

REPORT OF 041022

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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 - Browse Visual Inspection

No anomalies observed on available browse products

2.3 - Data Analysis

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

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

- ASA_MS__0PNPDE20041021_040604_000000152031_00233_13814_0034.N1

Polarisation	Start Time
V	20041020 043741
H	20041021 040604

MSM in V/V 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"/>

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

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

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	-3.471462	0.006737	-0.027635
7	P1	-3.344307	0.011575	-0.041772
11	P1	-4.625111	0.020539	0.072335
15	P1	-5.713618	0.035297	0.108065
19	P1	-3.530637	0.006174	-0.109235
22	P1	-4.555573	0.013101	-0.079760
24	P1	-4.970952	0.010420	0.035577
30	P1	-7.042596	0.017436	-0.030913

3	P1	-16.112446	0.085521	0.143105
7	P1	-14.038569	0.062874	-0.006811
11	P1	-20.401855	0.217452	-0.349935
15	P1	-11.729335	0.035973	0.111522
19	P1	-13.997142	0.025566	-0.073379
22	P1	-16.114592	0.401179	-0.463661
24	P1	-14.544144	0.266023	-0.253679
30	P1	-18.035830	0.346167	-0.019041

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.333576	0.089437	-0.095058
7	P2	-22.595507	0.122005	-0.060016
11	P2	-15.132174	0.120545	0.065584
15	P2	-7.088804	0.104572	-0.107571
19	P2	-9.619820	0.128874	-0.177324
22	P2	-17.279095	0.108181	0.033759
24	P2	-20.785606	0.090633	-0.052963
30	P2	-19.100515	0.083096	0.112590

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.171869	0.005521	-0.050498
7	P3	-8.171868	0.005521	-0.050490
11	P3	-8.171870	0.005521	-0.050485
15	P3	-8.171877	0.005521	-0.050450
19	P3	-8.171878	0.005521	-0.050449
22	P3	-8.171879	0.005521	-0.050447
24	P3	-8.171880	0.005521	-0.050449
30	P3	-8.171825	0.005521	-0.050475

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1	
<input type="checkbox"/>	
<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	-2.821672	0.013986	0.028826
7	P1	-2.988450	0.053066	0.077480
11	P1	-3.886059	0.020700	-0.015778
15	P1	-3.493436	0.021378	0.031747
19	P1	-3.537948	0.013663	-0.107990
22	P1	-5.666306	0.056712	0.103530
24	P1	-3.967327	0.021998	-0.006739
30	P1	-6.208202	0.050857	-0.083828
3	P1	-10.796523	0.093620	0.396024
7	P1	-10.088911	0.172512	0.045096
11	P1	-12.235024	0.122683	-0.163553
15	P1	-11.685549	0.076885	0.038803
19	P1	-15.592116	0.060940	-0.053721
22	P1	-23.610340	1.402814	-0.510138
24	P1	-18.126656	0.235138	-0.070262
30	P1	-20.378803	1.126574	0.216659

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.008543	0.048771	-0.100823
7	P2	-22.699617	0.066010	0.013866
11	P2	-10.868301	0.051462	-0.037913
15	P2	-4.993504	0.030511	-0.102870
19	P2	-6.830724	0.045142	-0.220489
22	P2	-7.391817	0.041750	0.001218
24	P2	-11.106961	0.055189	-0.135843
30	P2	-22.107983	0.038938	0.027922

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P3	-8.018271	0.003839	-0.039634
7	P3	-8.018187	0.003836	-0.039442
11	P3	-8.018356	0.003823	-0.039433
15	P3	-8.018270	0.003824	-0.039293
19	P3	-8.018302	0.003829	-0.039329
22	P3	-8.018255	0.003827	-0.039157
24	P3	-8.018358	0.003854	-0.039645
30	P3	-8.018315	0.003838	-0.039177

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	0.000477339
	stdev	2.16773e-07
MEAN Q	mean	0.000550132
	stdev	2.33470e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127362
	stdev	0.000920543

STDEV Q	mean	0.127578
	stdev	0.000929397



5.3 - Gain imbalance I/Q



6 - Doppler Analysis

No anomalies observed in DOppler evolution.
Doppler analysis performed over the last 35 days.

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

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

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>	
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6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

✕
Acsending
✕
Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

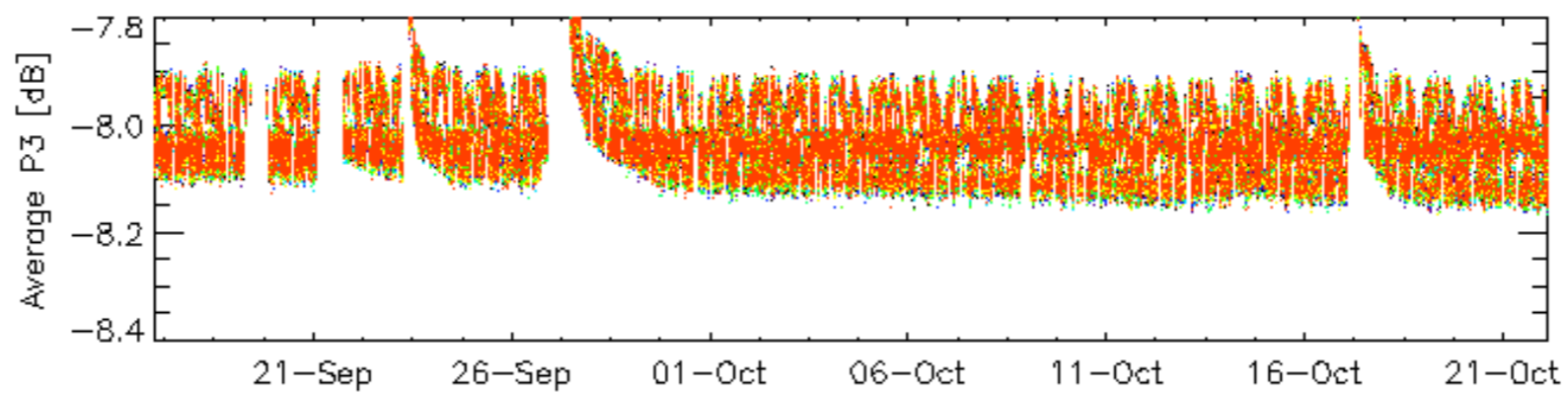
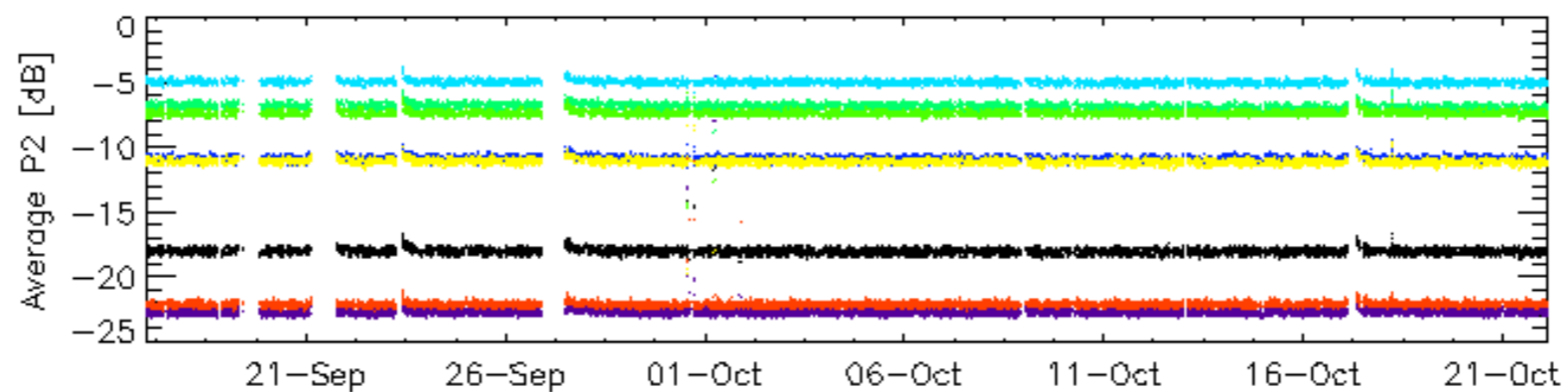
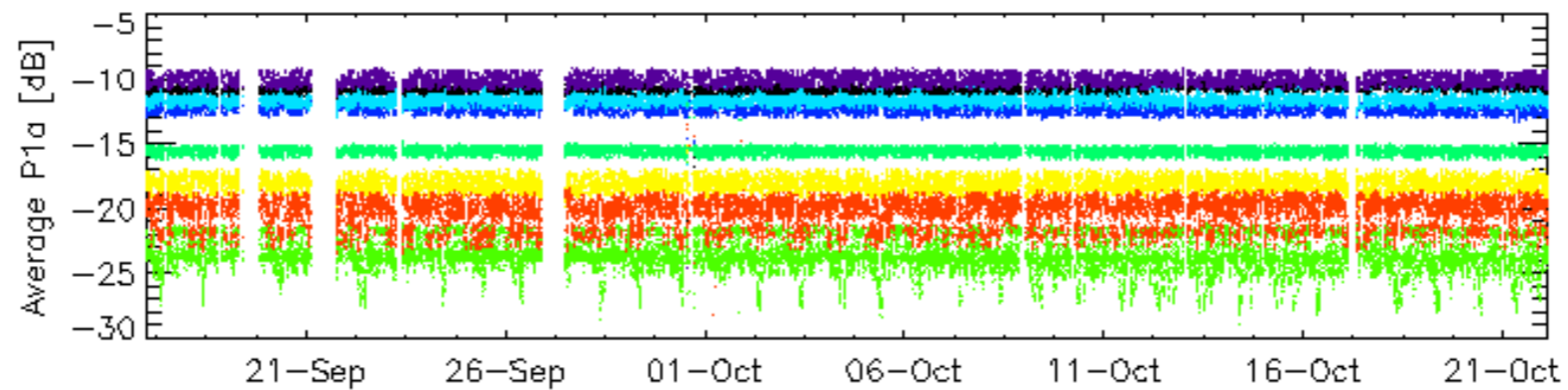
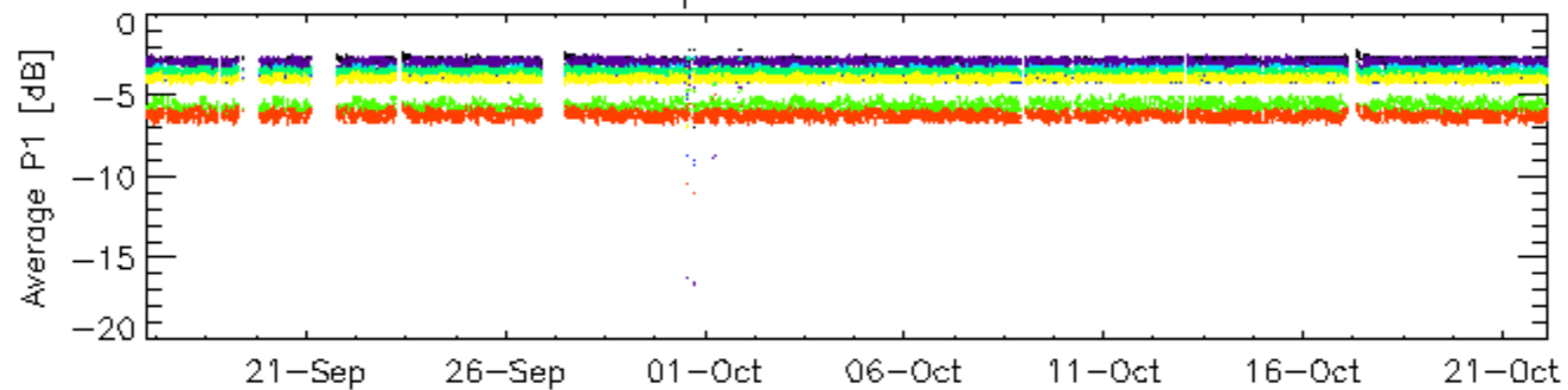
✕
Acsending
✕
Descending

