

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13462 - L2 Version 3
Chandra X-Ray Center

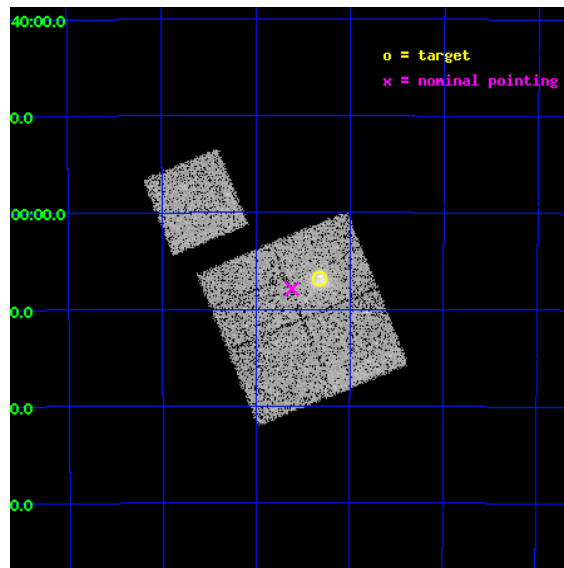
L2 Processing Date : Feb 25 2012

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1 Front

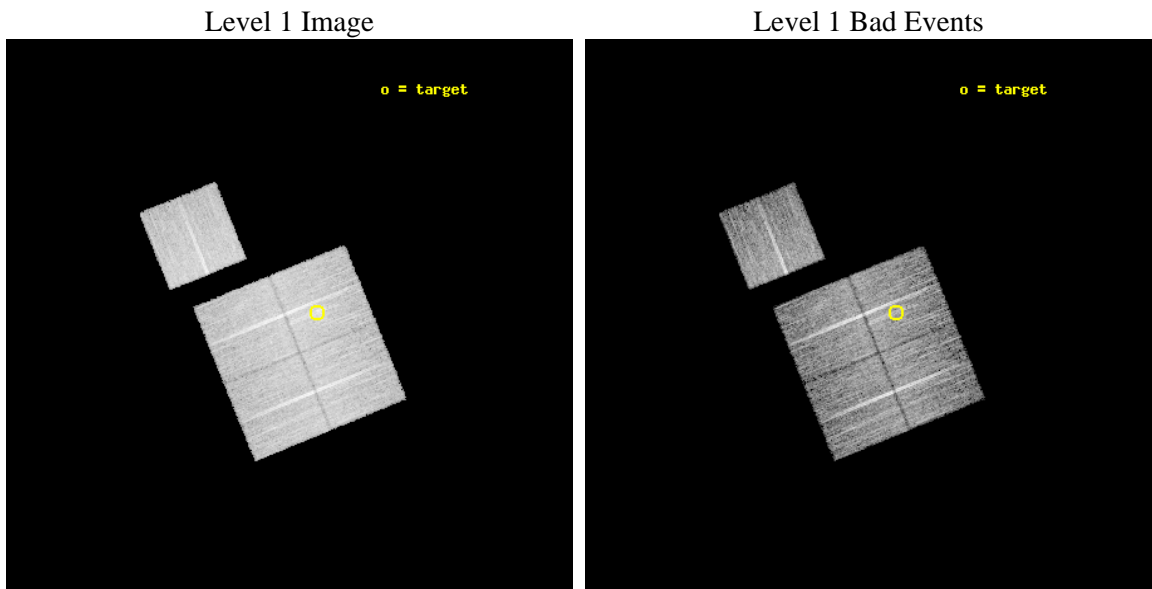
seq_num	801103	Sequence number
obs_id	13462	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg^2 from the South Pole Telescope Survey	Proposal title
observer	Dr Bradford Benson	Principal investigator
object	SPT-CLJ0013-4906	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	3.329583	Observer's specified target RA [deg]
dec_targ	-49.114	Observer's specified target Dec [deg]
ra_nom	3.4043425001387	Nominal RA [deg]
dec_nom	-49.131518363749	Nominal Dec [deg]
roll_nom	337.88644306009	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14259.02262044	Sum of GTIs [s]
livetime	14072.717992564	Livetime [s]
ontime0	14258.89950043	Sum of GTIs [s]
ontime1	14252.658659399	Sum of GTIs [s]
ontime2	14255.84059006	Sum of GTIs [s]
ontime3	14259.02262044	Sum of GTIs [s]
ontime6	14258.858460426	Sum of GTIs [s]
l2events	44300	Number of level 2 events



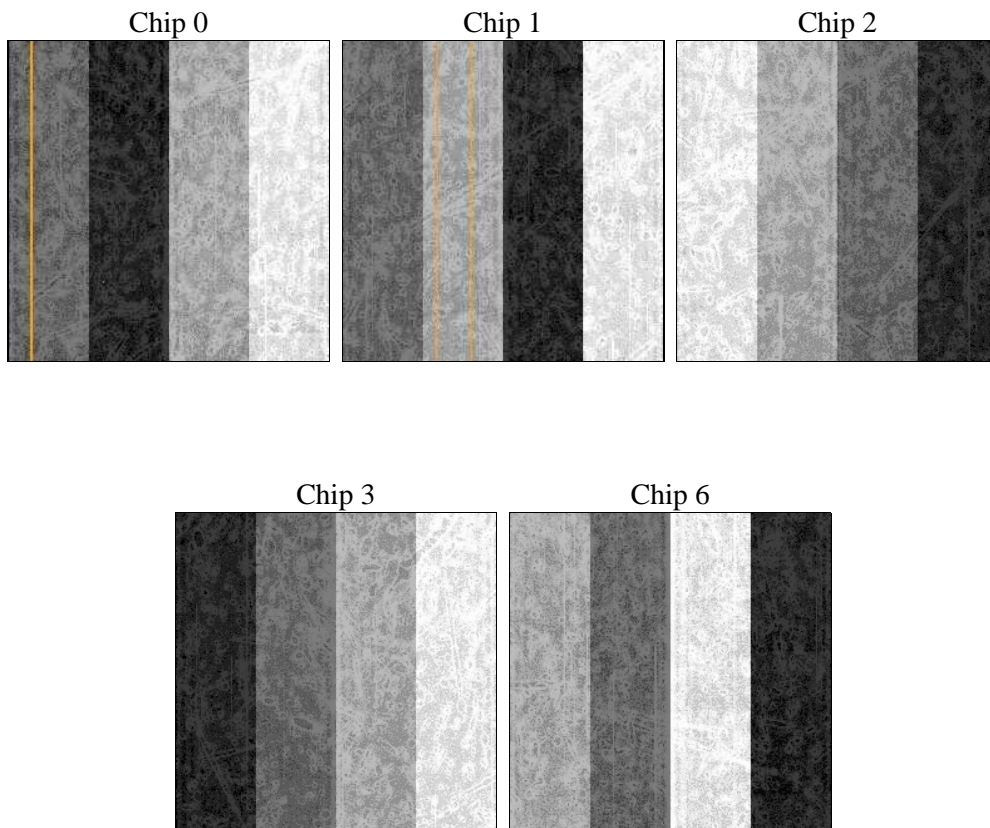
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14259.02262044	Sum of GTIs [s]
caldbver	4.4.8	 	ontime0	14258.89950043	Sum of GTIs [s]
date	2012-02-25T04:20:47	Date and time of file creation	ontime1	14252.658659399	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	14255.84059006	Sum of GTIs [s]
			ontime3	14259.02262044	Sum of GTIs [s]
			ontime6	14258.858460426	Sum of GTIs [s]
			l1events	413843	Number of level 1 events

