

REPORT OF 040920

last update on Mon Sep 20 13:55:13 GMT 2004

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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

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:

Polarisation	Start Time
V	20040919 023108
H	20040918 030245

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

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	-3.461234	0.023323	-0.081880
7	P1	-3.321582	0.028424	-0.120889
11	P1	-4.644936	0.041932	-0.044118
15	P1	-5.759825	0.087328	-0.091056
19	P1	-3.508564	0.078774	-0.104733
22	P1	-4.558121	0.107265	-0.073935
24	P1	-4.998853	0.126059	-0.083771
30	P1	-7.021756	0.148899	-0.196246
3	P1	-16.067392	0.964488	-1.020264
7	P1	-14.022084	0.075259	0.068585
11	P1	-20.239473	0.282401	-0.097848
15	P1	-11.776099	0.042283	0.021614

19	P1	-14.022574	1.097051	-0.345037
22	P1	-16.073071	0.350005	0.216791
24	P1	-14.478646	0.317046	0.146924
30	P1	-17.924267	0.628446	-0.145407

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.309231	0.084700	-0.022987
7	P2	-22.603317	0.129450	-0.039372
11	P2	-15.237744	0.156223	0.111915
15	P2	-7.061914	0.098178	-0.006497
19	P2	-9.568686	0.169184	0.035130
22	P2	-17.323877	0.114876	0.058475
24	P2	-20.754953	0.091323	-0.044966
30	P2	-19.191698	0.083099	0.120281

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.151706	0.002791	-0.024529
7	P3	-8.151718	0.002791	-0.024438
11	P3	-8.151729	0.002791	-0.024371
15	P3	-8.151725	0.002791	-0.024370
19	P3	-8.151717	0.002791	-0.024388
22	P3	-8.151711	0.002790	-0.024434
24	P3	-8.151706	0.002790	-0.024459
30	P3	-8.151628	0.002787	-0.024586

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	-2.774098	0.109002	-0.424467
7	P1	-2.989085	0.113621	-0.297169
11	P1	-3.889796	0.063473	-0.056795
15	P1	-3.538775	0.078791	-0.067940
19	P1	-3.517042	0.097618	-0.109779
22	P1	-5.728512	0.121825	-0.084511
24	P1	-3.951349	0.053563	-0.096481
30	P1	-6.212116	0.097974	-0.084462
3	P1	-10.653412	0.516917	-1.162469
7	P1	-10.086658	0.152592	-0.164389
11	P1	-12.167741	0.112151	0.008928
15	P1	-11.678084	0.075191	-0.053297
19	P1	-15.745160	2.041790	-0.417948
22	P1	-23.345041	1.563885	0.275406
24	P1	-17.939810	0.347572	0.004807
30	P1	-20.401802	1.269954	0.121397

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.988316	0.049670	-0.007692
7	P2	-22.744164	0.039866	0.020315
11	P2	-10.942634	0.060289	0.089051
15	P2	-4.961930	0.030516	-0.013732
19	P2	-6.773346	0.045935	-0.027861
22	P2	-7.431959	0.037932	0.043072
24	P2	-11.060102	0.043763	-0.022975
30	P2	-22.159939	0.029387	0.089209

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.003412	0.003064	-0.022637
7	P3	-8.003438	0.003062	-0.022756
11	P3	-8.003463	0.003064	-0.022471
15	P3	-8.003474	0.003051	-0.022944

19	P3	-8.003444	0.003071	-0.022737
22	P3	-8.003469	0.003062	-0.022813
24	P3	-8.003514	0.003081	-0.022906
30	P3	-8.003424	0.003065	-0.022639

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	0.000469617
	stdev	2.18977e-07
MEAN Q	mean	0.000537785
	stdev	2.36534e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127432
	stdev	0.000958775
STDEV Q	mean	0.127654
	stdev	0.000968350



5.3 - Gain imbalance I/Q



6 - Doppler Analysis

Preliminary report. The data is not yet controlled

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)



Ascending



Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler



Ascending



Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX



6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

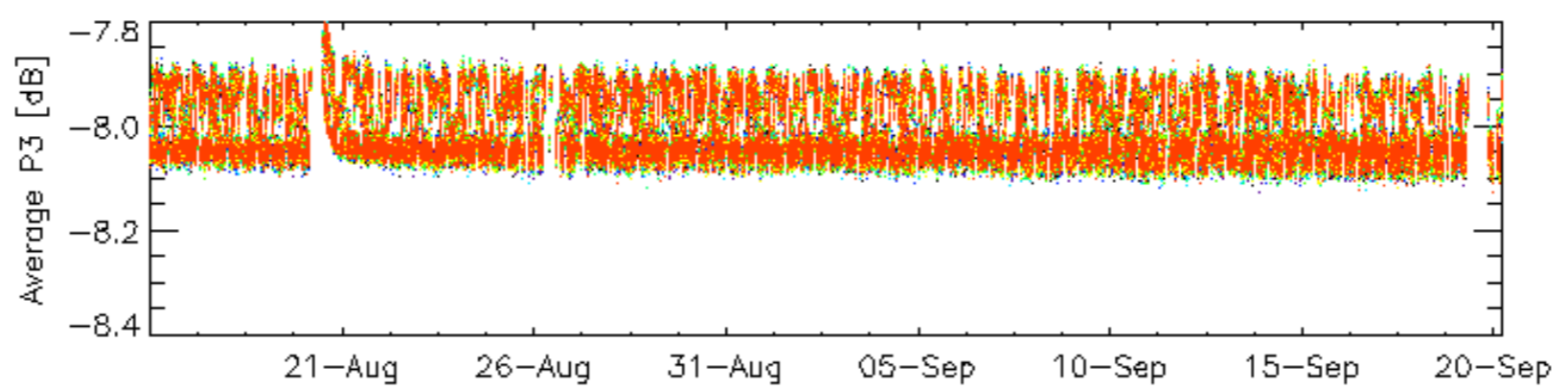
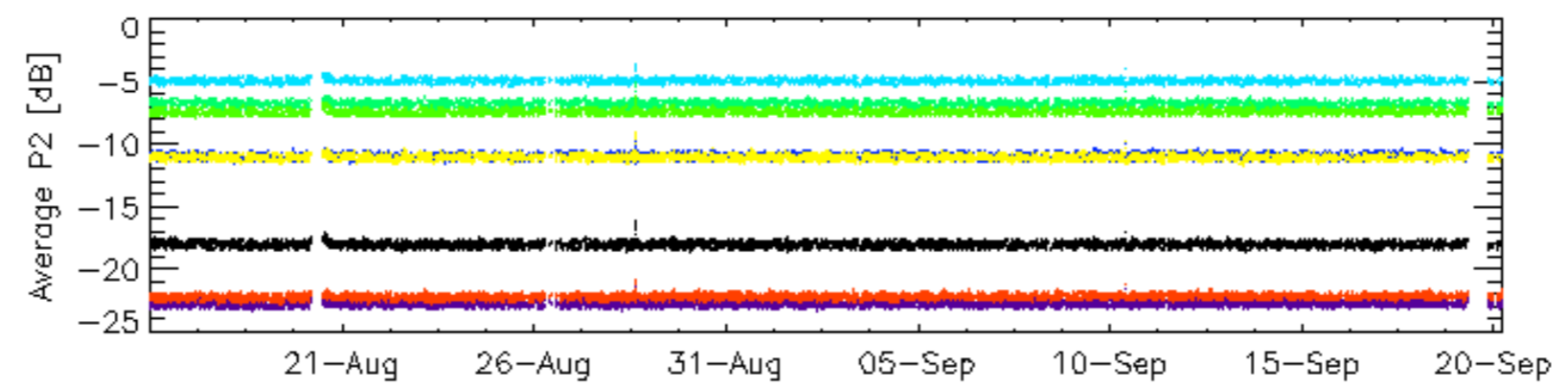
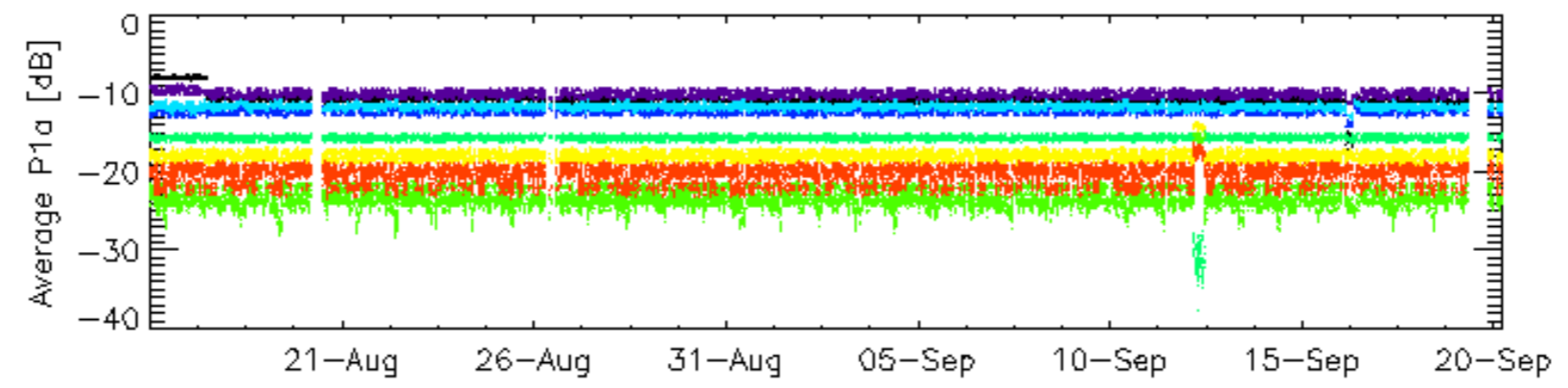
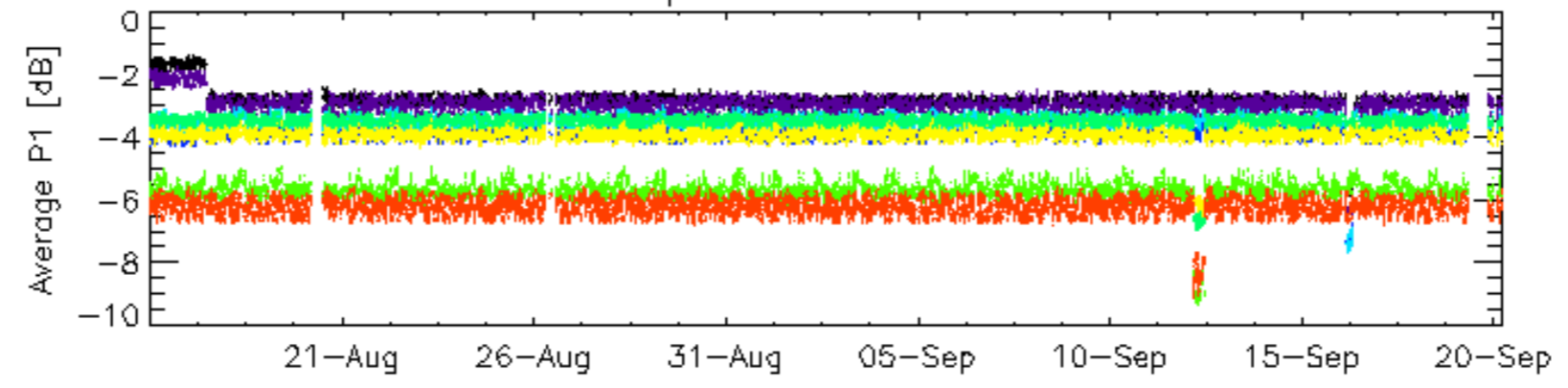
6.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

6.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

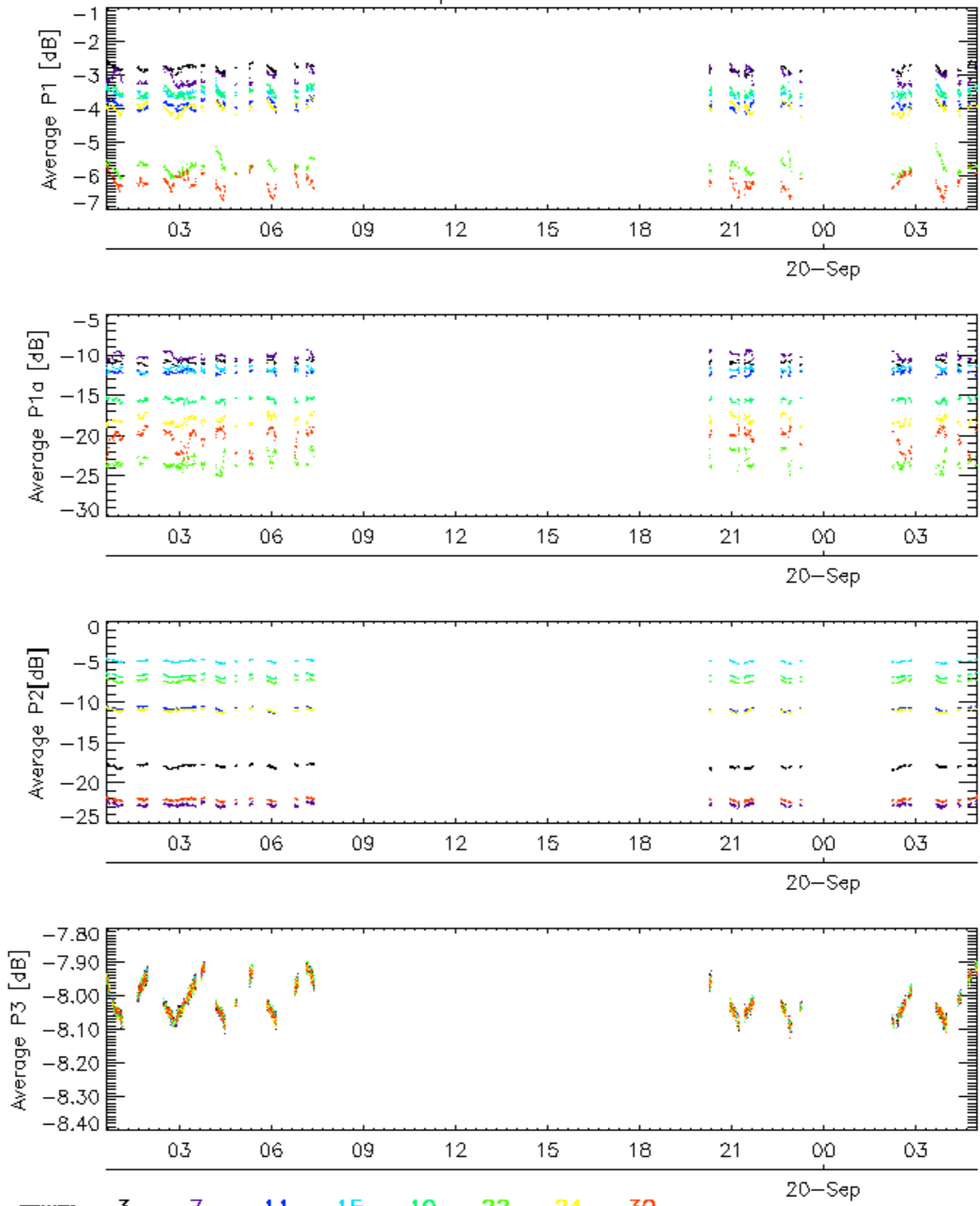
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Cal pulses for GM1 SS3

