

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12837 - L2 Version 2  
Chandra X-Ray Center

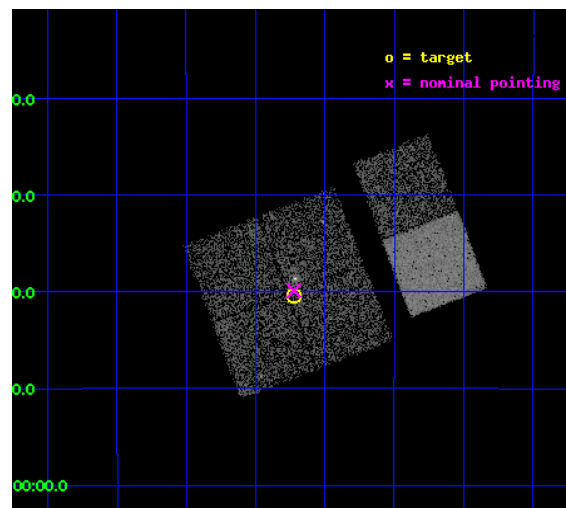
L2 Processing Date : Feb 2 2012

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# 1 Front

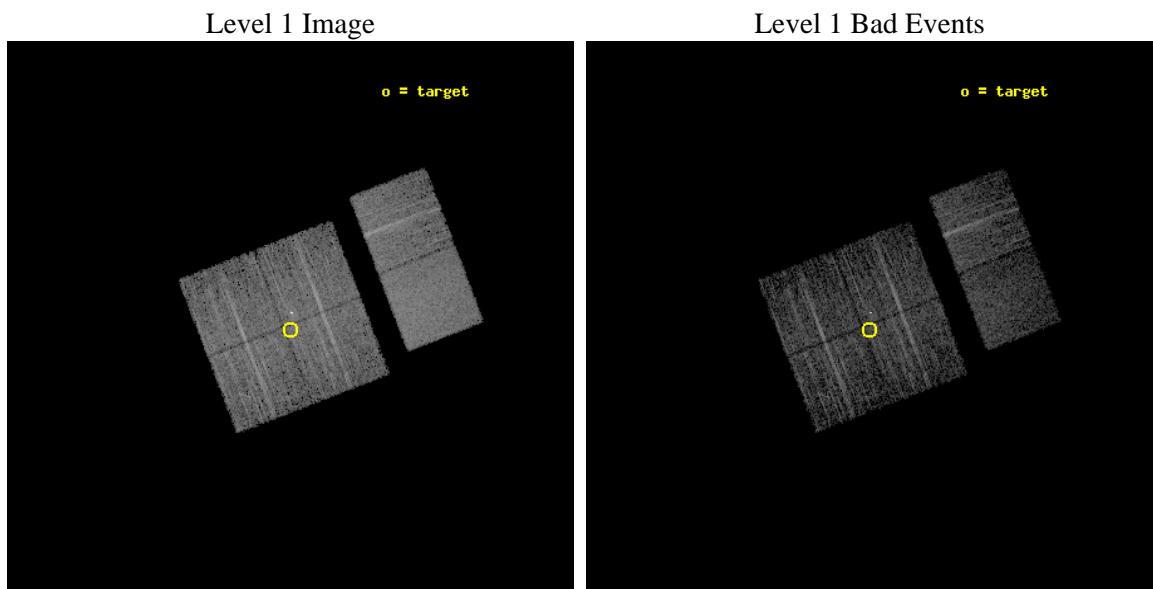
seq_num	702470	Sequence number
obs_id	12837	Observation id
title	Chandra observations of the faintest hard X-ray sources in the SIX survey	Proposal title
observer	Dr Eugenio Bottacini	Principal investigator
object	SIX-3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	205.305417	Observer's specified target RA [deg]
dec_targ	-14.673389	Observer's specified target Dec [deg]
ra_nom	205.30602089503	Nominal RA [deg]
dec_nom	-14.665326902159	Nominal Dec [deg]
roll_nom	69.005089061332	Nominal Roll [deg]
revision	2	Processing version of data
ontime	4755.1999823451	Sum of GTIs [s]
livetime	4694.986776931	Livetime [s]
ontime0	4755.0810638666	Sum of GTIs [s]
ontime1	4751.881193161	Sum of GTIs [s]
ontime2	4755.1631438732	Sum of GTIs [s]
ontime3	4755.1999823451	Sum of GTIs [s]
ontime6	4755.1999823451	Sum of GTIs [s]
ontime7	4755.1999823451	Sum of GTIs [s]
l2events	35543	Number of level 2 events



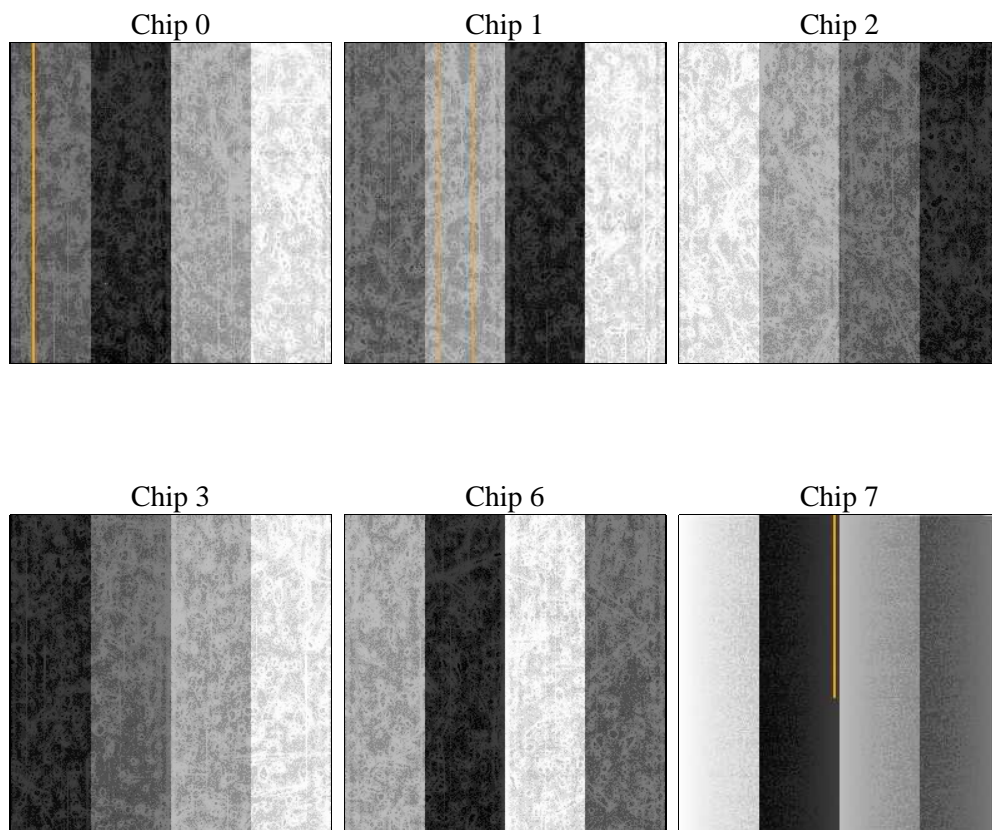
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	4755.1999823451	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime0	4755.0810638666	Sum of GTIs [s]
date	2012-02-02T07:12:46	Date and time of file creation	ontime1	4751.881193161	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4755.1631438732	Sum of GTIs [s]
			ontime3	4755.1999823451	Sum of GTIs [s]
			ontime6	4755.1999823451	Sum of GTIs [s]
			ontime7	4755.1999823451	Sum of GTIs [s]
			l1events	202335	Number of level 1 events

