QA0 Report

PMG Group

1 EB, SB and Array Information

Table 1: Execution Block Information.

	Value
EB UID:	uid://A002/Xa2300a/Xa8a
Start Time:	2015-06-04 02:05:01.030000
Number of Scans:	14
EB Status:	SUCCESS
SB UID:	uid://A002/X6b0cc1/X49
SB Name:	Arp220_B6_low_5
Project Code:	2012.1.00453.S
Array Name:	Array004
Array Family:	12 [m]
Correlator:	BL

Table 2: Scheduling Block Information.

	Value
SB UID:	uid://A002/X6b0cc1/X49
SB Name:	Arp220_B6_low_5
Project Code:	2012.1.00453.S
Band:	ALMA_RB_06
Representtive Freq.:	218.51 GHz.
RA:	15:34:57.29
DEC:	23:30:10.48
Min. Array AR (100GHz):	0.43 arcsec.
Max. Array AR (100GHz):	1.01 arcsec.
SB req. AR (100GHz):	0.92 arcsec.
SB req. LAS (100GHz):	5.50 arcsec.
Best Configuration:	C34-5

Num Antennas: 38.

Total Execution Time: 27.6 mins.

EB Integration Time on Source: 2.52 mins.

SB Requested Time on Source: 2.28 mins.

Is Polarization? False.

2 QA0 Summary

2.1 Check Flagged Data

No antennas with more than 10% of data flagged.

2.2 Check Calibration Intents

1 scans with intent OBSERVE_TARGET found.
1 scans with intent CALIBRATE_BANDPASS found.
1 scans with intent CALIBRATE_SIDEBAND_RATIO found.
3 scans with intent CALIBRATE_POINTING found.
1 scans with intent CALIBRATE_AMPLI found.
2 scans with intent CALIBRATE_PHASE found.
Pass

2.3 Check Amplitude Cal

A Solar System object was used. All OK.Pass

2.4 Check Mosaic Coverage / Pointings

Recomendation:
Pass

2.5 Check Array Resolution

2.6 Check Atmosphere Calibrations

Antenna(s) DA43 DV15 have SBgain outside spec (see details).

2.7 Check Phase Calibrations.

2.8 Check Pointing Calibrations.

ANTENNA	rms	limit
DA60	2.694829	2.55678
DV18	6.860147	2.55678

ANTENNA	rms	points
DA60	2.516590	15
DV13	3.927395	15
DV16	4.110723	15
DV18	4.855803	15
DV20	3.776593	15

