

PRELIMINARY REPORT OF 060824

last update on Thu Aug 24 16:41:54 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 2006-08-23 00:00:00 to 2006-08-24 16:41:54

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	79	10	7	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	37	79	10	7	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	79	10	7	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	79	10	7	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	54	31	21	94
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	46	54	31	21	94
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	54	31	21	94
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	54	31	21	94

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	20060823 073841
H	20060824 070704

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
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
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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	-3.943720	0.009854	0.003396
7	P1	-3.083437	0.051325	0.098944
11	P1	-4.088754	0.063047	0.030286
15	P1	-6.201052	0.093487	-0.025791
19	P1	-3.450679	0.010080	-0.083702
22	P1	-4.568024	0.009892	-0.024104
26	P1	-3.922569	0.019907	-0.018051
30	P1	-5.766186	0.009975	-0.010050
3	P1	-16.538803	0.257276	0.009716
7	P1	-16.871595	0.649395	1.301768
11	P1	-16.879118	0.298380	0.235328
15	P1	-13.004455	0.161260	0.145593
19	P1	-14.512132	0.055152	-0.064388
22	P1	-15.914221	0.463054	0.198959
26	P1	-15.139636	0.221168	-0.128433
30	P1	-17.054255	0.318335	0.135549

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.886723	0.083756	0.098165
7	P2	-21.866140	0.099352	0.015960
11	P2	-15.757983	0.114722	0.043701
15	P2	-7.106603	0.096740	0.034490
19	P2	-9.118442	0.090146	0.014624
22	P2	-18.140947	0.084355	0.021744
26	P2	-16.399319	0.090504	-0.001921
30	P2	-19.487921	0.090339	0.044365

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172623	0.003466	-0.002288
7	P3	-8.172623	0.003466	-0.002288
11	P3	-8.172623	0.003466	-0.002288
15	P3	-8.172623	0.003466	-0.002288
19	P3	-8.172623	0.003466	-0.002288
22	P3	-8.172623	0.003466	-0.002288
26	P3	-8.172667	0.003464	-0.002410
30	P3	-8.172667	0.003464	-0.002410

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.830662	0.021559	-0.011618
7	P1	-2.498069	0.286846	0.401347
11	P1	-2.893474	0.142412	-0.033430
15	P1	-3.641764	0.148939	-0.092493
19	P1	-3.428916	0.025423	-0.001516
22	P1	-5.089101	0.020679	-0.021414
26	P1	-5.867169	0.023560	-0.019799
30	P1	-5.192847	0.040007	0.005001
3	P1	-11.620944	0.066613	-0.007465
7	P1	-9.914964	0.188717	0.259617
11	P1	-10.285943	0.082165	-0.083026
15	P1	-10.801399	0.174475	-0.142642
19	P1	-15.549441	0.528724	0.103094
22	P1	-20.936298	1.341069	-0.129913

26	P1	-16.145020	0.407686	0.193603
30	P1	-18.006945	0.434015	-0.098018

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.491888	0.084487	0.130802
7	P2	-22.280619	0.203684	0.161436
11	P2	-10.968868	0.055286	0.149410
15	P2	-4.885299	0.043220	0.020553
19	P2	-6.860513	0.039988	0.004428
22	P2	-8.185395	0.062091	0.011209
26	P2	-24.170559	0.128827	0.009657
30	P2	-21.976412	0.078708	0.041105

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.013031	0.003688	-0.011865
7	P3	-8.012907	0.003686	-0.011714
11	P3	-8.013019	0.003688	-0.011843
15	P3	-8.013110	0.003685	-0.012126
19	P3	-8.013041	0.003699	-0.012008
22	P3	-8.013183	0.003676	-0.011972
26	P3	-8.012977	0.003673	-0.011815
30	P3	-8.012930	0.003684	-0.011632

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	0.000553907
	stdev	1.77085e-07
MEAN Q	mean	0.000530559
	stdev	2.16140e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136711
	stdev	0.00108174
STDEV Q	mean	0.137061
	stdev	0.00109832



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006082[234]

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_1PNPDE20060822_010019_000000812050_00303_23403_4134.N1	1	0
ASA_IMM_1PNPDE20060823_232215_000000502050_00331_23431_4292.N1	0	2
ASA_WSM_1PNPDE20060824_014431_000000982050_00332_23432_9170.N1	0	23





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

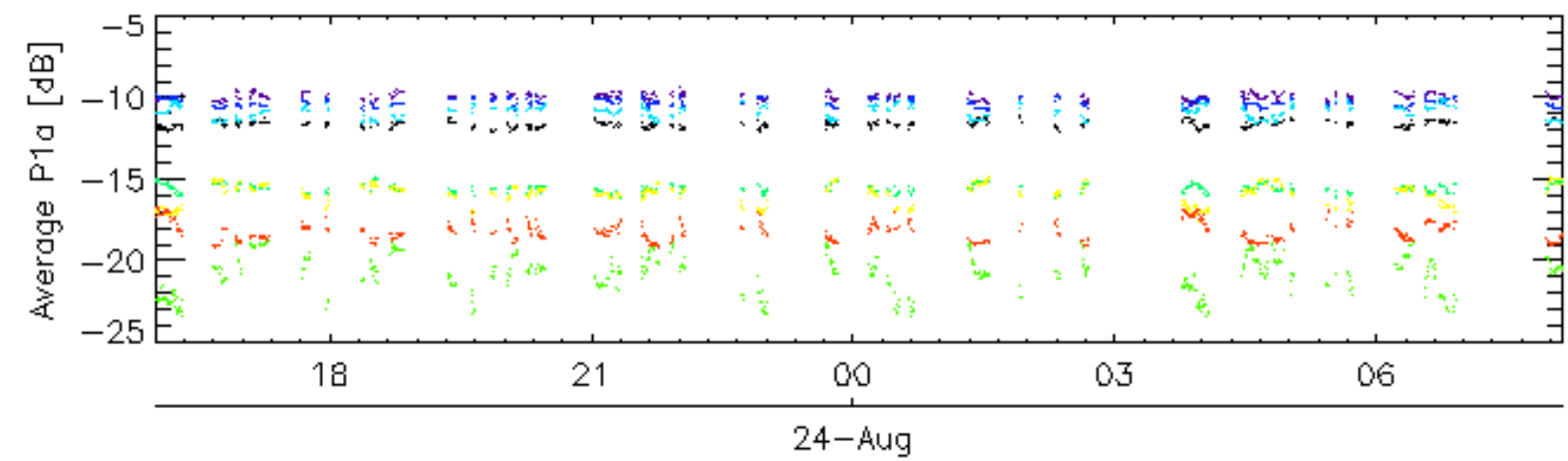
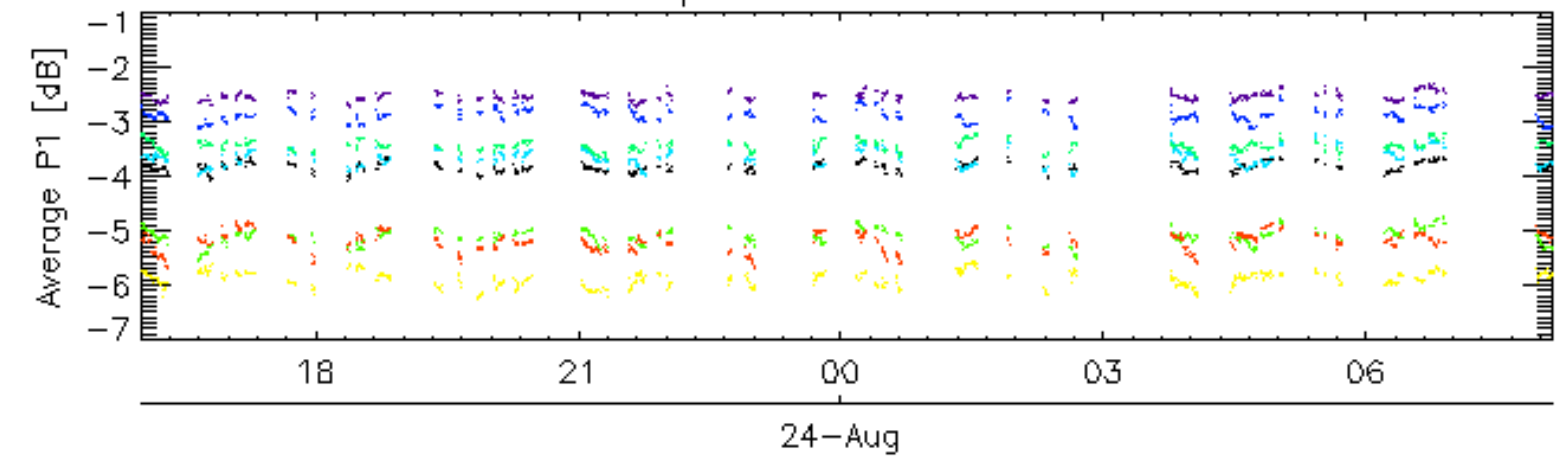
7.5 - Absolute Doppler for GM1

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

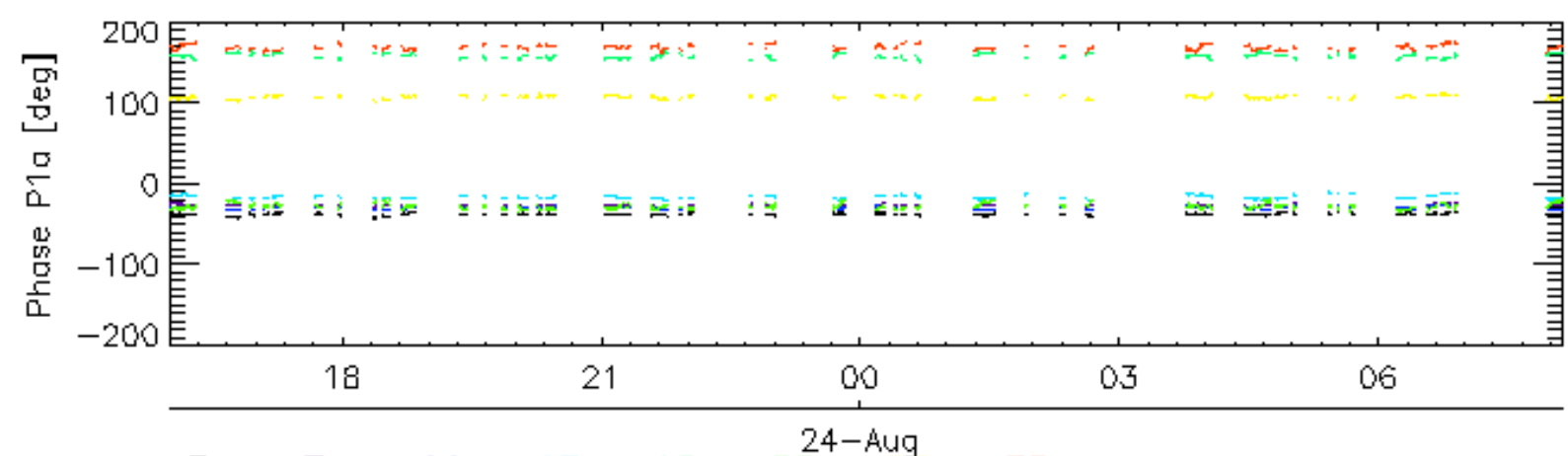
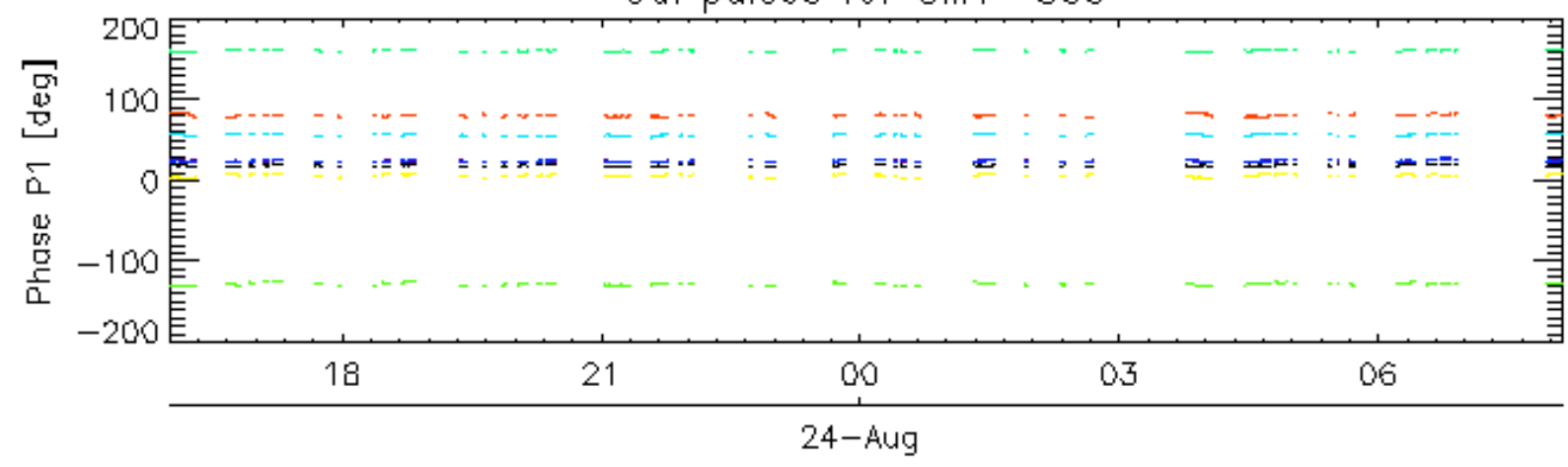
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

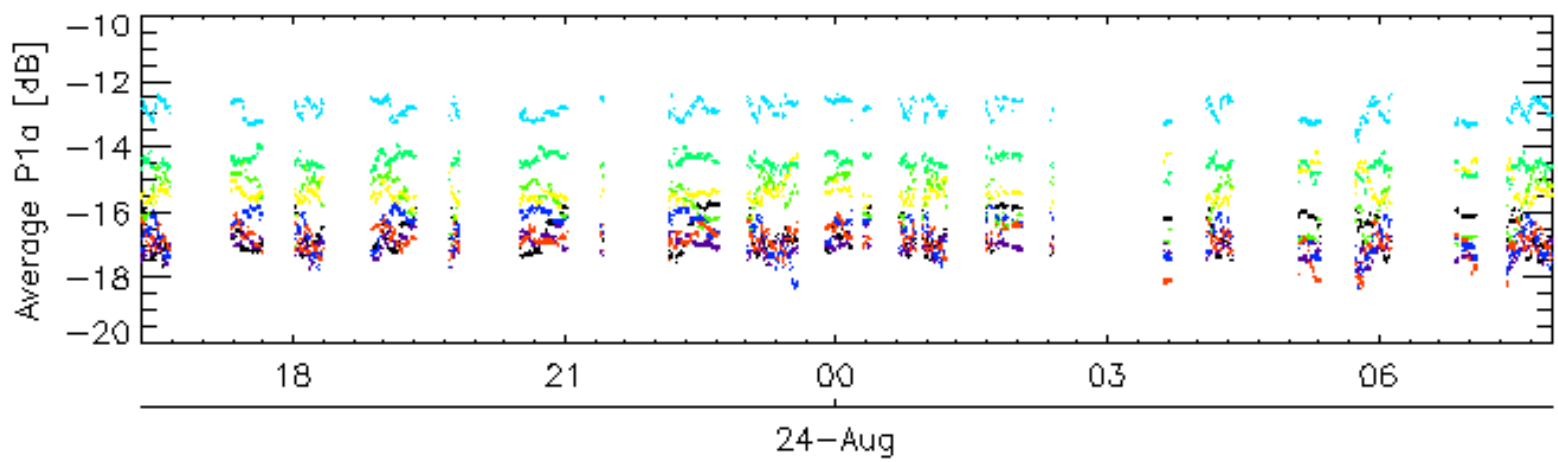
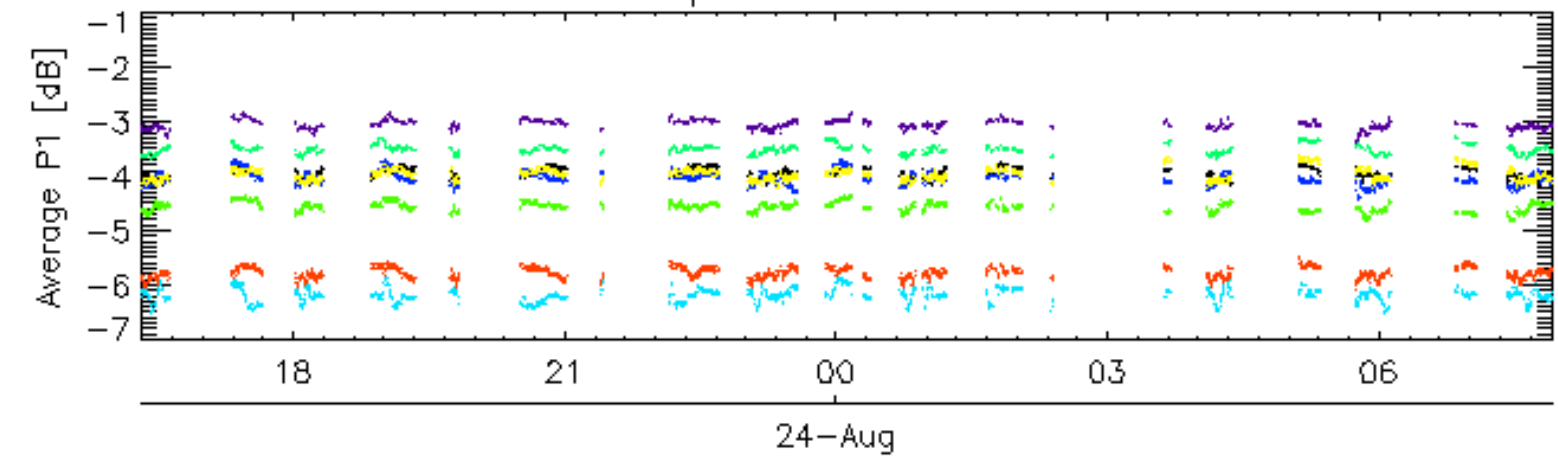


