

PRELIMINARY REPORT OF 060928

last update on Thu Sep 28 16:38:34 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 2006-09-27 00:00:00 to 2006-09-28 16:38:34

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	65	0	4	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	40	65	0	4	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	65	0	4	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	65	0	4	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

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	20060927 073839
H	20060928 070703

MSM in V/V polarisation

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

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	-3.943922	0.010124	-0.025971
7	P1	-3.071180	0.010982	-0.027585
11	P1	-4.068217	0.019475	-0.051533
15	P1	-6.187895	0.015675	-0.045647
19	P1	-3.538585	0.051405	-0.029764
22	P1	-4.590482	0.012475	-0.069157
26	P1	-3.957706	0.018986	-0.039928
30	P1	-5.822148	0.139553	-0.021507
3	P1	-16.598936	0.253433	0.020875
7	P1	-17.115849	0.111067	-0.046789
11	P1	-16.817236	0.341861	-0.125995
15	P1	-12.889251	0.104189	0.014682
19	P1	-14.661050	0.473887	-0.055392
22	P1	-15.720603	0.496458	-0.150819
26	P1	-15.221440	0.201942	0.013472
30	P1	-16.962658	0.372676	-0.183724

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.819046	0.085054	-0.005131
7	P2	-21.838253	0.096457	0.082504
11	P2	-15.745028	0.108447	0.008300
15	P2	-7.096329	0.101618	-0.027136
19	P2	-9.126740	0.093296	-0.061013
22	P2	-18.130301	0.089865	-0.068072
26	P2	-16.421501	0.097082	-0.083792
30	P2	-19.472200	0.091251	-0.024438

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.187691	0.005732	-0.047703

7	P3	-8.187691	0.005732	-0.047703
11	P3	-8.187691	0.005732	-0.047703
15	P3	-8.187691	0.005732	-0.047703
19	P3	-8.187691	0.005732	-0.047703
22	P3	-8.187691	0.005732	-0.047703
26	P3	-8.187665	0.005731	-0.047620
30	P3	-8.187665	0.005731	-0.047620

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	-3.856348	0.010198	-0.042164
7	P1	-2.542785	0.019207	0.008969
11	P1	-2.885423	0.018657	-0.011691
15	P1	-3.657988	0.029791	-0.019665
19	P1	-3.474037	0.079804	0.002071
22	P1	-5.105998	0.021973	0.018828
26	P1	-5.878758	0.025772	-0.065552
30	P1	-5.218483	0.074641	-0.024280
3	P1	-11.649219	0.048876	-0.026552
7	P1	-10.003594	0.056413	-0.070933
11	P1	-10.351585	0.061849	-0.034546
15	P1	-10.846839	0.147505	0.046430
19	P1	-15.708358	3.678563	0.280217
22	P1	-20.887585	1.304782	-0.298434
26	P1	-15.935382	0.378090	-0.060411
30	P1	-18.103300	0.502516	0.059037

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.406610	0.053429	-0.006736
7	P2	-22.187513	0.088555	0.021210
11	P2	-10.905381	0.041987	-0.040034
15	P2	-4.864871	0.036622	-0.050865
19	P2	-6.853283	0.037298	-0.053813
22	P2	-8.164007	0.032496	-0.055058
26	P2	-24.179699	0.060399	-0.081828
30	P2	-21.965023	0.047297	-0.029466

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.035081	0.004093	-0.060024
7	P3	-8.034930	0.004094	-0.060166
11	P3	-8.034893	0.004111	-0.060826
15	P3	-8.034801	0.004123	-0.060766
19	P3	-8.034899	0.004126	-0.060520
22	P3	-8.035036	0.004098	-0.060508
26	P3	-8.035047	0.004120	-0.060381
30	P3	-8.034989	0.004099	-0.060567

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	0.000555360
	stdev	1.72686e-07
MEAN Q	mean	0.000523829
	stdev	2.17830e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137195
	stdev	0.00114631
STDEV Q	mean	0.137559
	stdev	0.00116411



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006092[678]

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

Filename	num_gaps	num_missing_lines
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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)

✘
Ascending
✘
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

✘
Ascending
✘
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)

✘
Ascending
✘
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

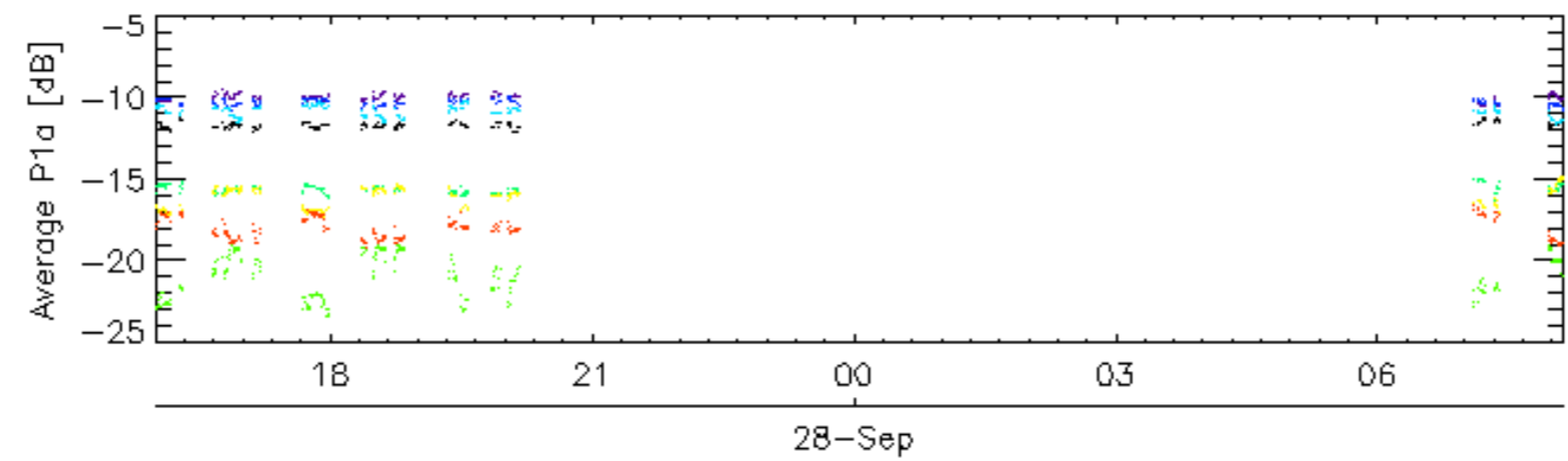
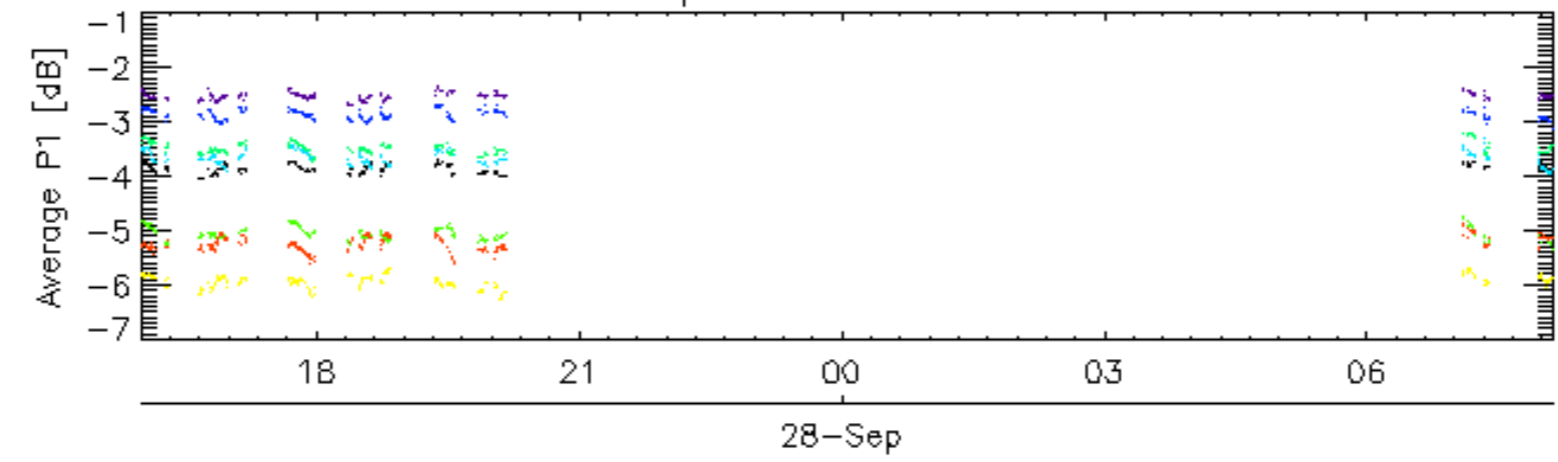
Ascending

Descending

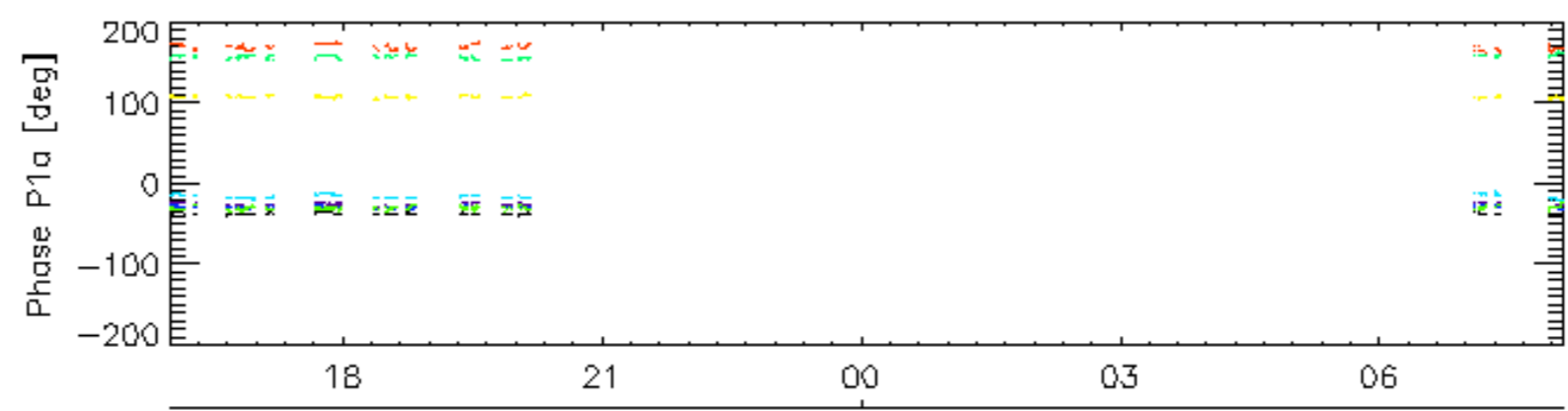
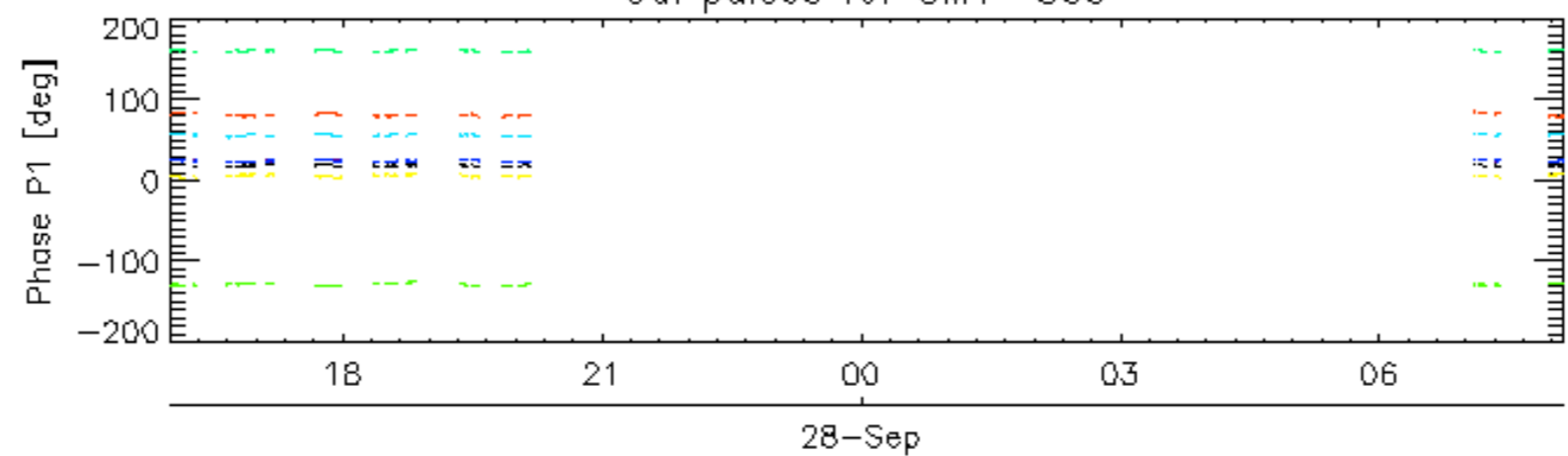
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

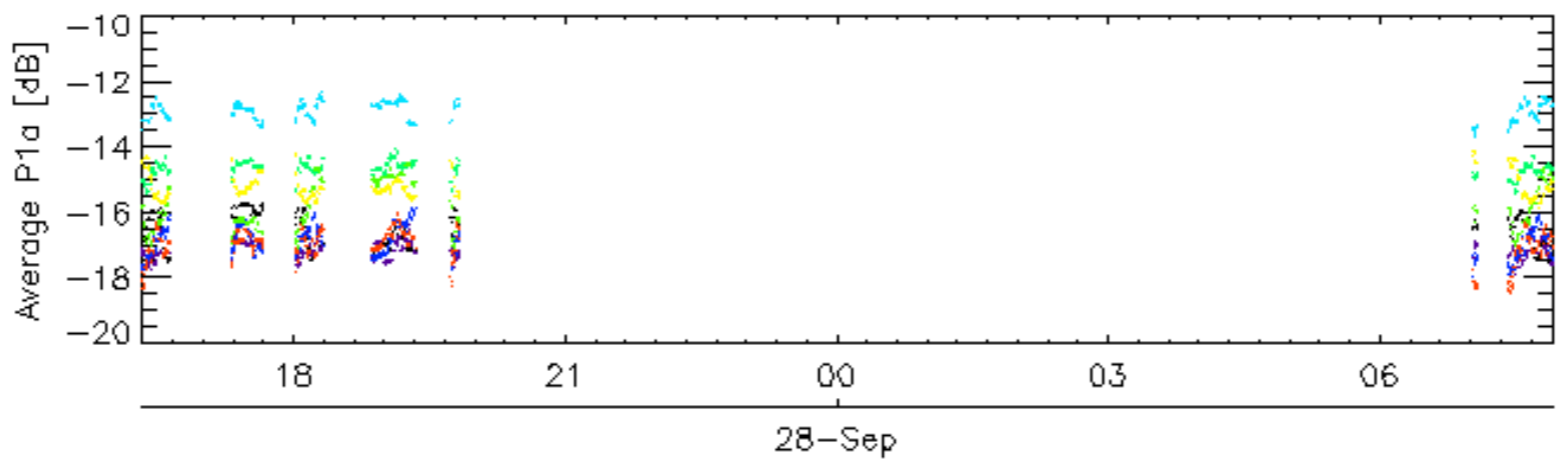
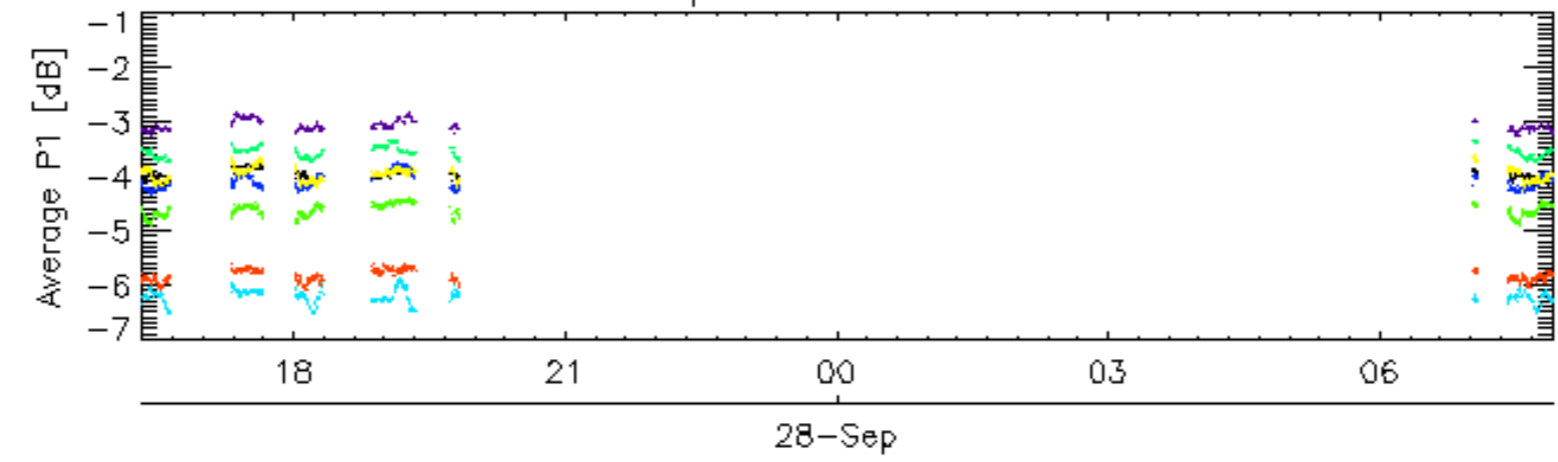


