

PRELIMINARY REPORT OF 050724

last update on Sun Jul 24 10:58:09 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 2005-07-23 00:00:00 to 2005-07-24 10:58:09

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	25	49	9	5	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	25	49	9	5	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	25	49	9	5	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	25	49	9	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	38	44	32	6	58
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	38	44	32	6	58
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	38	44	32	6	58
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	38	44	32	6	58

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	20050723 064410
H	20050724 061233

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	-3.320435	0.006580	0.024477
7	P1	-3.137330	0.015039	0.004371
11	P1	-4.682250	0.032719	-0.056299
15	P1	-5.551489	0.047269	-0.054040
19	P1	-3.788859	0.045765	-0.020801
22	P1	-4.617980	0.085194	-0.045712
26	P1	-4.852694	0.093748	-0.011062
30	P1	-7.217664	0.180533	-0.088384
3	P1	-15.571781	0.080426	0.007572
7	P1	-15.533332	0.107178	0.059730
11	P1	-21.606882	0.256528	-0.246139
15	P1	-11.293067	0.043240	0.005249
19	P1	-14.494547	0.260262	-0.027730
22	P1	-15.781527	0.356712	0.171373
26	P1	-17.483269	0.244668	0.230780
30	P1	-17.751169	0.395149	0.082757

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.875742	0.082787	0.101755
7	P2	-22.049885	0.105070	0.157001
11	P2	-13.707225	0.105637	0.254085
15	P2	-7.096621	0.093547	0.066655
19	P2	-9.596964	0.094312	0.030101
22	P2	-16.856953	0.094952	0.024770
26	P2	-16.506498	0.097408	0.017431
30	P2	-18.790171	0.084078	0.001002

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.158297	0.002737	0.013522
7	P3	-8.158297	0.002737	0.013522
11	P3	-8.158297	0.002737	0.013522
15	P3	-8.158297	0.002737	0.013522
19	P3	-8.158297	0.002737	0.013522
22	P3	-8.158297	0.002737	0.013522
26	P3	-8.158297	0.002737	0.013522
30	P3	-8.158297	0.002737	0.013522

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	-2.783550	0.013735	0.025147
7	P1	-2.952498	0.031735	0.013780
11	P1	-3.993696	0.017009	-0.016462
15	P1	-3.564753	0.023513	-0.048504
19	P1	-3.669075	0.116818	0.036117
22	P1	-5.677510	0.119924	-0.020430
26	P1	-7.385721	0.214797	-0.052935
30	P1	-6.322250	0.123933	-0.052491
3	P1	-10.822375	0.039068	0.034361
7	P1	-10.444182	0.156990	-0.012823
11	P1	-12.607944	0.109917	-0.049971
15	P1	-11.616685	0.073856	0.026068
19	P1	-15.665051	1.351634	0.163265
22	P1	-25.820063	3.502333	0.378358
26	P1	-15.420581	0.418865	0.172329
30	P1	-20.139063	1.291070	0.224481

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.623203	0.046451	0.119630
7	P2	-22.056852	0.040460	0.072264
11	P2	-9.714236	0.061556	0.177845
15	P2	-5.125844	0.046585	0.026913
19	P2	-6.904517	0.063342	0.014936
22	P2	-7.084680	0.039501	0.042399
26	P2	-23.966568	0.043589	-0.015195
30	P2	-21.956425	0.042496	0.023916

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998171	0.004139	0.002908
7	P3	-7.998117	0.004132	0.003045
11	P3	-7.998084	0.004131	0.003411
15	P3	-7.998216	0.004136	0.003035
19	P3	-7.998159	0.004145	0.002901
22	P3	-7.998227	0.004121	0.002883
26	P3	-7.998193	0.004127	0.003171
30	P3	-7.998141	0.004128	0.003335

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	0.000471352
	stdev	2.13796e-07
MEAN Q	mean	0.000503766
	stdev	2.31641e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128102
	stdev	0.000990319
STDEV Q	mean	0.128344
	stdev	0.00100103



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005072[234]

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_1PNPDE20050722_042651_000000522039_00147_17736_0317.N1	1	0
ASA_WSM_1PNPDE20050722_201717_000000862039_00157_17746_0710.N1	0	34
ASA_WSM_1PNPDE20050723_012128_000000672039_00160_17749_0739.N1	0	69







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

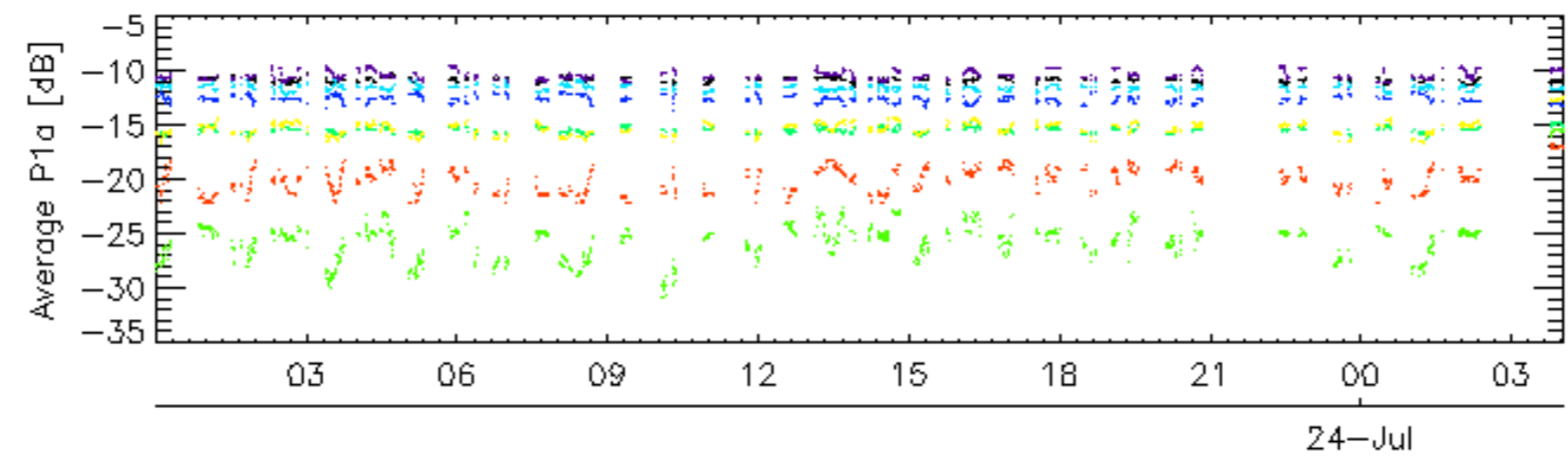
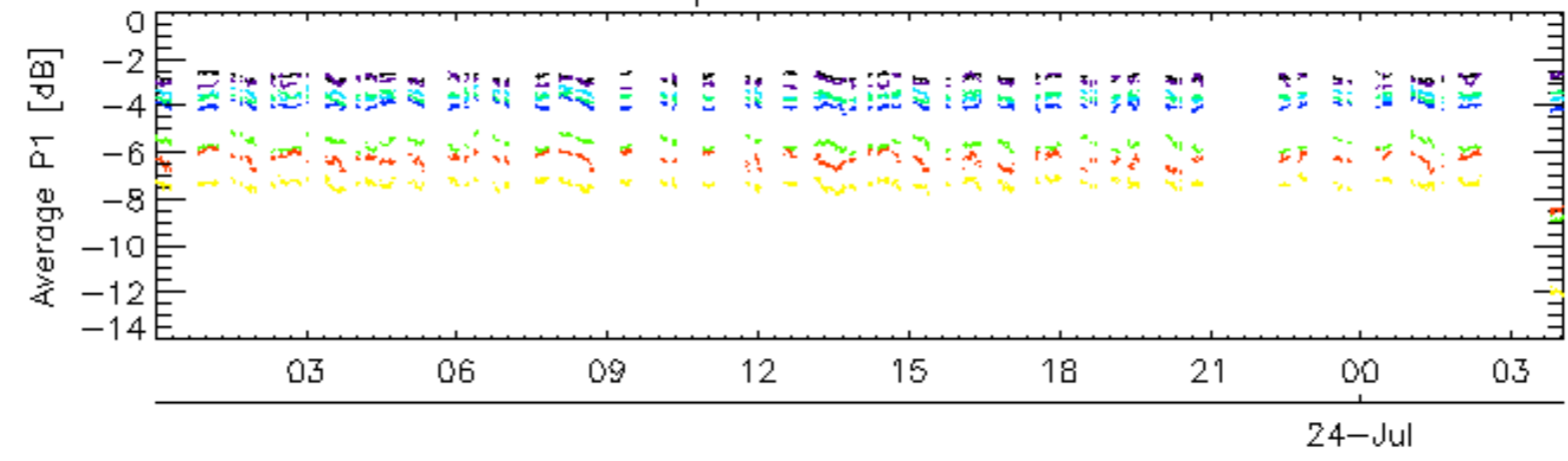
Ascending

Descending

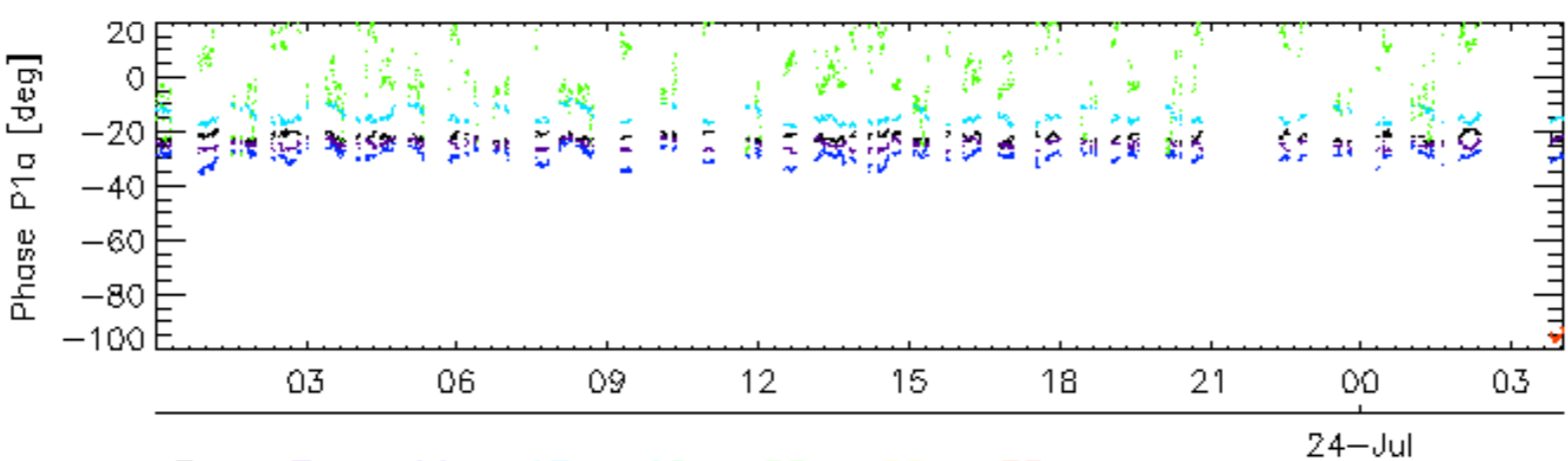
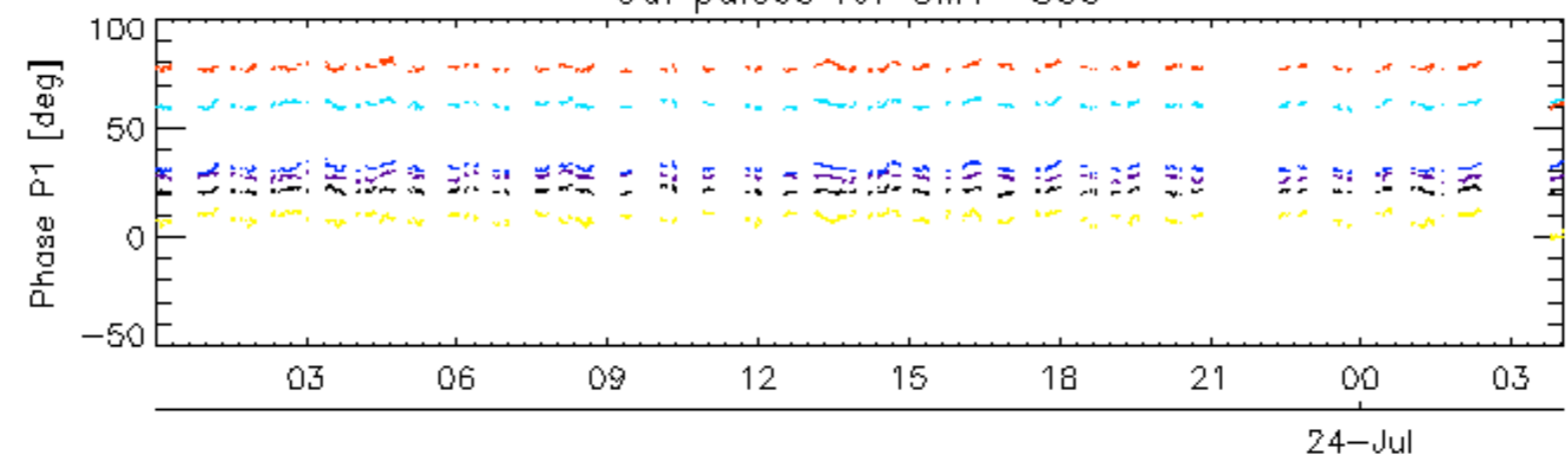
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

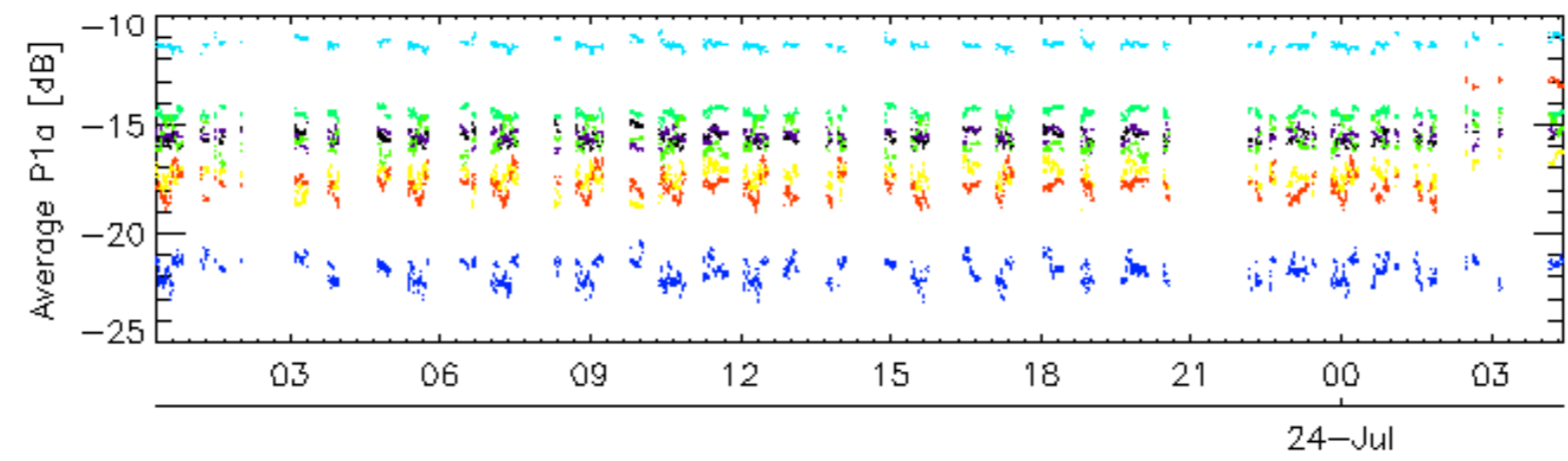
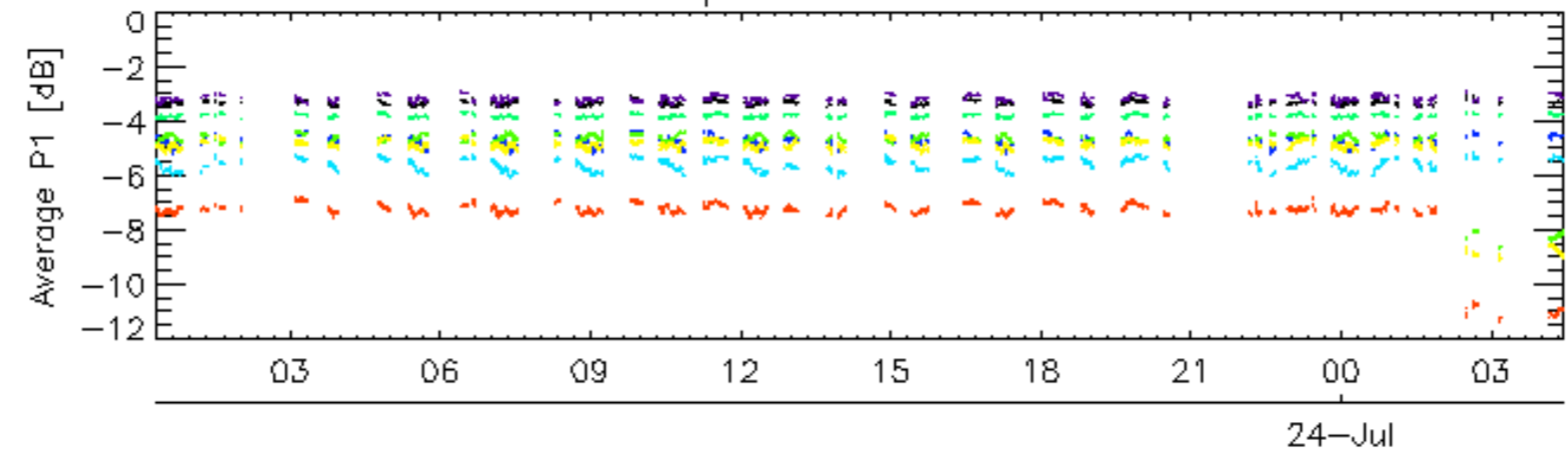


