

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13502 - L2 Version 2
Chandra X-Ray Center

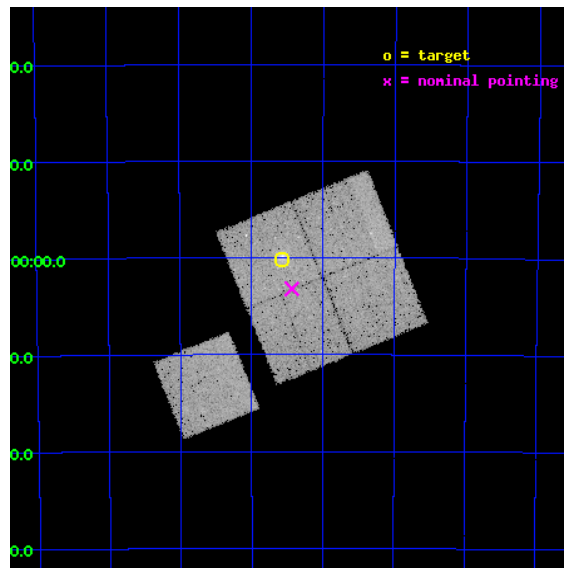
L2 Processing Date : Jan 19 2012

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1 Front

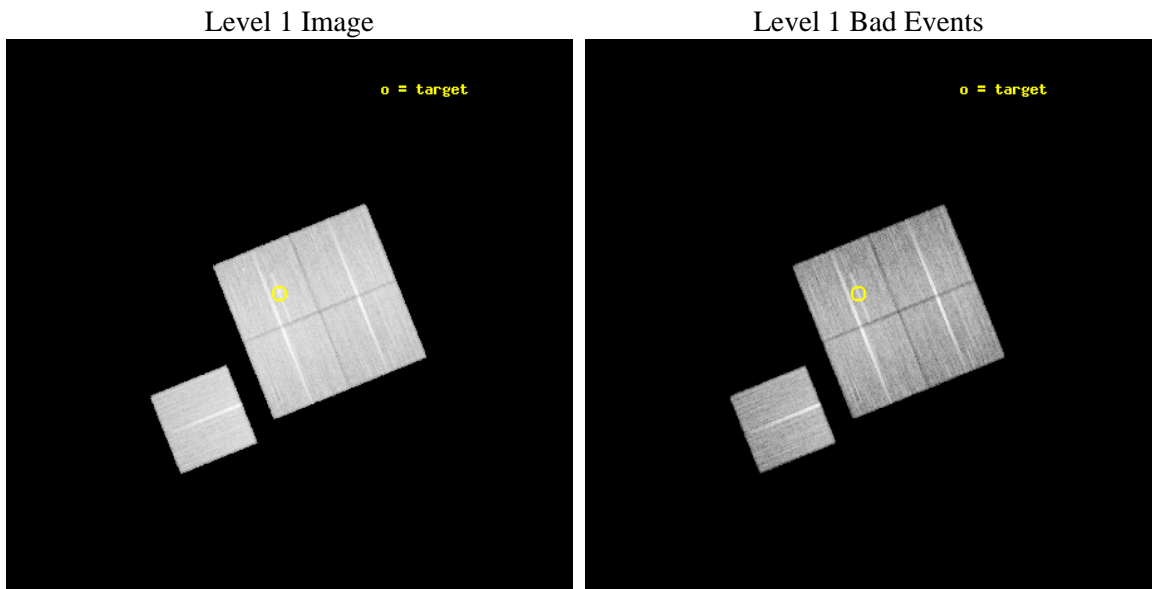
seq_num	801143	Sequence number
obs_id	13502	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg^2 from the South Pole Telescope Survey	Proposal title
observer	Dr Bradford Benson	Principal investigator
object	SPT-CLJ2232-6000	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	338.145	Observer's specified target RA [deg]
dec_targ	-60.0021	Observer's specified target Dec [deg]
ra_nom	338.10848844803	Nominal RA [deg]
dec_nom	-60.053381991896	Nominal Dec [deg]
roll_nom	248.06505048574	Nominal Roll [deg]
revision	2	Processing version of data
ontime	32270.95935756	Sum of GTIs [s]
livetime	31849.315516019	Livetime [s]
ontime0	32264.677416921	Sum of GTIs [s]
ontime1	32267.818257809	Sum of GTIs [s]
ontime2	32267.81838727	Sum of GTIs [s]
ontime3	32270.95935756	Sum of GTIs [s]
ontime6	32274.100248218	Sum of GTIs [s]
l2events	98436	Number of level 2 events



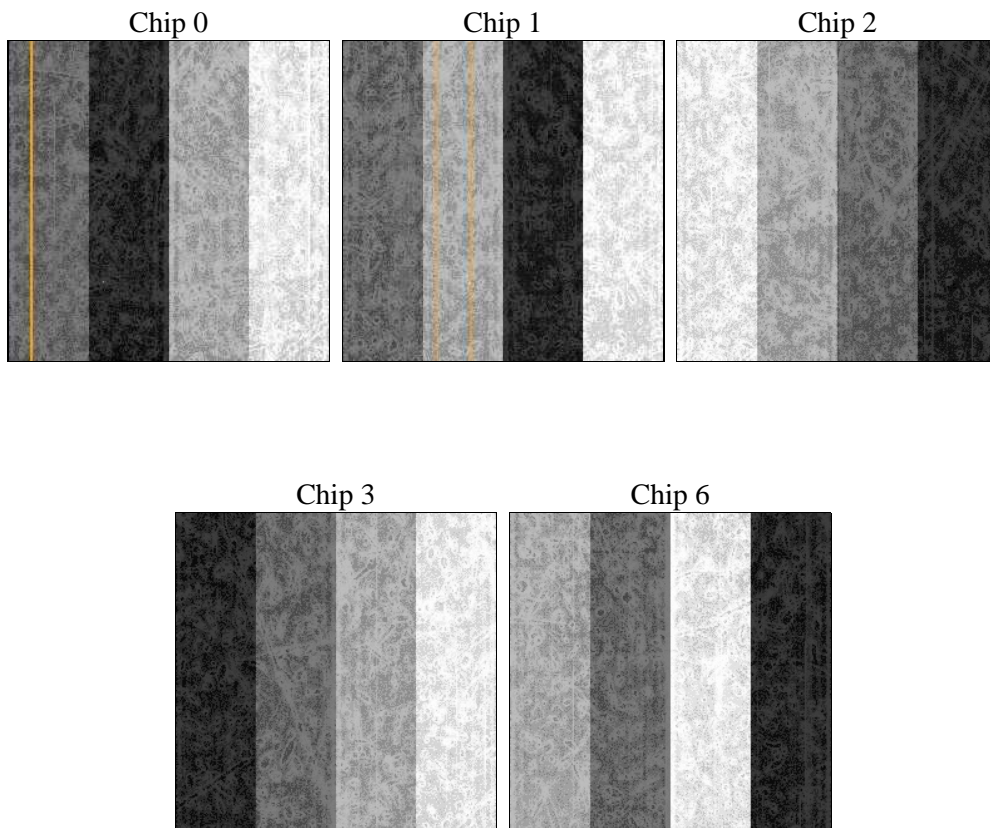
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32502.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	32270.95935756	Sum of GTIs [s]
caldbver	4.4.7	 	ontime0	32264.677416921	Sum of GTIs [s]
date	2012-01-19T21:50:33	Date and time of file creation	ontime1	32267.818257809	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	32267.81838727	Sum of GTIs [s]
			ontime3	32270.95935756	Sum of GTIs [s]
			ontime6	32274.100248218	Sum of GTIs [s]
			l1events	974484	Number of level 1 events