Cal pulses for GM1 SS3

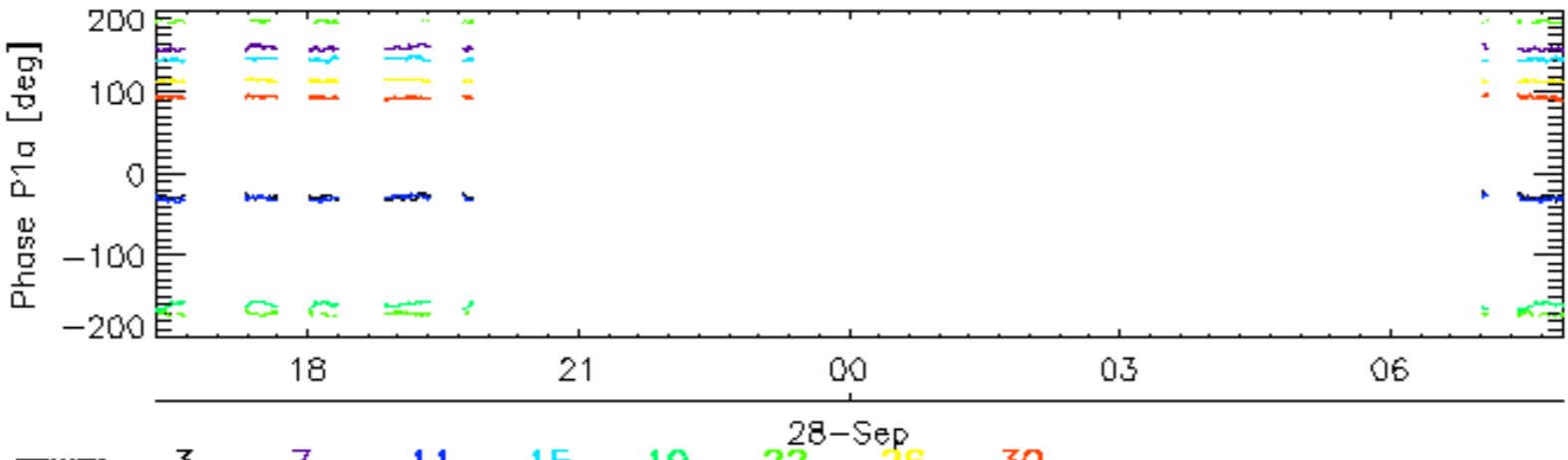
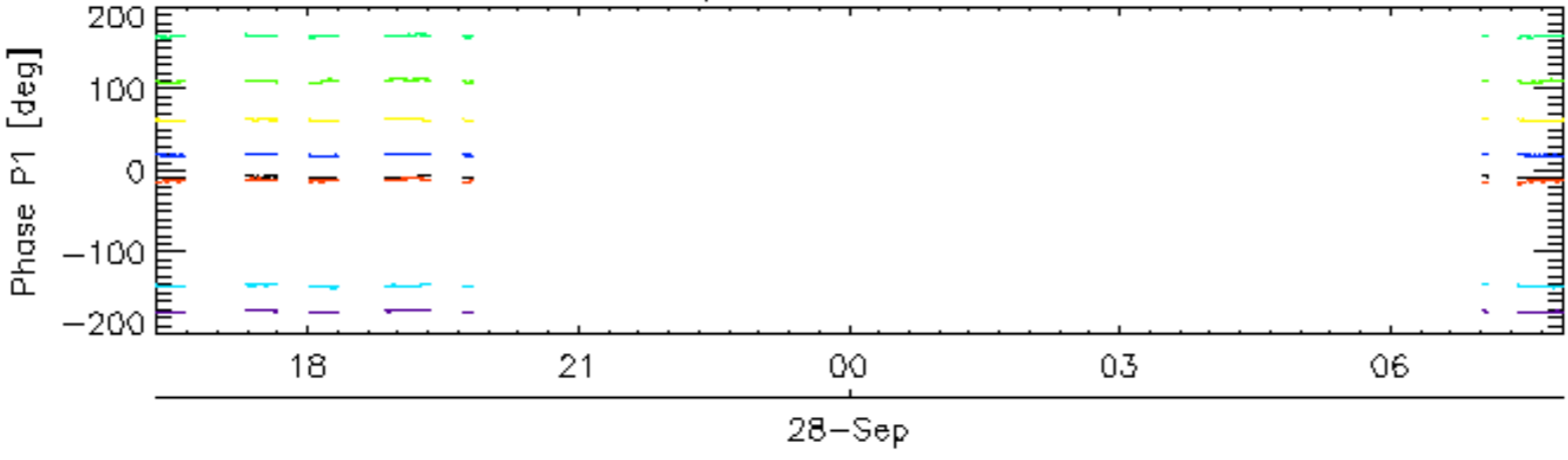


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

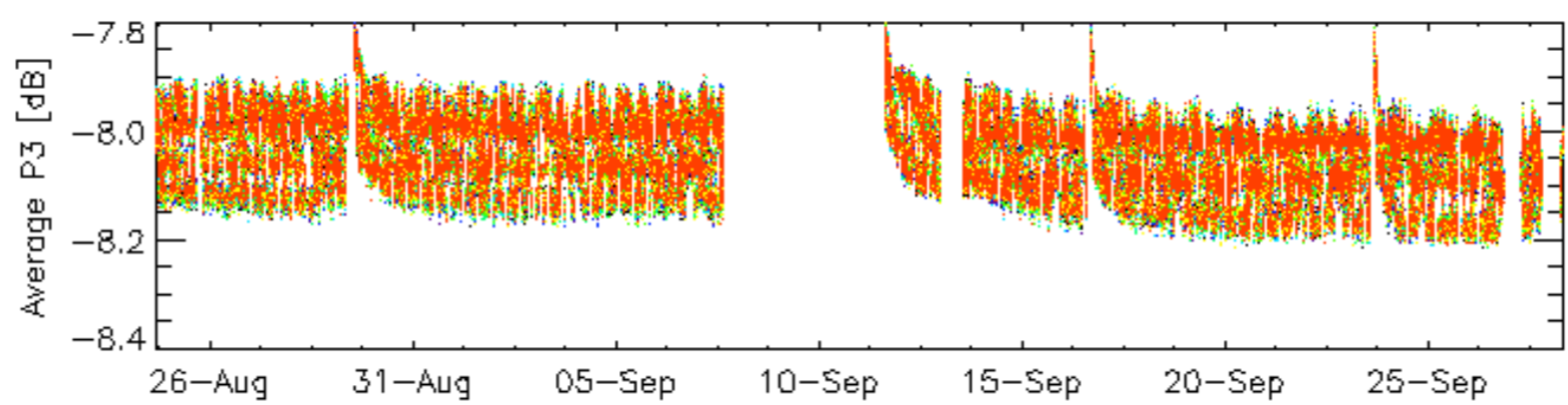
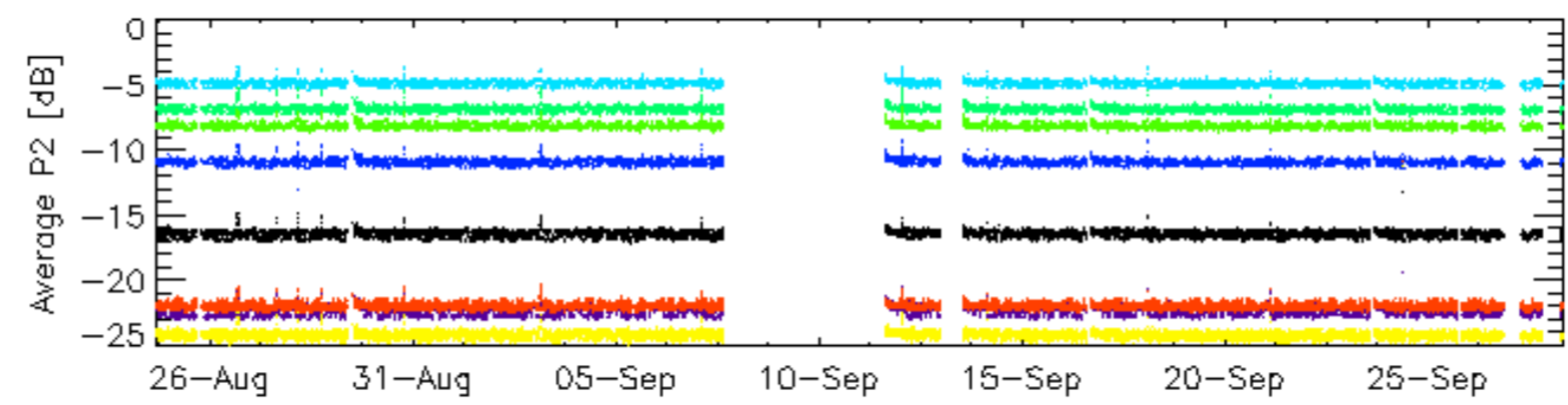
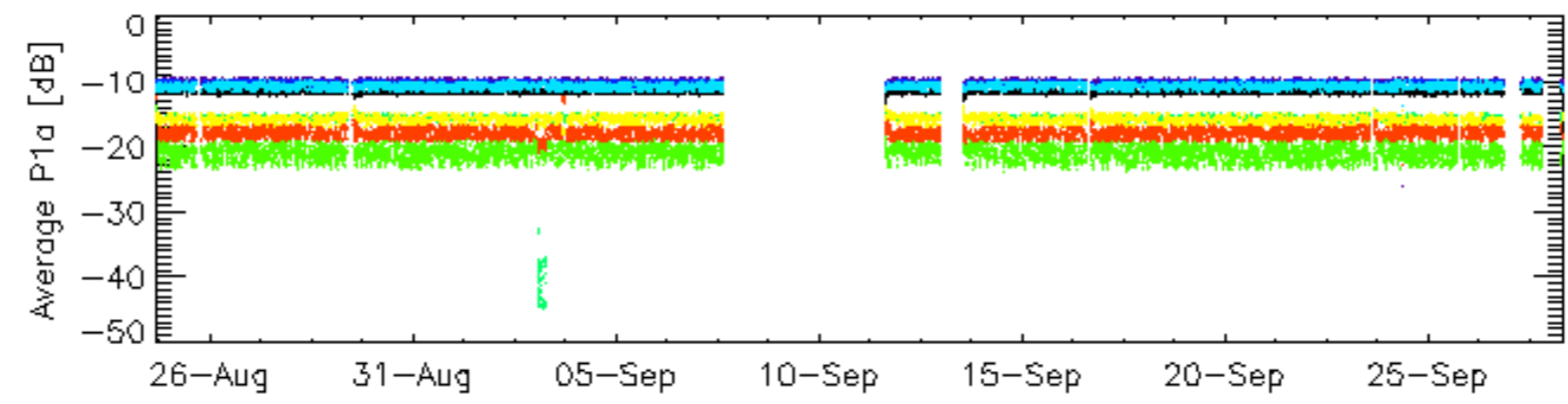
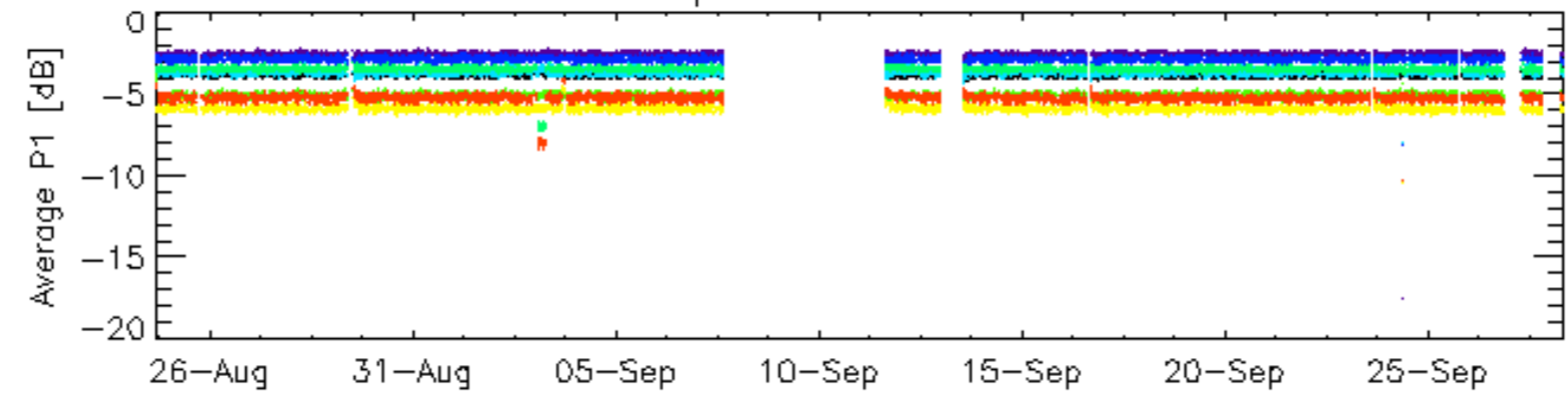


Cal pulses for WVS IS2



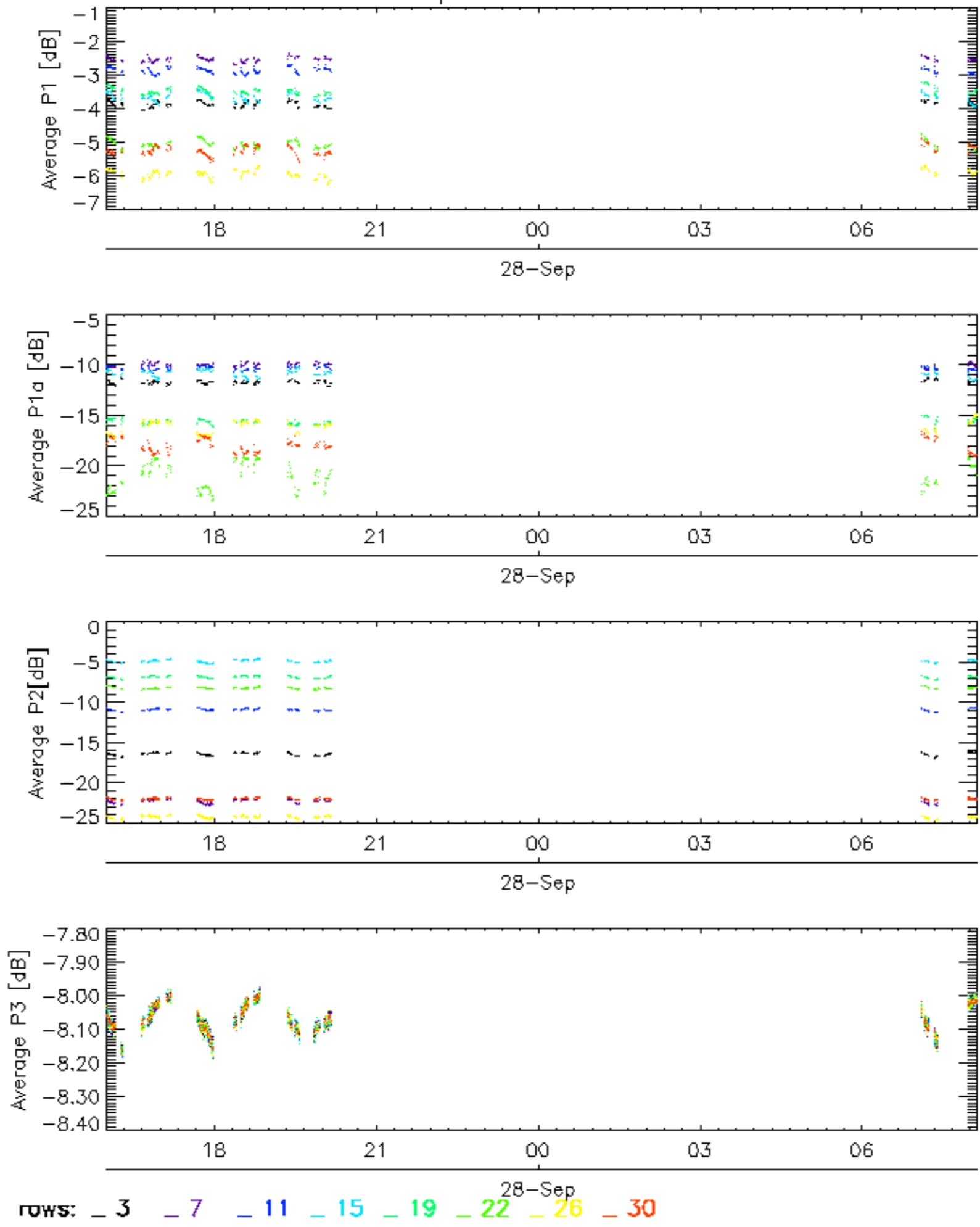
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

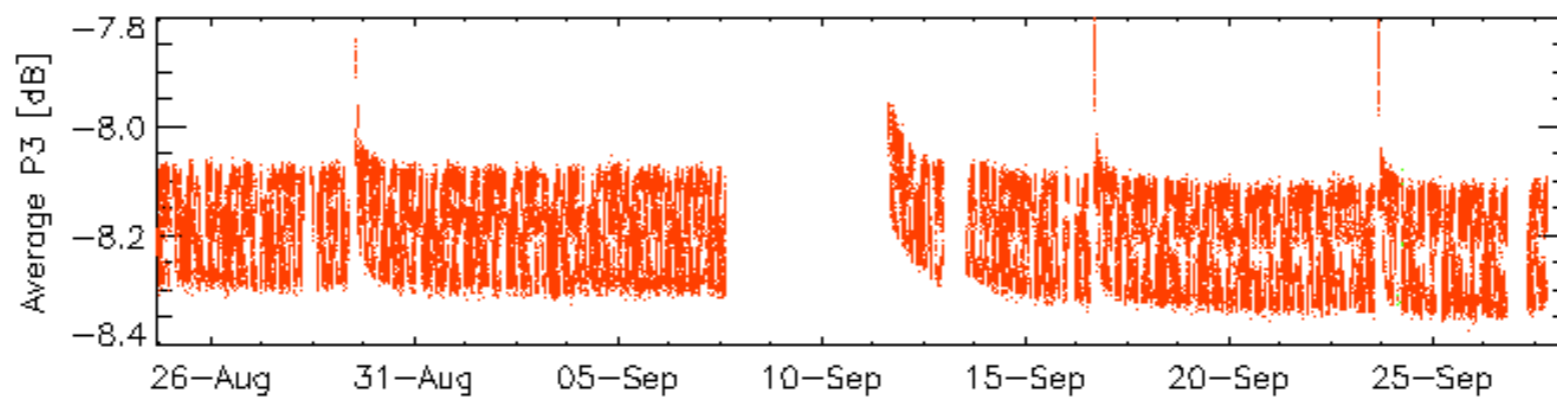
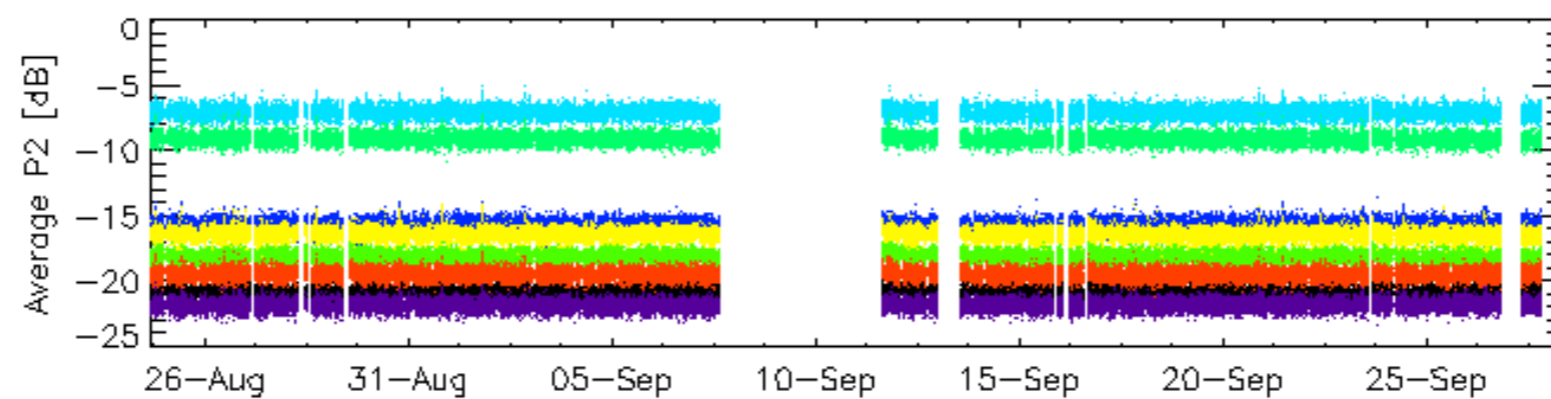
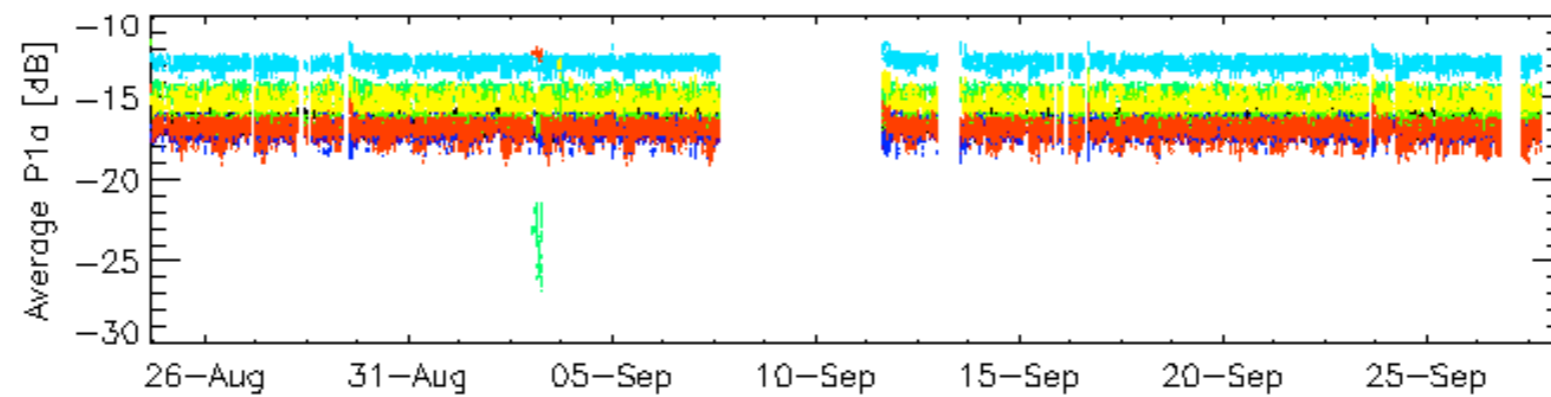
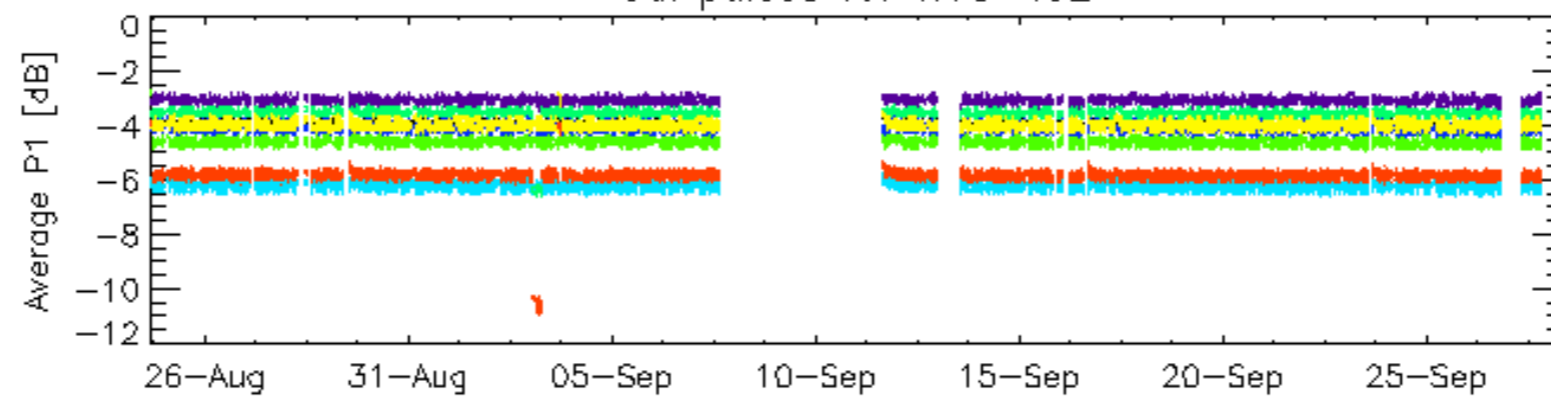


