

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15157 - L2 Version 2  
Chandra X-Ray Center

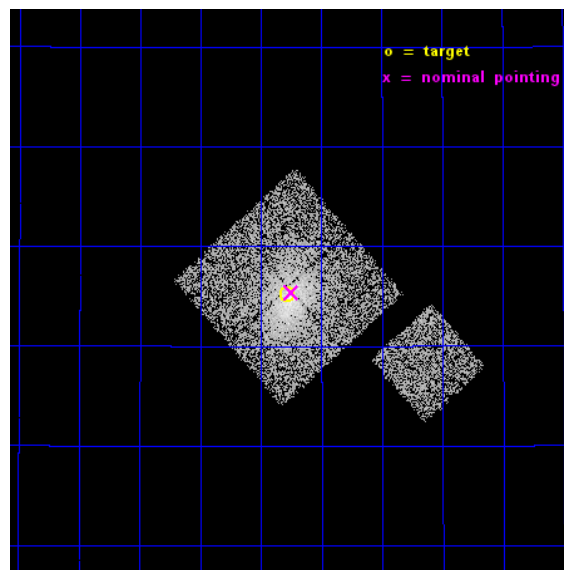
L2 Processing Date : Dec 6 2014

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# 1 Front

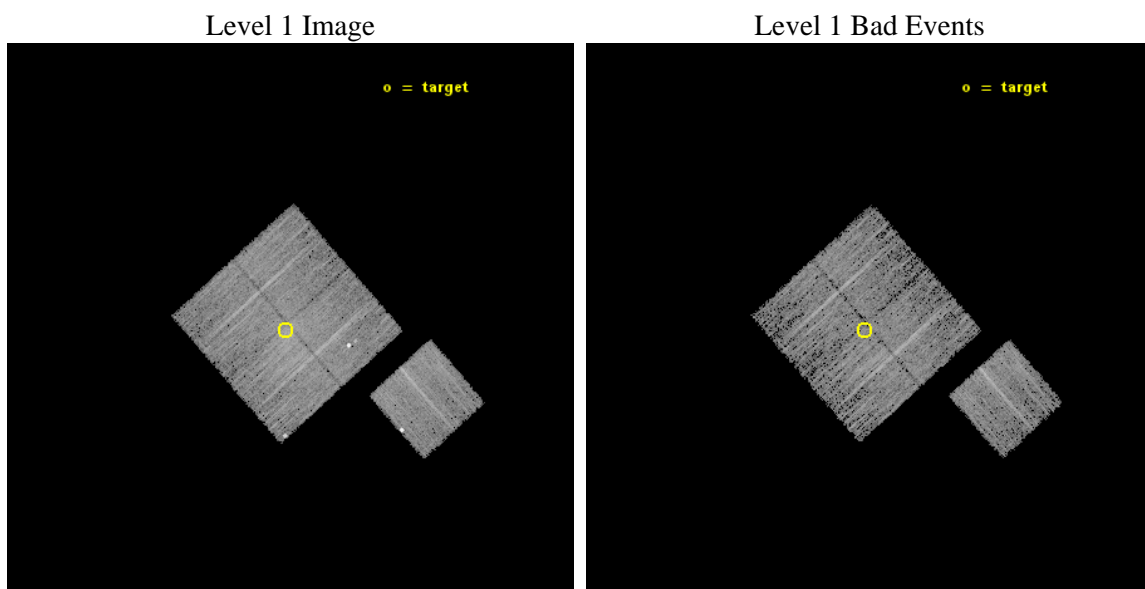
seq_num	801285	Sequence number
obs_id	15157	Observation id
title	COMPLETING eHIFLUGCS: THE ULTIMATE PRECISE AND ACCURATE LOCAL BASELINE	Proposal title
observer	Dr. Thomas Reiprich	Principal investigator
object	A7	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	2.945833	Observer's specified target RA [deg]
dec_targ	32.42	Observer's specified target Dec [deg]
ra_nom	2.9371006935702	Nominal RA [deg]
dec_nom	32.42335594486	Nominal Dec [deg]
roll_nom	138.2426785606	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8081.7000621557	Sum of GTIs [s]
livetime	7976.1067011826	Livetime [s]
ontime0	8081.7000621557	Sum of GTIs [s]
ontime1	8081.7000621557	Sum of GTIs [s]
ontime2	8081.7000621557	Sum of GTIs [s]
ontime3	8081.7000621557	Sum of GTIs [s]
ontime6	8081.7000621557	Sum of GTIs [s]
l2events	25386	Number of level 2 events



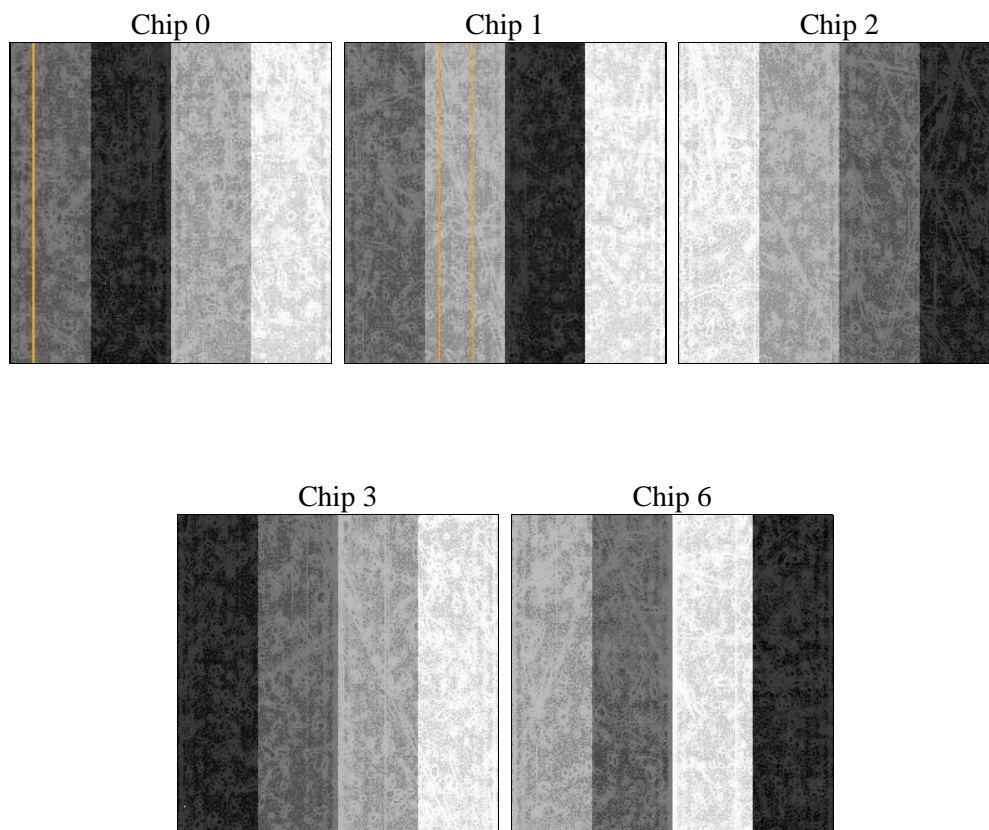
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.909000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	8081.7000621557	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	8081.7000621557	Sum of GTIs [s]
date	2014-12-06T05:31:00	Date and time of file creation	ontime1	8081.7000621557	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	8081.7000621557	Sum of GTIs [s]
			ontime3	8081.7000621557	Sum of GTIs [s]
			ontime6	8081.7000621557	Sum of GTIs [s]
			l1events	199542	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	36055	35938	41745	44389	41415
rejected events	30705	30480	33209	35599	34609
rejected %	85%	84%	79%	80%	83%

