

PRELIMINARY REPORT OF 050817

last update on Wed Aug 17 10:50:01 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 2005-08-16 00:00:00 to 2005-08-17 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	26	49	13	5	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	26	49	13	5	0
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	26	49	13	5	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	26	49	13	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	46	63	23	13	68
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	46	63	23	13	68
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	46	63	23	13	68
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	46	63	23	13	68

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	20050815 180518
H	20050816 173341

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	-3.315005	0.025423	0.014350
7	P1	-3.159198	0.026125	-0.059445
11	P1	-4.714044	0.032867	-0.028977
15	P1	-5.596055	0.050313	-0.067847
19	P1	-3.799422	0.004233	-0.044961
22	P1	-4.637024	0.088987	0.033285
26	P1	-4.846955	0.117513	0.050968
30	P1	-7.245833	0.119501	0.010460
3	P1	-15.550240	0.076937	0.053376
7	P1	-15.527908	0.143287	-0.075282
11	P1	-21.757116	0.271984	-0.185941
15	P1	-11.293865	0.066210	-0.005265
19	P1	-14.493936	0.036342	-0.057108
22	P1	-15.676713	0.346631	0.215663
26	P1	-17.336494	0.196944	0.176781
30	P1	-17.775513	0.398260	-0.165593

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.807722	0.084141	0.110571
7	P2	-21.962425	0.101289	0.145661
11	P2	-13.552631	0.107559	0.199849
15	P2	-7.065789	0.091110	0.040011
19	P2	-9.588820	0.094473	-0.002744
22	P2	-16.833828	0.096707	0.051436
26	P2	-16.508293	0.097849	-0.001854
30	P2	-18.798702	0.086204	-0.023171

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.156489	0.002692	-0.000404
7	P3	-8.156489	0.002692	-0.000404
11	P3	-8.156489	0.002692	-0.000404
15	P3	-8.156489	0.002692	-0.000404
19	P3	-8.156489	0.002692	-0.000404
22	P3	-8.156489	0.002692	-0.000404
26	P3	-8.156489	0.002692	-0.000404
30	P3	-8.156489	0.002692	-0.000404

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	-2.803100	0.085845	-0.038938
7	P1	-2.971335	0.055419	-0.031020
11	P1	-4.016116	0.016424	-0.060425
15	P1	-3.615363	0.057135	-0.088086
19	P1	-3.631380	0.015536	0.007660
22	P1	-5.694117	0.096253	-0.025804
26	P1	-7.393111	0.160653	0.053846
30	P1	-6.323764	0.097362	0.059558
3	P1	-10.897164	0.051662	-0.179168
7	P1	-10.472162	0.163953	-0.039623
11	P1	-12.642965	0.102385	-0.049355
15	P1	-11.603135	0.095971	-0.010706
19	P1	-15.500745	0.066428	0.099546
22	P1	-25.595781	2.805407	0.294595
26	P1	-15.290734	0.309400	0.202057
30	P1	-20.059999	1.280349	-0.064350

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.536751	0.046826	0.164732
7	P2	-22.019295	0.038631	0.055988
11	P2	-9.590823	0.065578	0.186487
15	P2	-5.103025	0.042255	0.043535
19	P2	-6.881601	0.062962	0.062743
22	P2	-7.054344	0.039367	0.052309
26	P2	-23.964748	0.037455	0.022350
30	P2	-21.945503	0.043648	0.023762

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.997911	0.004276	0.000559
7	P3	-7.997773	0.004268	0.000379
11	P3	-7.997780	0.004277	0.000246
15	P3	-7.997697	0.004276	0.000469
19	P3	-7.997809	0.004272	0.000568
22	P3	-7.997787	0.004268	0.000698
26	P3	-7.997686	0.004265	0.000960
30	P3	-7.997715	0.004261	0.000489

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	0.000458019
	stdev	2.21924e-07
MEAN Q	mean	0.000485979
	stdev	2.35520e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127931
	stdev	0.00100098
STDEV Q	mean	0.128186
	stdev	0.00101121



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005081[567]

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_1PNPDE20050815_032905_000002292039_00490_18079_2564.N1	1	0
ASA_IMM_1PNPDE20050816_153613_000000372040_00011_18101_2662.N1	1	0
ASA_GM1_1PNPDE20050816_215256_000004472040_00015_18105_2053.N1	0	14
ASA_WSM_1PNPDE20050815_165908_000000912039_00499_18088_4602.N1	0	2
ASA_WSM_1PNPDE20050815_184313_000002252039_00500_18089_4607.N1	0	3







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)



Ascending



Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler



Ascending



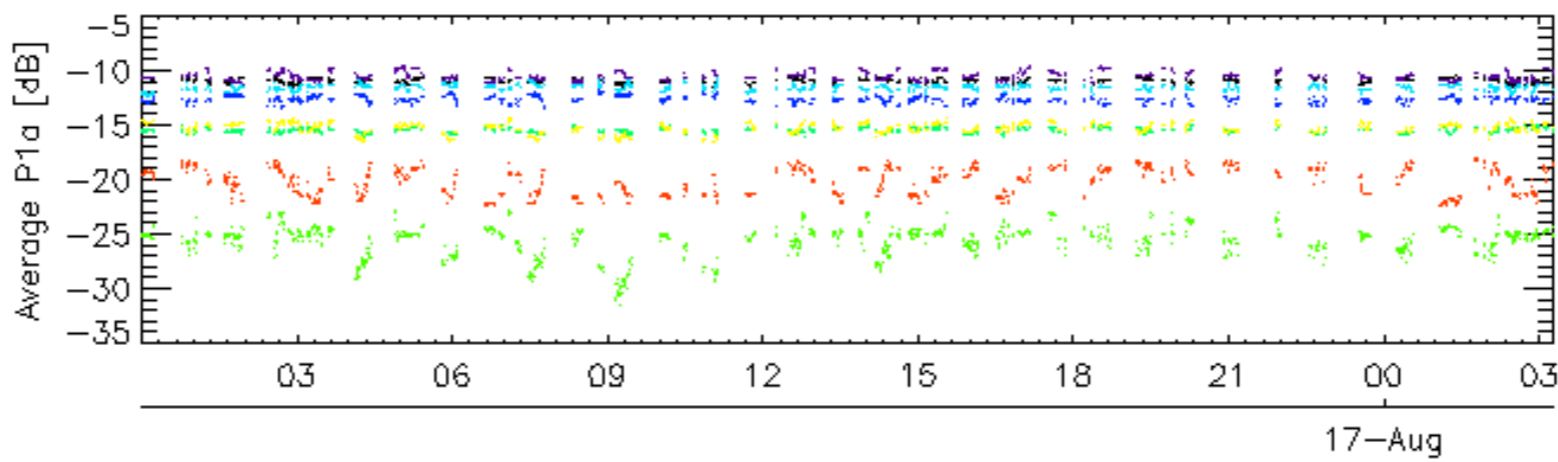
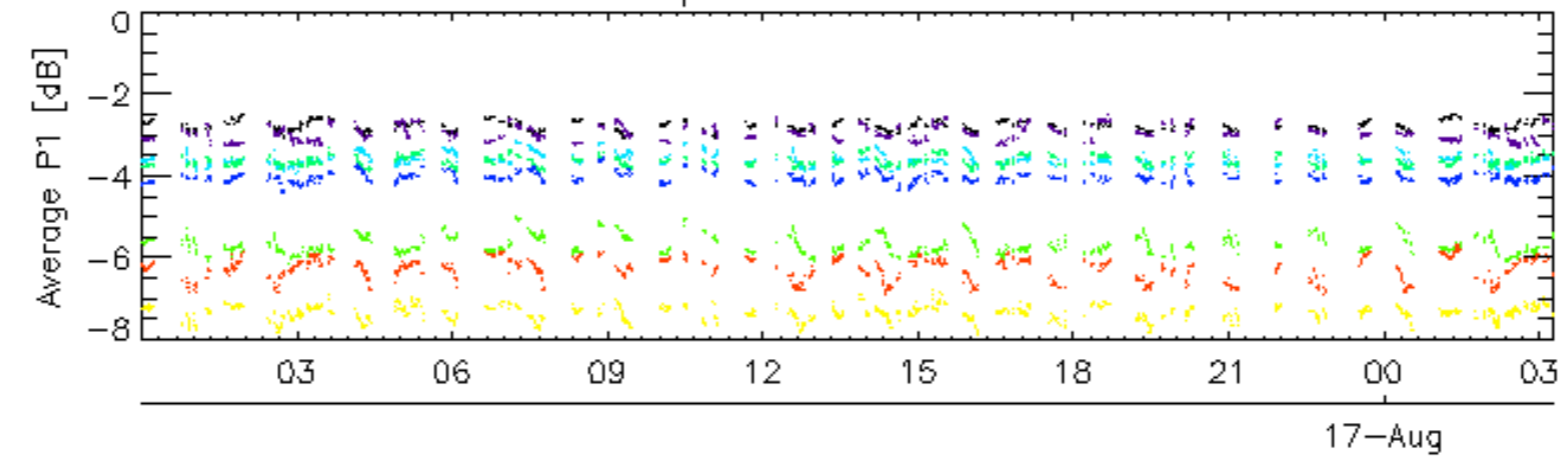
Descending

7.6 - Doppler evolution versus ANX for GM1

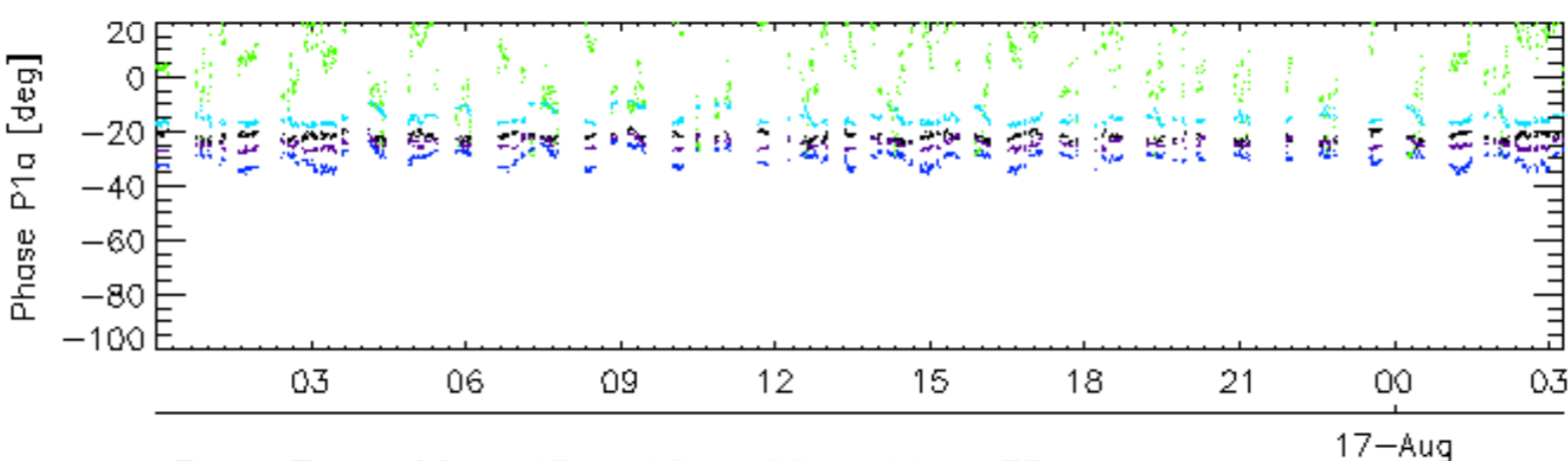
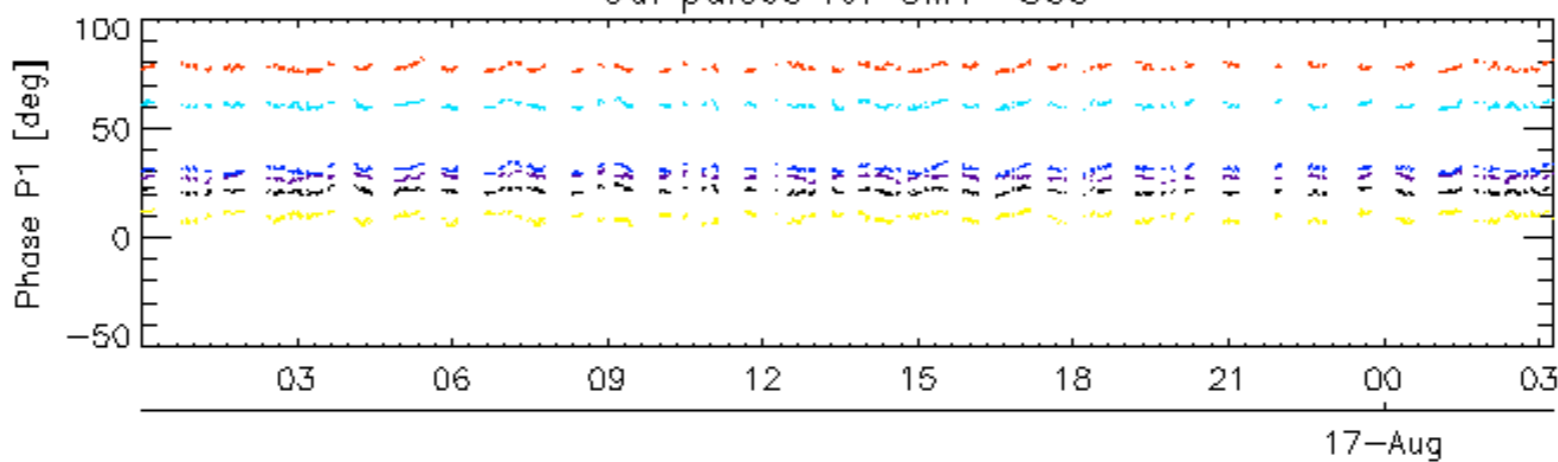
Evolution Doppler error versus ANX



Cal pulses for GM1 SS3

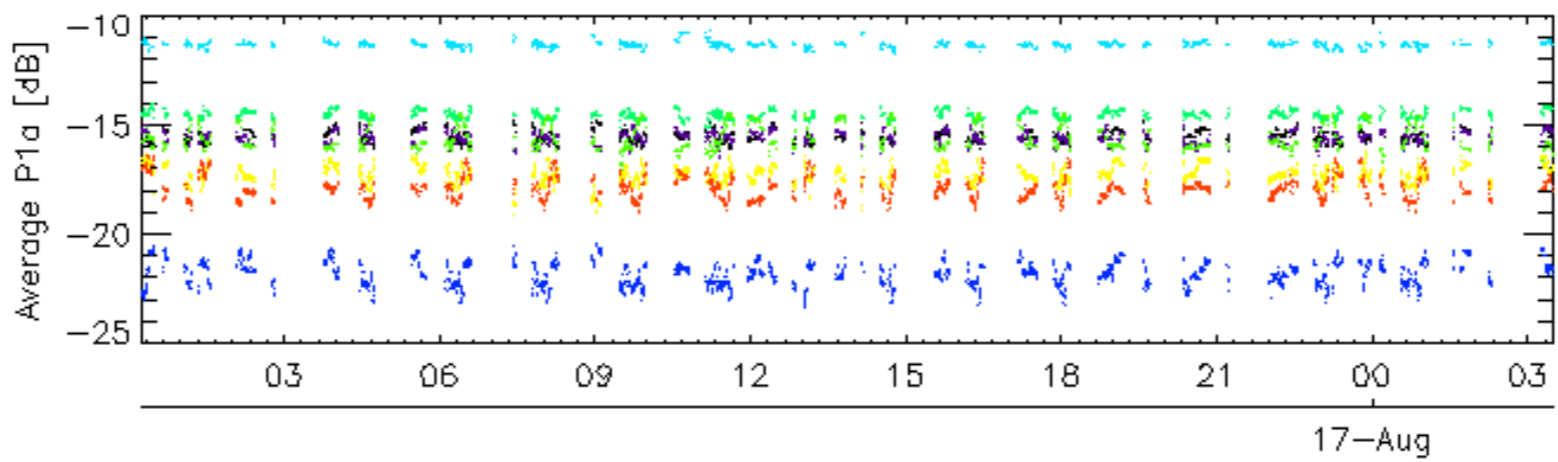
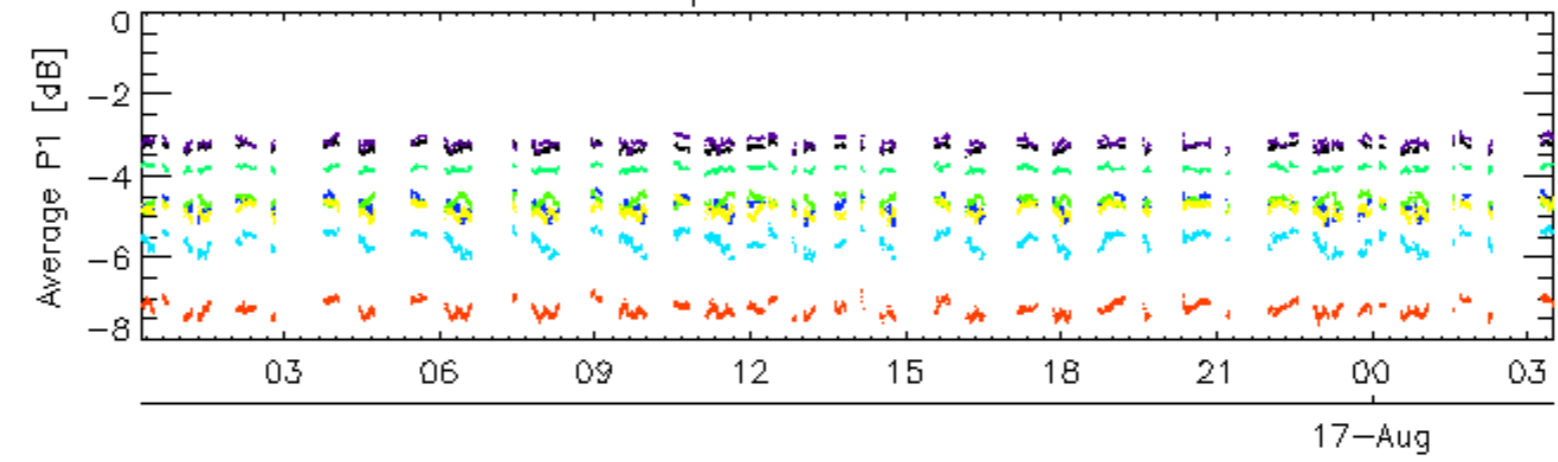