### 2.1.4 Events

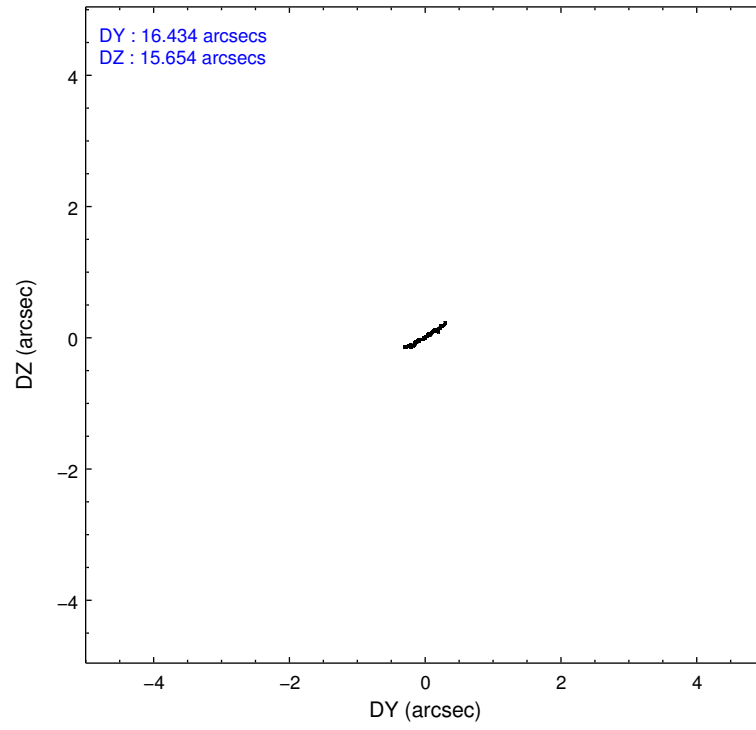
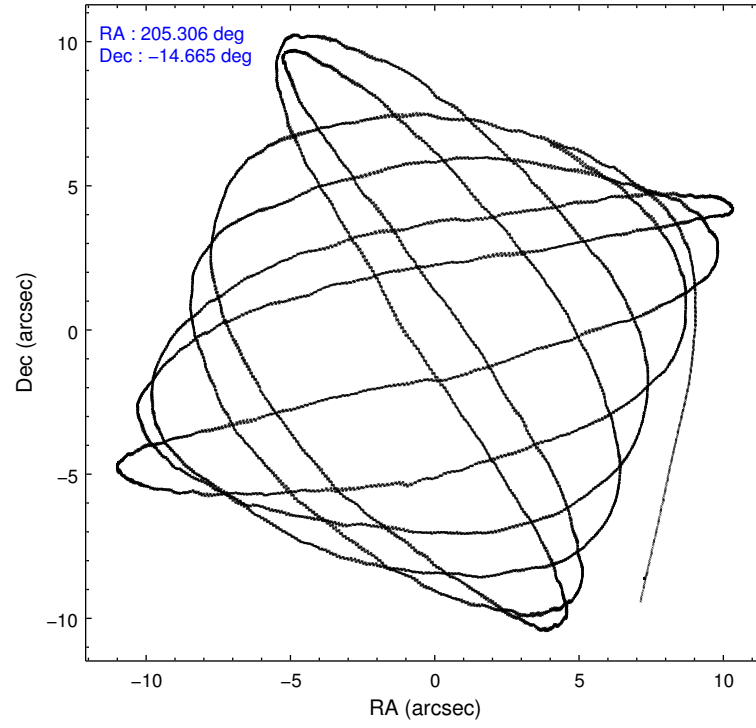
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	30569	30950	34119	31468	33472	41757	grade 0 events	1408	1467	2188	1213	1334	1696
rejected events	26690	26896	28898	28054	29617	22775		4%	4%	6%	3%	3%	4%
rejected %	87%	86%	84%	89%	88%	54%	grade 1 events	17	22	236	20	24	55
								0%	0%	0%	0%	0%	0%
							grade 2 events	928	909	1122	780	894	3969
								3%	2%	3%	2%	2%	9%
							grade 3 events	403	407	484	373	392	1694
								1%	1%	1%	1%	1%	4%
							grade 4 events	353	412	477	352	409	1619
								1%	1%	1%	1%	1%	3%
							grade 5 events	1421	1397	1629	1566	1523	4332
								4%	4%	4%	4%	4%	10%
							grade 6 events	793	863	958	703	829	10029
								2%	2%	2%	2%	2%	24%
							grade 7 events	25246	25473	27025	26461	28067	18363
								82%	82%	79%	84%	83%	43%

