

V&V Reference Report

L2 ASCDS Version : 8.5.1

Observation 5170 - L2 Version 3
Chandra X-Ray Center

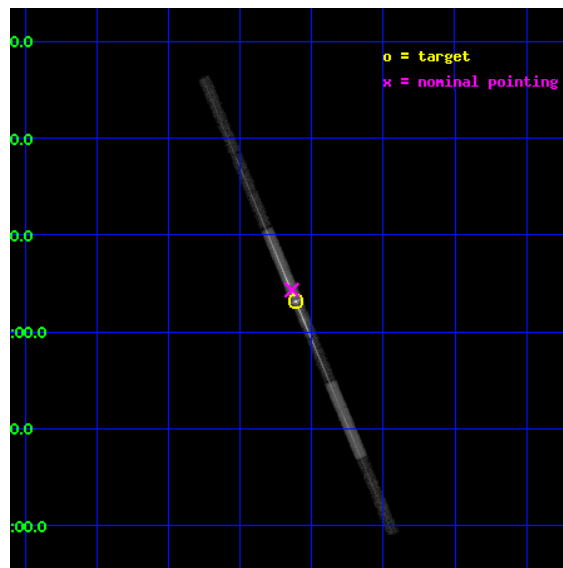
L2 Processing Date : Dec 19 2012

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1 Front

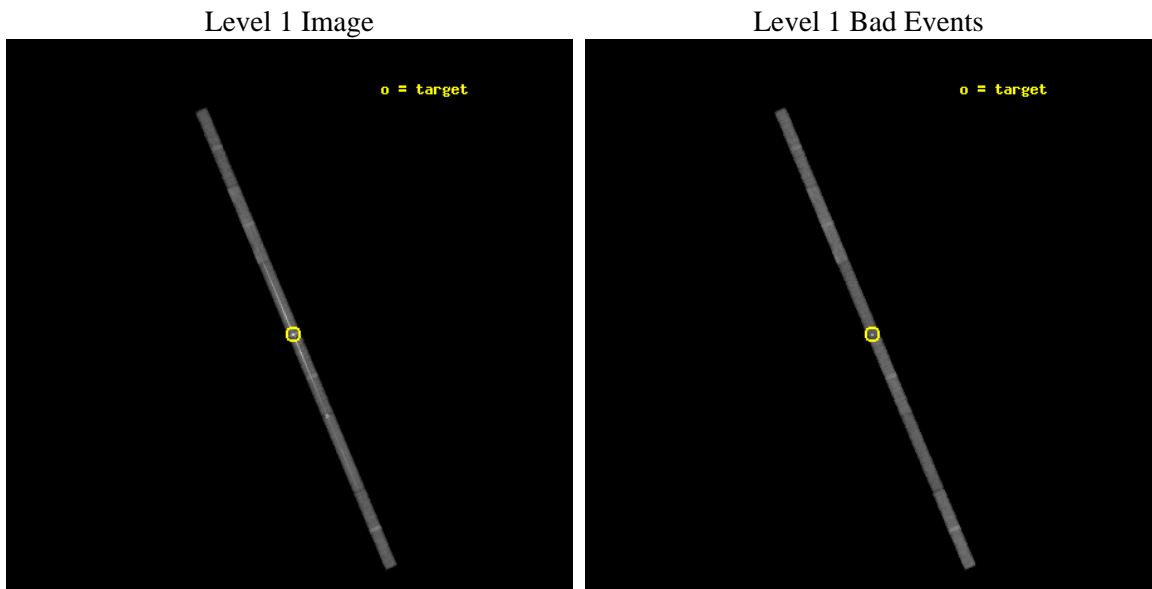
seq_num	790090	Sequence number
obs_id	5170	Observation id
title	AO5 Calibration Observations of 3C273	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	3C273	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.277917	Observer's specified target RA [deg]
dec_targ	2.052389	Observer's specified target Dec [deg]
ra_nom	187.28458196859	Nominal RA [deg]
dec_nom	2.0723369231936	Nominal Dec [deg]
roll_nom	247.15644852907	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30064.794809371	Sum of GTIs [s]
liveltime	28399.757592788	Livetime [s]
ontime4	30064.835849375	Sum of GTIs [s]
ontime5	30064.753769368	Sum of GTIs [s]
ontime6	30064.712729365	Sum of GTIs [s]
ontime7	30064.794809371	Sum of GTIs [s]
ontime8	30064.671689361	Sum of GTIs [s]
ontime9	30064.630649388	Sum of GTIs [s]
l2events	165844	Number of level 2 events



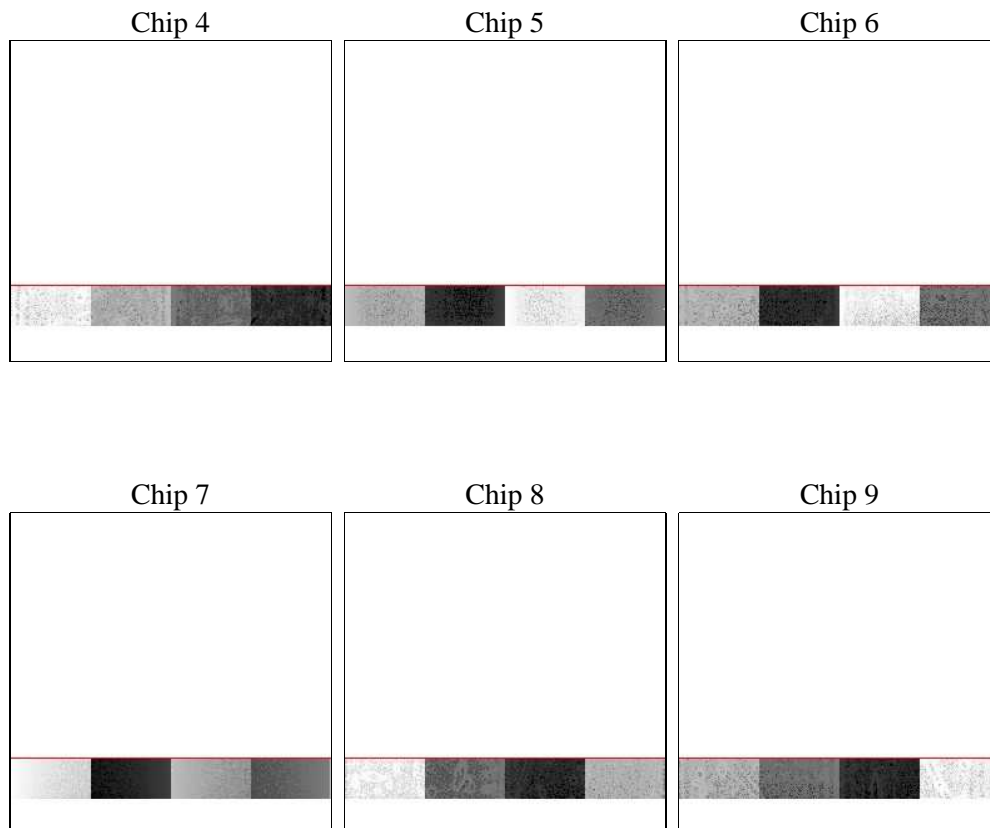
2 OBI

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	8.5.1	Processing system revision	ontime	30064.794809371	Sum of GTIs [s]
caldbver	4.5.5	 	ontime4	30064.835849375	Sum of GTIs [s]
date	2012-12-19T01:29:05	Date and time of file creation	ontime5	30064.753769368	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	30064.712729365	Sum of GTIs [s]
			ontime7	30064.794809371	Sum of GTIs [s]
			ontime8	30064.671689361	Sum of GTIs [s]
			ontime9	30064.630649388	Sum of GTIs [s]
			l1events	377301	Number of level 1 events

