

PRELIMINARY REPORT OF 060823

last update on Wed Aug 23 16:37:54 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 2006-08-22 00:00:00 to 2006-08-23 16:37:55

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	83	14	6	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	39	83	14	6	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	83	14	6	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	83	14	6	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	31	53	50	28	69
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	31	53	50	28	69
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	31	53	50	28	69
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	31	53	50	28	69

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20060823 073841
H	20060822 081018

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

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	-3.943849	0.009865	0.003312
7	P1	-3.084153	0.051271	0.097561
11	P1	-4.089489	0.062800	0.022469
15	P1	-6.200349	0.093185	-0.032532
19	P1	-3.448434	0.010093	-0.082653
22	P1	-4.567636	0.009933	-0.026321
26	P1	-3.921970	0.020009	-0.013909
30	P1	-5.765807	0.009946	-0.010036
3	P1	-16.537434	0.256549	0.026493
7	P1	-16.874813	0.649773	1.382397
11	P1	-16.884829	0.295960	0.225459
15	P1	-13.007657	0.161457	0.144094
19	P1	-14.510257	0.054770	-0.067523
22	P1	-15.921077	0.461072	0.168404
26	P1	-15.135983	0.222050	-0.114588
30	P1	-17.056673	0.319999	0.129129

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.889700	0.084046	0.095222
7	P2	-21.866978	0.099645	0.020746
11	P2	-15.758887	0.115169	0.045648
15	P2	-7.107129	0.096807	0.030760
19	P2	-9.118516	0.090168	0.012970
22	P2	-18.141220	0.084648	0.018757
26	P2	-16.398846	0.090849	-0.004696
30	P2	-19.488684	0.090679	0.047786

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172492	0.003449	-0.001759
7	P3	-8.172492	0.003449	-0.001759
11	P3	-8.172492	0.003449	-0.001759
15	P3	-8.172492	0.003449	-0.001759
19	P3	-8.172492	0.003449	-0.001759
22	P3	-8.172492	0.003449	-0.001759
26	P3	-8.172547	0.003448	-0.001897
30	P3	-8.172547	0.003448	-0.001897

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	-3.830581	0.021608	-0.011302
7	P1	-2.498183	0.286290	0.415951
11	P1	-2.892133	0.142248	-0.043584
15	P1	-3.639447	0.148906	-0.103902
19	P1	-3.428385	0.025502	-0.000069
22	P1	-5.087913	0.020773	-0.018778
26	P1	-5.867105	0.023580	-0.015338
30	P1	-5.193943	0.040133	0.009292
3	P1	-11.621555	0.066566	-0.006389
7	P1	-9.914114	0.187710	0.275755
11	P1	-10.282433	0.082216	-0.091142
15	P1	-10.796003	0.174410	-0.144975
19	P1	-15.550233	0.528154	0.101990
22	P1	-20.945513	1.335070	-0.102282

26	P1	-16.153513	0.406692	0.200250
30	P1	-17.999910	0.431998	-0.095817

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.496075	0.084843	0.138524
7	P2	-22.284216	0.204130	0.180271
11	P2	-10.972233	0.055337	0.151379
15	P2	-4.886430	0.043331	0.027932
19	P2	-6.860986	0.040162	0.009719
22	P2	-8.185554	0.062333	0.013968
26	P2	-24.170723	0.128980	0.017090
30	P2	-21.977243	0.078902	0.048214

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.012804	0.003692	-0.010178
7	P3	-8.012672	0.003691	-0.009799
11	P3	-8.012787	0.003697	-0.009968
15	P3	-8.012856	0.003695	-0.010344
19	P3	-8.012806	0.003707	-0.010221
22	P3	-8.012942	0.003683	-0.010242
26	P3	-8.012758	0.003679	-0.009810
30	P3	-8.012710	0.003689	-0.009775

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	0.000554770
	stdev	1.76454e-07
MEAN Q	mean	0.000531205
	stdev	2.16108e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136777
	stdev	0.00107998
STDEV Q	mean	0.137127
	stdev	0.00109651



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006082[123]

The assumptions 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_1PNPDE20060821_004801_000000802050_00288_23388_3949.N1	1	0
ASA_IMM_1PNPDE20060821_155731_000000522050_00298_23398_4040.N1	1	0
ASA_IMM_1PNPDE20060822_010019_000000812050_00303_23403_4134.N1	1	0
ASA_WSM_1PNPDE20060821_141902_000000852050_00297_23397_8839.N1	0	36





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)

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

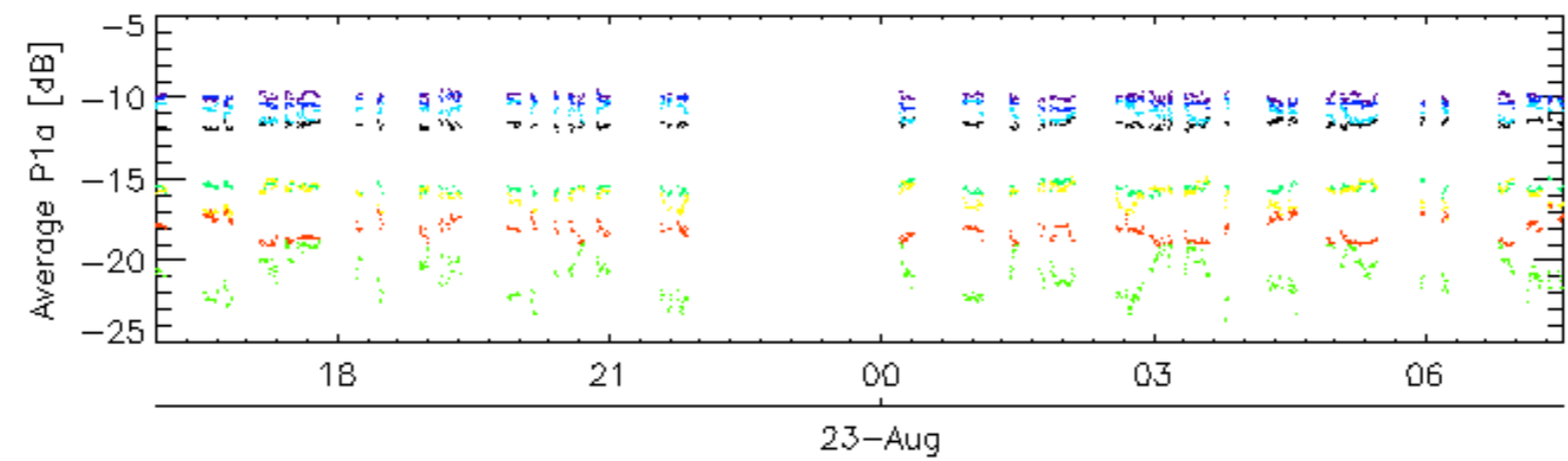
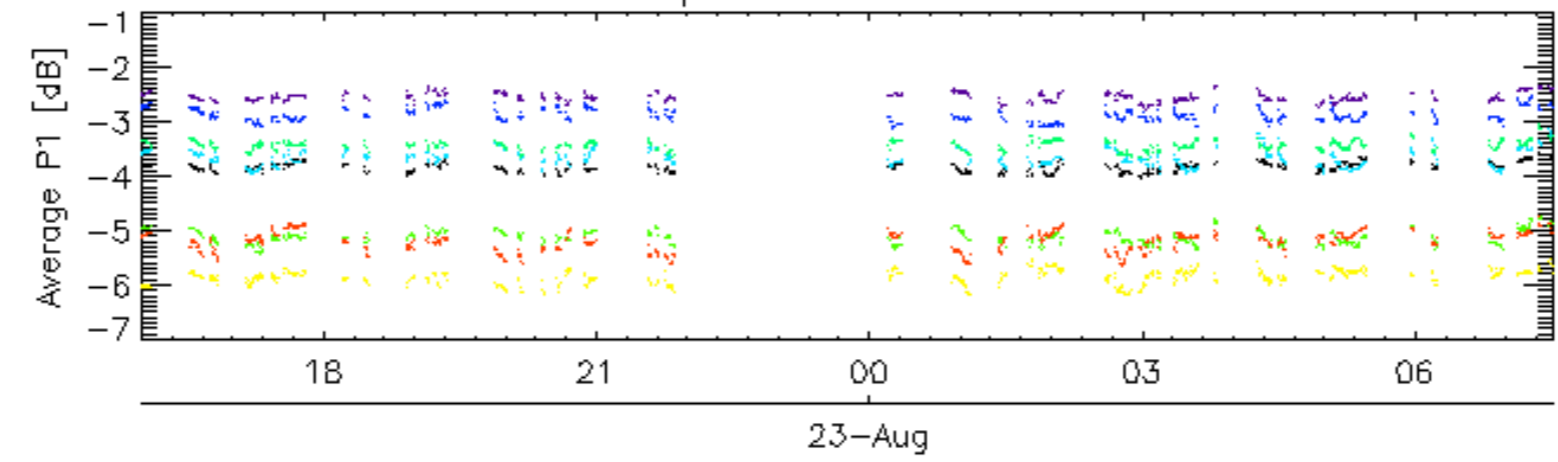
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

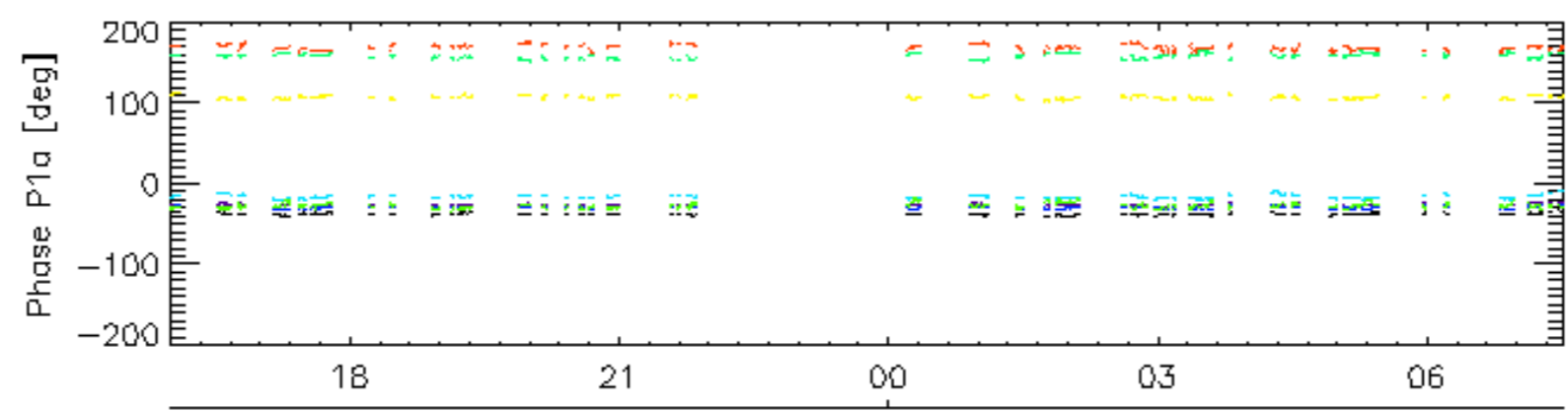
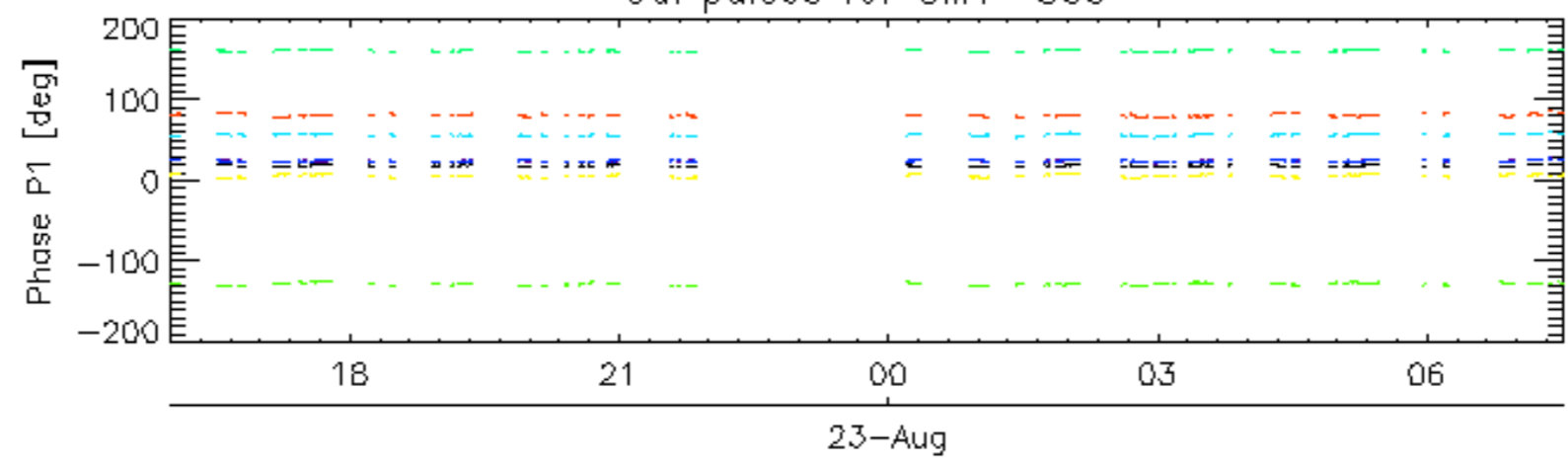
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

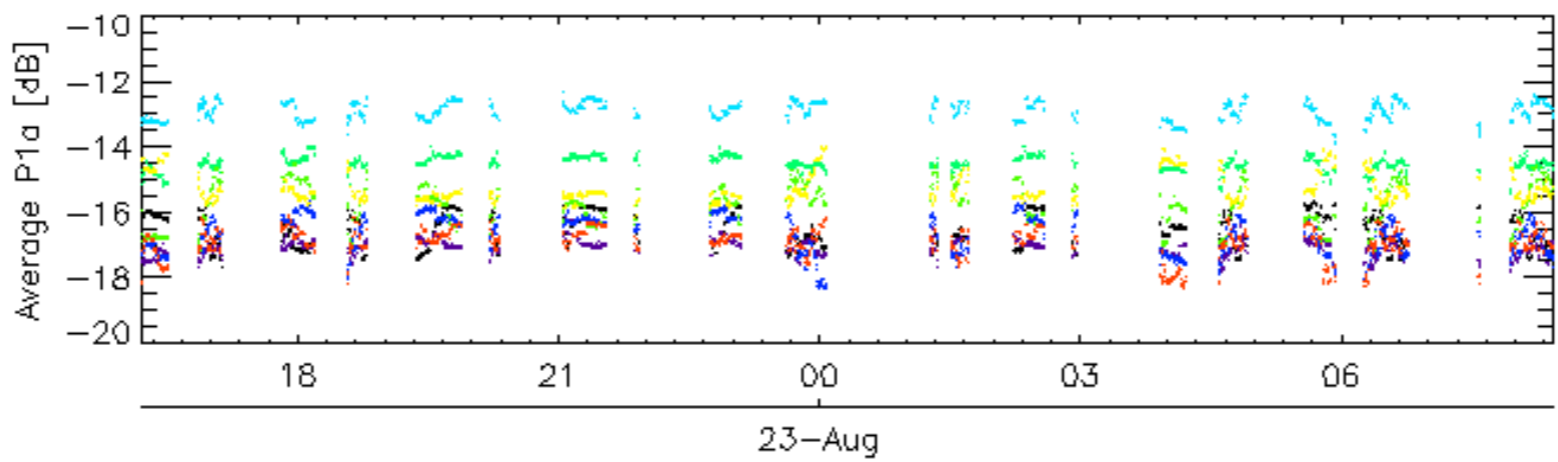
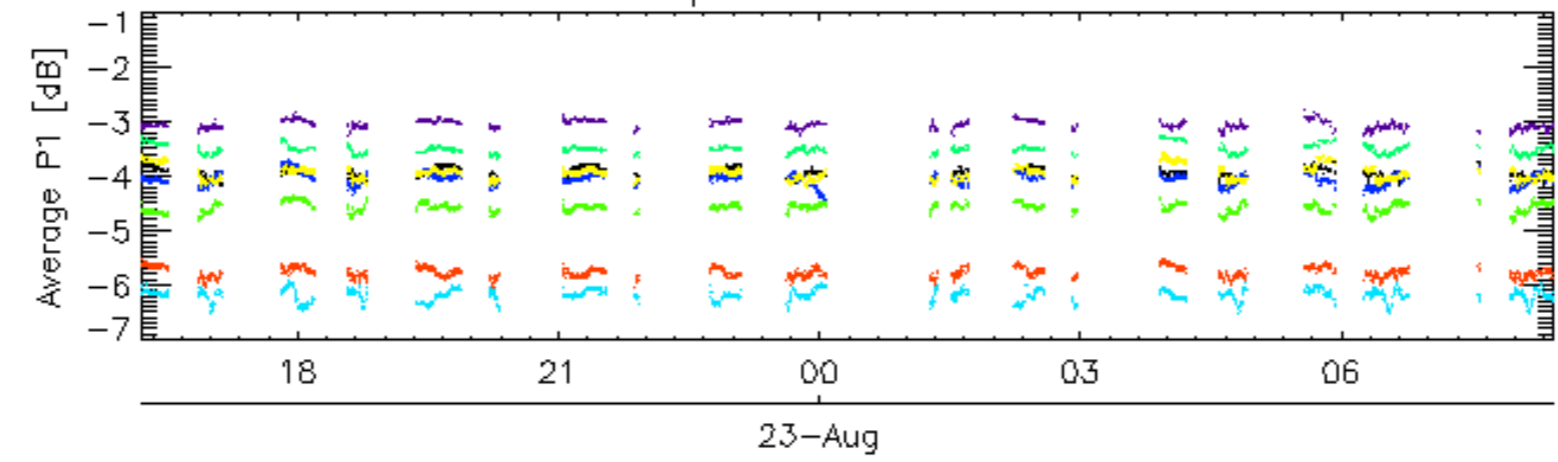


