

PRELIMINARY REPORT OF 060112

last update on Thu Jan 12 16:44:33 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 2006-01-11 00:00:00 to 2006-01-12 16:44:34

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	36	0	15	0	19
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	36	0	15	0	19
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	0	15	0	19
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	0	15	0	19

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	53	23	10	64
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	30	53	23	10	64
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	30	53	23	10	64
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	53	23	10	64

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	20060112 074708
H	20060111 081845

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
<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

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	-3.959151	0.108359	-0.445668
7	P1	-2.926234	0.063601	-0.346231
11	P1	-4.123439	0.037641	0.088173
15	P1	-5.782957	0.716176	-1.374290
19	P1	-3.181611	0.031506	-0.287682
22	P1	-4.474123	0.022032	-0.064746
26	P1	-4.274119	0.033348	0.257460
30	P1	-5.735630	0.020180	-0.161357
3	P1	-16.633411	1.326004	-1.743517
7	P1	-16.201279	1.253974	-1.855011
11	P1	-16.513706	0.425864	-0.418579
15	P1	-13.104316	0.488610	-0.780369
19	P1	-13.746395	0.204681	-0.630424
22	P1	-15.974711	0.587511	0.059912
26	P1	-15.557598	0.615480	-1.026351
30	P1	-16.309320	1.250698	-1.455075

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.702419	0.105912	0.235918
7	P2	-22.519018	0.102088	0.078725
11	P2	-16.389984	0.115787	0.252664
15	P2	-7.247971	0.104487	0.084632
19	P2	-9.201071	0.101964	0.061550
22	P2	-17.924696	0.103987	-0.063567
26	P2	-16.276871	0.116146	0.243869
30	P2	-19.705458	0.099451	0.203125

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.227243	0.007800	0.034986
7	P3	-8.227243	0.007800	0.034986
11	P3	-8.227243	0.007800	0.034986
15	P3	-8.227243	0.007800	0.034986
19	P3	-8.227243	0.007800	0.034986
22	P3	-8.227243	0.007800	0.034986
26	P3	-8.227243	0.007800	0.034986
30	P3	-8.227243	0.007800	0.034986

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	-3.714985	0.008549	-0.021448
7	P1	-2.763302	0.007709	0.010060
11	P1	-2.870698	0.009995	0.022382
15	P1	-3.434272	0.017518	-0.070613
19	P1	-3.386904	0.014082	0.032745
22	P1	-5.121996	0.020073	0.002122
26	P1	-5.851999	0.015540	0.000216
30	P1	-5.268763	0.032503	0.055299
3	P1	-11.498844	0.036199	-0.049367
7	P1	-9.948936	0.048518	0.074002
11	P1	-10.058650	0.053298	-0.015397
15	P1	-10.580661	0.076240	-0.119136
19	P1	-15.506231	0.069675	0.090595
22	P1	-20.821705	1.035638	0.510899

26	P1	-17.020350	0.317499	0.503734
30	P1	-18.159012	0.283129	0.011902

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.530670	0.032182	0.232140
7	P2	-22.977865	0.059886	0.295008
11	P2	-11.515381	0.020894	0.206172
15	P2	-4.963773	0.023554	0.123483
19	P2	-6.956795	0.022391	0.089214
22	P2	-8.204606	0.022538	0.040268
26	P2	-24.018873	0.029354	0.141324
30	P2	-22.123281	0.017822	0.074796

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.070335	0.002550	0.033981
7	P3	-8.070429	0.002543	0.034197
11	P3	-8.070546	0.002545	0.034012
15	P3	-8.070444	0.002538	0.034000
19	P3	-8.070472	0.002542	0.033850
22	P3	-8.070266	0.002532	0.034512
26	P3	-8.070241	0.002525	0.034442
30	P3	-8.070260	0.002537	0.033432

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	0.000518069
	stdev	1.92956e-07
MEAN Q	mean	0.000501763
	stdev	2.26135e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134873
	stdev	0.00118731
STDEV Q	mean	0.135198
	stdev	0.00120409



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006011[012]

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_1PNPDE20060112_032449_000000672044_00133_20227_0097.N1	0	60







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)


Acsending

<input type="checkbox"/>
Descending

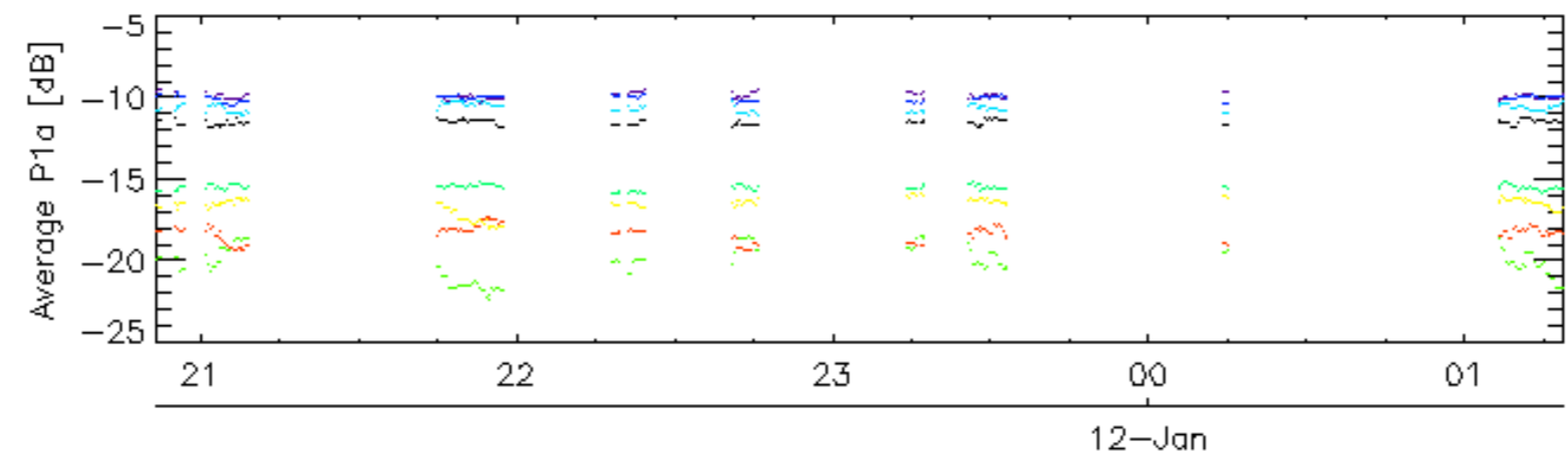
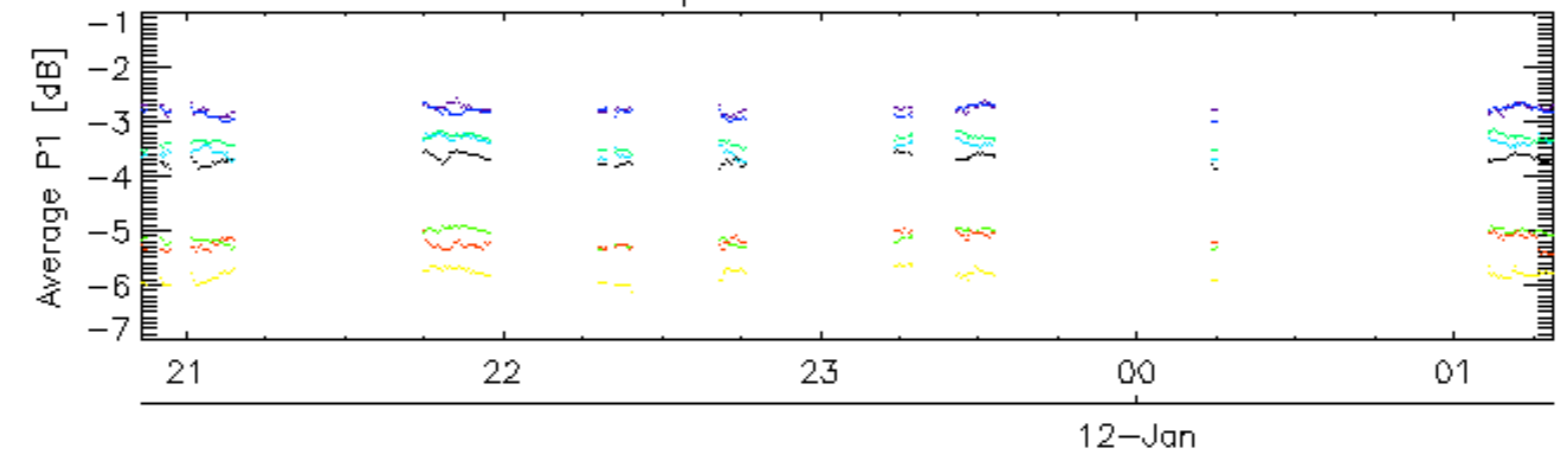
7.5 - Absolute Doppler for GM1

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

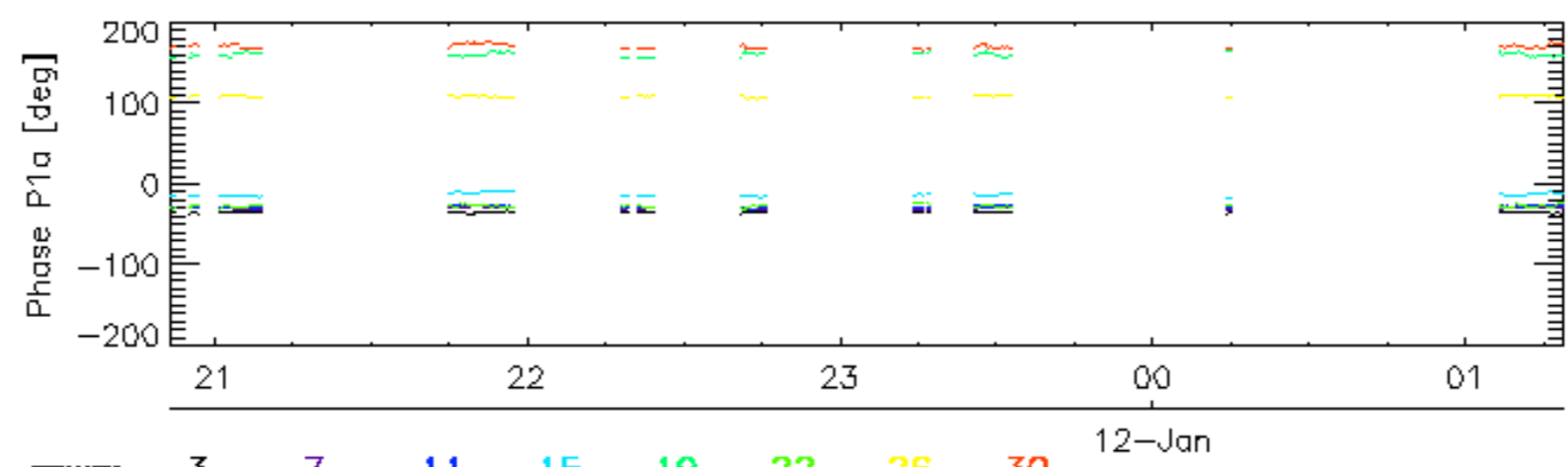
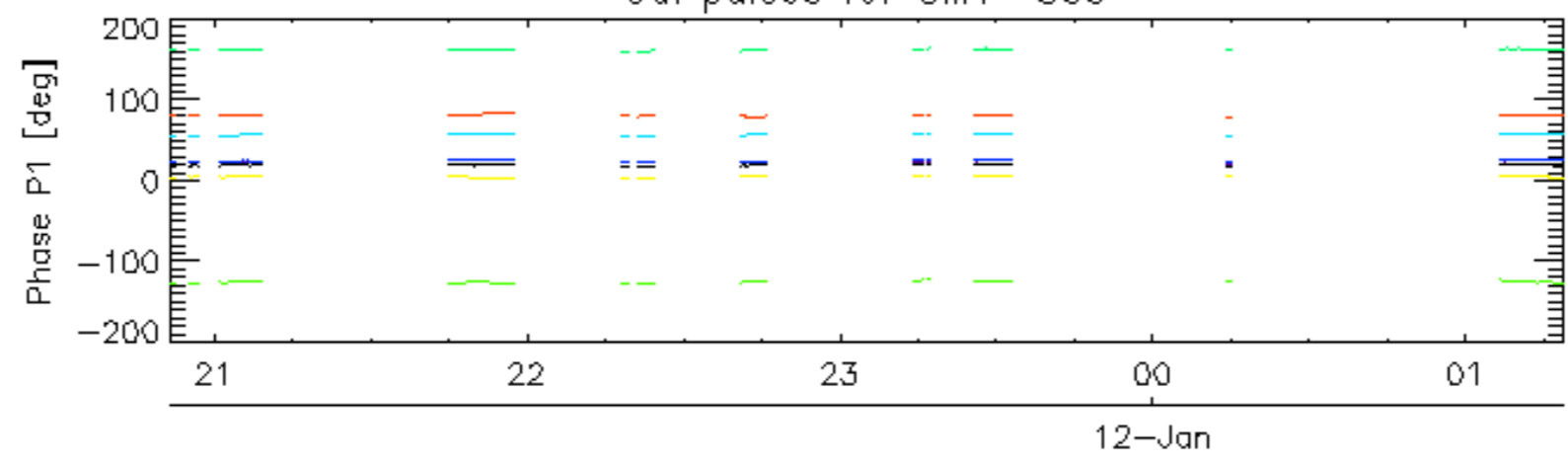
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

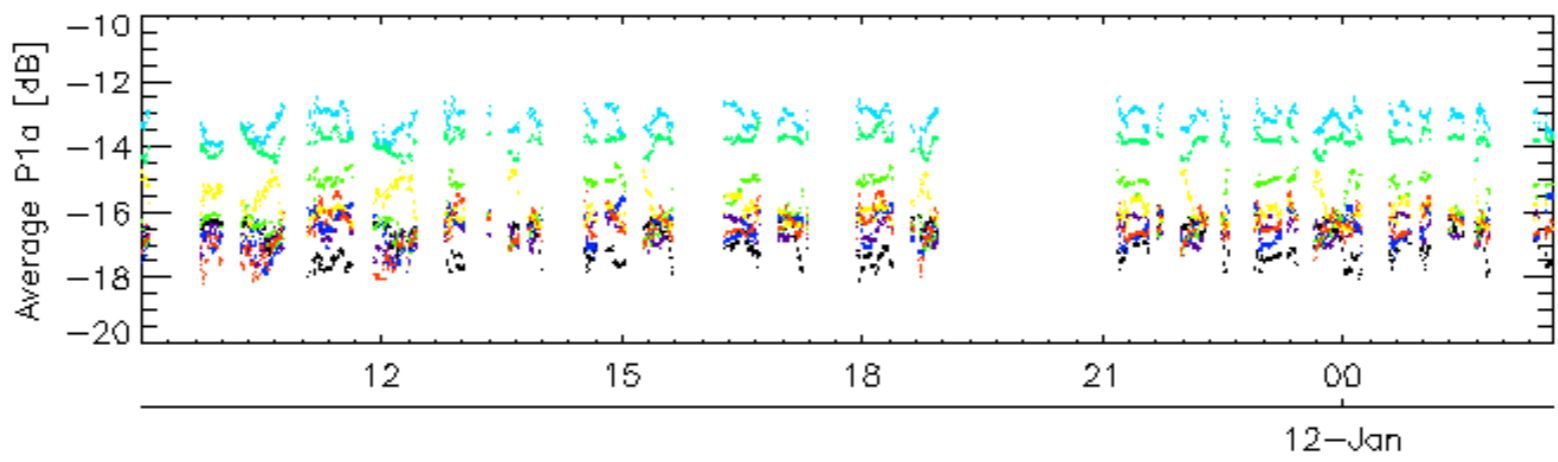
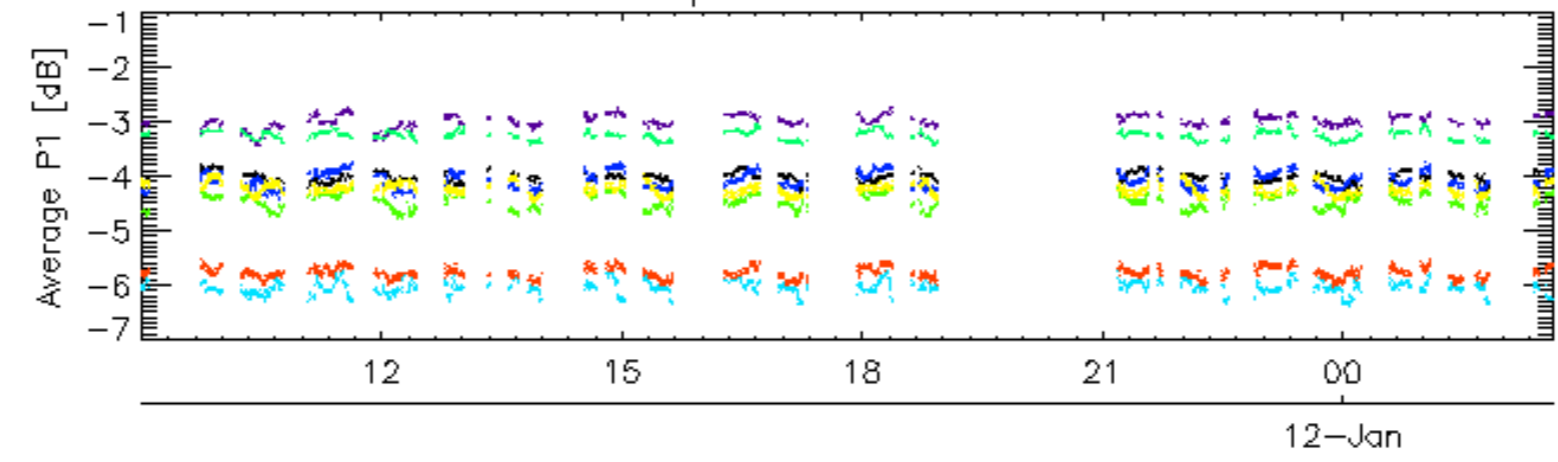


