

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 15105 - L2 Version 2
Chandra X-Ray Center

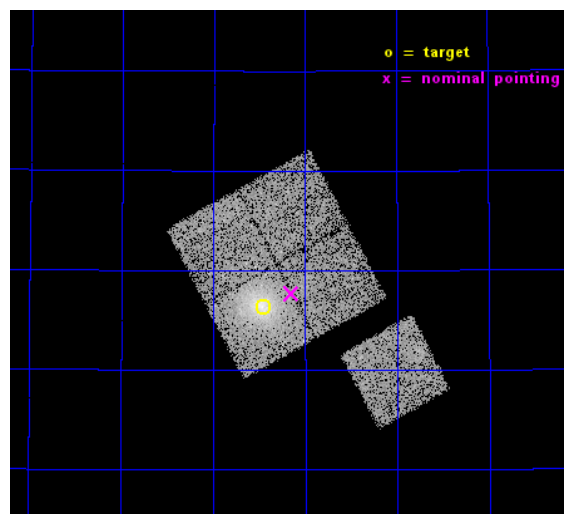
L2 Processing Date : Dec 10 2014

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1 Front

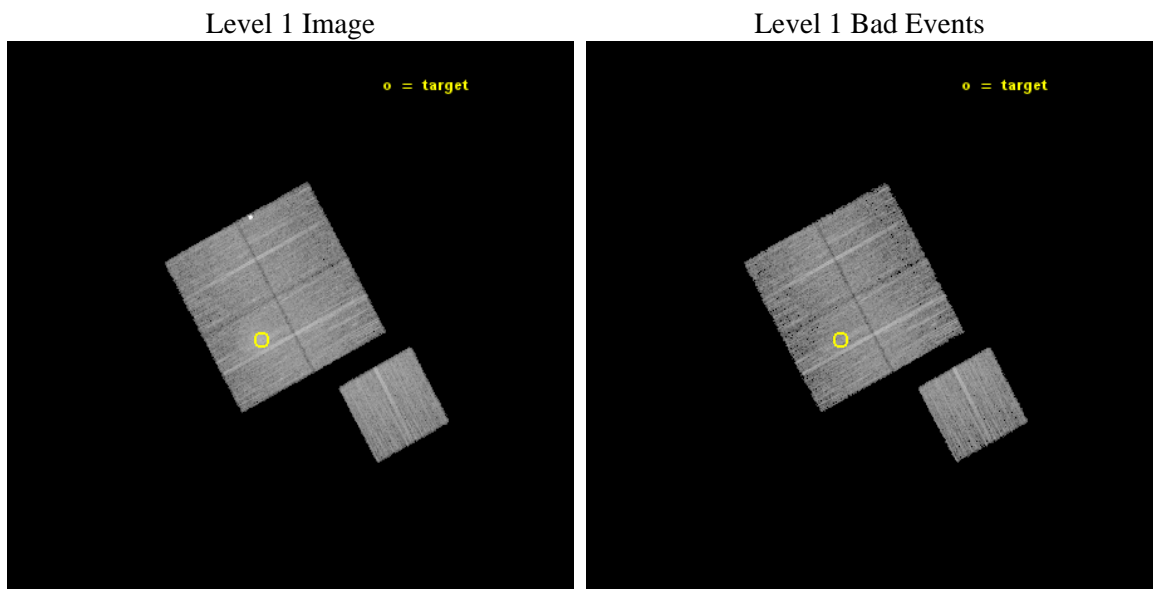
seq_num	801234	Sequence number
obs_id	15105	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G163.72+53.53	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	155.61375	Observer's specified target RA [deg]
dec_targ	50.104528	Observer's specified target Dec [deg]
ra_nom	155.53747018074	Nominal RA [deg]
dec_nom	50.128373590236	Nominal Dec [deg]
roll_nom	151.67715418984	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14079.44366461	Sum of GTIs [s]
livetime	13895.485367997	Livetime [s]
ontime0	14085.602665484	Sum of GTIs [s]
ontime1	14079.361594915	Sum of GTIs [s]
ontime2	14085.684745491	Sum of GTIs [s]
ontime3	14079.44366461	Sum of GTIs [s]
ontime6	14085.561625481	Sum of GTIs [s]
l2events	43861	Number of level 2 events



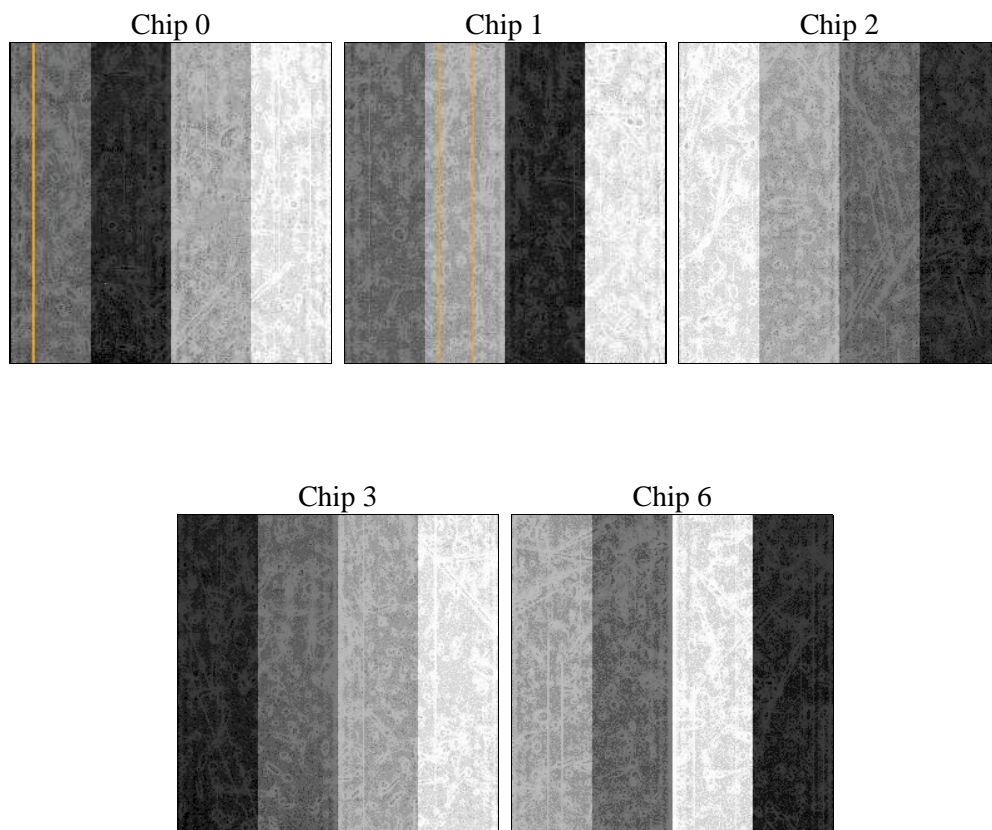
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	14079.44366461	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	14085.602665484	Sum of GTIs [s]
date	2014-12-10T05:16:11	Date and time of file creation	ontime1	14079.361594915	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	14085.684745491	Sum of GTIs [s]
			ontime3	14079.44366461	Sum of GTIs [s]
			ontime6	14085.561625481	Sum of GTIs [s]
			l1events	337790	Number of level 1 events