2.1.4 Events

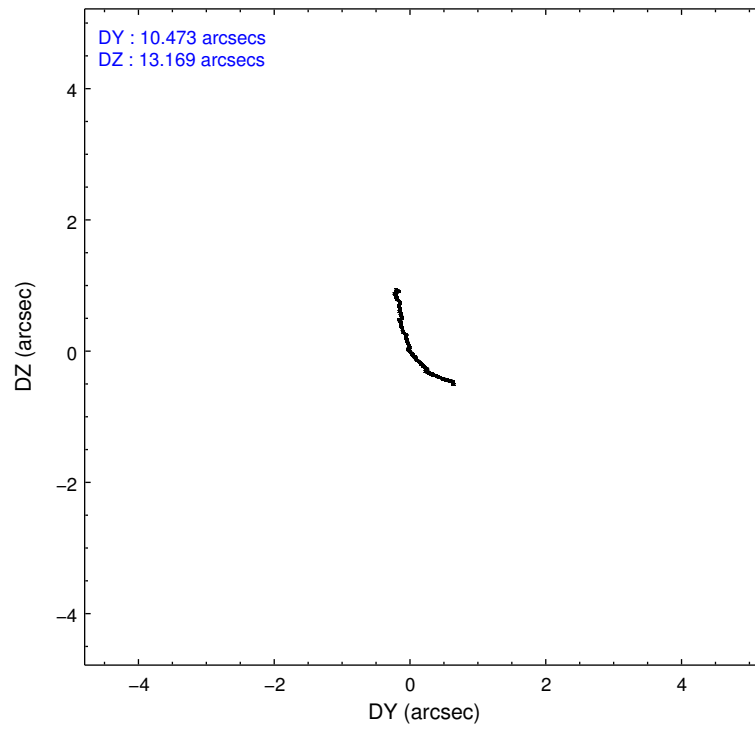
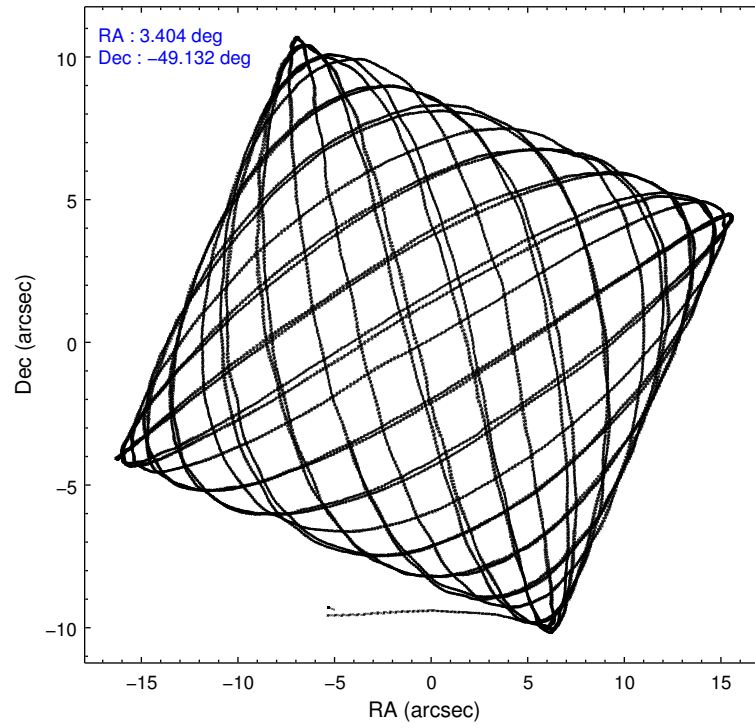
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	78888	80259	82718	87680	84298
rejected events	69076	69375	73097	75912	74287
rejected %	87%	86%	88%	86%	88%