Cal pulses for GM1 SS3

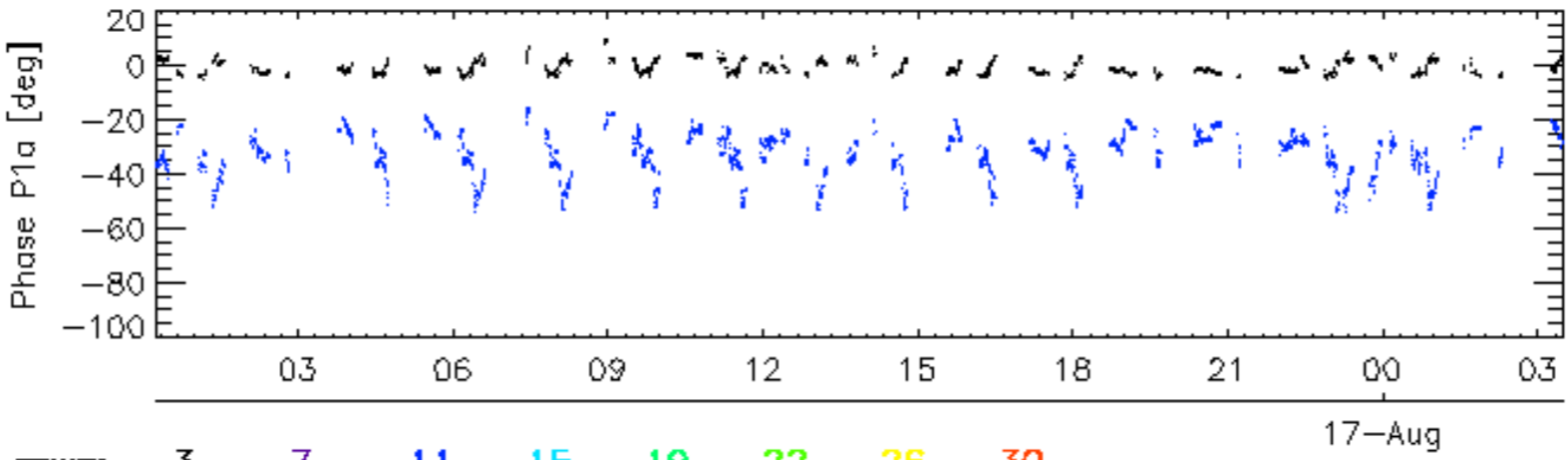
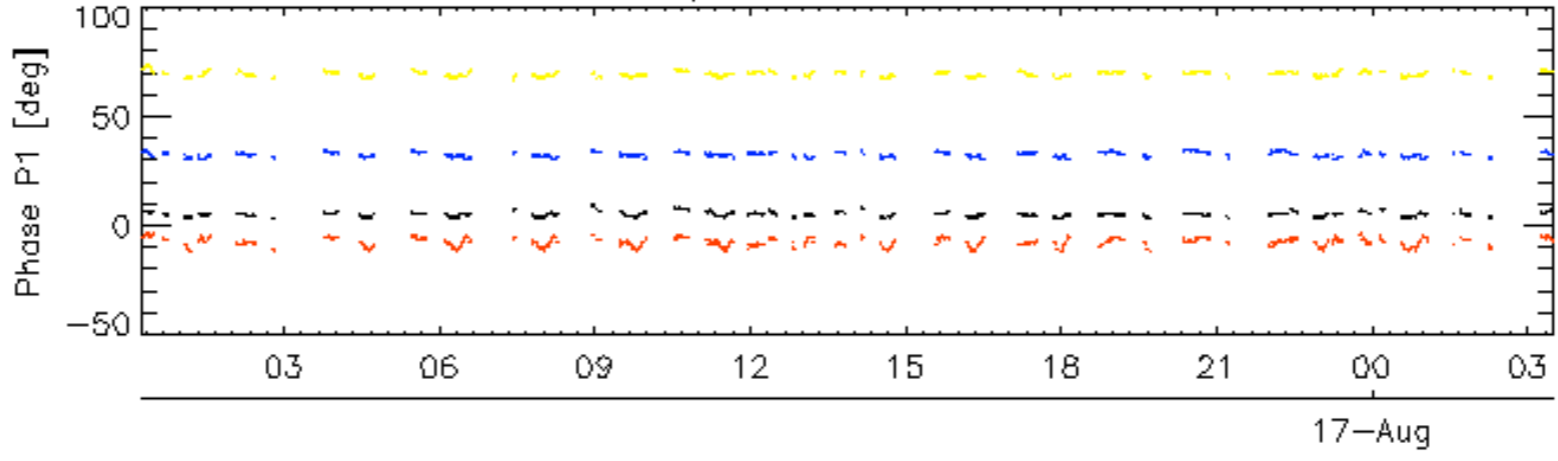


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

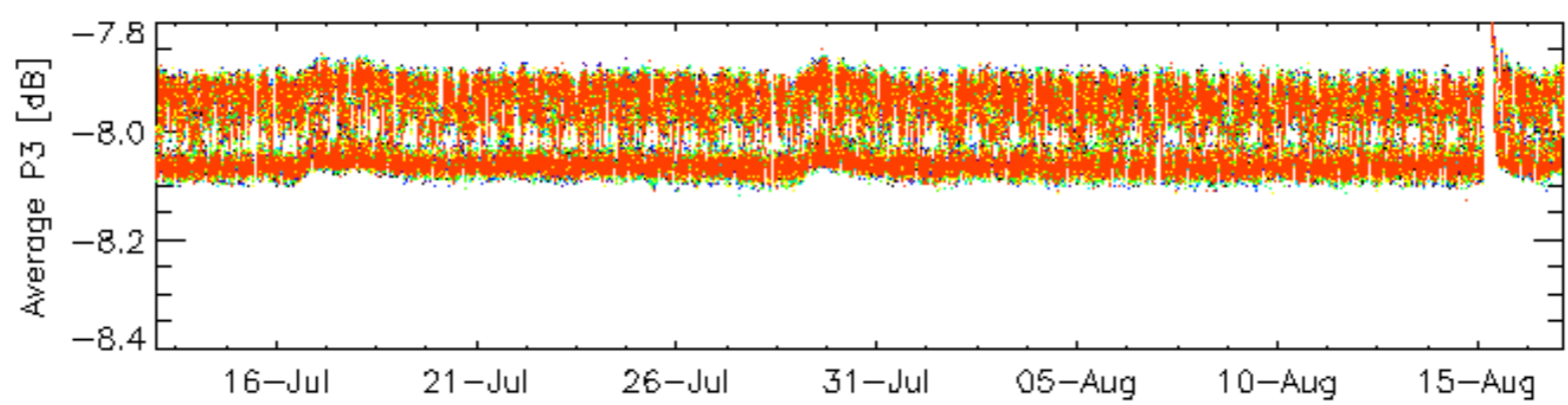
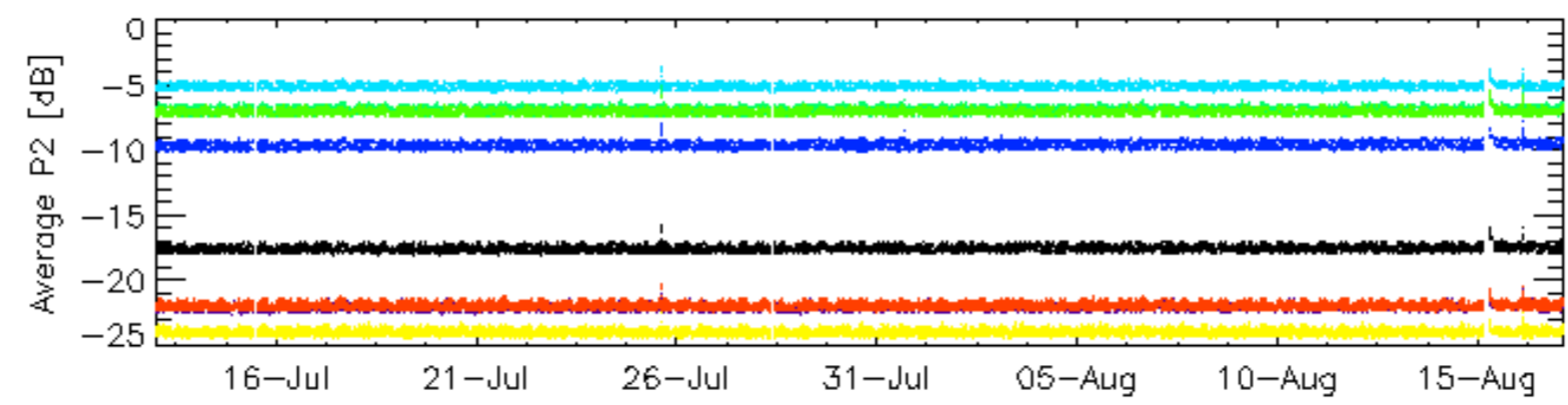
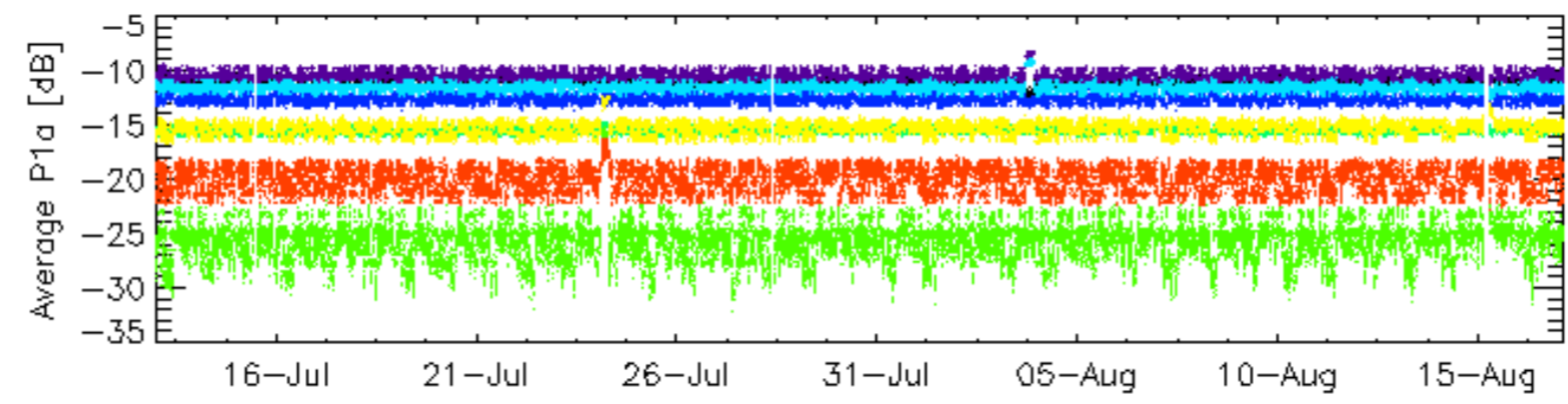
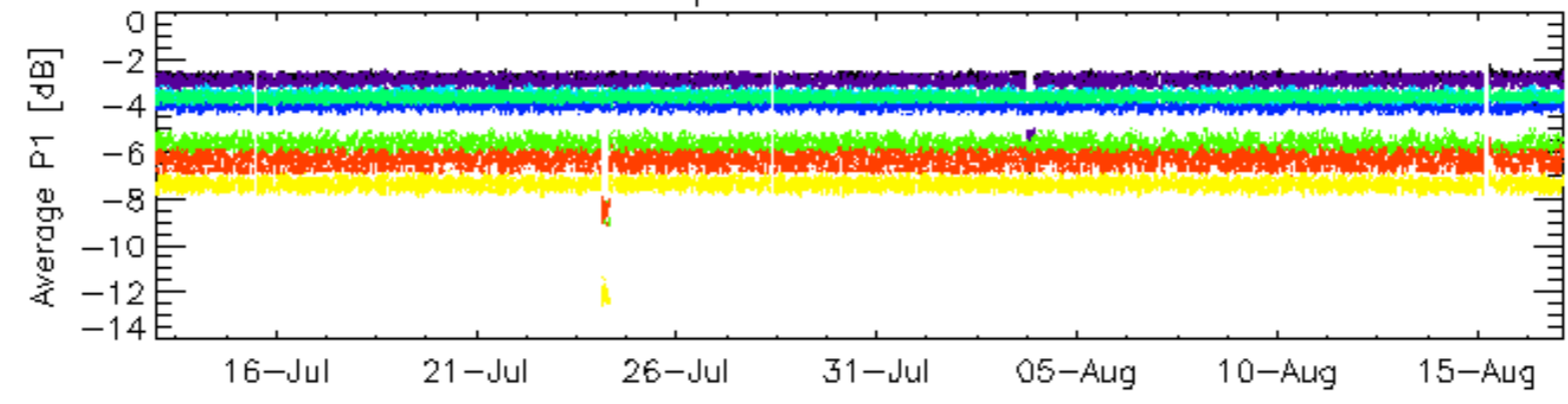


Cal pulses for WVS IS2



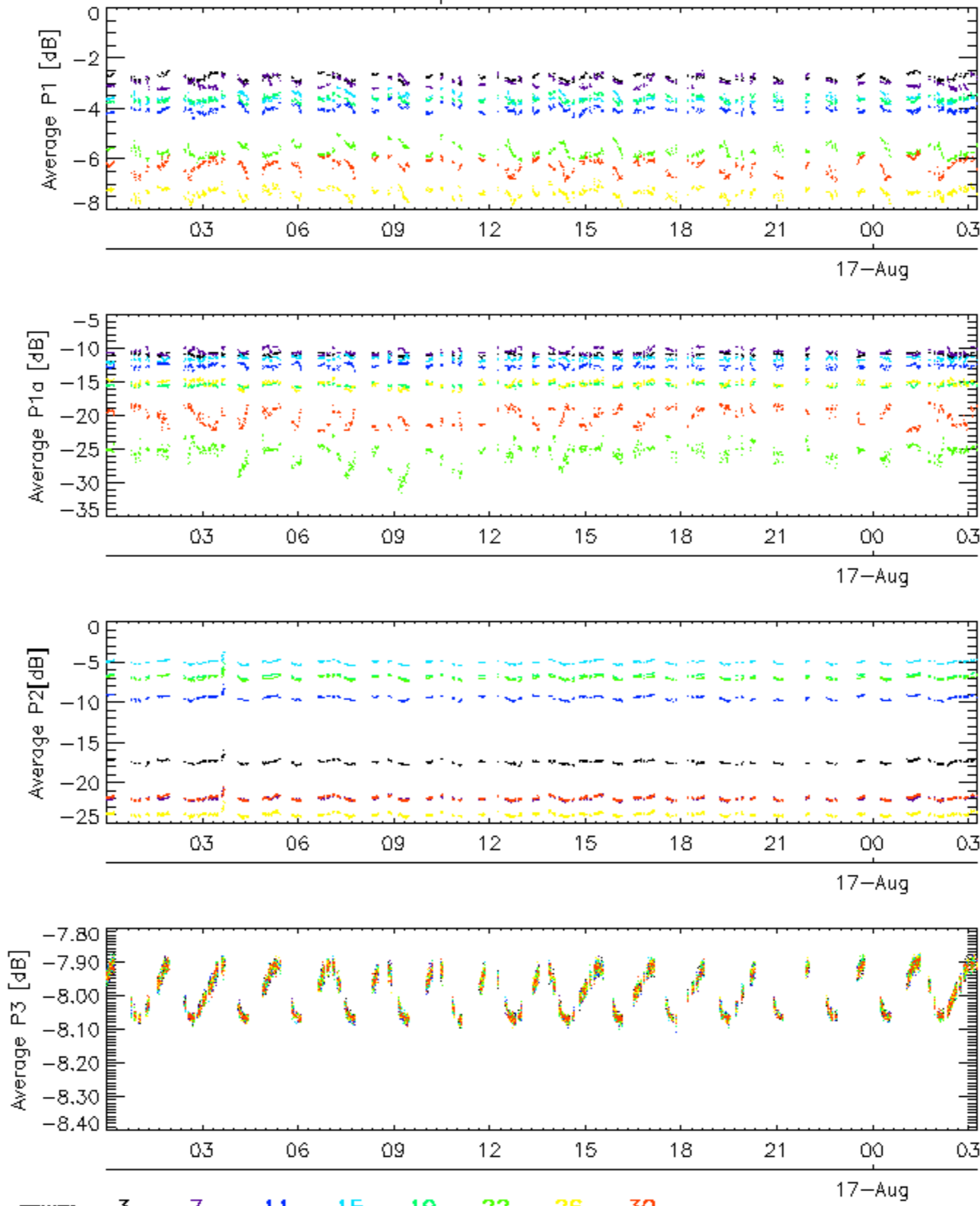
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