Cal pulses for GM1 SS3

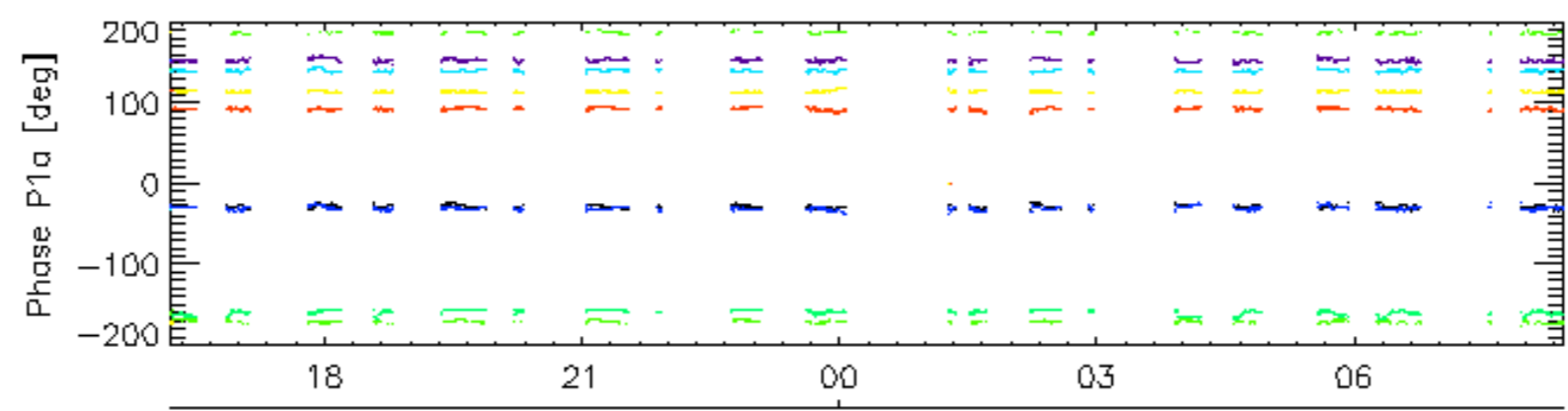
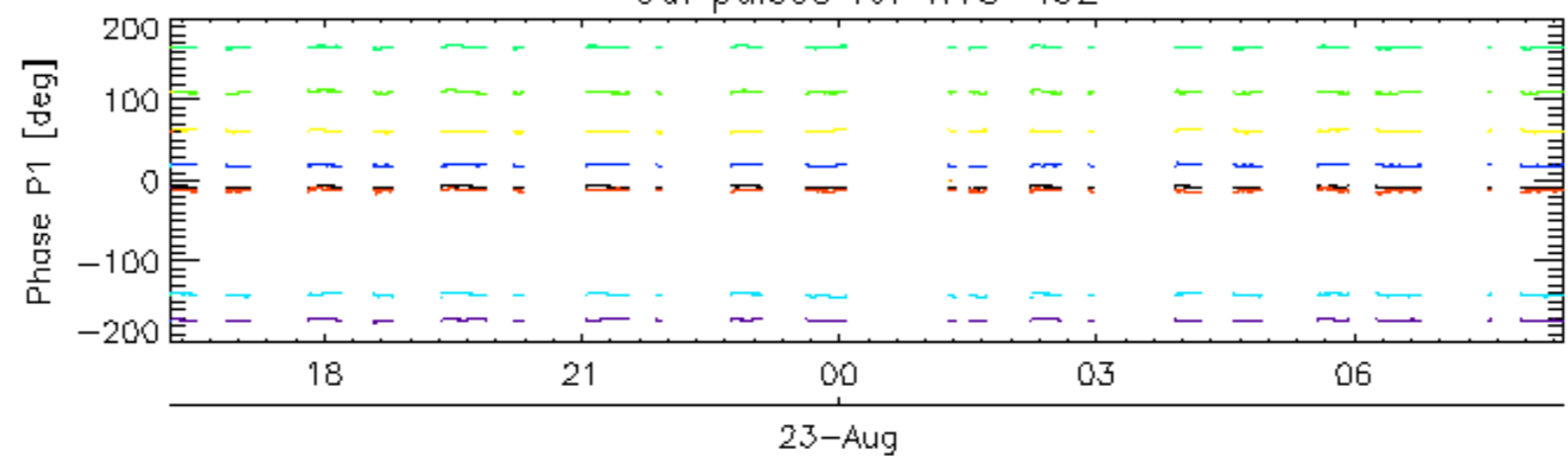


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

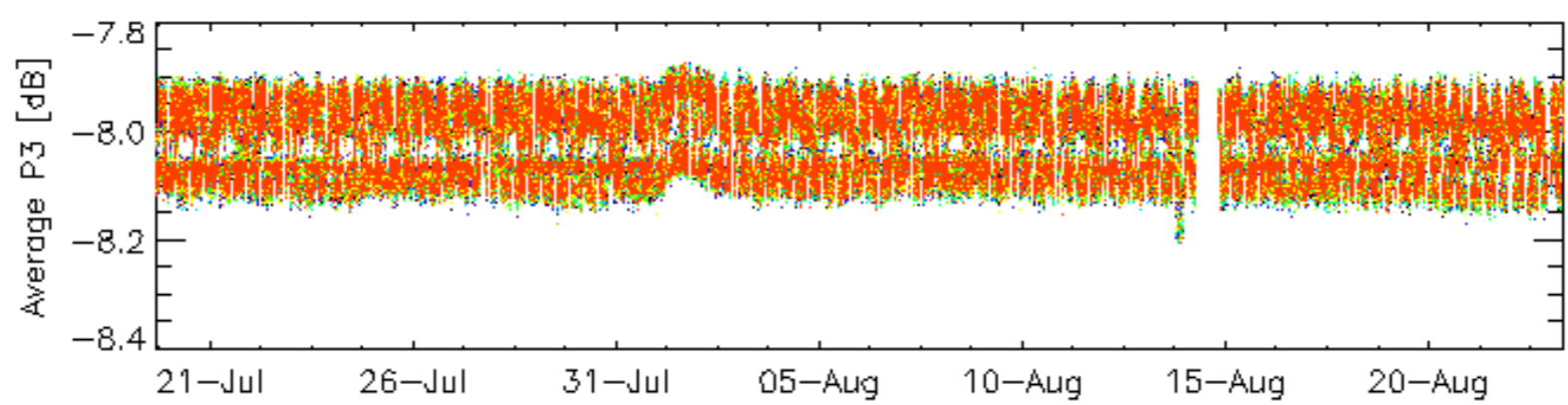
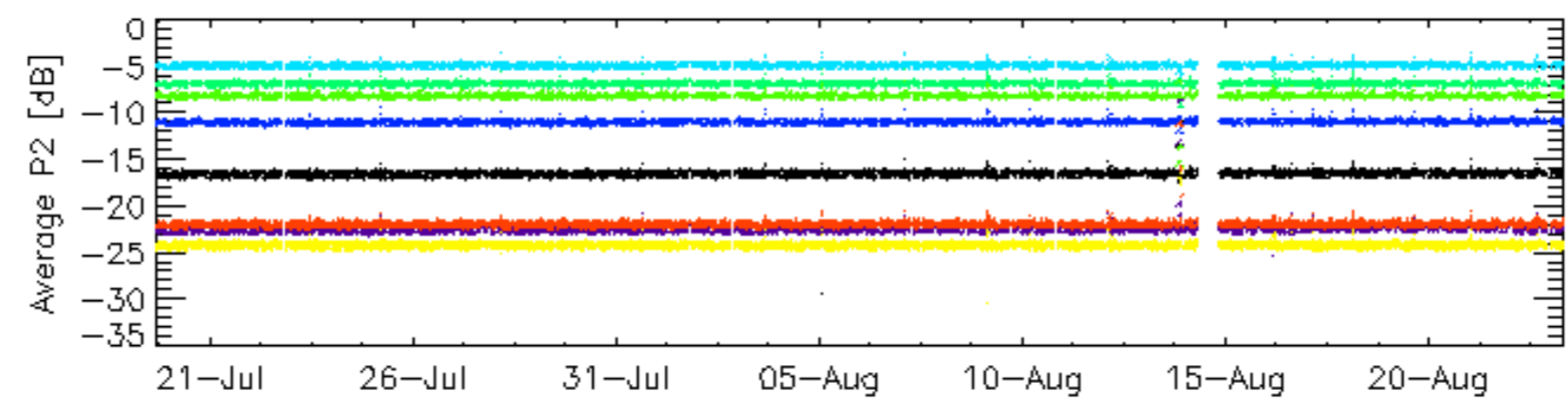
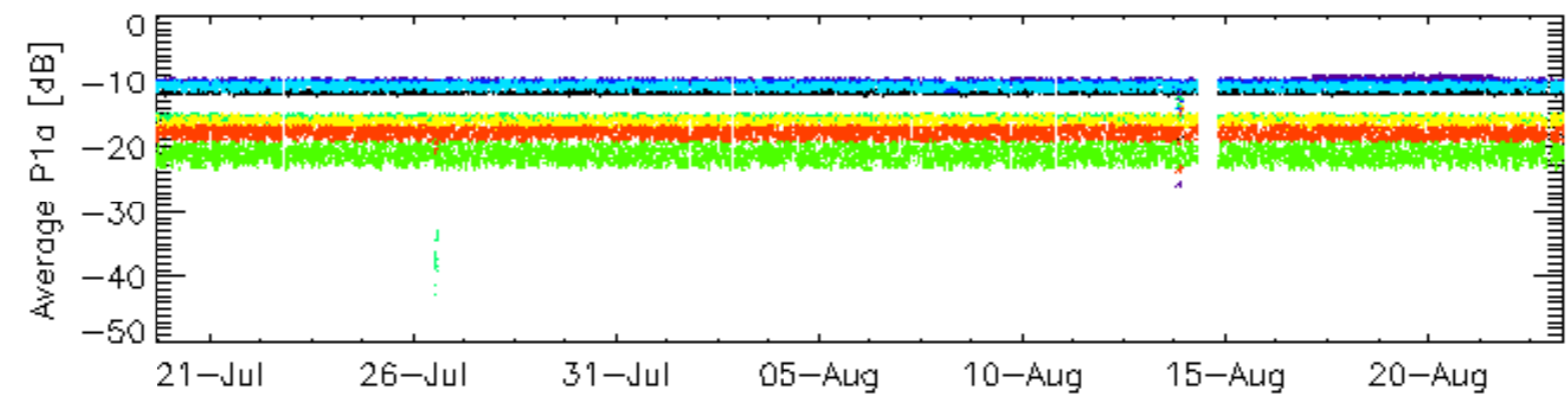
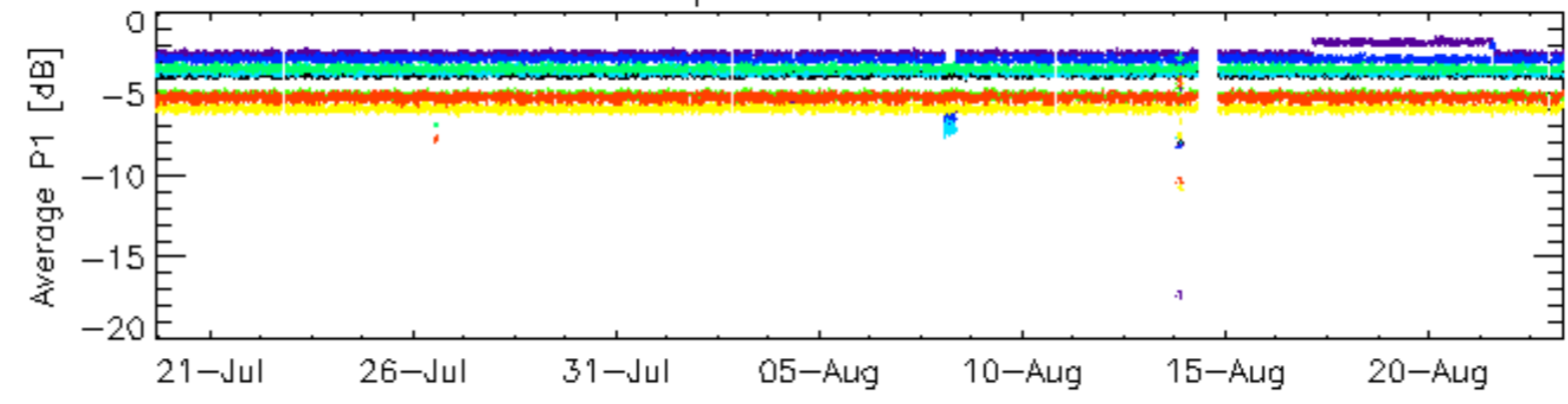


Cal pulses for WVS IS2



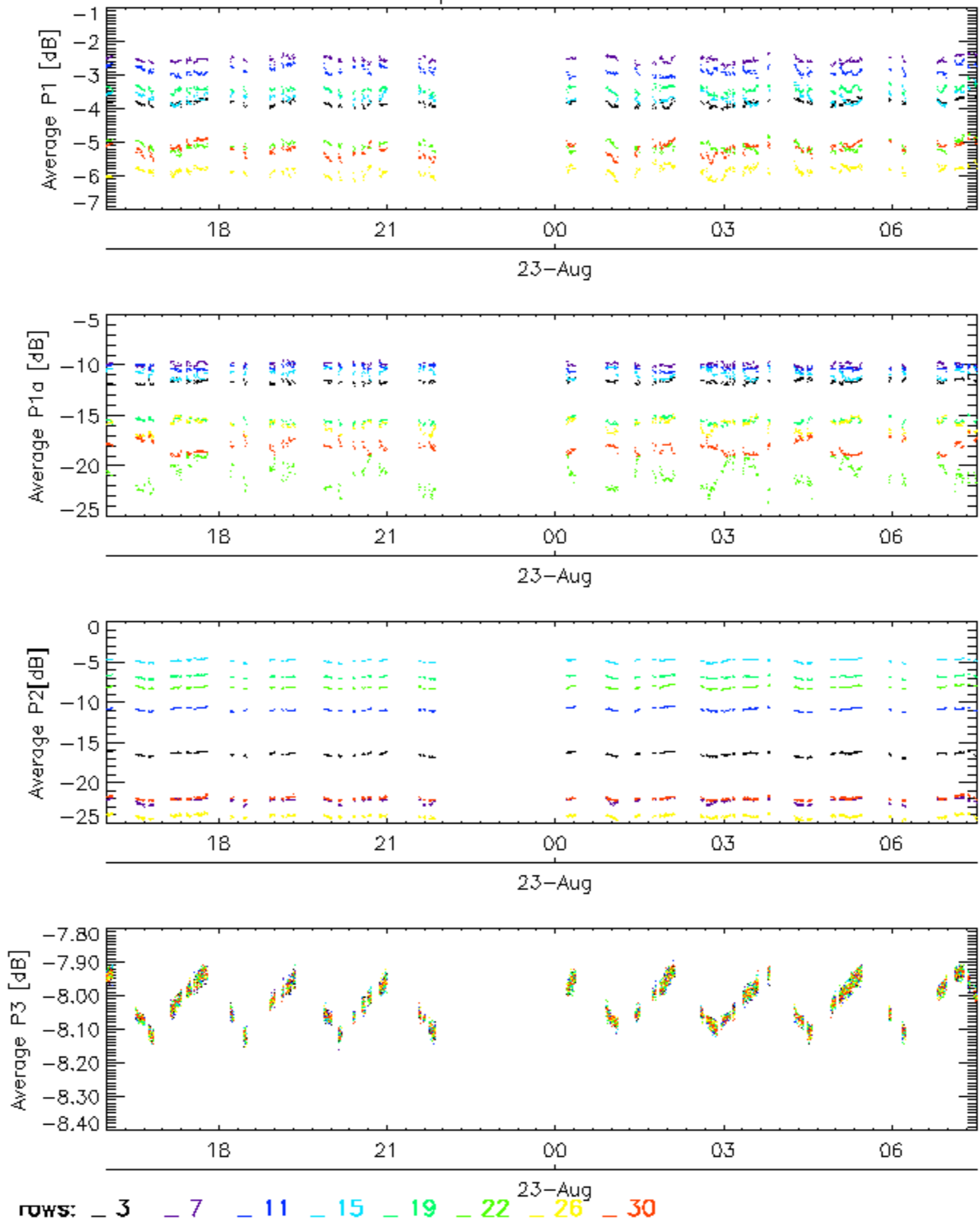
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

