

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12259 - L2 Version 2
Chandra X-Ray Center

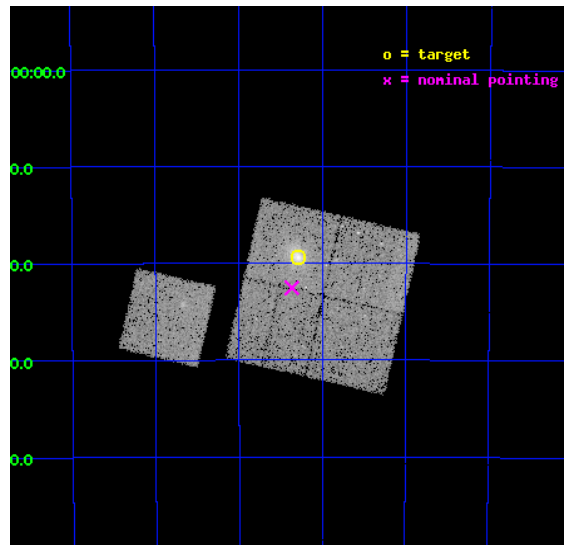
L2 Processing Date : Feb 4 2012

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1 Front

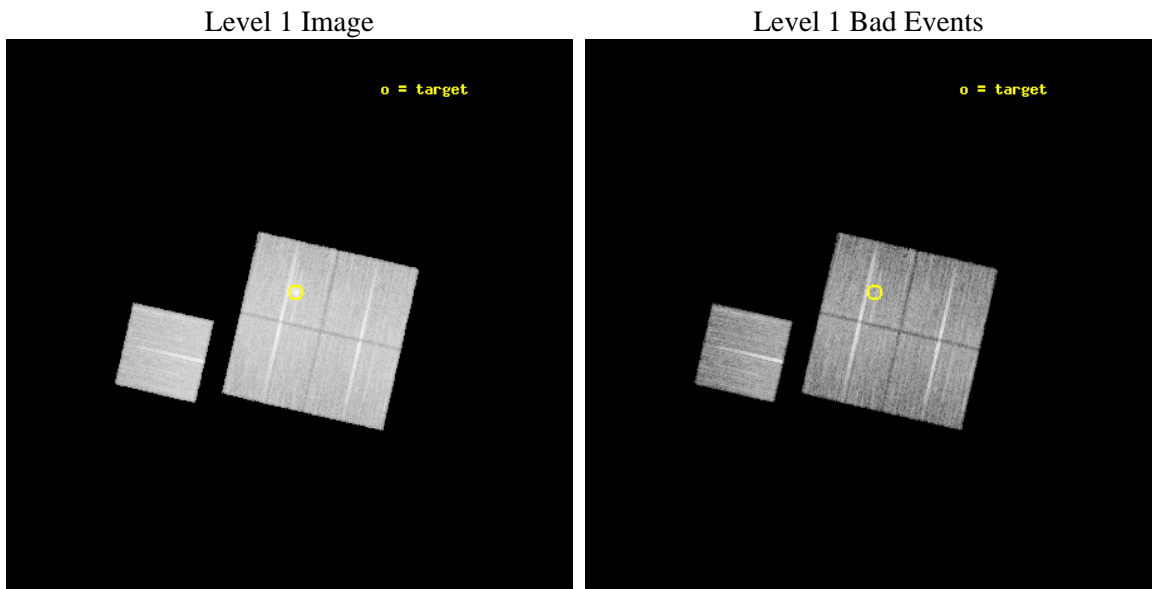
seq_num	800978	Sequence number
obs_id	12259	Observation id
title	Chandra Observations of the ACT Sample of SZE-Selected Galaxy Clusters	Proposal title
observer	Prof John Hughes	Principal investigator
object	ACT J0438-5419	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	69.57375	Observer's specified target RA [deg]
dec_targ	-54.322417	Observer's specified target Dec [deg]
ra_nom	69.591407283346	Nominal RA [deg]
dec_nom	-54.375828902769	Nominal Dec [deg]
roll_nom	282.9352676749	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20050.71816355	Sum of GTIs [s]
livetime	19788.740769619	Livetime [s]
ontime0	20057.000154257	Sum of GTIs [s]
ontime1	20057.000154257	Sum of GTIs [s]
ontime2	20053.859183848	Sum of GTIs [s]
ontime3	20050.71816355	Sum of GTIs [s]
ontime6	20053.859143853	Sum of GTIs [s]
l2events	70434	Number of level 2 events



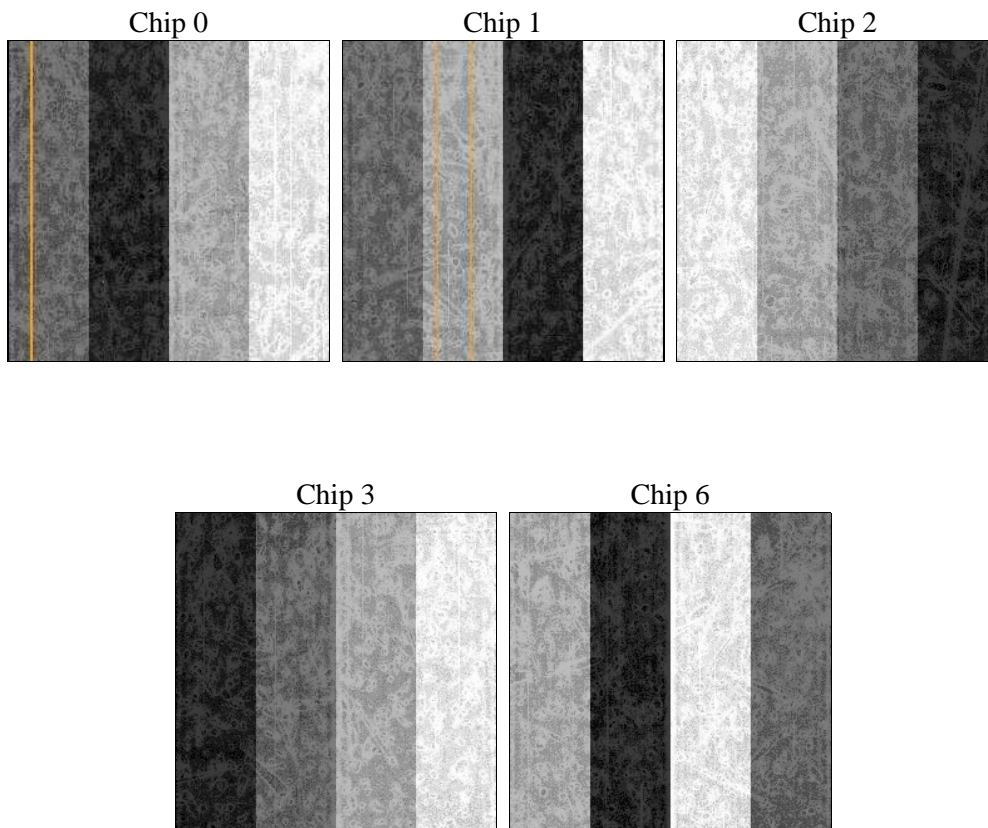
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	20050.71816355	Sum of GTIs [s]
caldbver	4.4.7	 	ontime0	20057.000154257	Sum of GTIs [s]
date	2012-02-04T07:39:14	Date and time of file creation	ontime1	20057.000154257	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20053.859183848	Sum of GTIs [s]
			ontime3	20050.71816355	Sum of GTIs [s]
			ontime6	20053.859143853	Sum of GTIs [s]
			l1events	655734	Number of level 1 events

