

PRELIMINARY REPORT OF 070101

last update on Mon Jan 1 16:19:51 GMT 2007

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2006-12-31 00:00:00 to 2007-01-01 16:19:51

PDHS-K

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	30	33	22	7	54
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	30	33	22	7	54
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	30	33	22	7	54
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	30	33	22	7	54

2.3 - Browse Visual Inspection

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	20070101 054047
H	20061229 071539

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"/>

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☒	

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

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4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

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4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

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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	-3.960708	0.008168	-0.018993
7	P1	-3.134759	0.024996	0.045872
11	P1	-4.118018	0.026426	0.011592
15	P1	-6.326488	0.017044	-0.020677
19	P1	-3.662162	0.005562	-0.059354
22	P1	-4.662150	0.014231	-0.031878
26	P1	-3.961975	0.009020	-0.011311
30	P1	-5.901104	0.009368	-0.043706
3	P1	-16.543530	0.262867	-0.091868
7	P1	-17.277254	0.195577	0.115359
11	P1	-17.181511	0.492287	-0.031171
15	P1	-13.038692	0.138532	0.060890
19	P1	-15.005278	0.095810	-0.108502
22	P1	-15.824494	0.539922	0.094259
26	P1	-15.084795	0.188486	0.069902
30	P1	-17.509109	0.476720	0.080401

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.794695	0.094807	0.000863
7	P2	-21.713797	0.093714	0.078000
11	P2	-15.566375	0.102253	0.009388
15	P2	-7.107545	0.109552	0.023612
19	P2	-9.187961	0.105665	0.022516
22	P2	-18.227034	0.099171	0.018876
26	P2	-16.594723	0.111880	-0.024236
30	P2	-19.450172	0.089873	0.004788

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.238180	0.009123	0.003340
7	P3	-8.238180	0.009123	0.003340
11	P3	-8.238180	0.009123	0.003340

15	P3	-8.238180	0.009123	0.003340
19	P3	-8.238180	0.009123	0.003340
22	P3	-8.238180	0.009123	0.003340
26	P3	-8.238220	0.009124	0.003200
30	P3	-8.238220	0.009124	0.003200

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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	-3.920976	0.015045	-0.002598
7	P1	-2.471740	0.015805	0.019190
11	P1	-2.852834	0.018175	0.019536
15	P1	-3.689217	0.032410	-0.021371
19	P1	-3.547123	0.020224	-0.005152
22	P1	-5.025237	0.025047	0.031249
26	P1	-6.032406	0.030986	-0.021878
30	P1	-5.346081	0.040432	-0.000844
3	P1	-11.741862	0.085234	0.030814
7	P1	-10.072536	0.083887	0.012728
11	P1	-10.354750	0.123325	-0.034452
15	P1	-10.713718	0.125519	-0.058952
19	P1	-15.728431	0.131161	-0.007472
22	P1	-21.590553	1.408635	-0.072613
26	P1	-16.061209	0.356400	0.023988
30	P1	-17.887388	0.375642	-0.000749

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.466200	0.122113	0.001879
7	P2	-22.219173	0.297360	0.027691
11	P2	-10.862539	0.115531	0.019976
15	P2	-4.984066	0.202850	0.007375
19	P2	-6.965077	0.289174	-0.005863
22	P2	-8.248541	0.117754	0.001853
26	P2	-24.316807	0.168759	-0.077886
30	P2	-21.951296	0.121860	0.035978

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.087869	0.005346	-0.017171
7	P3	-8.087731	0.005322	-0.016458
11	P3	-8.087809	0.005343	-0.016980
15	P3	-8.087655	0.005321	-0.017029
19	P3	-8.087664	0.005346	-0.017272
22	P3	-8.087671	0.005334	-0.016464
26	P3	-8.087801	0.005337	-0.017825
30	P3	-8.087806	0.005314	-0.017413

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	0.000561556
	stdev	1.65749e-07
MEAN Q	mean	0.000501604
	stdev	2.12857e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140092
	stdev	0.00123043
STDEV Q	mean	0.140489
	stdev	0.00125123



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006123[011]

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



Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDE20061230_061449_000002592054_00163_25267_3906.N1	5	0
ASA_WSM_1PNPDE20061230_012058_000004402054_00160_25264_3489.N1	0	41
ASA_WSM_1PNPDE20061230_144646_000004462054_00168_25272_4293.N1	0	36
ASA_WSM_1PNPDE20061230_172249_000001772054_00170_25274_4329.N1	0	4
ASA_WSM_1PNPDE20061230_190232_000000972054_00171_25275_4361.N1	0	48
ASA_WSM_1PNPDE20061231_005022_000002612054_00174_25278_4768.N1	0	36
ASA_WSM_1PNPDE20061231_151026_000002192054_00183_25287_5223.N1	0	57
ASA_WSM_1PNPDE20061231_165036_000001642054_00184_25288_5255.N1	0	36
ASA_WSM_1PNPDE20061231_183356_000001412054_00185_25289_5303.N1	0	40





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)

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

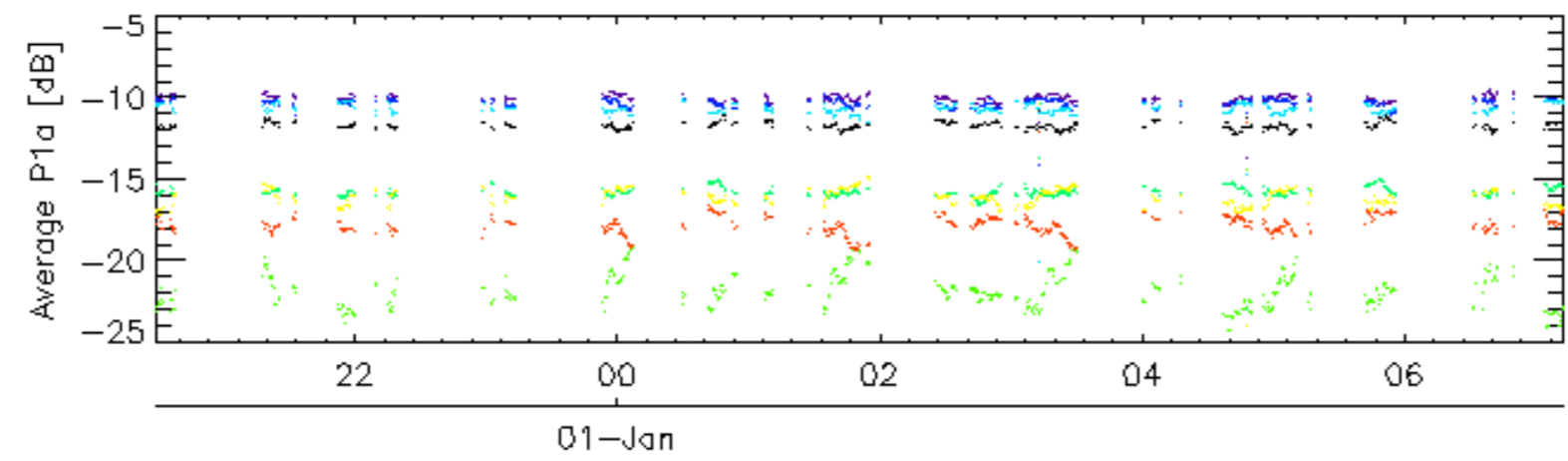
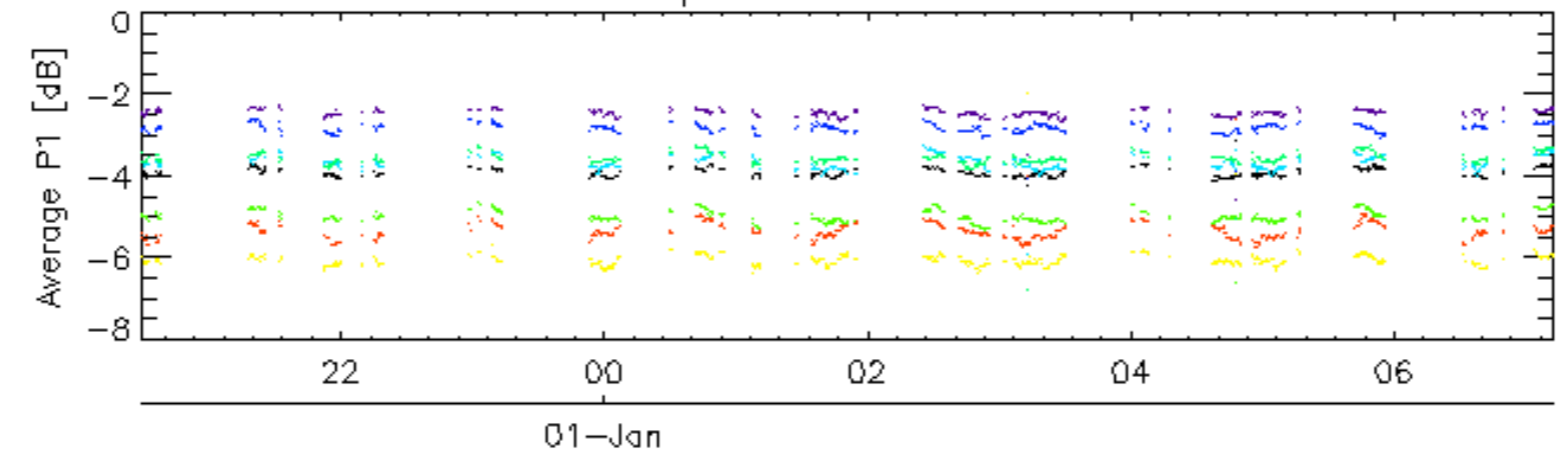
7.5 - Absolute Doppler for GM1

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

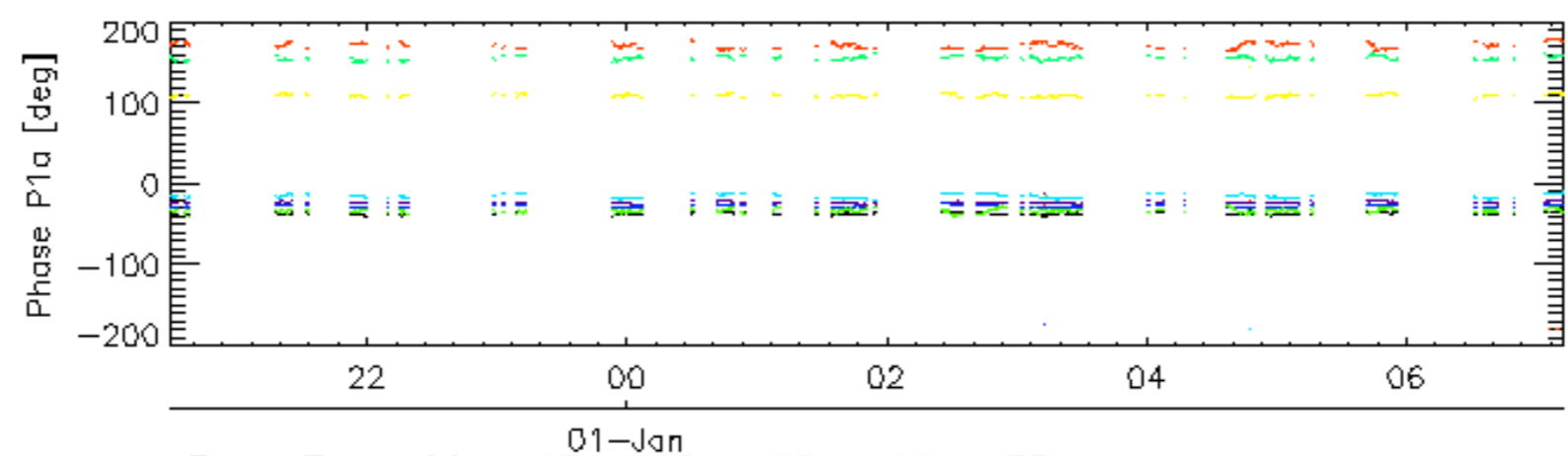
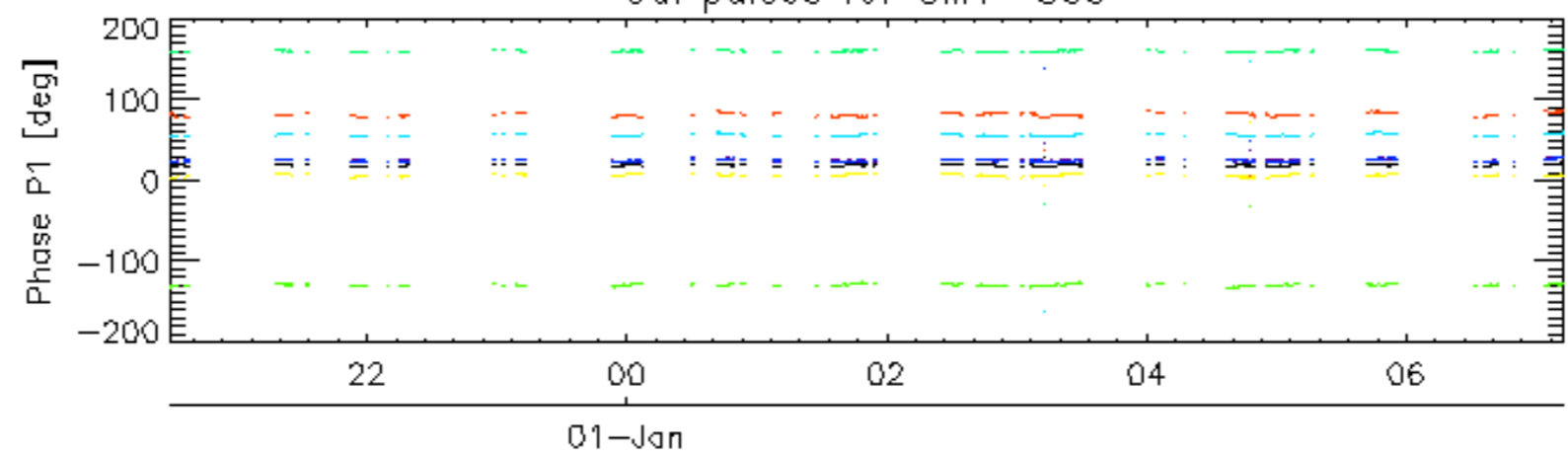
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

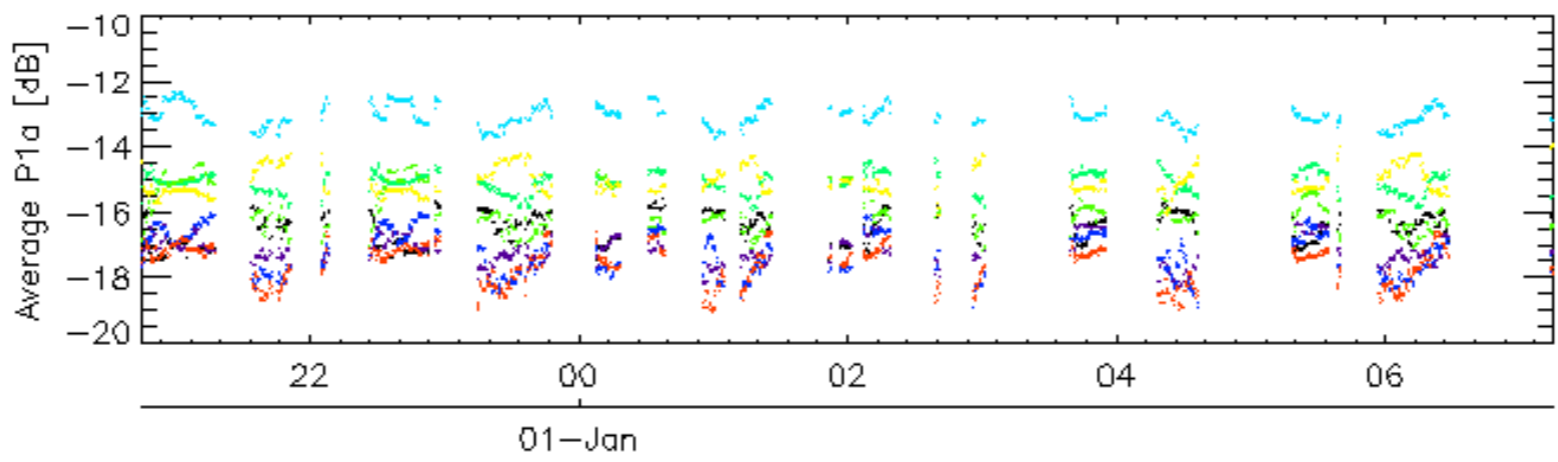
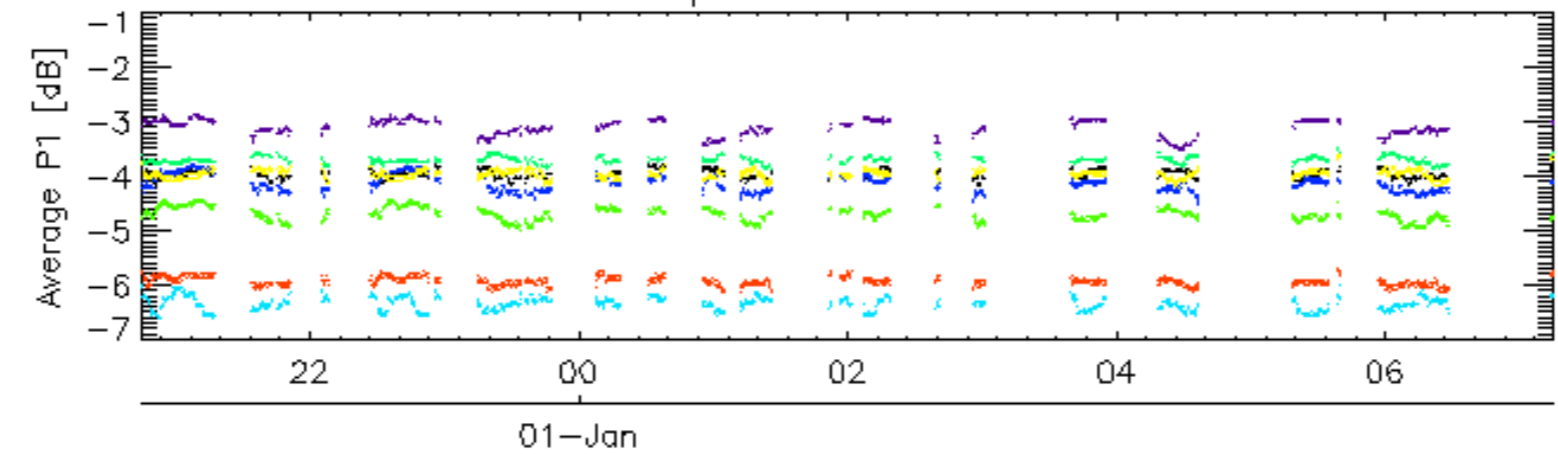


