

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 14656 - L2 Version 2  
Chandra X-Ray Center

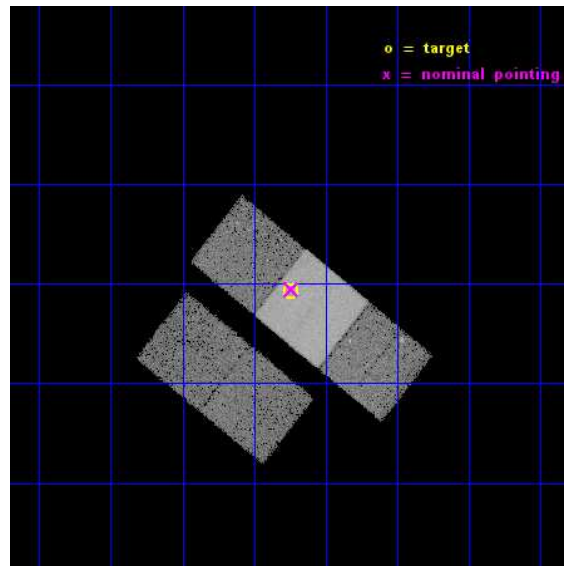
L2 Processing Date : Dec 8 2014

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# 1 Front

seq_num	401489	Sequence number
obs_id	14656	Observation id
title	Active Quiescence in the Black Hole Binary System A0620-00	Proposa
observer	Dr. Michelle Buxton	Principal investigator
object	A0620-00	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	95.685417	Observer's specified target RA [deg]
dec_targ	-0.34575	Observer's specified target Dec [deg]
ra_nom	95.685069747424	Nominal RA [deg]
dec_nom	-0.34273555619373	Nominal Dec [deg]
roll_nom	38.745733612513	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30066.753050029	Sum of GTIs [s]
livetime	29673.908786609	Livetime [s]
ontime2	30066.588890016	Sum of GTIs [s]
ontime3	30063.529939771	Sum of GTIs [s]
ontime6	30066.712010026	Sum of GTIs [s]
ontime7	30066.753050029	Sum of GTIs [s]
ontime8	30066.629930019	Sum of GTIs [s]
l2events	141498	Number of level 2 events

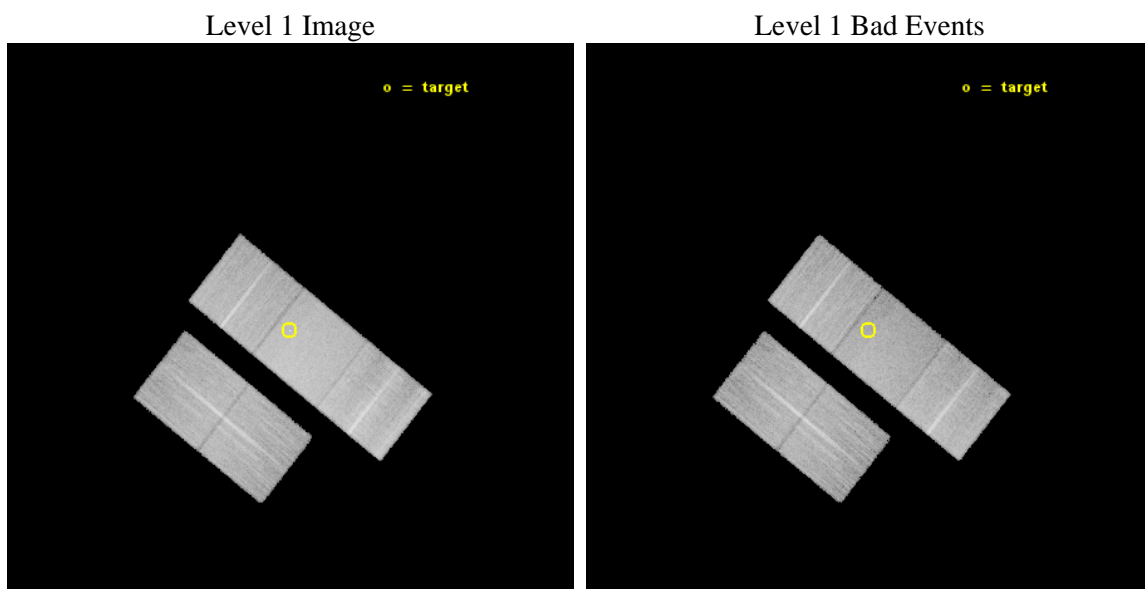




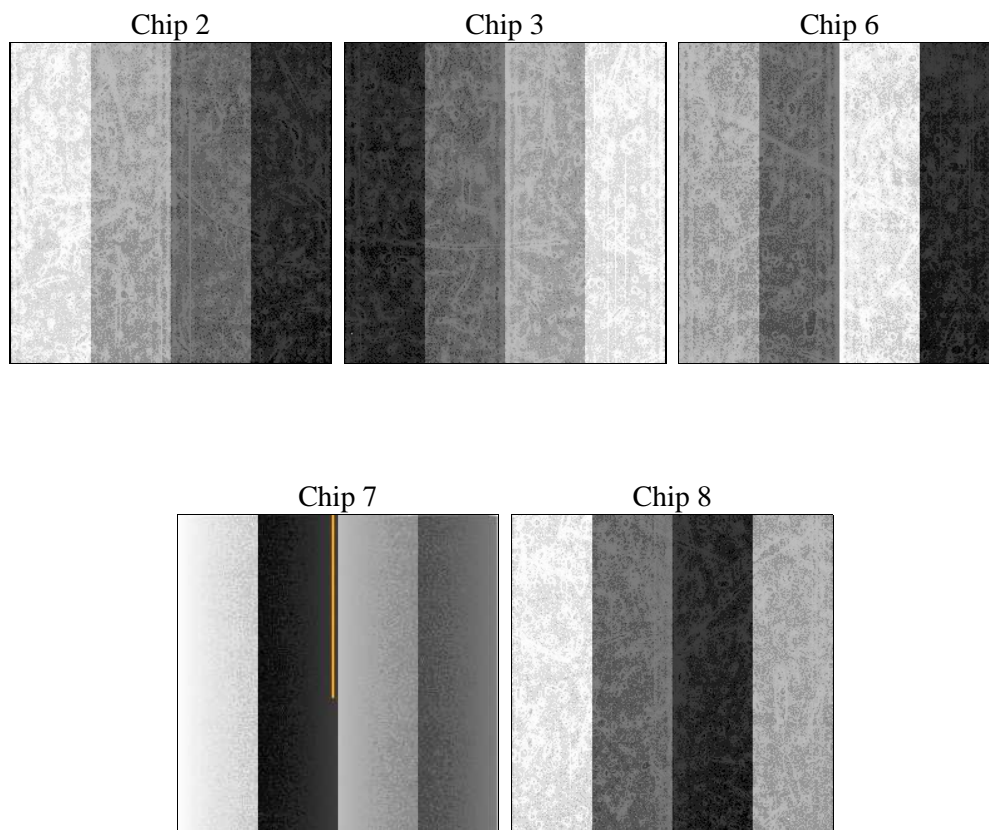
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	30066.753050029	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	30066.588890016	Sum of GTIs [s]
date	2014-12-08T07:45:53	Date and time of file creation	ontime3	30063.529939771	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30066.712010026	Sum of GTIs [s]
			ontime7	30066.753050029	Sum of GTIs [s]
			ontime8	30066.629930019	Sum of GTIs [s]
			l1events	796132	Number of level 1 events

