

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15374 - L2 Version 2  
Chandra X-Ray Center

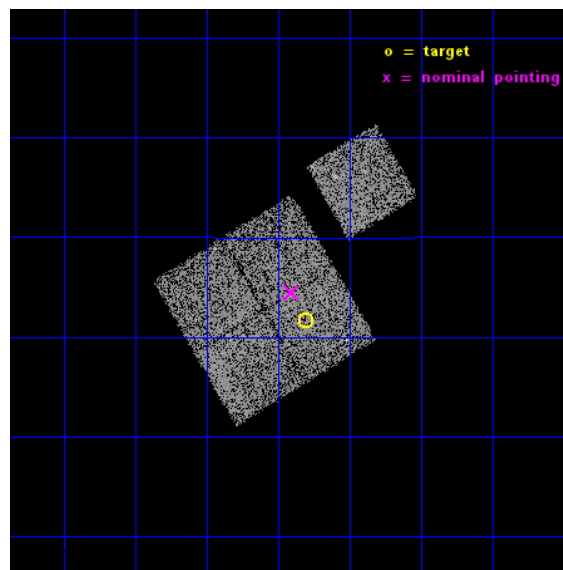
L2 Processing Date : Nov 30 2014

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# 1 Front

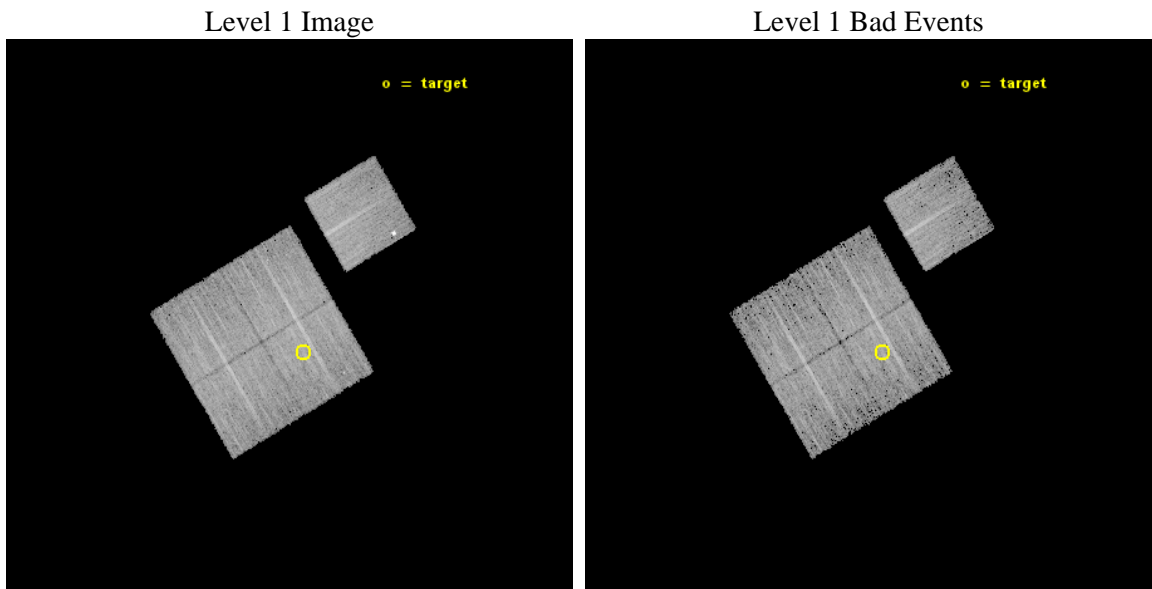
seq_num	801364	Sequence number
obs_id	15374	Observation id
title	A Search for Cool Cores in a Sample of $z = 0.4$ Galaxy Clusters	Pro
observer	Professor Gordon Garmire	Principal investigator
object	GMBCG J154.45050+03.86041	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	154.450417	Observer's specified target RA [deg]
dec_targ	3.860278	Observer's specified target Dec [deg]
ra_nom	154.47634981641	Nominal RA [deg]
dec_nom	3.9081812757885	Nominal Dec [deg]
roll_nom	59.235075683115	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10078.059017122	Sum of GTIs [s]
livetime	9946.381756704	Livetime [s]
ontime0	10081.200077534	Sum of GTIs [s]
ontime1	10081.200077534	Sum of GTIs [s]
ontime2	10081.200077534	Sum of GTIs [s]
ontime3	10078.059017122	Sum of GTIs [s]
ontime6	10081.200077534	Sum of GTIs [s]
l2events	27323	Number of level 2 events



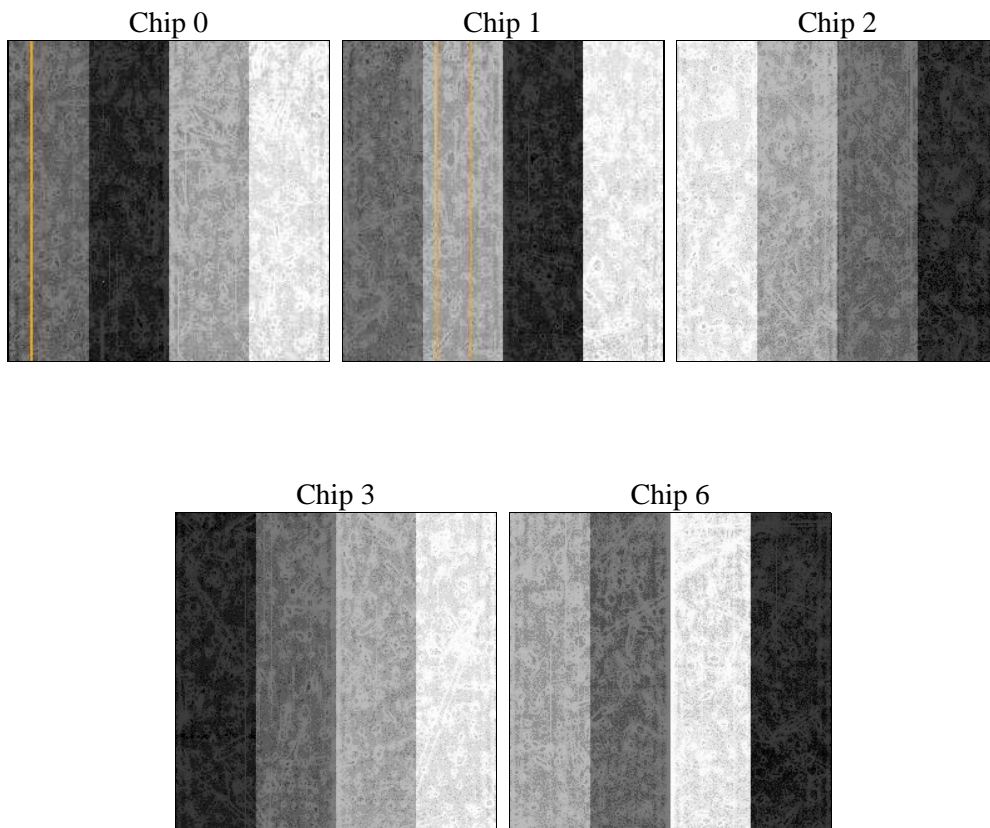
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10078.059017122	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10081.200077534	Sum of GTIs [s]
date	2014-12-01T03:23:27	Date and time of file creation	ontime1	10081.200077534	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10081.200077534	Sum of GTIs [s]
			ontime3	10078.059017122	Sum of GTIs [s]
			ontime6	10081.200077534	Sum of GTIs [s]
			l1events	266601	Number of level 1 events