6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

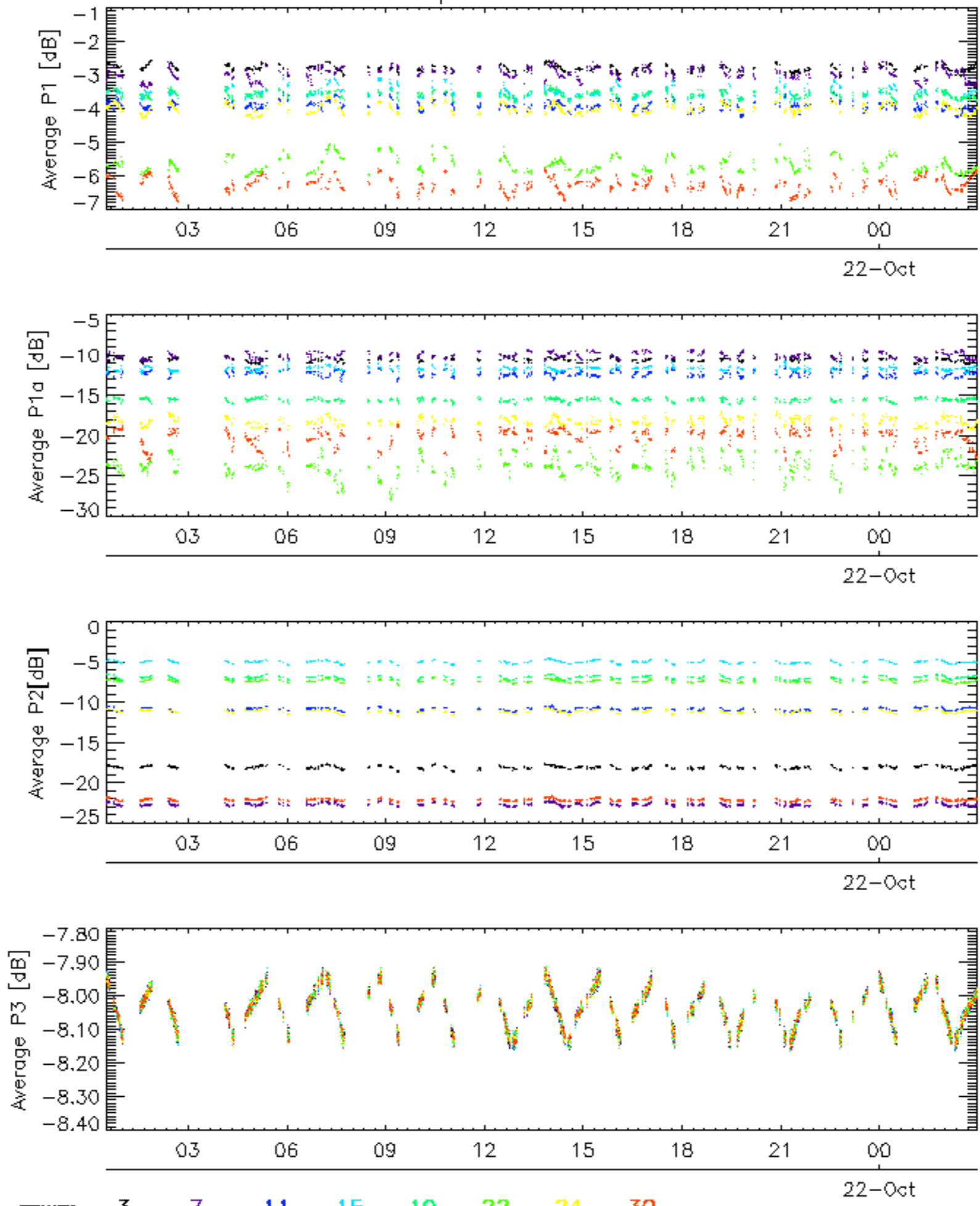
✕

Cal pulses for GM1 SS3

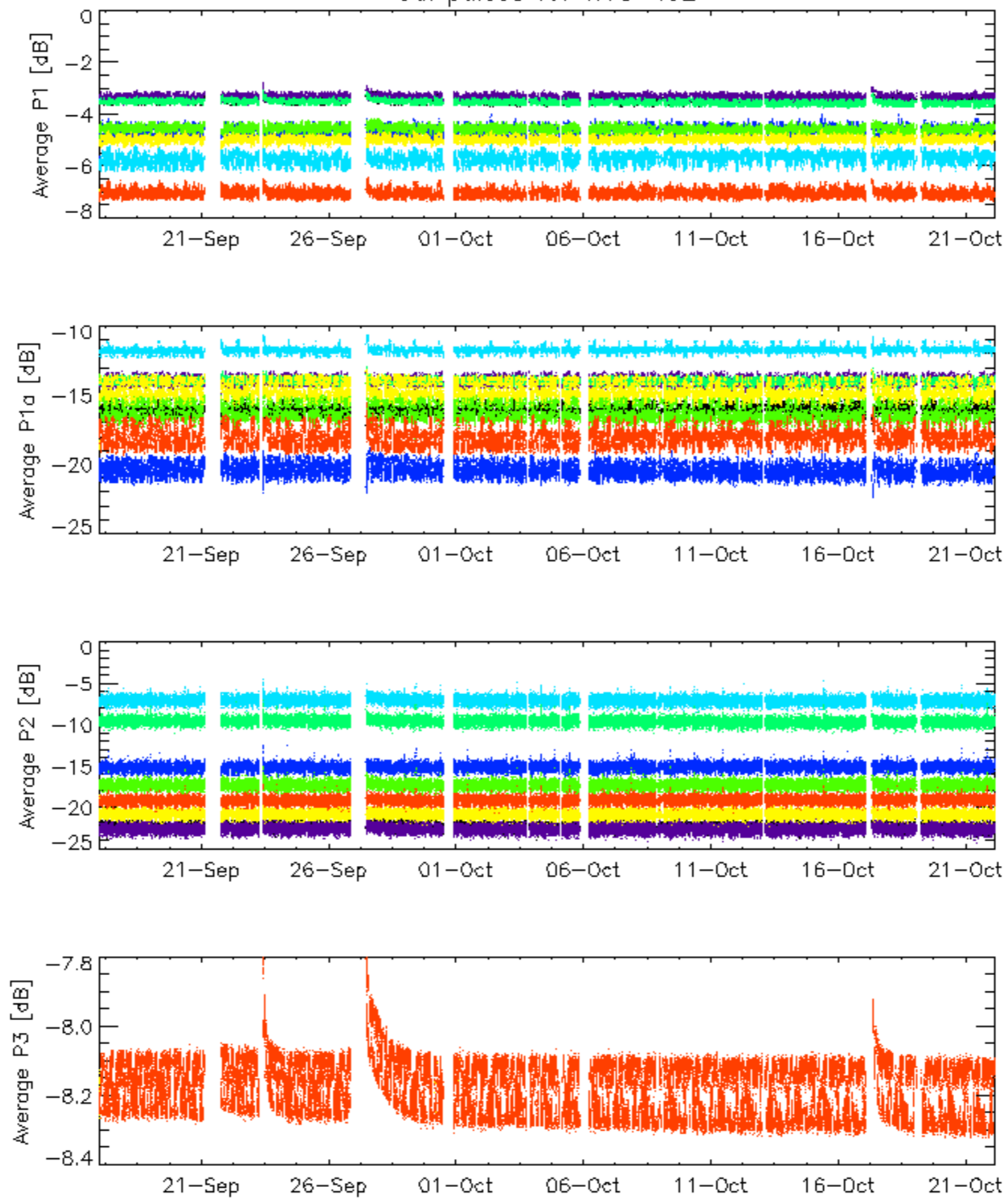


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

Cal pulses for GM1 SS3

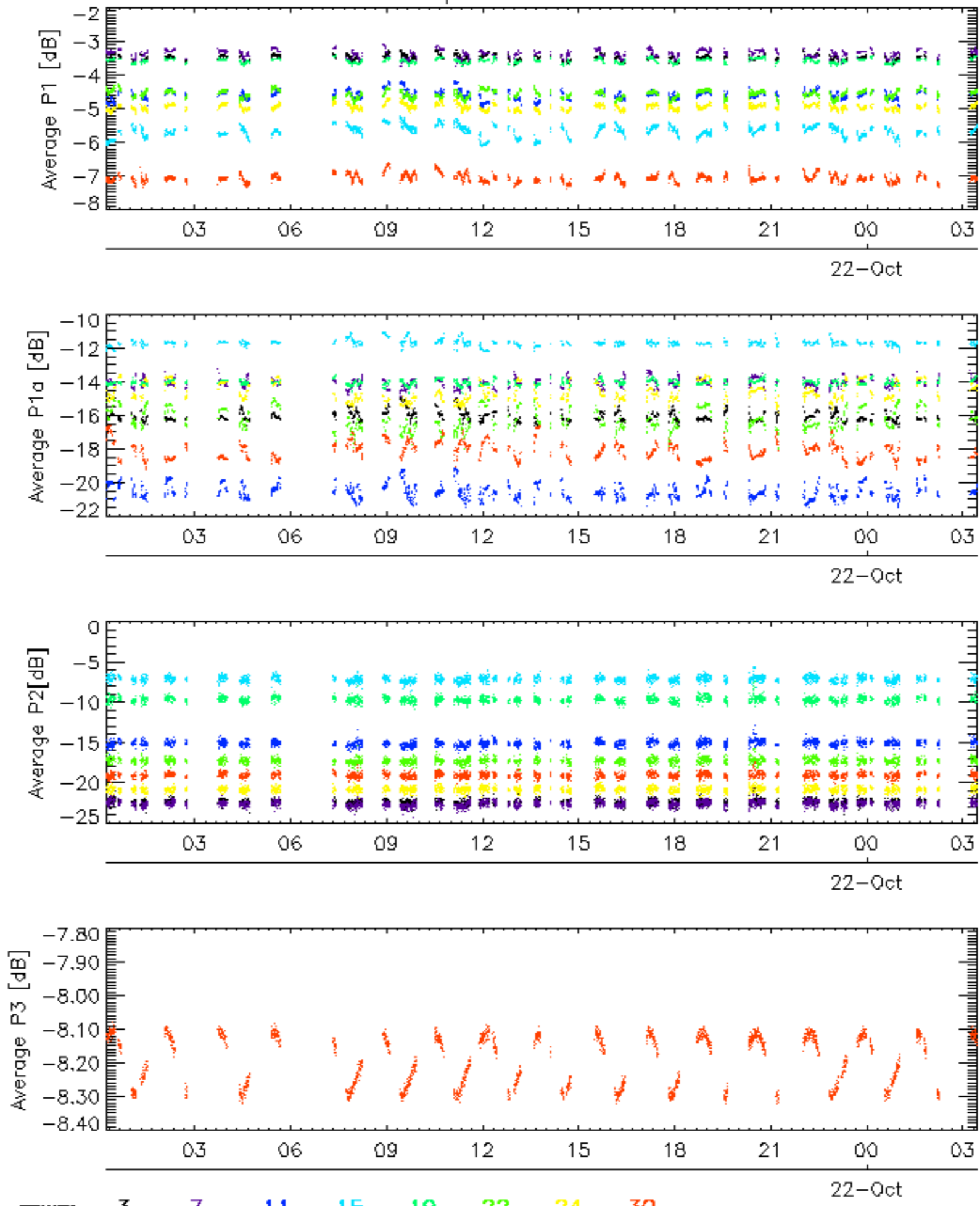


Cal pulses for WVS IS2



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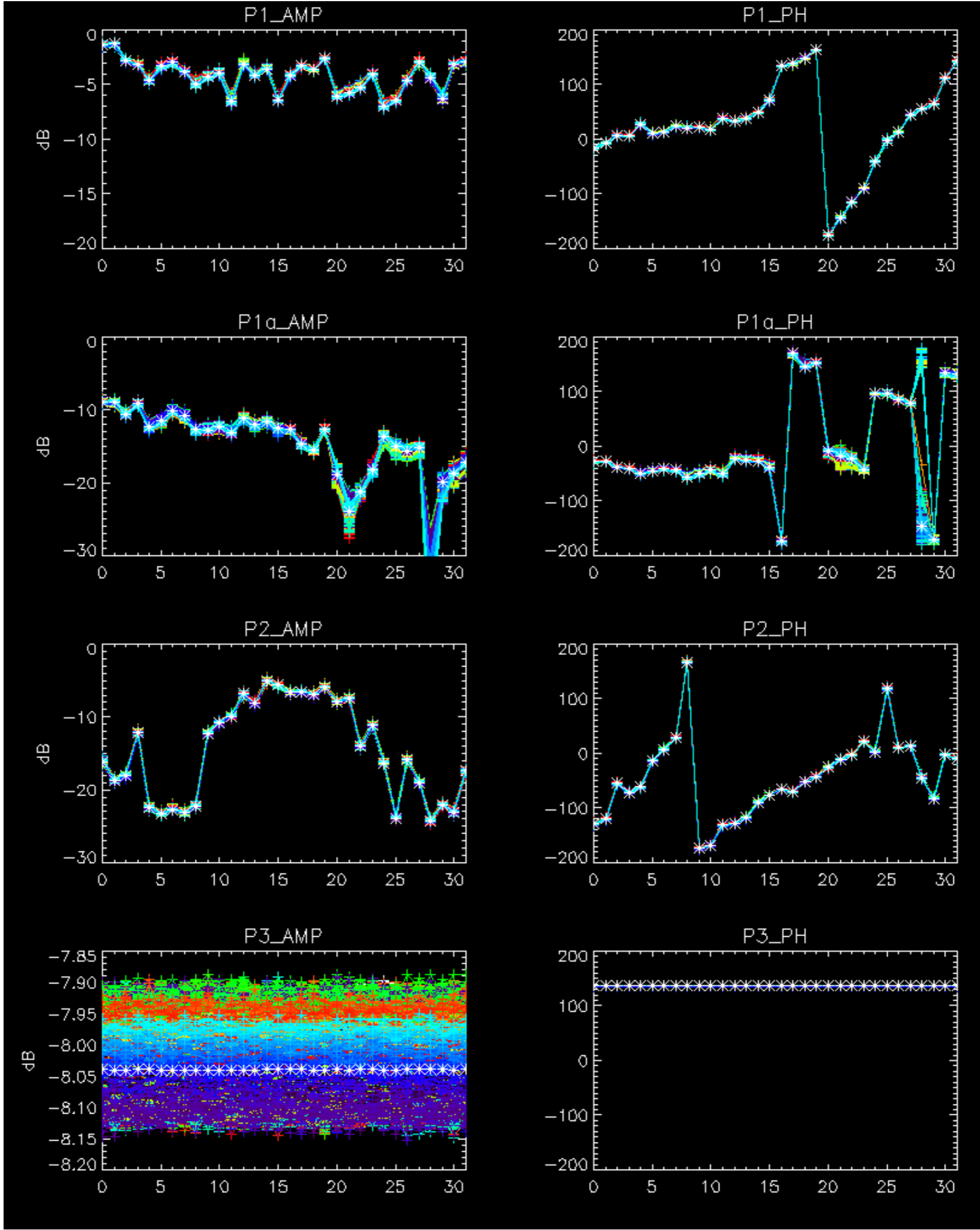
Cal pulses for WVS IS2

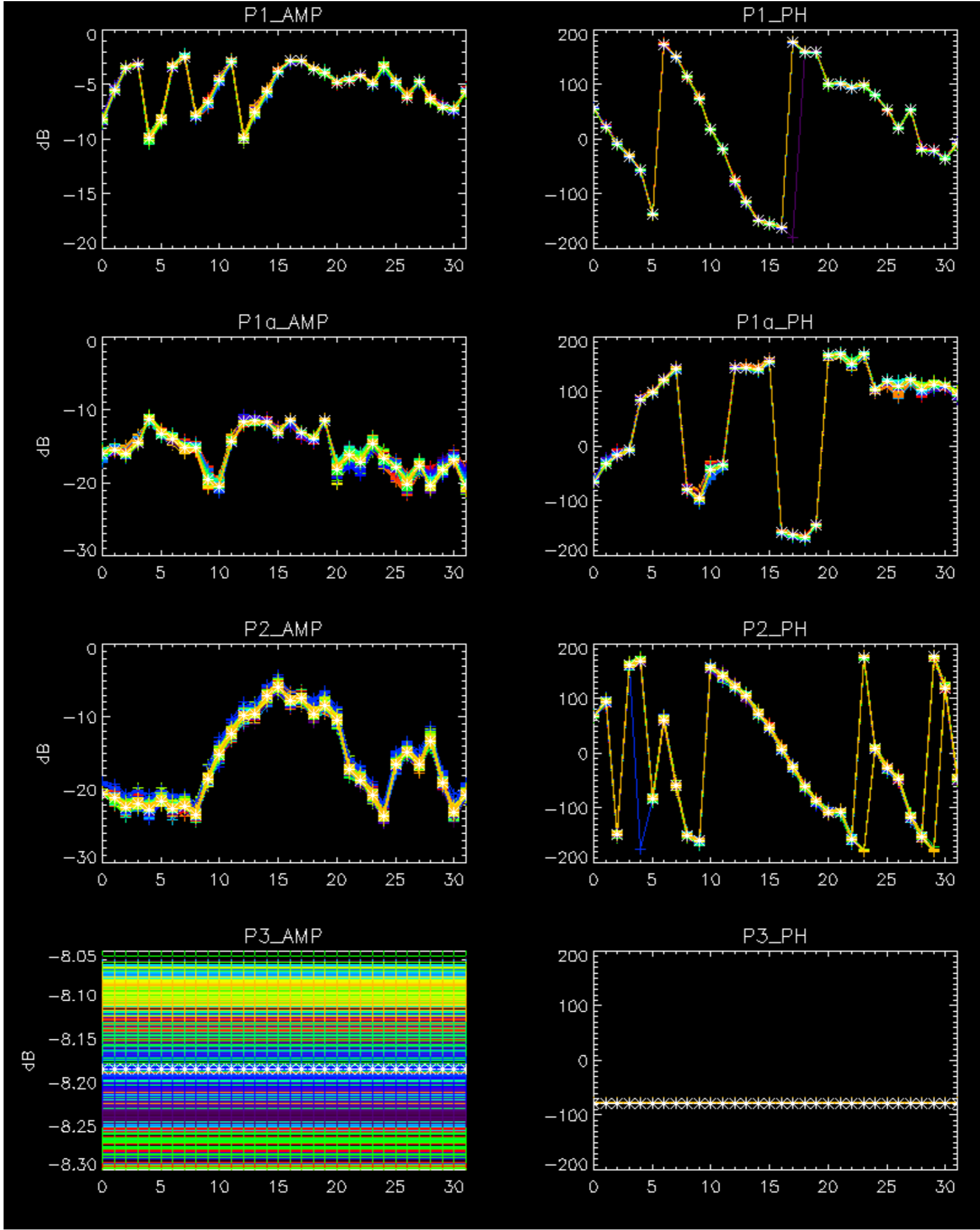


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No anomalies observed on available browse products

No anomalies observed.

