

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 13463 - L2 Version 2  
Chandra X-Ray Center

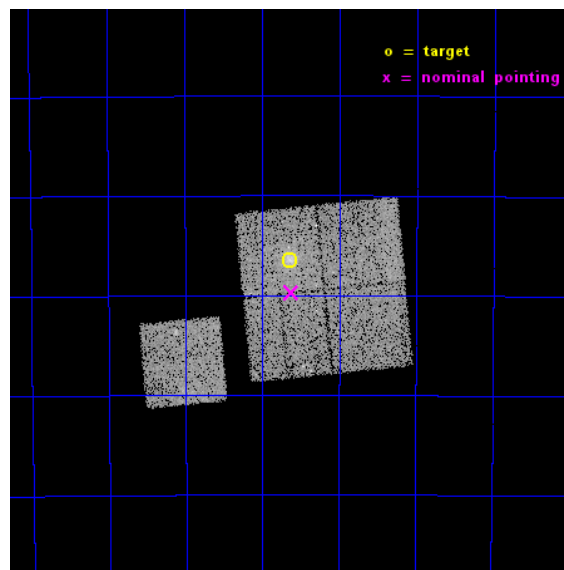
L2 Processing Date : Nov 30 2014

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# 1 Front

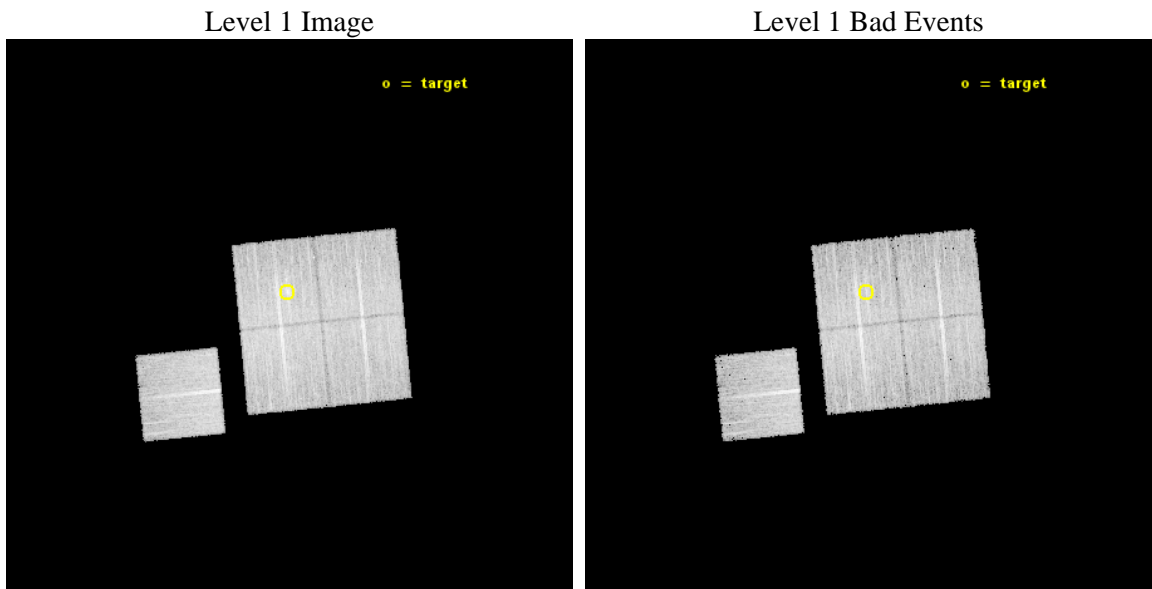
seq_num	801104	Sequence number
obs_id	13463	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg <sup>2</sup> from the South Pole Telescope Survey	Proposal title
observer	Dr. Bradford Benson	Principal investigator
object	SPT-CLJ2135-5726	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	323.910833	Observer's specified target RA [deg]
dec_targ	-57.440889	Observer's specified target Dec [deg]
ra_nom	323.90504493437	Nominal RA [deg]
dec_nom	-57.495242572781	Nominal Dec [deg]
roll_nom	264.34004671079	Nominal Roll [deg]
revision	2	Processing version of data
ontime	17284.822352707	Sum of GTIs [s]
livetime	17058.983423768	Livetime [s]
ontime0	17284.699232697	Sum of GTIs [s]
ontime1	17281.59927249	Sum of GTIs [s]
ontime2	17281.640322387	Sum of GTIs [s]
ontime3	17284.822352707	Sum of GTIs [s]
ontime6	17275.235221803	Sum of GTIs [s]
l2events	48308	Number of level 2 events



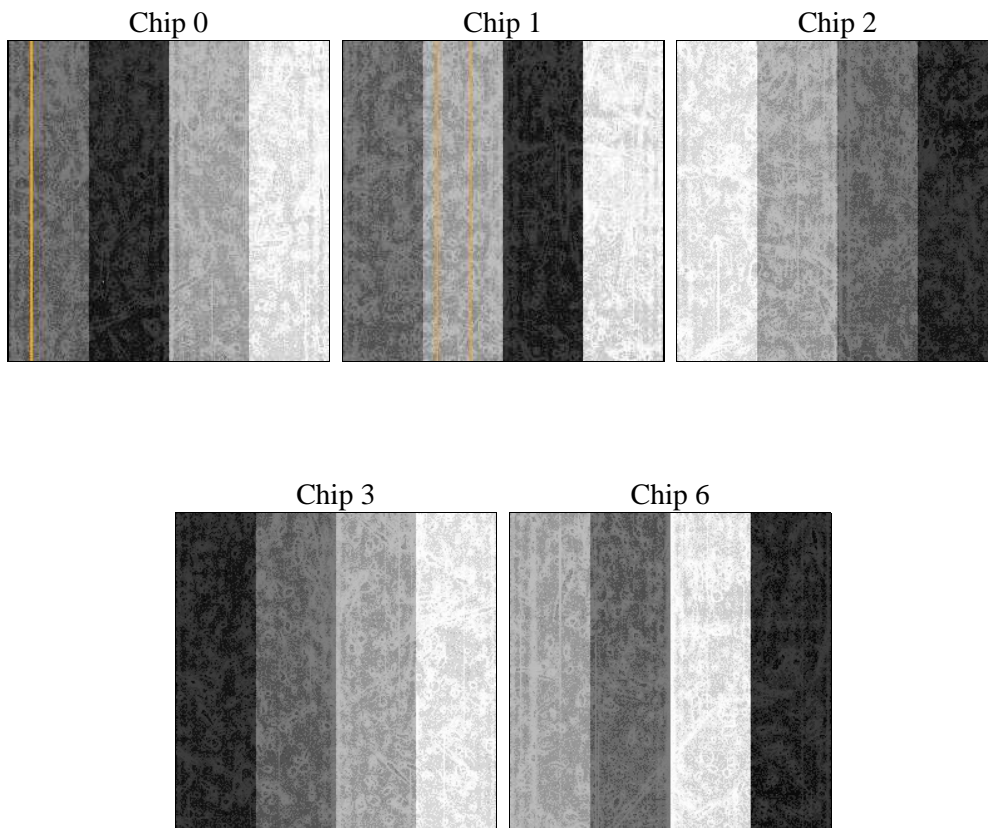
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17200.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	17284.822352707	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	17284.699232697	Sum of GTIs [s]
date	2014-11-30T05:26:53	Date and time of file creation	ontime1	17281.59927249	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	17281.640322387	Sum of GTIs [s]
			ontime3	17284.822352707	Sum of GTIs [s]
			ontime6	17275.235221803	Sum of GTIs [s]
			l1events	444014	Number of level 1 events