Cal pulses for GM1 SS3

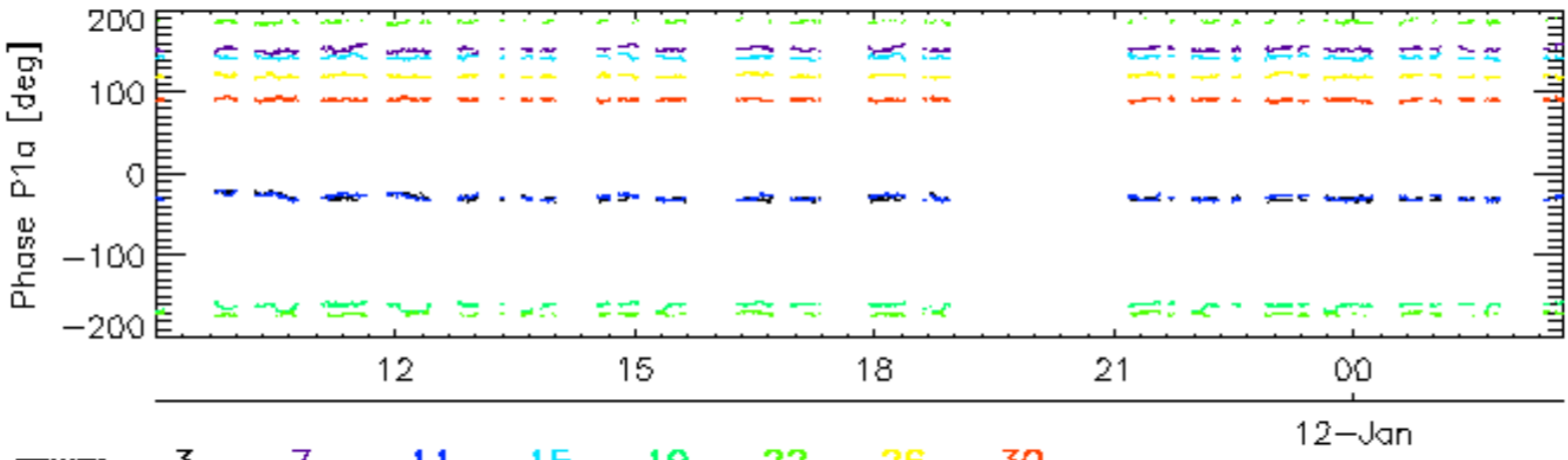
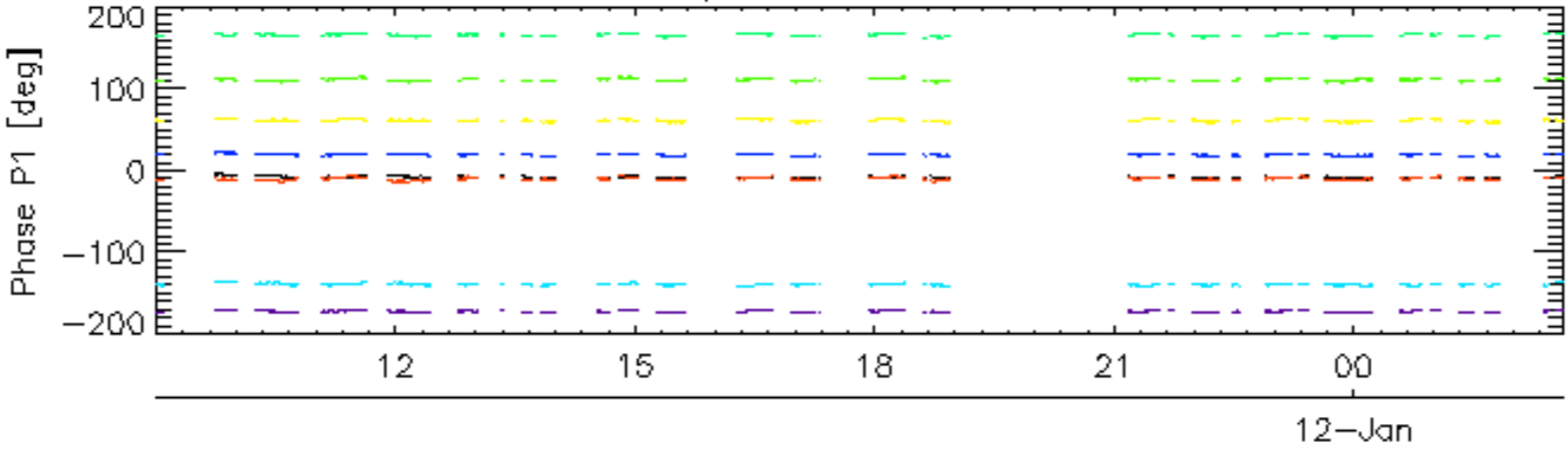


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

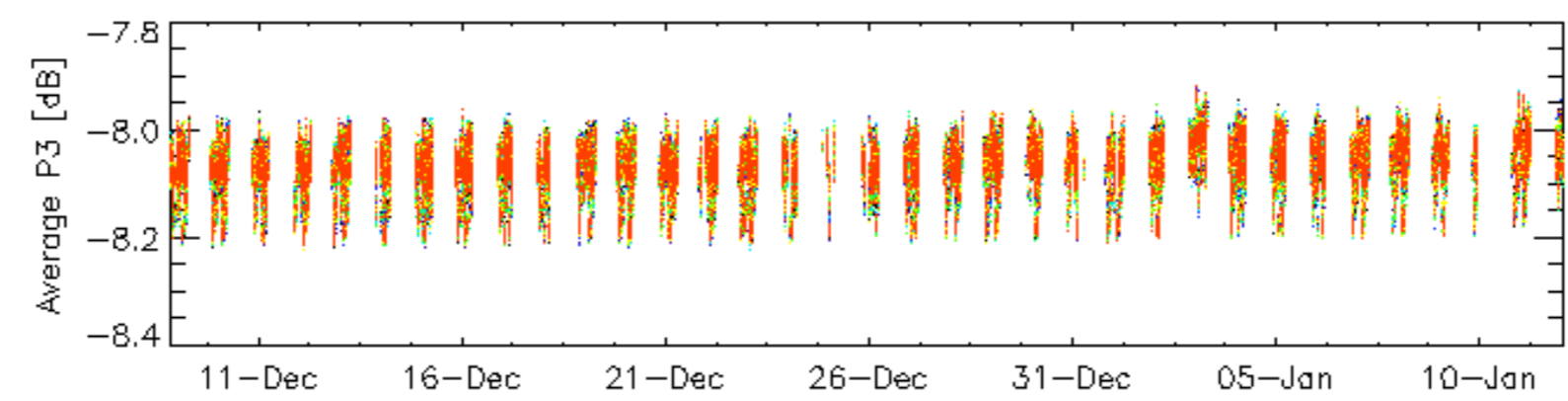
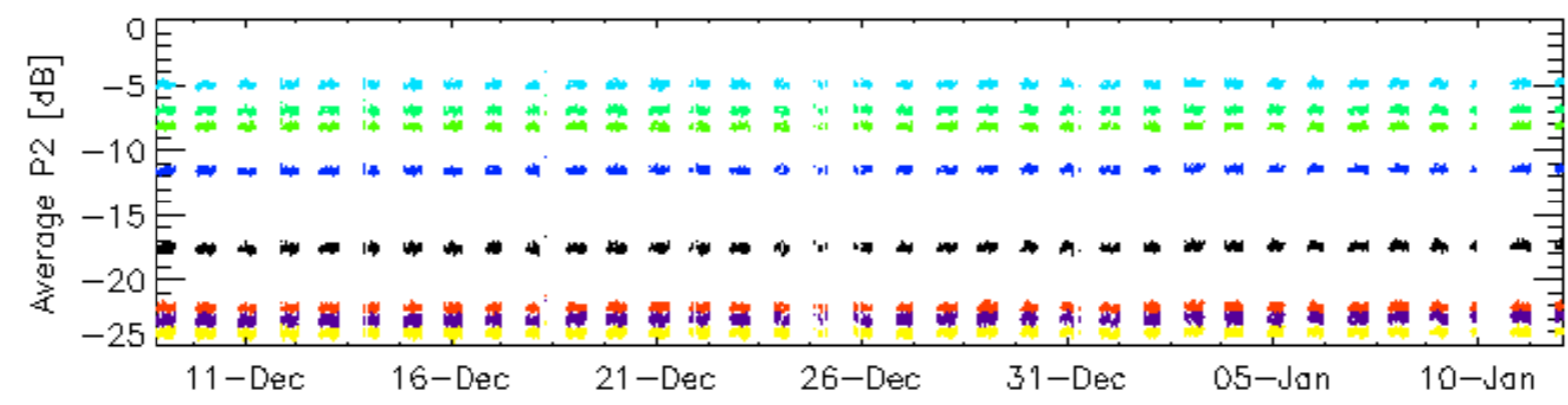
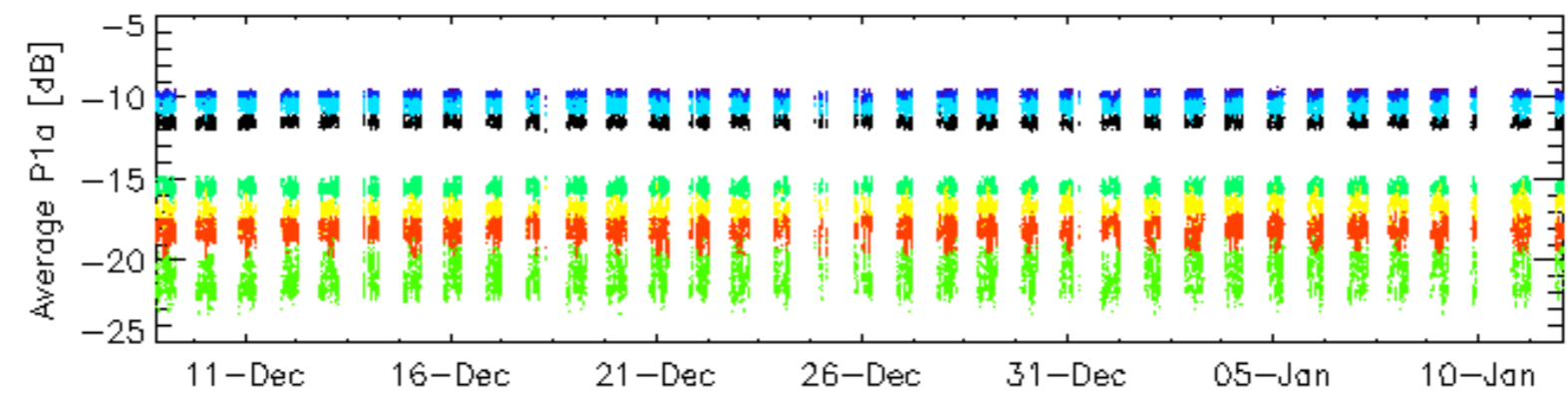
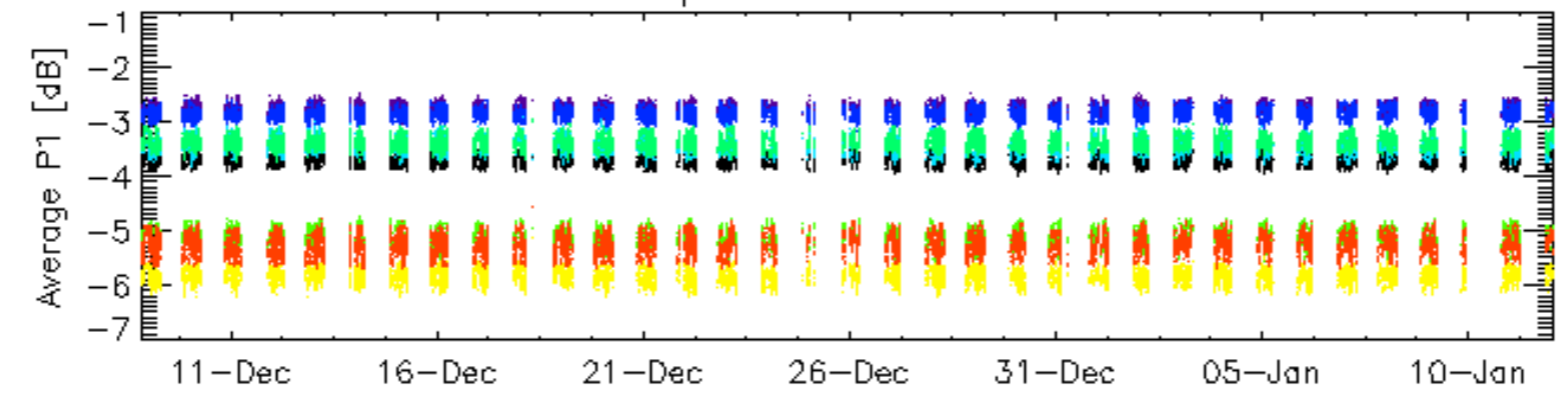


Cal pulses for WVS IS2



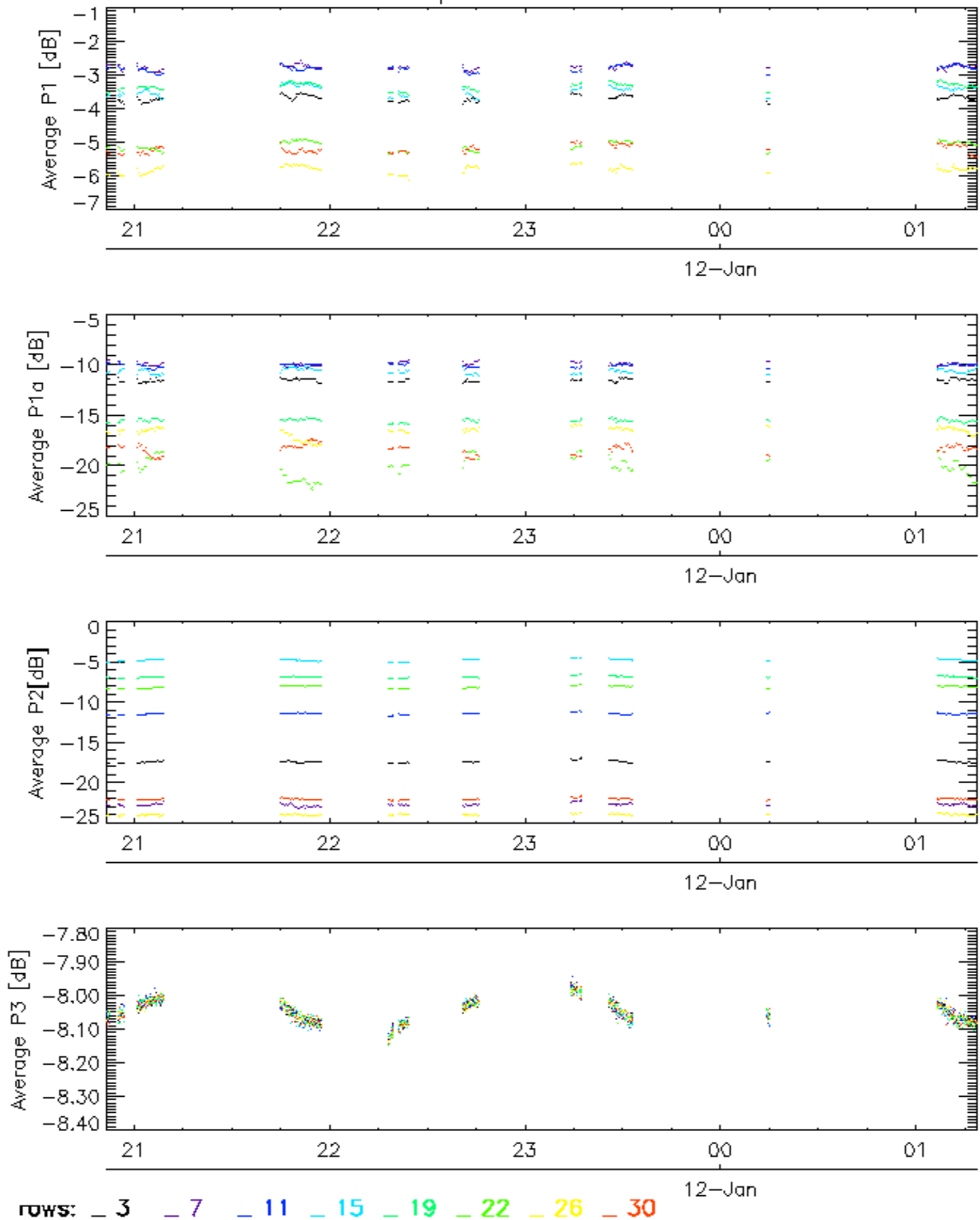
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

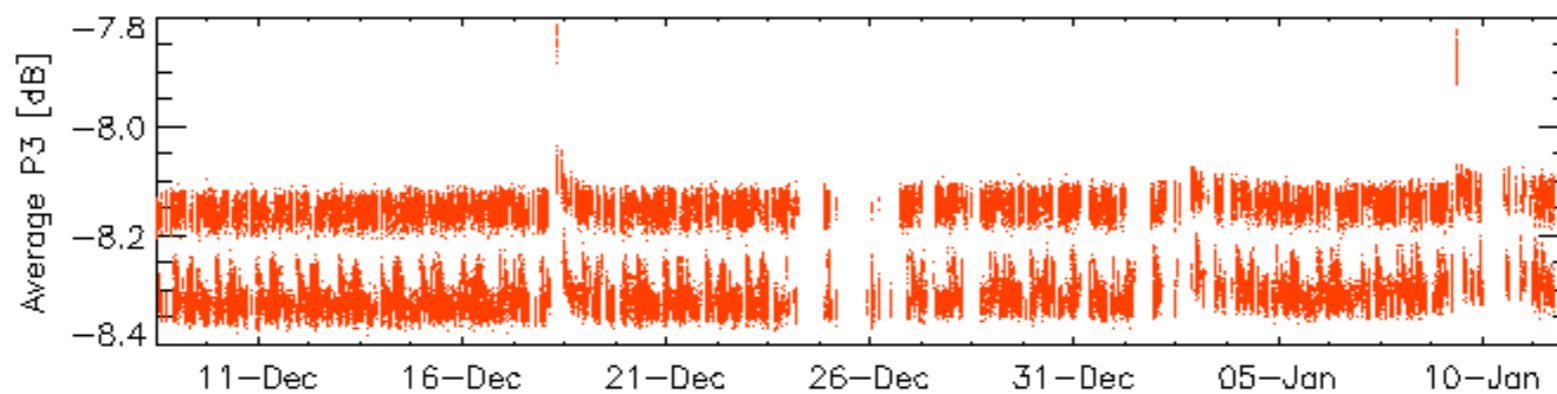
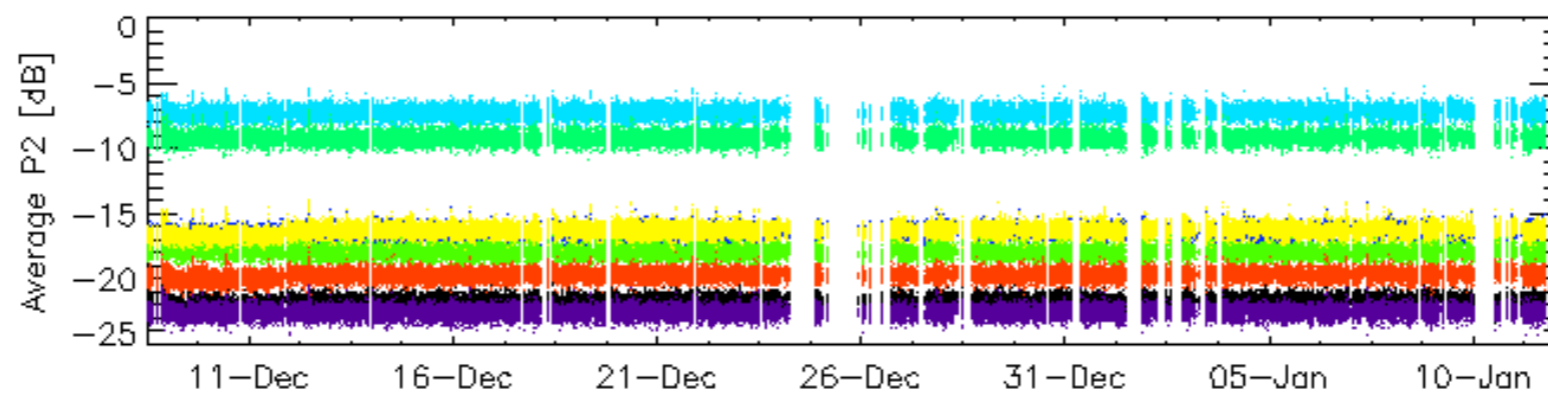
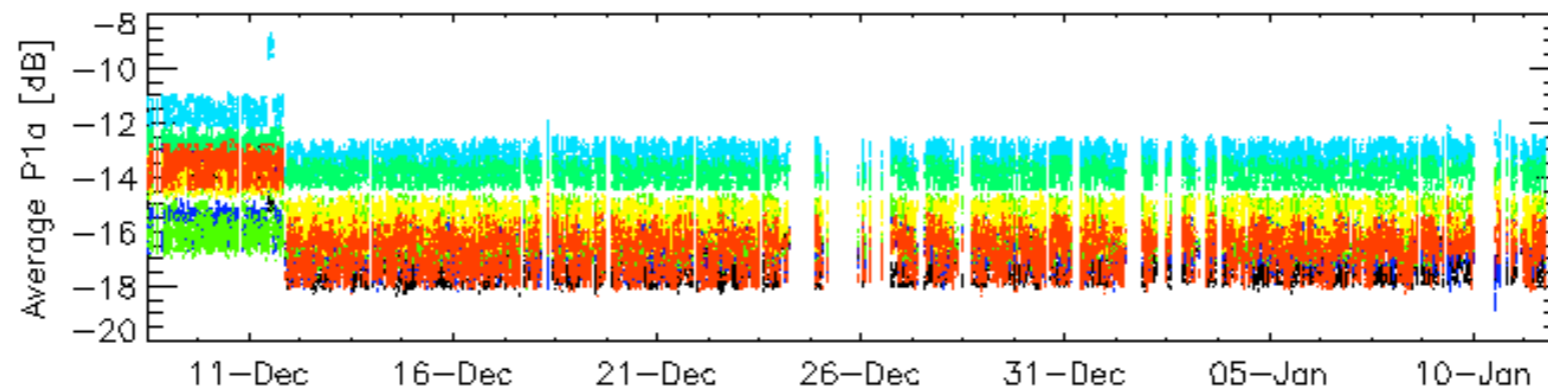
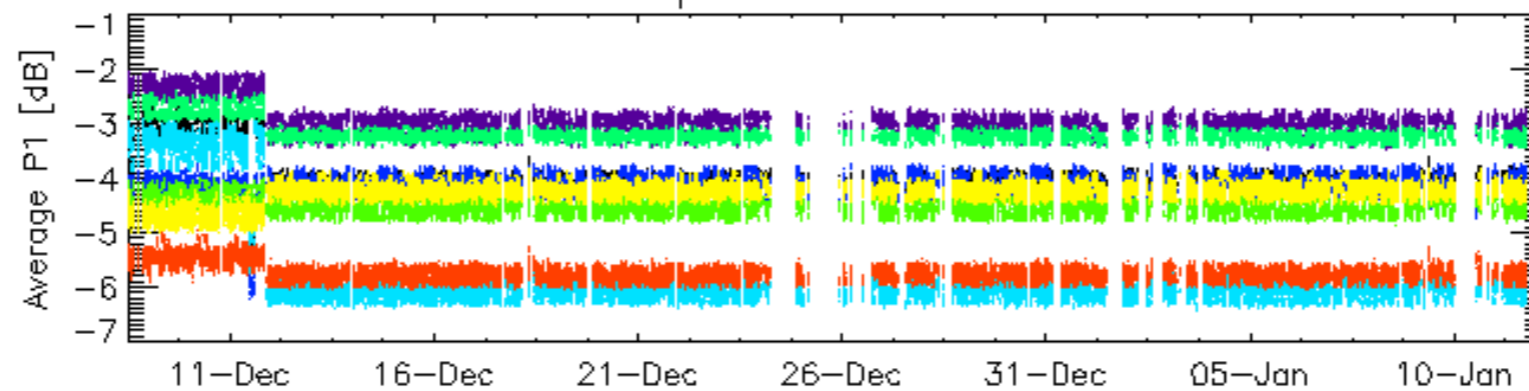