Cal pulses for GM1 SS3

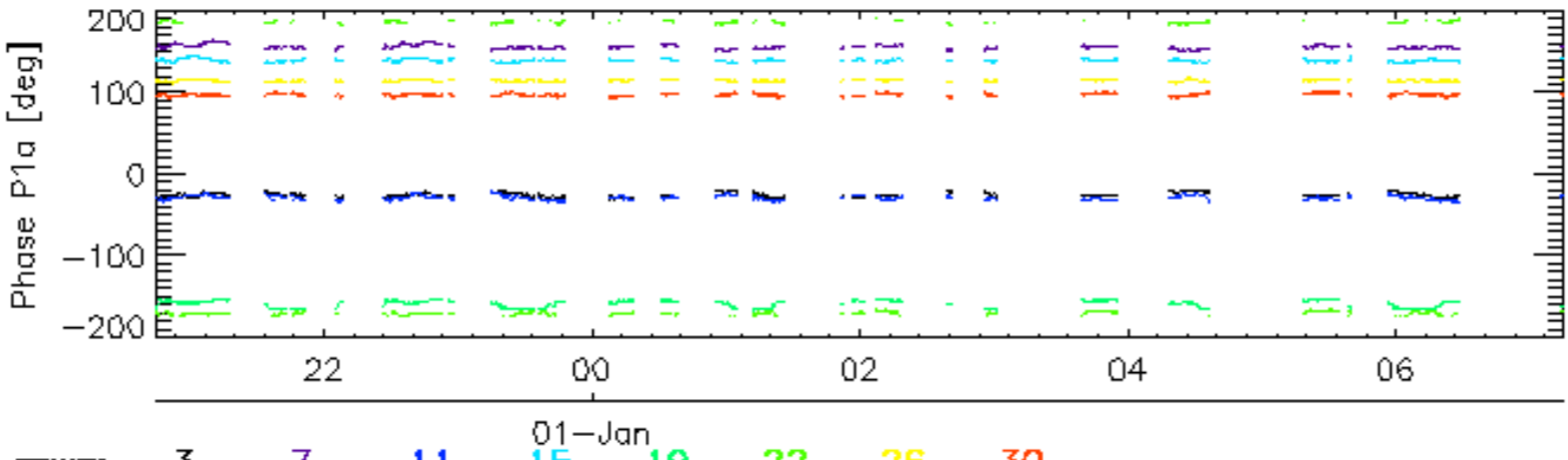
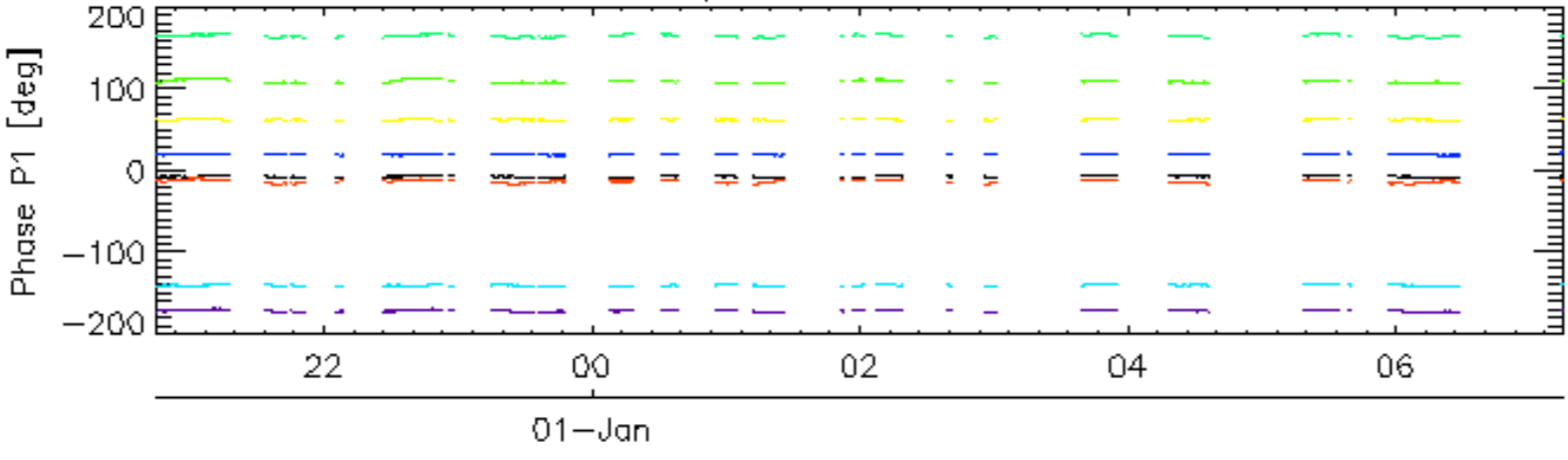


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

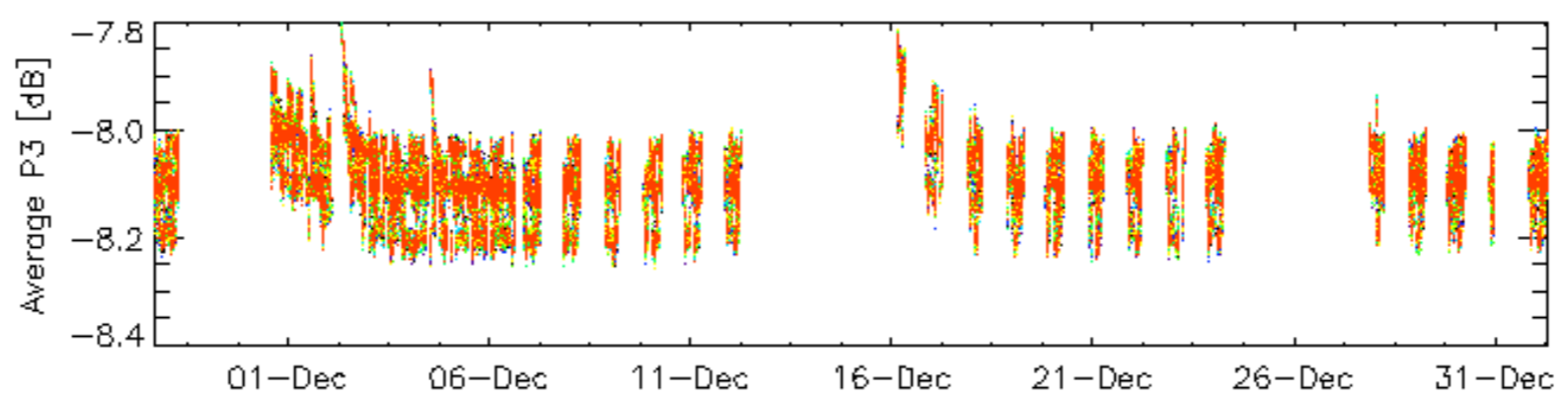
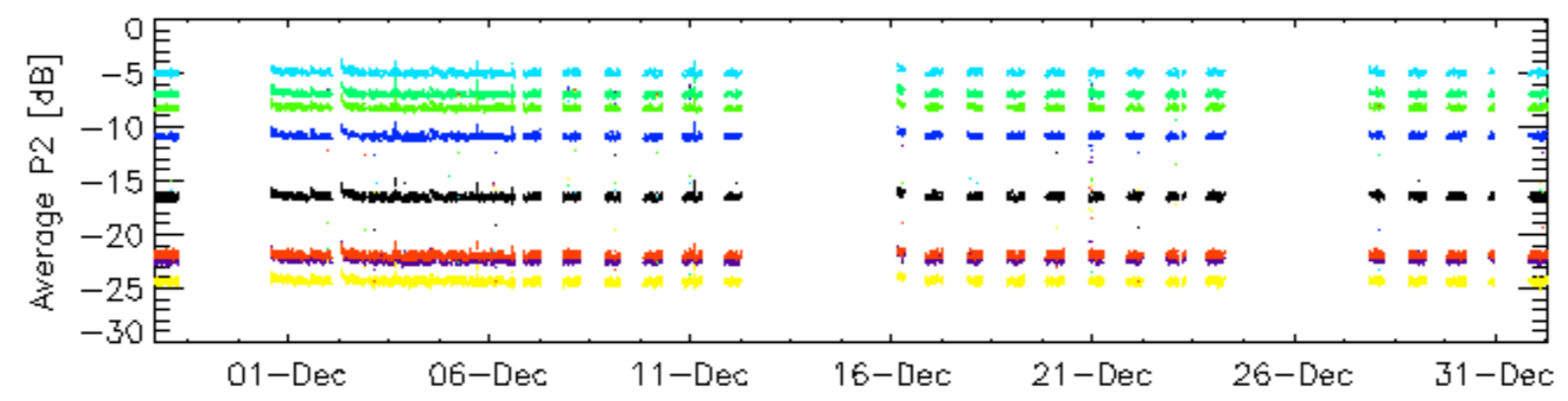
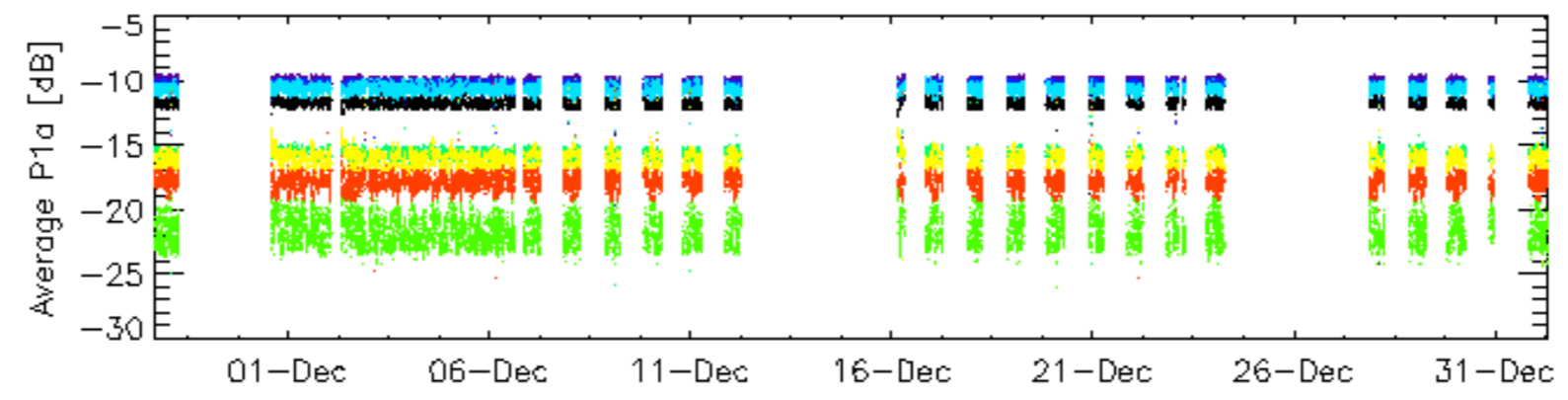
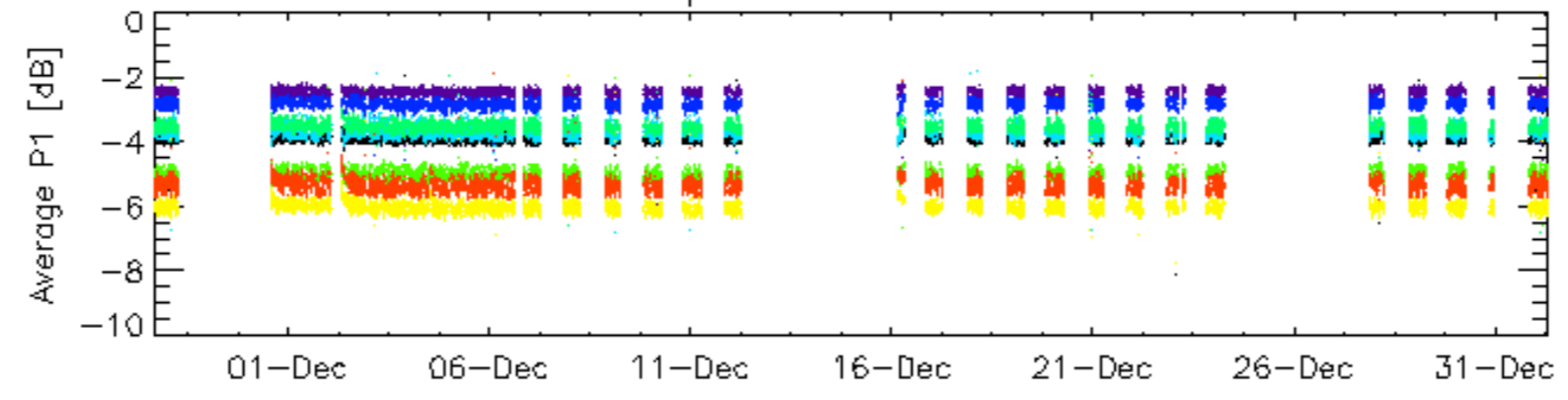


Cal pulses for WVS IS2



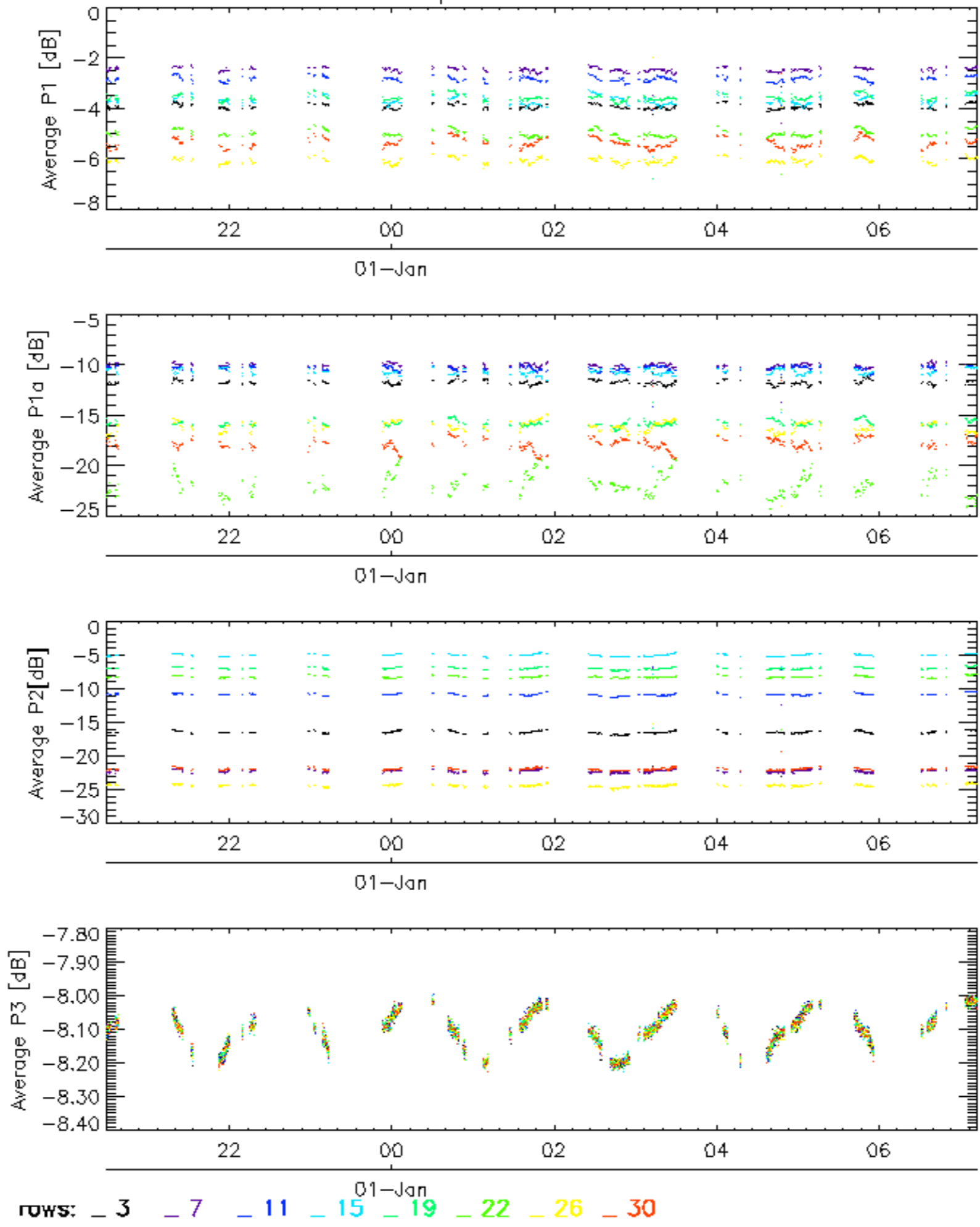
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

