

PRELIMINARY REPORT OF 070128

last update on Sun Jan 28 16:30:14 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-01-27 00:00:00 to 2007-01-28 16:30:14

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	35	68	15	2	26
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	35	68	15	2	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	68	15	2	26
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	35	68	15	2	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	47	65	21	13	57
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	47	65	21	13	57
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	47	65	21	13	57
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	47	65	21	13	57

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	20070128 095339
H	20070127 084440

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

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⊗

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)
3	P1a	-11.709340	0.043596	0.117092
7	P1a	-10.003947	0.041084	0.453124
11	P1a	-10.504521	0.053959	0.140323
15	P1a	-10.769814	0.115511	-0.711465
19	P1a	-15.796820	0.062078	-0.195693
22	P1a	-21.530624	1.905635	1.438423
26	P1a	-15.572146	0.361778	0.299628
30	P1a	-18.142921	0.283492	-0.257547

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.066401	0.040879	-1.455726
7	P1	-2.542885	0.005362	0.065356
11	P1	-2.953530	0.011455	0.062620
15	P1	-3.746242	0.020441	-0.258679
19	P1	-3.615703	0.014784	-0.200645
22	P1	-5.093610	0.019211	0.016482
26	P1	-5.987600	0.021238	-0.236667
30	P1	-5.324398	0.042339	0.265391

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.207220	0.093190	0.017076
7	P2	-22.105225	0.134139	0.017374
11	P2	-10.991673	0.080161	-0.086460
15	P2	-5.151590	0.101999	0.152503
19	P2	-7.279100	0.086270	-0.036850
22	P2	-8.342151	0.080636	-0.066644

26	P2	-24.337484	0.074246	-0.184880
30	P2	-21.701712	0.076777	0.168609

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.226042	0.007438	-0.058087
7	P3	-8.226042	0.007438	-0.058087
11	P3	-8.226042	0.007438	-0.058087
15	P3	-8.226042	0.007438	-0.058087
19	P3	-8.226042	0.007438	-0.058087
22	P3	-8.226042	0.007438	-0.058087
26	P3	-8.226042	0.007438	-0.058087
30	P3	-8.226042	0.007438	-0.058087

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)
3	P1a	-11.729033	0.063722	-0.066623
7	P1a	-10.025428	0.072287	0.034920
11	P1a	-10.386781	0.074591	-0.150602
15	P1a	-10.756323	0.149105	-0.127974
19	P1a	-15.752921	0.085261	-0.029877
22	P1a	-21.405508	1.491372	0.784814
26	P1a	-15.851094	0.323705	0.656692
30	P1a	-18.027824	0.383850	-0.563960

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.924577	0.015416	-0.044859
7	P1	-2.459373	0.049589	0.081844

11	P1	-2.828341	0.014670	-0.025554
15	P1	-3.730100	0.031549	-0.118427
19	P1	-3.552878	0.017482	-0.017903
22	P1	-5.005016	0.021720	-0.042081
26	P1	-6.038254	0.022718	0.025665
30	P1	-5.339152	0.033903	0.056982

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.379717	0.073285	0.221024
7	P2	-22.149536	0.145965	0.210871
11	P2	-10.794242	0.073202	0.194684
15	P2	-4.926389	0.156368	0.162645
19	P2	-6.914634	0.139031	0.123485
22	P2	-8.210592	0.086031	0.084163
26	P2	-24.326252	0.112095	0.121537
30	P2	-21.867767	0.108335	0.157514

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.079497	0.002748	0.047591
7	P3	-8.079235	0.002744	0.047027
11	P3	-8.079346	0.002749	0.047428
15	P3	-8.079341	0.002747	0.047259
19	P3	-8.079288	0.002751	0.047784
22	P3	-8.079434	0.002747	0.046631
26	P3	-8.079483	0.002748	0.047679
30	P3	-8.079358	0.002746	0.047122

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	0.000581600
	stdev	1.76910e-07
MEAN Q	mean	0.000489298
	stdev	2.06899e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127866
	stdev	0.00201921
STDEV Q	mean	0.128151
	stdev	0.00205236



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007012[678]

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_1PNPDE20070126_145411_000000852055_00054_25659_4744.N1	0	34





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

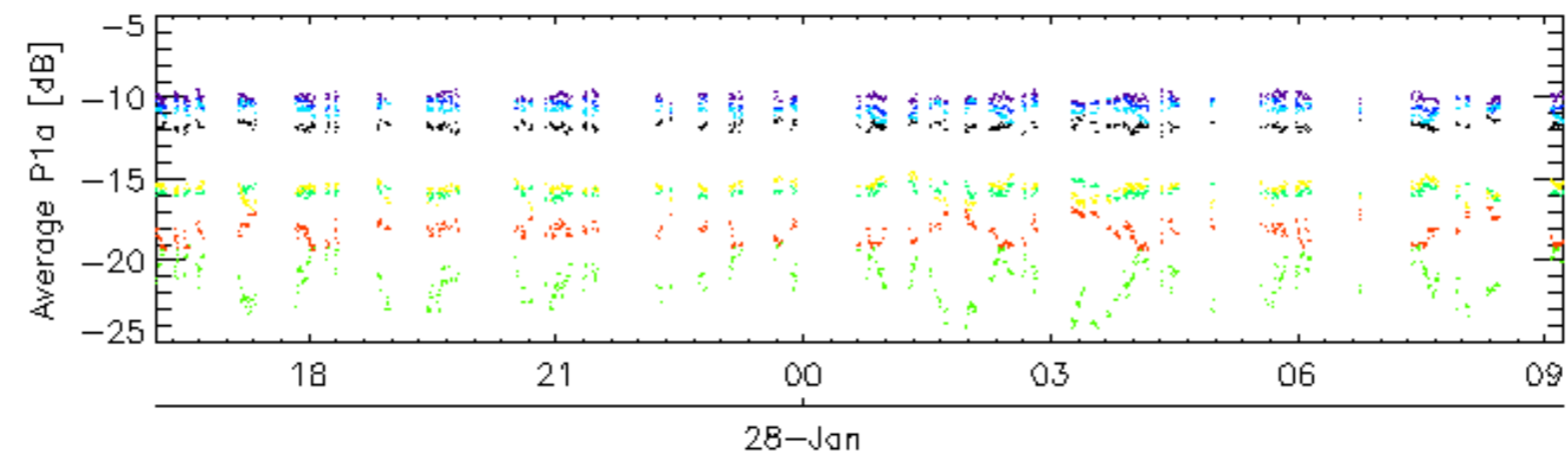
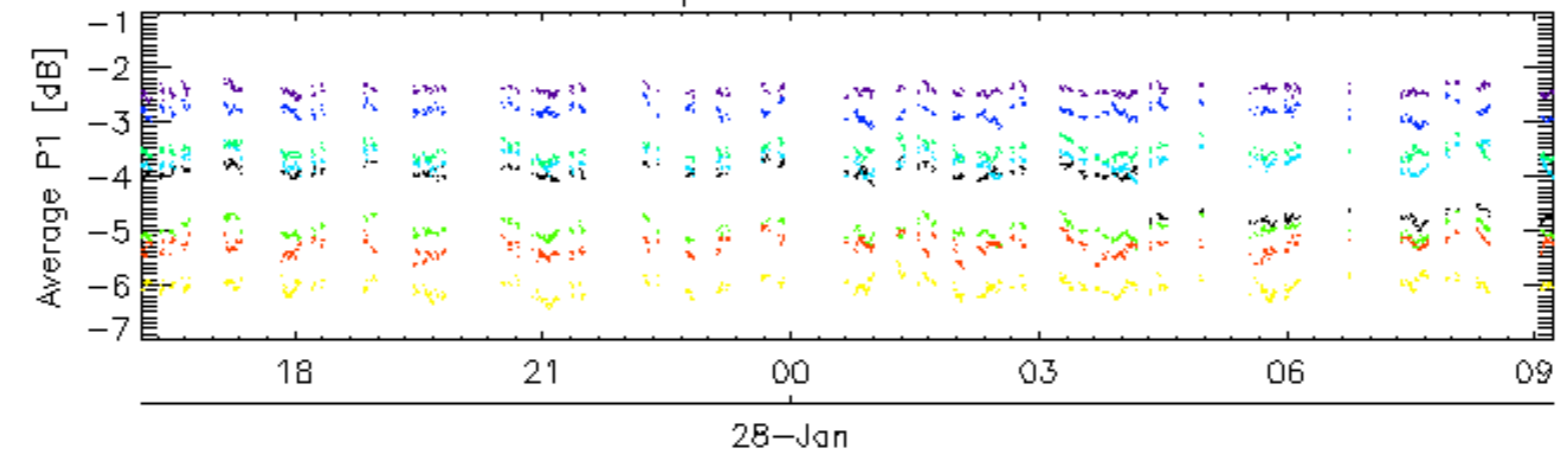
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

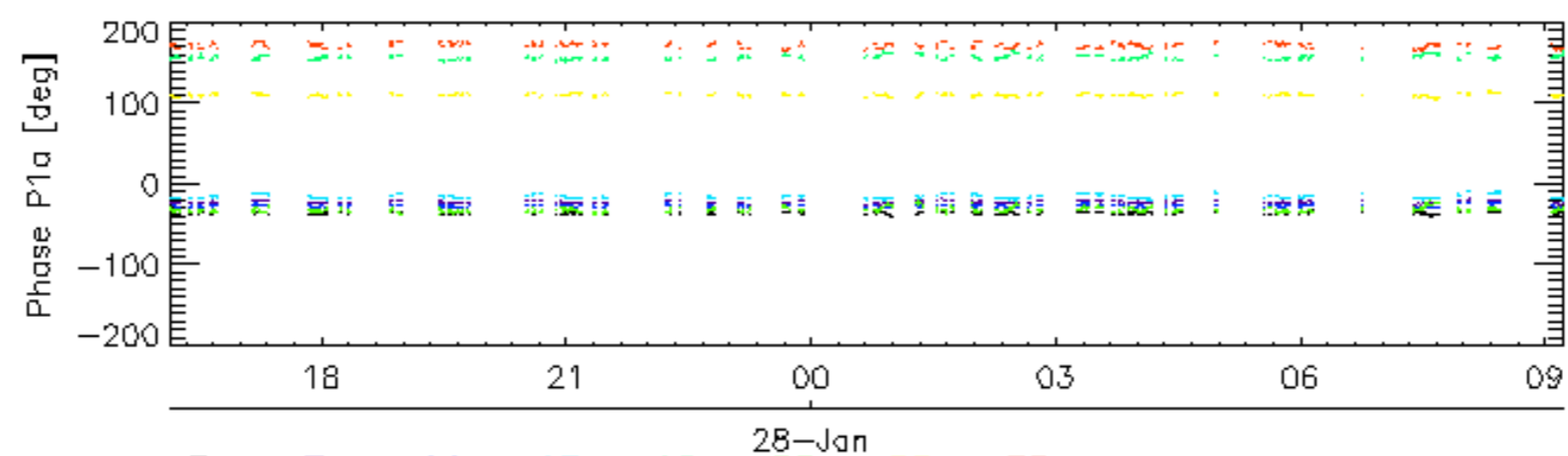
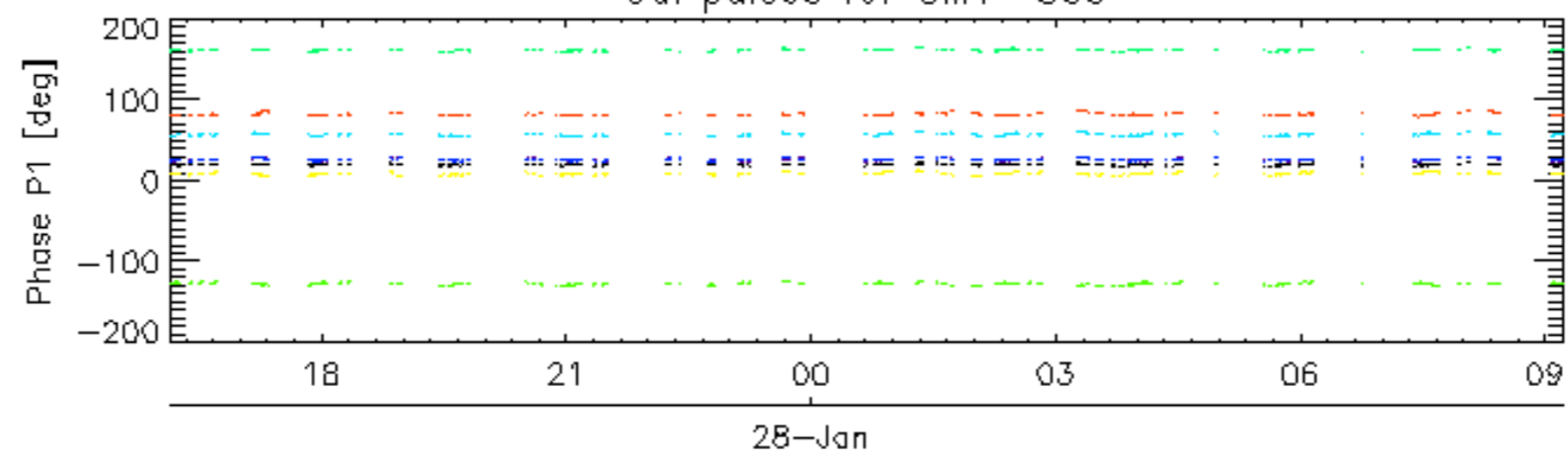
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

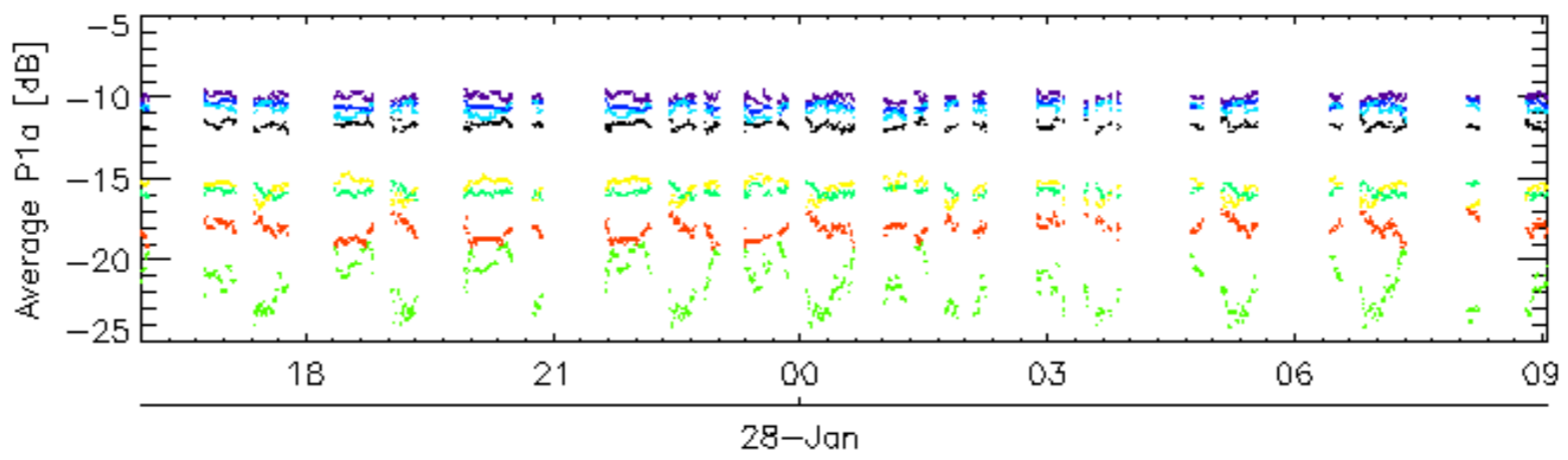
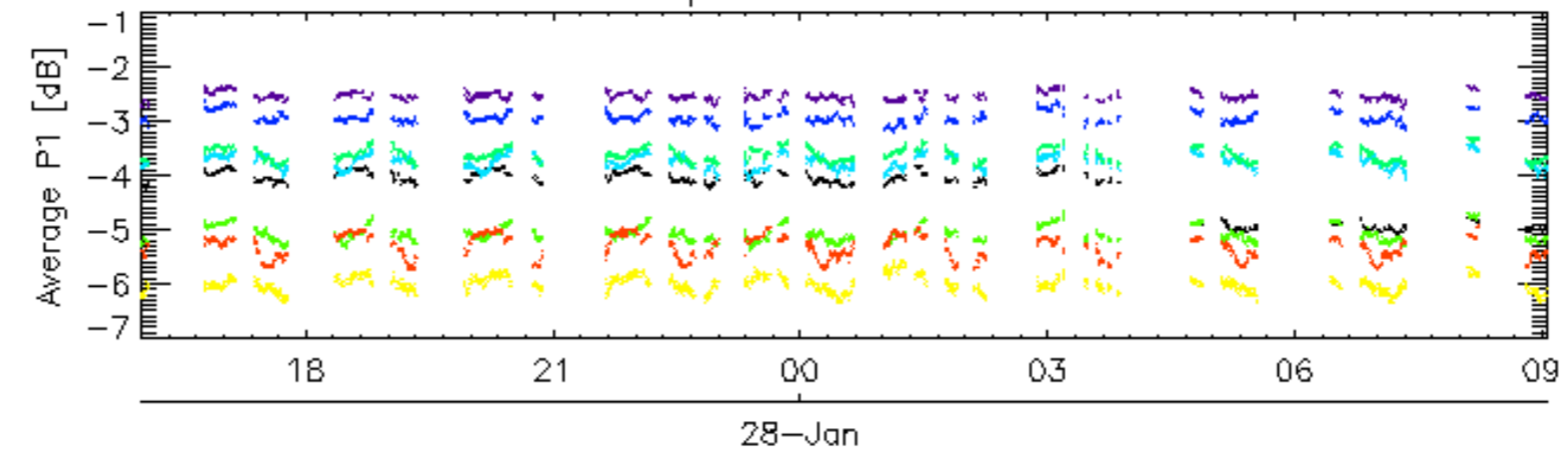


