

REPORT OF 031212

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P) products, which are the available few hours after the acquisition, on the high rate browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

Anomalous P1 gain drop that began on 10-DEC-2003 01:57:28 causes an instrument unavailability on 11-DEC-2003 15:05:36 until 15:15:11

2.2 - Browse Visual Inspection

No anomalies observed on available browse products acquired after unavailability.

2.3 - Data Analysis

- P1 pulse is back to nominal values while P3 is affected by an anomalous decreasing trend.
- 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
V	20031211 192518
H	20031211 192358

MSM in V/V polarisation

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

MSM in H/H polarisation

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

4 - Internal calibration Results

- P1 pulse is back to nominal values after instrument recovery.
- P3 pulse is affected by an anomalous decreasing trend since the beginning of the anomaly in 10-DEC-2003 01:57:28.

4.1 - Daily statistics

row	stat	AveP1	AveP2	AveP3
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3	mean	-4.81785	-22.5563	-8.12940
	stdev	1.42615	0.0852851	0.00448504
24	mean	-5.03868	-21.1808	-8.12940
	stdev	0.0119315	0.0755246	0.00448504



4.2 - Cyclic statistics

row	stat	AveP1	AveP2	AveP3
3	mean	-3.77451	-22.5588	-8.14707
	stdev	0.0762574	0.0712193	0.00507172
24	mean	-5.10833	-21.2340	-8.14707
	stdev	0.0141581	0.0648839	0.00507172



4.3 - cal pulses monitoring (all rows)



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000337700
	stdev	1.08918e-05
MEAN Q	mean	0.000180296
	stdev	1.08954e-05



5.2 - Input stdev I/Q

channel	stat	DSS-B
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STDEV I	mean	0.114760
	stdev	0.00154458
STDEV Q	mean	0.115015
	stdev	0.00156043



5.3 - Gain imbalance I/Q



6 - Wave Doppler Analysis

No anomalies observed Doppler evolution.
Doppler analysis performed over the last 35 days

