

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15387 - L2 Version 2  
Chandra X-Ray Center

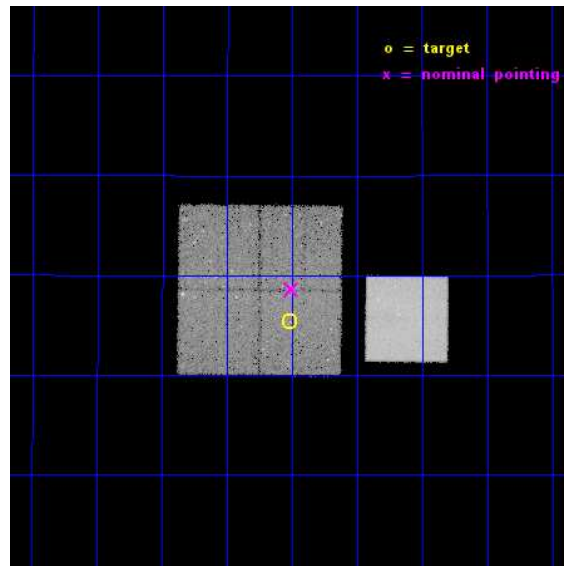
L2 Processing Date : Nov 30 2014

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# 1 Front

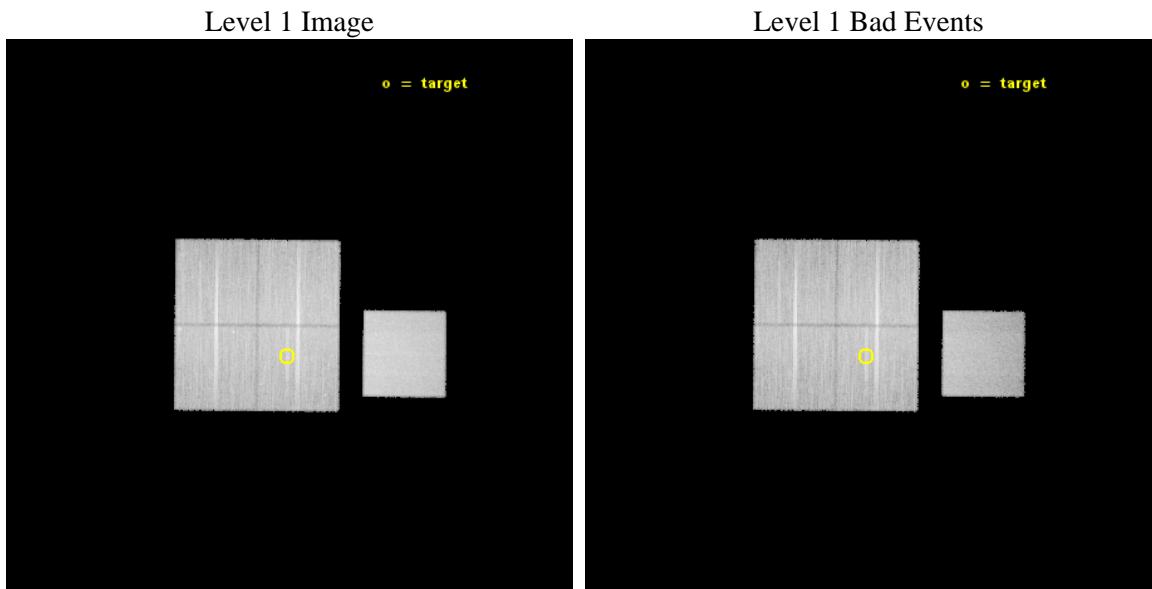
seq_num	601093	Sequence number
obs_id	15387	Observation id
title	Search for evidence of dwarf galaxy collisions in X-rays	Proposal
observer	Professor Gordon Garmire	Principal investigator
object	ngc3344	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	160.879583	Observer's specified target RA [deg]
dec_targ	24.922222	Observer's specified target Dec [deg]
ra_nom	160.87654608189	Nominal RA [deg]
dec_nom	24.976590592621	Nominal Dec [deg]
roll_nom	90.550719986316	Nominal Roll [deg]
revision	2	Processing version of data
ontime	48068.600369692	Sum of GTIs [s]
livetime	47440.548718273	Livetime [s]
ontime0	48065.459319413	Sum of GTIs [s]
ontime1	48068.600369692	Sum of GTIs [s]
ontime2	48062.318248987	Sum of GTIs [s]
ontime3	48068.600369692	Sum of GTIs [s]
ontime7	48068.600369692	Sum of GTIs [s]
l2events	219421	Number of level 2 events



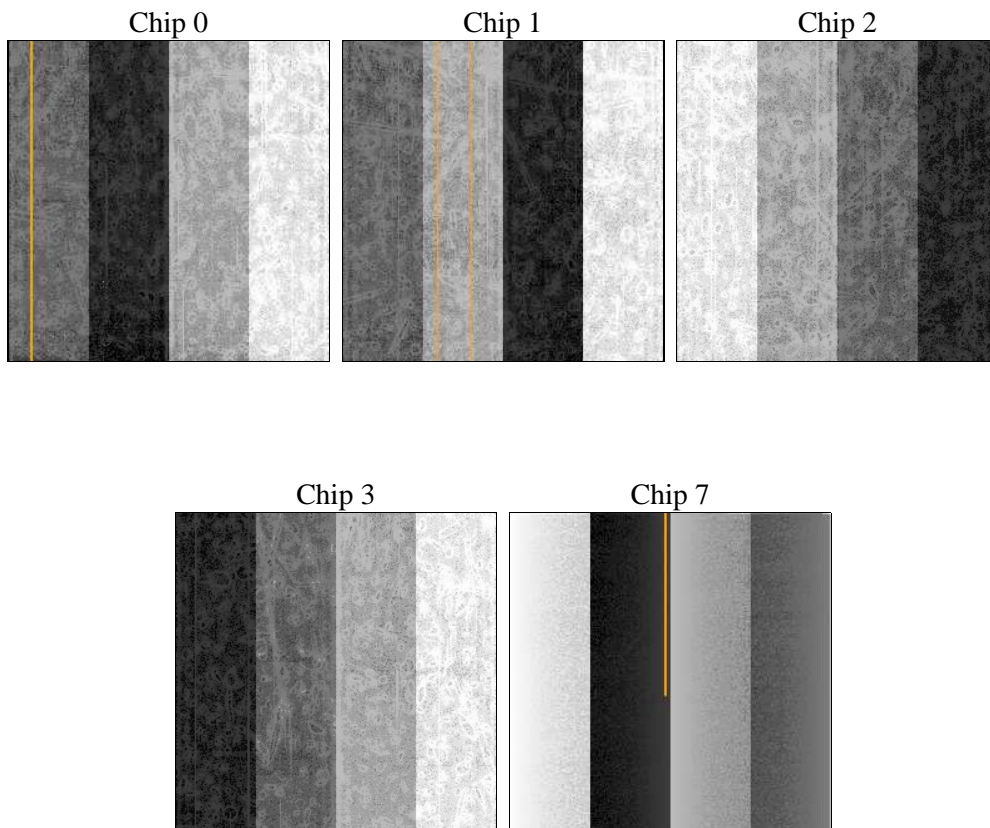
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	48000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	48068.600369692	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	48065.459319413	Sum of GTIs [s]
date	2014-12-01T03:57:22	Date and time of file creation	ontime1	48068.600369692	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	48062.318248987	Sum of GTIs [s]
			ontime3	48068.600369692	Sum of GTIs [s]
			ontime7	48068.600369692	Sum of GTIs [s]
			l1events	1177997	Number of level 1 events

