

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13198 - L2 Version 2
Chandra X-Ray Center

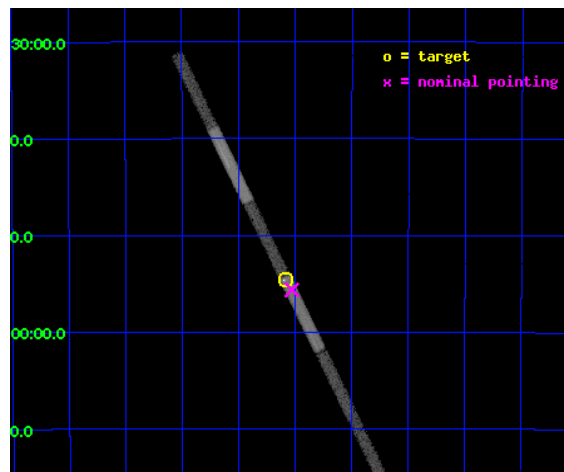
L2 Processing Date : Feb 11 2012

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1 Front

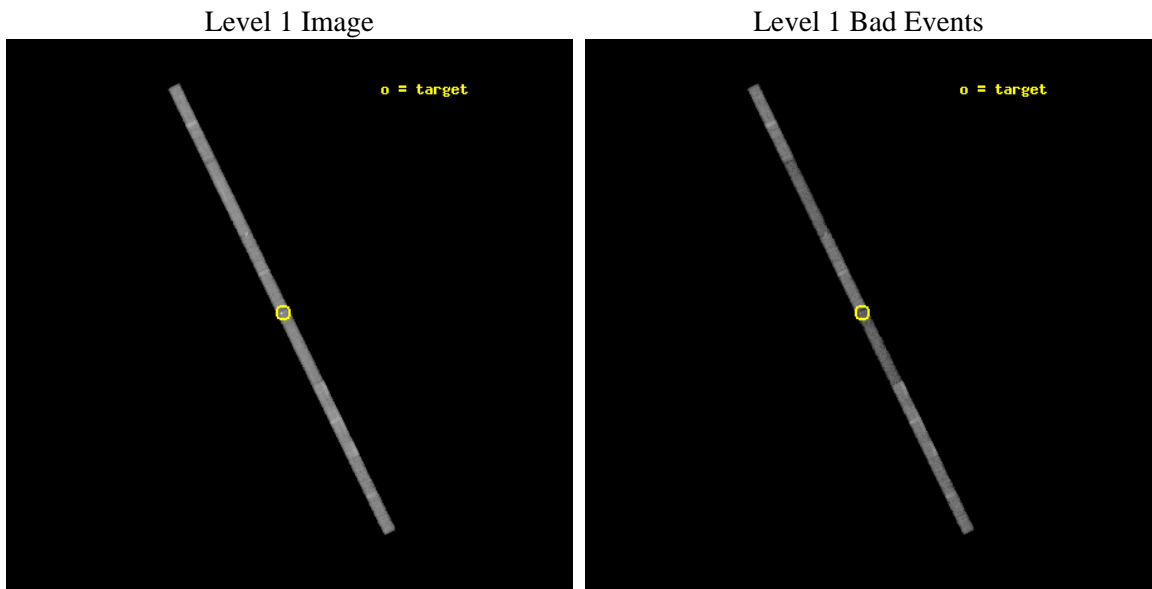
seq_num	490022	Sequence number
obs_id	13198	Observation id
title	AO-12 Calibration Observations of GX 13+1 and RXJ 1856.5-3754	Prop
observer	Dr. CXC Calibration	Principal investigator
object	RXJ 1856.5-3754	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	284.147083	Observer's specified target RA [deg]
dec_targ	-37.909611	Observer's specified target Dec [deg]
ra_nom	284.13246029035	Nominal RA [deg]
dec_nom	-37.927173230882	Nominal Dec [deg]
roll_nom	63.847741408323	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30064.999487936	Sum of GTIs [s]
livetime	28399.950935922	Livetime [s]
ontime4	30064.999487936	Sum of GTIs [s]
ontime5	30064.999487936	Sum of GTIs [s]
ontime6	30064.258447945	Sum of GTIs [s]
ontime7	30064.999487936	Sum of GTIs [s]
ontime8	30064.999487936	Sum of GTIs [s]
ontime9	30064.999487936	Sum of GTIs [s]
l2events	44169	Number of level 2 events



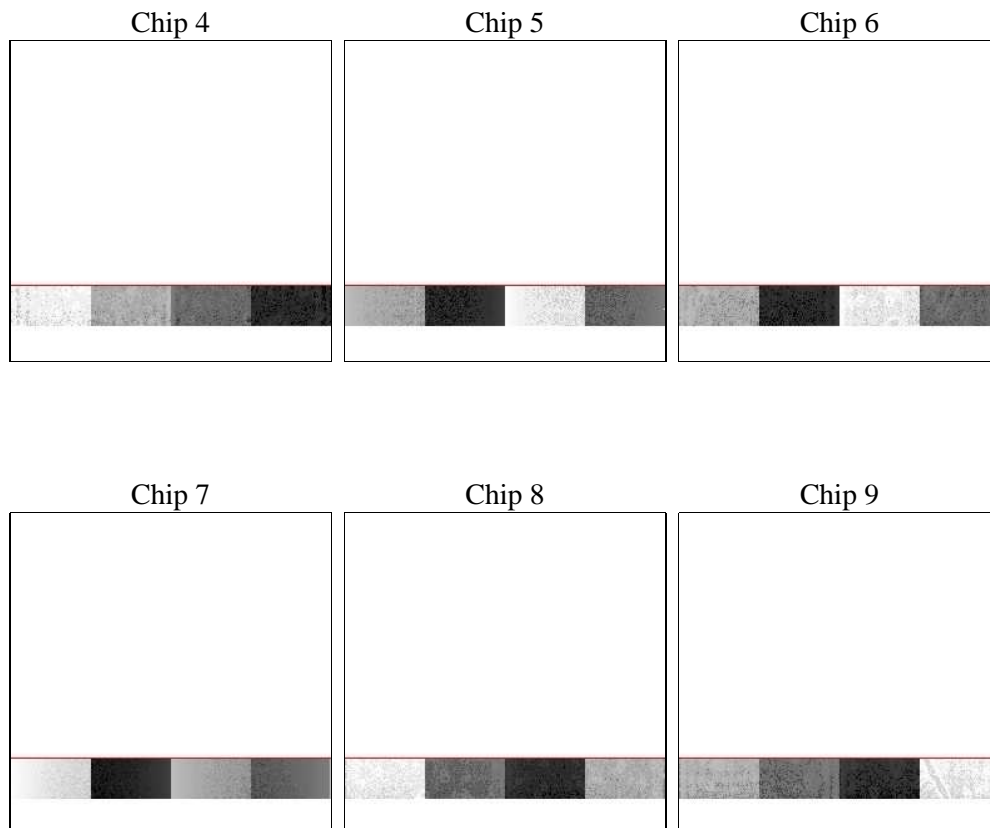
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	30064.999487936	Sum of GTIs [s]
caldsver	4.4.7	 	ontime4	30064.999487936	Sum of GTIs [s]
date	2012-02-11T18:57:56	Date and time of file creation	ontime5	30064.999487936	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30064.258447945	Sum of GTIs [s]
			ontime7	30064.999487936	Sum of GTIs [s]
			ontime8	30064.999487936	Sum of GTIs [s]
			ontime9	30064.999487936	Sum of GTIs [s]
			l1events	187021	Number of level 1 events

2.1.4 Events

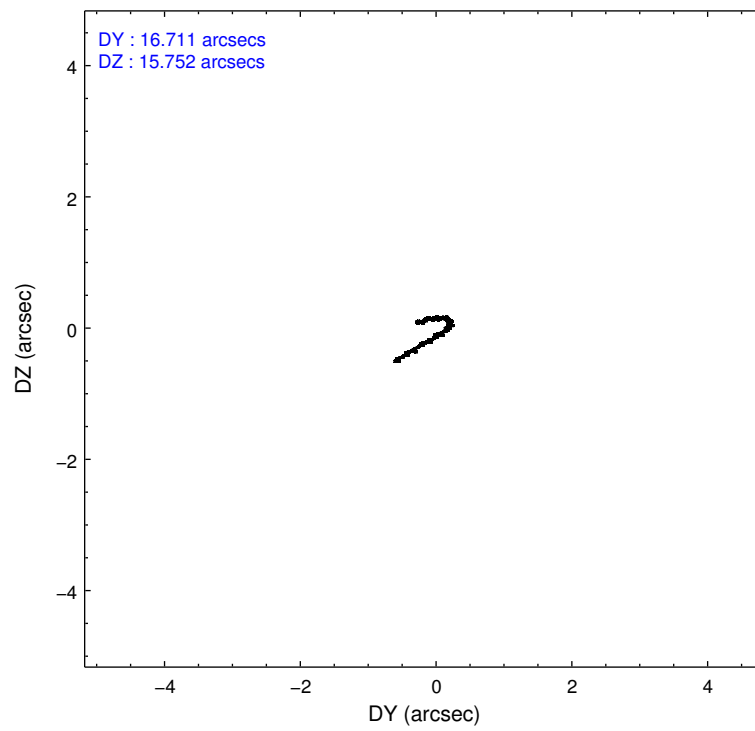
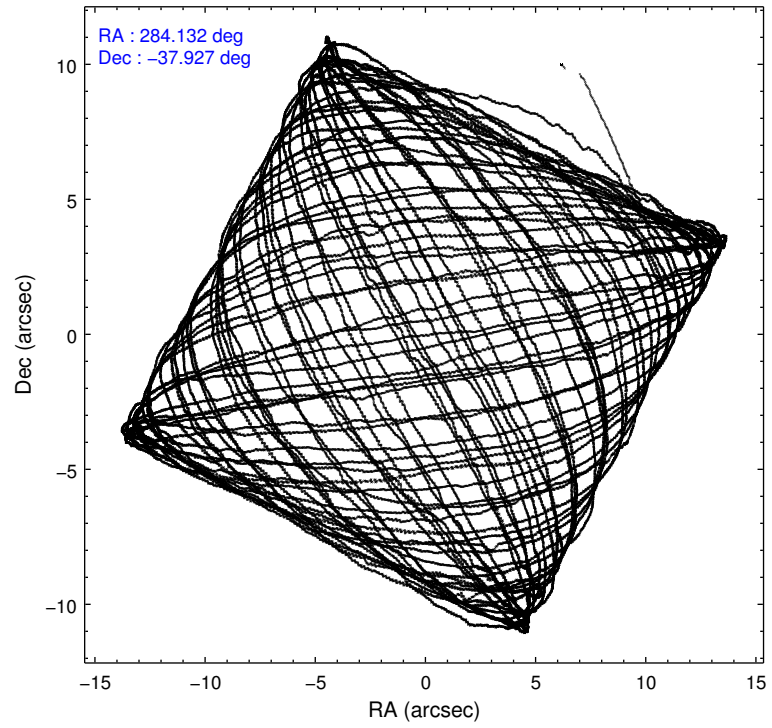
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	31974	33081	27801	28746	40901	24518
rejected events	28414	14401	24443	12335	30737	21378
rejected %	88%	43%	87%	42%	75%	87%