### 2.1.4 Events

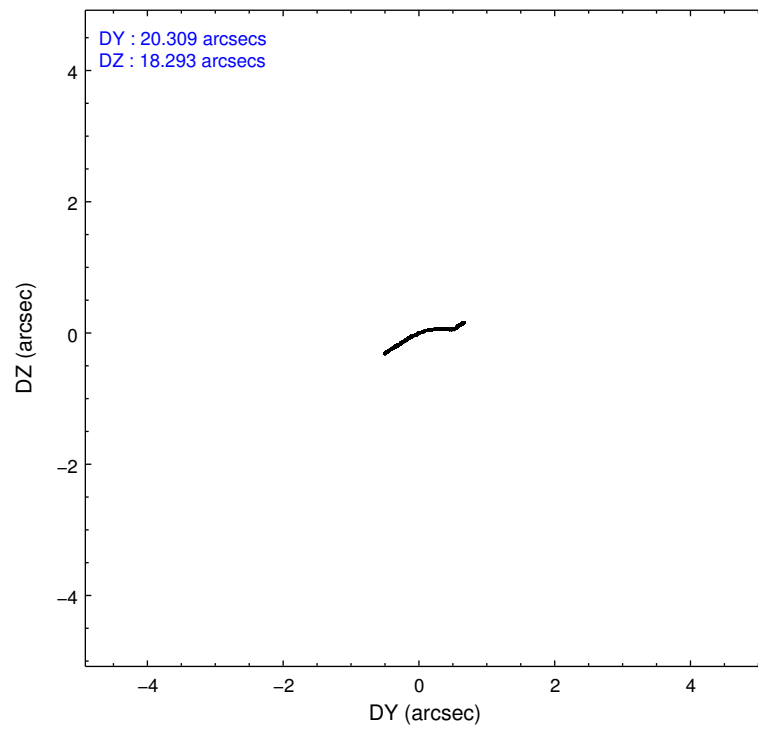
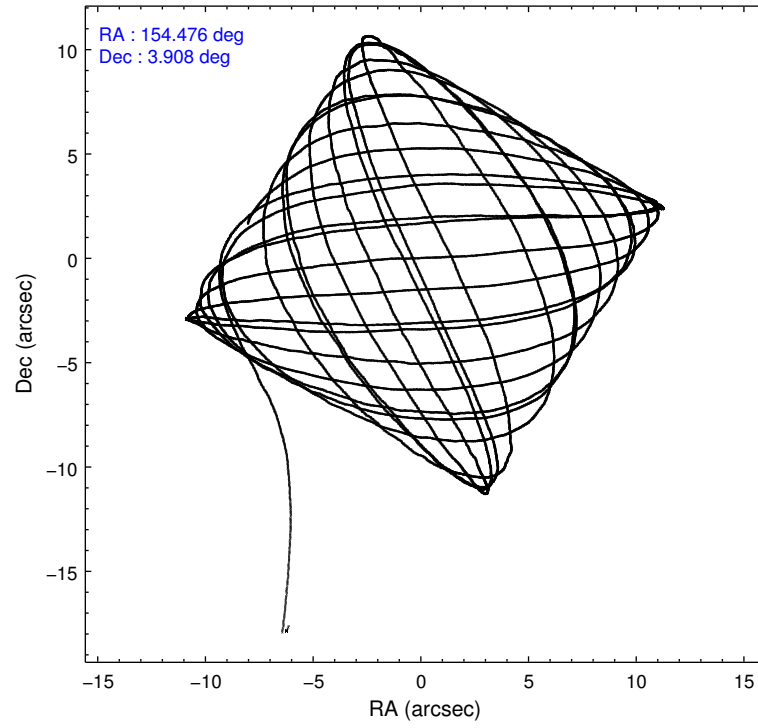
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	50423	51001	54117	53871	57189
rejected events	44047	44073	47859	47706	48722
rejected %	87%	86%	88%	88%	85%

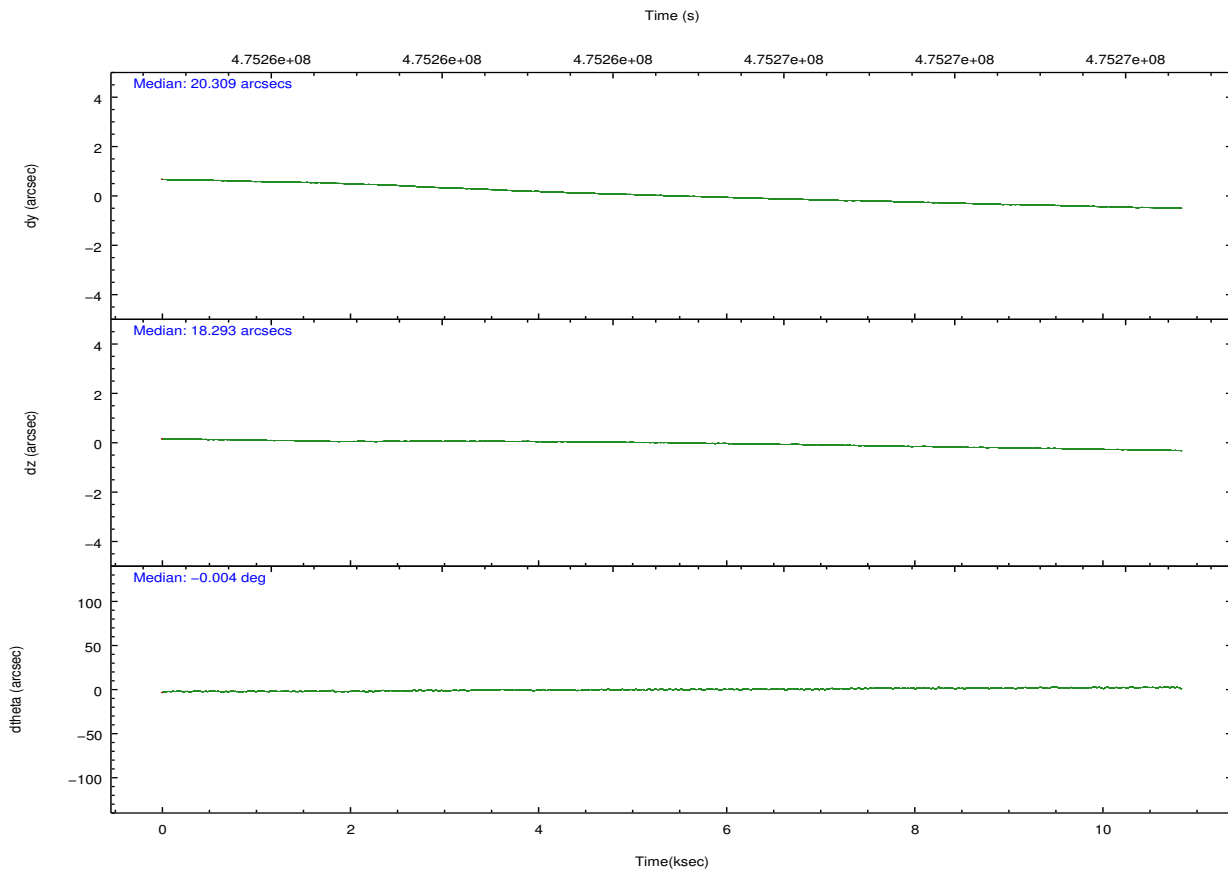
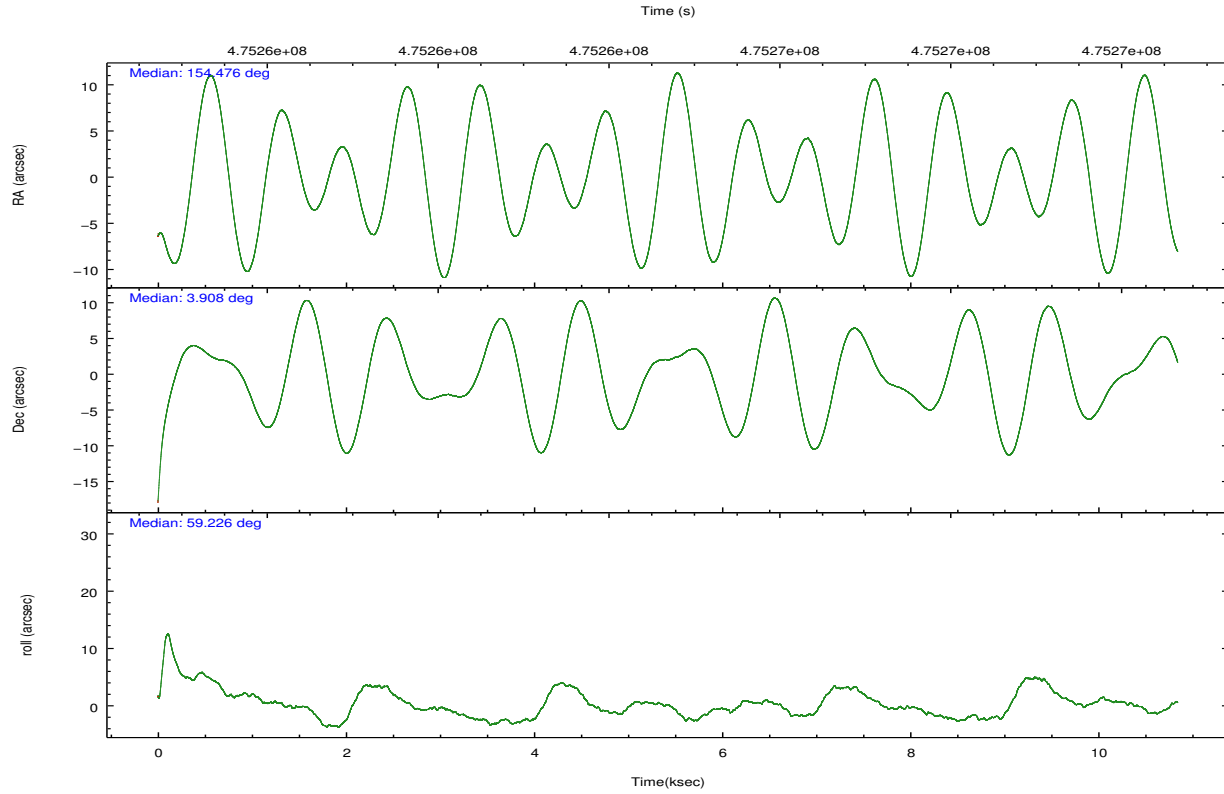
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2200	2318	2235	2251	3496
	4%	4%	4%	4%	6%
grade 1 events	36	33	34	25	31
	0%	0%	0%	0%	0%
grade 2 events	1493	1689	1458	1328	2060
	2%	3%	2%	2%	3%
grade 3 events	699	702	648	606	704
	1%	1%	1%	1%	1%
grade 4 events	614	704	634	641	681
	1%	1%	1%	1%	1%
grade 5 events	2697	2646	2412	2758	2783
	5%	5%	4%	5%	4%
grade 6 events	1372	1516	1285	1343	1527
	2%	2%	2%	2%	2%
grade 7 events	41312	41393	45411	44919	45907
	81%	81%	83%	83%	80%