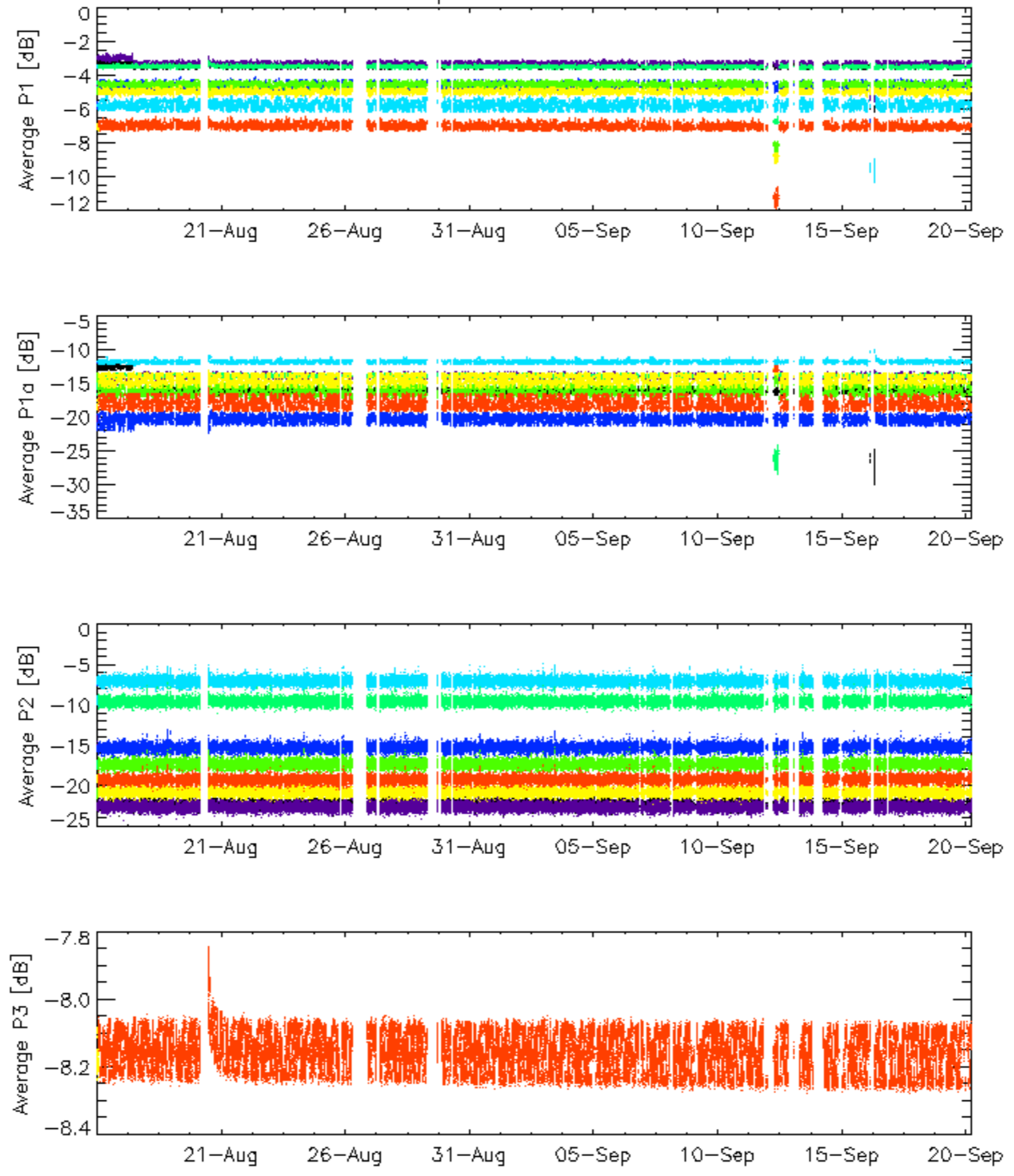


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Cal pulses for GM1 SS3

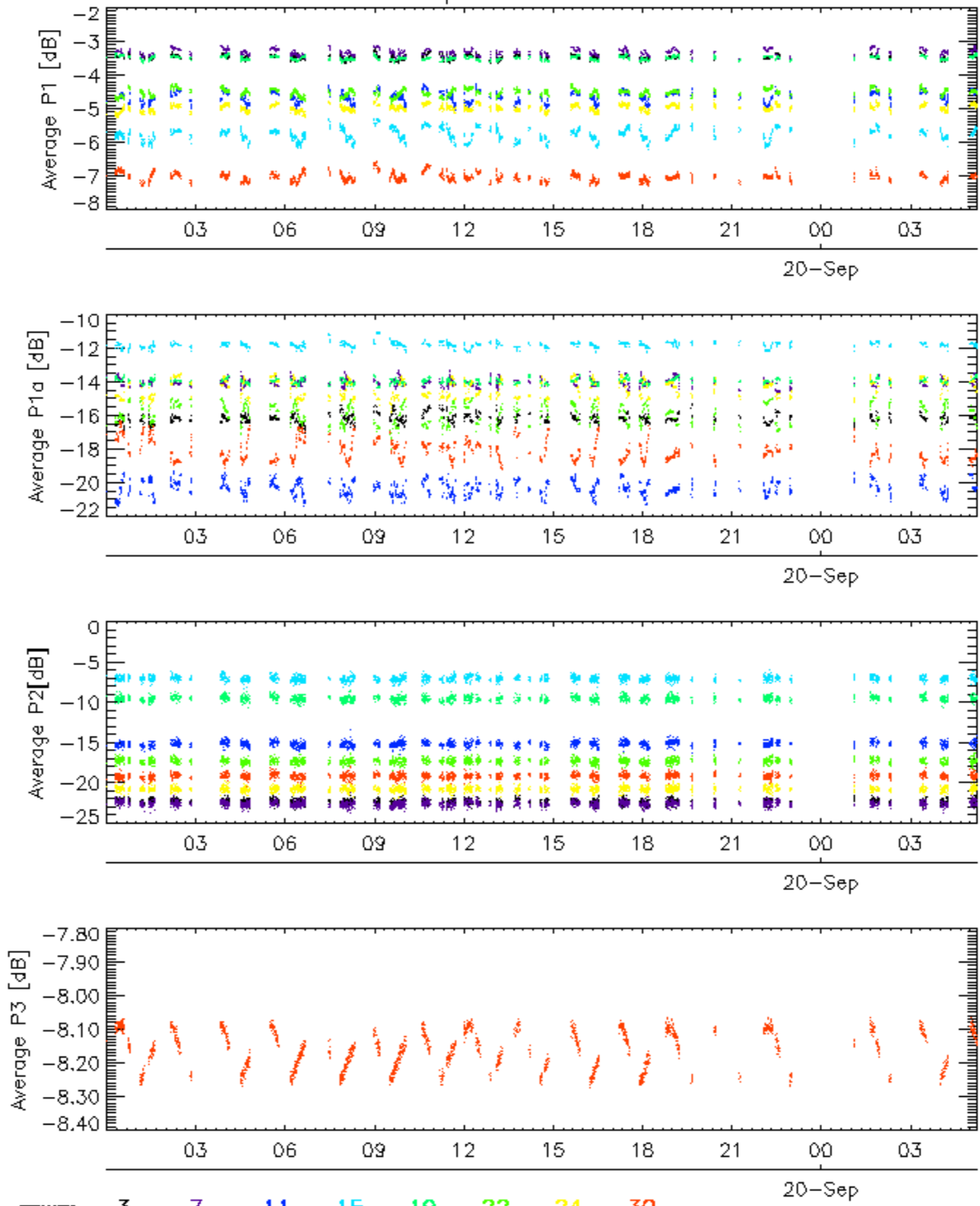


Cal pulses for WVS IS2



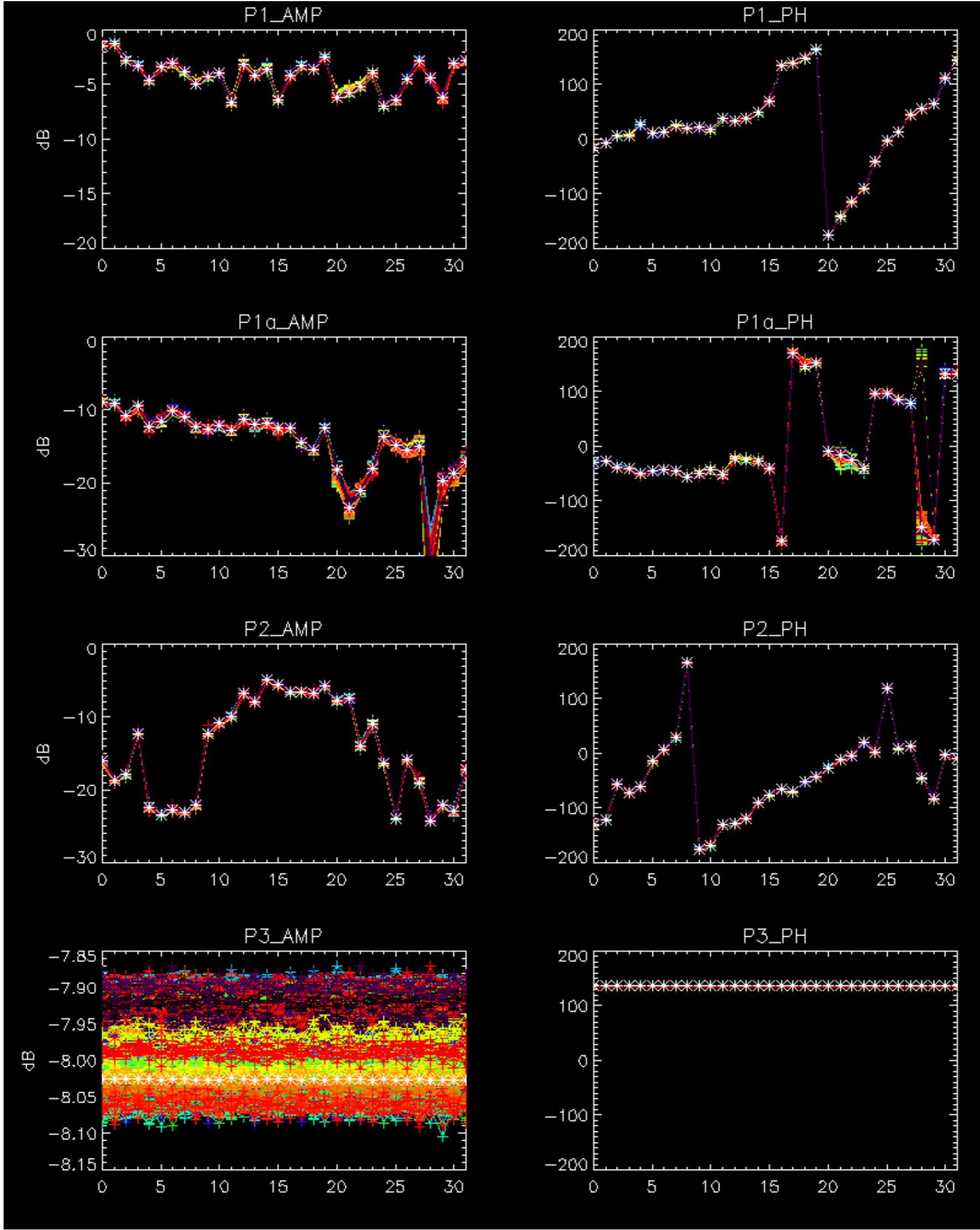
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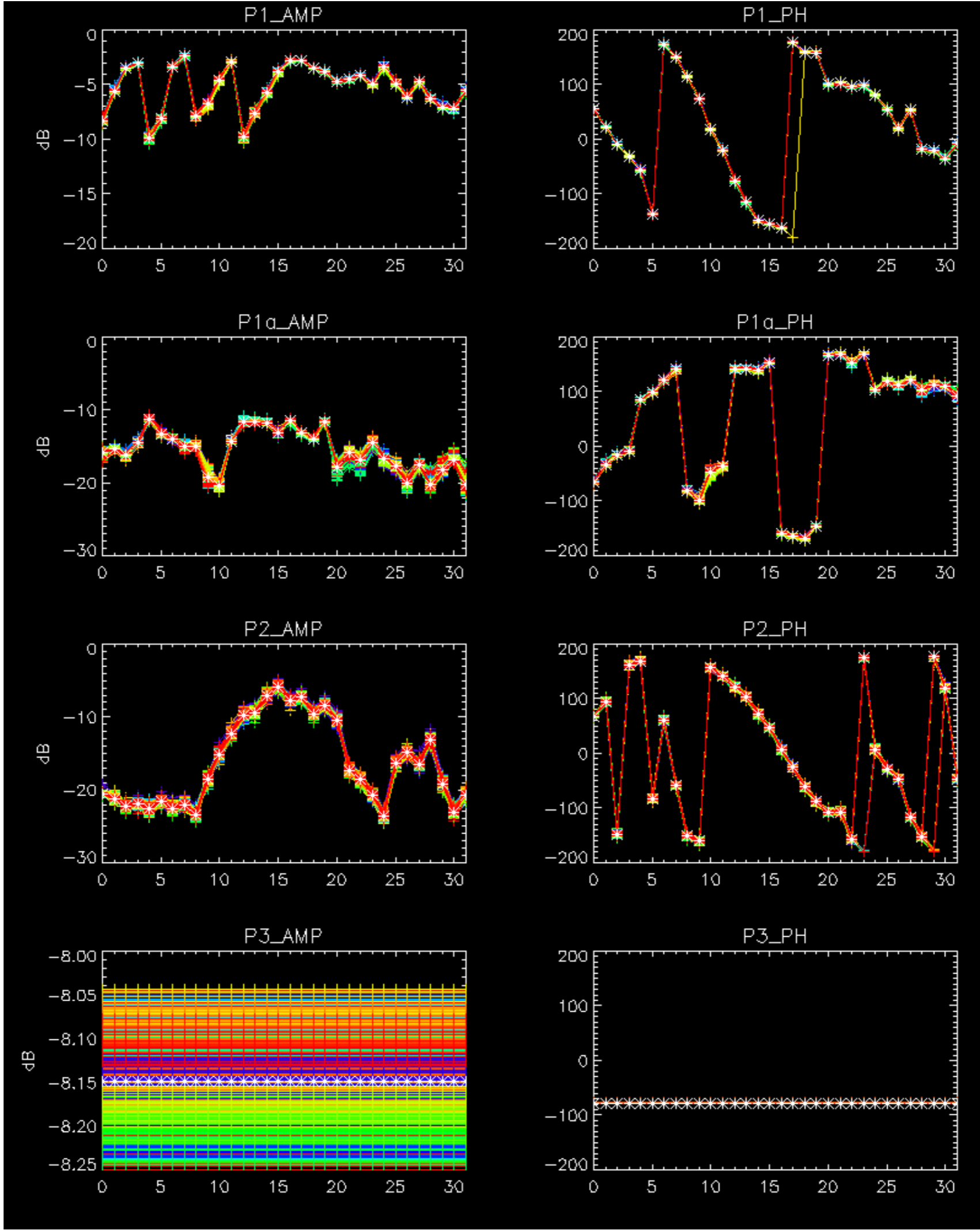
Cal pulses for WVS IS2



