

PRELIMINARY REPORT OF 060104

last update on Wed Jan 4 16:34:53 GMT 2006

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 2006-01-03 00:00:00 to 2006-01-04 16:34:53

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	20	0	3	0	17
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	20	0	3	0	17
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	20	0	3	0	17
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	0	3	0	17

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	29	34	23	4	36
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	29	34	23	4	36
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	29	34	23	4	36
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	29	34	23	4	36

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	20051231 204859
H	20051230 143812

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

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
☒



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.752916	0.239089	-1.369593
7	P1	-2.780001	0.122768	-0.959358
11	P1	-4.135855	0.037002	0.097321
15	P1	-5.205402	1.633569	-3.789214
19	P1	-3.068804	0.064495	-0.717715
22	P1	-4.444146	0.024001	-0.219402
26	P1	-4.374176	0.060059	0.654691
30	P1	-5.668398	0.034062	-0.450699
3	P1	-15.918484	2.693002	-4.757675
7	P1	-15.466829	2.611112	-4.747633
11	P1	-16.350250	0.474307	-1.111174
15	P1	-12.760583	0.857716	-2.385945
19	P1	-13.493540	0.364571	-1.650857
22	P1	-15.924126	0.618513	-0.476416
26	P1	-15.147039	1.015378	-2.657788
30	P1	-15.679089	2.359493	-4.201751

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.769424	0.114591	0.372443
7	P2	-22.535524	0.106109	0.052400
11	P2	-16.468843	0.132842	0.483010
15	P2	-7.269243	0.106718	0.107593
19	P2	-9.207417	0.105147	0.012004
22	P2	-17.888527	0.112503	-0.250222
26	P2	-16.361193	0.132679	0.532162
30	P2	-19.775791	0.116928	0.429248

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.233501	0.007686	0.026461
7	P3	-8.233501	0.007686	0.026461
11	P3	-8.233501	0.007686	0.026461
15	P3	-8.233501	0.007686	0.026461
19	P3	-8.233501	0.007686	0.026461
22	P3	-8.233501	0.007686	0.026461
26	P3	-8.233501	0.007686	0.026461
30	P3	-8.233501	0.007686	0.026461

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.711843	0.008537	-0.031494
7	P1	-2.767624	0.007691	0.003442
11	P1	-2.875823	0.009378	0.006064
15	P1	-3.422718	0.016729	-0.054729
19	P1	-3.393089	0.014473	-0.003110
22	P1	-5.124352	0.019174	-0.009102
26	P1	-5.854181	0.015983	-0.017551
30	P1	-5.278118	0.033612	0.024929
3	P1	-11.491401	0.040168	-0.042560
7	P1	-9.966300	0.047847	0.055525
11	P1	-10.054184	0.056534	-0.036215
15	P1	-10.565305	0.070594	-0.080933
19	P1	-15.520142	0.074473	0.024843
22	P1	-20.943296	0.934245	0.453854

26	P1	-17.118326	0.290666	0.358936
30	P1	-18.173466	0.277225	0.165008

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.580057	0.029541	0.158091
7	P2	-23.035284	0.055309	0.170191
11	P2	-11.561210	0.019794	0.186458
15	P2	-4.989595	0.021188	0.067359
19	P2	-6.974161	0.021626	0.033993
22	P2	-8.213054	0.022409	-0.004825
26	P2	-24.046482	0.030049	0.078322
30	P2	-22.135958	0.017318	0.018230

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.077372	0.002473	0.013123
7	P3	-8.077580	0.002471	0.013093
11	P3	-8.077640	0.002455	0.012705
15	P3	-8.077547	0.002454	0.013288
19	P3	-8.077577	0.002471	0.013474
22	P3	-8.077490	0.002458	0.013427
26	P3	-8.077472	0.002442	0.013826
30	P3	-8.077319	0.002464	0.012629

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	0.000465248
	stdev	2.17125e-07
MEAN Q	mean	0.000469601
	stdev	2.34970e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.130095
	stdev	0.00115546
STDEV Q	mean	0.130388
	stdev	0.00116902



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006010[234]

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_IMM_1PNPDE20060104_004520_000001852044_00016_20110_5463.N1	1	0





7 - Doppler Analysis

Preliminary report. The data is not yet controled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)	
<input type="checkbox"/>	Acsending
<input type="checkbox"/>	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 AN

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

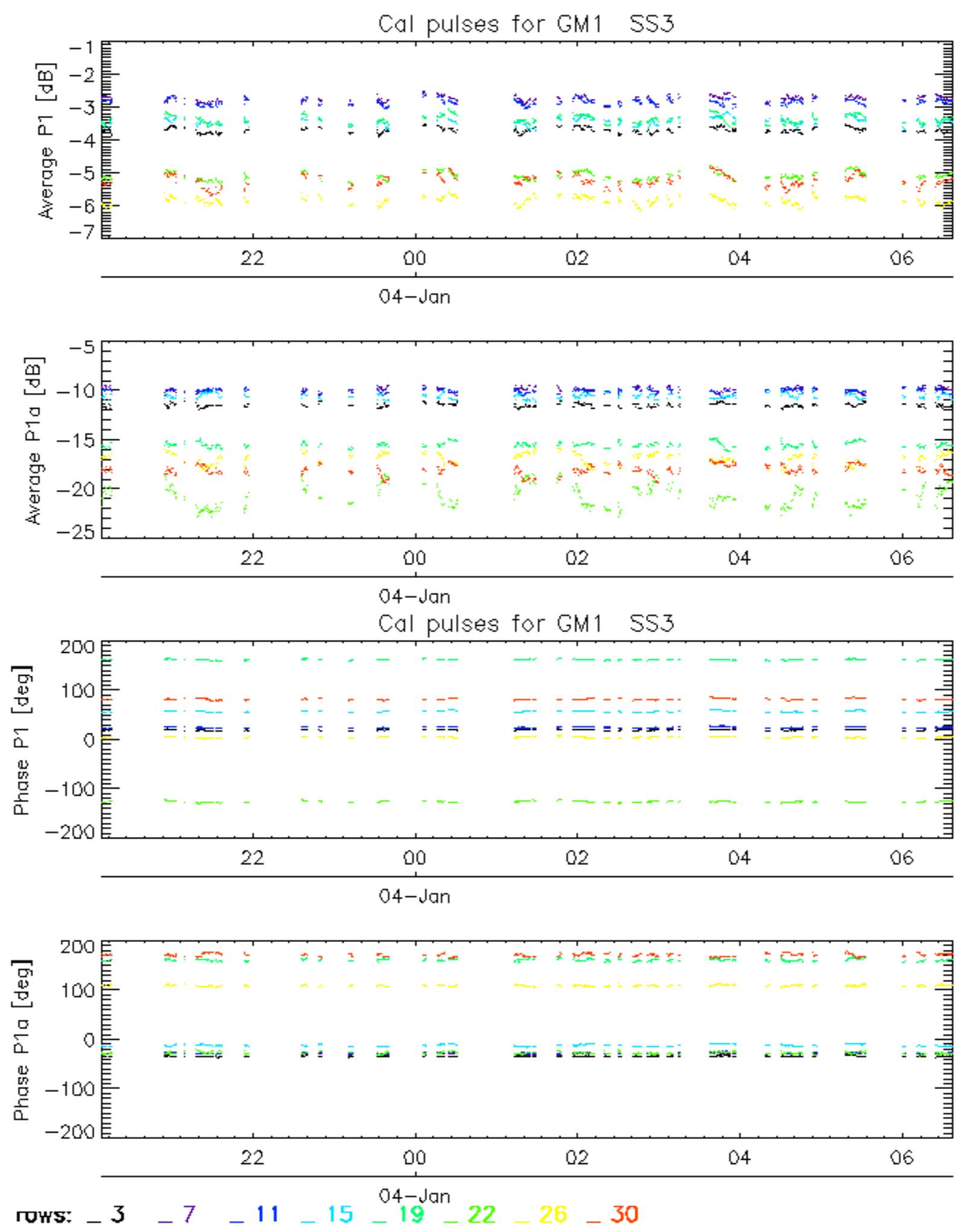
<input type="checkbox"/>
Descending

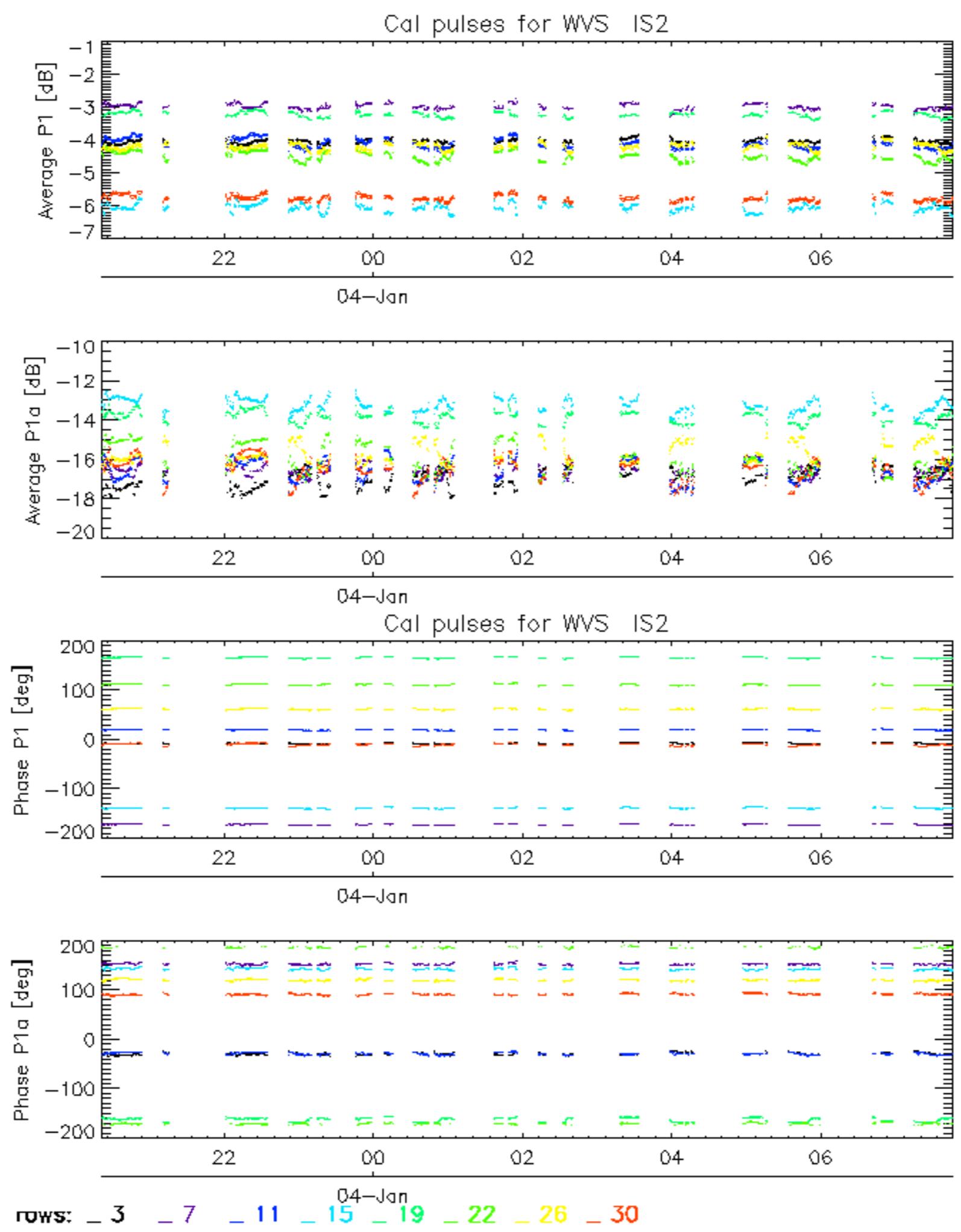
7.5 - Absolute Doppler for GM1

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

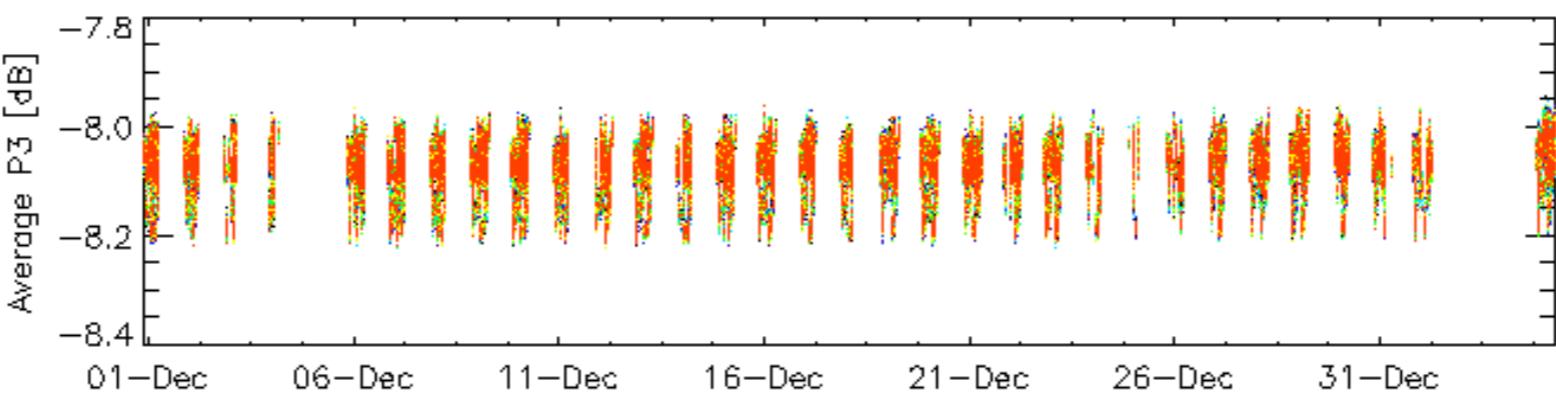
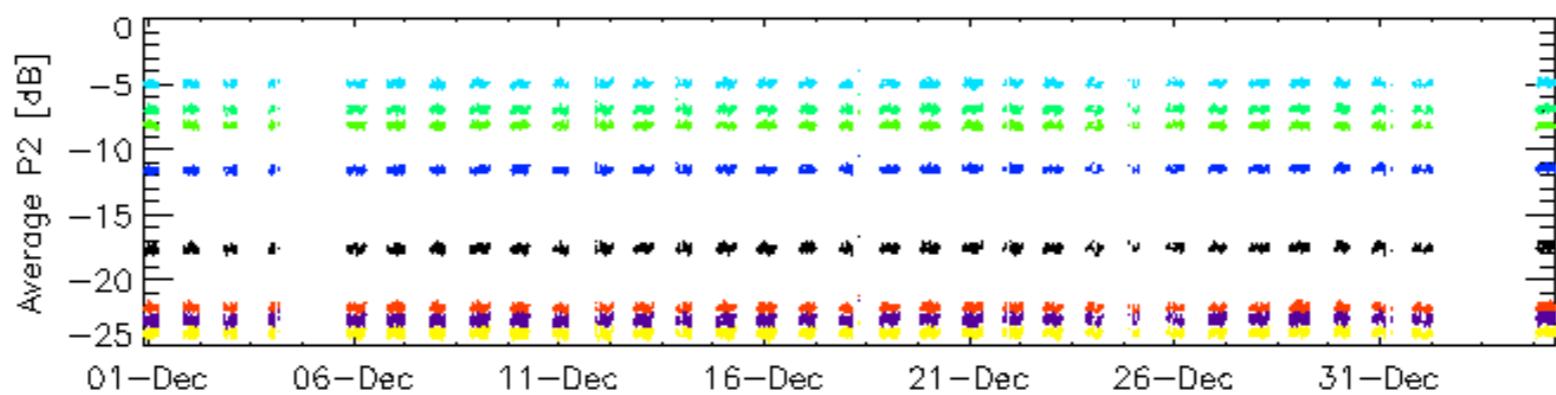
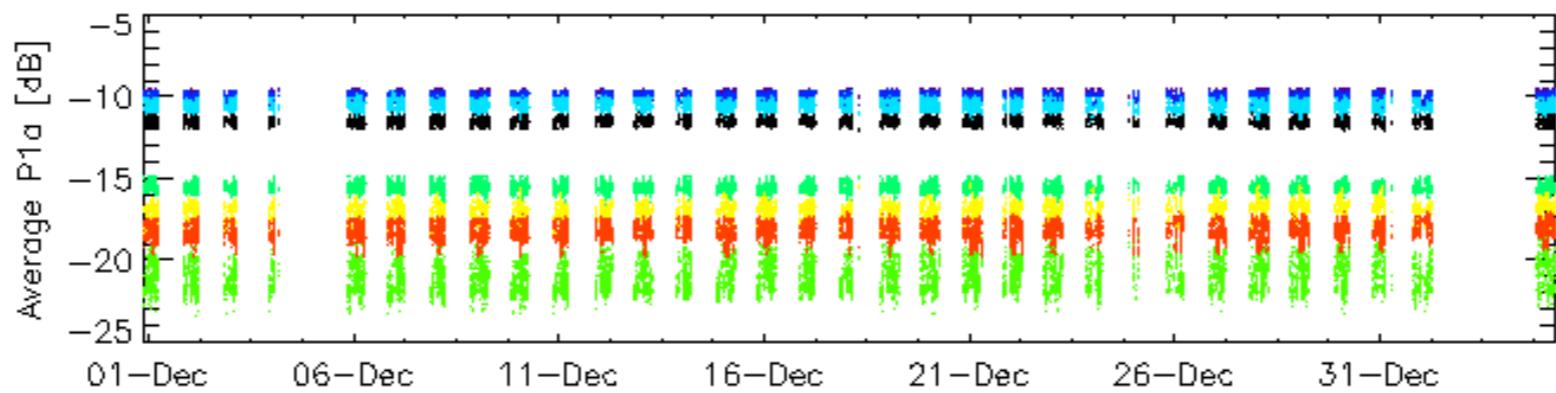
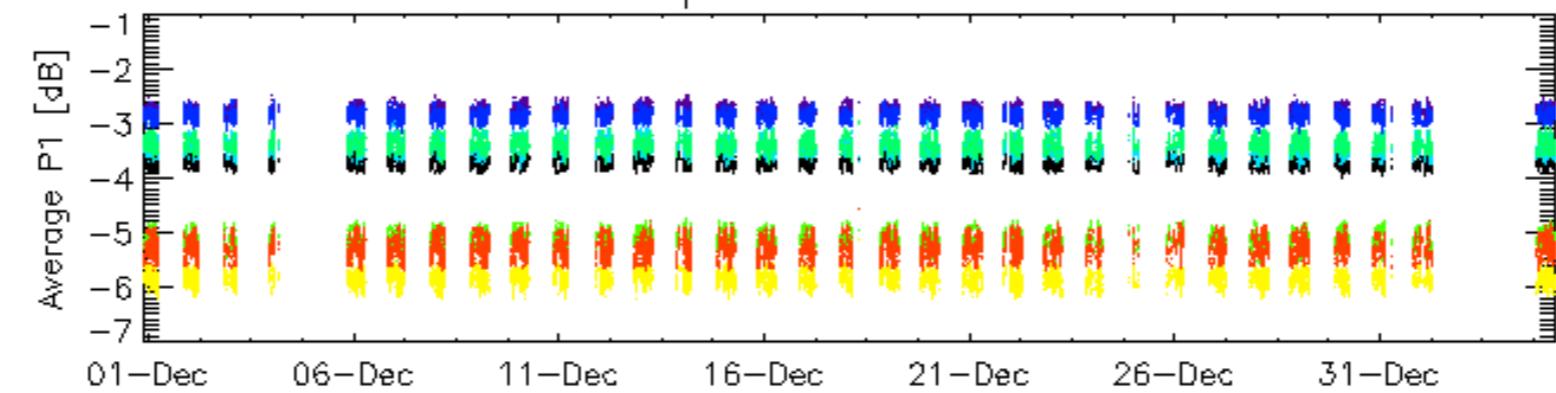
7.6 - Doppler evolution versus ANX for GM1