Cal pulses for GM1 SS3

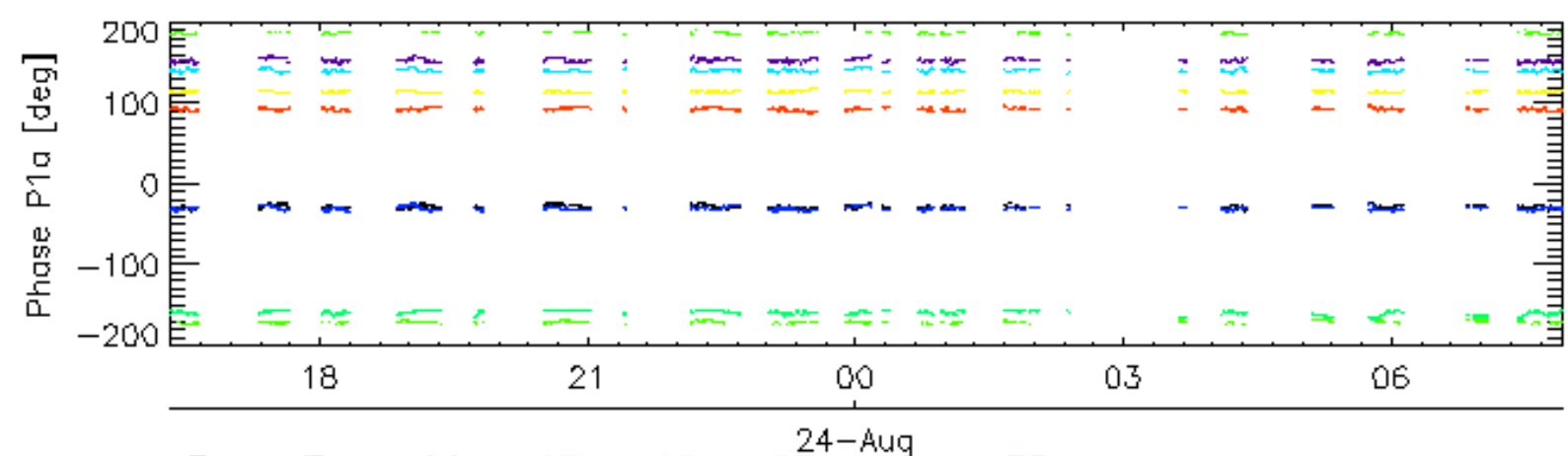
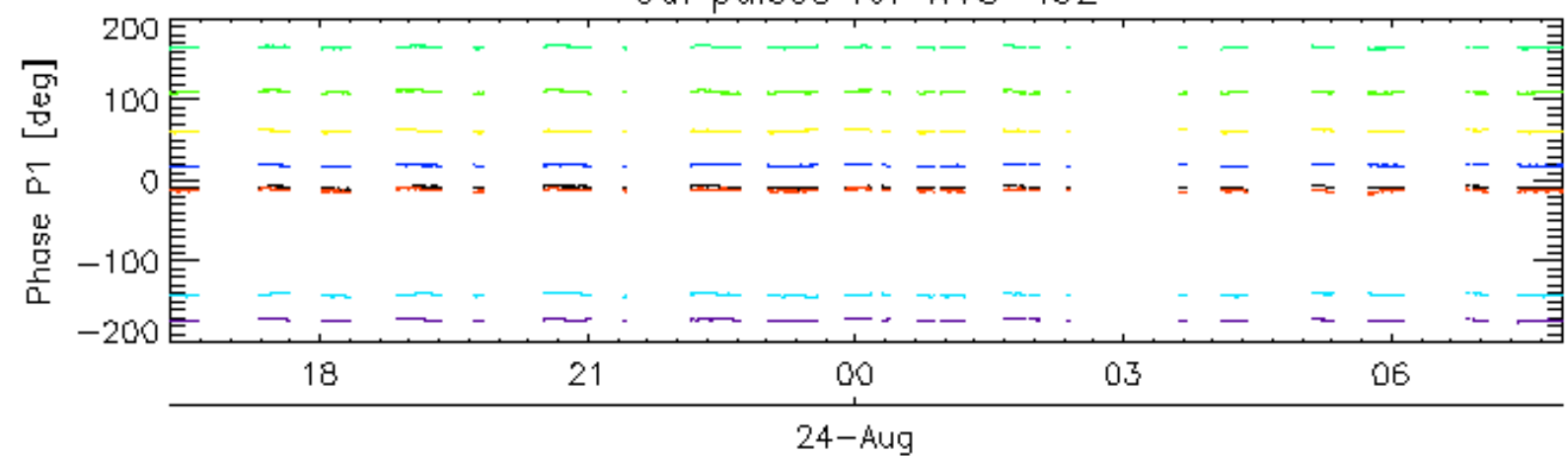


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

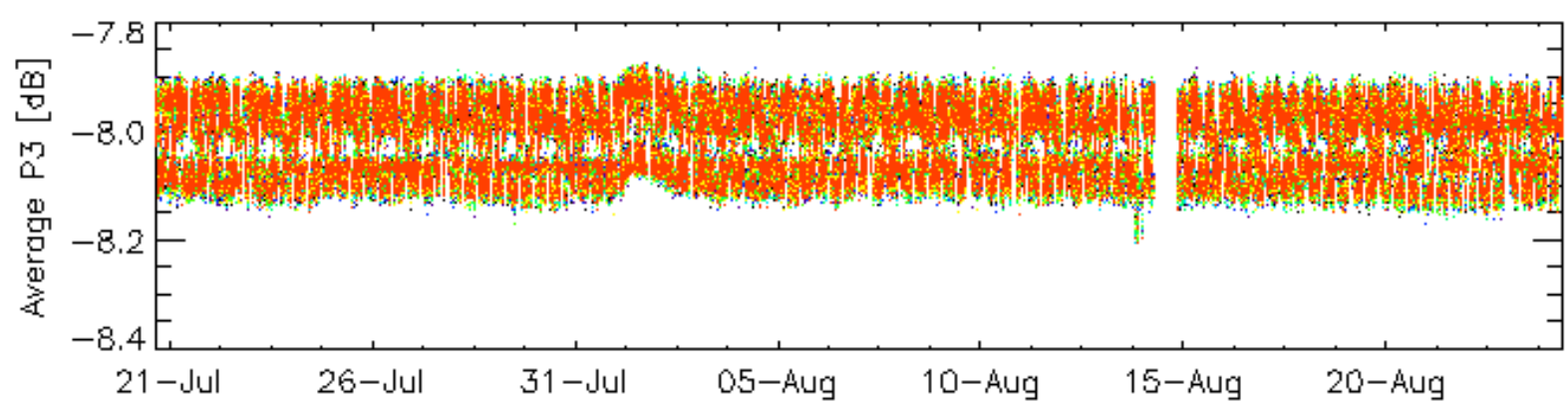
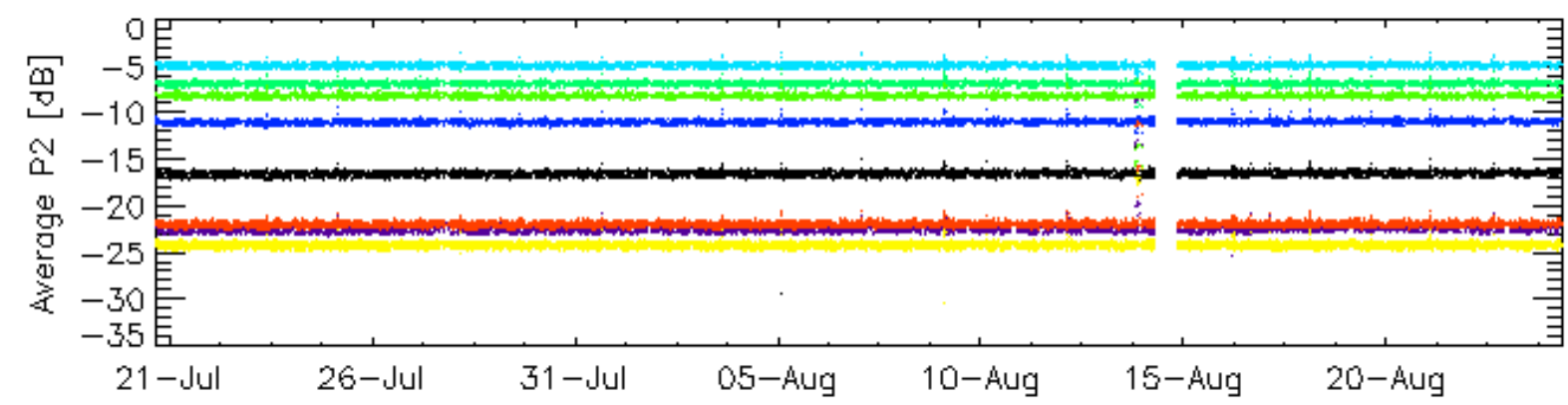
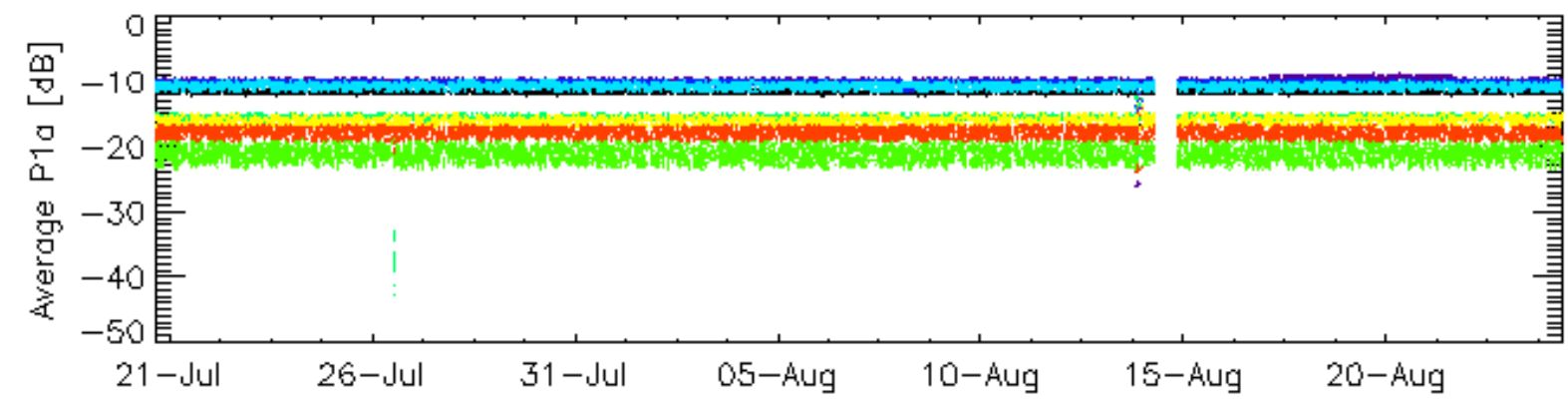
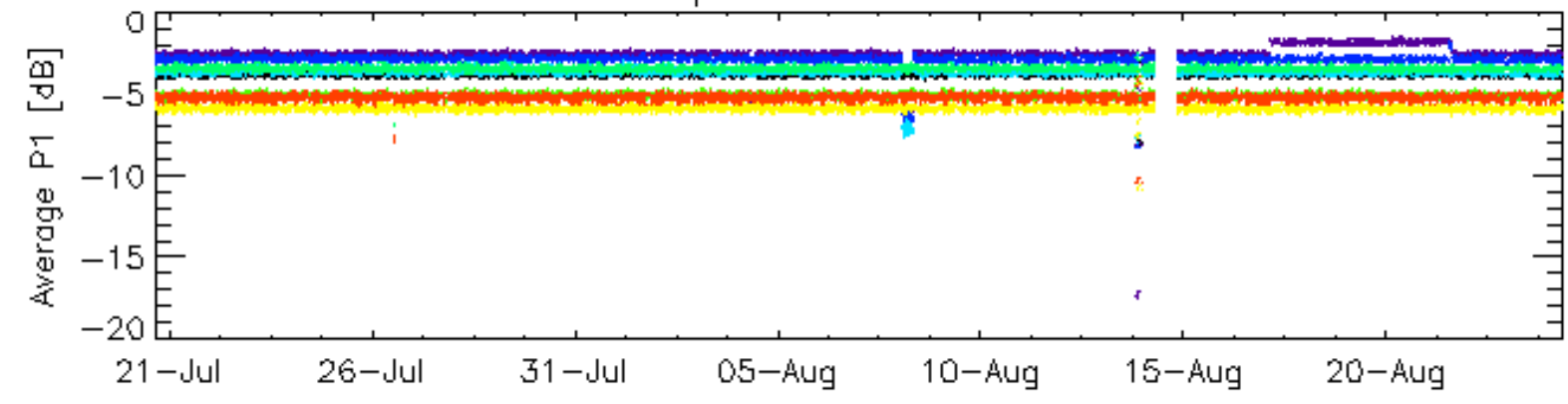


Cal pulses for WVS IS2



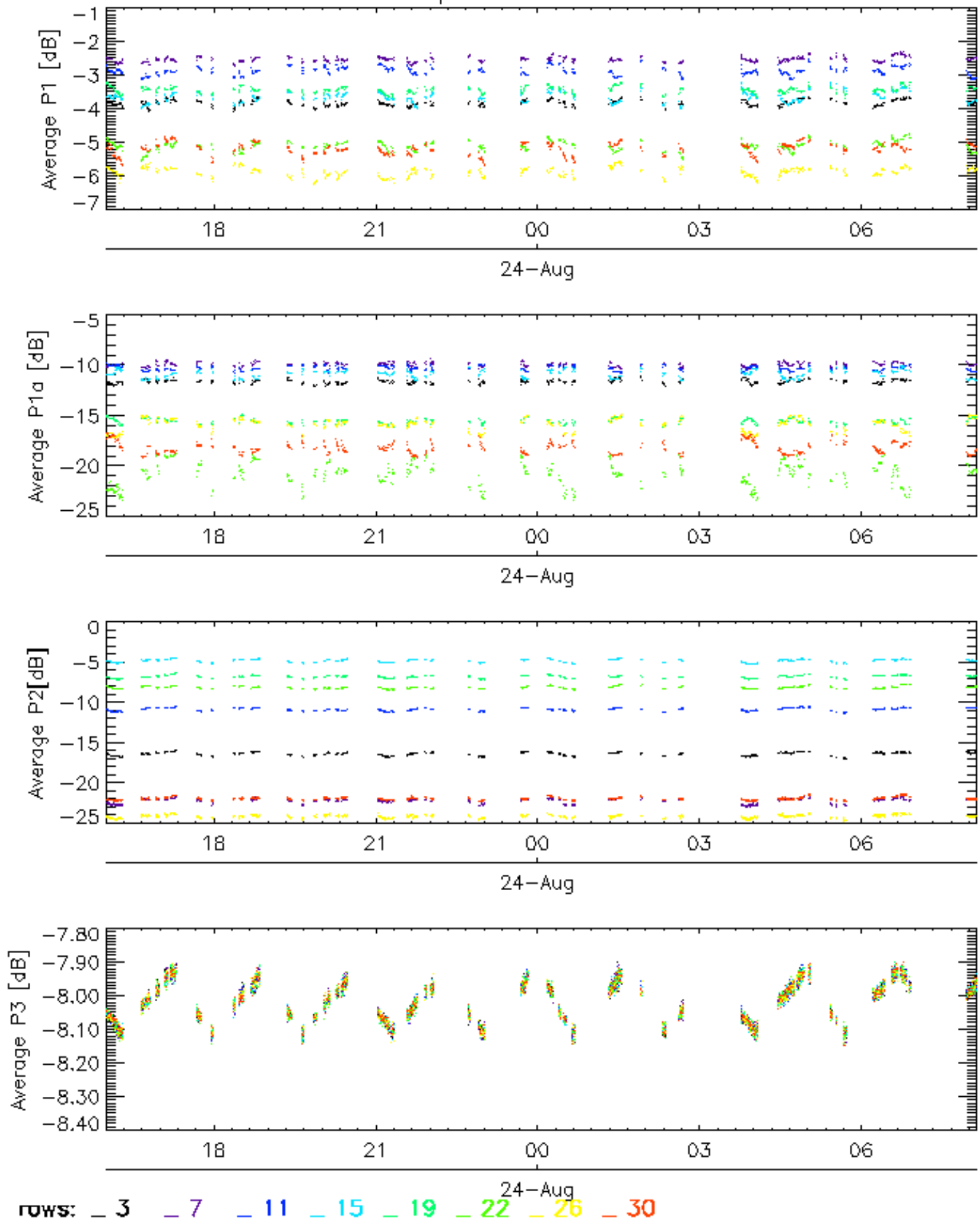
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

