

PRELIMINARY REPORT OF 051221

last update on Wed Dec 21 16:44:27 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 2005-12-20 00:00:00 to 2005-12-21 16:44:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	0	7	0	18
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	0	7	0	18
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	0	7	0	18
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	0	7	0	18

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	10	8	8	1	10
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	10	8	8	1	10
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	49	32	8	53
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	29	41	24	7	43
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	29	41	24	7	43
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	10	8	8	1	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	29	41	24	7	43

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	20051221 073836
H	20051220 081013

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒

☒	☒
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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	-3.675473	0.245535	-0.120442
7	P1	-2.754994	0.127991	0.068106
11	P1	-4.146823	0.032369	-0.010179
15	P1	-5.110900	1.722048	0.328296
19	P1	-3.041129	0.064194	0.030017
22	P1	-4.437947	0.022305	0.012309
26	P1	-4.396434	0.060586	-0.041888
30	P1	-5.656222	0.034544	0.030479
3	P1	-15.648526	2.677719	-0.323363
7	P1	-15.318811	2.673127	0.315272
11	P1	-16.322136	0.479850	0.098010
15	P1	-12.769949	0.986043	0.429131
19	P1	-13.429753	0.358238	0.064405
22	P1	-16.001701	0.632235	0.243951
26	P1	-15.109439	1.096056	0.356379
30	P1	-15.588856	2.476688	0.363829

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.839367	0.110730	0.148072
7	P2	-22.549612	0.104873	0.027996
11	P2	-16.549809	0.126203	0.170360
15	P2	-7.278886	0.103765	-0.000519
19	P2	-9.219662	0.101798	0.005762
22	P2	-17.873932	0.111579	-0.030140
26	P2	-16.370386	0.131710	-0.095558
30	P2	-19.789701	0.118113	-0.036924

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235875	0.007539	-0.004510
7	P3	-8.235875	0.007539	-0.004510
11	P3	-8.235875	0.007539	-0.004510
15	P3	-8.235875	0.007539	-0.004510
19	P3	-8.235875	0.007539	-0.004510
22	P3	-8.235875	0.007539	-0.004510
26	P3	-8.235875	0.007539	-0.004510
30	P3	-8.235875	0.007539	-0.004510

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<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	-3.702837	0.008176	-0.021384
7	P1	-2.774663	0.011932	0.015314
11	P1	-2.875952	0.014865	-0.007263
15	P1	-3.409425	0.021580	-0.026507
19	P1	-3.389941	0.013707	-0.023457
22	P1	-5.125162	0.018873	-0.005873
26	P1	-5.841672	0.016262	-0.035207
30	P1	-5.281509	0.033220	-0.030887
3	P1	-11.480498	0.041204	-0.026594
7	P1	-9.966979	0.046145	-0.020863
11	P1	-10.050761	0.060632	0.014331
15	P1	-10.569770	0.078630	0.082306

19	P1	-15.516499	0.073007	-0.052792
22	P1	-20.958611	0.966714	-0.109364
26	P1	-17.178196	0.301195	0.018288
30	P1	-18.281422	0.305338	0.273695

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.619387	0.029919	0.047709
7	P2	-23.050686	0.056886	-0.040508
11	P2	-11.625144	0.021050	0.113854
15	P2	-4.988235	0.021044	-0.045594
19	P2	-6.968014	0.021966	-0.057244
22	P2	-8.199029	0.022649	-0.059133
26	P2	-24.051725	0.030801	-0.026273
30	P2	-22.126266	0.018206	-0.058515

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.077092	0.002470	-0.010771
7	P3	-8.077158	0.002468	-0.010700
11	P3	-8.077102	0.002454	-0.011240
15	P3	-8.077119	0.002467	-0.011522
19	P3	-8.077134	0.002468	-0.011199
22	P3	-8.077185	0.002466	-0.010897
26	P3	-8.077100	0.002446	-0.011246
30	P3	-8.076813	0.002466	-0.011098

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	0.000461549
	stdev	2.17863e-07
MEAN Q	mean	0.000476788
	stdev	2.36659e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129072
	stdev	0.00109543
STDEV Q	mean	0.129357
	stdev	0.00110779



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[901]

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_WSM_1PNPDE20051221_021712_000001042043_00318_19911_5158.N1	0	54
ASA_WSM_1PNPDE20051221_031549_000001472043_00319_19912_5167.N1	0	49





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

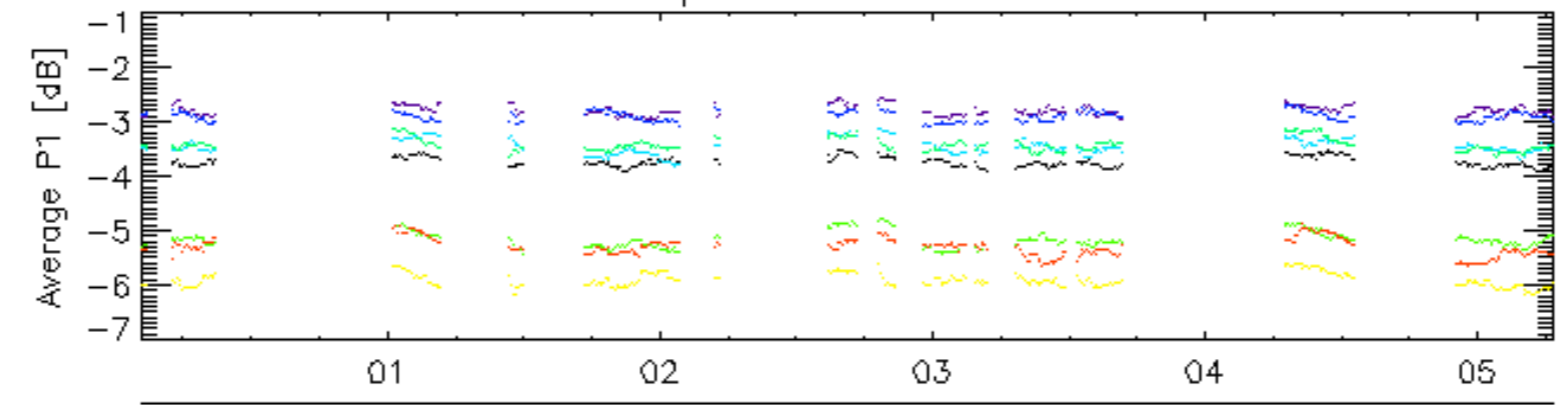
7.5 - Absolute Doppler for GM1

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

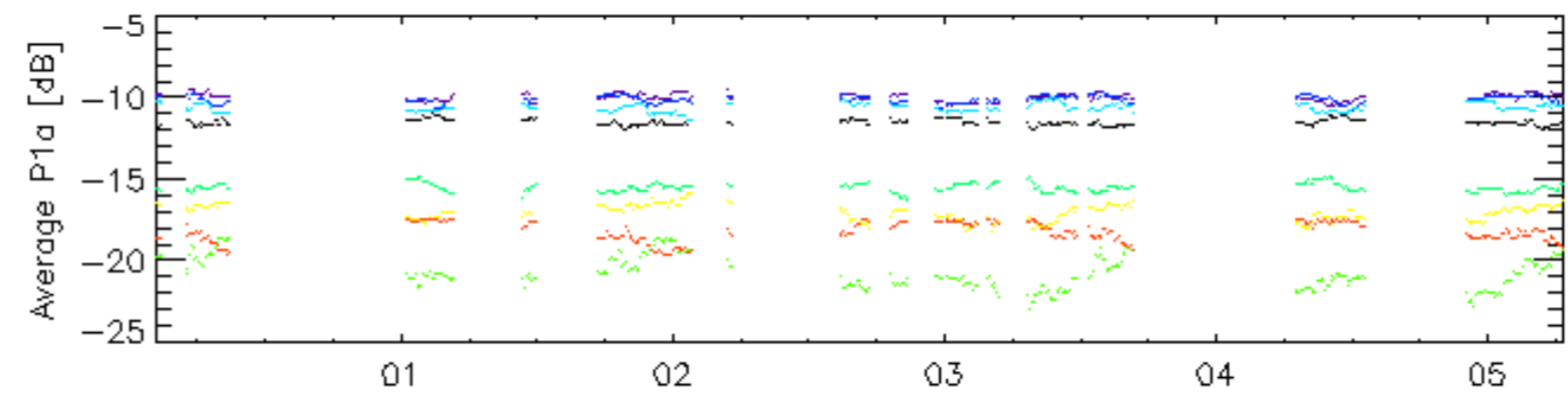
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