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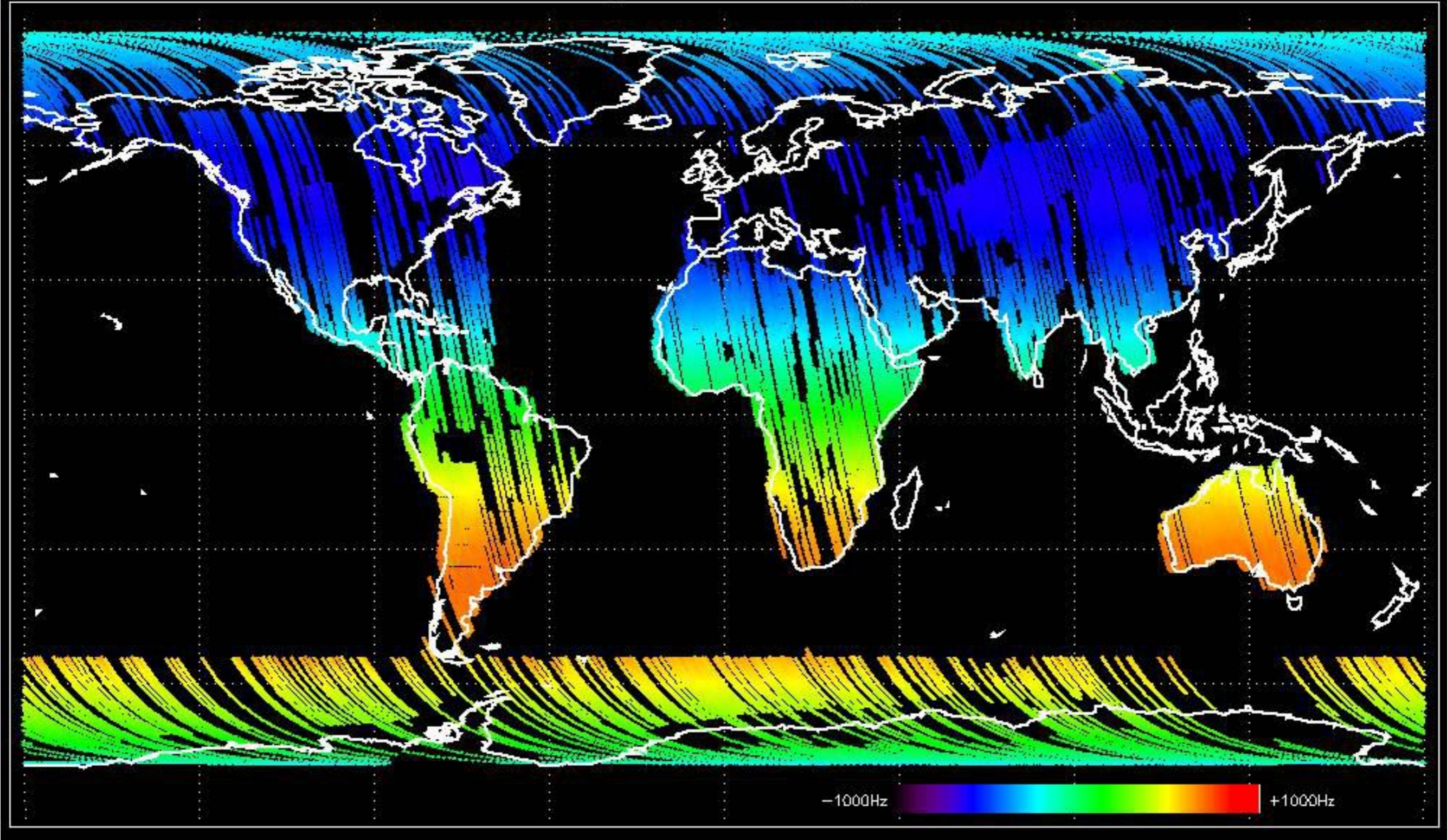
No anomalies observed.