### 2.1.4 Events

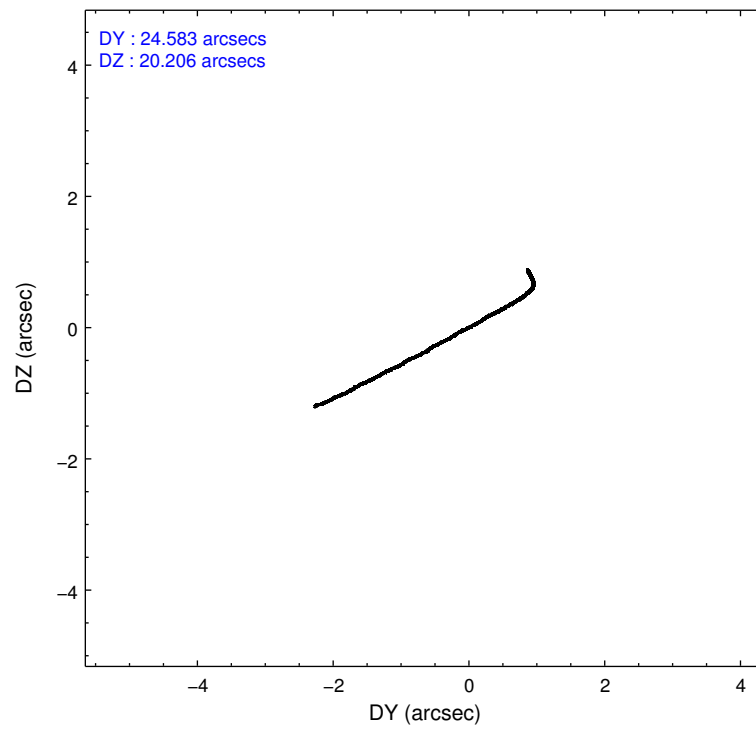
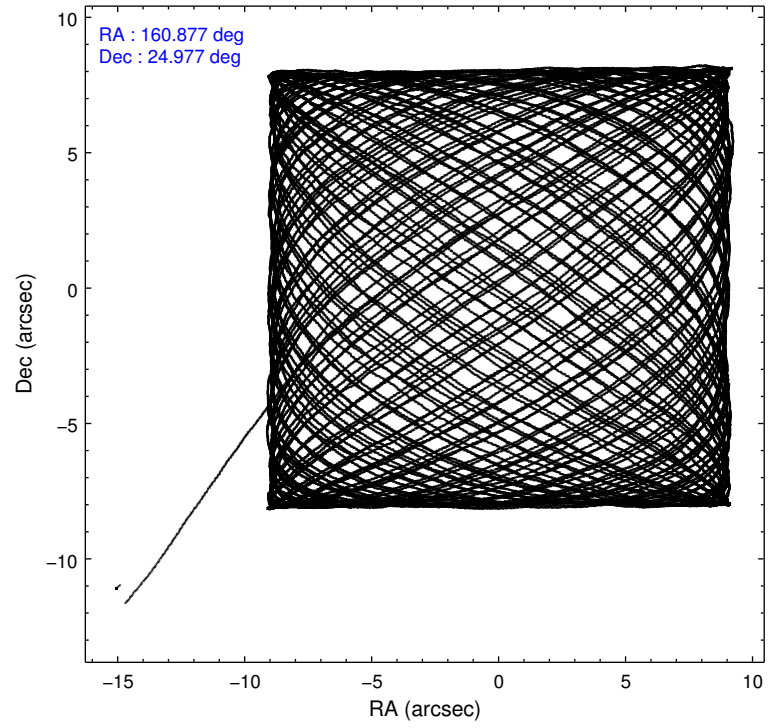
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	211341	216717	237864	232767	279308
rejected events	183830	187716	210851	205630	148069
rejected %	86%	86%	88%	88%	53%

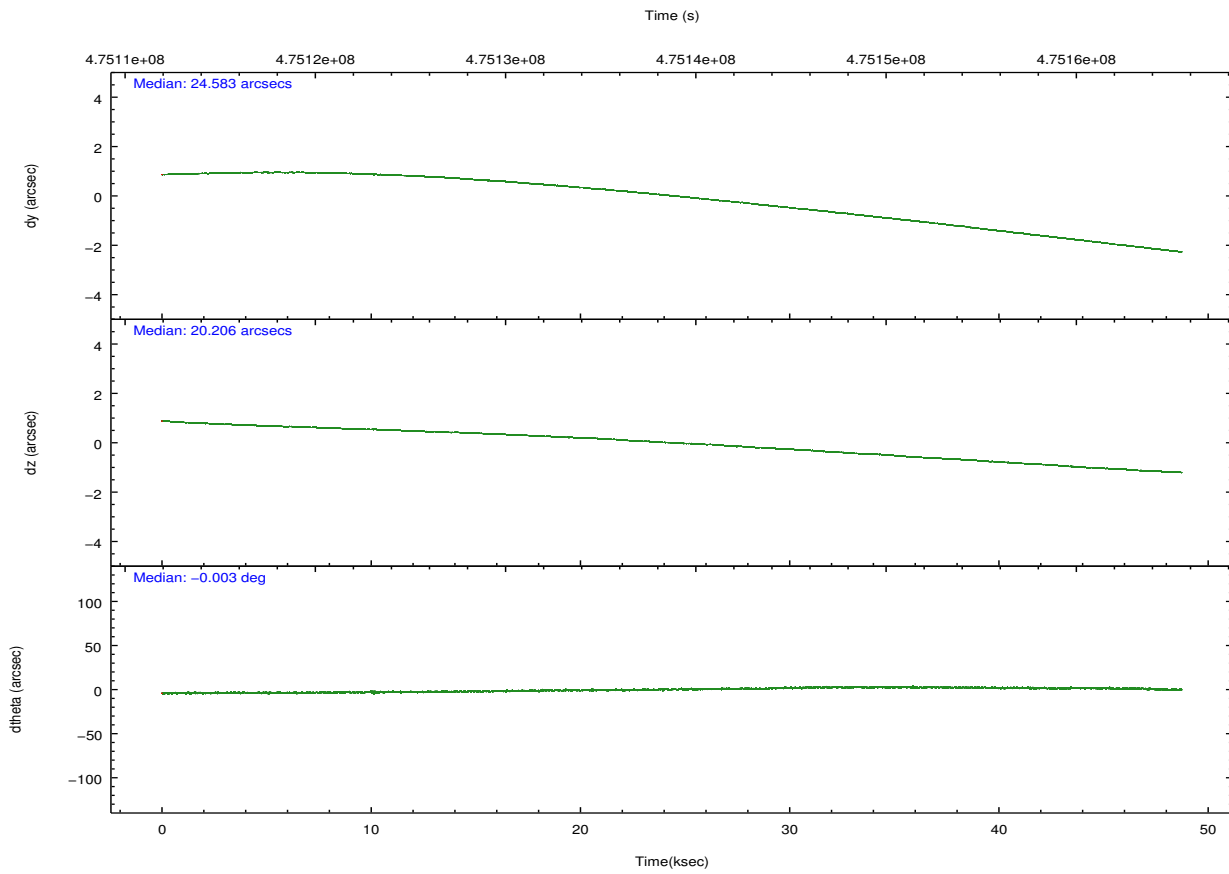
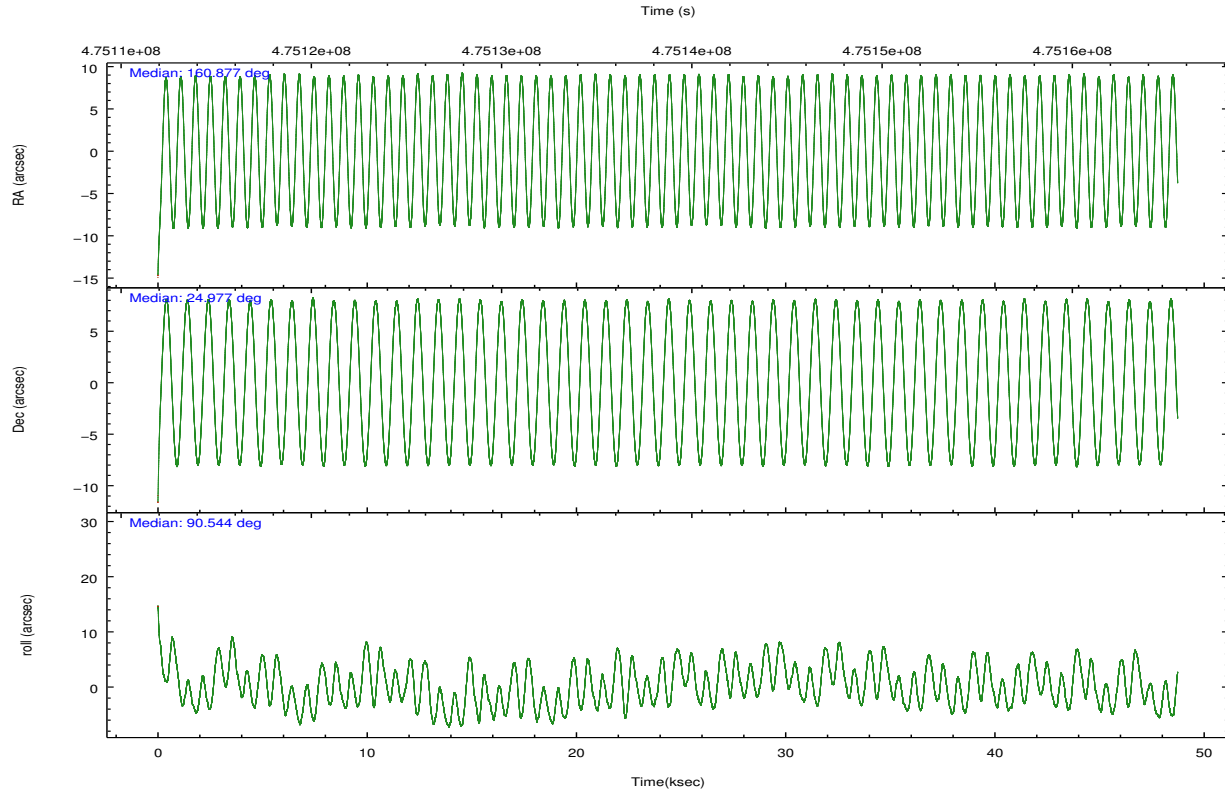
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	10089	10117	10220	10449	12801
	4%	4%	4%	4%	4%
grade 1 events	151	129	133	139	384
	0%	0%	0%	0%	0%
grade 2 events	6636	6738	6400	5768	28101
	3%	3%	2%	2%	10%
grade 3 events	2803	3013	2802	2849	11556
	1%	1%	1%	1%	4%
grade 4 events	2658	2969	2659	2851	11416
	1%	1%	1%	1%	4%
grade 5 events	9350	10080	8888	10807	29322
	4%	4%	3%	4%	10%
grade 6 events	5326	6166	4932	5223	67377
	2%	2%	2%	2%	24%
grade 7 events	174328	177505	201830	194681	118351
	82%	81%	84%	83%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	160.892065	160.8765460818879	CCD I2 on	Y	Y
[deg] Pointing Dec	24.952953	24.97659059262145	CCD I3 on	Y	Y
[deg] Pointing Roll	90.335482	90.55071998631578	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	N
[mm] SIM translation stage pos	-225.992463	-225.9841449889113	CCD S3 on	O2	Y
[mm] SIM translation stage offset	-7.6	-7.608308014018434	CCD S4 on	N	N
[s] Observation start time (MET)	475115102.184000	475113889.47191	CCD S5 on	N	N
Observation start date	2013-01-21T00:23:55	2013-01-21T00:04:49	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	475163102.184000	475163960.7246	On-chip summing requested	N	N
Observation end date	2013-01-21T13:43:55	2013-01-21T13:59:20	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