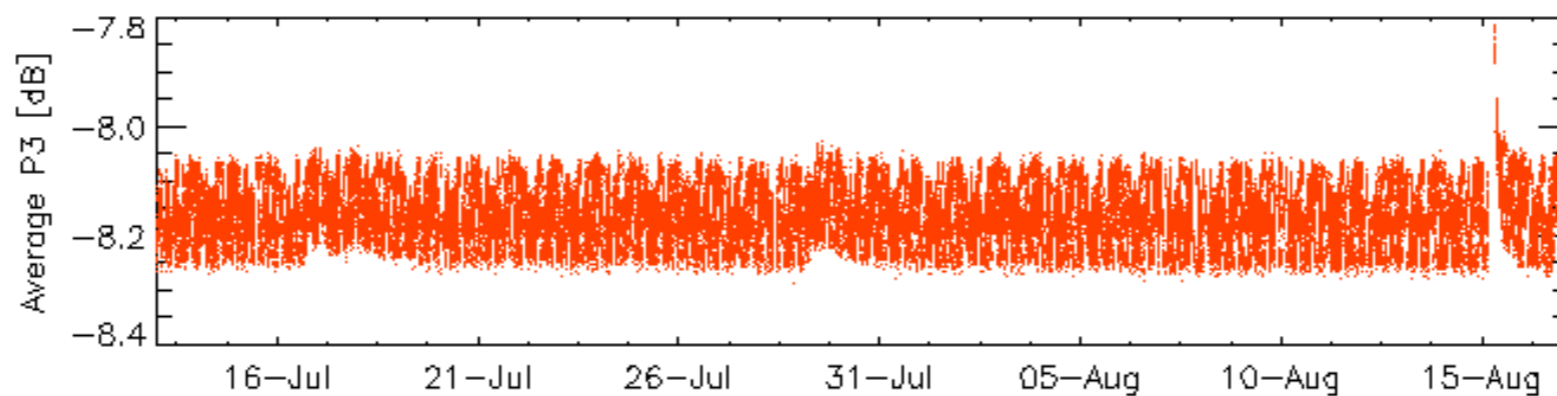
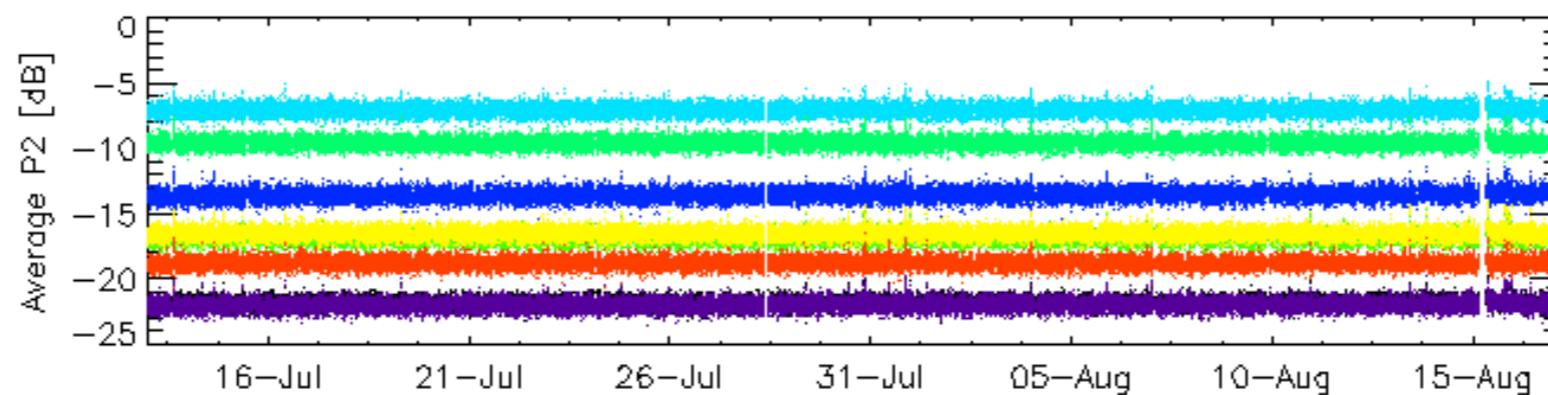
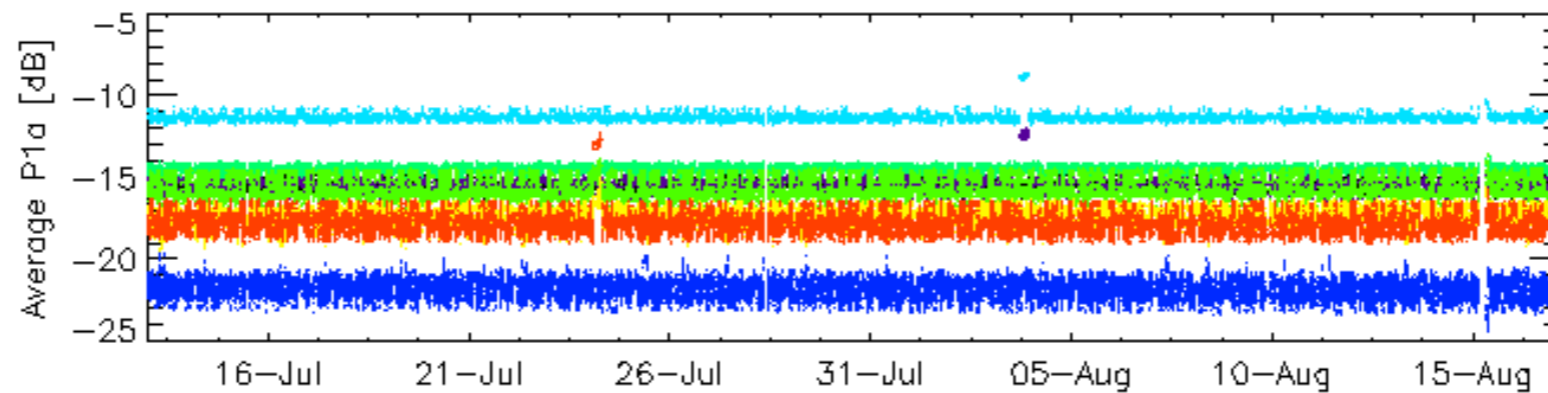
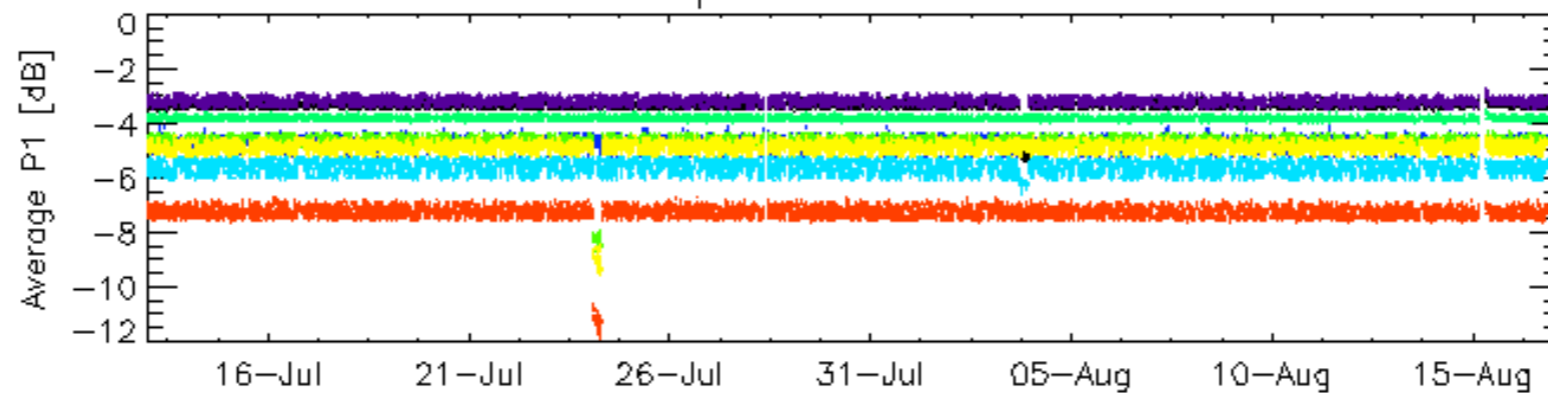


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

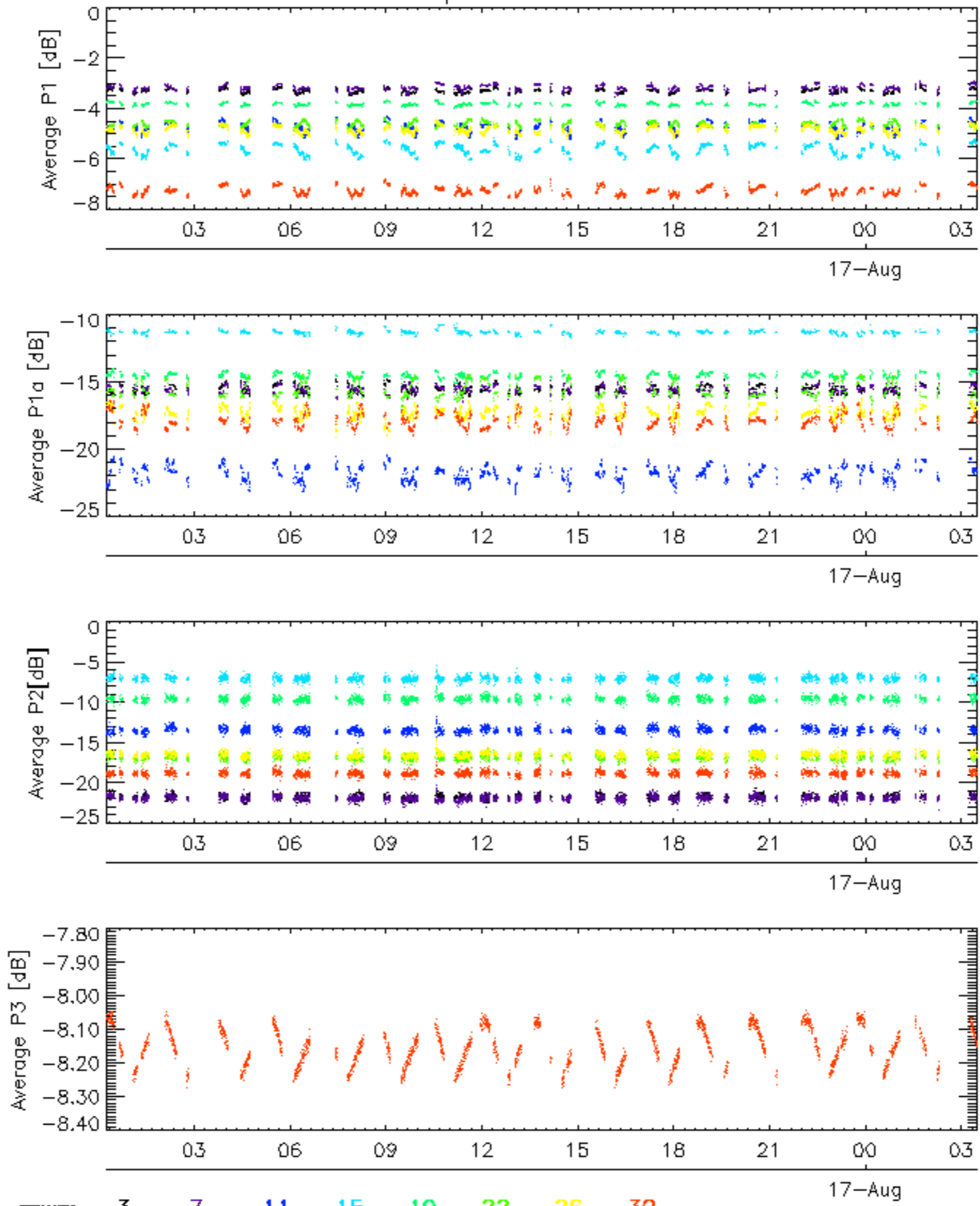


Cal pulses for WVS IS2

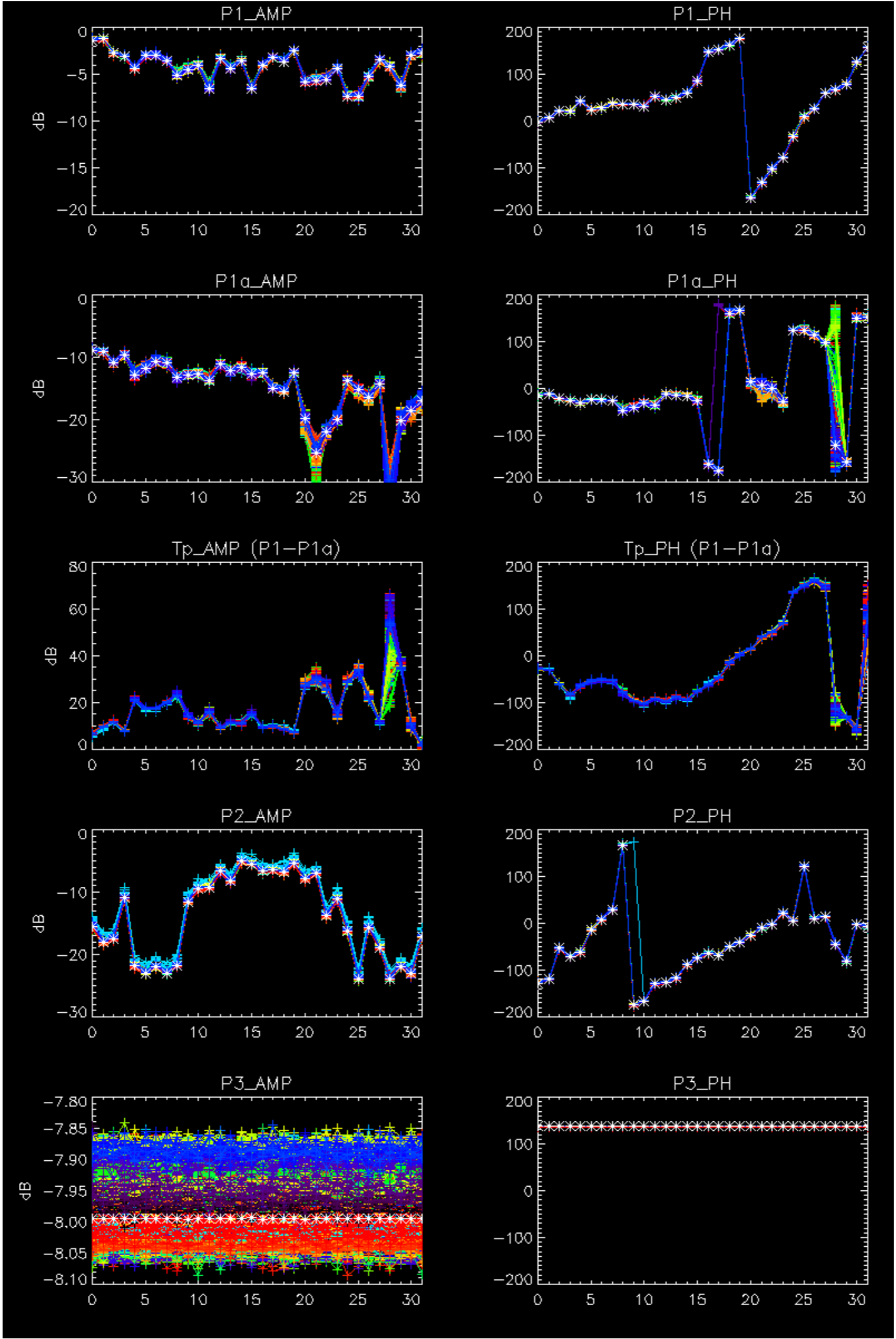


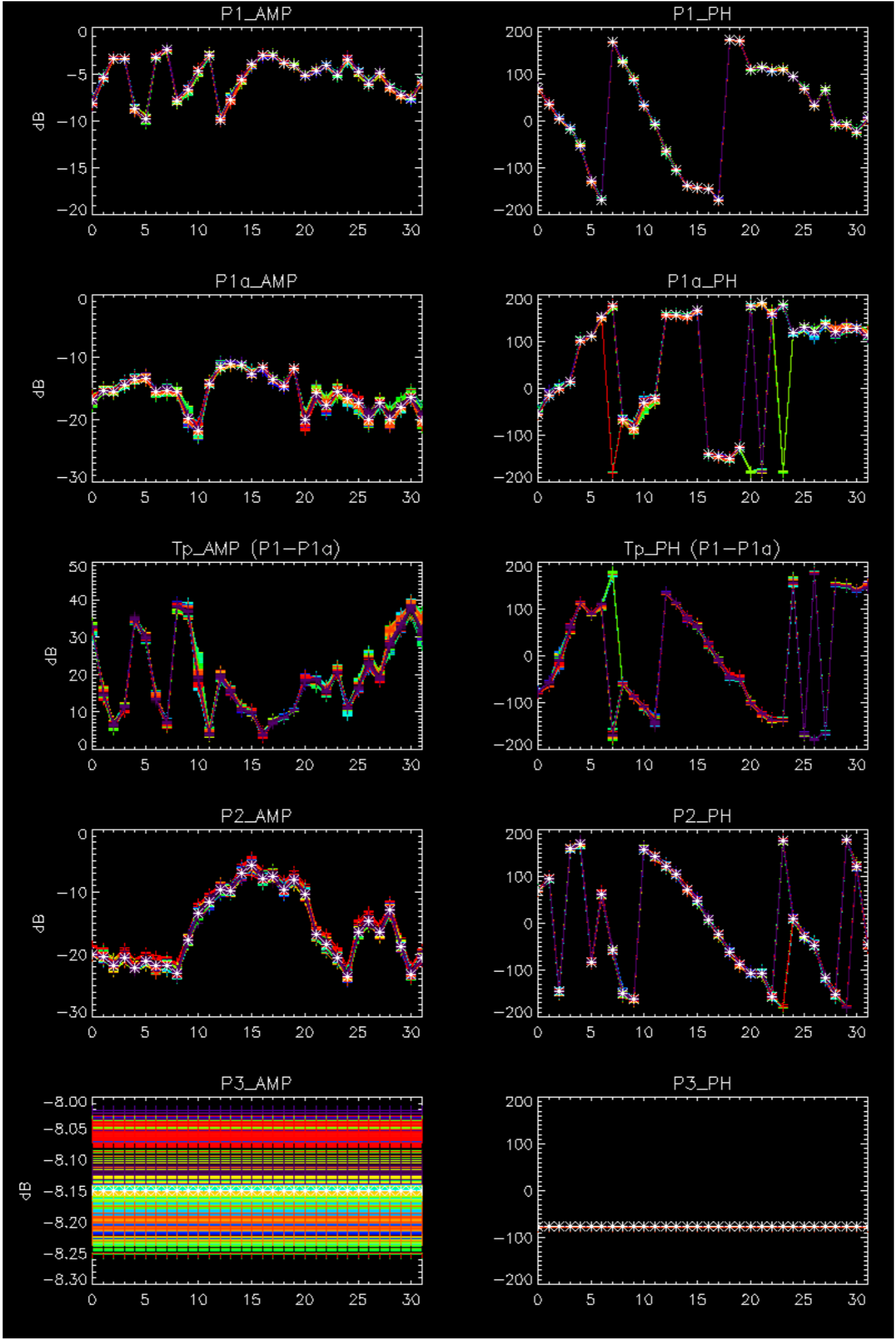
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



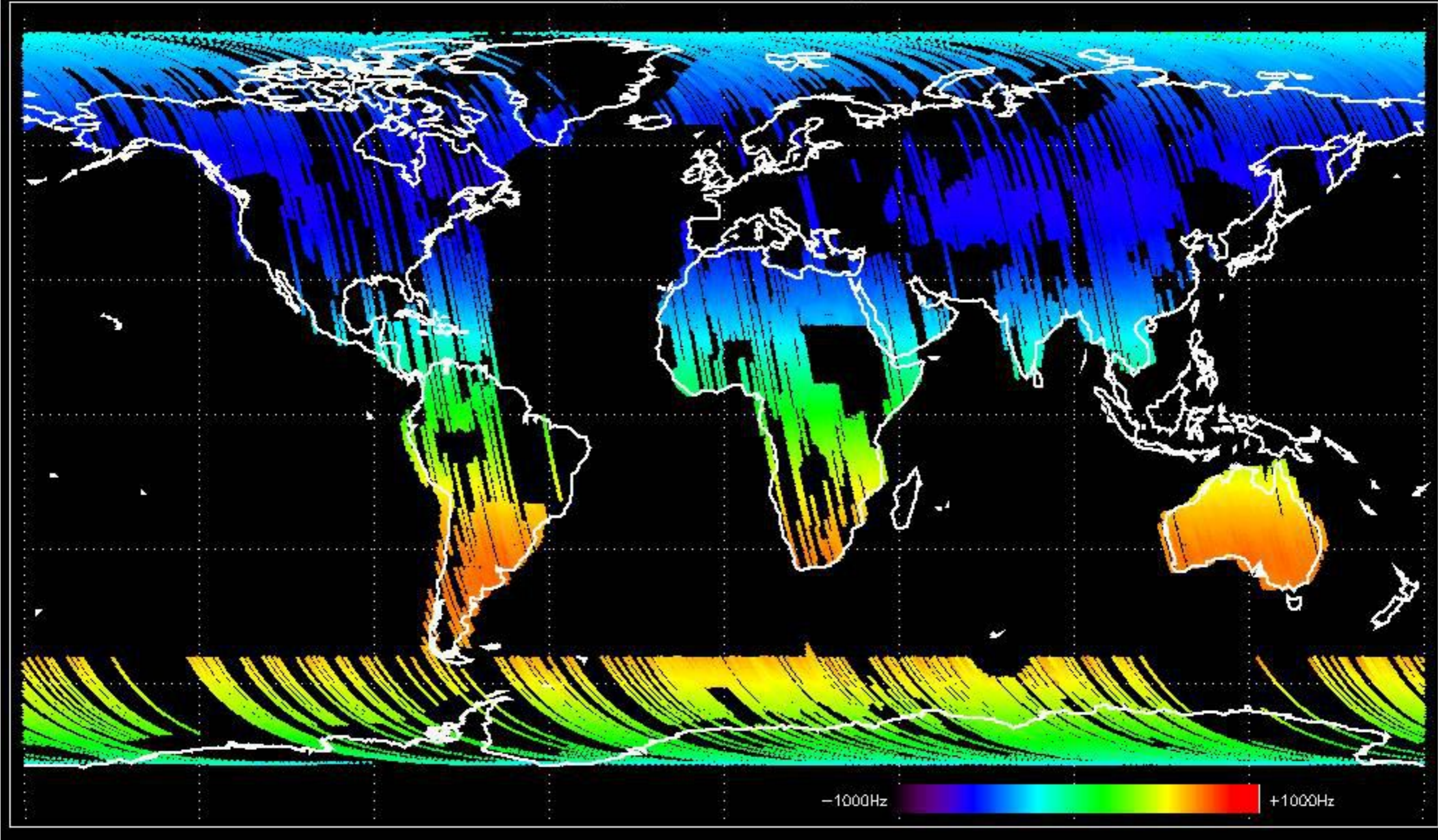
No anomalies observed.



