

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 11799 - L2 Version 3
Chandra X-Ray Center

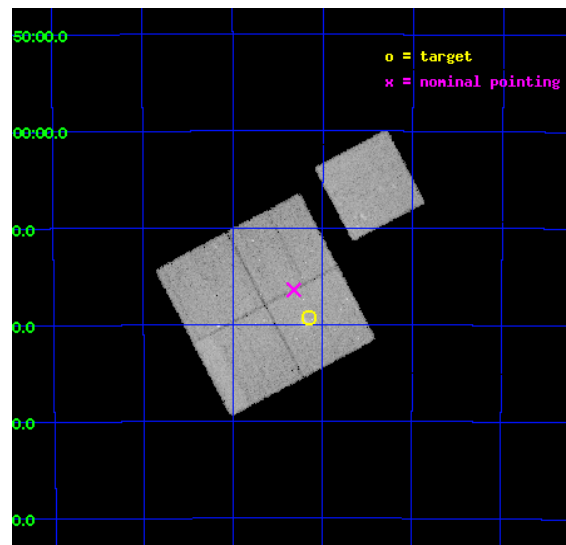
L2 Processing Date : Jan 7 2013

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1 Front

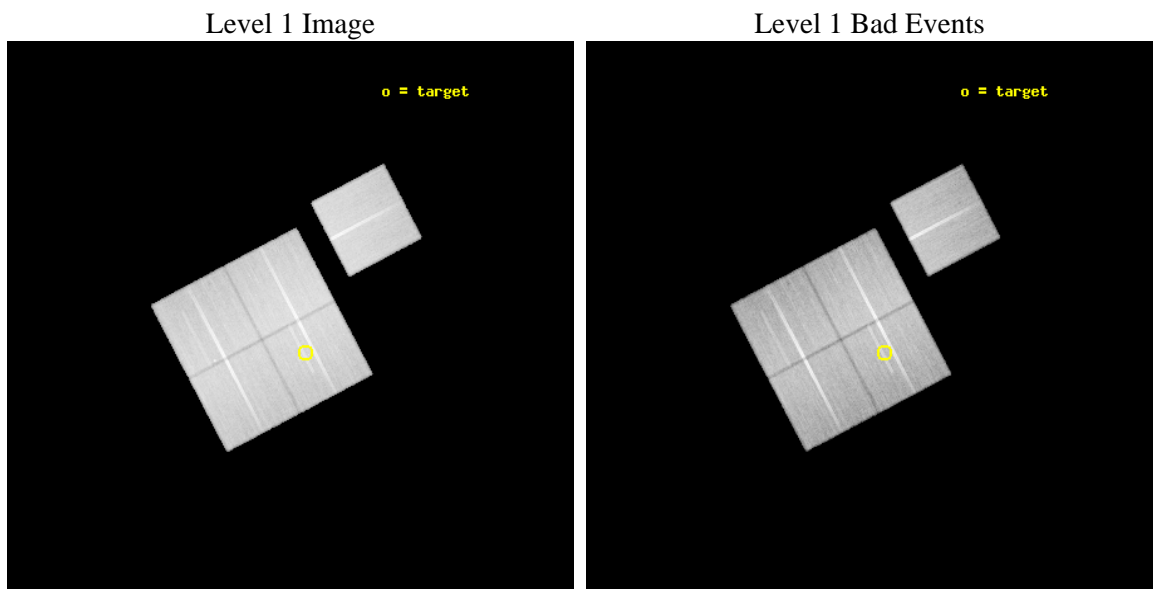
seq_num	800682	Sequence number
obs_id	11799	Observation id
title	South Pole Telescope (SPT) - Chandra Cluster Cosmology	Proposal ti
observer	Dr. Stephen Murray	Principal investigator
object	SPT-CL 2341-5119	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	355.287	Observer's specified target RA [deg]
dec_targ	-51.3208	Observer's specified target Dec [deg]
ra_nom	355.33026217806	Nominal RA [deg]
dec_nom	-51.273590852412	Nominal Dec [deg]
roll_nom	62.242452211856	Nominal Roll [deg]
revision	3	Processing version of data
ontime	50970.159391761	Sum of GTIs [s]
livetime	50304.196735622	Livetime [s]
ontime0	50957.595450342	Sum of GTIs [s]
ontime1	50967.018381476	Sum of GTIs [s]
ontime2	50973.300392032	Sum of GTIs [s]
ontime3	50970.159391761	Sum of GTIs [s]
ontime6	50970.159401655	Sum of GTIs [s]
l2events	195533	Number of level 2 events



