

REPORT OF 040917

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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
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MSM in V/V polarisation

MSM in H/H polarisation

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	
<input type="checkbox"/>	
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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	-3.447736	0.011944	-0.093692
7	P1	-3.295876	0.027890	-0.204514
11	P1	-4.639886	0.033670	-0.013134
15	P1	-5.749526	0.057681	-0.057123
19	P1	-3.505646	0.081269	-0.147909
22	P1	-4.559116	0.110268	-0.122164
24	P1	-4.997475	0.128685	-0.126825
30	P1	-7.014809	0.153152	-0.239884
3	P1	-15.850302	1.357021	-1.913357
7	P1	-14.035554	0.081073	0.142842
11	P1	-20.241674	0.275131	-0.086301
15	P1	-11.778670	0.037900	0.019981
19	P1	-14.016876	1.131369	-0.502649
22	P1	-16.094023	0.346317	0.181280
24	P1	-14.481709	0.319510	0.162545
30	P1	-17.906027	0.635364	-0.102073

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.306648	0.084611	-0.024866

7	P2	-22.601772	0.125571	-0.058033
11	P2	-15.253044	0.155523	0.120988
15	P2	-7.060257	0.097286	-0.005587
19	P2	-9.566762	0.166237	0.031178
22	P2	-17.328505	0.113249	0.062407
24	P2	-20.751263	0.090770	-0.039584
30	P2	-19.201275	0.083005	0.127668

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.149652	0.002683	-0.023193
7	P3	-8.149648	0.002682	-0.023219
11	P3	-8.149641	0.002682	-0.023254
15	P3	-8.149639	0.002683	-0.023279
19	P3	-8.149643	0.002683	-0.023297
22	P3	-8.149632	0.002685	-0.023375
24	P3	-8.149635	0.002684	-0.023354
30	P3	-8.149667	0.002677	-0.022819

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	-2.702191	0.130859	-0.619700
7	P1	-2.933802	0.095822	-0.416759
11	P1	-3.874779	0.019828	0.010957
15	P1	-3.524049	0.020625	0.008318
19	P1	-3.512711	0.099072	-0.136176

22	P1	-5.729780	0.122527	-0.122919
24	P1	-3.948378	0.054051	-0.116403
30	P1	-6.209337	0.099206	-0.128584
3	P1	-10.479185	0.734242	-1.661601
7	P1	-10.061187	0.158483	-0.269107
11	P1	-12.160702	0.102584	0.034647
15	P1	-11.671994	0.072268	-0.020025
19	P1	-15.747322	2.071877	-0.602056
22	P1	-23.346394	1.569470	0.302844
24	P1	-17.928717	0.348856	0.065456
30	P1	-20.409790	1.273182	0.212788

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.984970	0.051294	-0.013007
7	P2	-22.745035	0.040884	0.017337
11	P2	-10.951182	0.061296	0.091703
15	P2	-4.959662	0.031011	-0.006612
19	P2	-6.770400	0.046841	-0.022946
22	P2	-7.434883	0.038941	0.048055
24	P2	-11.055900	0.044260	-0.016812
30	P2	-22.165409	0.030224	0.096796

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.001085	0.003138	-0.019526
7	P3	-8.000997	0.003138	-0.019798
11	P3	-8.001083	0.003136	-0.019468
15	P3	-8.001046	0.003129	-0.019865
19	P3	-8.001041	0.003146	-0.019661
22	P3	-8.001046	0.003133	-0.019723
24	P3	-8.001083	0.003159	-0.019872
30	P3	-8.000995	0.003138	-0.019434

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	
	stdev	
MEAN Q	mean	
	stdev	



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	
	stdev	
STDEV Q	mean	
	stdev	



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)

✘
Ascending
✘
Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

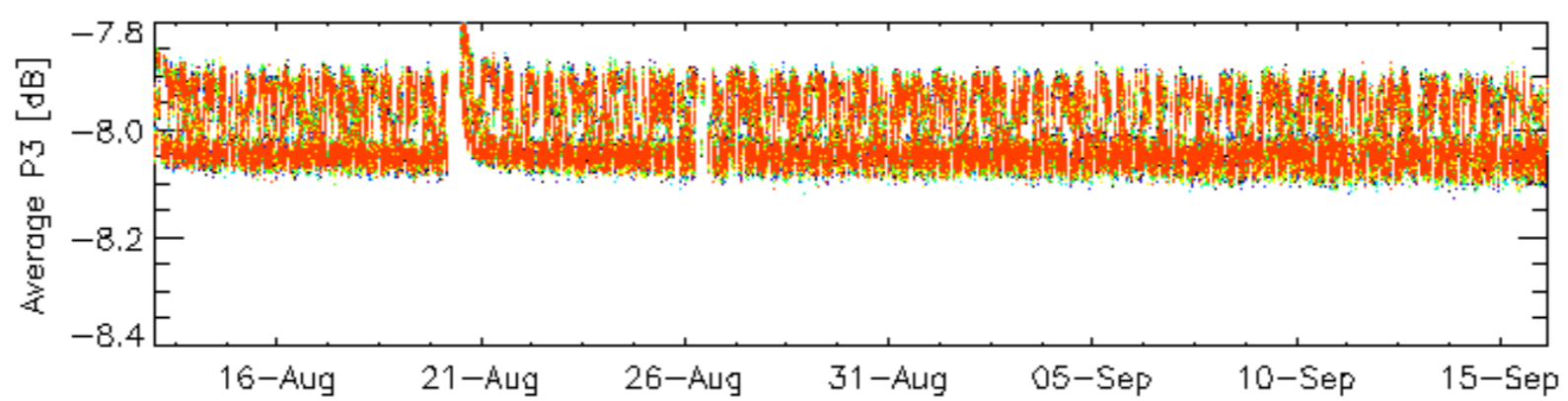
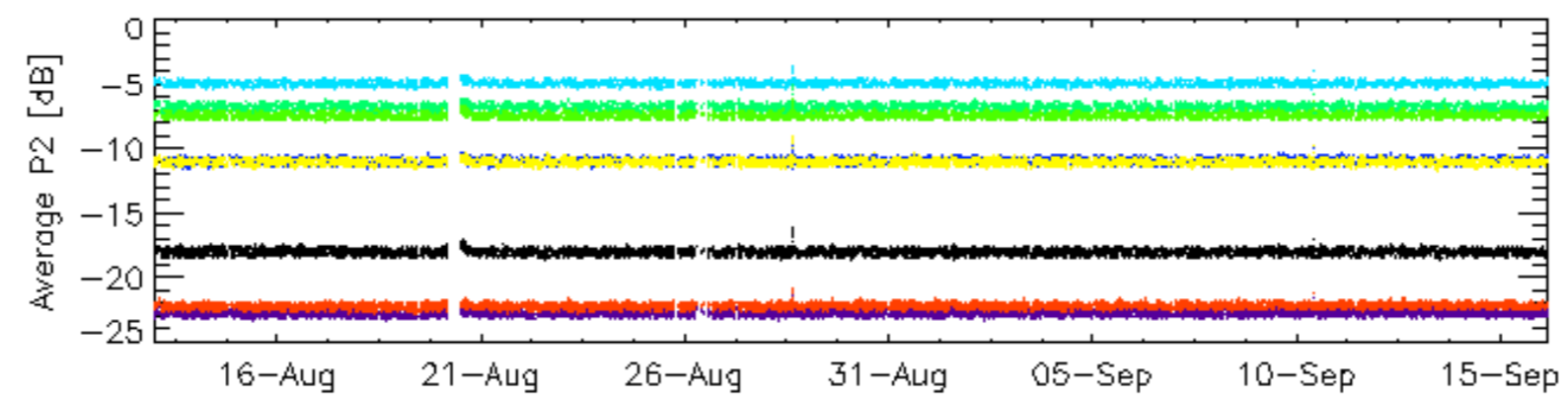
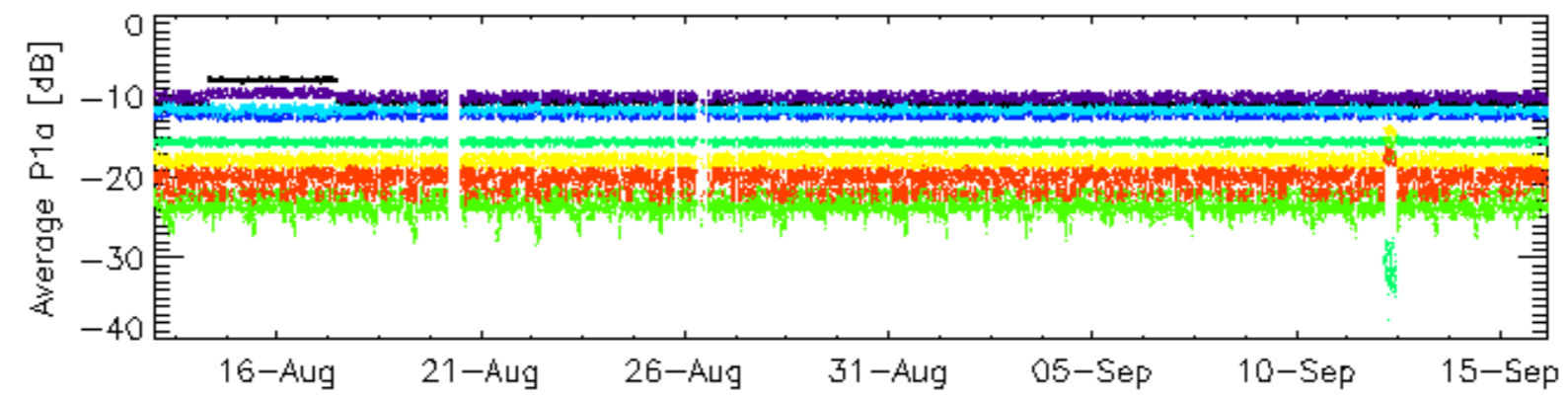
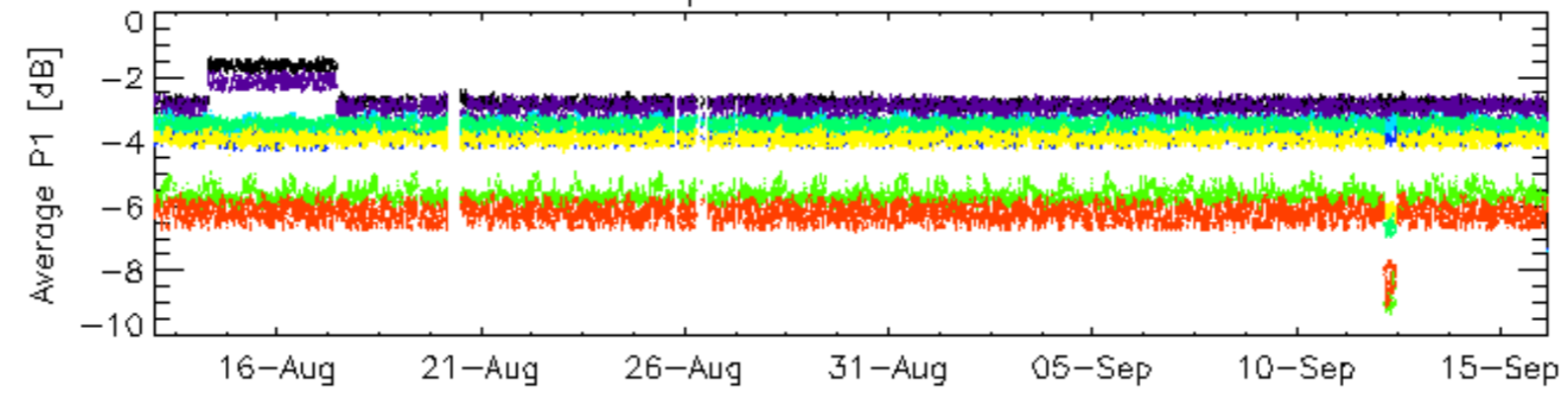
Ascending