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

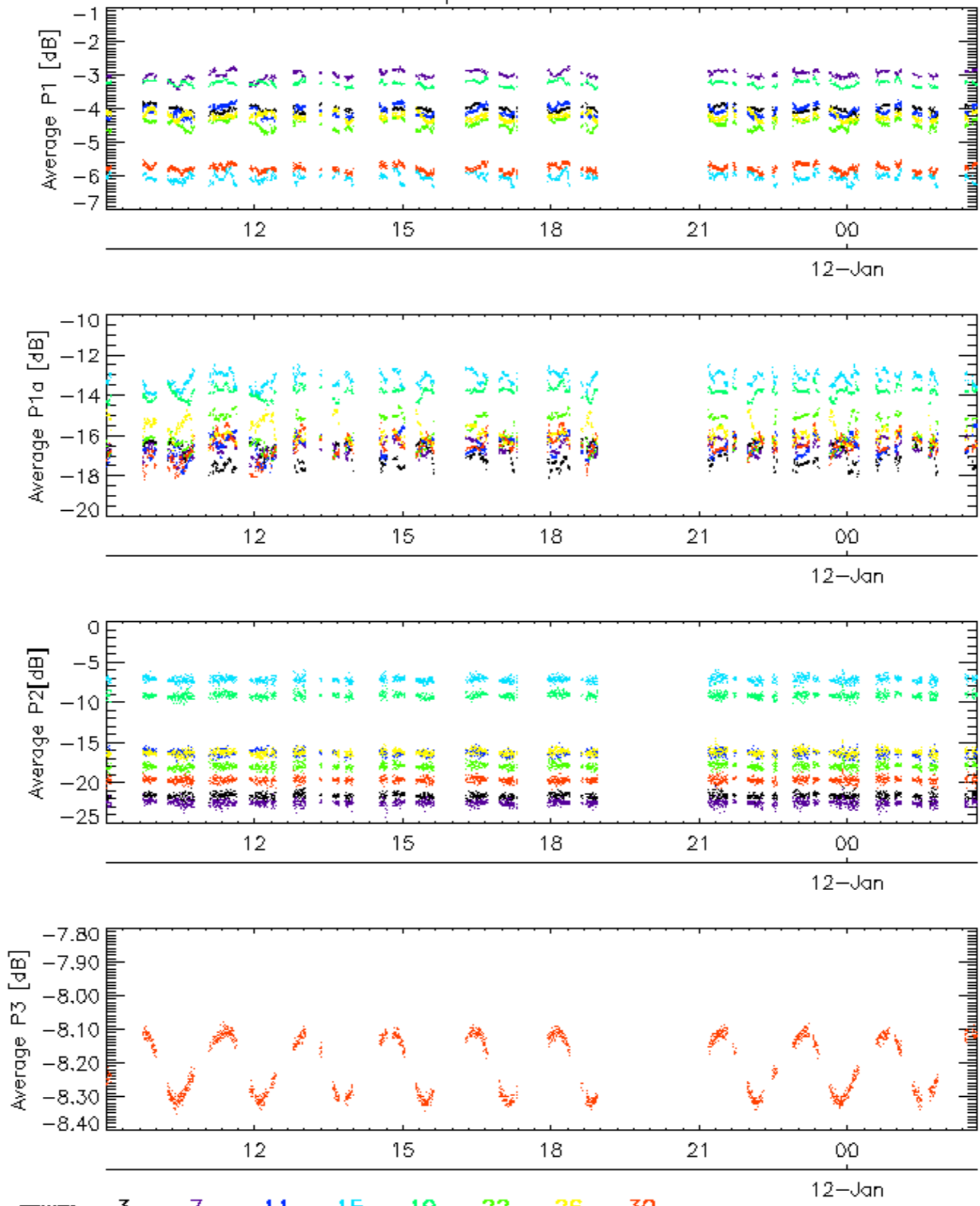


Cal pulses for WVS IS2



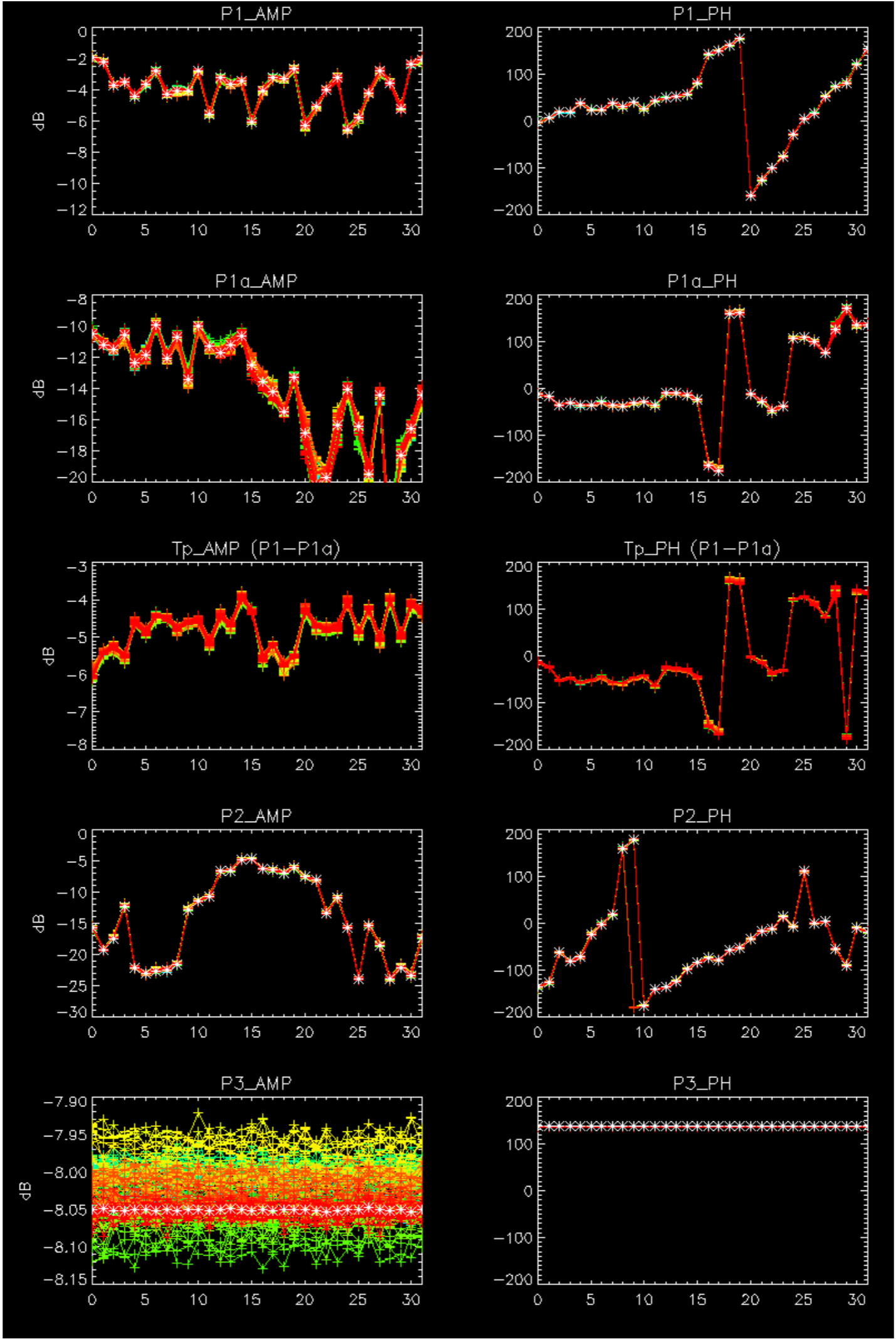
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

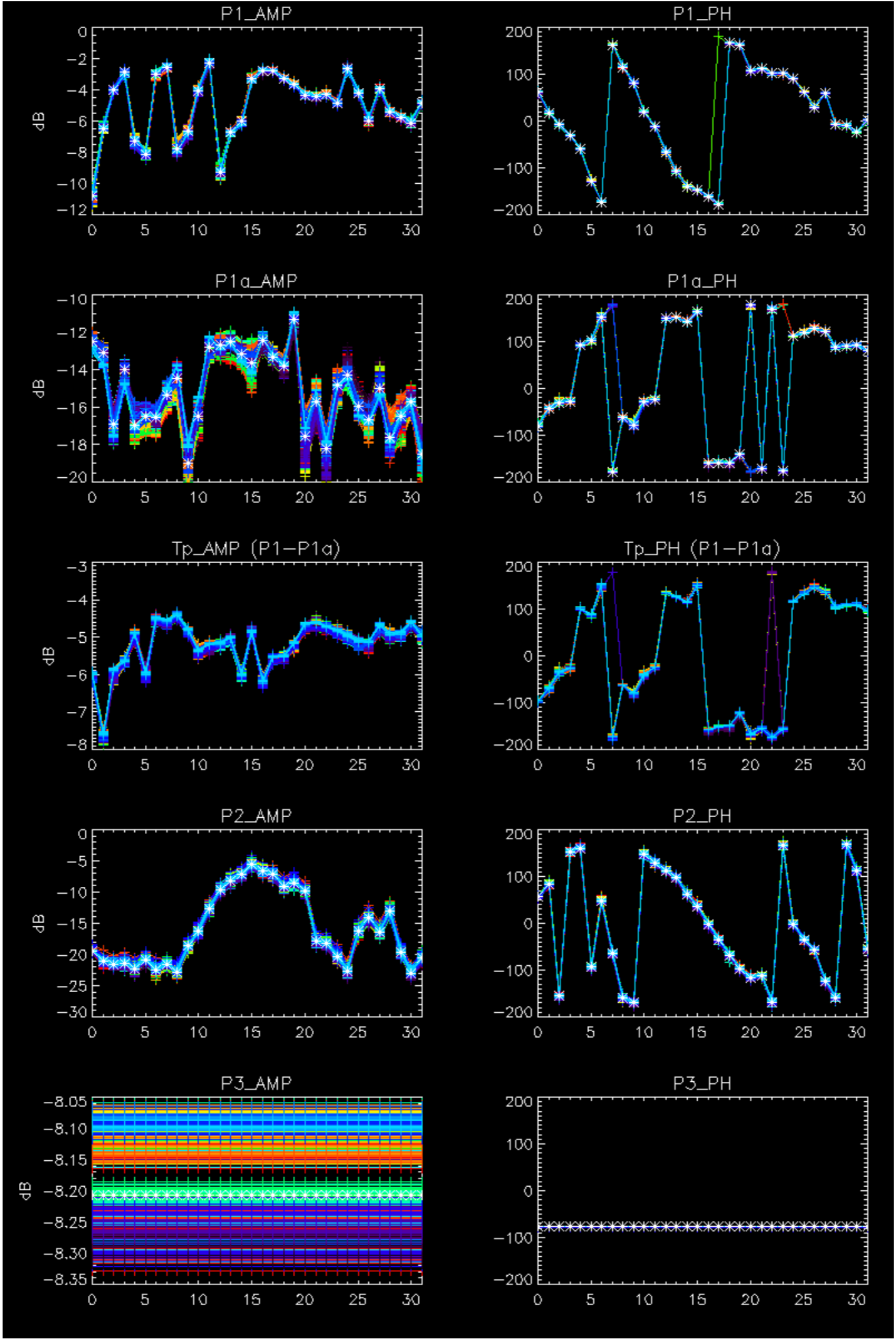
Cal pulses for WVS IS2



No anomalies observed on available browse products

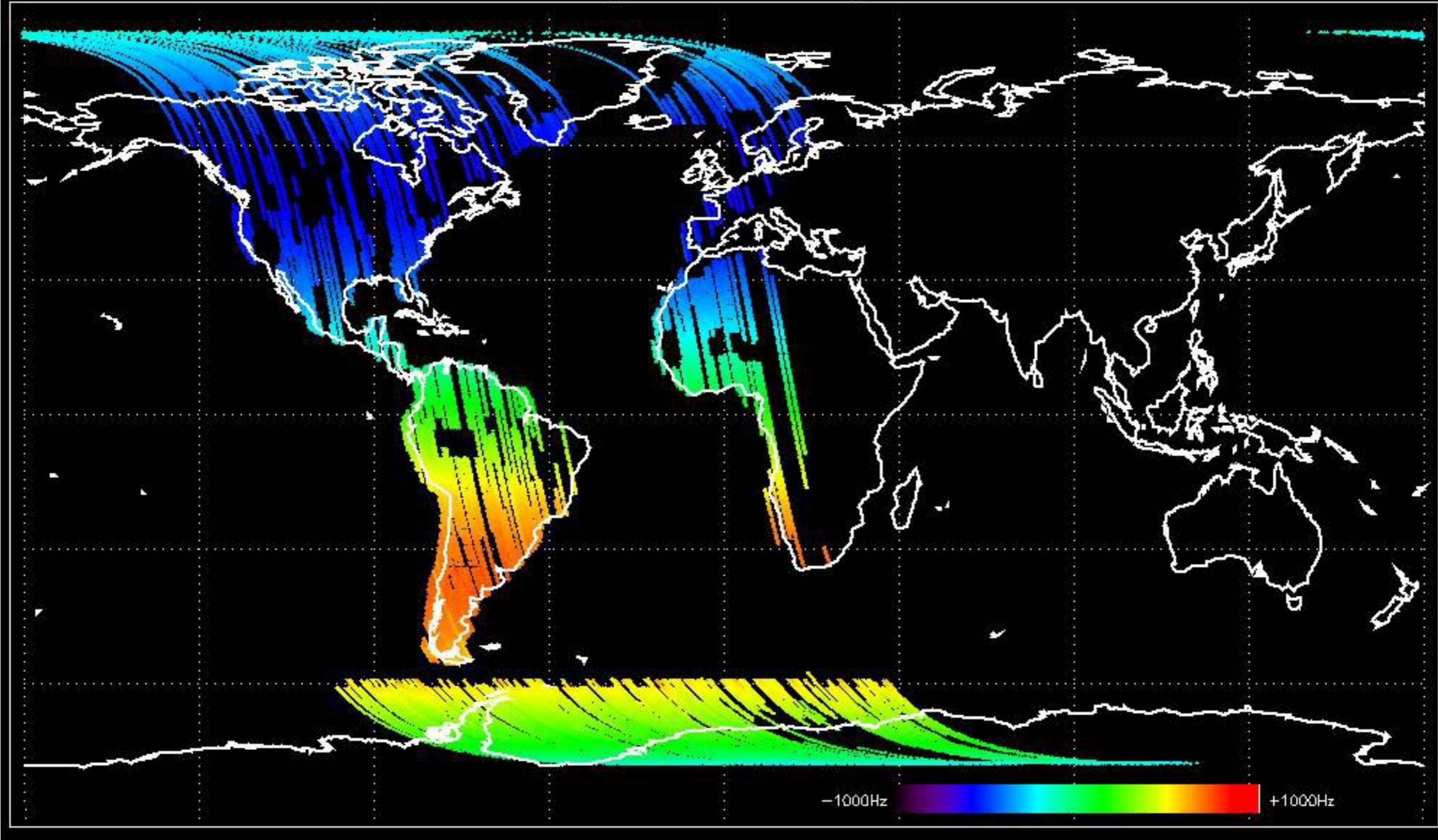
No anomalies observed.



