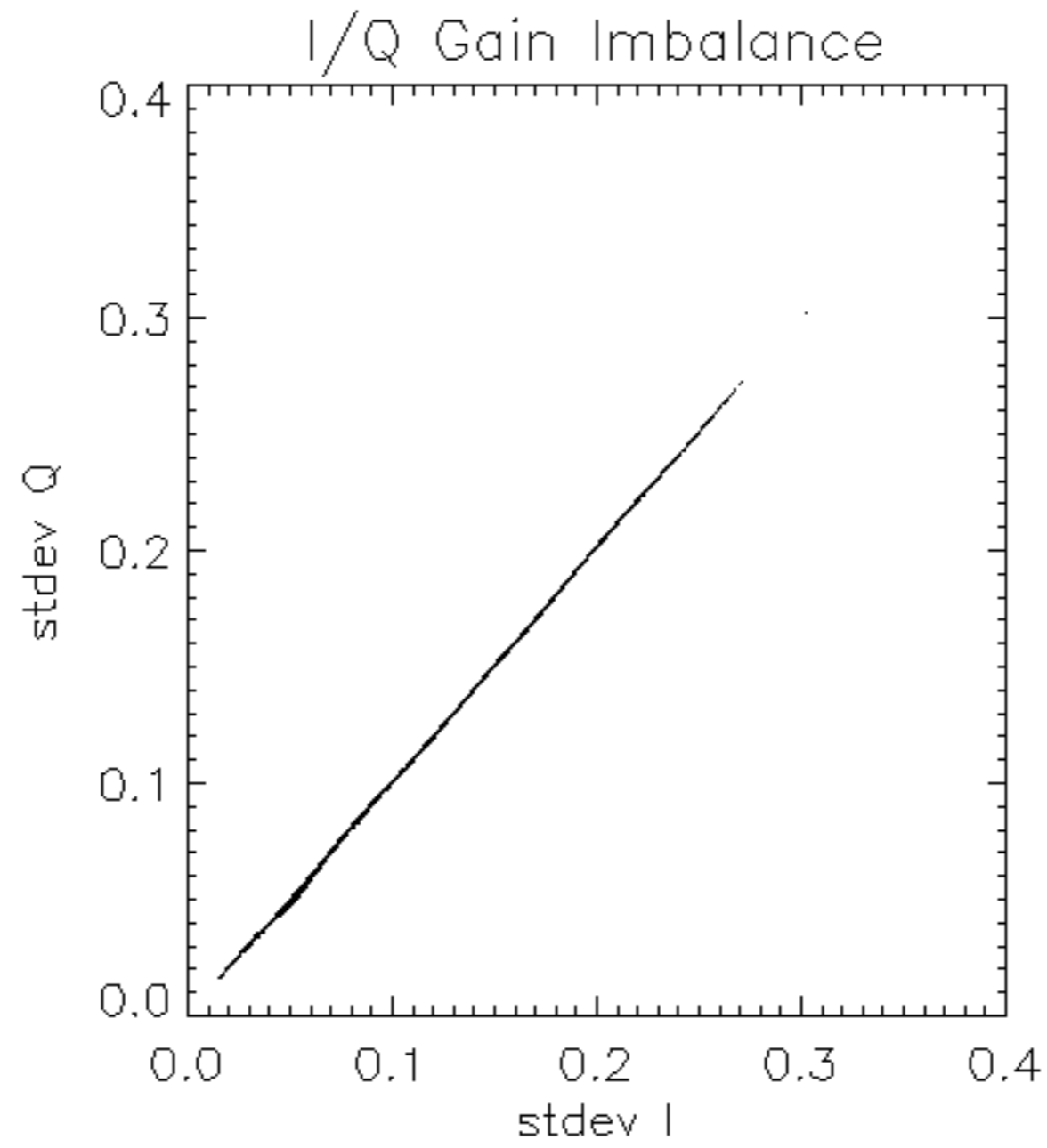


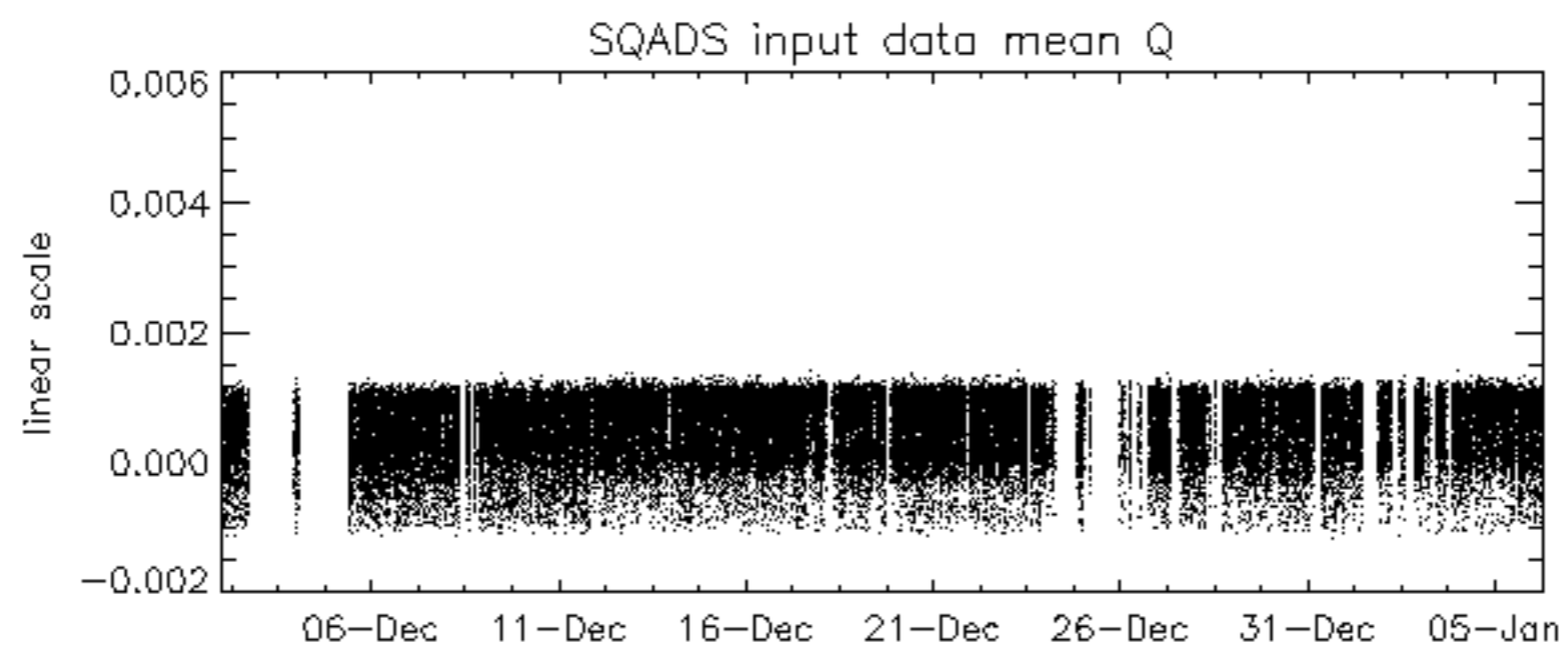
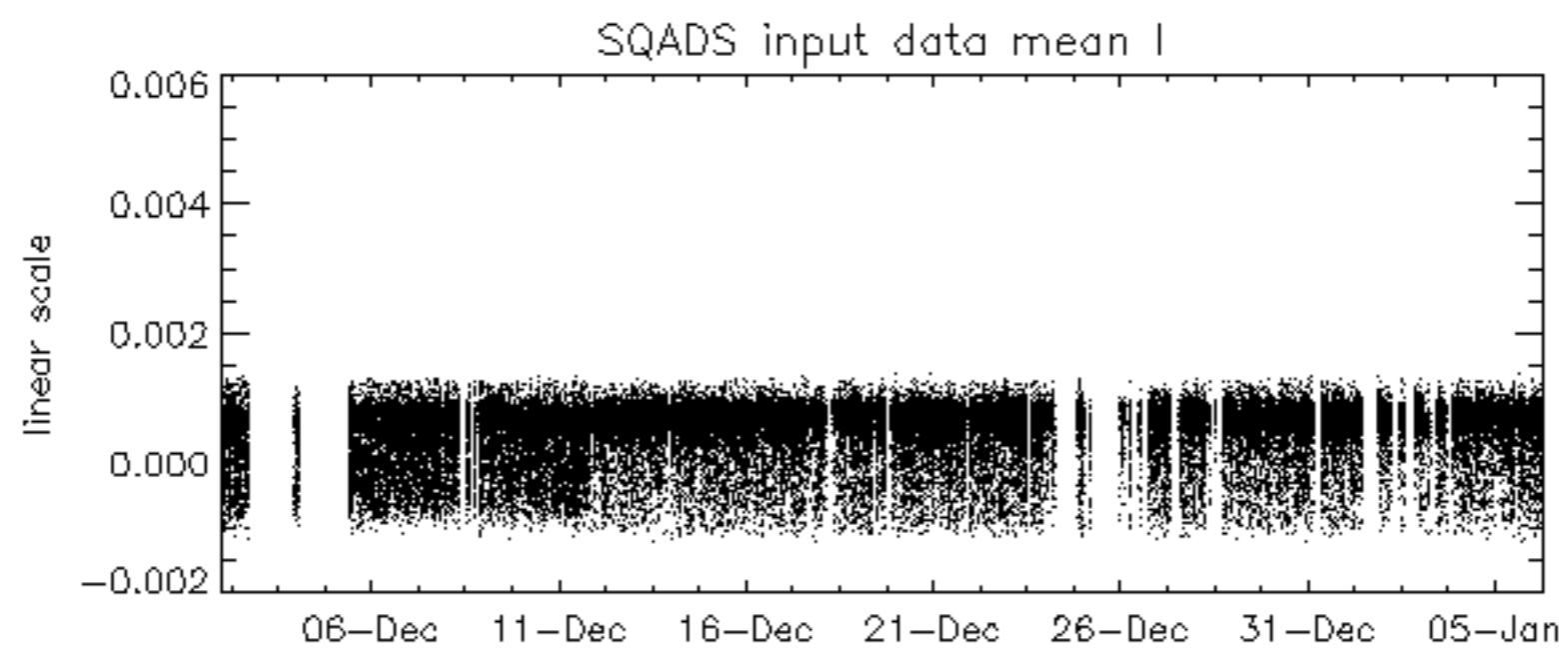