Cal pulses for GM1 SS3

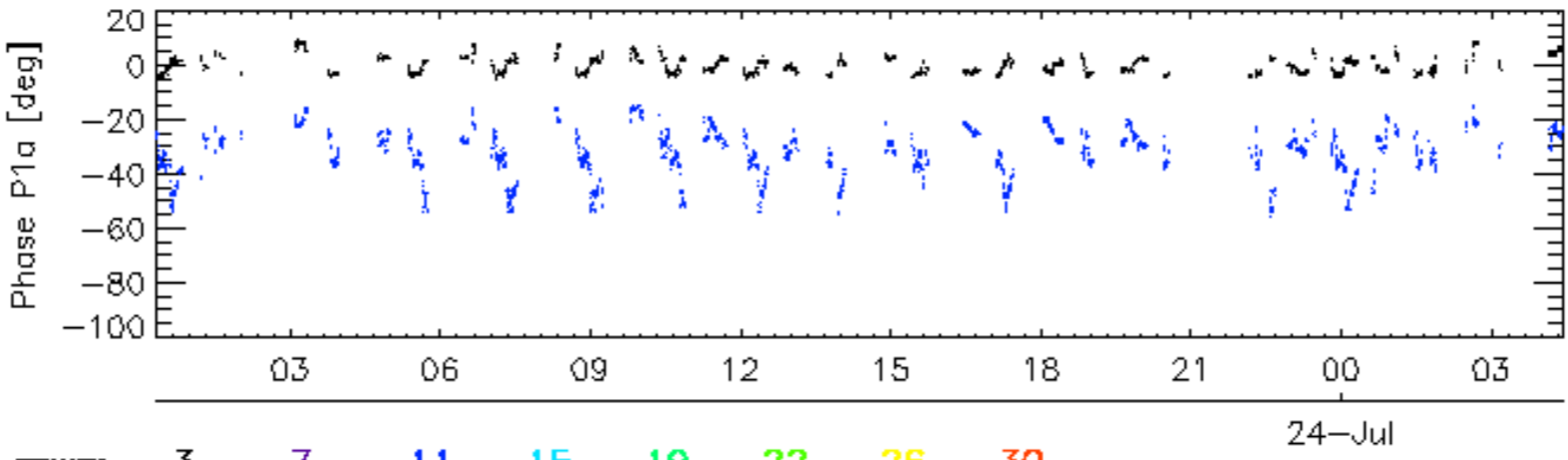
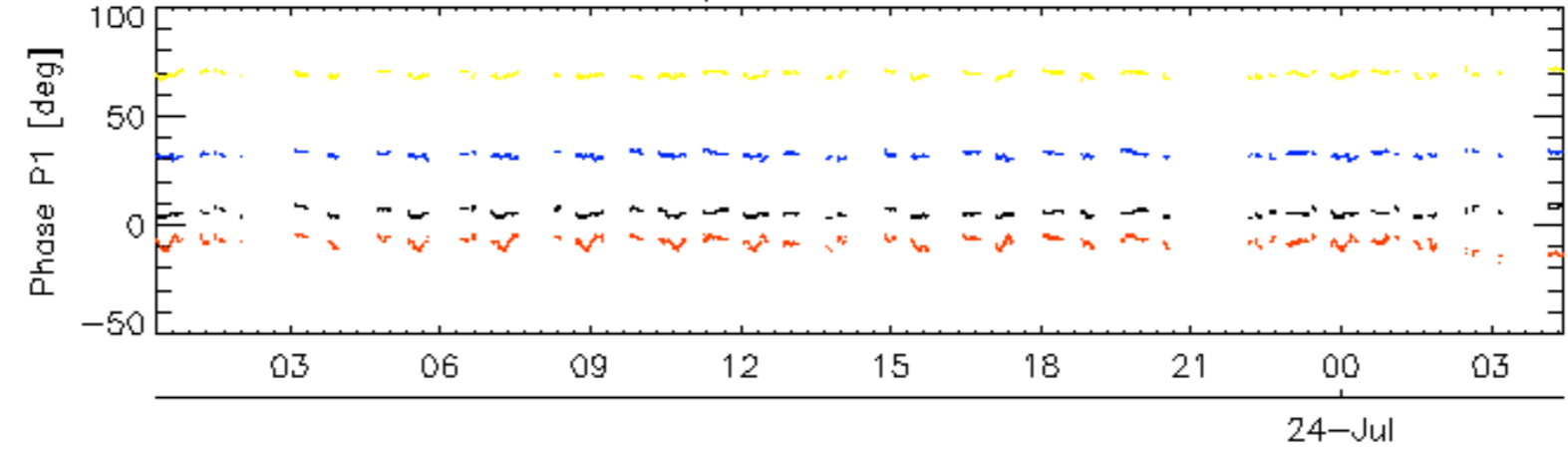


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

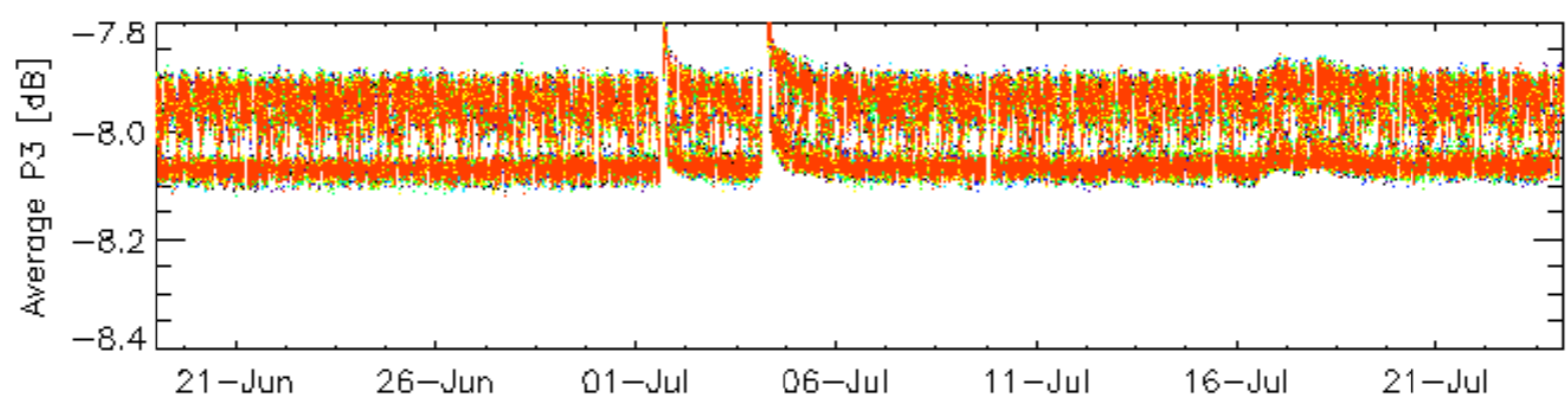
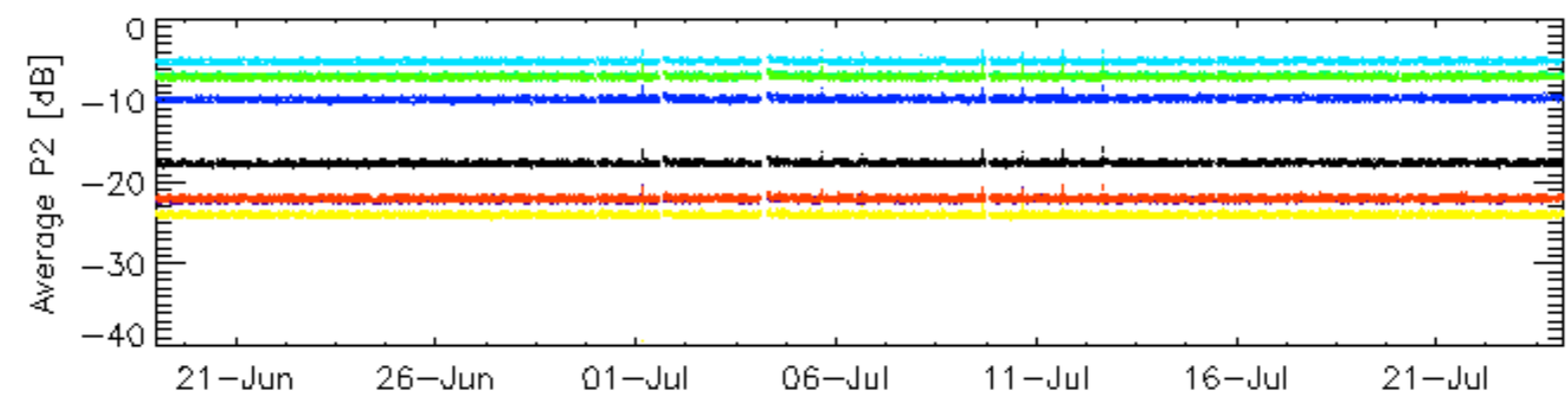
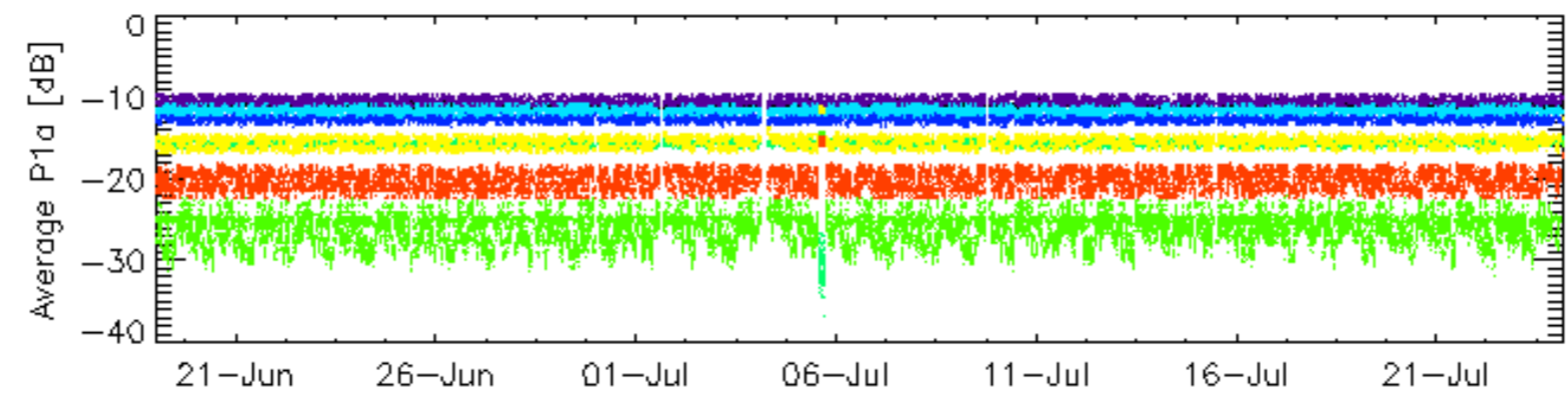
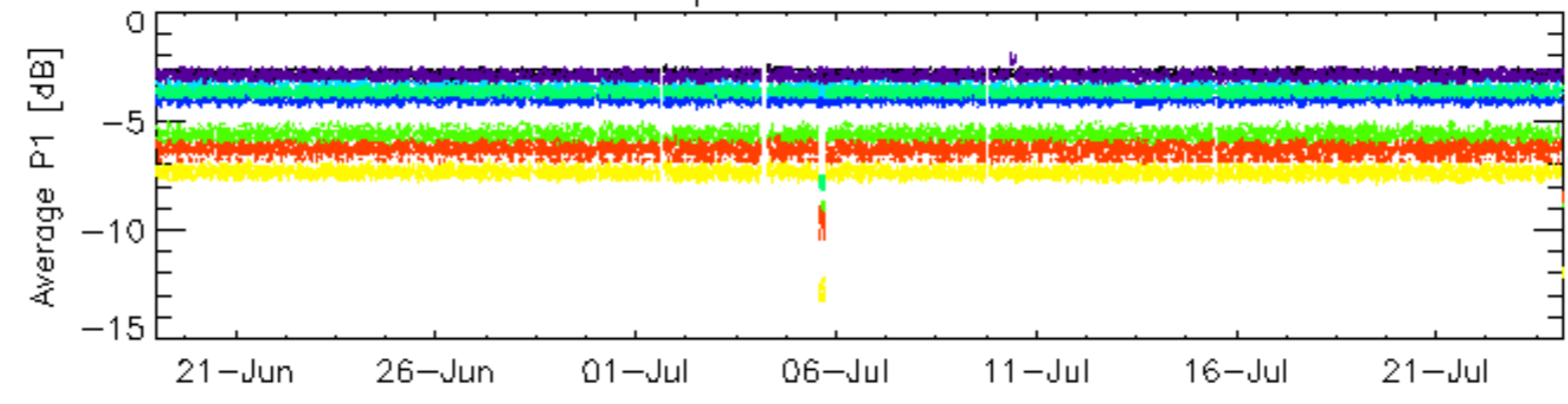


Cal pulses for WVS IS2



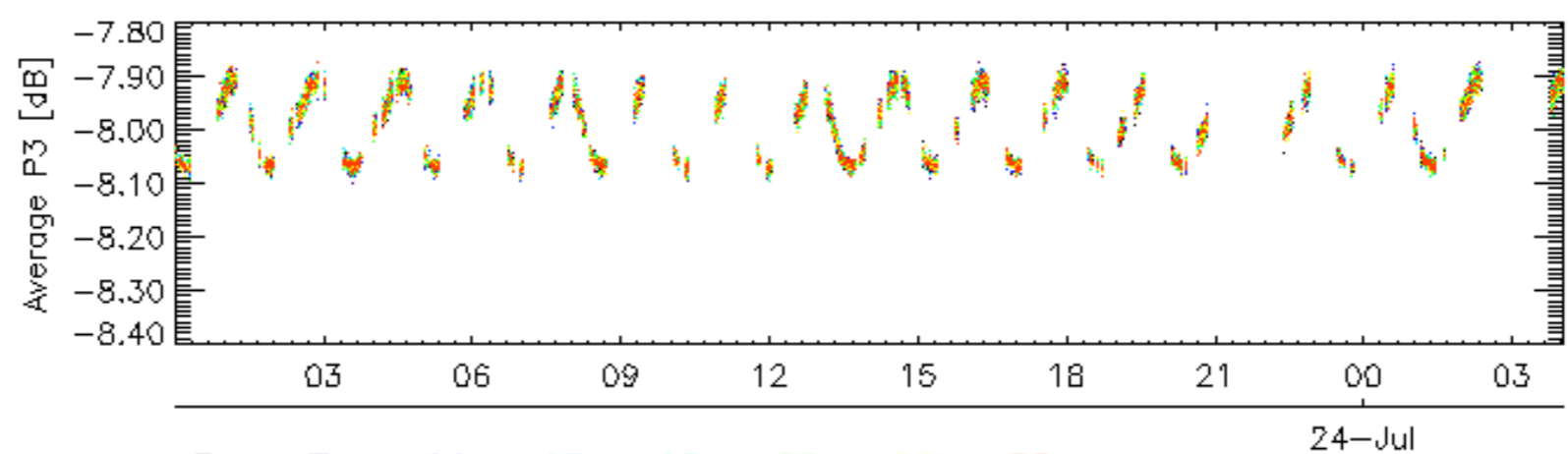
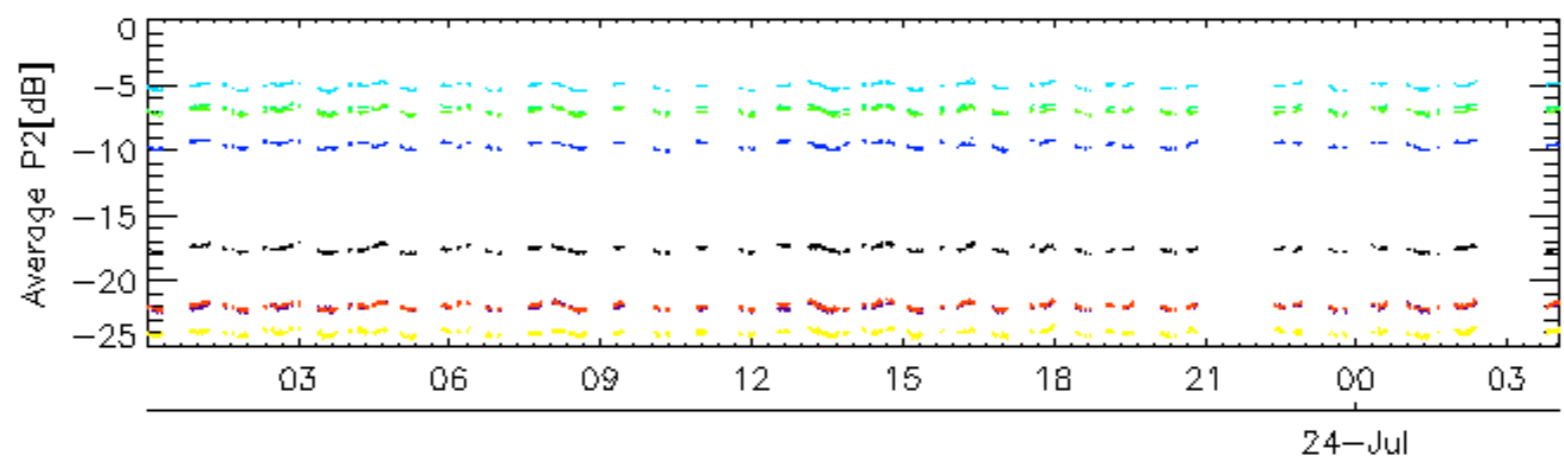
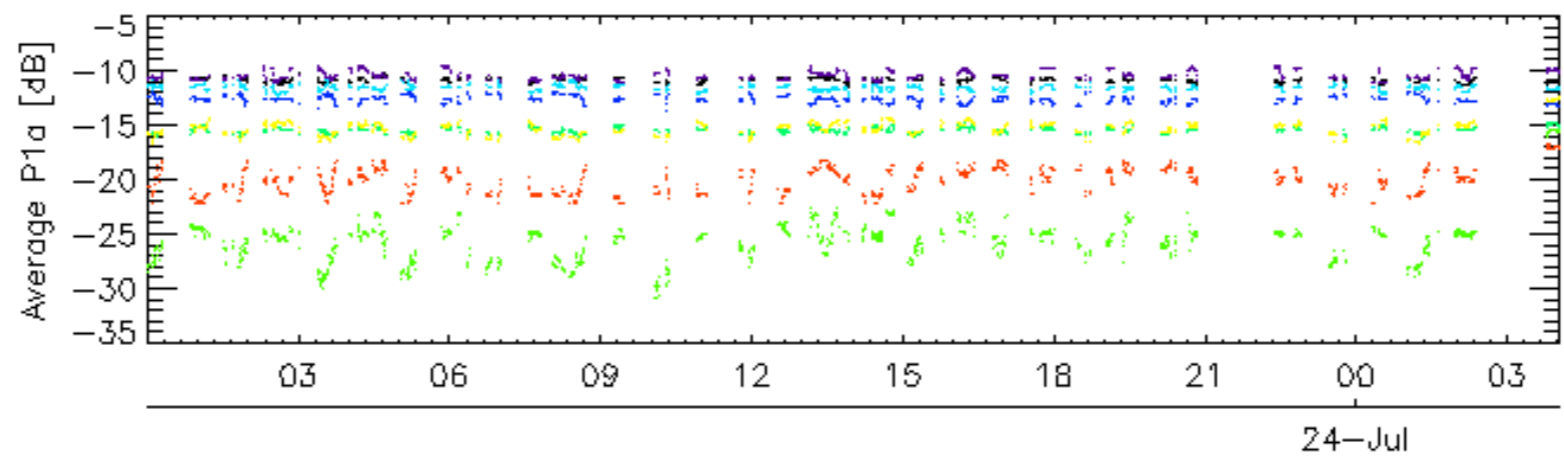
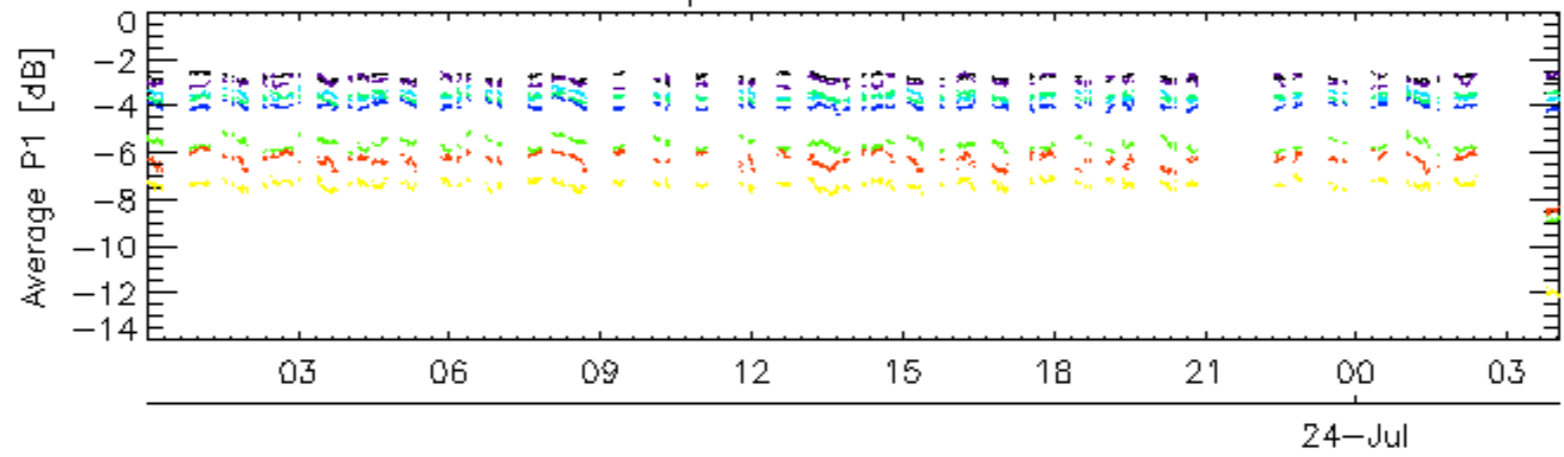
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