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

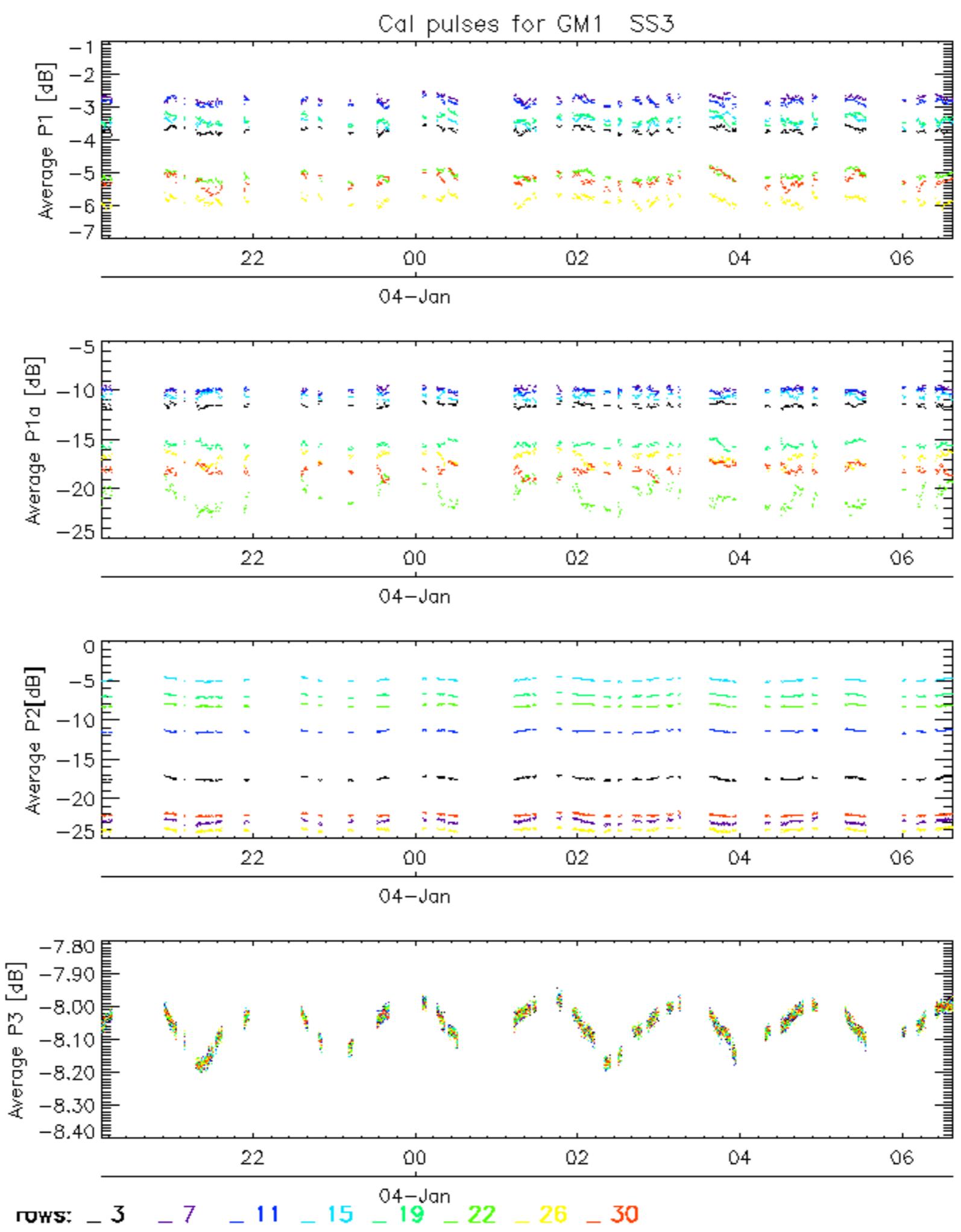




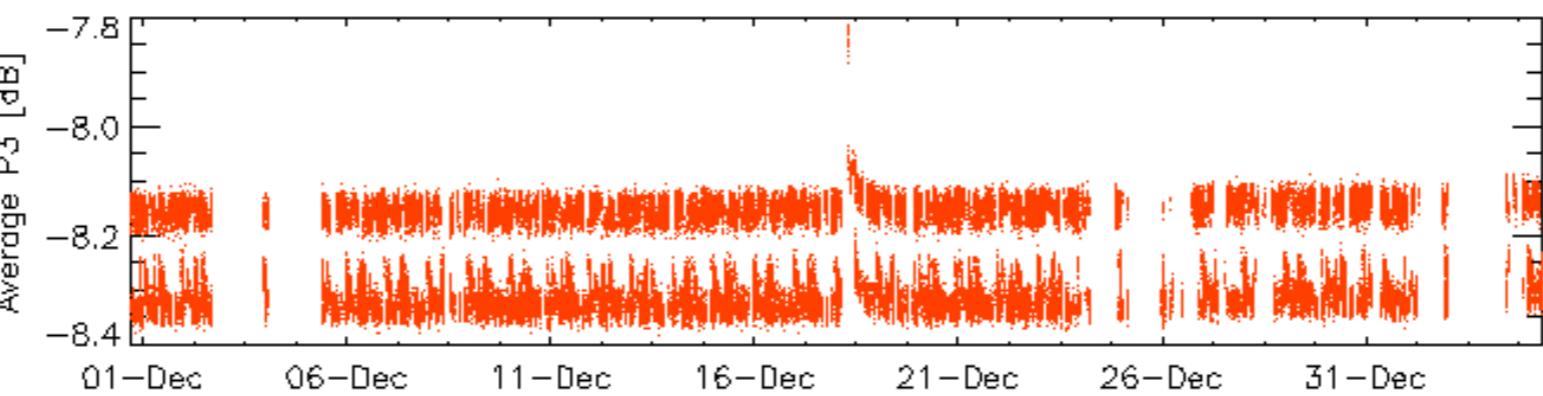
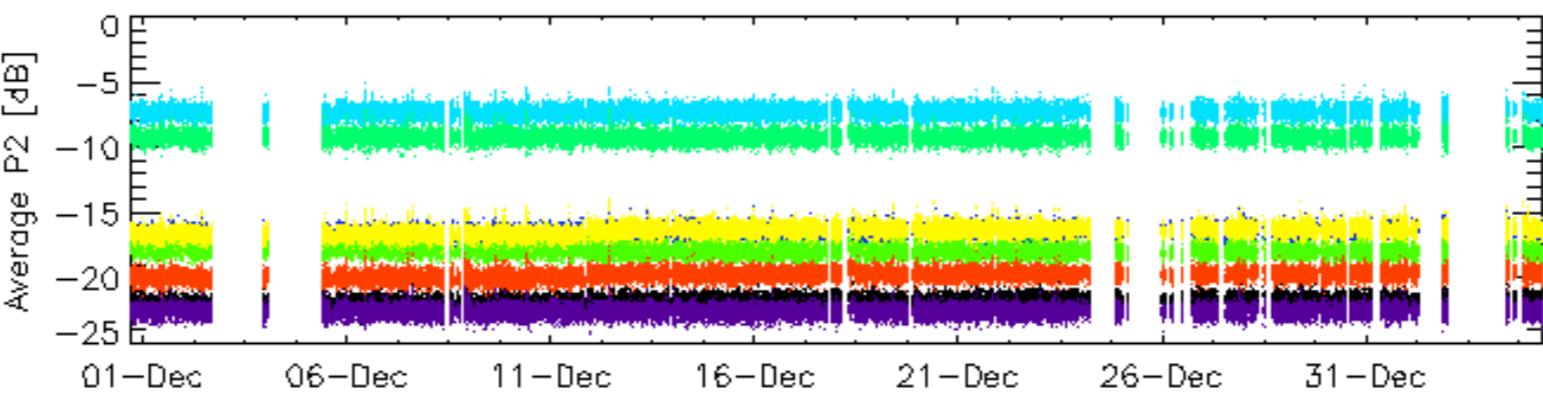
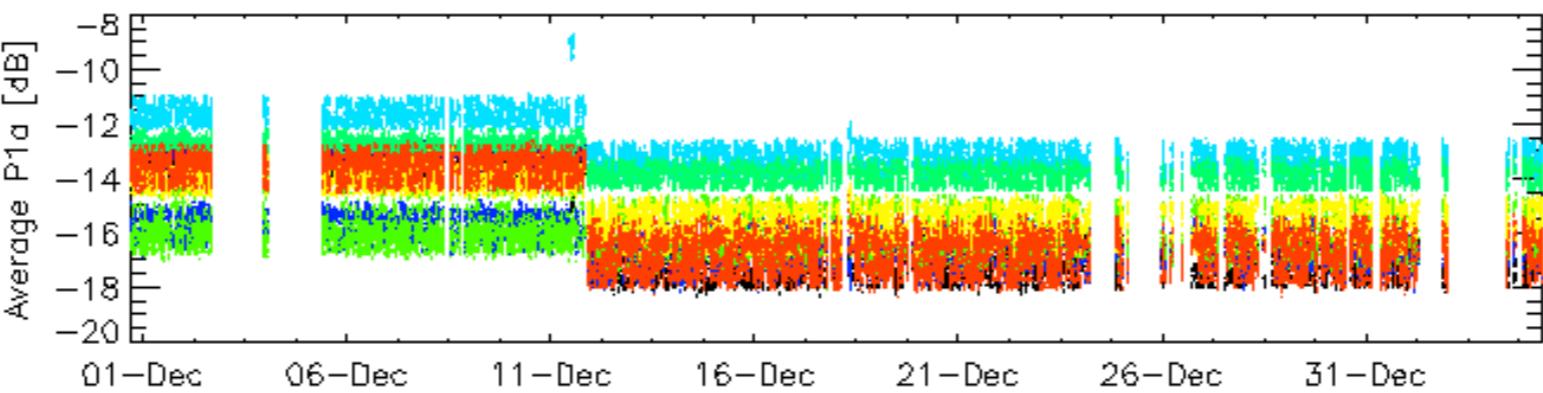
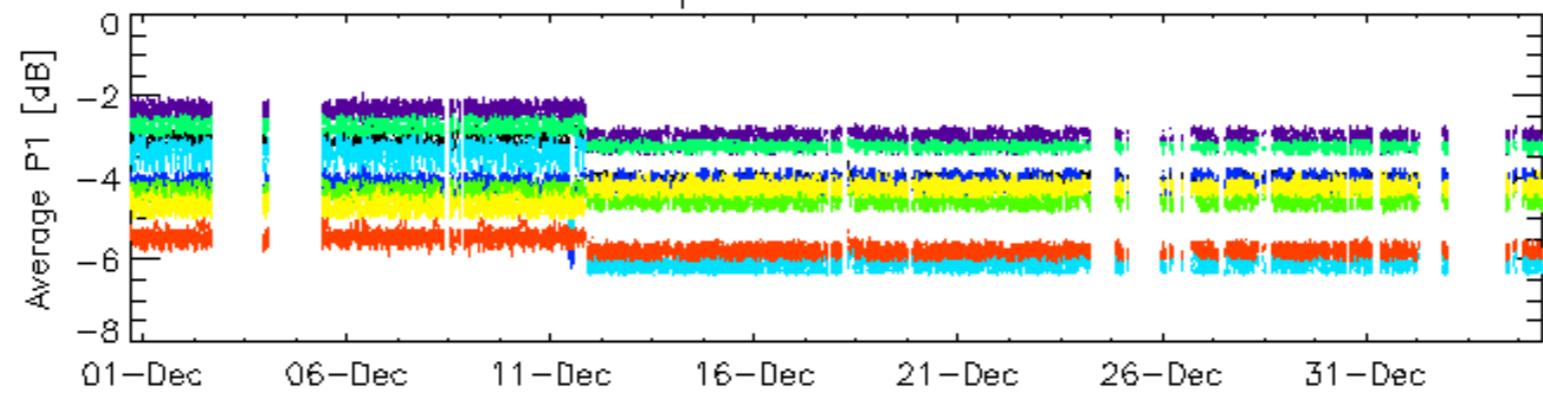
Cal pulses for GM1 SS3



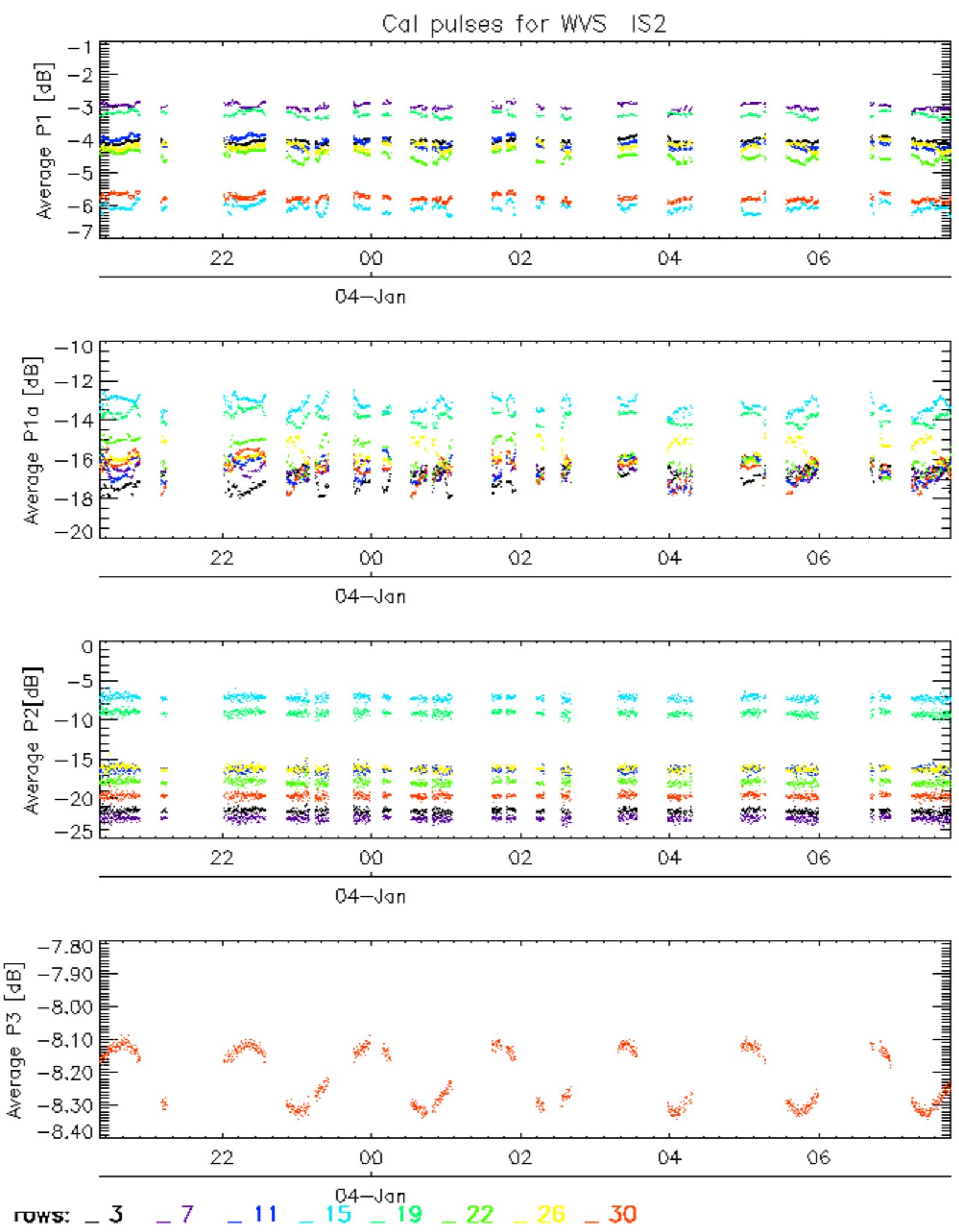
ROWS: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