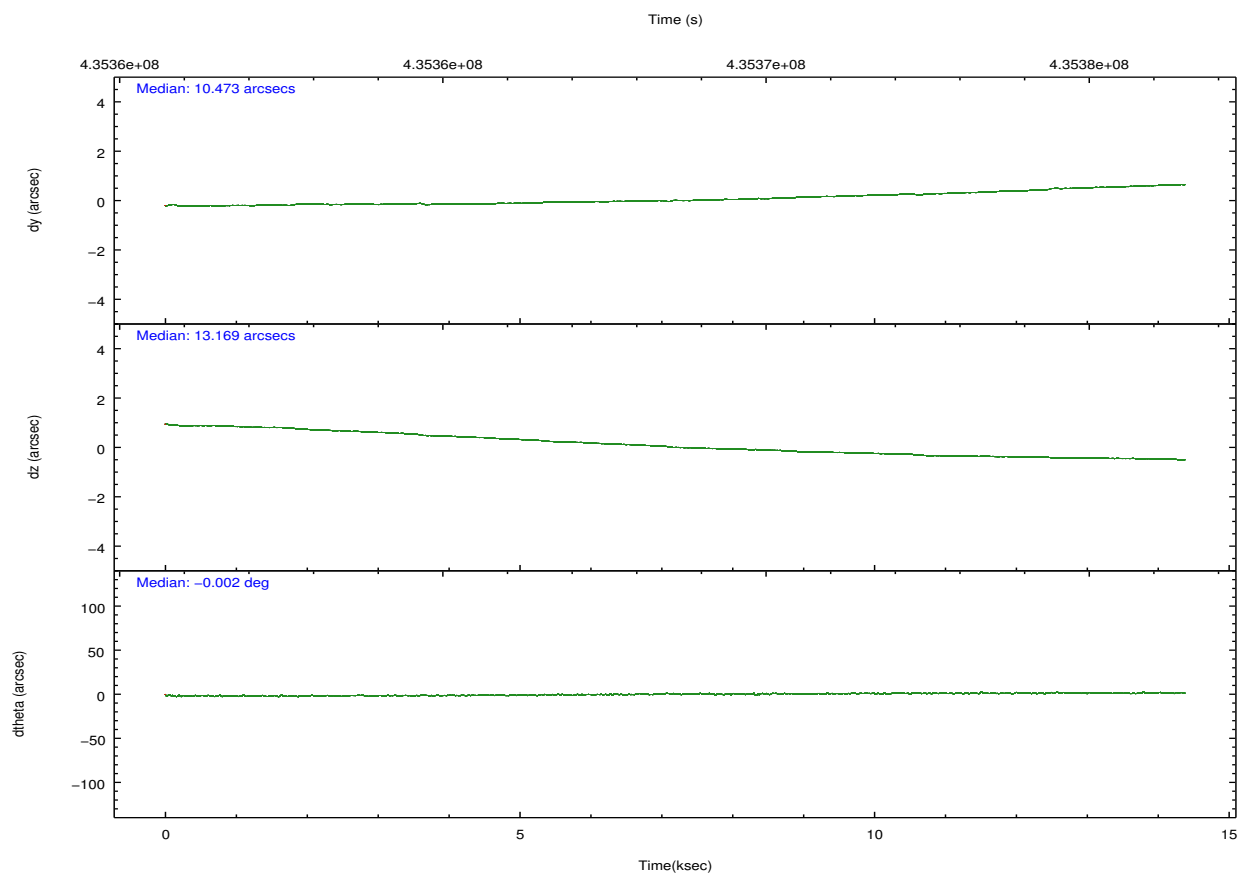
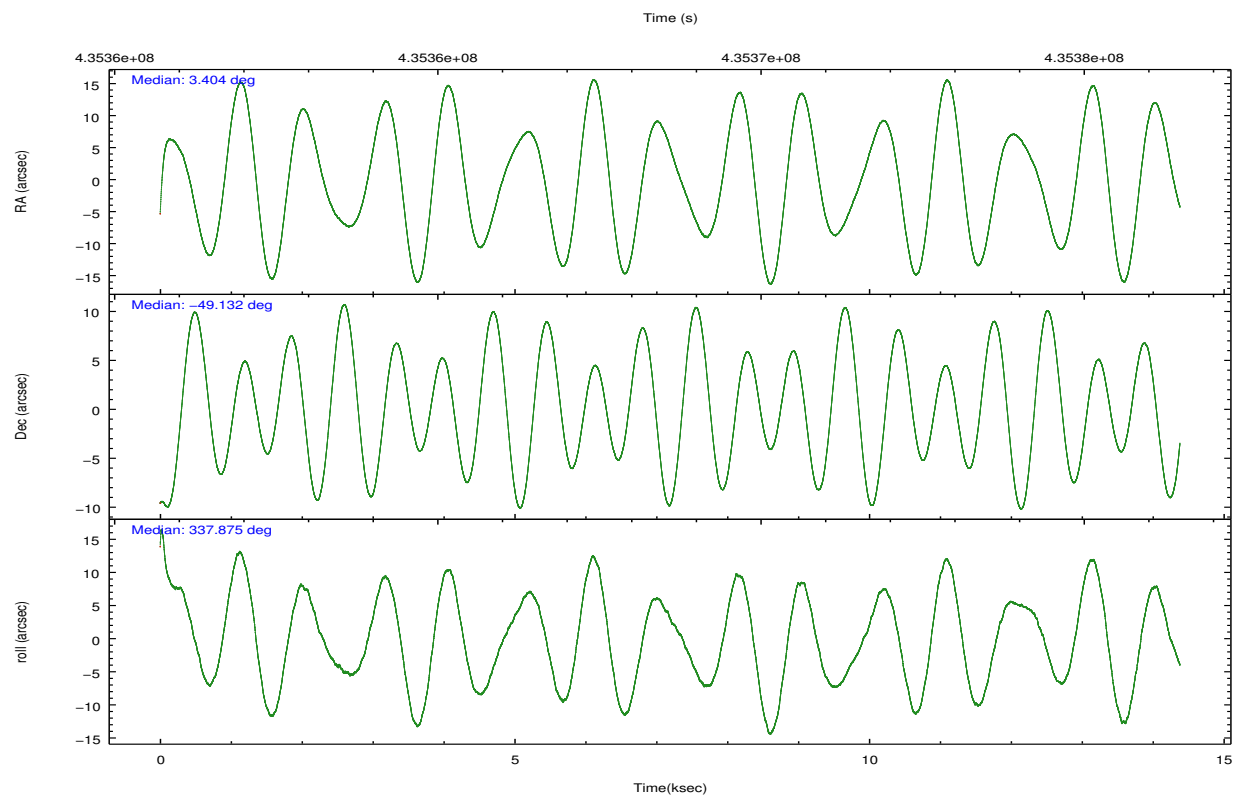
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3519	3918	3462	5383	3504
	4%	4%	4%	6%	4%
grade 1 events	58	53	52	49	41
	0%	0%	0%	0%	0%
grade 2 events	2417	2522	2411	2275	2199
	3%	3%	2%	2%	2%
grade 3 events	1006	1012	981	1033	1039
	1%	1%	1%	1%	1%
grade 4 events	911	1056	971	1070	1037
	1%	1%	1%	1%	1%
grade 5 events	3723	3938	3554	4229	3968
	4%	4%	4%	4%	4%
grade 6 events	1961	2379	1799	2012	2233
	2%	2%	2%	2%	2%
grade 7 events	65293	65381	69488	71629	70277
	82%	81%	84%	81%	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	3.362695	3.404342500138682	CCD I2 on	Y	Y
[deg] Pointing Dec	-49.135352	-49.13151836374945	CCD I3 on	Y	Y
[deg] Pointing Roll	337.646247	337.8864430600911	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)	435361585.184000	435360517.68363	CCD S5 on	N	N
Observation start date	2011-10-18T21:45:19	2011-10-18T21:28:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	435375785.184000	435376311.90946	On-chip summing requested	N	N
Observation end date	2011-10-19T01:41:59	2011-10-19T01:51:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