Cal pulses for GM1 SS3

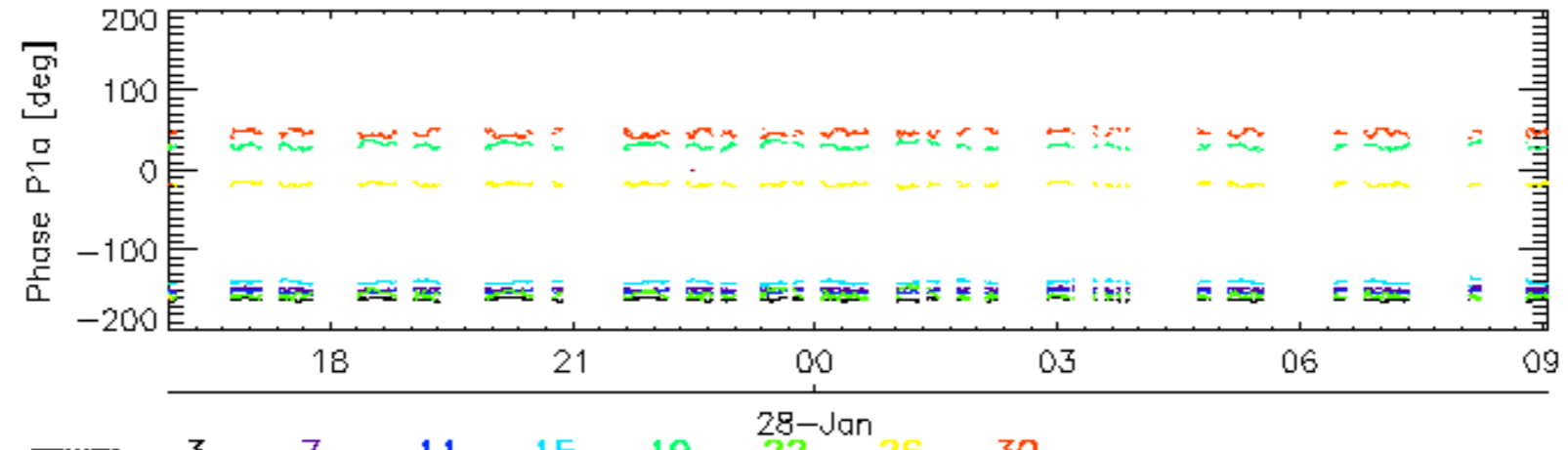
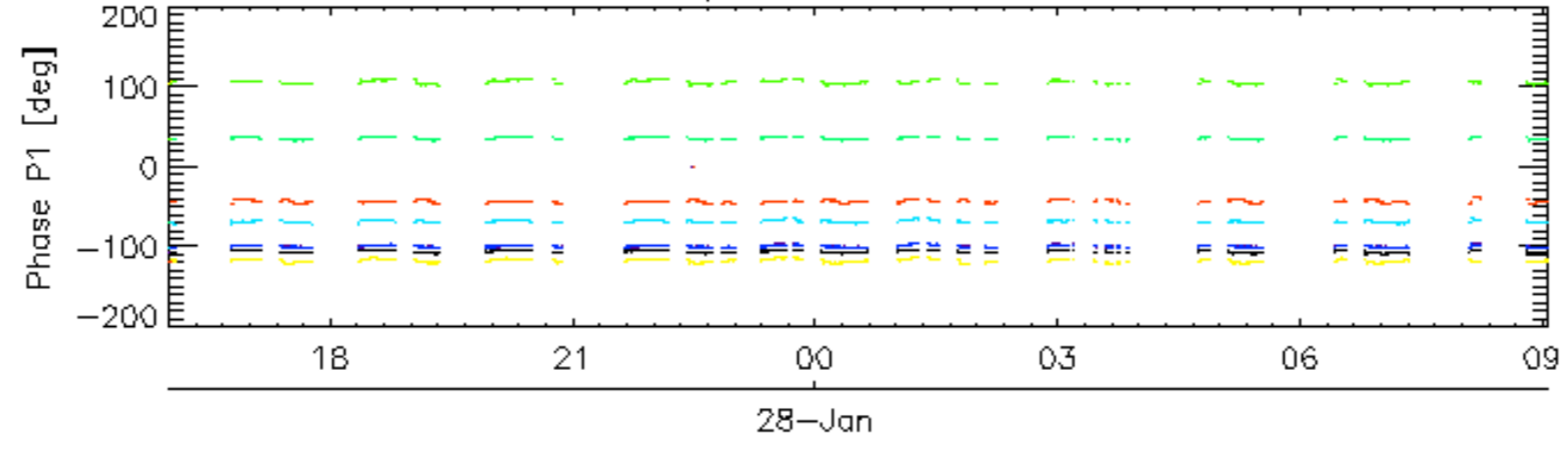


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS4

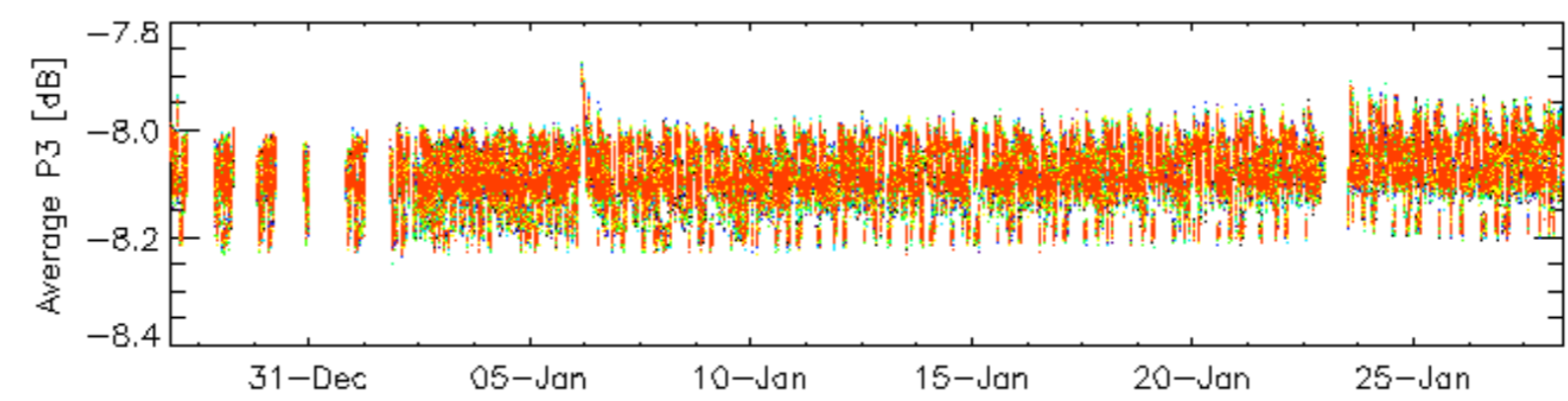
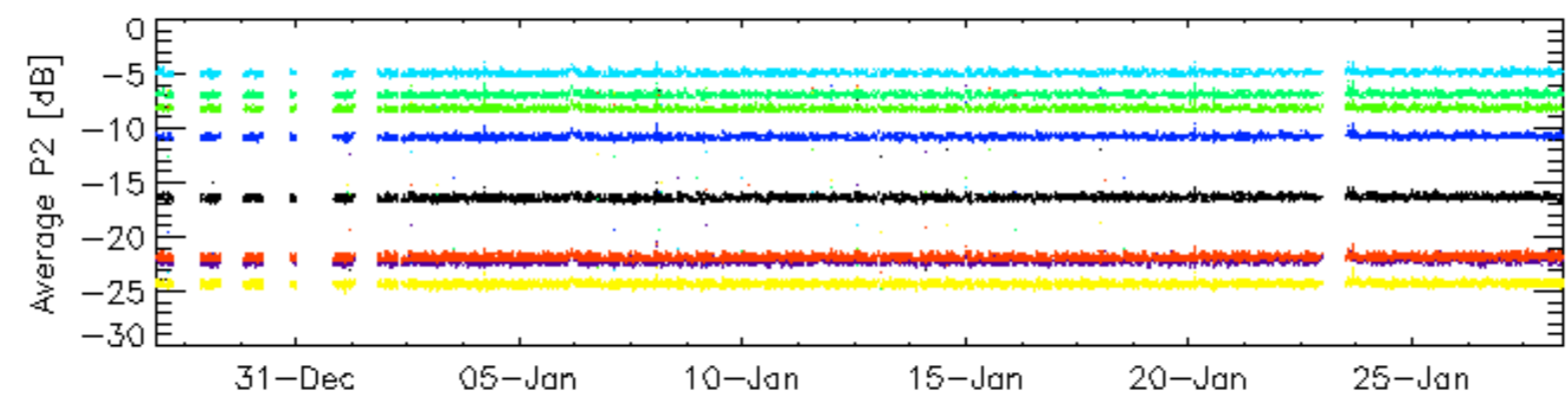
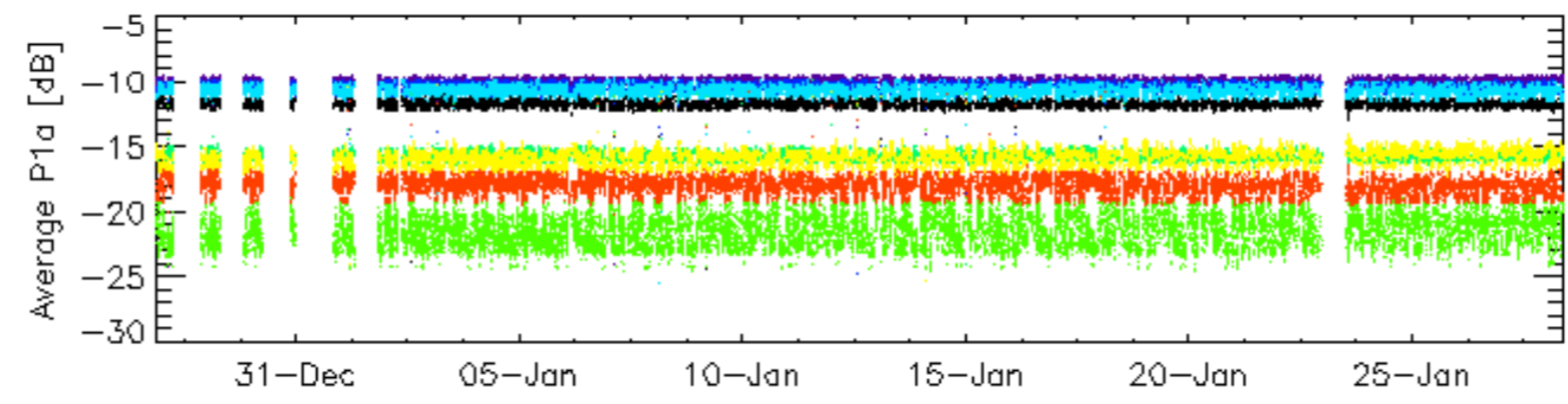
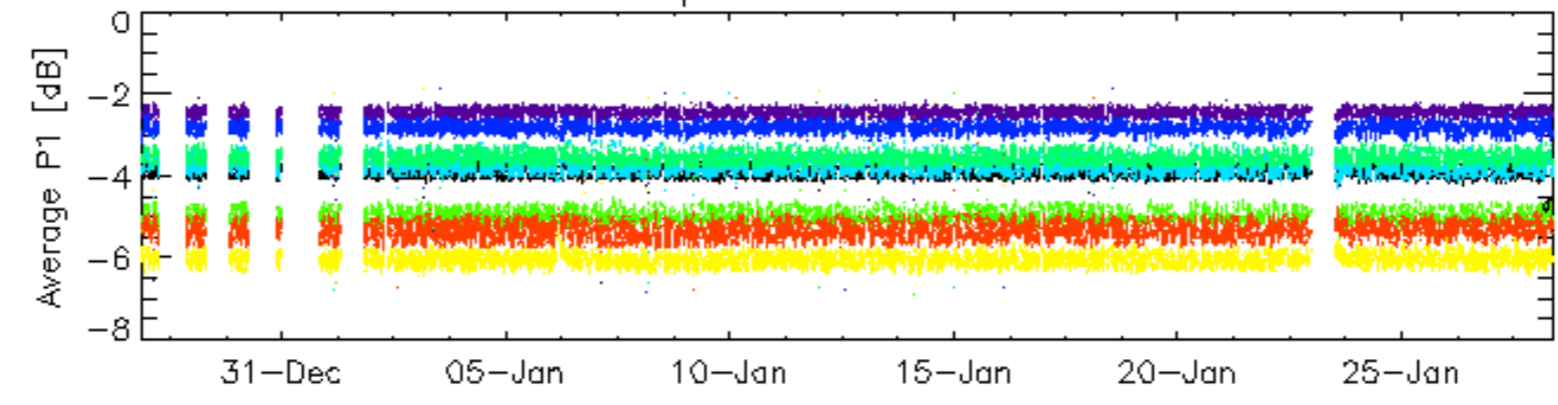


Cal pulses for WVS IS4



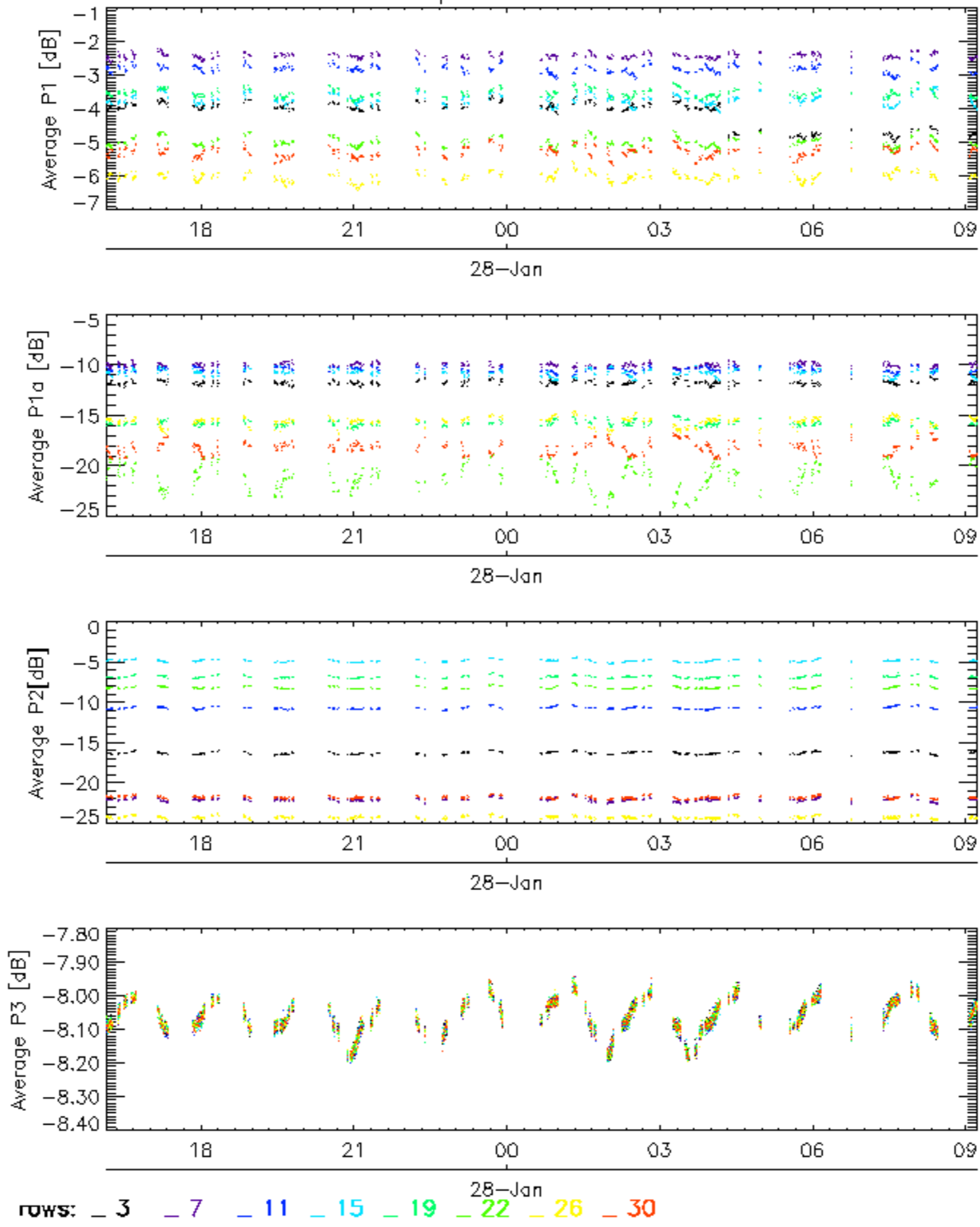
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