Cal pulses for WVS IS2



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

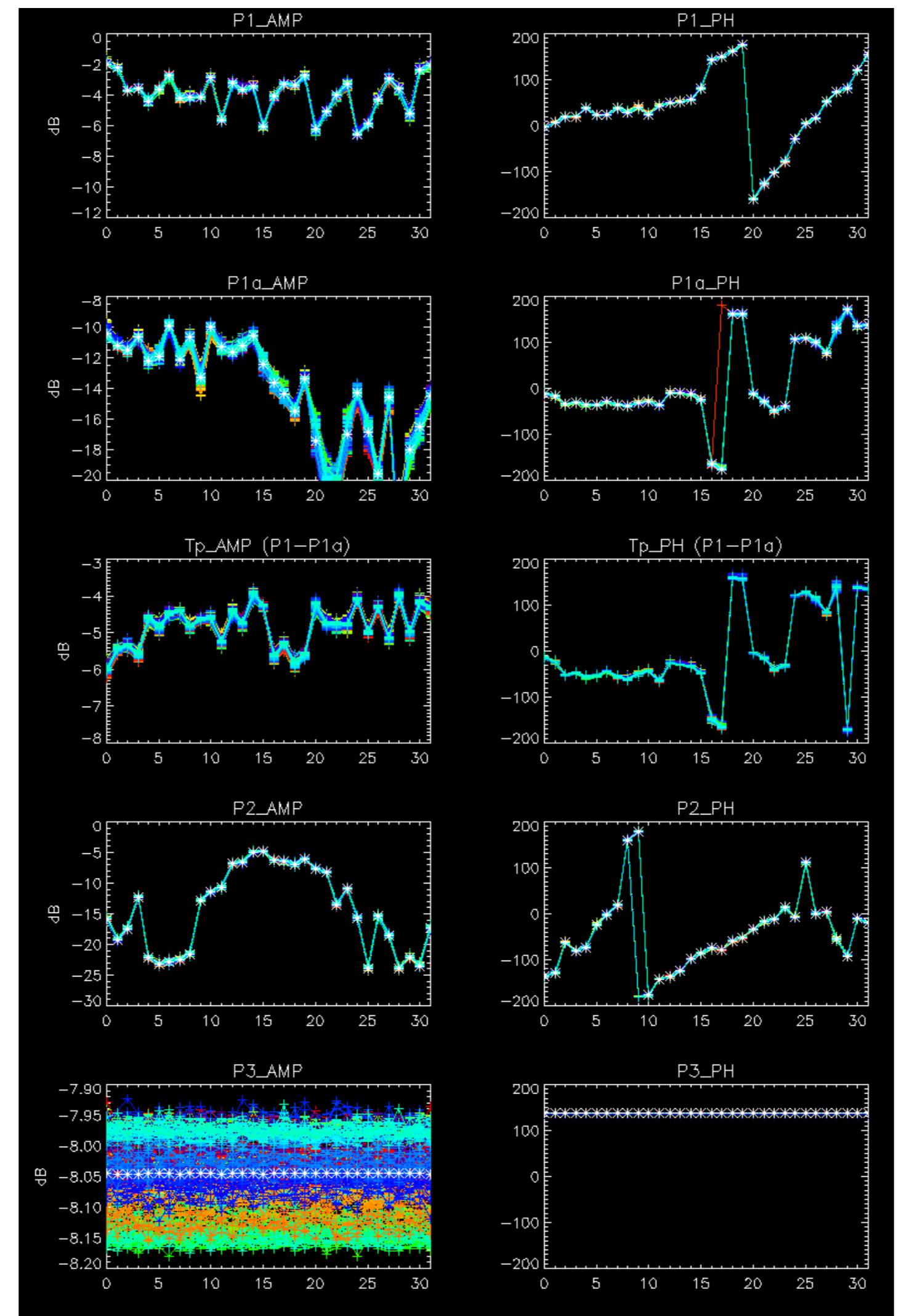


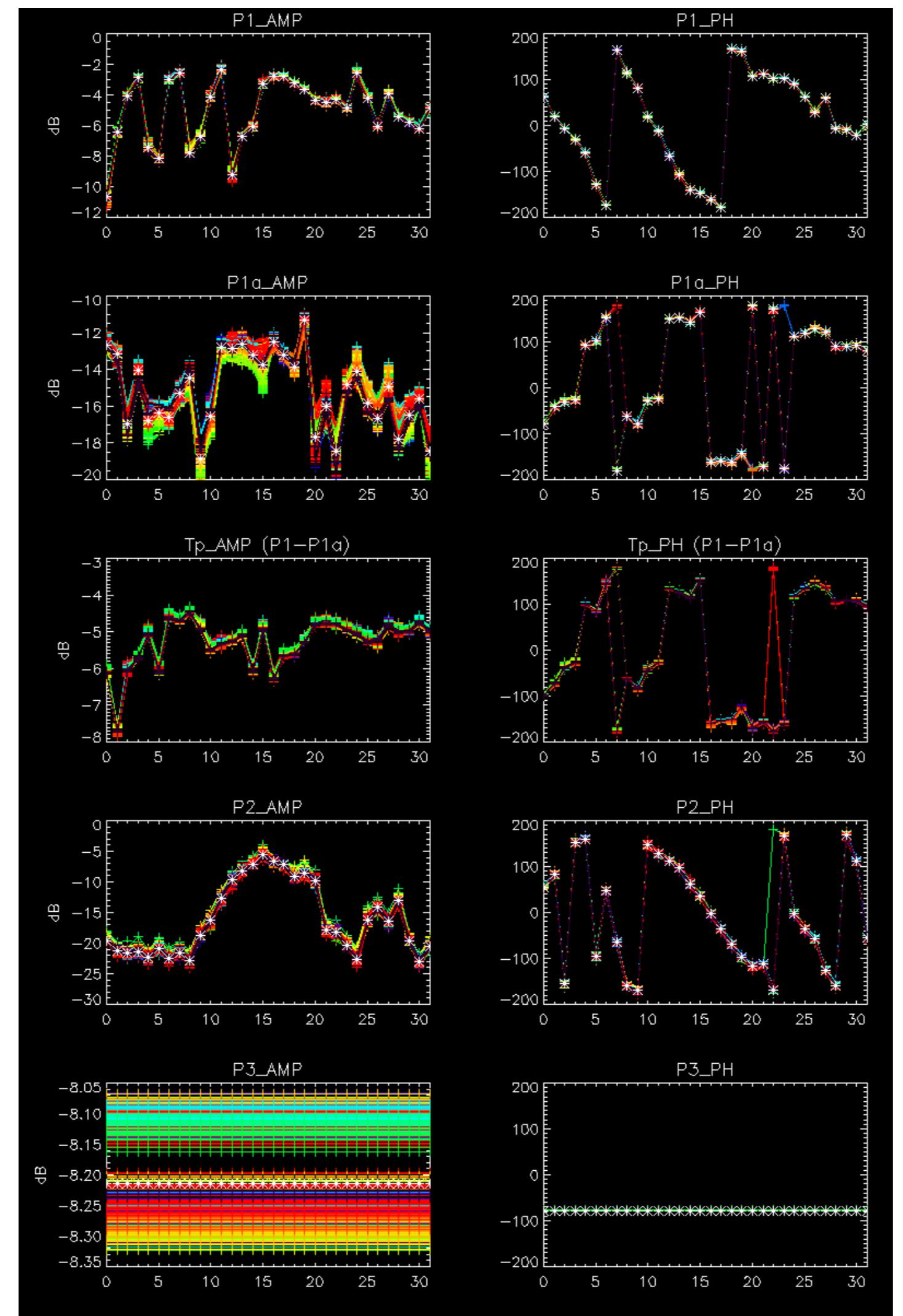
No anomalies observed on available browse products



No anomalies observed.