2.9 Check Latest Focus.

2.10 Check Latest Delay.

3 Pointing / Mosaic Details

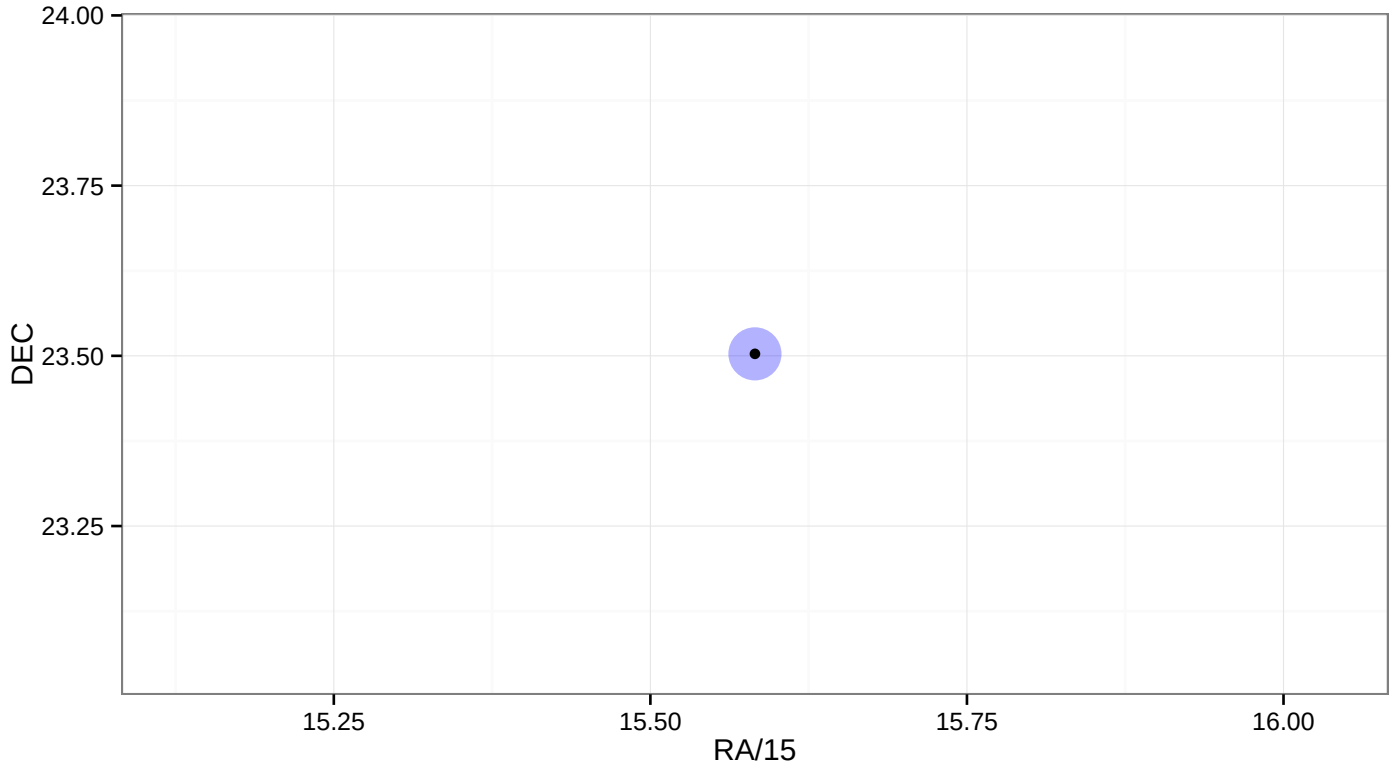

Figure 1:

4 Scans Information

Scan	SubSc.	Start	End	Intent	Field
1	10	2015-06-04 02:05:01	2015-06-04 02:07:21	CALIBRATE_POINTING	J1550+0527
2	2	2015-06-04 02:08:17	2015-06-04 02:09:43	CALIBRATE_SIDEBAND_RATIO	J1550+0527
3	3	2015-06-04 02:09:43	2015-06-04 02:10:02	CALIBRATE_ATMOSPHERE	J1550+0527
4	10	2015-06-04 02:10:02	2015-06-04 02:15:43	CALIBRATE_BANDPASS	J1550+0527
5	10	2015-06-04 02:16:03	2015-06-04 02:18:21	CALIBRATE_POINTING	J1517-2422
6	3	2015-06-04 02:18:42	2015-06-04 02:19:25	CALIBRATE_ATMOSPHERE	Titan
7	5	2015-06-04 02:19:25	2015-06-04 02:22:23	CALIBRATE_AMPLI	Titan
8	10	2015-06-04 02:22:43	2015-06-04 02:25:01	CALIBRATE_POINTING	J1516+1932
9	1	2015-06-04 02:25:15	2015-06-04 02:26:15	CALIBRATE_PHASE	J1516+1932
10	3	2015-06-04 02:26:26	2015-06-04 02:27:07	CALIBRATE_ATMOSPHERE	J1550+0527
11	1	2015-06-04 02:27:07	2015-06-04 02:27:57	CALIBRATE_DELAY	J1550+0527
12	3	2015-06-04 02:28:09	2015-06-04 02:28:55	CALIBRATE_ATMOSPHERE	Arp220
13	5	2015-06-04 02:28:55	2015-06-04 02:31:47	OBSERVE_TARGET	Arp220
14	1	2015-06-04 02:31:53	2015-06-04 02:32:35	CALIBRATE_PHASE	J1516+1932