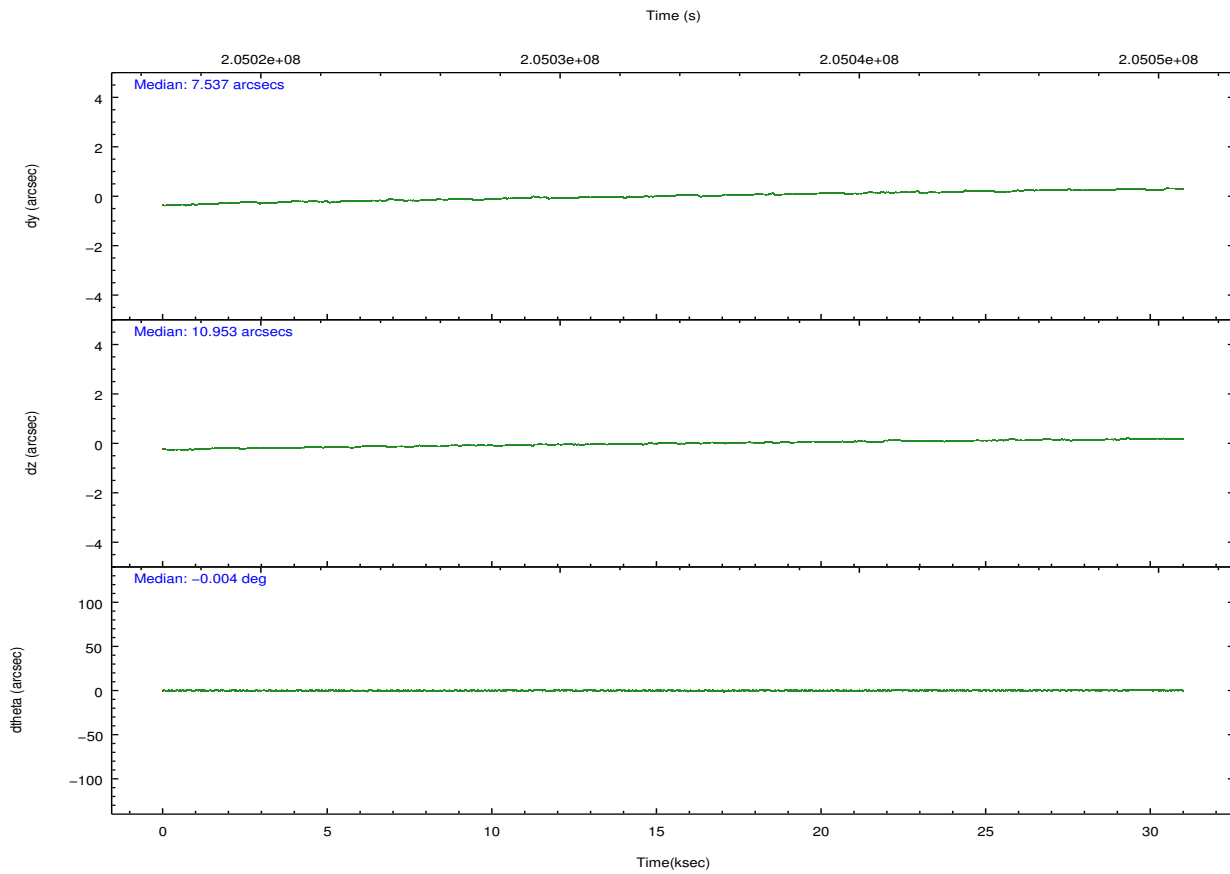
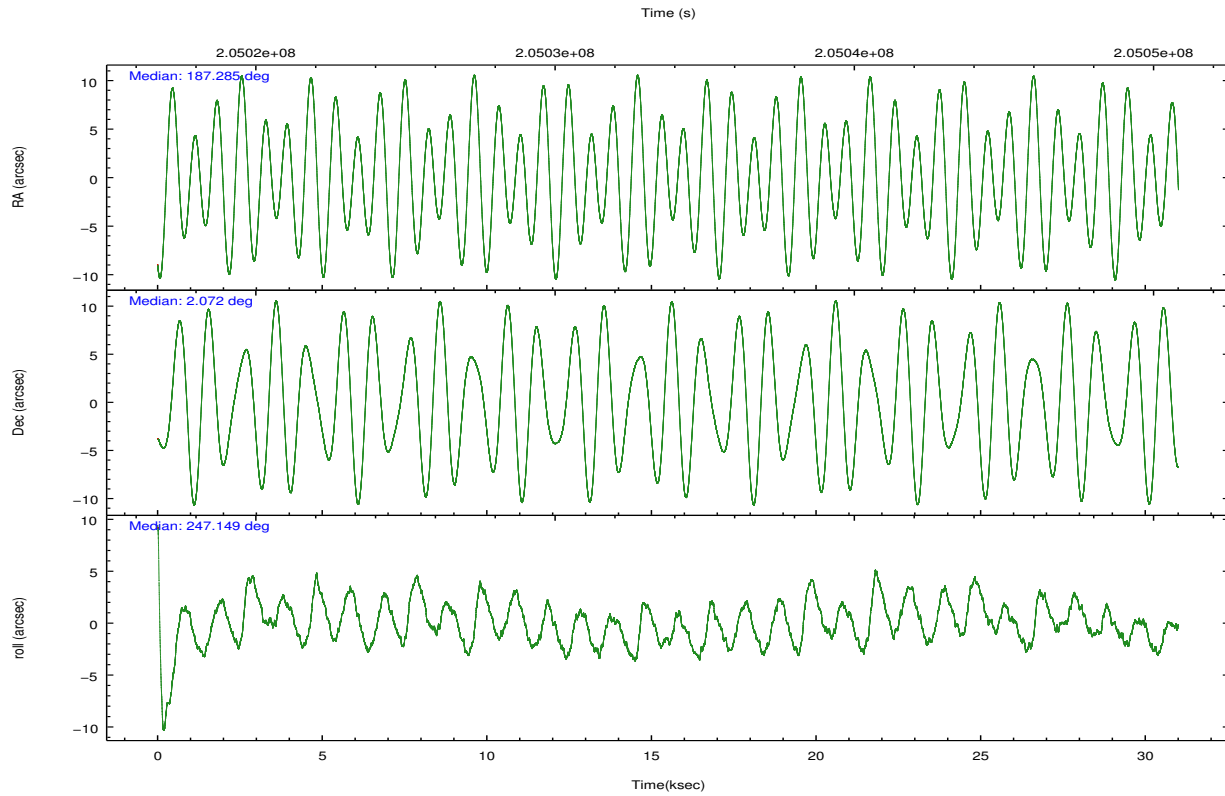
2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	42602	51782	69502	125783	53851	33781	grade 0 events	2182	8377	26503	20802	4455	2072
rejected events	37394	22436	33887	31402	41900	28888		5%	16%	38%	16%	8%	6%
rejected %	87%	43%	48%	24%	77%	85%	grade 1 events	4	185	56	774	19	13
								0%	0%	0%	0%	0%	0%
							grade 2 events	982	6391	4033	22688	2068	727
								2%	12%	5%	18%	3%	2%
							grade 3 events	711	2337	1751	10678	1208	707
								1%	4%	2%	8%	2%	2%
							grade 4 events	665	2128	1723	10510	1184	682
								1%	4%	2%	8%	2%	2%
							grade 5 events	1181	3767	1197	6950	1642	1192
								2%	7%	1%	5%	3%	3%
							grade 6 events	669	10113	1606	29703	3036	708
								1%	19%	2%	23%	5%	2%
							grade 7 events	36208	18484	32633	23678	40239	27680
								84%	35%	46%	18%	74%	81%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	187.280818	187.2845819685932	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	2.099316	2.072336923193566	Subarray start row	113	113
[deg] Pointing Roll	246.999958	247.1564485290727	Subarray row count	128	128
[s] Window start time (MET)	202435264.184000	202435264.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	207619264.184000	207619264.184000	[s] Primary exposure time	0.000000	0.7
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	205019282.184000	205018257.45105			
Observation start date	2004-06-30T21:46:58	2004-06-30T21:30:57			
[s] Observation end time (MET)	205049282.184000	205050091.38996			
Observation end date	2004-07-01T06:06:58	2004-07-01T06:21:31			
Read mode	TIMED	TIMED			

2.3 Aspect

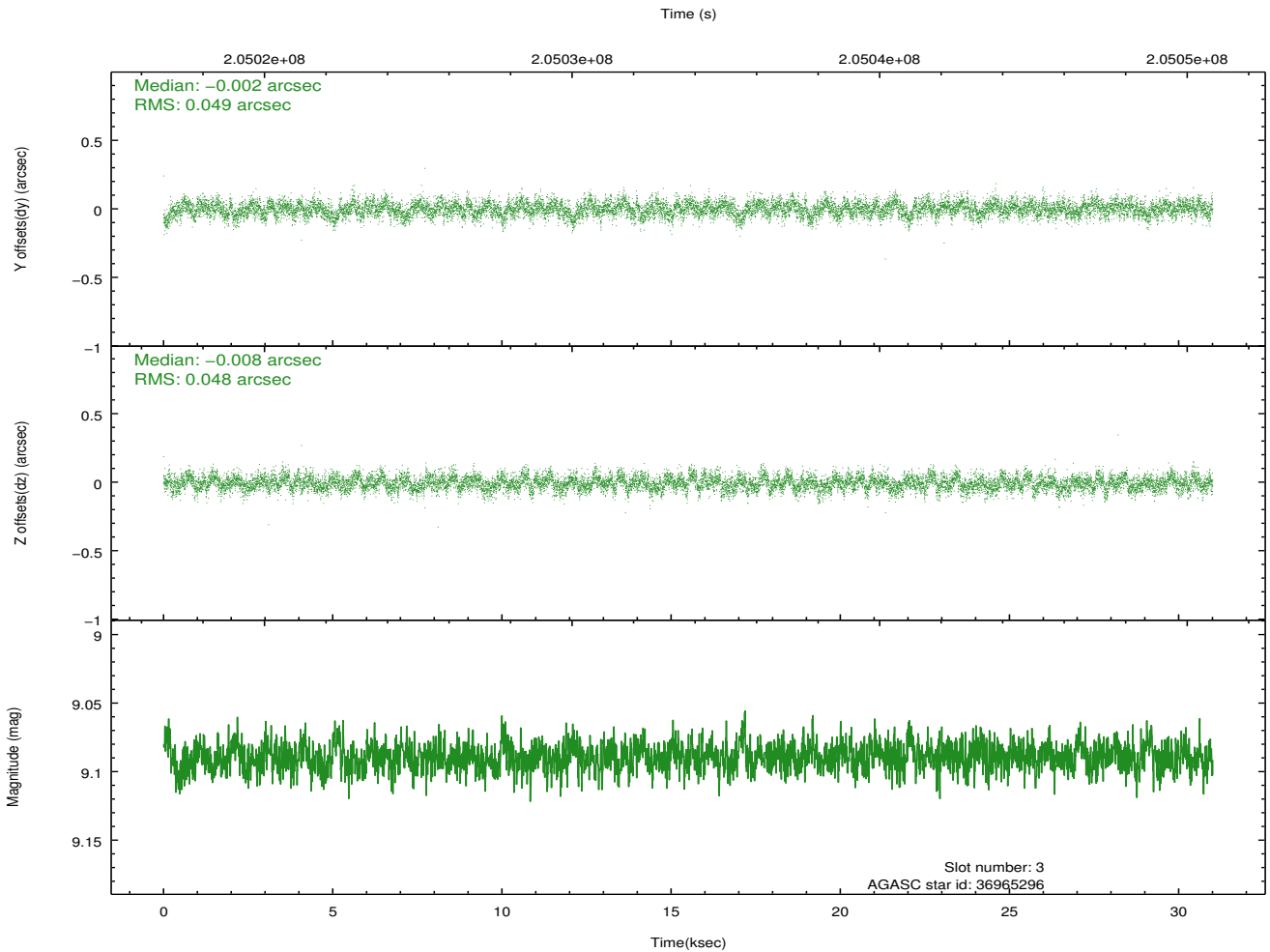
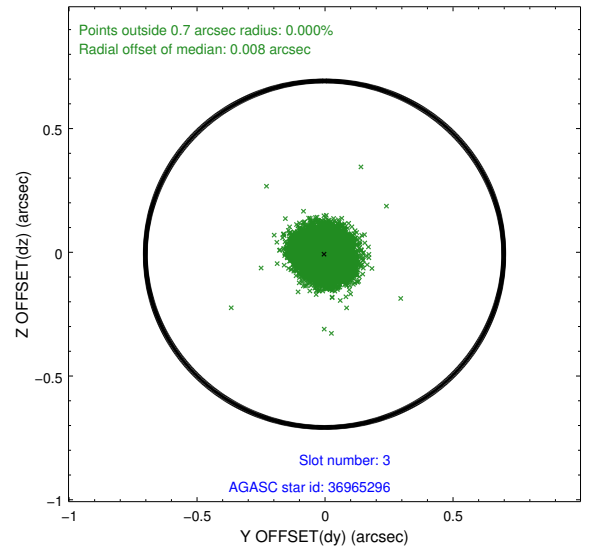
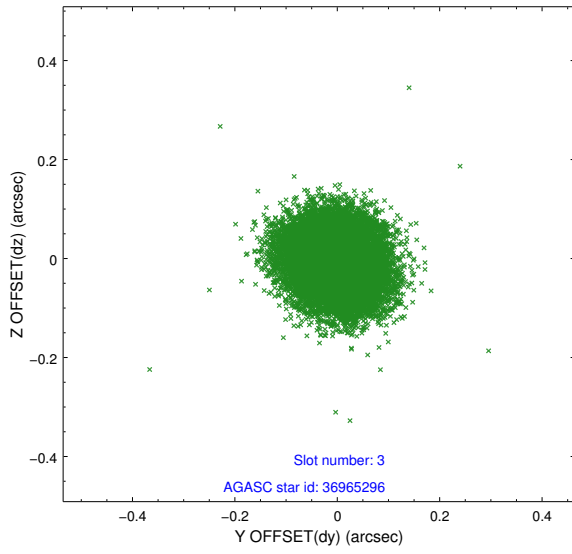


