

PRELIMINARY REPORT OF 050729

last update on Fri Jul 29 11:02:25 GMT 2005

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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 2005-07-28 00:00:00 to 2005-07-29 11:02:25

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	21	38	16	1	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	21	38	16	1	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	21	38	16	1	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	21	38	16	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	39	53	27	14	38
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	39	53	27	14	38
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	39	53	27	14	38
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	39	53	27	14	38

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	20050727 043741
H	20050728 040604

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	-3.317283	0.006493	0.015002
7	P1	-3.136851	0.015082	-0.000624
11	P1	-4.688214	0.032528	-0.043790
15	P1	-5.556484	0.047818	-0.037787
19	P1	-3.792874	0.046357	0.002135
22	P1	-4.638929	0.142080	-0.100011
26	P1	-4.864804	0.166818	-0.047112
30	P1	-7.243533	0.252494	-0.103818
3	P1	-15.569285	0.078402	0.027391
7	P1	-15.527832	0.105438	0.046470
11	P1	-21.641388	0.257495	-0.245099
15	P1	-11.290006	0.042353	-0.011119
19	P1	-14.498017	0.264042	0.034779
22	P1	-15.767485	0.357648	0.093222
26	P1	-17.441143	0.235187	0.232883
30	P1	-17.724052	0.500735	0.060454

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.862665	0.083416	0.067024
7	P2	-22.030548	0.103980	0.110993
11	P2	-13.673214	0.105910	0.236641
15	P2	-7.088902	0.092987	0.037115
19	P2	-9.593533	0.094976	0.018096
22	P2	-16.855181	0.095685	0.013053
26	P2	-16.505625	0.097782	-0.002604
30	P2	-18.791433	0.084866	-0.007860

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.156960	0.002731	0.003811
7	P3	-8.156960	0.002731	0.003811
11	P3	-8.156960	0.002731	0.003811
15	P3	-8.156960	0.002731	0.003811
19	P3	-8.156960	0.002731	0.003811
22	P3	-8.156960	0.002731	0.003811
26	P3	-8.156960	0.002731	0.003811
30	P3	-8.156960	0.002731	0.003811

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	-2.783915	0.013616	-0.001135
7	P1	-2.953027	0.031178	0.025078
11	P1	-3.996046	0.016542	-0.018351
15	P1	-3.571931	0.023145	-0.046204
19	P1	-3.665298	0.114830	0.078161
22	P1	-5.694262	0.162093	-0.039418
26	P1	-7.413646	0.325361	-0.084838
30	P1	-6.339027	0.148745	-0.065014
3	P1	-10.836318	0.040661	-0.060928
7	P1	-10.451773	0.153913	0.003663
11	P1	-12.613634	0.109112	-0.083611
15	P1	-11.615726	0.072356	0.023986
19	P1	-15.647079	1.327895	0.309036
22	P1	-25.726522	3.815255	0.402916
26	P1	-15.384617	0.439399	0.196223
30	P1	-20.093042	1.329051	0.310394

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.606359	0.046193	0.086921
7	P2	-22.048132	0.040713	0.055069
11	P2	-9.690884	0.062212	0.168133
15	P2	-5.123072	0.046194	0.019284
19	P2	-6.902753	0.064246	0.016344
22	P2	-7.078981	0.039436	0.028184
26	P2	-23.970932	0.043970	-0.015836
30	P2	-21.954002	0.043437	0.010576

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998219	0.004161	-0.000836
7	P3	-7.998120	0.004157	-0.000572
11	P3	-7.998069	0.004155	-0.000610
15	P3	-7.998243	0.004162	-0.000558
19	P3	-7.998271	0.004164	-0.000721
22	P3	-7.998247	0.004145	-0.000565
26	P3	-7.998290	0.004149	-0.000571
30	P3	-7.998131	0.004152	-0.000274

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	0.000473803
	stdev	2.12759e-07
MEAN Q	mean	0.000501545
	stdev	2.31256e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128536
	stdev	0.00100335
STDEV Q	mean	0.128786
	stdev	0.00101457



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005072[789]

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_WSM_1PNPDE20050727_183936_000000672039_00228_17817_1598.N1	0	18
ASA_WSM_1PNPDE20050727_183936_000002732039_00228_17817_1617.N1	0	18
ASA_WSM_1PNPDE20050728_162647_000000672039_00241_17830_1643.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)



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

✕

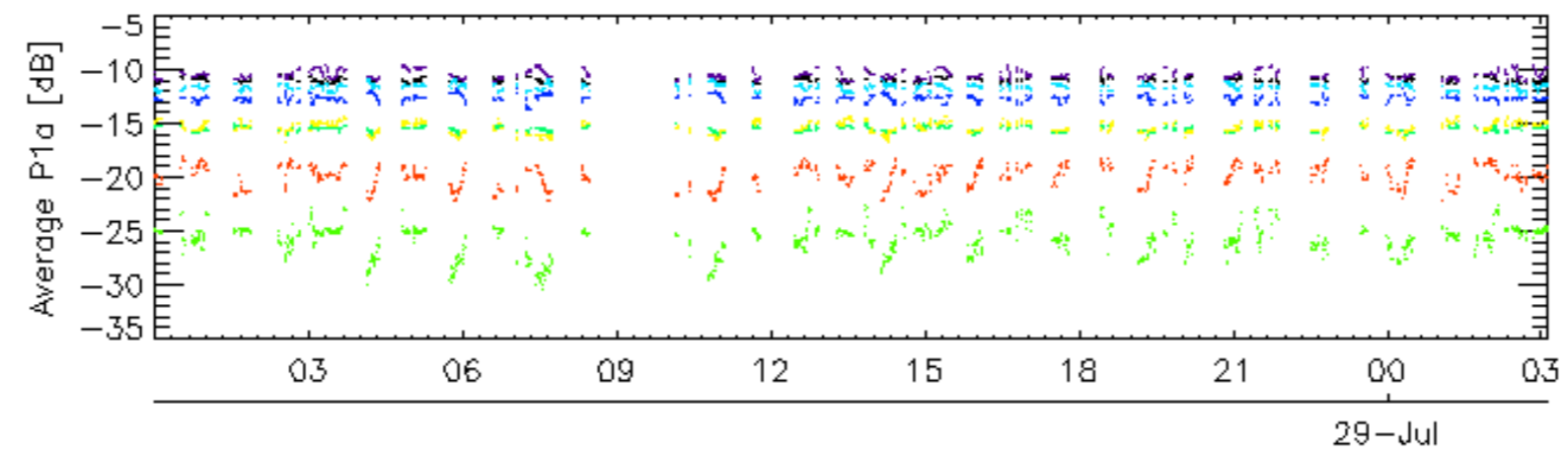
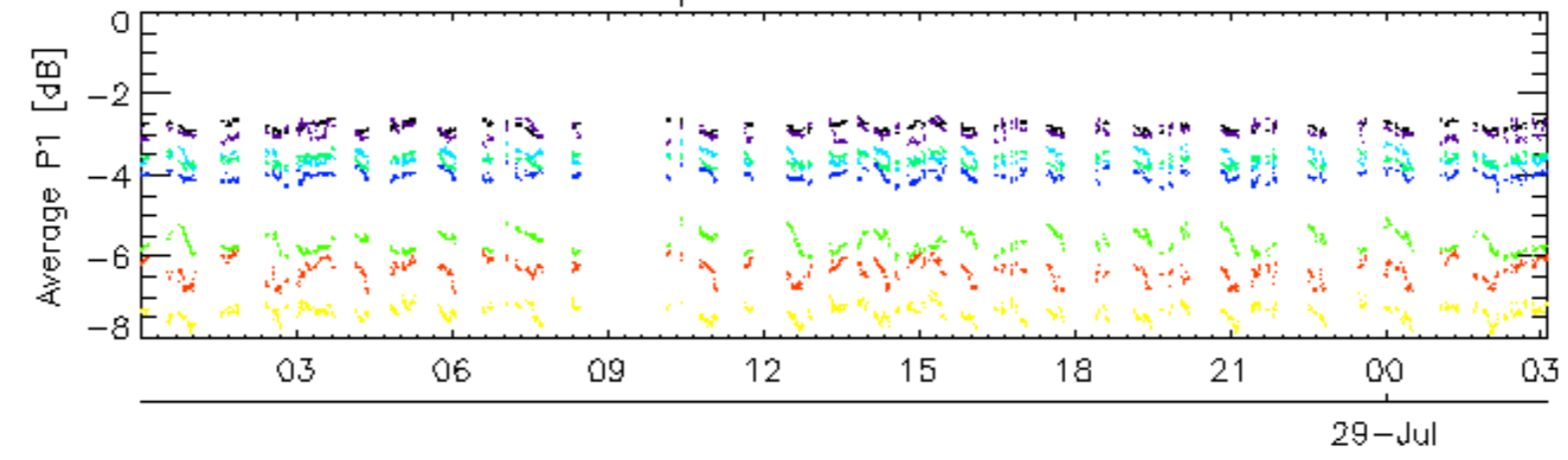
Descending

7.6 - Doppler evolution versus ANX for GM1

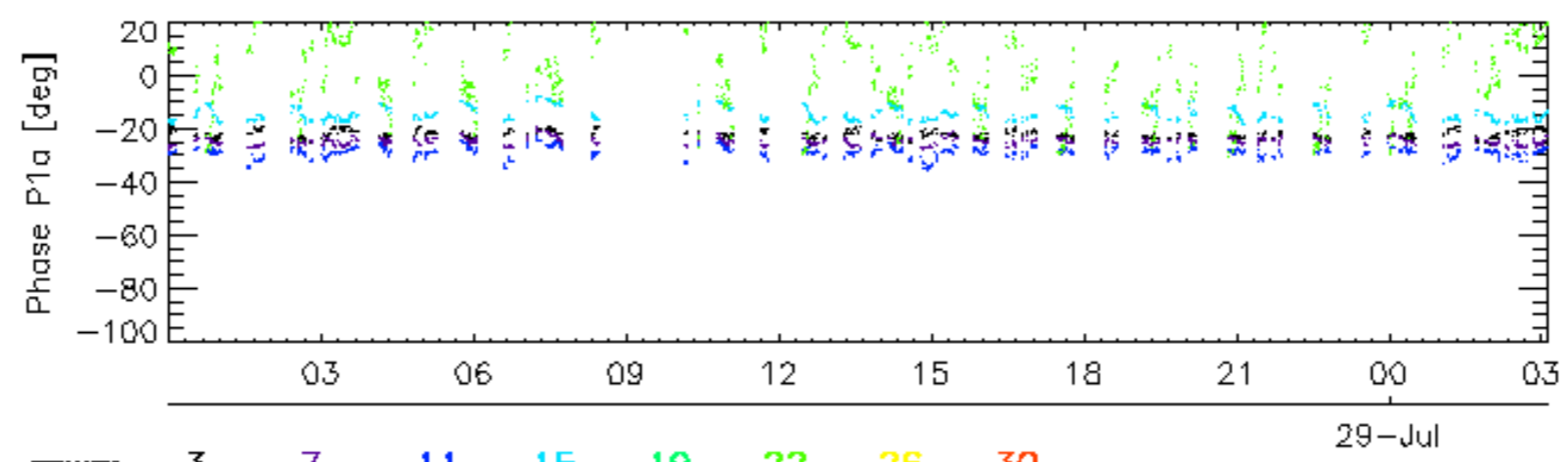
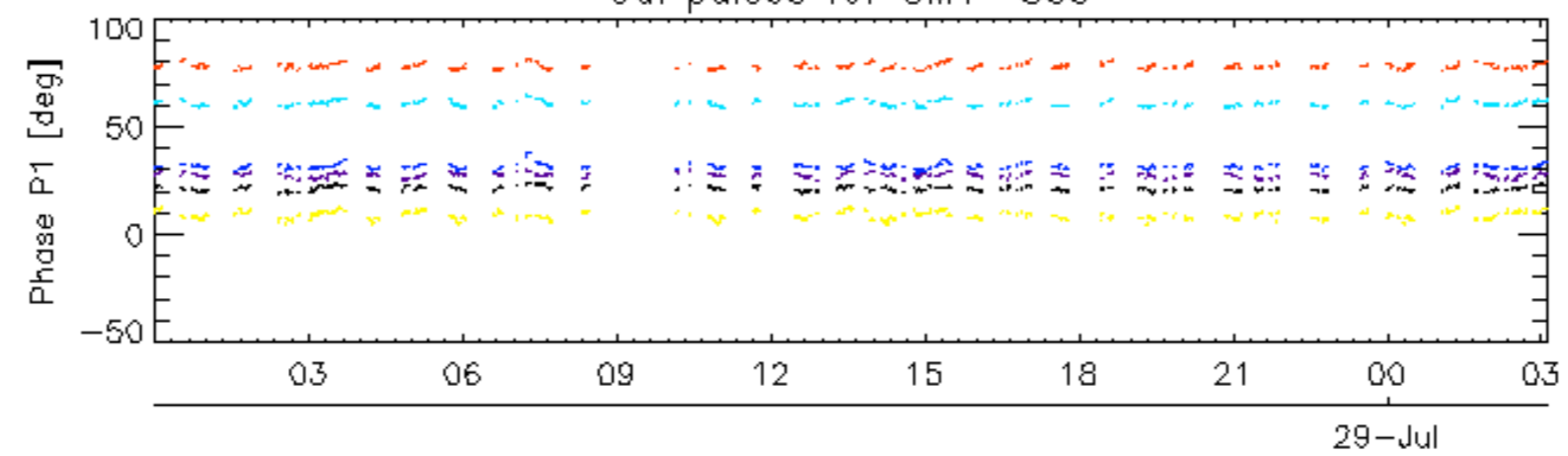
Evolution Doppler error versus ANX

✕

Cal pulses for GM1 SS3

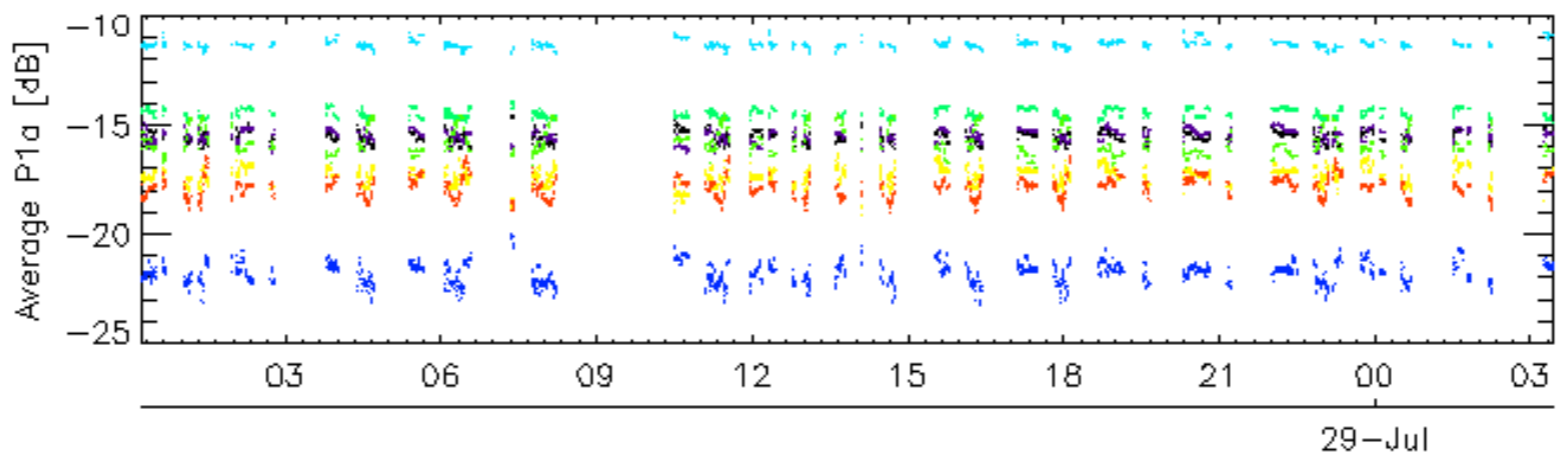
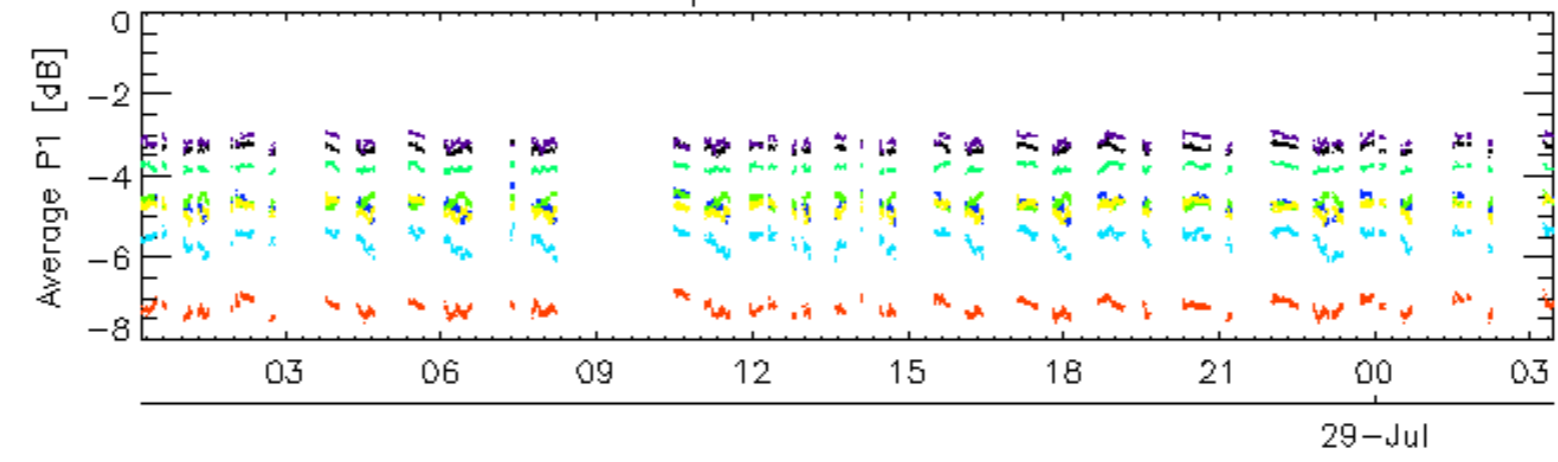