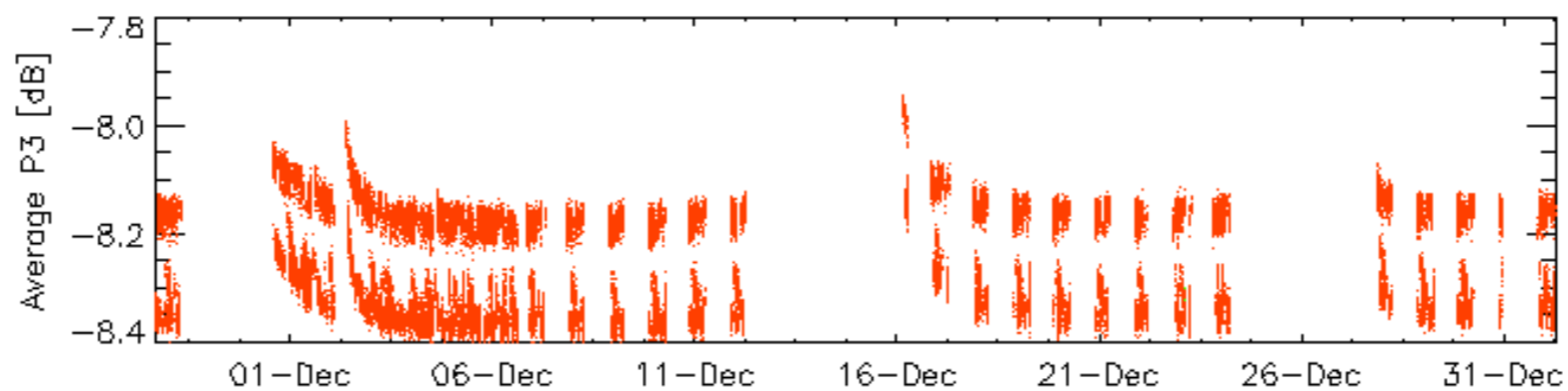
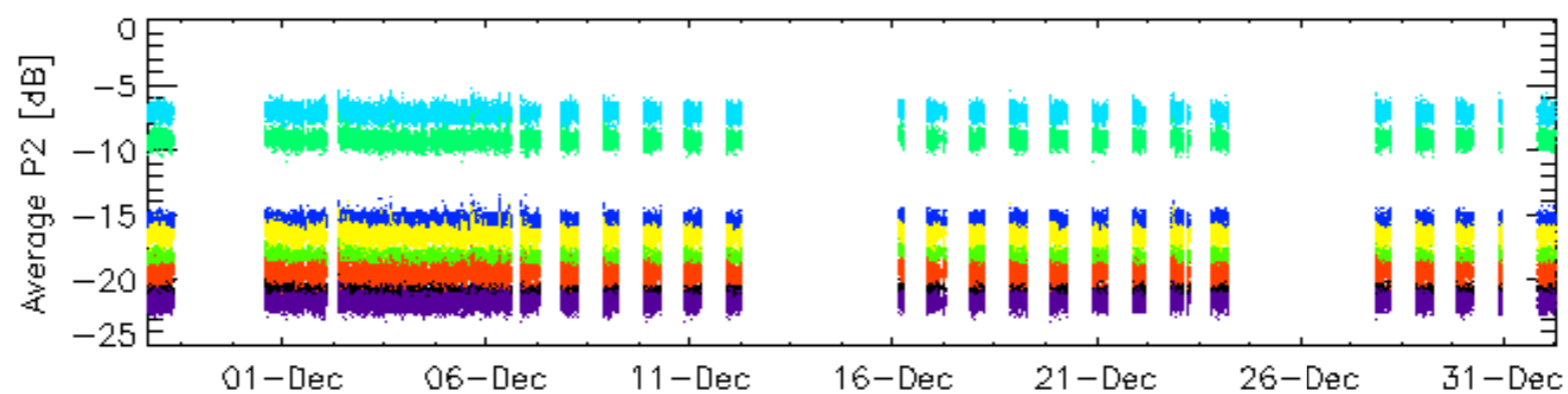
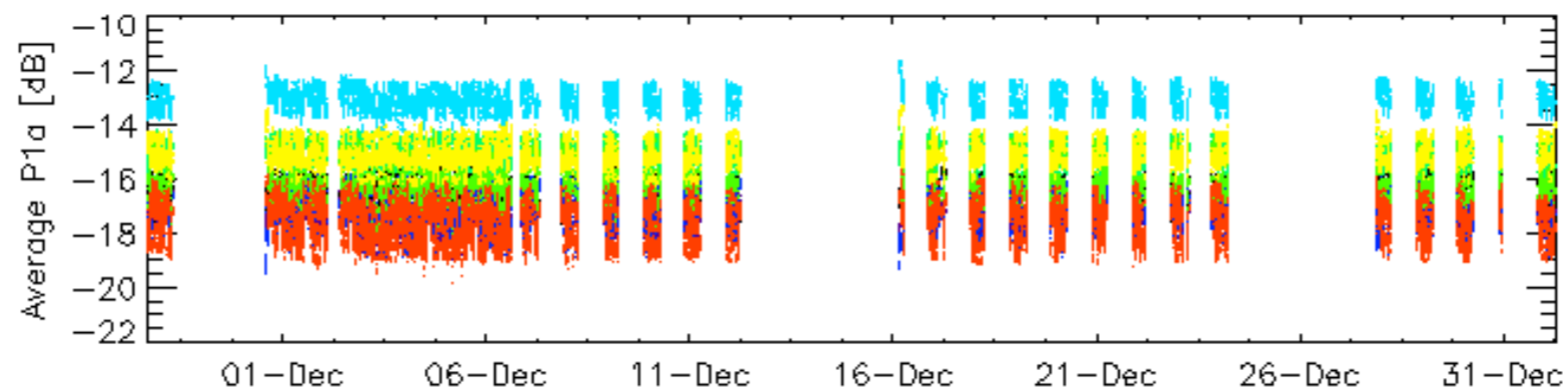
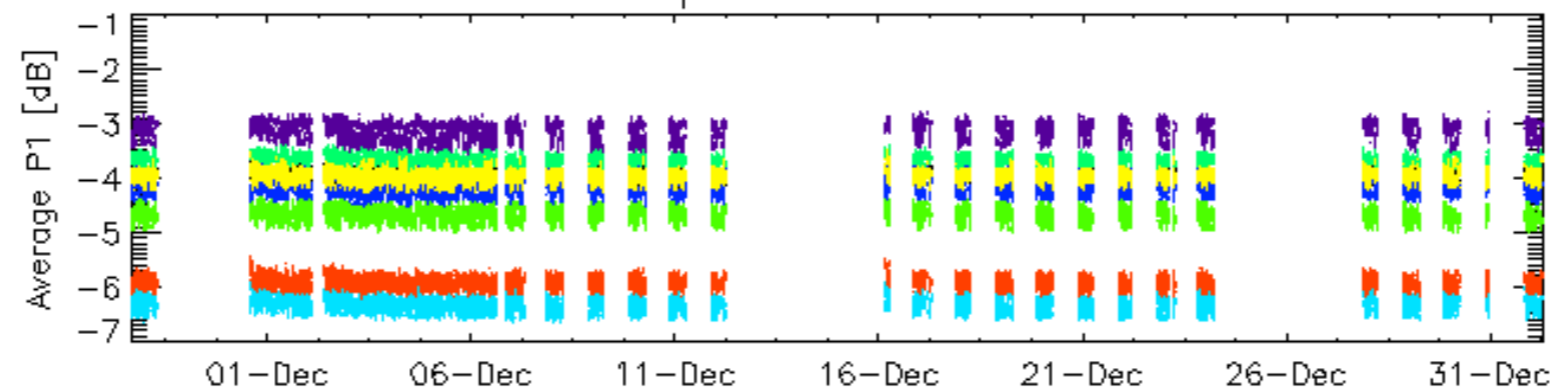


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

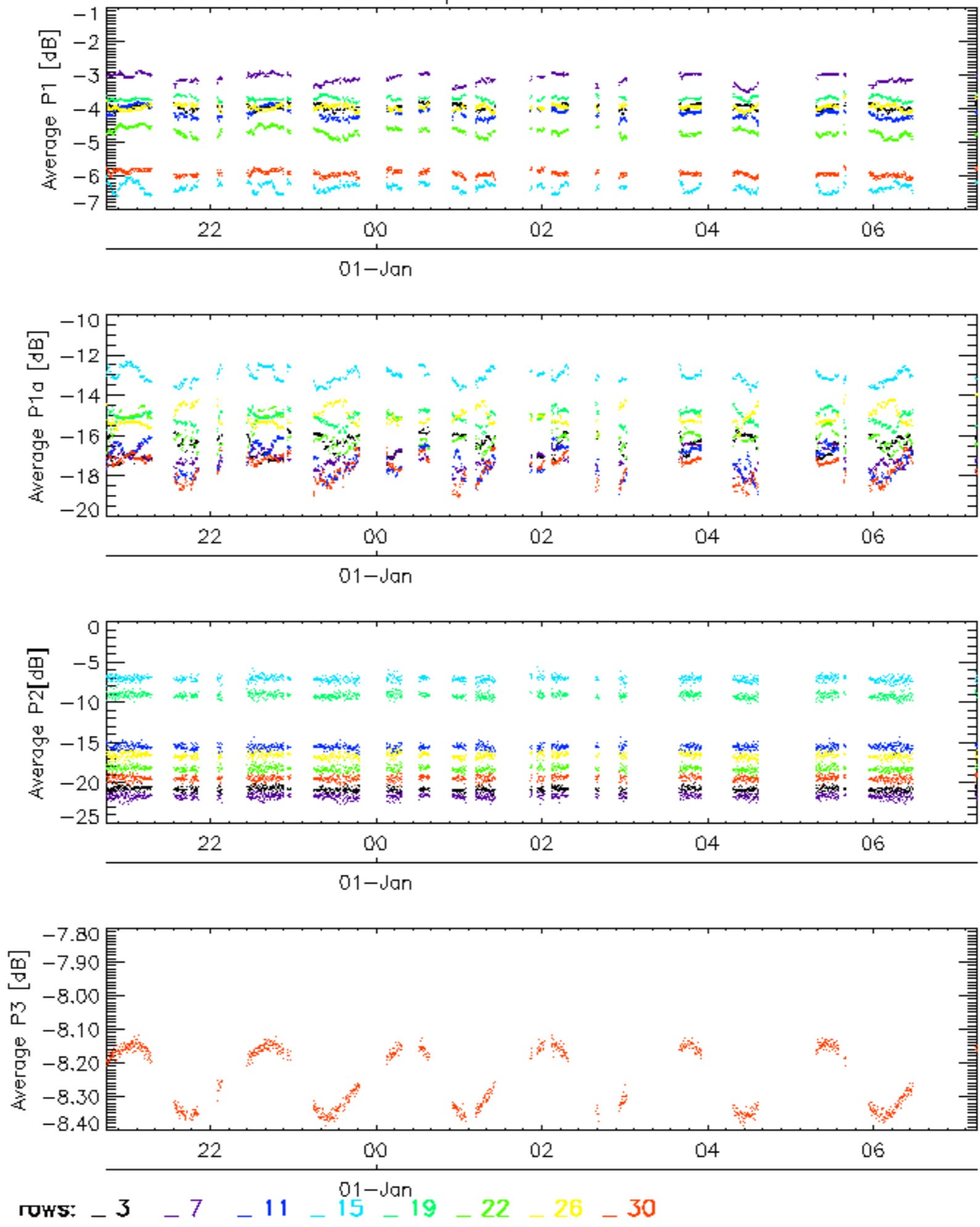


Cal pulses for WVS IS2

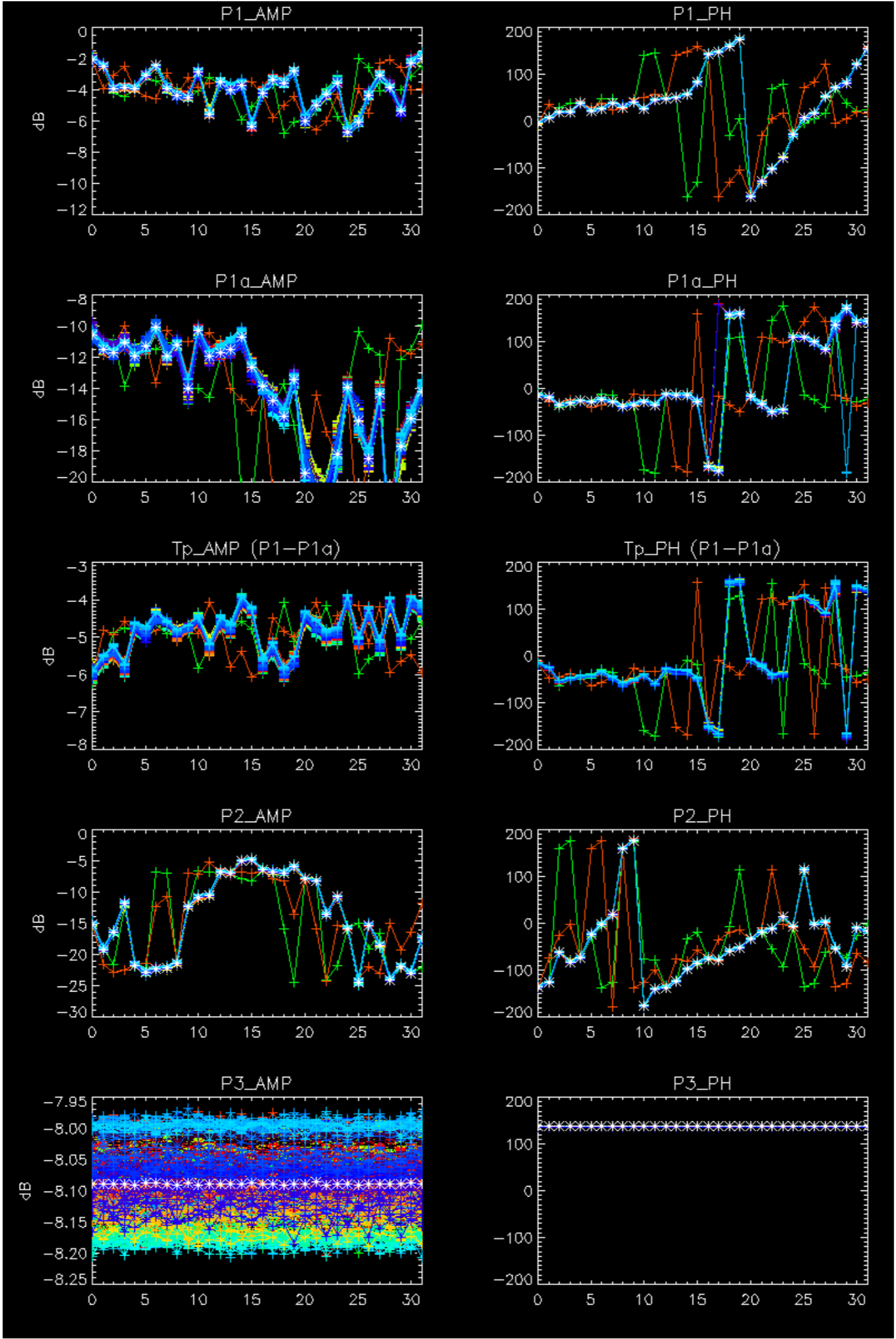


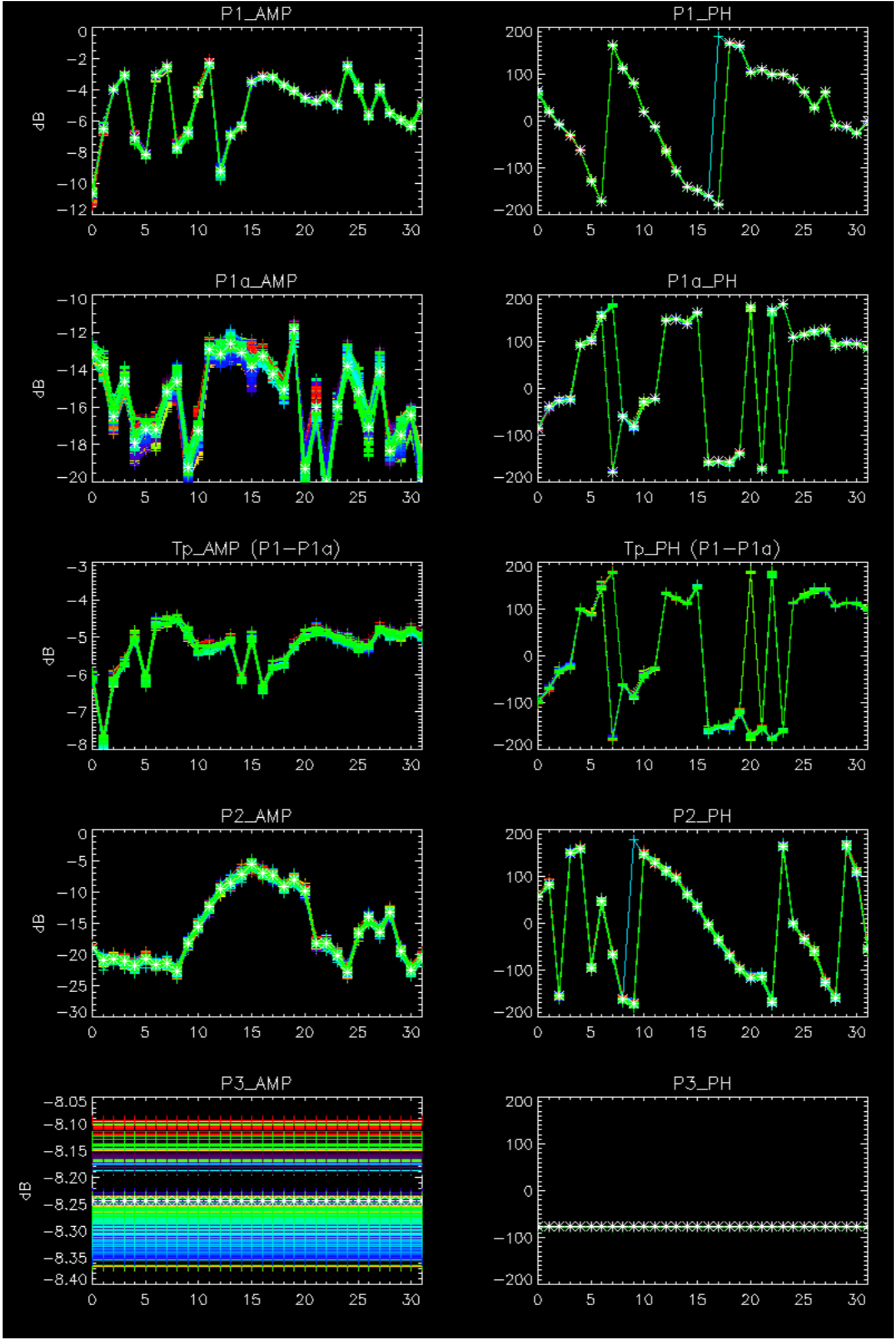
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



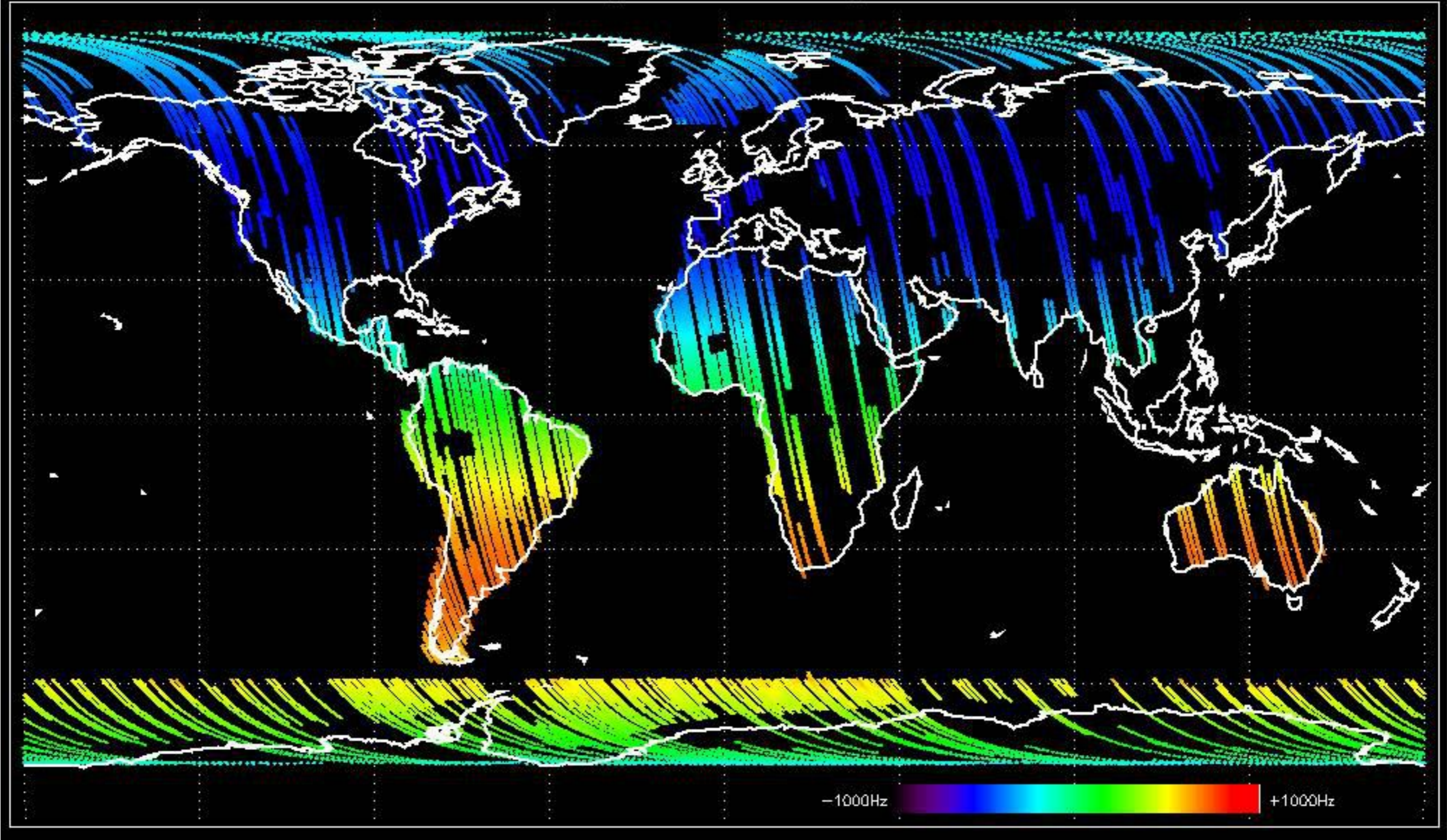
No anomalies observed.