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

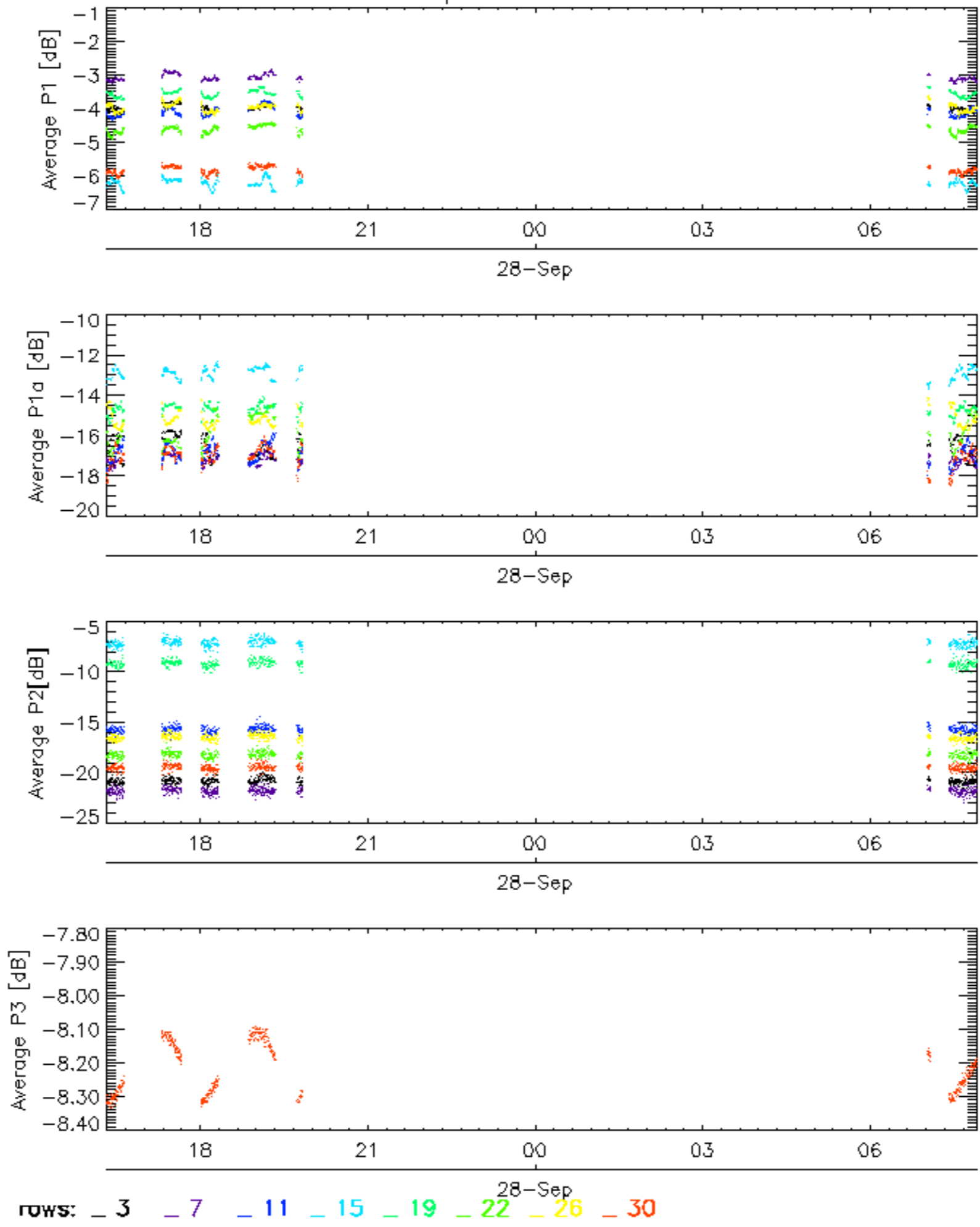


Cal pulses for WVS IS2



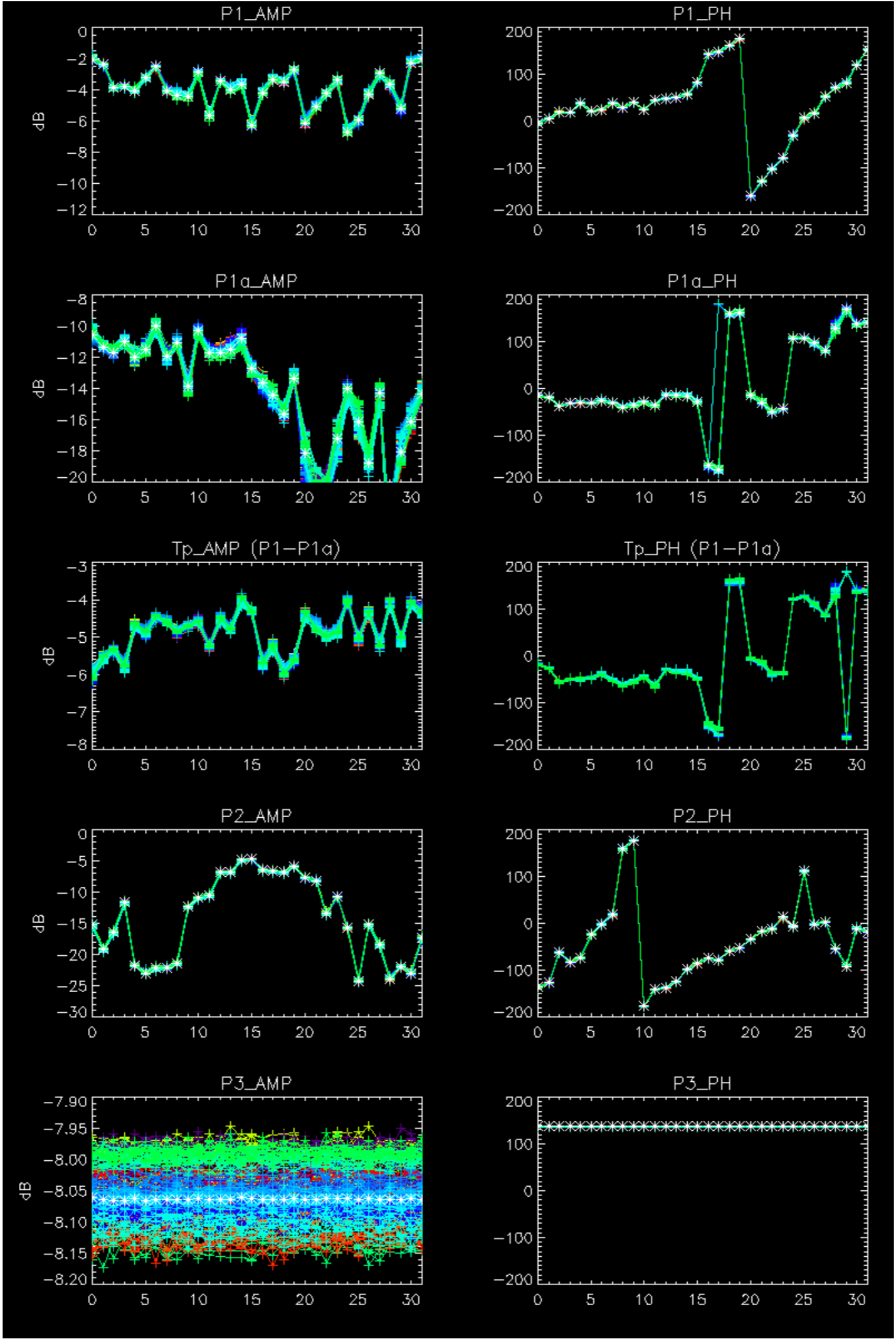
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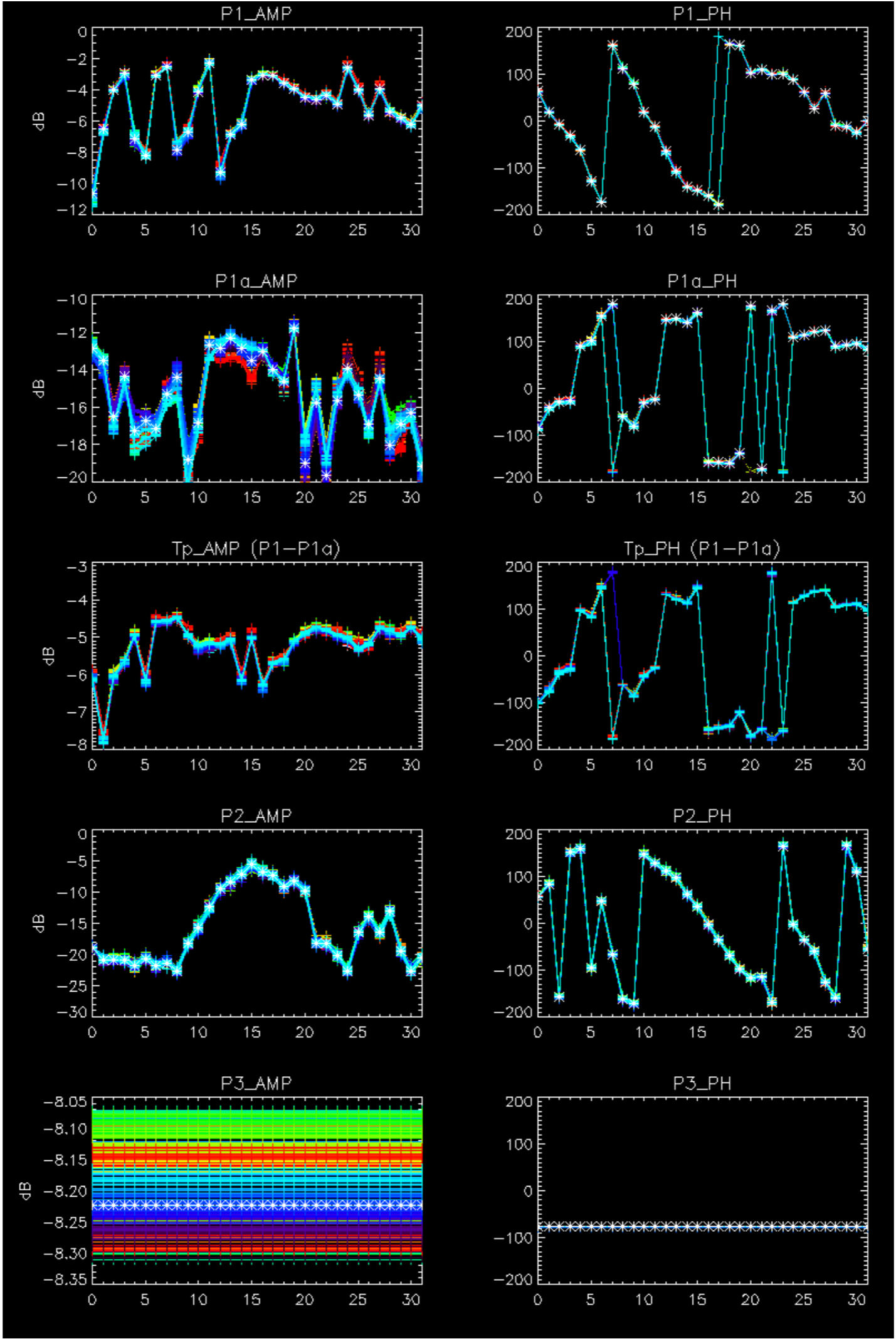
Cal pulses for WVS IS2



No anomalies observed on available browse products

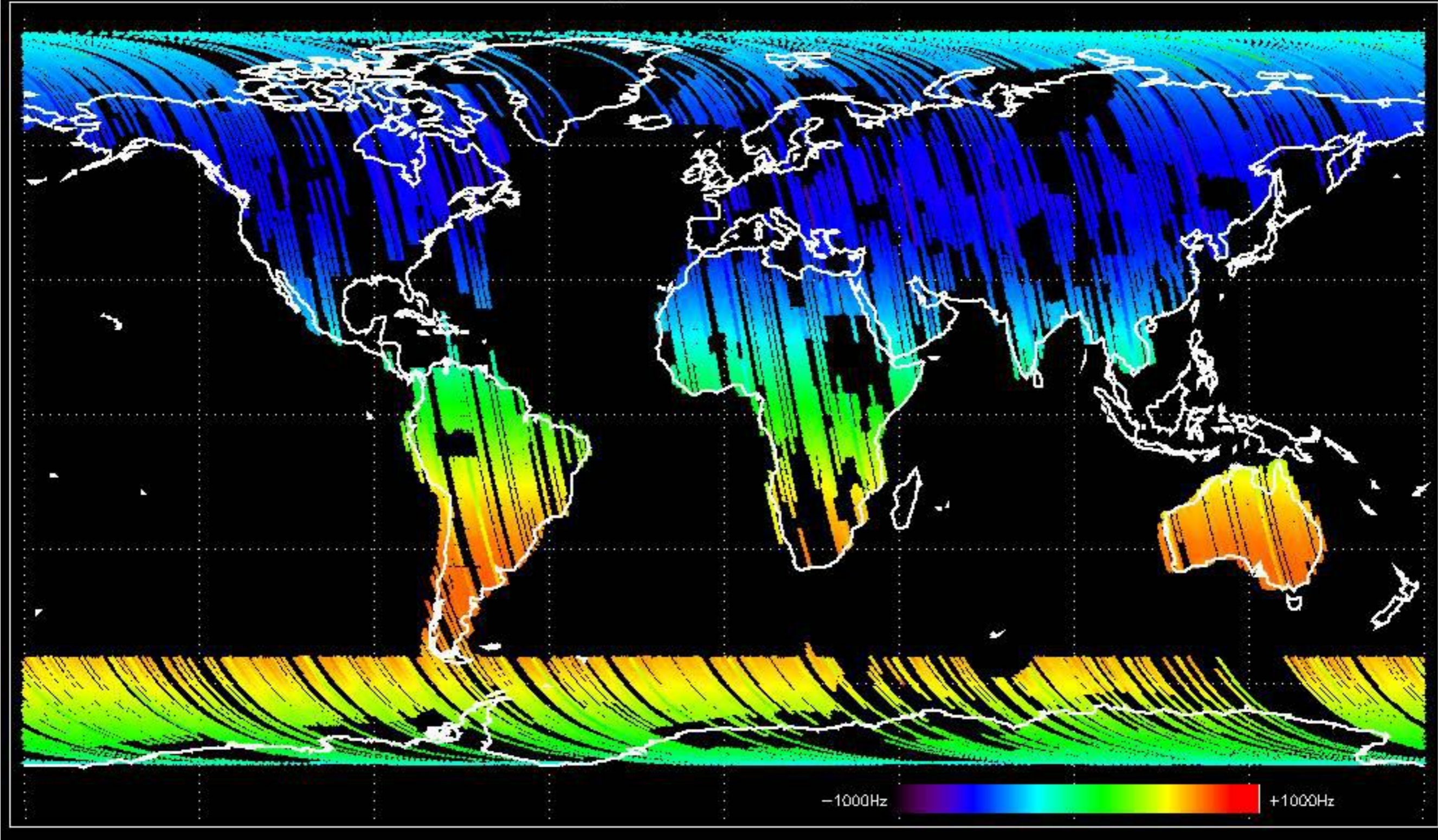
No anomalies observed.