Cal pulses for GM1 SS3

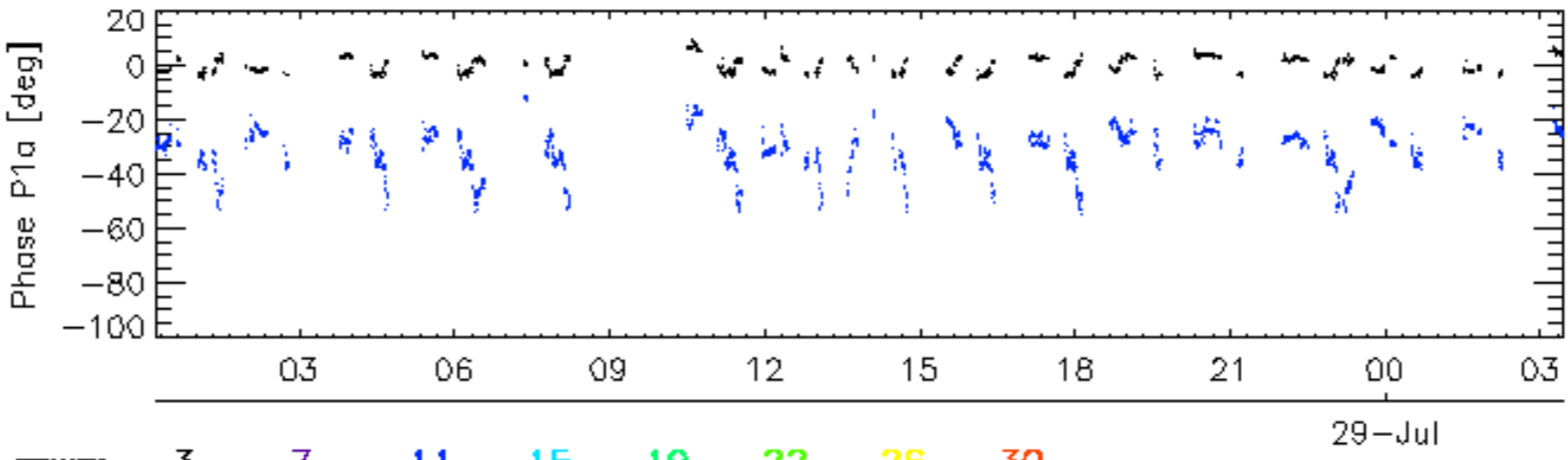
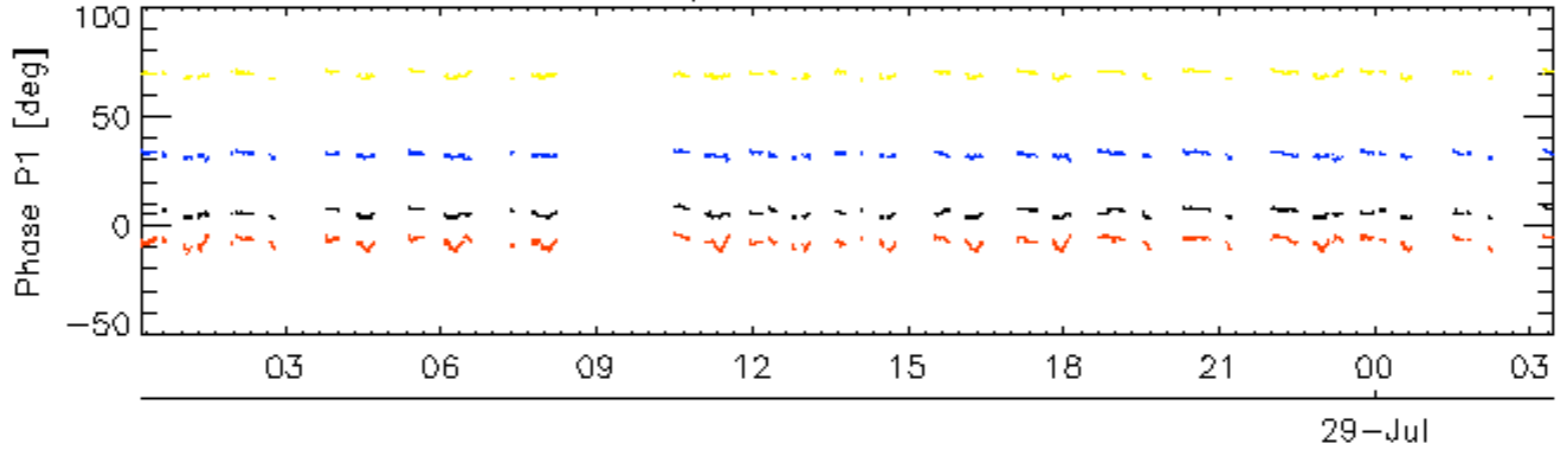


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

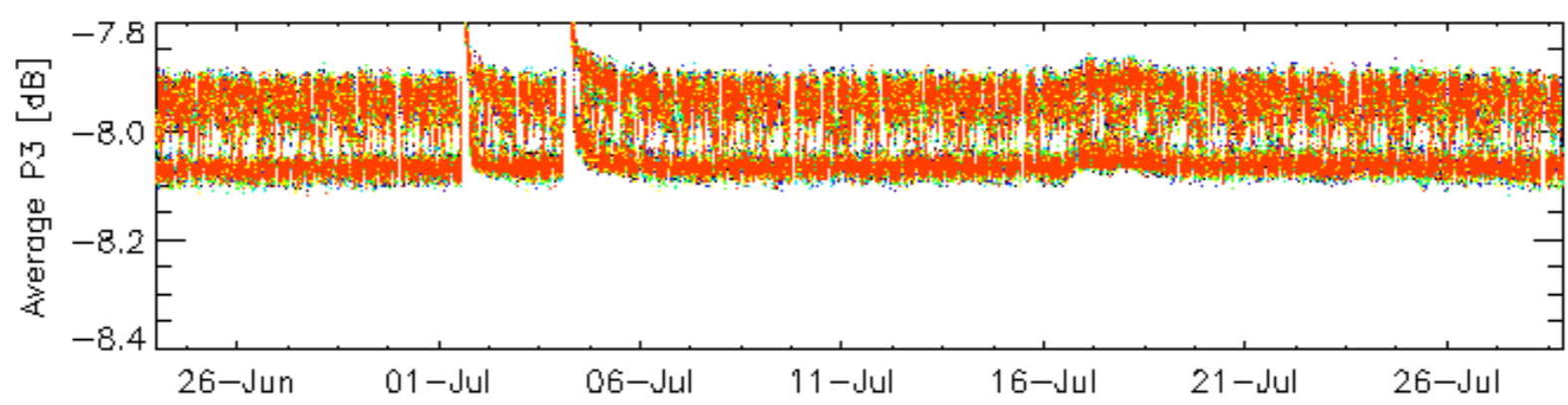
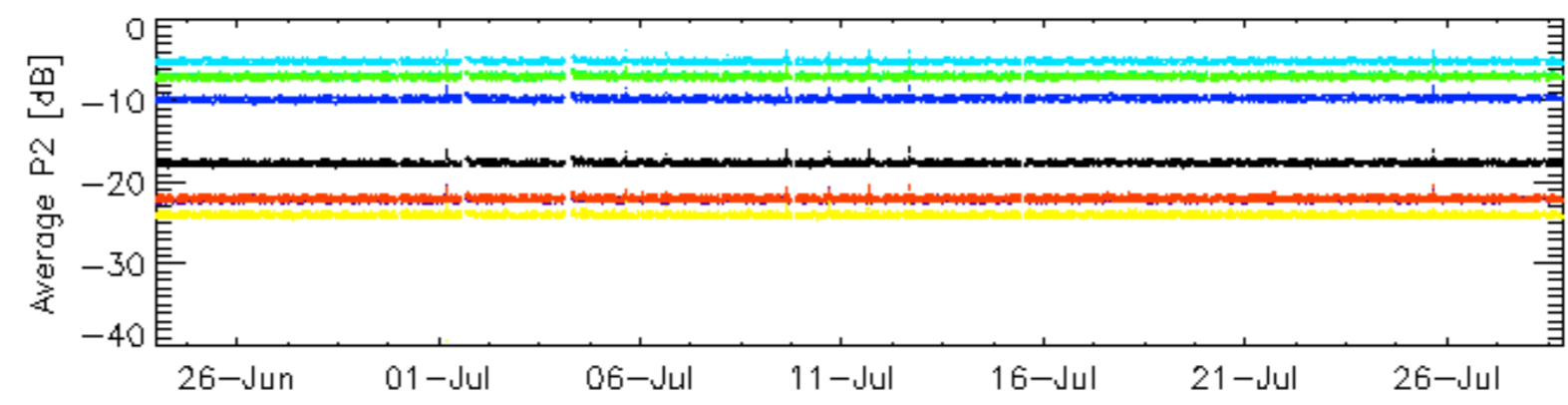
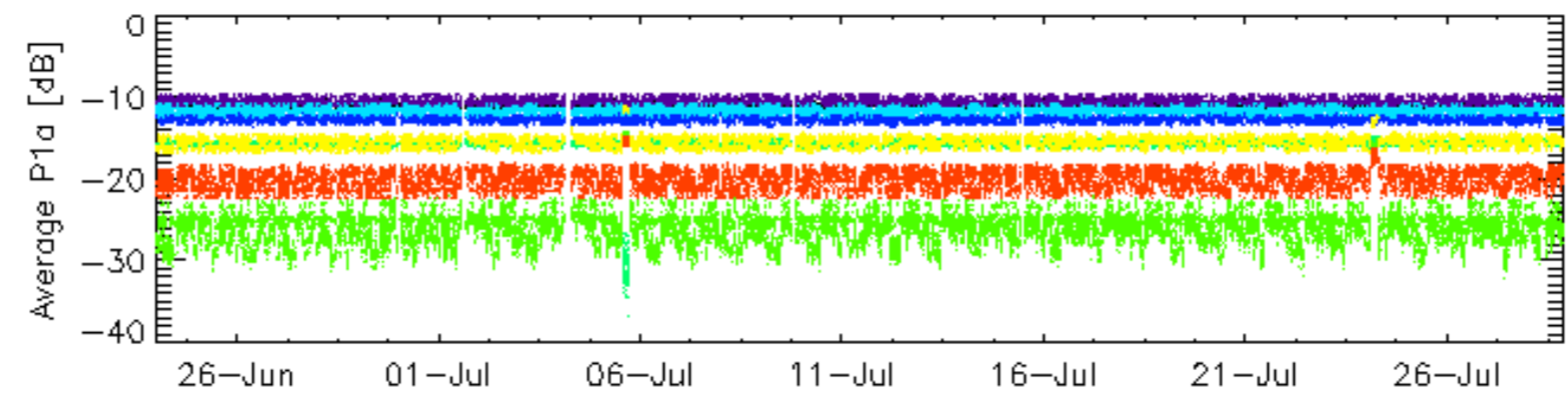
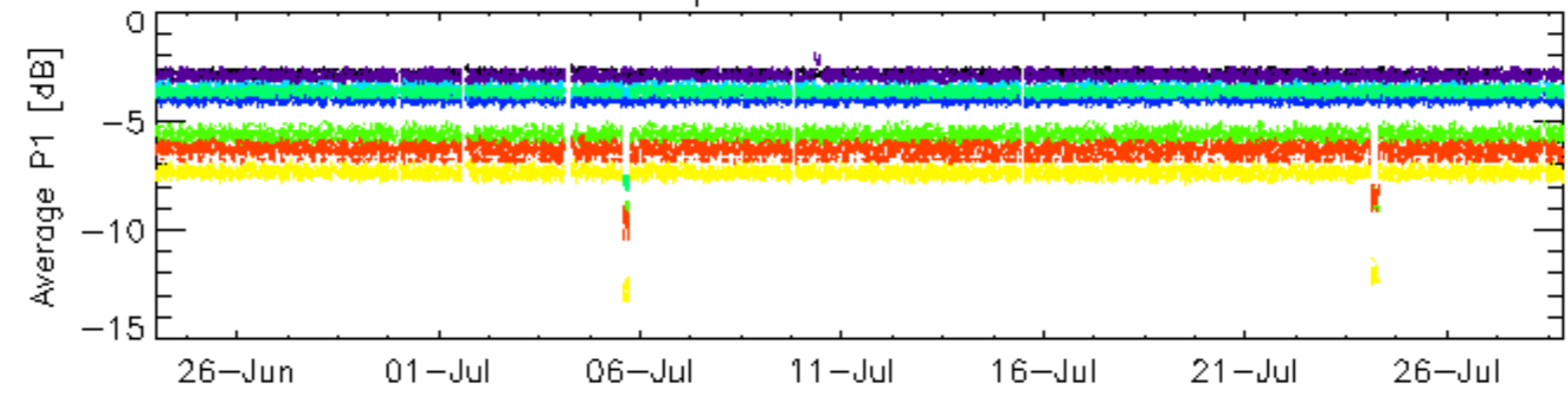


Cal pulses for WVS IS2



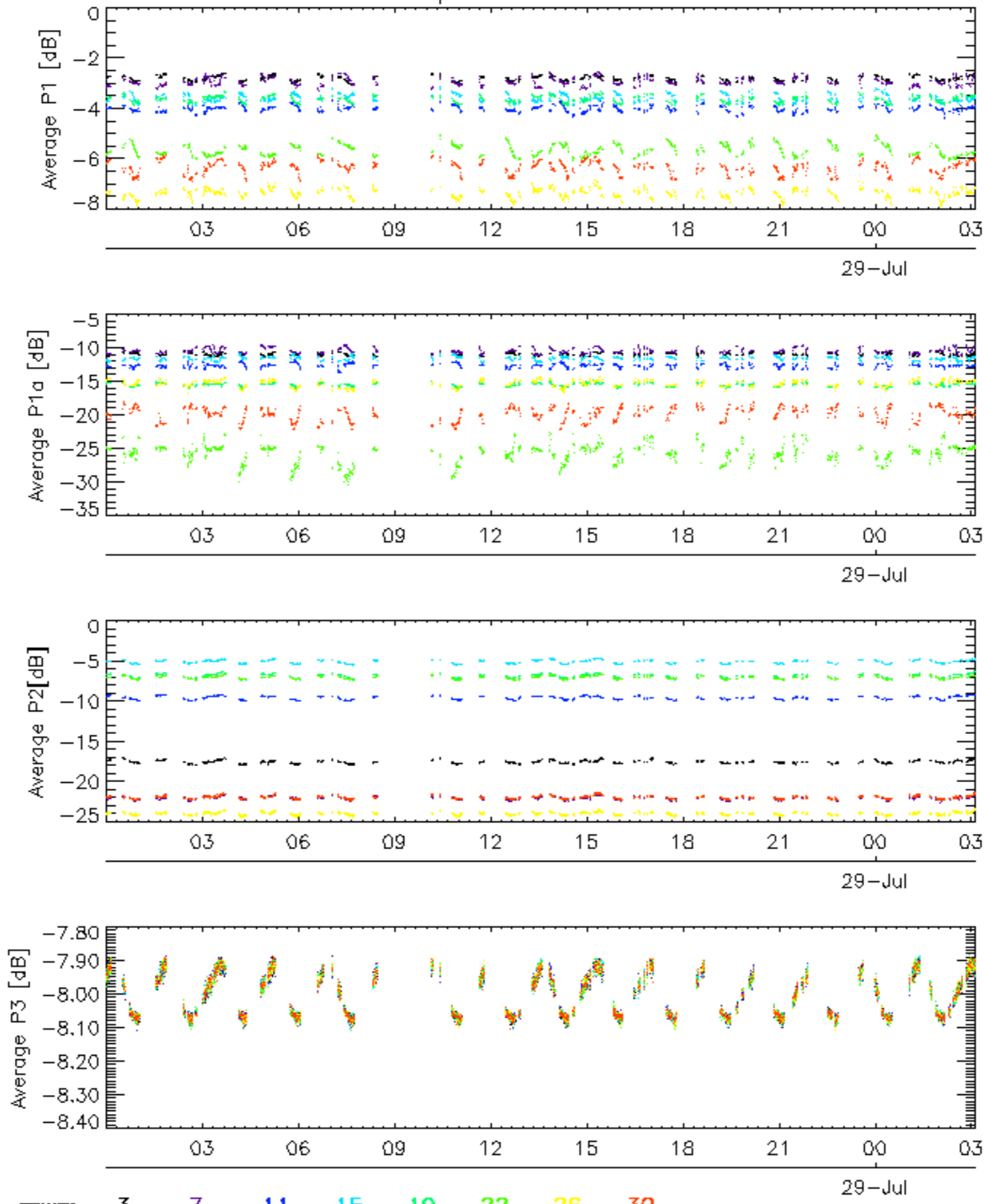
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