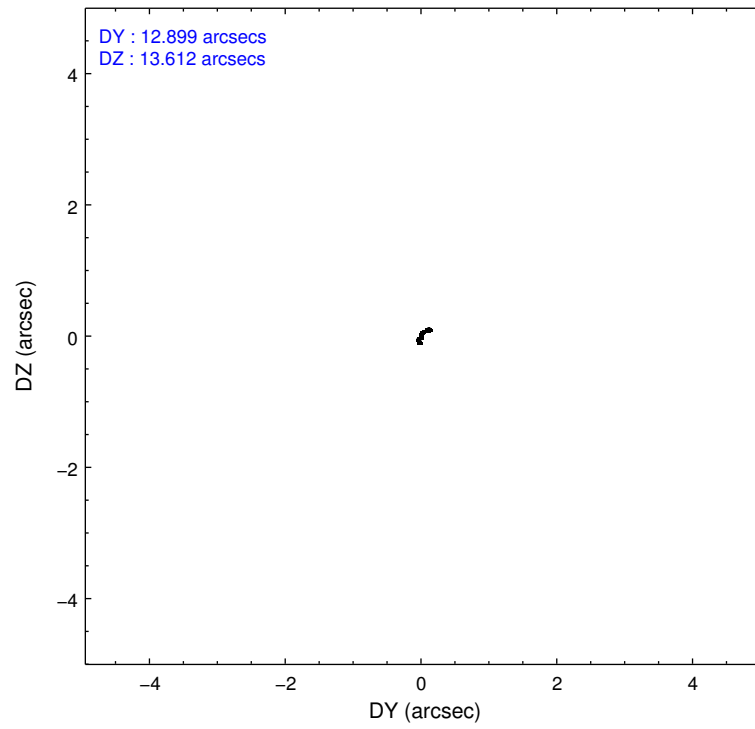
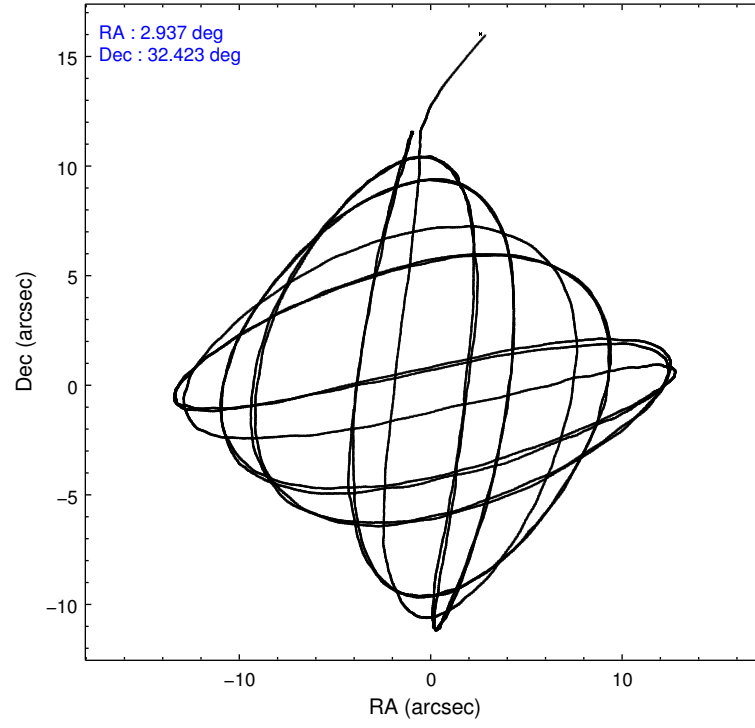
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2423	2152	5646	5480	3934
	6%	5%	13%	12%	9%
grade 1 events	18	19	67	39	17
	0%	0%	0%	0%	0%
grade 2 events	1164	1236	1155	1319	1032
	3%	3%	2%	2%	2%
grade 3 events	453	479	499	516	394
	1%	1%	1%	1%	0%
grade 4 events	461	488	468	543	411
	1%	1%	1%	1%	0%
grade 5 events	1411	1510	1336	1710	1566
	3%	4%	3%	3%	3%
grade 6 events	853	1105	772	949	1041
	2%	3%	1%	2%	2%
grade 7 events	29272	28949	31802	33833	33020
	81%	80%	76%	76%	79%

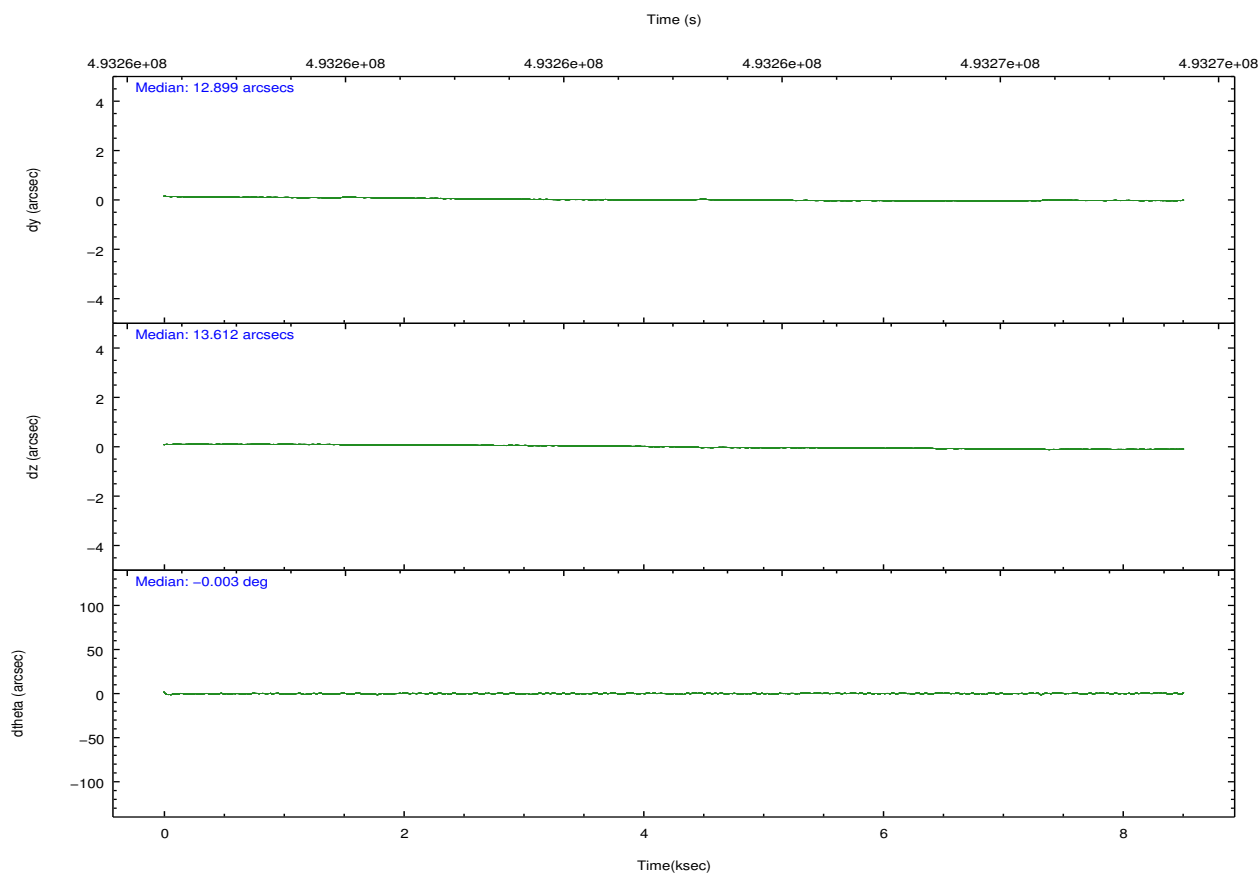
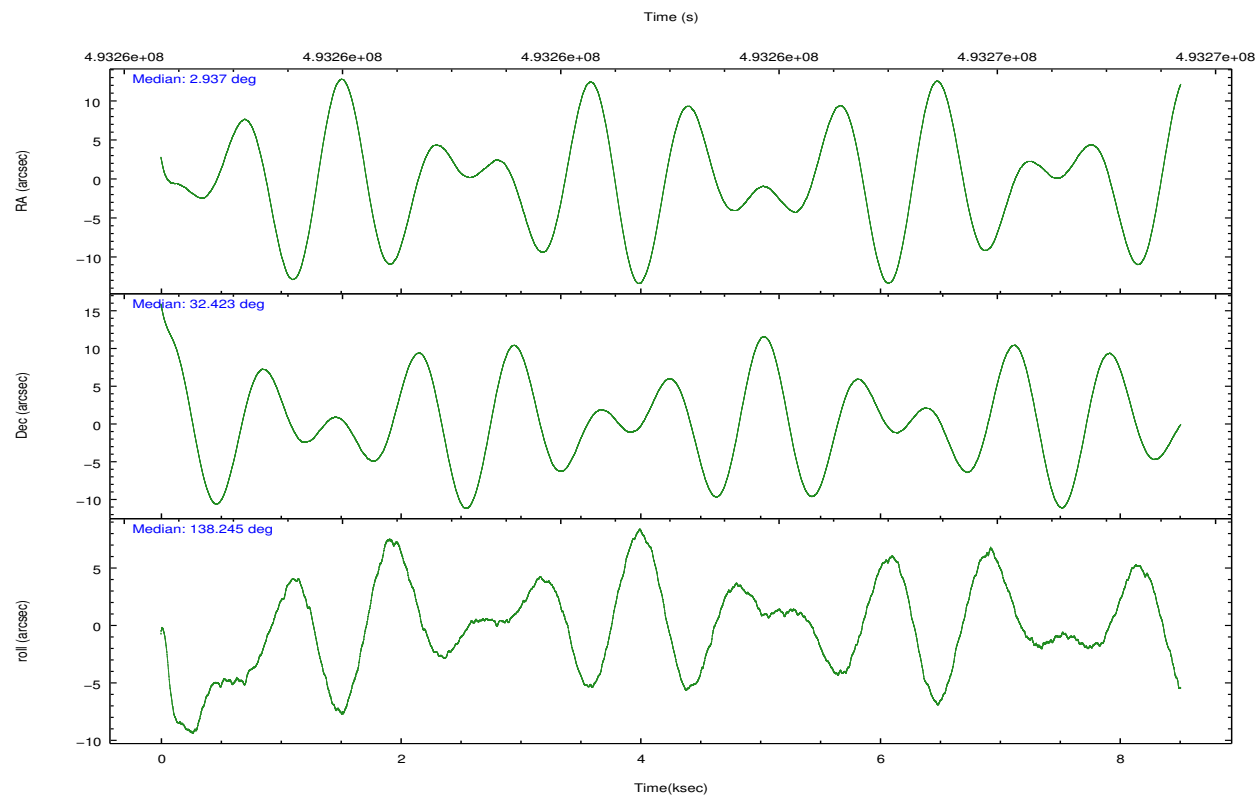


