

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12914 - L2 Version 2  
Chandra X-Ray Center

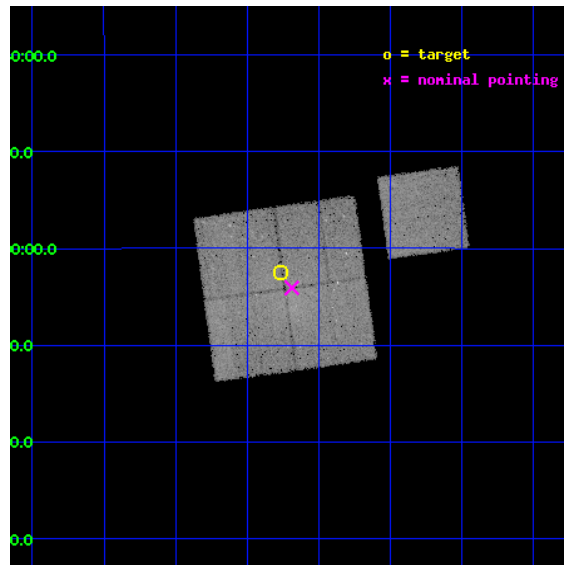
L2 Processing Date : Feb 6 2012

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# 1 Front

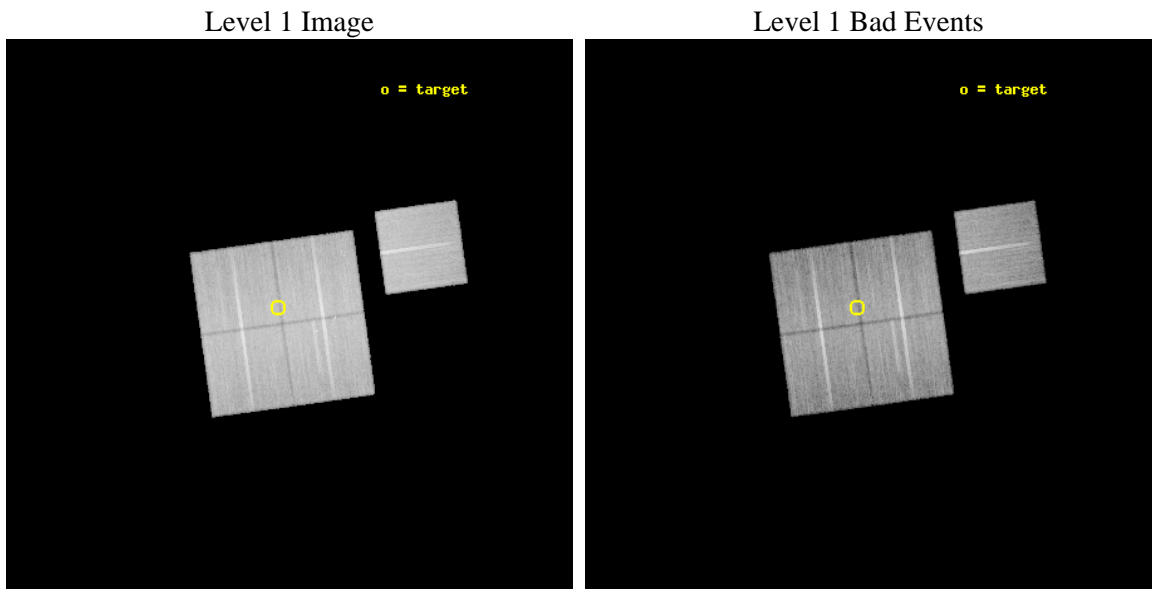
seq_num	801051	Sequence number
obs_id	12914	Observation id
title	Probing the Dynamics of the Merging Subclusters in Abell 1750	Prop
observer	Dr Stephen Murray	Principal investigator
object	a1750ss	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	202.565833	Observer's specified target RA [deg]
dec_targ	-2.041306	Observer's specified target Dec [deg]
ra_nom	202.54695929463	Nominal RA [deg]
dec_nom	-2.0678756091326	Nominal Dec [deg]
roll_nom	82.112487666095	Nominal Roll [deg]
revision	2	Processing version of data
ontime	37522.359268367	Sum of GTIs [s]
liveltime	37032.102020967	Livetime [s]
ontime0	37522.359268367	Sum of GTIs [s]
ontime1	37522.359268248	Sum of GTIs [s]
ontime2	37525.500288606	Sum of GTIs [s]
ontime3	37522.359268248	Sum of GTIs [s]
ontime6	37522.359258354	Sum of GTIs [s]
l2events	128516	Number of level 2 events



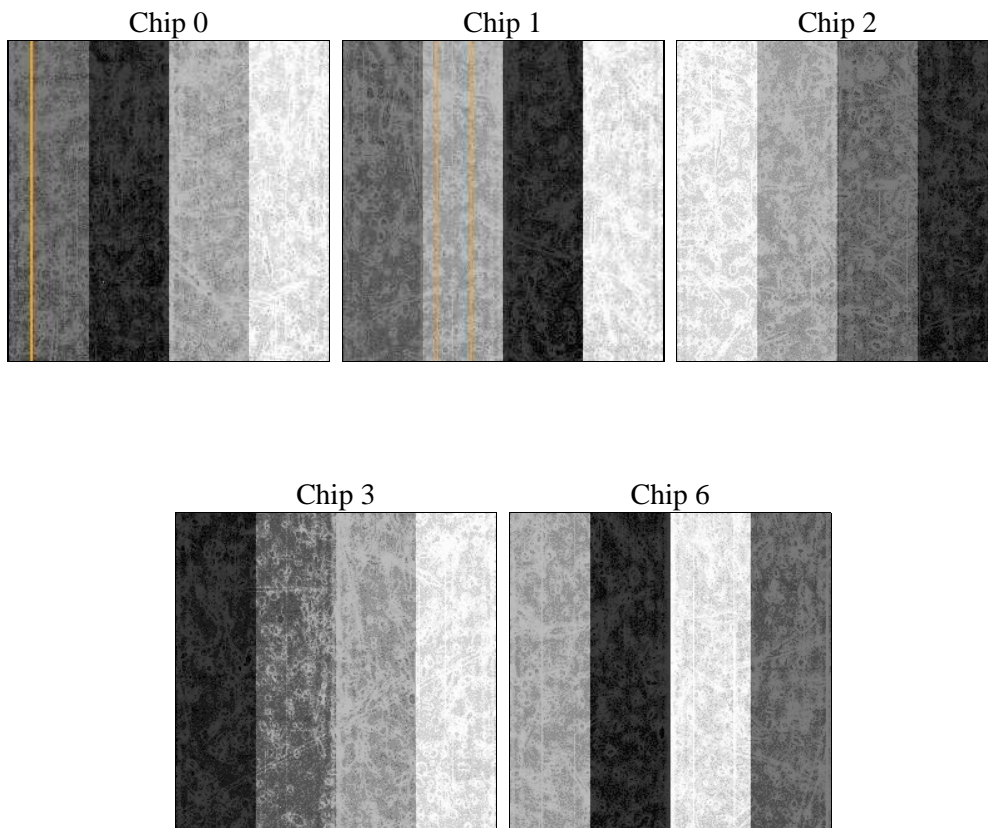
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	37473.130000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	37522.359268367	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	37522.359268367	Sum of GTIs [s]
date	2012-02-06T08:31:45	Date and time of file creation	ontime1	37522.359268248	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	37525.500288606	Sum of GTIs [s]
			ontime3	37522.359268248	Sum of GTIs [s]
			ontime6	37522.359258354	Sum of GTIs [s]
			l1events	1225351	Number of level 1 events