Slot Statistics

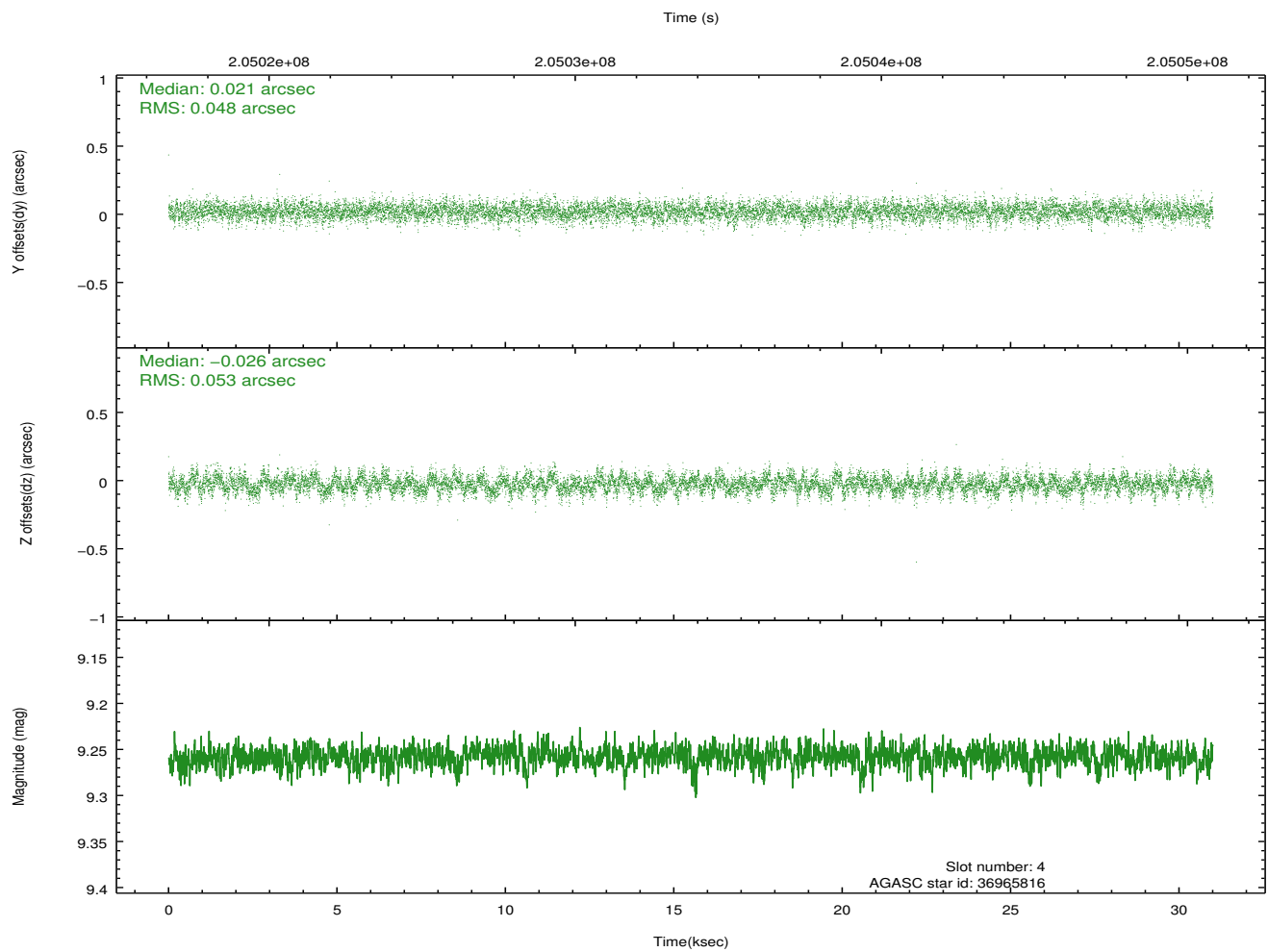
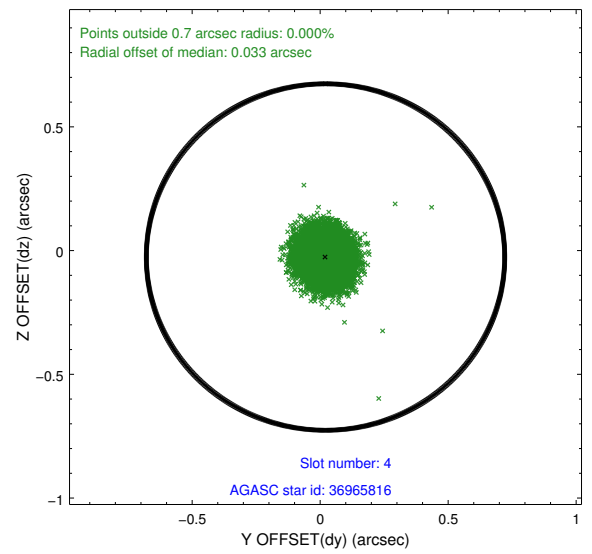
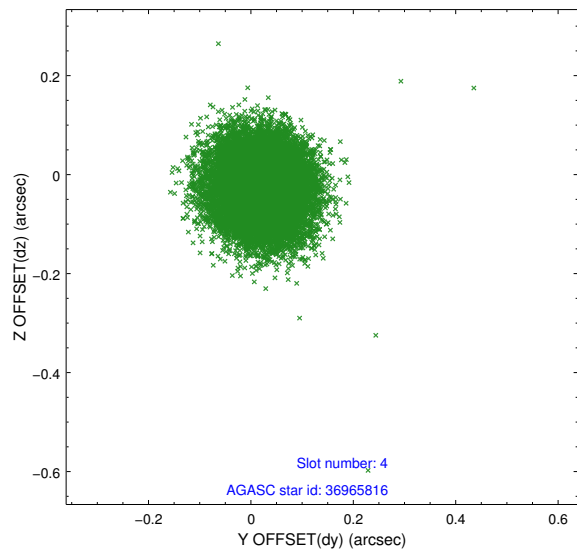
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	7563	-0.061	-0.113	0.012	0.019	0.000000	0.000000	-759.79	-1897.04
1	FID	ACIS-S-4	7.17	7562	0.094	0.060	0.006	0.011	0.000000	0.000000	2153.61	11.52
2	FID	ACIS-S-5	7.22	7562	-0.063	0.061	0.012	0.019	0.000000	0.000000	-1812.55	5.26
3	GUIDE	36965296	9.09	15121	-0.002	-0.008	0.072	0.117	186.926292	1.837429	1366.52	-805.77
4	GUIDE	36965816	9.26	15114	0.021	-0.026	0.076	0.123	186.823353	1.771455	1729.97	-1053.93
5	GUIDE	36965896	9.72	15103	0.063	-0.076	0.113	0.180	187.153754	1.617178	1776.77	257.47
6	GUIDE	37356352	7.67	15126	-0.409	-0.172	0.068	0.104	187.433784	2.618460	-1935.33	-224.22
7	GUIDE	37883040	9.99	15105	0.331	0.285	0.158	0.258	187.575516	1.280402	2299.56	2129.00

