

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17527 - L2 Version 1  
Chandra X-Ray Center

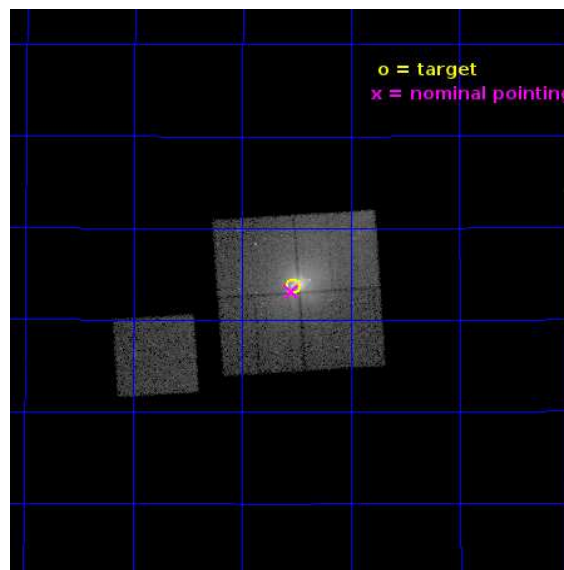
L2 Processing Date : Oct 12 2015

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# 1 Front

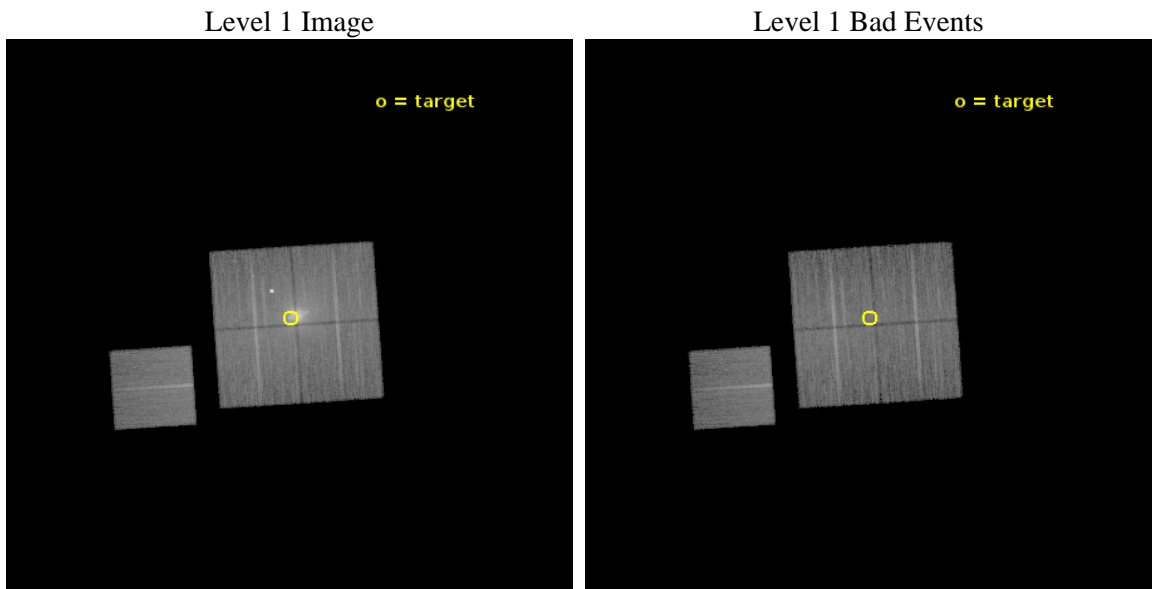
seq_num	703133	Sequence number
obs_id	17527	Observation id
title	The Rise to Power: Half a Billion Years of Intense AGN Activity in the Merging Cluster Cygnus A	Proposal title
observer	Dr. Michael Wise	Principal investigator
object	Cygnus A - E Hotspot	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.883333	Observer's specified target RA [deg]
dec_targ	40.727889	Observer's specified target Dec [deg]
ra_nom	299.88681182558	Nominal RA [deg]
dec_nom	40.718210126772	Nominal Dec [deg]
roll_nom	266.20642249095	Nominal Roll [deg]
revision	1	Processing version of data
ontime	27072.259188056	Sum of GTIs [s]
livetime	26718.540191457	Livetime [s]
ontime0	27075.400208354	Sum of GTIs [s]
ontime1	27072.259188294	Sum of GTIs [s]
ontime2	27075.400208354	Sum of GTIs [s]
ontime3	27072.259188056	Sum of GTIs [s]
ontime6	27075.400208354	Sum of GTIs [s]
l2events	197374	Number of level 2 events



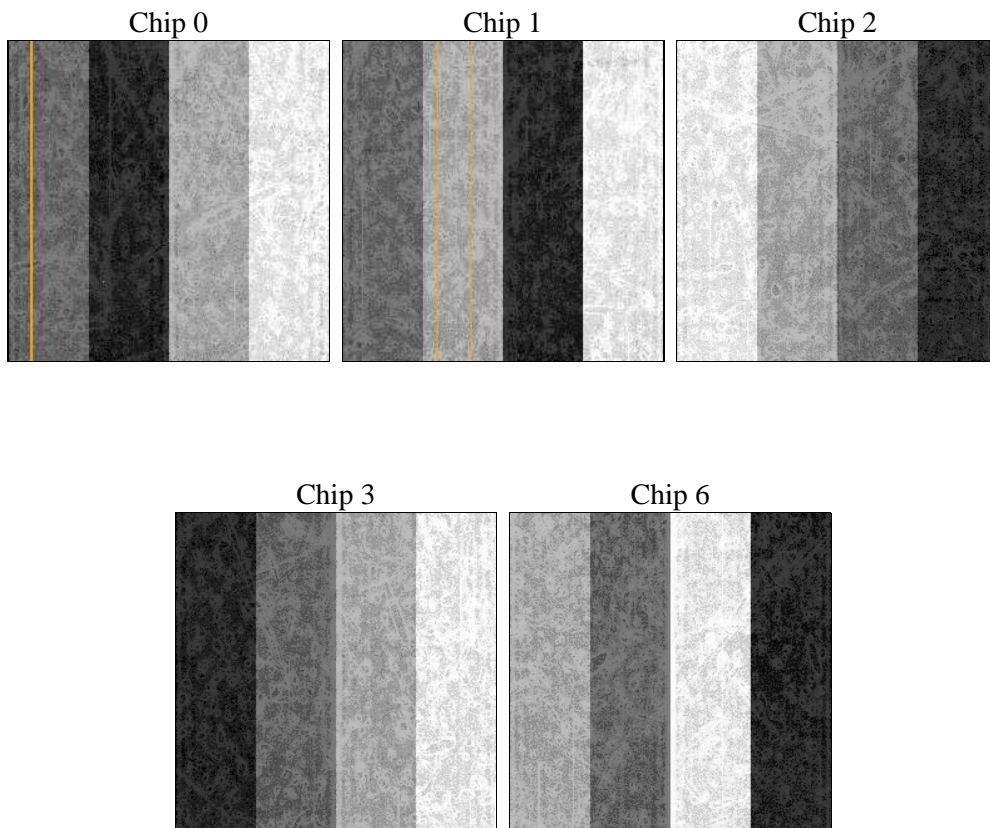
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.2.1	Processing system revision	ontime	27072.259188056	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	27075.400208354	Sum of GTIs [s]
date	2015-10-12T04:43:29	Date and time of file creation	ontime1	27072.259188294	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	27075.400208354	Sum of GTIs [s]
			ontime3	27072.259188056	Sum of GTIs [s]
			ontime6	27075.400208354	Sum of GTIs [s]
			l1events	857729	Number of level 1 events