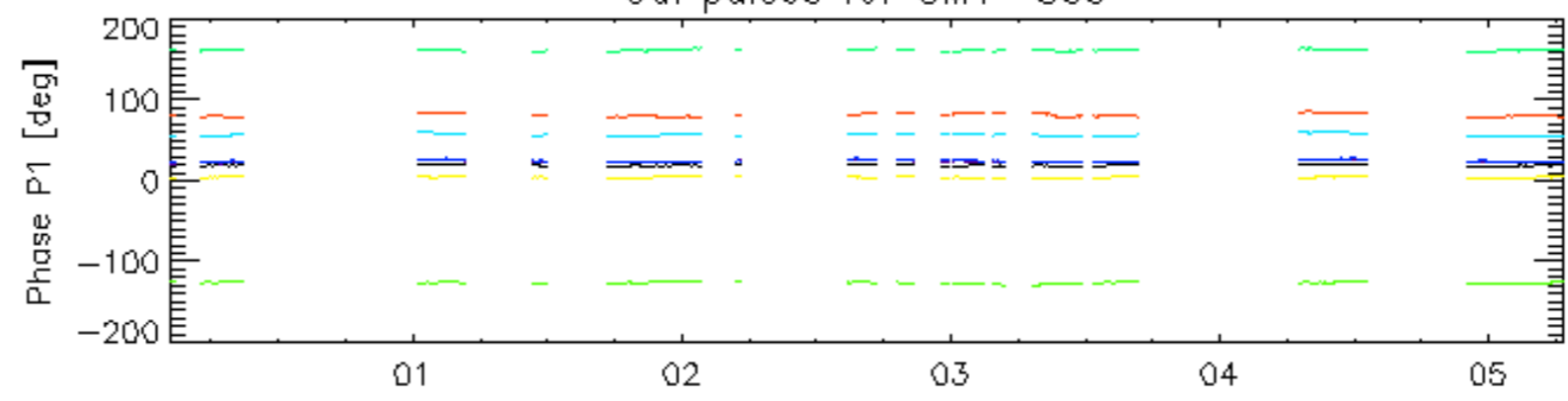


21-Dec

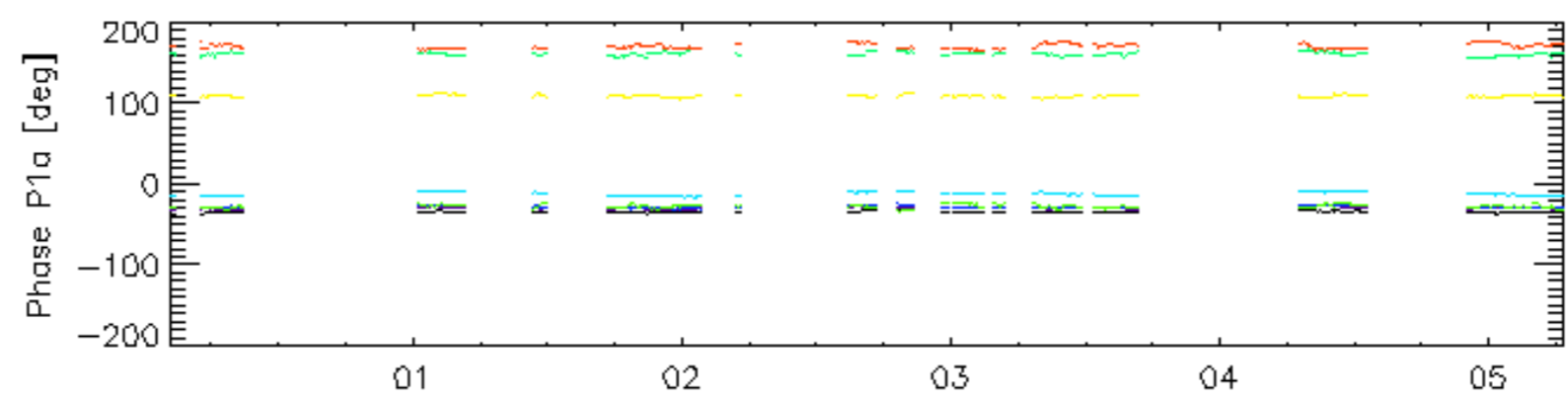


21-Dec

Cal pulses for GM1 SS3

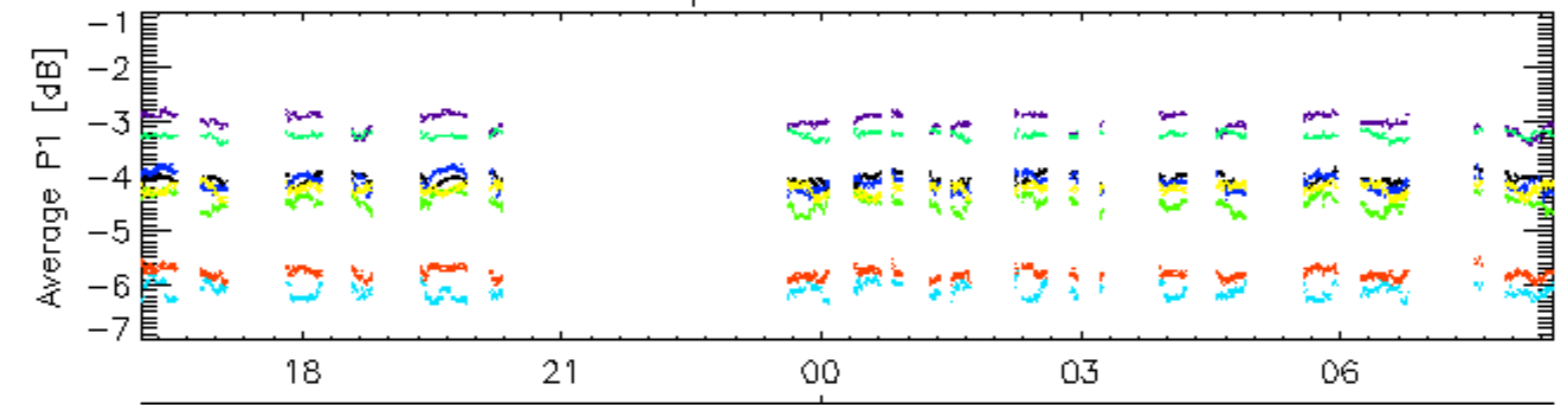


21-Dec

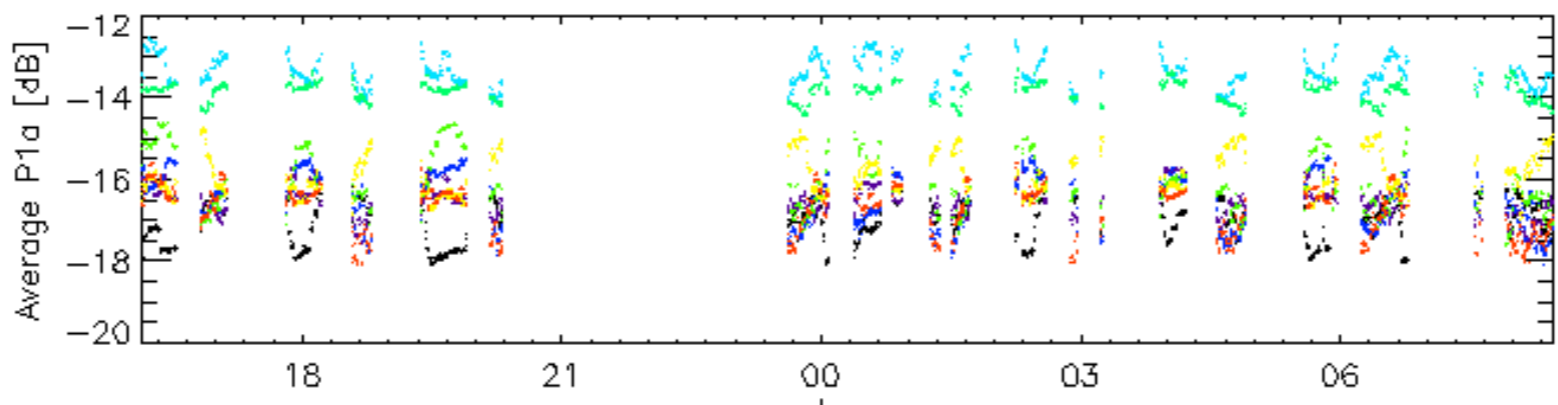


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

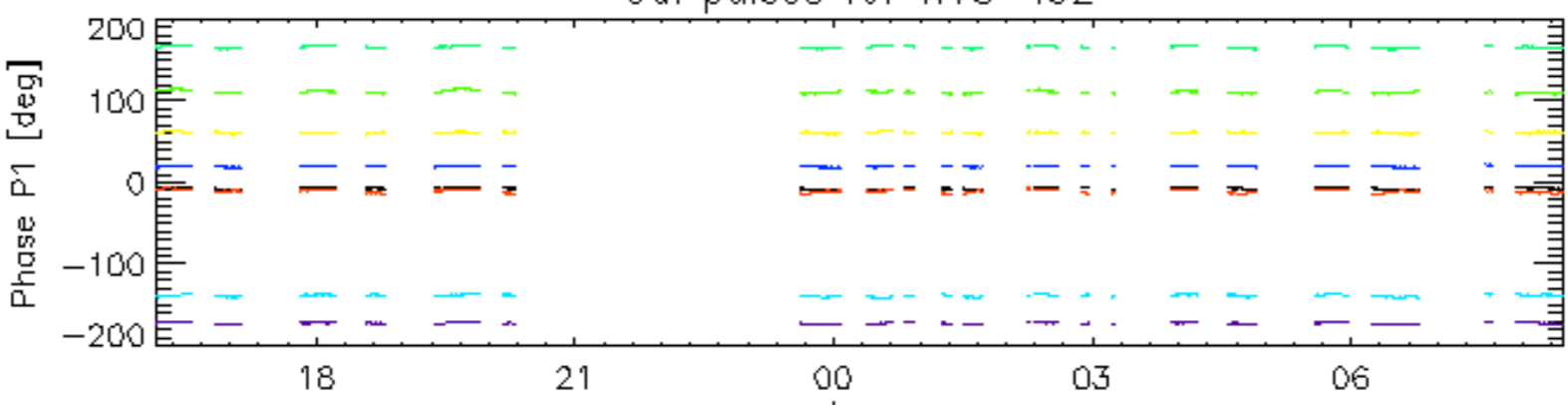


21-Dec

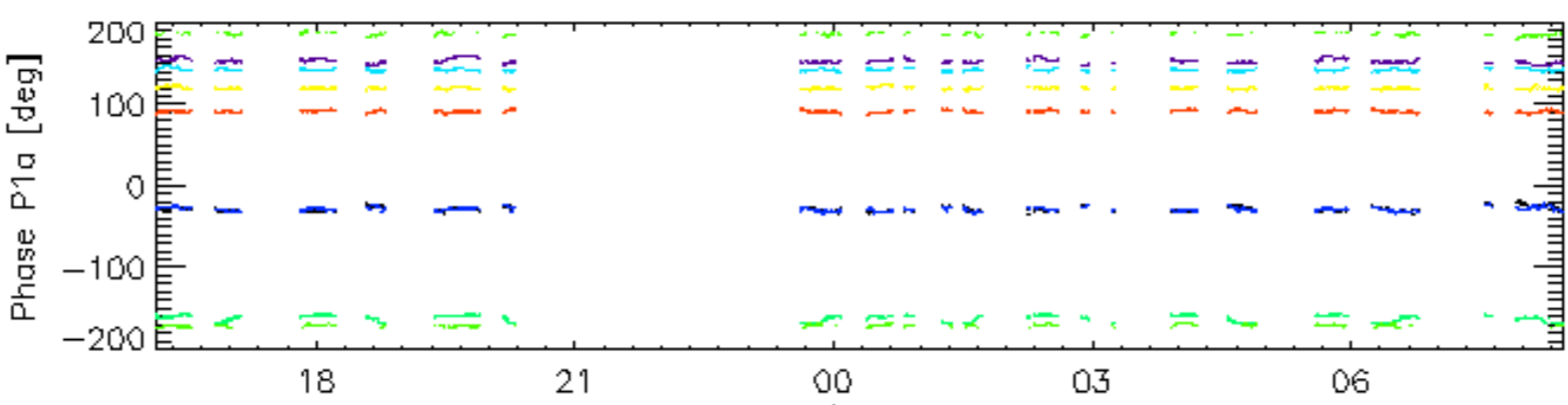


21-Dec

Cal pulses for WVS IS2



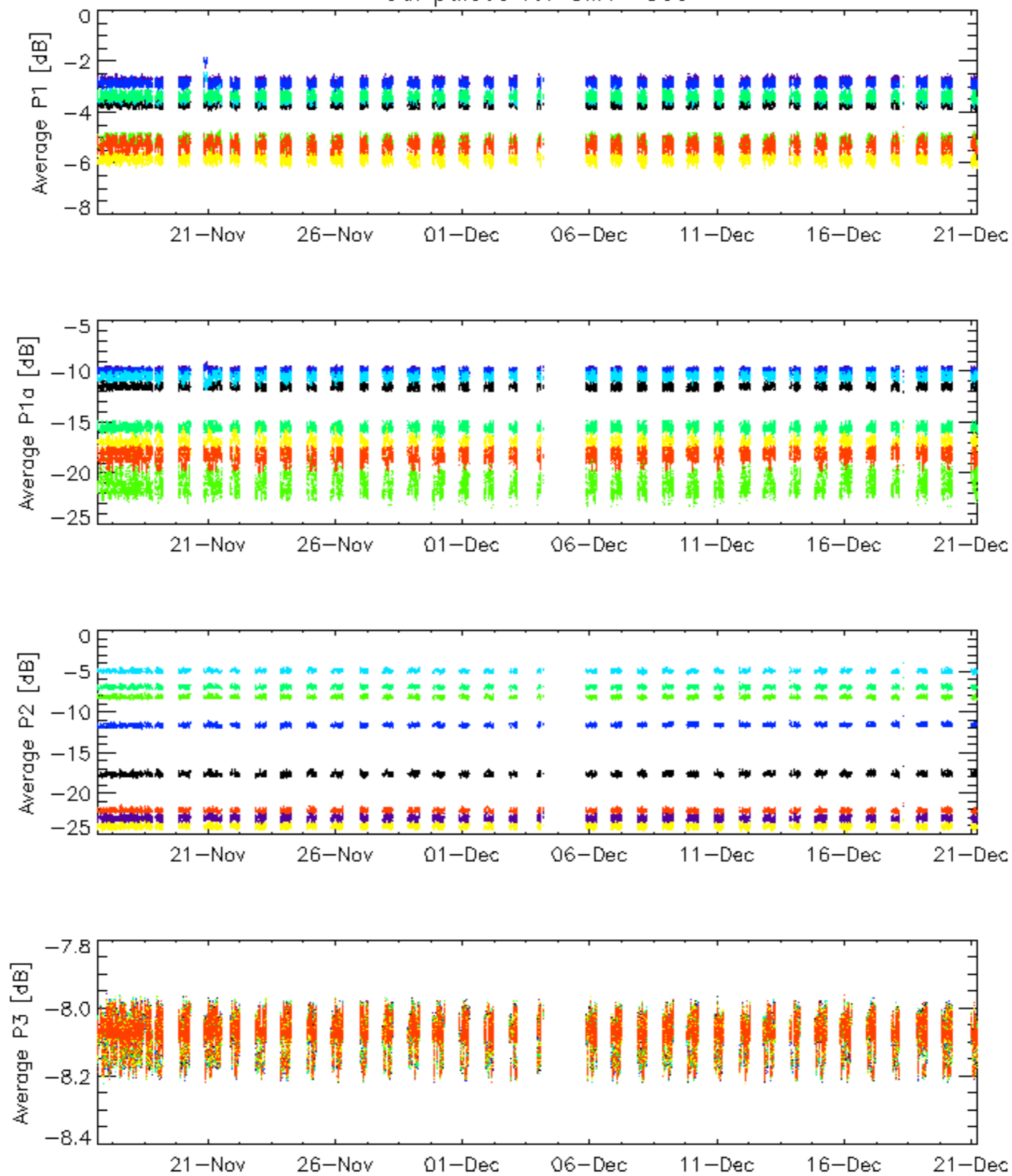
21-Dec



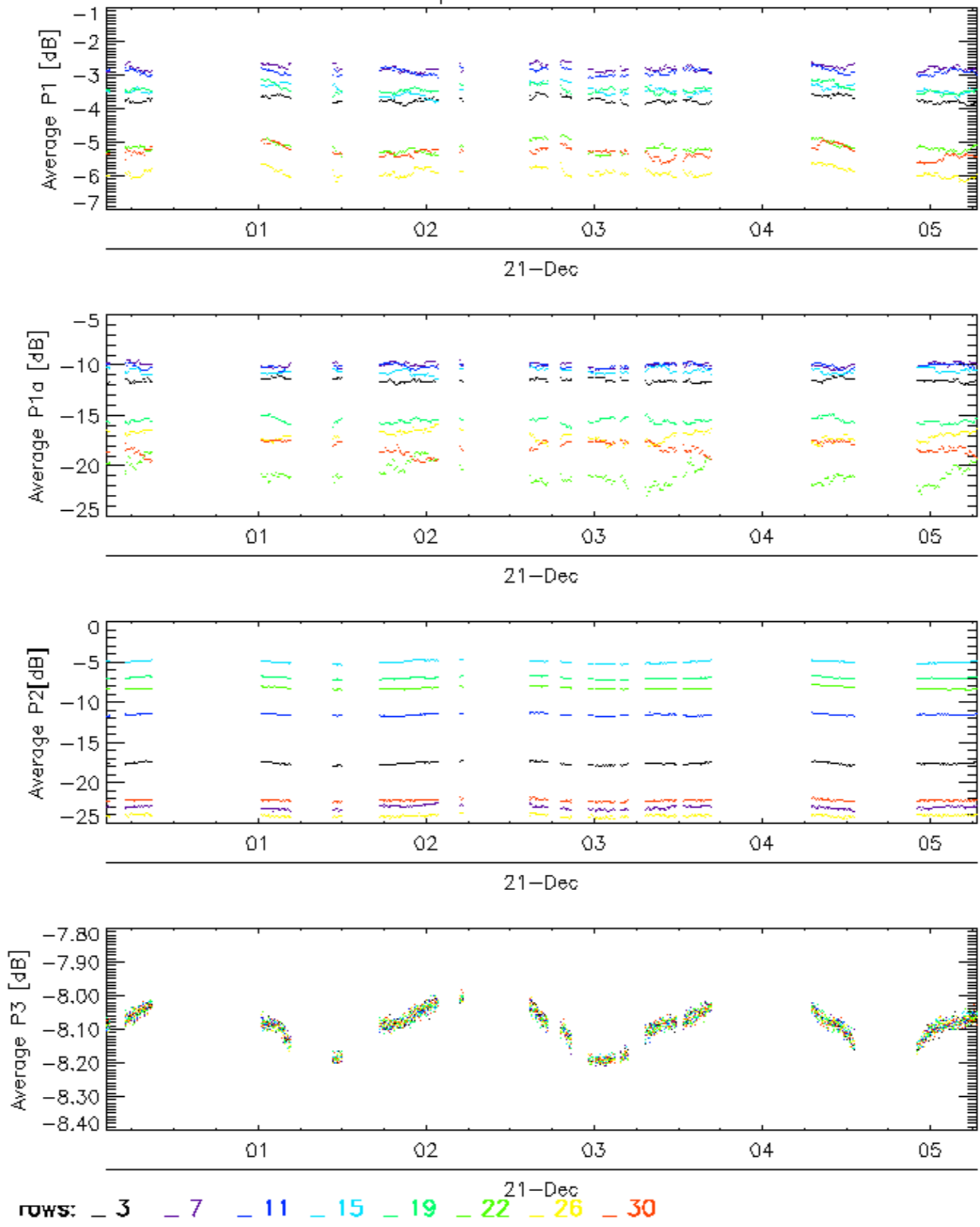
21-Dec

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

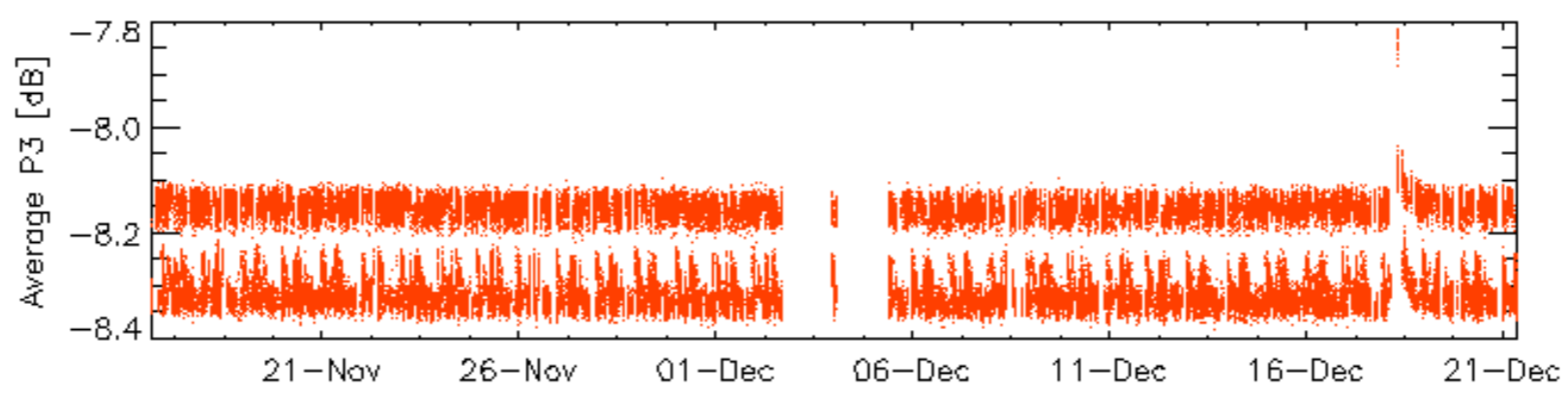
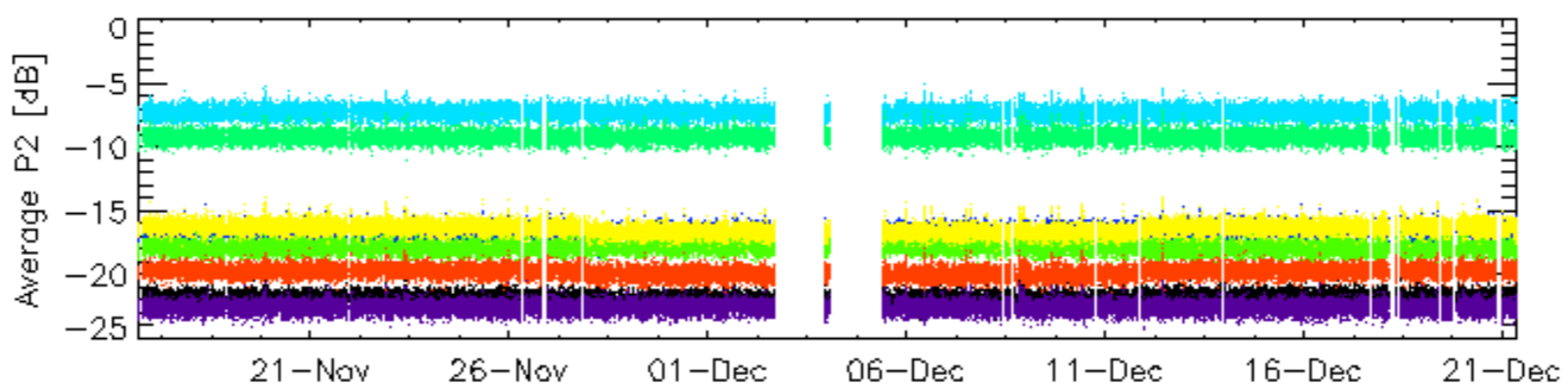
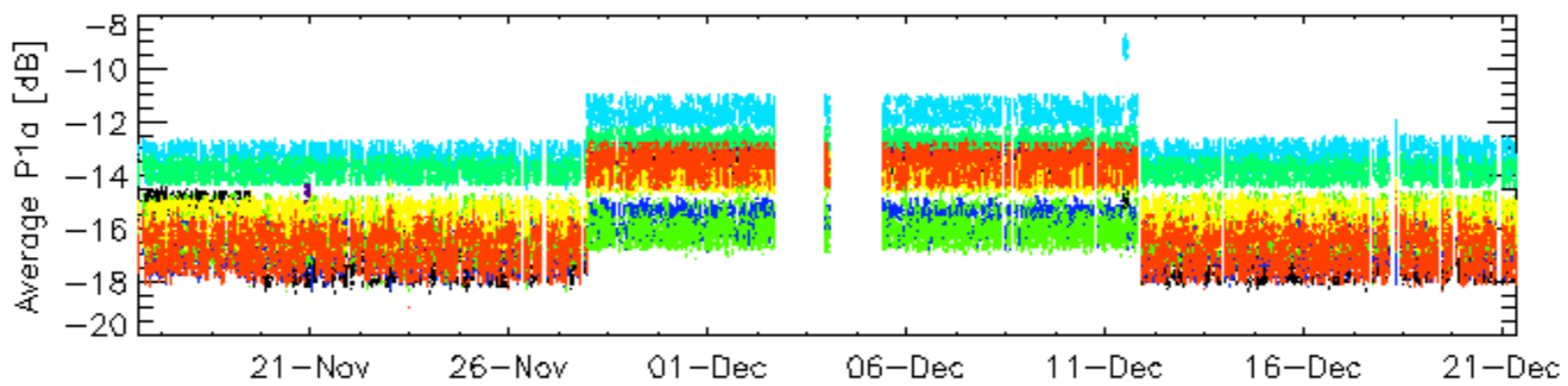
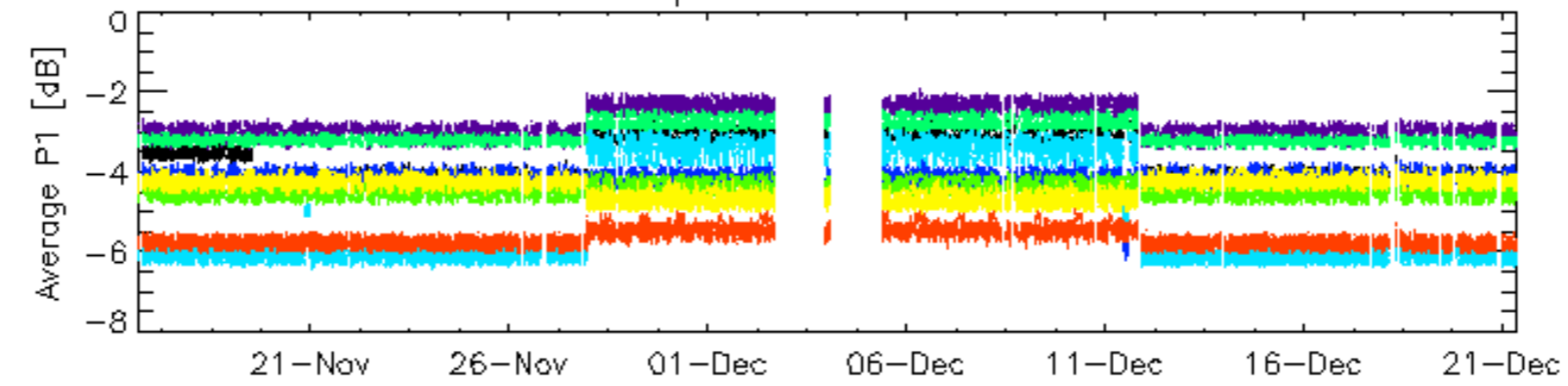
Cal pulses for GM1 SS3



