

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8378 - L2 Version 3
Chandra X-Ray Center

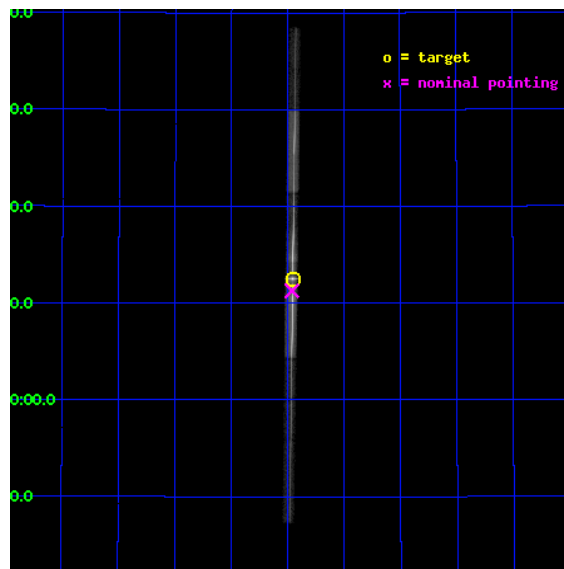
L2 Processing Date : Apr 17 2012

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1 Front

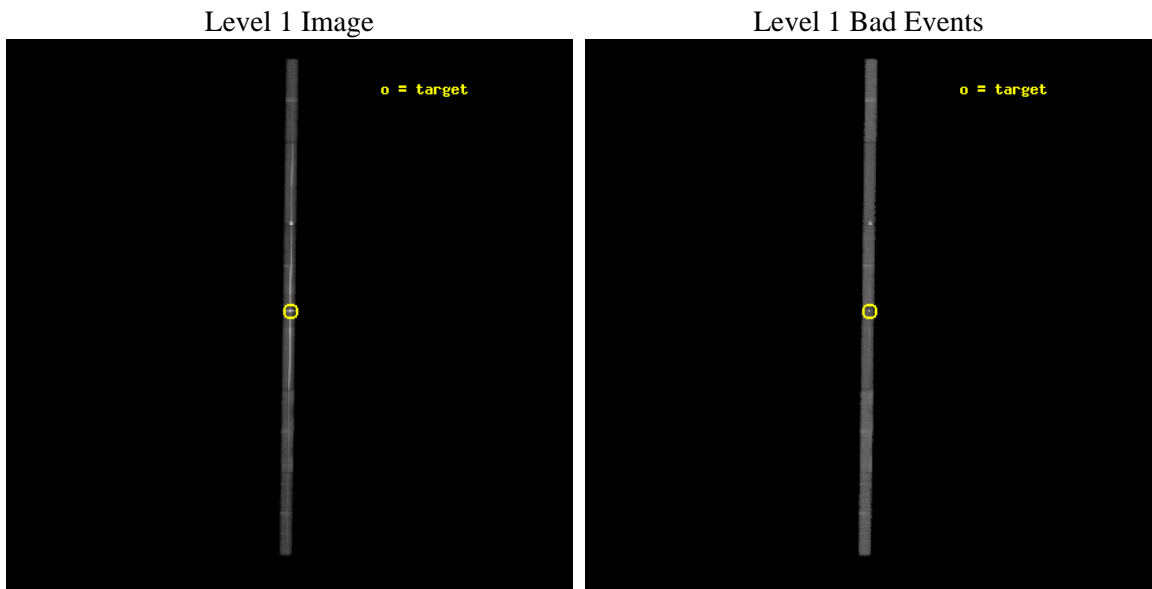
seq_num	790114	Sequence number
obs_id	8378	Observation id
title	AO8 Calibration Observations of Mkn 421 and PKS2155-304	Proposal t
observer	Dr. CXC Calibration	Principal investigator
object	MKN421	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.11563946597	Nominal RA [deg]
dec_nom	38.187955231012	Nominal Dec [deg]
roll_nom	90.735359485753	Nominal Roll [deg]
revision	3	Processing version of data
ontime	28161.69952035	Sum of GTIs [s]
livetime	26602.058814969	Livetime [s]
ontime4	28161.69952035	Sum of GTIs [s]
ontime5	28161.69952035	Sum of GTIs [s]
ontime6	28161.69952035	Sum of GTIs [s]
ontime7	28161.69952035	Sum of GTIs [s]
ontime8	28161.69952035	Sum of GTIs [s]
ontime9	28161.69952035	Sum of GTIs [s]
l2events	456653	Number of level 2 events



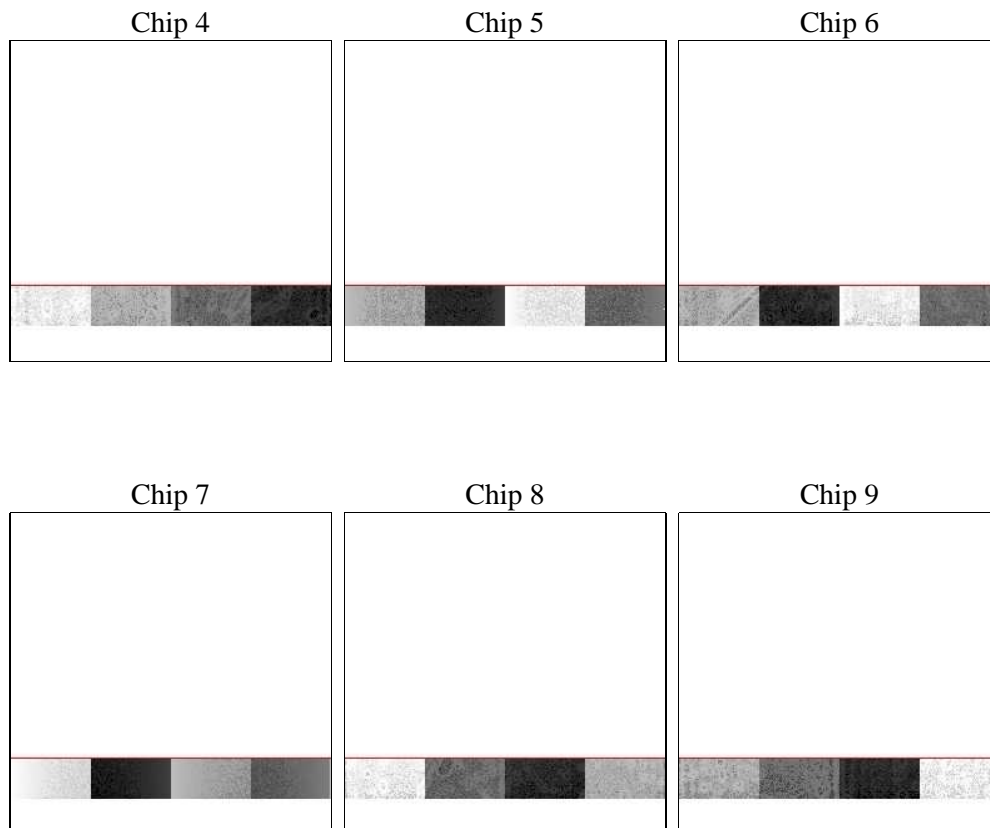
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	28161.69952035	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	28161.69952035	Sum of GTIs [s]
date	2012-04-17T23:03:20	Date and time of file creation	ontime5	28161.69952035	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	28161.69952035	Sum of GTIs [s]
			ontime7	28161.69952035	Sum of GTIs [s]
			ontime8	28161.69952035	Sum of GTIs [s]
			ontime9	28161.69952035	Sum of GTIs [s]
			l1events	760595	Number of level 1 events

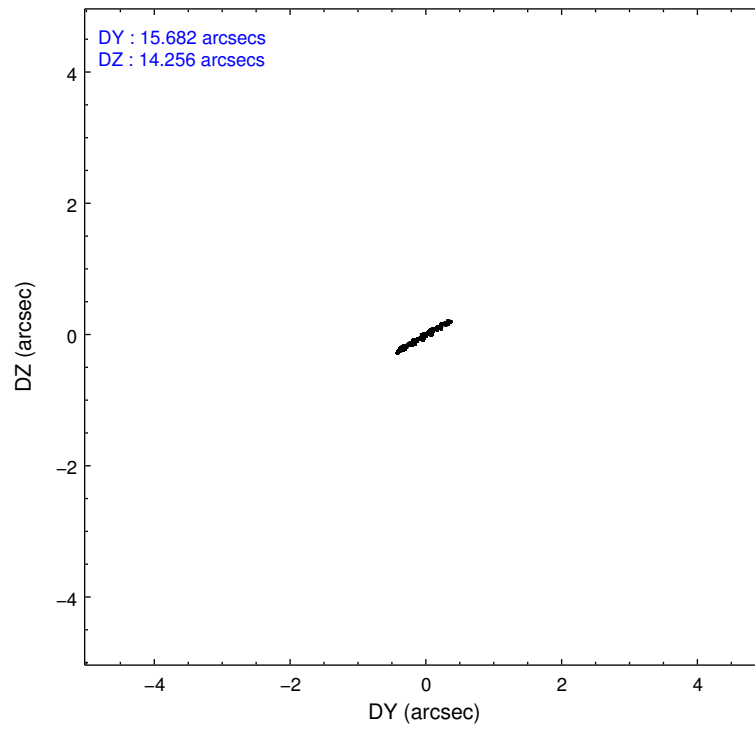
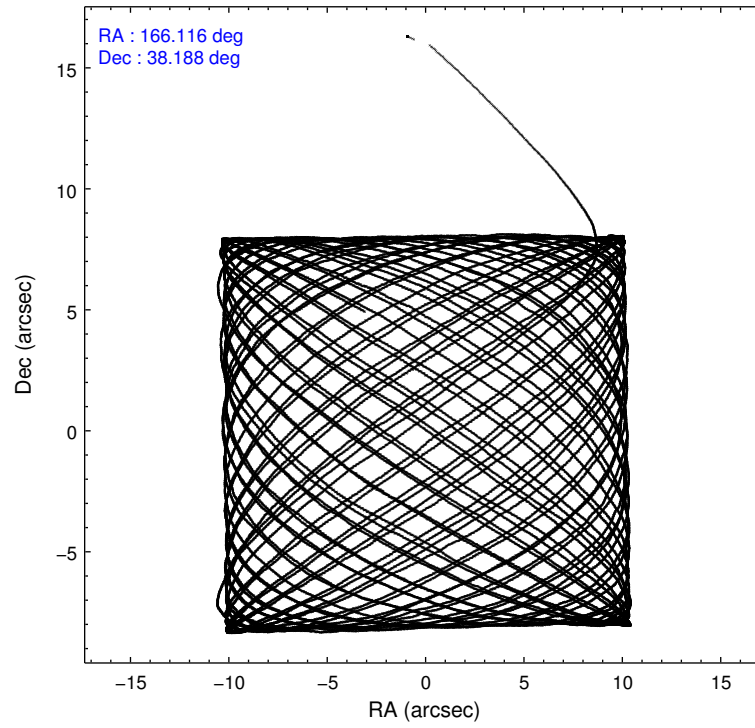
2.1.4 Events