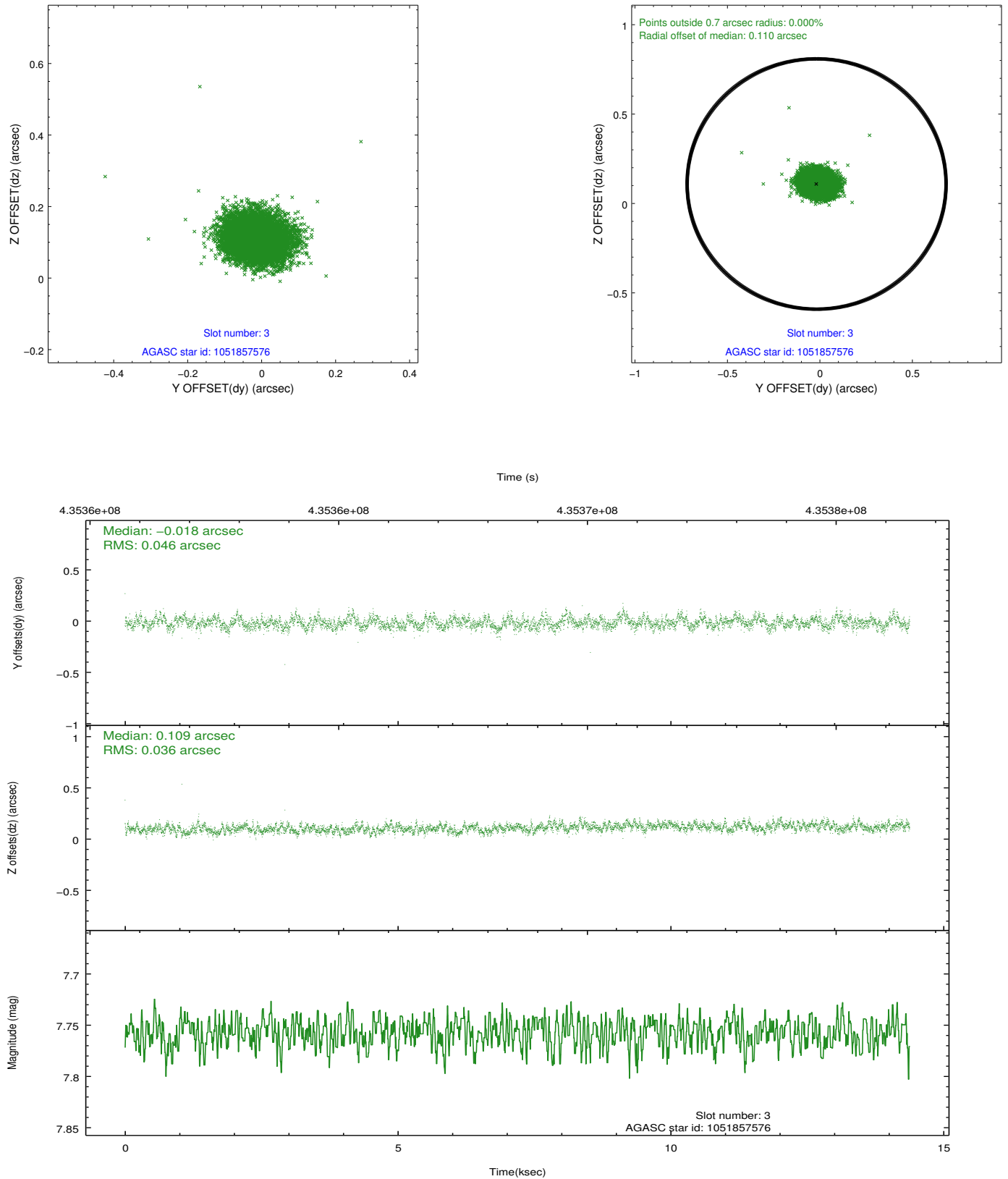


Slot Statistics

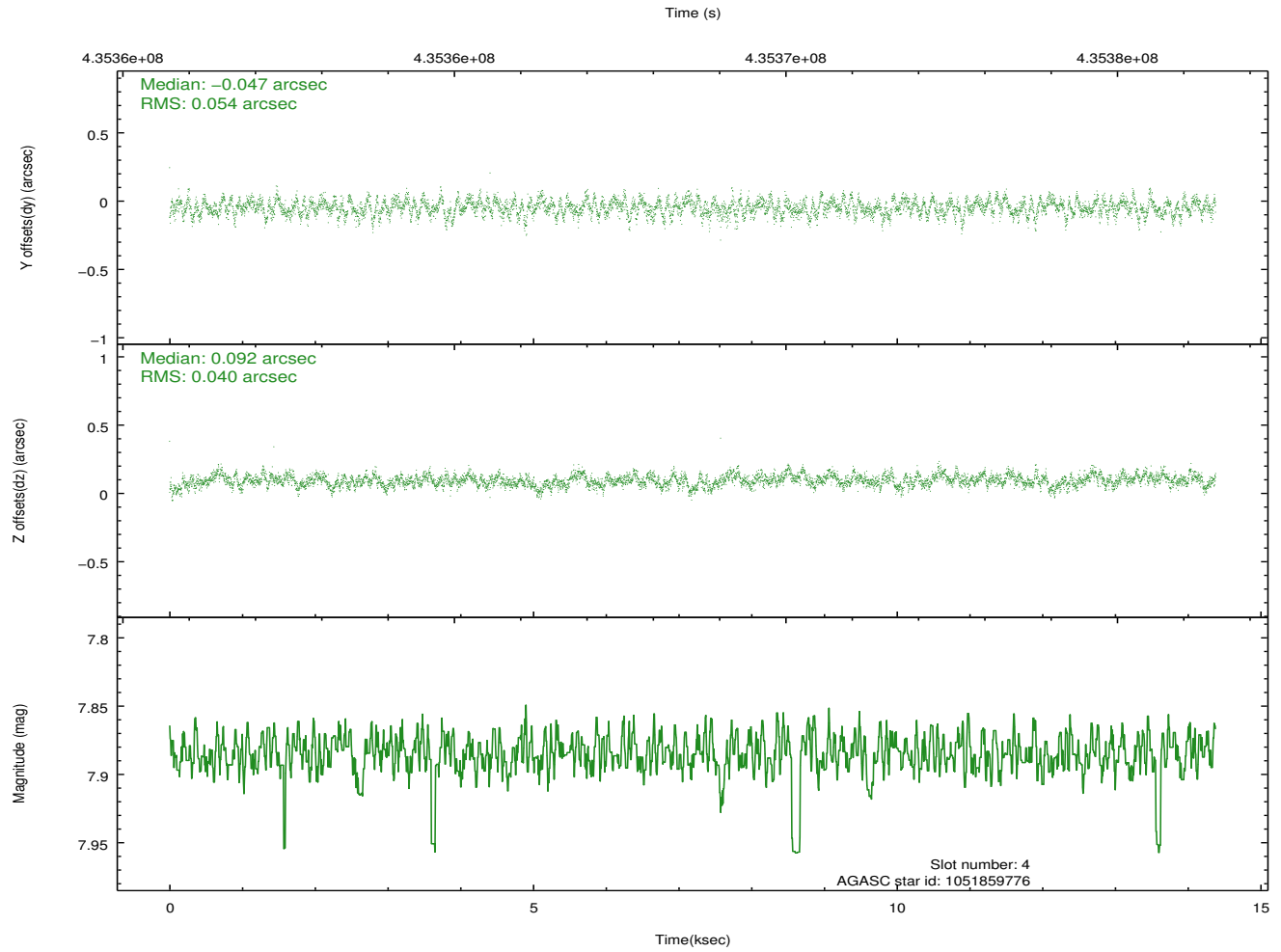
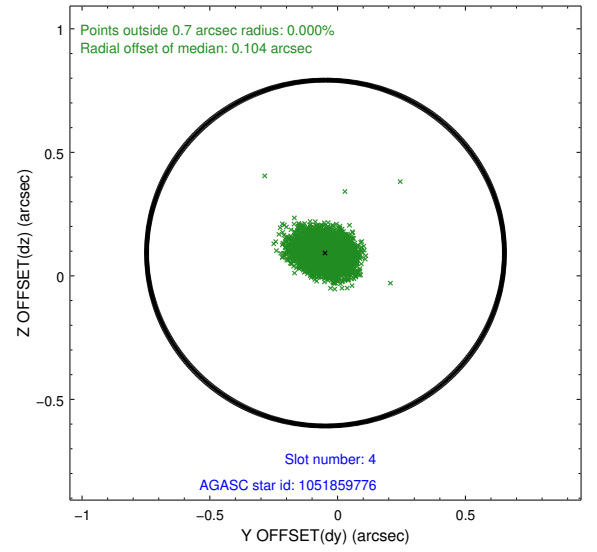
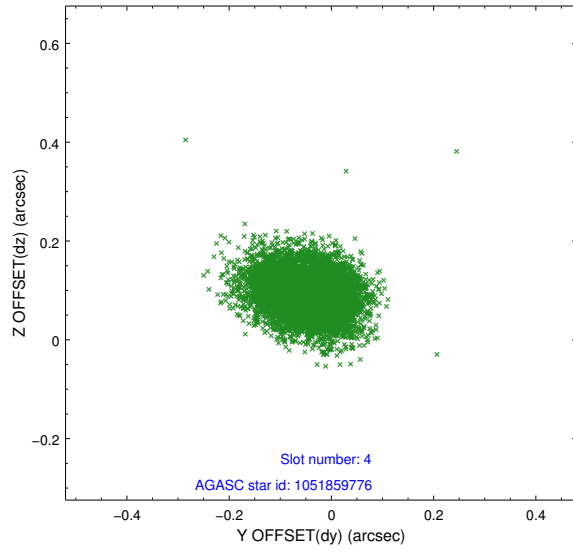
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.00	3508	0.131	-0.084	0.011	0.019	0.000000	0.000000	929.02	-995.99
1	FID	ACIS-I-5	6.99	3508	-0.278	0.113	0.014	0.019	0.000000	0.000000	-1819.33	901.46
2	FID	ACIS-I-6	7.02	3508	0.055	0.044	0.016	0.022	0.000000	0.000000	394.12	1546.29
3	GUIDE	1051857576	7.76	7013	-0.018	0.109	0.061	0.100	2.908697	-49.656028	-263.28	-2139.17
4	GUIDE	1051859776	7.89	7008	-0.047	0.092	0.071	0.116	3.630000	-49.864344	1572.78	-2192.24
5	GUIDE	1051860408	9.25	7003	-0.016	-0.043	0.089	0.143	3.575350	-49.345730	750.10	-511.40
6	GUIDE	1051985352	9.94	6996	0.207	-0.161	0.144	0.227	3.915069	-49.264097	1378.73	60.77
7	GUIDE	1051854992	8.20	7014	-0.126	0.005	0.113	0.166	3.444068	-48.432800	-781.96	2412.78