Cal pulses for GM1 SS3

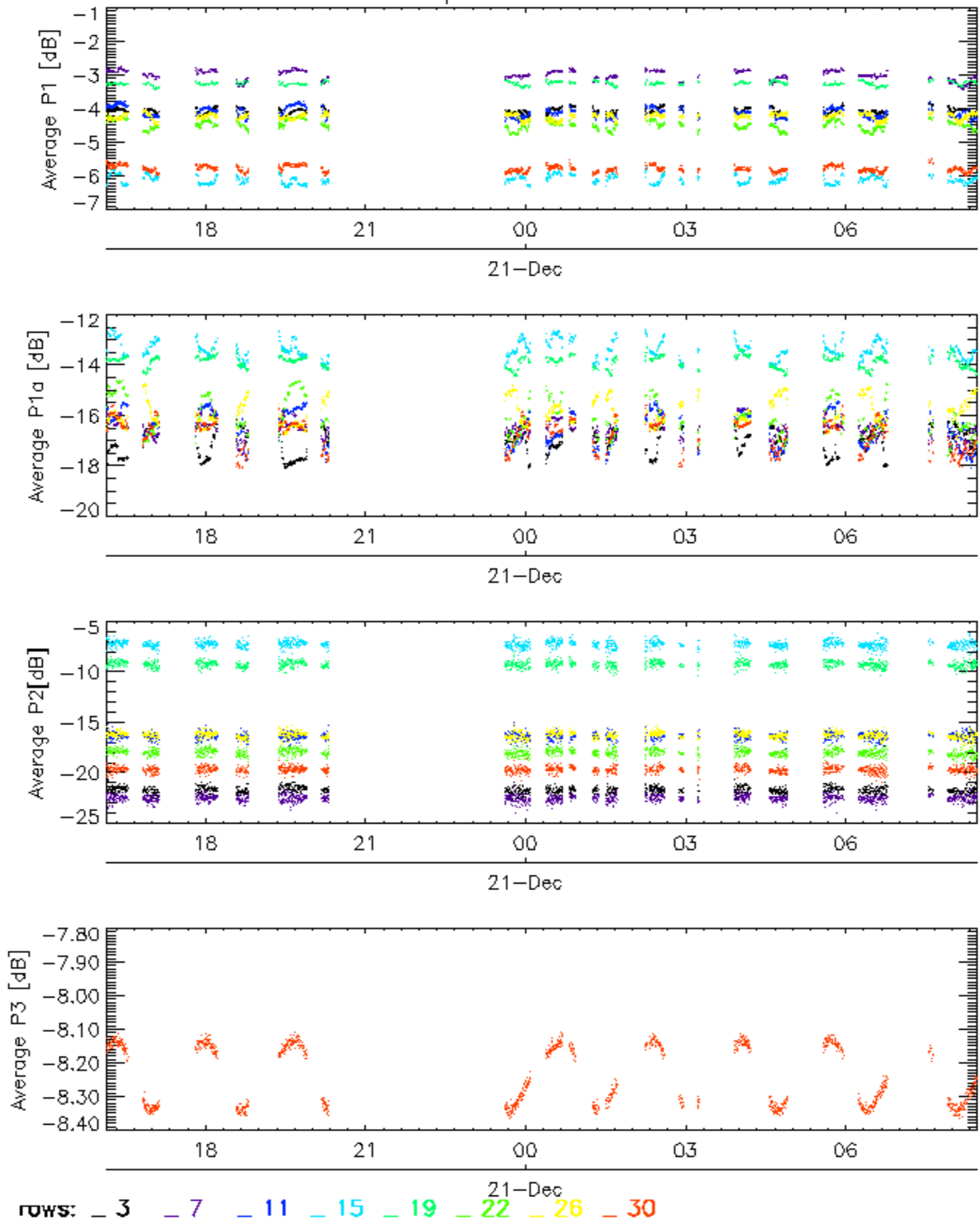


Cal pulses for WVS IS2



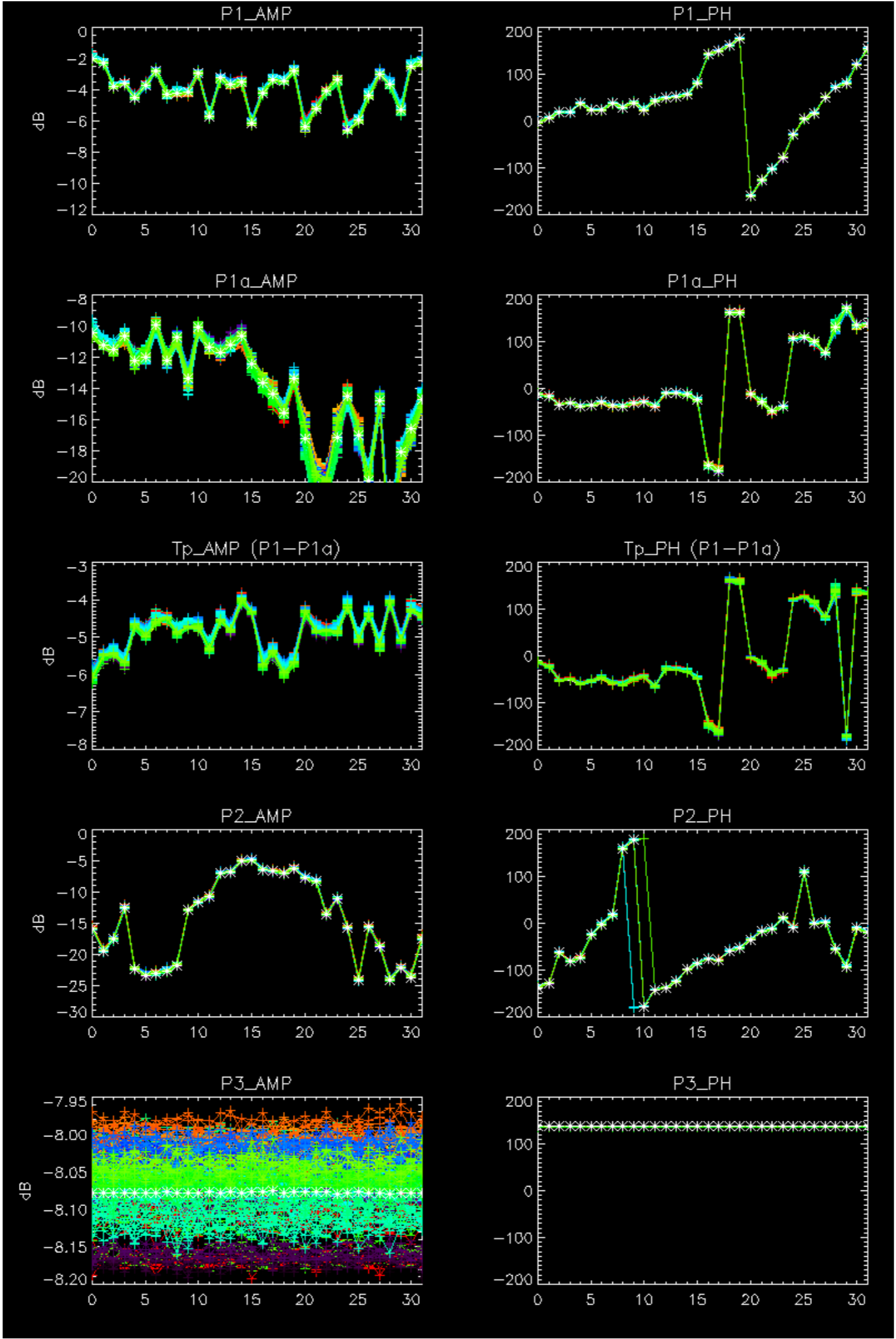
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

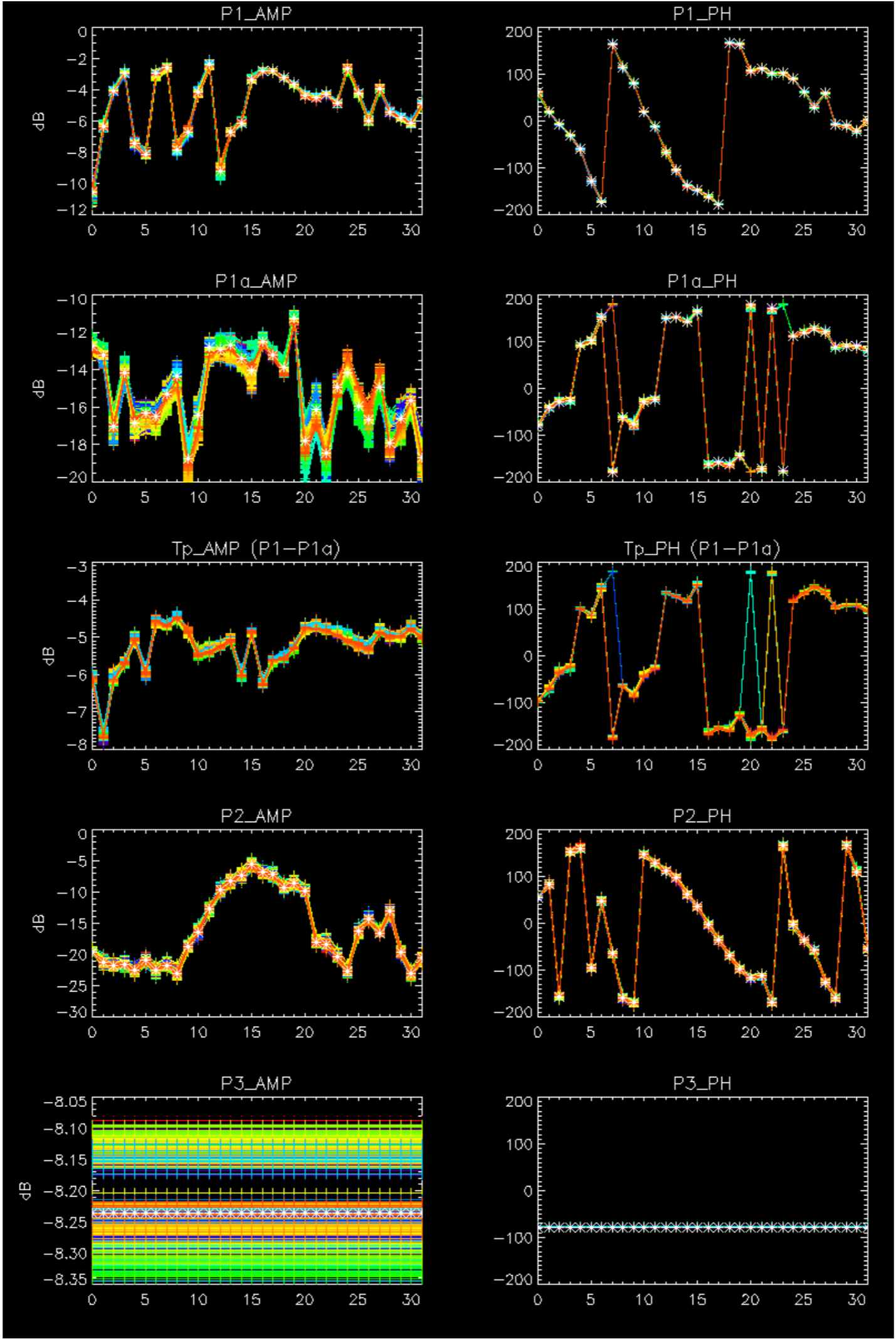
Cal pulses for WVS IS2



No anomalies observed on available browse products

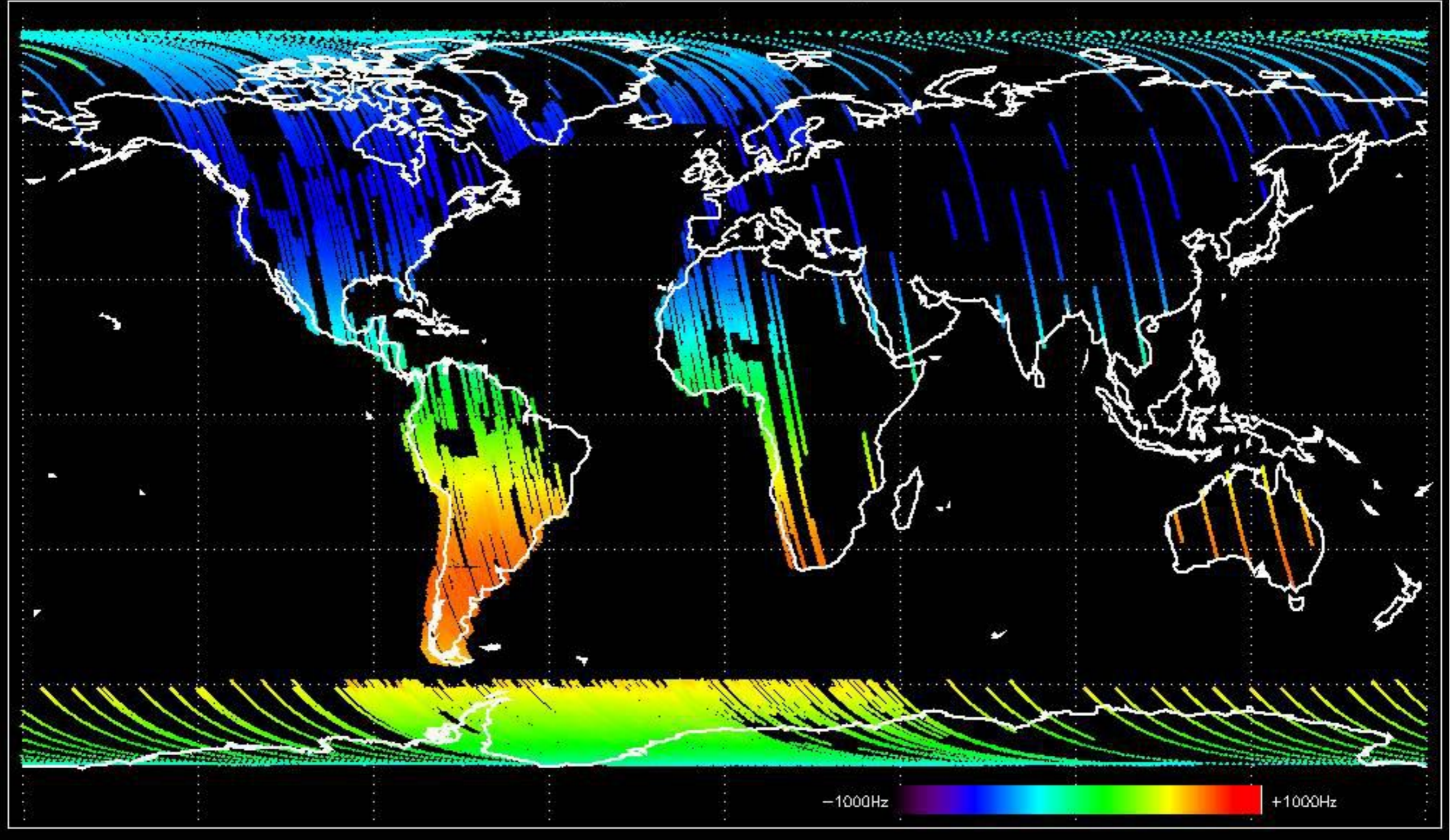
No anomalies observed.