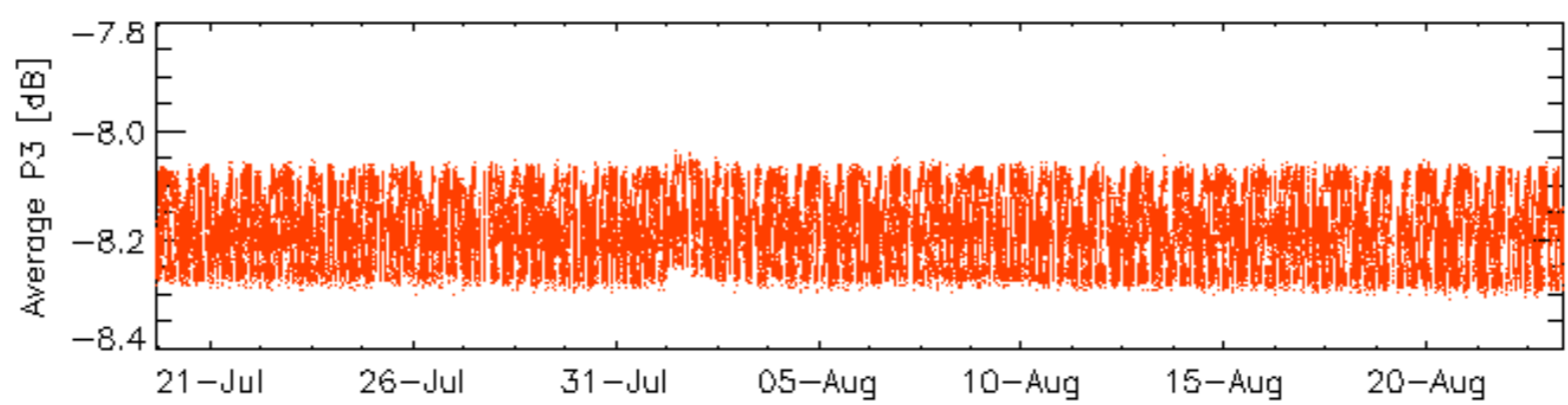
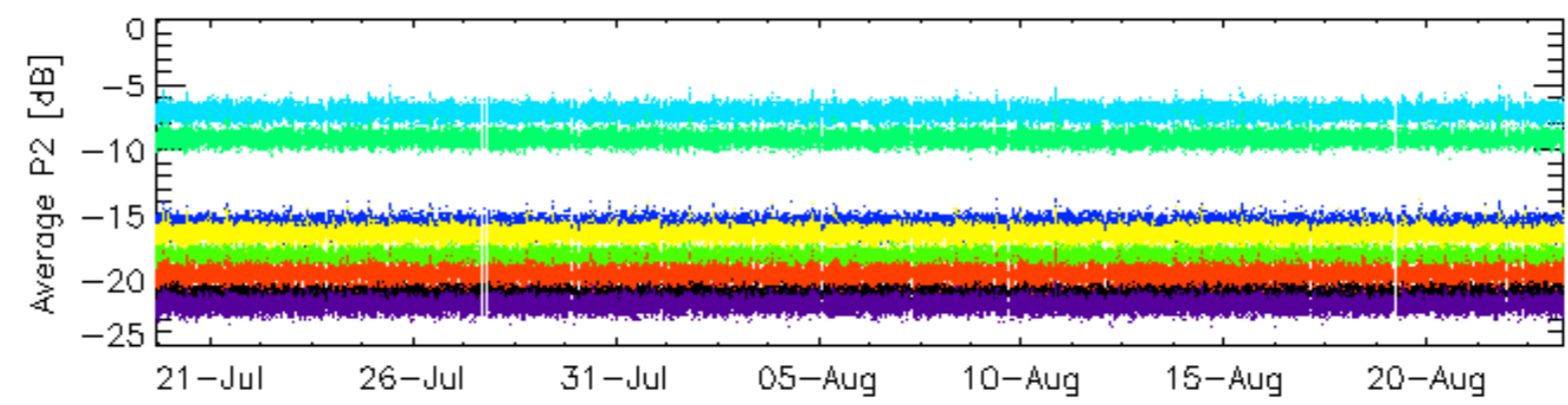
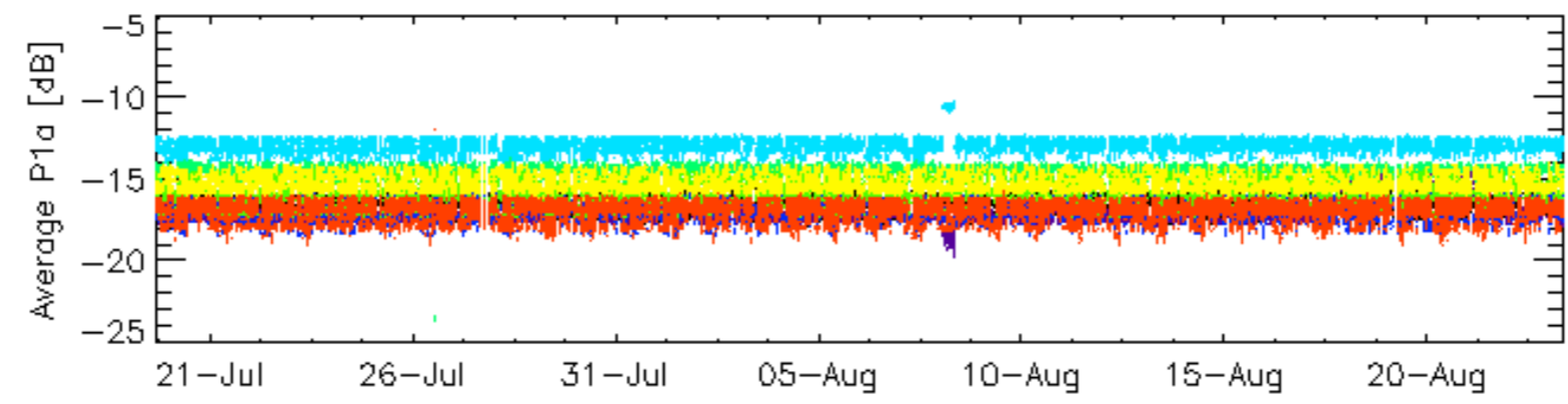
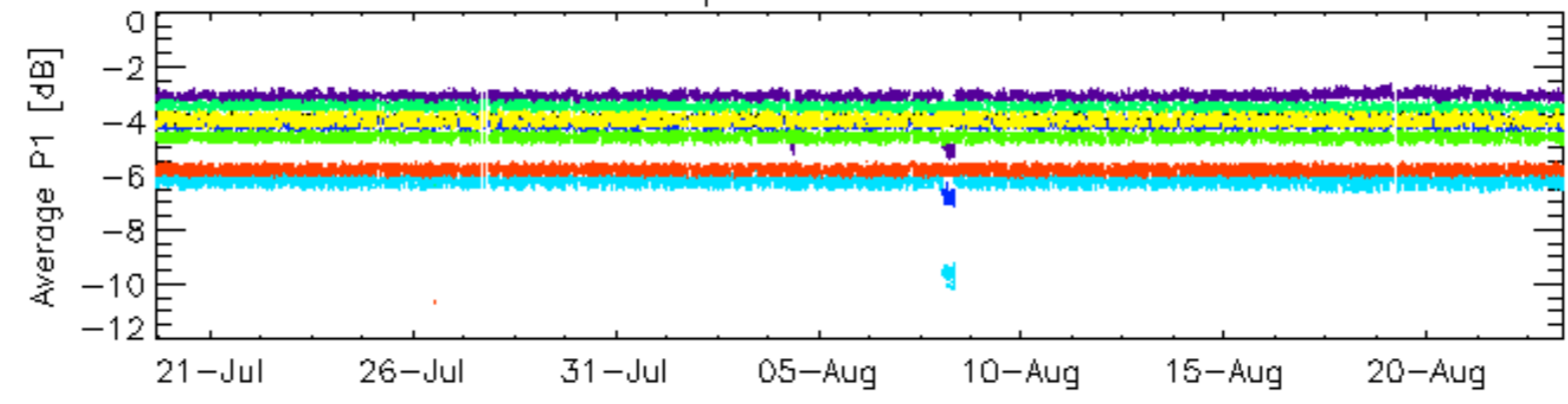


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

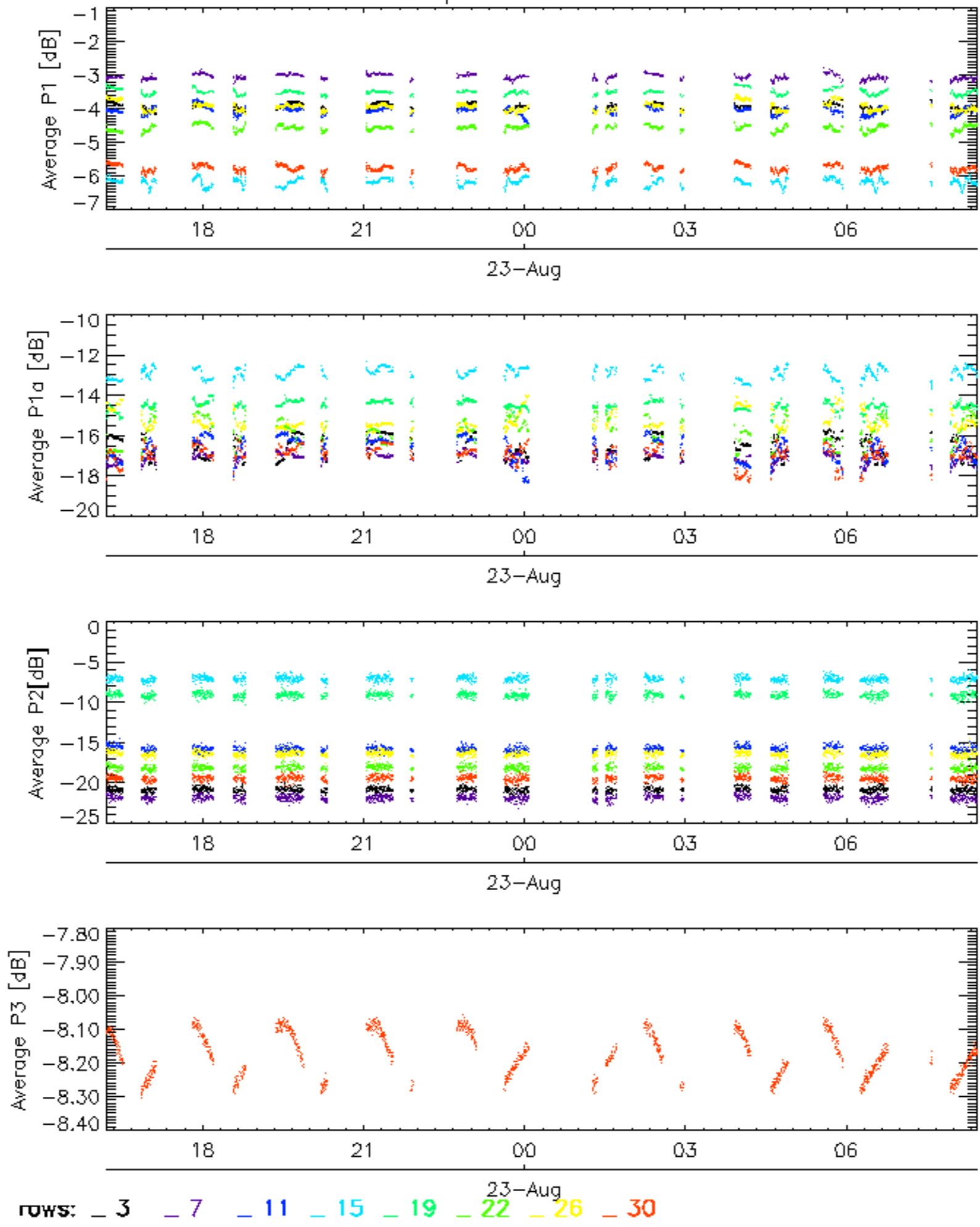


Cal pulses for WVS IS2



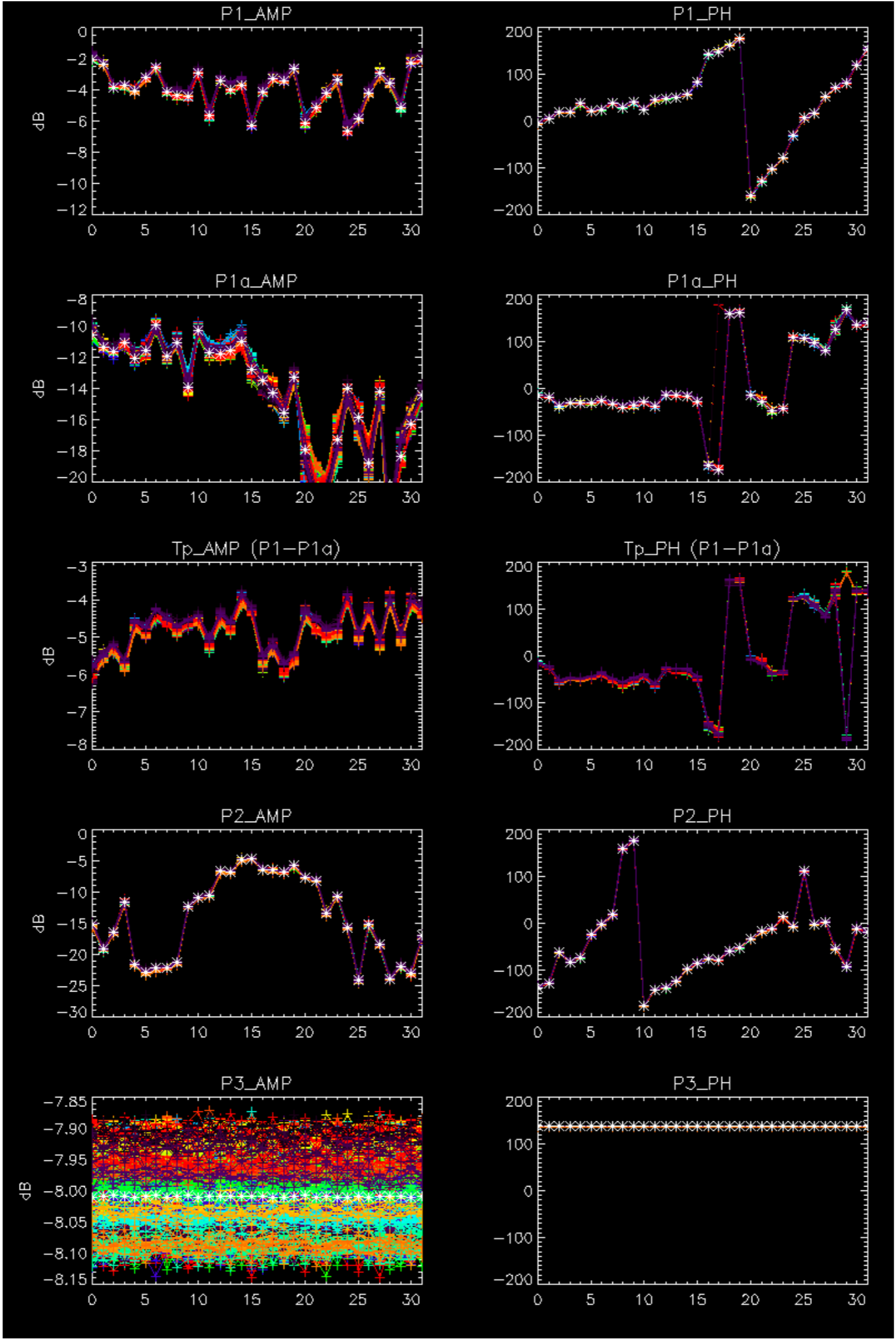
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

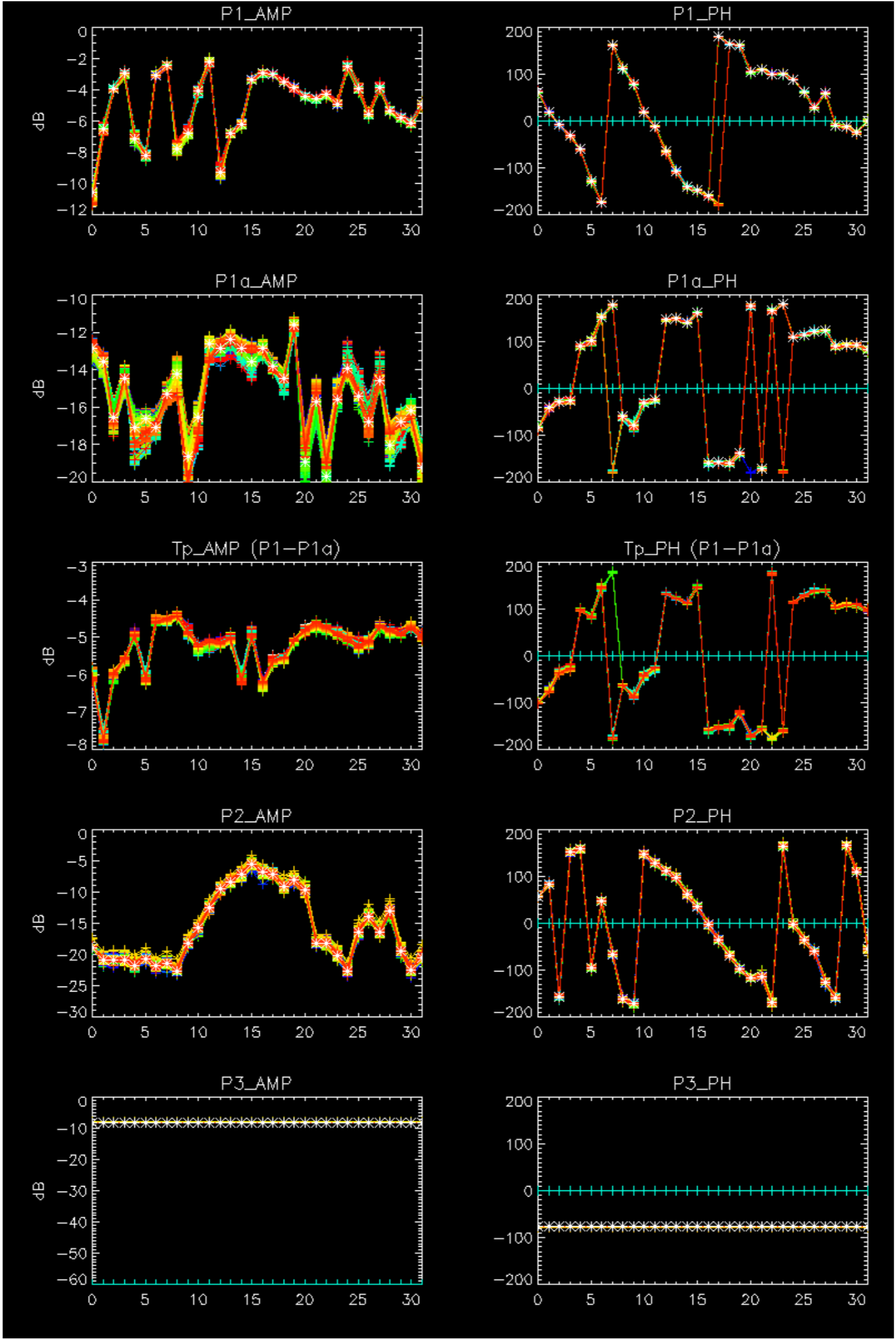
Cal pulses for WVS IS2



No anomalies observed on available browse products

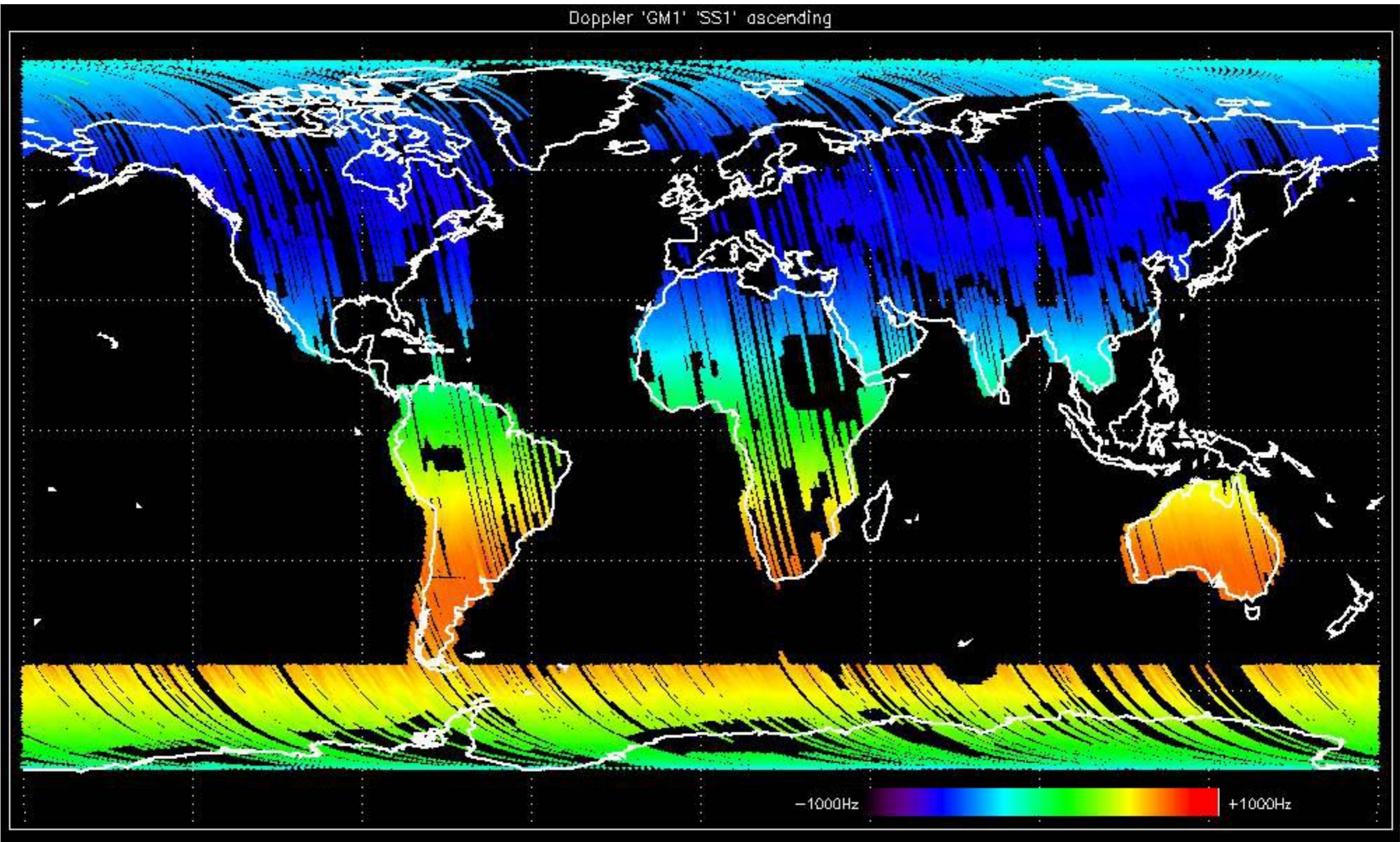
No anomalies observed.



