

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13117 - L2 Version 3
Chandra X-Ray Center

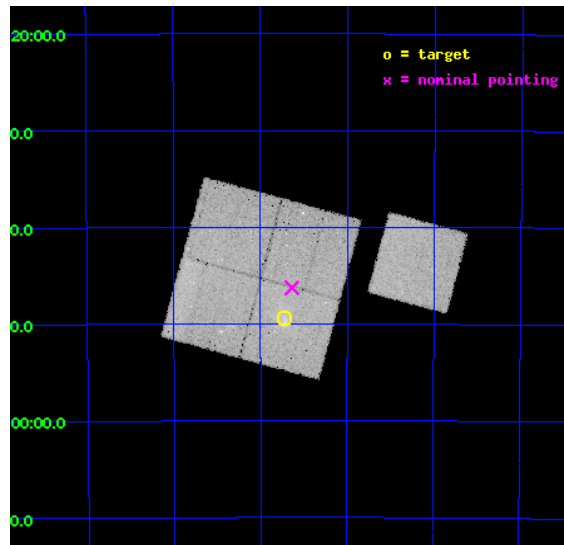
L2 Processing Date : Jul 2 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

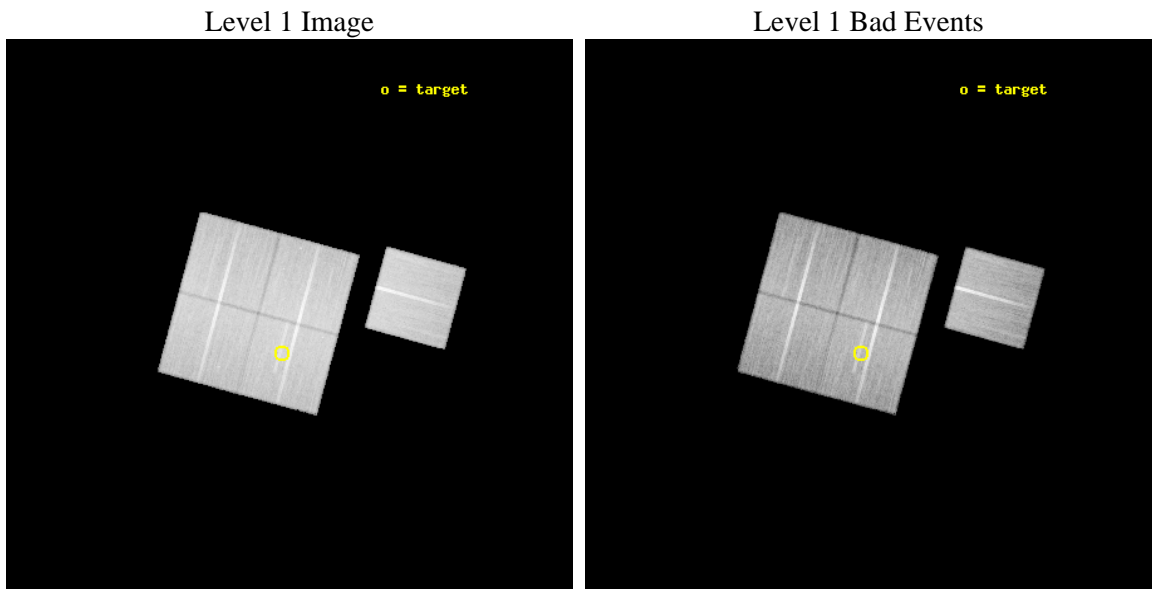
seq_num	800983	Sequence number
obs_id	13117	Observation id
title	Chandra Observations of the ACT Sample of SZE-Selected Galaxy Clusters	Proposal title
observer	Prof. John Hughes	Principal investigator
object	ACT J0559-5249	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	89.93	Observer's specified target RA [deg]
dec_targ	-52.824194	Observer's specified target Dec [deg]
ra_nom	89.90951077564	Nominal RA [deg]
dec_nom	-52.771209220531	Nominal Dec [deg]
roll_nom	105.19236480334	Nominal Roll [deg]
revision	3	Processing version of data
ontime	44555.087343931	Sum of GTIs [s]
livetime	43972.942326805	Livetime [s]
ontime0	44545.541303098	Sum of GTIs [s]
ontime1	44545.582352936	Sum of GTIs [s]
ontime2	44555.046303928	Sum of GTIs [s]
ontime3	44555.087343931	Sum of GTIs [s]
ontime6	44548.641233325	Sum of GTIs [s]
l2events	154337	Number of level 2 events



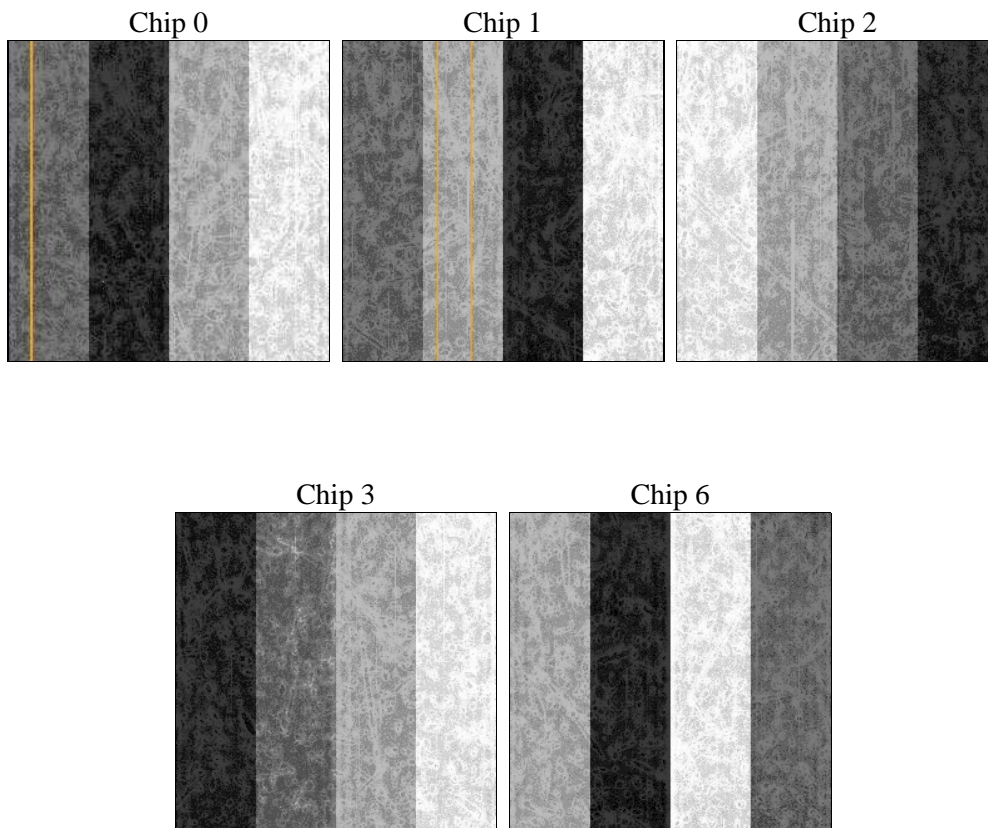
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	44500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	44555.087343931	Sum of GTIs [s]
caldsver	4.5.0	 	ontime0	44545.541303098	Sum of GTIs [s]
date	2012-07-02T23:12:06	Date and time of file creation	ontime1	44545.582352936	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	44555.046303928	Sum of GTIs [s]
			ontime3	44555.087343931	Sum of GTIs [s]
			ontime6	44548.641233325	Sum of GTIs [s]
			l1events	1621362	Number of level 1 events