2.4 Star Slots

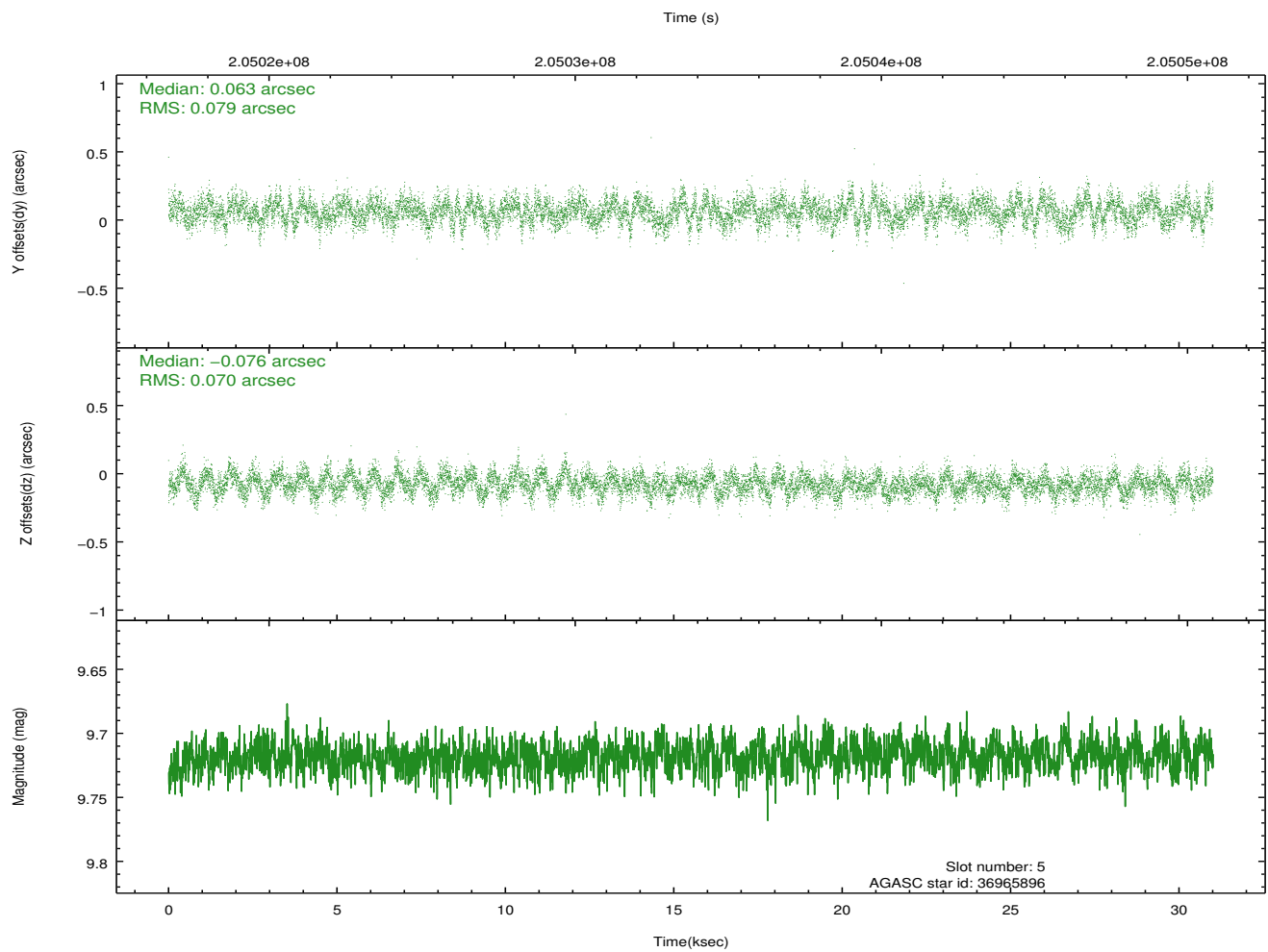
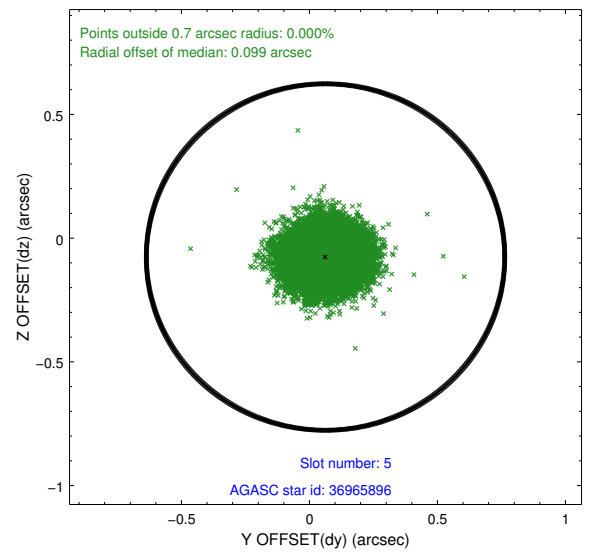
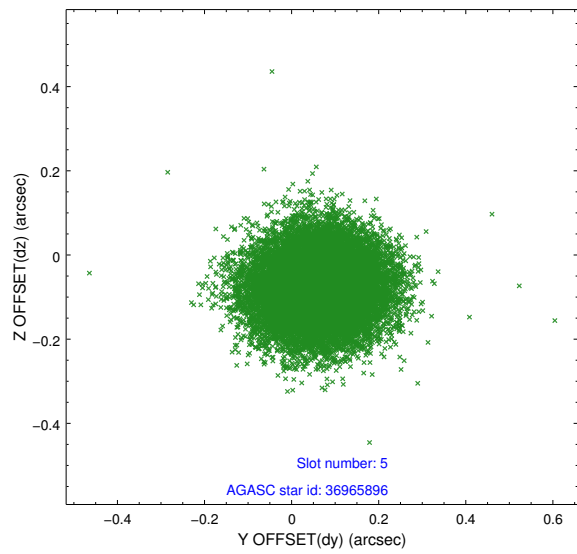
2.4.1 Slot 3