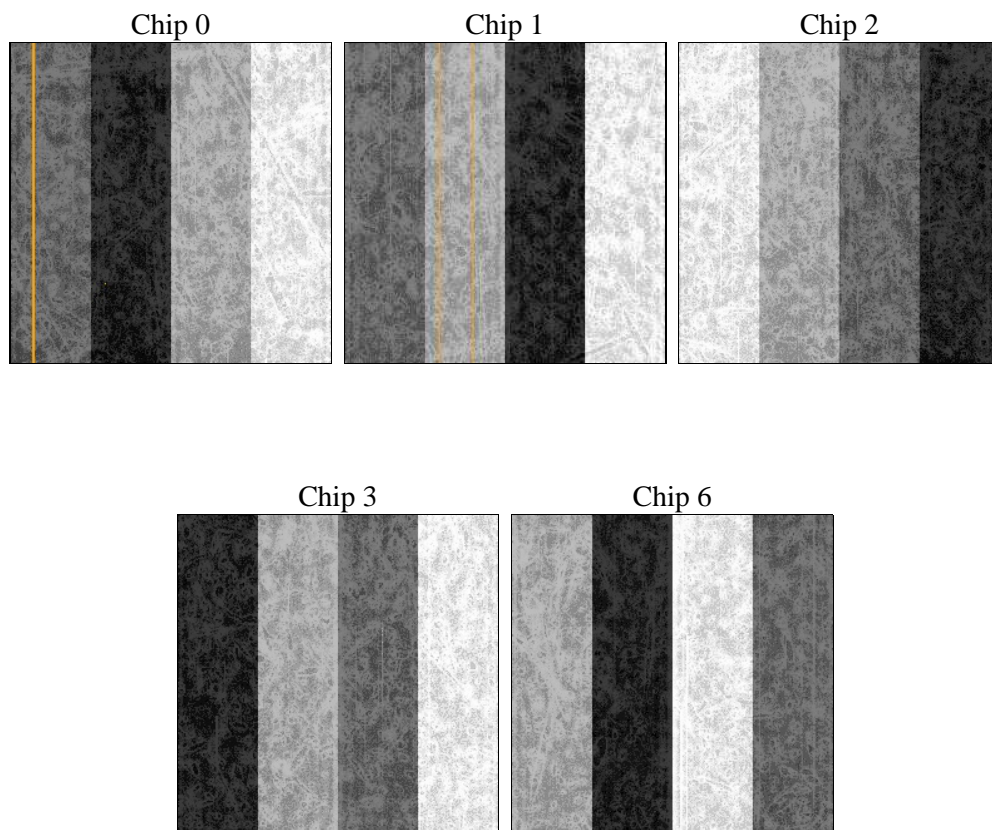
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50939.808000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	50970.159391761	Sum of GTIs [s]
caldsver	4.5.5	 	ontime0	50957.595450342	Sum of GTIs [s]
date	2013-01-07T20:07:49	Date and time of file creation	ontime1	50967.018381476	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	50973.300392032	Sum of GTIs [s]
			ontime3	50970.159391761	Sum of GTIs [s]
			ontime6	50970.159401655	Sum of GTIs [s]
			l1events	2318014	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	446036	431945	507960	458830	473243	grade 0 events	16018	18093	15522	17037	16324
rejected events	400177	381117	464281	413529	426978		3%	4%	3%	3%	3%
rejected %	89%	88%	91%	90%	90%	grade 1 events	248	258	277	276	238
							0%	0%	0%	0%	0%
						grade 2 events	11147	11755	10716	9764	10201
							2%	2%	2%	2%	2%
						grade 3 events	5033	5227	4447	4808	4751
							1%	1%	0%	1%	1%
						grade 4 events	4731	5377	4616	4765	4752
							1%	1%	0%	1%	1%
						grade 5 events	16532	17612	15936	18982	18250
							3%	4%	3%	4%	3%
						grade 6 events	8931	10378	8379	8929	10239
							2%	2%	1%	1%	2%
						grade 7 events	383396	363245	448067	394269	408488
							85%	84%	88%	85%	86%

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	355.332148	355.3302621780568	CCD I2 on	Y	Y
[deg] Pointing Dec	-51.301074	-51.27359085241223	CCD I3 on	Y	Y
[deg] Pointing Roll	62.035239	62.24245221185622	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	-225.840463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	365488025.184000	365487043.98496	CCD S5 on	N	N
Observation start date	2009-08-01T04:25:59	2009-08-01T04:10:43	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	365538965.184000	365539195.47507	On-chip summing requested	N	N
Observation end date	2009-08-01T18:34:59	2009-08-01T18:39:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