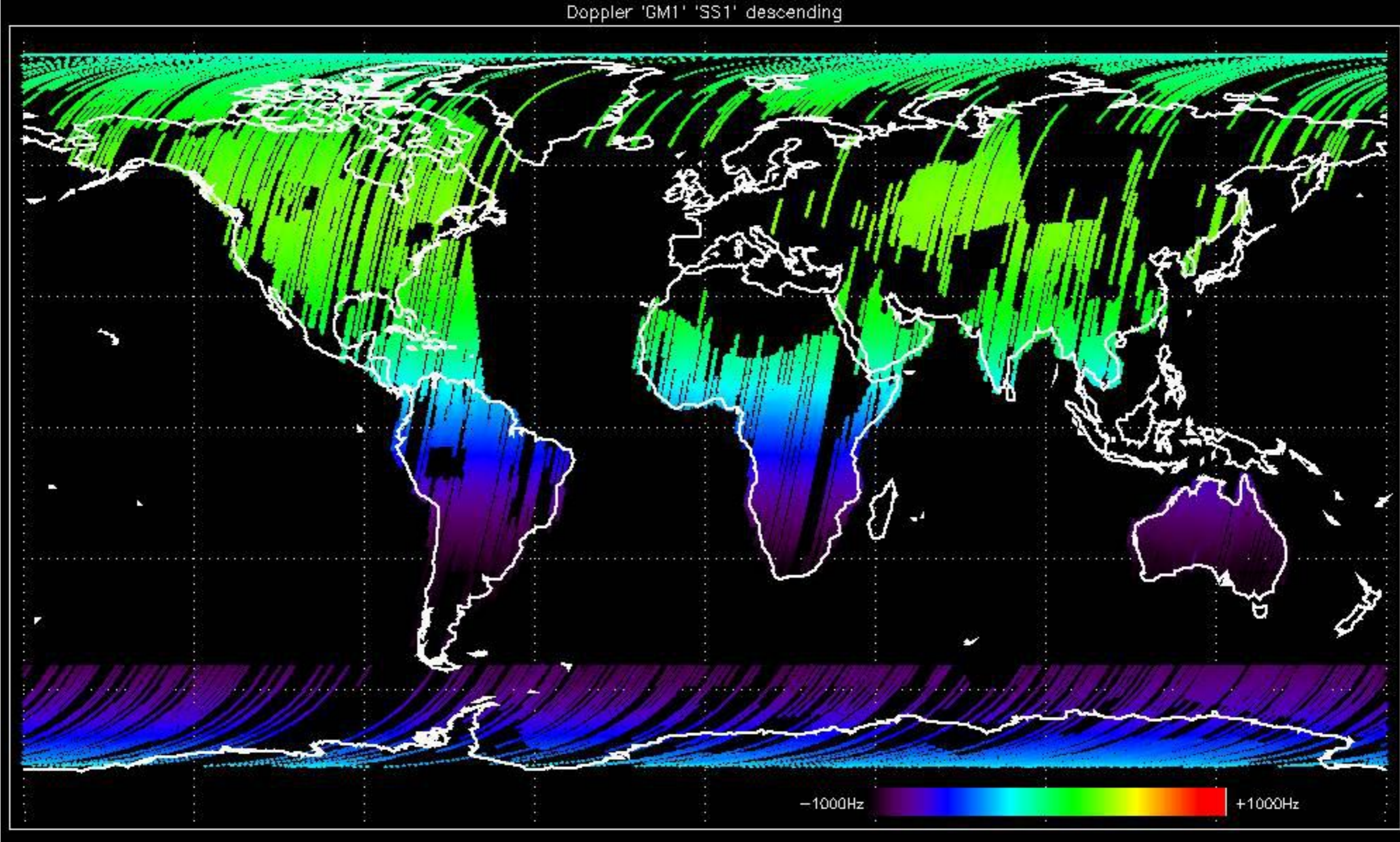


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

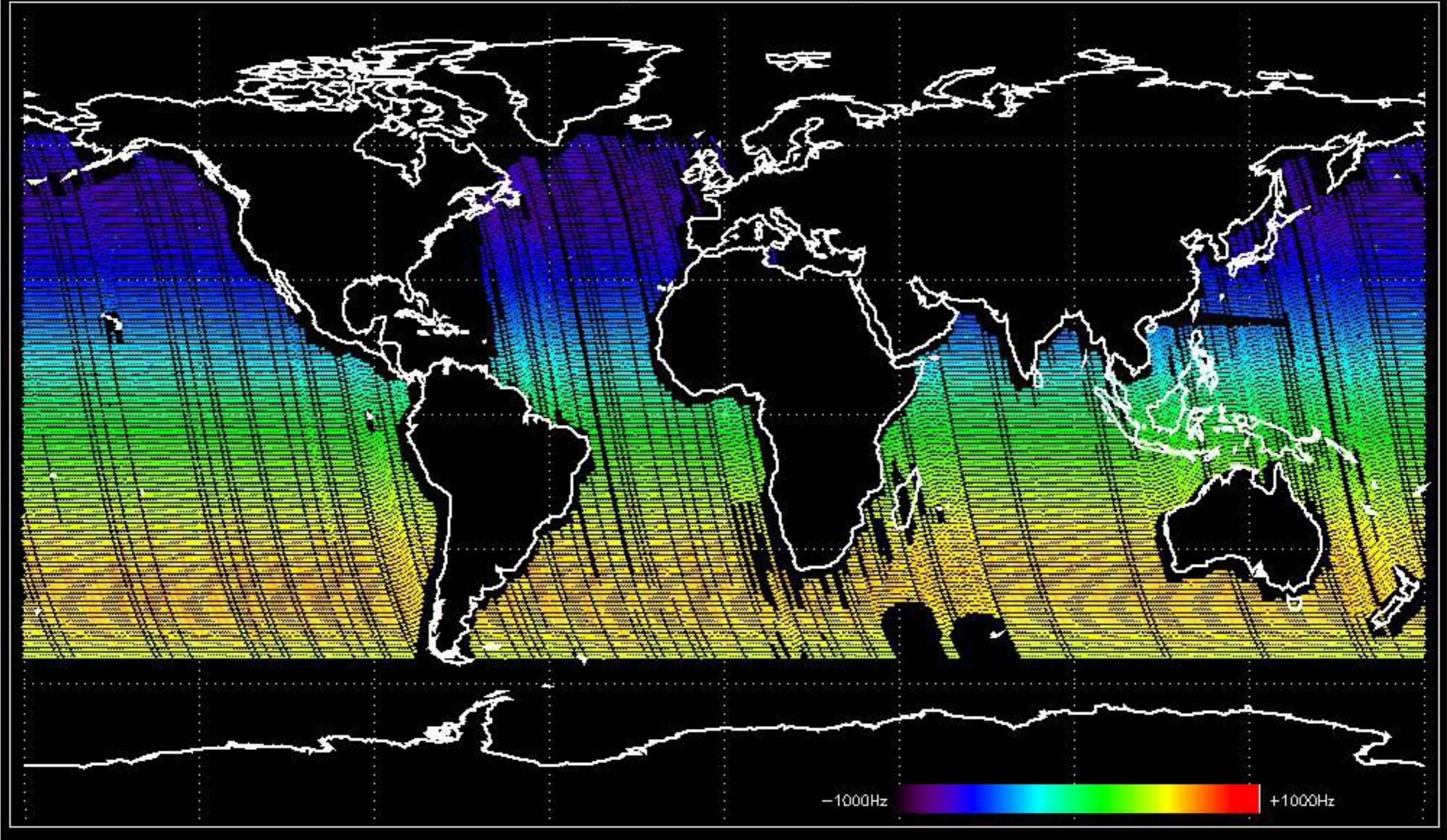
Doppler 'GM1' 'SS1' ascending



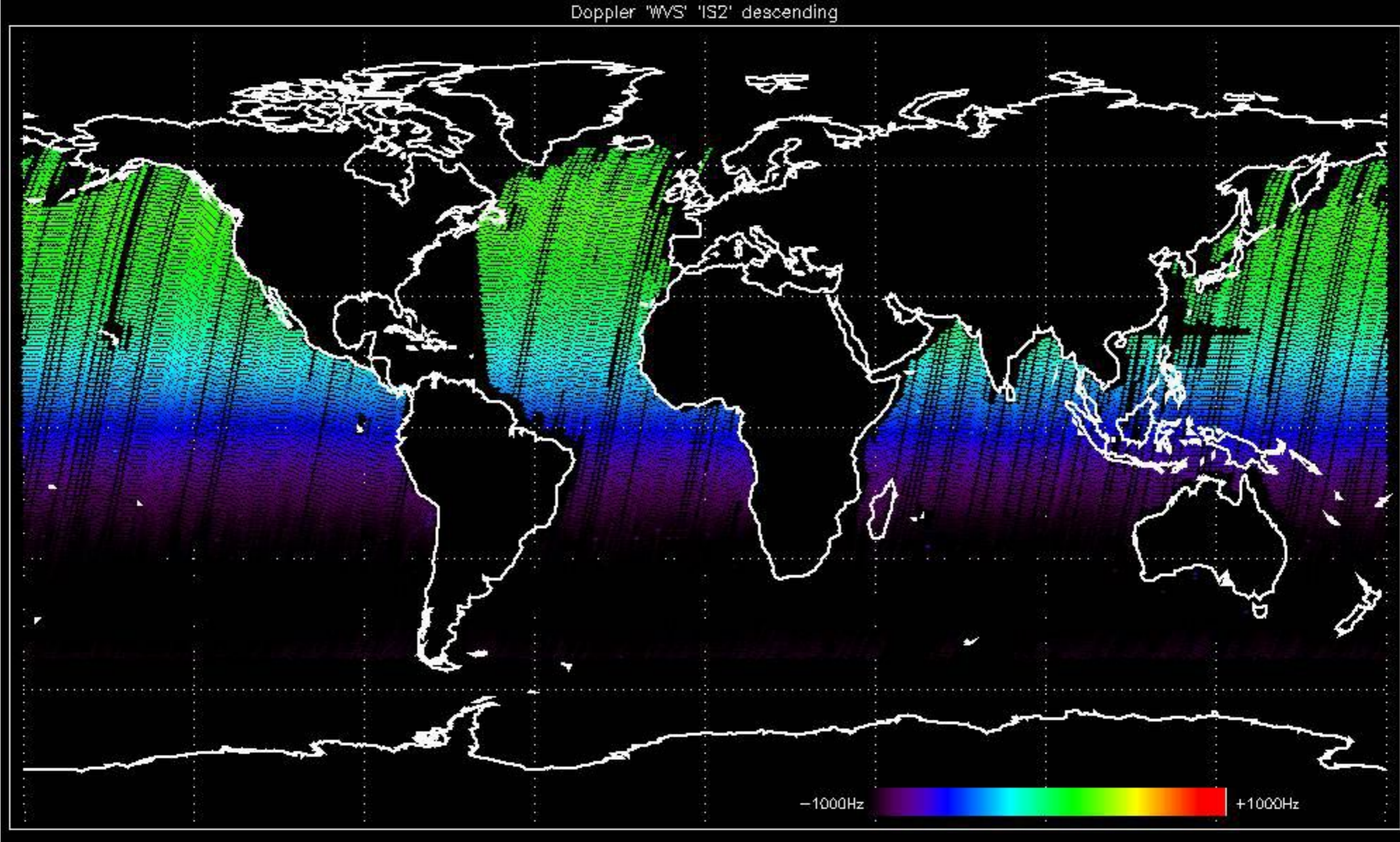
Doppler 'GM1' 'SS1' descending

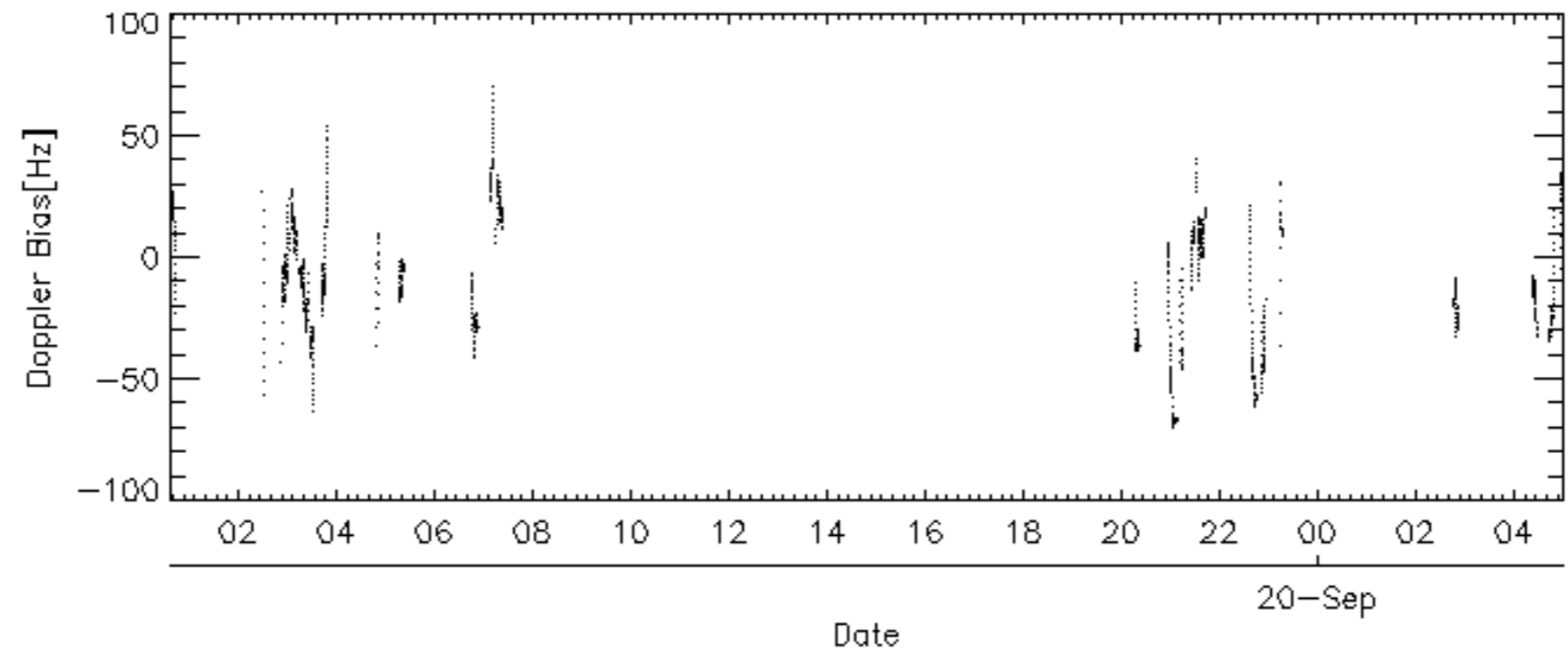
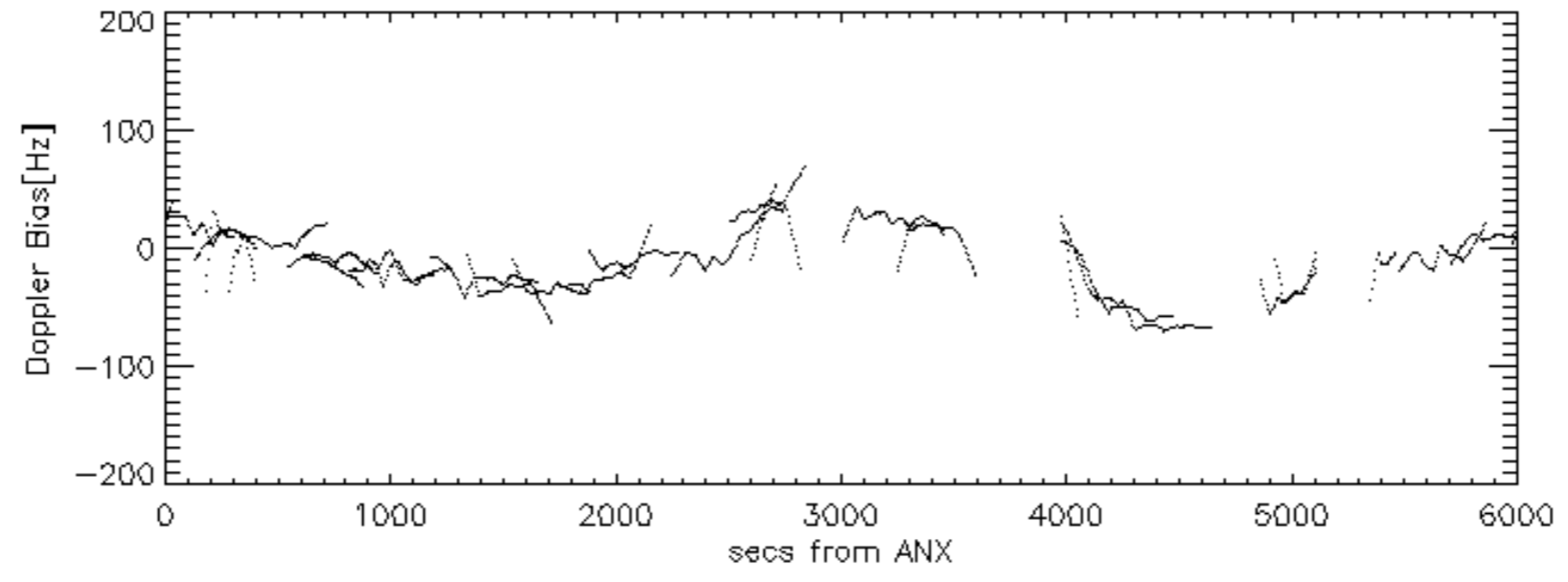
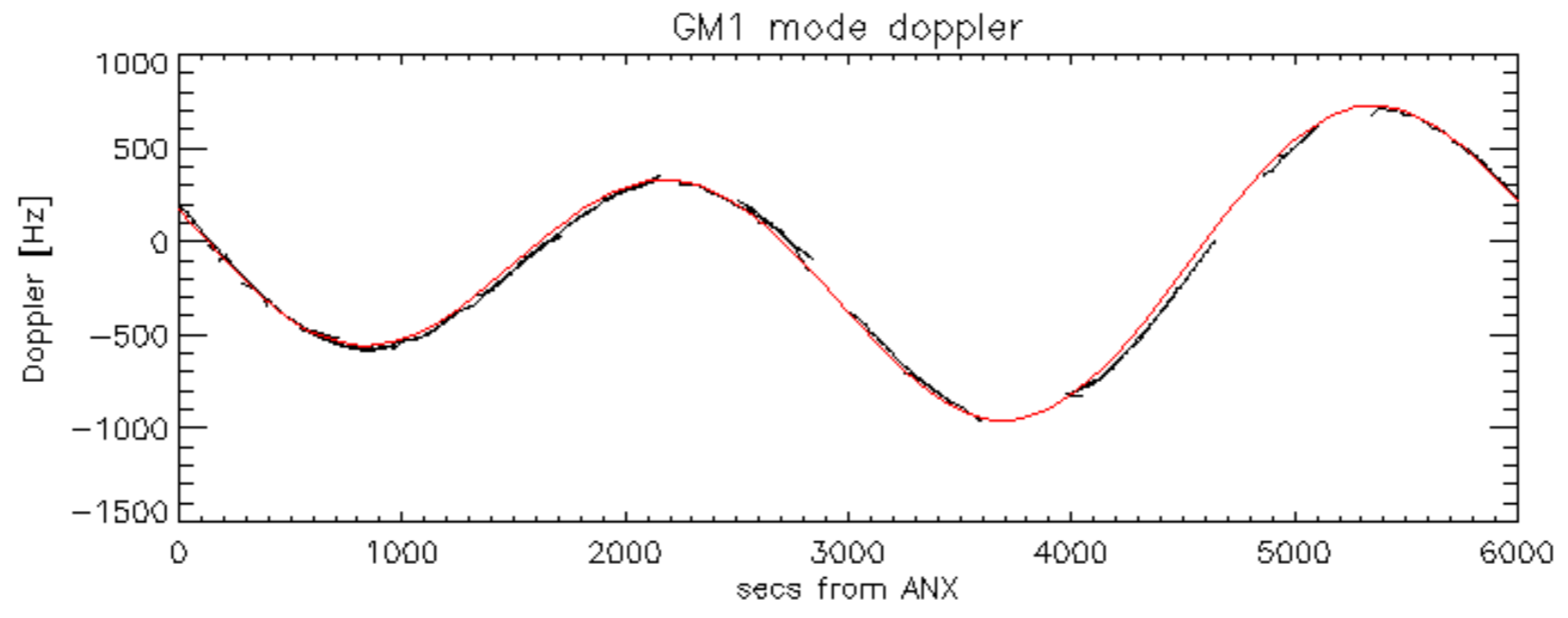


