

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15297 - L2 Version 2  
Chandra X-Ray Center

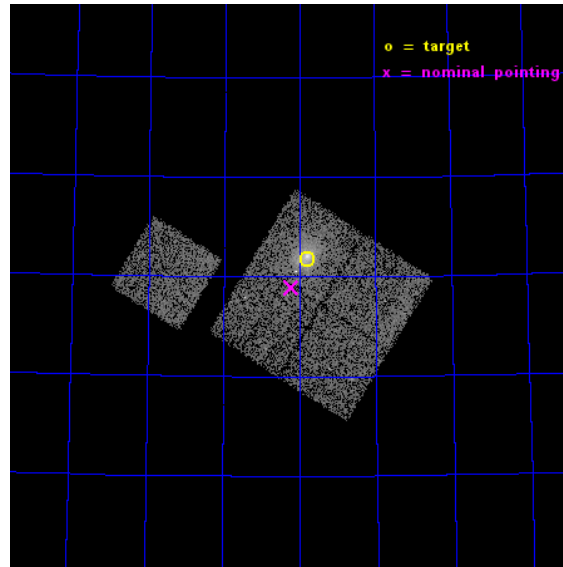
L2 Processing Date : Dec 3 2014

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# 1 Front

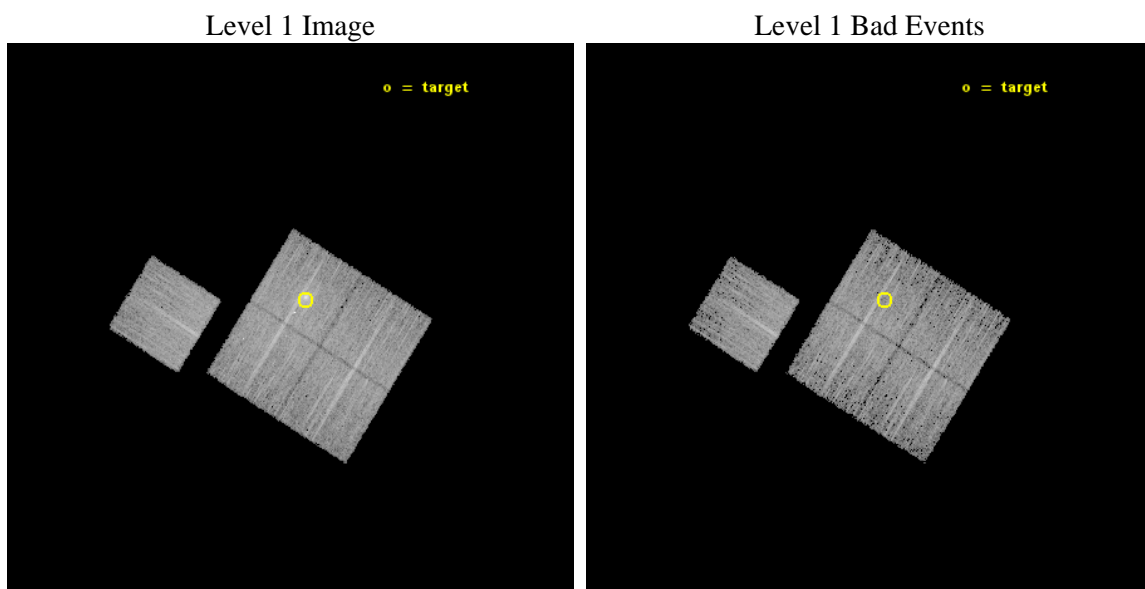
seq_num	801330	Sequence number
obs_id	15297	Observation id
title	Observing Distant Planck Clusters (Type A)	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	PSZ137	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	95.451667	Observer's specified target RA [deg]
dec_targ	74.696	Observer's specified target Dec [deg]
ra_nom	95.554714571107	Nominal RA [deg]
dec_nom	74.64892977978	Nominal Dec [deg]
roll_nom	302.04870931407	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9779.5208614469	Sum of GTIs [s]
livetime	9651.7442218135	Livetime [s]
ontime0	9776.2567412257	Sum of GTIs [s]
ontime1	9779.4387814403	Sum of GTIs [s]
ontime2	9779.4798214436	Sum of GTIs [s]
ontime3	9779.5208614469	Sum of GTIs [s]
ontime6	9779.3567014337	Sum of GTIs [s]
l2events	32692	Number of level 2 events



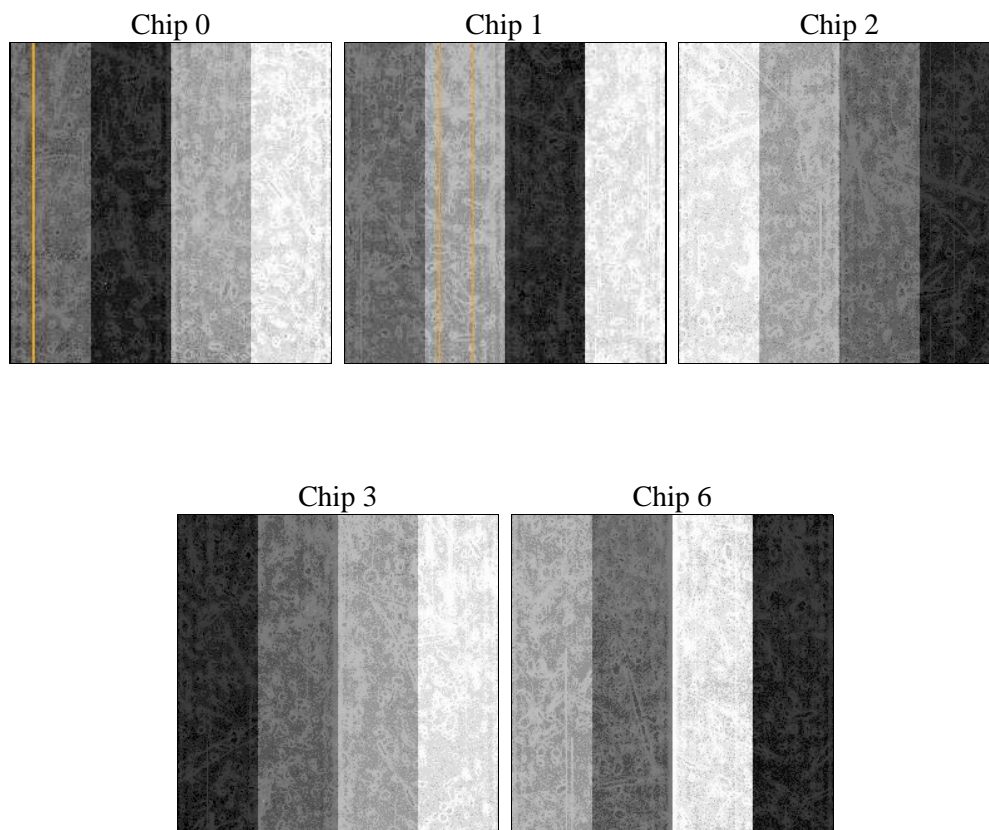
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9697.231000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	9779.5208614469	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	9776.2567412257	Sum of GTIs [s]
date	2014-12-03T06:03:01	Date and time of file creation	ontime1	9779.4387814403	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	9779.4798214436	Sum of GTIs [s]
			ontime3	9779.5208614469	Sum of GTIs [s]
			ontime6	9779.3567014337	Sum of GTIs [s]
			l1events	257410	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	47300	48464	52024	56917	52705
rejected events	41101	41644	45645	44740	46398
rejected %	86%	85%	87%	78%	88%