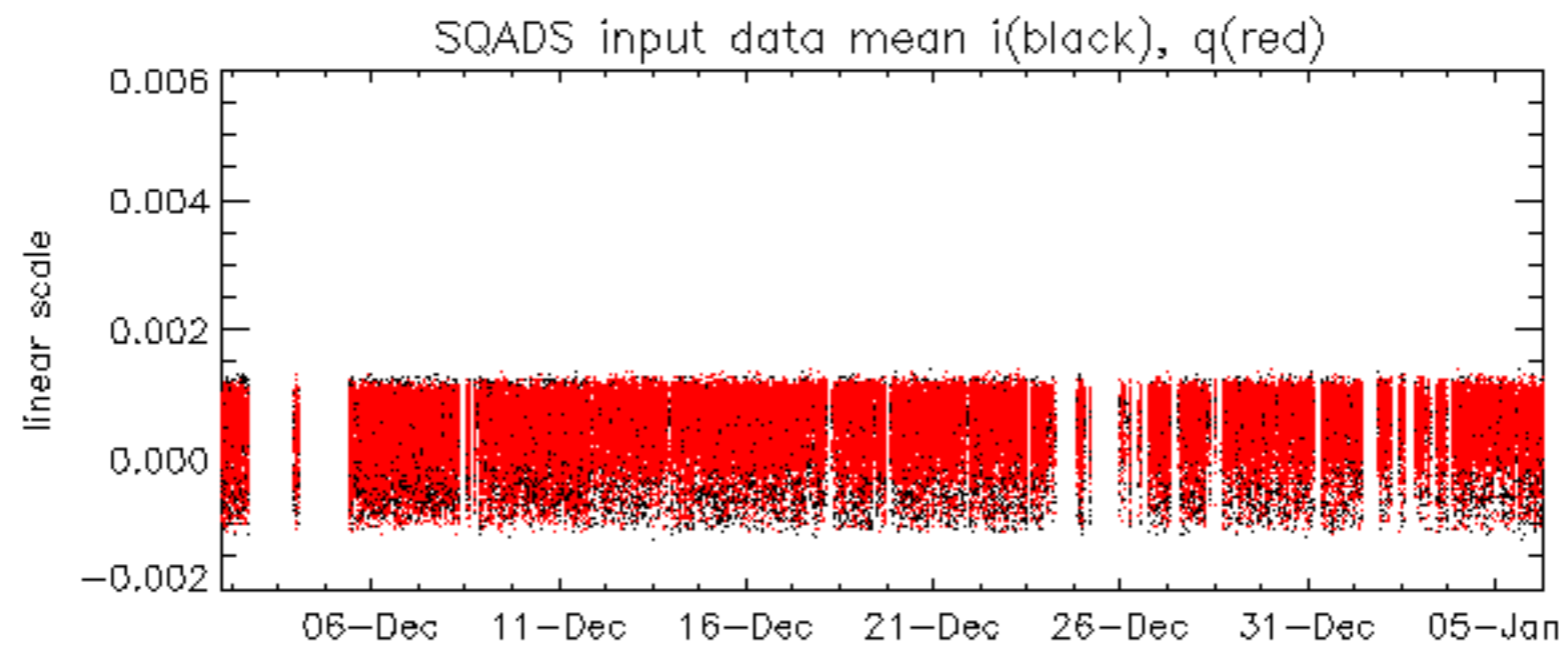
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.996343 