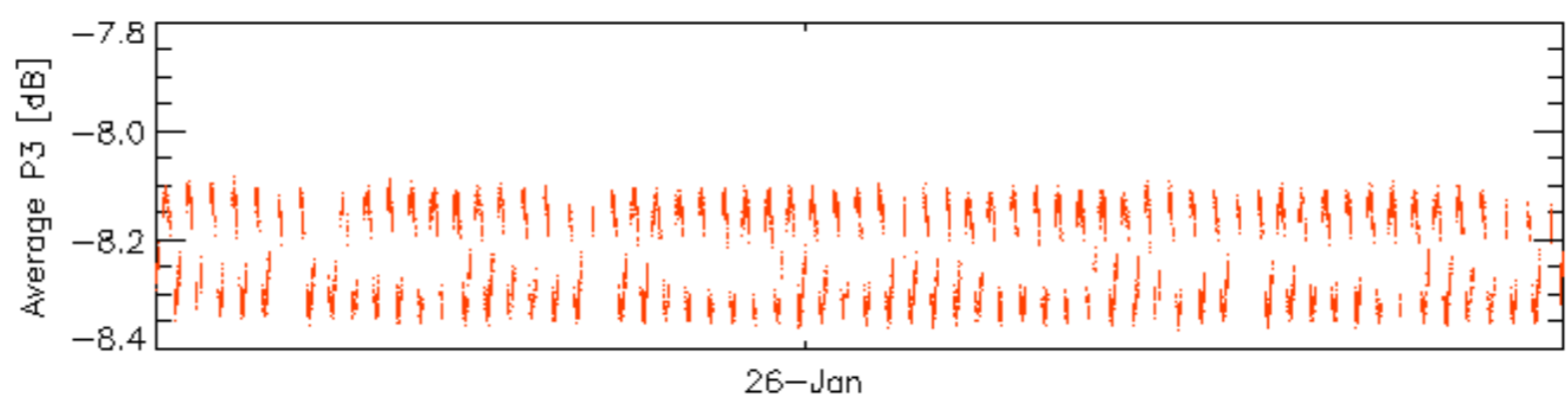
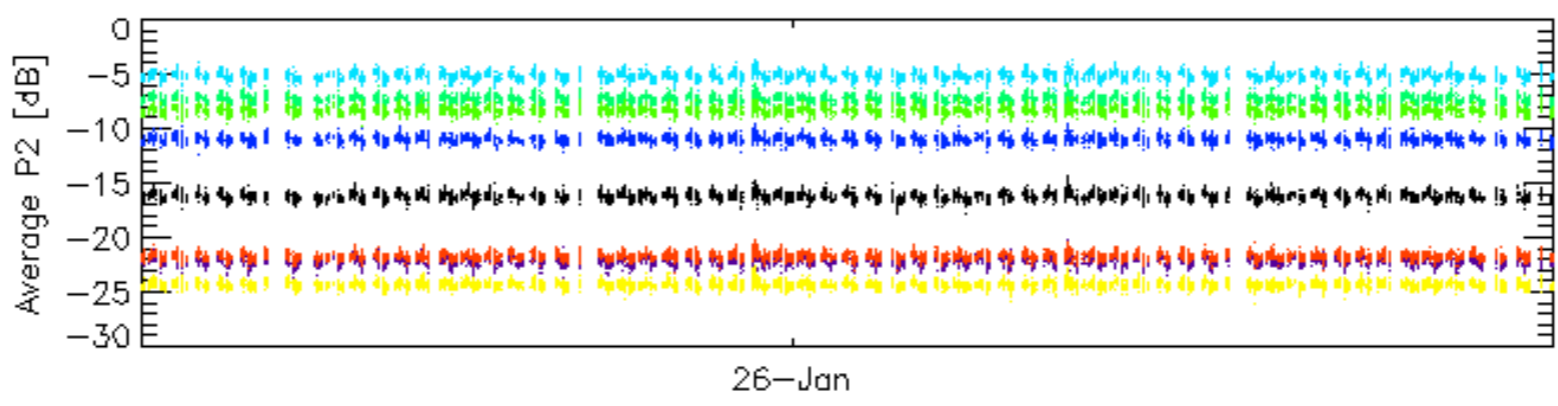
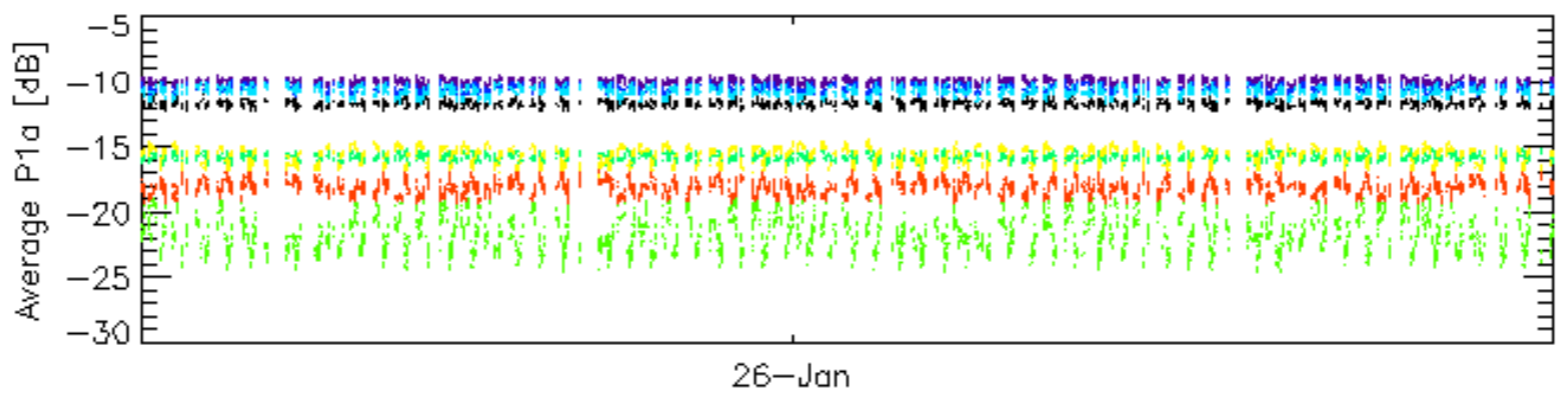
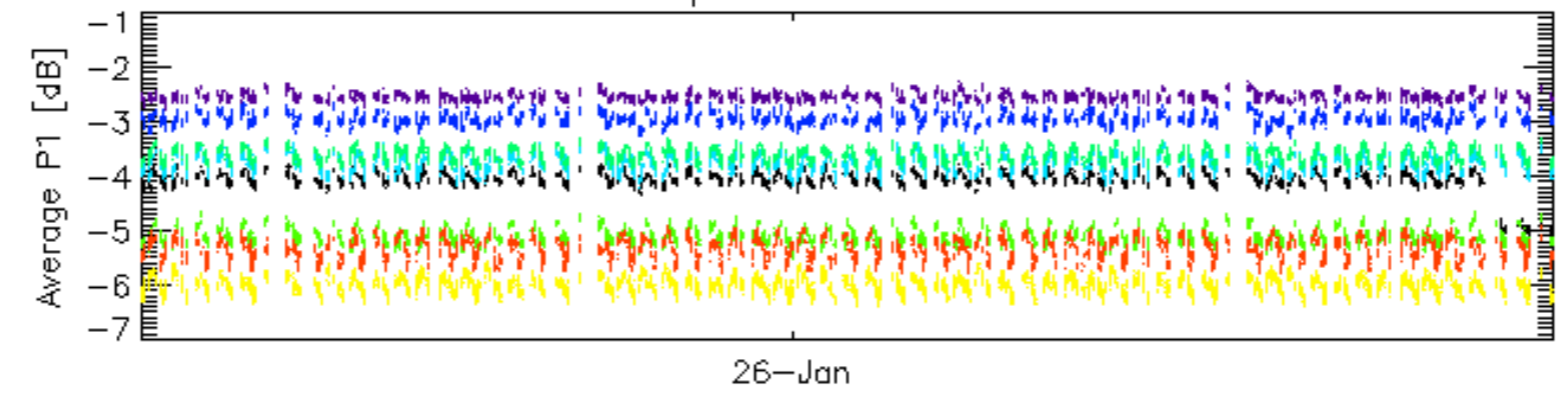


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

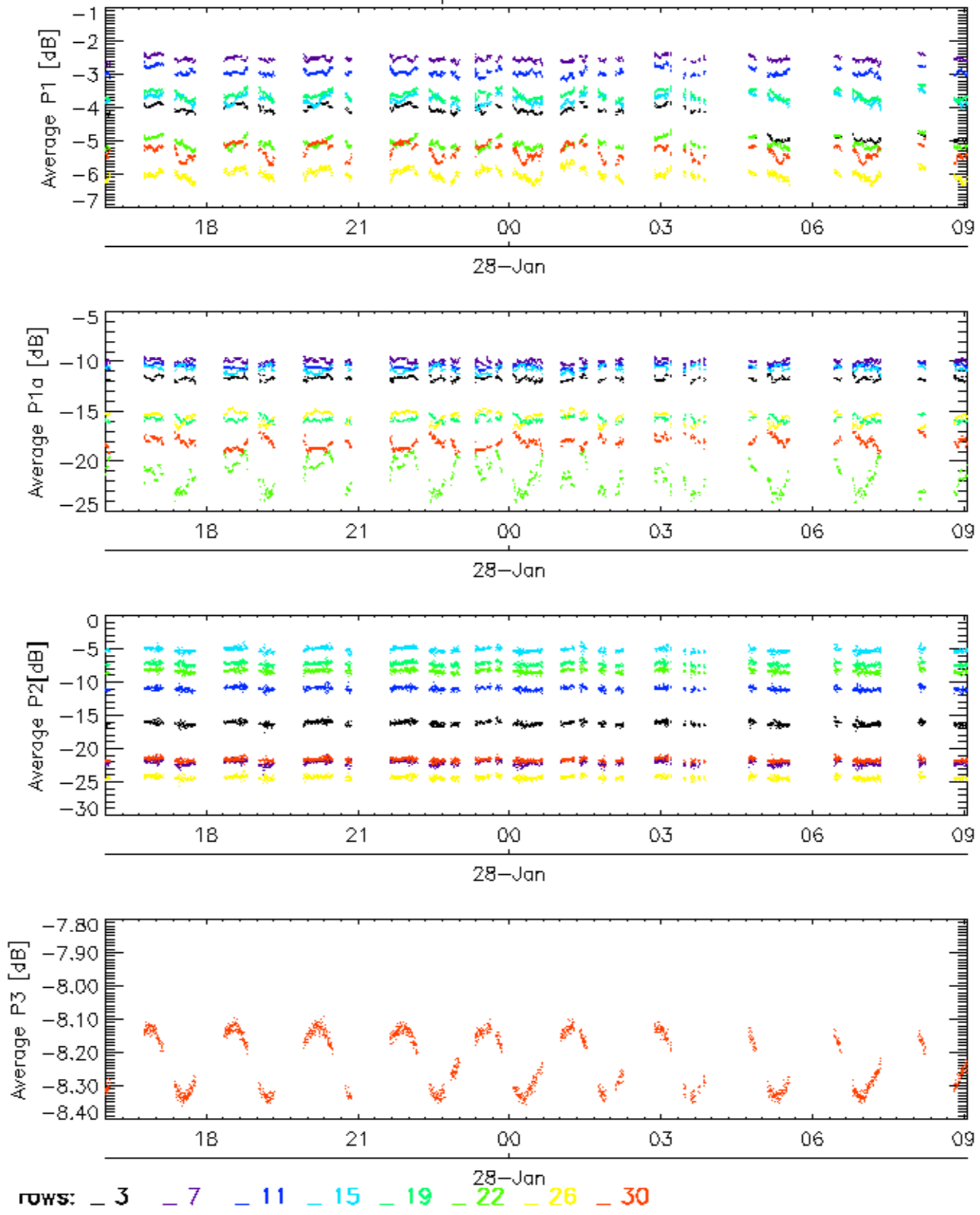


Cal pulses for WVS IS4

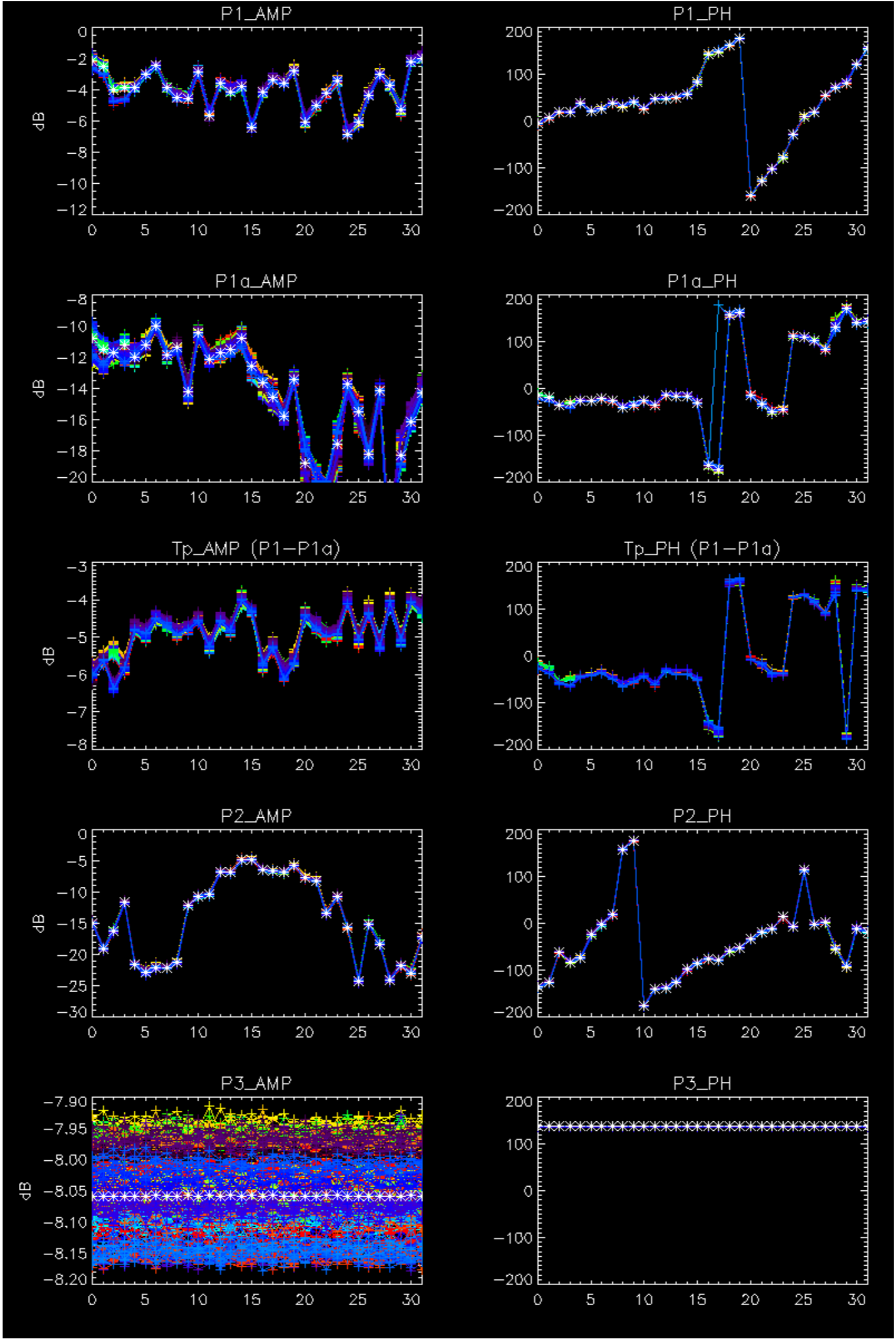


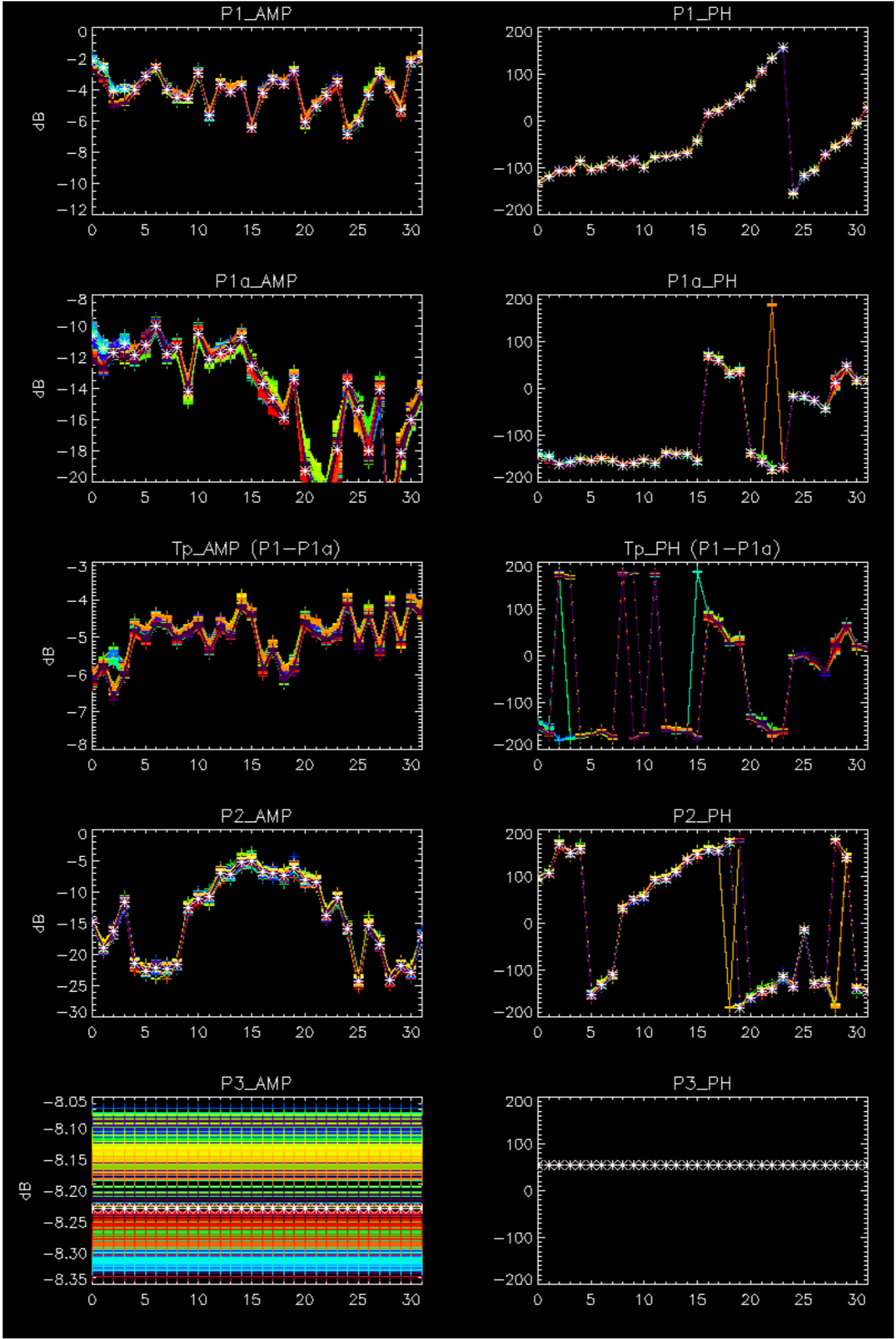
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Cal pulses for WVS IS4



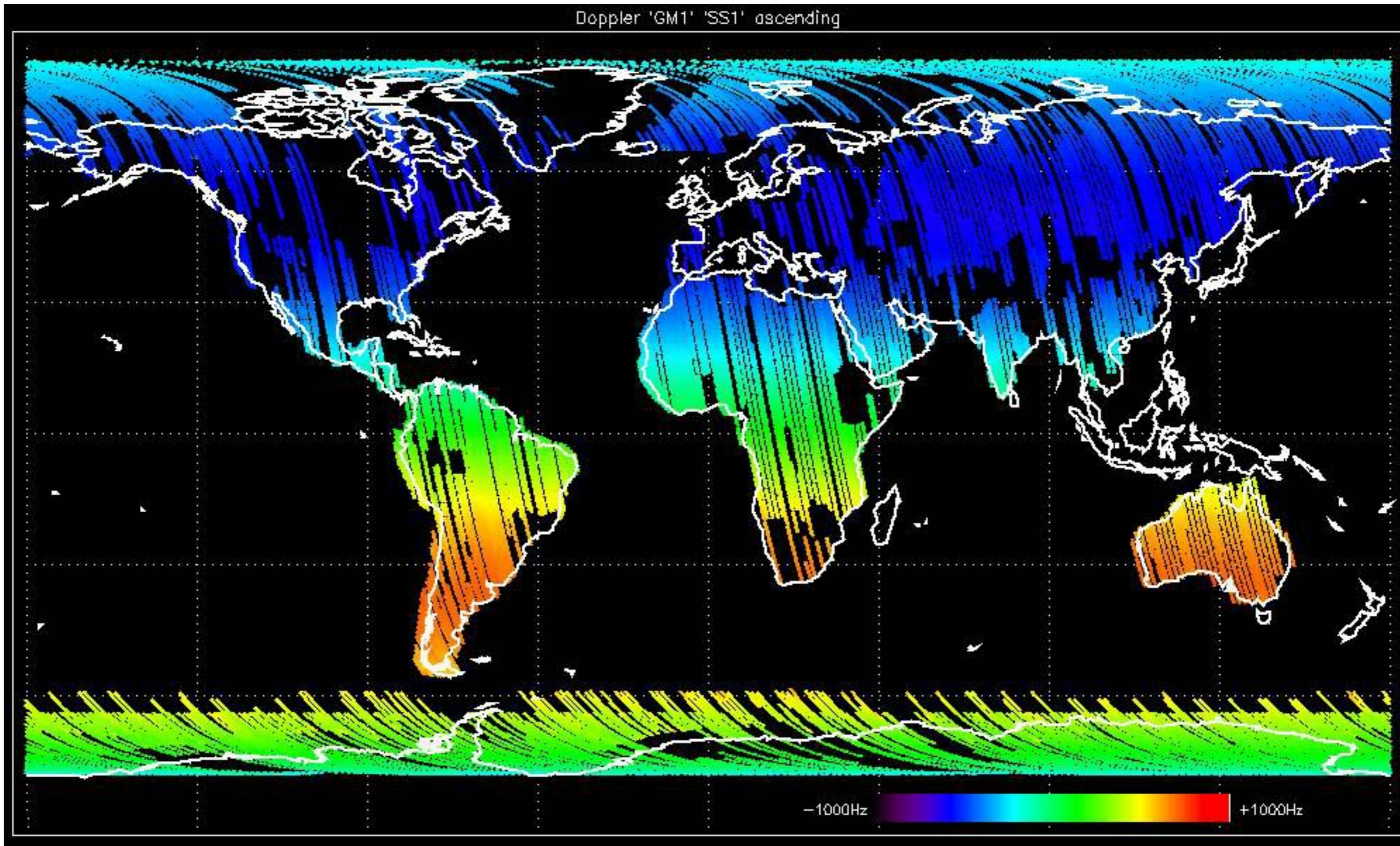
No anomalies observed.