## 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	154.476124	154.4763498164058	CCD I2 on	Y	Y
[deg] Pointing Dec	3.880652	3.908181275788485	CCD I3 on	Y	Y
[deg] Pointing Roll	59.026420	59.23507568311516	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	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	475260101.184000	475258336.06719	CCD S5 on	N	N
Observation start date	2013-01-22T16:40:34	2013-01-22T16:12:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	475270101.184000	475270853.36786	On-chip summing requested	N	N
Observation end date	2013-01-22T19:27:14	2013-01-22T19:40:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





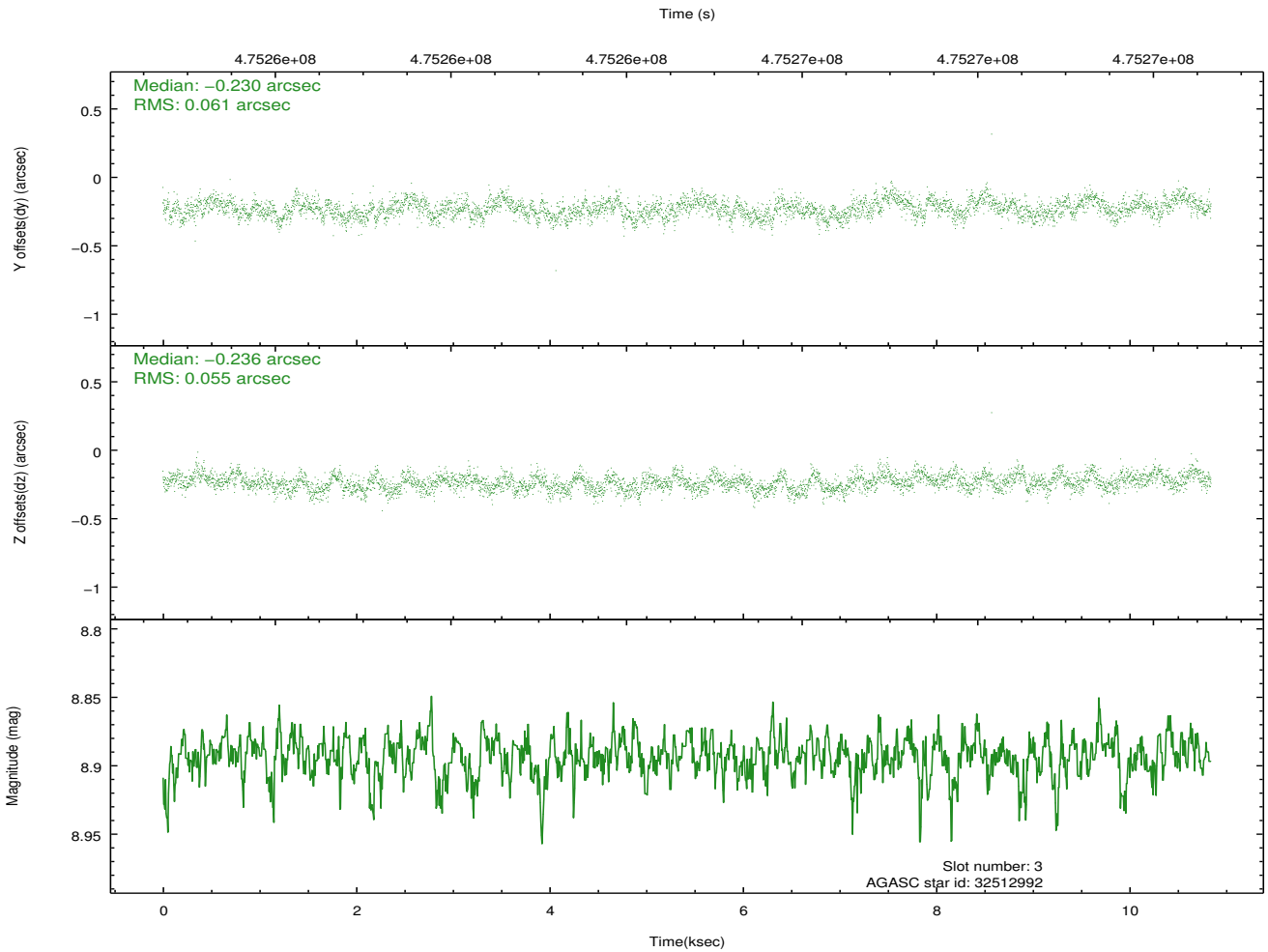
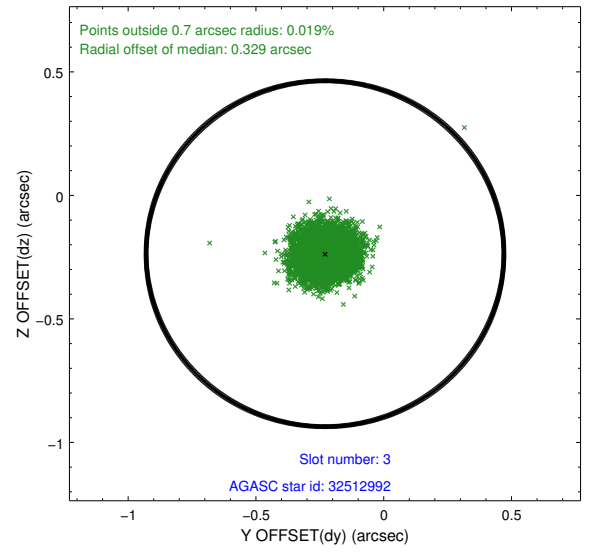
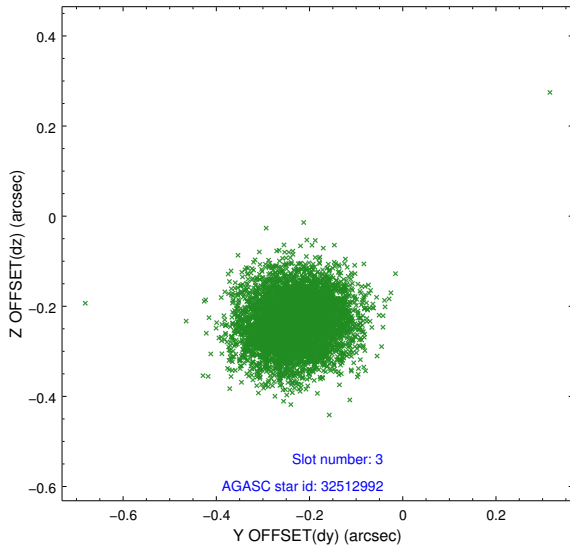
### Slot Statistics