5 Atmosphere Details

SCAN	BB	trecX	trecY	tsysX	tsysY
3	BB_1	42.59168	45.13751	79.98778	82.60945
3	BB_2	38.71401	40.74519	74.51009	75.60708
3	BB_3	34.05957	34.01127	75.72794	75.73999
3	BB_4	39.31945	40.37367	83.78958	86.25096
6	BB_1	42.32688	42.91869	77.14703	79.69205
6	BB_2	37.81037	39.05960	72.10497	73.11743
6	BB_3	33.53483	34.74098	72.53561	72.37147
6	BB_4	38.79378	39.29923	79.79565	82.35462
10	BB_1	41.08031	44.12023	79.84879	82.20602
10	BB_2	38.27000	39.23594	74.51165	75.65597
10	BB_3	33.41242	32.41963	75.62054	75.53324
10	BB_4	37.82838	39.01030	83.10505	85.44464
12	BB_1	43.08506	43.63559	86.79262	89.31620
12	BB_2	38.15220	39.47245	81.10900	82.30431
12	BB_3	33.90549	34.25163	83.64722	83.76488
12	BB_4	39.07481	39.28326	92.24089	94.10559

ANTENNA	BB	sbgainX	sbgainY
DA43	BB_2	0.8941212	0.9771732
DV15	BB_1	0.9378747	0.6146969
DV15	BB_2	0.9369108	0.6266854
DV15	BB_3	0.9820715	0.6303833
DV15	BB_4	0.9772646	0.5899714

ANTENNA	BB	Scans
DA42	BB_3	2
DA44	BB_3	3
DA44	BB_4	1
DA47	BB_4	2
DA49	BB_1	4
DA49	BB_2	4
DA49	BB_3	4
DA63	BB_4	1
DV13	BB_4	1
DV24	BB_3	1
DV25	BB_1	4
DV25	BB_2	4
DV25	BB_3	4
DV25	BB_4	4

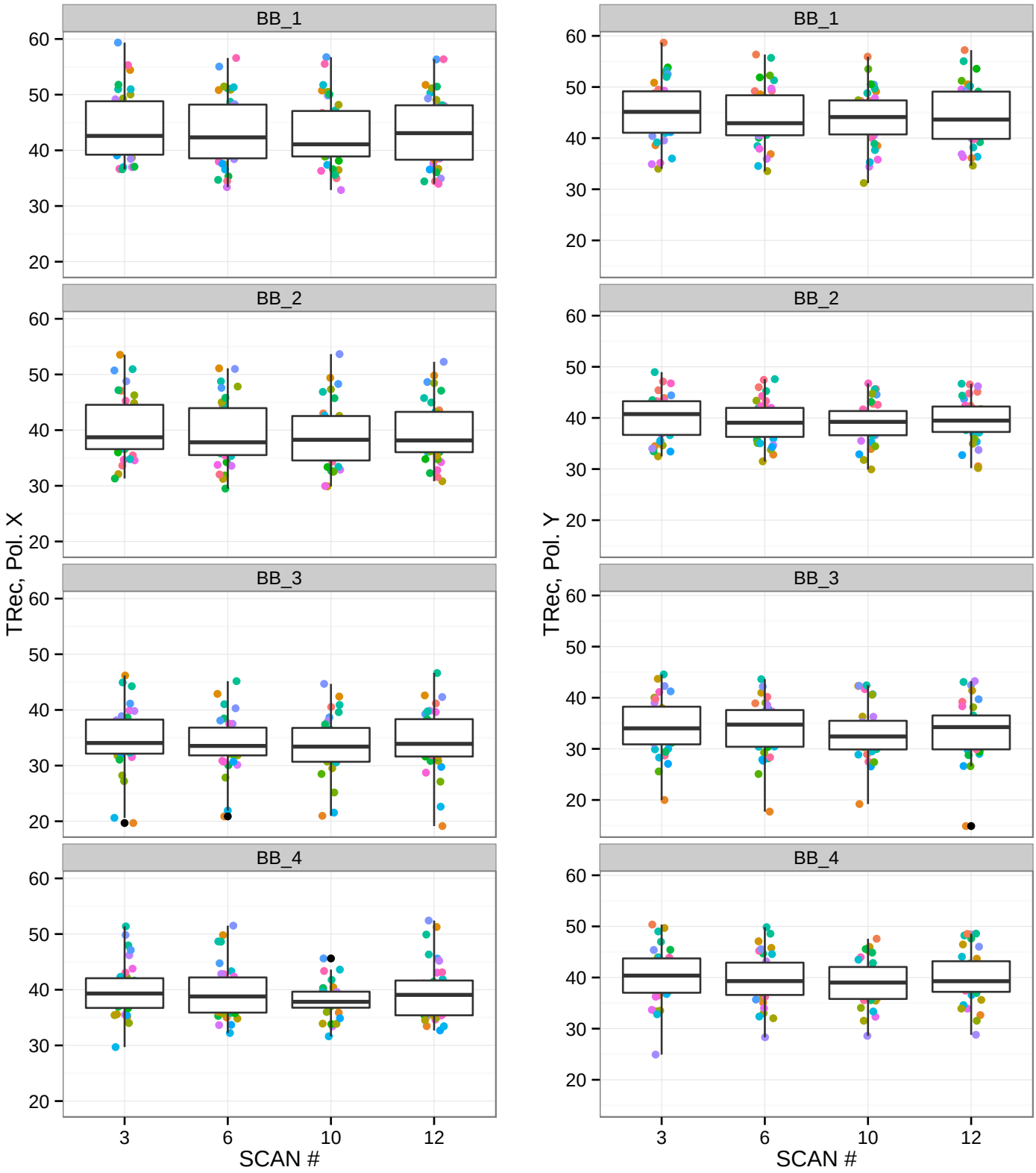
BB_1
BB_2
BB_3
BB_4
TRec, Pol. X
TRec, Pol. Y
SCAN #
SCAN #
60
50
40
30
20
3
6
10
12