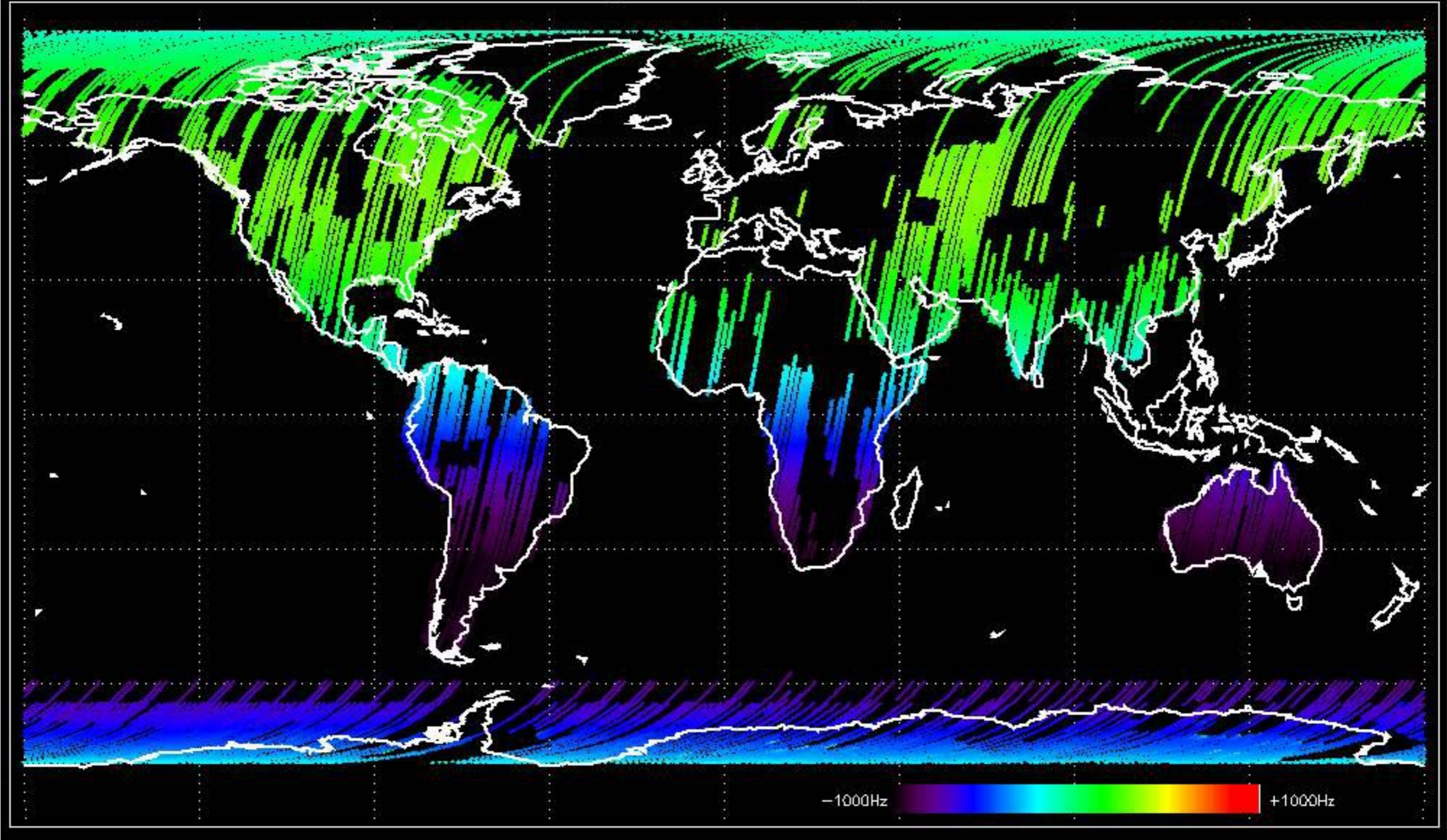


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

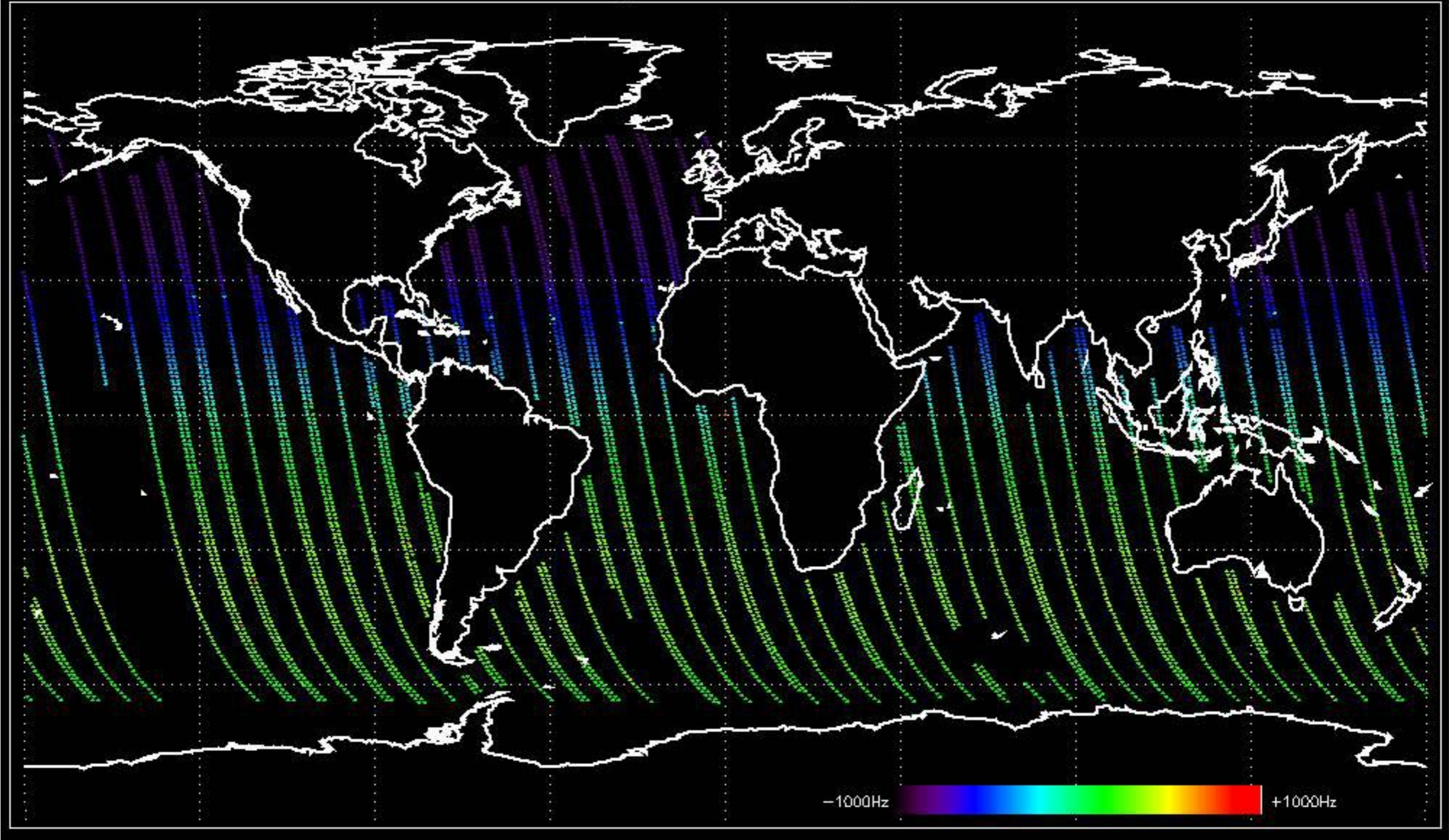
Doppler 'GM1' 'SS1' ascending



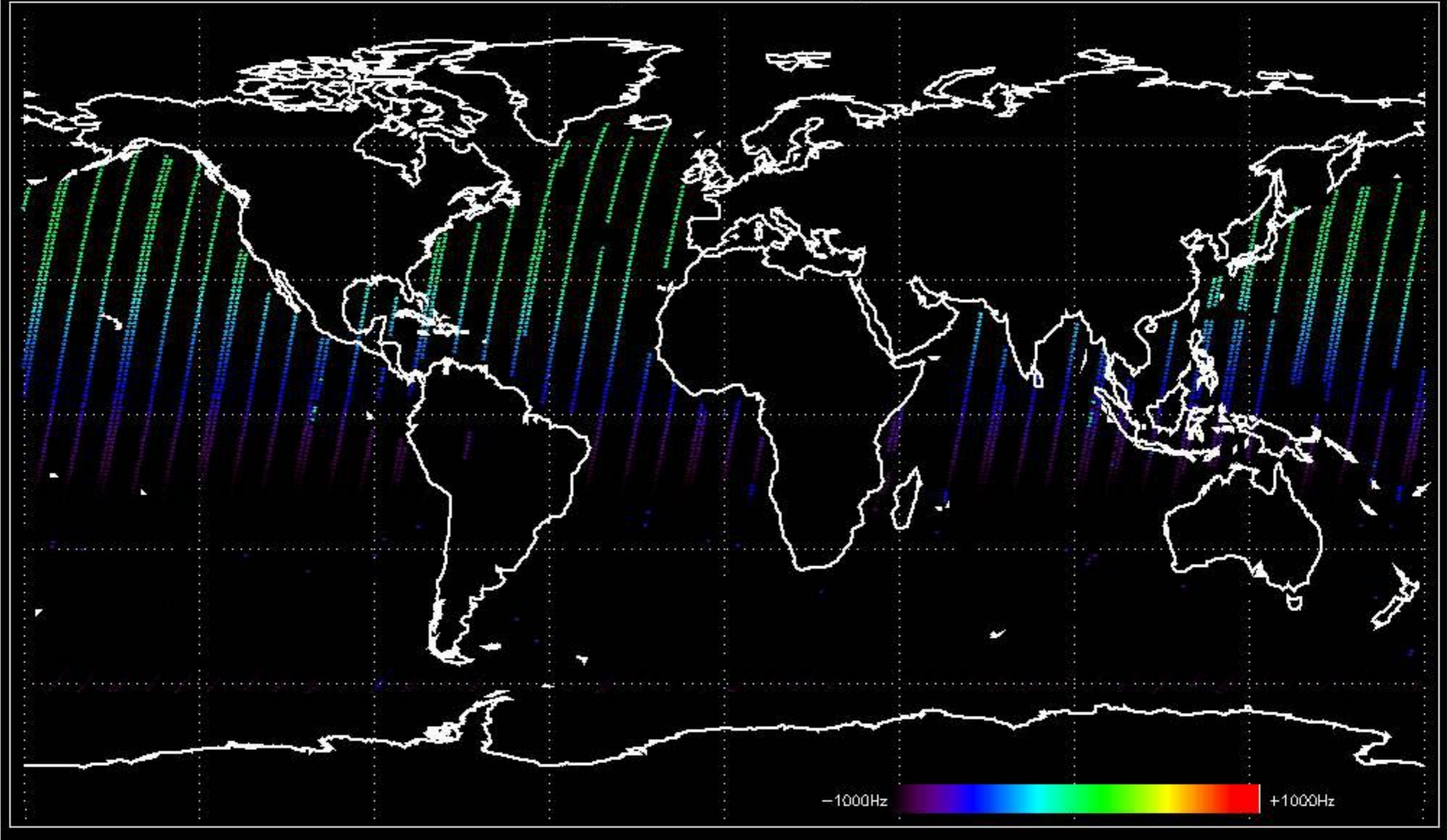
Doppler 'GM1' 'SS1' descending



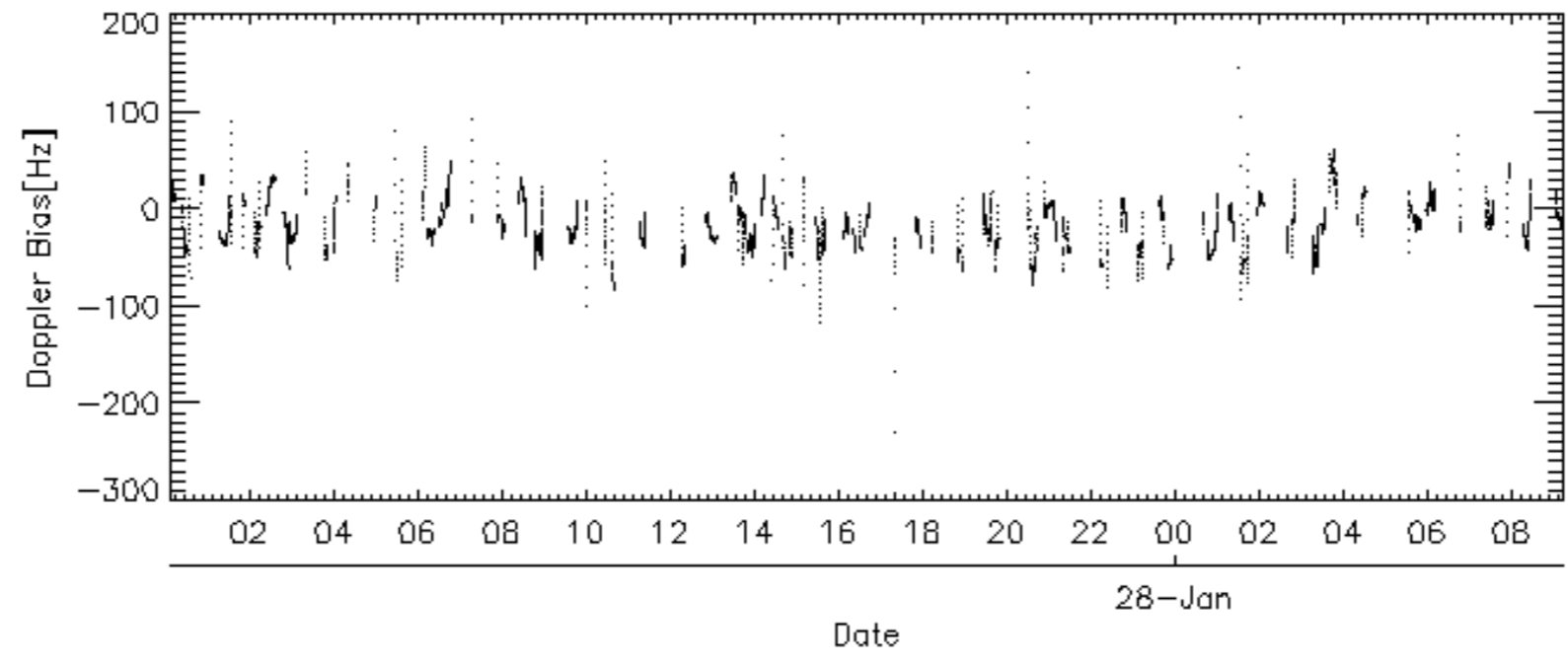
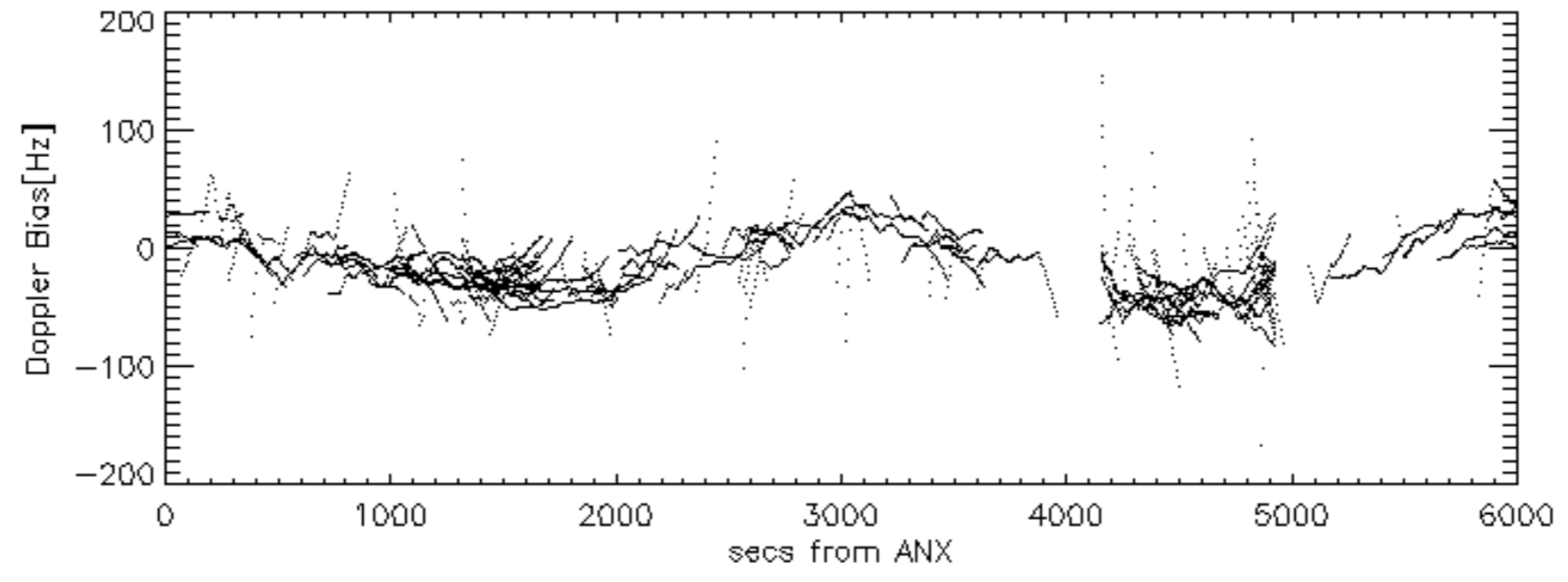
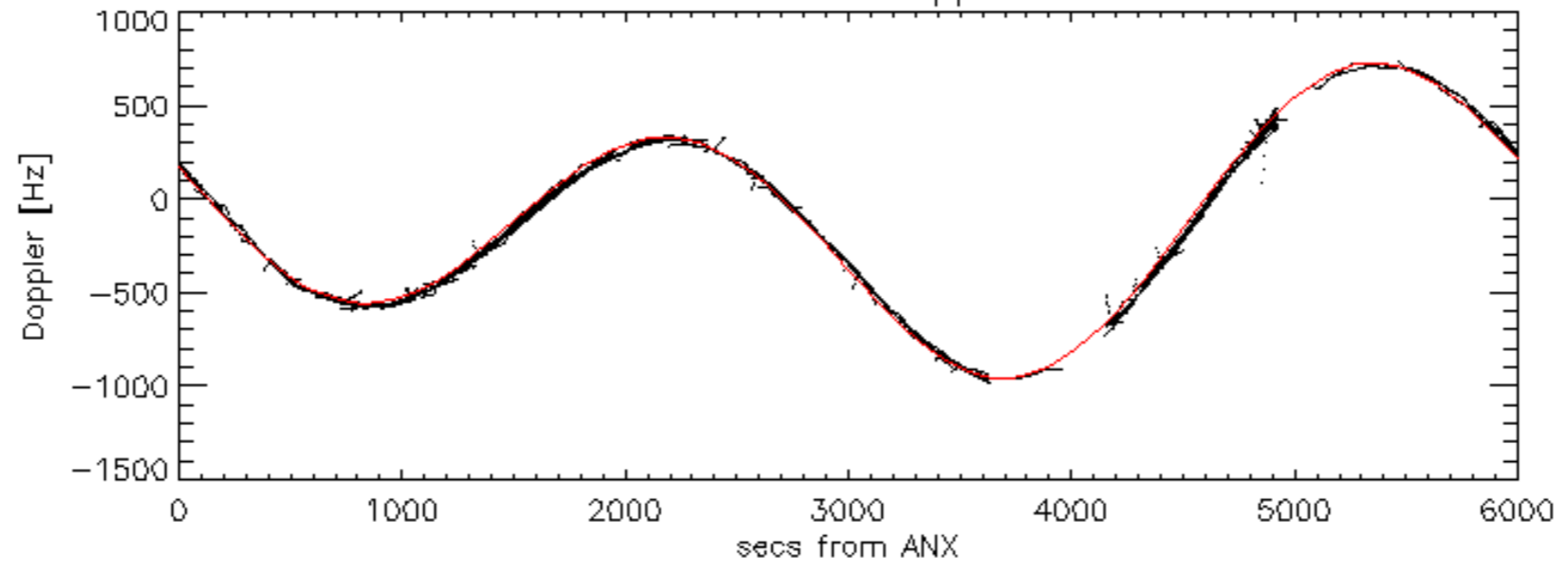
Doppler 'WVS' 'IS4' ascending