Descending

6.6 - Doppler evolution versus ANX for GM1

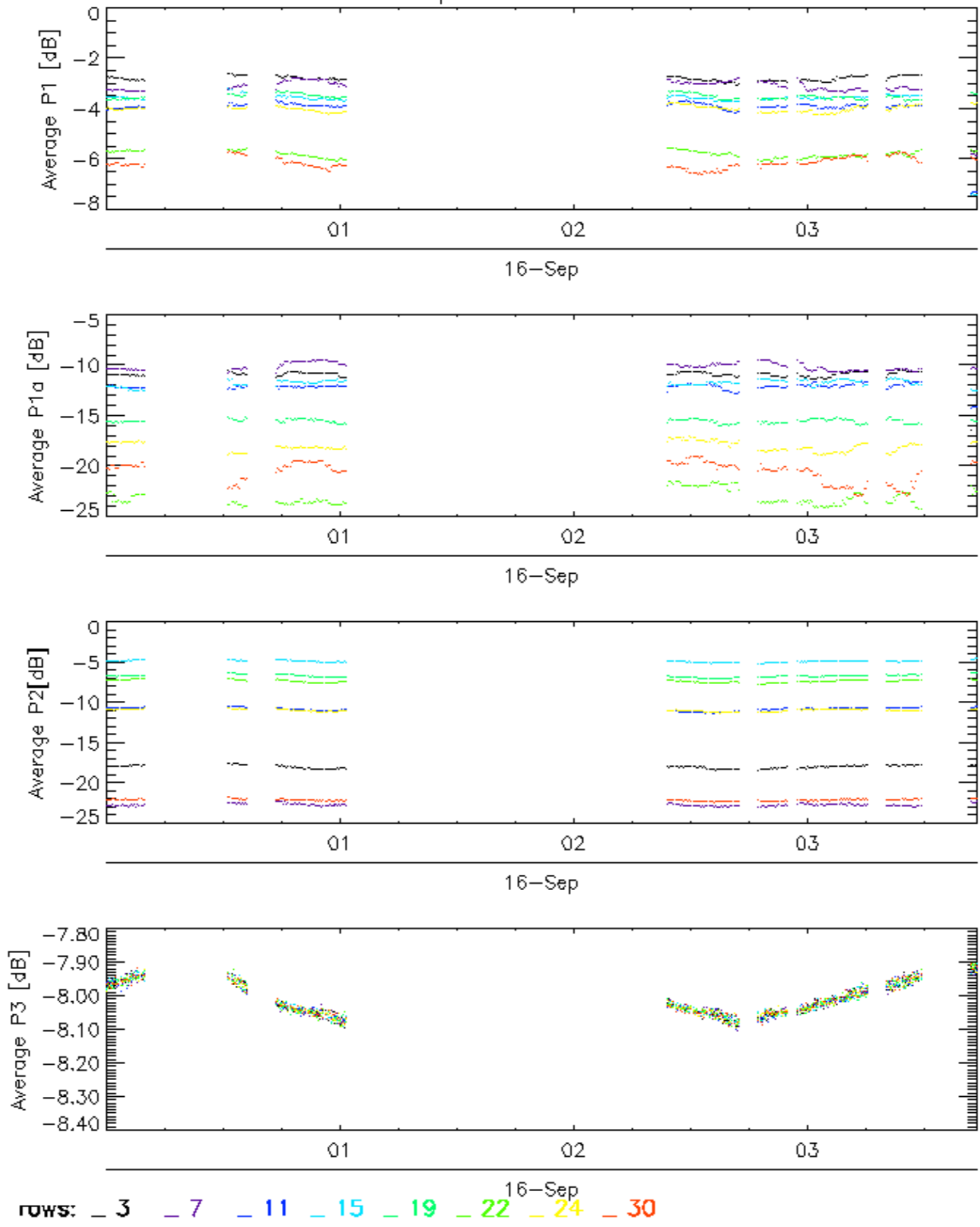
Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

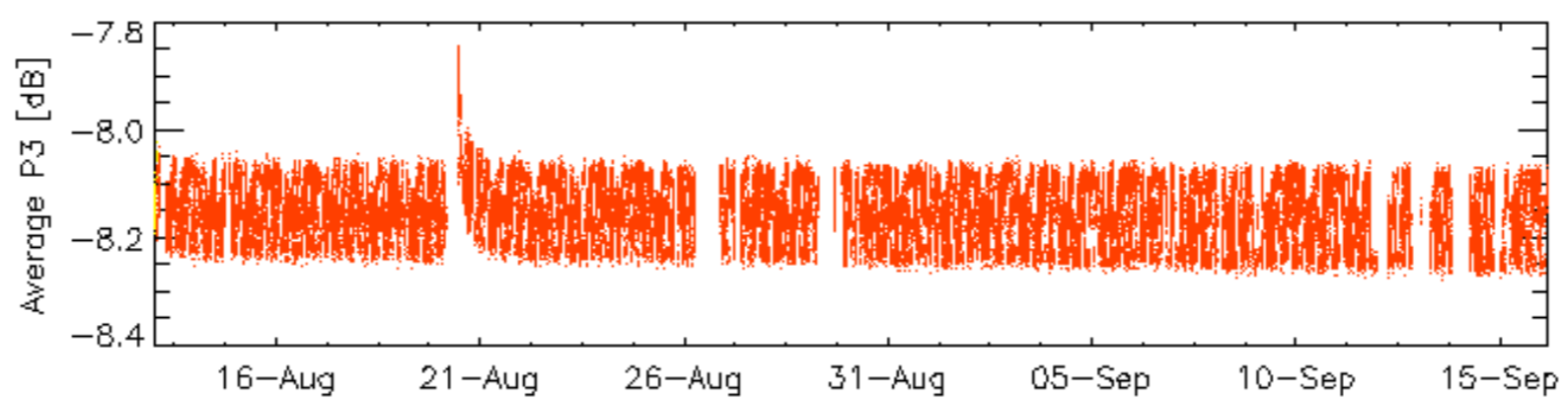
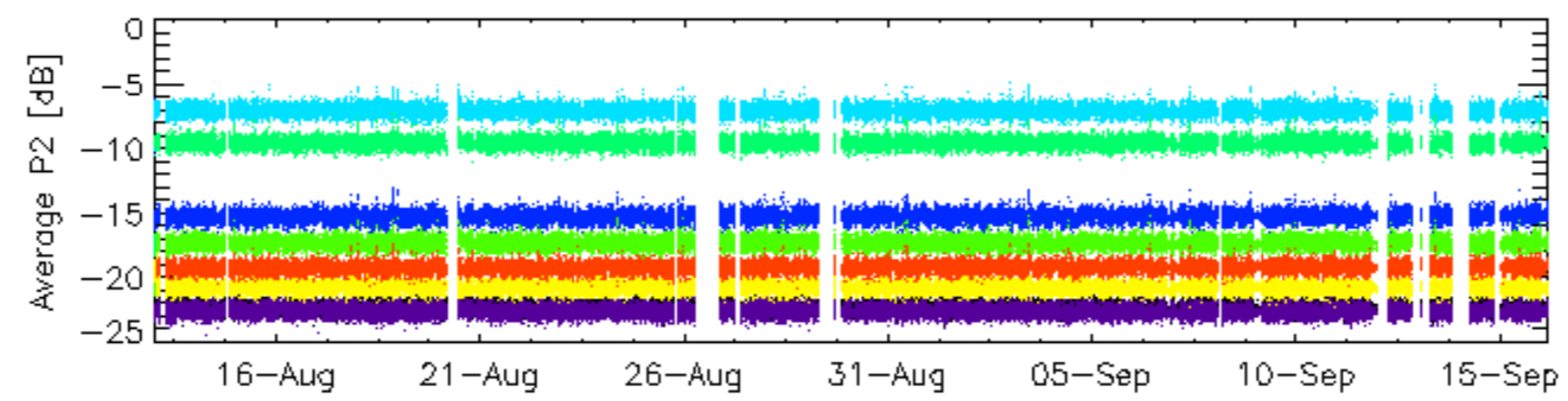
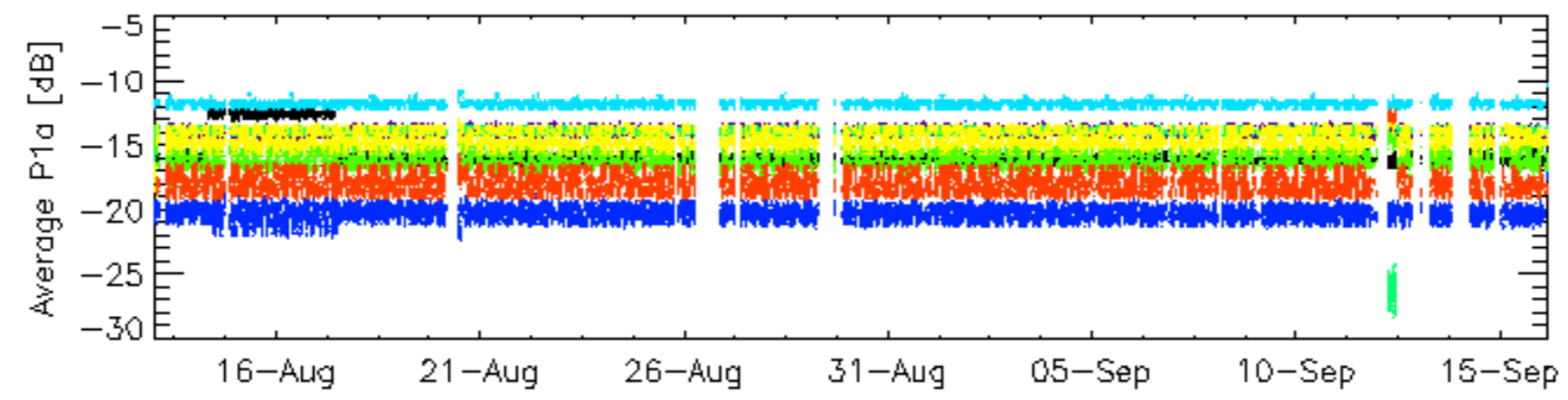
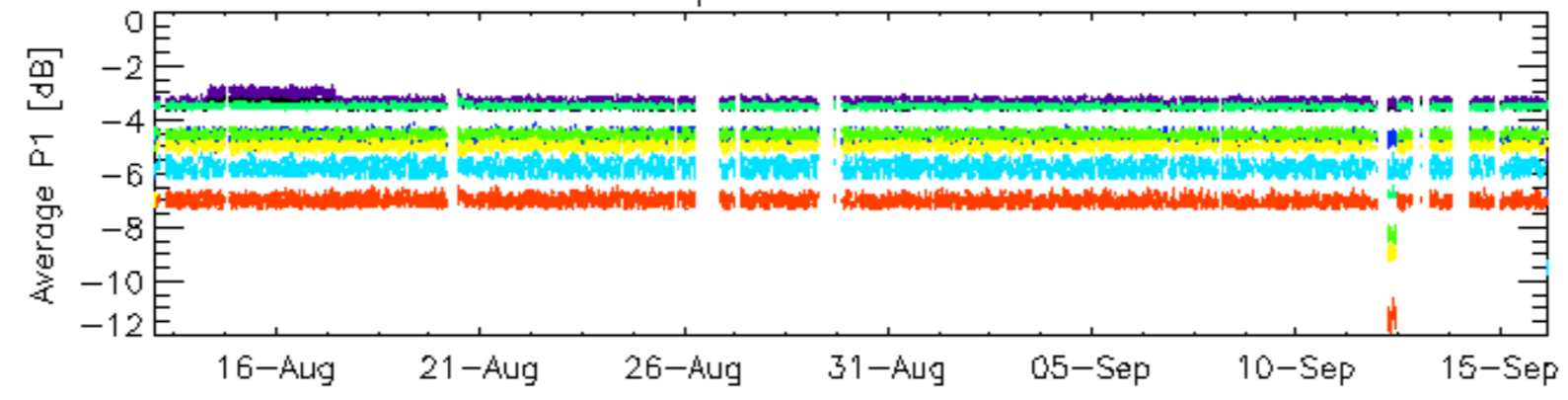