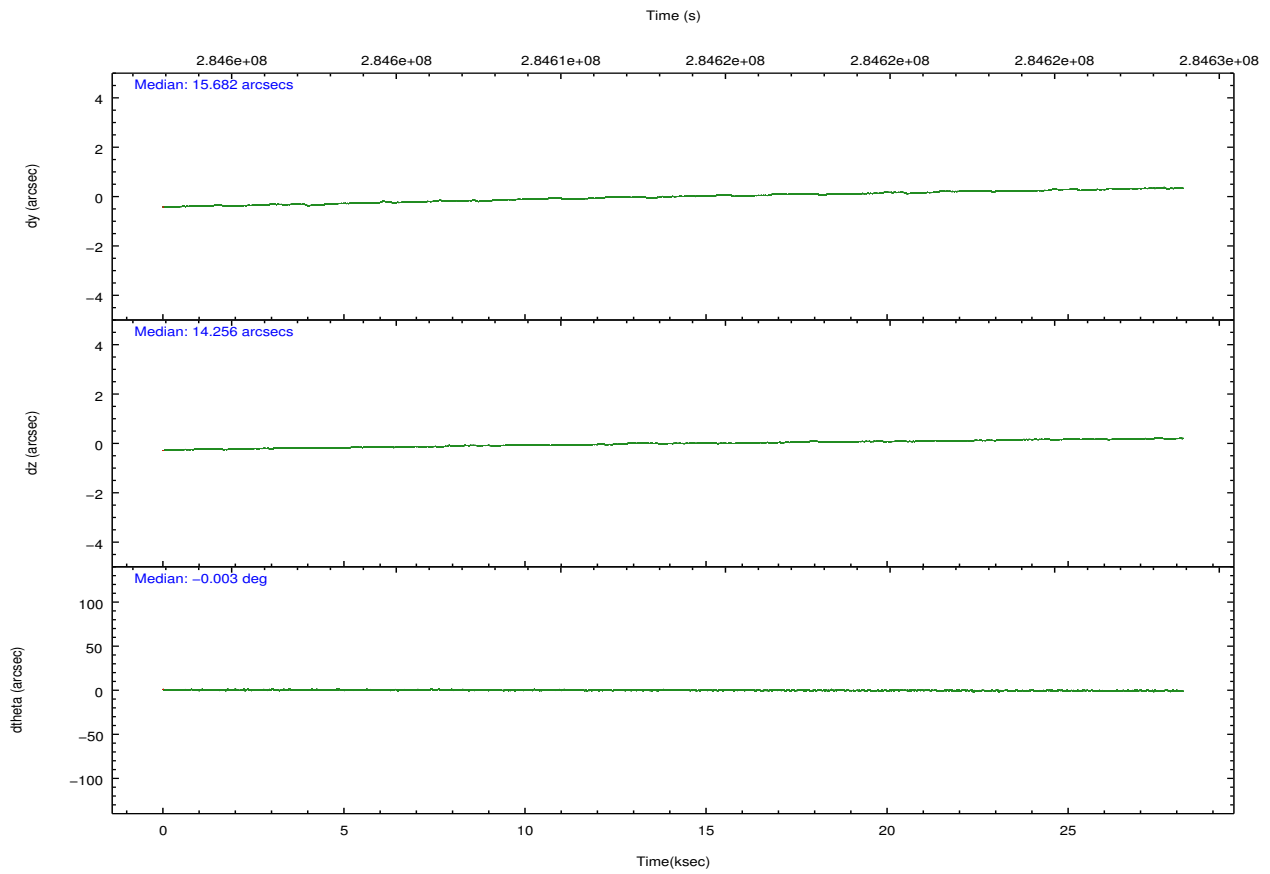
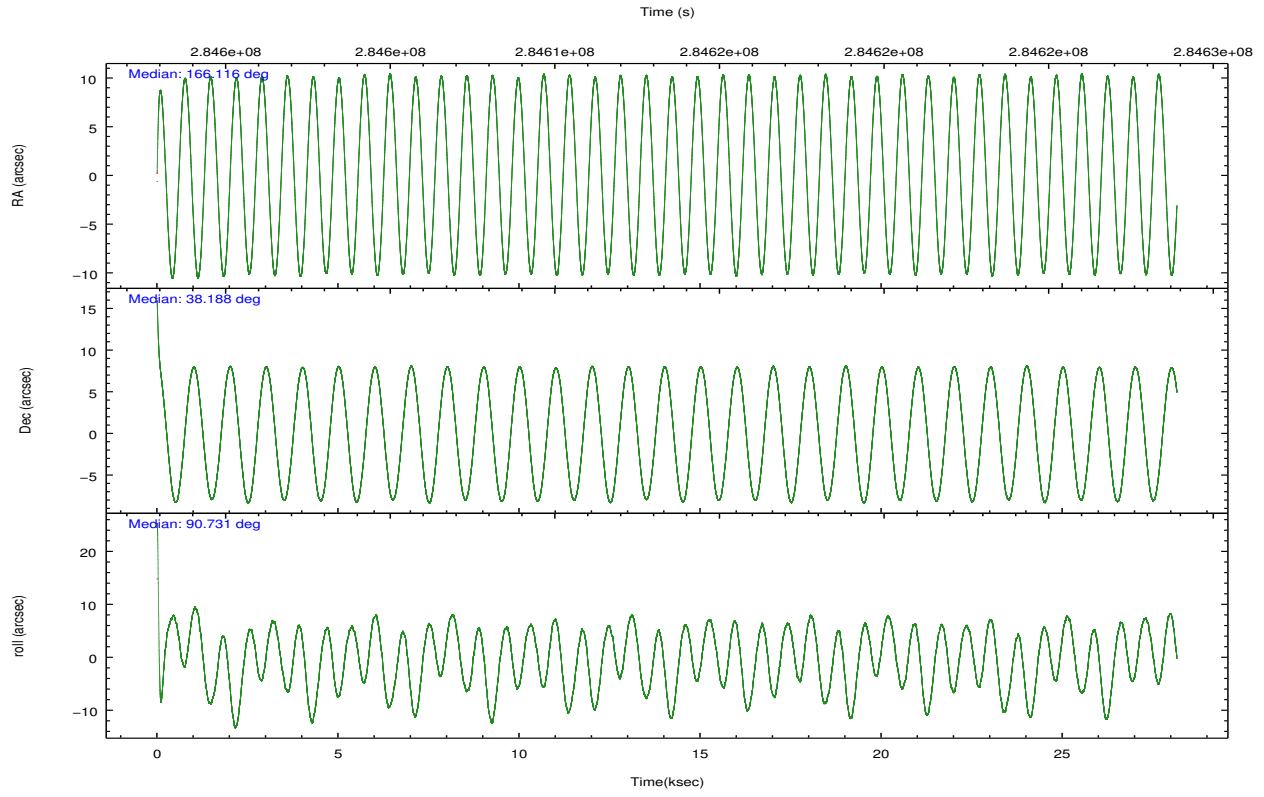
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	51024	112802	165951	318347	70356	42115	grade 0 events	5320	32772	104315	68039	12797	5219
rejected events	41820	33456	37097	68561	46928	33177		10%	29%	62%	21%	18%	12%
rejected %	81%	29%	22%	21%	66%	78%	grade 1 events	16	3912	394	1677	37	11
								0%	3%	0%	0%	0%	0%
							grade 2 events	1339	13679	12513	62427	3388	1168
								2%	12%	7%	19%	4%	2%
							grade 3 events	822	9911	4469	28616	1748	844
								1%	8%	2%	8%	2%	2%
							grade 4 events	815	7388	4349	28070	1620	850
								1%	6%	2%	8%	2%	2%
							grade 5 events	1432	7564	1717	11424	1904	1436
								2%	6%	1%	3%	2%	3%
							grade 6 events	916	15645	3294	62778	3883	862
								1%	13%	1%	19%	5%	2%
							grade 7 events	40364	21931	34900	55316	44979	31725
								79%	19%	21%	17%	63%	75%