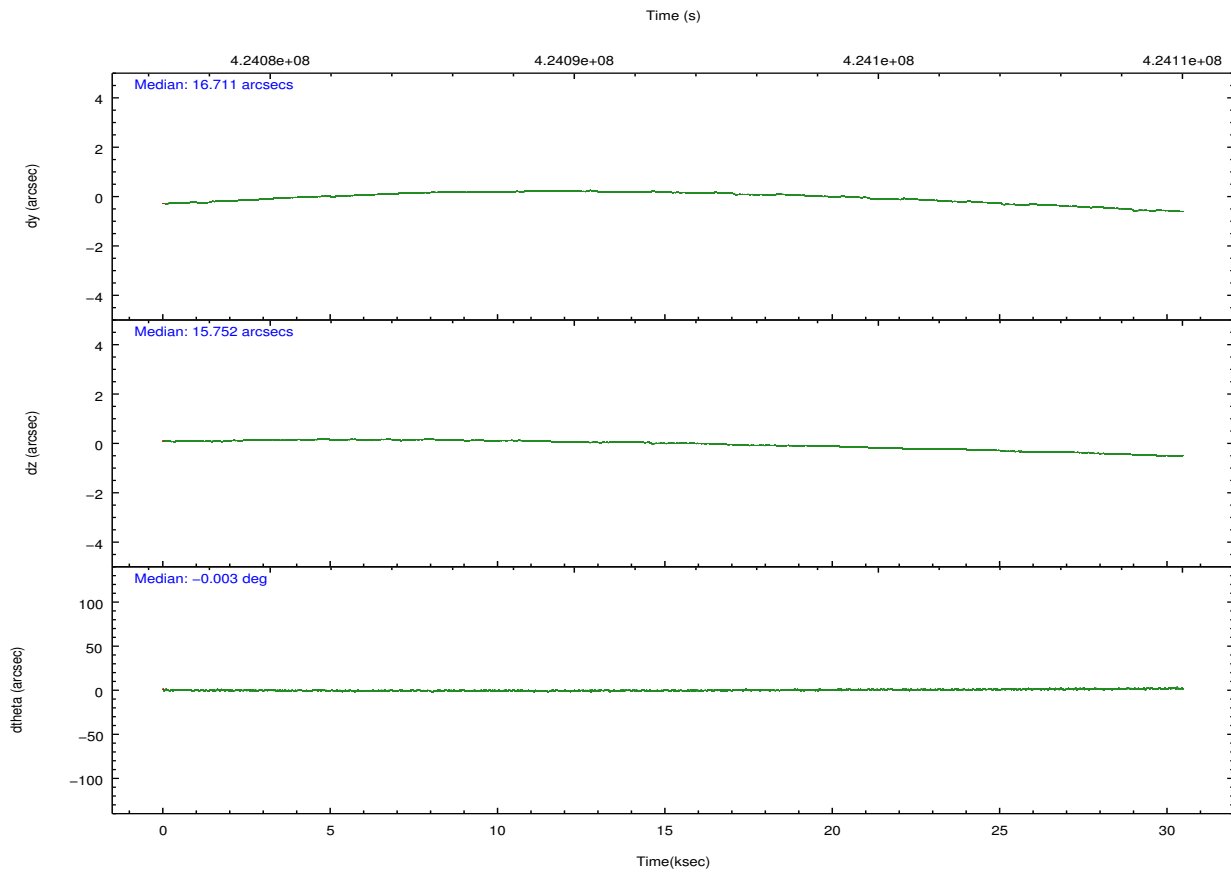
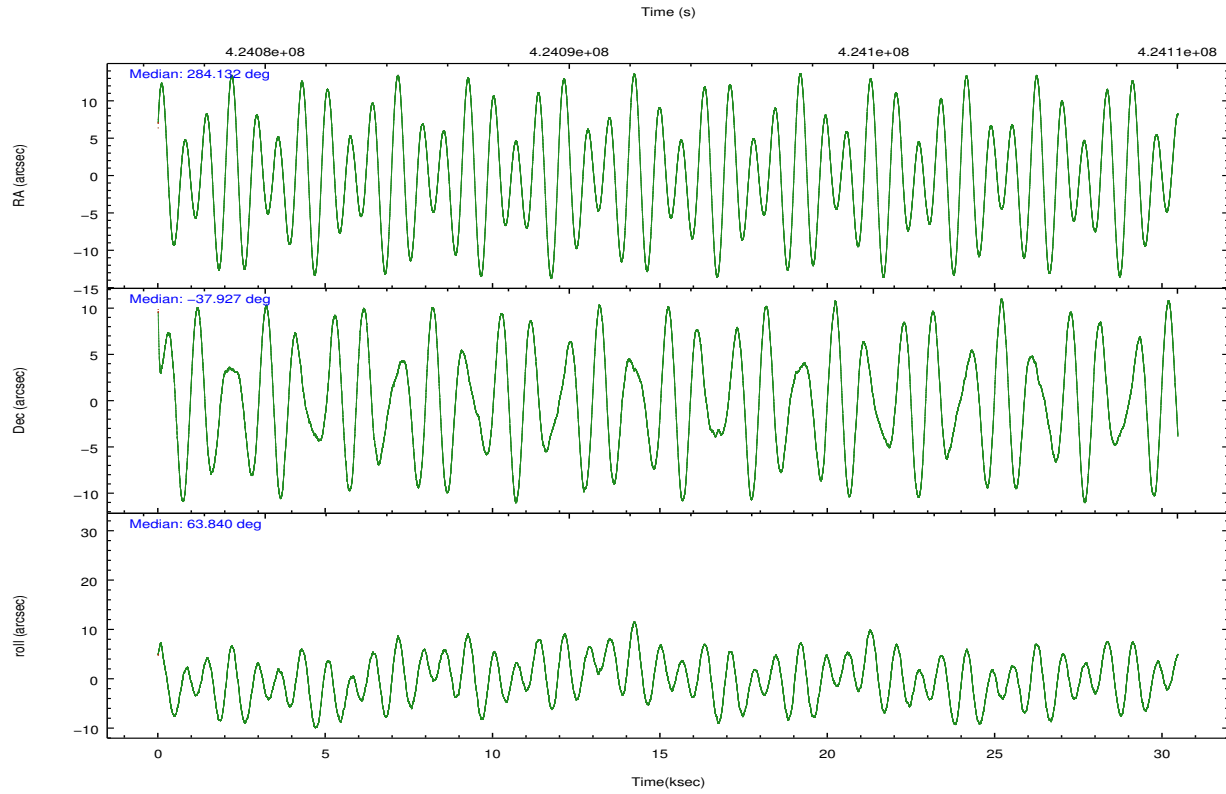
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1064	2855	1078	3918	2351	887
	3%	8%	3%	13%	5%	3%
grade 1 events	6	233	8	53	15	11
	0%	0%	0%	0%	0%	0%
grade 2 events	787	5009	590	3269	2082	613
	2%	15%	2%	11%	5%	2%
grade 3 events	582	1394	590	1851	1257	574
	1%	4%	2%	6%	3%	2%
grade 4 events	511	1413	532	1669	1180	515
	1%	4%	1%	5%	2%	2%
grade 5 events	808	2985	747	2581	1186	854
	2%	9%	2%	8%	2%	3%
grade 6 events	616	8011	568	5704	3294	551
	1%	24%	2%	19%	8%	2%
grade 7 events	27600	11181	23688	9701	29536	20513
	86%	33%	85%	33%	72%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	284.135245	284.1324602903533	CCD I2 on	N	N
[deg] Pointing Dec	-37.954456	-37.92717323088206	CCD I3 on	N	N
[deg] Pointing Roll	63.692828	63.84774140832278	CCD S0 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-182.132523	-182.1344861297048	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-8	-7.998036453302973	CCD S4 on	Y	Y
[s] Observation start time (MET)	424078493.184000	424077414.3279	CCD S5 on	O1	Y
Observation start date	2011-06-10T07:33:47	2011-06-10T07:16:54	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	424108493.184000	424109259.54206	On-chip summing requested	N	N
Observation end date	2011-06-10T15:53:47	2011-06-10T16:07:39	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	113	113
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