2.1.4 Events

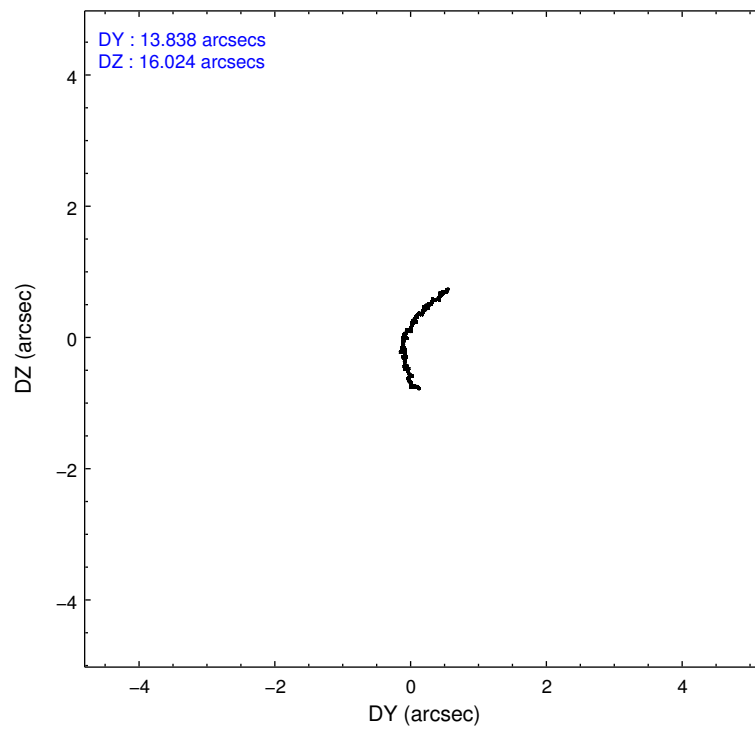
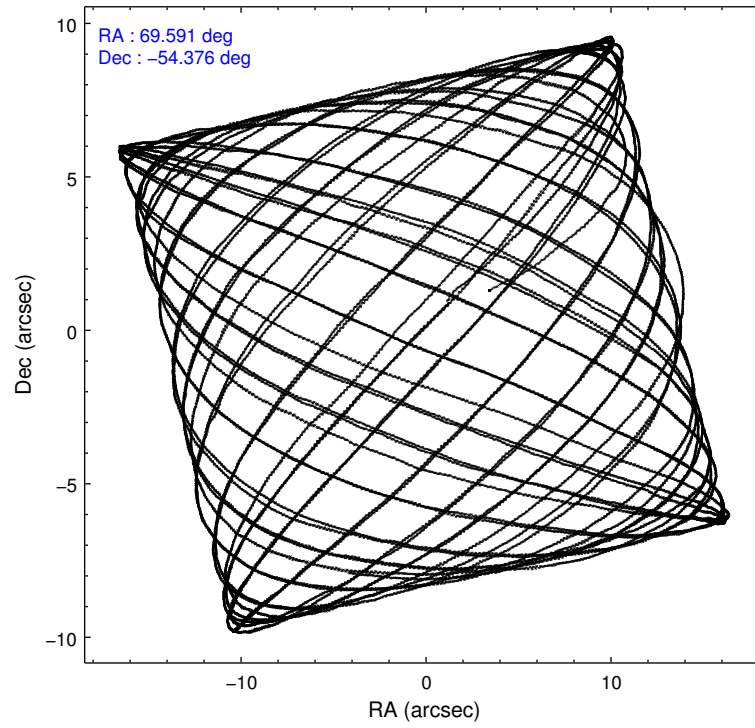
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	123663	126695	129752	137565	138059
rejected events	108781	109466	115136	116901	122566
rejected %	87%	86%	88%	84%	88%

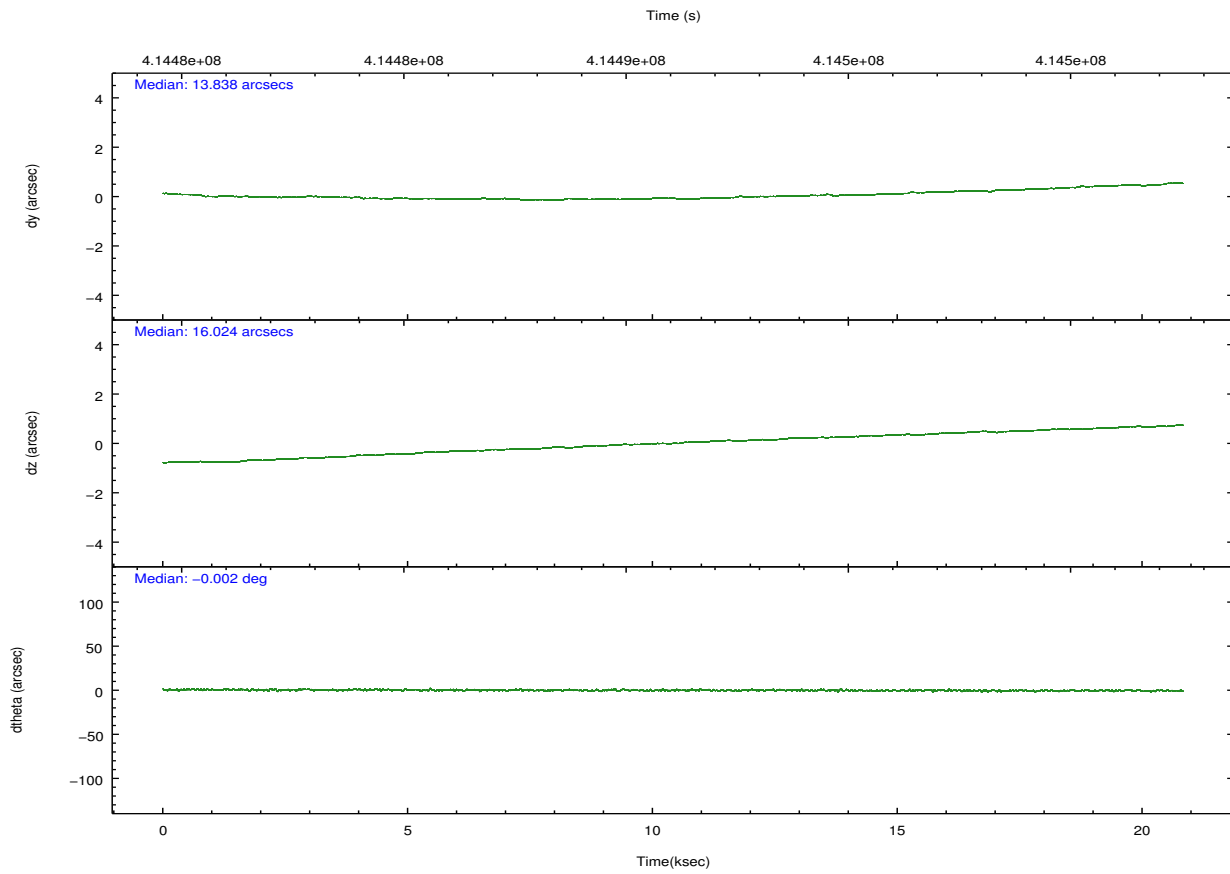
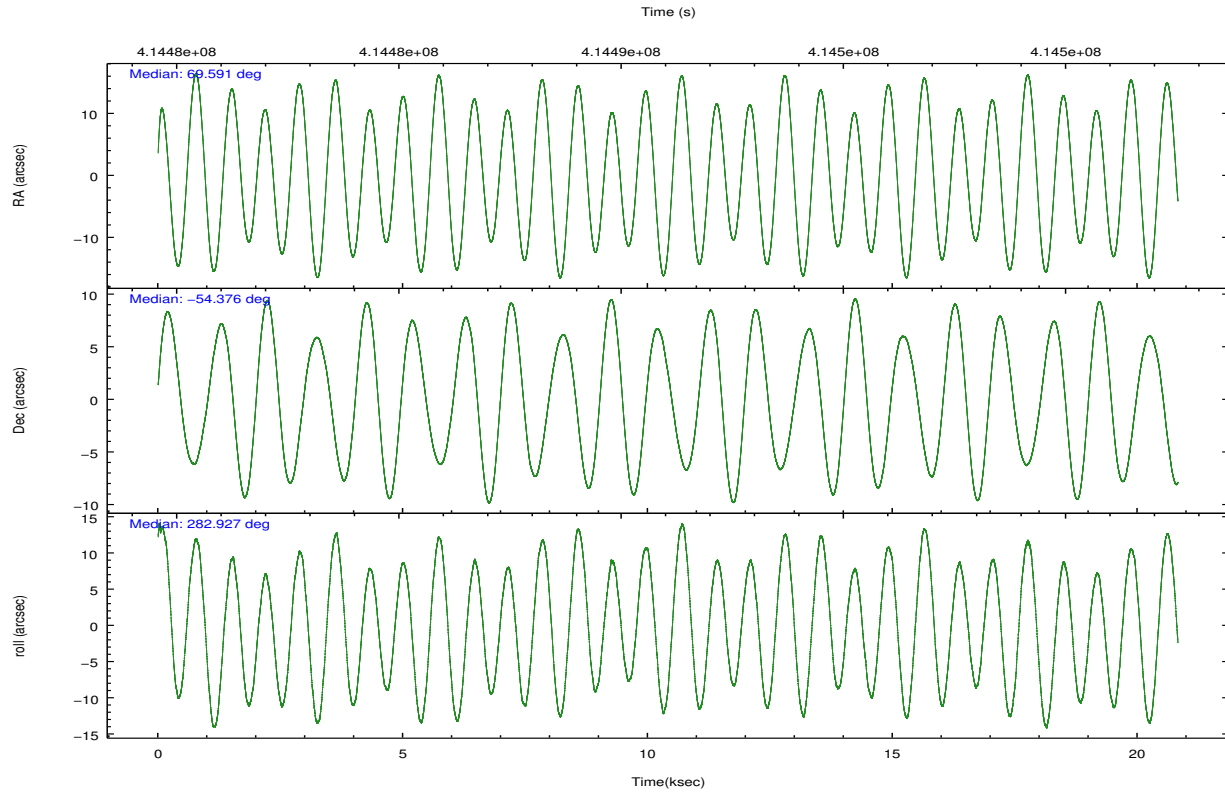
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5147	6353	5355	10384	5450
	4%	5%	4%	7%	3%
grade 1 events	85	60	64	115	65
	0%	0%	0%	0%	0%
grade 2 events	3607	4106	3489	3808	3402
	2%	3%	2%	2%	2%
grade 3 events	1632	1695	1486	1661	1593
	1%	1%	1%	1%	1%
grade 4 events	1525	1697	1543	1684	1624
	1%	1%	1%	1%	1%
grade 5 events	5758	6071	5362	6301	6222
	4%	4%	4%	4%	4%
grade 6 events	2971	3381	2743	3128	3425
	2%	2%	2%	2%	2%
grade 7 events	102938	103332	109710	110484	116278
	83%	81%	84%	80%	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	69.559110	69.59140728334631	CCD I2 on	Y	Y
[deg] Pointing Dec	-54.355779	-54.37582890276901	CCD I3 on	Y	Y
[deg] Pointing Roll	282.700330	282.9352676748962	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)	414481476.184000	414479780.205	CCD S5 on	N	N
Observation start date	2011-02-19T05:43:30	2011-02-19T05:16:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	414501476.184000	414502555.19368	On-chip summing requested	N	N
Observation end date	2011-02-19T11:16:50	2011-02-19T11:35:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