### 2.1.4 Events

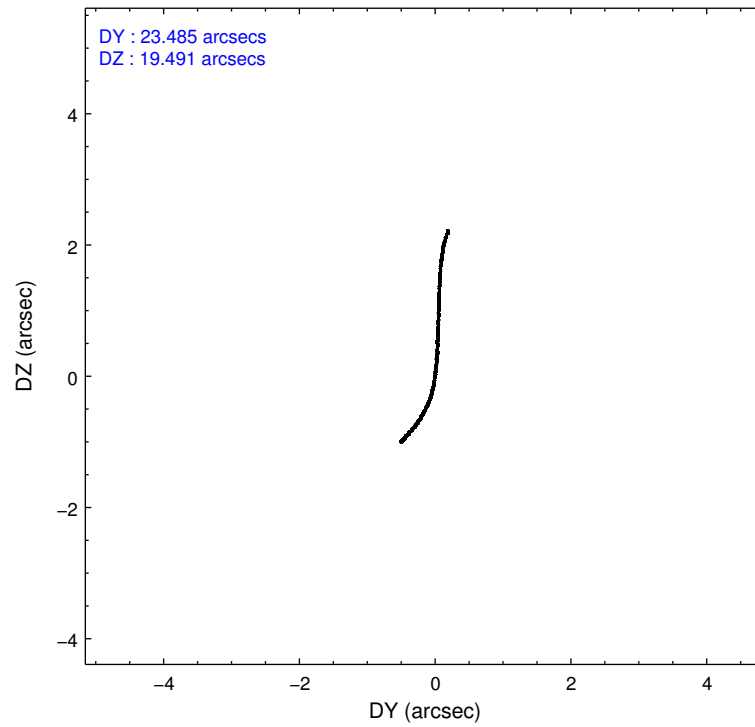
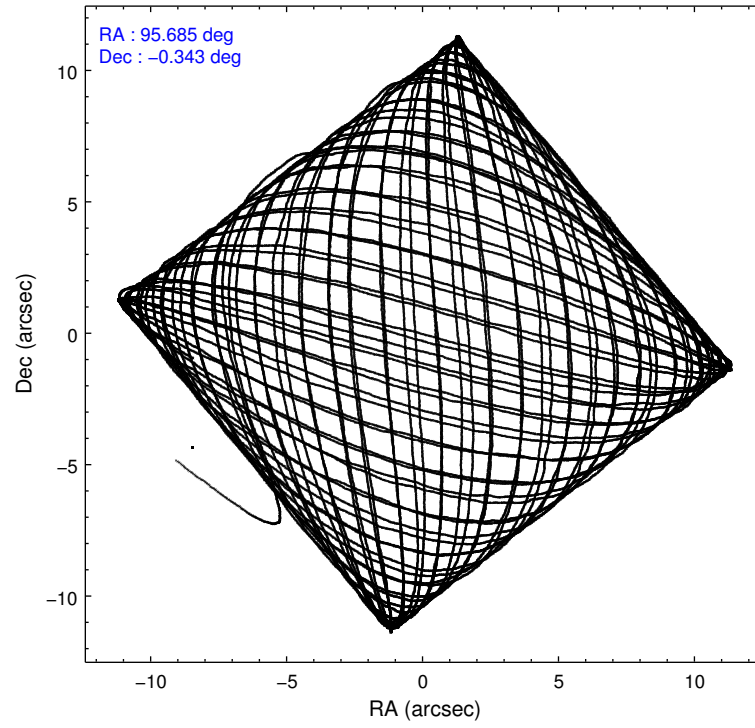
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	135648	134542	144519	193634	187789
rejected events	119852	119210	126816	109853	137665
rejected %	88%	88%	87%	56%	73%

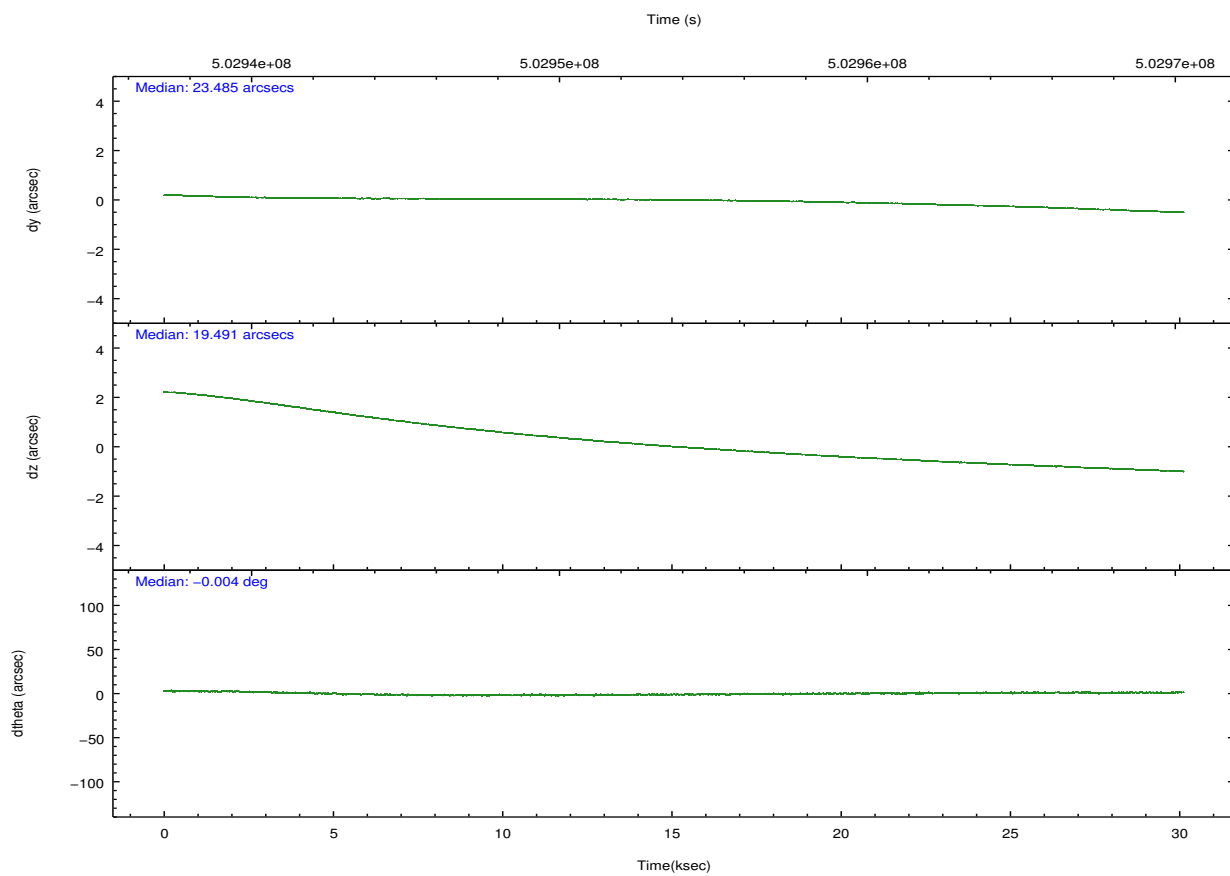
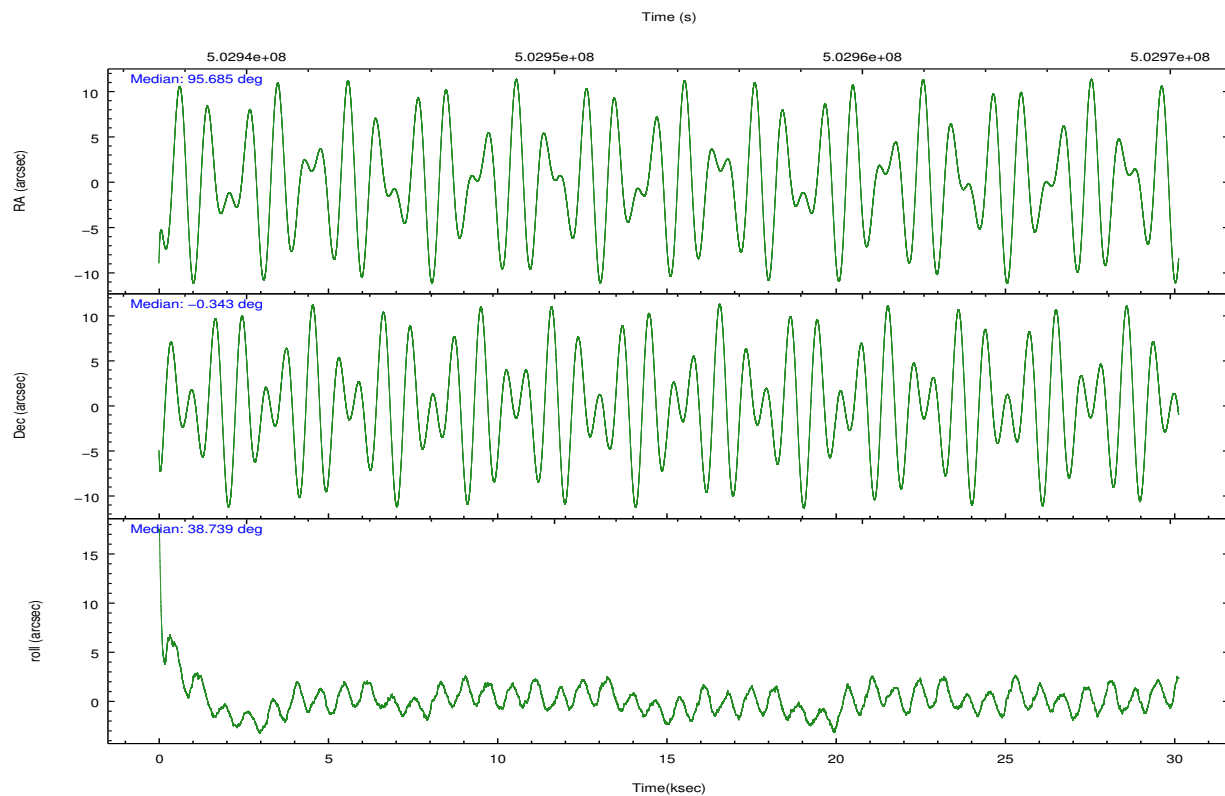
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	5519	5184	5946	7303	14209
	4%	3%	4%	3%	7%
grade 1 events	80	68	63	232	138
	0%	0%	0%	0%	0%
grade 2 events	3873	3529	3947	17161	12195
	2%	2%	2%	8%	6%
grade 3 events	1646	1688	1833	7262	5270
	1%	1%	1%	3%	2%
grade 4 events	1597	1703	1779	7120	4894
	1%	1%	1%	3%	2%
grade 5 events	6142	7544	7846	20145	11003
	4%	5%	5%	10%	5%
grade 6 events	3165	3232	4202	44956	13557
	2%	2%	2%	23%	7%
grade 7 events	113626	111594	118903	89455	126523
	83%	82%	82%	46%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	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	95.675526	95.68506974742355	Subarray requested	NONE	NONE
[deg] Pointing Dec	-0.368354	-0.3427355561937331	Alternating exposures requested	N	N
[deg] Pointing Roll	38.589048	38.74573361251324	[s] Primary exposure time	0.000000	3.1
[s] Window start time (MET)	496972867.184000	496972867.184000			
[s] Window stop time (MET)	507513667.184000	507513667.184000			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
Phase constraints	Y	Y			
[d] Phase period	0.997270	0.997270			
[d] Phase epoch (MJD)	56300.000000	56300.000000			
Phase start	0.000000	0.000000			
Phase end	0.400000	0.400000			
Phase start error	0.100000	0.100000			
Phase end error	0.100000	0.100000			
[s] Observation start time (MET)	502938775.184000	502937571.33508			
Observation start date	2013-12-09T01:11:48	2013-12-09T00:52:51			
[s] Observation end time (MET)	502968775.184000	502969320.19932			

