

PRELIMINARY REPORT OF 060921

last update on Thu Sep 21 16:50:49 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 2006-09-20 00:00:00 to 2006-09-21 16:50:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	64	11	3	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	64	11	3	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	64	11	3	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	64	11	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	34	47	32	21	50
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	34	47	32	21	50
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	34	47	32	21	50
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	34	47	32	21	50

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	20060920 043733
H	20060919 050910

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

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	-3.941180	0.009825	-0.004312
7	P1	-3.050670	0.011635	-0.076498
11	P1	-4.055817	0.018359	-0.031189
15	P1	-6.182708	0.015564	-0.006341
19	P1	-3.523938	0.050078	-0.064859
22	P1	-4.570680	0.027766	-0.061565
26	P1	-3.951303	0.019148	-0.050135
30	P1	-5.799345	0.152601	-0.086384
3	P1	-16.598679	0.254116	-0.105982
7	P1	-16.810909	0.626398	-1.331561
11	P1	-16.792910	0.346071	-0.056220
15	P1	-12.901237	0.104363	0.146009
19	P1	-14.629733	0.457815	-0.149827
22	P1	-15.692265	0.556184	0.071138
26	P1	-15.221545	0.203358	-0.040615
30	P1	-16.936642	0.395459	-0.017345

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.822208	0.083278	0.041282
7	P2	-21.857822	0.095656	0.048962
11	P2	-15.747659	0.106215	-0.009653
15	P2	-7.090208	0.098760	-0.006074
19	P2	-9.118955	0.091153	-0.025831
22	P2	-18.122515	0.086689	-0.002630
26	P2	-16.408583	0.093855	-0.045192
30	P2	-19.470968	0.089943	-0.008089

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.179614	0.004958	-0.022771
7	P3	-8.179614	0.004958	-0.022771
11	P3	-8.179614	0.004958	-0.022771
15	P3	-8.179614	0.004958	-0.022771
19	P3	-8.179614	0.004958	-0.022771
22	P3	-8.179614	0.004958	-0.022771
26	P3	-8.179614	0.004958	-0.022771
30	P3	-8.179614	0.004958	-0.022771

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	-3.846965	0.009096	-0.041514
7	P1	-2.451258	0.066025	-0.435248
11	P1	-2.879270	0.022361	-0.051176
15	P1	-3.653191	0.028915	-0.039809
19	P1	-3.463490	0.078139	-0.036884
22	P1	-5.097588	0.035949	-0.054458
26	P1	-5.869121	0.023896	-0.005525
30	P1	-5.201903	0.077278	-0.046152
3	P1	-11.635721	0.046937	-0.027957
7	P1	-9.924369	0.079573	-0.395708
11	P1	-10.341351	0.062434	-0.105007
15	P1	-10.856616	0.151134	-0.012672
19	P1	-15.685946	3.572387	-0.053927
22	P1	-20.804619	1.716088	-0.170175

26	P1	-15.948523	0.395155	0.177264
30	P1	-18.056044	0.809896	-0.313458

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.412973	0.056026	0.071341
7	P2	-22.192881	0.088038	0.070186
11	P2	-10.899269	0.042669	0.020451
15	P2	-4.859255	0.037777	0.009980
19	P2	-6.848131	0.038379	-0.003202
22	P2	-8.156536	0.032989	0.013332
26	P2	-24.170708	0.052712	-0.015328
30	P2	-21.961109	0.042692	-0.011077

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.025031	0.003870	-0.033376
7	P3	-8.024885	0.003867	-0.033320
11	P3	-8.024886	0.003874	-0.033254
15	P3	-8.024961	0.003890	-0.033090
19	P3	-8.024978	0.003893	-0.033029
22	P3	-8.025031	0.003862	-0.033096
26	P3	-8.025093	0.003882	-0.033159
30	P3	-8.024920	0.003869	-0.033112

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	0.000546504
	stdev	1.79663e-07
MEAN Q	mean	0.000520033
	stdev	2.19596e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136098
	stdev	0.00114319
STDEV Q	mean	0.136450
	stdev	0.00116052



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006092[901]

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_1PNPDE20060920_001749_000001822051_00217_23818_6049.N1	1	0
ASA_IMM_1PNPDE20060920_015825_000001852051_00218_23819_6068.N1	1	0
ASA_IMM_1PNPDE20060920_234612_000001712051_00231_23832_6130.N1	1	0





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)

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

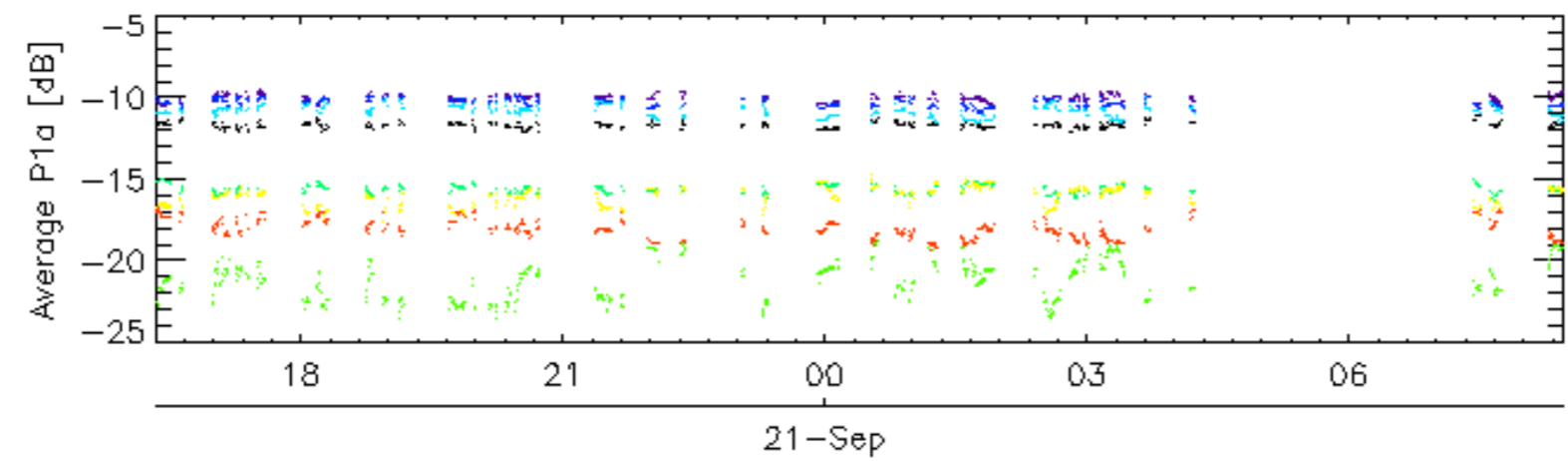
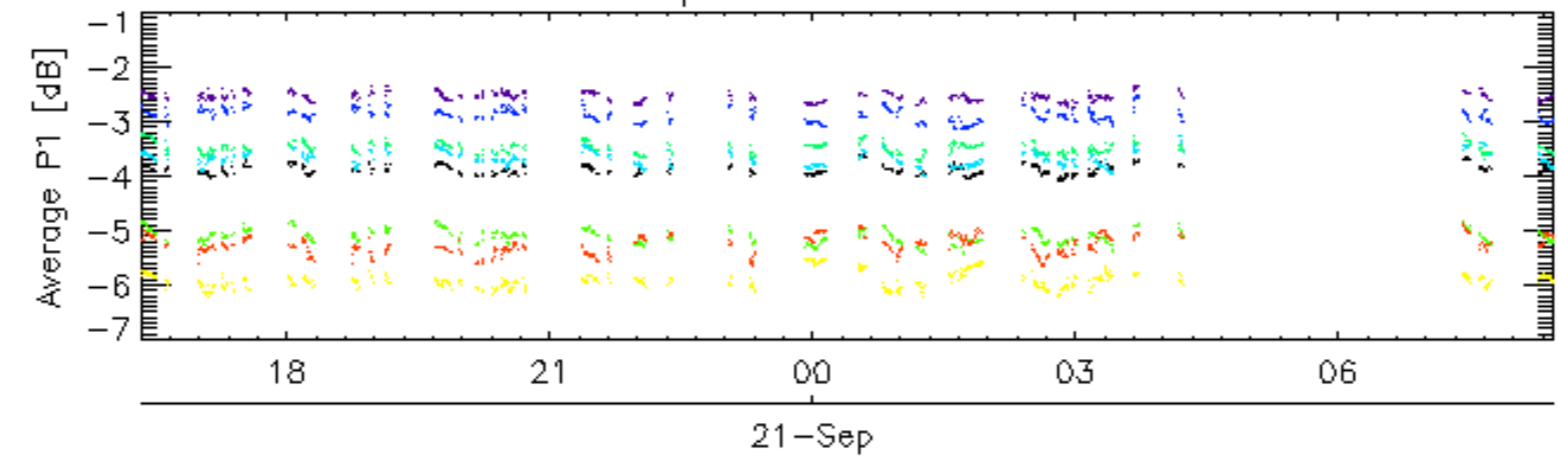
7.5 - Absolute Doppler for GM1

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

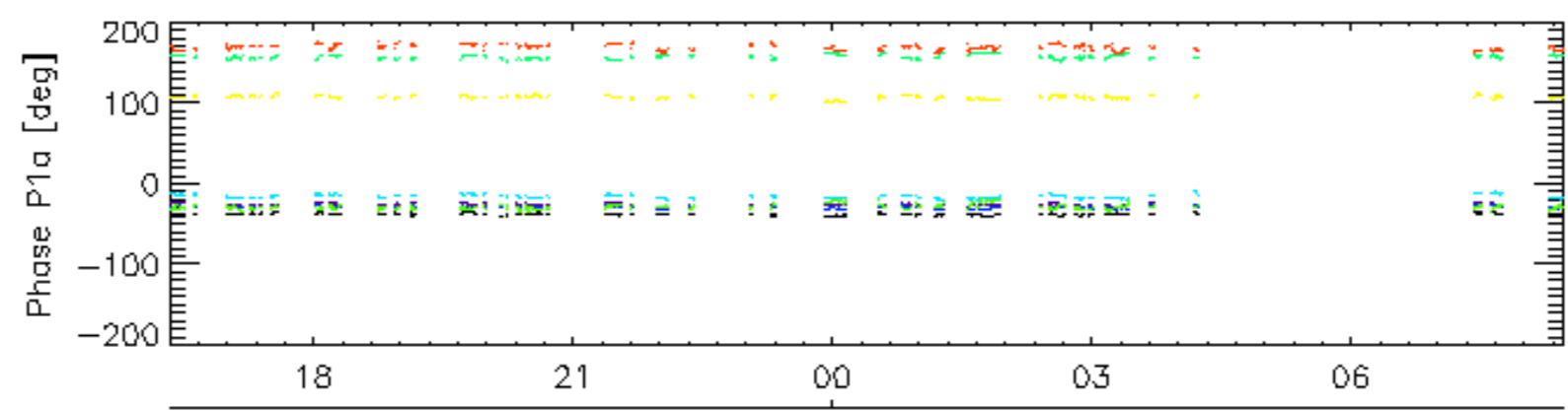
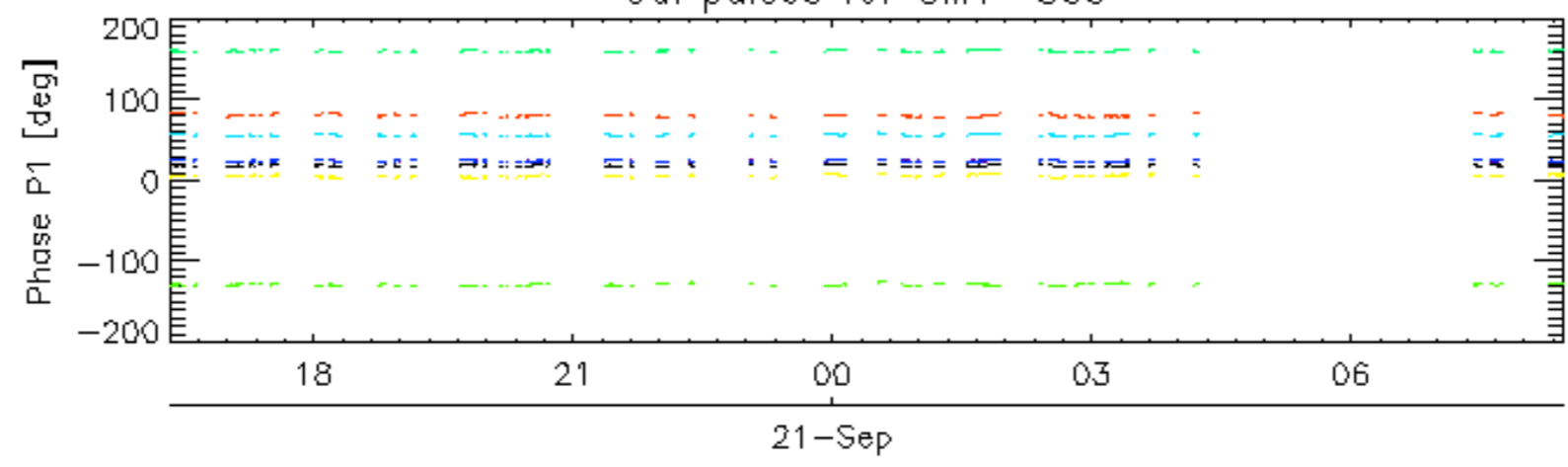
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

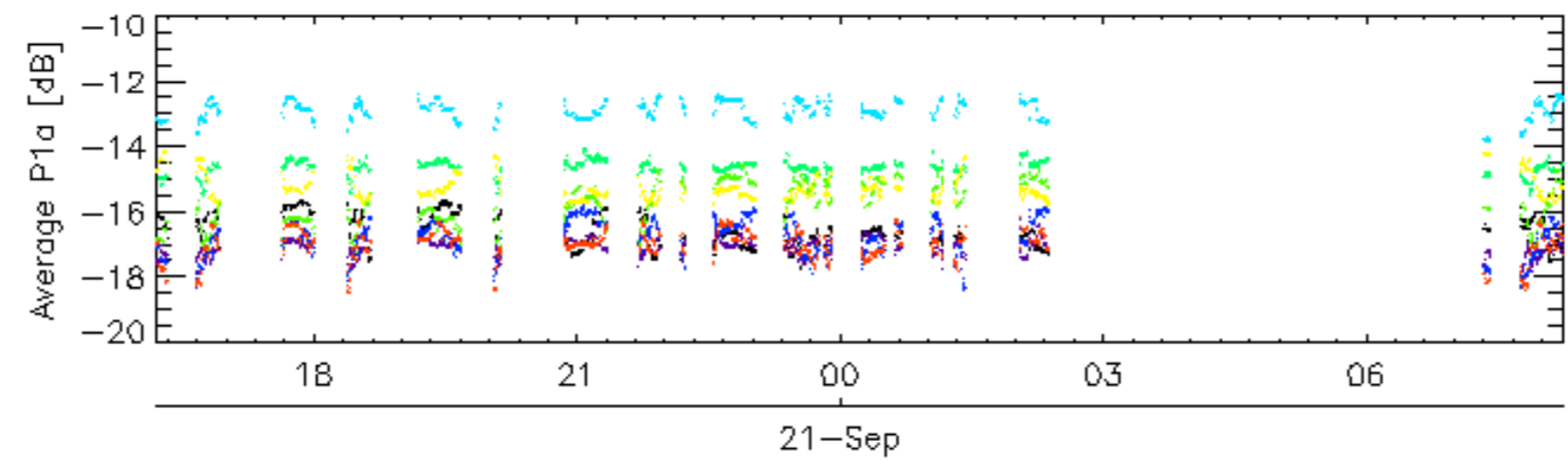
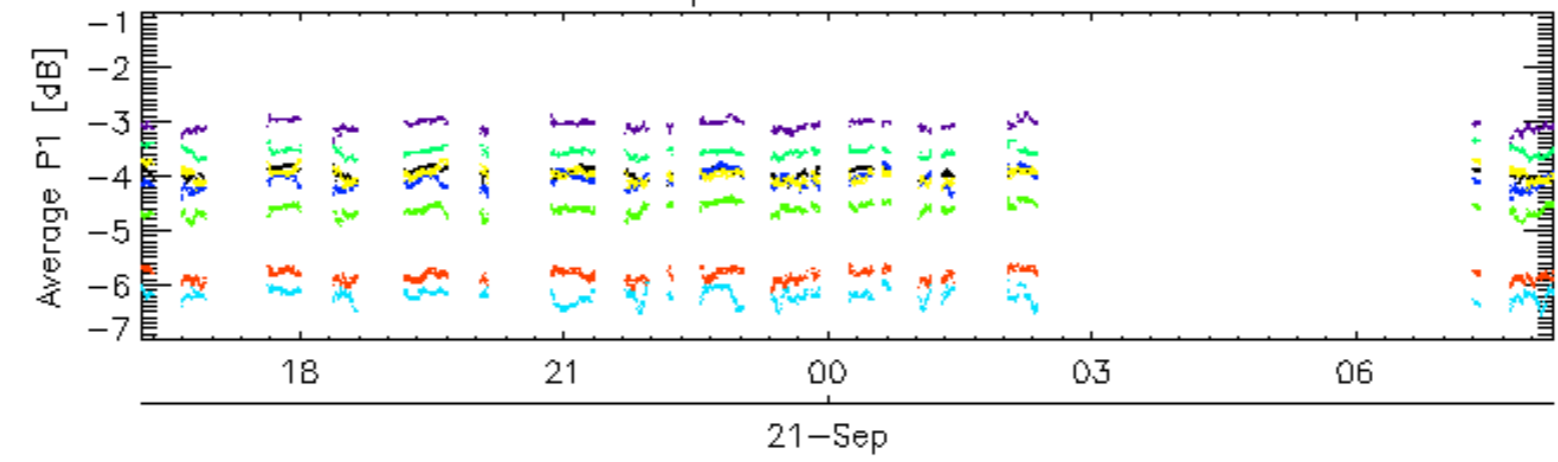