6.1 - Unbiased Doppler Error

Evolution of unbiased Doppler error (Real - Expected)
Ascending
Descending

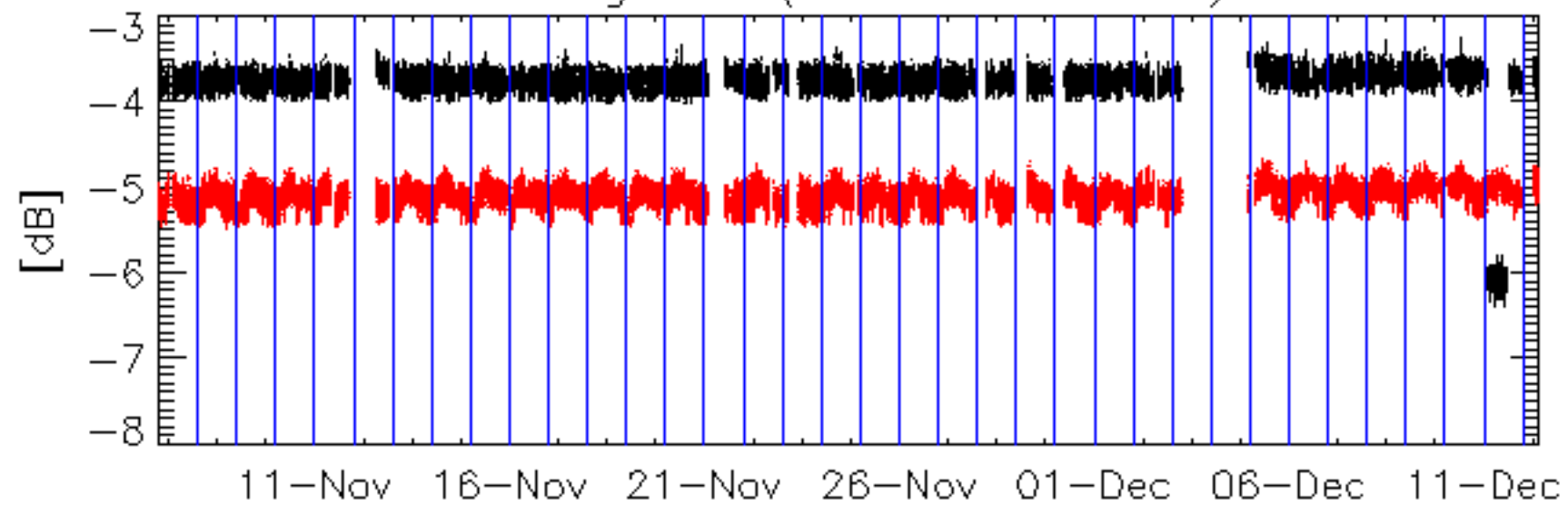
6.2 - Absolute Doppler

Evolution of Absolute Doppler
Ascending
Descending

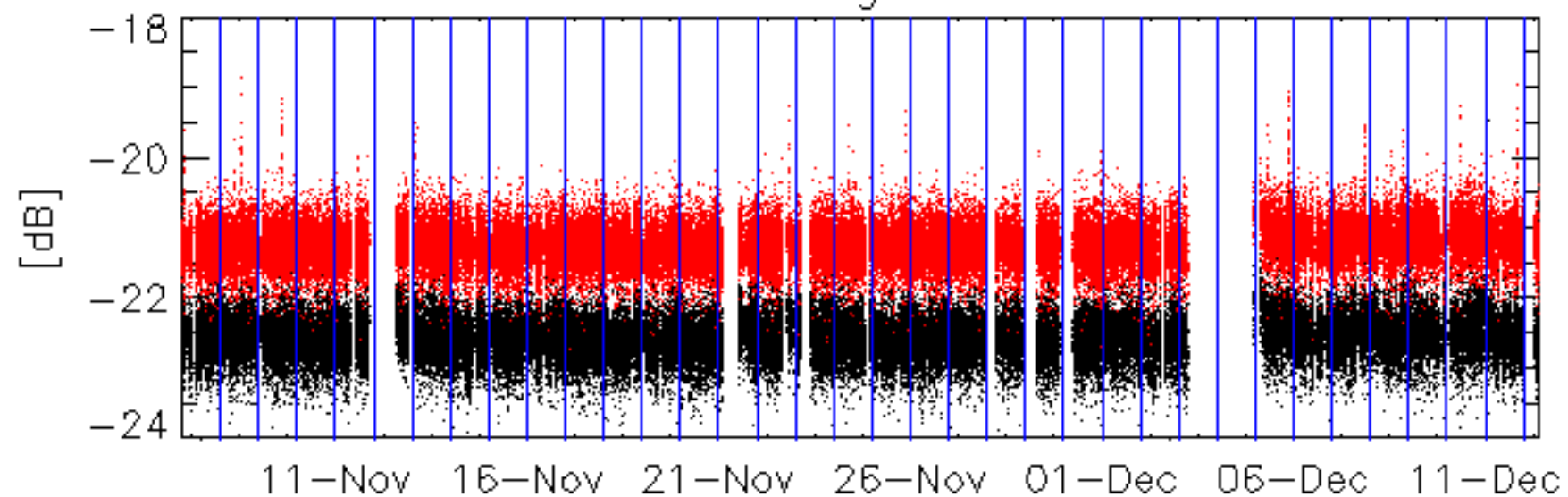
6.3 - Doppler evolution versus ANX

Evolution Doppler error versus ANX

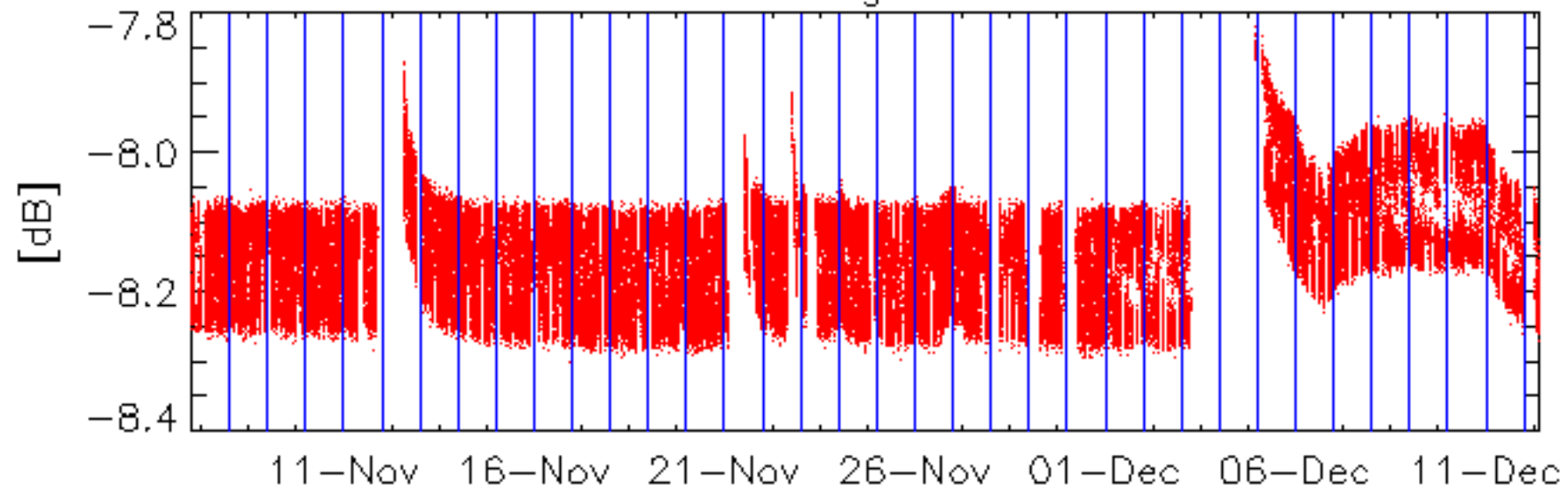

Average P1 (row 3 & row 24)



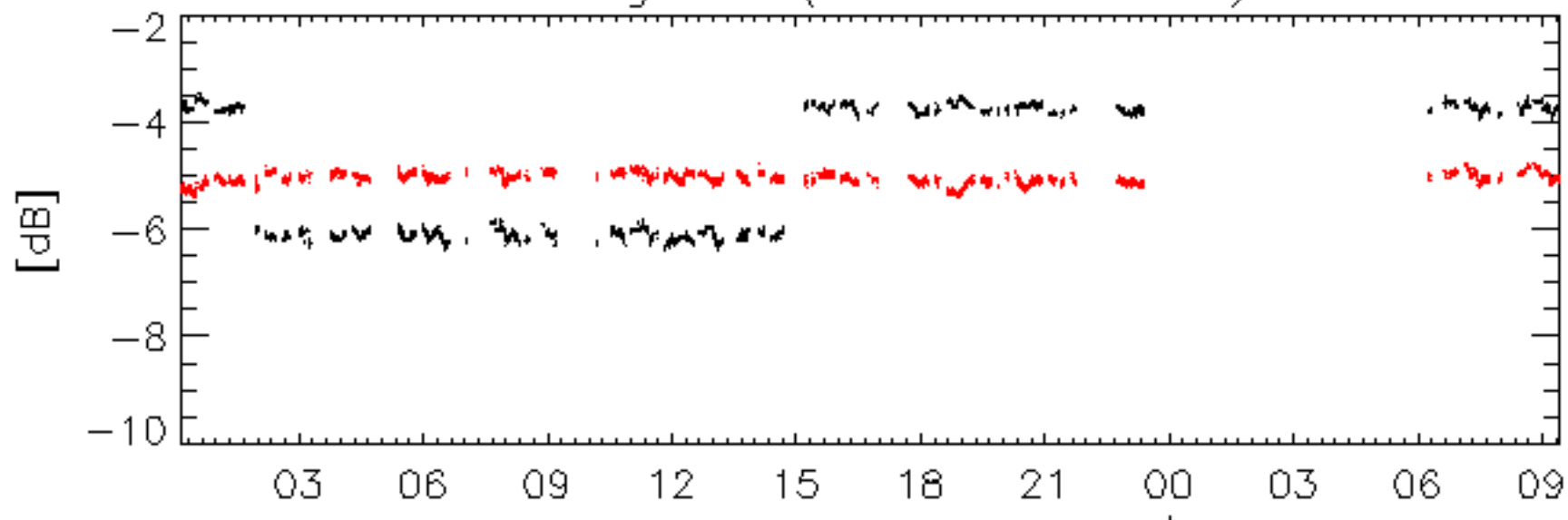
Average P2



Average P3

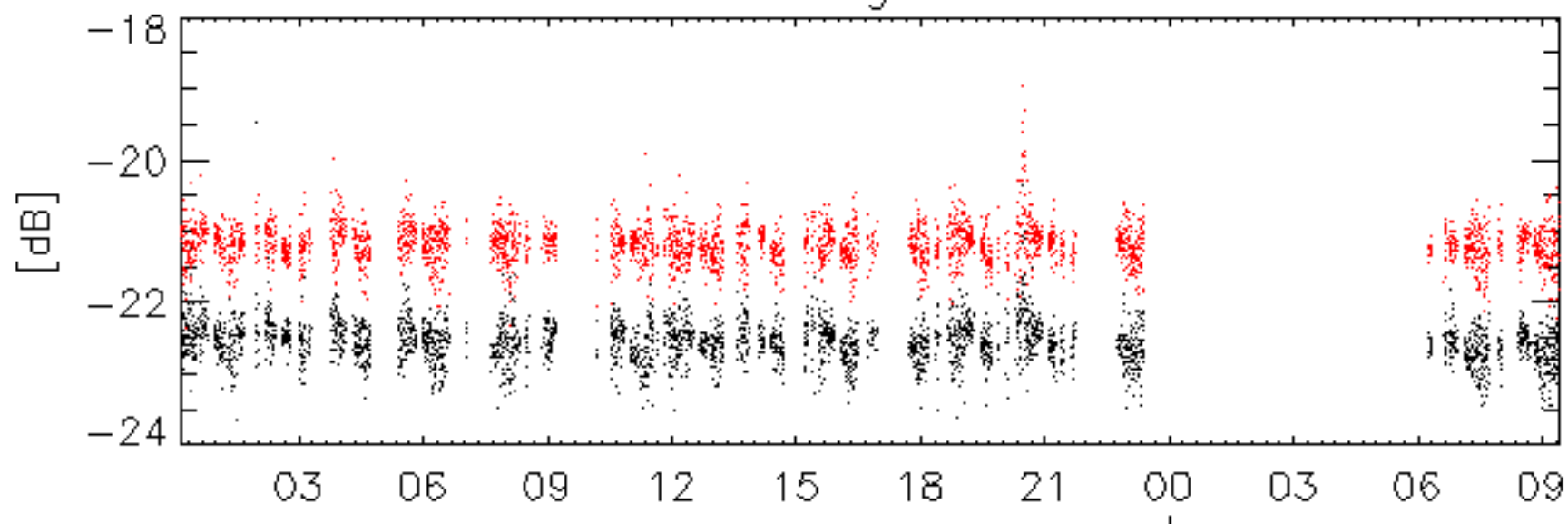


Average P1 (row 3 & row 24)