### 2.1.4 Events

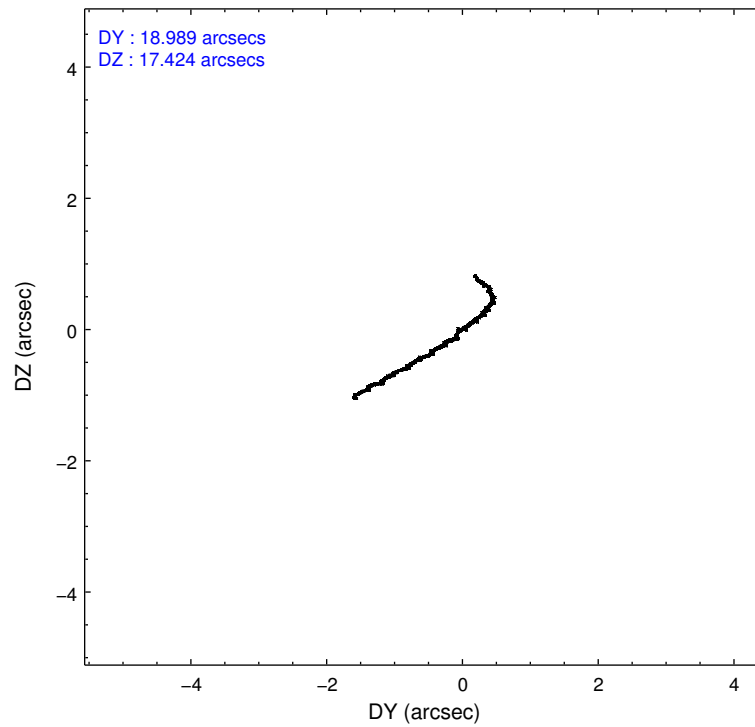
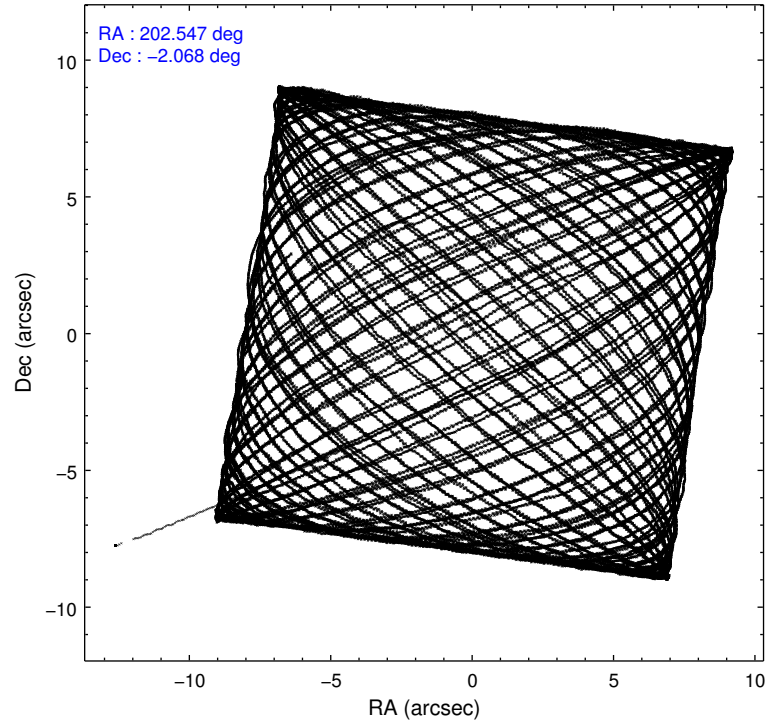
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	231761	233906	256849	253798	249037
rejected events	200775	201123	227949	222991	220865
rejected %	86%	85%	88%	87%	88%

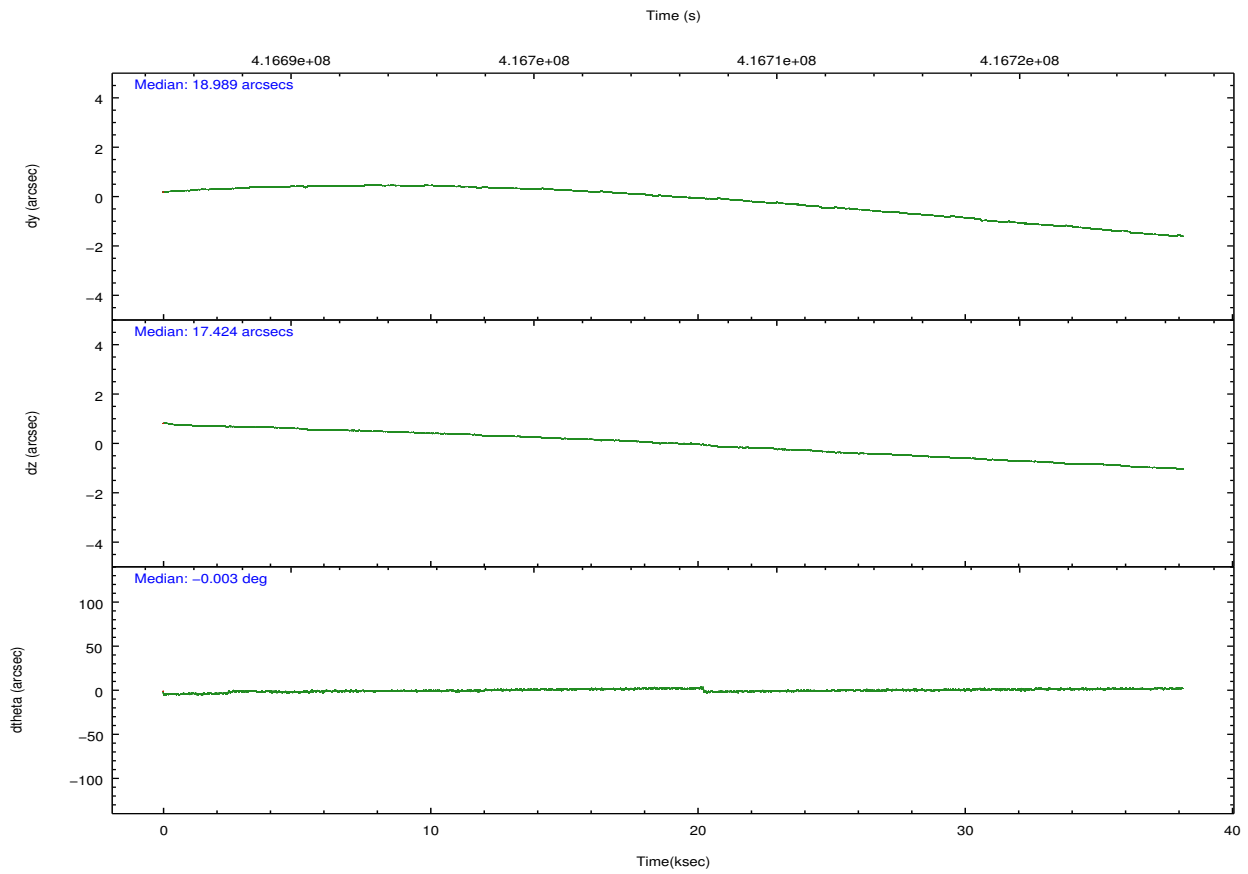
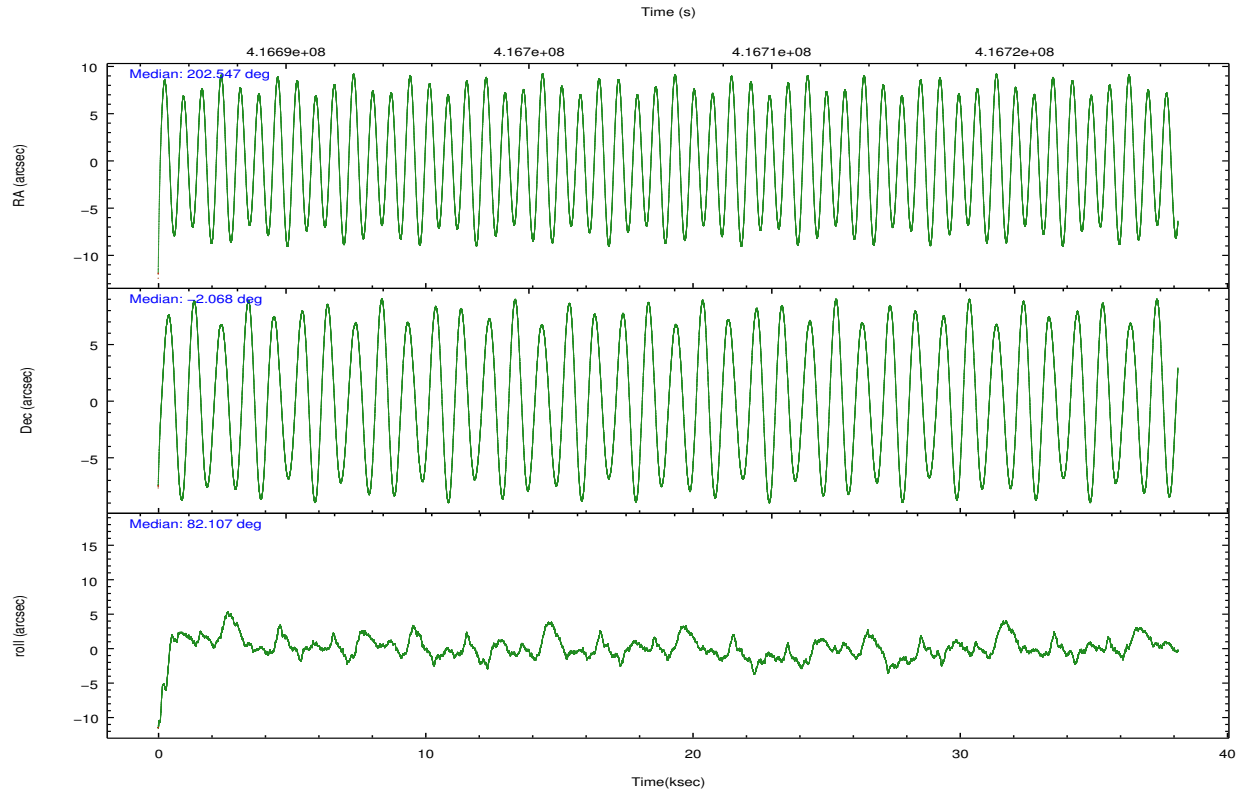
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	12176	12384	10866	12681	9731
	5%	5%	4%	4%	3%
grade 1 events	147	180	157	164	139
	0%	0%	0%	0%	0%
grade 2 events	7176	7452	6874	6491	6160
	3%	3%	2%	2%	2%
grade 3 events	3117	3274	2961	2969	2913
	1%	1%	1%	1%	1%
grade 4 events	2956	3177	2830	2984	3039
	1%	1%	1%	1%	1%
grade 5 events	10840	11450	9997	11969	11632
	4%	4%	3%	4%	4%
grade 6 events	5565	6503	5372	5684	6336
	2%	2%	2%	2%	2%
grade 7 events	189784	189486	217792	210856	209087
	81%	81%	84%	83%	83%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	202.557424	202.5469592946294	CCD I2 on	Y	Y
[deg] Pointing Dec	-2.093301	-2.067875609132551	CCD I3 on	Y	Y
[deg] Pointing Roll	81.904177	82.11248766609464	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	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	416687329.184000	416686151.75676	CCD S5 on	N	N
Observation start date	2011-03-16T18:27:43	2011-03-16T18:09:11	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	416724802.184000	416725039.74628	On-chip summing requested	N	N
Observation end date	2011-03-17T04:52:16	2011-03-17T04:57:19	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