Figure 2:

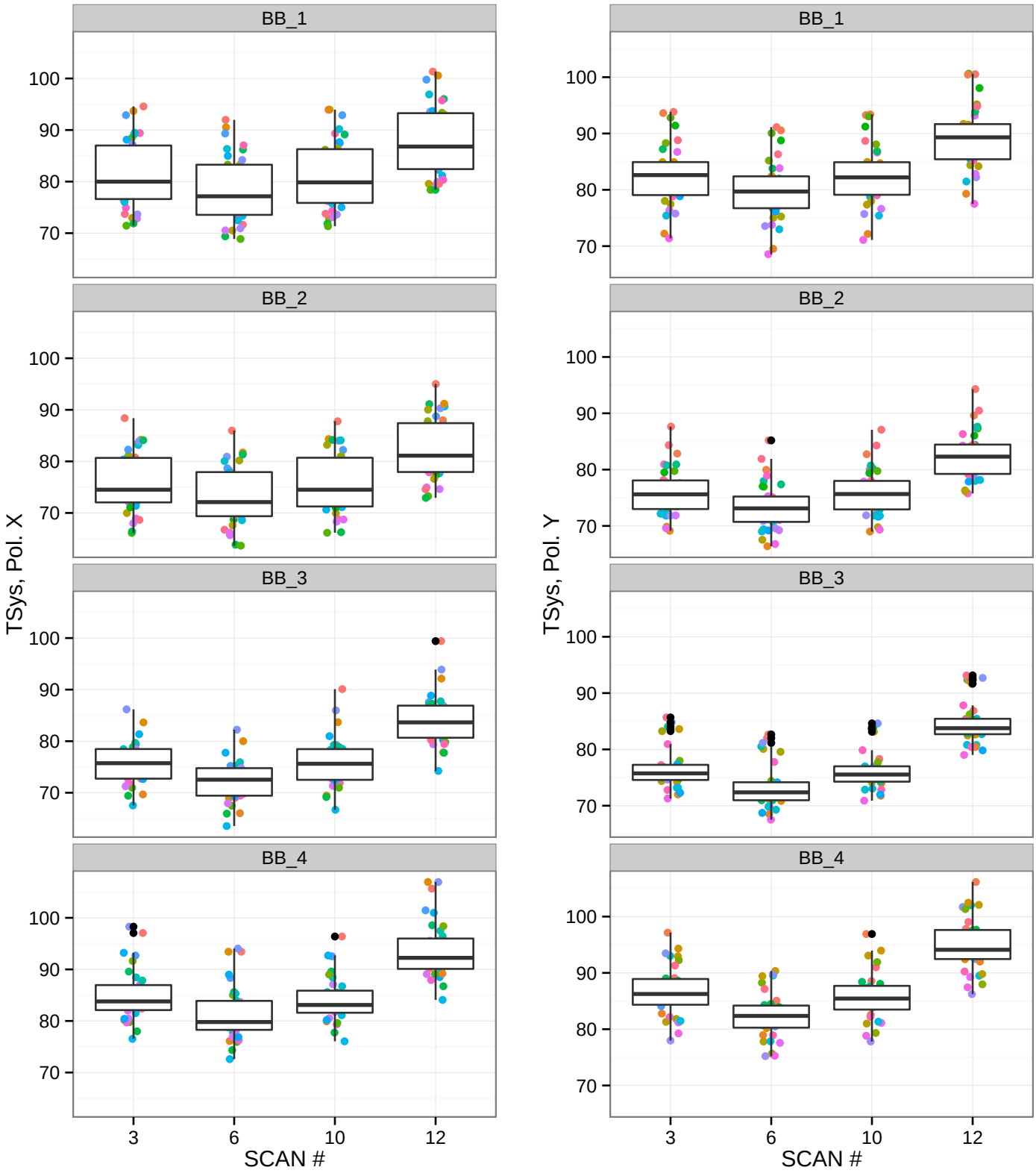

Figure 3:

6 Phase

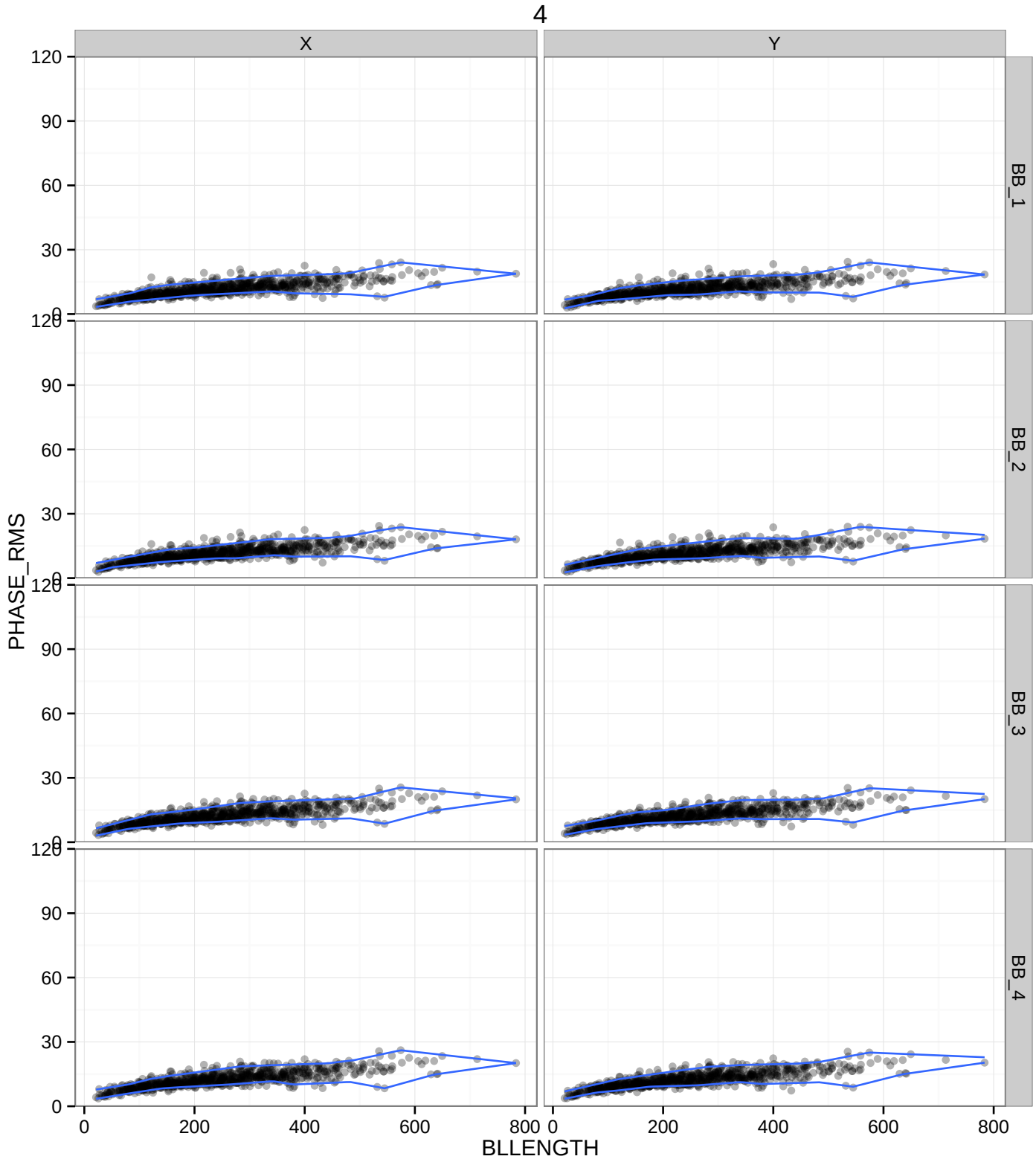
4
X
Y
BB_1
BB_2
BB_3
BB_4
PHASE_RMS
BLLENGTH
0
30
60
90
120
200
400
600
800