2.4 Star Slots

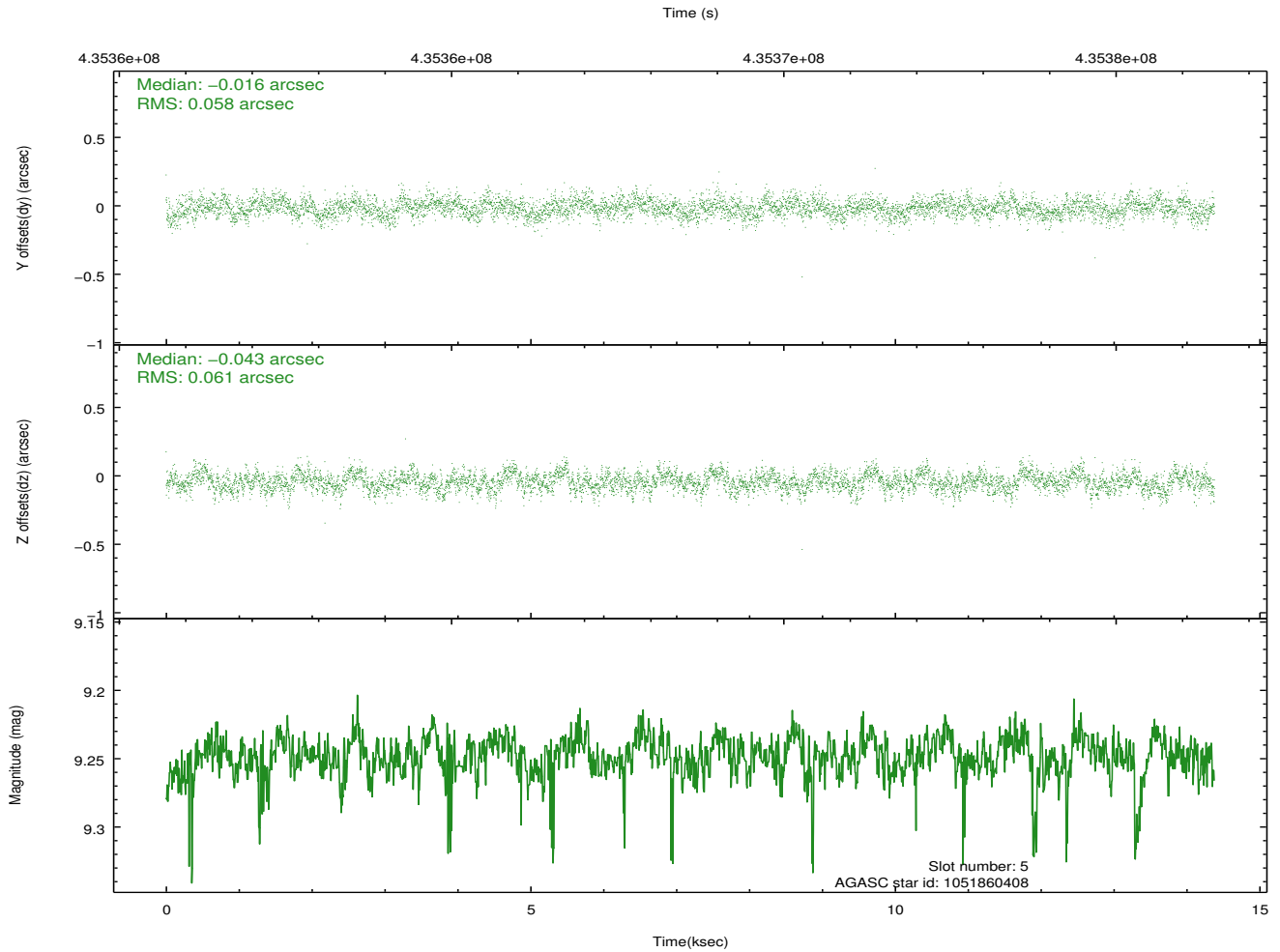
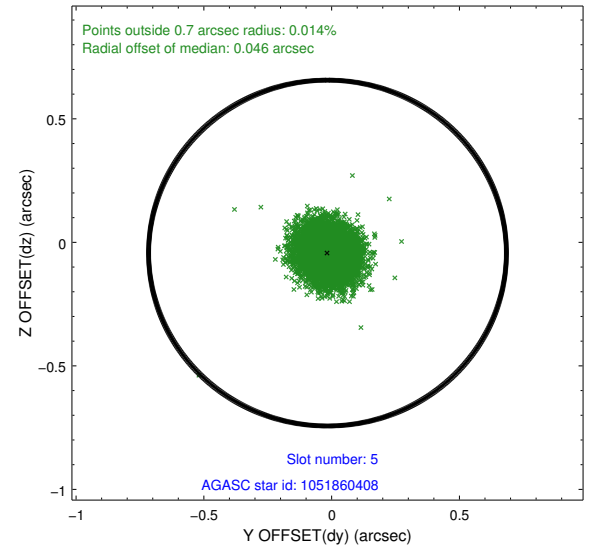
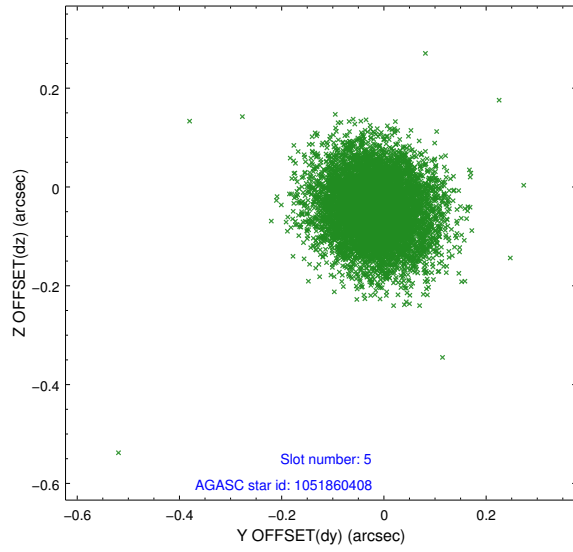
2.4.1 Slot 3