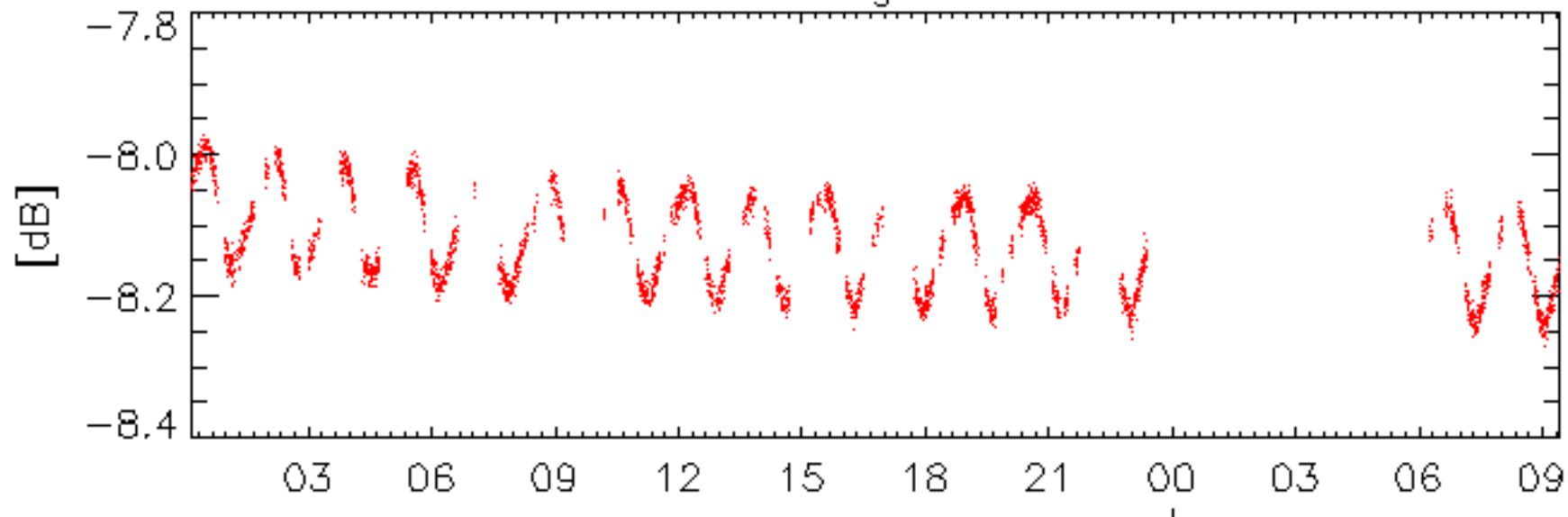
12-Dec

Average P2



12-Dec

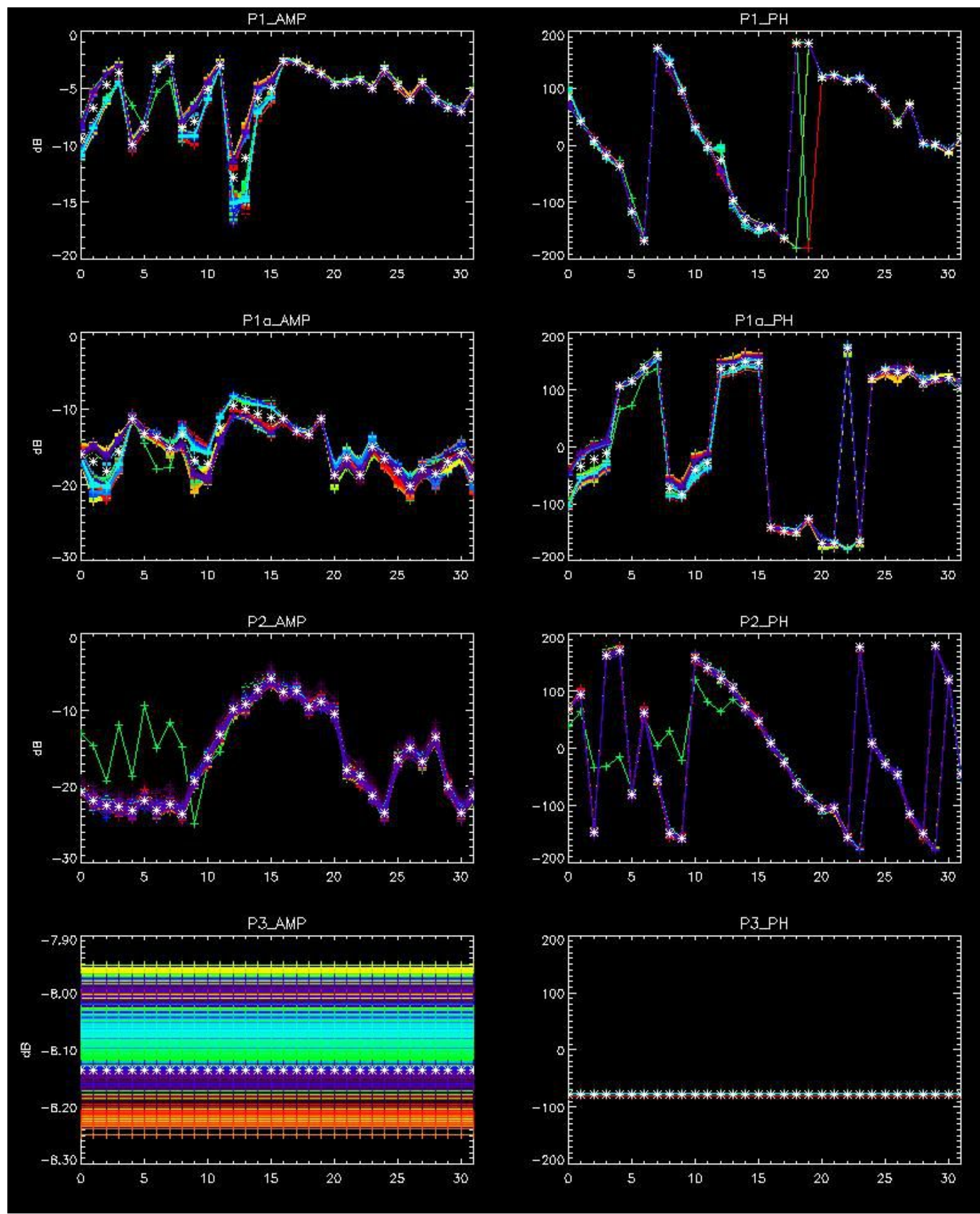
Average P3



12-Dec

No anomalies observed on available browse products acquired after unavailability.