## 2.3 Aspect



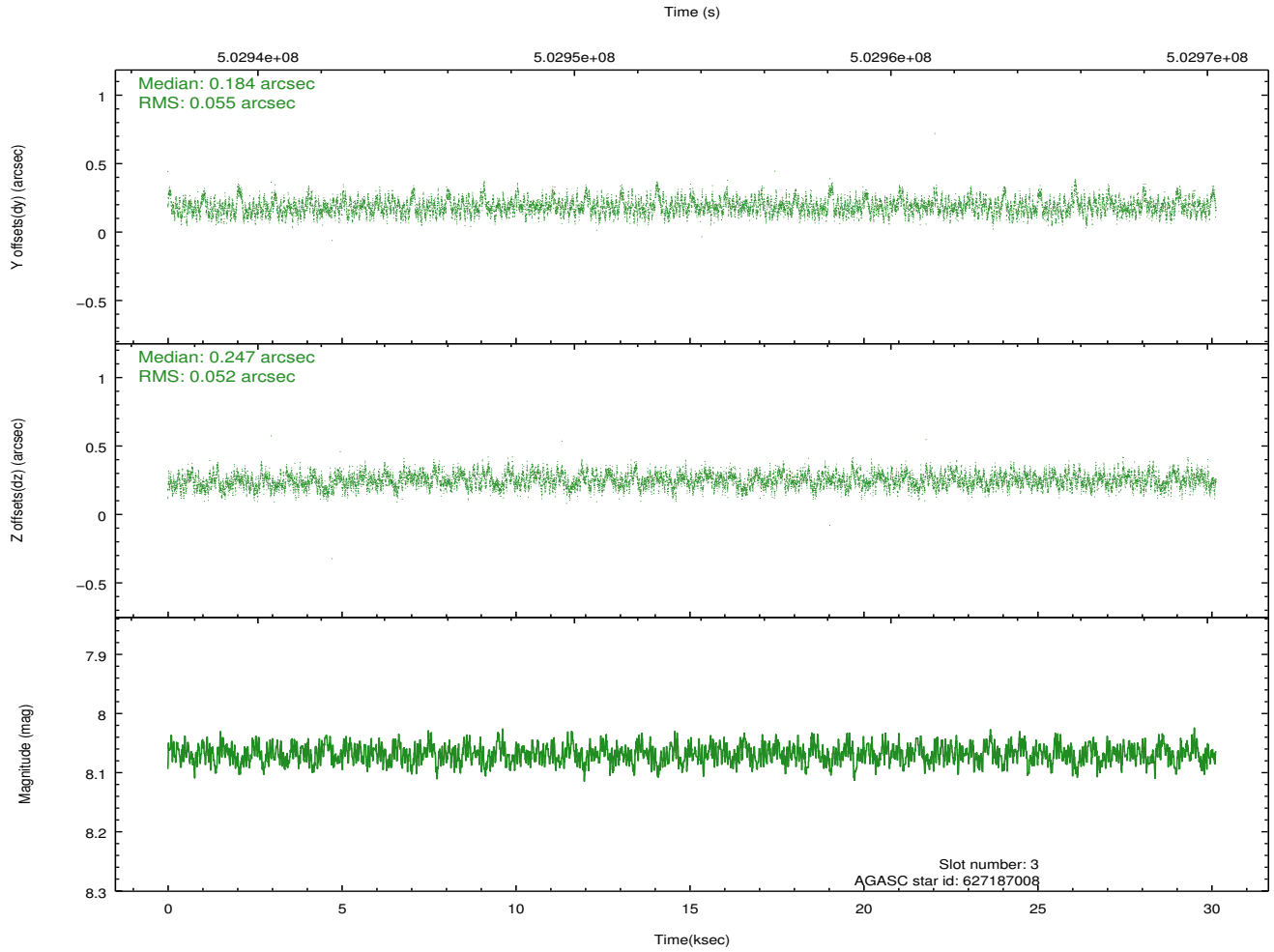
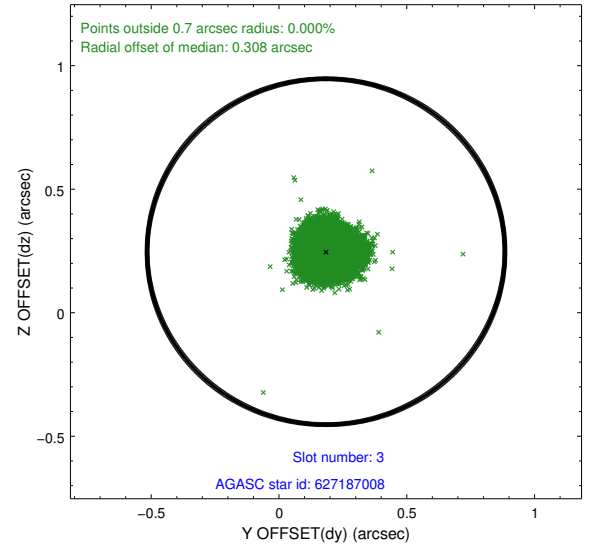
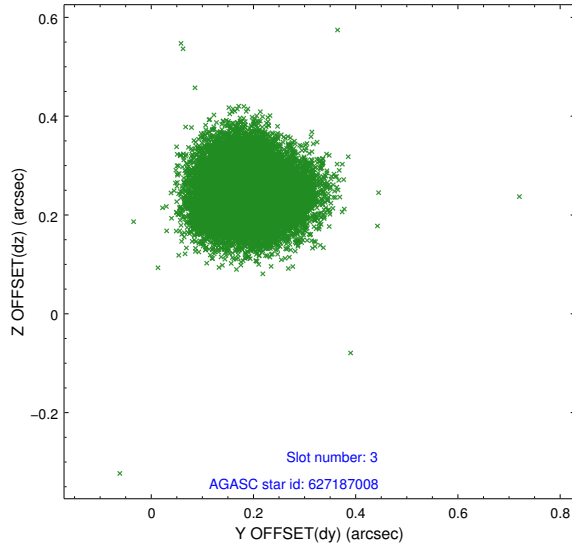