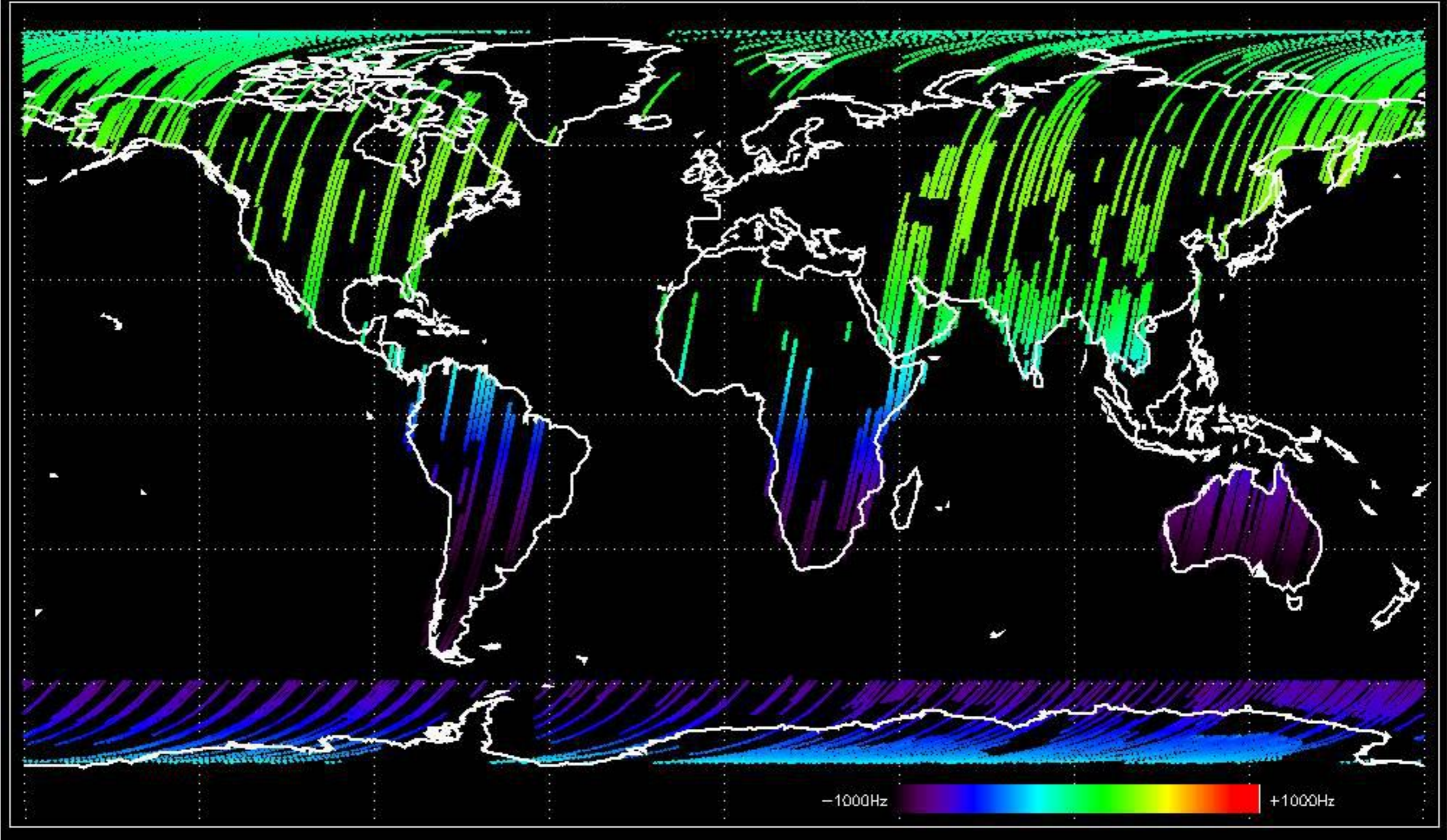


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

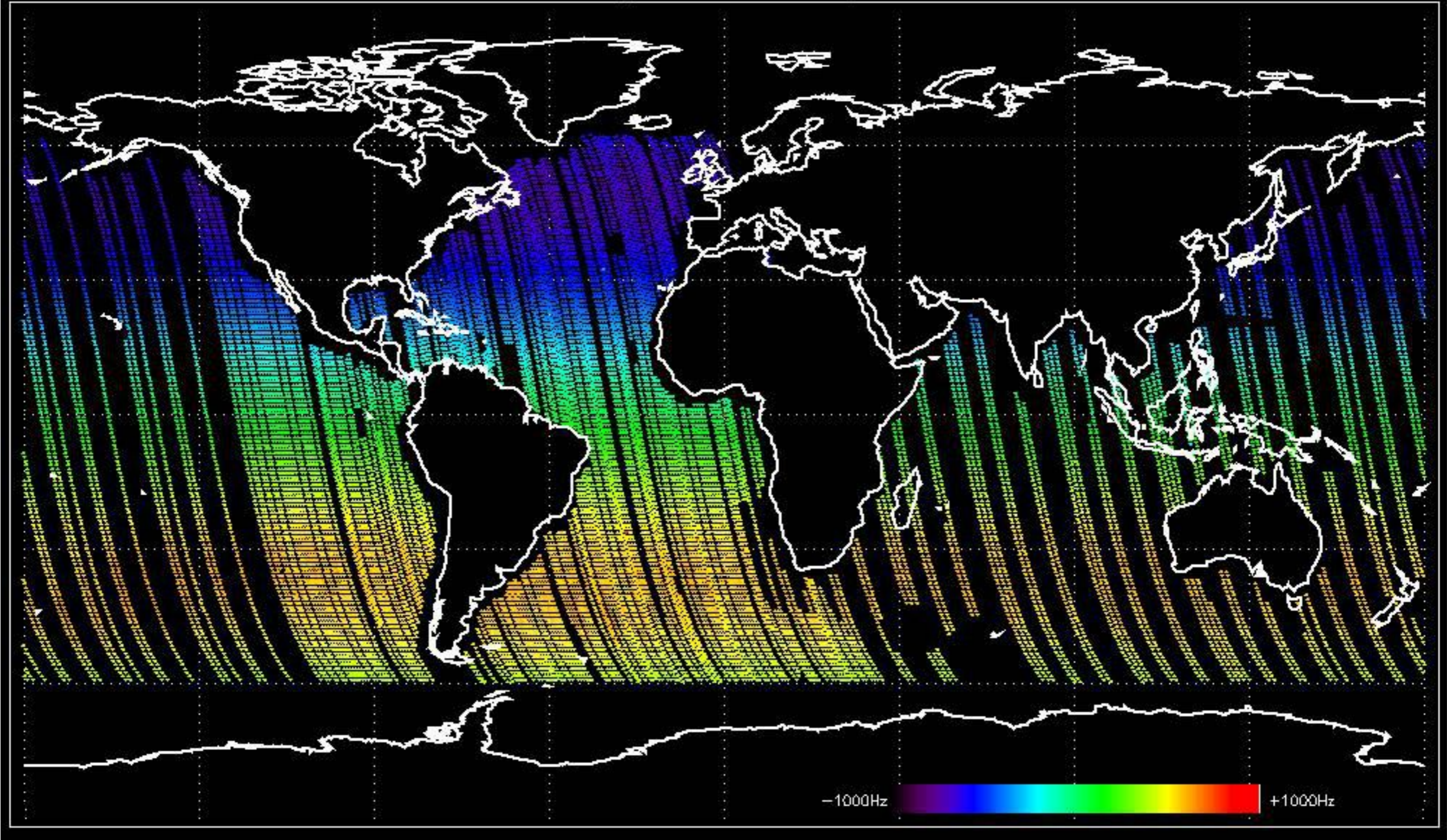
Doppler 'GM1' 'SS1' ascending



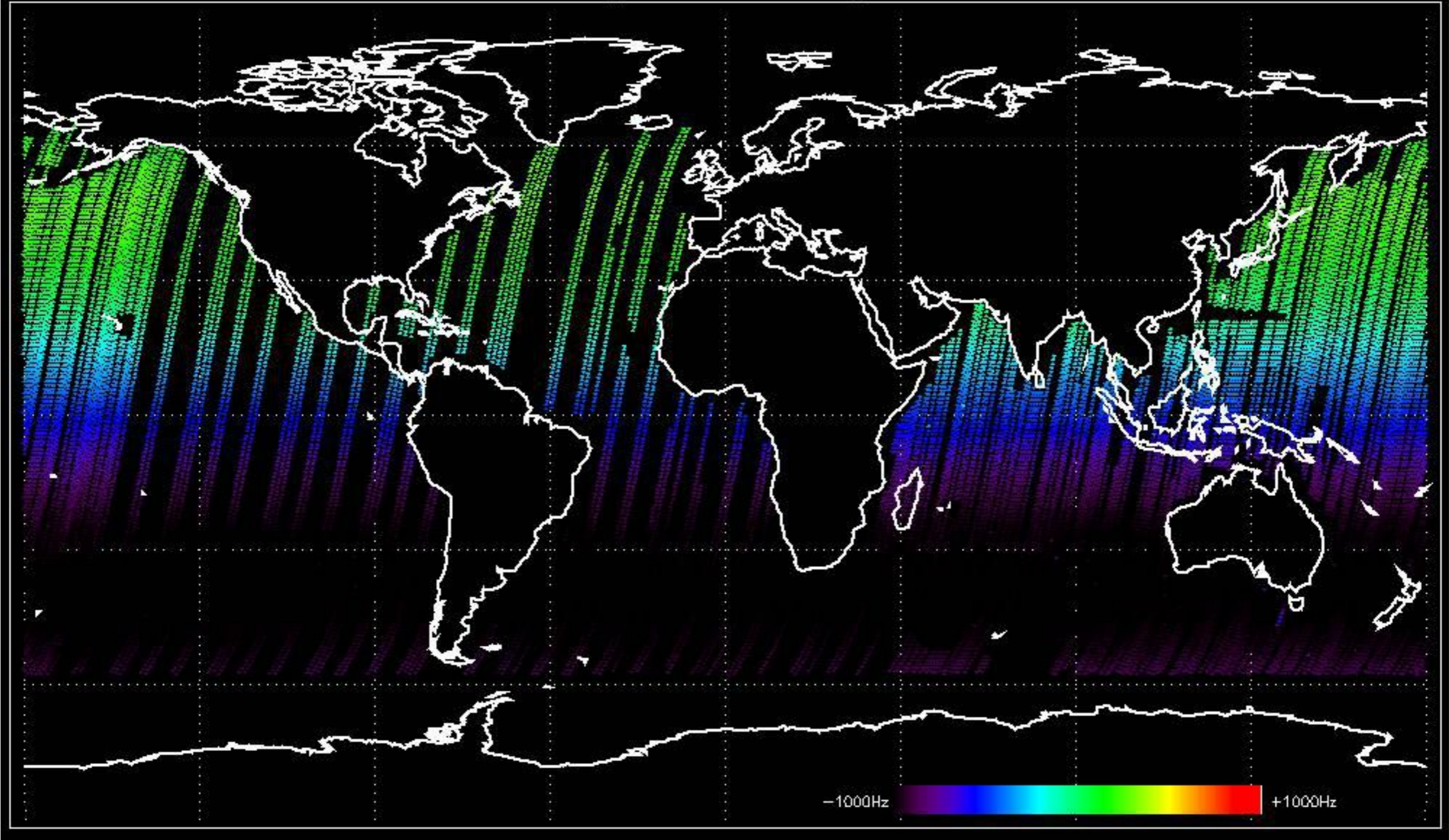
Doppler 'GM1' 'SS1' descending



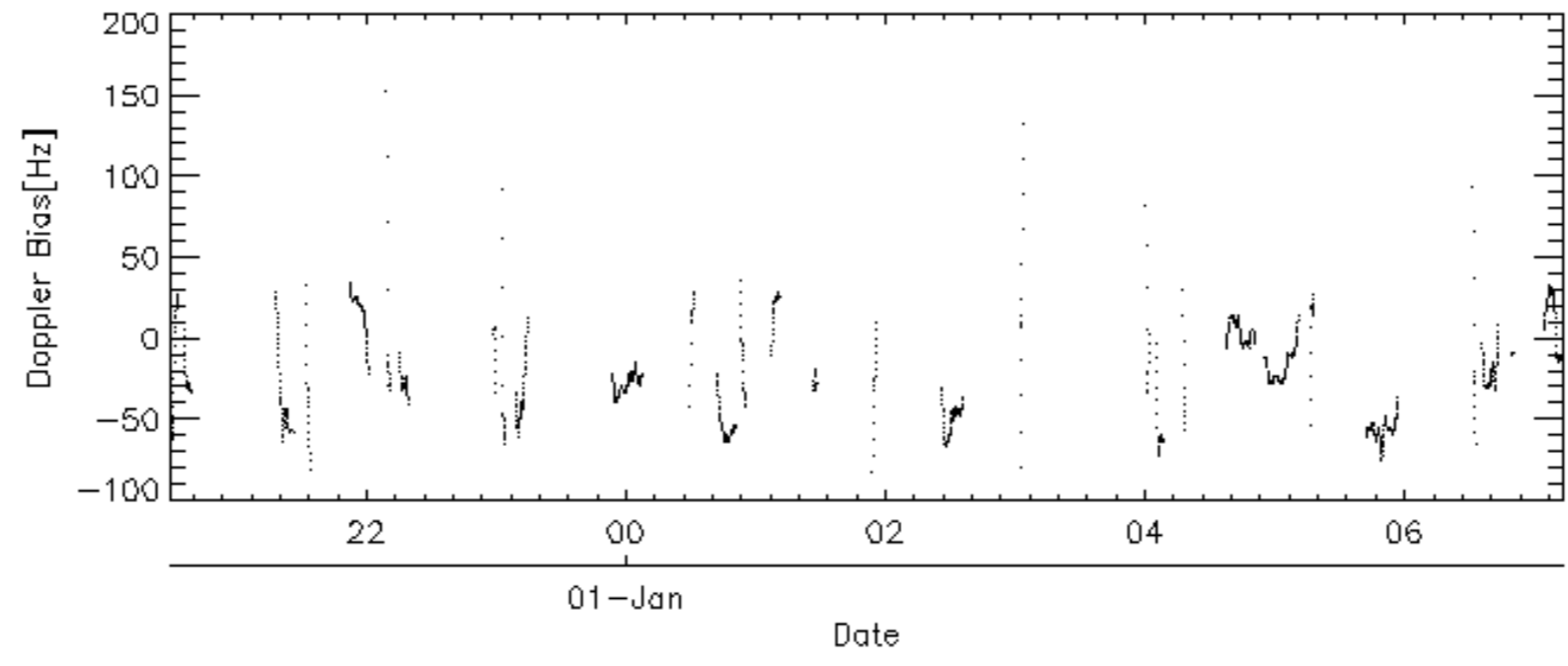
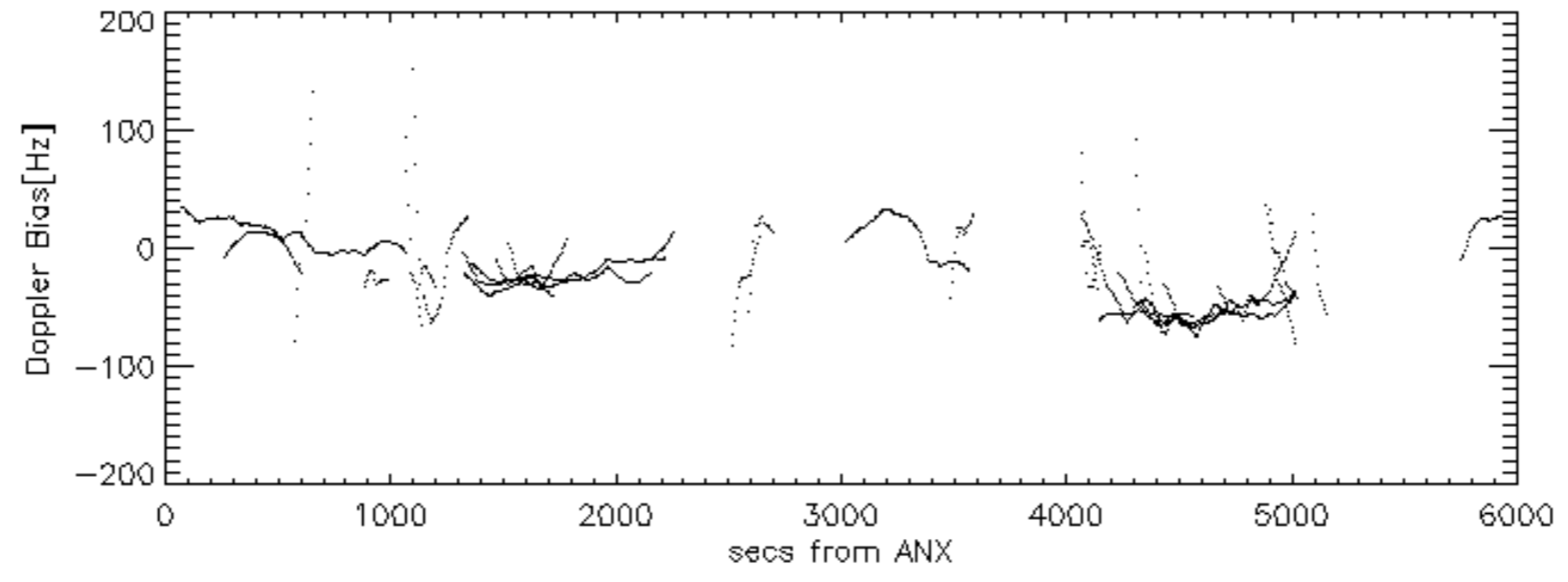
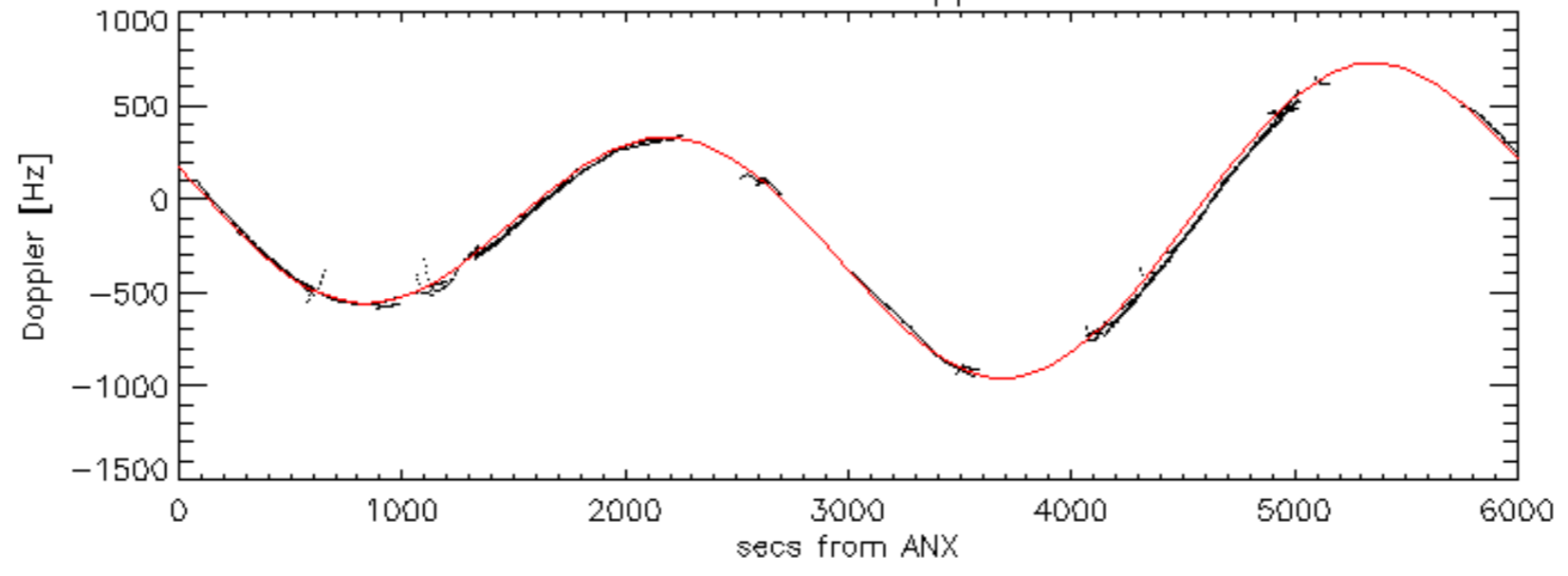
Doppler 'WVS' 'IS2' ascending