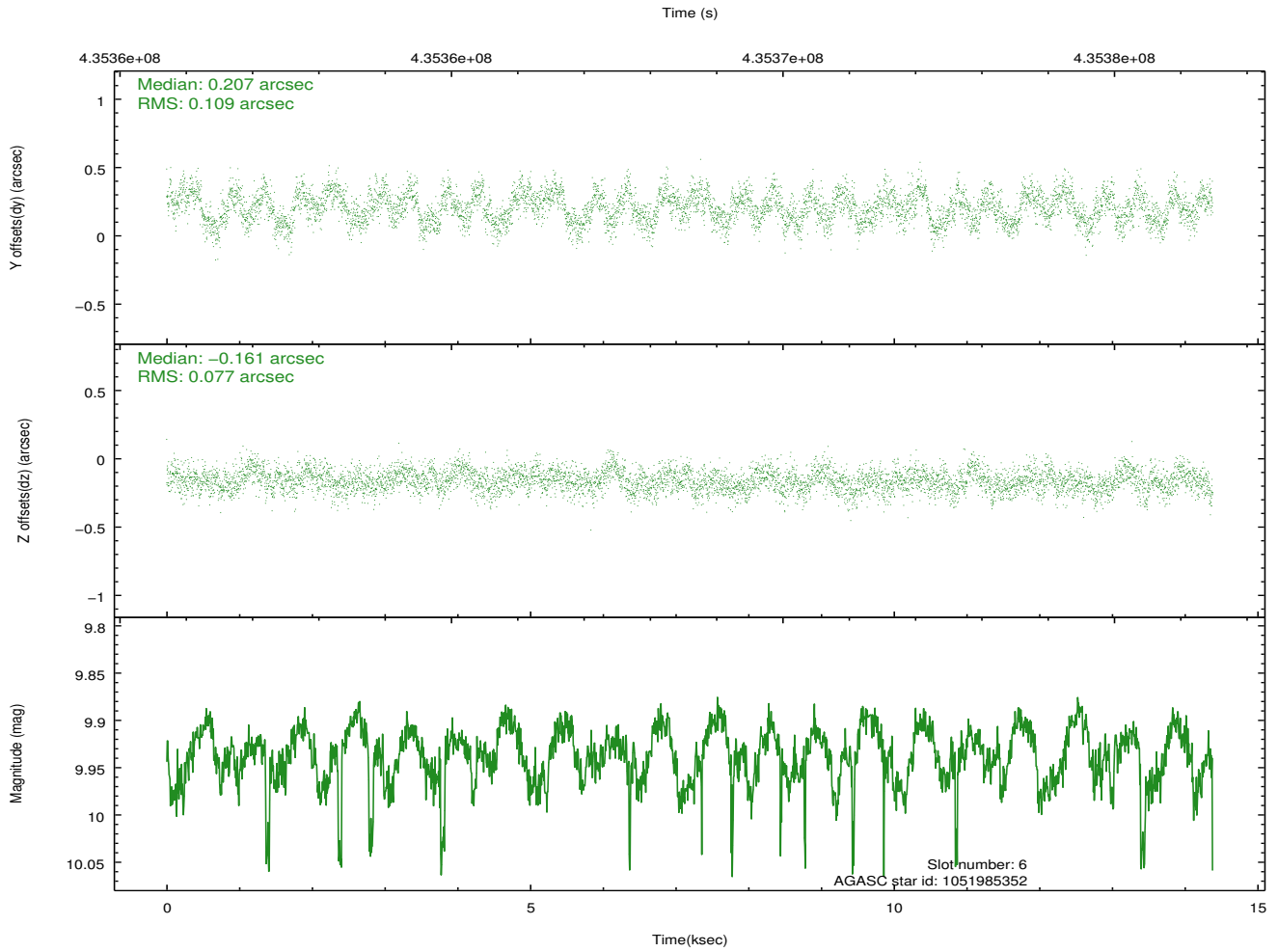
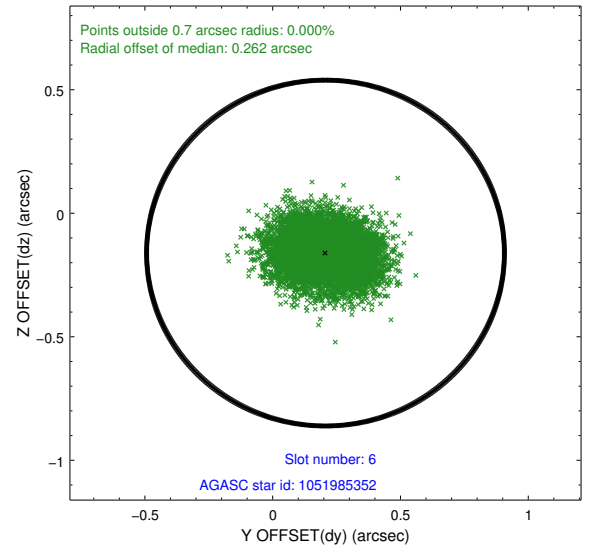
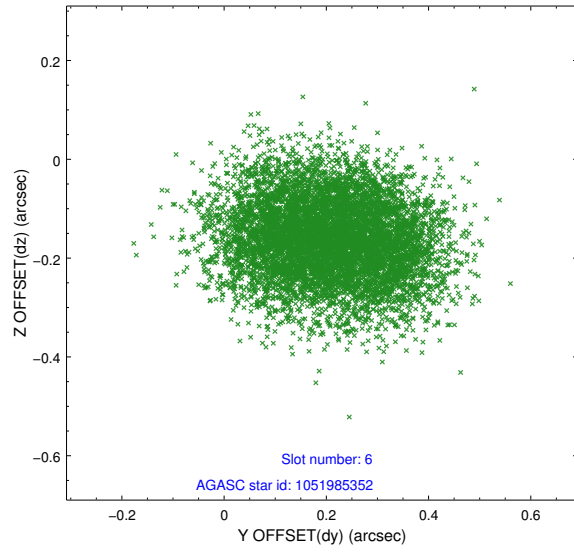
2.4.2 Slot 4