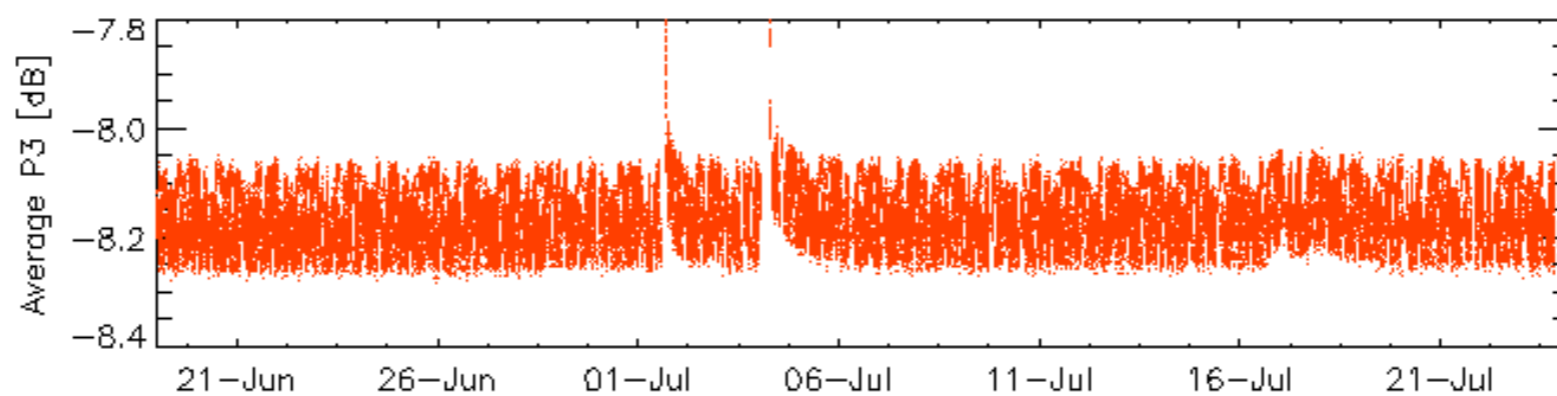
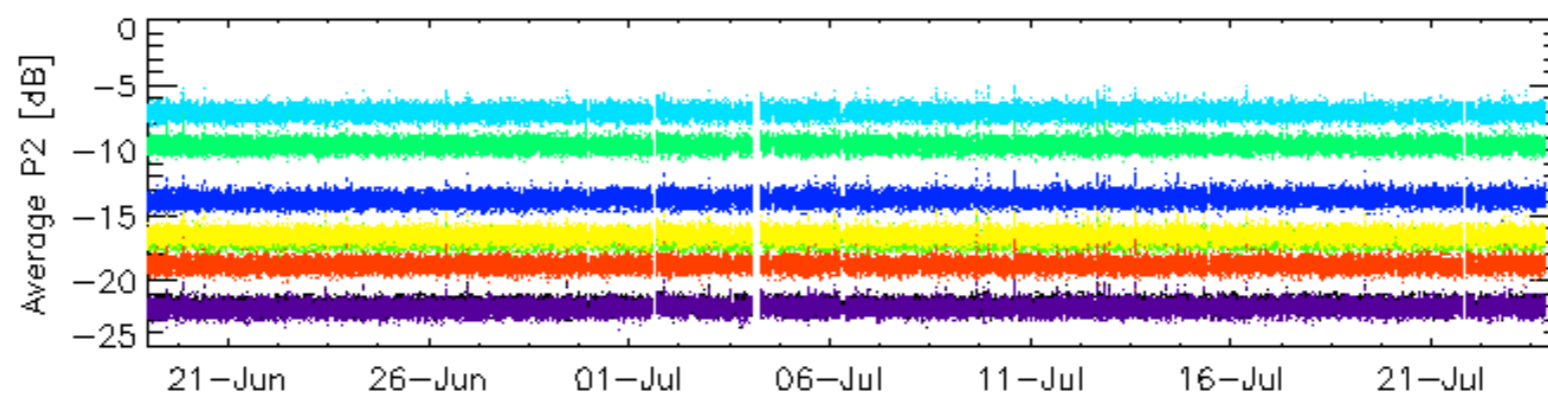
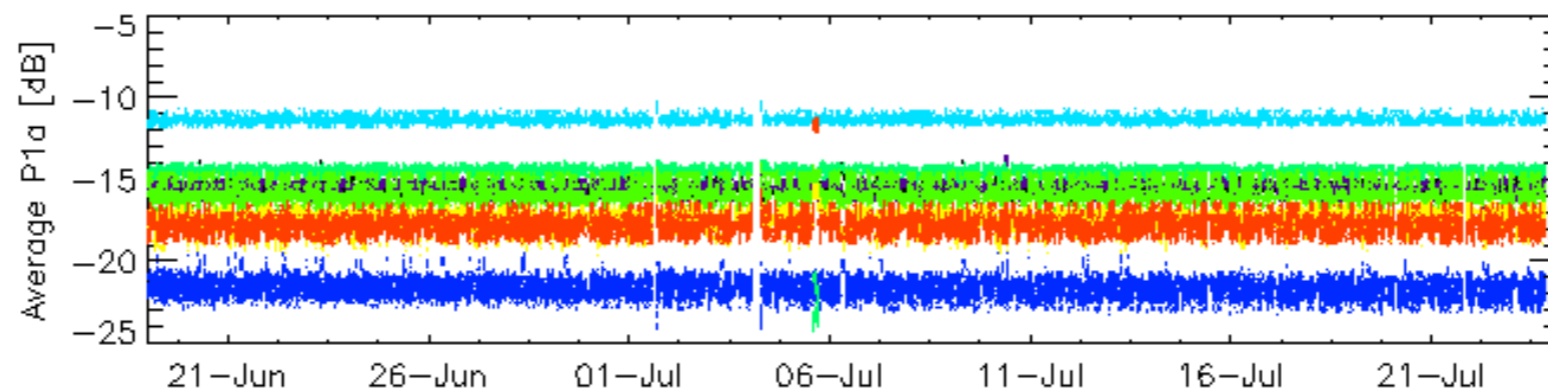
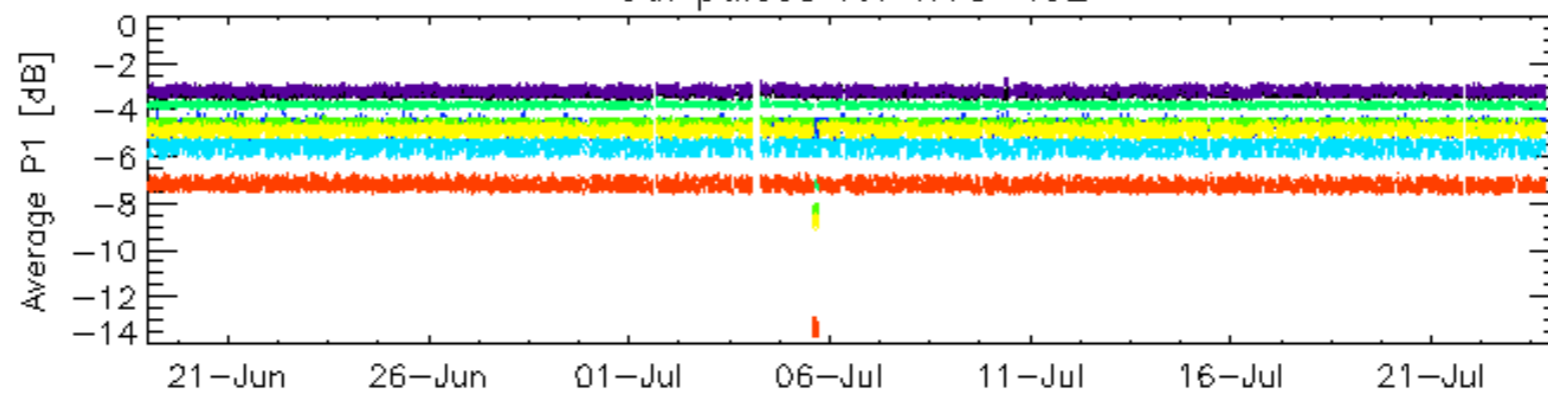
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



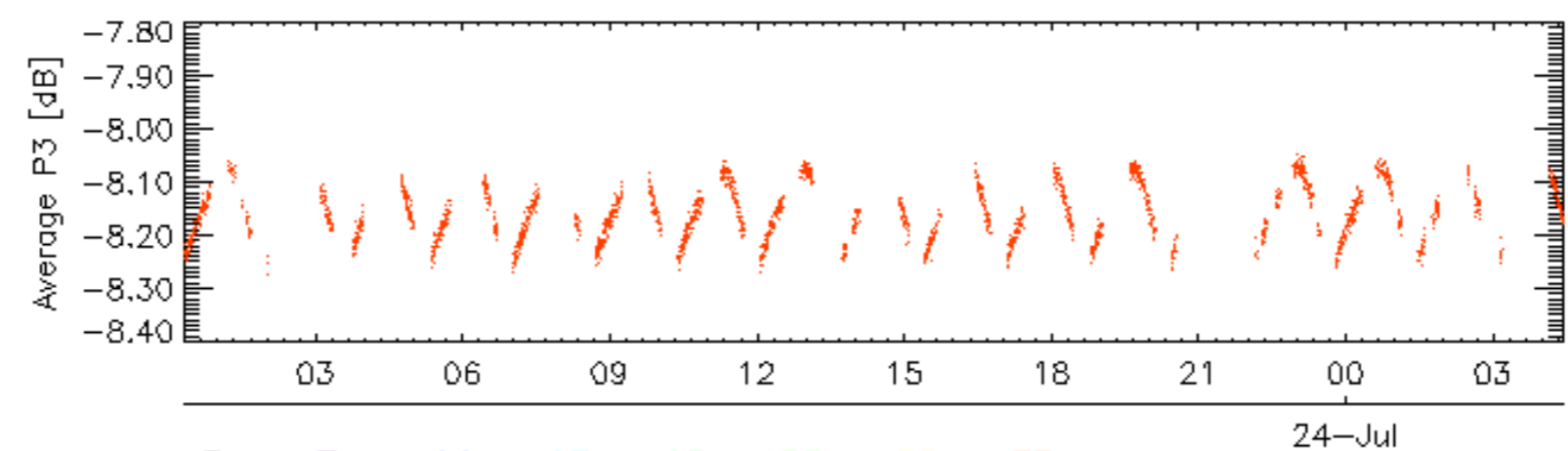
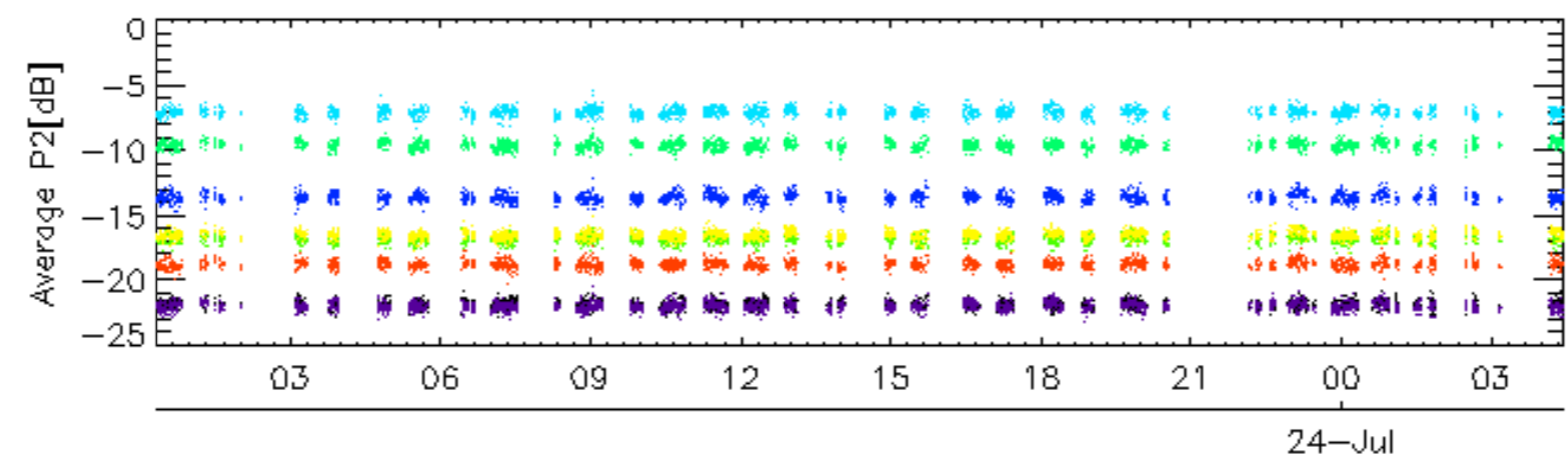
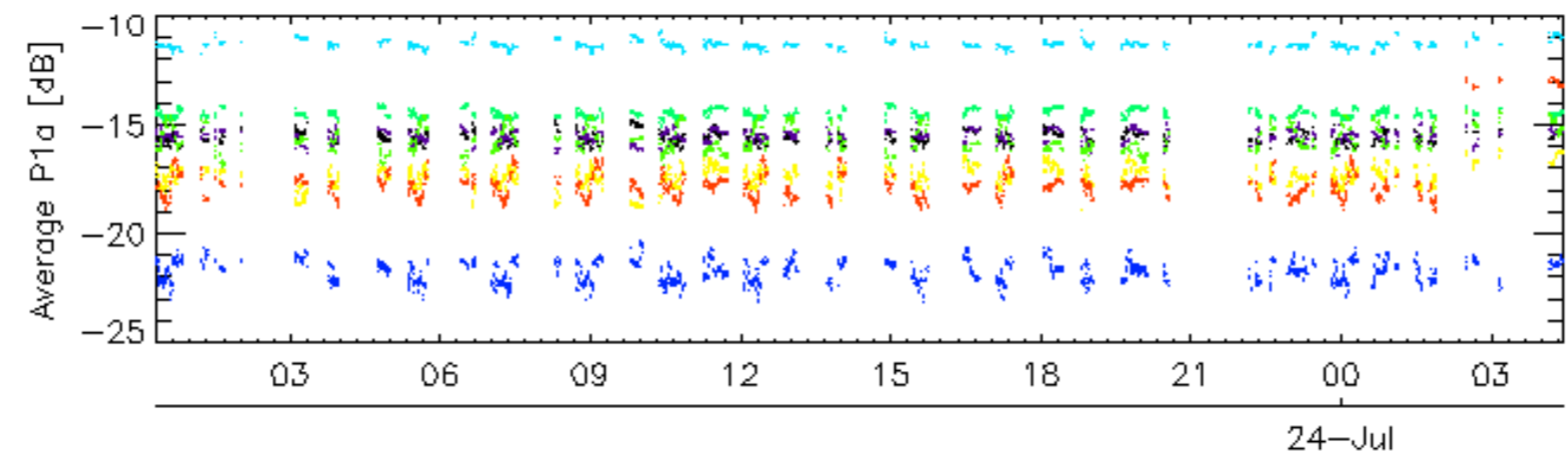
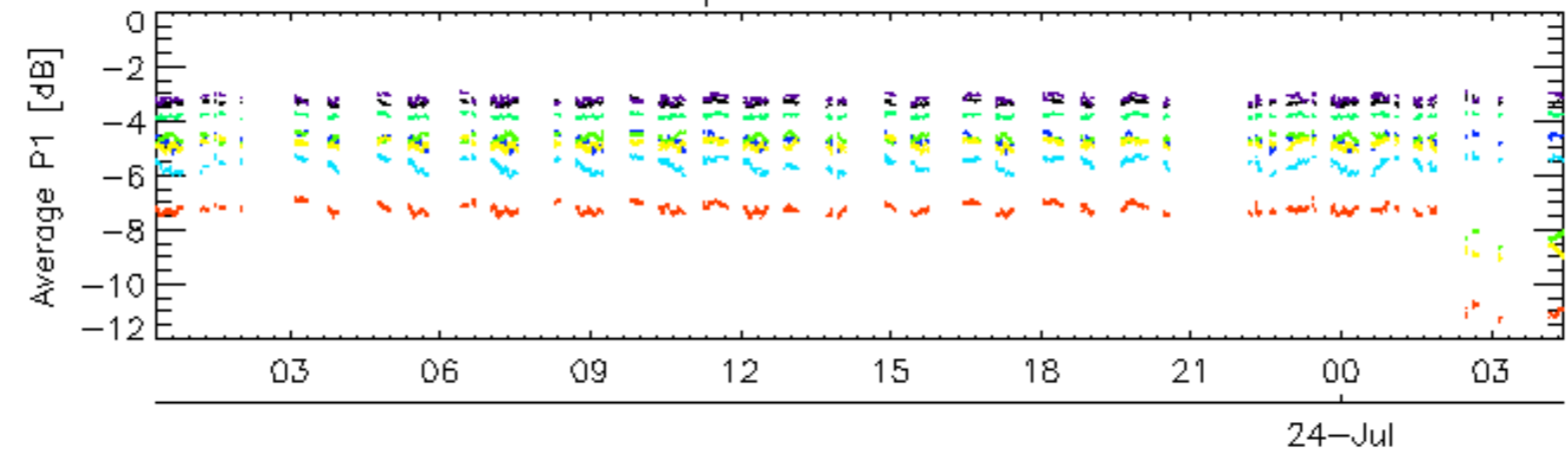
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