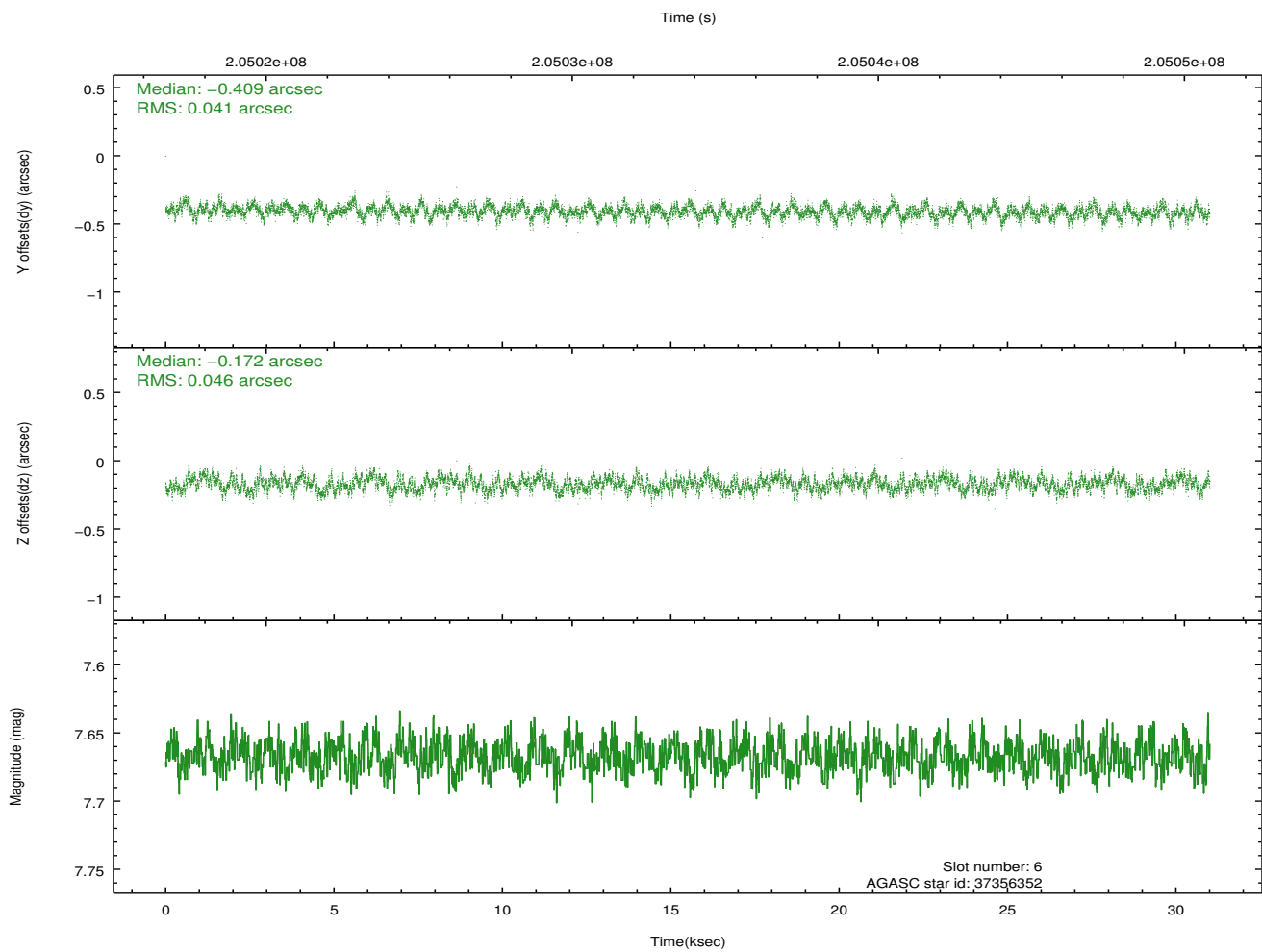
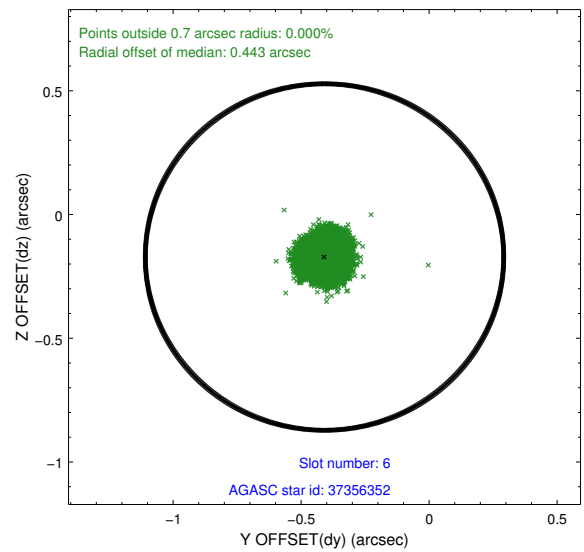
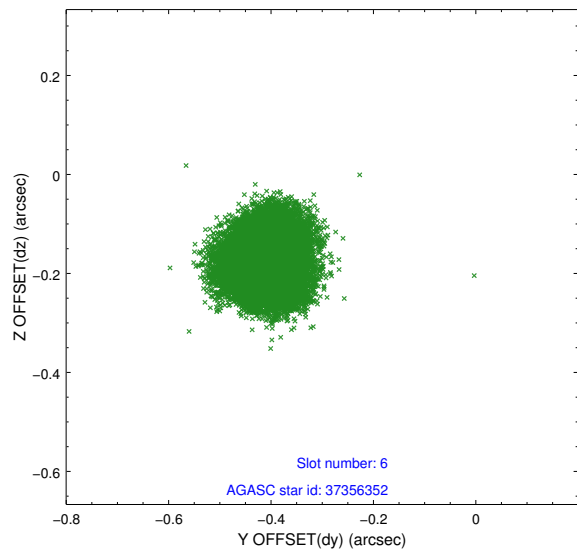
2.4.2 Slot 4



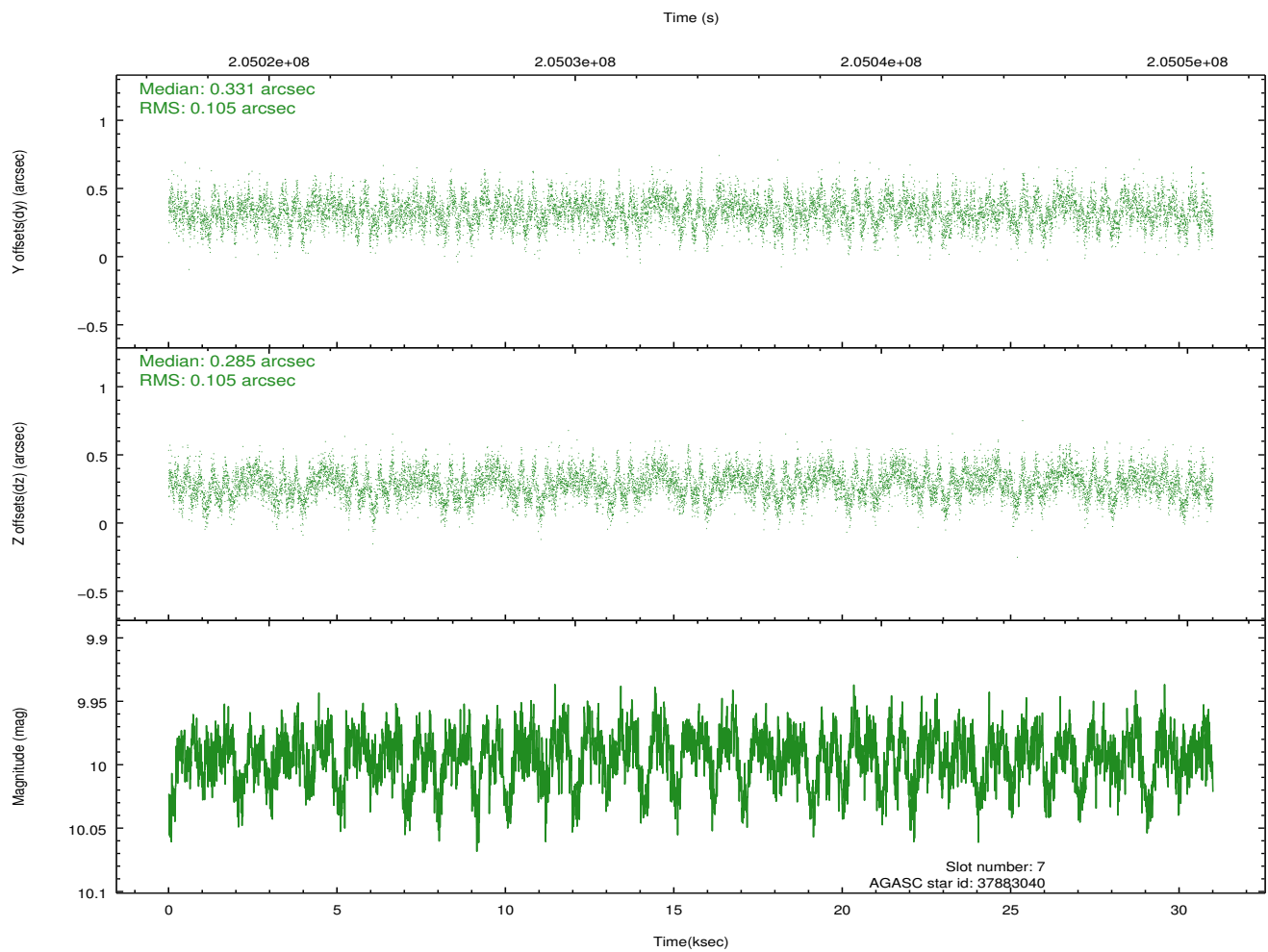
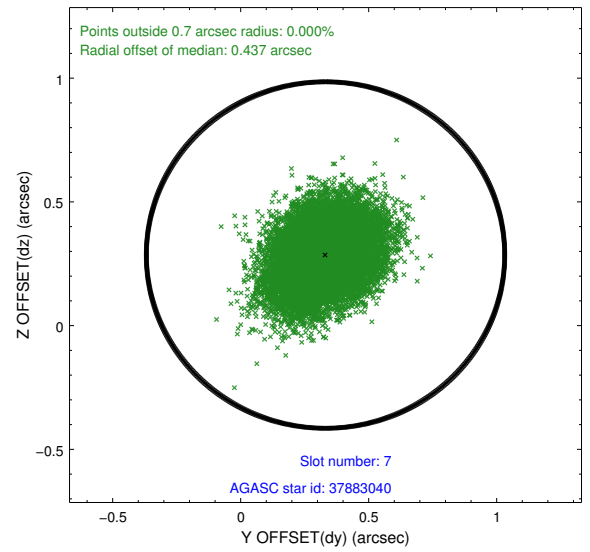
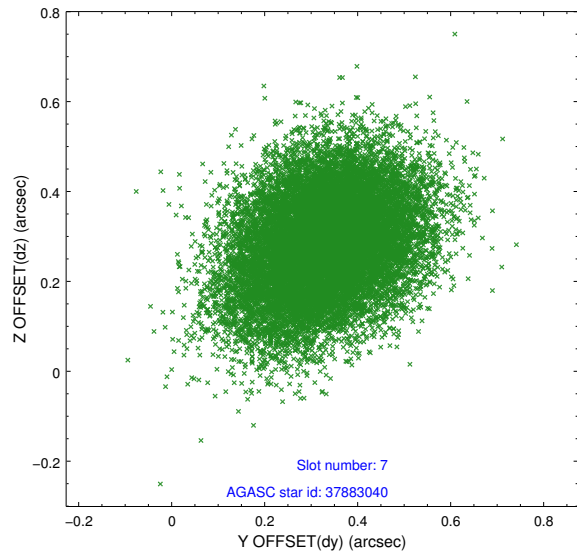
2.4.3 Slot 5