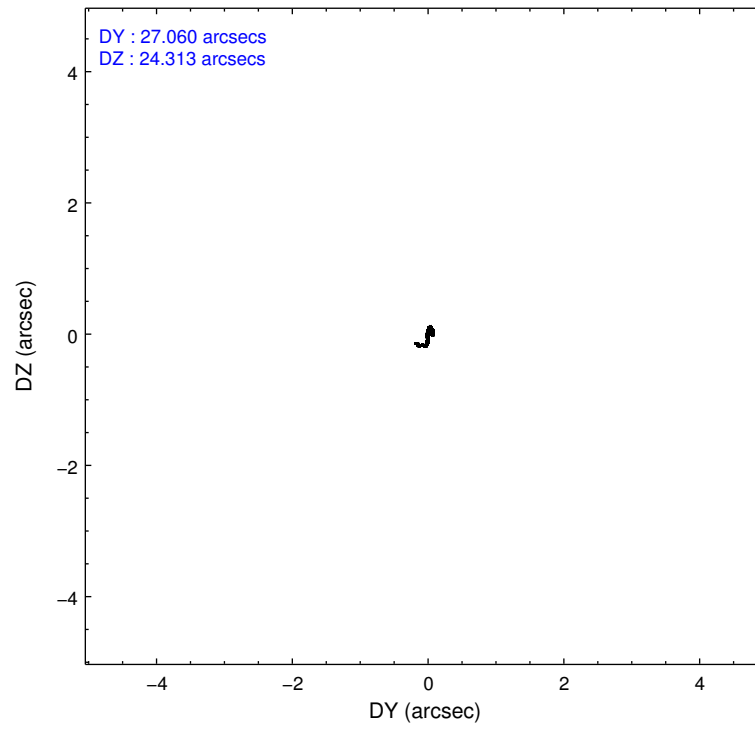
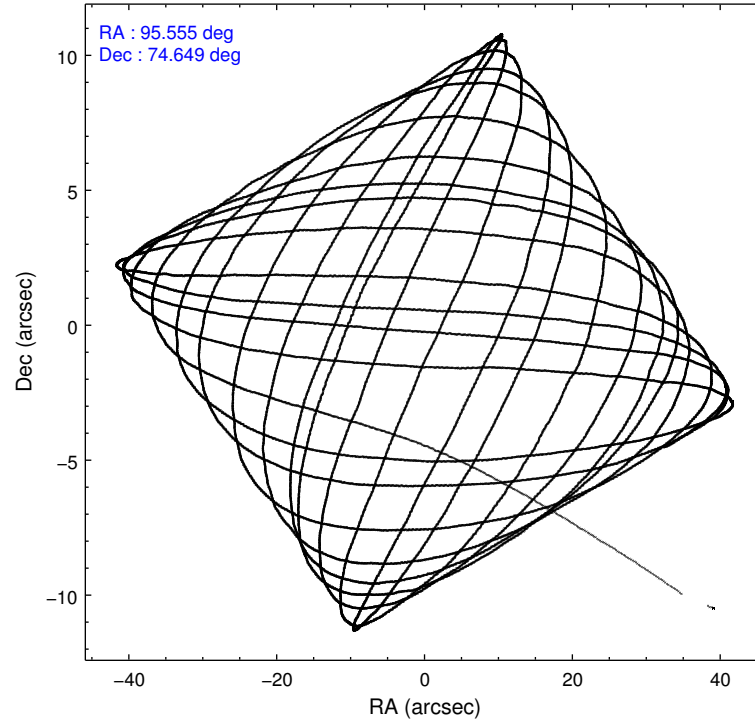
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2186	2404	2339	7313	2118
	4%	4%	4%	12%	4%
grade 1 events	36	29	23	48	27
	0%	0%	0%	0%	0%
grade 2 events	1559	1645	1577	1930	1413
	3%	3%	3%	3%	2%
grade 3 events	613	700	617	784	656
	1%	1%	1%	1%	1%
grade 4 events	625	663	635	821	633
	1%	1%	1%	1%	1%
grade 5 events	2408	2549	2323	2859	2632
	5%	5%	4%	5%	4%
grade 6 events	1218	1411	1214	1333	1490
	2%	2%	2%	2%	2%
grade 7 events	38655	39063	43296	41829	43736
	81%	80%	83%	73%	82%