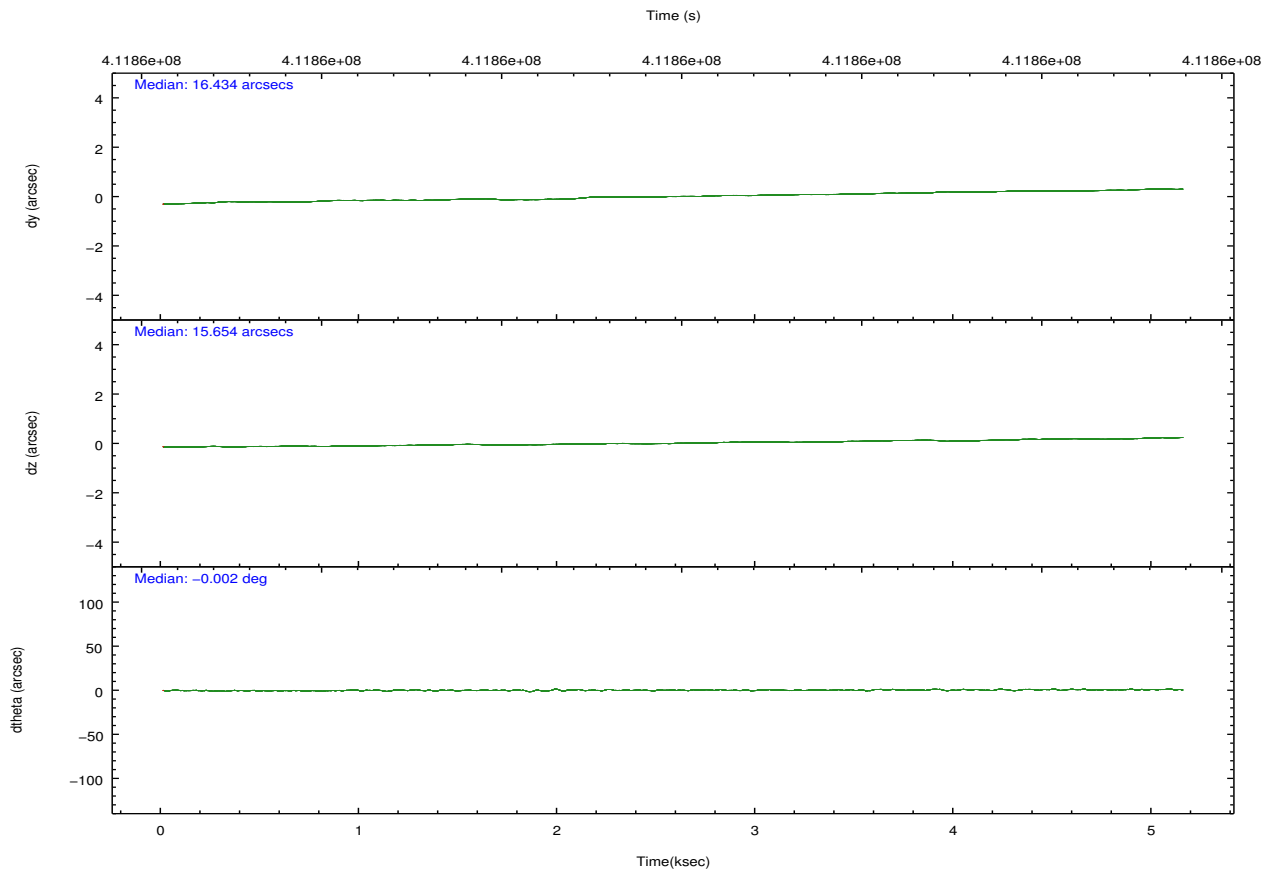
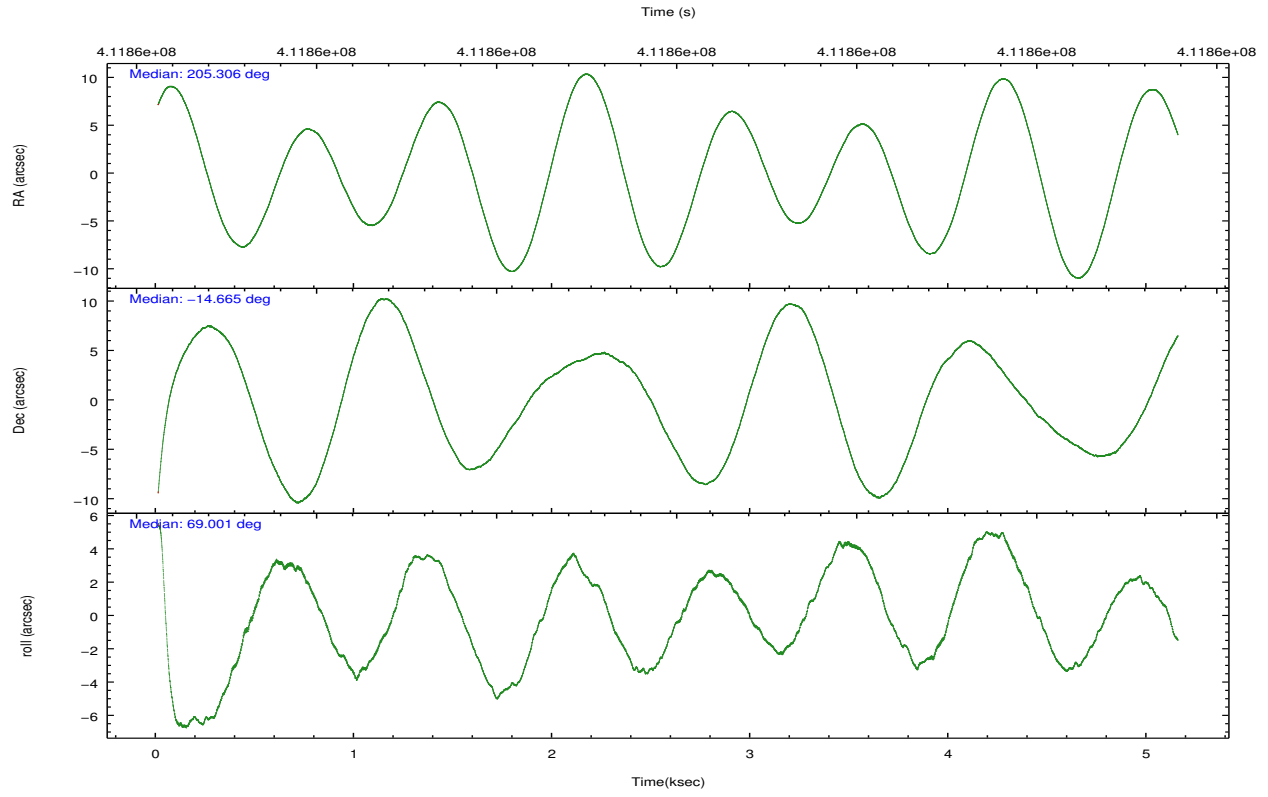


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	205.310525	205.3060208950345	CCD I2 on	Y	Y
[deg] Pointing Dec	-14.692467	-14.66532690215892	CCD I3 on	Y	Y
[deg] Pointing Roll	68.797506	69.00508906133217	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	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	411857539.184000	411856615.44427	CCD S5 on	N	N
Observation start date	2011-01-19T20:51:13	2011-01-19T20:36:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411862539.184000	411863140.08211	On-chip summing requested	N	N
Observation end date	2011-01-19T22:14:33	2011-01-19T22:25:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