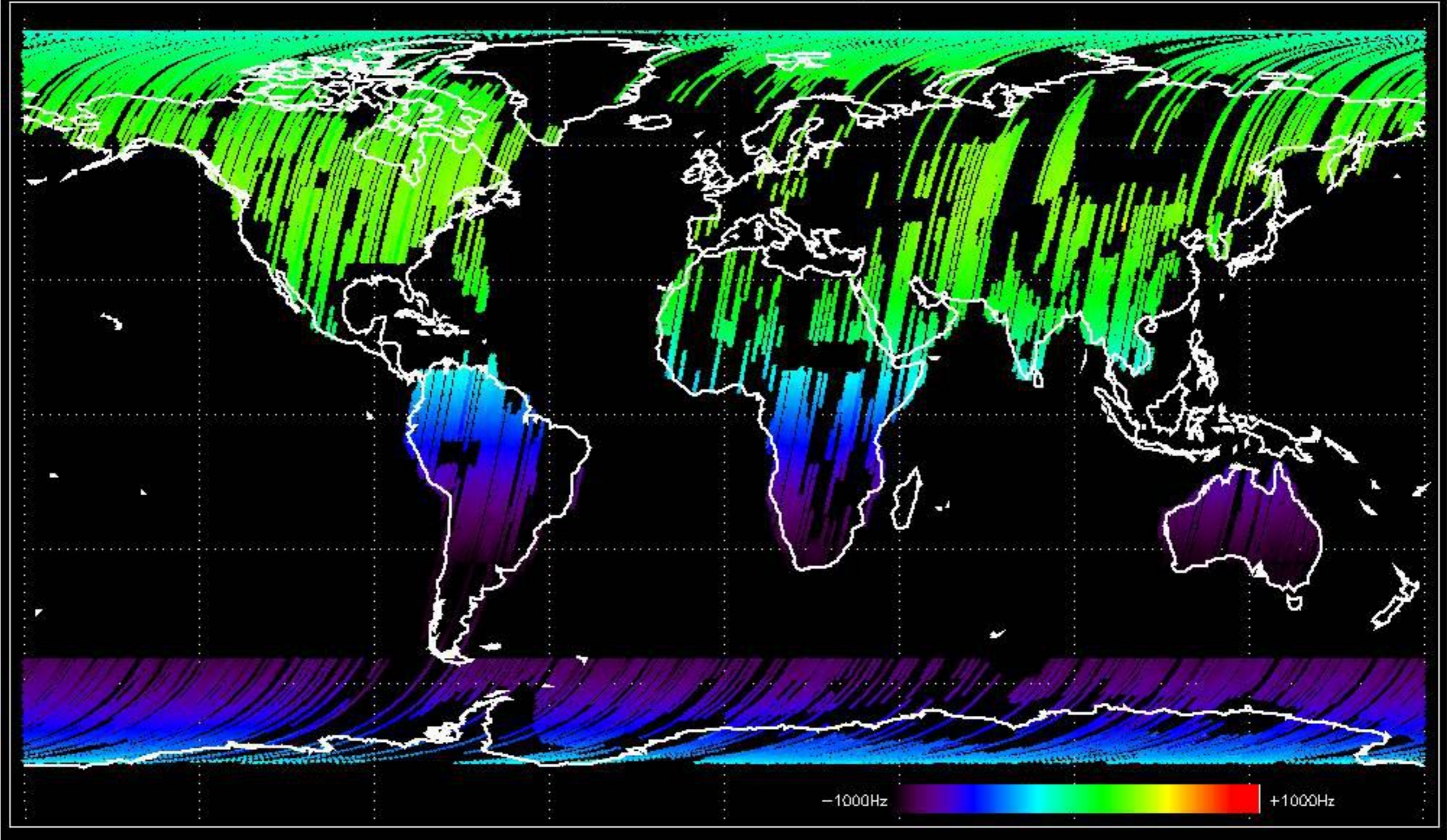


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

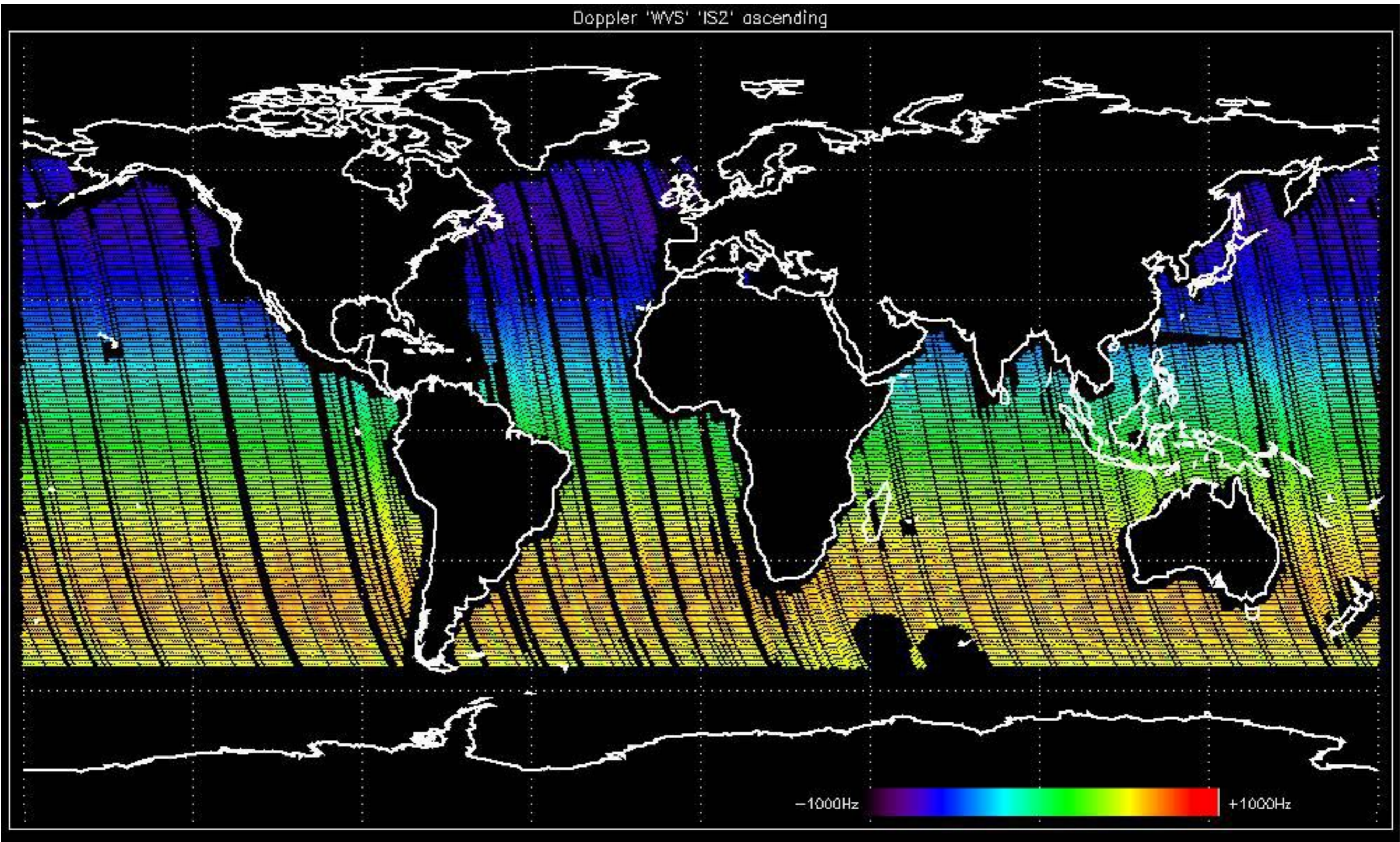
Doppler 'GM1' 'SS1' ascending



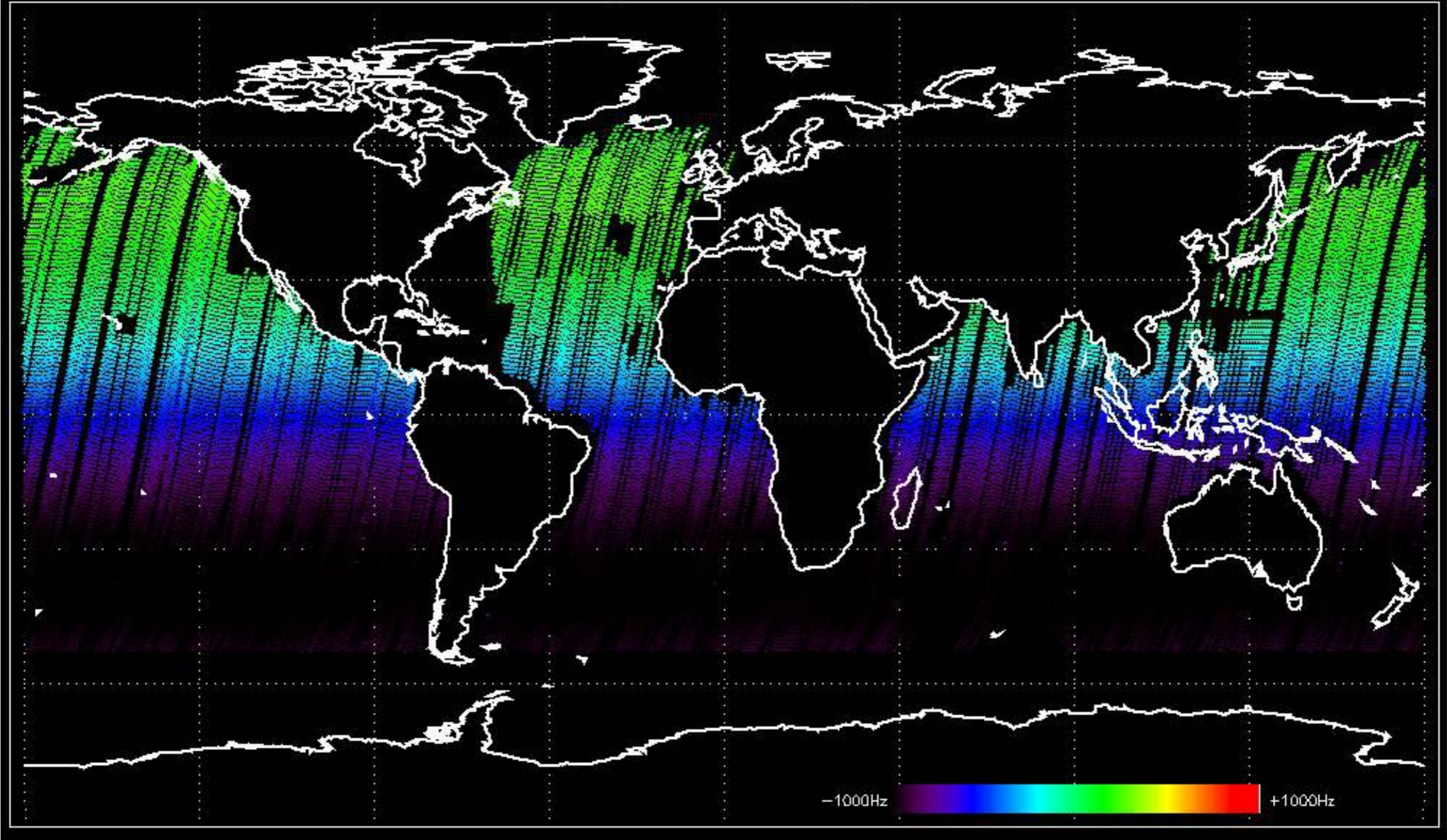
Doppler 'GM1' 'SS1' descending



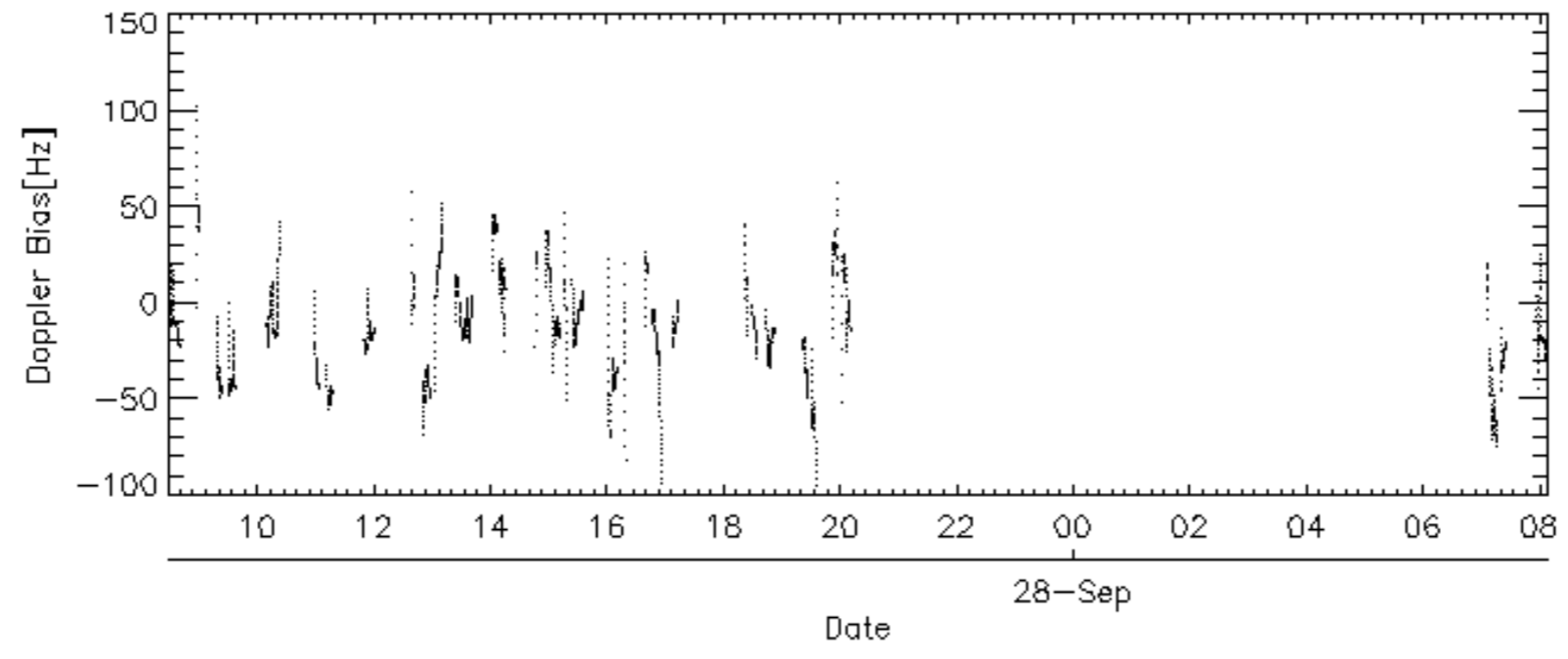
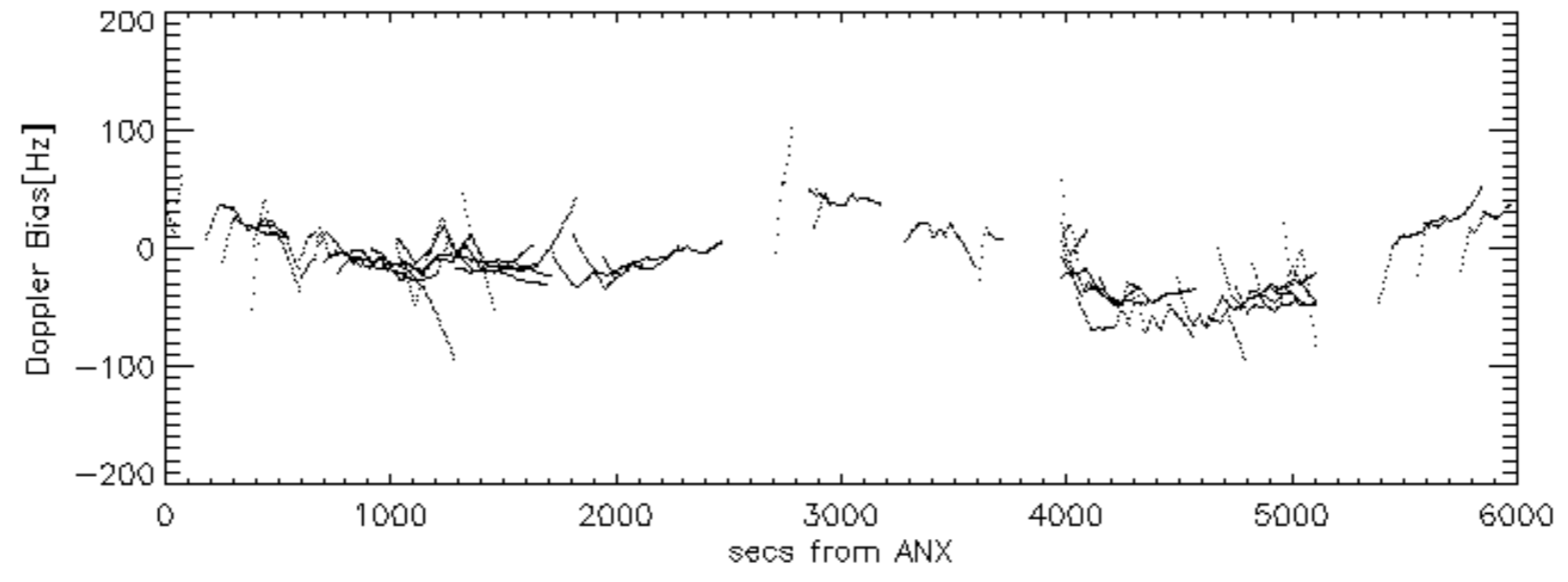
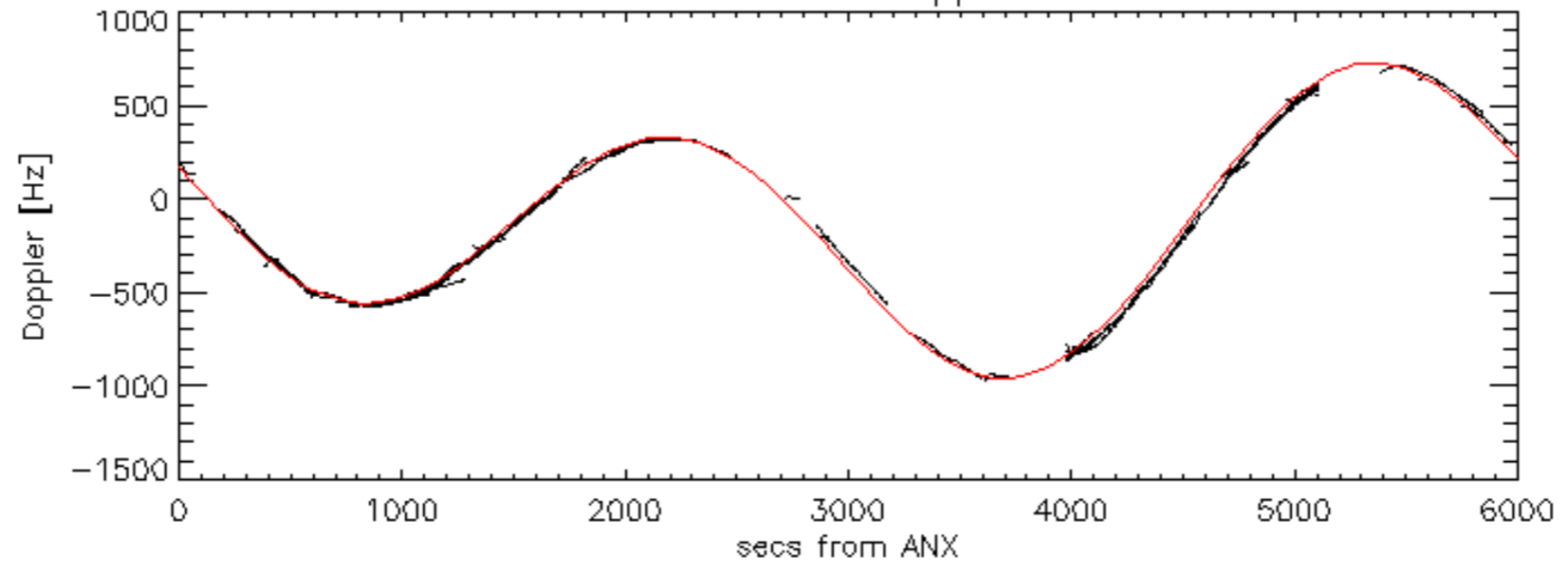
Doppler 'WVS' 'IS2' ascending