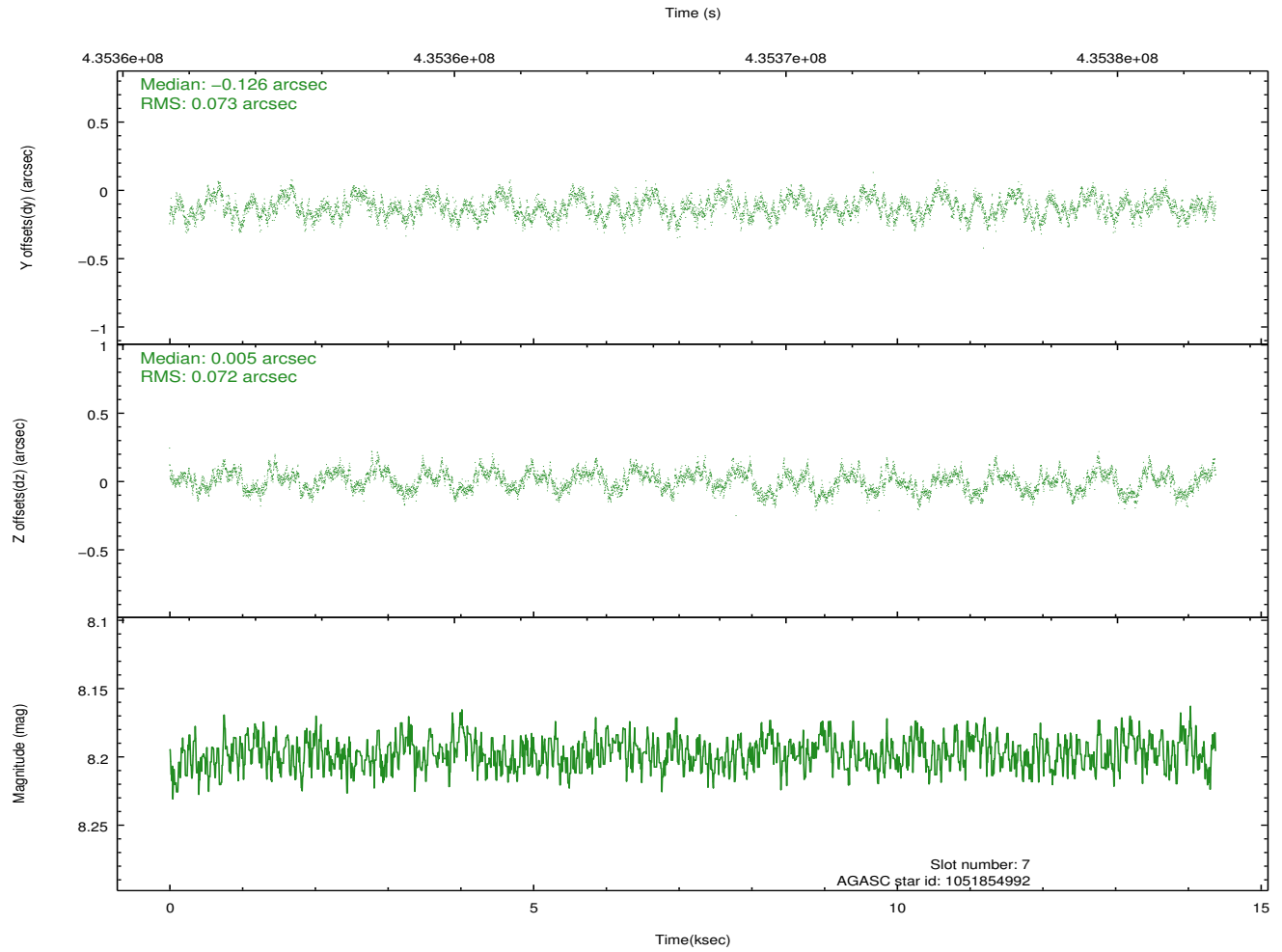
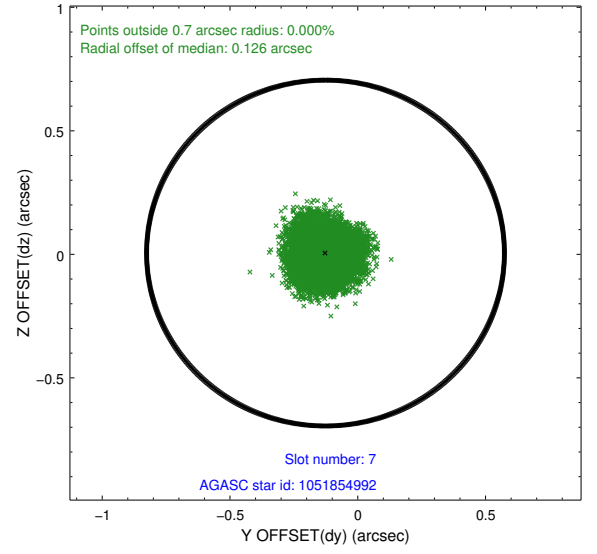
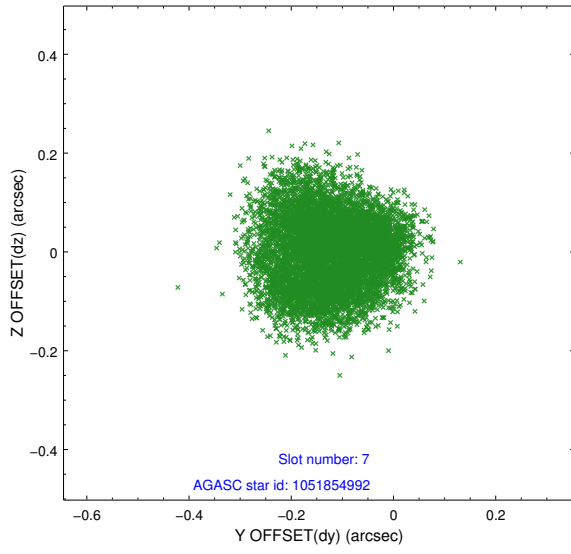
2.4.3 Slot 5