Cal pulses for GM1 SS3

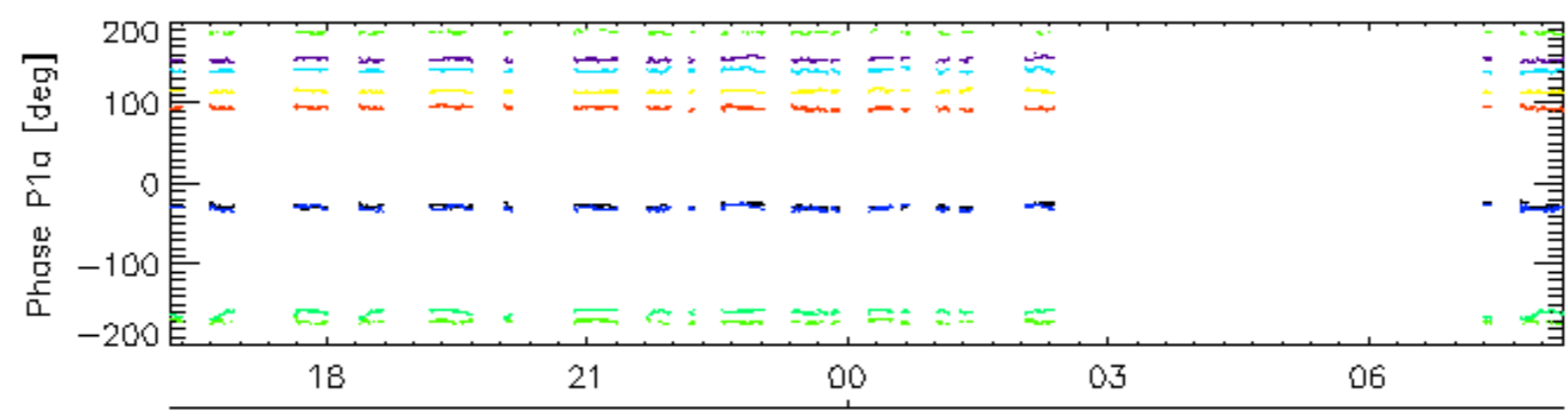
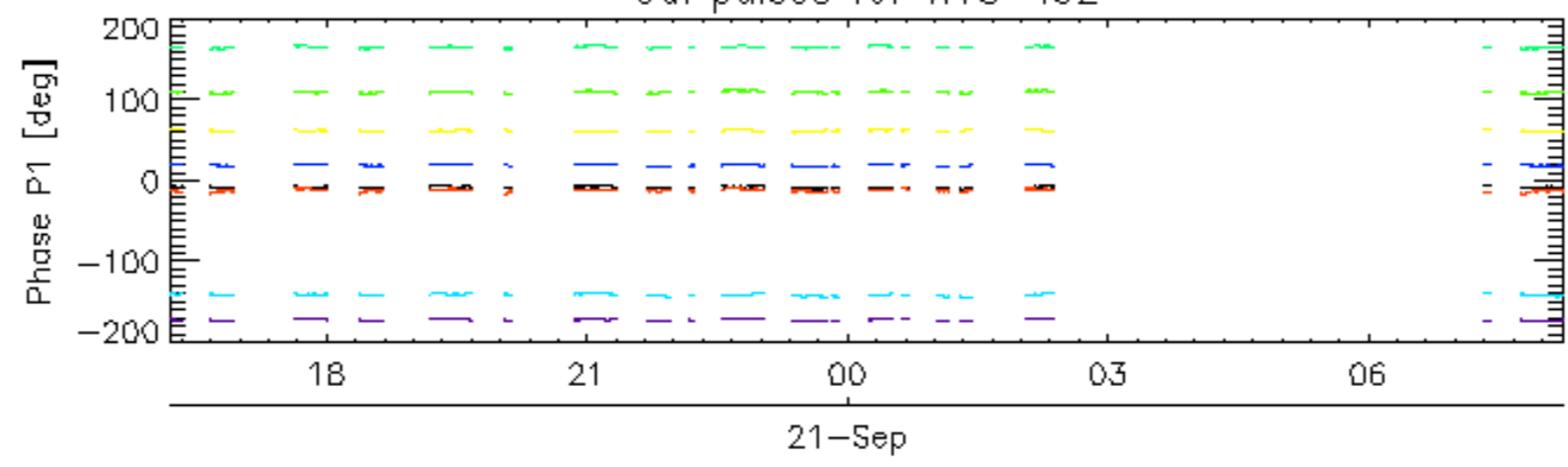


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

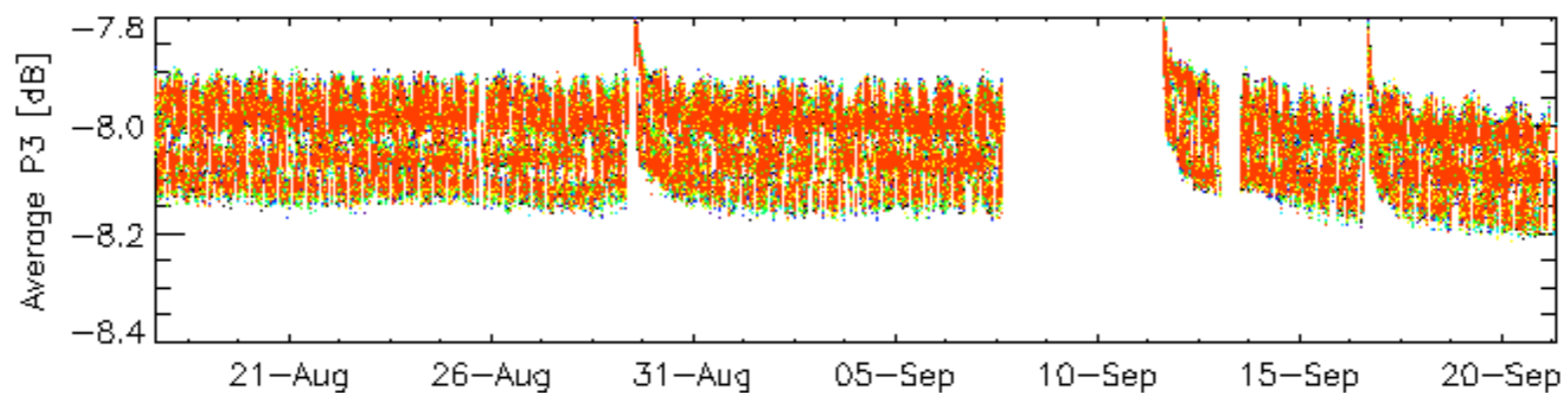
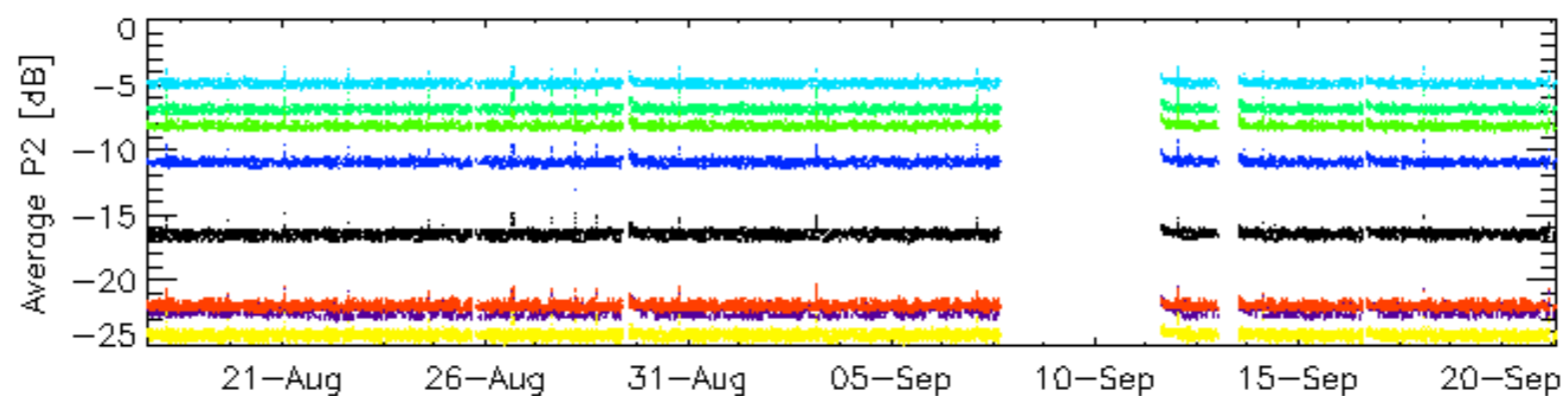
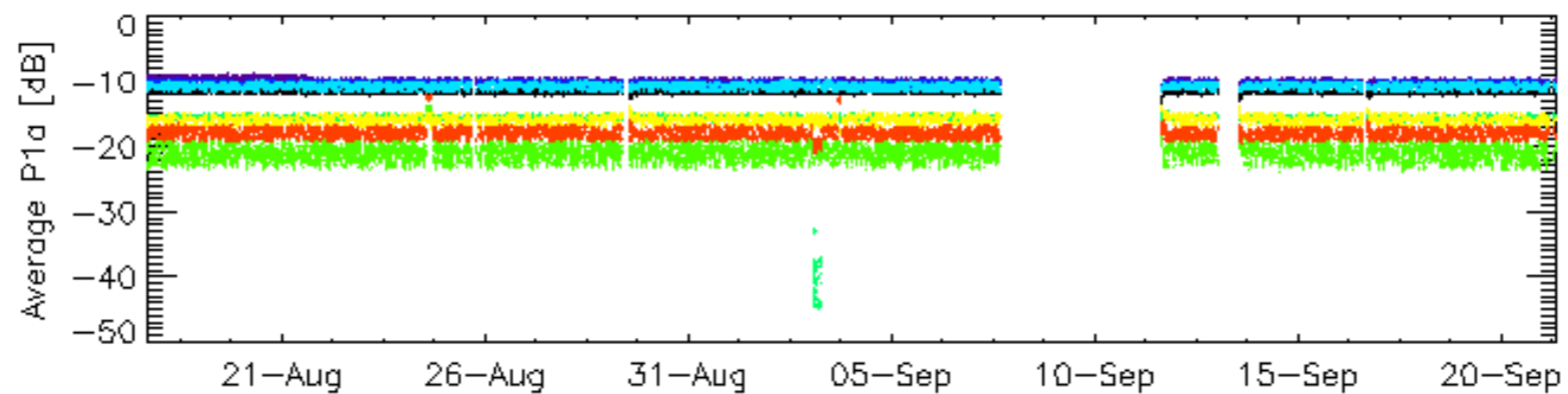
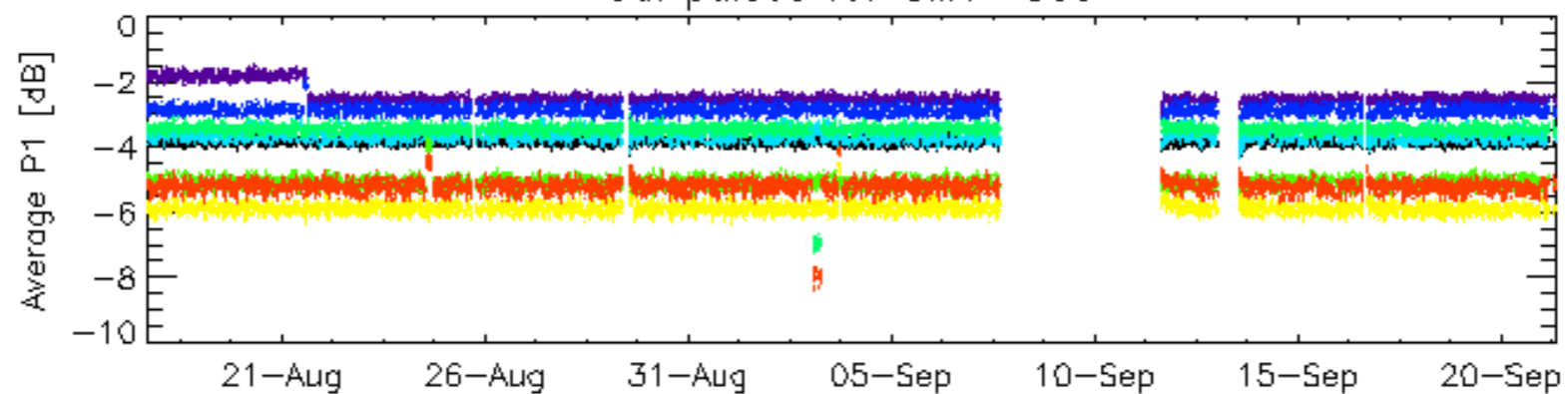


Cal pulses for WVS IS2



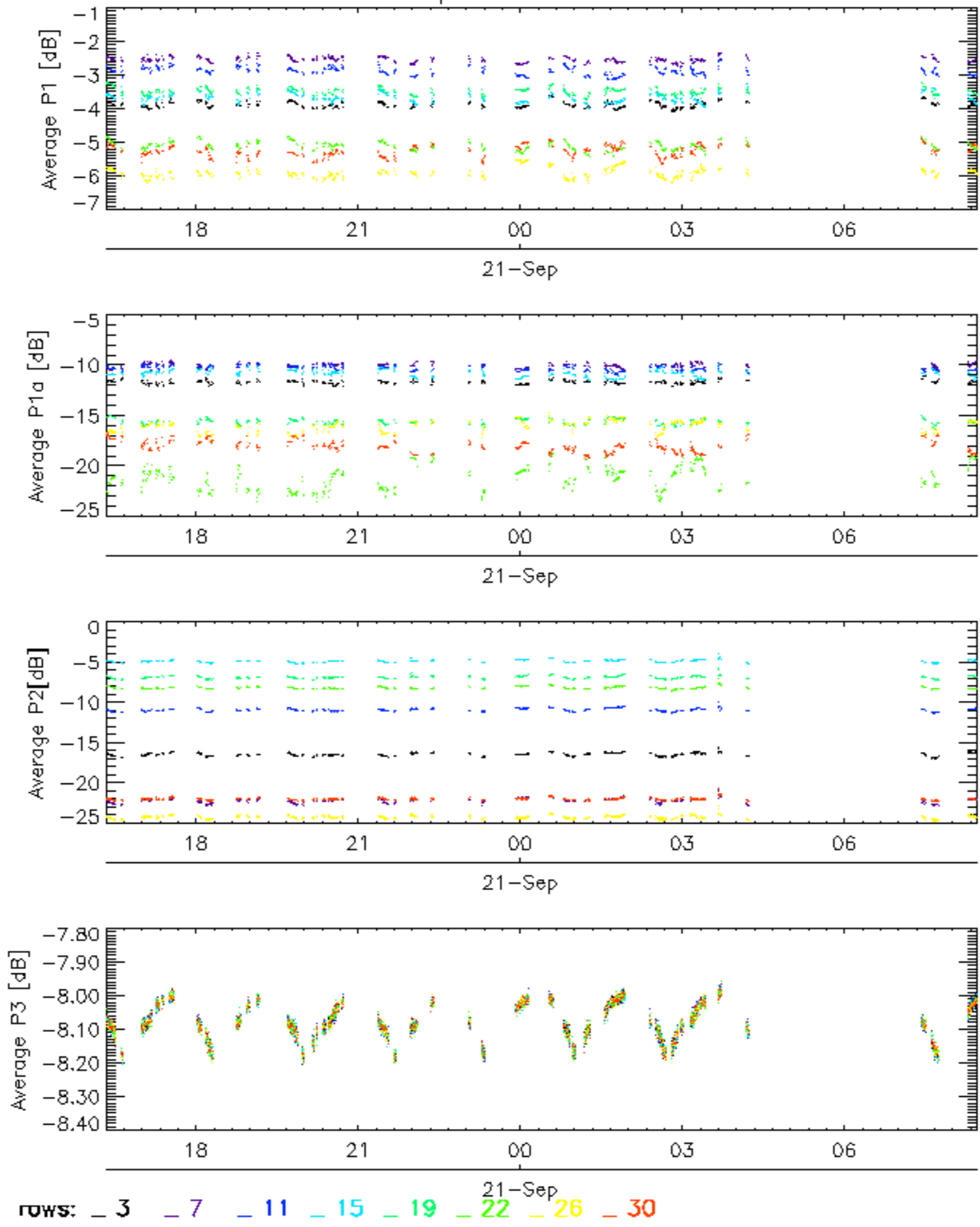
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