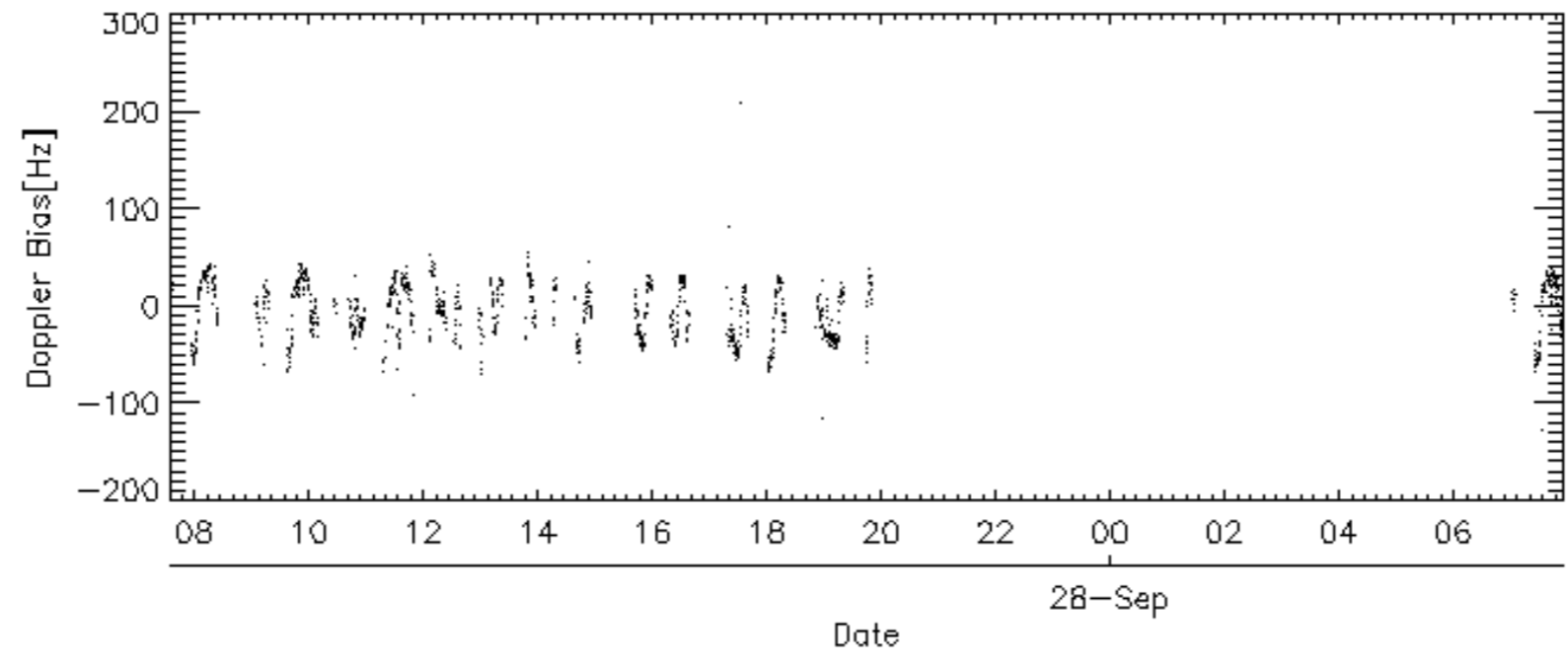
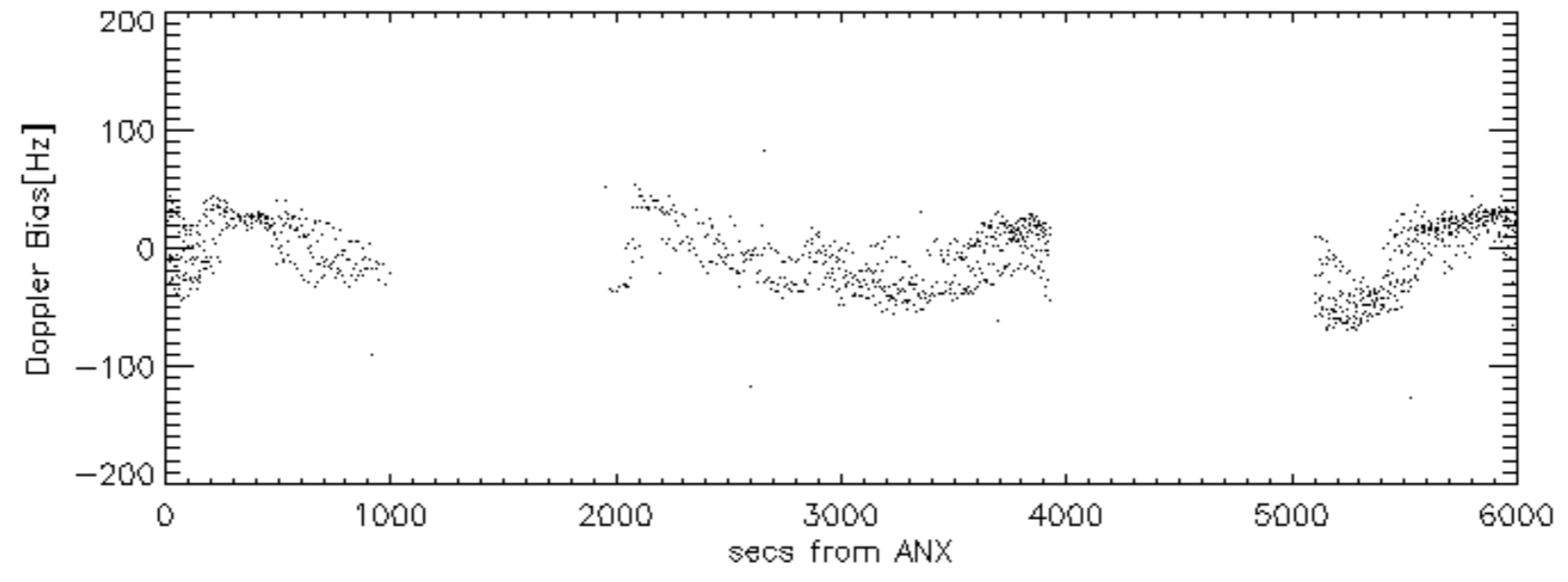
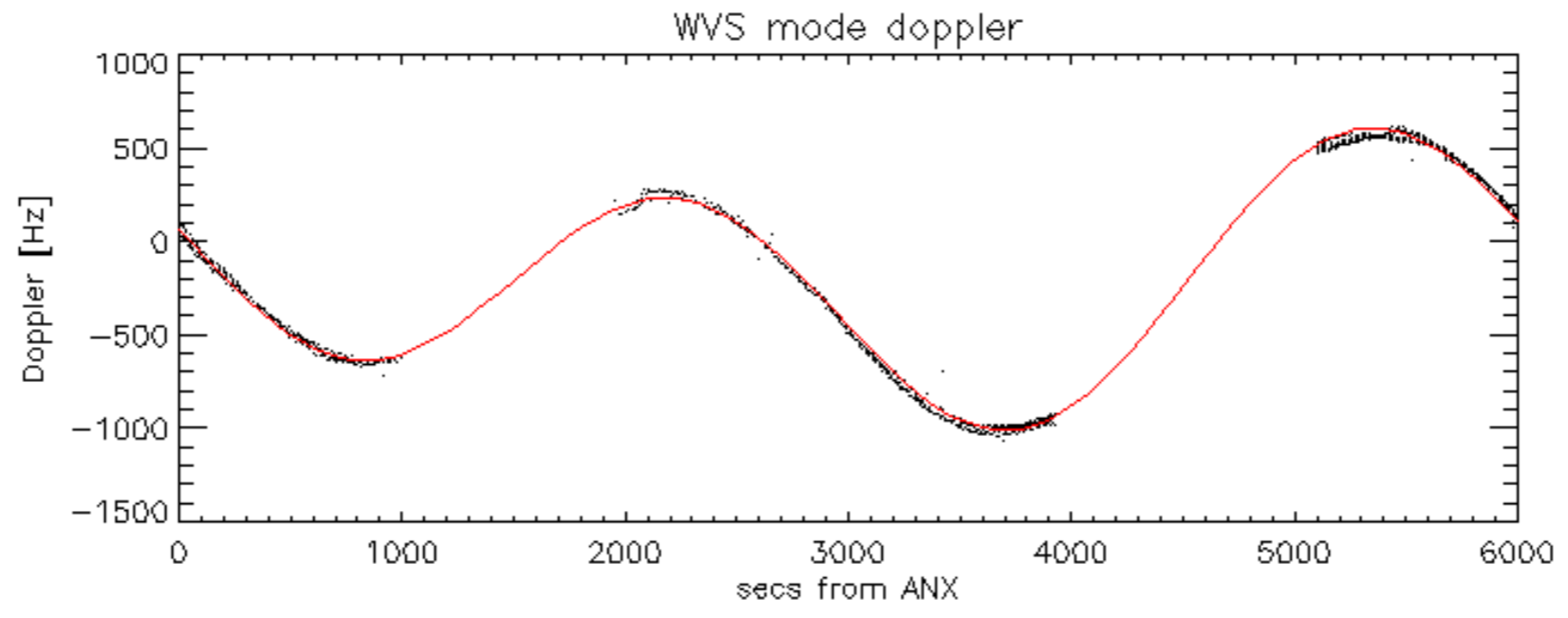


Doppler 'WVS' 'IS2' descending

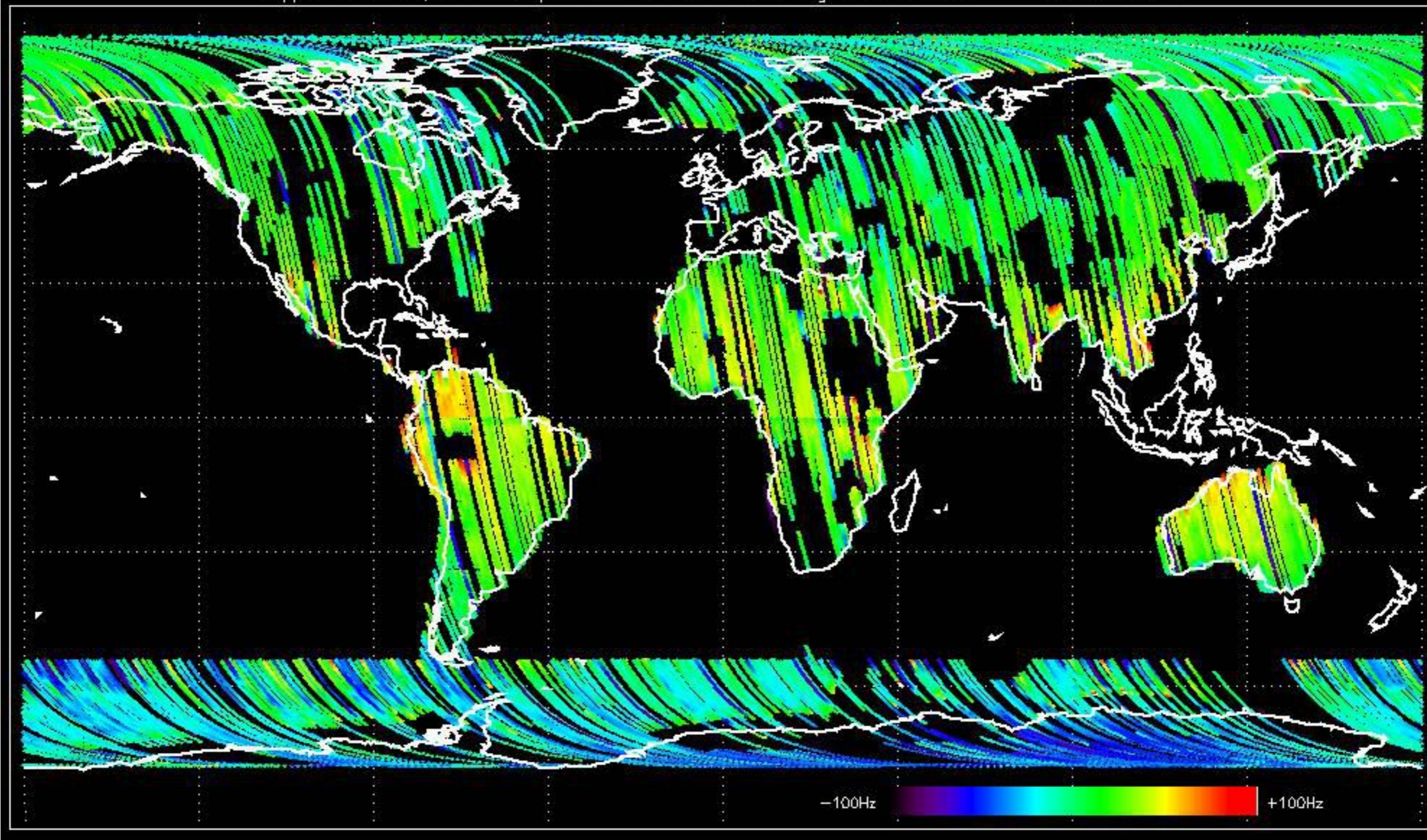


GM1 mode doppler

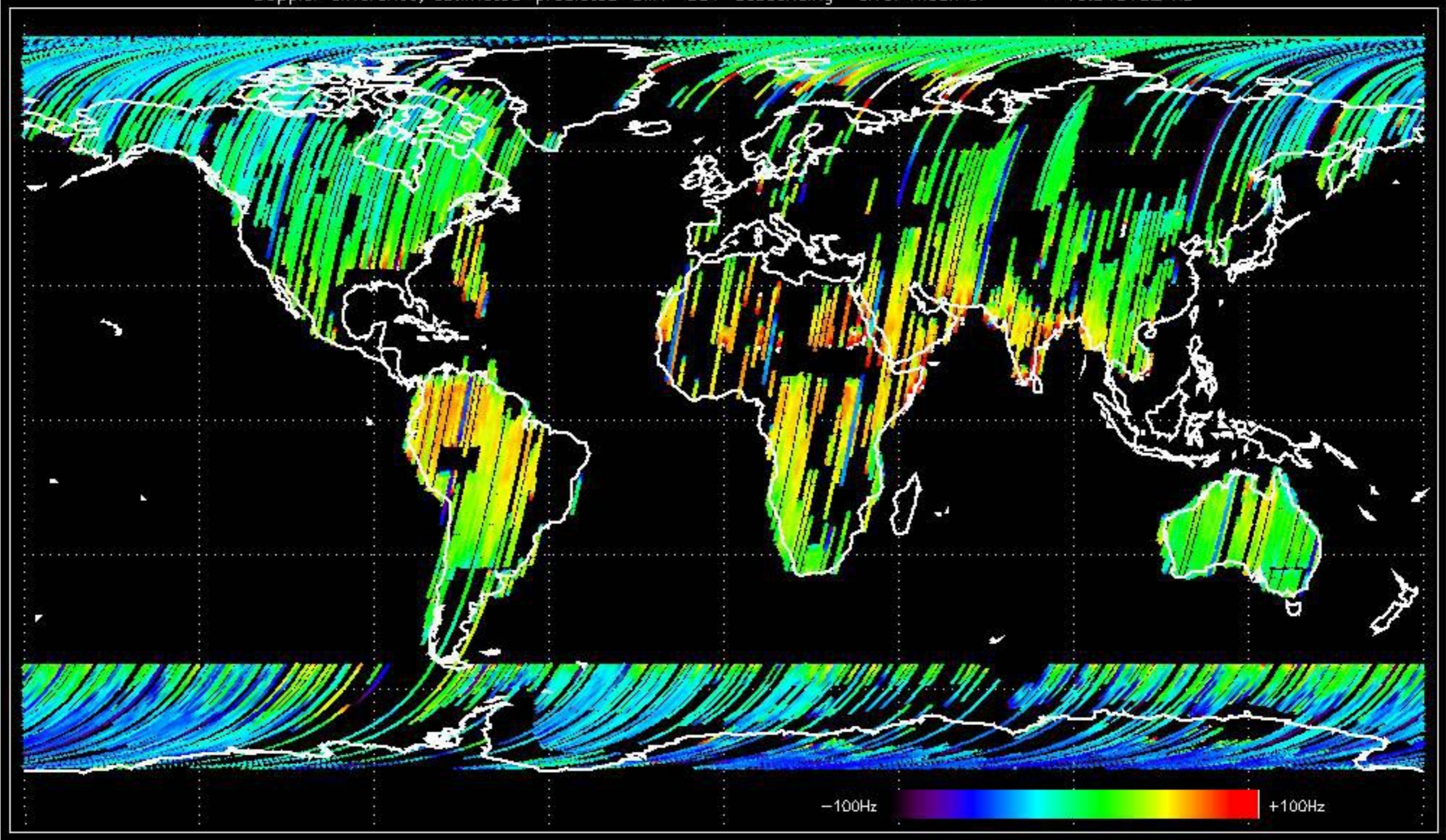




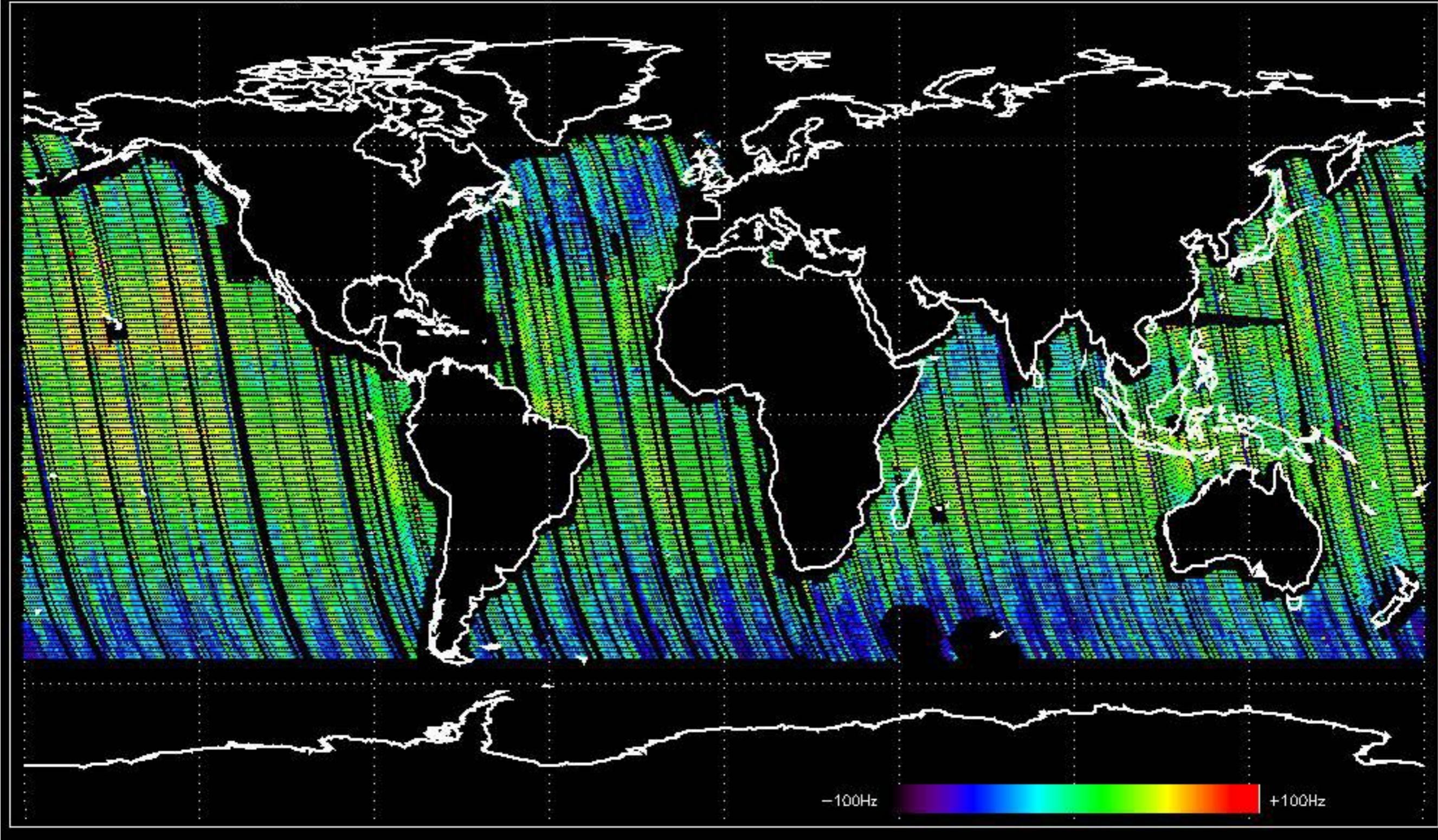
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.119805 Hz