Hz

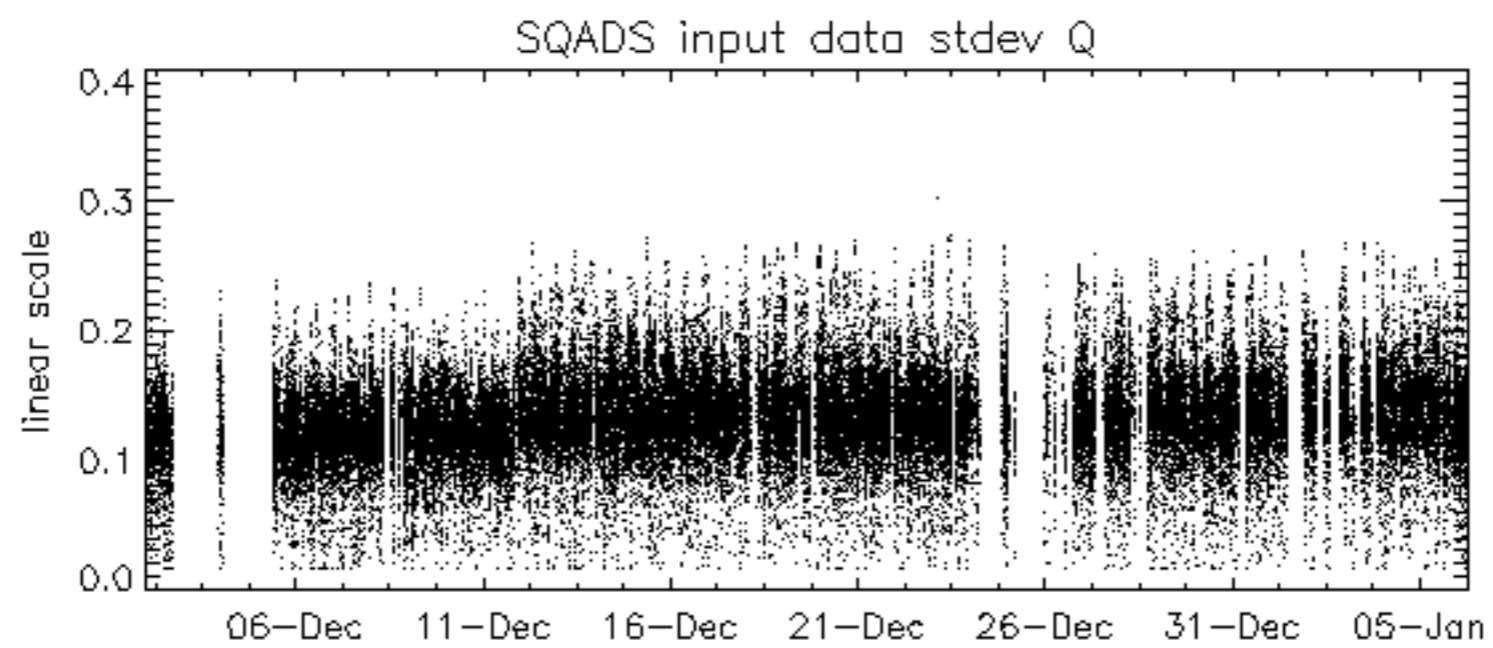
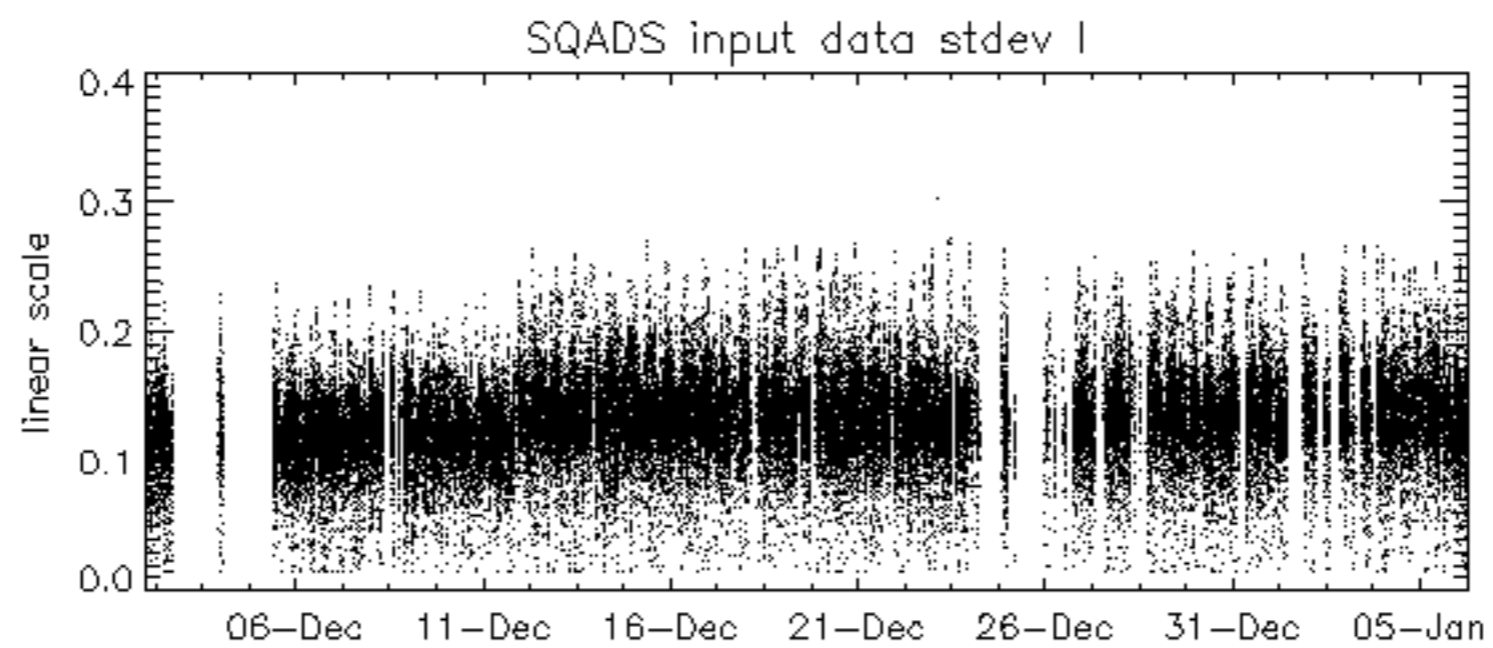