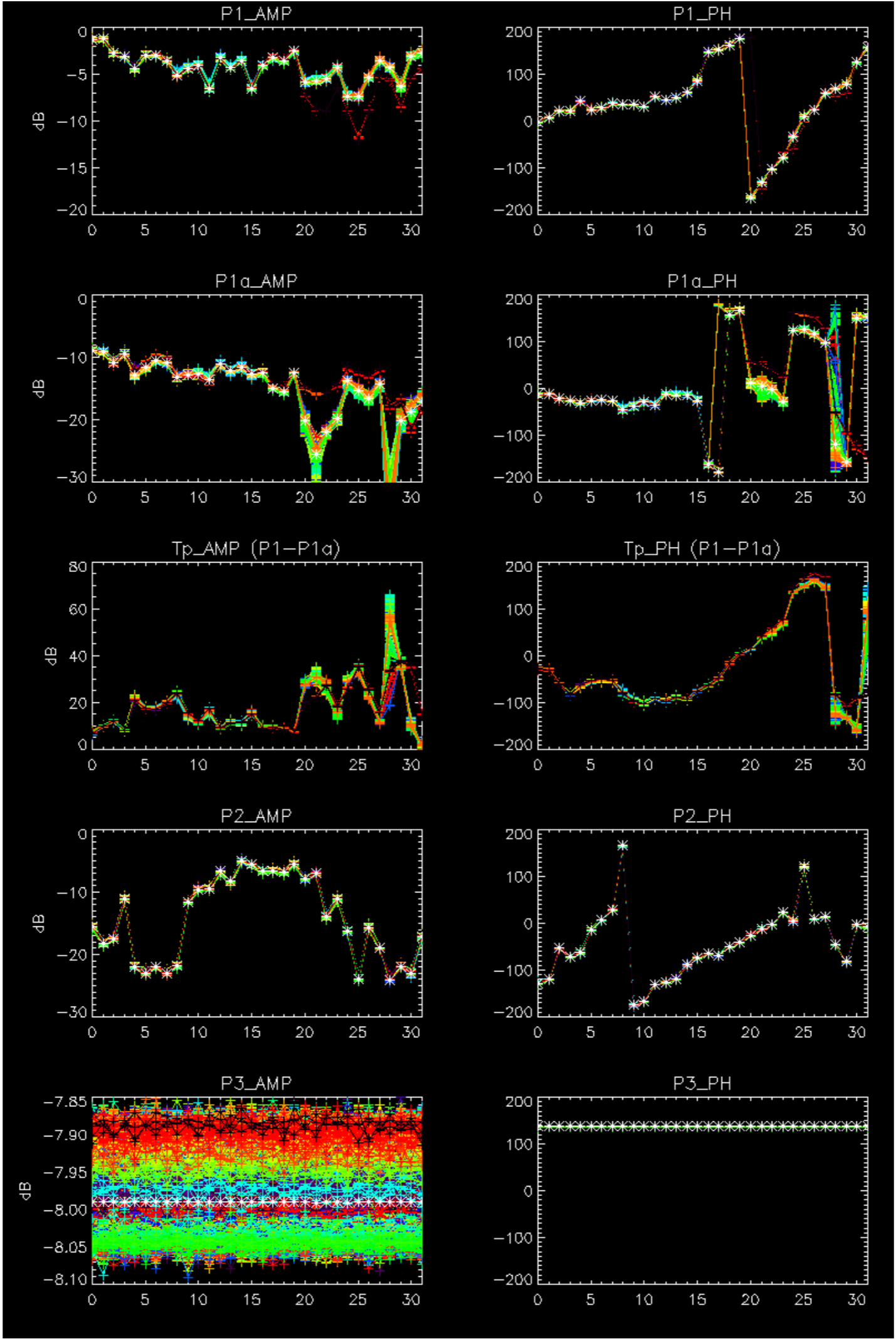
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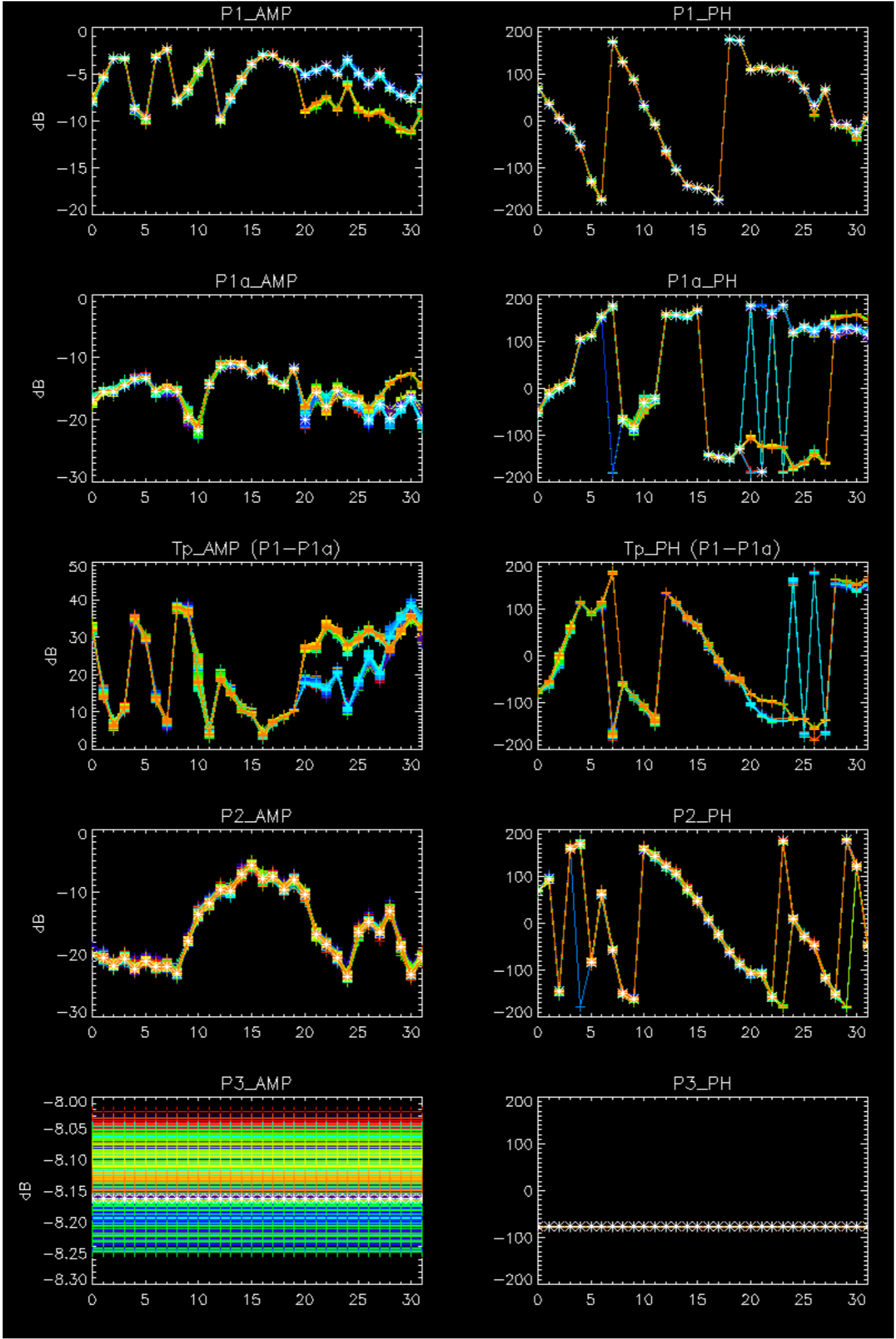
Cal pulses for WVS IS2



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

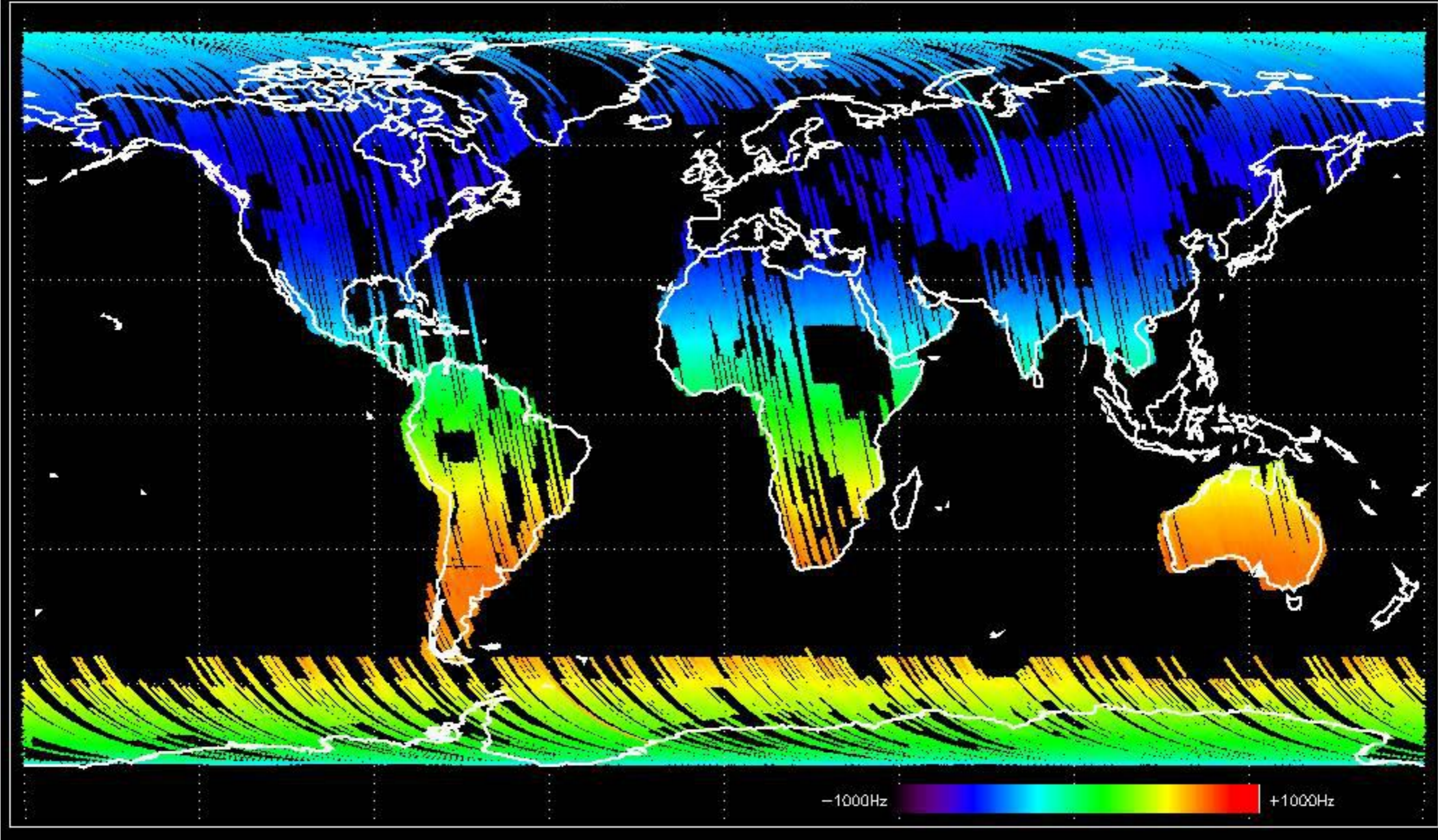
No anomalies observed.