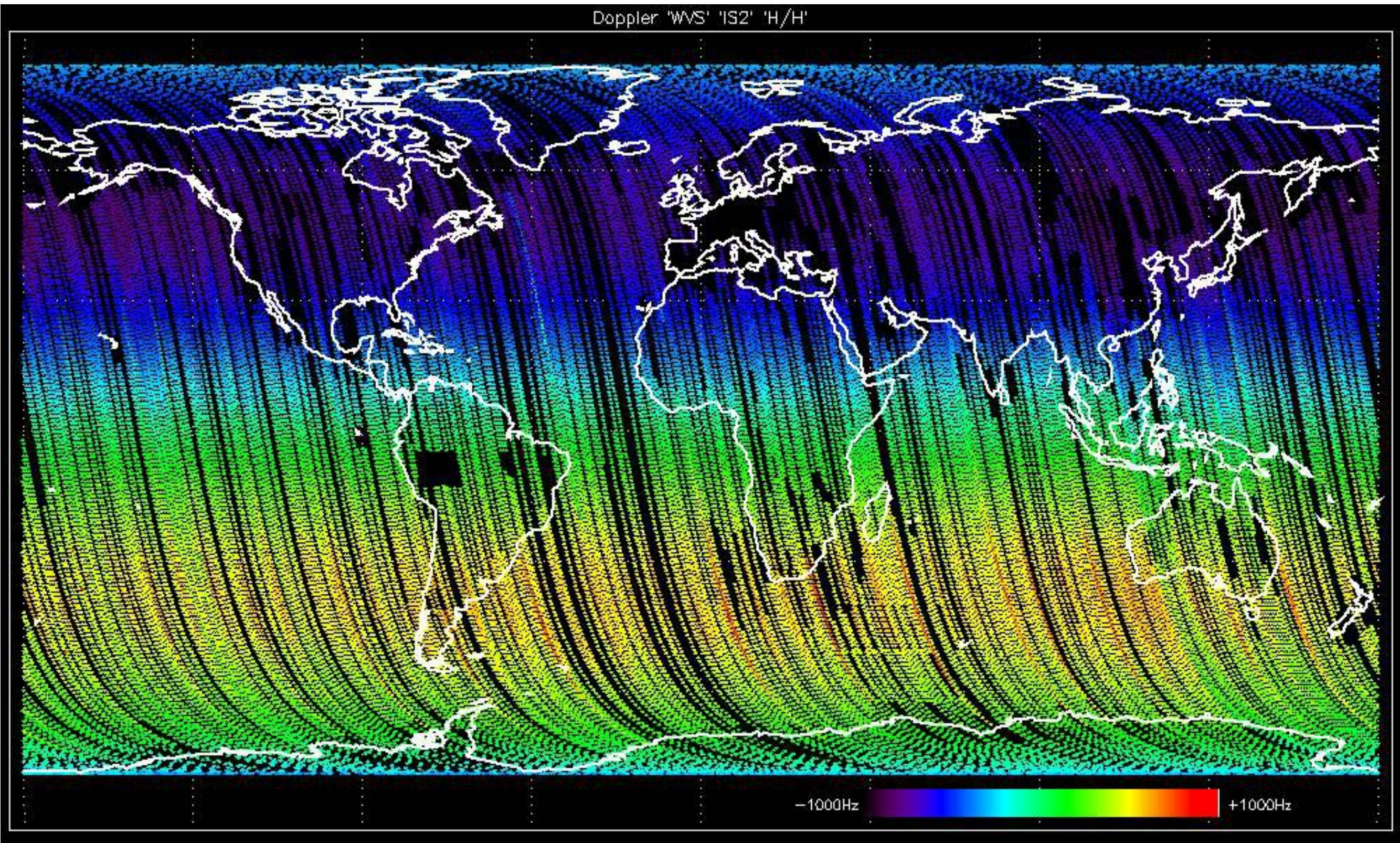
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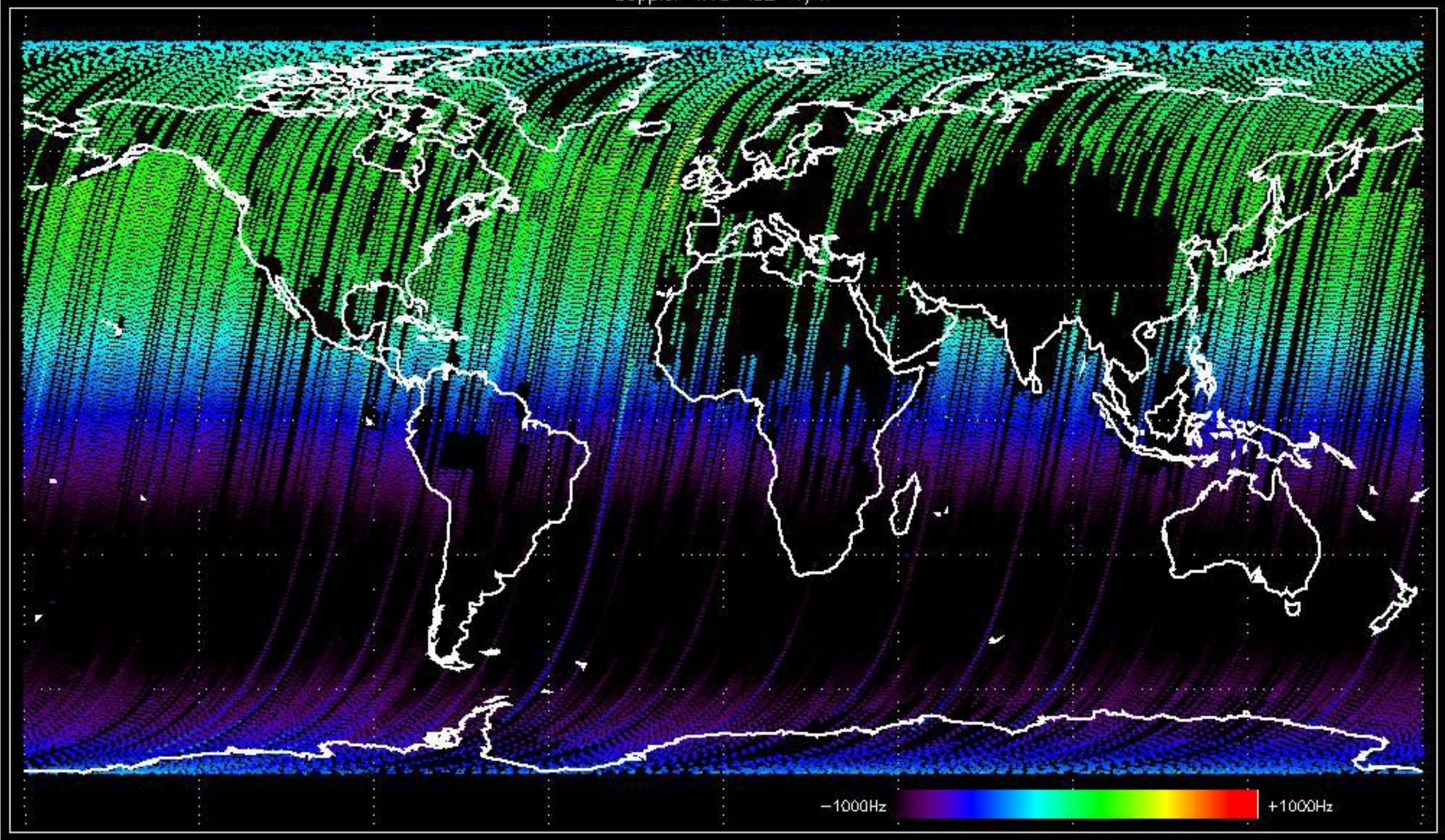
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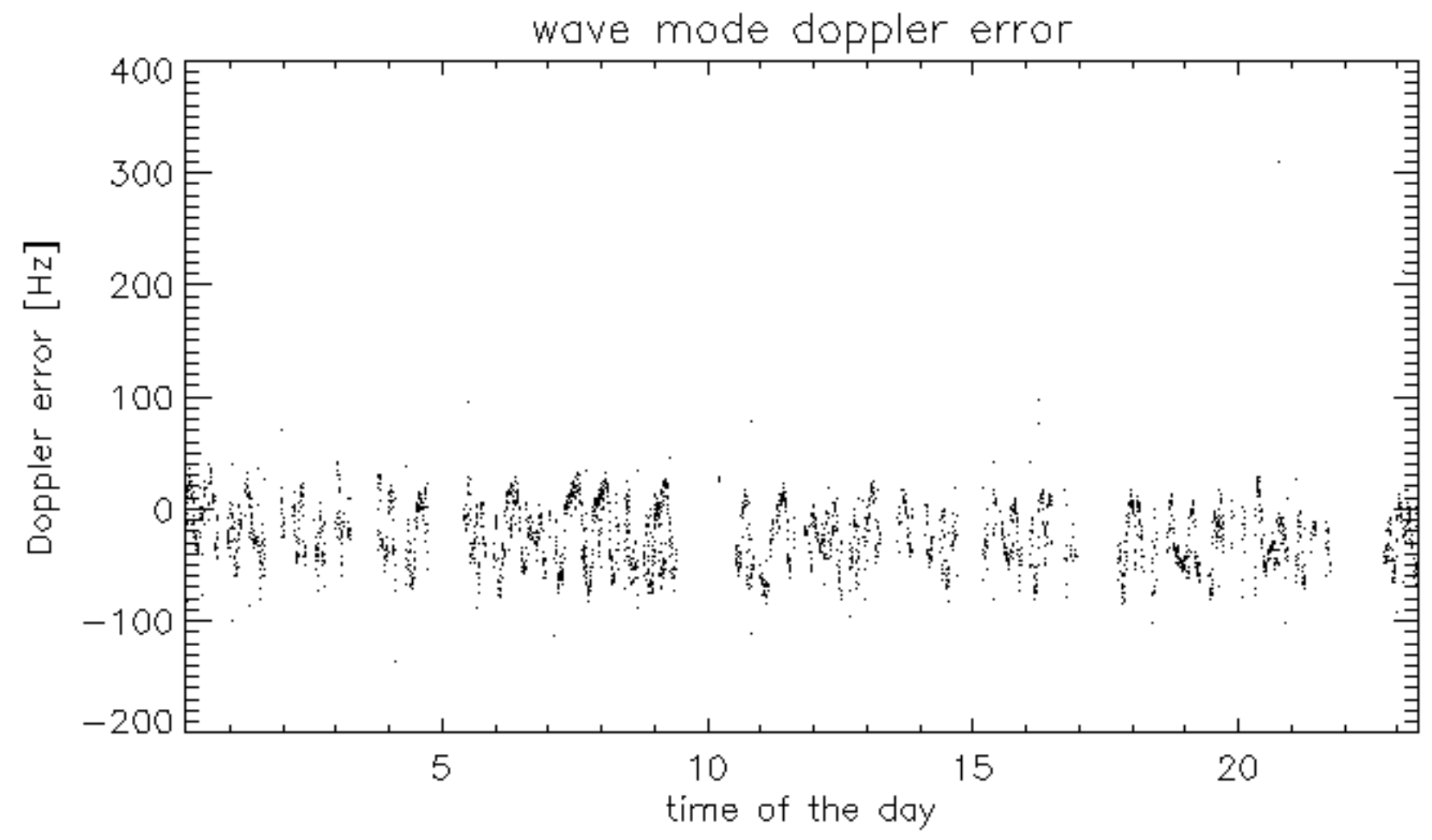
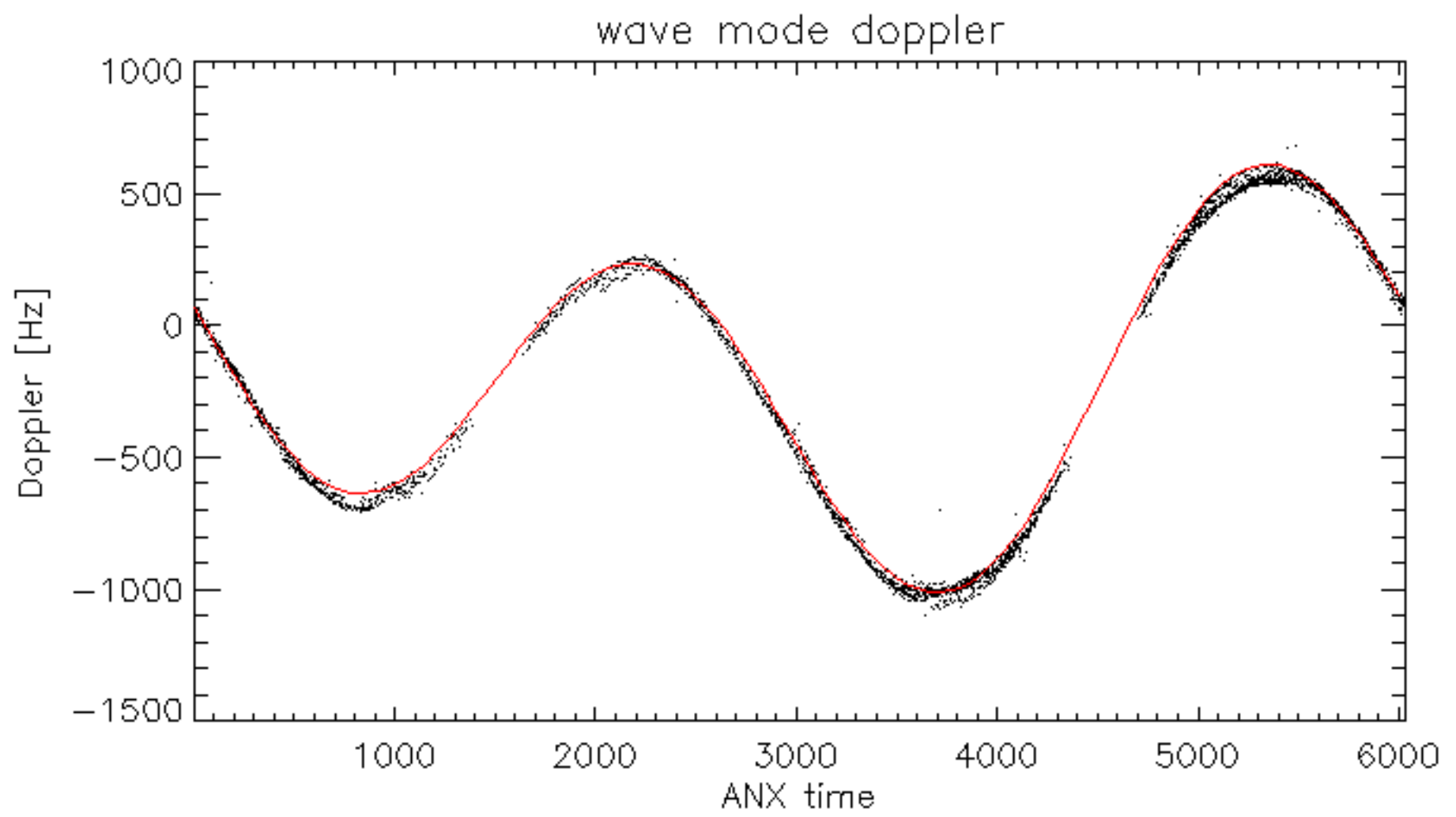
No anomalies observed Doppler evolution.
Doppler analysis performed over the last 35 days