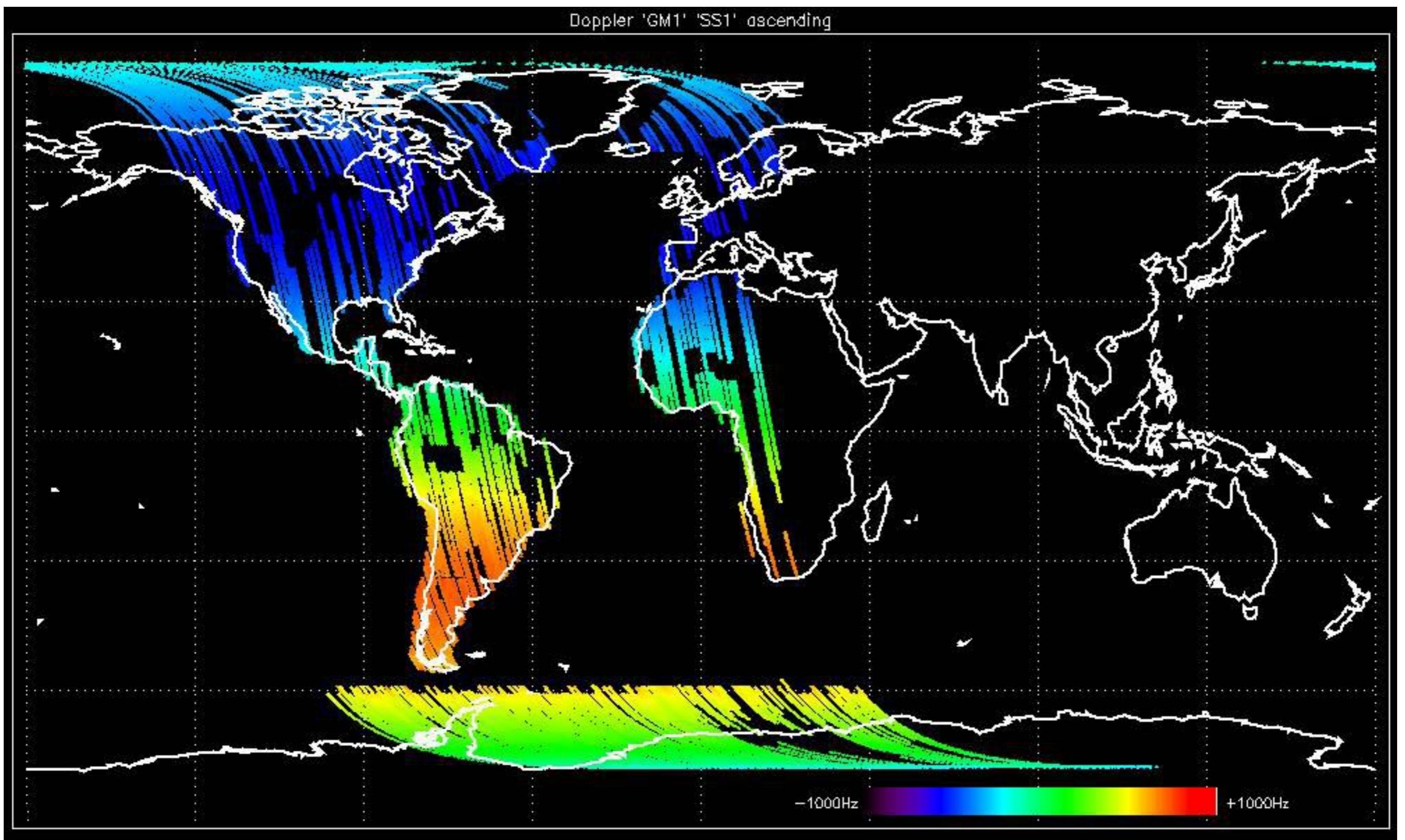


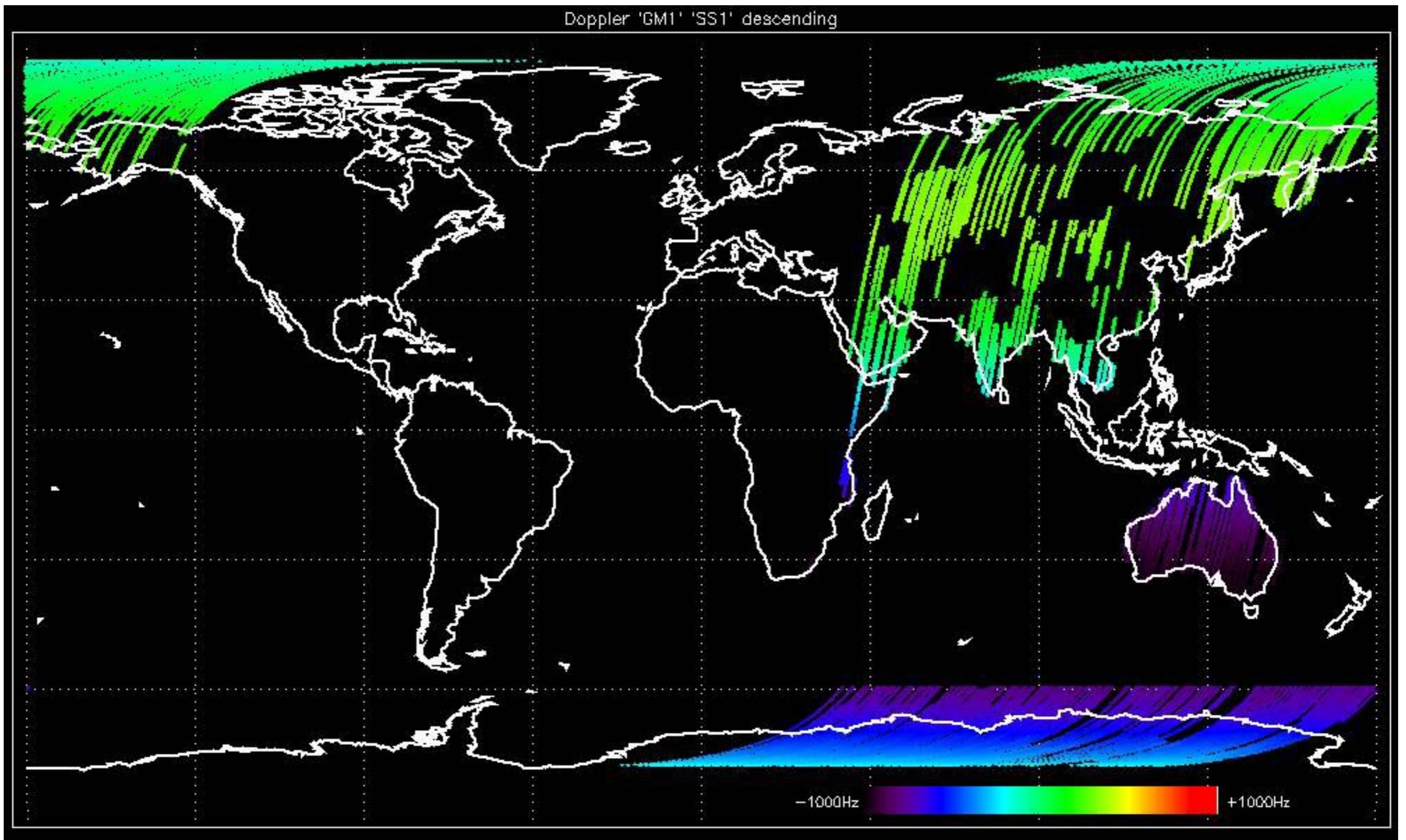


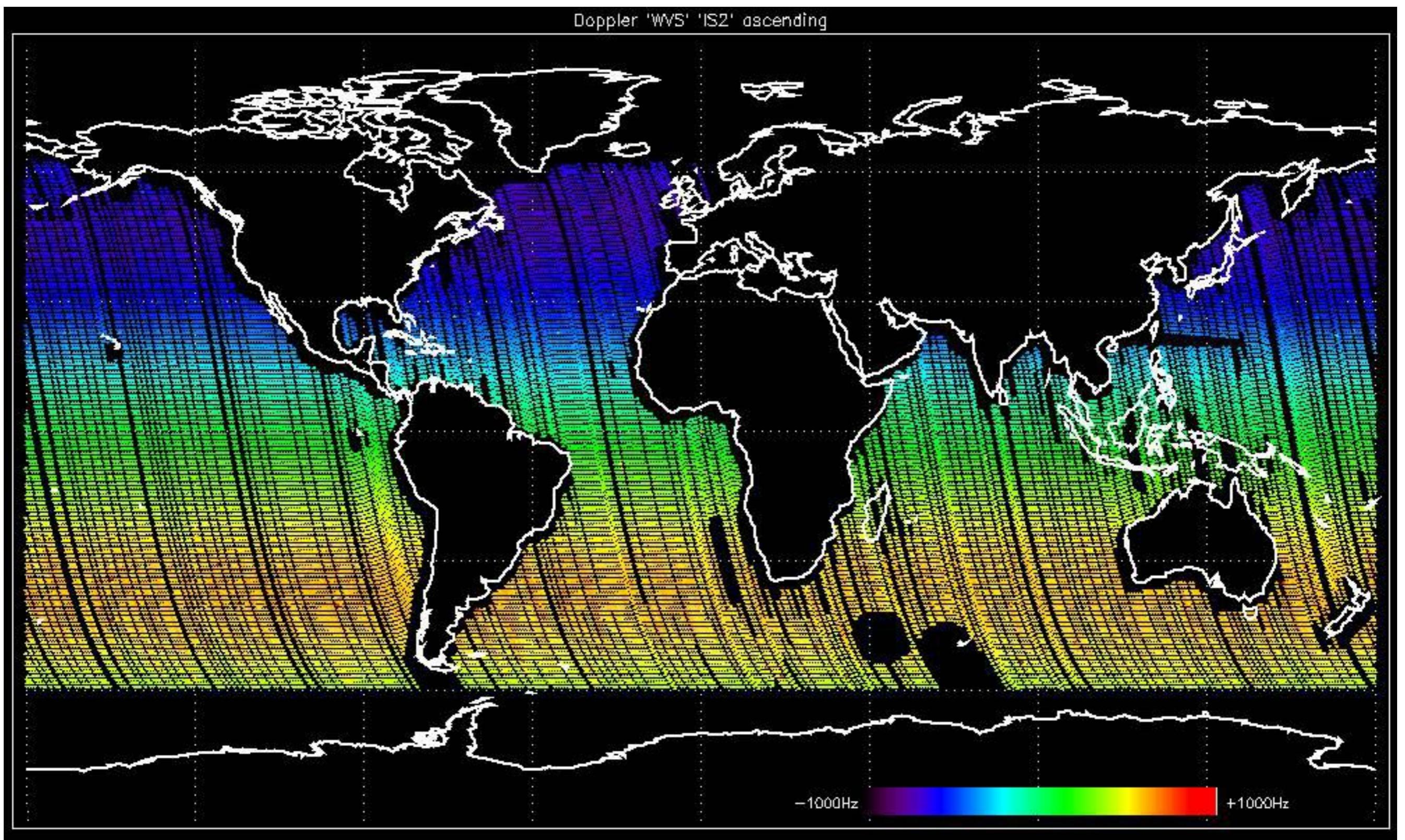


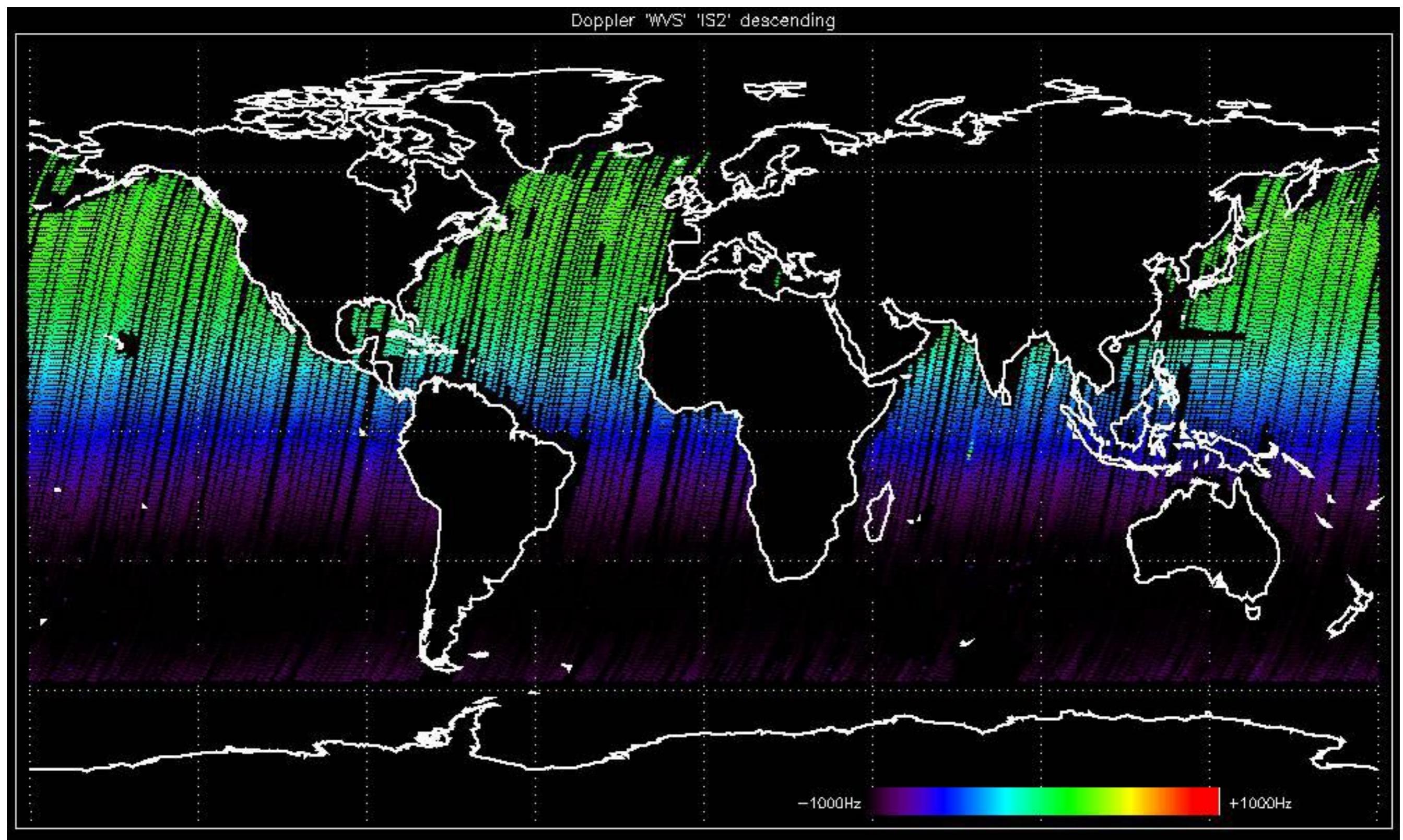
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