2.1.4 Events

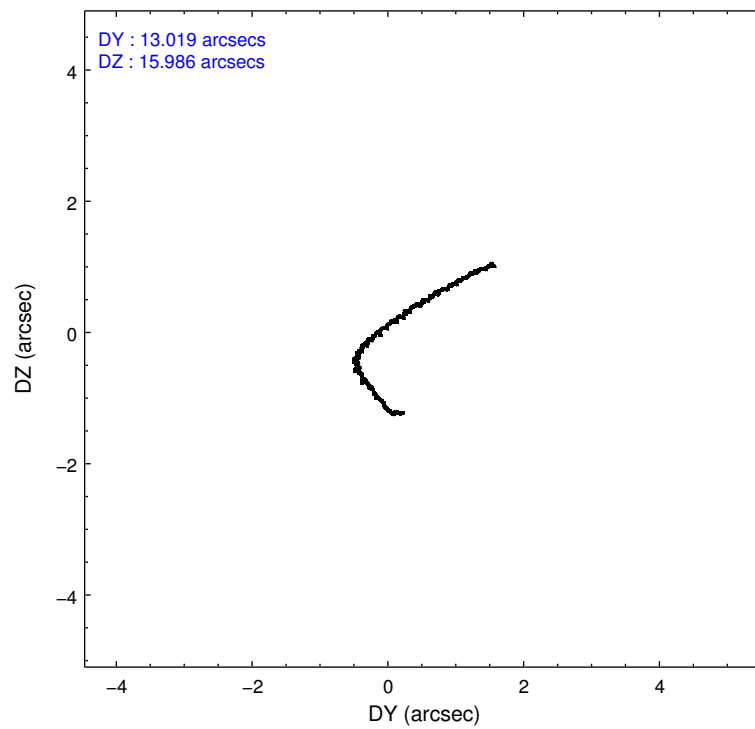
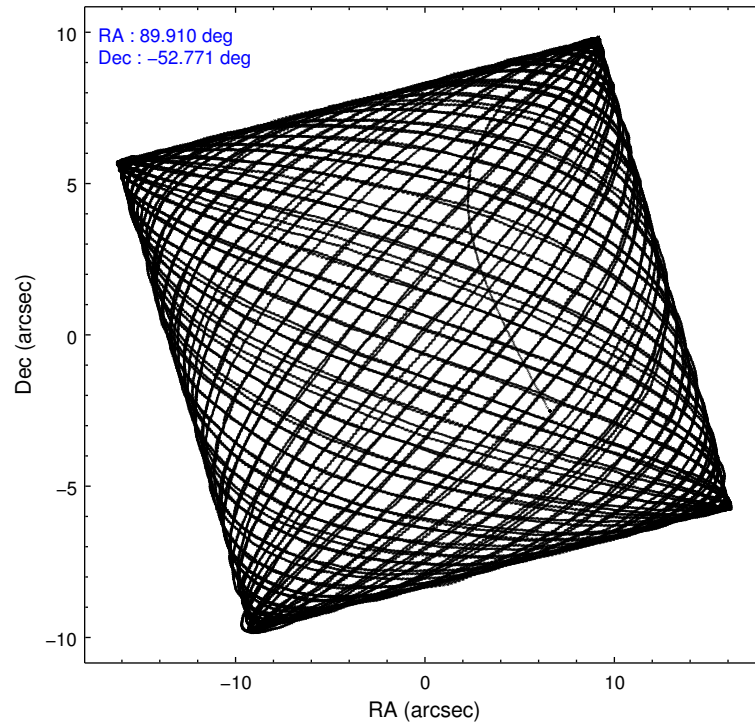
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	310707	304314	341754	332272	332315
rejected events	274966	264217	306230	295723	295742
rejected %	88%	86%	89%	89%	88%

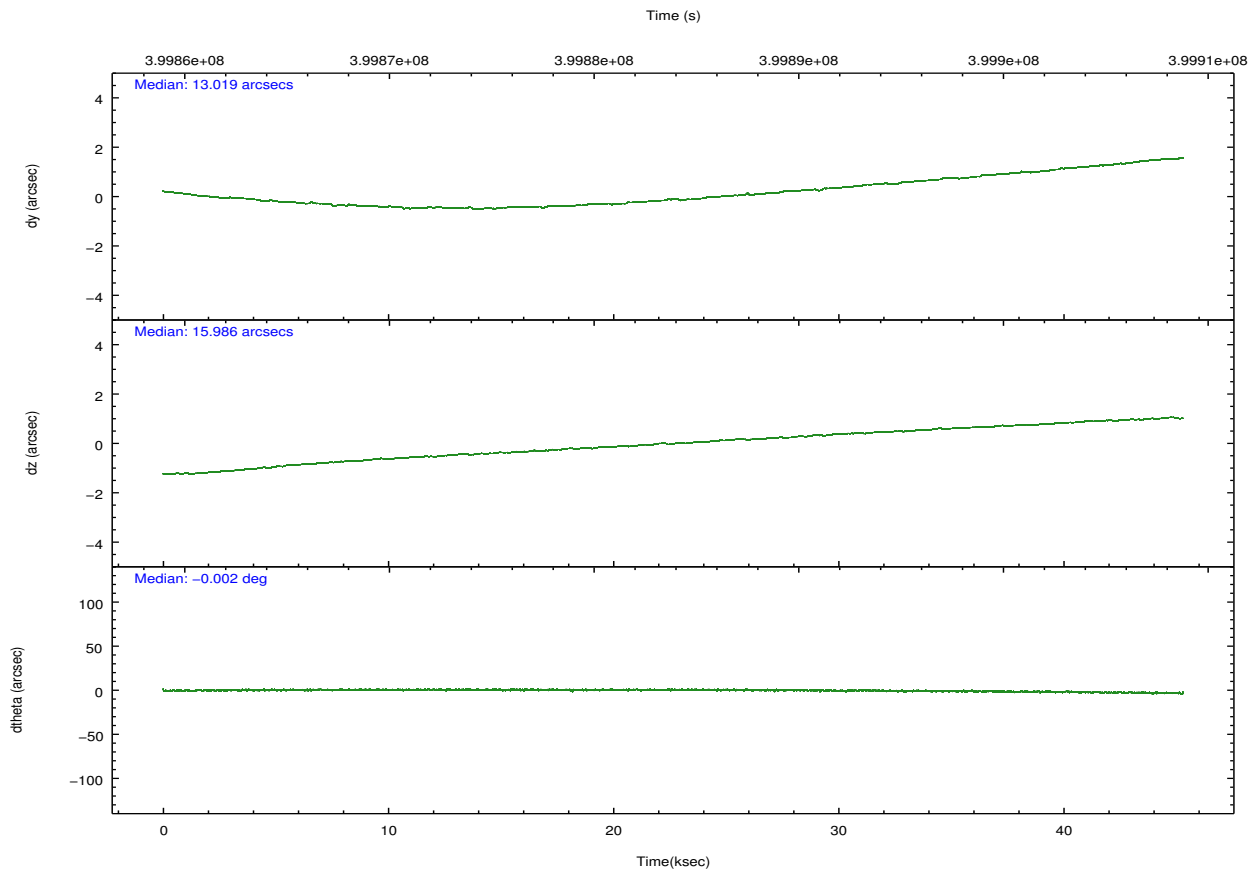
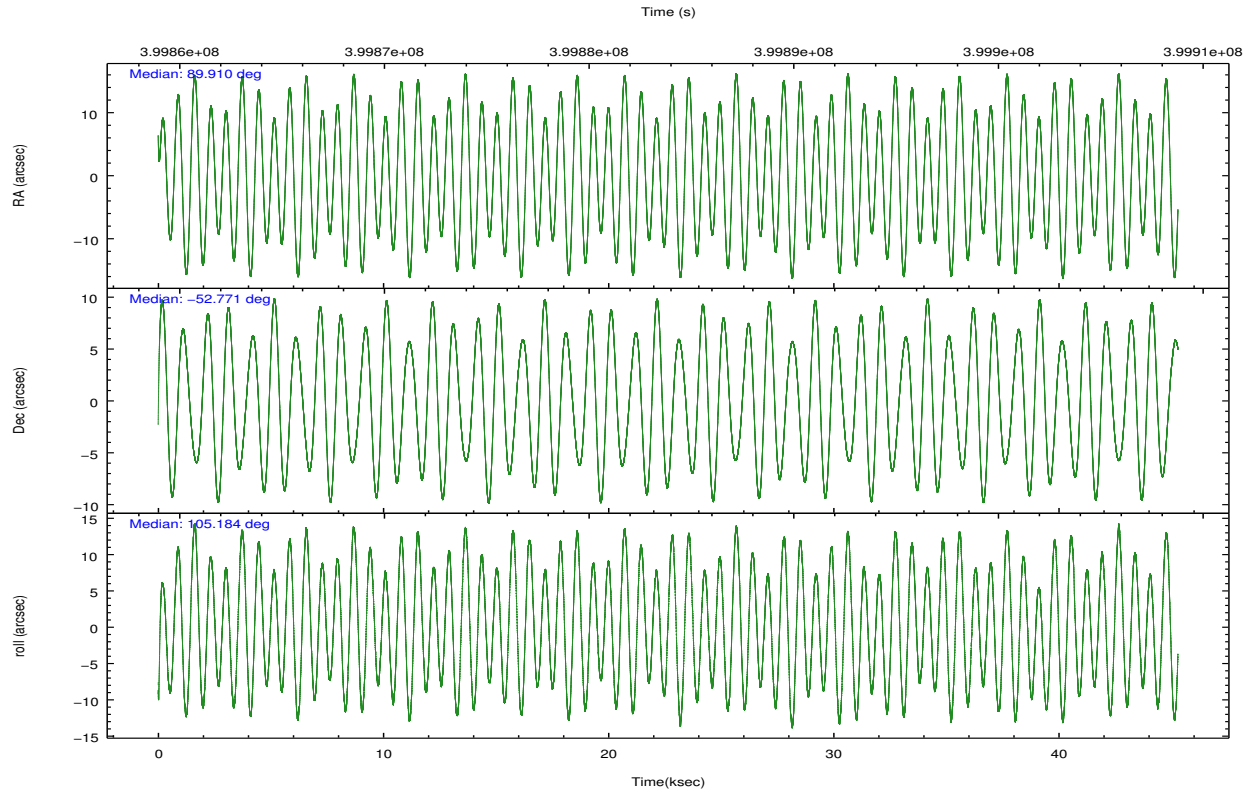
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	12194	14363	12782	13858	12757
	3%	4%	3%	4%	3%
grade 1 events	164	169	199	223	165
	0%	0%	0%	0%	0%
grade 2 events	8724	9355	8668	8136	8120
	2%	3%	2%	2%	2%
grade 3 events	3920	4128	3744	3729	3910
	1%	1%	1%	1%	1%
grade 4 events	3680	4056	3632	3747	3861
	1%	1%	1%	1%	1%
grade 5 events	13368	14358	12555	15242	14396
	4%	4%	3%	4%	4%
grade 6 events	7226	8196	6702	7080	7927
	2%	2%	1%	2%	2%
grade 7 events	261431	249689	293472	280257	281179
	84%	82%	85%	84%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	89.941892	89.90951077564017	CCD I2 on	Y	Y
[deg] Pointing Dec	-52.790520	-52.77120922053084	CCD I3 on	Y	Y
[deg] Pointing Roll	105.009466	105.1923648033351	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-225.792463	-225.7829997647864	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.8	-7.809453238143249	CCD S4 on	N	N
[s] Observation start time (MET)	399861997.184000	399860309.00153	CCD S5 on	N	N
Observation start date	2010-09-03T00:45:31	2010-09-03T00:18:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	399906497.184000	399907282.19144	On-chip summing requested	N	N
Observation end date	2010-09-03T13:07:11	2010-09-03T13:21:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