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	2645	0.130	-0.073	0.013	0.022	0.000000	0.000000	918.98	-1001.05
1	FID		ACIS-I-5	7.12	2645	-0.322	0.101	0.011	0.019	0.000000	0.000000	-1829.40	896.20
2	FID		ACIS-I-6	7.13	2645	0.100	0.044	0.007	0.012	0.000000	0.000000	383.86	1541.29
3	GUIDE	used	32512992	8.89	5286	-0.230	-0.236	0.088	0.140	154.453014	4.618349	2233.92	1438.21
4	GUIDE	used	32513016	8.66	5286	0.389	0.125	0.075	0.119	154.432450	3.459874	-1378.37	-644.77
5	GUIDE	used	32518352	9.27	5282	0.069	-0.436	0.152	0.250	153.958642	4.128630	-190.49	2052.50
6	GUIDE	used	32639672	9.22	5253	0.034	0.038	0.133	0.208	155.236225	3.954176	1633.31	-2202.88
7	GUIDE	used	32640976	9.22	5283	-0.273	0.529	0.160	0.280	155.221826	3.864945	1331.69	-2324.65

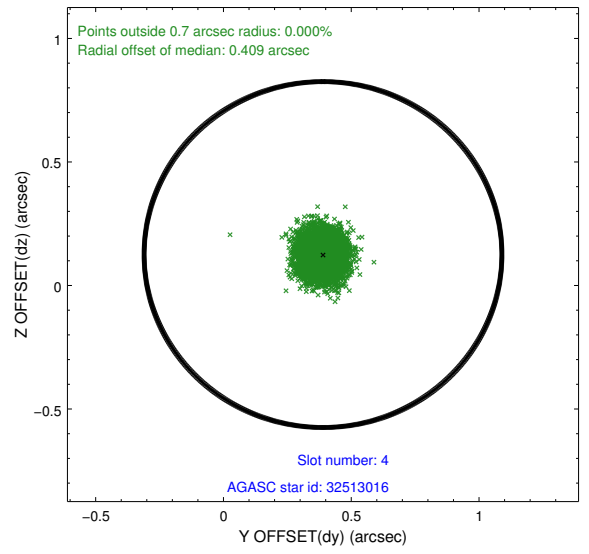
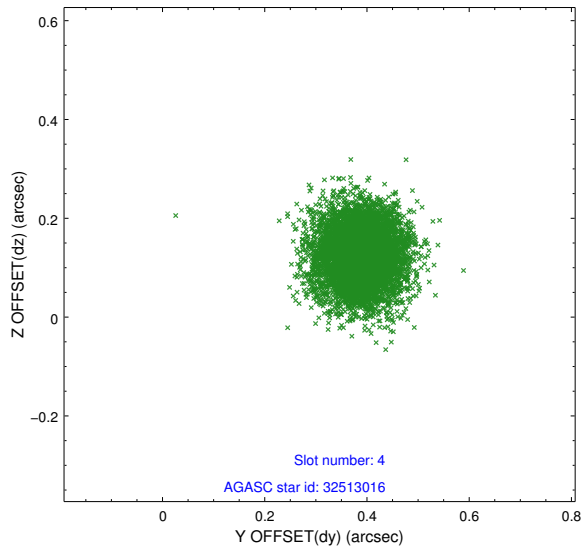
∞