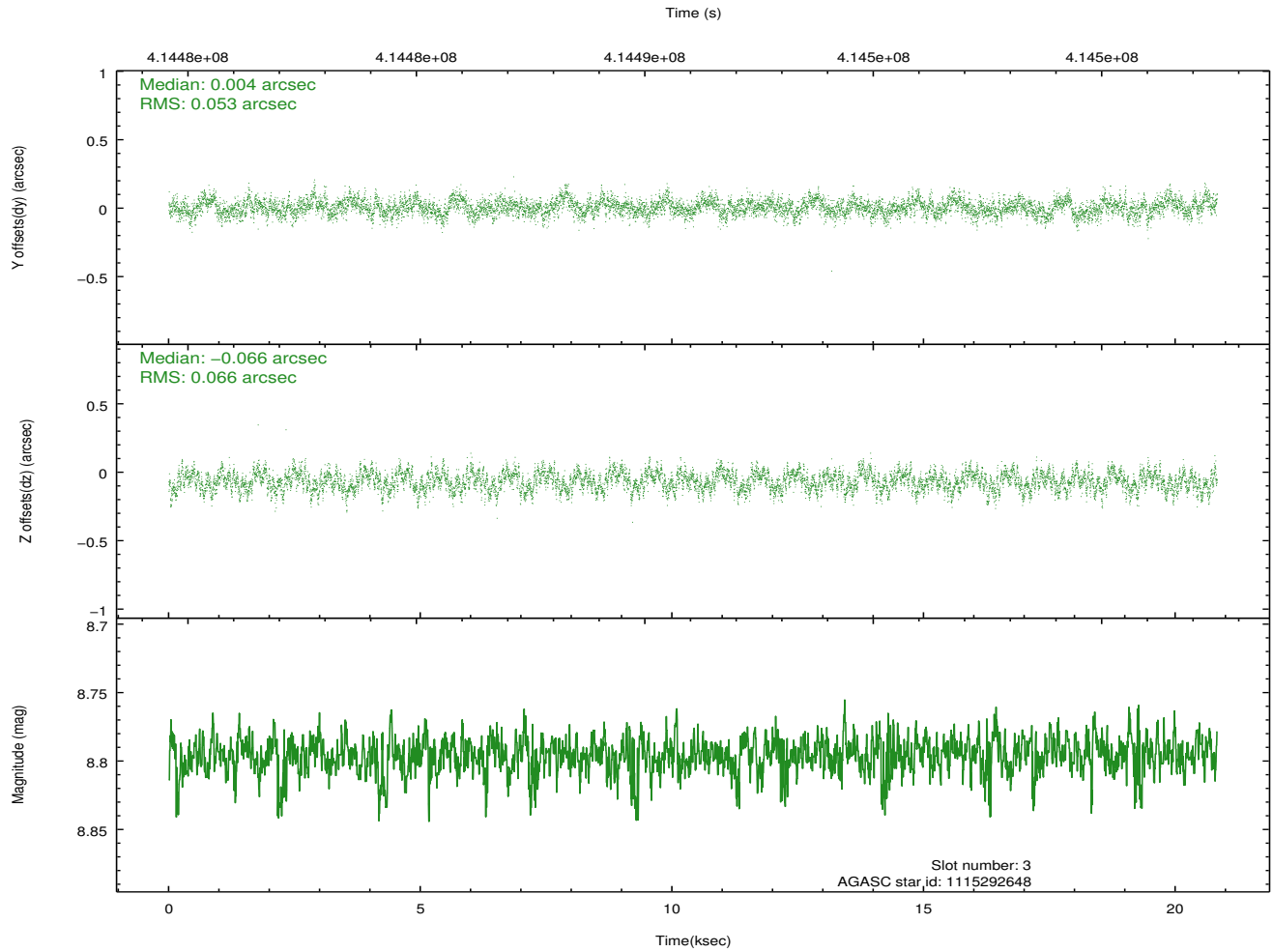
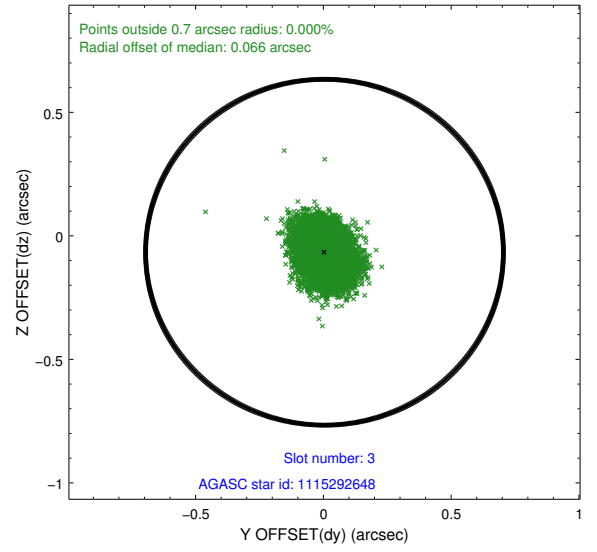
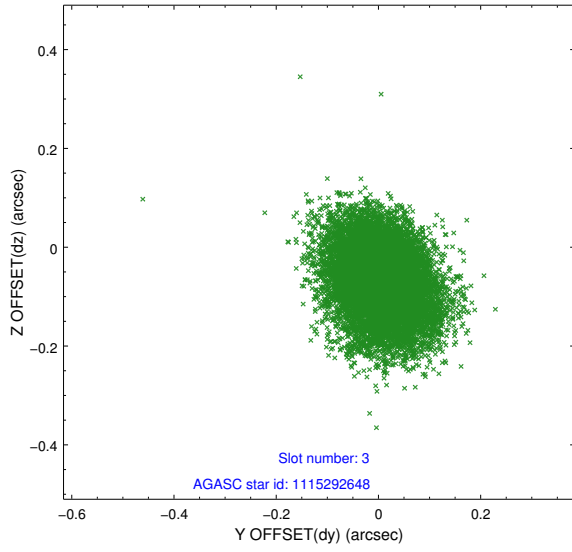