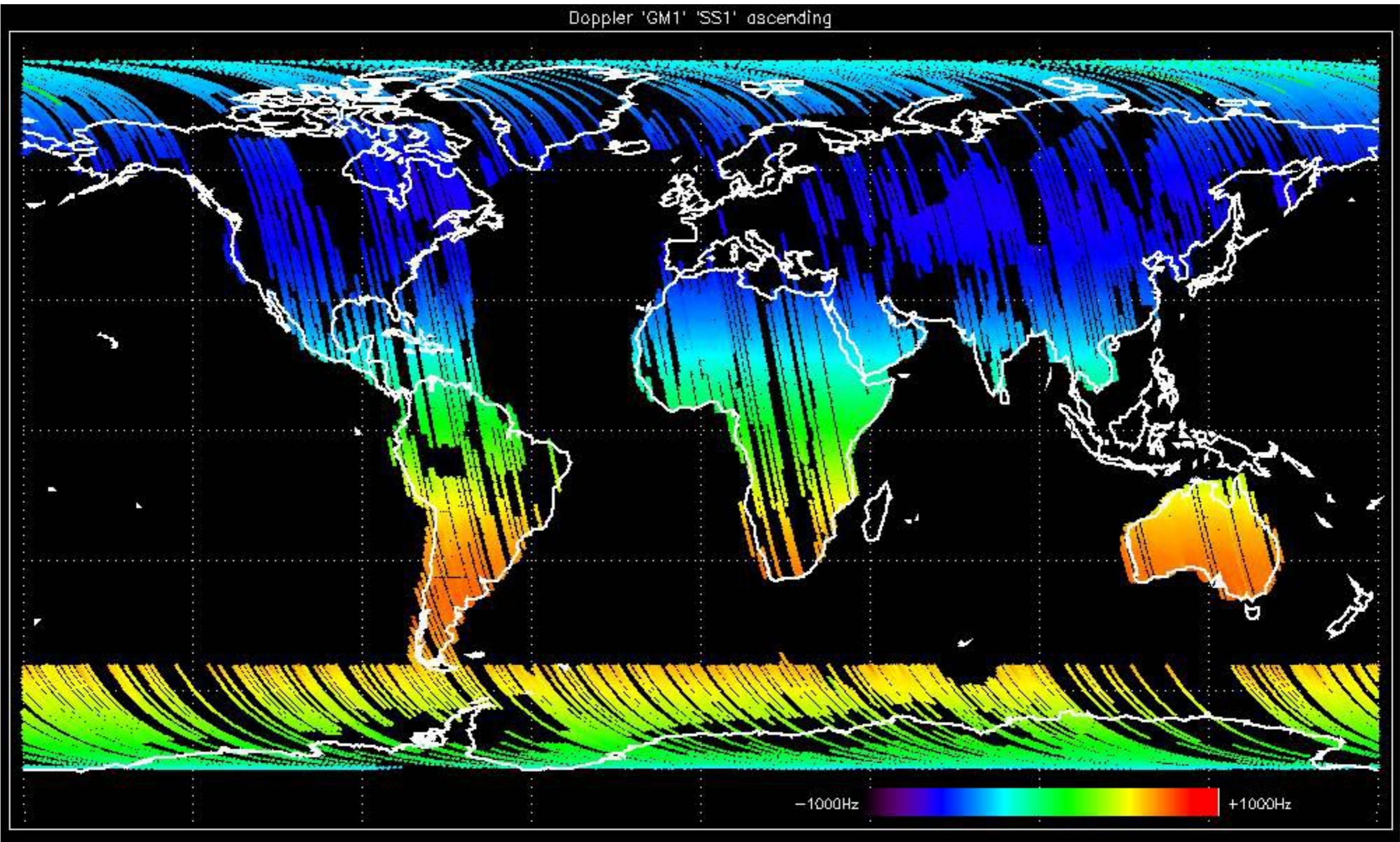




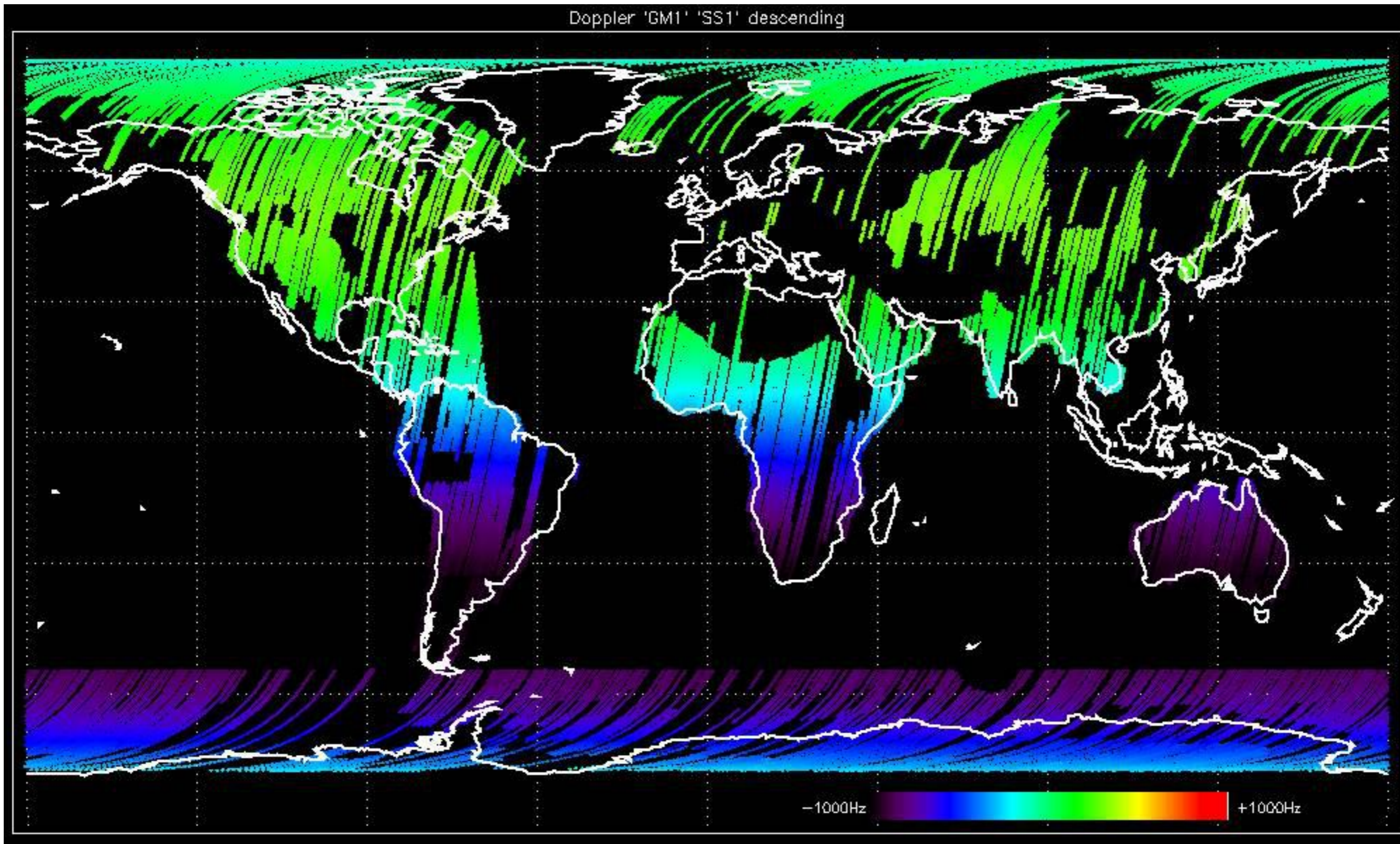
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