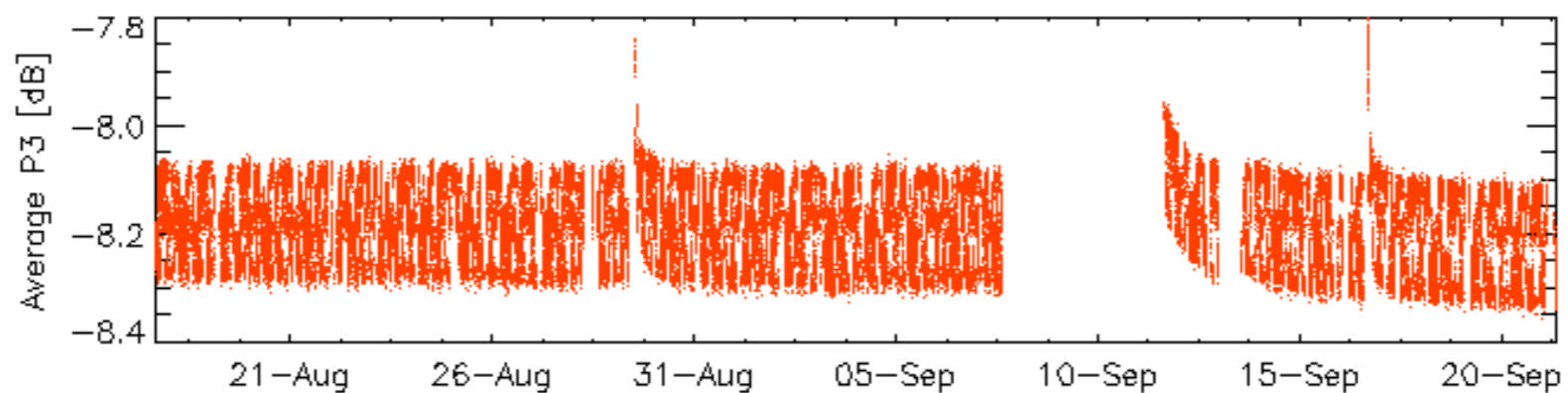
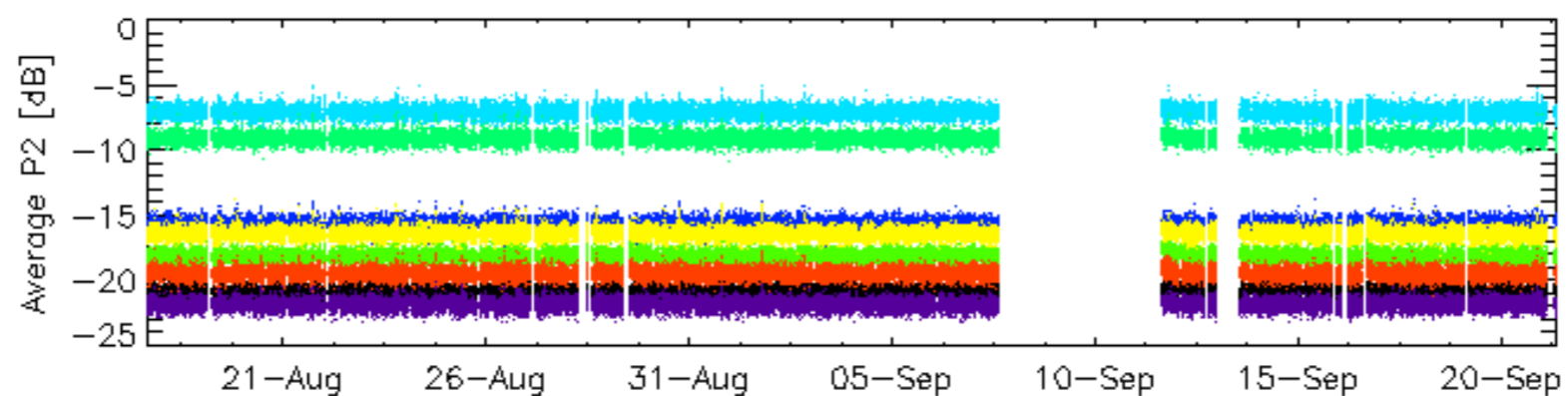
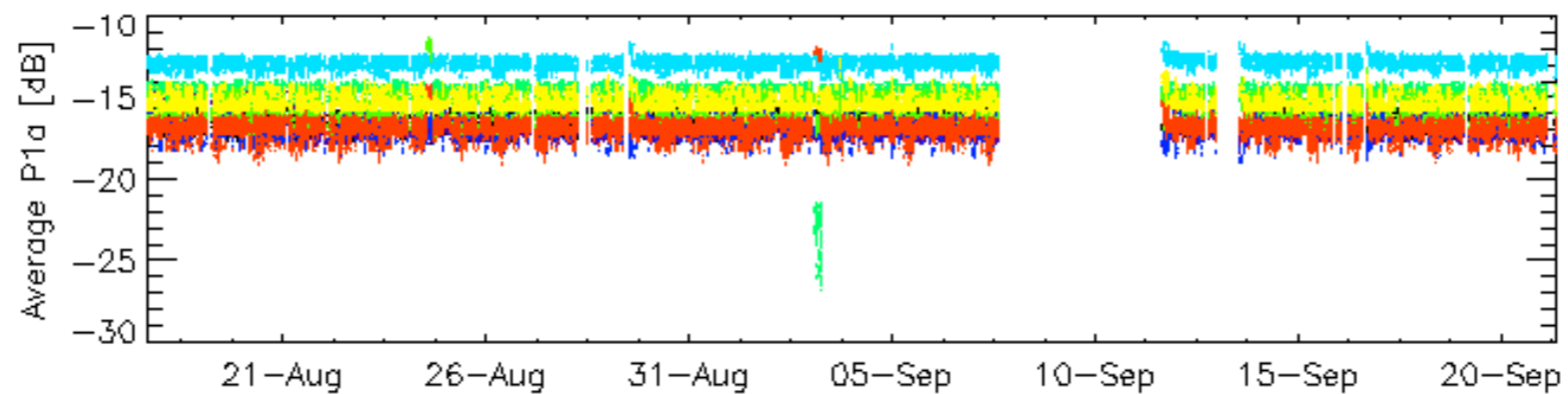
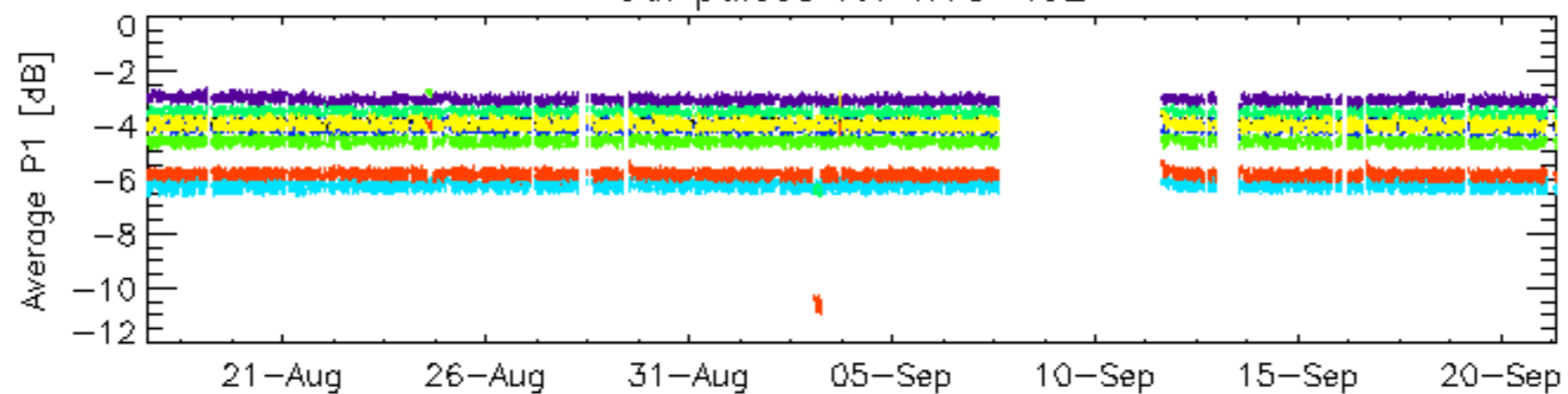


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

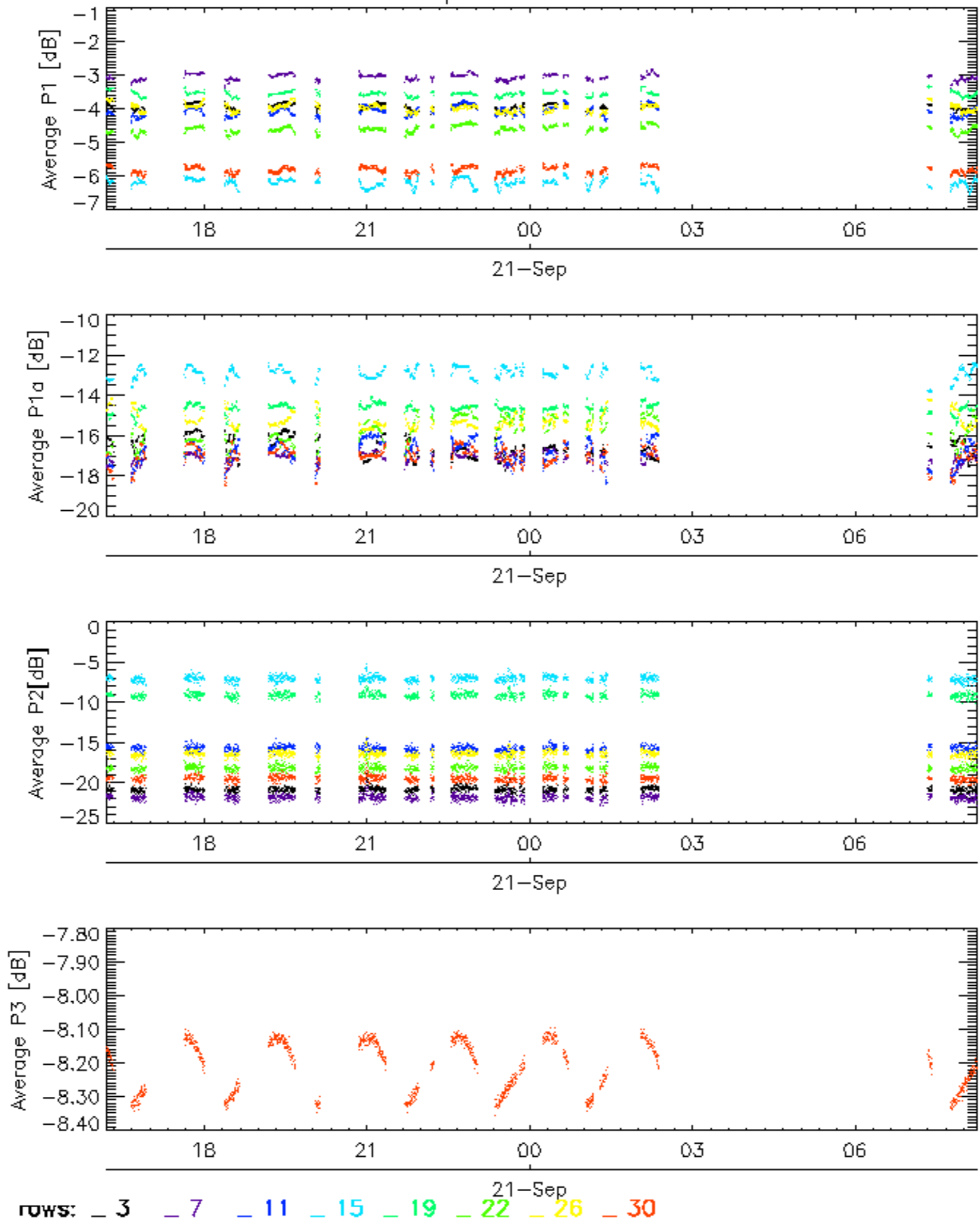


Cal pulses for WVS IS2



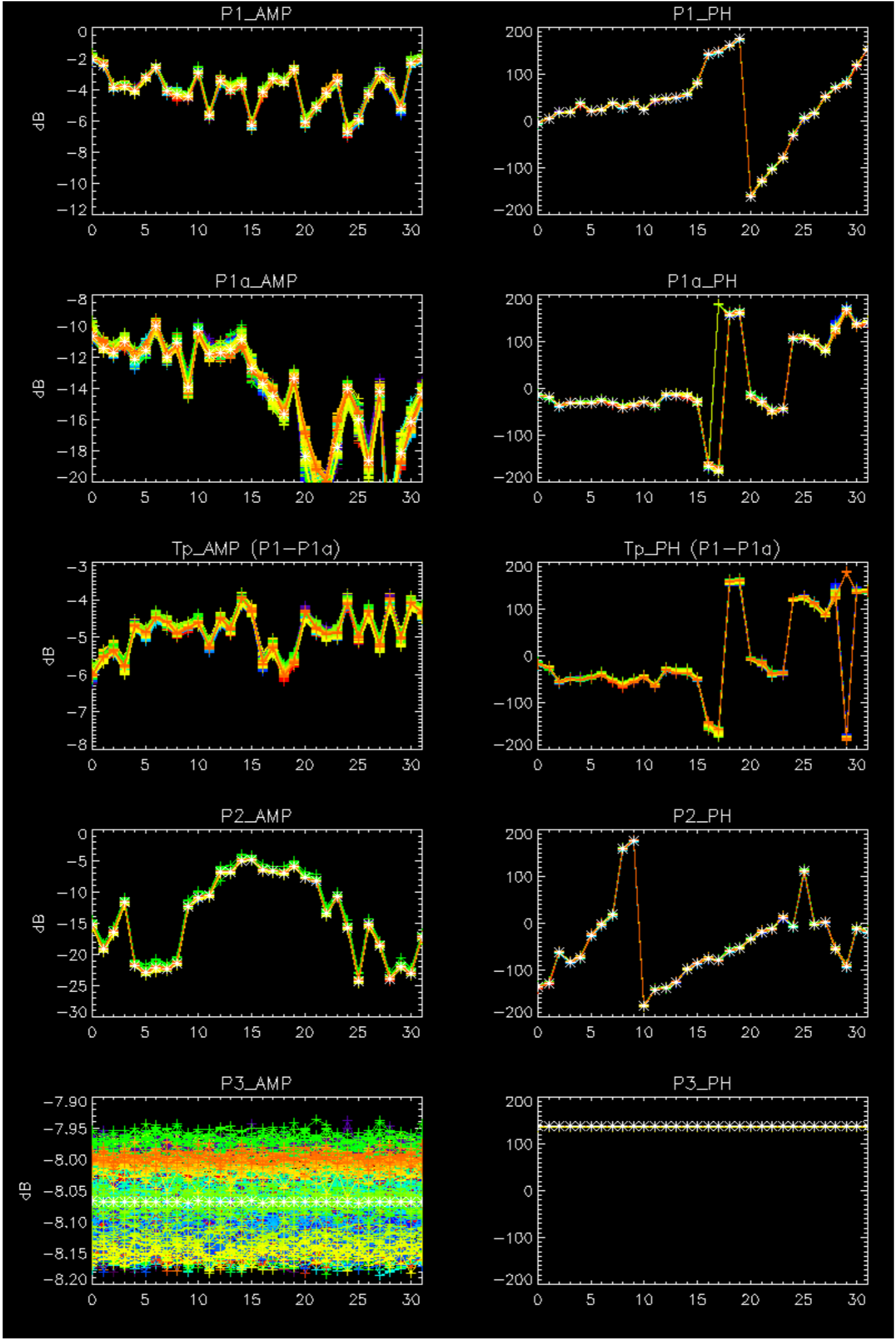
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

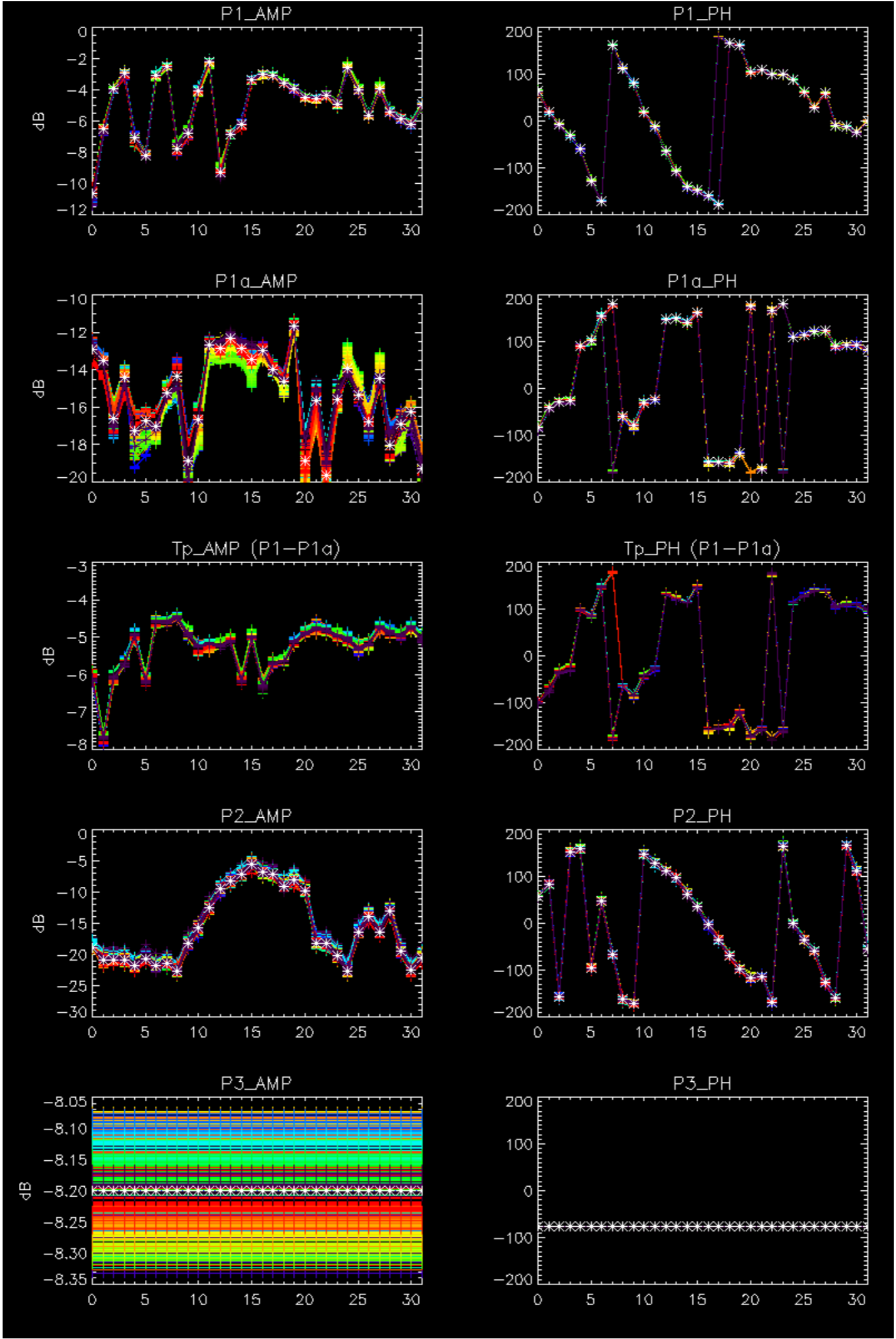
Cal pulses for WVS IS2



No anomalies observed on available browse products

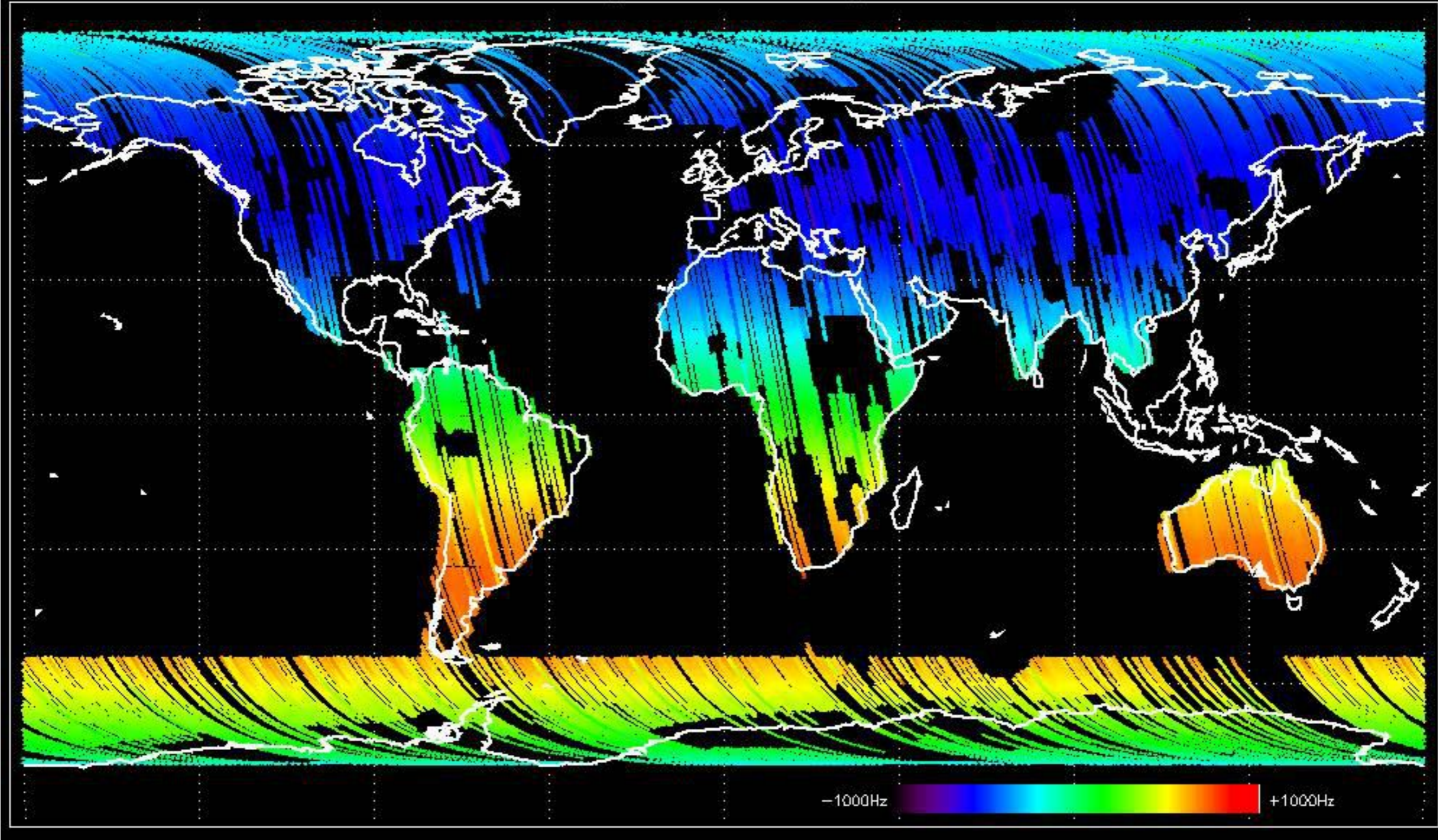
No anomalies observed.