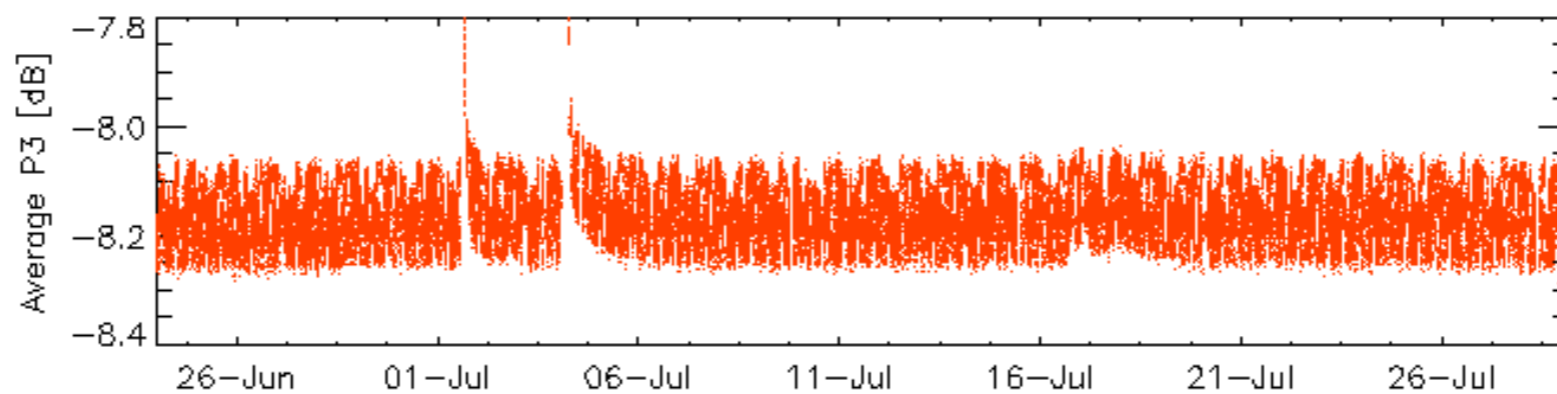
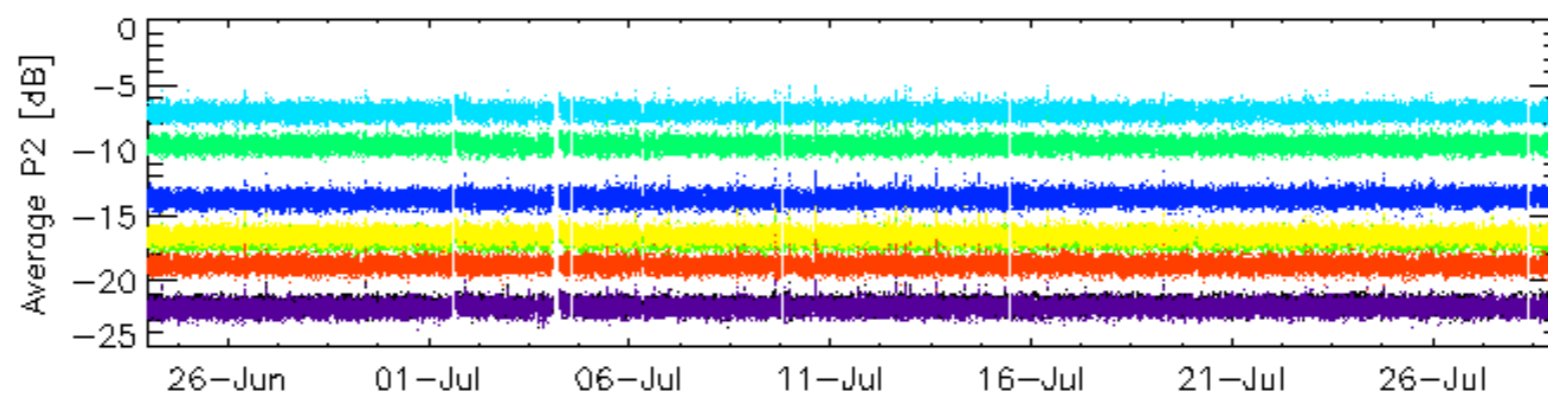
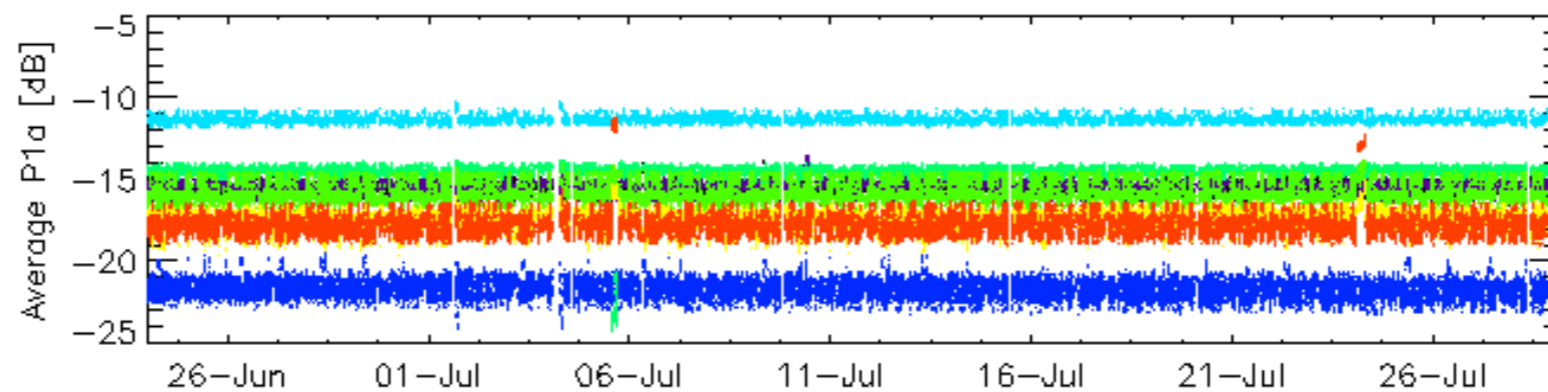
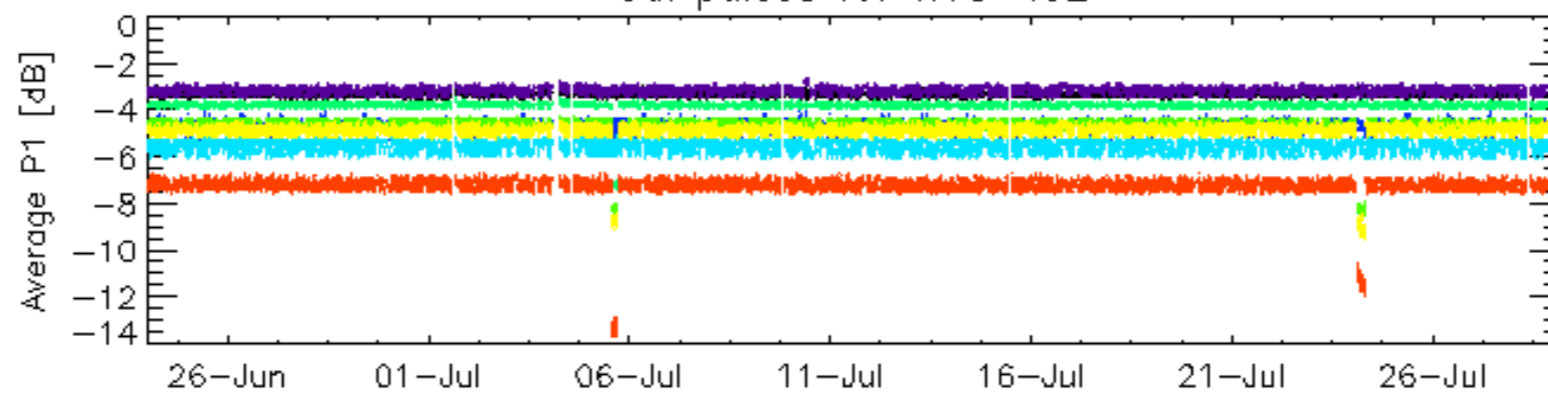


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

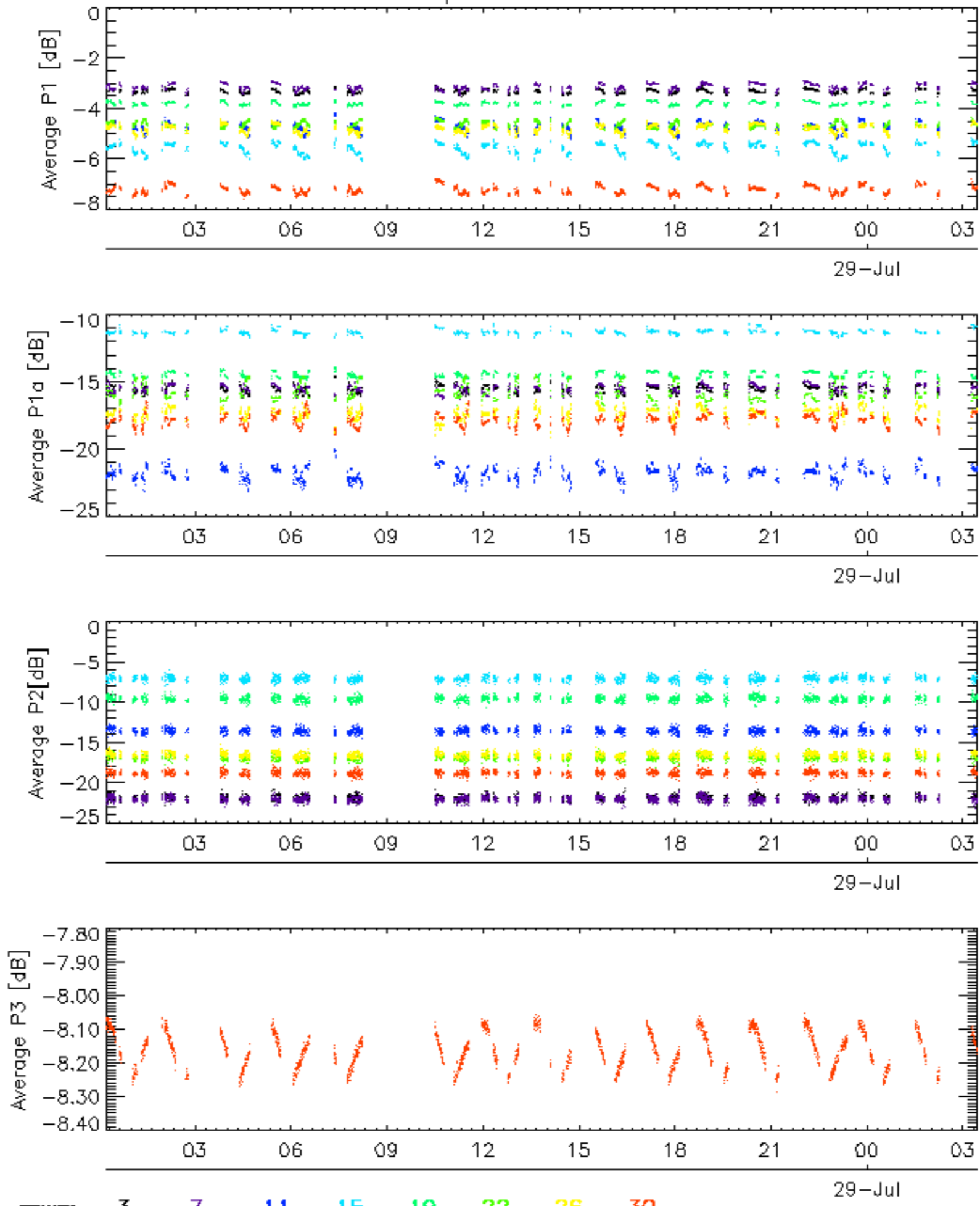


Cal pulses for WVS IS2



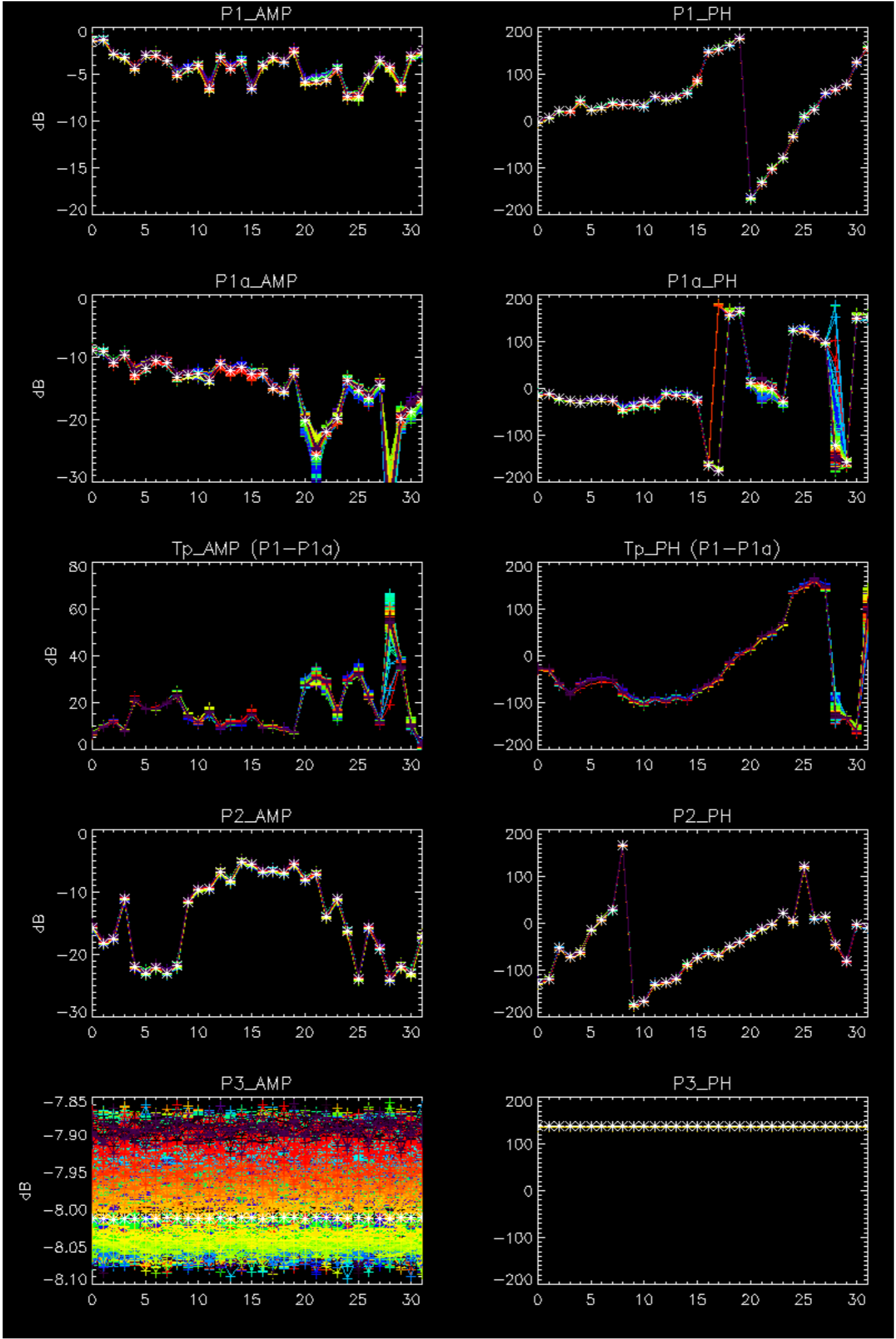
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

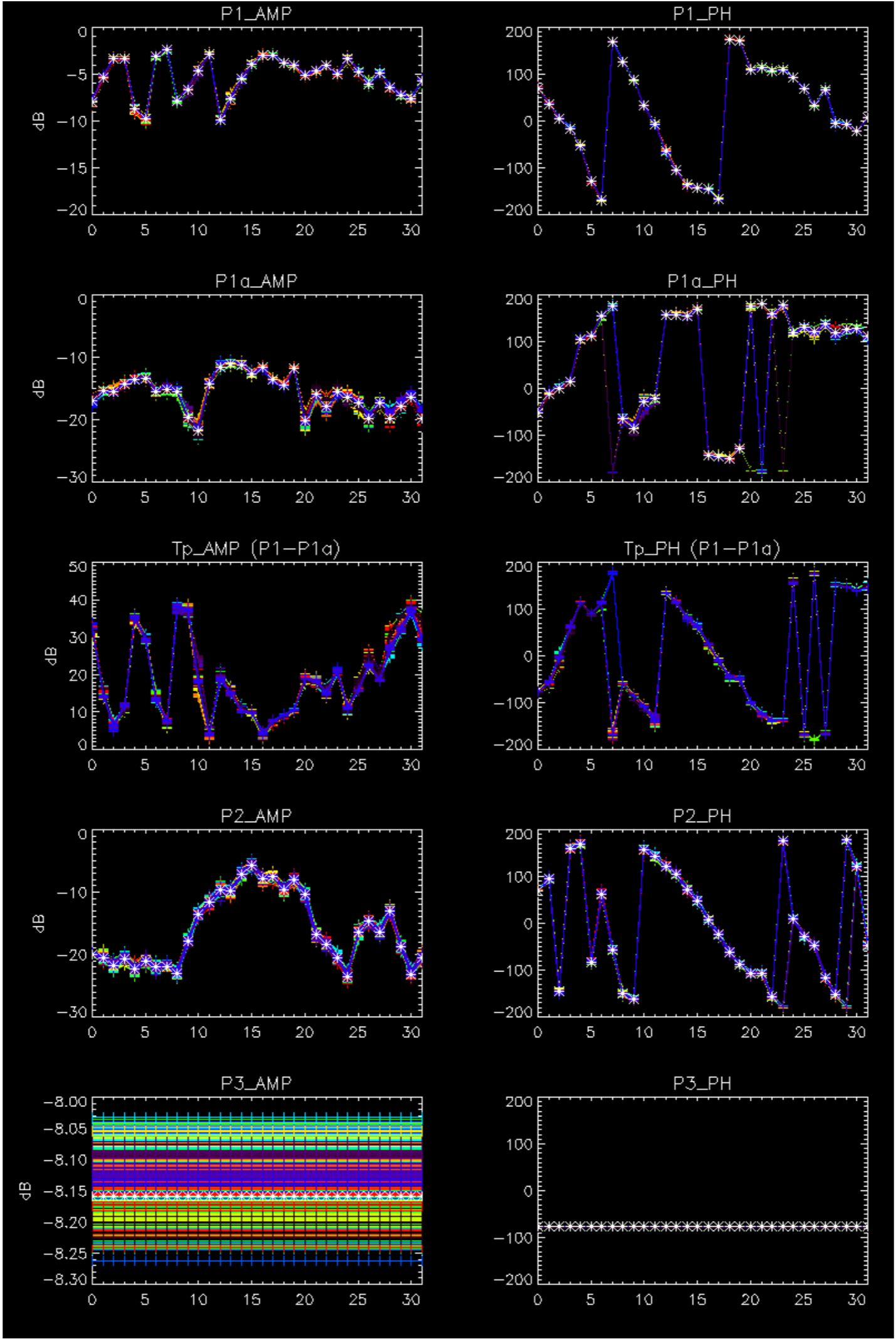
Cal pulses for WVS IS2



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

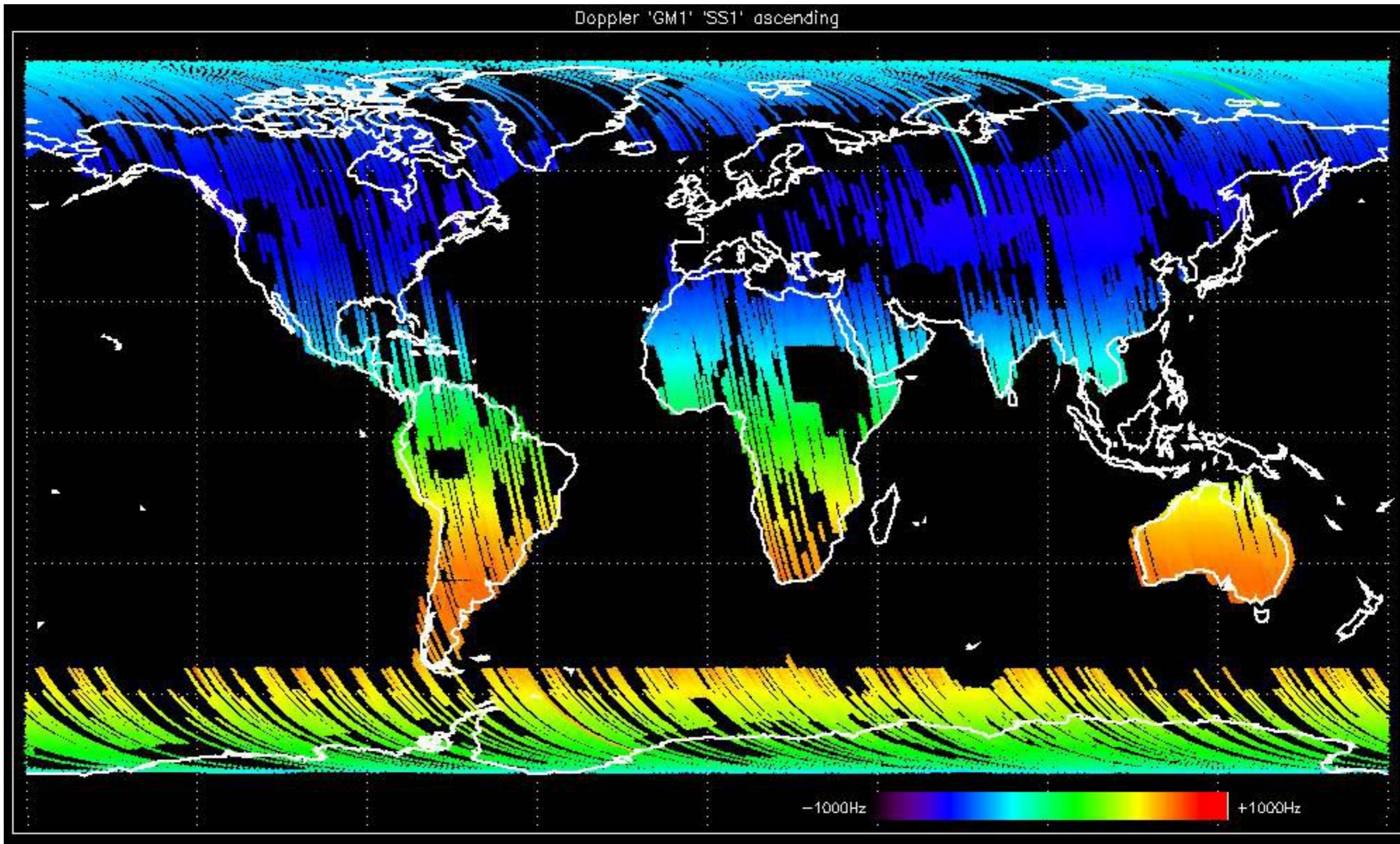
No anomalies observed.