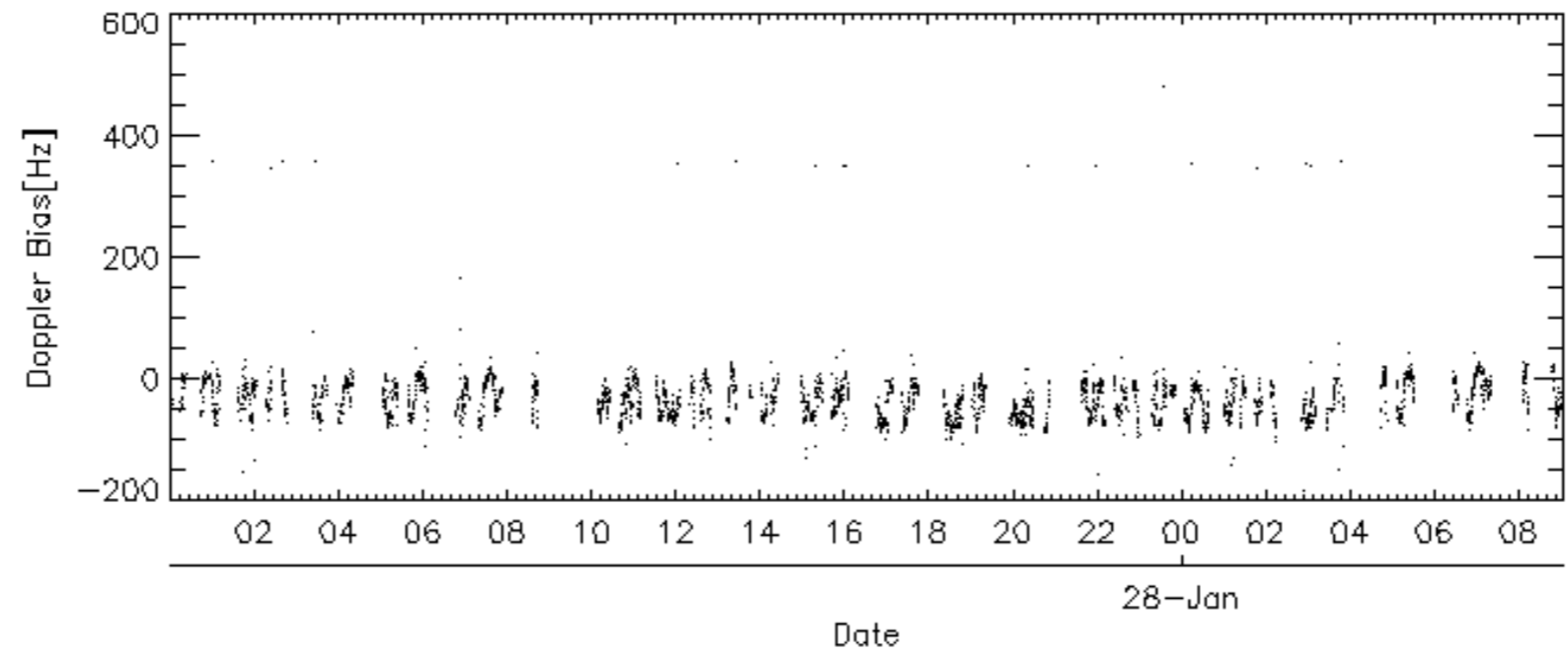
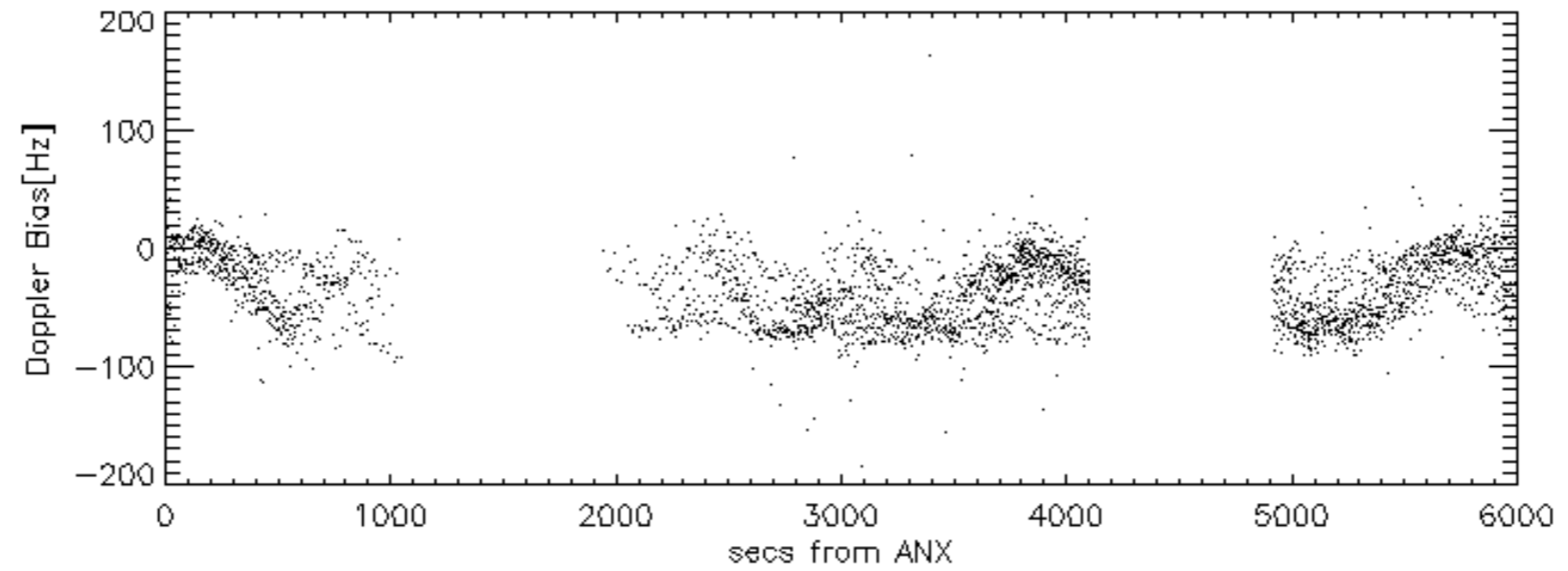
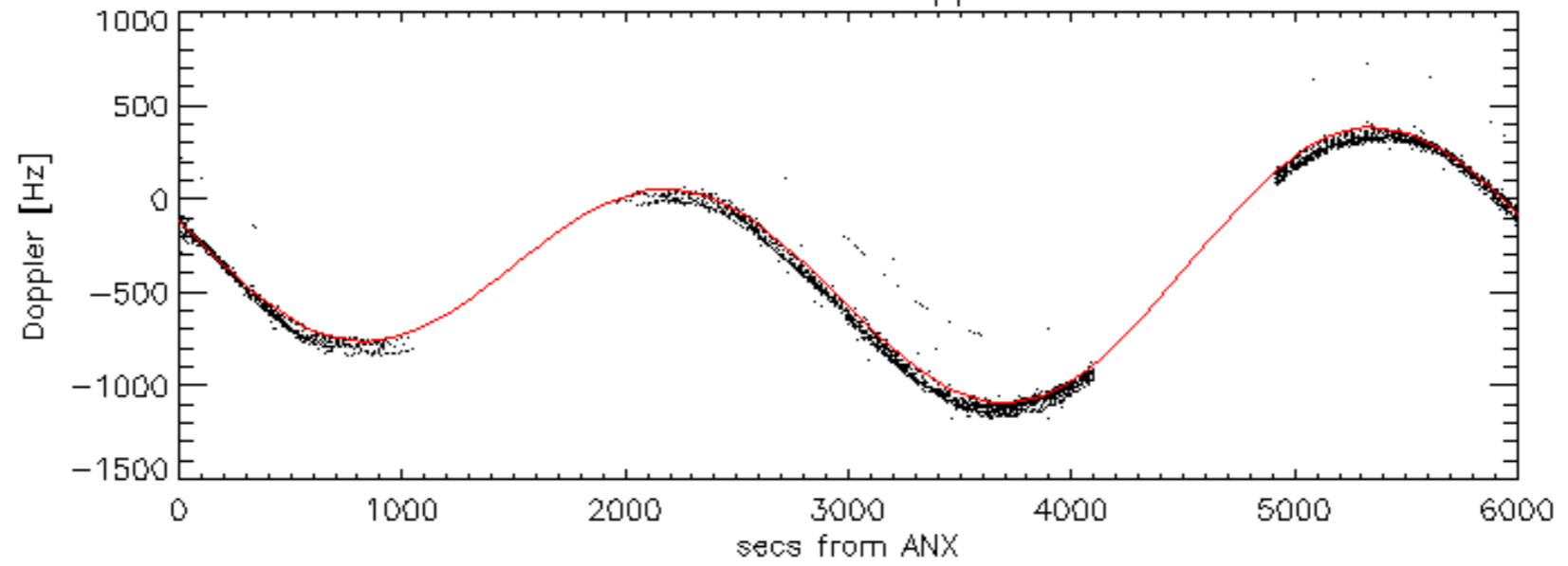
Doppler 'WVS' 'IS4' descending