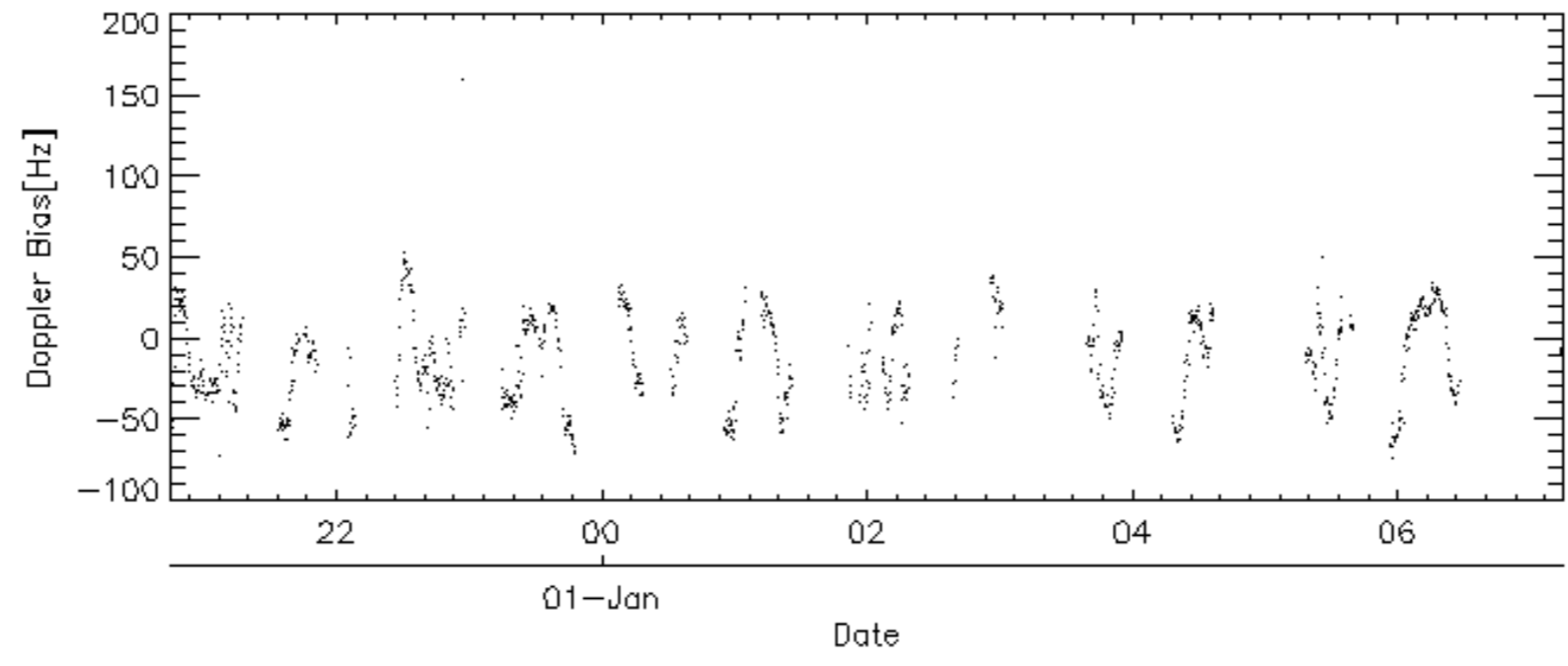
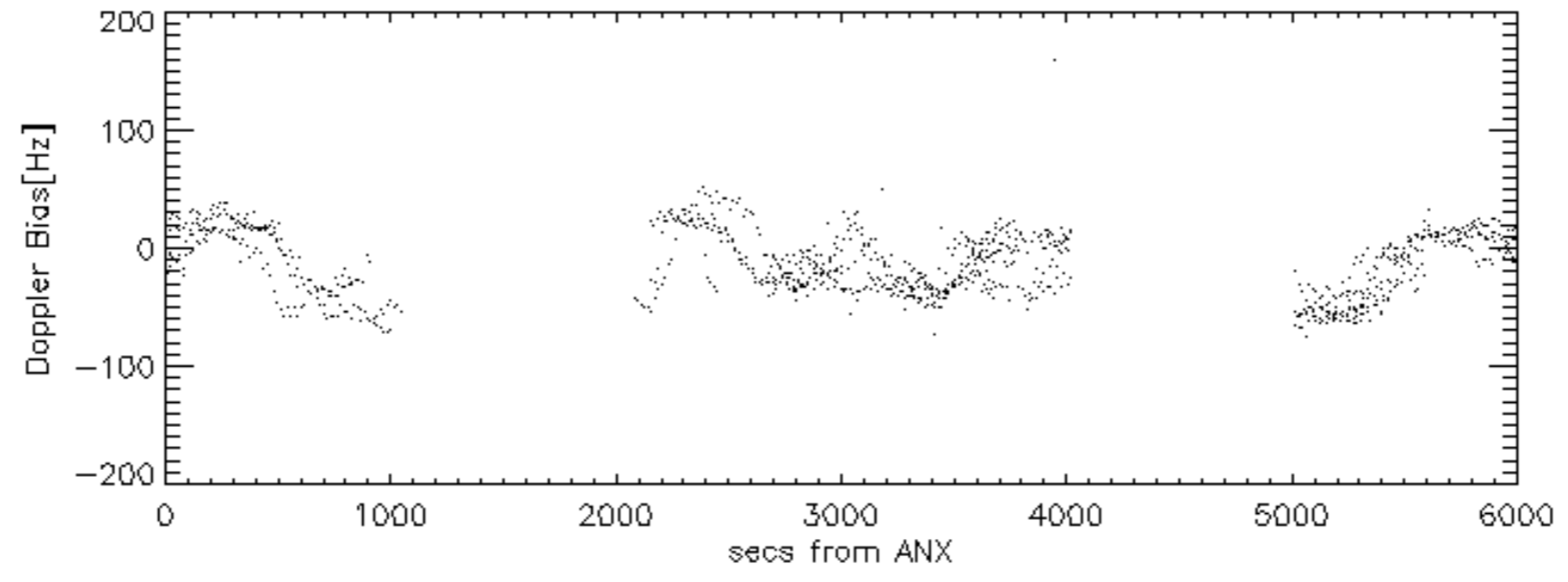
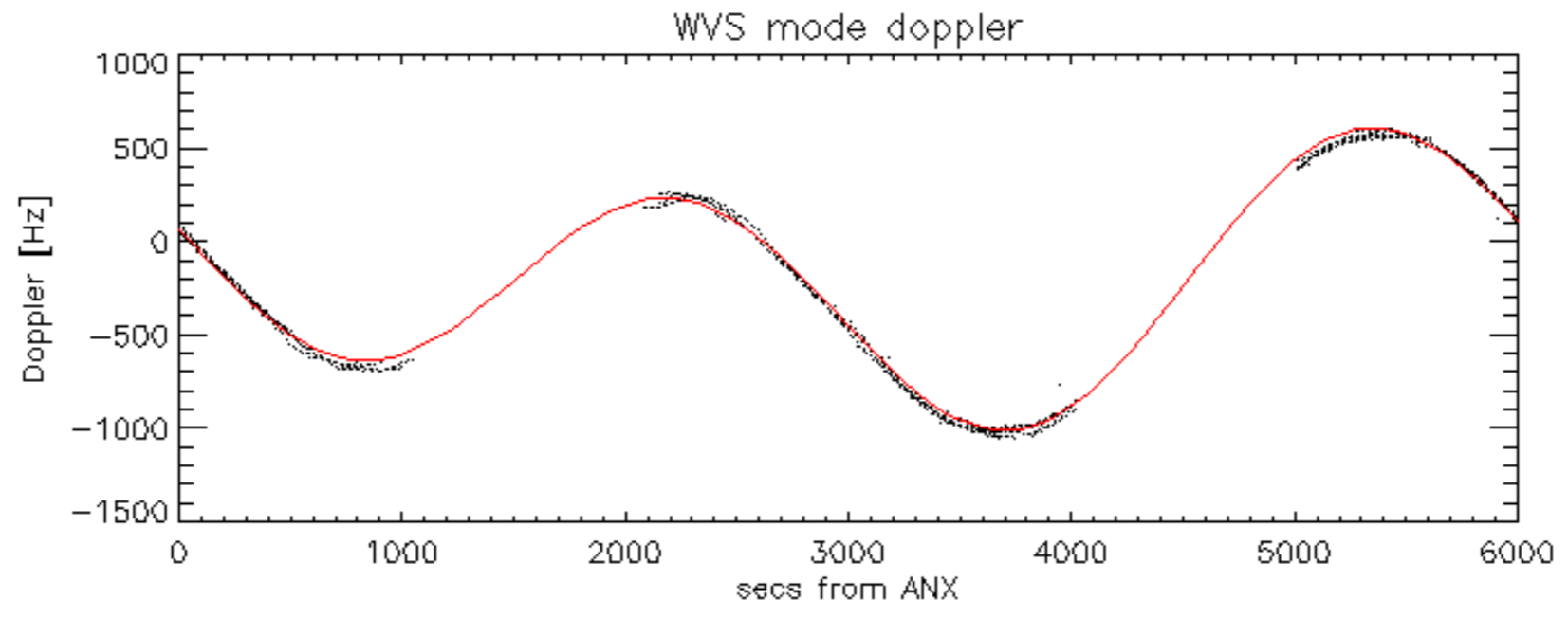


Doppler 'WVS' 'IS2' descending

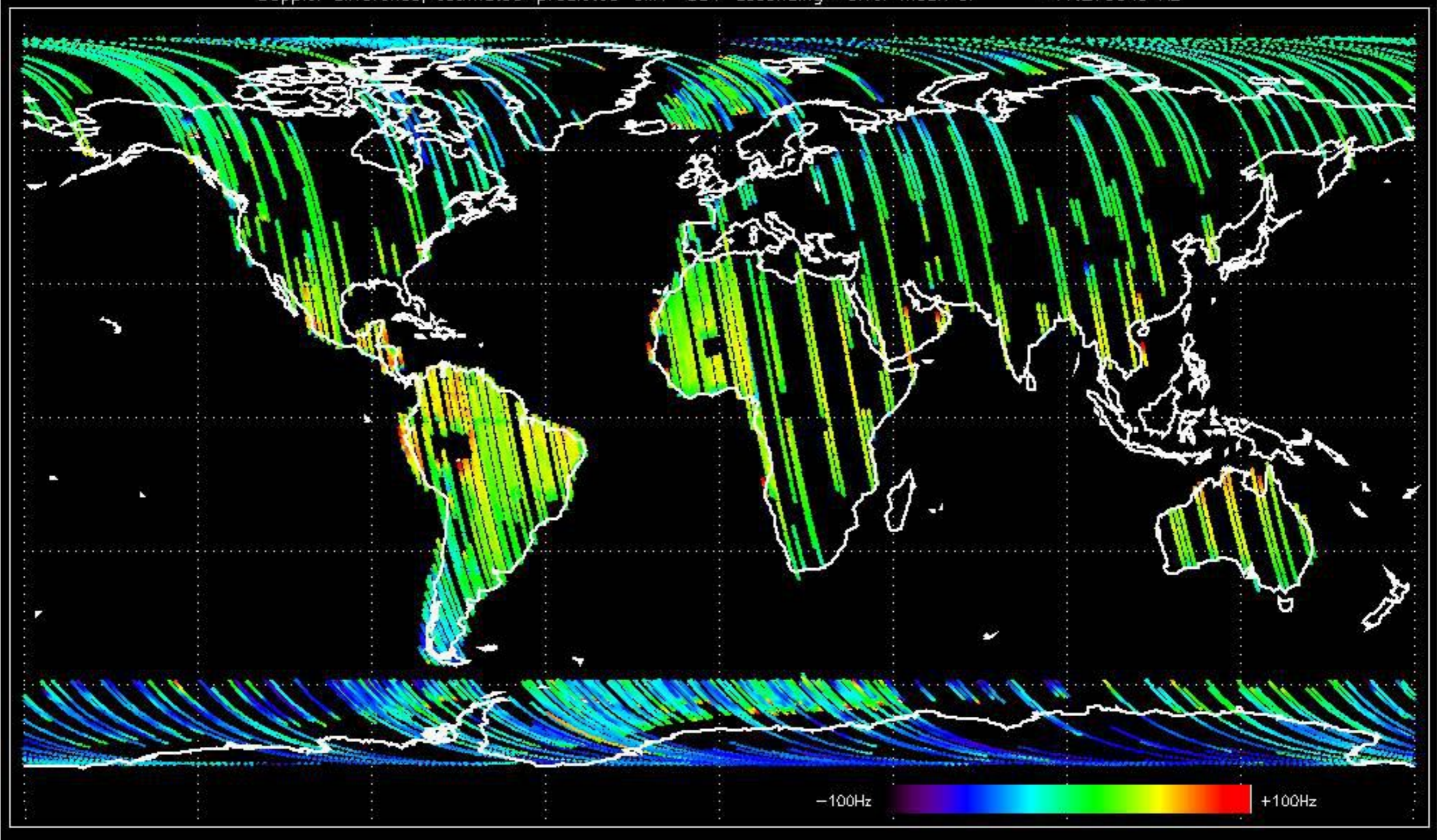


GM1 mode doppler

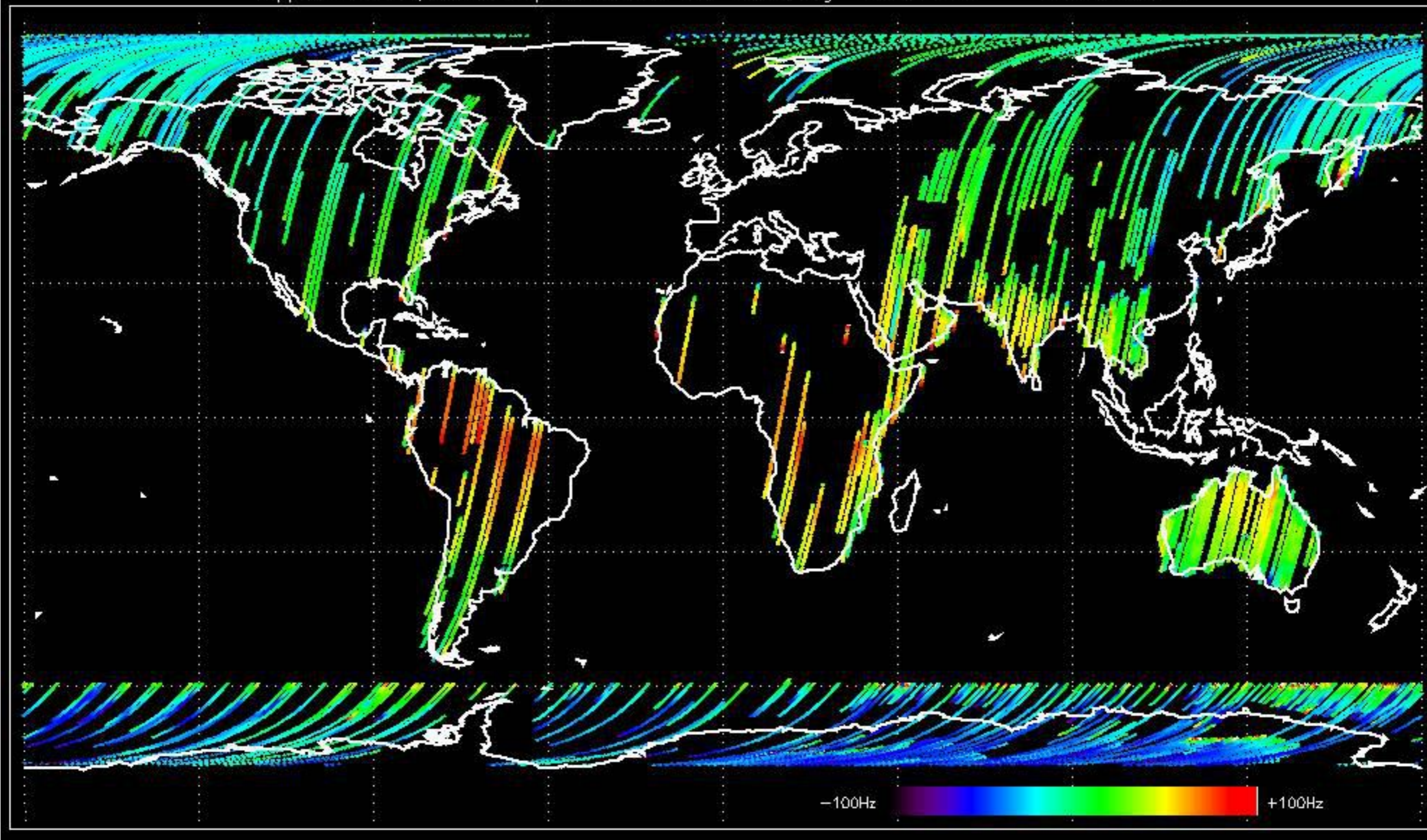




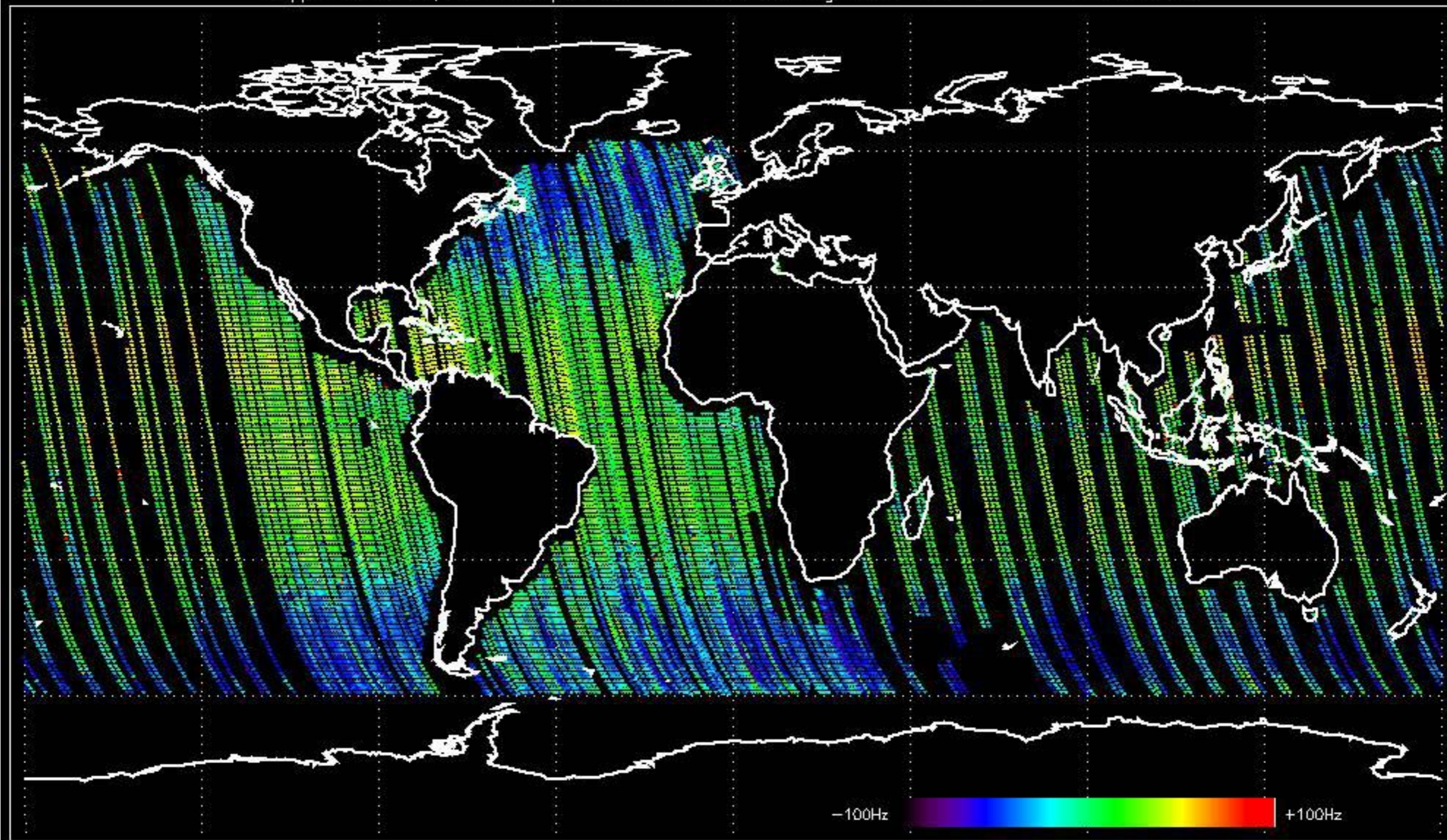
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.273549 Hz