### 2.1.4 Events

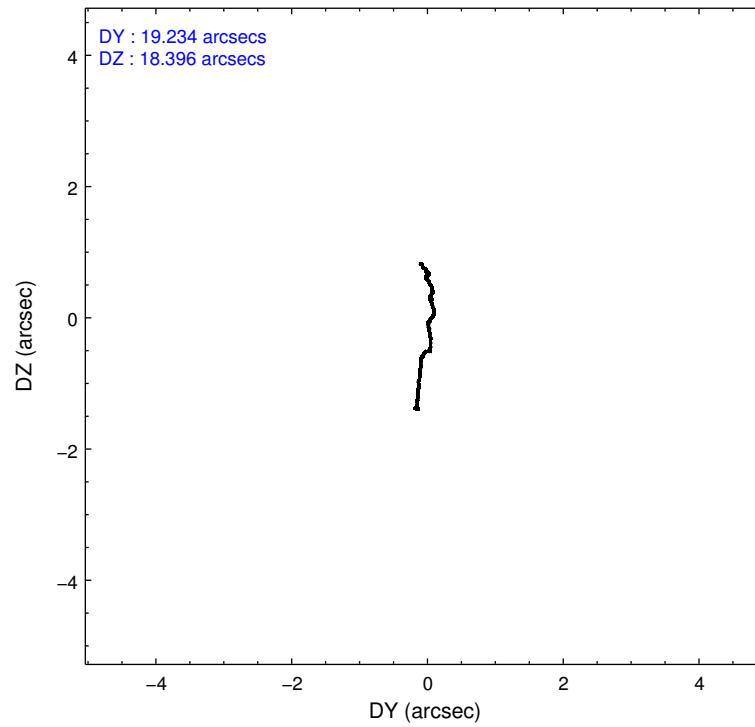
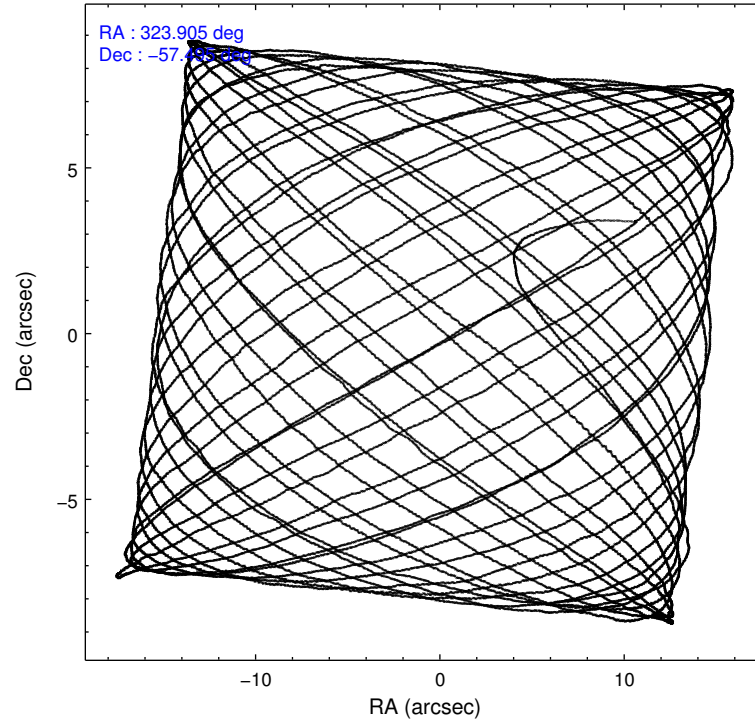
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	84068	84846	94189	90768	90143
rejected events	73304	72962	83512	78405	78901
rejected %	87%	85%	88%	86%	87%

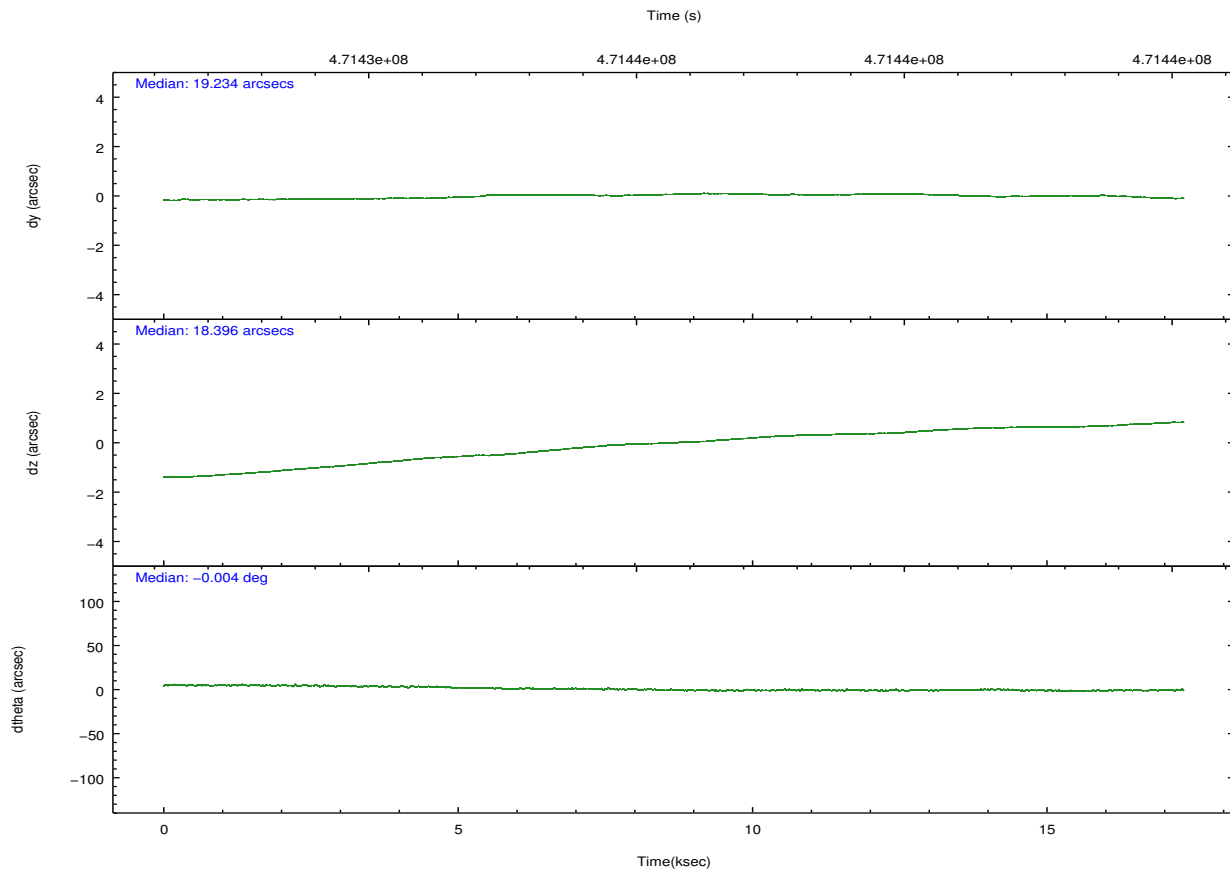
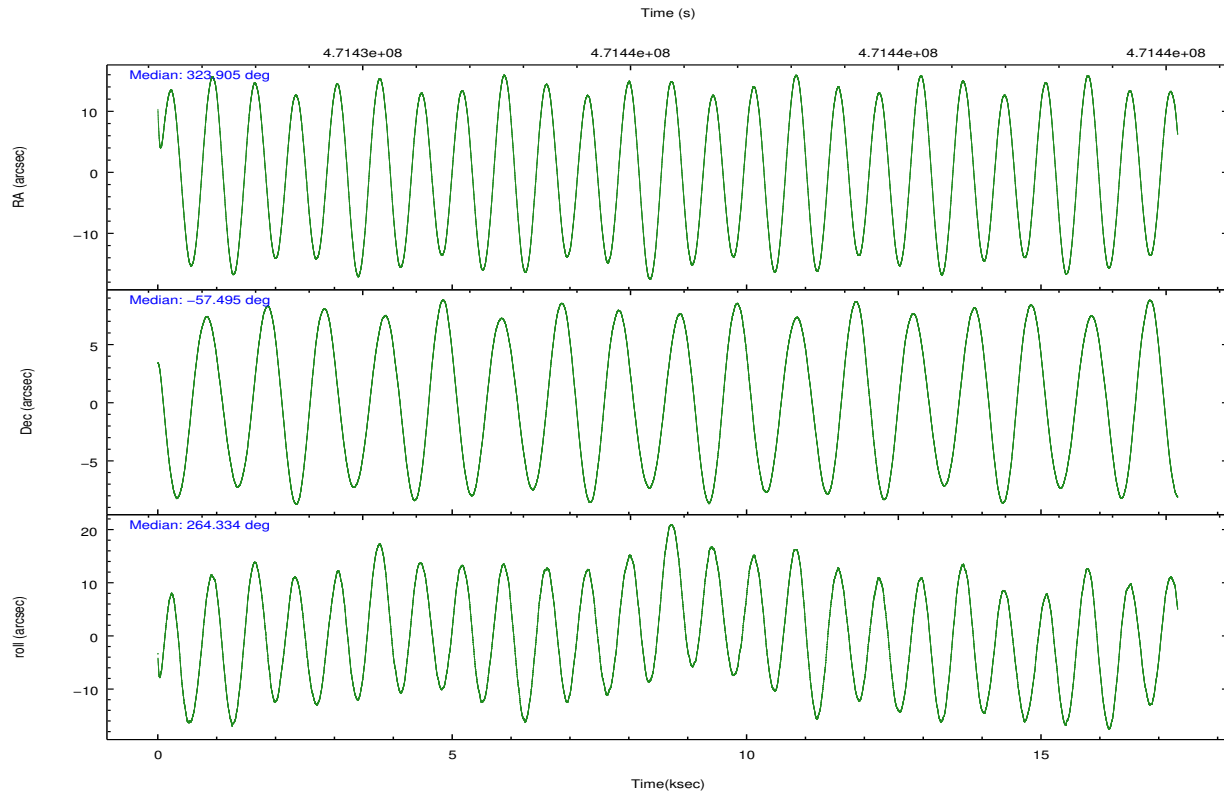
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3771	4251	3786	5246	4091
	4%	5%	4%	5%	4%
grade 1 events	41	53	46	68	64
	0%	0%	0%	0%	0%
grade 2 events	2784	2843	2676	2565	2437
	3%	3%	2%	2%	2%
grade 3 events	1150	1179	1040	1108	1096
	1%	1%	1%	1%	1%
grade 4 events	978	1147	1096	1187	1138
	1%	1%	1%	1%	1%
grade 5 events	4149	4423	3771	4616	4562
	4%	5%	4%	5%	5%
grade 6 events	2084	2467	2081	2257	2482
	2%	2%	2%	2%	2%
grade 7 events	69111	68483	79693	73721	74273
	82%	80%	84%	81%	82%