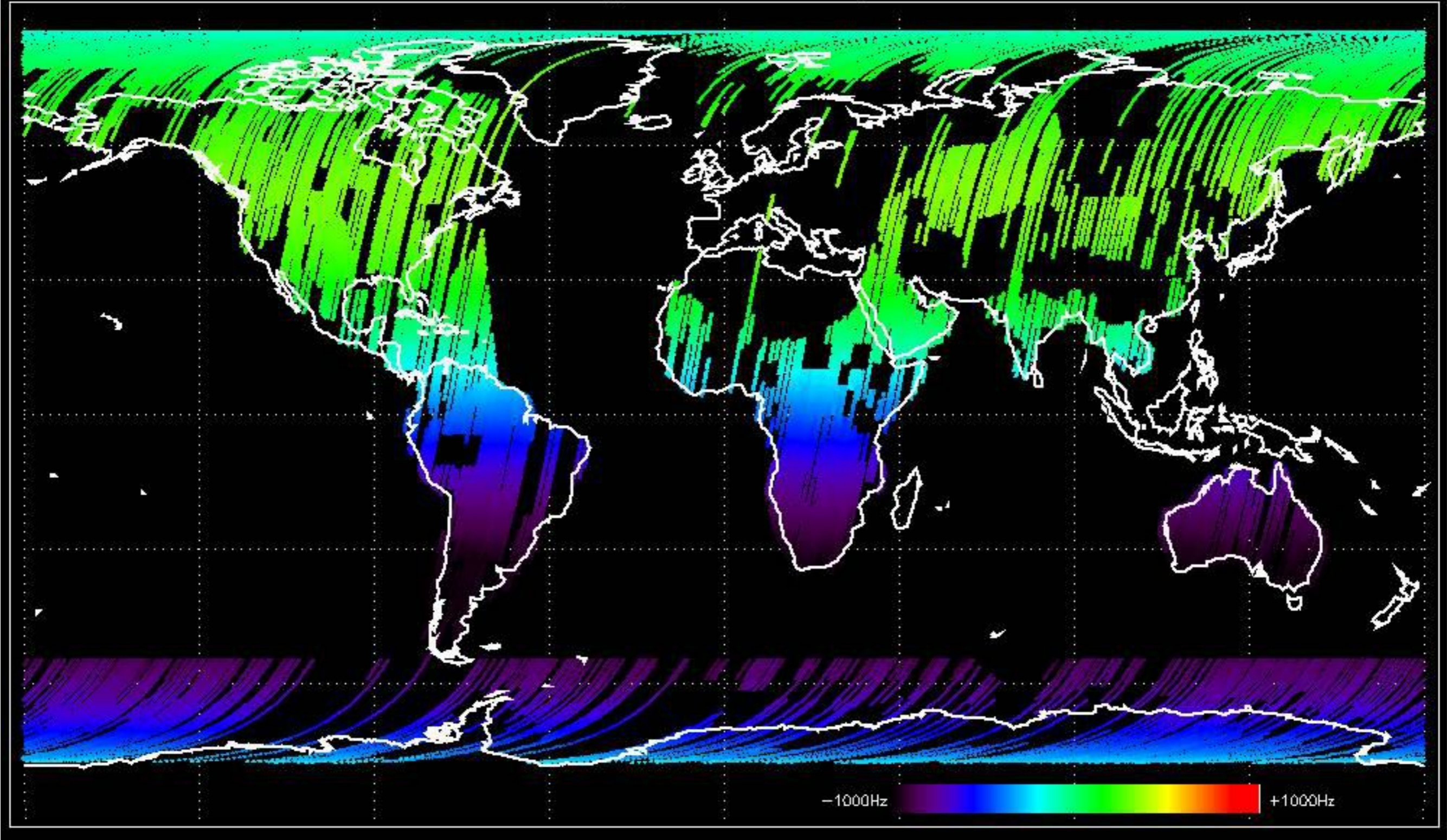


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

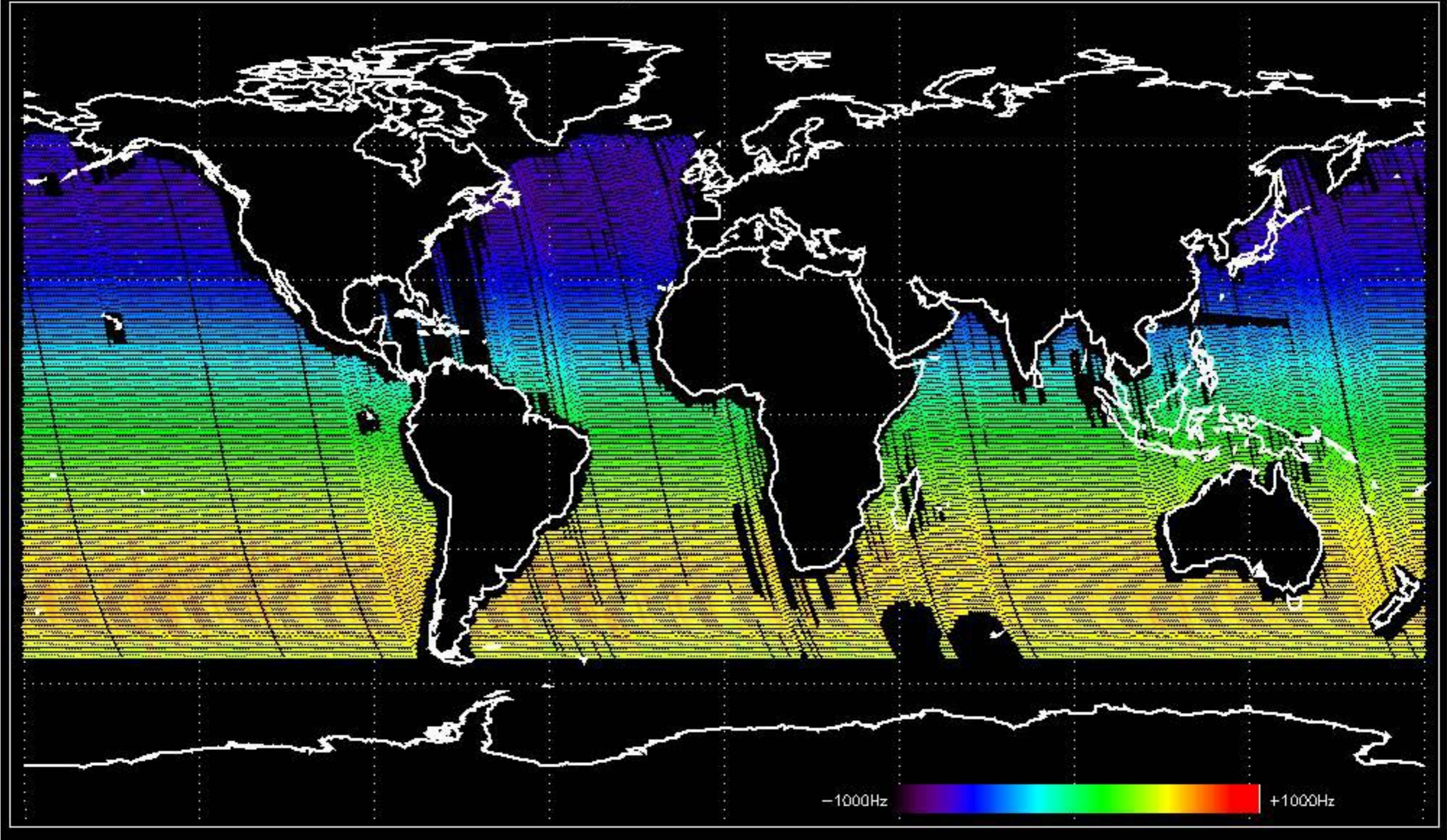
Doppler 'GM1' 'SS1' ascending



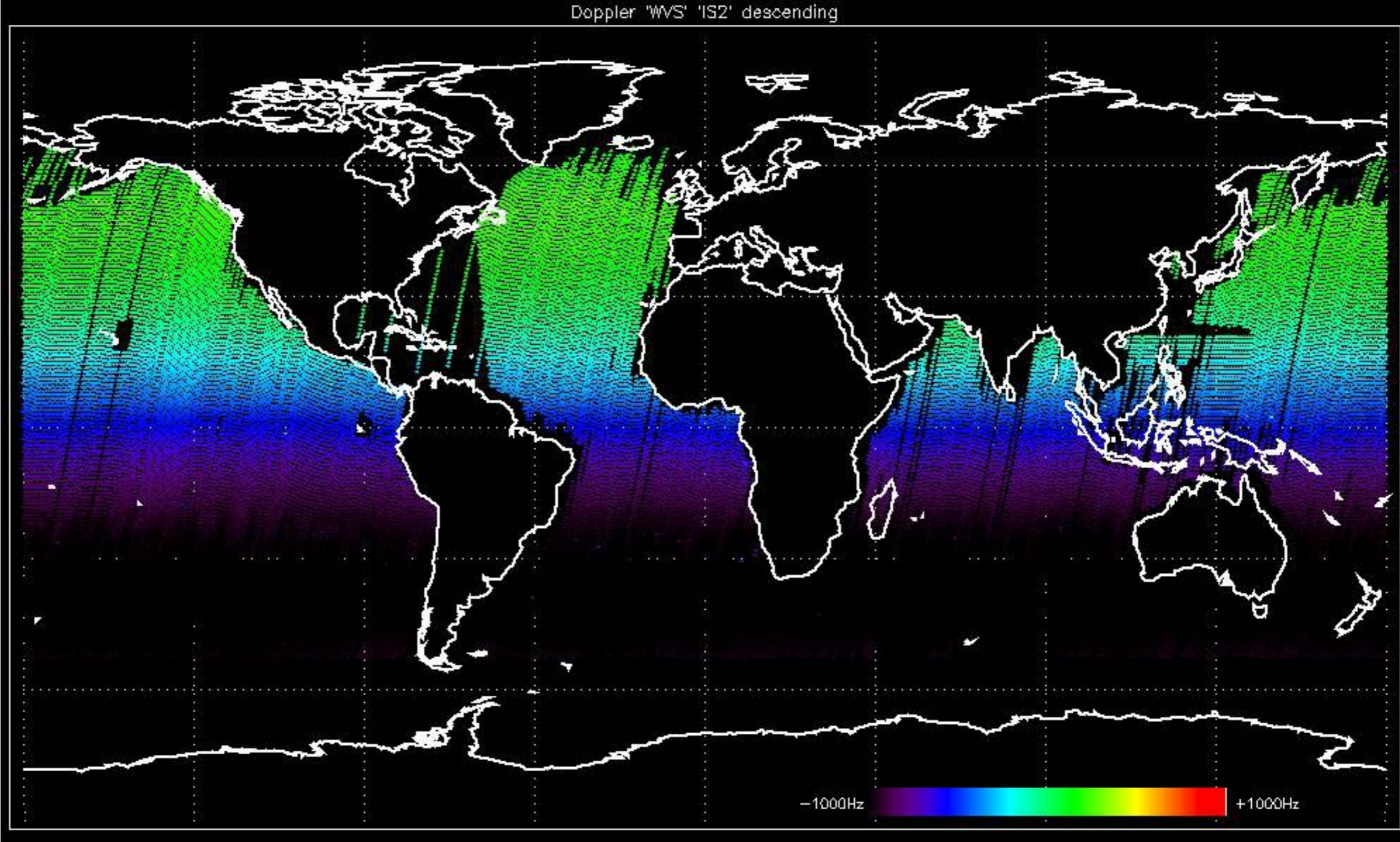
Doppler 'GM1' 'SS1' descending

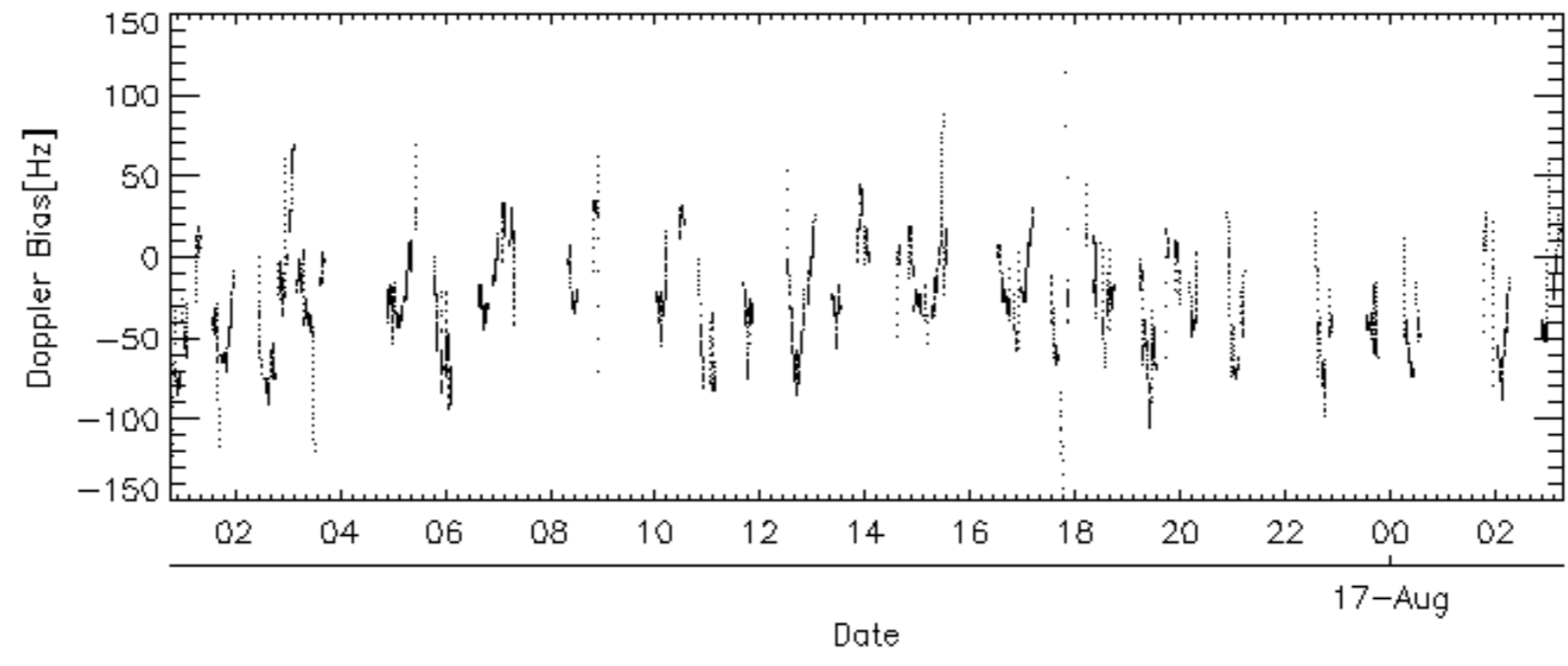
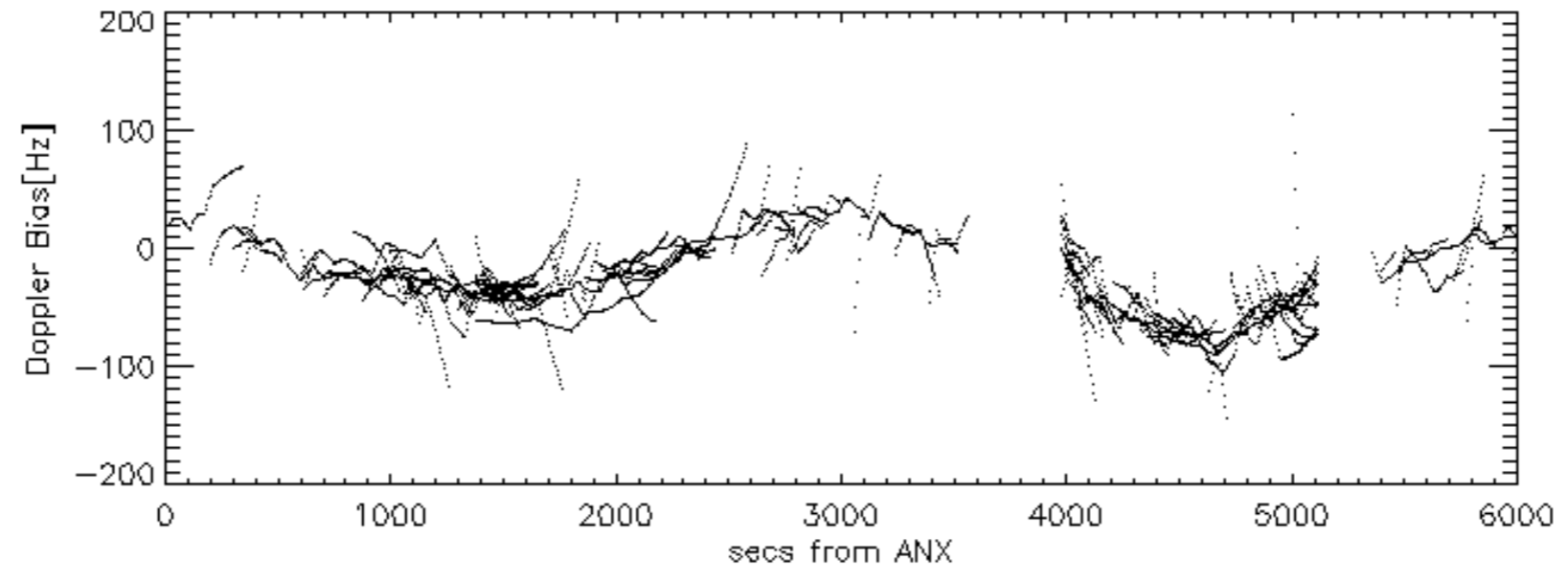
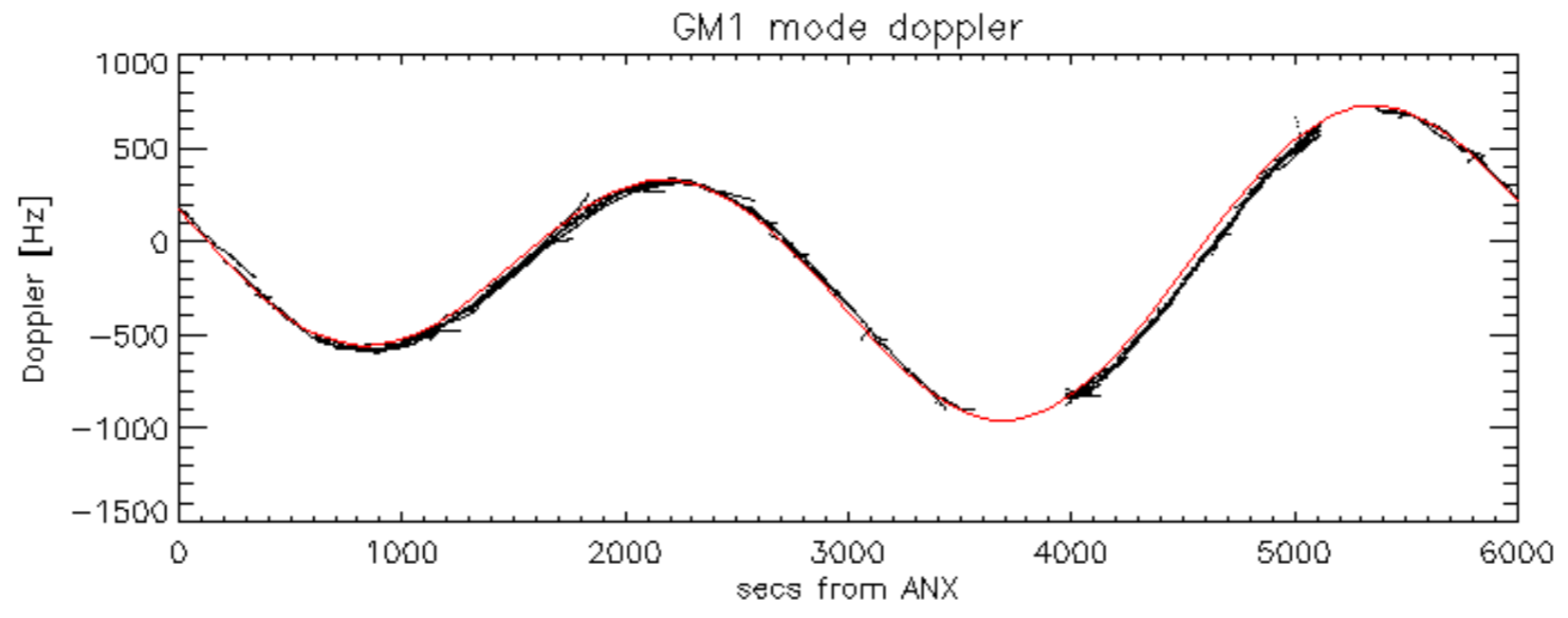