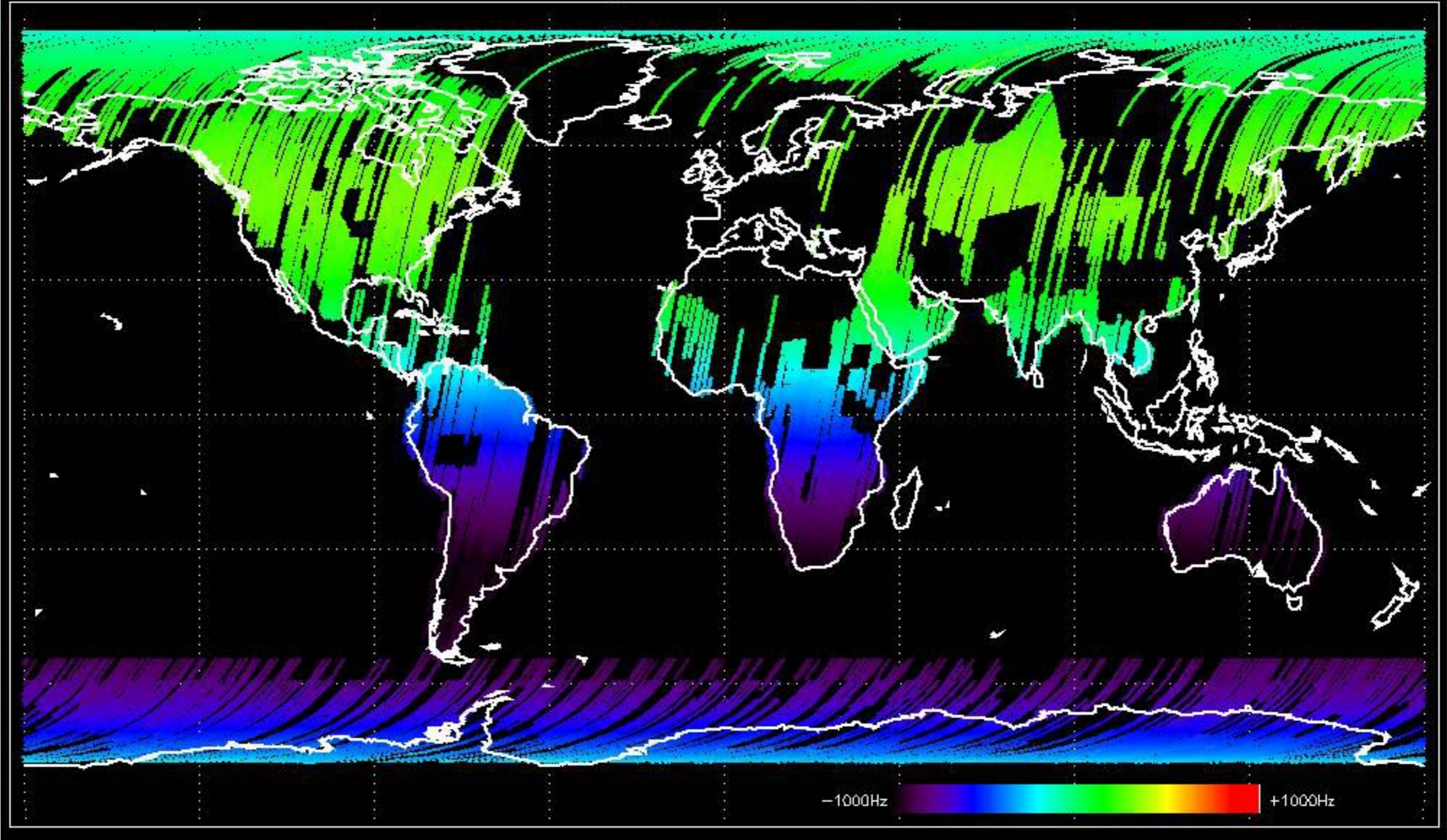


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

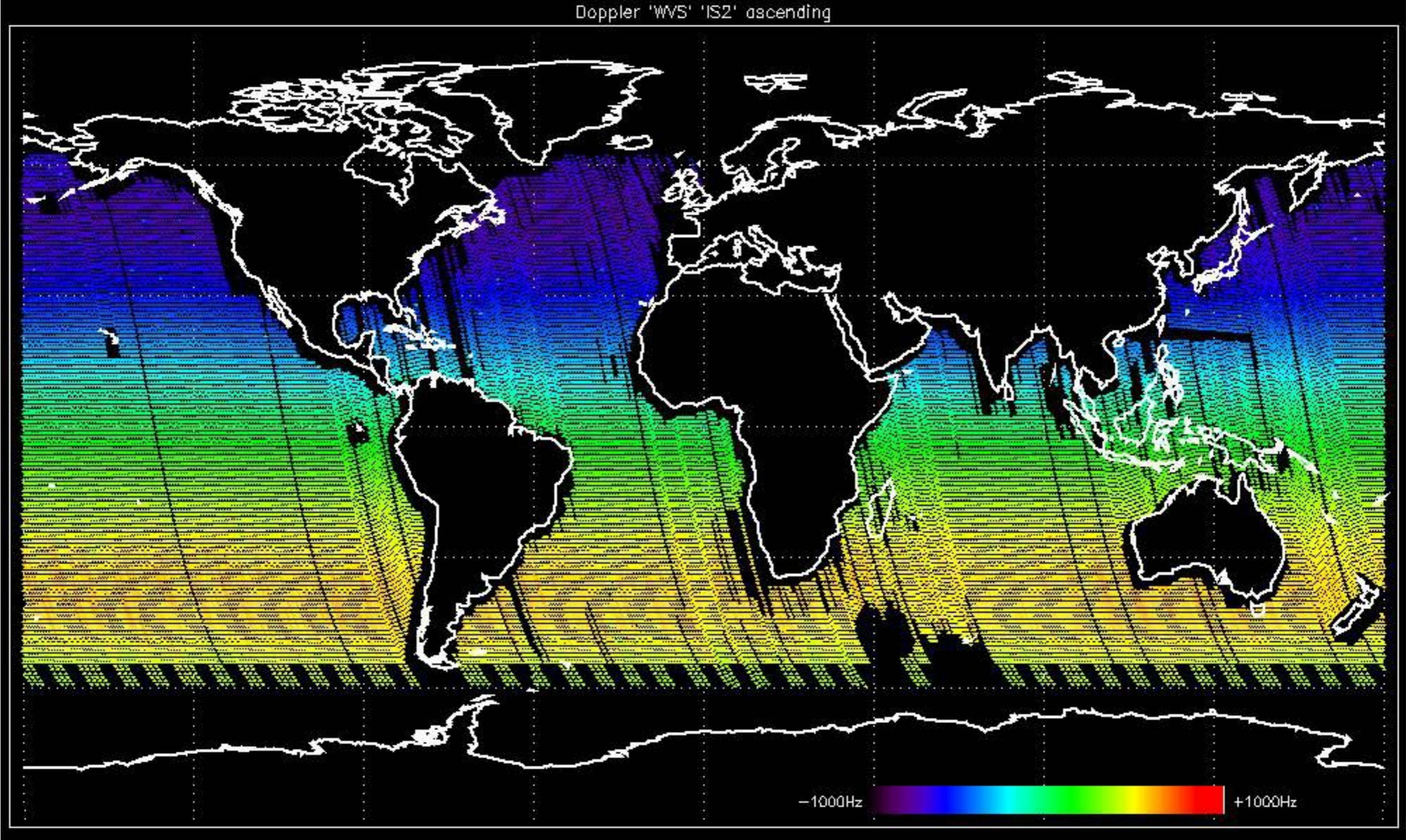
Doppler 'GM1' 'SS1' ascending



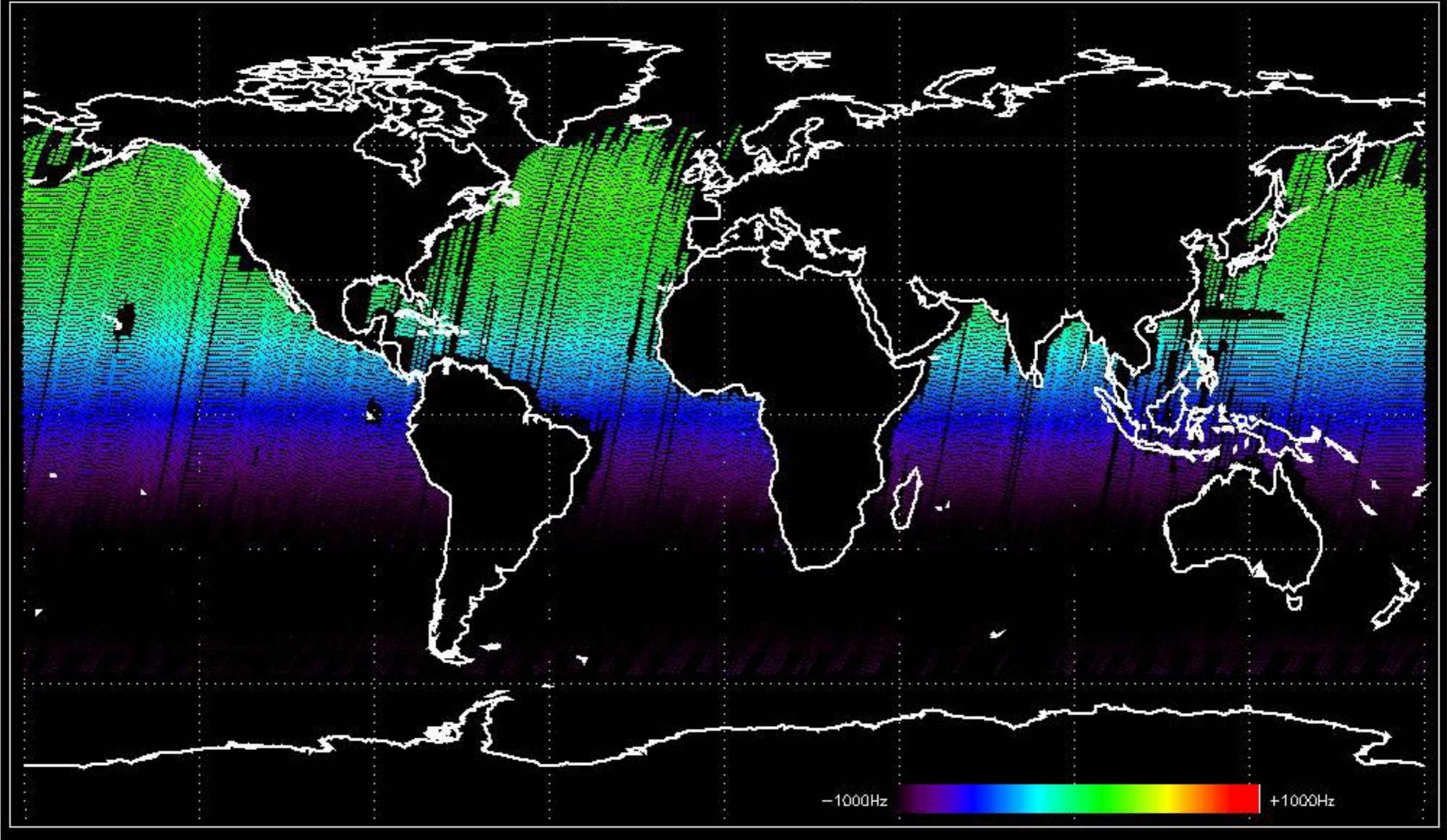
Doppler 'GM1' 'SS1' descending



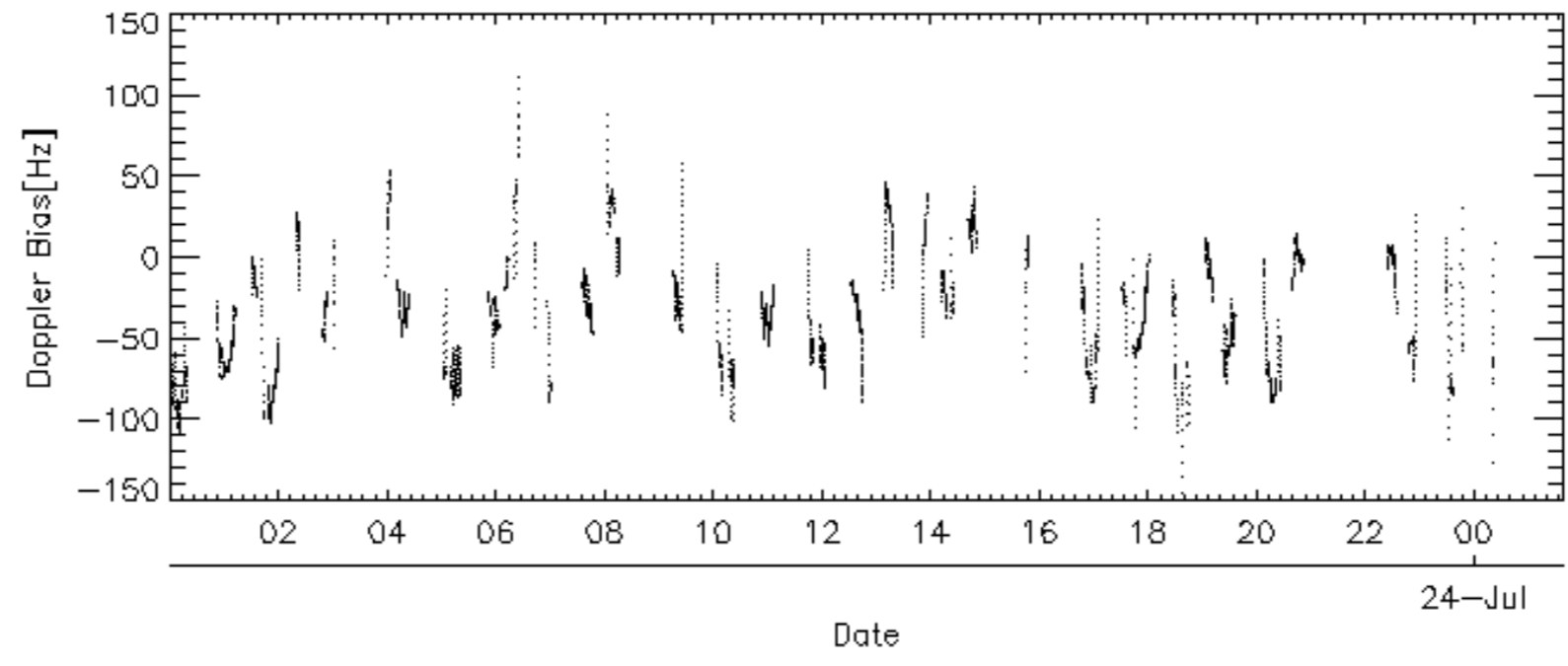
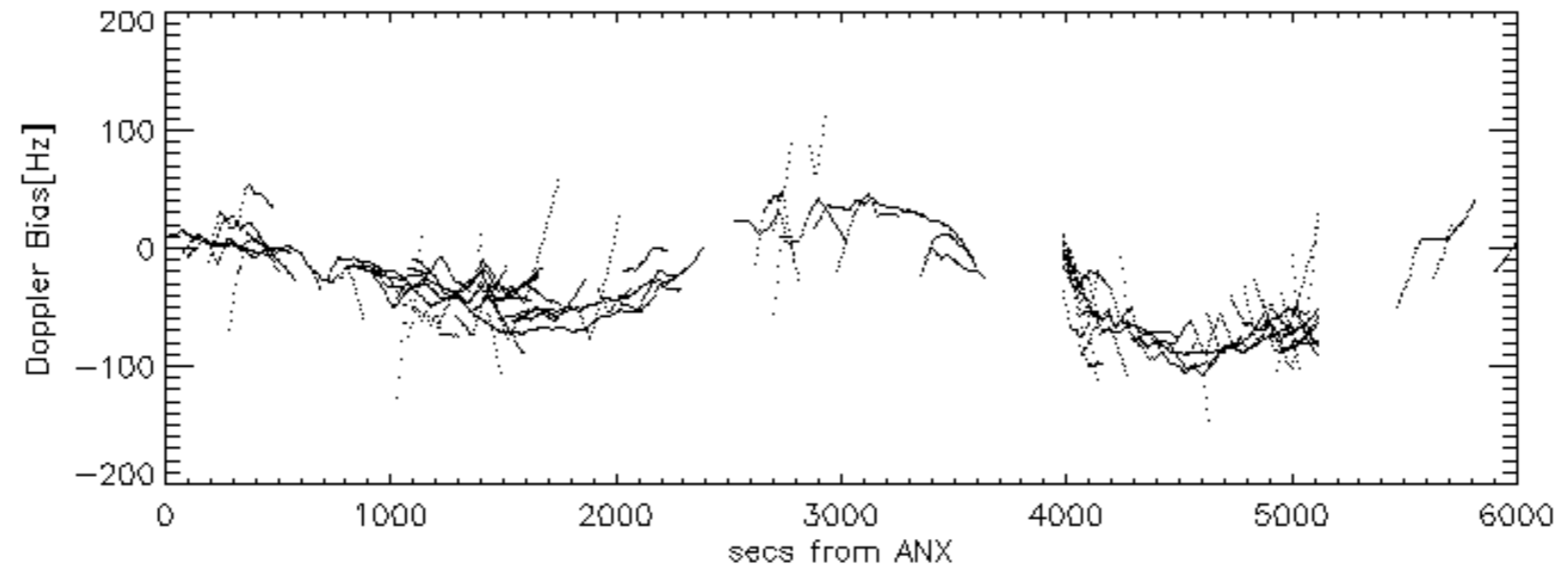
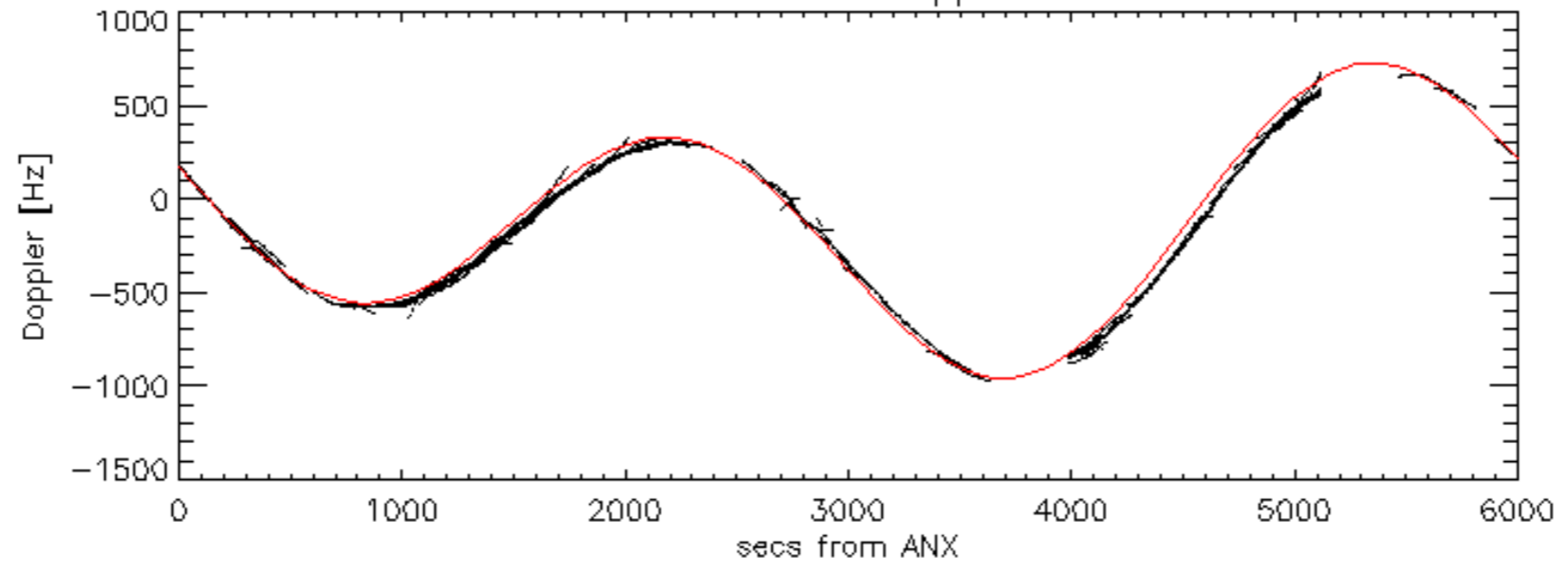
Doppler 'WVS' 'IS2' ascending

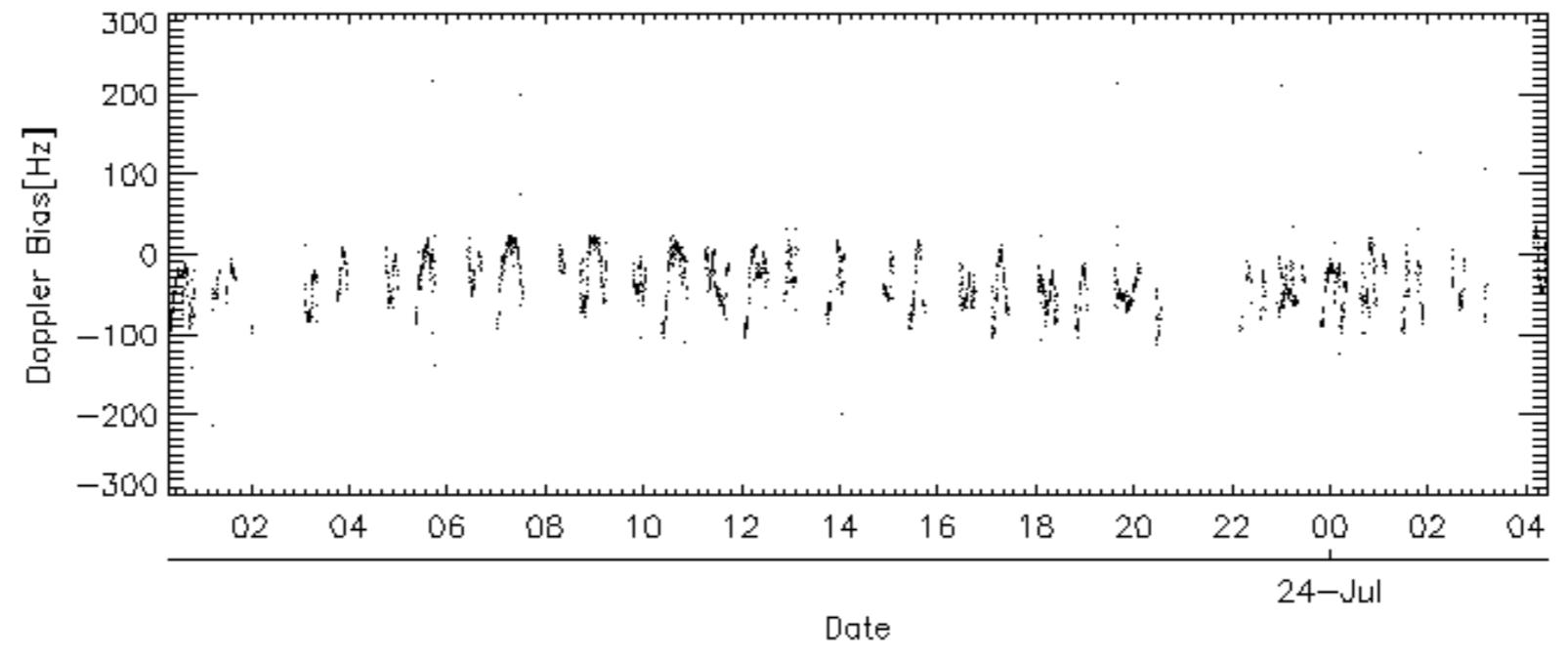
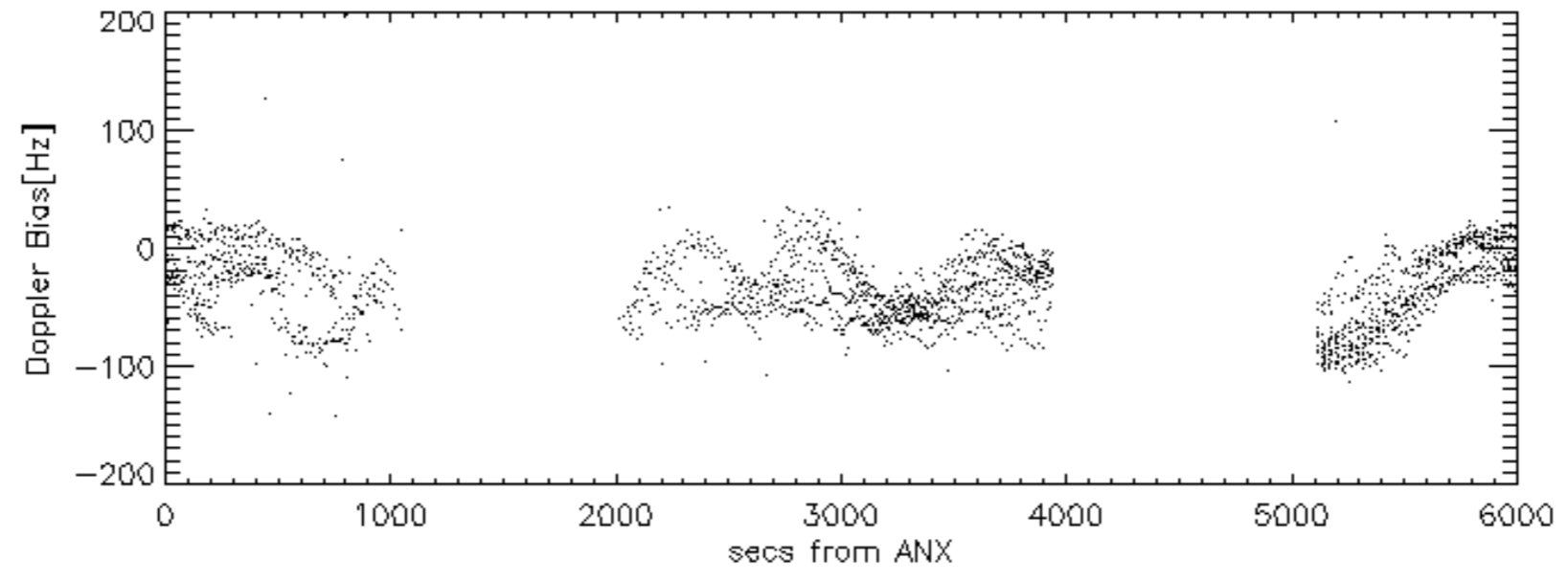
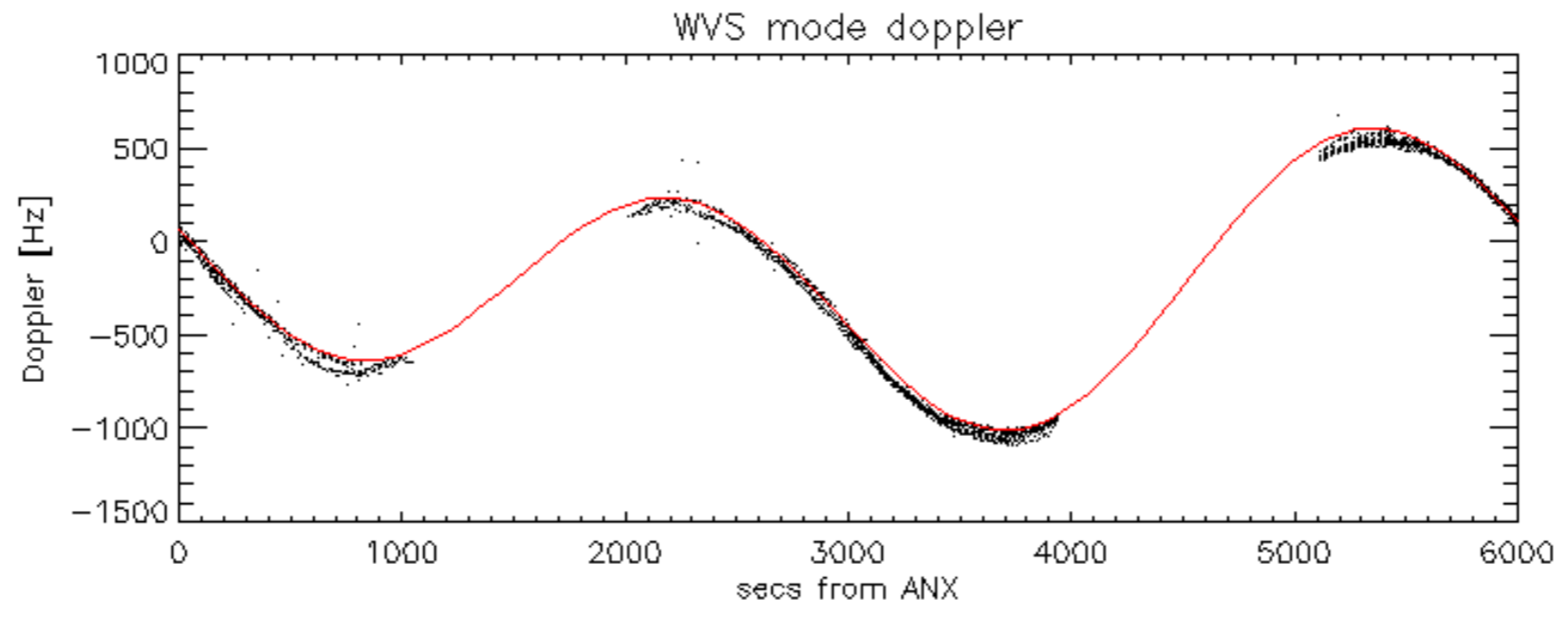