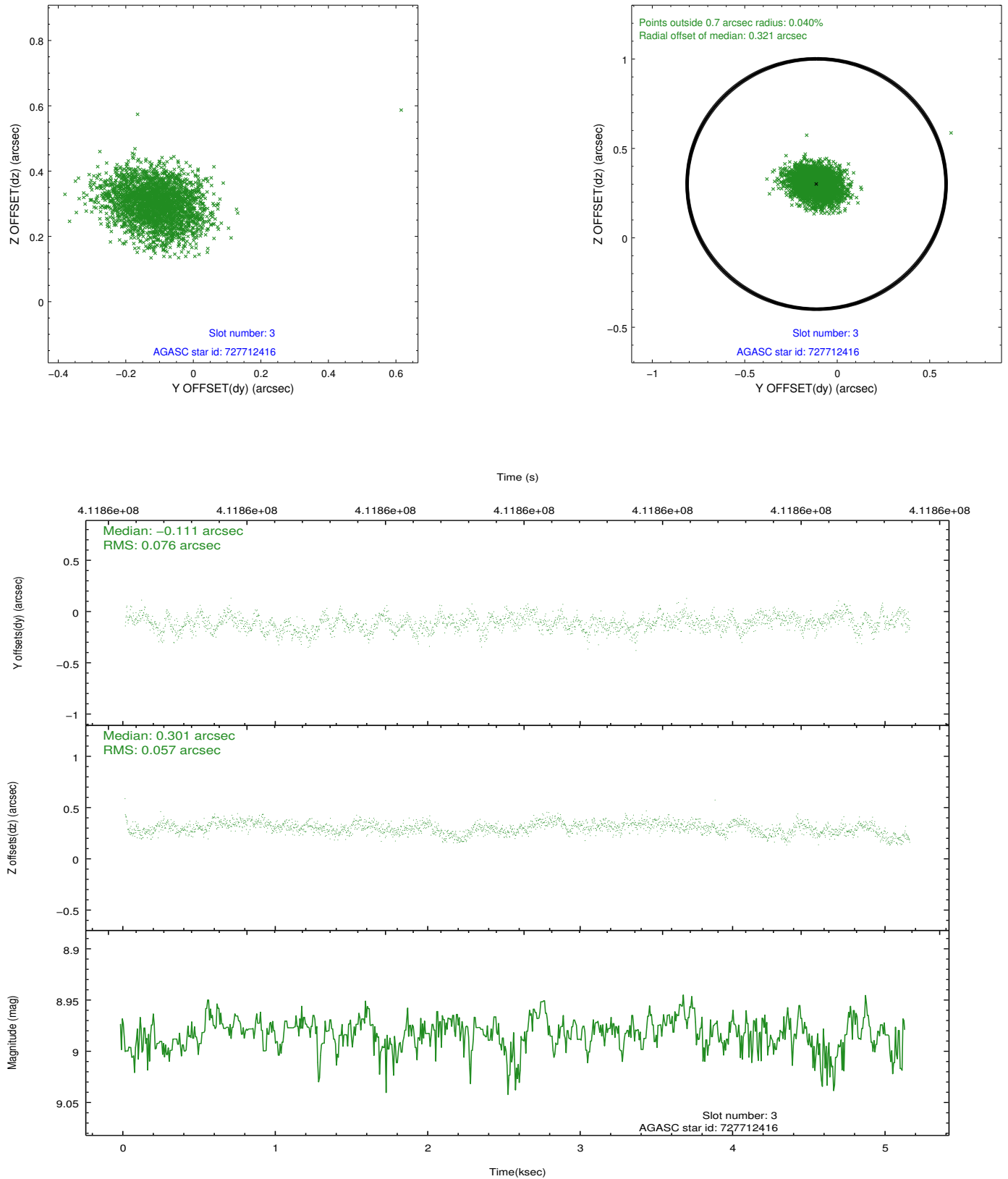


### Slot Statistics

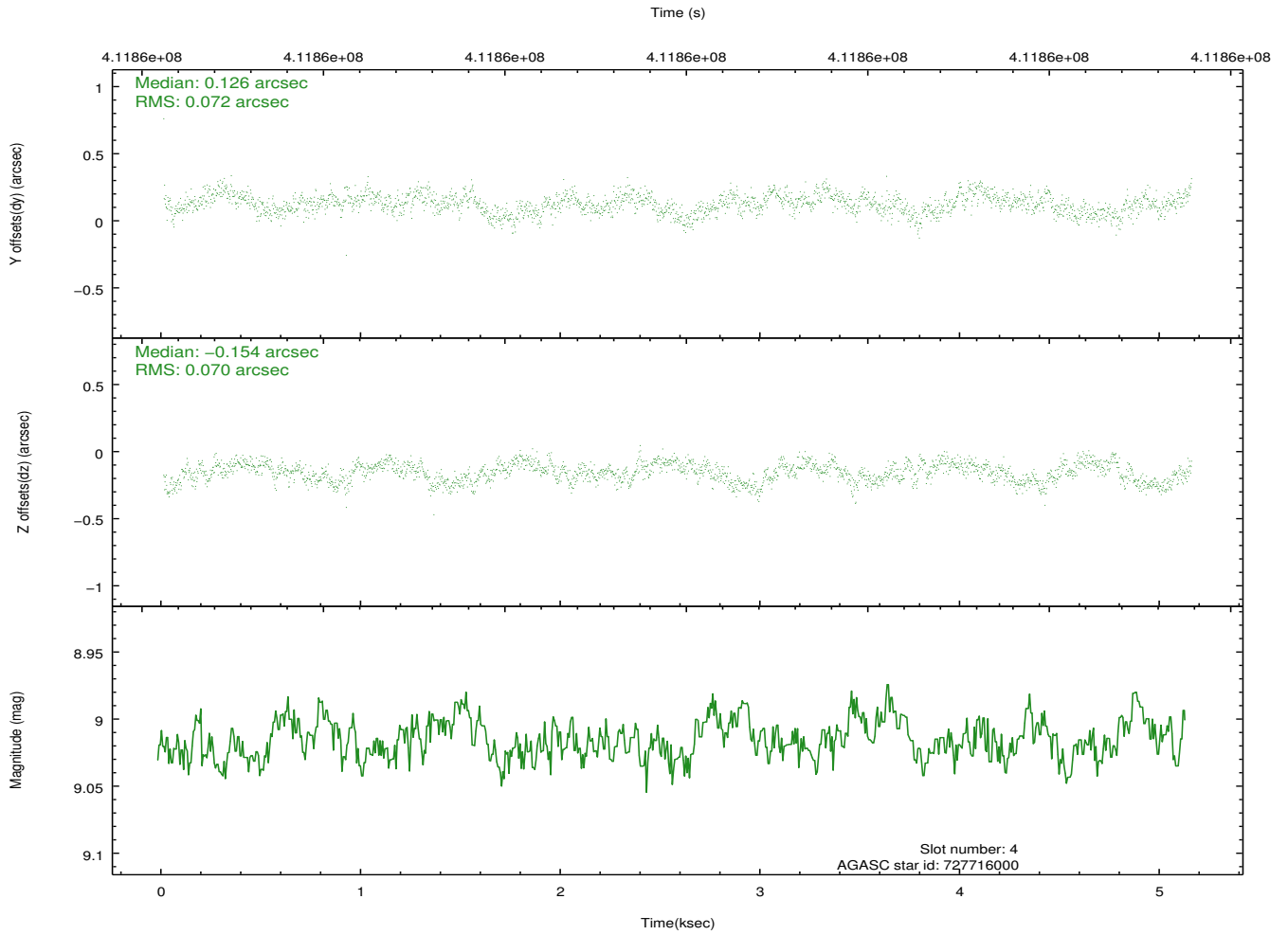
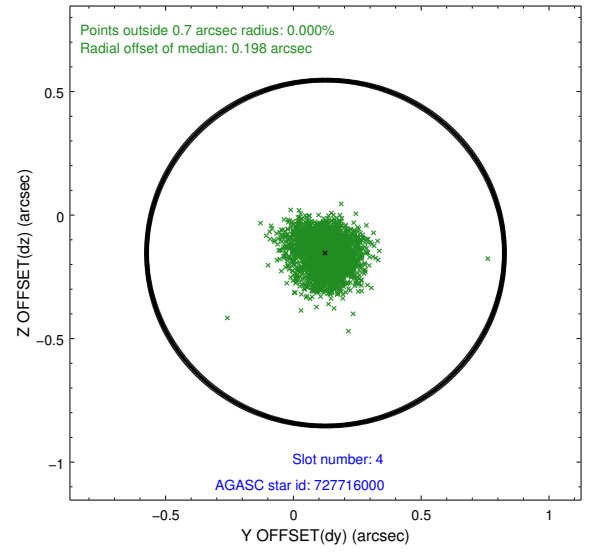
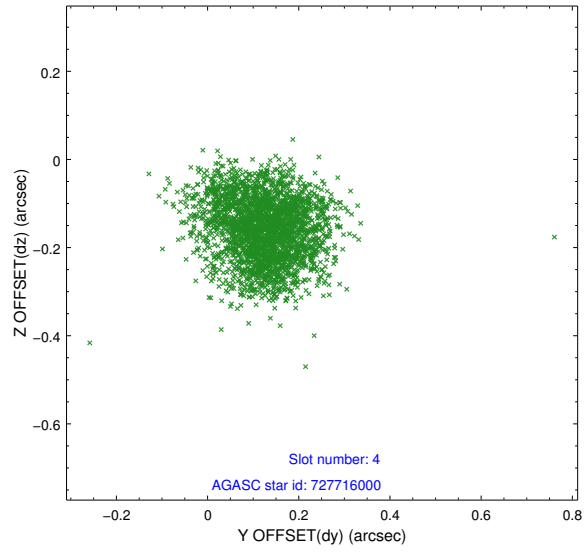
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.07	1256	0.038	-0.027	0.009	0.016	0.000000	0.000000	923.02	-839.31
1	FID	ACIS-I-5	7.06	1256	-0.204	0.040	0.007	0.013	0.000000	0.000000	-1824.69	1057.65
2	FID	ACIS-I-6	7.07	1256	0.076	0.058	0.007	0.013	0.000000	0.000000	387.31	1703.51
3	GUIDE	727712416	8.98	2510	-0.111	0.301	0.101	0.160	205.852928	-14.237471	2208.95	-1172.26
4	GUIDE	727716000	9.02	2512	0.126	-0.154	0.109	0.166	204.719163	-14.581300	-374.24	2063.50
5	GUIDE	802427424	8.51	2511	-0.047	0.263	0.078	0.126	205.723425	-15.035251	-632.62	-1783.81
6	GUIDE	727713000	9.30	2511	-0.183	-0.430	0.110	0.178	204.735878	-14.294479	607.57	2385.62
7	GUIDE	802426720	7.48	2511	0.215	0.031	0.086	0.137	204.833653	-15.208637	-2333.05	873.06