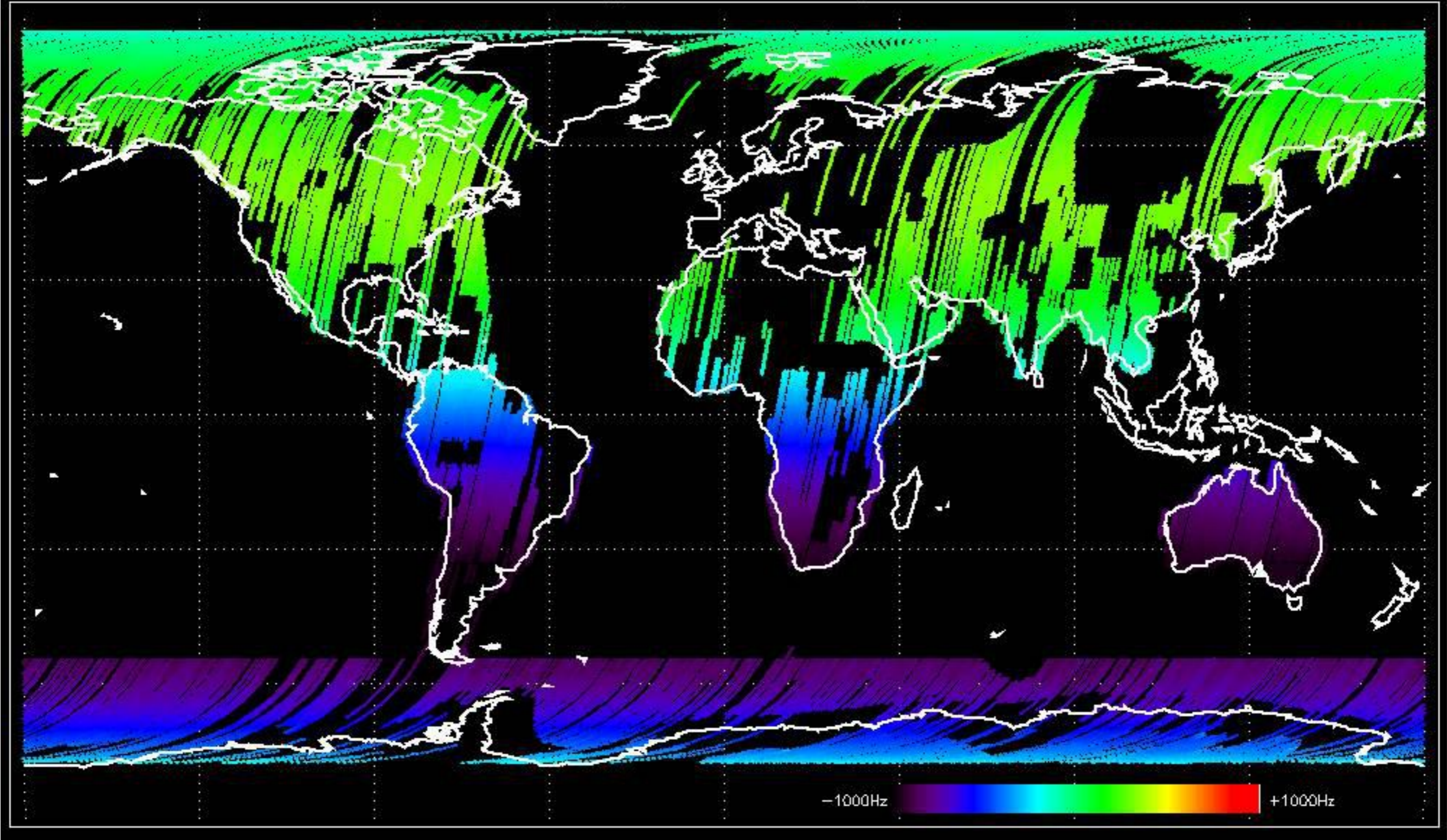


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

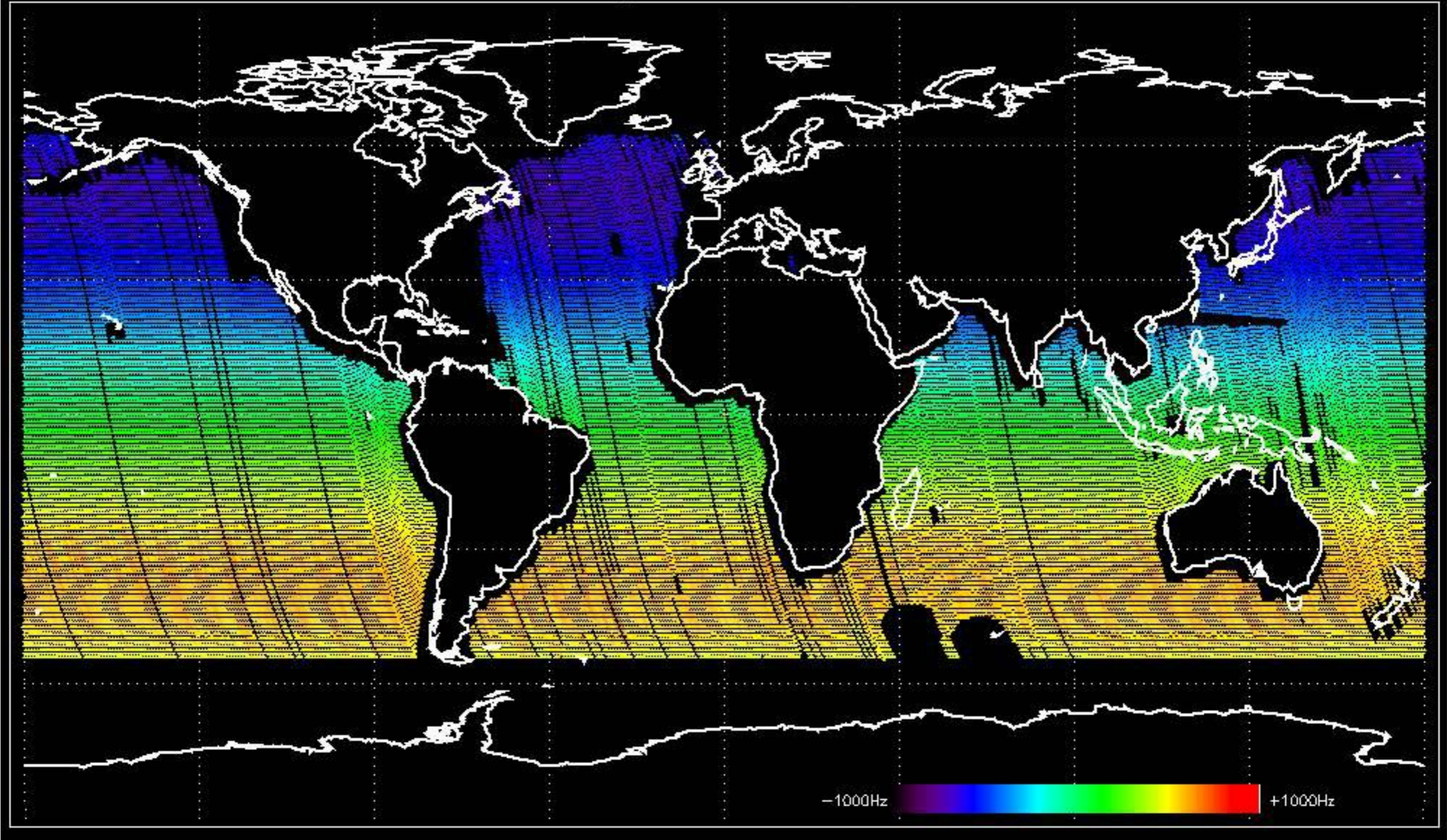
Doppler 'GM1' 'SS1' ascending



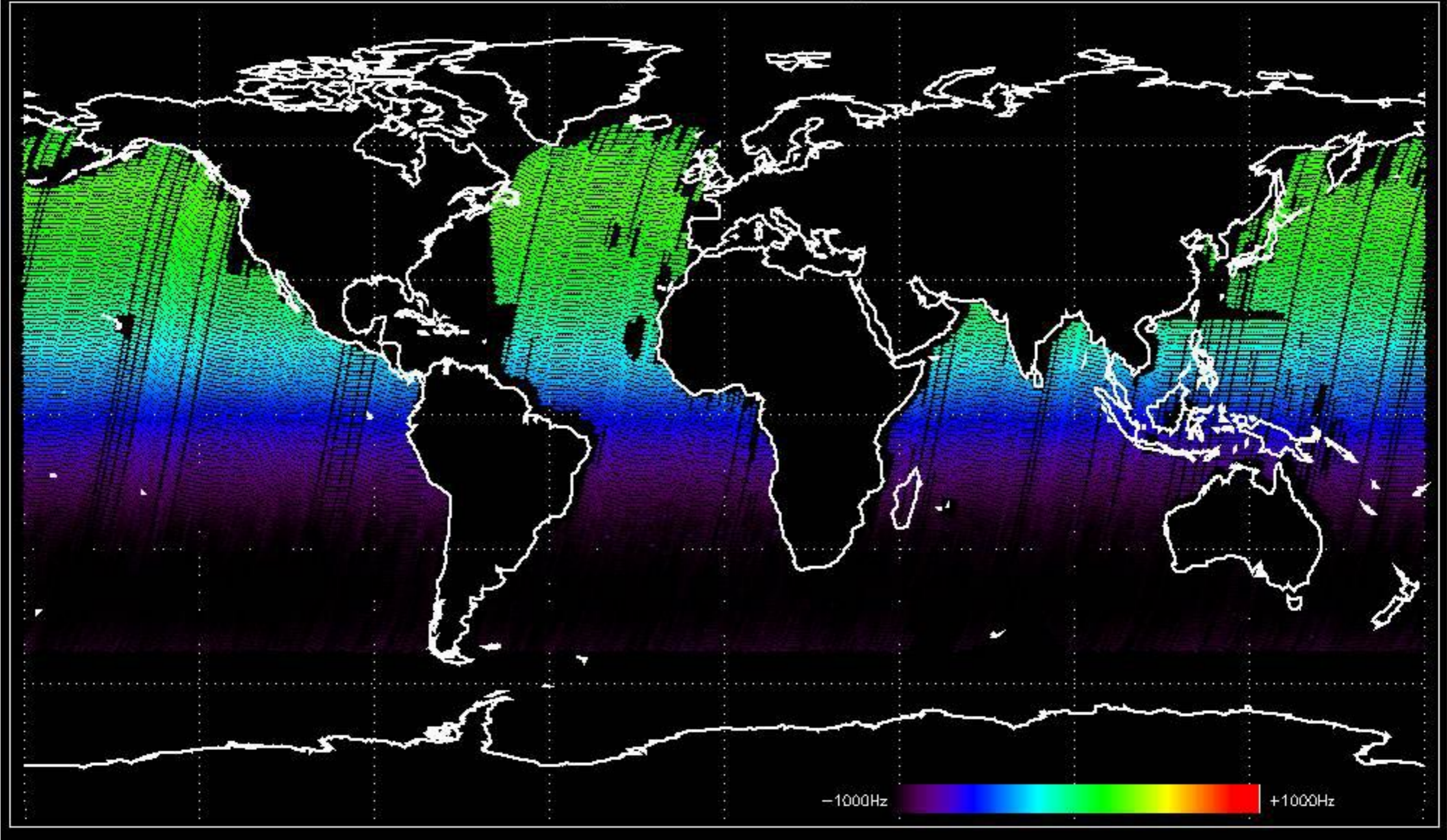
Doppler 'GM1' 'SS1' descending



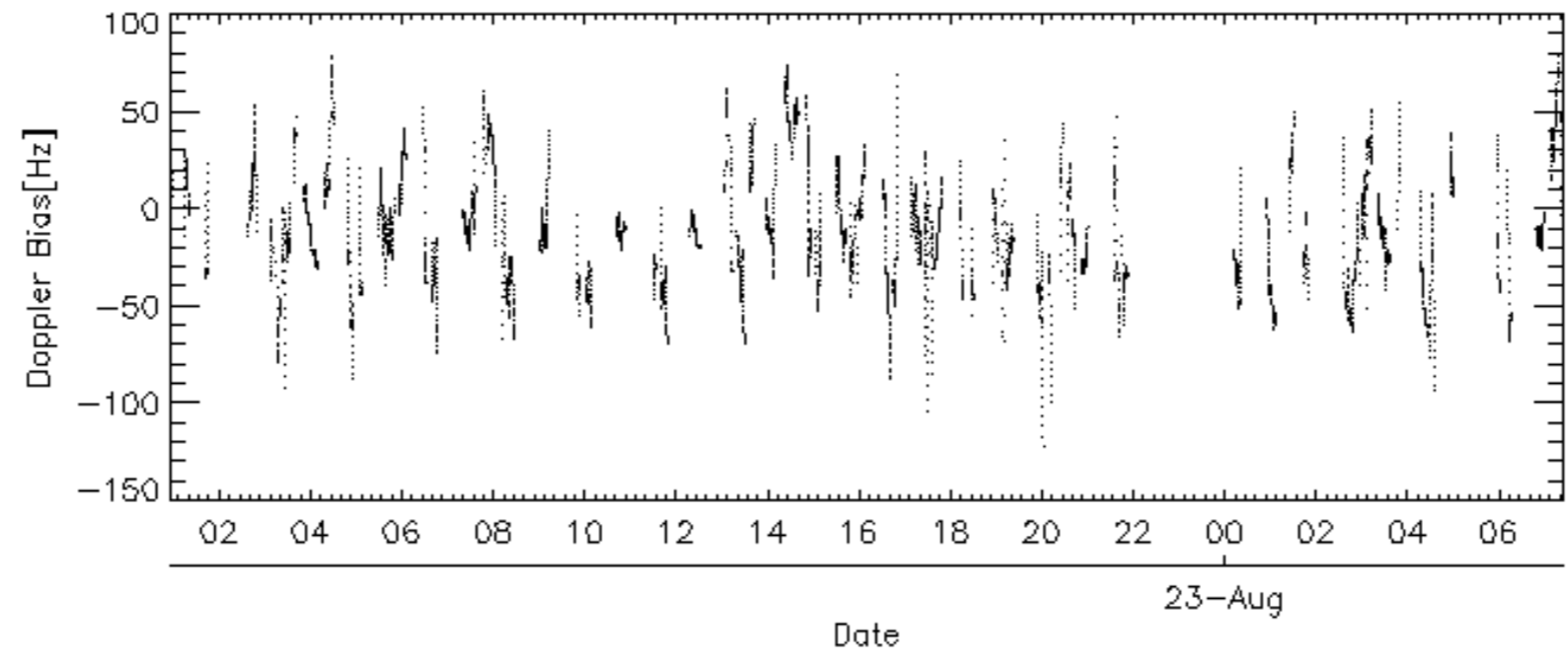
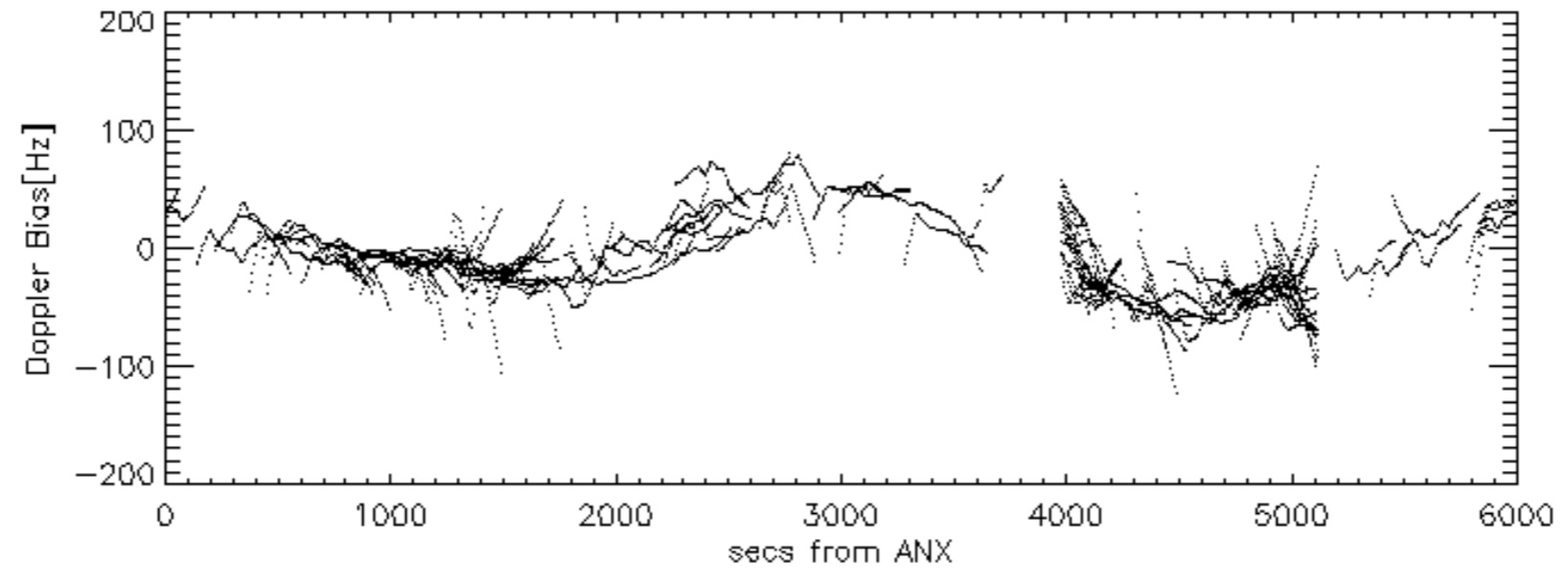
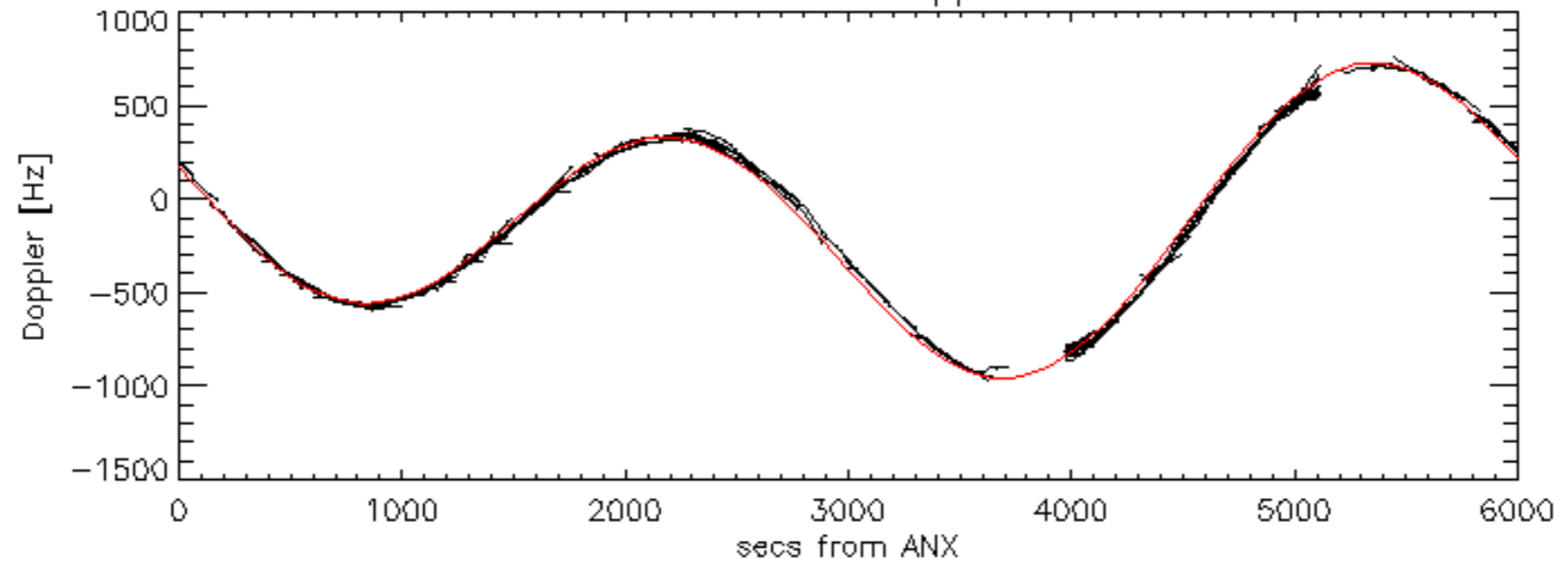
Doppler 'WVS' 'IS2' ascending