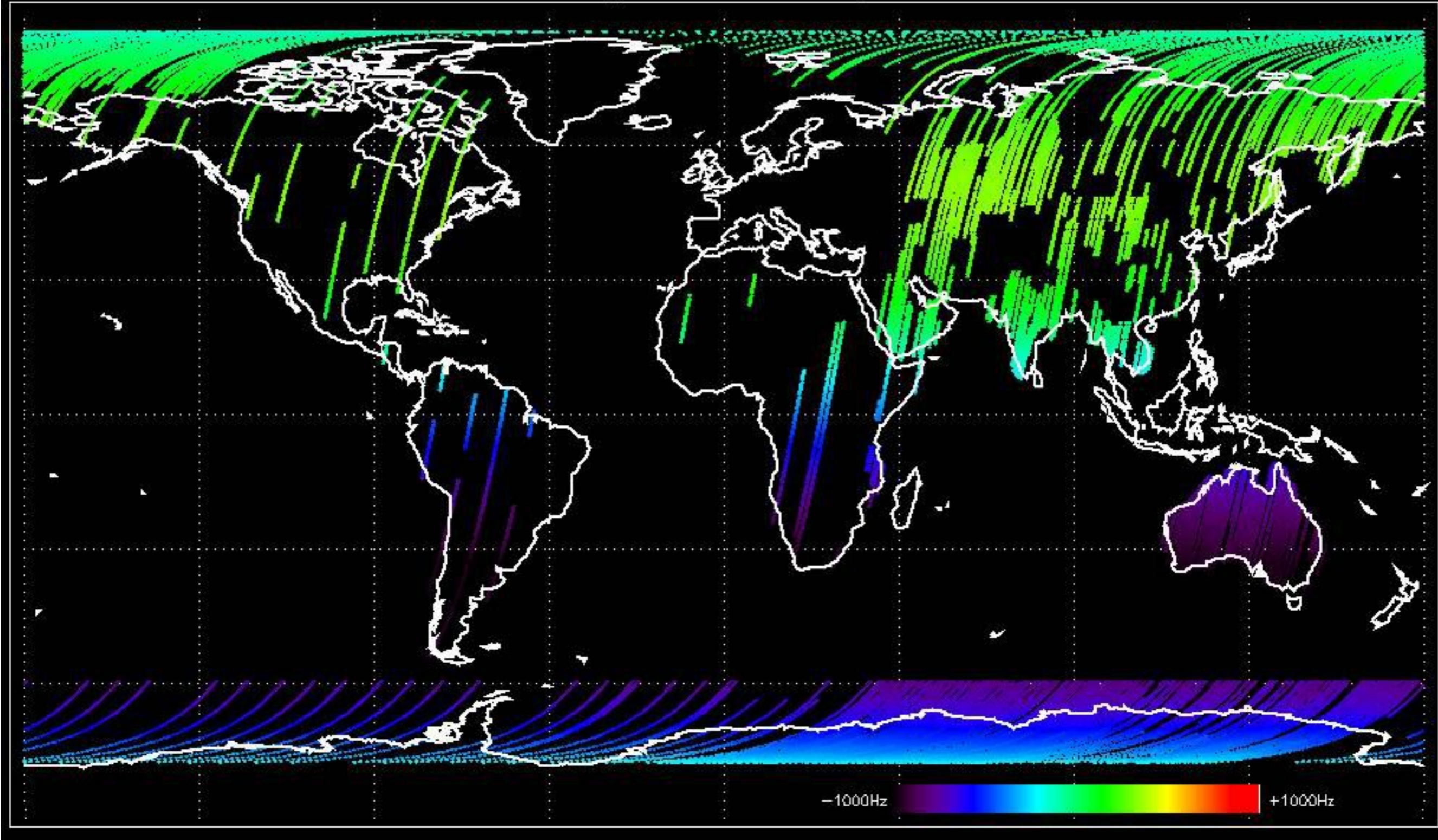


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

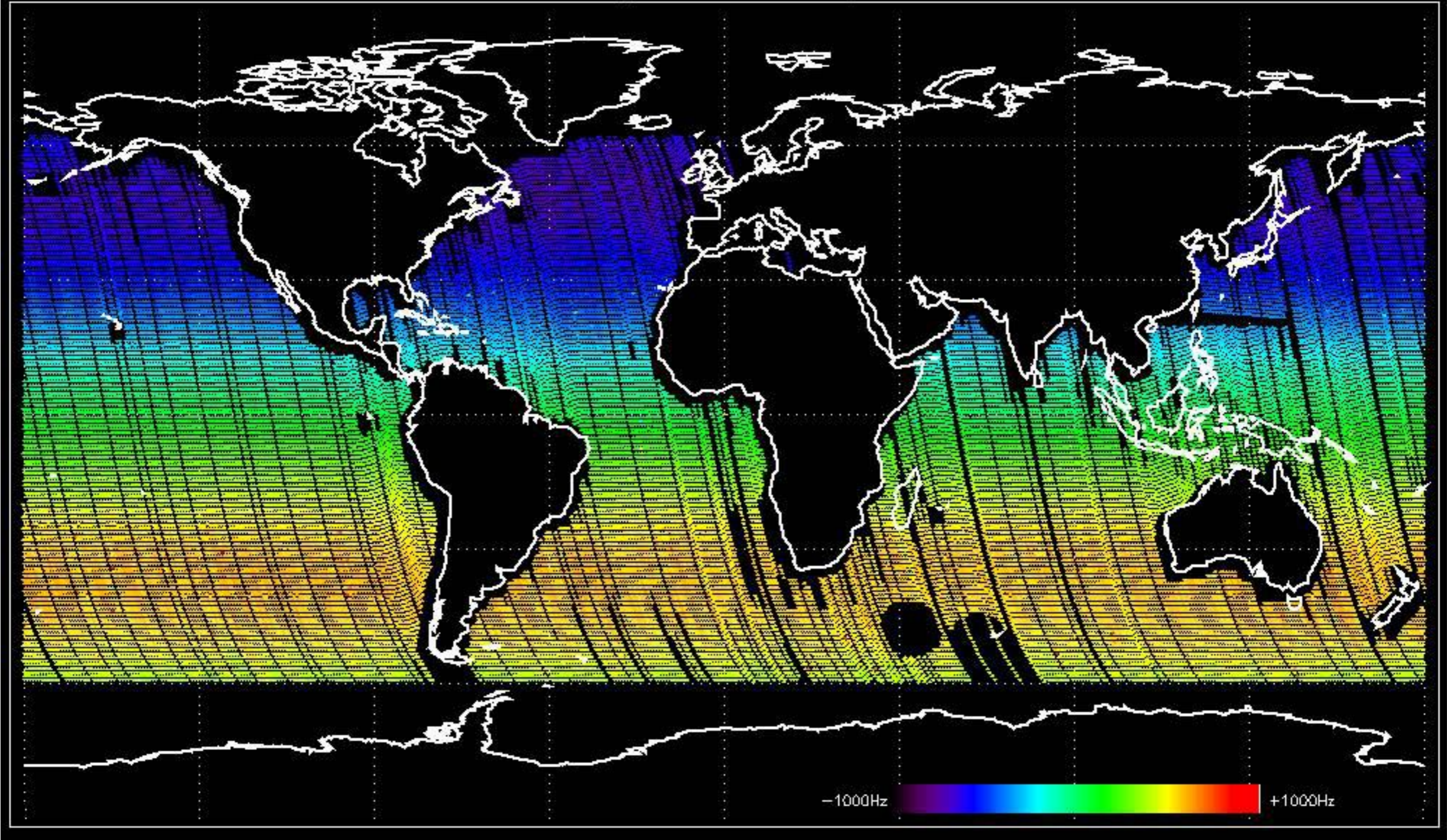
Doppler 'GM1' 'SS1' ascending



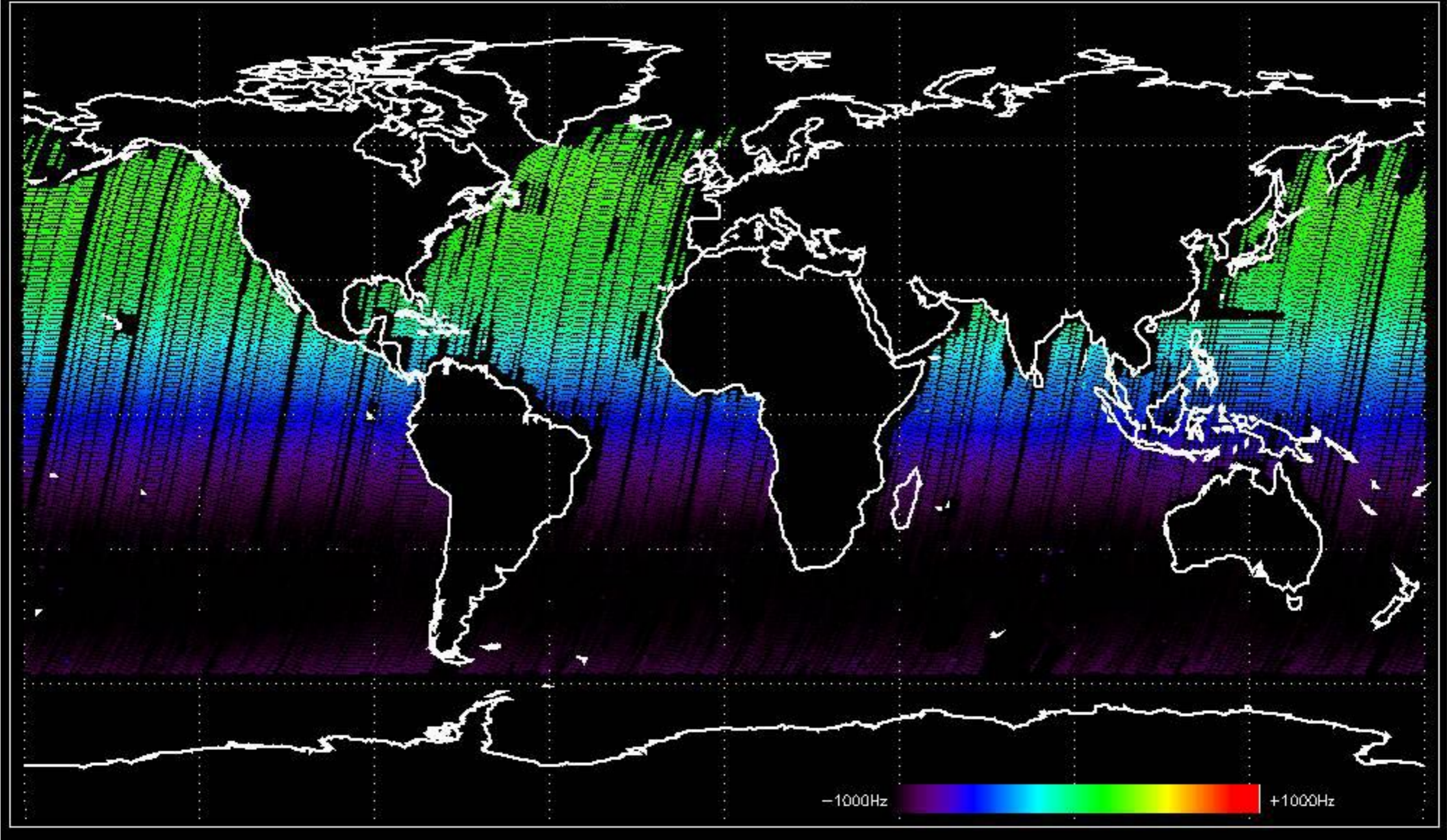
Doppler 'GM1' 'SS1' descending

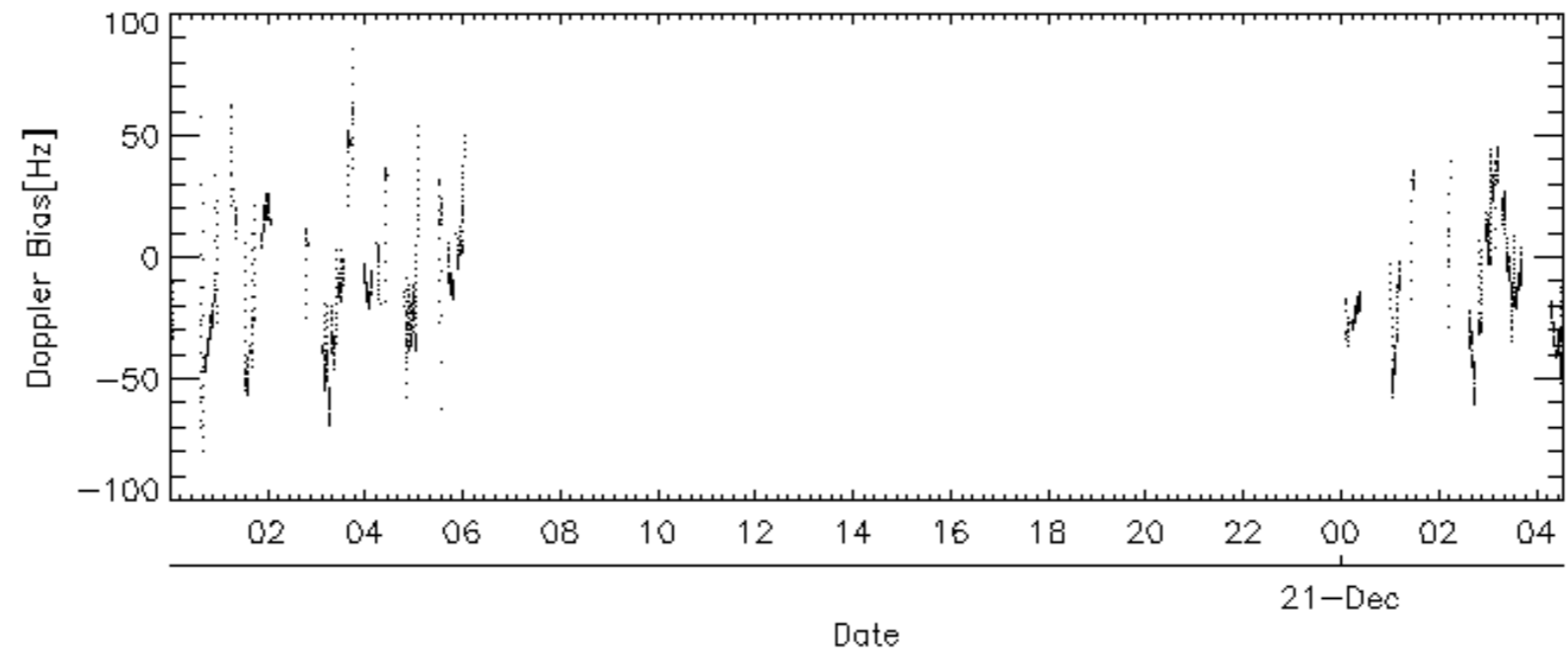
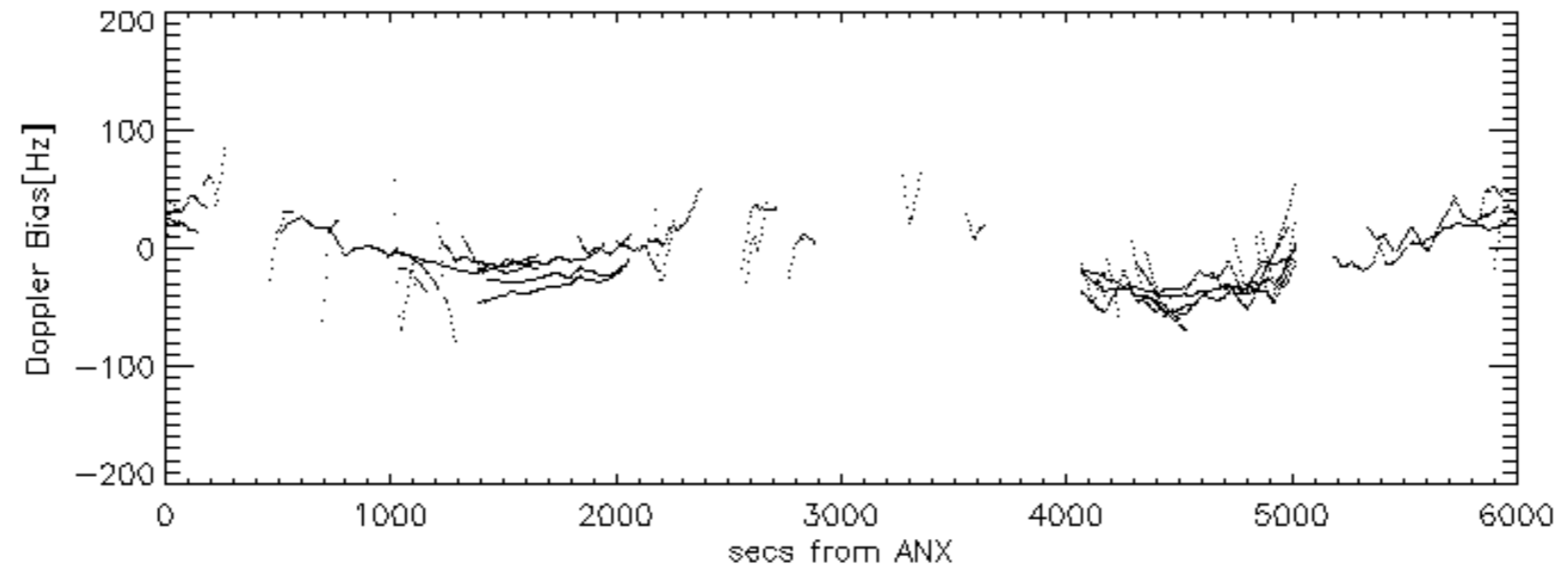
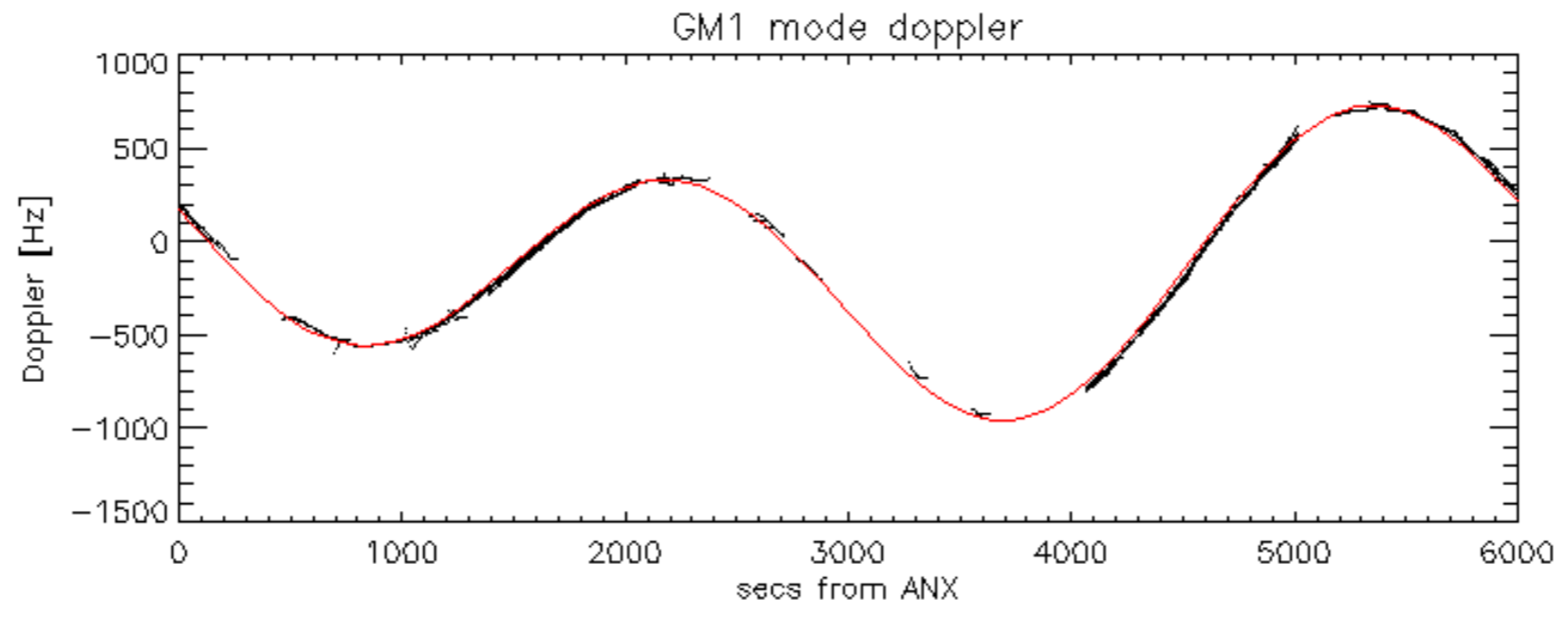