2.4.4 Slot 6

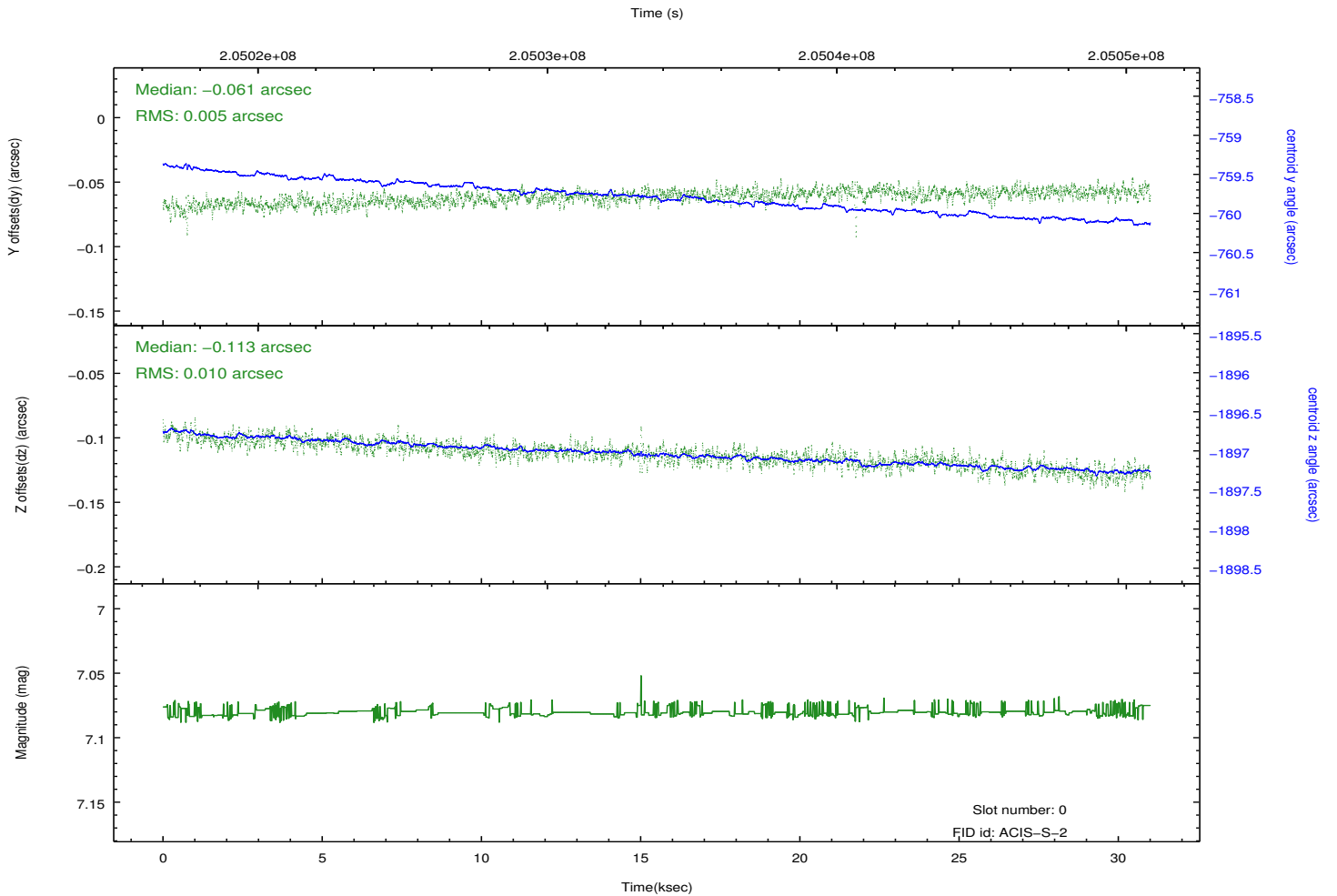
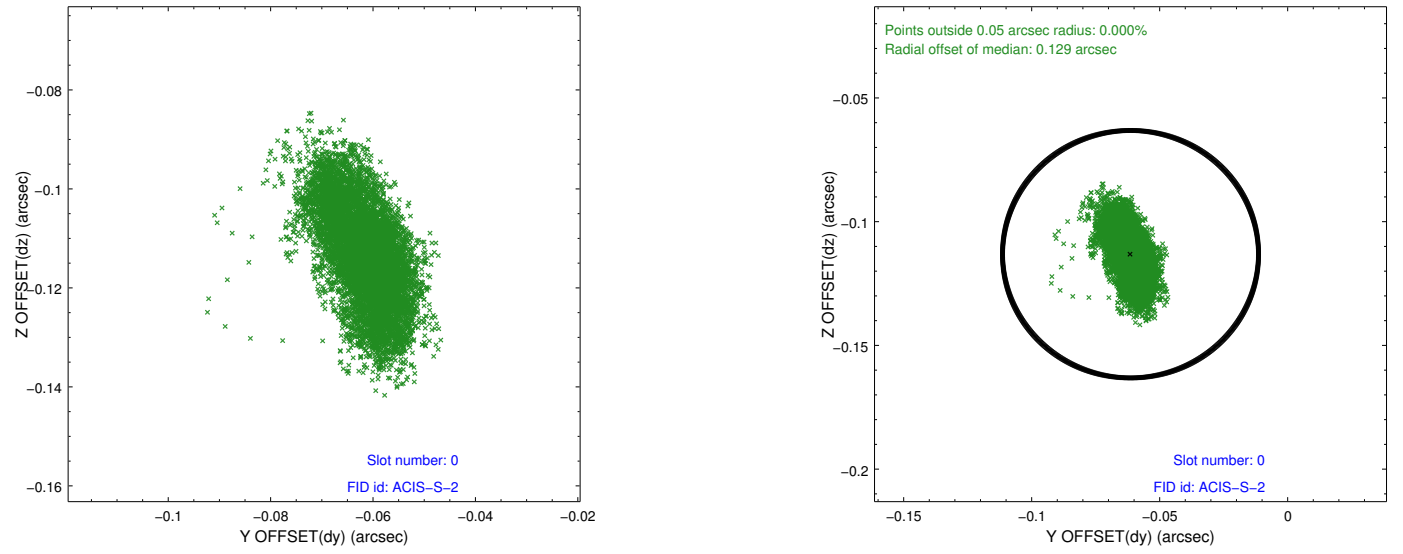


2.4.5 Slot 7

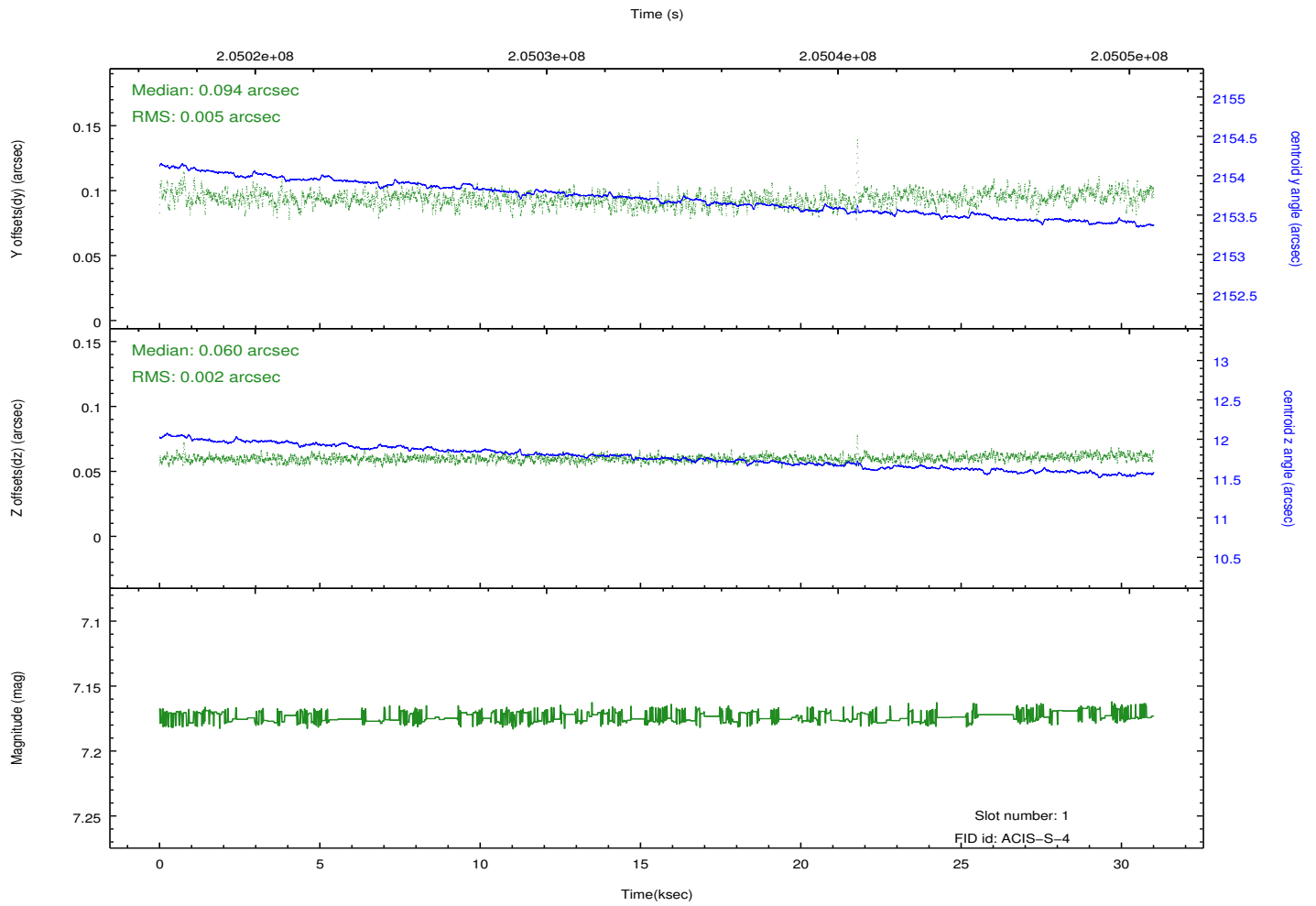
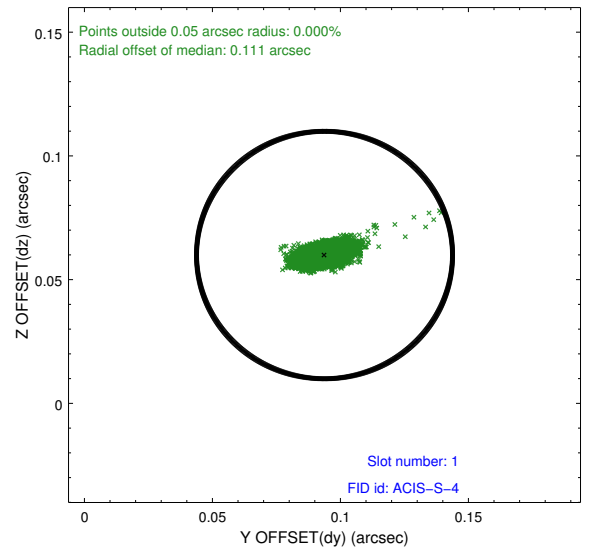
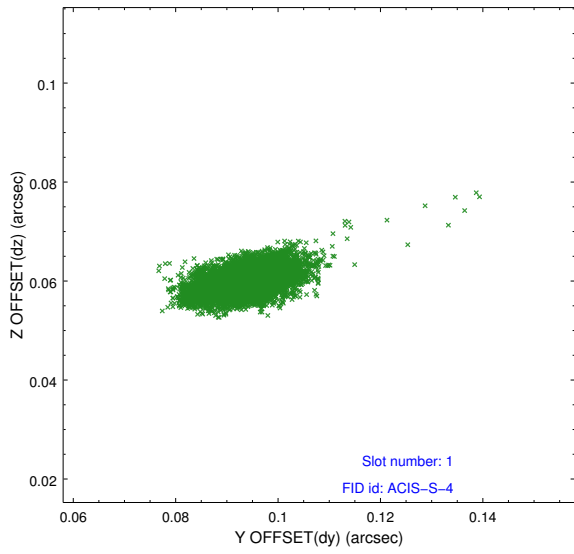