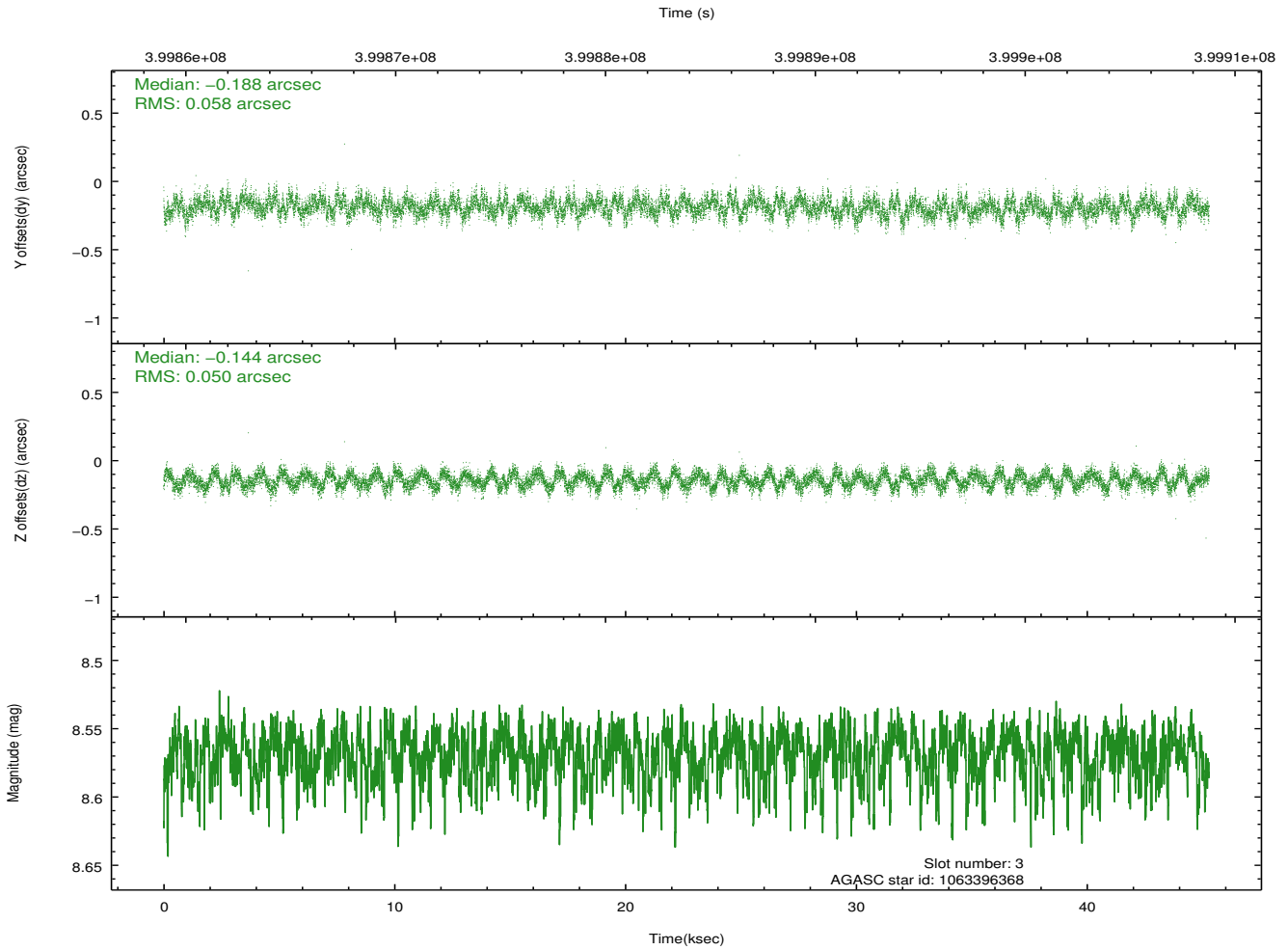
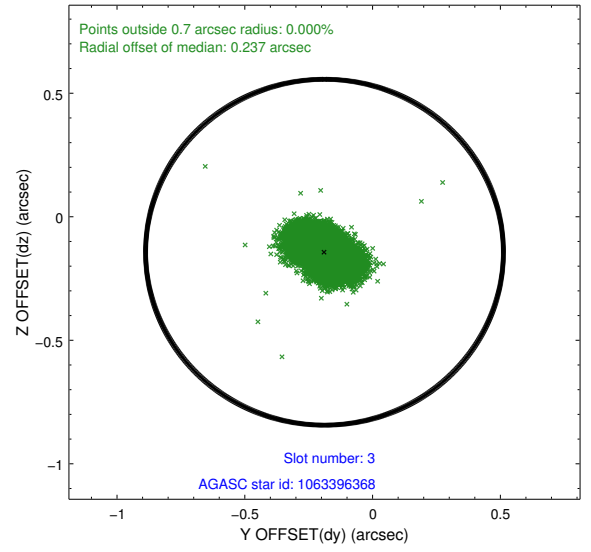
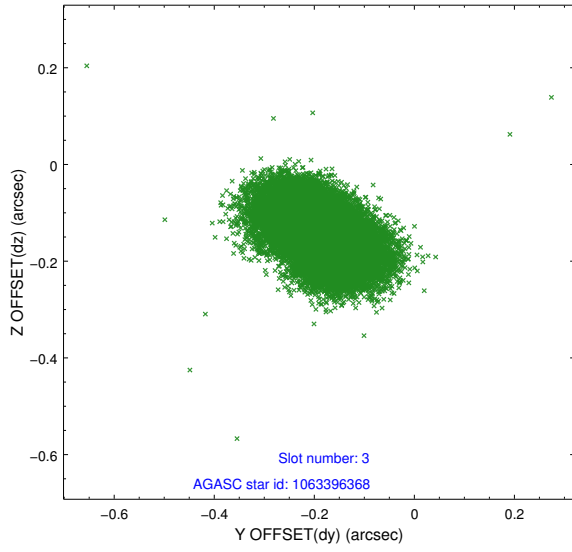