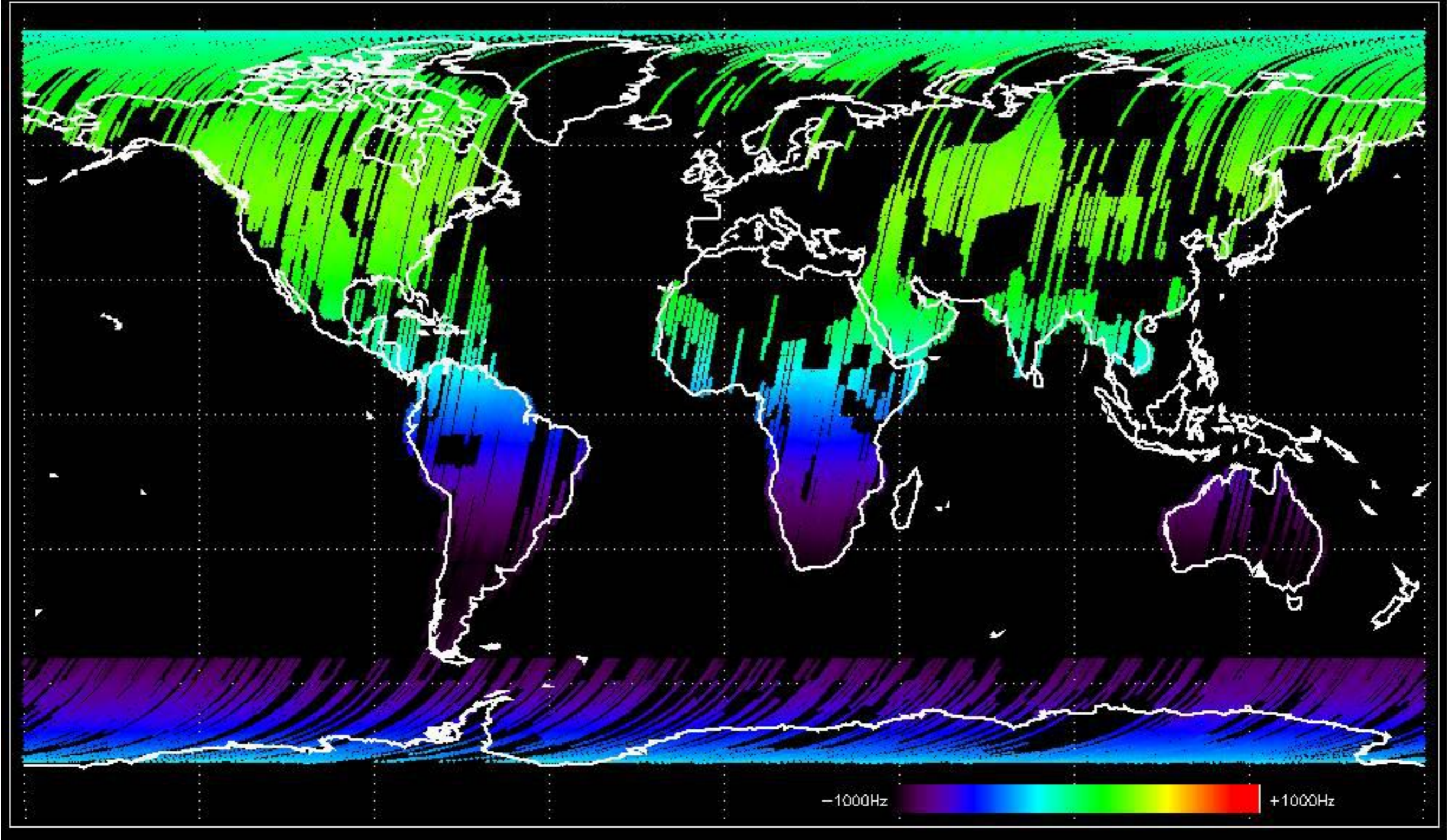


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

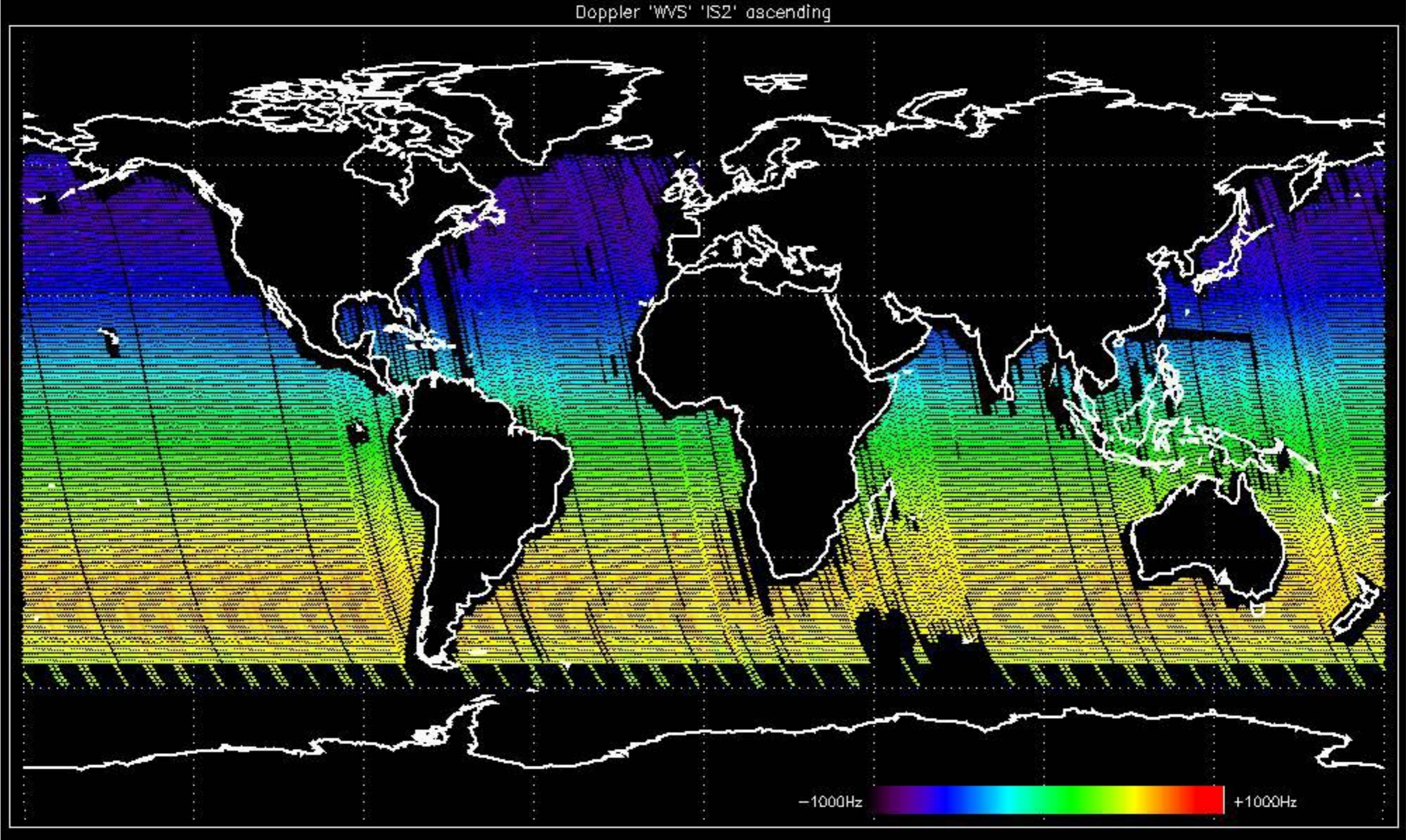
Doppler 'GM1' 'SS1' ascending



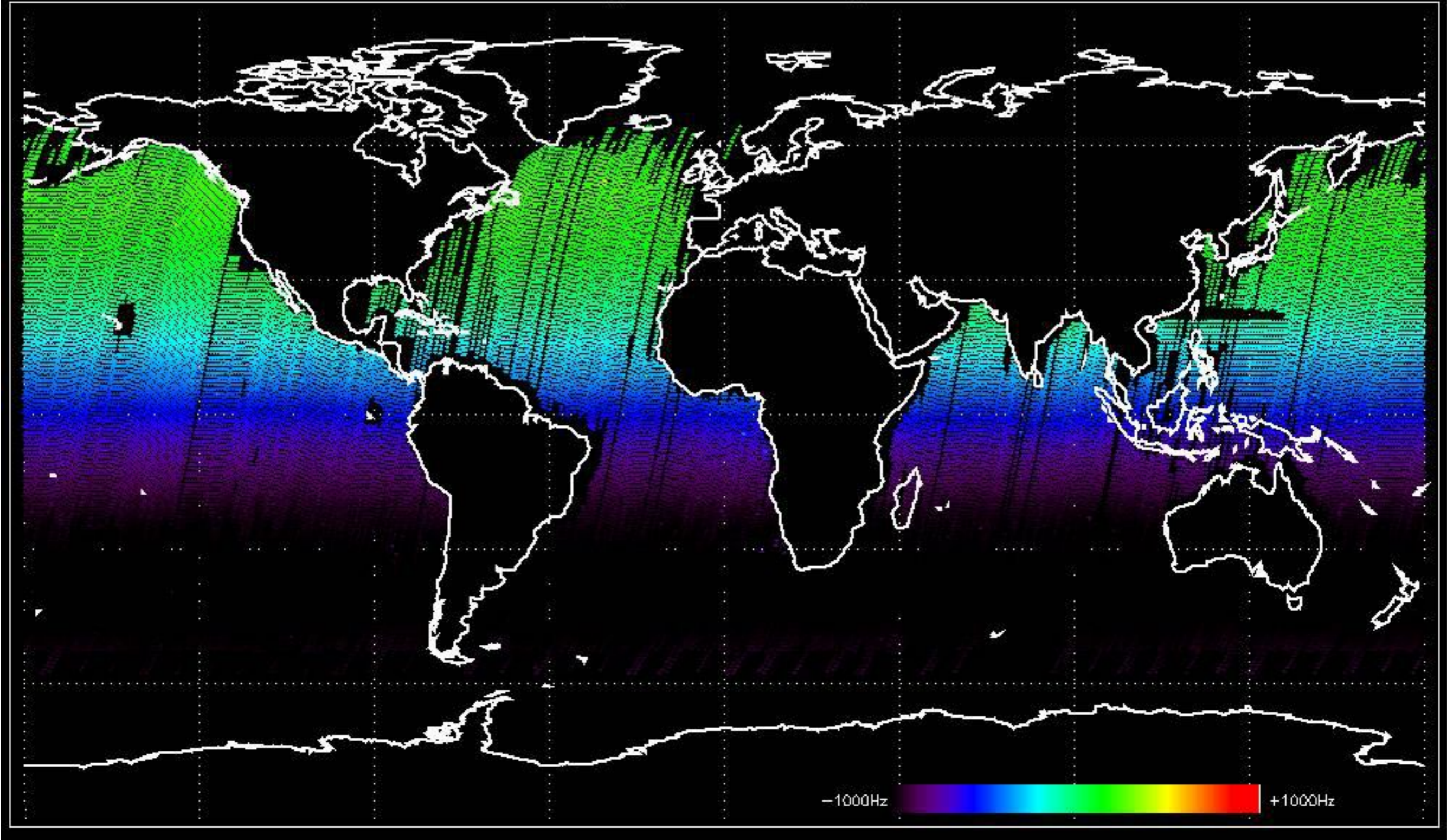
Doppler 'GM1' 'SS1' descending



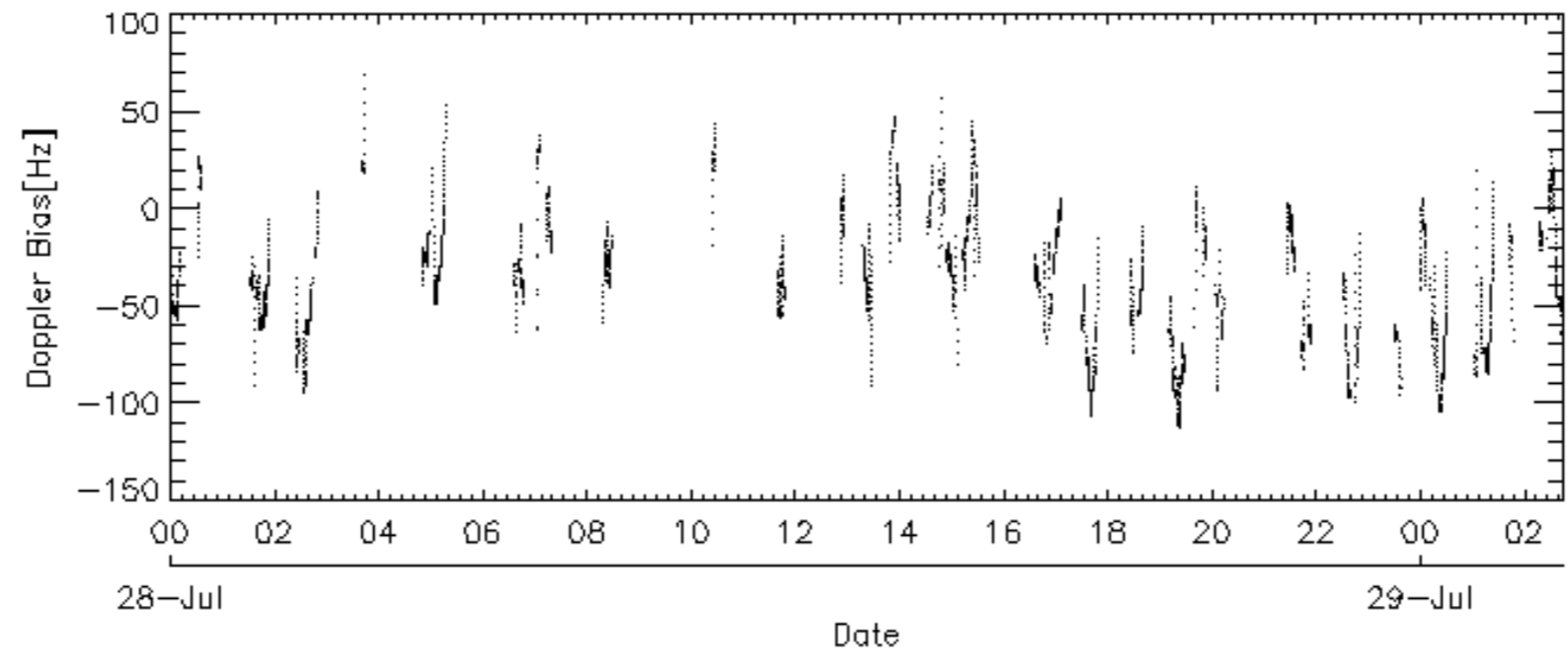
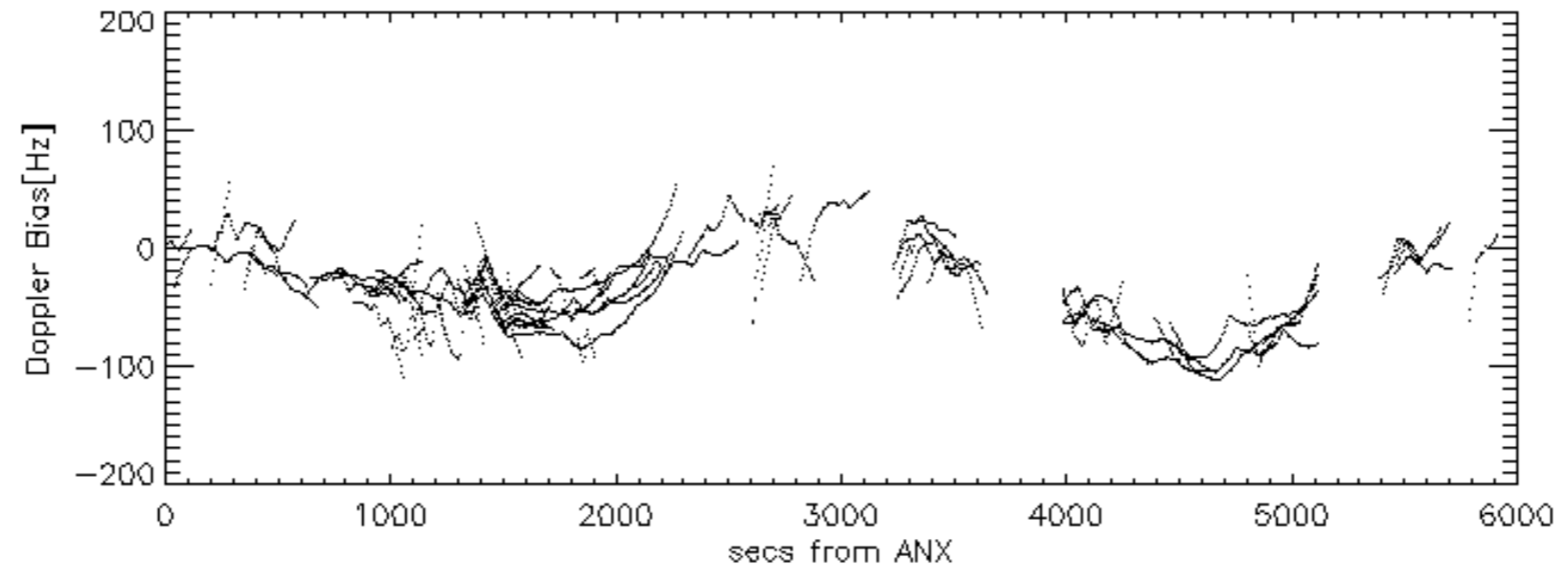
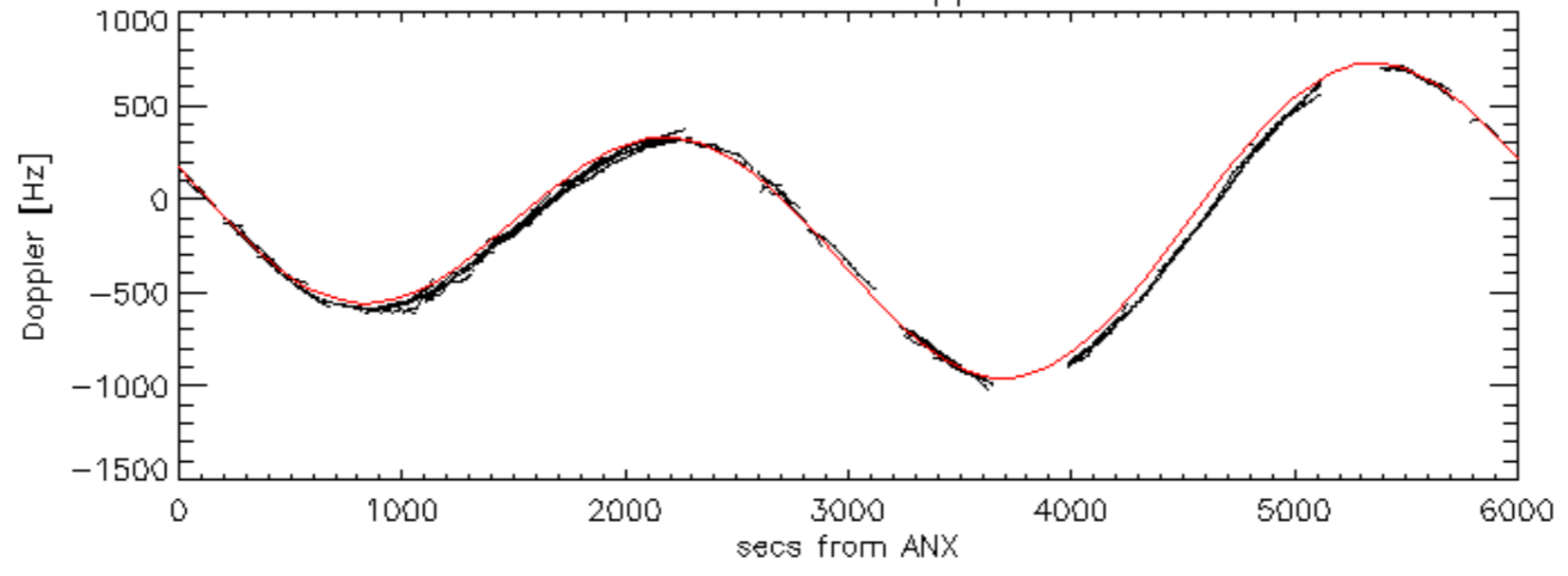
Doppler 'WVS' 'IS2' ascending