Slot Statistics

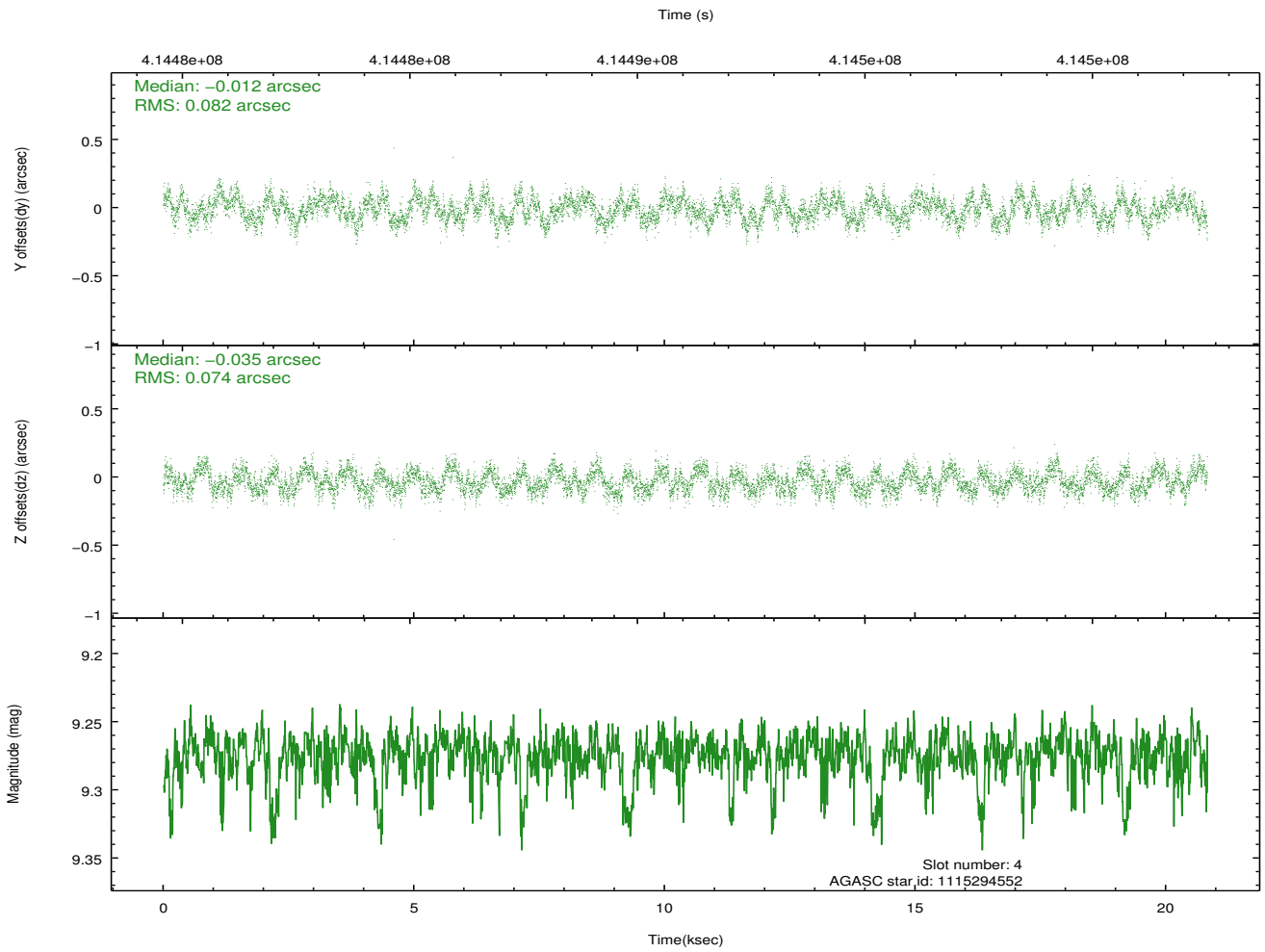
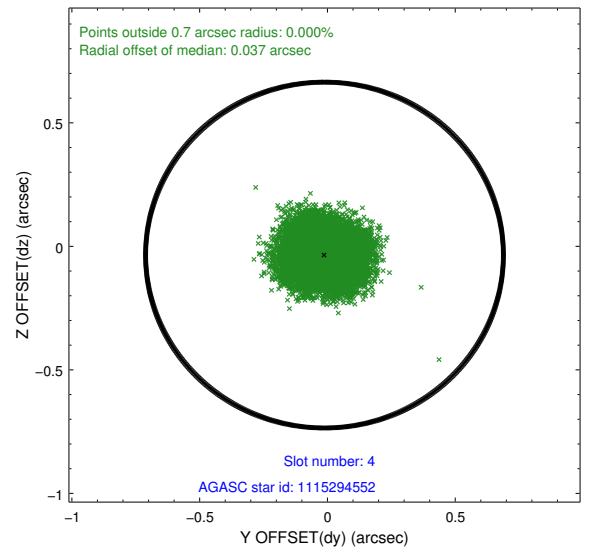
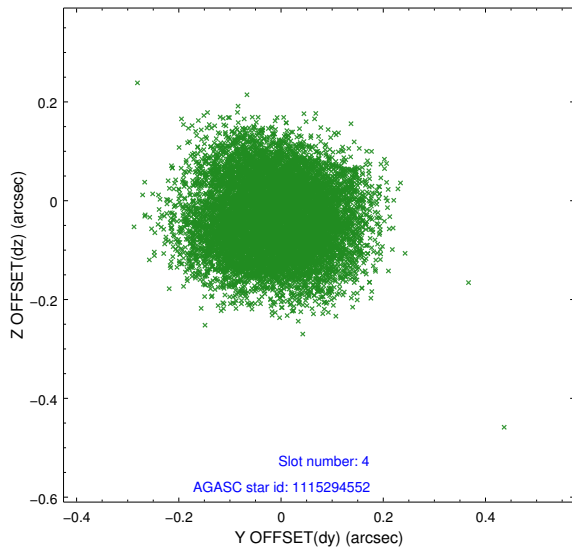
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-4	6.96	5077	0.086	0.062	0.010	0.017	0.000000	0.000000	2145.05	900.95
1	FID	ACIS-I-5	7.04	5080	-0.251	0.030	0.007	0.012	0.000000	0.000000	-1822.58	897.83
2	FID	ACIS-I-6	7.06	5079	0.065	-0.024	0.011	0.019	0.000000	0.000000	390.87	1542.09
3	GUIDE	1115292648	8.80	10156	0.004	-0.066	0.091	0.147	69.128269	-54.621151	737.52	-1086.29
4	GUIDE	1115294552	9.27	10150	-0.012	-0.035	0.120	0.181	70.763166	-54.715228	1833.71	2153.69
5	GUIDE	1115294592	8.03	10157	-0.011	0.002	0.071	0.113	68.867649	-54.891283	1573.16	-1820.94
6	GUIDE	1115306896	9.58	10147	-0.060	0.028	0.127	0.201	70.253885	-53.868129	-1381.39	1823.08
7	GUIDE	1115307616	8.93	10126	0.080	0.070	0.100	0.158	68.994288	-54.194583	-822.50	-1033.79

