

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15378 - L2 Version 2  
Chandra X-Ray Center

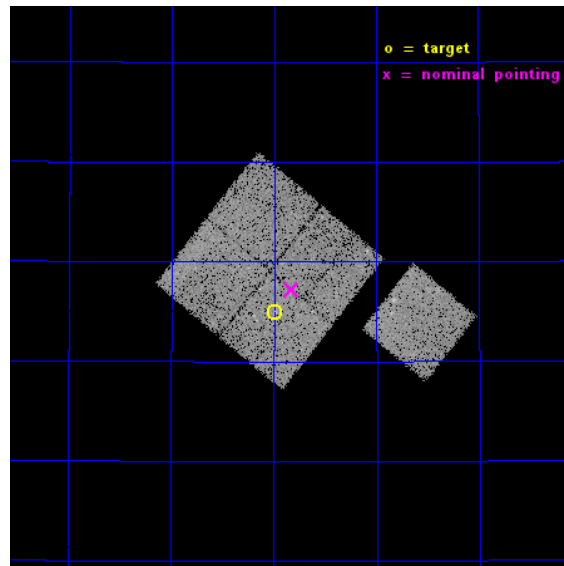
L2 Processing Date : Nov 30 2014

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# 1 Front

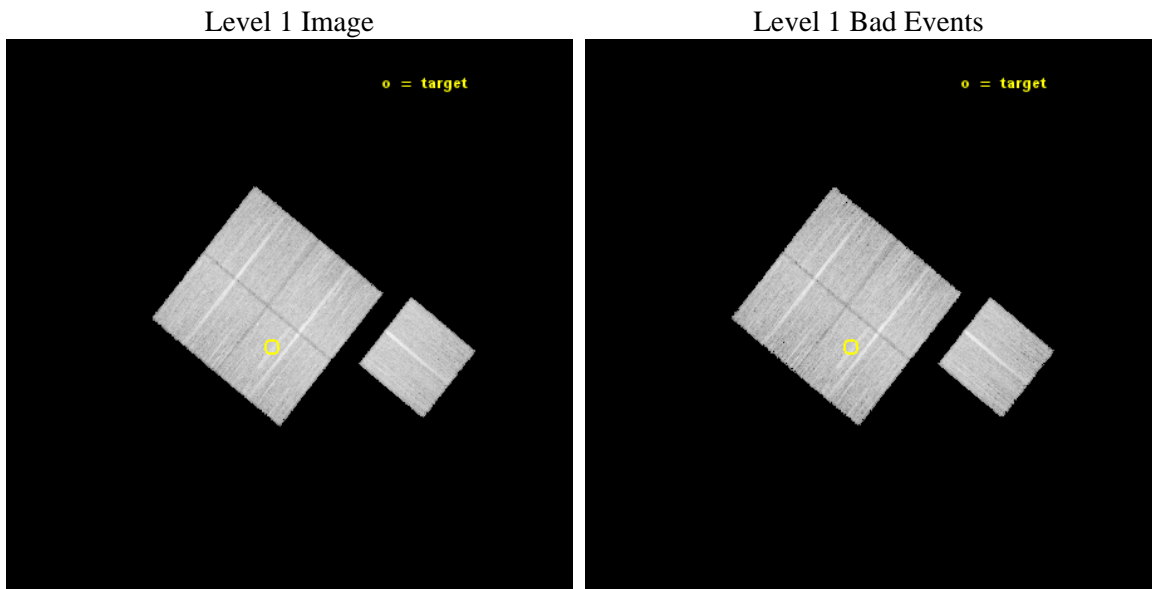
seq_num	801368	Sequence number
obs_id	15378	Observation id
title	Extending a Large Sample of Fossil Groups with Chandra	Proposal ti
observer	Professor Gordon Garmire	Principal investigator
object	SDSS J083759.33+441455.9	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	129.497083	Observer's specified target RA [deg]
dec_targ	44.248889	Observer's specified target Dec [deg]
ra_nom	129.45728185554	Nominal RA [deg]
dec_nom	44.287179903549	Nominal Dec [deg]
roll_nom	128.99299897777	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20080.836437106	Sum of GTIs [s]
livetime	19818.465525759	Livetime [s]
ontime0	20068.149085879	Sum of GTIs [s]
ontime1	20080.7543571	Sum of GTIs [s]
ontime2	20080.795397103	Sum of GTIs [s]
ontime3	20080.836437106	Sum of GTIs [s]
ontime6	20077.53121686	Sum of GTIs [s]
l2events	54398	Number of level 2 events



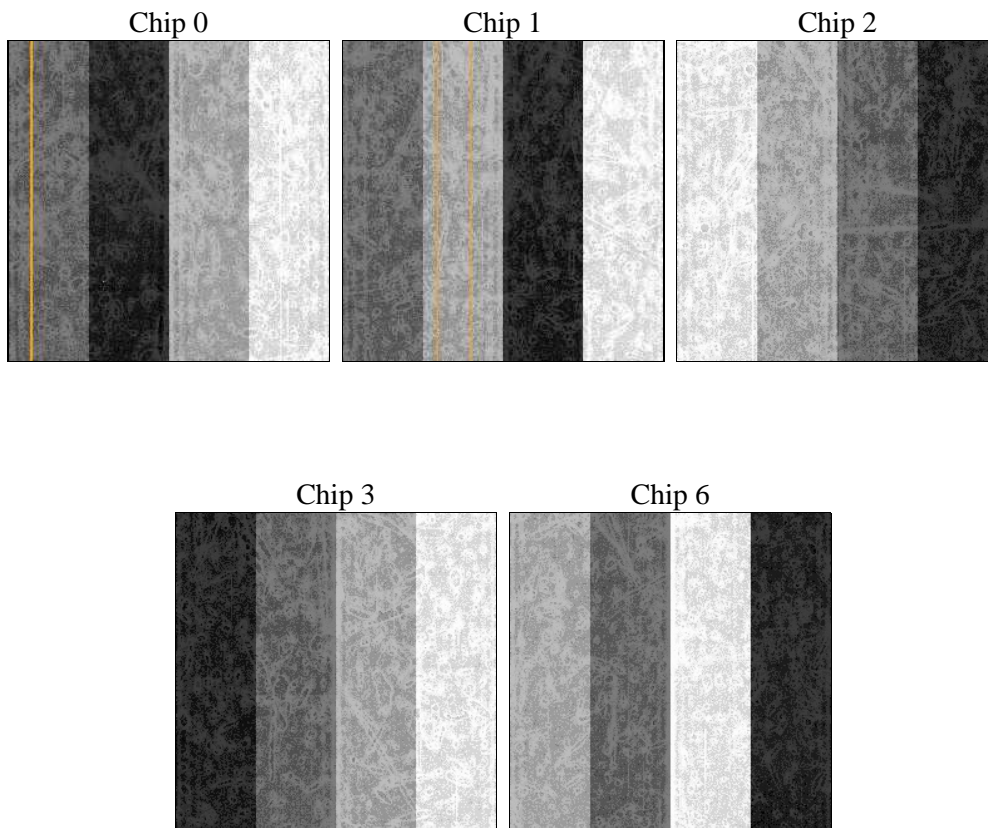
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20080.836437106	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	20068.149085879	Sum of GTIs [s]
date	2014-11-30T22:22:23	Date and time of file creation	ontime1	20080.7543571	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20080.795397103	Sum of GTIs [s]
			ontime3	20080.836437106	Sum of GTIs [s]
			ontime6	20077.53121686	Sum of GTIs [s]
			l1events	535564	Number of level 1 events