## 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	323.883735	323.9050449343656	CCD I2 on	Y	Y
[deg] Pointing Dec	-57.470231	-57.49524257278089	CCD I3 on	Y	Y
[deg] Pointing Roll	264.113399	264.3400467107852	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	-225.842463	-225.8458576473255	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	471427161.184000	471425867.01069	CCD S5 on	N	N
Observation start date	2012-12-09T07:58:14	2012-12-09T07:37:47	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	471444361.184000	471445582.88675	On-chip summing requested	N	N
Observation end date	2012-12-09T12:44:54	2012-12-09T13:06:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





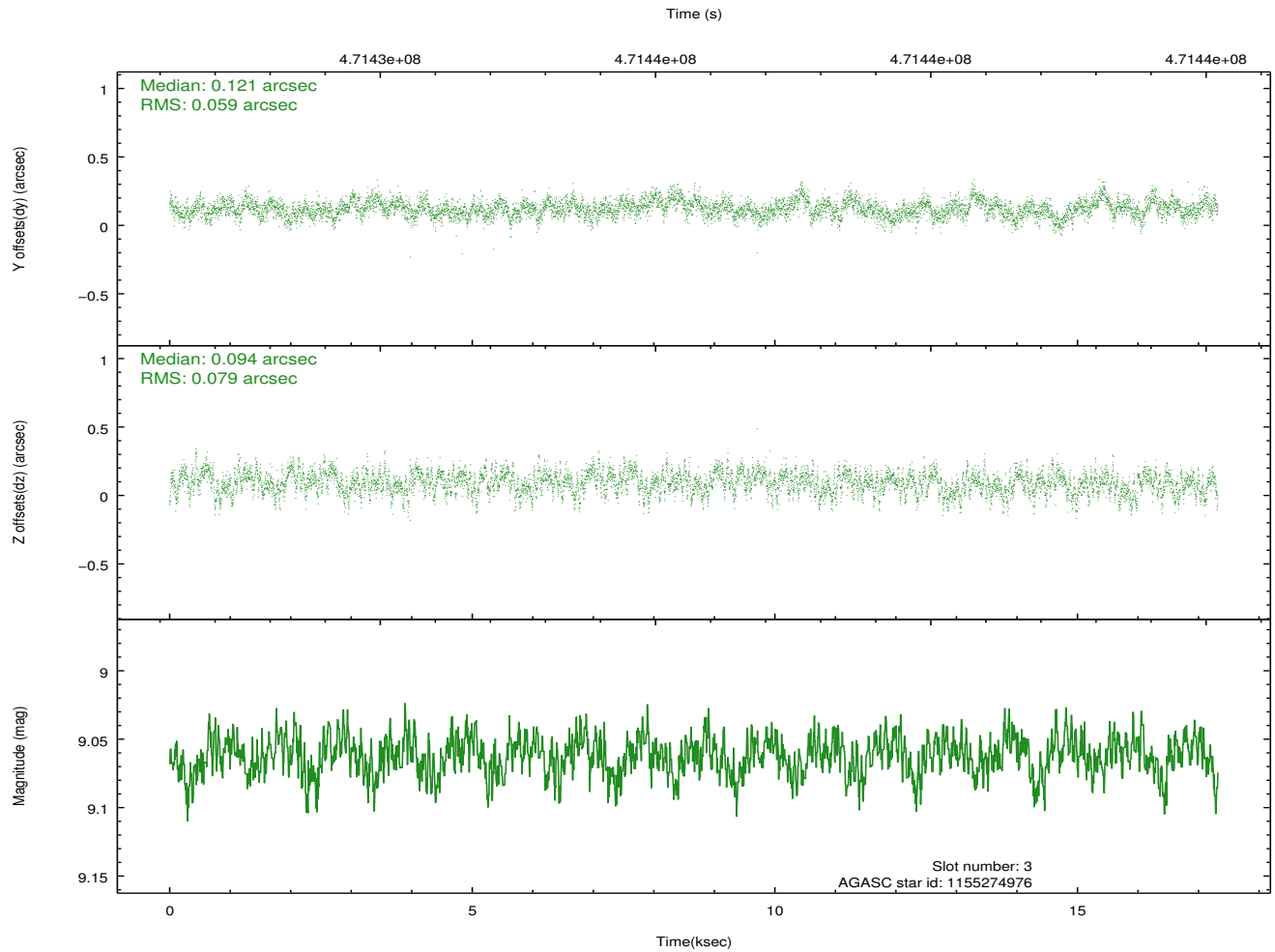
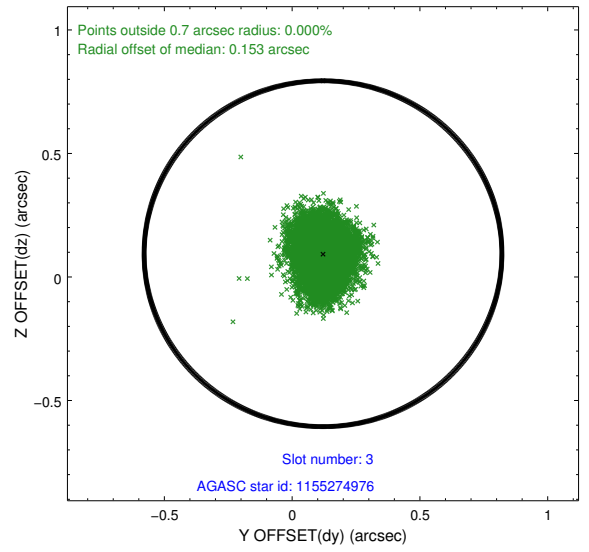
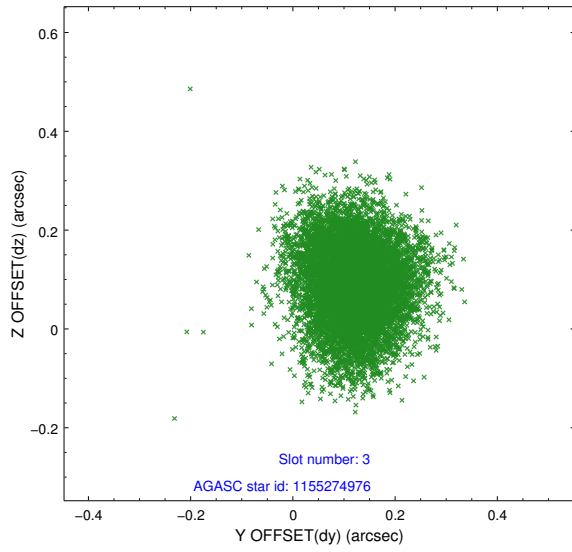
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.12	4225	0.134	-0.080	0.021	0.054	0.000000	0.000000	920.16	-1001.04
1	FID		ACIS-I-5	7.11	4225	-0.335	0.101	0.016	0.033	0.000000	0.000000	-1828.35	896.39
2	FID		ACIS-I-6	7.12	4225	0.106	0.047	0.016	0.026	0.000000	0.000000	385.32	1541.18
3	GUIDE	used	1155274976	9.06	8445	0.121	0.094	0.104	0.169	323.053151	-57.303297	-421.91	-1667.05
4	GUIDE	used	1155401120	9.05	8444	-0.078	0.058	0.092	0.149	325.033518	-56.989777	-1932.78	2067.68
5	GUIDE	used	1155401352	9.65	8419	0.140	-0.013	0.169	0.264	324.553729	-57.358224	-528.04	1253.71
6	GUIDE	used	1155406904	9.45	8440	-0.023	-0.074	0.134	0.218	324.670861	-57.800524	1036.95	1625.32
7	GUIDE	used	1155407416	9.29	8425	-0.165	-0.067	0.194	0.304	323.909817	-57.626710	555.52	108.13