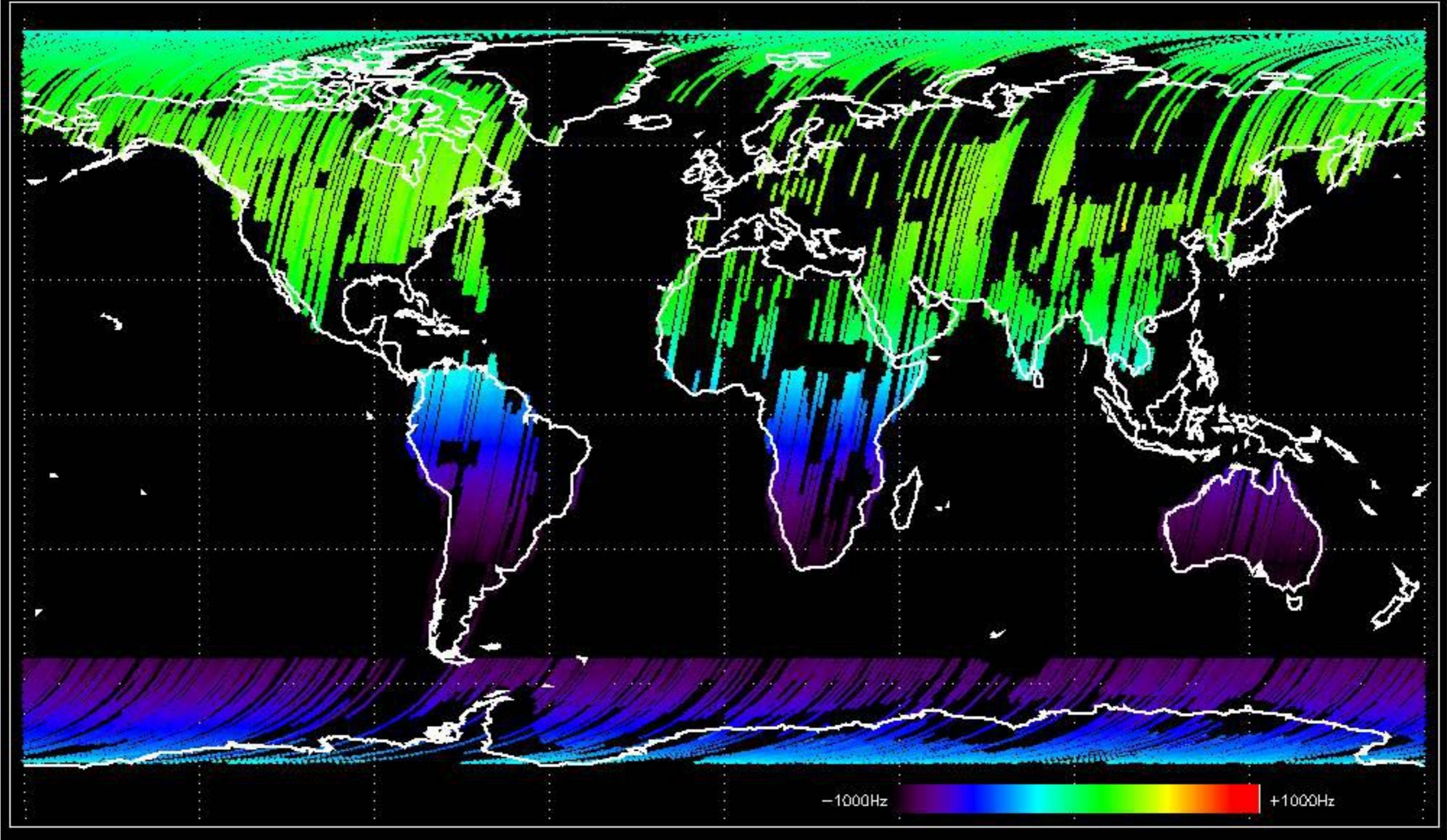


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

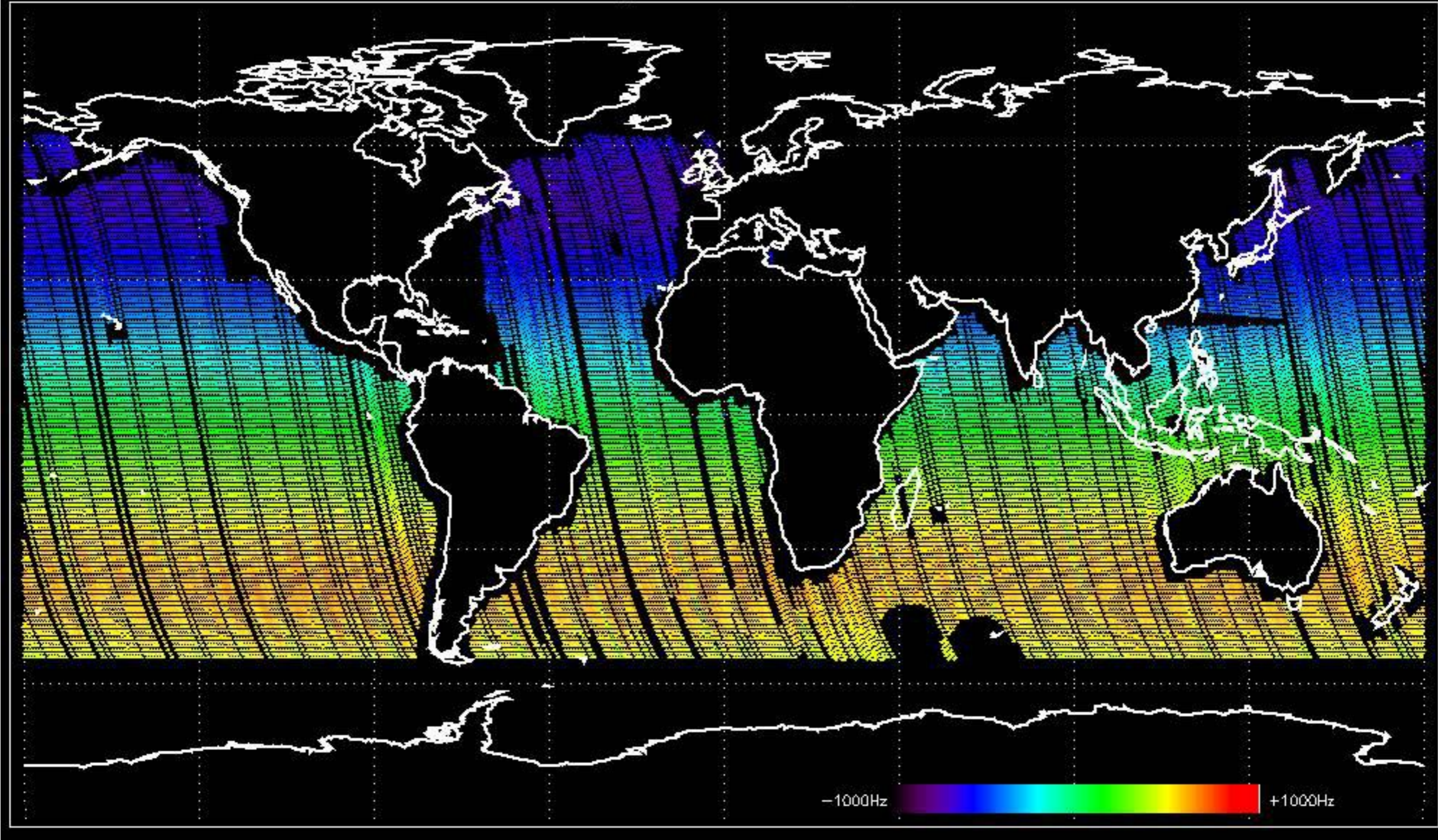
Doppler 'GM1' 'SS1' ascending



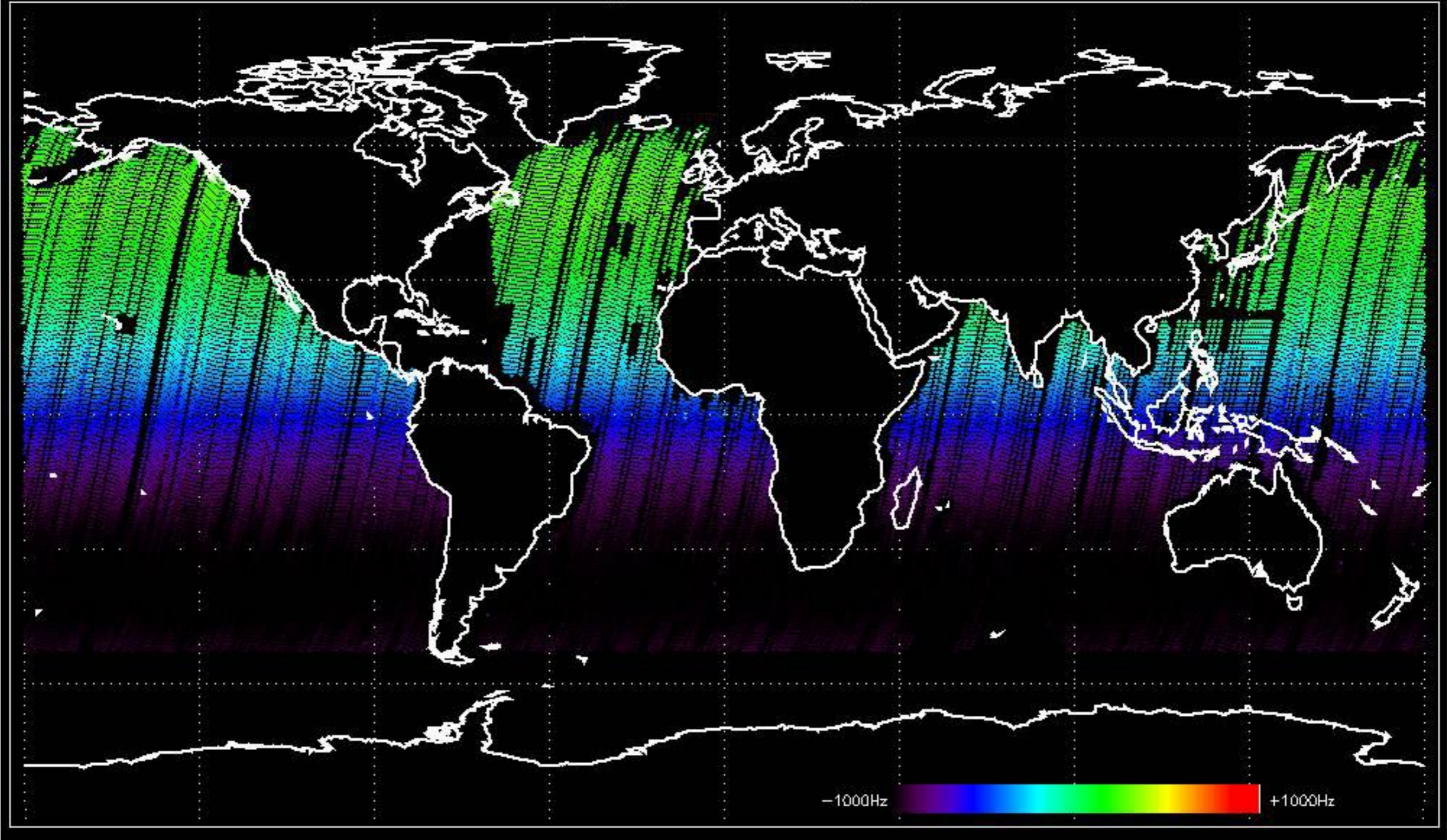
Doppler 'GM1' 'SS1' descending



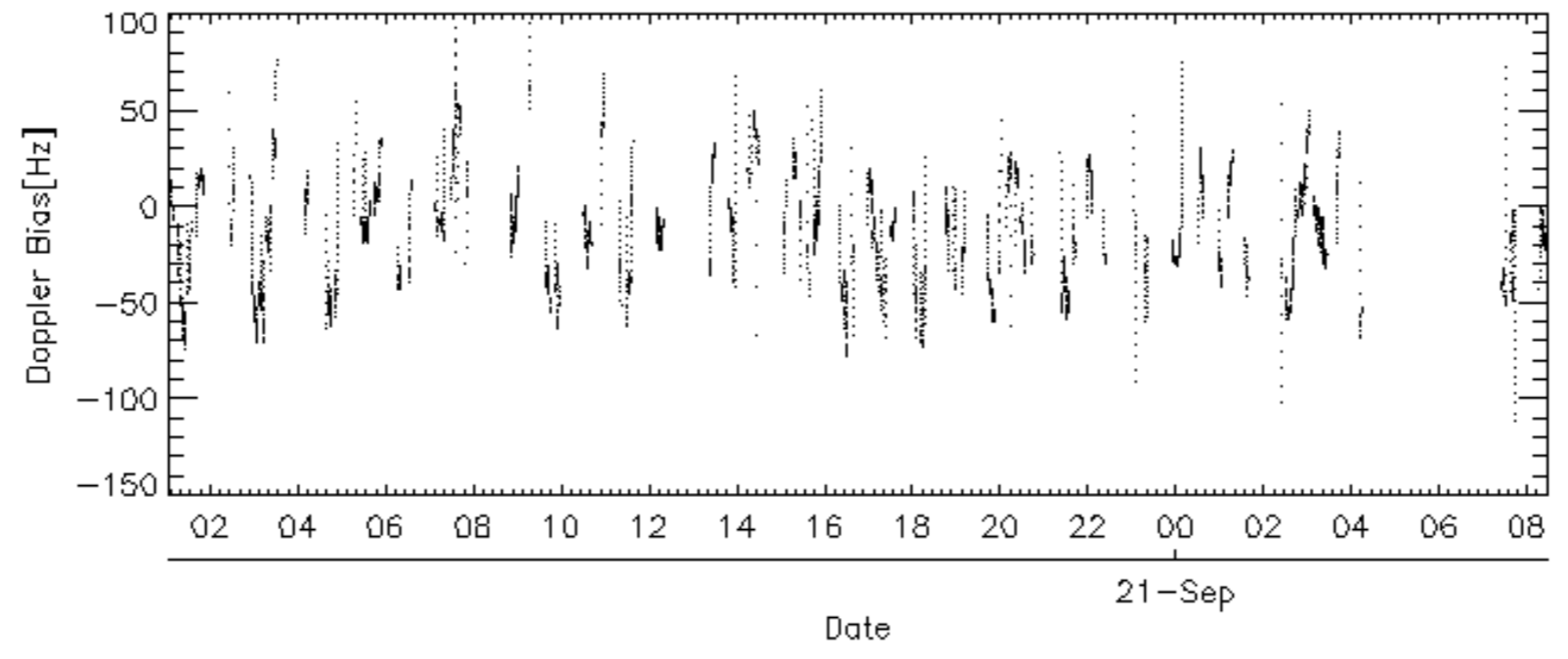
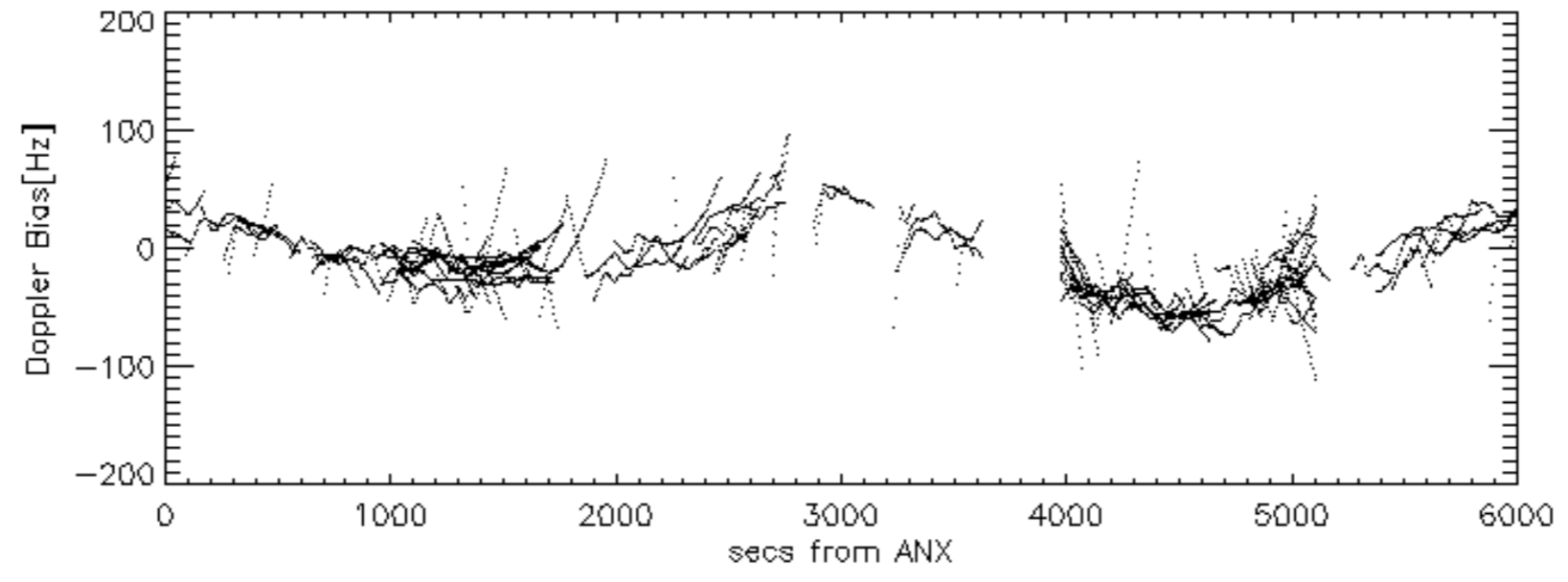
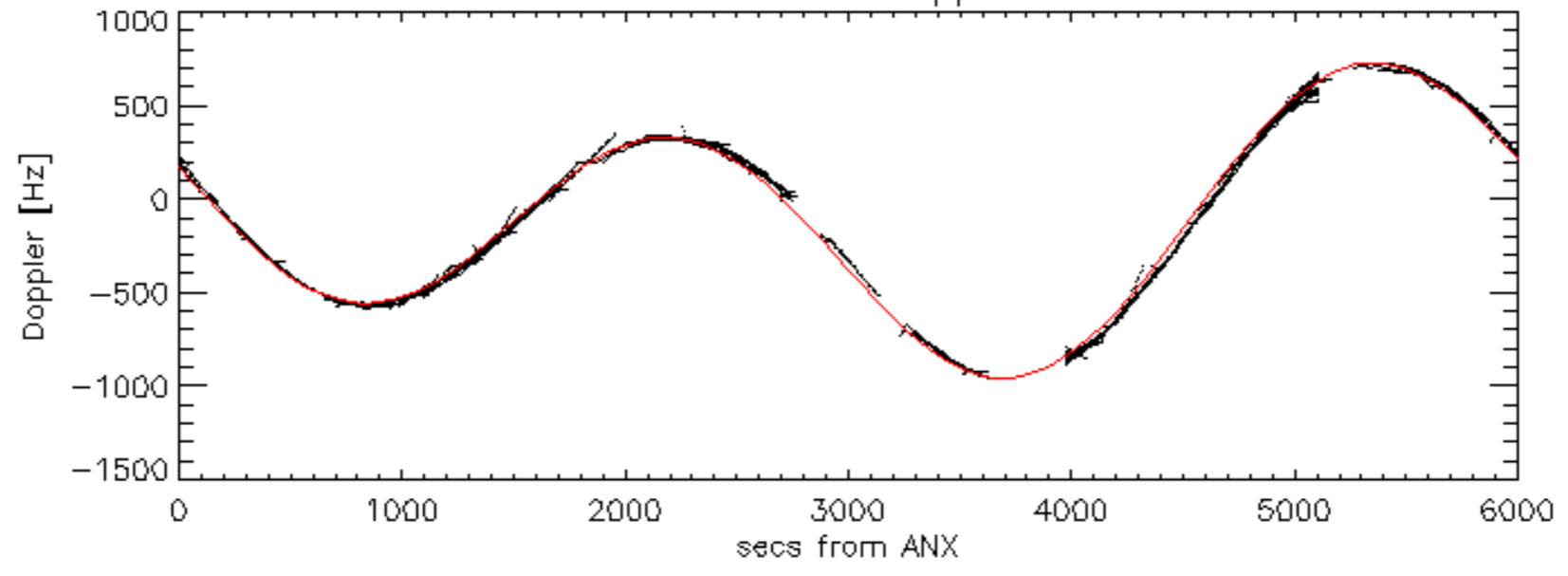
Doppler 'WVS' 'IS2' ascending