2.1.4 Events

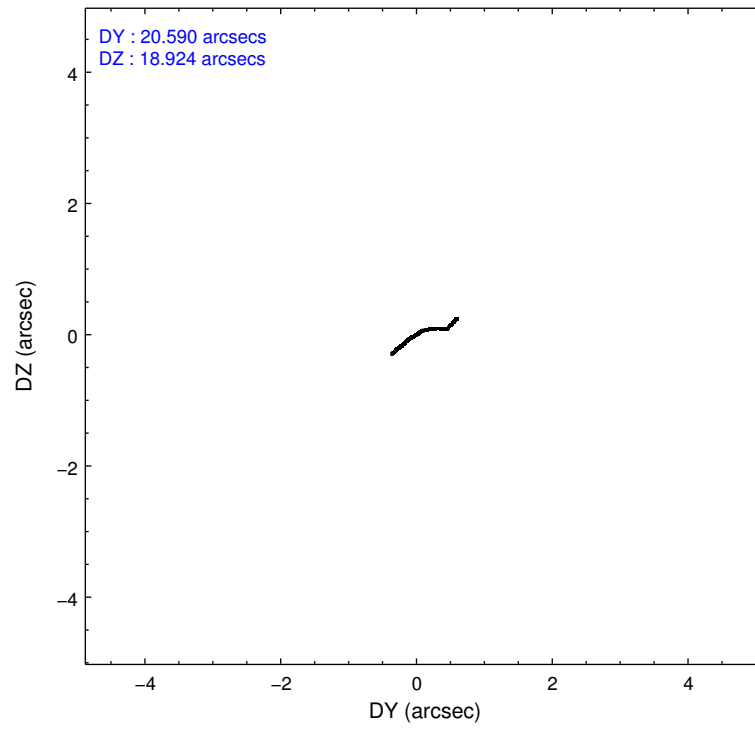
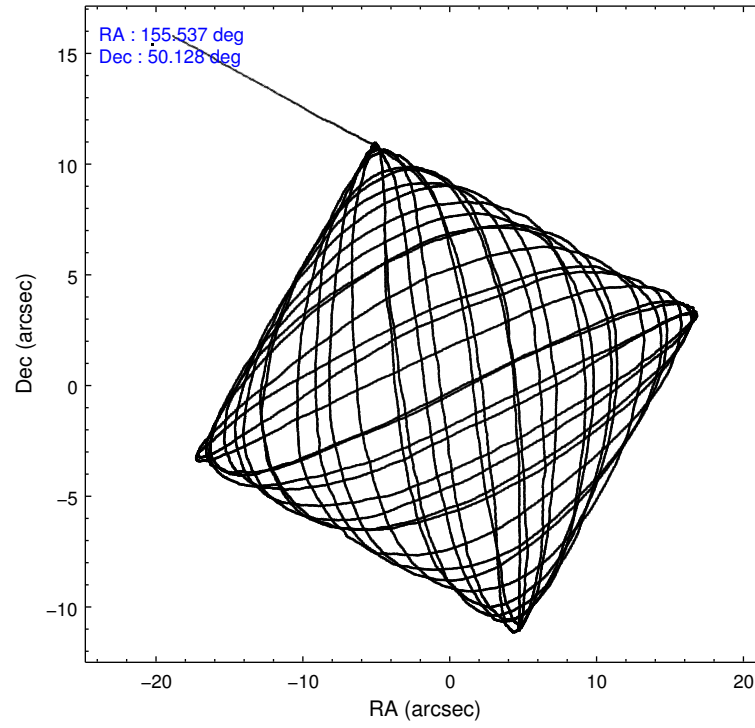
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	61975	62433	69010	75091	69281
rejected events	49665	53417	60995	58194	61149
rejected %	80%	85%	88%	77%	88%

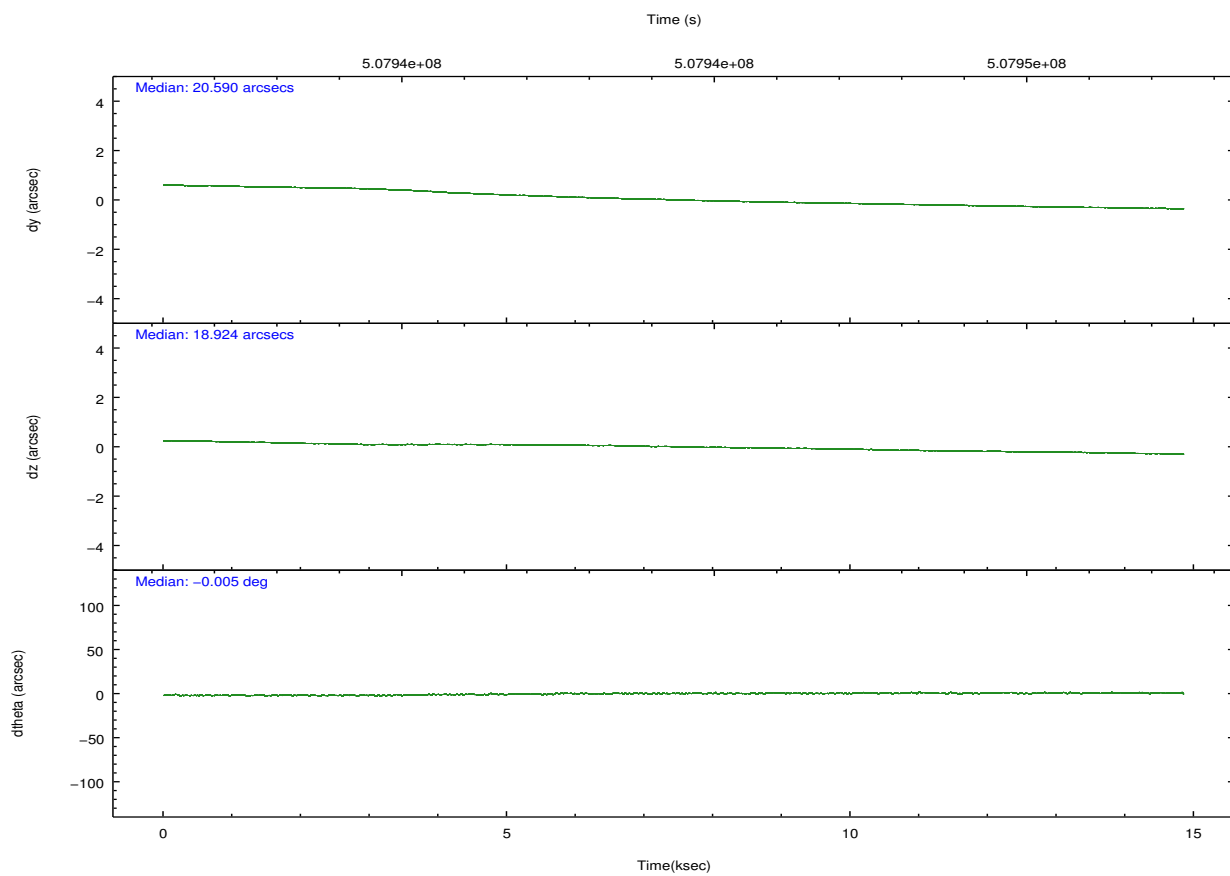
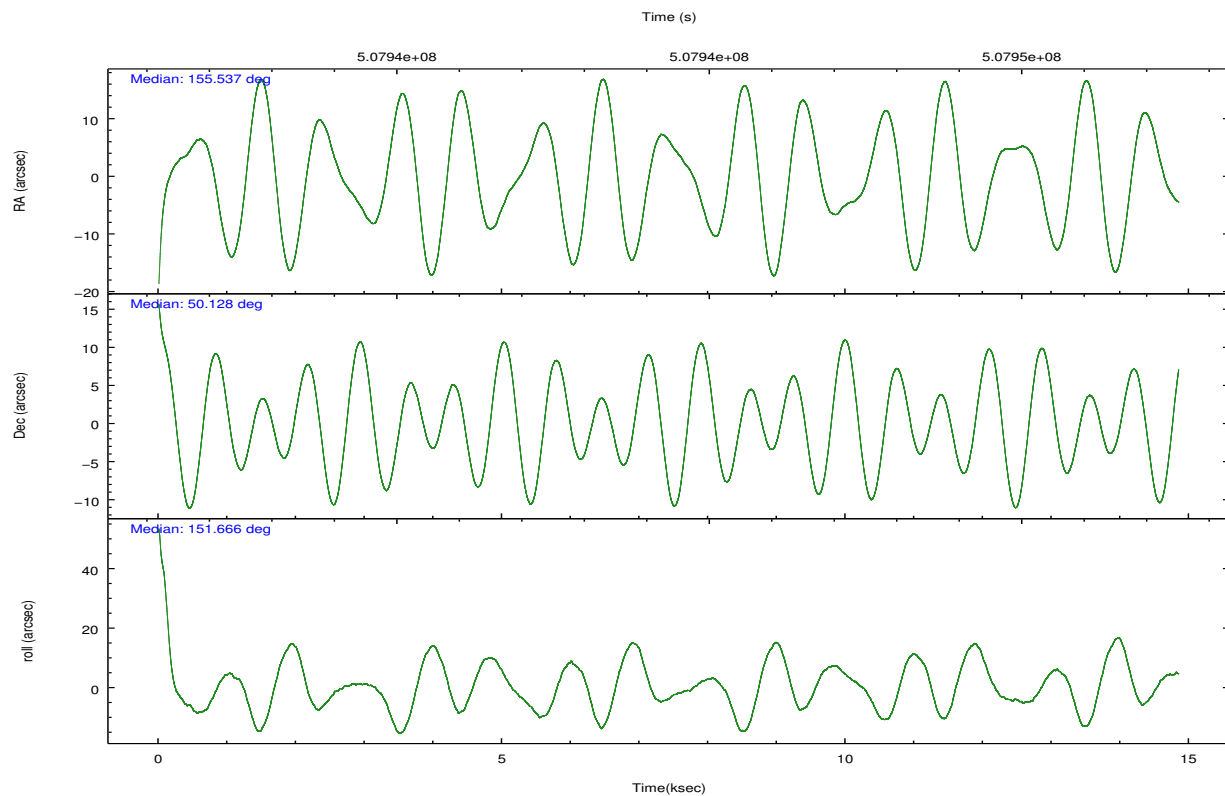
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	7157	3246	2896	10381	2748
	11%	5%	4%	13%	3%
grade 1 events	53	31	60	60	33
	0%	0%	0%	0%	0%
grade 2 events	1906	2132	1952	2507	1767
	3%	3%	2%	3%	2%
grade 3 events	814	835	823	1084	863
	1%	1%	1%	1%	1%
grade 4 events	791	860	799	1057	780
	1%	1%	1%	1%	1%
grade 5 events	3232	3340	3118	3612	3441
	5%	5%	4%	4%	4%
grade 6 events	1649	1945	1546	1876	1977
	2%	3%	2%	2%	2%
grade 7 events	46373	50044	57816	54514	57672
	74%	80%	83%	72%	83%