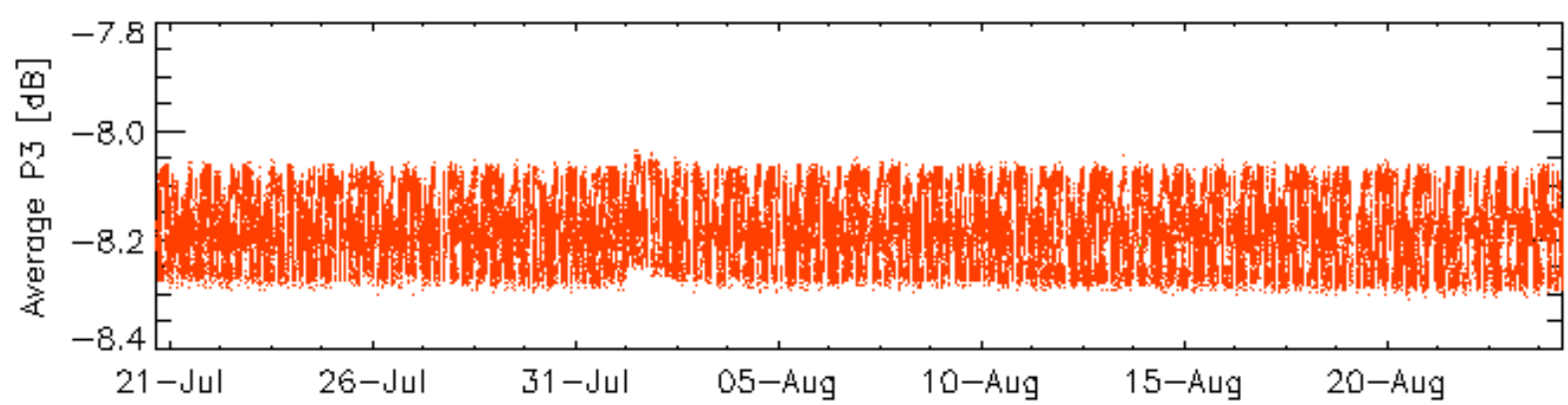
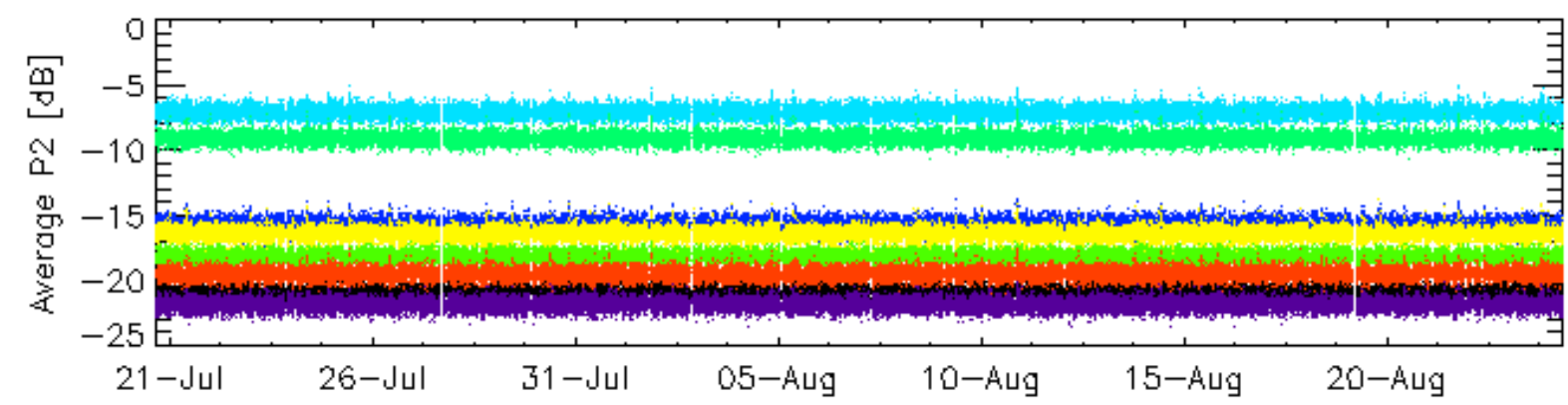
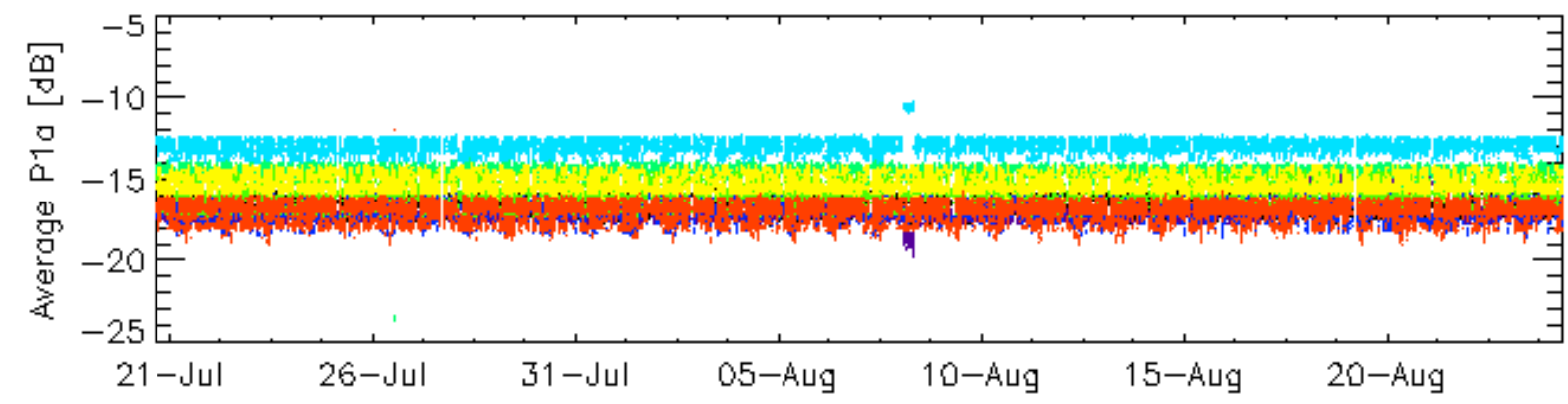
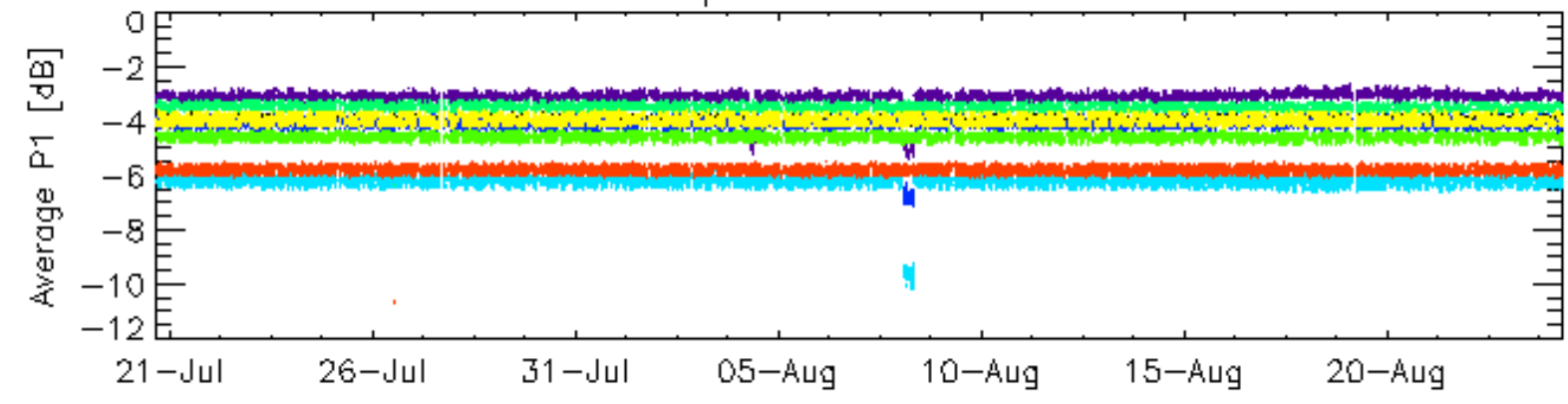


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

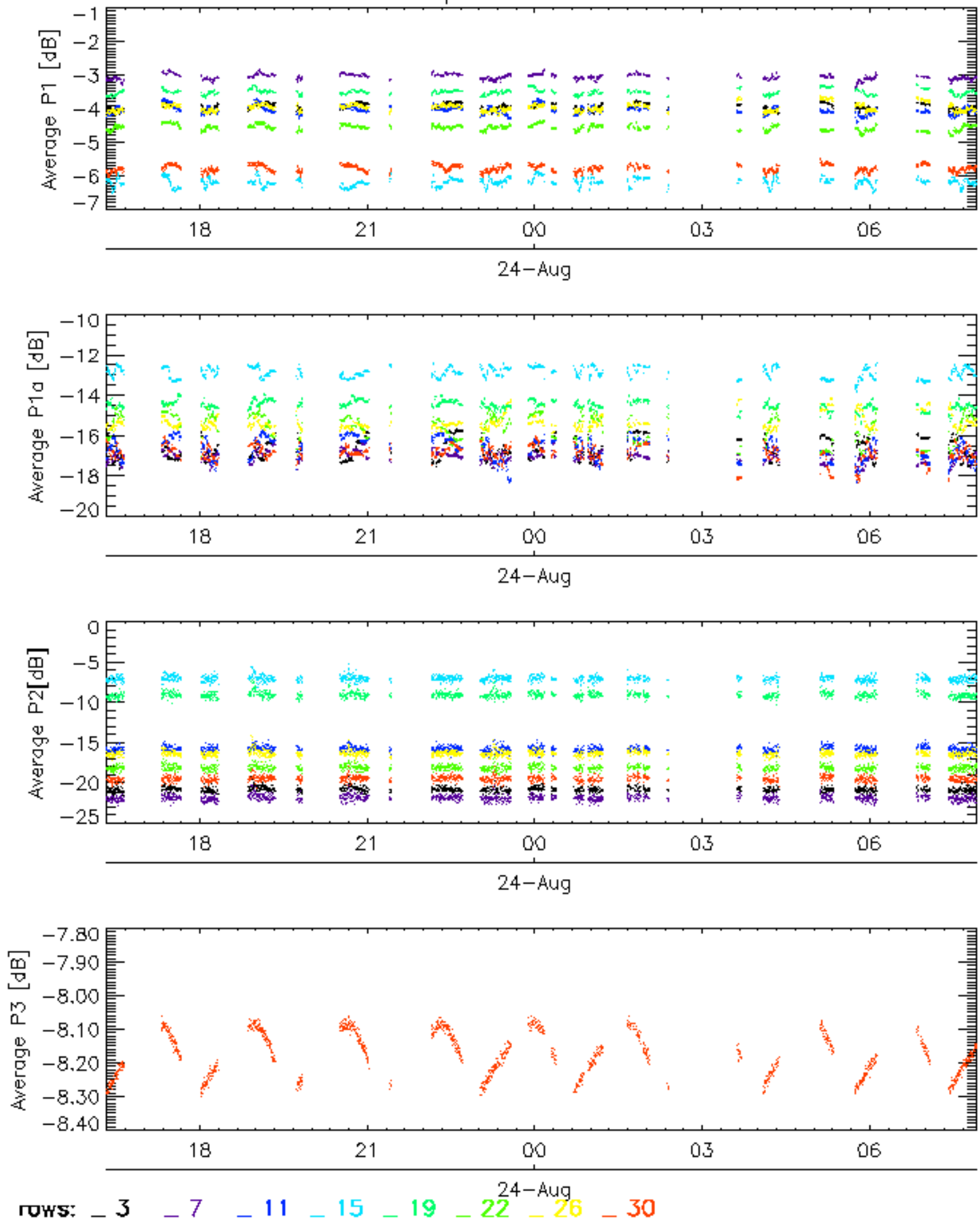


Cal pulses for WVS IS2



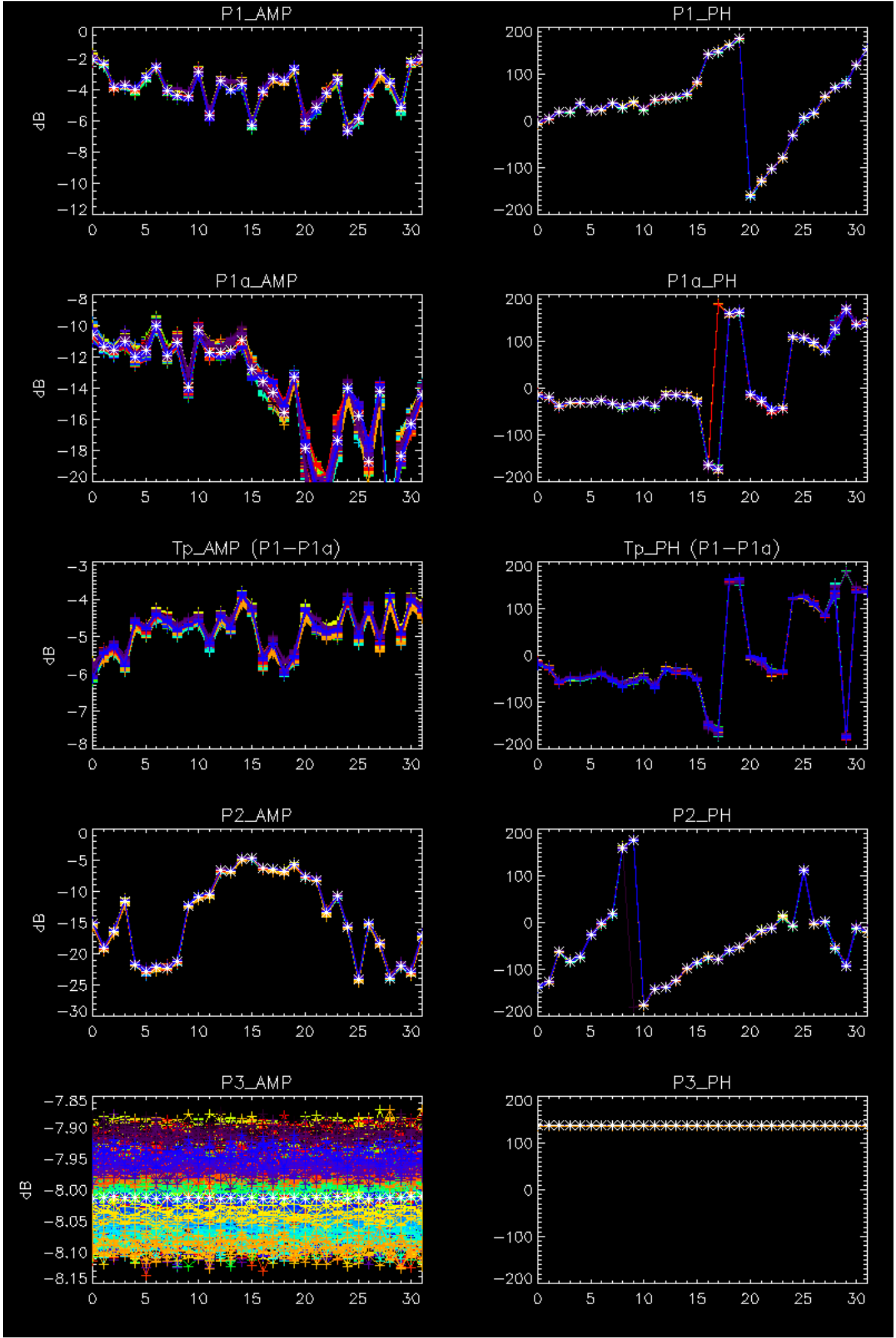
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

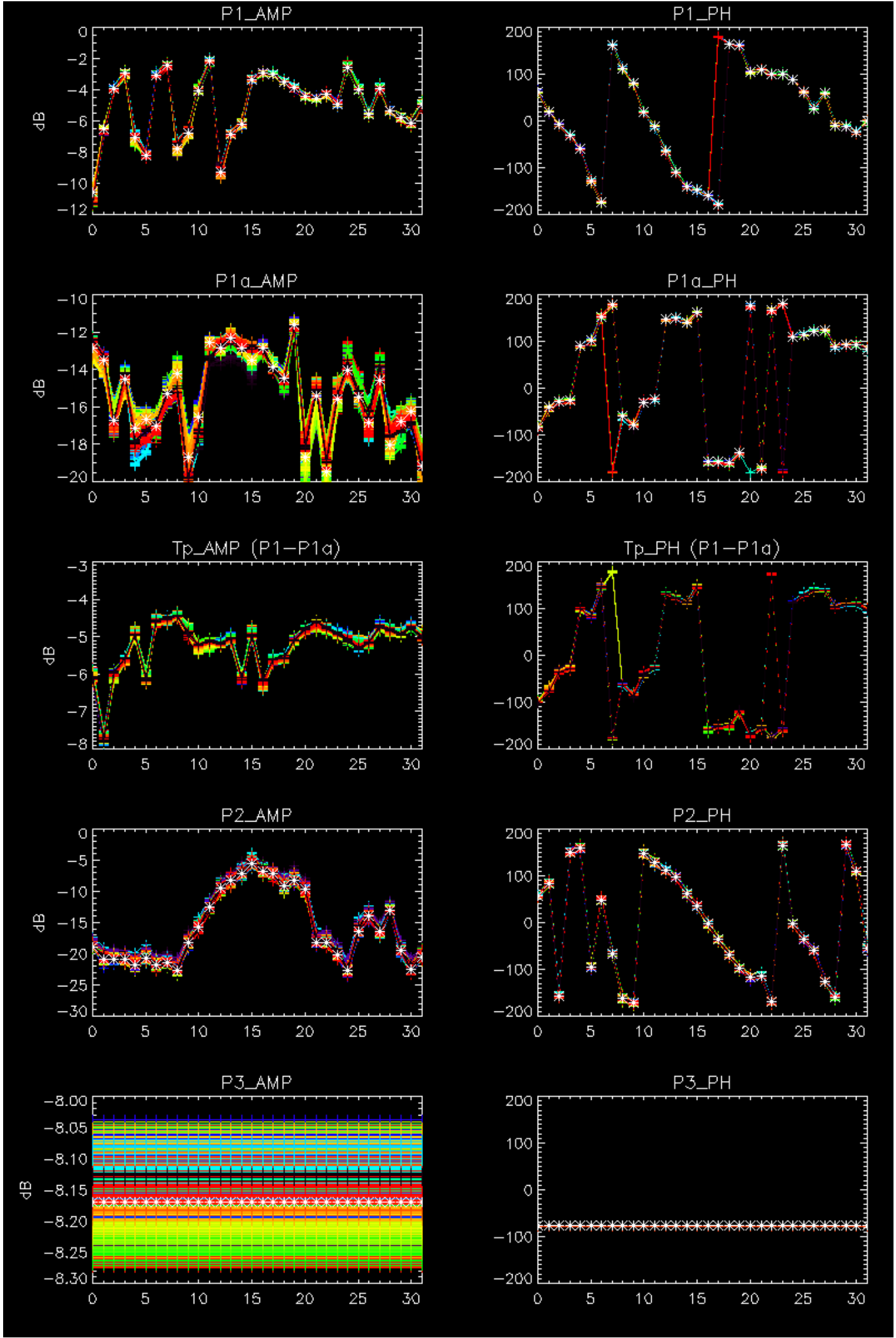
Cal pulses for WVS IS2



No anomalies observed on available browse products

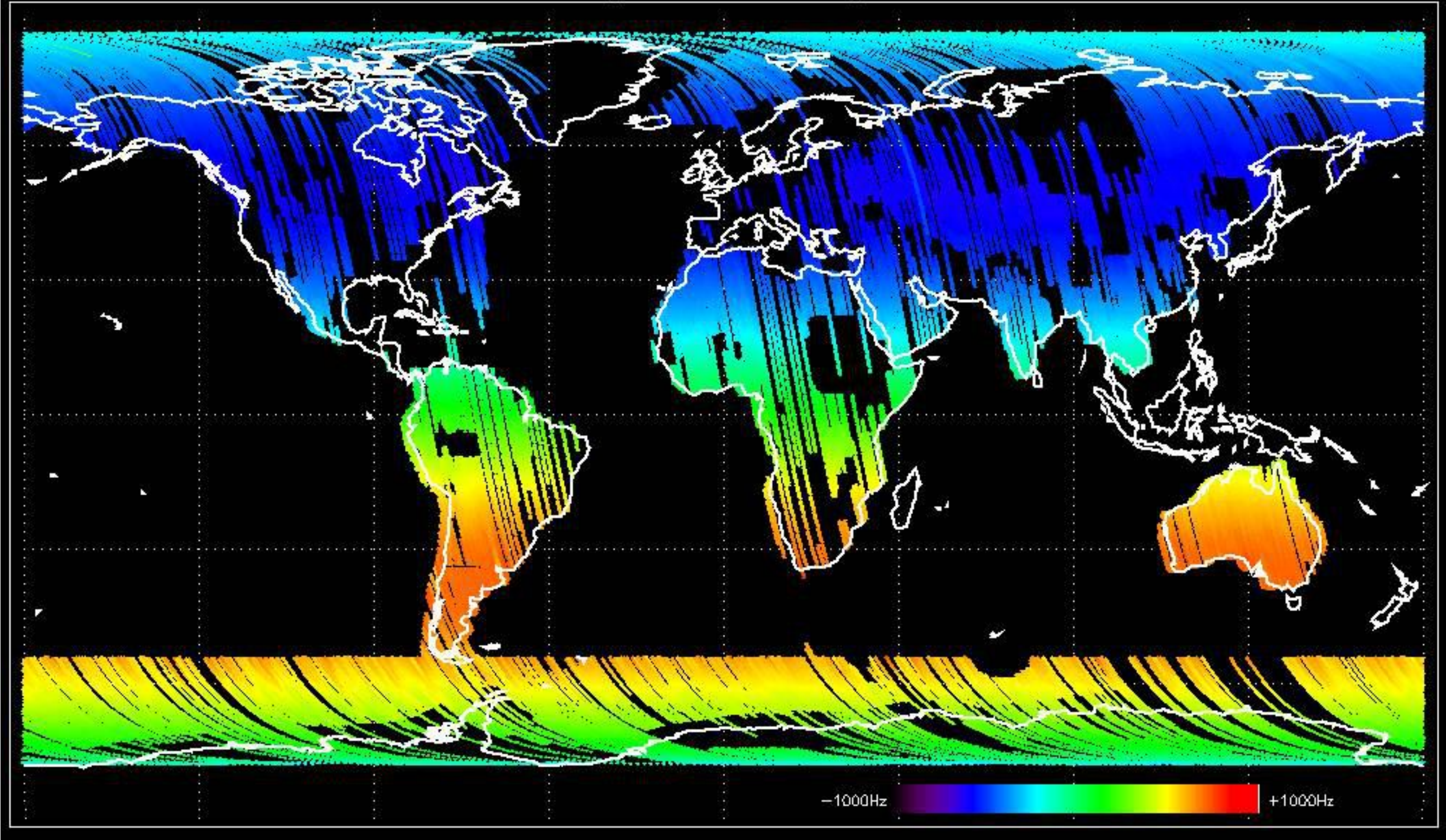
No anomalies observed.