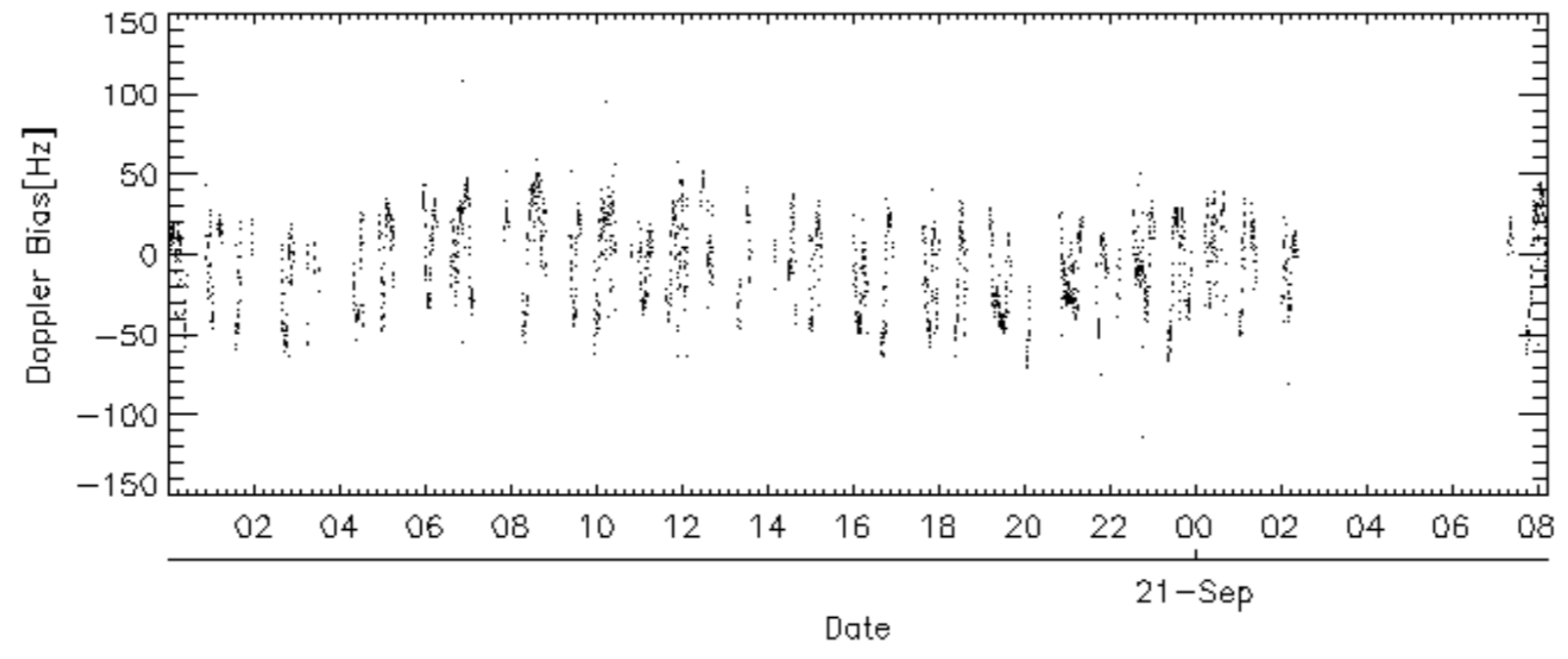
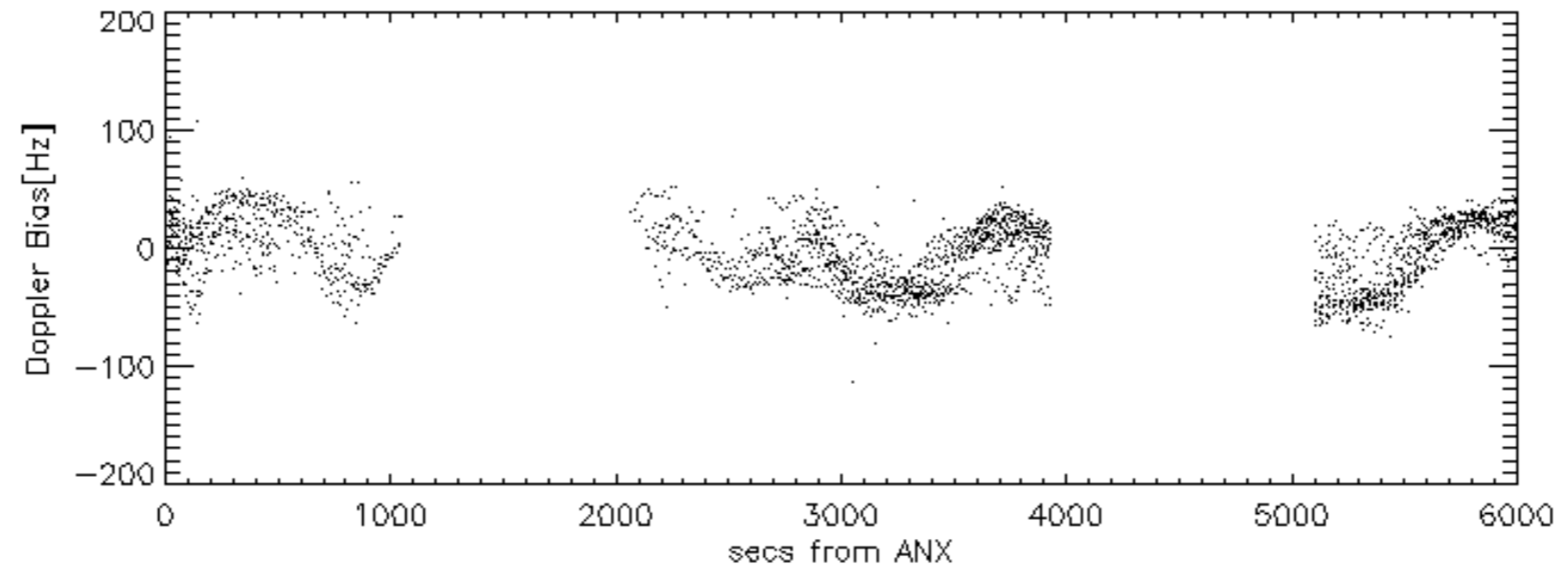
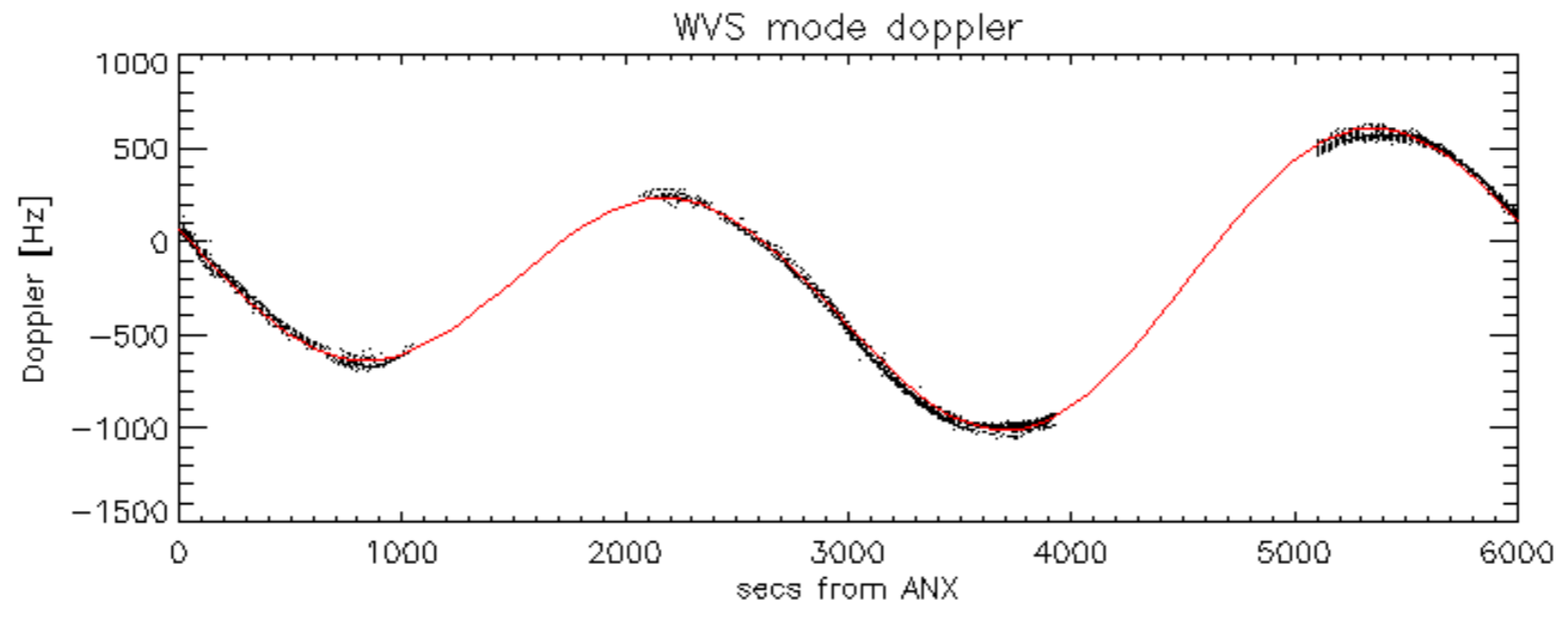