Slot Statistics

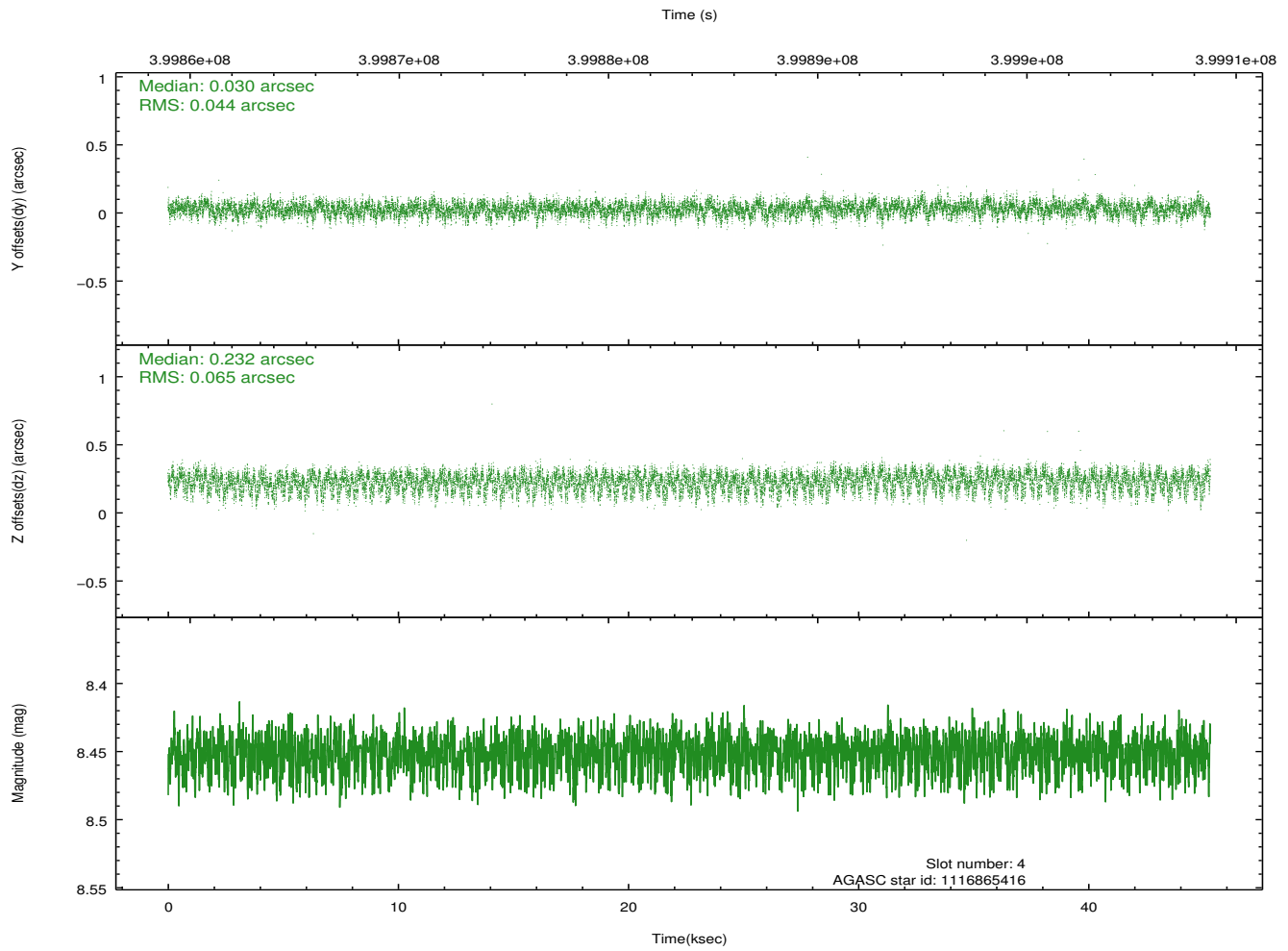
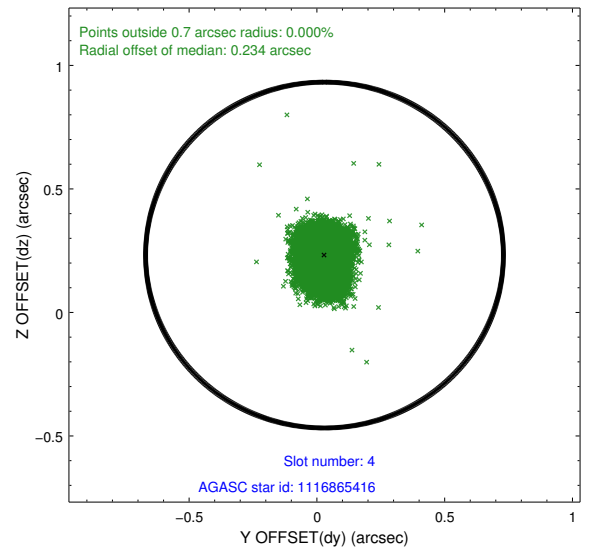
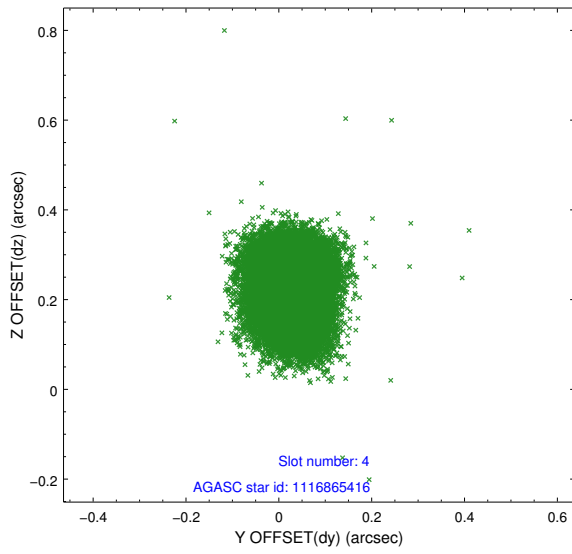
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.99	11048	0.120	-0.087	0.025	0.034	0.000000	0.000000	926.26	-999.99
1	FID	ACIS-I-5	6.98	11048	-0.243	0.108	0.019	0.041	0.000000	0.000000	-1822.21	897.68
2	FID	ACIS-I-6	7.00	11047	0.033	0.044	0.027	0.046	0.000000	0.000000	391.74	1542.12
3	GUIDE	1063396368	8.57	22051	-0.188	-0.144	0.082	0.132	90.045624	-52.177781	2071.19	-791.86
4	GUIDE	1116865416	8.45	22085	0.030	0.232	0.083	0.134	91.050005	-52.893639	-999.21	-2223.07
5	GUIDE	1063398424	8.70	22069	0.047	0.129	0.092	0.151	90.754923	-52.113929	1877.90	-2363.60
6	GUIDE	1116743352	9.20	22075	0.056	-0.179	0.109	0.187	89.141412	-53.569099	-2273.45	2381.24
7	GUIDE	1116740176	9.38	22072	0.059	-0.035	0.104	0.172	89.520403	-53.532421	-2348.69	1564.09