### 2.1.4 Events

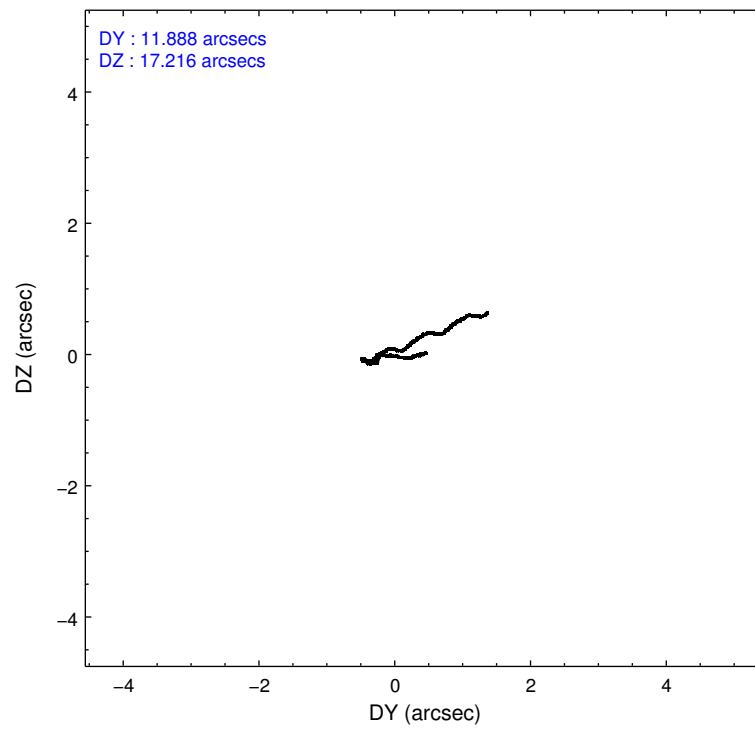
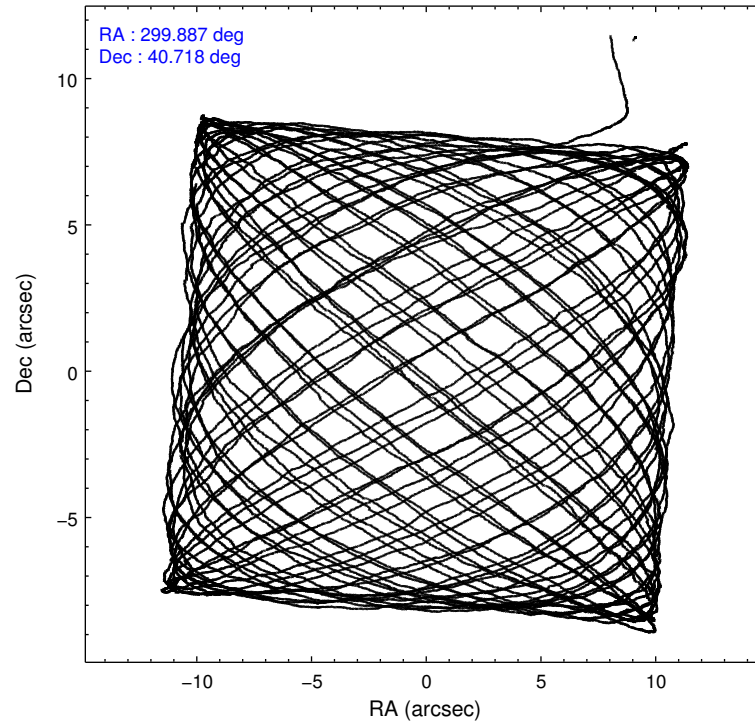
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	145825	207834	162314	191896	149860
rejected events	117912	119579	135660	126211	132516
rejected %	80%	57%	83%	65%	88%

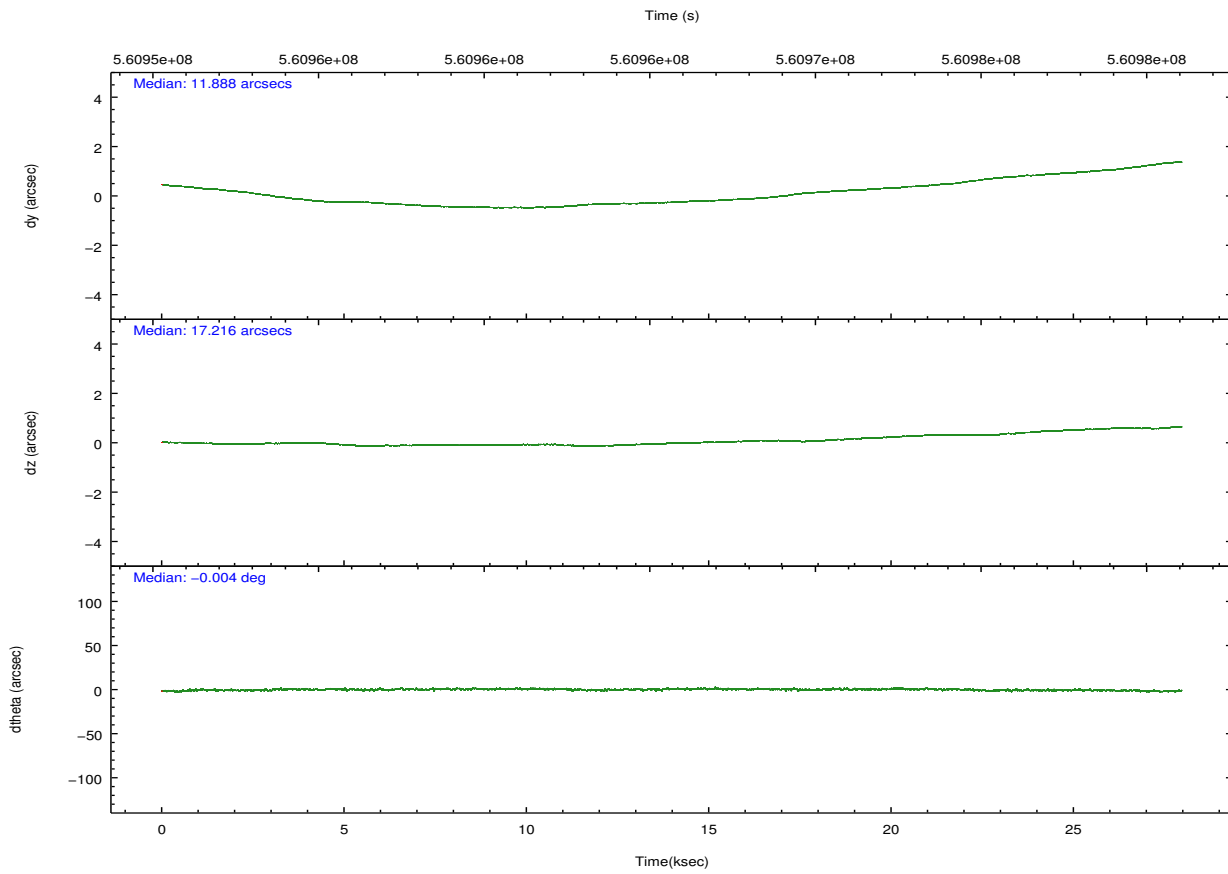
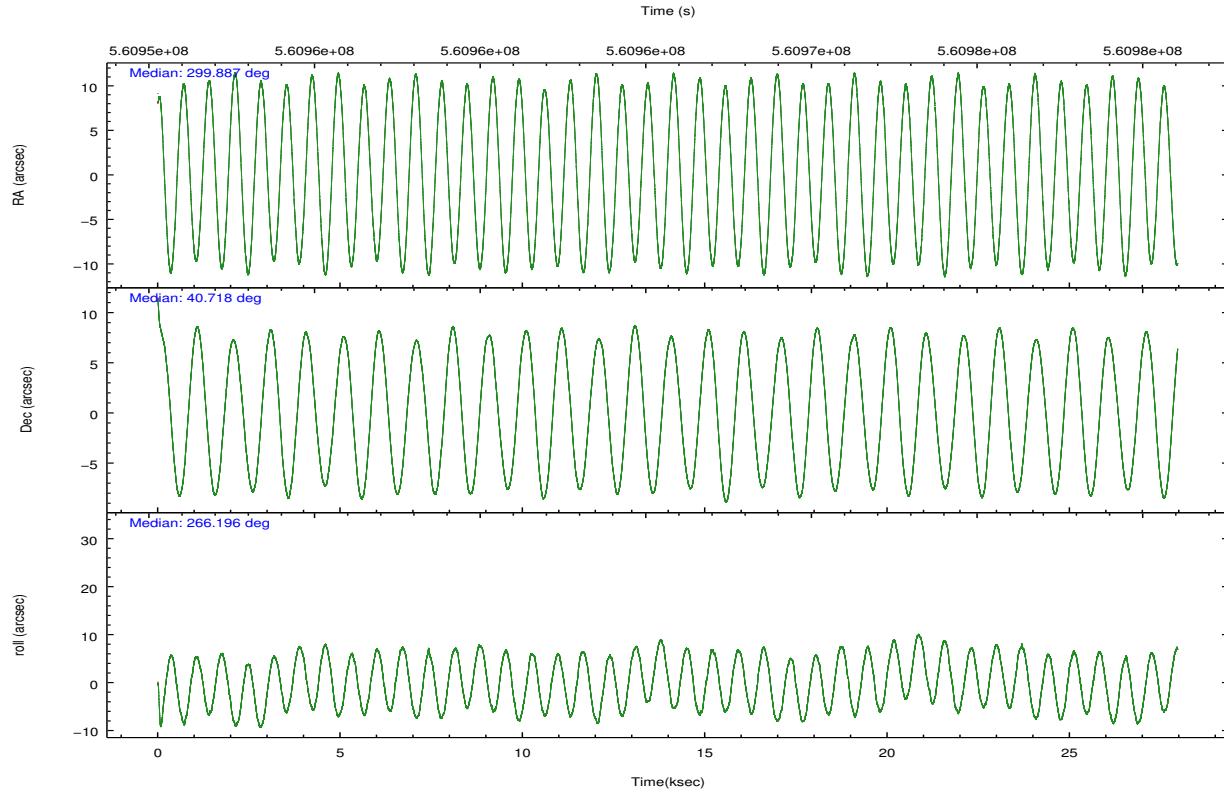
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	14807	57185	14288	38321	5967
	10%	27%	8%	19%	3%
grade 1 events	112	389	126	226	72
	0%	0%	0%	0%	0%
grade 2 events	5292	15351	4916	16352	4028
	3%	7%	3%	8%	2%
grade 3 events	2127	4059	2020	3110	1569
	1%	1%	1%	1%	1%
grade 4 events	1957	4042	1972	3022	1644
	1%	1%	1%	1%	1%
grade 5 events	6230	7088	5912	7335	7023
	4%	3%	3%	3%	4%
grade 6 events	3734	7647	3469	4895	4143
	2%	3%	2%	2%	2%
grade 7 events	111566	112073	129611	118635	125414
	76%	53%	79%	61%	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	299.870603	299.8868118255793	CCD I2 on	Y	Y
[deg] Pointing Dec	40.742930	40.7182101267723	CCD I3 on	Y	Y
[deg] Pointing Roll	266.008314	266.2064224909472	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)	560952649.184000	560950816.96595	CCD S5 on	N	N
Observation start date	2015-10-11T12:09:41	2015-10-11T11:40:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	560979649.184000	560980361.56762	On-chip summing requested	N	N
Observation end date	2015-10-11T19:39:41	2015-10-11T19:52:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