2.1.4 Events

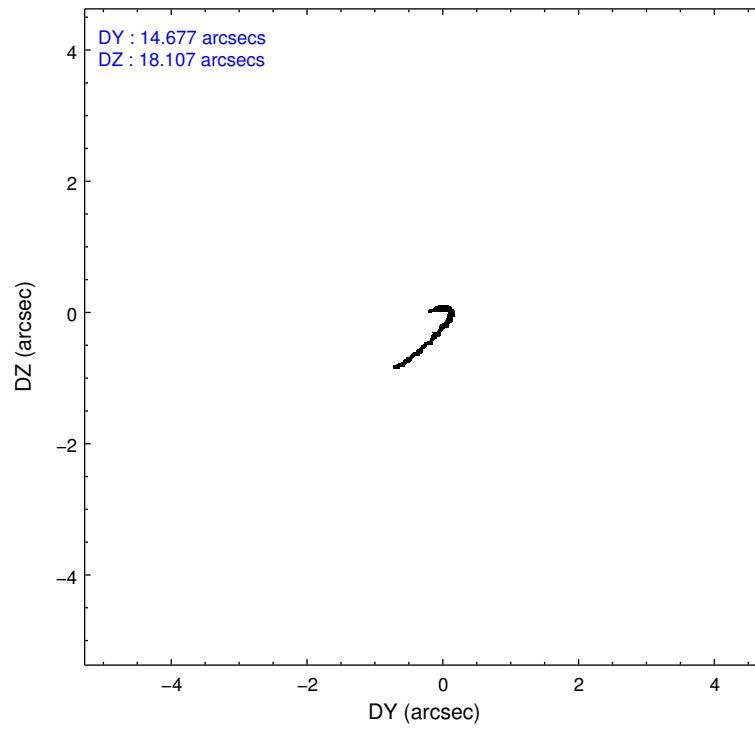
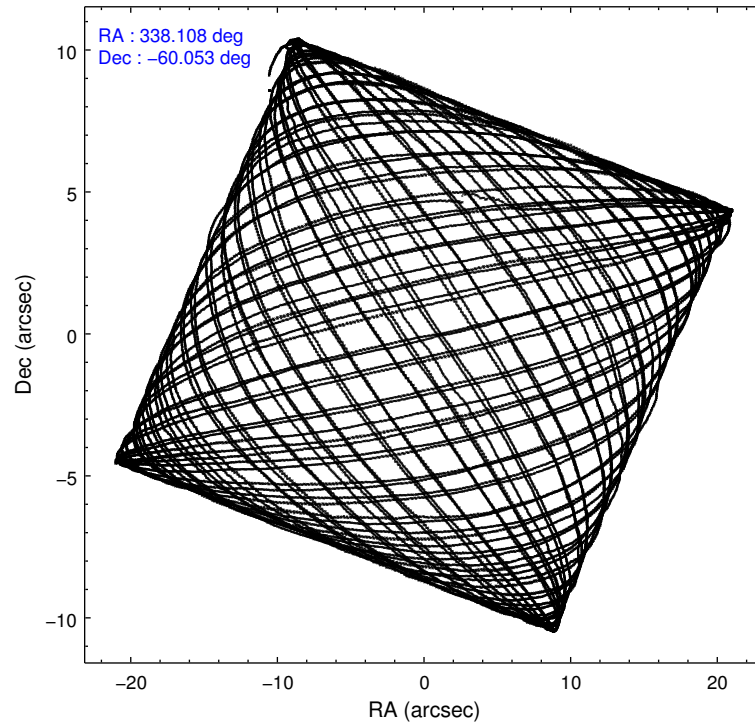
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	182271	185252	204192	201211	201558
rejected events	159791	159838	182026	177371	178530
rejected %	87%	86%	89%	88%	88%