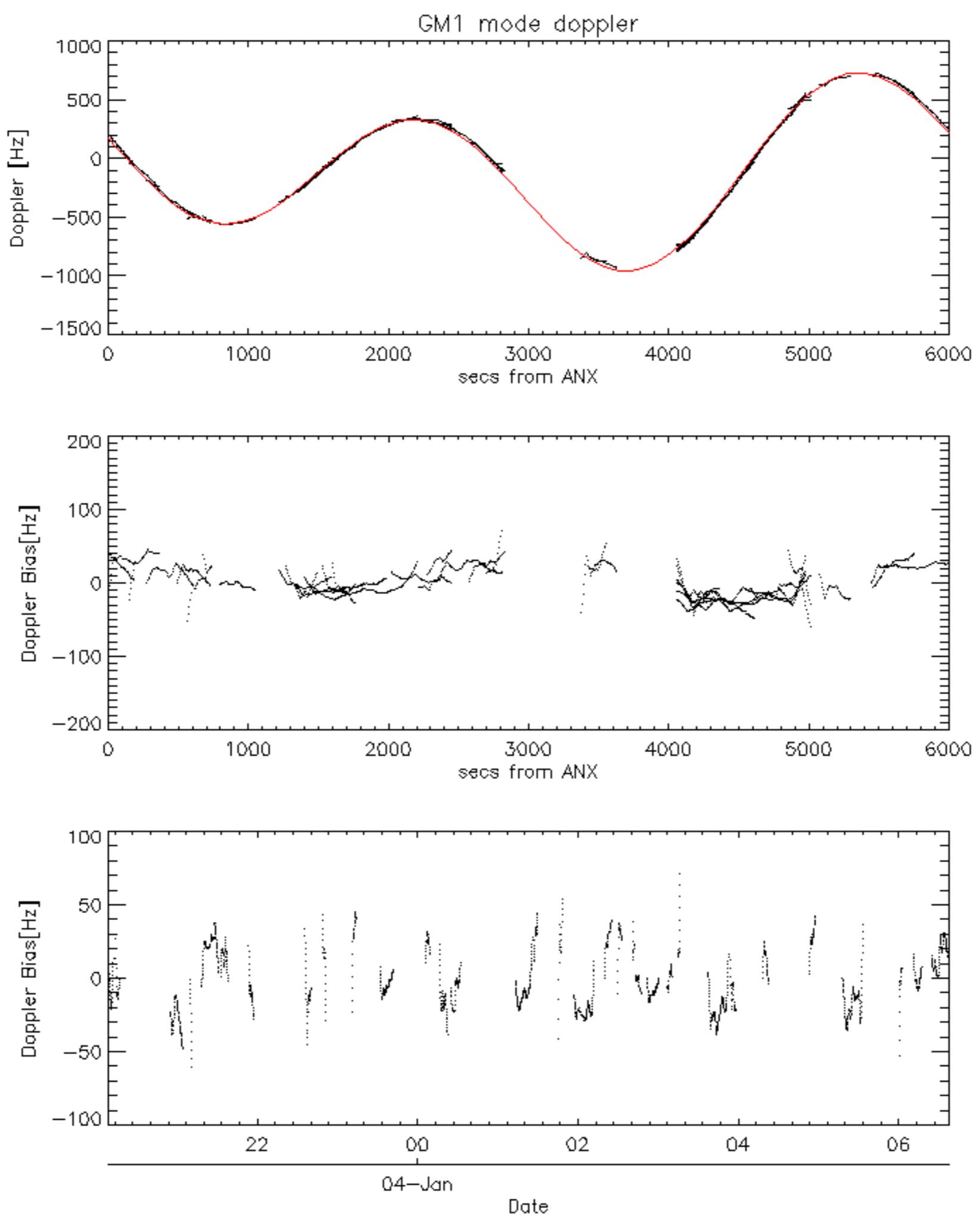


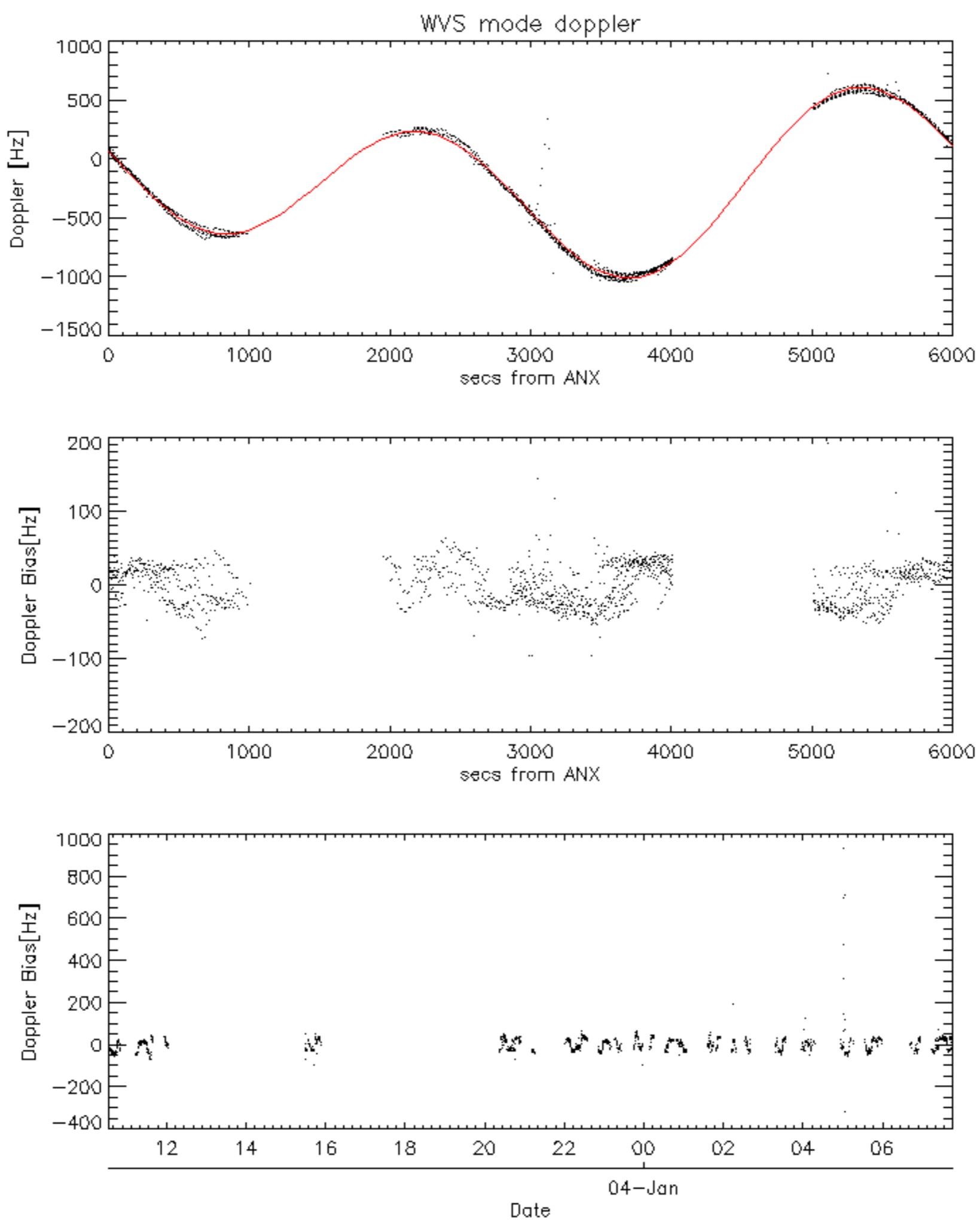


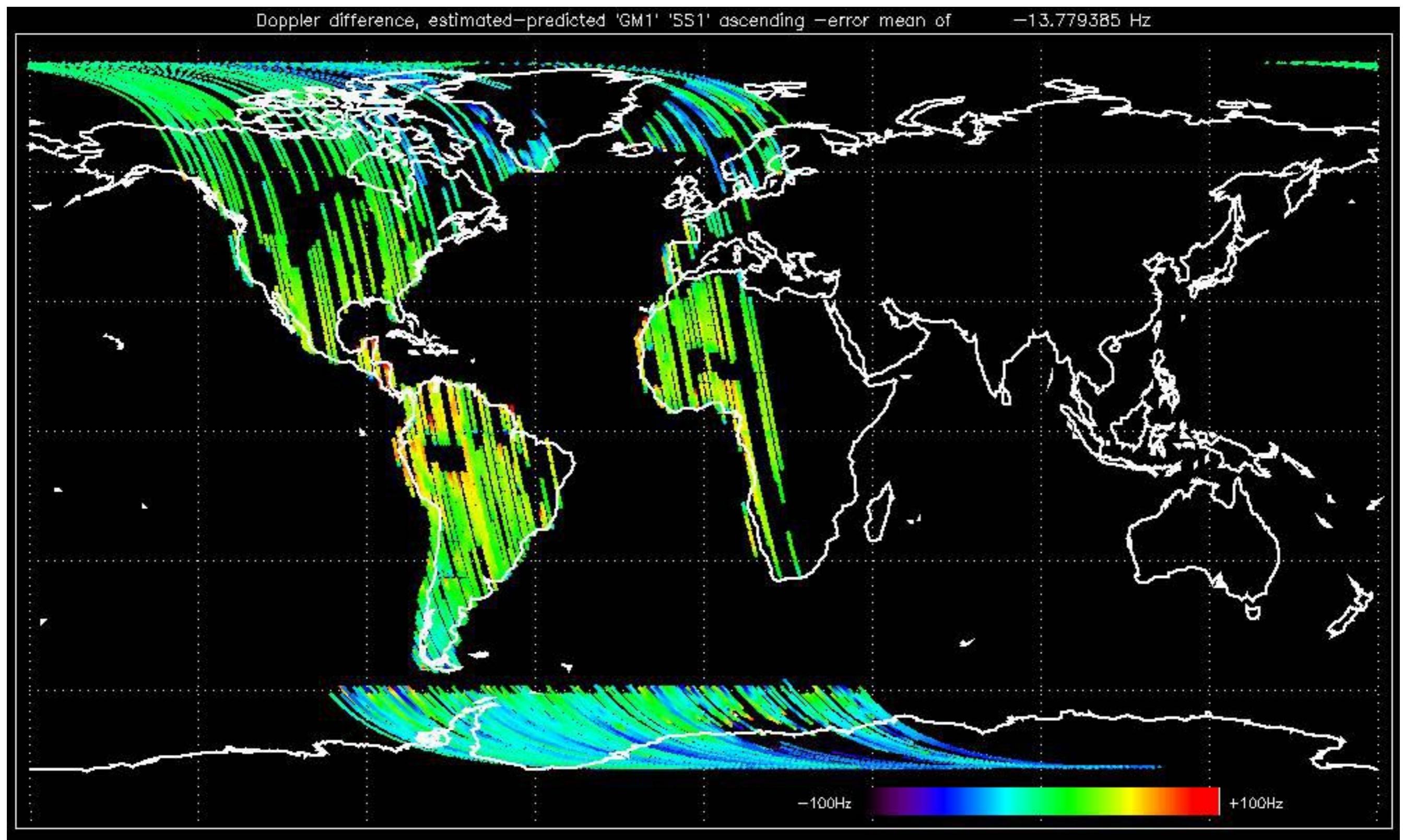


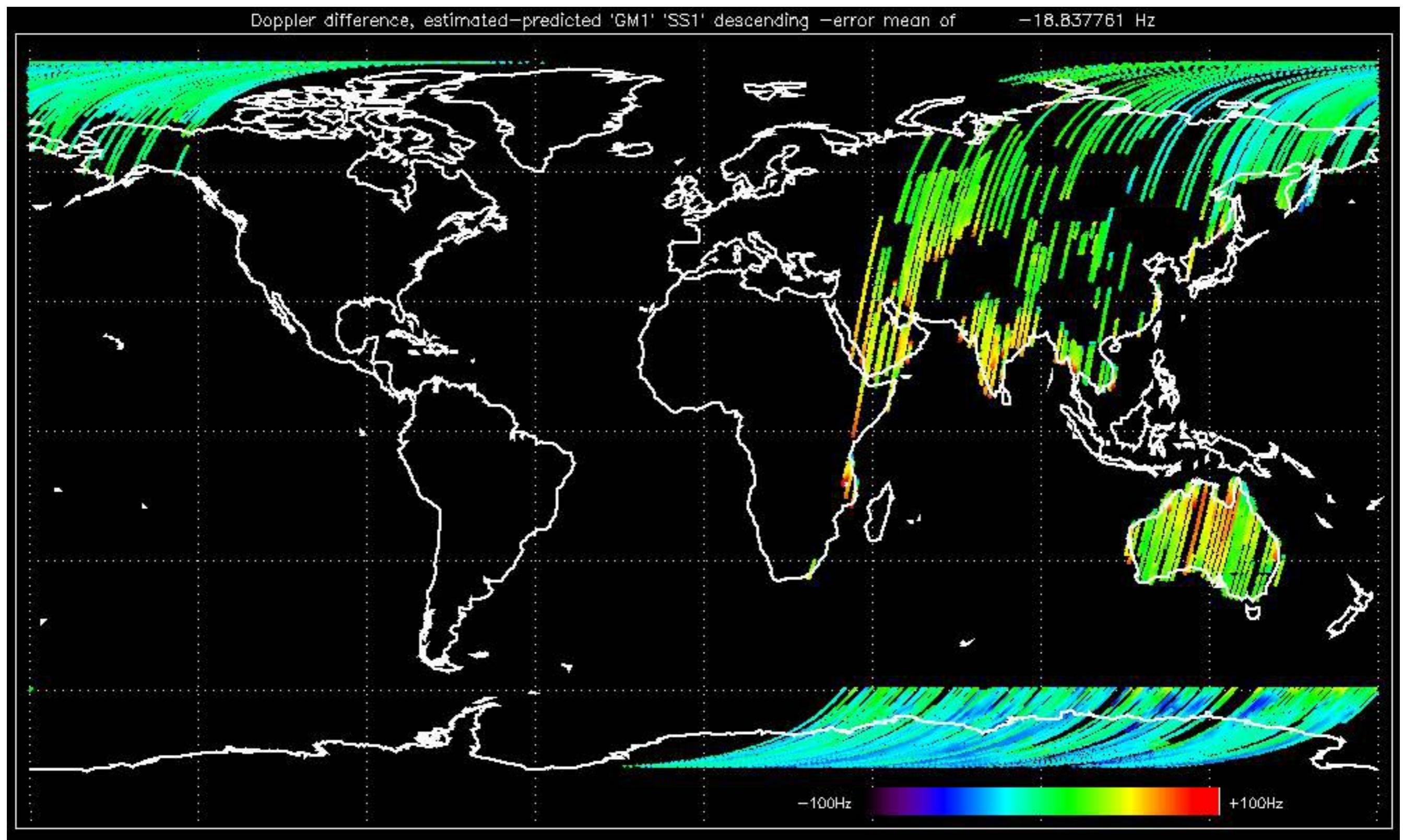


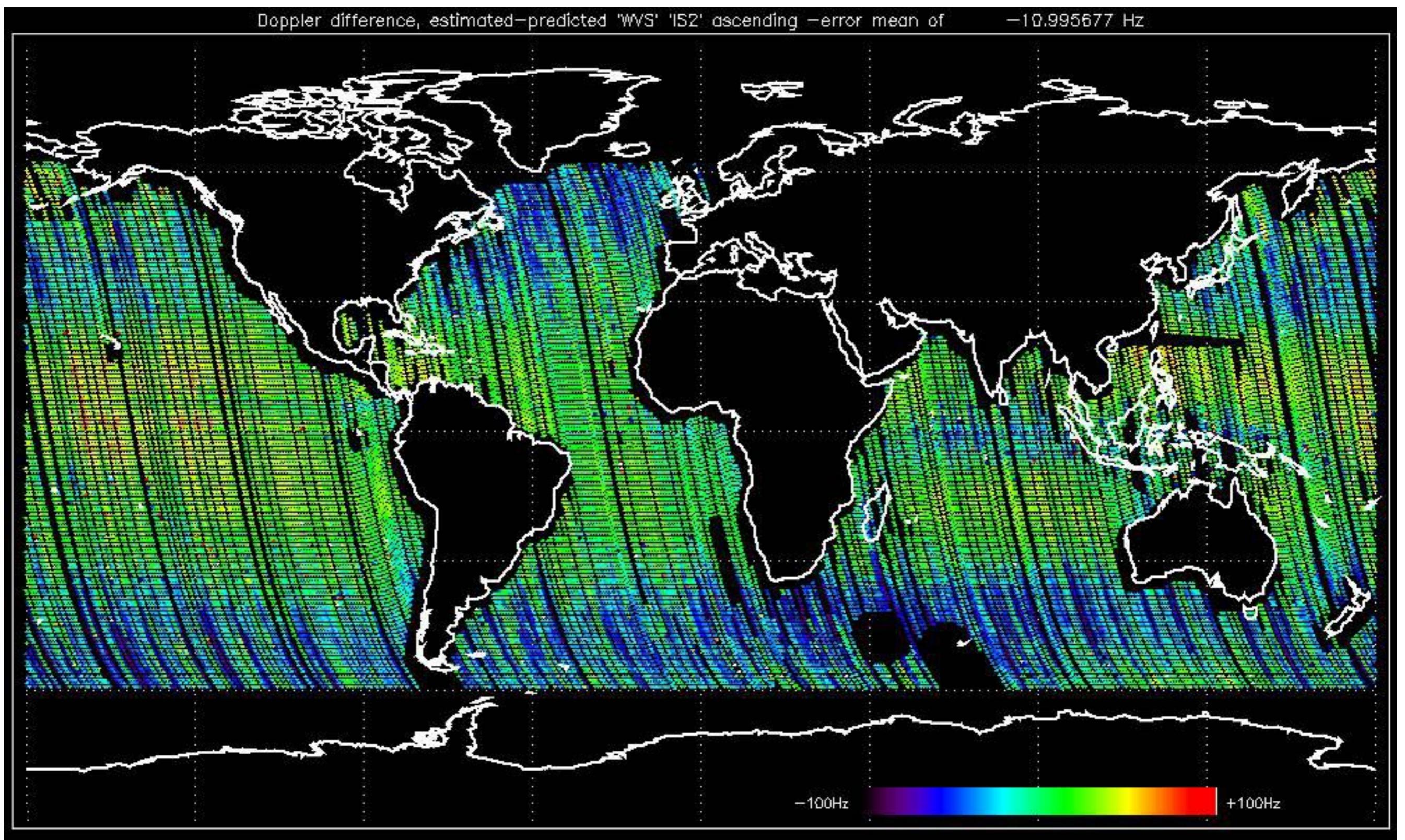


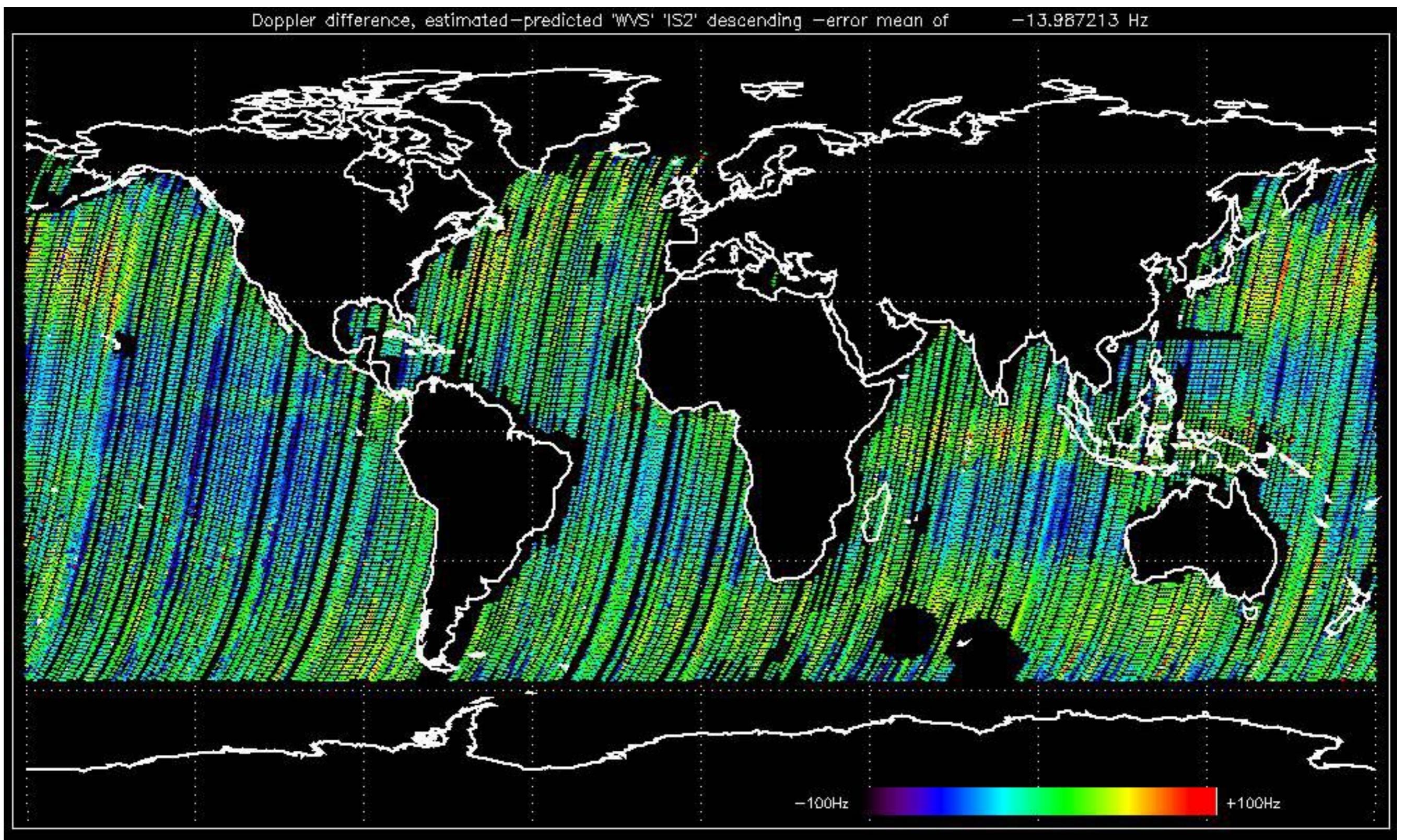












No anomalies observed on available MS products:



No anomalies observed.



Reference: 2001-02-09 13:50:42 H RxGain

Test : 2005-12-30 14:38:12 H

Reference: 2001-02-09 14:08:23 V RxGain

Test : 2005-12-31 20:48:59 V

	A1	A3	B1	B3	C1	C3	D1	D3	E1	E3	
1	Yellow										1
2		Yellow									2
3			Yellow								3
4				Yellow							4
5					Yellow						5
6						Yellow					6
7							Yellow				7
8								Yellow			8
9									Yellow		9
10										Yellow	10
11										Yellow	11
12										Yellow	12
13										Yellow	13
14										Yellow	14
15										Yellow	15
16										Yellow	16
17								Red		Yellow	17
18								Red		Yellow	18
19								Red		Yellow	19
20								Red		Yellow	20
21								Red		Yellow	21
22								Red		Yellow	22
23								Red		Yellow	23
24								Red		Yellow	24
25								Red		Yellow	25
26								Red		Yellow	26
27								Red		Yellow	27
28								Red		Yellow	28
29								Red		Yellow	29
30								Red		Yellow	30
31								Red		Yellow	31
32								Red		Yellow	32

RxGain									
Reference: 2005-09-29 07:47:20 V									
Test : 2005-12-31 20:48:59 V									
A1	A3	B1	B3	C1	C3	D1	D3	E1	E3
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32								
A2	A4	B2	B4	C2	C4	D2	D4	E2	E4
21	23	25	27	29	31	33	35	37	39
41	43	45	47	49	51	53	55	57	59
61	63	65	67	69	71	73	75	77	79
81	83	85	87	89	91	93	95	97	99
101	103	105	107	109	111	113	115	117	119
121	123	125	127	129	131	133	135	137	139
141	143	145	147	149	151	153	155	157	159
161	163	165	167	169	171	173	175	177	179
181	183	185	187	189	191	193	195	197	199
201	203	205	207	209	211	213	215	217	219
221	223	225	227	229	231	233	235	237	239
241	243	245	247	249	251	253	255	257	259
261	263	265	267	269	271	273	275	277	279
281	283	285	287	289	291	293	295	297	299
301	303	305	307	309	311	313	315	317	319
321	323	325	327	329	331	333	335	337	339
341	343	345	347	349	351	353	355	357	359
361	363	365	367	369	371	373	375	377	379
381	383	385	387	389	391	393	395	397	399
391	393	395	397	399	401	403	405	407	409
411	413	415	417	419	421	423	425	427	429
431	433	435	437	439	441	443	445	447	449
451	453	455	457	459	461	463	465	467	469
471	473	475	477	479	481	483	485	487	489
491	493	495	497	499	501	503	505	507	509
511	513	515	517	519	521	523	525	527	529
531	533	535	537	539	541	543	545	547	549
551	553	555	557	559	561	563	565	567	569
571	573	575	577	579	581	583	585	587	589
591	593	595	597	599	601	603	605	607	609
611	613	615	617	619	621	623	625	627	629
631	633	635	637	639	641	643	645	647	649
651	653	655	657	659	661	663	665	667	669
671	673	675	677	679	681	683	685	687	689
691	693	695	697	699	701	703	705	707	709
711	713	715	717	719	721	723	725	727	729
731	733	735	737	739	741	743	745	747	749
751	753	755	757	759	761	763	765	767	769
771	773	775	777	779	781	783	785	787	789
791	793	795	797	799	801	803	805	807	809
811	813	815	817	819	821	823	825	827	829
831	833	835	837	839	841	843	845	847	849
851	853	855	857	859	861	863	865	867	869
871	873	875	877	879	881	883	885	887	889
891	893	895	897	899	901	903	905	907	909
911	913	915	917	919	921	923	925	927	929
931	933	935	937	939	941	943	945	947	949
951	953	955	957	959	961	963	965	967	969
971	973	975	977	979	981	983	985	987	989
991	993	995	997	999	1001	1003	1005	1007	1009
1011	1013	1015	1017	1019	1021	1023	1025	1027	1029
1031	1033	1035	1037	1039	1041	1043	1045	1047	1049
1051	1053	1055	1057	1059	1061	1063	1065	1067	1069
1071	1073	1075	1077	1079	1081	1083	1085	1087	1089
1091	1093	1095	1097	1099	1101	1103	1105	1107	1109
1111	1113	1115	1117	1119	1121	1123	1125	1127	1129
1131	1133	1135	1137	1139	1141	1143	1145	1147	1149
1151	1153	1155	1157	1159	1161	1163	1165	1167	1169
1171	1173	1175	1177	1179	1181	1183	1185	1187	1189
1191	1193	1195	1197	1199	1201	1203	1205	1207	1209
1211	1213	1215	1217	1219	1221	1223	1225	1227	1229
1231	1233	1235	1237	1239	1241	1243	1245	1247	1249
1251	1253	1255	1257	1259	1261	1263	1265	1267	1269
1271	1273	1275	1277	1279	1281	1283	1285	1287	1289
1291	1293	1295	1297	1299	1301	1303	1305	1307	1309
1311	1313	1315	1317	1319	1321	1323	1325	1327	1329
1331	1333	1335	1337	1339	1341	1343	1345	1347	1349
1351	1353	1355	1357	1359	1361	1363	1365	1367	1369
1371	1373	1375	1377	1379	1381	1383	1385	1387	1389
1391	1393	1395	1397	1399	1401	1403	1405	1407	1409
1411	1413	1415	1417	1419	1421	1423	1425	1427	1429
1431	1433	1435	1437	1439	1441	1443	1445	1447	1449
1451	1453	1455	1457	1459	1461	1463	1465	1467	1469
1471	1473	1475	1477	1479	1481	1483	1485	1487	1489
1491	1493	1495	1497	1499	1501	1503	1505	1507	1509
1511	1513	1515	1517	1519	1521	1523	1525	1527	1529
1531	1533	1535	1537	1539	1541	1543	1545	1547	1549
1551	1553	1555							