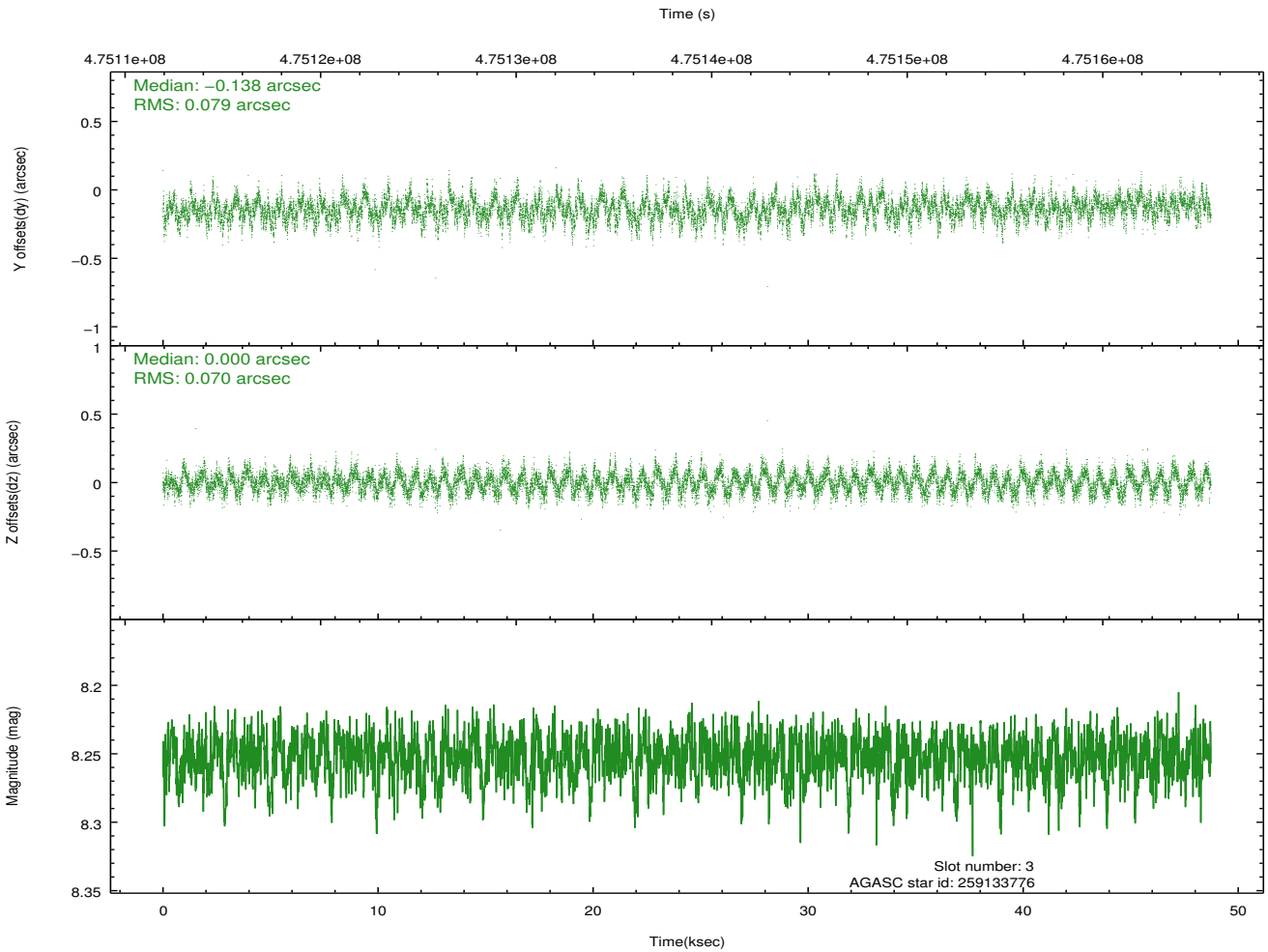
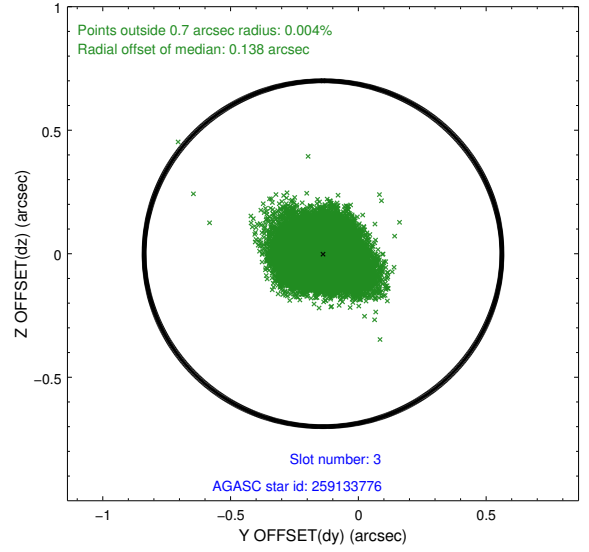
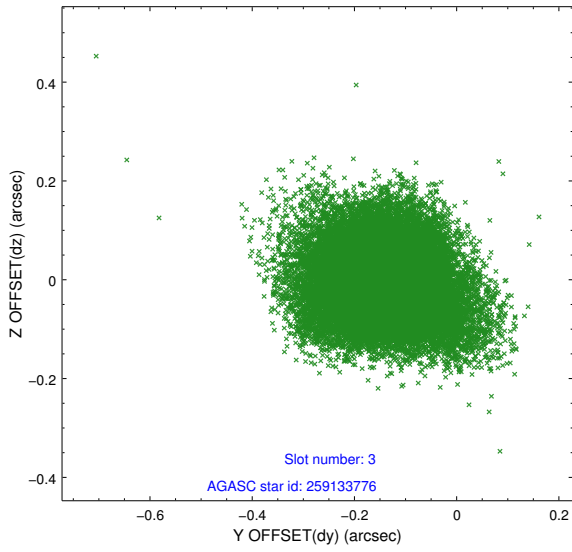