### 2.1.4 Events

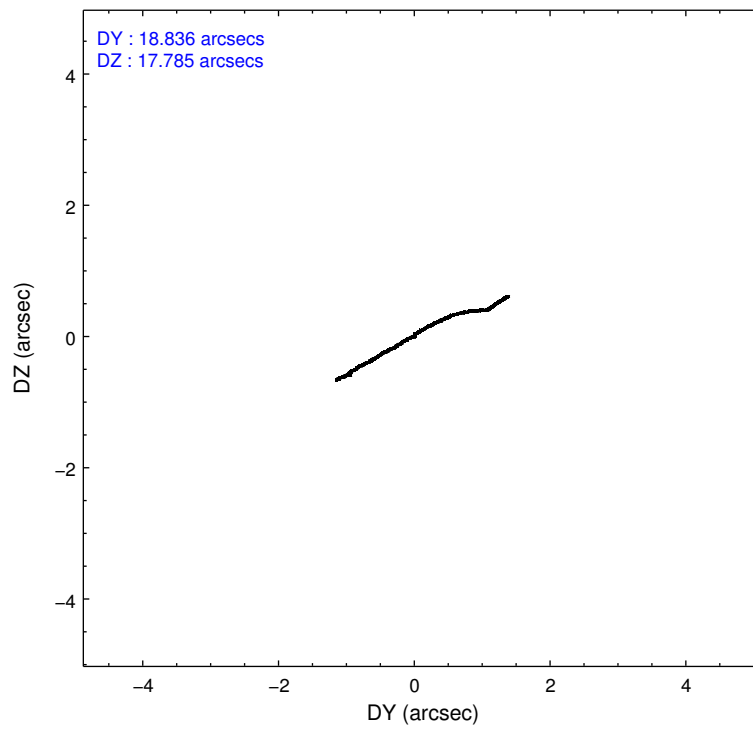
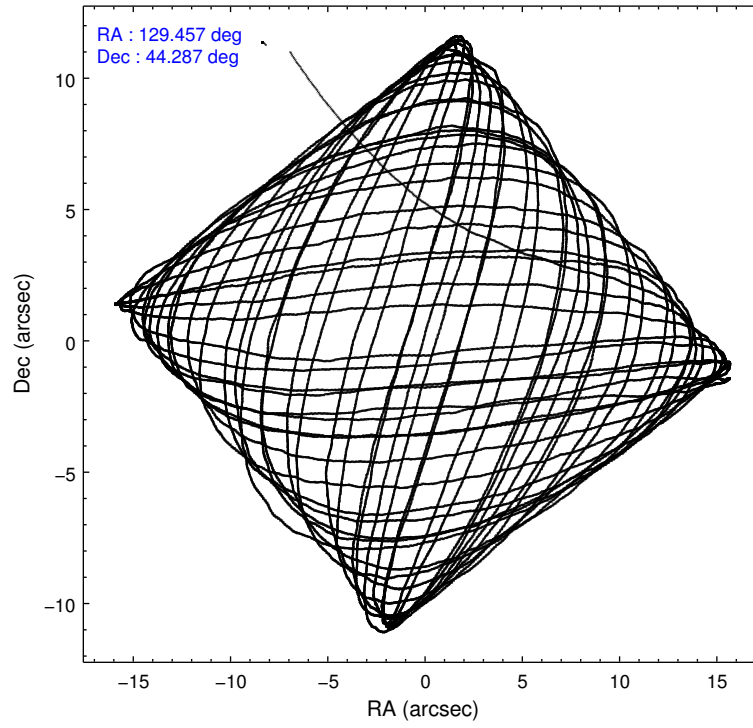
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	98995	103035	112161	109278	112095
rejected events	86435	89332	99880	96823	99143
rejected %	87%	86%	89%	88%	88%

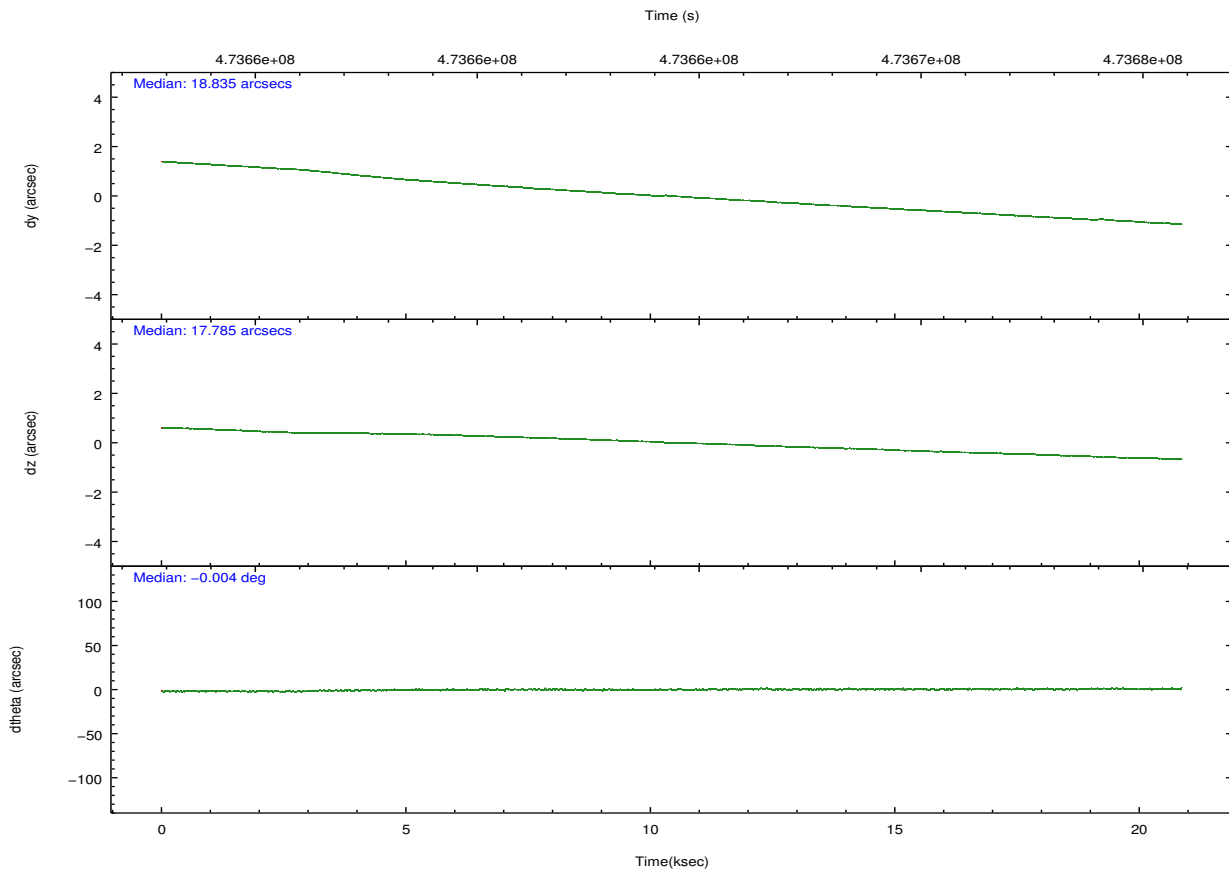
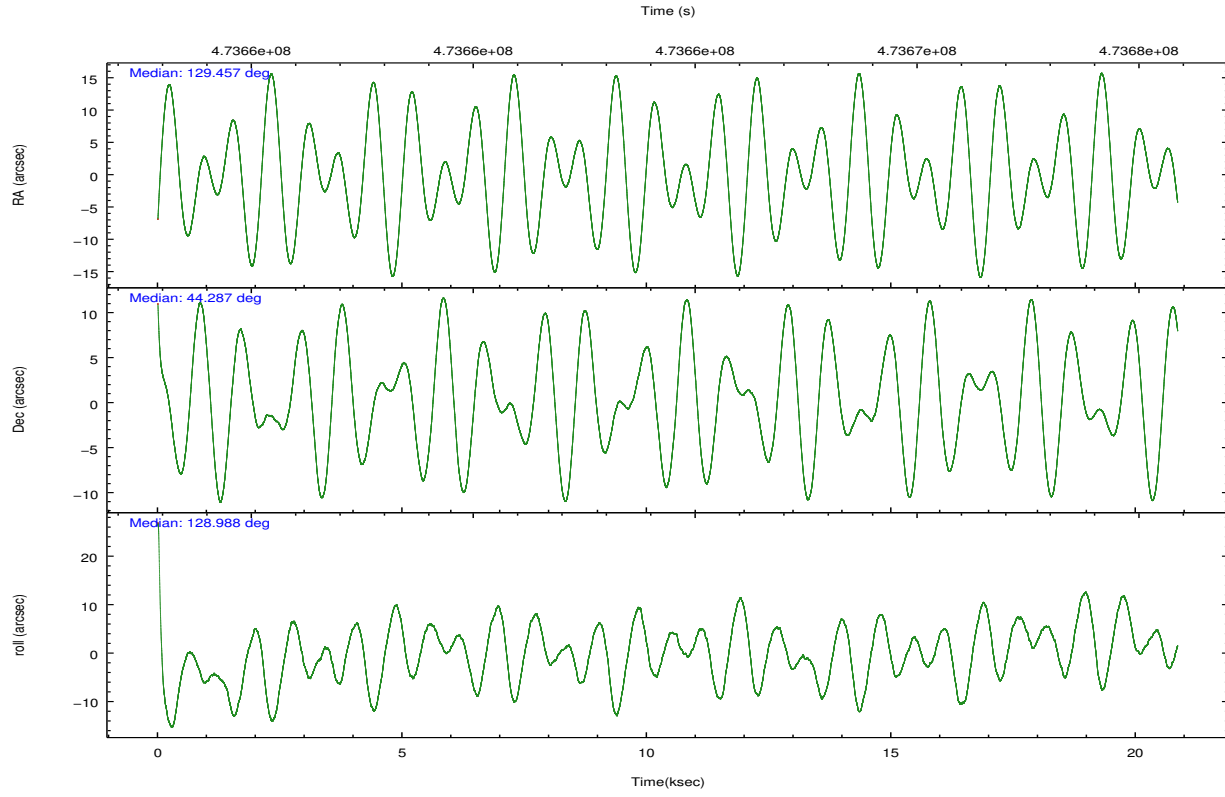
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4166	4730	4440	4568	4449
	4%	4%	3%	4%	3%
grade 1 events	48	67	77	83	57
	0%	0%	0%	0%	0%
grade 2 events	3035	3291	2914	2663	2895
	3%	3%	2%	2%	2%
grade 3 events	1387	1276	1262	1320	1358
	1%	1%	1%	1%	1%
grade 4 events	1259	1409	1230	1335	1330
	1%	1%	1%	1%	1%
grade 5 events	5098	5485	4685	5814	5294
	5%	5%	4%	5%	4%
grade 6 events	2717	2998	2441	2571	2925
	2%	2%	2%	2%	2%
grade 7 events	81285	83779	95112	90924	93787
	82%	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	129.493154	129.4572818555383	CCD I2 on	Y	Y
[deg] Pointing Dec	44.277404	44.28717990354885	CCD I3 on	Y	Y
[deg] Pointing Roll	128.759245	128.9929989777744	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	-226.992463	-226.9898711095352	CCD S3 on	N	N
[mm] SIM translation stage offset	-6.6	-6.602581893394444	CCD S4 on	N	N
[s] Observation start time (MET)	473654820.184000	473652941.51804	CCD S5 on	N	N
Observation start date	2013-01-04T02:45:53	2013-01-04T02:15:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	473674820.184000	473675707.79426	On-chip summing requested	N	N
Observation end date	2013-01-04T08:19:13	2013-01-04T08:35:07	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