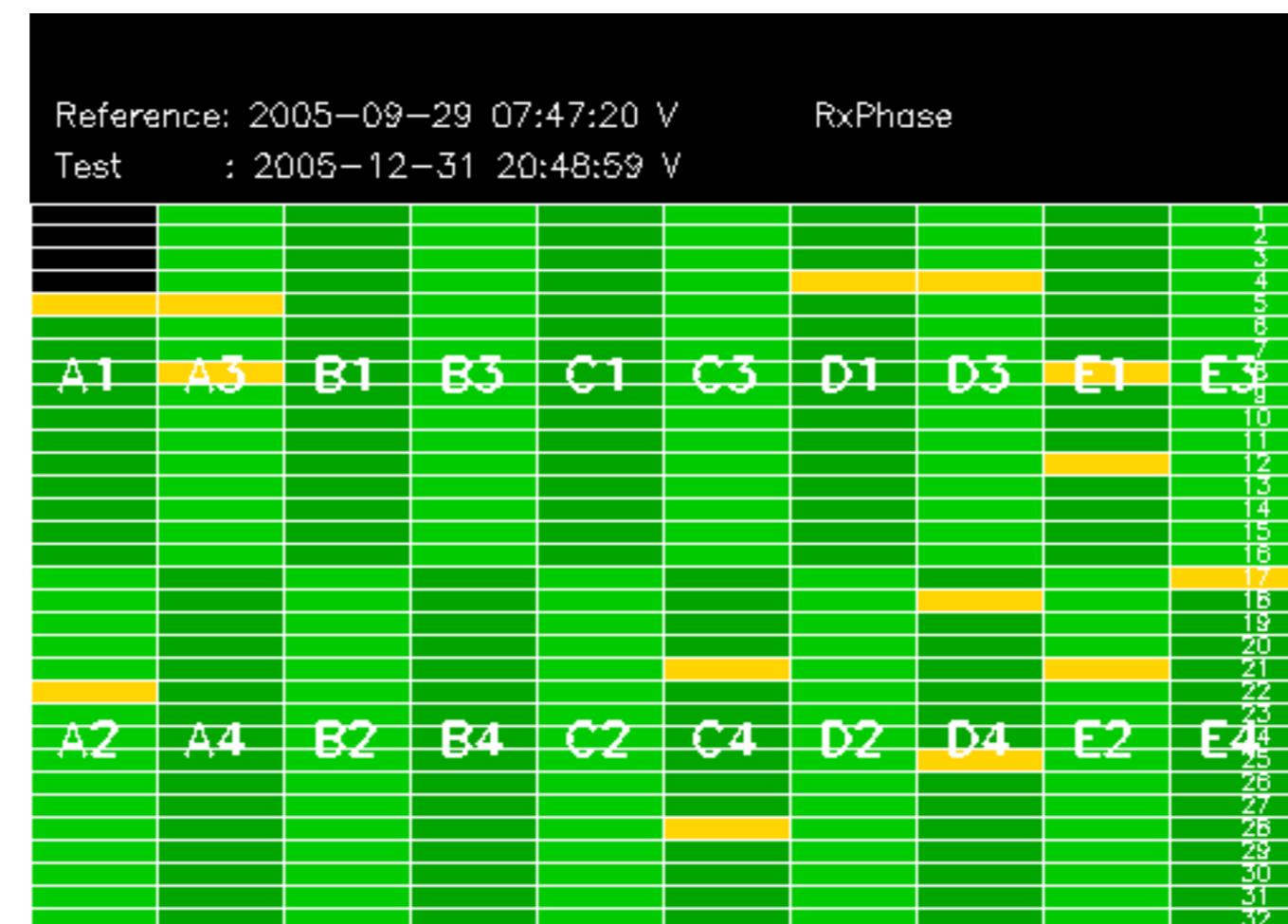
Reference: 2001-02-09 13:50:42 |

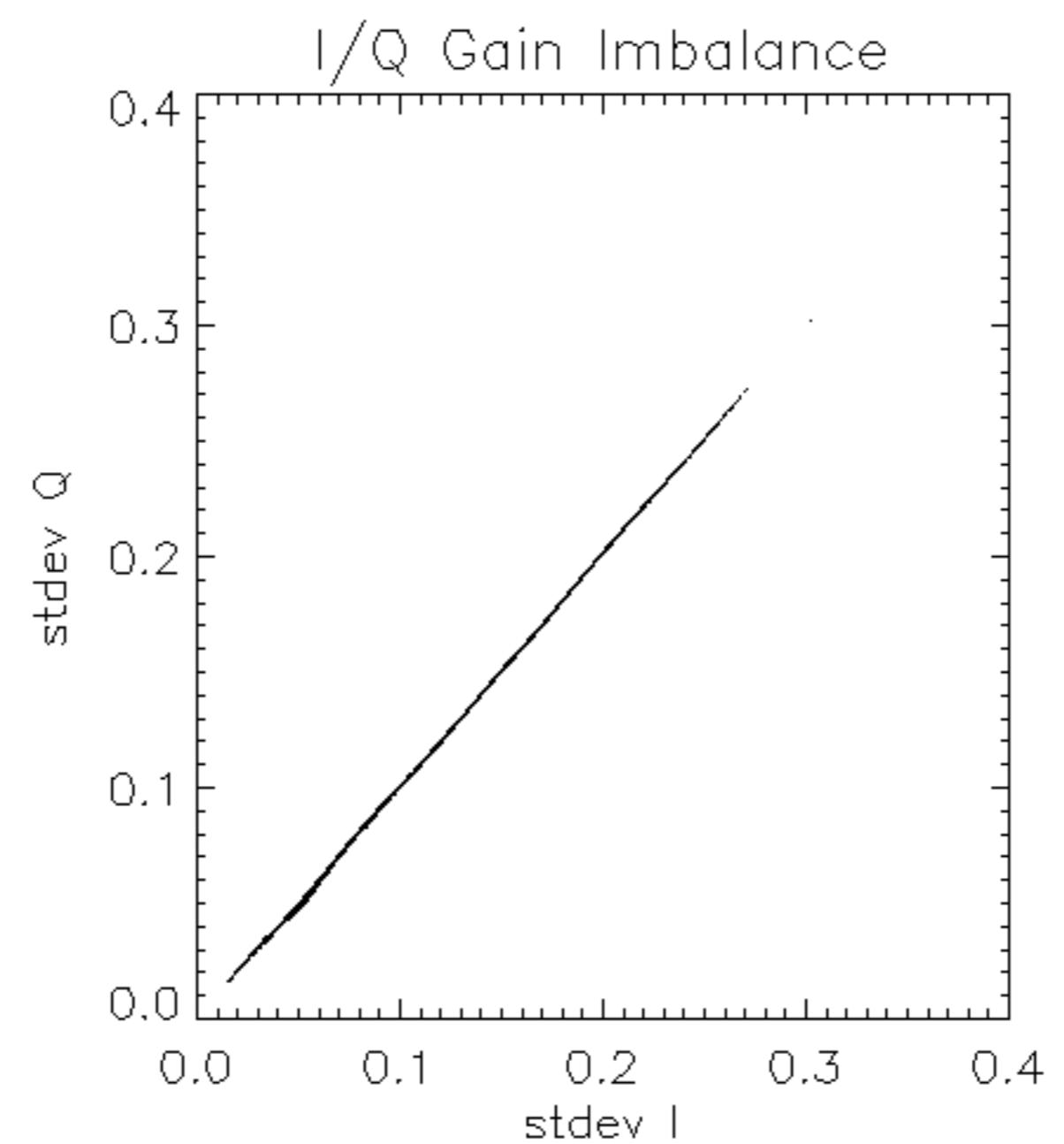
RxPhase

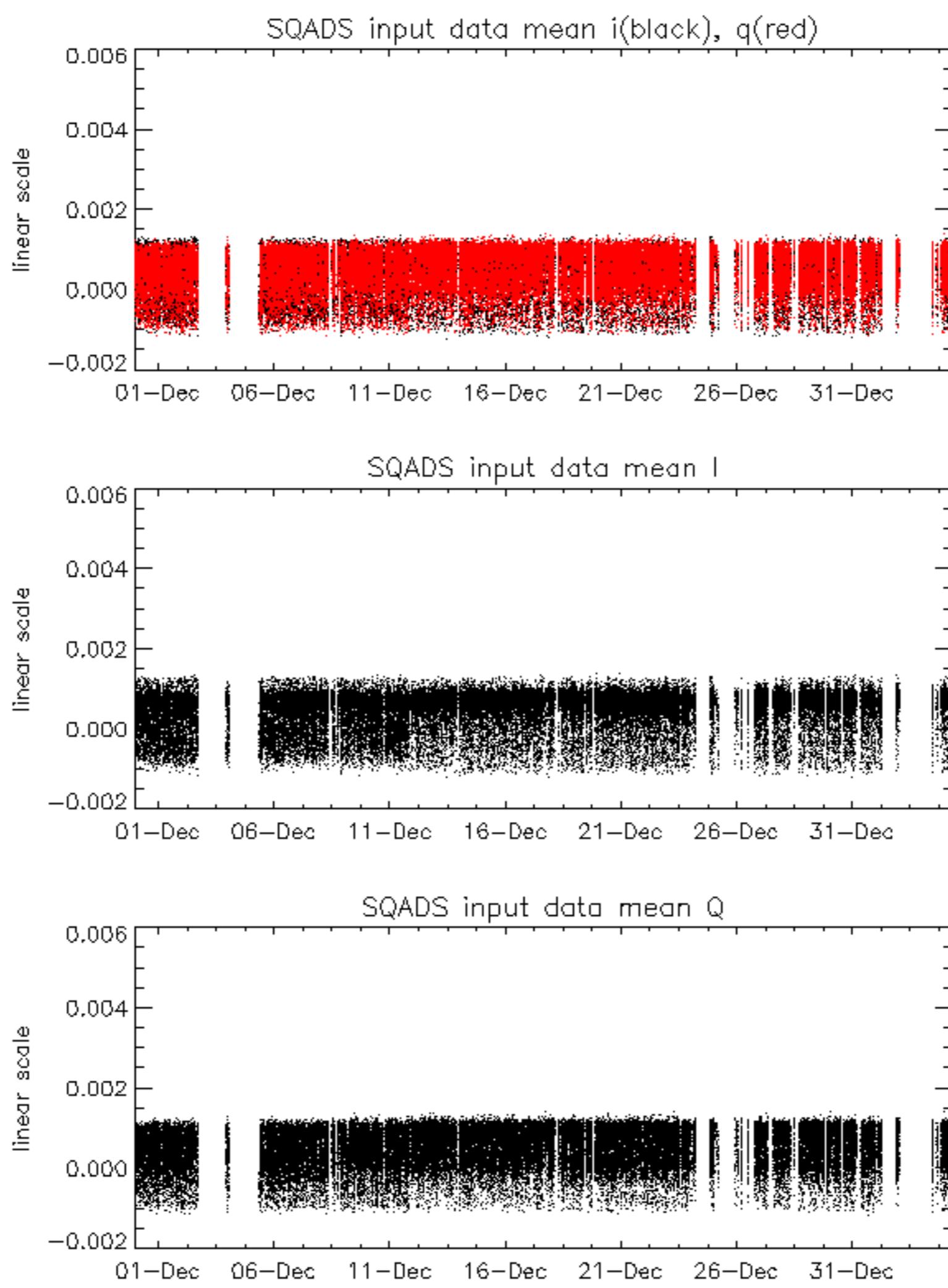
Test : 2005-12-30 14:38:12 H

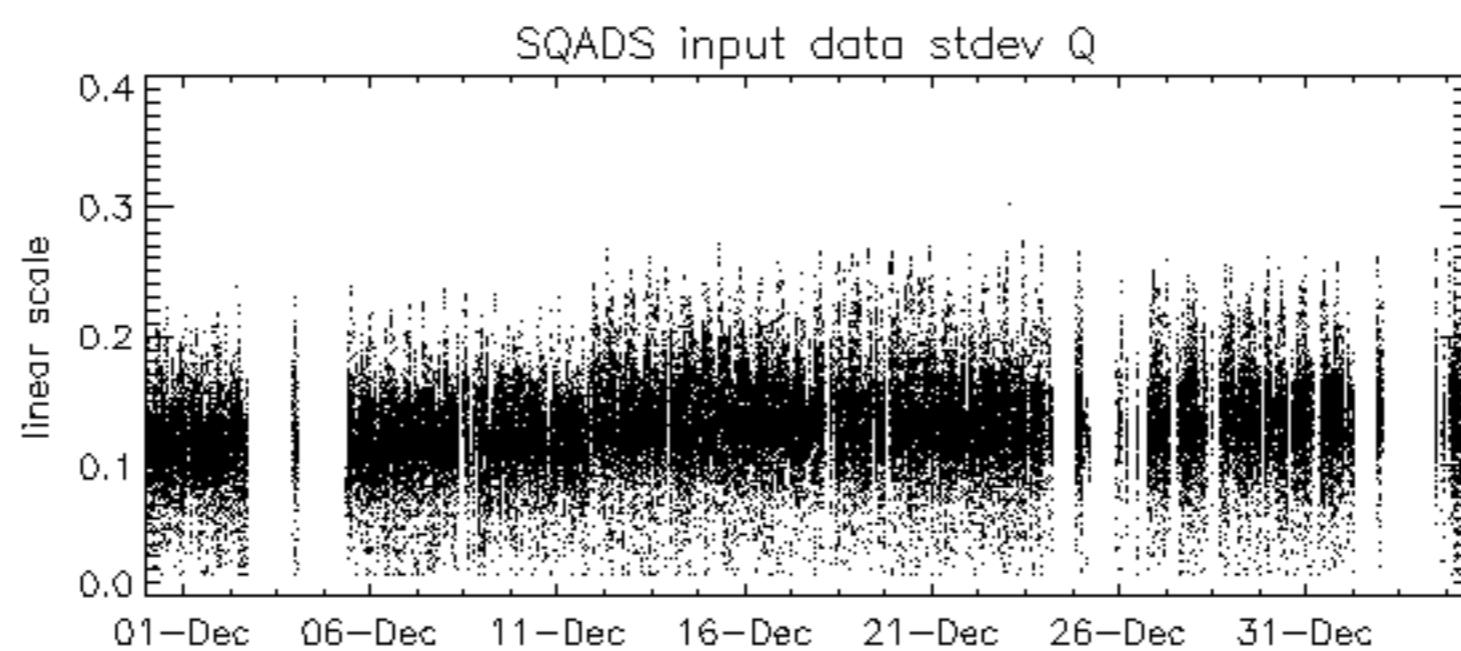
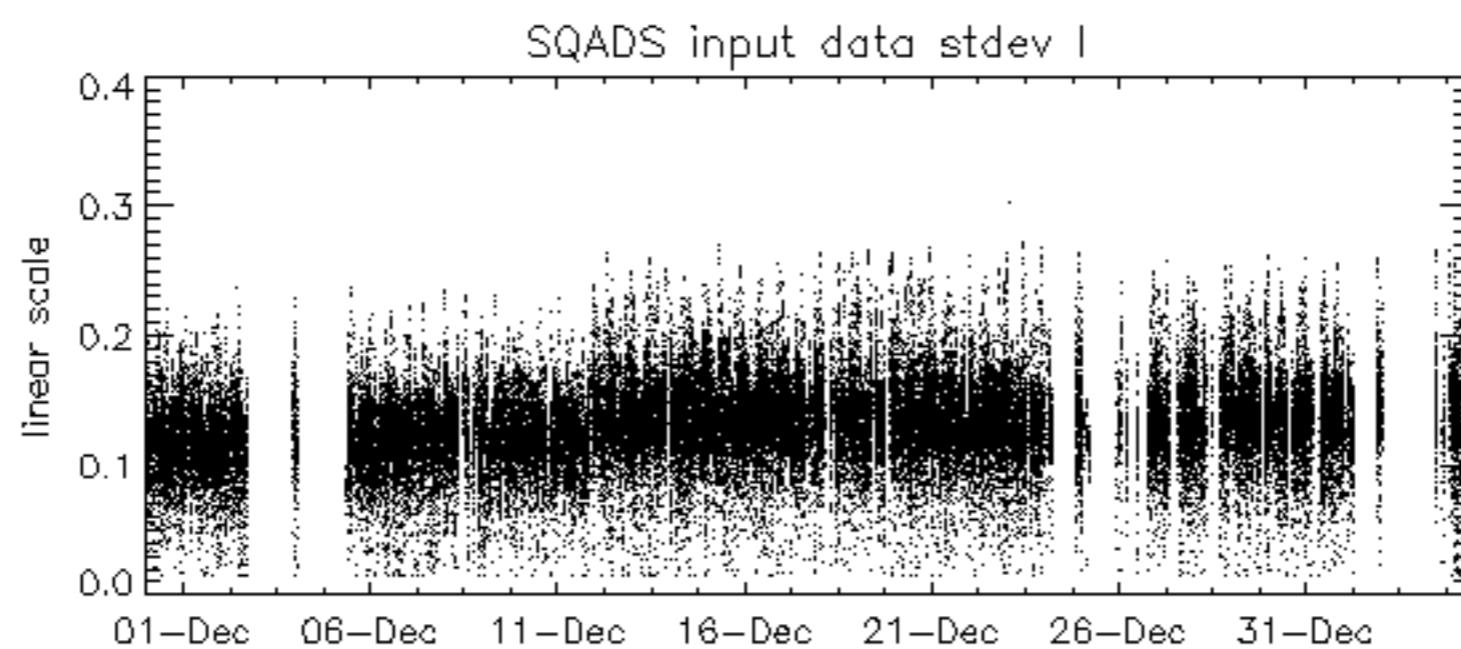
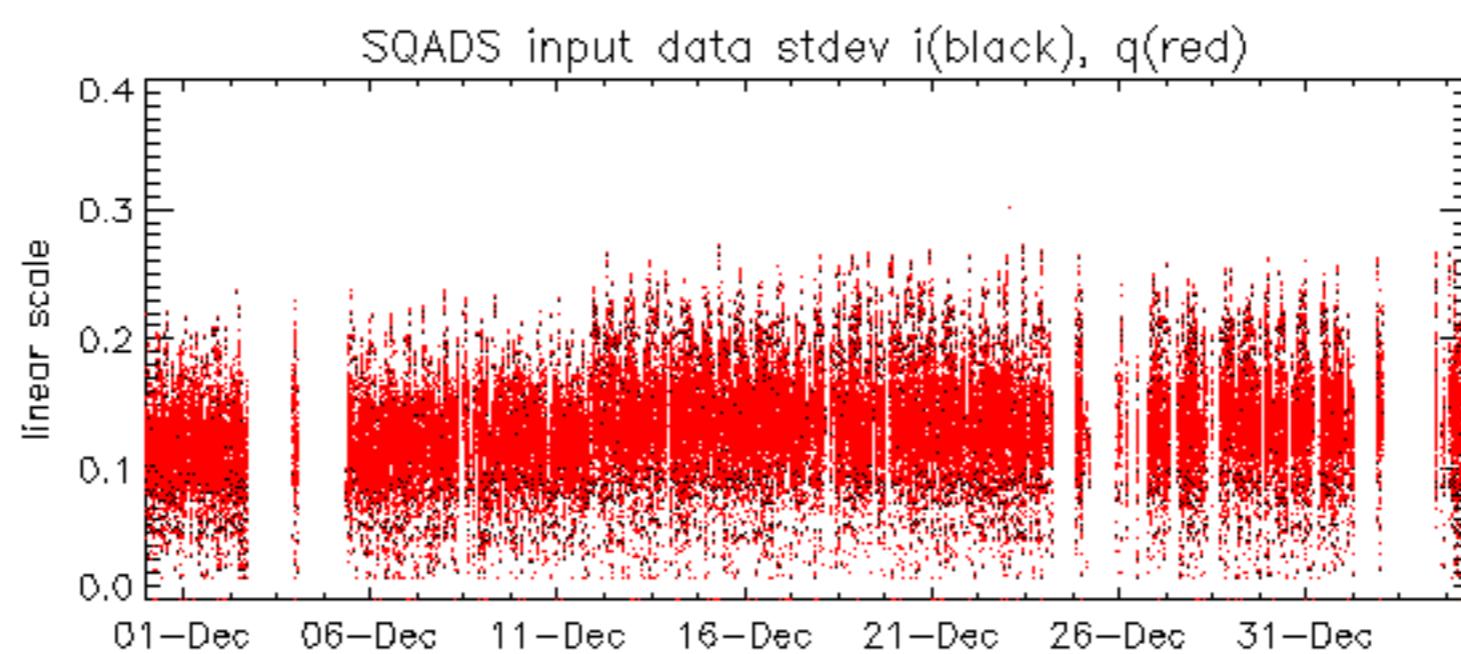
Reference:	2005-10-08 03:02:47 H	RxPhase
Test	: 2005-12-30 14:38:12 H	
		1
		2
		3
		4
		5
		6
		7
A1	A3	B1
B3	C1	C3
D1	D3	E1
		E3
		8
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
A2	A4	B2
B4	C2	C4
D2	D4	E2
		E4
		24
		25
		26
		27
		28
		29
		30
		31
		32