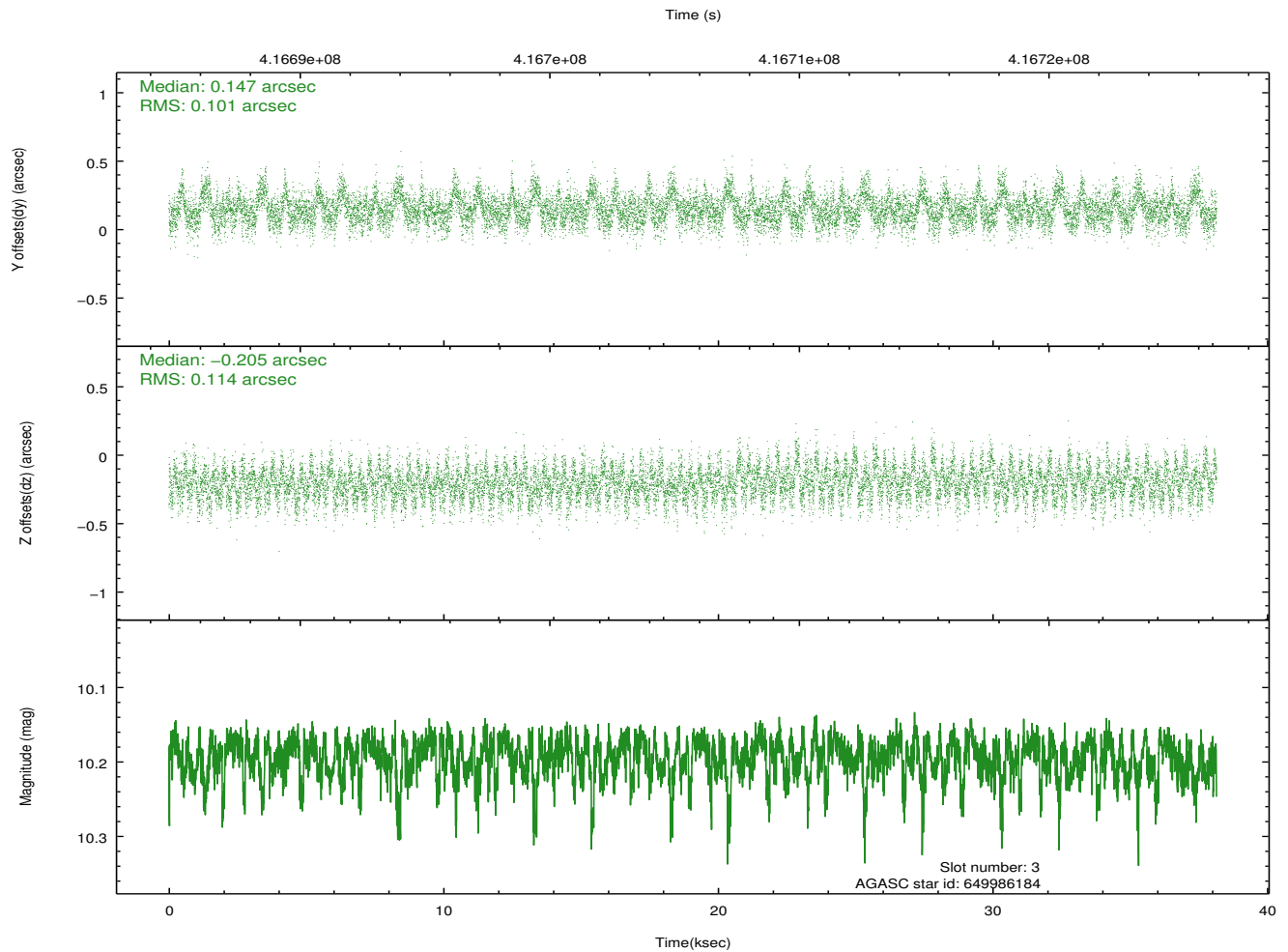
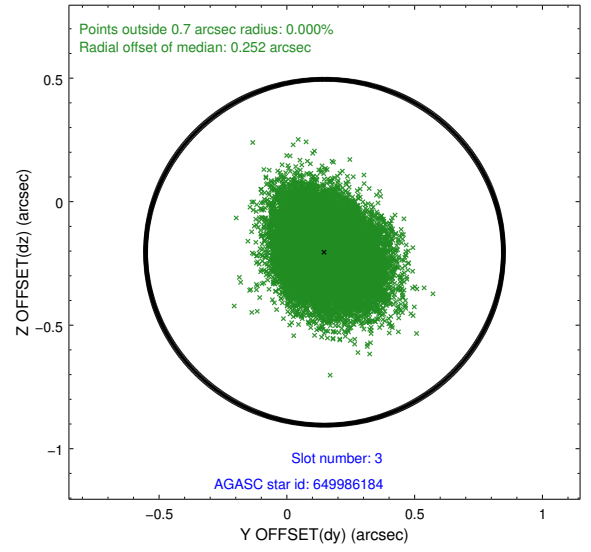
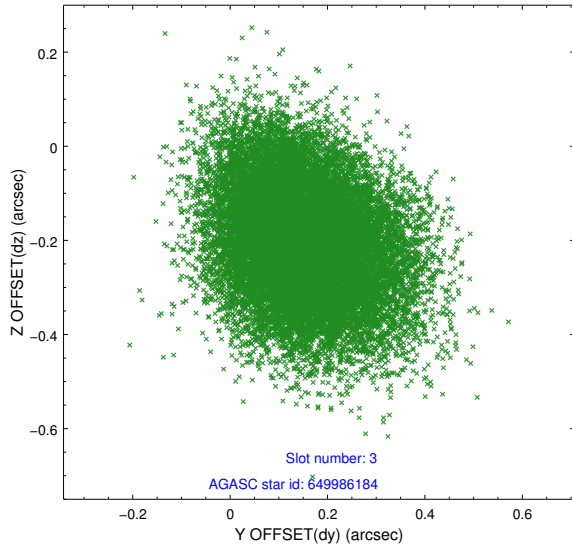