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	166.133828	166.1156394659656	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	38.164637	38.18795523101228	Subarray start row	113	113
[deg] Pointing Roll	90.567476	90.73535948575268	Subarray row count	128	128
[s] Window start time (MET)	283996865.184000	283996865.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	286588865.184000	286588865.184000	[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	-182.139514760308			
[mm] SIM translation stage offset	-8	-7.993007822699838			
[s] Observation start time (MET)	284599499.184000	284598560.5211			
Observation start date	2007-01-07T23:23:54	2007-01-07T23:09:20			
[s] Observation end time (MET)	284627499.184000	284627633.62248			
Observation end date	2007-01-08T07:10:34	2007-01-08T07:13:53			
Read mode	TIMED	TIMED			

2.3 Aspect



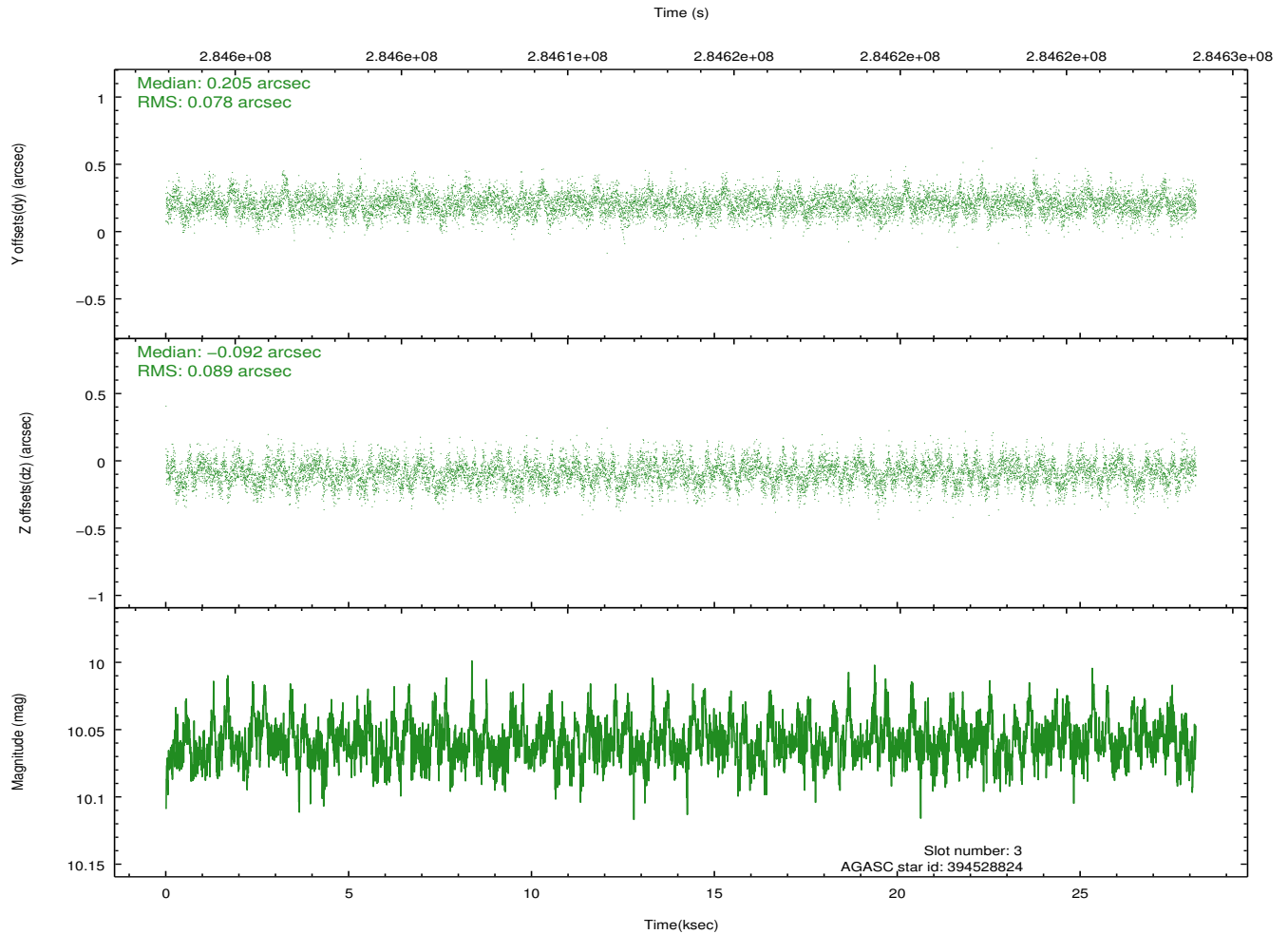
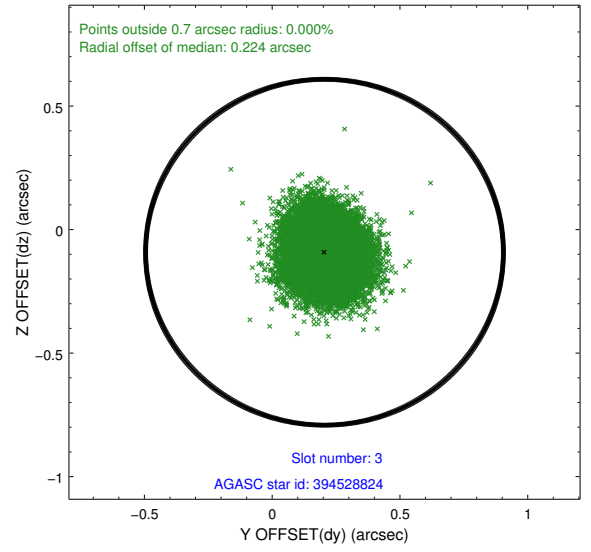
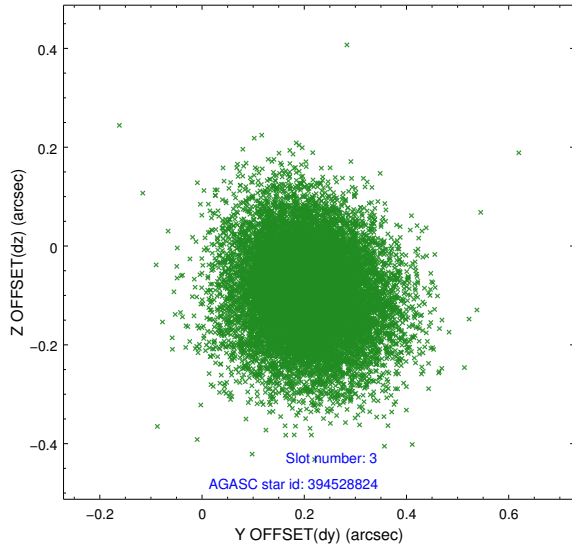


Slot Statistics

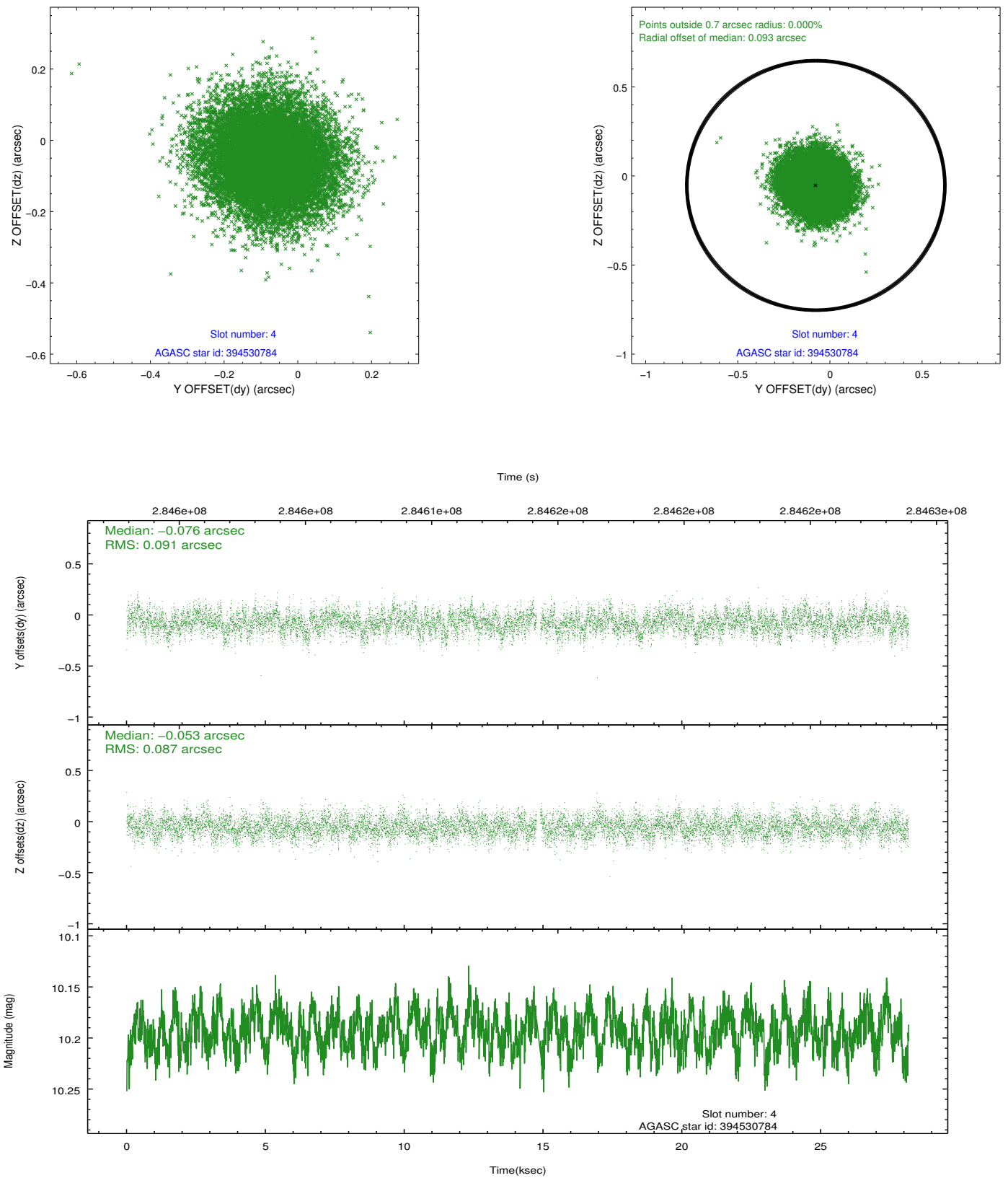
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	6870	-0.111	-0.127	0.009	0.018	0.000000	0.000000	-768.21	-1900.38
1	FID	ACIS-S-4	7.18	6870	0.267	0.088	0.008	0.021	0.000000	0.000000	2145.43	8.16
2	FID	ACIS-S-5	7.21	6870	-0.188	0.047	0.012	0.029	0.000000	0.000000	-1820.99	1.94
3	GUIDE	394528824	10.06	13712	0.205	-0.092	0.126	0.206	165.824970	38.140431	-76.66	875.31
4	GUIDE	394530784	10.19	13650	-0.076	-0.053	0.135	0.215	165.569172	38.418674	935.18	1583.63
5	GUIDE	394533848	8.71	13734	-0.031	0.059	0.078	0.124	166.382906	38.276007	395.65	-705.21
6	GUIDE	394543960	9.80	13720	-0.013	-0.046	0.126	0.198	165.802757	37.787371	-1346.93	955.23
7	GUIDE	394546712	6.60	13736	-0.082	0.128	0.059	0.092	166.451462	38.394357	819.61	-903.48

2.4 Star Slots

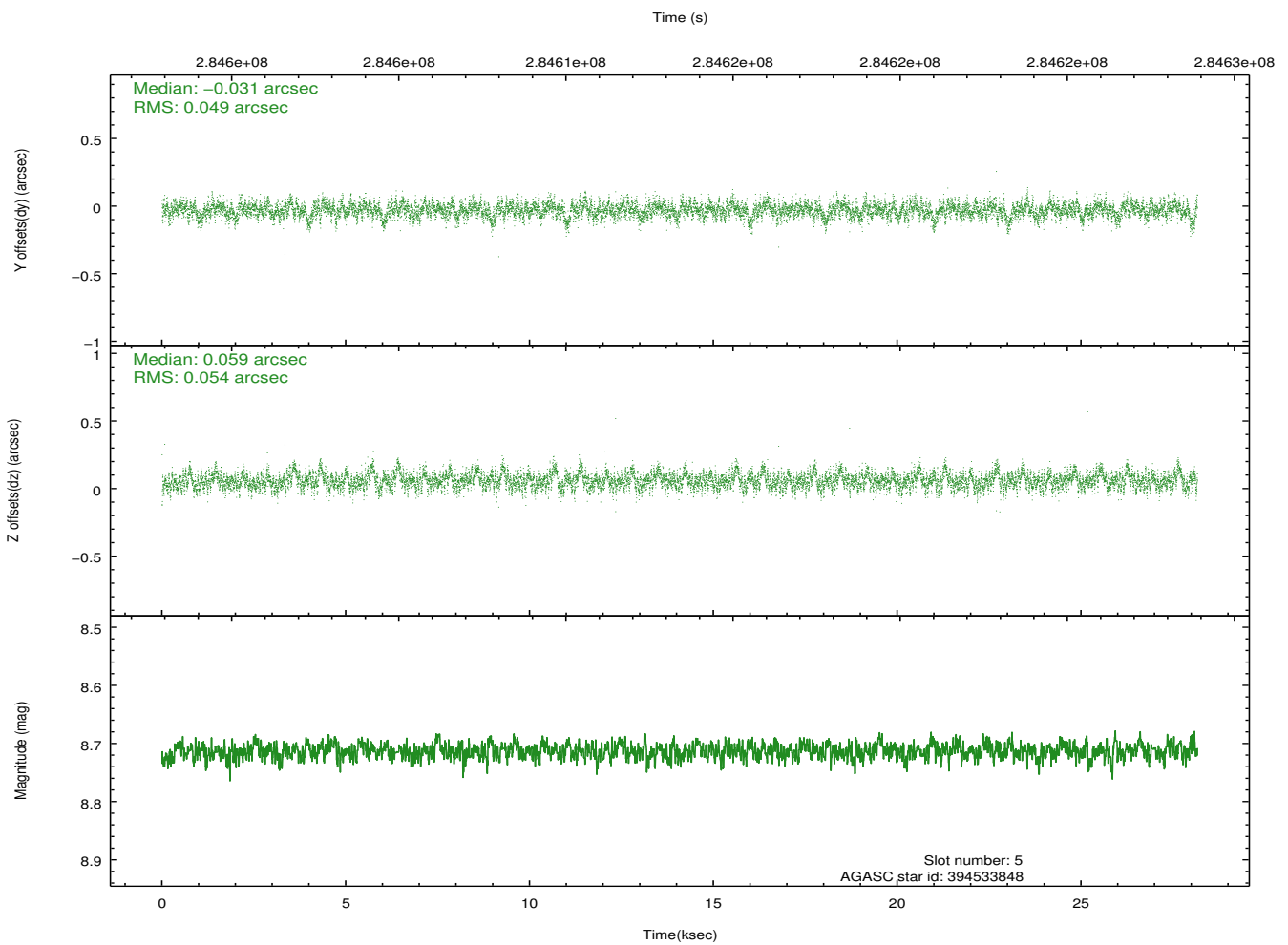
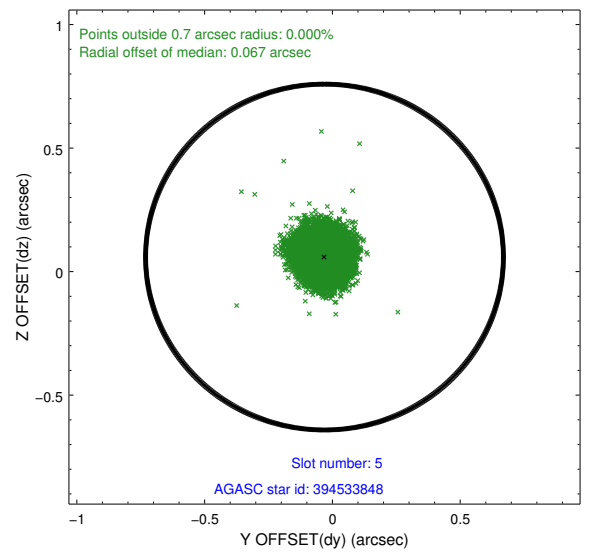
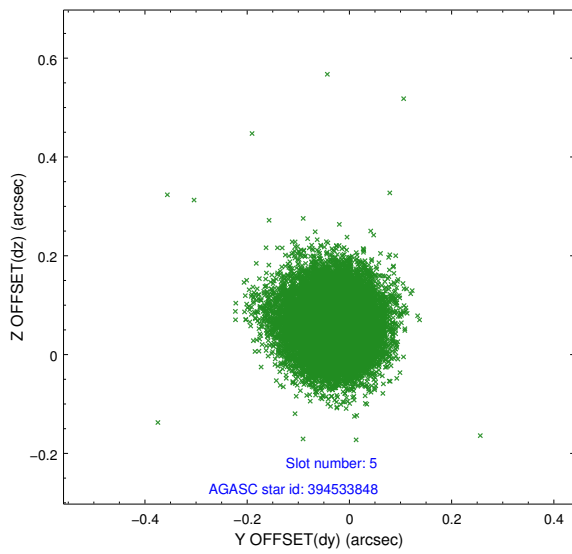
2.4.1 Slot 3



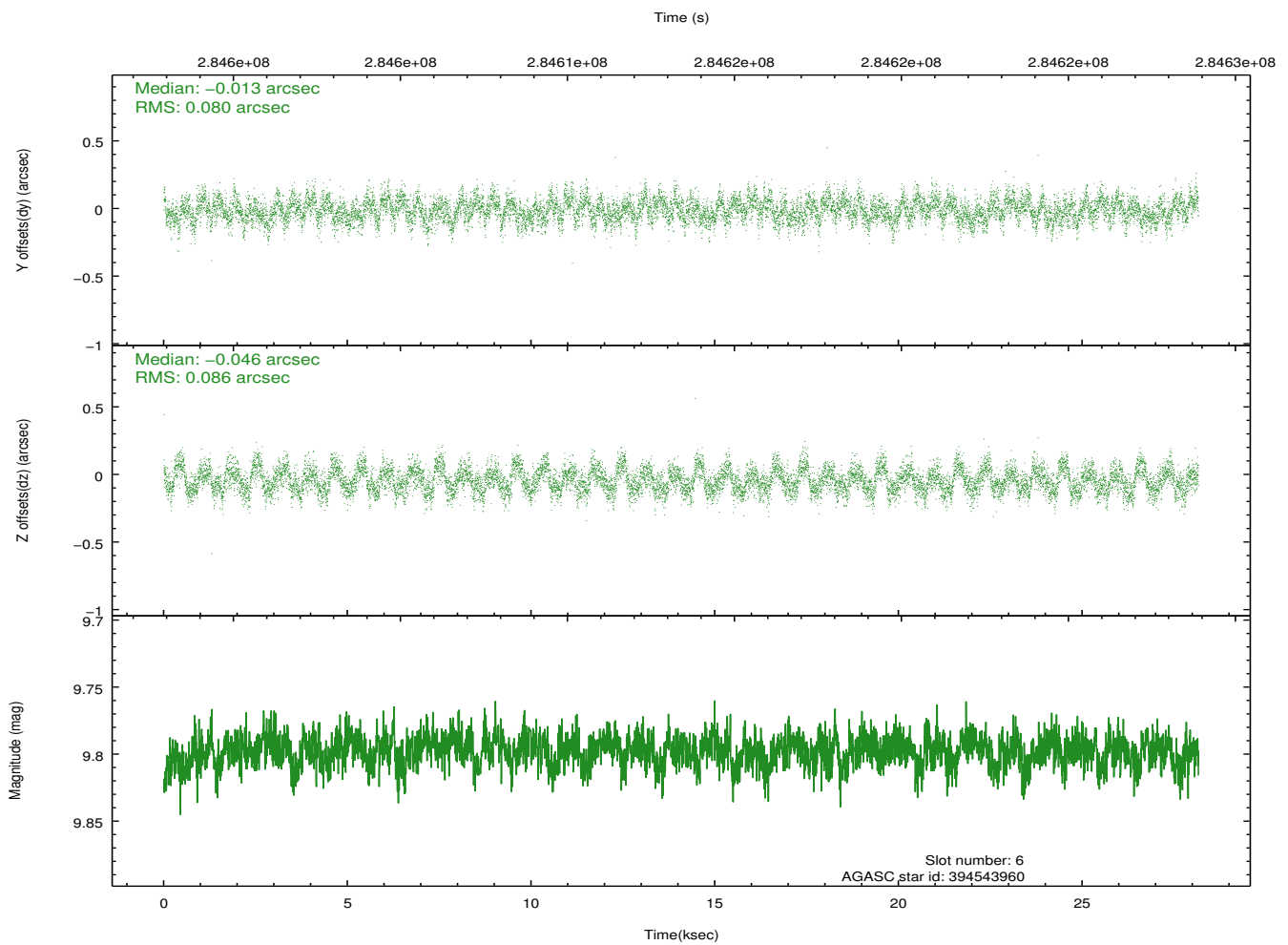
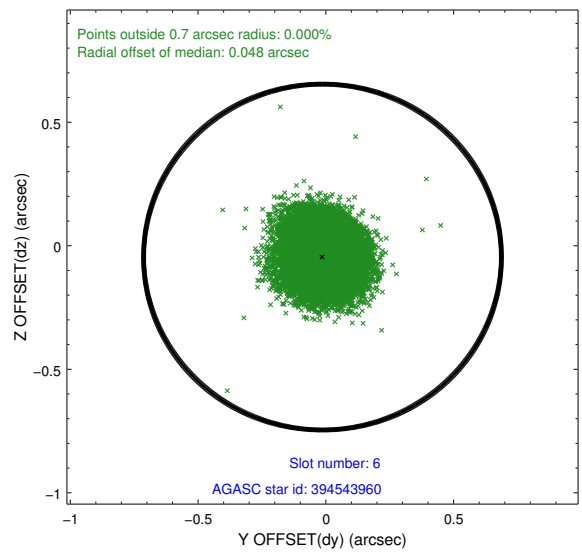
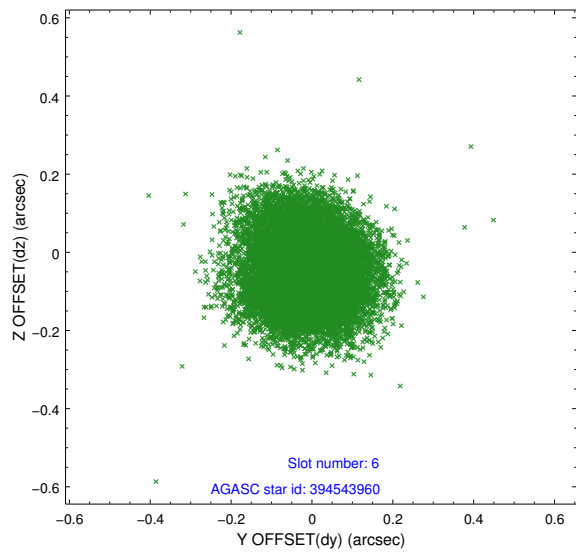
2.4.2 Slot 4



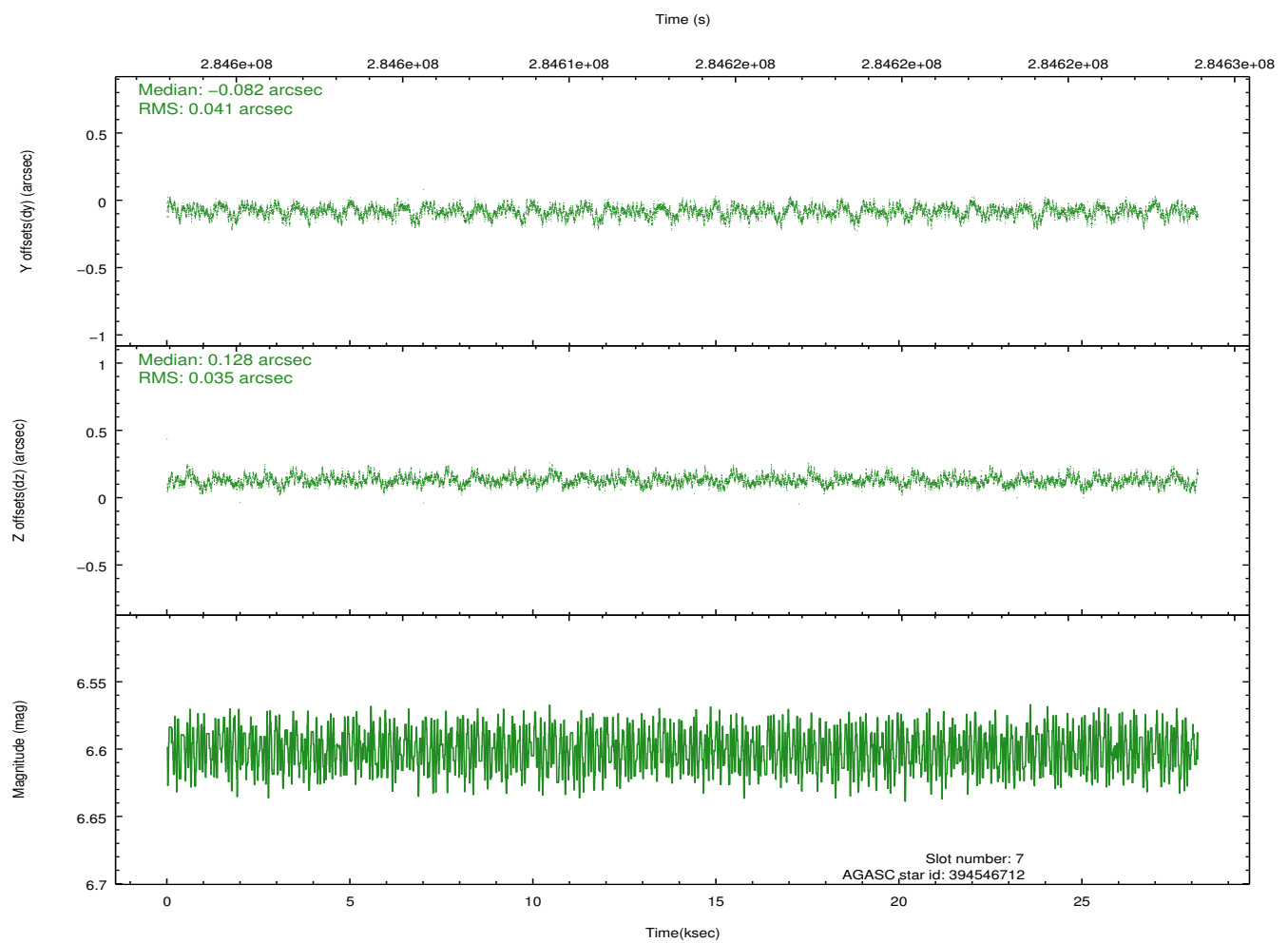
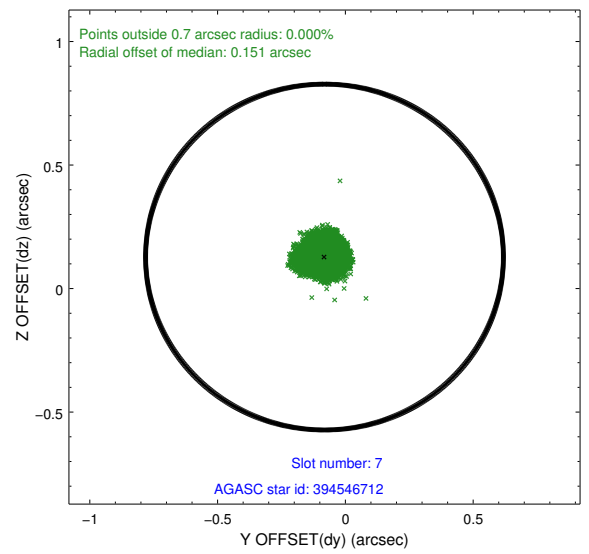
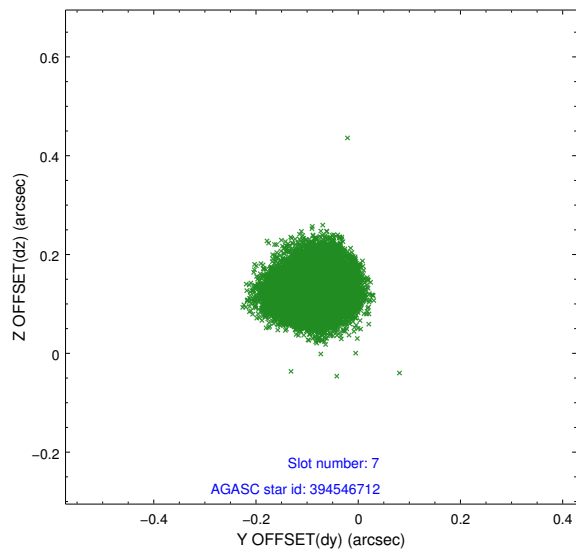
2.4.3 Slot 5



2.4.4 Slot 6

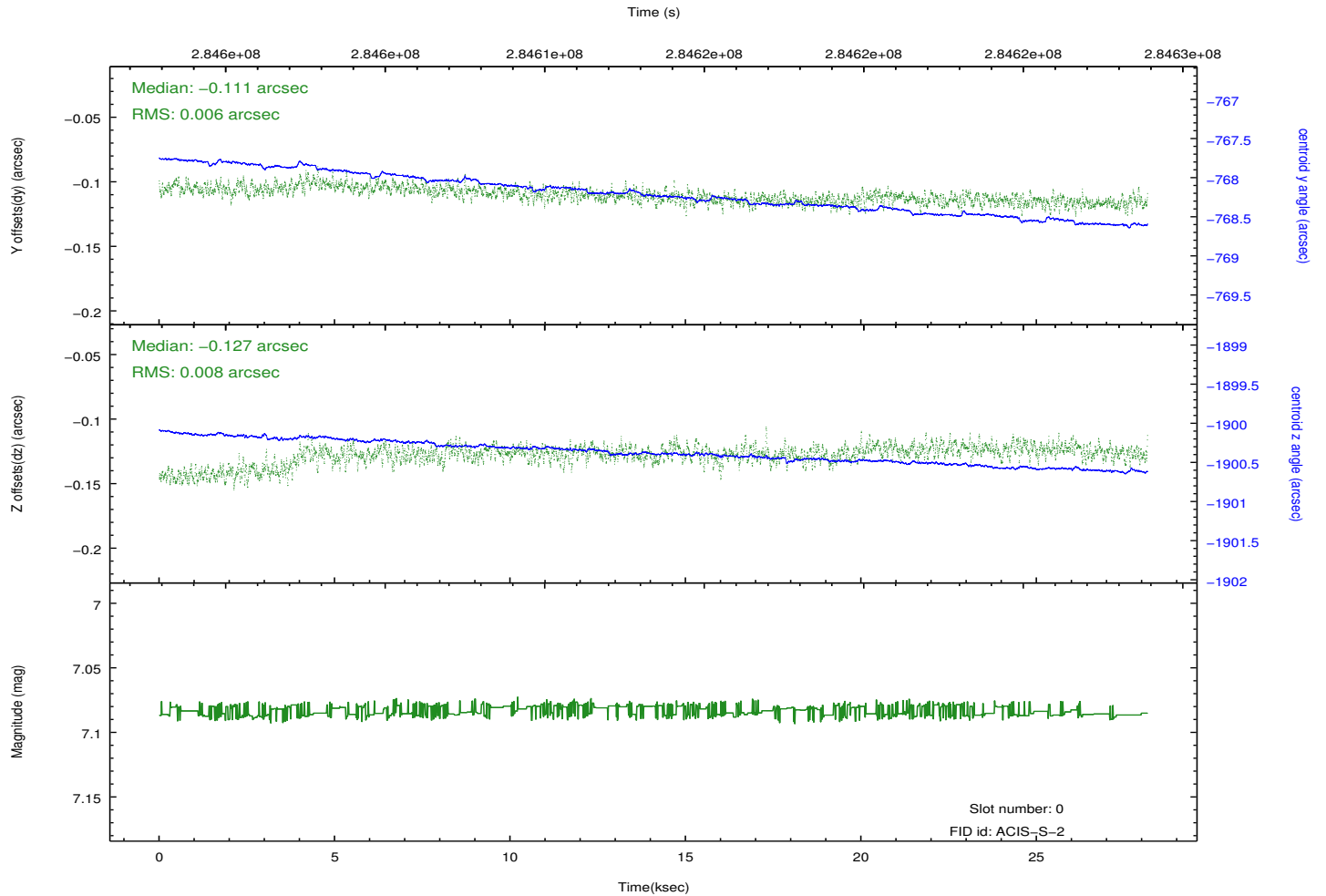
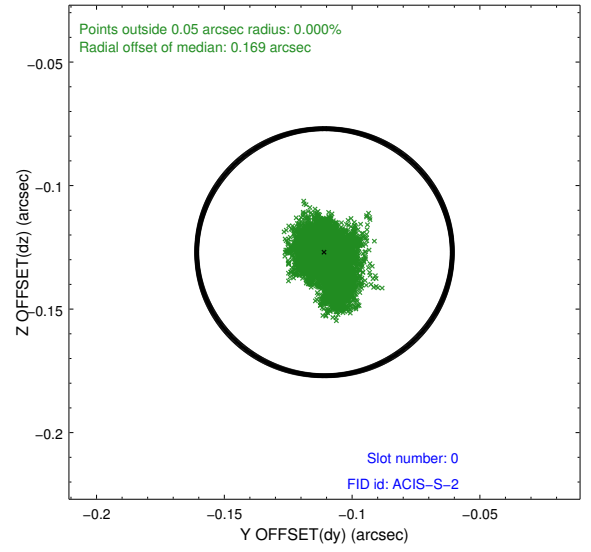
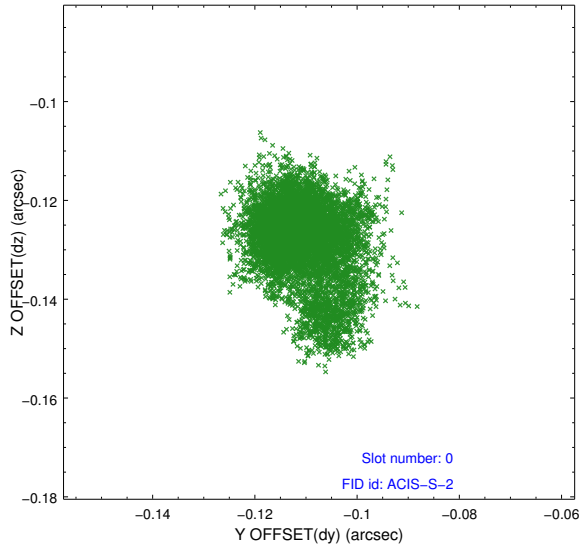


2.4.5 Slot 7

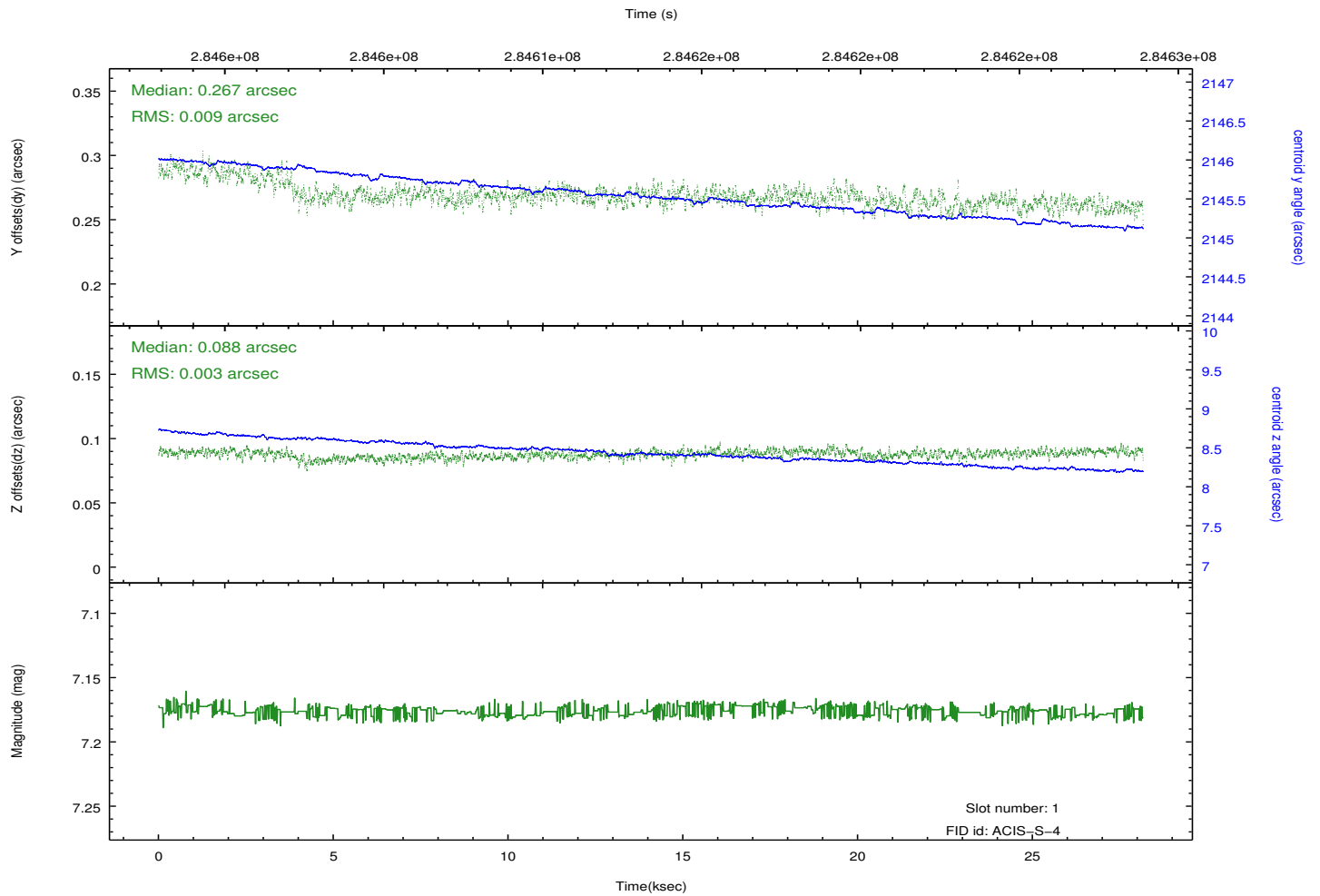
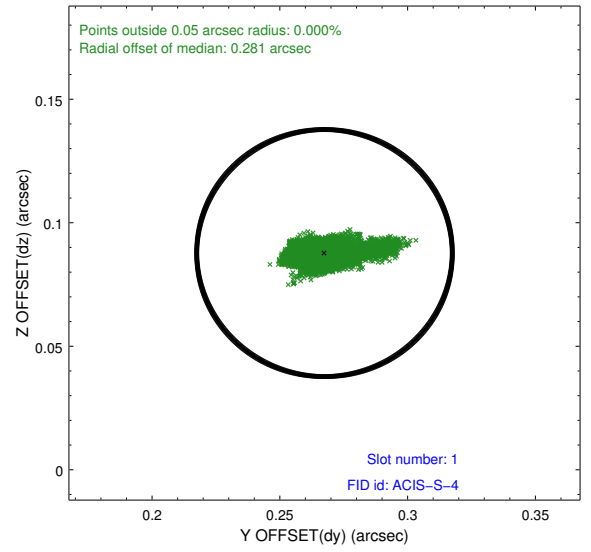
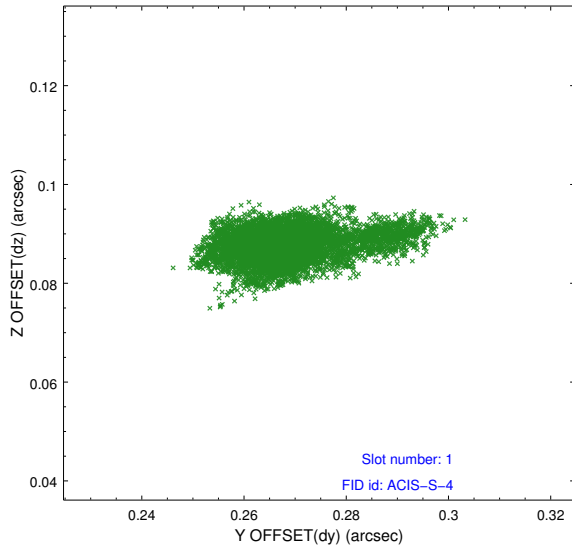