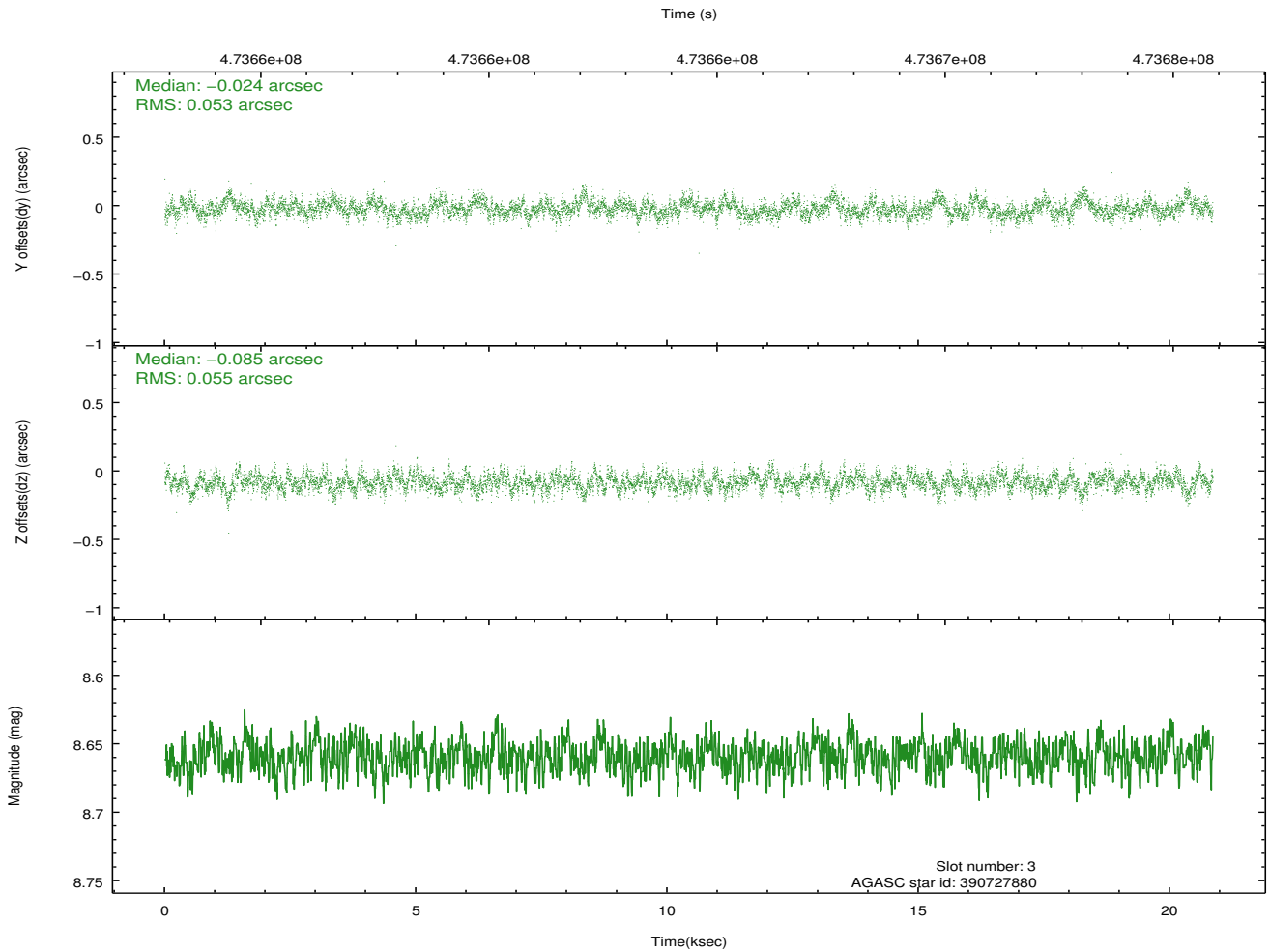
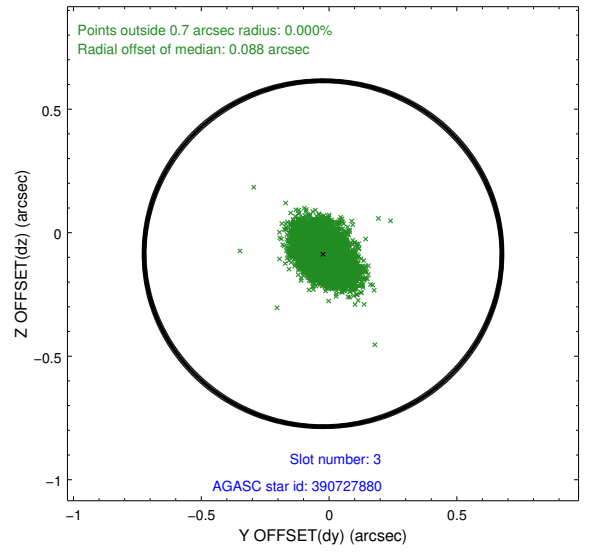
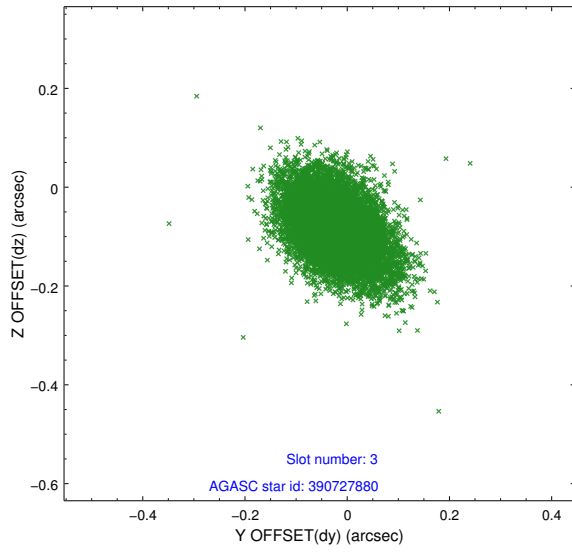
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.14	5088	0.121	-0.077	0.012	0.028	0.000000	0.000000	920.51	-977.02
1	FID		ACIS-I-5	7.13	5088	-0.334	0.088	0.015	0.029	0.000000	0.000000	-1828.02	920.43
2	FID		ACIS-I-6	7.15	5088	0.119	0.063	0.015	0.028	0.000000	0.000000	385.78	1565.18
3	GUIDE	used	390727880	8.66	10173	-0.024	-0.085	0.080	0.136	129.394129	43.811759	-1145.79	1250.25
4	GUIDE	used	390732200	9.41	10104	-0.212	-0.275	0.155	0.233	128.288683	44.373488	2227.70	2186.57
5	GUIDE	used	390733376	7.74	10174	0.091	0.047	0.087	0.138	129.873945	44.291817	-571.35	-798.40
6	GUIDE	used	390734248	8.25	10170	0.256	0.281	0.088	0.140	129.816628	44.244114	-613.84	-575.91
7	GUIDE	used	390736352	9.51	10158	-0.114	0.037	0.182	0.284	129.440556	44.455314	584.30	-295.13