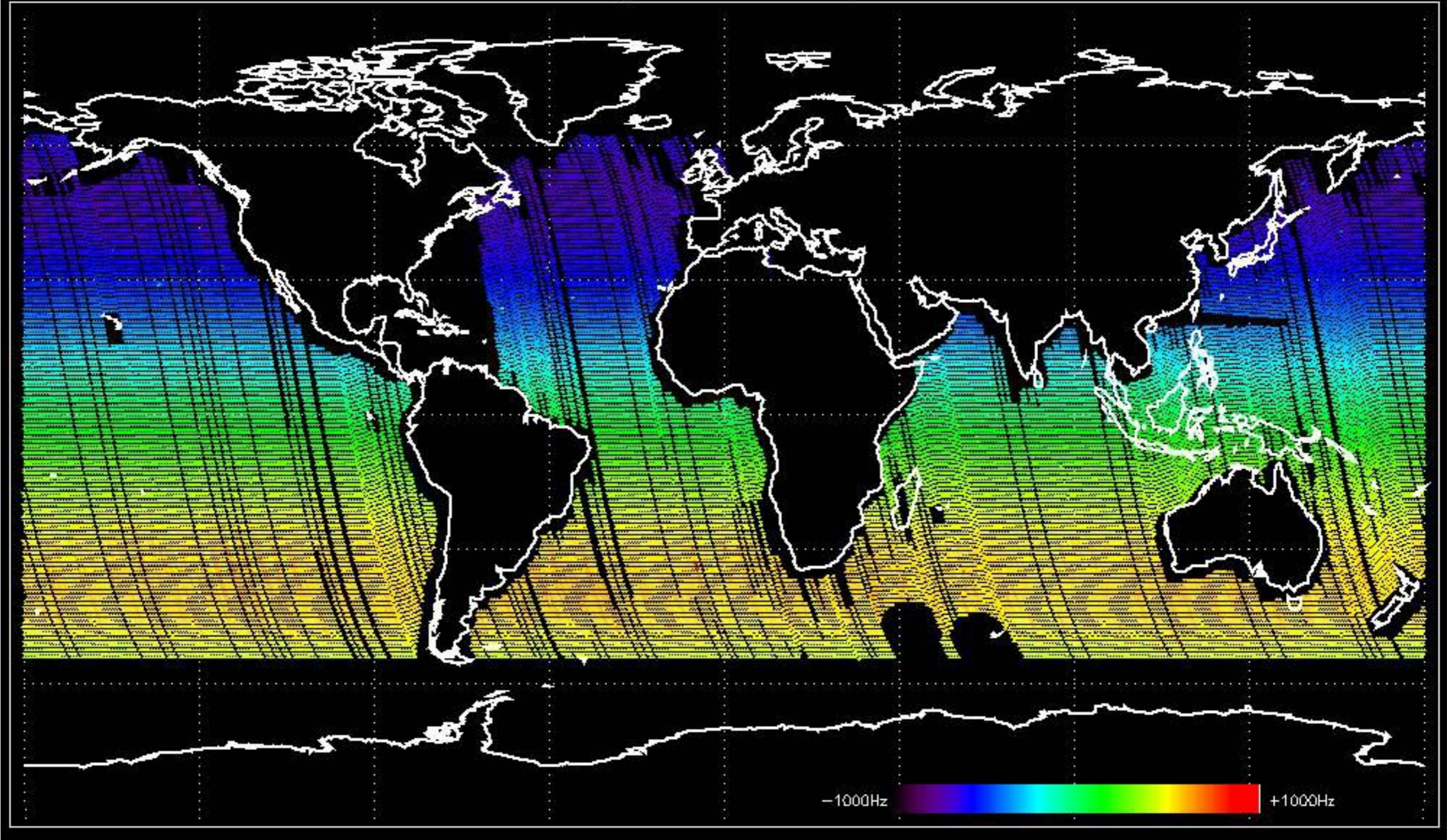
Doppler 'GM1' 'SS1' ascending



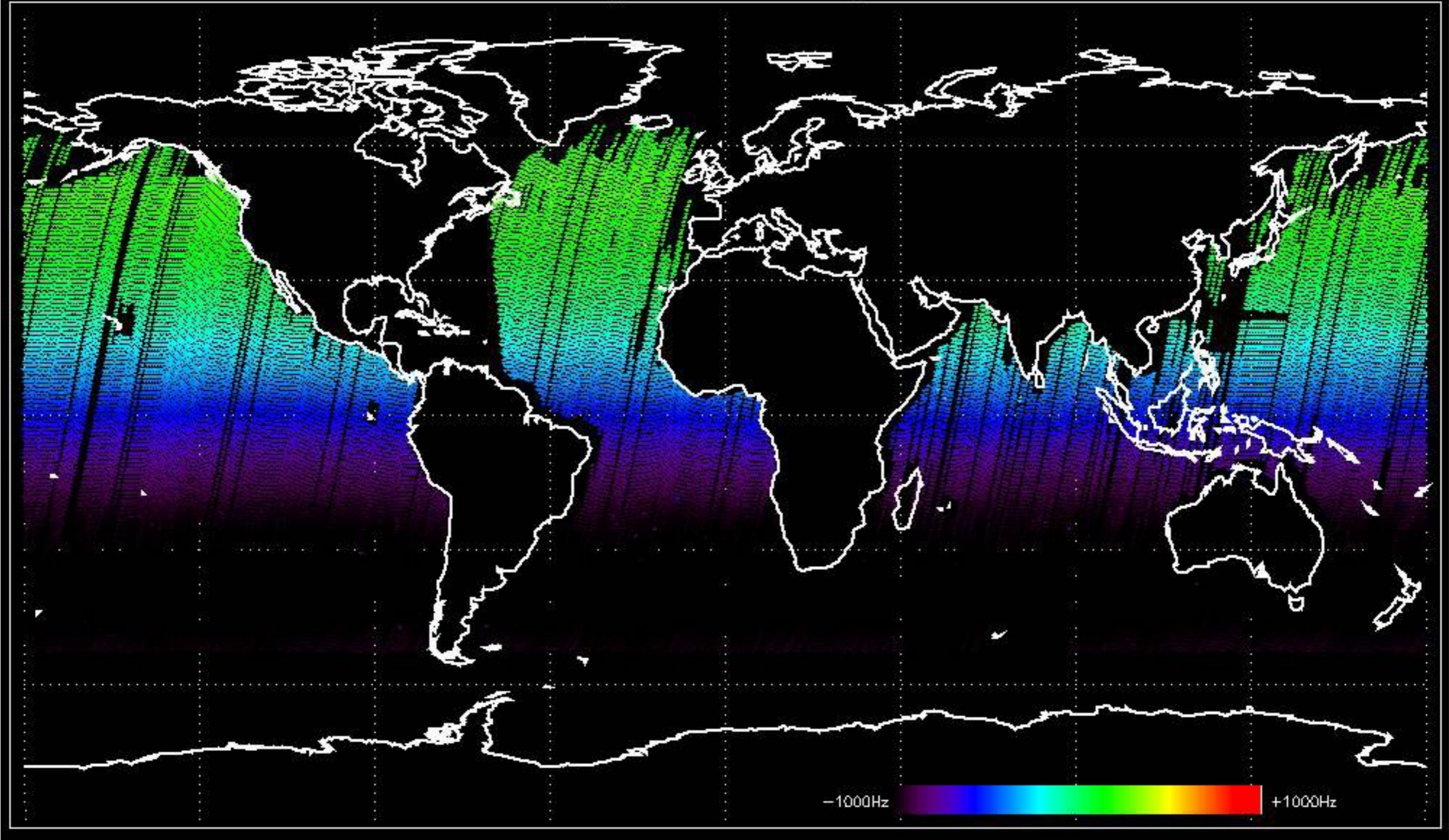
Doppler 'GM1' 'SS1' descending



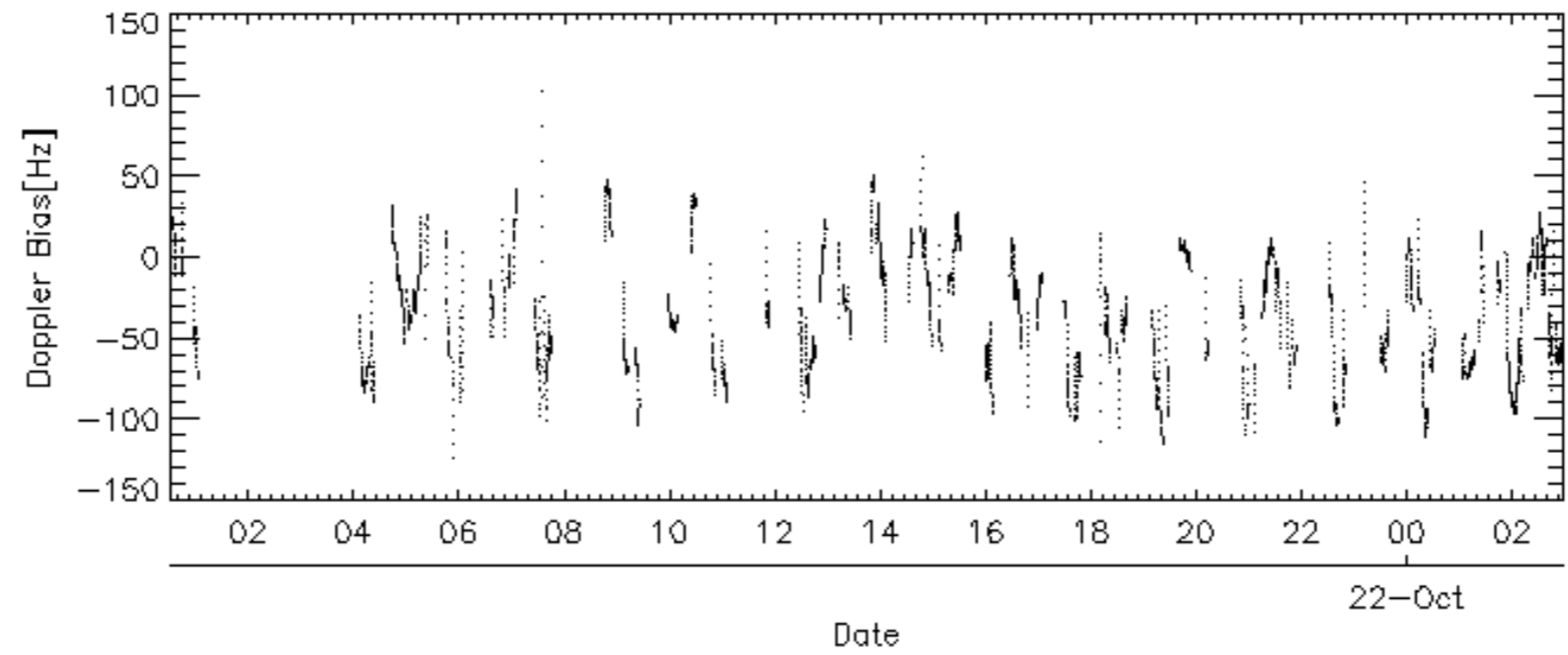
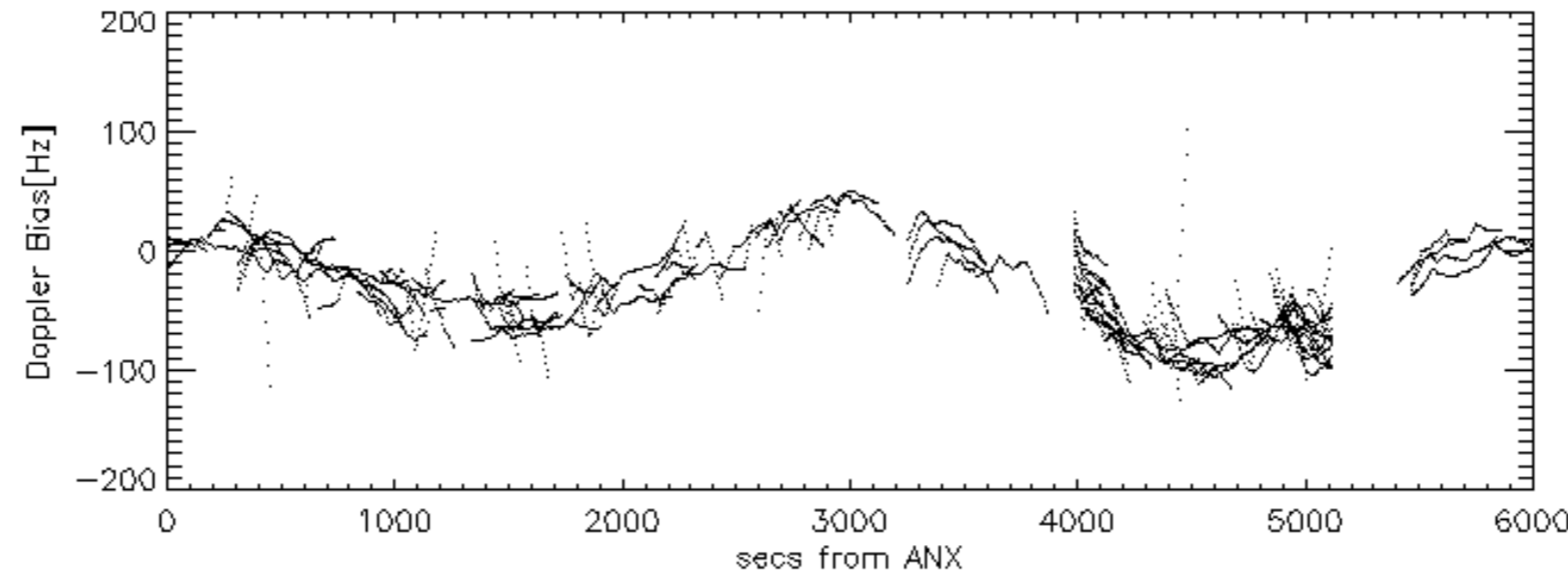
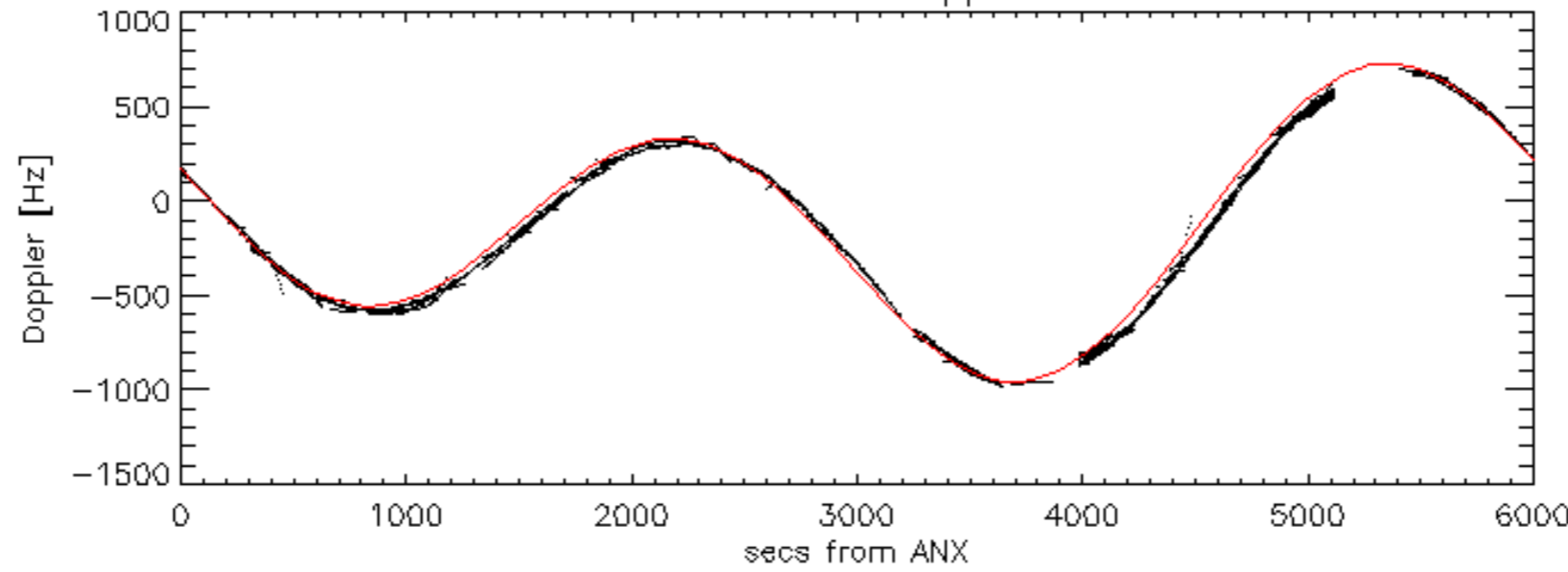
Doppler 'WVS' 'IS2' ascending

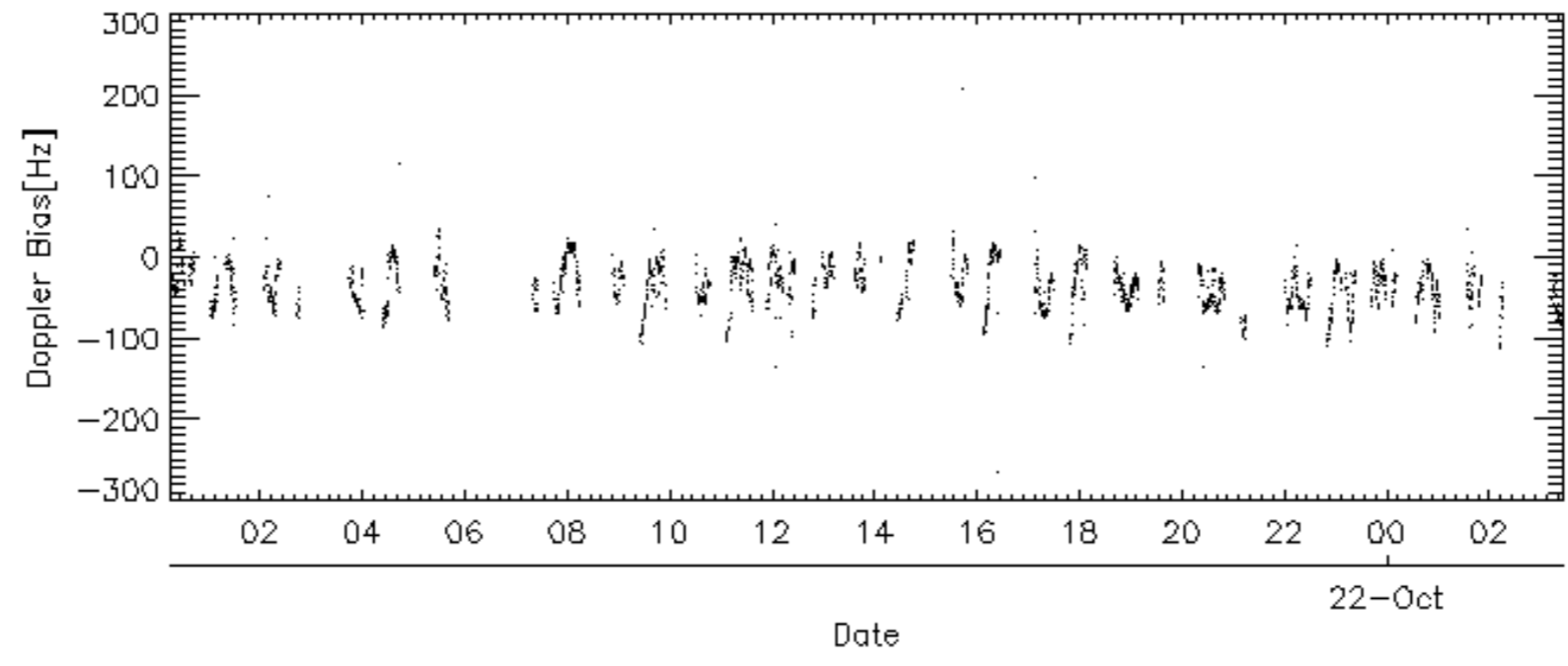
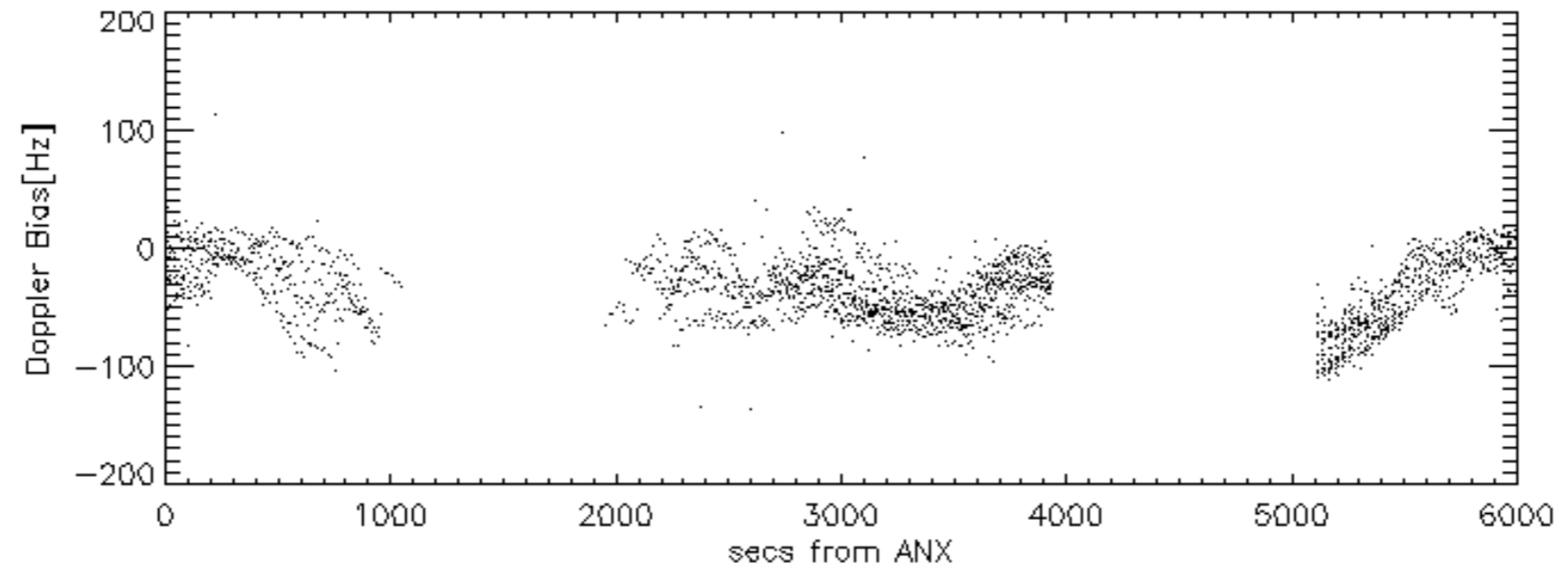
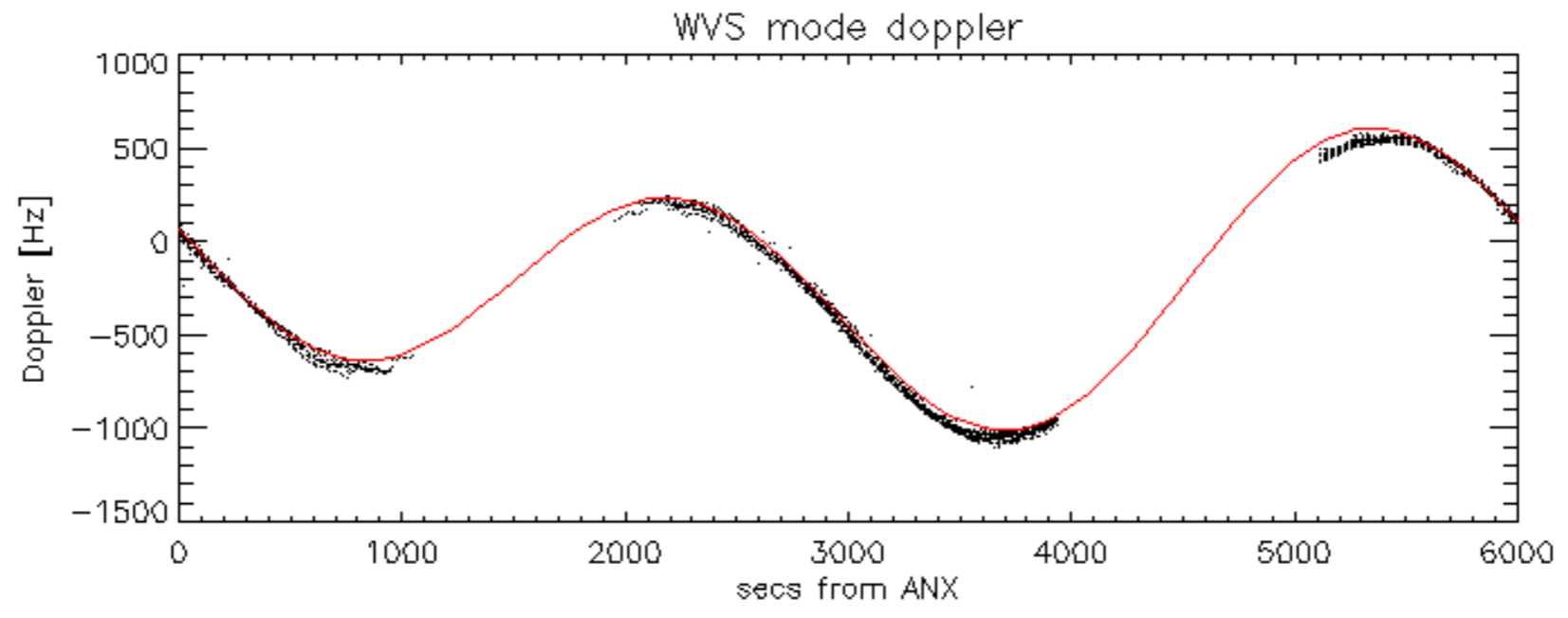