Doppler 'WVS' 'IS2' descending

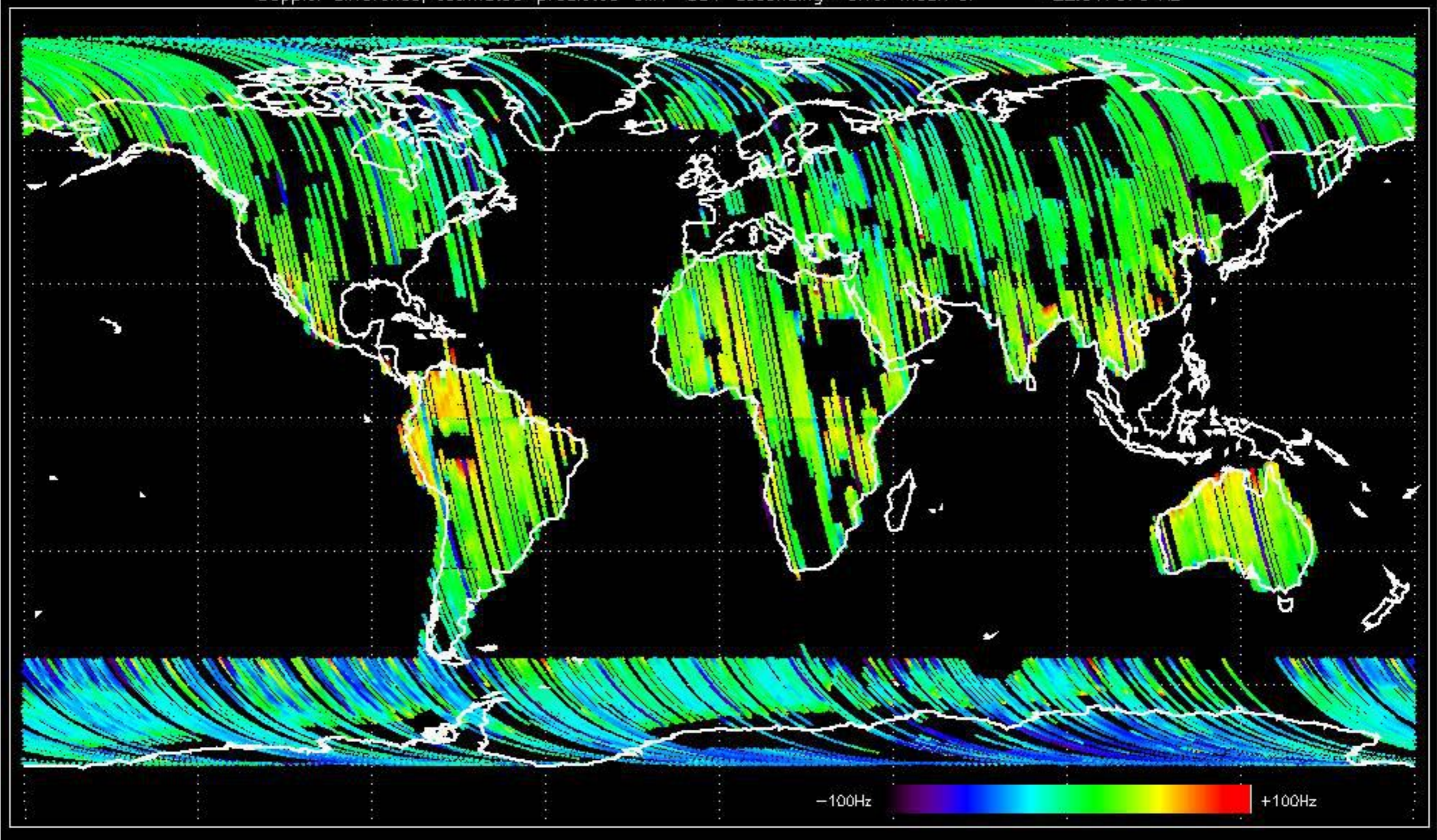


GM1 mode doppler

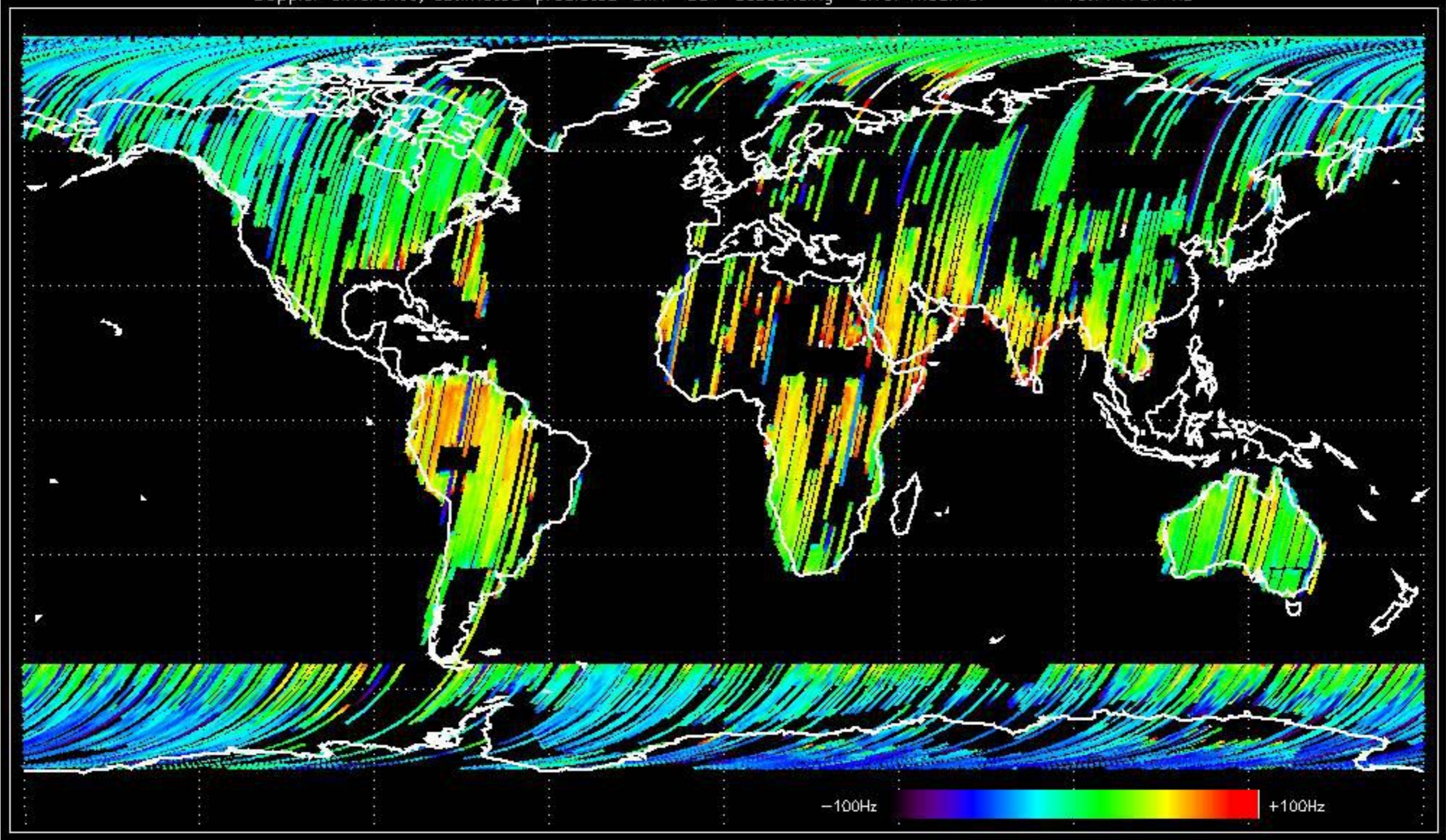




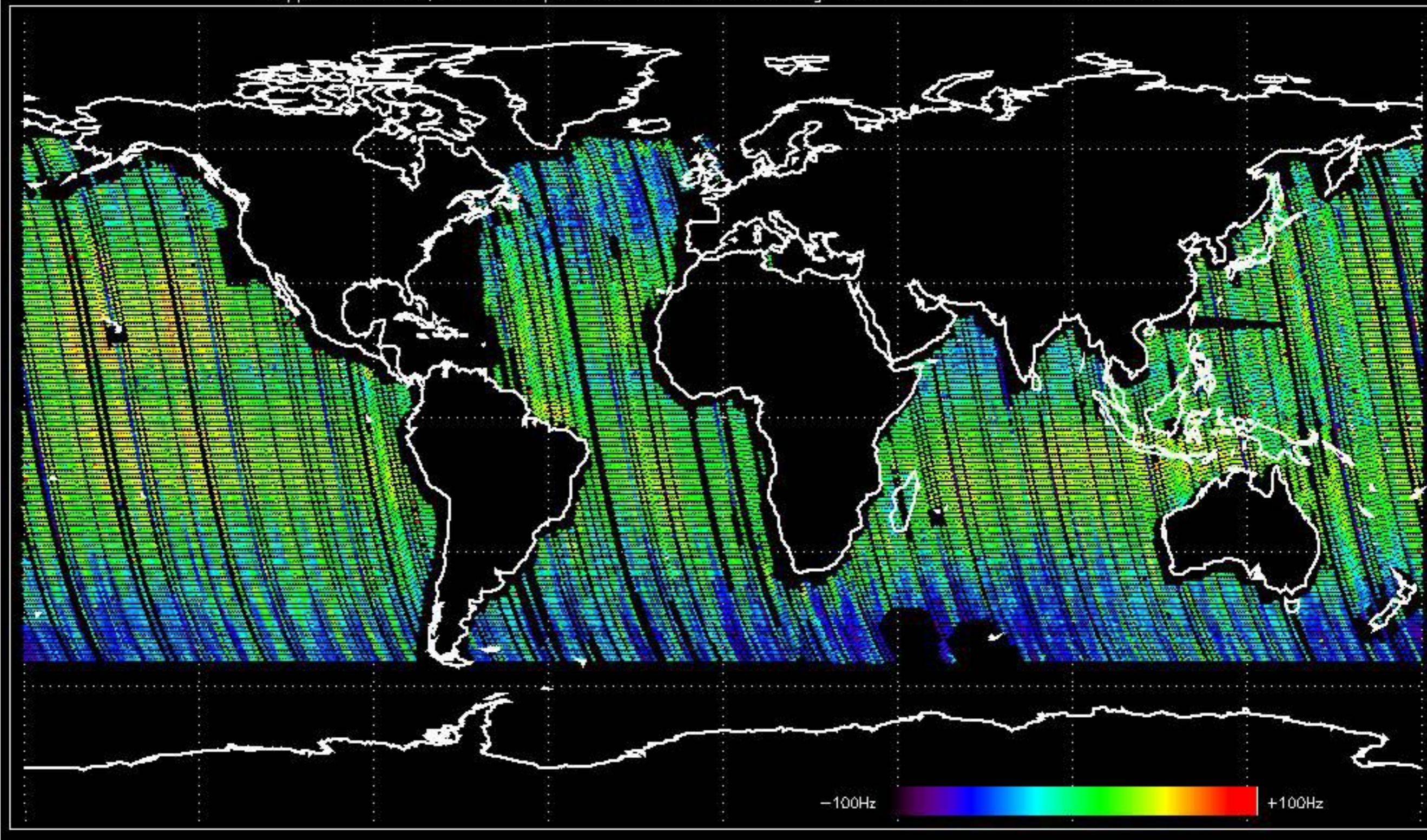
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -22.017870 Hz



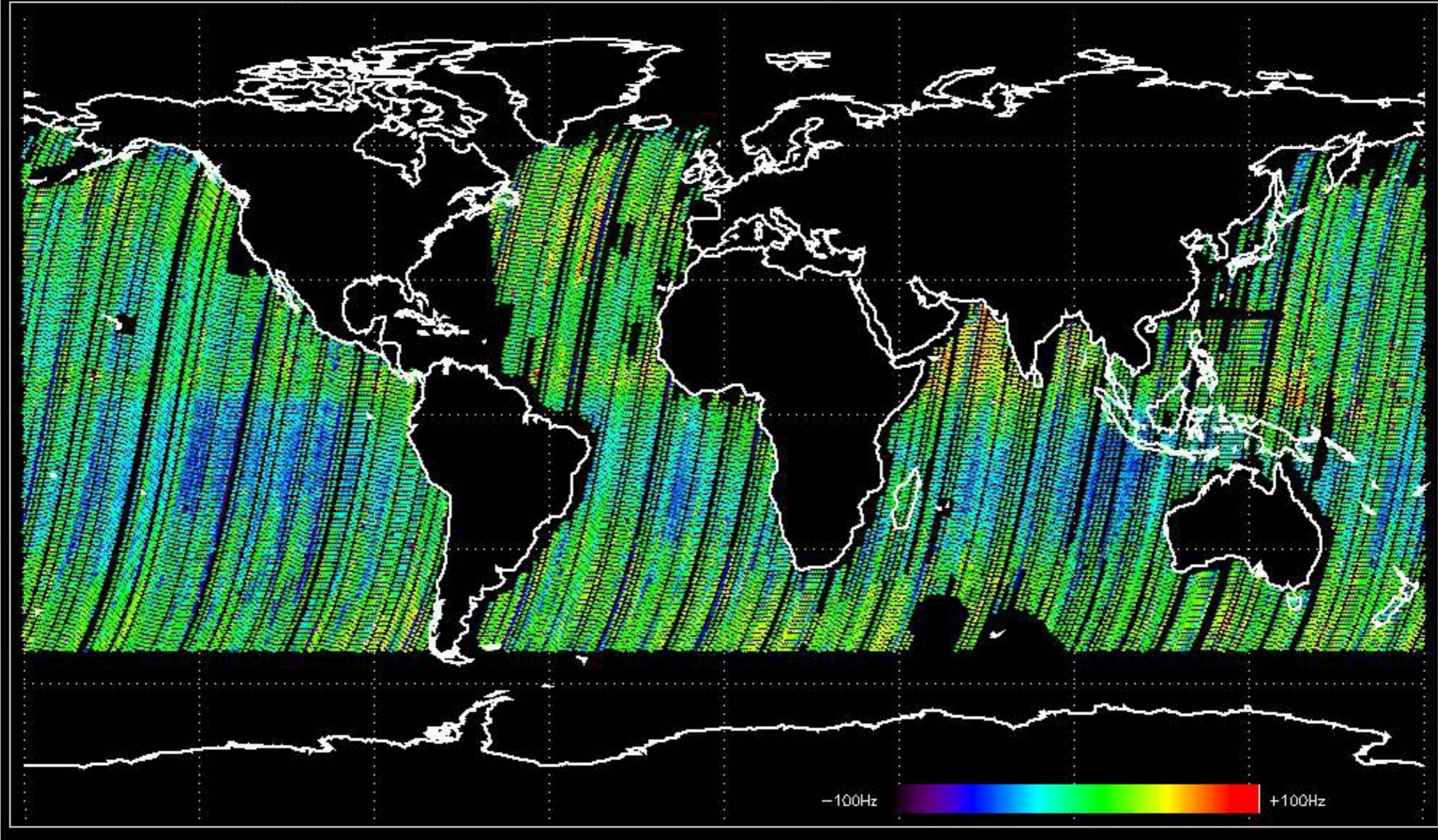
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.774707 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.002114 Hz

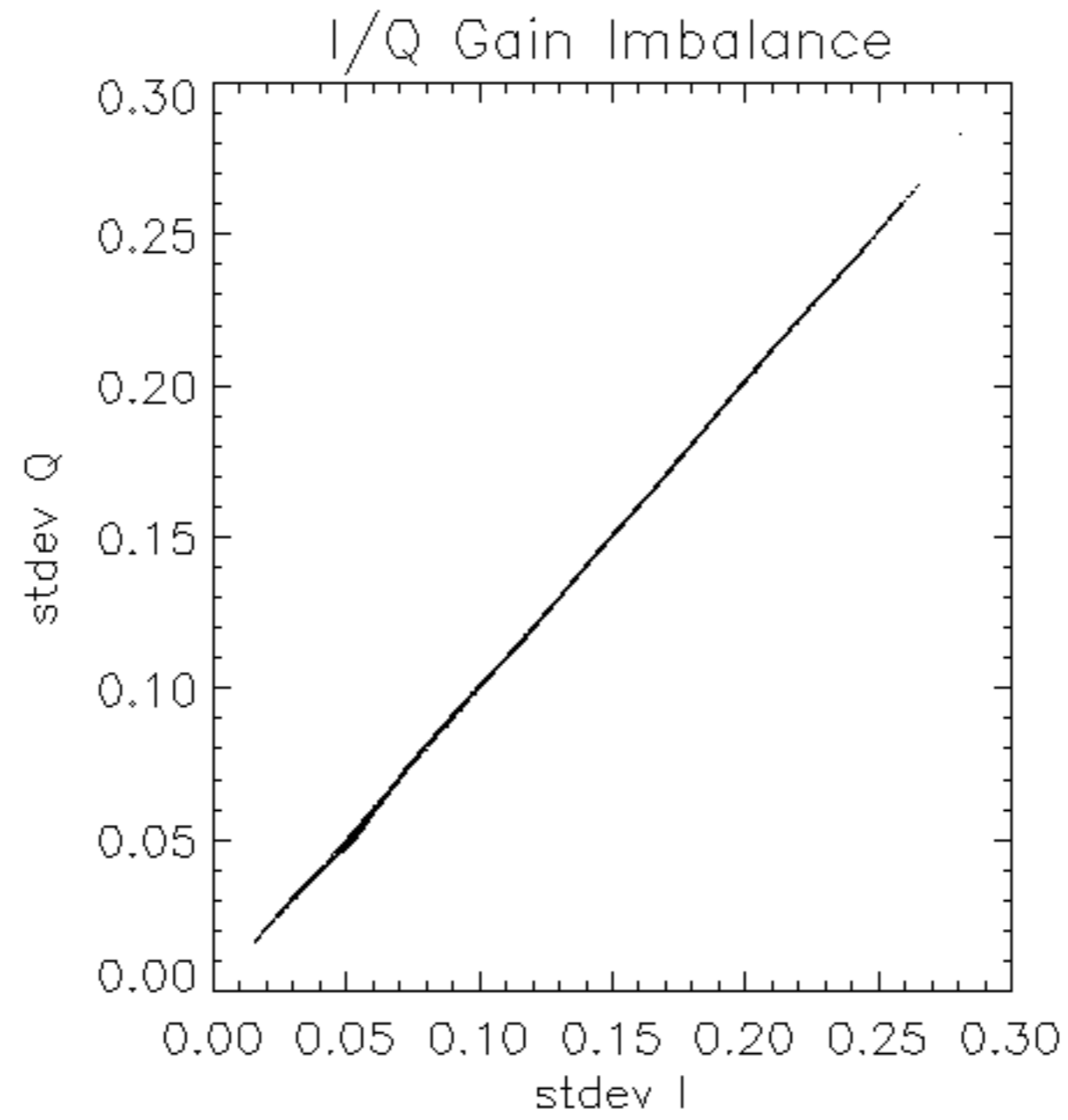


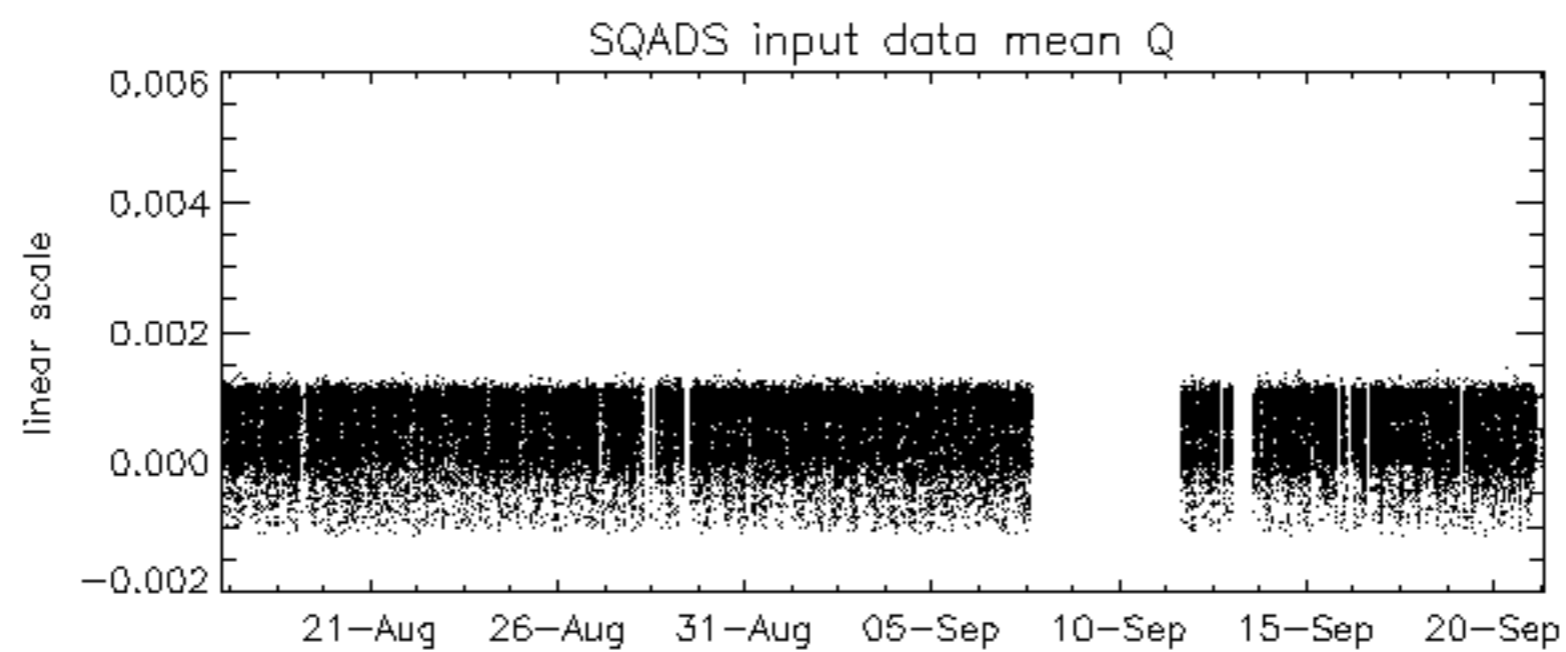
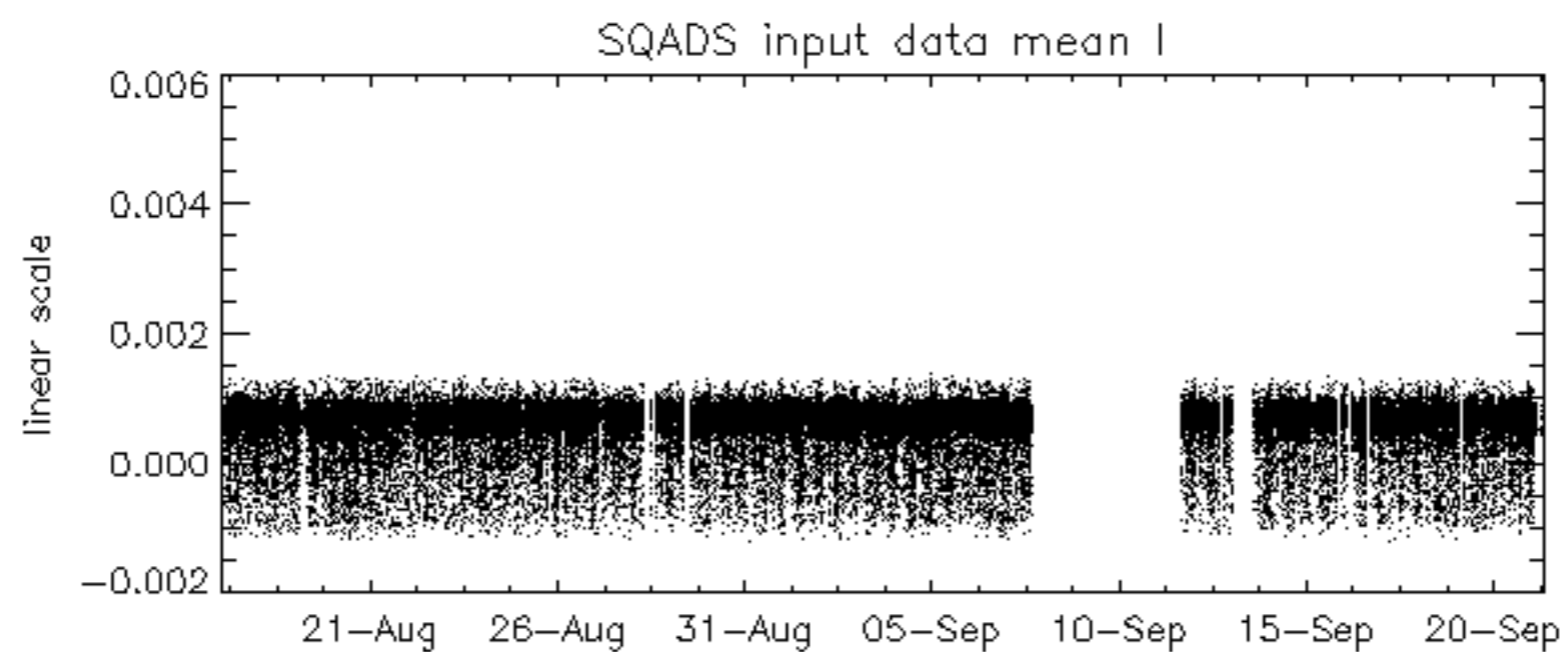
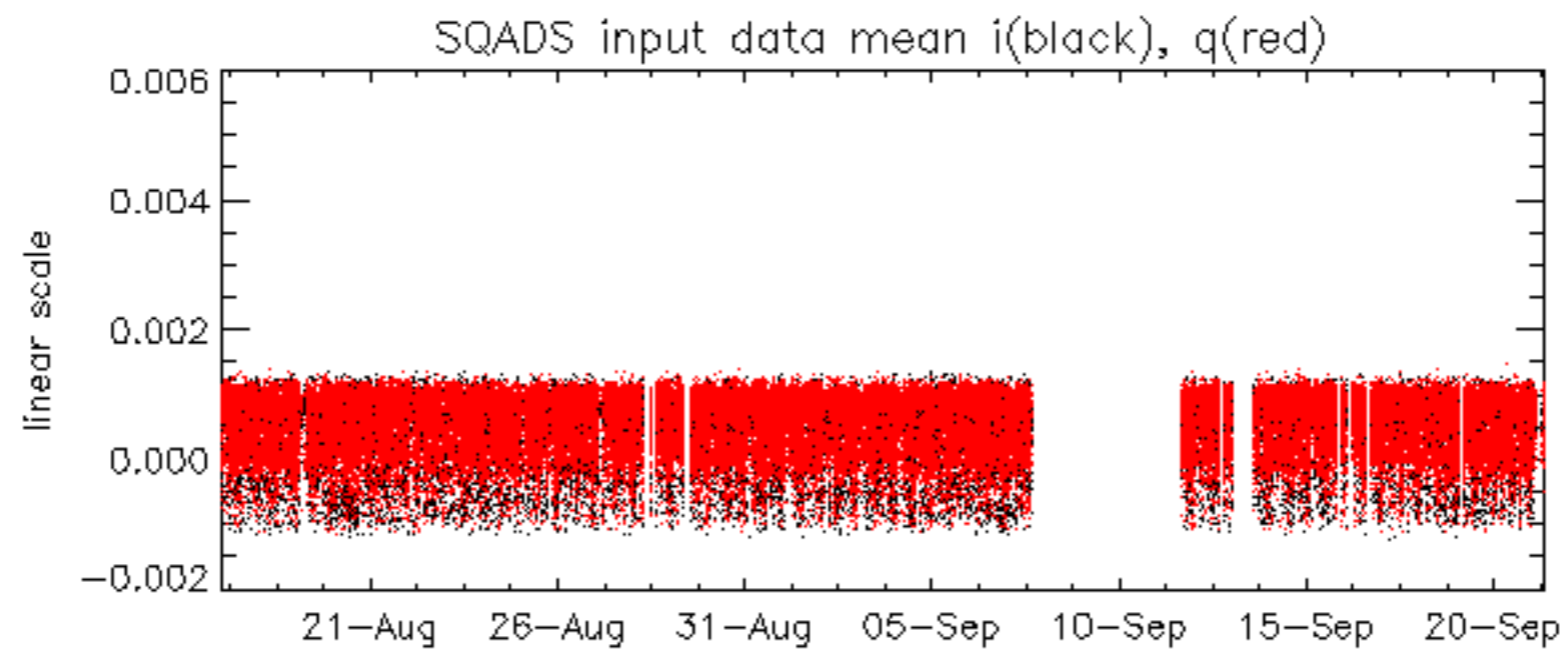
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.412233 Hz