### Slot Statistics

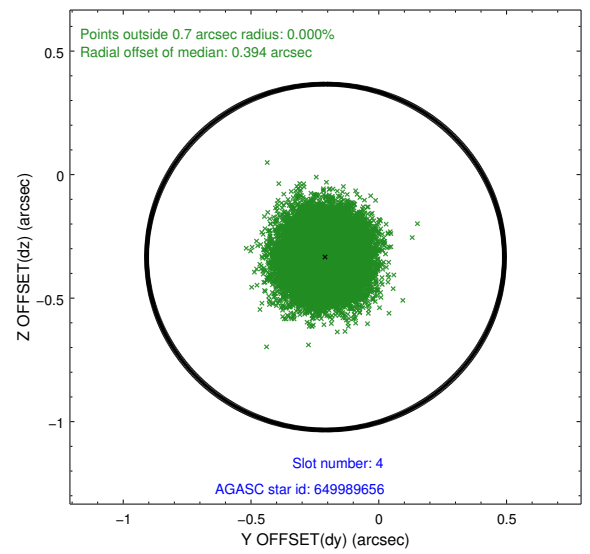
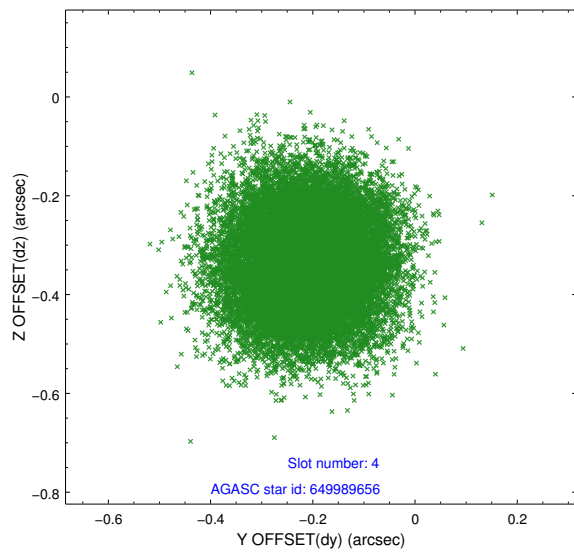
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.05	9306	-0.011	-0.044	0.044	0.058	0.000000	0.000000	920.60	-841.06
1	FID	ACIS-I-4	6.97	9306	0.202	0.063	0.032	0.041	0.000000	0.000000	2140.82	1058.88
2	FID	ACIS-I-5	7.02	9307	-0.286	0.056	0.014	0.025	0.000000	0.000000	-1827.69	1056.66
3	GUIDE	649986184	10.19	18588	0.147	-0.205	0.162	0.262	201.931197	-2.405894	-1431.85	2071.43
4	GUIDE	649989656	9.61	18578	-0.209	-0.334	0.132	0.206	202.302842	-2.036557	73.08	935.48
5	GUIDE	650904408	8.39	18605	0.263	0.181	0.093	0.152	202.793007	-2.262184	-481.94	-923.98
6	GUIDE	651297280	7.90	18609	0.128	0.443	0.074	0.119	203.154395	-2.598251	-1497.43	-2381.45
7	GUIDE	649993656	8.37	18608	-0.337	-0.083	0.070	0.113	202.447079	-1.396902	2425.91	746.43