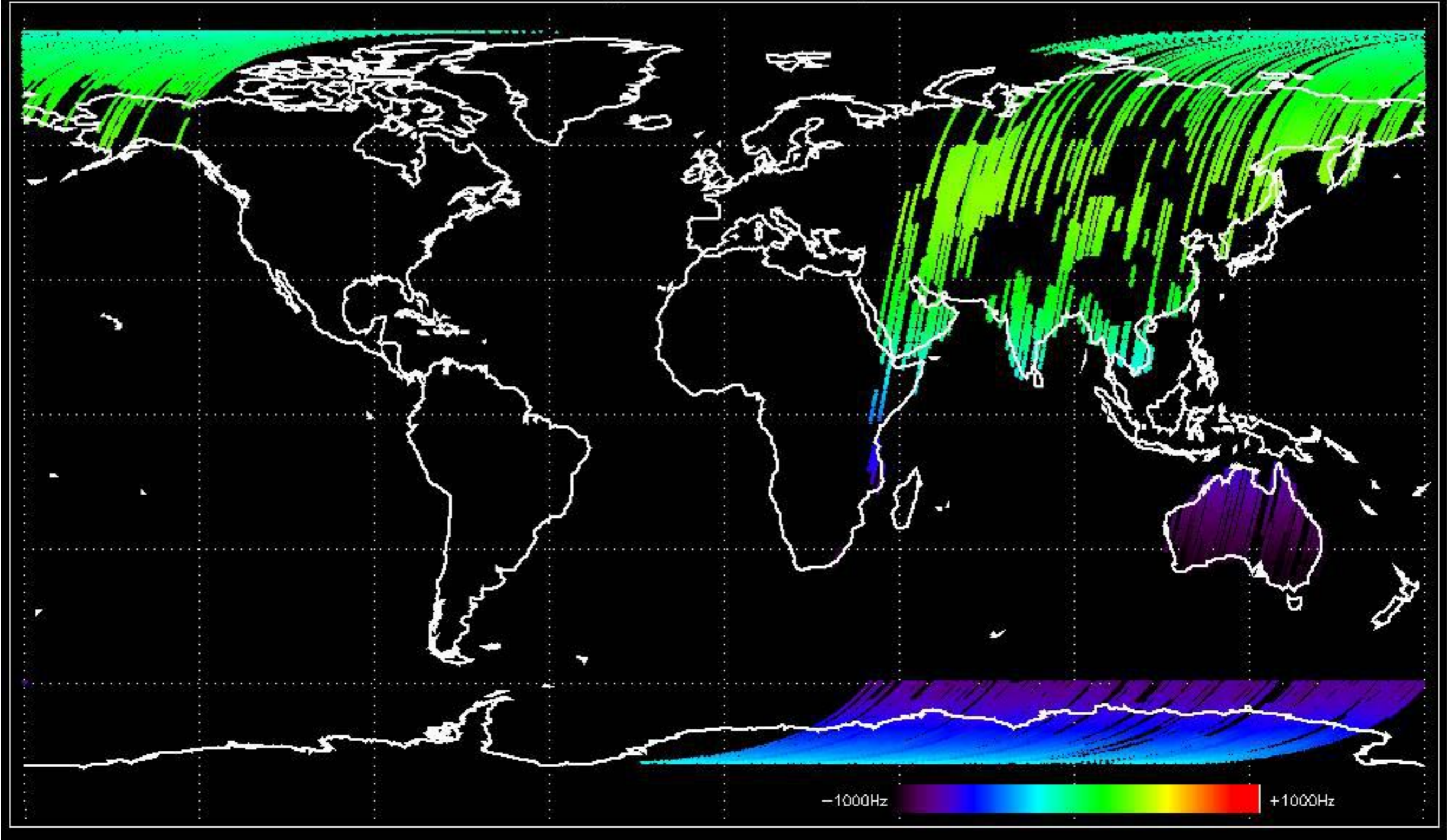


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

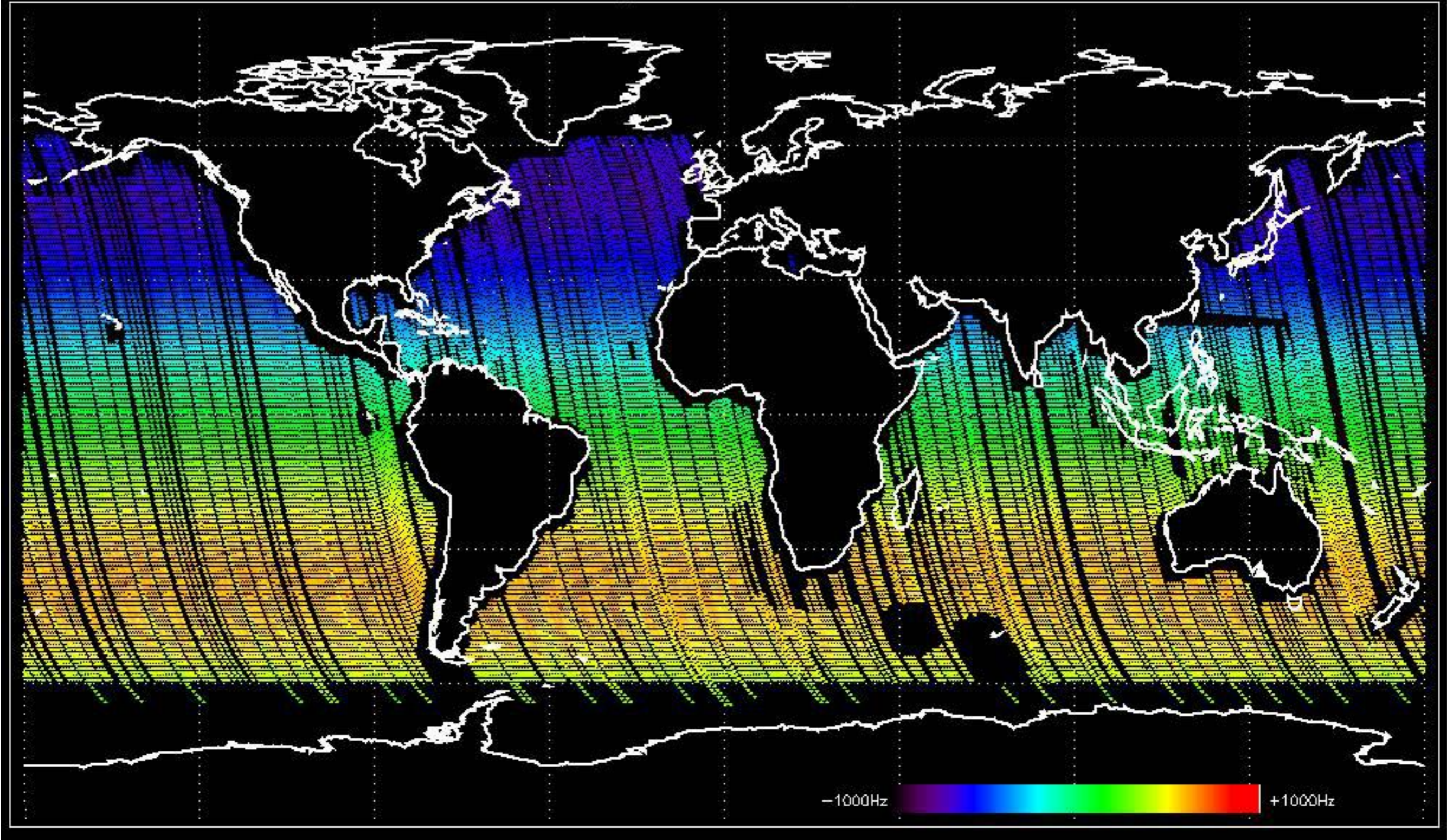
Doppler 'GM1' 'SS1' ascending



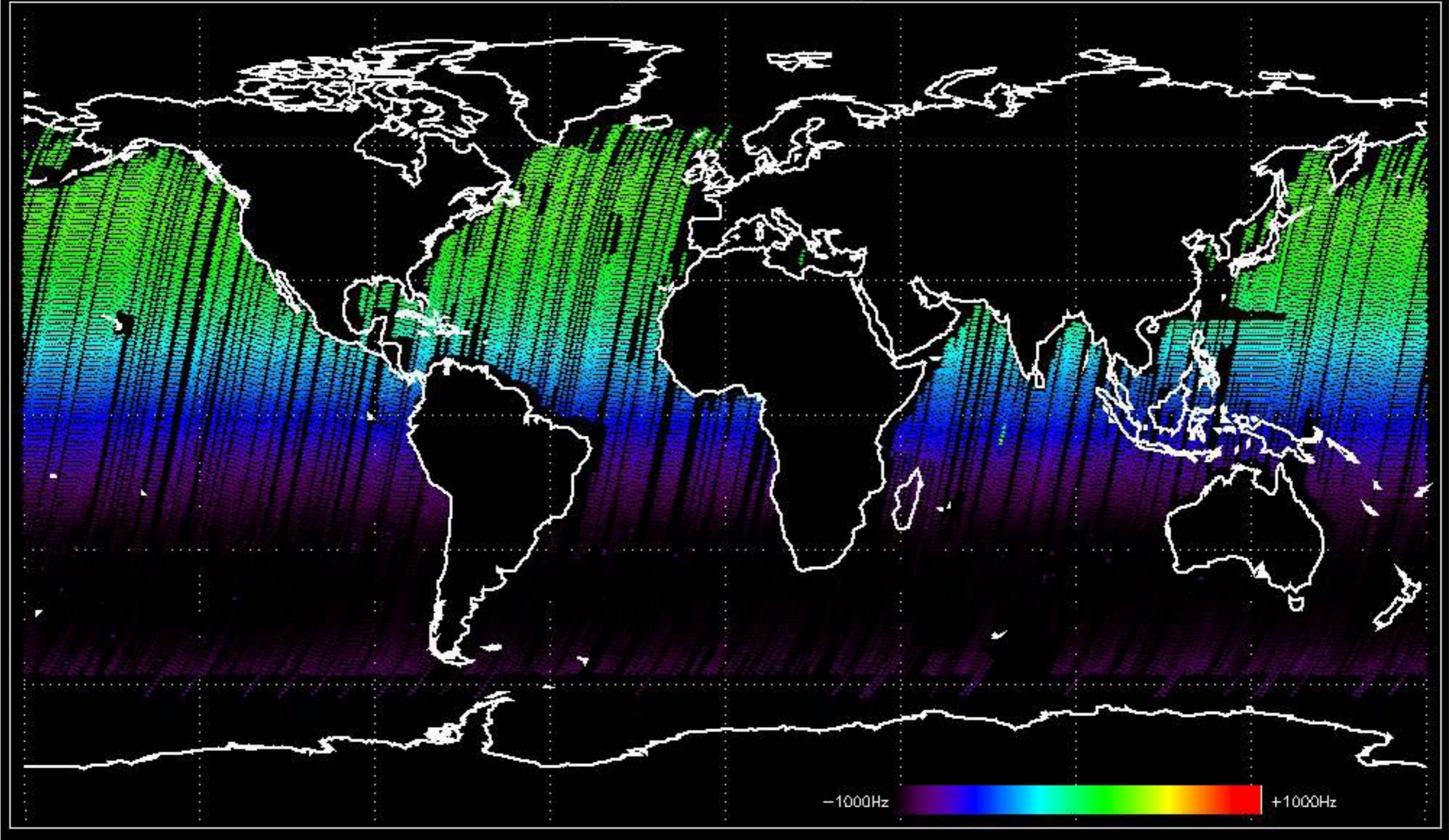
Doppler 'GM1' 'SS1' descending

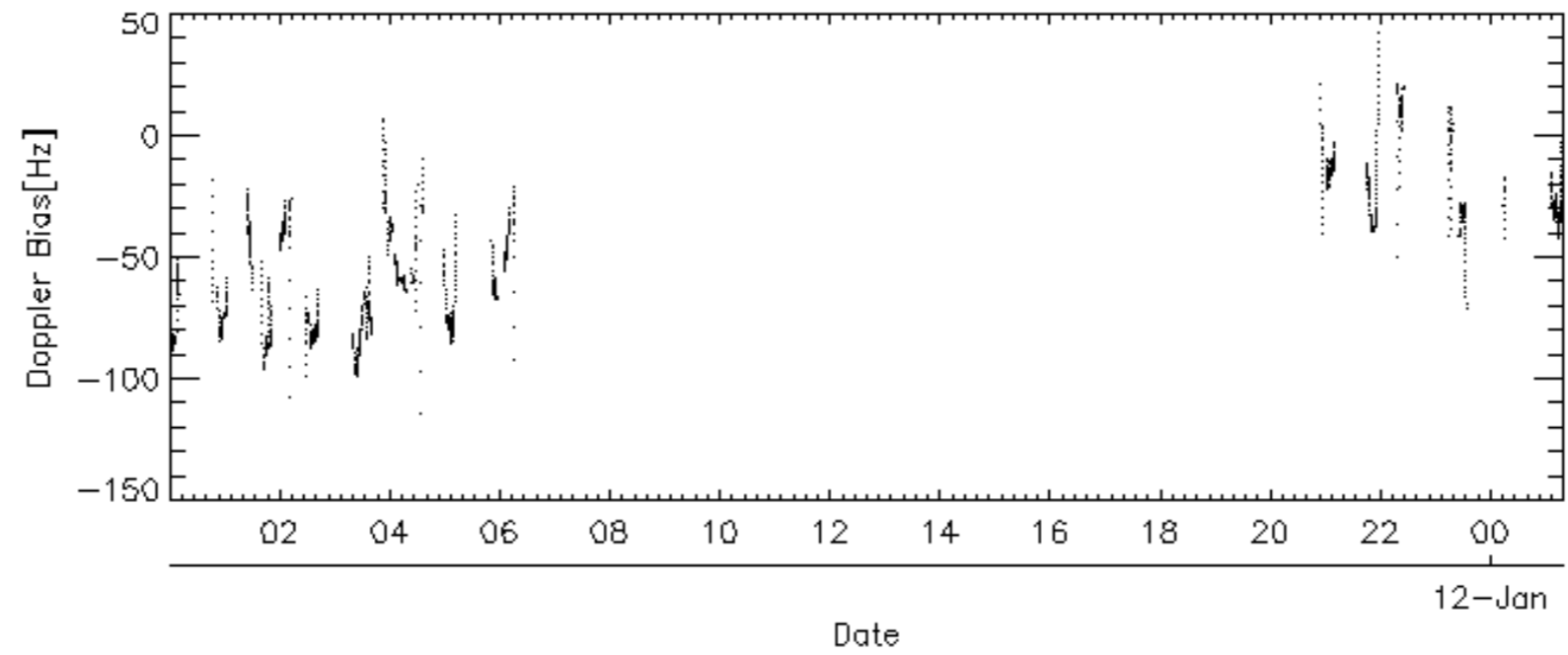
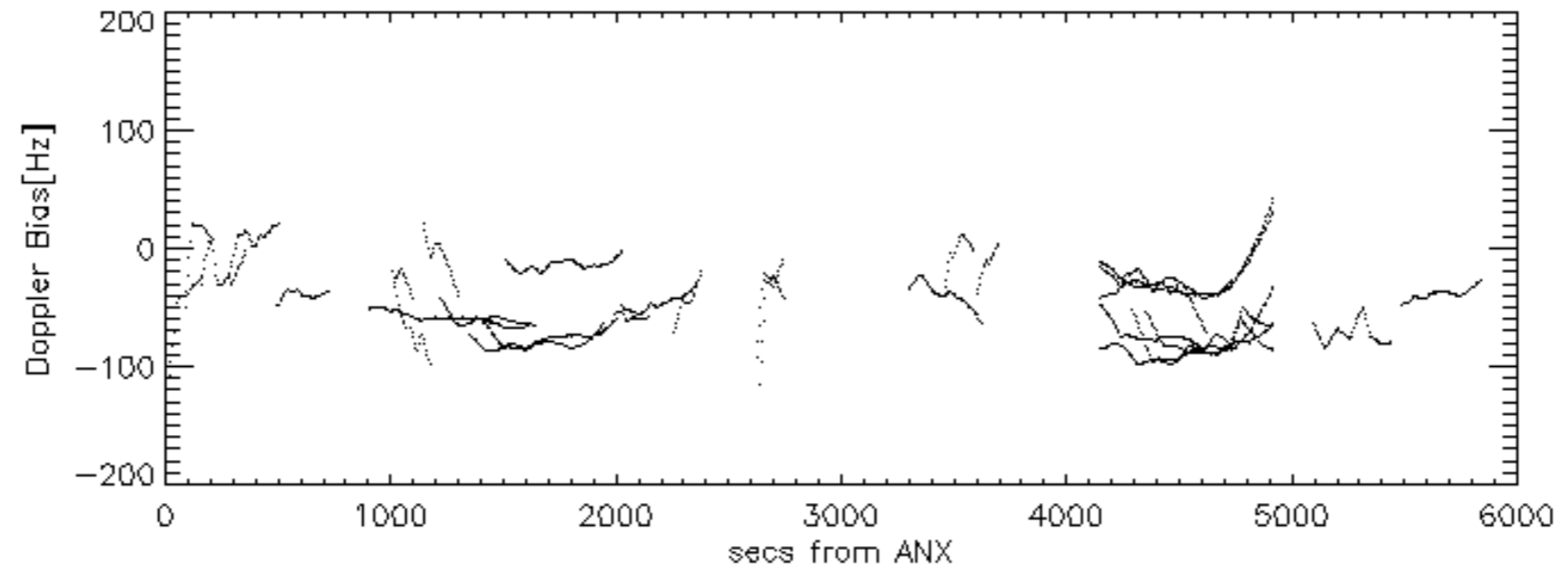
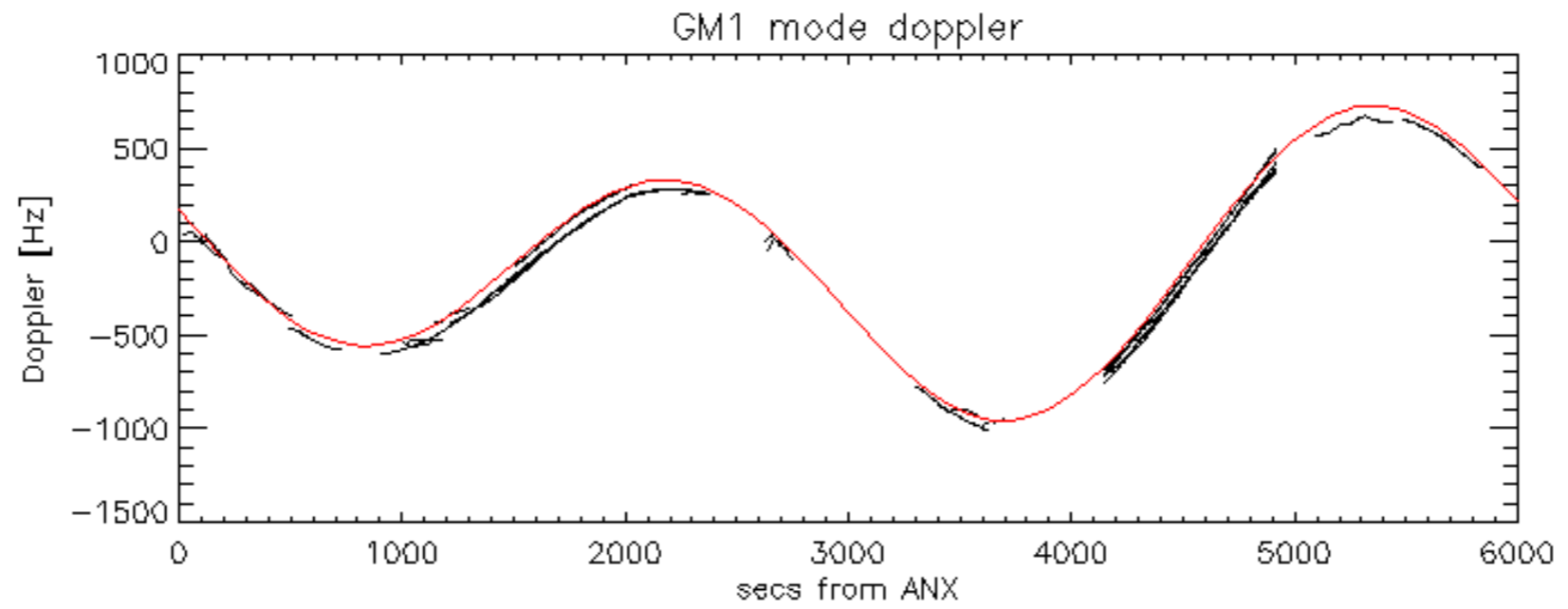