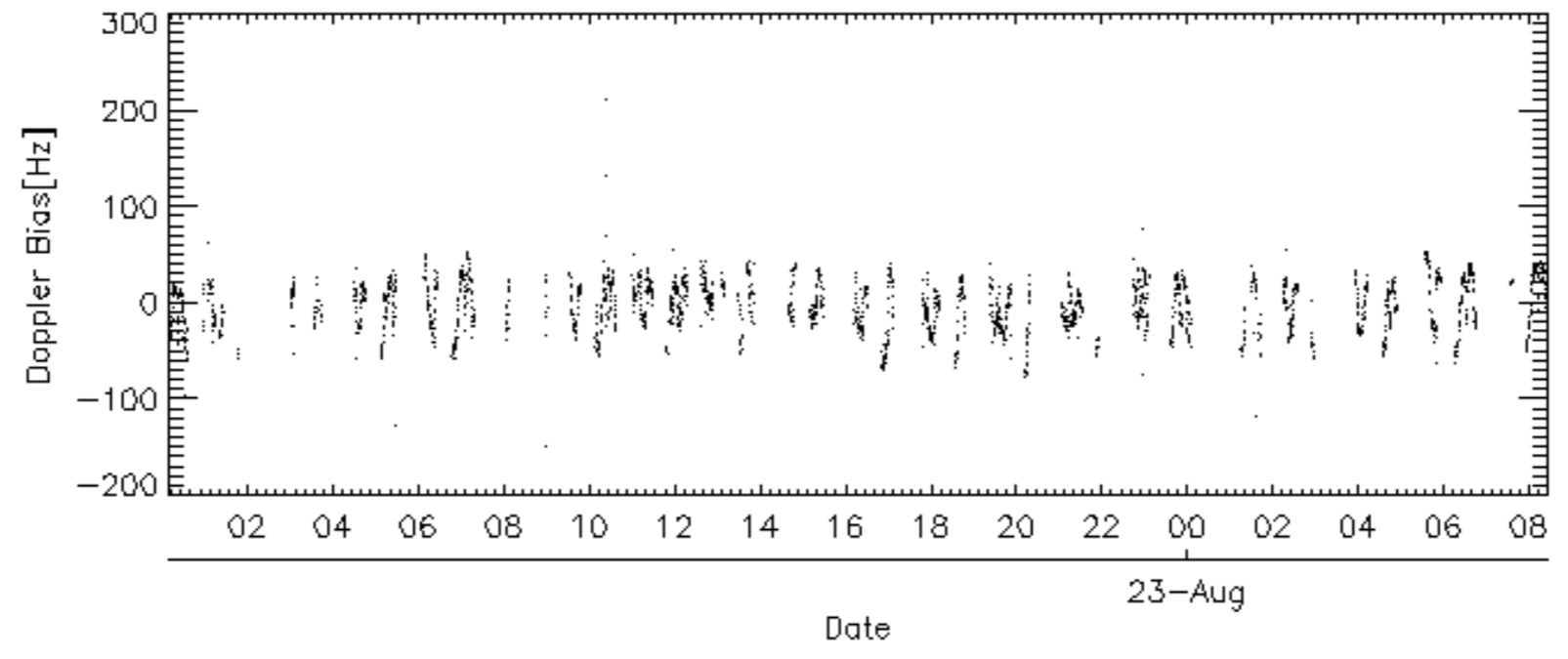
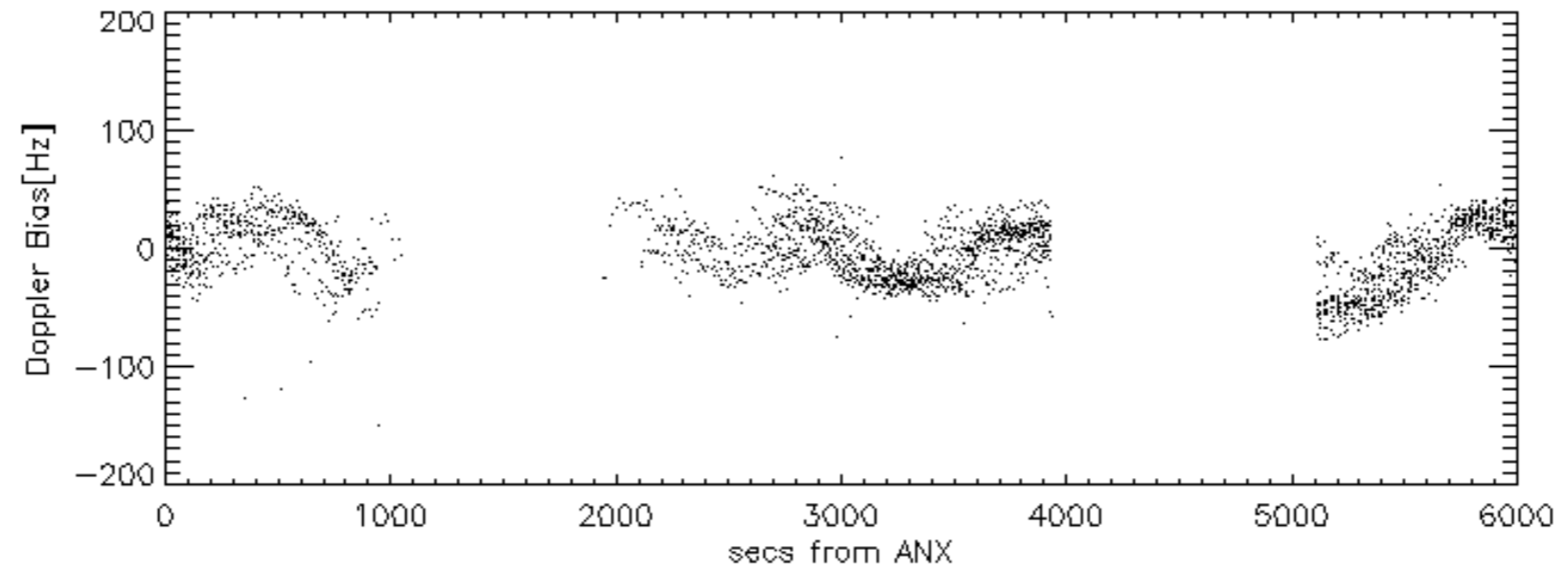
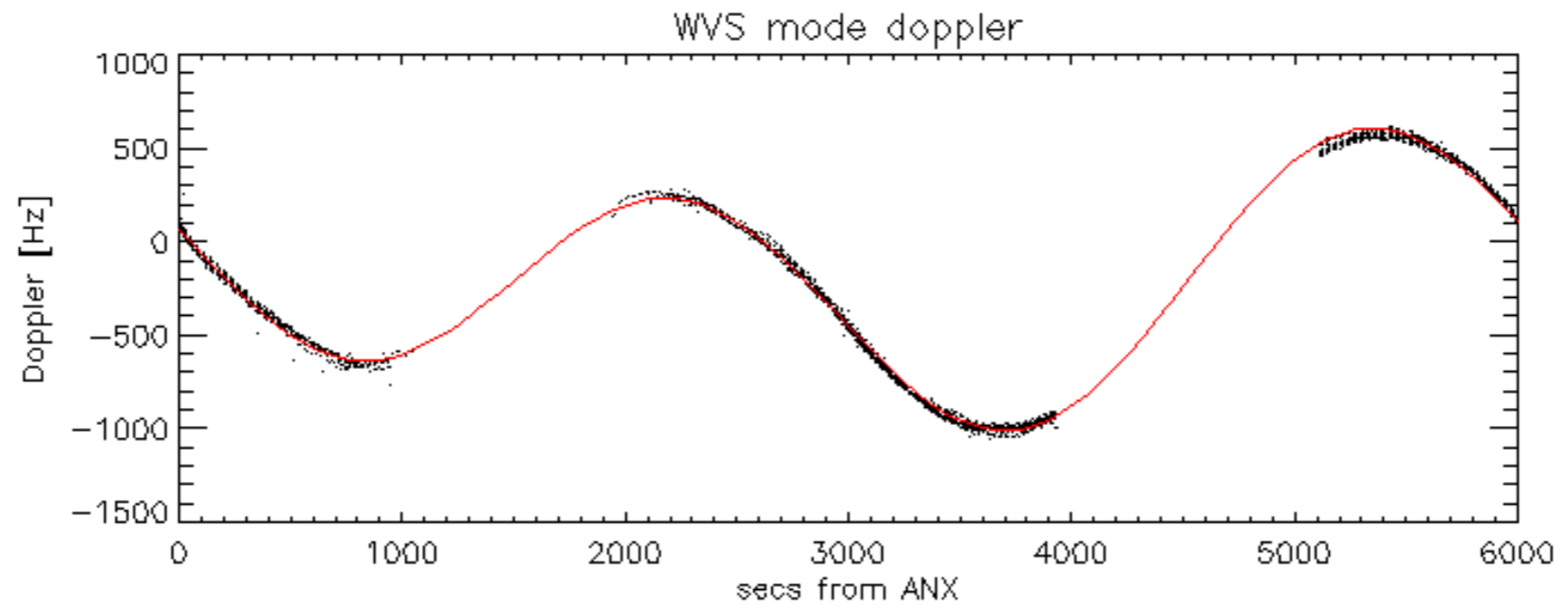