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	155.580335	155.5374701807403	CCD I2 on	Y	Y
[deg] Pointing Dec	50.129298	50.12837359023554	CCD I3 on	Y	Y
[deg] Pointing Roll	151.435558	151.677154189843	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	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	507937787.184000	507936007.17219	CCD S5 on	N	N
Observation start date	2014-02-04T21:48:40	2014-02-04T21:20:07	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	507951787.184000	507952785.91061	On-chip summing requested	N	N
Observation end date	2014-02-05T01:42:00	2014-02-05T01:59:45	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



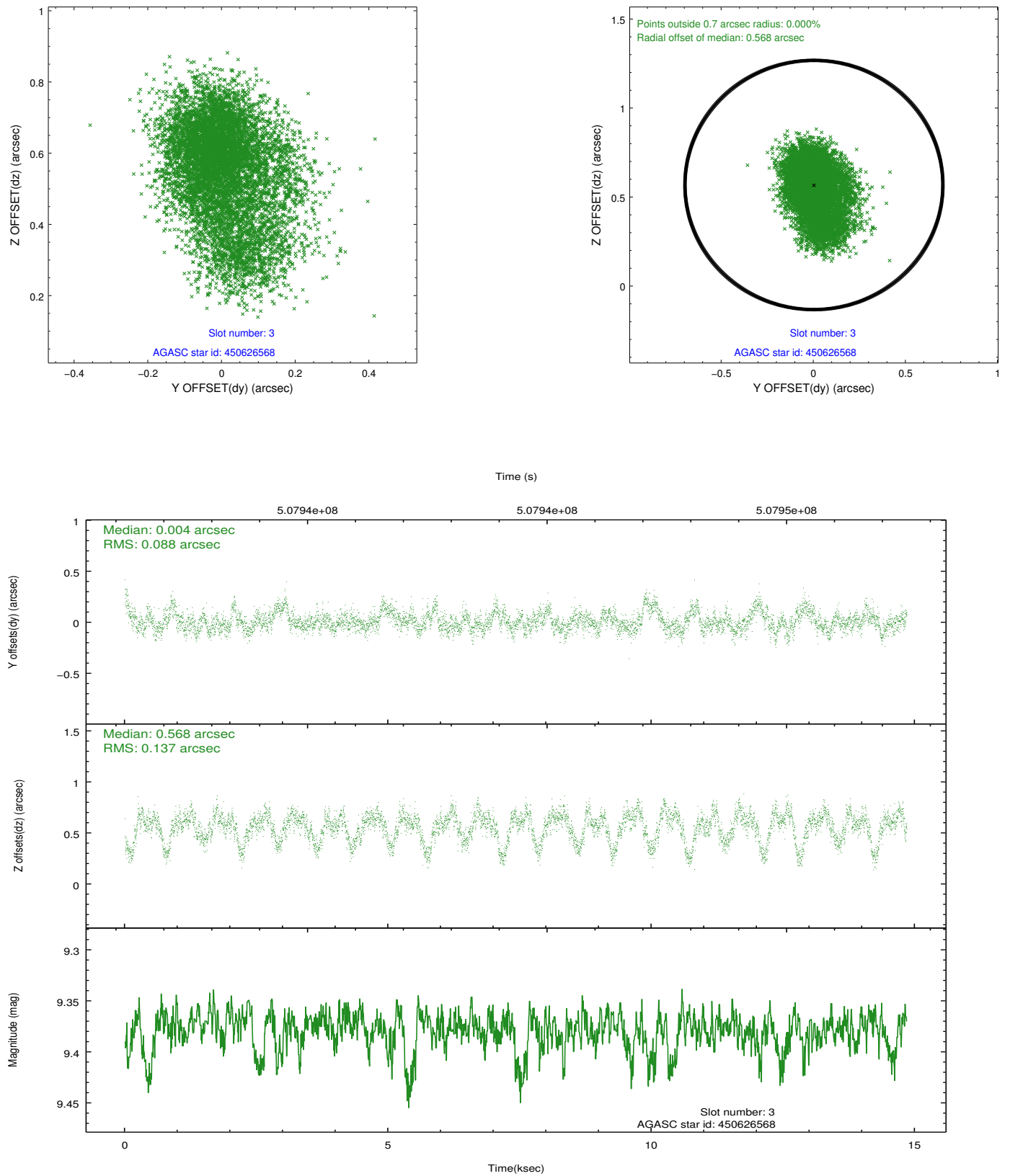


Slot Statistics

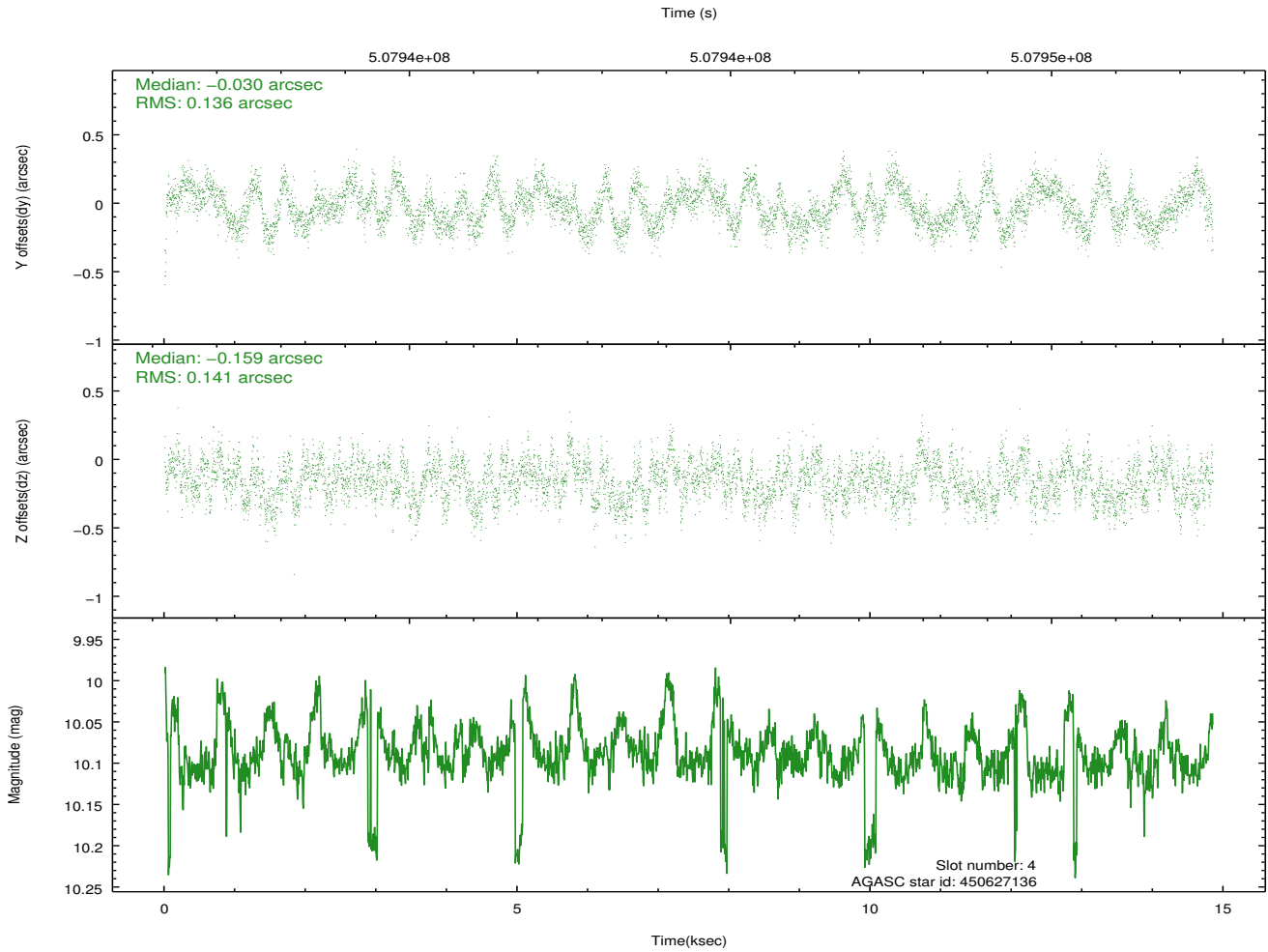
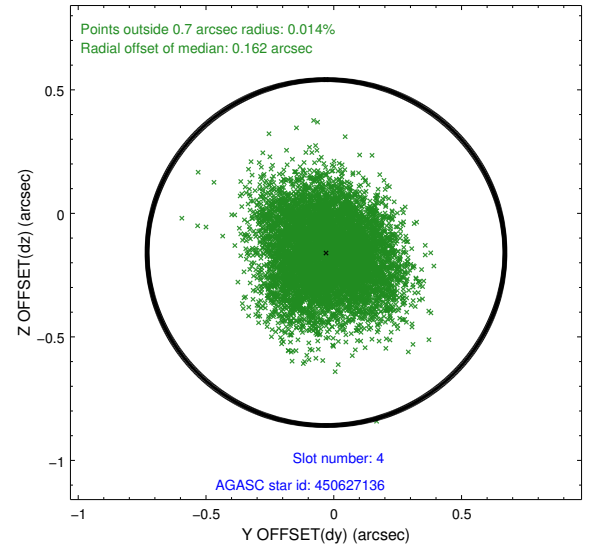
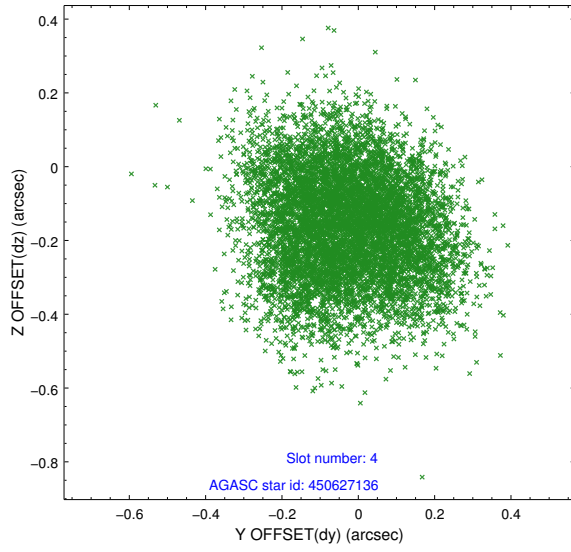
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.12	3621	0.131	-0.089	0.009	0.015	0.000000	0.000000	918.69	-1001.72
1	FID		ACIS-I-5	7.10	3621	-0.333	0.094	0.006	0.010	0.000000	0.000000	-1829.82	895.60
2	FID		ACIS-I-6	7.12	3621	0.111	0.065	0.011	0.018	0.000000	0.000000	383.74	1540.55
3	GUIDE	used	450626568	9.38	7238	0.004	0.568	0.167	0.298	156.450342	49.999401	-1985.79	-561.48
4	GUIDE	used	450627136	10.09	7233	-0.030	-0.159	0.211	0.325	155.555096	49.429070	-1153.80	2242.38
5	GUIDE	used	450629776	9.74	7232	-0.146	-0.475	0.227	0.325	155.439403	49.455901	-869.99	2286.58
6	GUIDE	used	451022248	9.41	7237	-0.155	0.157	0.120	0.195	155.277653	50.527212	1293.82	-927.10
7	GUIDE	used	451026152	9.66	7235	0.308	-0.069	0.157	0.249	155.681634	50.128352	-205.36	-109.68