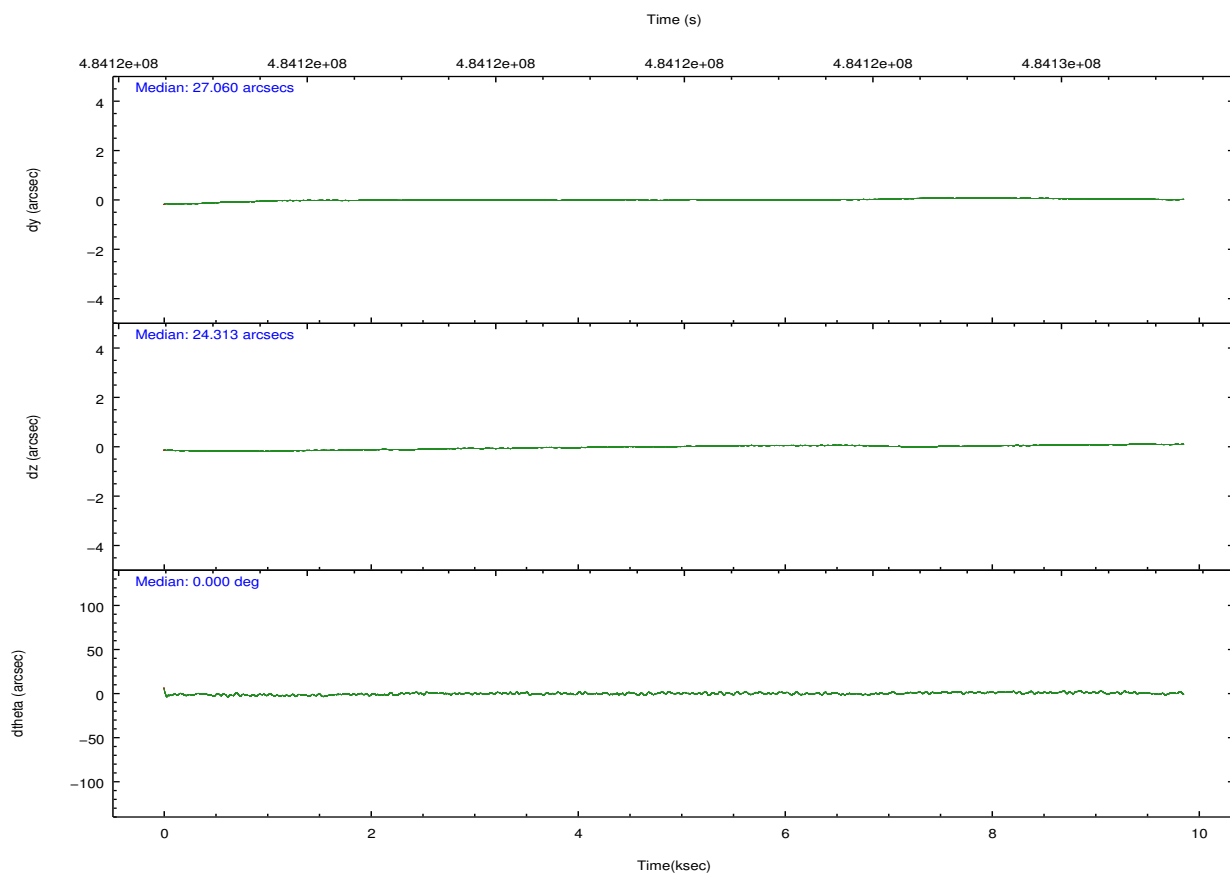
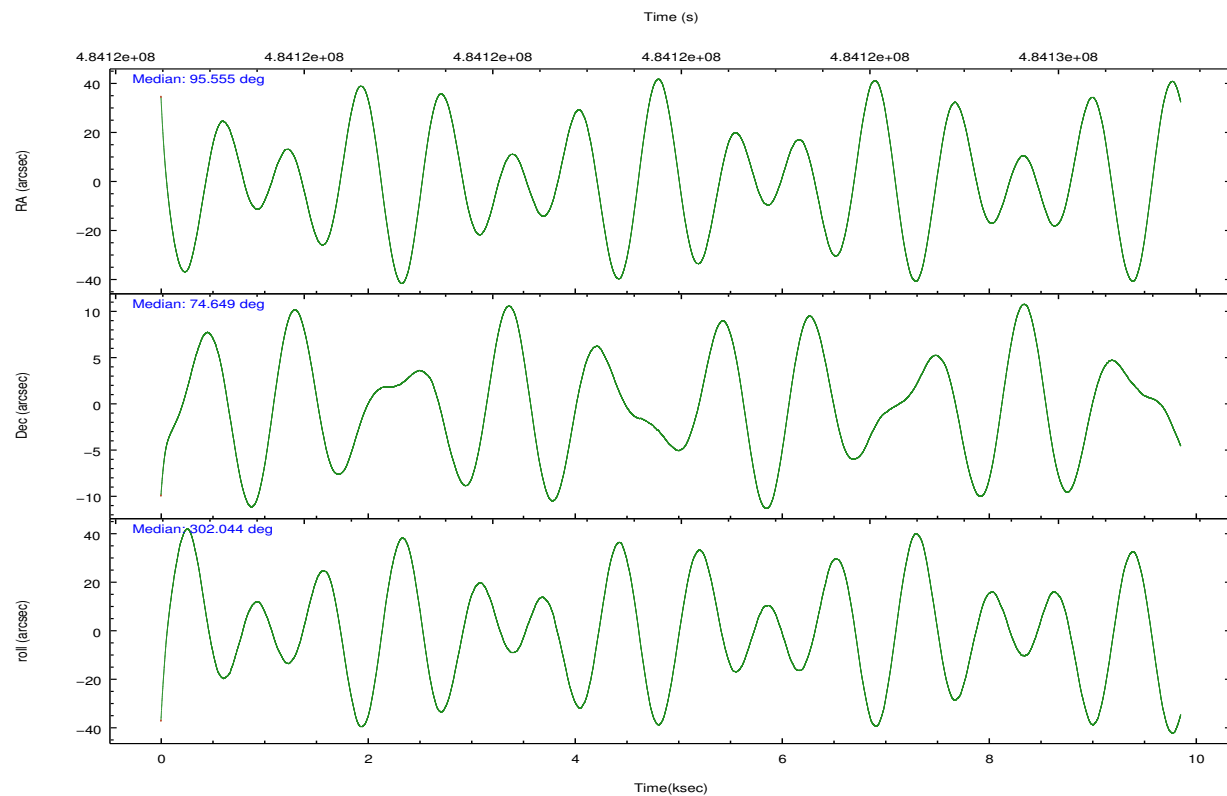


## 2.2 Compared Parameters

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	95.462742	95.55471457110654	CCD I2 on	Y	Y
[deg] Pointing Dec	74.661696	74.64892977978023	CCD I3 on	Y	Y
[deg] Pointing Roll	301.928728	302.0487093140666	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	-225.840463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	484117111.184000	484115801.78378	CCD S5 on	N	N
Observation start date	2013-05-05T04:57:24	2013-05-05T04:36:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	484126808.184000	484127045.00939	On-chip summing requested	N	N
Observation end date	2013-05-05T07:39:01	2013-05-05T07:44:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