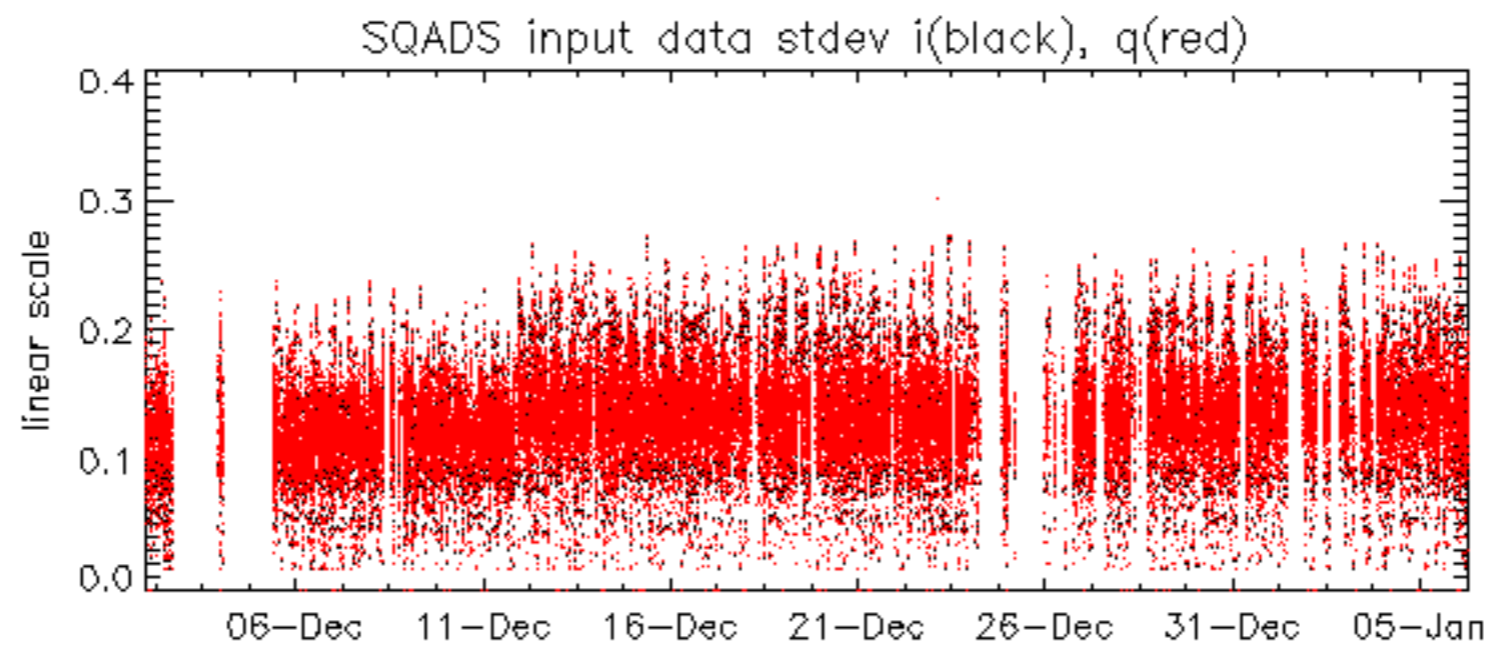


No anomalies observed on available MS products:

No anomalies observed.