## 2.4 Star Slots

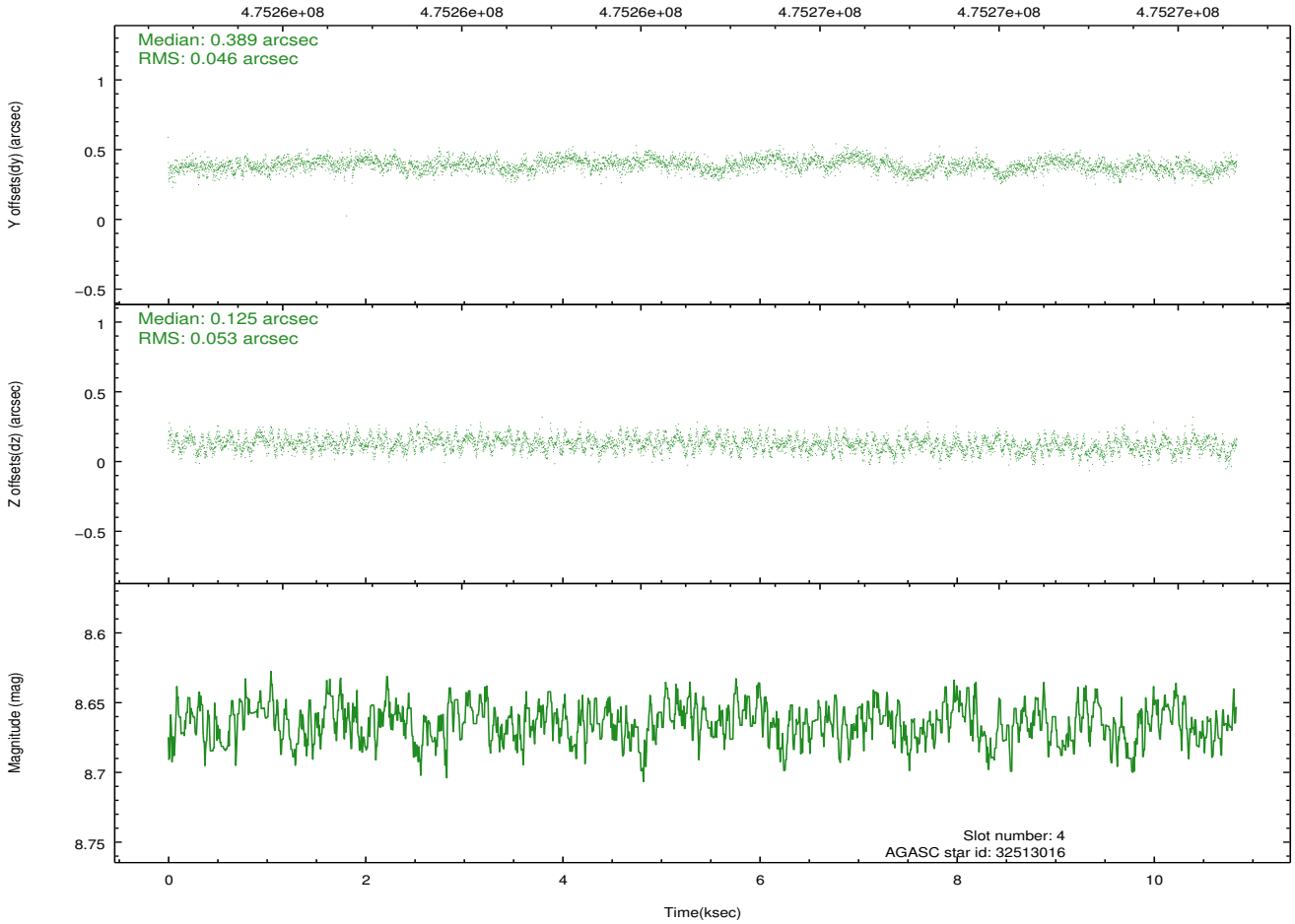
### 2.4.1 Slot 3



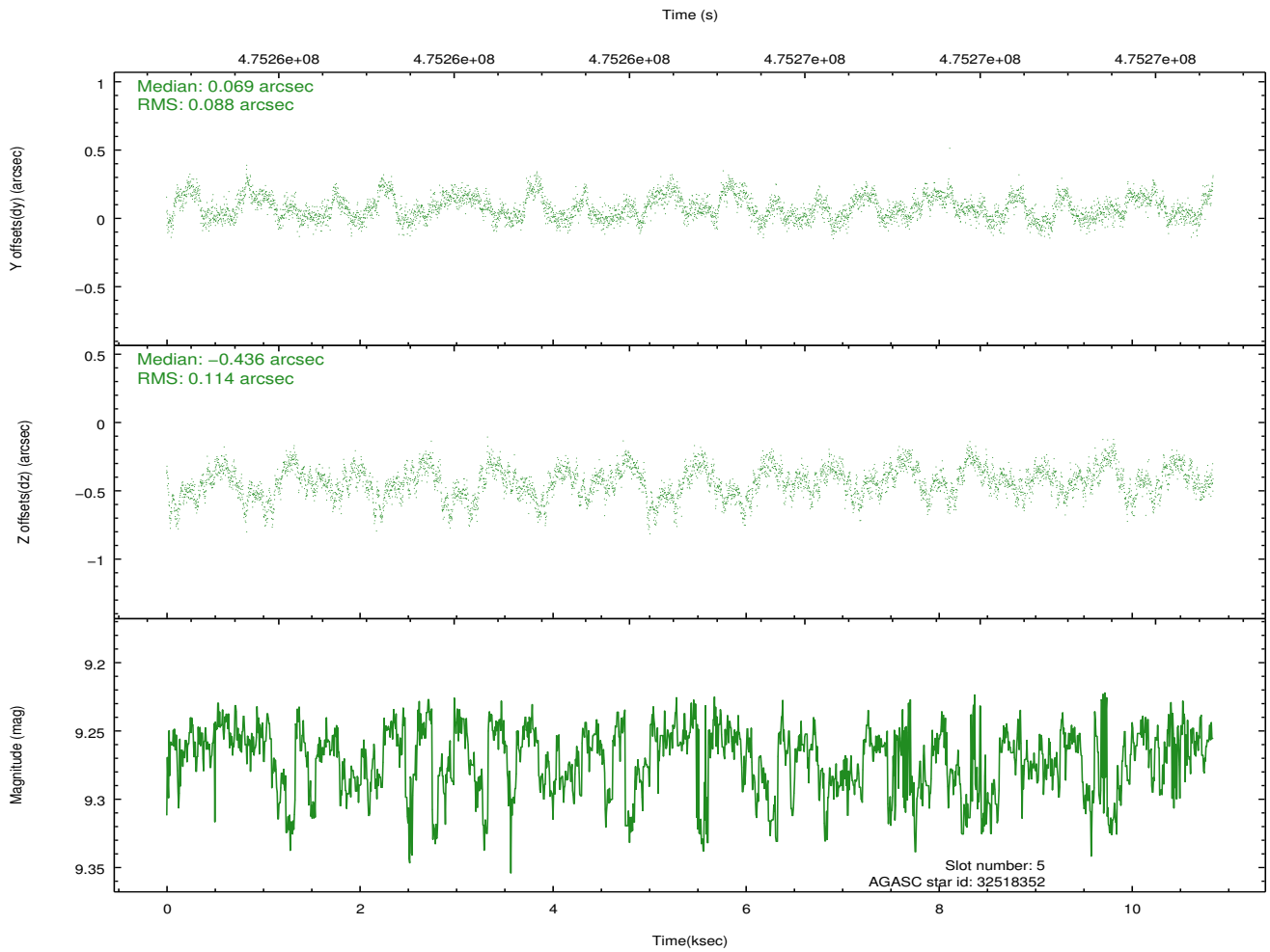
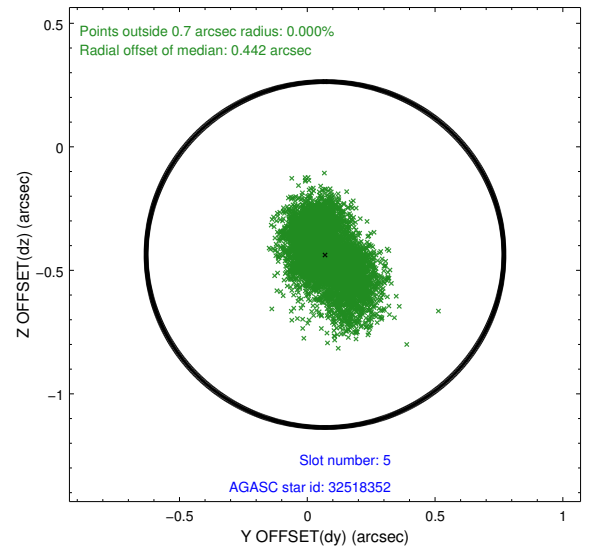
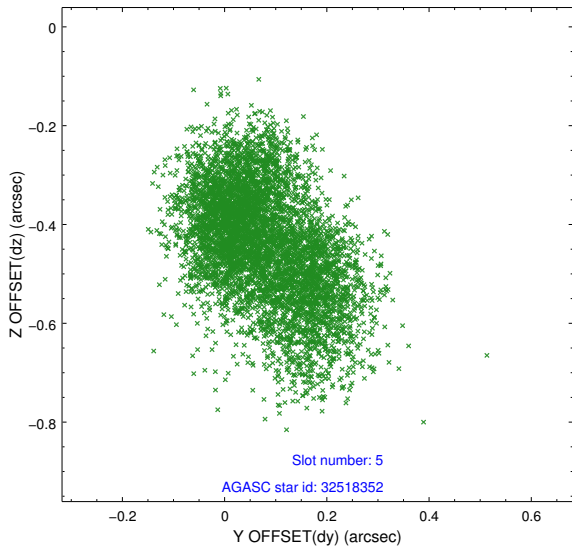
### 2.4.2 Slot 4



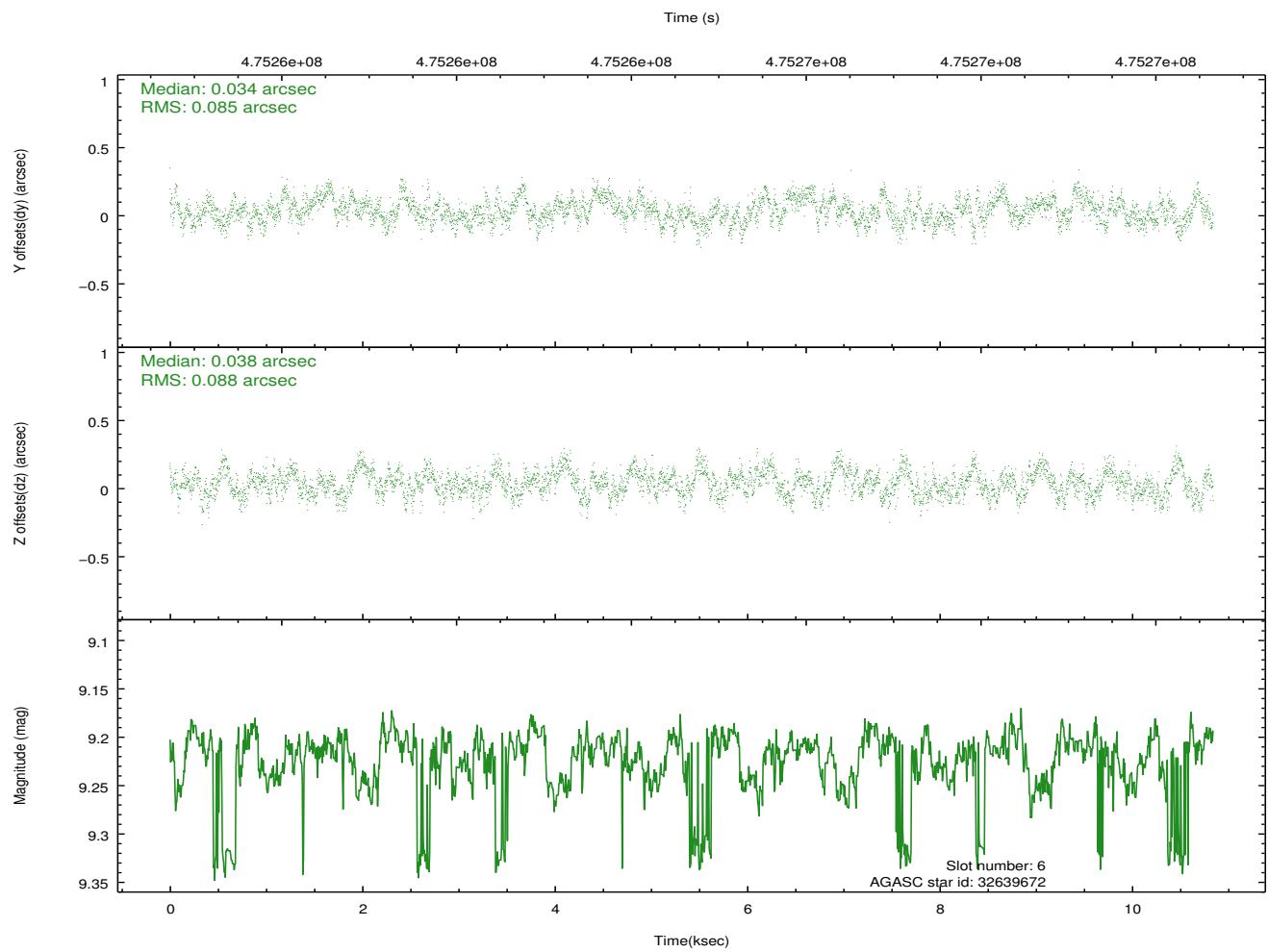
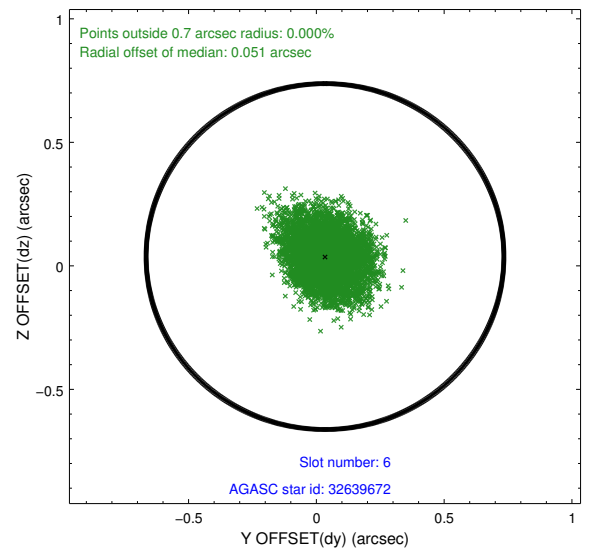
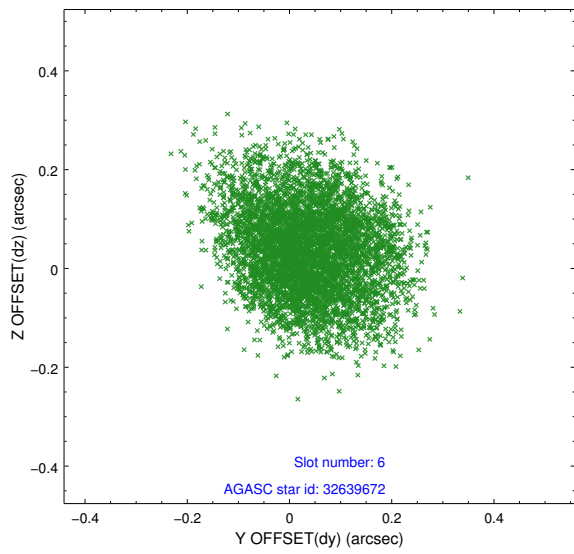
Time (s)