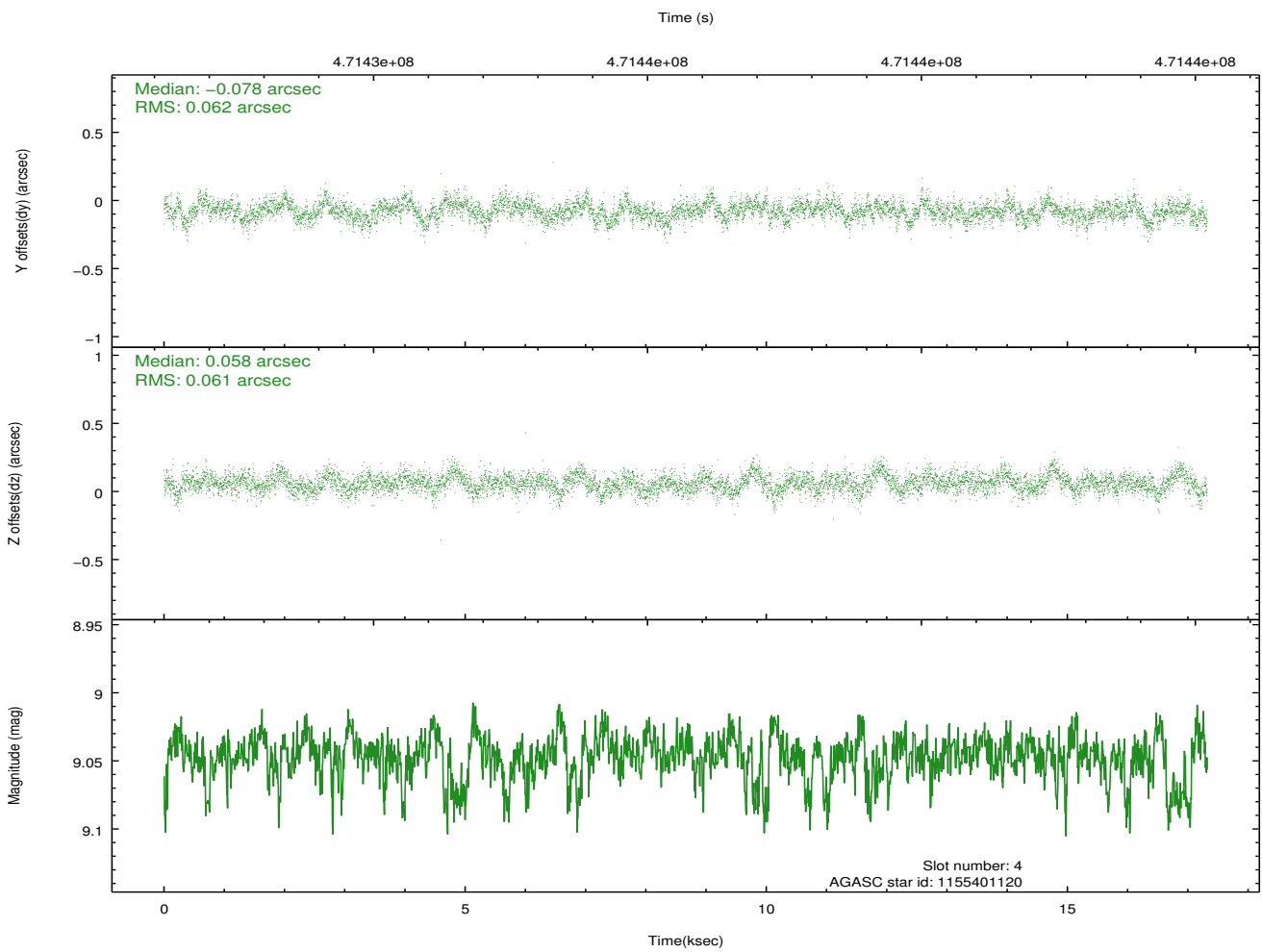
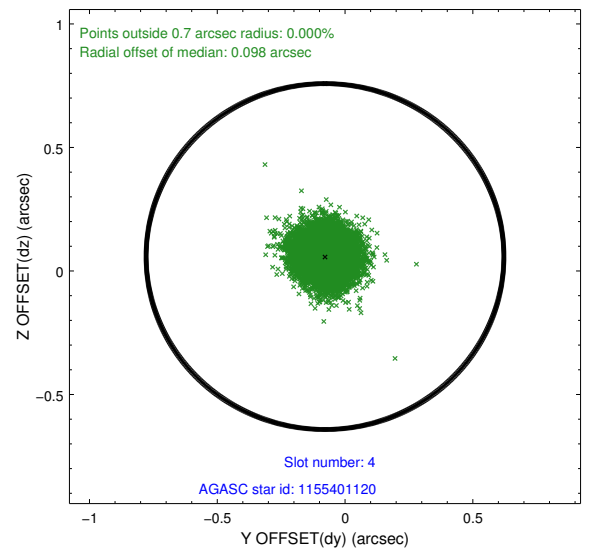
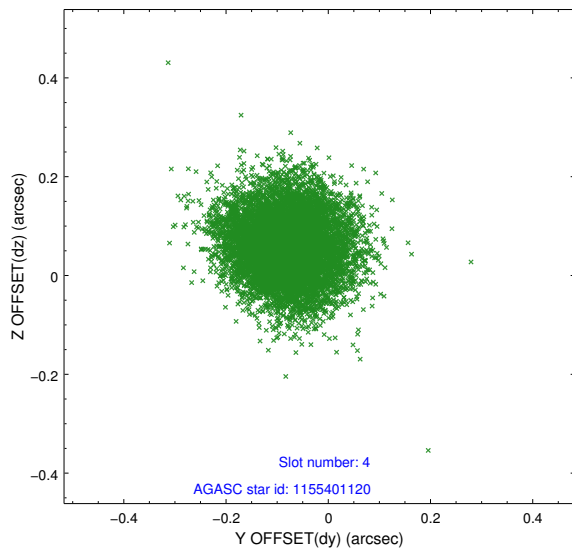
∞