Doppler 'WVS' 'IS2' descending

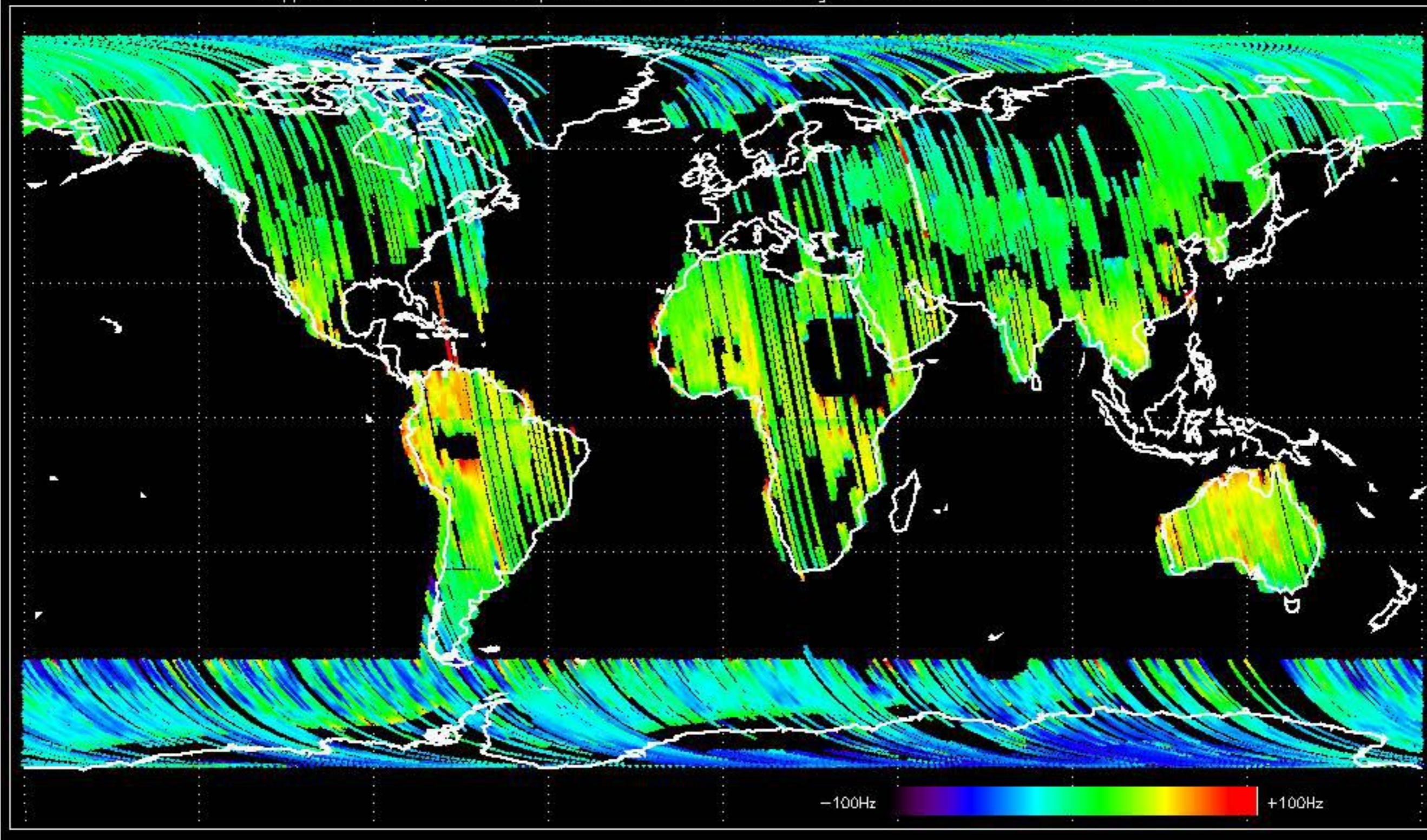


GM1 mode doppler

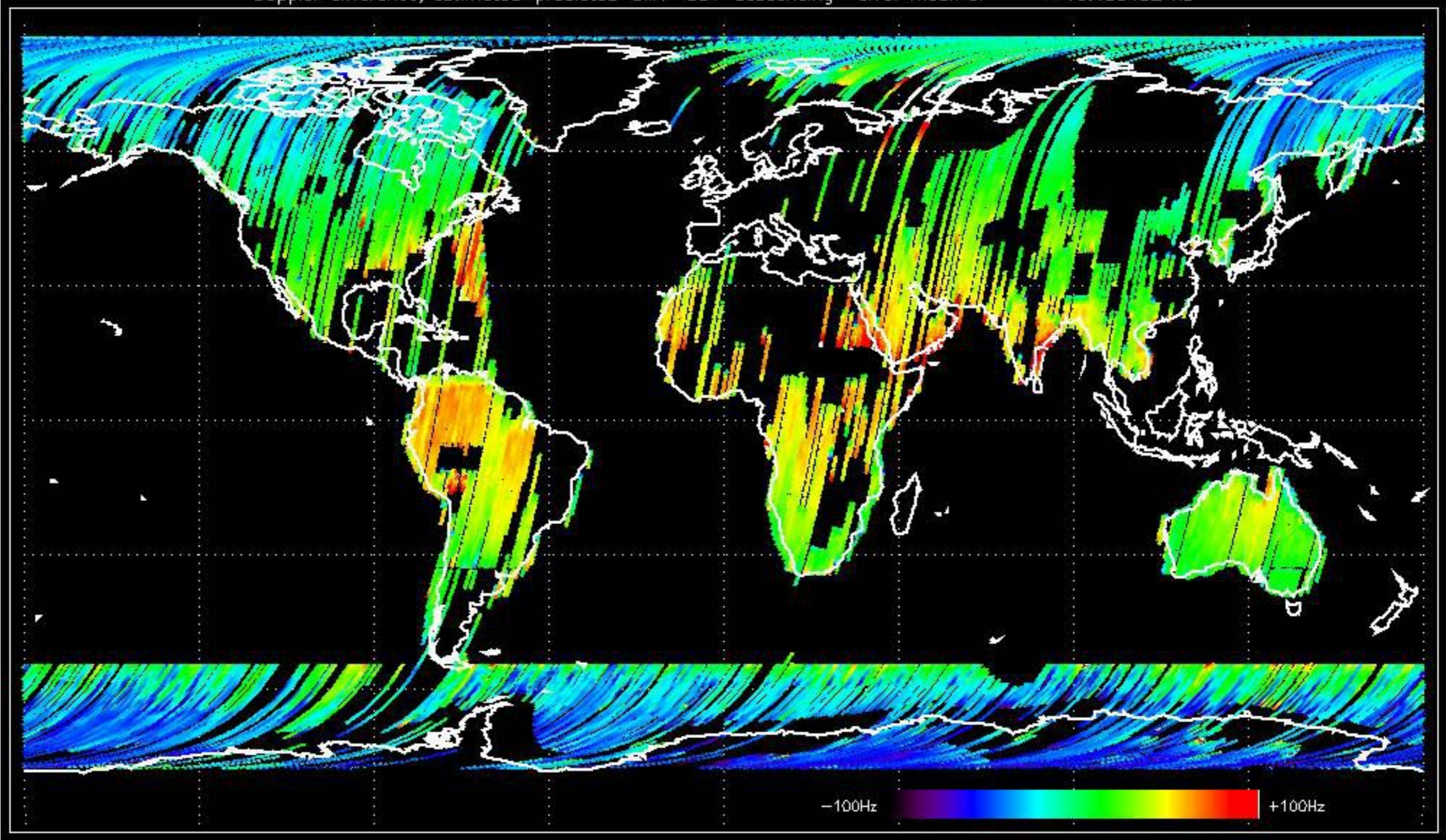




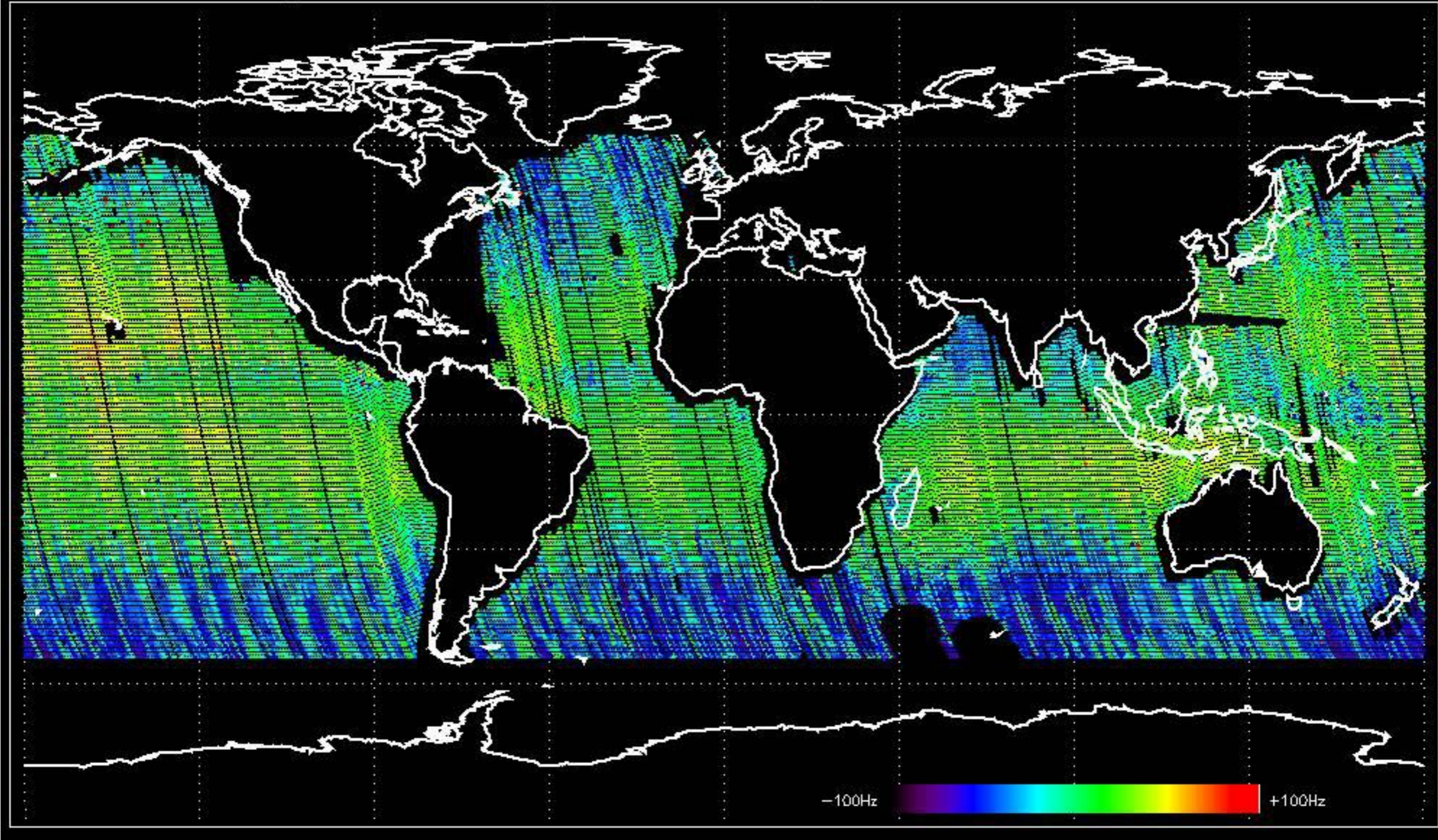
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.569725 Hz



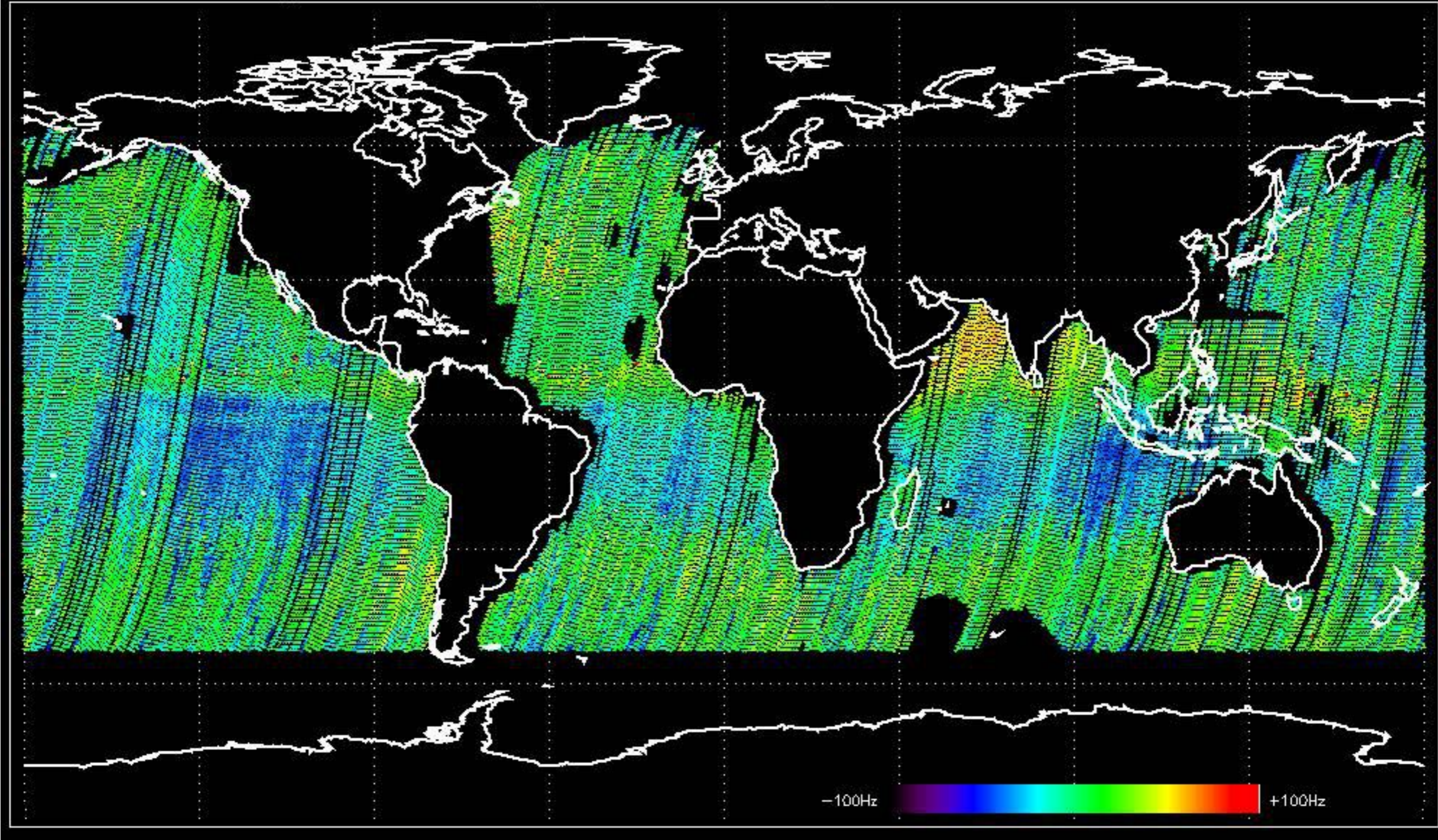
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -10.183452 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -3.3846621 Hz

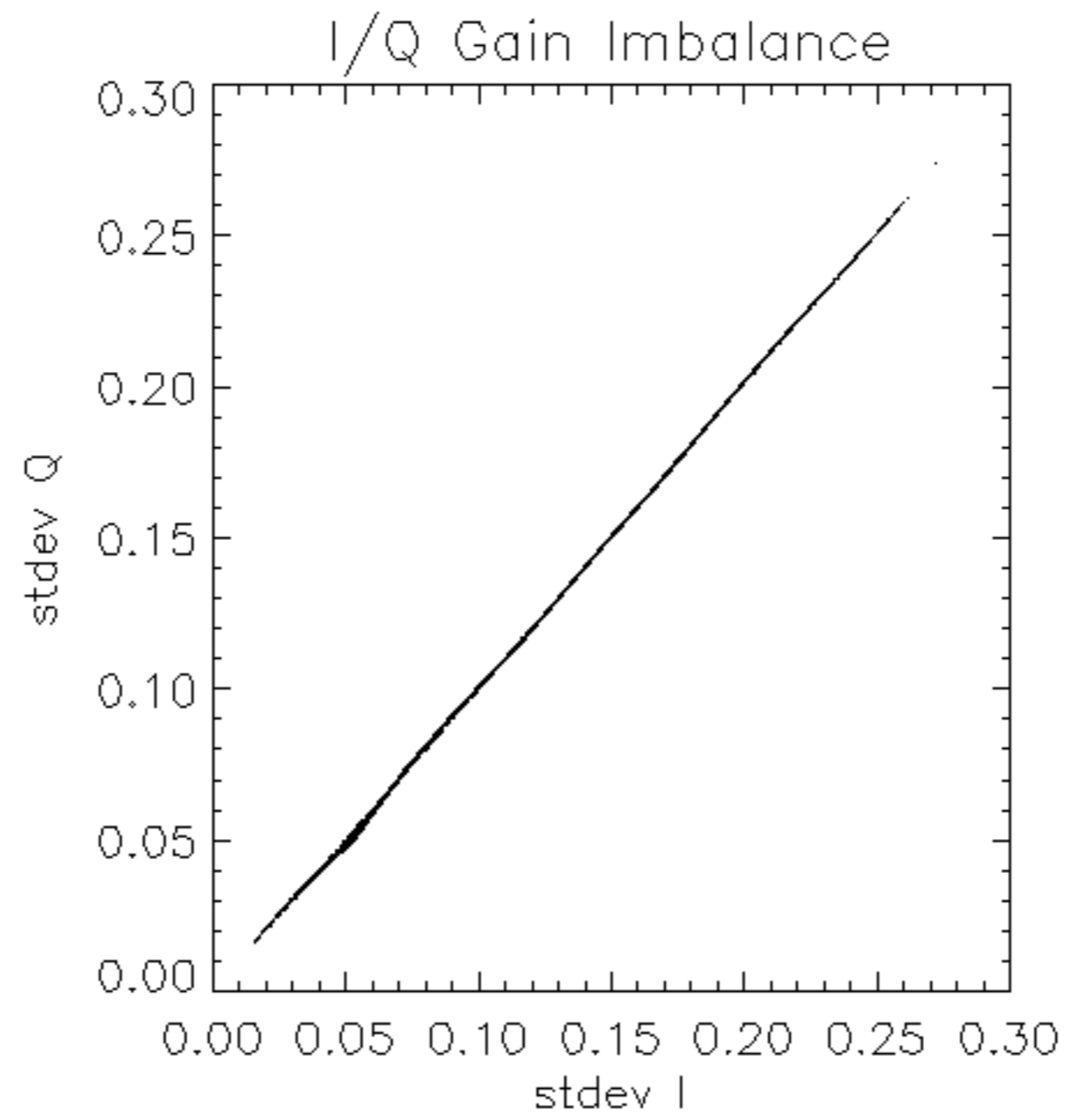


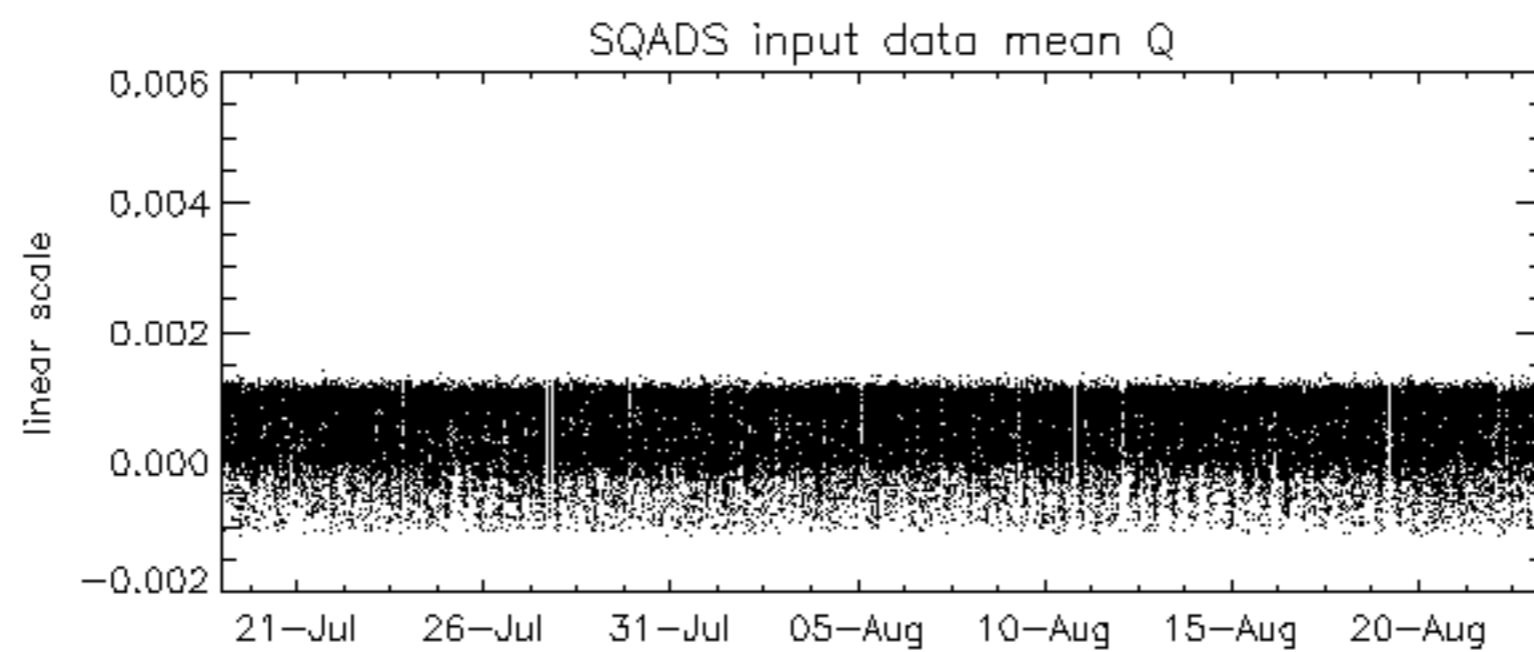
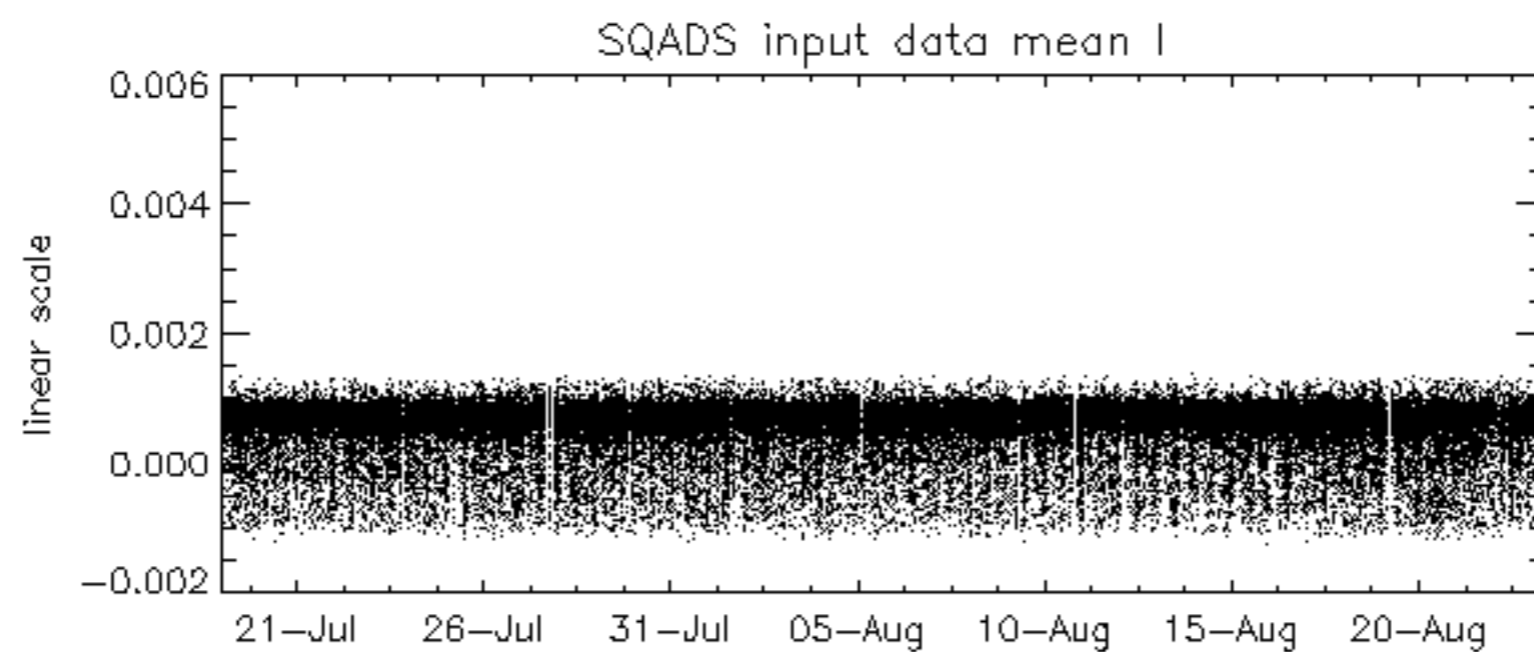
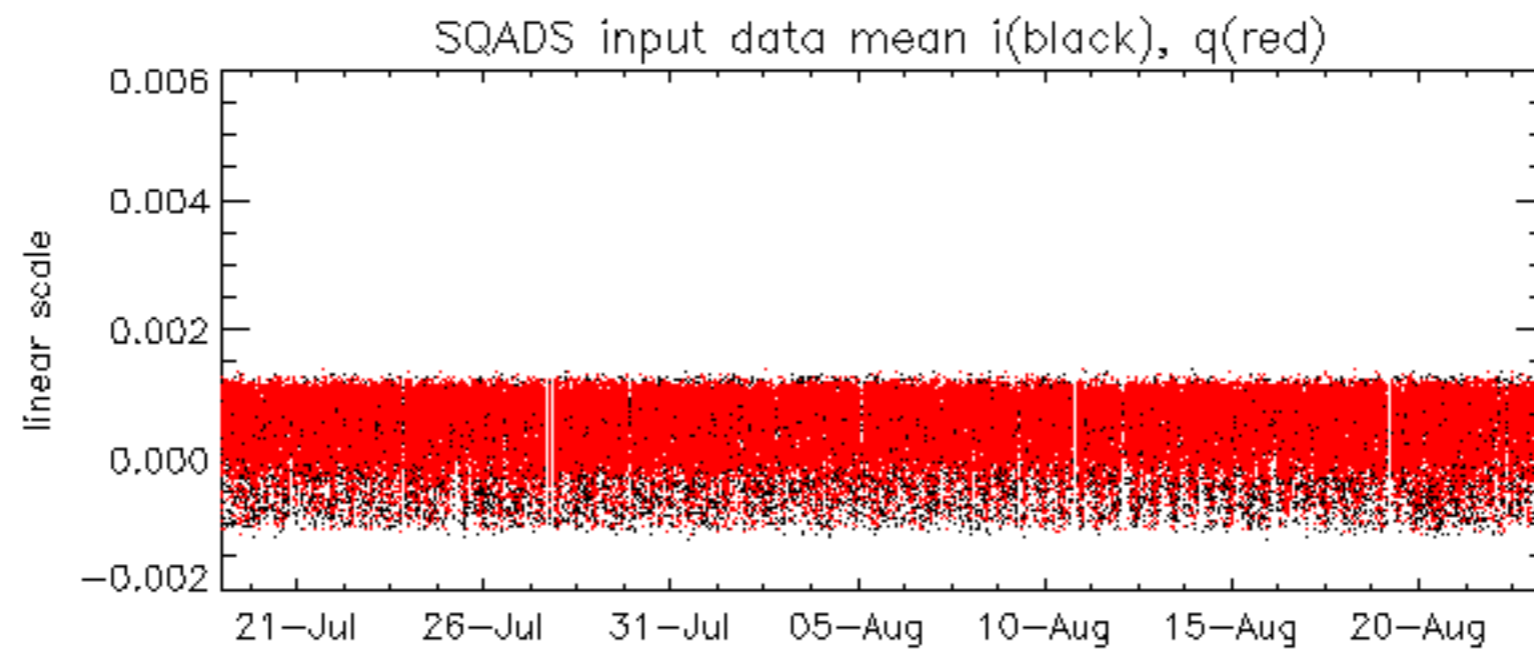
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.9202315 Hz