2.4 Star Slots

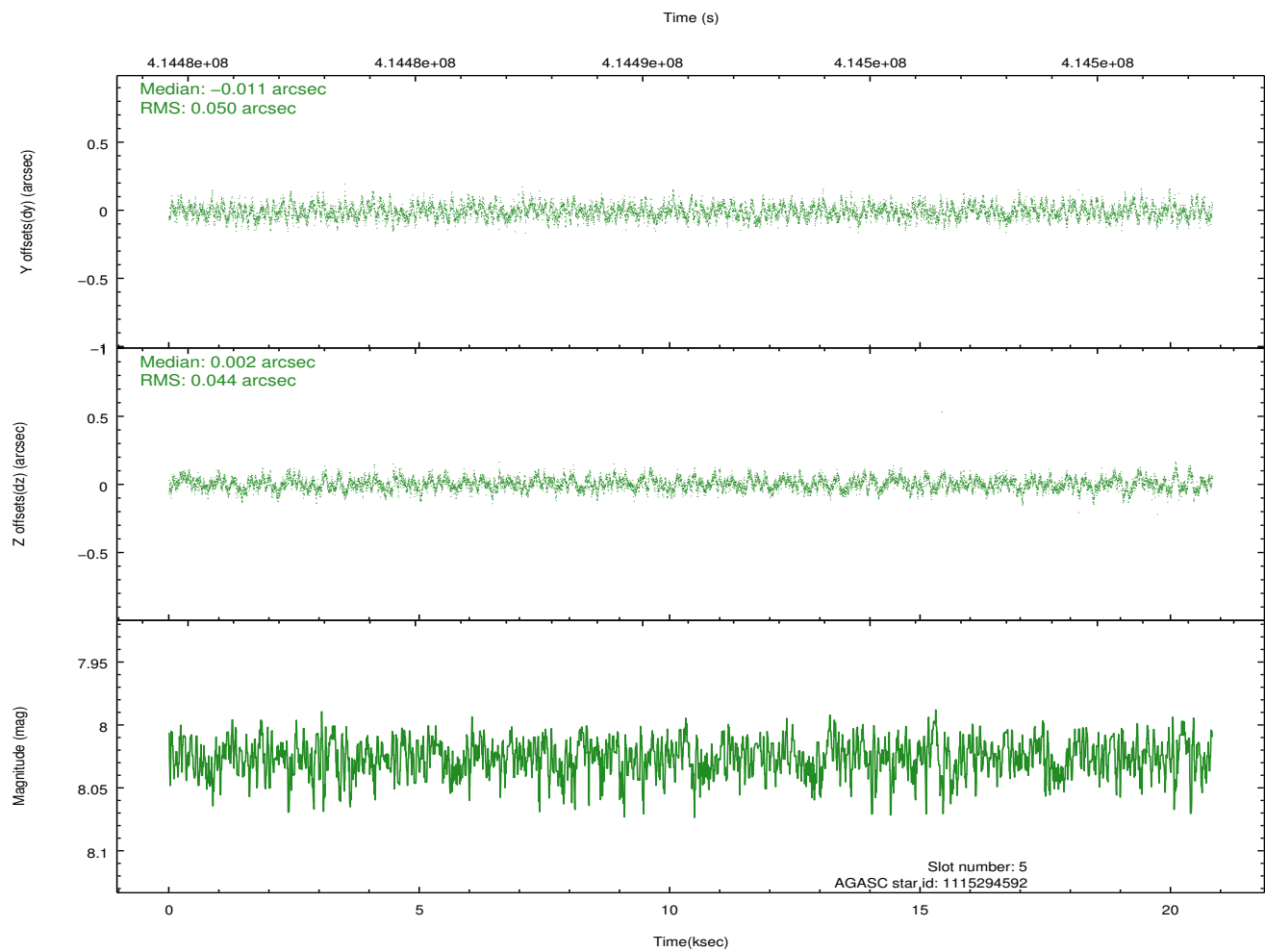
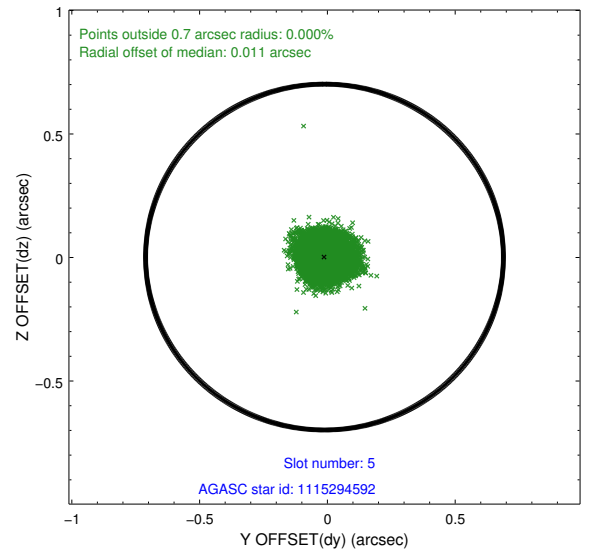
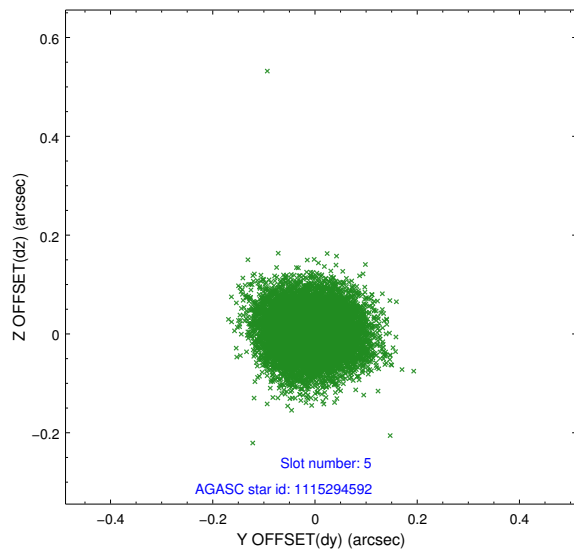
2.4.1 Slot 3



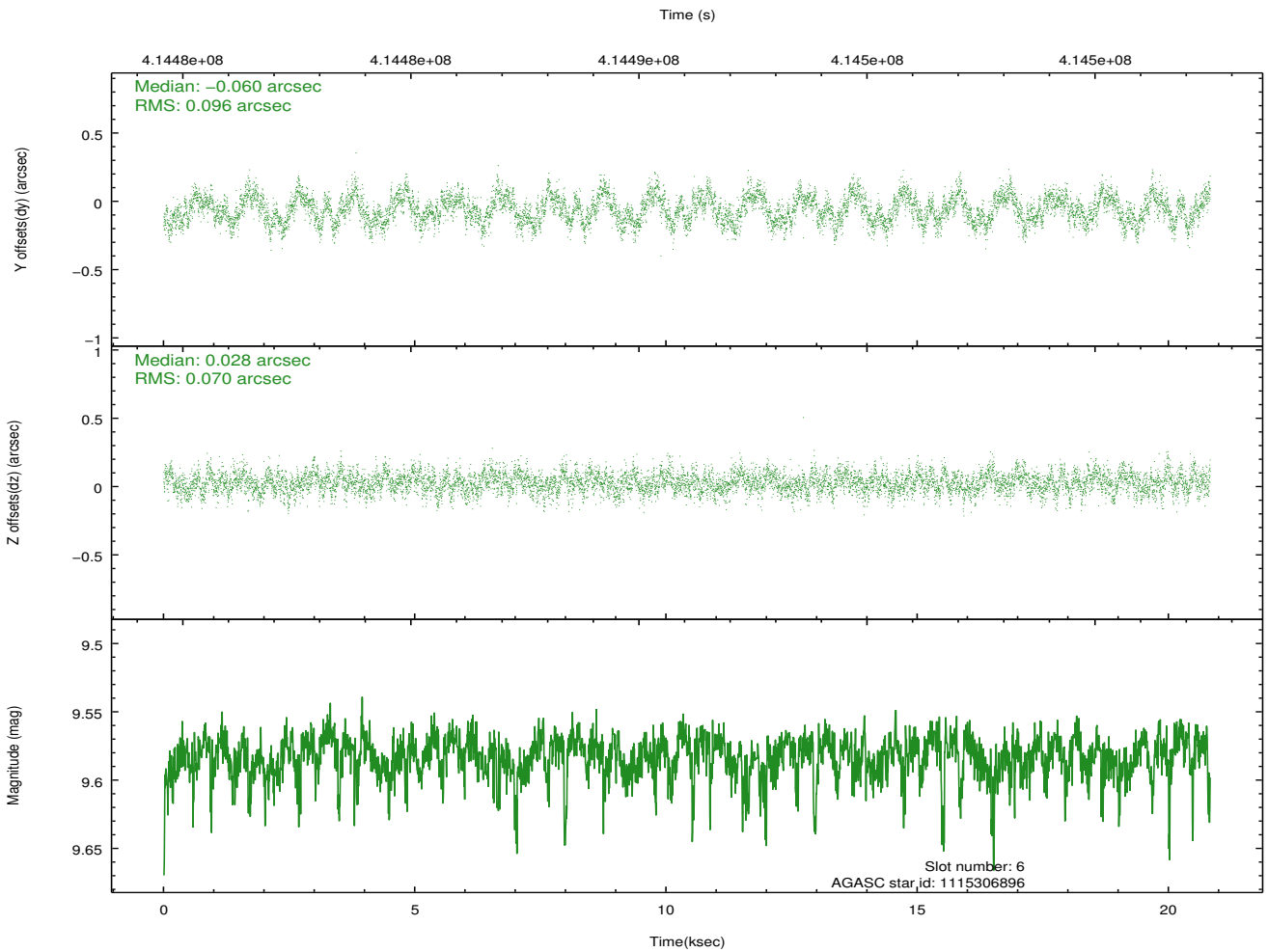
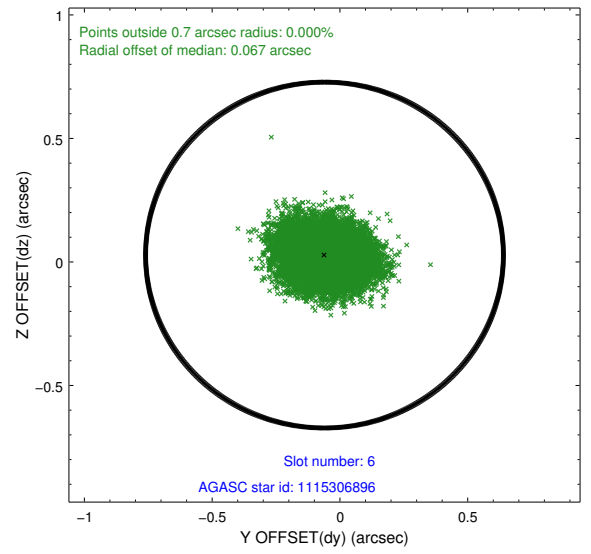
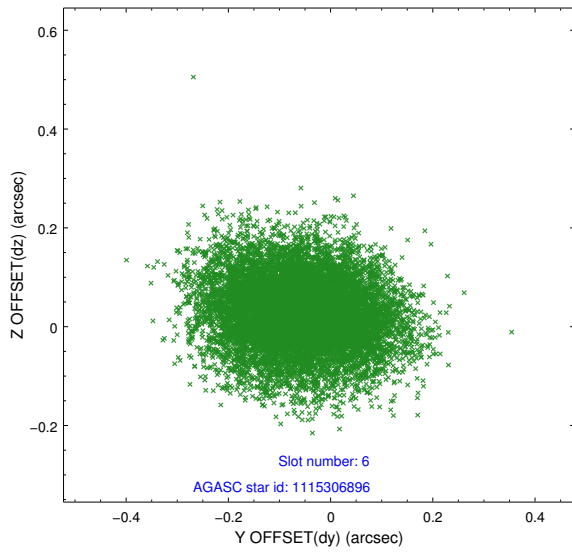
2.4.2 Slot 4