Doppler 'WVS' 'IS2' 'H/H'

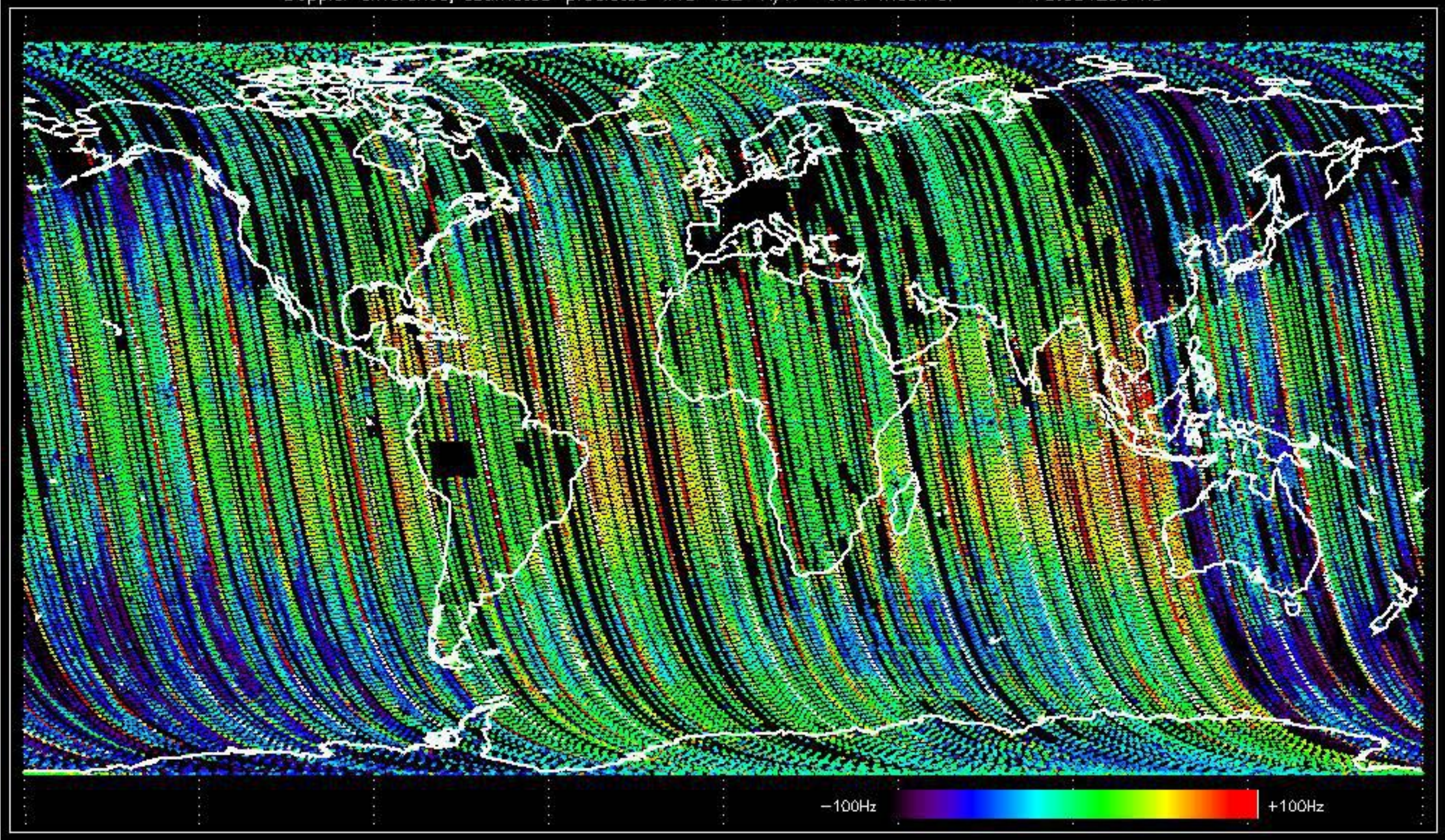


Doppler 'WVS' 'ISZ' 'V/V'