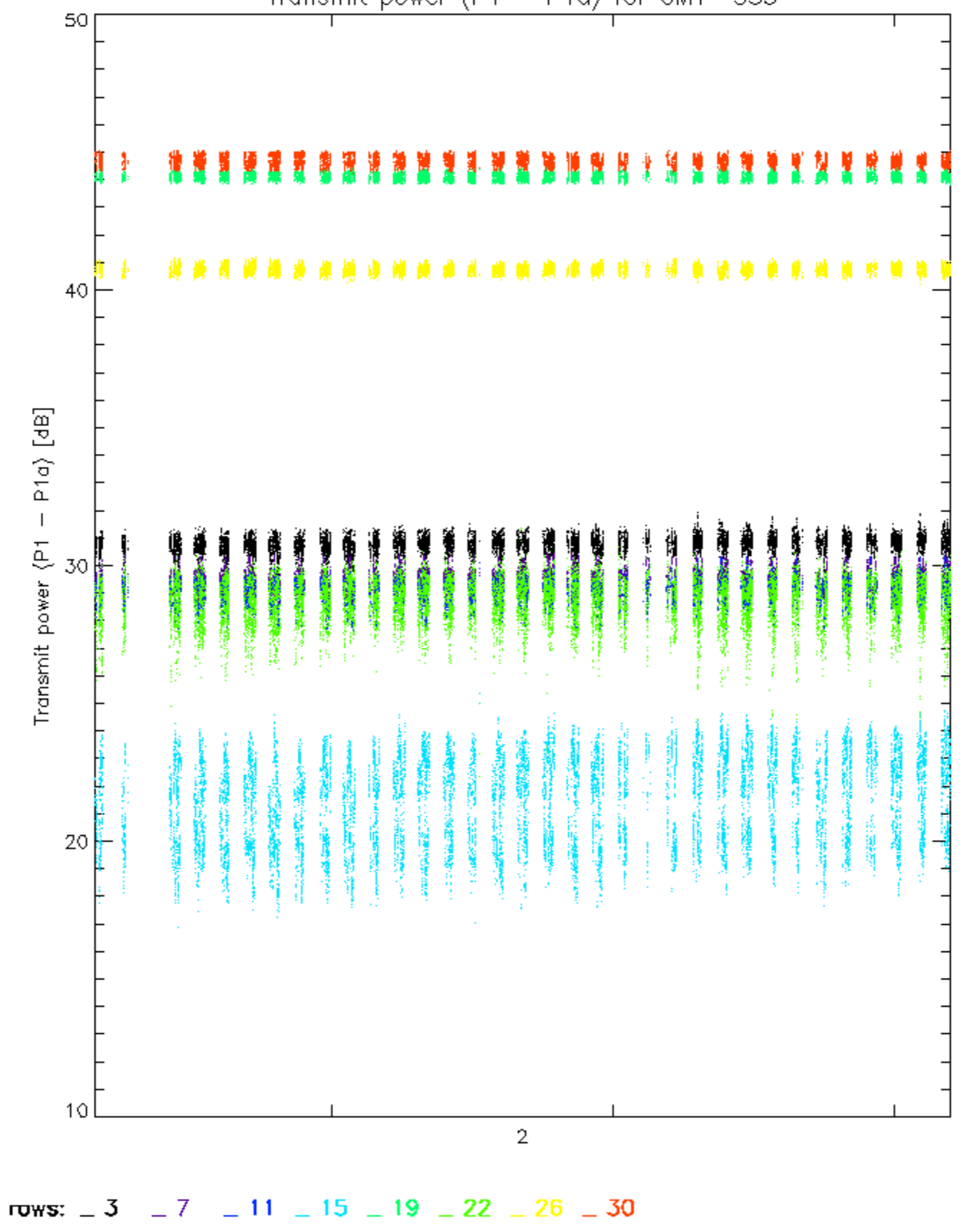


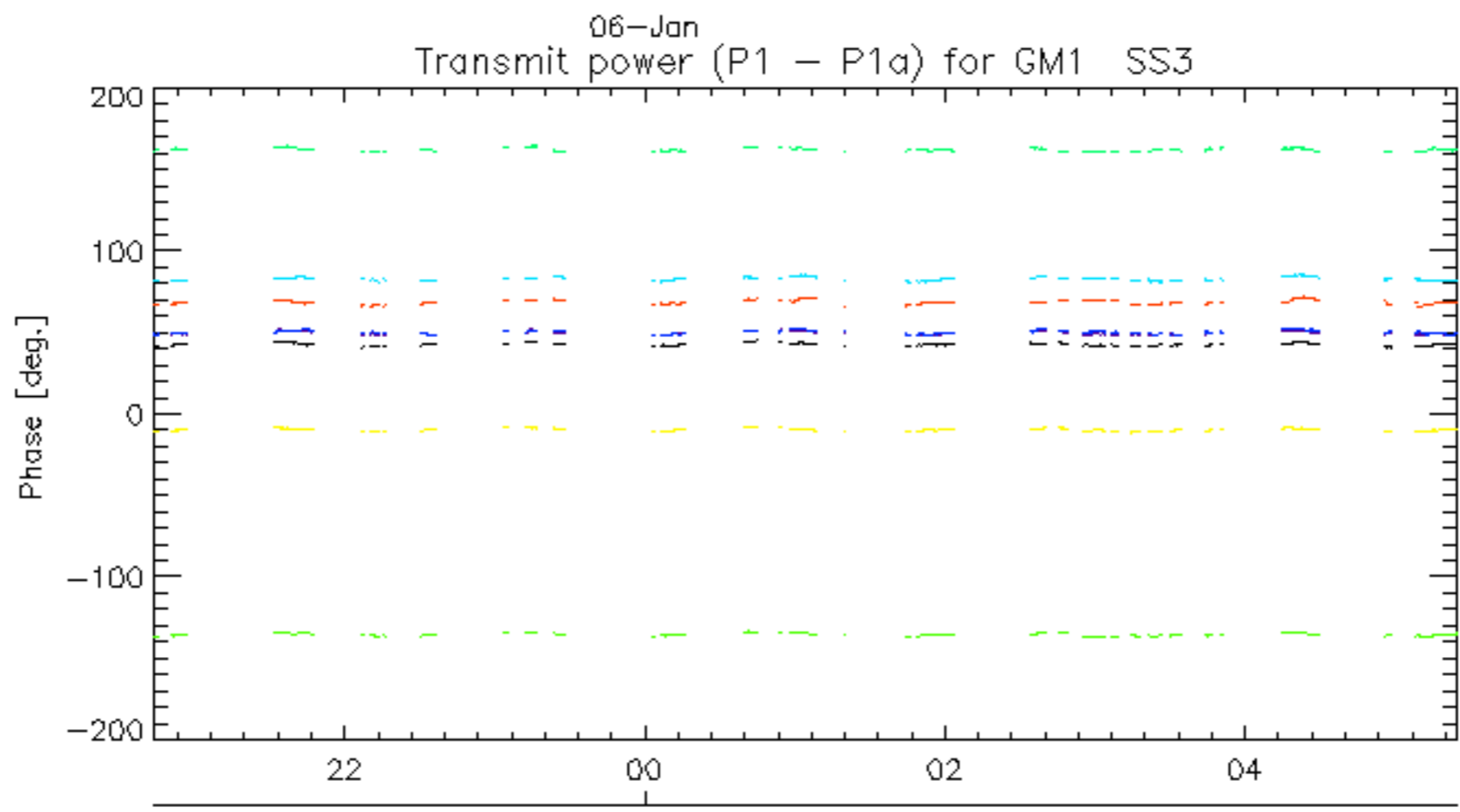
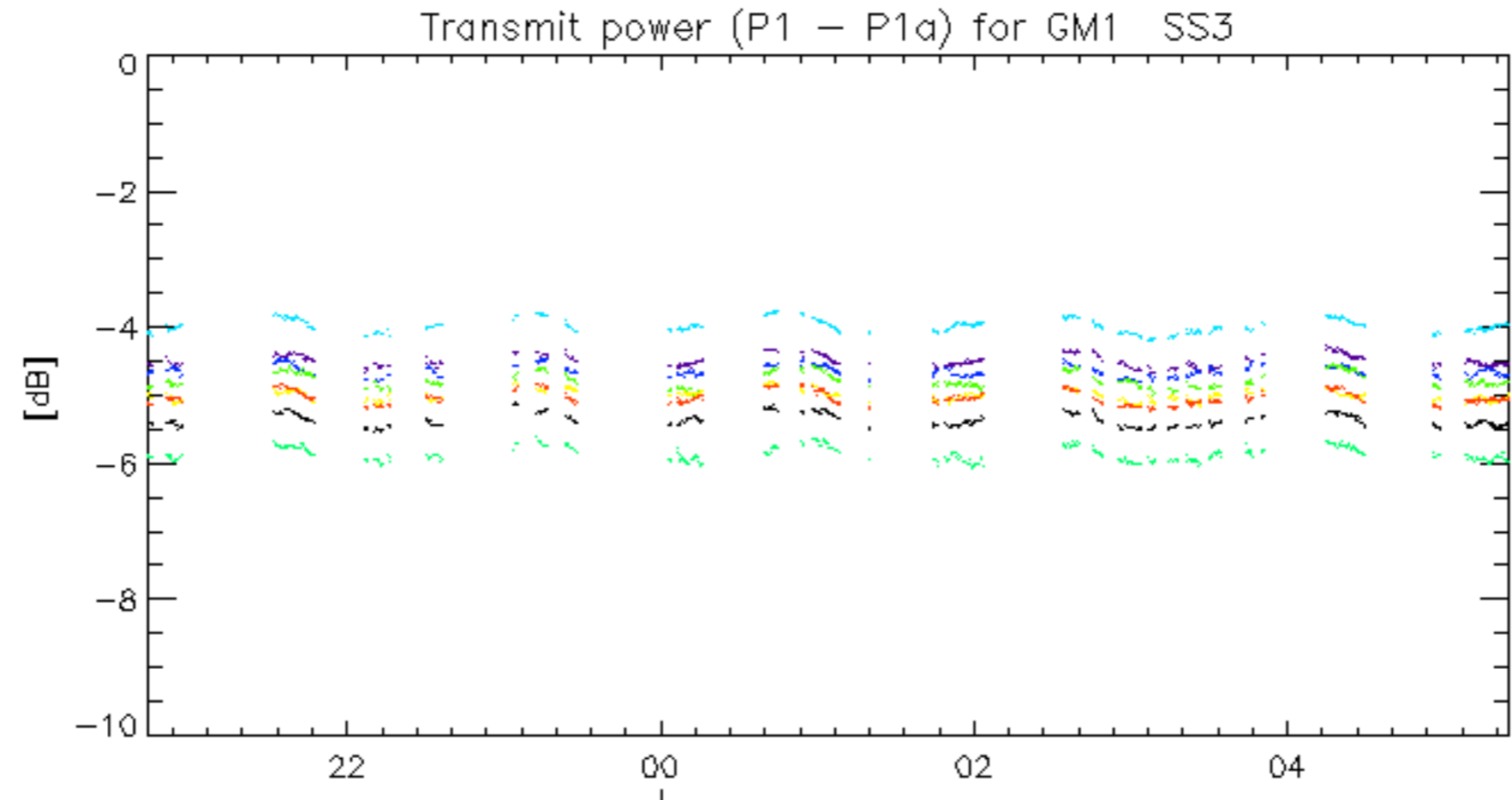
Summary of analysis for the last 3 days 2006010[456]

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