2.3 Aspect



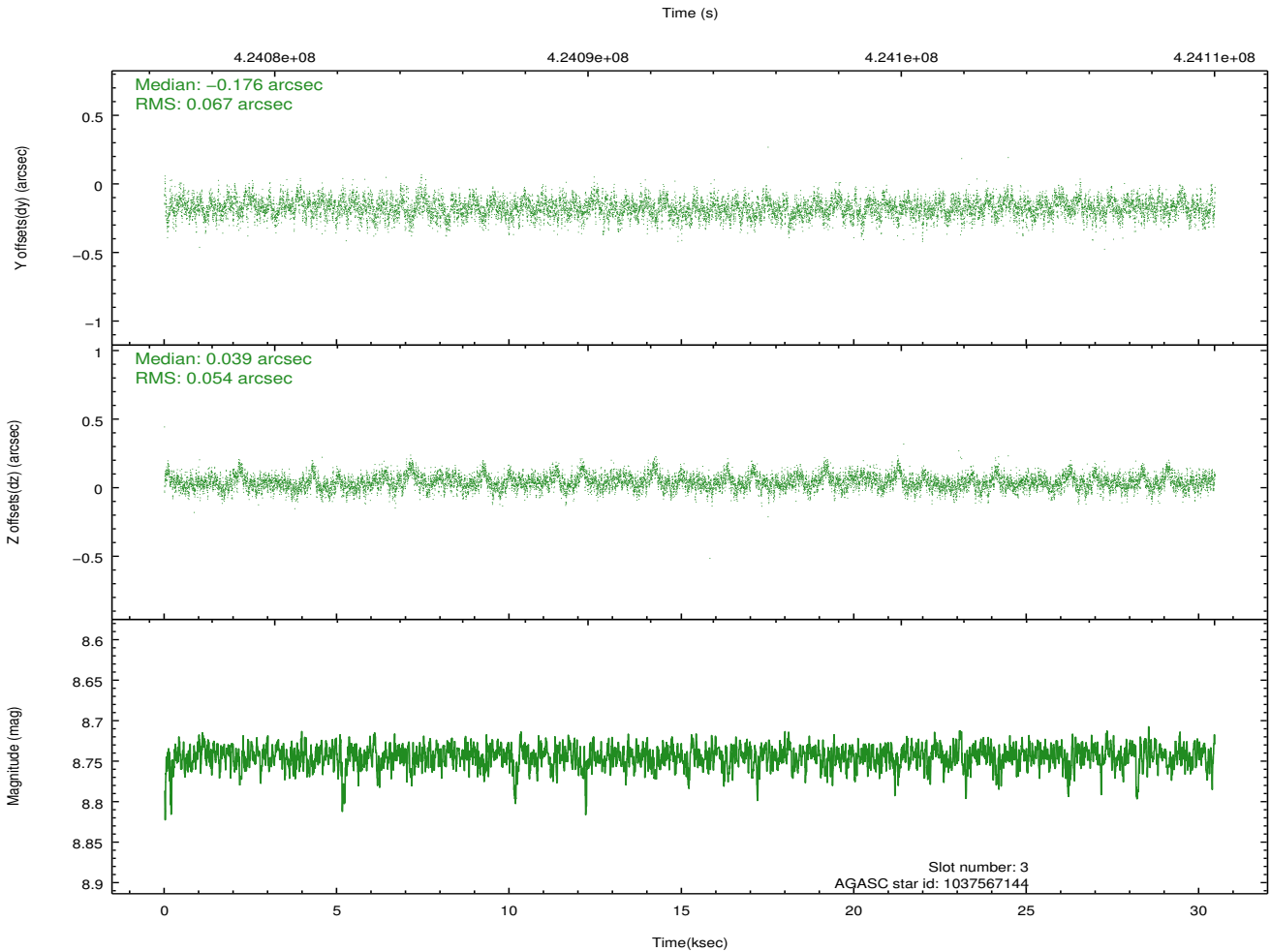
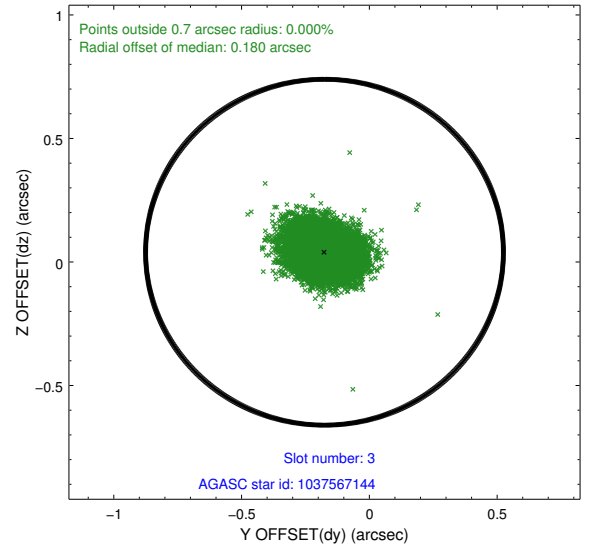
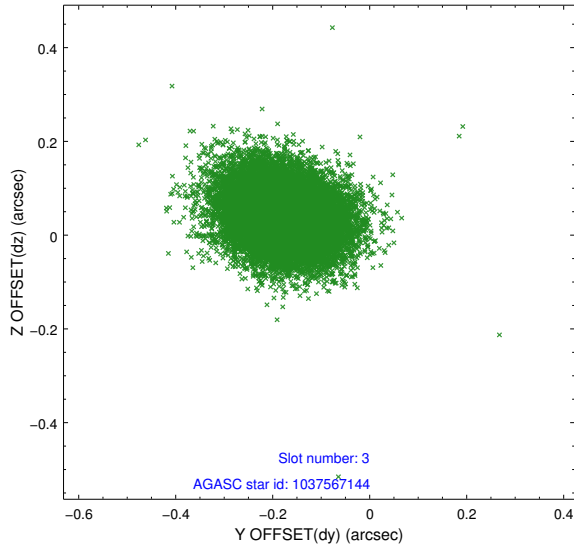


Slot Statistics

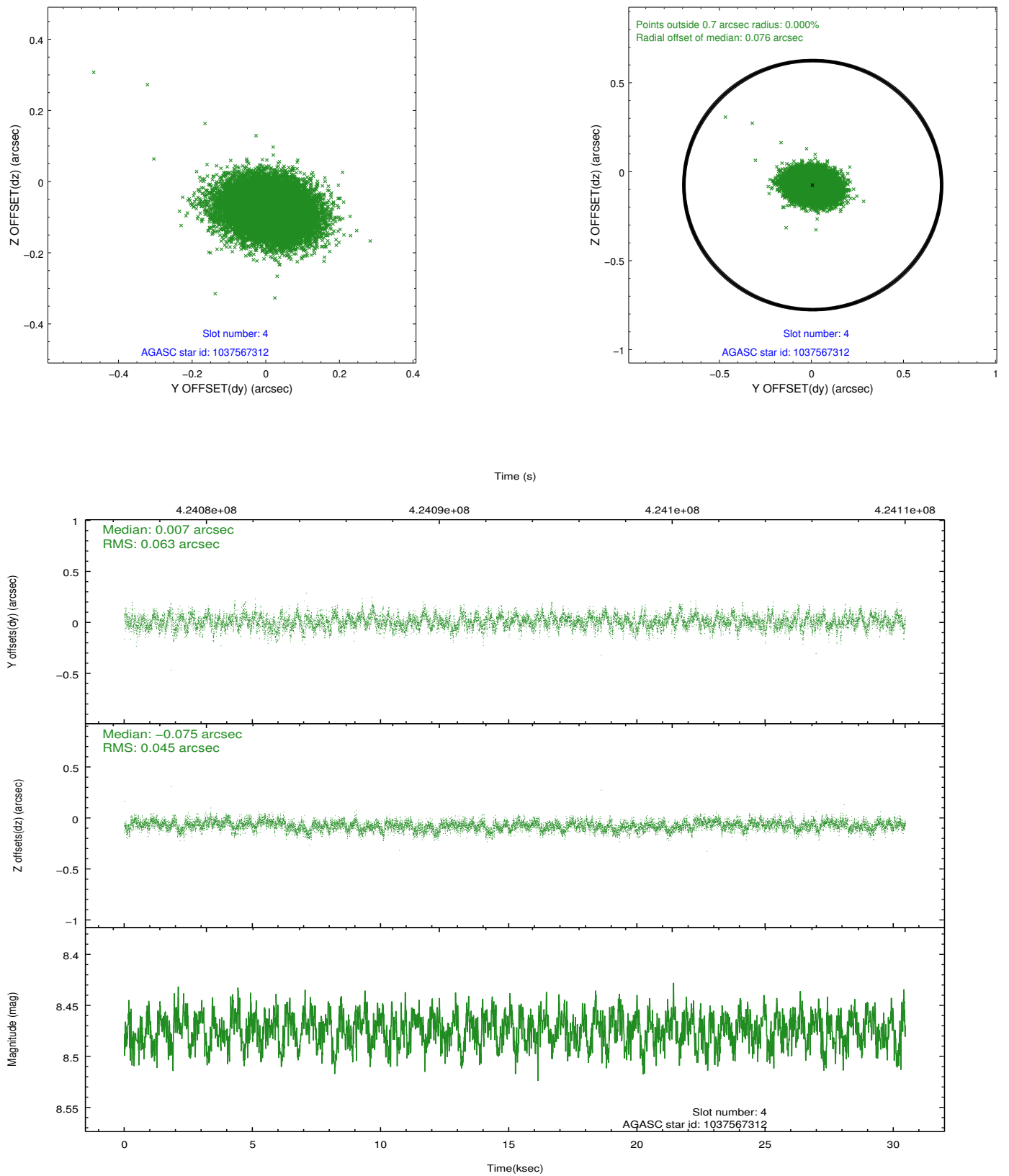
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.94	7429	-0.169	-0.126	0.011	0.017	0.000000	0.000000	-769.31	-1901.96
1	FID	ACIS-S-4	7.03	7431	0.152	0.096	0.010	0.017	0.000000	0.000000	2144.30	6.58
2	FID	ACIS-S-6	7.24	7431	-0.010	0.037	0.012	0.020	0.000000	0.000000	392.98	644.03
3	GUIDE	1037567144	8.74	14855	-0.176	0.039	0.090	0.148	284.940440	-37.605390	2135.71	-1505.67
4	GUIDE	1037567312	8.47	14859	0.007	-0.075	0.081	0.135	283.456056	-37.976515	-931.47	1689.24
5	GUIDE	1037567328	8.83	14855	-0.187	-0.175	0.093	0.150	284.052016	-37.647288	885.99	702.87
6	GUIDE	1037576824	8.73	14848	0.124	0.211	0.090	0.146	284.177029	-38.323536	-1138.24	-694.45
7	GUIDE	1037578168	8.11	14852	0.233	-0.003	0.079	0.127	284.493659	-38.169059	-246.29	-1253.30