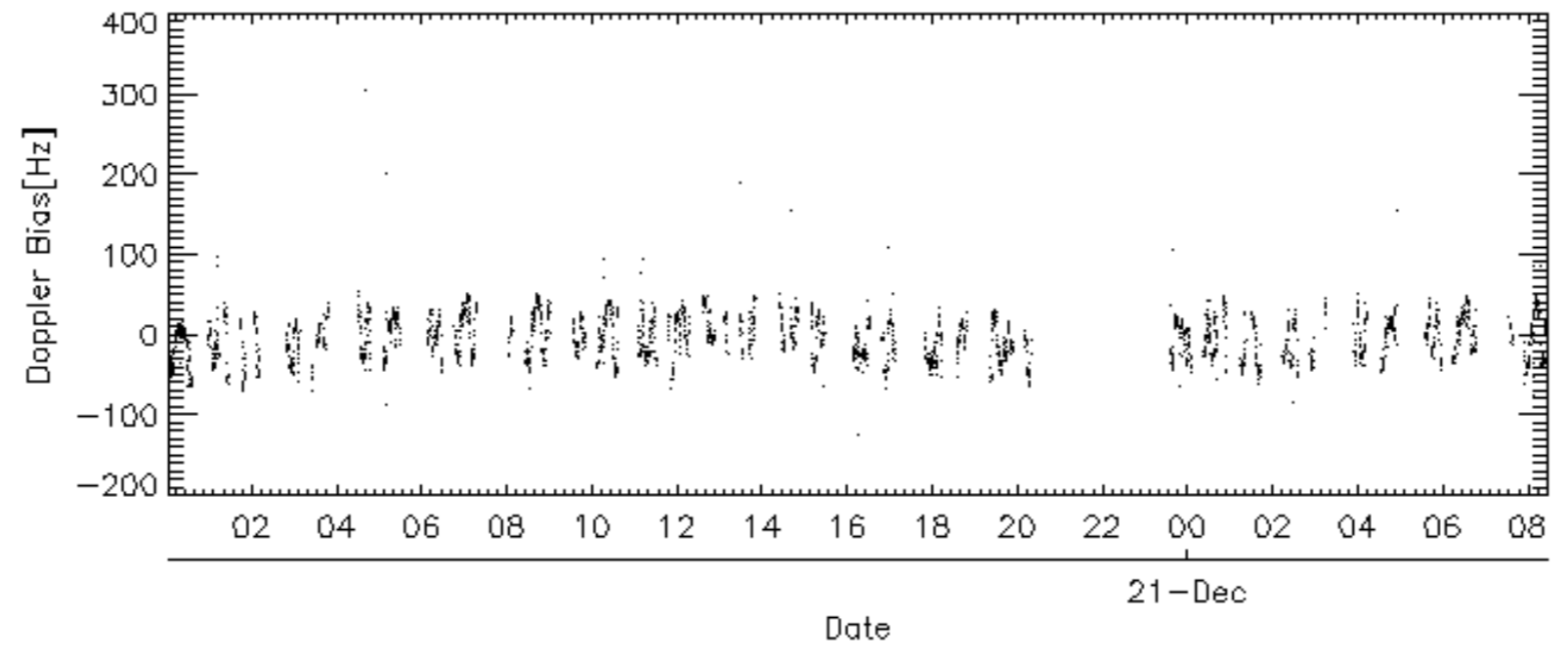
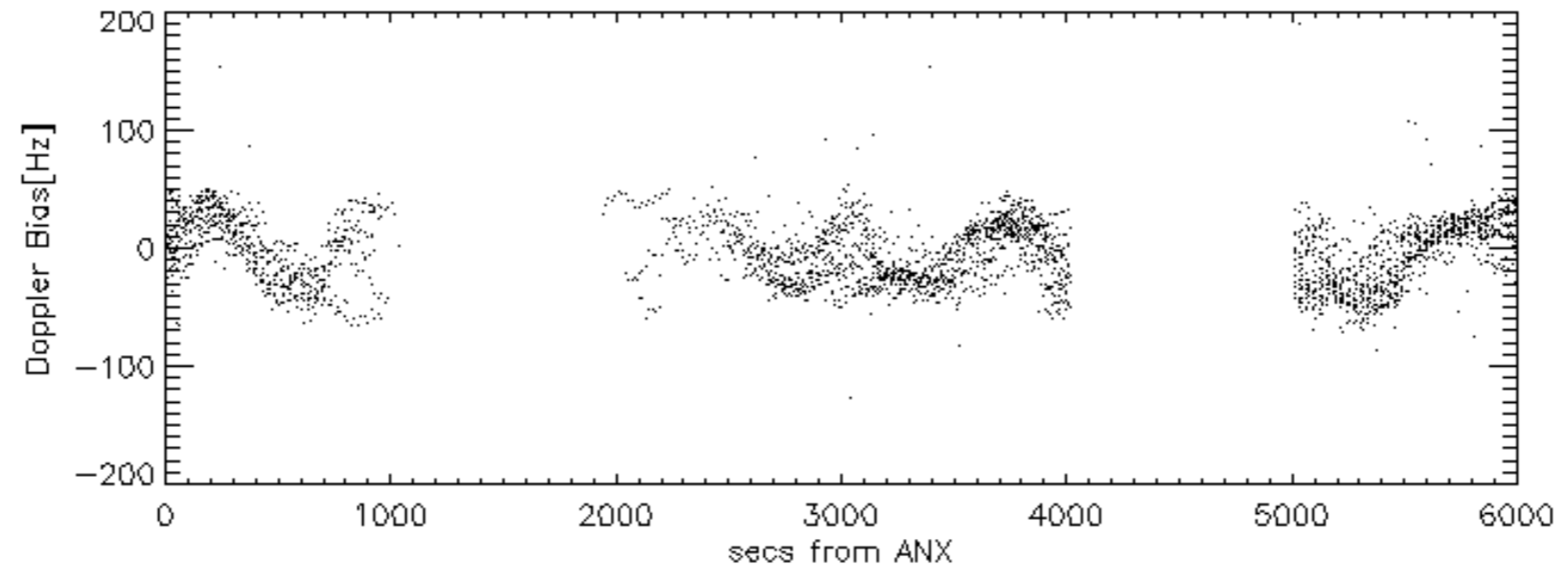
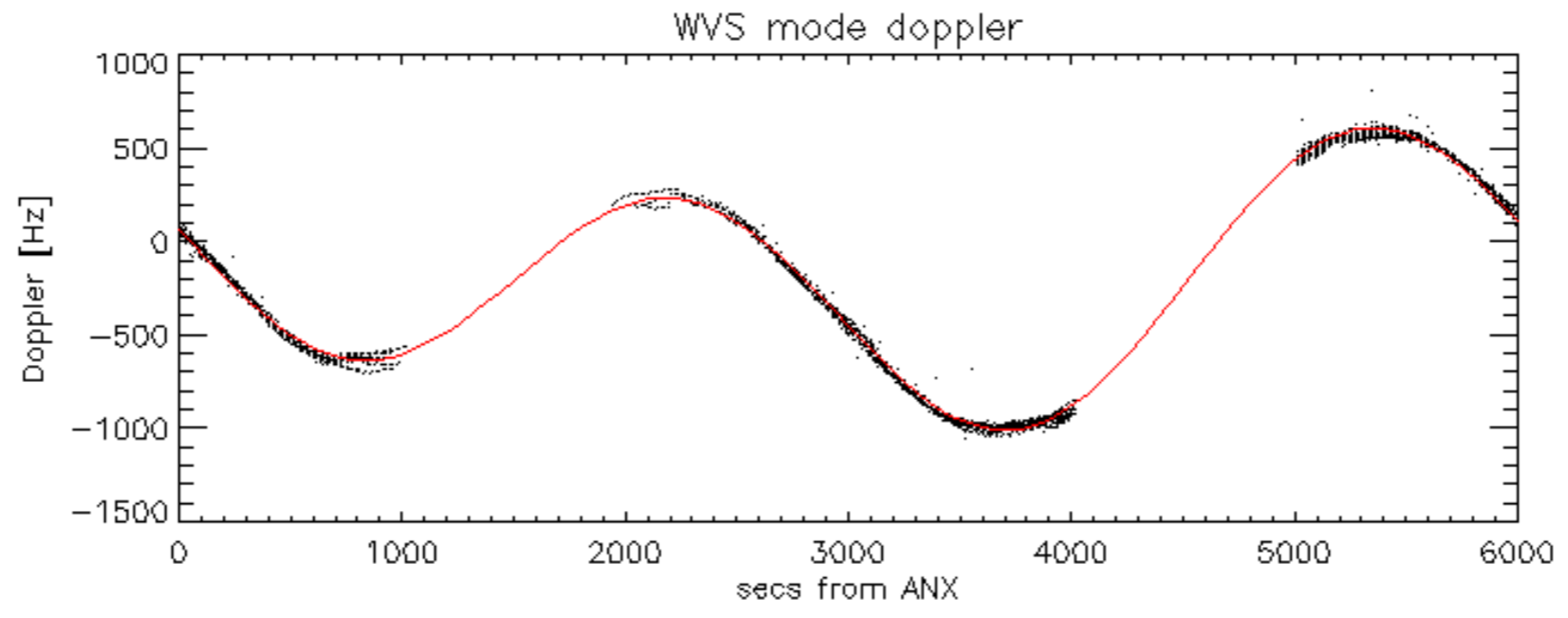
Doppler 'WVS' 'IS2' ascending