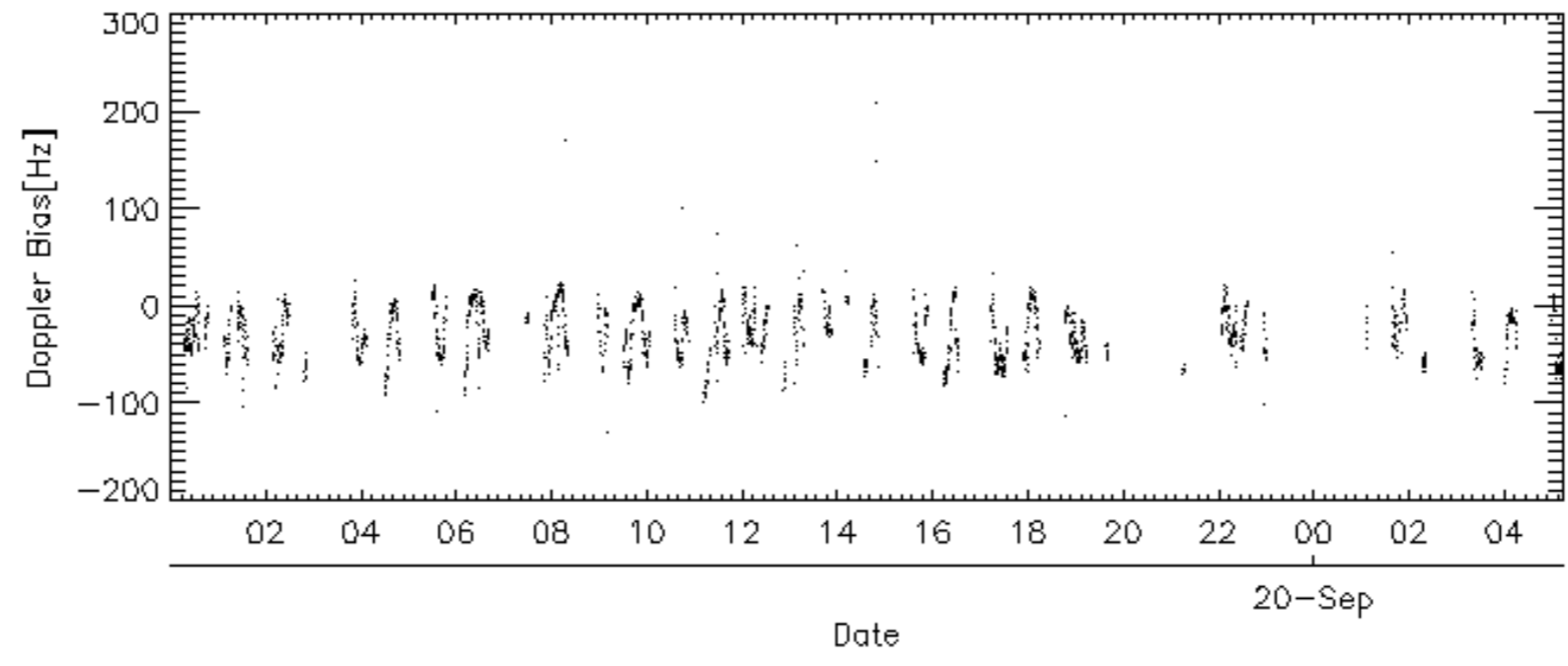
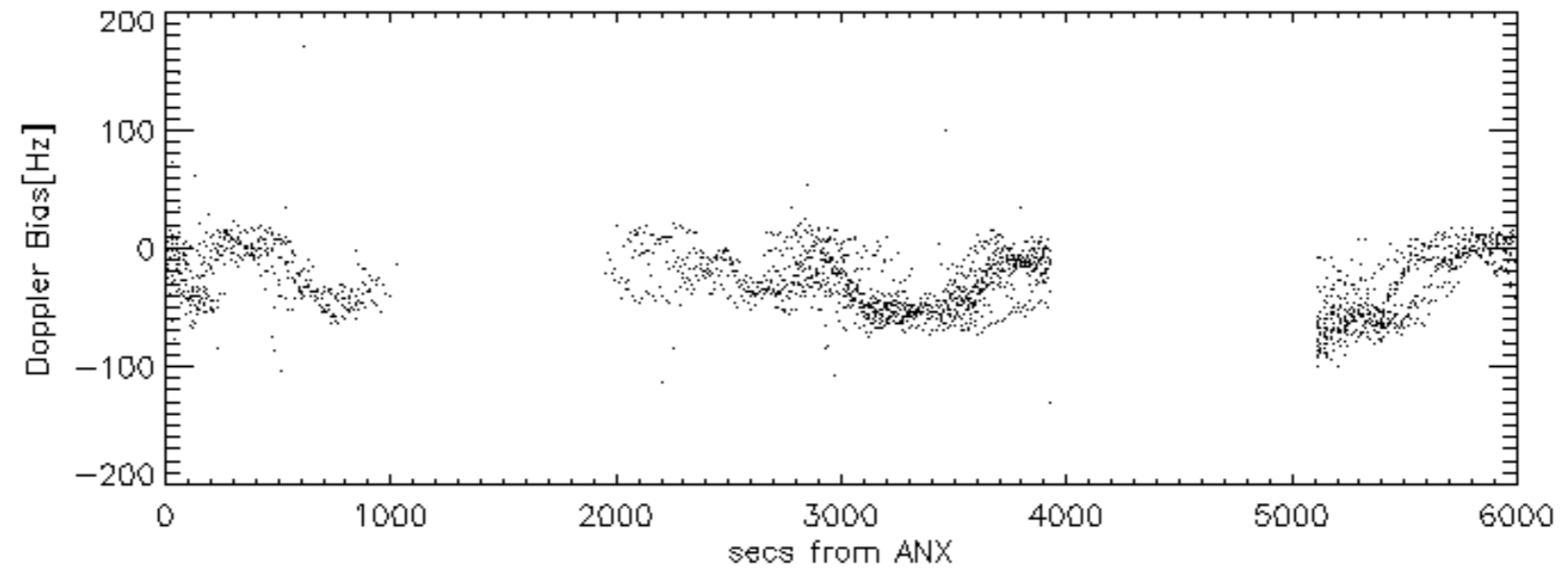
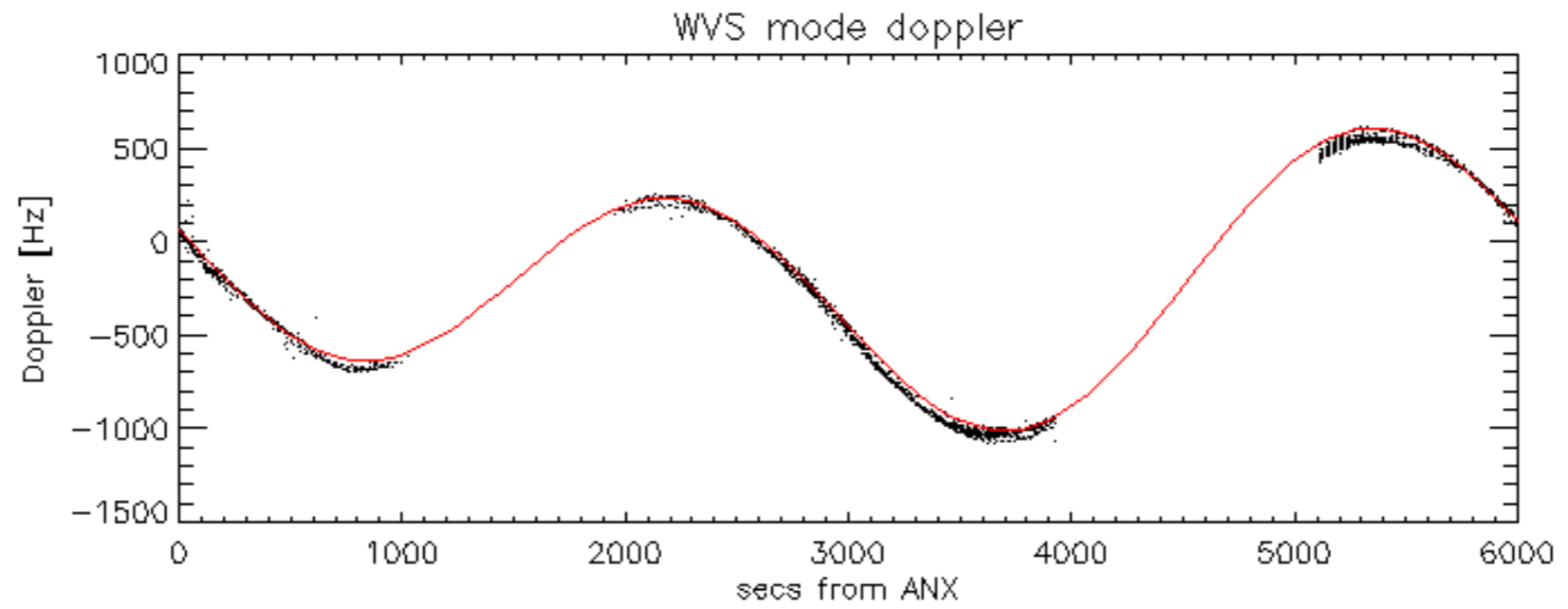
Doppler 'WVS' 'IS2' ascending



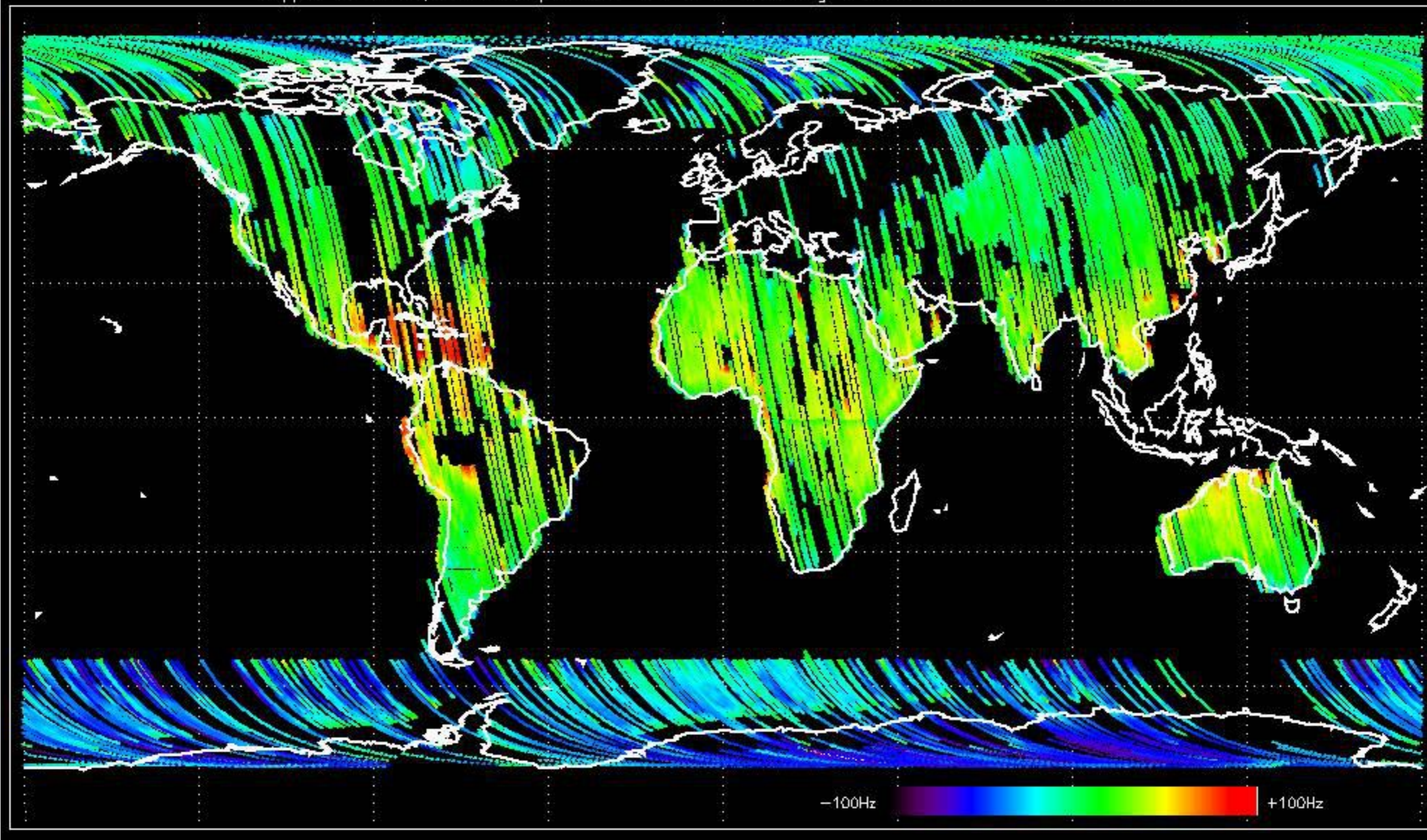
Doppler 'WVS' 'IS2' descending



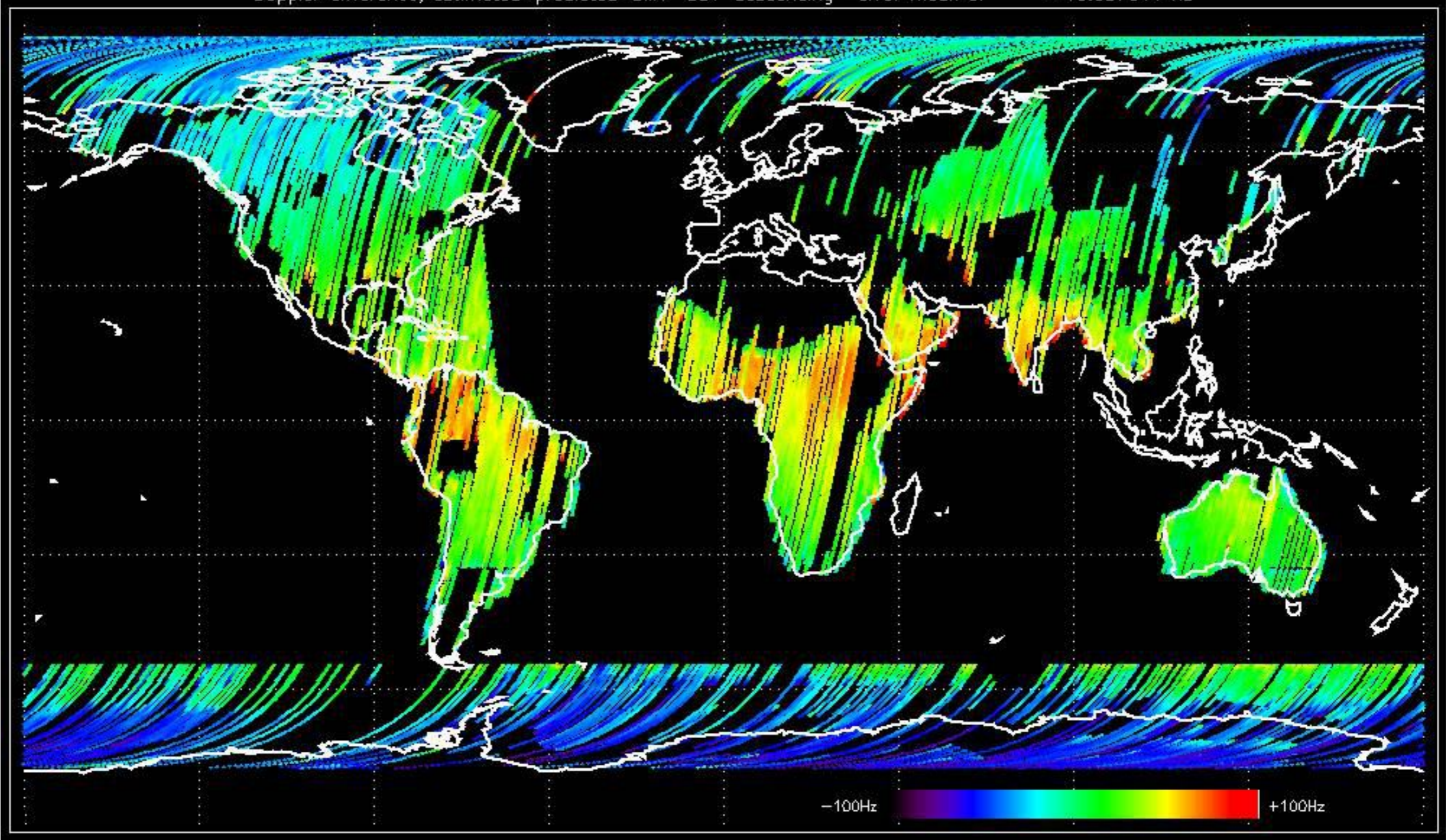




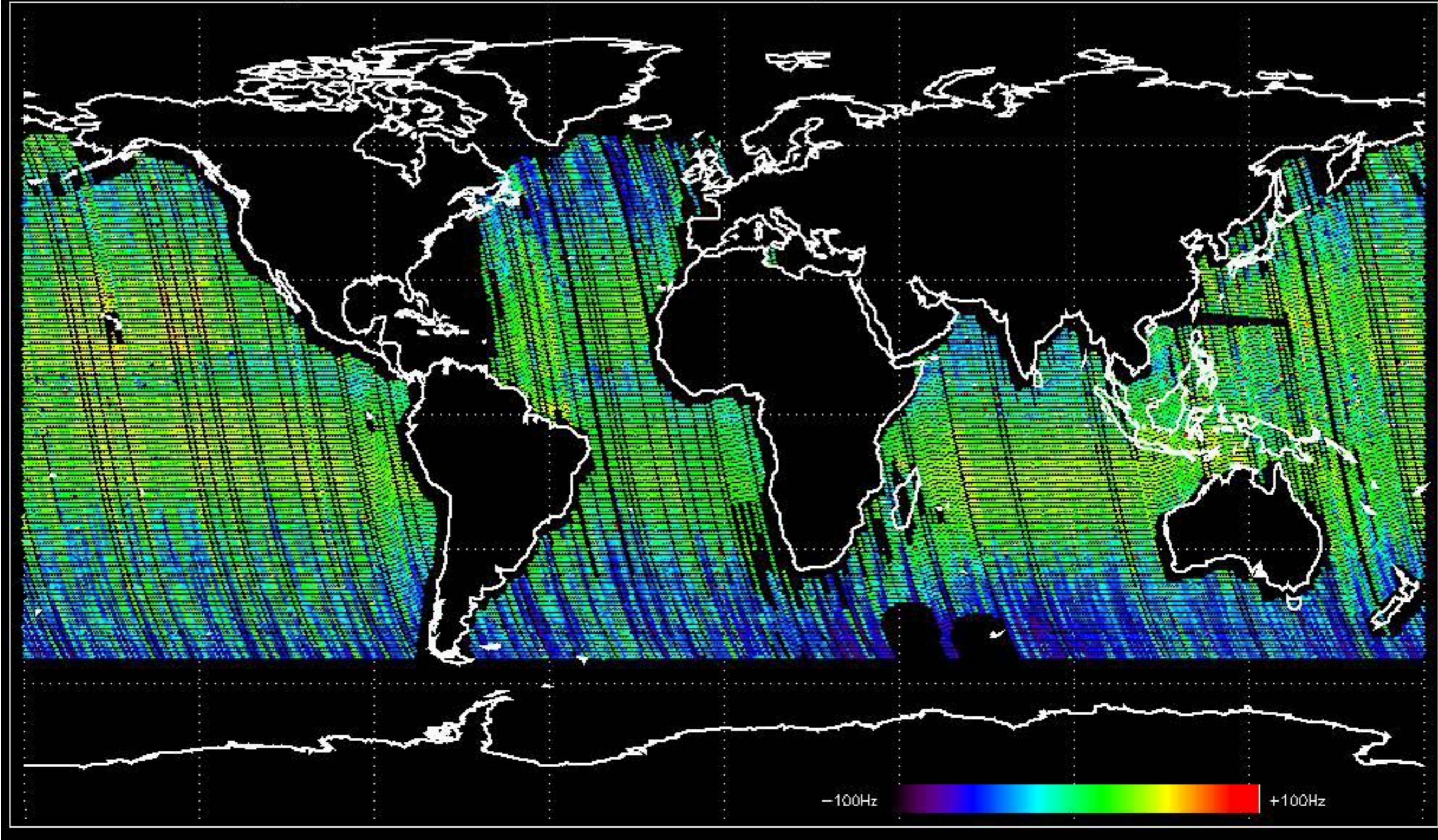
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -29.621103 Hz