## 2.2 Compared Parameters

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	2.969038	2.937100693570244	CCD I2 on	Y	Y
[deg] Pointing Dec	32.417842	32.42335594485975	CCD I3 on	Y	Y
[deg] Pointing Roll	138.016862	138.2426785605974	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)	493259255.184000	493258153.96815	CCD S5 on	N	N
Observation start date	2013-08-19T00:26:28	2013-08-19T00:09:13	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	493267256.184000	493267493.25616	On-chip summing requested	N	N
Observation end date	2013-08-19T02:39:49	2013-08-19T02:44:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



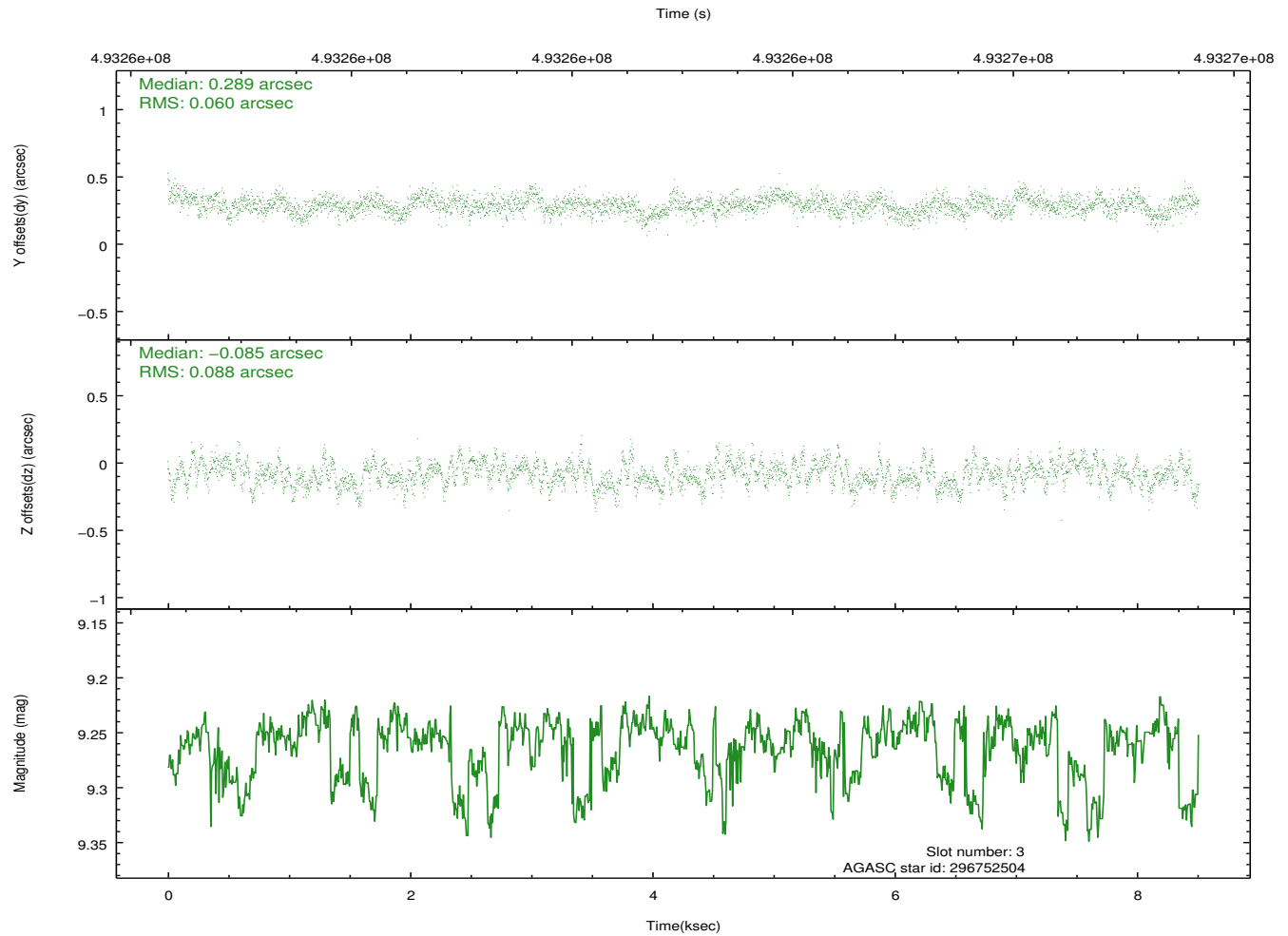
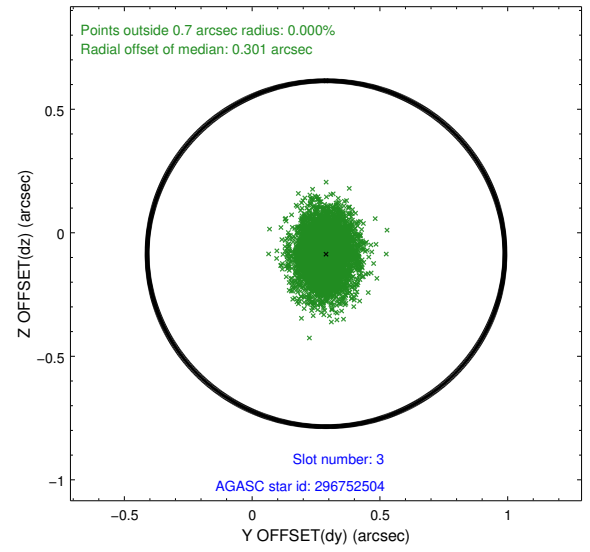
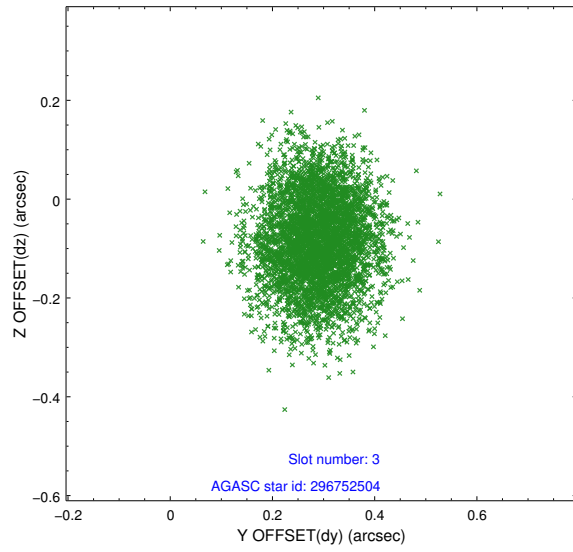