2.4 Star Slots

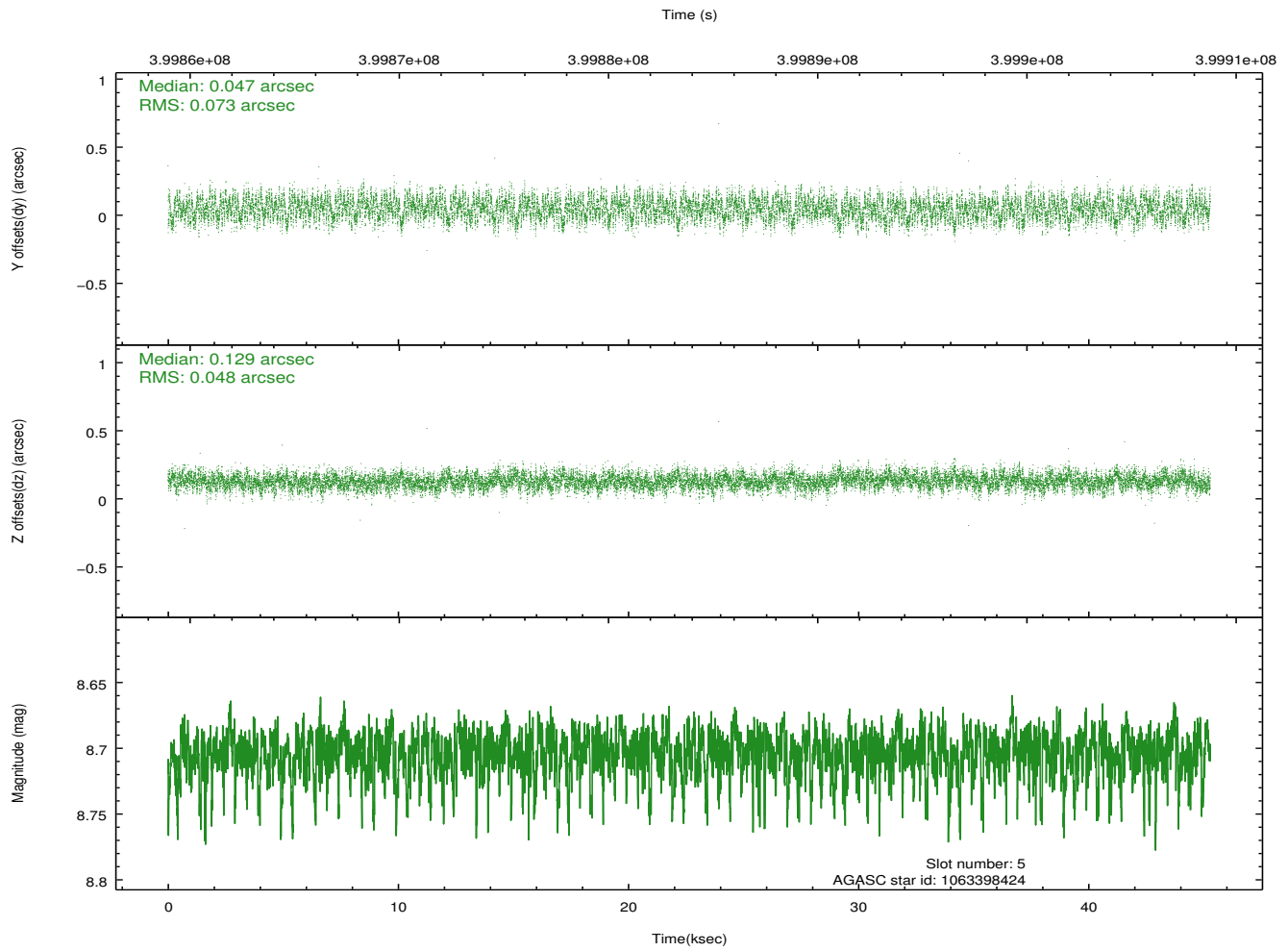
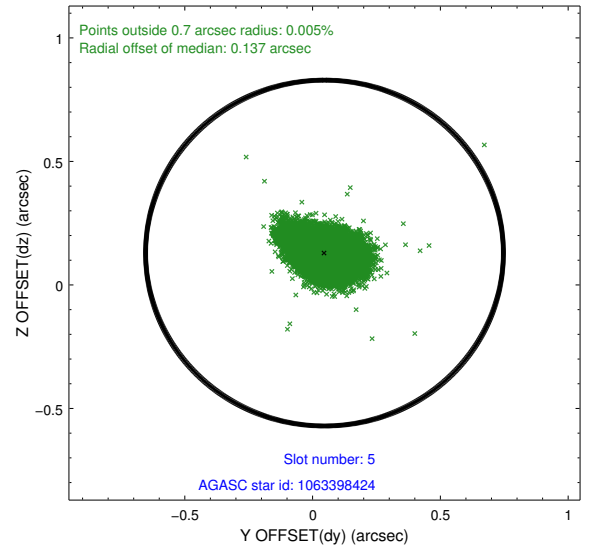
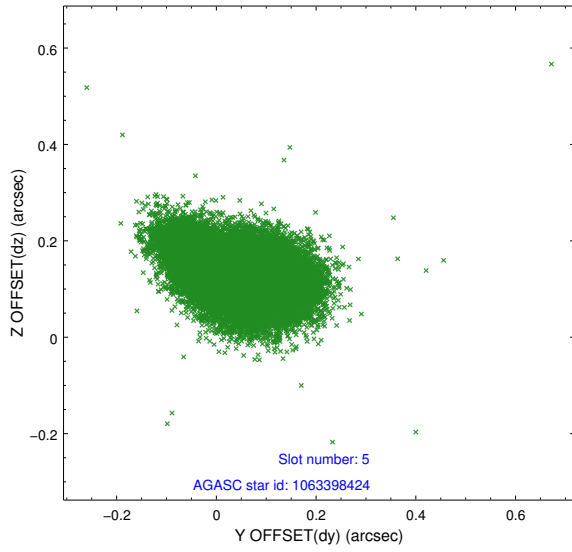
2.4.1 Slot 3



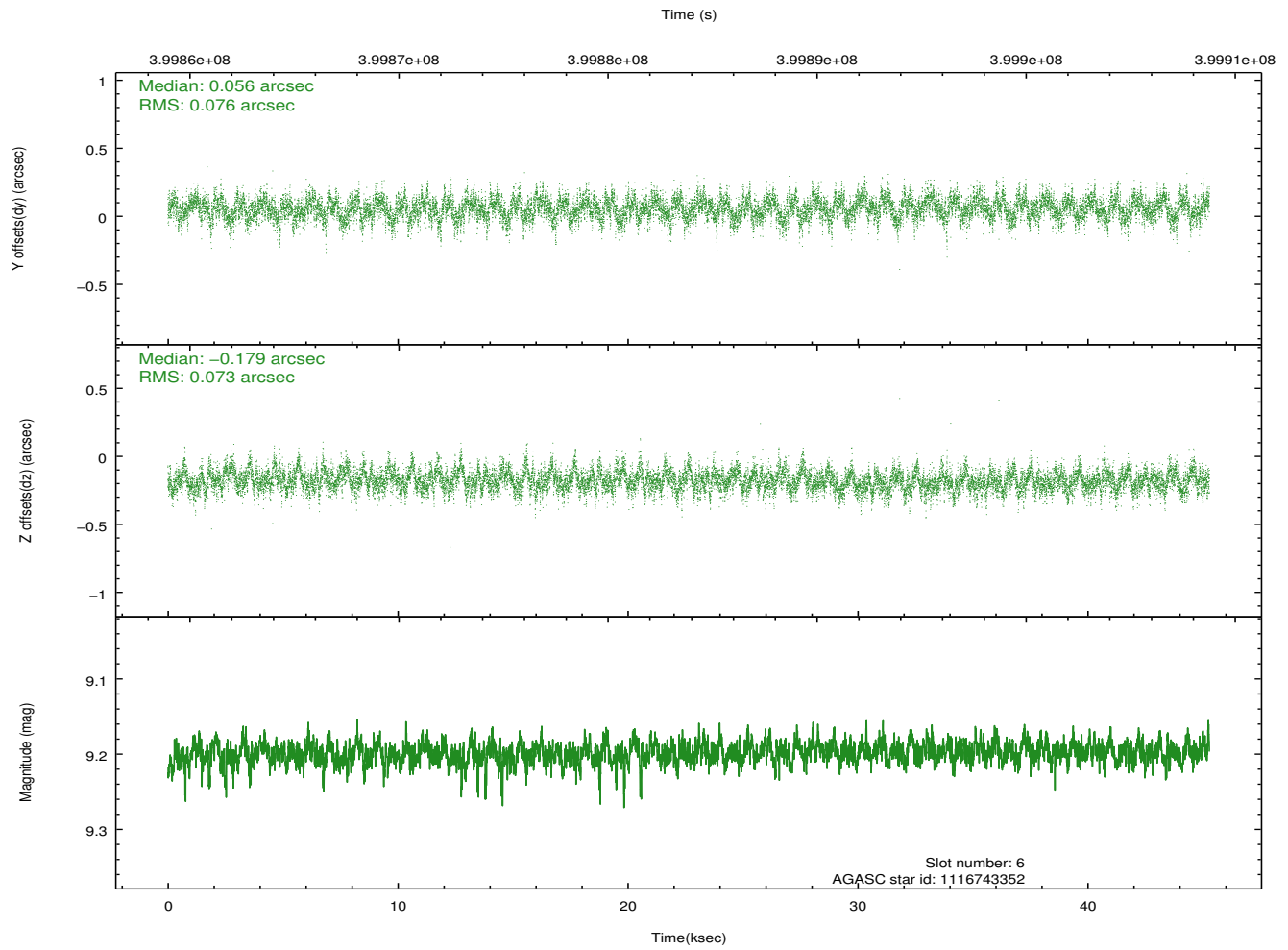
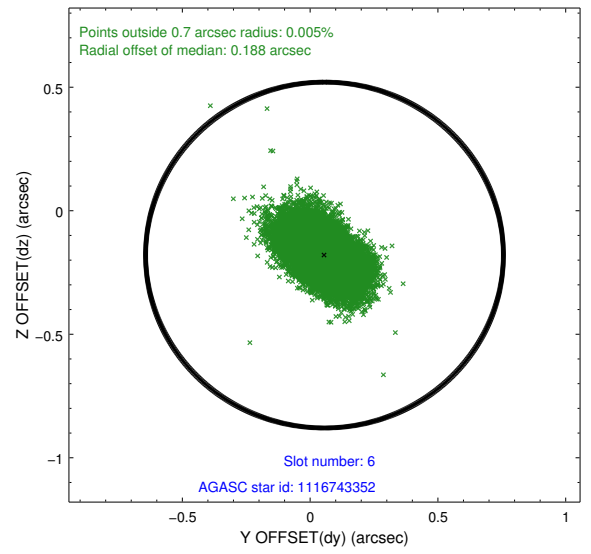
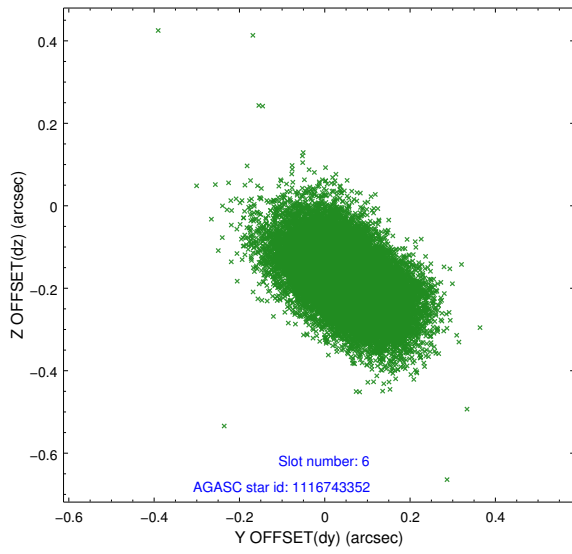
2.4.2 Slot 4