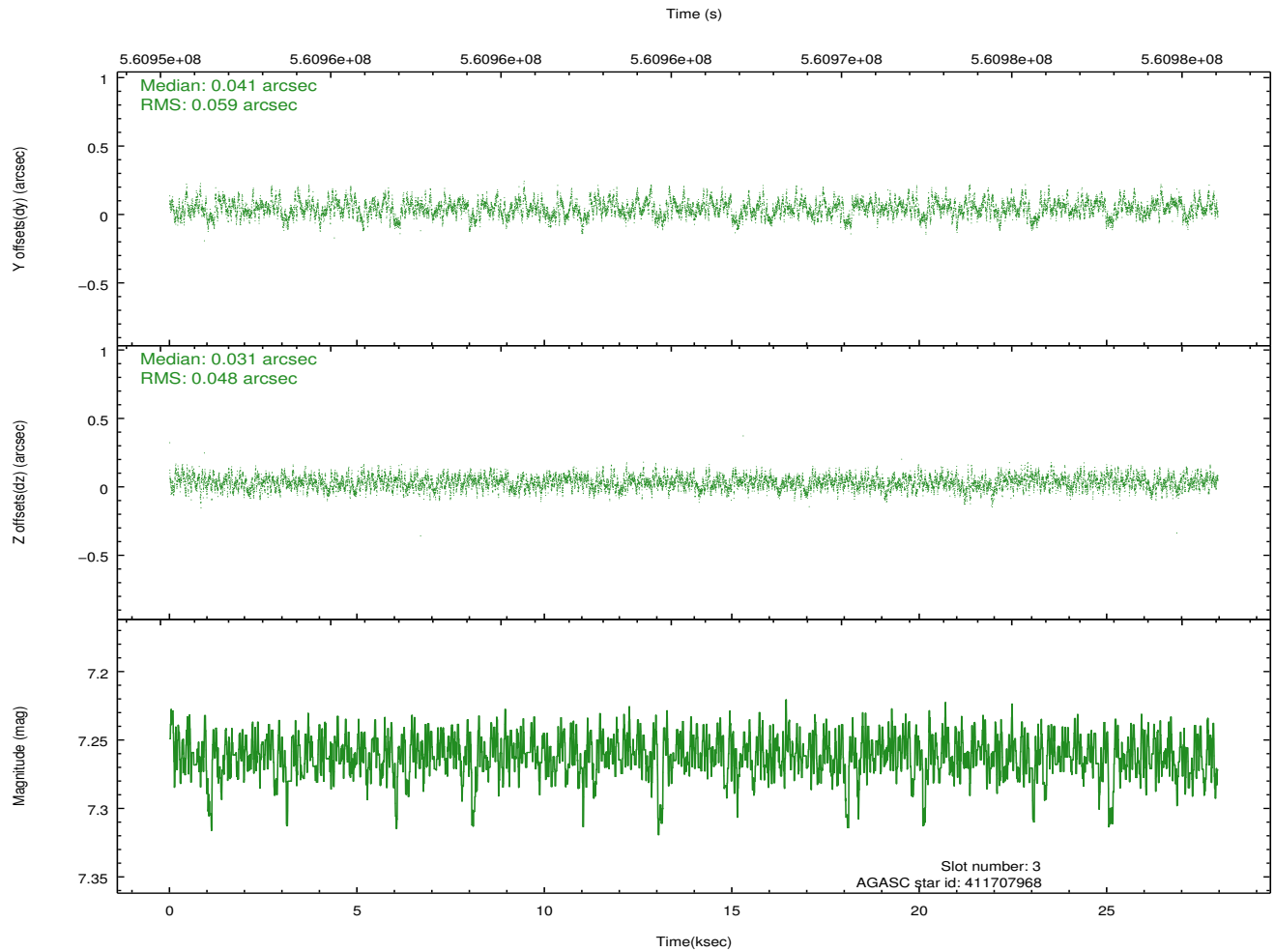
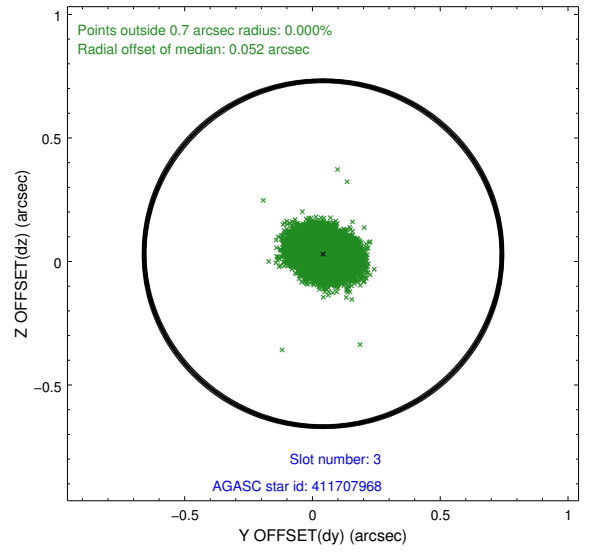
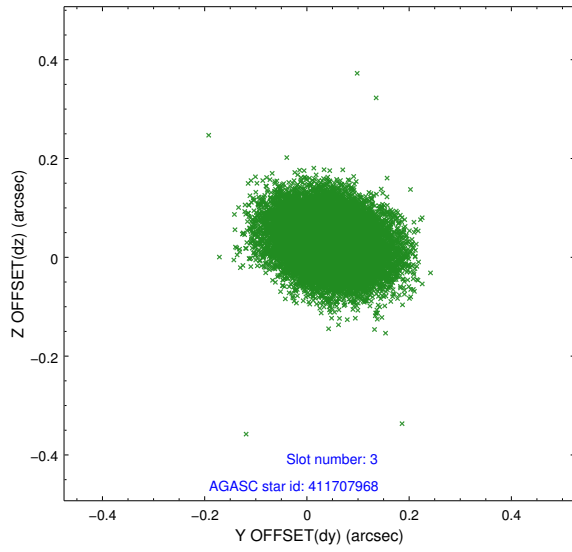
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	6818	-0.014	-0.113	0.016	0.035	0.000000	0.000000	927.53	-841.06
1	FID		ACIS-I-4	7.17	6819	0.302	0.109	0.021	0.042	0.000000	0.000000	2147.88	1058.96
2	FID		ACIS-I-5	7.25	6820	-0.387	0.075	0.015	0.026	0.000000	0.000000	-1820.79	1056.74
3	GUIDE	used	411707968	7.26	13640	0.041	0.031	0.081	0.131	299.509933	40.926839	-594.01	-1024.44
4	GUIDE	used	413421016	8.68	13637	-0.018	-0.279	0.086	0.139	300.612426	40.446254	915.39	2101.24
5	GUIDE	used	413937088	7.99	13641	0.021	0.105	0.087	0.153	300.780094	41.277874	-2105.40	2319.99
6	GUIDE	used	411722416	7.87	13628	0.292	-0.148	0.118	0.191	298.936507	40.391736	1426.85	-2467.24
7	GUIDE	used	413929808	8.44	13635	-0.328	0.290	0.088	0.153	300.621353	41.348826	-2326.29	1871.69