### Slot Statistics

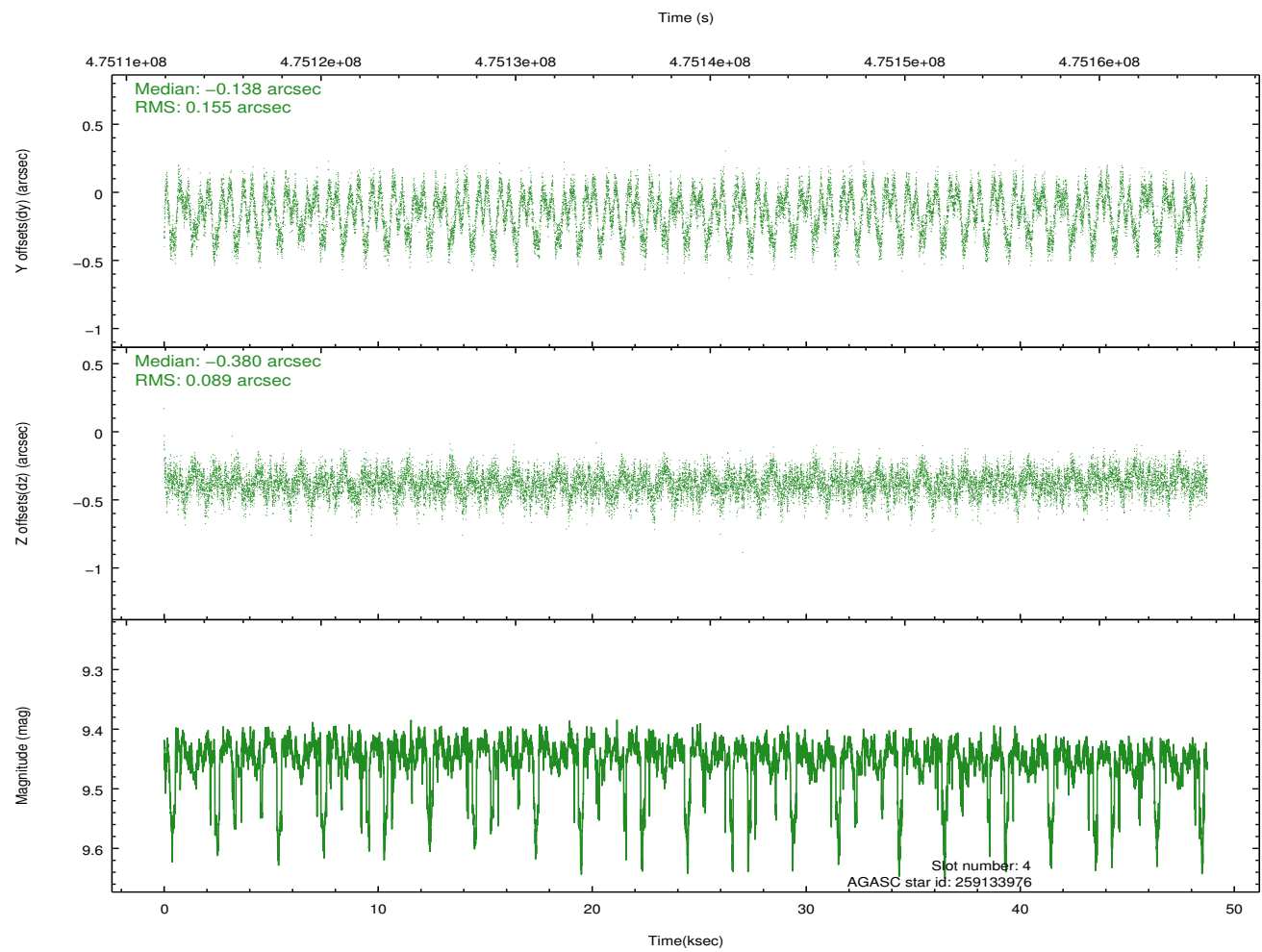
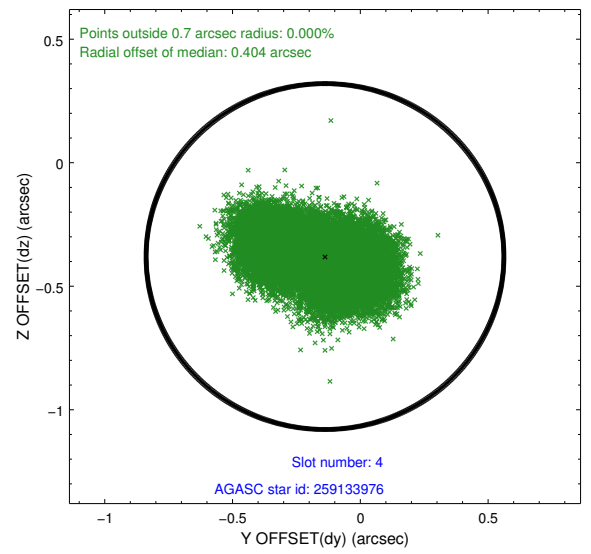
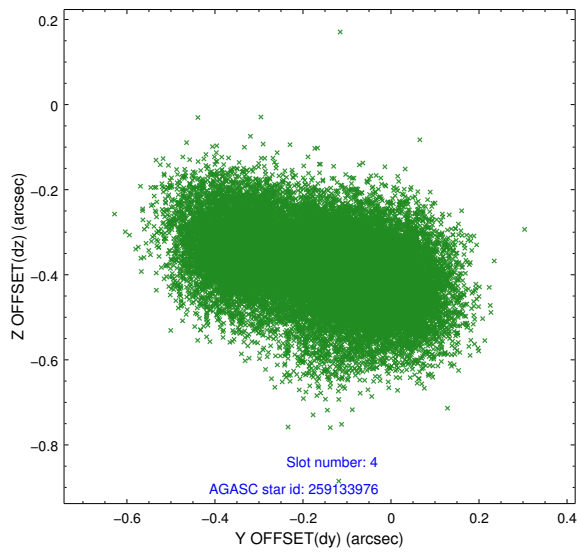
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.13	11887	0.150	-0.103	0.034	0.062	0.000000	0.000000	914.86	-1000.14
1	FID		ACIS-I-5	7.12	11888	-0.386	0.097	0.015	0.026	0.000000	0.000000	-1833.83	897.50
2	FID		ACIS-I-6	7.14	11887	0.147	0.078	0.022	0.054	0.000000	0.000000	380.36	1542.02
3	GUIDE	used	259133776	8.25	23762	-0.138	0.000	0.111	0.181	161.514597	25.567597	2205.97	-2033.74
4	GUIDE	used	259133976	9.44	23589	-0.138	-0.380	0.196	0.303	160.716582	25.150640	715.48	567.64
5	GUIDE	used	259136320	9.29	23675	0.016	-0.325	0.105	0.171	160.427058	24.371434	-2081.87	1536.96
6	GUIDE	used	259146896	8.86	23759	0.146	0.407	0.098	0.157	161.613934	24.576469	-1362.54	-2354.59
7	GUIDE	used	259146848	9.24	23638	0.138	0.297	0.135	0.212	161.629881	24.671214	-1021.64	-2407.49