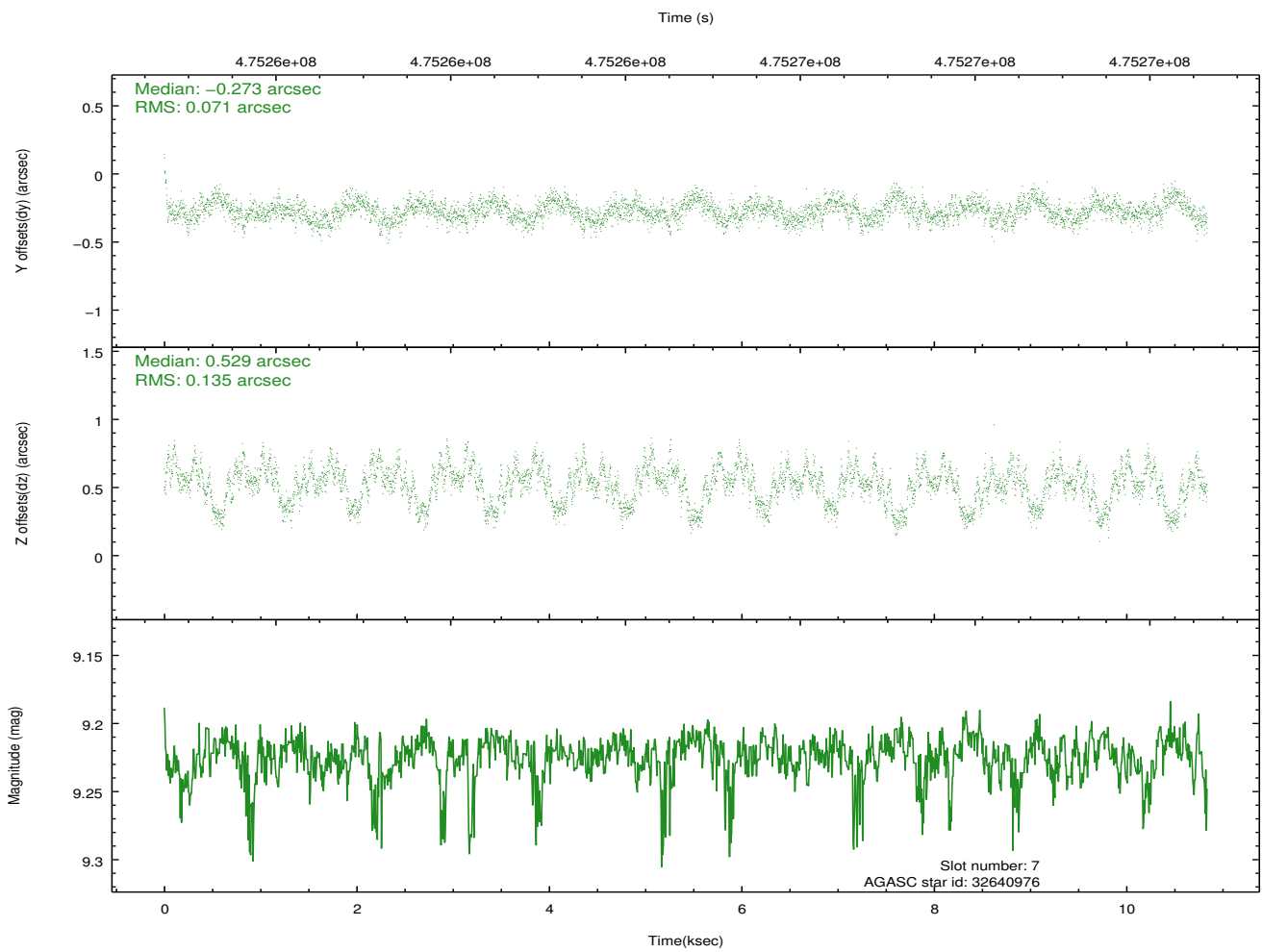
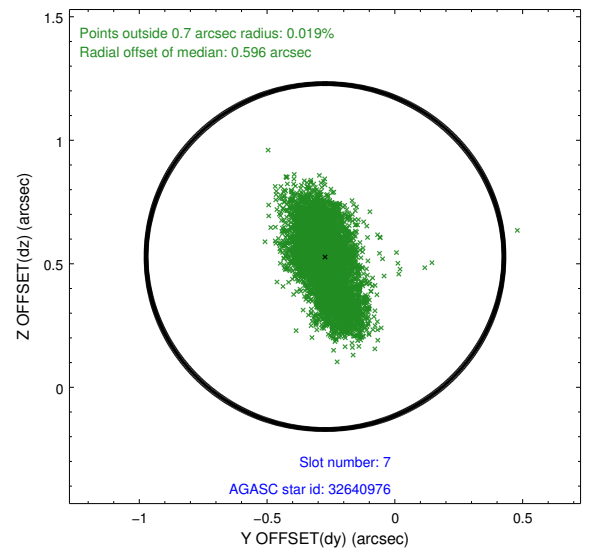
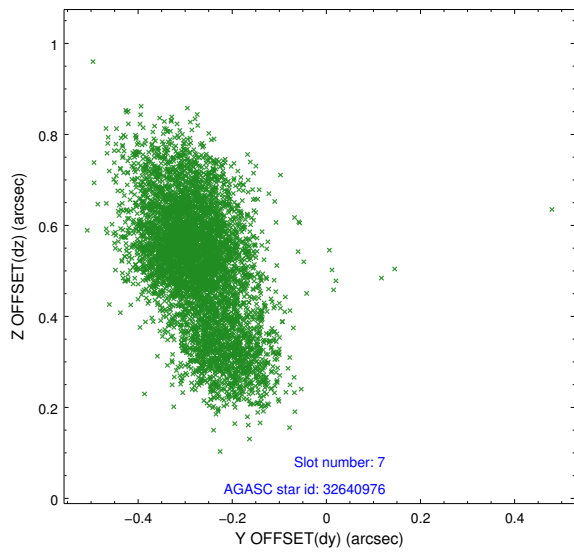
### 2.4.3 Slot 5