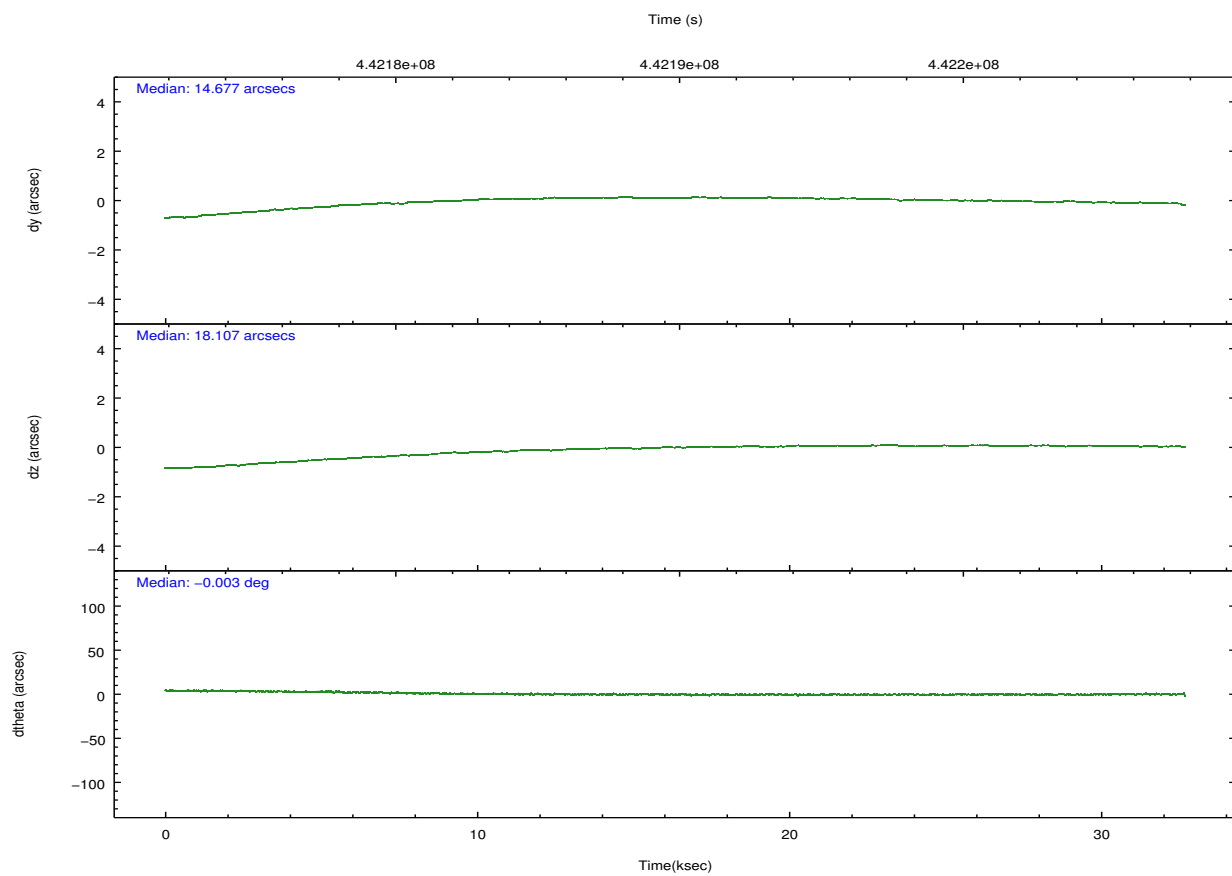
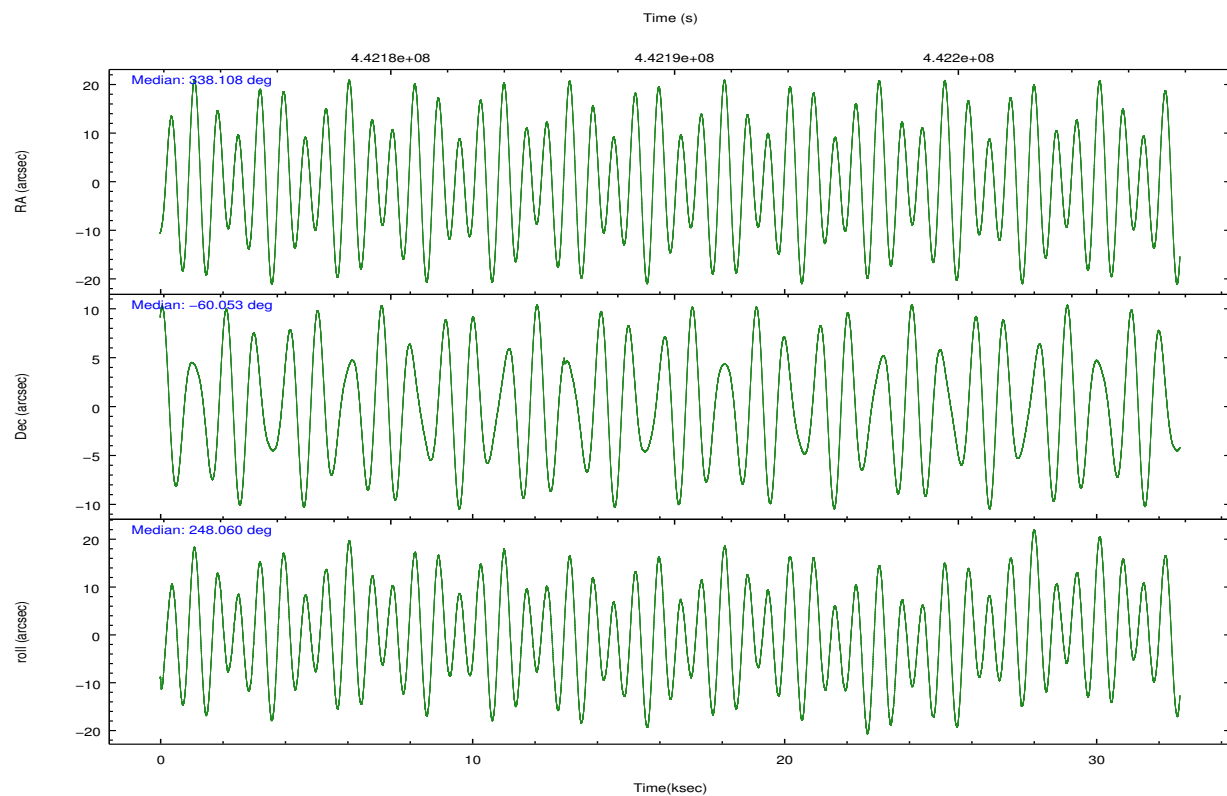
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	7827	8915	7809	9346	8134
	4%	4%	3%	4%	4%
grade 1 events	95	86	155	135	96
	0%	0%	0%	0%	0%
grade 2 events	5633	6237	5614	5245	5061
	3%	3%	2%	2%	2%
grade 3 events	2325	2481	2192	2419	2361
	1%	1%	1%	1%	1%
grade 4 events	2199	2574	2325	2376	2375
	1%	1%	1%	1%	1%
grade 5 events	8371	9335	7919	9865	9524
	4%	5%	3%	4%	4%
grade 6 events	4498	5213	4228	4457	5099
	2%	2%	2%	2%	2%
grade 7 events	151323	150411	173950	167368	168908
	83%	81%	85%	83%	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	338.100566	338.1084884480289	CCD I2 on	Y	Y
[deg] Pointing Dec	-60.026162	-60.0533819918959	CCD I3 on	Y	Y
[deg] Pointing Roll	247.849499	248.0650504857441	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)	442173670.184000	442173007.61747	CCD S5 on	N	N
Observation start date	2012-01-05T18:00:04	2012-01-05T17:50:07	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	442206172.184000	442206466.69424	On-chip summing requested	N	N
Observation end date	2012-01-06T03:01:46	2012-01-06T03:07:46	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