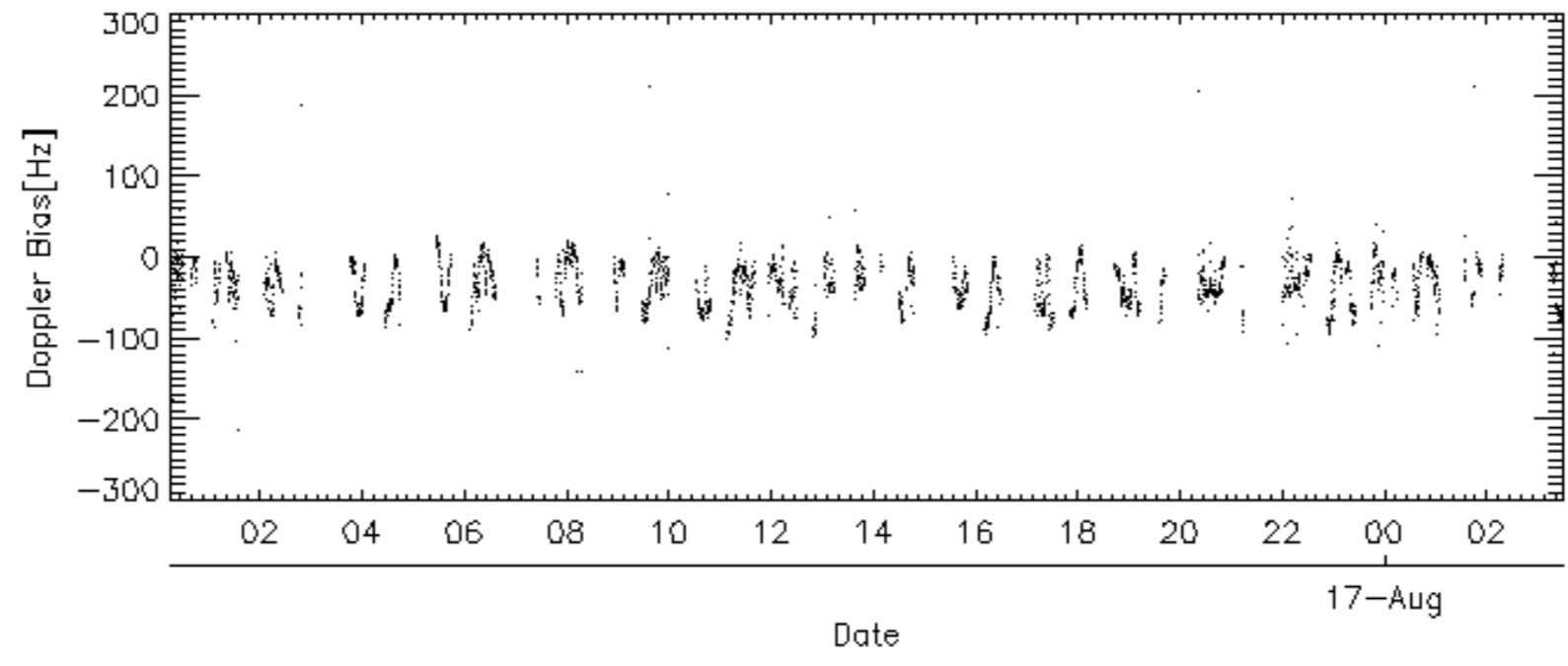
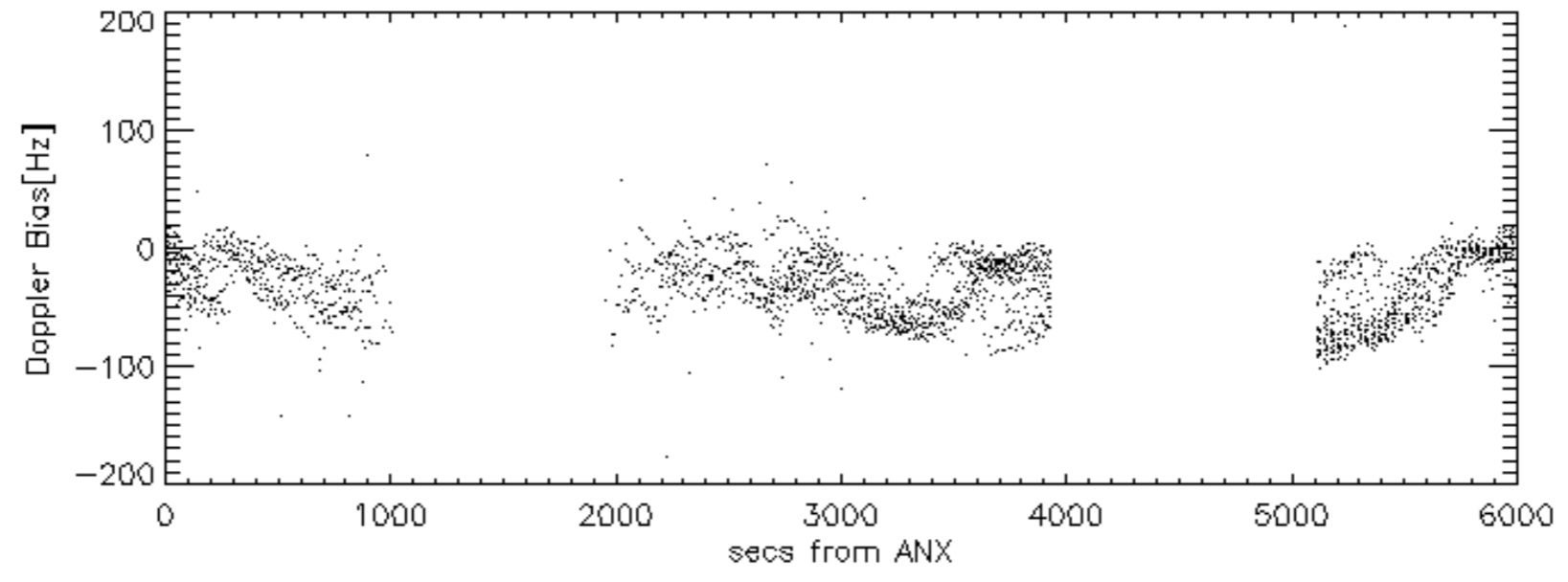
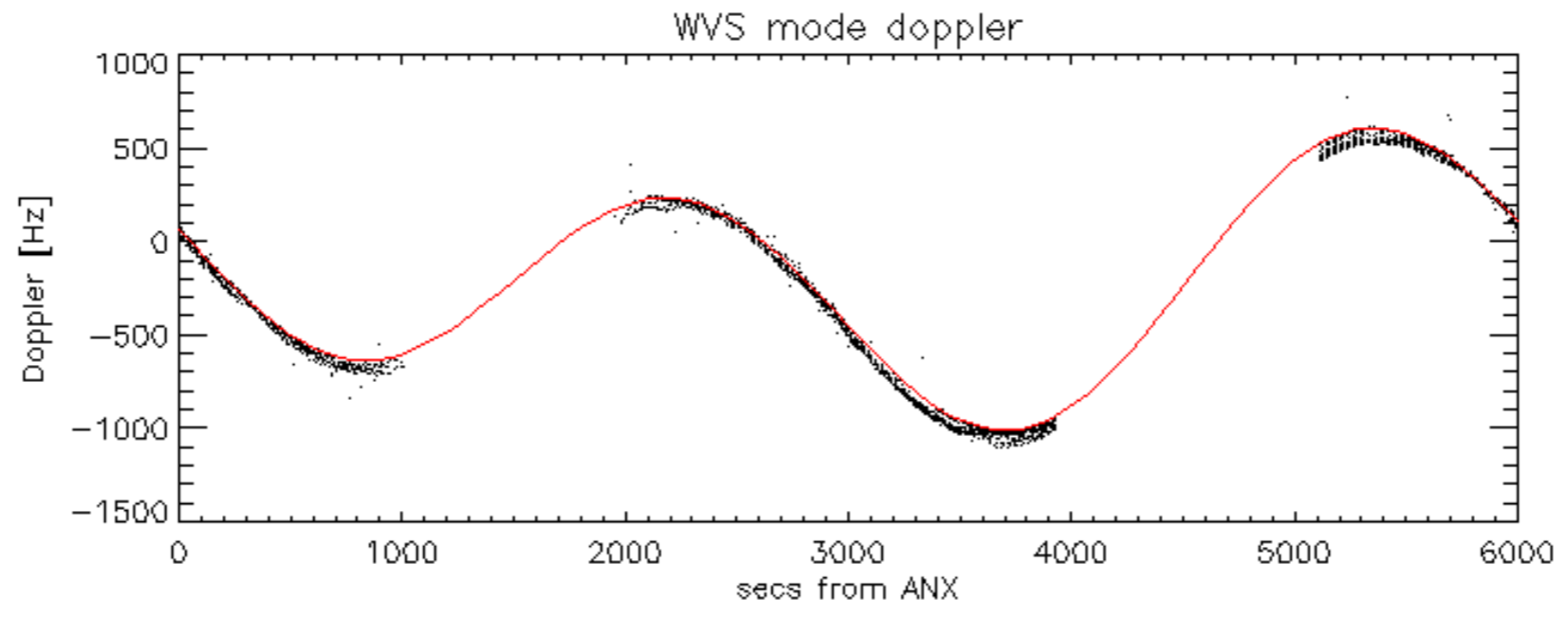
Doppler 'WVS' 'IS2' ascending