### Slot Statistics

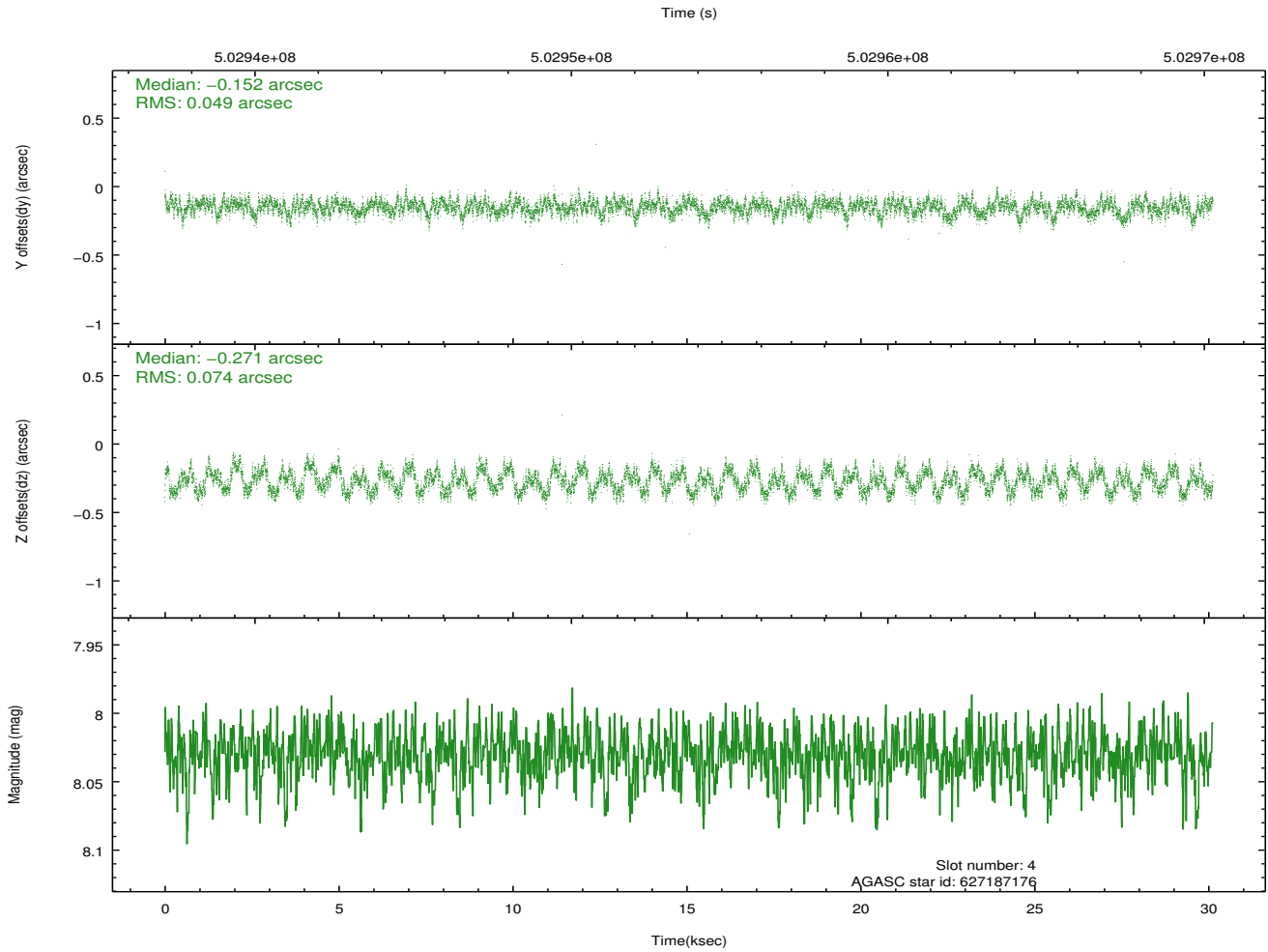
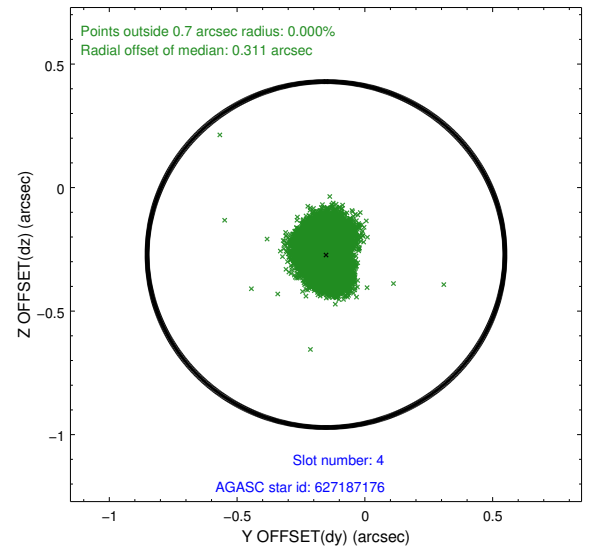
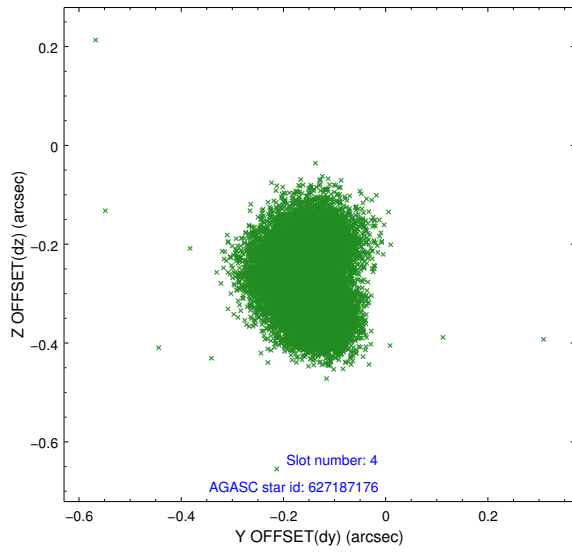
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	7348	-0.136	-0.023	0.022	0.032	0.000000	0.000000	-776.75	-1741.26
1	FID		ACIS-S-4	7.05	7348	0.313	0.071	0.012	0.027	0.000000	0.000000	2136.94	167.23
2	FID		ACIS-S-5	7.07	7349	-0.204	-0.040	0.022	0.029	0.000000	0.000000	-1829.57	160.89
3	GUIDE	used	627187008	8.07	14694	0.184	0.247	0.082	0.126	95.706759	-0.833093	-954.87	-1377.63
4	GUIDE	used	627187176	8.03	14693	-0.152	-0.271	0.097	0.142	95.647337	-0.234674	221.03	439.22
5	GUIDE	used	627197472	8.63	14693	0.033	0.095	0.099	0.158	96.421301	-0.454862	1904.98	-1917.30
6	GUIDE	used	17311408	8.91	14686	-0.084	-0.373	0.117	0.185	95.480917	0.304218	962.85	2329.27
7	GUIDE	used	627186688	7.98	14693	0.014	0.303	0.083	0.128	95.995507	-0.973934	-458.72	-2421.97