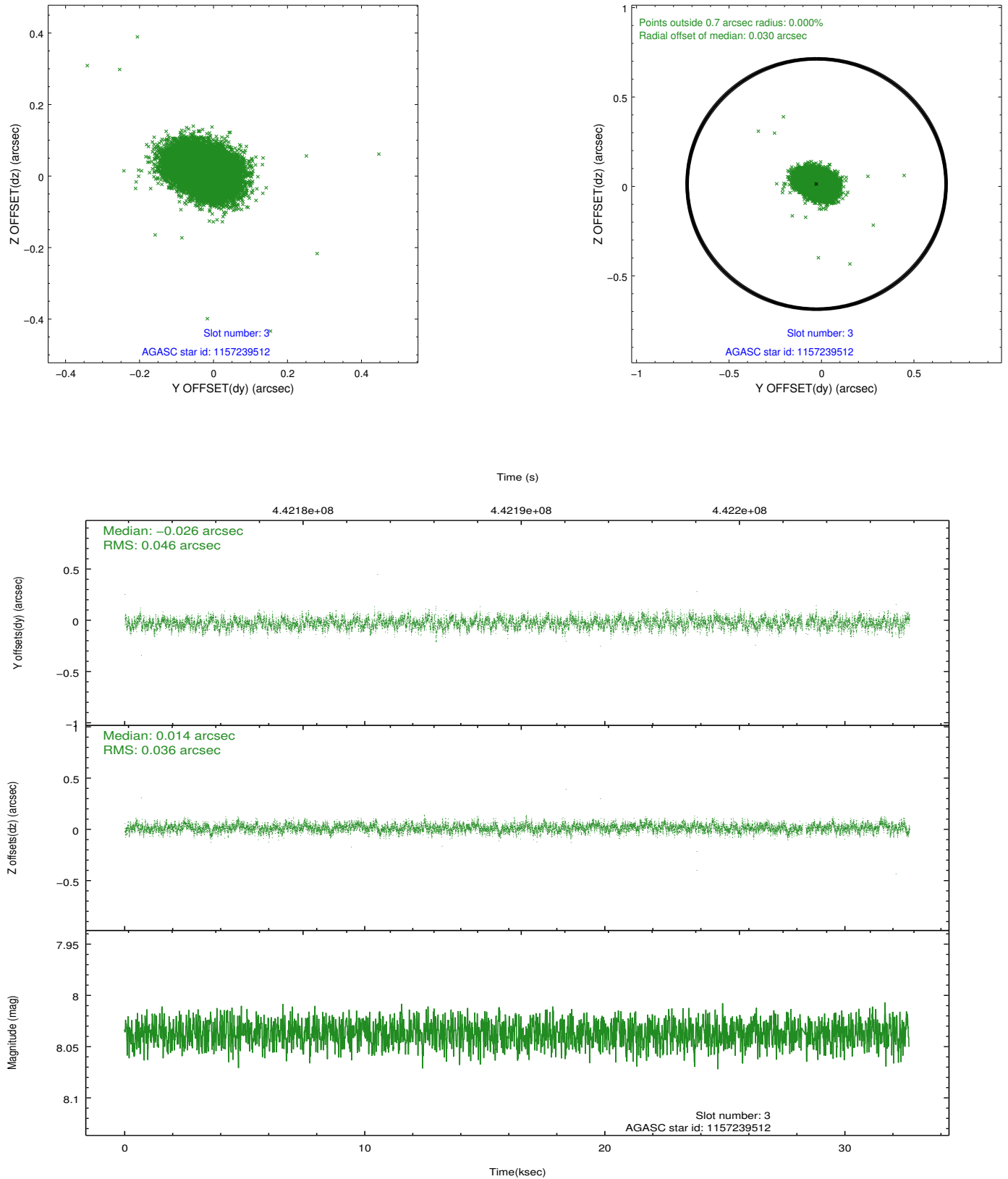


Slot Statistics

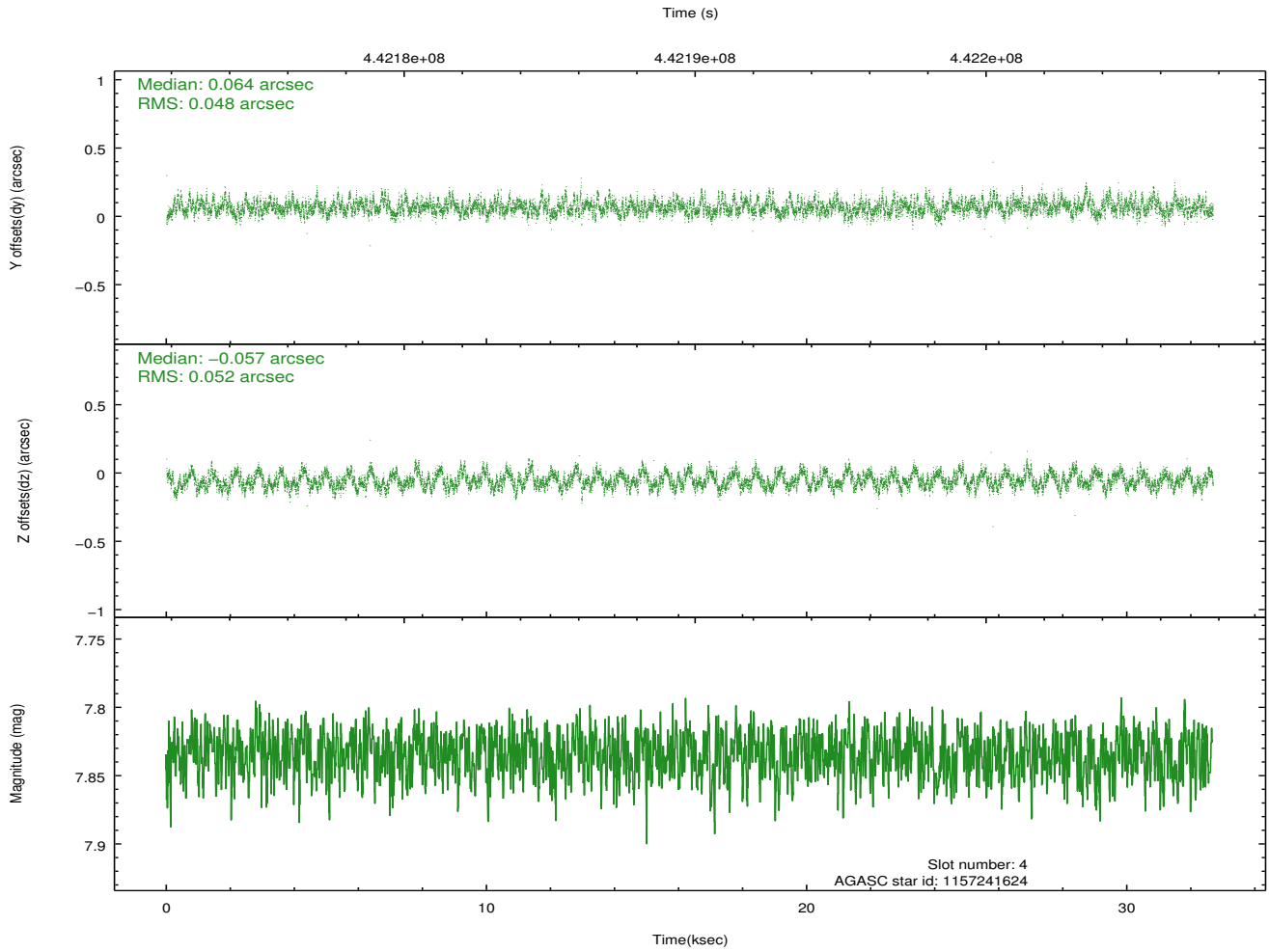
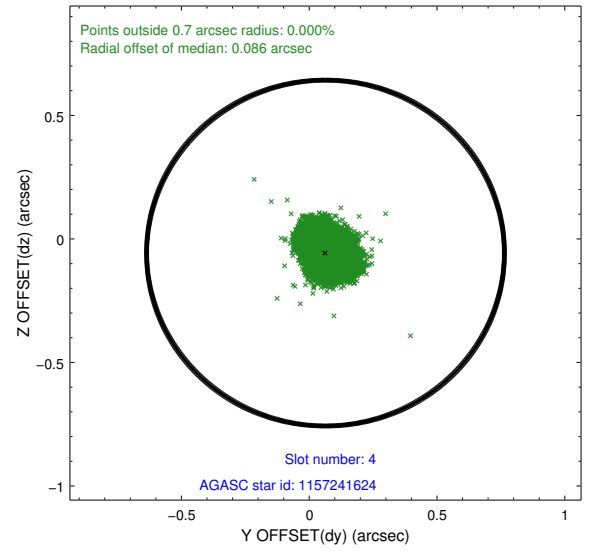
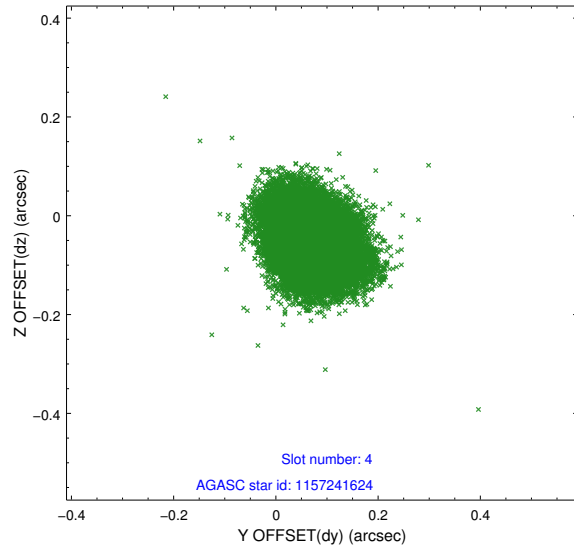
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.03	7972	0.130	-0.059	0.014	0.044	0.000000	0.000000	924.85	-1000.77
1	FID	ACIS-I-5	7.02	7971	-0.309	0.108	0.011	0.023	0.000000	0.000000	-1823.69	896.81
2	FID	ACIS-I-6	7.04	7970	0.086	0.022	0.011	0.023	0.000000	0.000000	390.26	1541.32
3	GUIDE	1157239512	8.04	15874	-0.026	0.014	0.061	0.100	338.984652	-59.864472	-1130.26	1263.81
4	GUIDE	1157241624	7.83	15941	0.064	-0.057	0.076	0.120	338.349578	-59.991946	-282.24	369.39
5	GUIDE	1195115000	8.46	15931	-0.113	0.002	0.081	0.128	338.506761	-60.143580	119.11	835.18
6	GUIDE	1195118072	8.14	15942	0.066	-0.088	0.063	0.099	338.311203	-60.014009	-182.66	335.19
7	GUIDE	1195116824	8.85	15938	0.005	0.126	0.087	0.137	339.462401	-60.094648	-669.96	2366.55