## 2.4 Star Slots

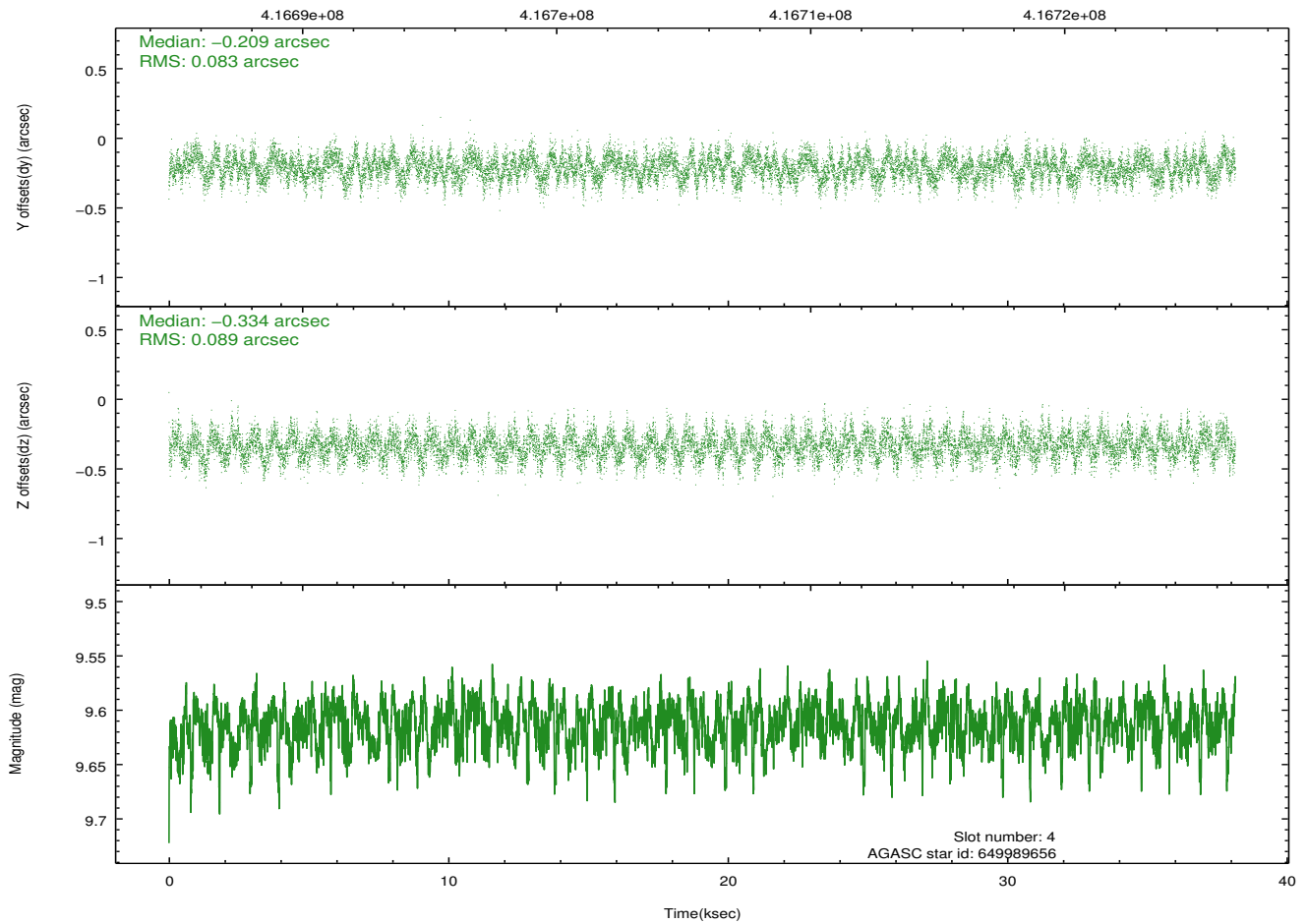
### 2.4.1 Slot 3



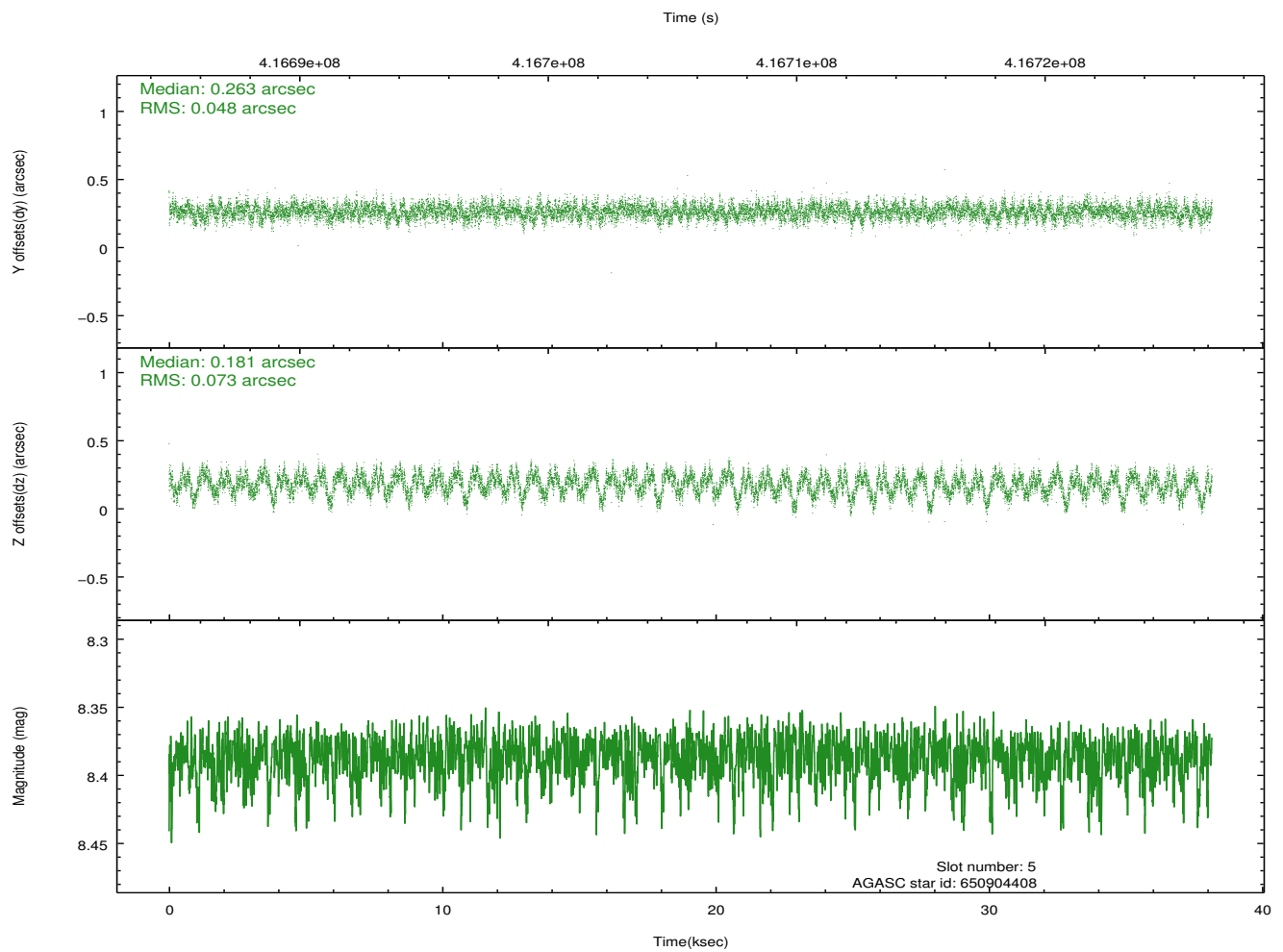
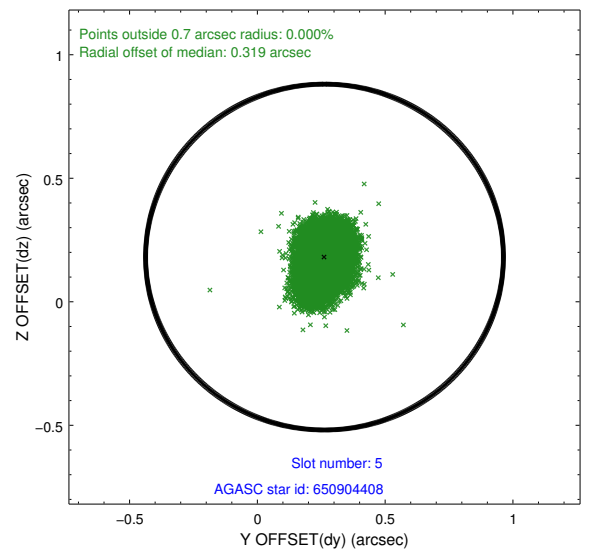
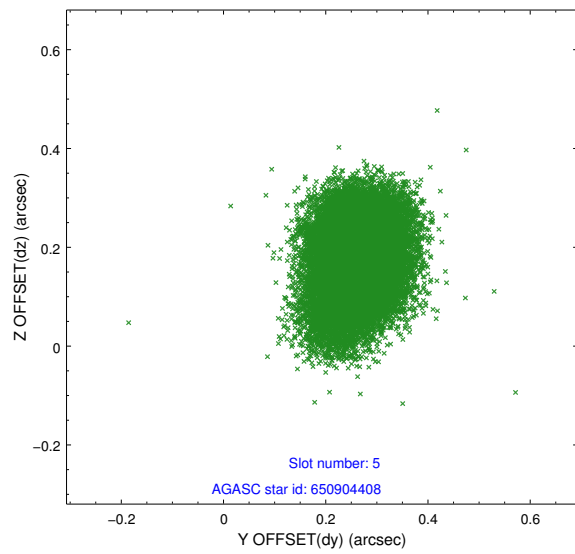
## 2.4.2 Slot 4



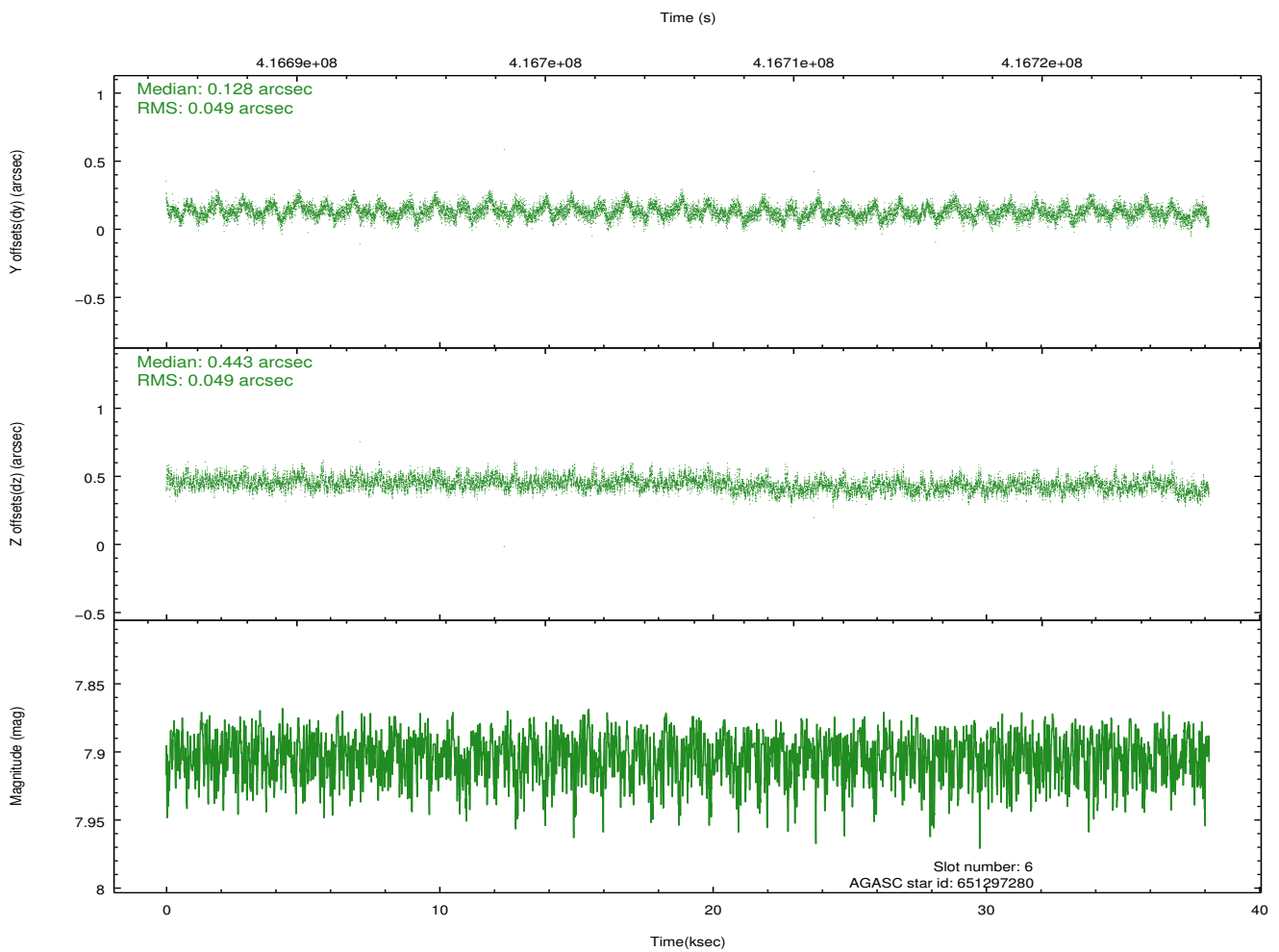
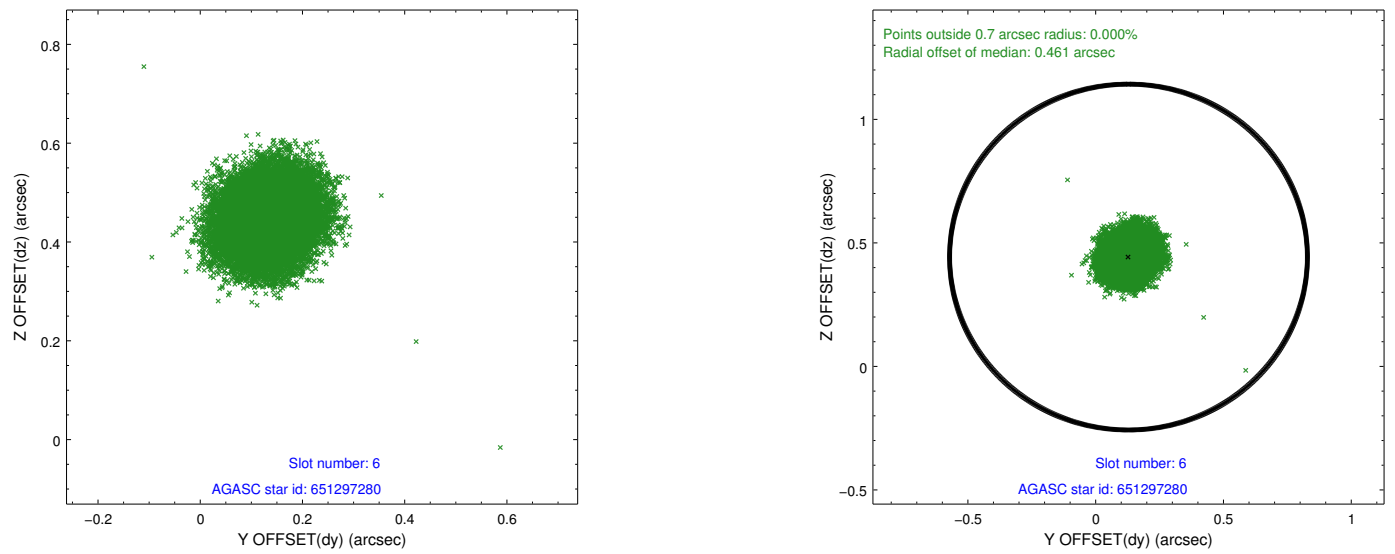
Time (s)