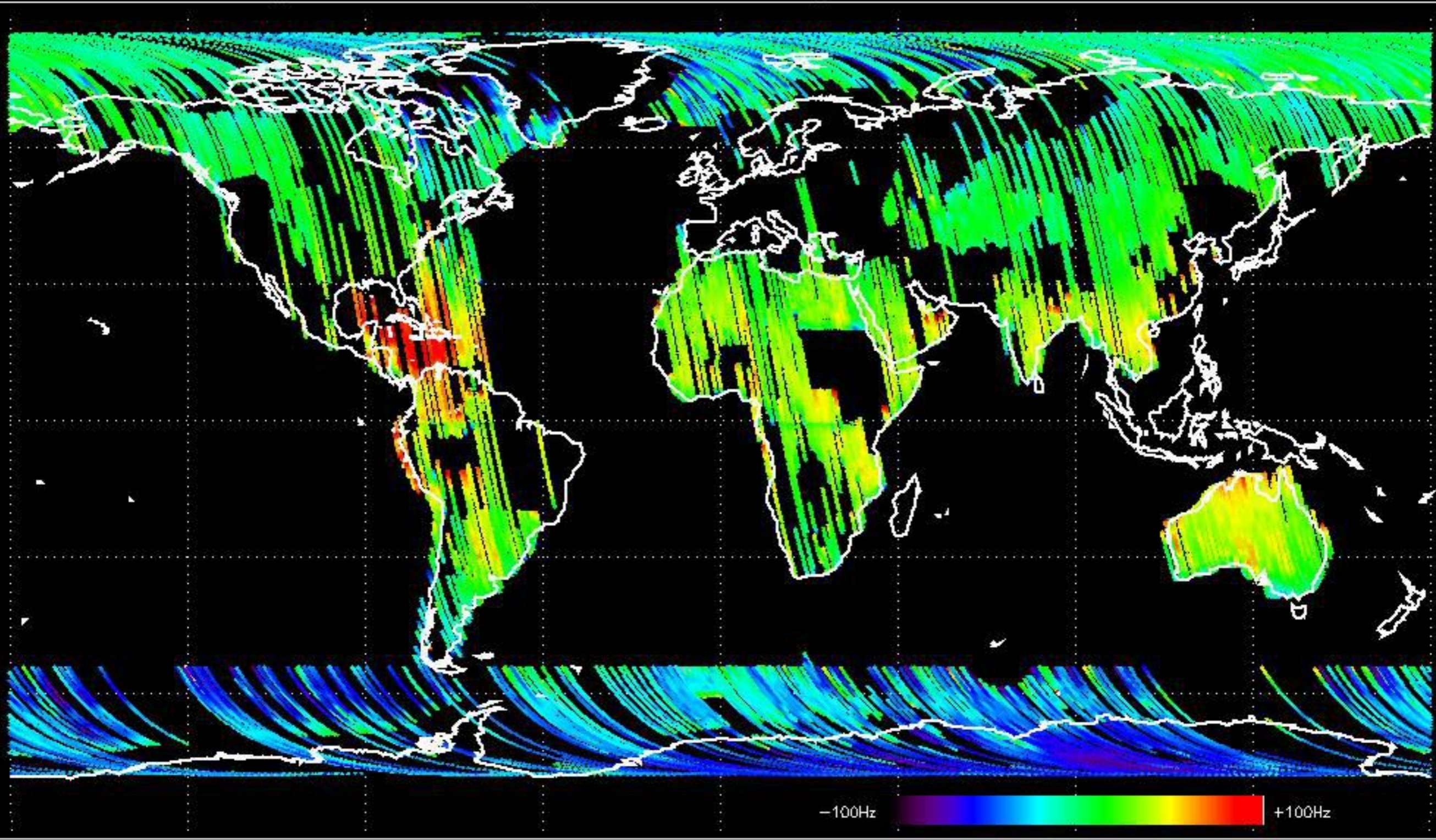
Doppler 'WVS' 'IS2' descending



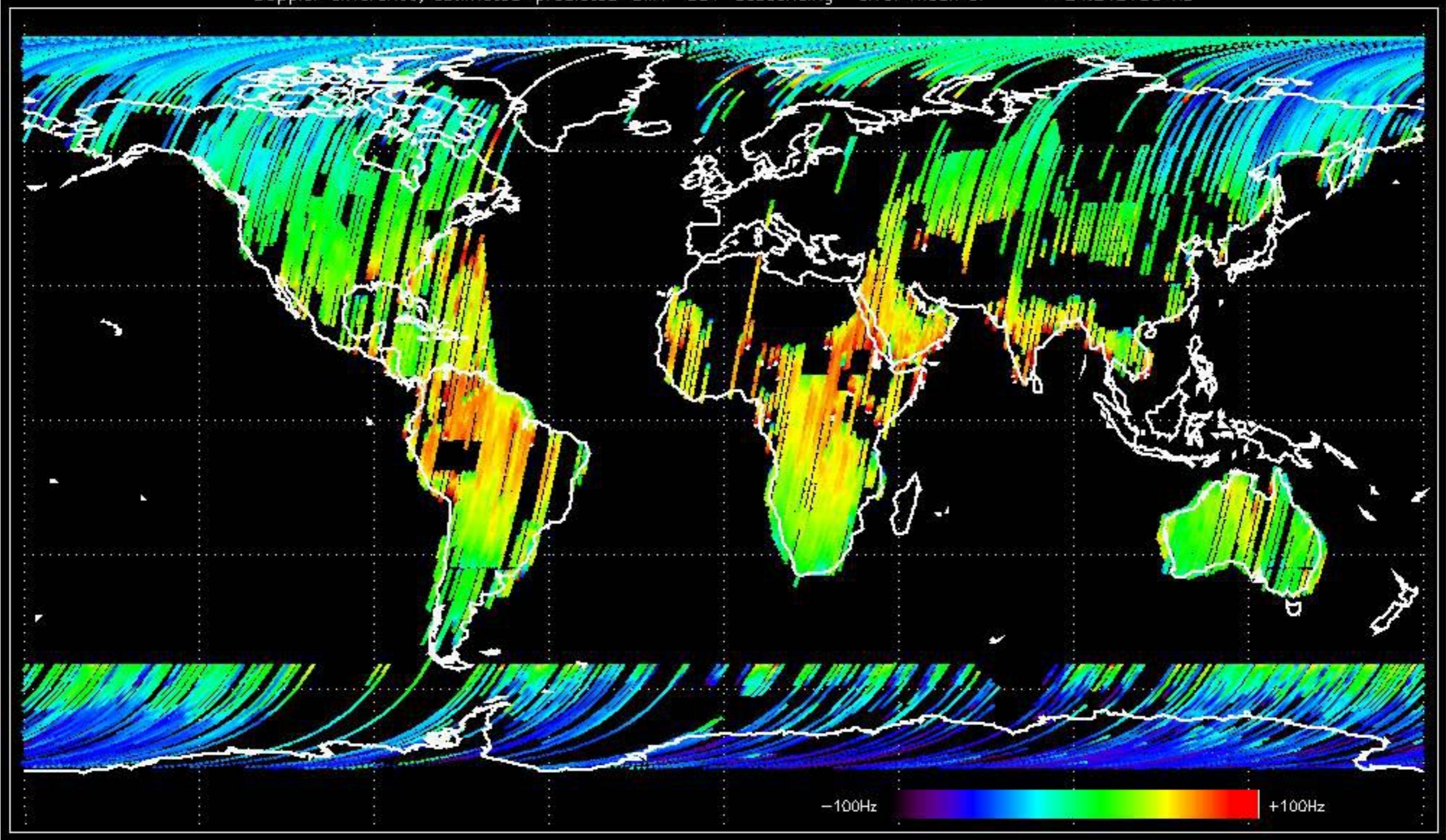




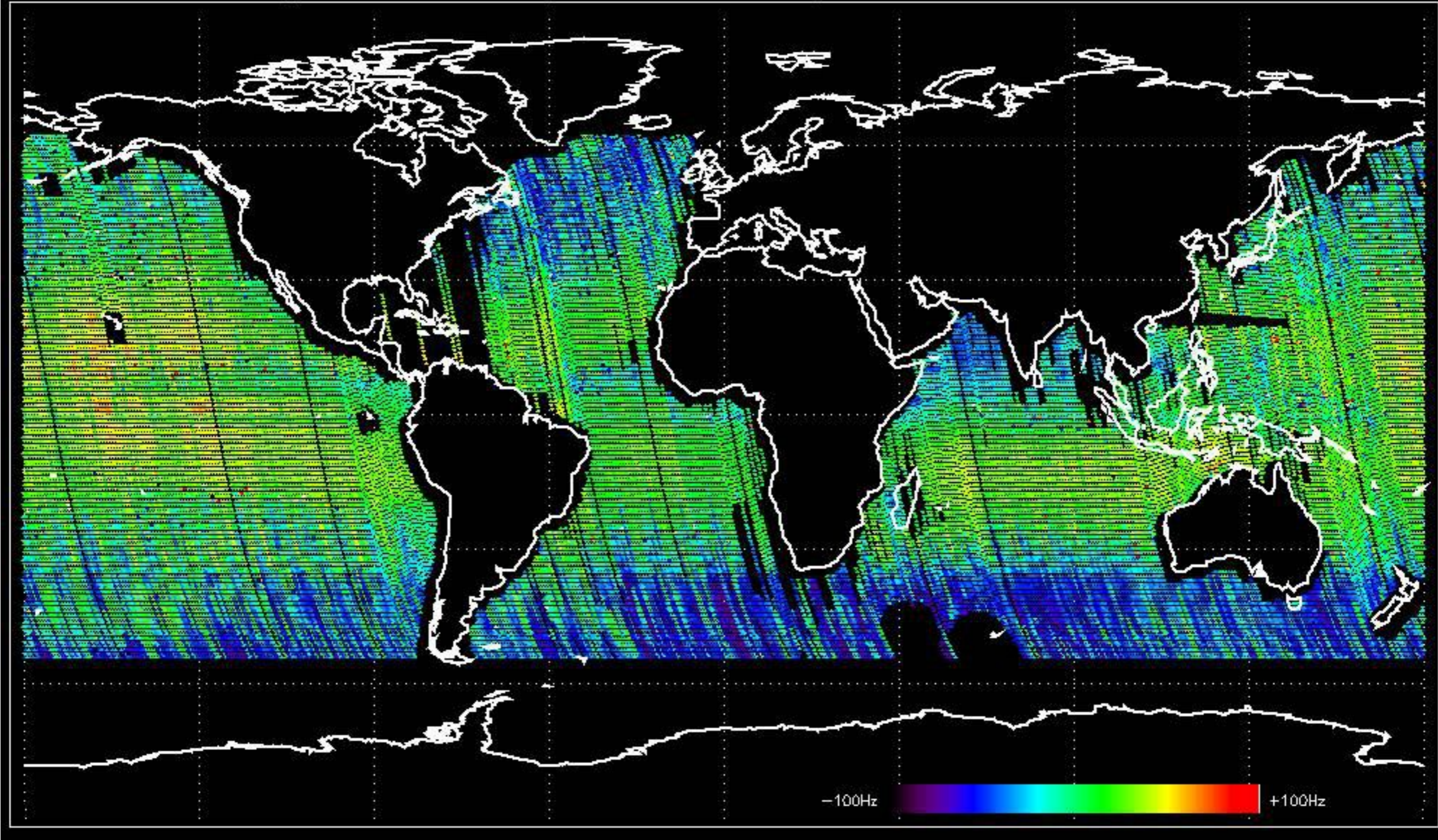
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.487210 Hz



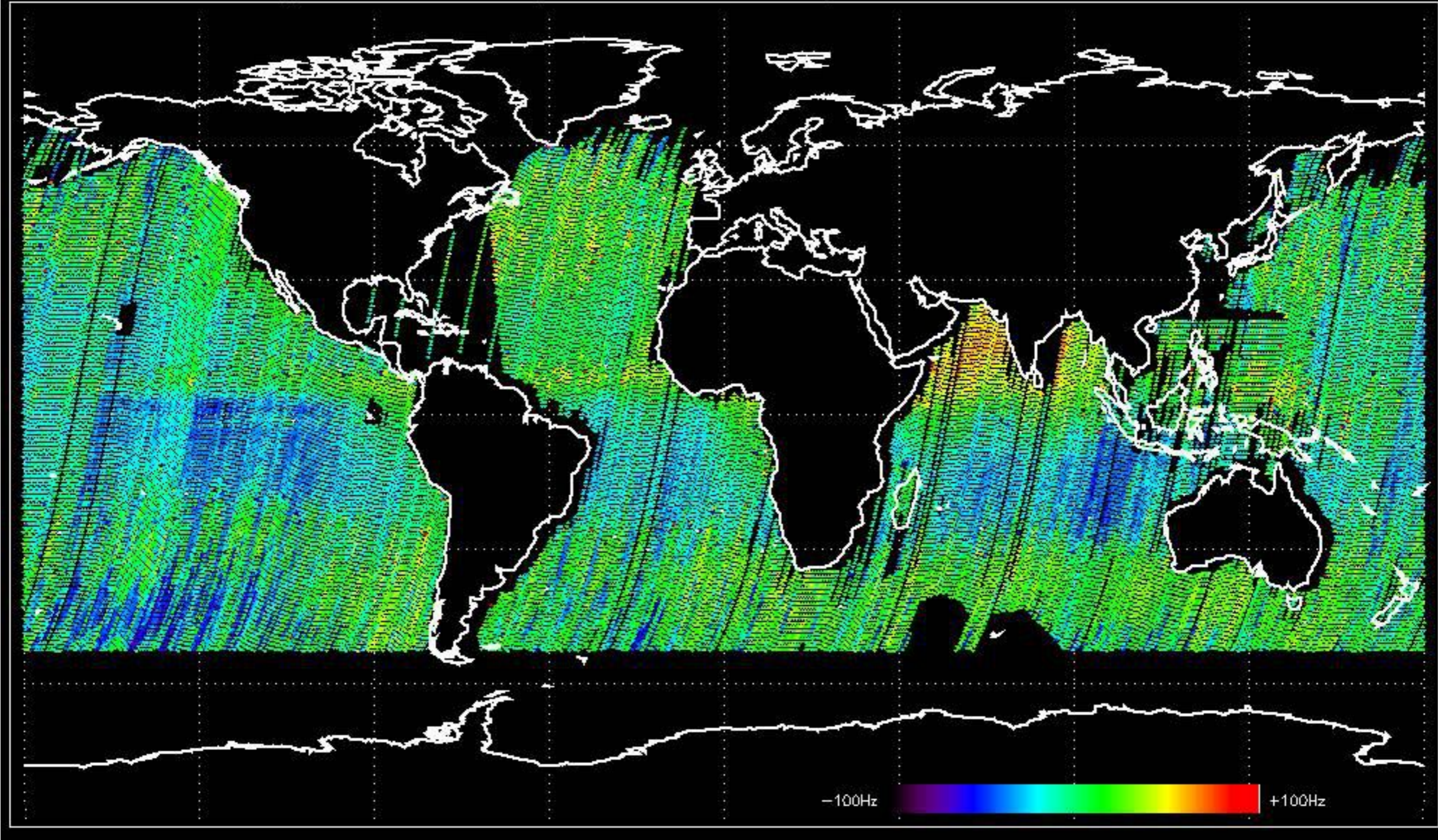
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.248108 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.730651 Hz

