

# V&V Reference Report

## L2 ASCDS Version : 8.5.1

Observation 15375 - L2 Version 2  
Chandra X-Ray Center

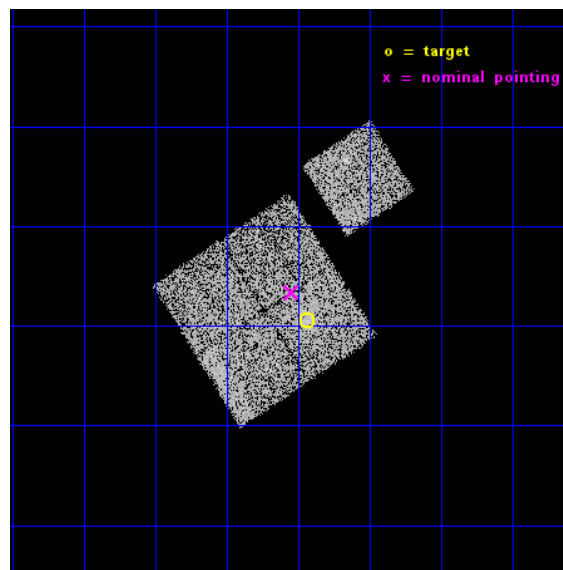
L2 Processing Date : Nov 30 2014

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# 1 Front

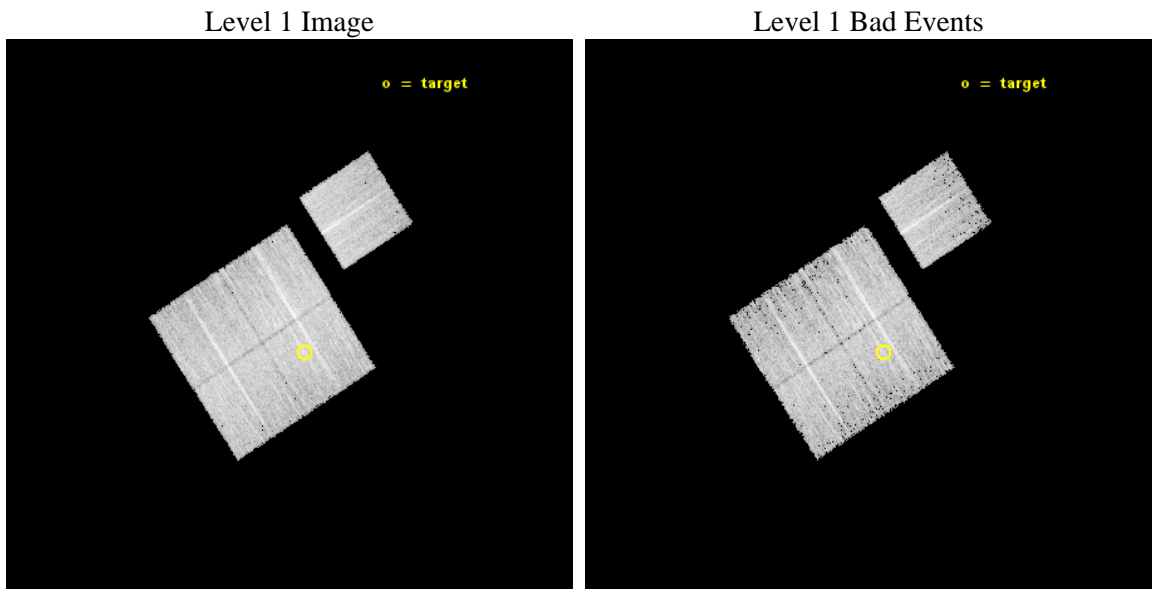
seq_num	801365	Sequence number
obs_id	15375	Observation id
title	A Search for Cool Cores in a Sample of $z = 0.4$ Galaxy Clusters	Pro
observer	Professor Gordon Garmire	Principal investigator
object	GMBCG J215.98479+04.34262	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.984583	Observer's specified target RA [deg]
dec_targ	4.3425	Observer's specified target Dec [deg]
ra_nom	216.01229446784	Nominal RA [deg]
dec_nom	4.3894111594096	Nominal Dec [deg]
roll_nom	57.127204143159	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10080.785912097	Sum of GTIs [s]
livetime	9949.0730227883	Livetime [s]
ontime0	10083.803762436	Sum of GTIs [s]
ontime1	10083.844802439	Sum of GTIs [s]
ontime2	10083.885842443	Sum of GTIs [s]
ontime3	10080.785912097	Sum of GTIs [s]
ontime6	10080.621752024	Sum of GTIs [s]
l2events	28841	Number of level 2 events



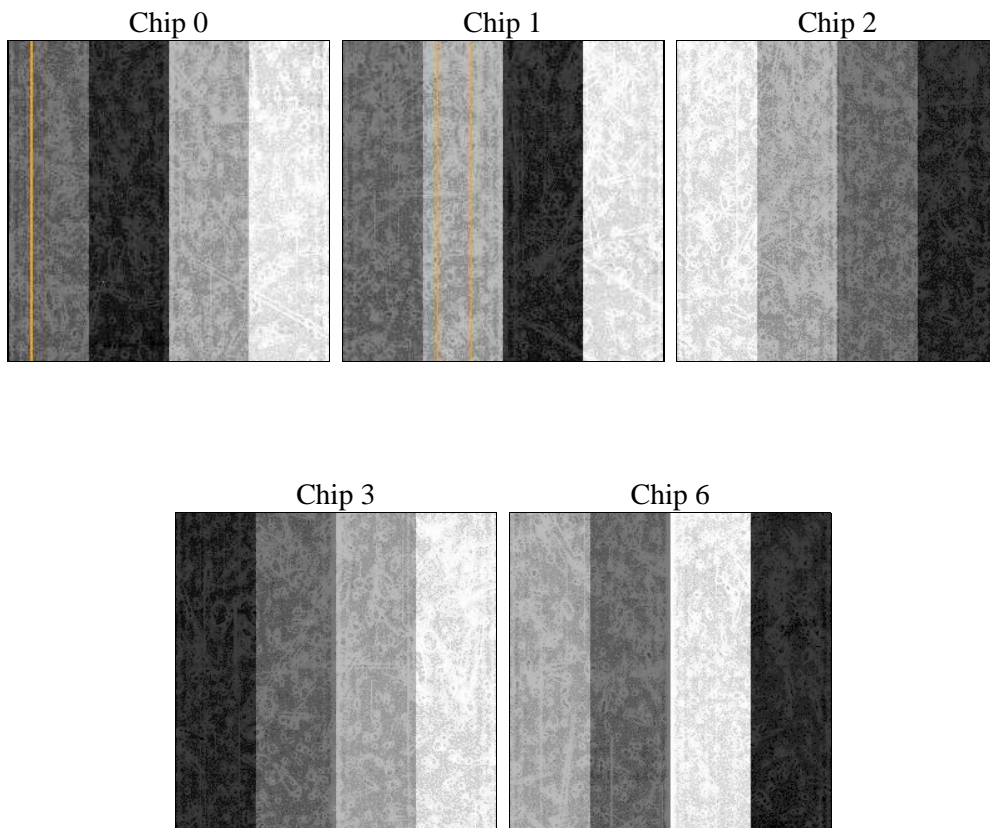
## 2 OBI

### 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	10080.785912097	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	10083.803762436	Sum of GTIs [s]
date	2014-11-30T12:29:23	Date and time of file creation	ontime1	10083.844802439	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10083.885842443	Sum of GTIs [s]
			ontime3	10080.785912097	Sum of GTIs [s]
			ontime6	10080.621752024	Sum of GTIs [s]
			l1events	273577	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	50582	54054	59799	55038	54104
rejected events	43676	46399	52856	48337	46882
rejected %	86%	85%	88%	87%	86%