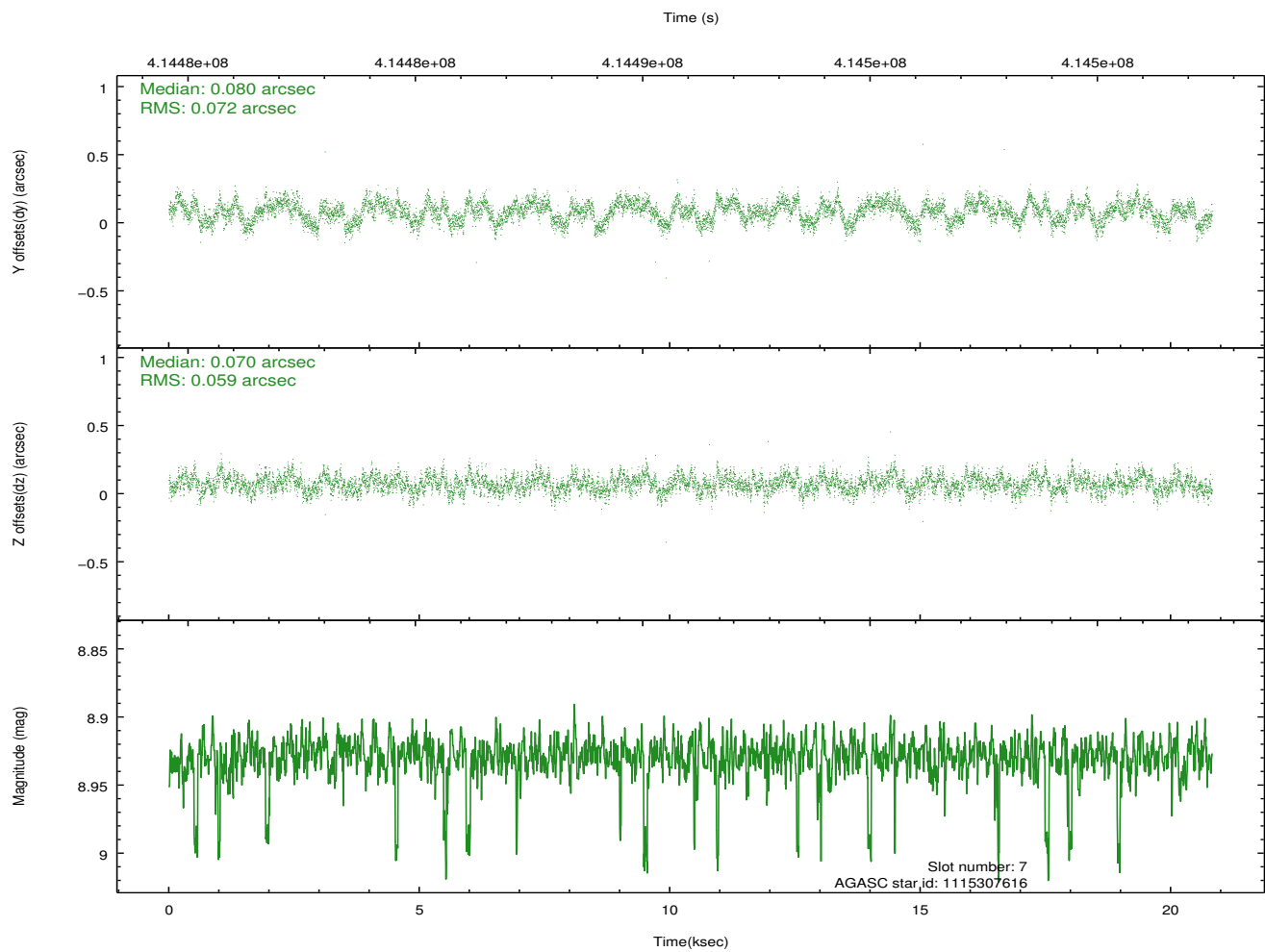
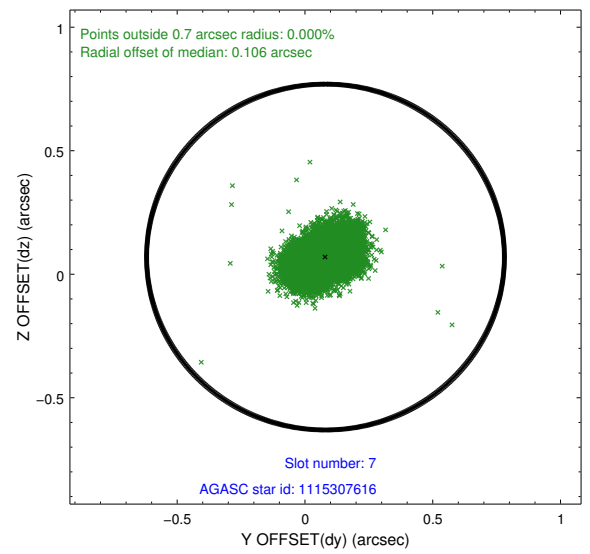
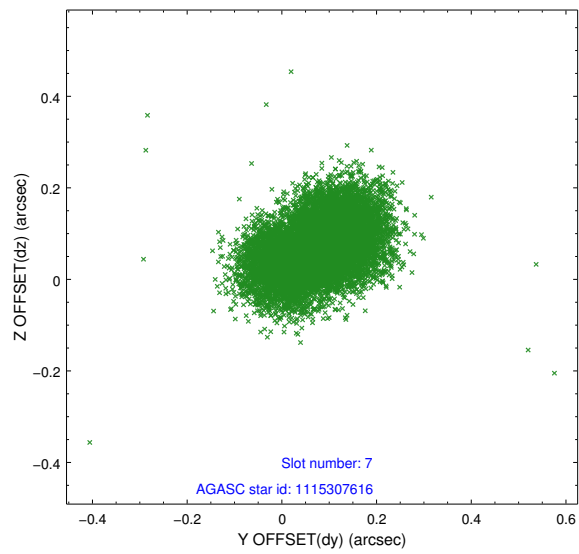
2.4.3 Slot 5