Doppler 'WVS' 'IS2' descending

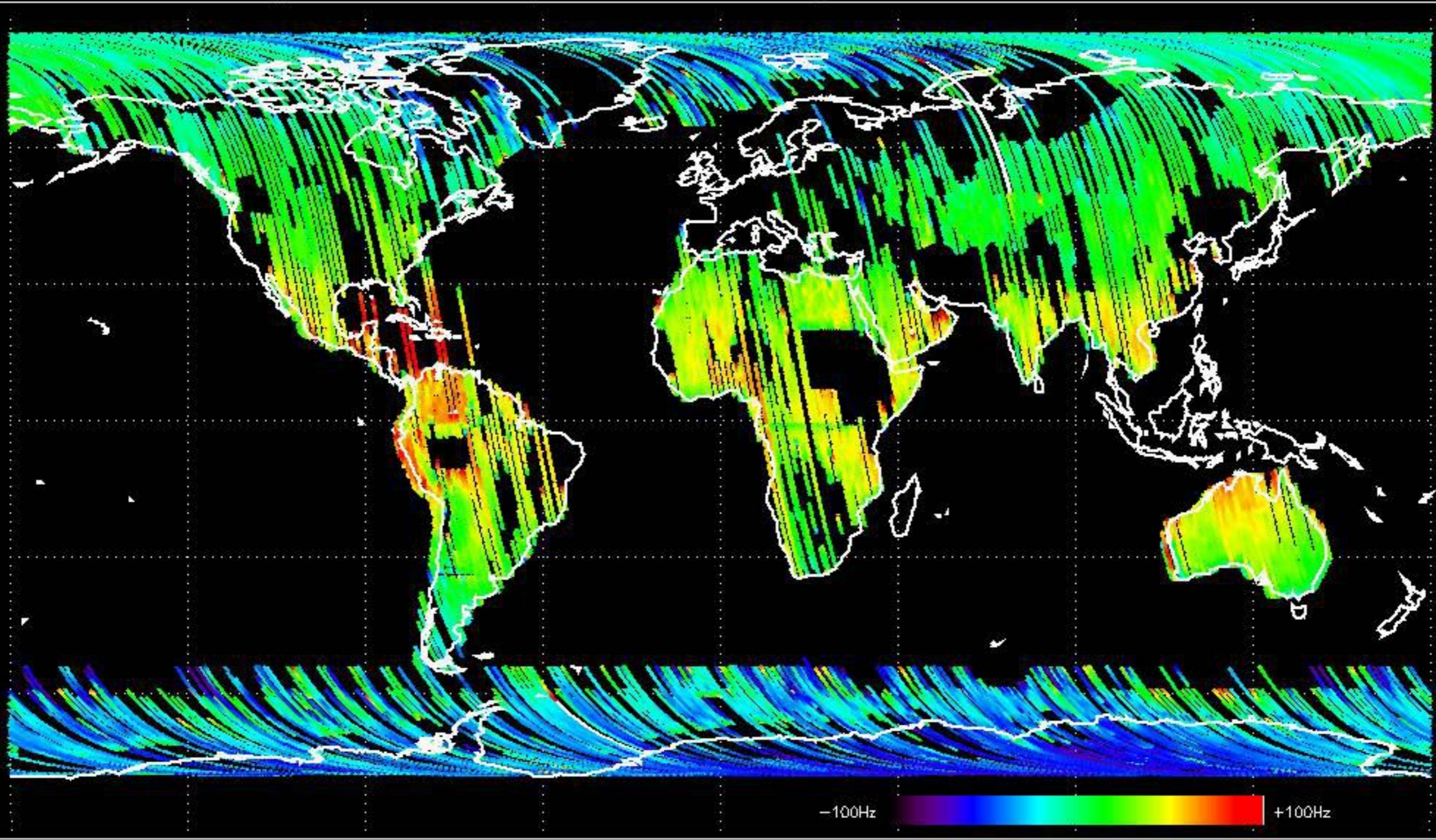


GM1 mode doppler

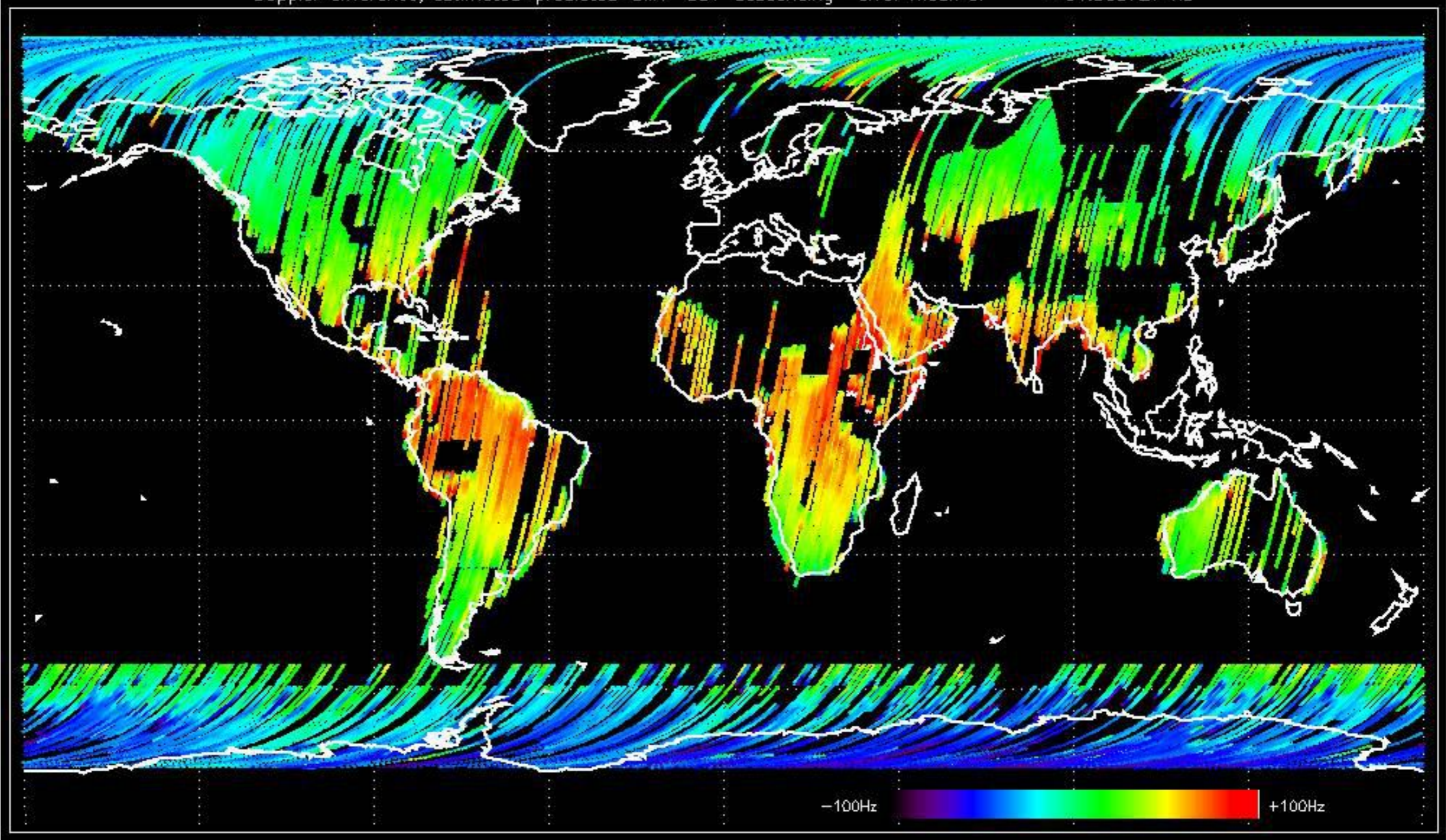




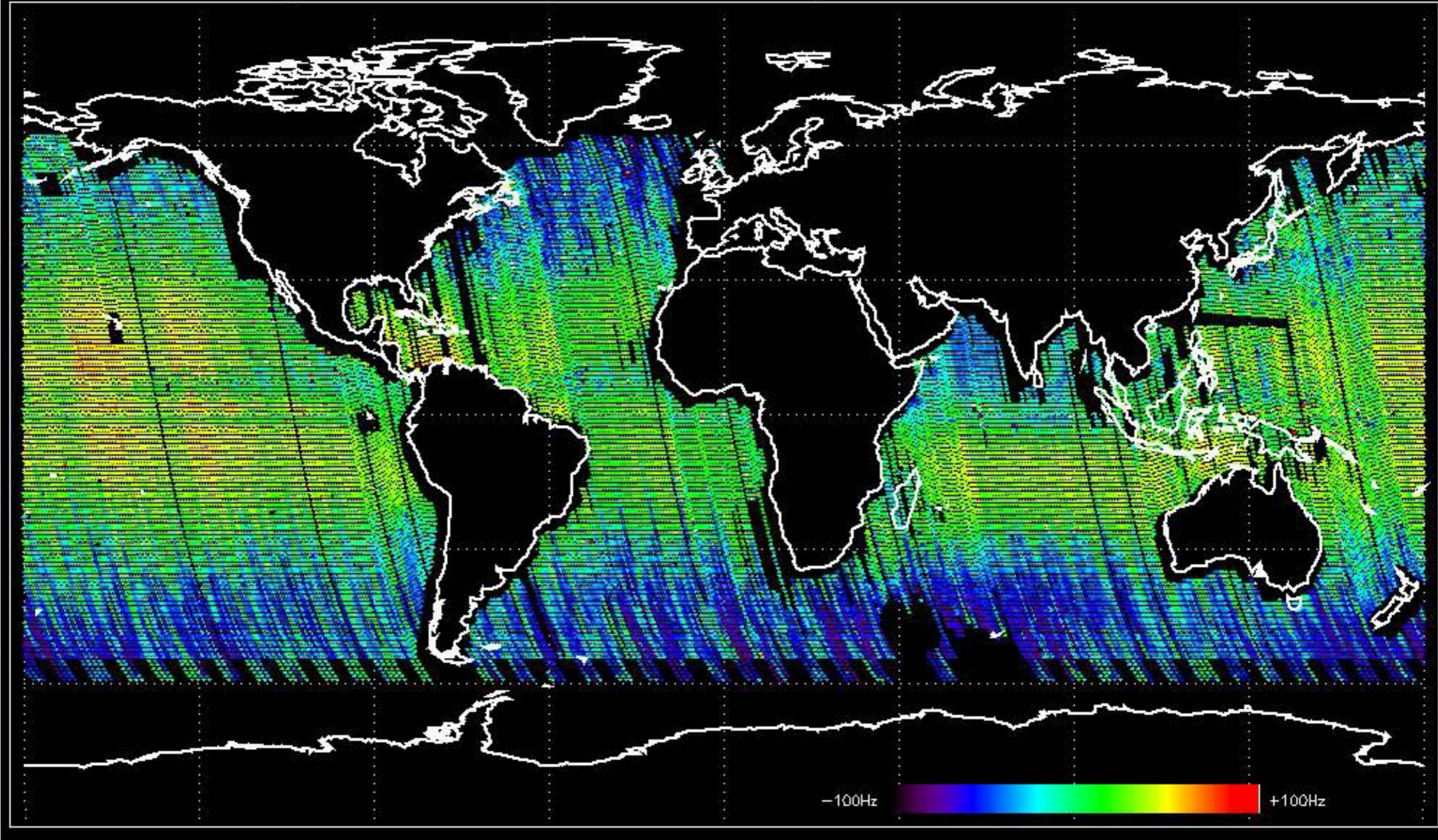
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -37.590914 Hz



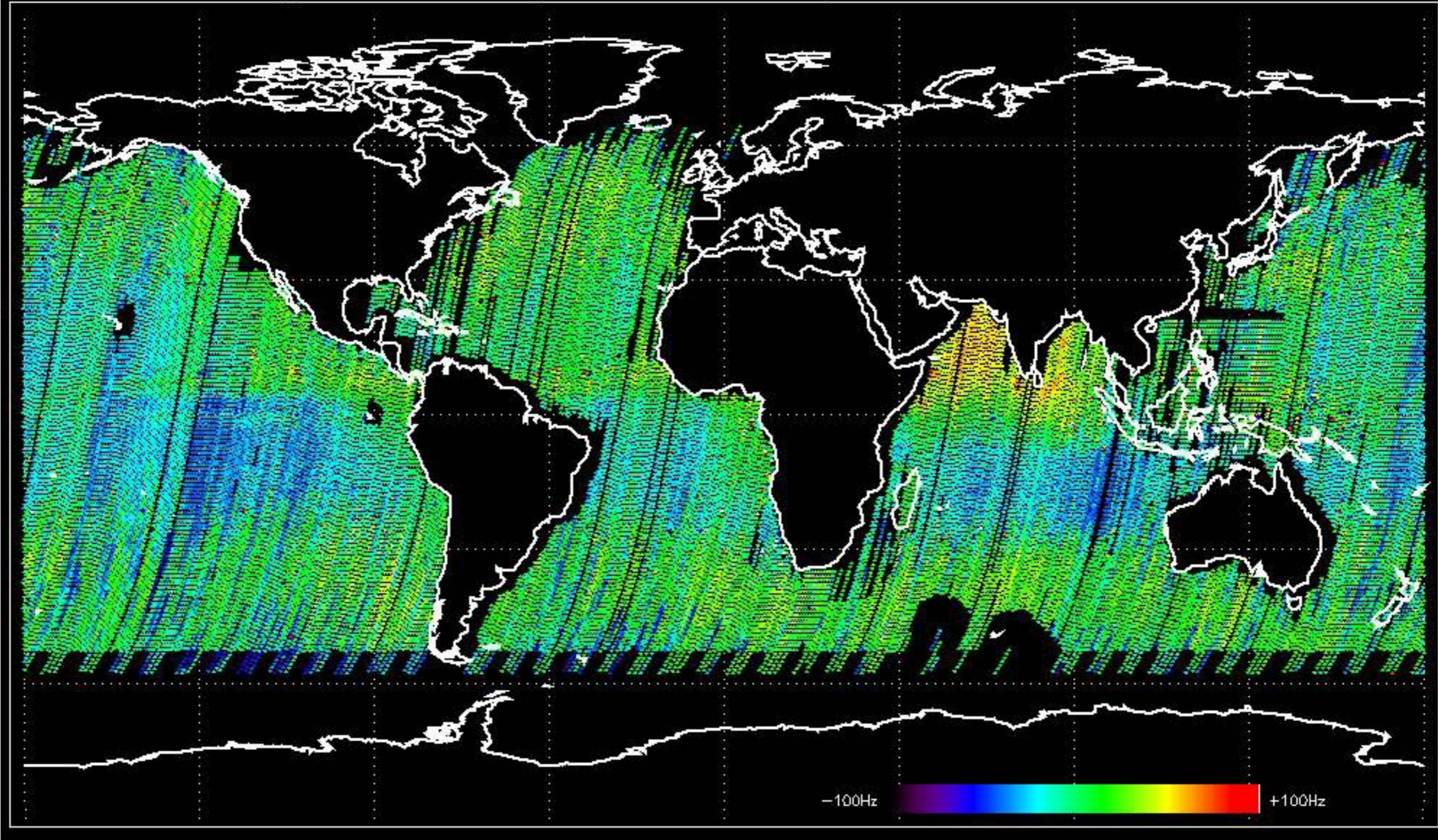
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -31.303727 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -32.804931 Hz