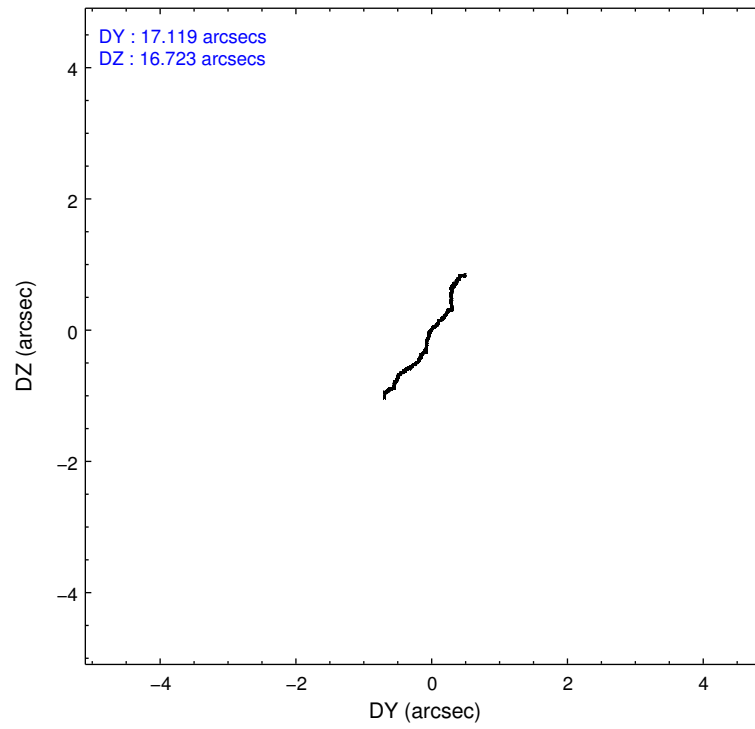
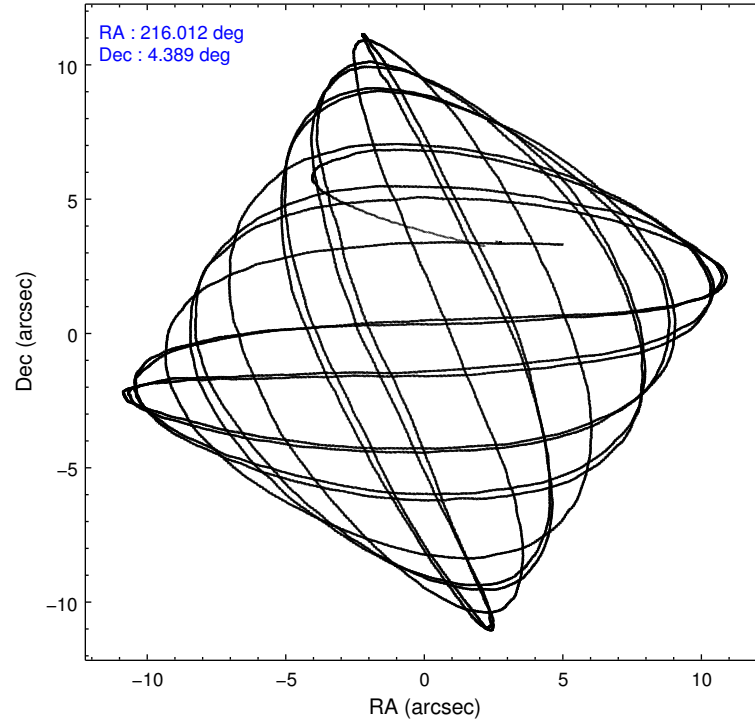
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2501	2856	2696	2552	2744
	4%	5%	4%	4%	5%
grade 1 events	25	20	42	35	26
	0%	0%	0%	0%	0%
grade 2 events	1747	1848	1723	1479	1650
	3%	3%	2%	2%	3%
grade 3 events	646	674	655	673	679
	1%	1%	1%	1%	1%
grade 4 events	674	738	709	684	668
	1%	1%	1%	1%	1%
grade 5 events	2458	2701	2352	2875	2585
	4%	4%	3%	5%	4%
grade 6 events	1344	1545	1160	1316	1485
	2%	2%	1%	2%	2%
grade 7 events	41187	43672	50462	45424	44267
	81%	80%	84%	82%	81%

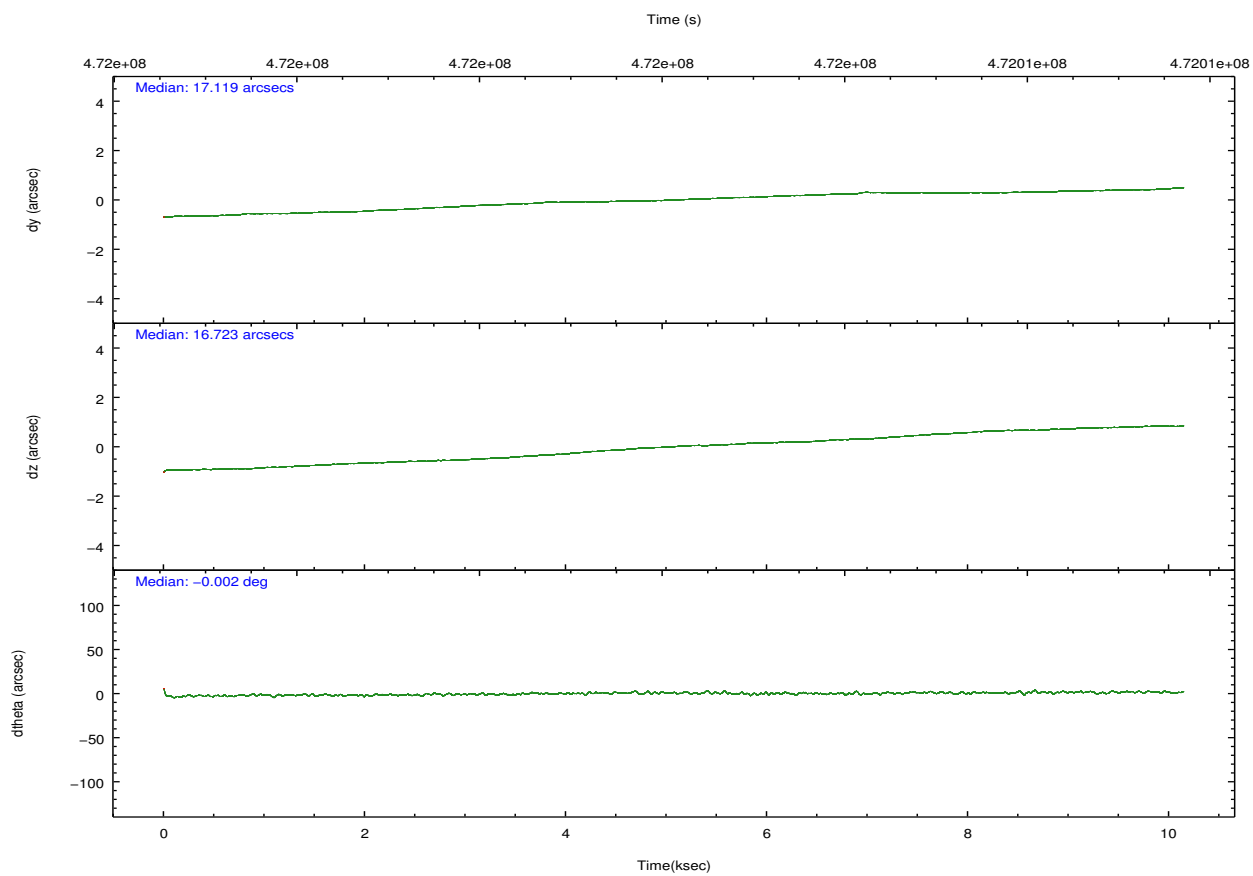
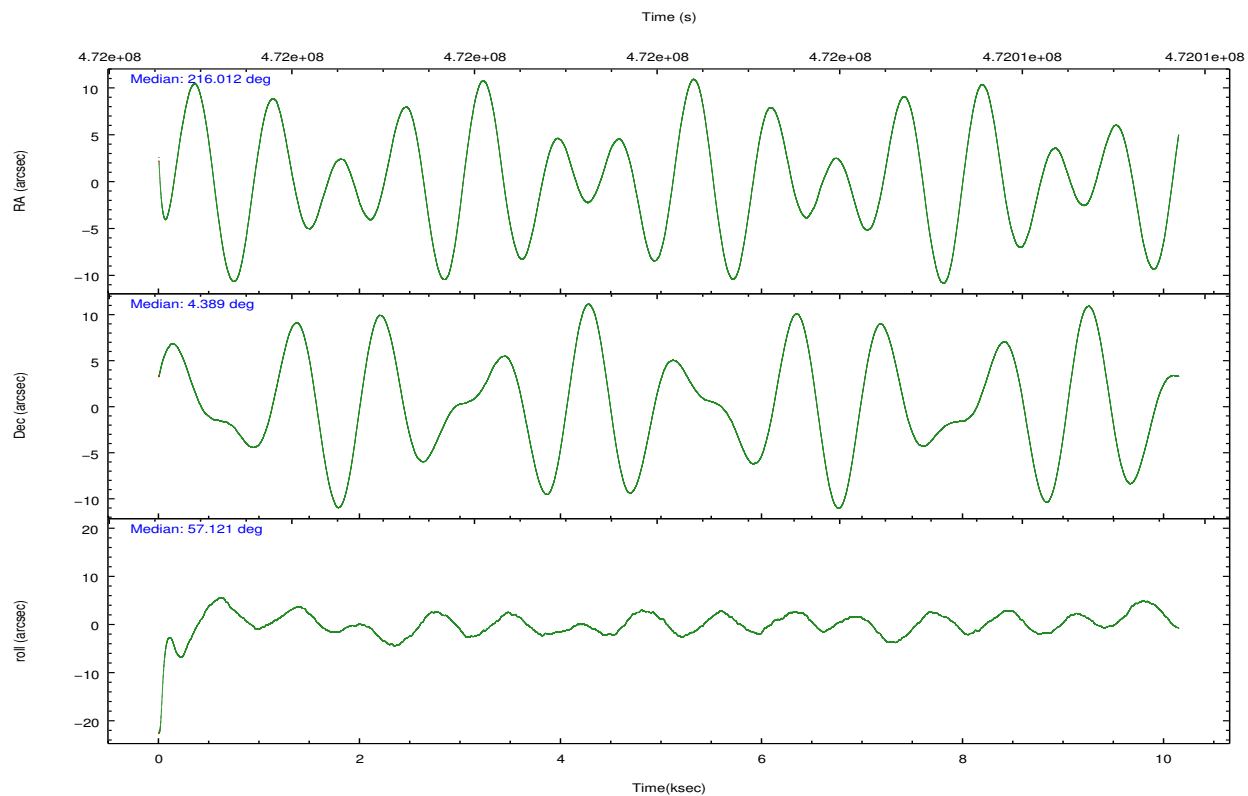