Doppler 'WVS' 'IS2' descending

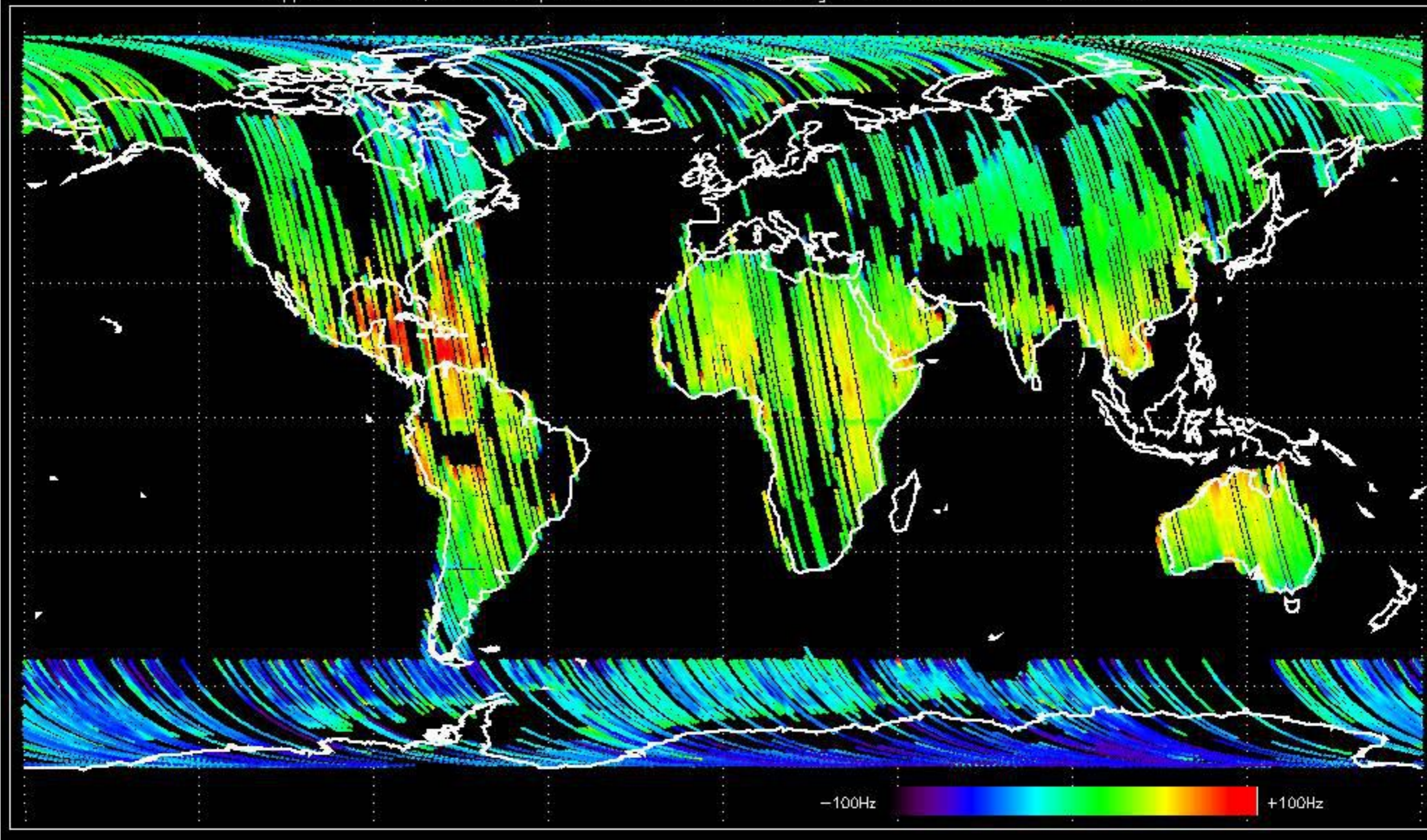


GM1 mode doppler

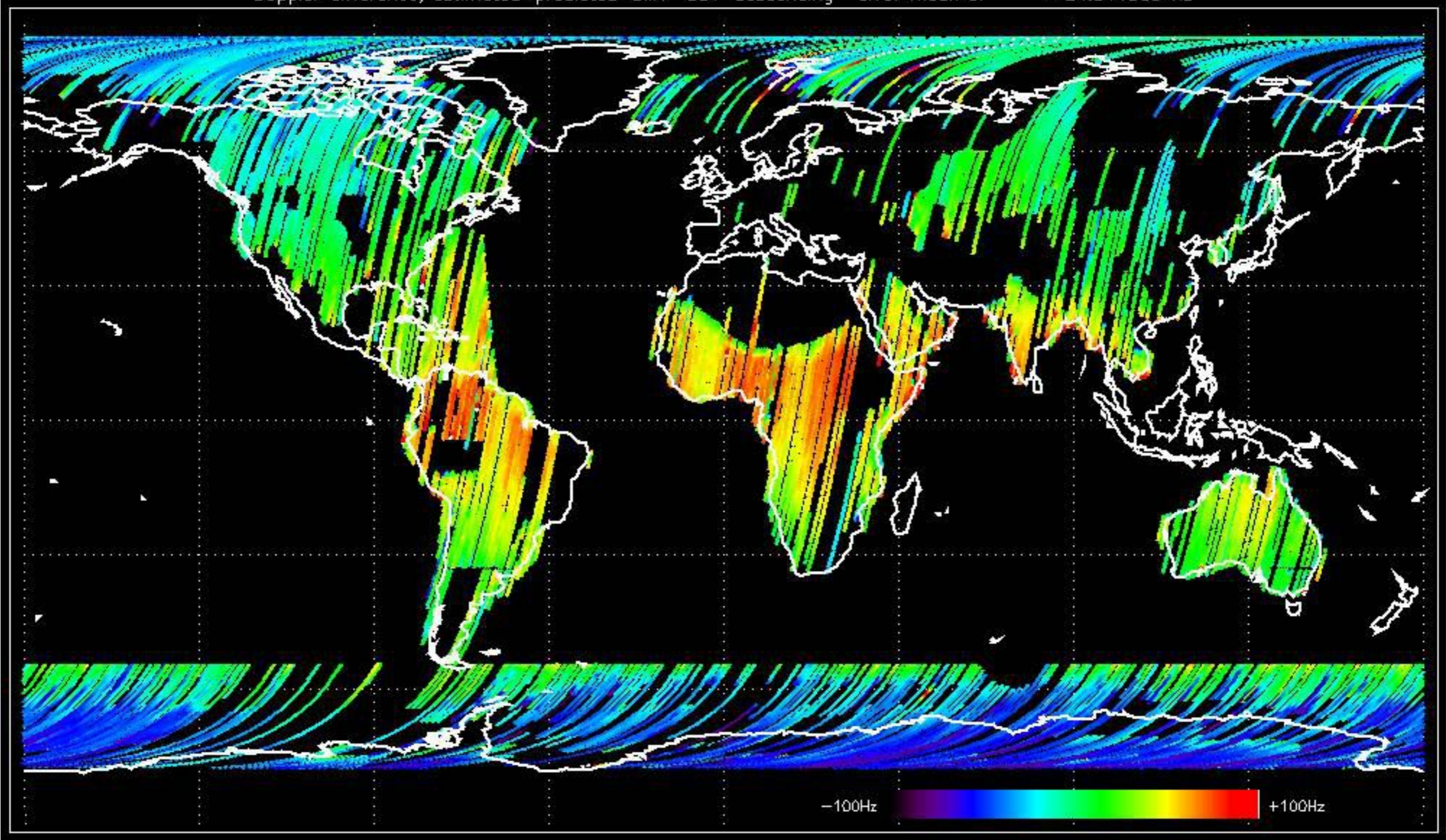




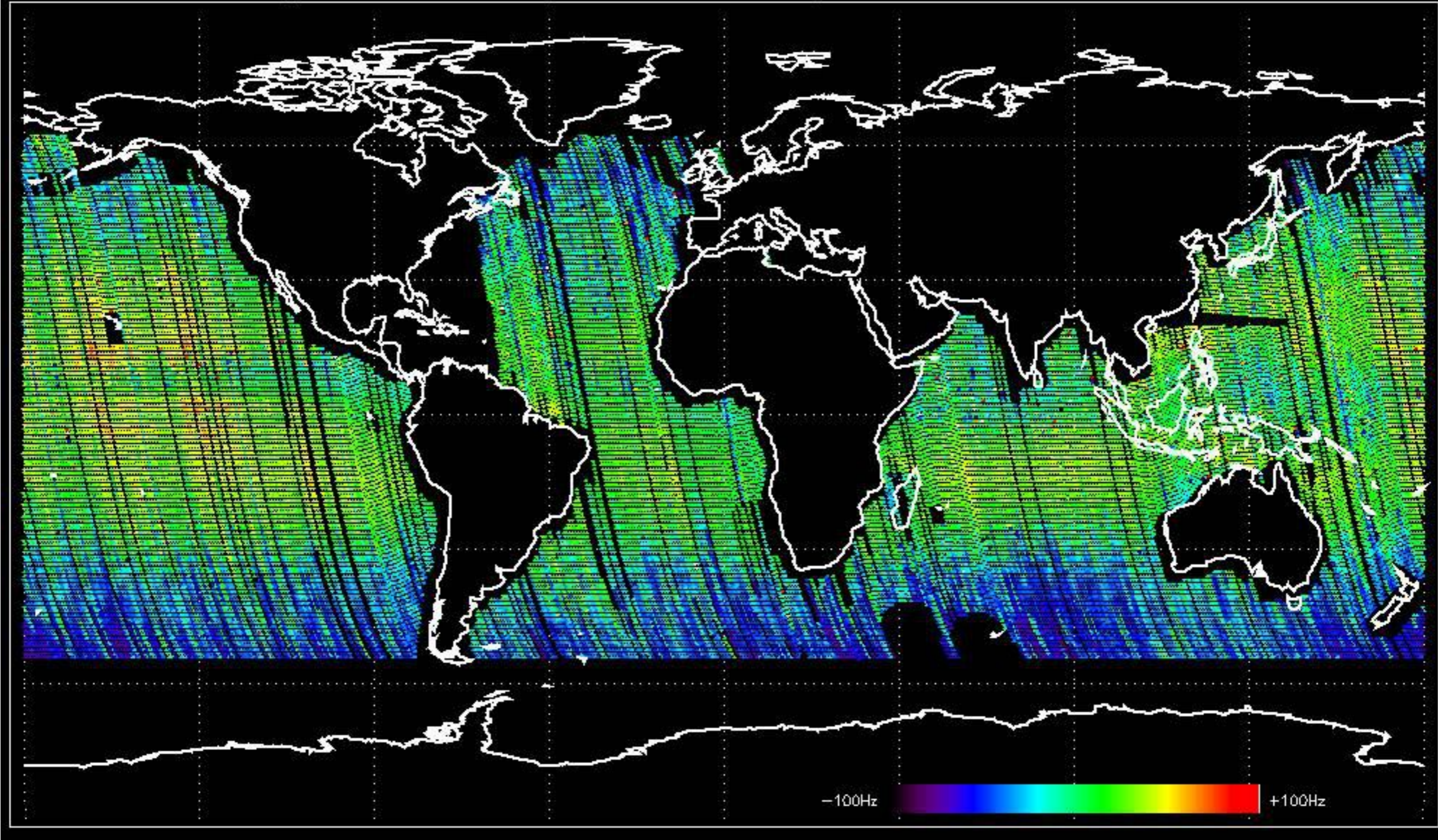
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -30.959696 Hz