2.4 Star Slots

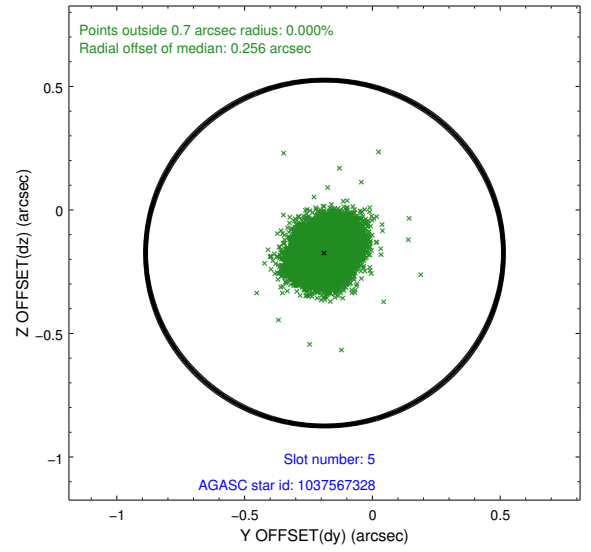
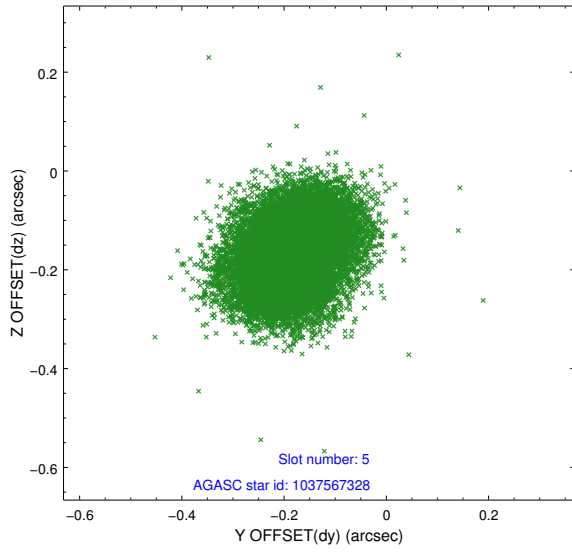
2.4.1 Slot 3



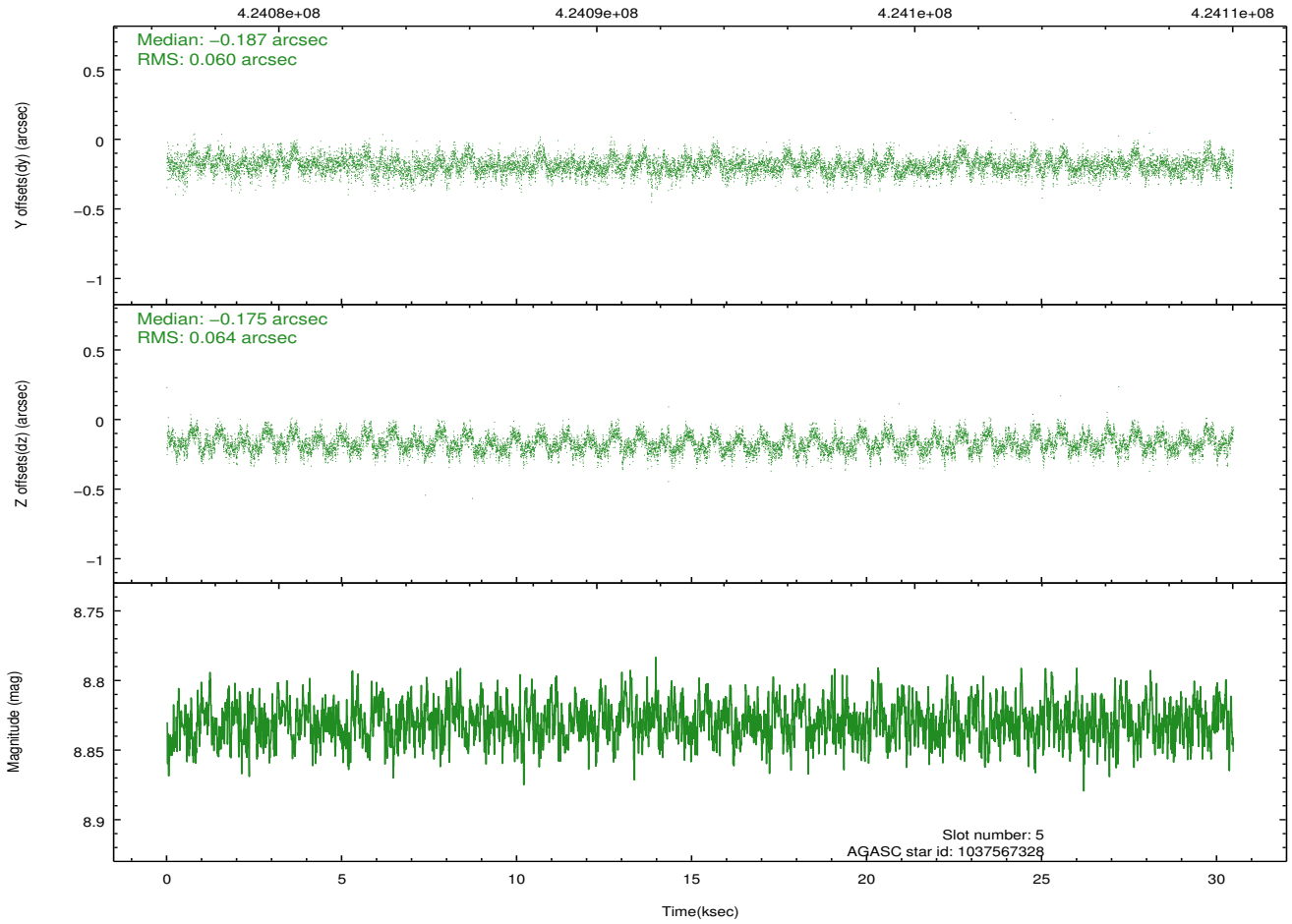
2.4.2 Slot 4



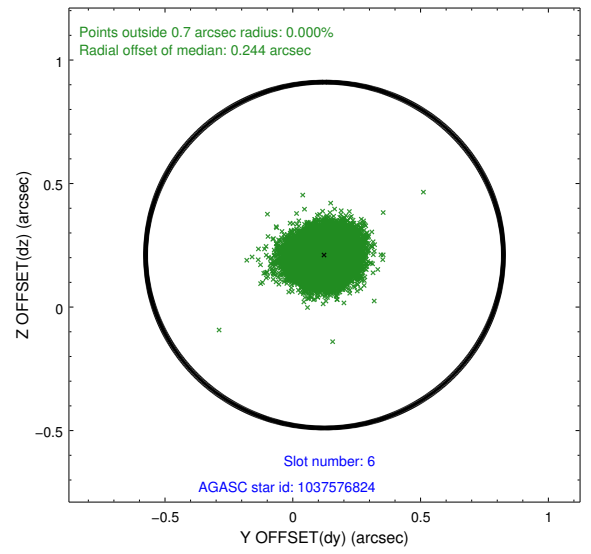
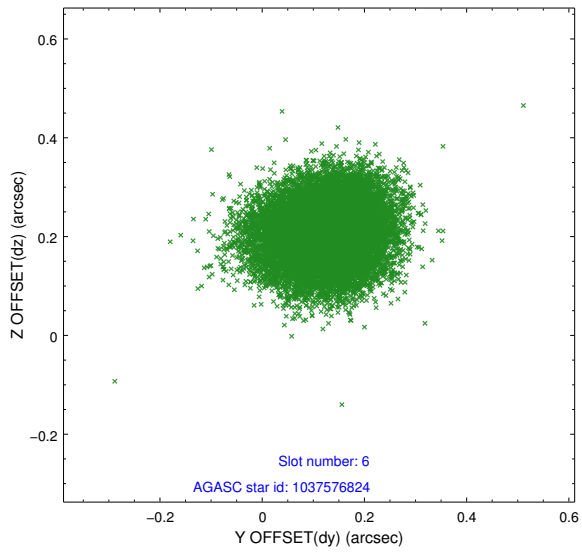
2.4.3 Slot 5