## 2.2 Compared Parameters

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	216.011026	216.0122944678426	CCD I2 on	Y	Y
[deg] Pointing Dec	4.361920	4.38941115940955	CCD I3 on	Y	Y
[deg] Pointing Roll	56.918642	57.12720414315855	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	-225.8458576473255	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	471997206.184000	471996178.57894	CCD S5 on	N	N
Observation start date	2012-12-15T22:18:59	2012-12-15T22:02:58	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	472007206.184000	472007455.11705	On-chip summing requested	N	N
Observation end date	2012-12-16T01:05:39	2012-12-16T01:10:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



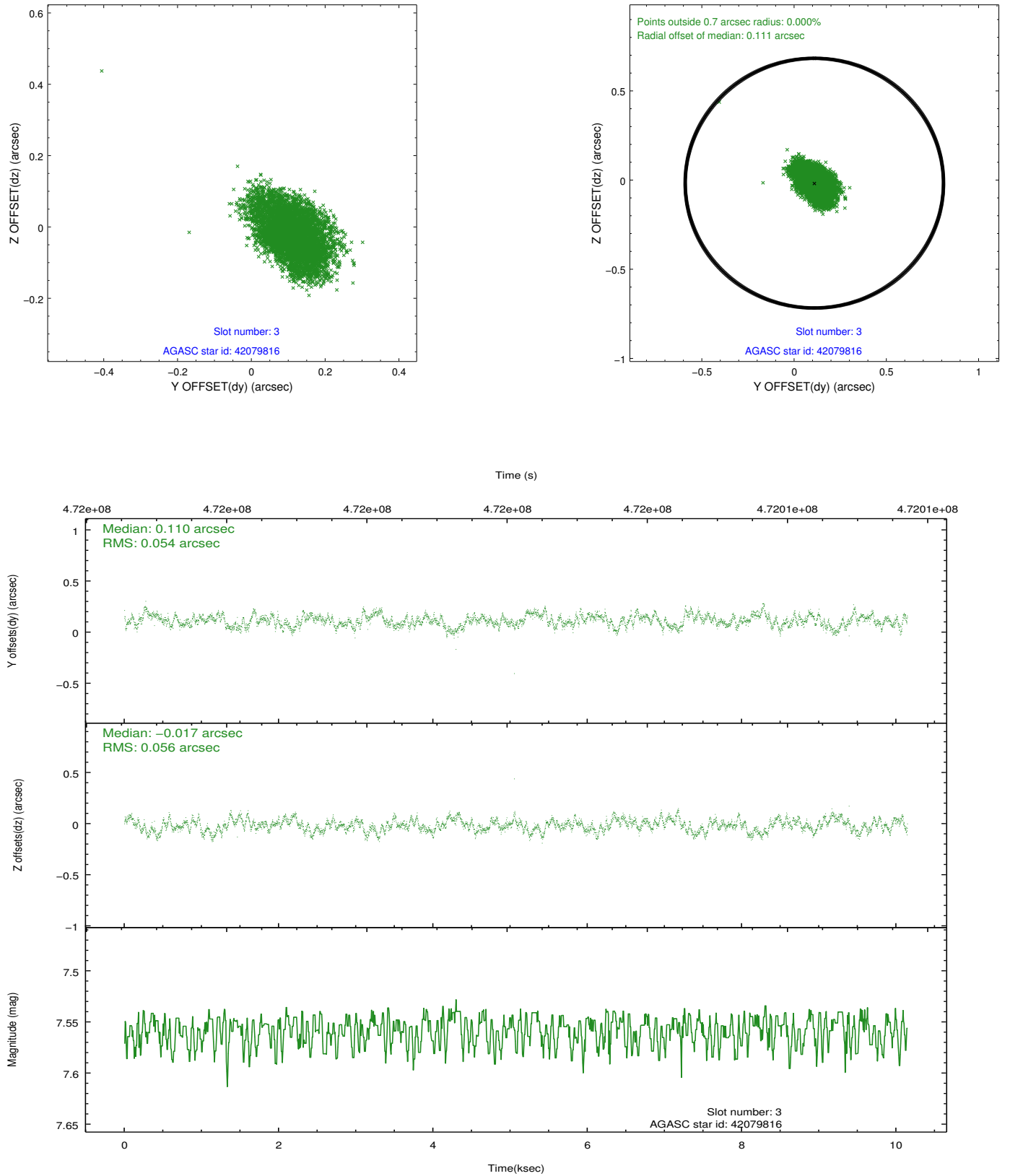


### Slot Statistics

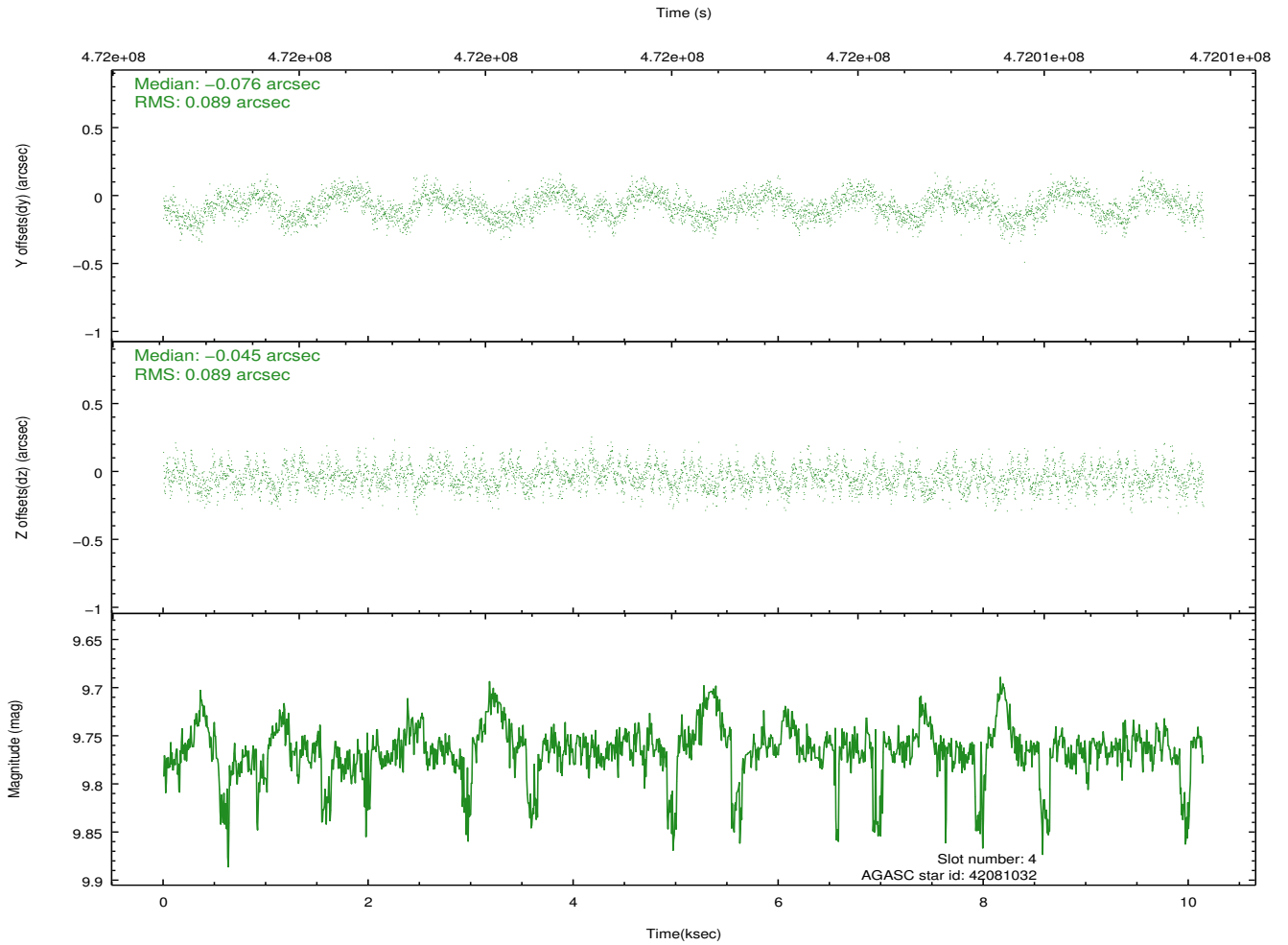
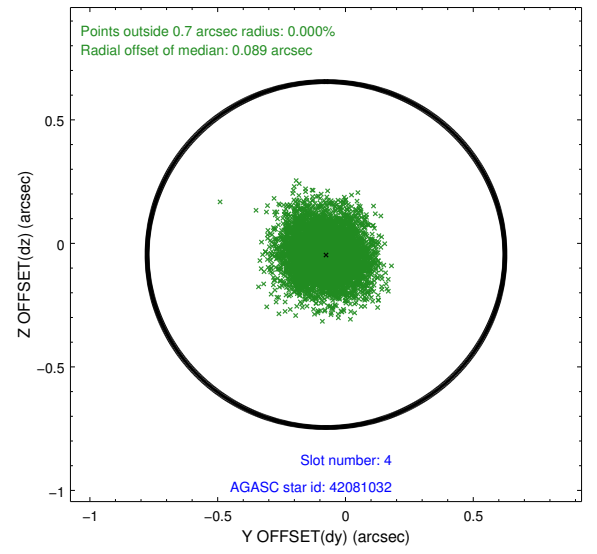
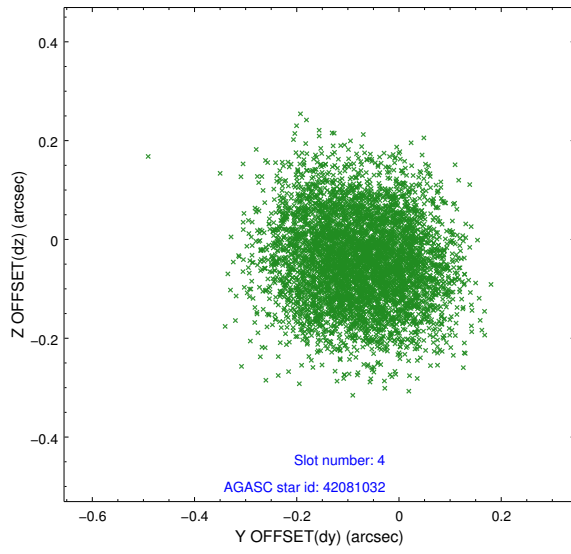
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	2475	0.138	-0.101	0.013	0.021	0.000000	0.000000	922.31	-999.45
1	FID		ACIS-I-2	7.04	2475	-0.301	0.007	0.009	0.015	0.000000	0.000000	-772.34	-1005.07
2	FID		ACIS-I-4	6.98	2475	0.065	0.162	0.009	0.023	0.000000	0.000000	2141.45	901.25
3	GUIDE	used	42079816	7.56	4947	0.110	-0.017	0.083	0.134	215.756331	4.286050	-727.53	617.60
4	GUIDE	used	42081032	9.76	4939	-0.076	-0.045	0.137	0.211	215.625634	4.699661	264.15	1822.54
5	GUIDE	used	42081720	9.76	4937	-0.097	-0.162	0.228	0.342	215.706672	4.759521	603.54	1696.56
6	GUIDE	used	42086696	8.67	4948	0.140	0.308	0.088	0.140	216.337173	3.948057	-608.17	-1793.81
7	GUIDE	used	42077800	8.05	4948	-0.069	-0.085	0.097	0.170	216.478358	4.857306	2409.46	-430.70