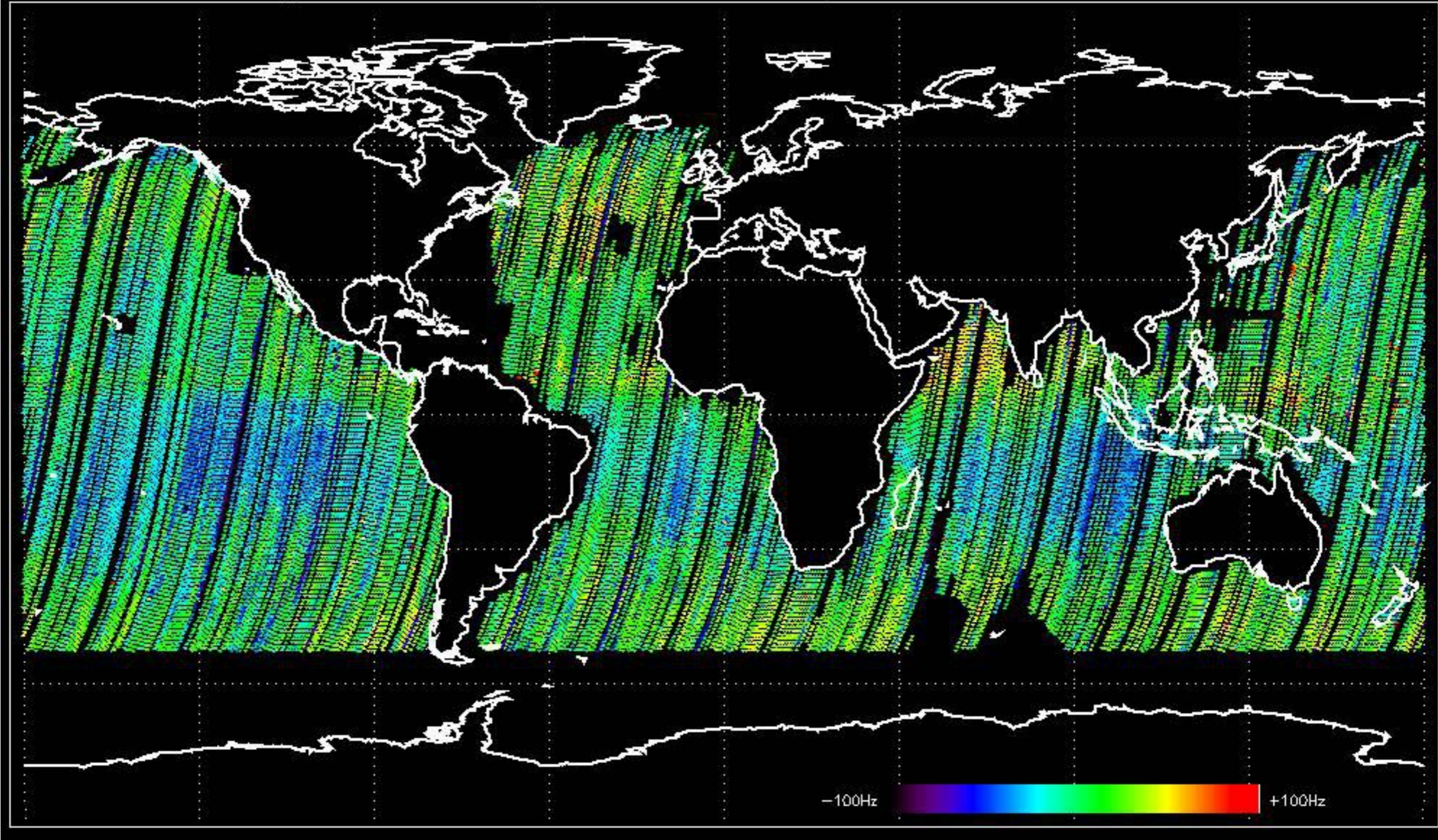
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.815182 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.582410 Hz

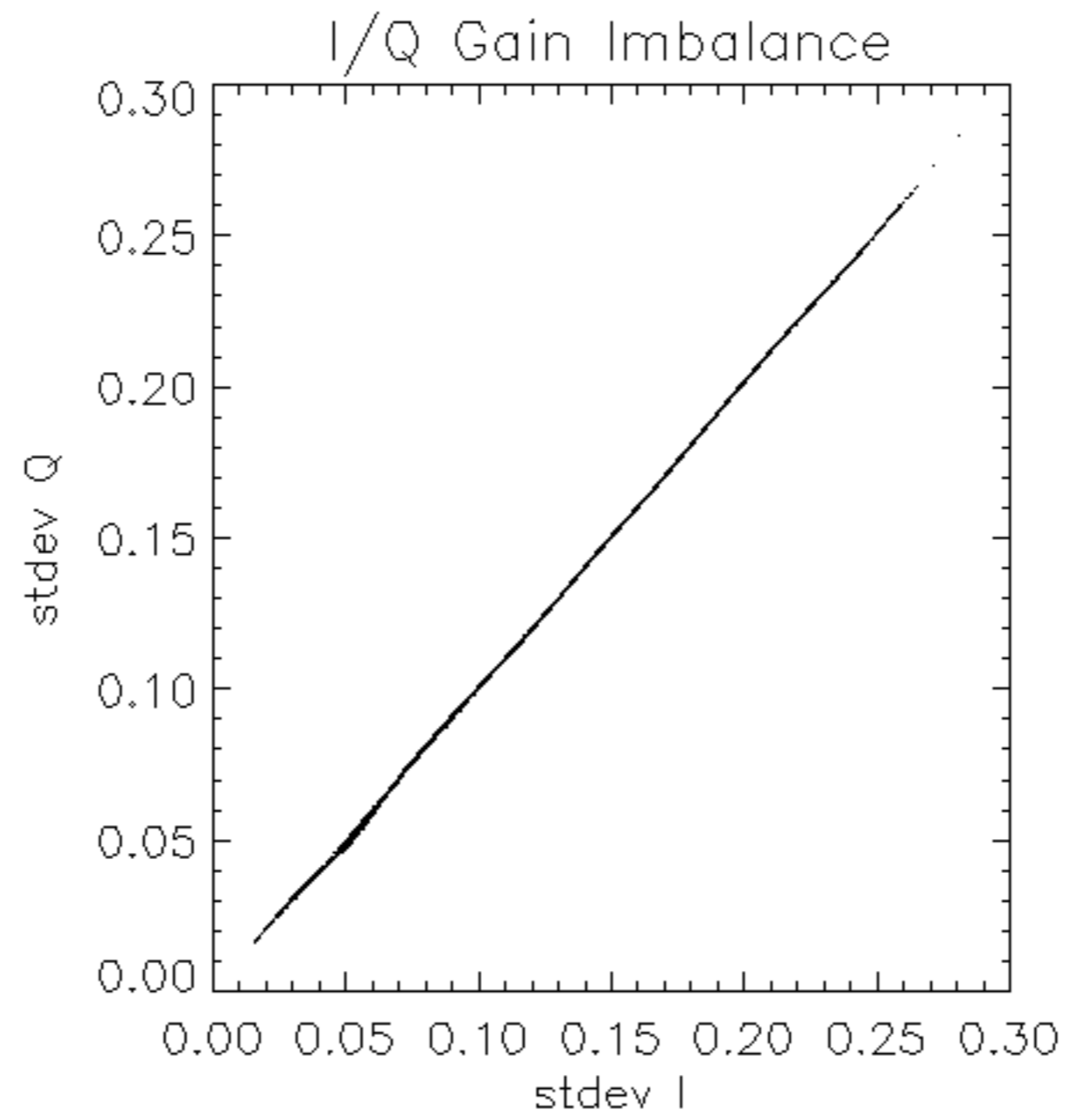


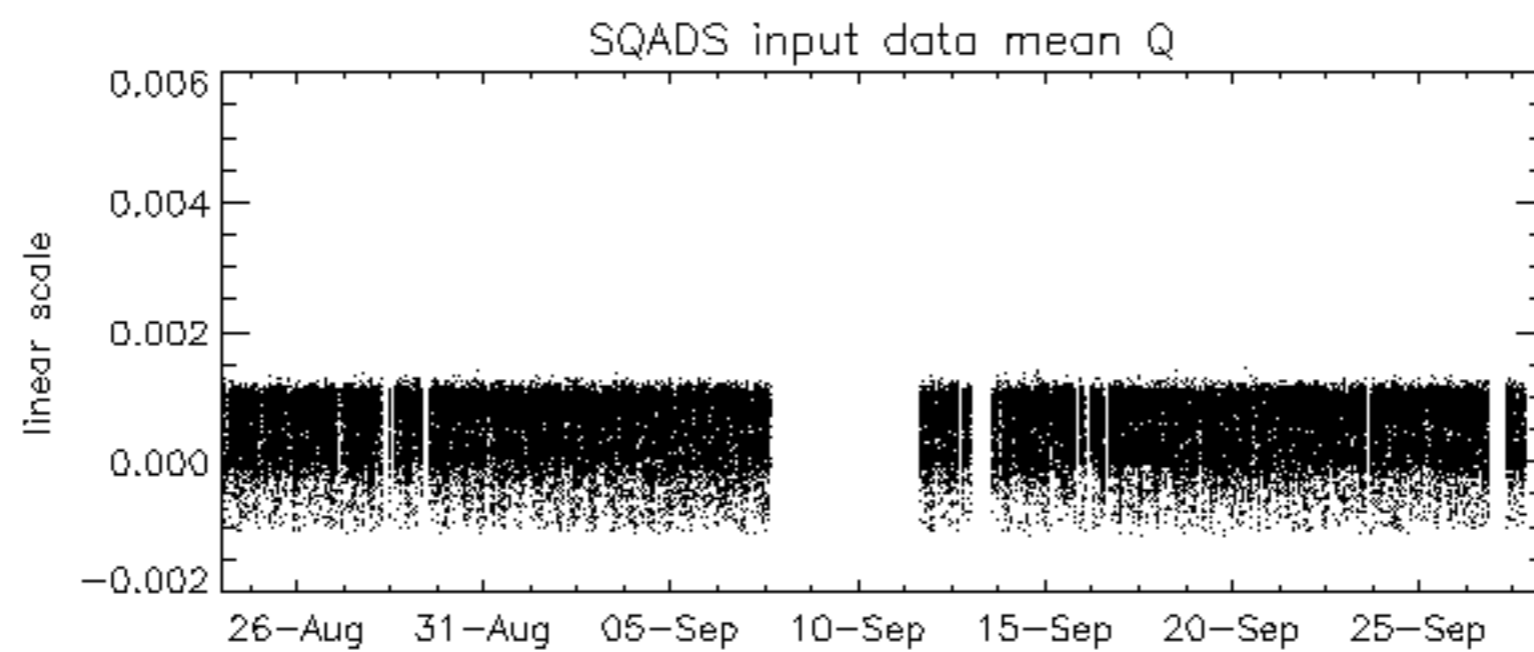
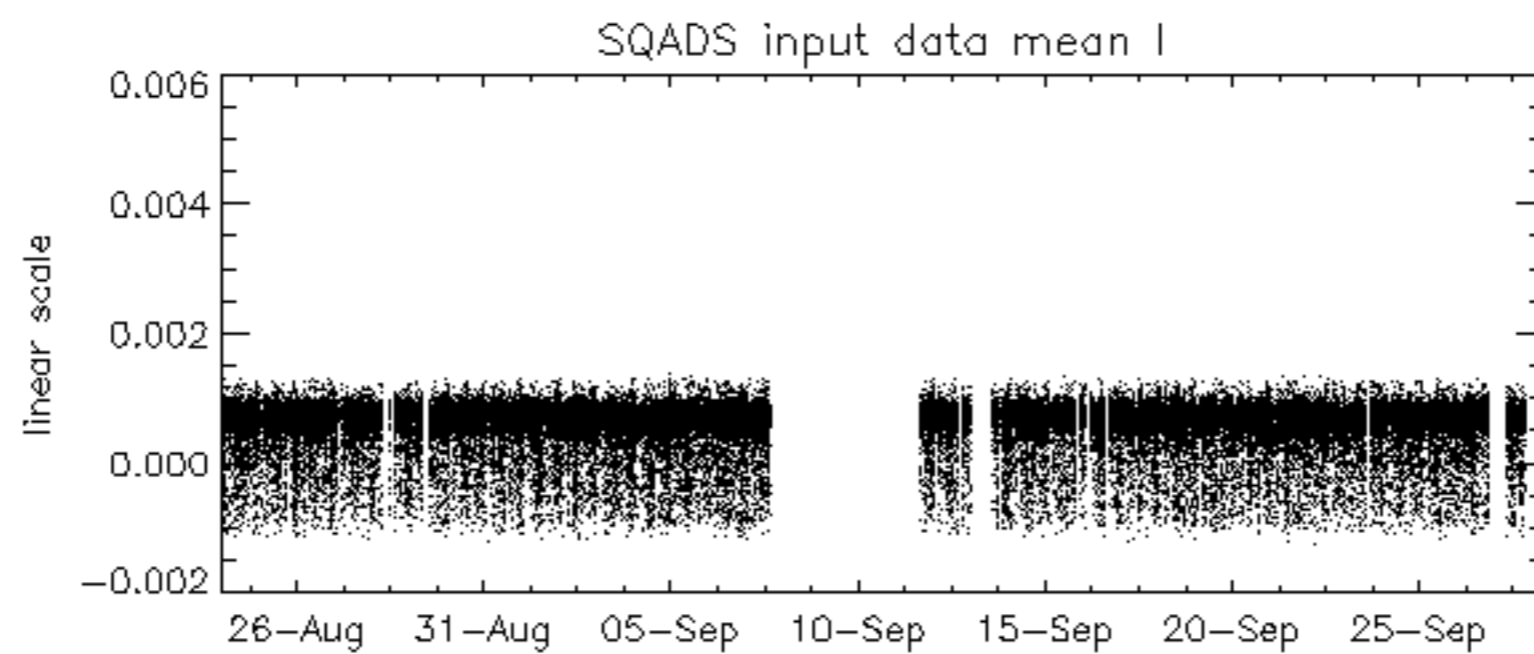
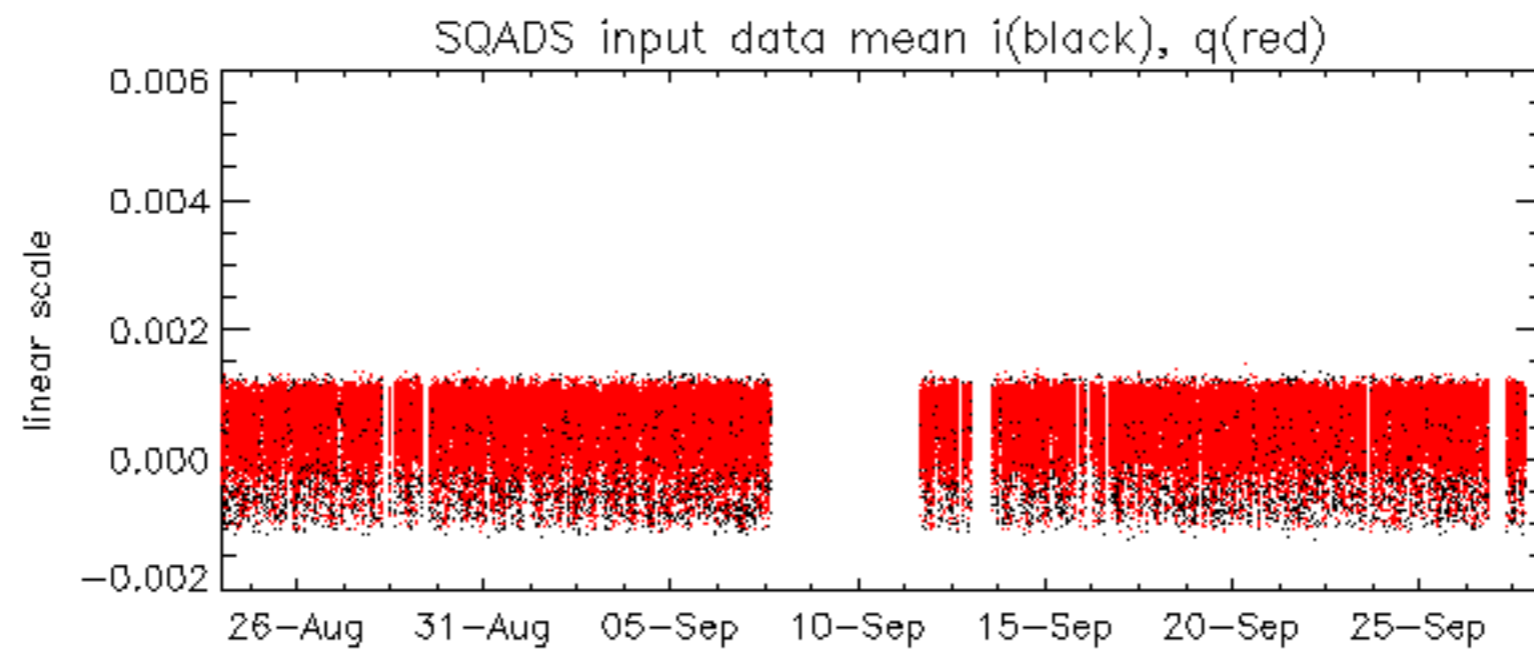
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -15.053296 Hz