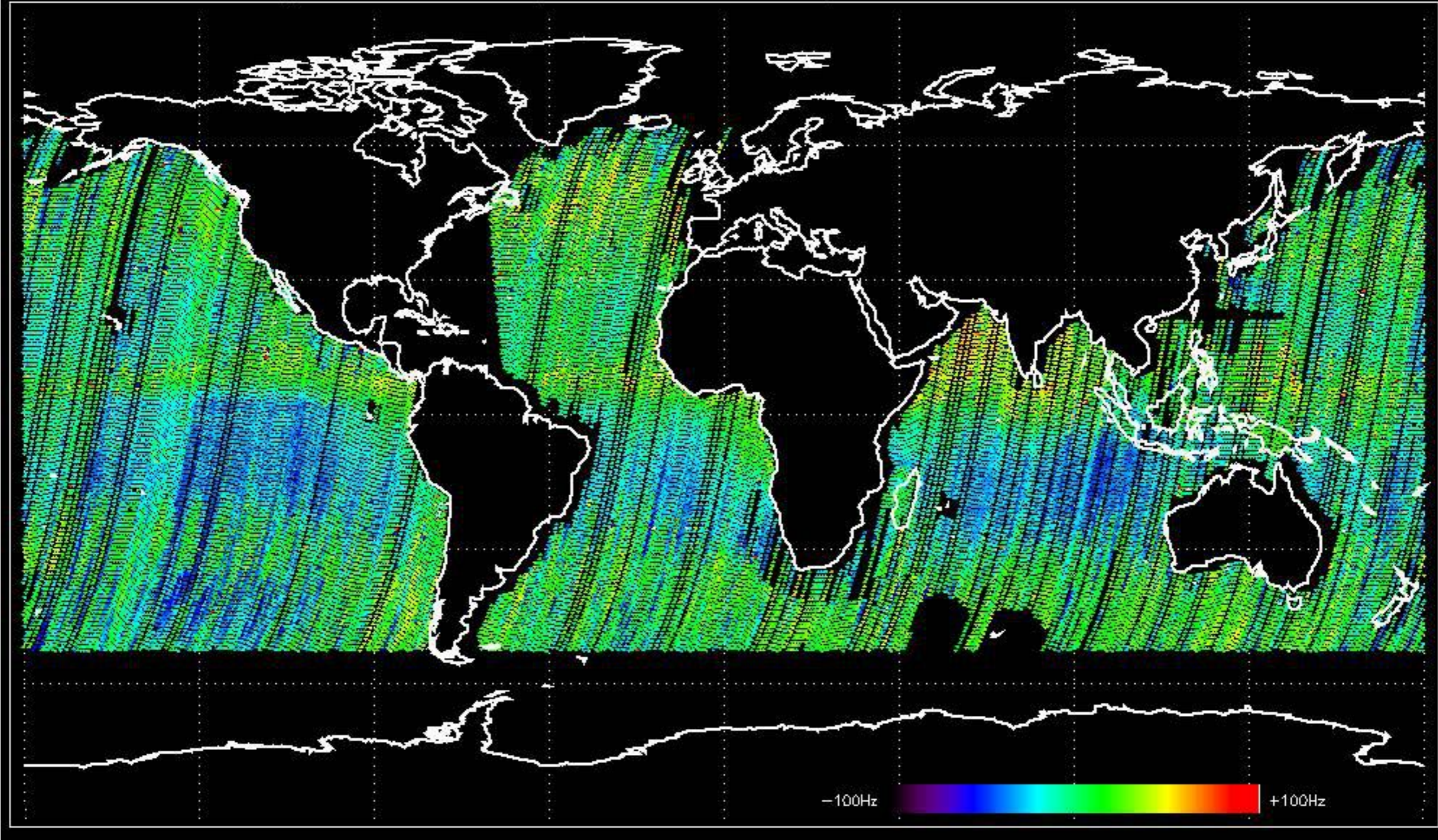
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.057644 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -29.375185 Hz

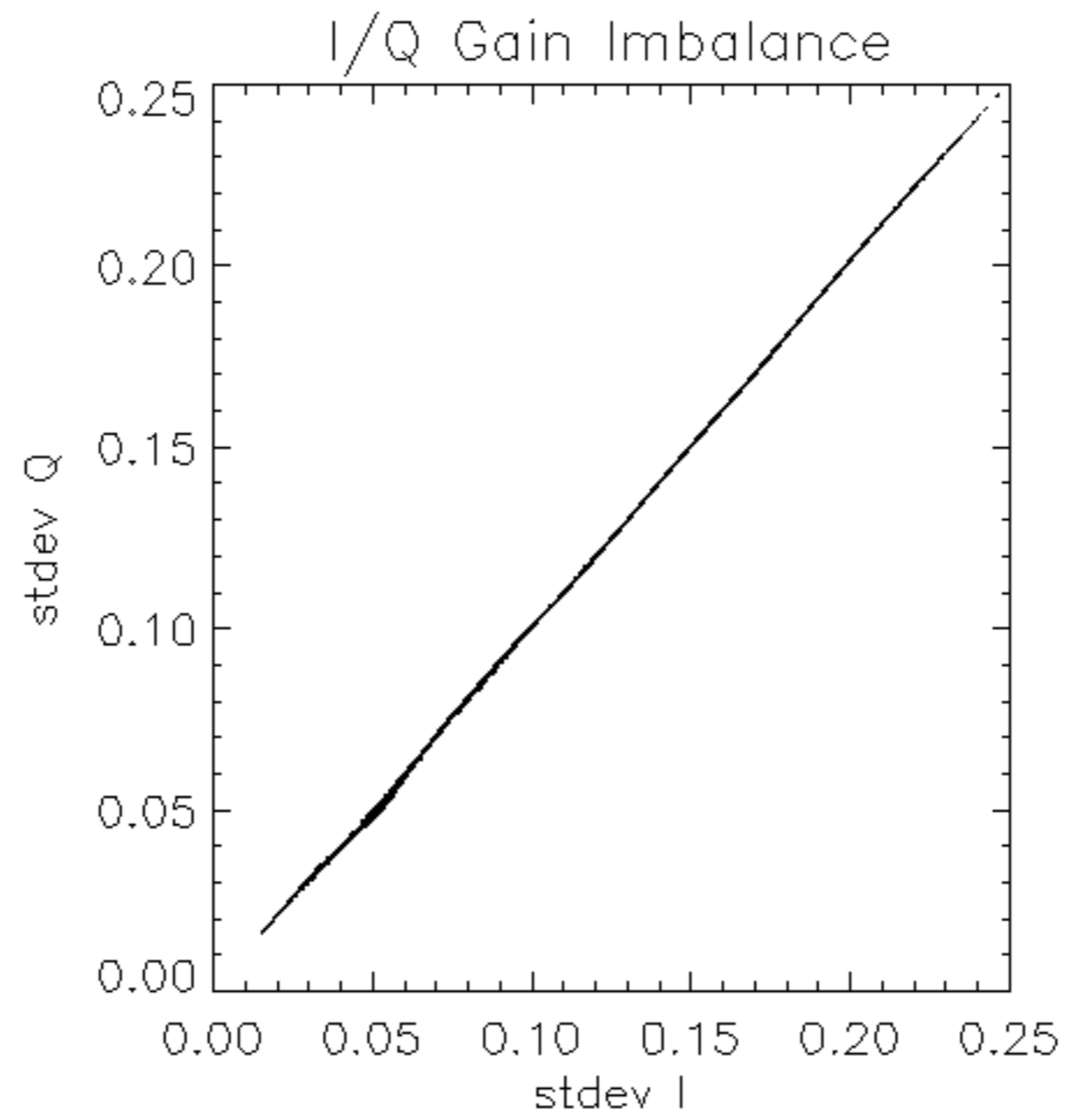


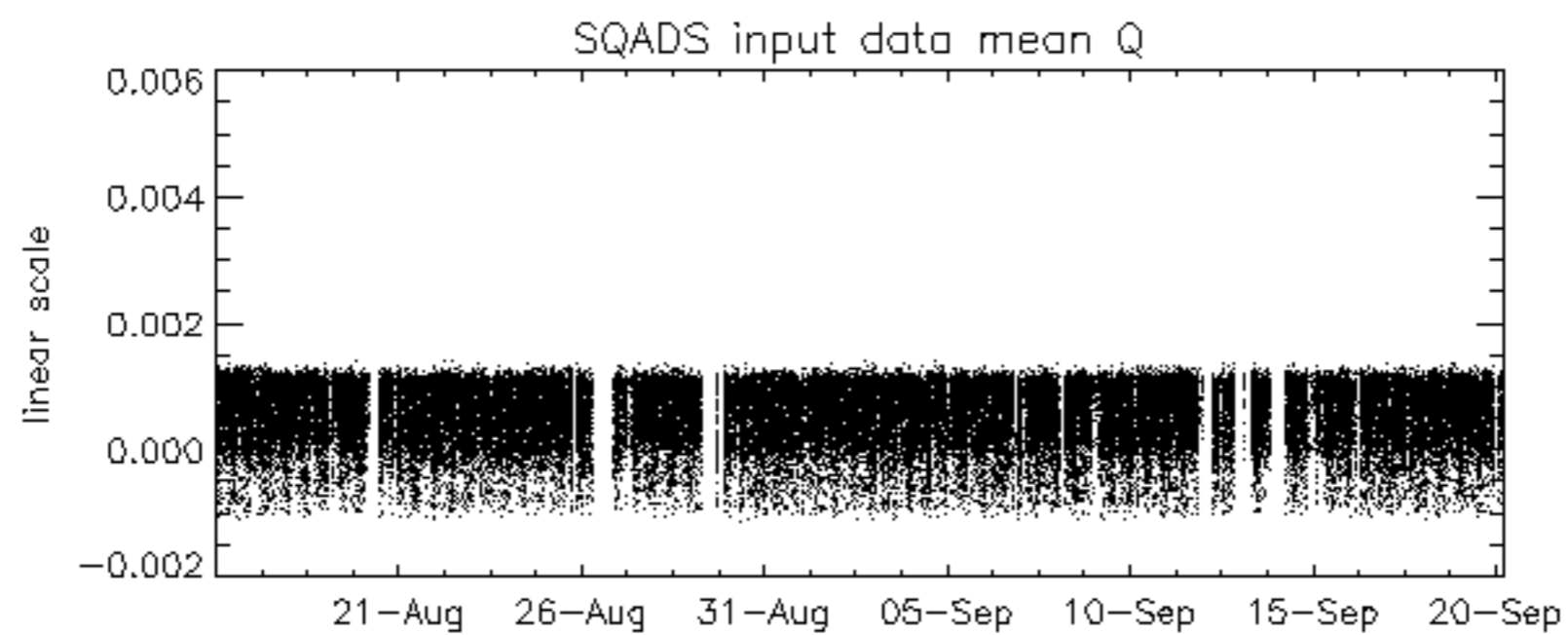
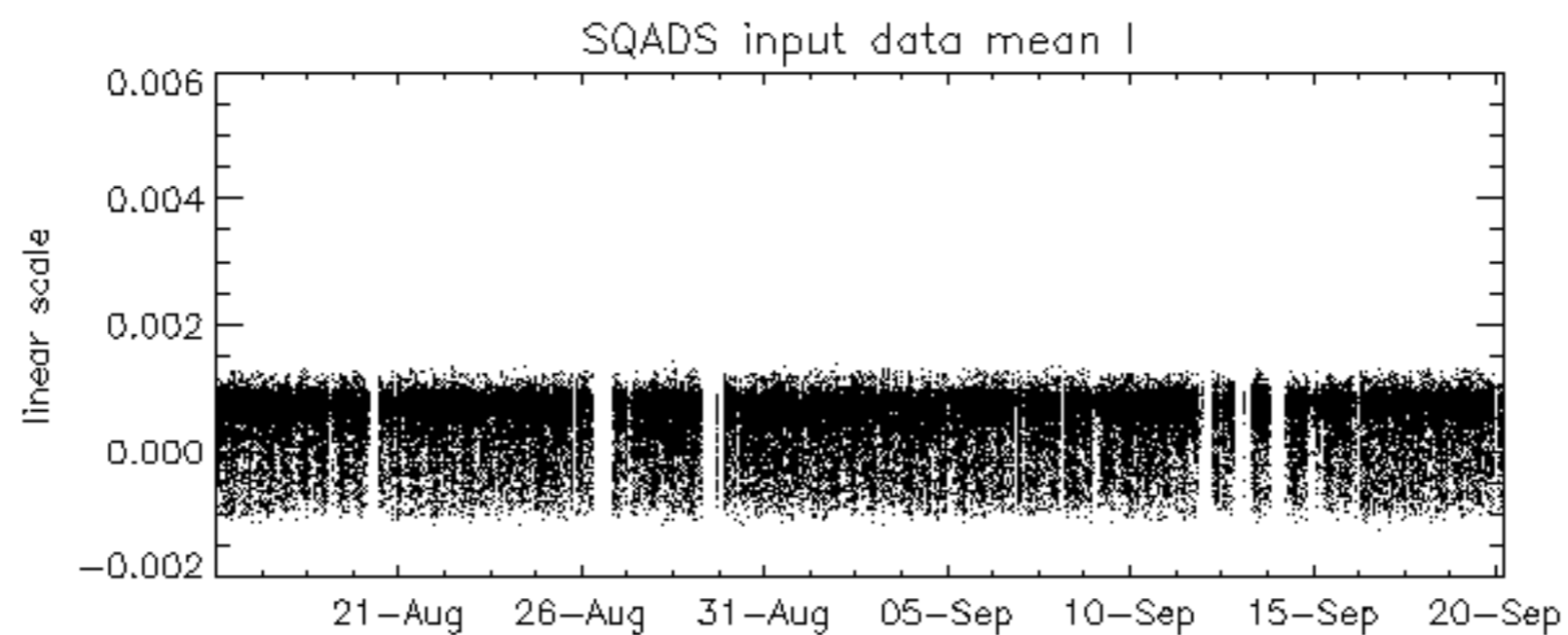
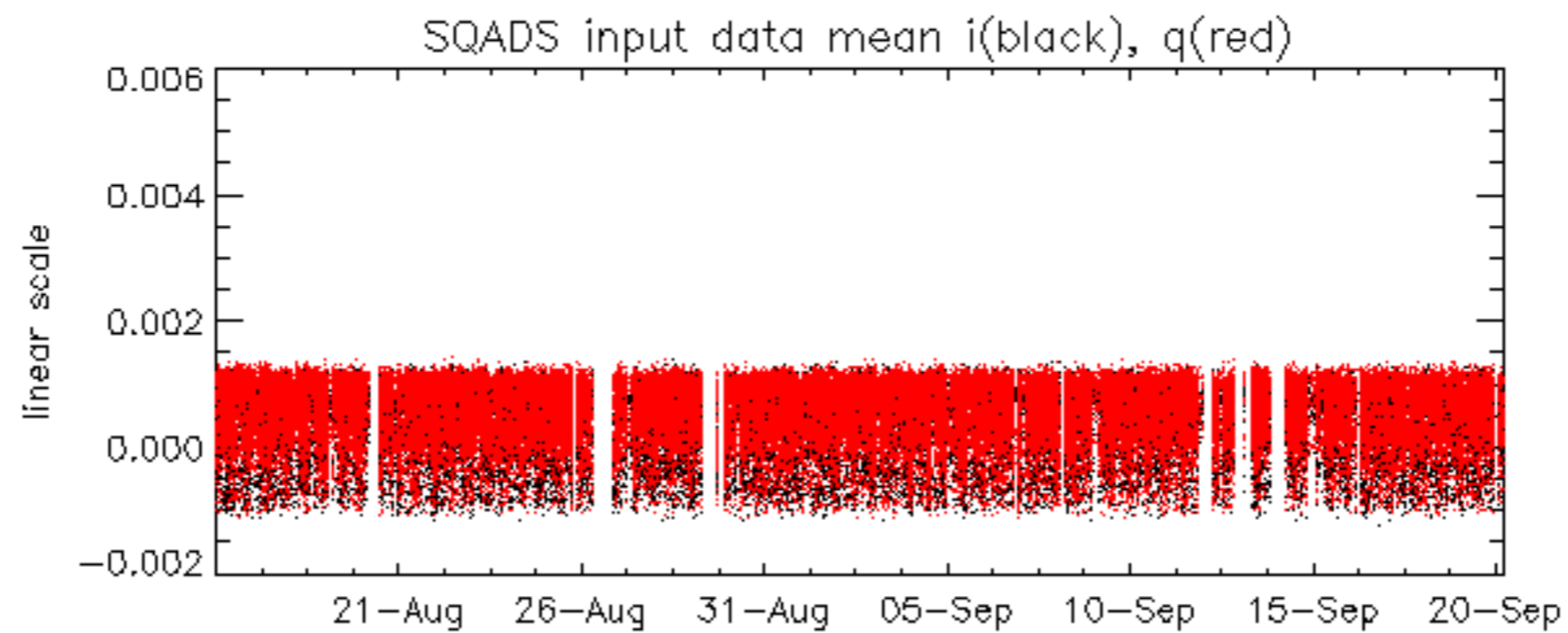
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -30.561263 Hz