### Slot Statistics

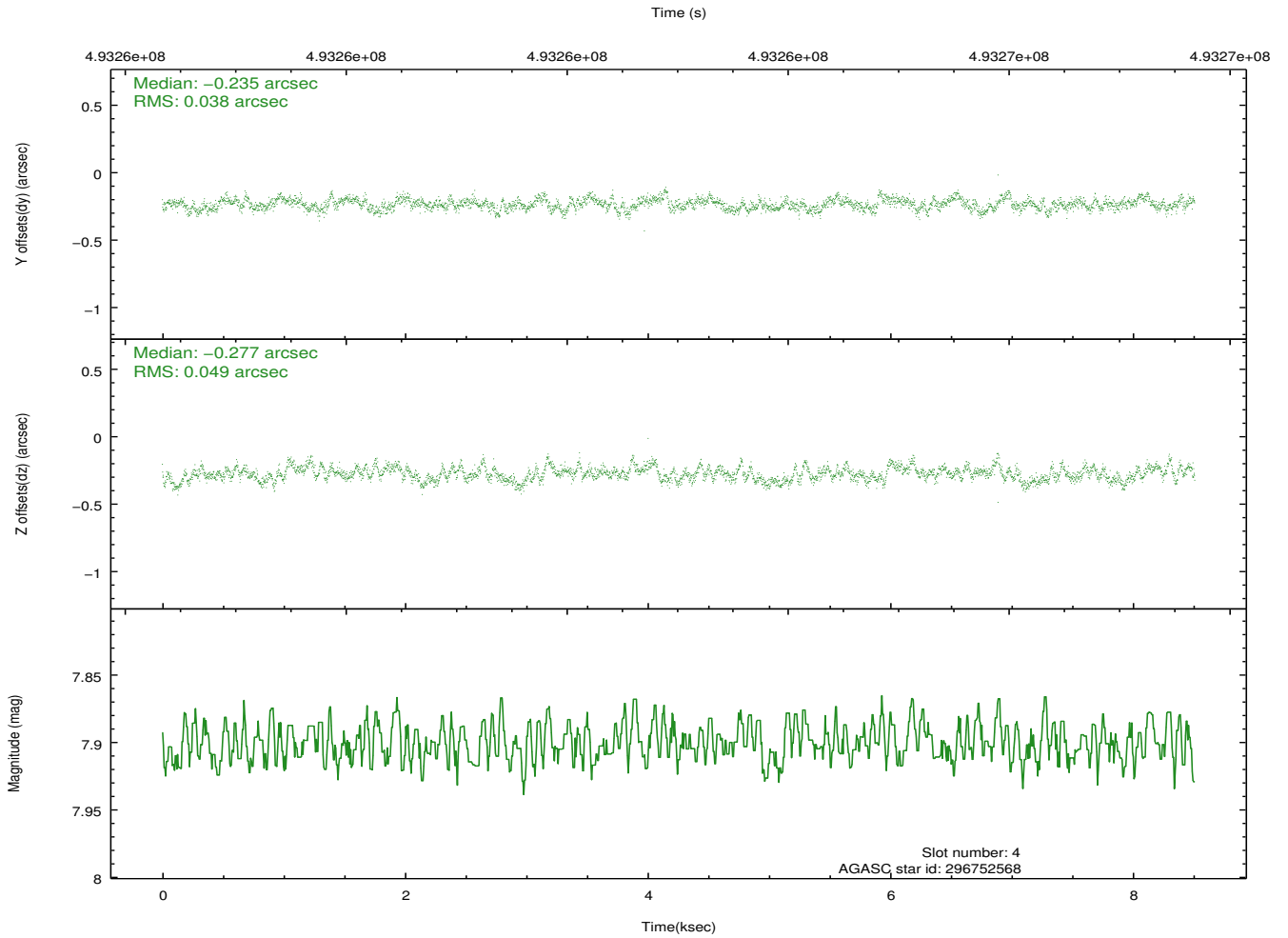
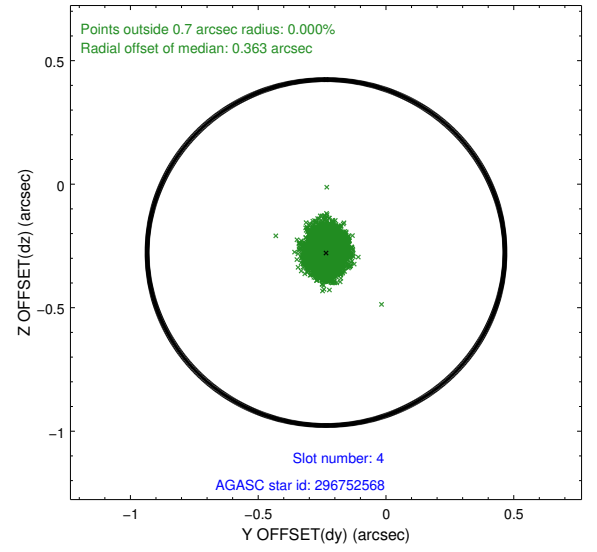
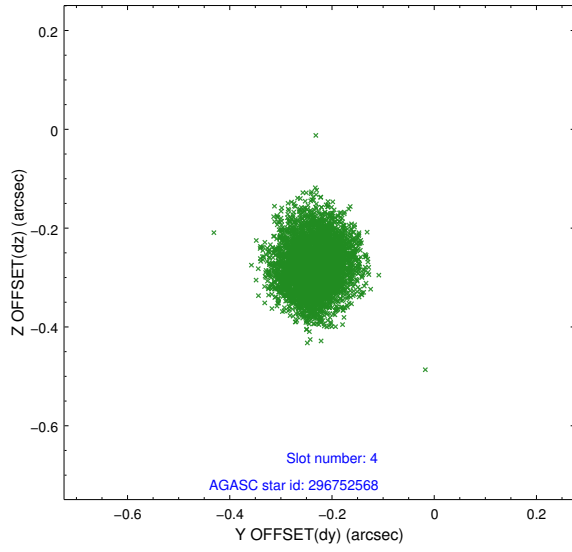
lot	status	used	id	mag	n_pts	med_dy	med_dz	drl	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.23	2076	0.059	-0.027	0.006	0.011	0.000000	0.000000	926.67	-837.15
1	FID		ACIS-I-5	7.22	2076	-0.230	0.057	0.007	0.011	0.000000	0.000000	-1821.39	1060.03
2	FID		ACIS-I-6	7.22	2076	0.080	0.041	0.007	0.012	0.000000	0.000000	391.50	1705.28
3	GUIDE	used	296752504	9.26	4149	0.289	-0.085	0.114	0.184	3.124770	32.203916	-867.11	254.94
4	GUIDE	used	296752568	7.90	4152	-0.235	-0.277	0.067	0.105	3.440928	32.556698	-728.23	-1331.82
5	GUIDE	used	296753288	7.95	4151	-0.216	0.225	0.079	0.126	2.706141	32.680571	1225.22	-171.02
6	BAD	used	296753512	5.28	2591	-0.172	-0.024	0.041	0.065	2.696658	32.242575	195.29	1022.50
7	GUIDE	used	296753016	8.82	4150	0.273	0.153	0.077	0.122	3.652161	32.072873	-2374.88	-475.16