## 2.4 Star Slots

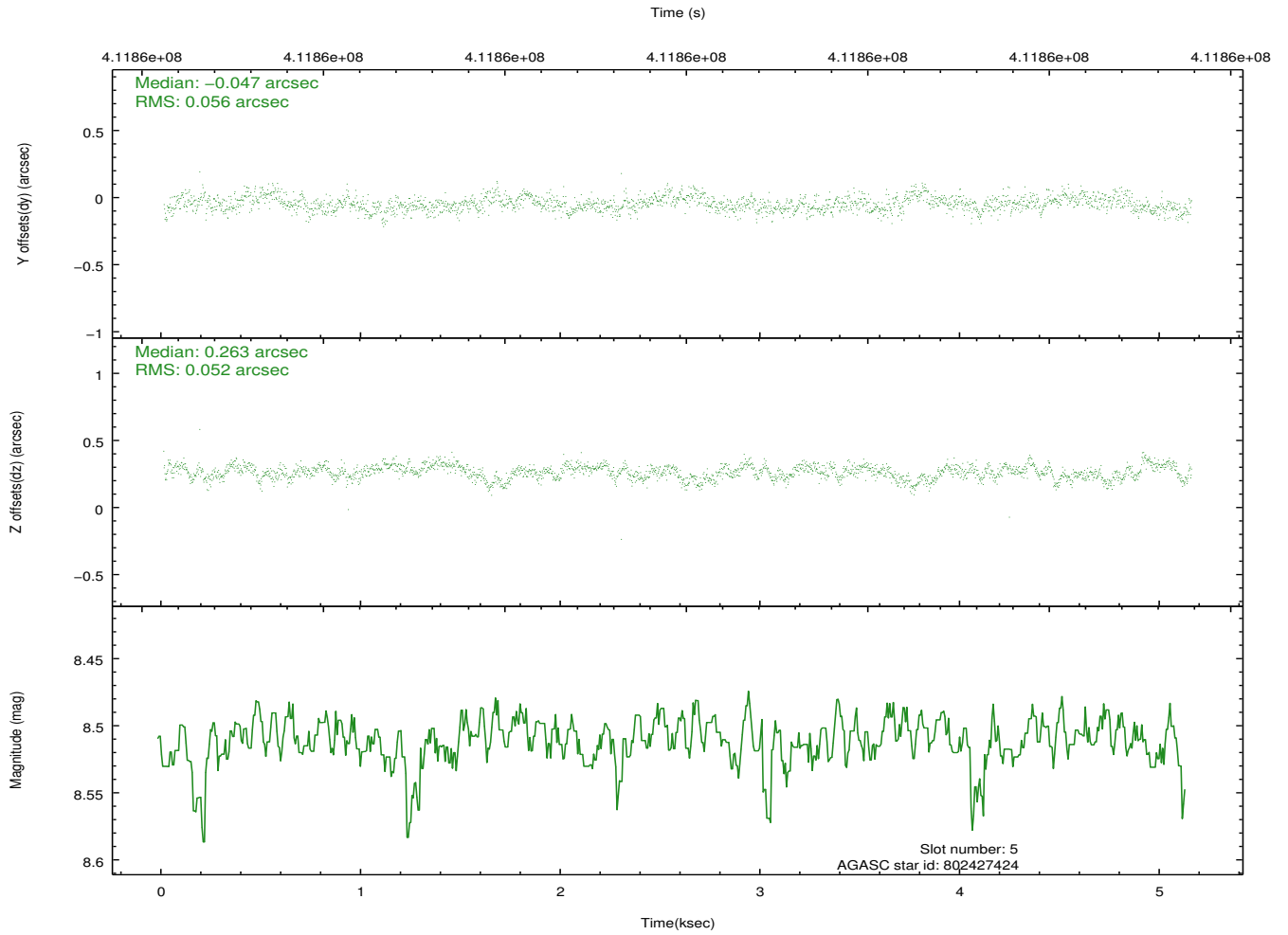
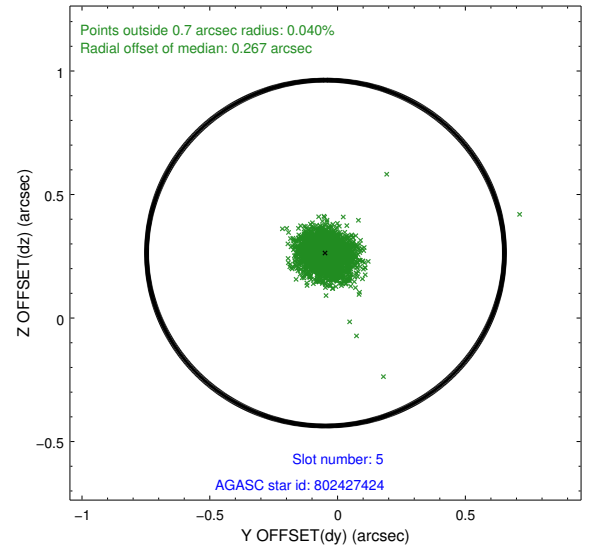
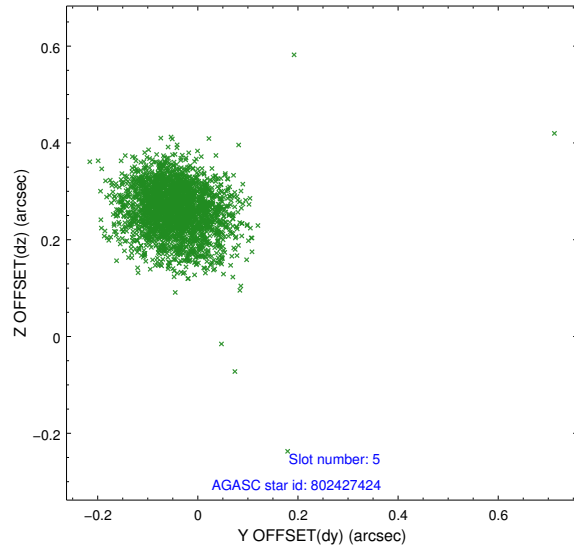
### 2.4.1 Slot 3