## 2.4 Star Slots

### 2.4.1 Slot 3

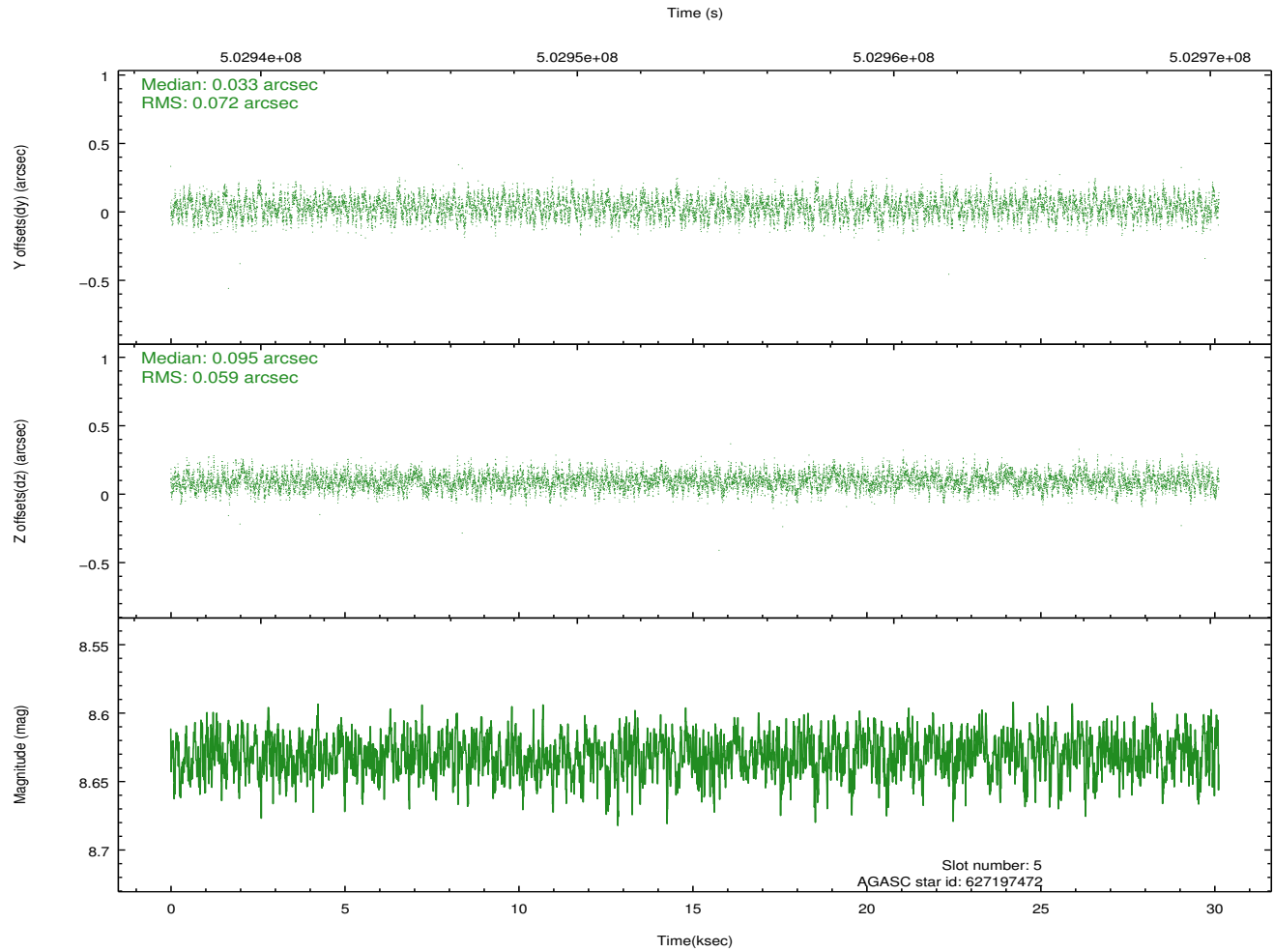
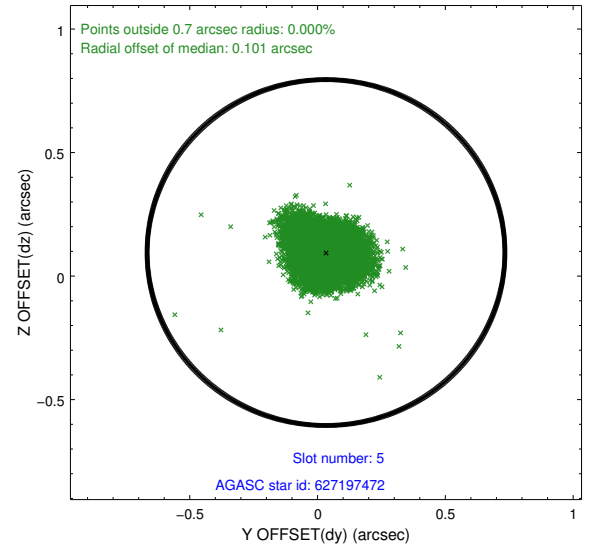
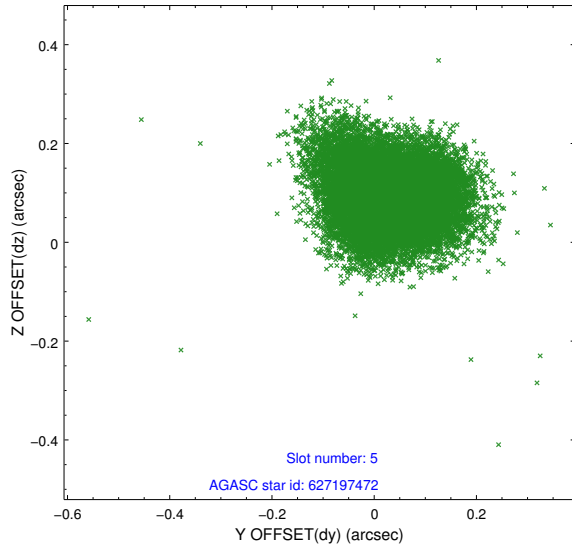