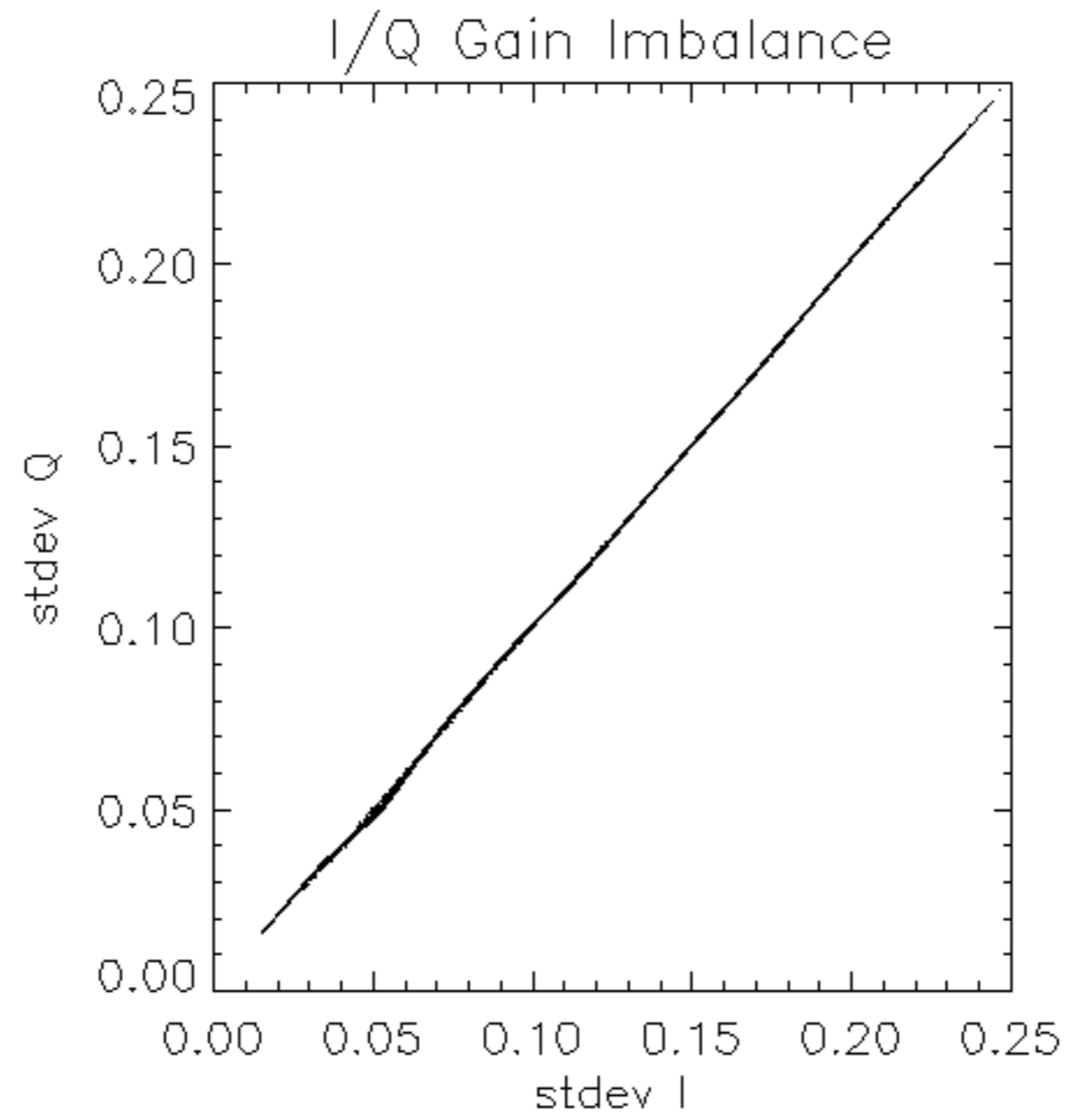


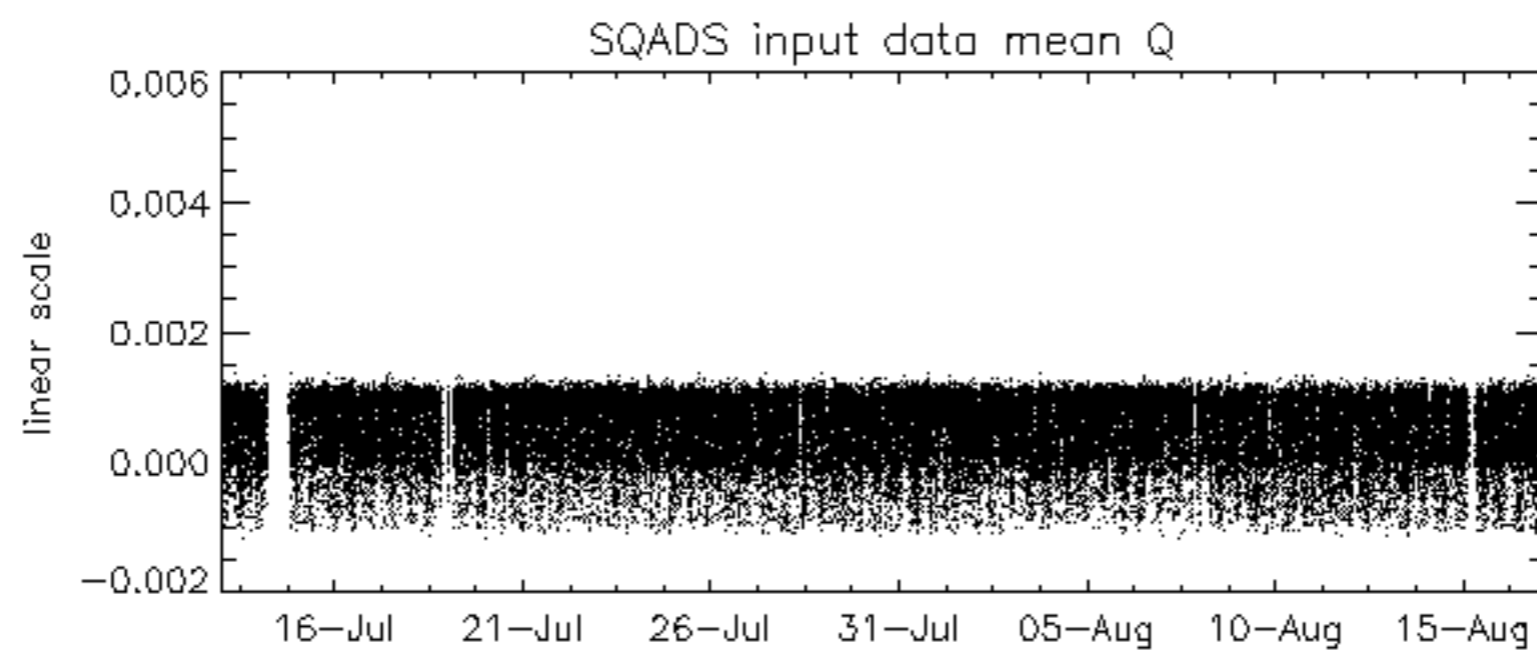
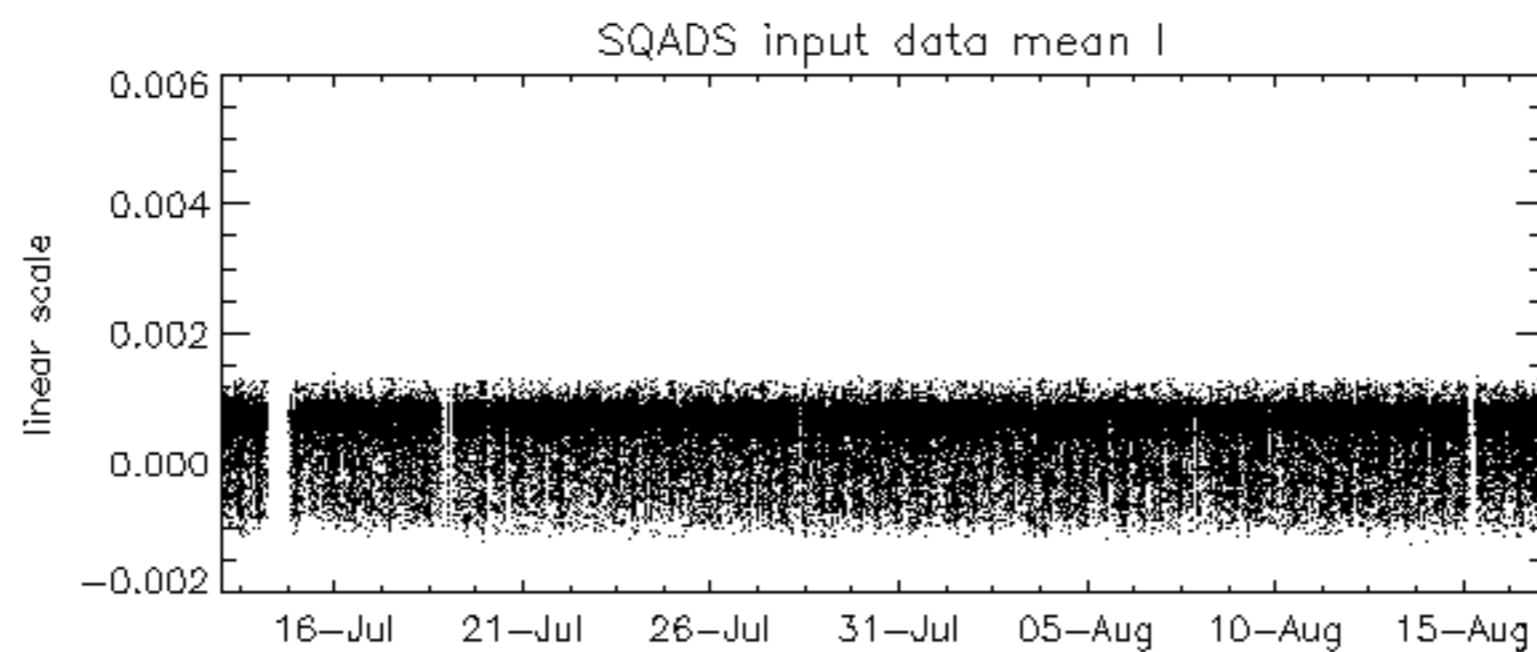
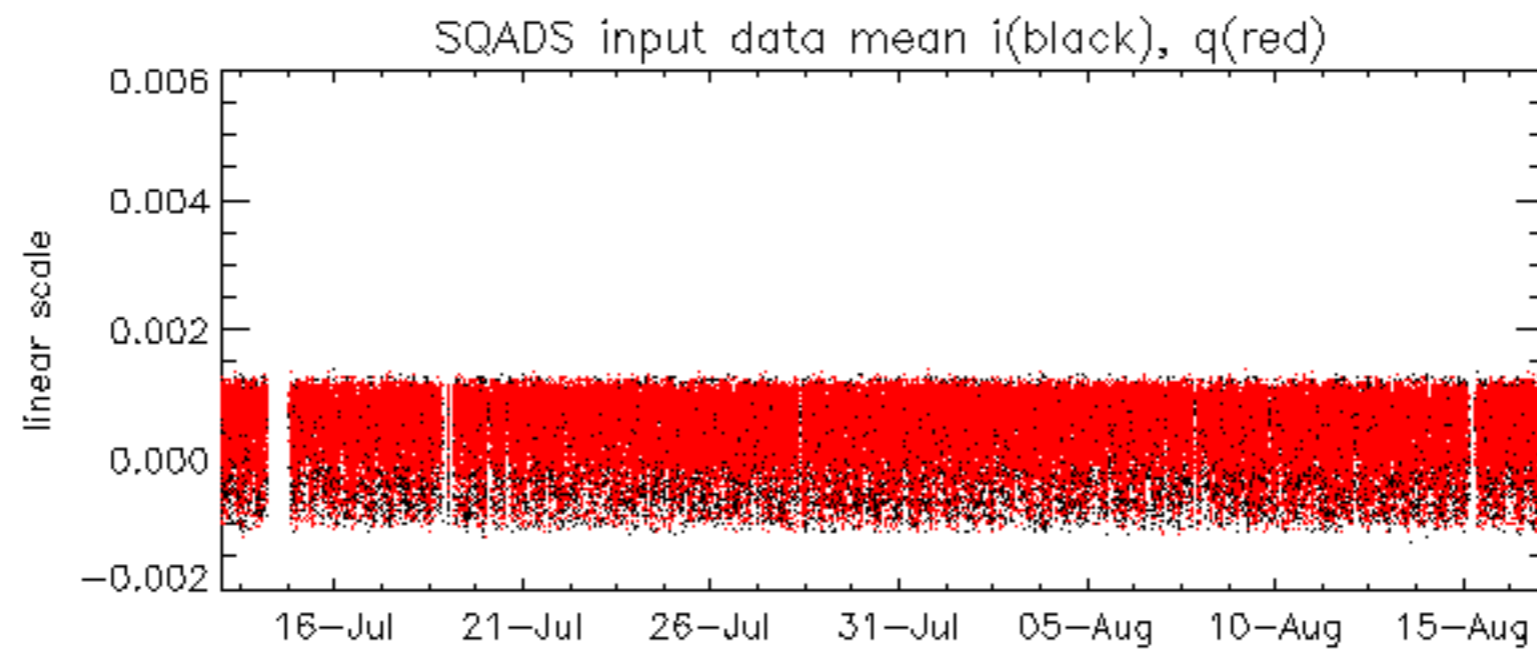
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.567364 Hz

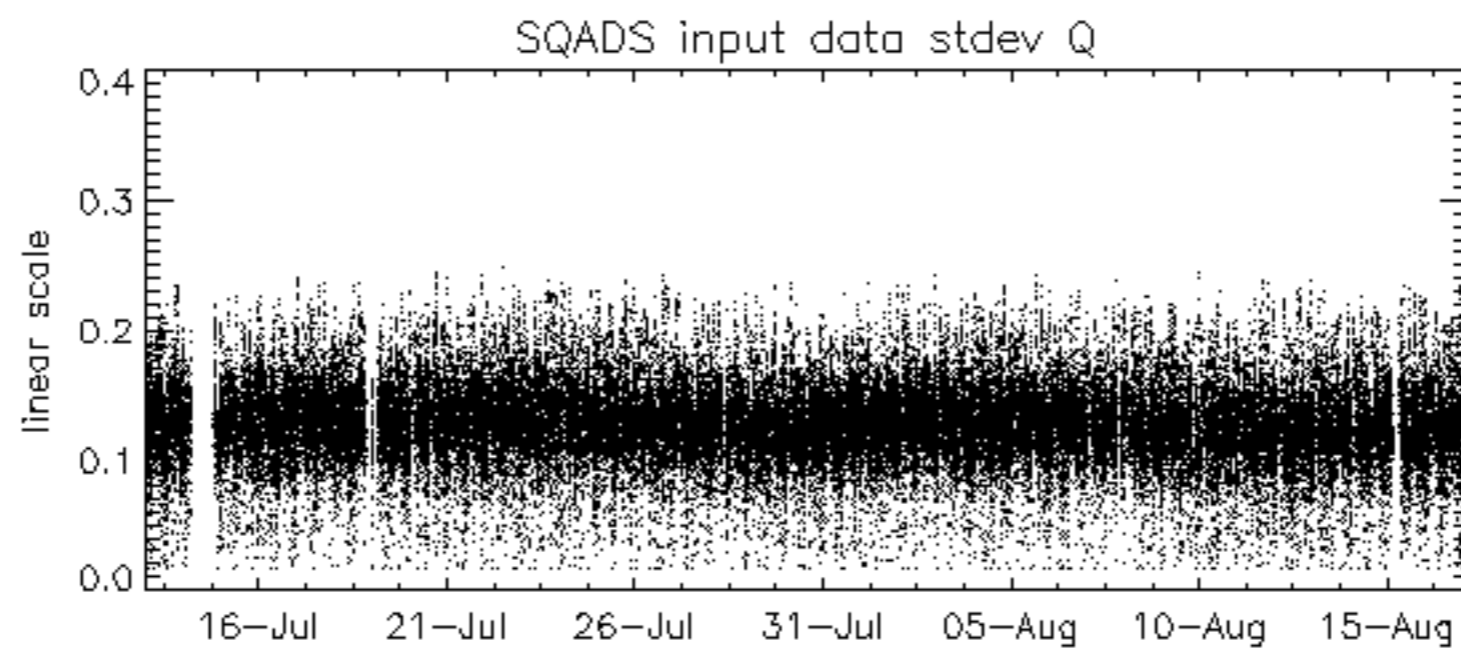
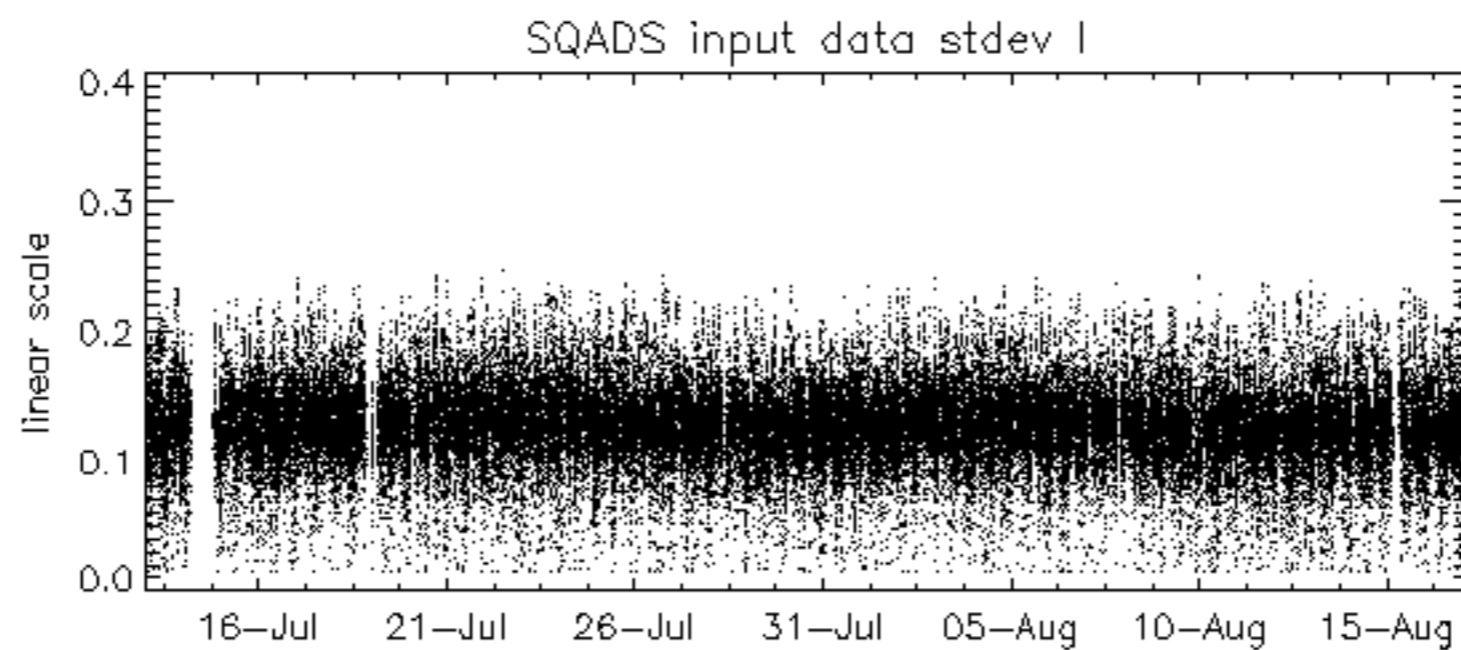
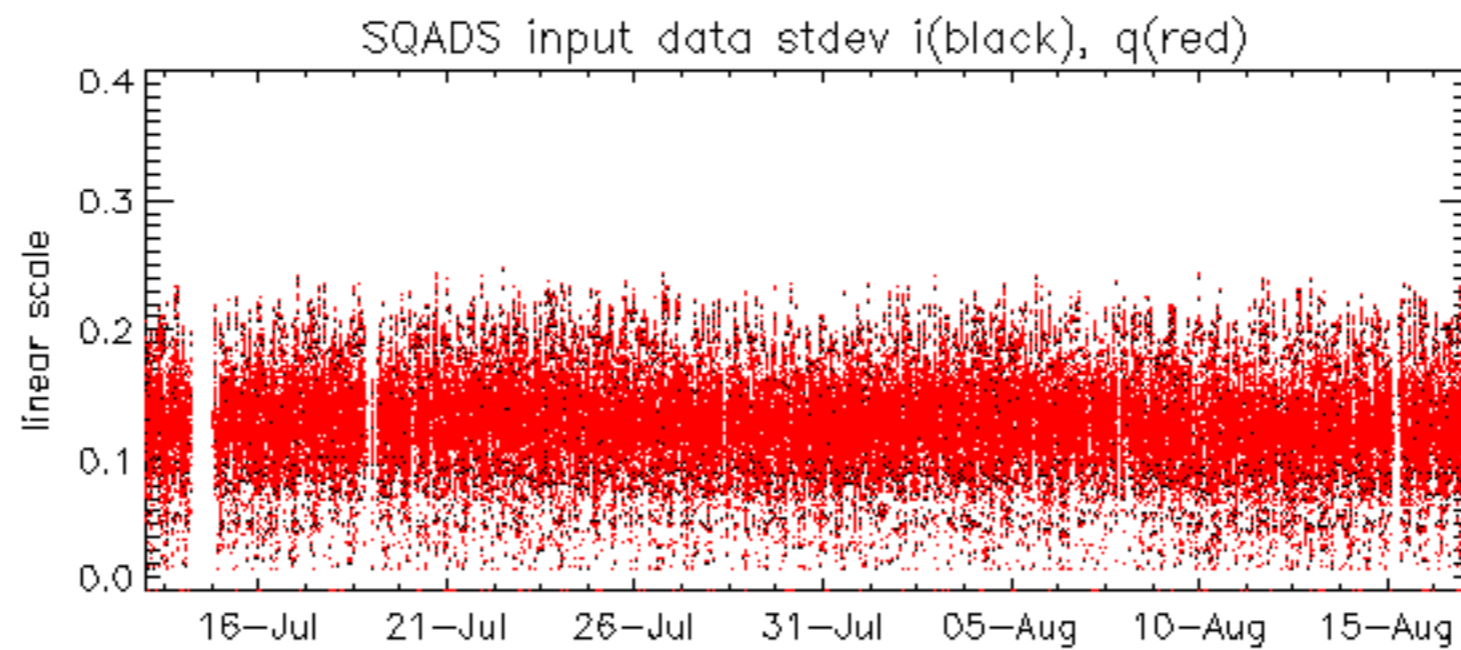


No anomalies observed on available MS products:

No anomalies observed.