2.5 FID Slots

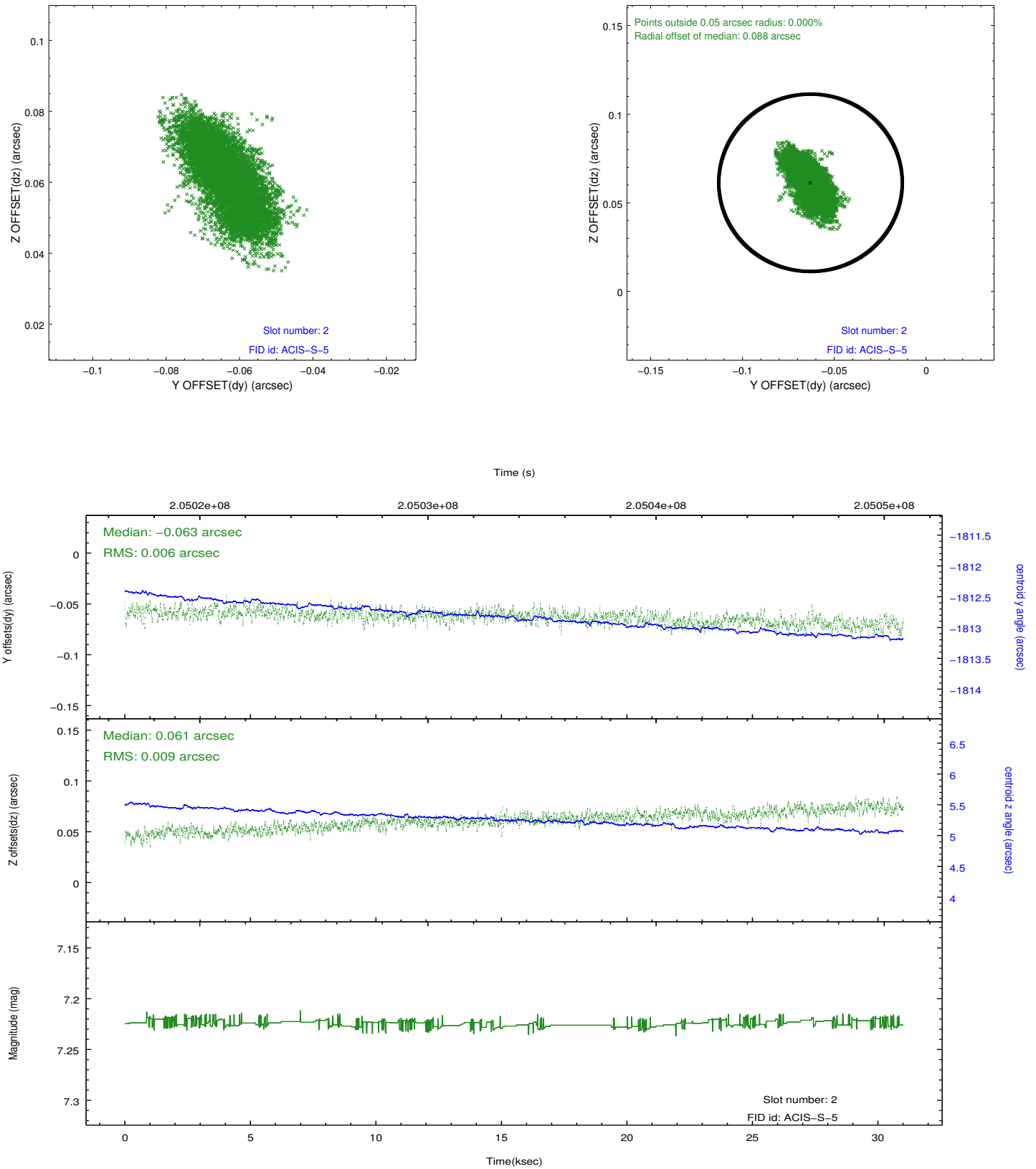
2.5.1 Slot 0



2.5.2 Slot 1

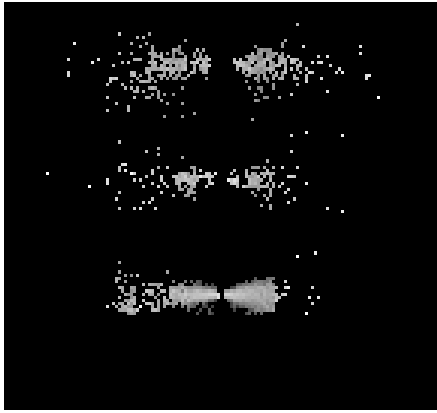


2.5.3 Slot 2

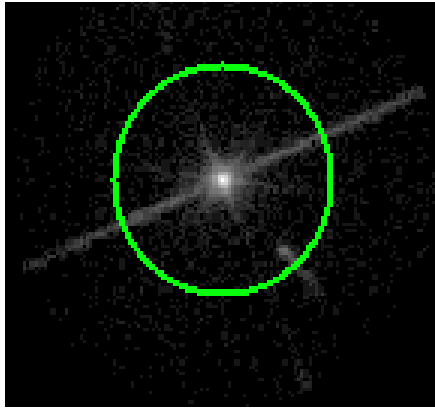


3 Gratings

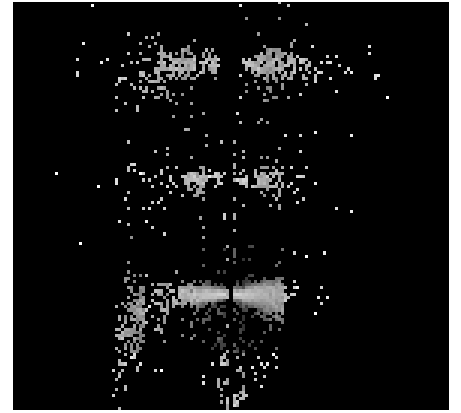
3.1 LETG Arm



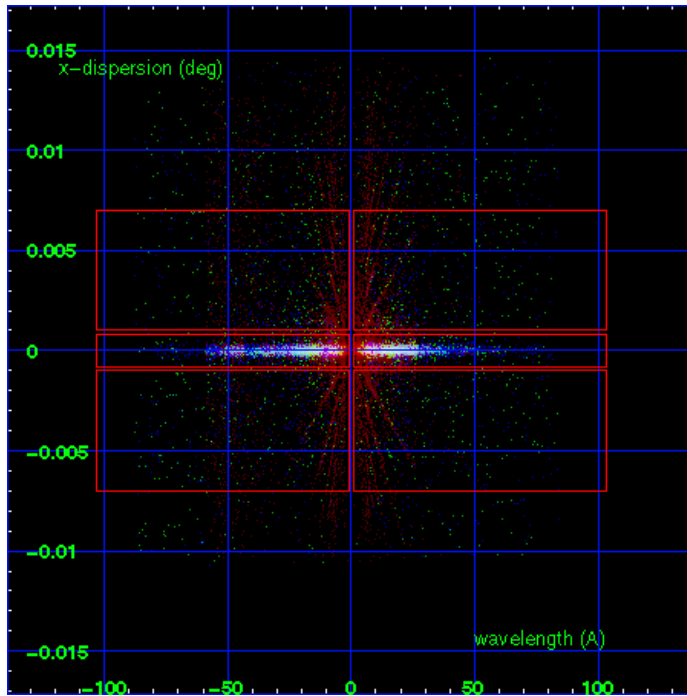
LETG Order Sort 123



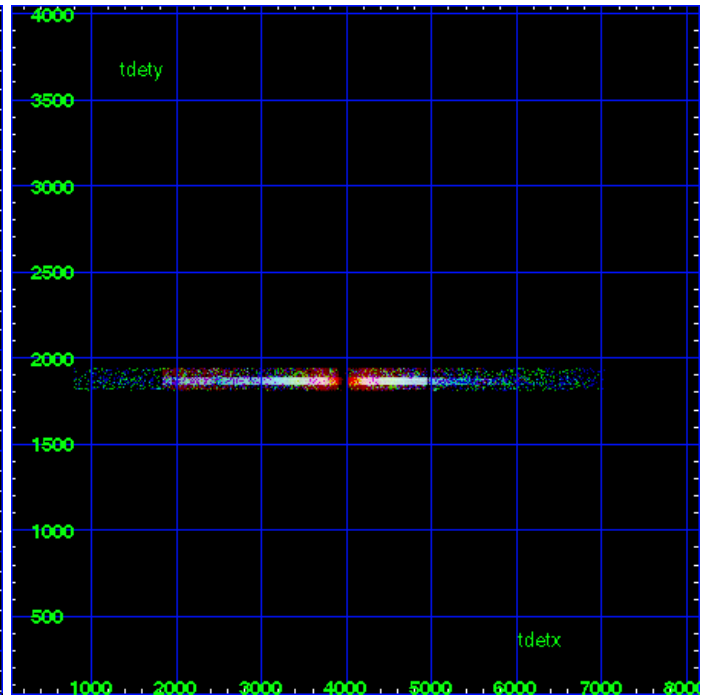
LETG Zero Order



LETG Order Sort ALL

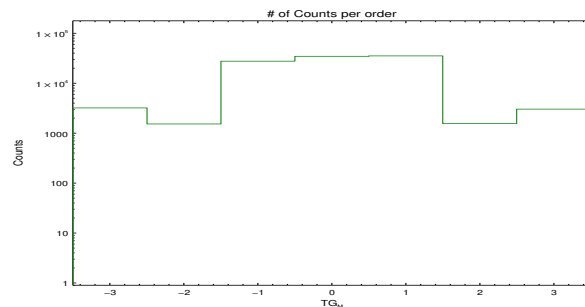


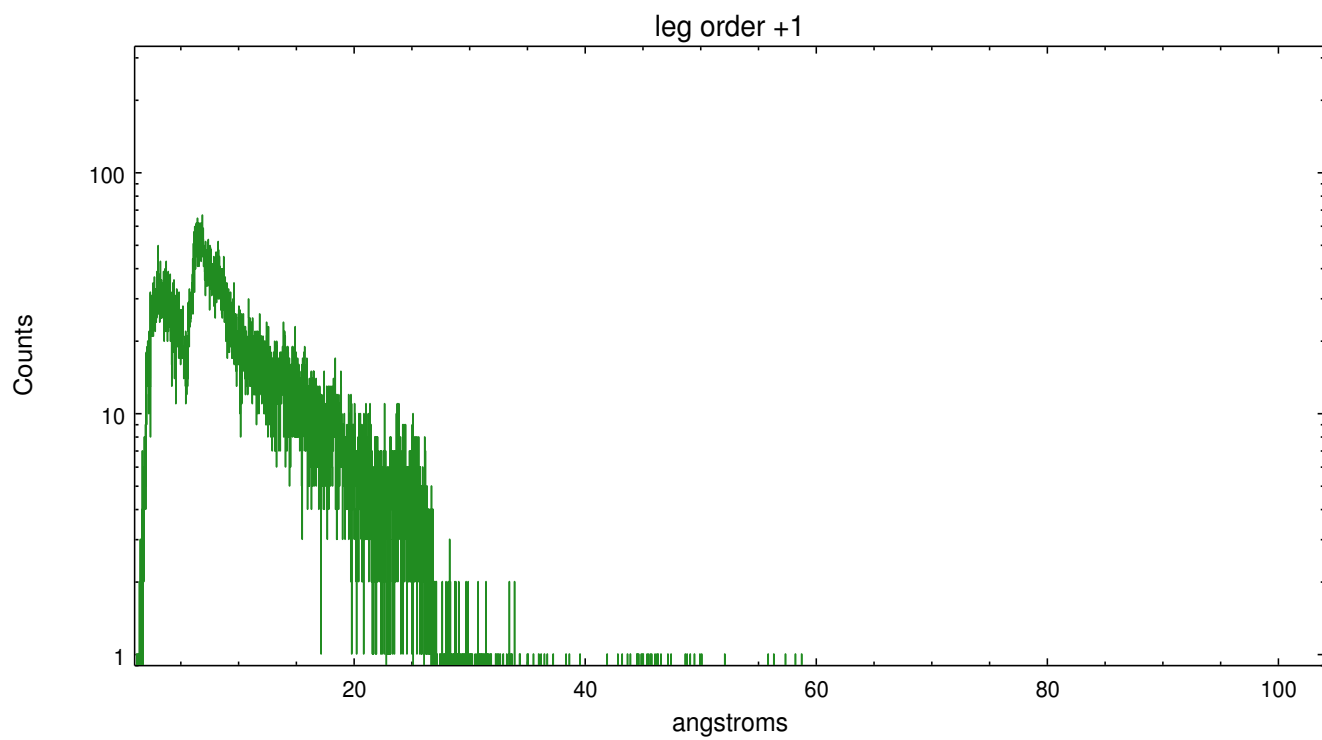
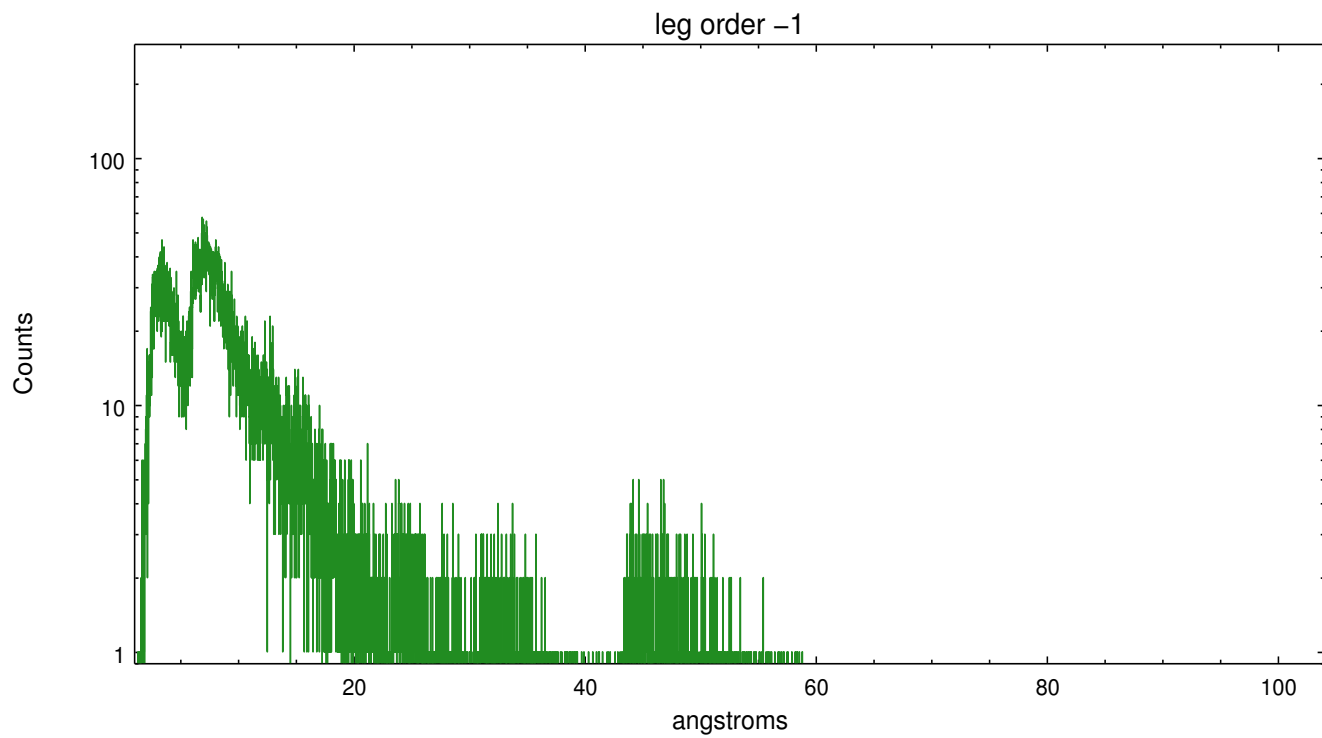
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3218	1534	27827	34866	35582	1558	3042





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.064

A.2 Comments

Gain and CTI correction are not well calibrated on CCD_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=none`, `osort_lo`, `osort_hi ~0.5`) though this can allow more zeroth order background at short wavelengths.

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Due to a spacecraft commanding error, the obsid transition occurred 33 seconds from the Kalman lock end of the previous obsid. So there were 2 Kalman locks at two different attitudes. For this processing, first three `*aipr*` files were removed from list due to two KALMAN locks at two different attitudes.