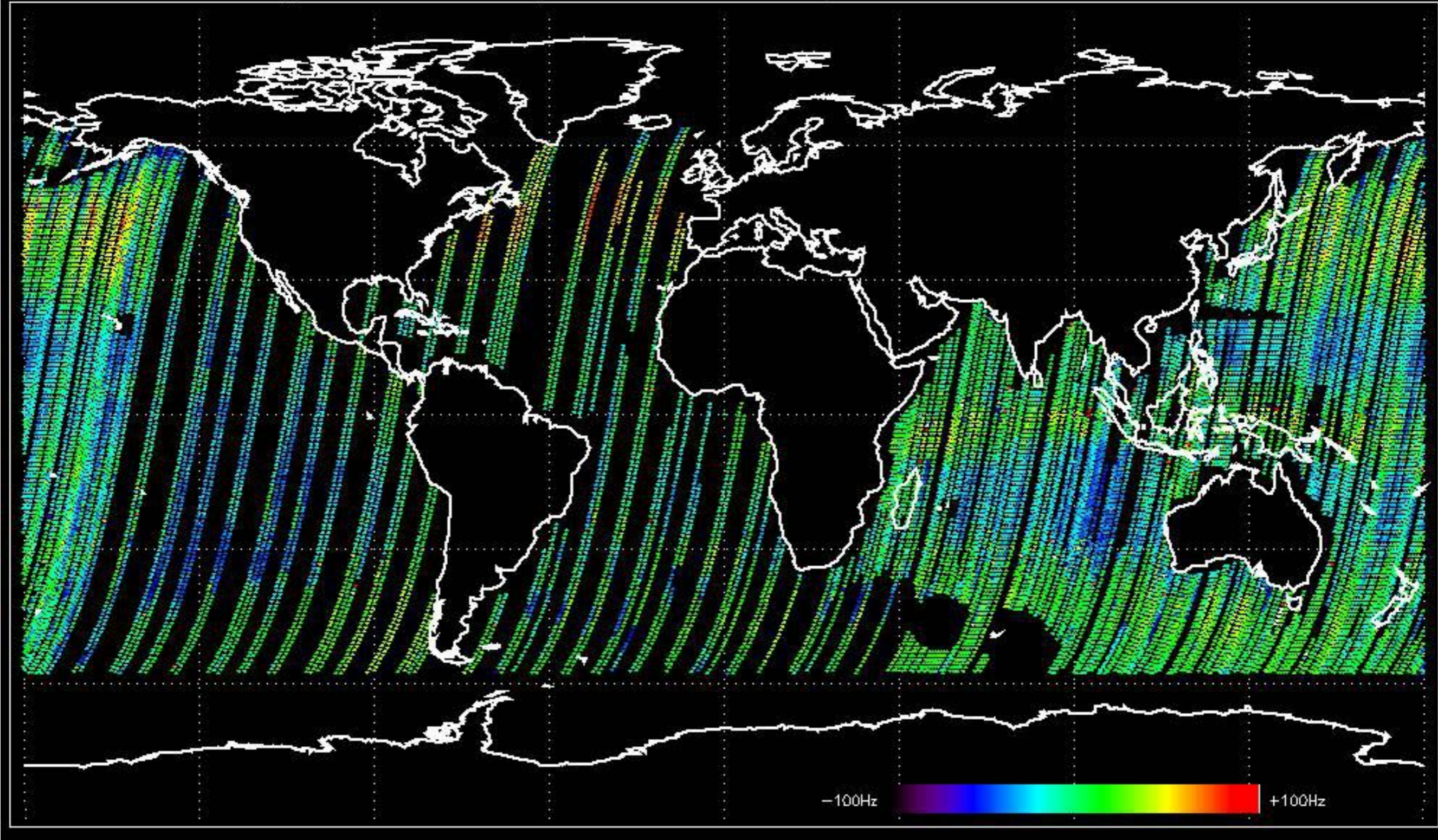
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.461644 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -13.285614 Hz

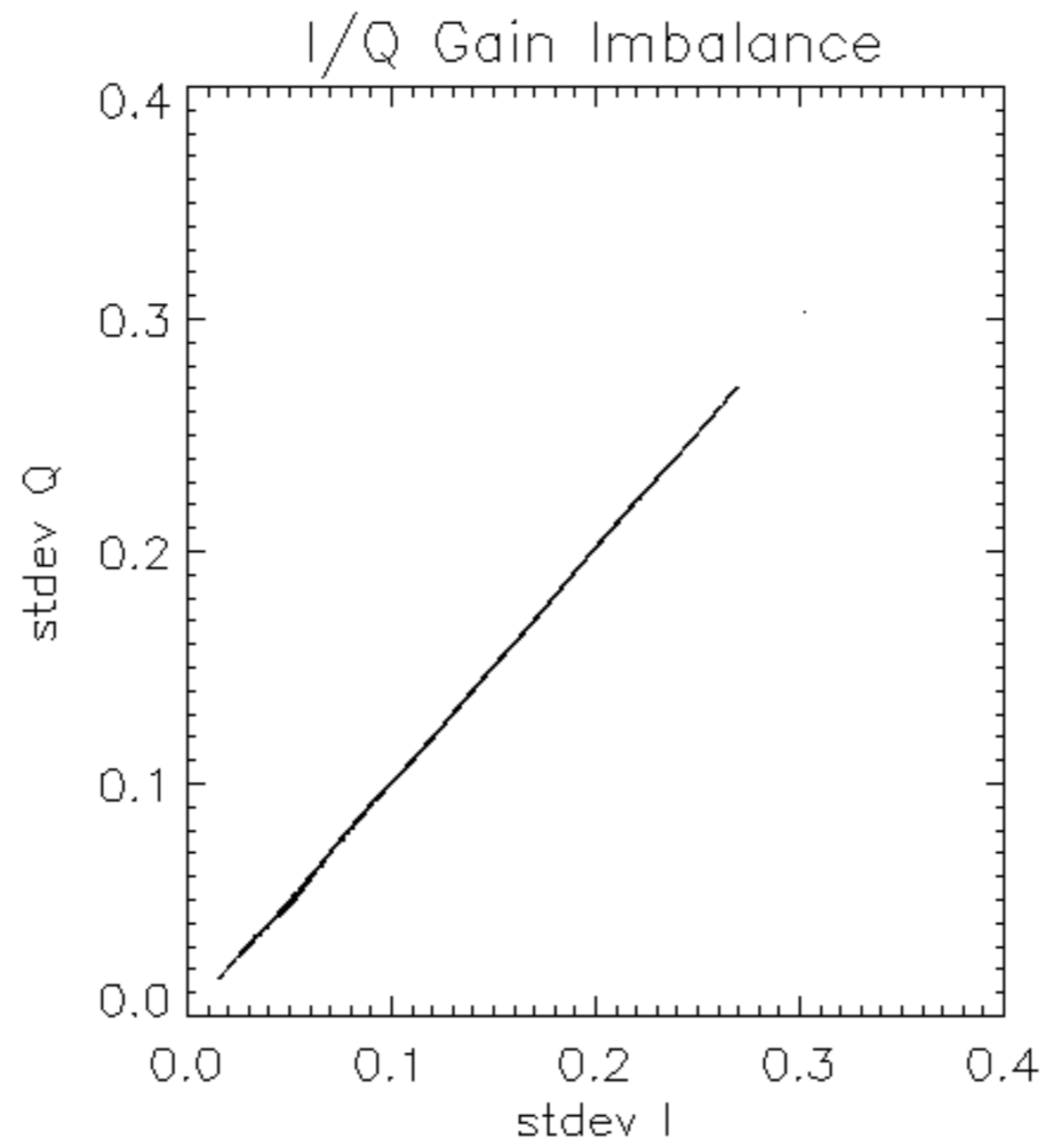


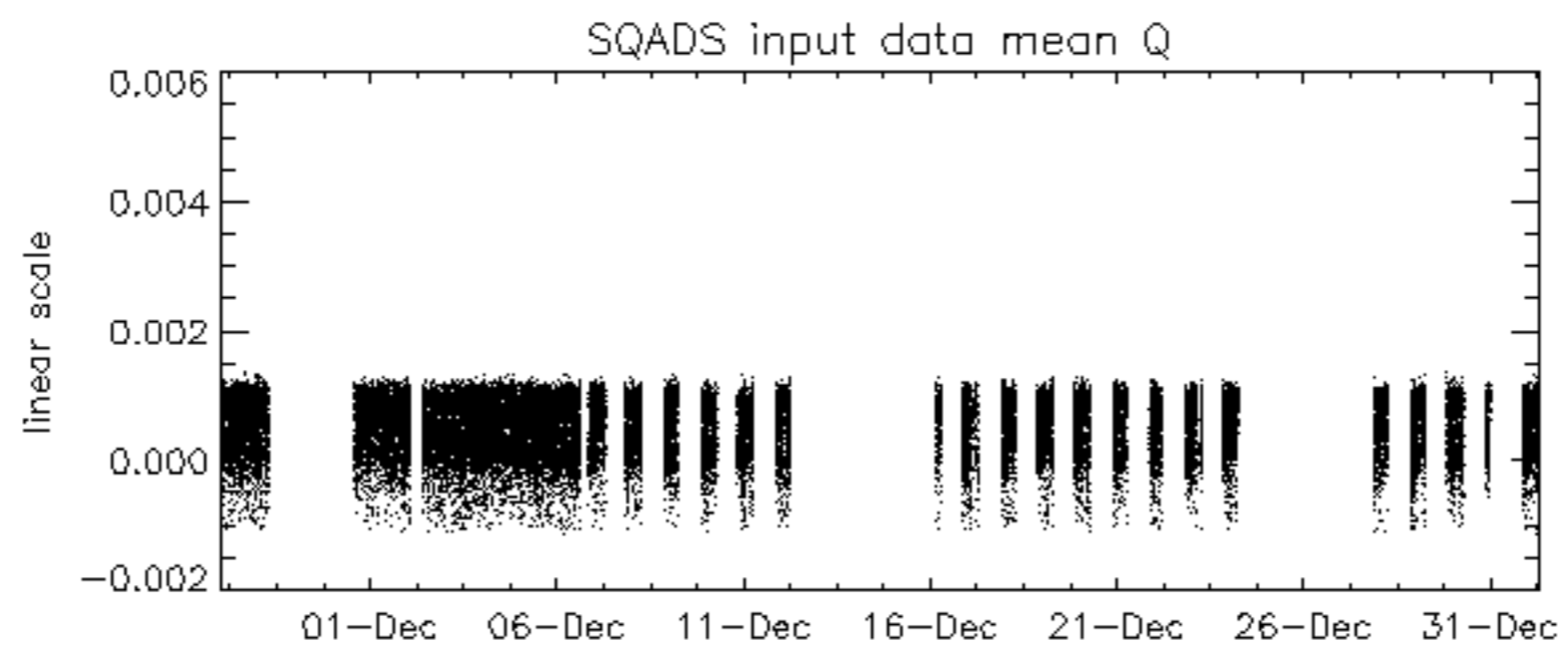
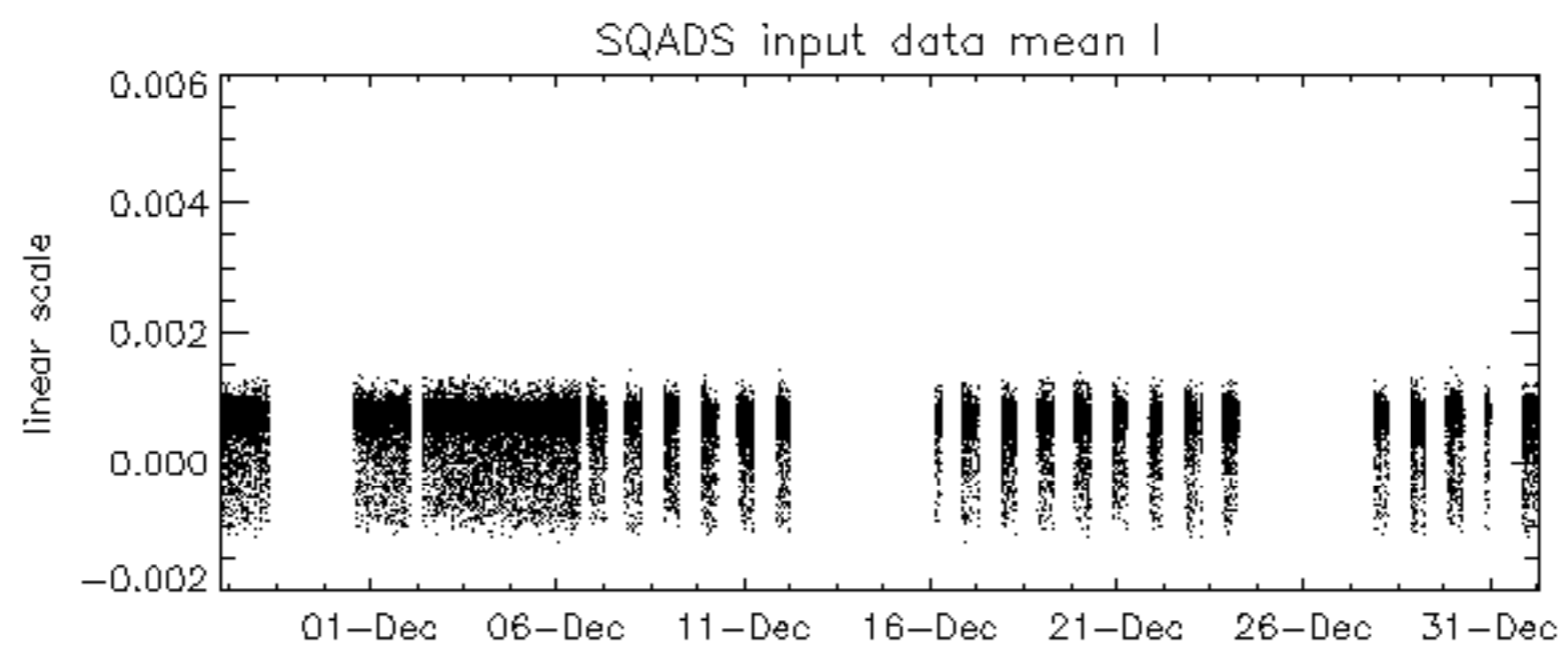
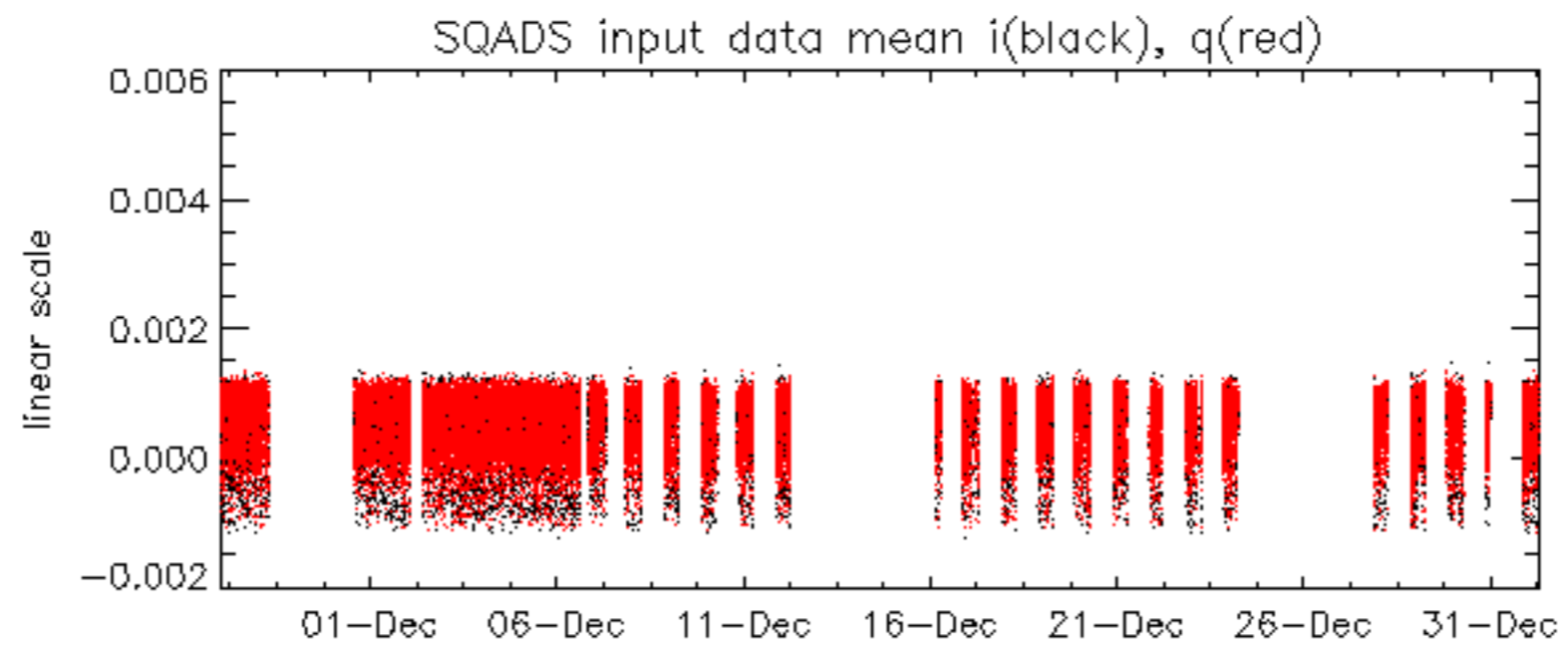
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.4445732 Hz