## 2.4 Star Slots

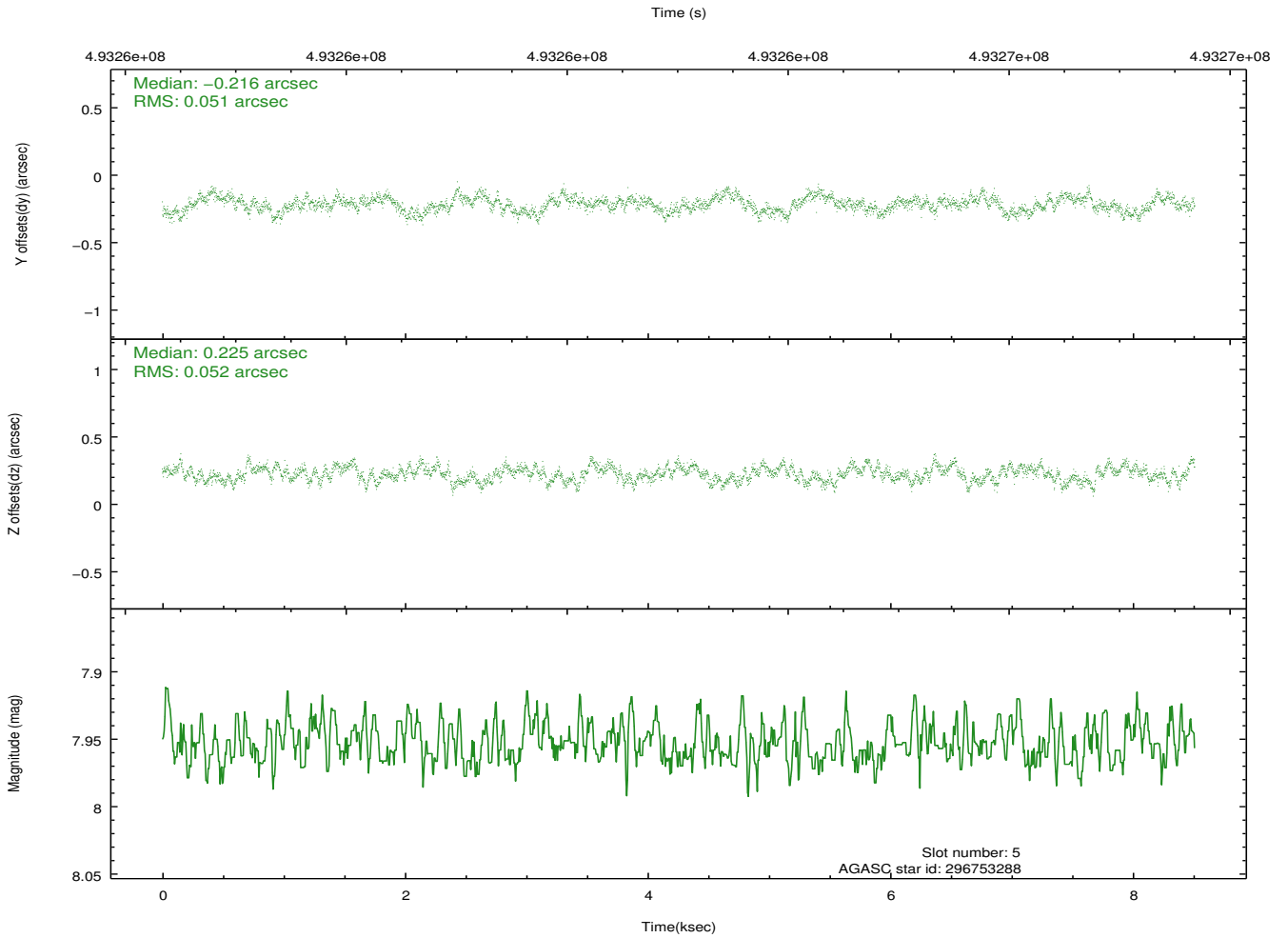
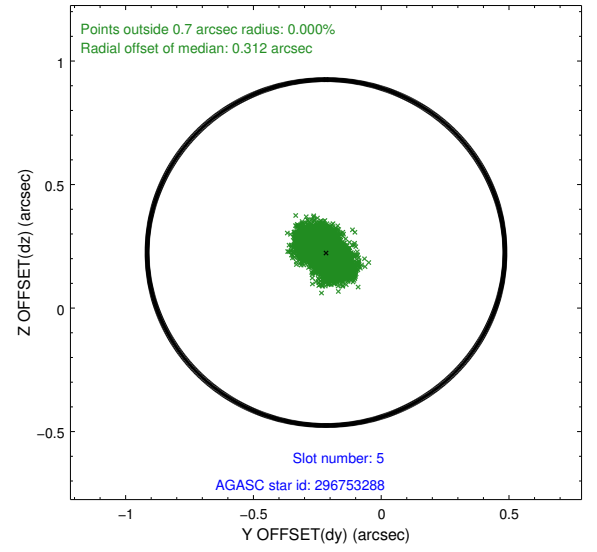
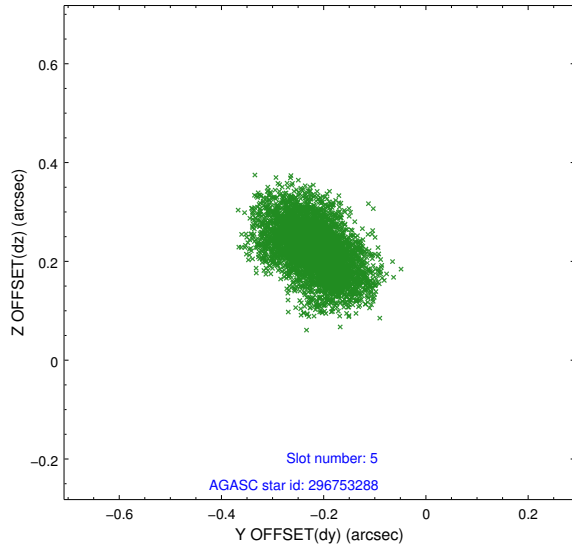
### 2.4.1 Slot 3