## 2.4 Star Slots

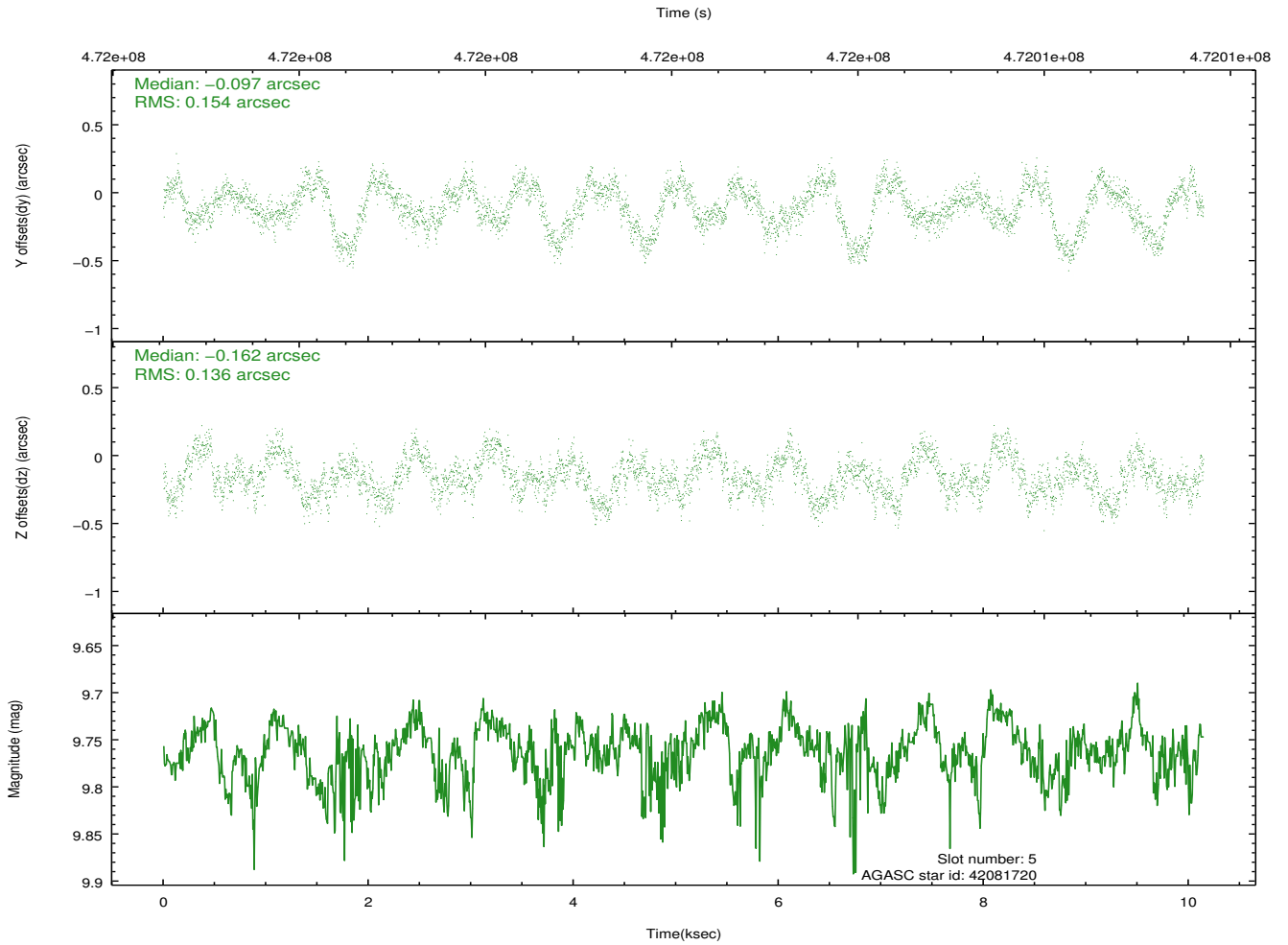
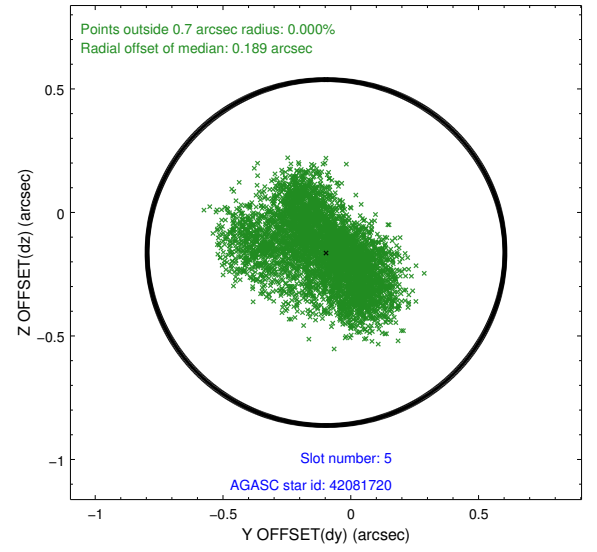
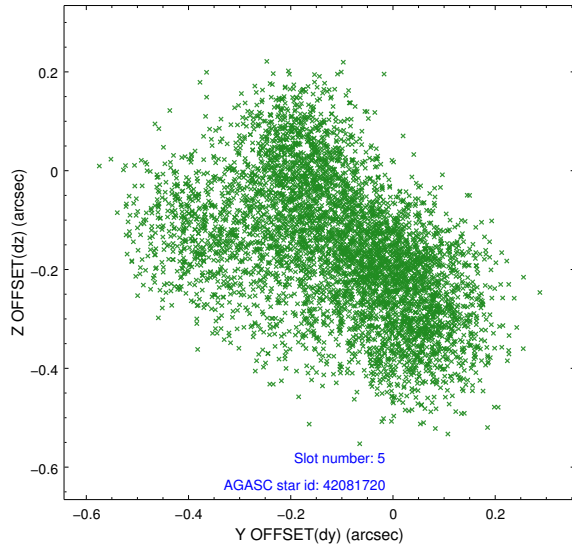
### 2.4.1 Slot 3