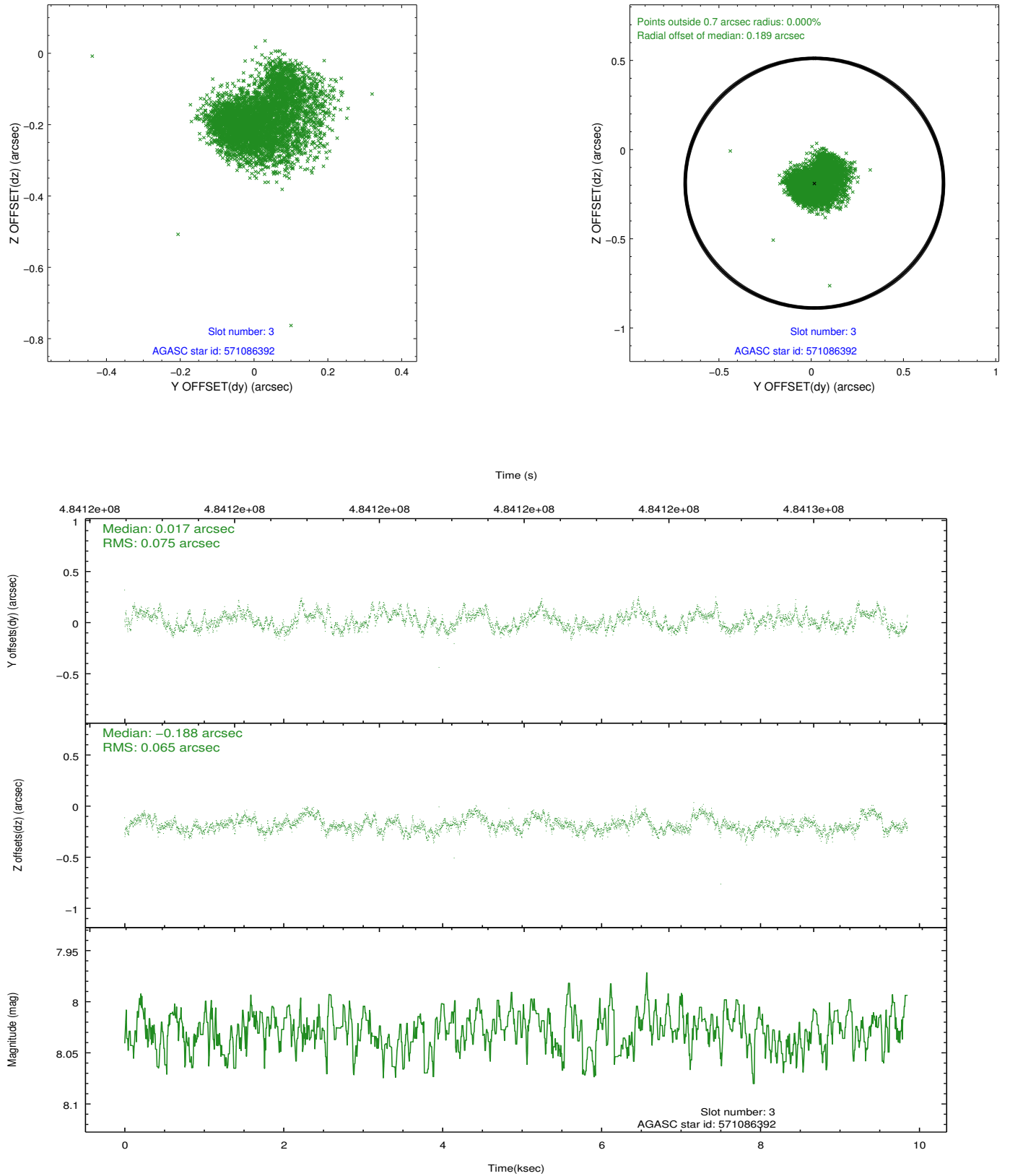


### Slot Statistics

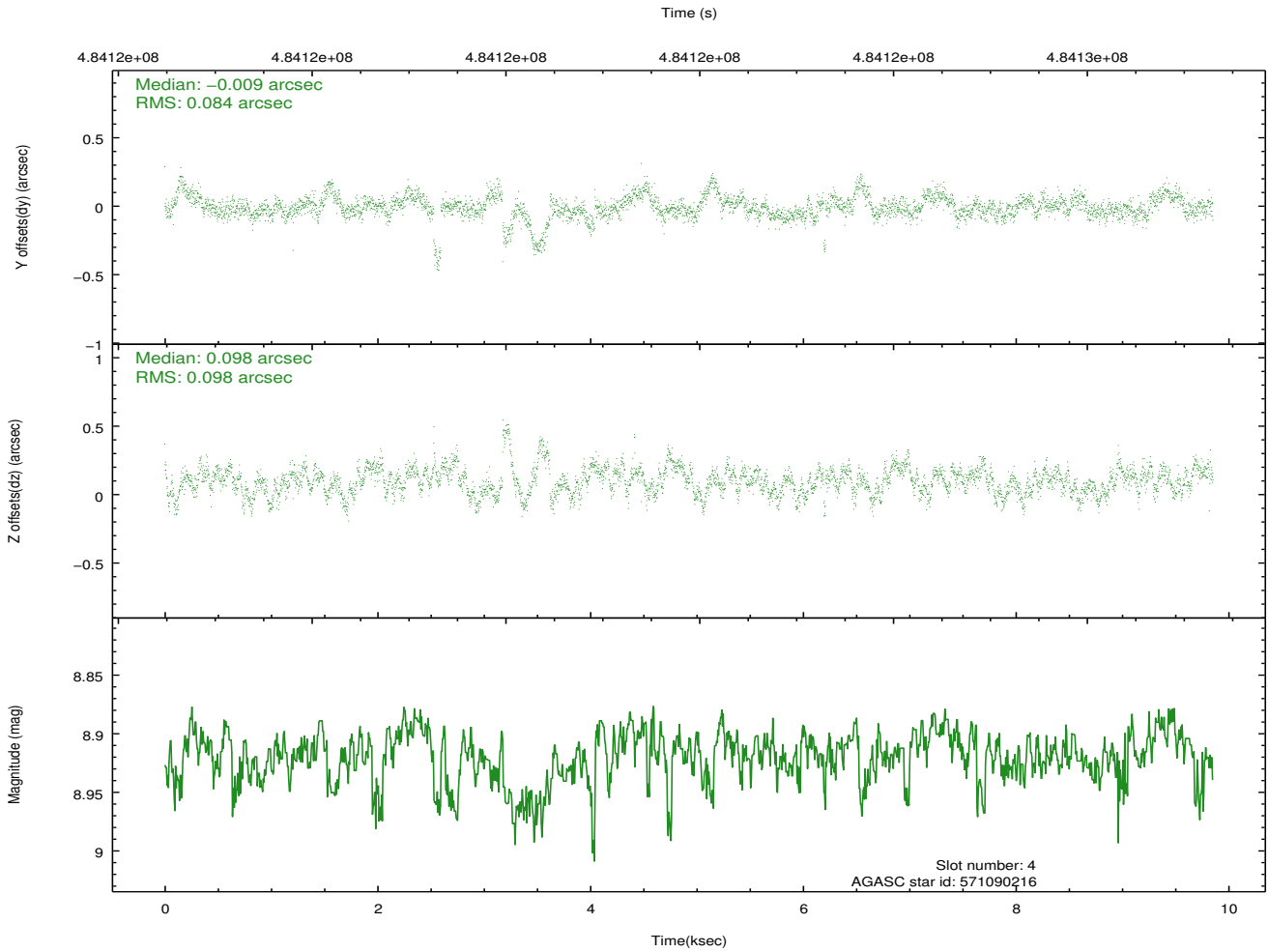
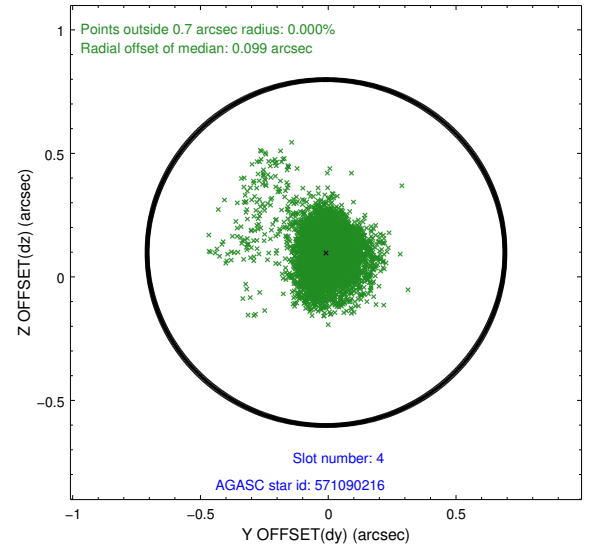
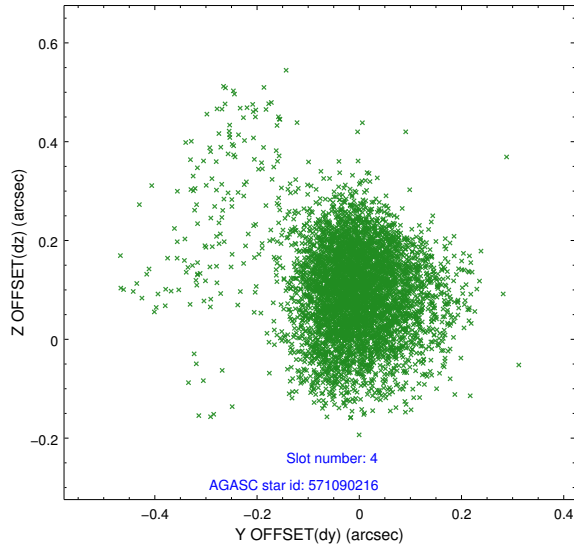
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.05	2404	0.100	-0.022	0.010	0.015	0.000000	0.000000	911.98	-1007.26
1	FID		ACIS-I-2	7.01	2404	-0.359	-0.088	0.008	0.013	0.000000	0.000000	-782.68	-1013.01
2	FID		ACIS-I-4	6.95	2402	0.162	0.179	0.009	0.017	0.000000	0.000000	2131.31	893.32
3	GUIDE	used	571086392	8.03	4807	0.017	-0.188	0.107	0.165	95.774545	74.846098	-407.96	600.99
4	GUIDE	used	571090216	8.92	4801	-0.009	0.098	0.125	0.225	94.050307	74.265168	468.89	-1916.00
5	GUIDE	used	572784808	7.61	4807	-0.245	-0.267	0.079	0.135	97.020549	74.743088	515.39	1417.14
6	GUIDE	used	593112712	9.78	4782	0.128	0.156	0.212	0.354	95.261855	75.291954	-2022.44	1044.50
7	GUIDE	used	571082696	8.73	4803	0.131	0.211	0.092	0.143	92.857116	74.527931	-960.43	-2348.22