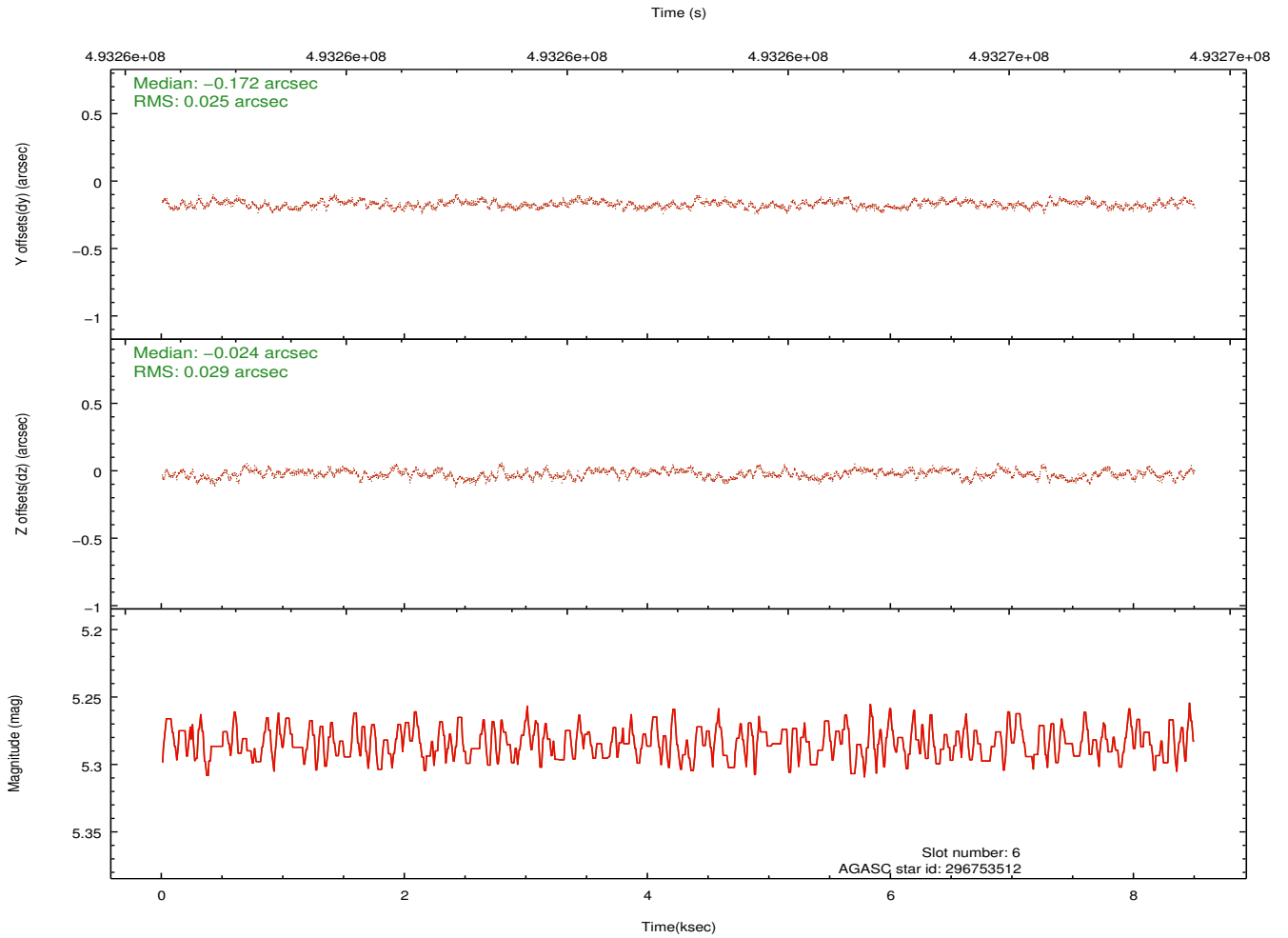
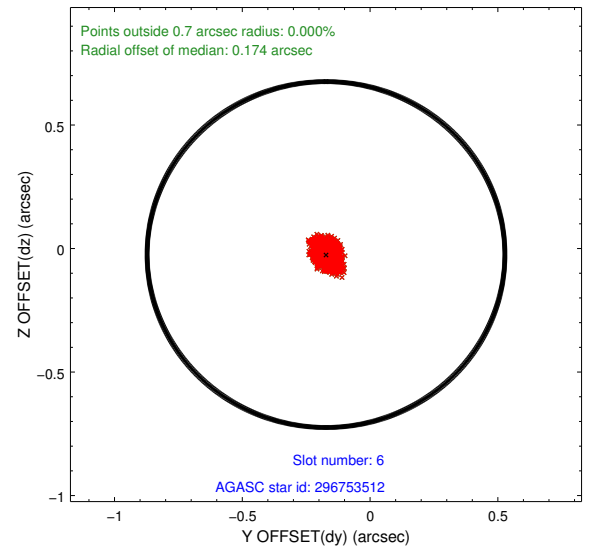
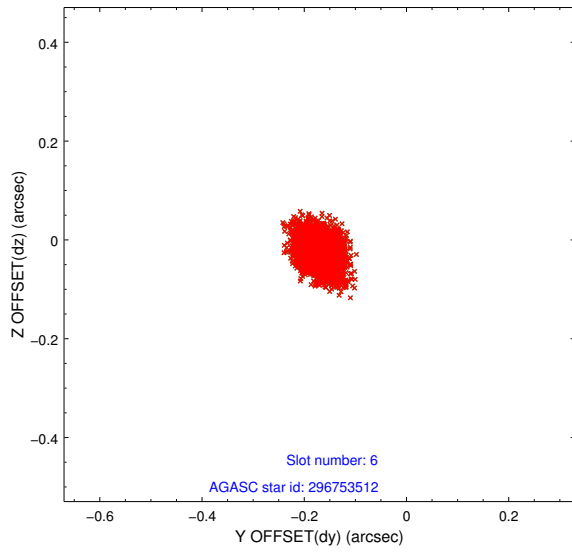
## 2.4.2 Slot 4



### 2.4.3 Slot 5

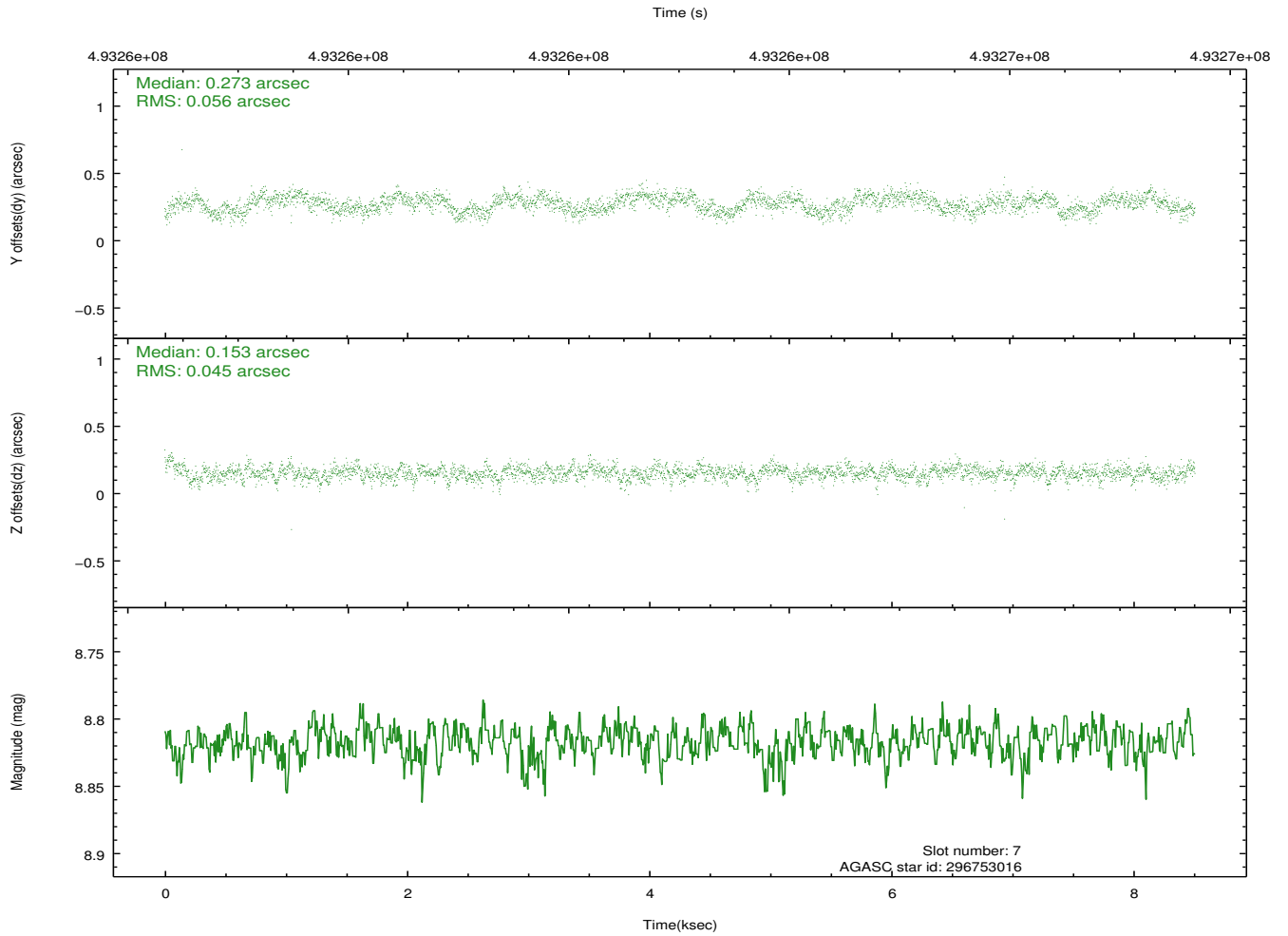
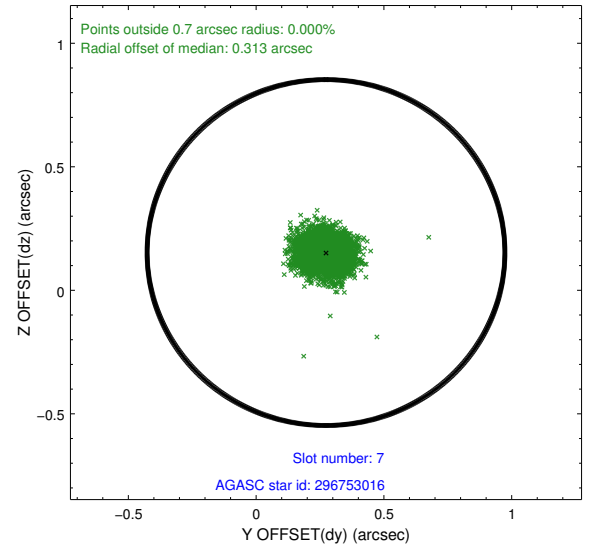
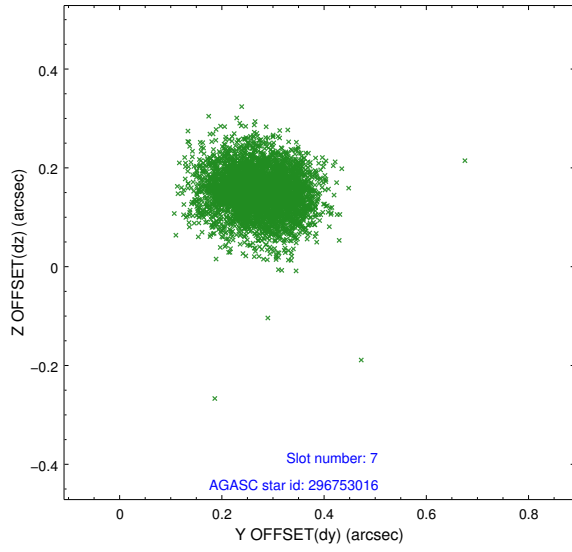