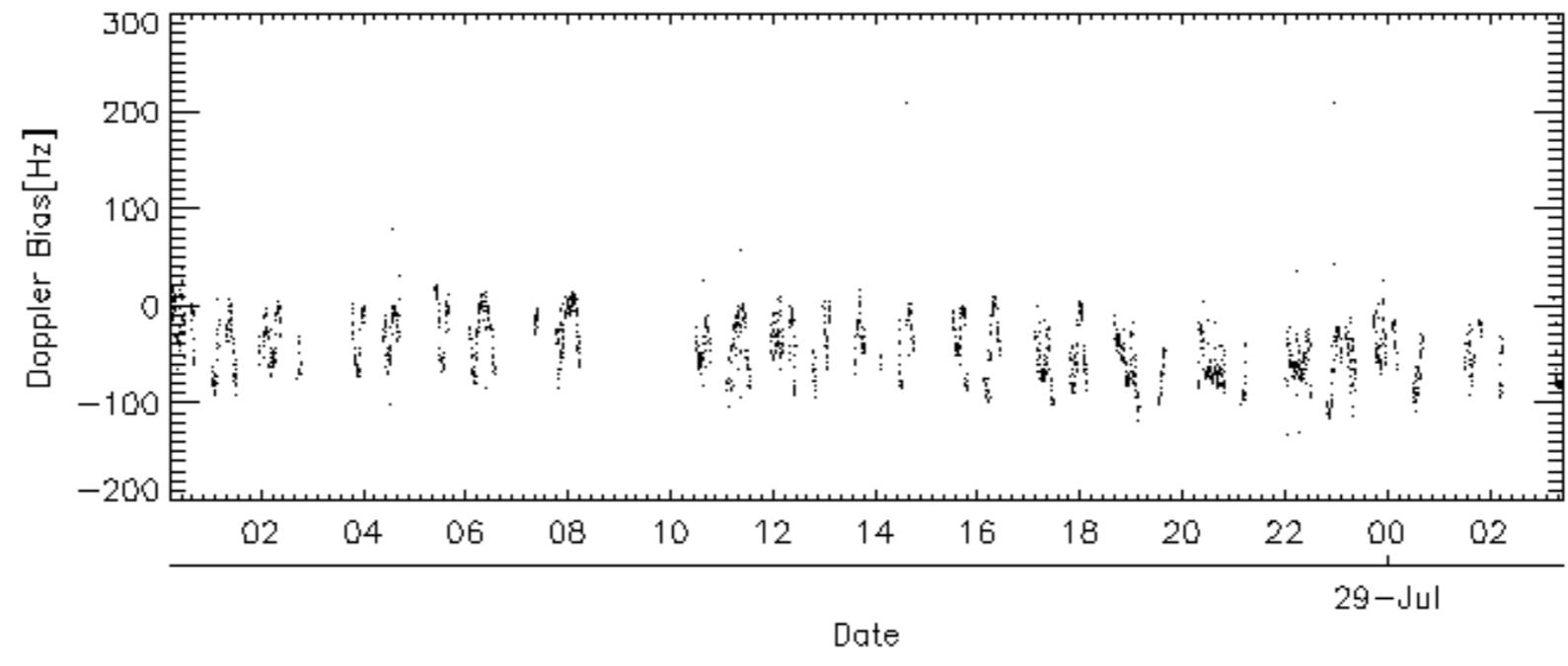
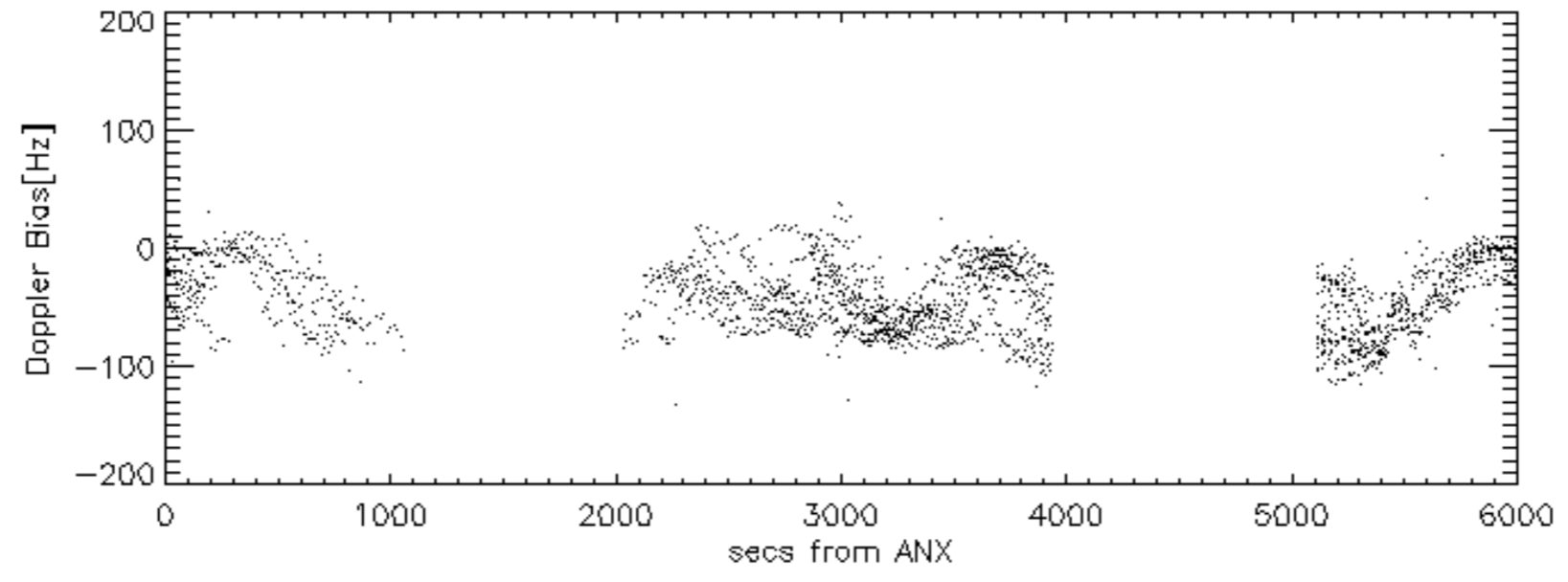
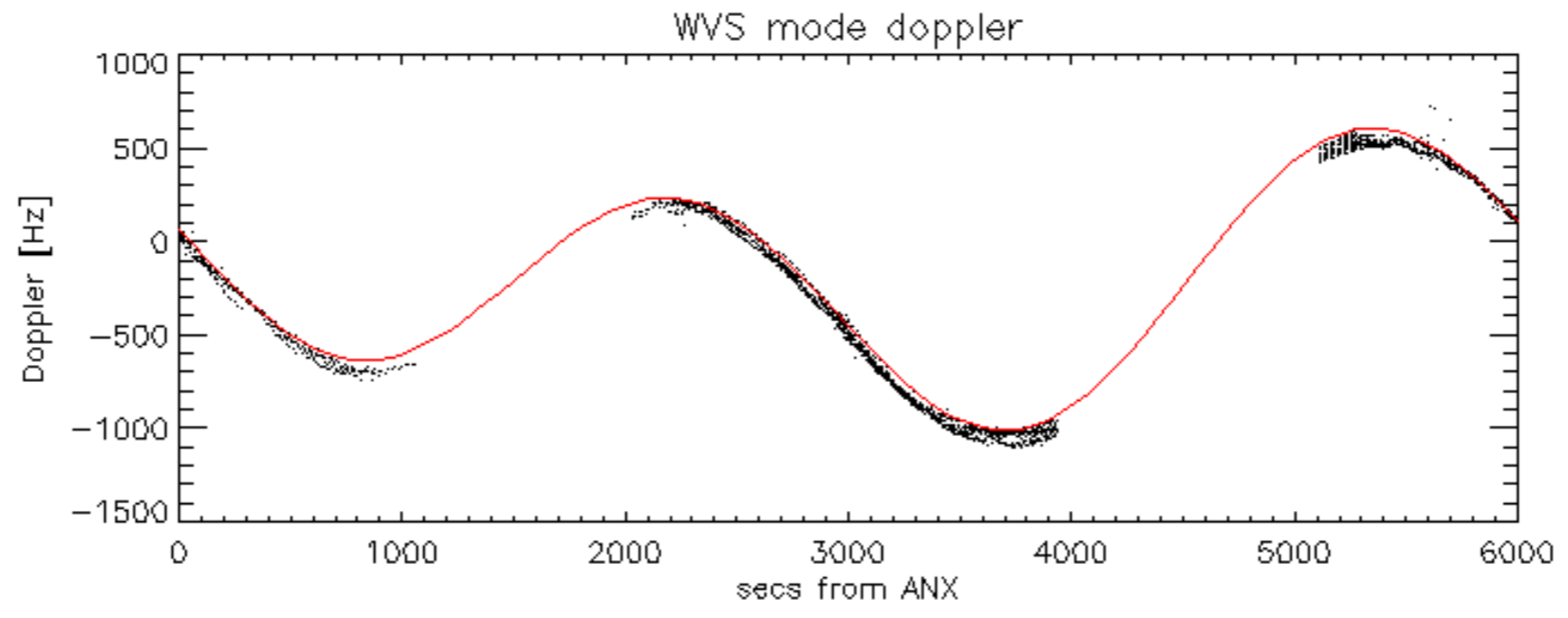