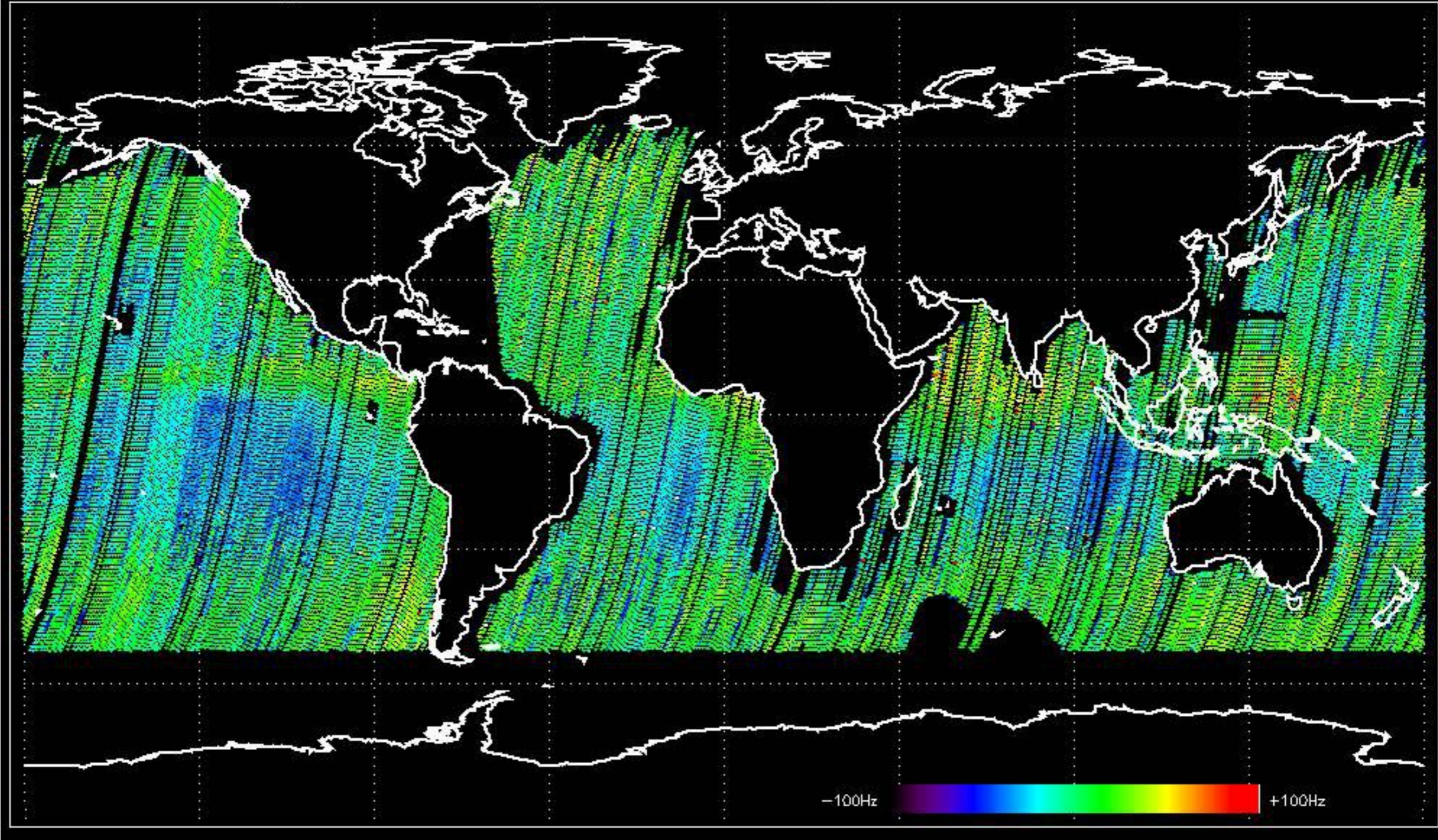
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.314065 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -30.048354 Hz



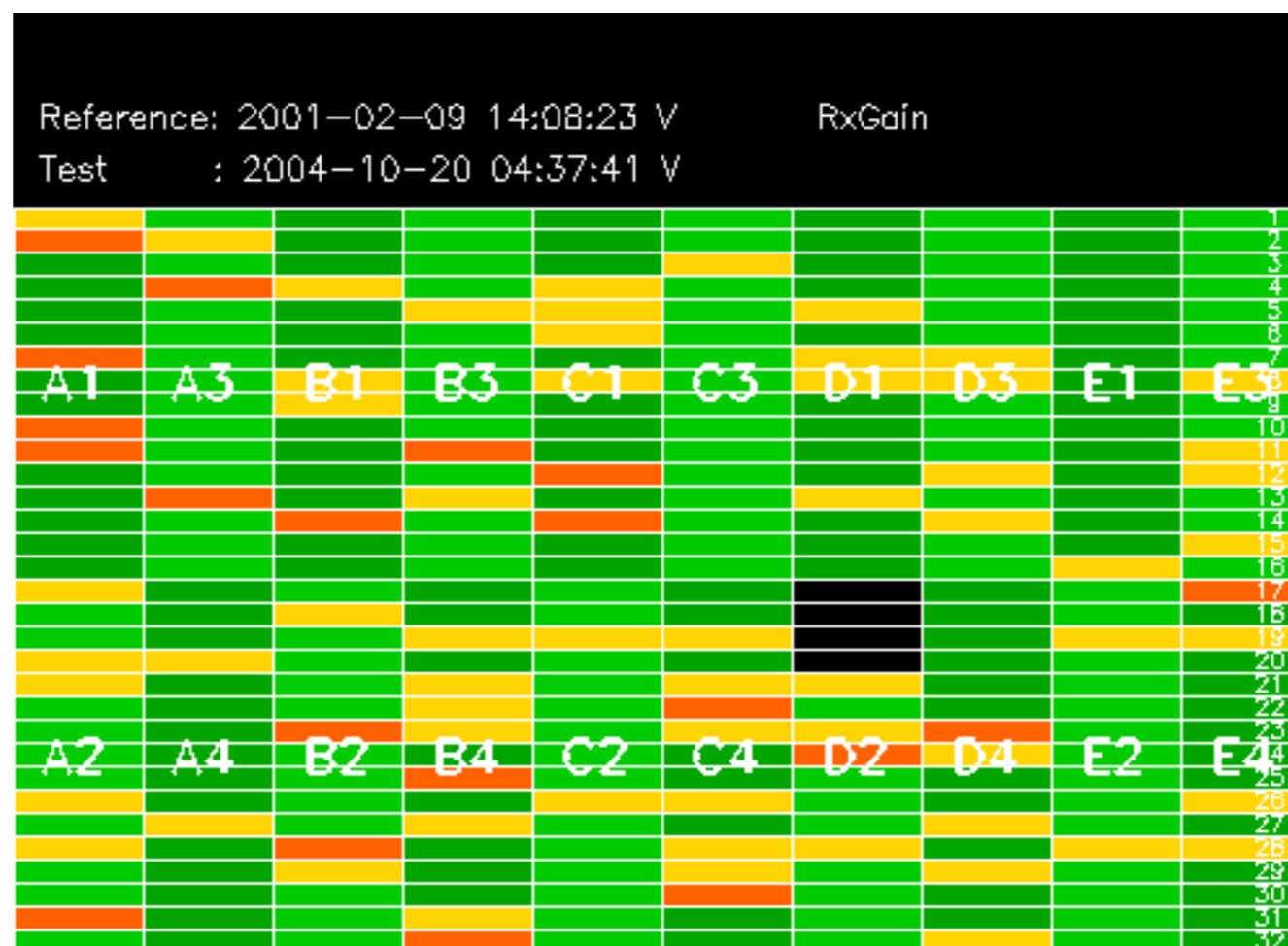
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -33.661078 Hz