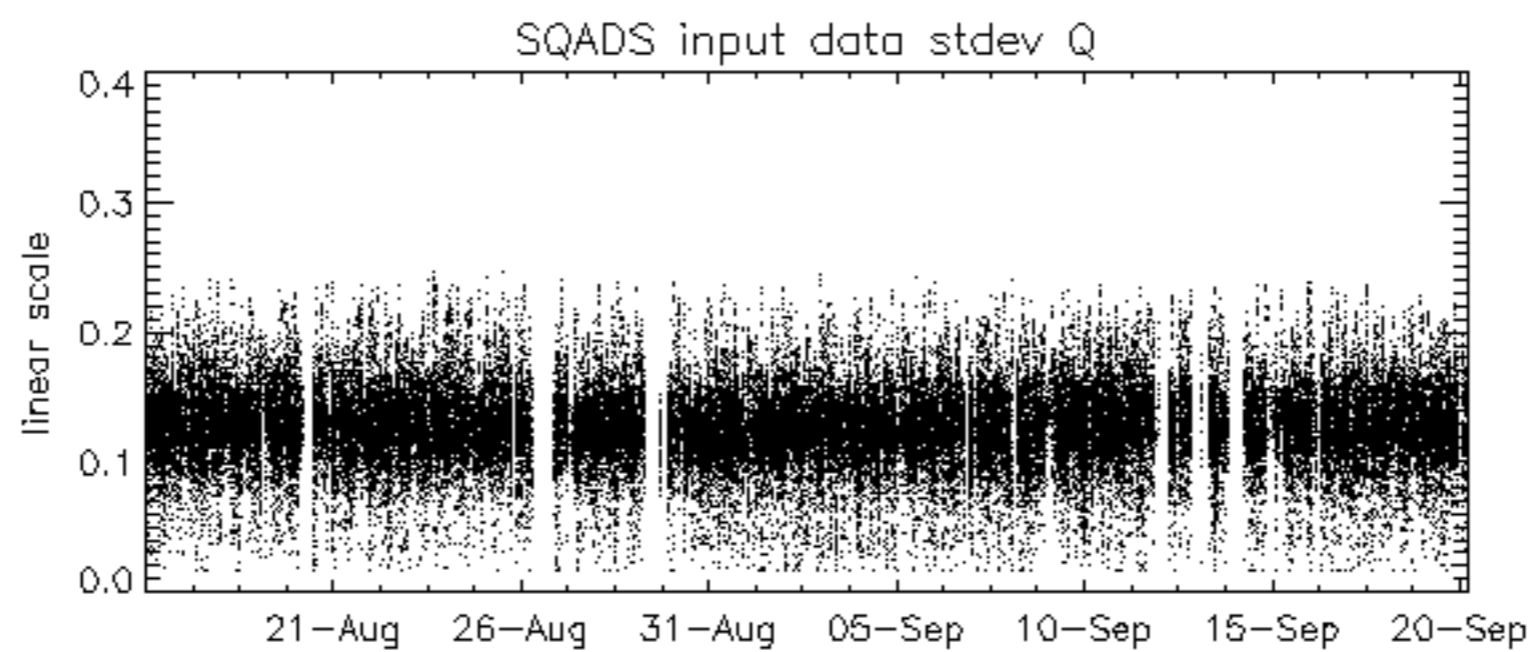
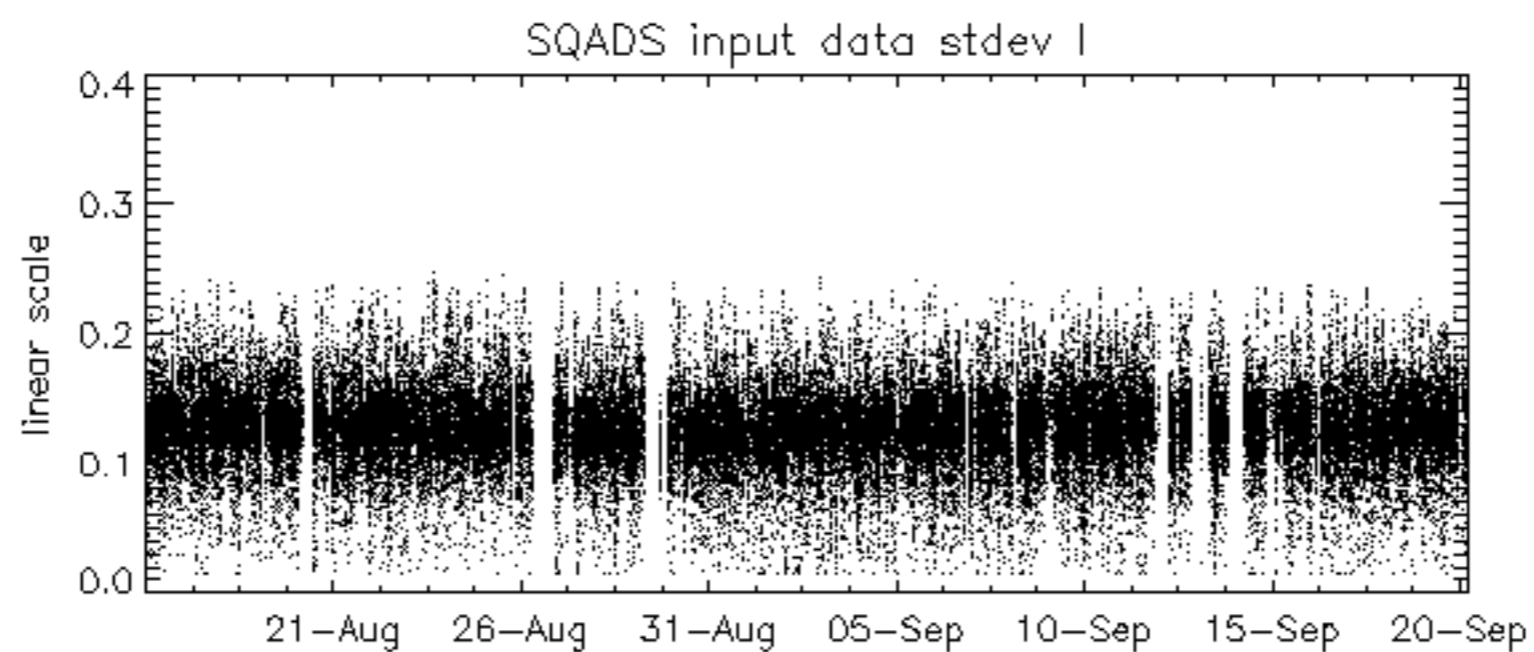
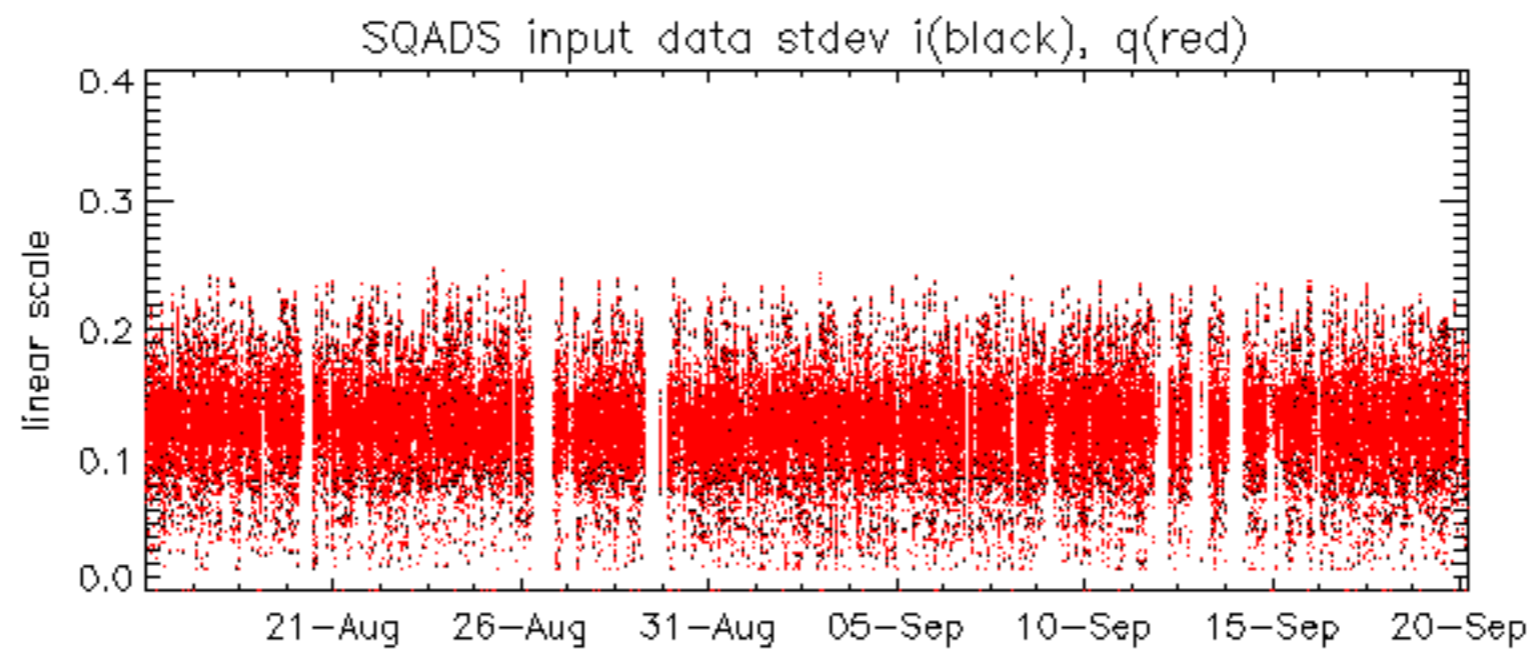