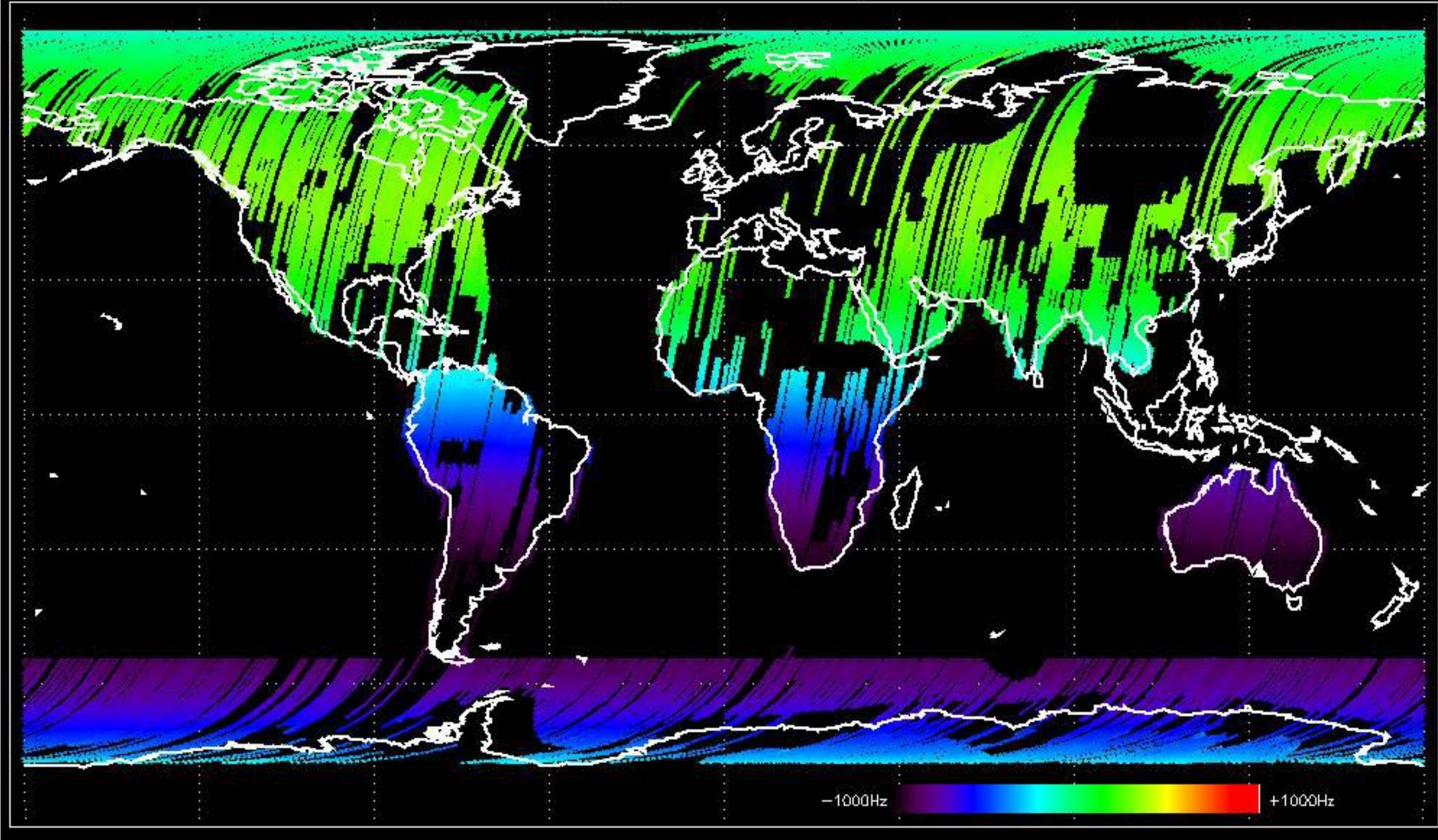


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

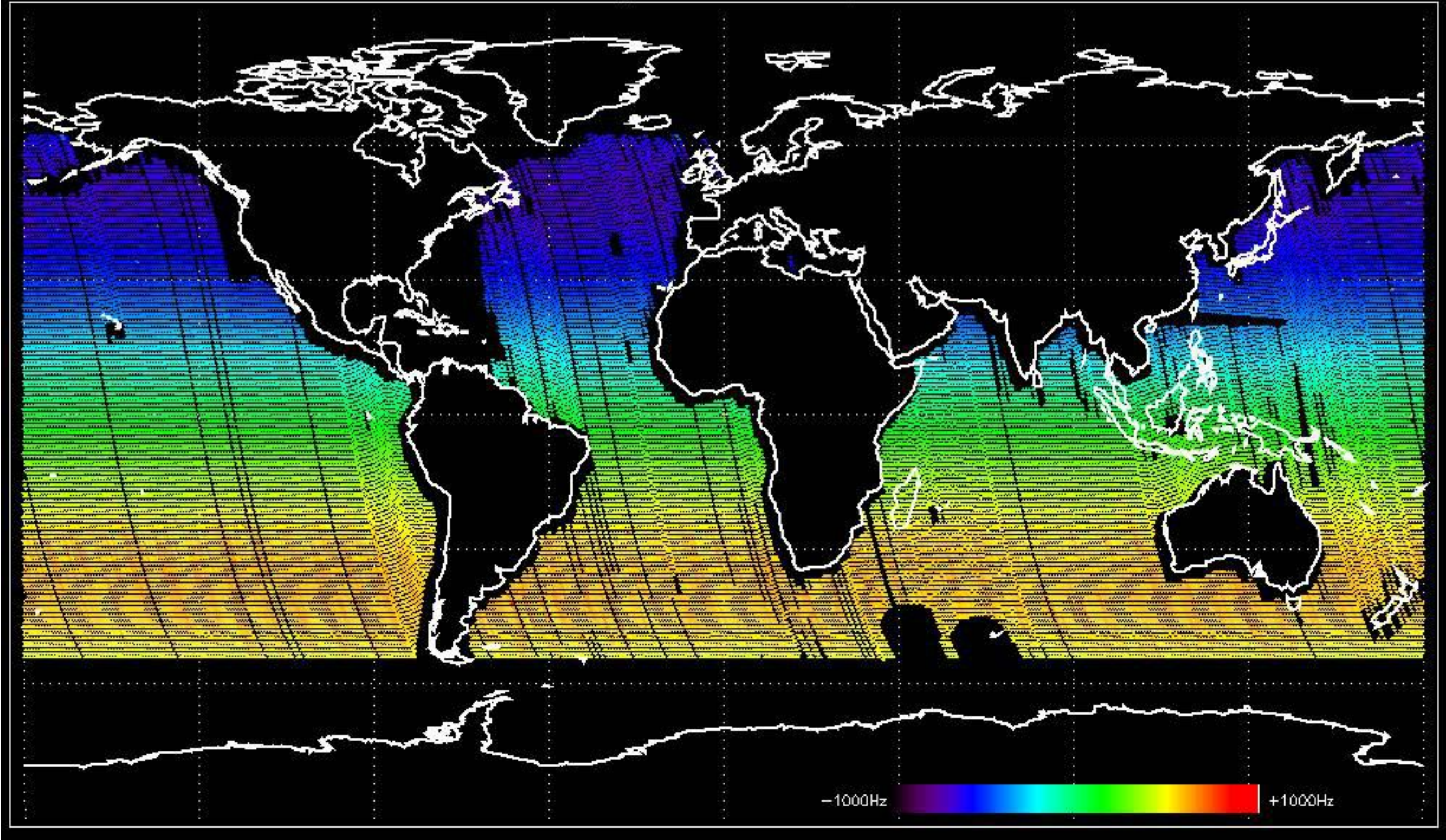
Doppler 'GM1' 'SS1' ascending



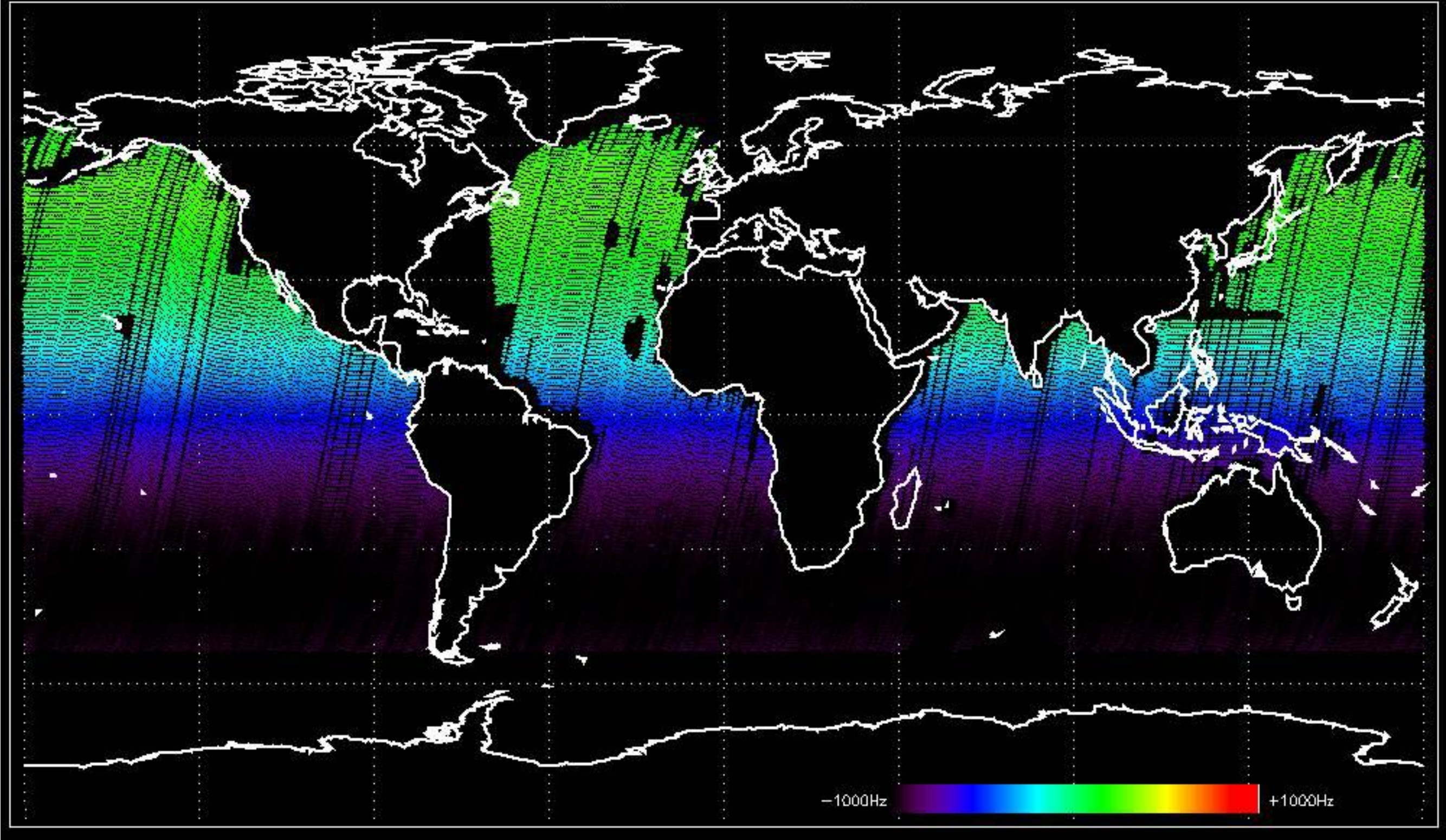
Doppler 'GM1' 'SS1' descending



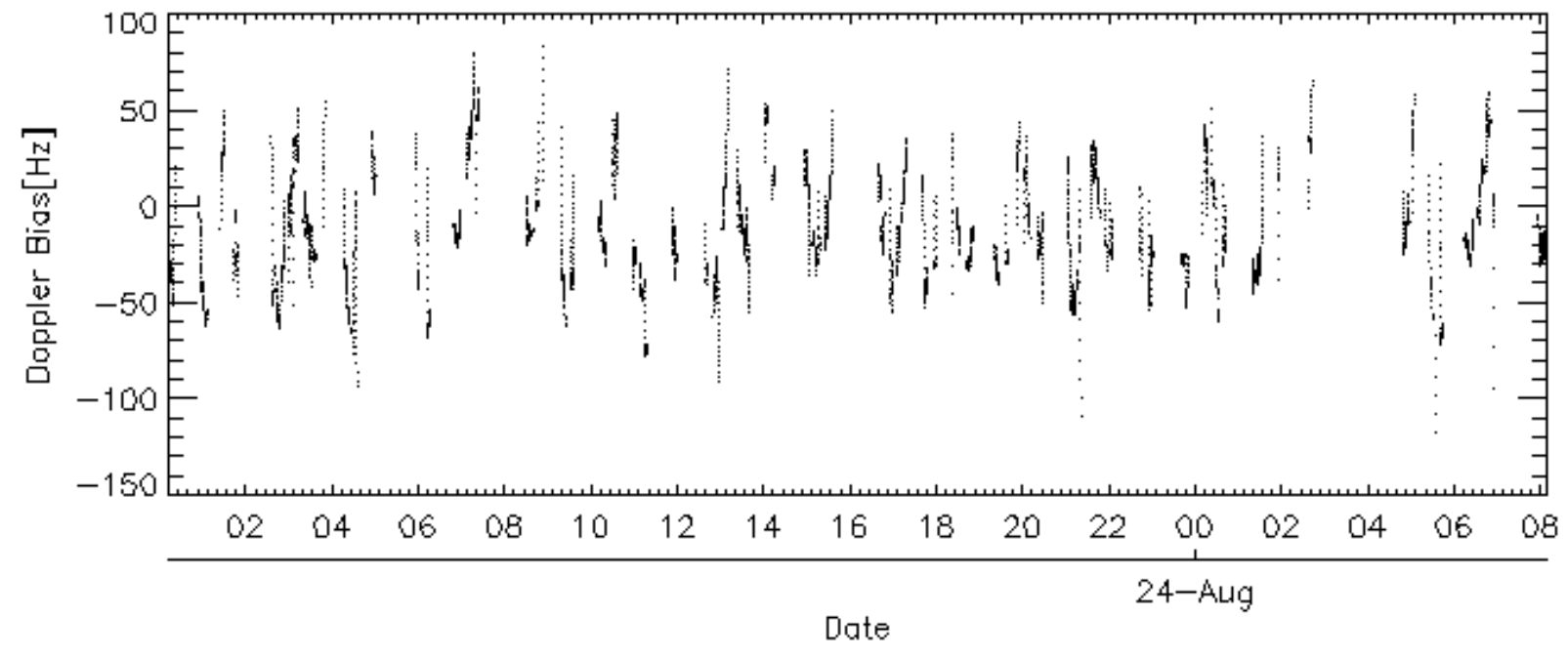
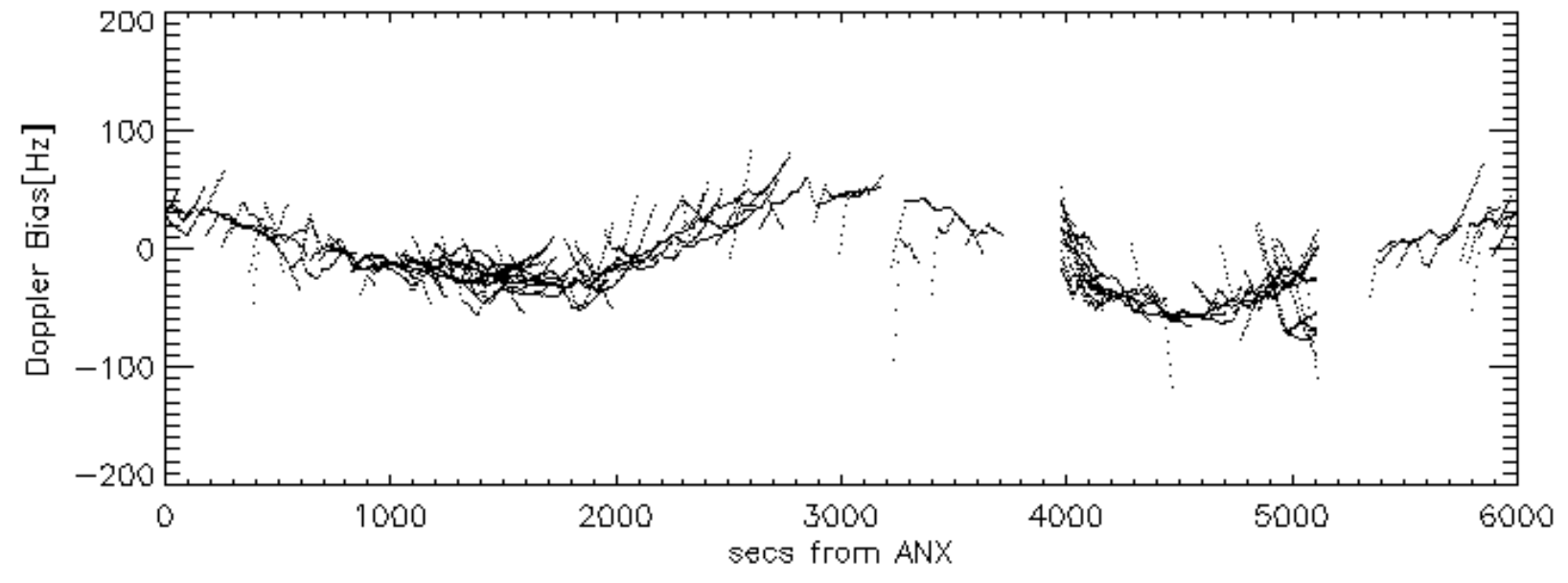
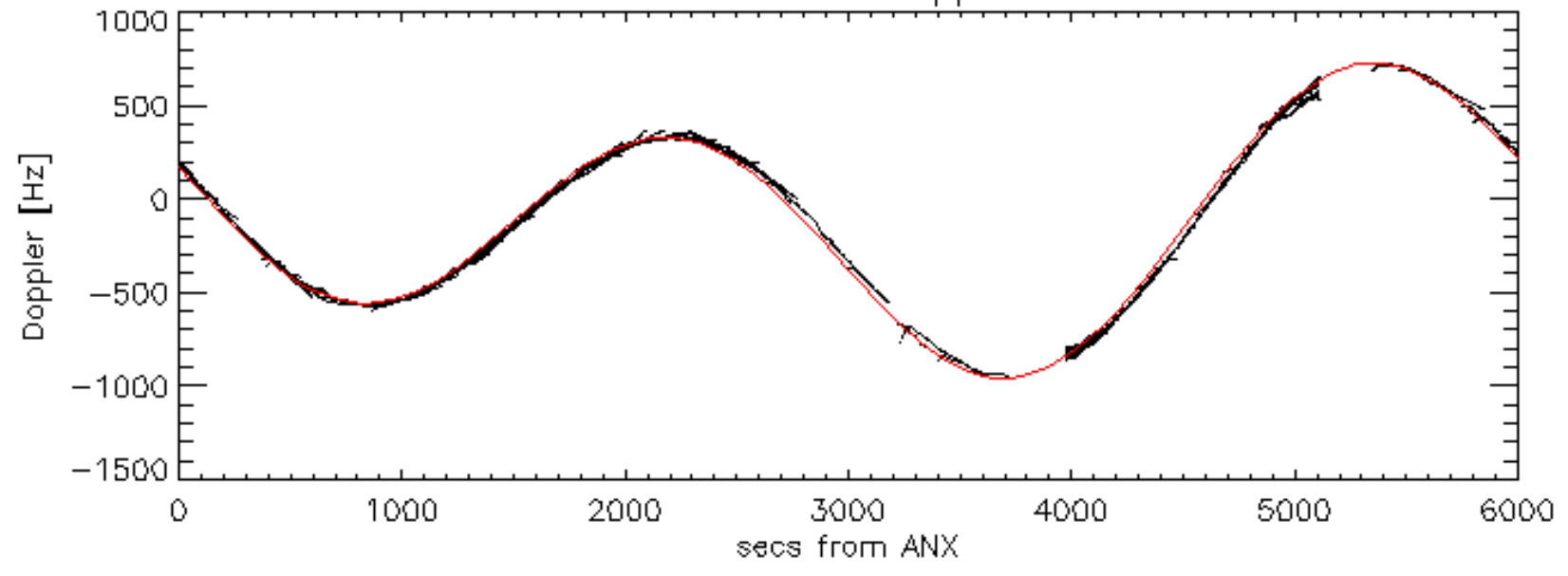
Doppler 'WVS' 'IS2' ascending