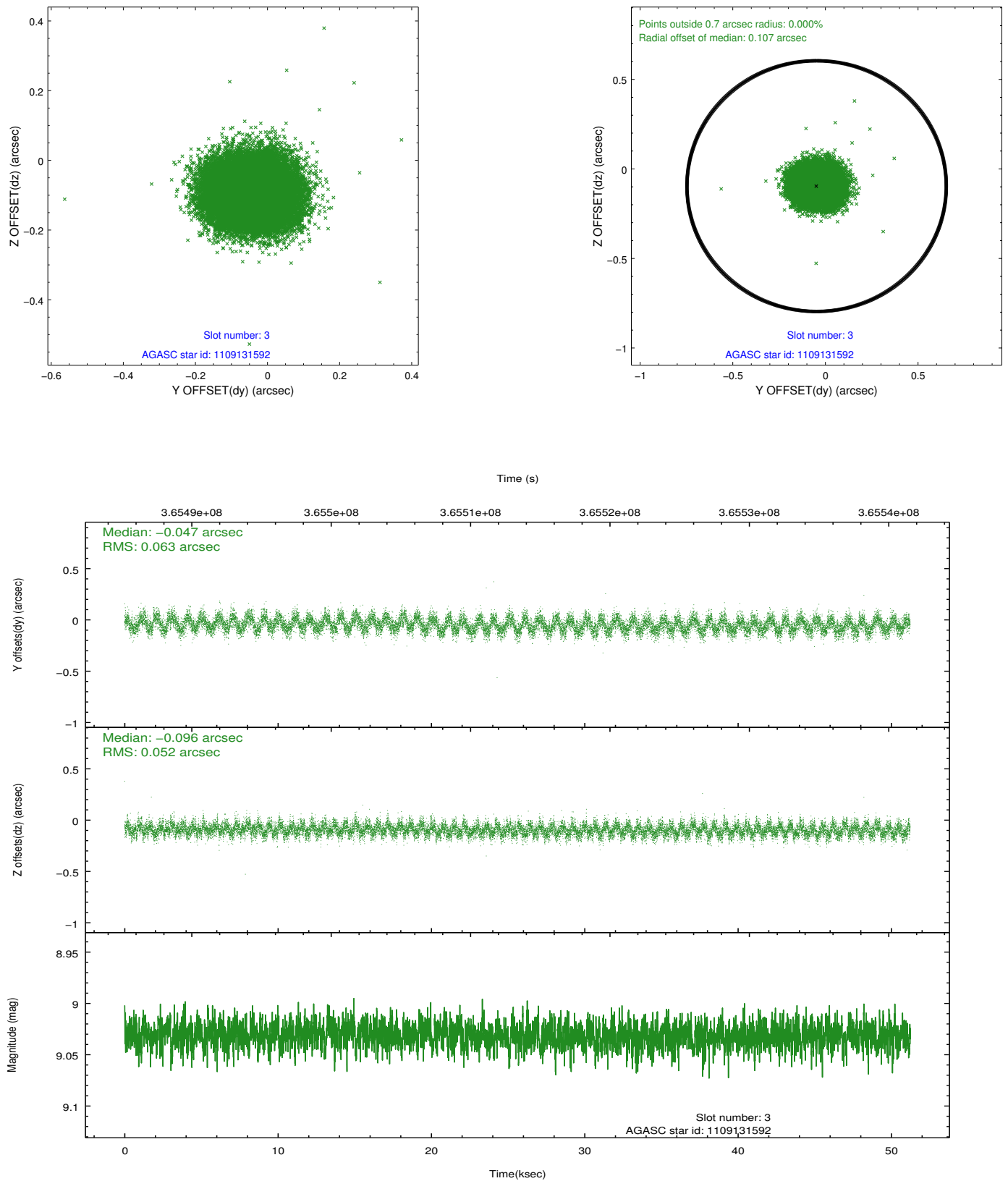
2.3 Aspect

Slot Statistics

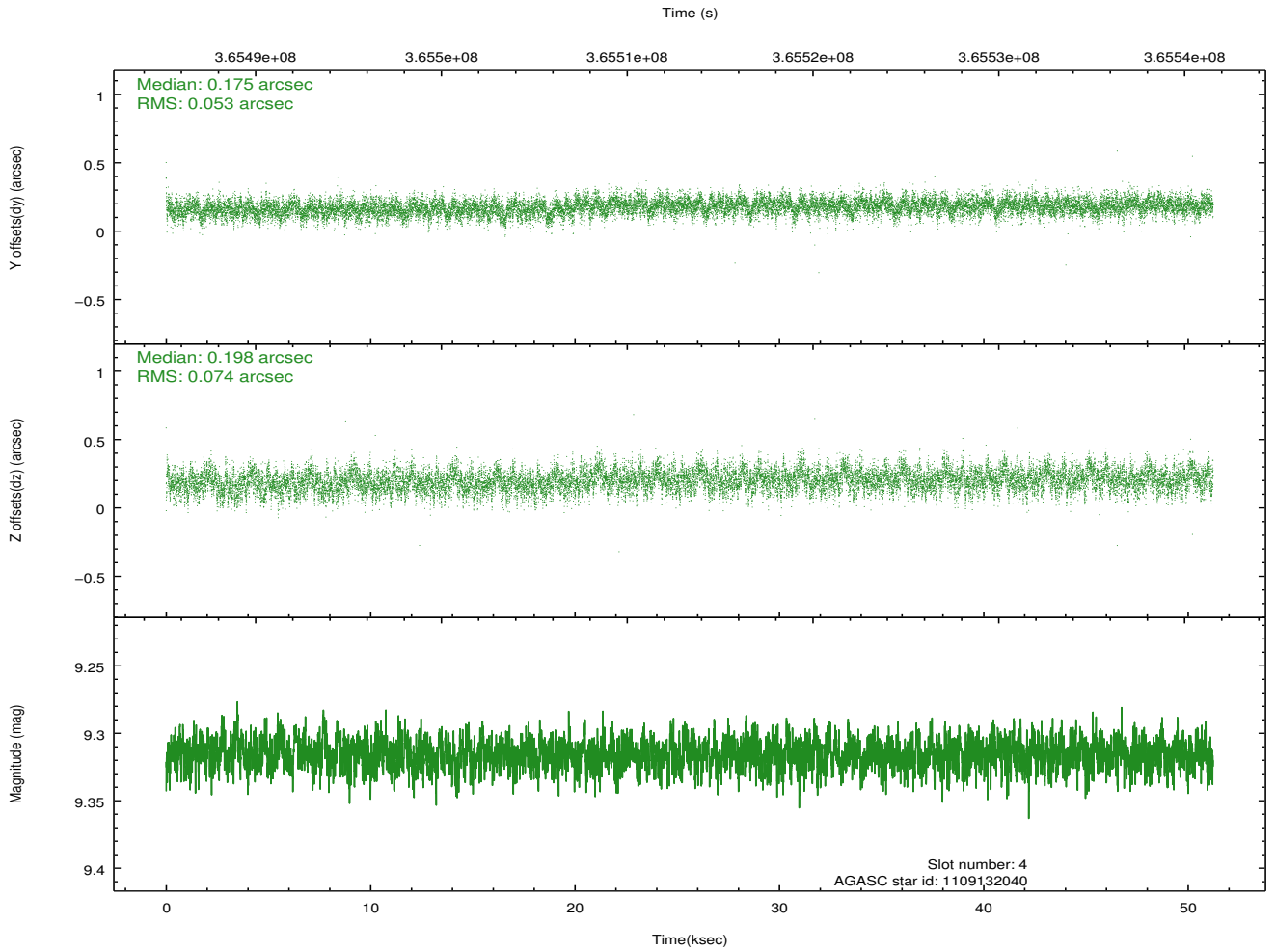
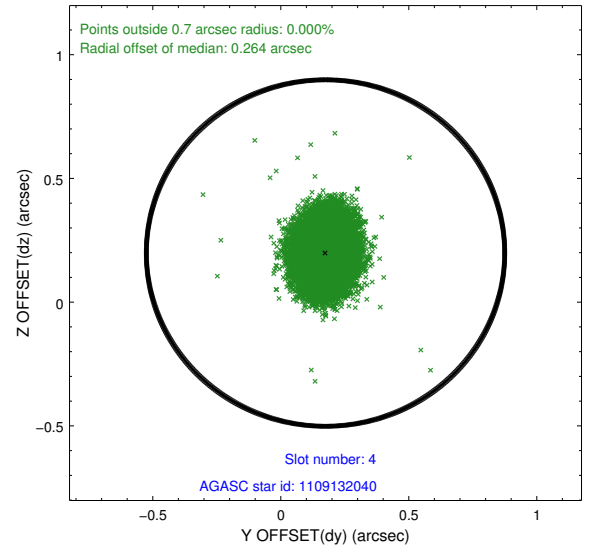
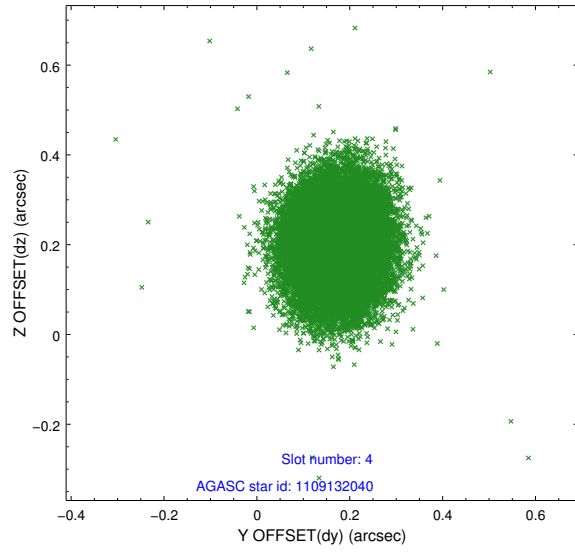
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.05	12494	0.148	-0.100	0.009	0.023	0.000000	0.000000	922.39	-999.96
1	FID	ACIS-I-5	7.03	12494	-0.267	0.131	0.008	0.013	0.000000	0.000000	-1826.15	897.74
2	FID	ACIS-I-6	7.04	12495	0.028	0.040	0.009	0.017	0.000000	0.000000	387.82	1542.14
3	GUIDE	1109131592	9.03	24966	-0.047	-0.096	0.087	0.139	355.617183	-50.699413	2216.78	441.17
4	GUIDE	1109132040	9.32	24948	0.175	0.198	0.097	0.158	355.829522	-52.105894	-2046.24	-2331.87
5	GUIDE	1109132320	8.86	24972	0.137	0.035	0.082	0.133	355.885442	-51.348861	427.70	-1181.67
6	GUIDE	1109134344	7.70	24982	-0.111	0.032	0.071	0.118	355.000339	-51.616738	-1352.92	121.58
7	GUIDE	1109138912	8.03	24979	-0.155	-0.174	0.060	0.098	354.931465	-50.754503	1308.02	1727.30