## 2.4.2 Slot 4

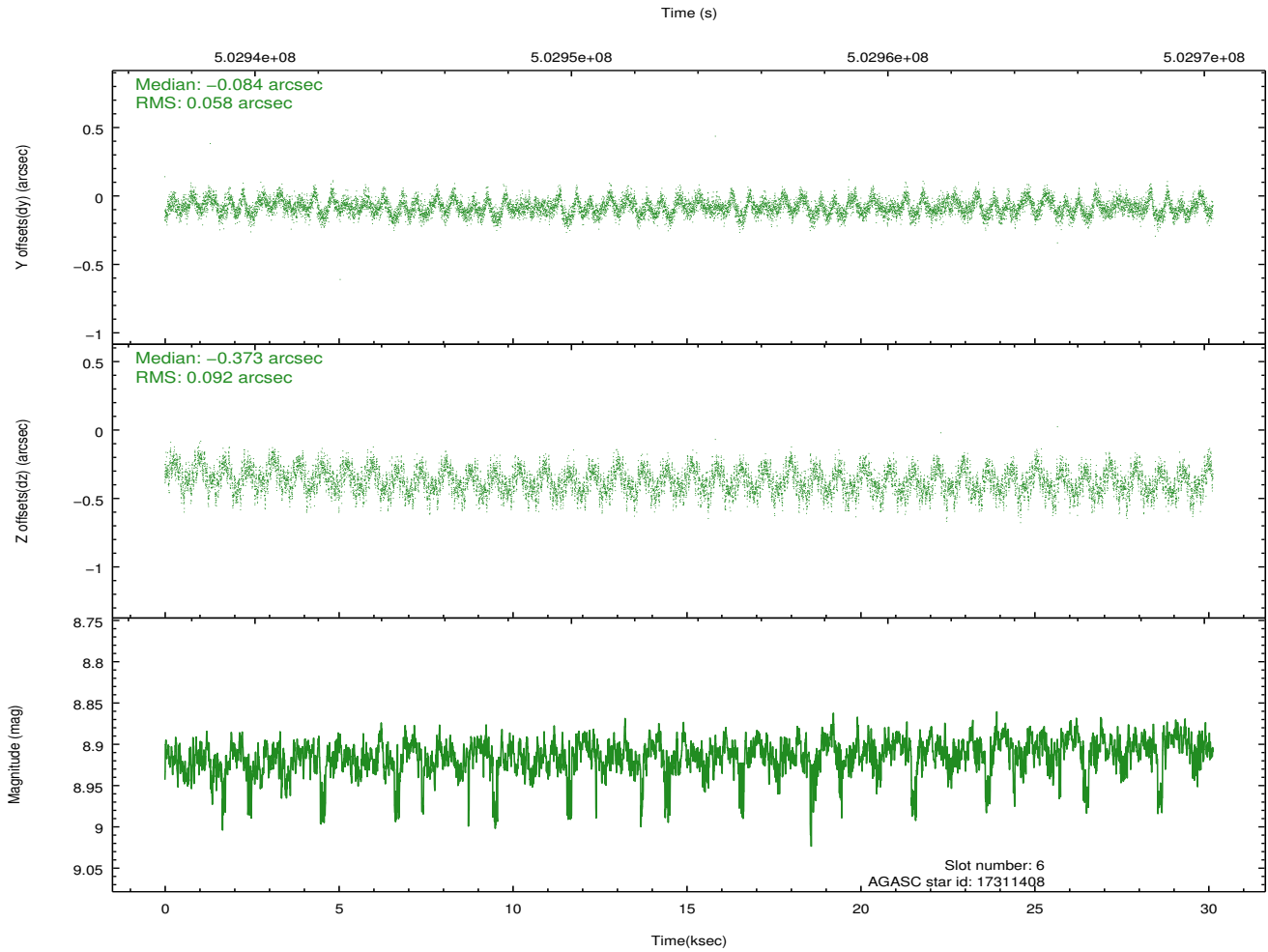
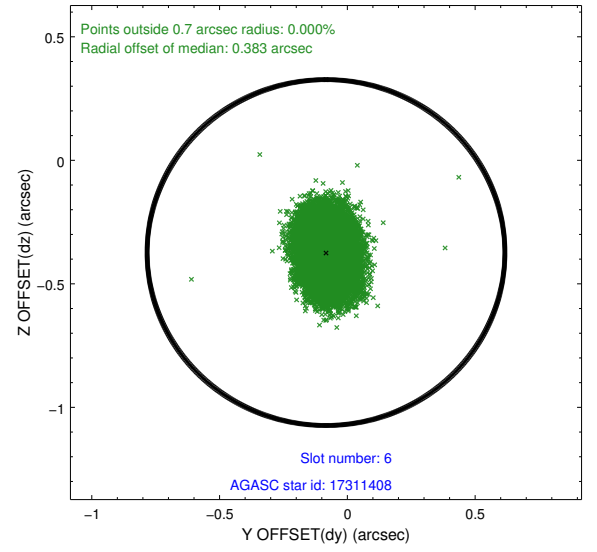
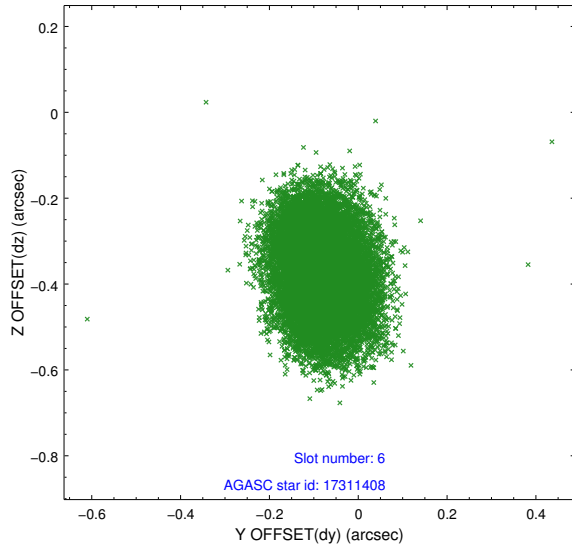




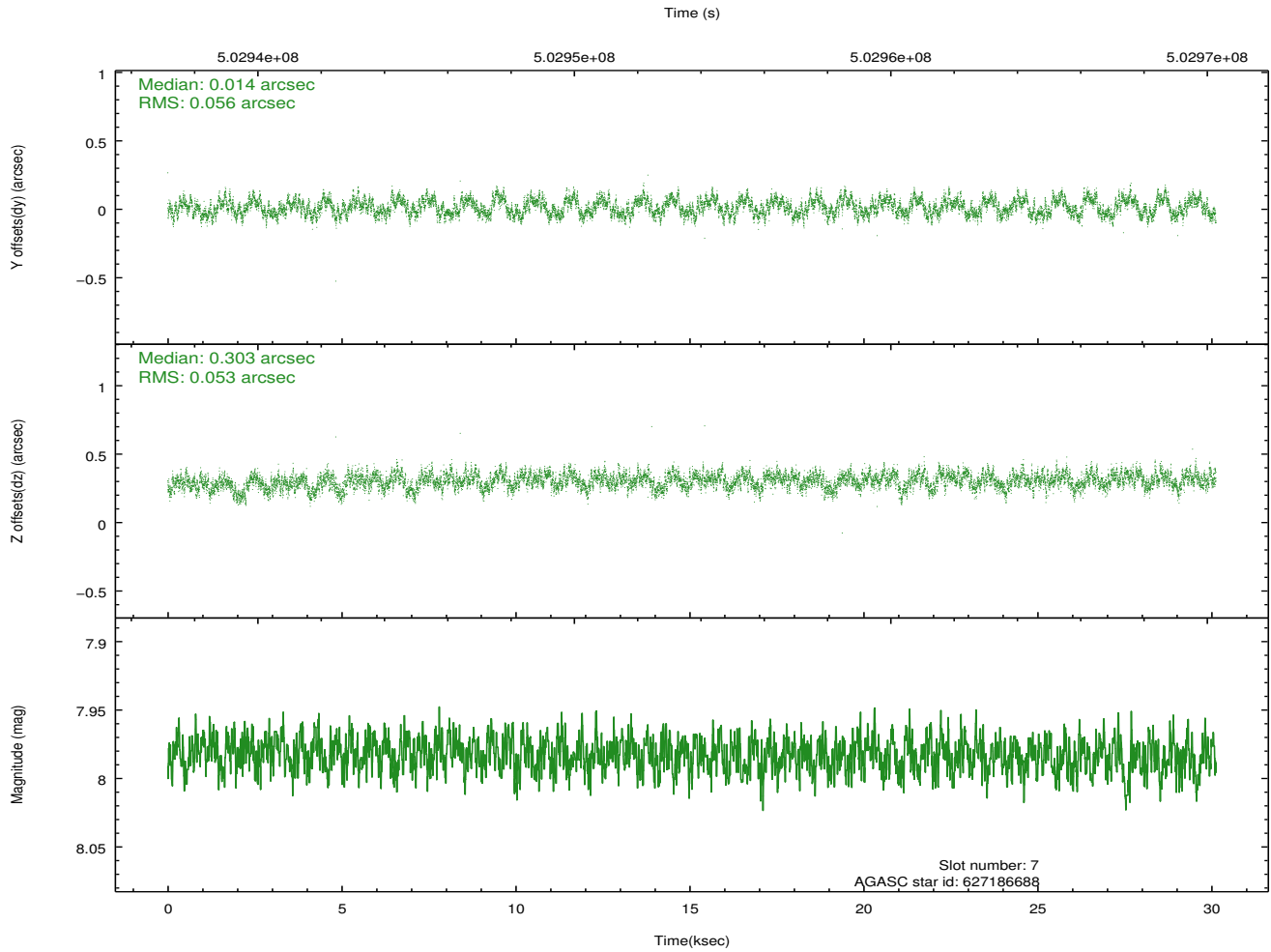
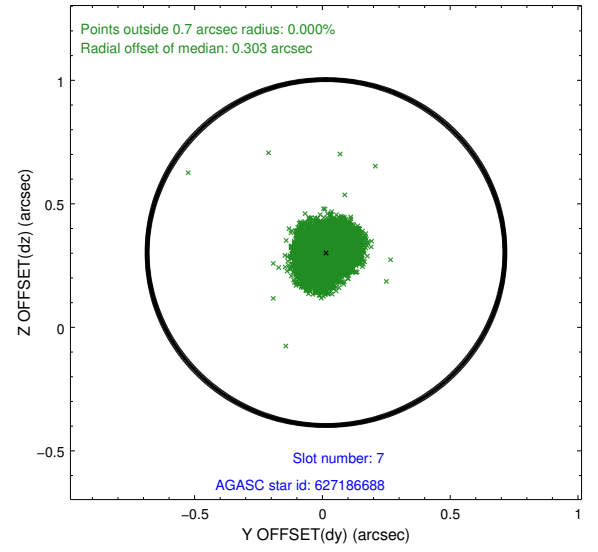
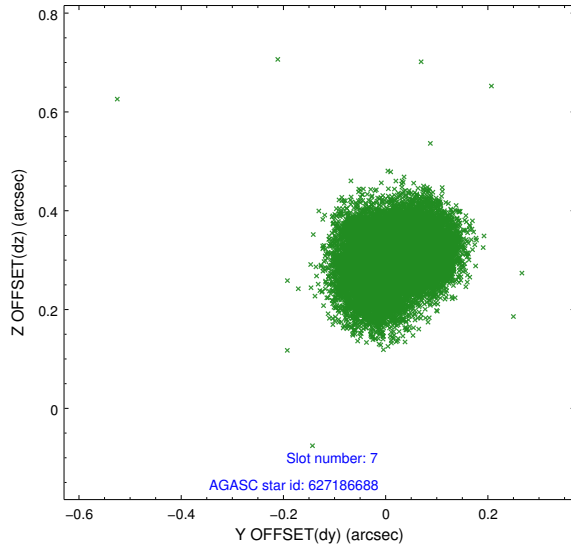
### 2.4.3 Slot 5