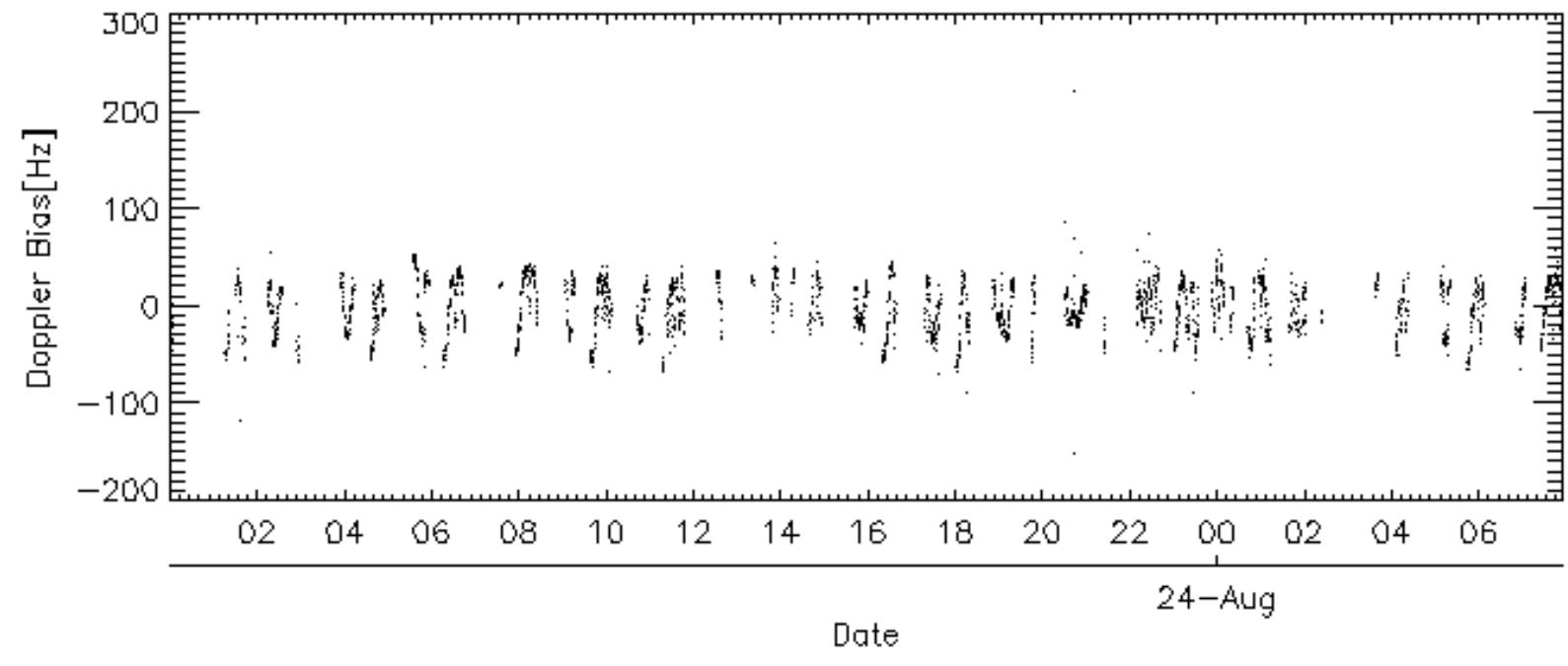
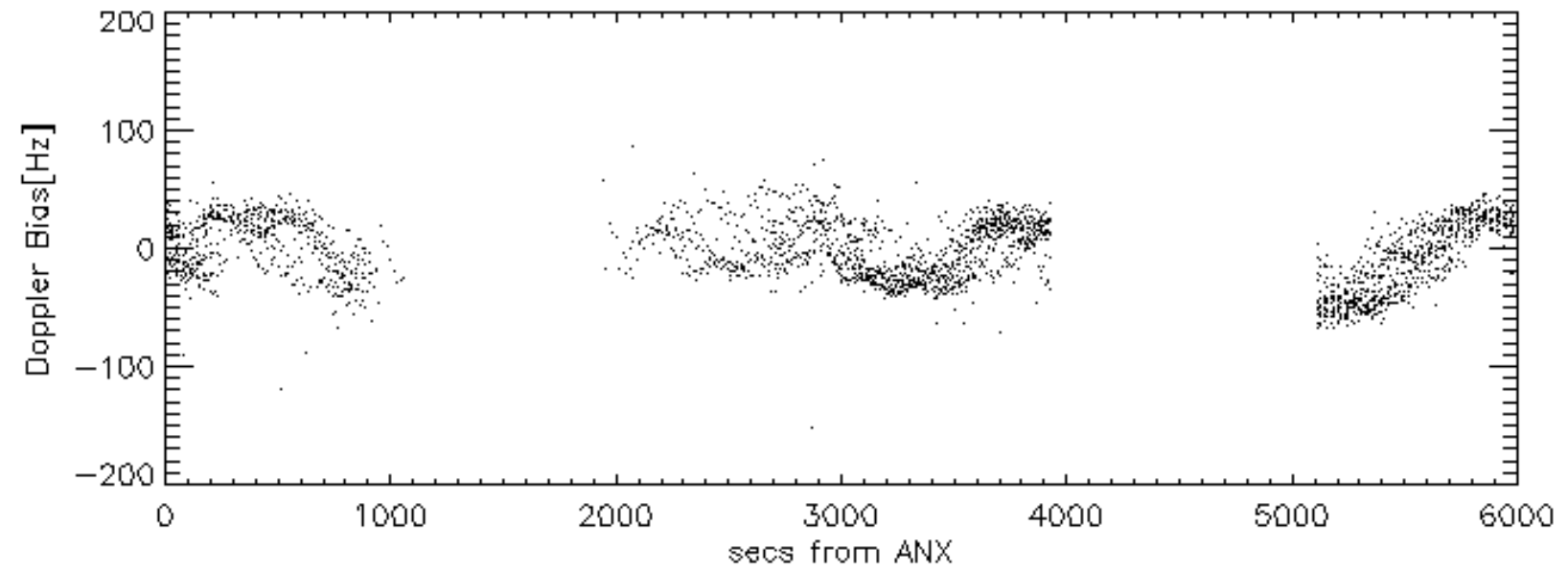
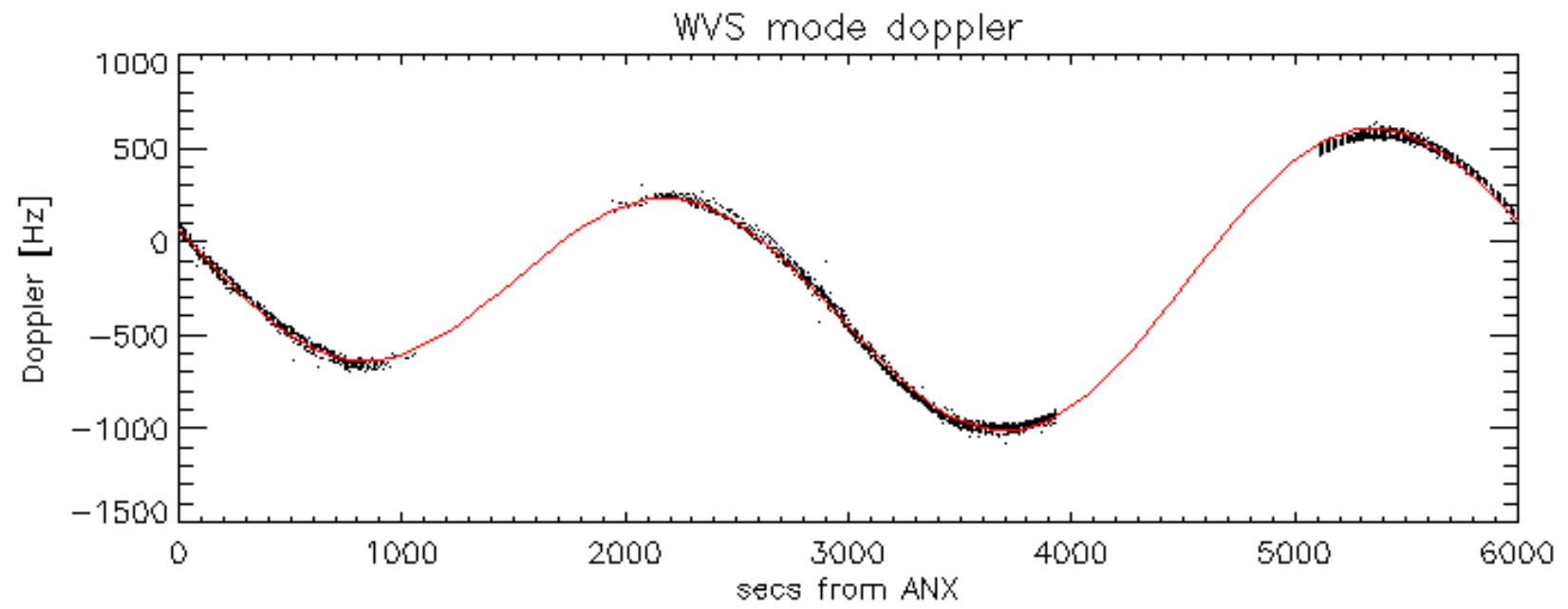