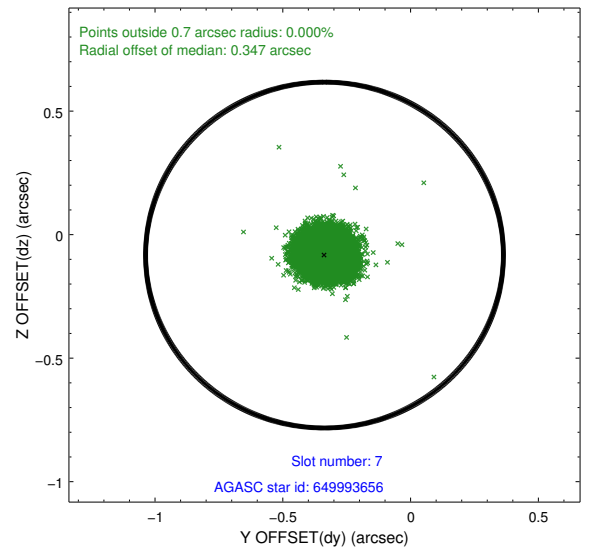
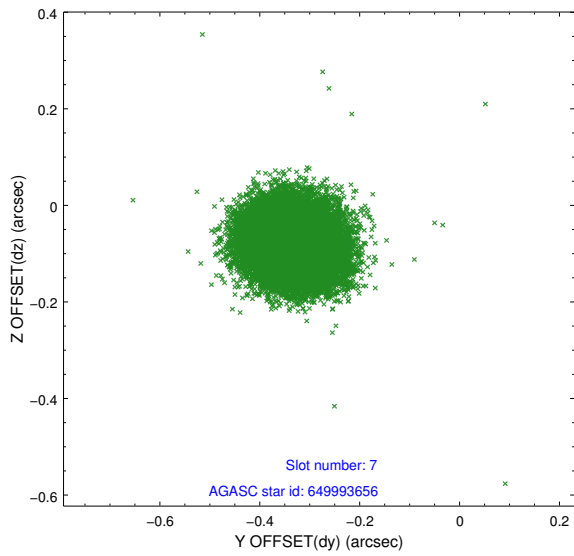
### 2.4.3 Slot 5