## 2.4.4 Slot 6



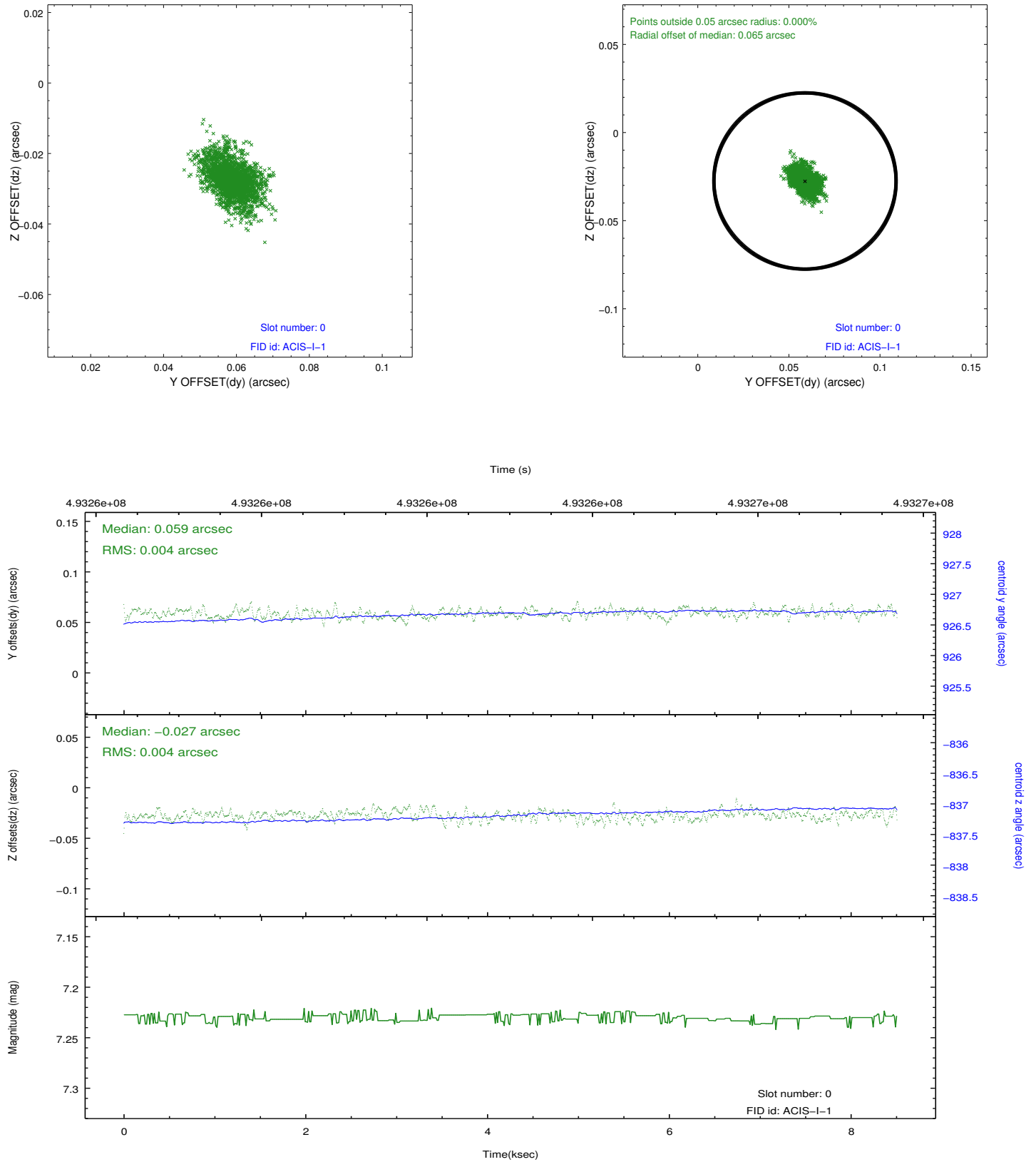


## 2.4.5 Slot 7

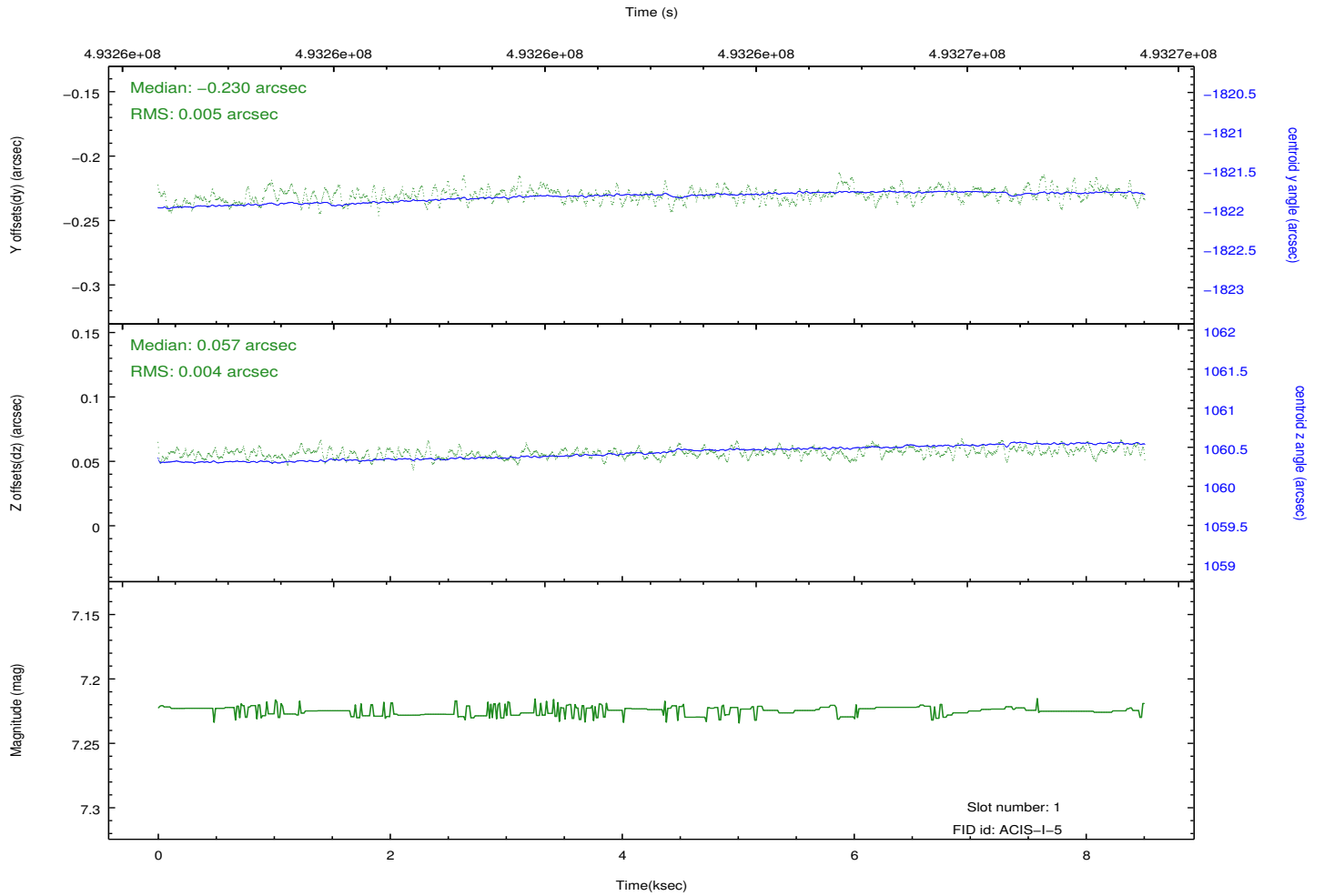
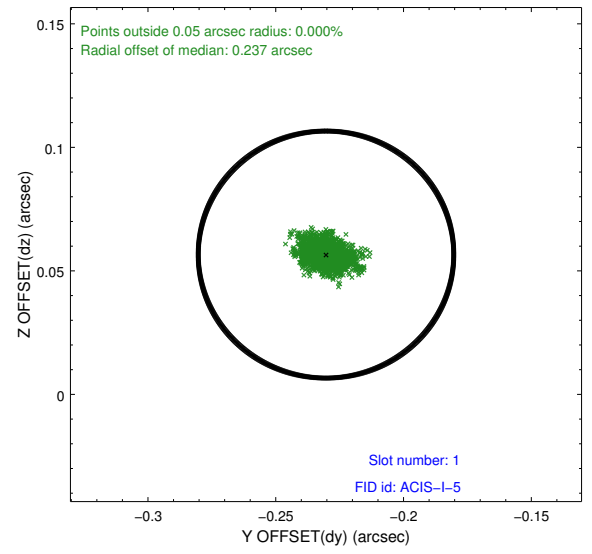
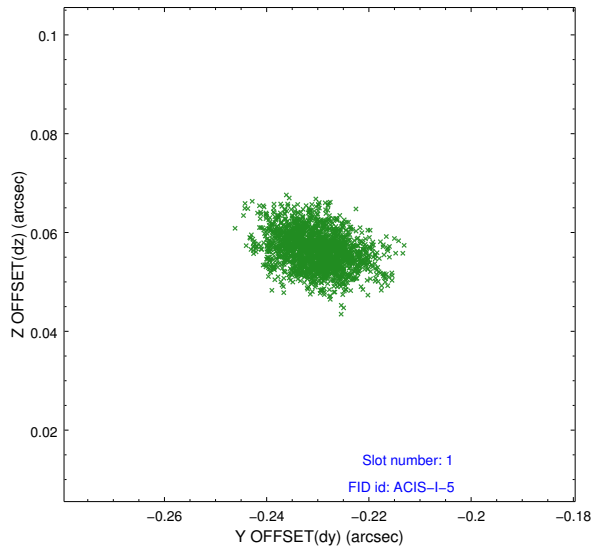