## 2.4 Star Slots

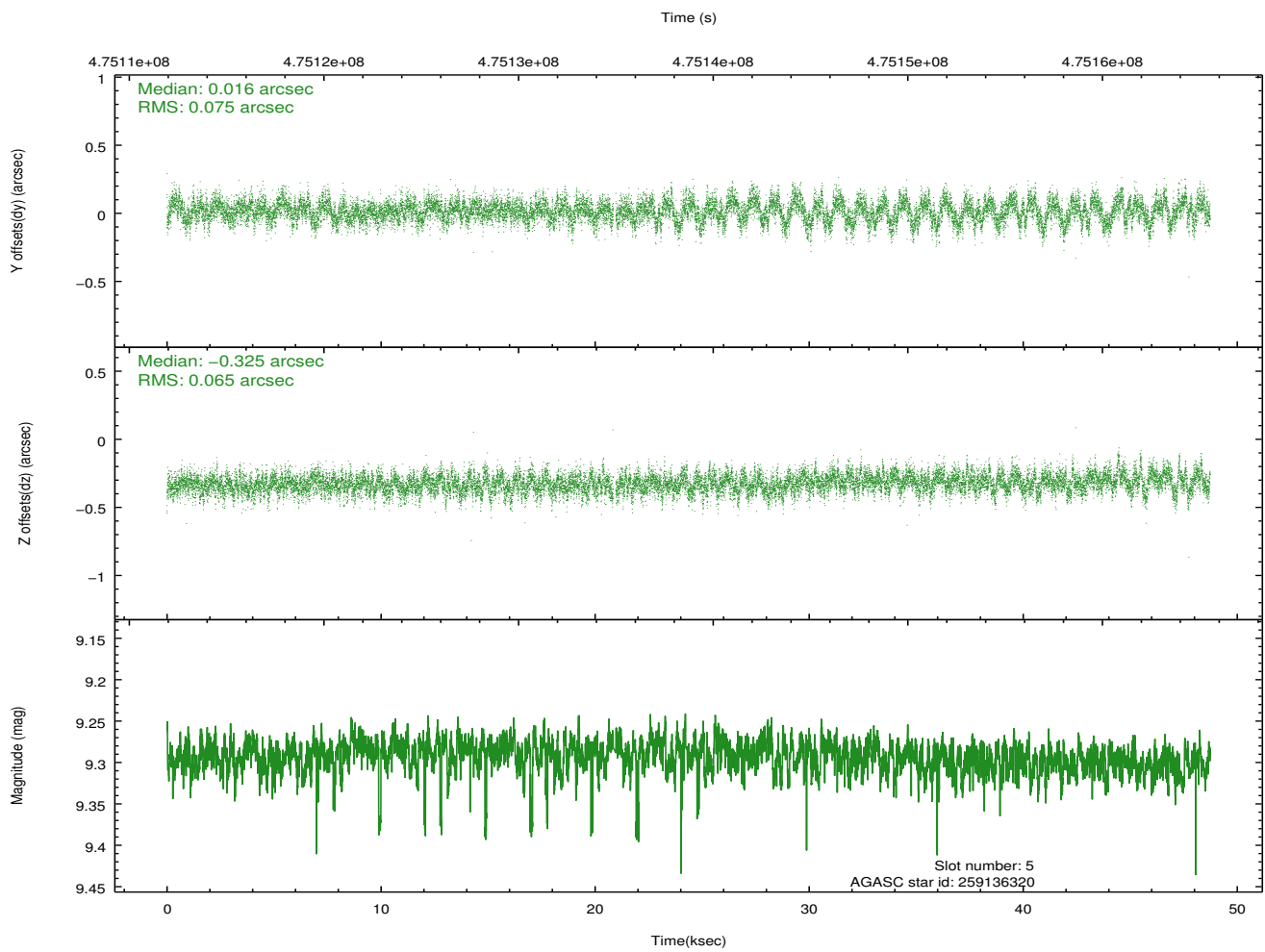
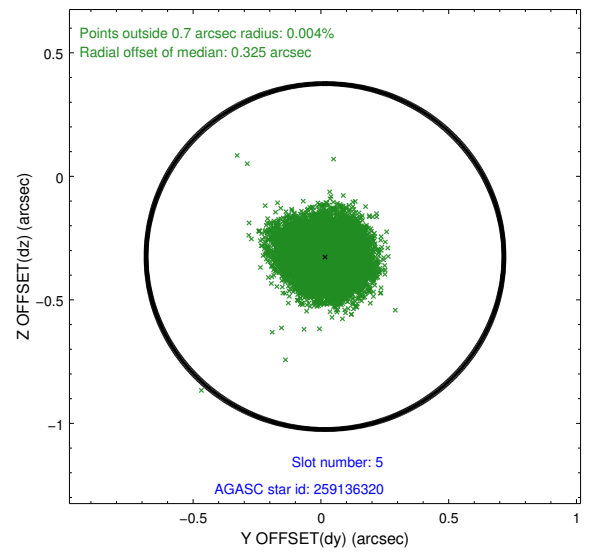
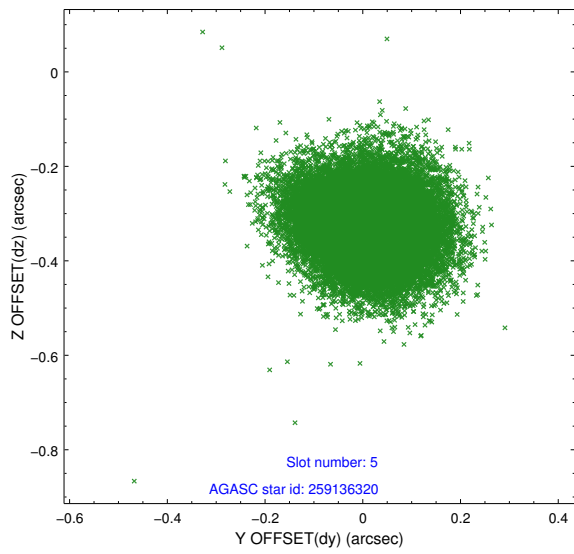
### 2.4.1 Slot 3



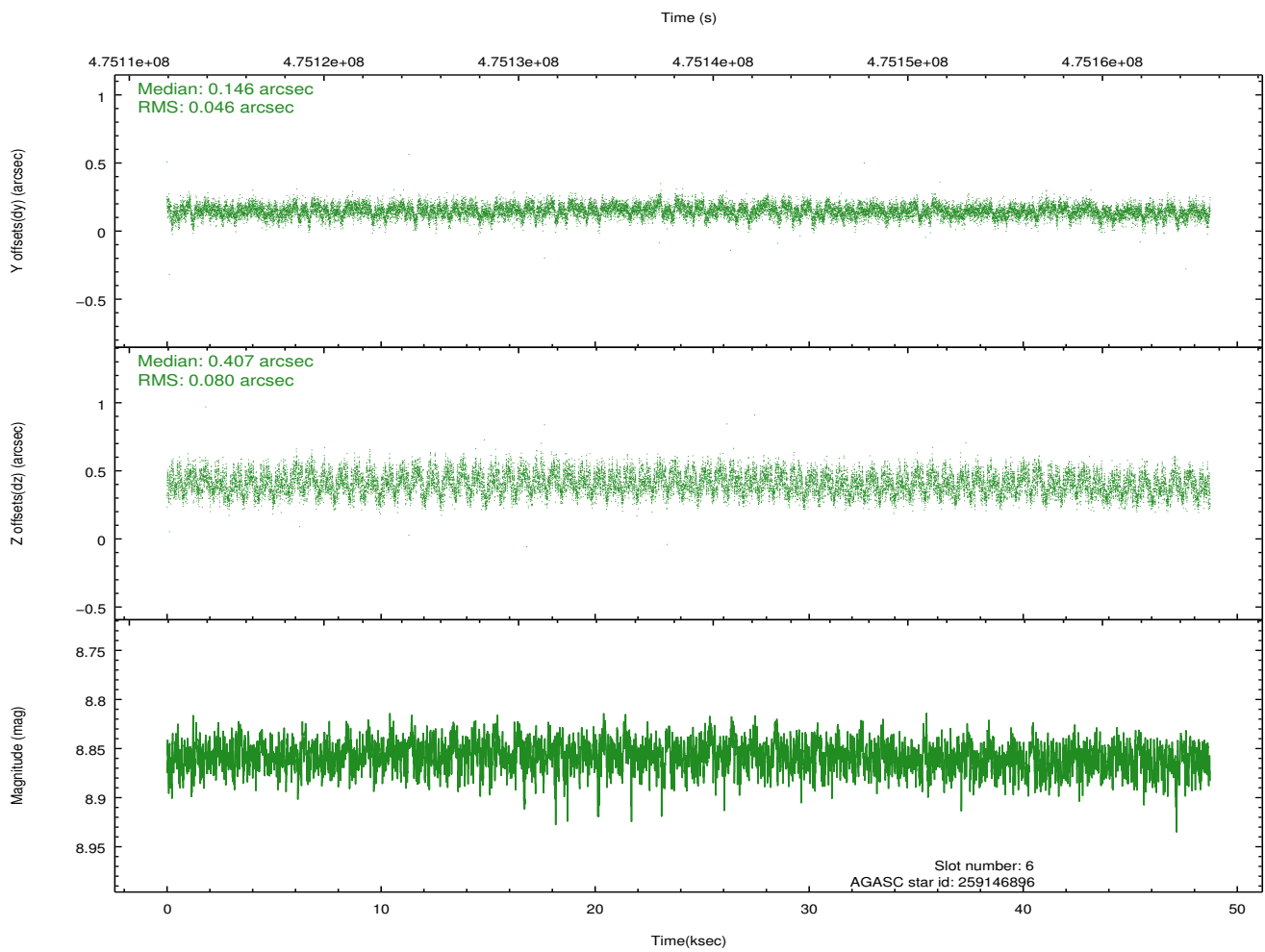
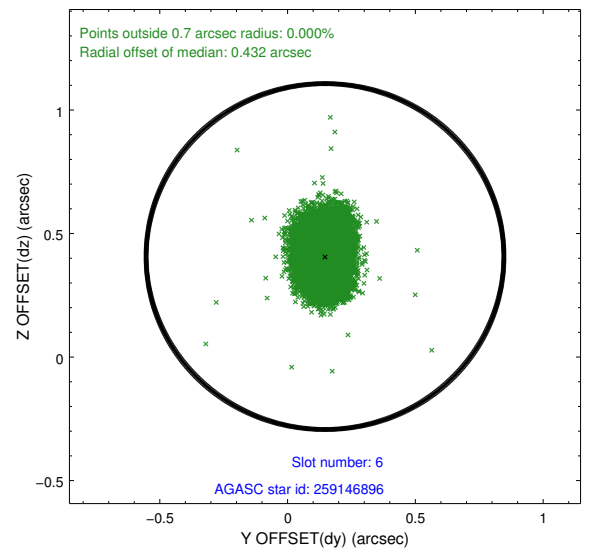
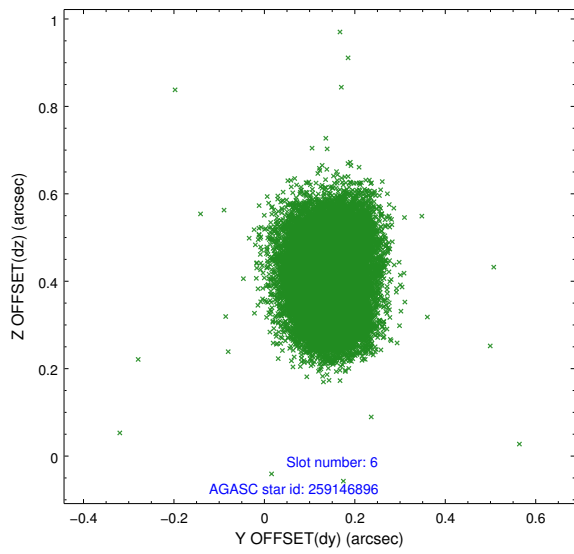
## 2.4.2 Slot 4