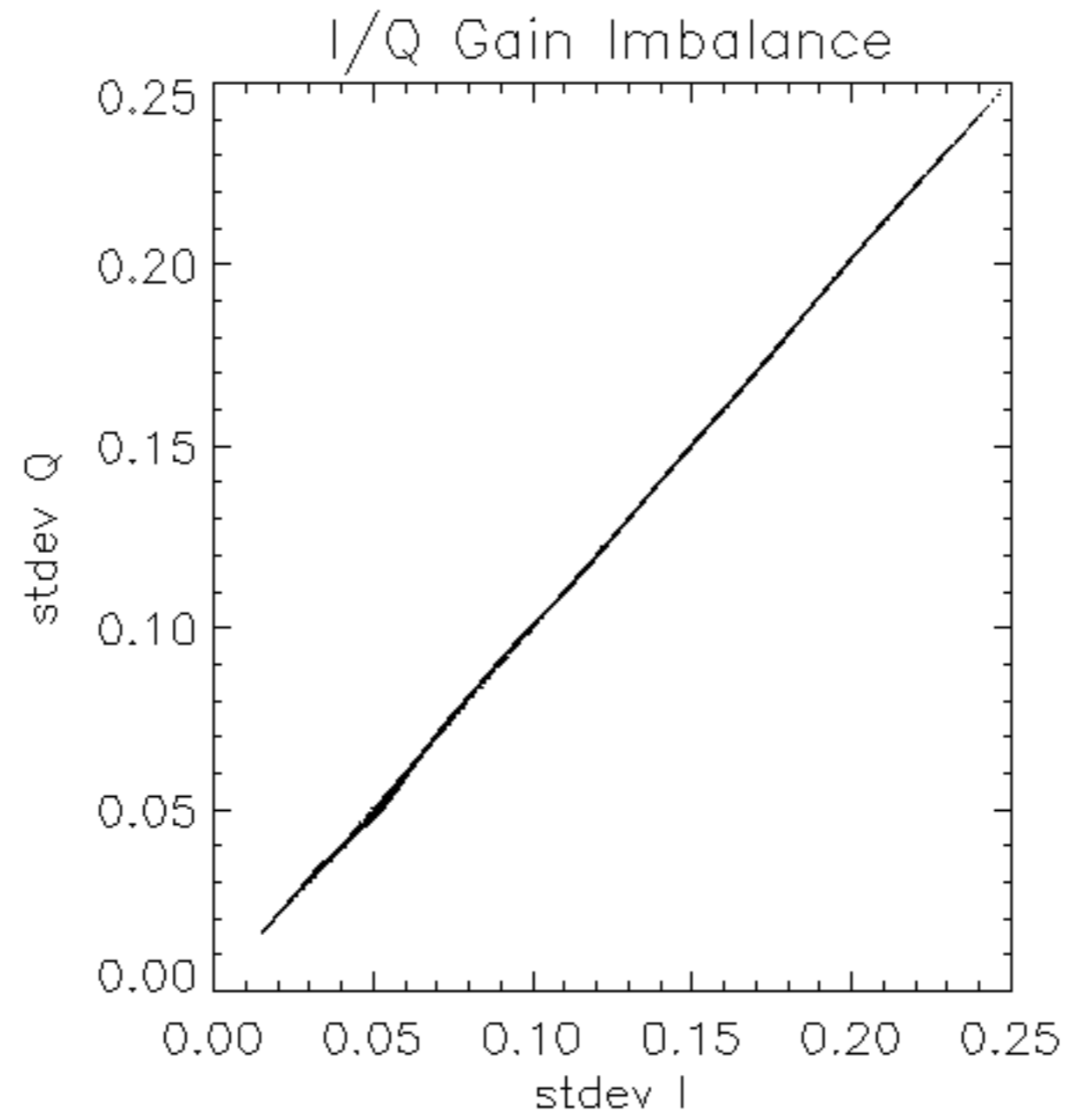


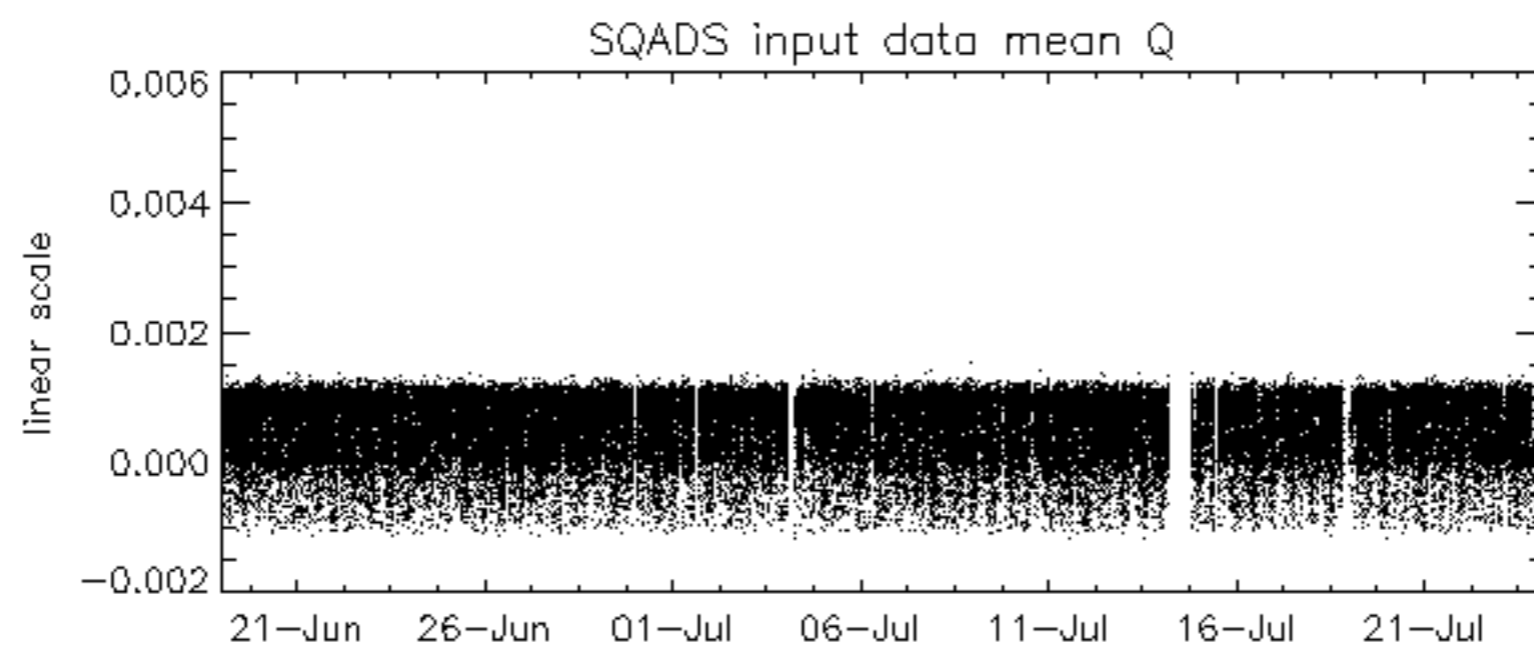
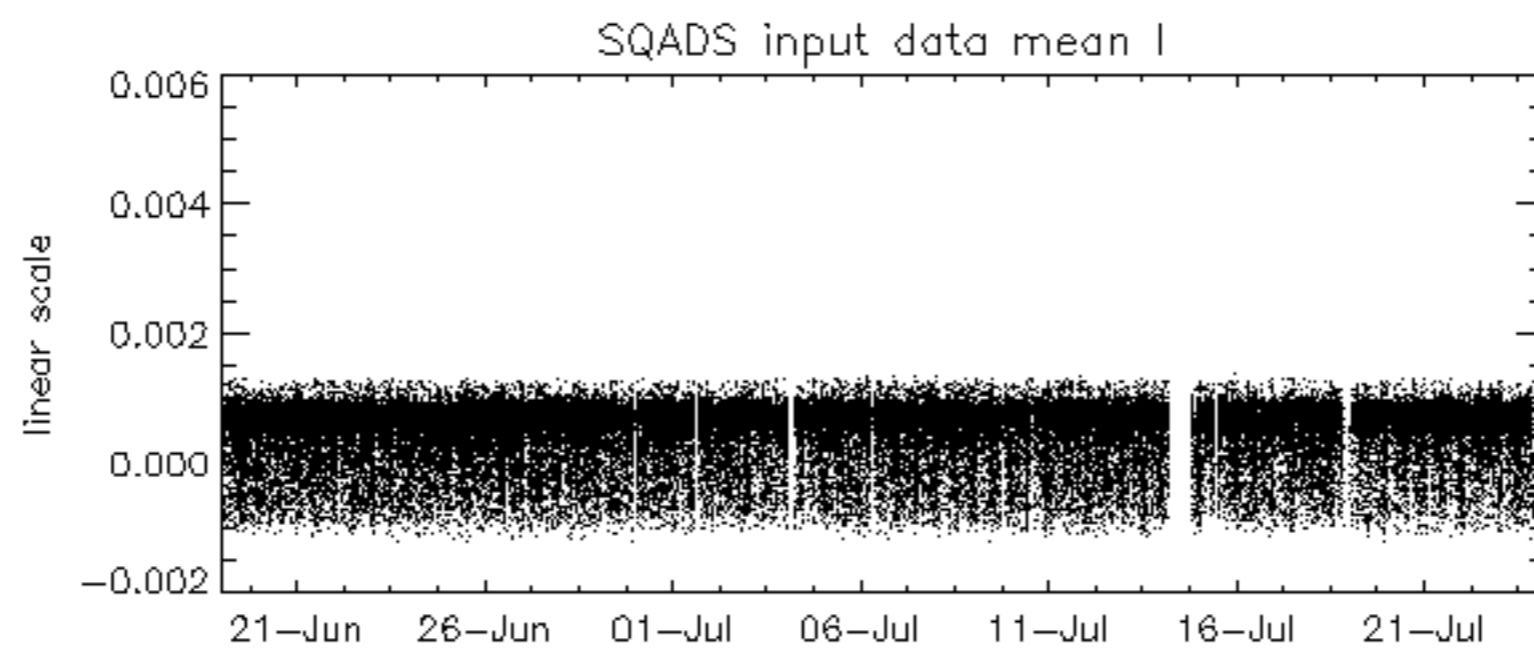
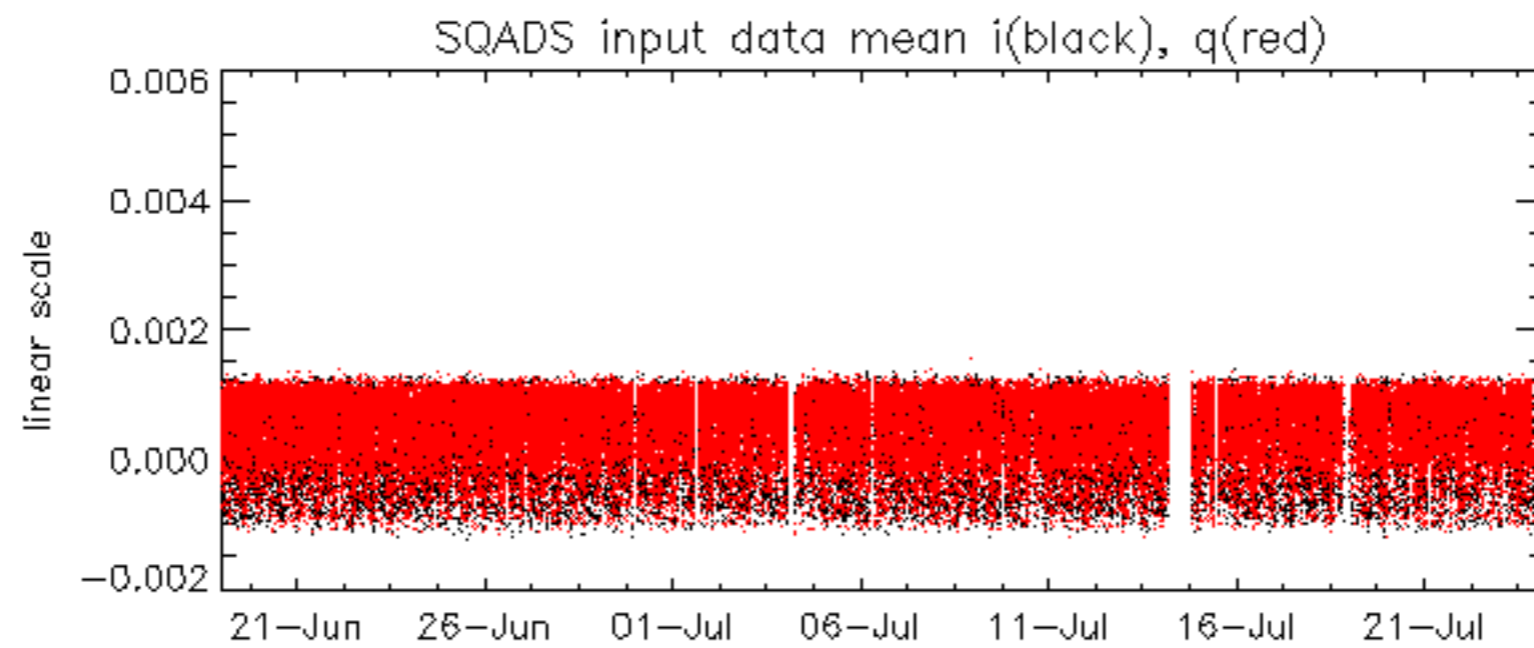
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.599248 Hz

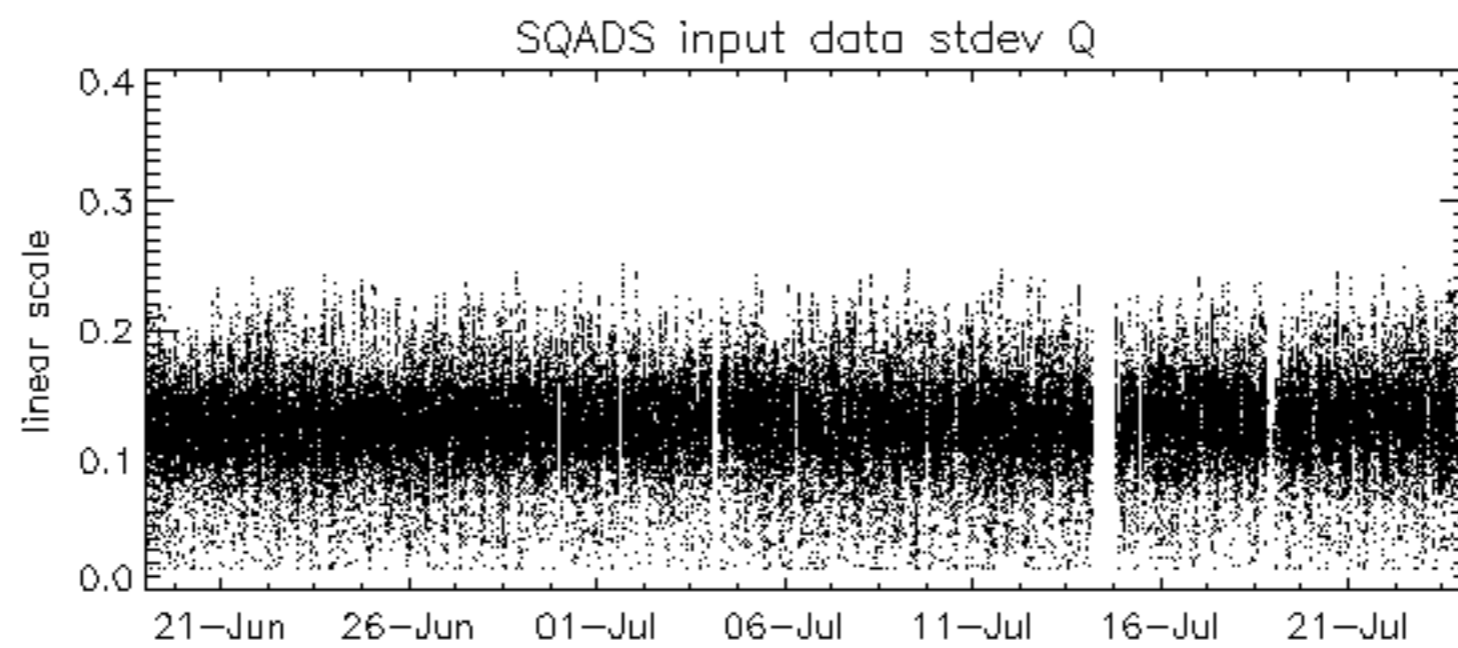
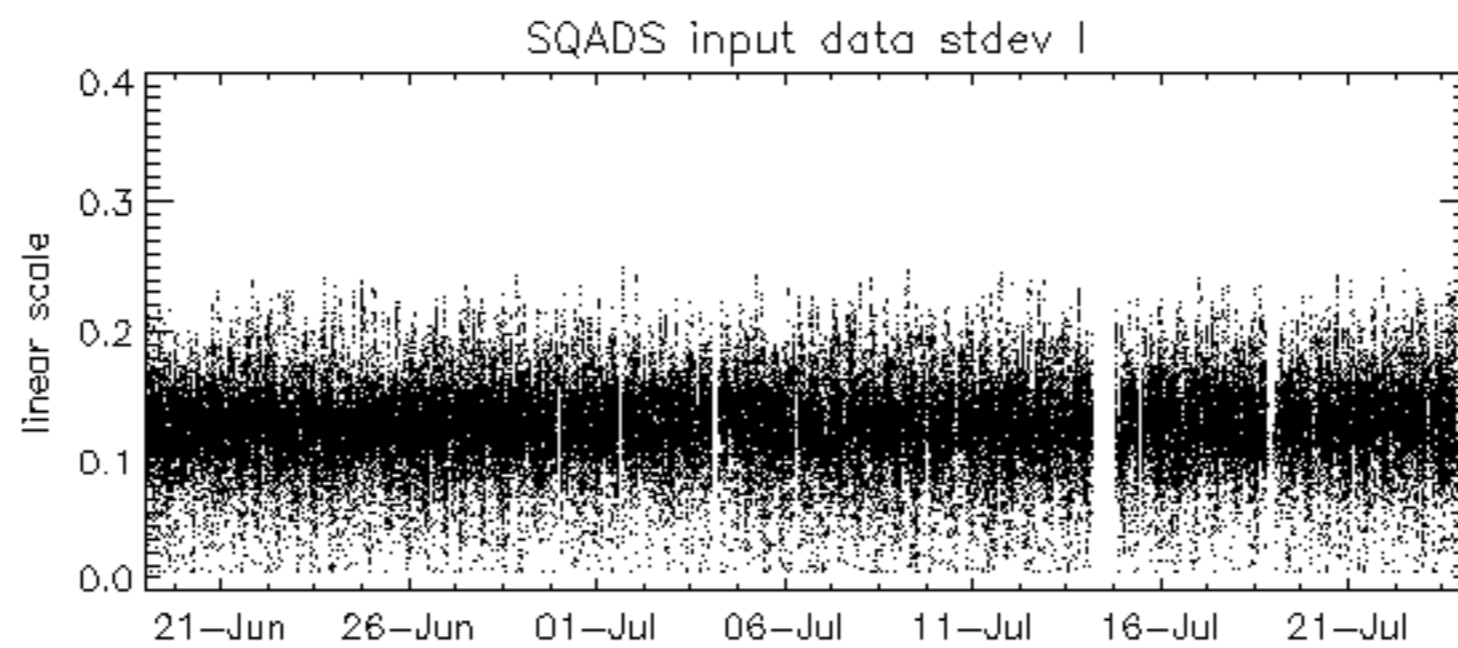
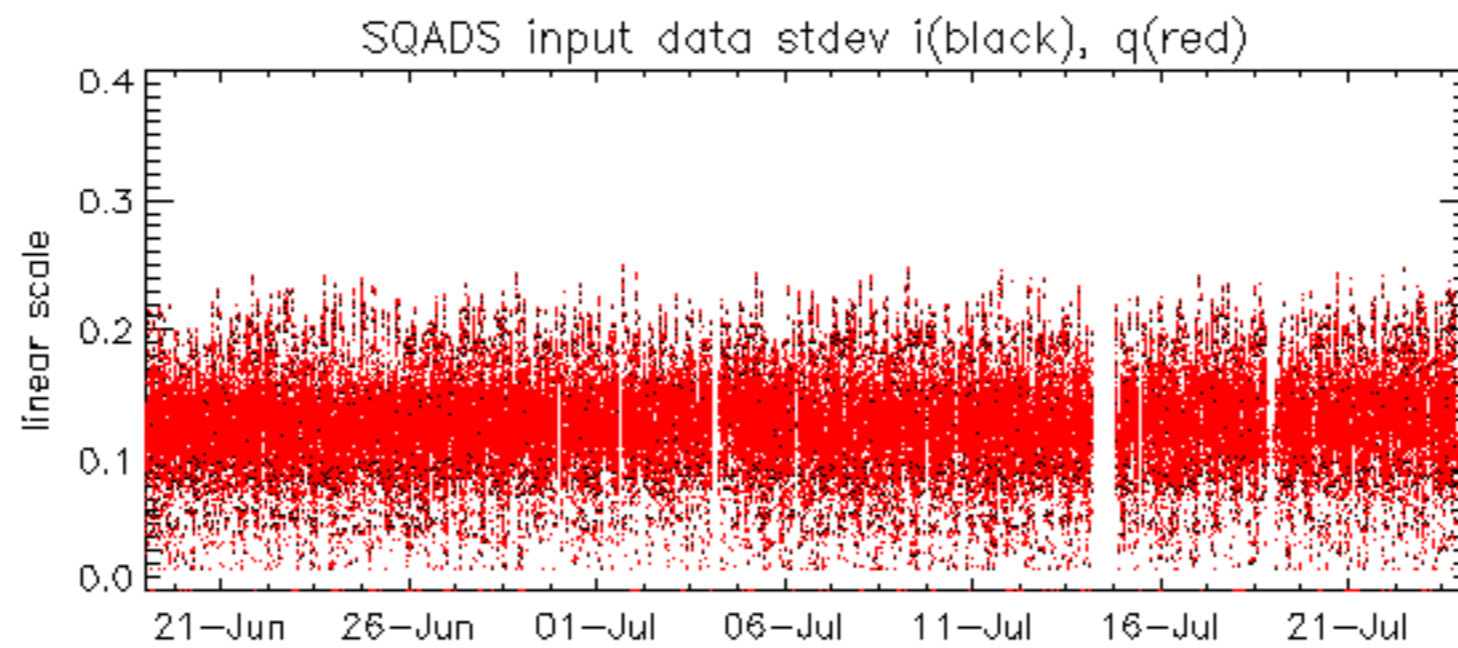


No anomalies observed on available MS products:

No anomalies observed.