## 2.4 Star Slots

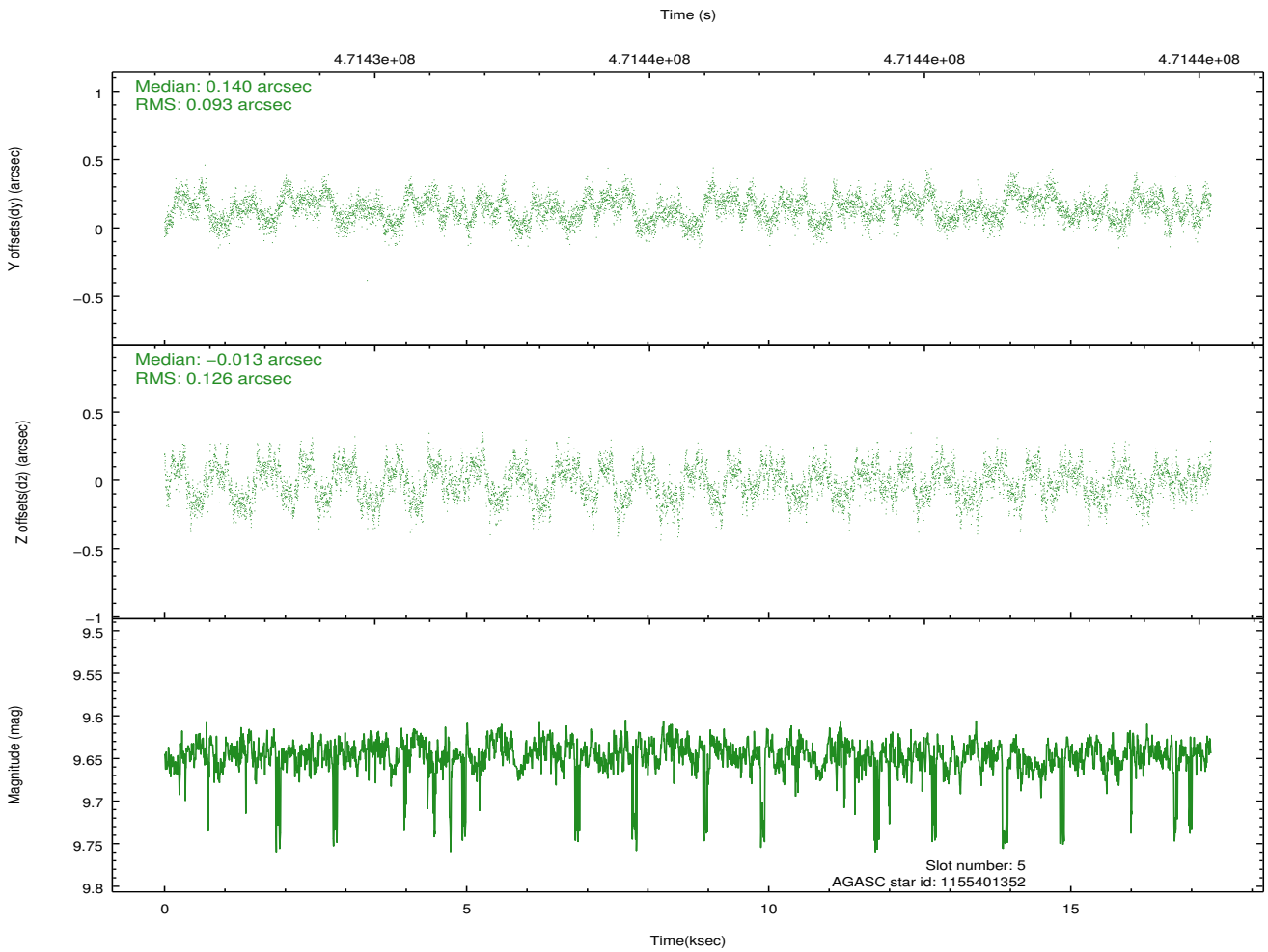
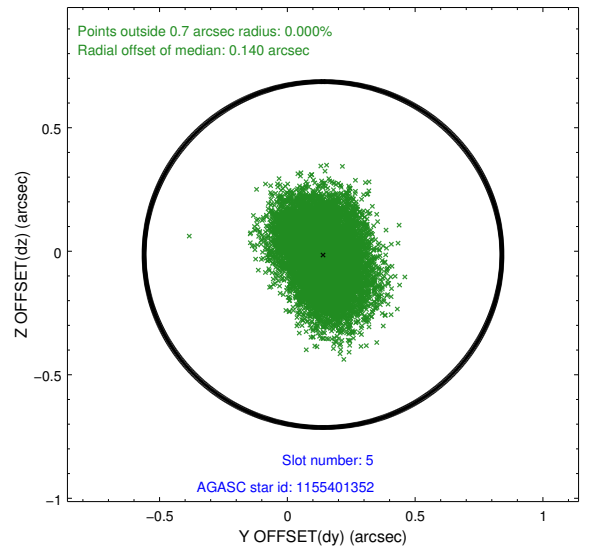
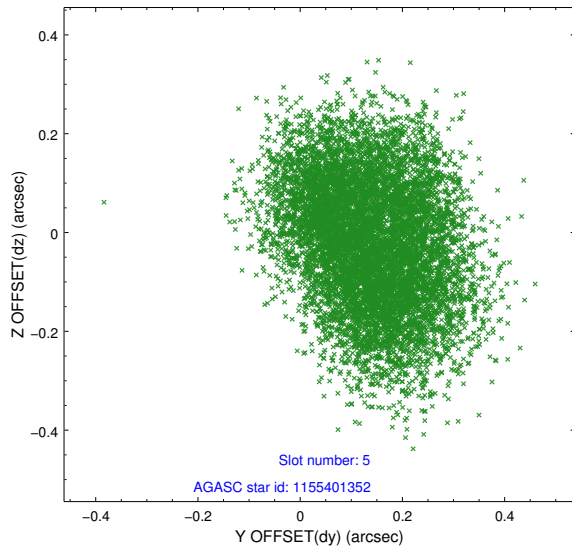
### 2.4.1 Slot 3



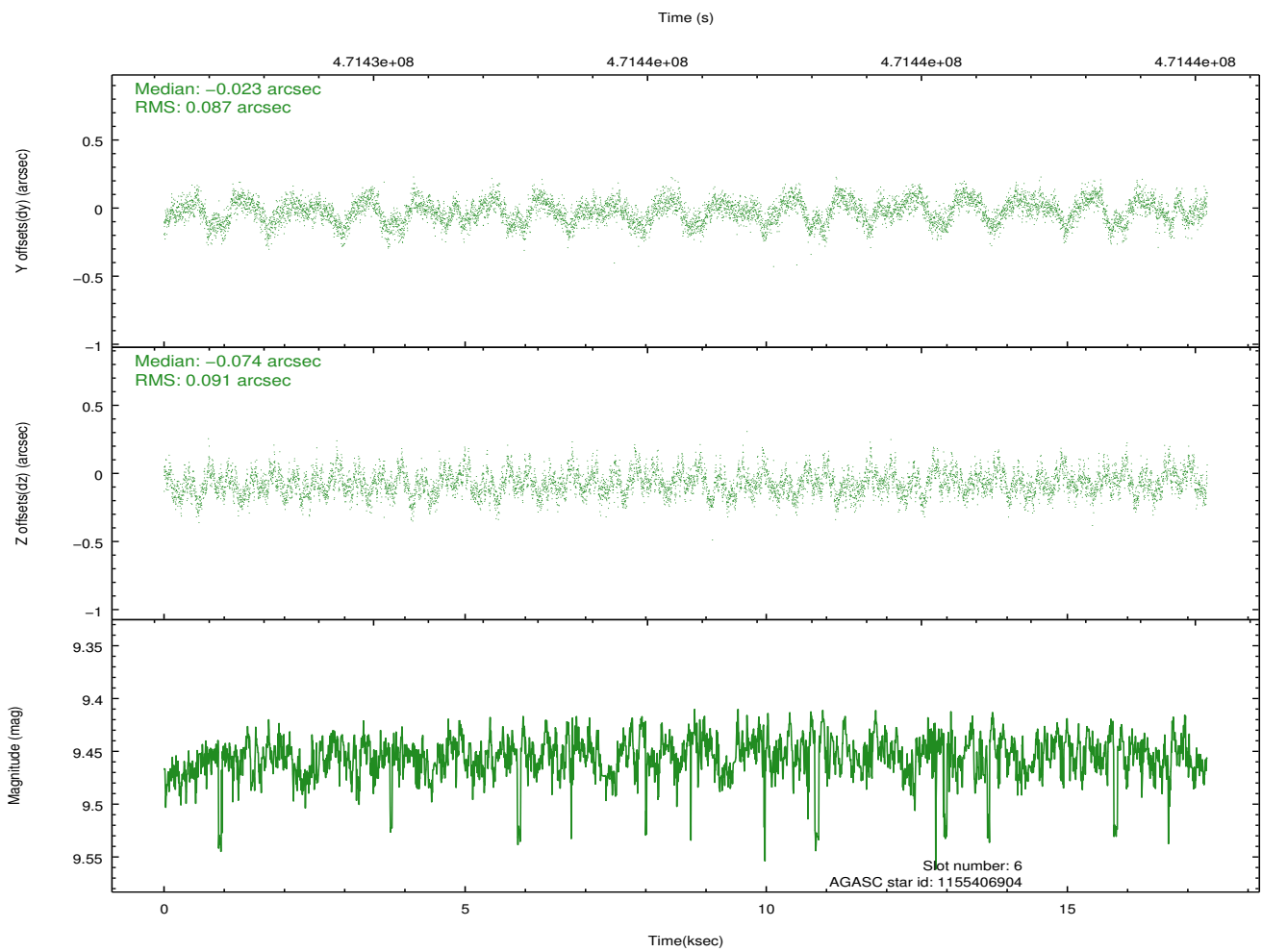
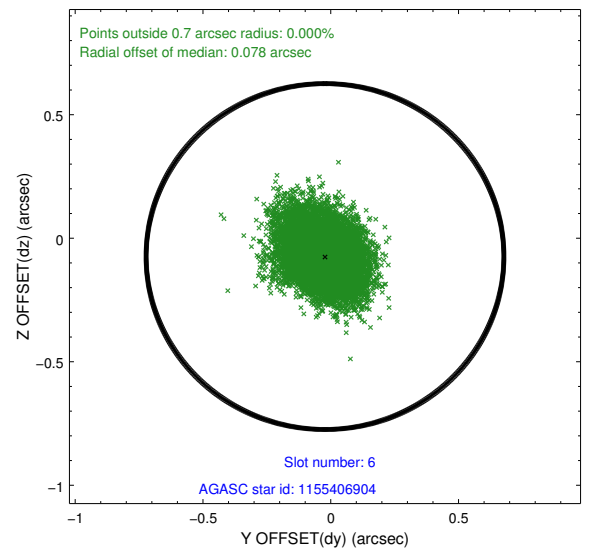
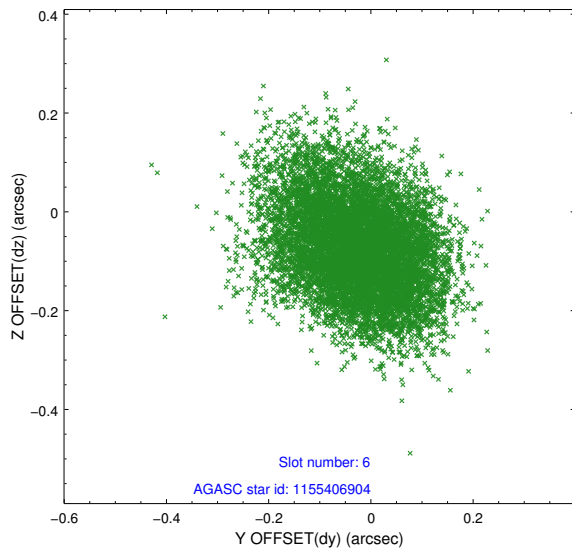
## 2.4.2 Slot 4