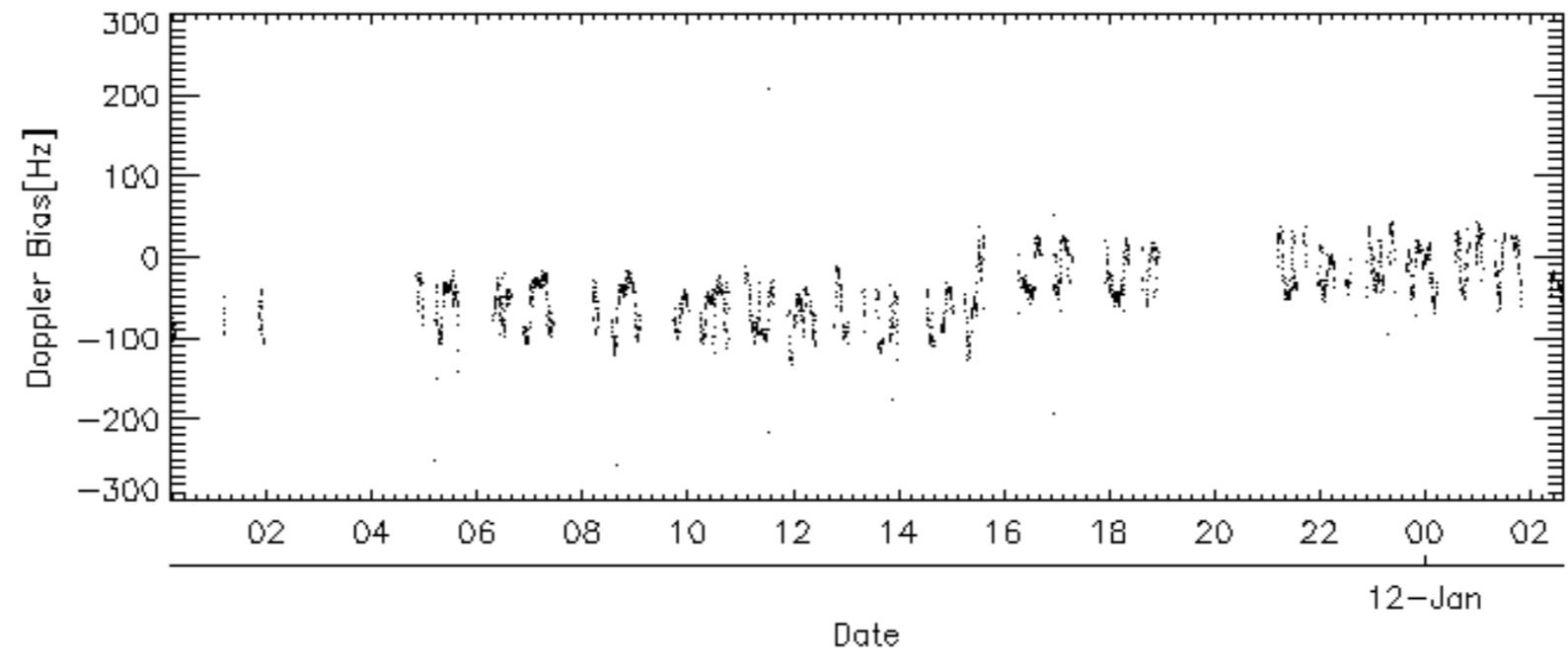
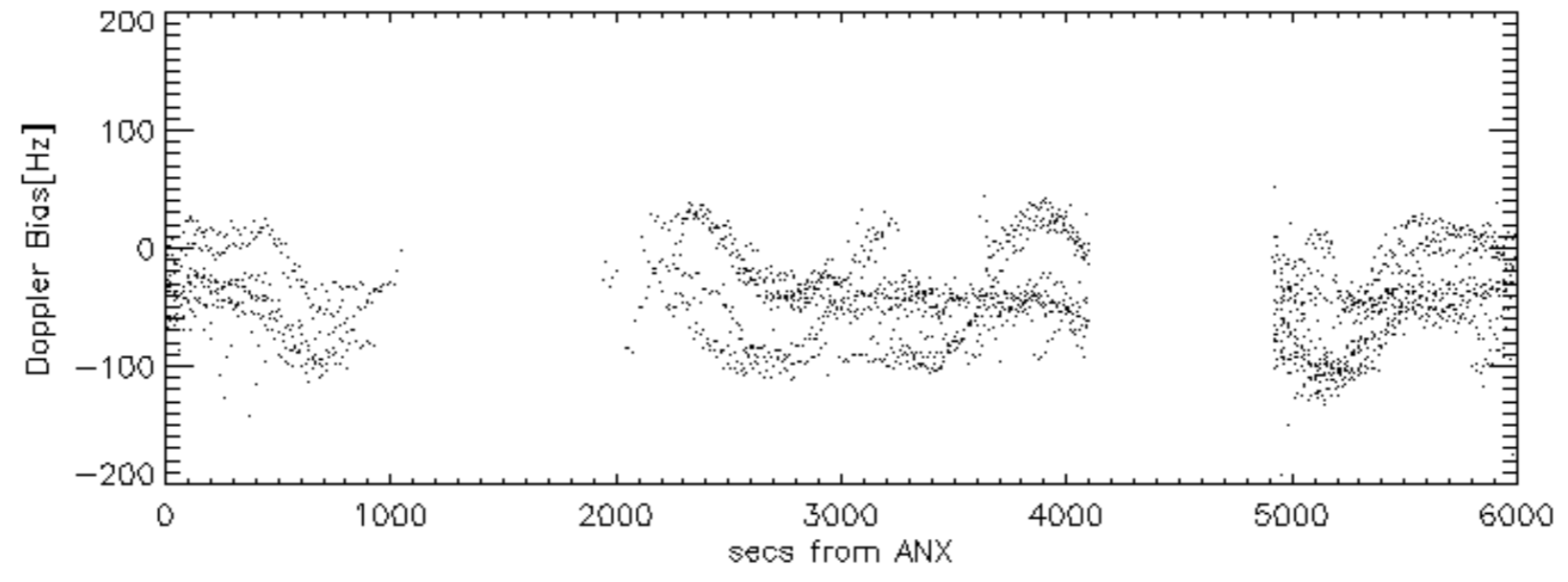
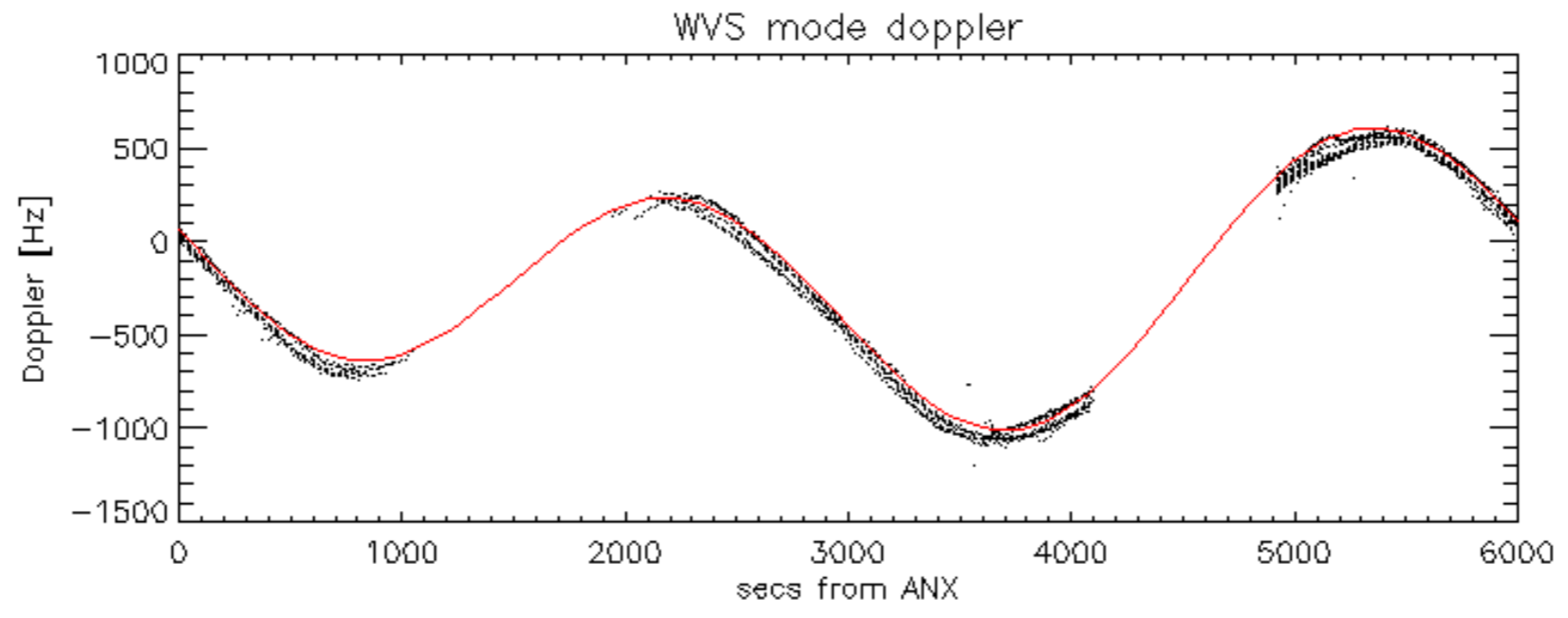
Doppler 'WVS' 'IS2' ascending



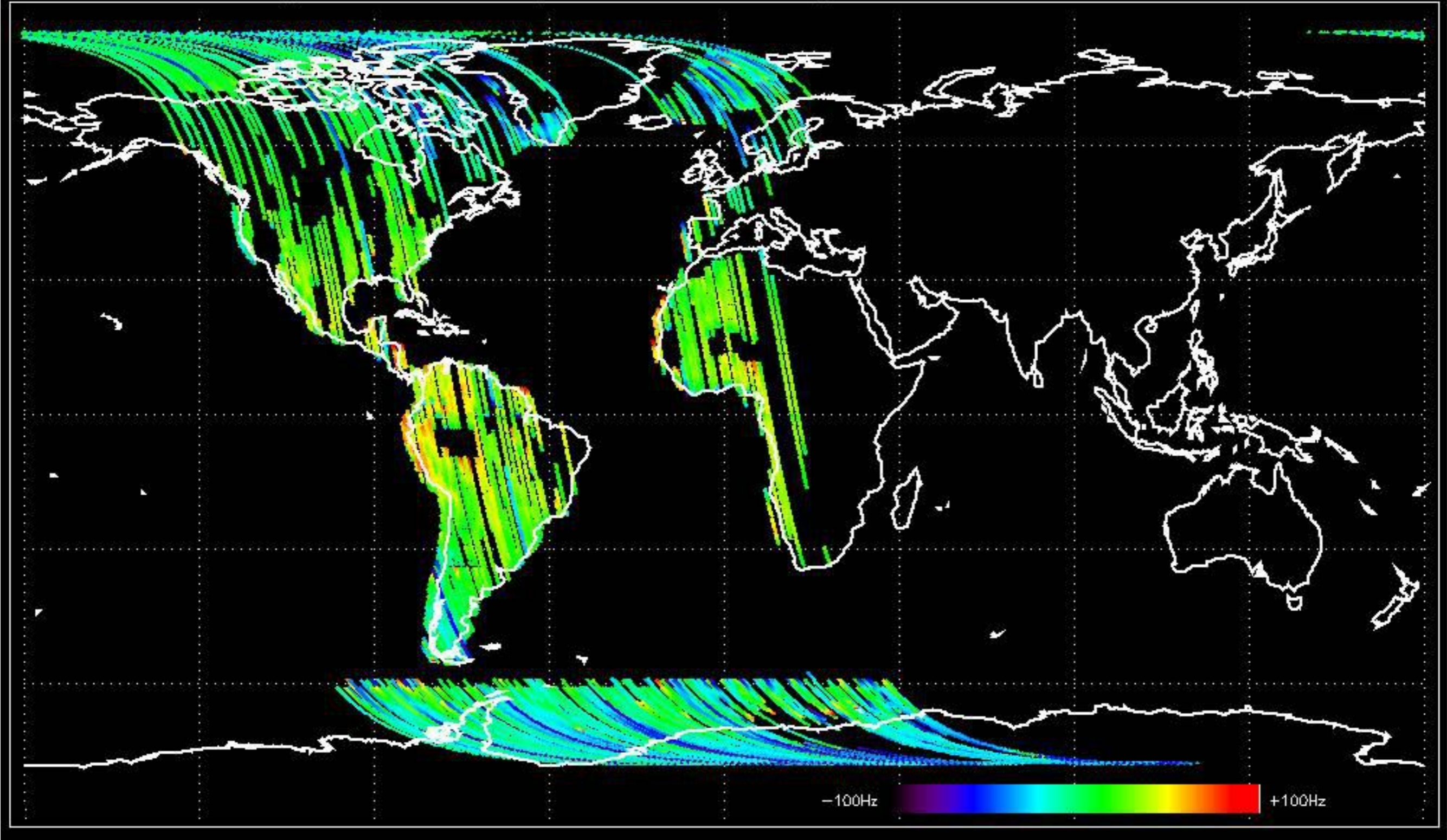
Doppler 'WVS' 'IS2' descending



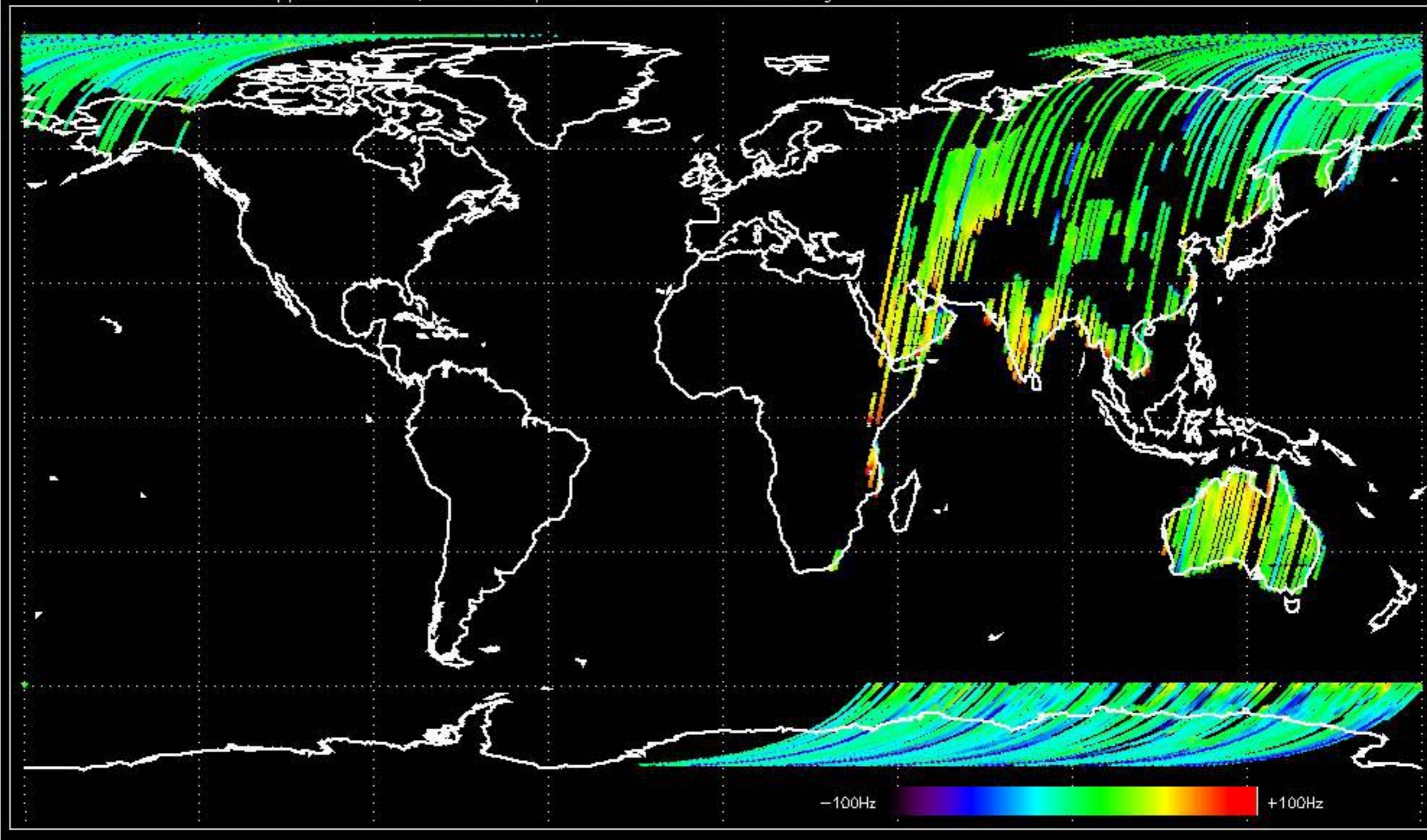




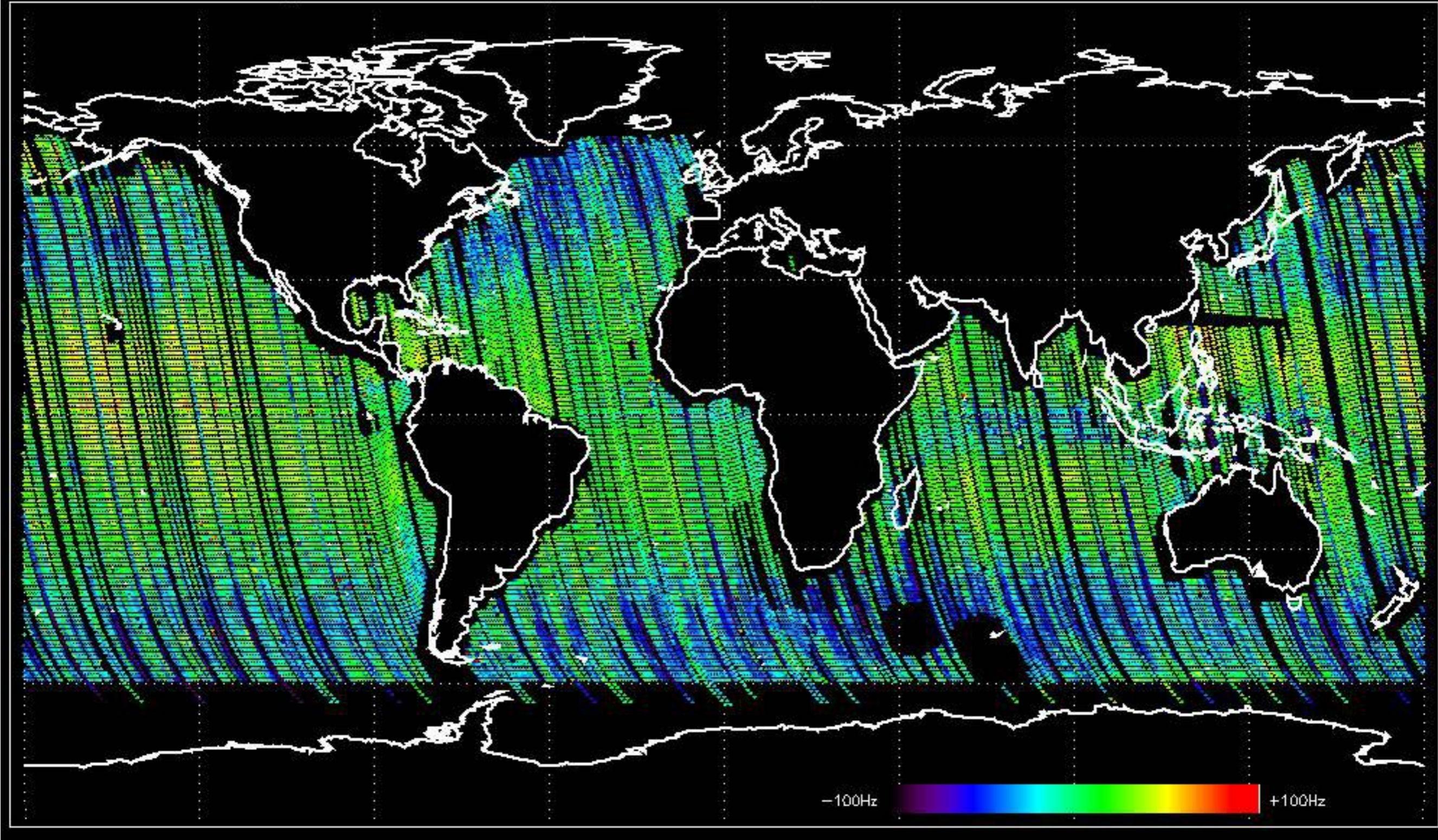
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.912901 Hz