2.4 Star Slots

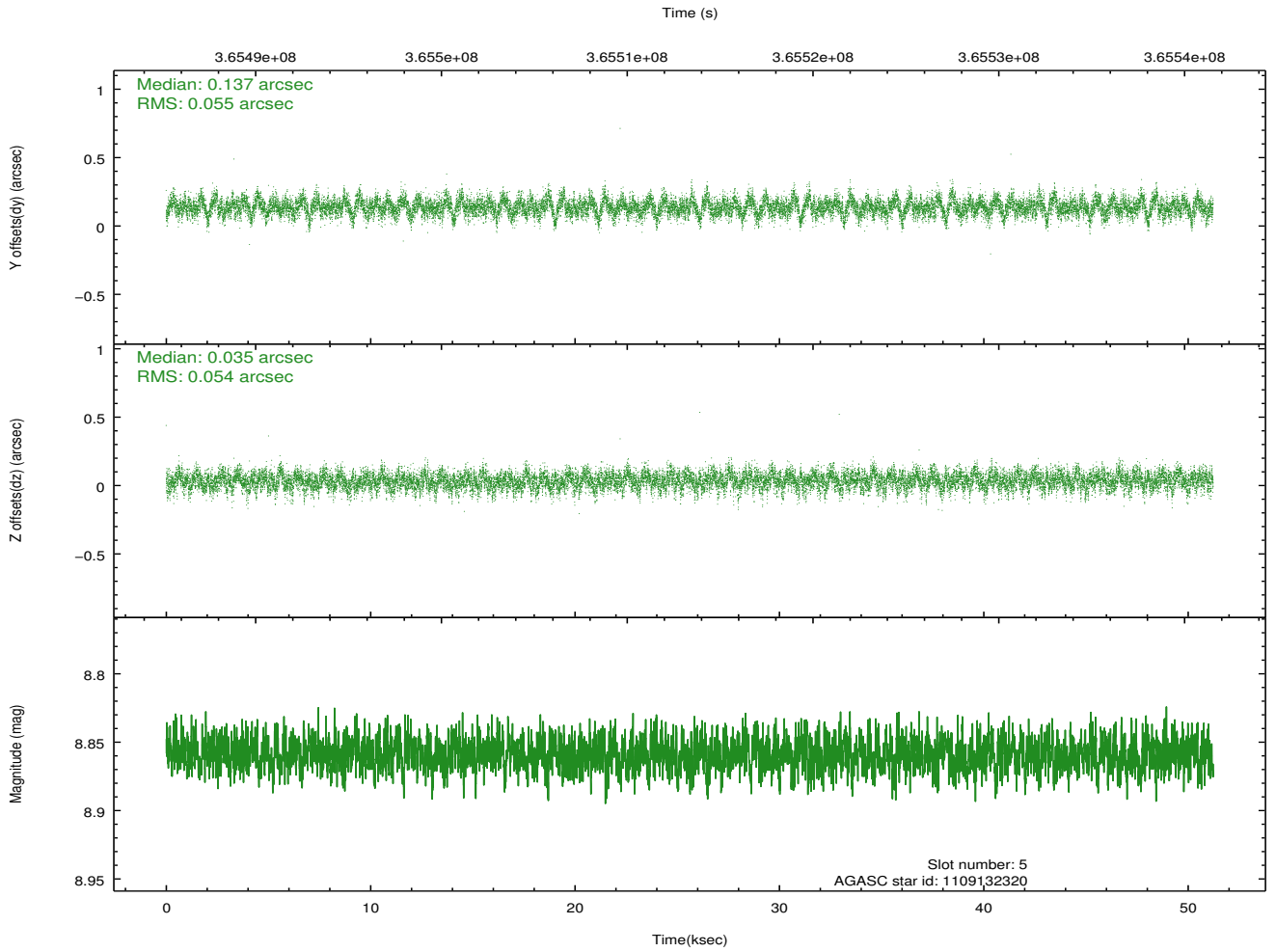
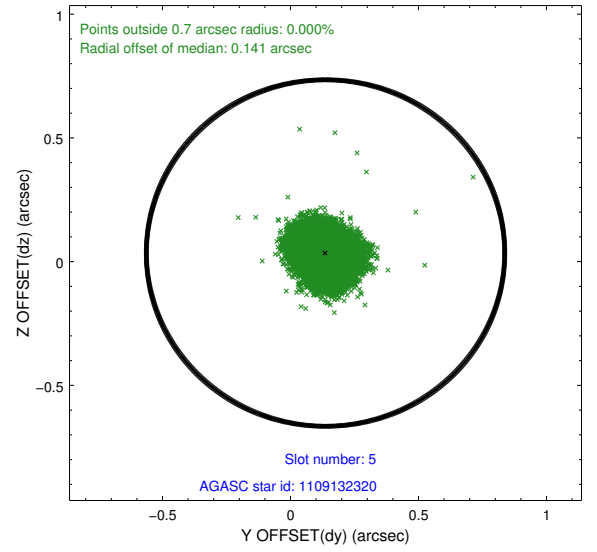
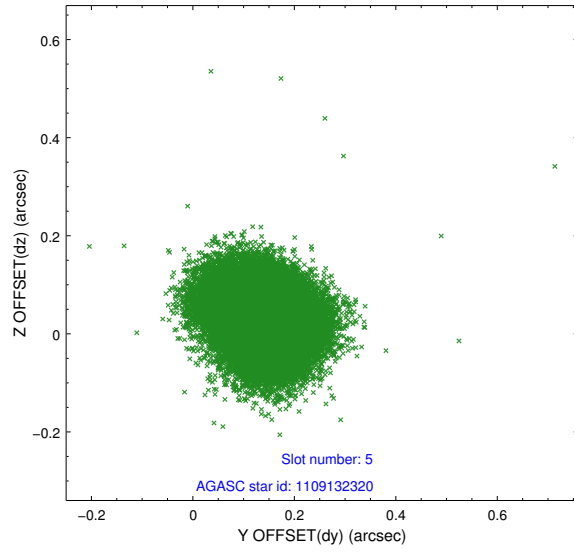
2.4.1 Slot 3