Doppler 'WVS' 'IS2' descending

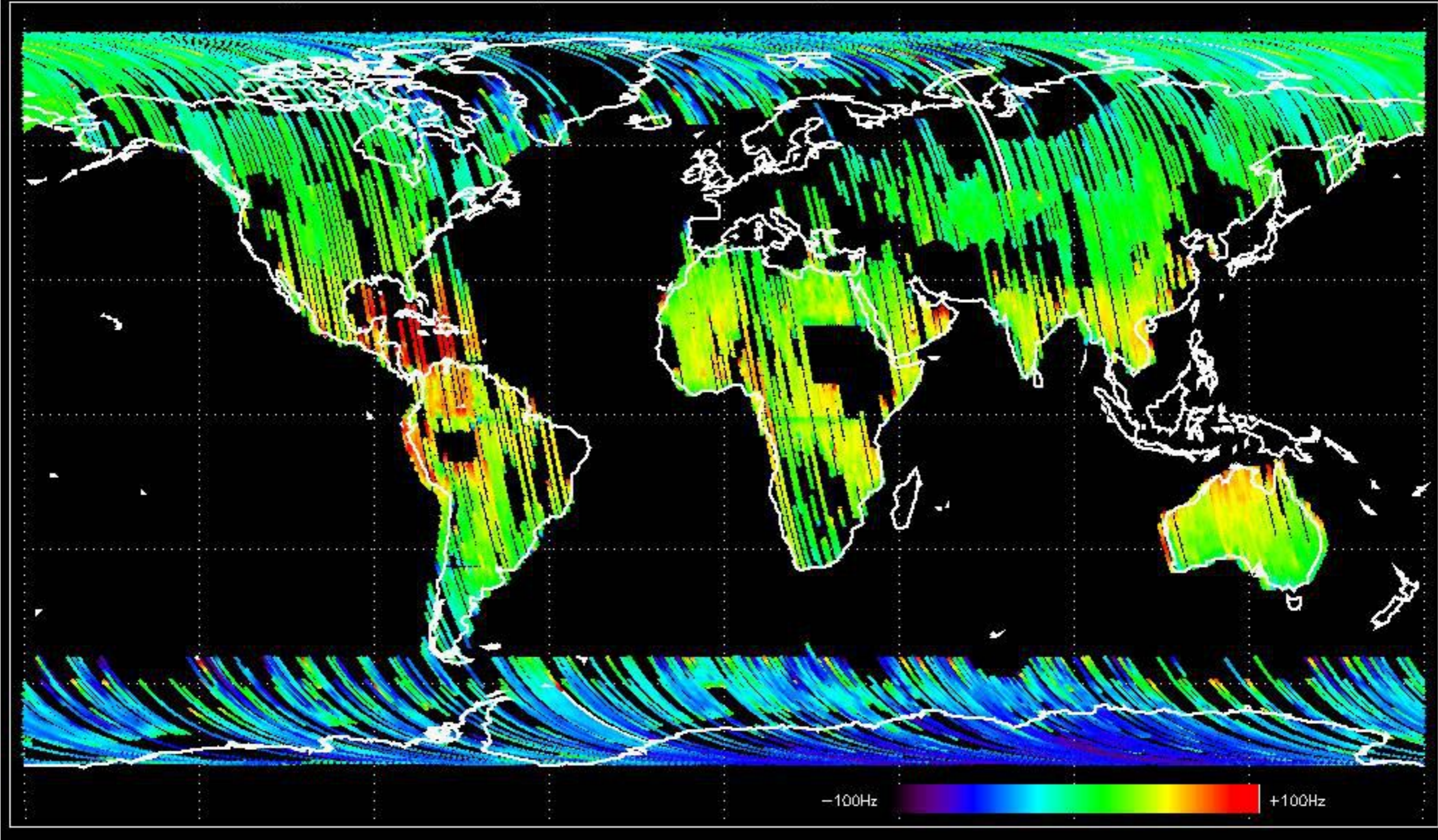


GM1 mode doppler

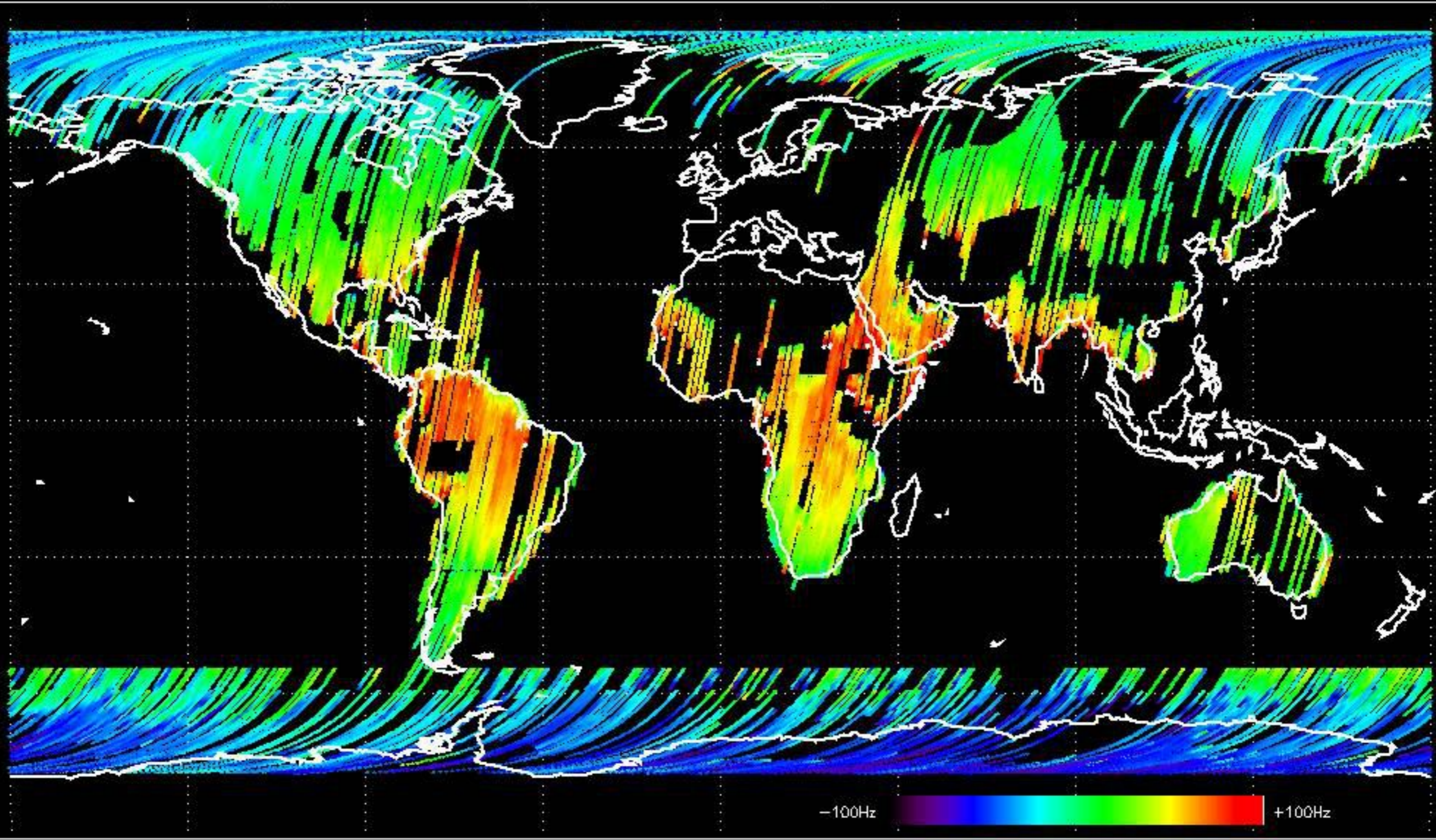




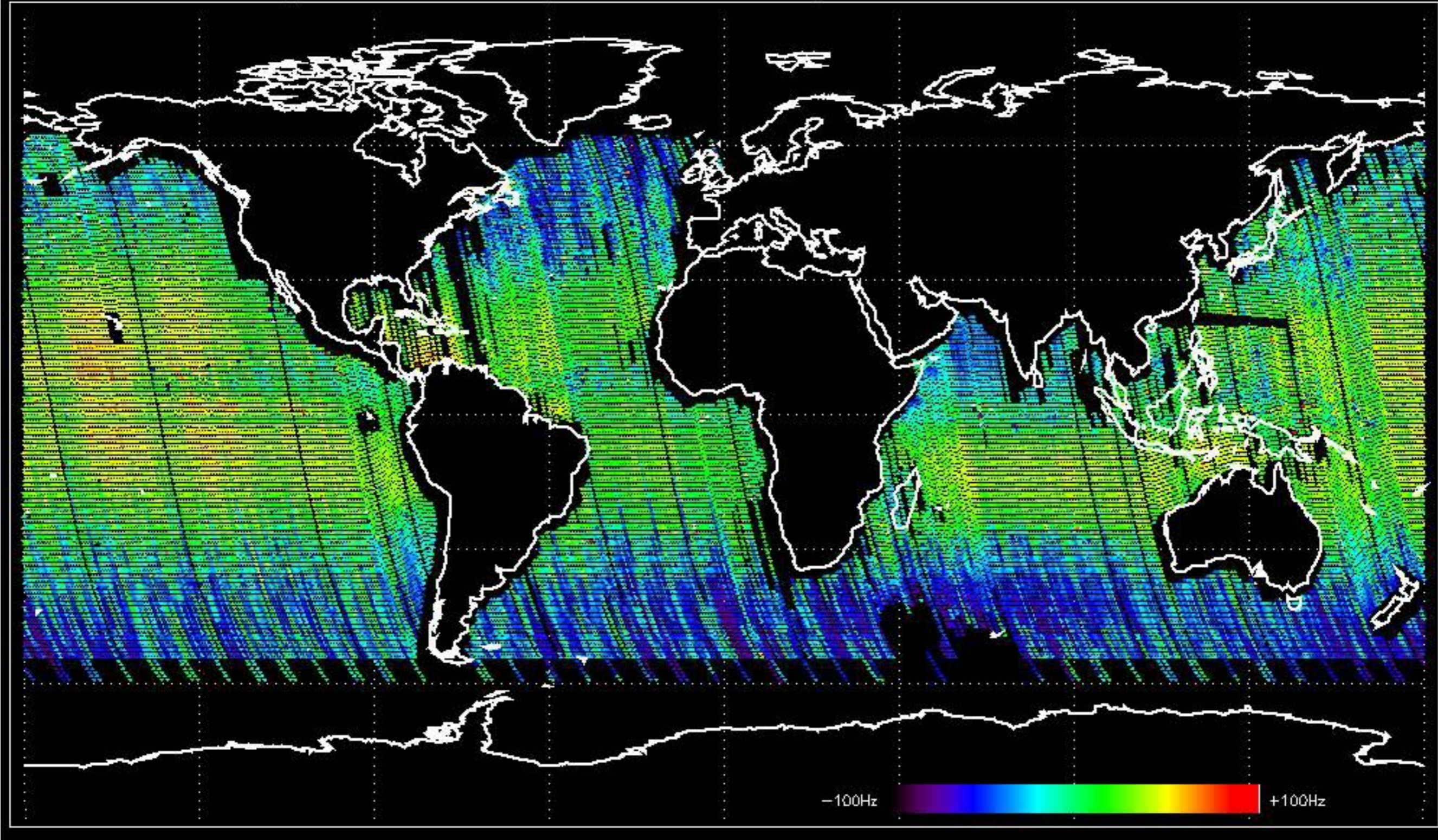
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -35.800269 Hz



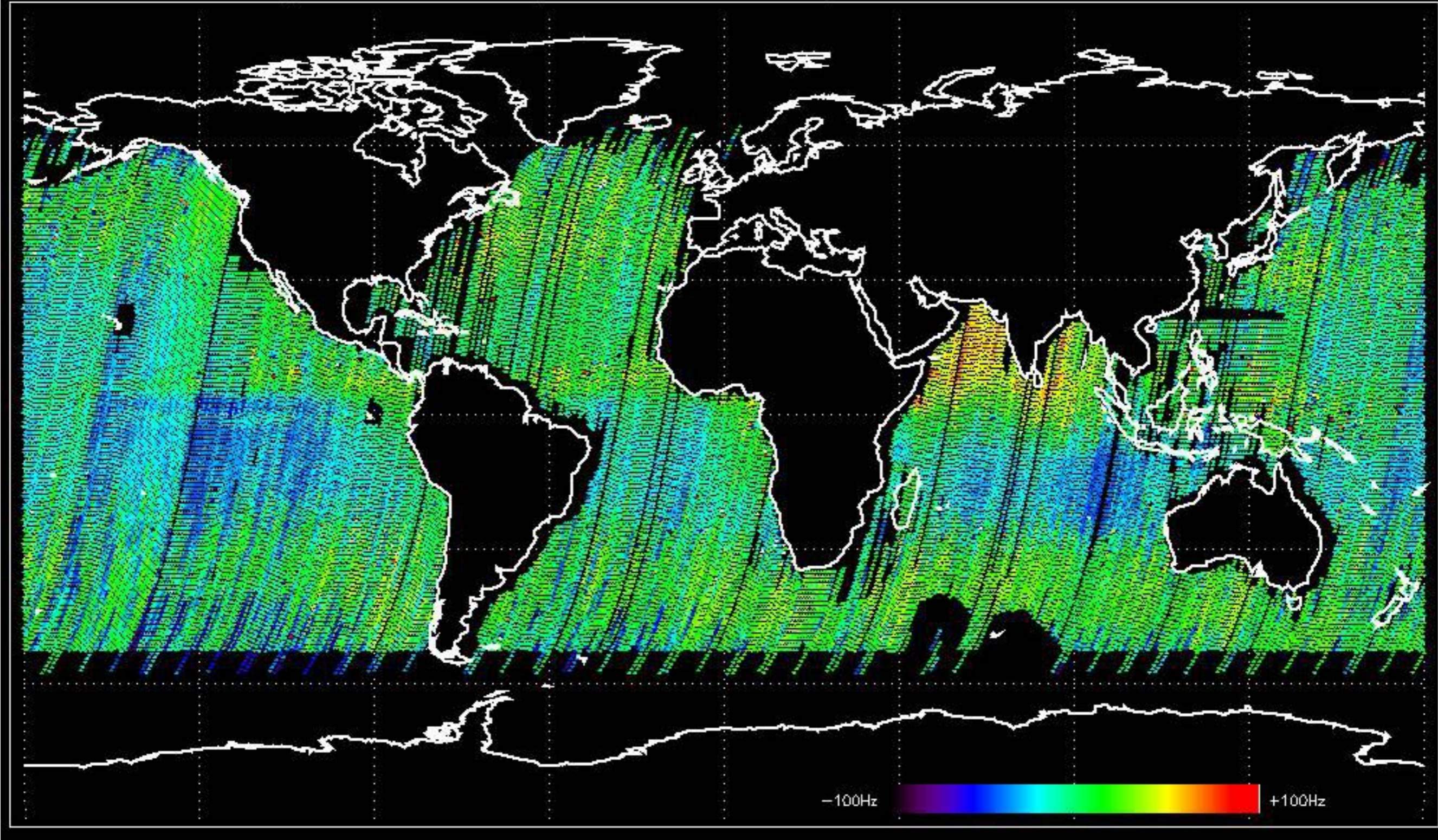
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.512792 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -32.801620 Hz

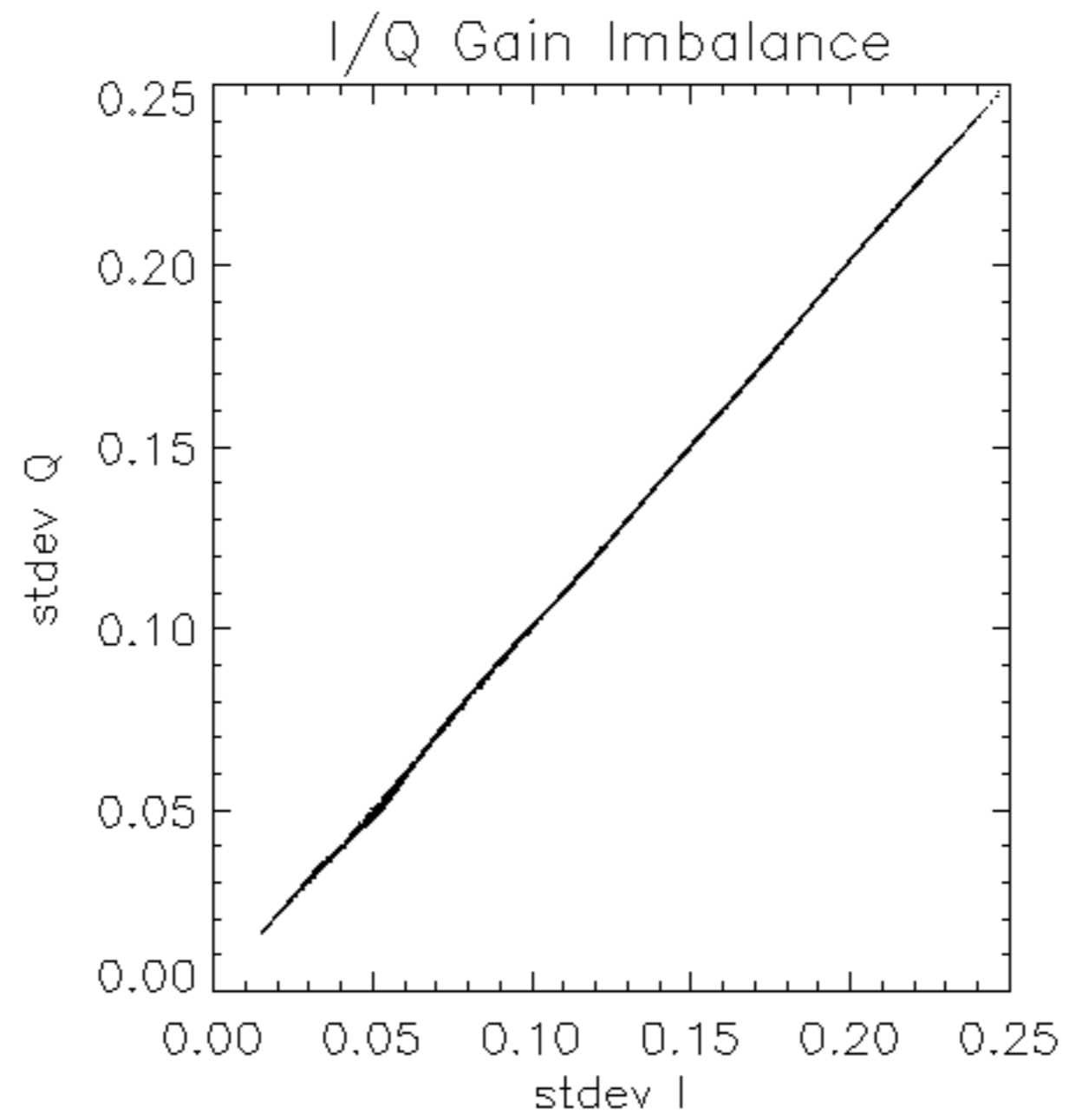


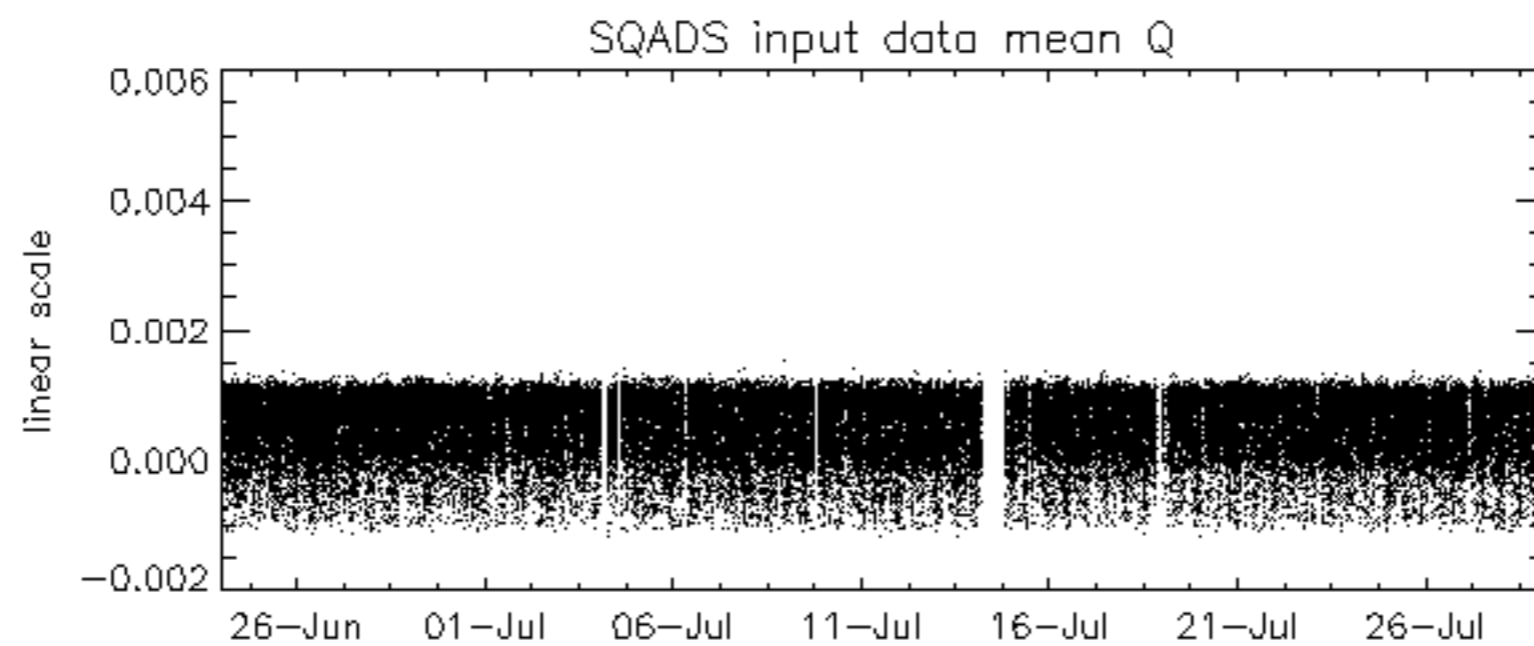
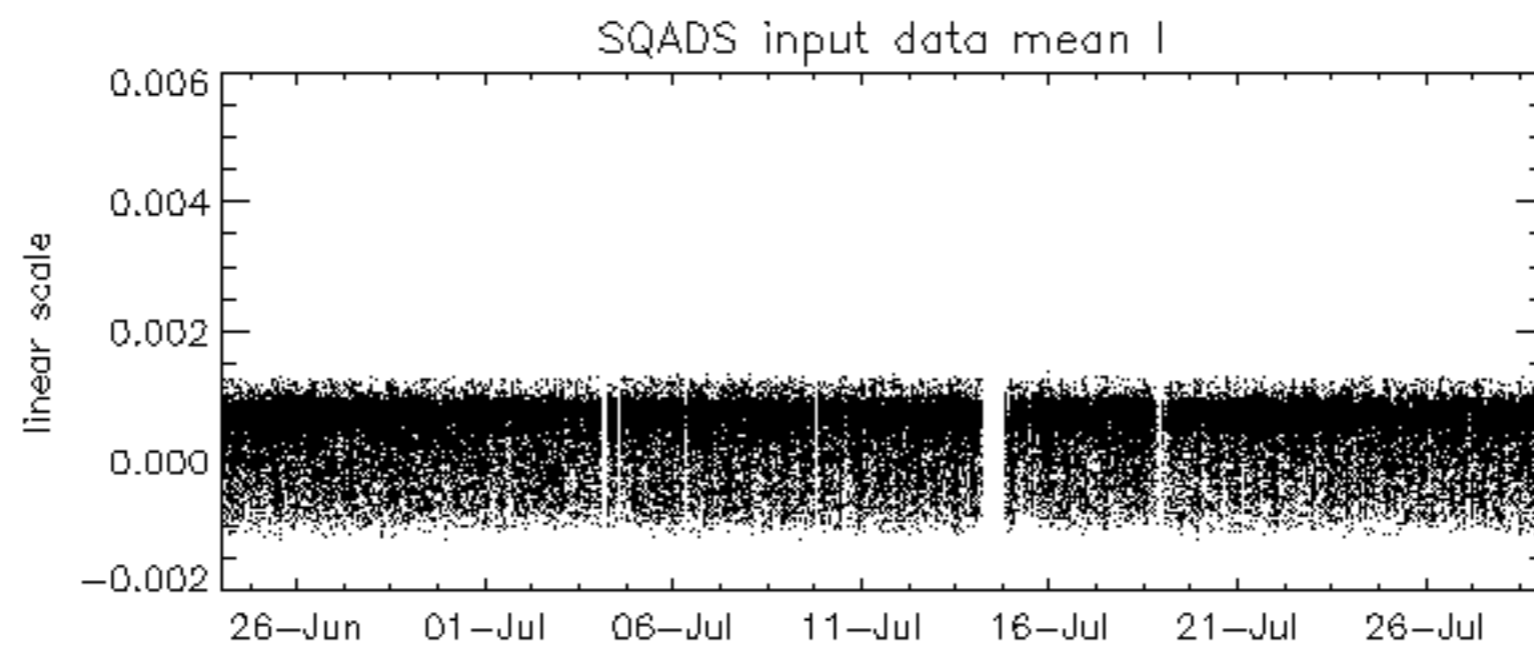
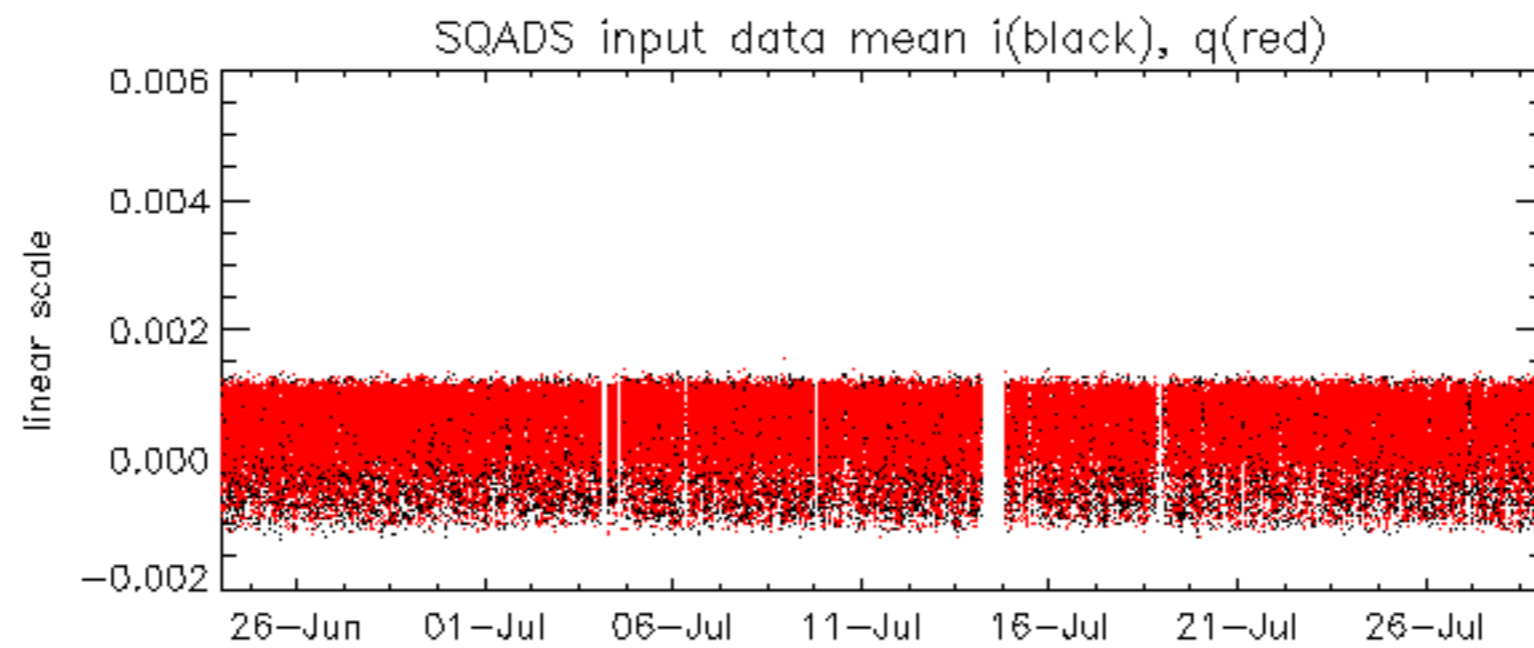
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.491198 Hz