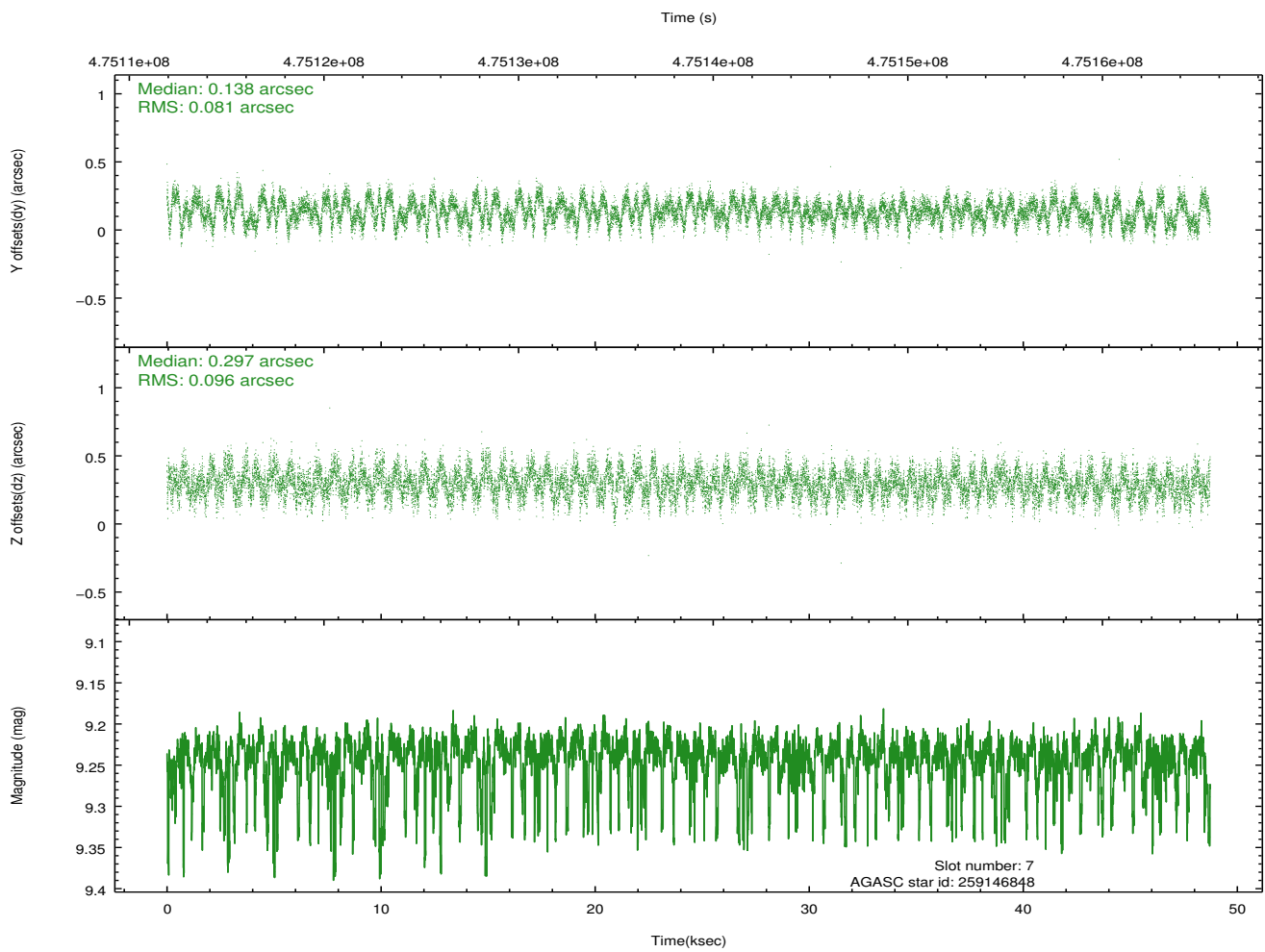
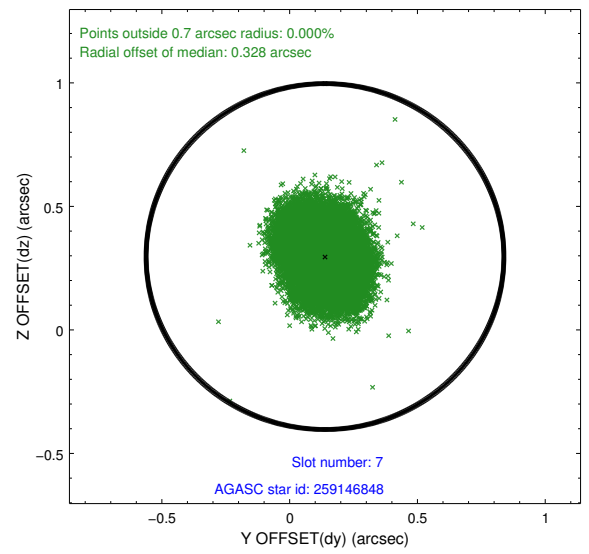
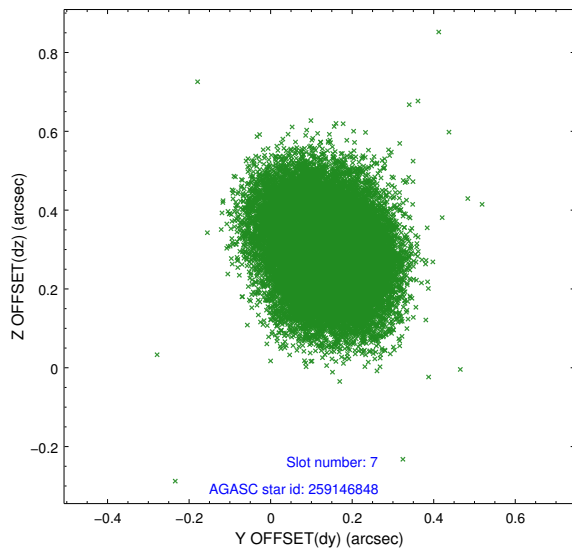
### 2.4.3 Slot 5