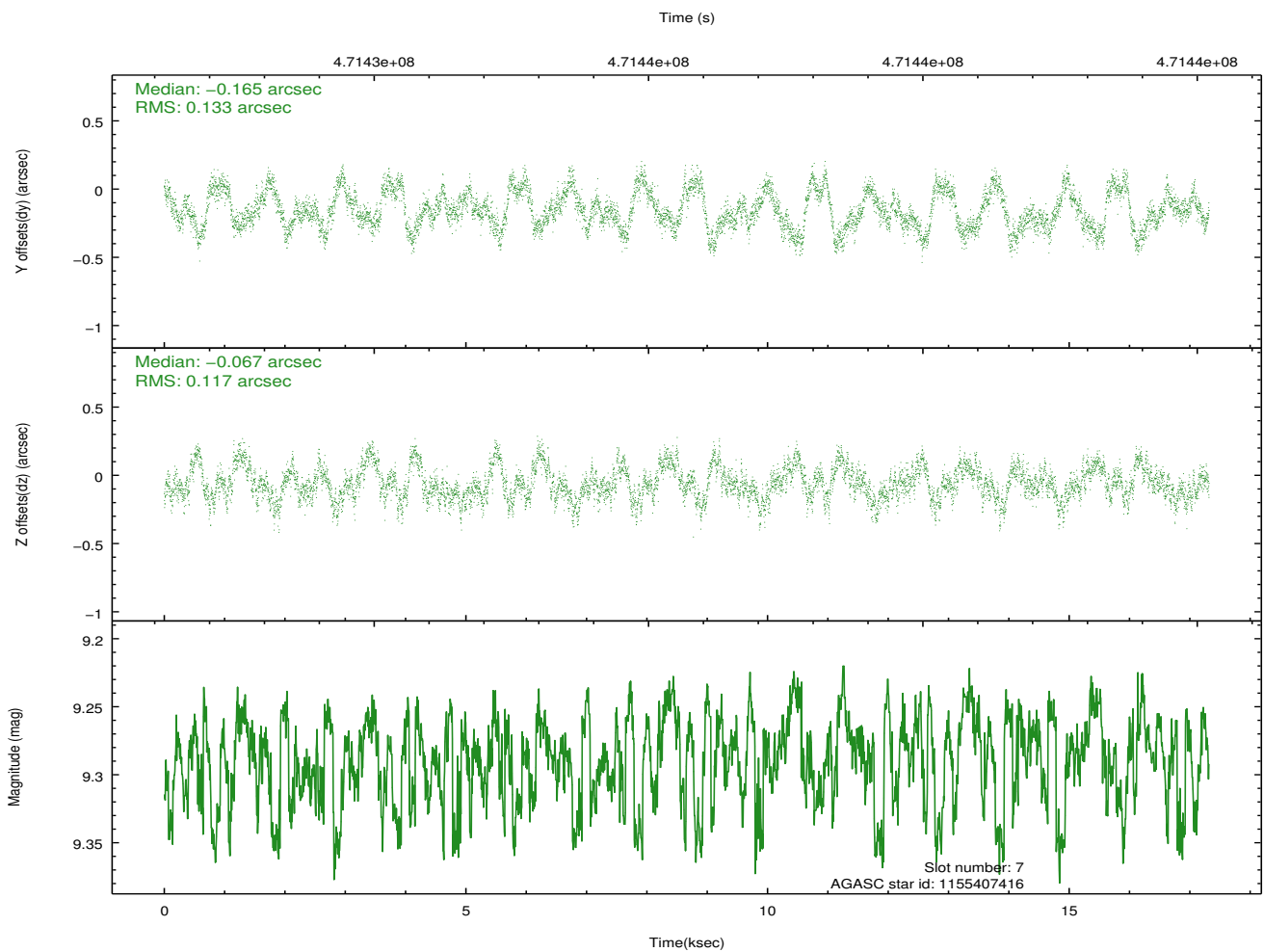
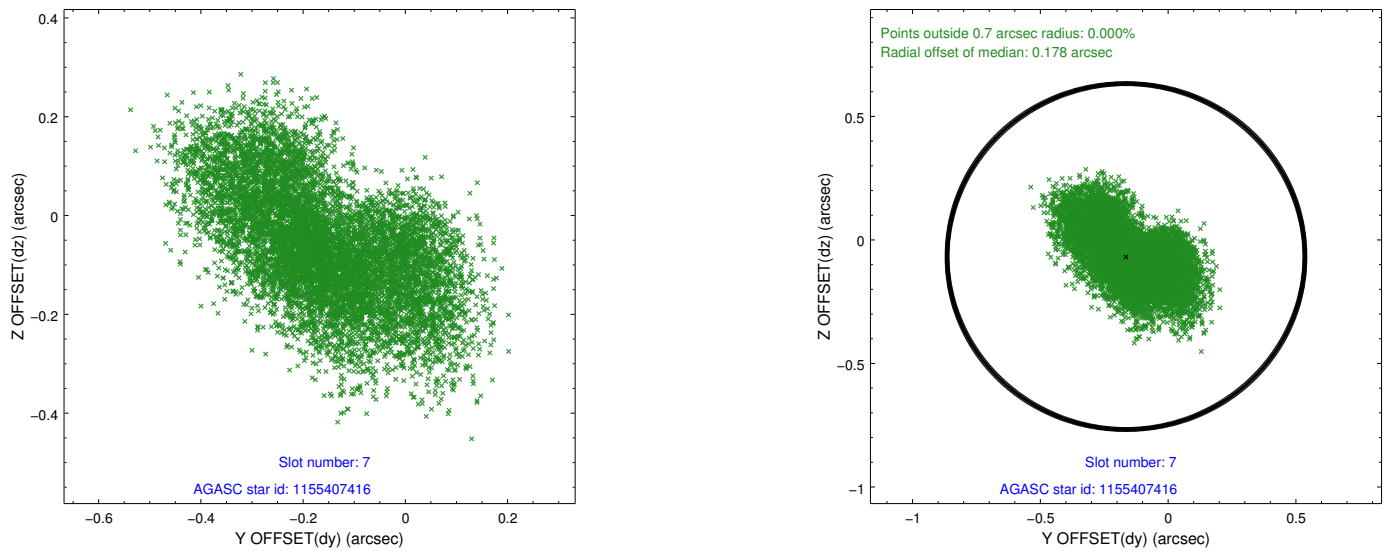
### 2.4.3 Slot 5