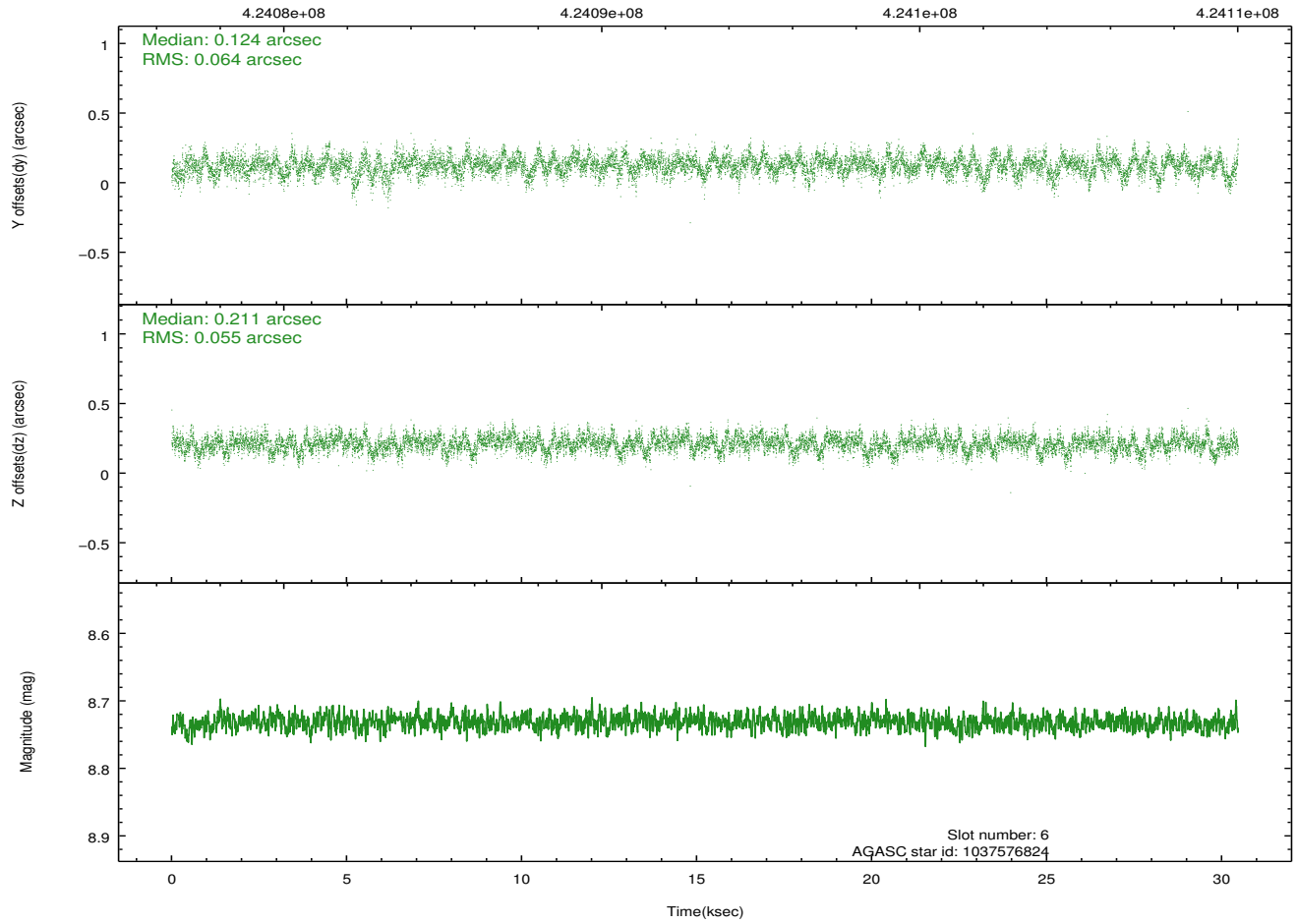
Time (s)



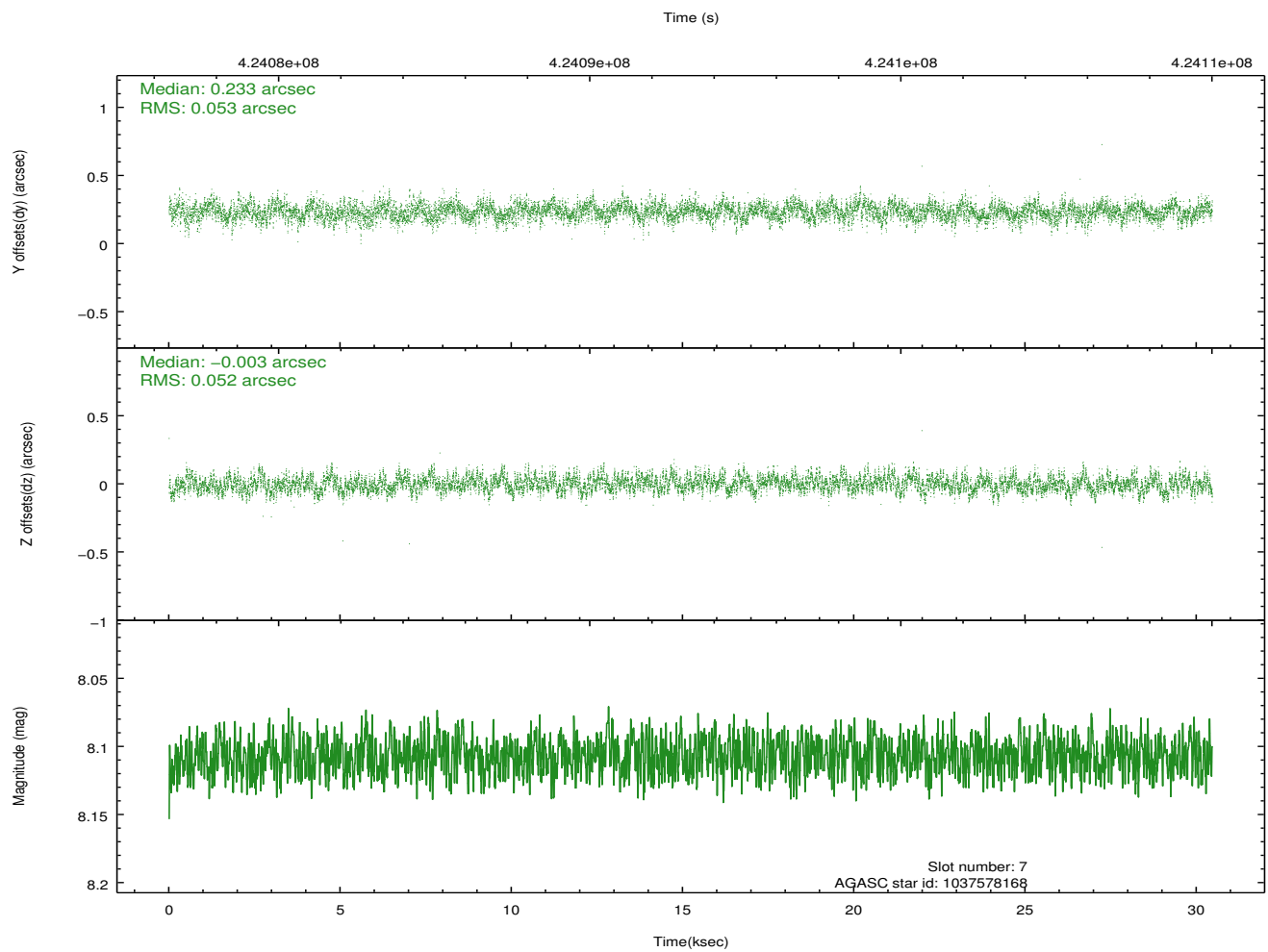
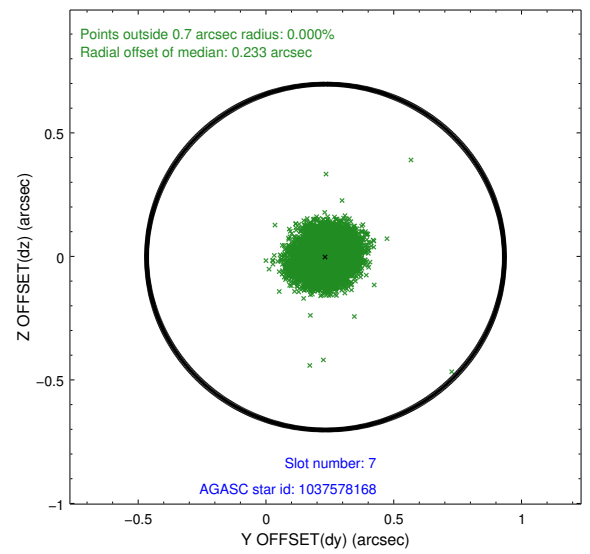
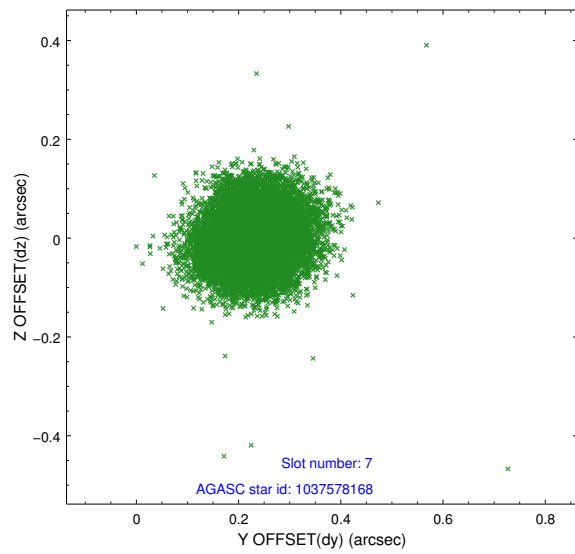
2.4.4 Slot 6



Time (s)