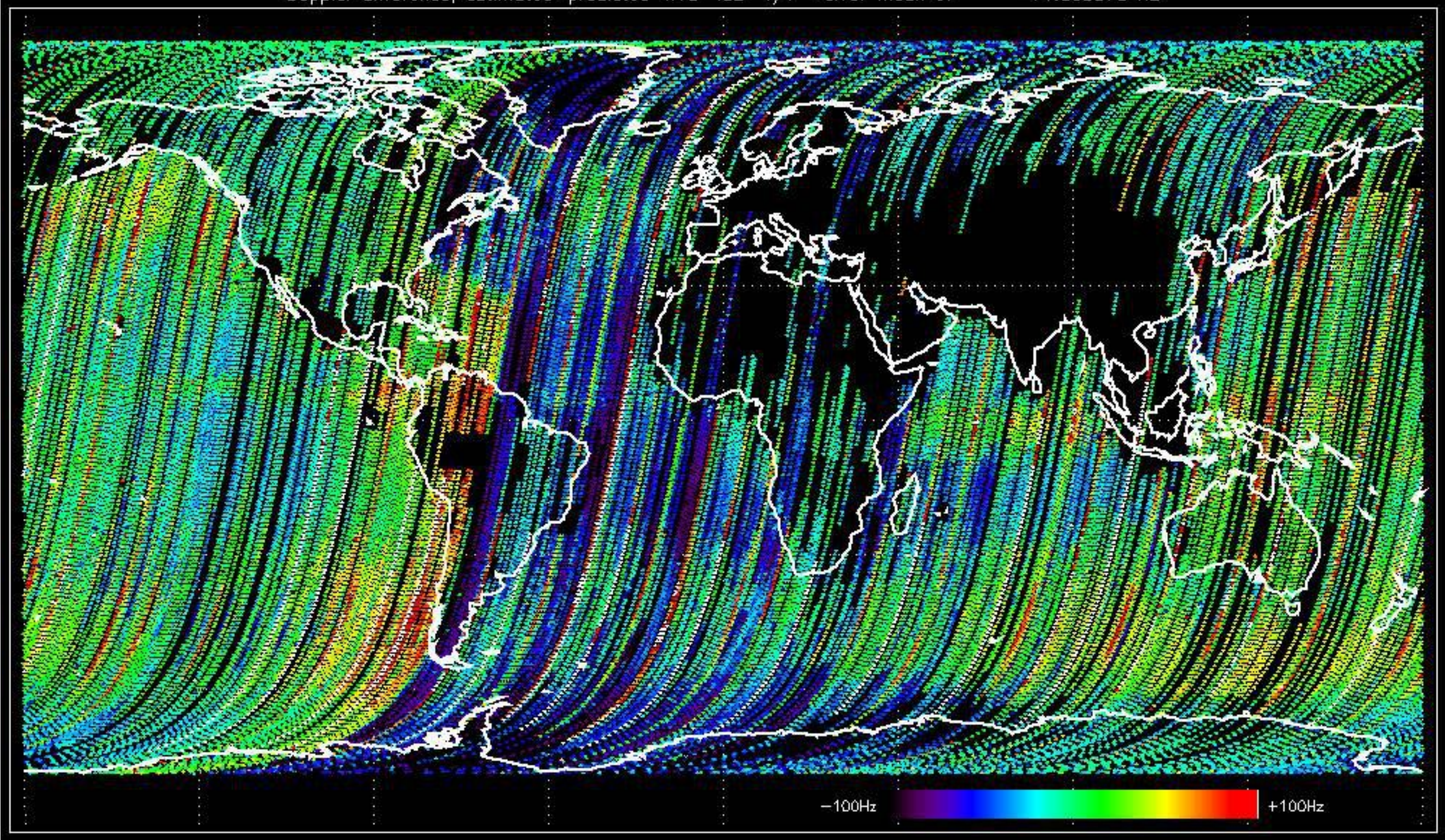




Doppler difference, estimated-predicted 'WVS' 'IS2' 'H/H' -error mean of -79.034200 Hz