## 2.4.4 Slot 6

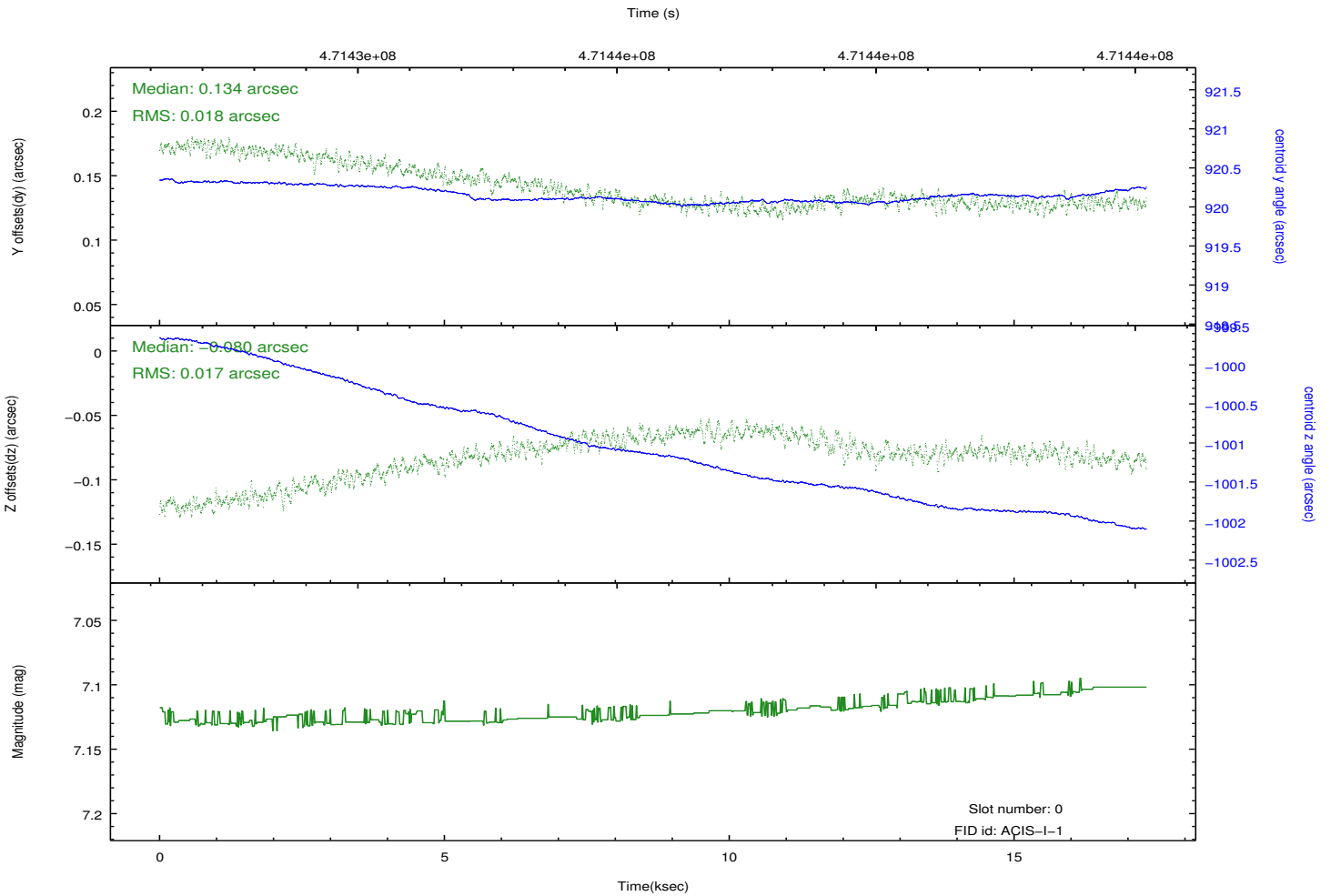
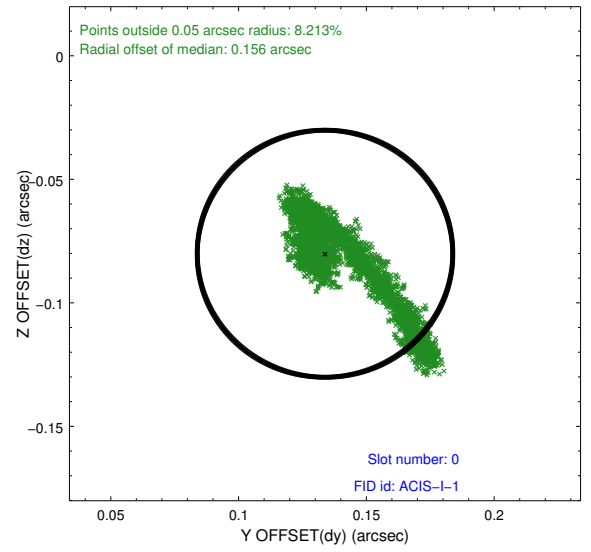
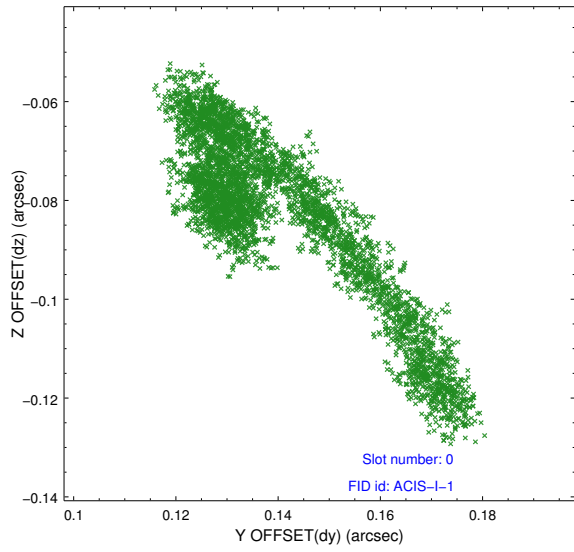


## 2.4.5 Slot 7

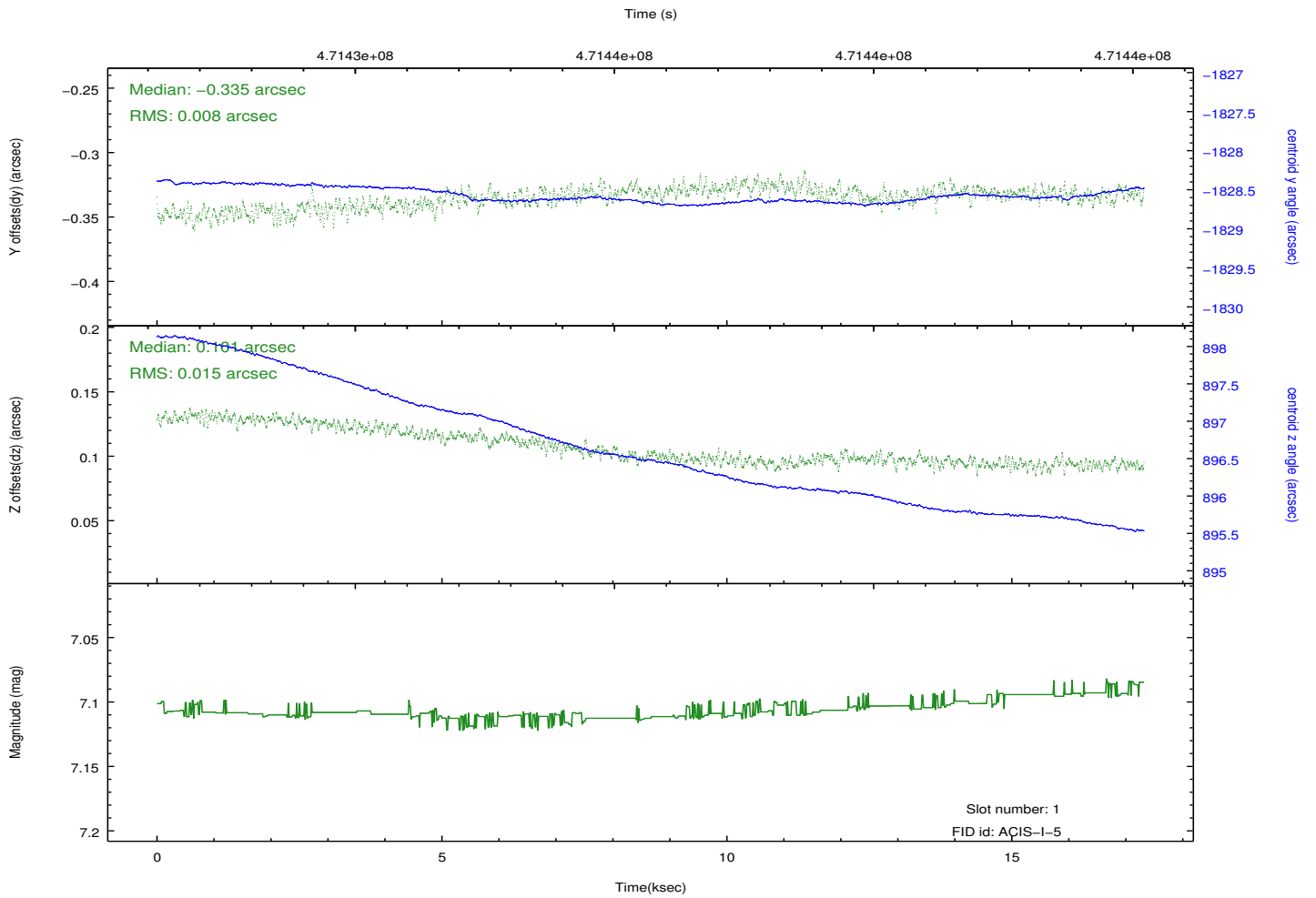
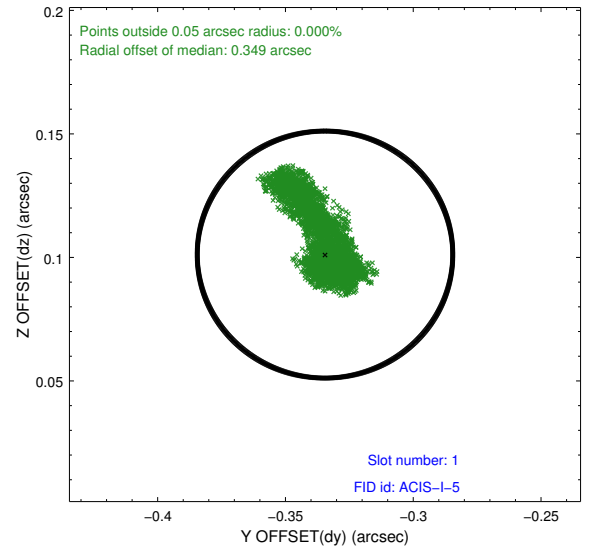
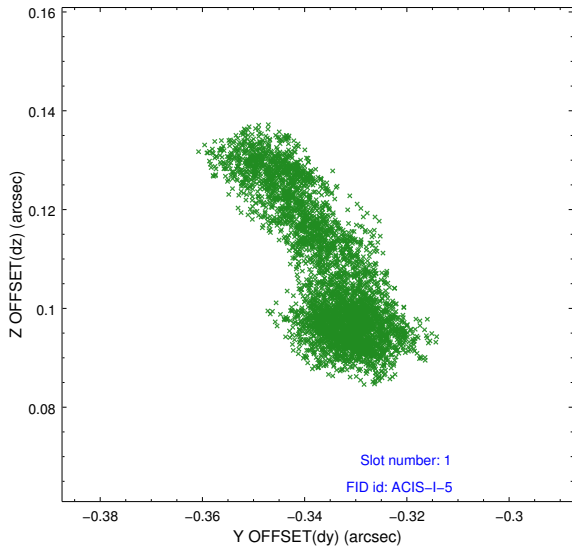