Doppler 'WVS' 'IS2' descending

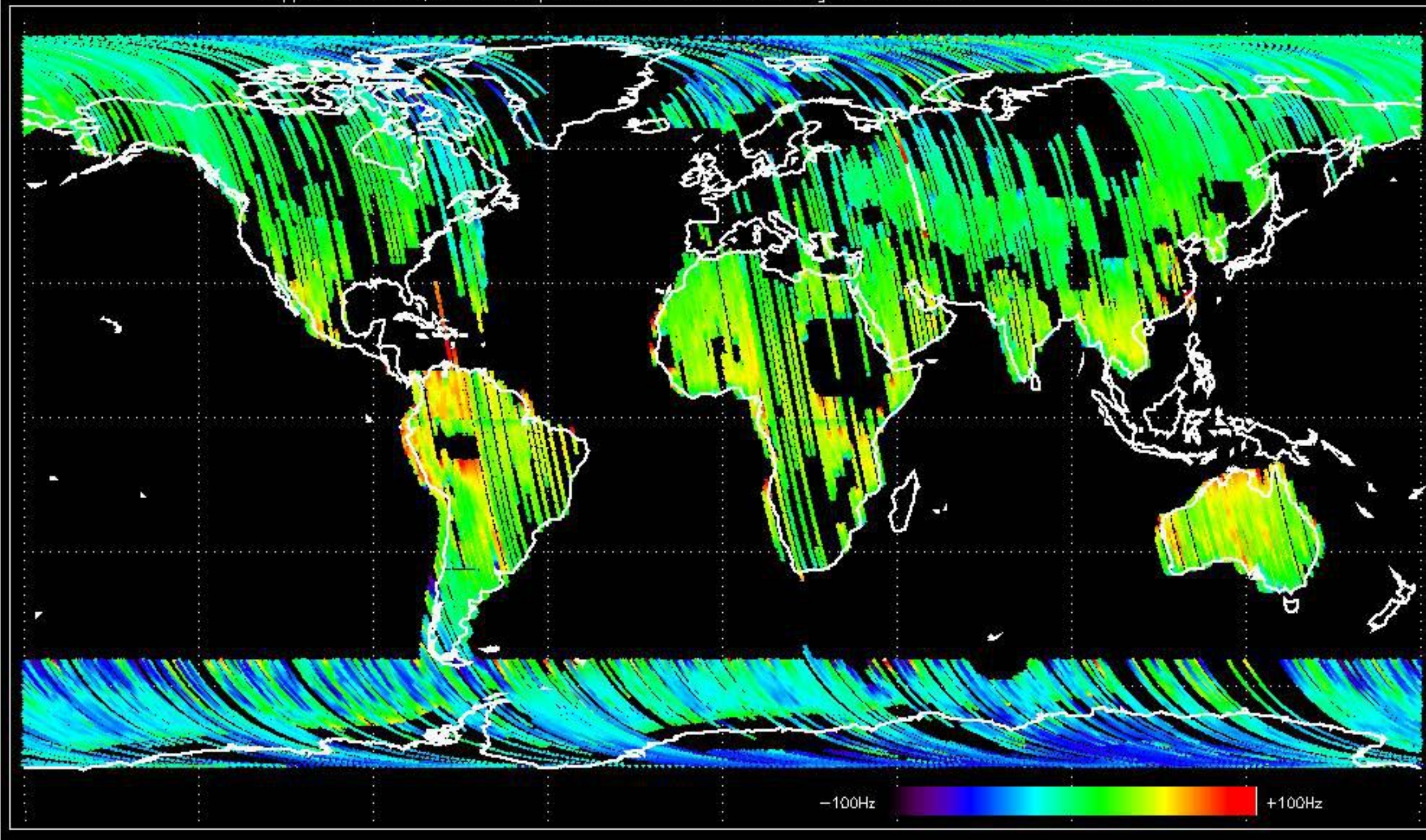


GM1 mode doppler

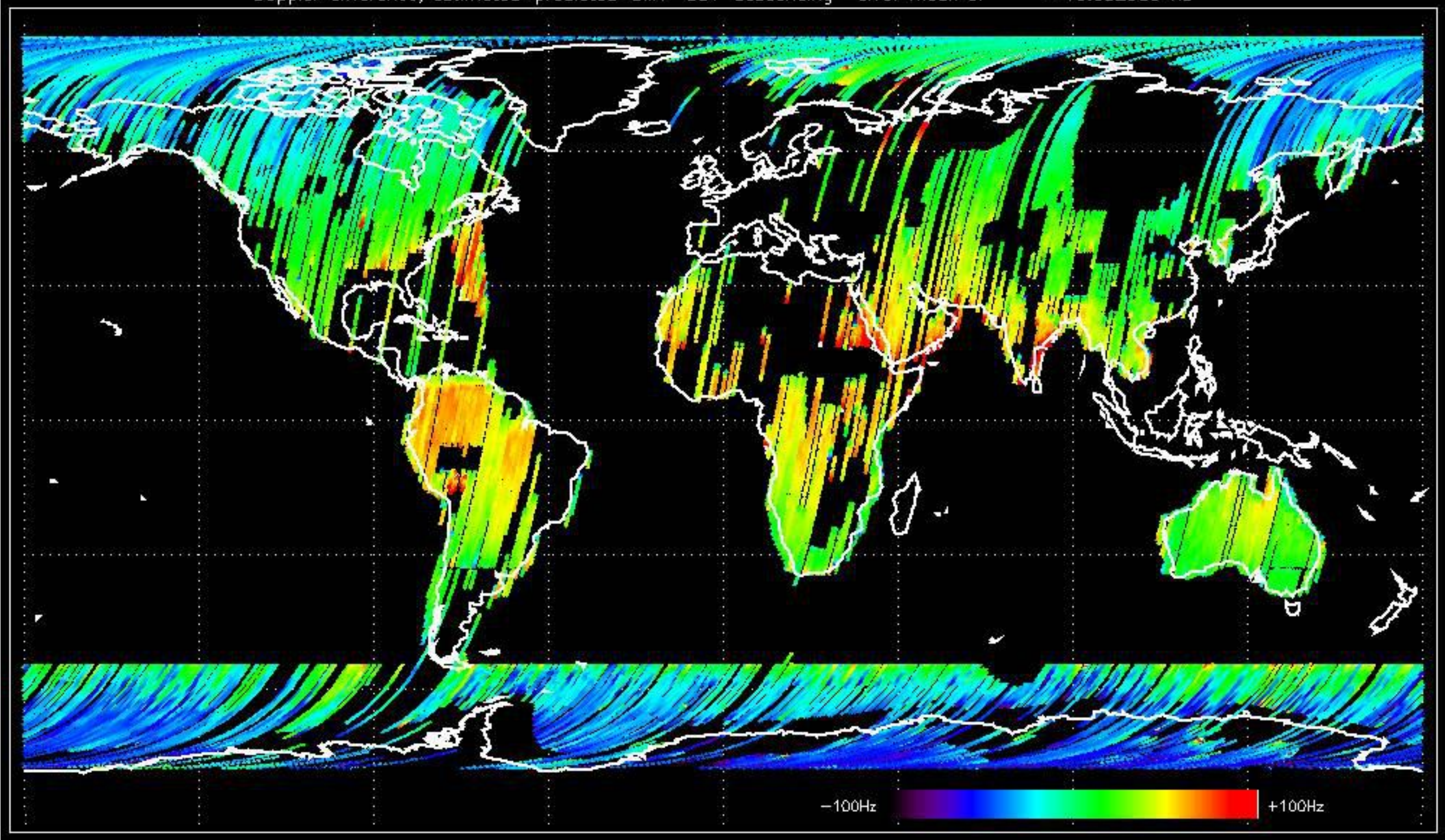




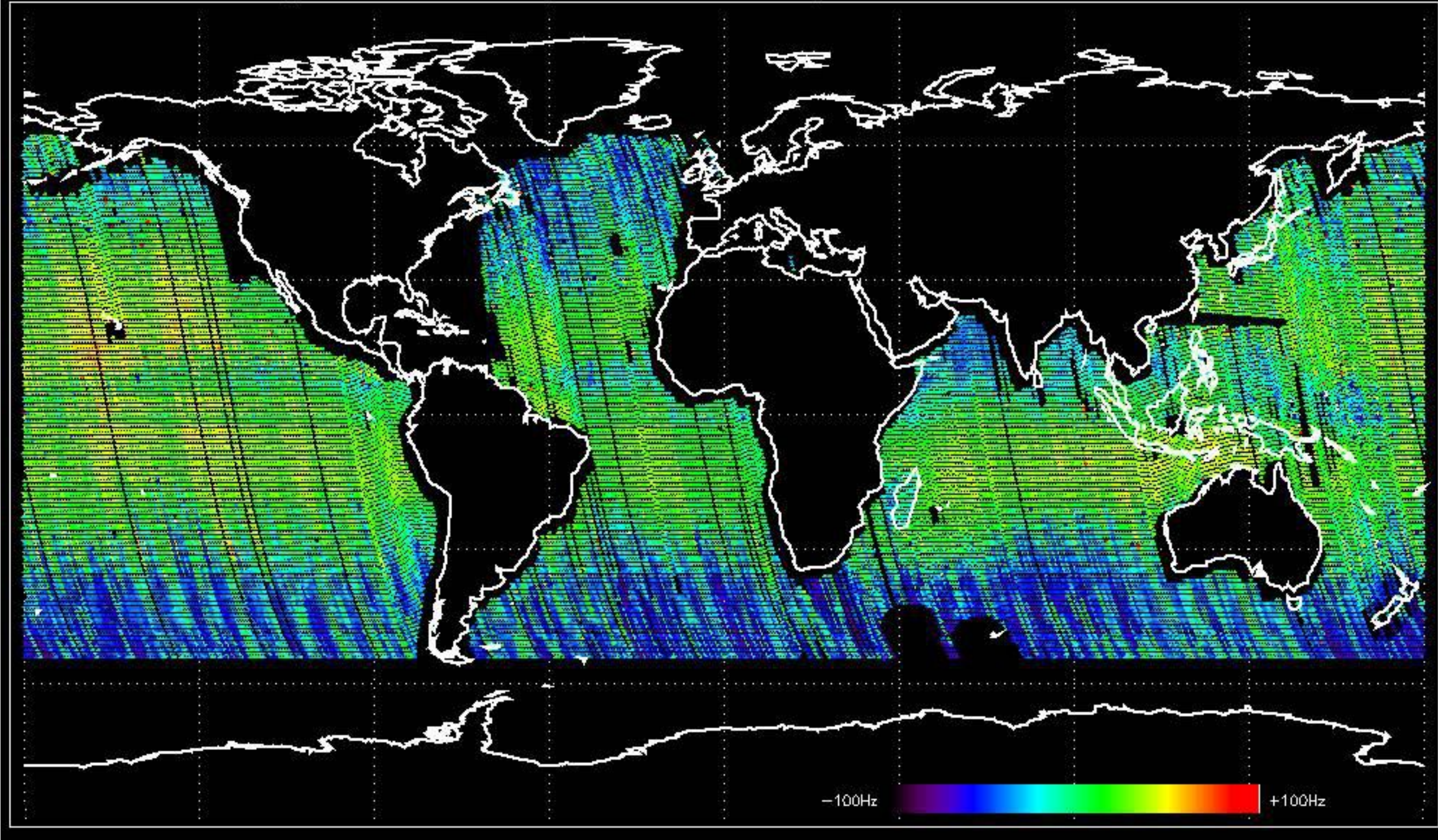
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.499879 Hz



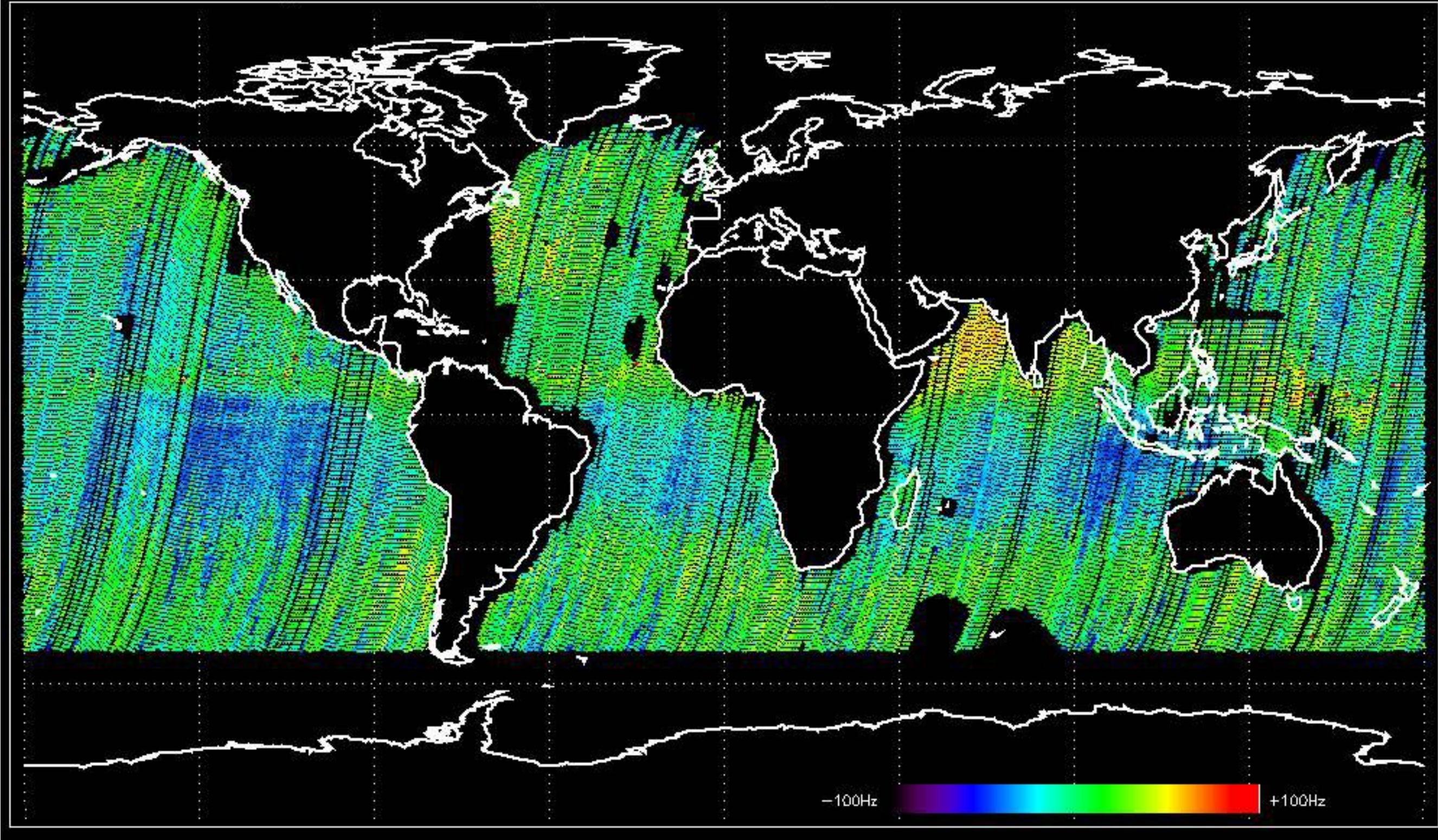
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -10.082959 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -3.4833168 Hz