## 2.4.4 Slot 6

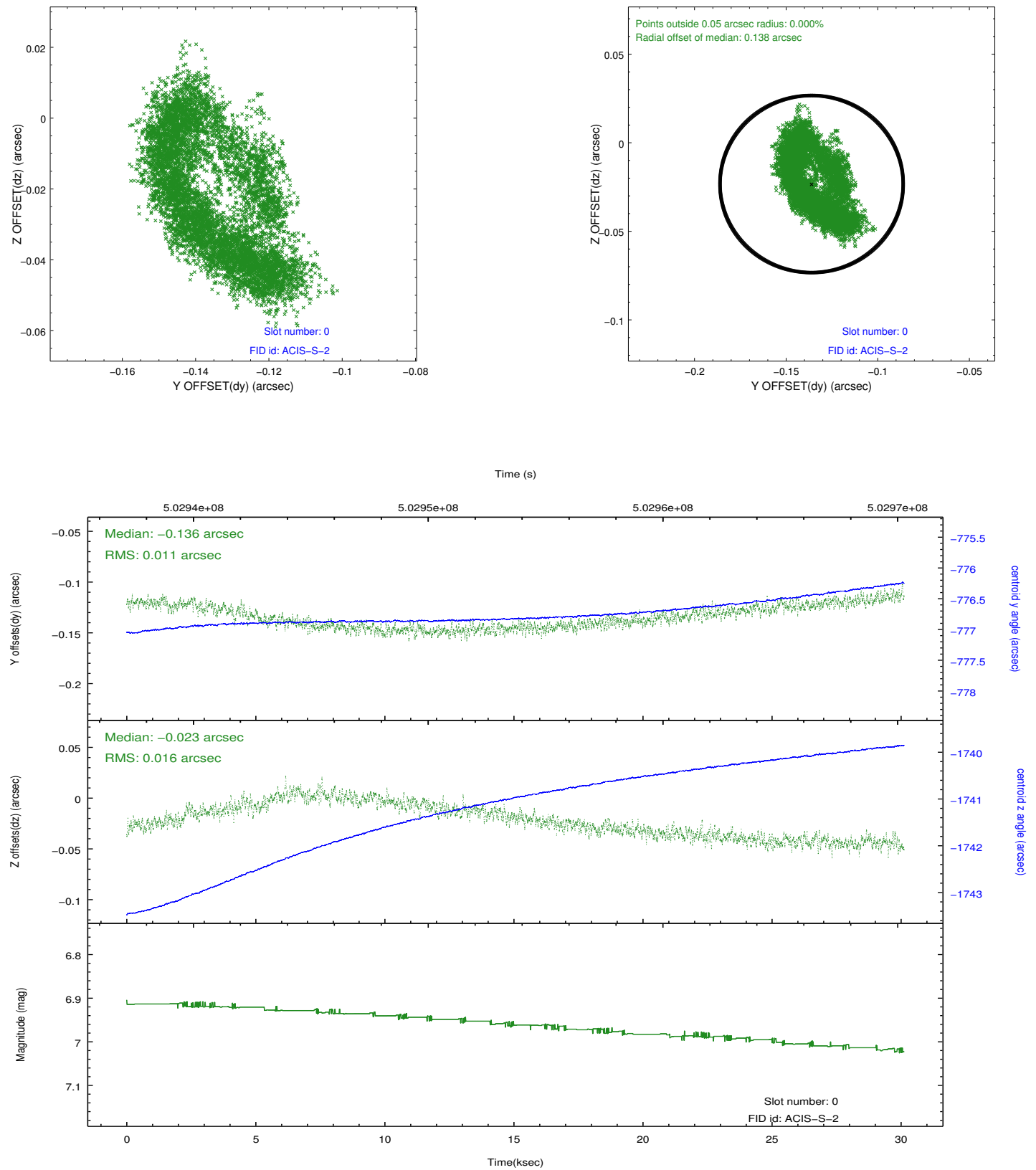


## 2.4.5 Slot 7

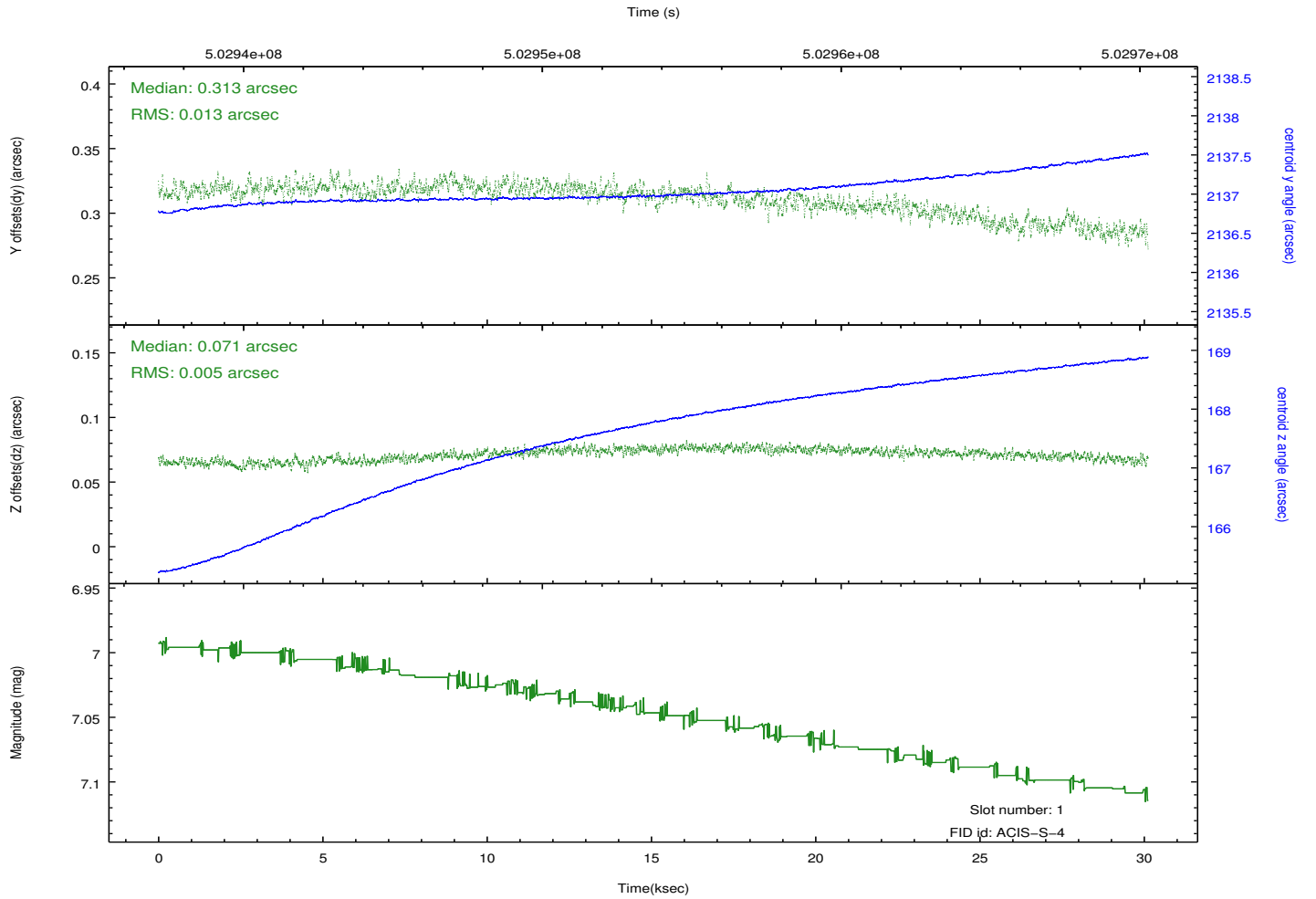
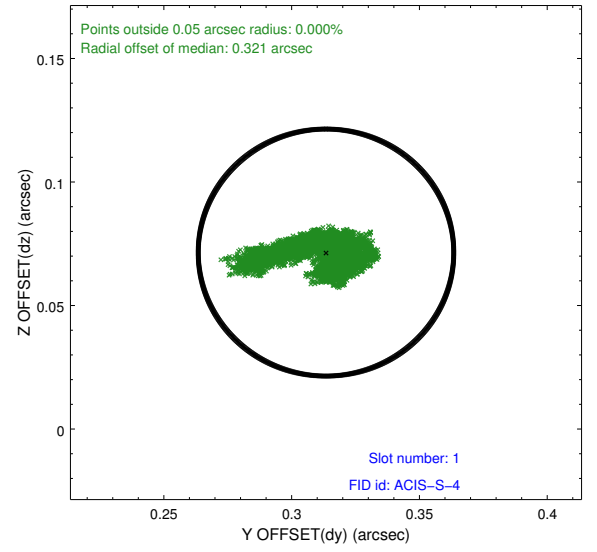
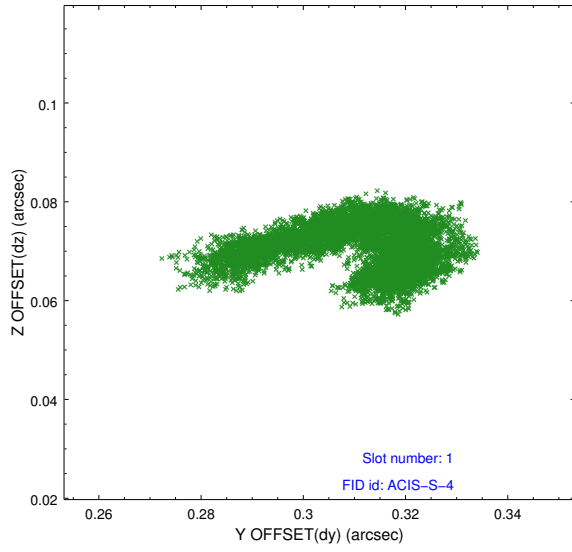