Reference:	2001-02-09 14:08:23 V	RxPhase
Test	: 2005-12-31 20:48:59 V	
		1
		2
		3
		4
		5
		6
A1	A3	B1
B3	C1	C3
D1	D3	E1
		E3
		7
		8
		9
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20
		21
		22
		23
A2	A4	B2
B4	C2	C4
D2	D4	E2
		E4
		24
		25
		26
		27
		28
		29
		30
		31
		32









Reference: 2001-02-09 13:50:42 H

Test : 2005-12-30 14:38:12 H

Reference: 2005-10-08 03:02:47 H

Test : 2005-12-30 14:38:12 H

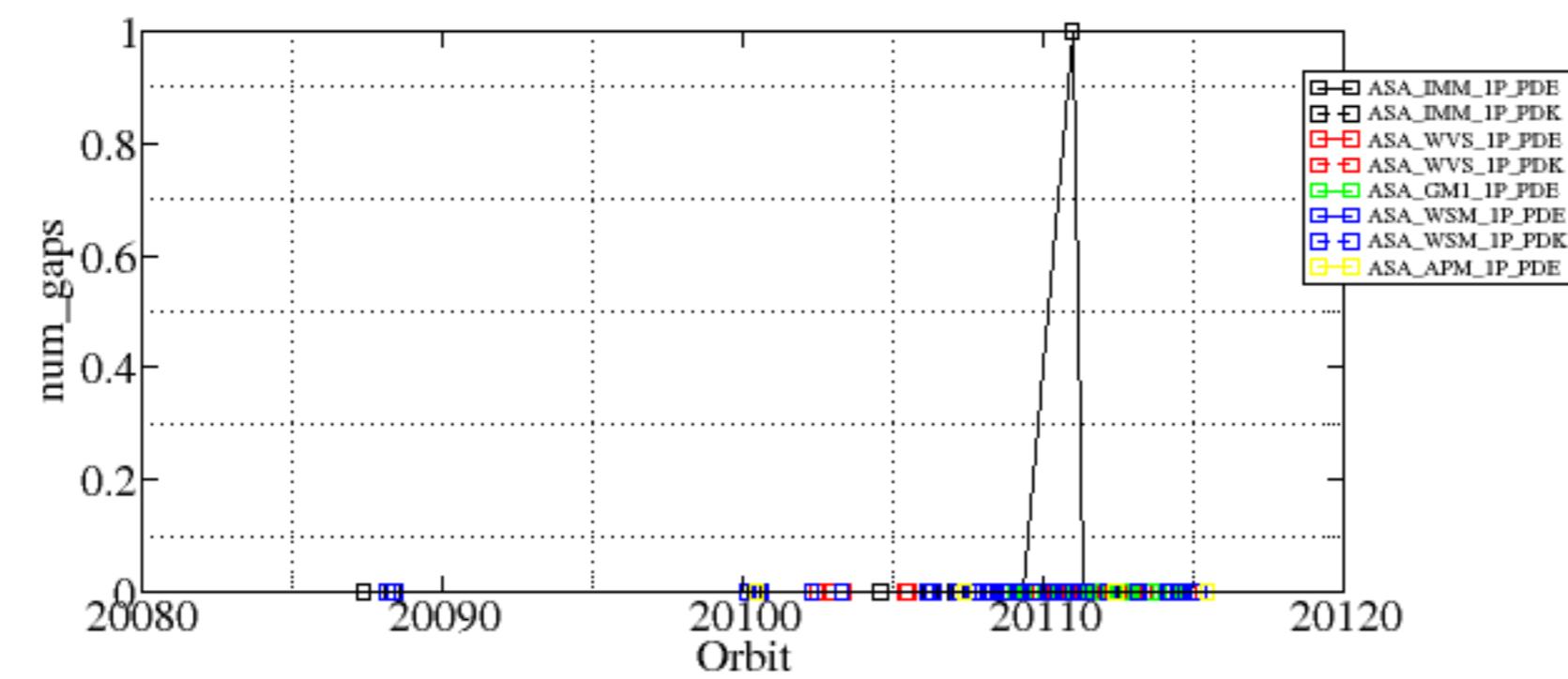
Reference:	2001-02-09 14:08:23	V	TxGain
Test	: 2005-12-31 20:48:59	V	
A1	A3	B1	B3
C1	C3	D1	D3
E1	E3		
A2	A4	B2	B4
C2	C4	D2	D4
E2	E4		

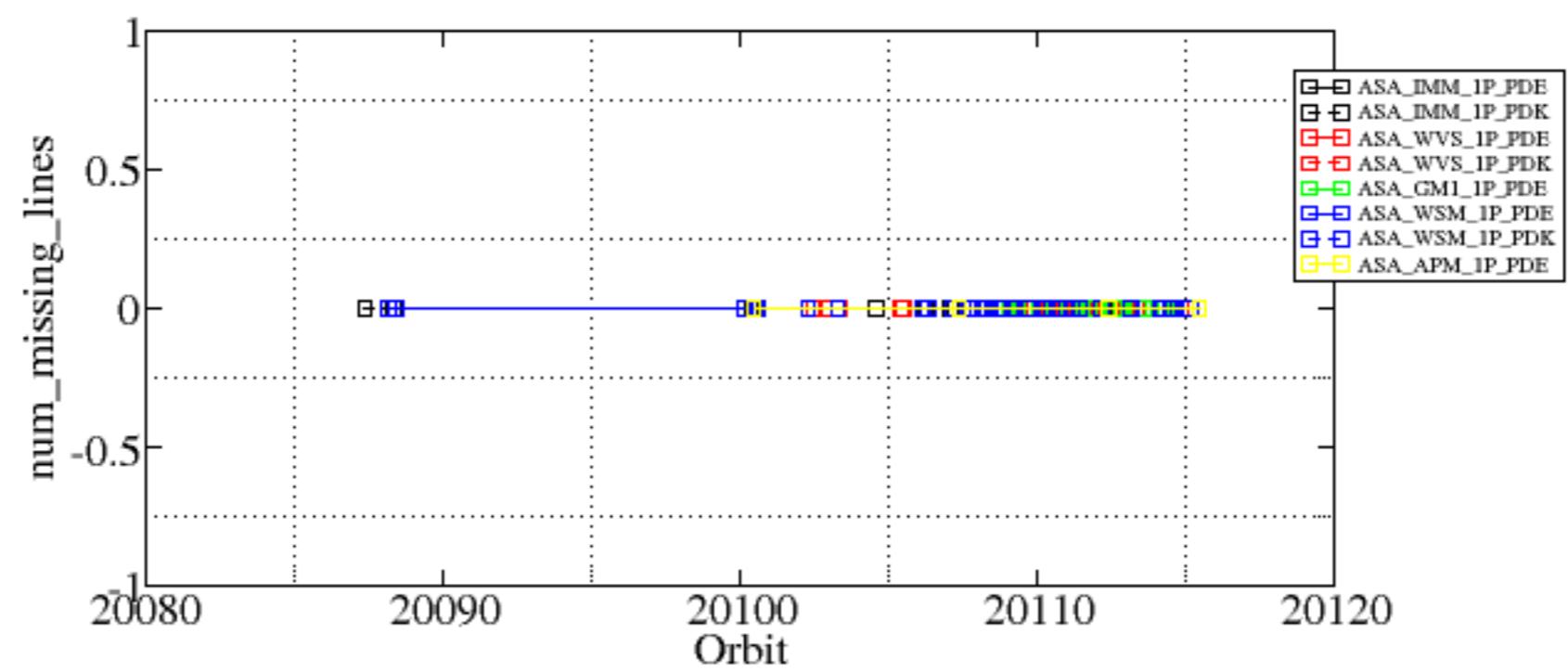
Reference:	2005-09-29	07:47:20	V	TxGain
Test	:	2005-12-31	20:48:59	V
A1	A3	B1	B3	C1
A2	A4	B2	B4	C2
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32			

Summary of analysis for the last 3 days 2006010[234]

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

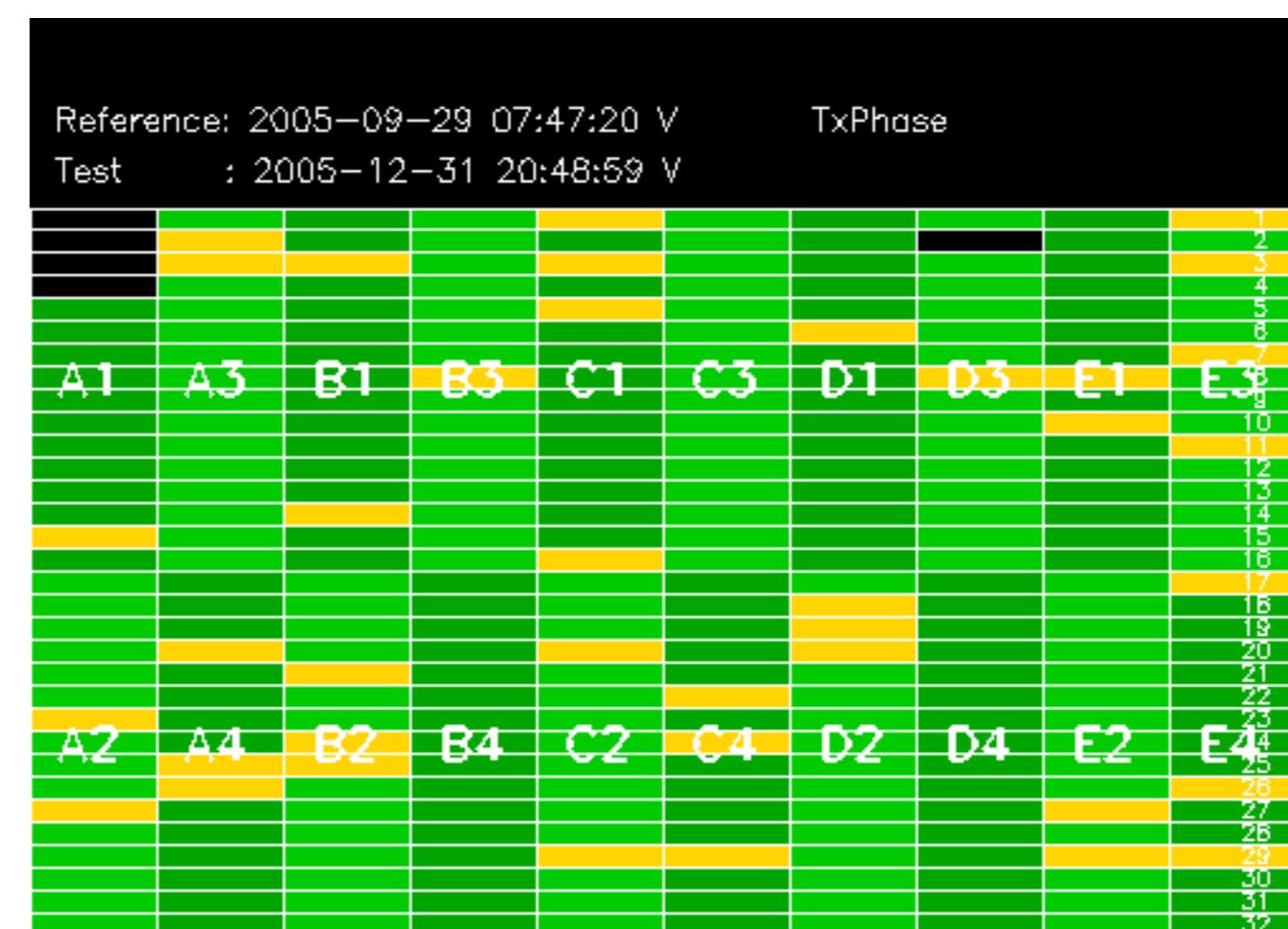
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060104_004520_00001852044_00016_20110_5463.N1	1	0