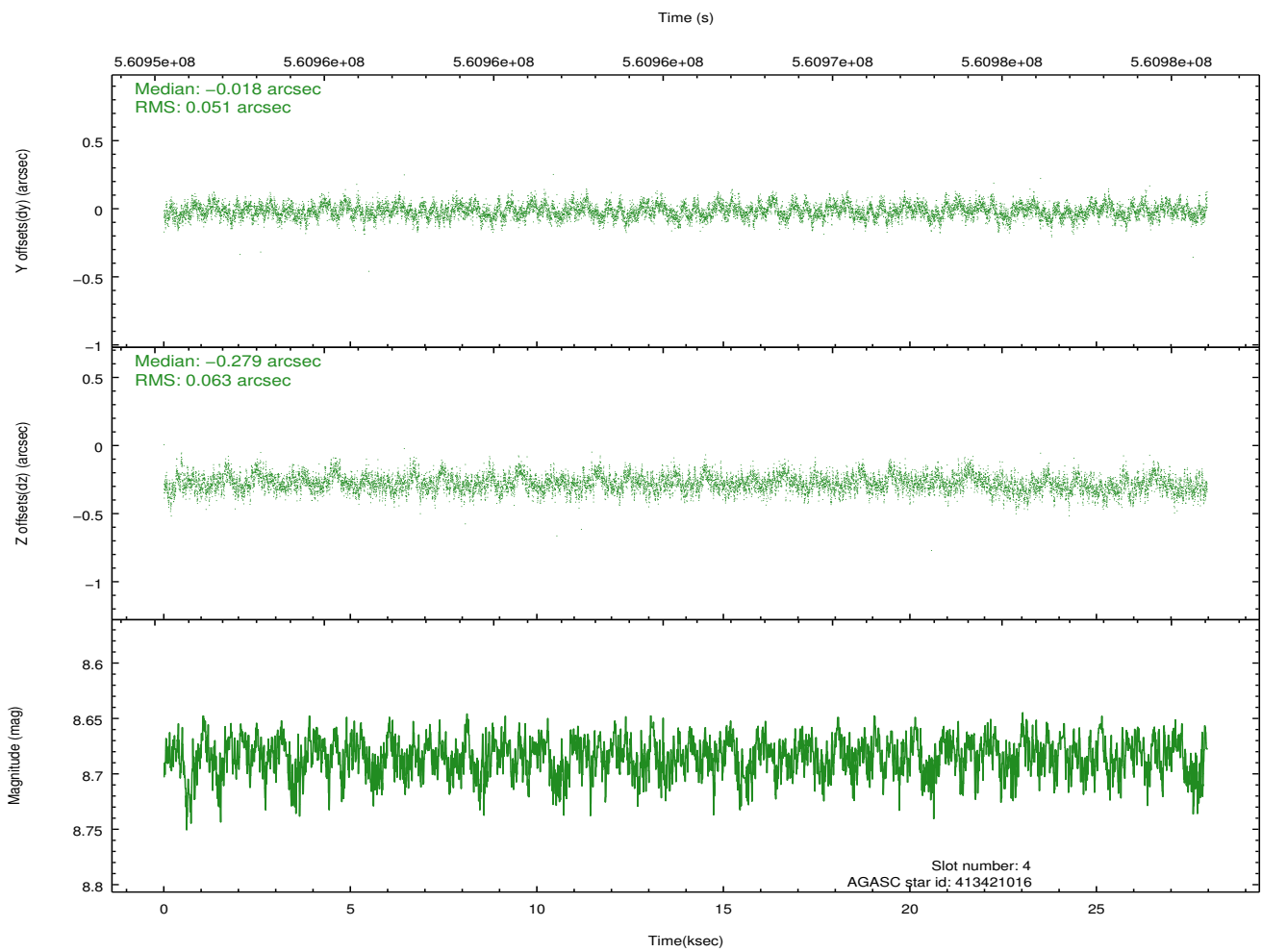
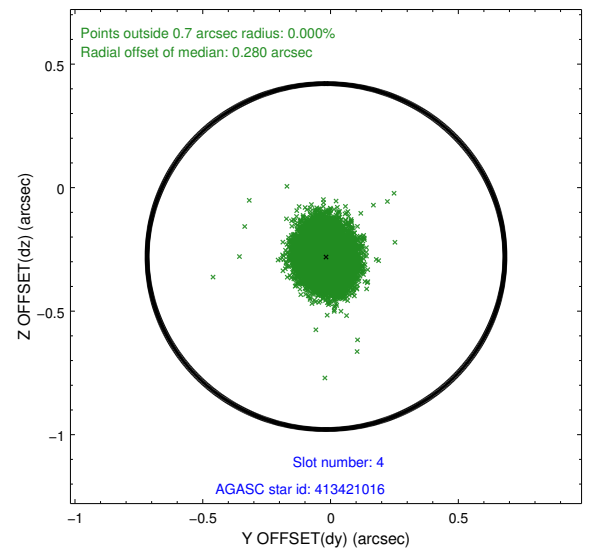
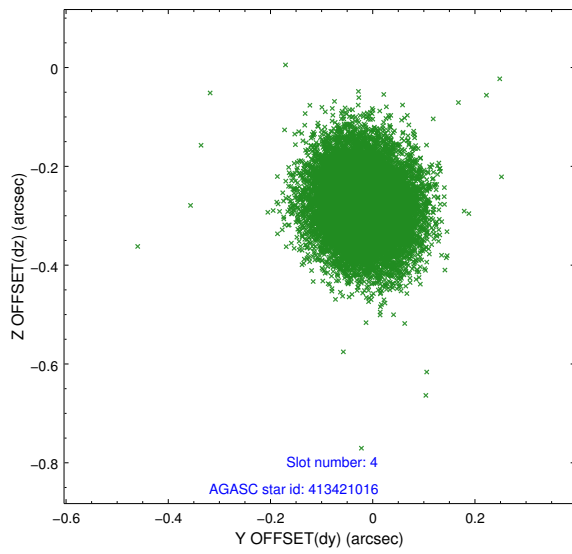
∞