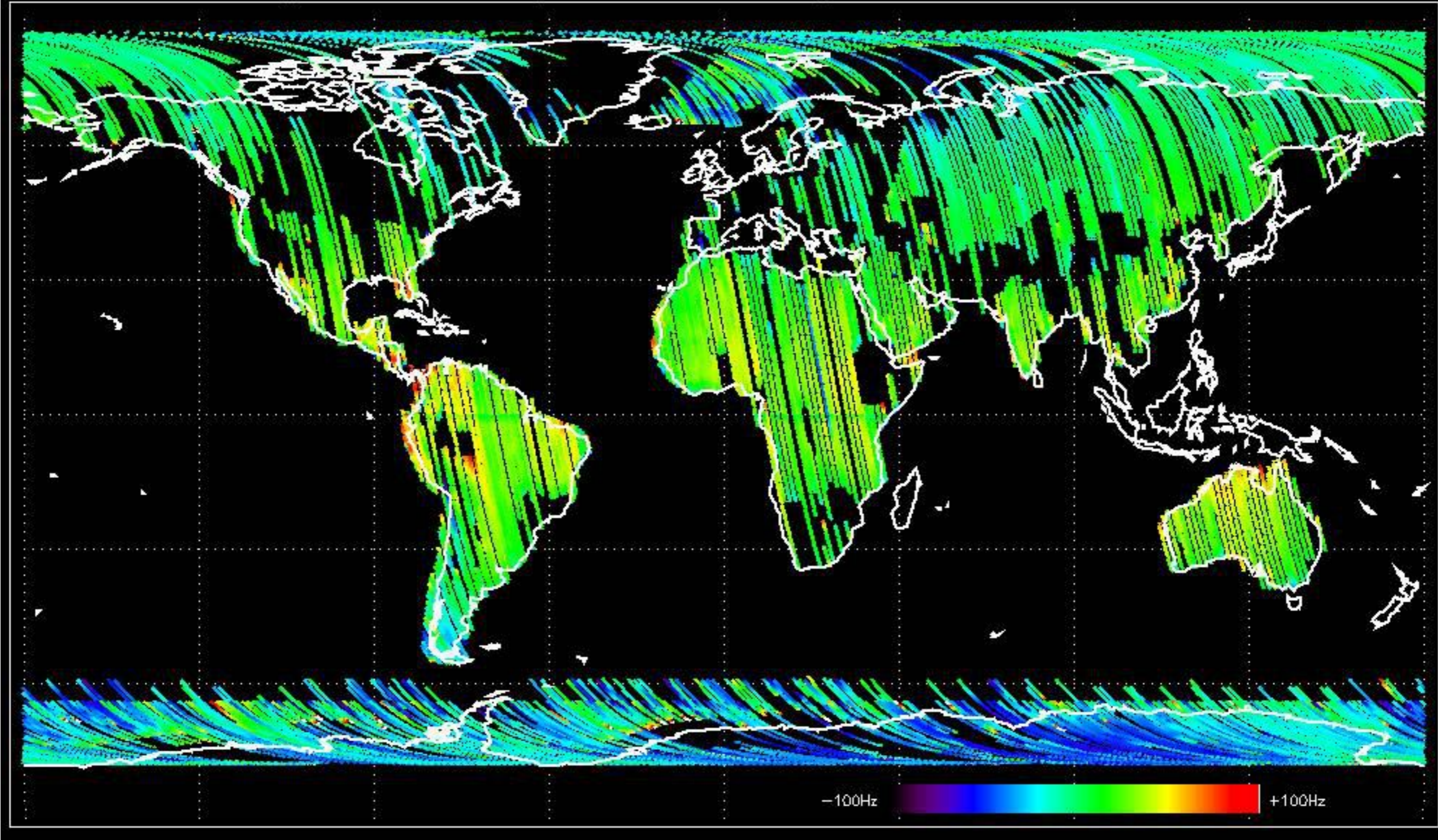
GM1 mode doppler



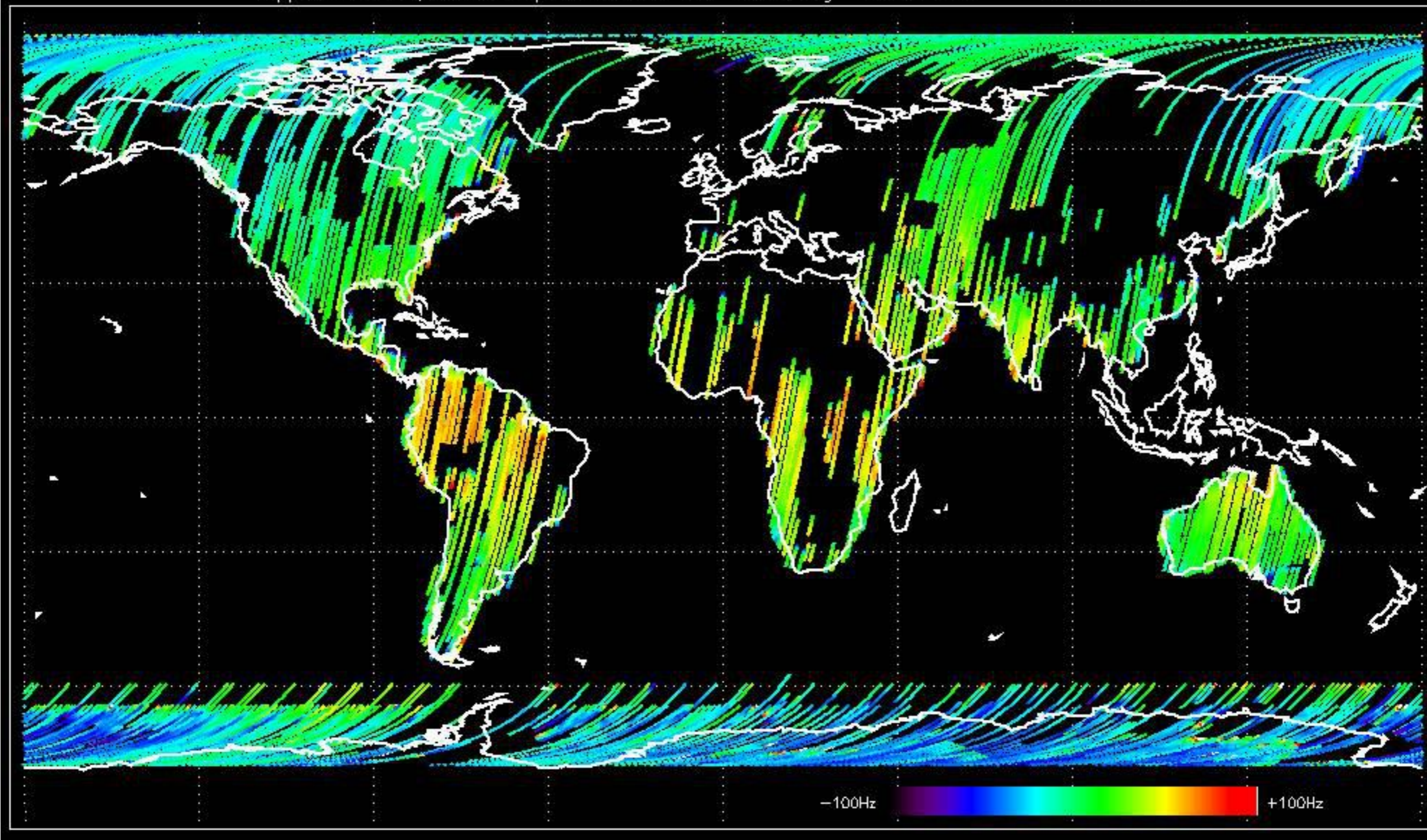
WVS mode doppler



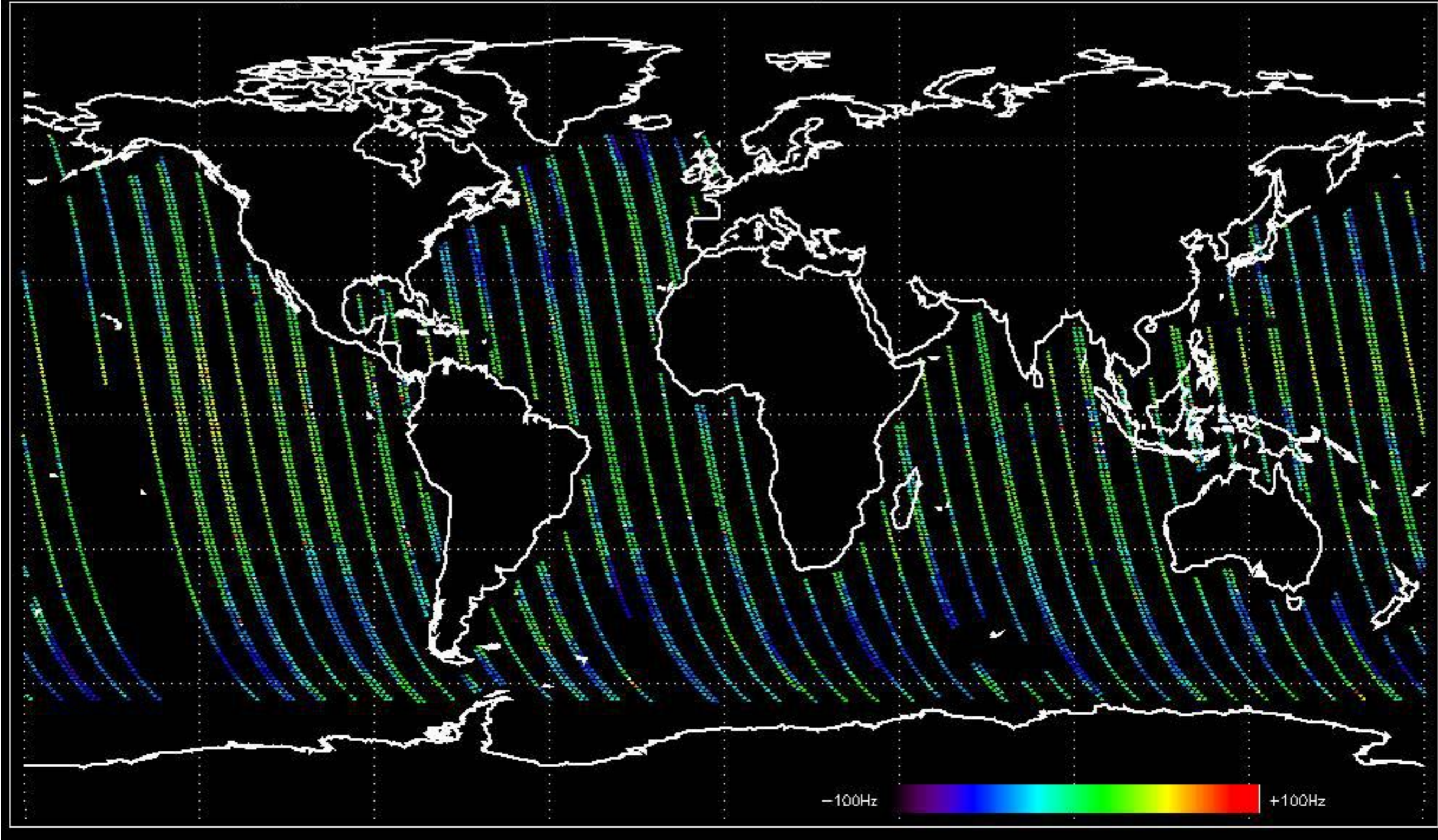
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.897050 Hz



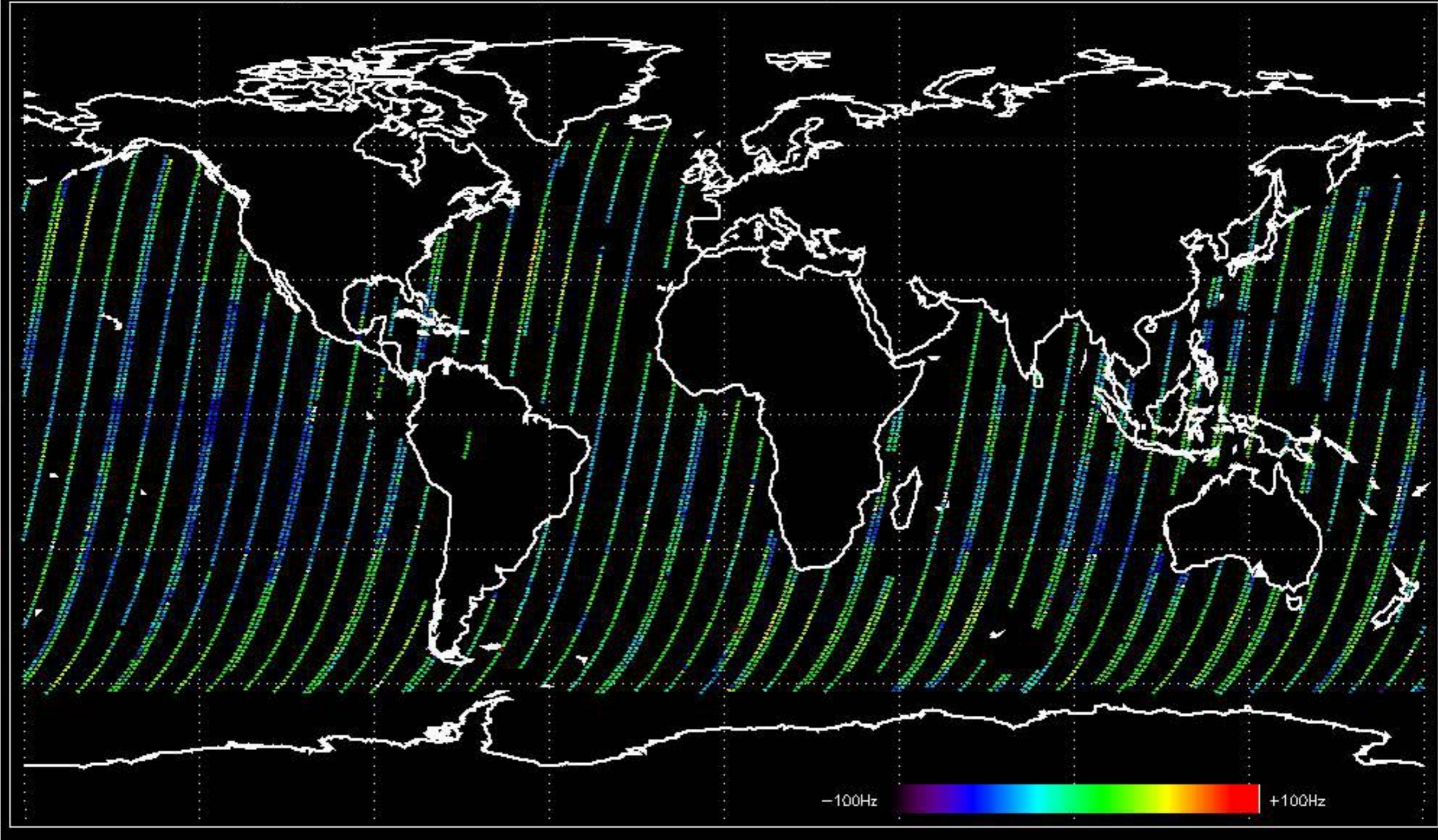
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.004951 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -27.747446 Hz

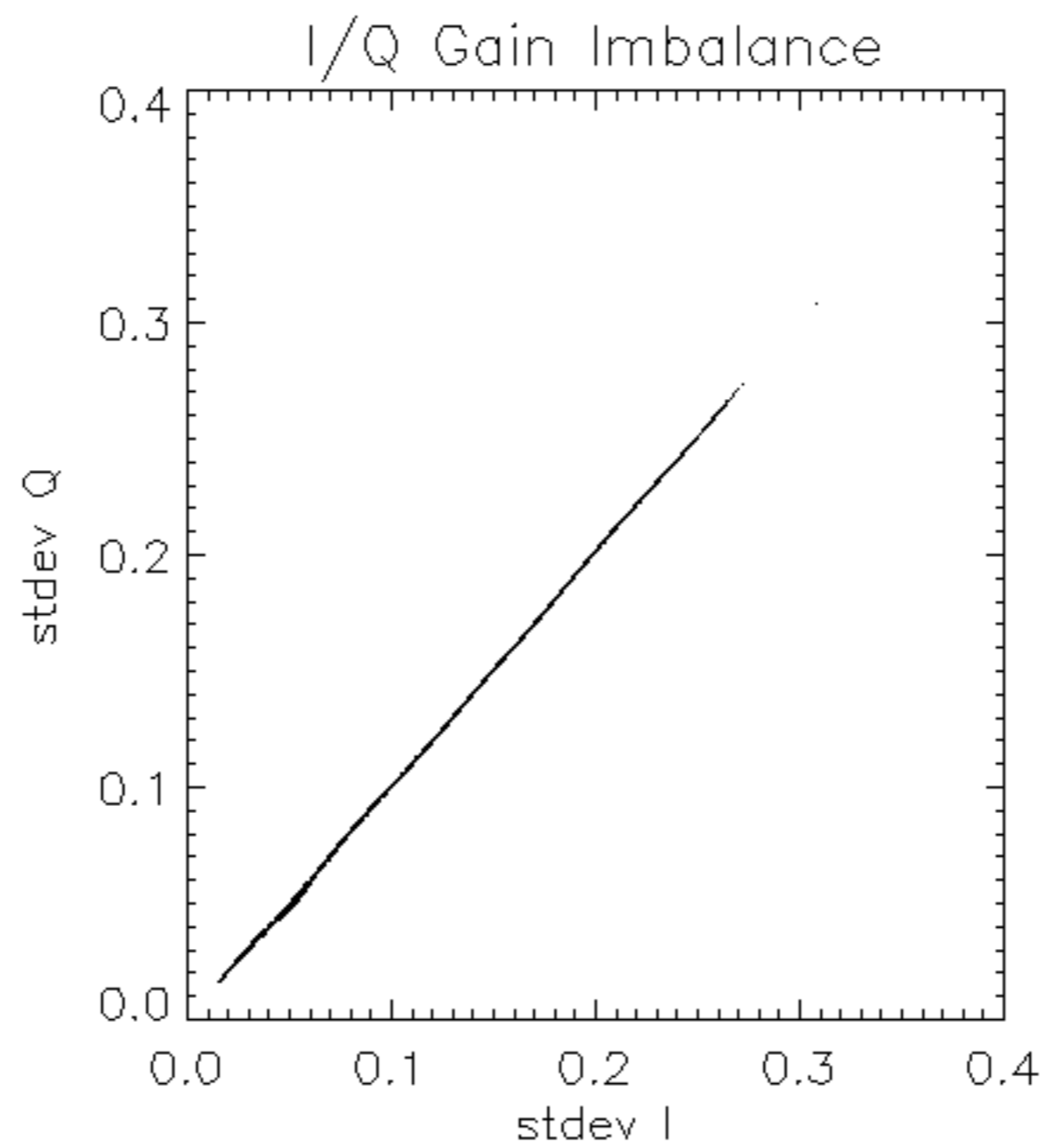


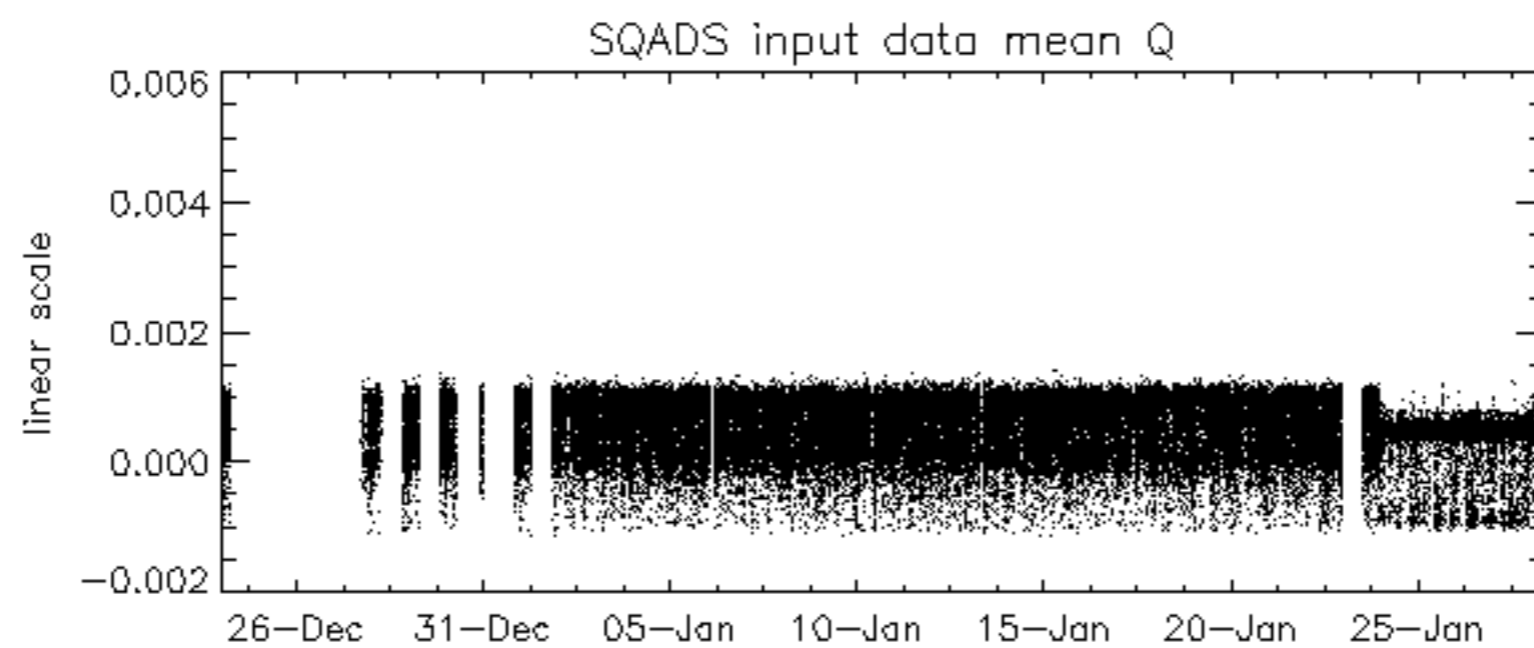
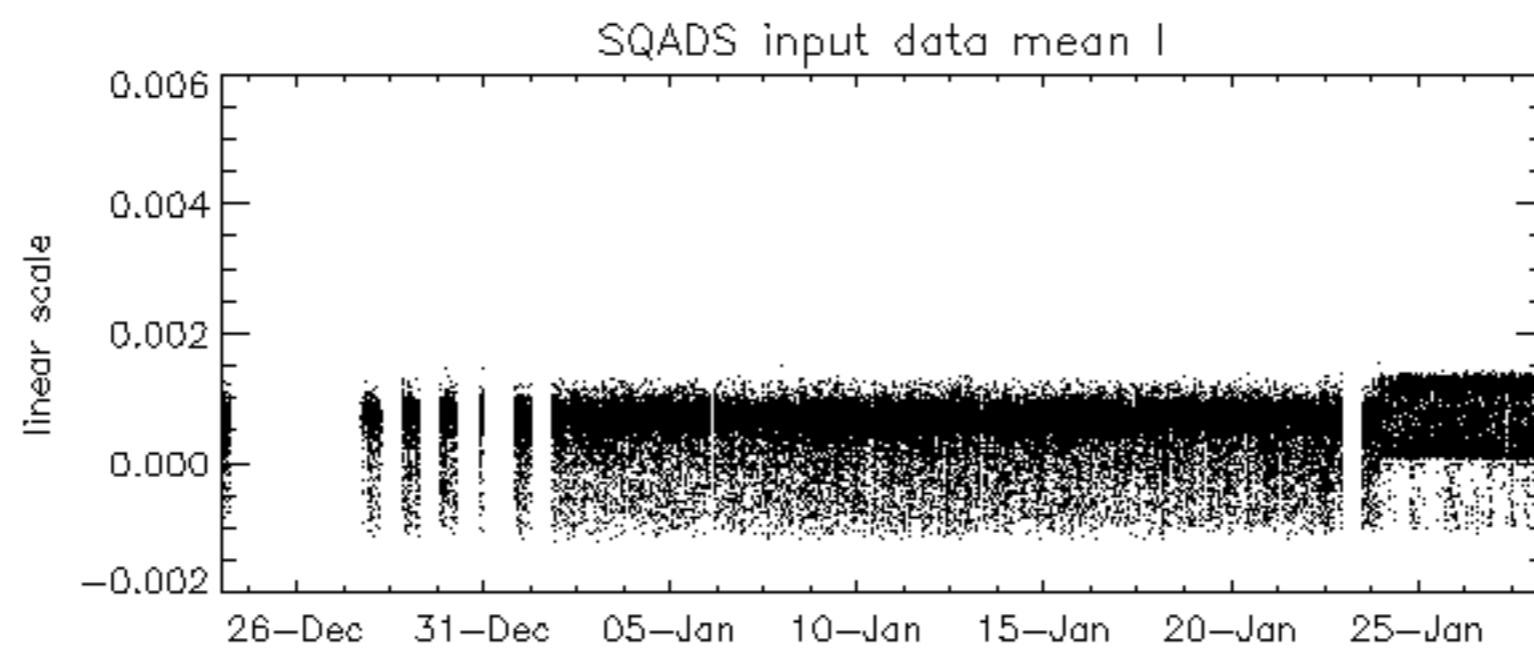
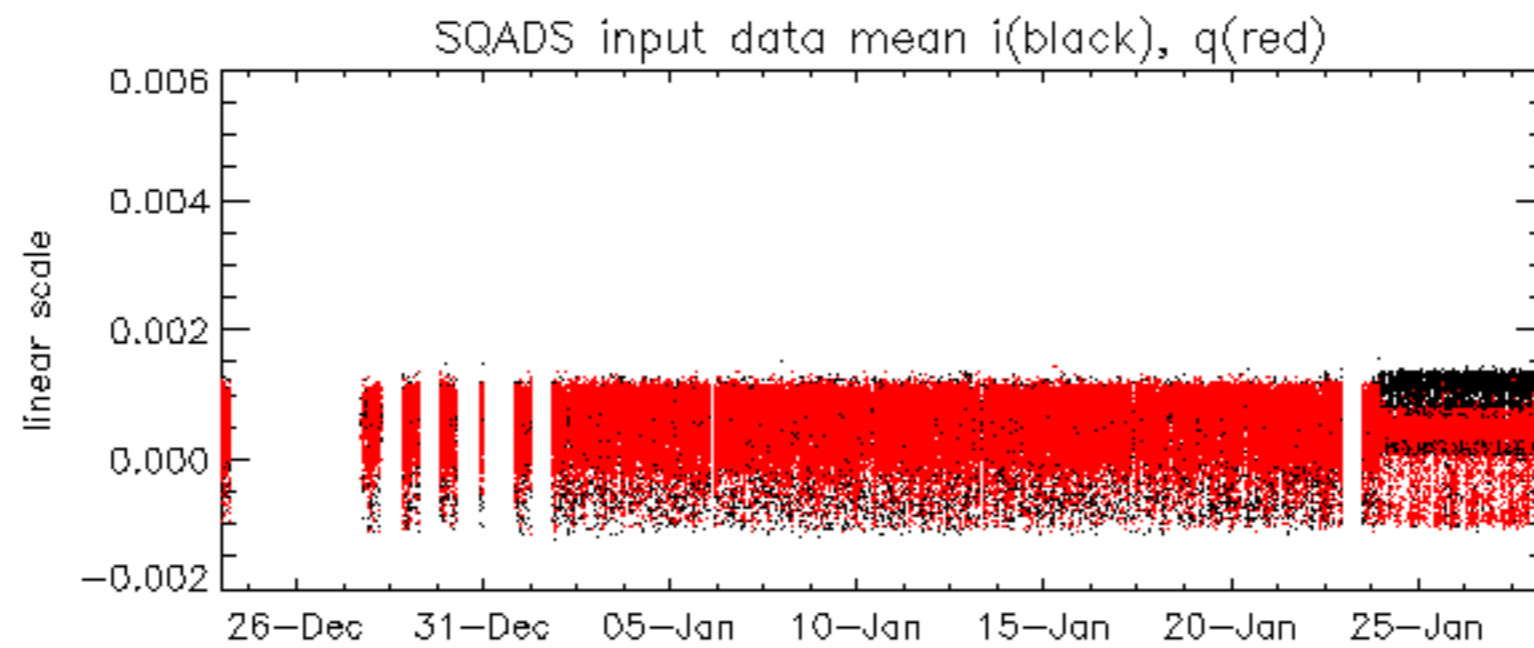
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -34.870436 Hz