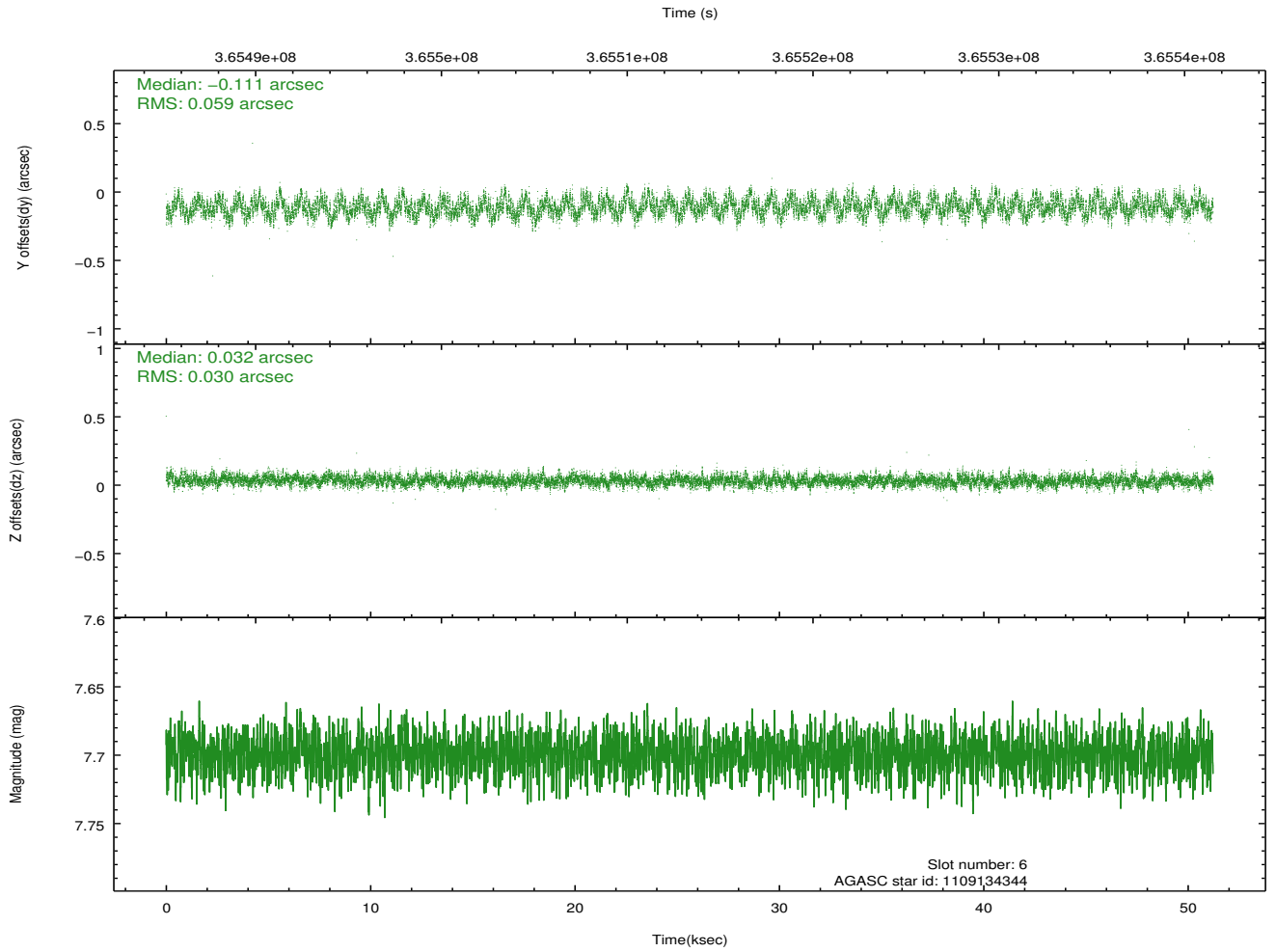
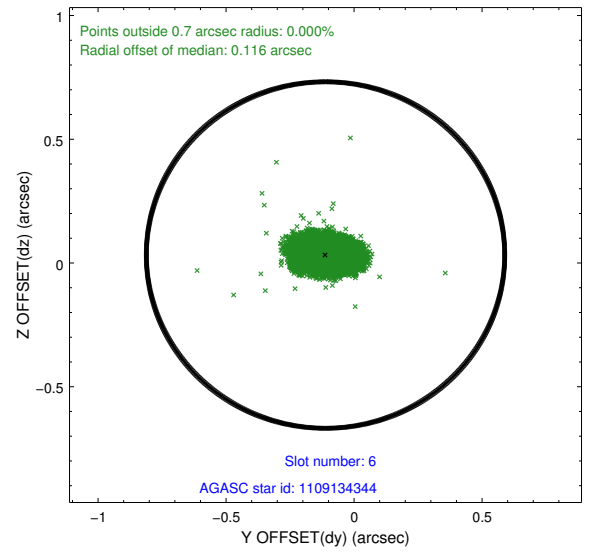
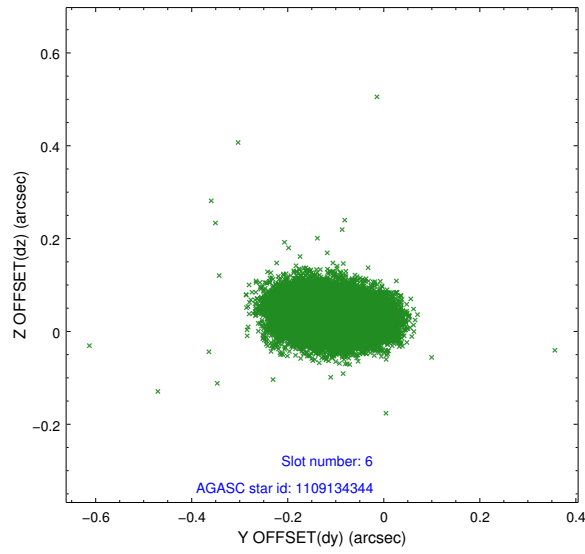
2.4.2 Slot 4