## 2.4 Star Slots

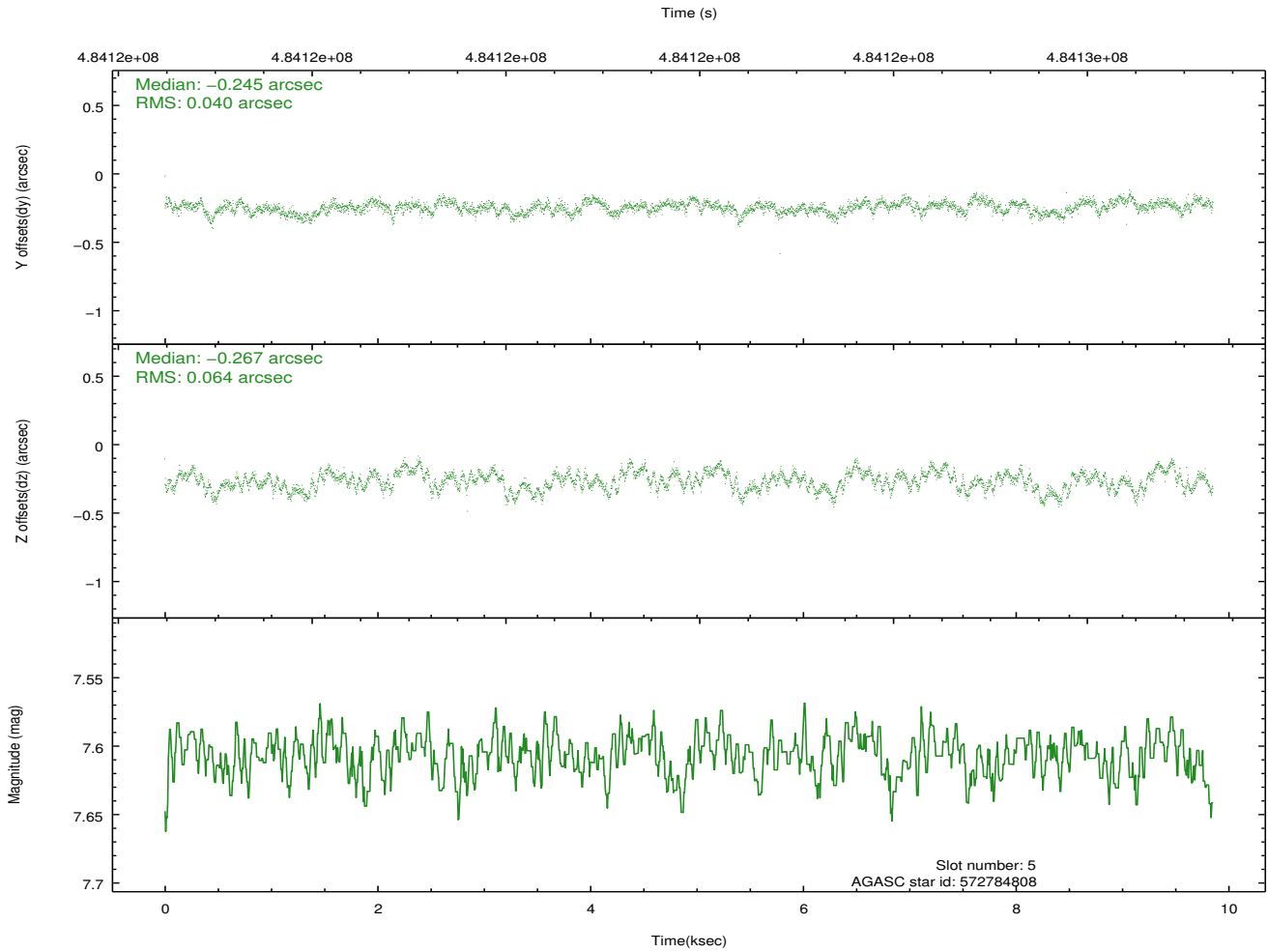
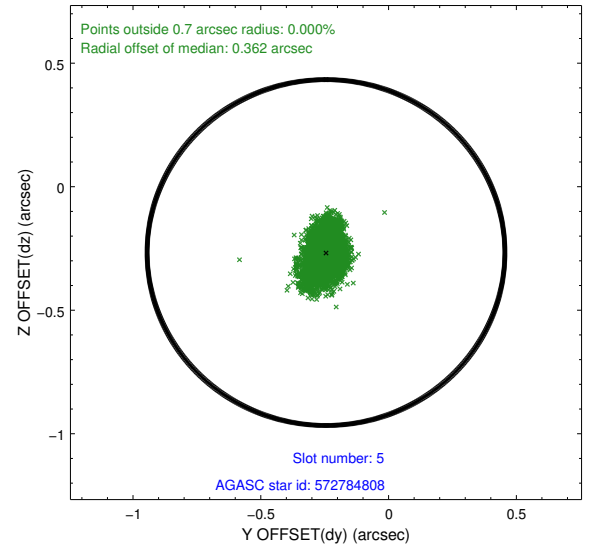
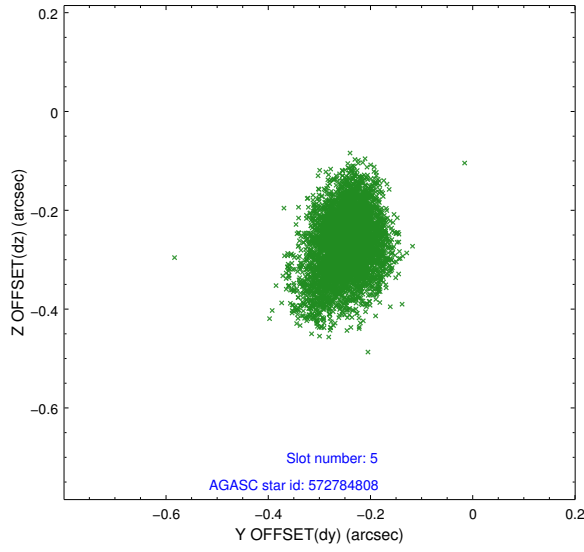
### 2.4.1 Slot 3