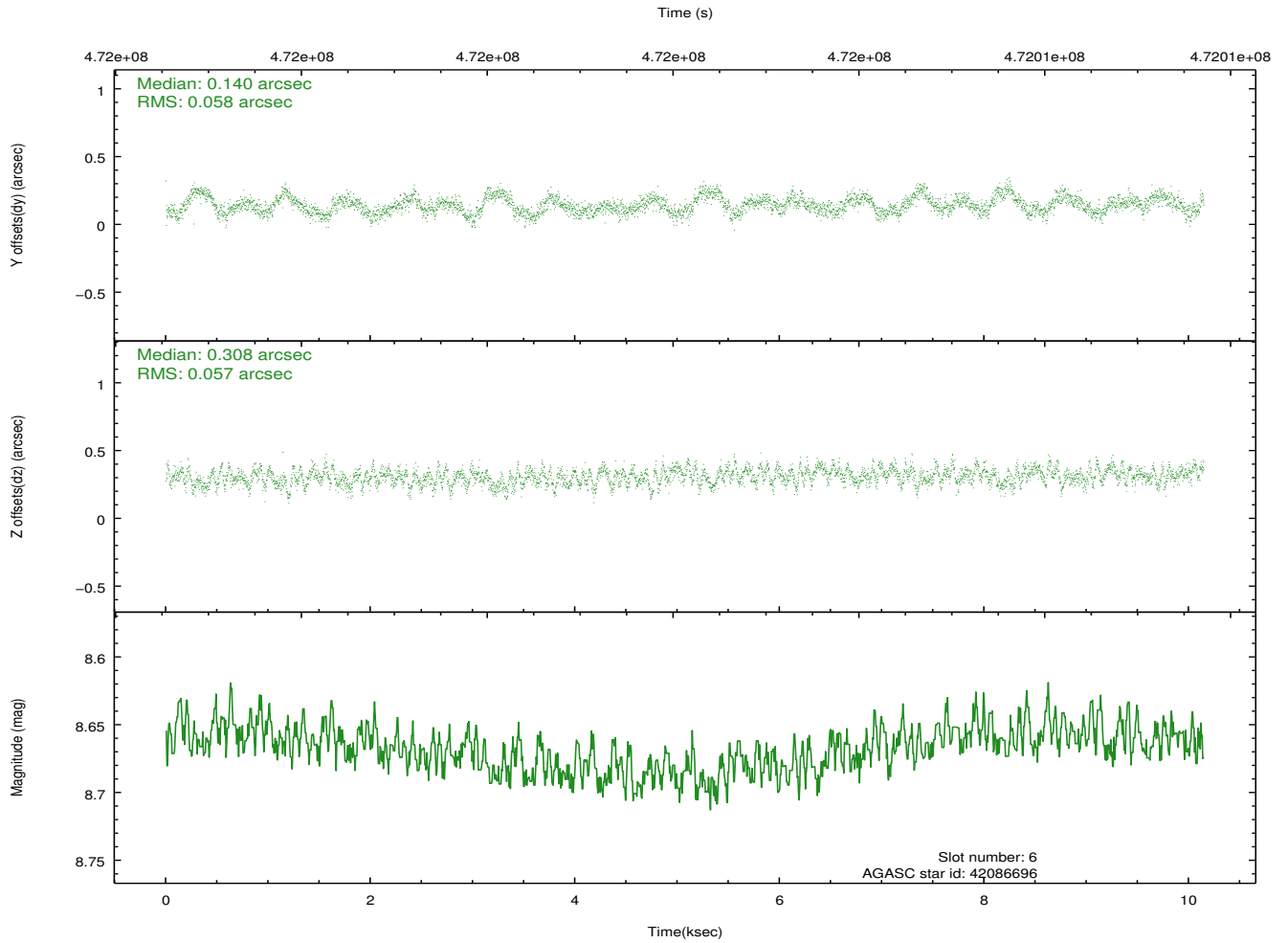
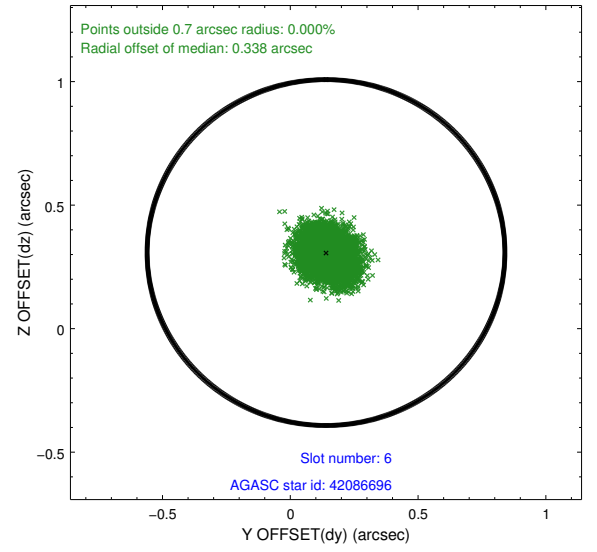
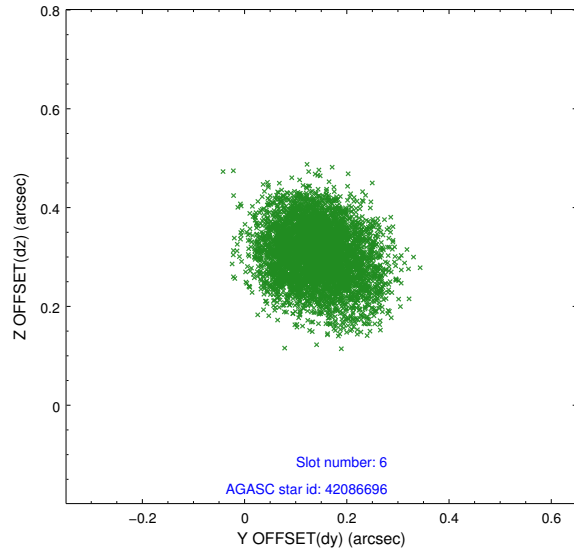