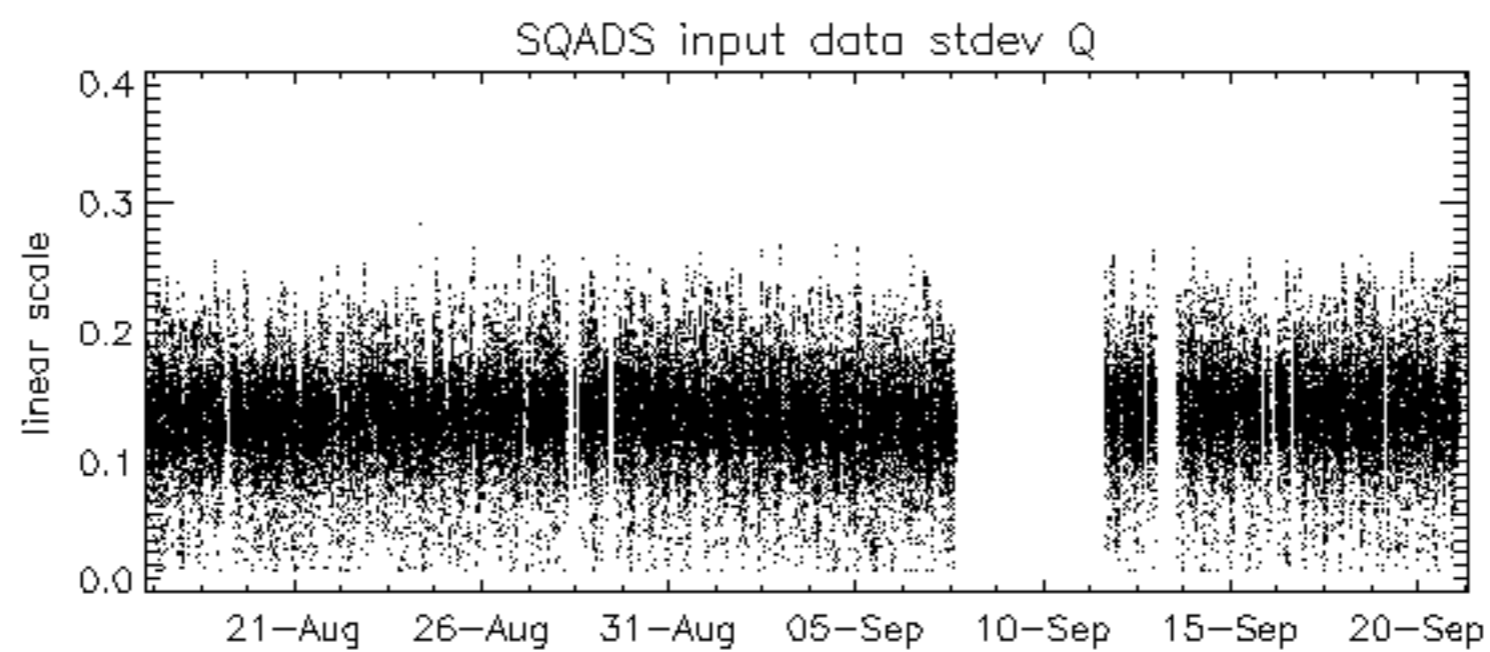
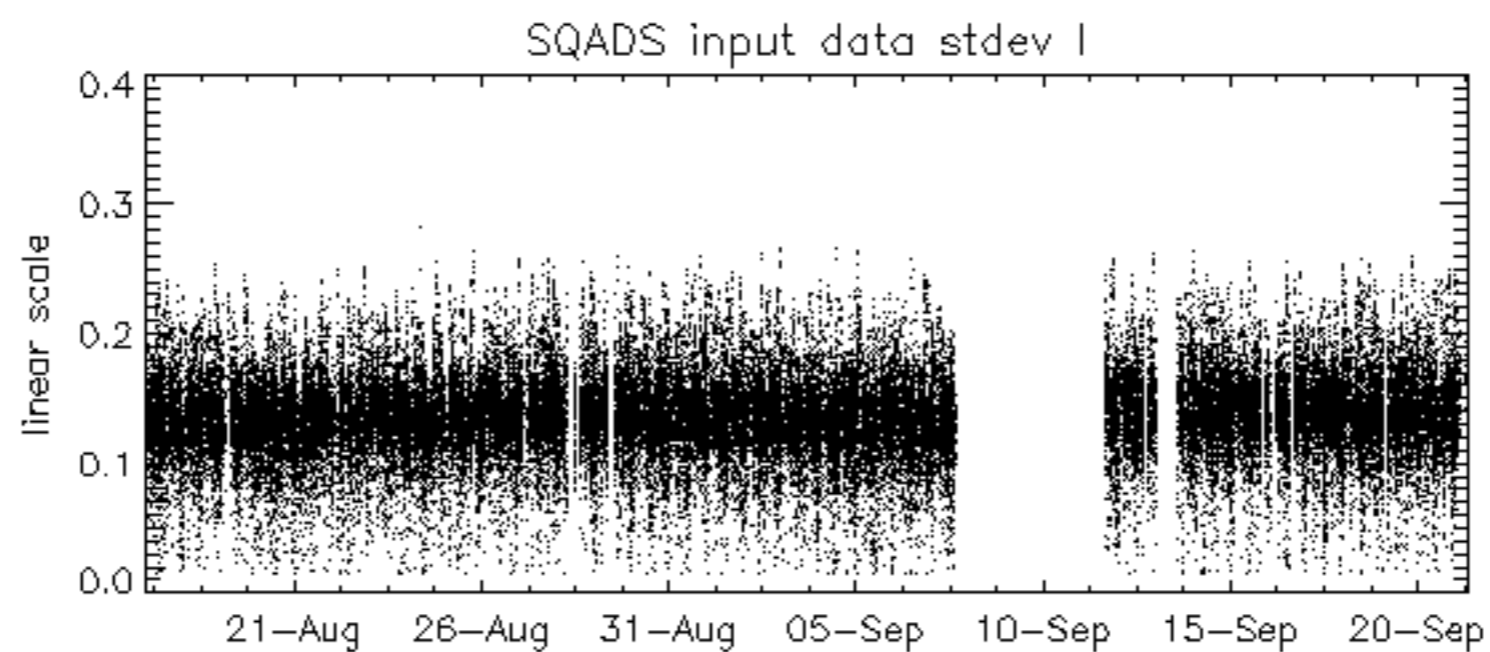
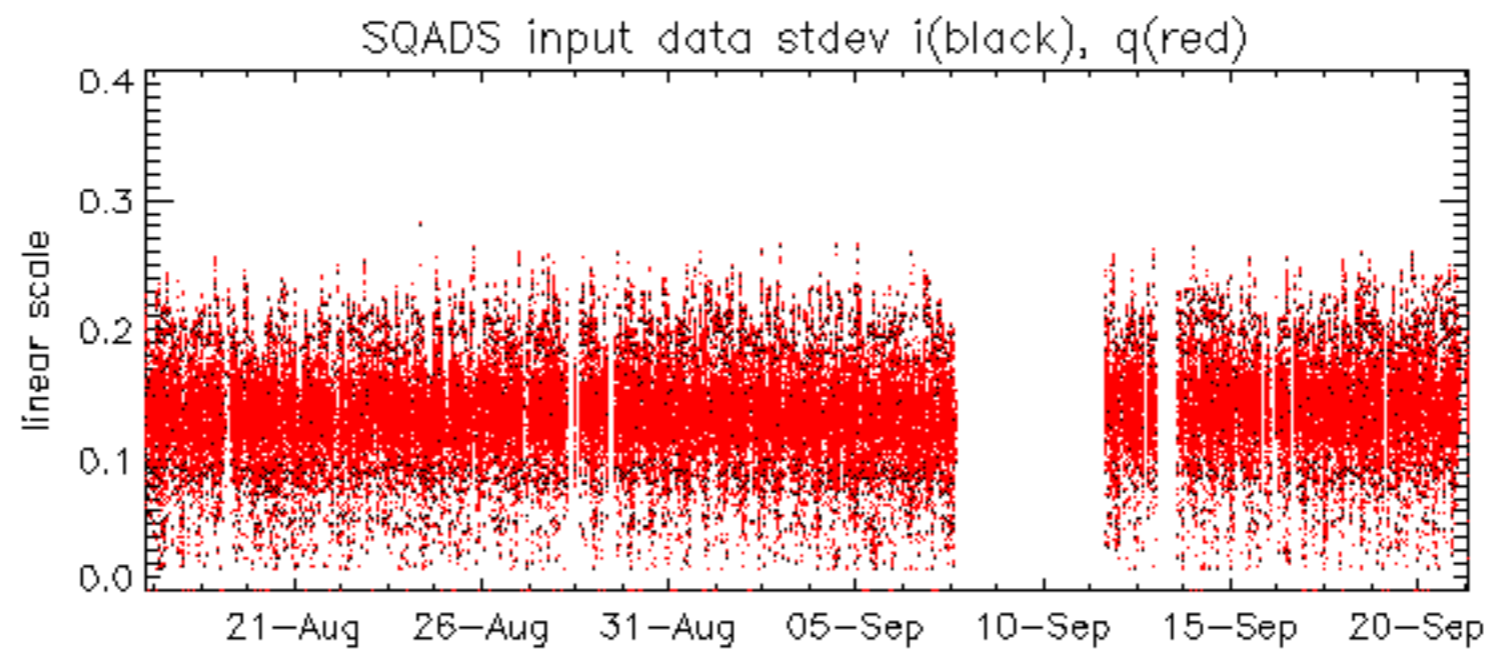


No anomalies observed on available MS products:

No anomalies observed.