## 2.4 Star Slots

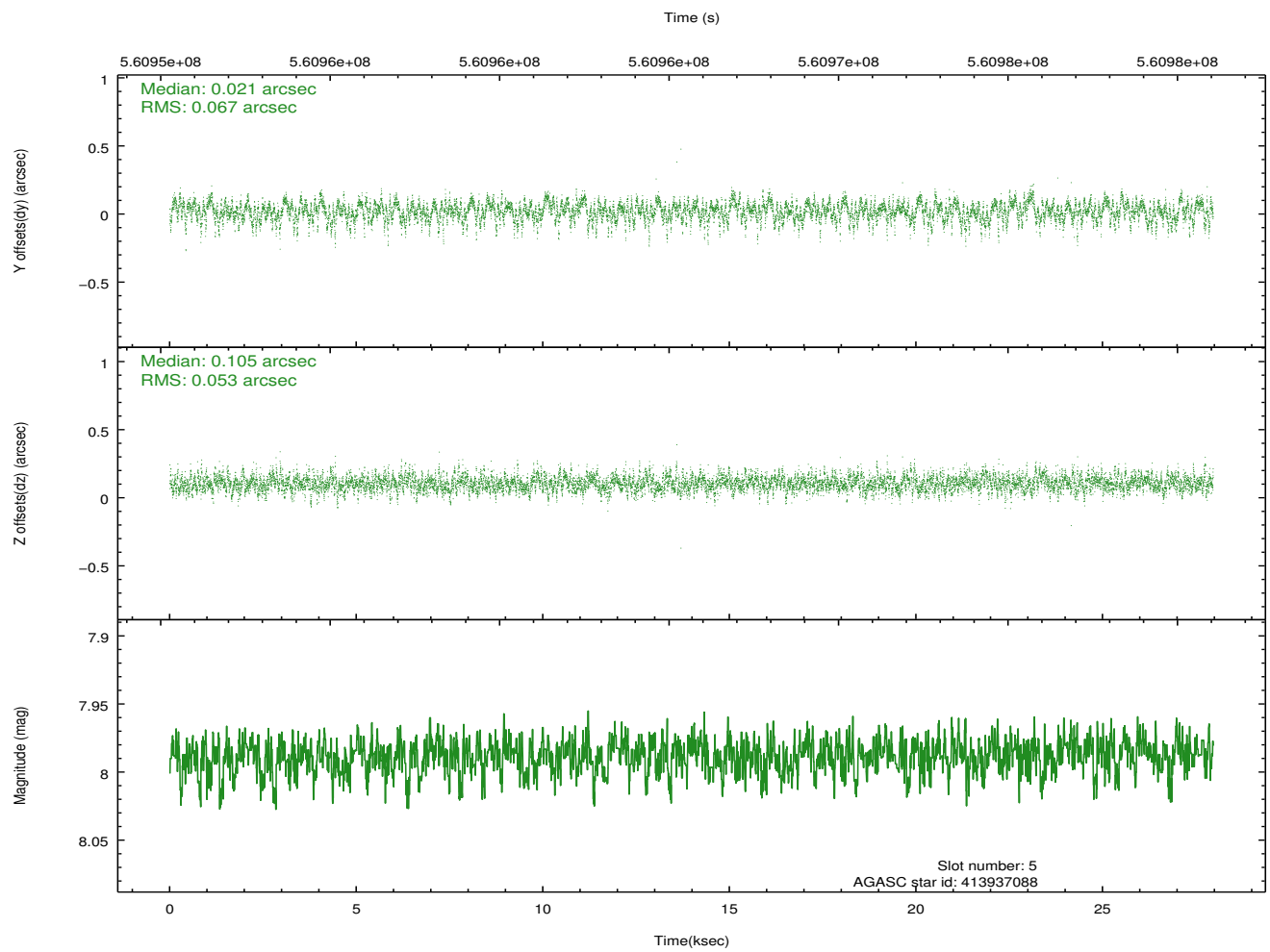
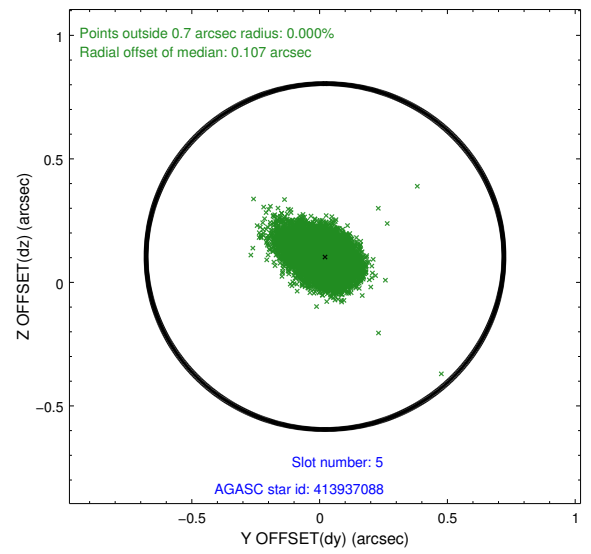
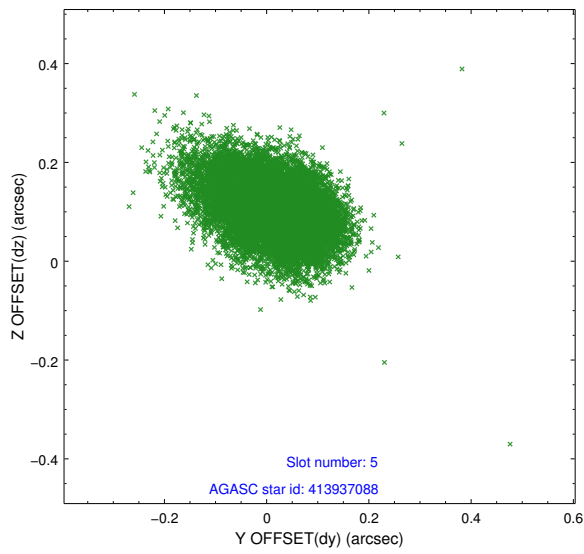
### 2.4.1 Slot 3



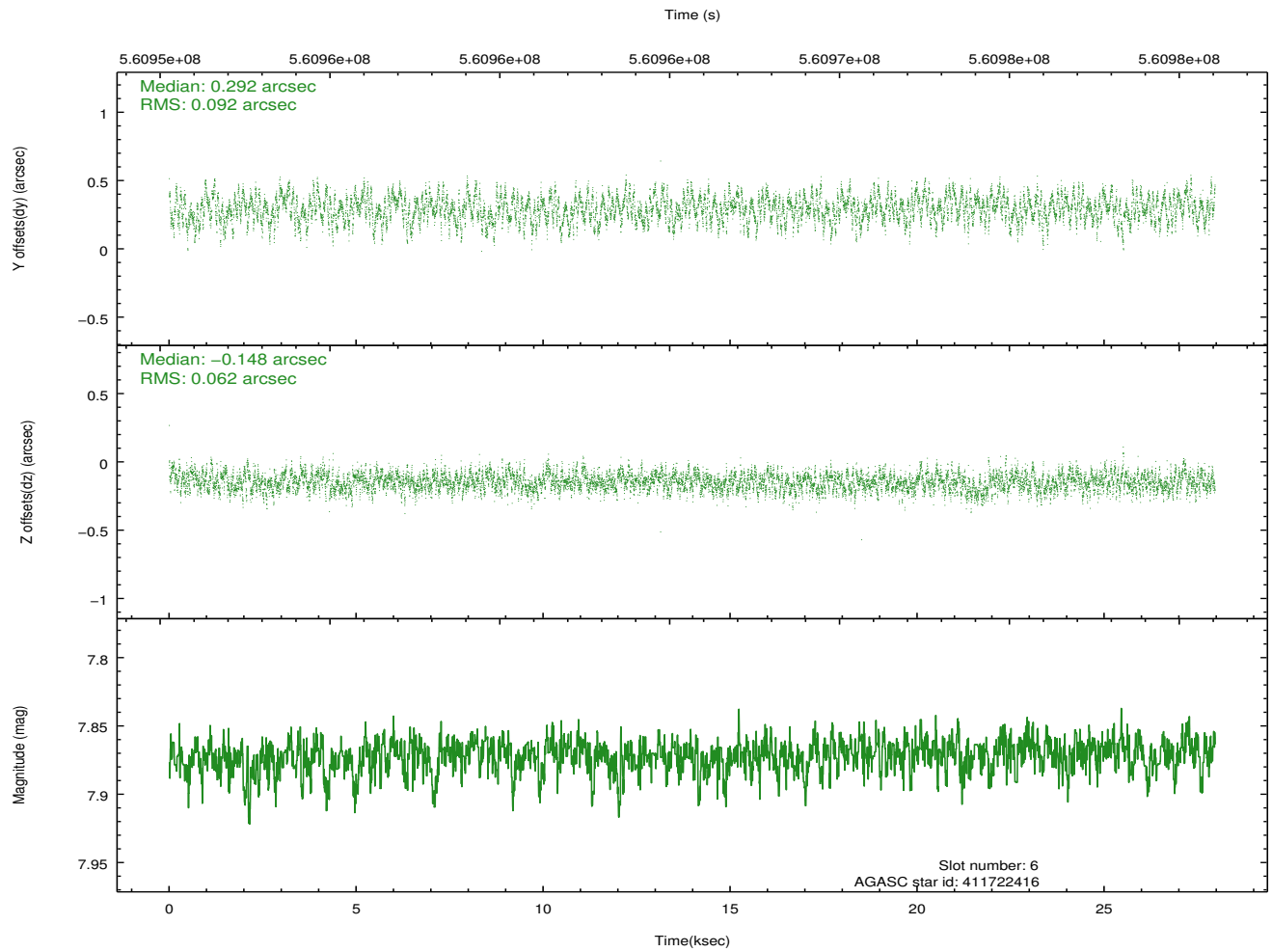
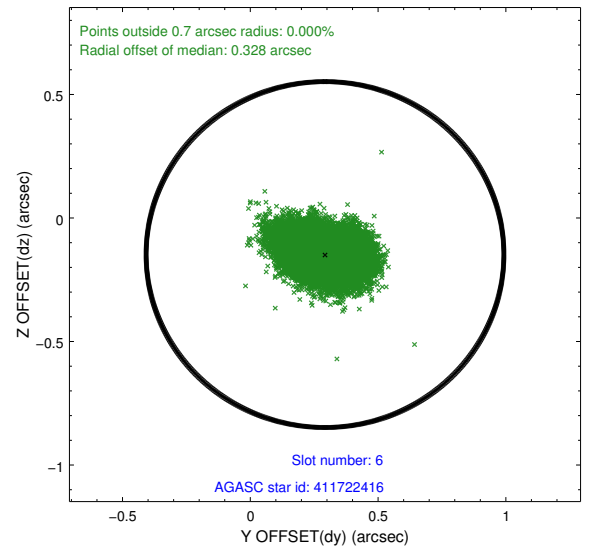
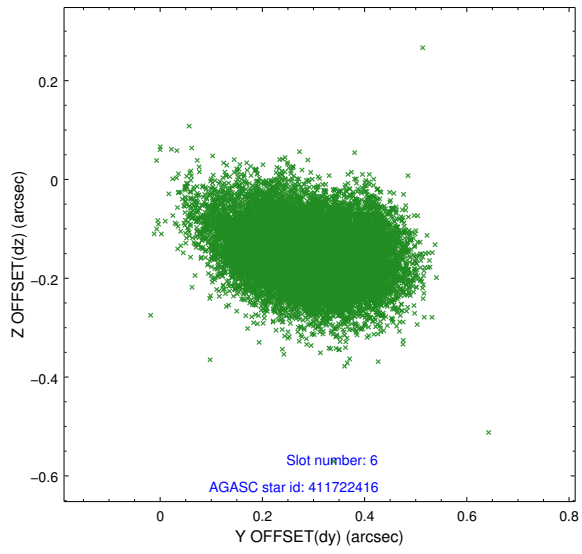
## 2.4.2 Slot 4