## 2.4.4 Slot 6

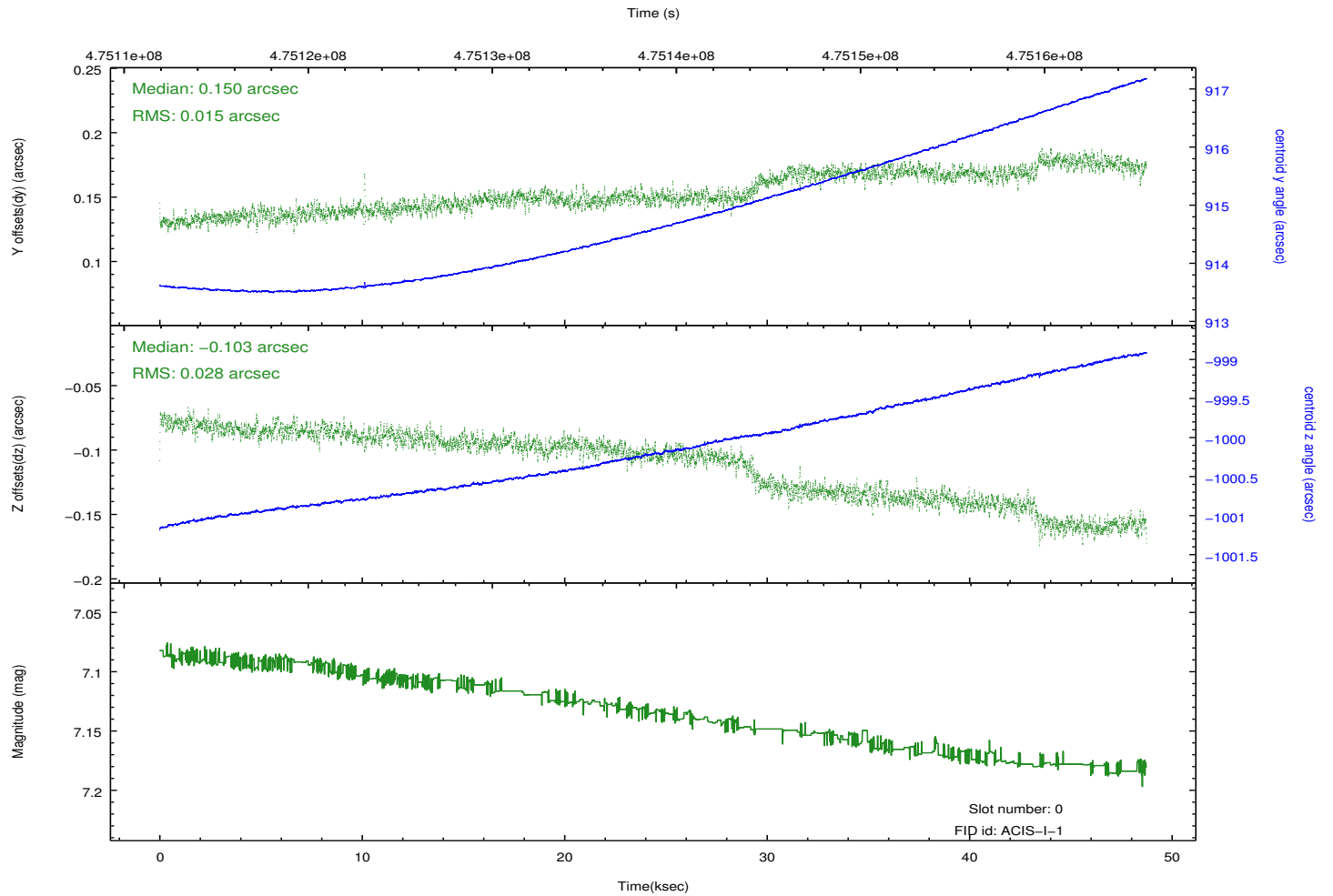
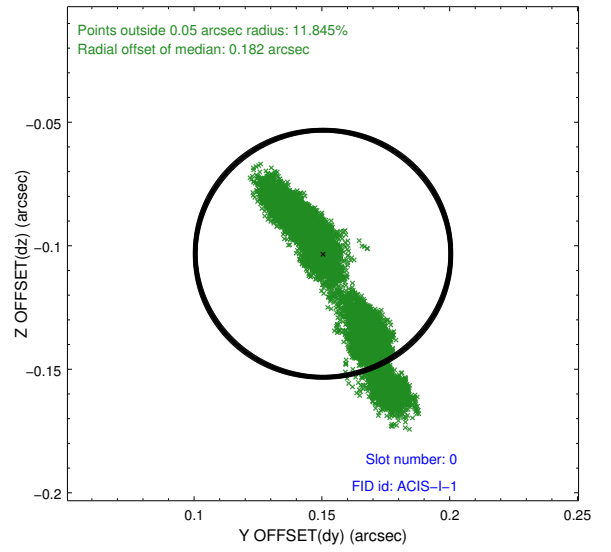
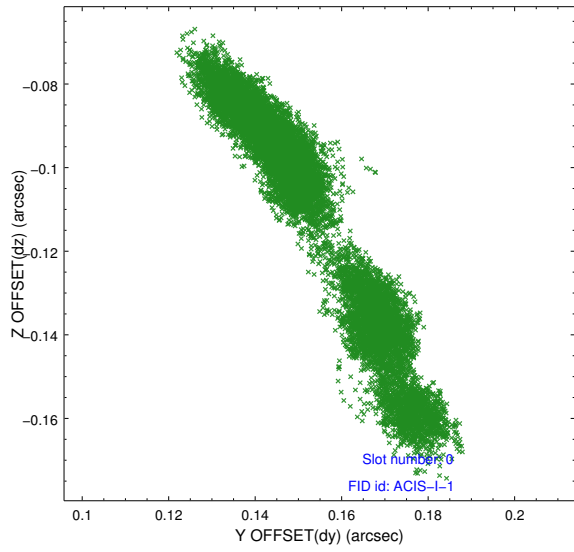


## 2.4.5 Slot 7

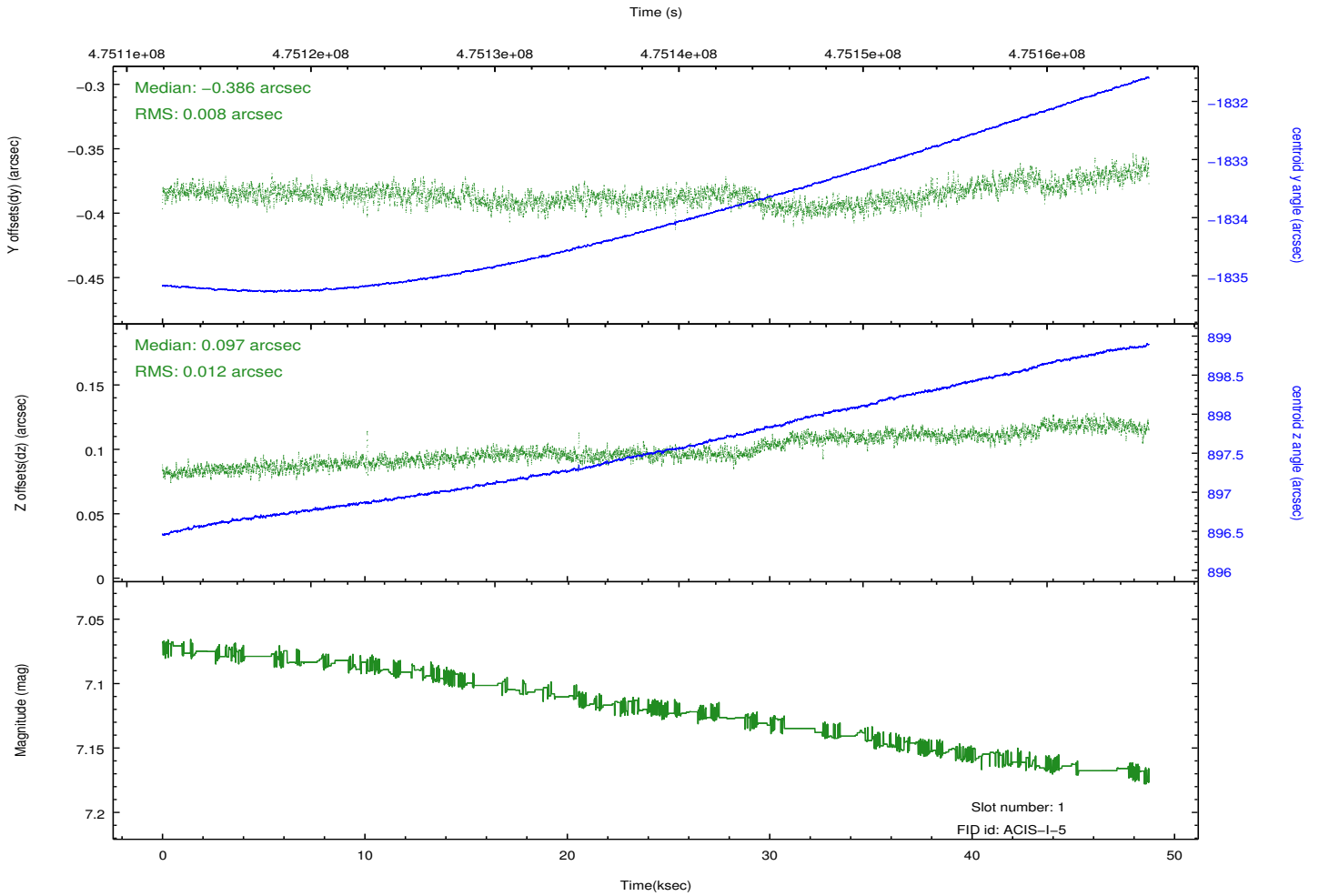
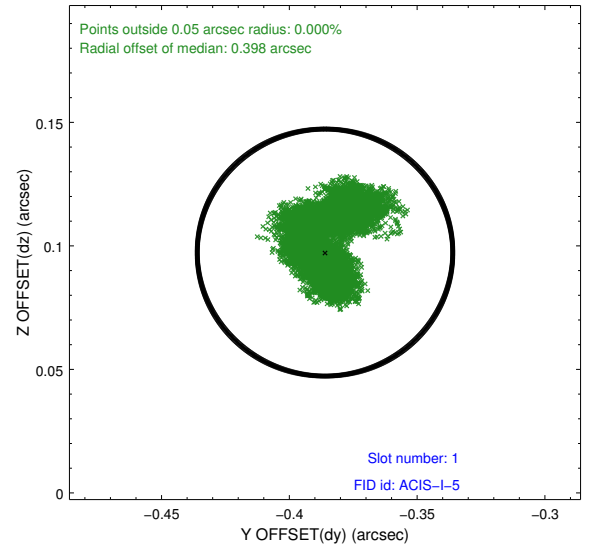
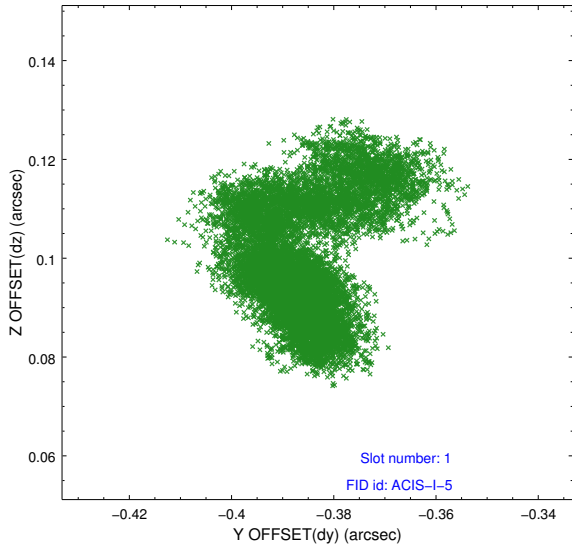