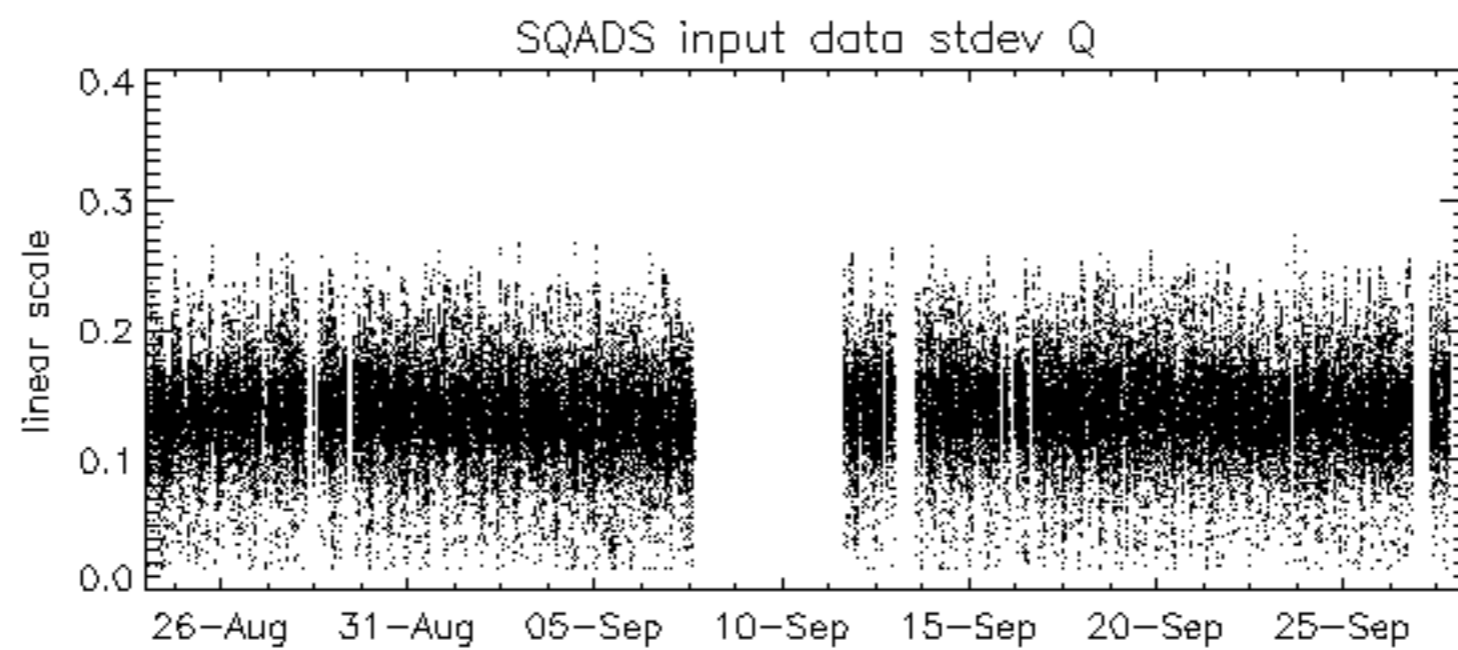
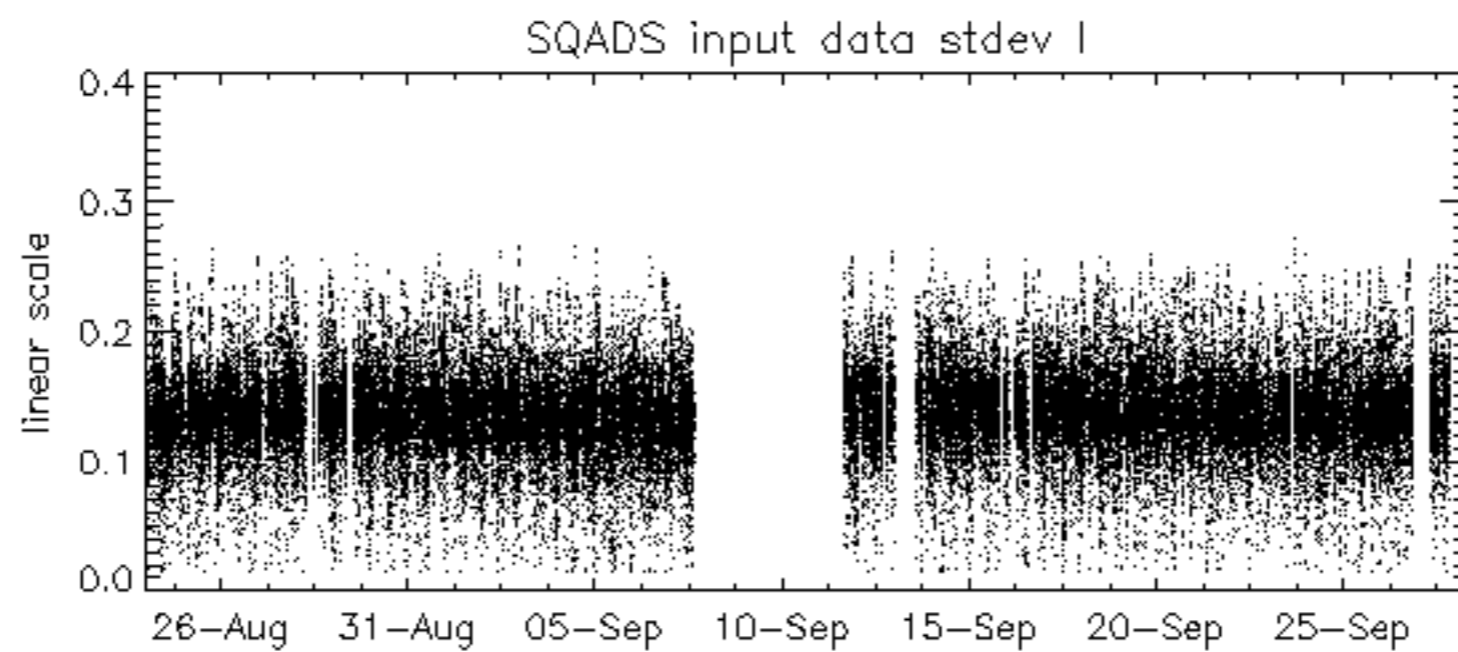
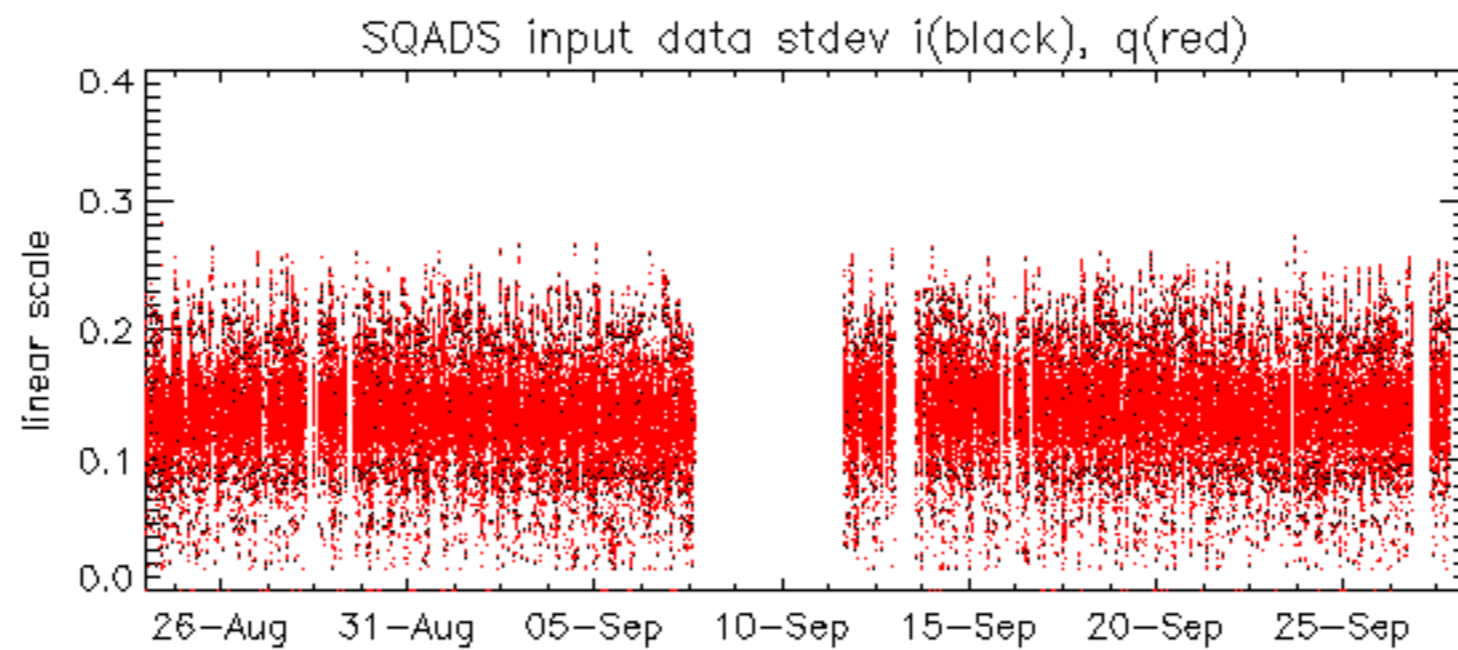


No anomalies observed on available MS products:

No anomalies observed.



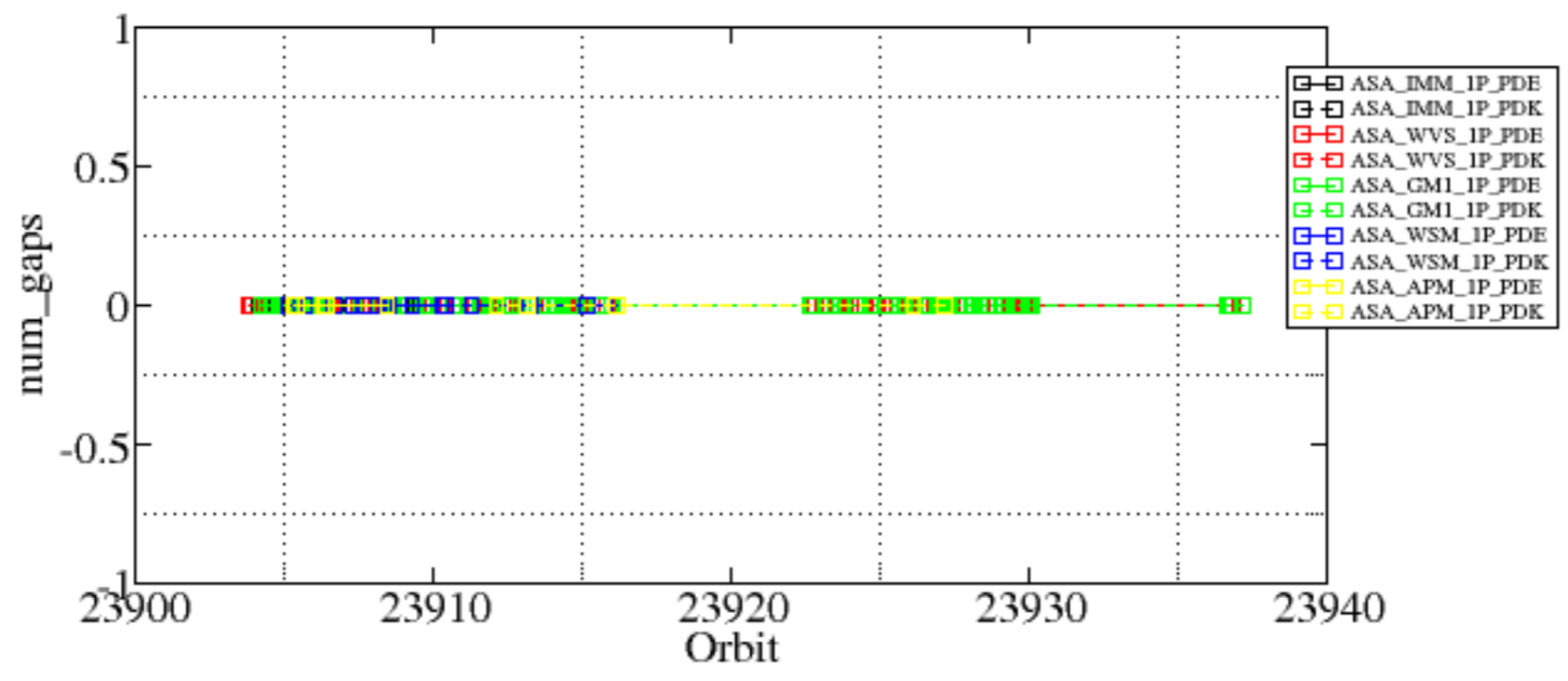


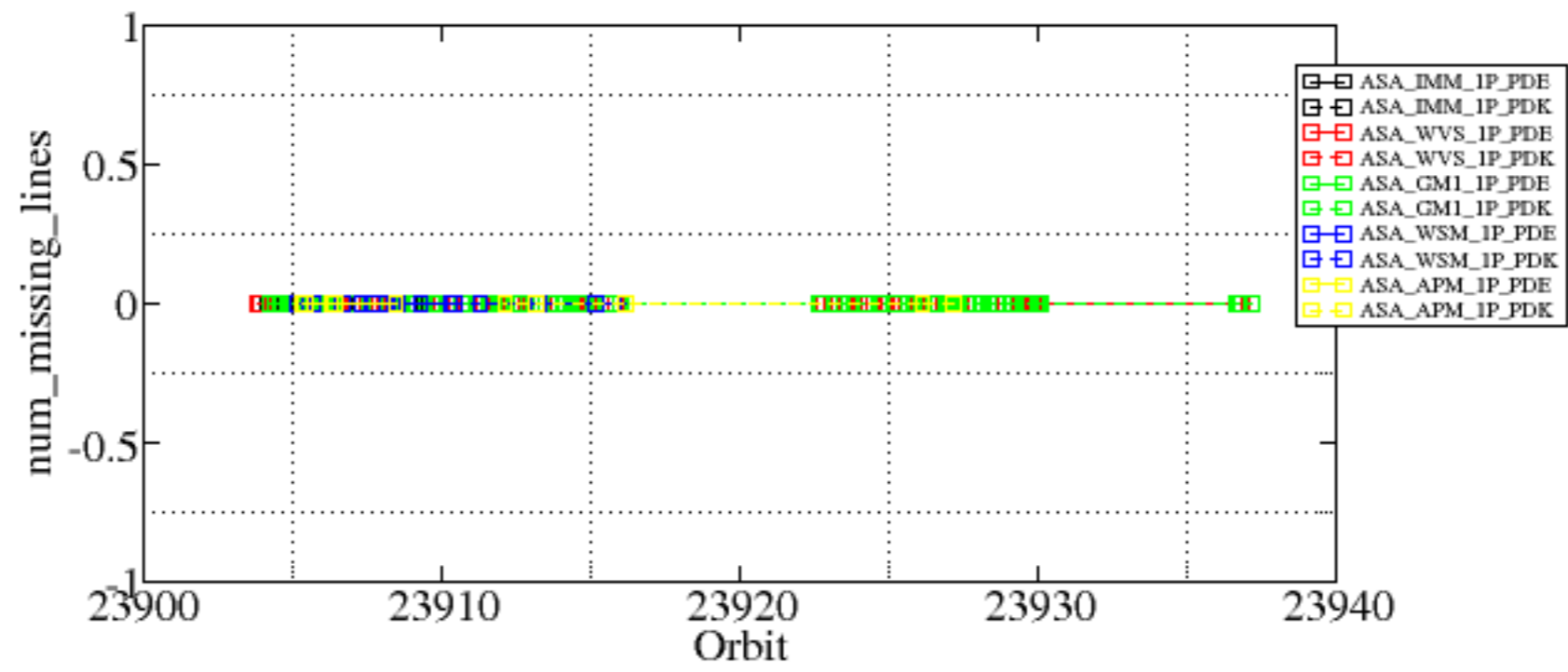


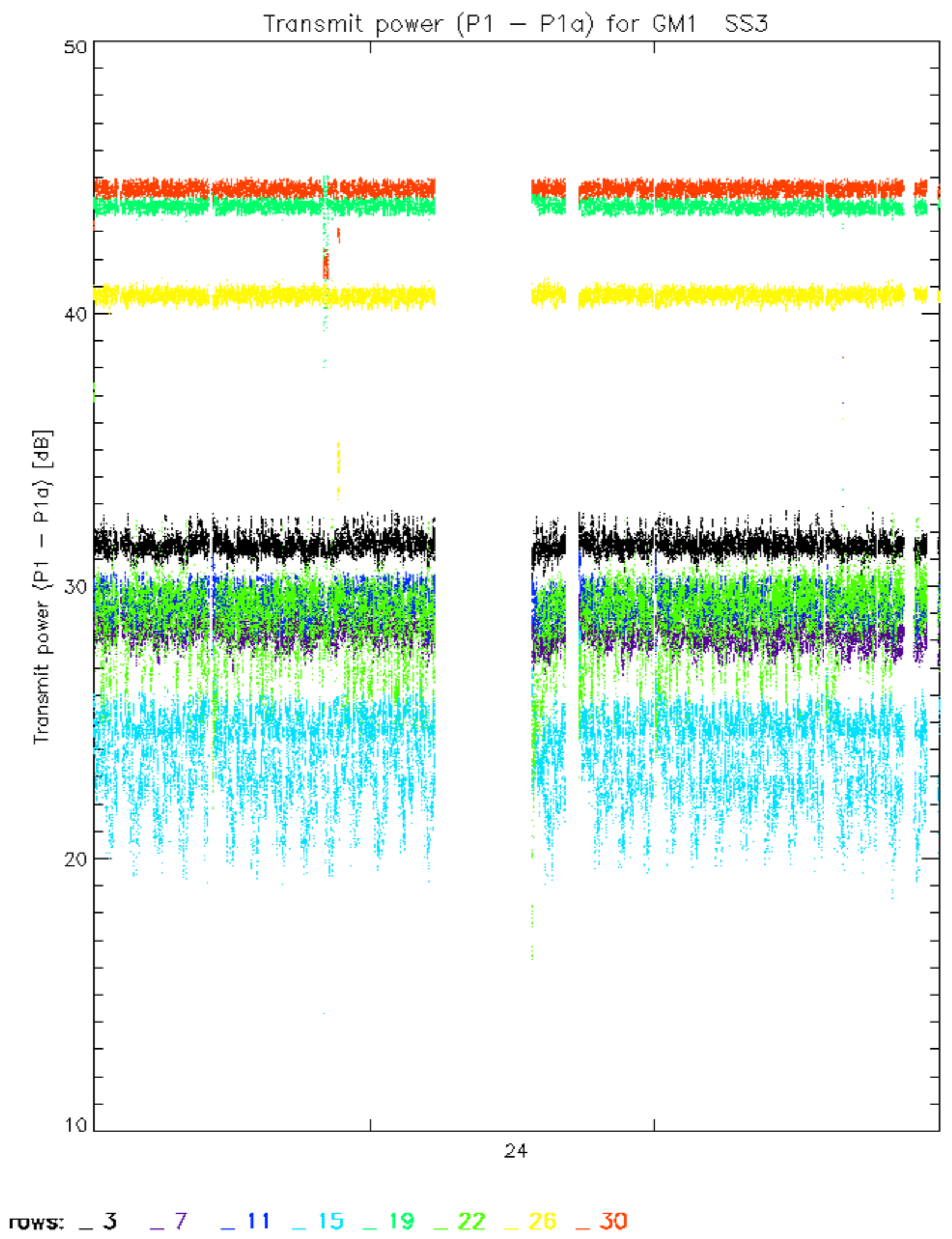
Summary of analysis for the last 3 days 2006092[678]