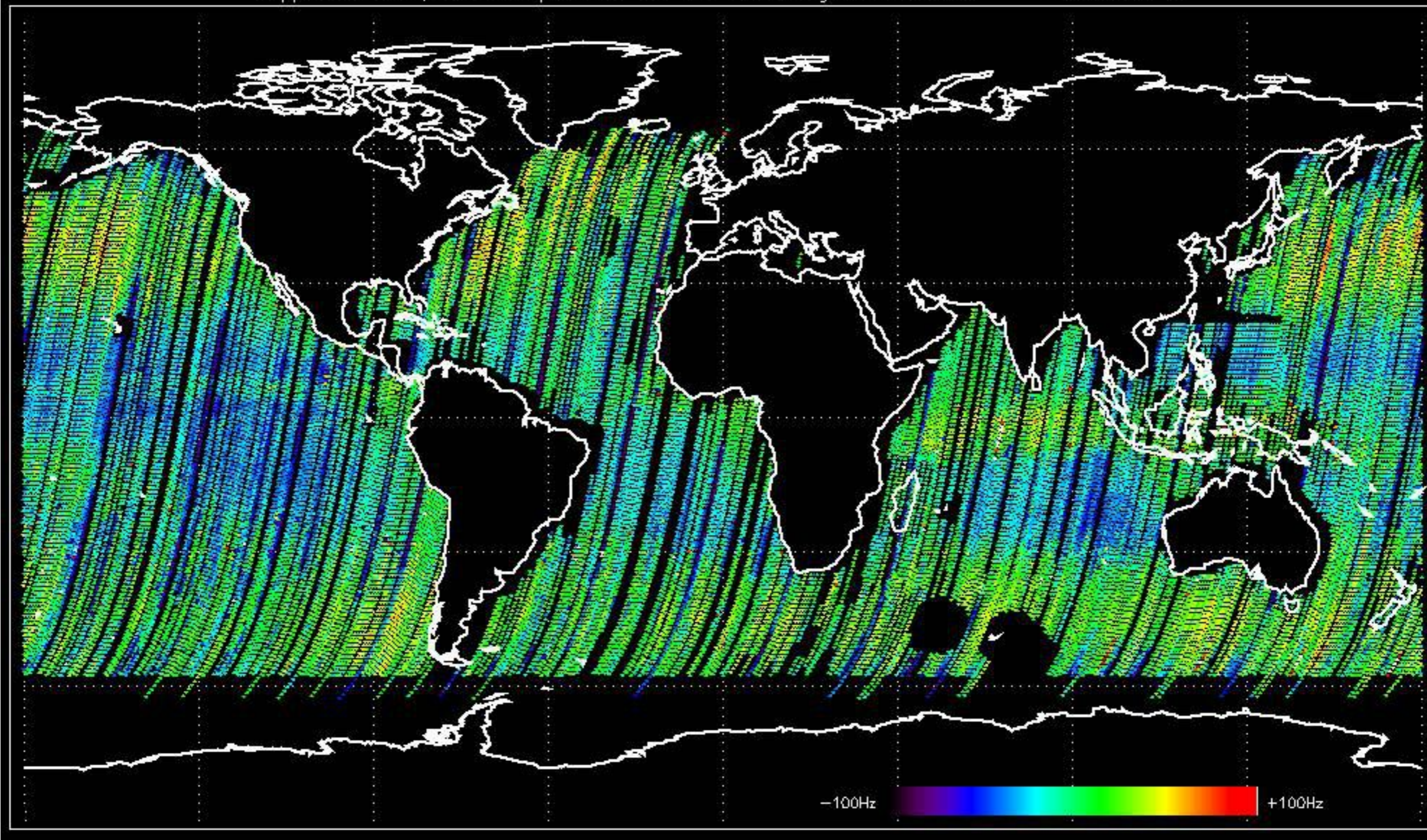
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.279919 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.9049162 Hz

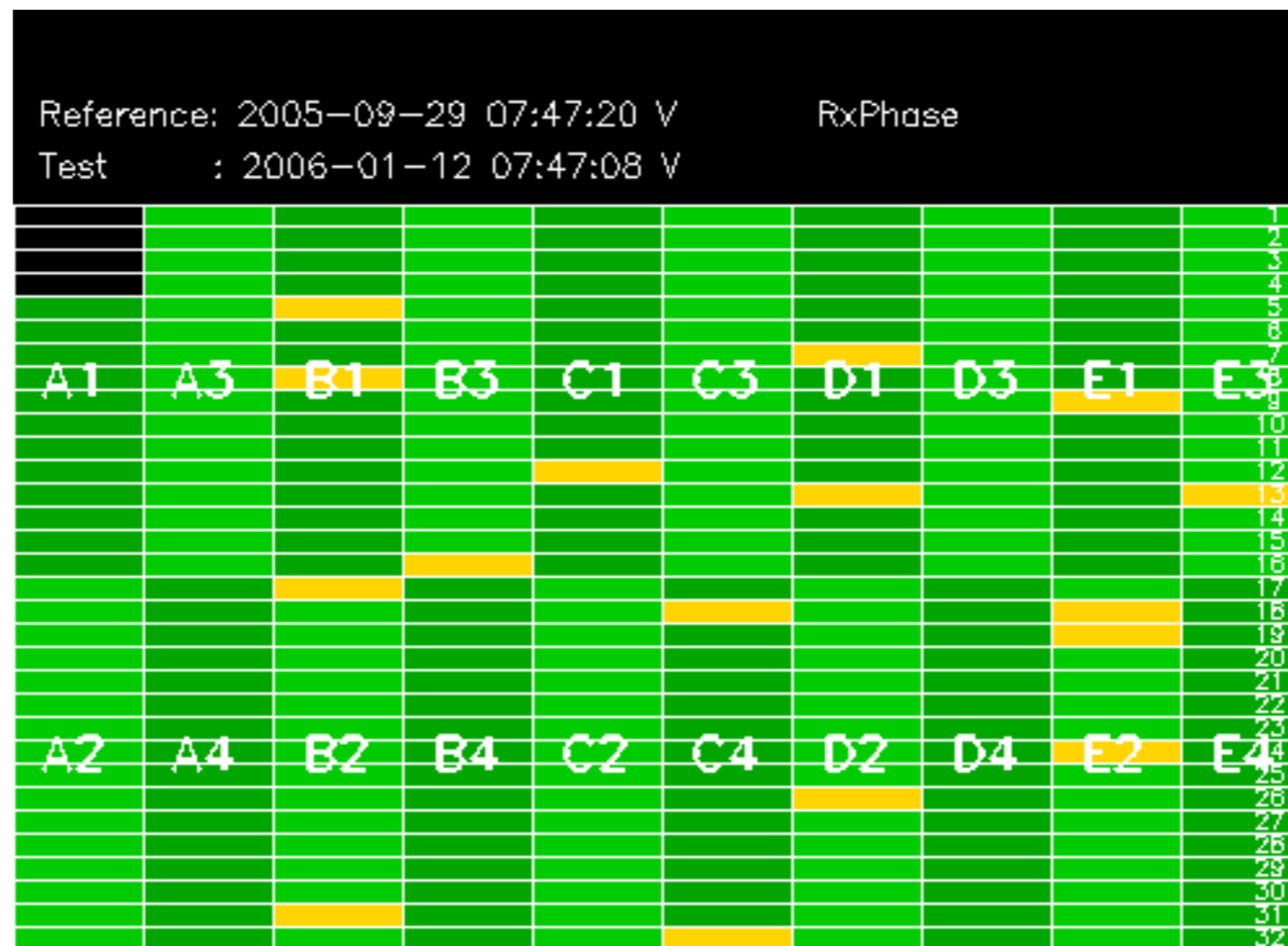


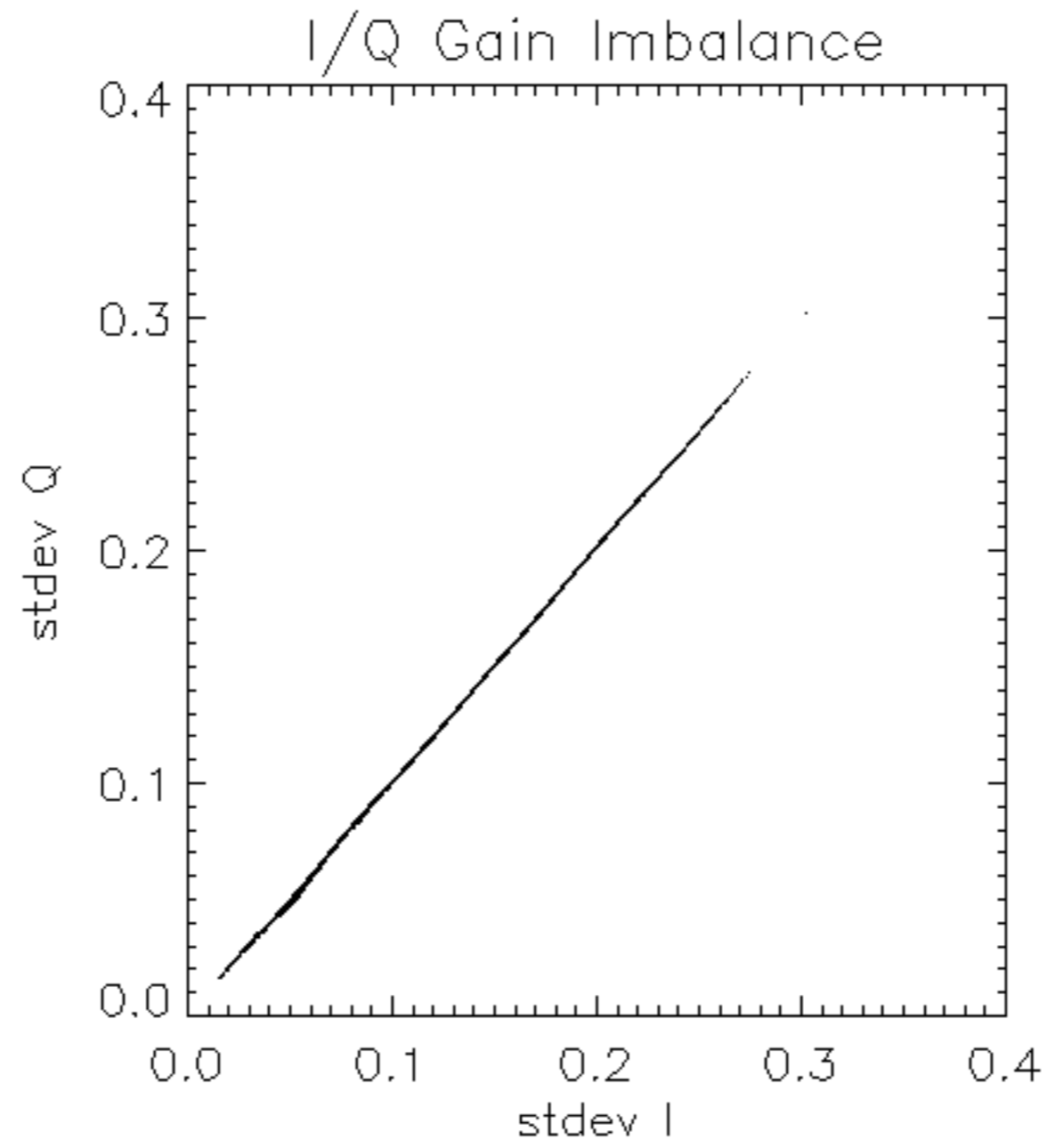
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.874390 Hz

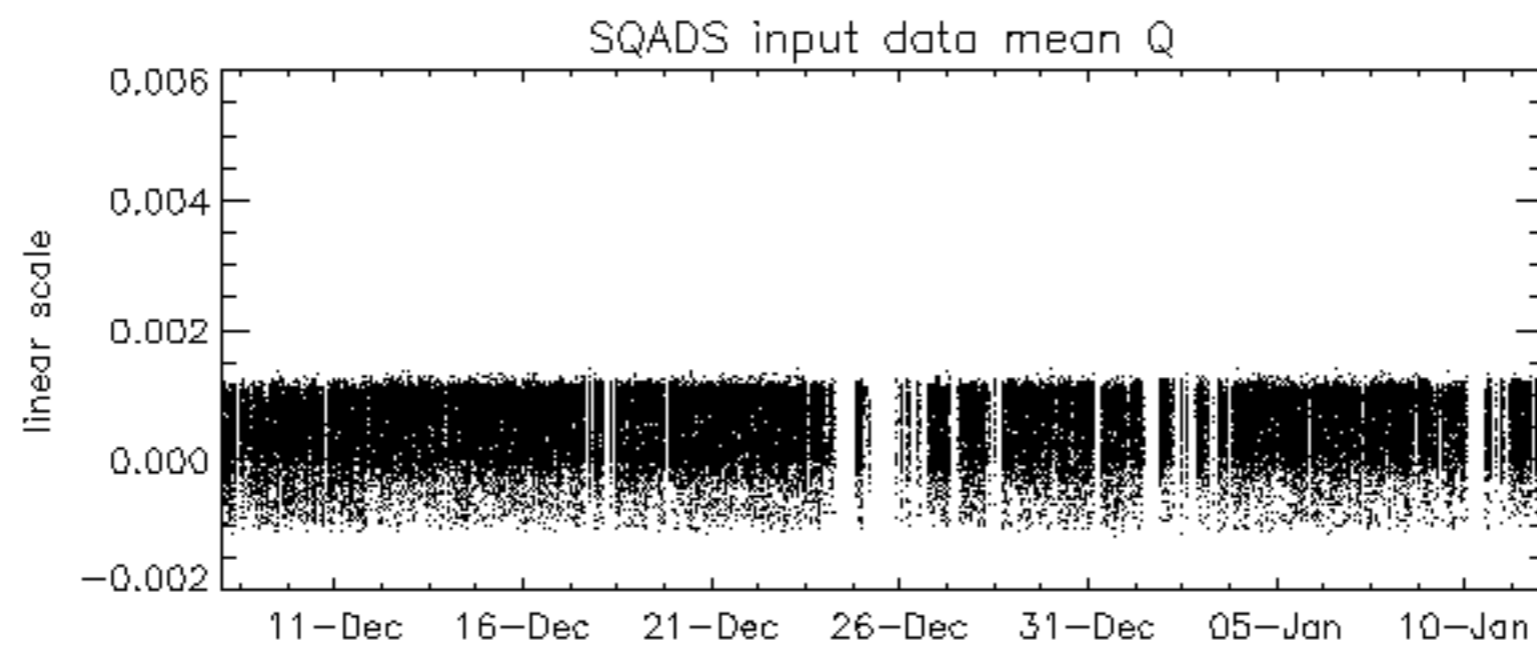
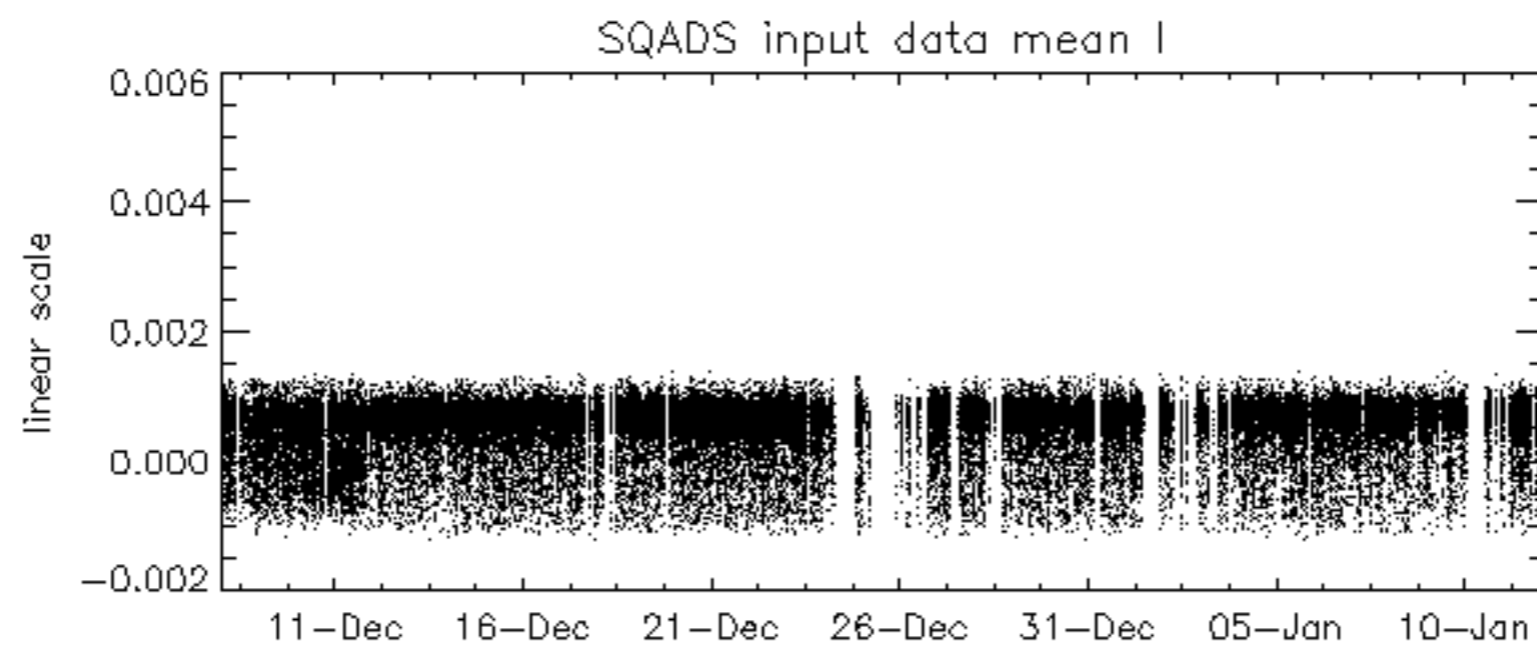
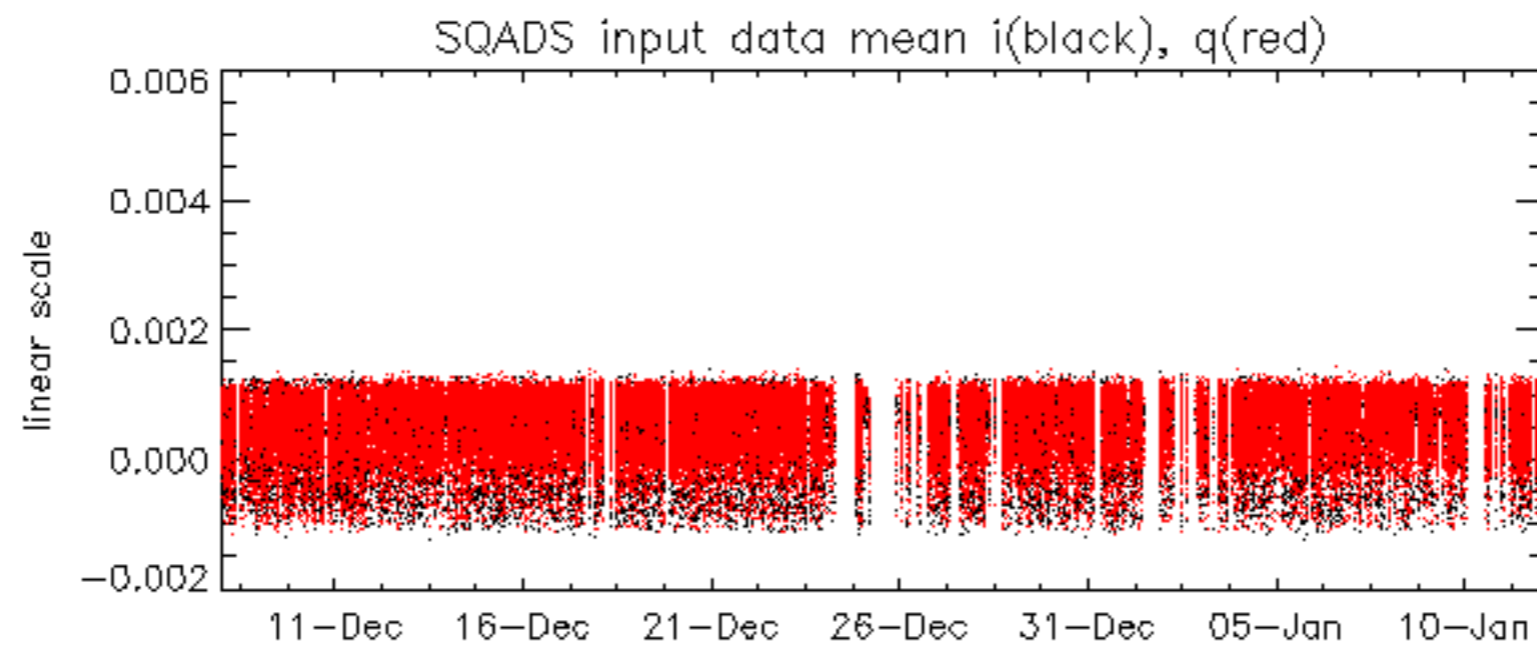