2.4 Star Slots

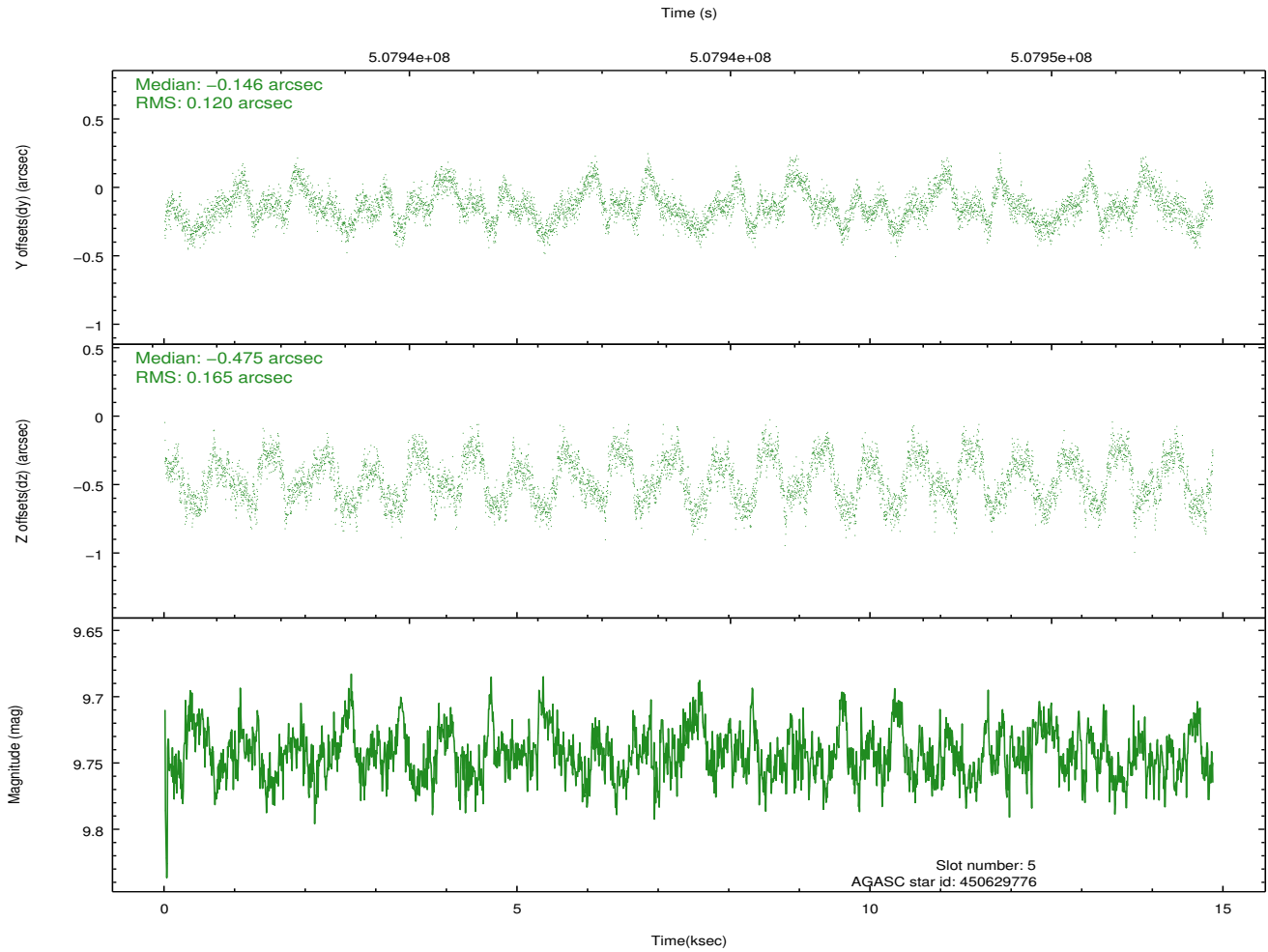
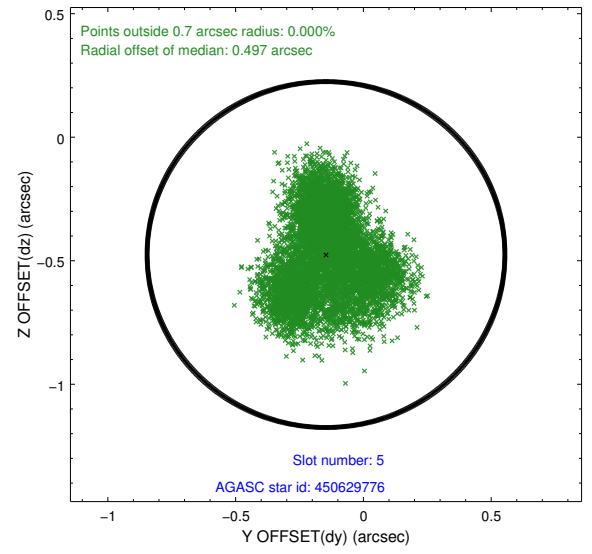
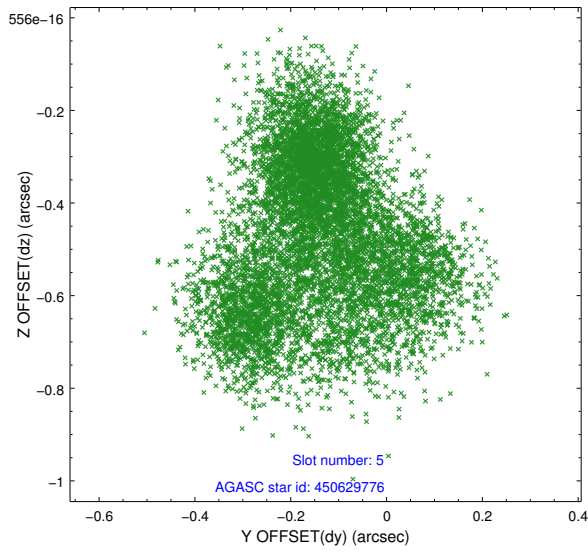