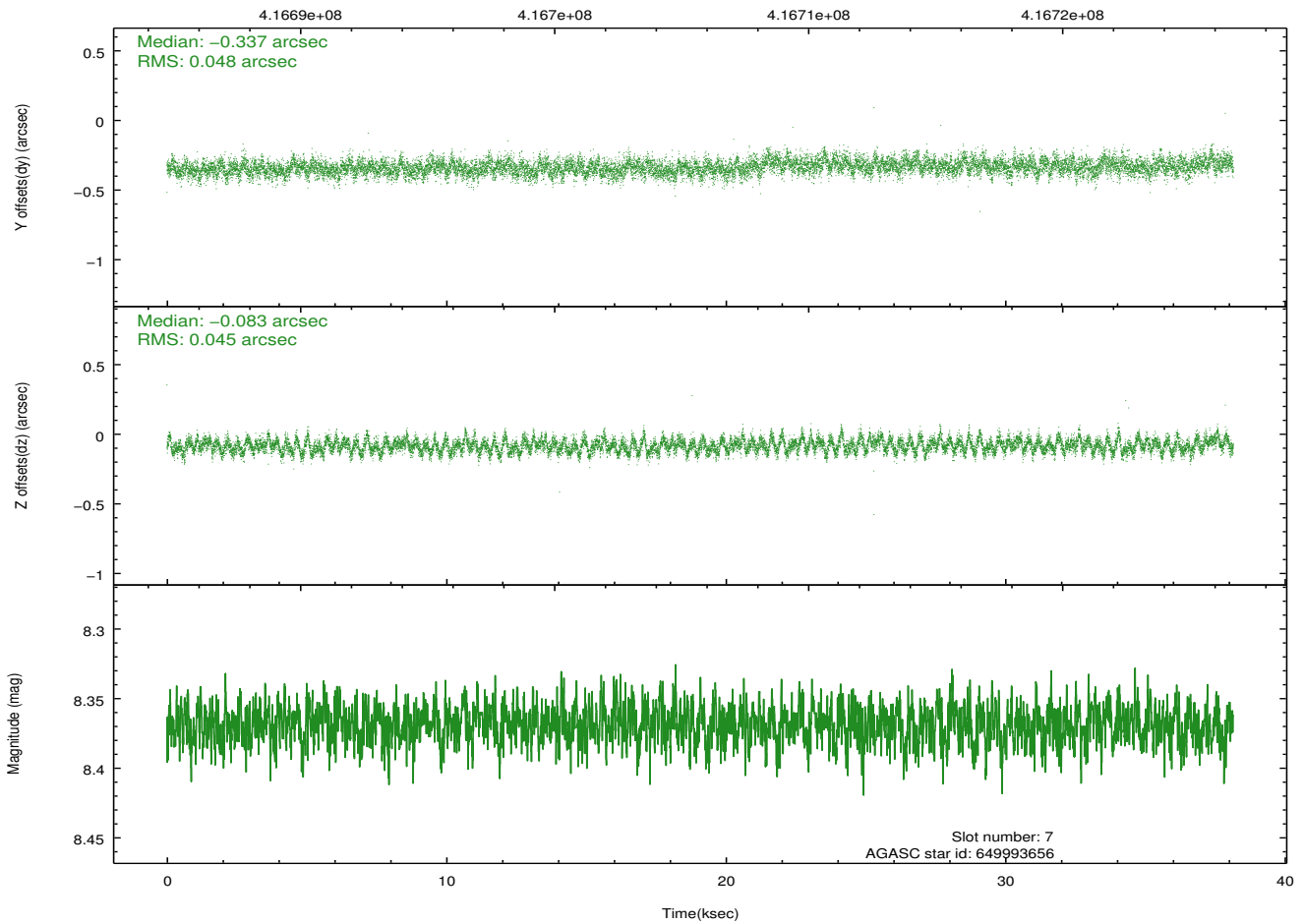
## 2.4.4 Slot 6



## 2.4.5 Slot 7

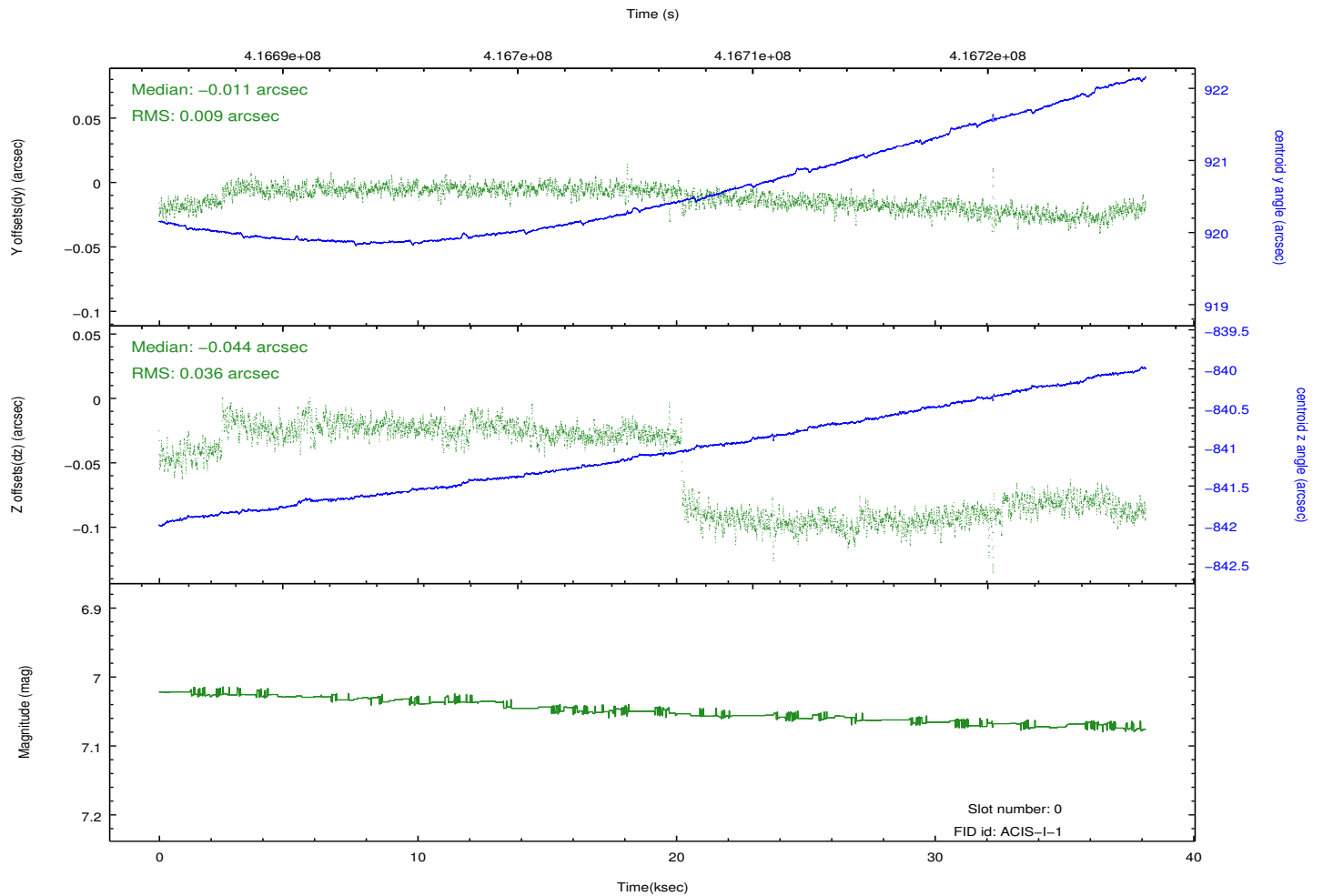
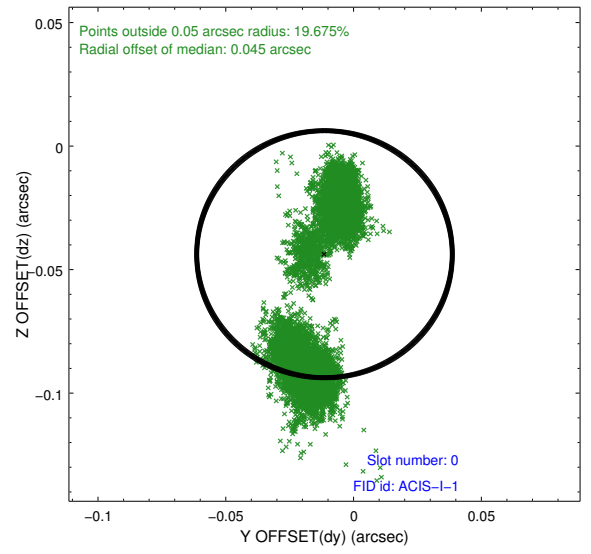
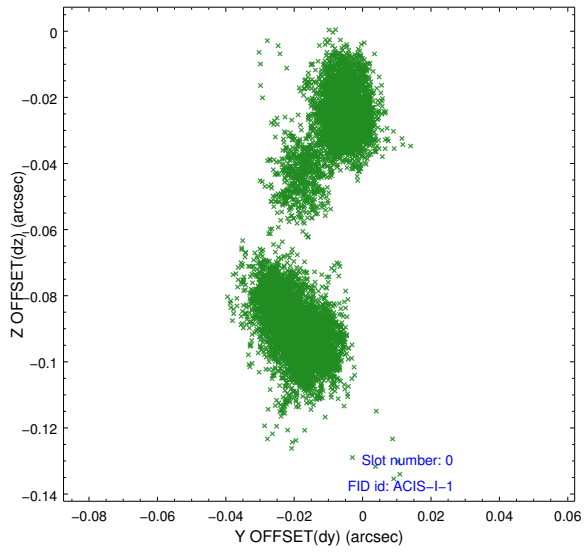


Time (s)