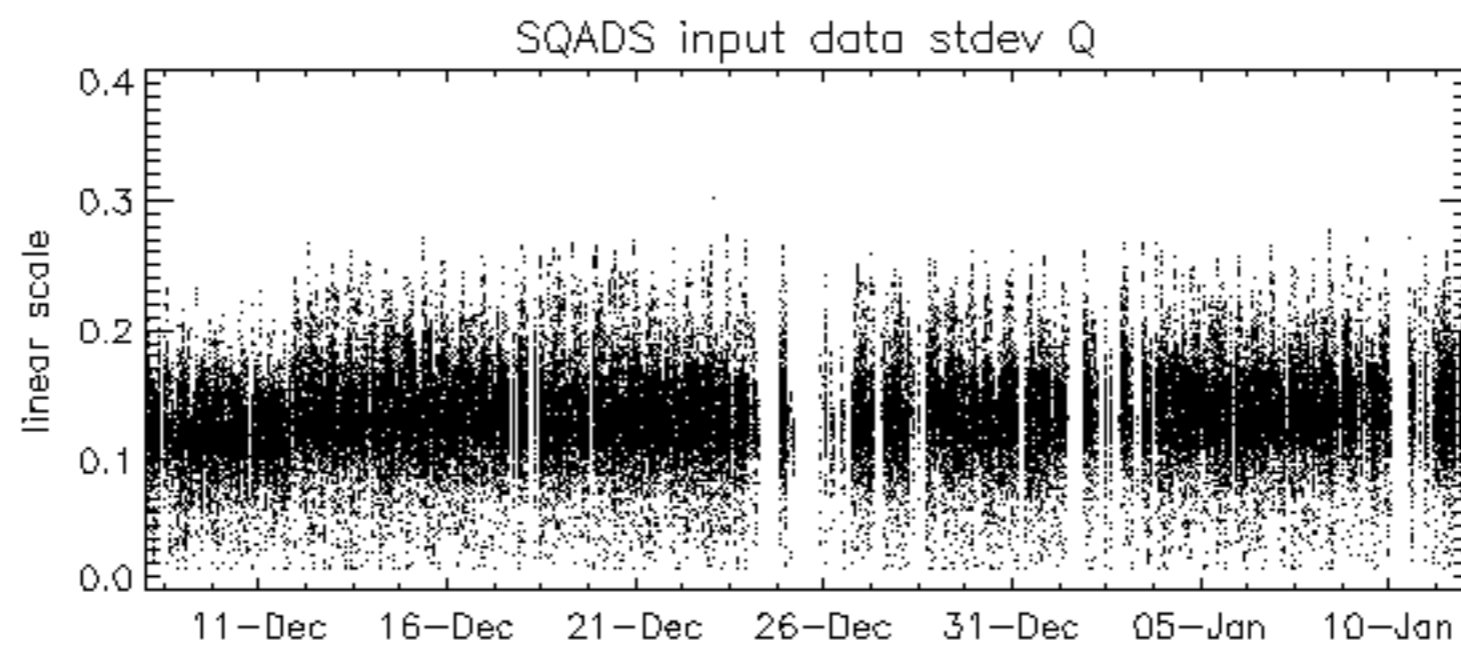
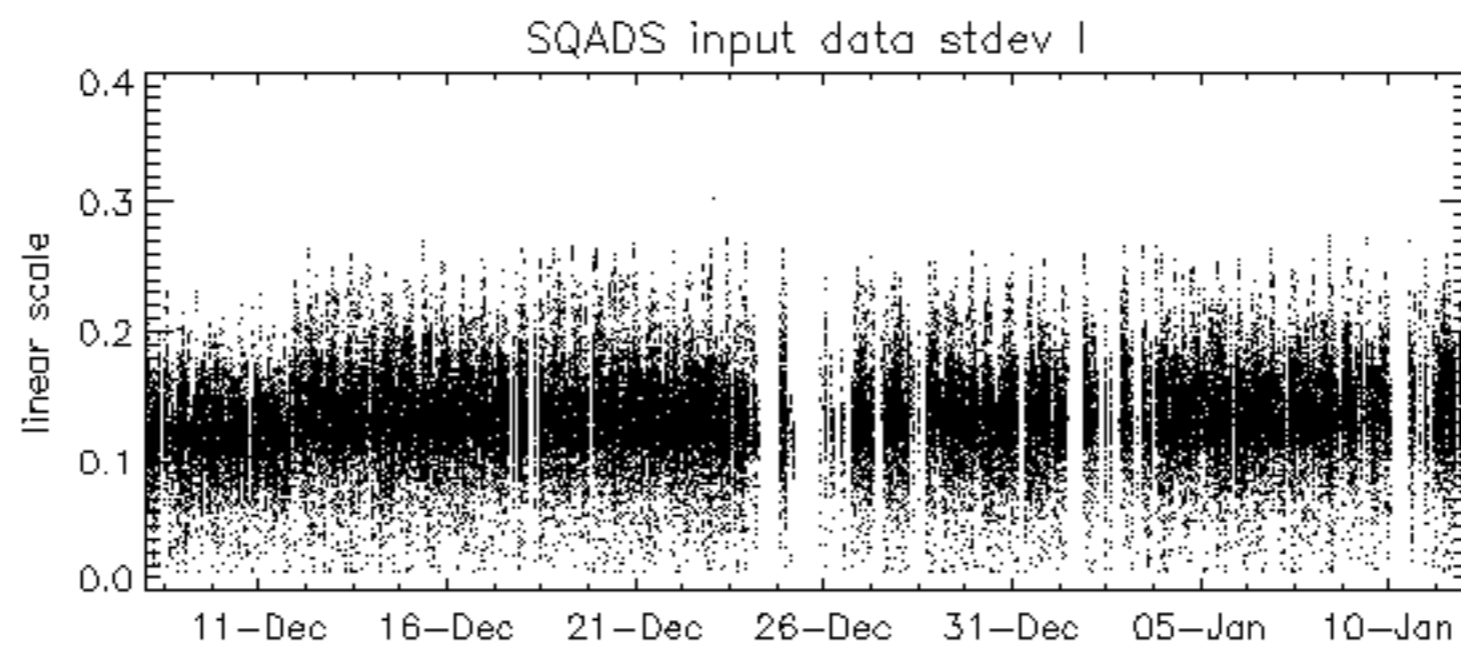
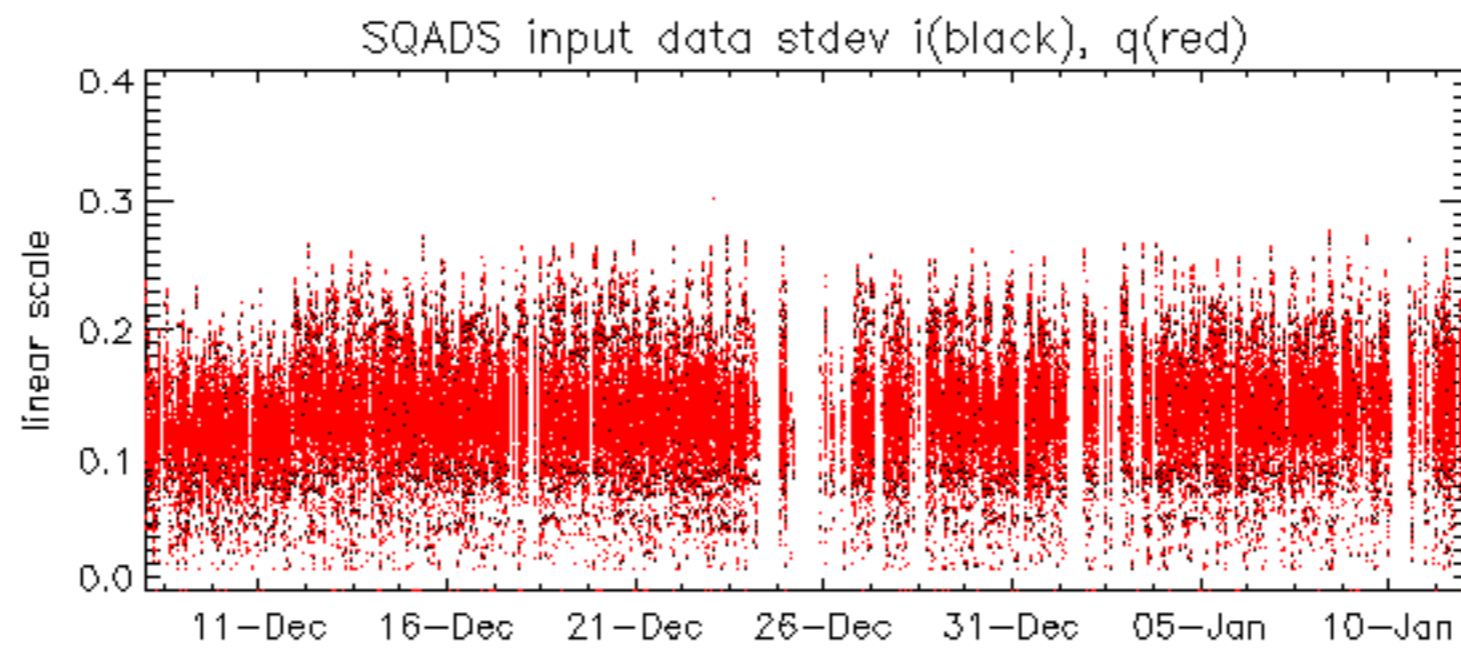
No anomalies observed on available MS products:

No anomalies observed.





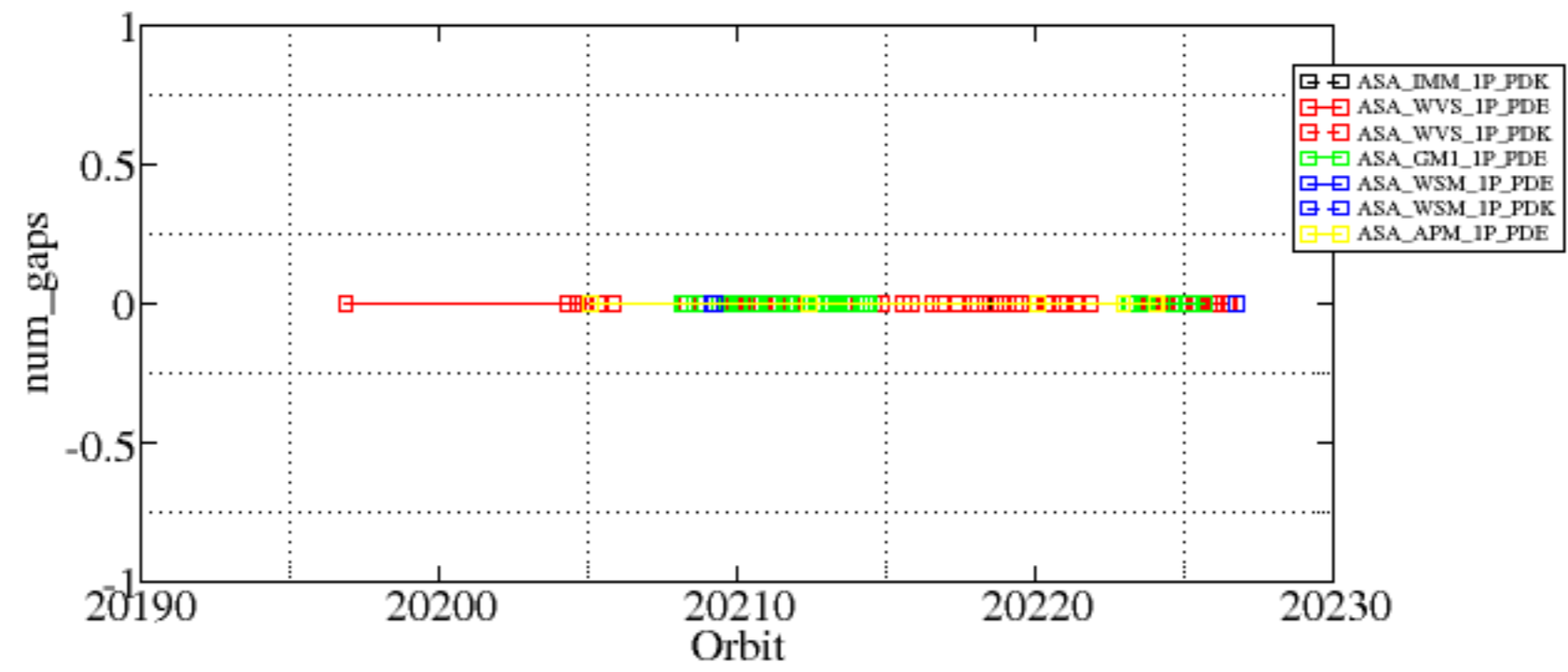


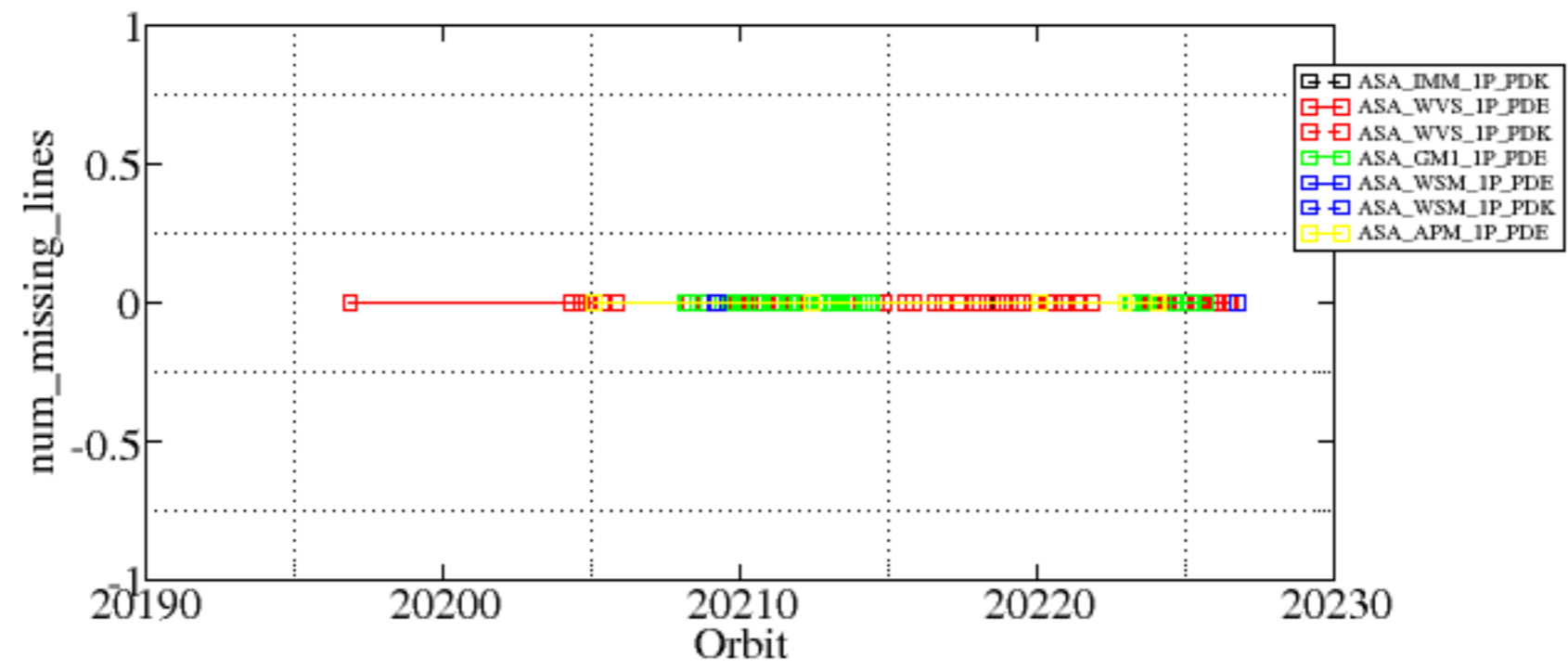


Summary of analysis for the last 3 days 2006011[012]

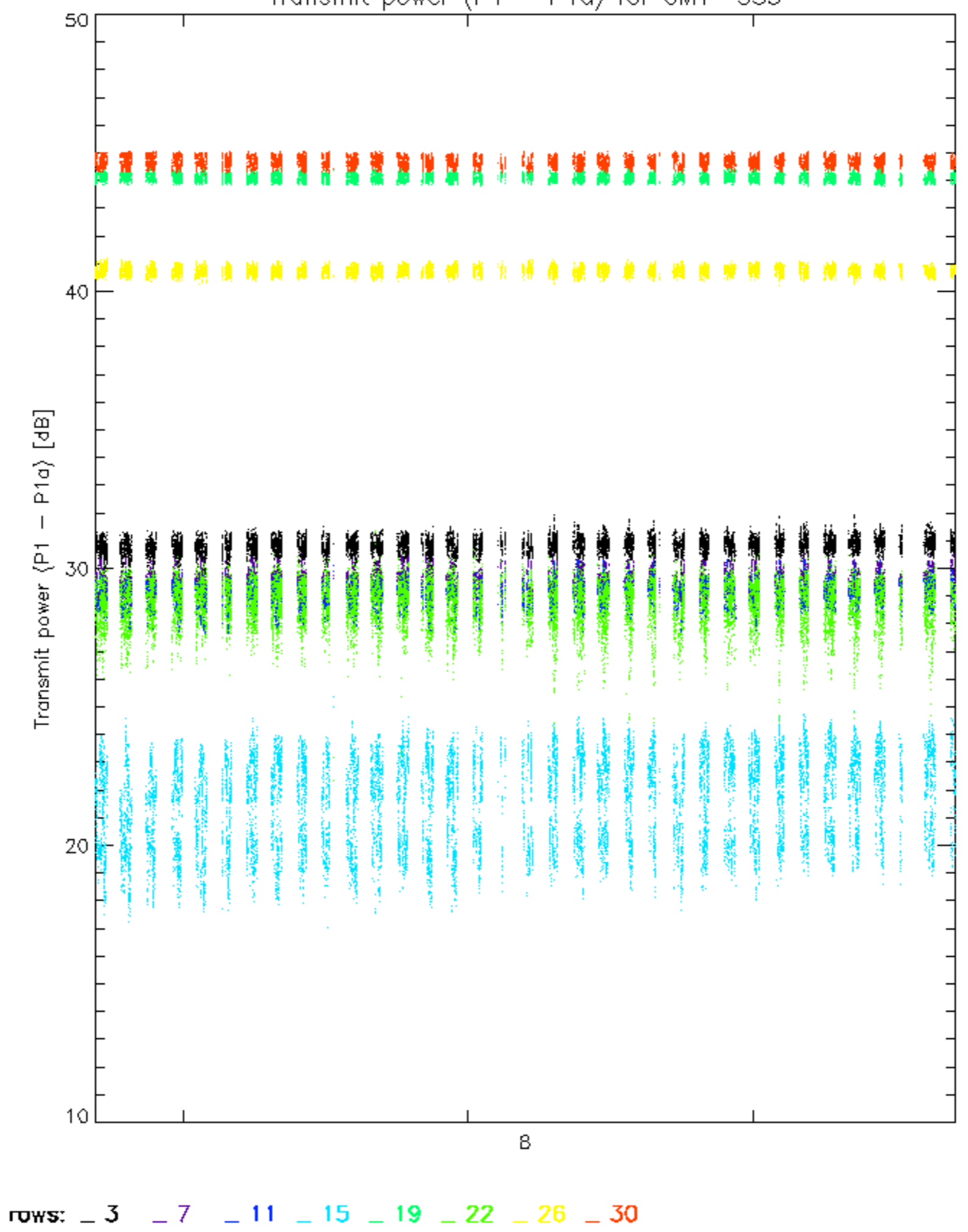
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