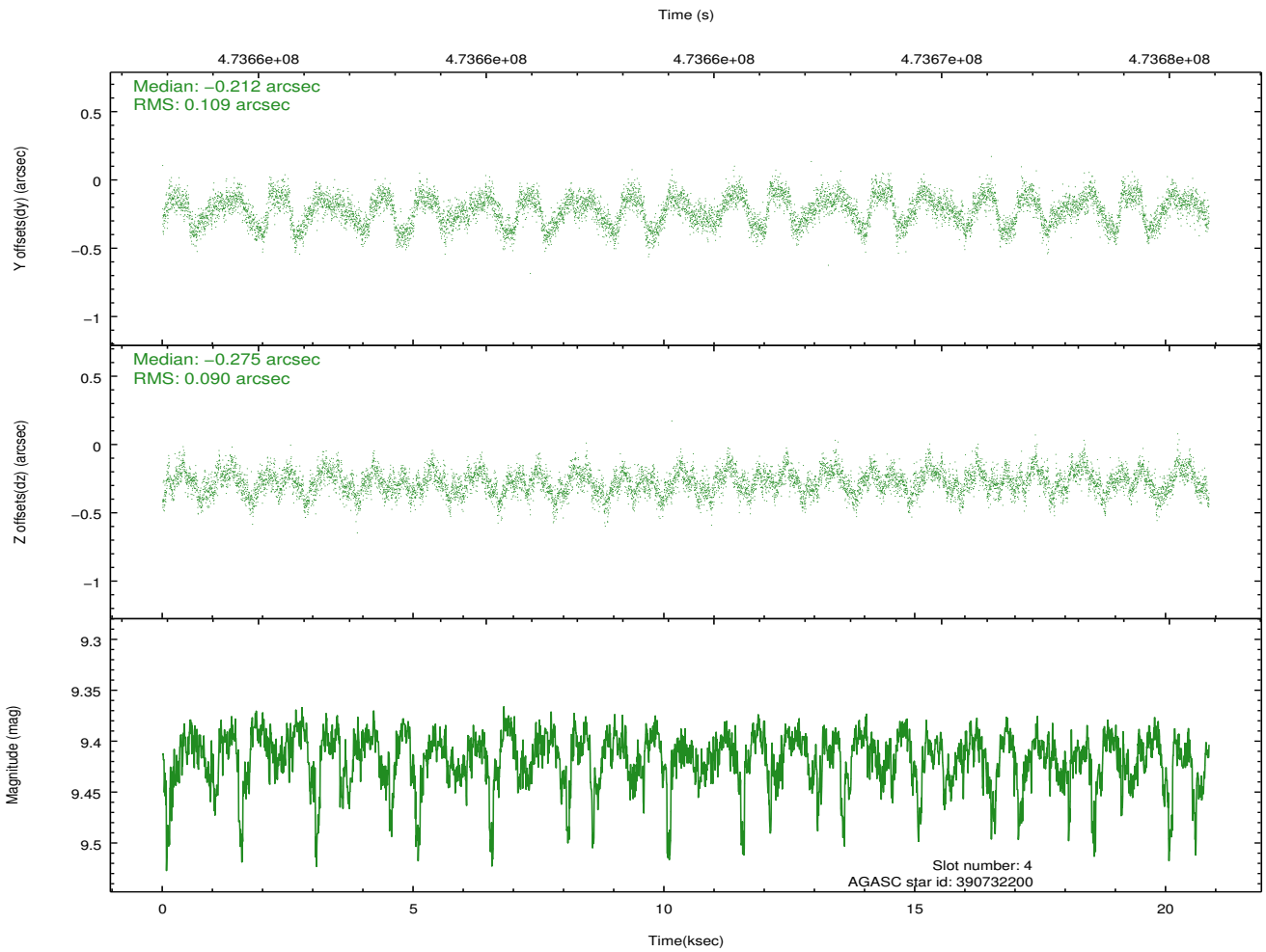
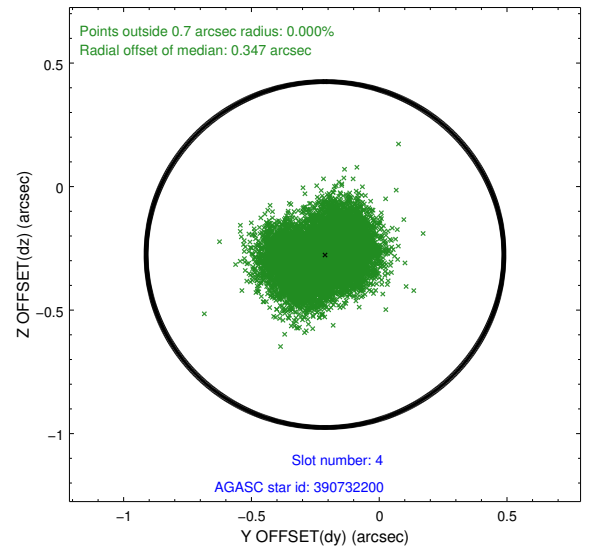
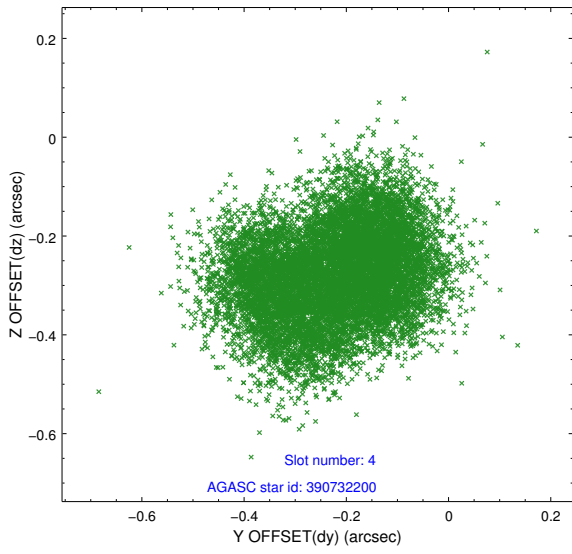
∞