2.4.4 Slot 6

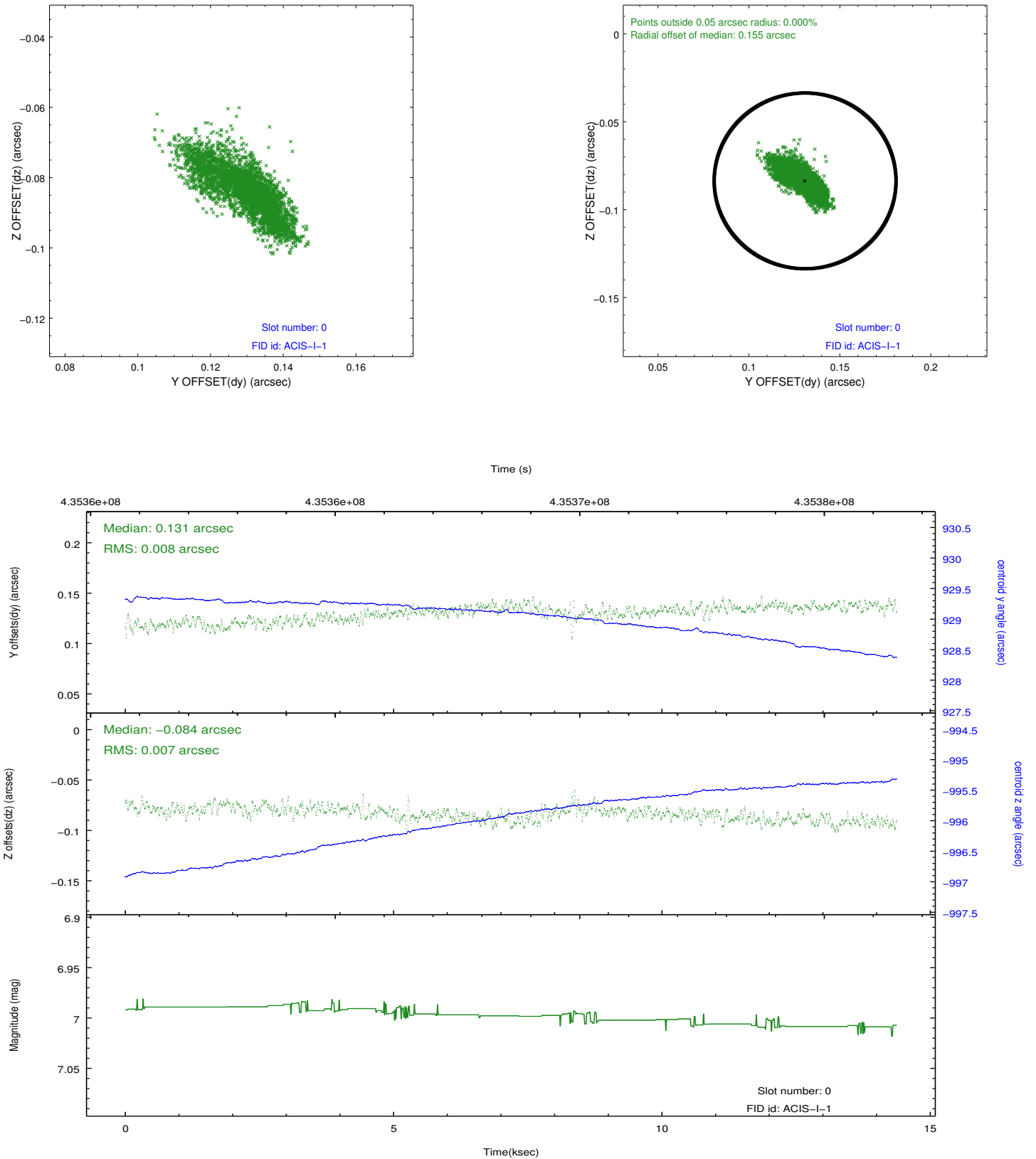


2.4.5 Slot 7

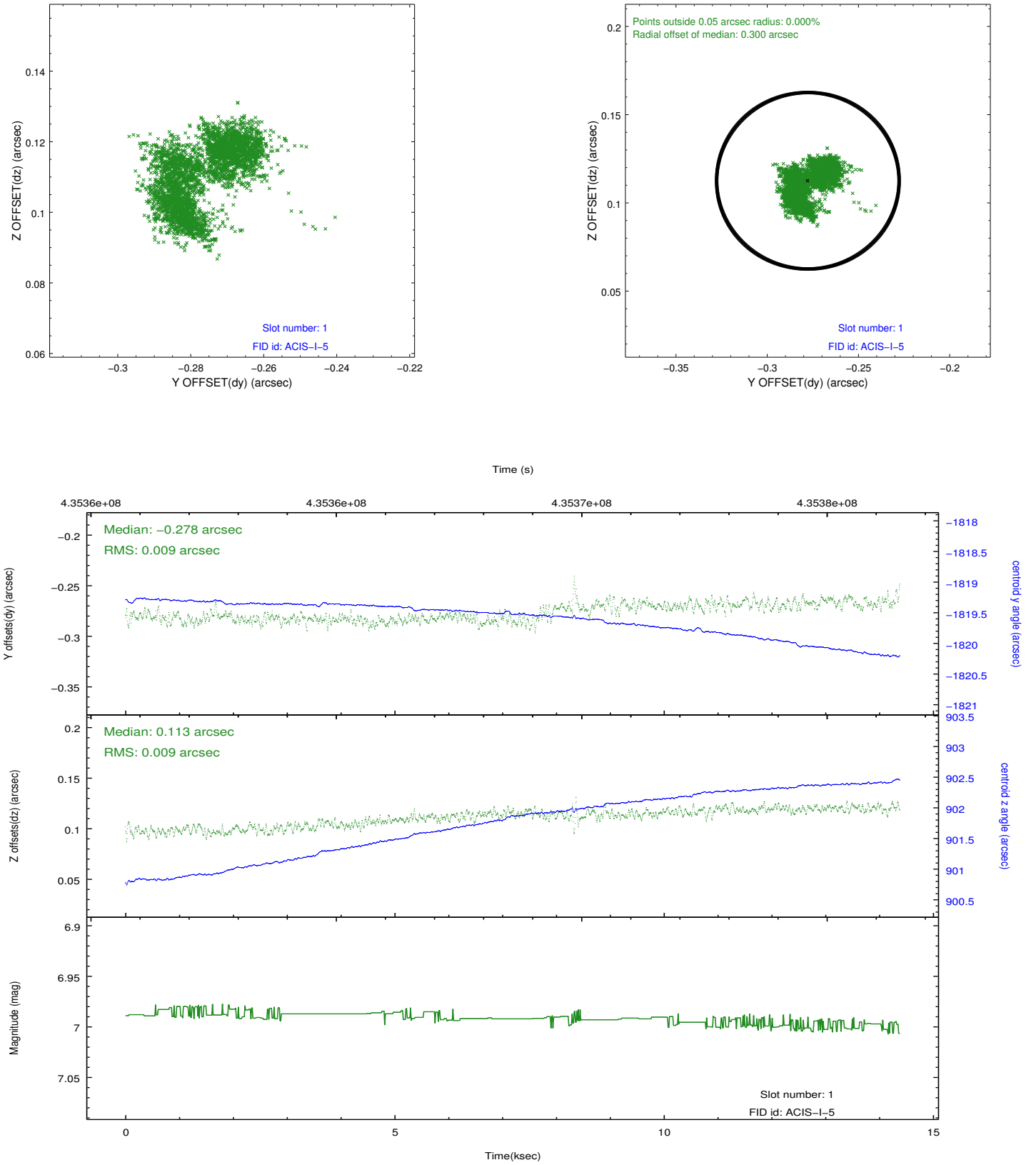


2.5 FID Slots

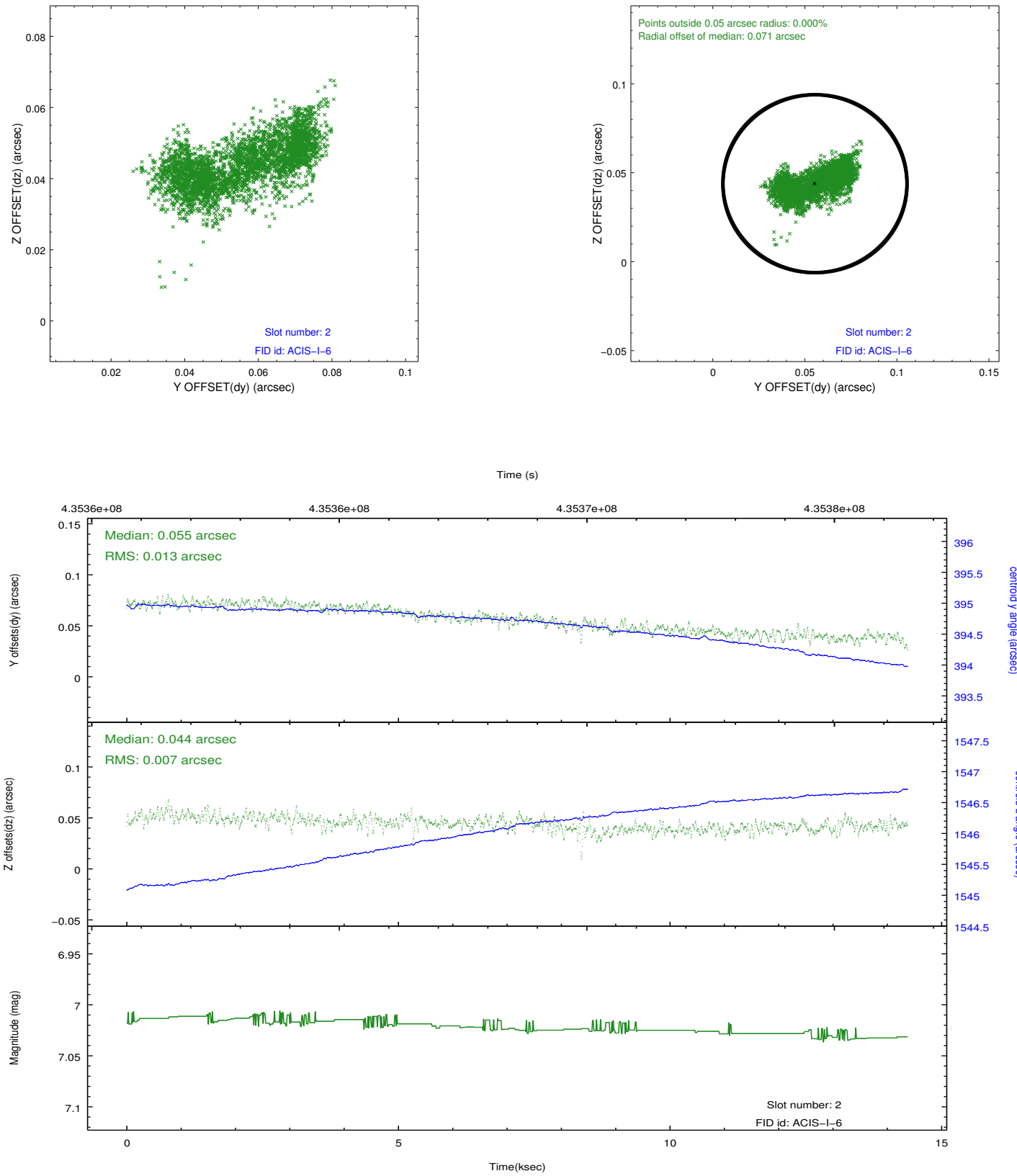
2.5.1 Slot 0



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)	2012.02.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.259022628605

A.2 Comments

A spatial region of the original bias map for CCD = 3 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 = 3 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:
(3.25237, -49.00966), (3.24928, -49.01457), (3.28008, -49.02282), (3.29452, -49.02095)