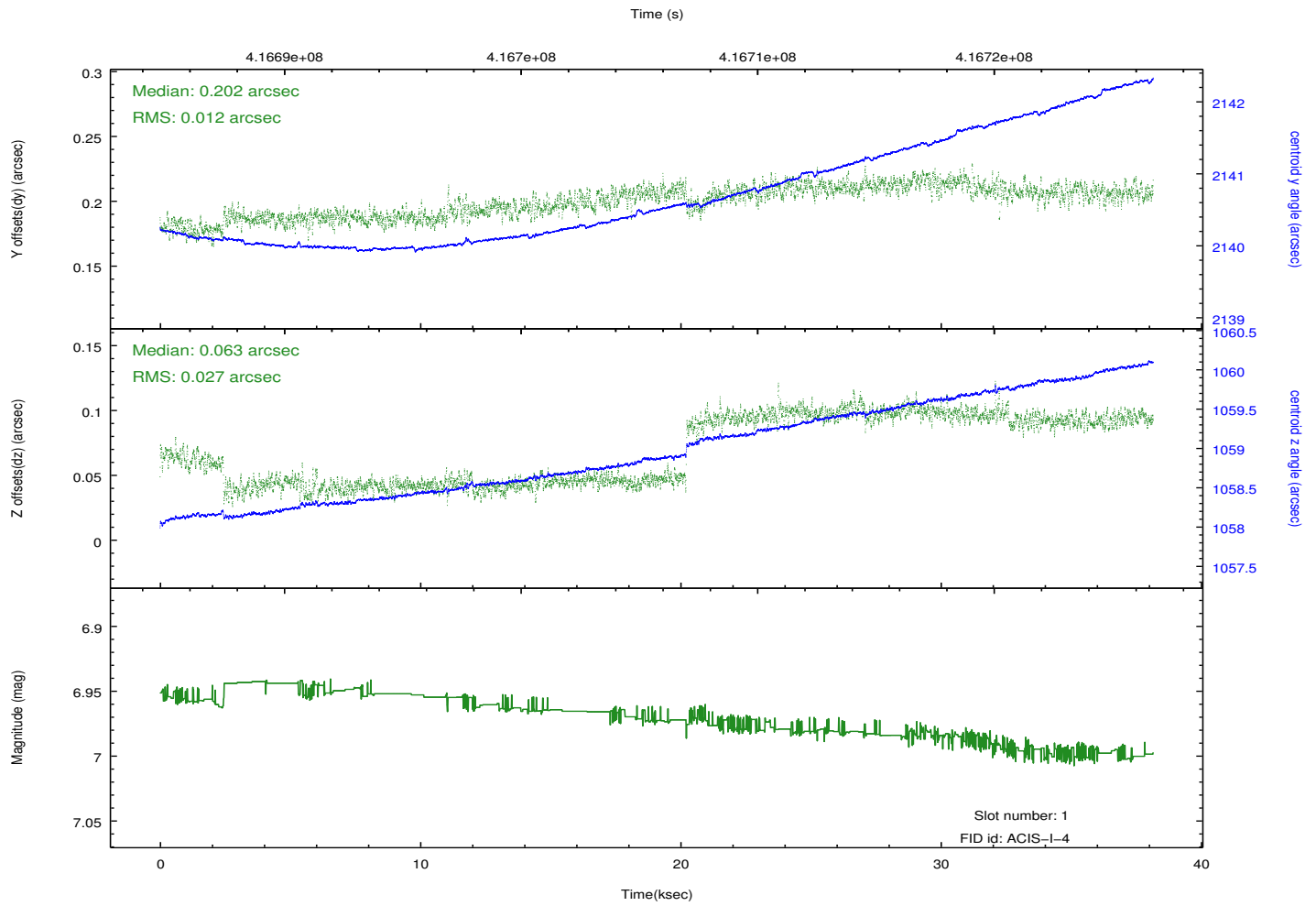
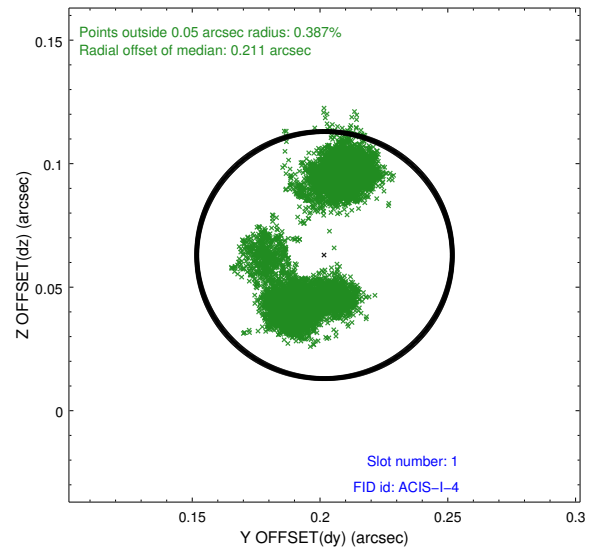
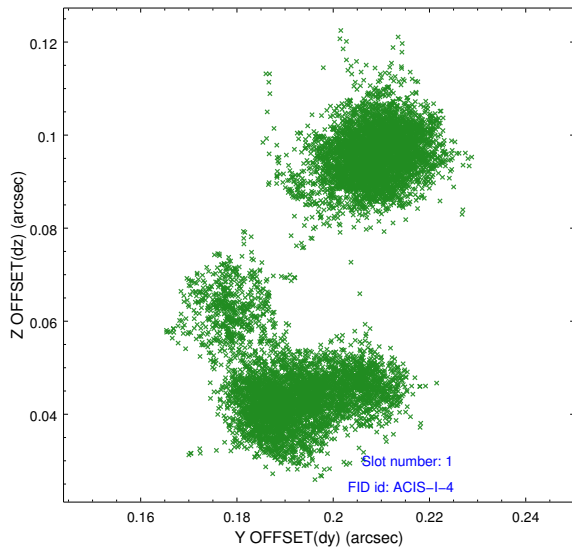


## 2.5 FID Slots

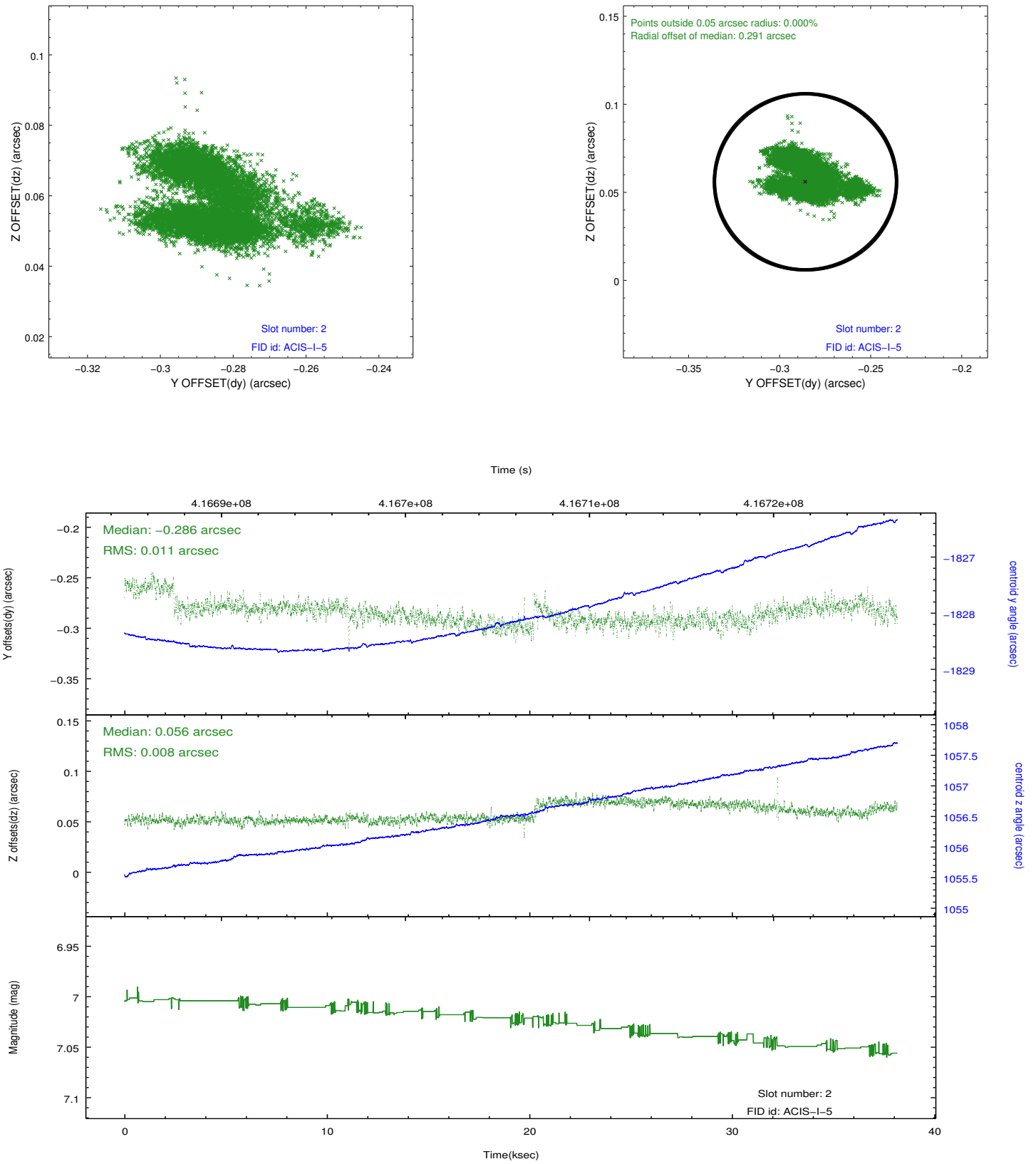
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	37.522359268308

## 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.