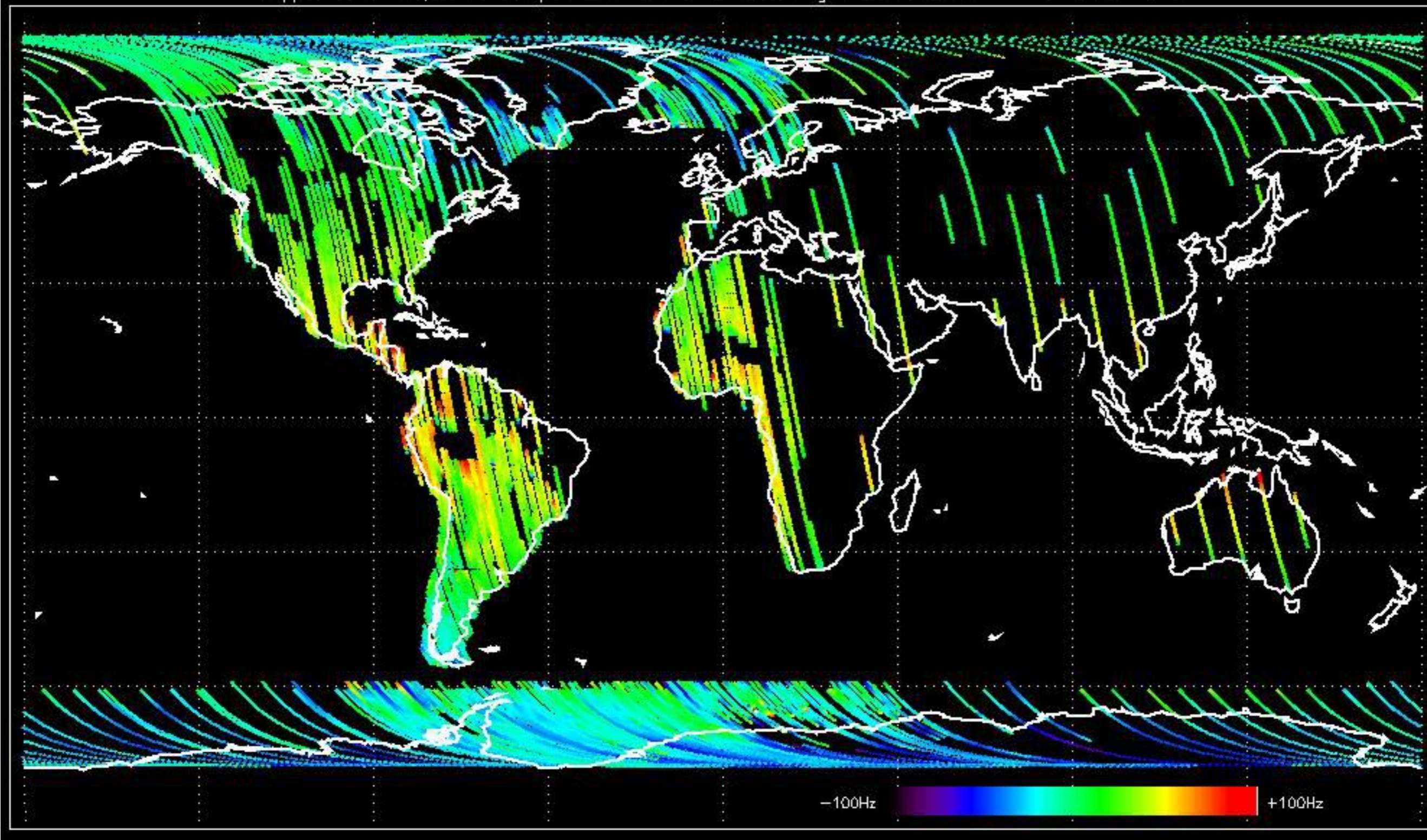
Doppler 'WVS' 'IS2' descending



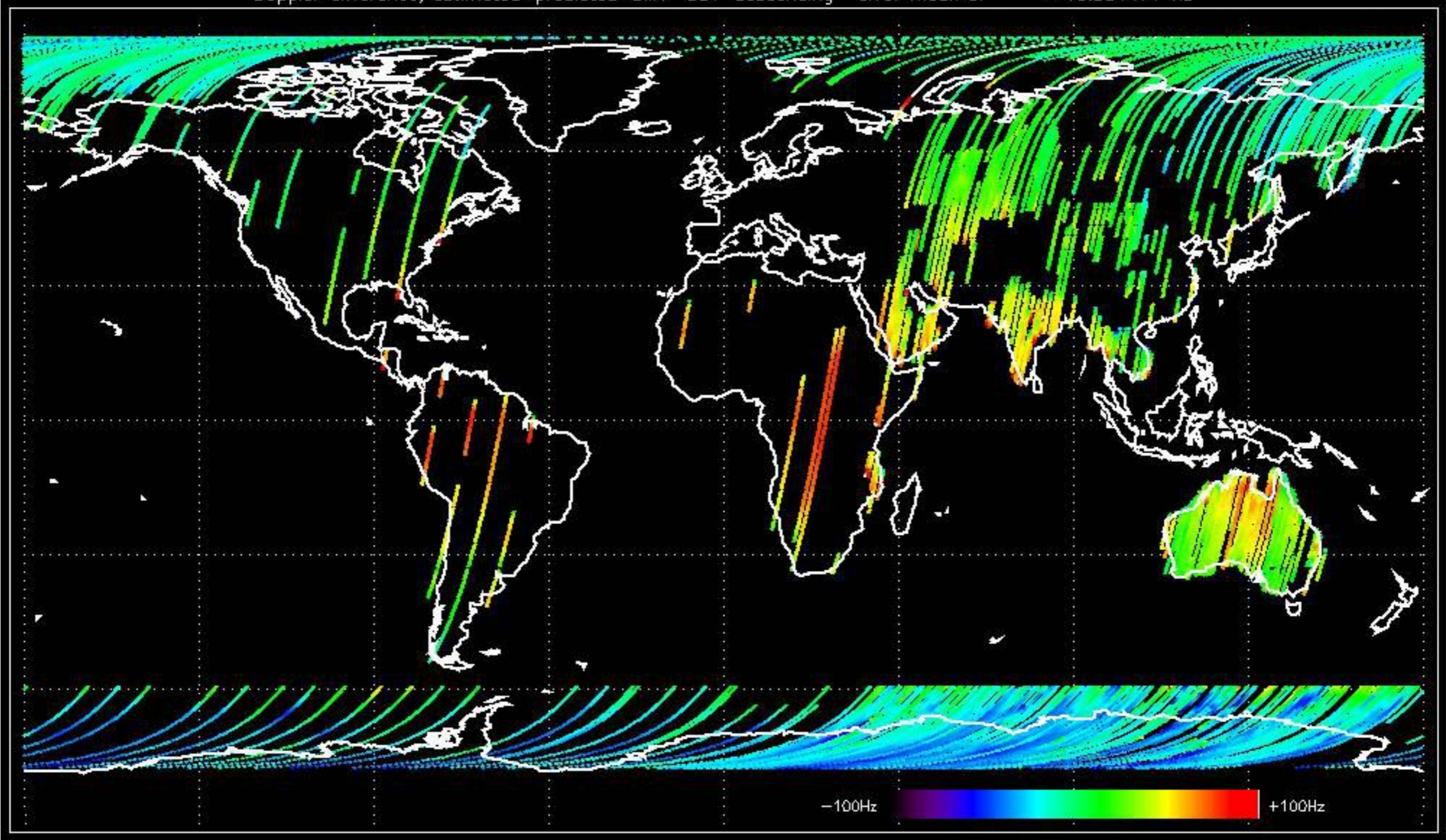




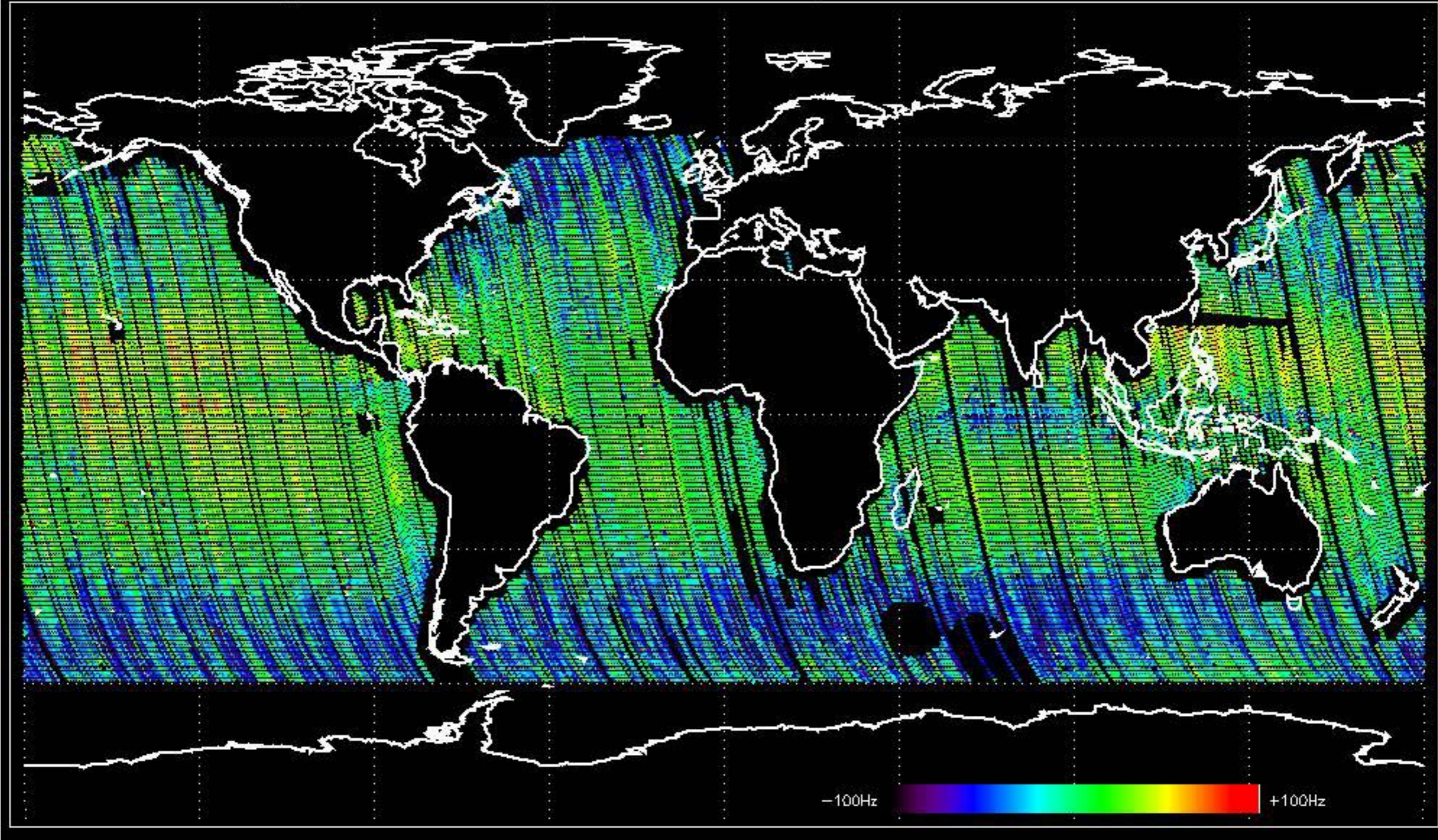
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.553581 Hz



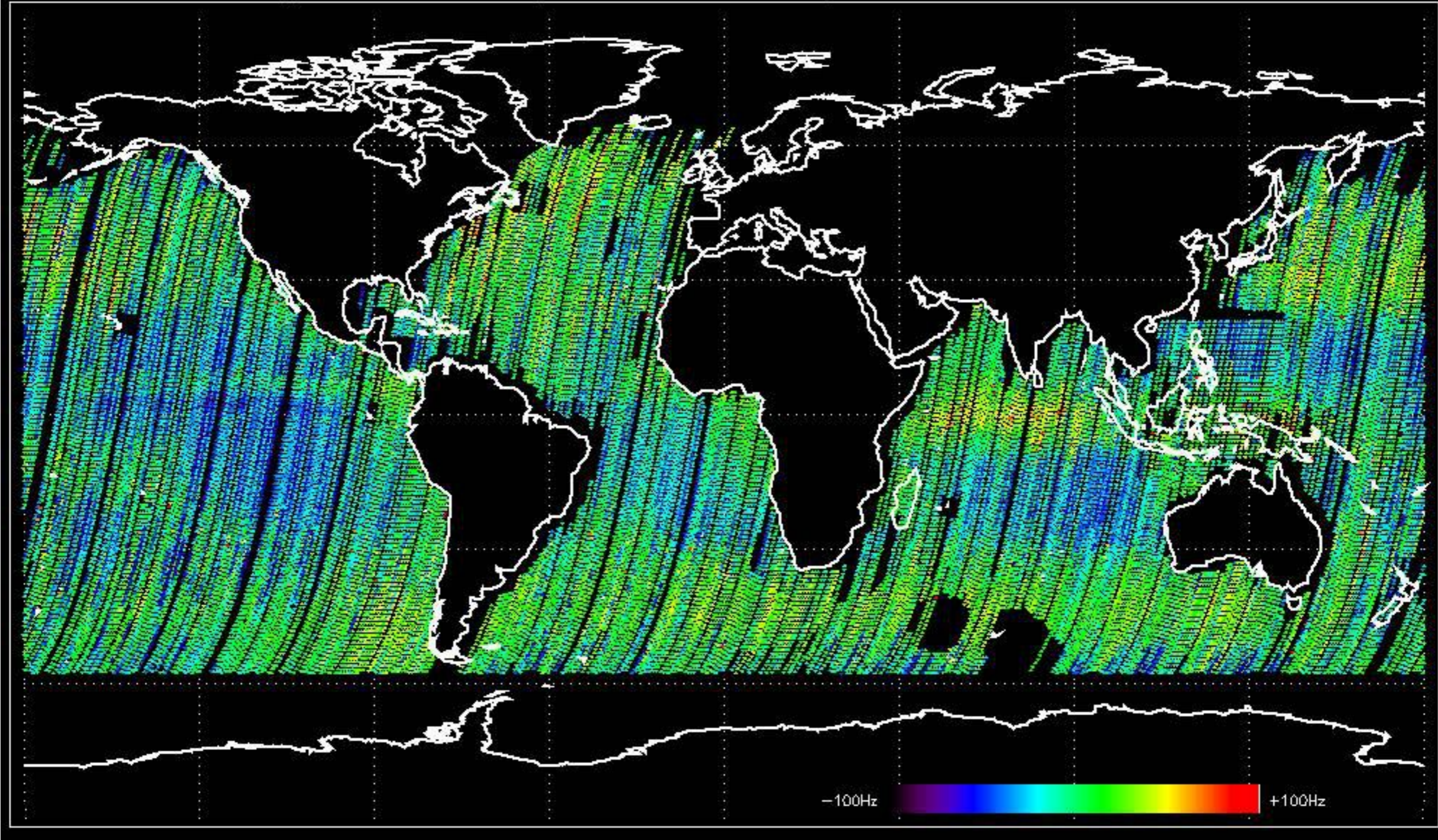
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.951471 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.6712462 Hz

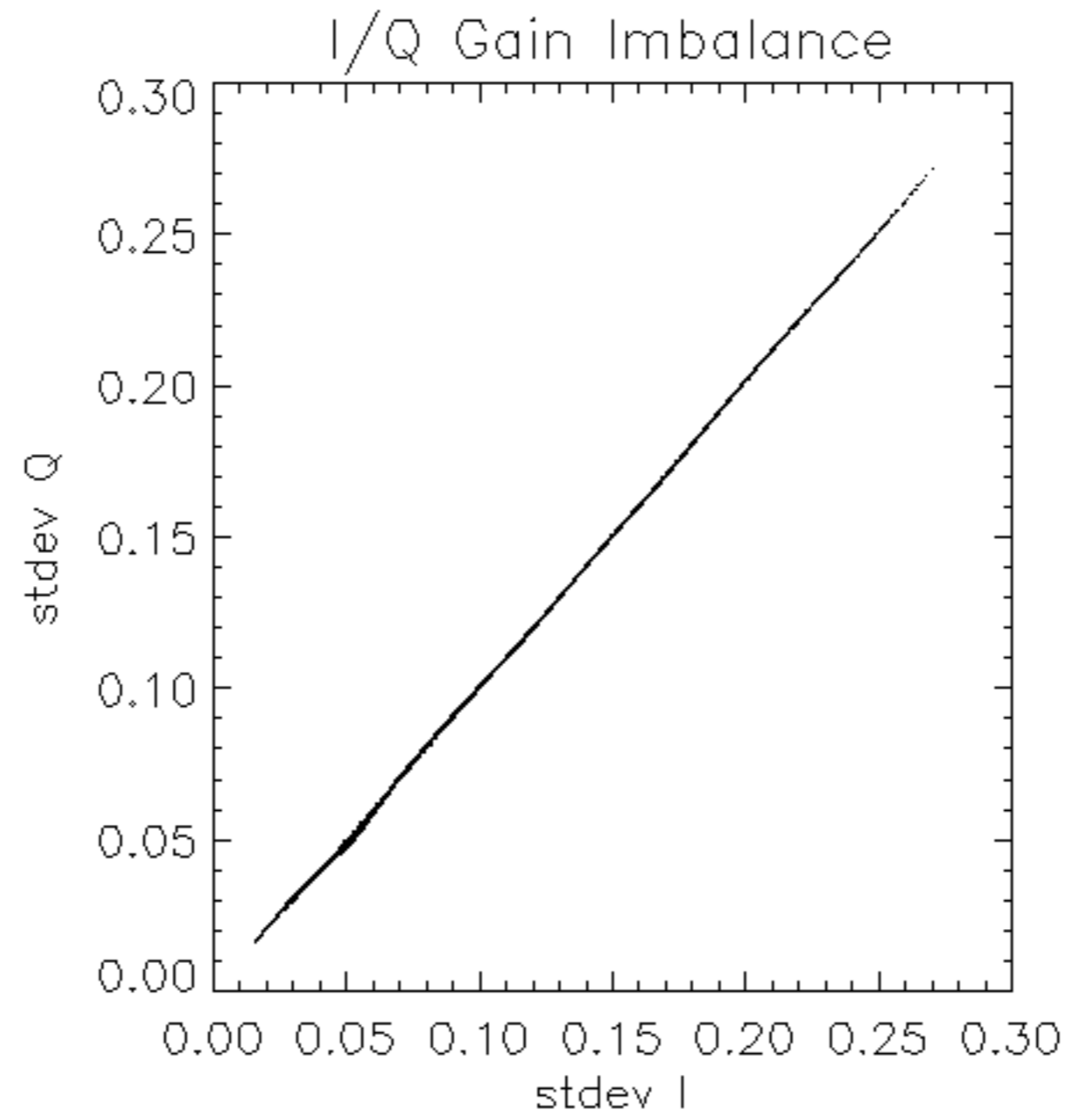


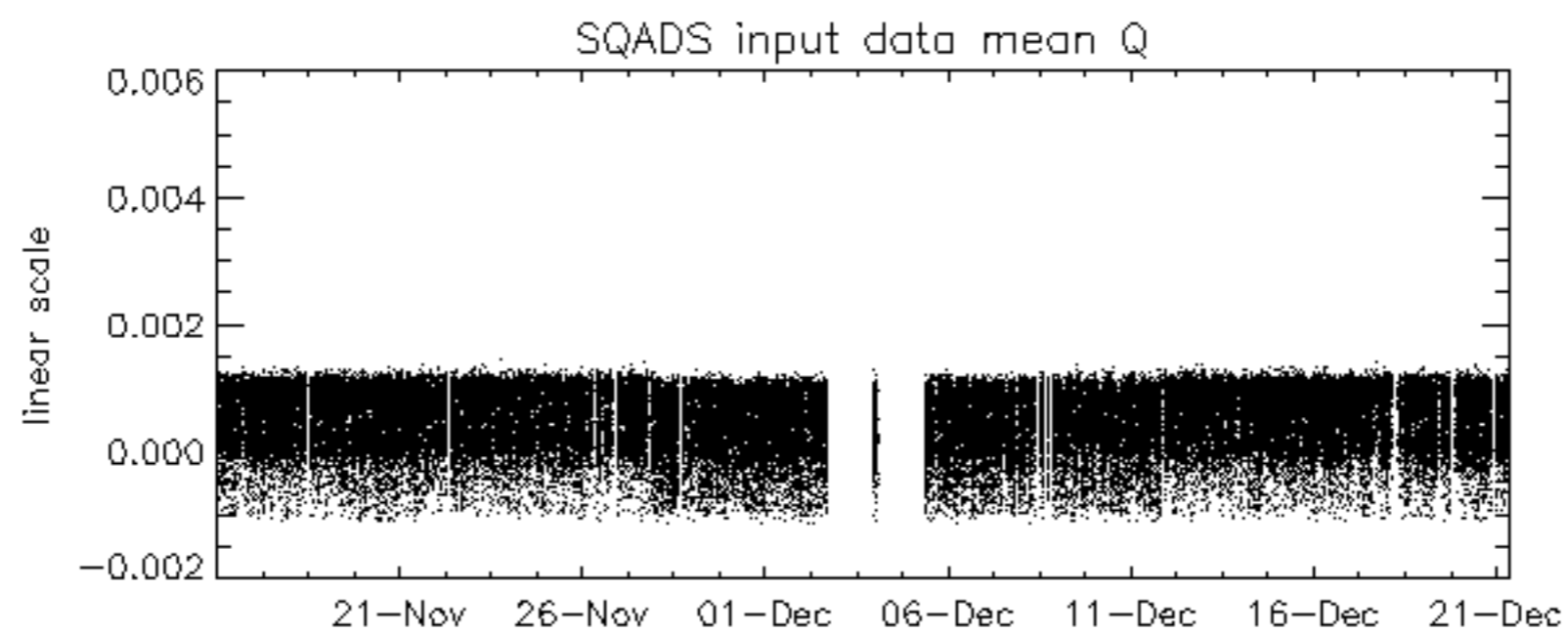
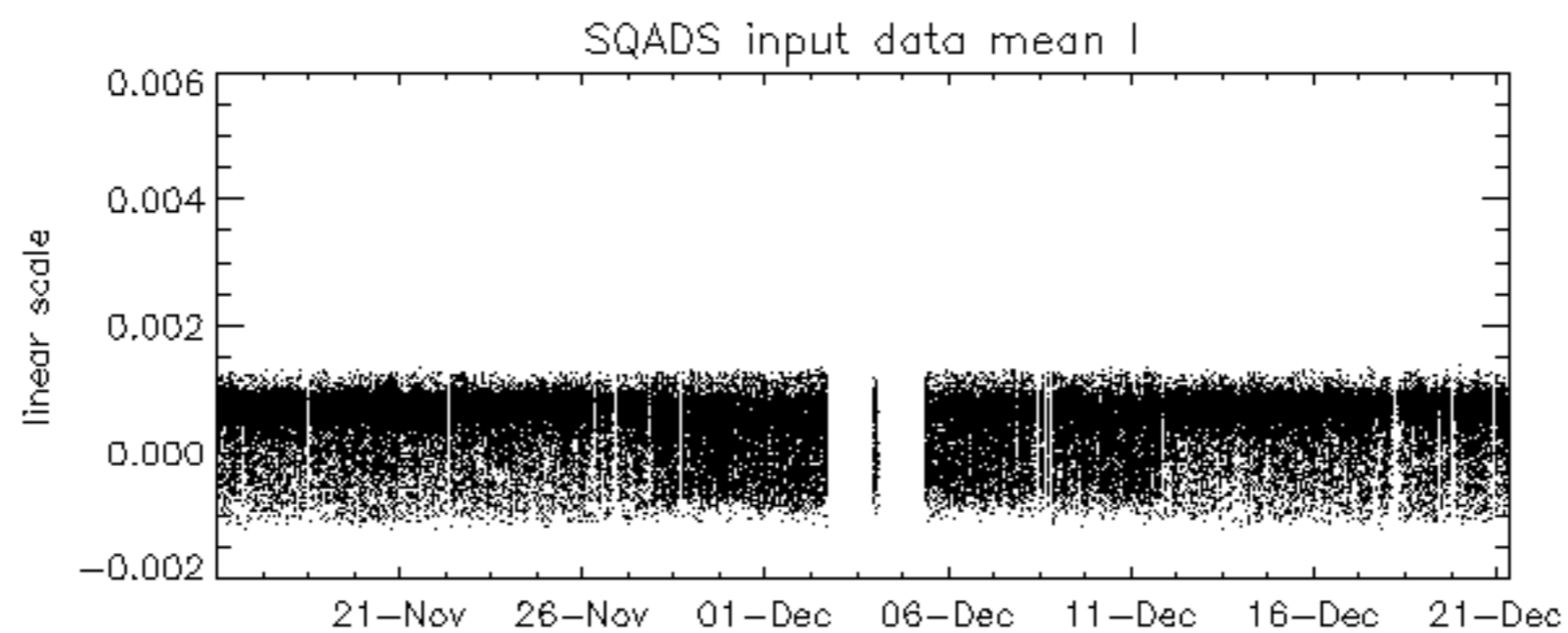
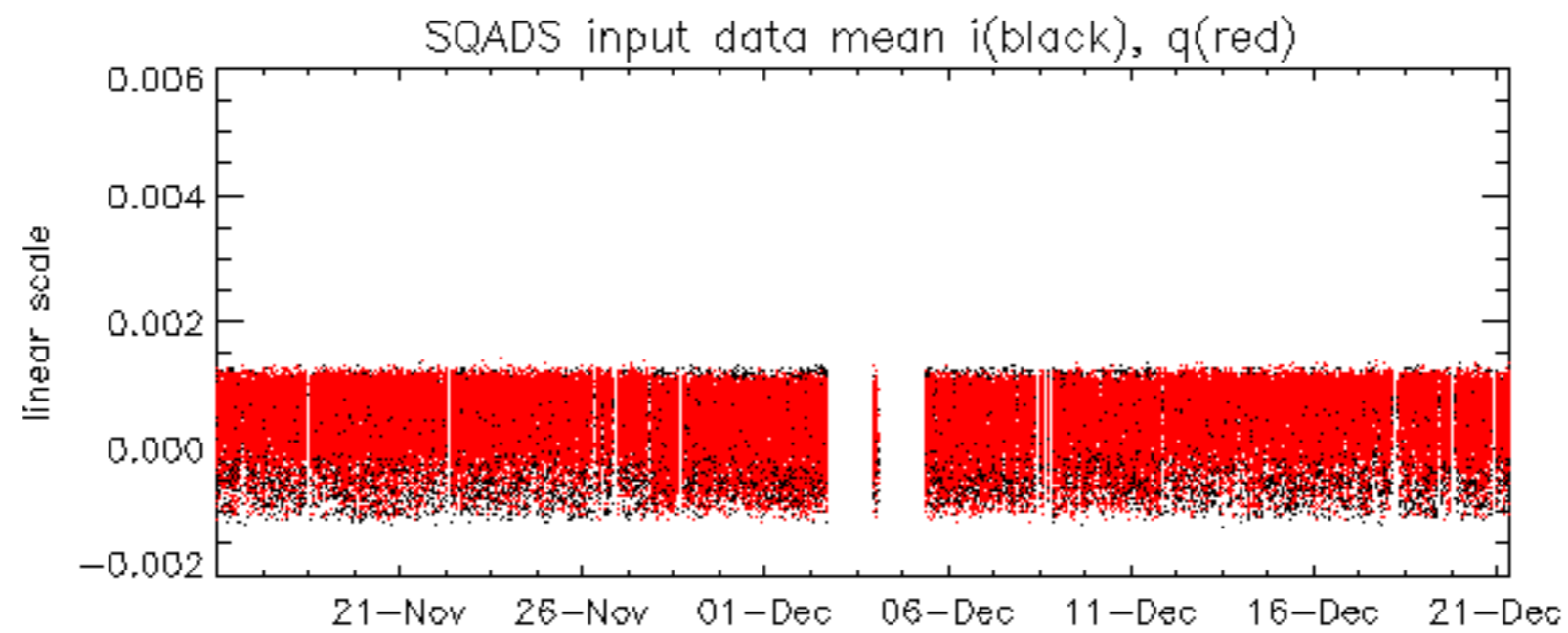
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.608983 Hz