2.4 Star Slots

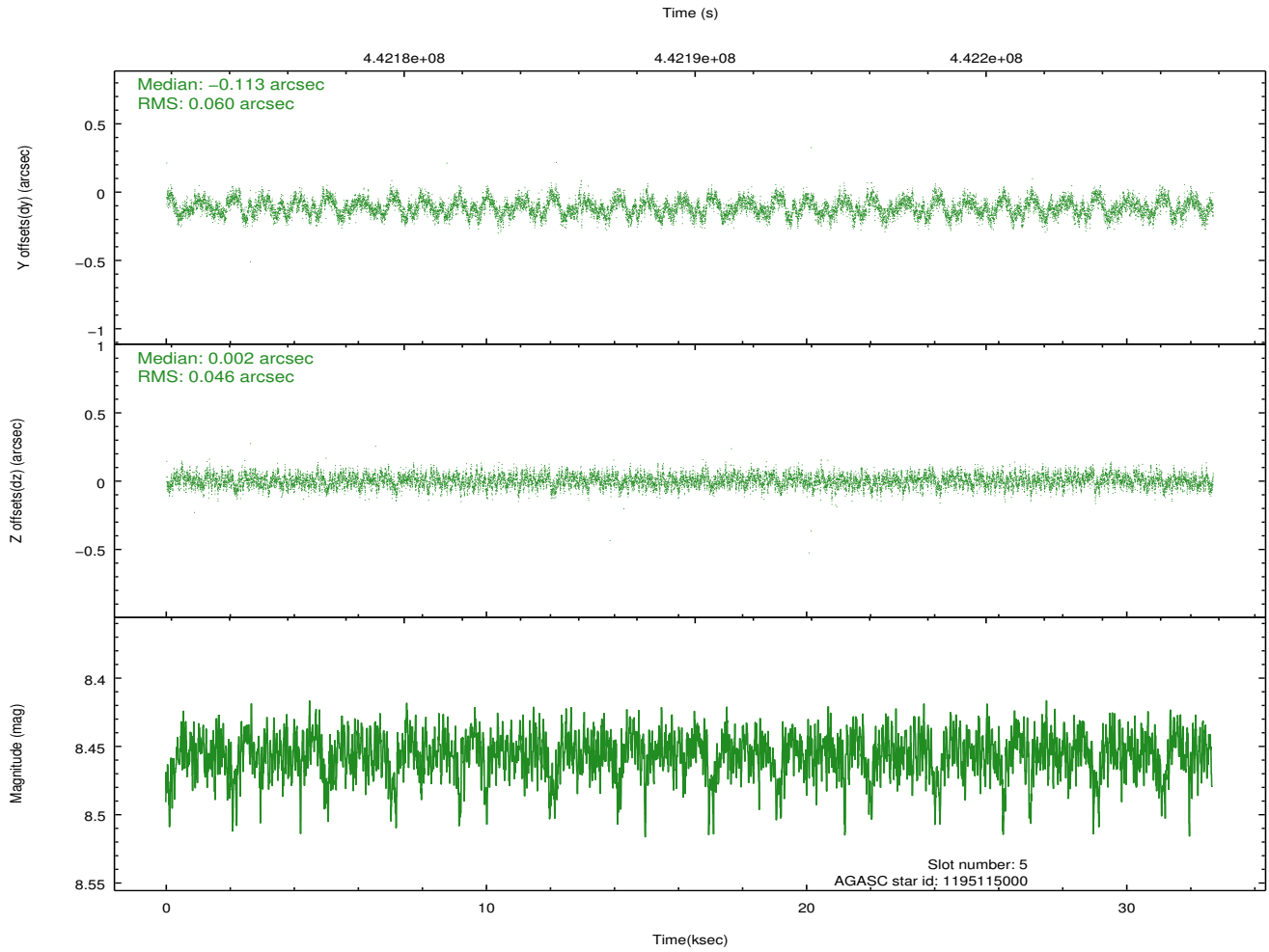
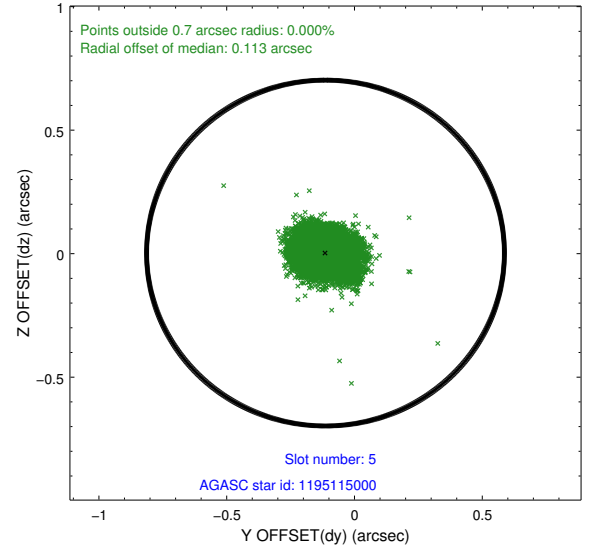
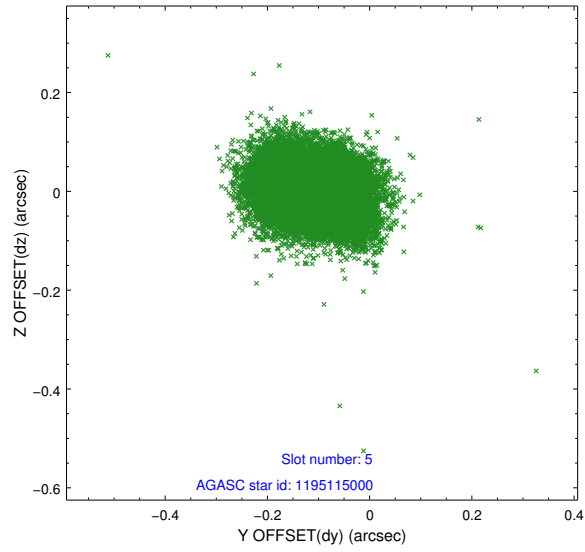
2.4.1 Slot 3