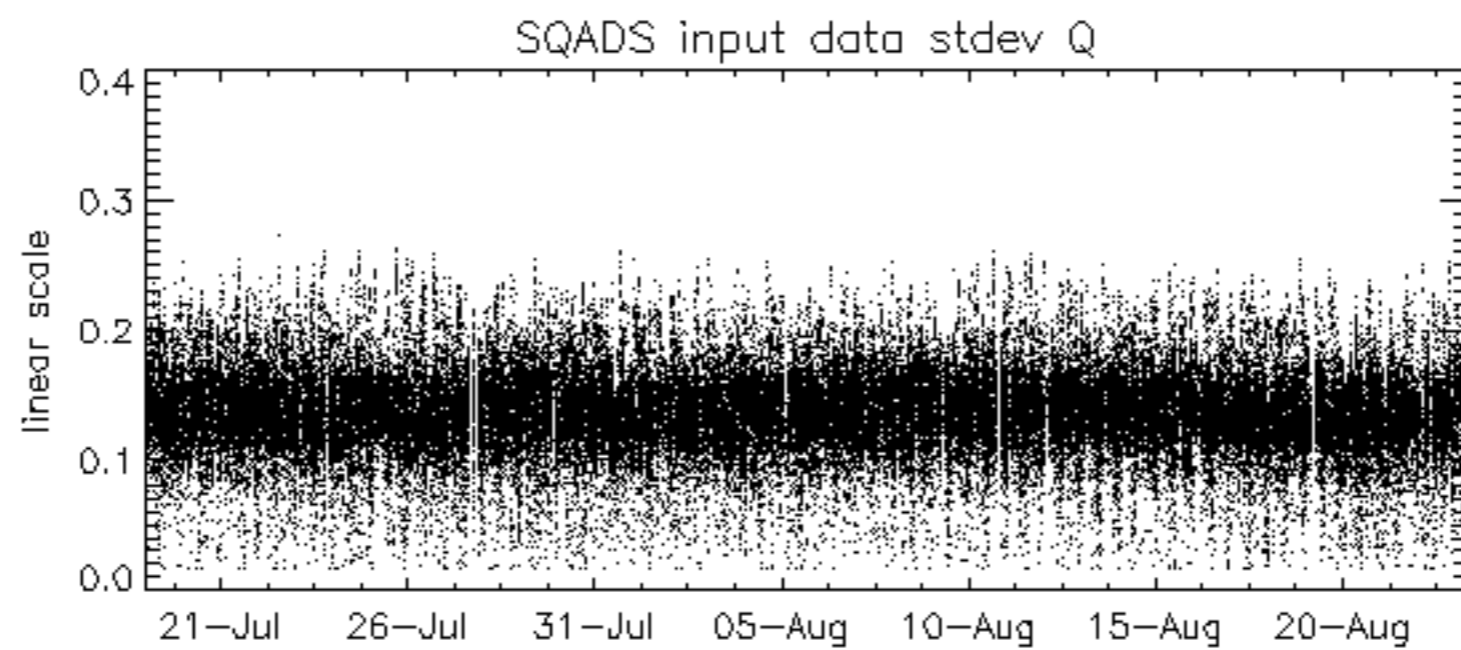
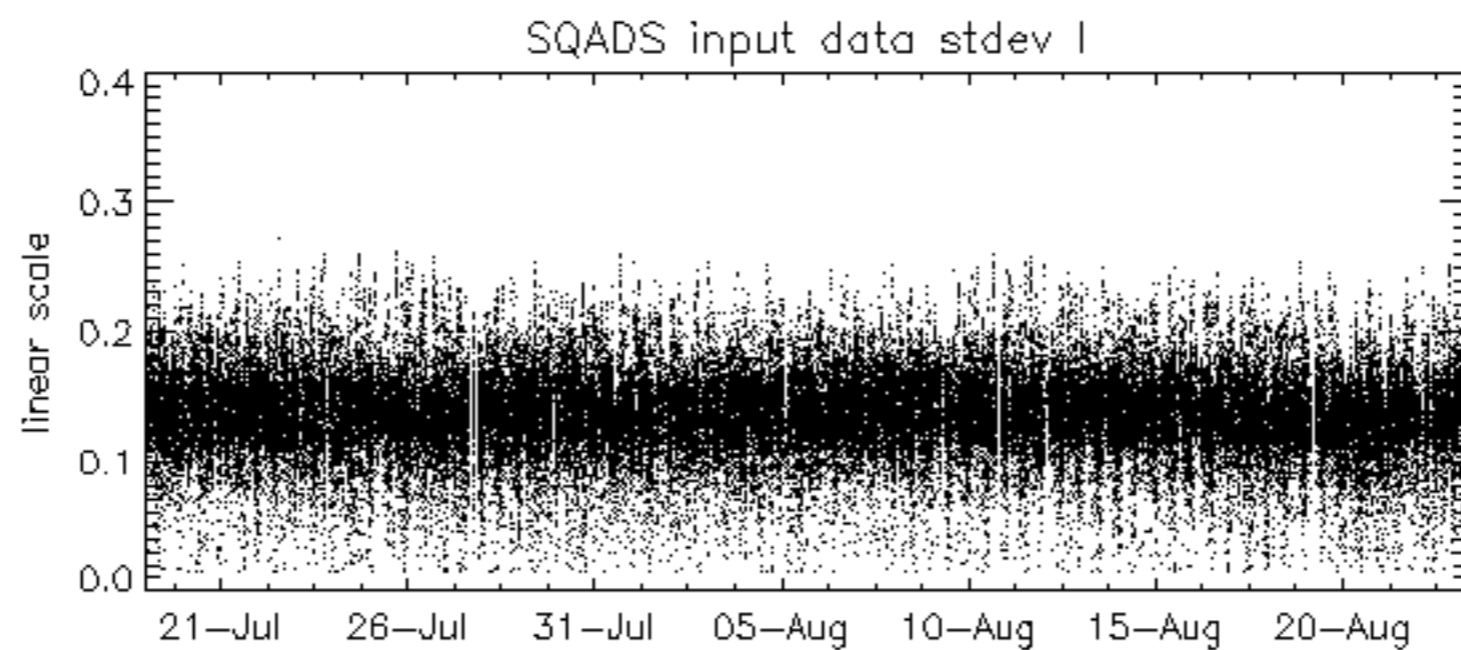
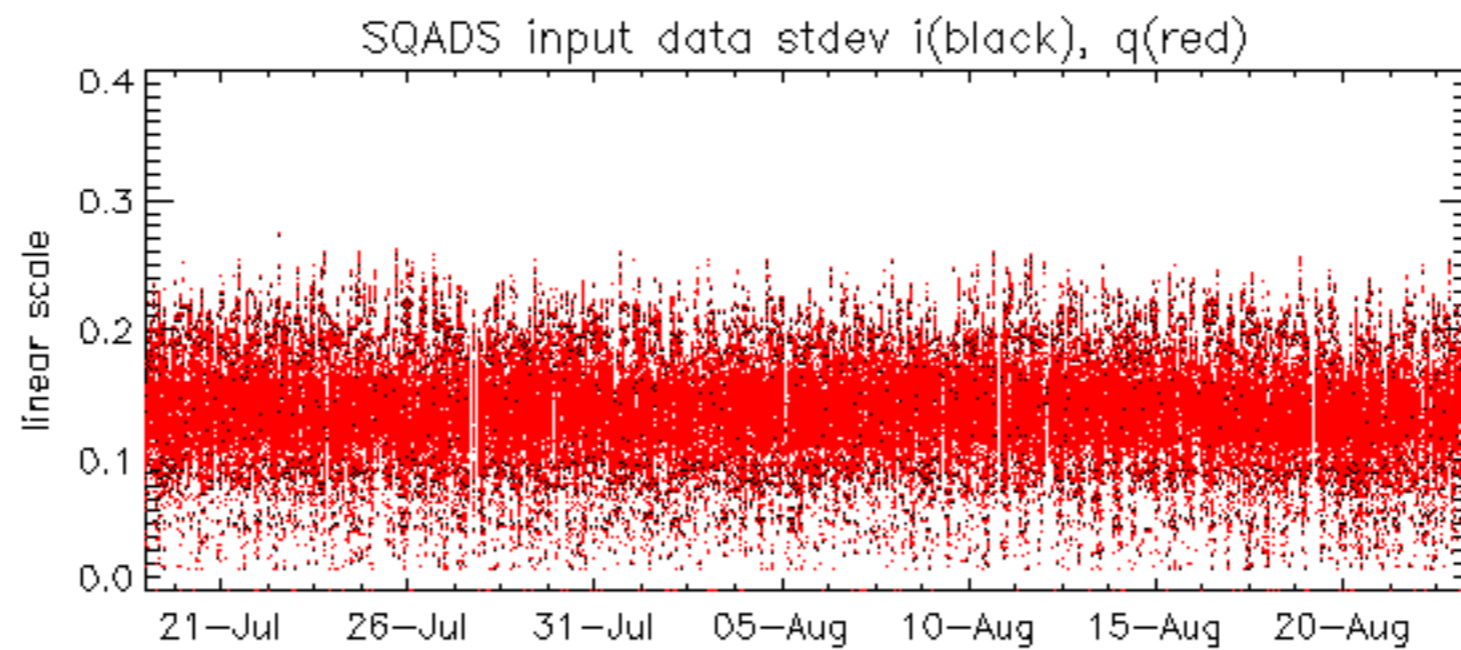


No anomalies observed on available MS products:

No anomalies observed.



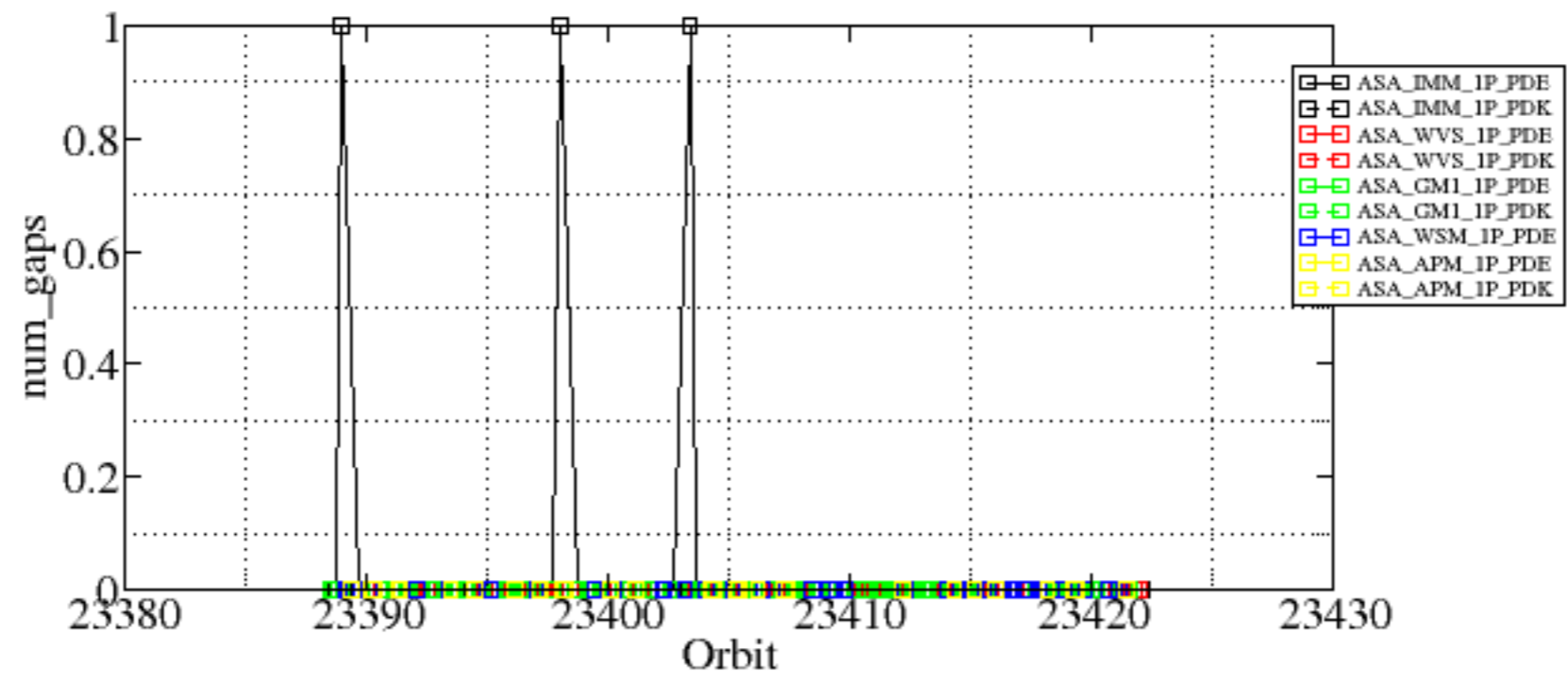


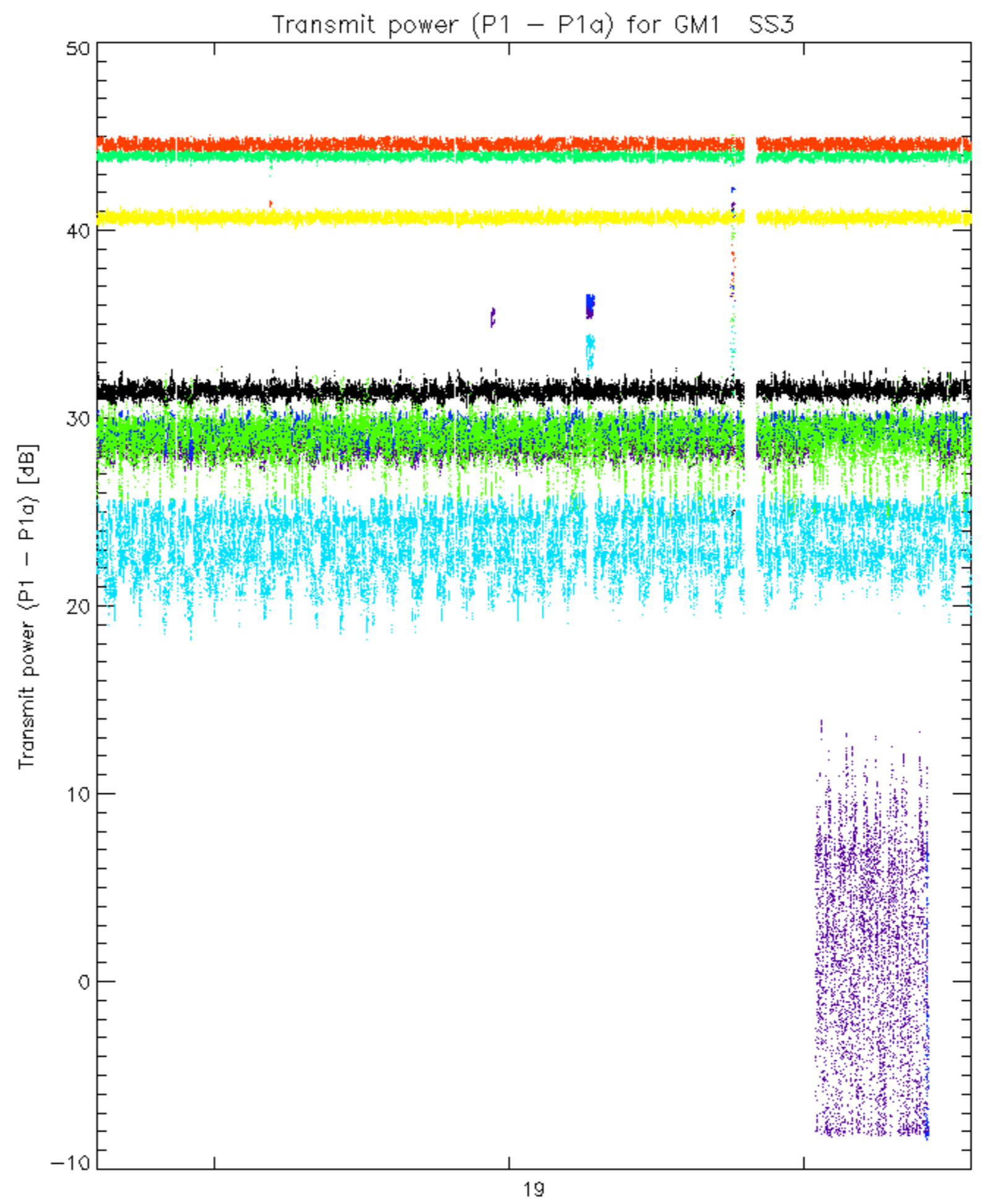


Summary of analysis for the last 3 days 2006082[123]