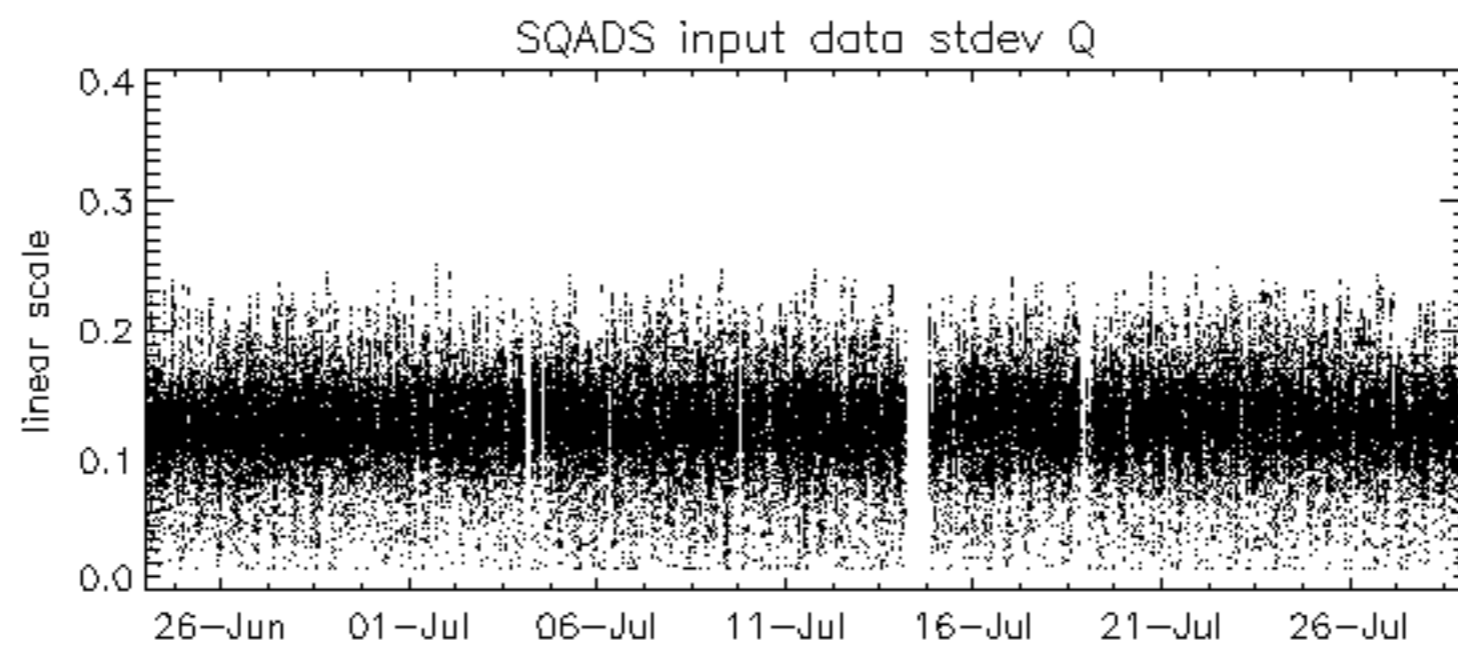
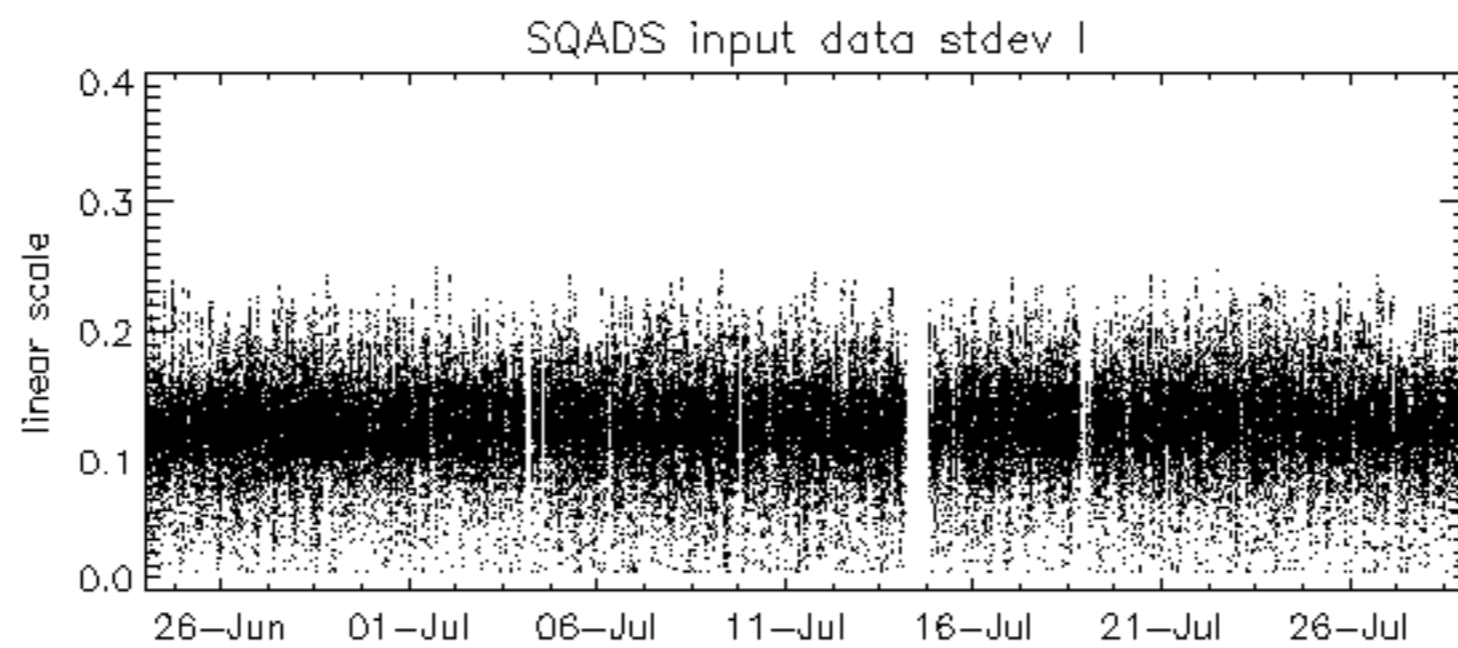
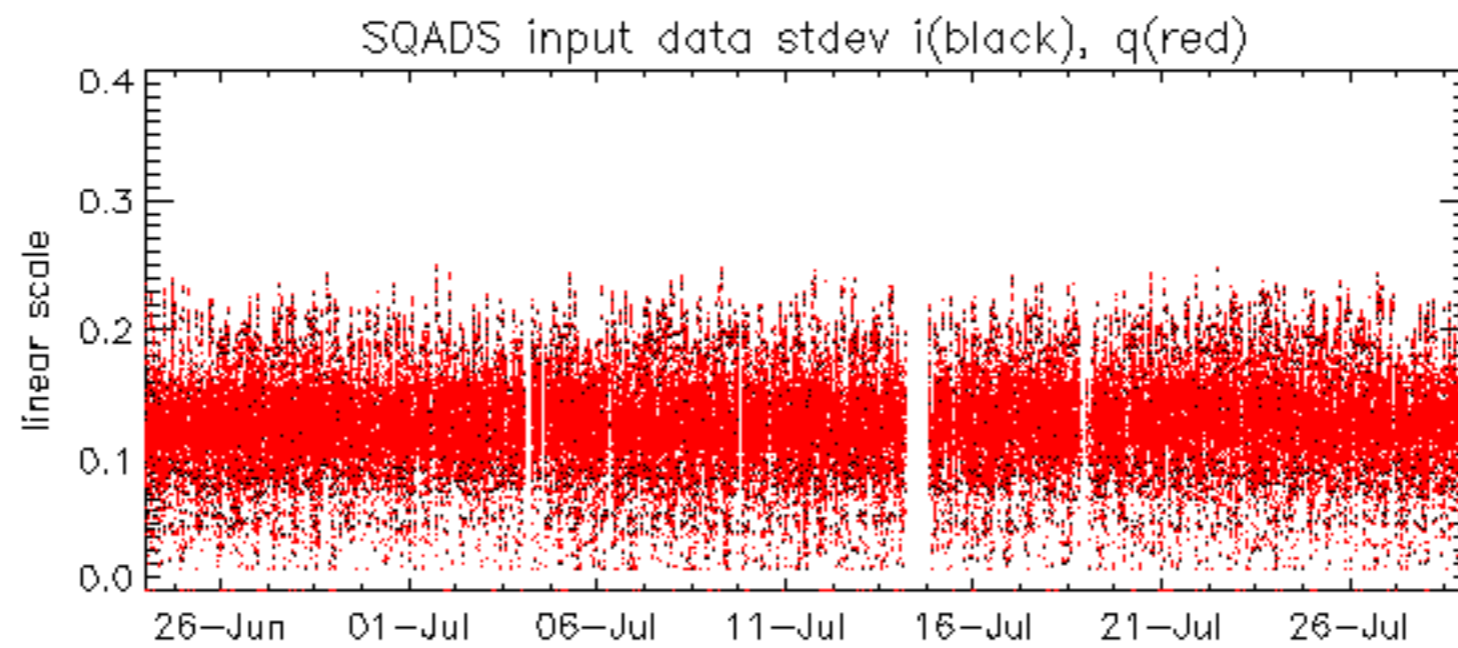


No anomalies observed on available MS products:

No anomalies observed.