## 2.4.2 Slot 4



### 2.4.3 Slot 5

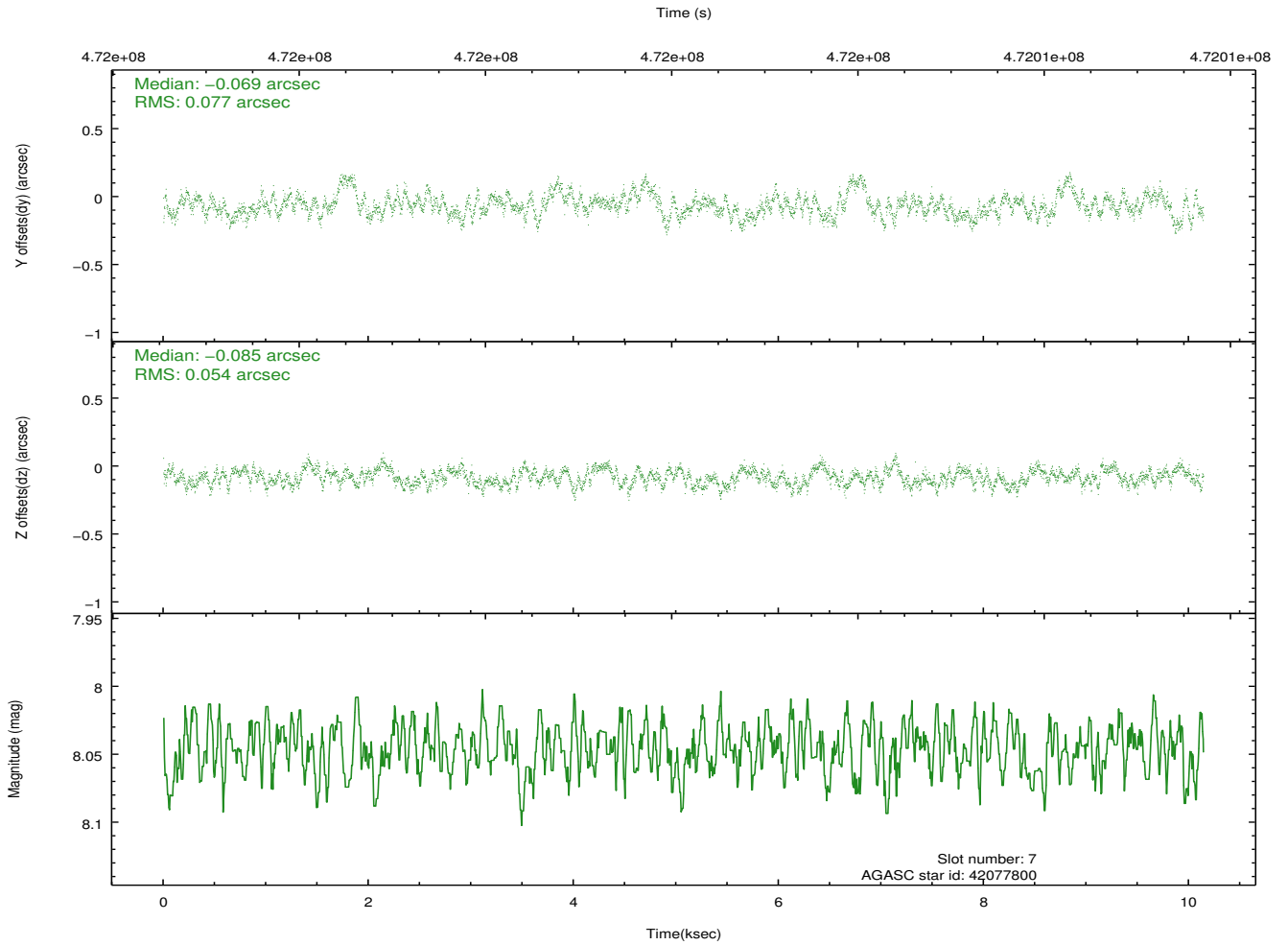
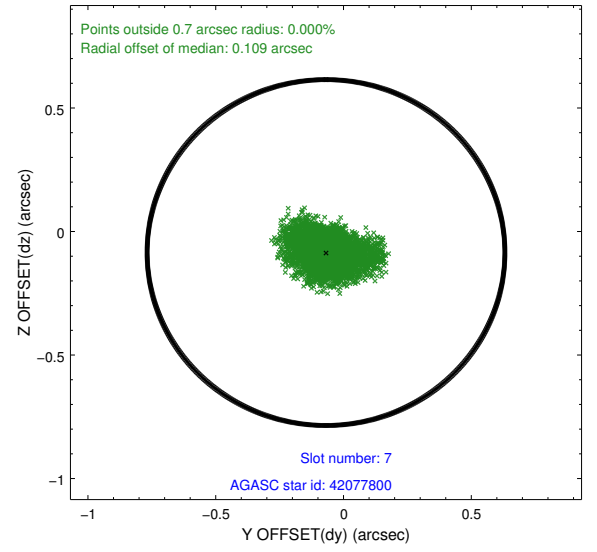
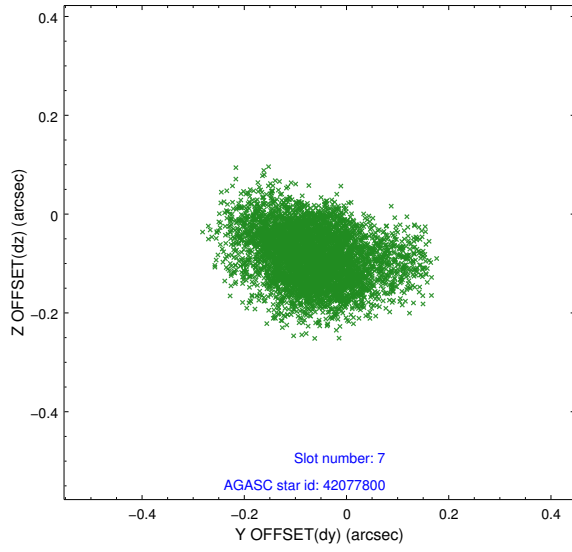