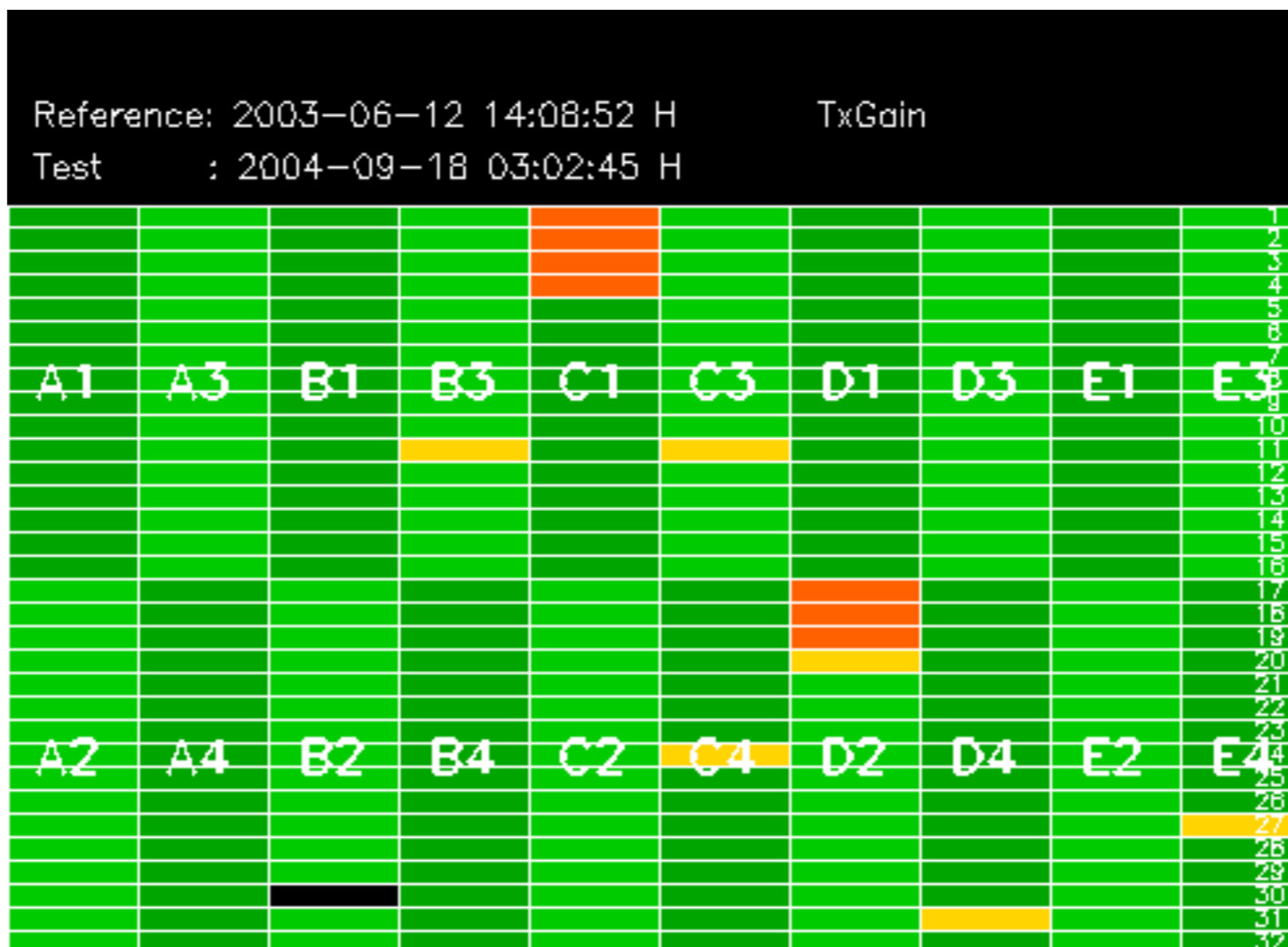
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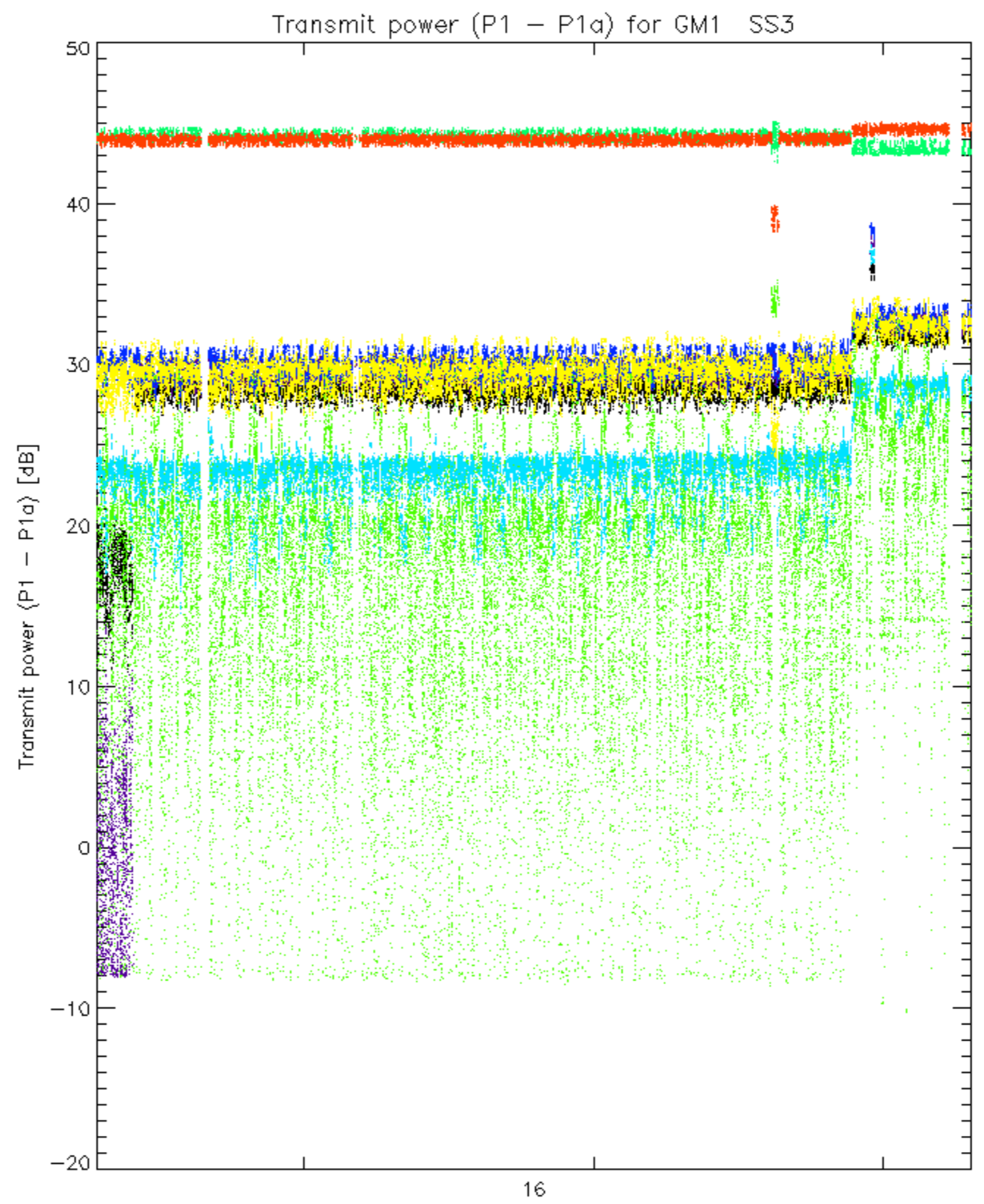
No anomalies observed.



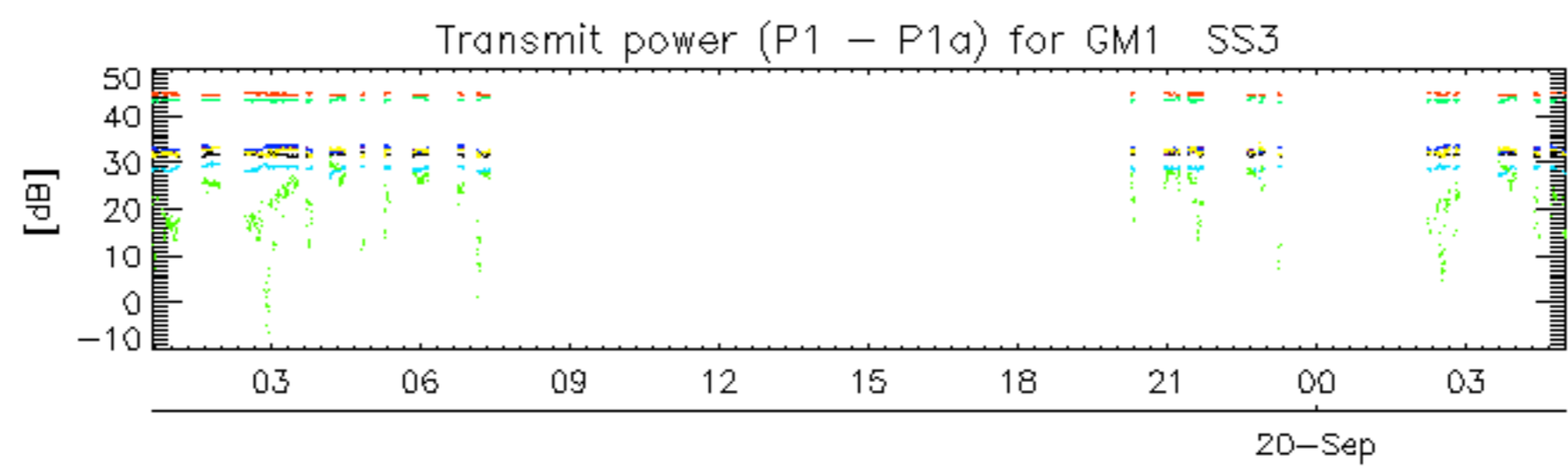




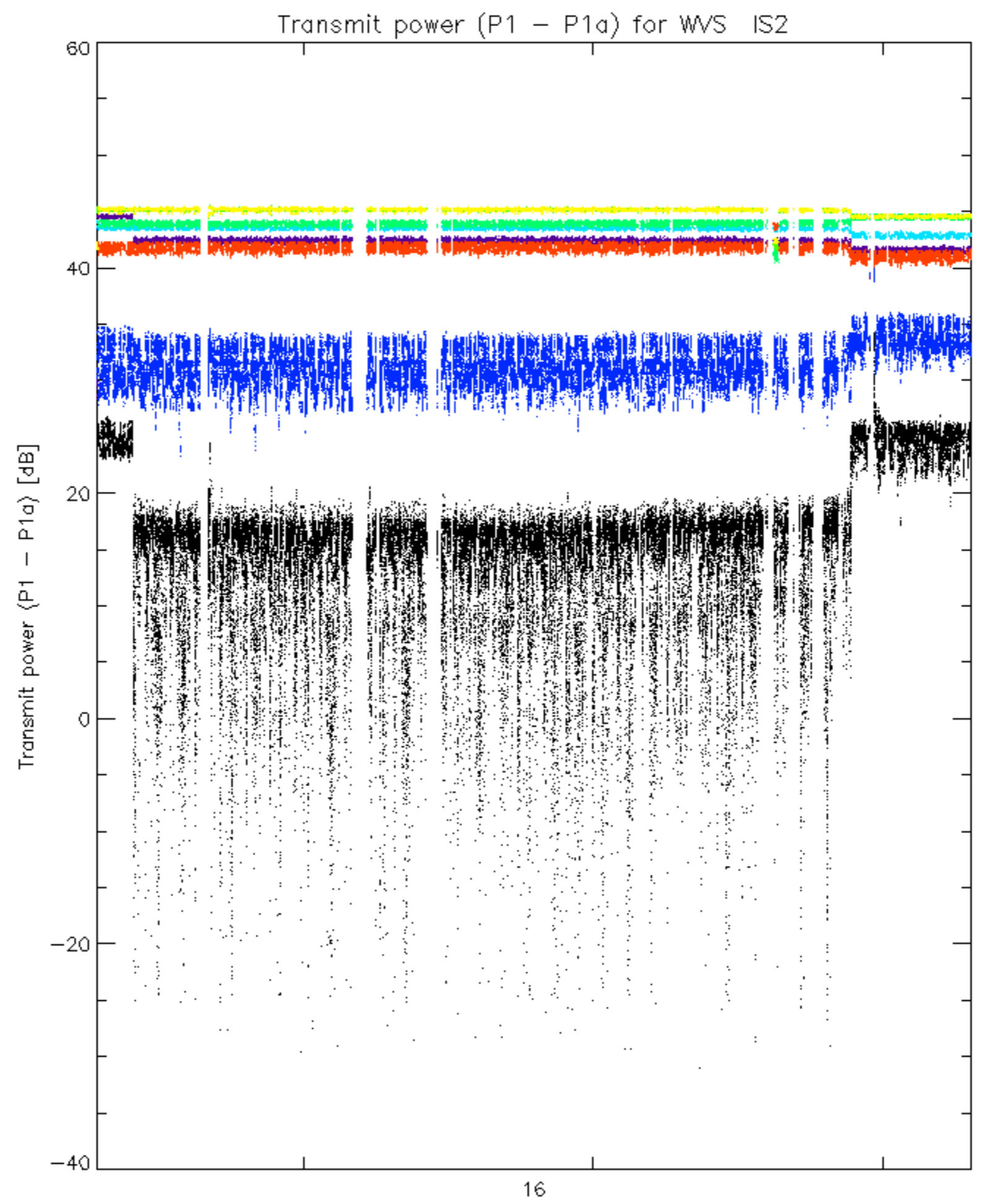




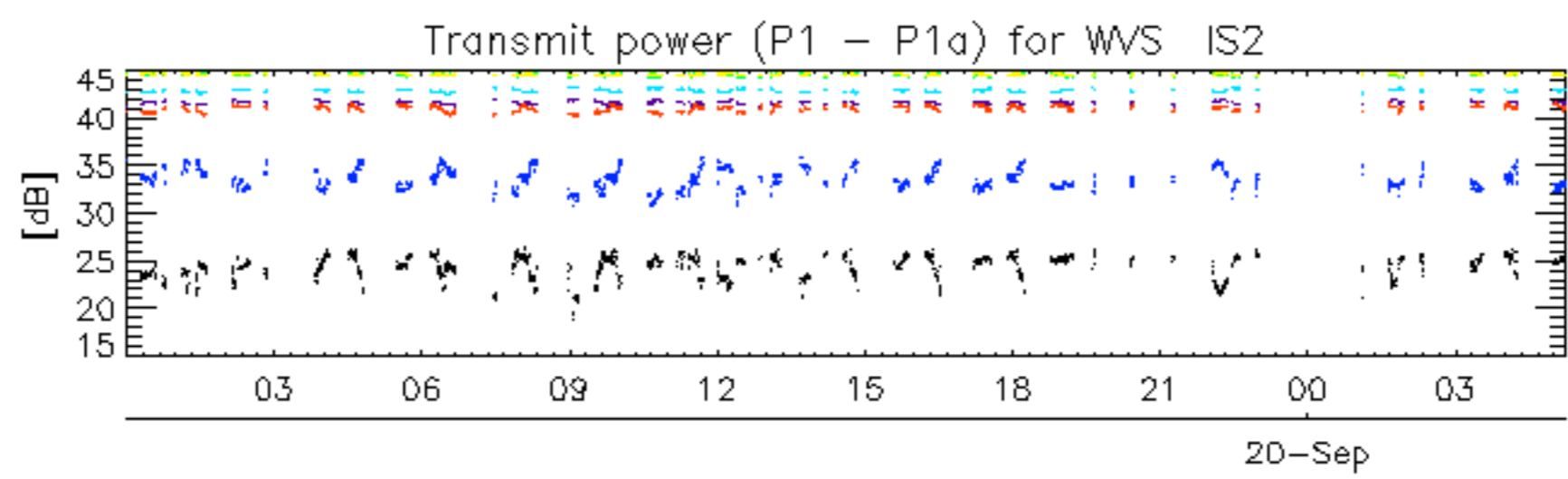
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rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30



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



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

No unavailabilities during the reported period.