2.4.1 Slot 3



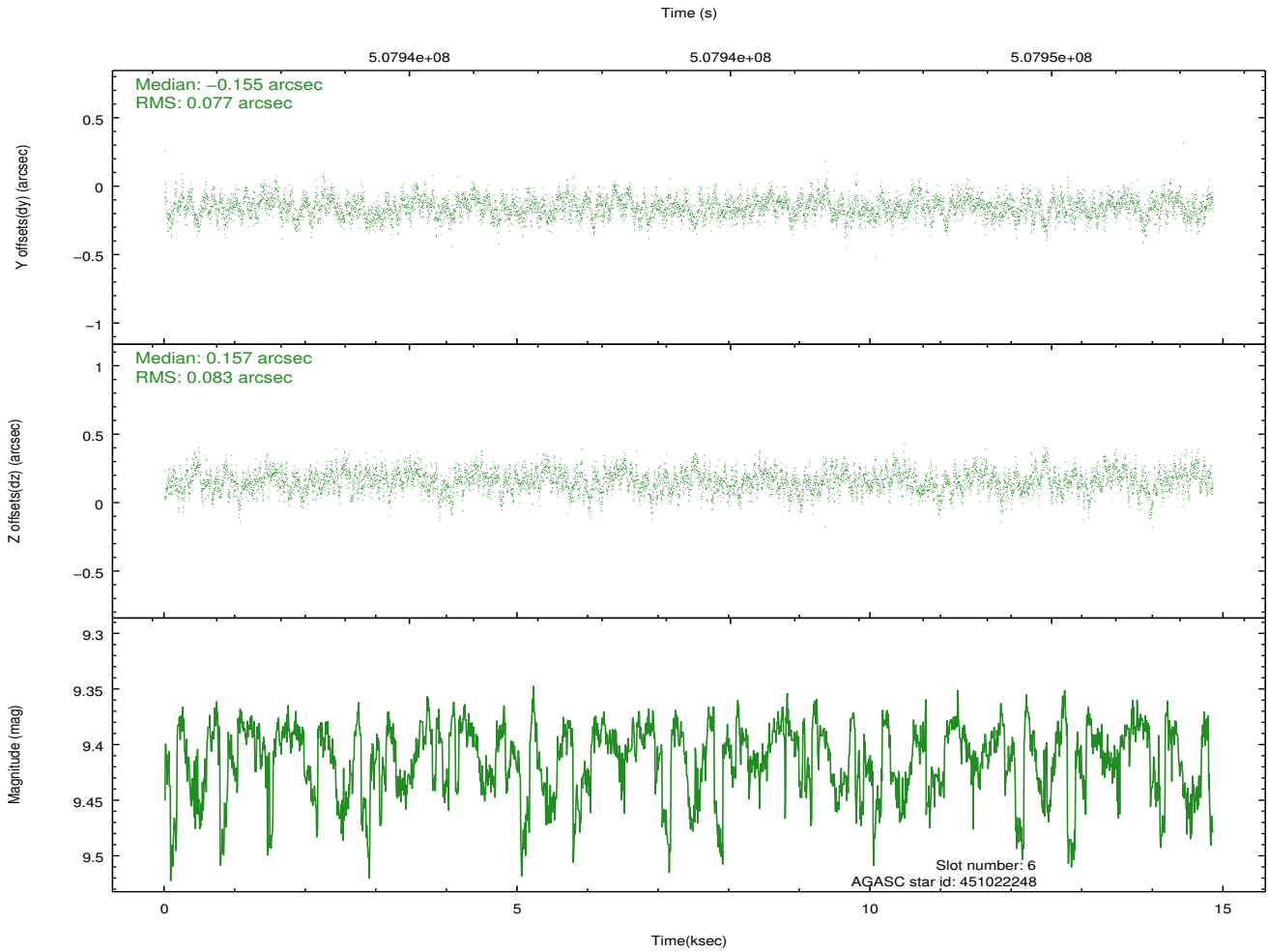
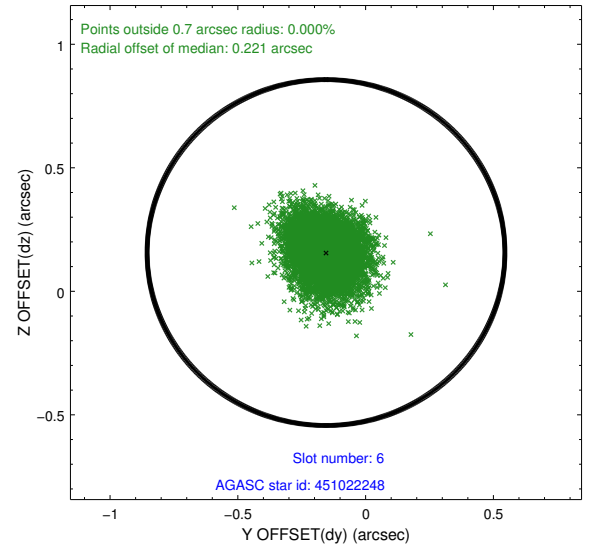
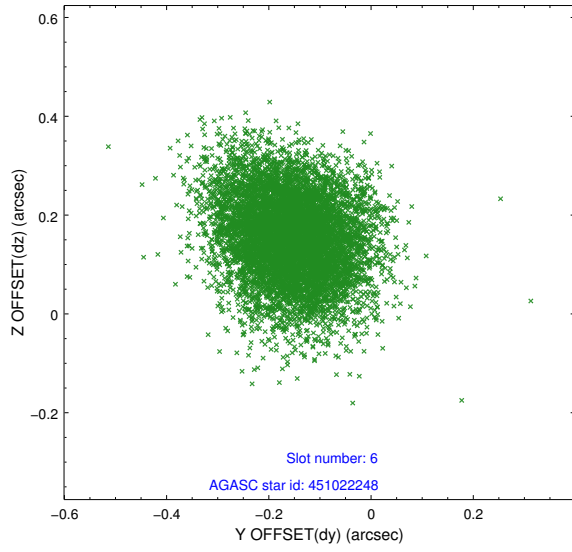
2.4.2 Slot 4