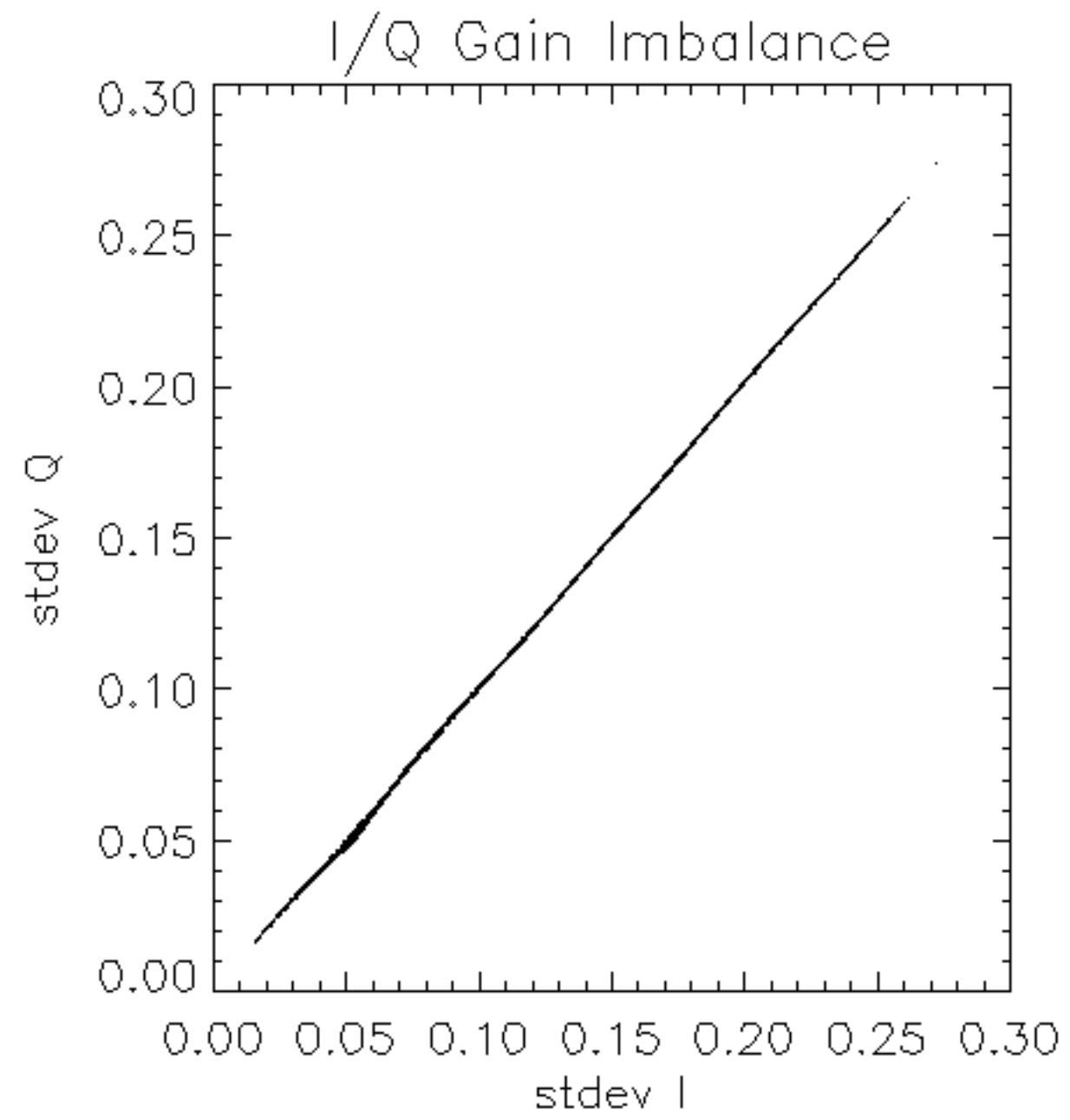


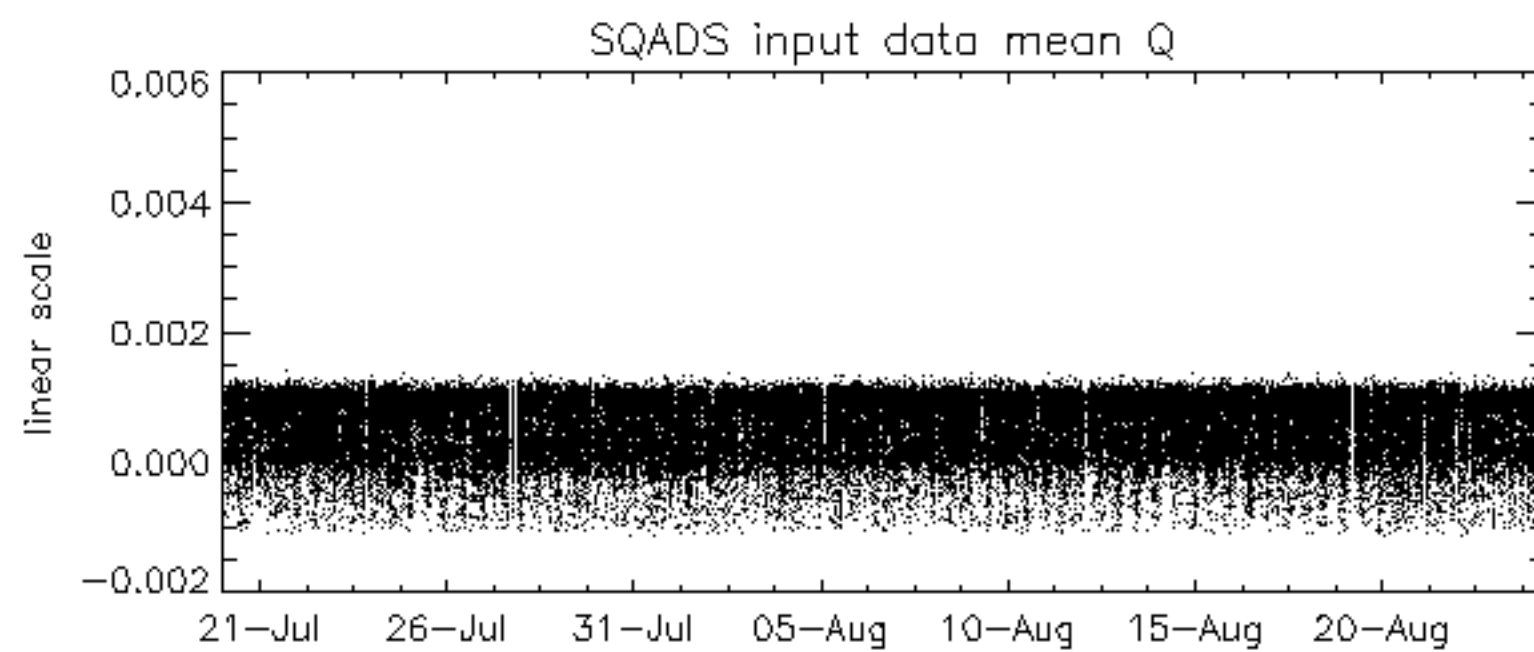
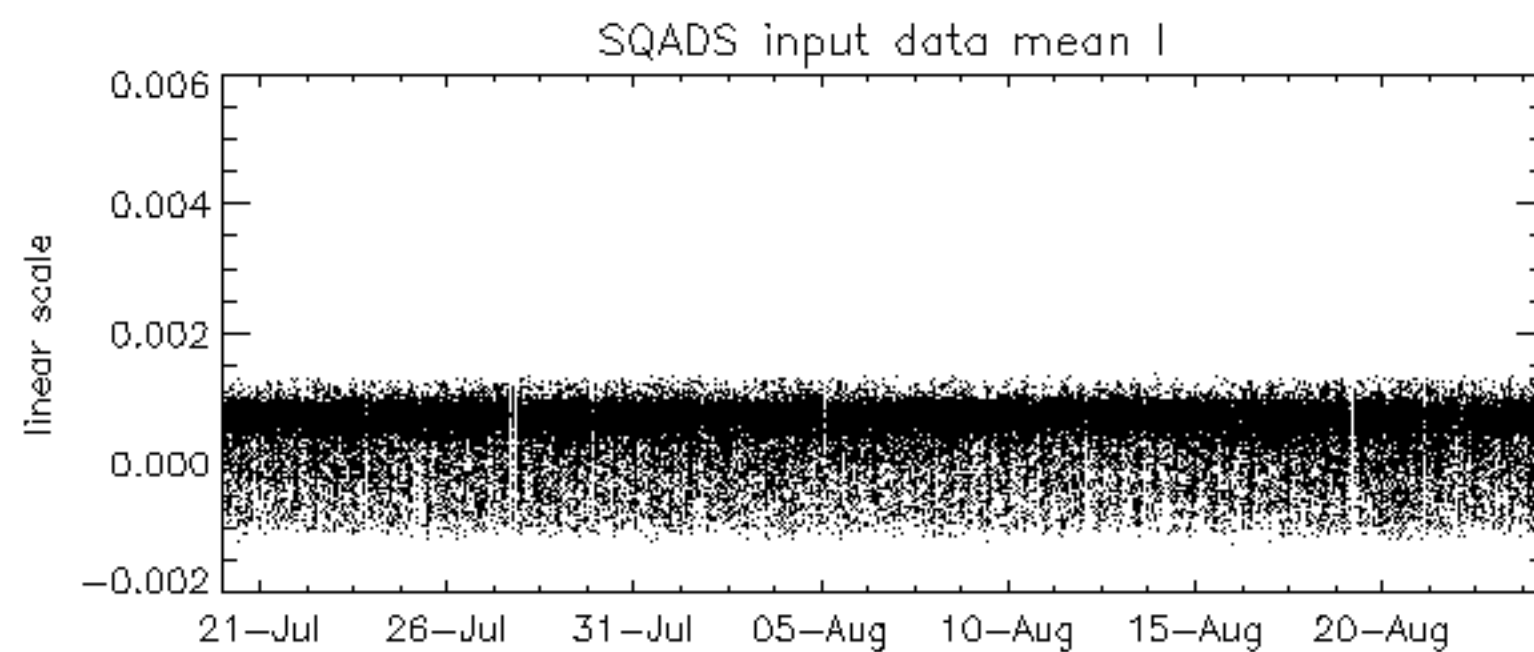
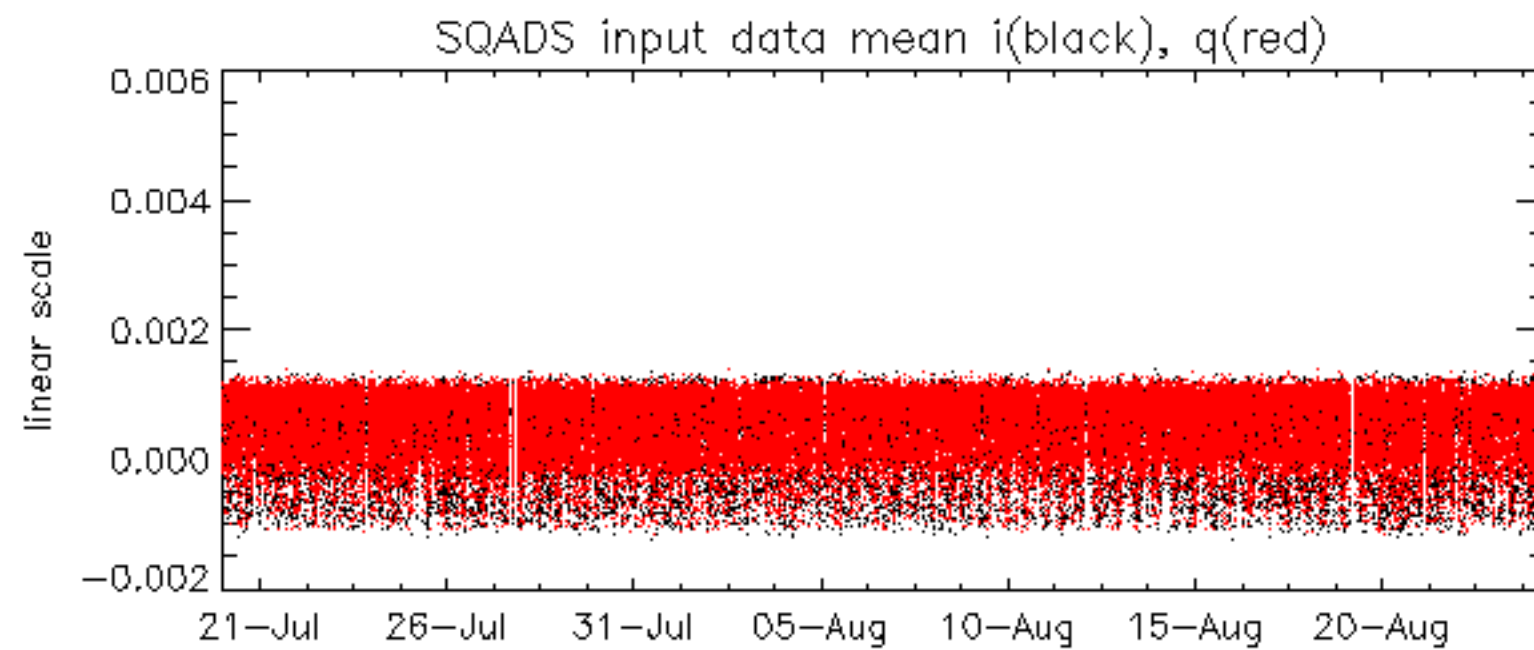
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.8165790 Hz

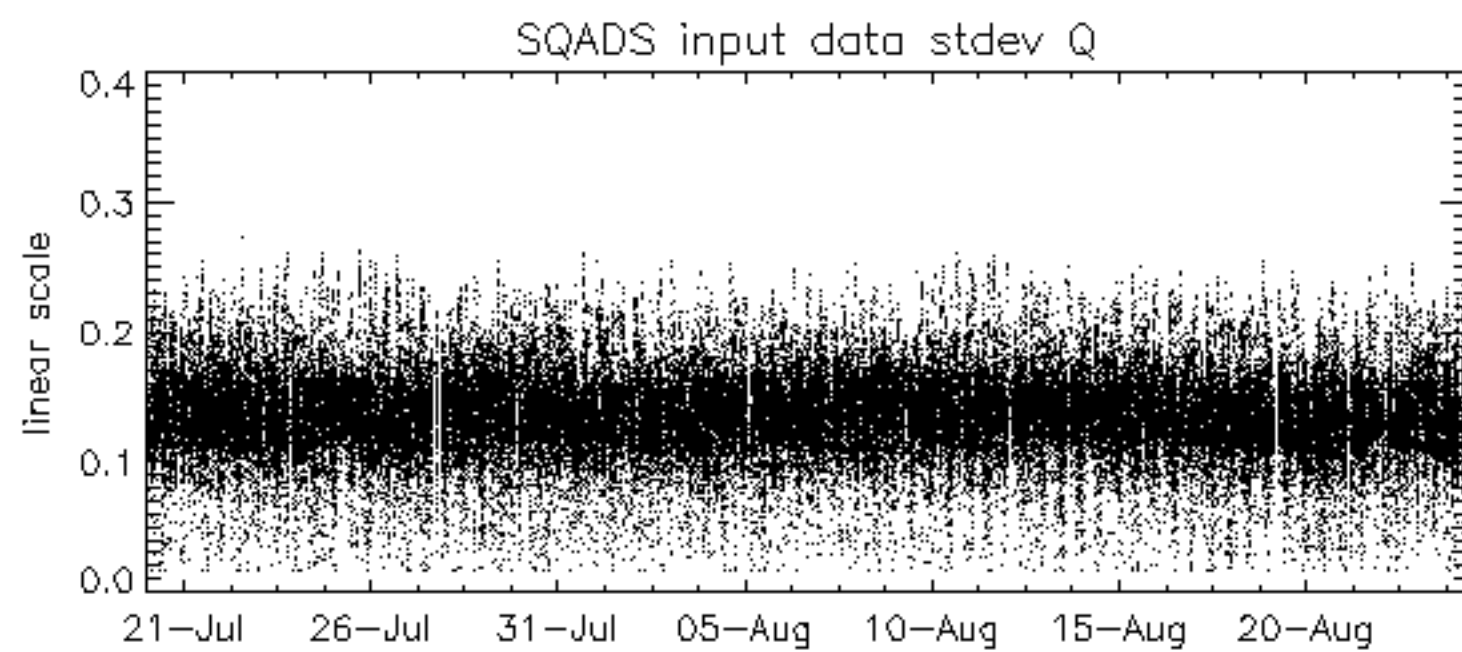
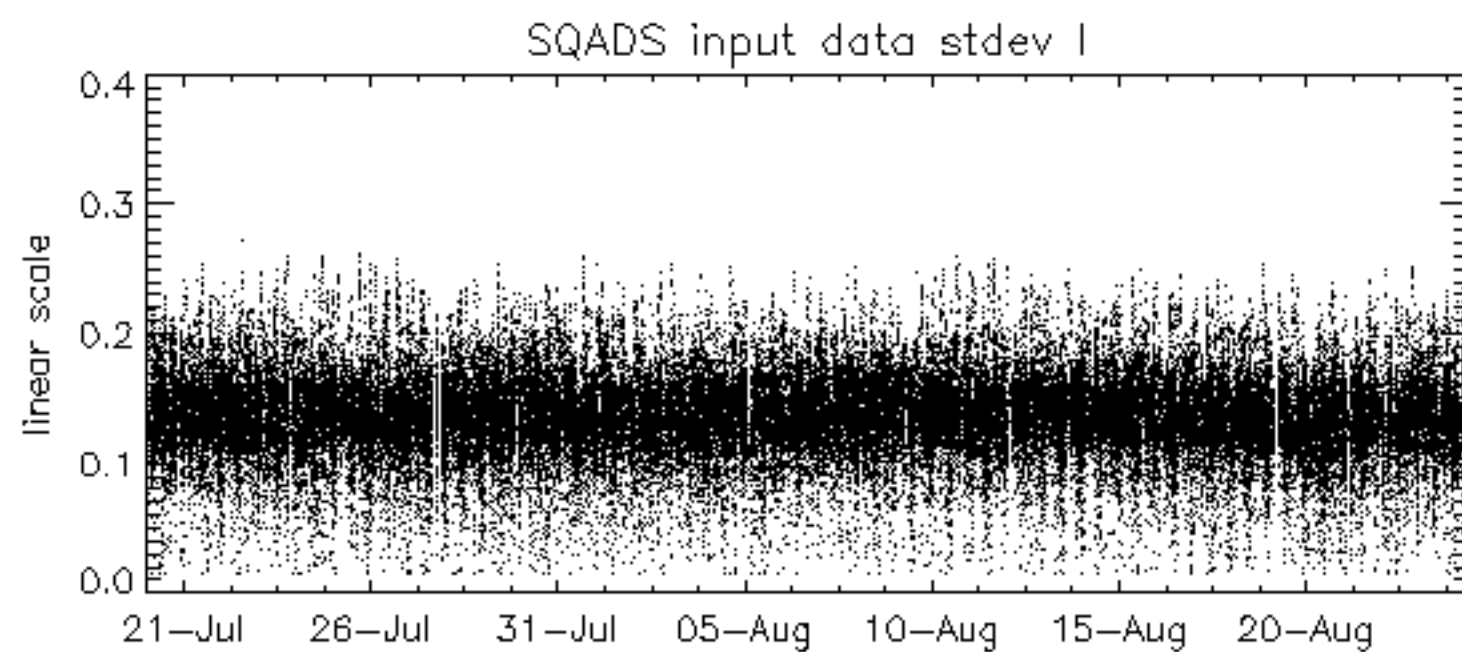
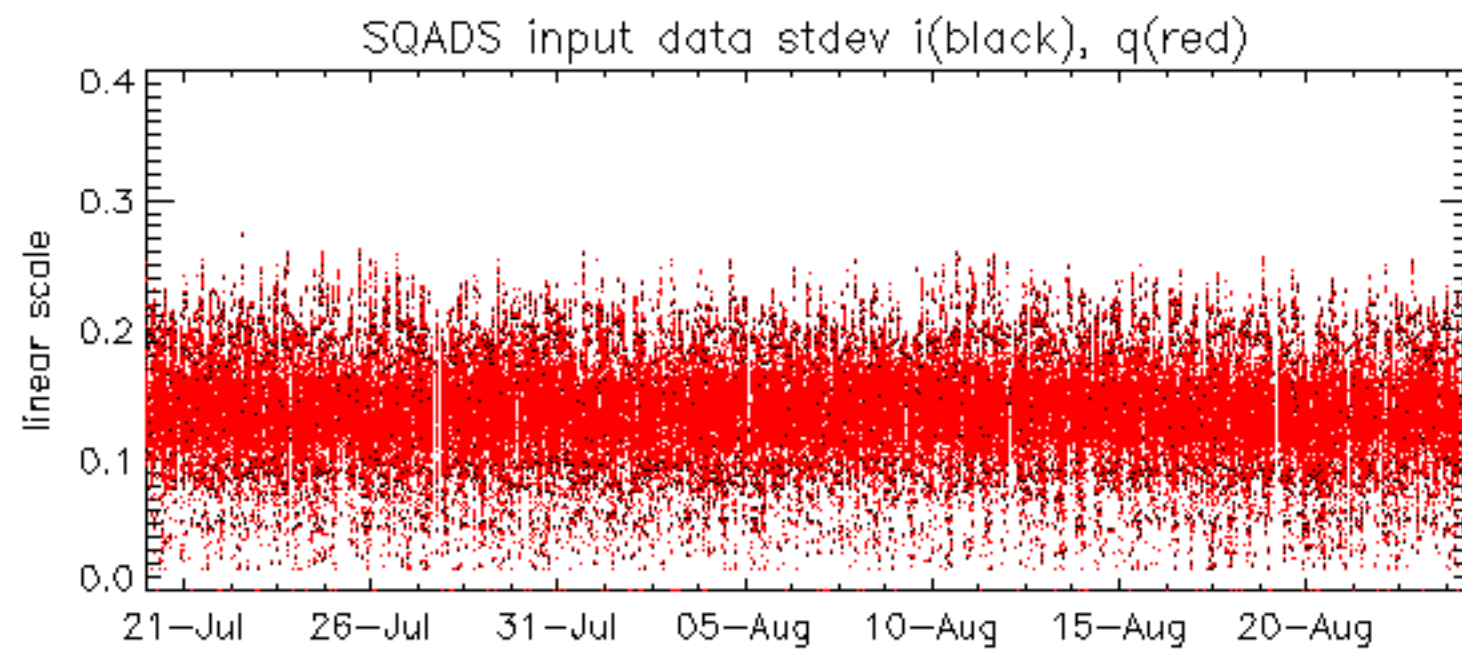


No anomalies observed on available MS products:

No anomalies observed.