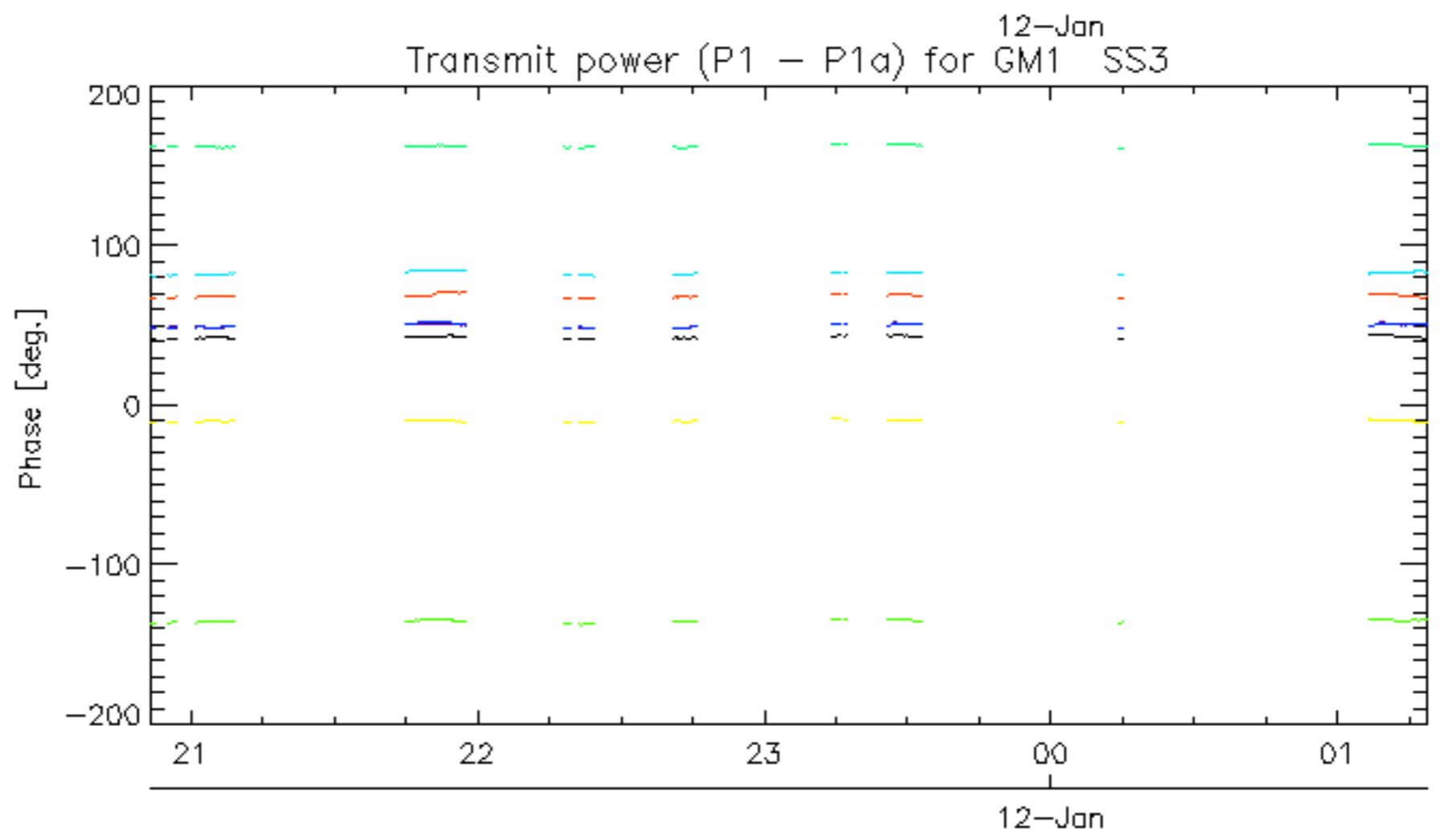
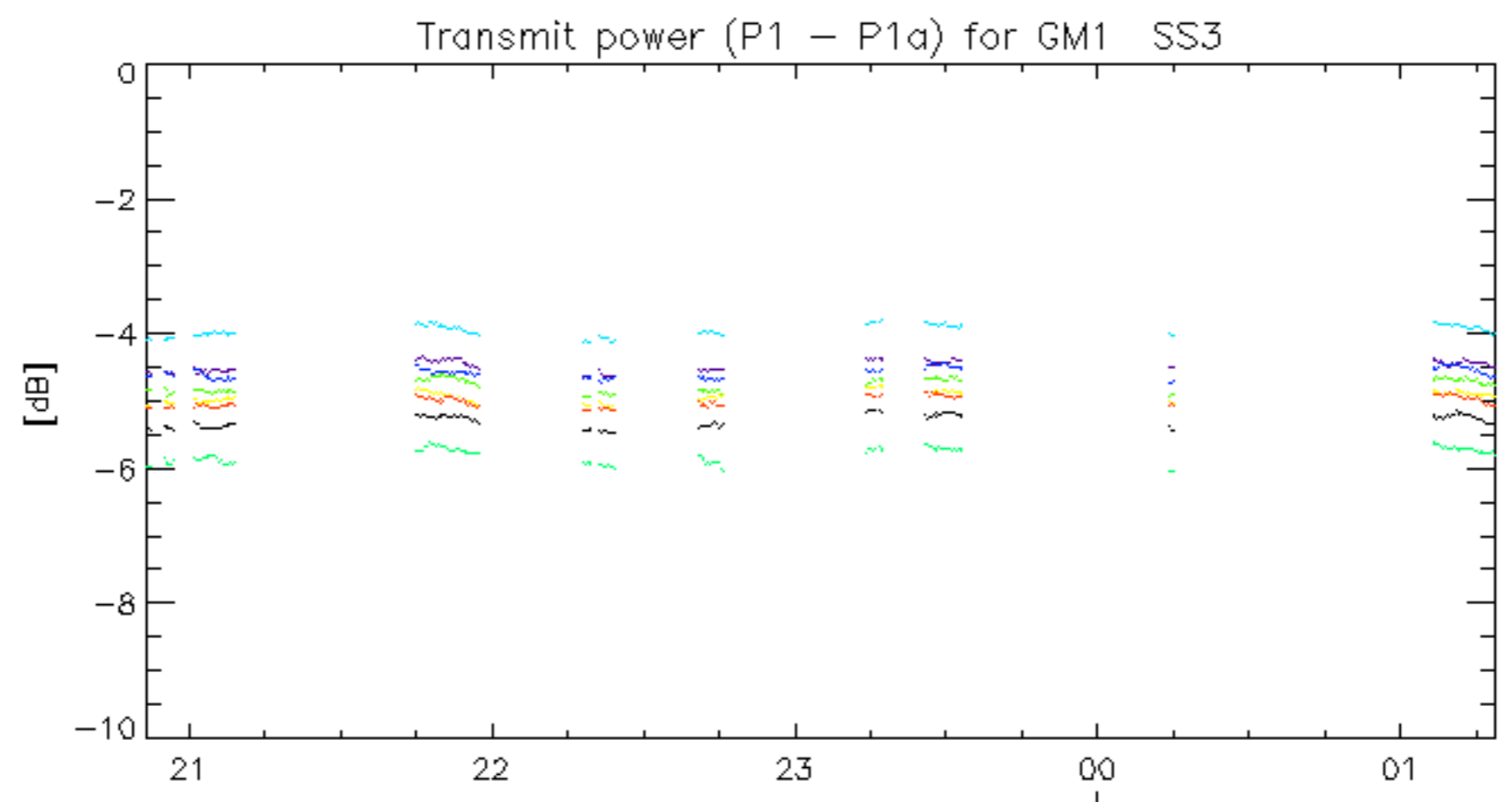
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20060112_032449_00000672044_00133_20227_0097.N1	0	60



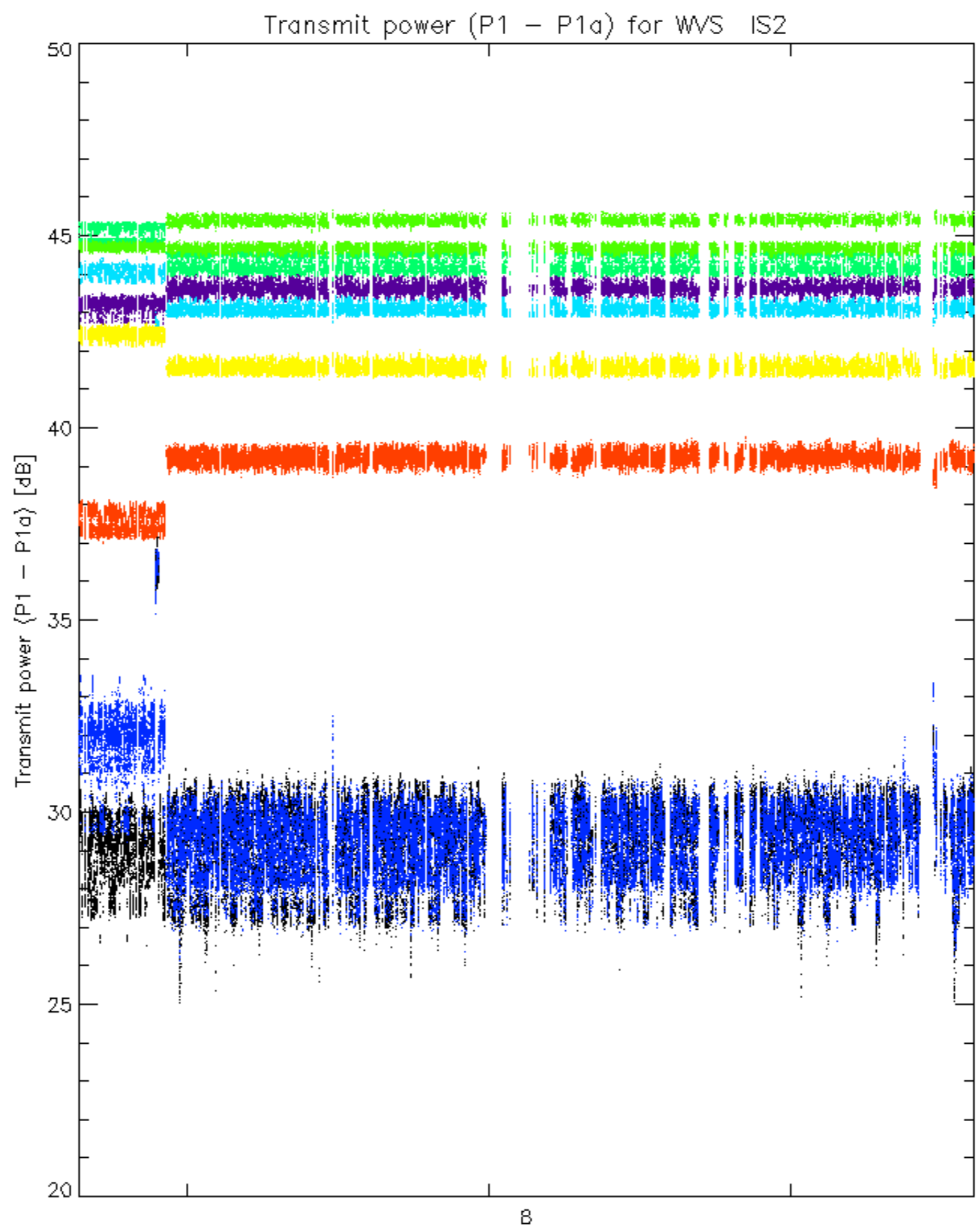


Transmit power (P1 - P1a) for GM1 SS3

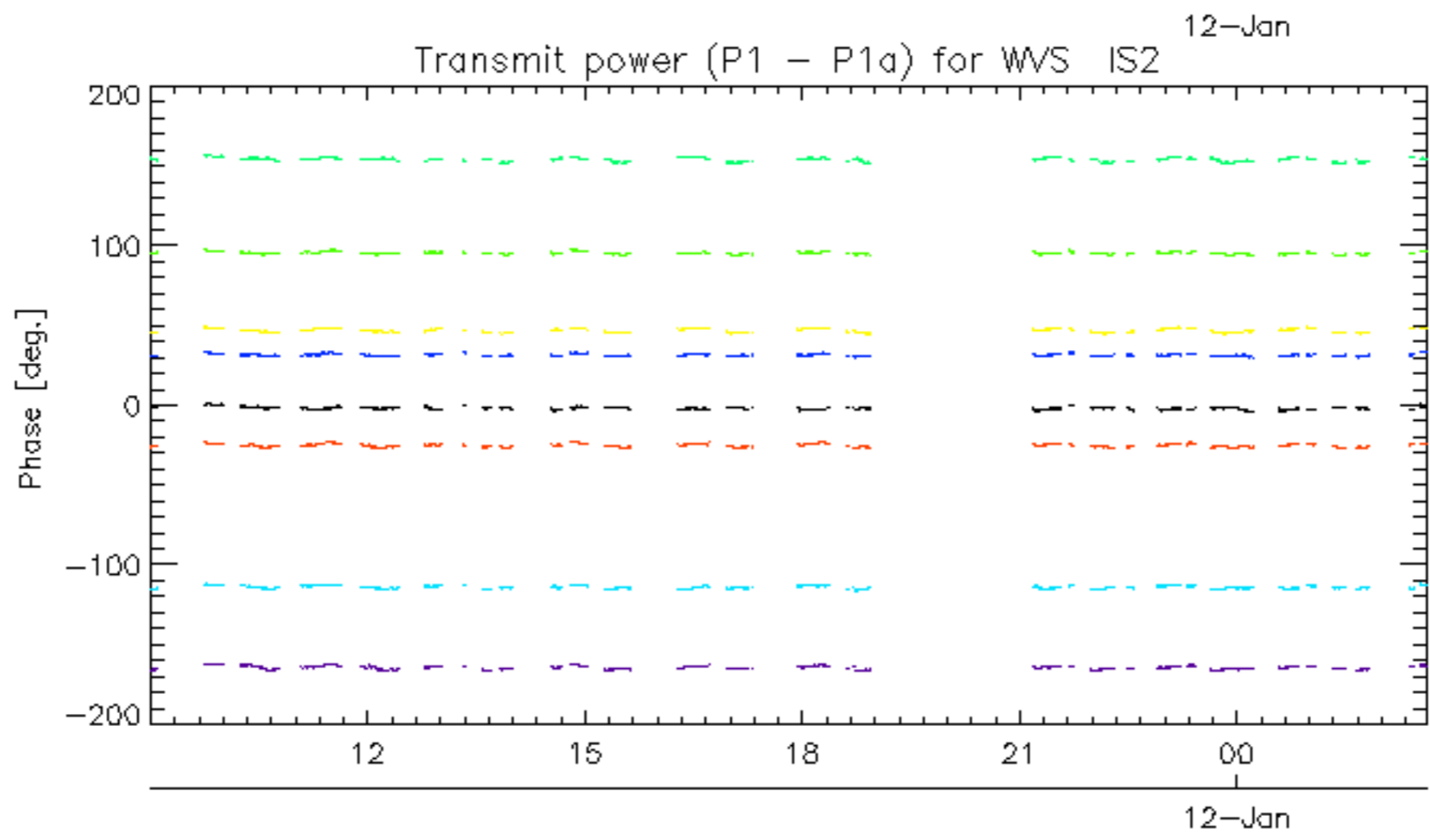
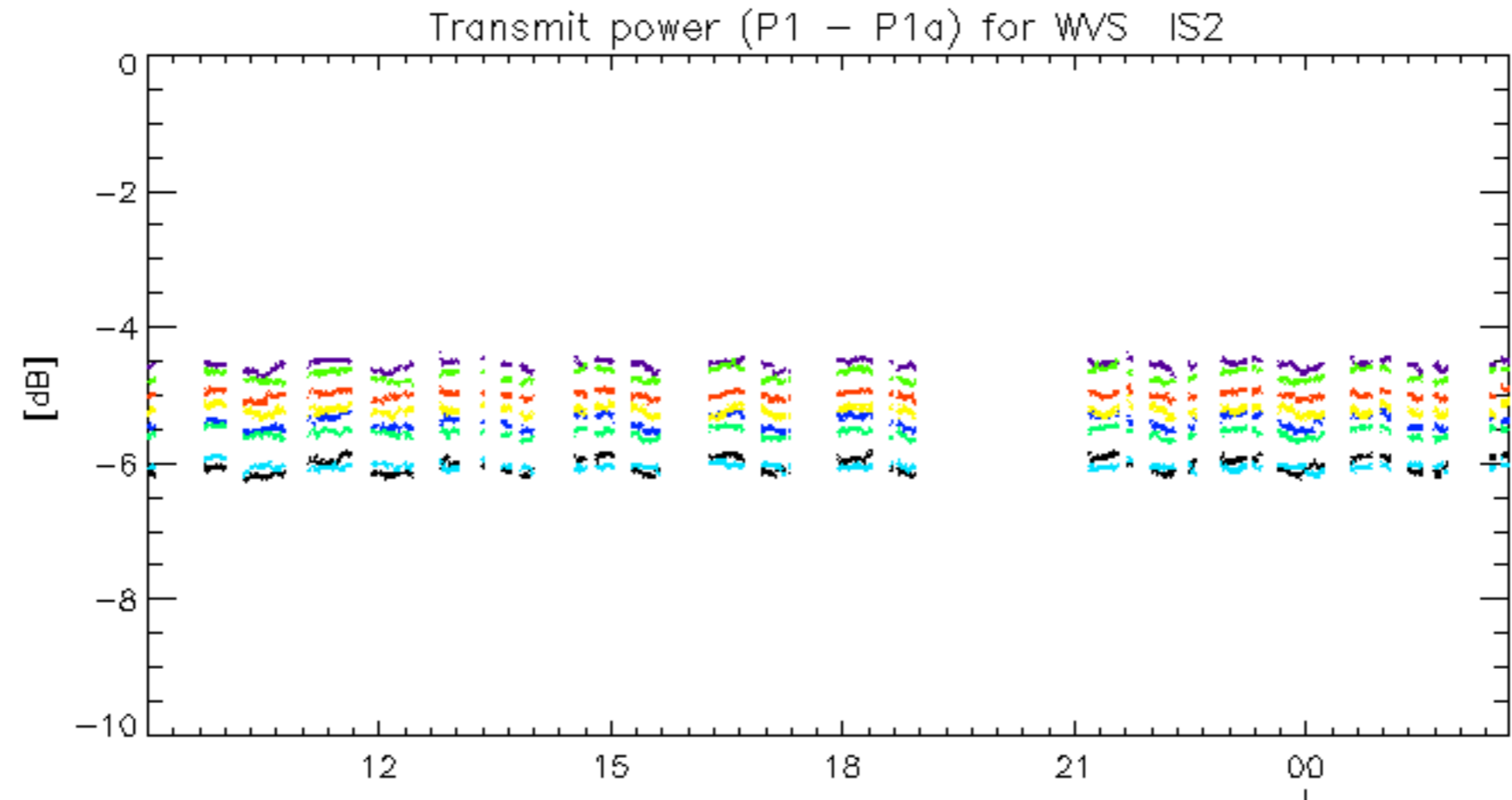




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.