2.4.4 Slot 6

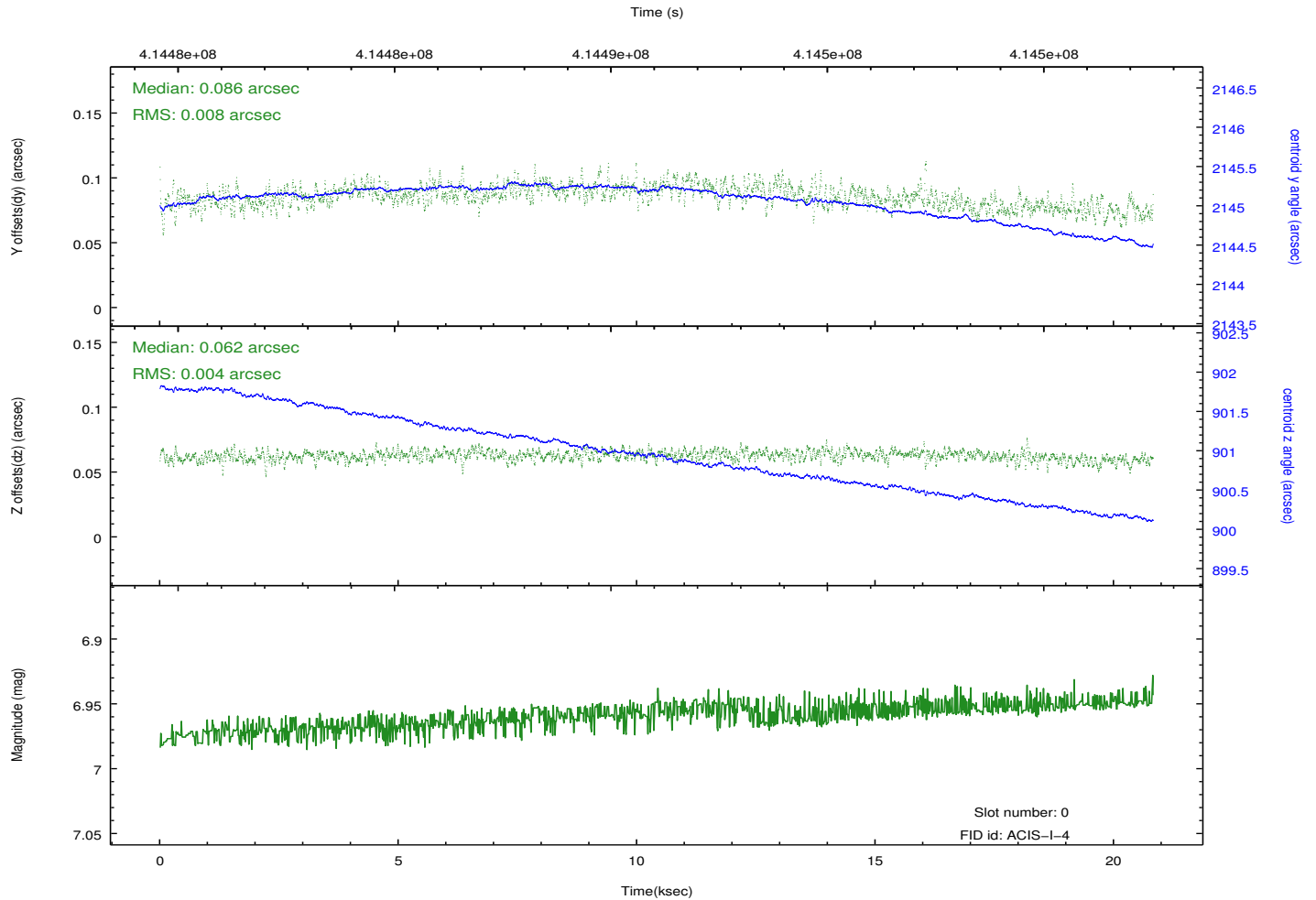
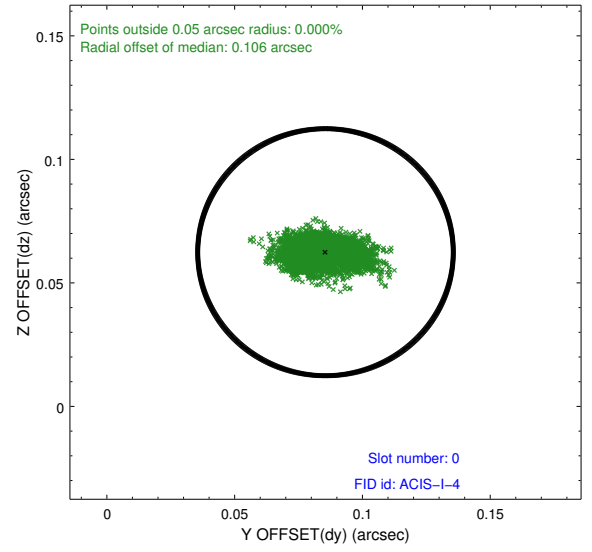
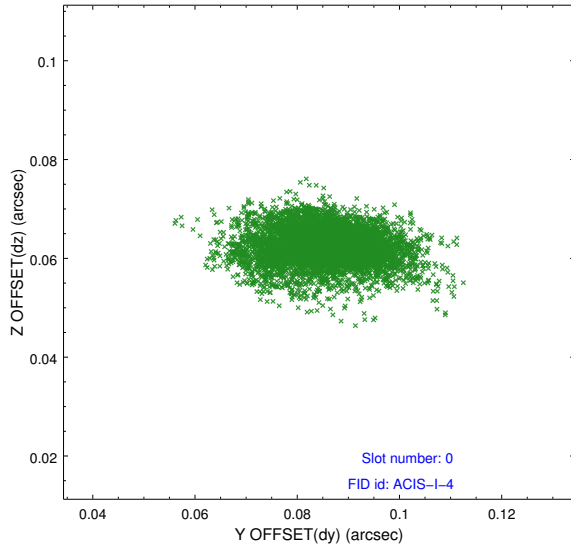