Figure 4:

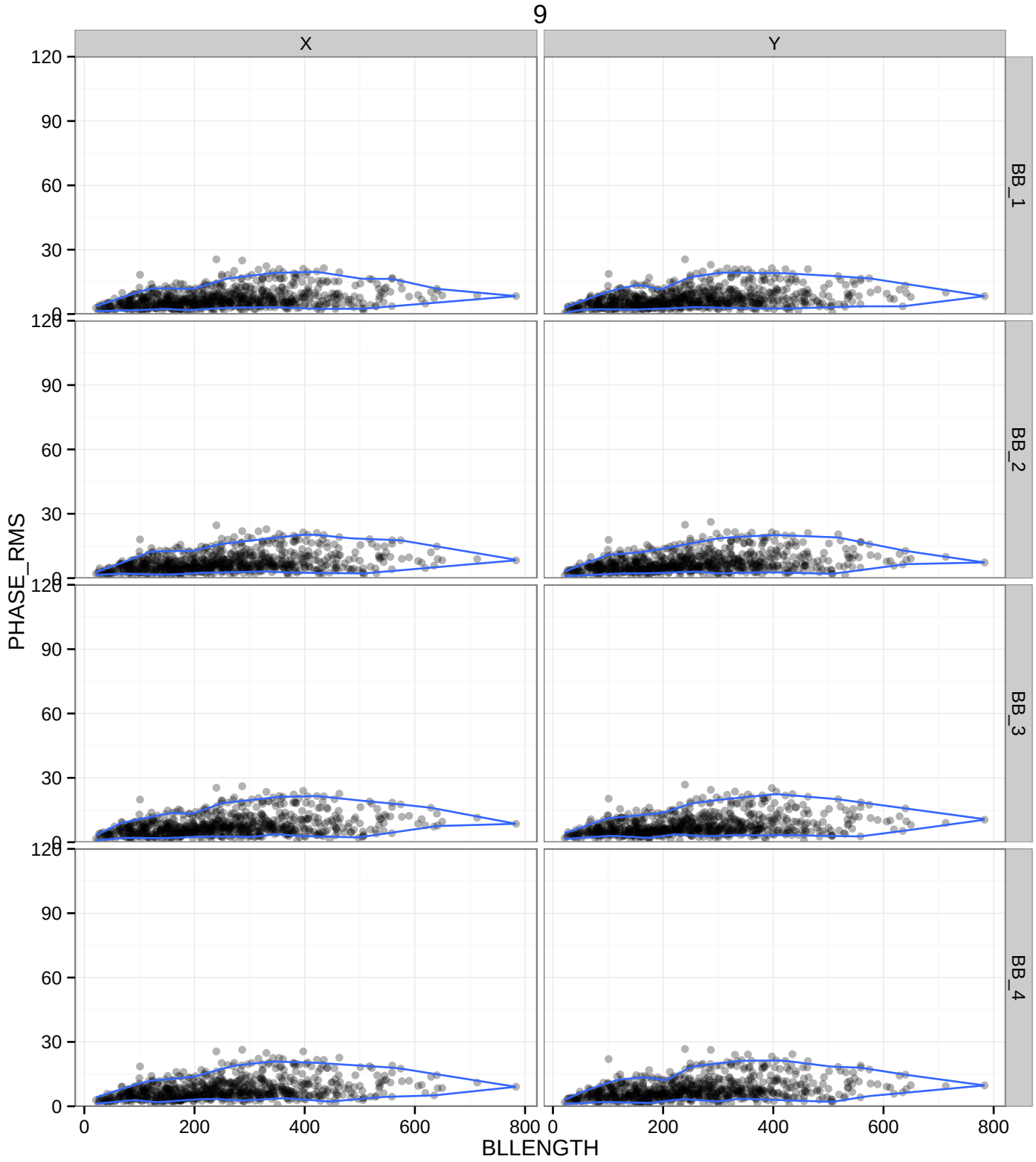
9
X
Y
BB_1
BB_2
BB_3
BB_4
PHASE_RMS
BLLENGTH
0
30
60
90
120
200
400
600
800