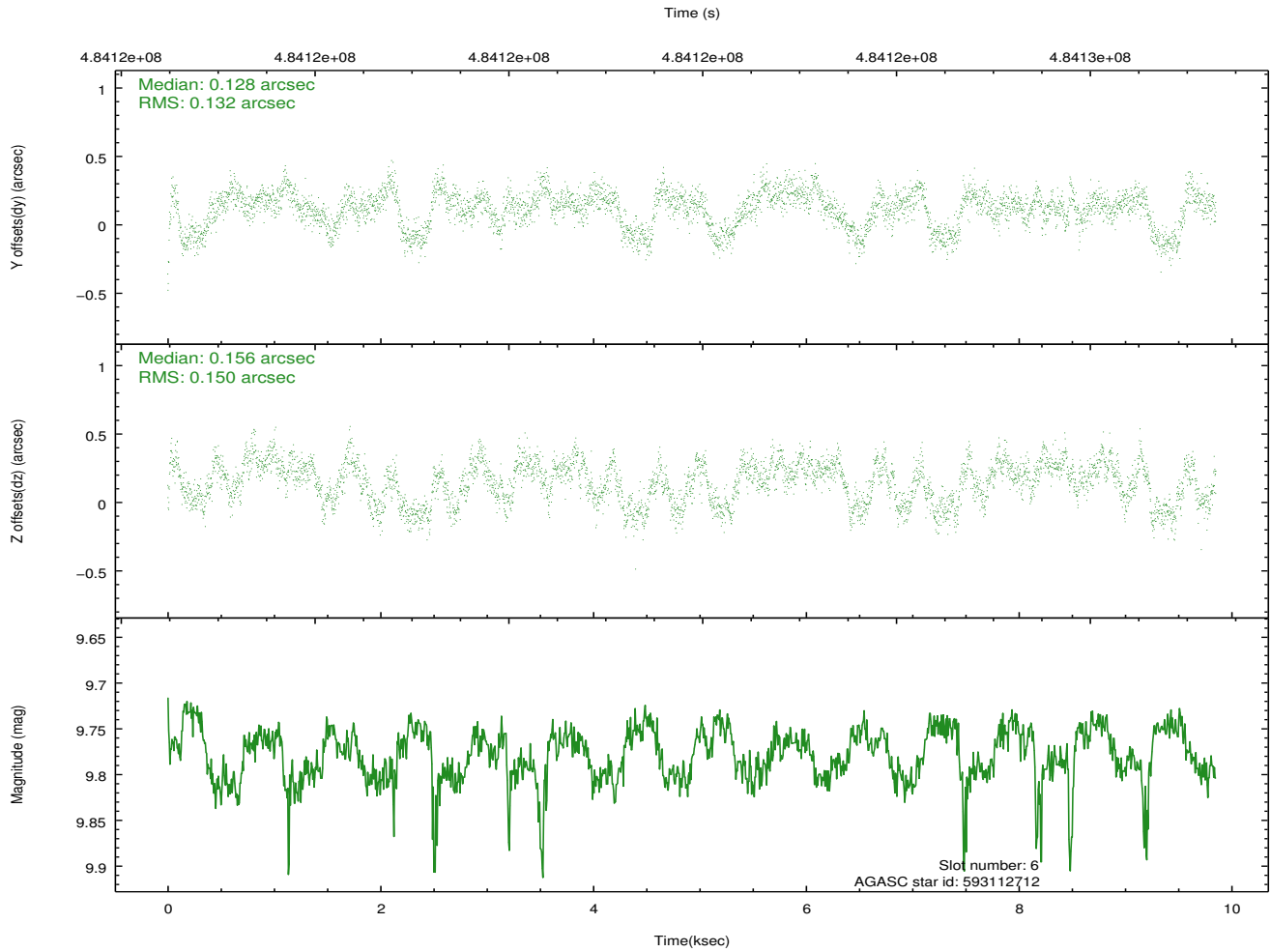
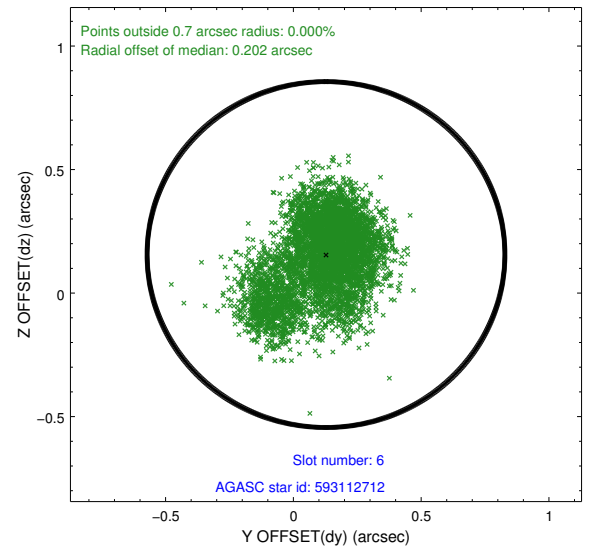
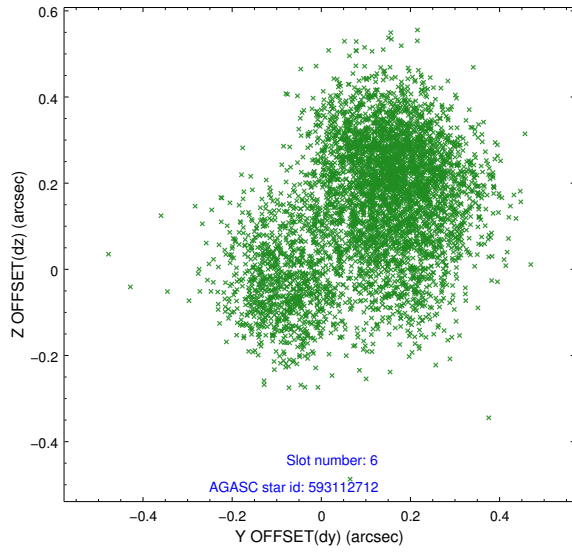
## 2.4.2 Slot 4