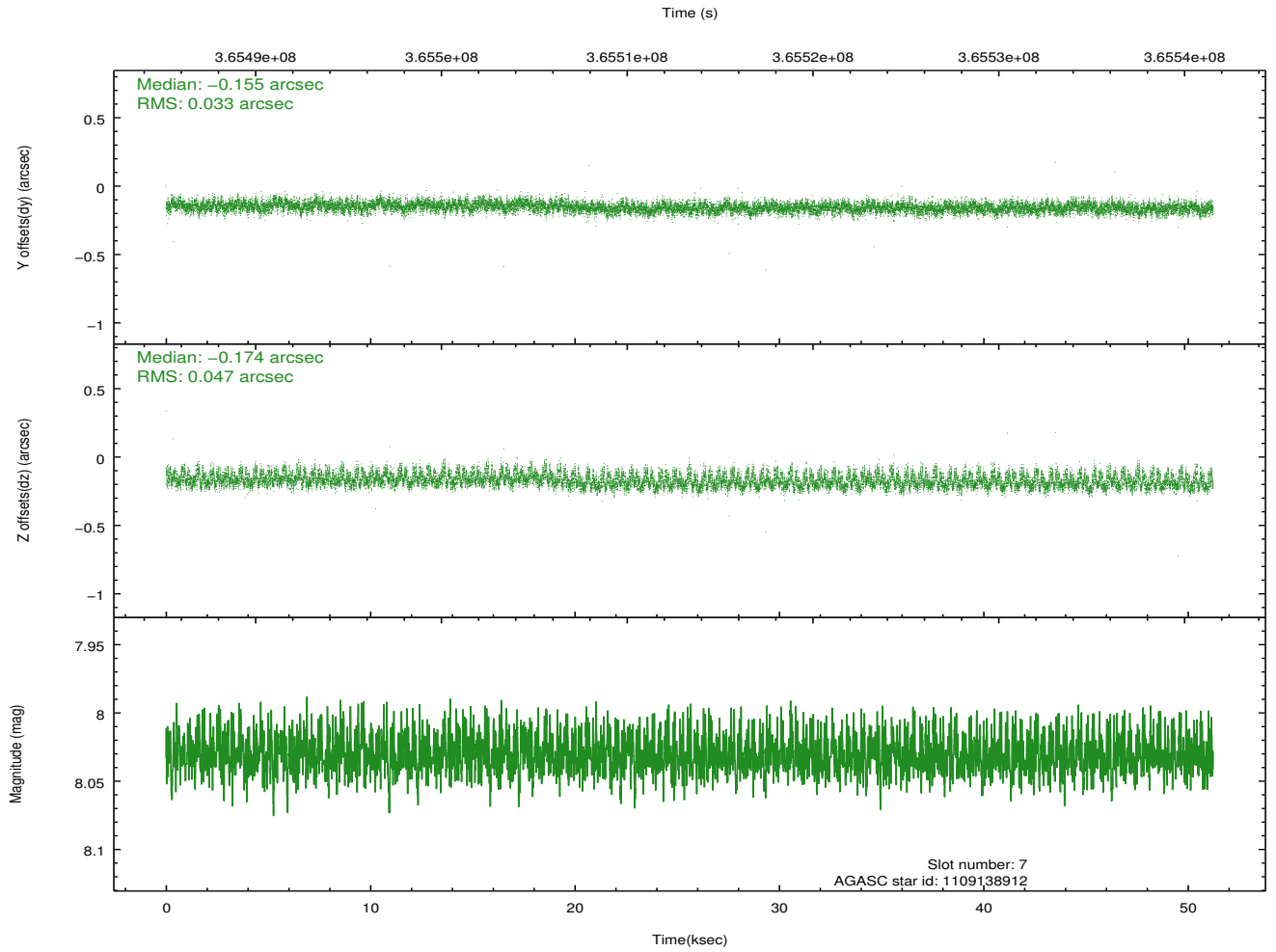
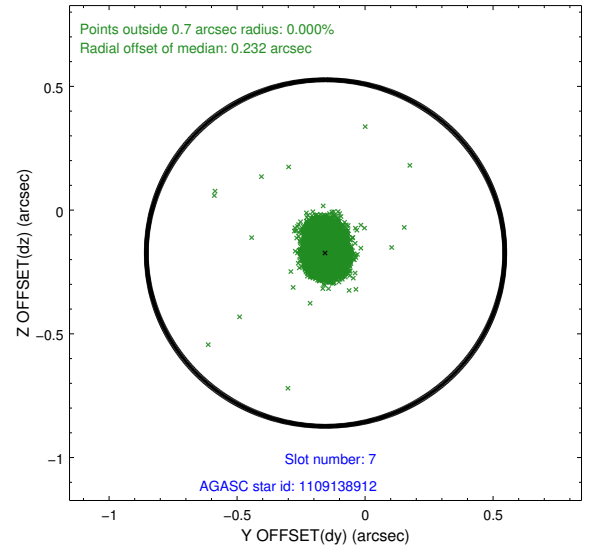
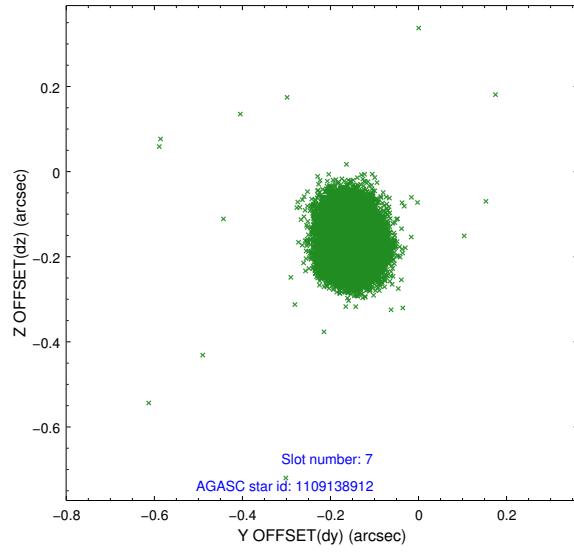
2.4.3 Slot 5