## 2.4.4 Slot 6



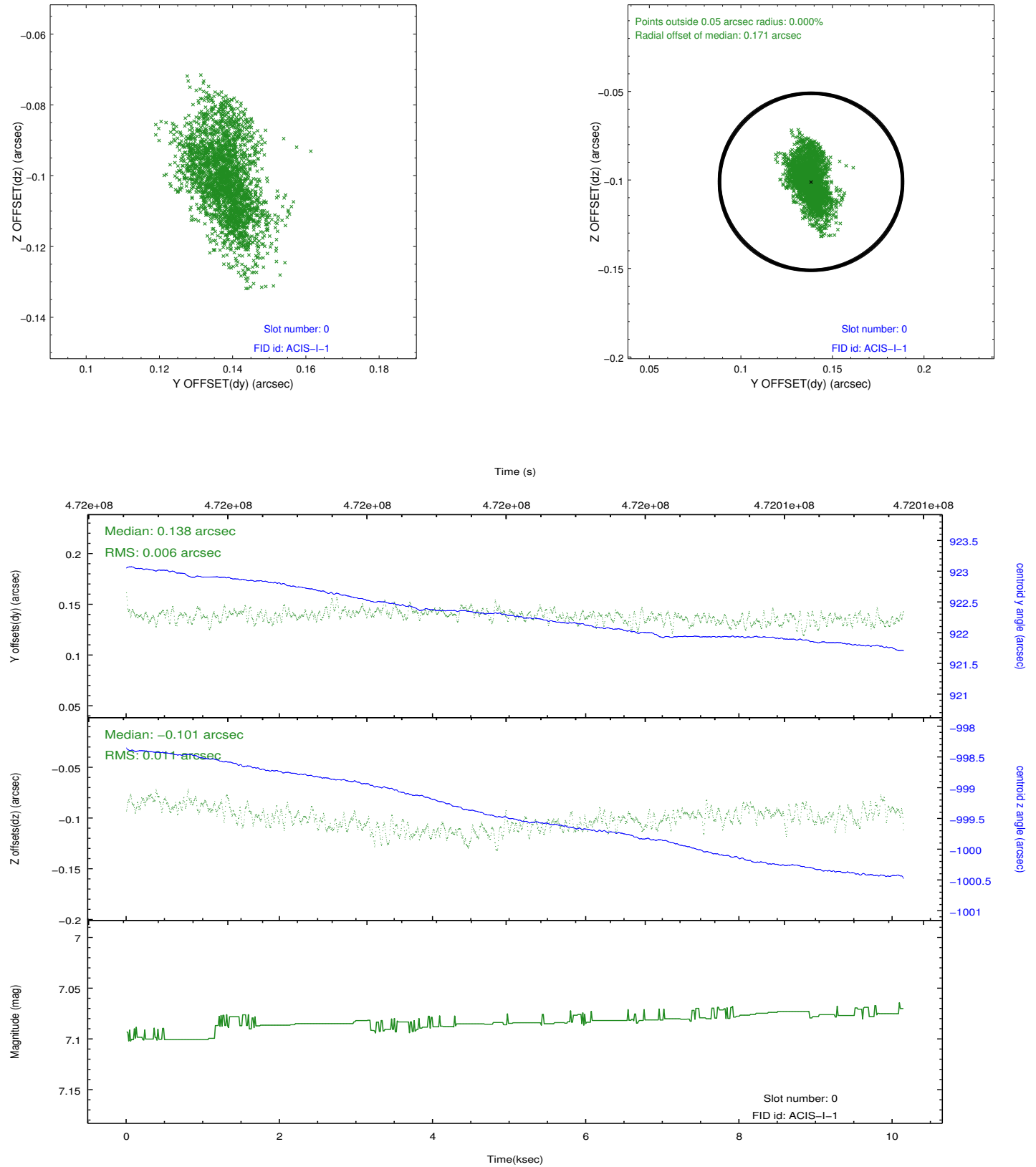


## 2.4.5 Slot 7

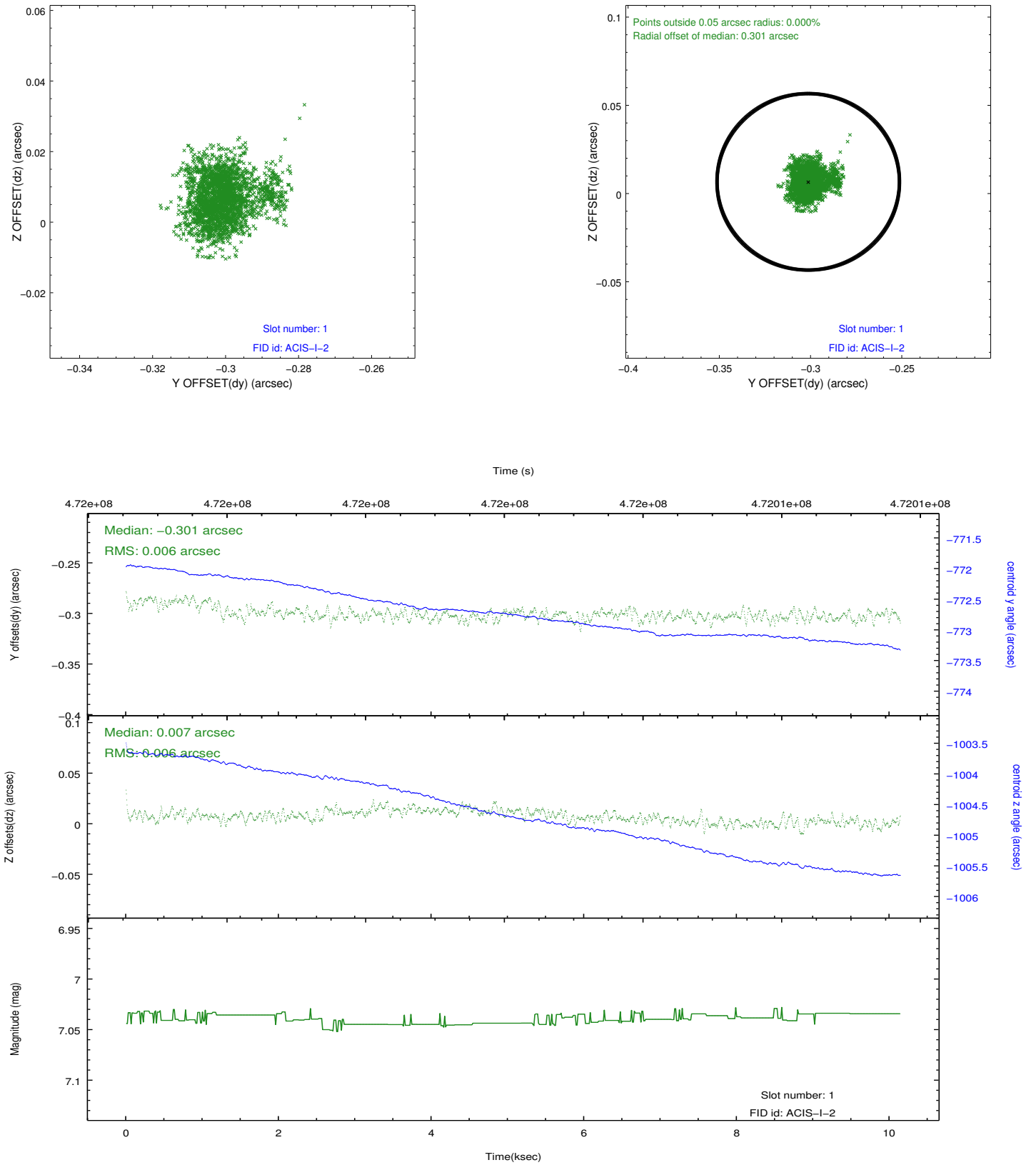


## 2.5 FID Slots

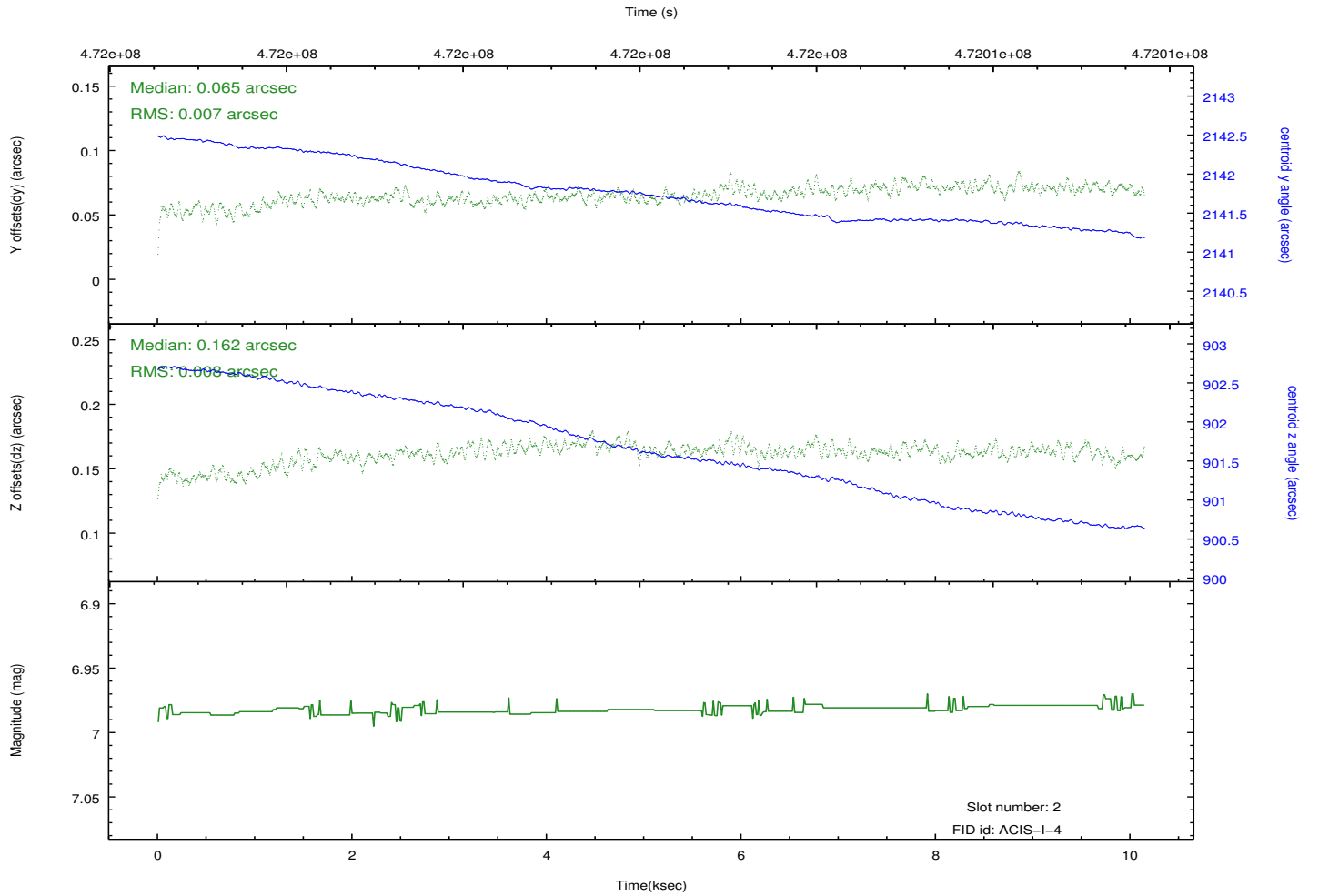