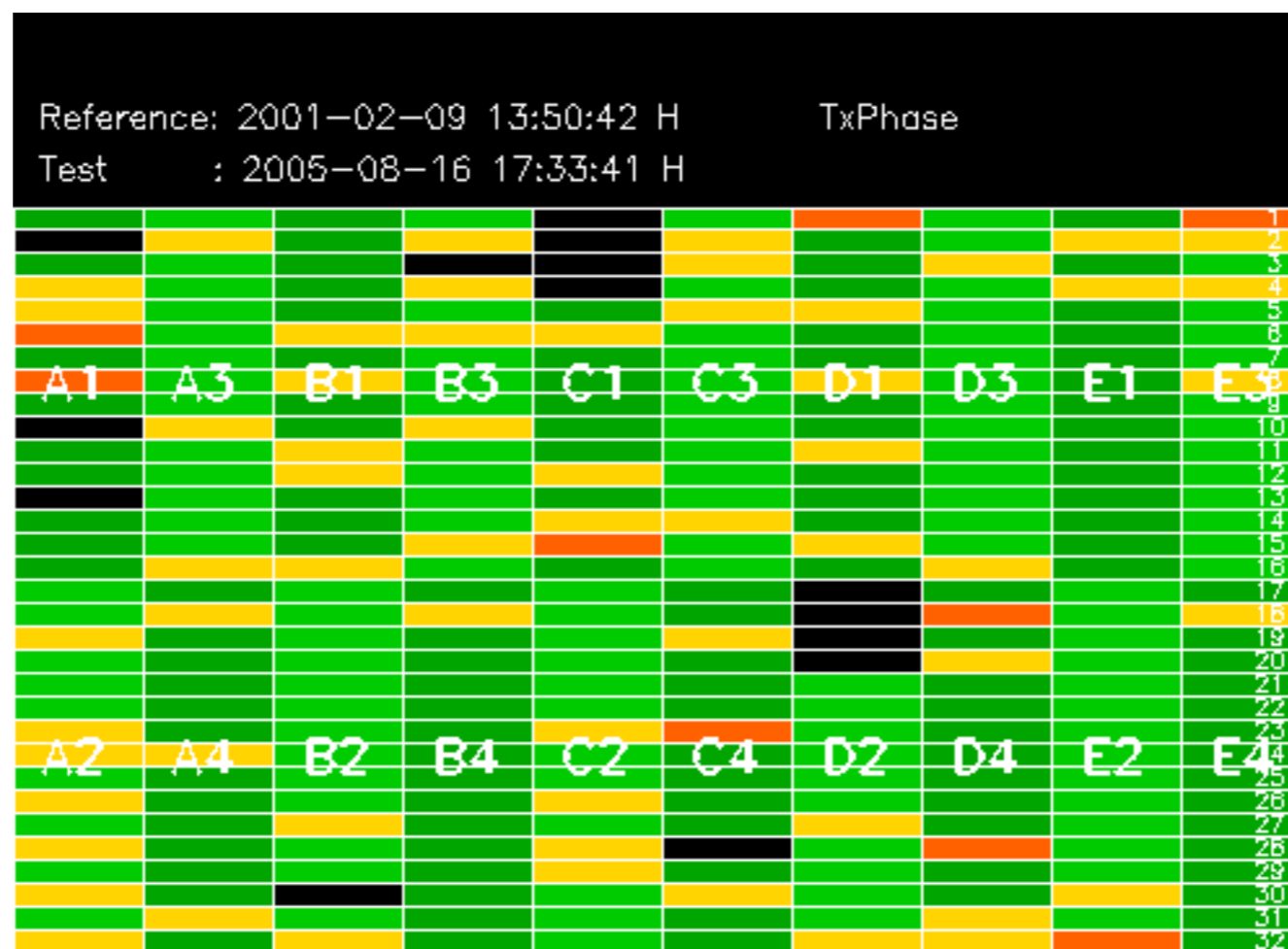


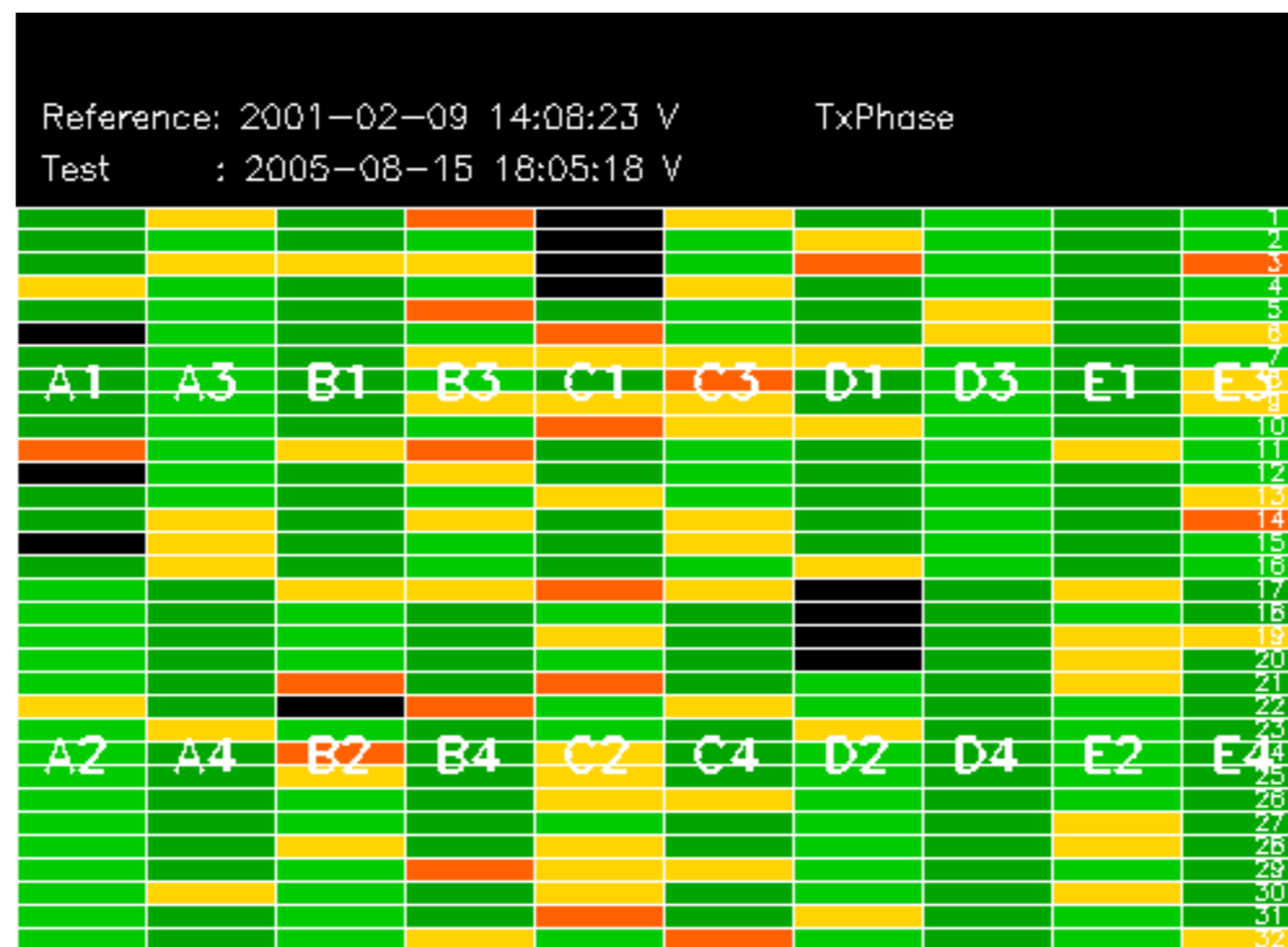


Summary of analysis for the last 3 days 2005081[567]

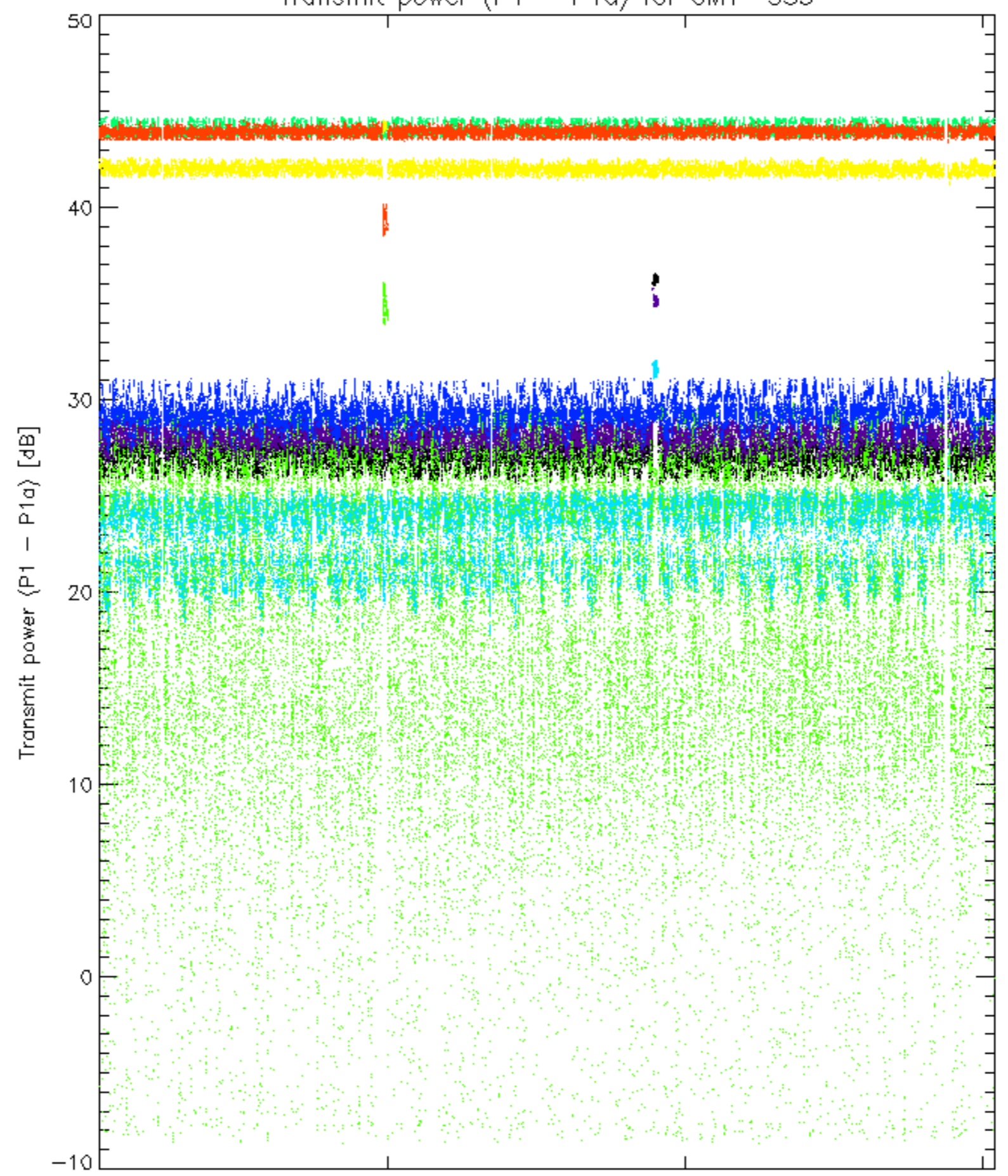
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050815_032905_000002292039_00490_18079_2564.N1	1	0
ASA_IMM_1PNPDE20050816_153613_000000372040_00011_18101_2662.N1	1	0
ASA_GM1_1PNPDE20050816_215256_000004472040_00015_18105_2053.N1	0	14
ASA_WSM_1PNPDE20050815_165908_000000912039_00499_18088_4602.N1	0	2
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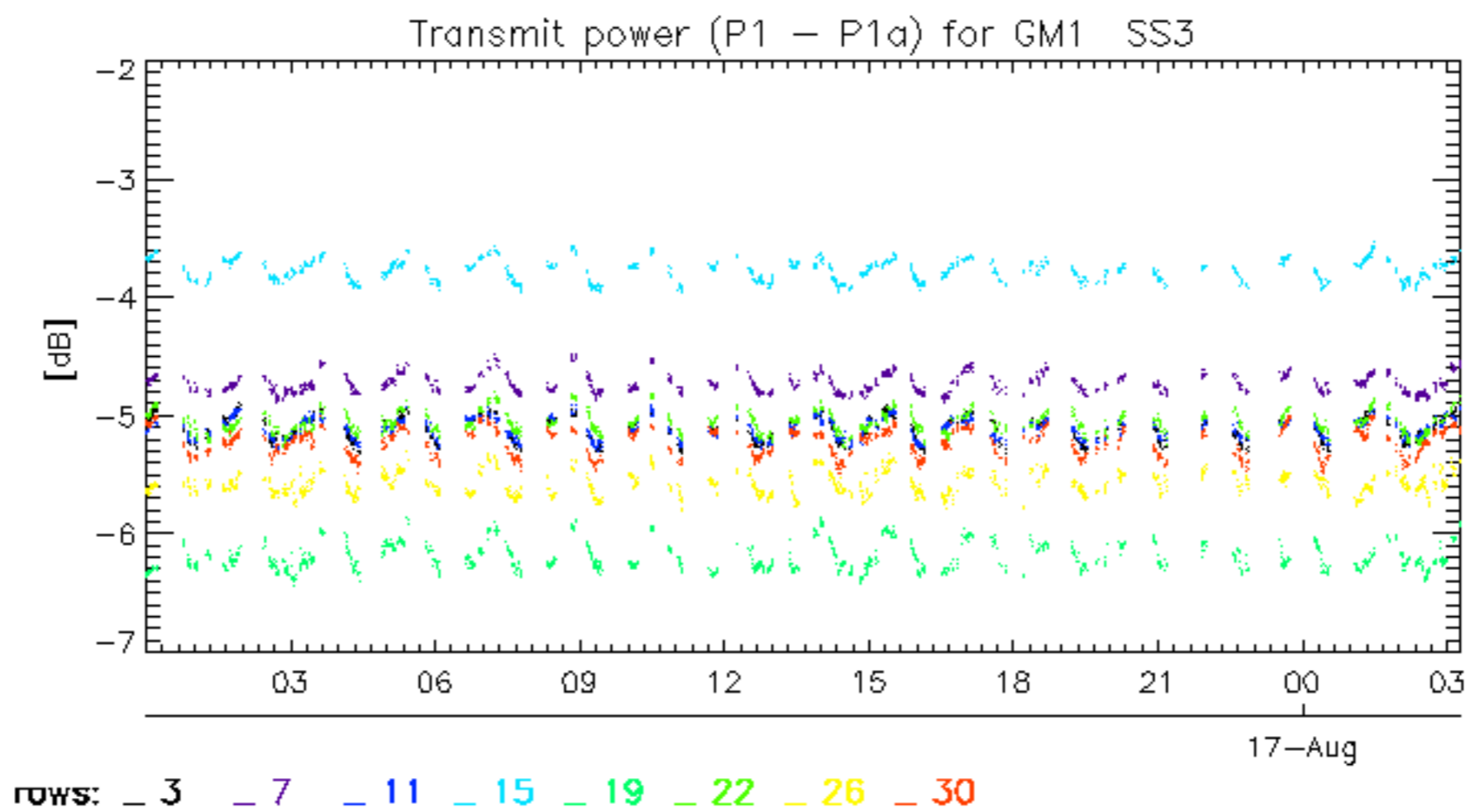


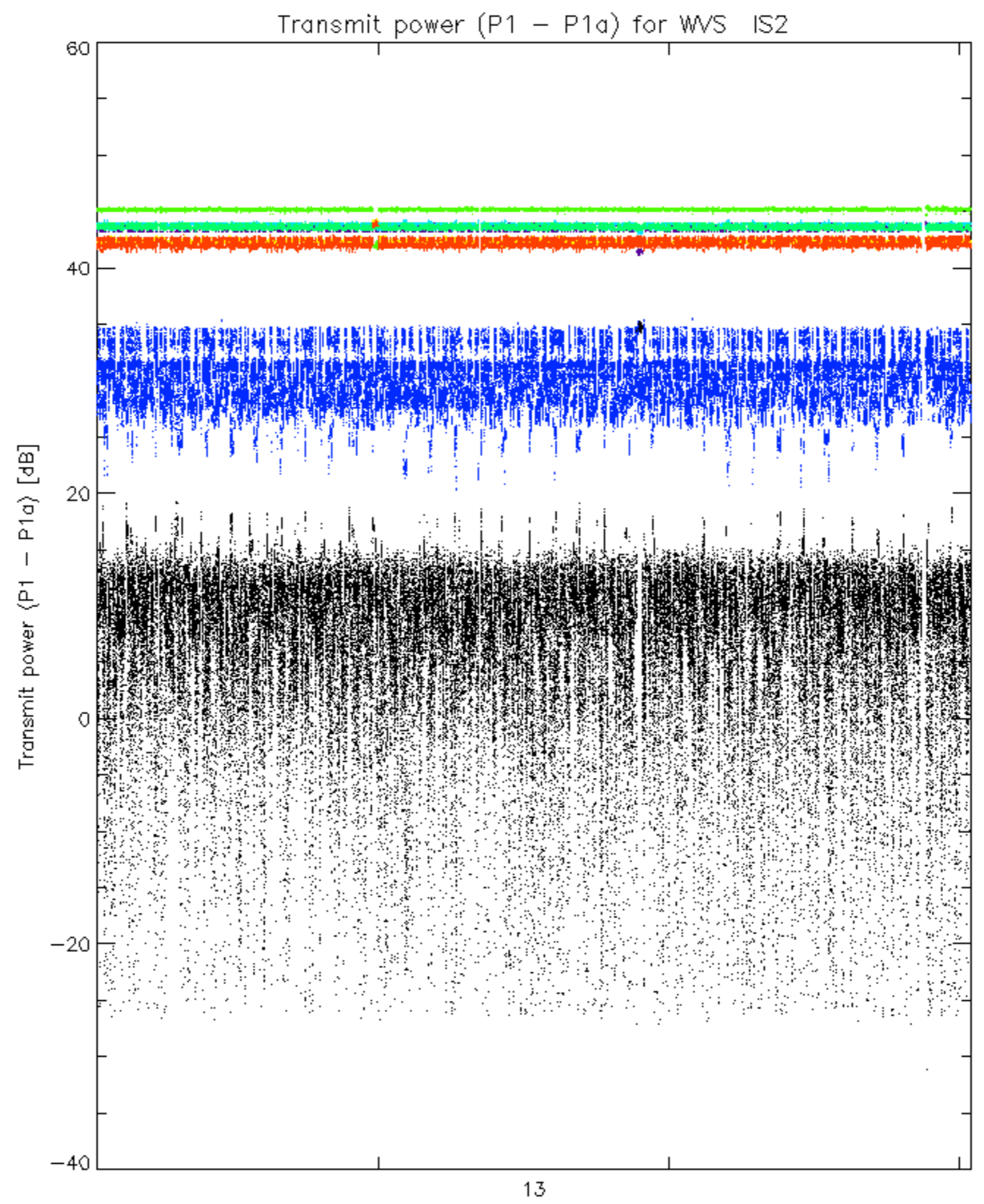


Transmit power (P1 - P1a) for GM1 SS3

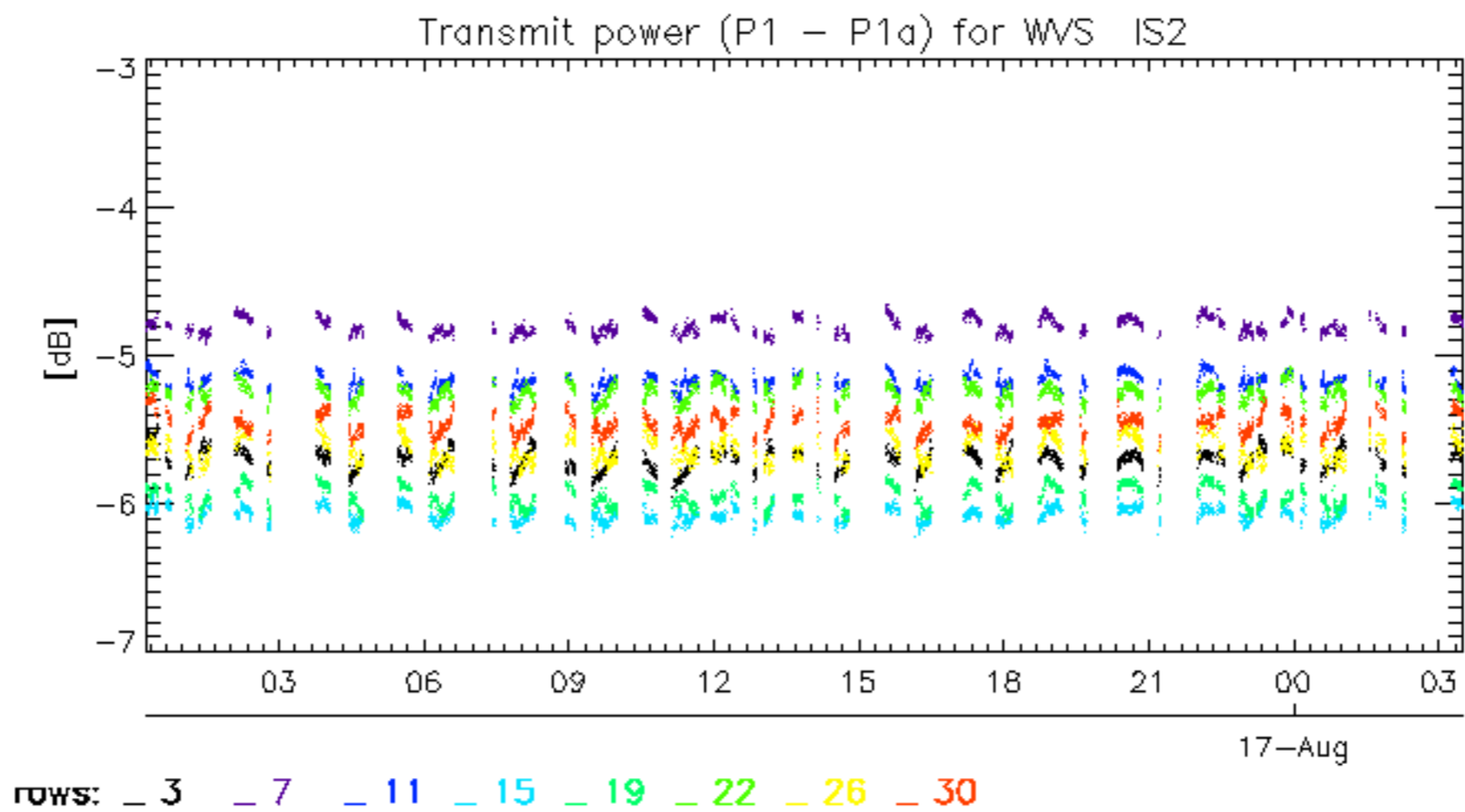


rows: 3 7 11 15 19 22 26 30





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



No unavailabilities during the reported period.