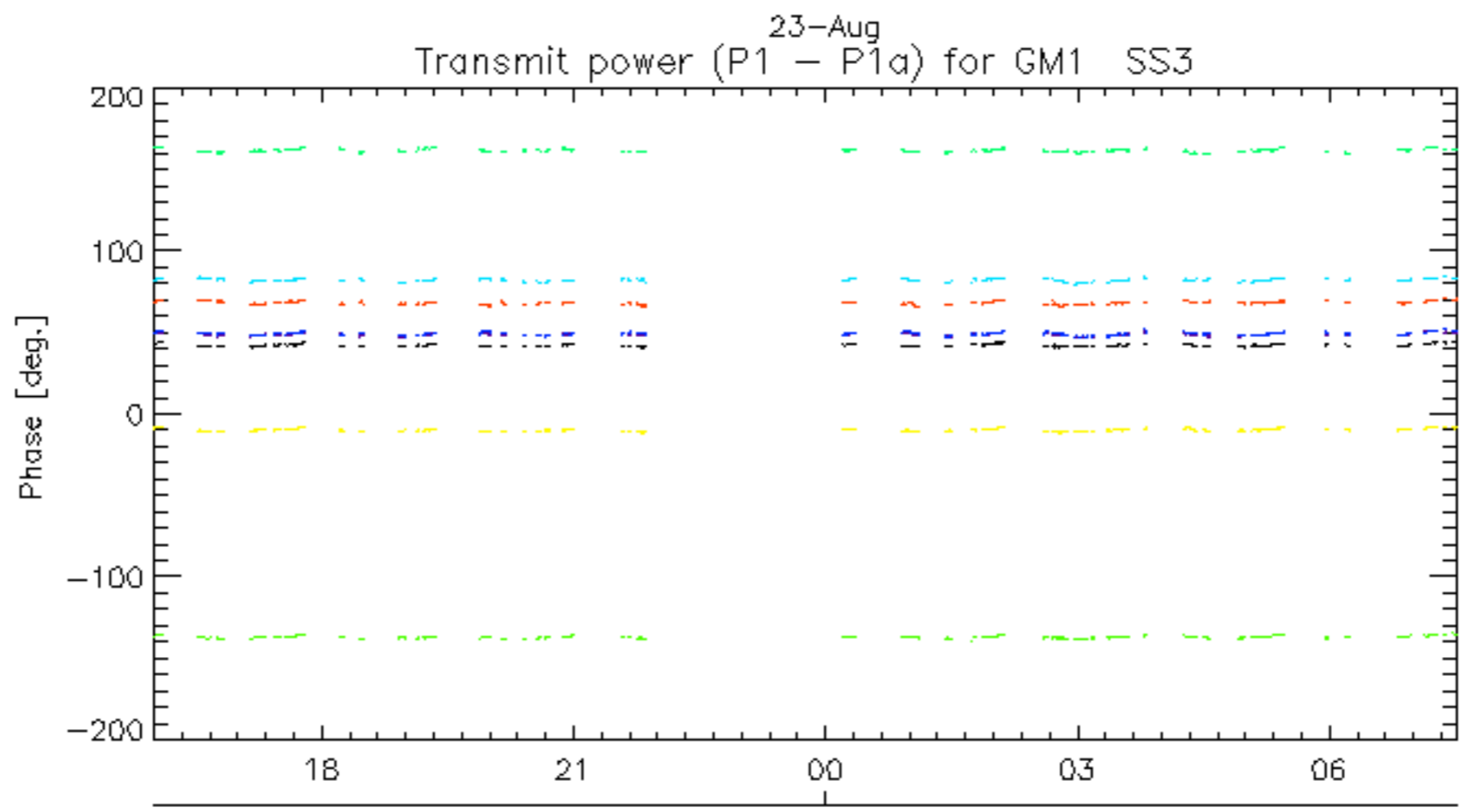
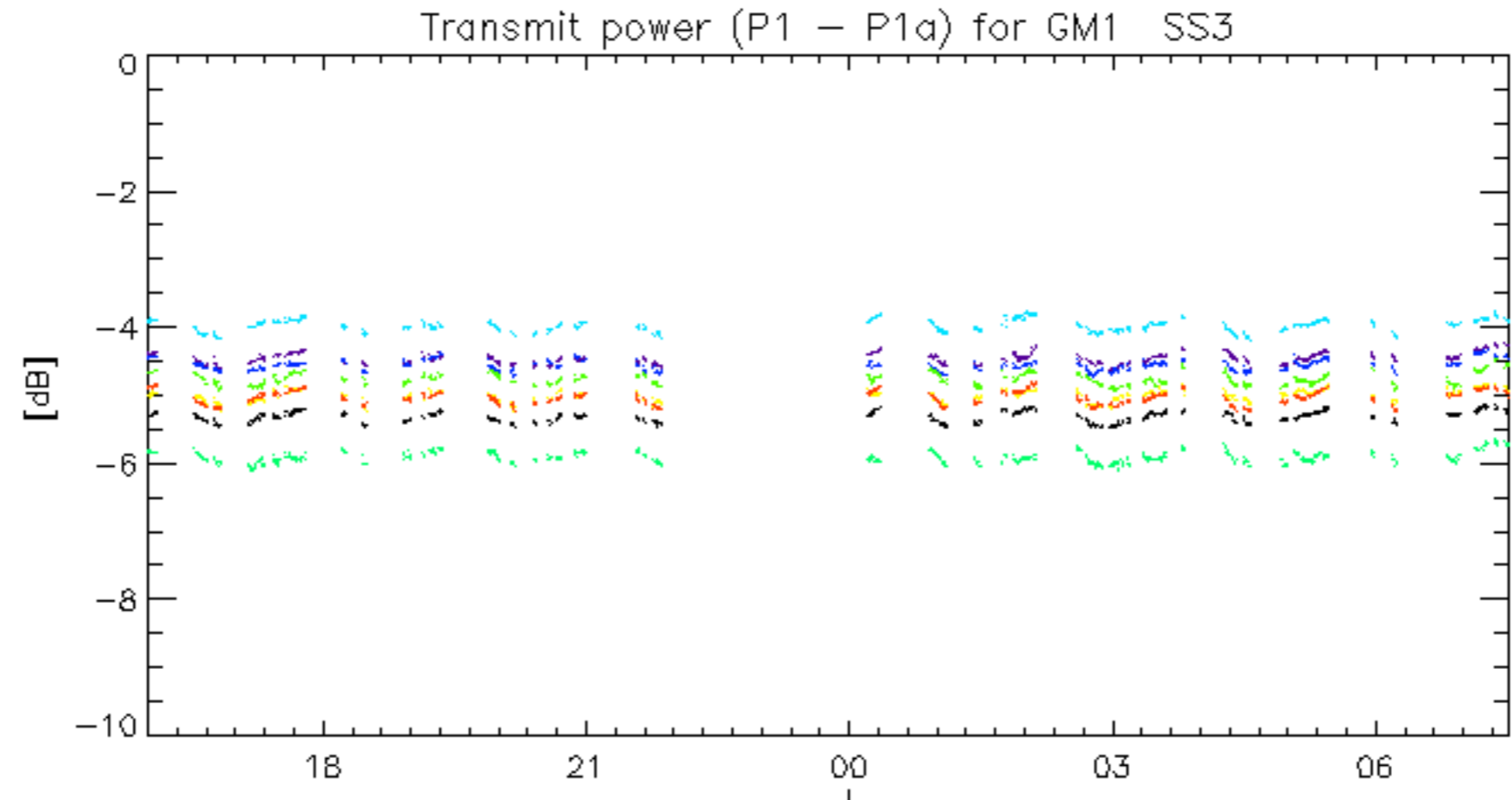
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060821_004801_000000802050_00288_23388_3949.N1	1	0
ASA_IMM_1PNPDE20060821_155731_000000522050_00298_23398_4040.N1	1	0
ASA_IMM_1PNPDE20060822_010019_000000812050_00303_23403_4134.N1	1	0
ASA_WSM_1PNPDE20060821_141902_000000852050_00297_23397_8839.N1	0	36

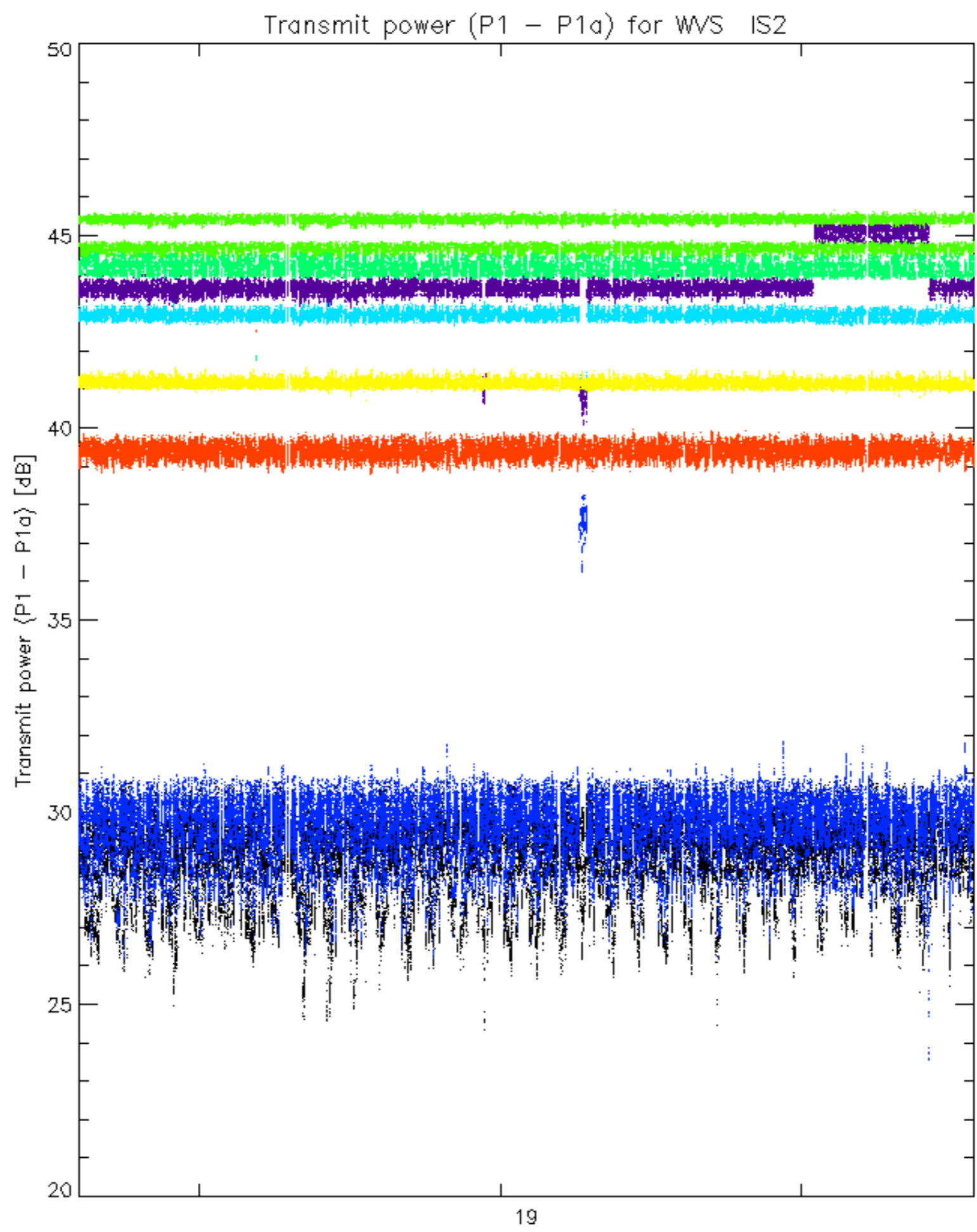




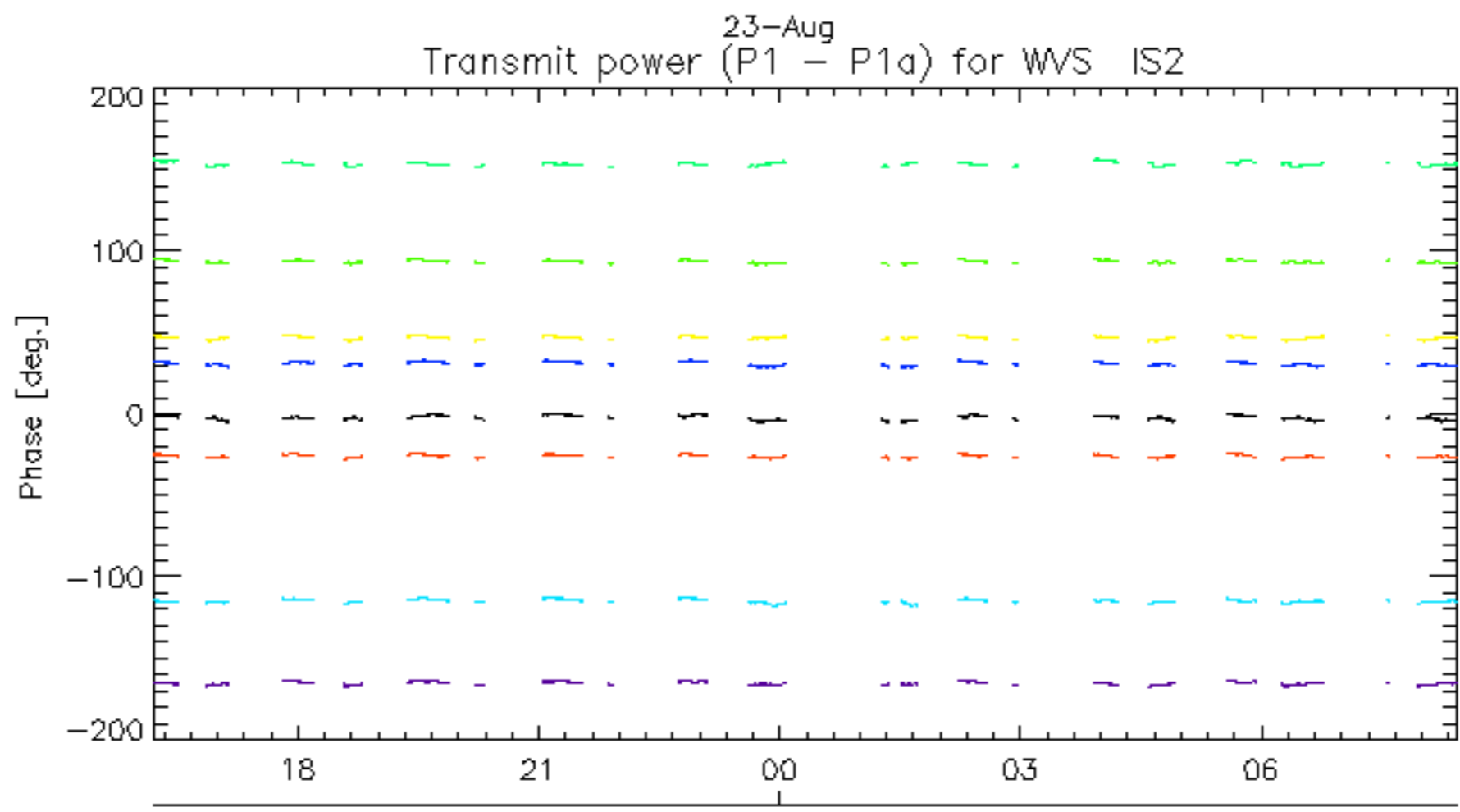
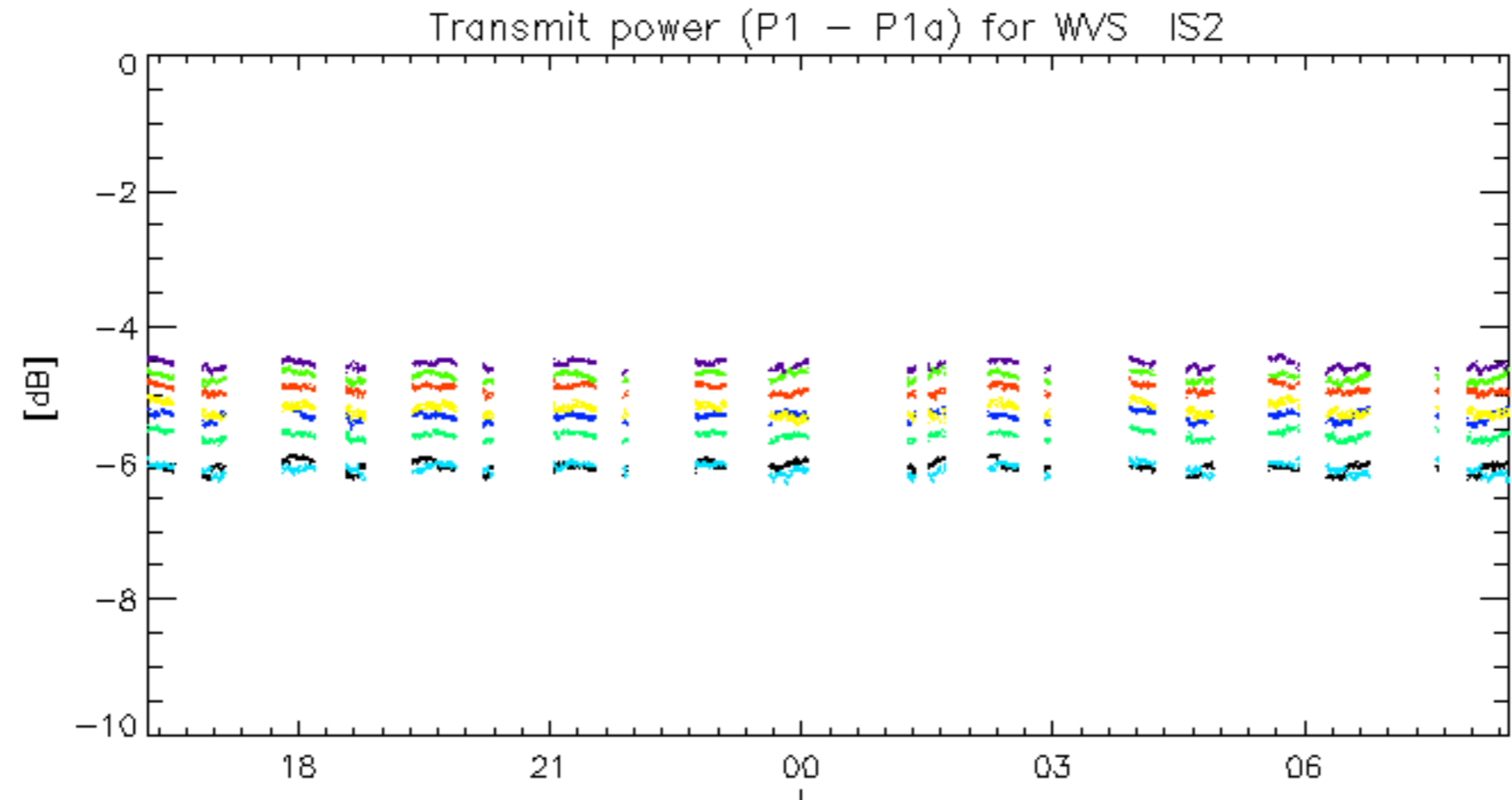
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No unavailabilities during the reported period.