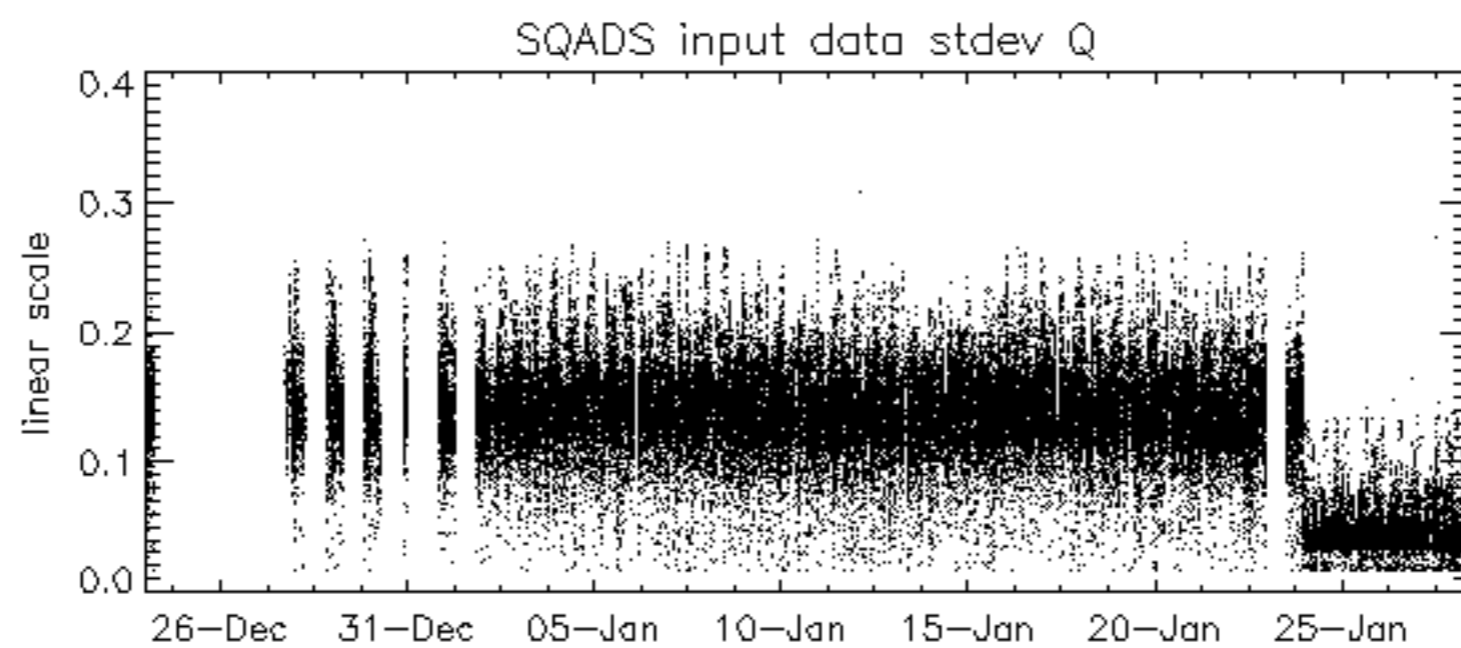
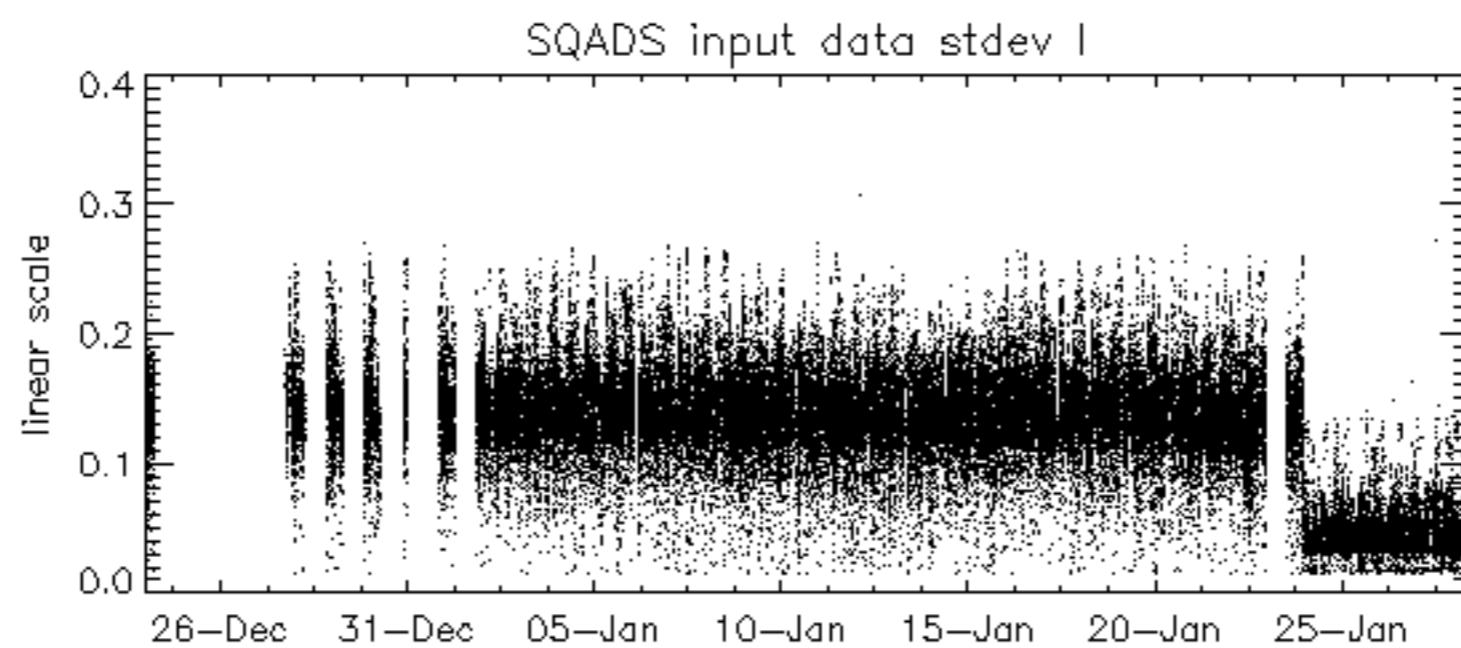
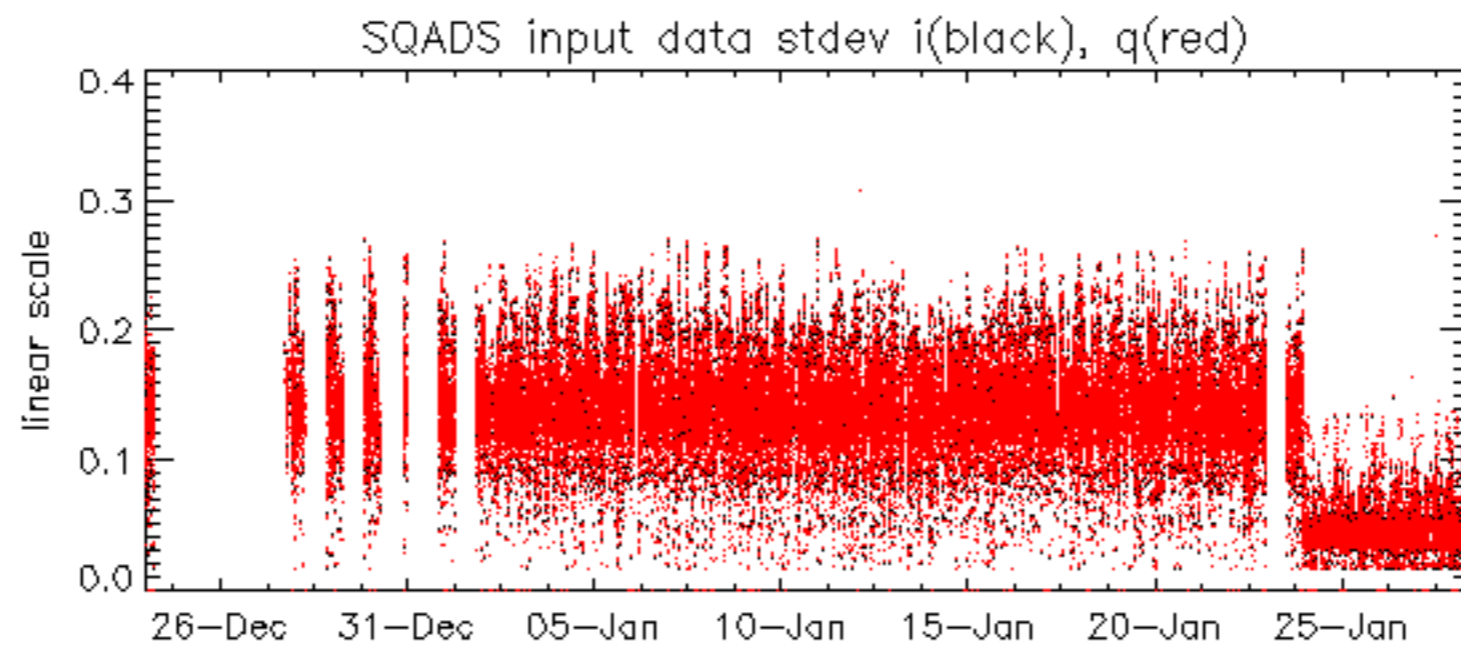


No anomalies observed on available MS products:

No anomalies observed.



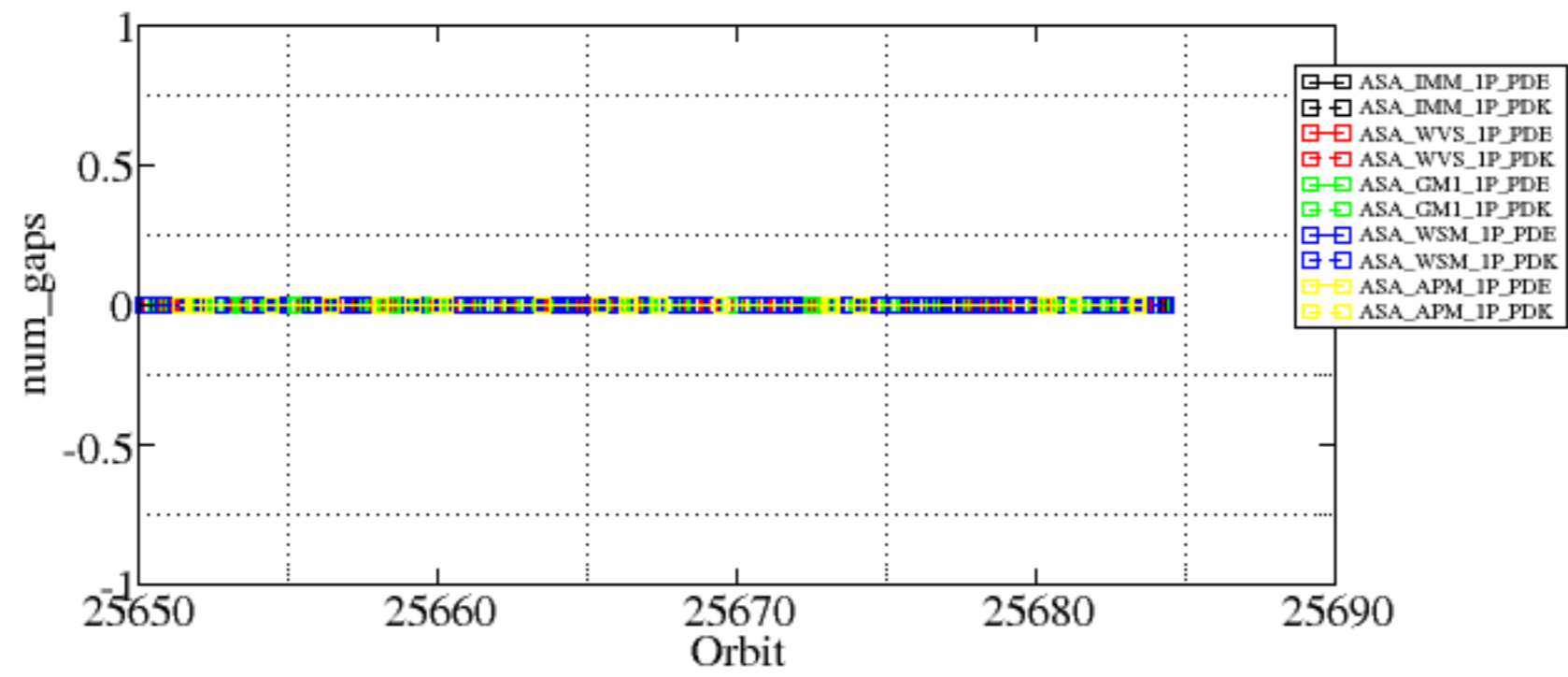




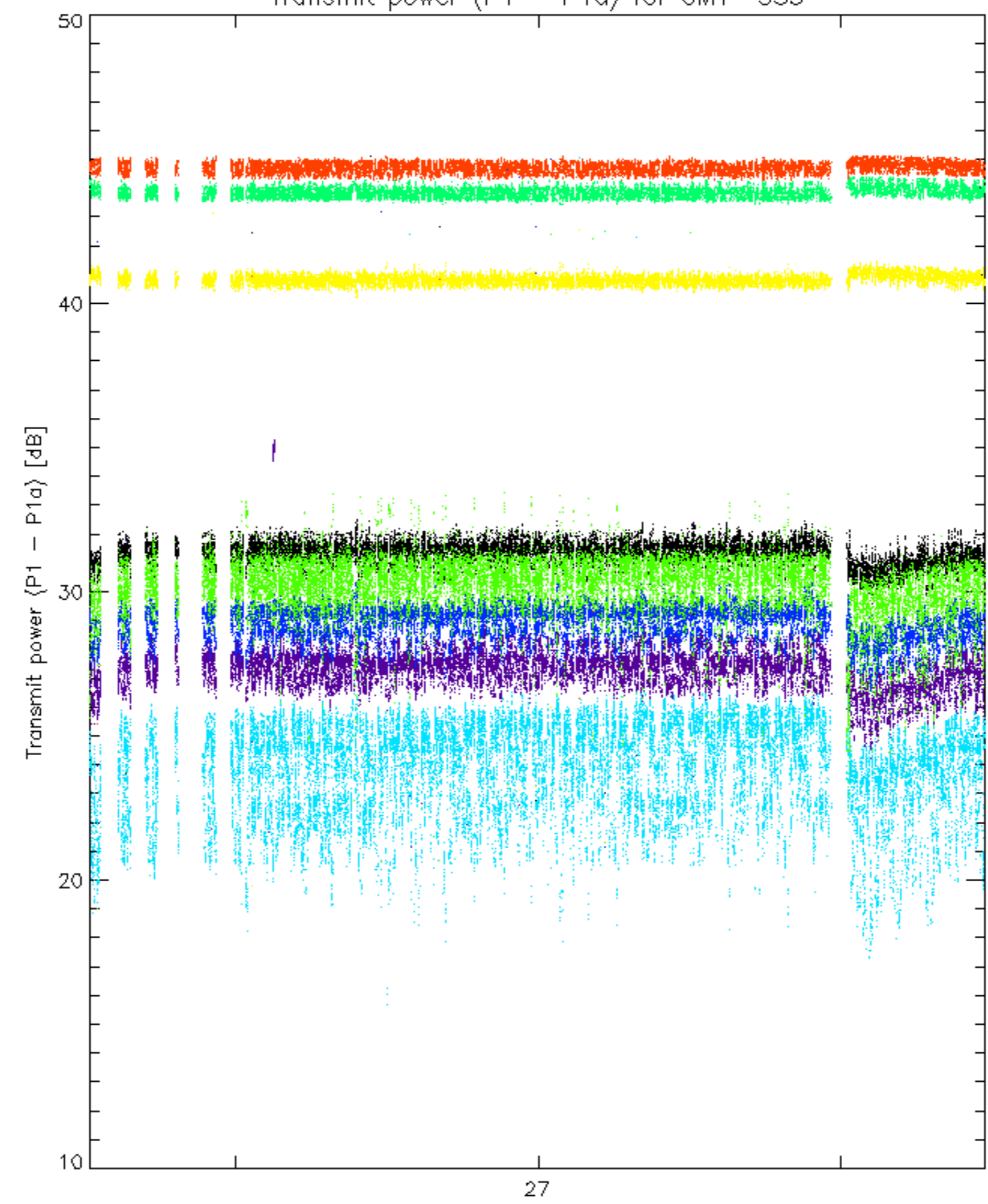
Summary of analysis for the last 3 days 2007012[678]

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

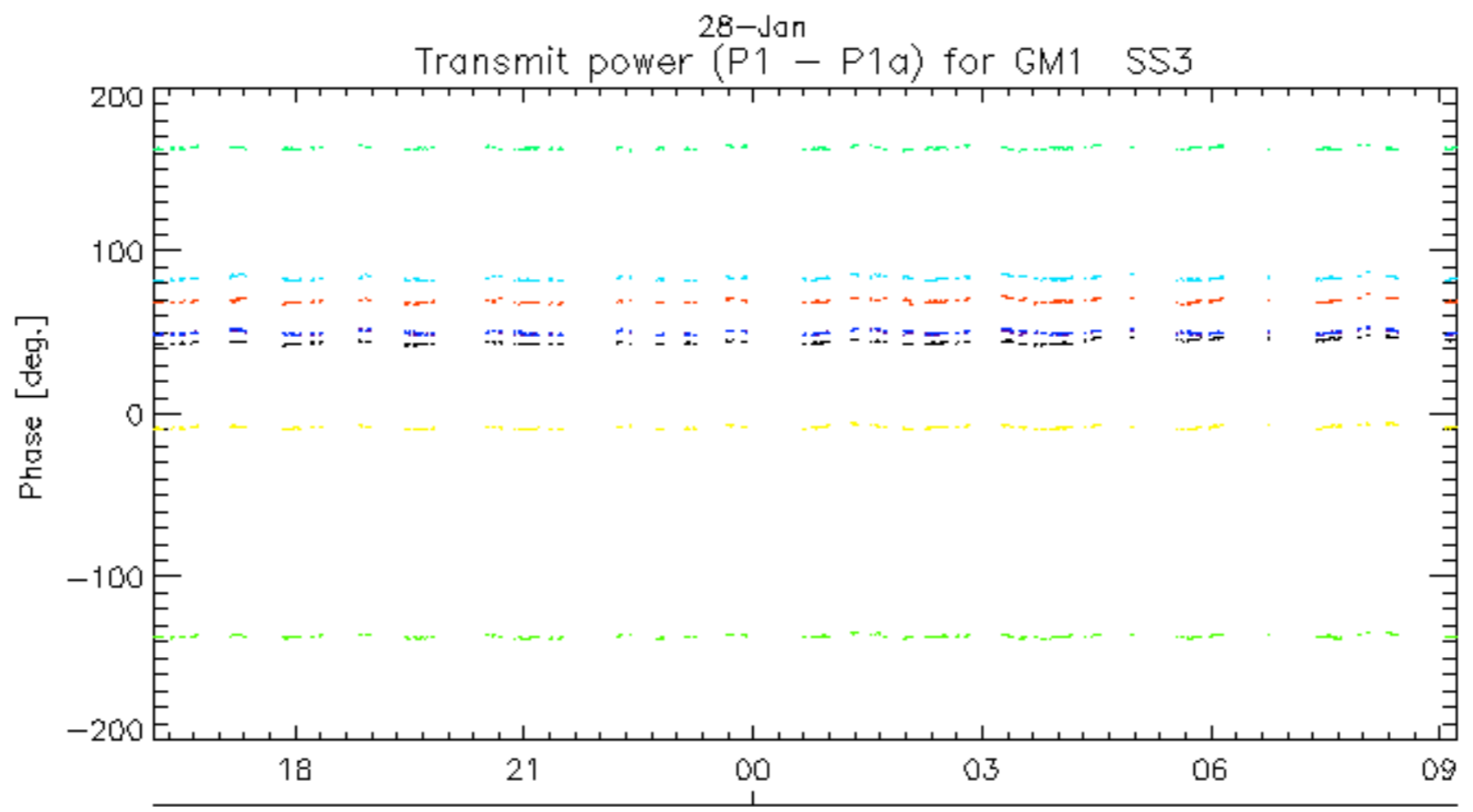
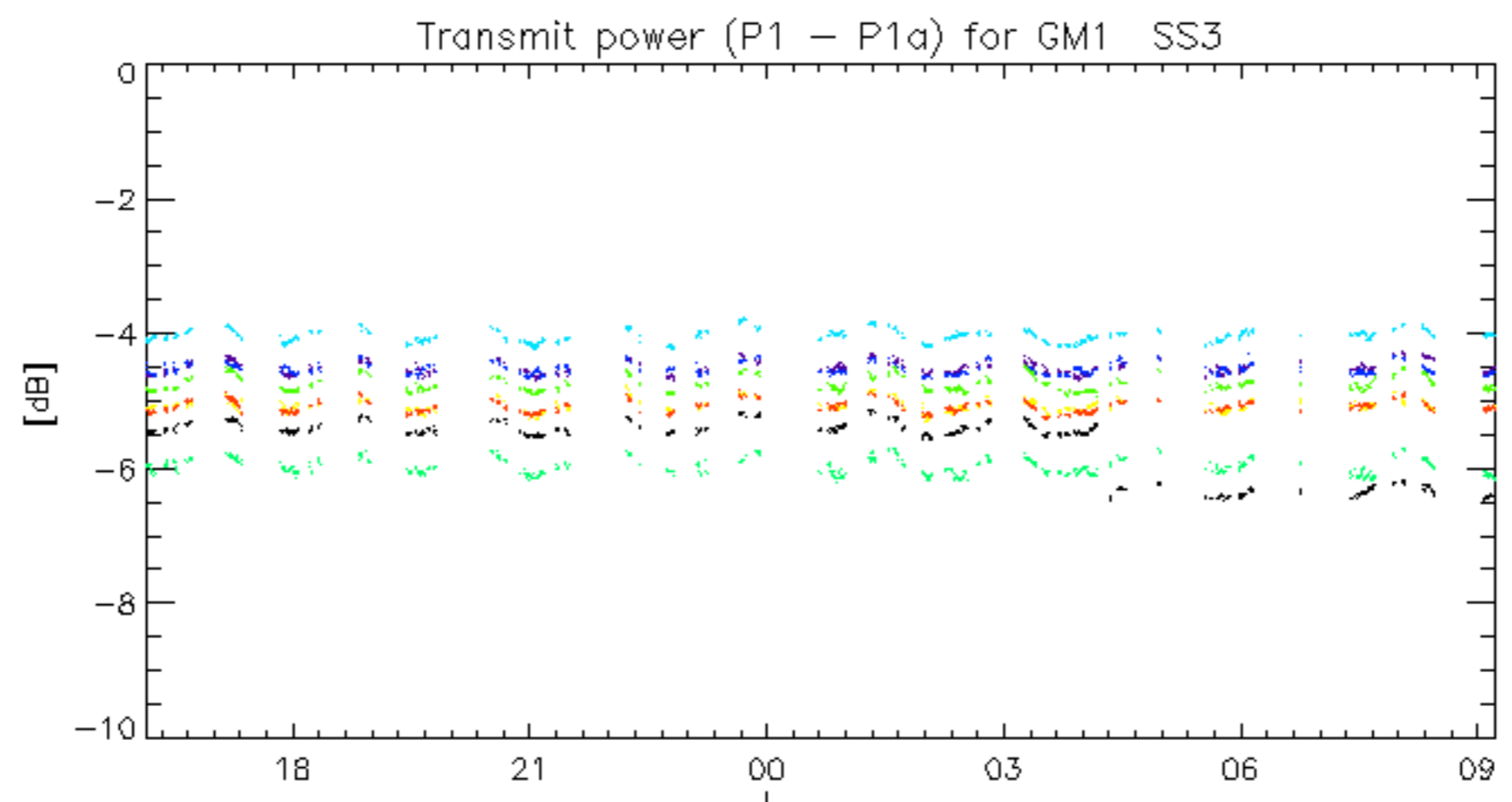
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070126_145411_00000852055_00054_25659_4744.N1	0	34



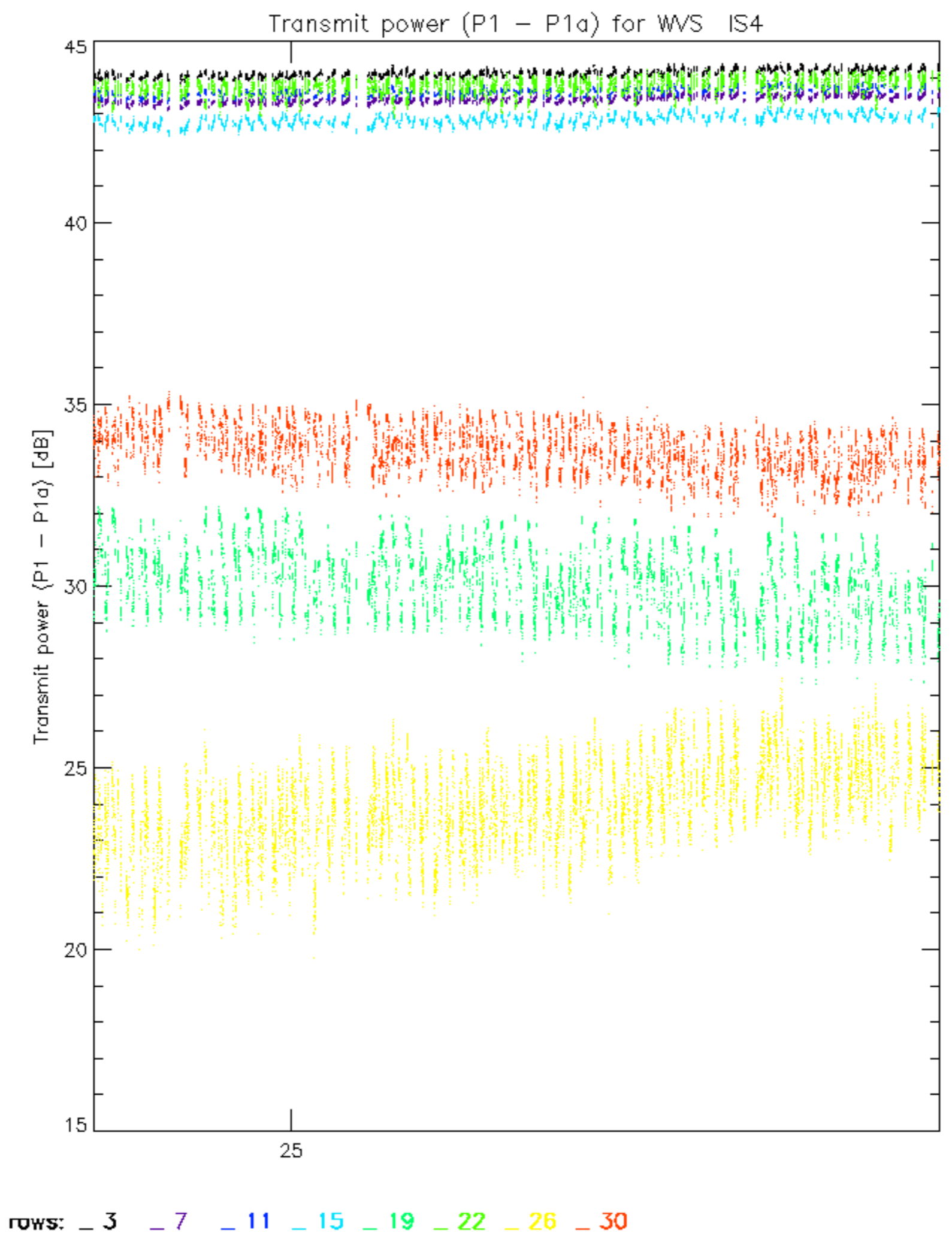
Transmit power (P1 - P1a) for GM1 SS3

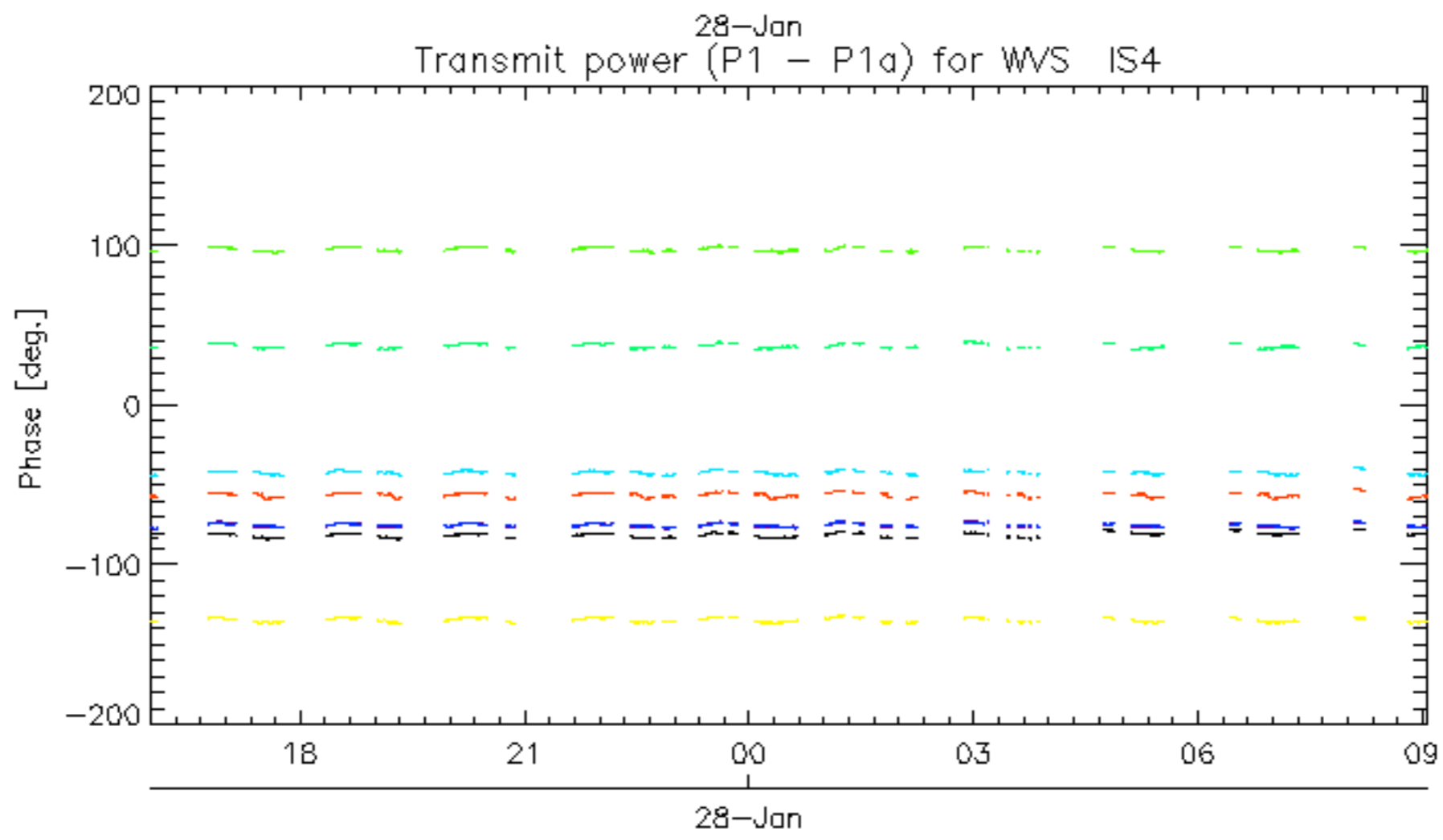
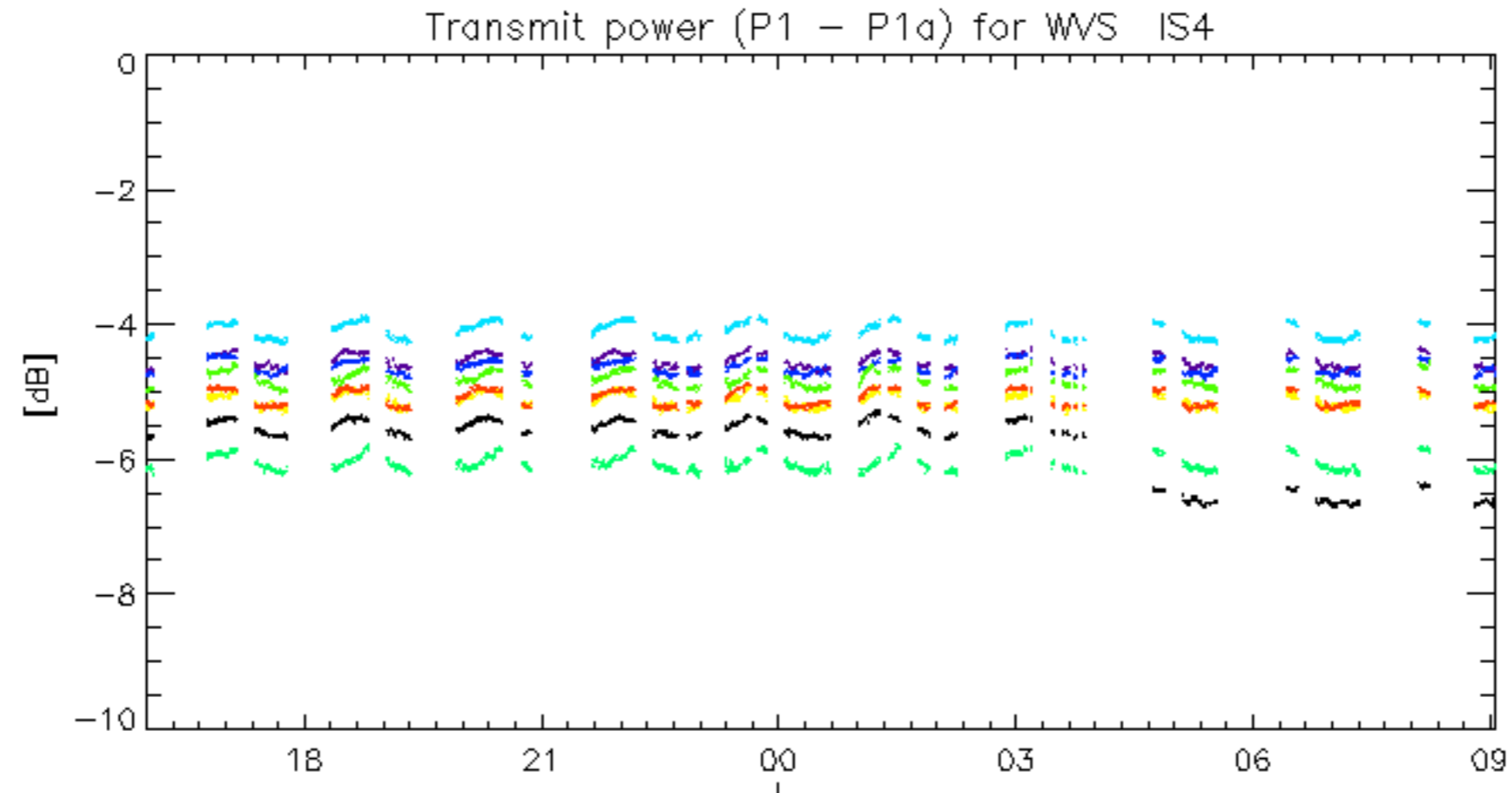


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.