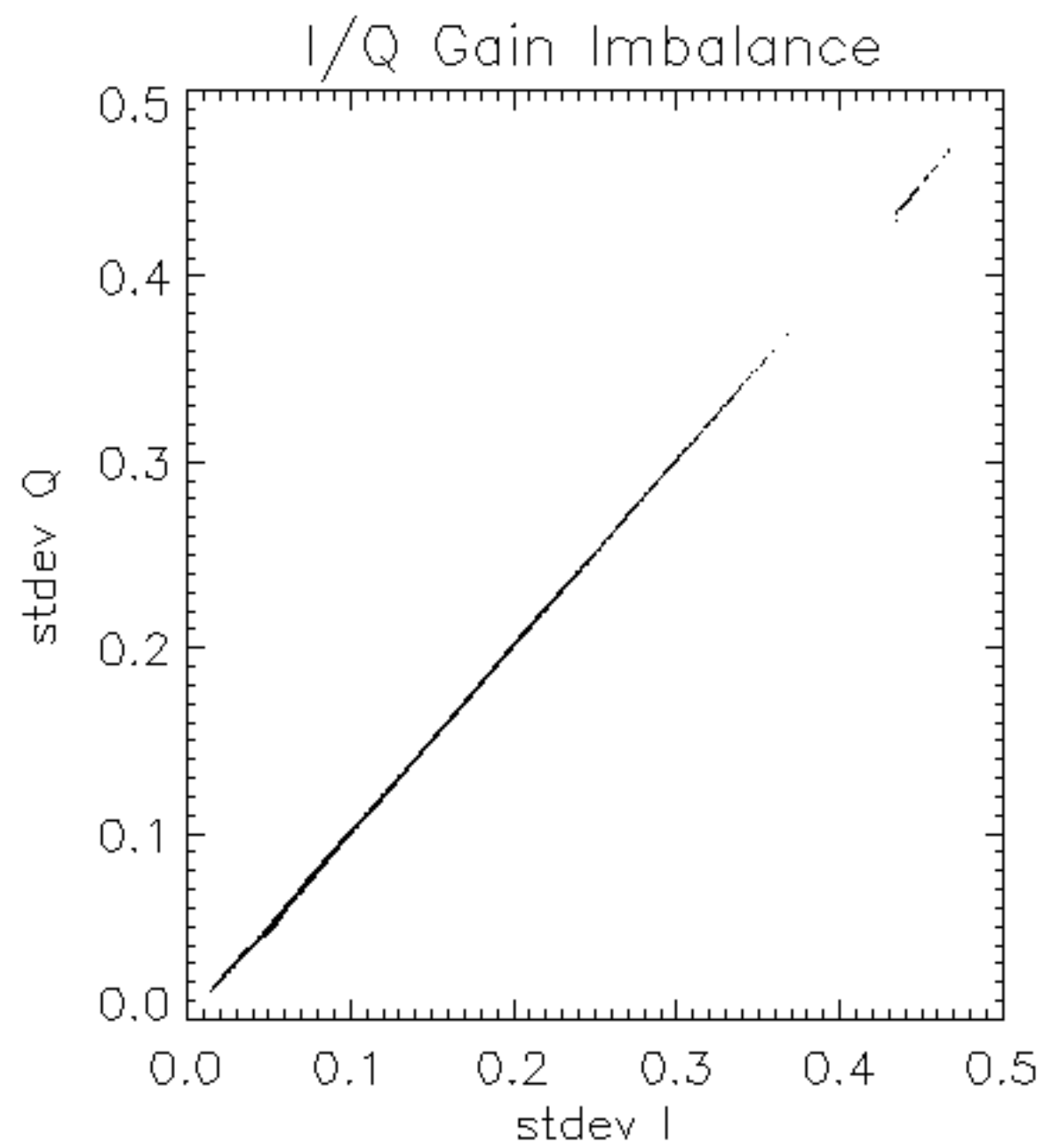


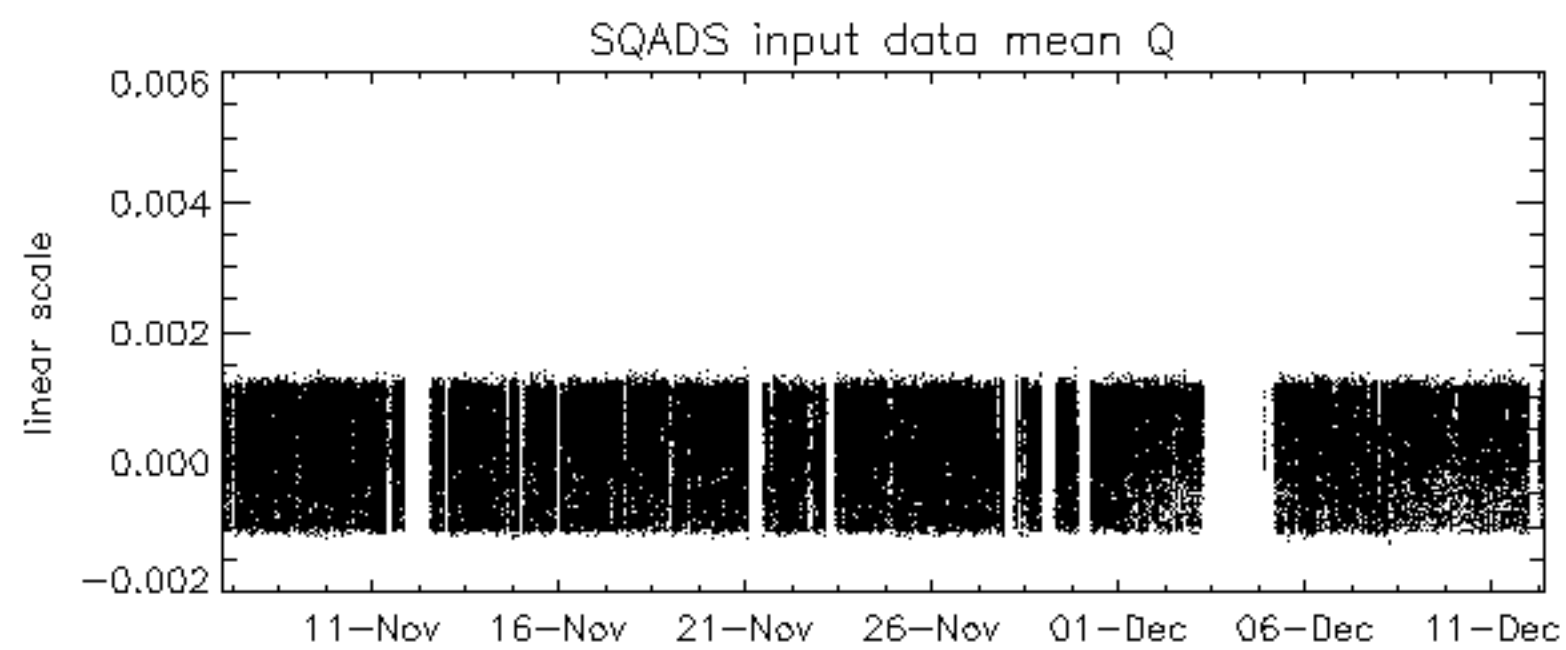
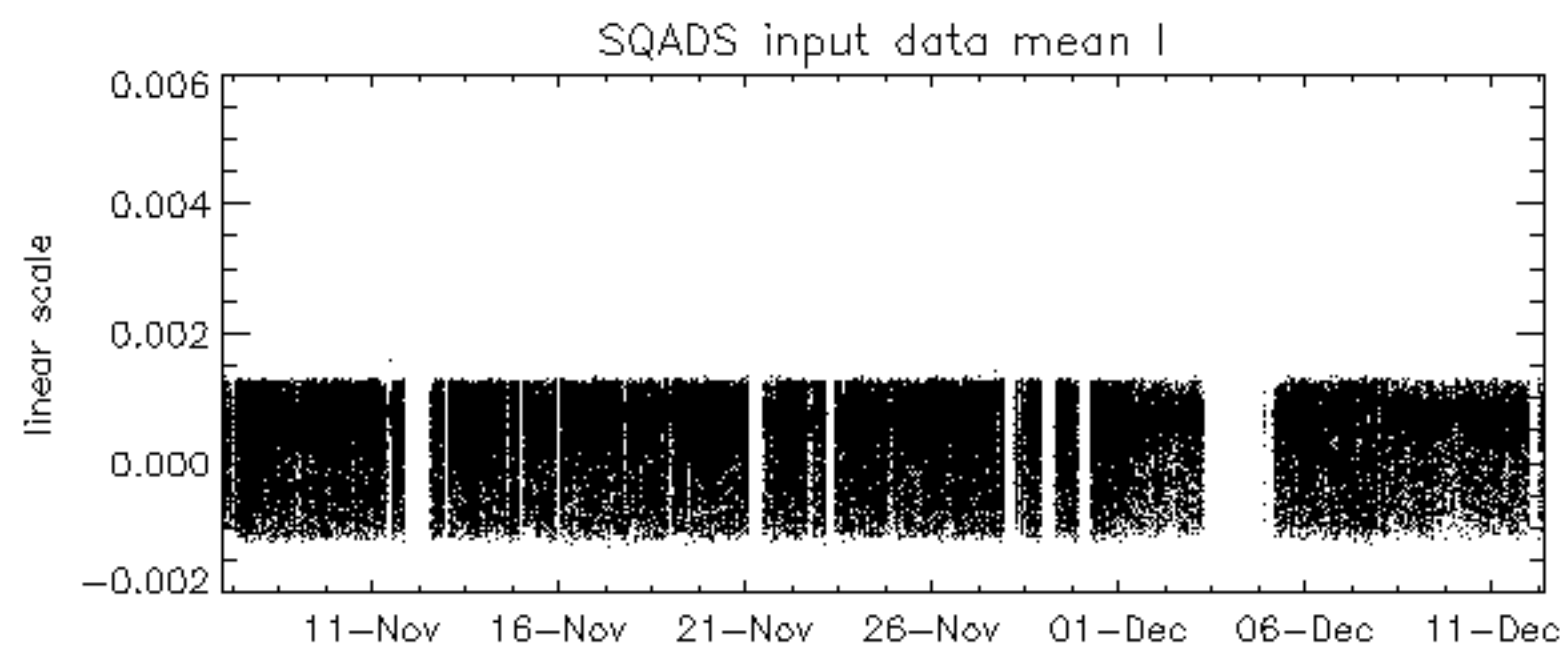
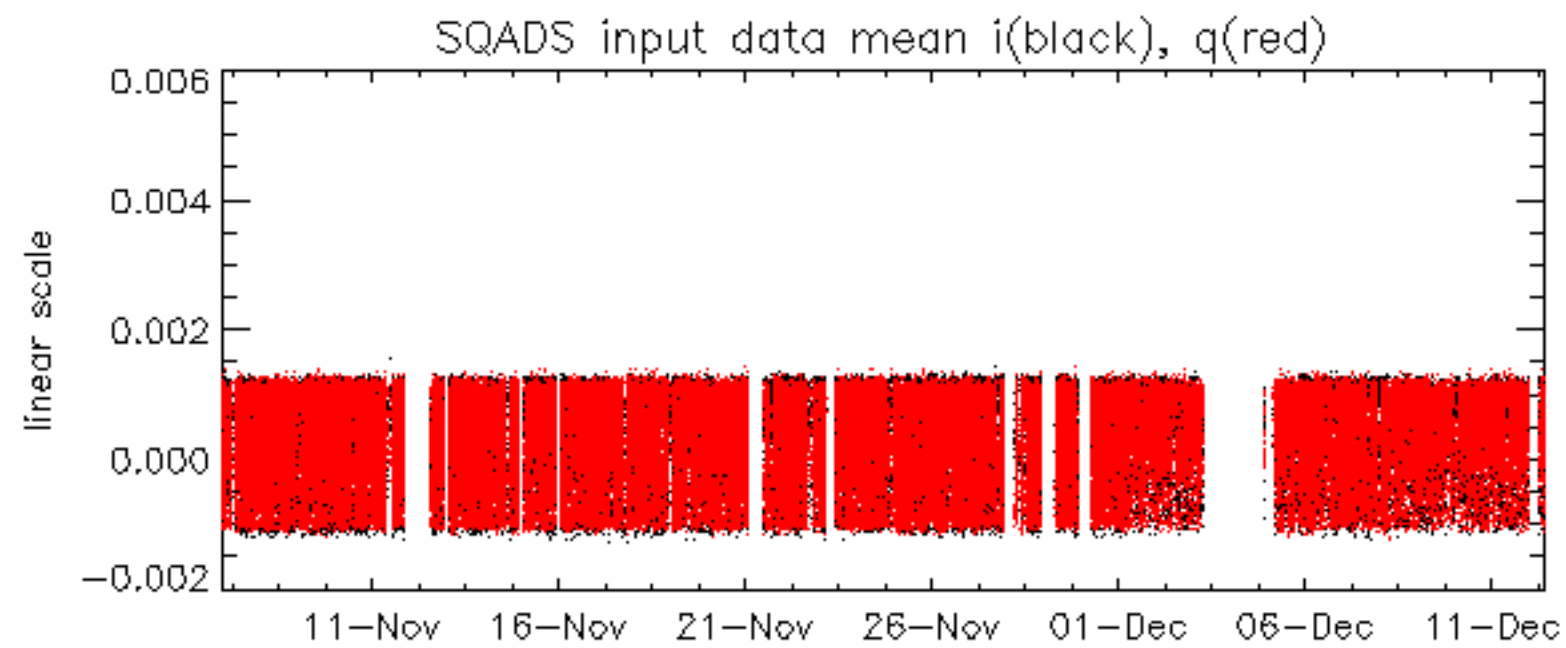
Doppler difference, estimated-predicted 'WVS' 'IS2' 'V/V' -error mean of -71.898973 Hz