### 2.4.3 Slot 5

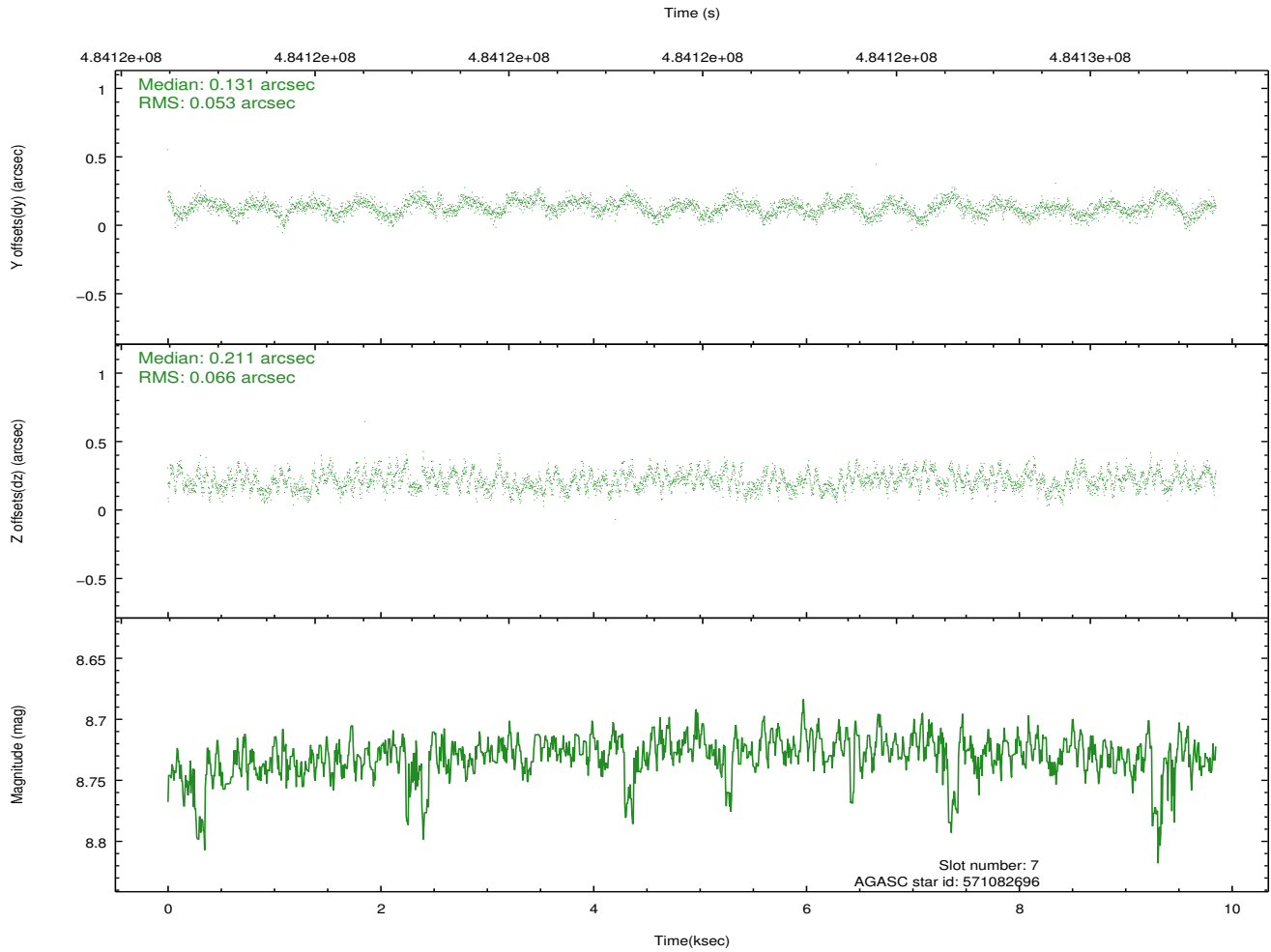
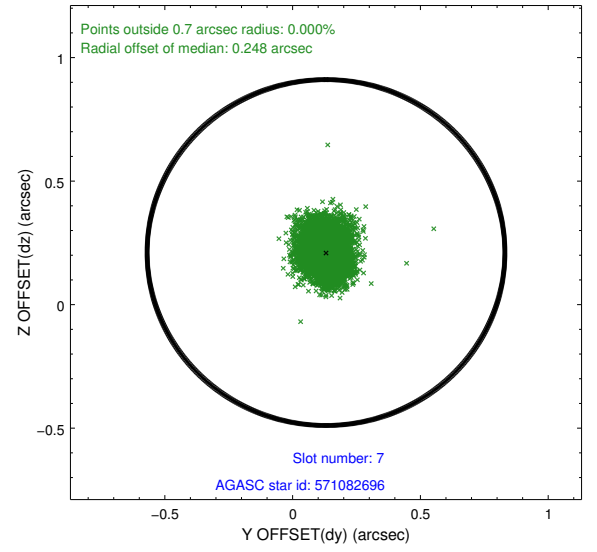
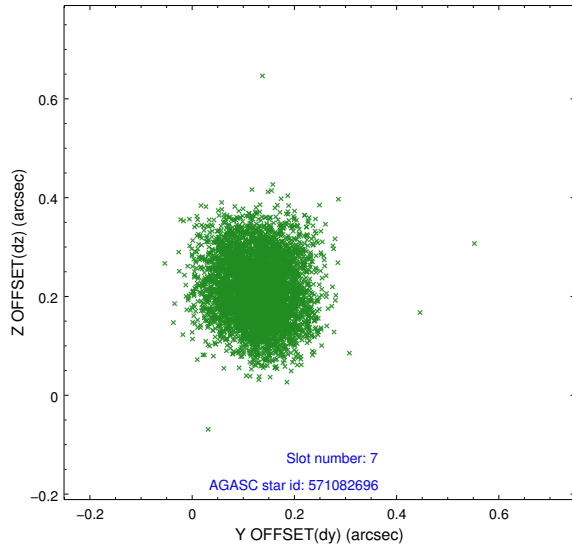