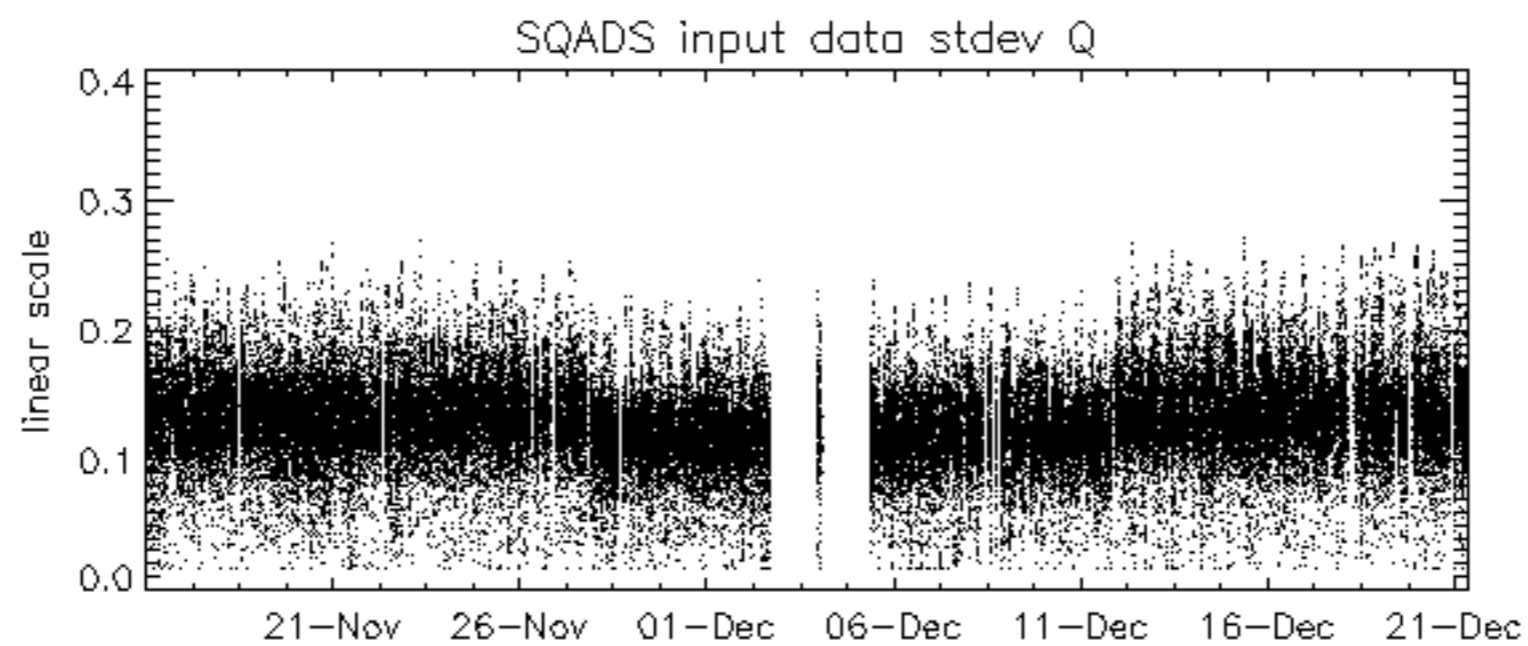
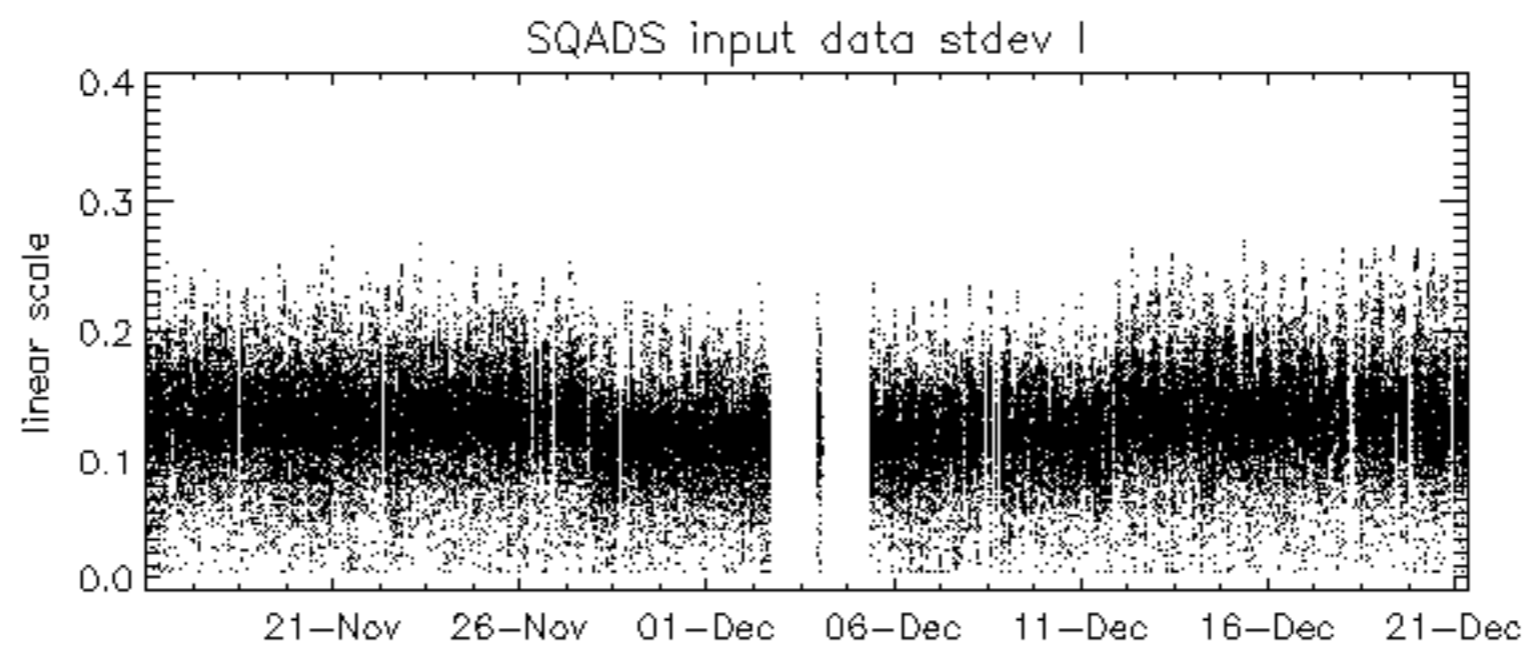
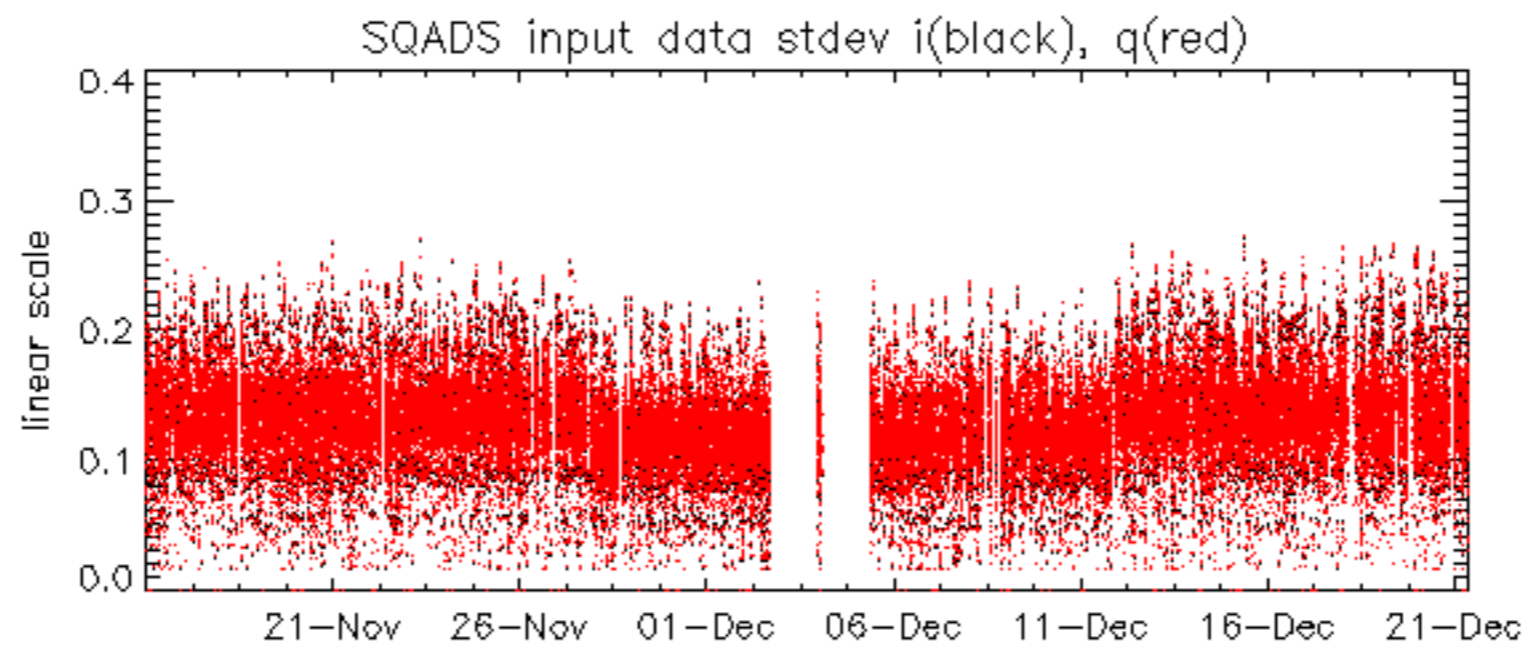


No anomalies observed on available MS products:

No anomalies observed.