Figure 5:

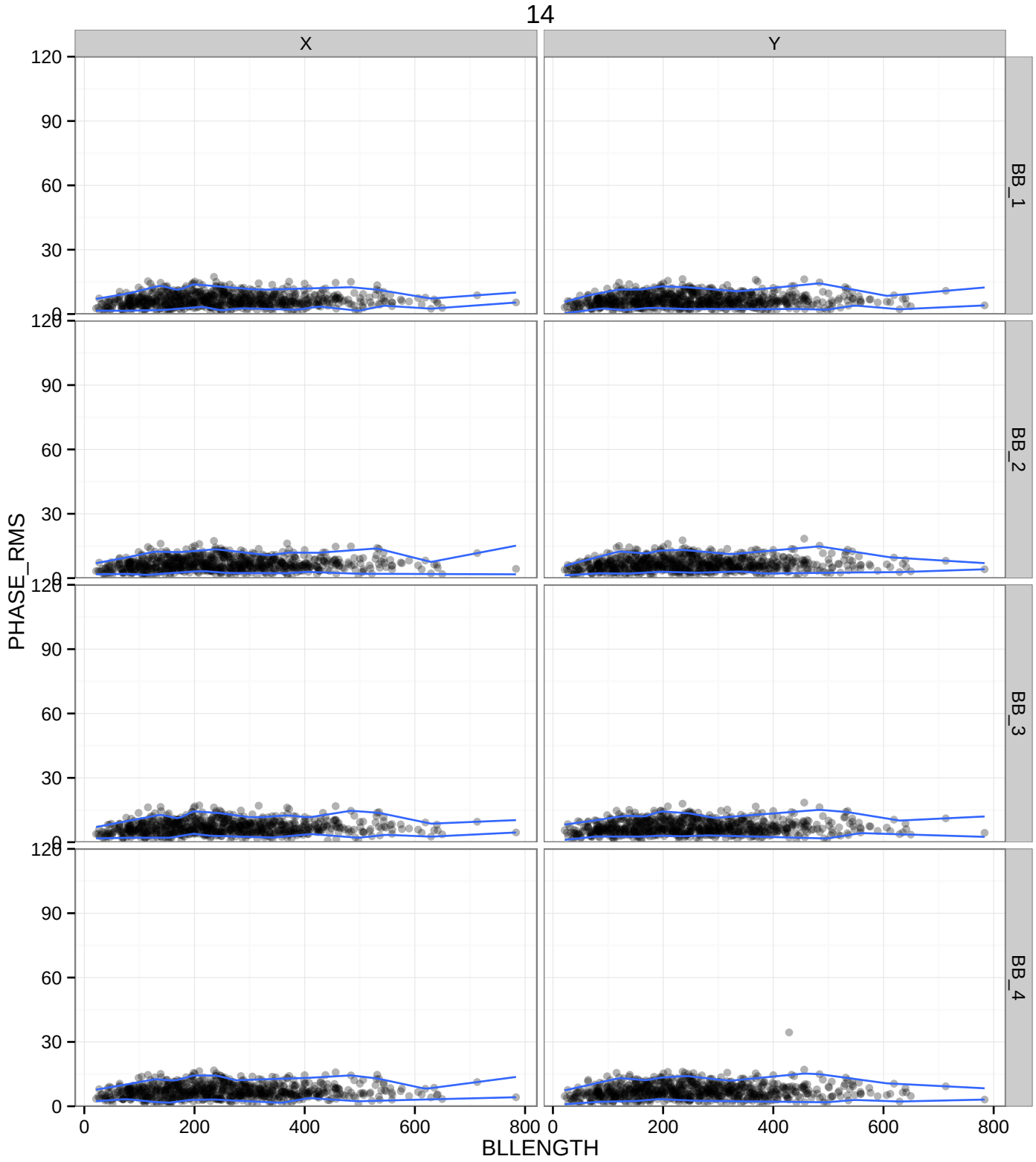
14
X
Y
BB_1
BB_2
BB_3
BB_4
PHASE_RMS
BLLENGTH
0
30
60
90
120
200
400
600
800