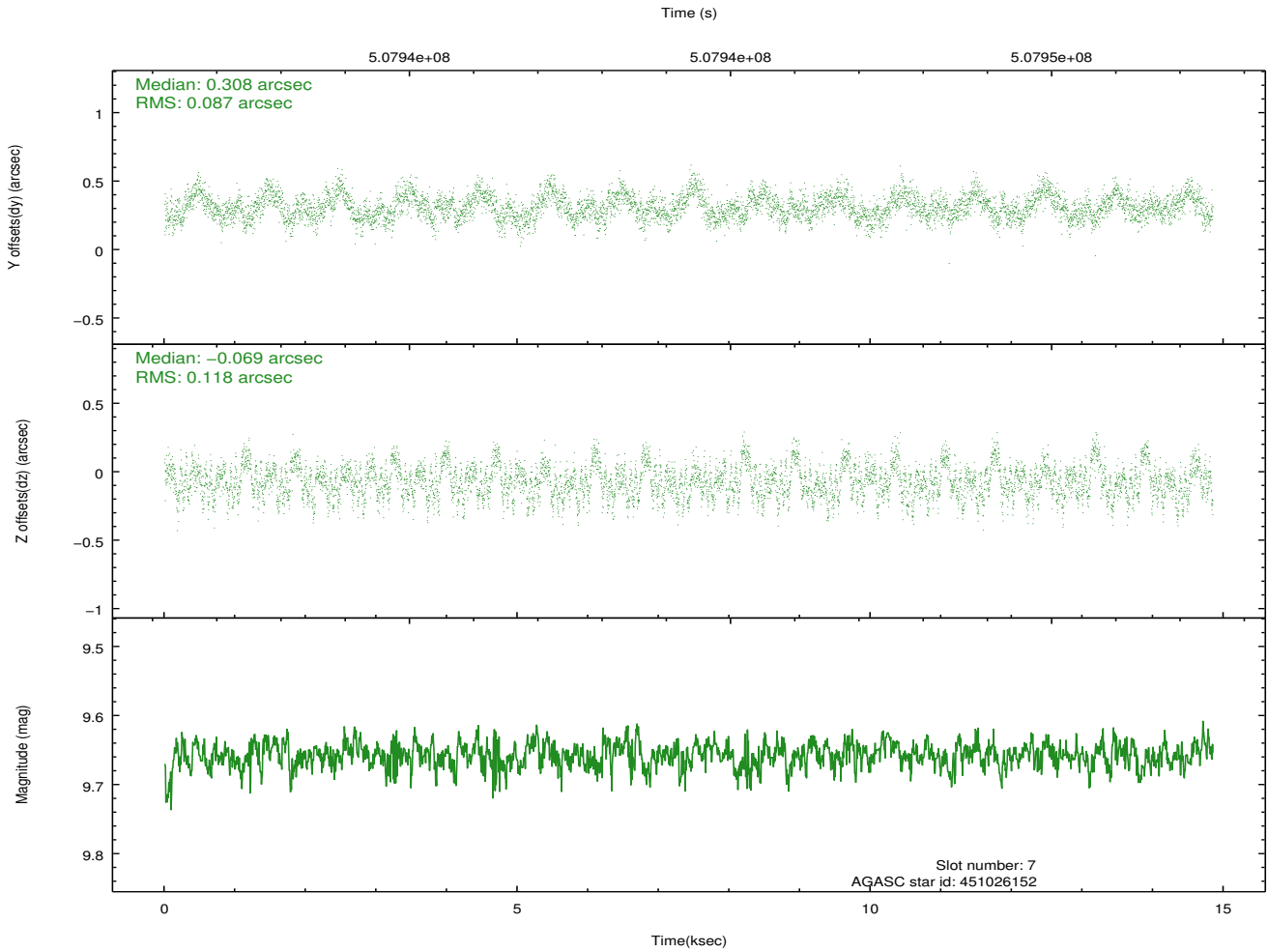
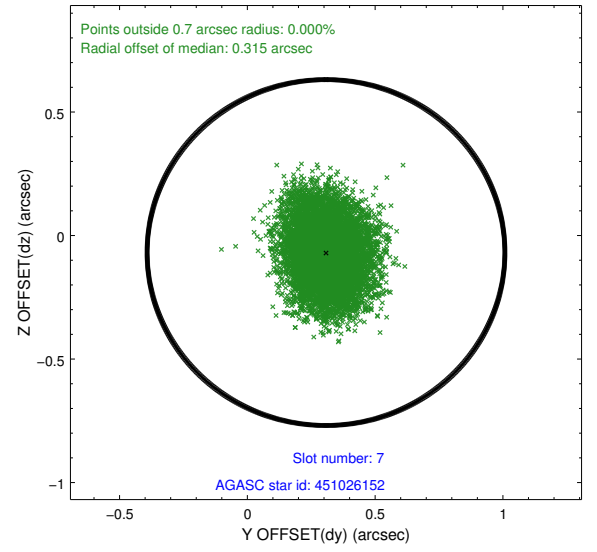
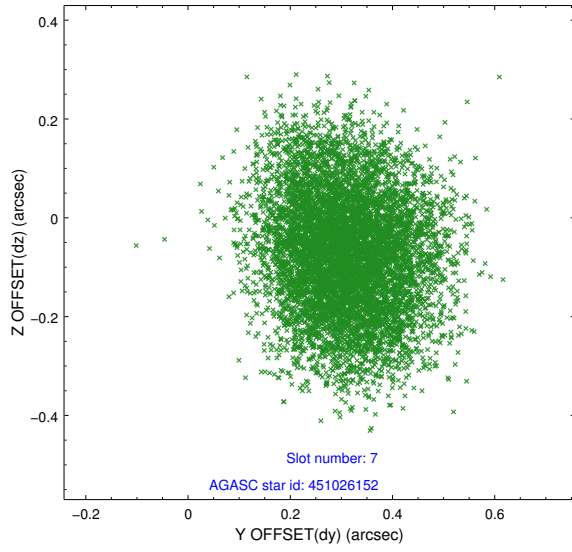
2.4.3 Slot 5