## 2.5 FID Slots

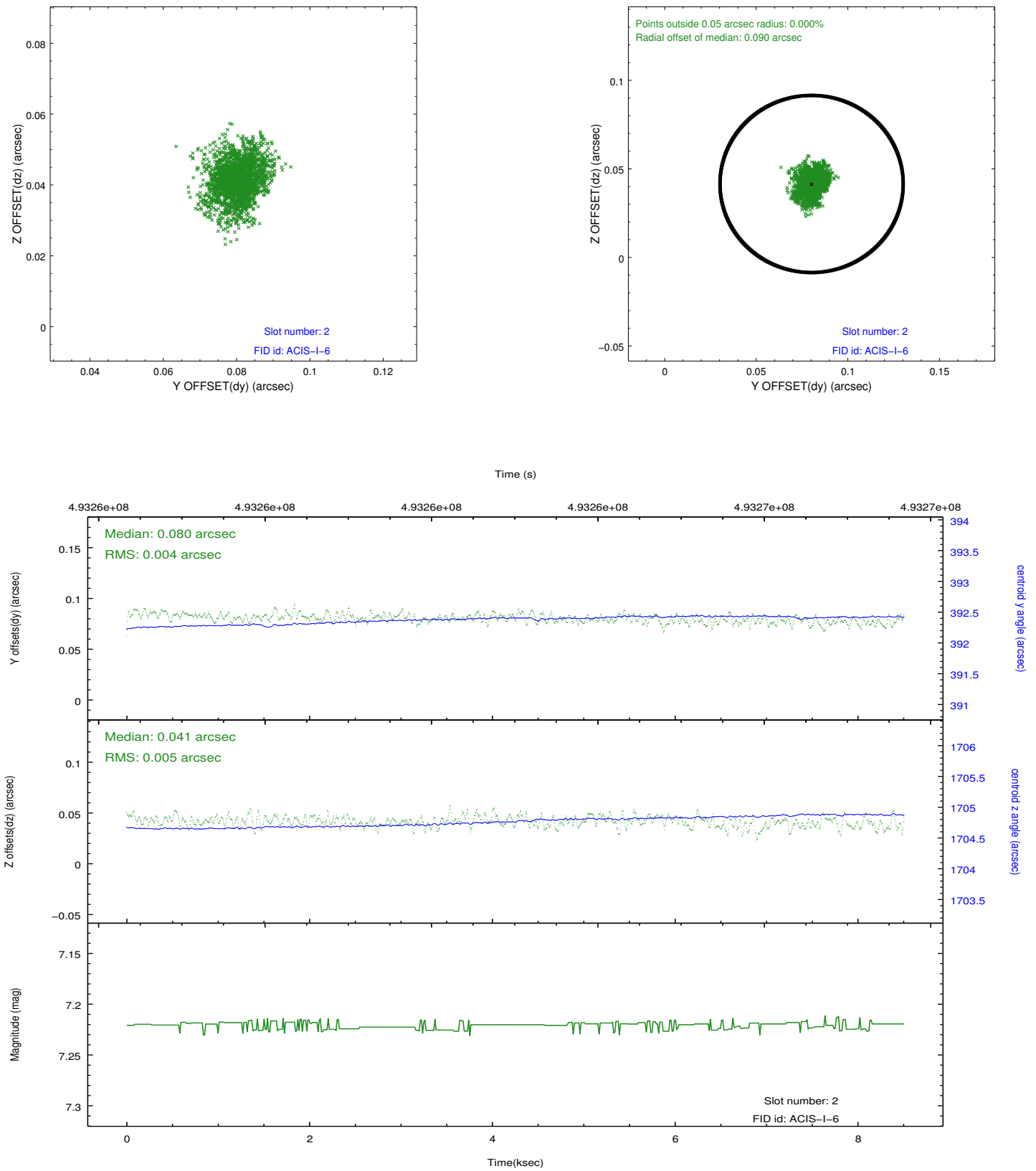
### 2.5.1 Slot 0



## 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)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0817000621557

## 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.