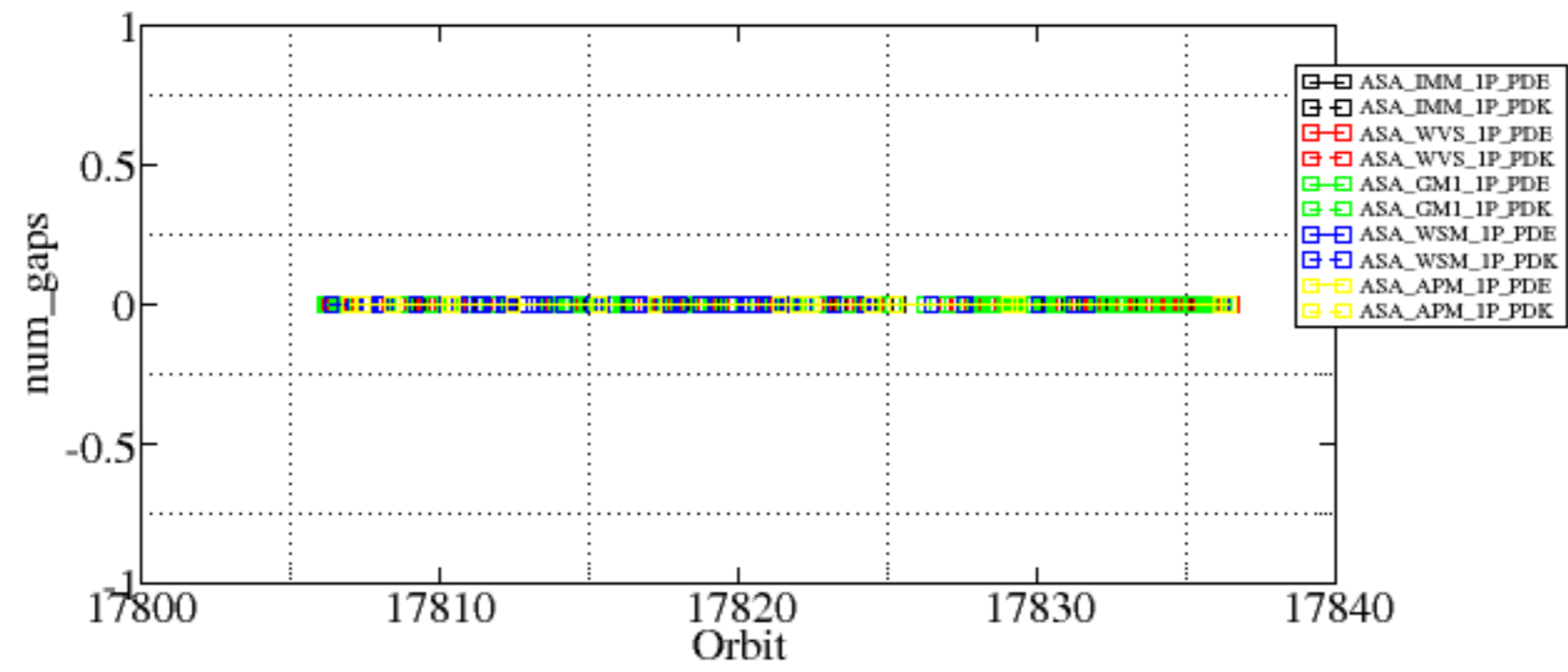


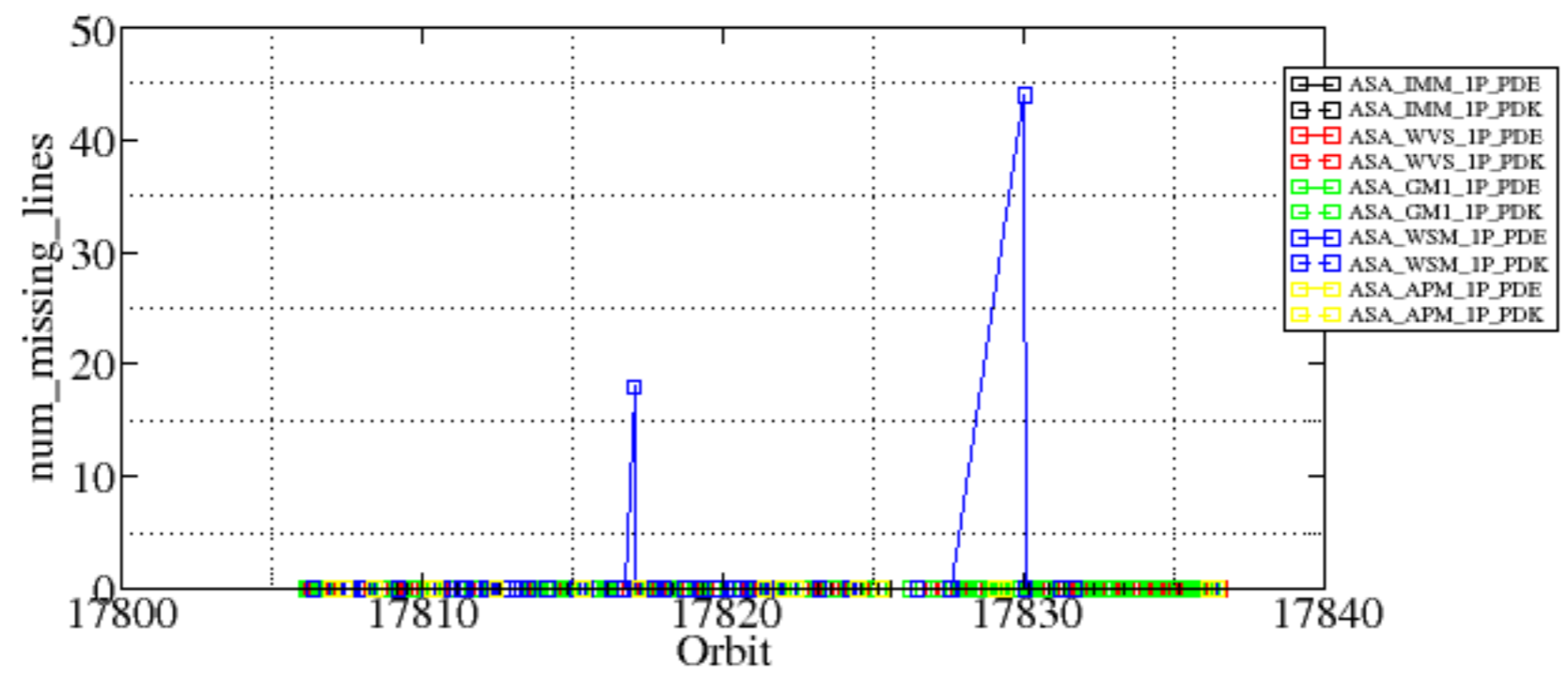


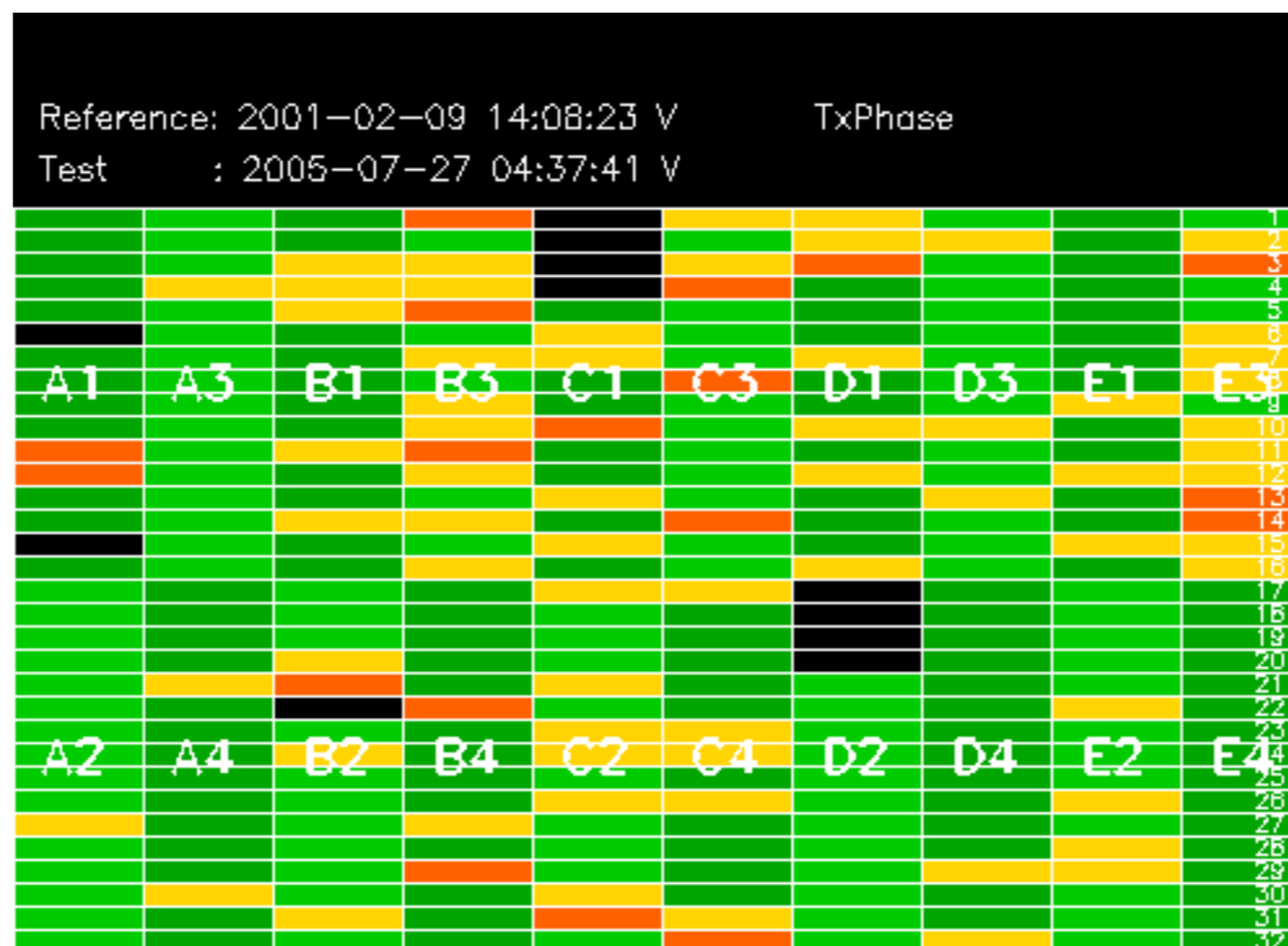
Summary of analysis for the last 3 days 2005072[789]

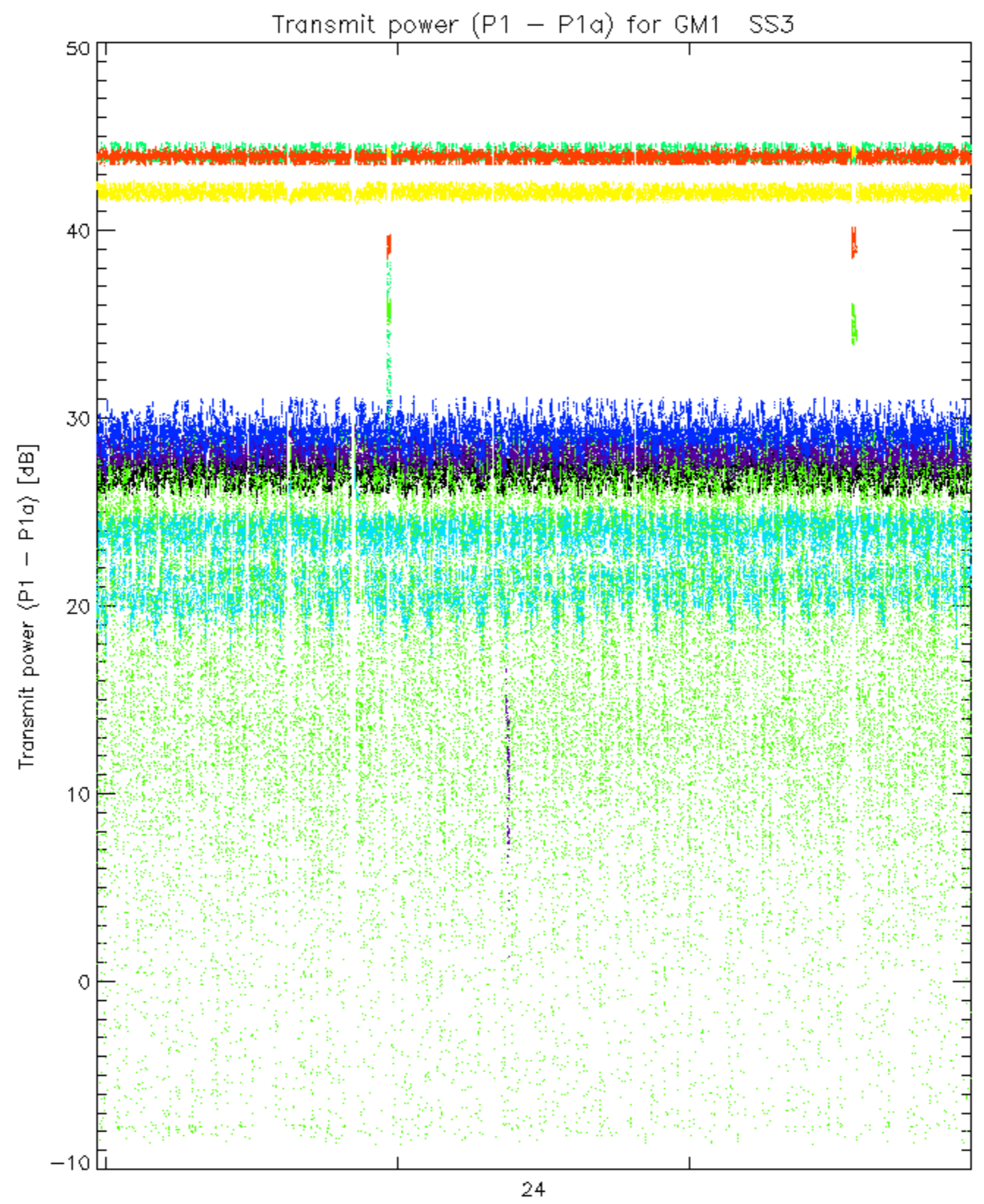
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

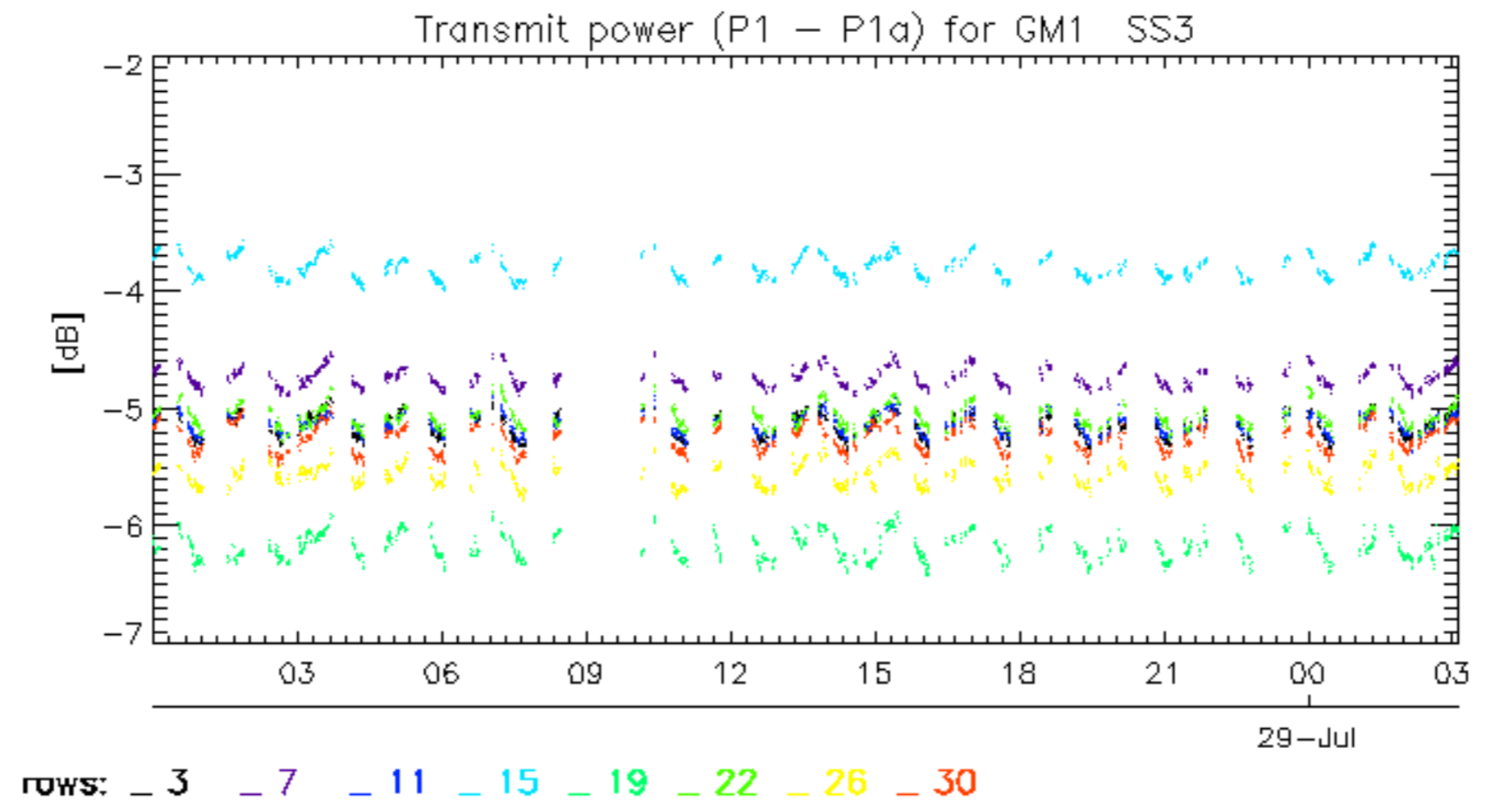
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20050727_183936_00000672039_00228_17817_1598.N1	0	18
ASA_WSM_1PNPDE20050727_183936_000002732039_00228_17817_1617.N1	0	18
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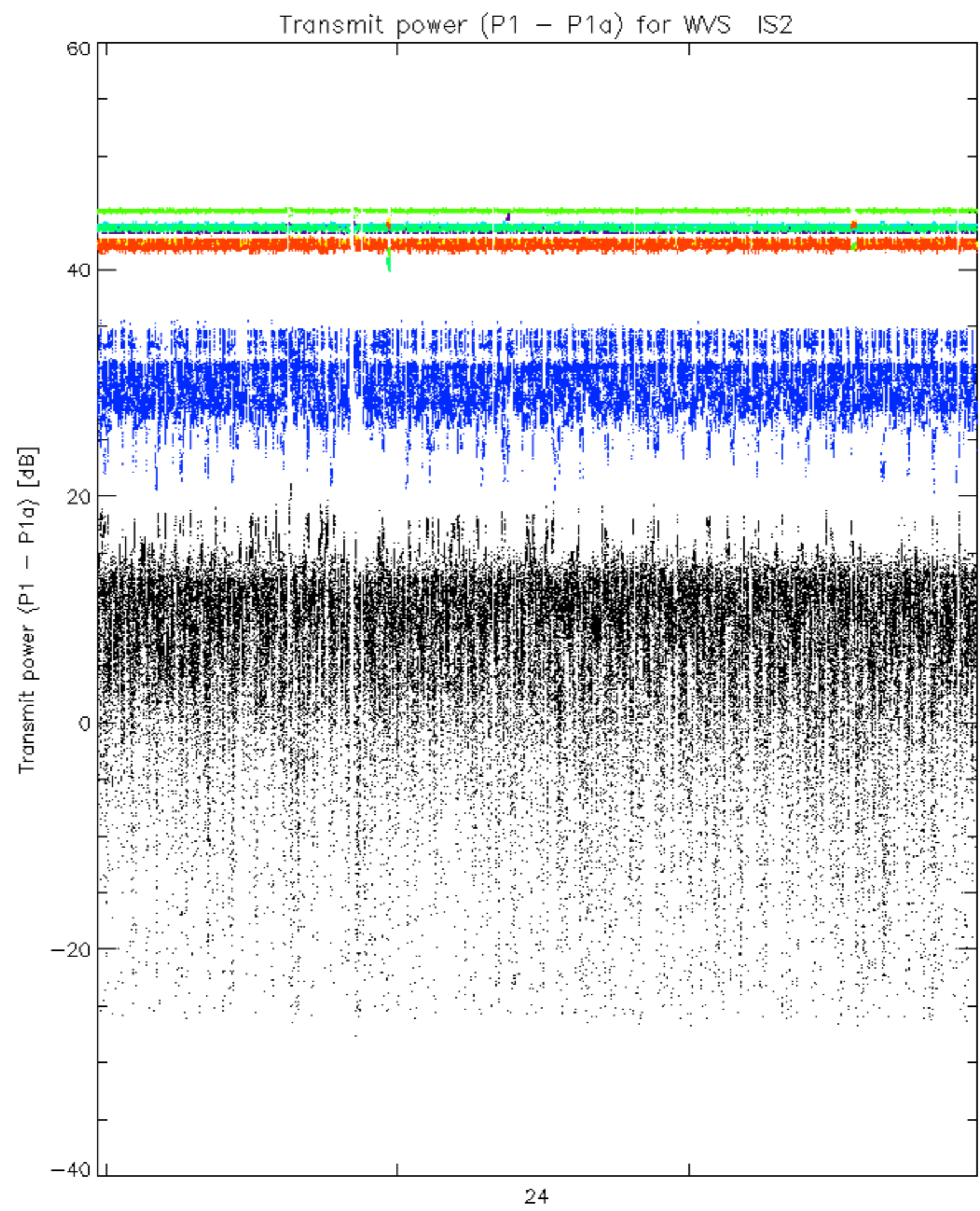




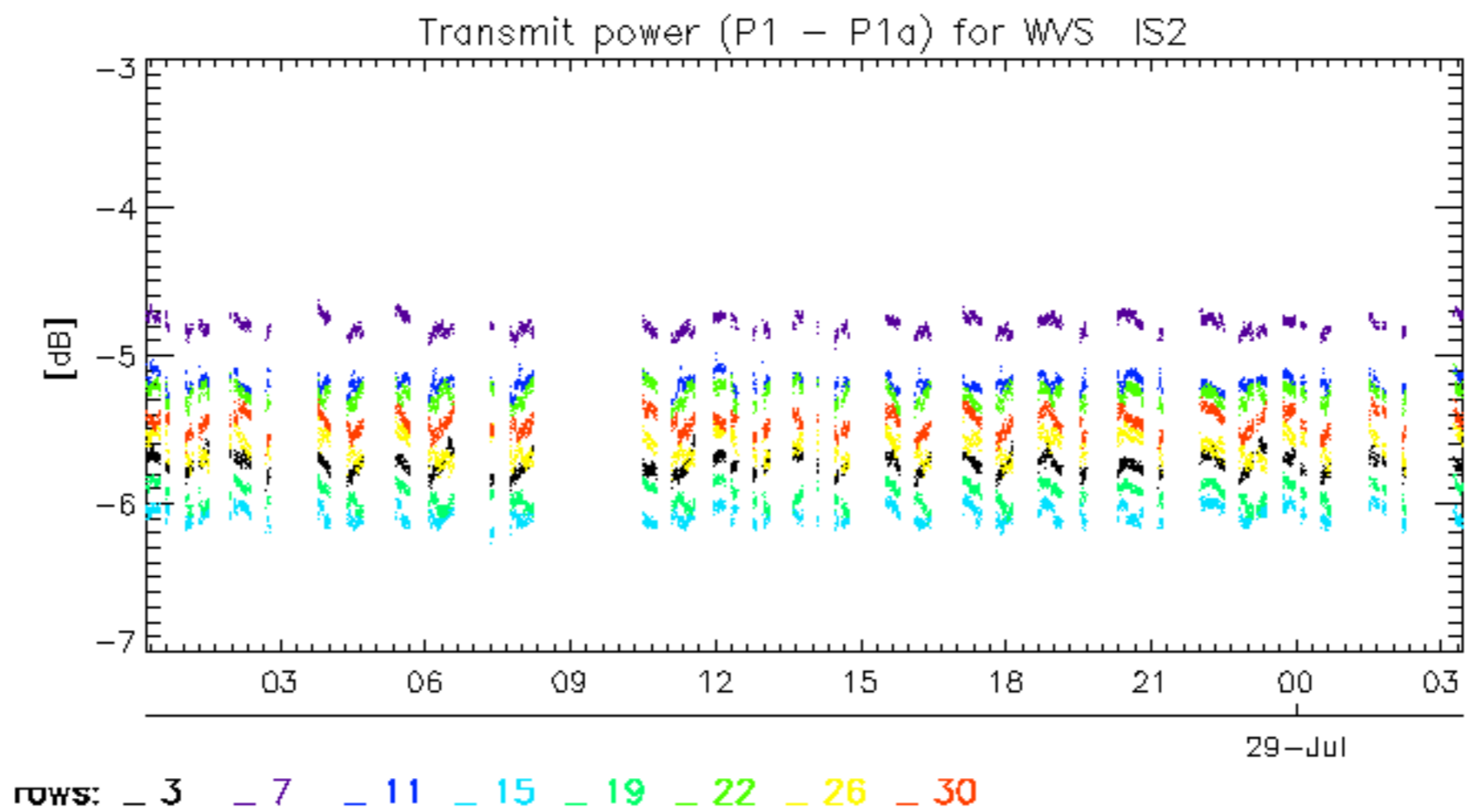








rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



No unavailabilities during the reported period.