## 2.4.4 Slot 6

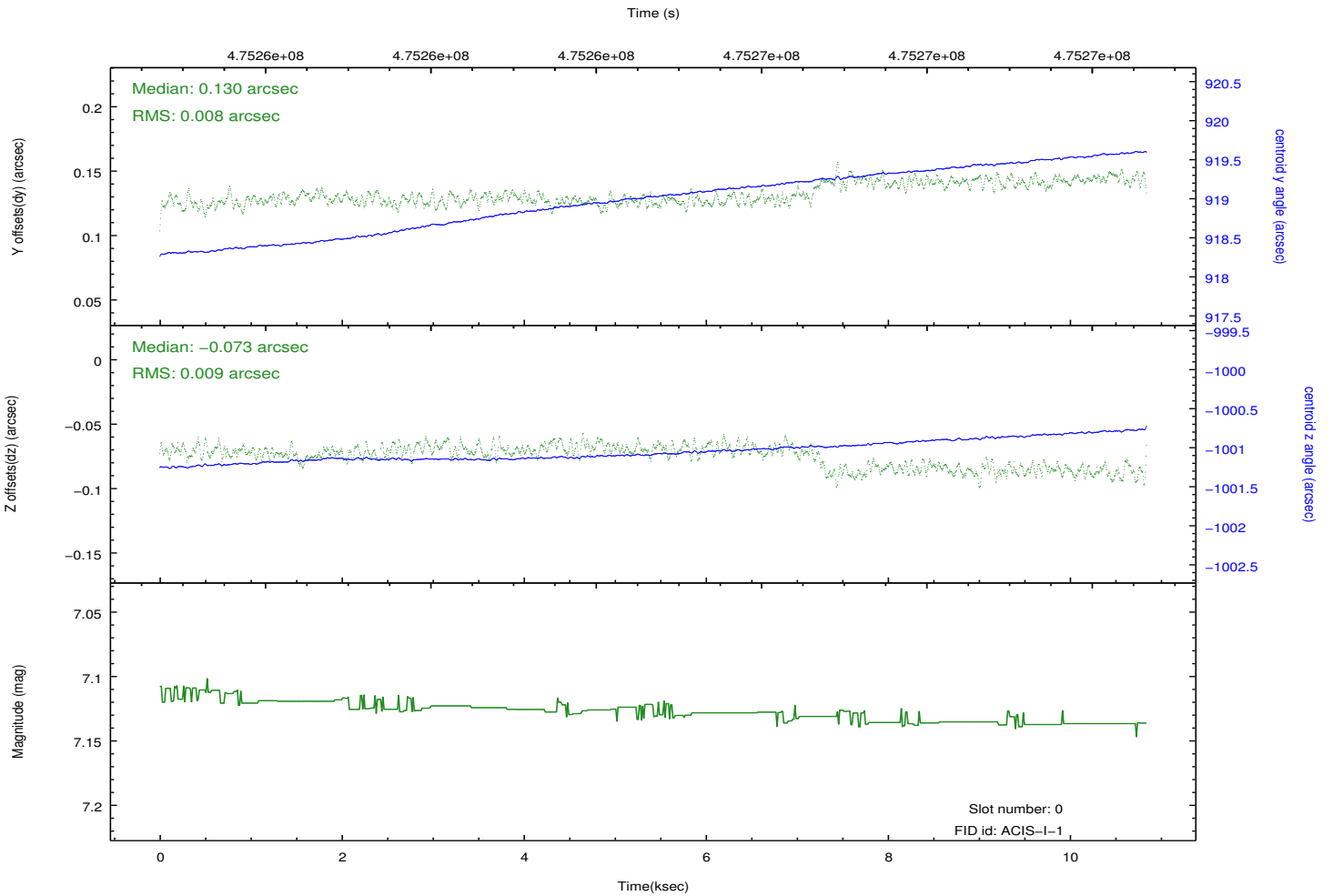
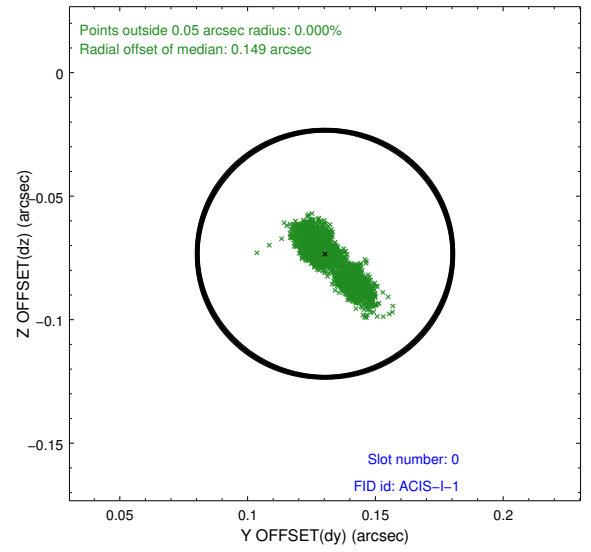
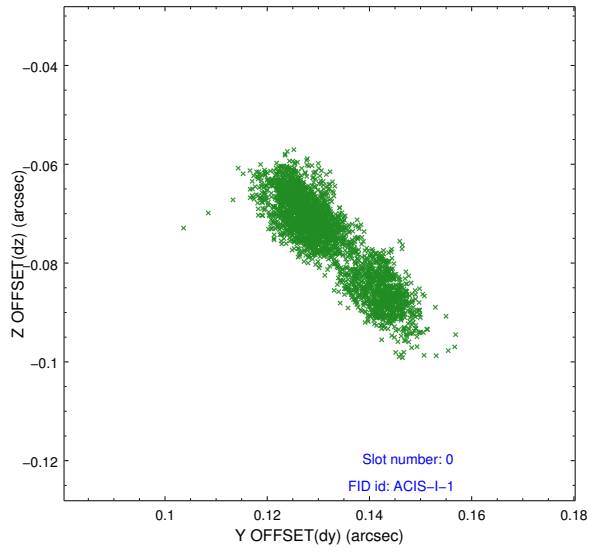


## 2.4.5 Slot 7

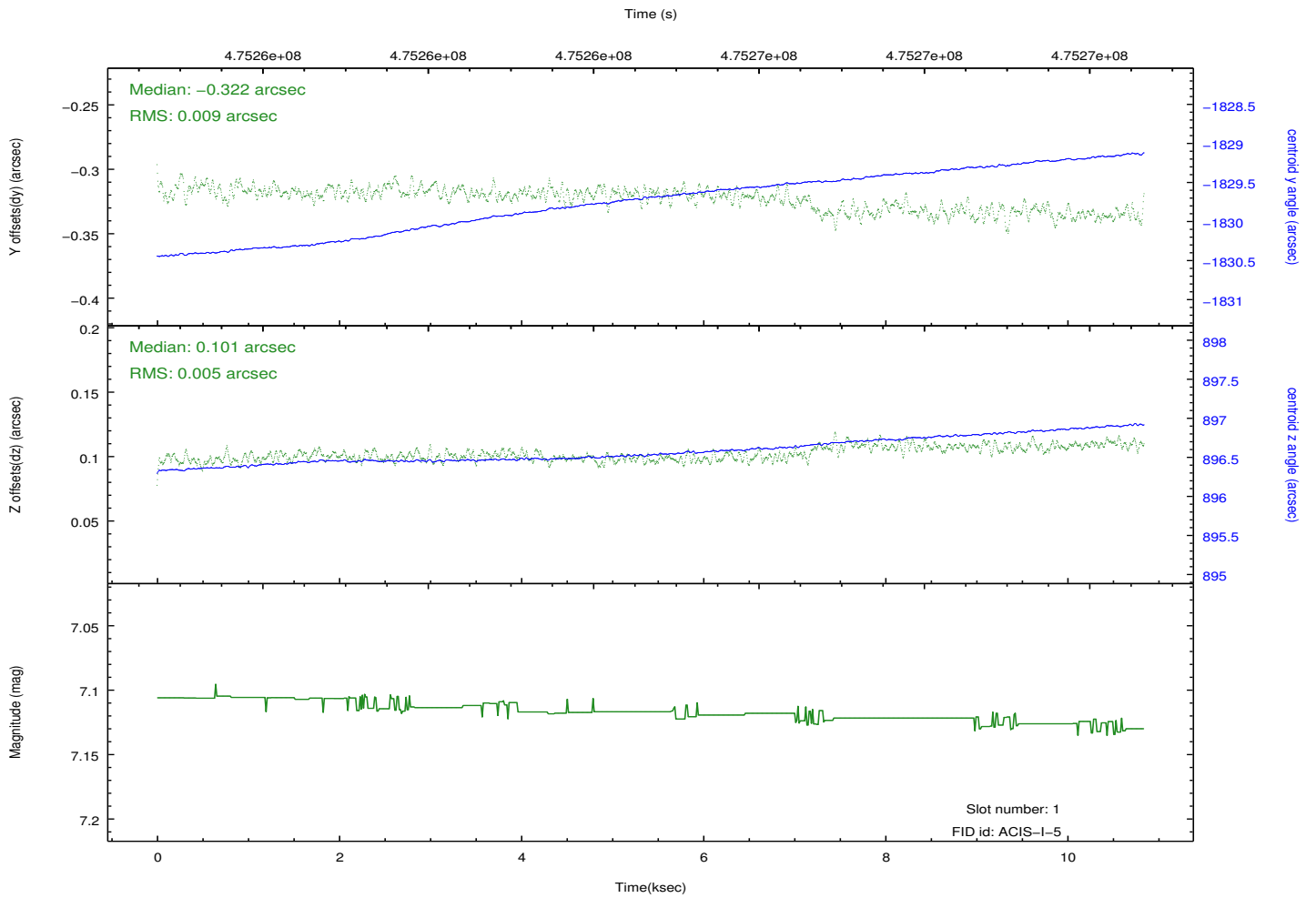
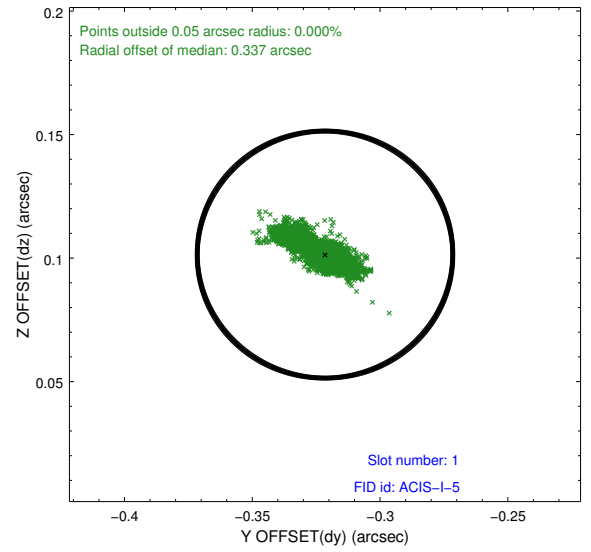
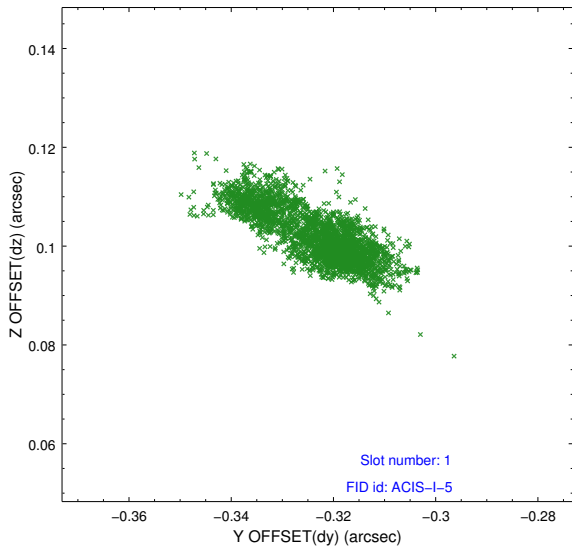