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

Cal pulses for GM1 SS3

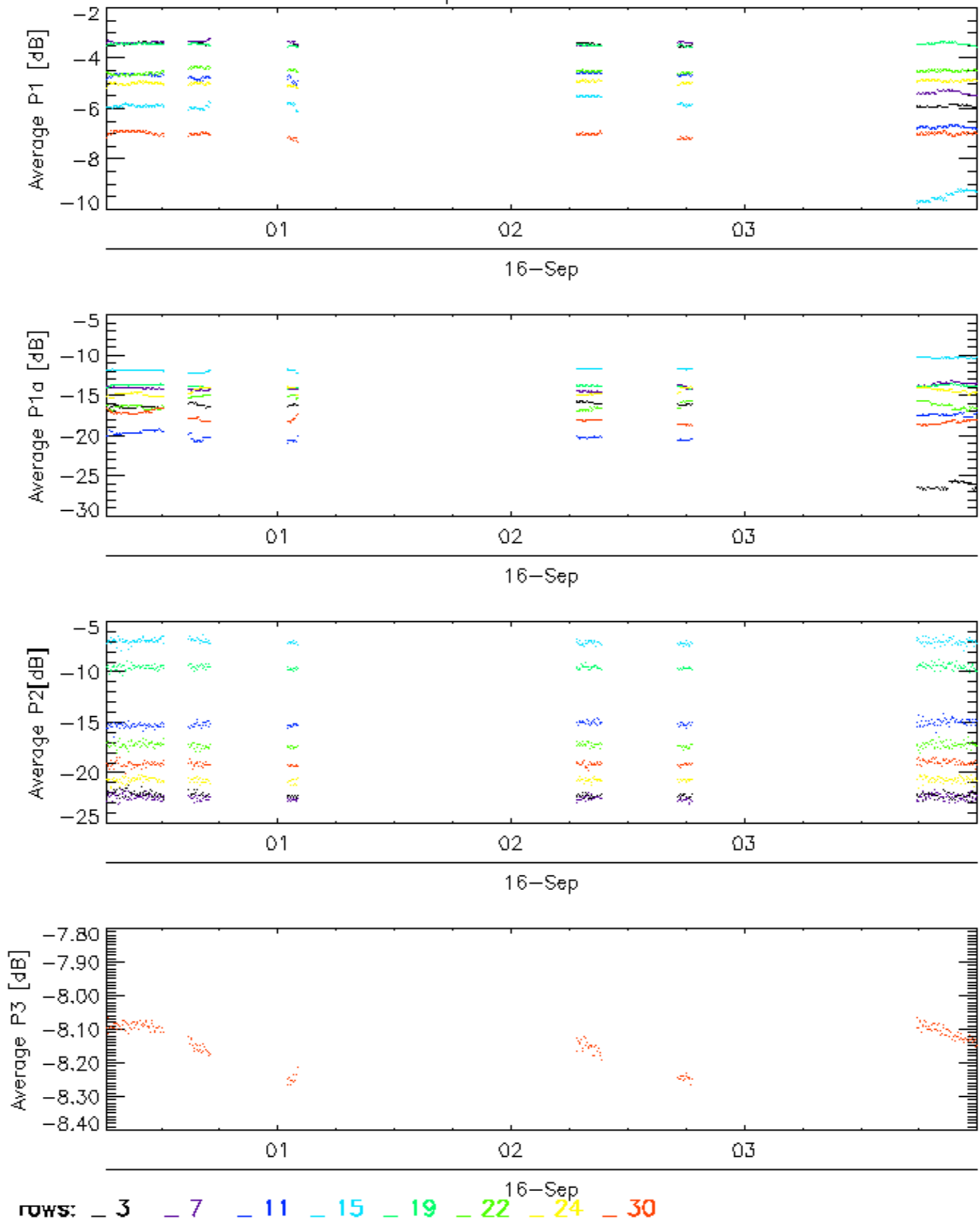


Cal pulses for WVS IS2

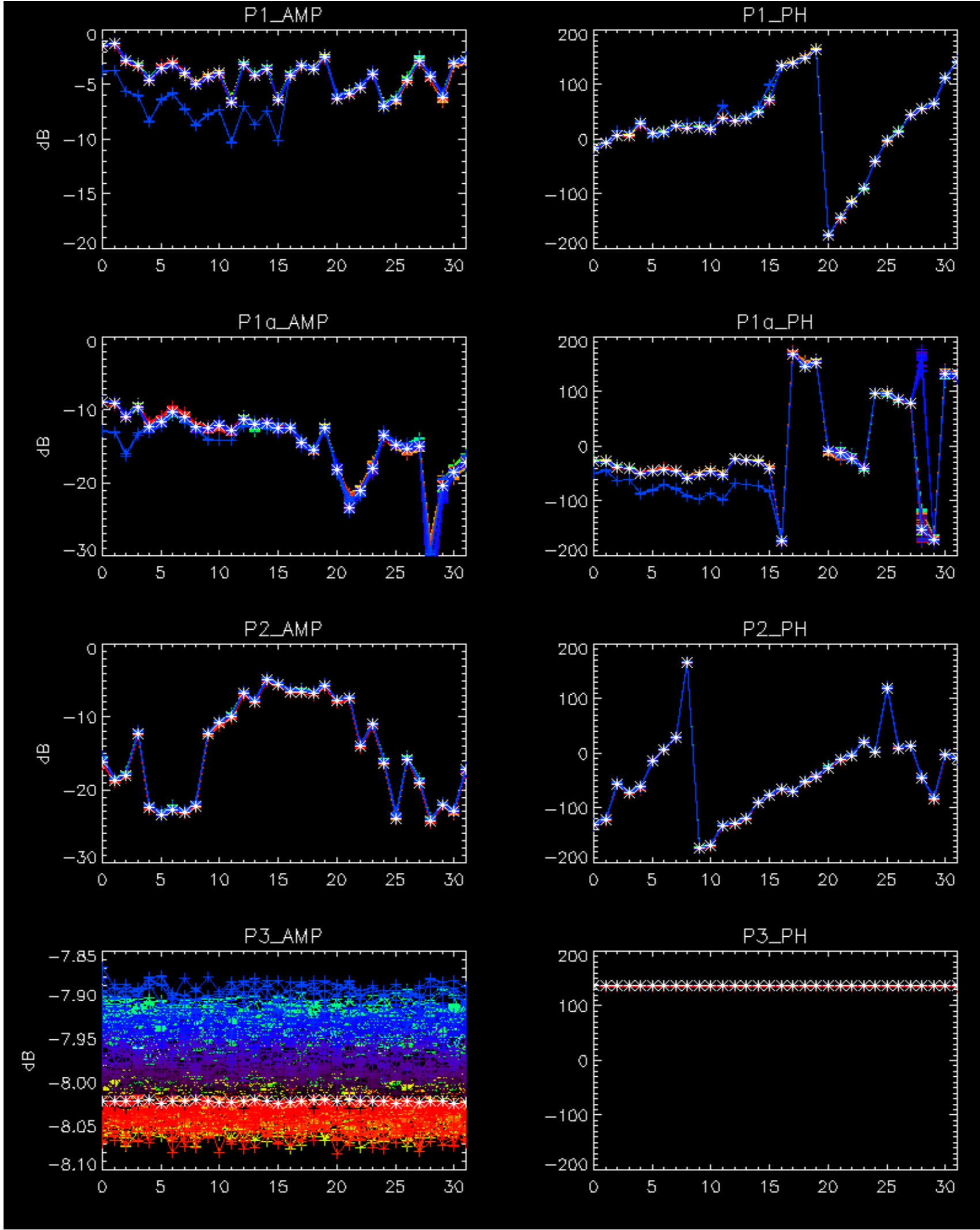


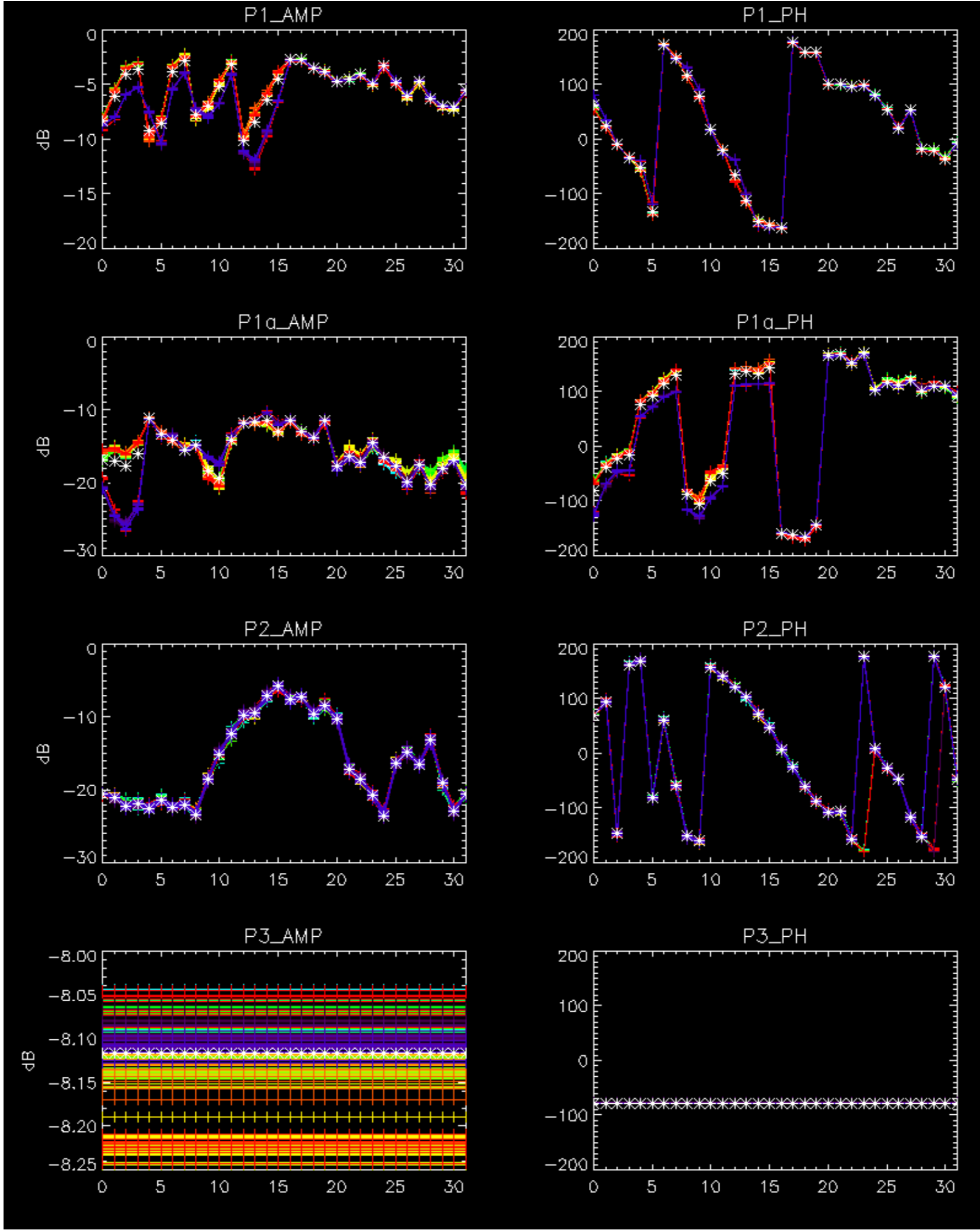
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