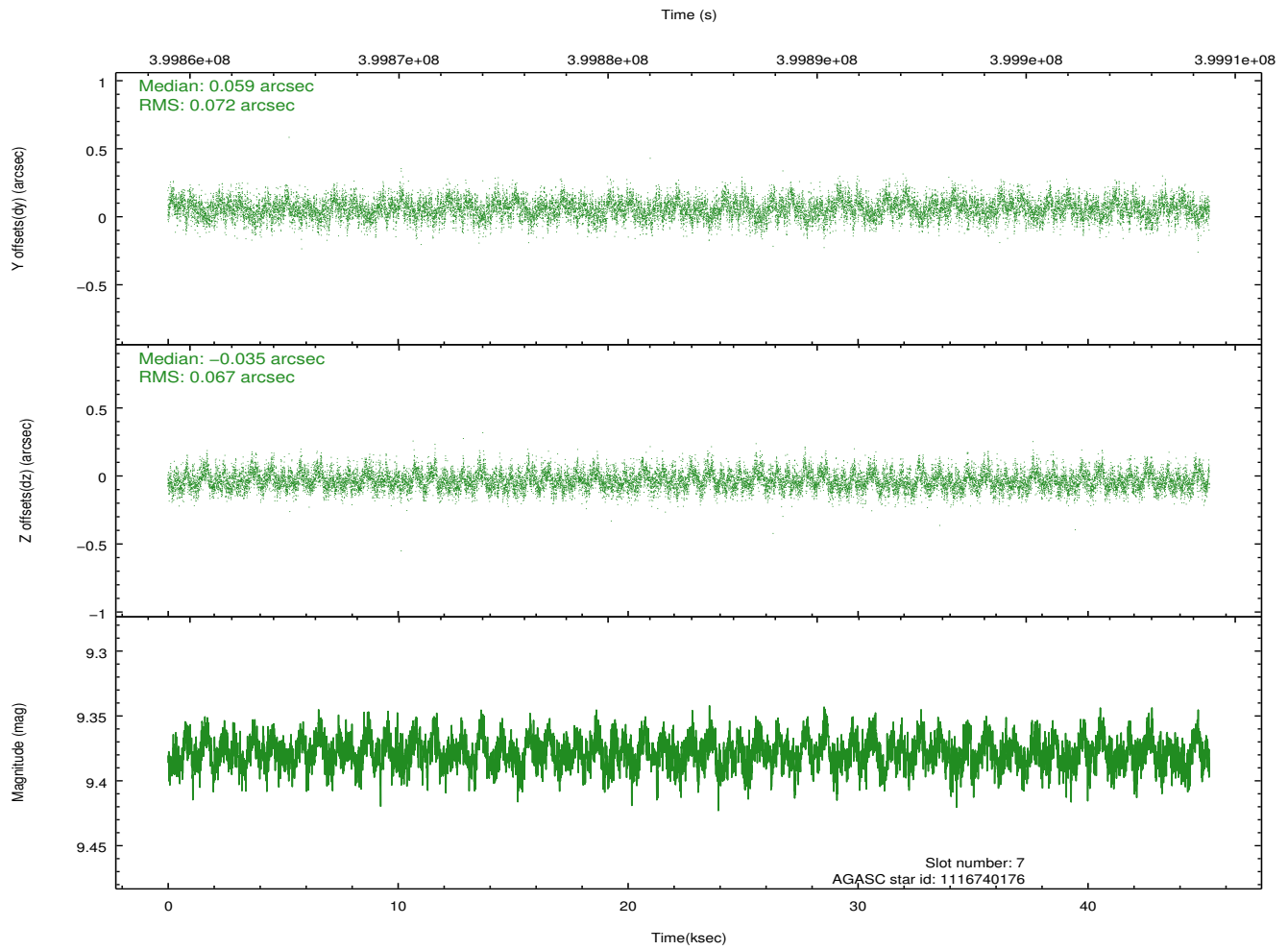
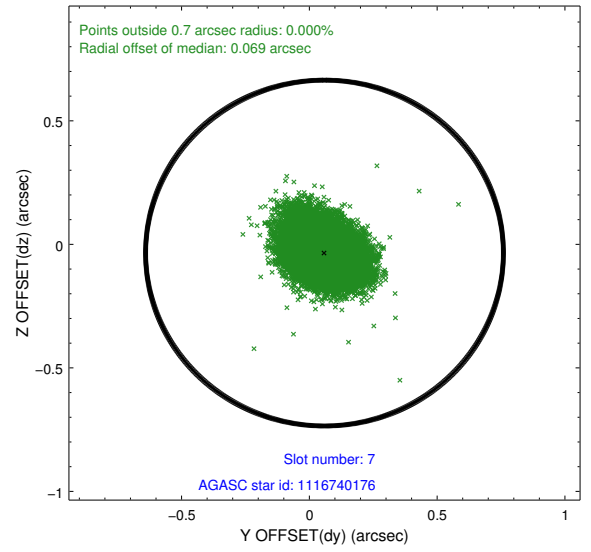
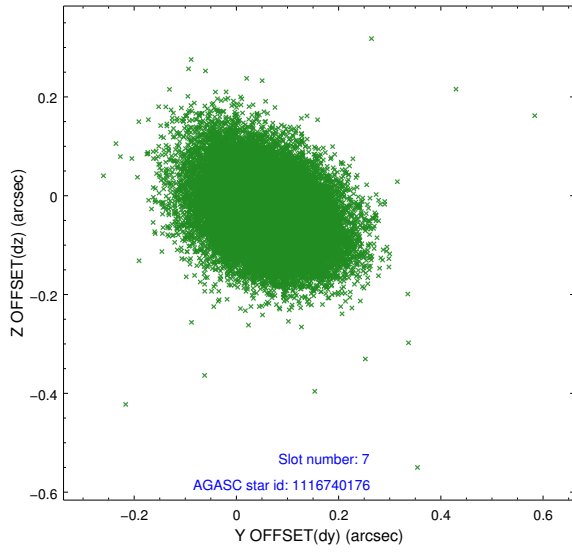
2.4.3 Slot 5