2.4.5 Slot 7

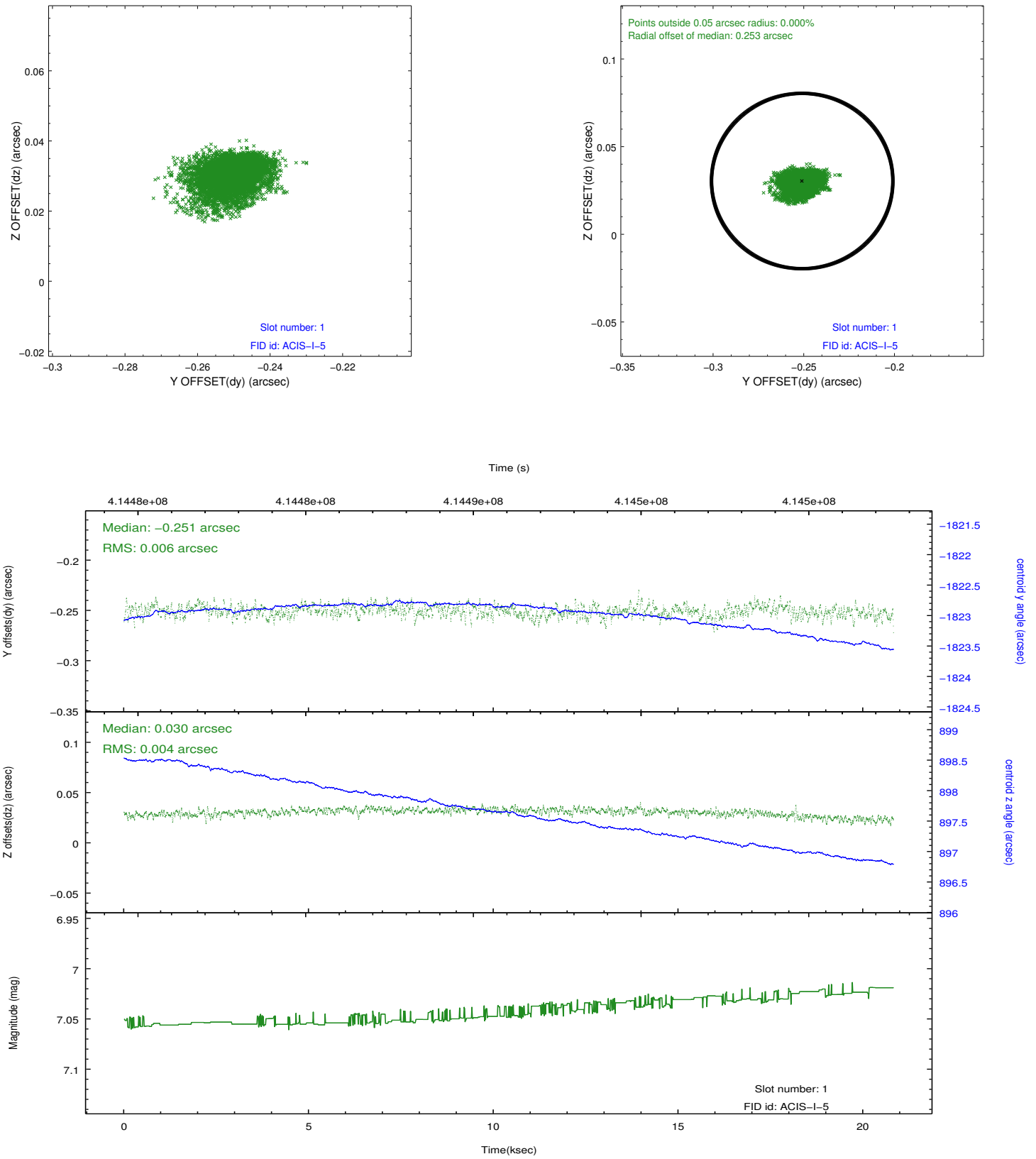


2.5 FID Slots

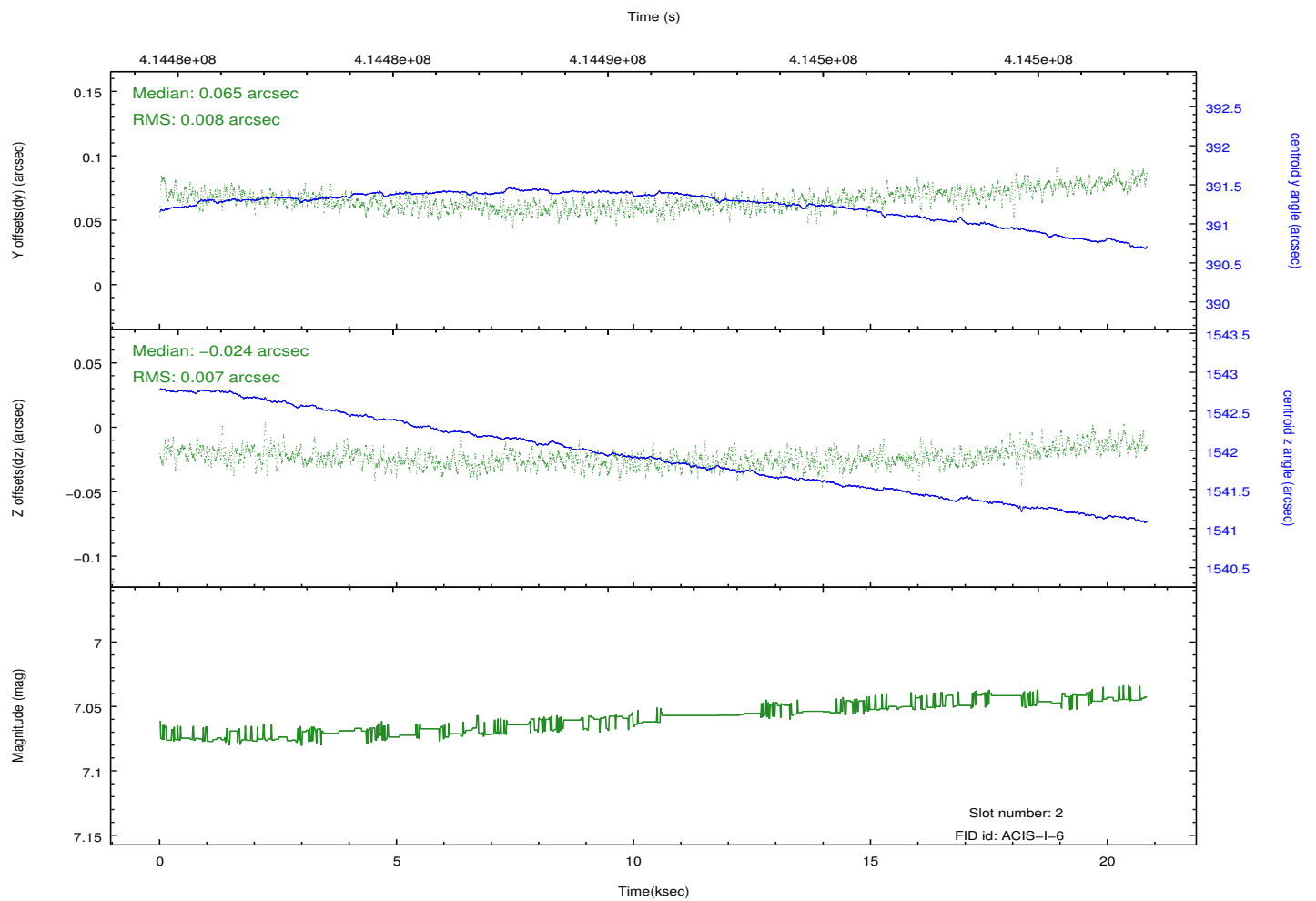
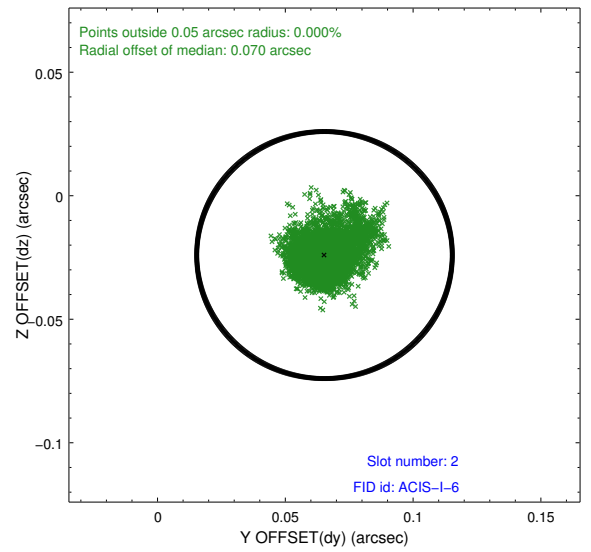
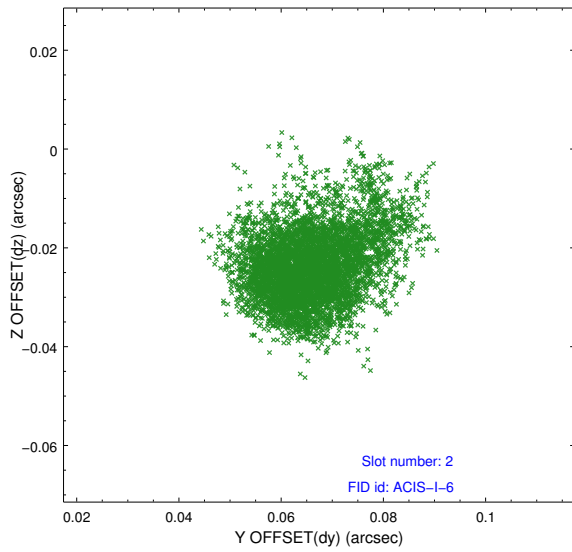
2.5.1 Slot 0



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)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.05071816349

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSEr algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.