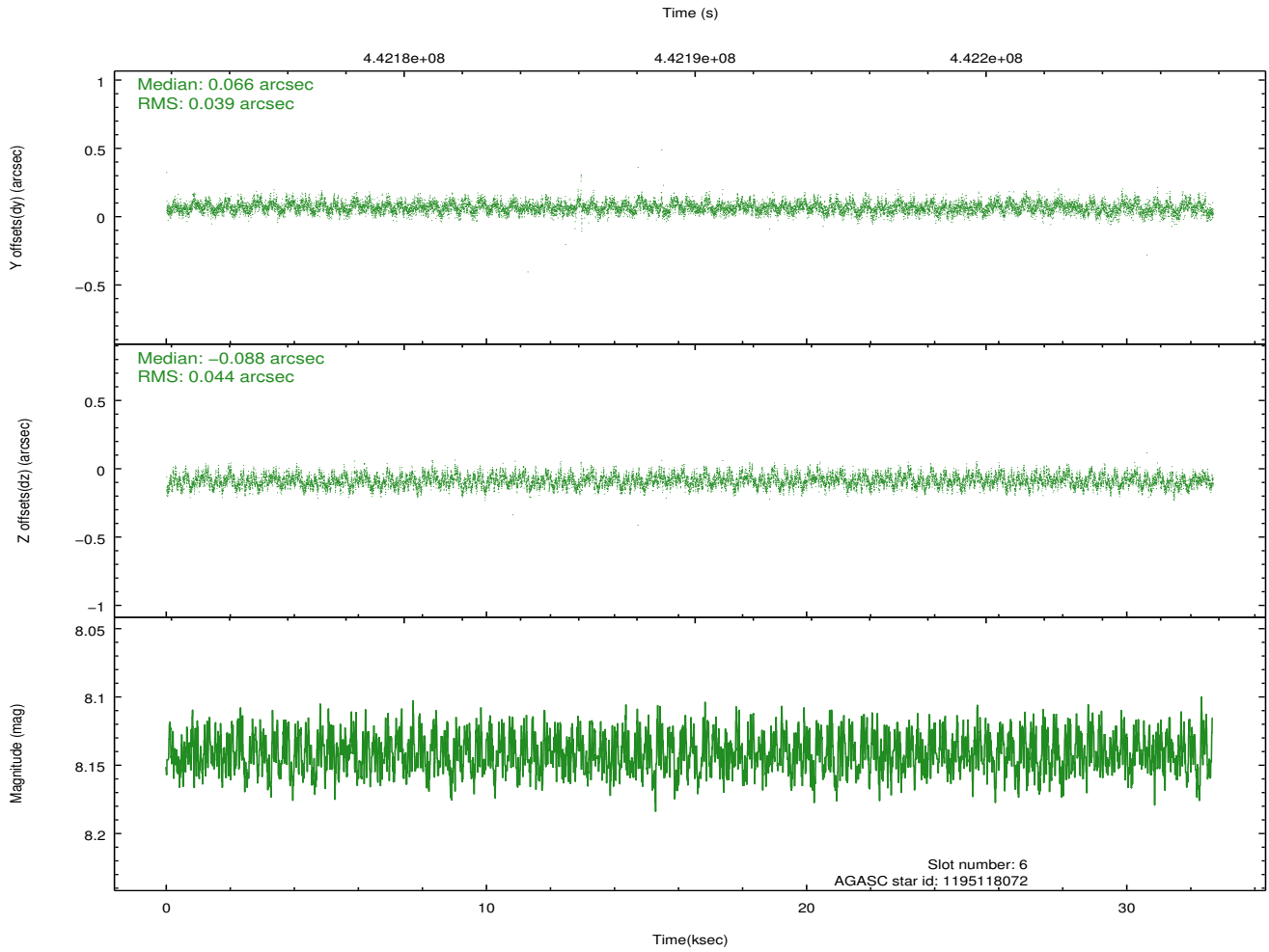
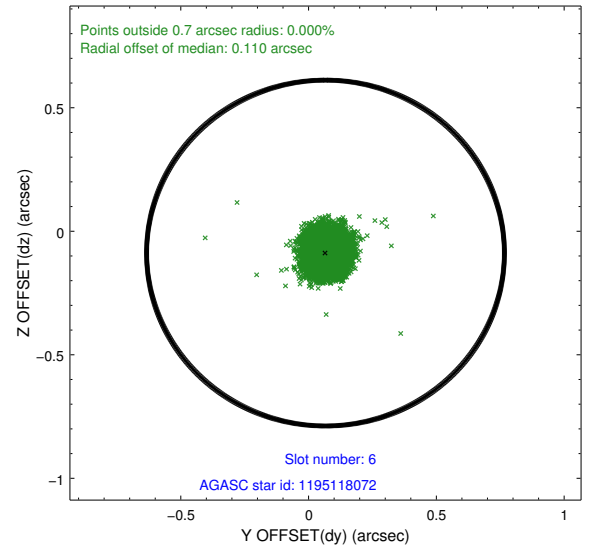
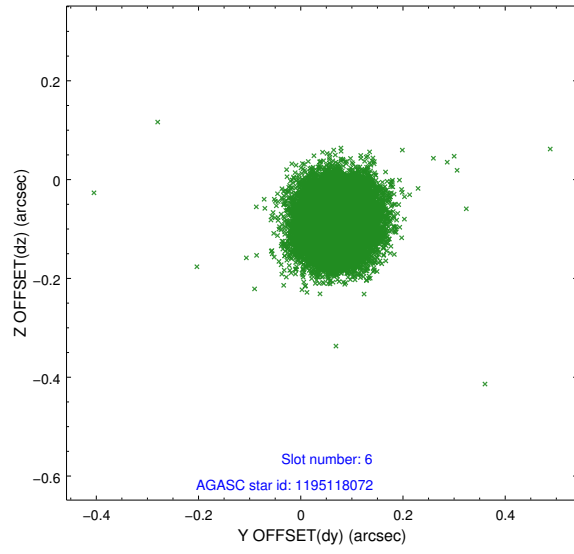
2.4.2 Slot 4