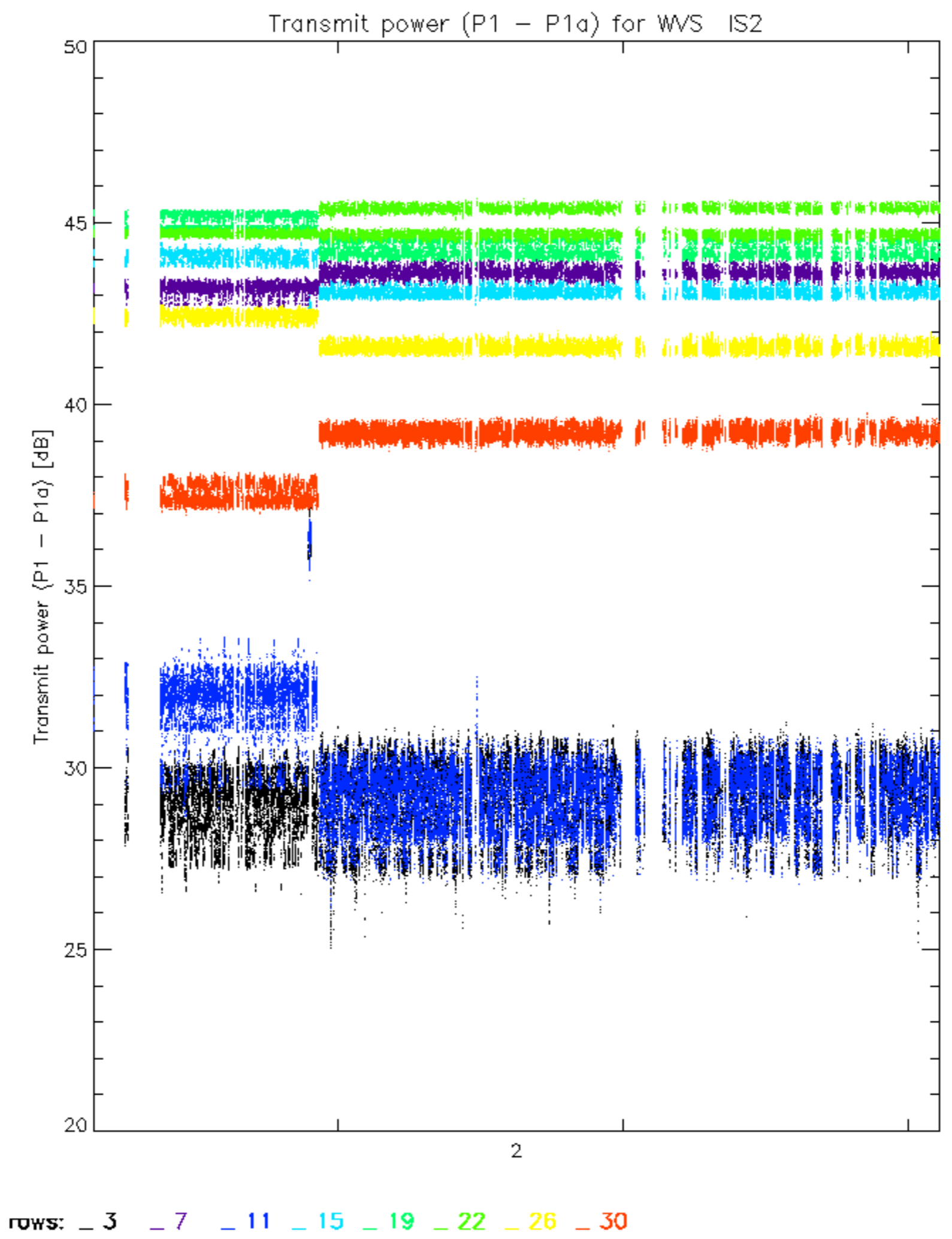
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060104_004520_000001852044_00016_20110_5463.N1	1	0
ASA_IMM_1PNPDE20060104_155357_000000402044_00025_20119_5538.N1	1	0