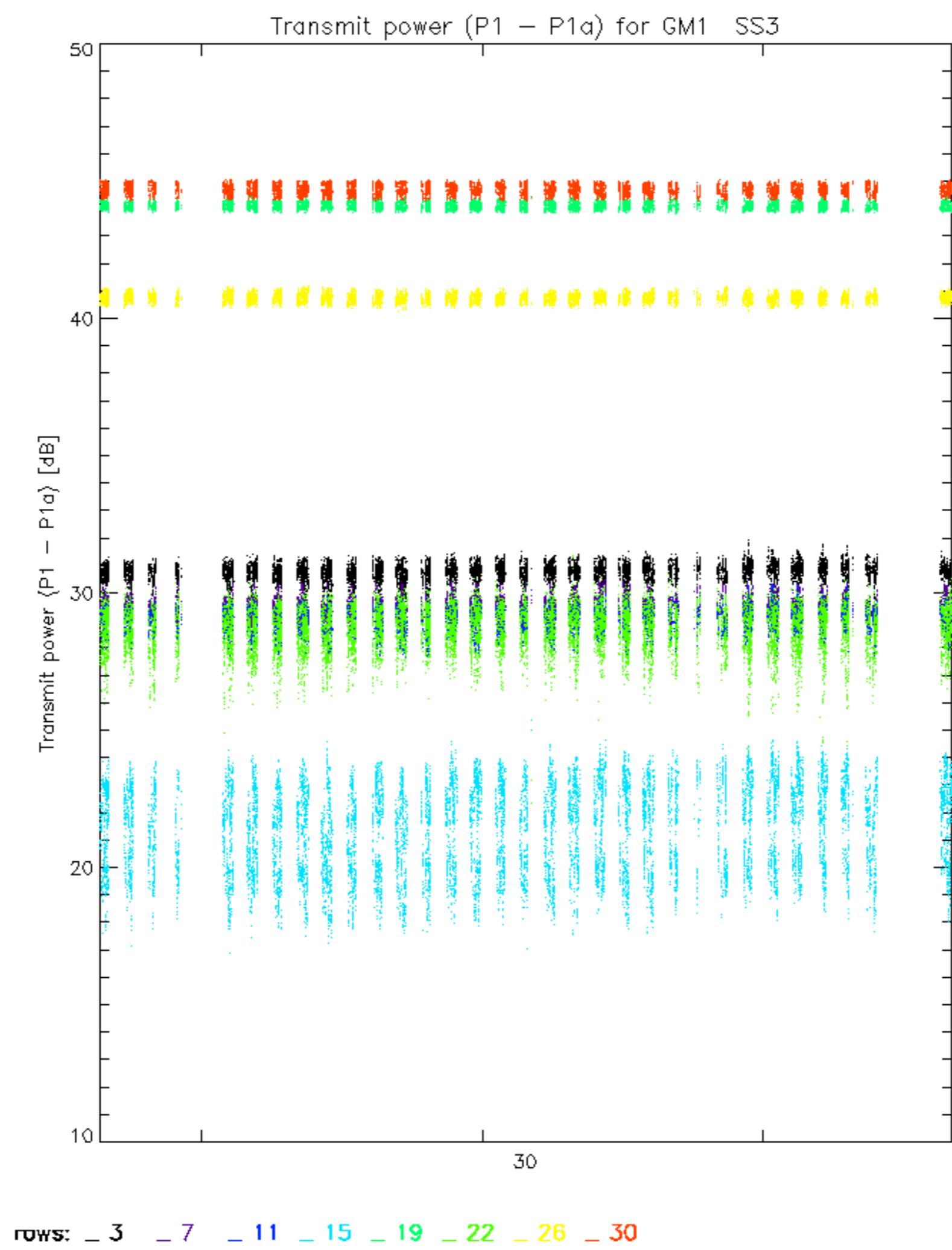


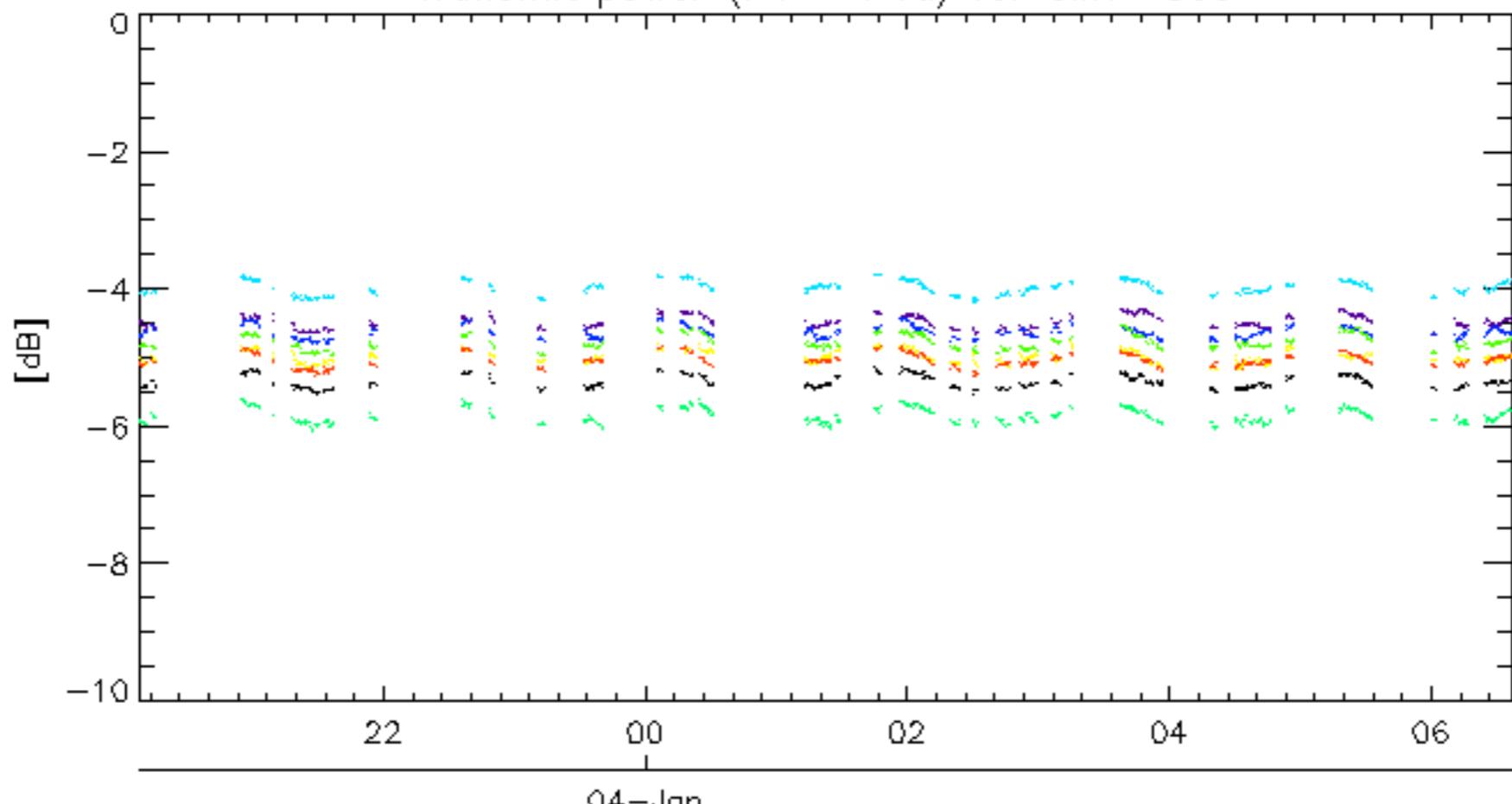
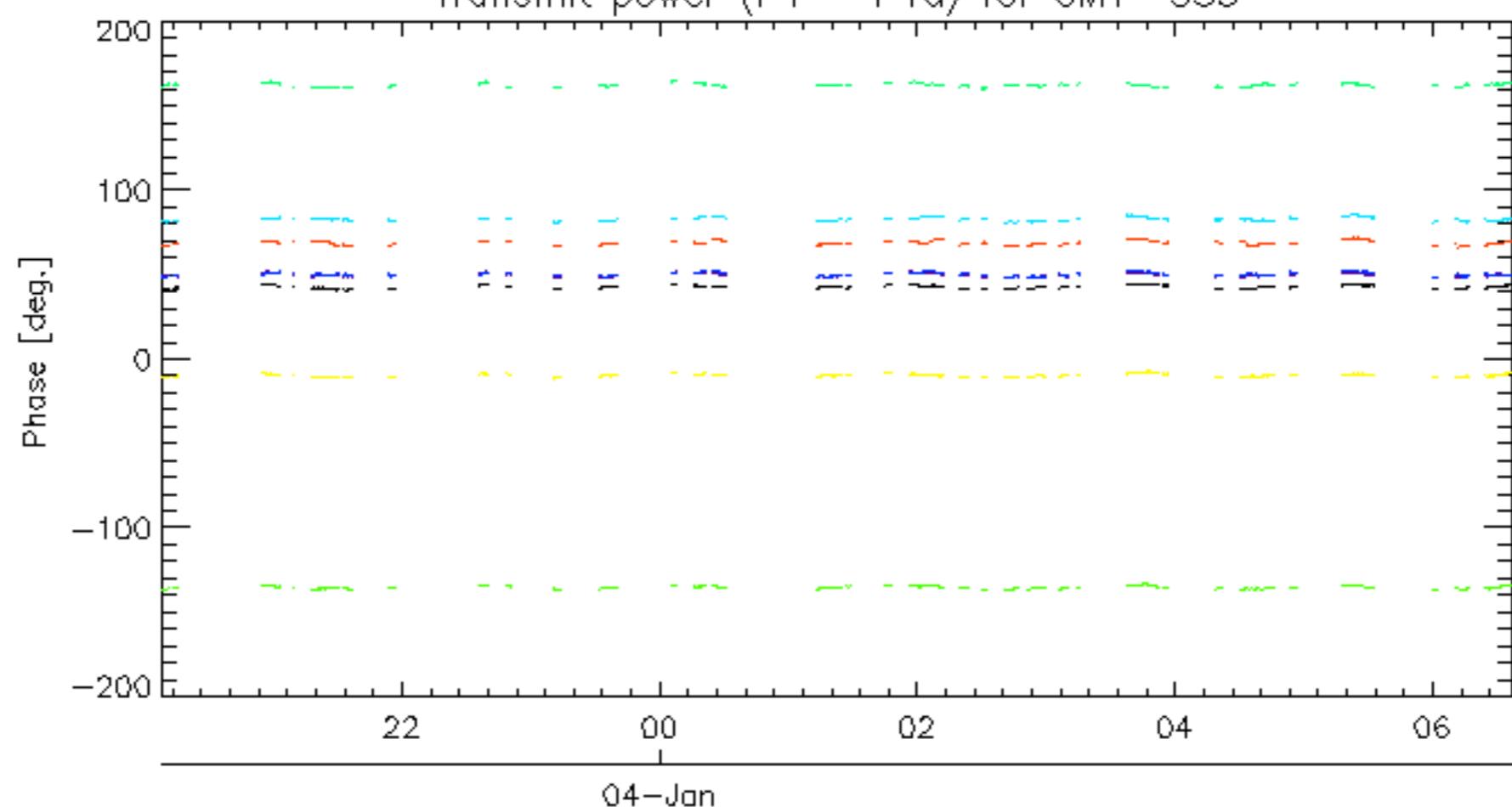


Reference: 2001-02-09 13:50:42 H TxPhase

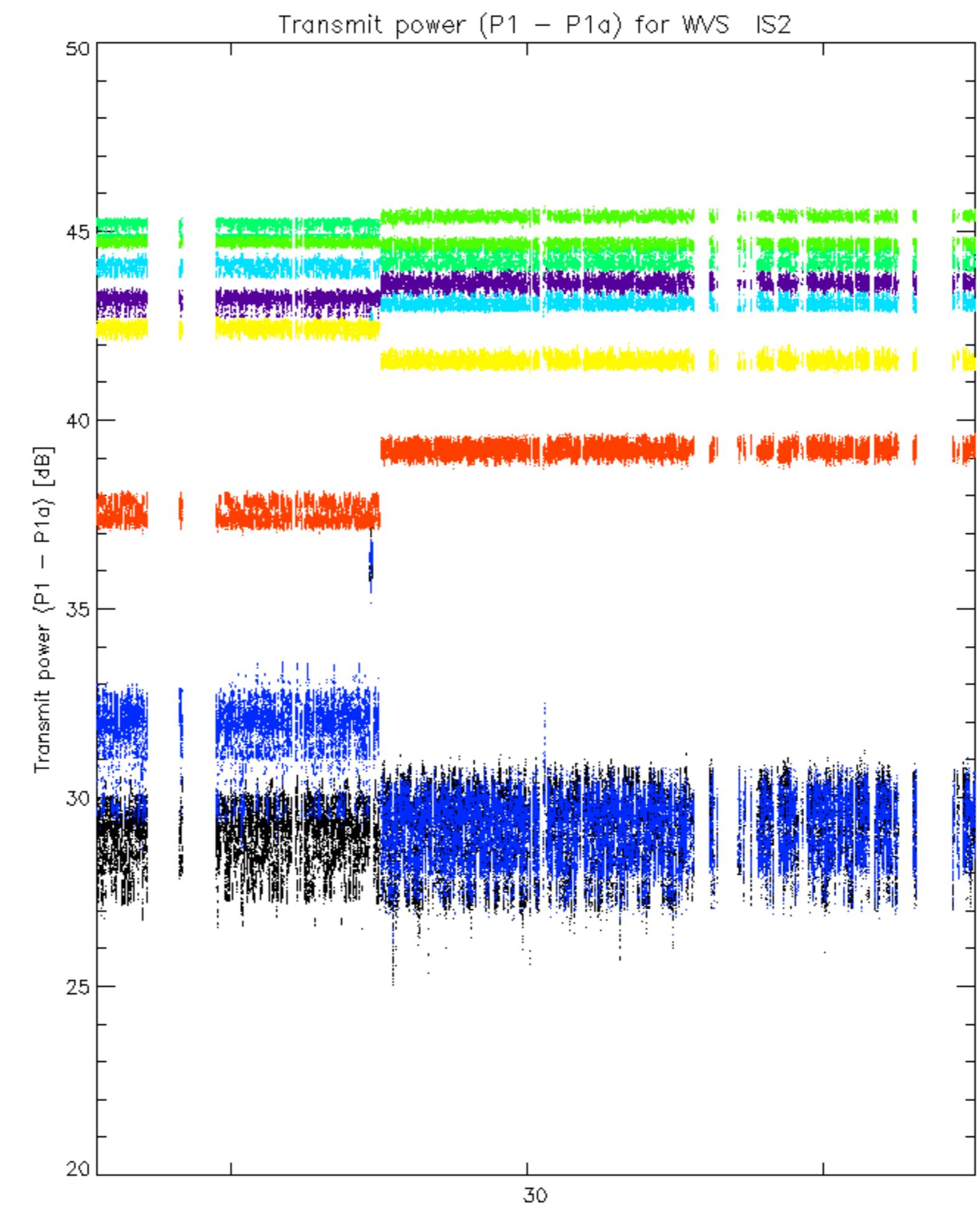
Test : 2005-12-30 14:38:12 H

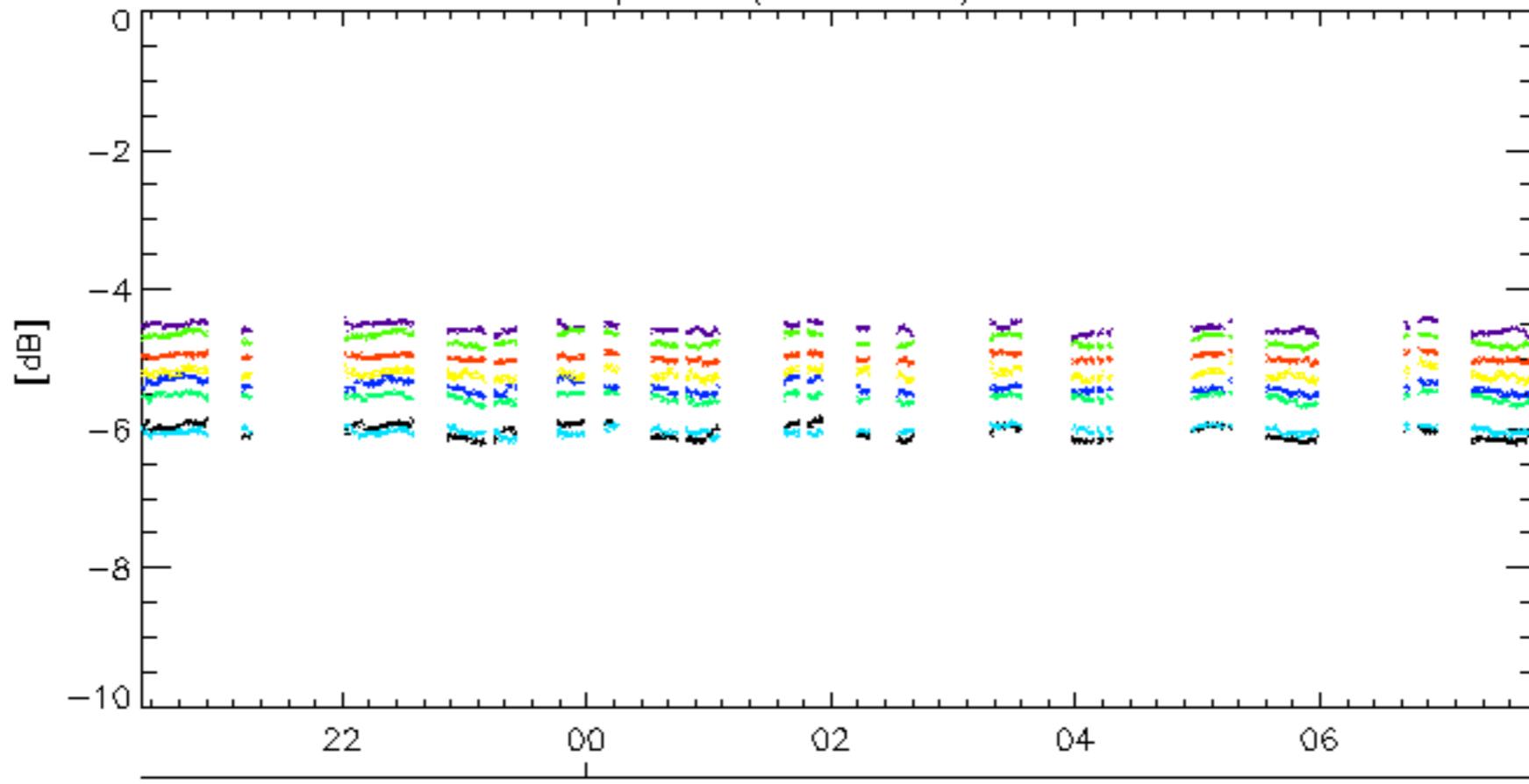
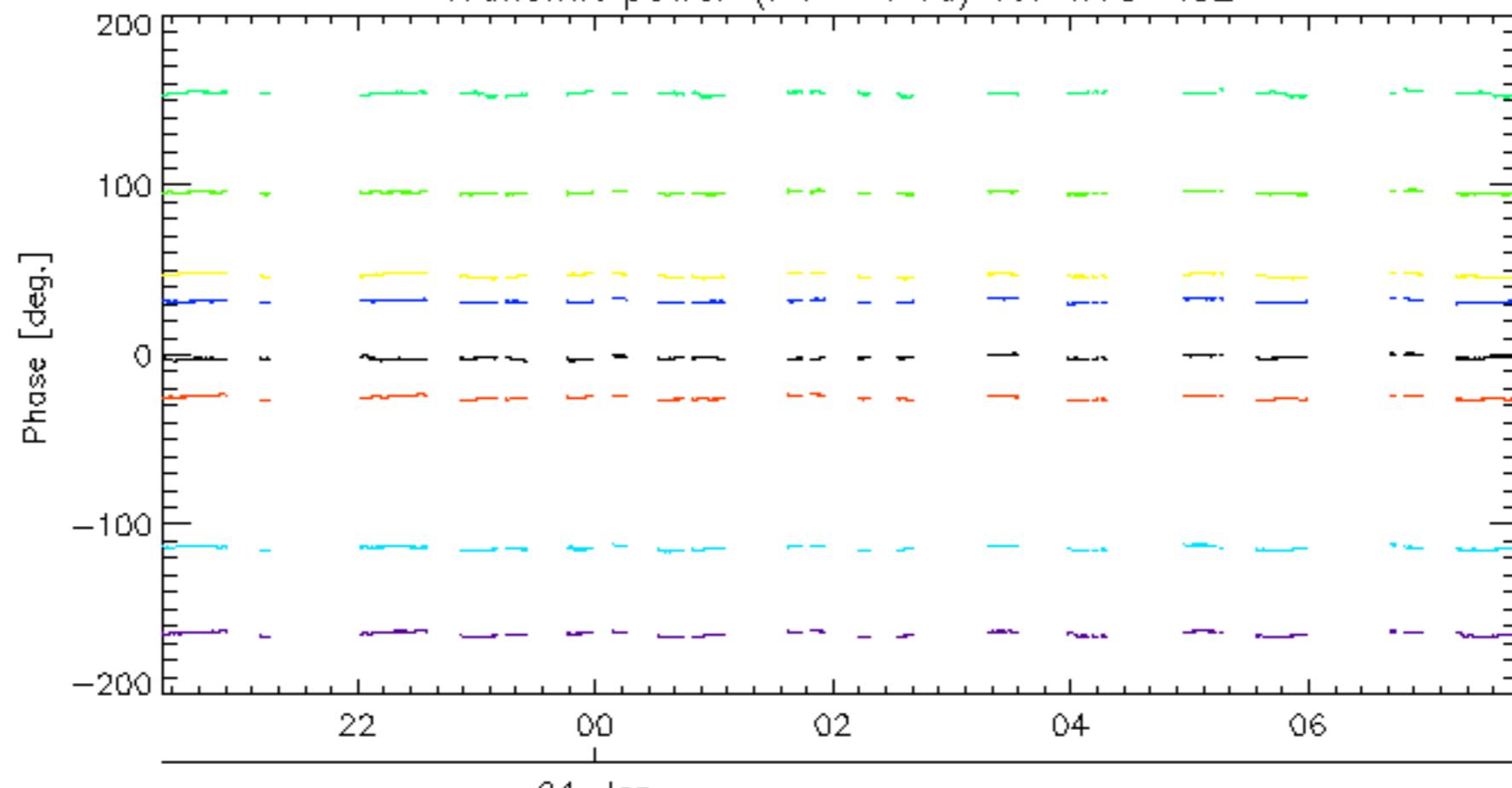




Transmit power ($P_1 - P_{1a}$) for GM1 SS304-Jan
Transmit power ($P_1 - P_{1a}$) for GM1 SS3

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



Transmit power ($P_1 - P_{1a}$) for WVS IS204-Jan
Transmit power ($P_1 - P_{1a}$) for WVS IS2

04-Jan

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

No unavailabilities during the reported period.