## 2.4 Star Slots

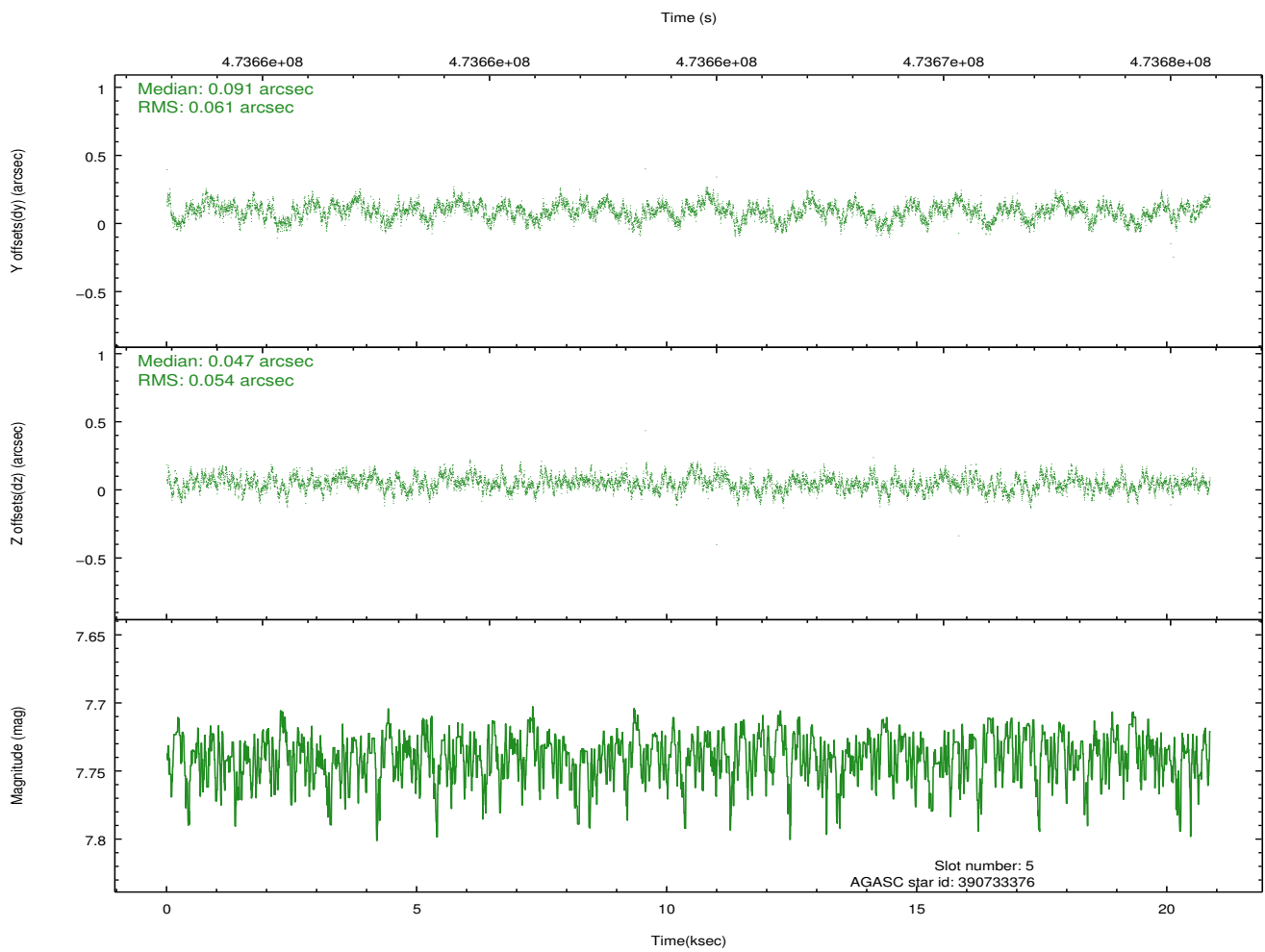
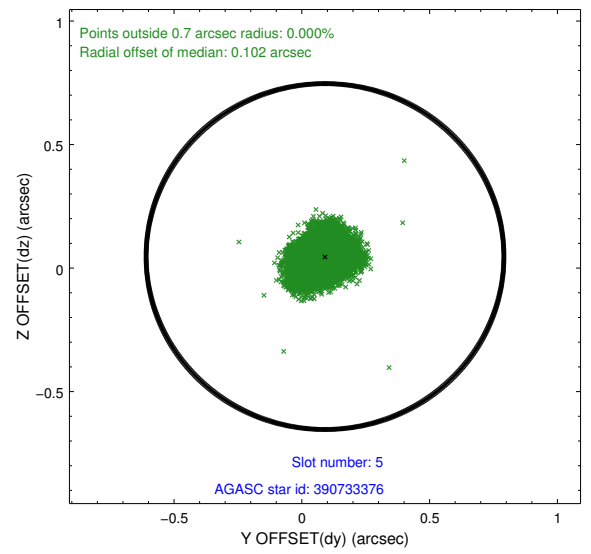
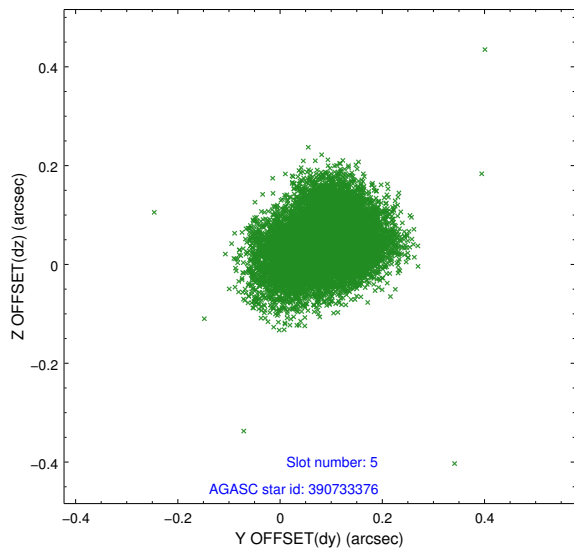
### 2.4.1 Slot 3



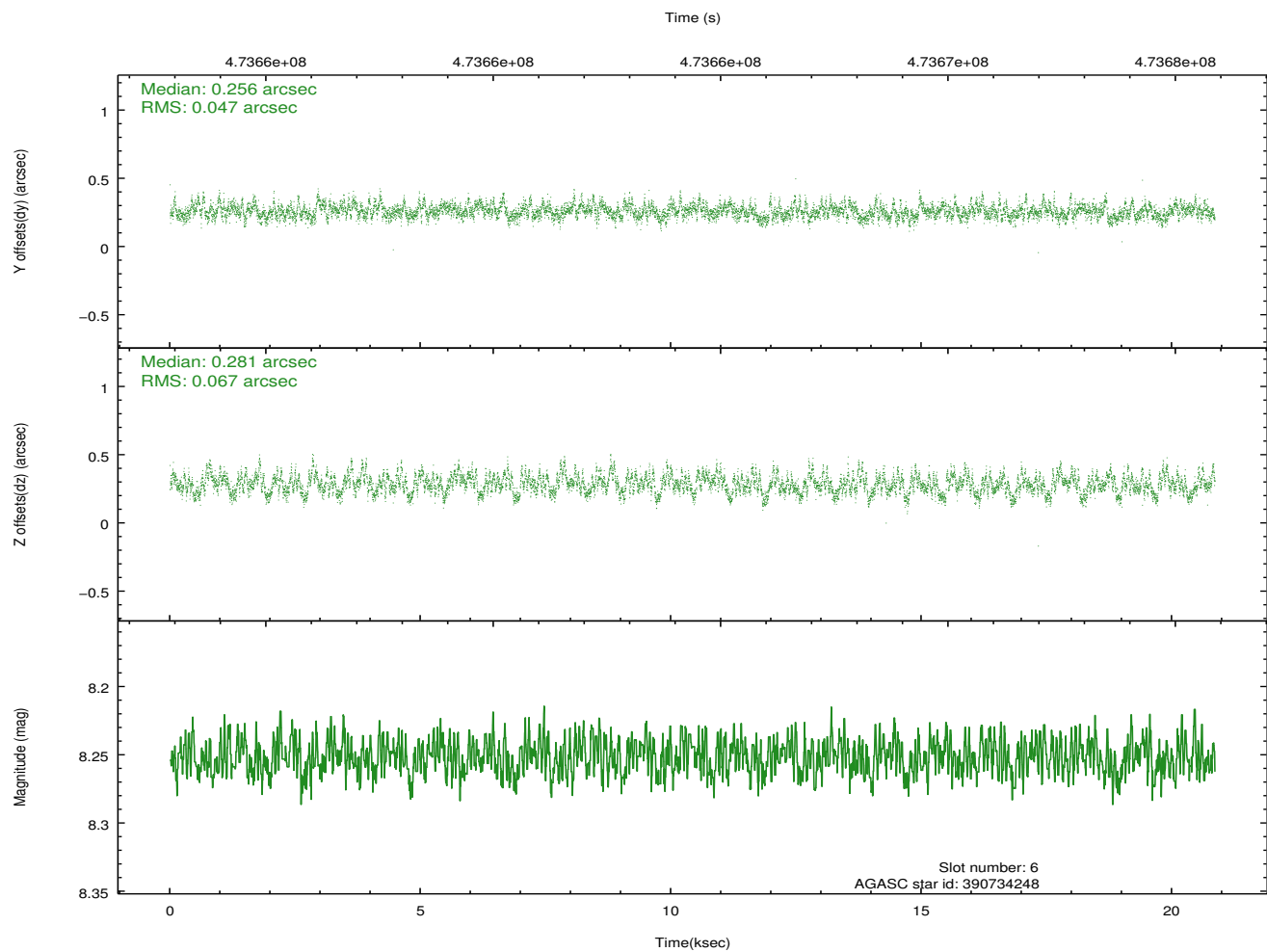
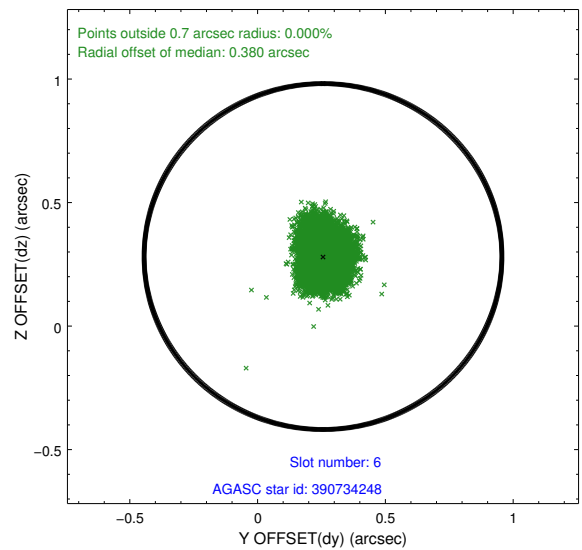
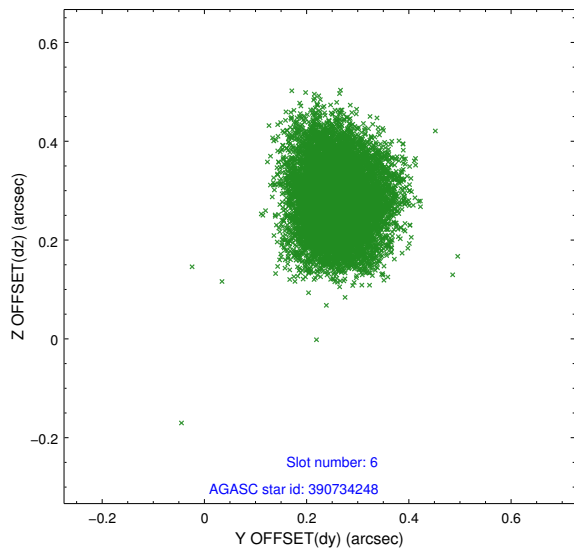
### 2.4.2 Slot 4