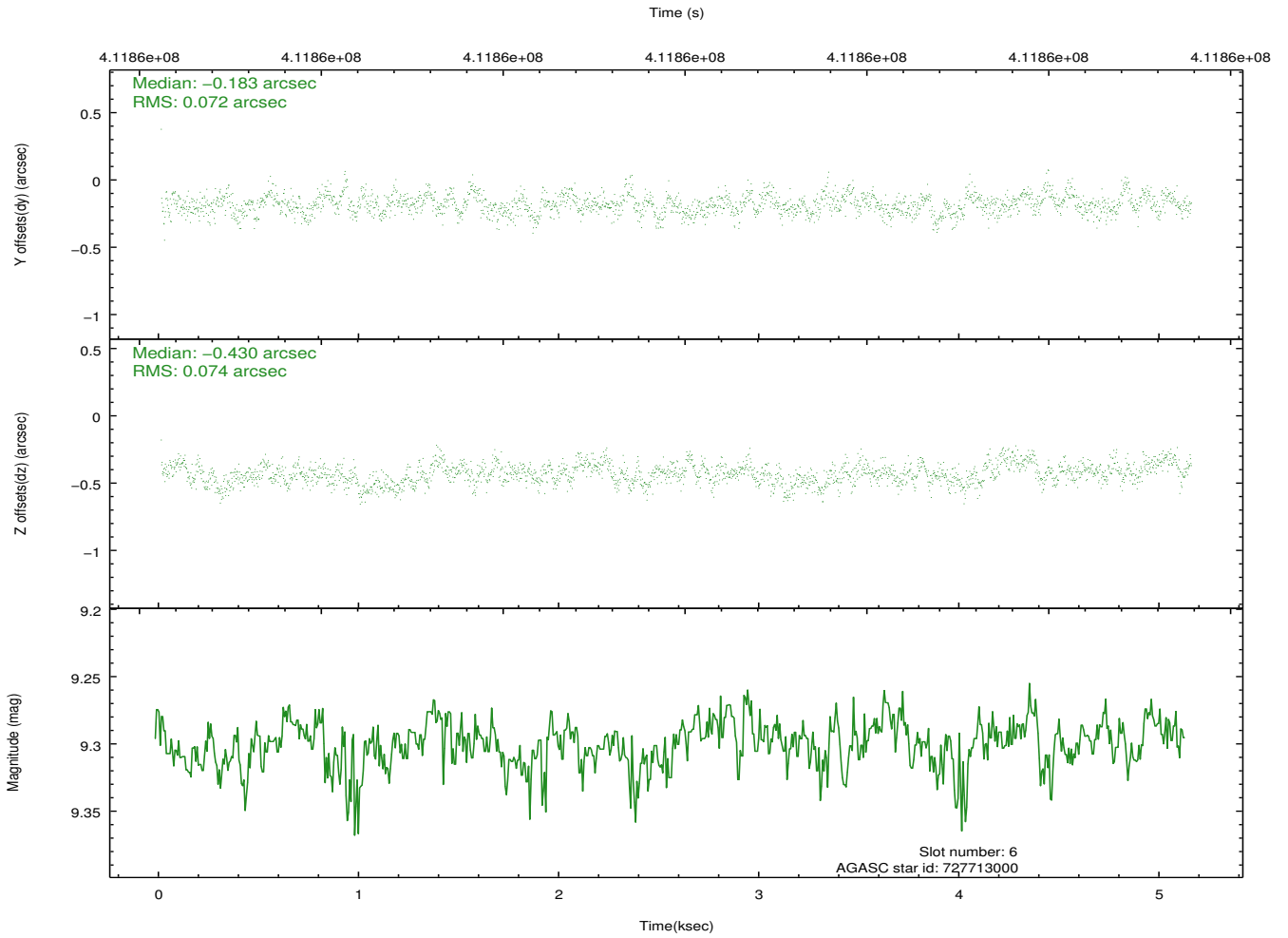
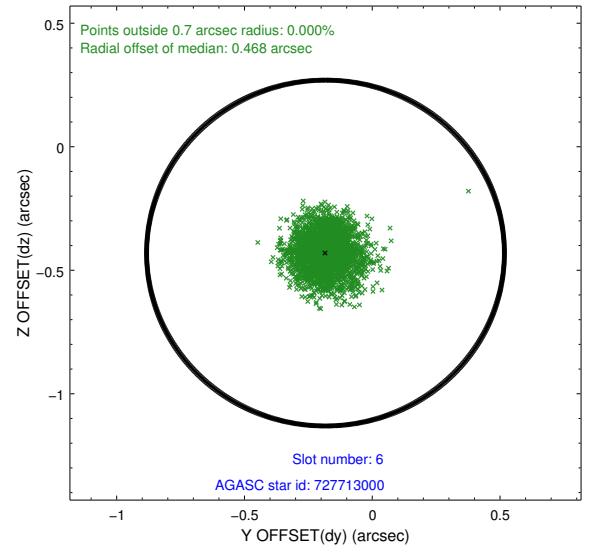
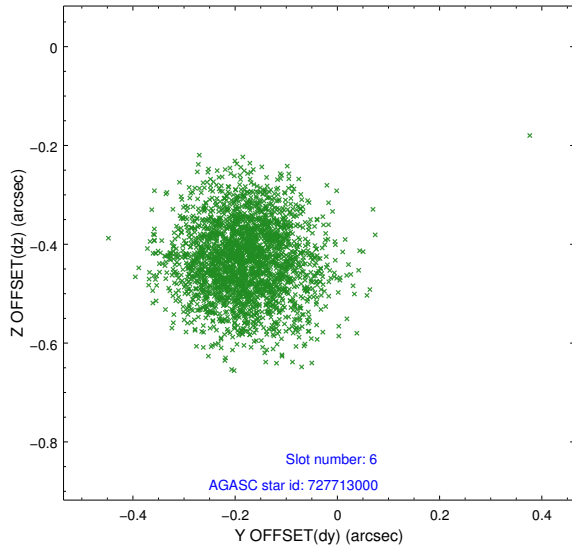
## 2.4.2 Slot 4