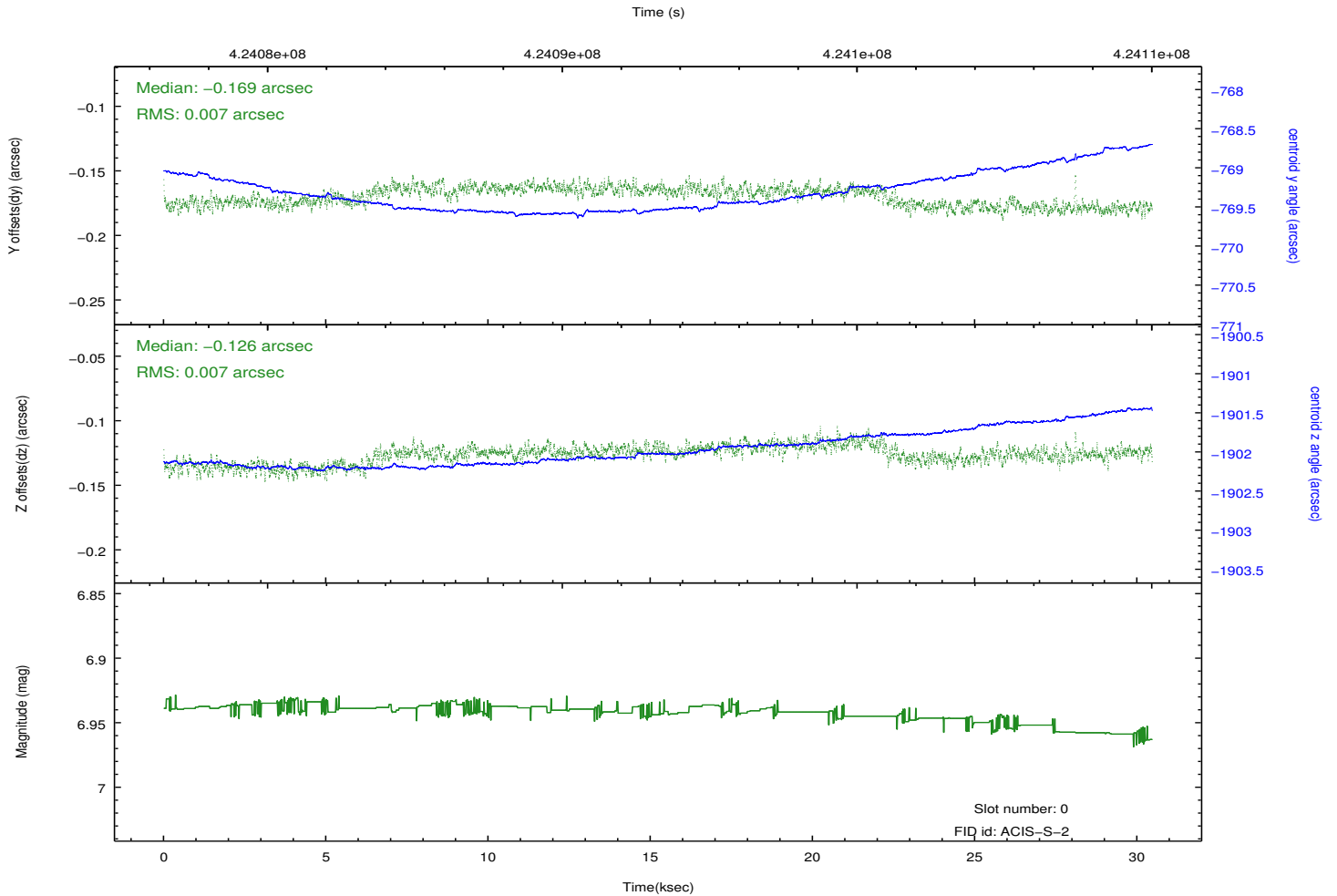
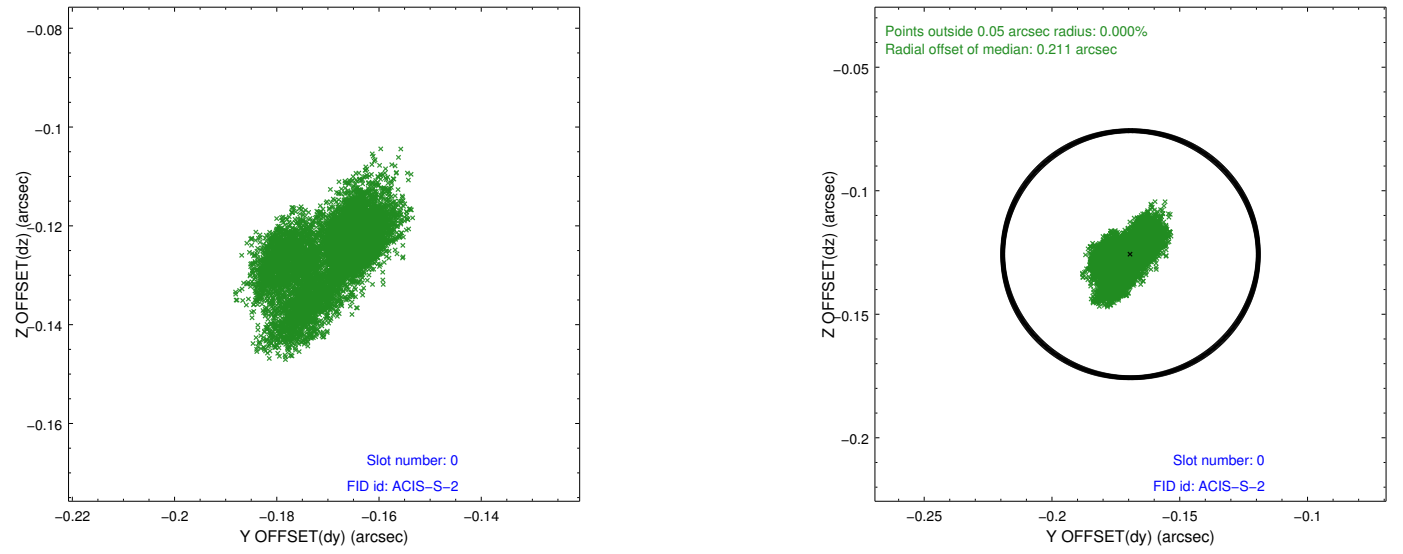


2.4.5 Slot 7

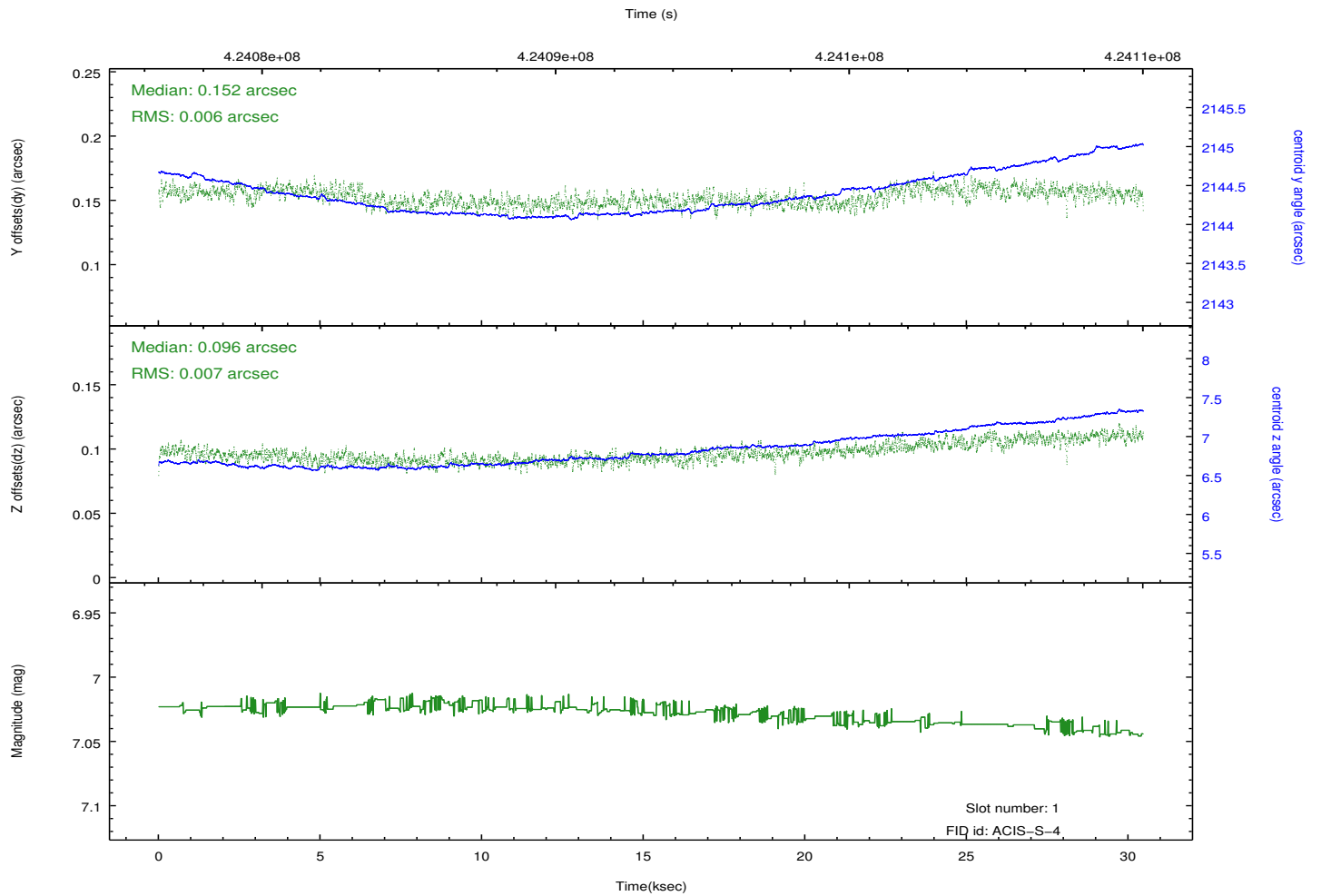
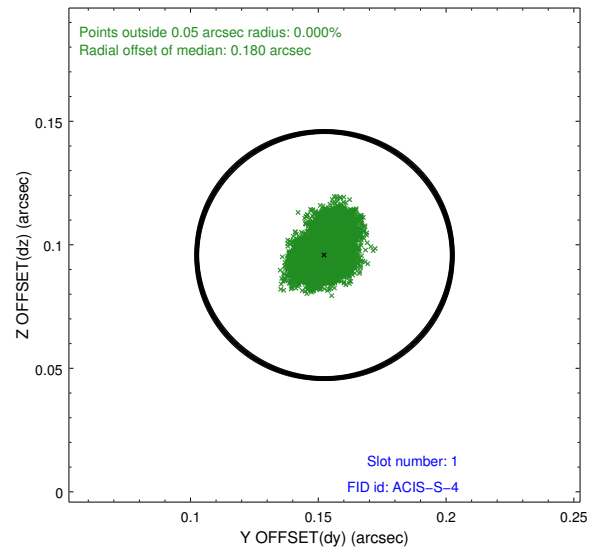
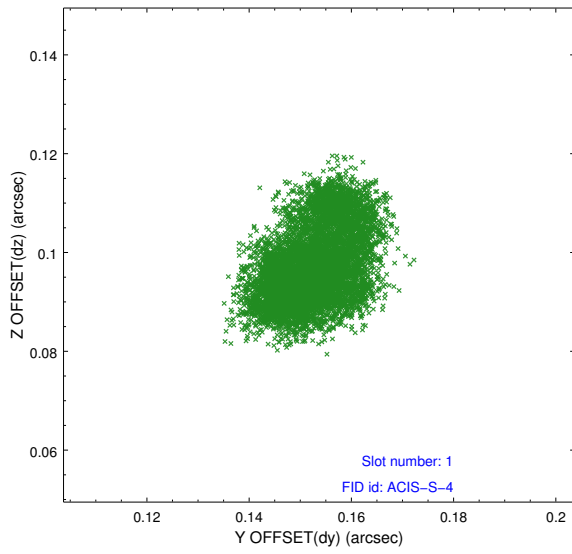