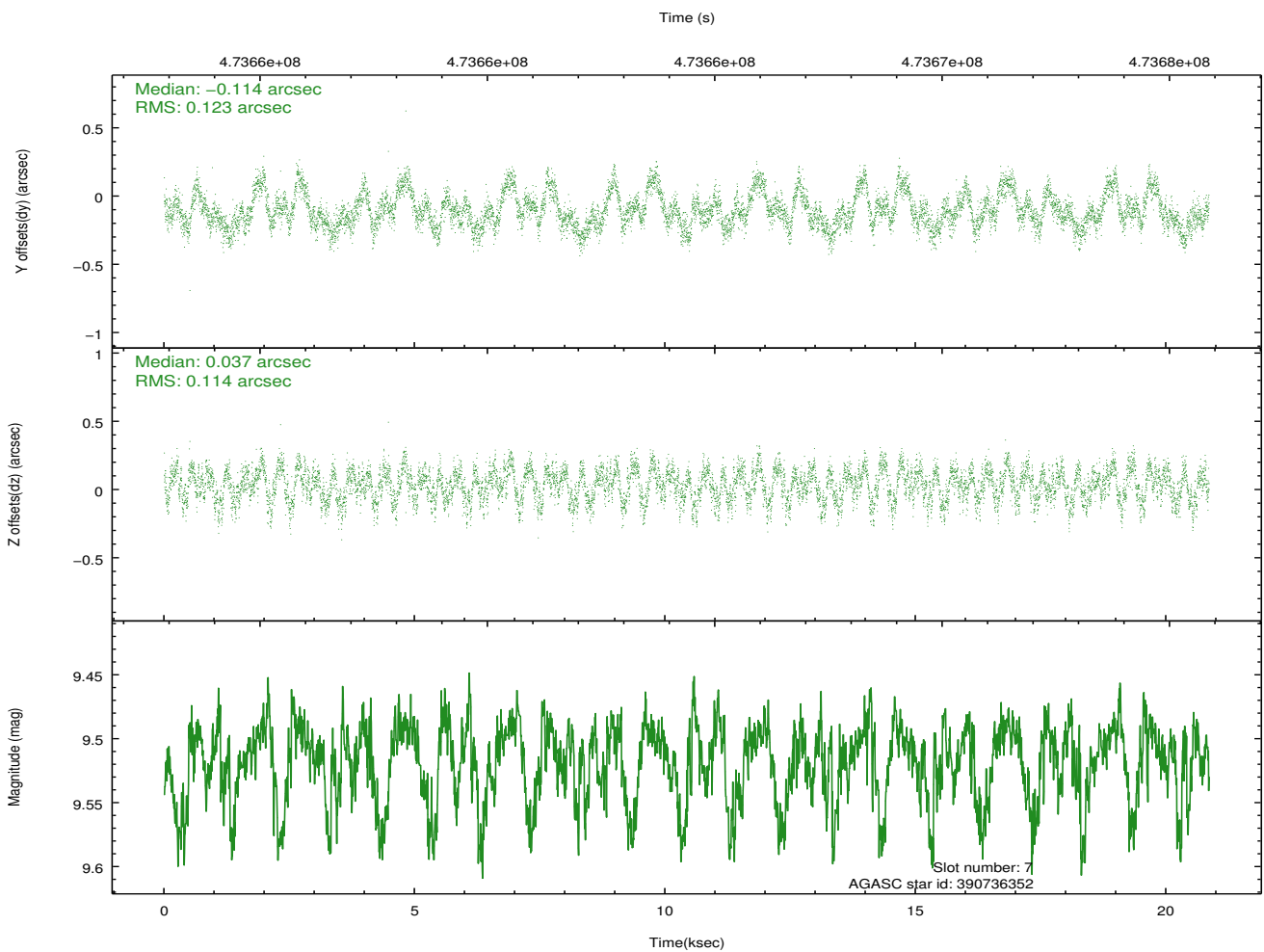
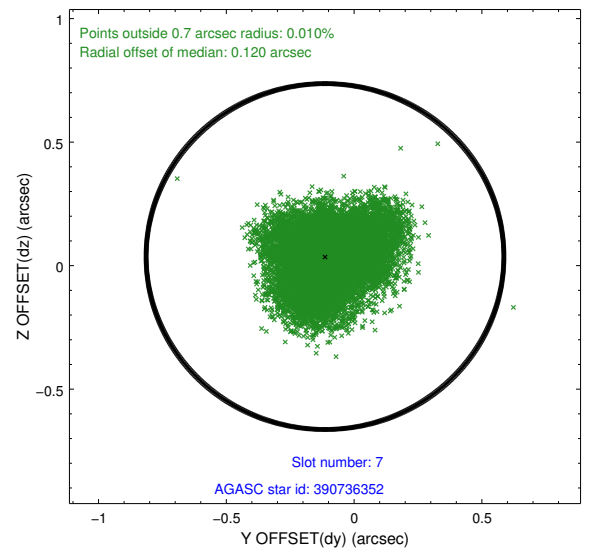
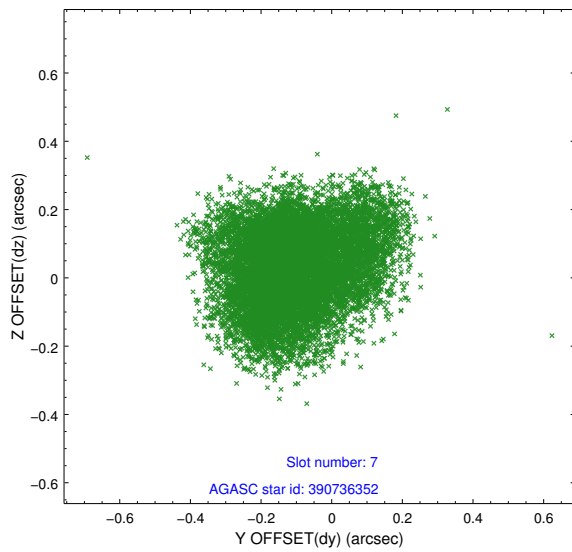
### 2.4.3 Slot 5