2.4.4 Slot 6

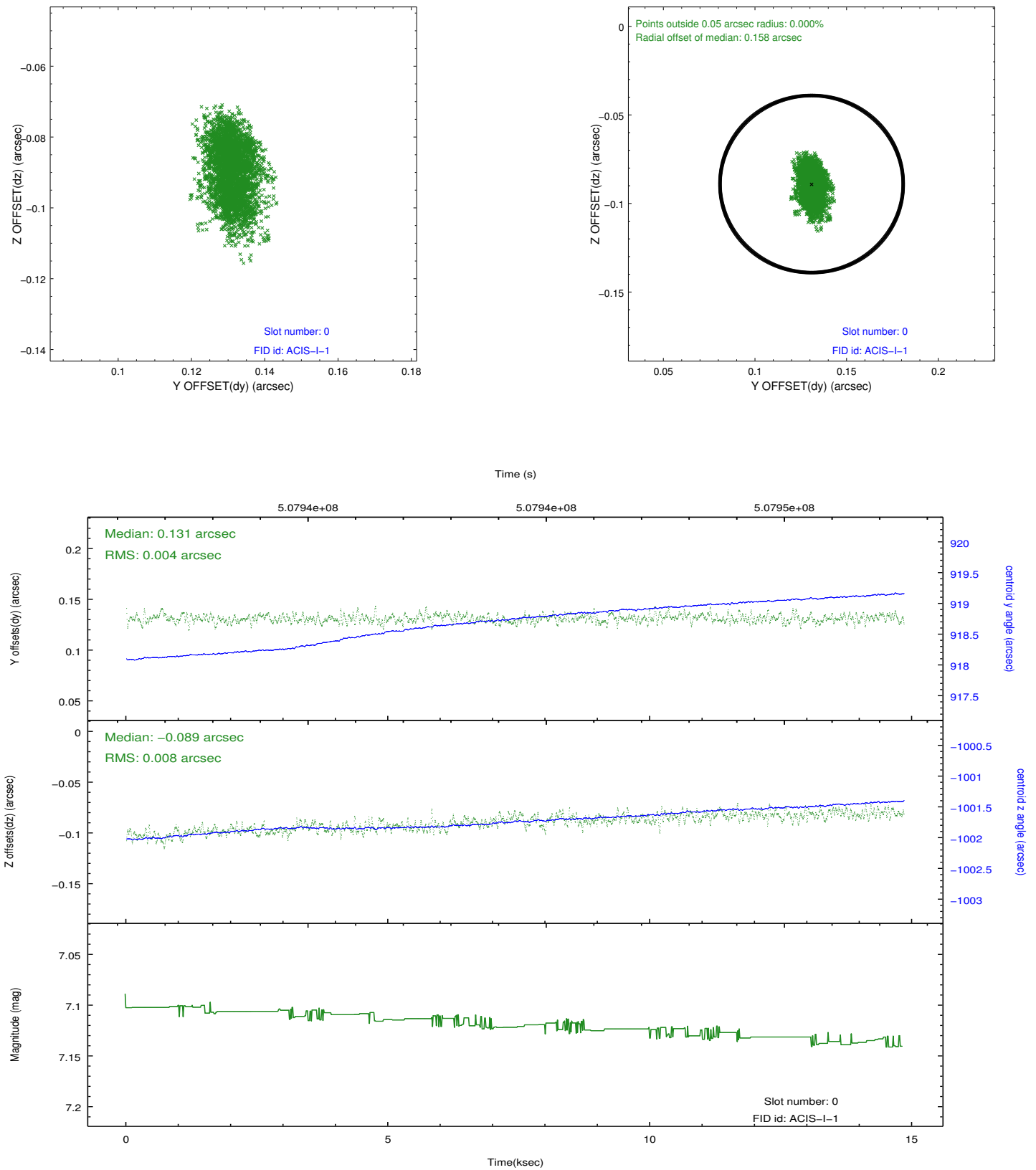


2.4.5 Slot 7

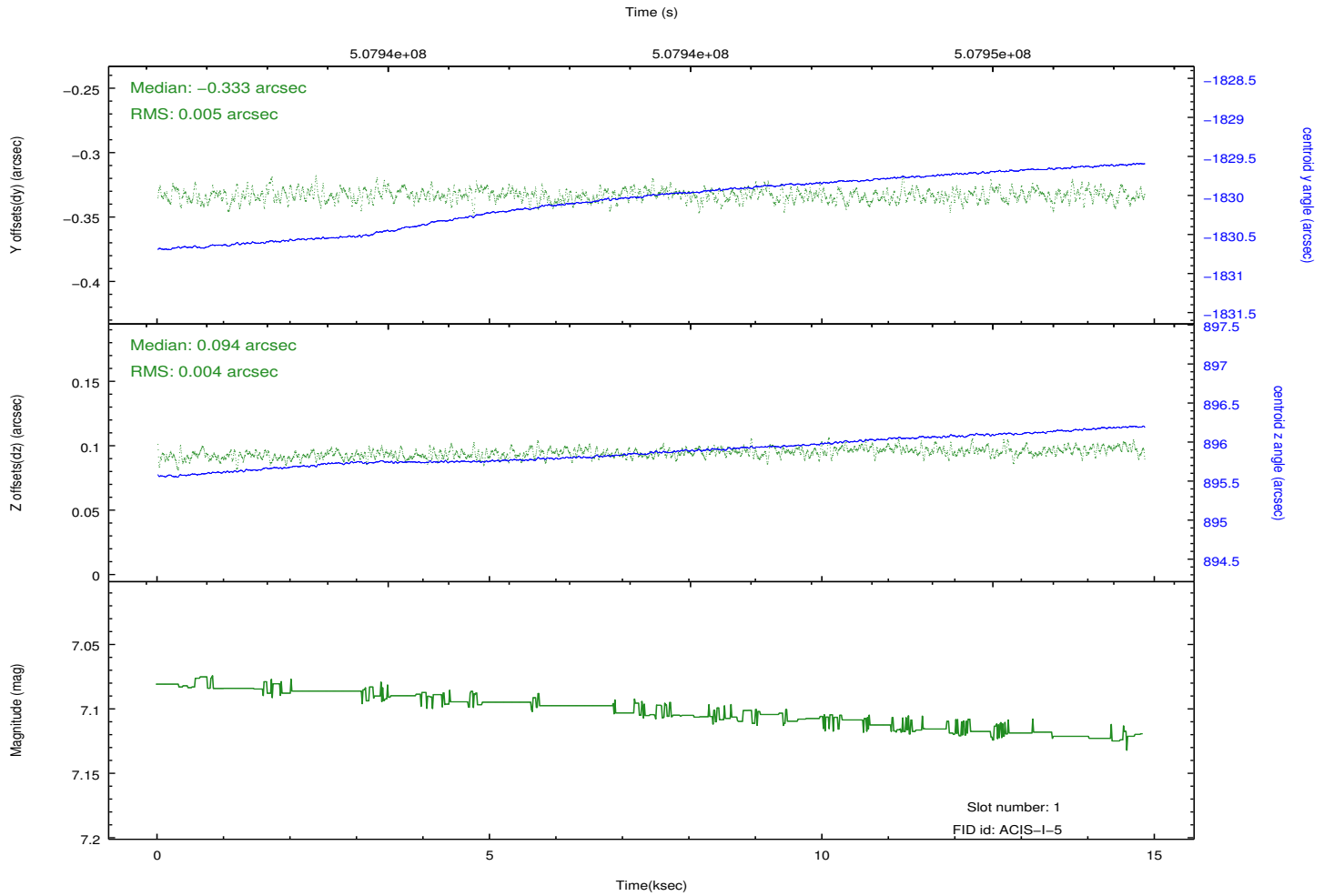
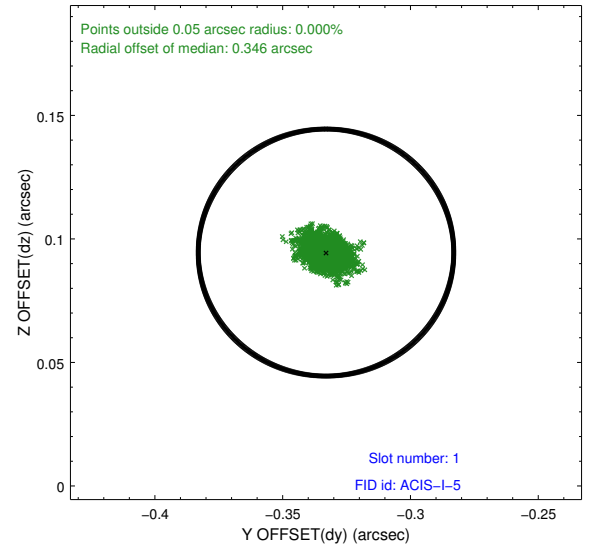
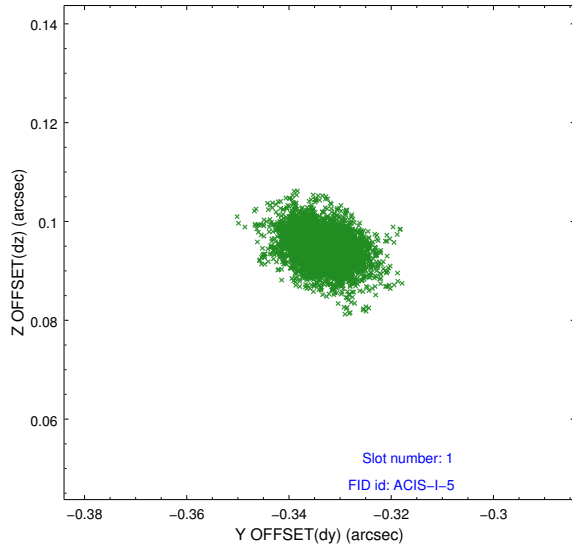