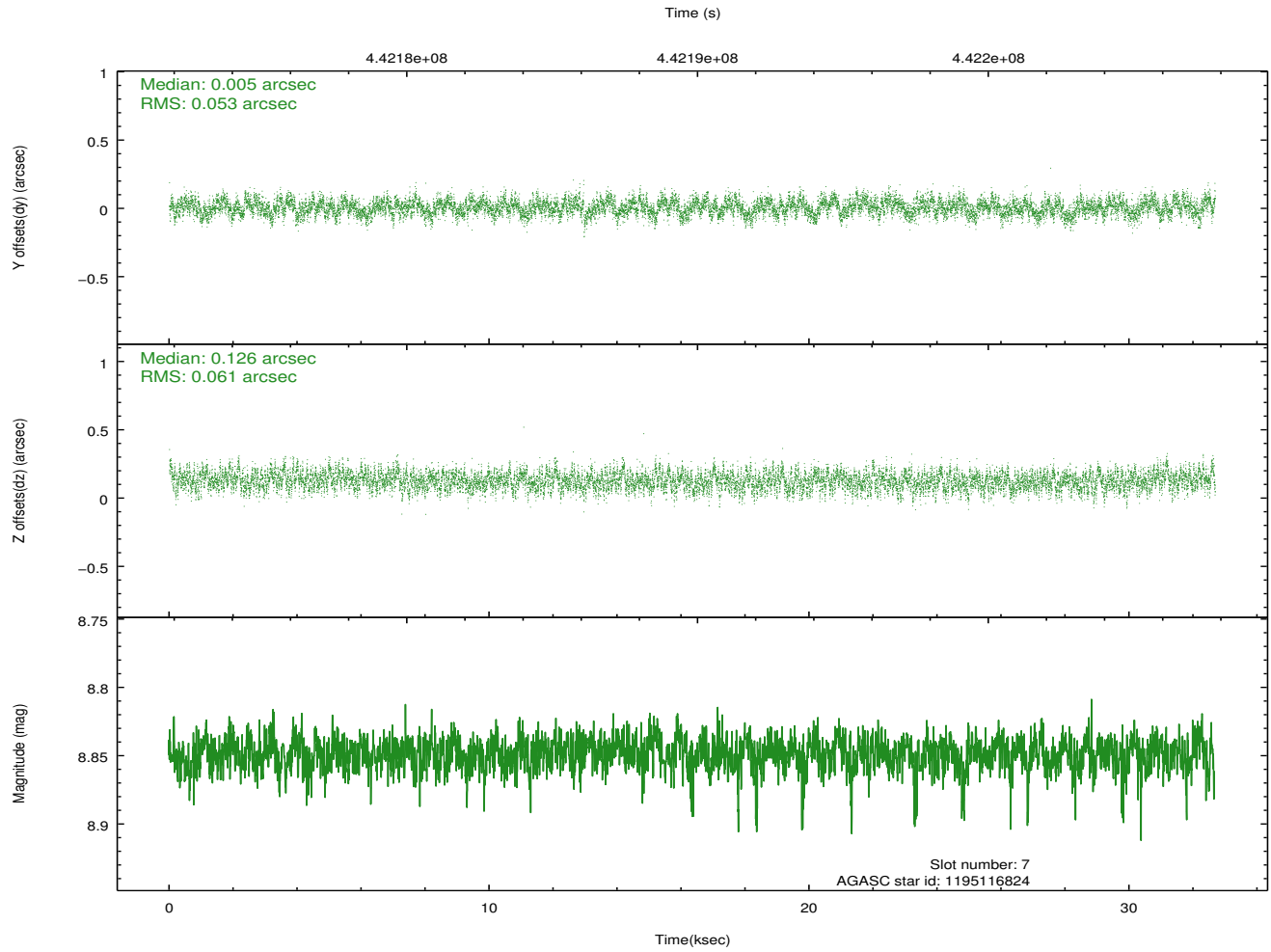
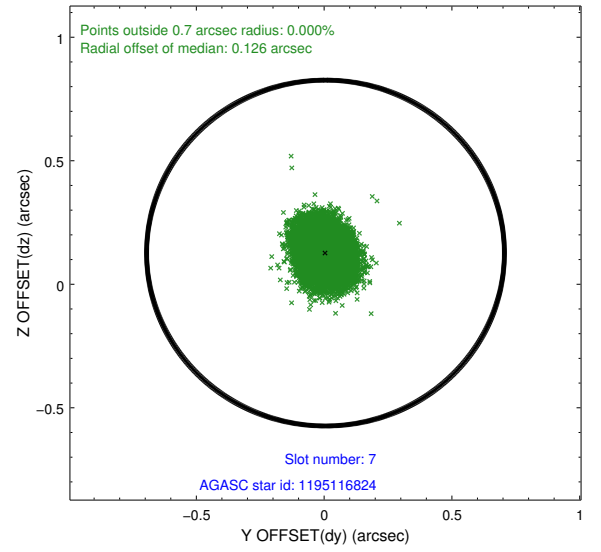
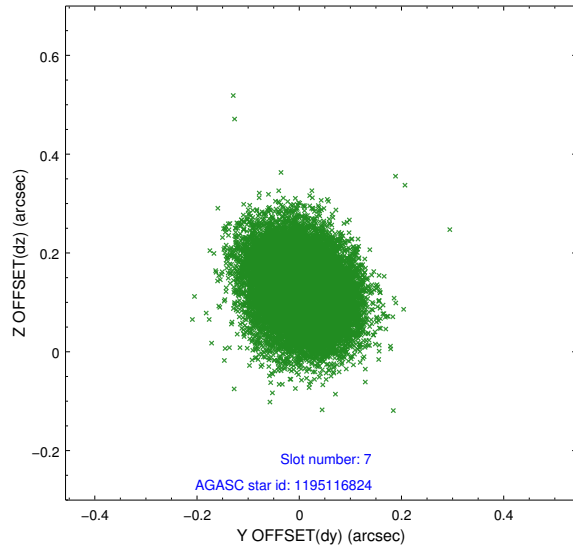
2.4.3 Slot 5