### 2.4.4 Slot 6

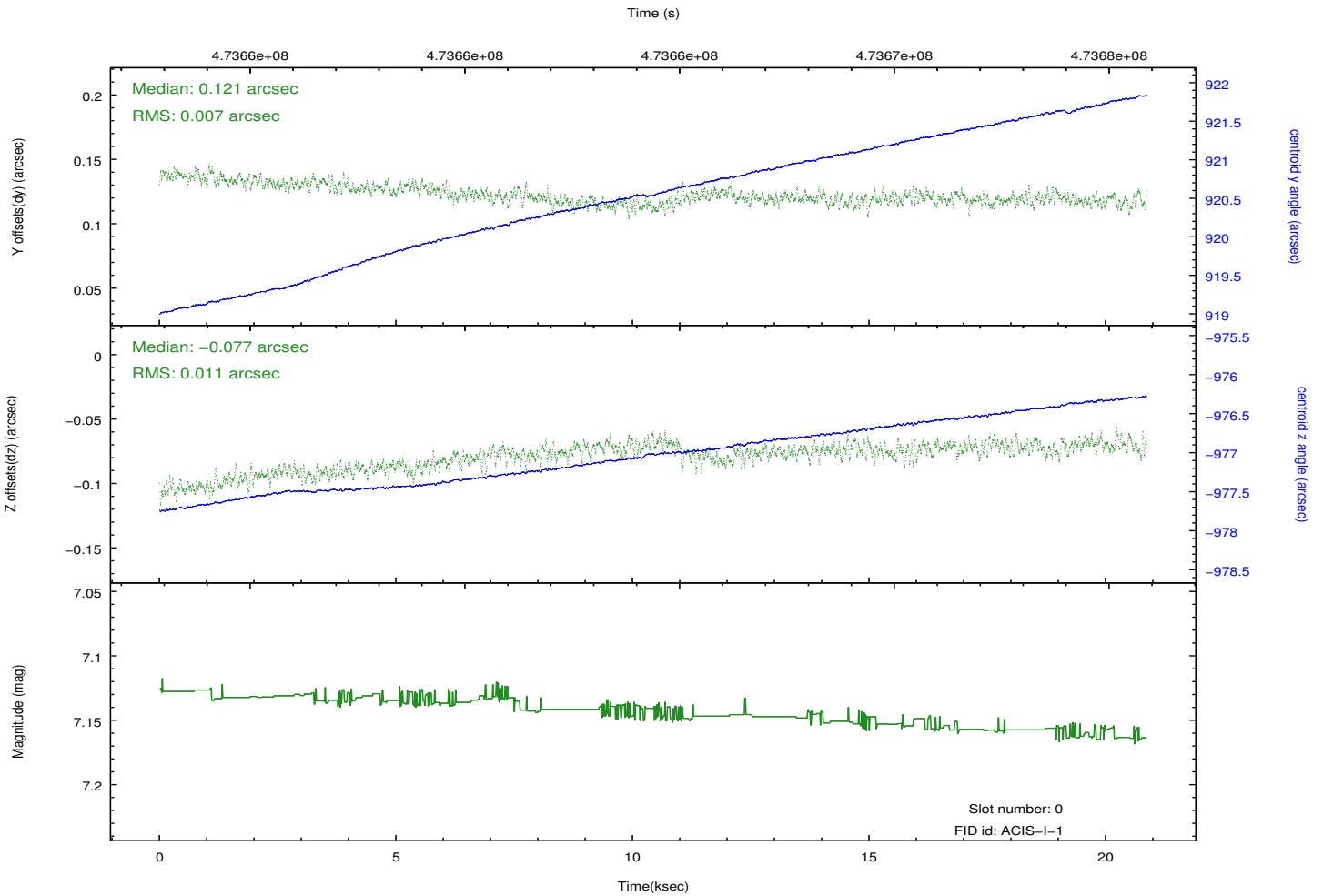
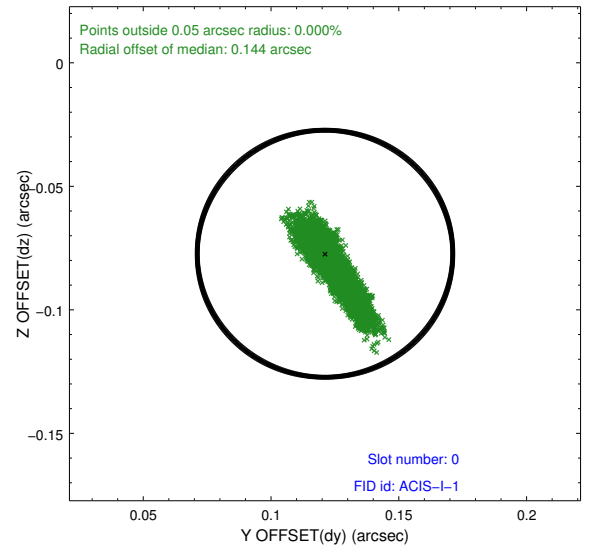
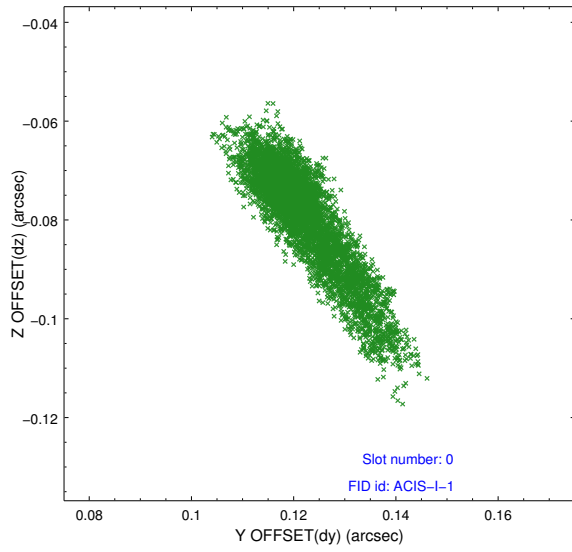


## 2.4.5 Slot 7

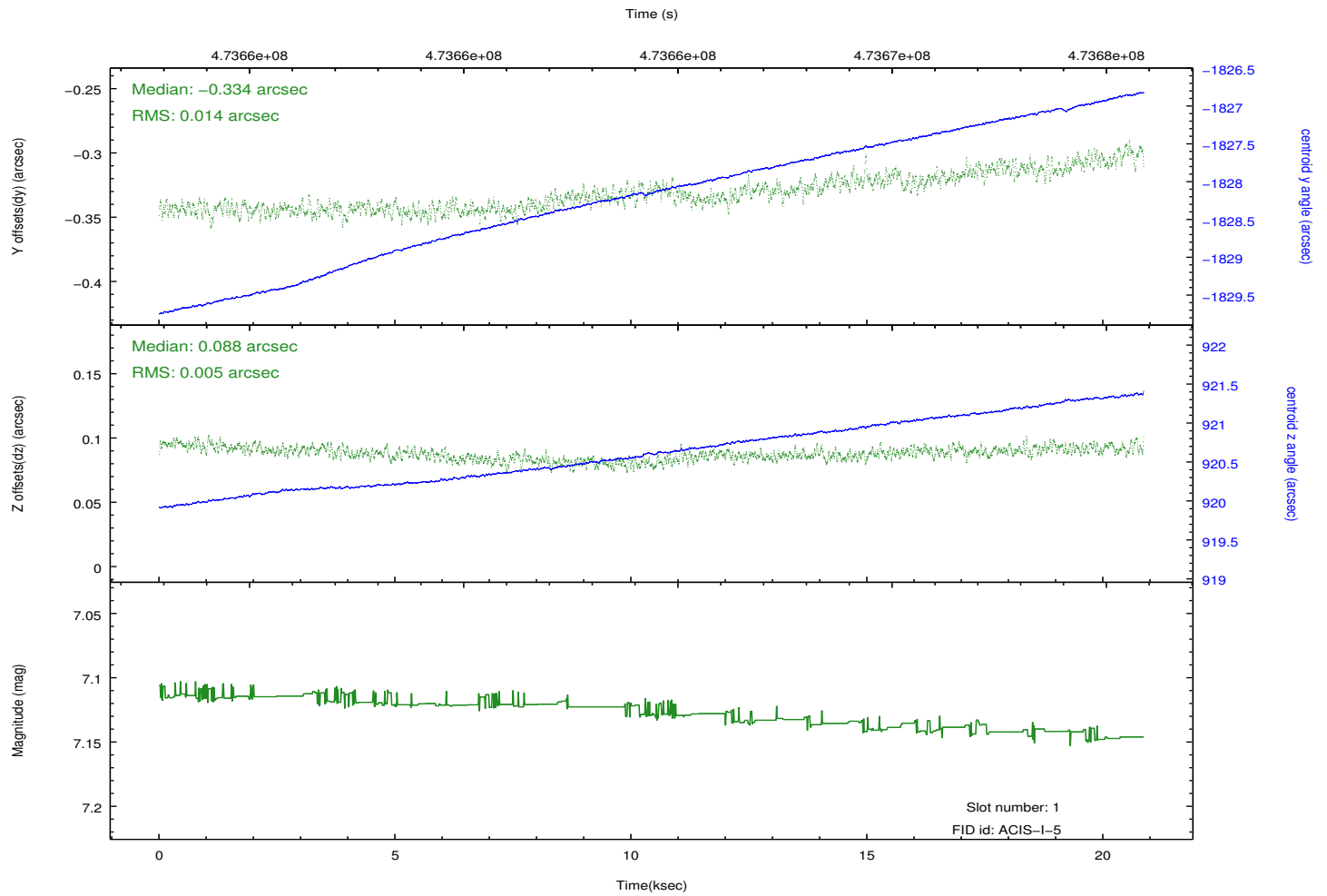
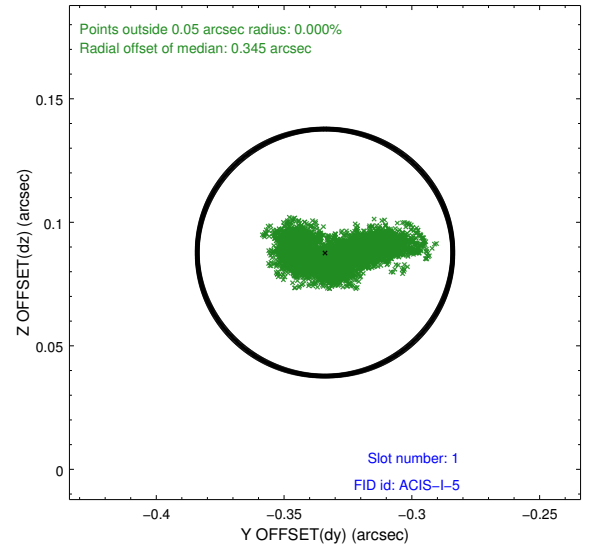
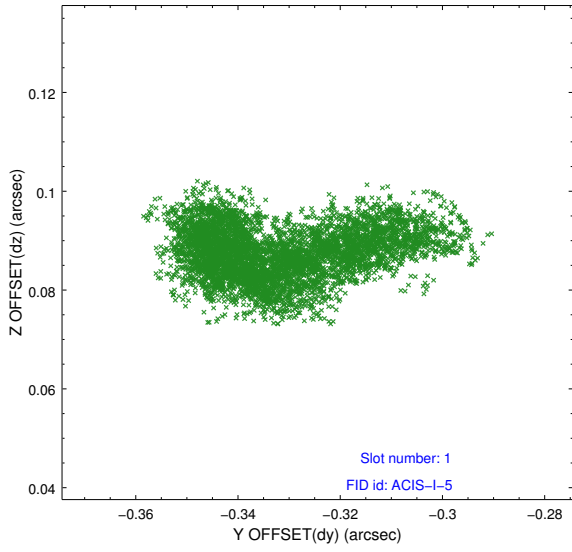