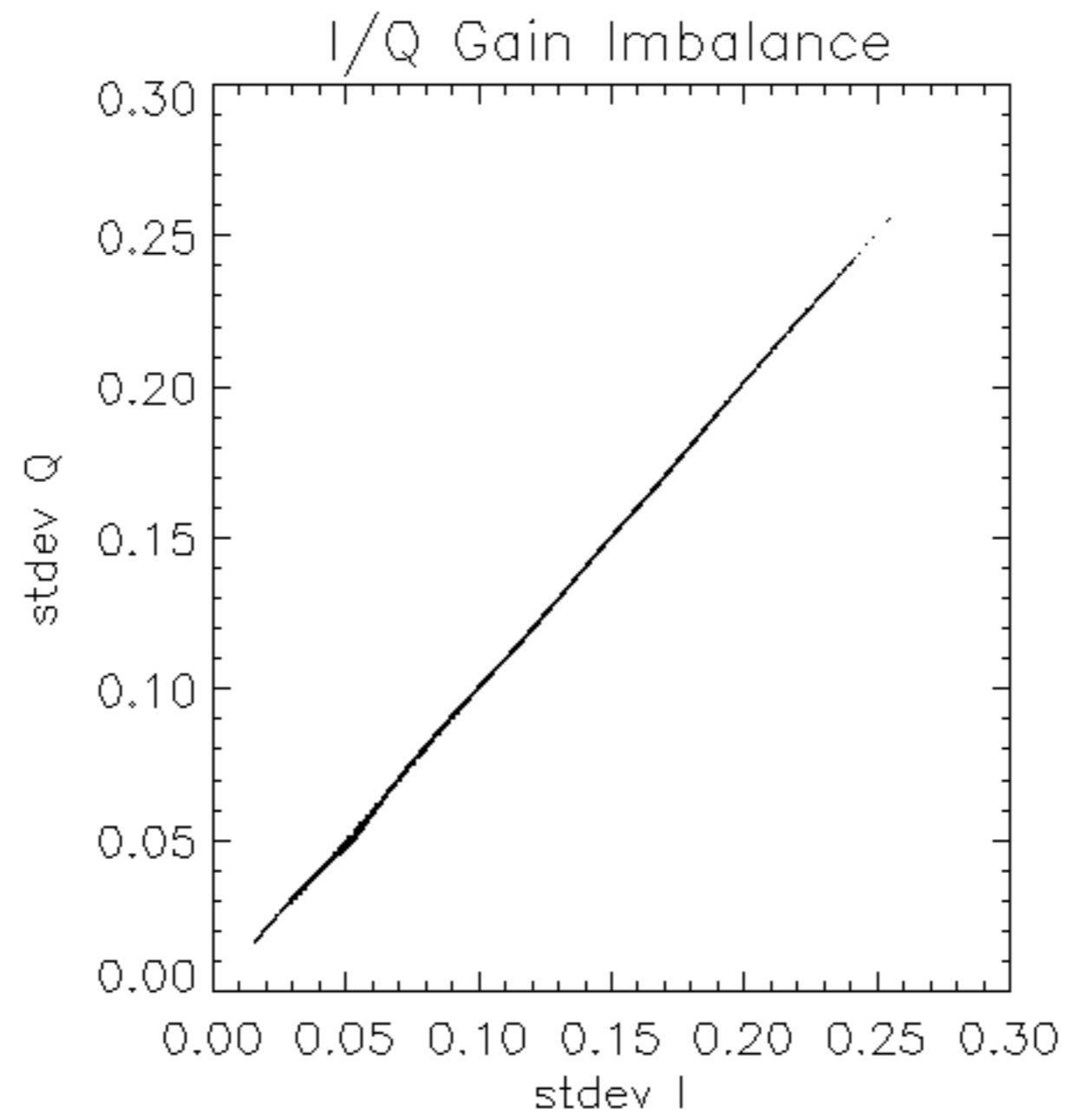


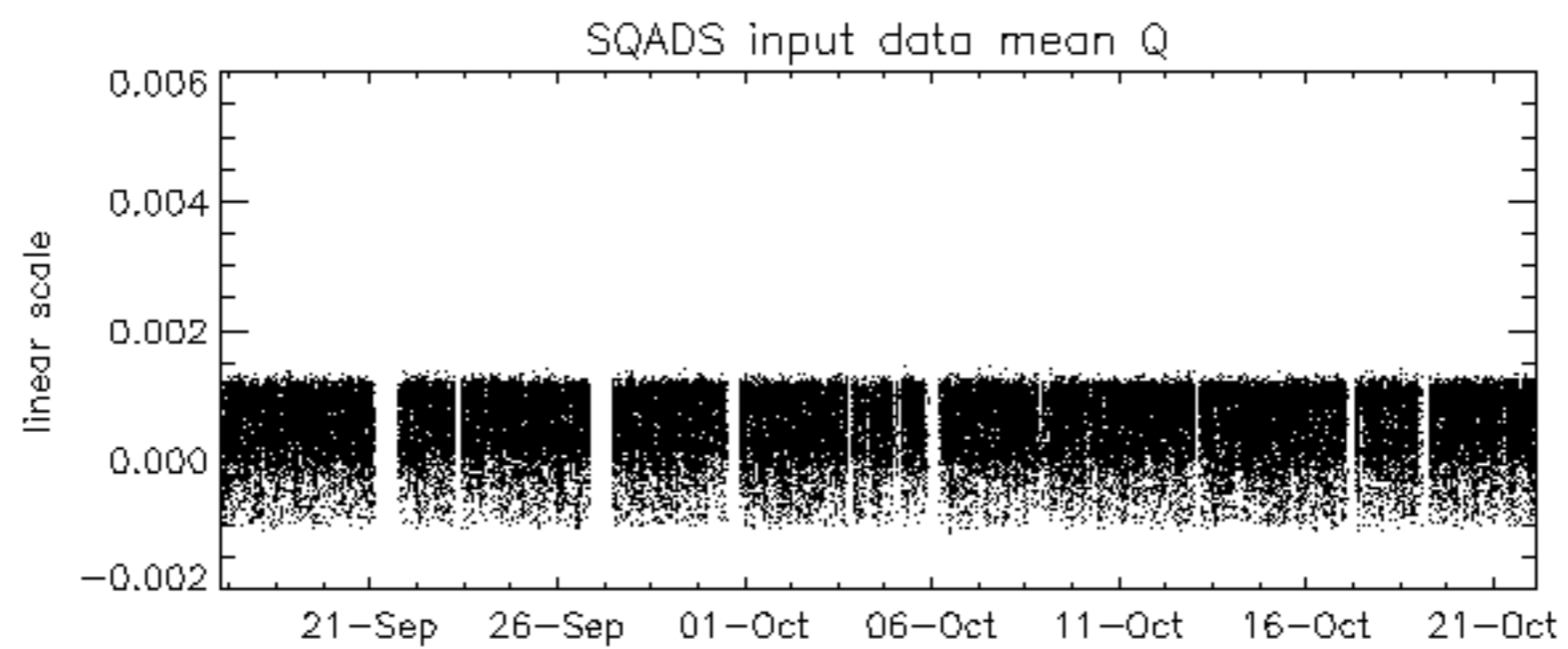
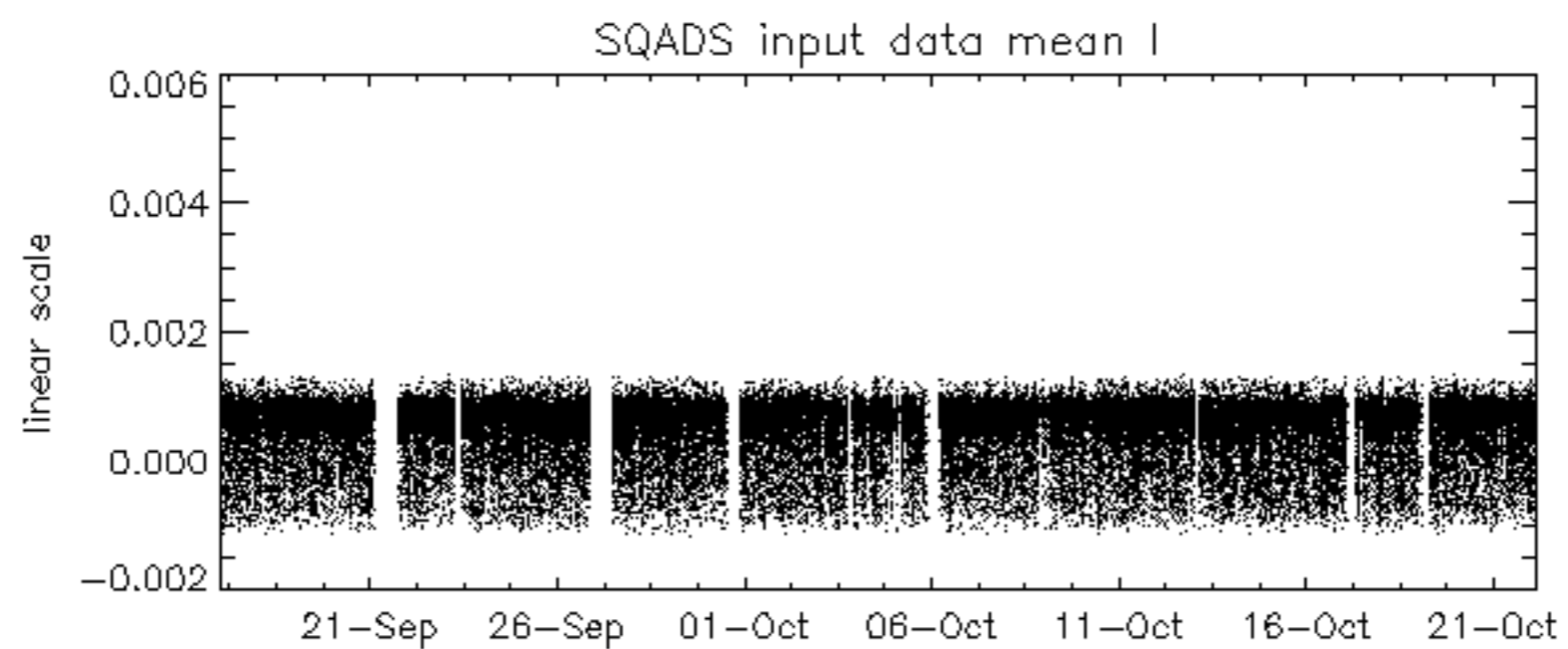
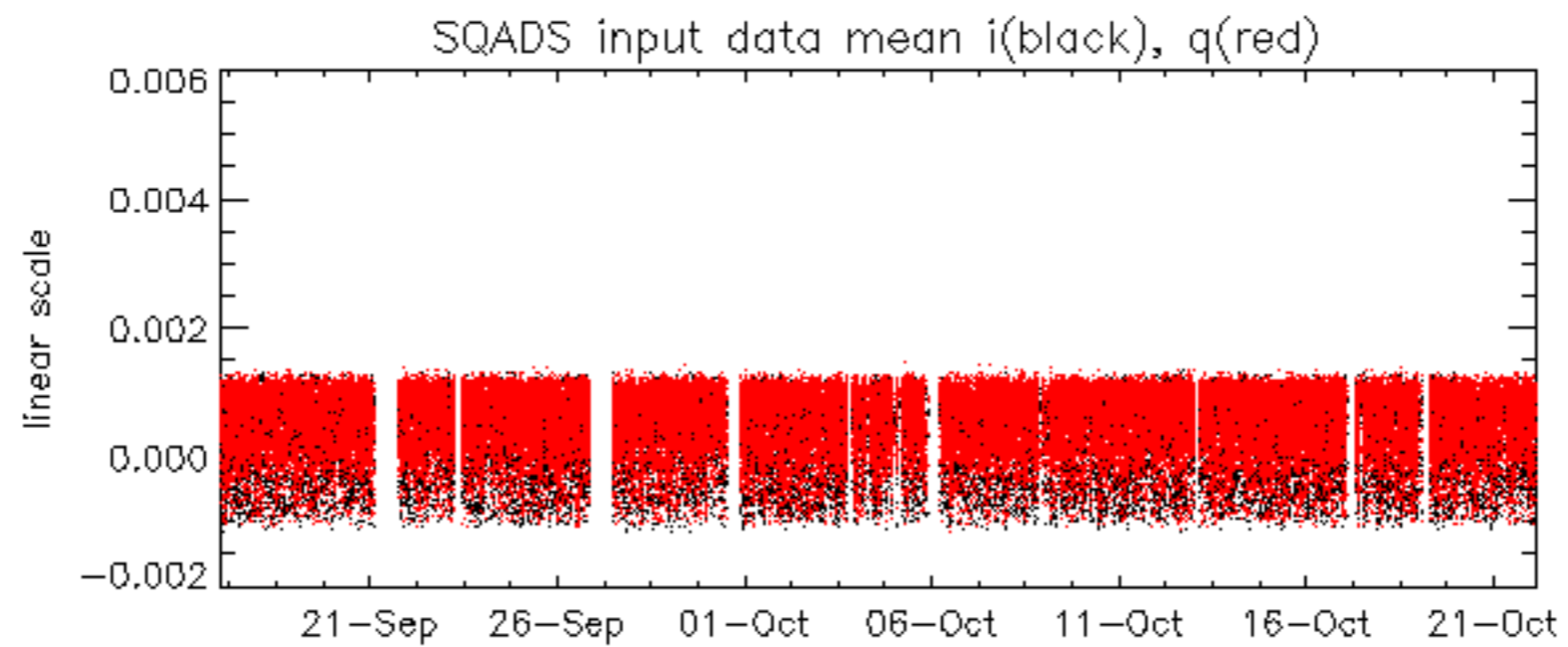
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

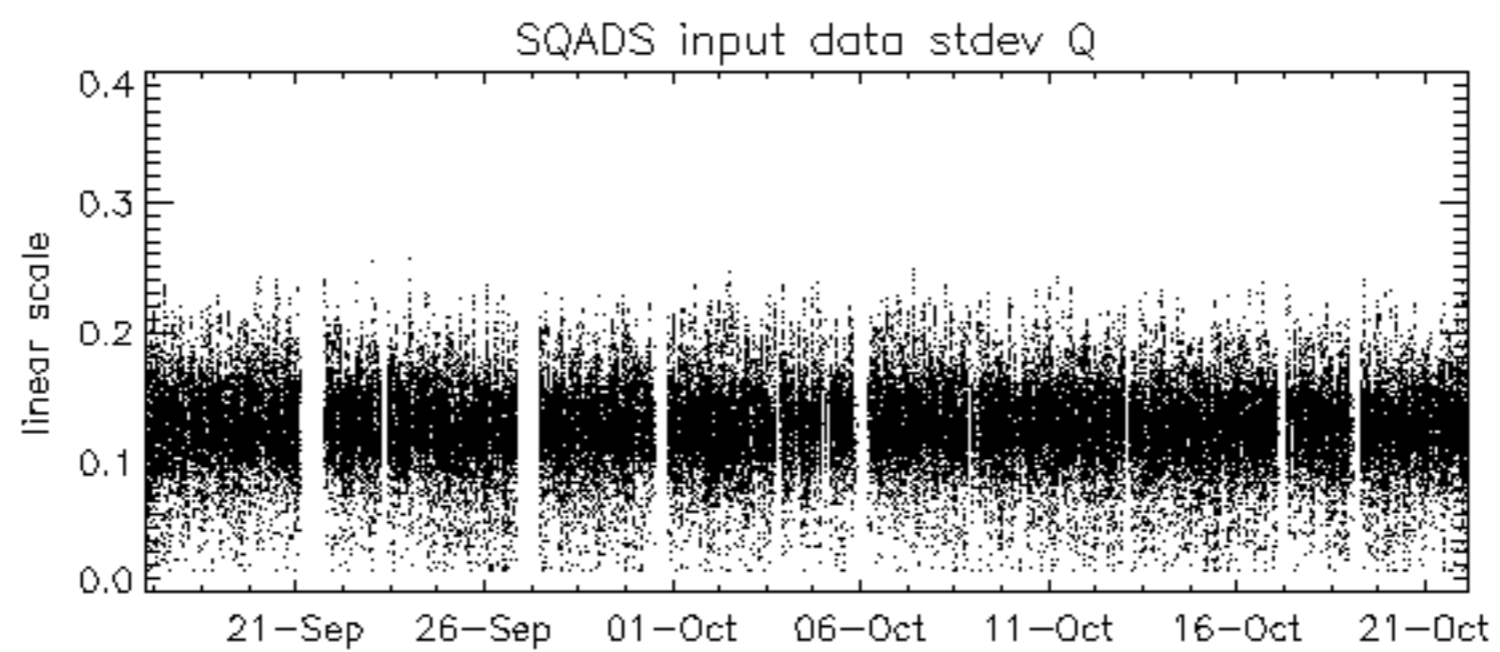
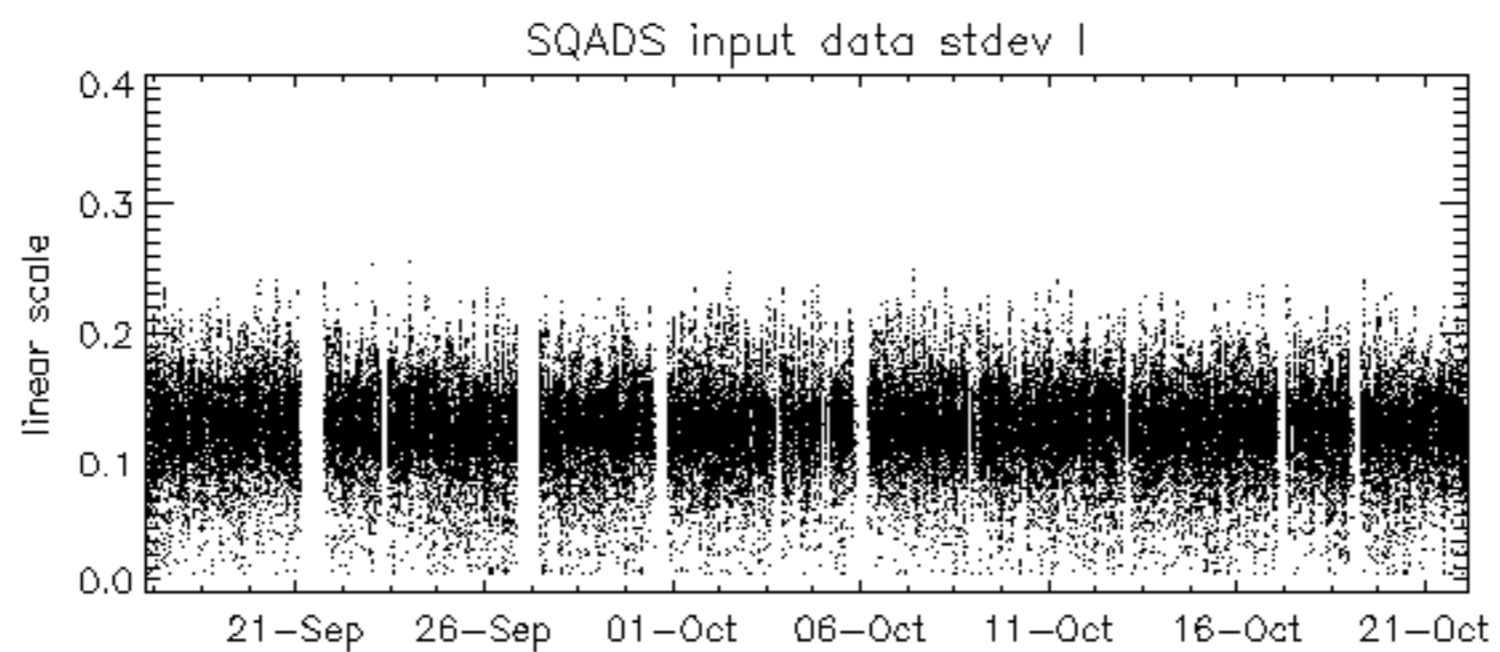
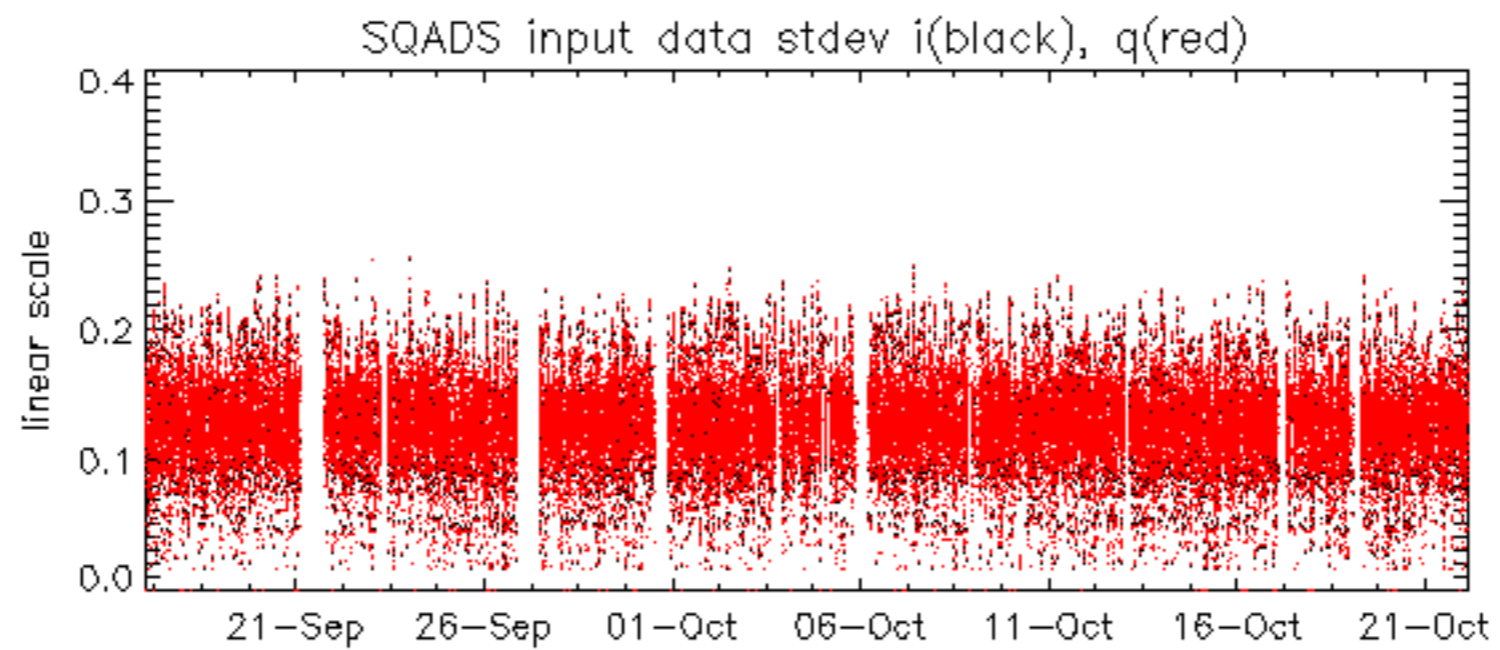
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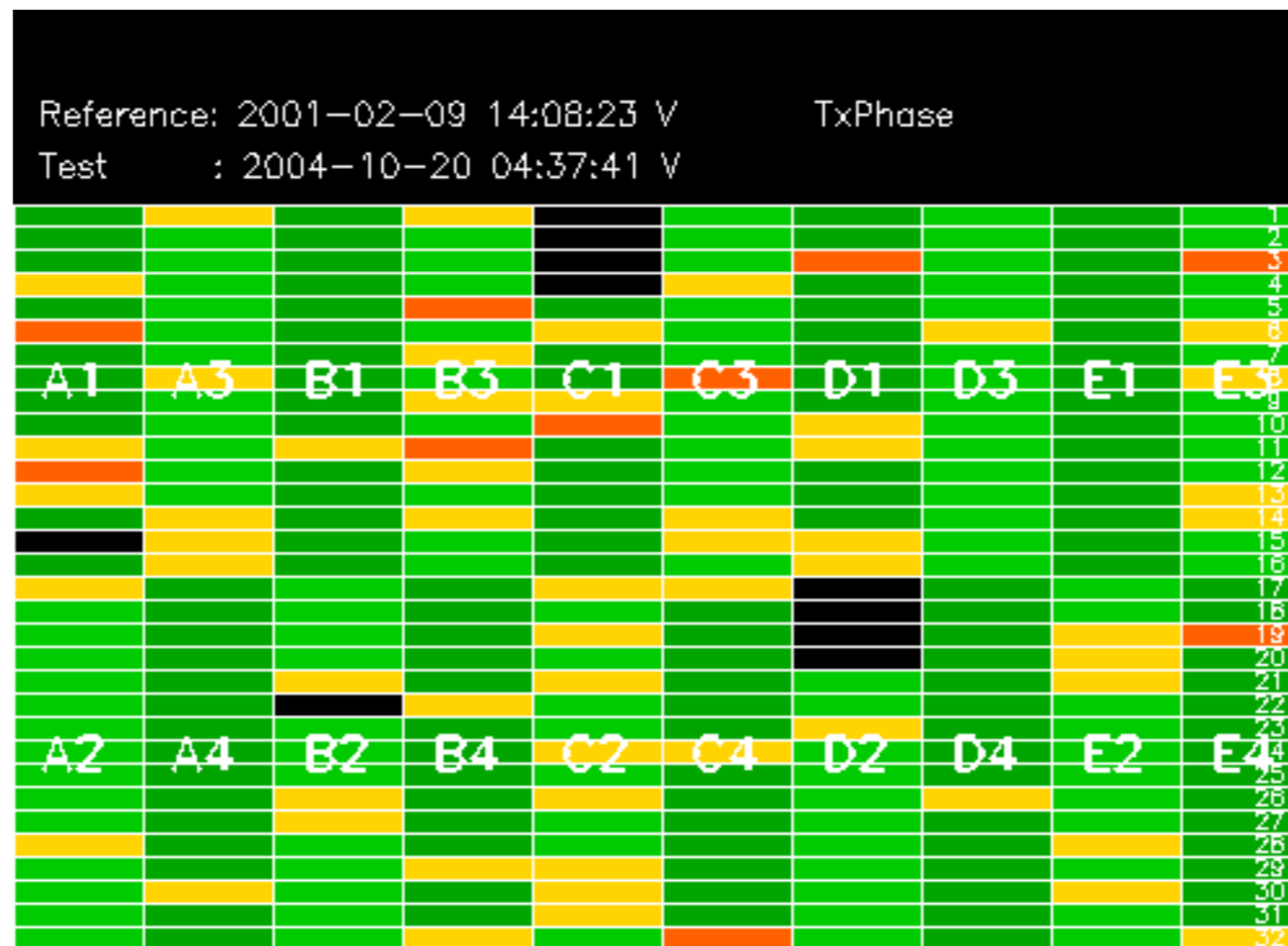
No anomalies observed.