Figure 6:

7 Delay

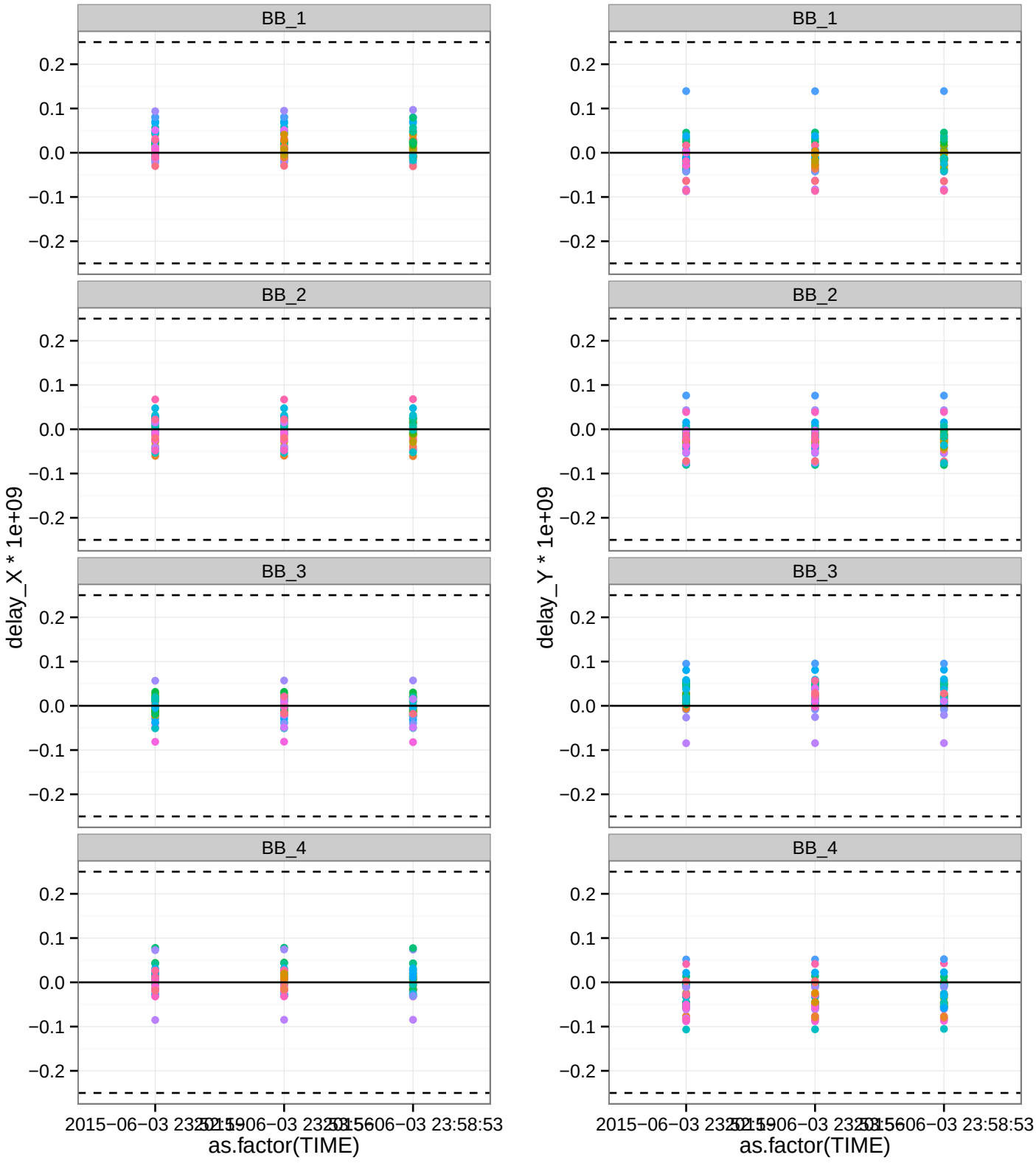
BB_1
BB_2
BB_3
BB_4
delay_X * 1e+09
delay_Y * 1e+09
0.2
0.1
0.0
−0.1
−0.2
2015−06−03 23:58:53
as.factor(TIME)

Figure 7: