

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12695 - L2 Version 2  
Chandra X-Ray Center

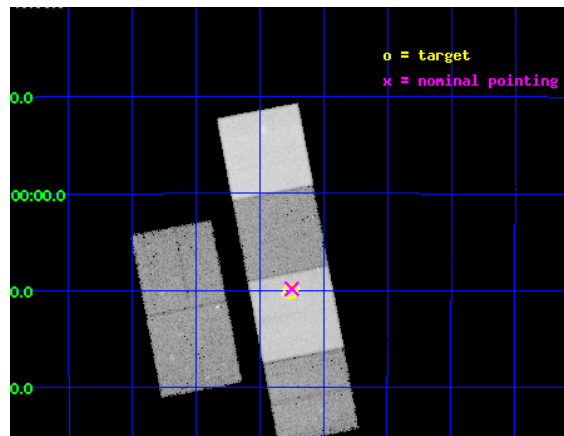
L2 Processing Date : Feb 10 2012

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# 1 Front

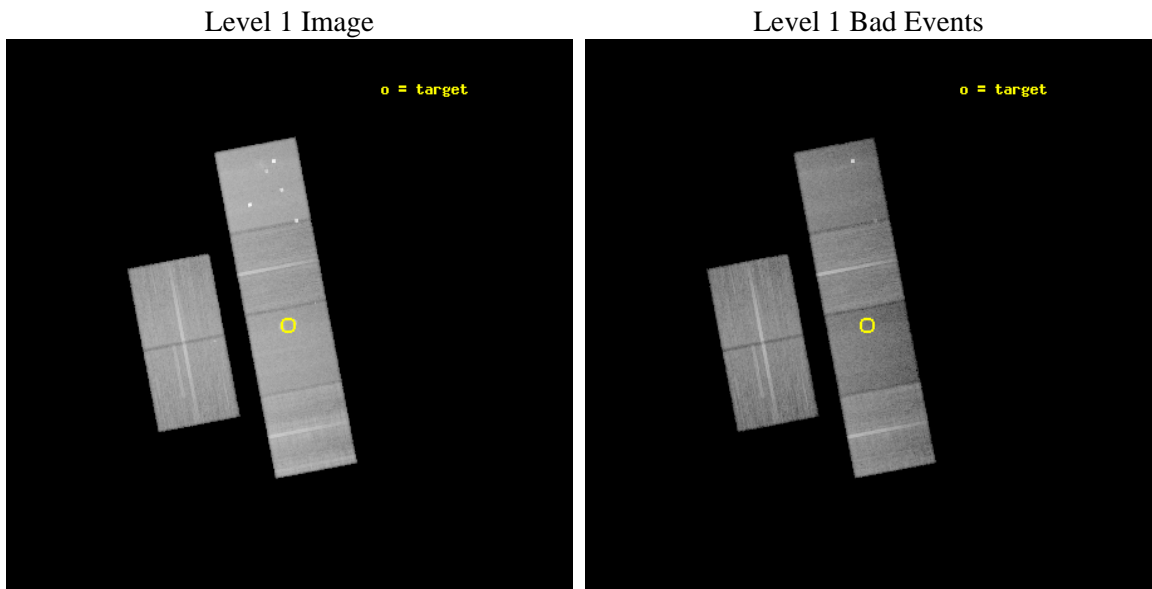
seq_num	501522	Sequence number
obs_id	12695	Observation id
title	Radioactivity, Particle Acceleration, and Supernova Ejecta in the Youngest Galactic SNR G1.9+0.3	Proposal title
observer	Dr. Kazimierz Borkowski	Principal investigator
object	G1.9+0.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.189167	Observer's specified target RA [deg]
dec_targ	-27.168889	Observer's specified target Dec [deg]
ra_nom	267.18722730215	Nominal RA [deg]
dec_nom	-27.164366942321	Nominal Dec [deg]
roll_nom	79.155744085905	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40054.117303133	Sum of GTIs [s]
livetime	39546.927952147	Livetime [s]
ontime2	40034.71215111	Sum of GTIs [s]
ontime3	40053.994183123	Sum of GTIs [s]
ontime5	40054.07626313	Sum of GTIs [s]
ontime6	40054.035223126	Sum of GTIs [s]
ontime7	40054.117303133	Sum of GTIs [s]
ontime8	40053.95314312	Sum of GTIs [s]
l2events	416489	Number of level 2 events



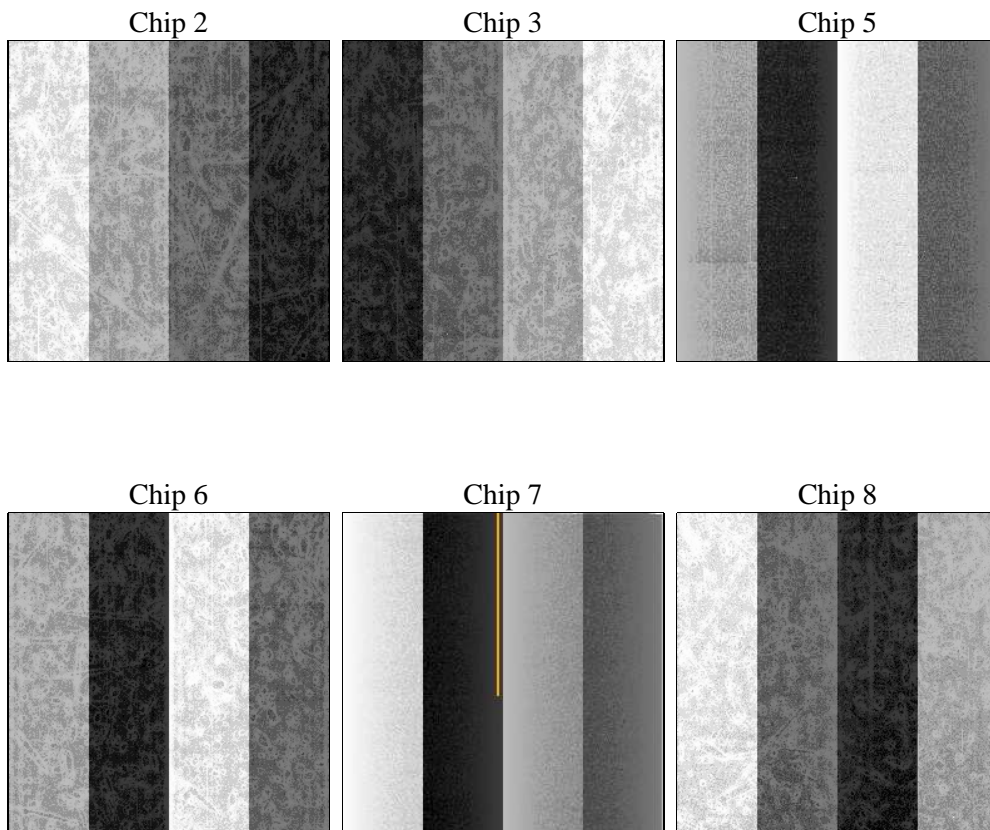
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	40054.117303133	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	40034.71215111	Sum of GTIs [s]
date	2012-02-11T00:55:38	Date and time of file creation	ontime3	40053.994183123	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	40054.07626313	Sum of GTIs [s]
			ontime6	40054.035223126	Sum of GTIs [s]
			ontime7	40054.117303133	Sum of GTIs [s]
			ontime8	40053.95314312	Sum of GTIs [s]
			l1events	1720151	Number of level 1 events

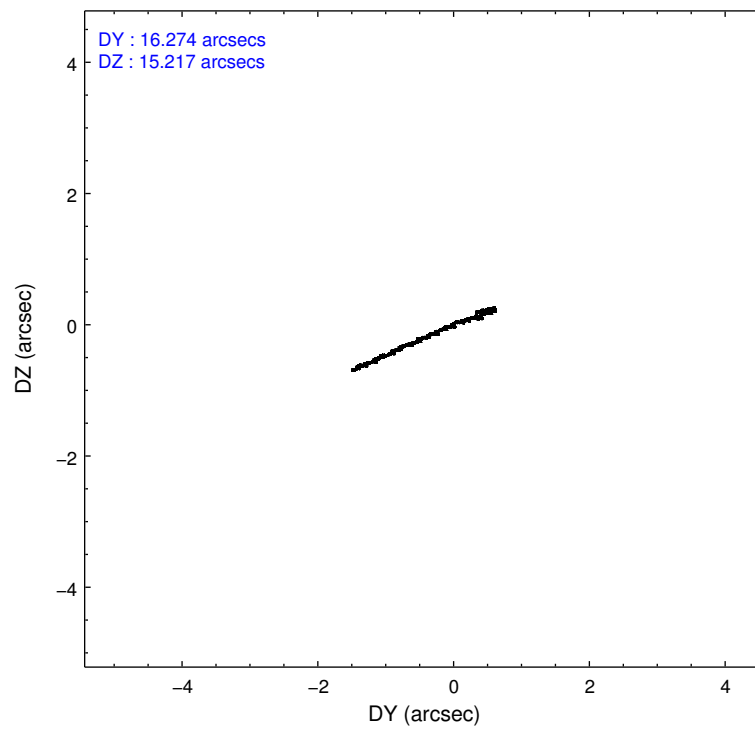
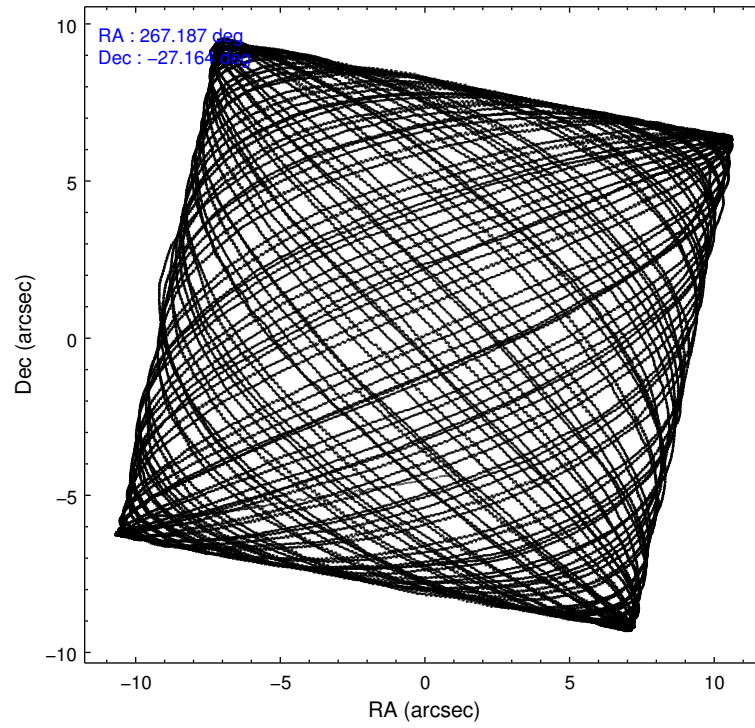
### 2.1.4 Events

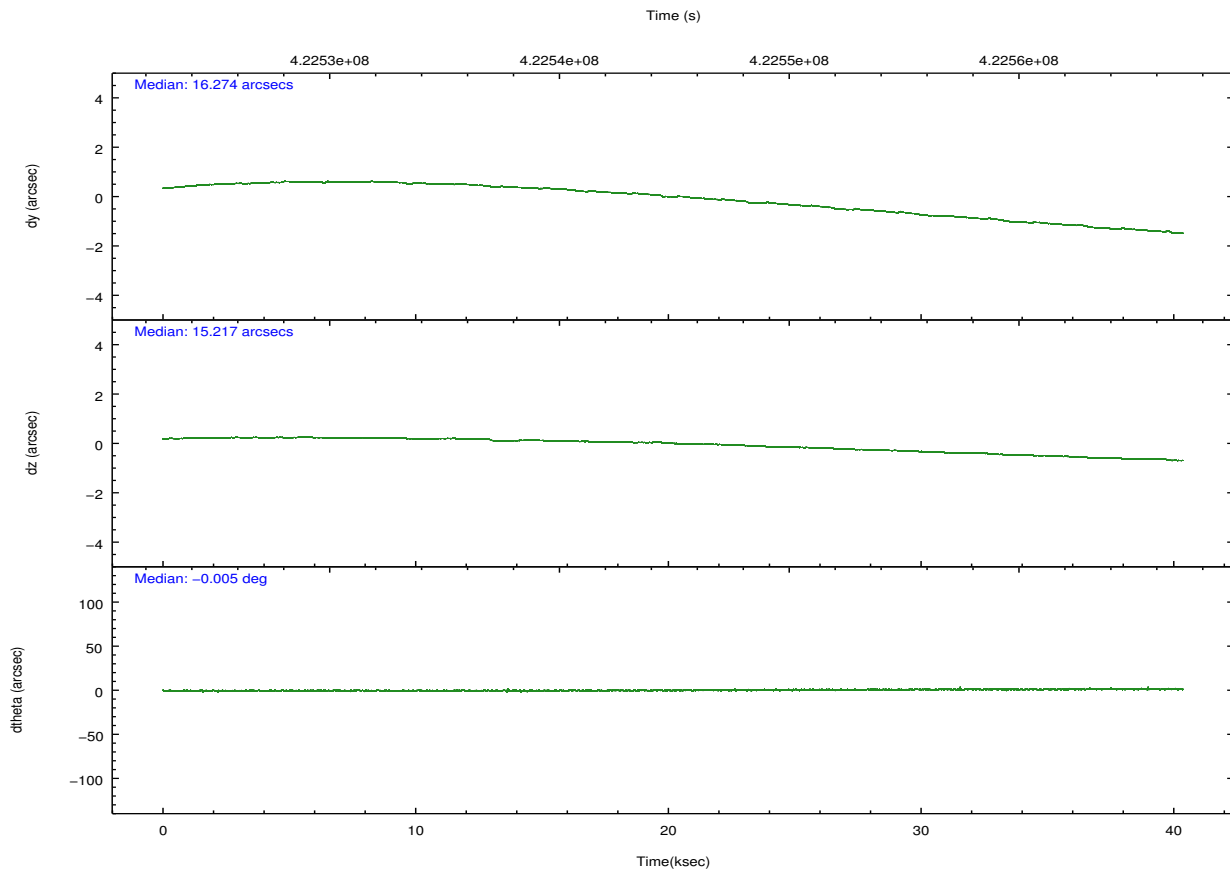
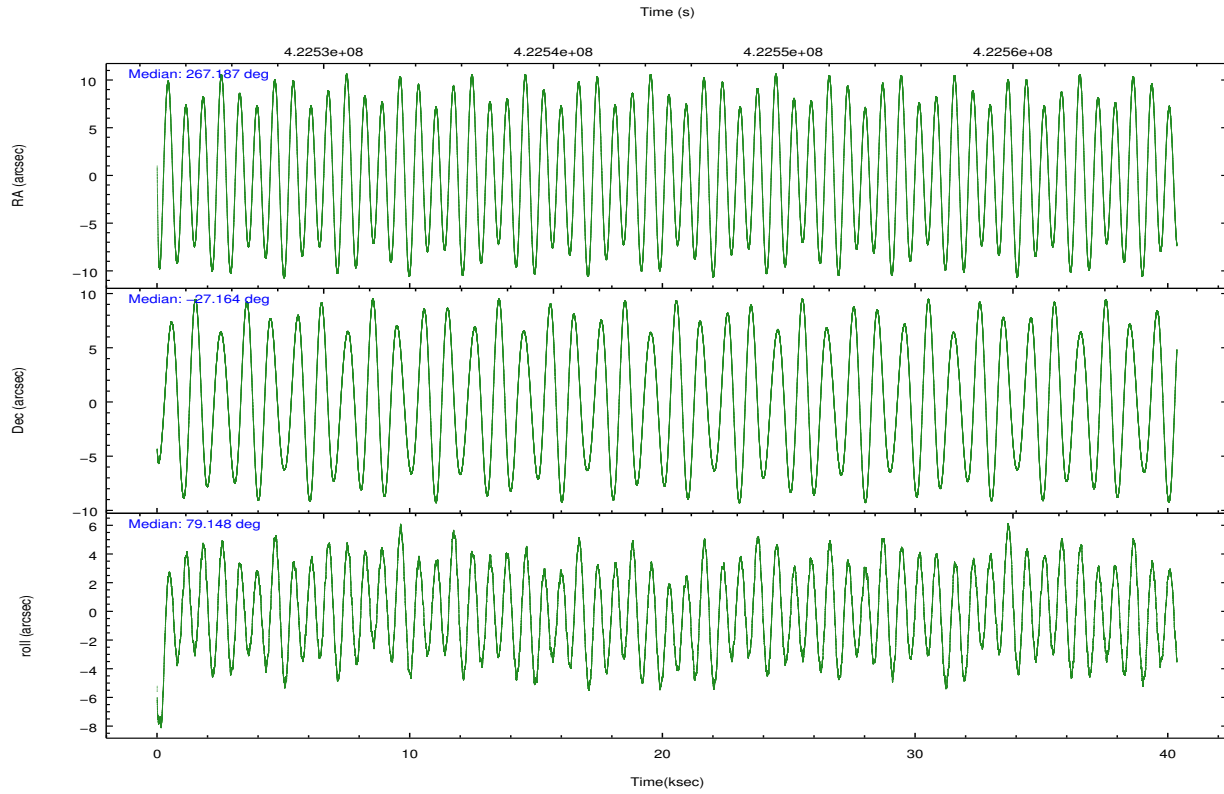
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	265156	238305	373866	252289	278694	311841	grade 0 events	11610	11073	30970	13139	14999	25501
rejected events	236338	210732	171534	220283	138114	225565		4%	4%	8%	5%	5%	8%
rejected %	89%	88%	45%	87%	49%	72%	grade 1 events	183	151	964	142	344	267
								0%	0%	0%	0%	0%	0%
							grade 2 events	6817	5782	61367	6754	30192	20424
								2%	2%	16%	2%	10%	6%
							grade 3 events	2768	2899	7660	3040	13051	9154
								1%	1%	2%	1%	4%	2%
							grade 4 events	2808	2830	7230	3017	12806	8497
								1%	1%	1%	1%	4%	2%
							grade 5 events	8077	9782	28939	9822	28749	15063
								3%	4%	7%	3%	10%	4%
							grade 6 events	4816	4995	95139	6064	69555	22714
								1%	2%	25%	2%	24%	7%
							grade 7 events	228077	200793	141597	210311	108998	210221
								86%	84%	37%	83%	39%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	267.197705	267.1872273021499	CCD I2 on	O1	Y
[deg] Pointing Dec	-27.190063	-27.1643669423211	CCD I3 on	Y	Y
[deg] Pointing Roll	79.003903	79.1557440859055	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O2	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	422525130.184000	422524039.04716	CCD S5 on	N	N
Observation start date	2011-05-23T08:04:24	2011-05-23T07:47:19	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	422565130.184000	422566171.67435	On-chip summing requested	N	N
Observation end date	2011-05-23T19:11:04	2011-05-23T19:29:31	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



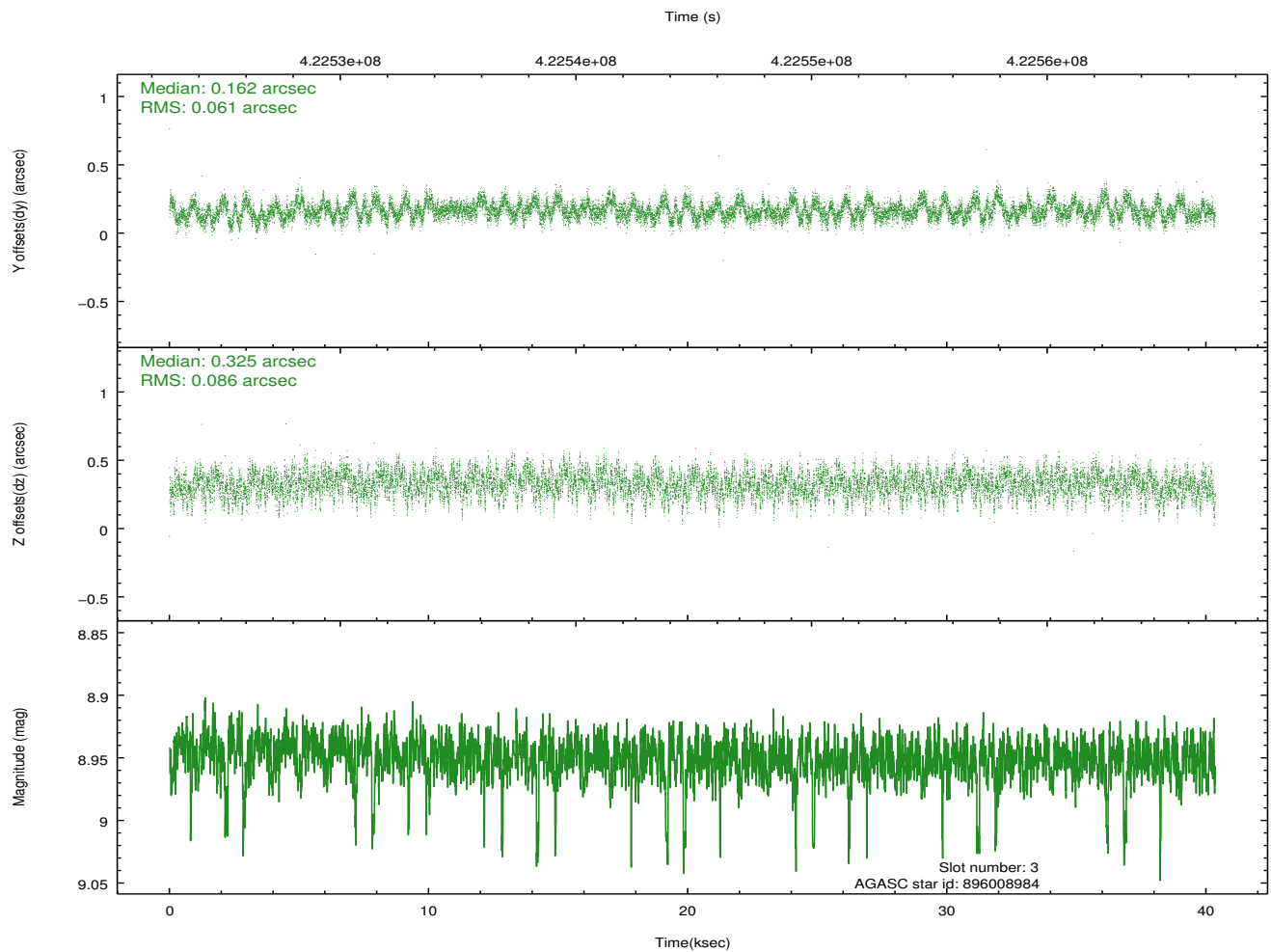
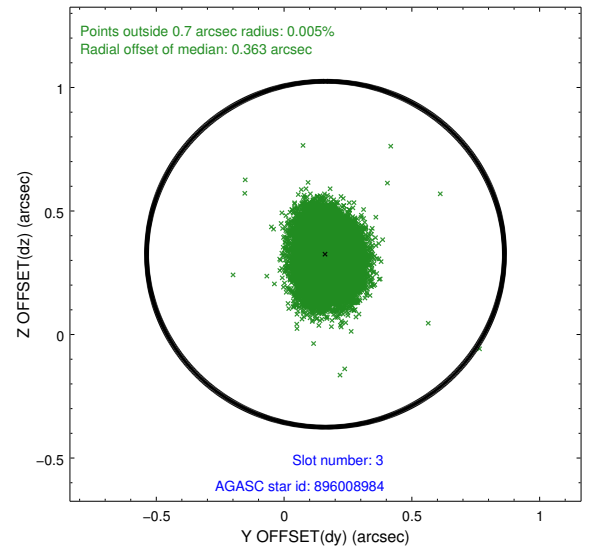
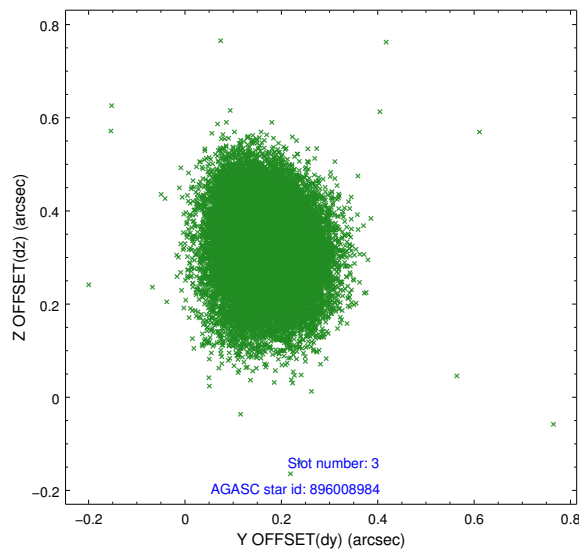


### Slot Statistics

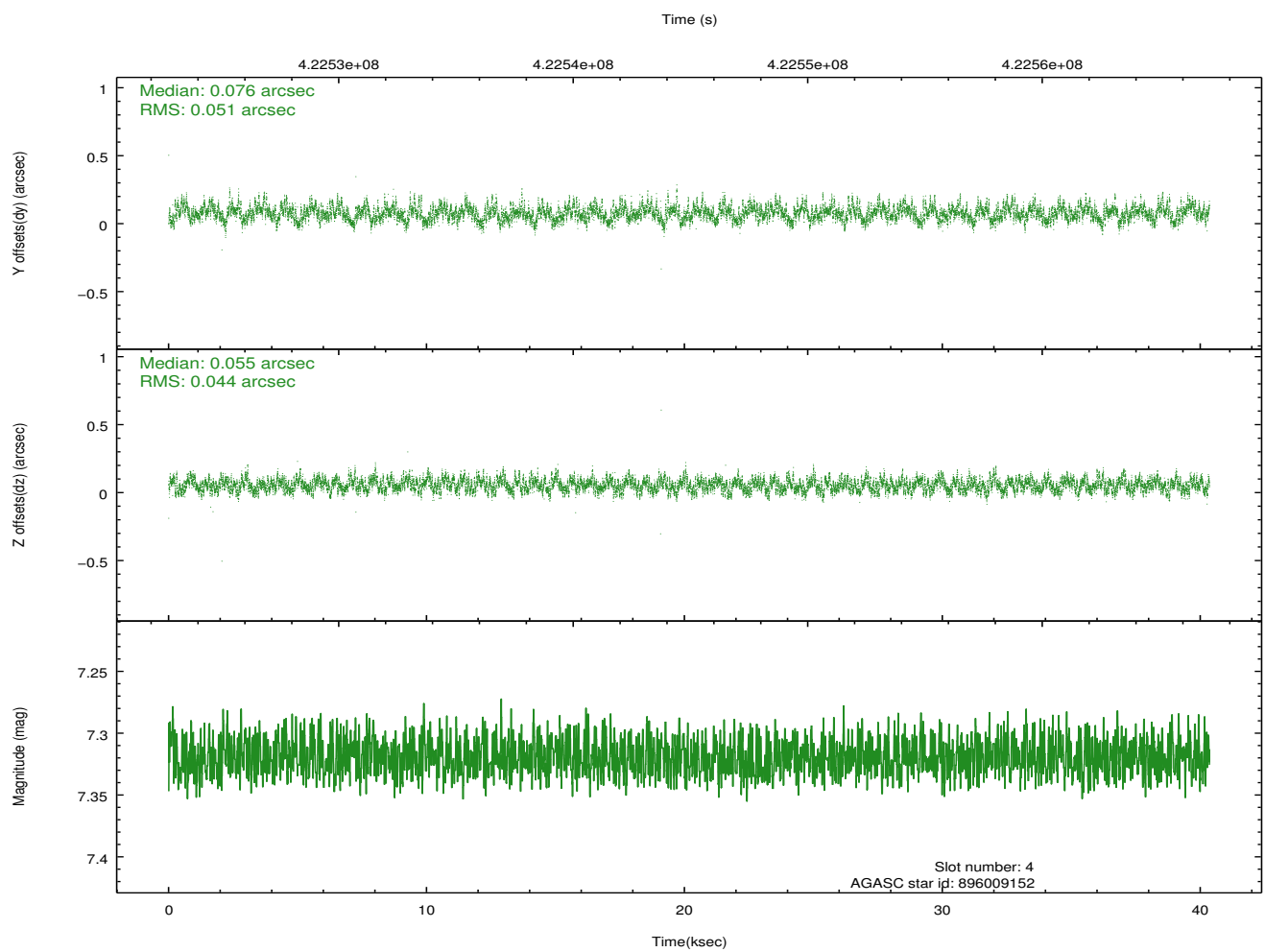
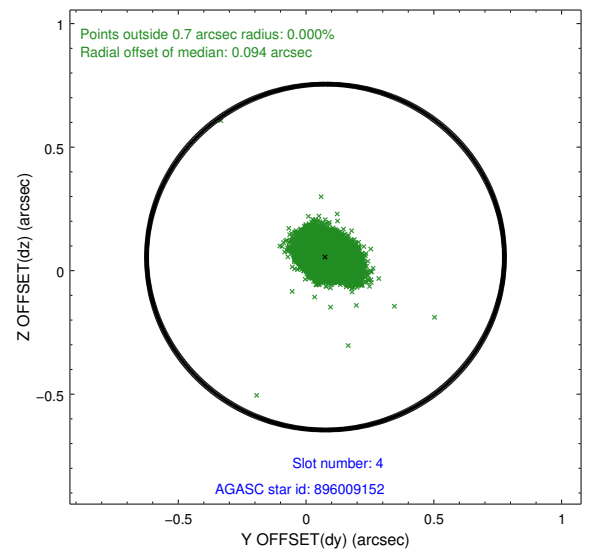
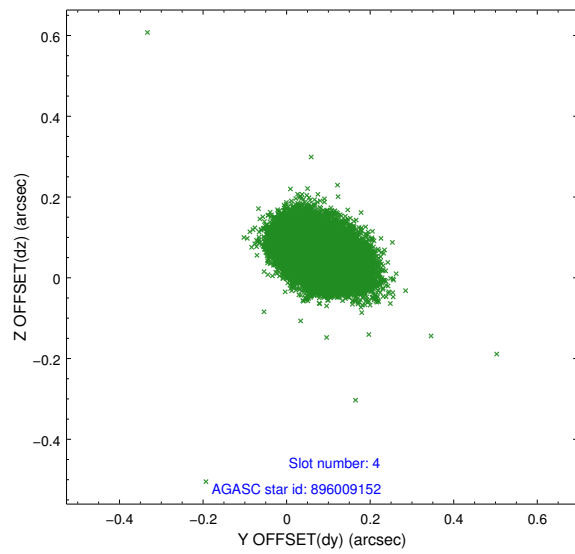
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.95	9843	-0.104	-0.030	0.013	0.023	0.000000	0.000000	-769.20	-1736.50
1	FID	ACIS-S-4	7.03	9843	0.205	0.059	0.012	0.023	0.000000	0.000000	2144.36	172.08
2	FID	ACIS-S-5	7.06	9844	-0.130	-0.020	0.011	0.032	0.000000	0.000000	-1822.07	165.66
3	GUIDE	896008984	8.95	19655	0.162	0.325	0.112	0.183	267.790868	-27.829489	-1903.26	-2293.50
4	GUIDE	896009152	7.32	19681	0.076	0.055	0.071	0.116	267.588100	-27.061669	690.38	-1140.45
5	GUIDE	897717296	8.26	19682	-0.216	0.208	0.065	0.109	267.921819	-26.875322	1549.60	-2067.19
6	GUIDE	896013040	7.34	19682	-0.092	-0.385	0.066	0.114	266.506589	-26.972299	340.54	2324.81
7	GUIDE	896014528	7.68	19681	0.064	-0.204	0.065	0.117	266.628858	-27.438607	-1228.99	1612.62

## 2.4 Star Slots

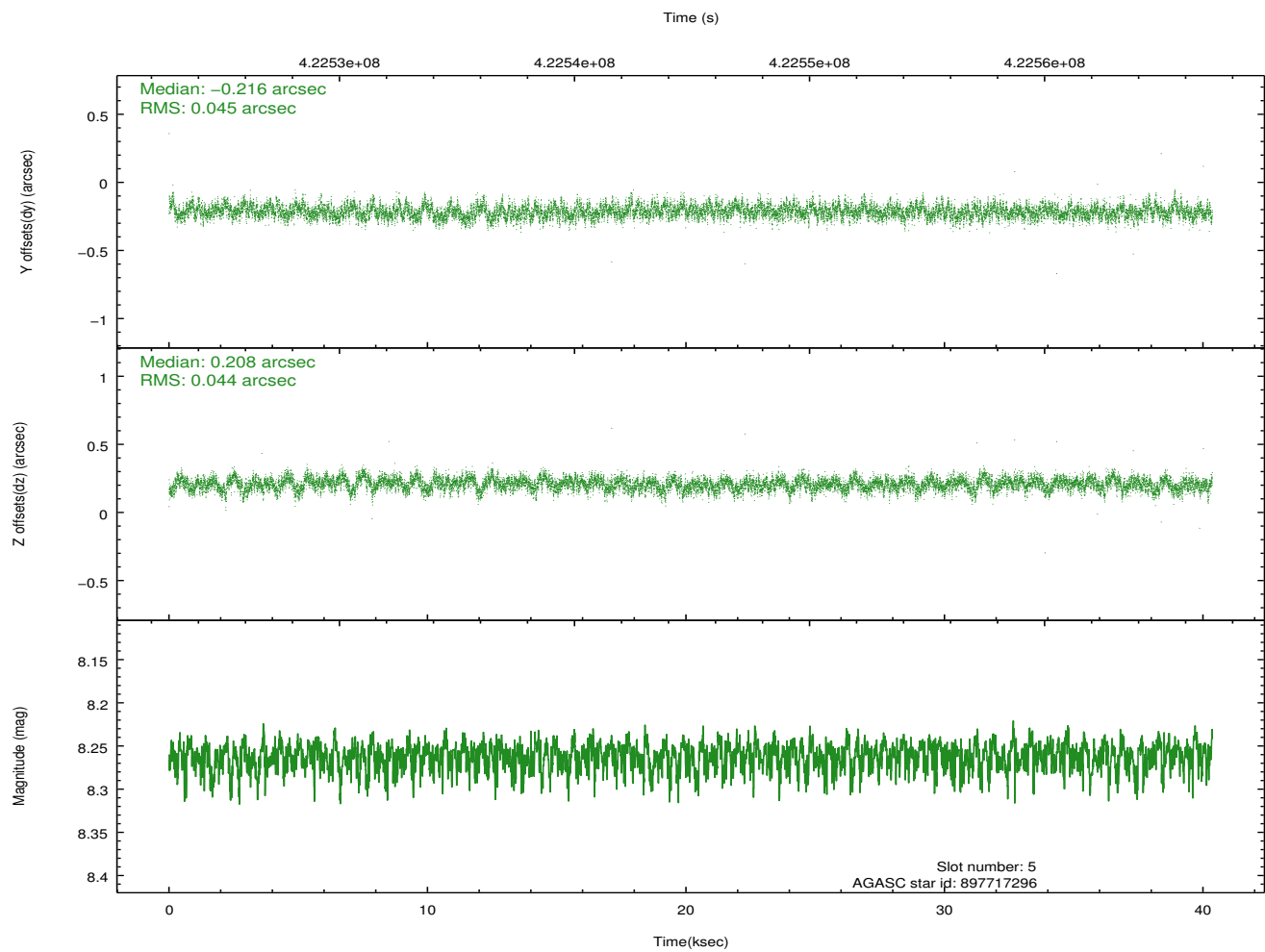
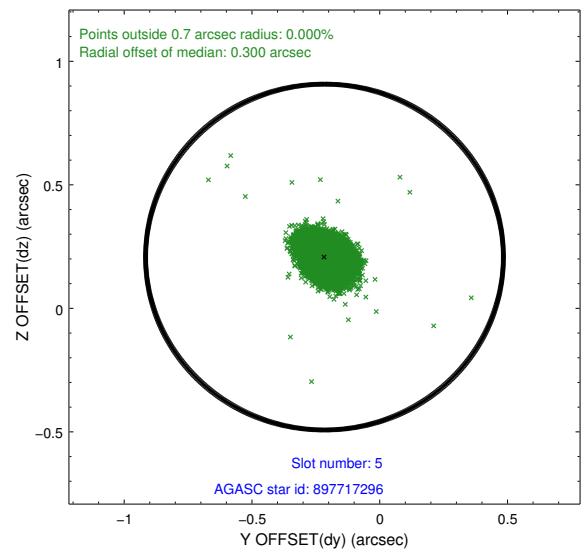
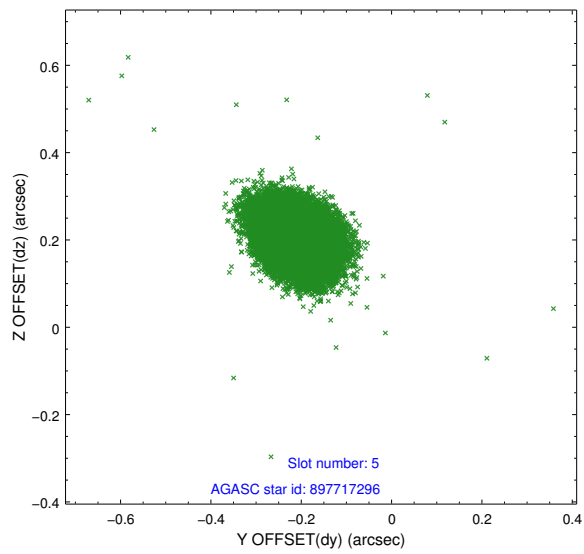
### 2.4.1 Slot 3



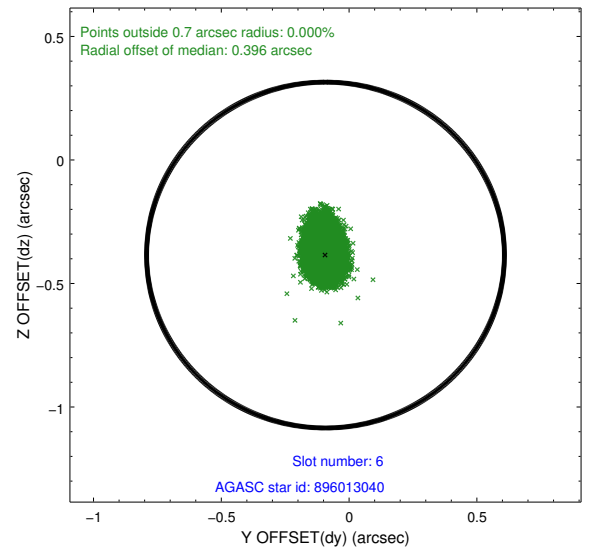
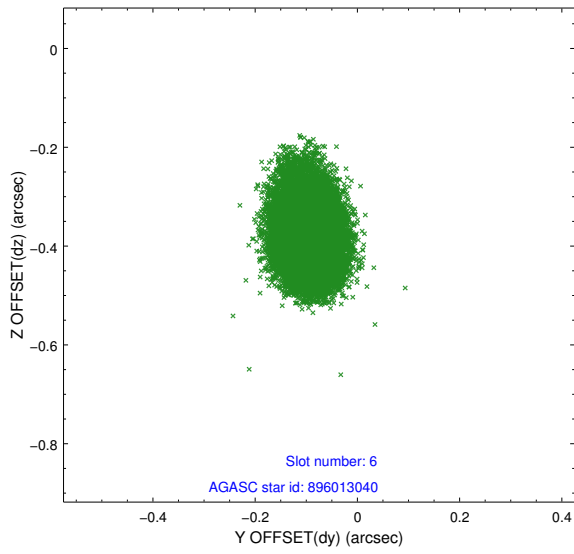
## 2.4.2 Slot 4



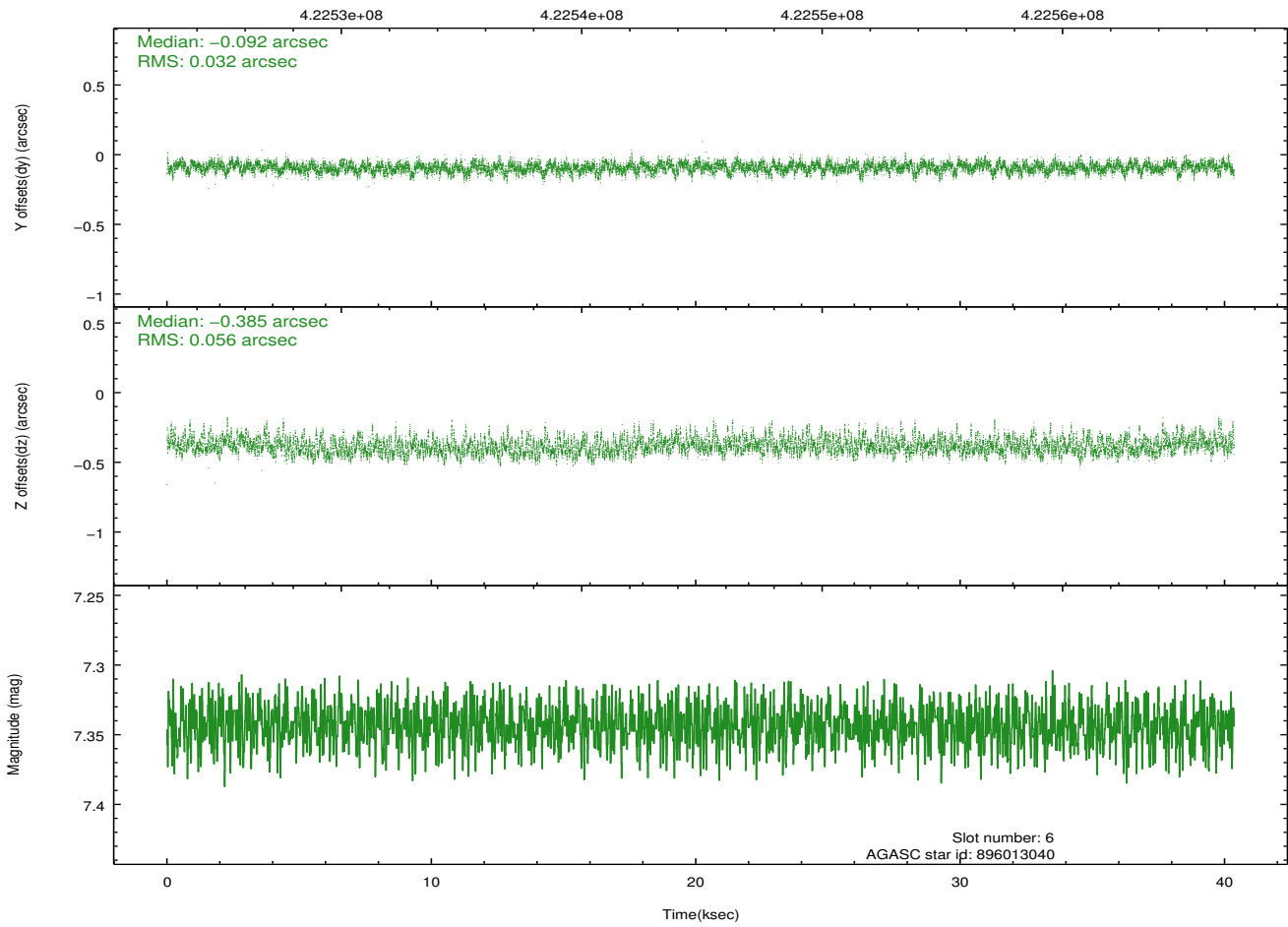
### 2.4.3 Slot 5



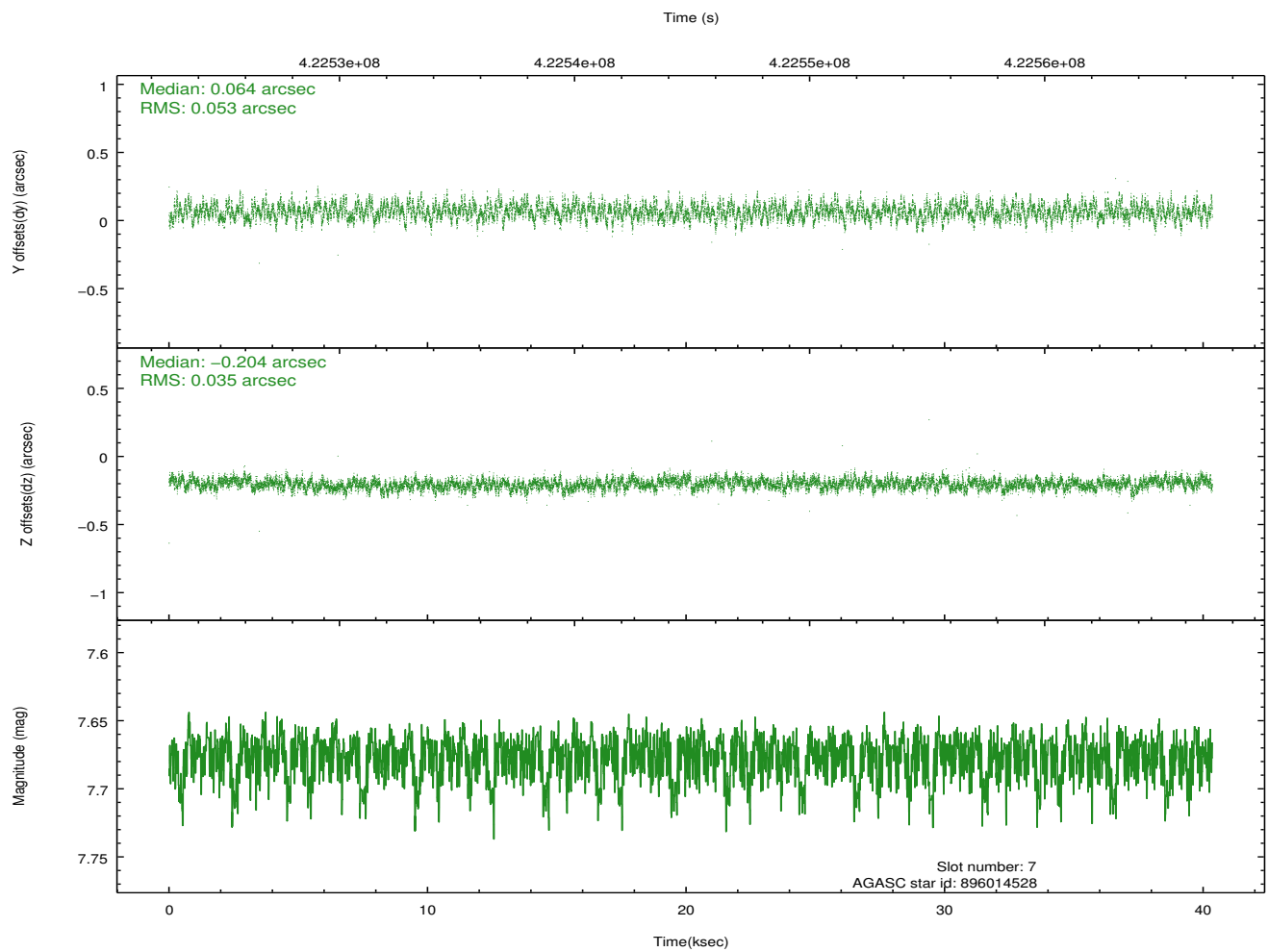
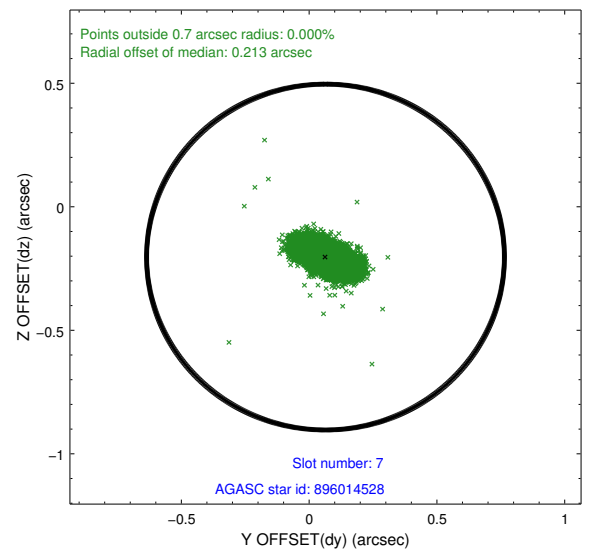
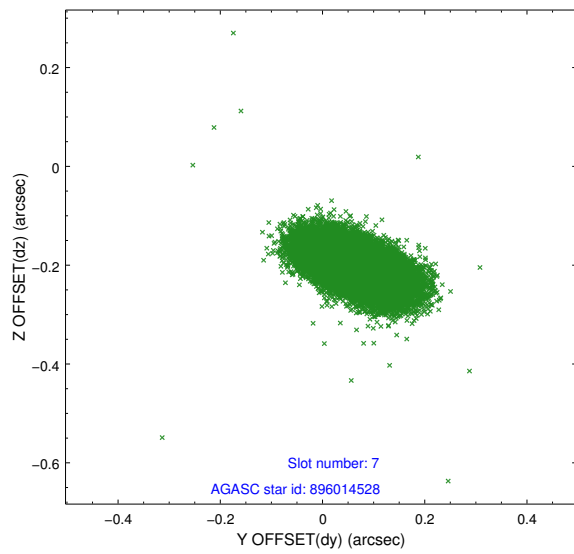
## 2.4.4 Slot 6



Time (s)

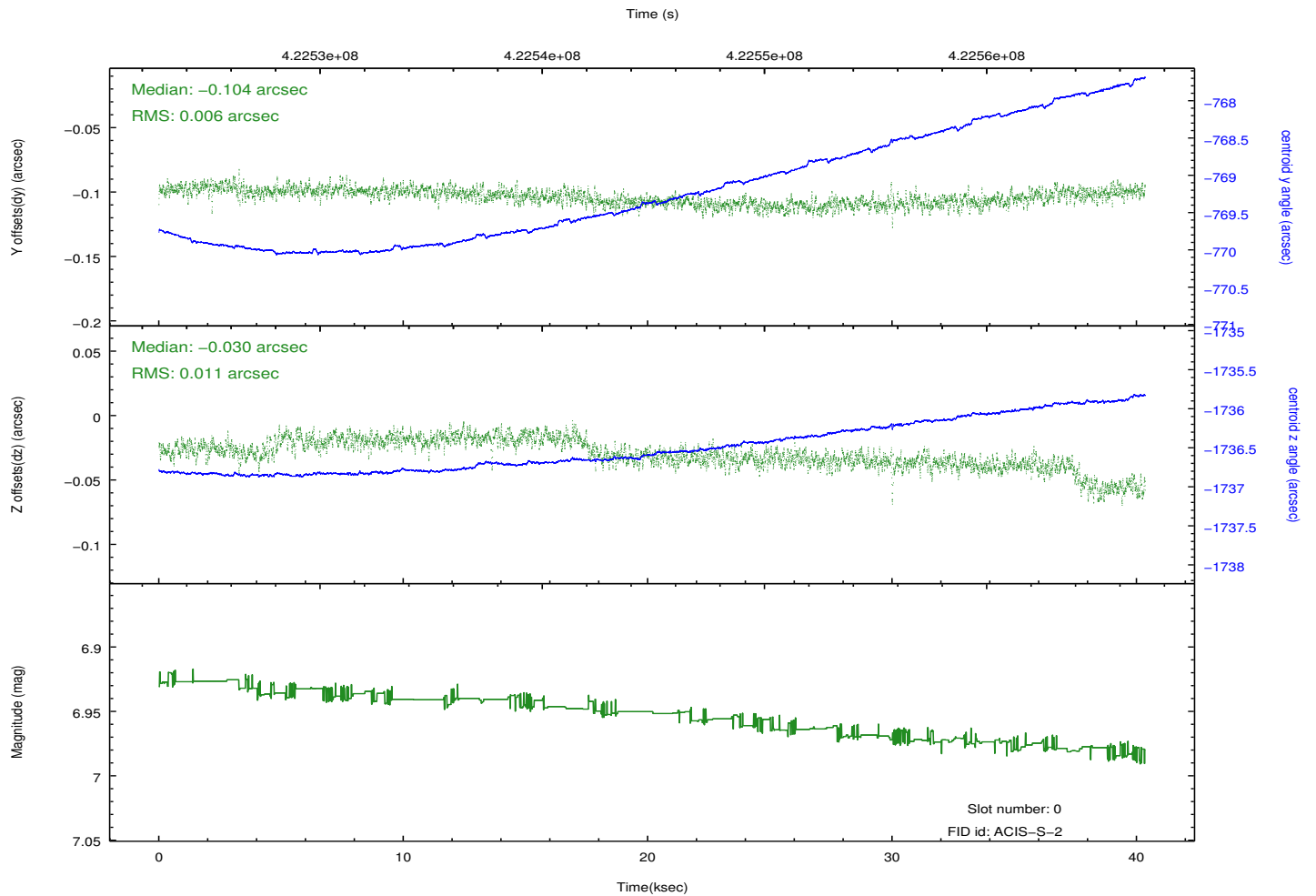
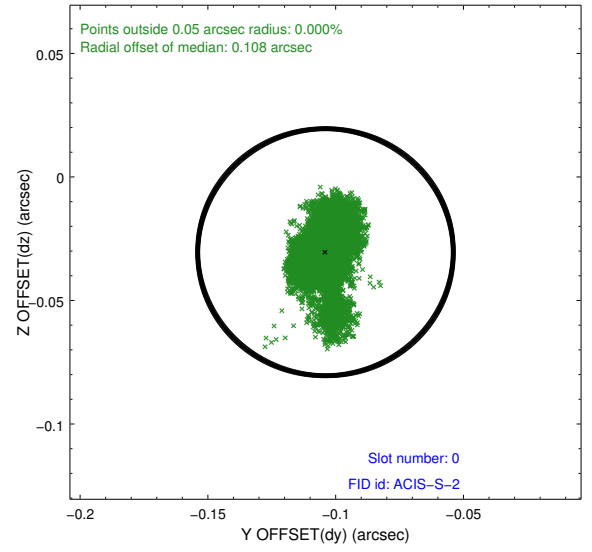
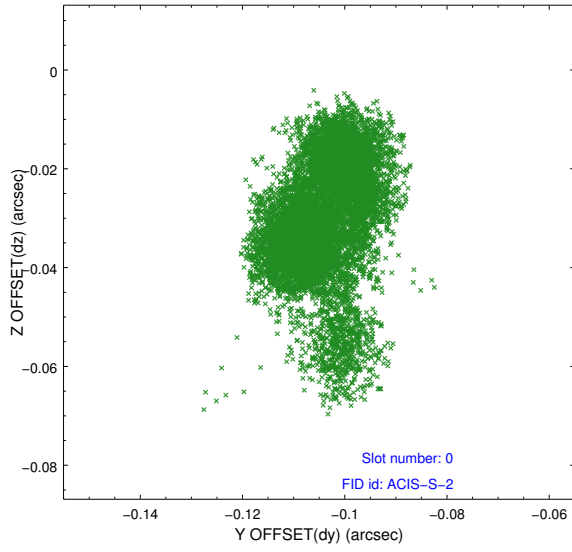


## 2.4.5 Slot 7

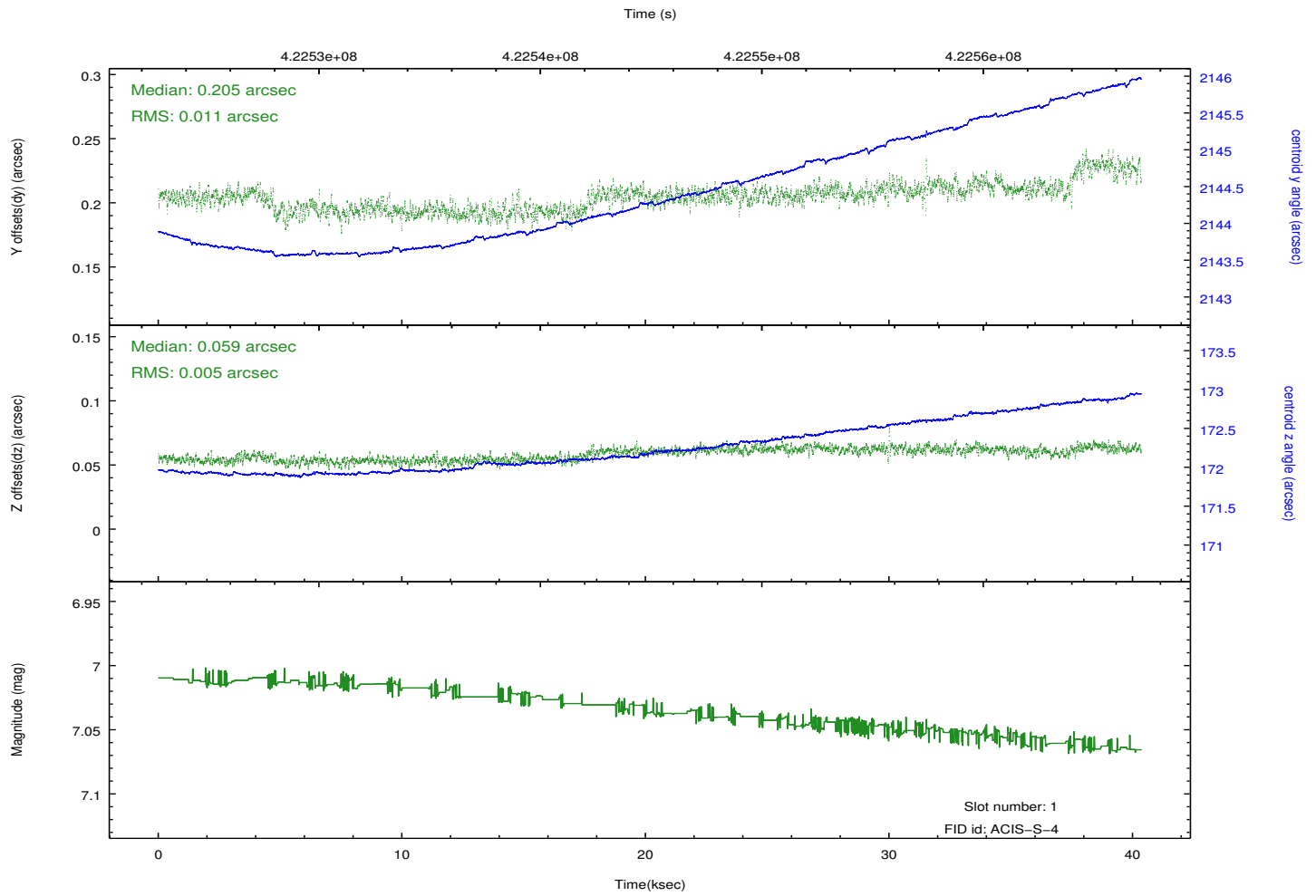
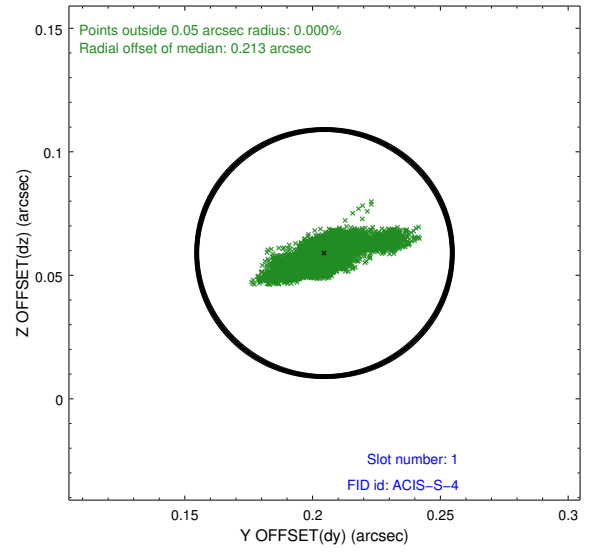
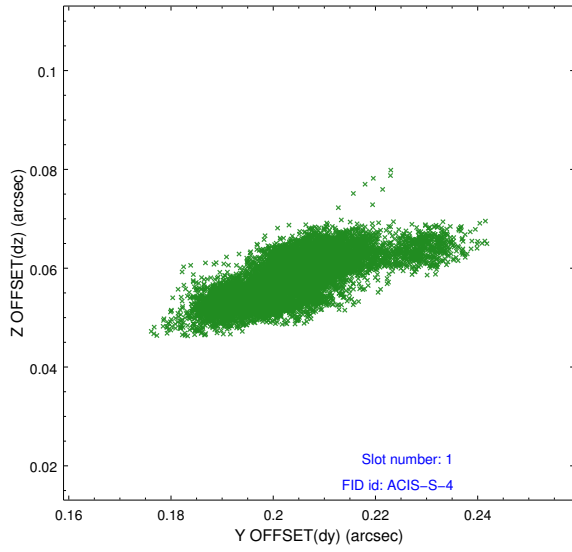


## 2.5 FID Slots

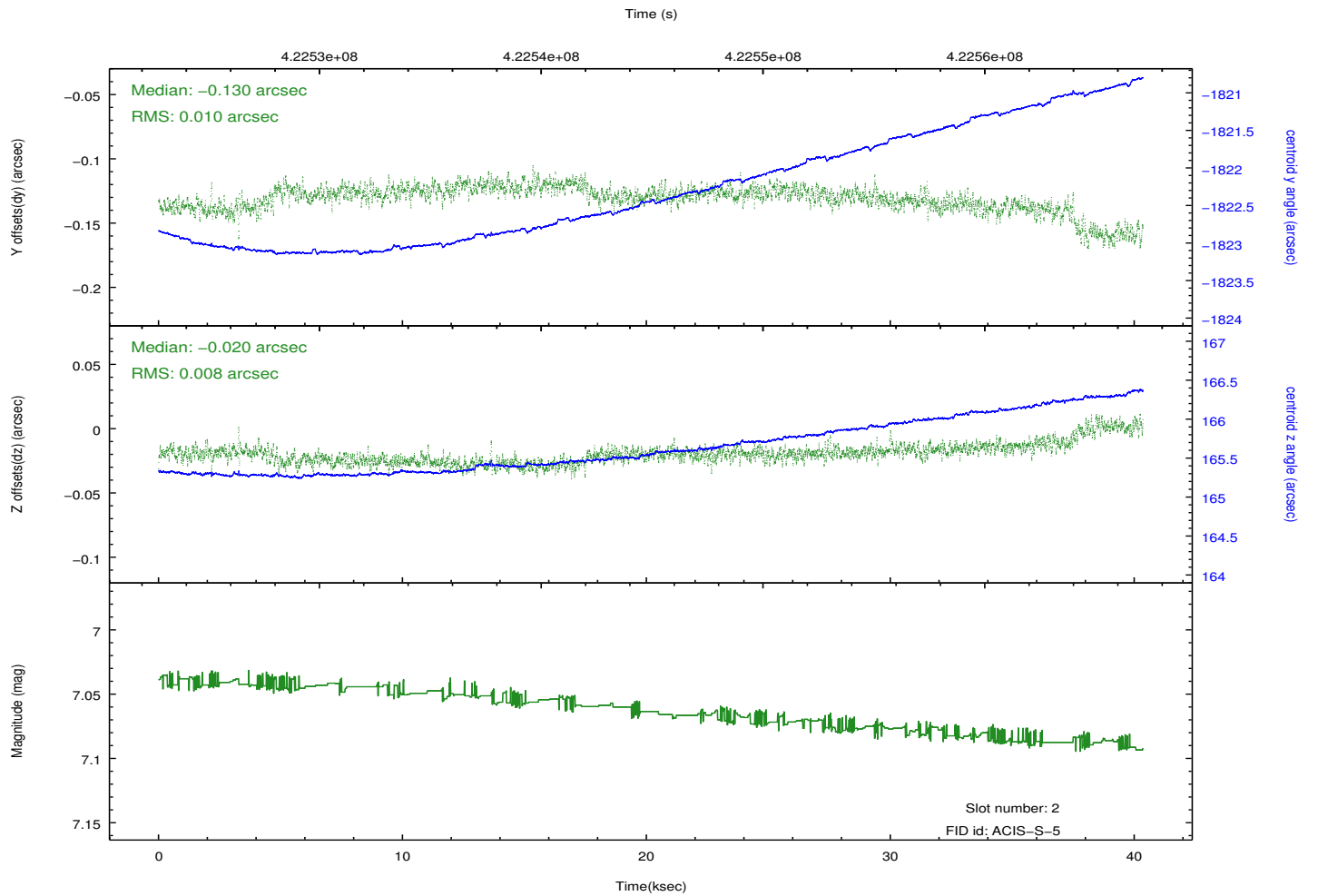
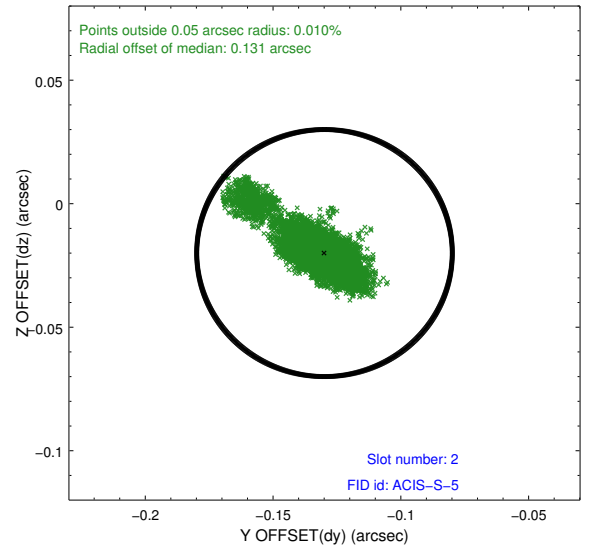
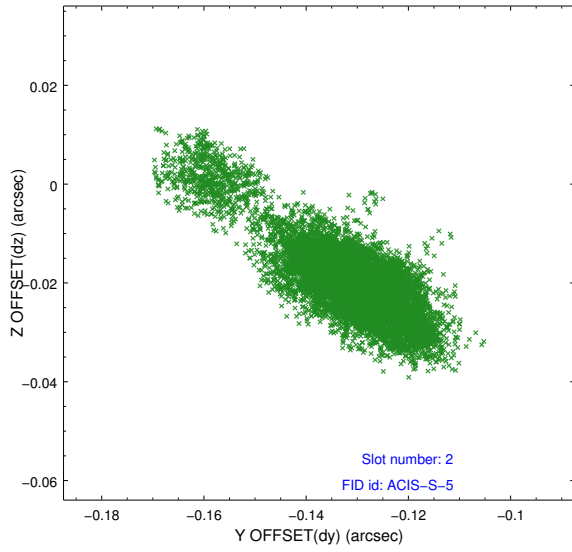
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.054117301345

## 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.