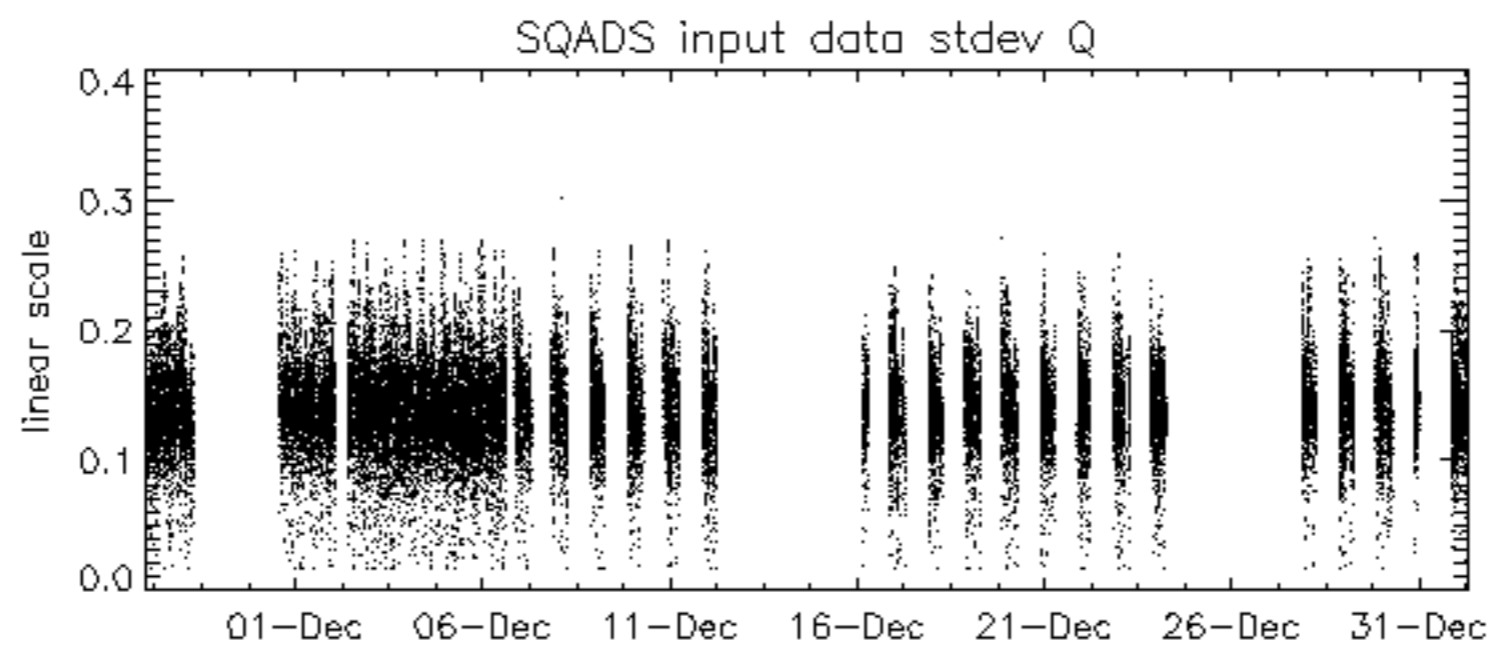
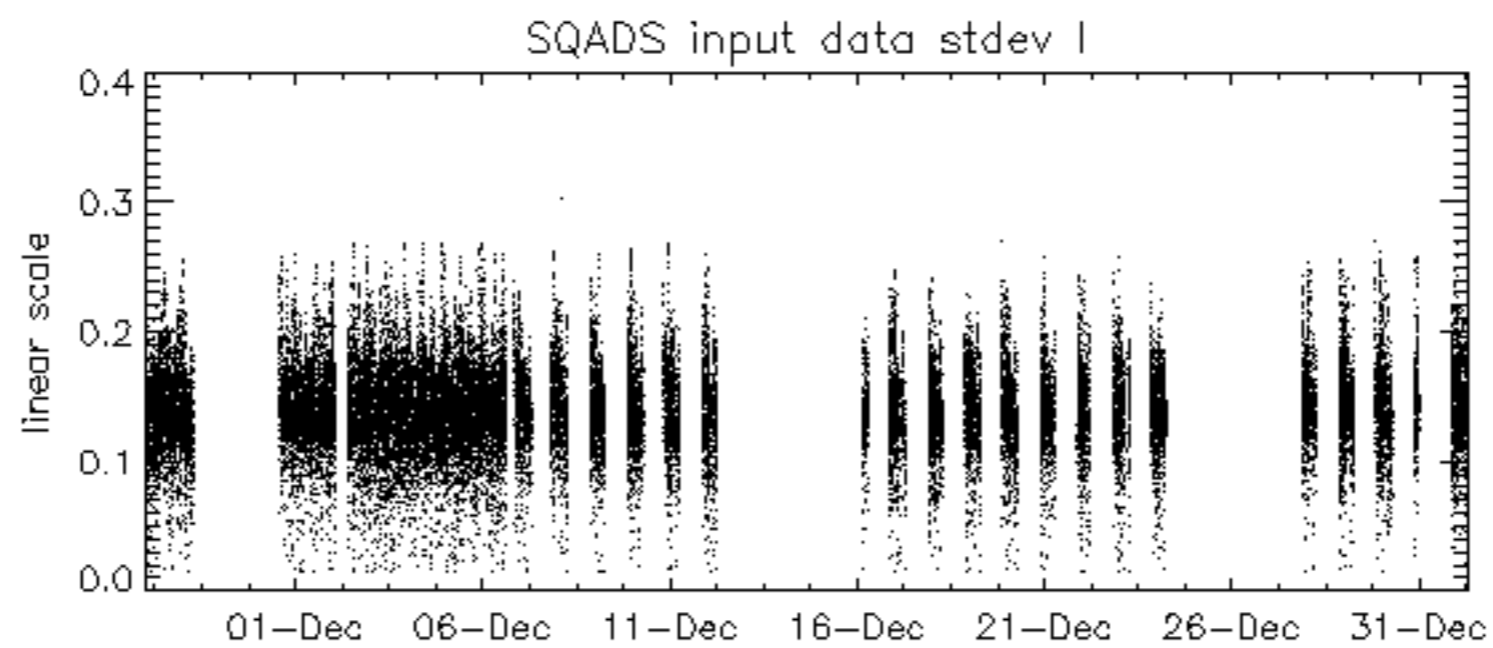
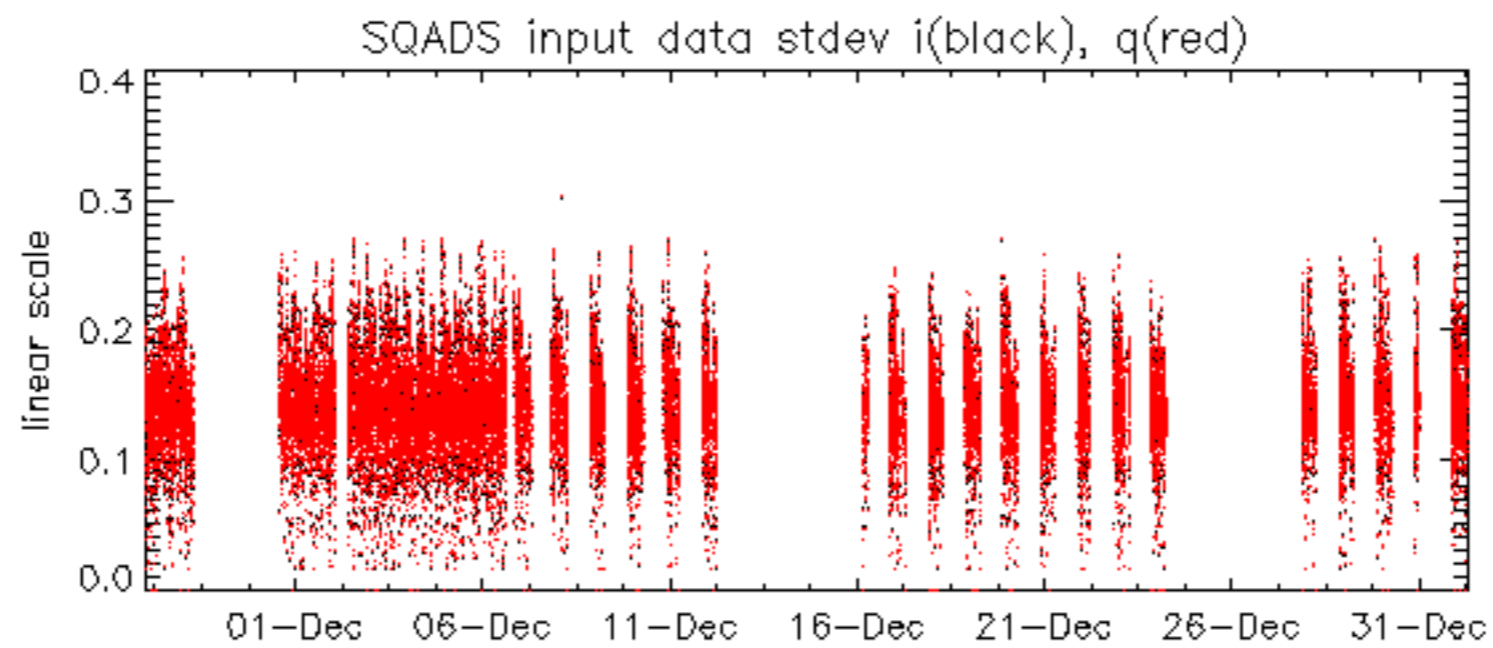


No anomalies observed on available MS products:

No anomalies observed.



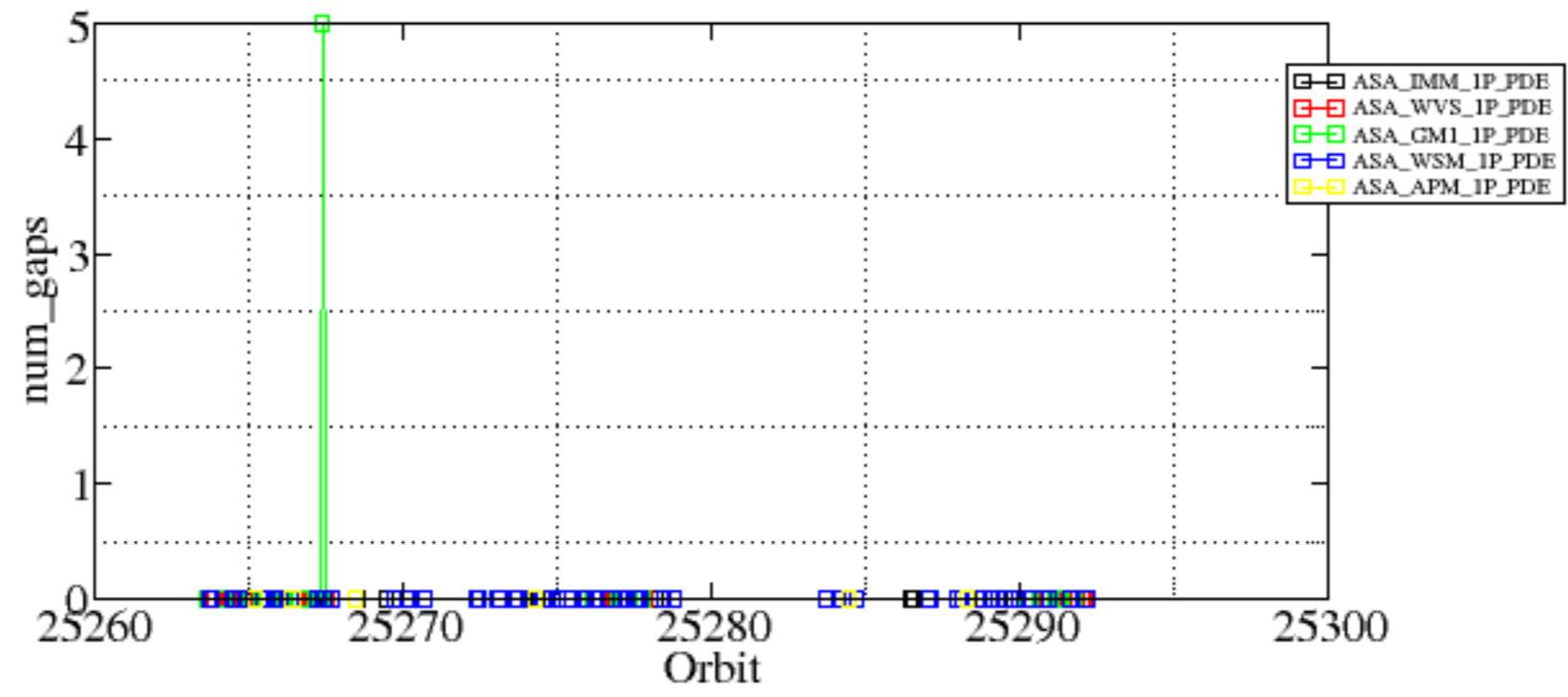


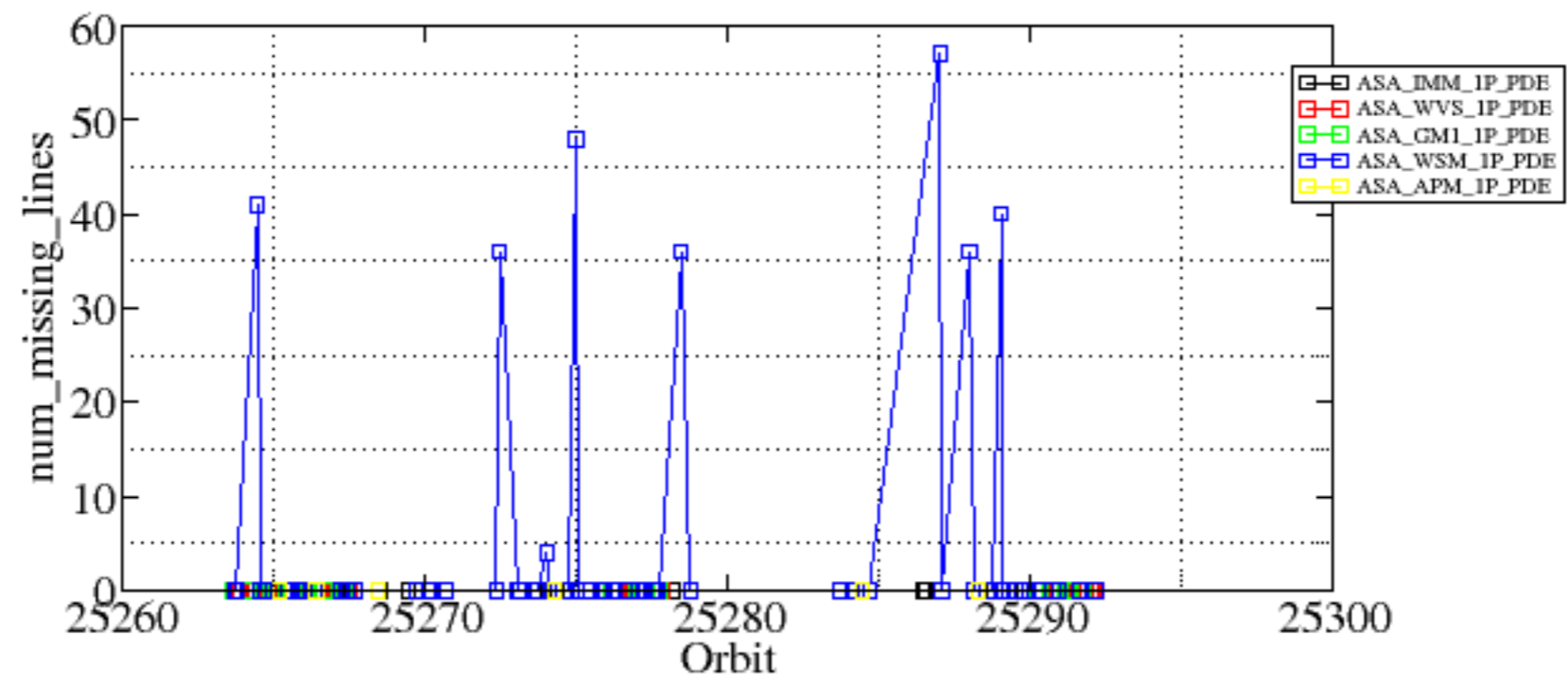


Summary of analysis for the last 3 days 2006123[011]

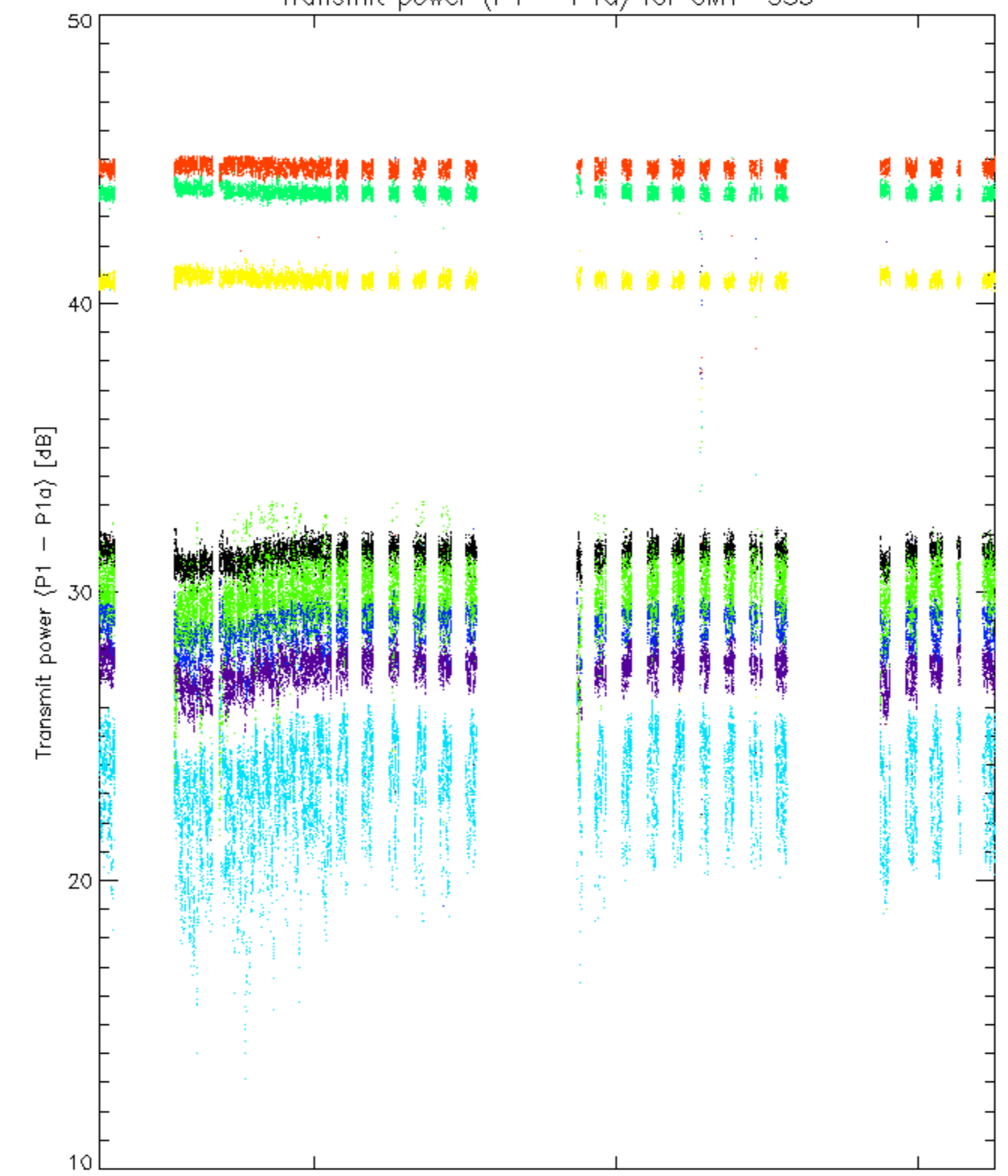
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDE20061230_061449_000002592054_00163_25267_3906.N1	5	0
ASA_WSM_1PNPDE20061230_012058_000004402054_00160_25264_3489.N1	0	41
ASA_WSM_1PNPDE20061230_144646_000004462054_00168_25272_4293.N1	0	36
ASA_WSM_1PNPDE20061230_172249_000001772054_00170_25274_4329.N1	0	4
ASA_WSM_1PNPDE20061230_190232_000000972054_00171_25275_4361.N1	0	48
ASA_WSM_1PNPDE20061231_005022_000002612054_00174_25278_4768.N1	0	36
ASA_WSM_1PNPDE20061231_151026_000002192054_00183_25287_5223.N1	0	57
ASA_WSM_1PNPDE20061231_165036_000001642054_00184_25288_5255.N1	0	36
ASA_WSM_1PNPDE20061231_183356_000001412054_00185_25289_5303.N1	0	40