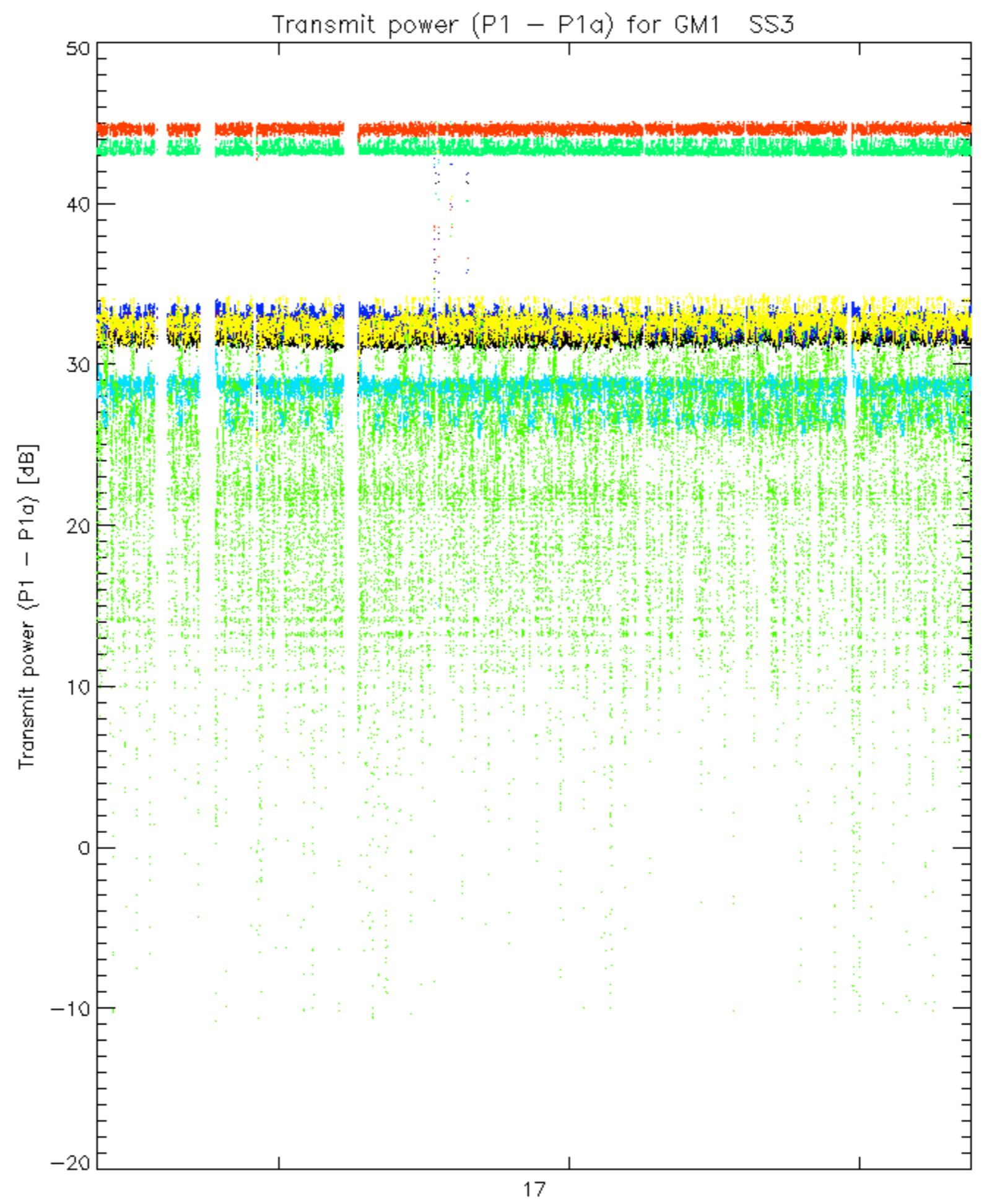




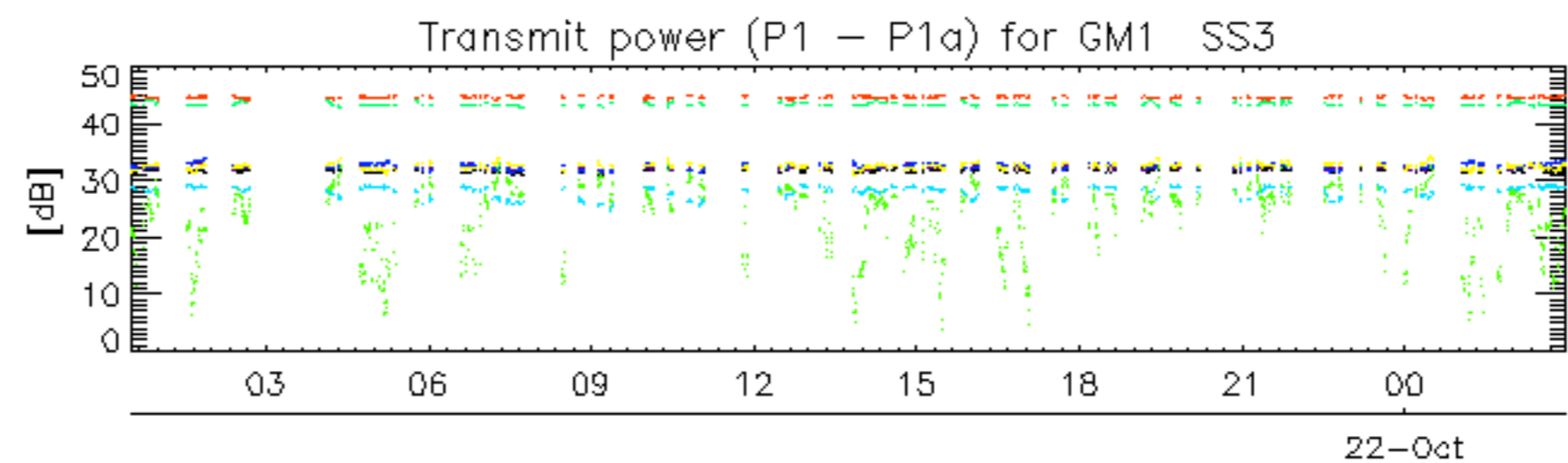




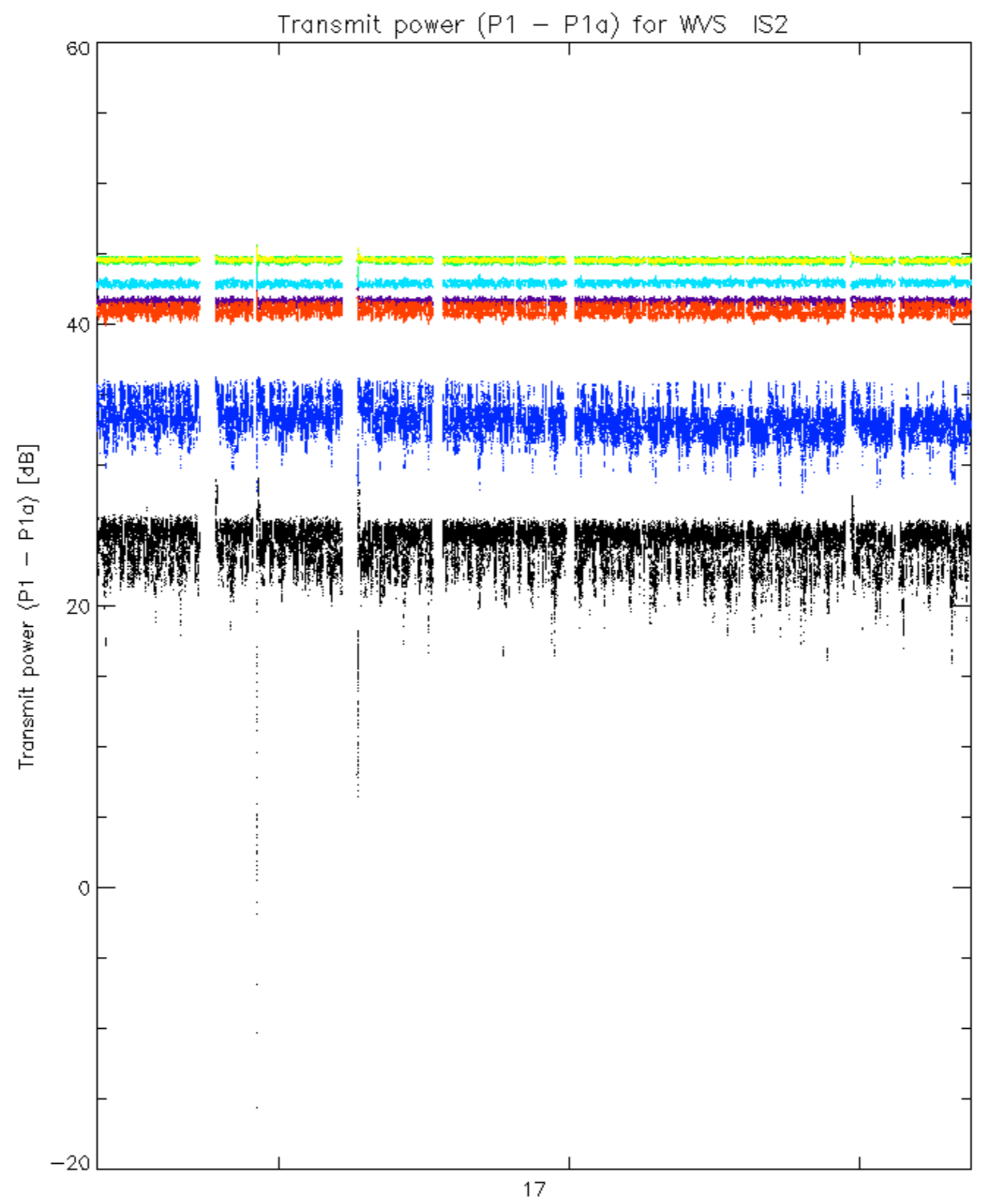




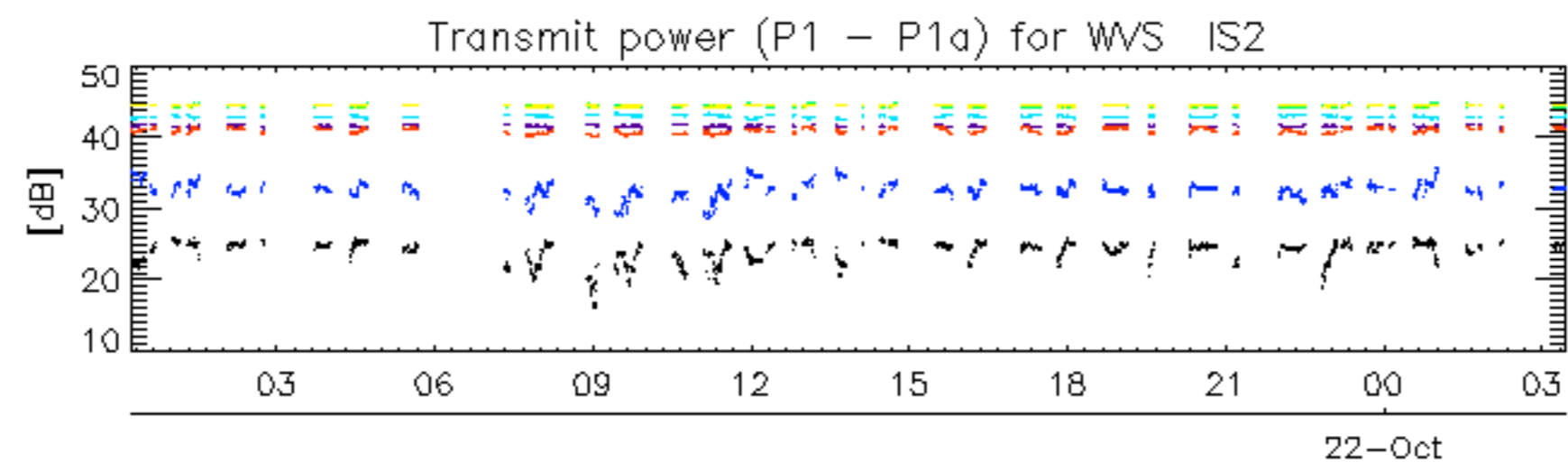
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rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

No unavailabilities during the reported period.