2.4.4 Slot 6

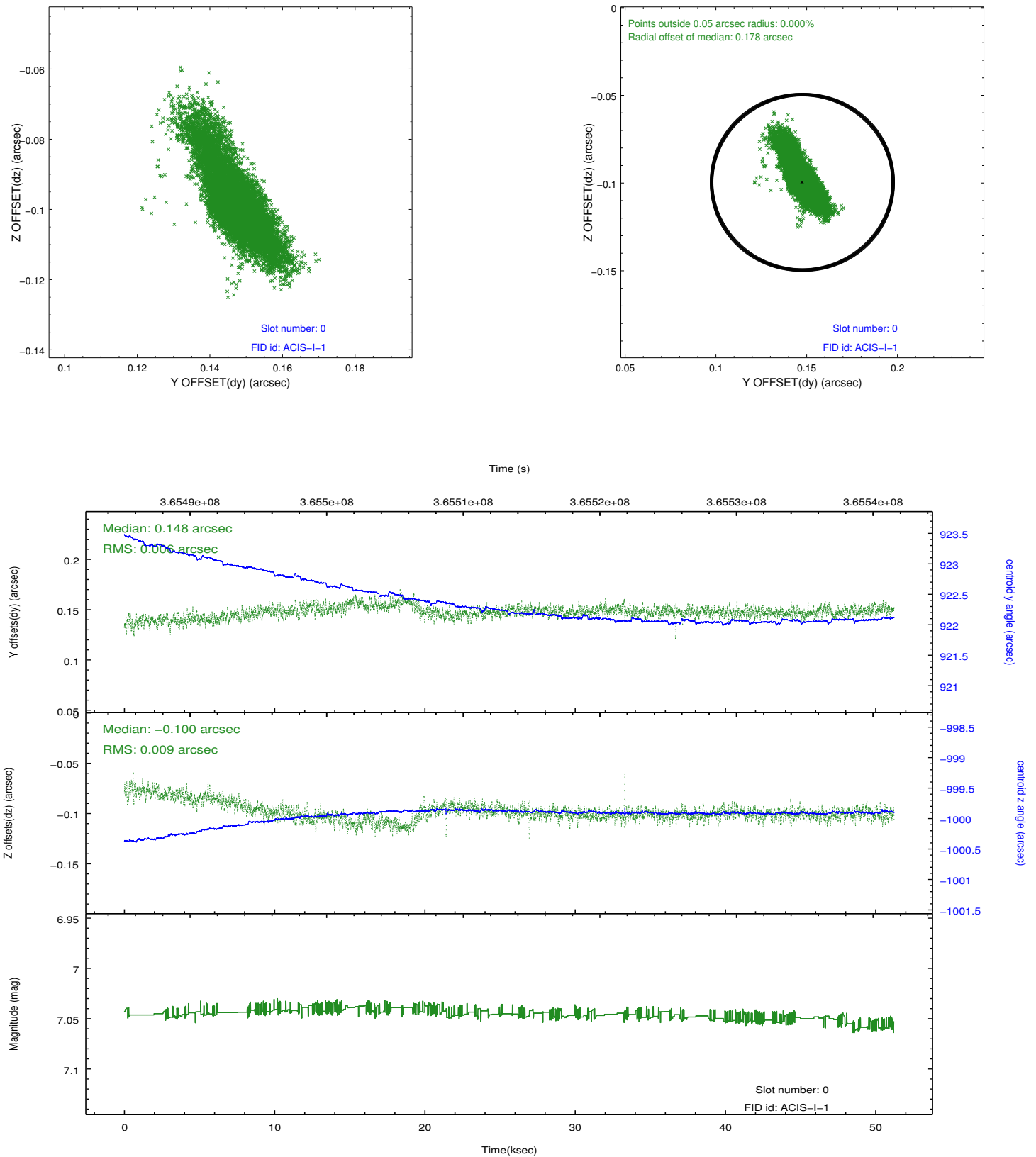


2.4.5 Slot 7

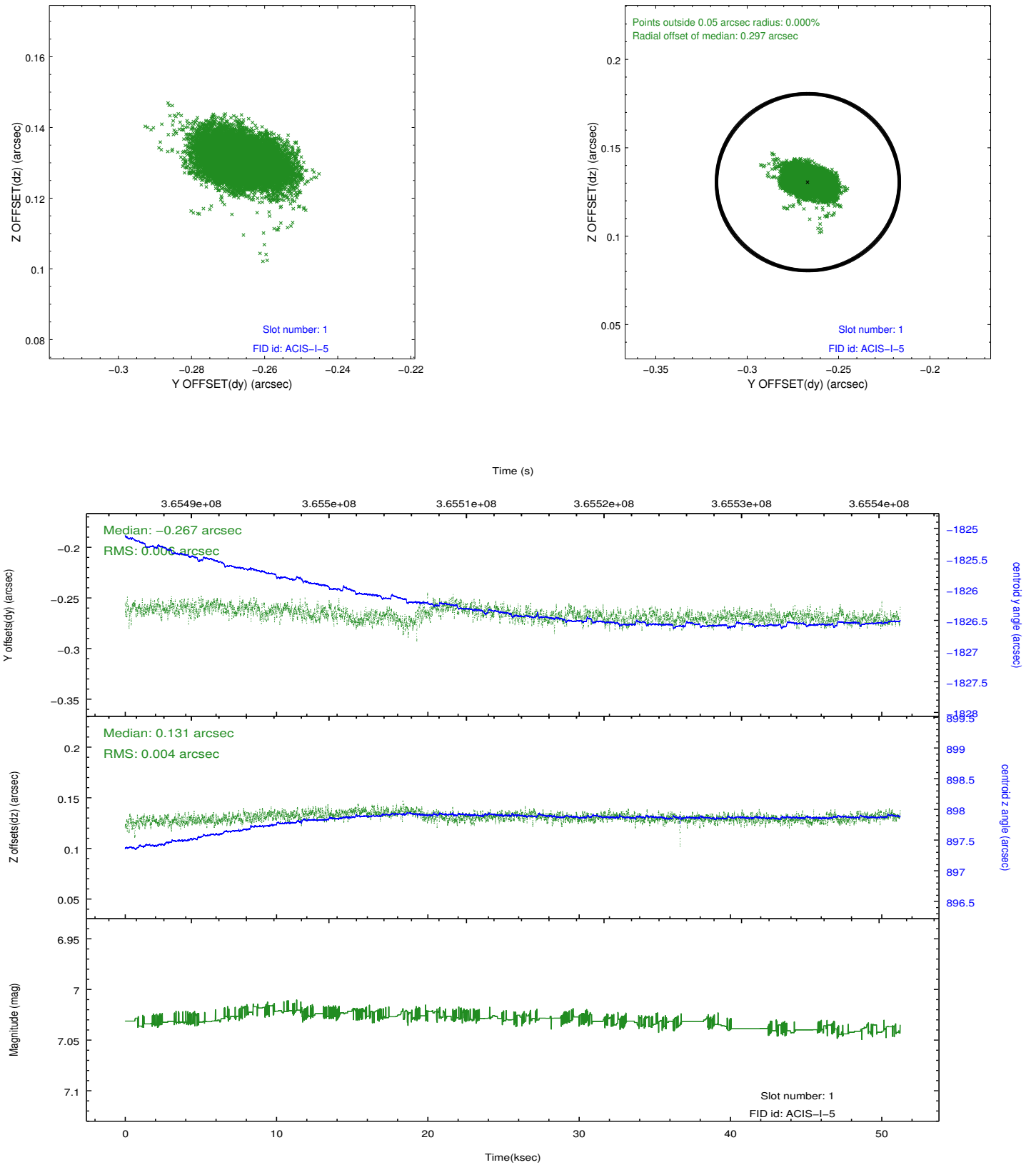


2.5 FID Slots

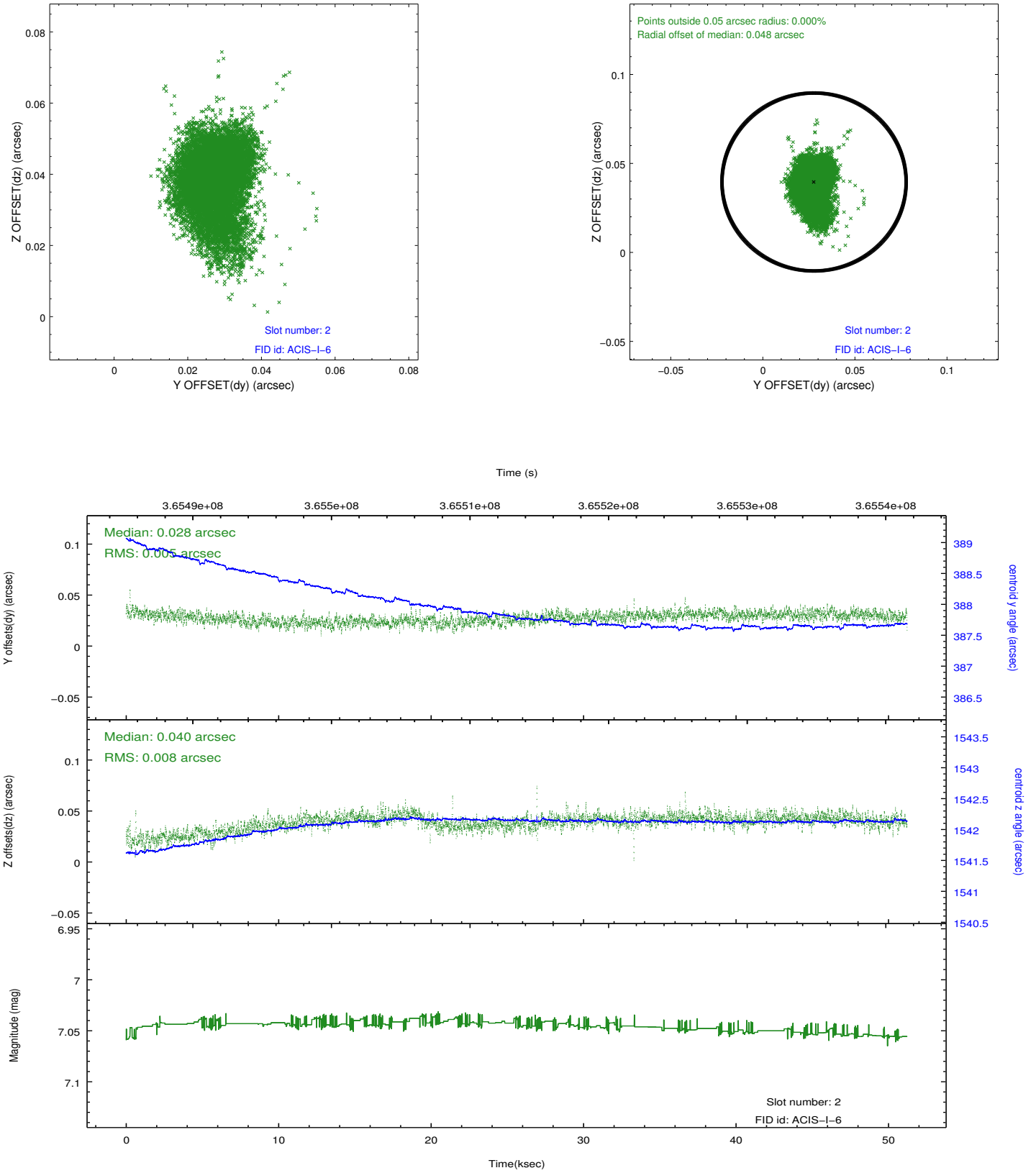
2.5.1 Slot 0



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)	2013.01.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.9701593

A.2 Comments

User: The bias files for this observation were adversely affected by a light leak from a bright optical source. The CCDs ACIS-S2, ACIS-I2, and ACIS-I0 were affected the most. There may also be some contribution from the light leak on the biases for CCDs ACIS-I3 and ACIS-I1, but the effect is relatively small on these two CCDs. To avoid systematically reducing the size of the pulse heights of the events, the biases for every CCD were replaced by biases for the same set of CCDs from another observation that was taken (1) within 2 days of this observation, (2) at a temperature that differed by only a few tenths of degrees C, and (3) with the same clocking configuration. Before the replacement biases were used, the overall levels of the bias were adjusted separately for each node. The data obtained after reprocessing with the replacement biases were examined to search for evidence of problems with the pulse heights by examining the pulse heights of the outer 16 pixels of the 5x5 event islands. The modes of these pulse-height histograms were at zero adu for every node. Therefore, it appears that the reprocessed data is fine. Please note that analyses of data at or very near the event threshold will be problematic because some events that should have been telemetered will not have been due to the light leak. There is no way to fix this problem. As long as lowest-energy data are ignored for spectral analyses this issue should not be a problem.