2.4.4 Slot 6

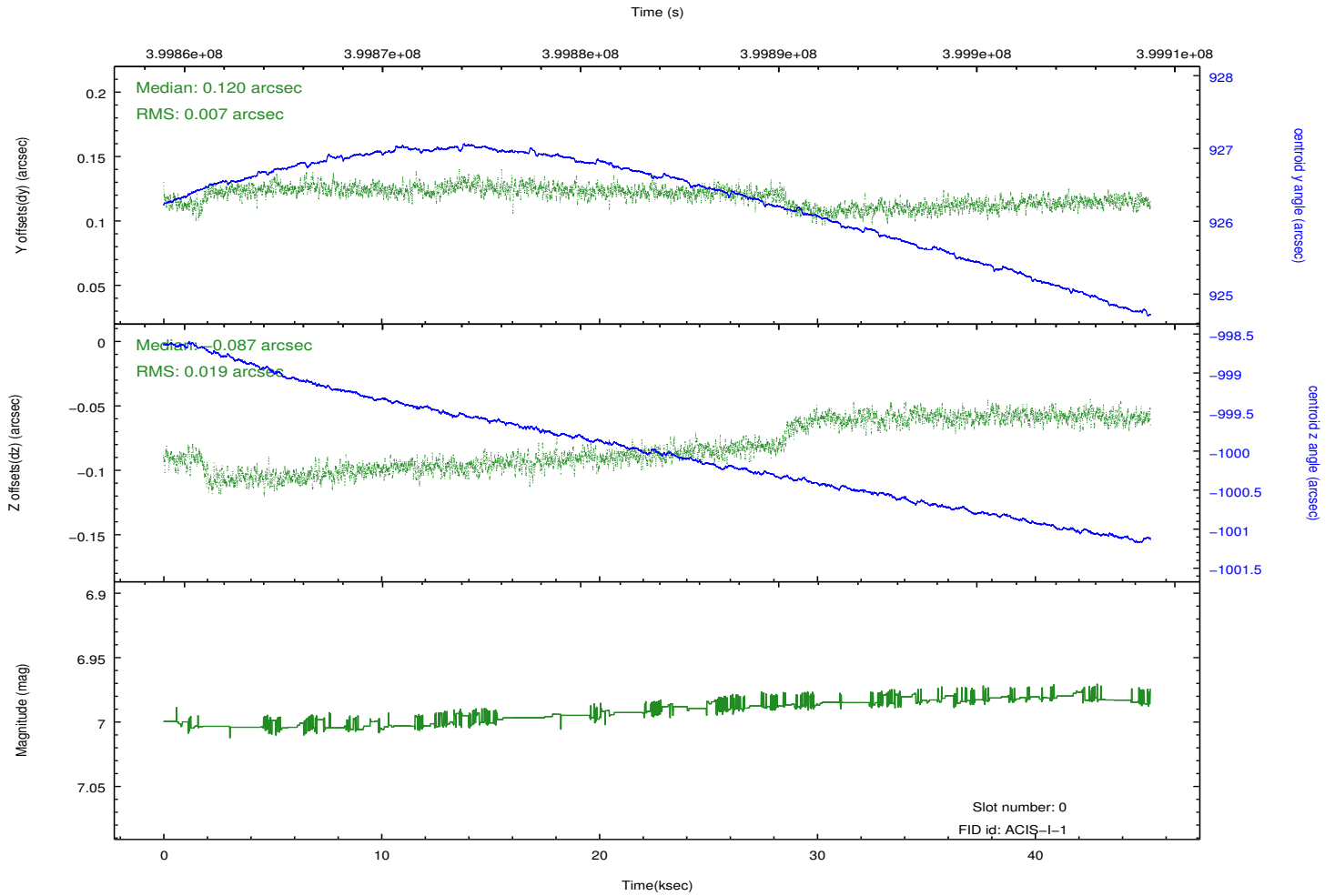
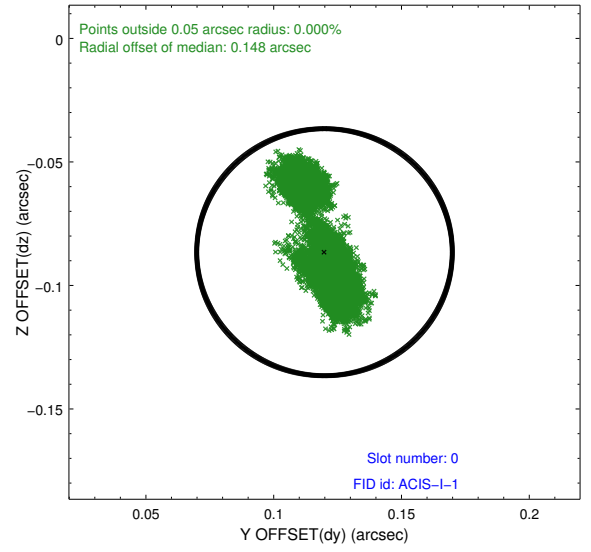
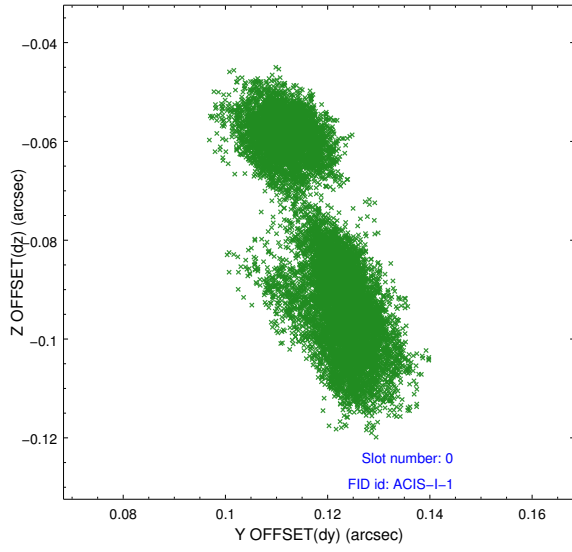


2.4.5 Slot 7

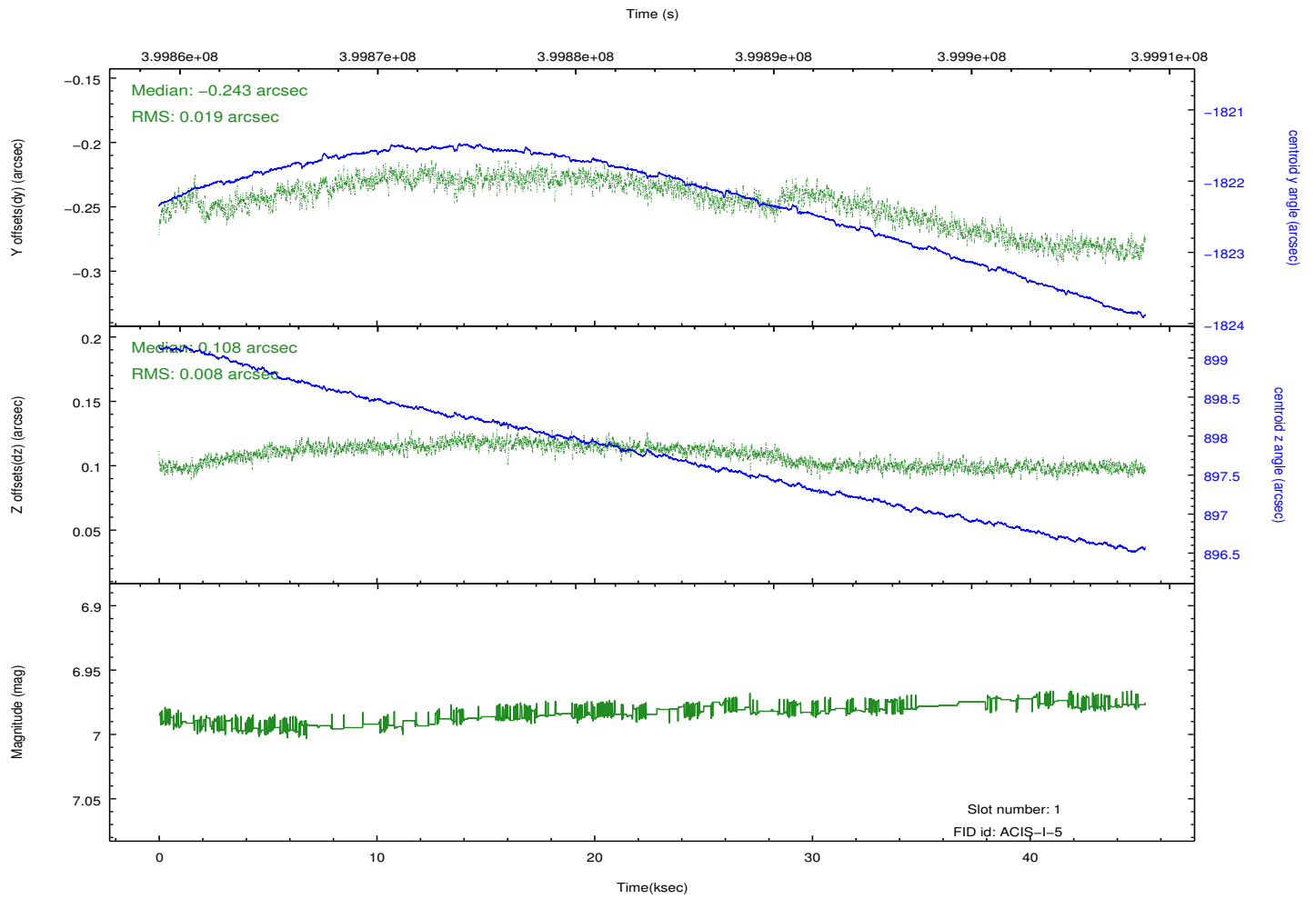
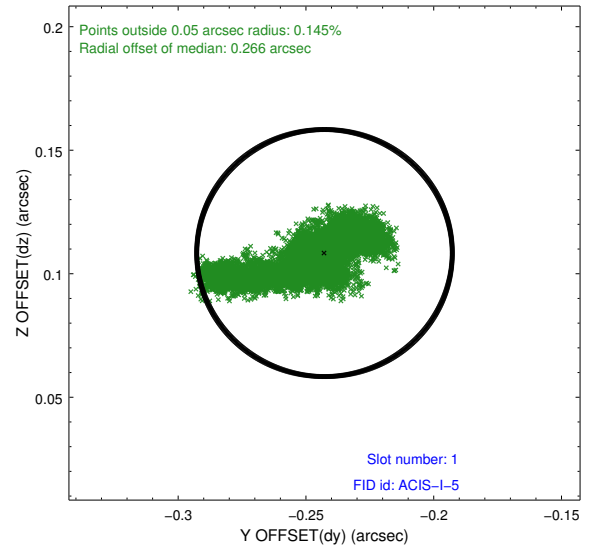
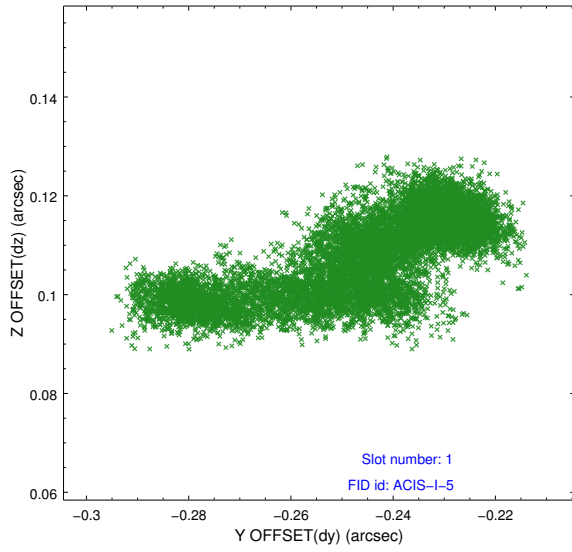