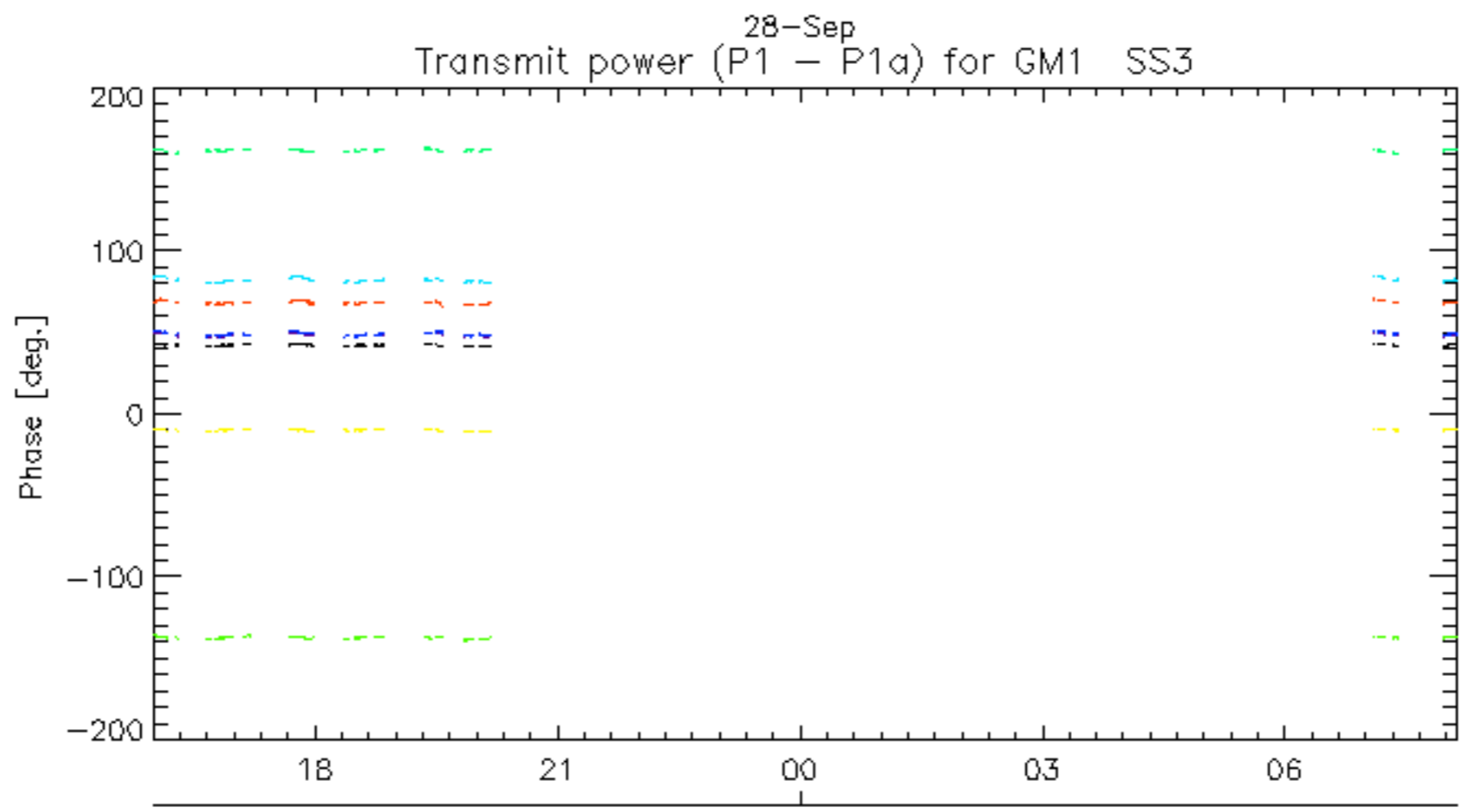
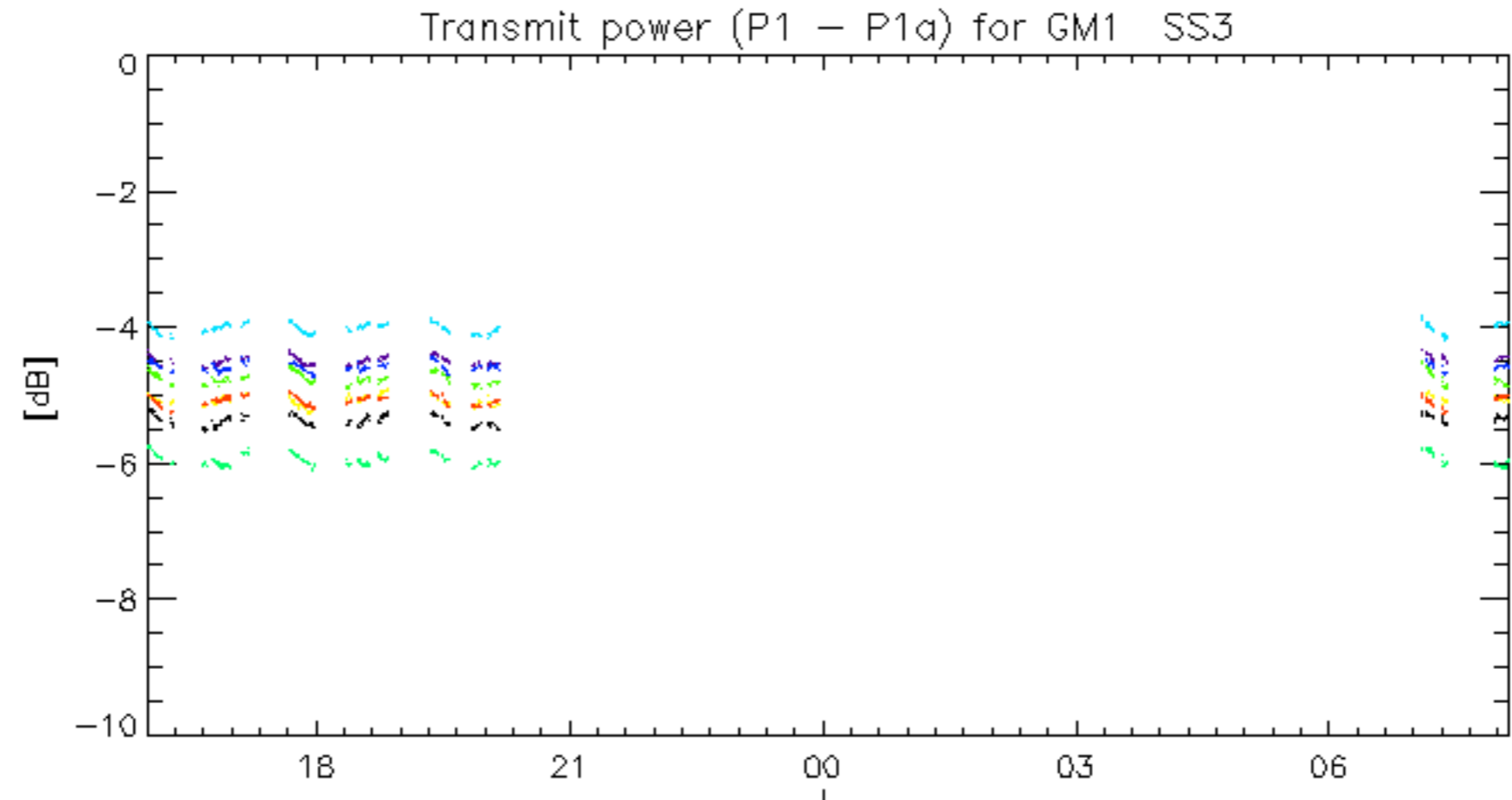
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines



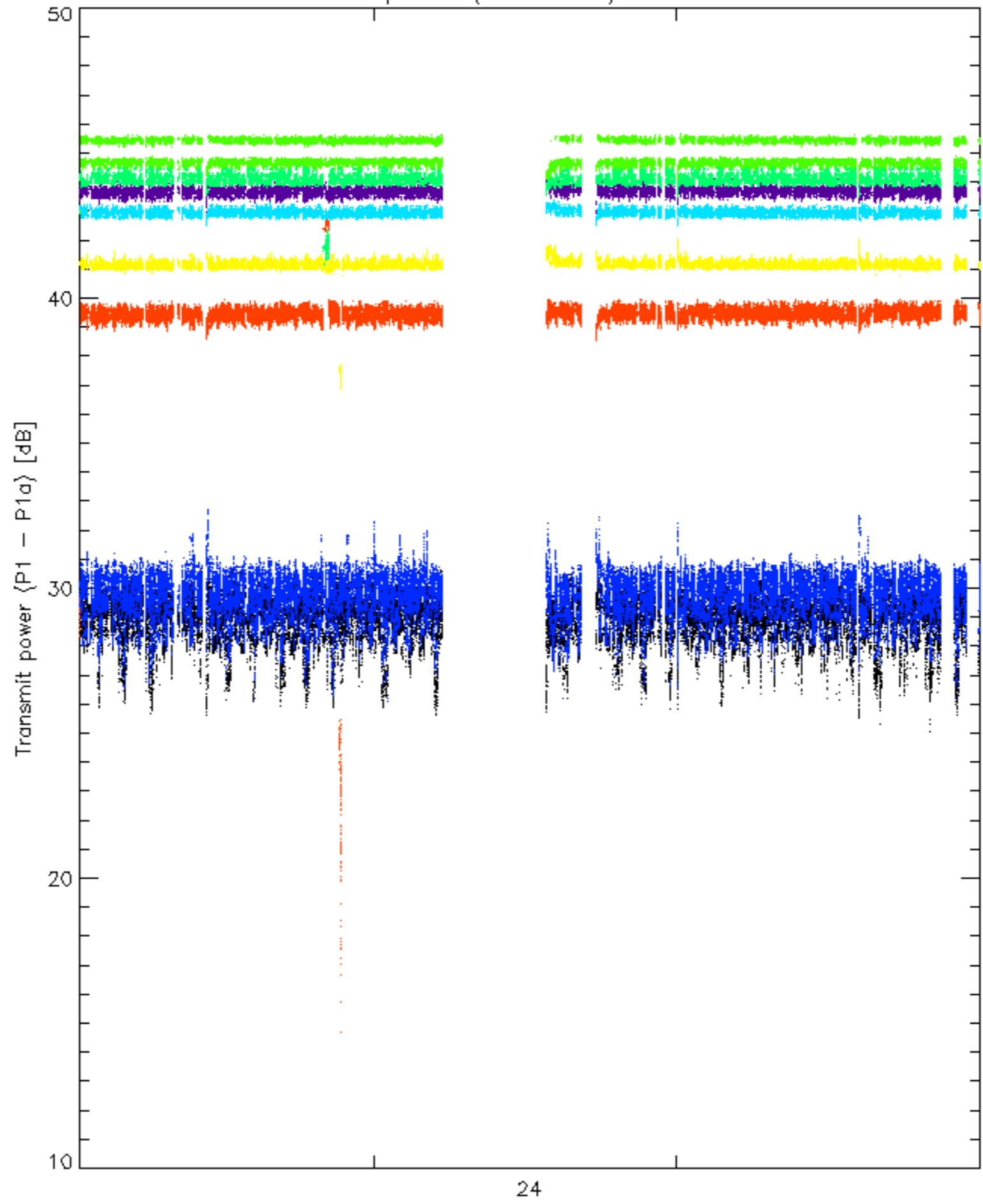




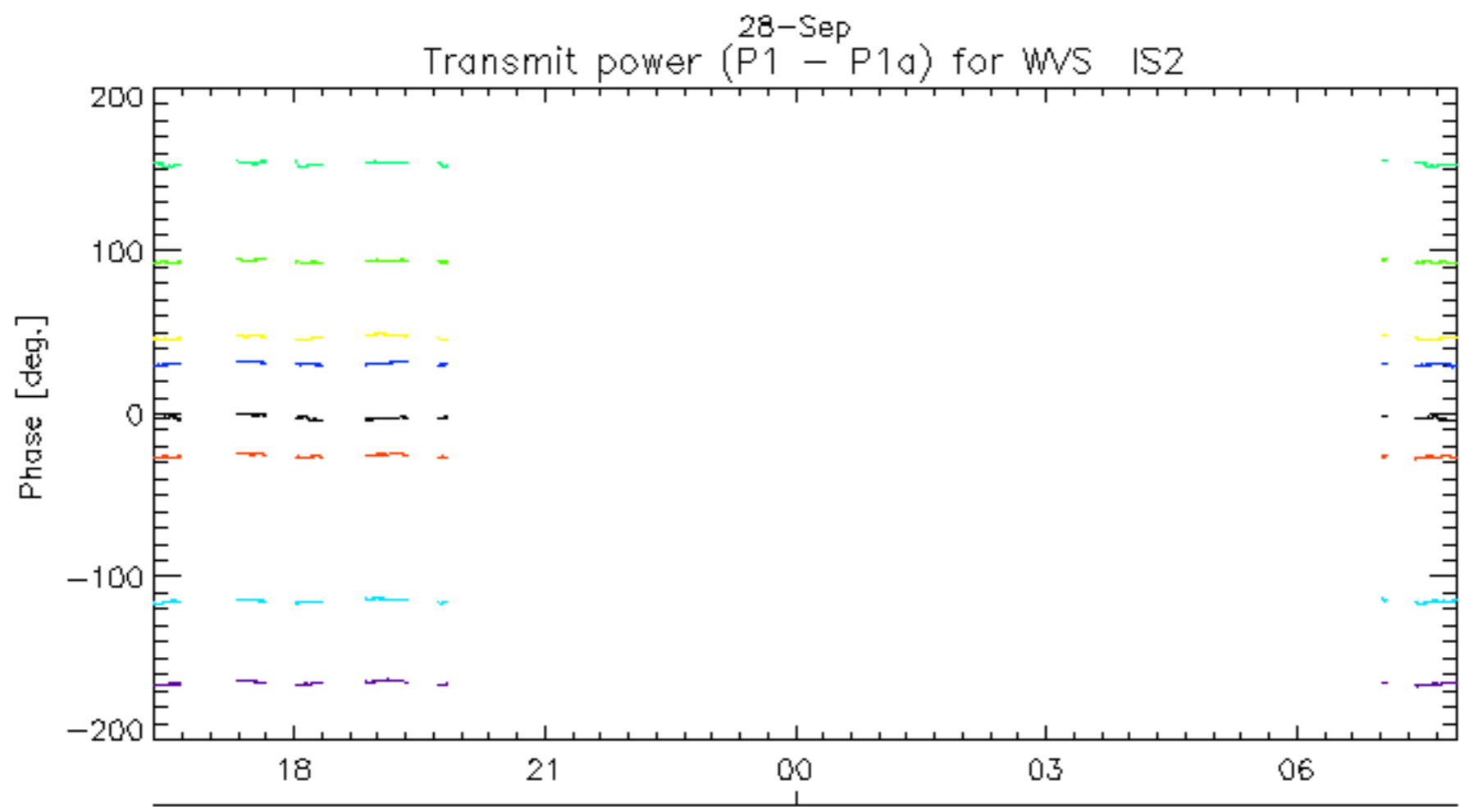
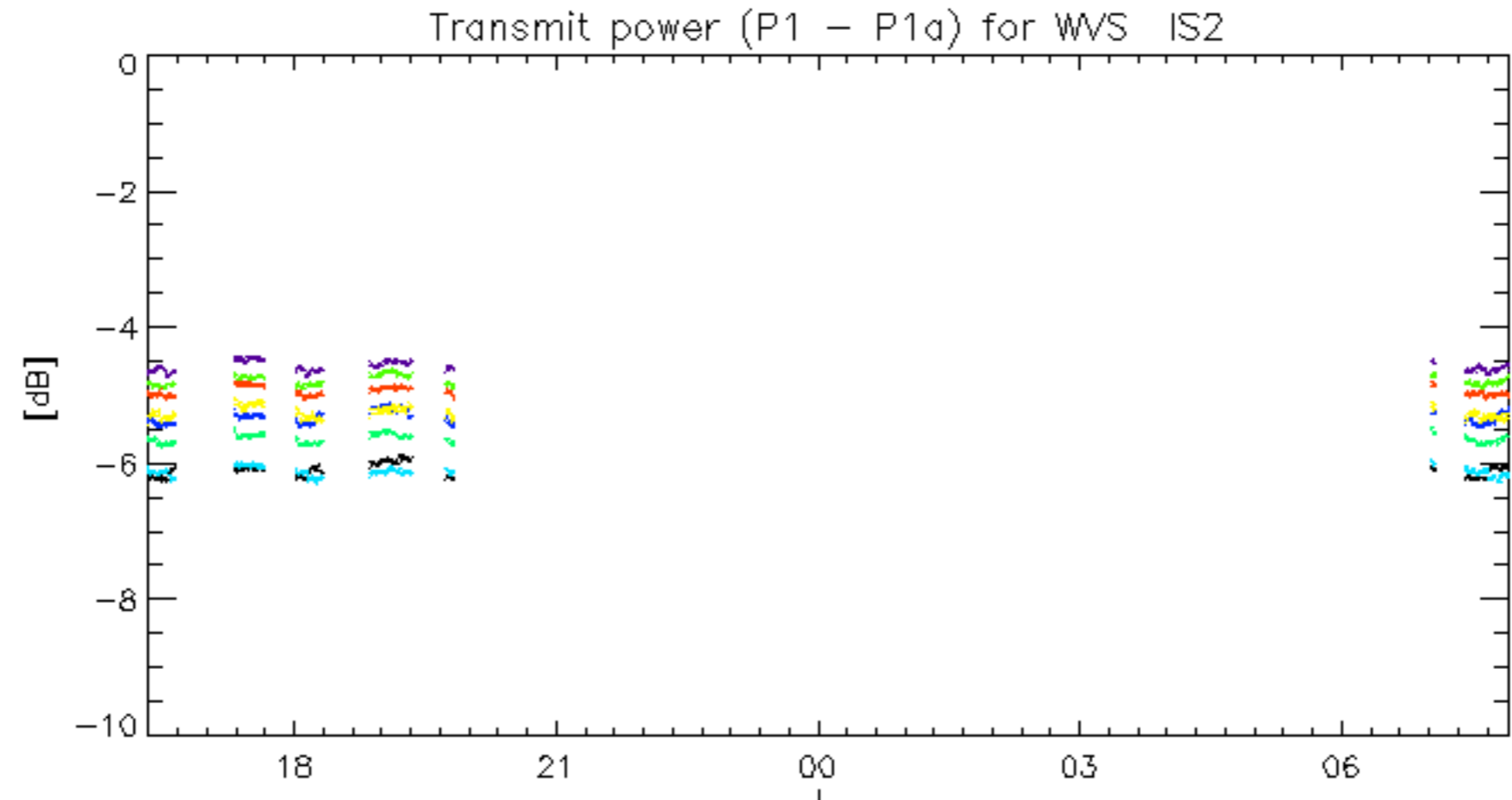


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.