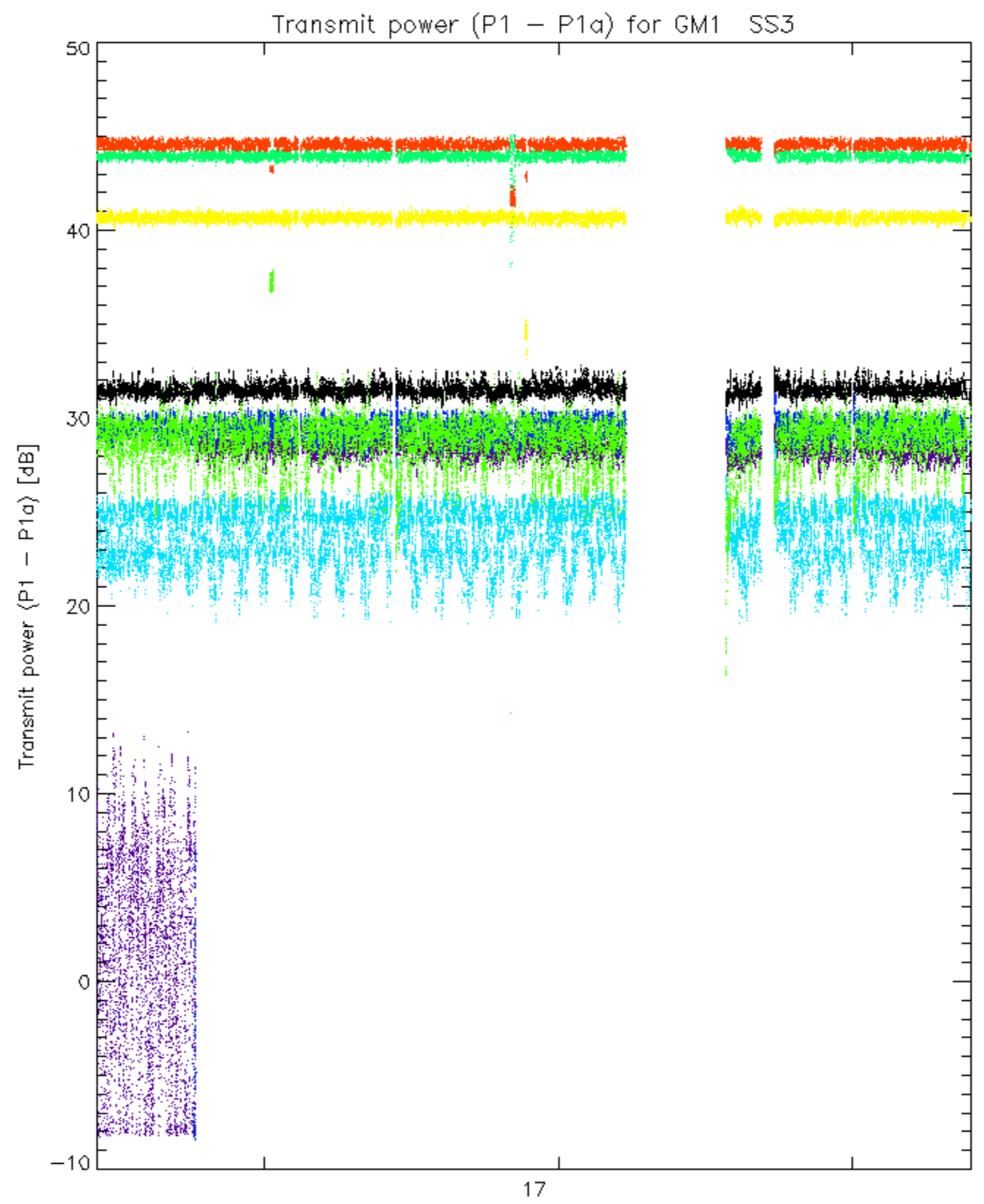




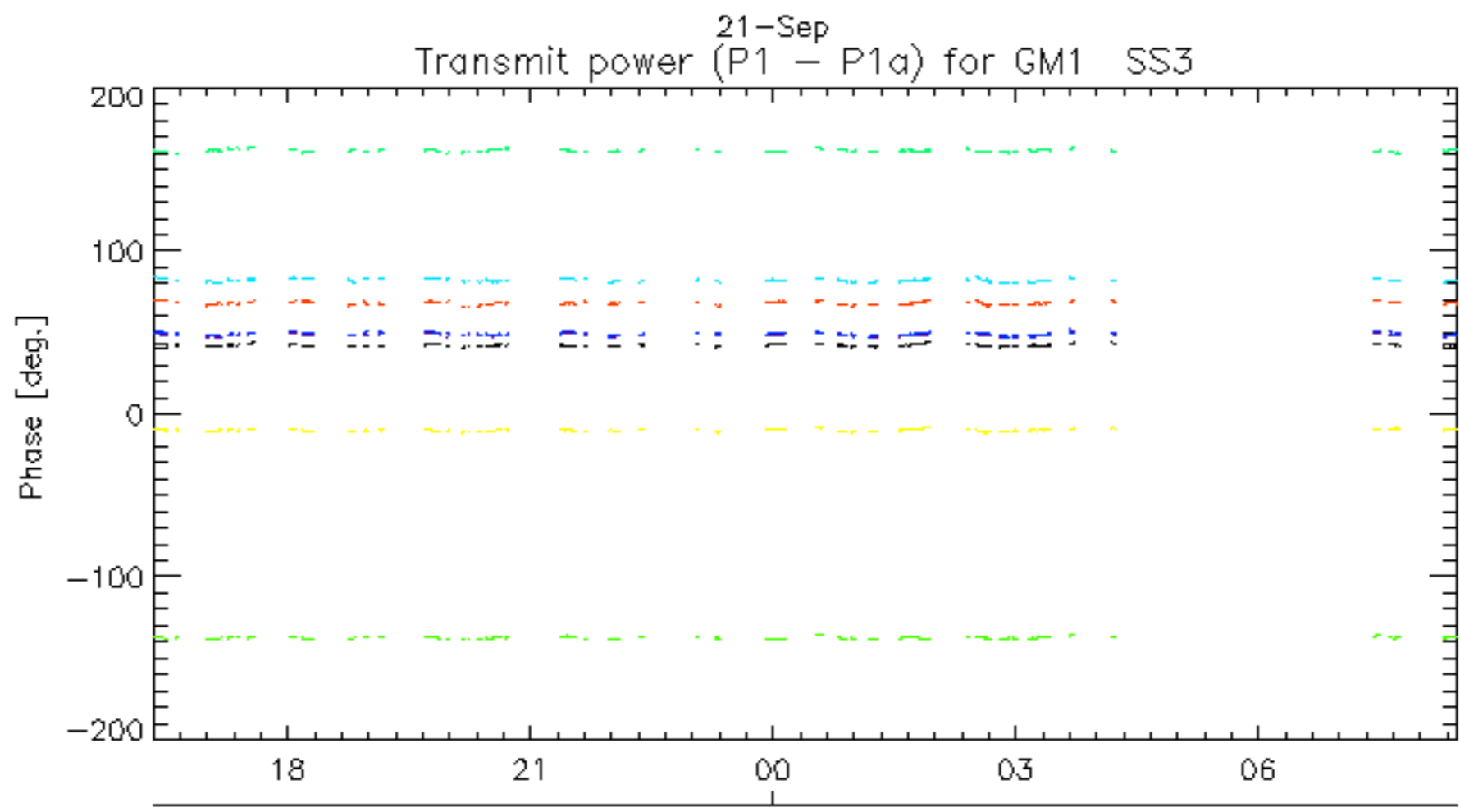
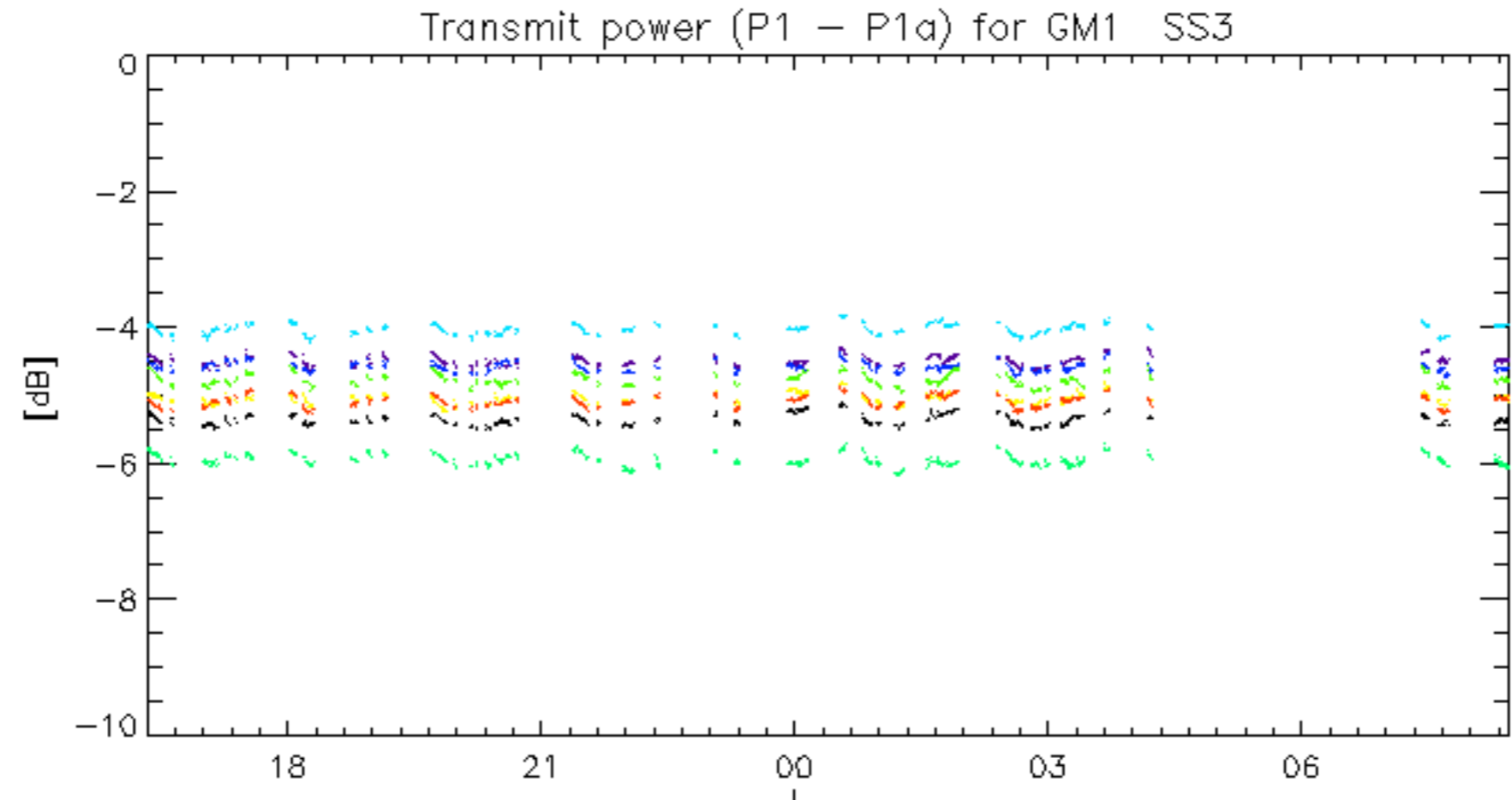
Summary of analysis for the last 3 days 2006092[901]

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

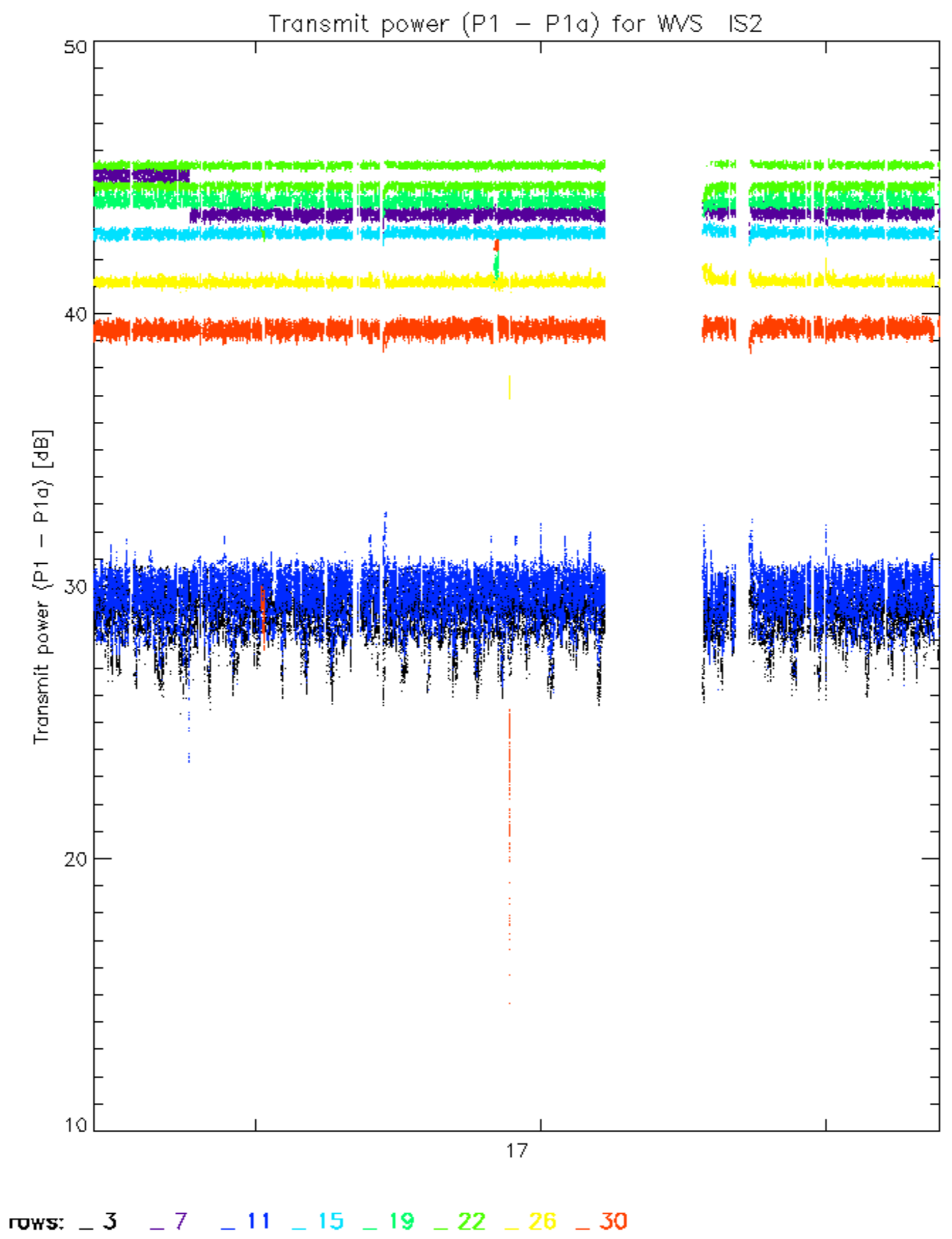
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060920_001749_000001822051_00217_23818_6049.N1	1	0
ASA_IMM_1PNPDE20060920_015825_000001852051_00218_23819_6068.N1	1	0
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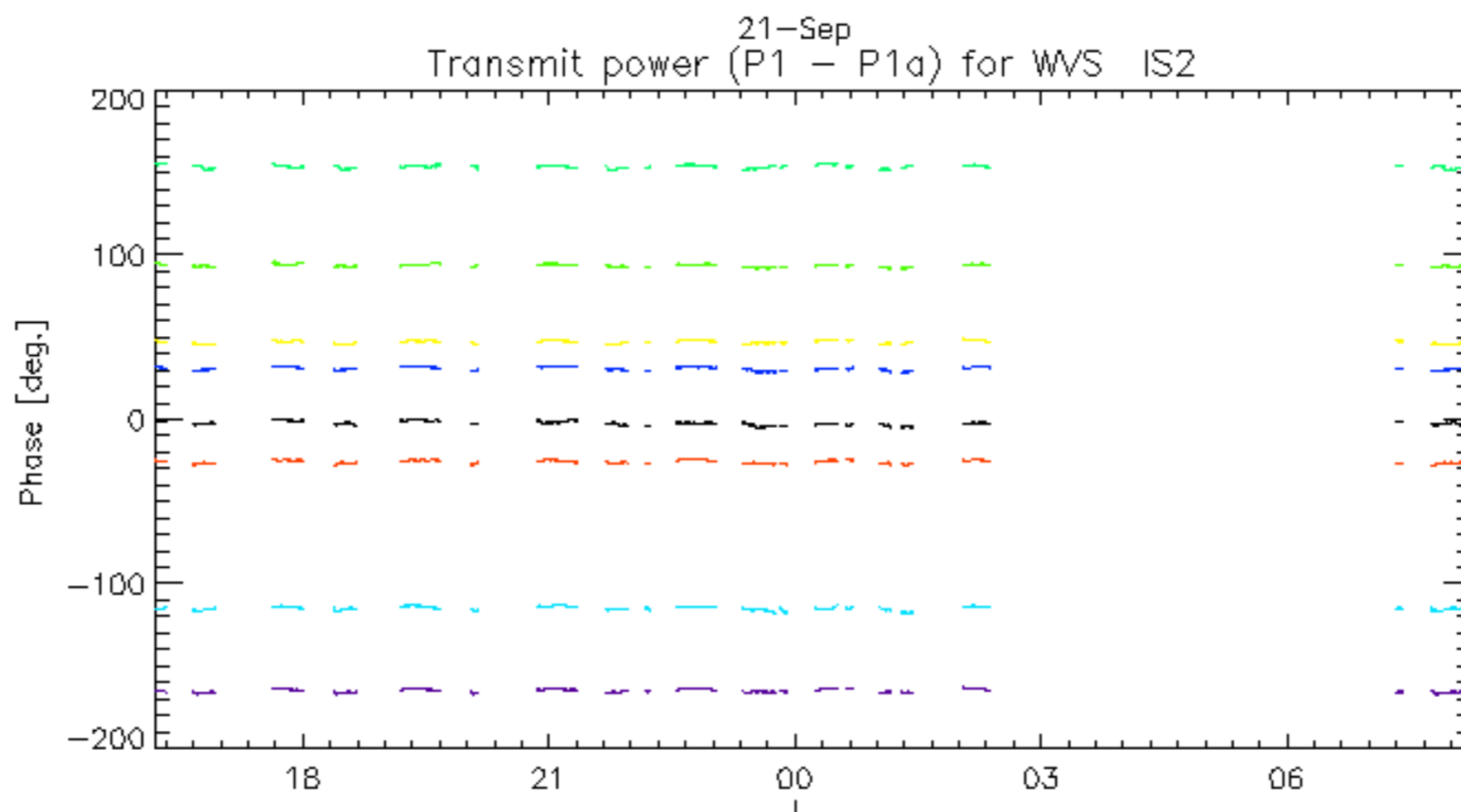
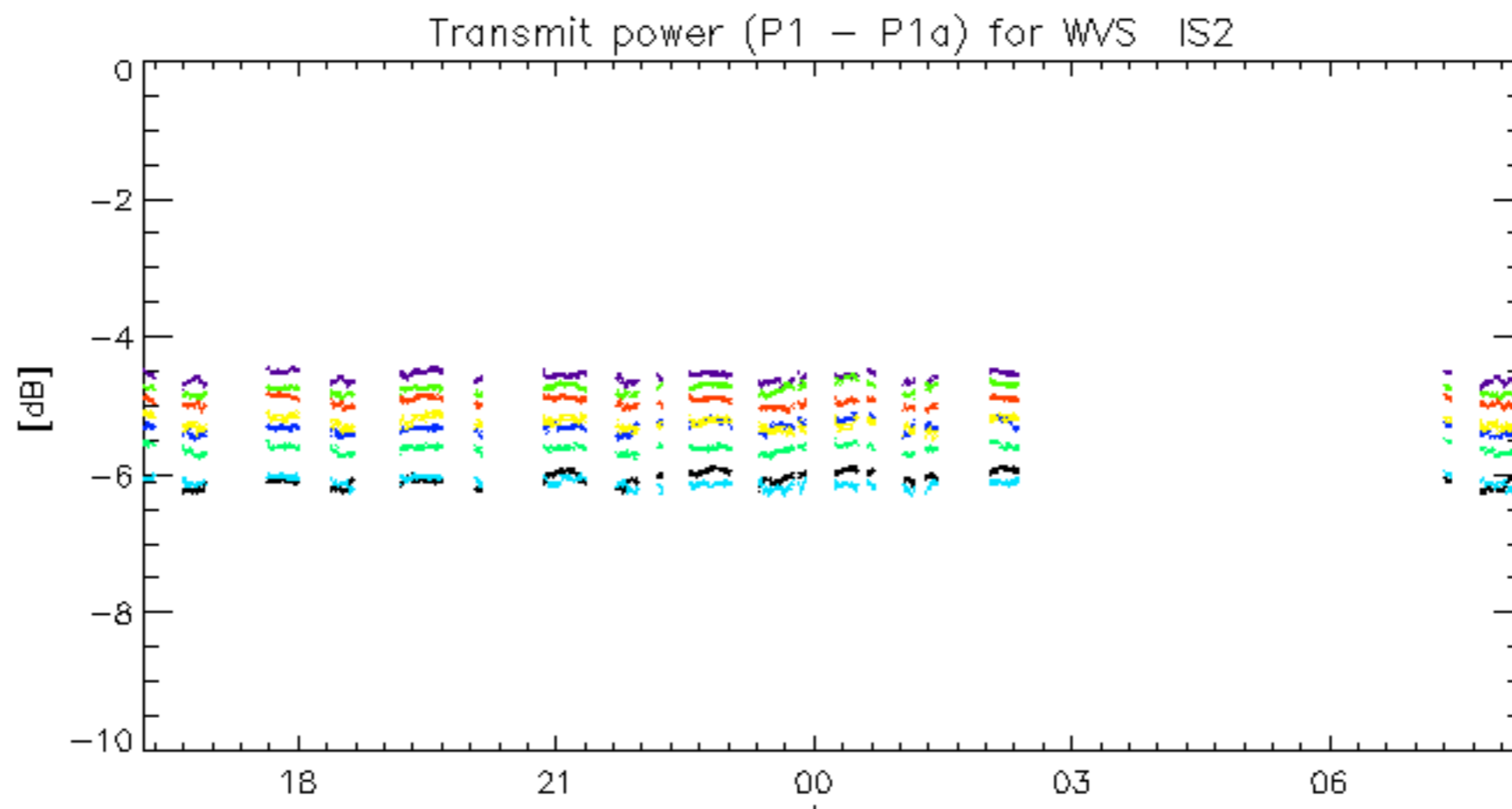


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.