Cal pulses for WVS IS2



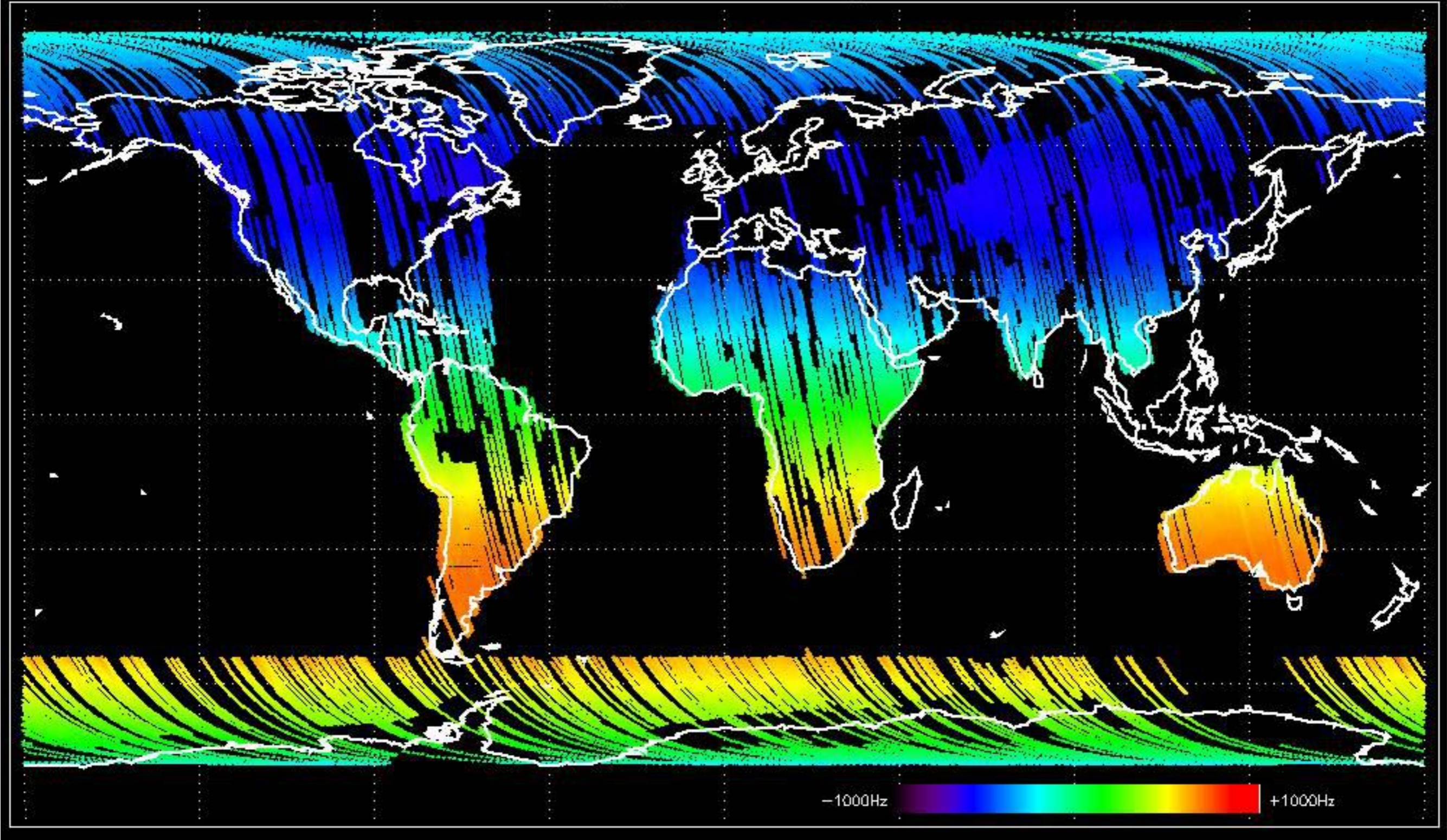
No anomalies observed.