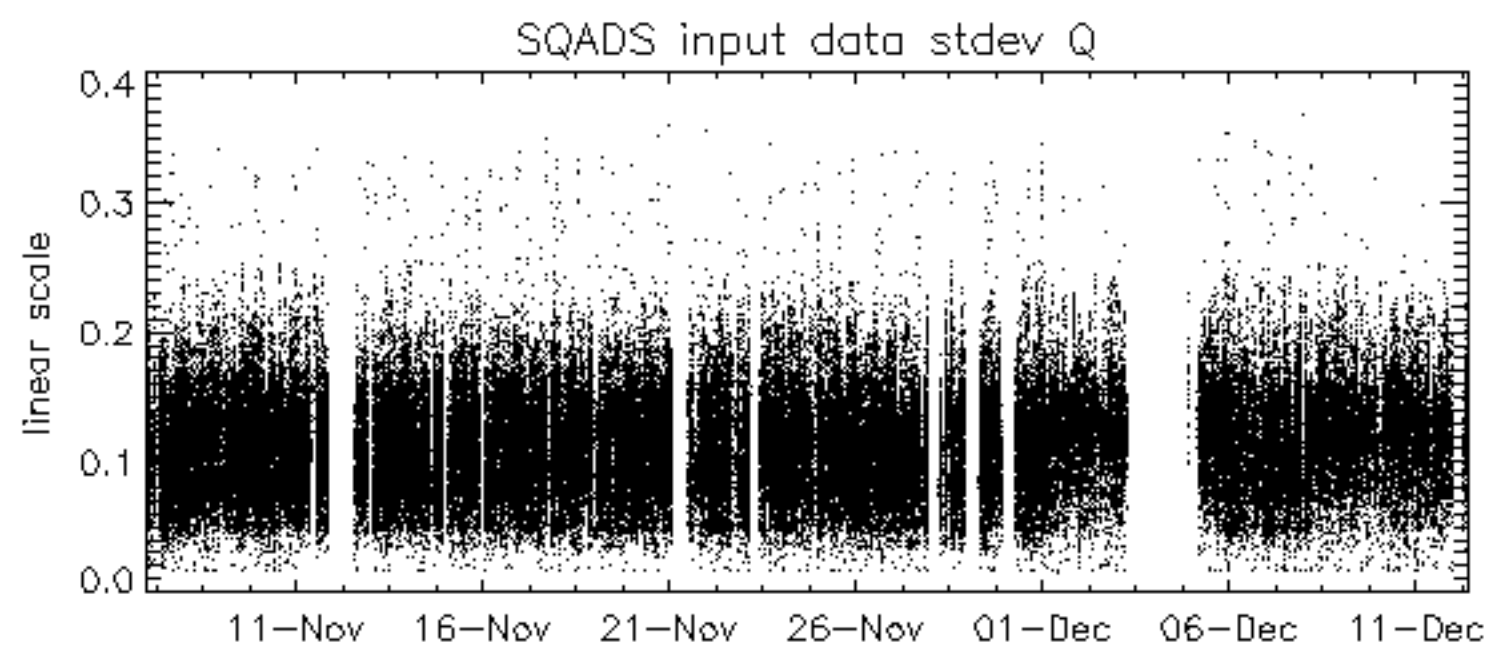
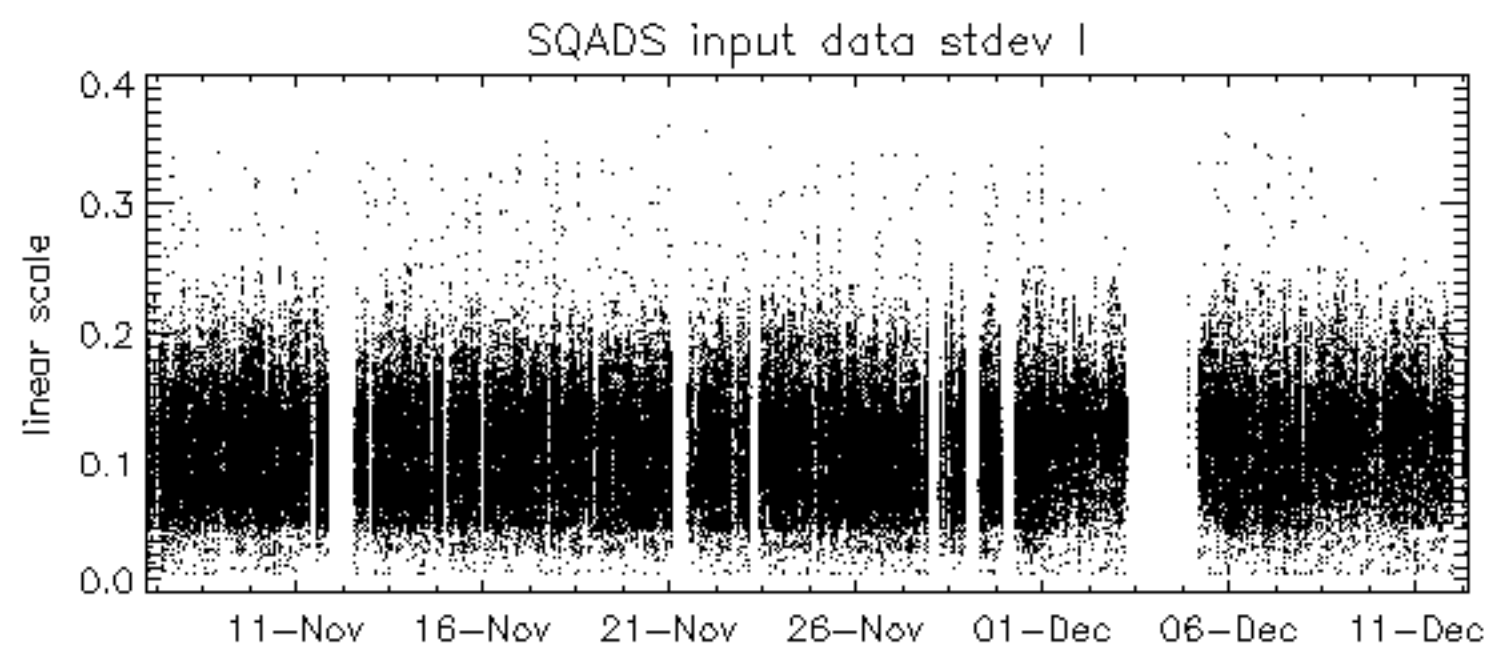
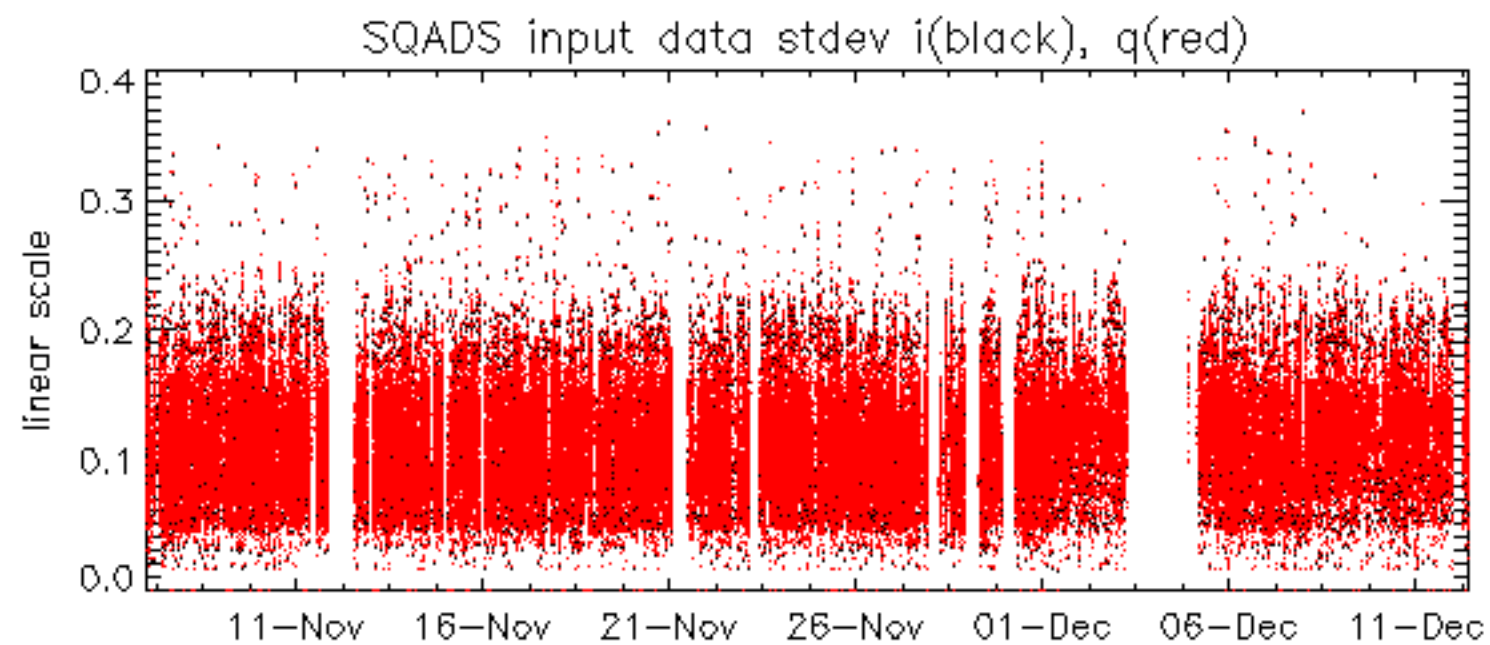


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