ASA_IMM_1PNPDE20060106_054348_000000372044_00048_20142_5727.N1	1	0
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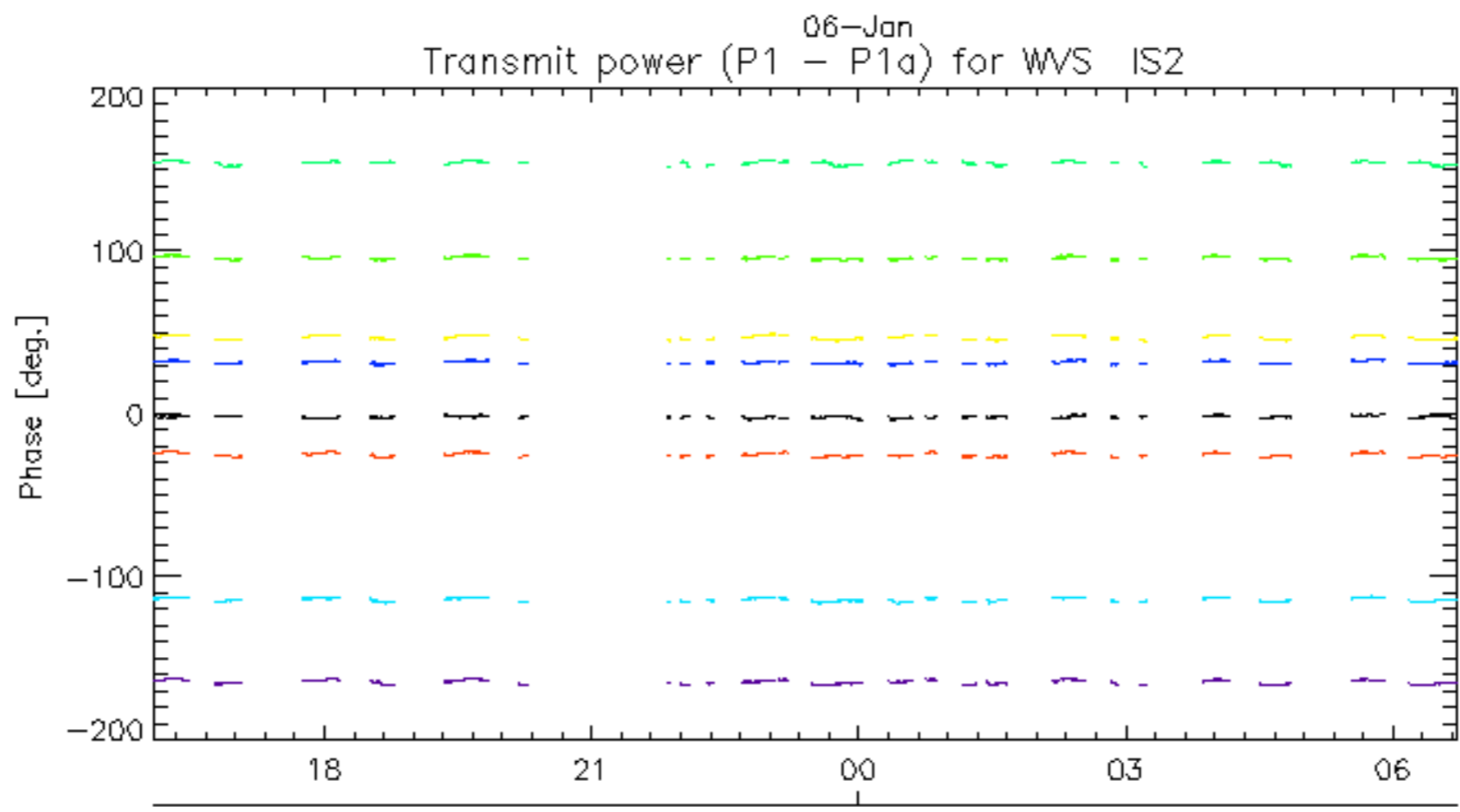
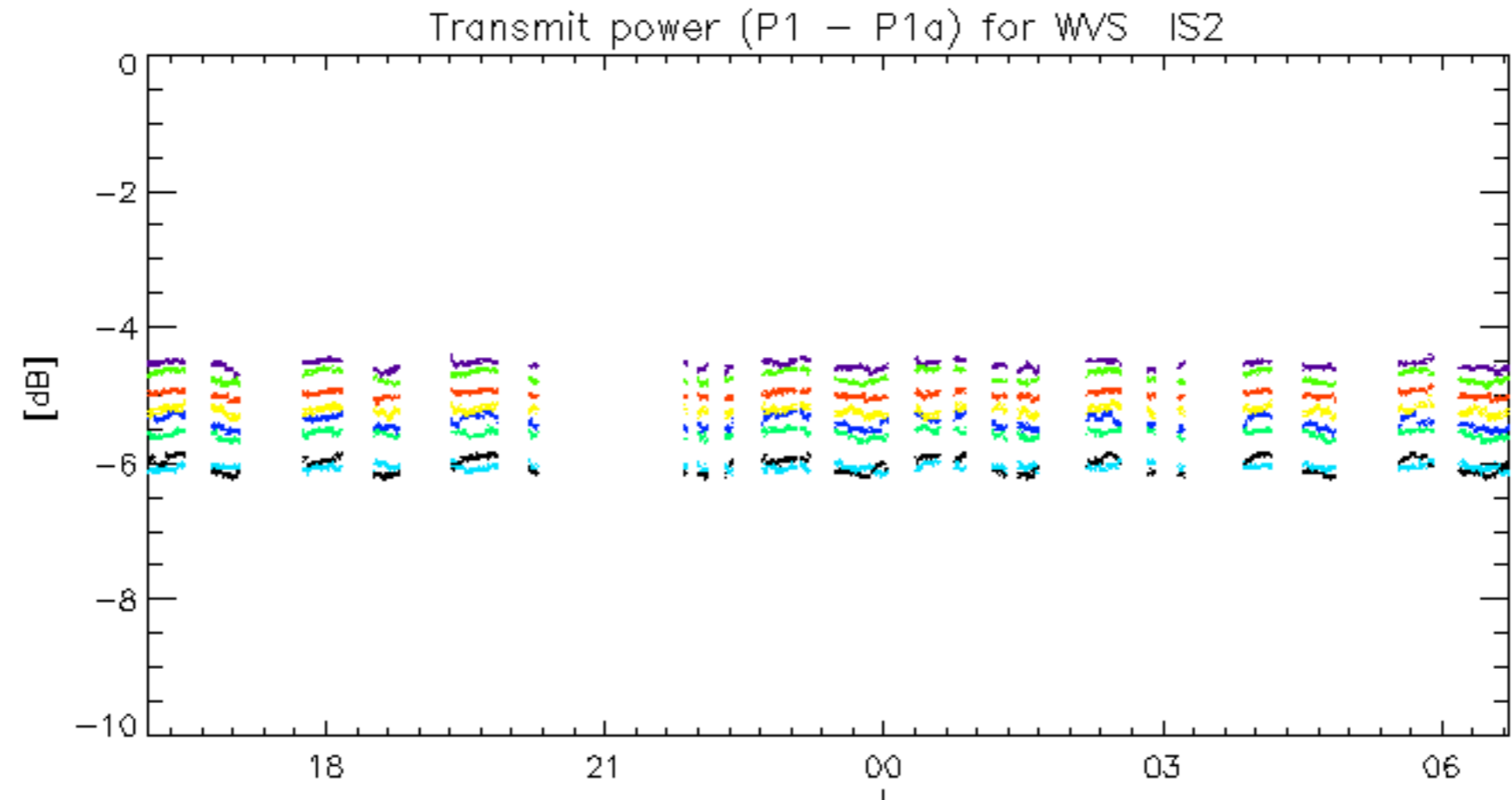
Transmit power (P1 - P1a) for GM1 SS3





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





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

No unavailabilities during the reported period.