2.5 FID Slots

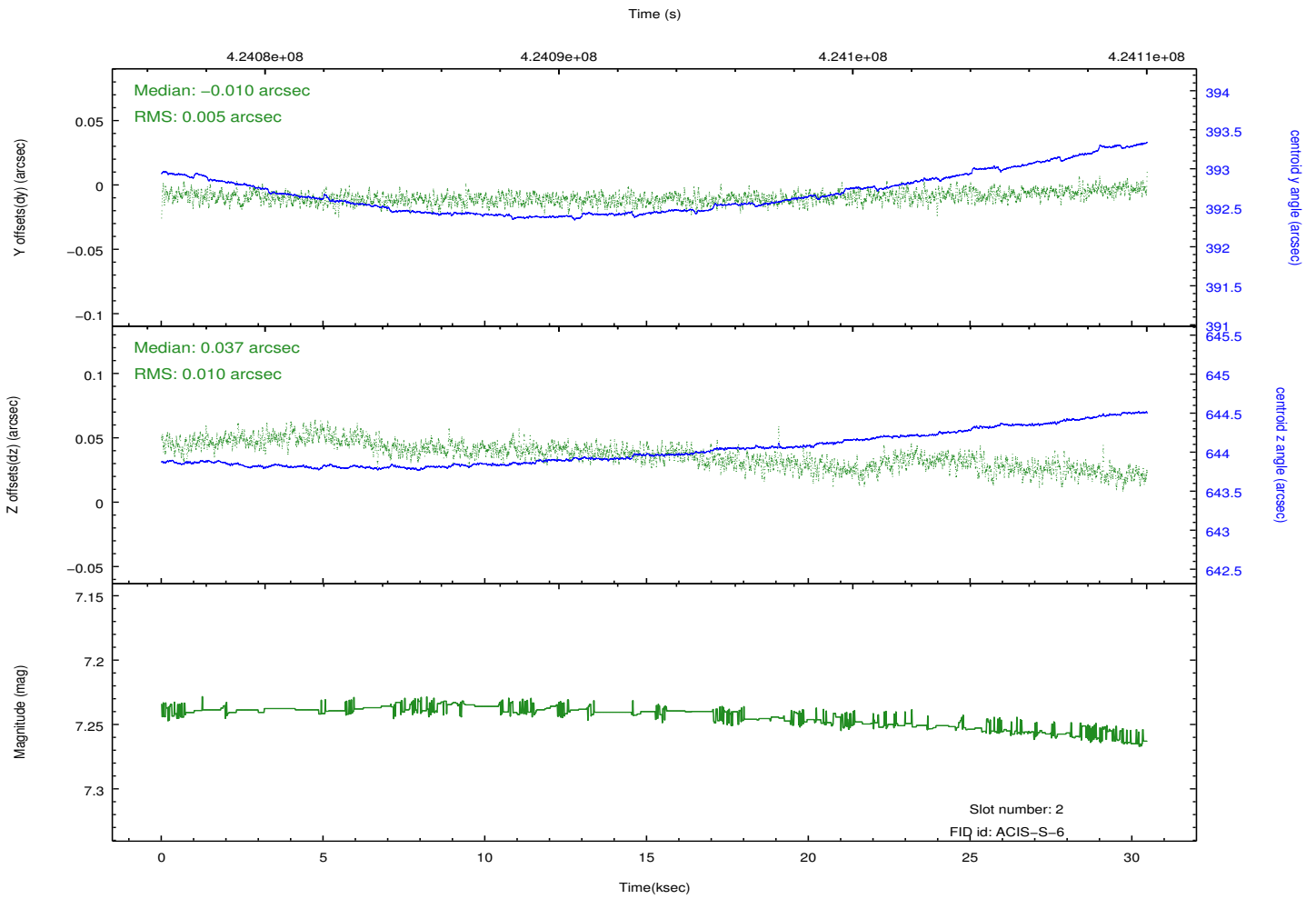
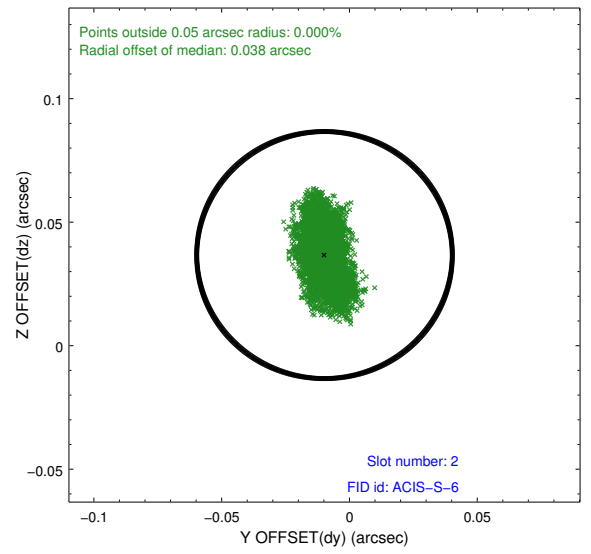
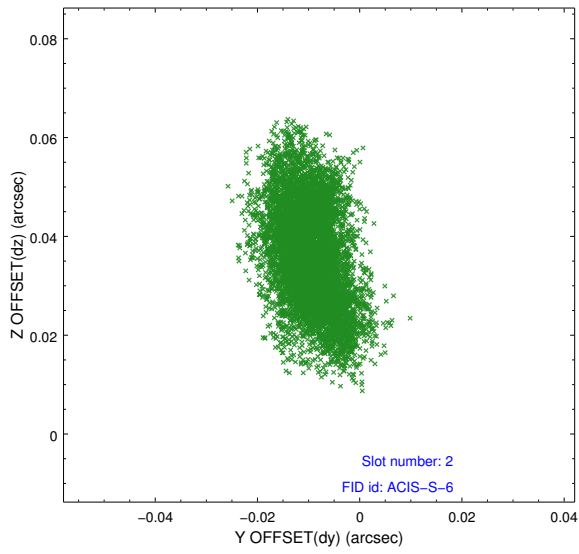
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