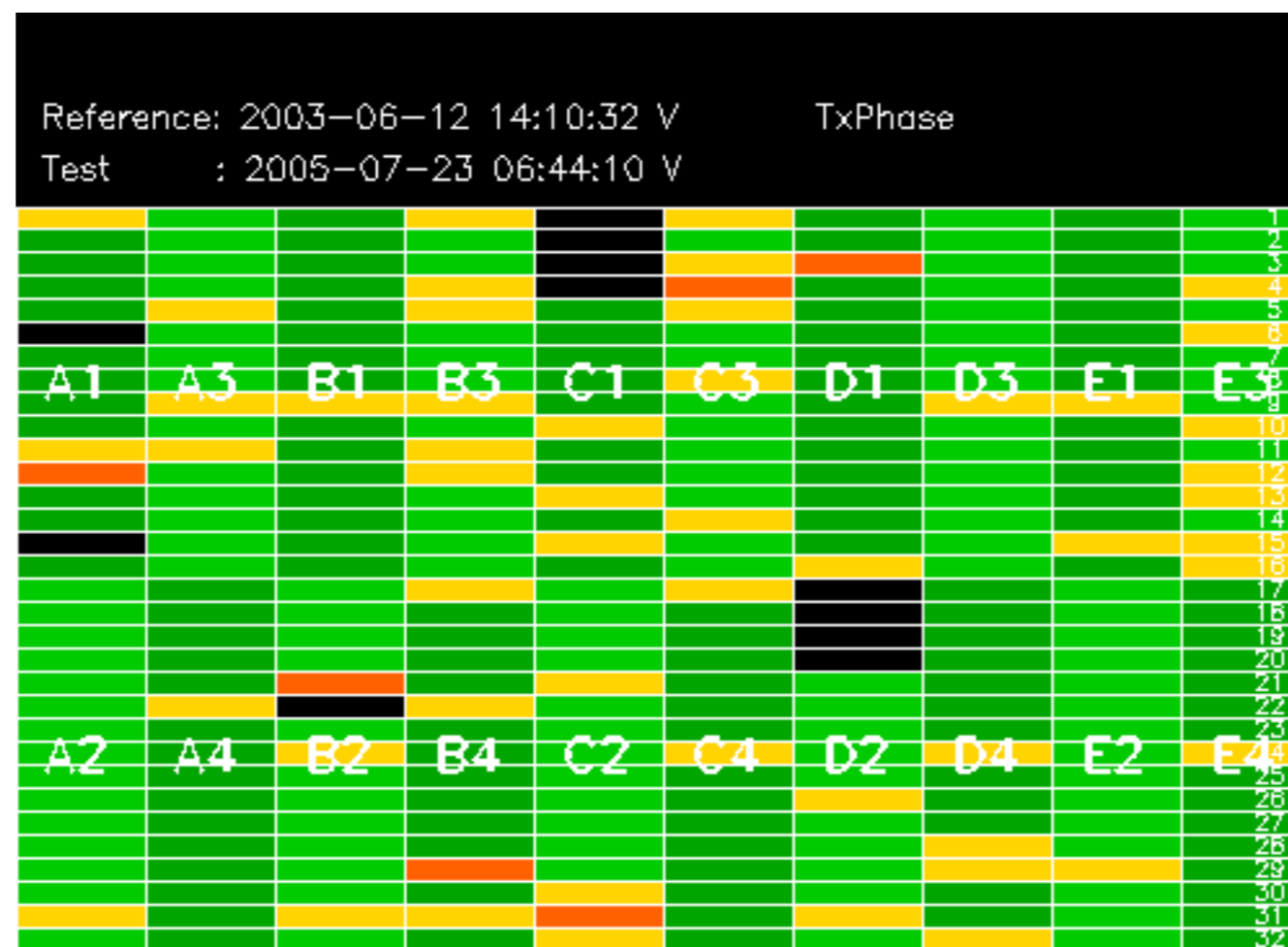


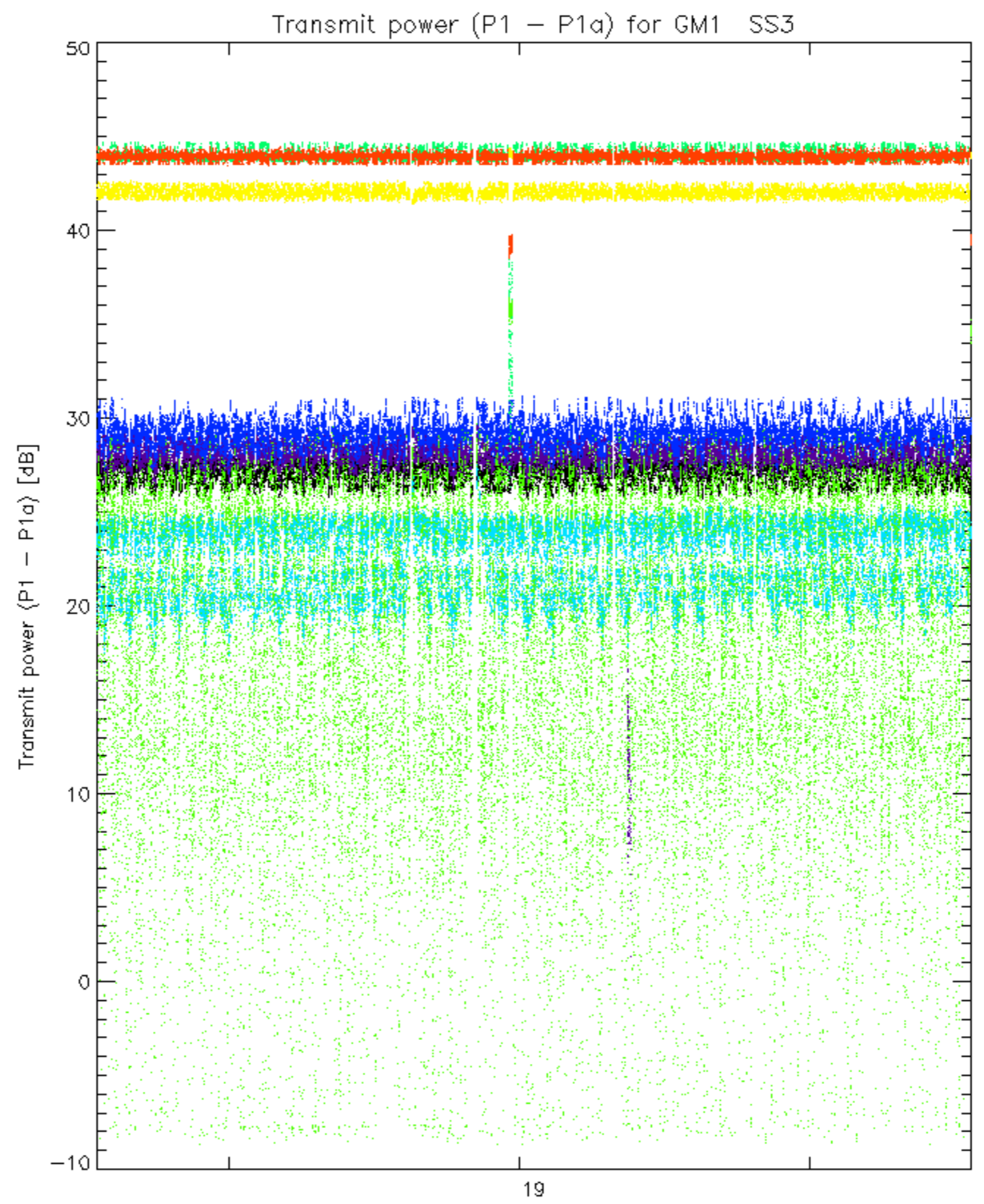


Summary of analysis for the last 3 days 2005072[234]

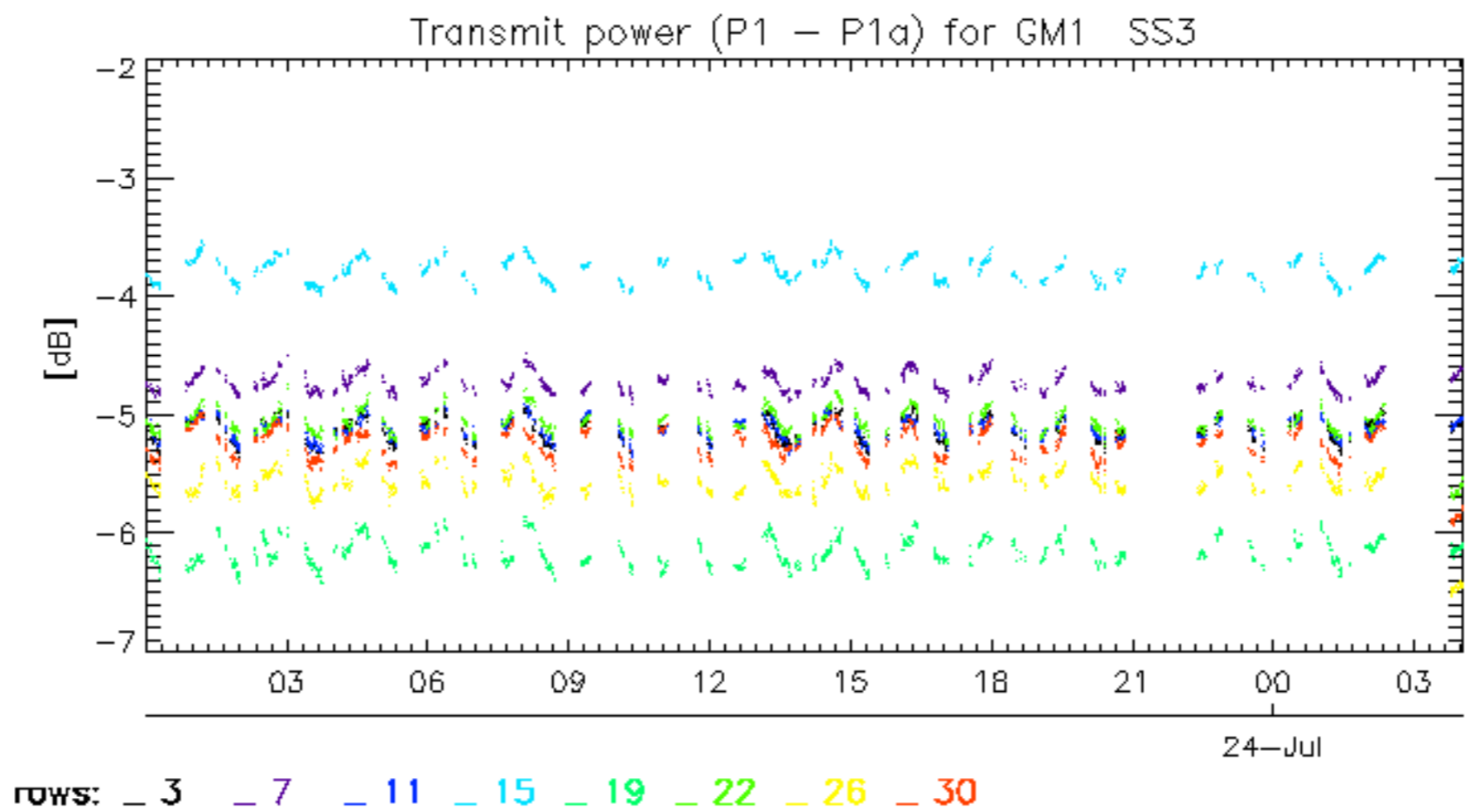
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

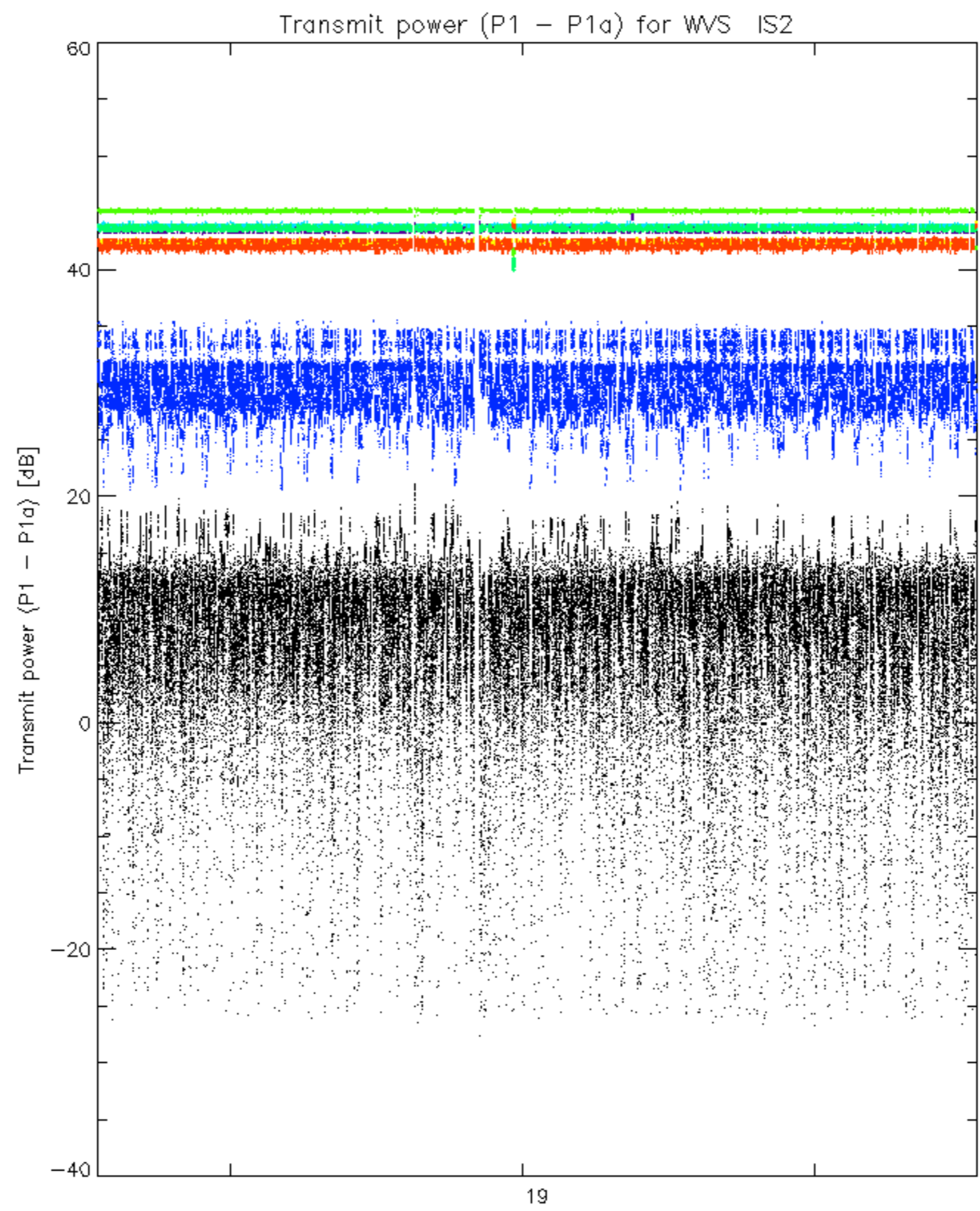
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050722_042651_00000522039_00147_17736_0317.N1	1	0
ASA_WSM_1PNPDE20050722_201717_00000862039_00157_17746_0710.N1	0	34
ASA_WSM_1PNPDE20050723_012128_00000672039_00160_17749_0739.N1	0	69



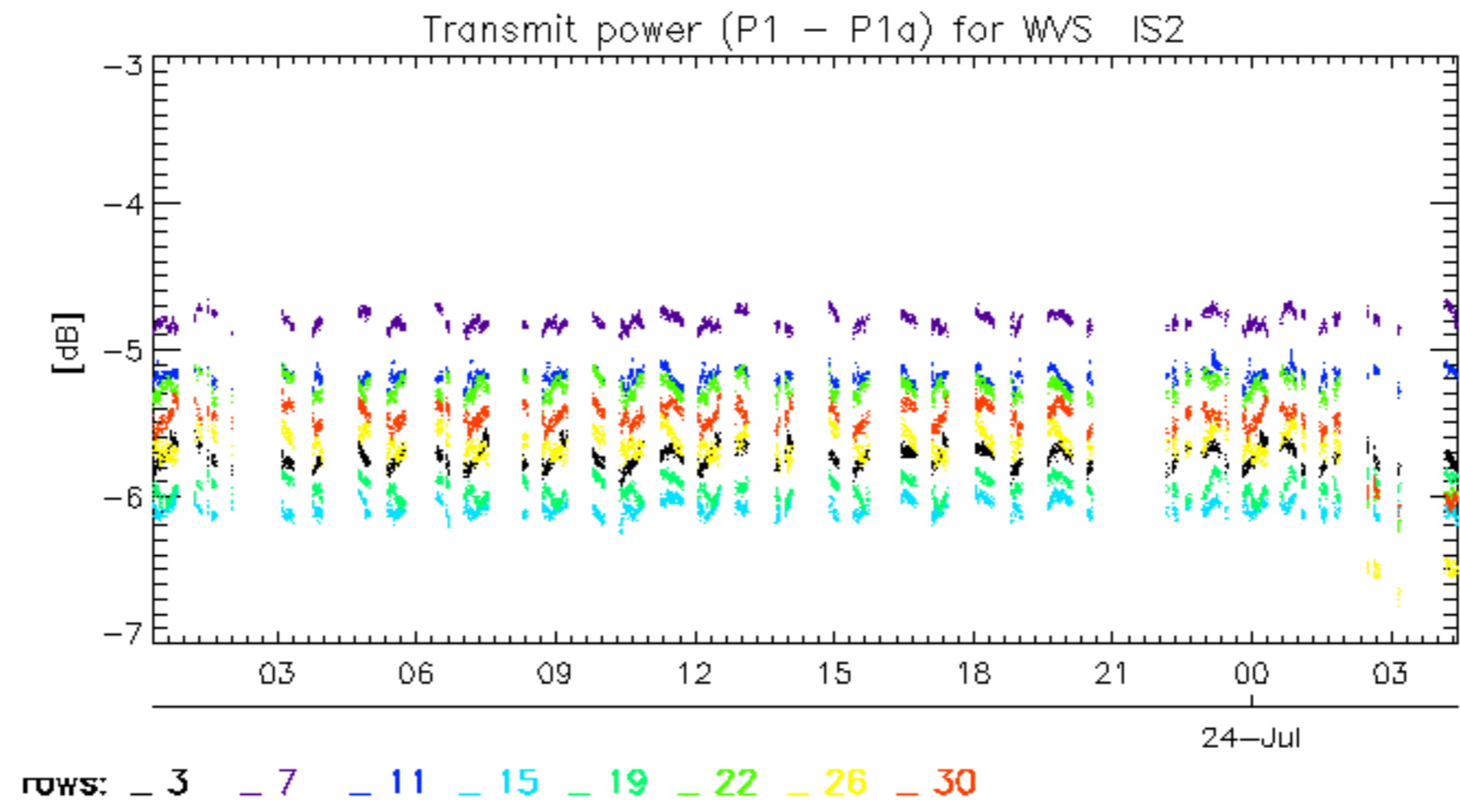


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.