## 2.5 FID Slots

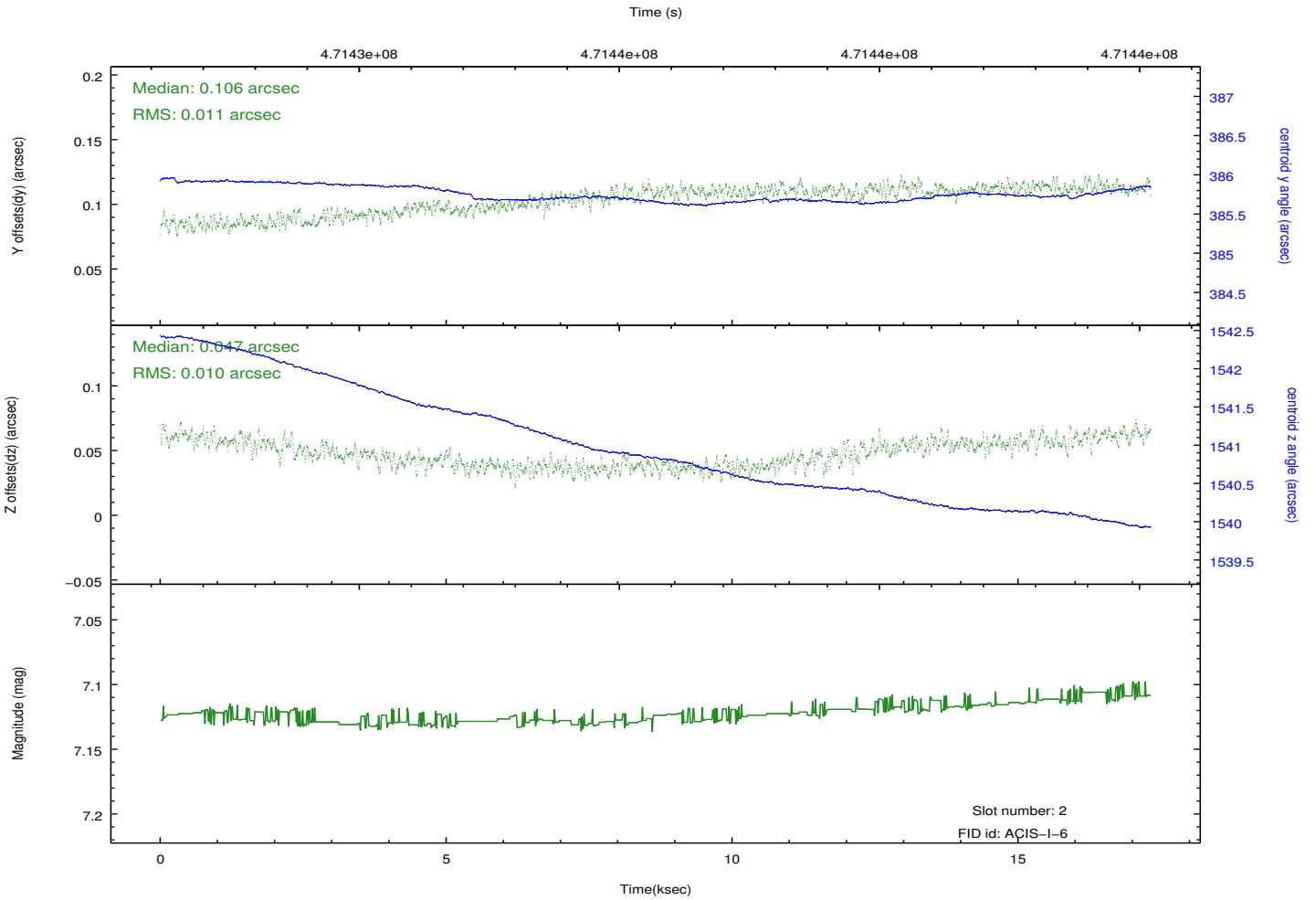
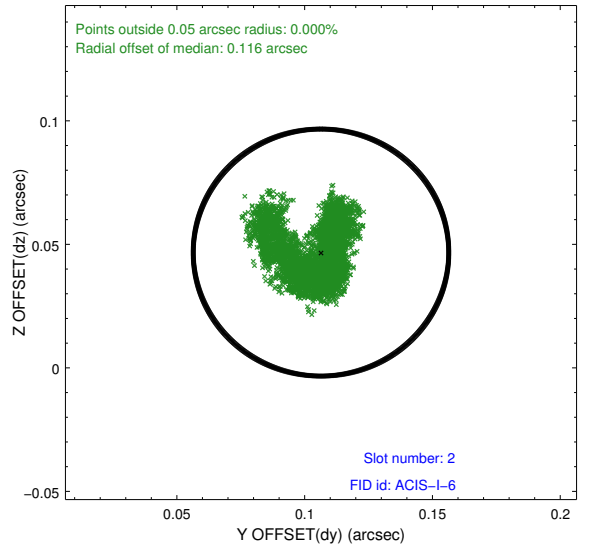
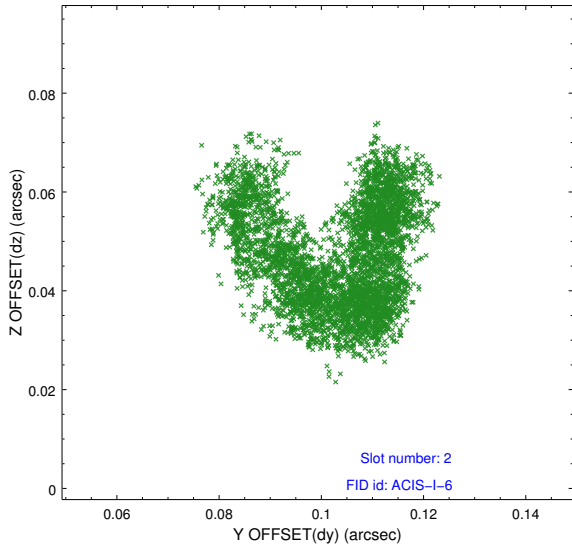
### 2.5.1 Slot 0



## 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)	2014.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.284822352707

## A.2 Comments

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.