## 2.5 FID Slots

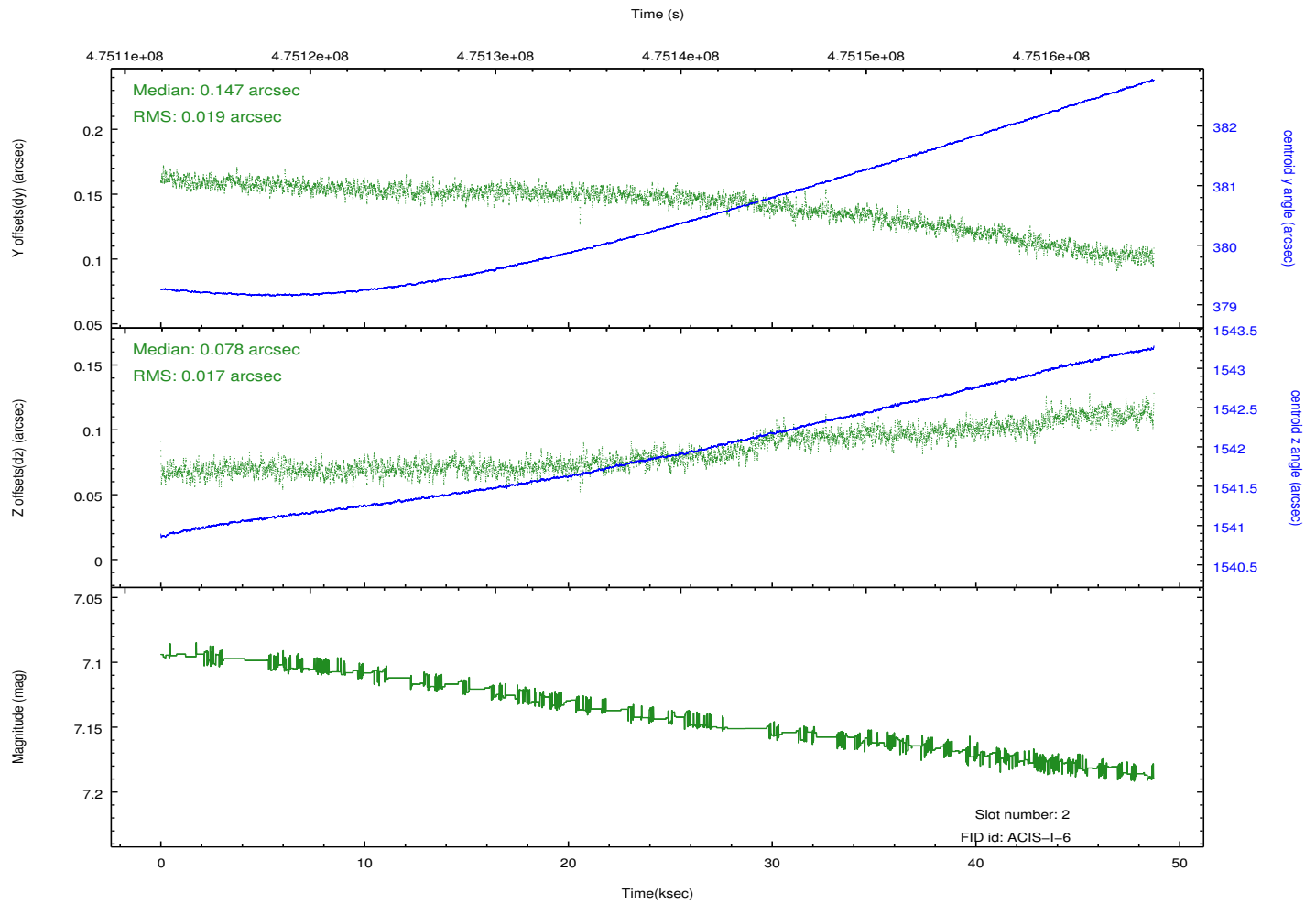
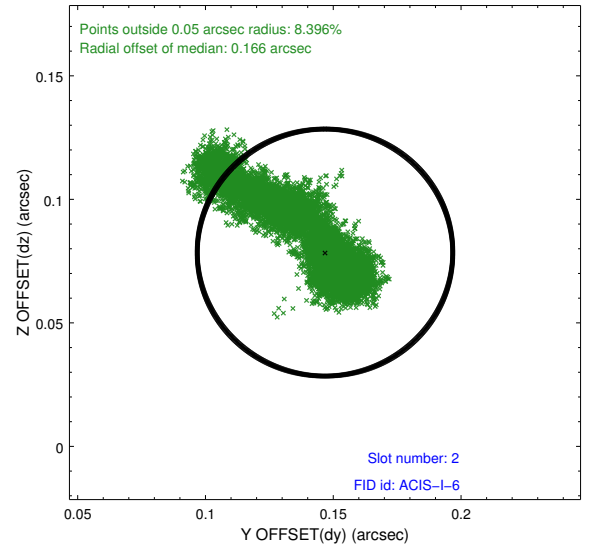
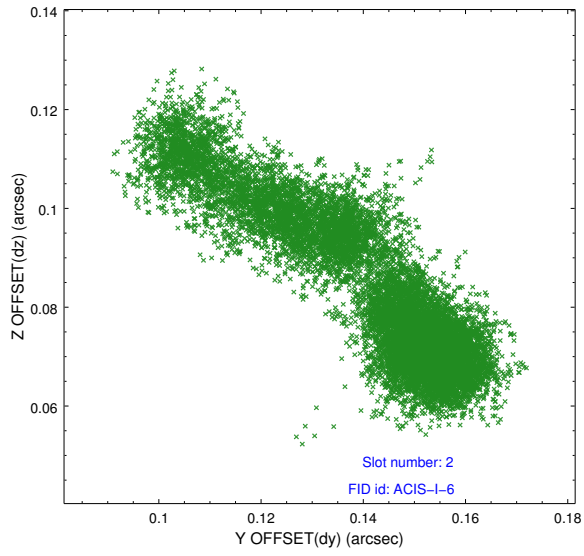
### 2.5.1 Slot 0



## 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)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	48.068600369692

## 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.