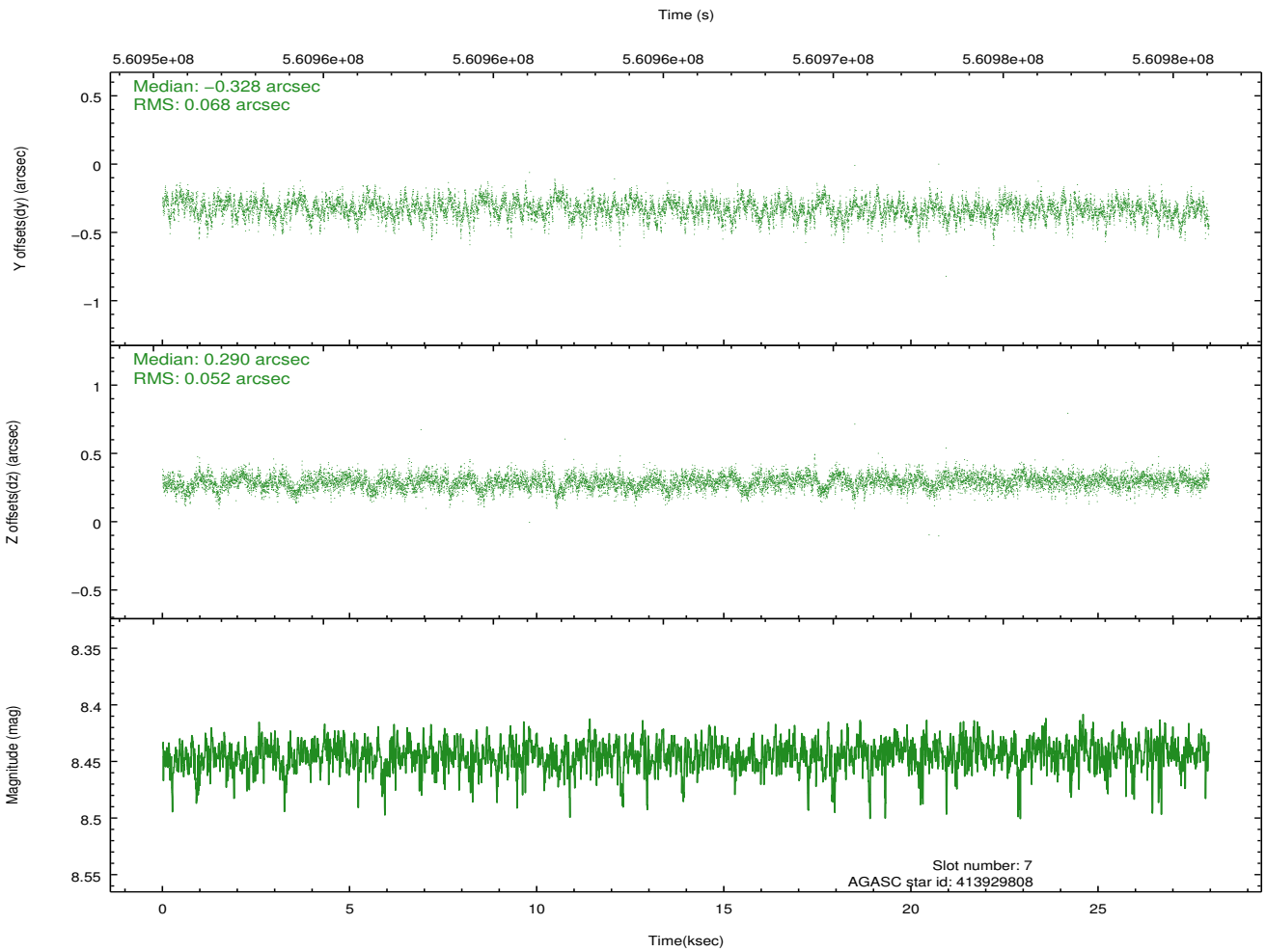
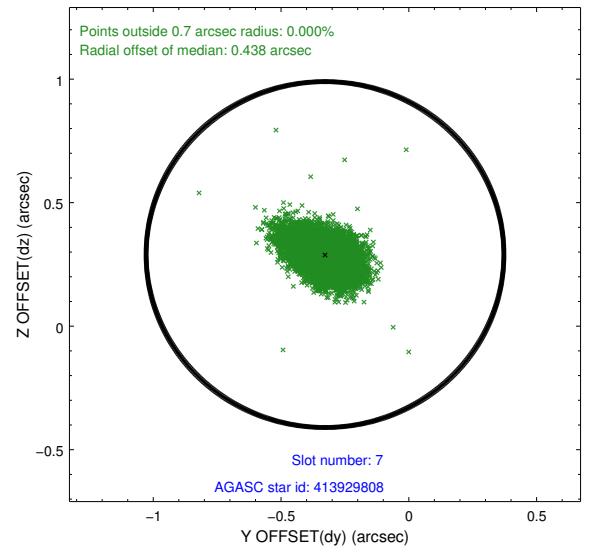
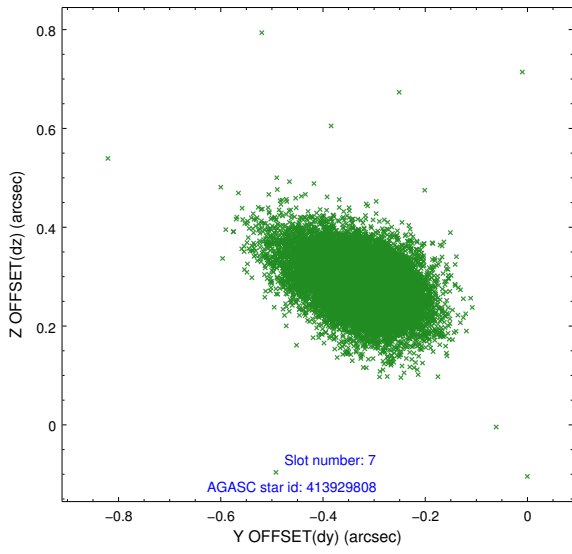
### 2.4.3 Slot 5