## 2.5 FID Slots

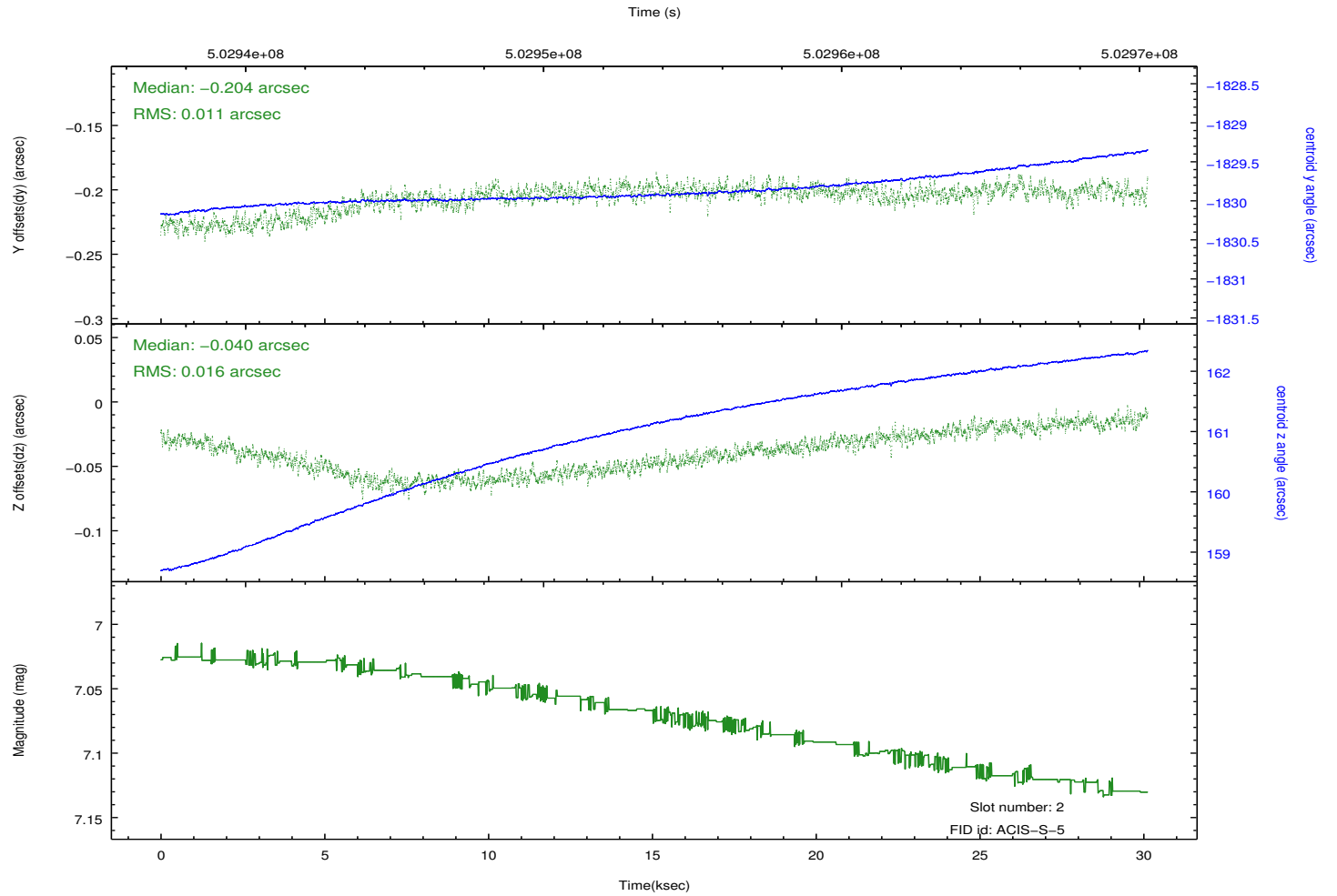
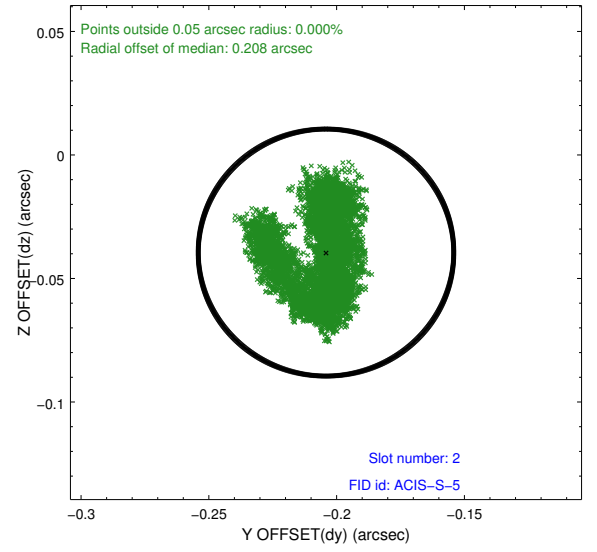
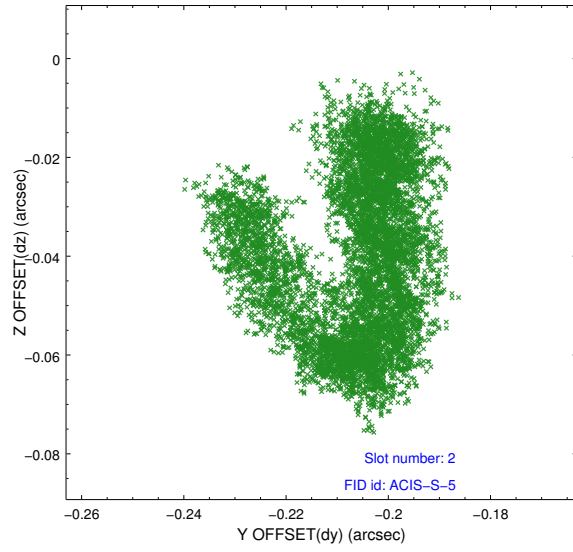
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.066753050029

## A.2 Comments

Time constraint met. Phase constraint met.

=====

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.