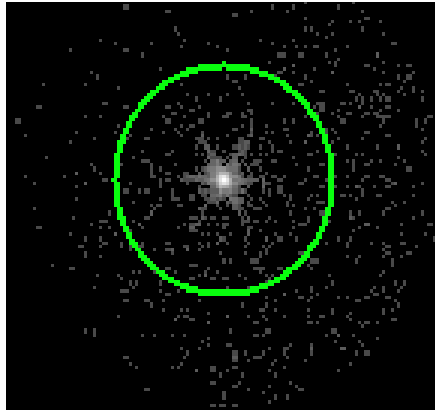


3 Gratings

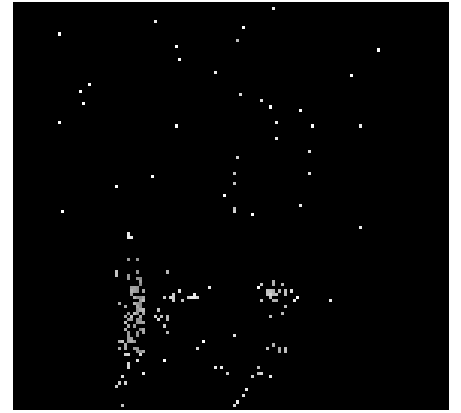
3.1 LETG Arm



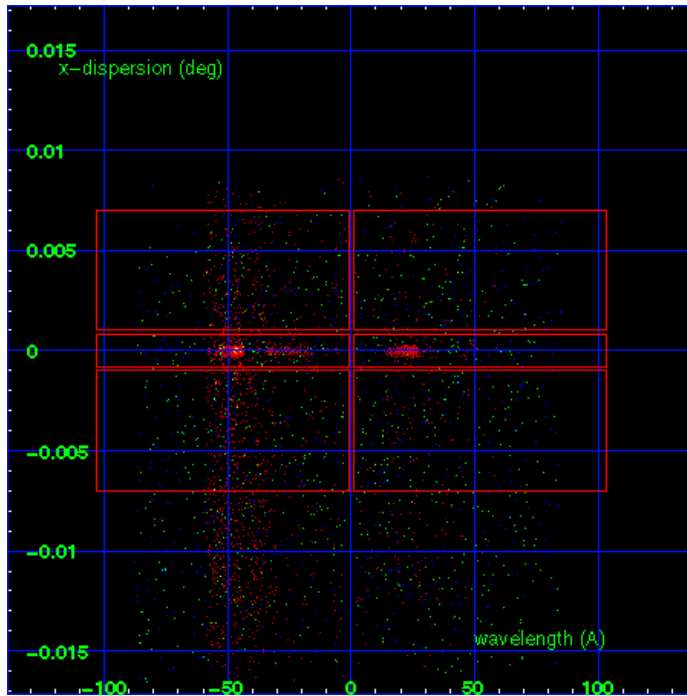
LETG Order Sort 123



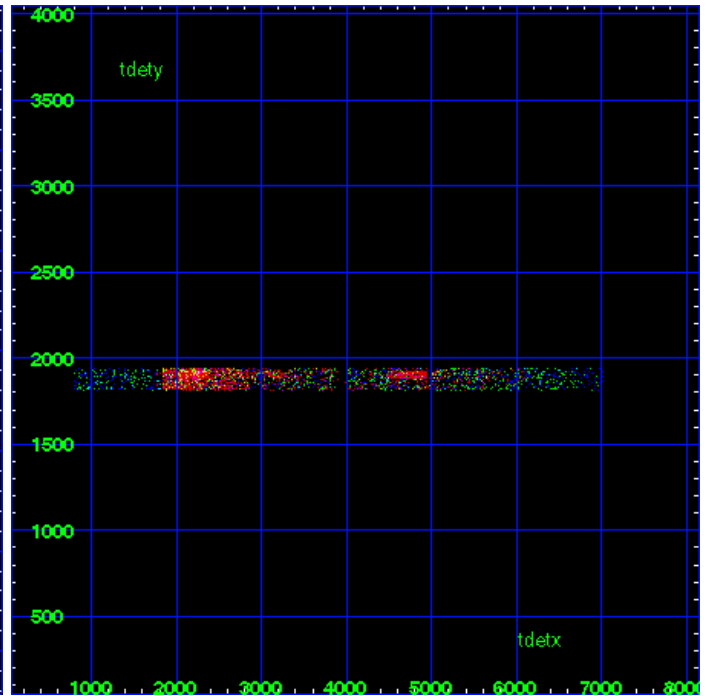
LETG Zero Order



LETG Order Sort ALL

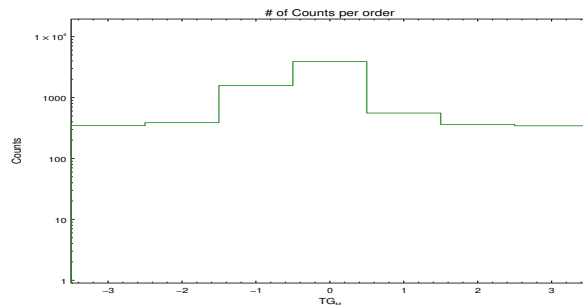


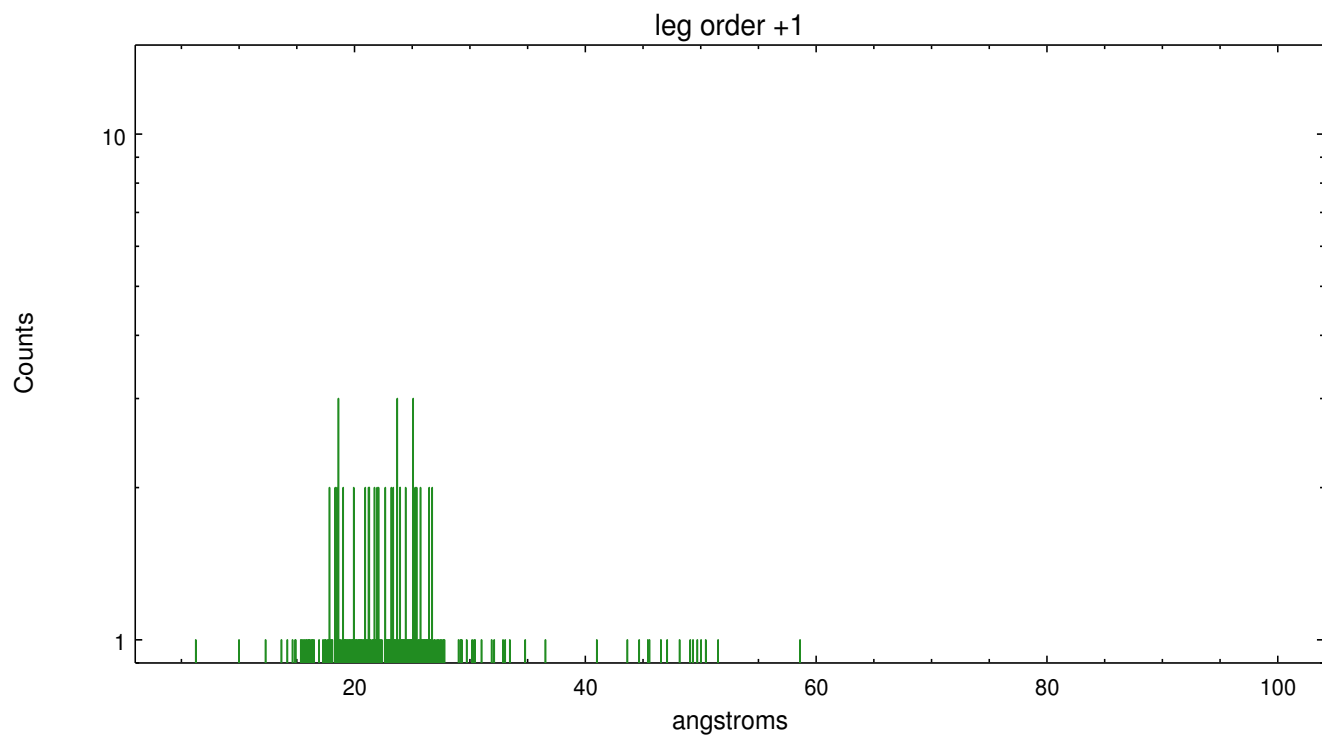
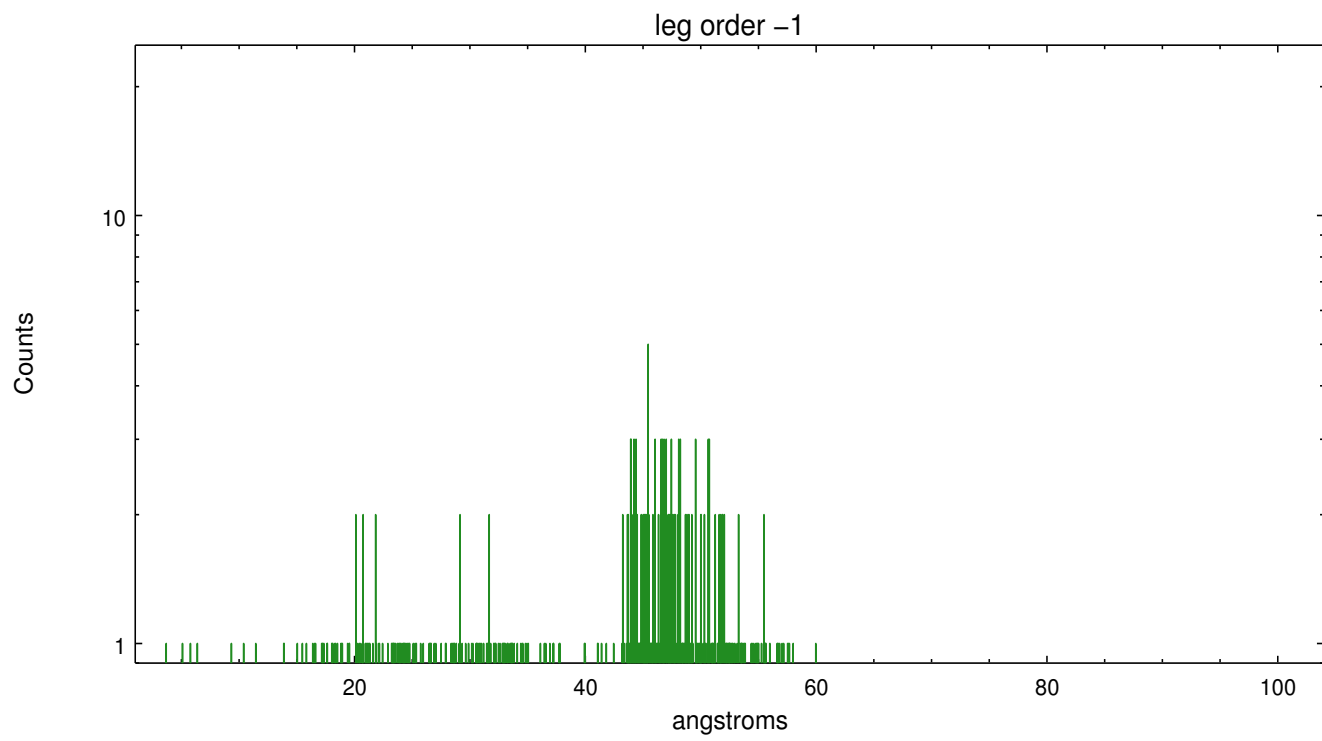
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	346	387	1578	3893	557	361	344





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.064999487936

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.