2.4.4 Slot 6

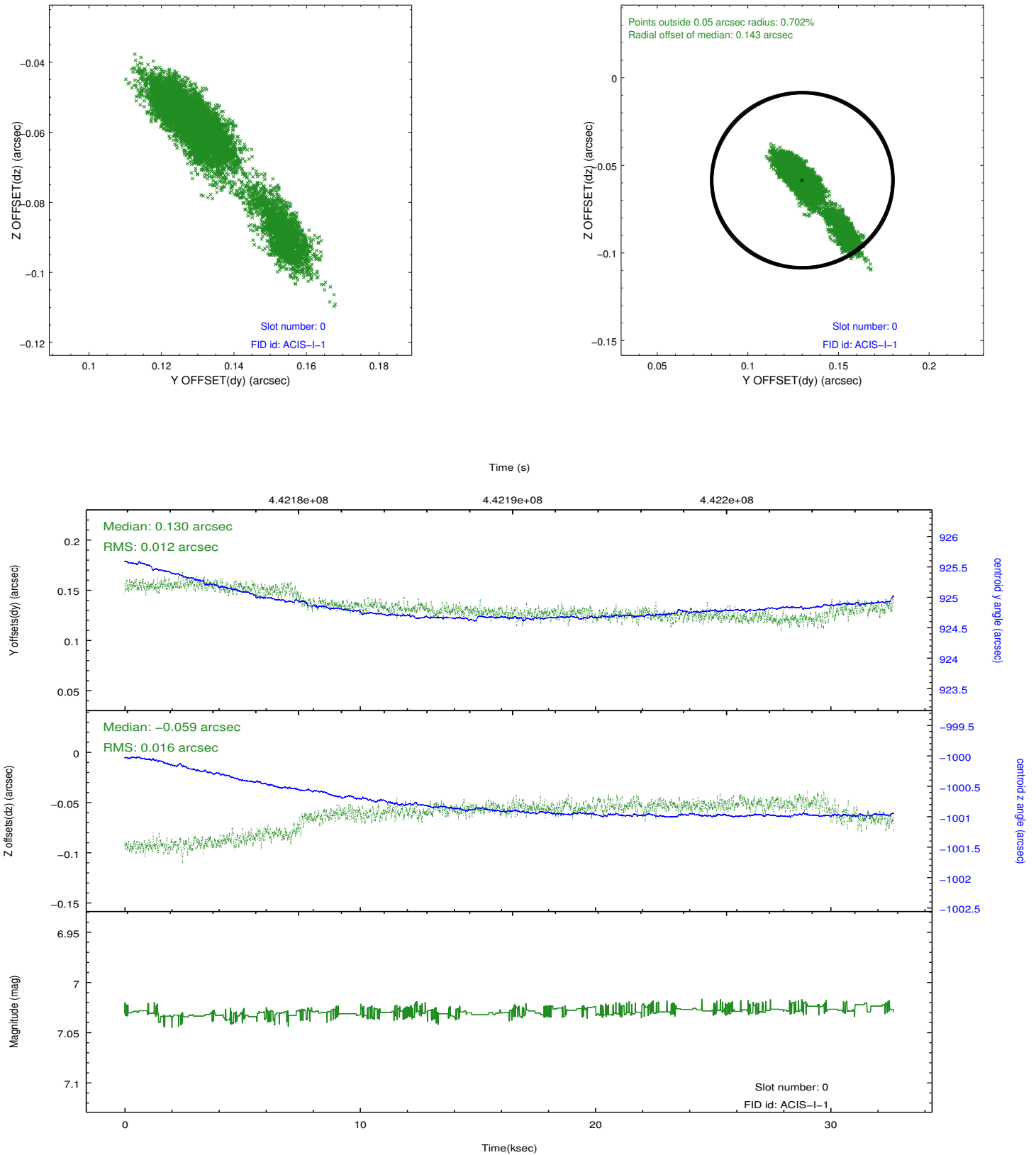


2.4.5 Slot 7

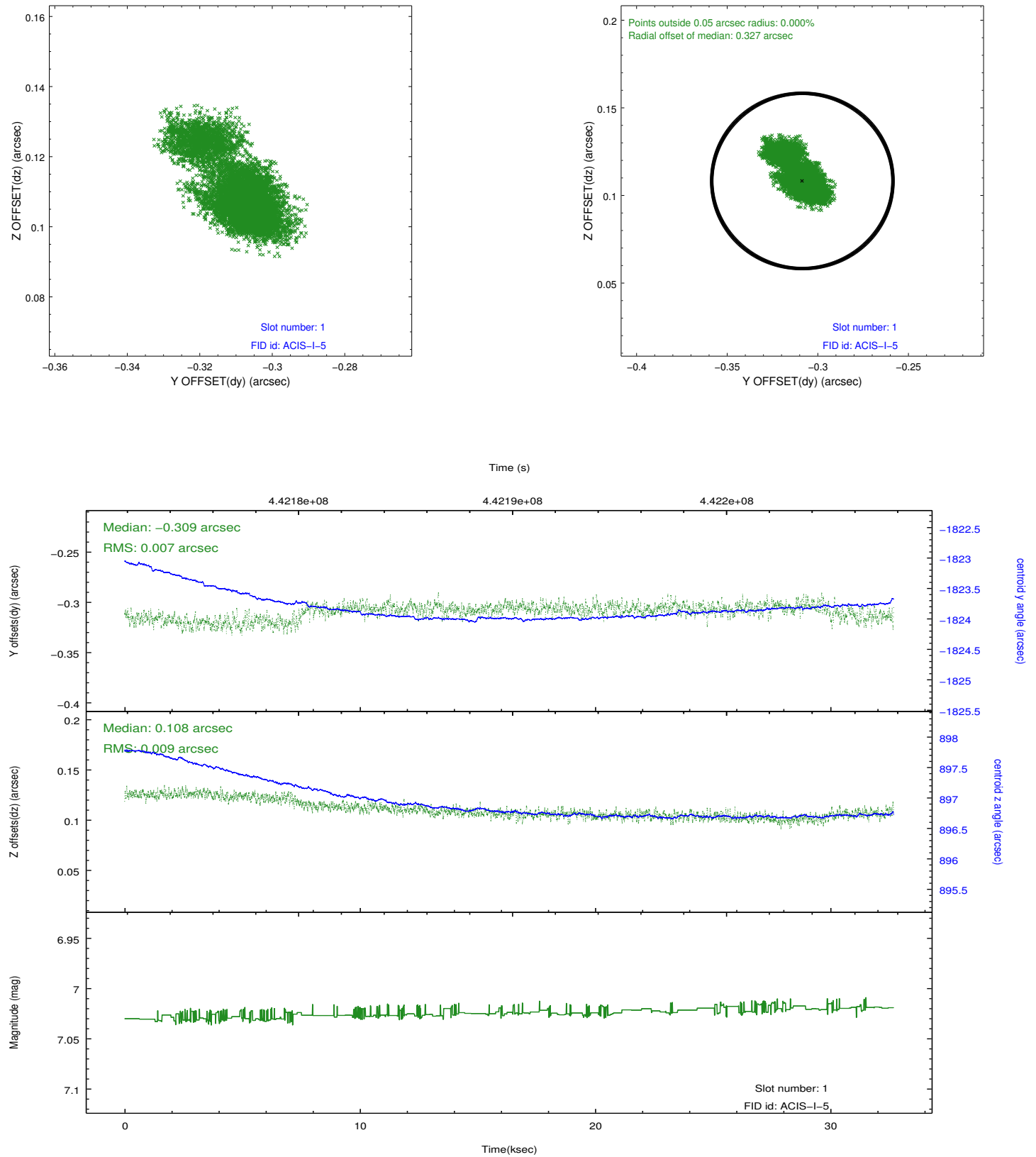


2.5 FID Slots

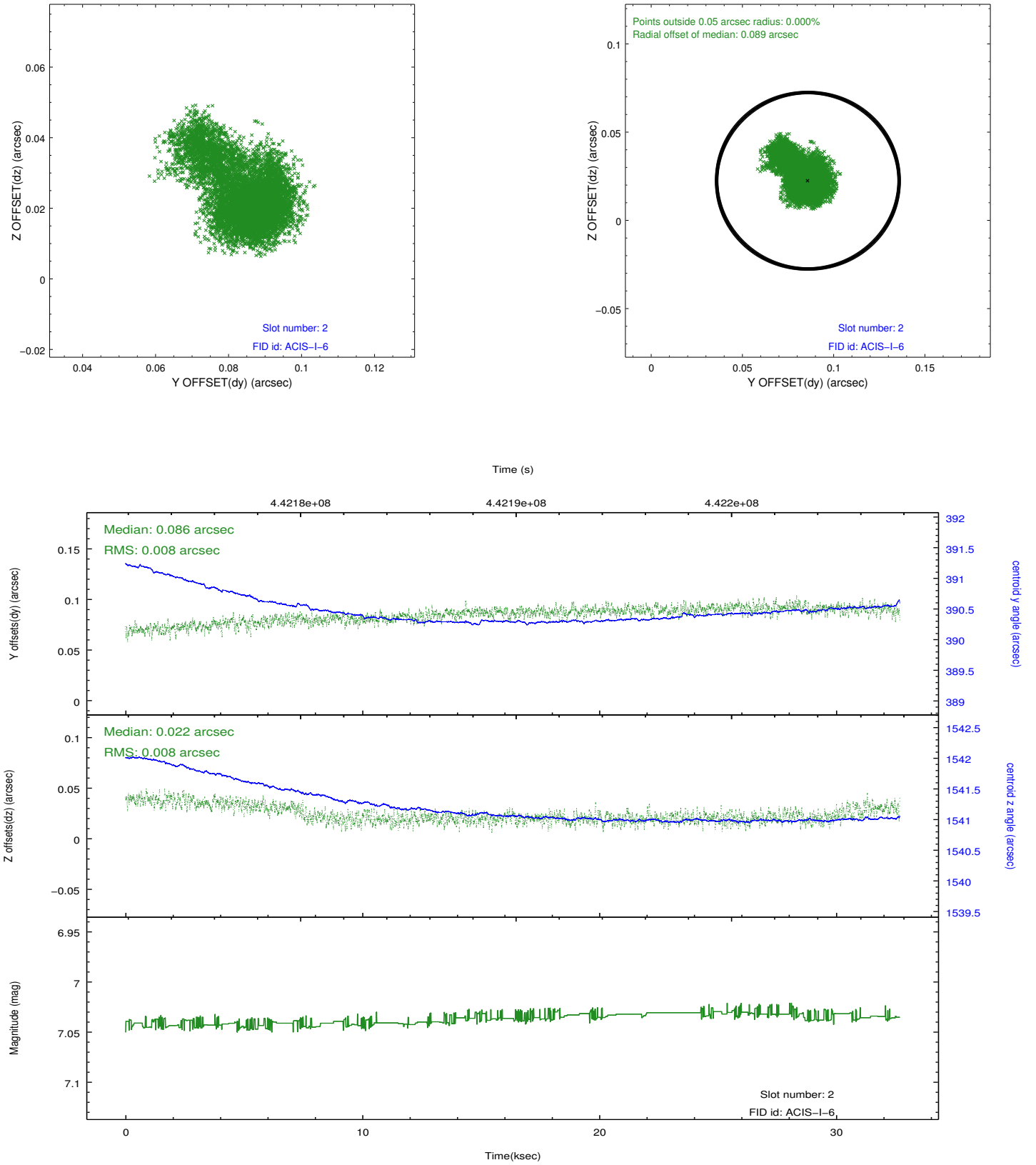
2.5.1 Slot 0



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)	2012.01.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.27095935756

A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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:
(337.84243, -60.15341), (337.84826, -60.15460), (337.87108, -60.12669), (337.86525, -60.12550)