### 2.4.3 Slot 5

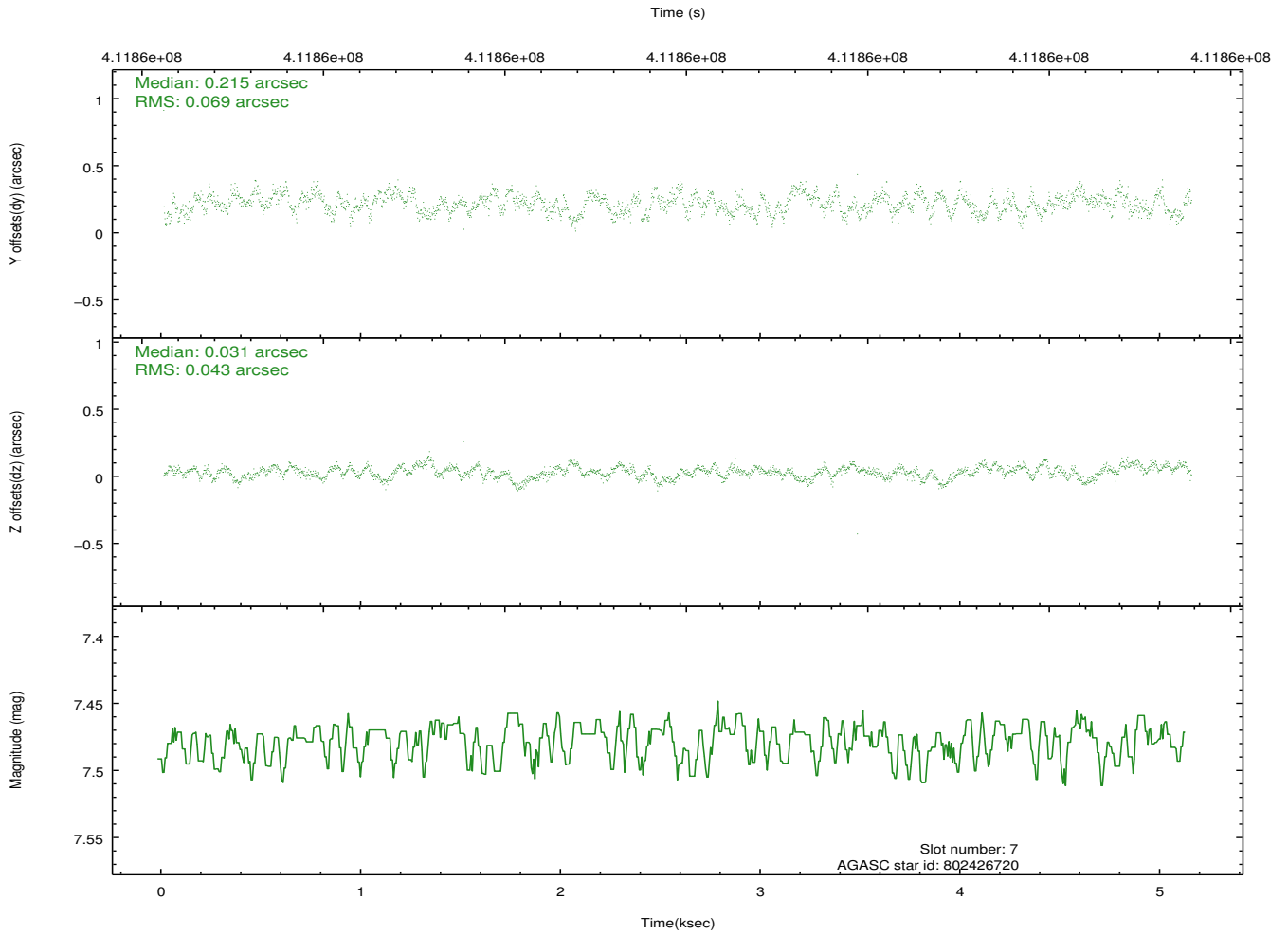
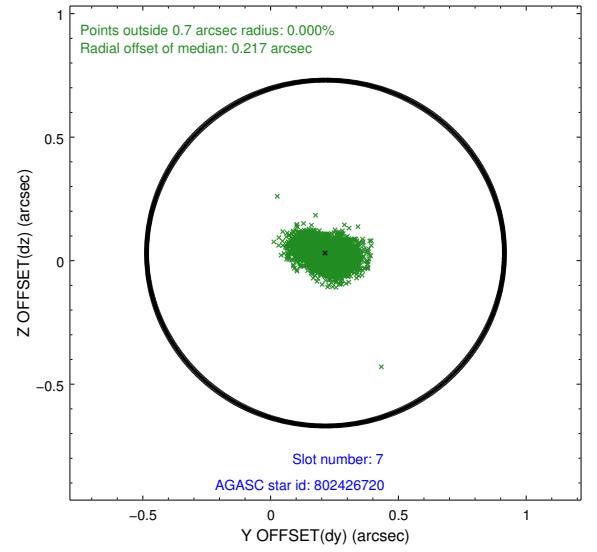
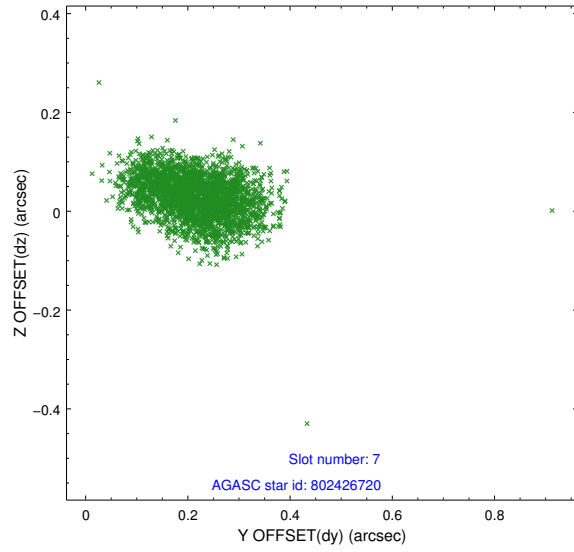