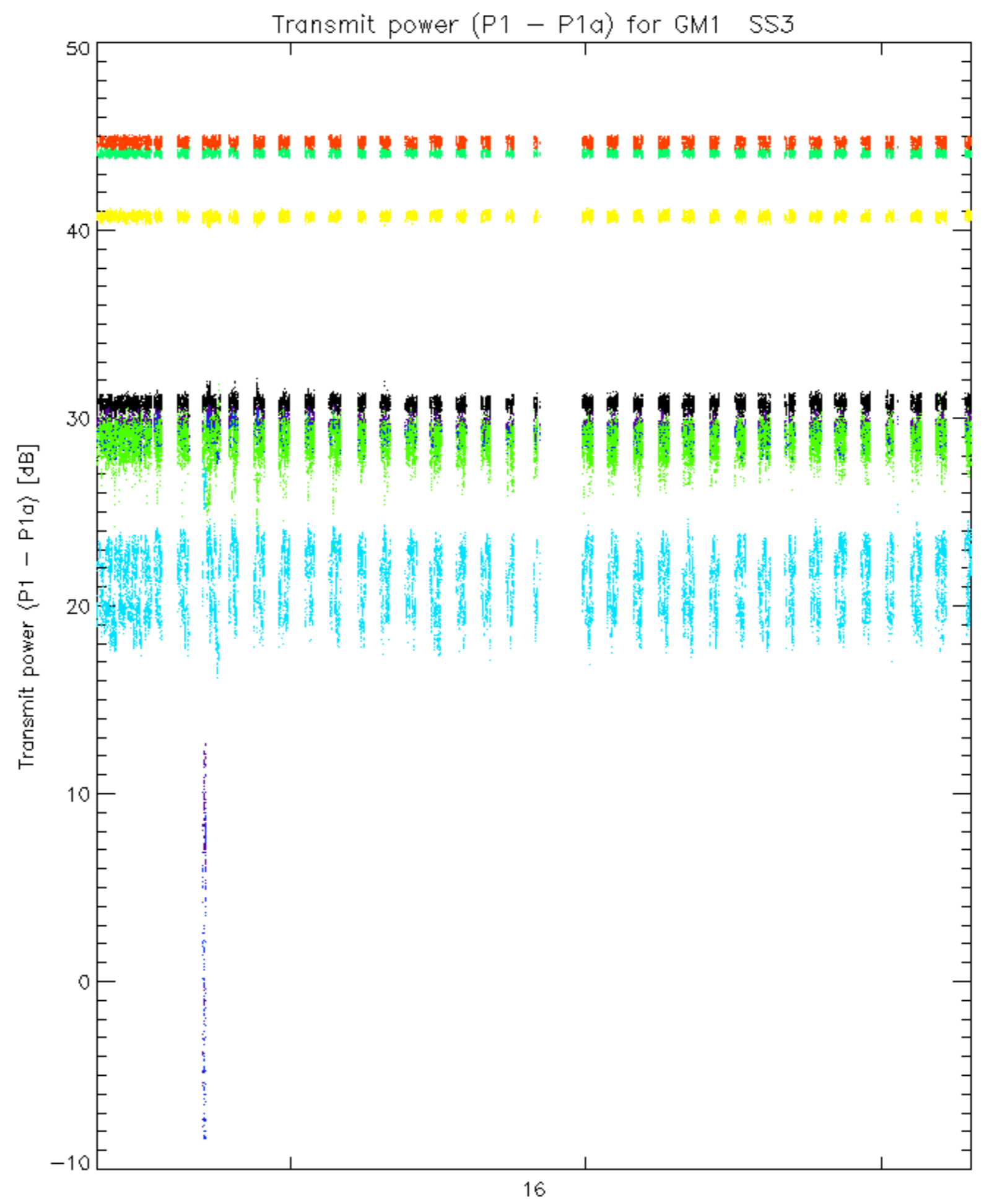


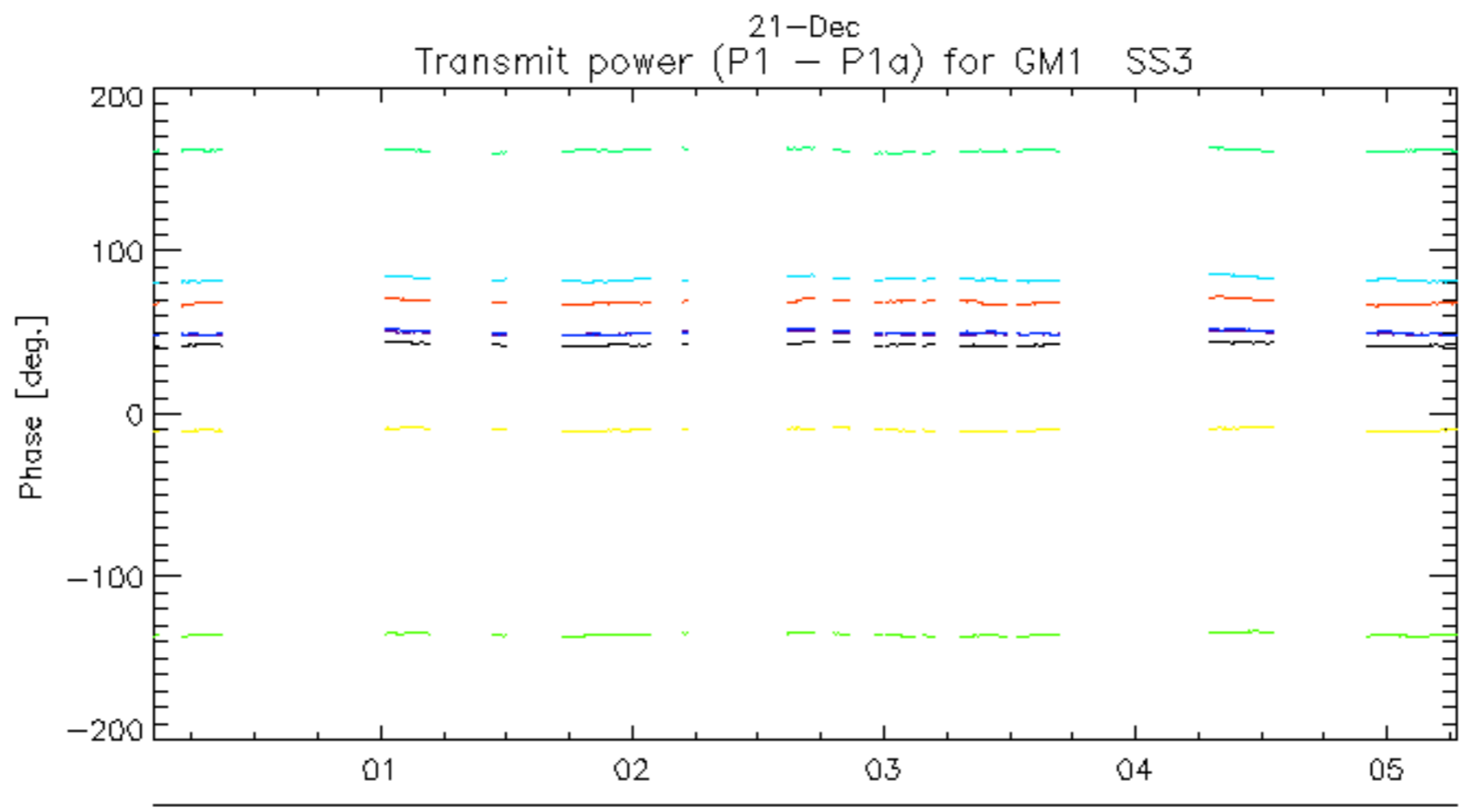
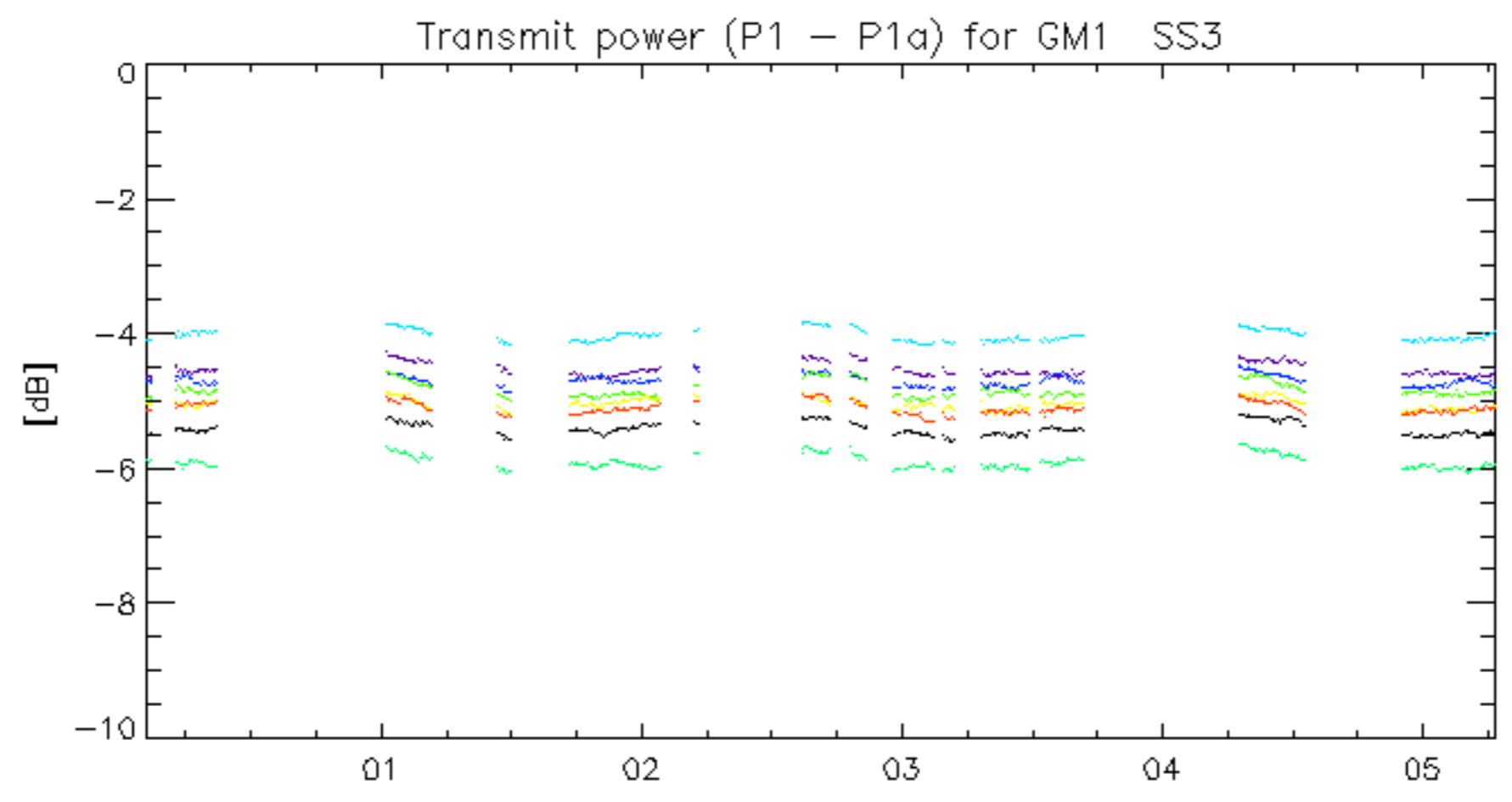


Summary of analysis for the last 3 days 2005122[901]

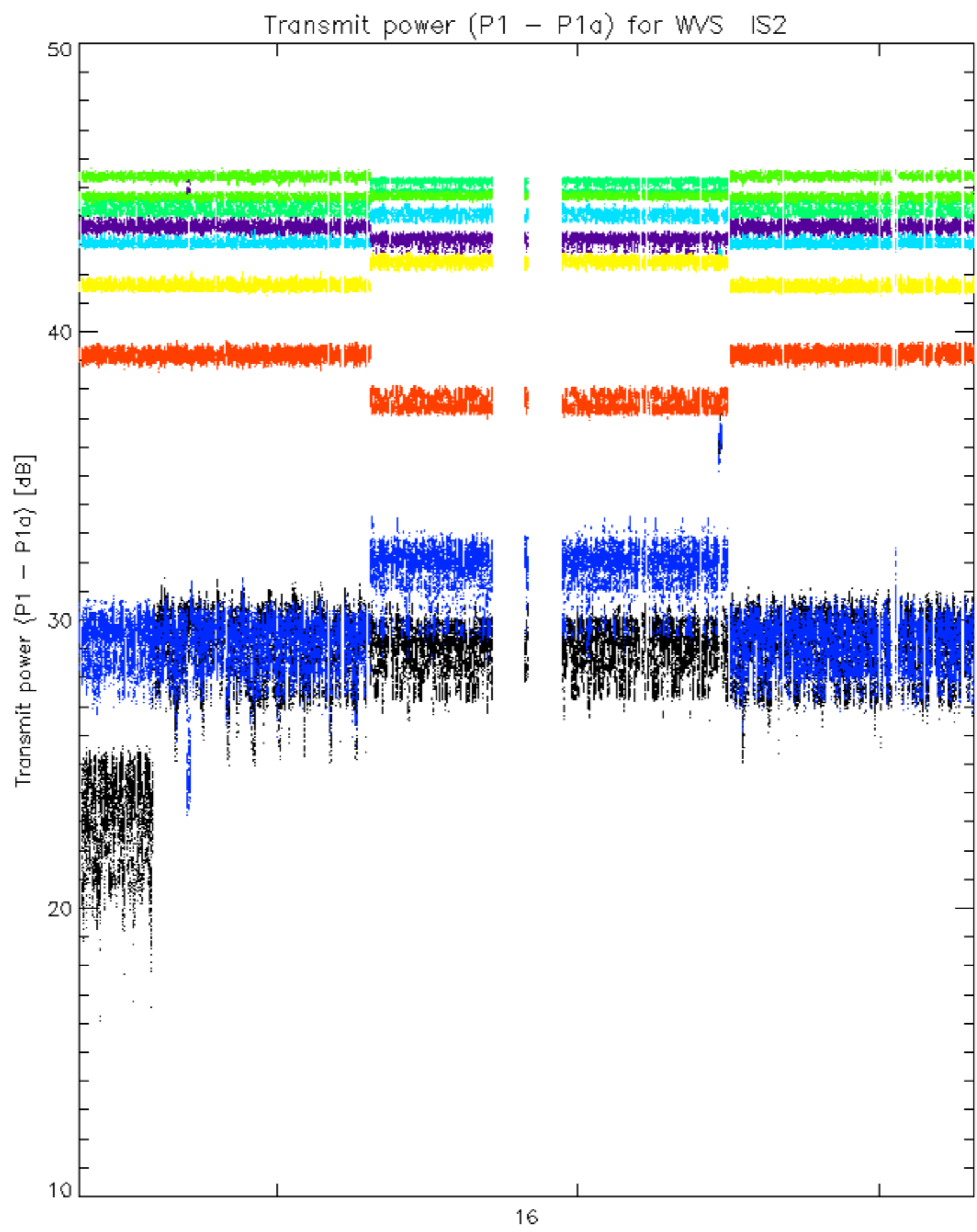
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20051221_021712_000001042043_00318_19911_5158.N1	0	54
ASA_WSM_1PNPDE20051221_031549_000001472043_00319_19912_5167.N1	0	49

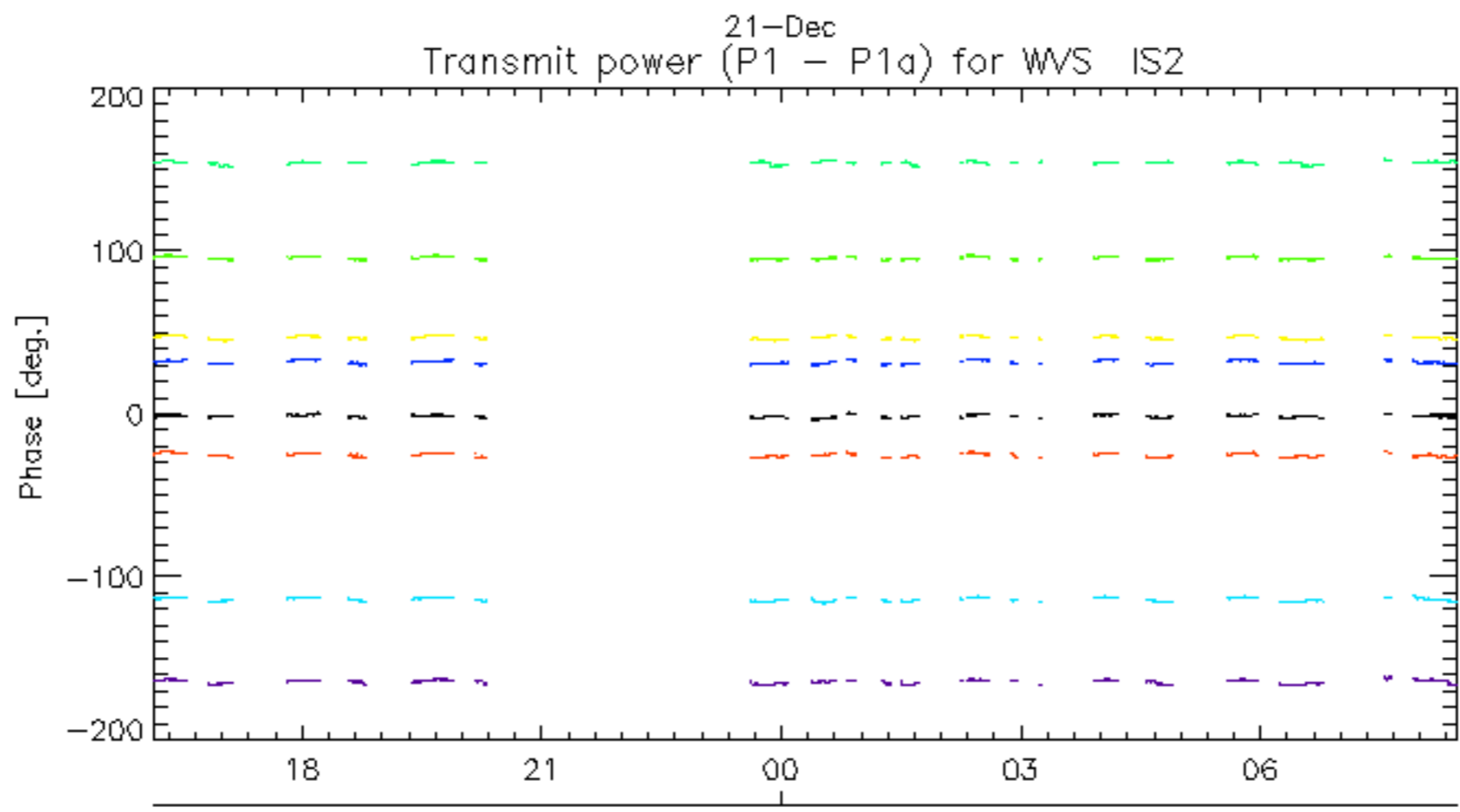
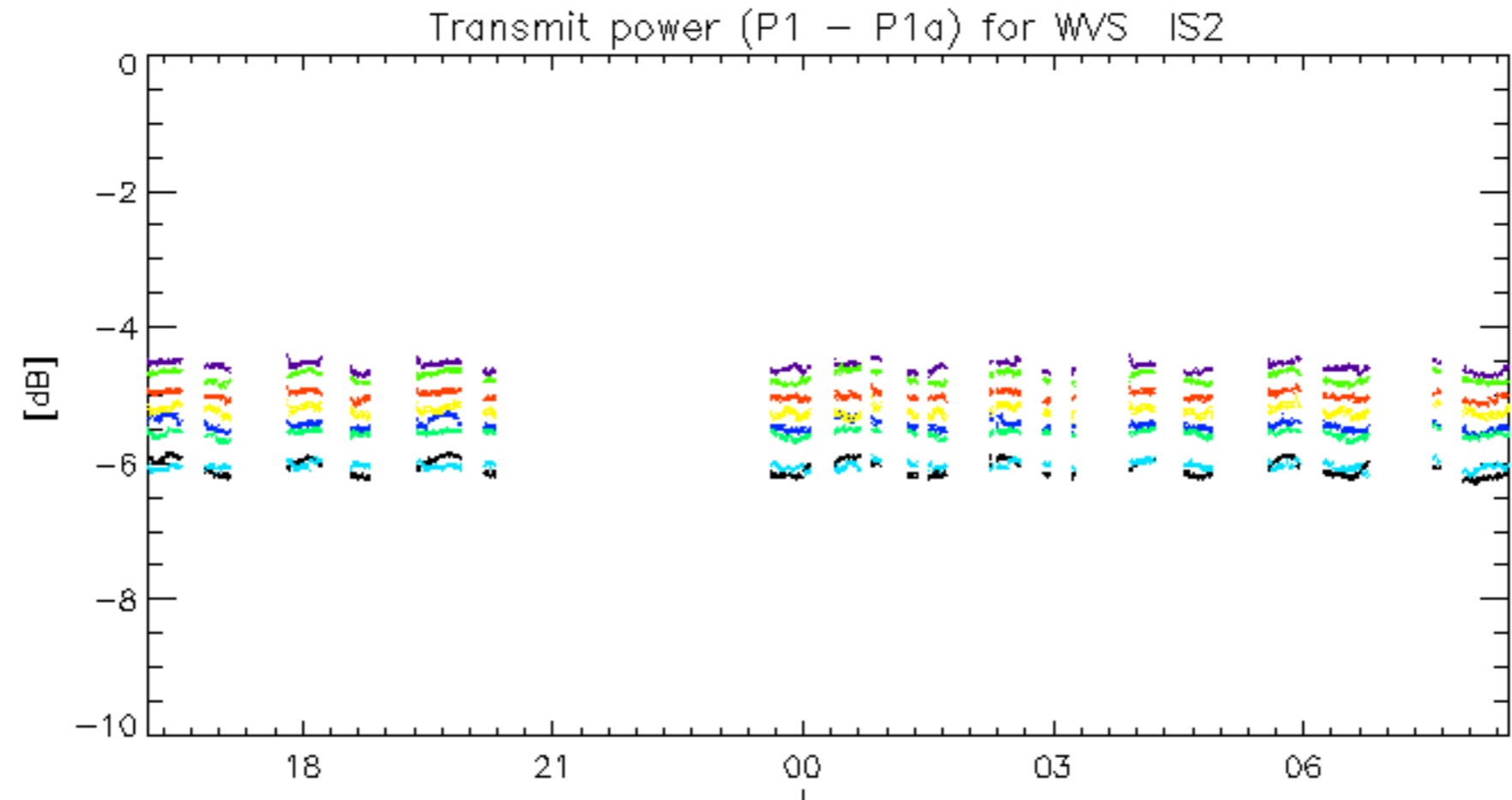




21-Dec
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.