2.5 FID Slots

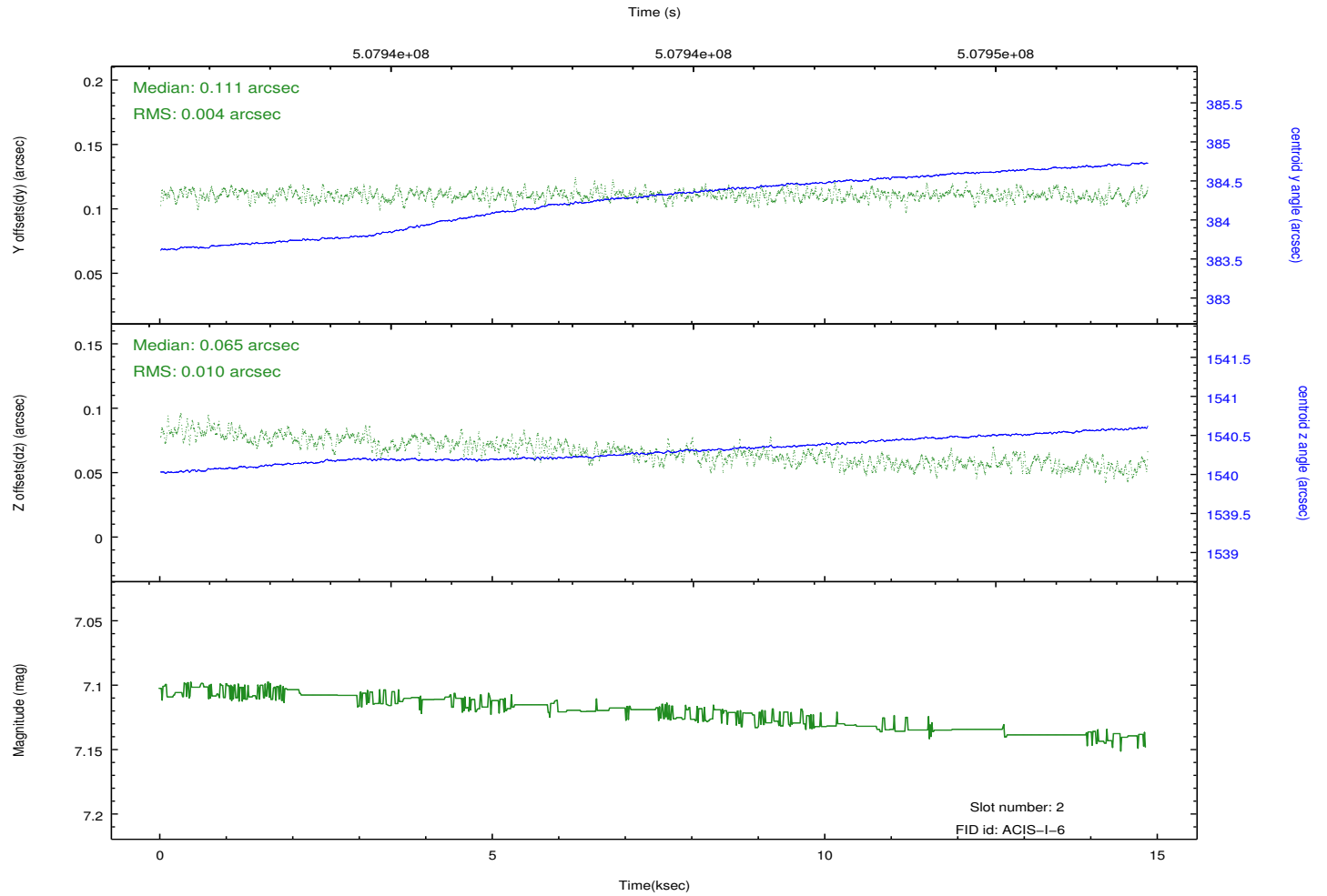
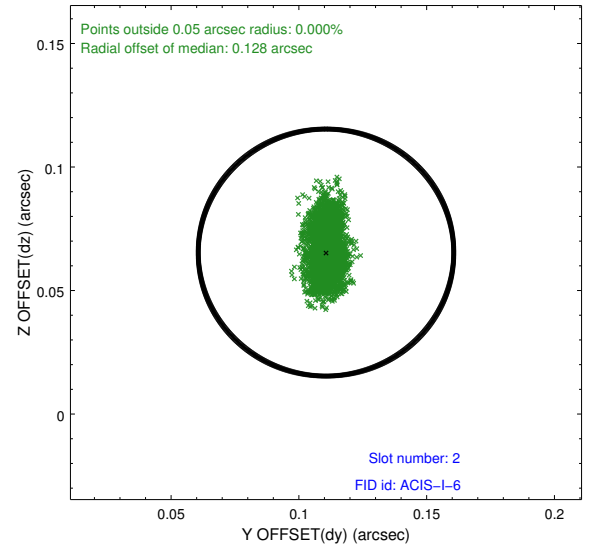
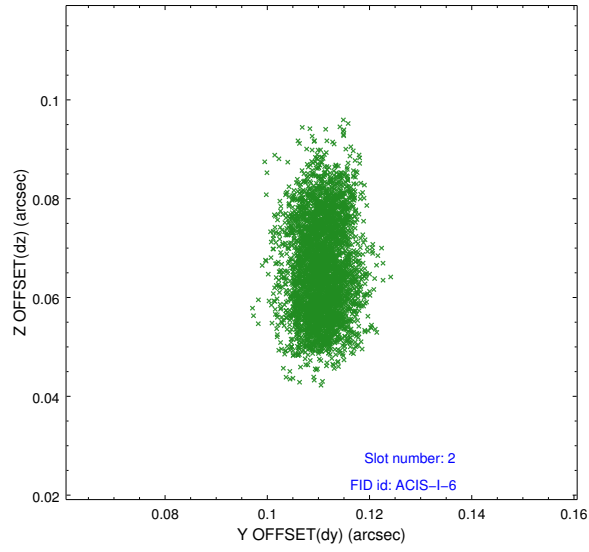
2.5.1 Slot 0



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)	2014.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.07944366461

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.