2.5 FID Slots

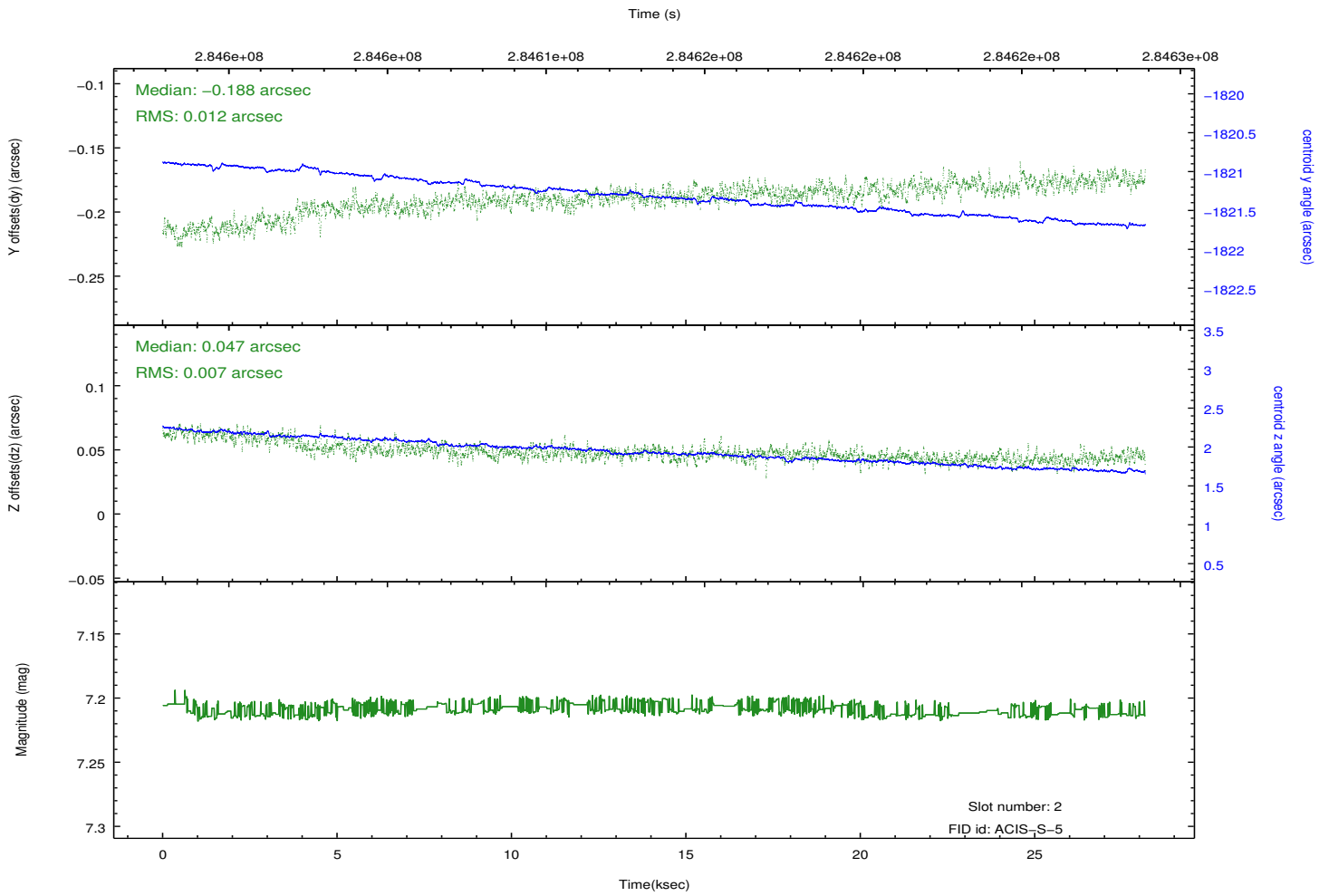
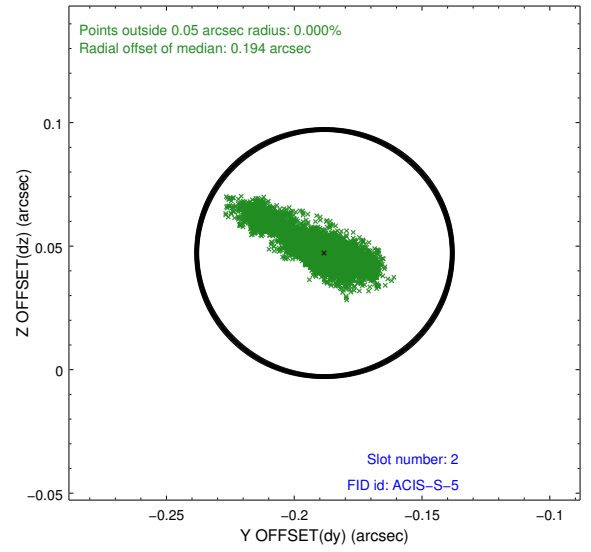
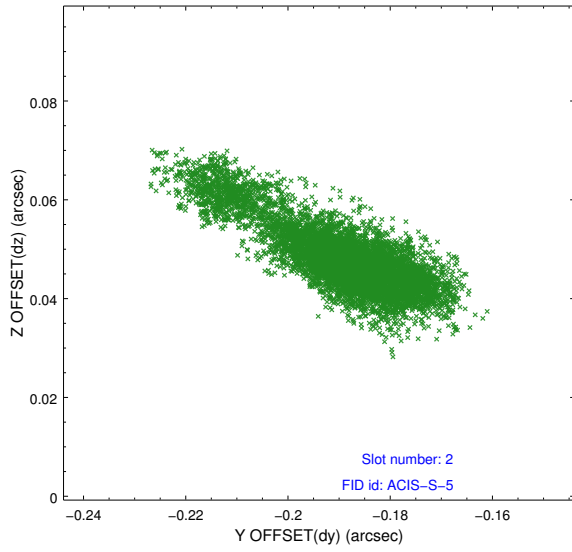
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