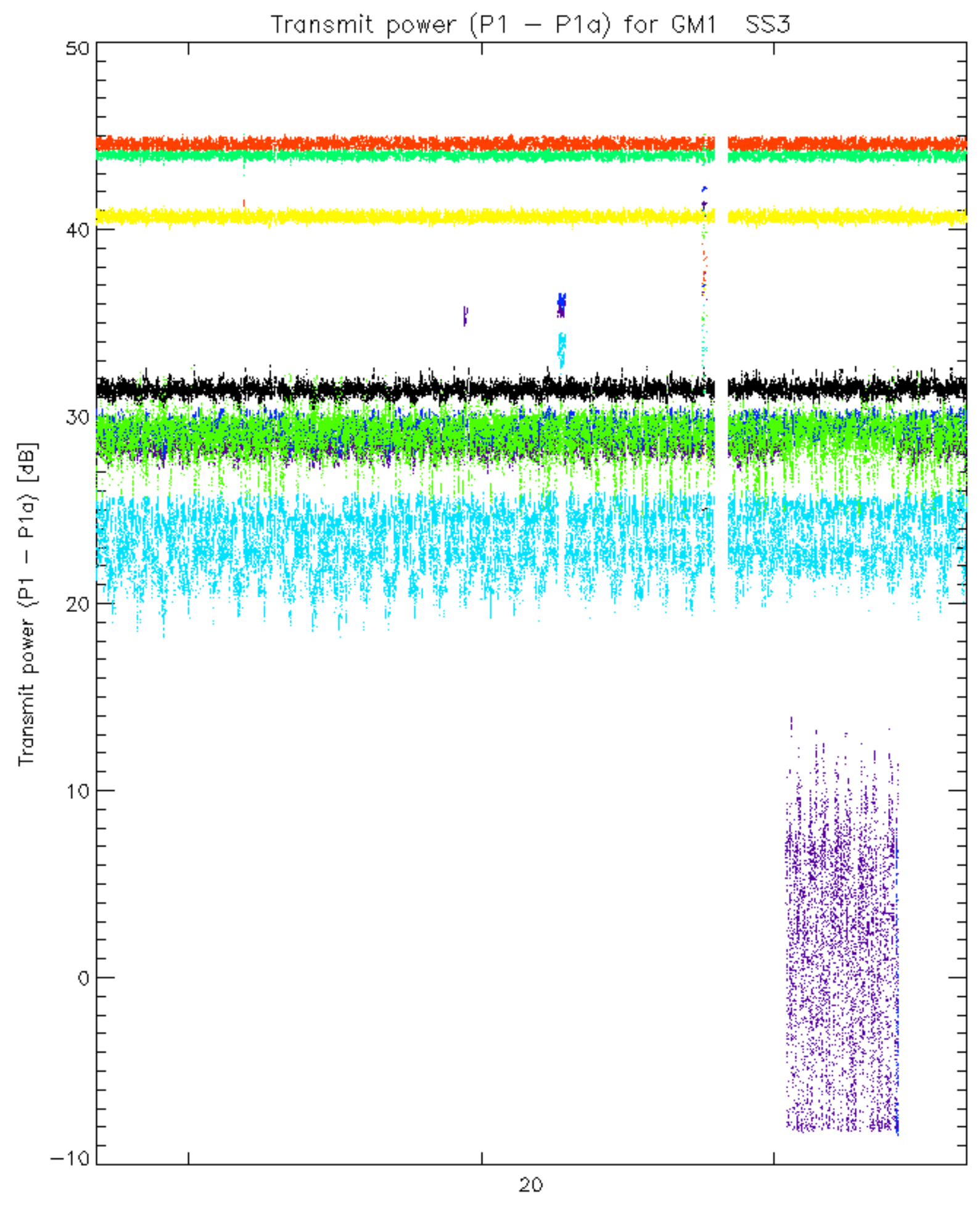




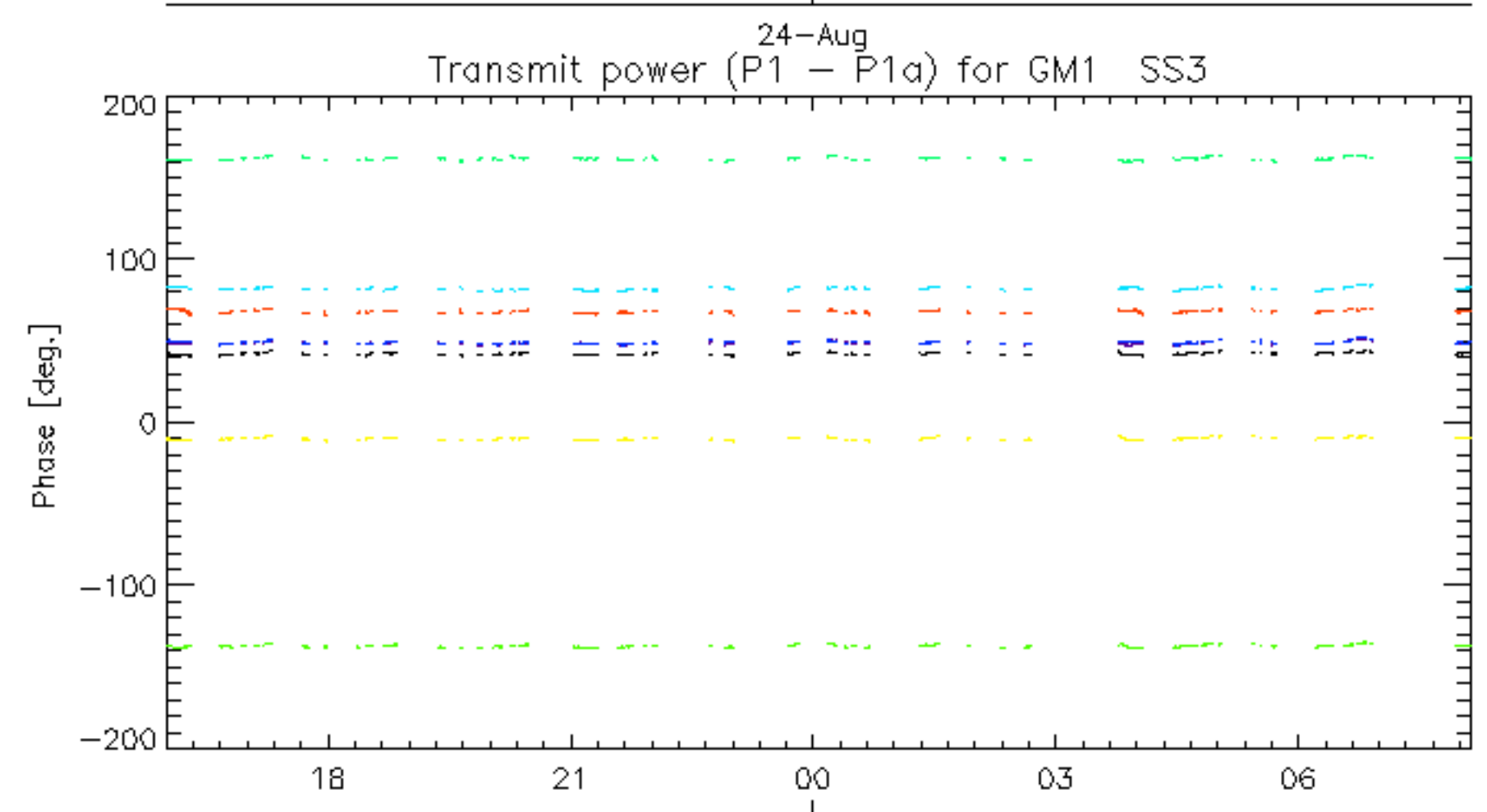
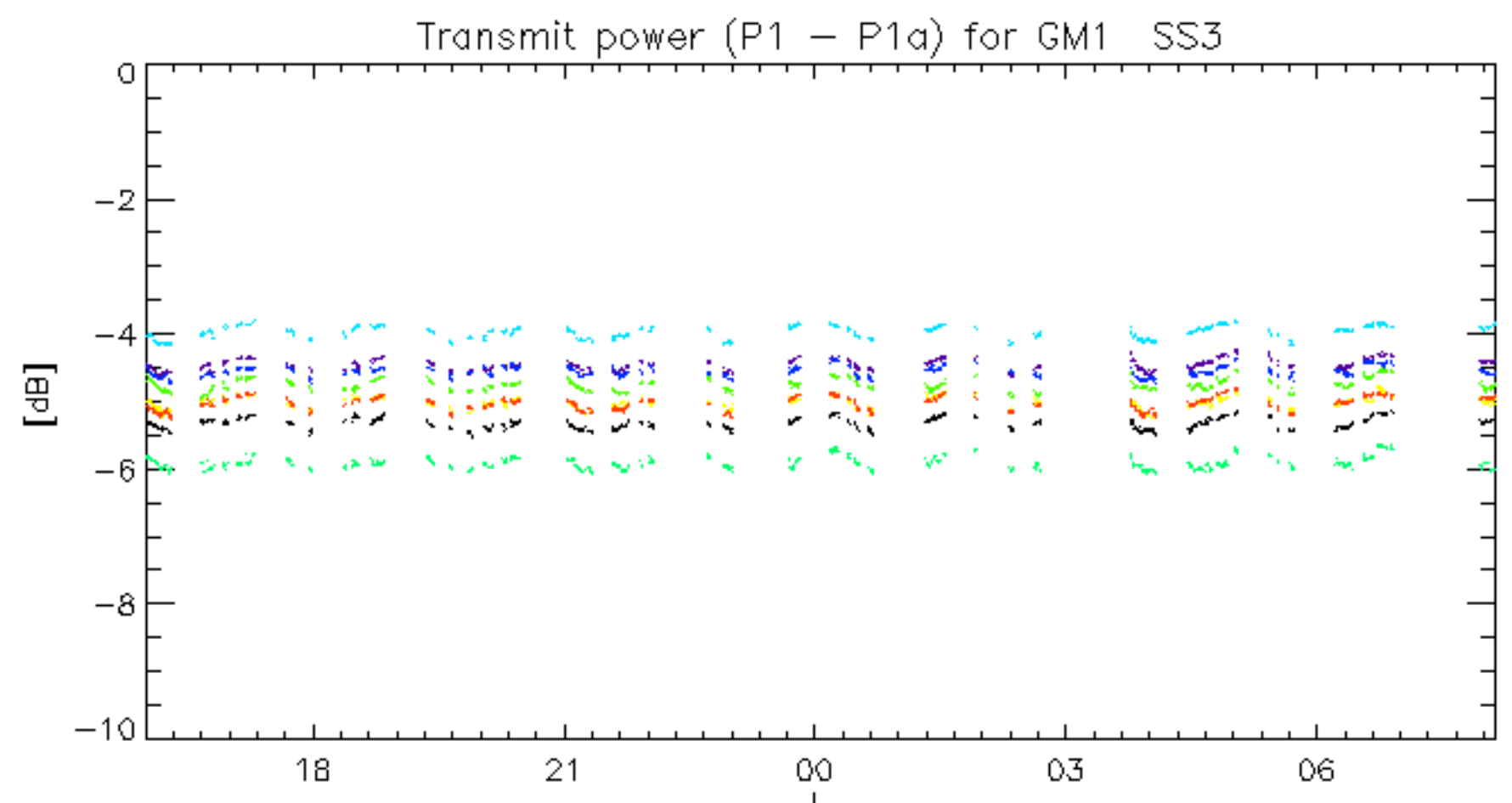
Summary of analysis for the last 3 days 2006082[234]

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

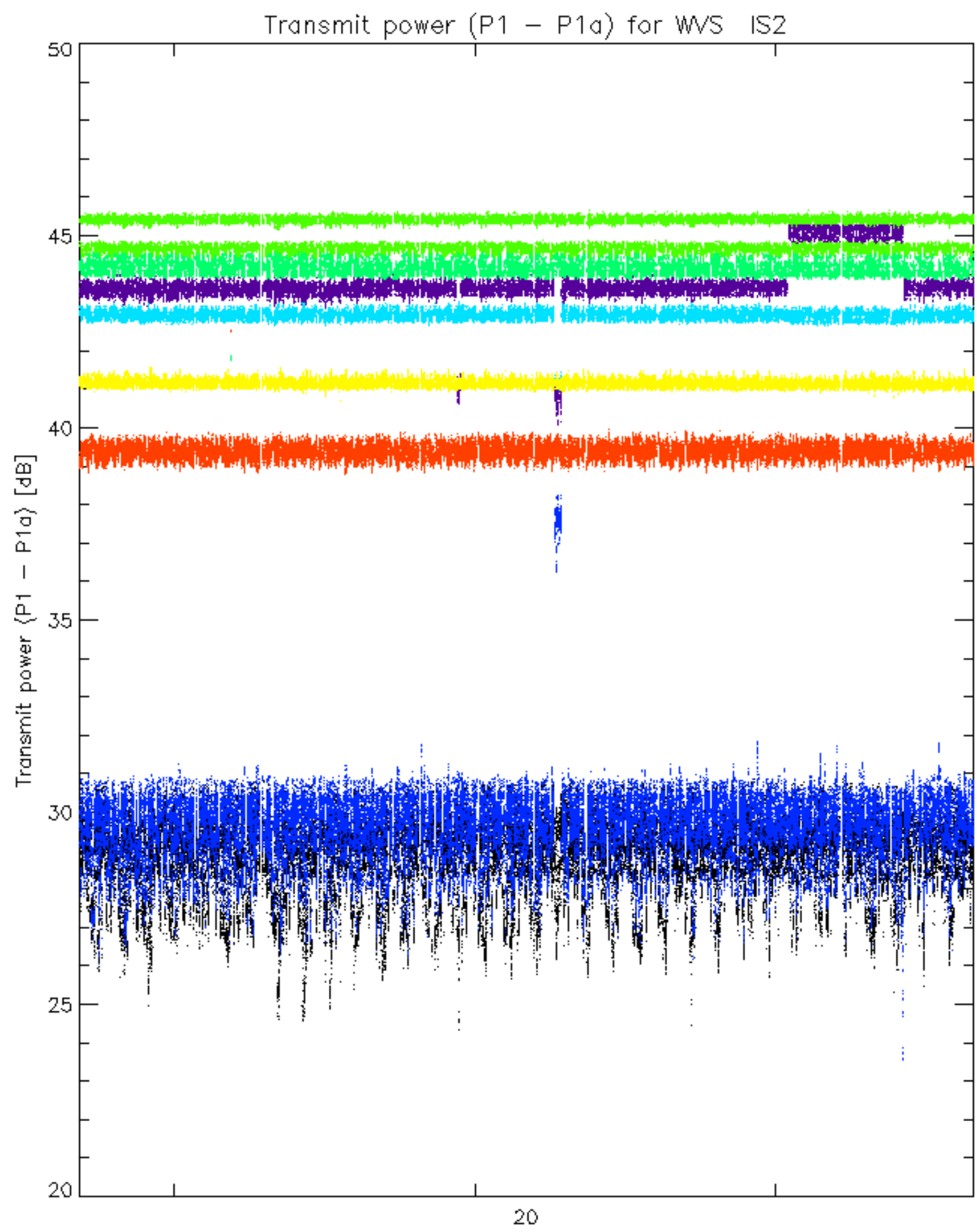
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060822_010019_00000812050_00303_23403_4134.N1	1	0
ASA_IMM_1PNPDE20060823_232215_00000502050_00331_23431_4292.N1	0	2
ASA_WSM_1PNPDE20060824_014431_00000982050_00332_23432_9170.N1	0	23

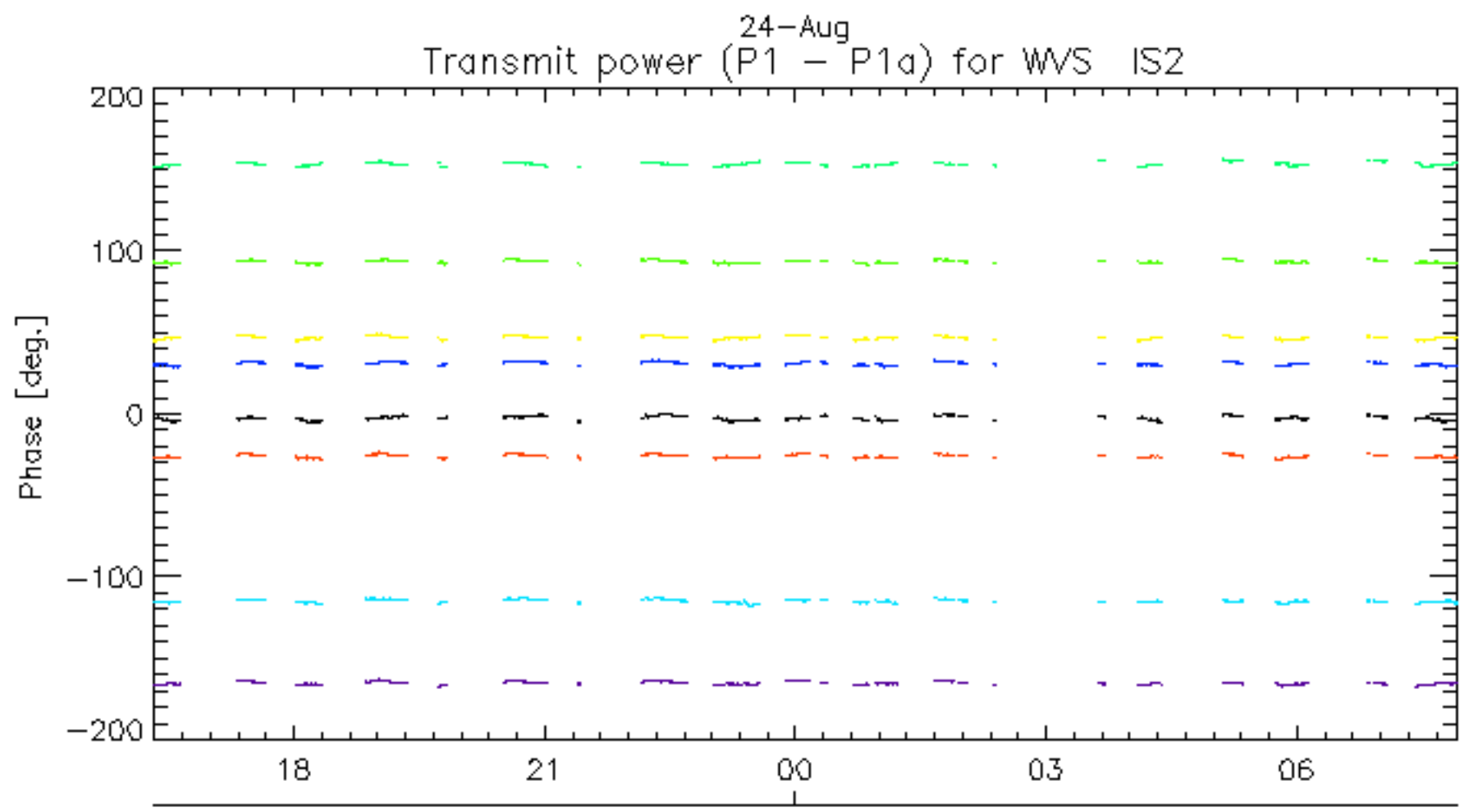
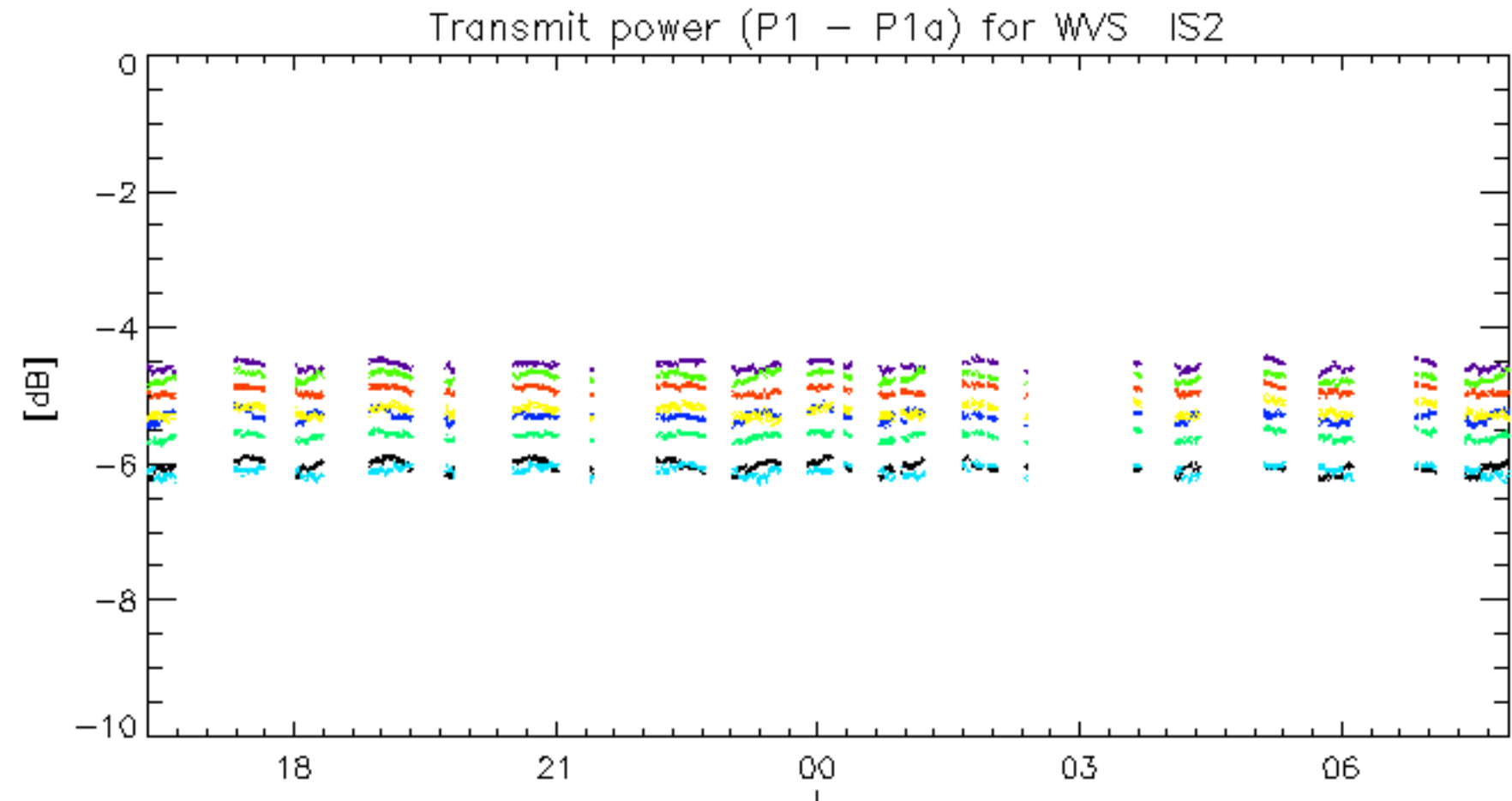


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.