## 2.5 FID Slots

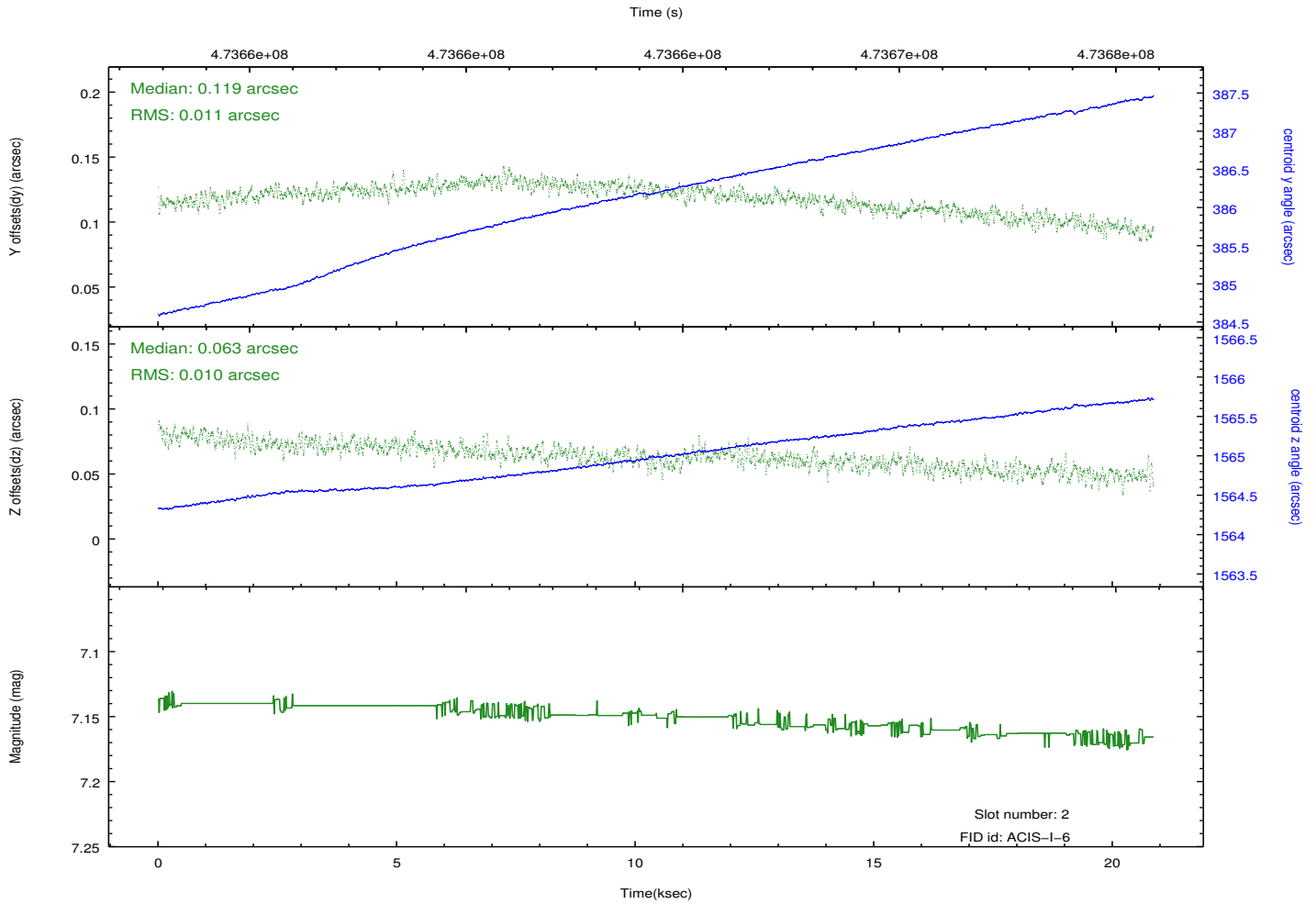
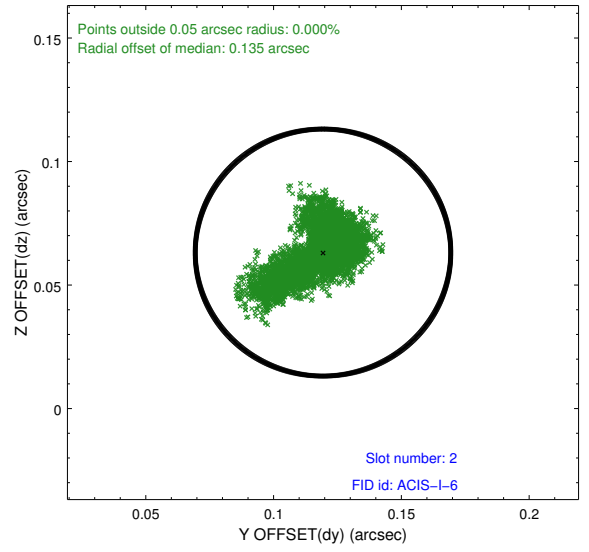
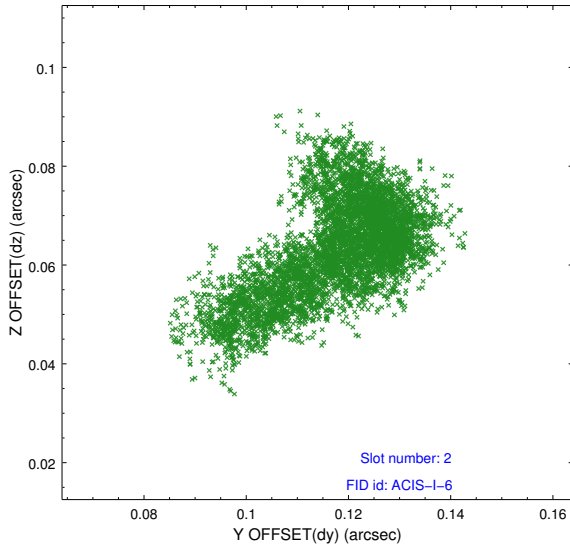
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.080836437106

## 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.