### 2.4.4 Slot 6

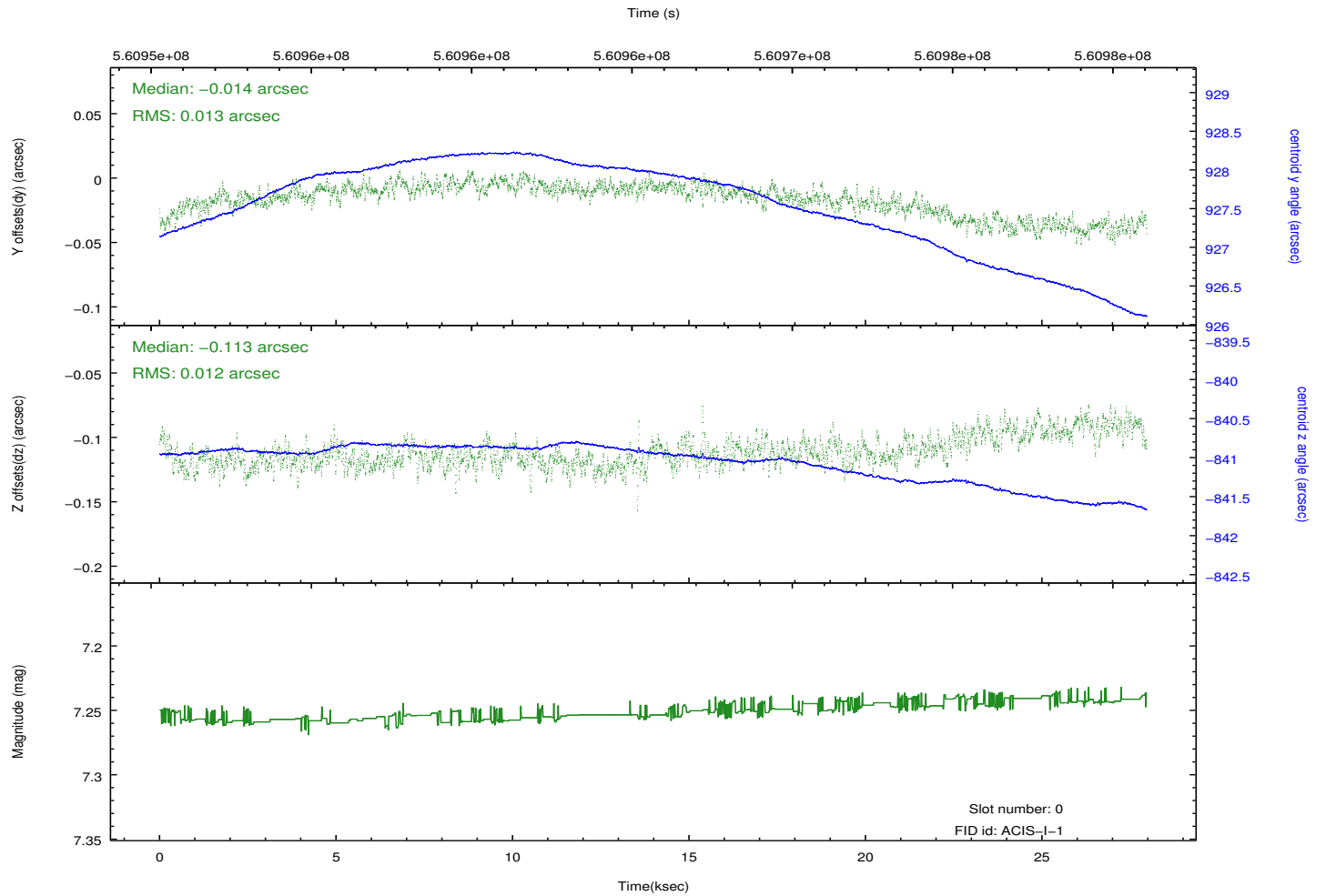
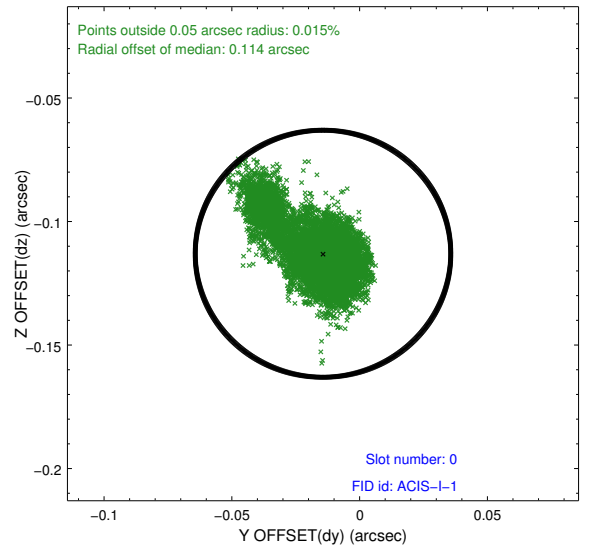
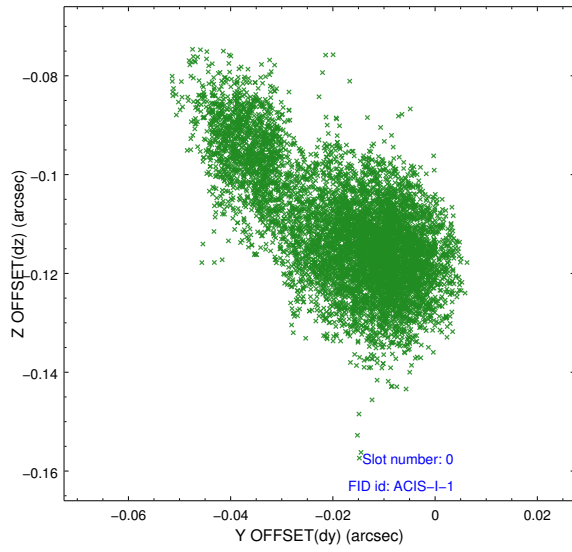


### 2.4.5 Slot 7

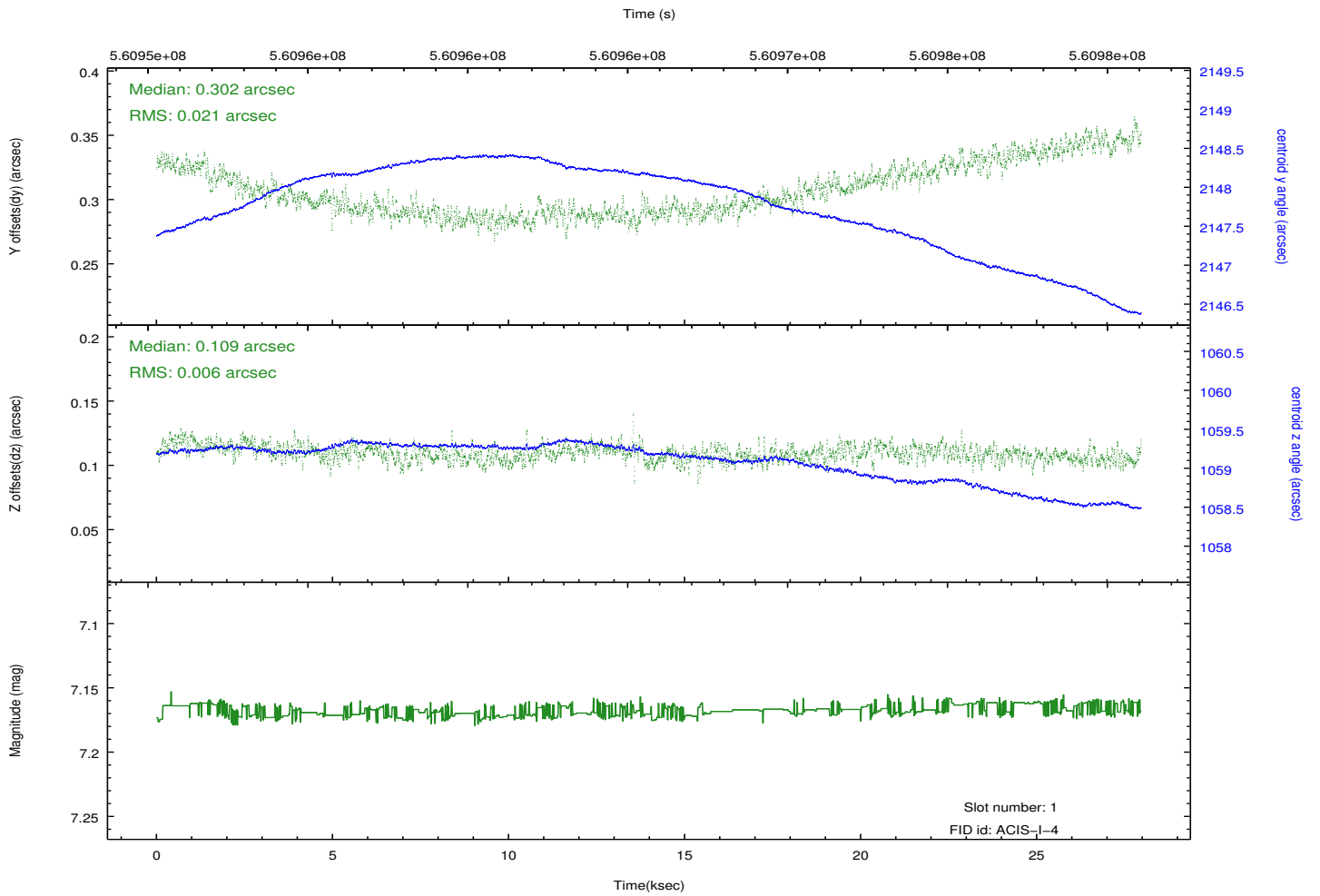
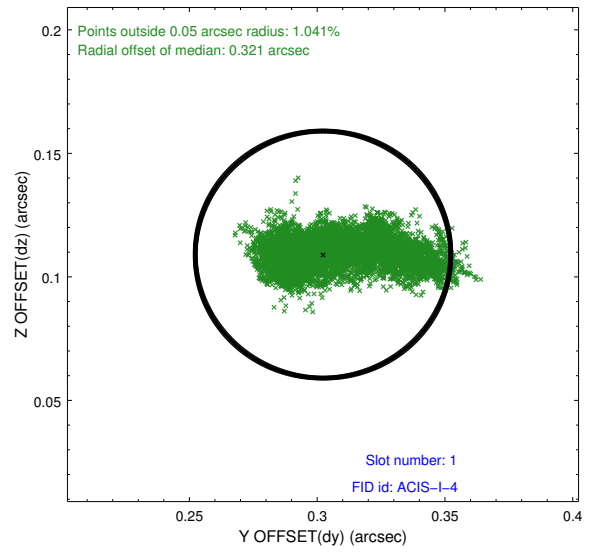
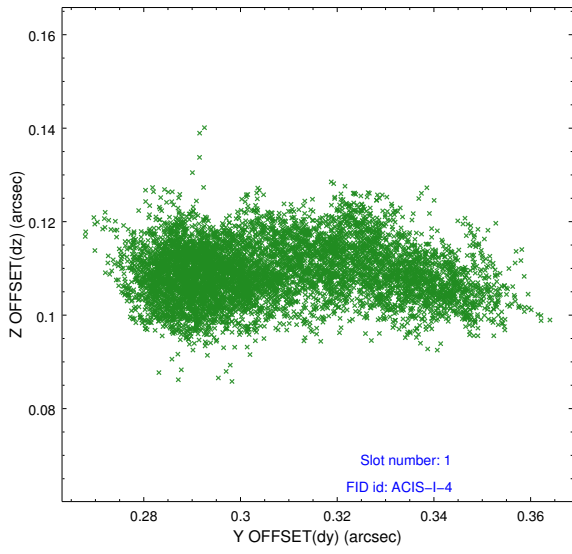