## 2.5 FID Slots

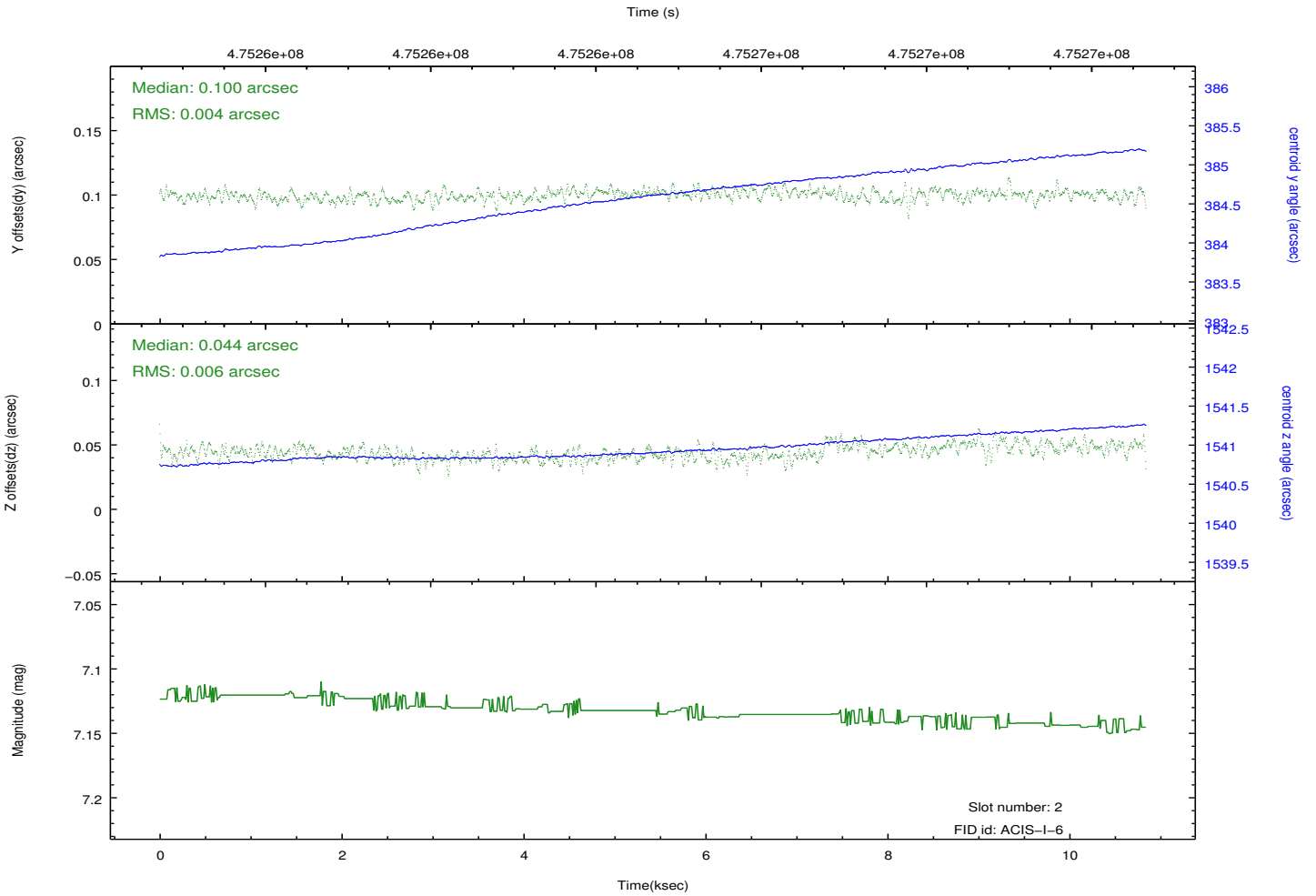
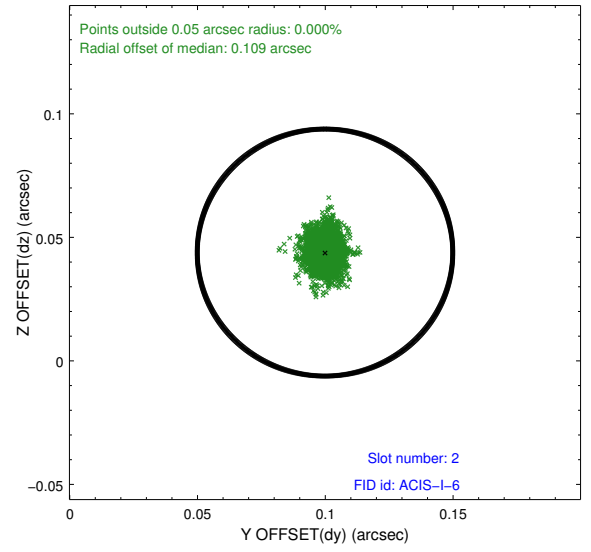
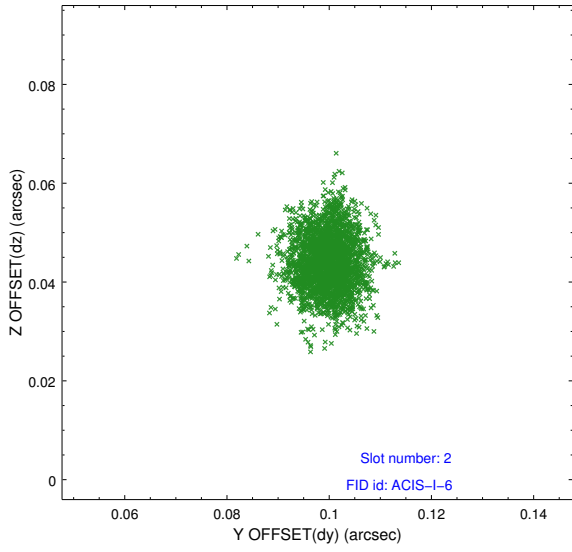
### 2.5.1 Slot 0



## 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)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.078059017122

## 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.