## 2.4.4 Slot 6



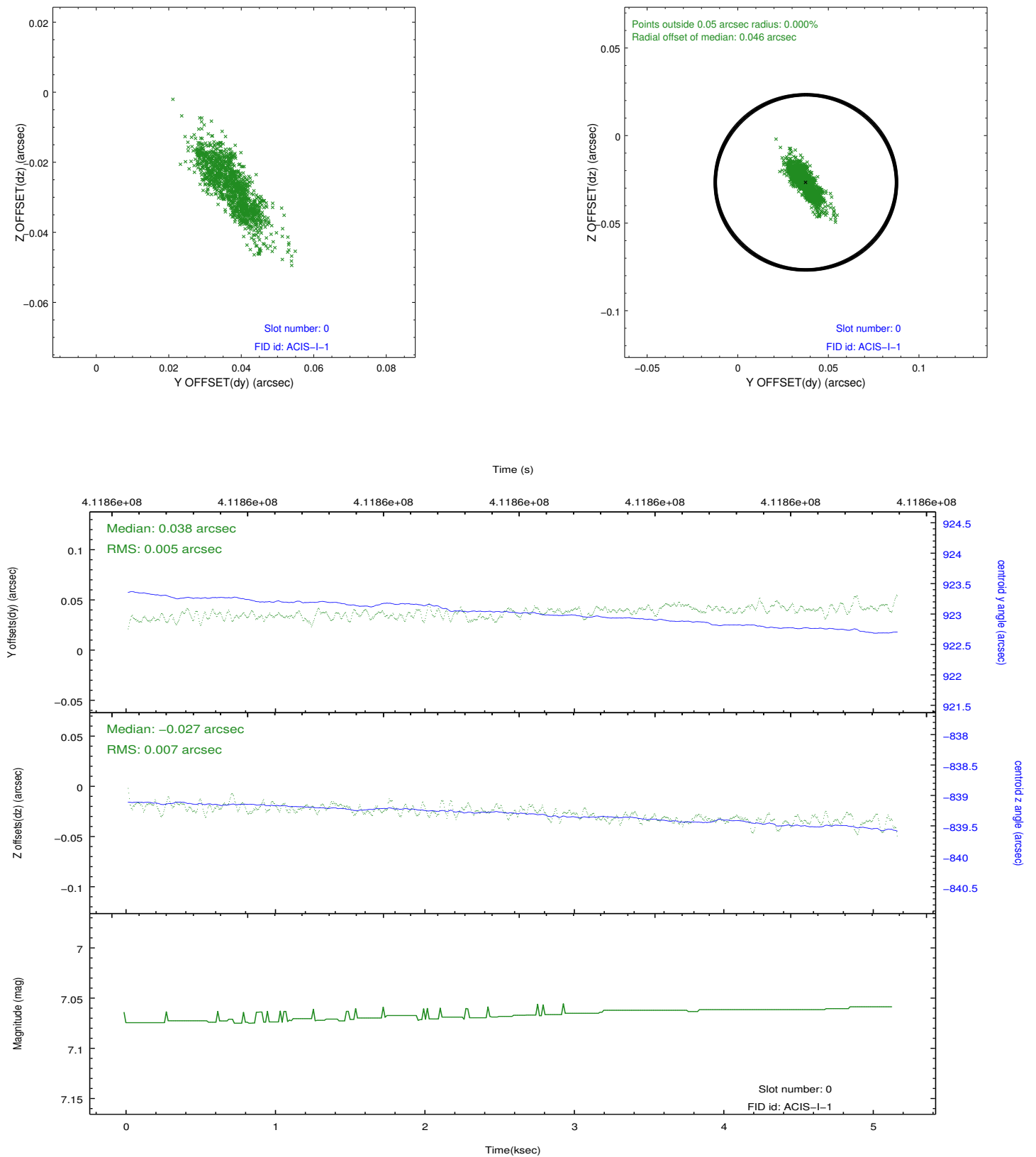


## 2.4.5 Slot 7

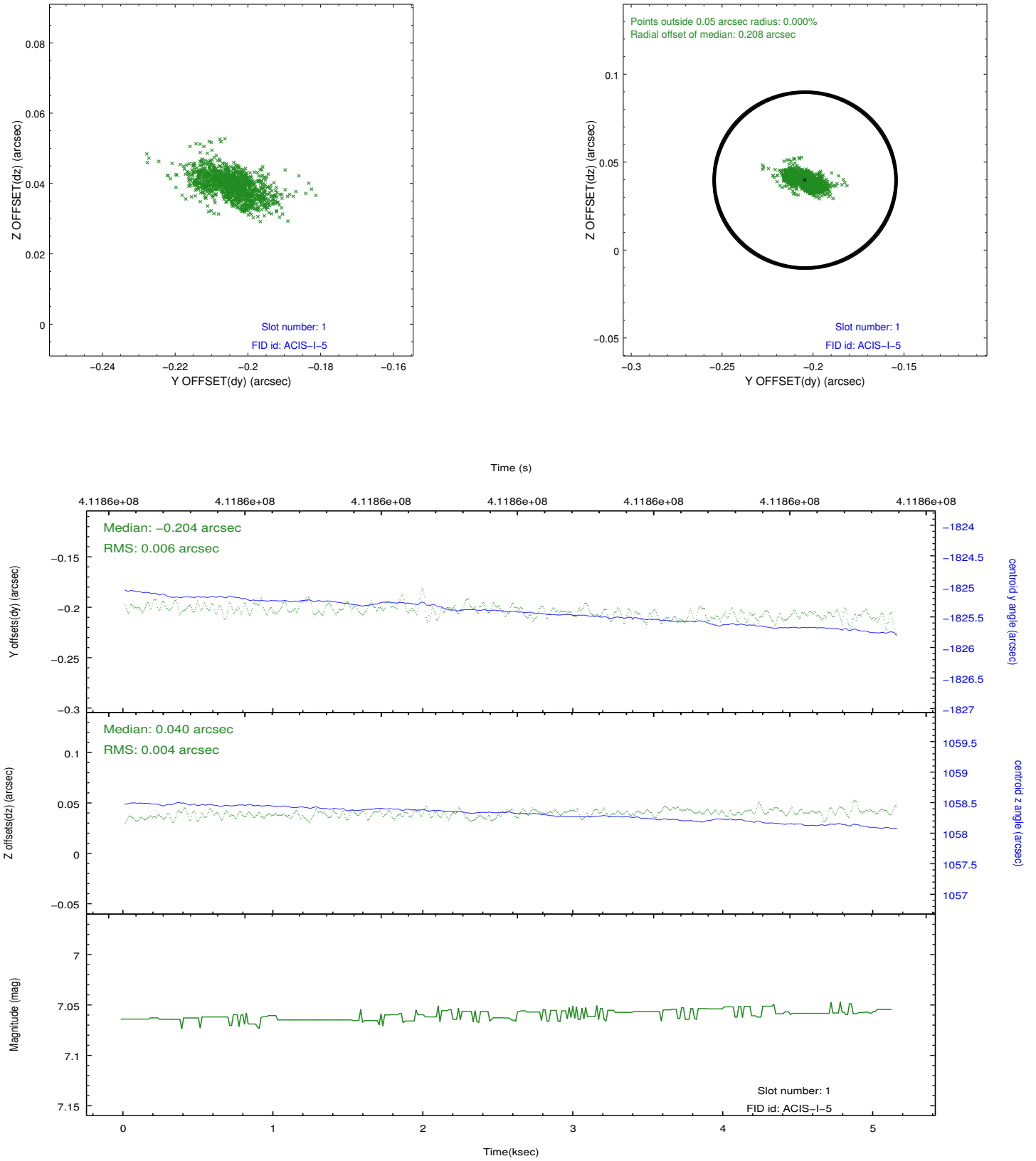


## 2.5 FID Slots

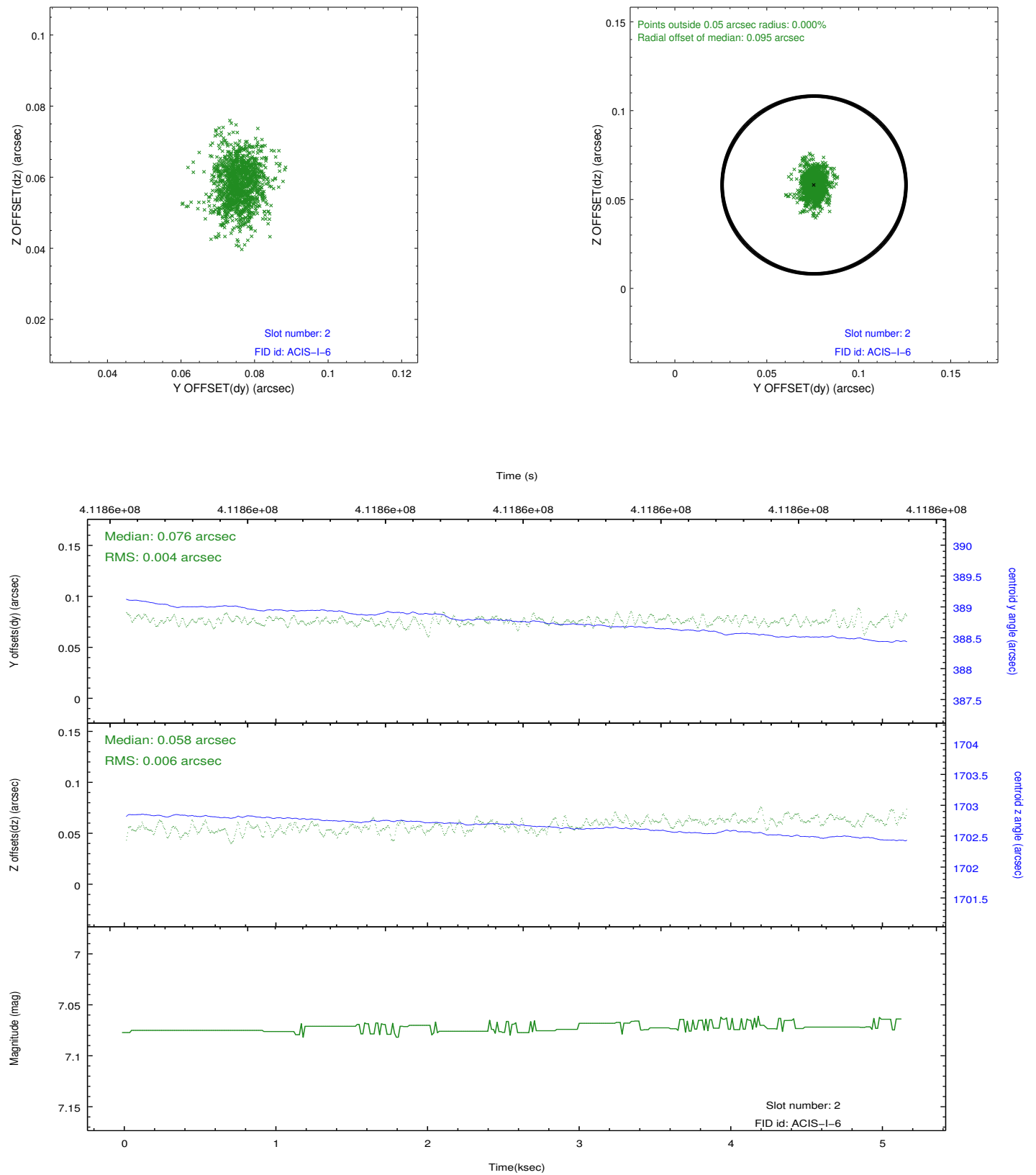
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.7551999823451

## 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.