## 2.5 FID Slots

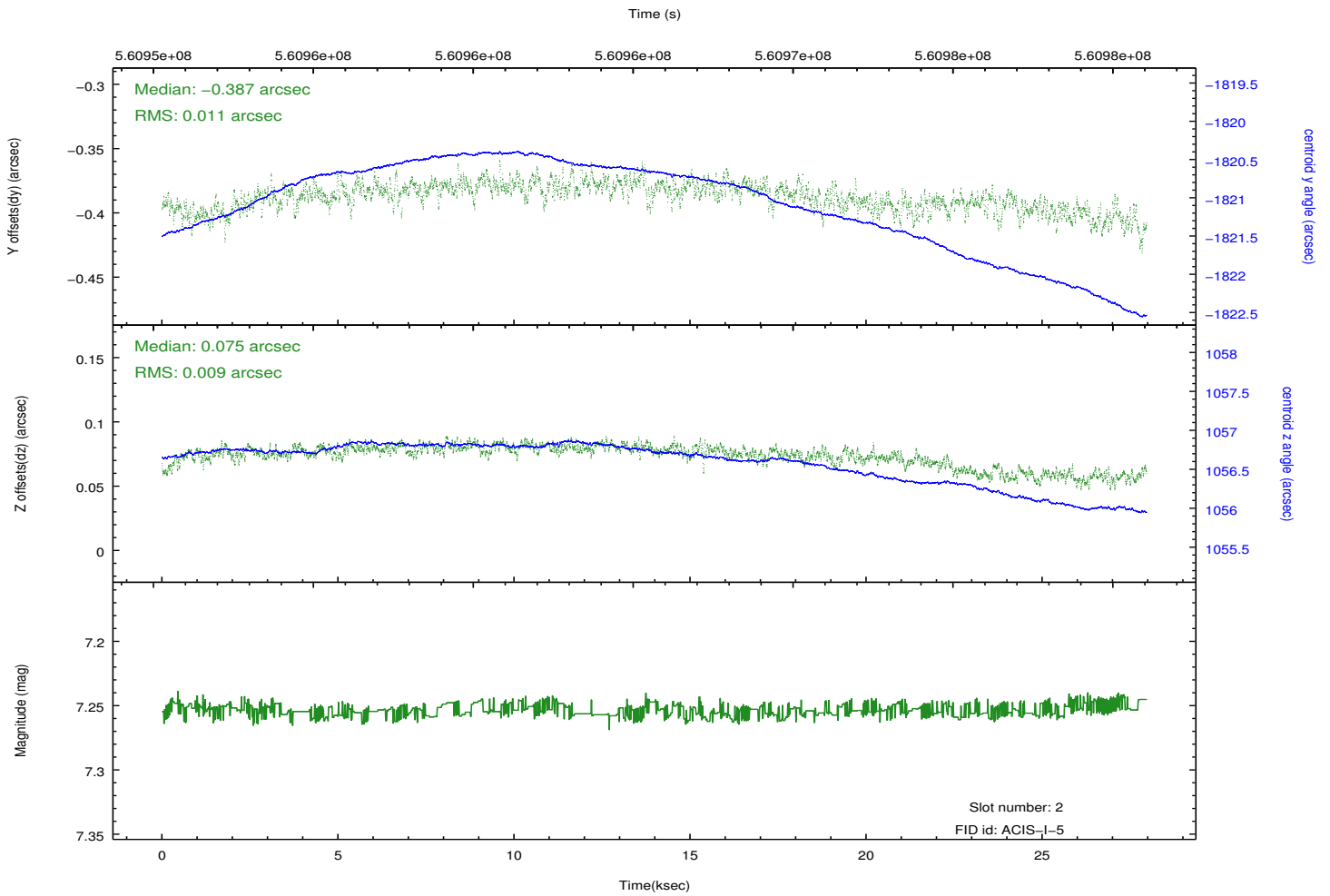
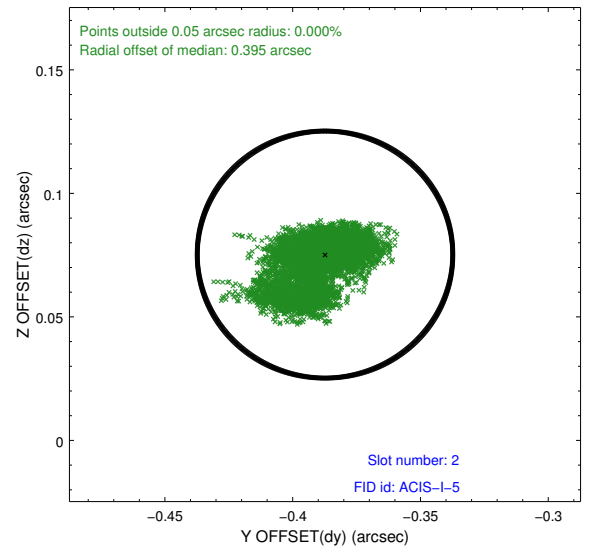
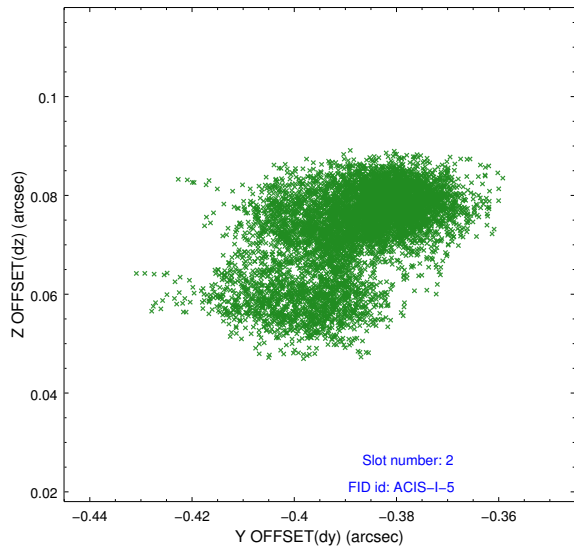
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.072259188056

## A.2 Comments