2.5 FID Slots

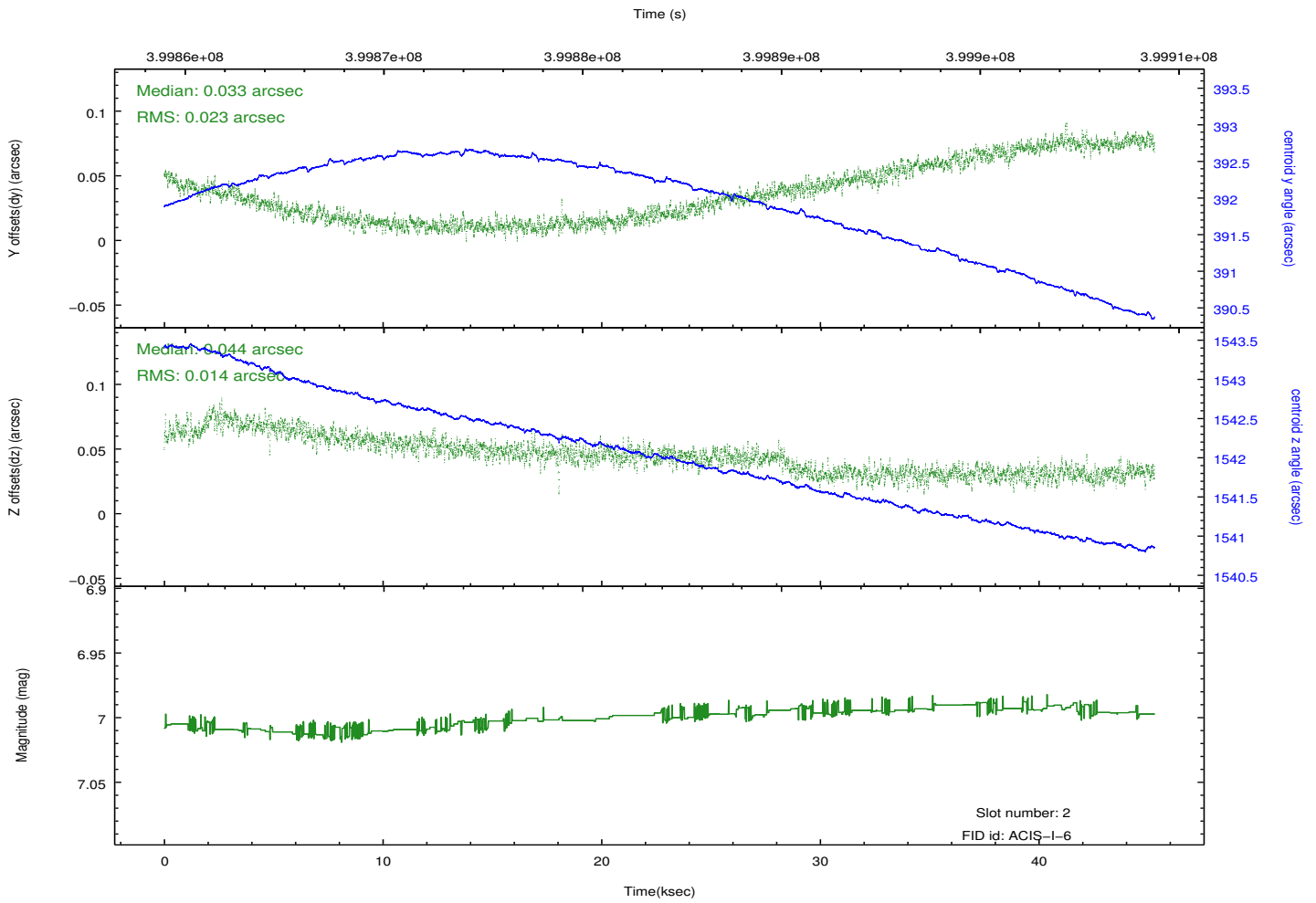
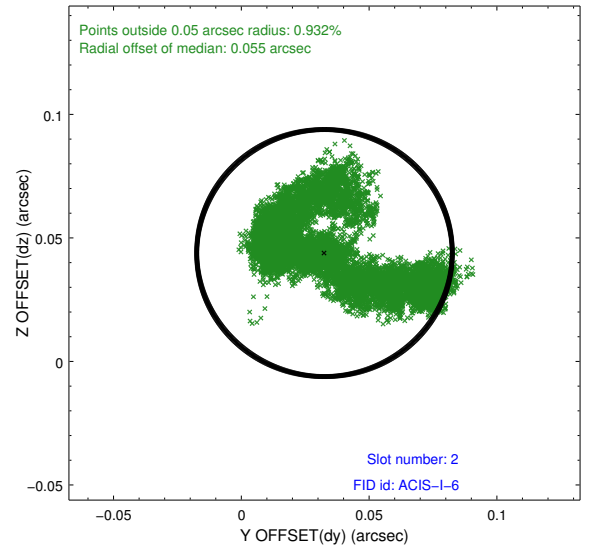
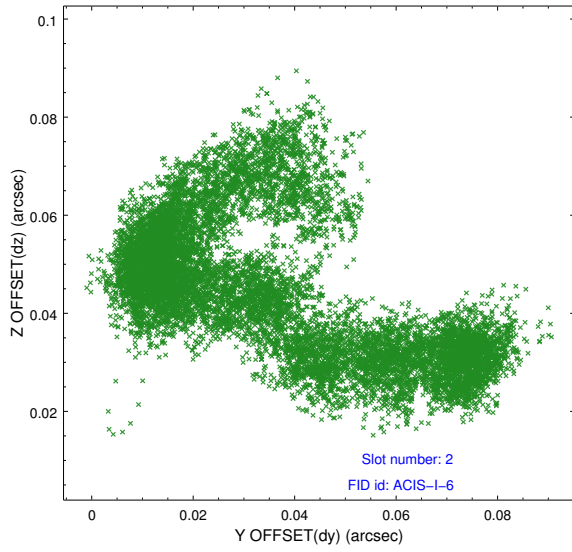
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.07.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	44.55508733815

A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(90.02944, -52.81753), (90.04379, -52.81513), (90.02161, -52.76609), (90.00918, -52.77269)