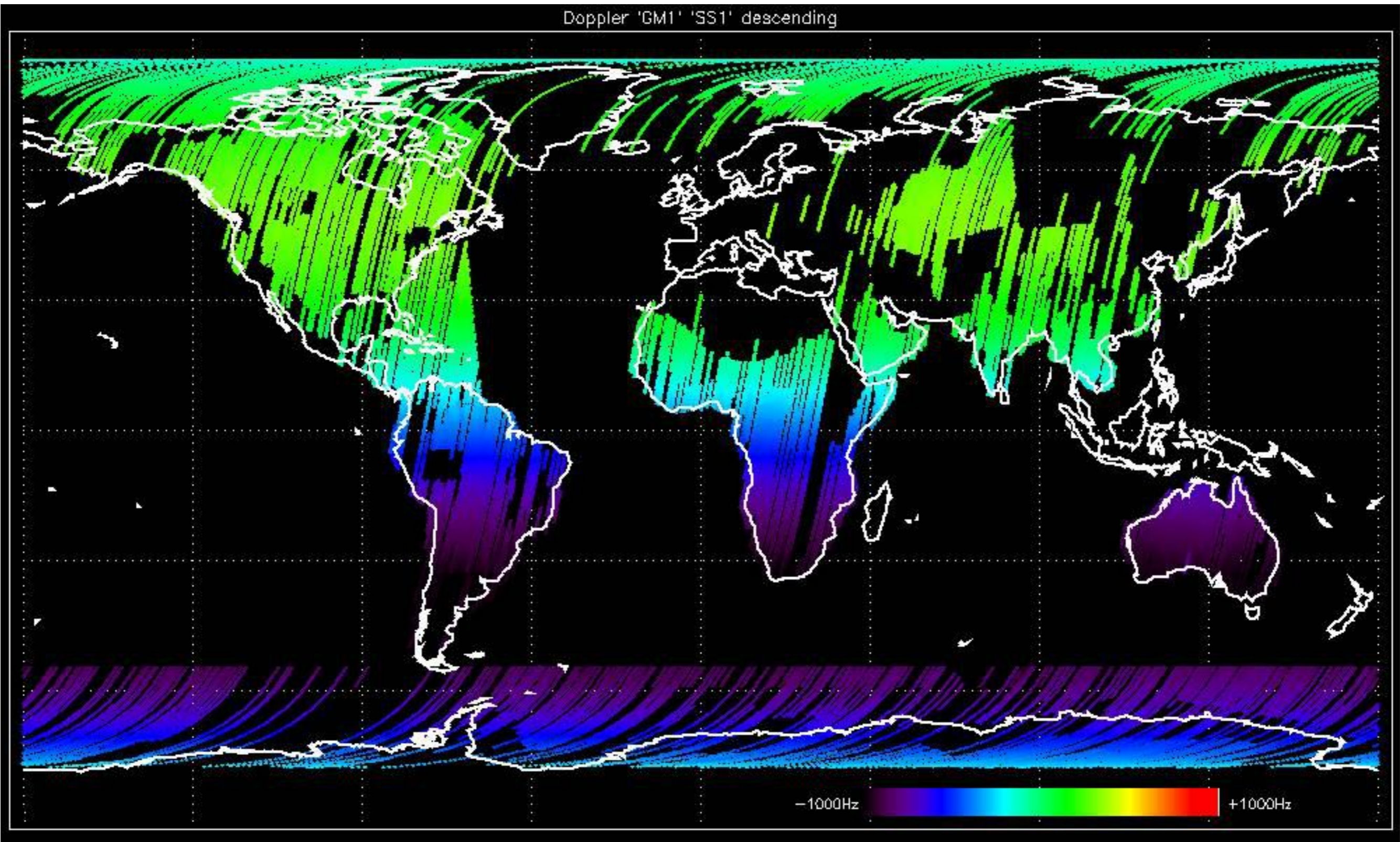


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

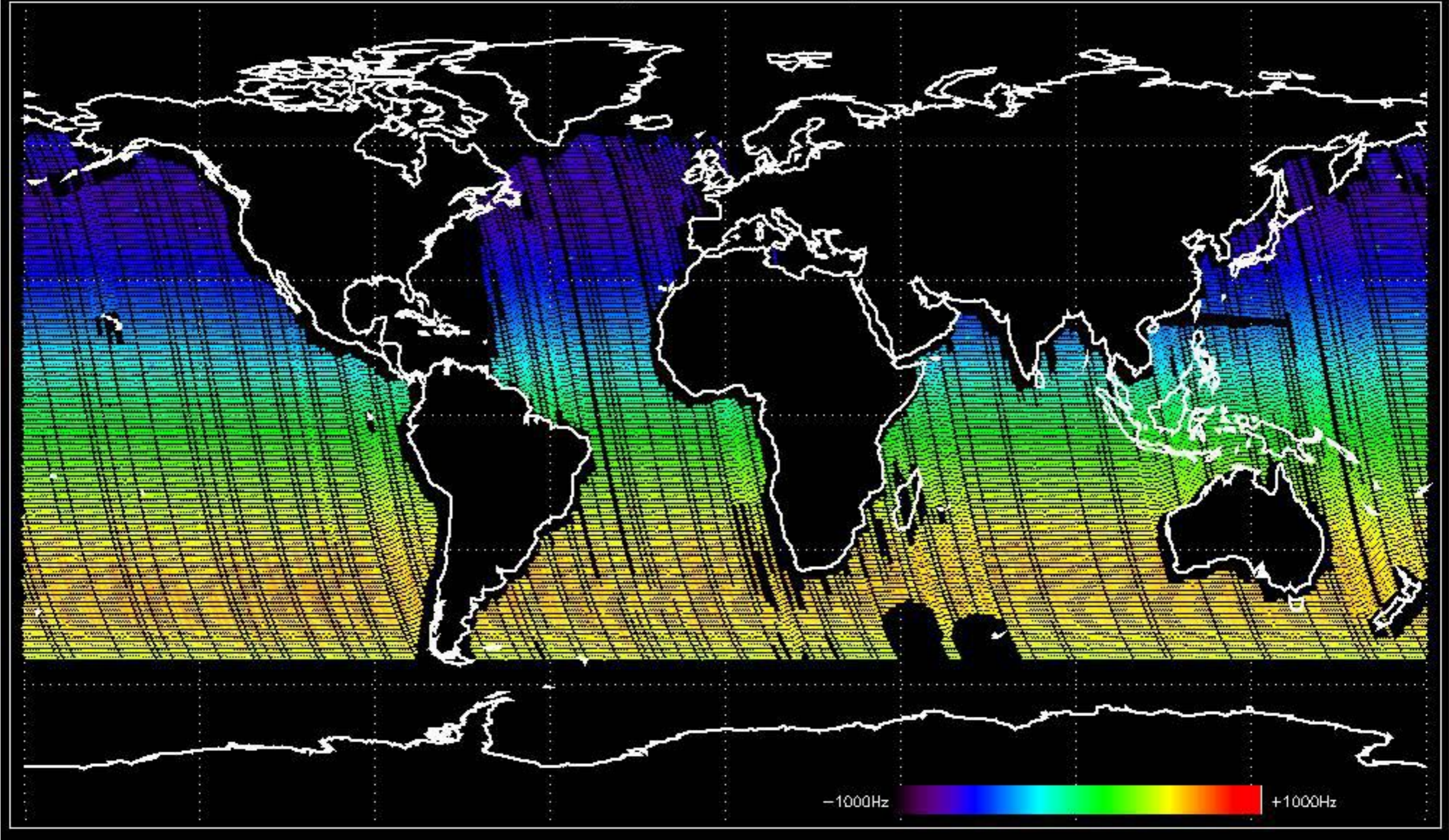
Doppler 'GM1' 'SS1' ascending



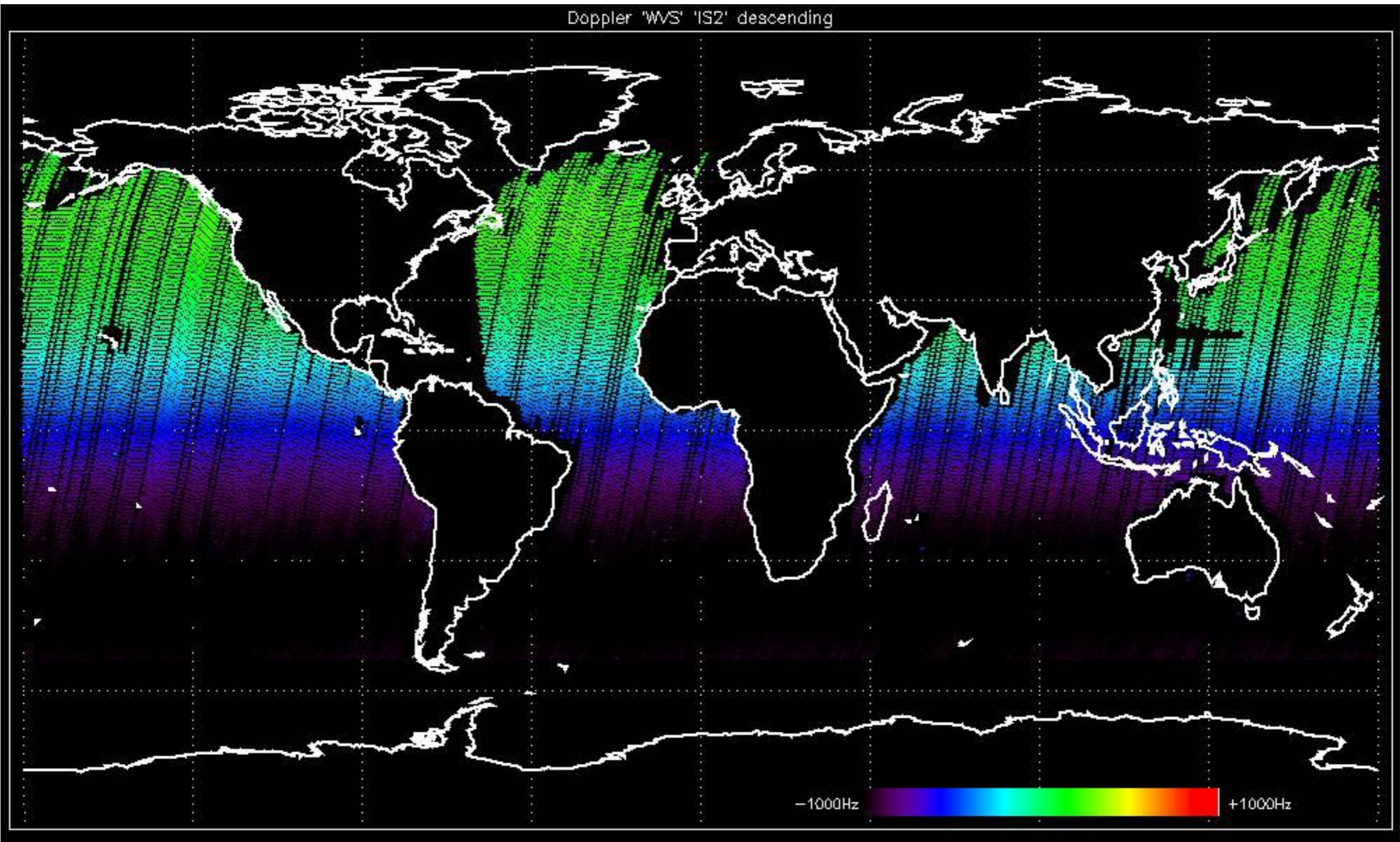
Doppler 'GM1' 'SS1' descending



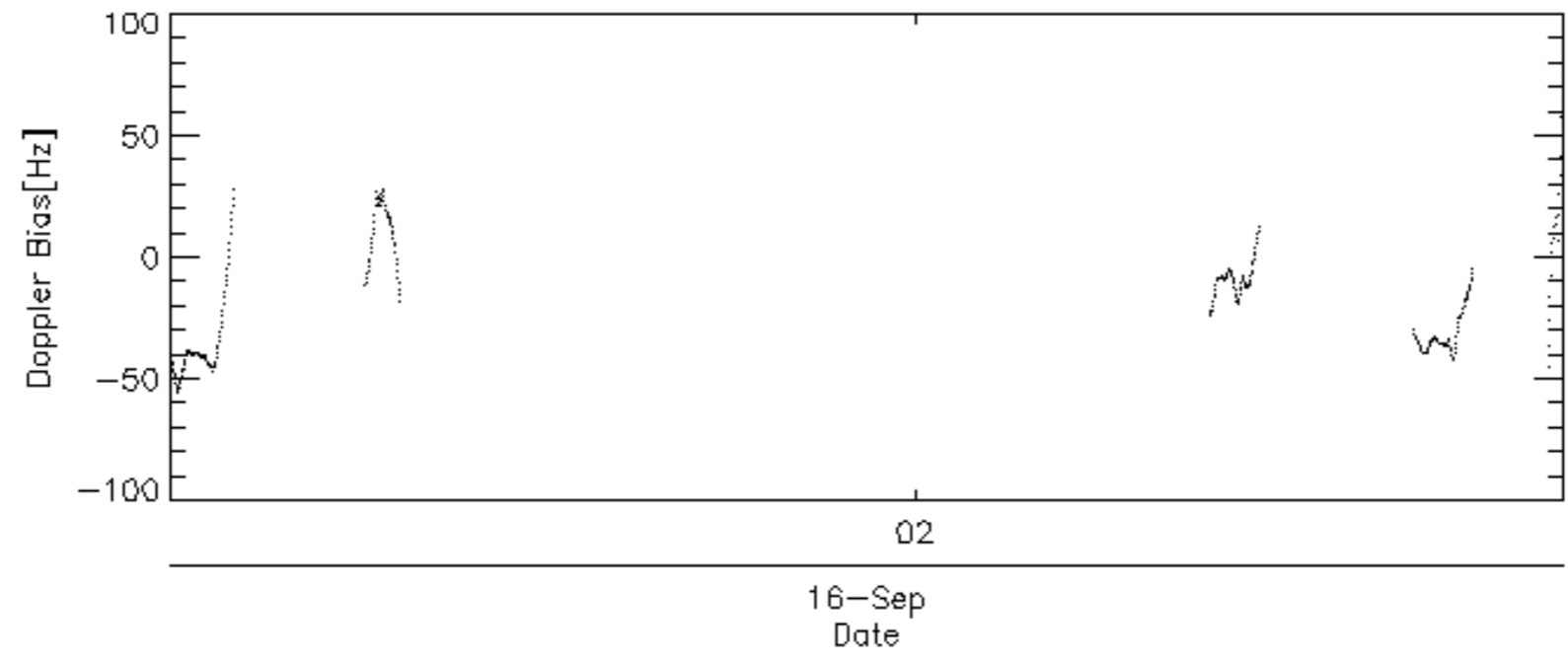
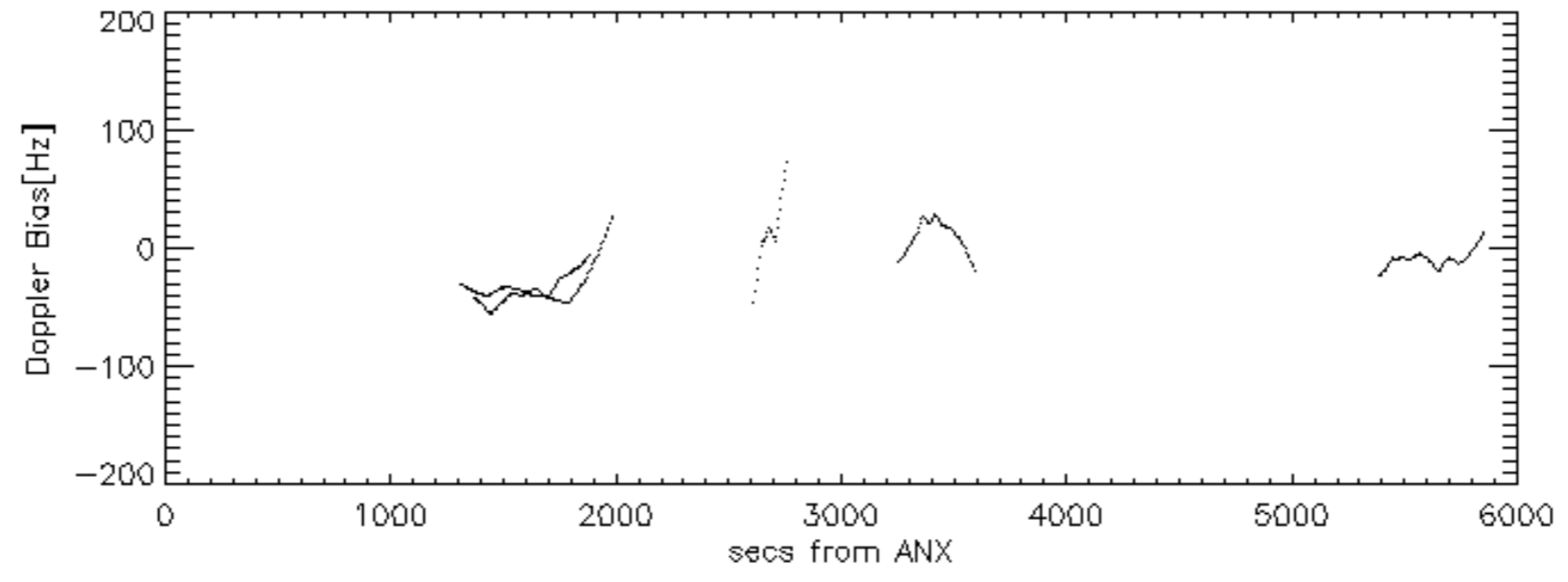
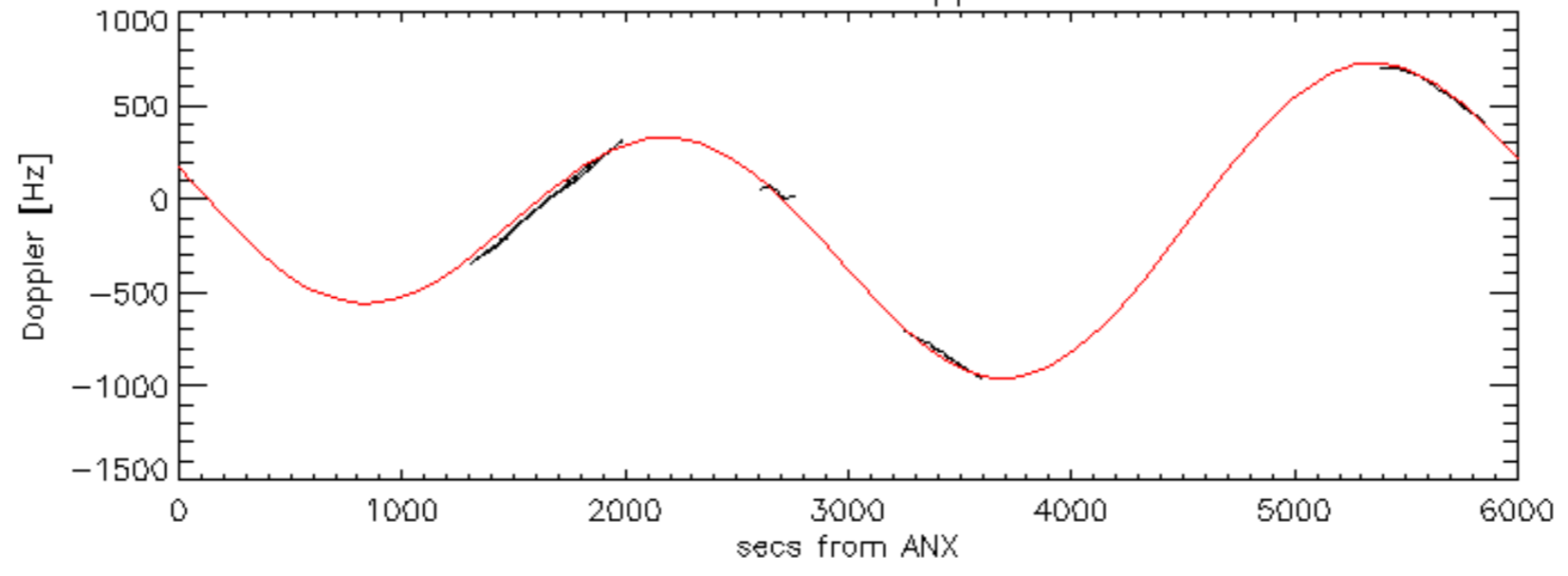
Doppler 'WVS' 'IS2' ascending

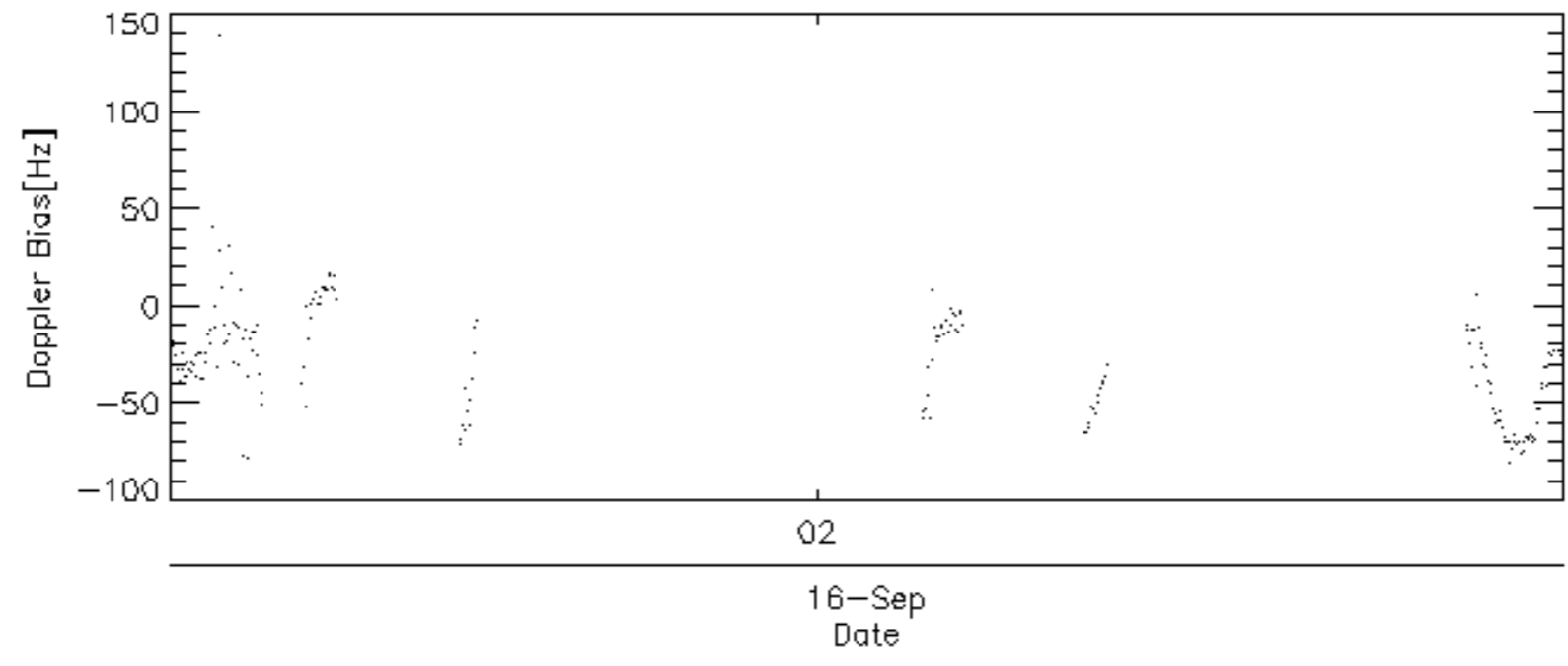
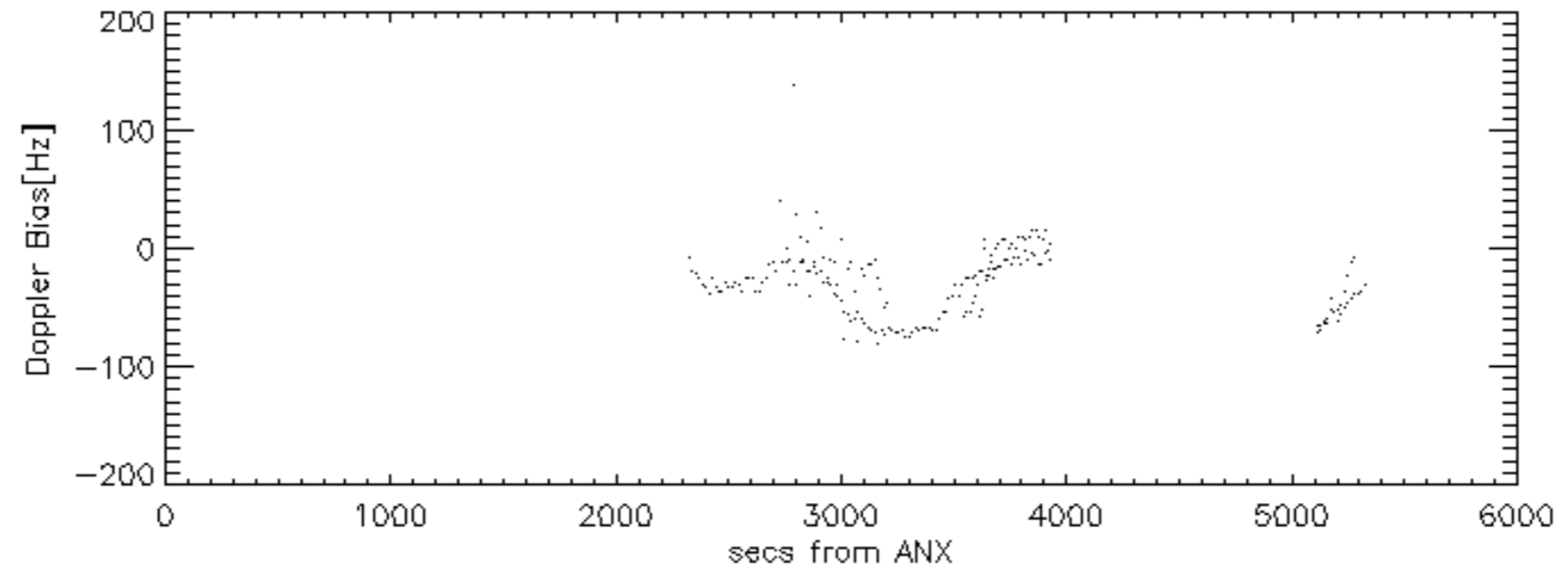
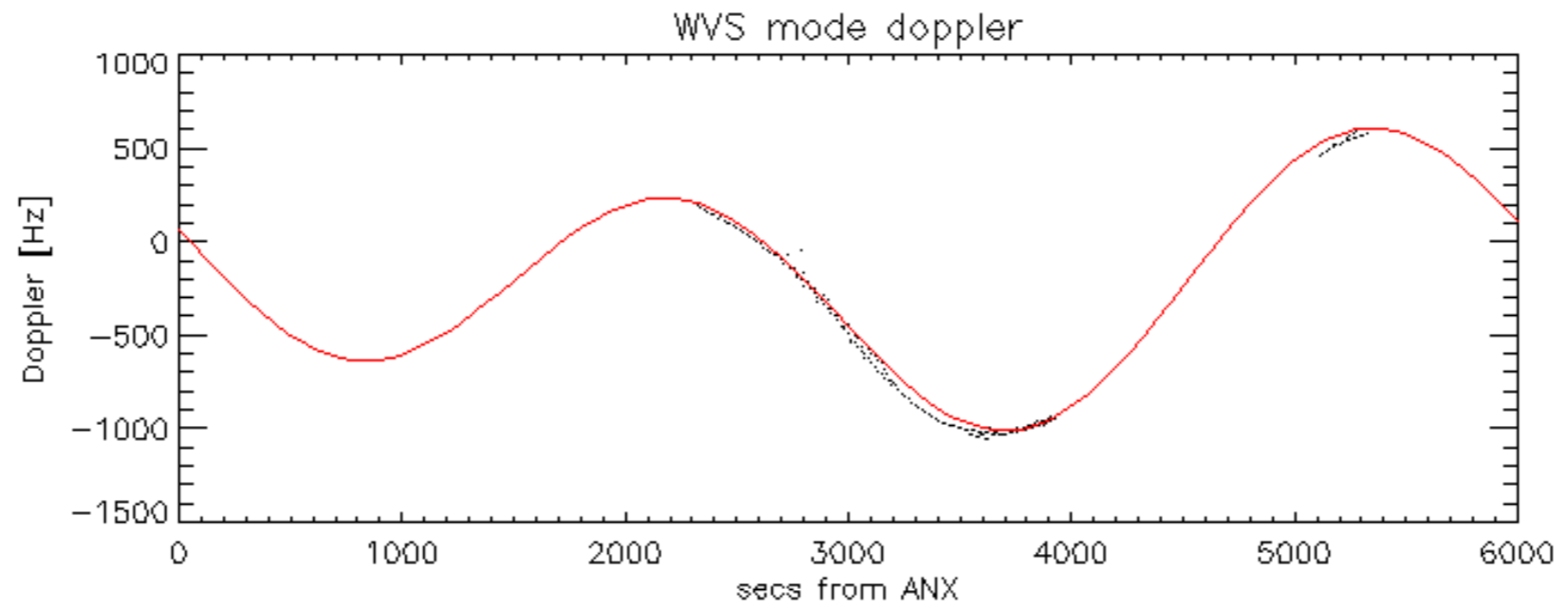


Doppler 'WVS' 'IS2' descending

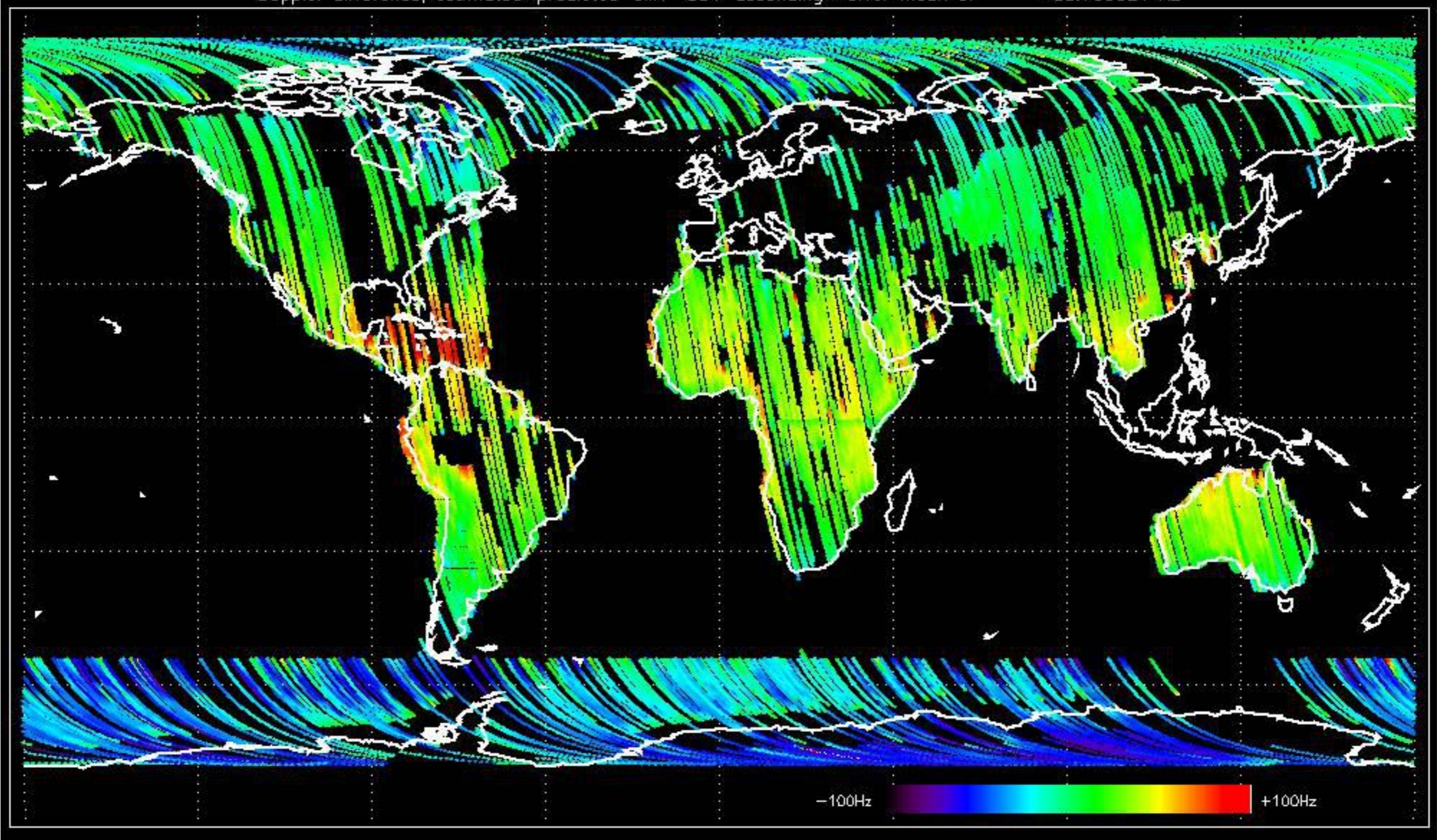


GM1 mode doppler

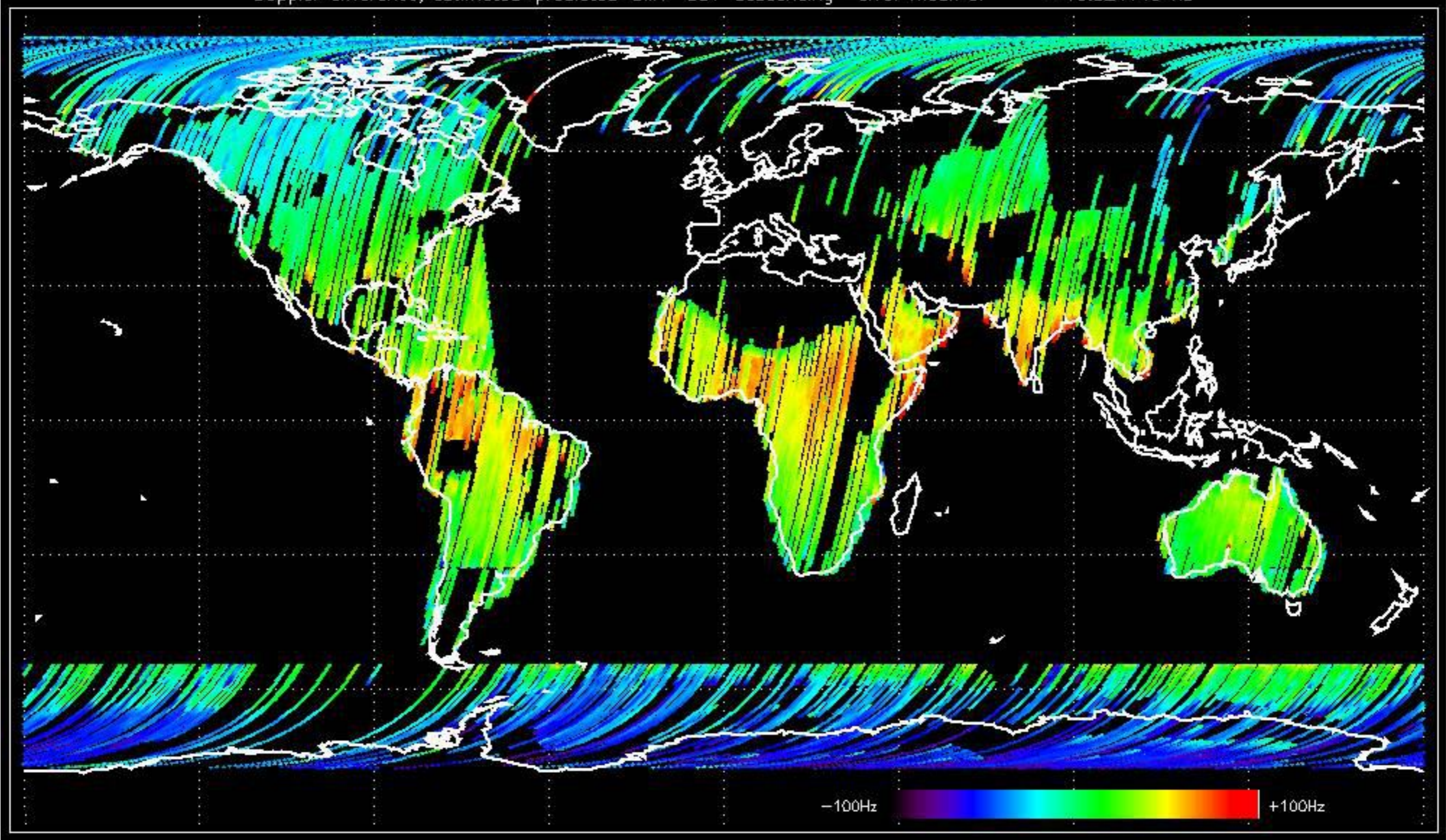




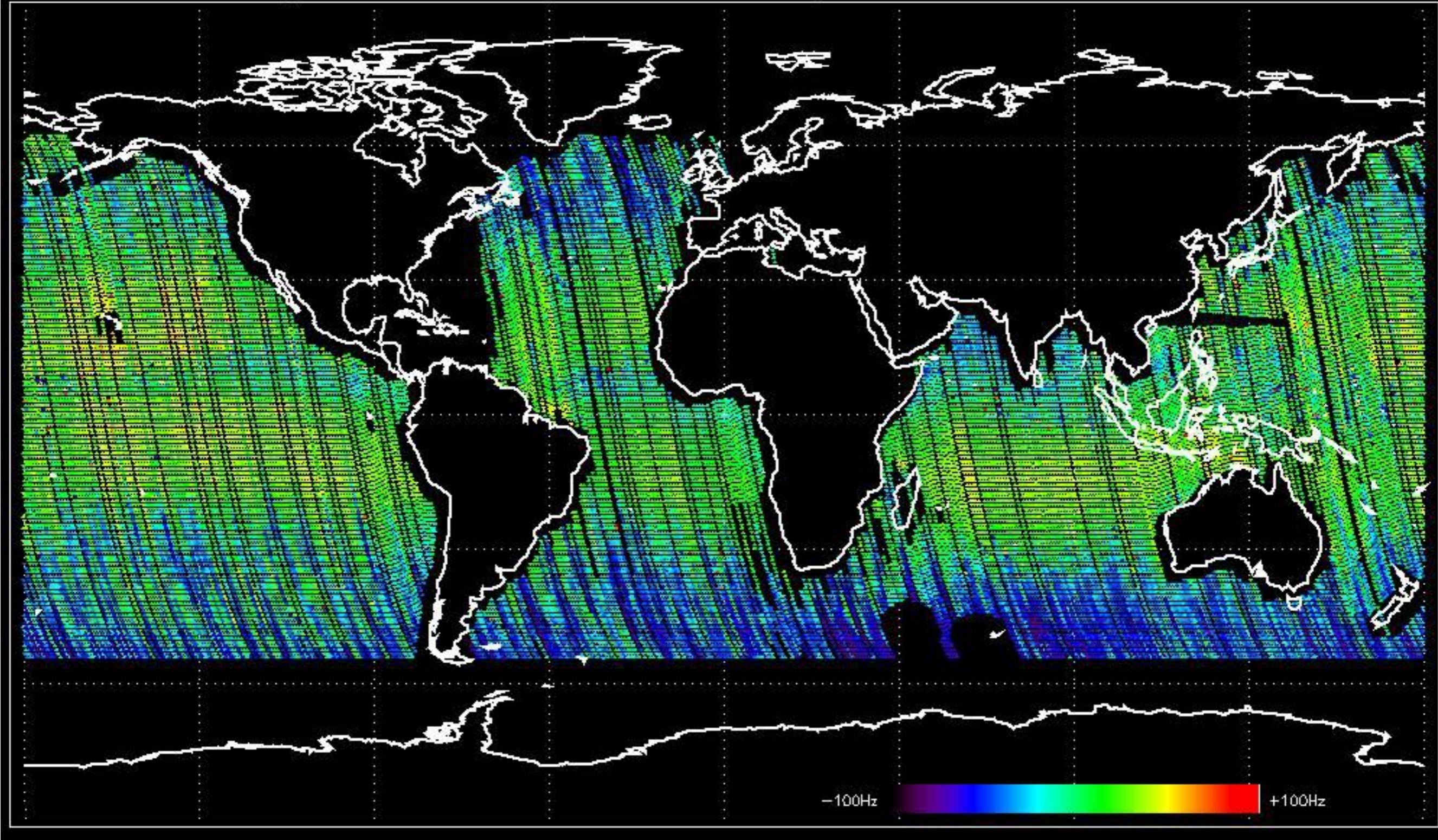
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -30.750624 Hz



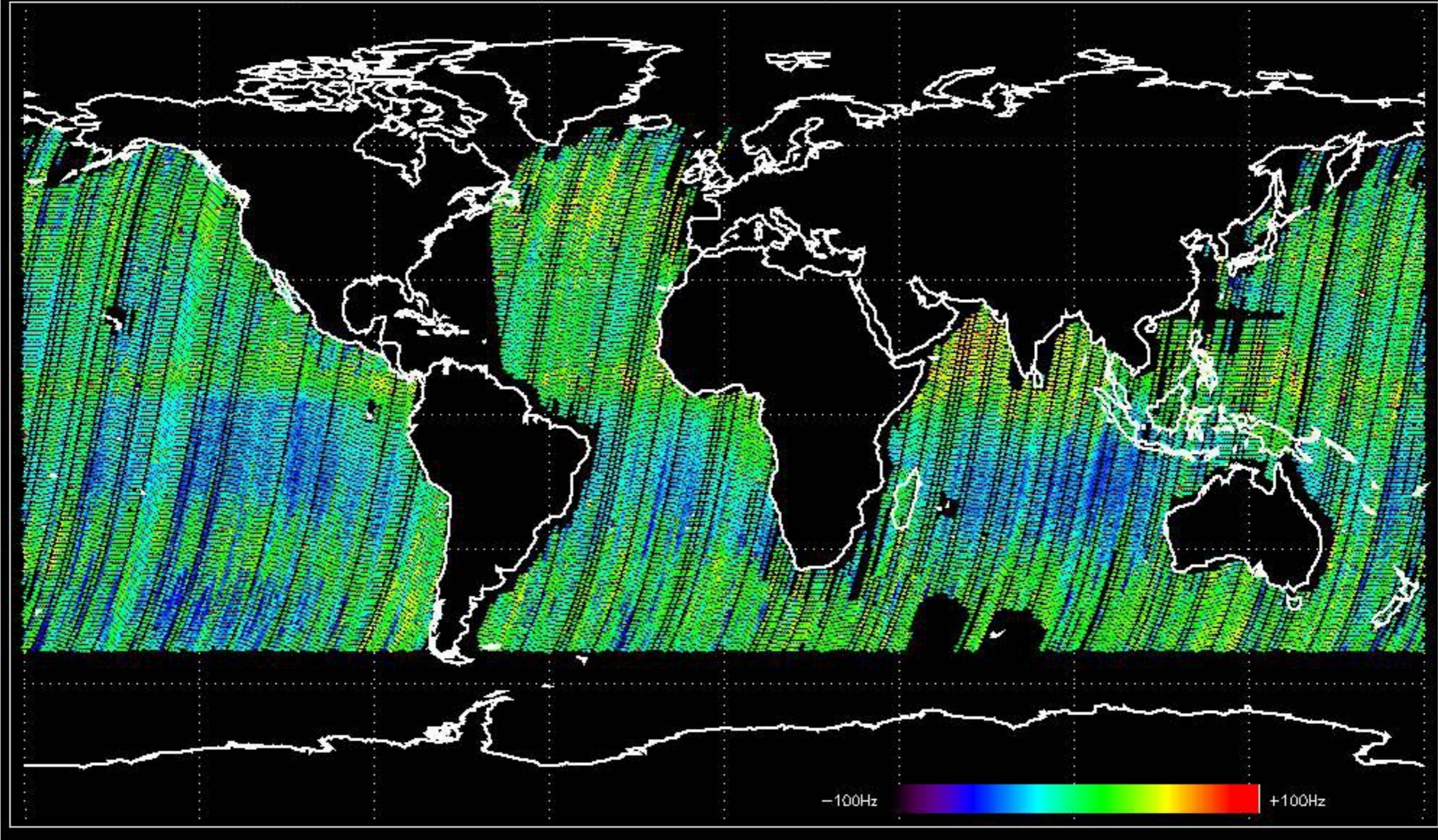
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.824145 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -29.010011 Hz

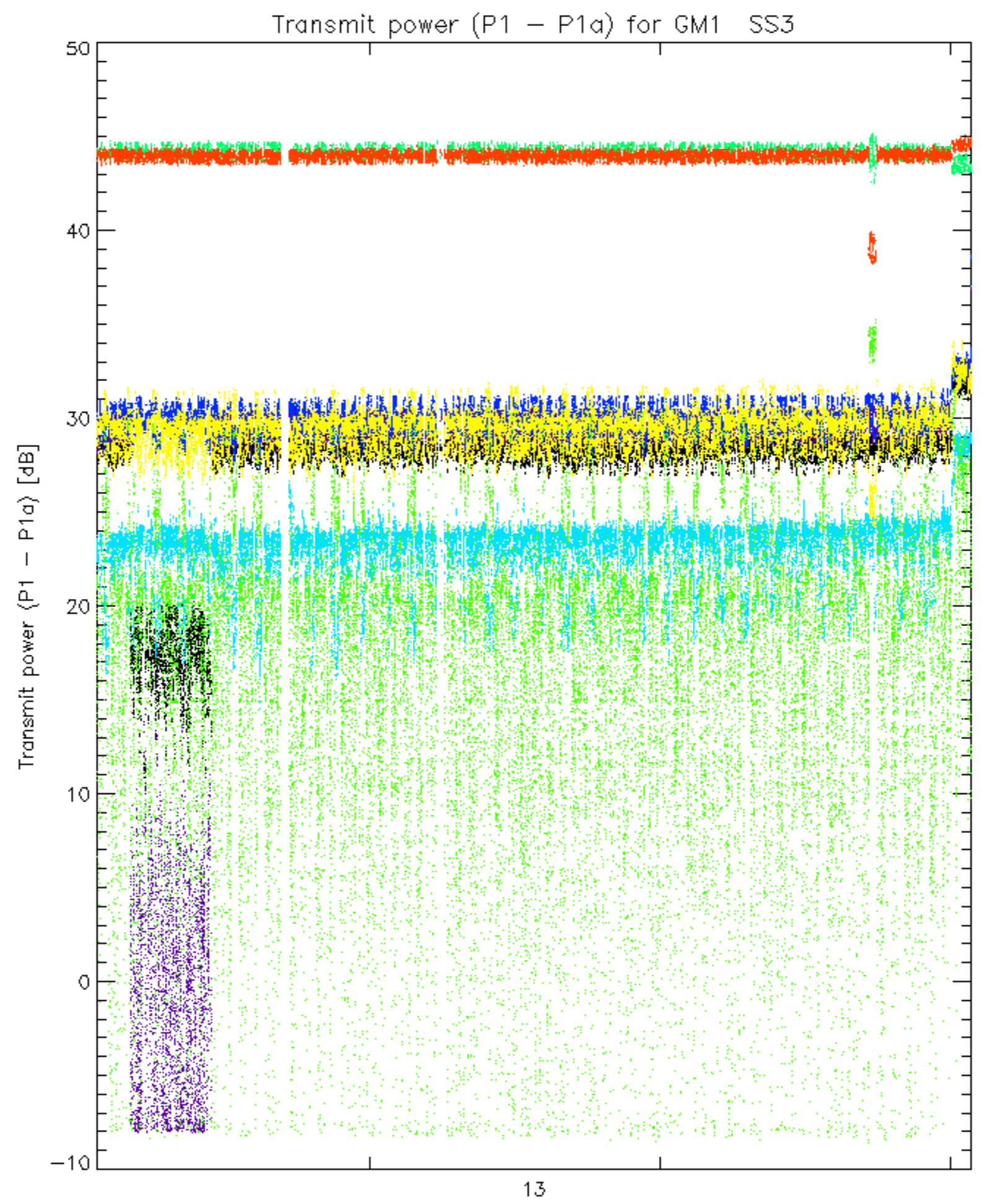


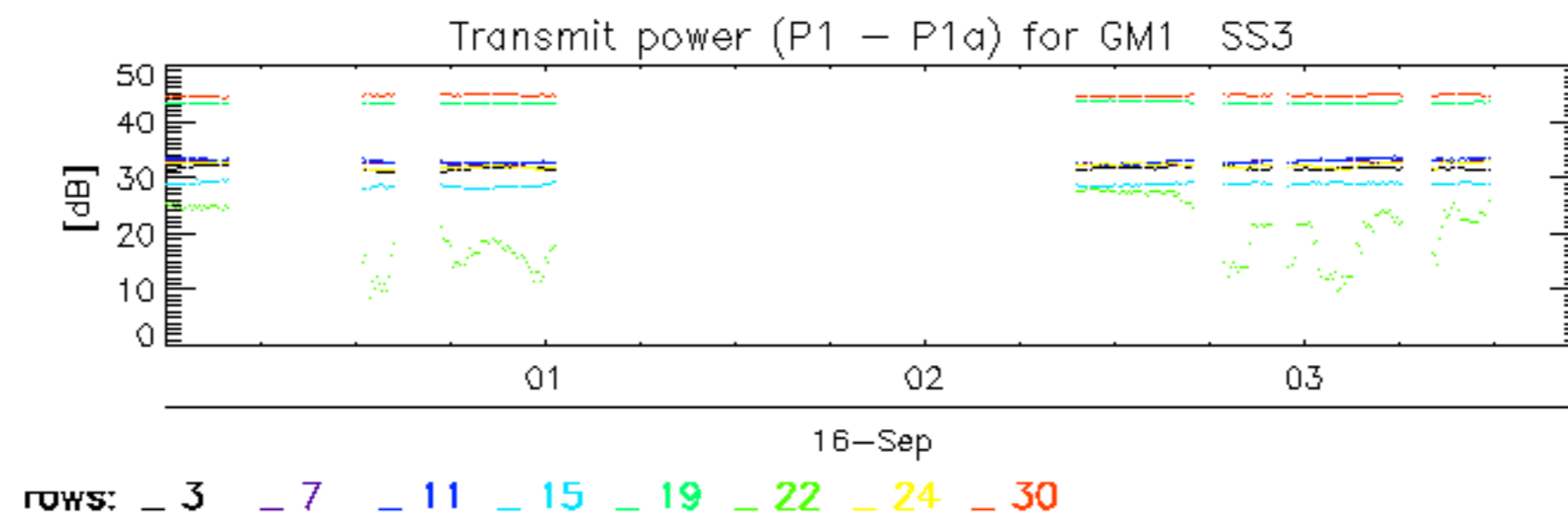
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -29.820729 Hz

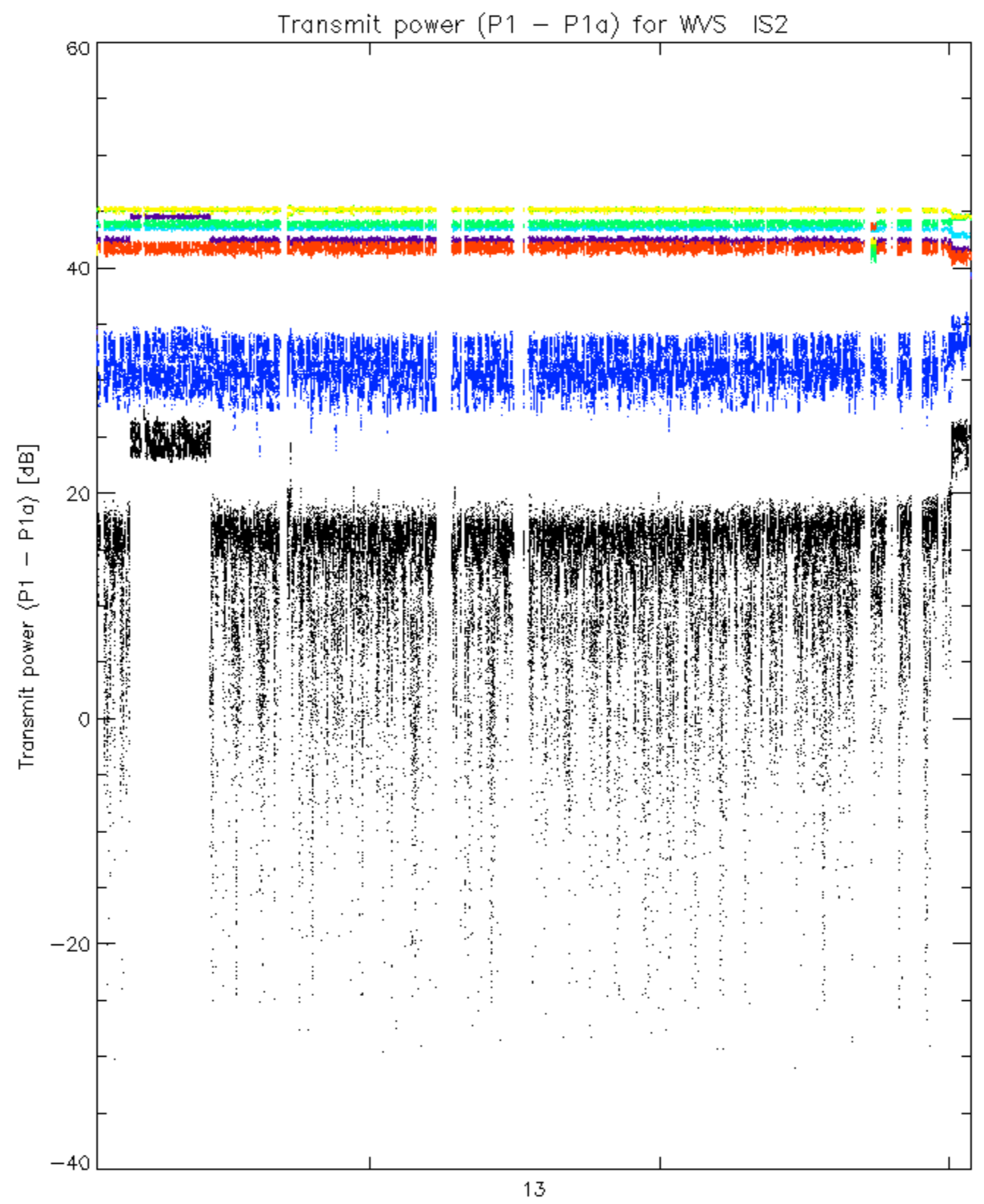


The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

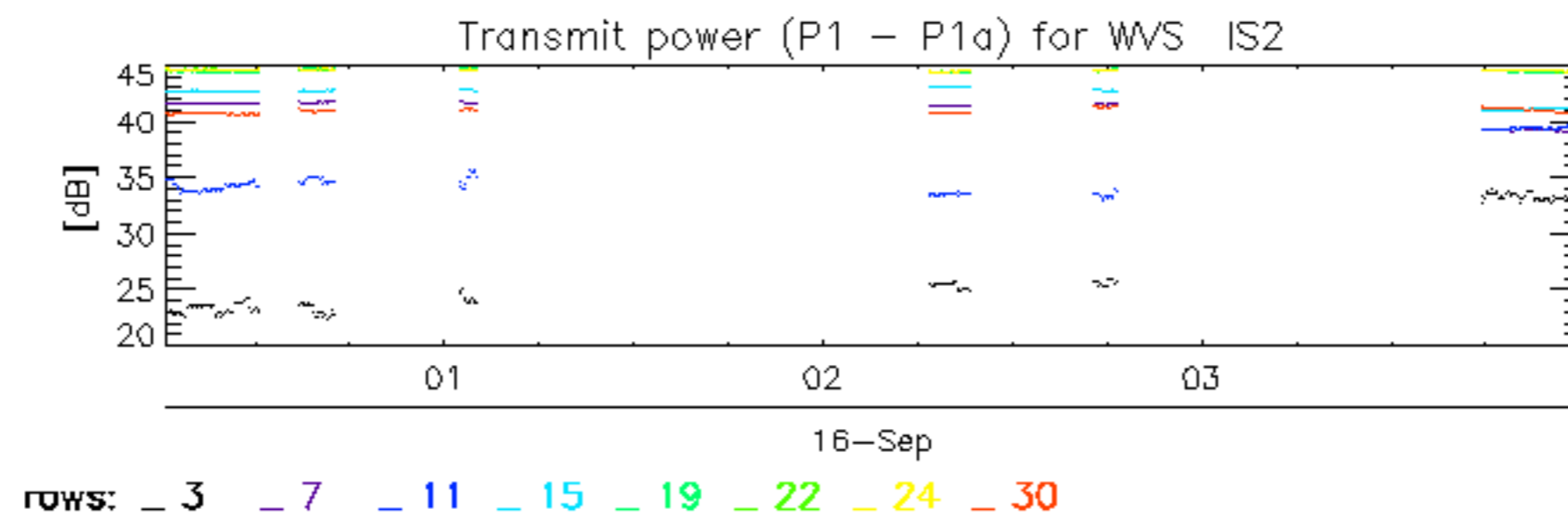
No anomalies observed.







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



No unavailabilities during the reported period.