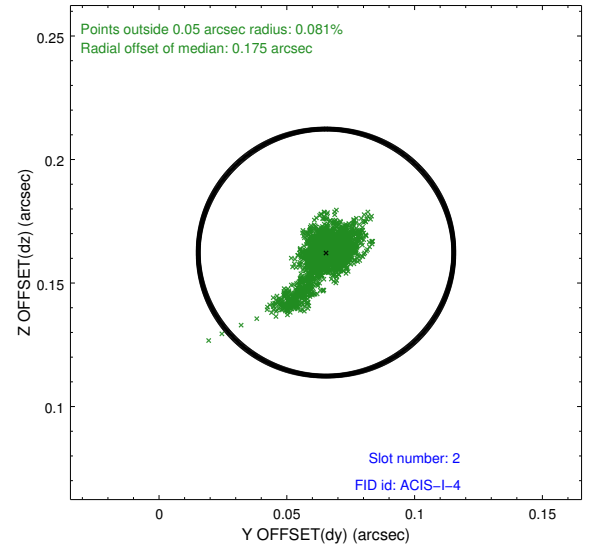
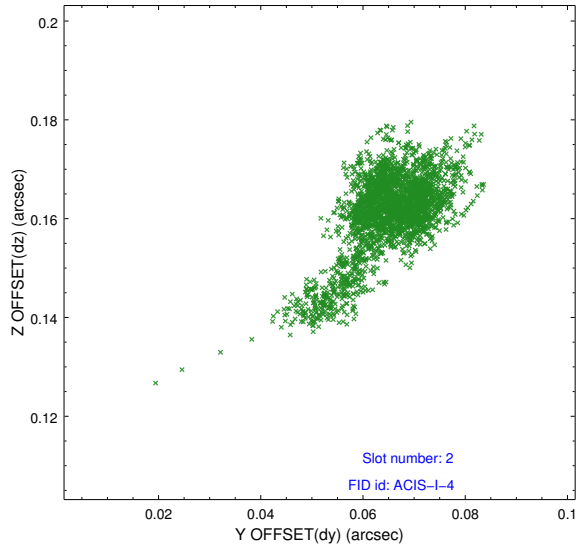
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.080785912097

## 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.