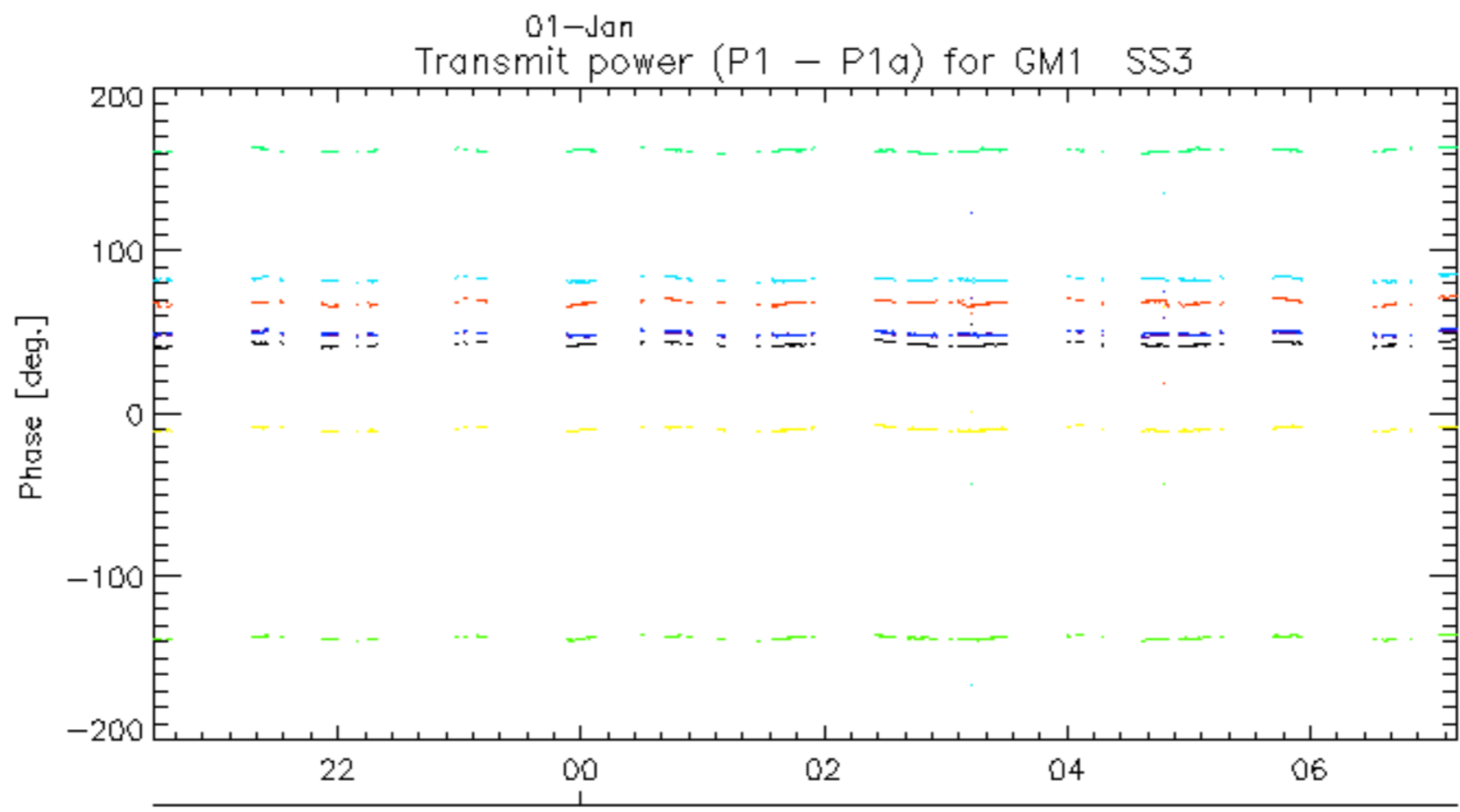
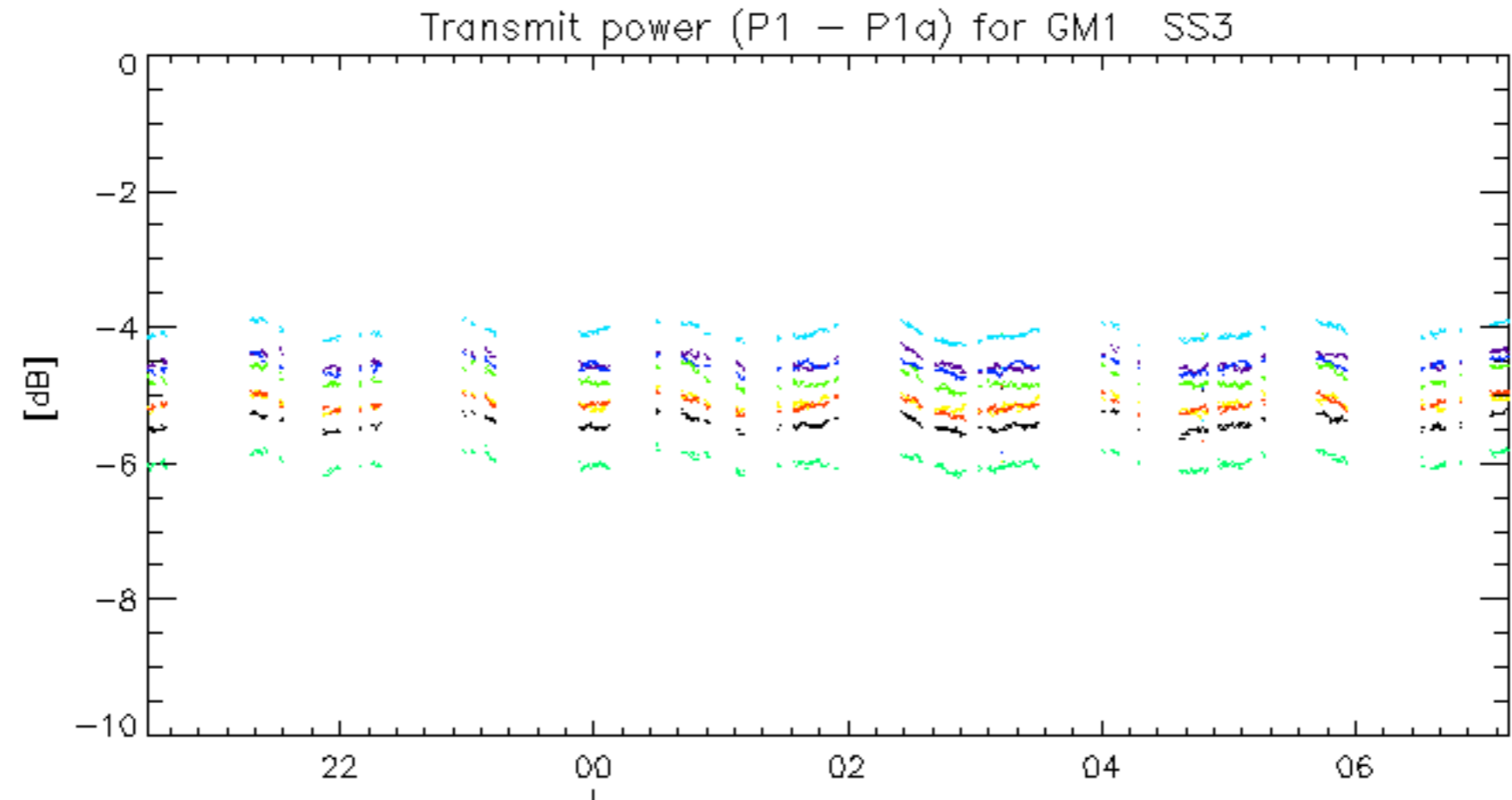




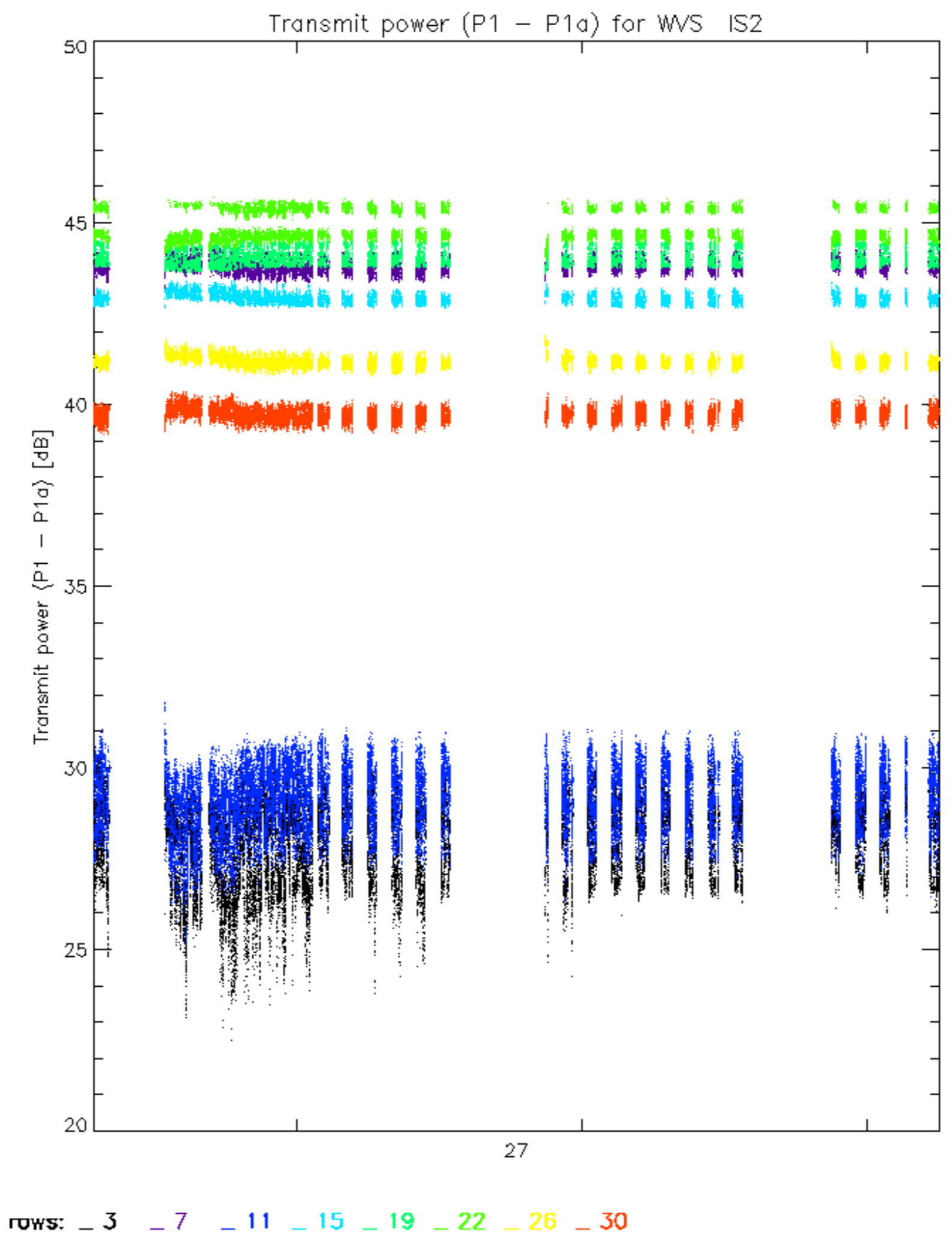
Transmit power (P1 - P1a) for GM1 SS3



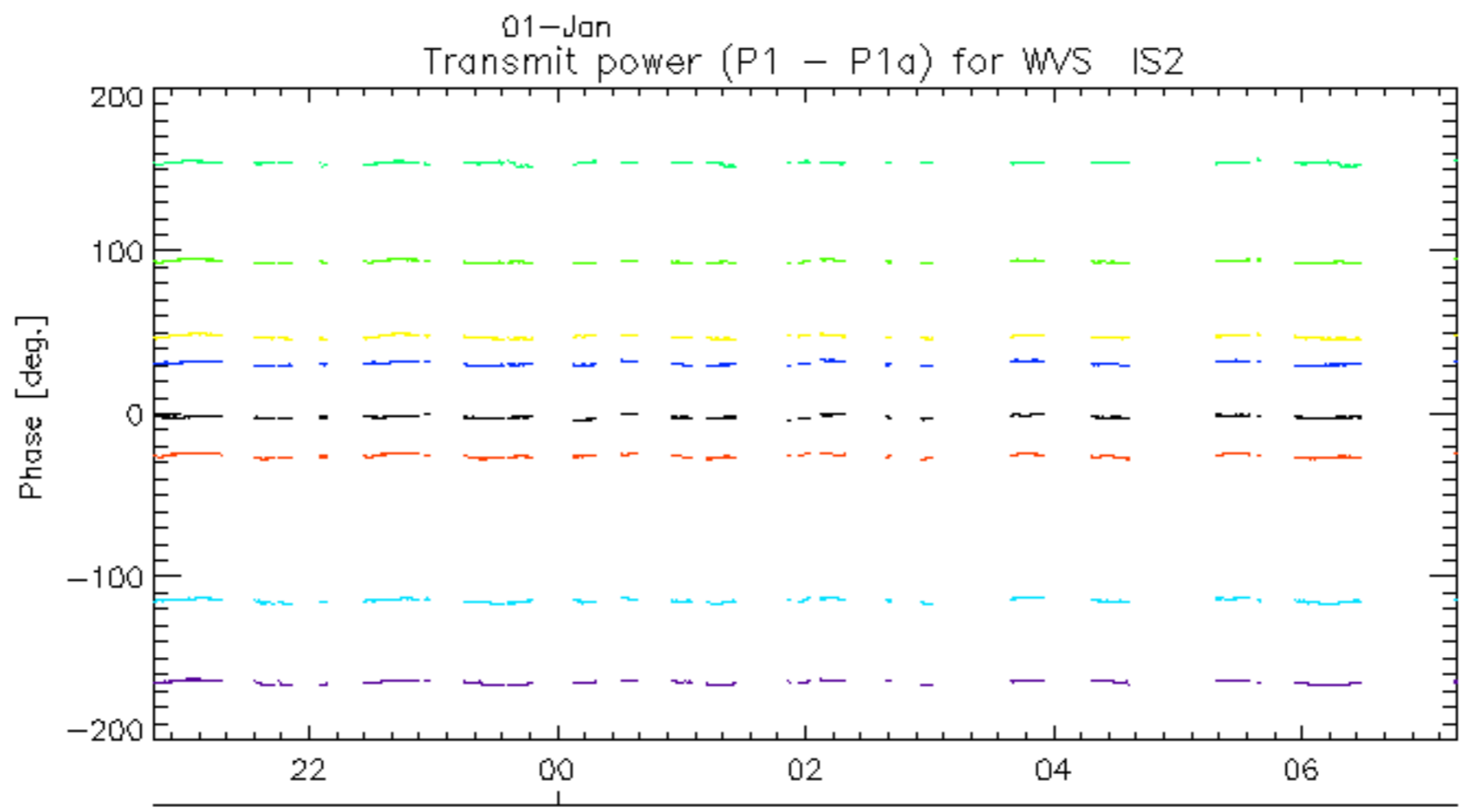
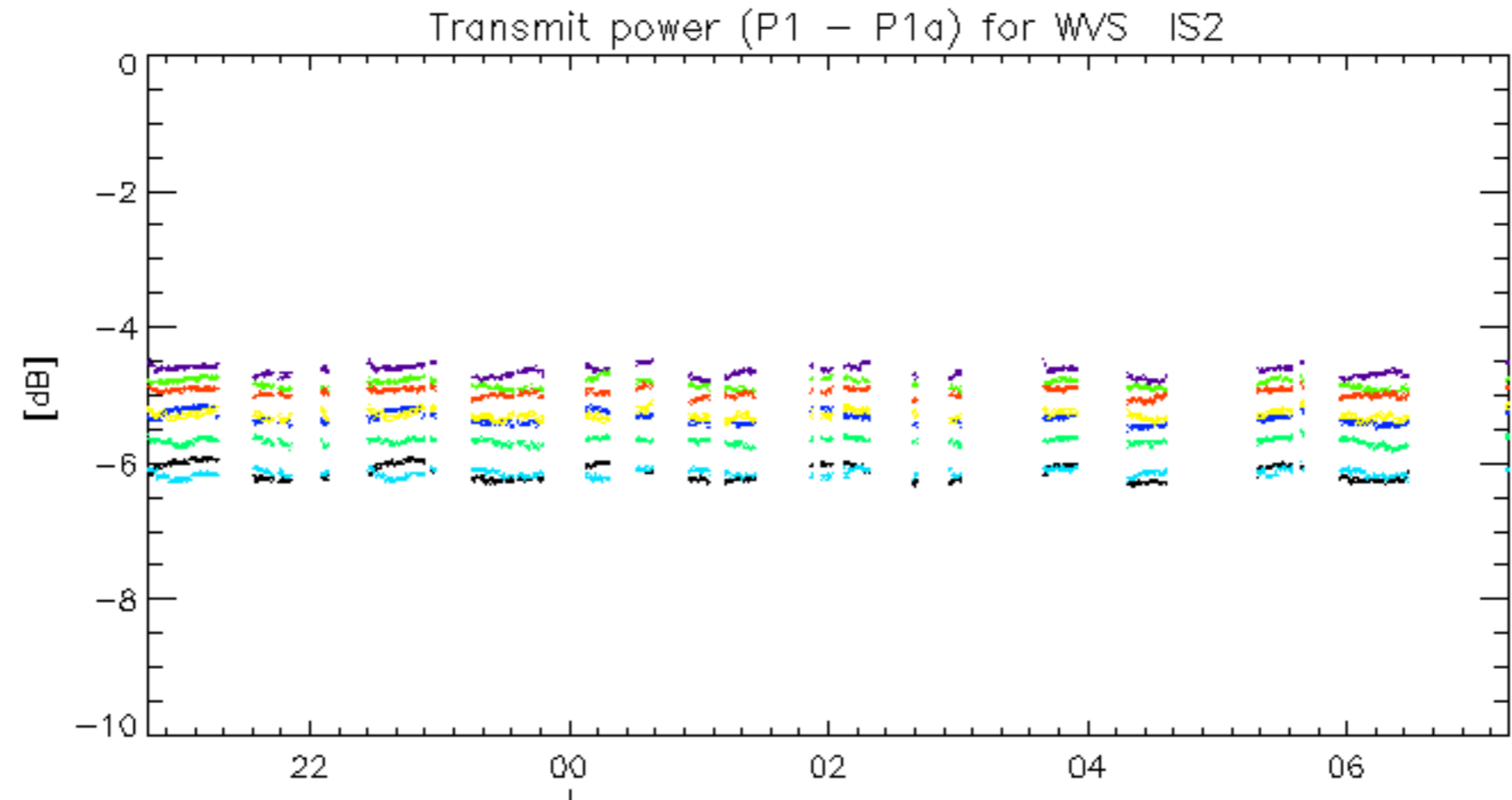
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



27



01-Jan
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.