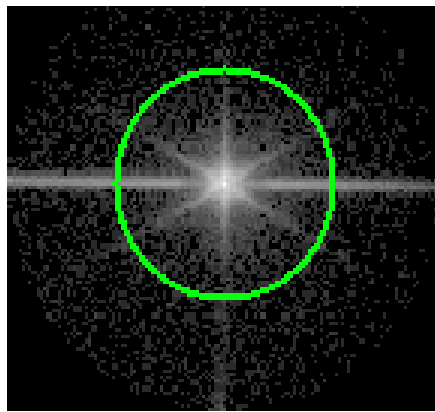


3 Gratings

3.1 LETG Arm



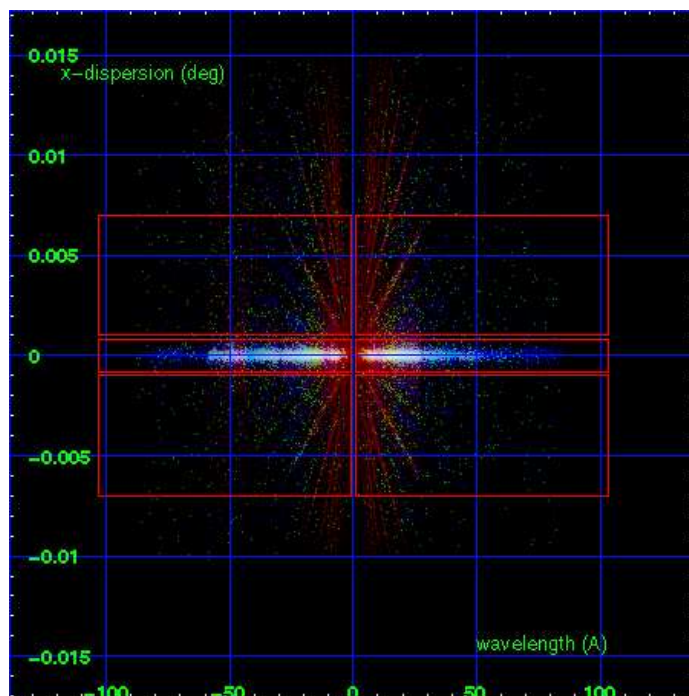
LETG Order Sort 123



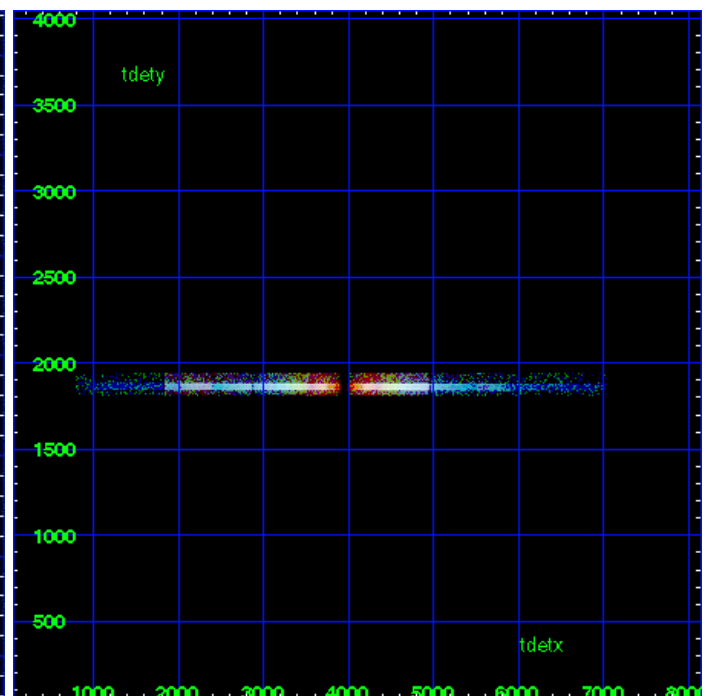
LETG Zero Order



LETG Order Sort ALL

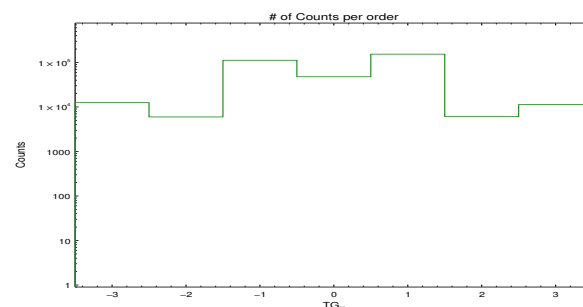


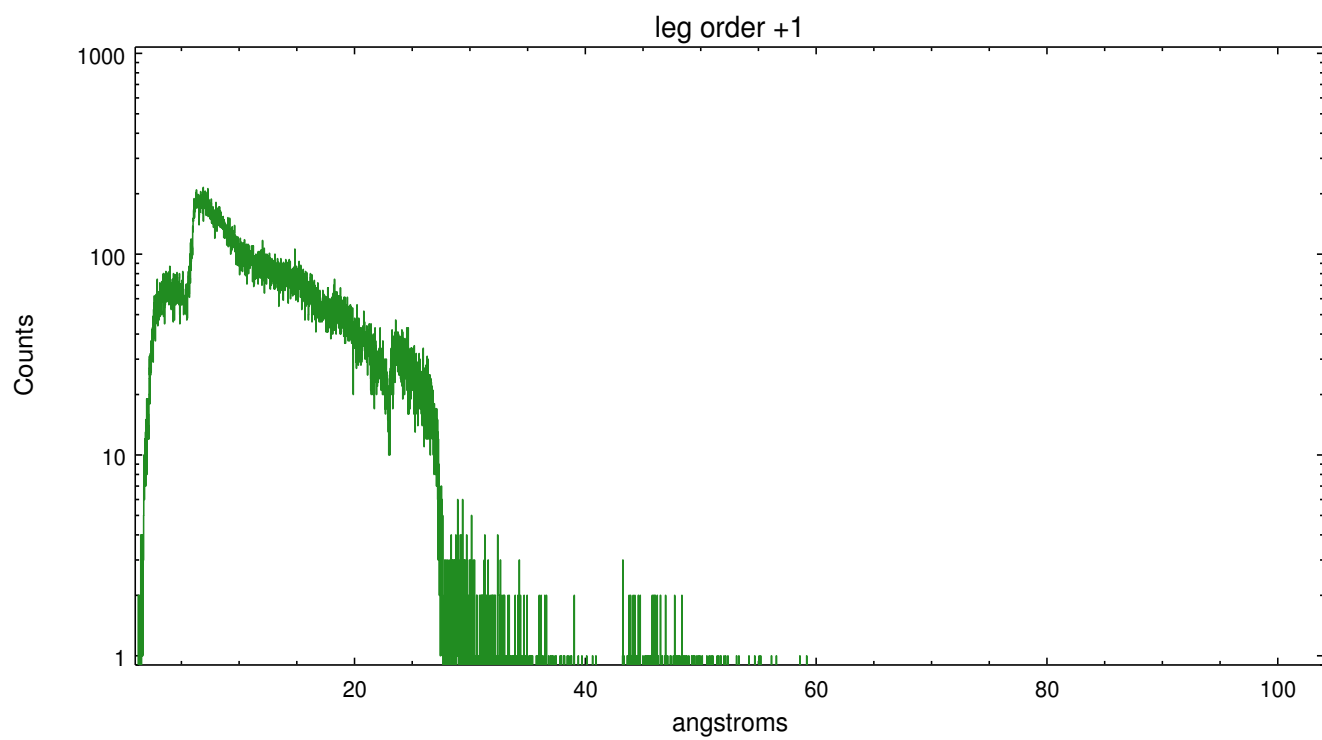
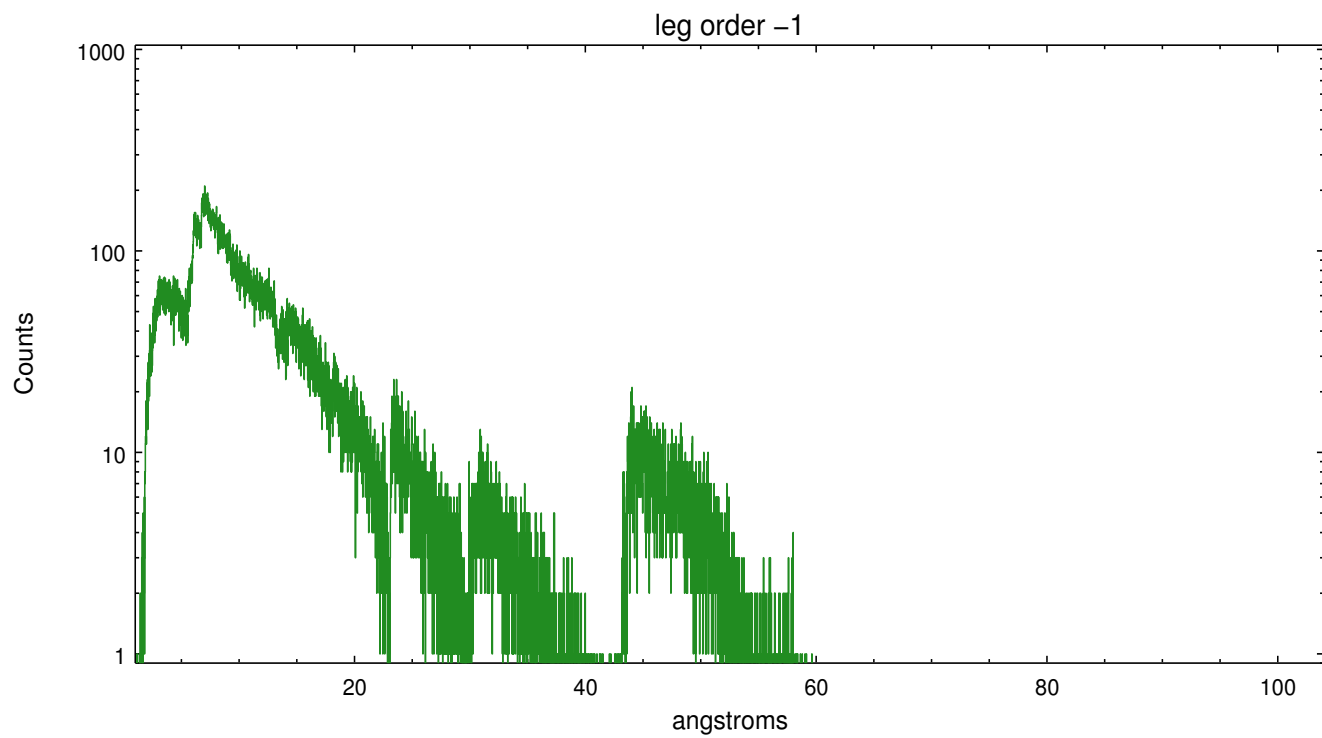
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	12504	5963	111933	47757	153655	6062	11296





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.1616995

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.