## 2.4.4 Slot 6



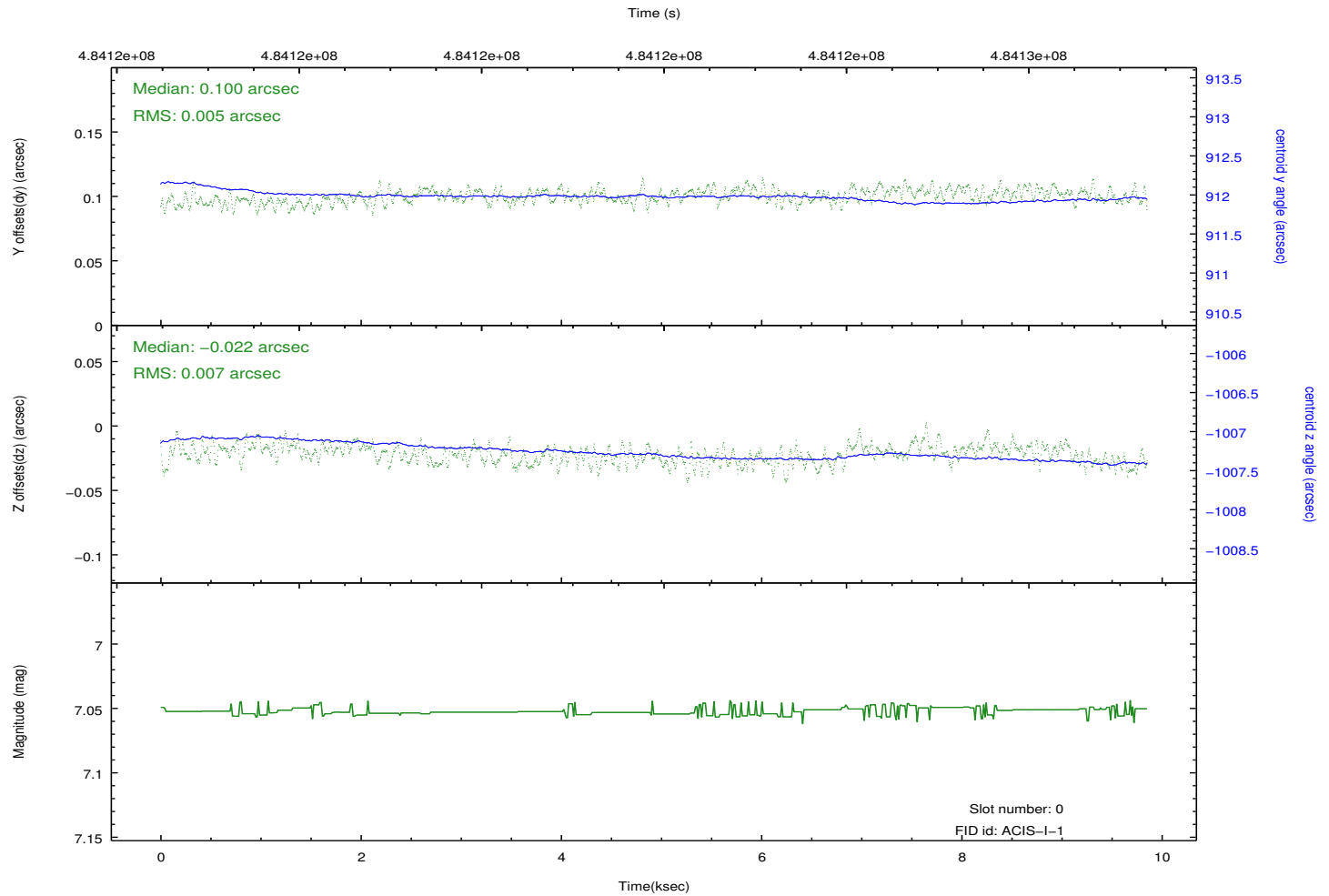
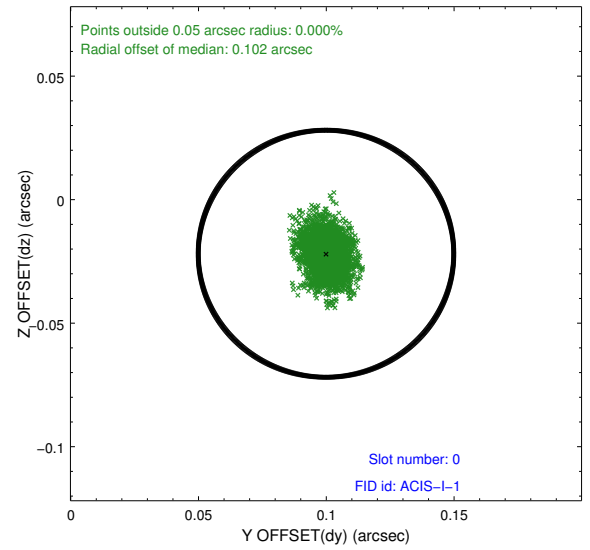
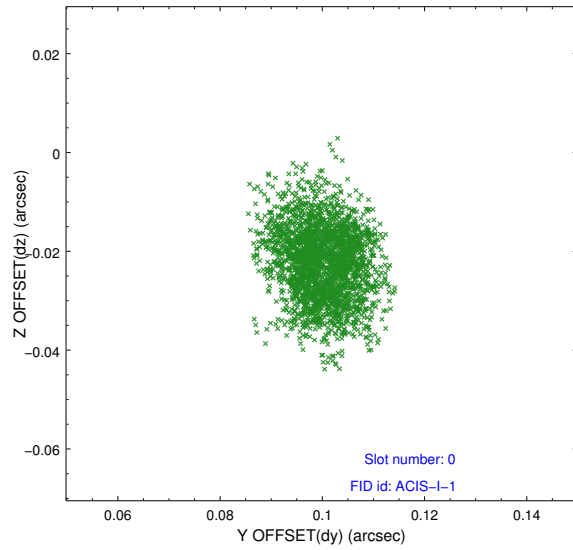


## 2.4.5 Slot 7

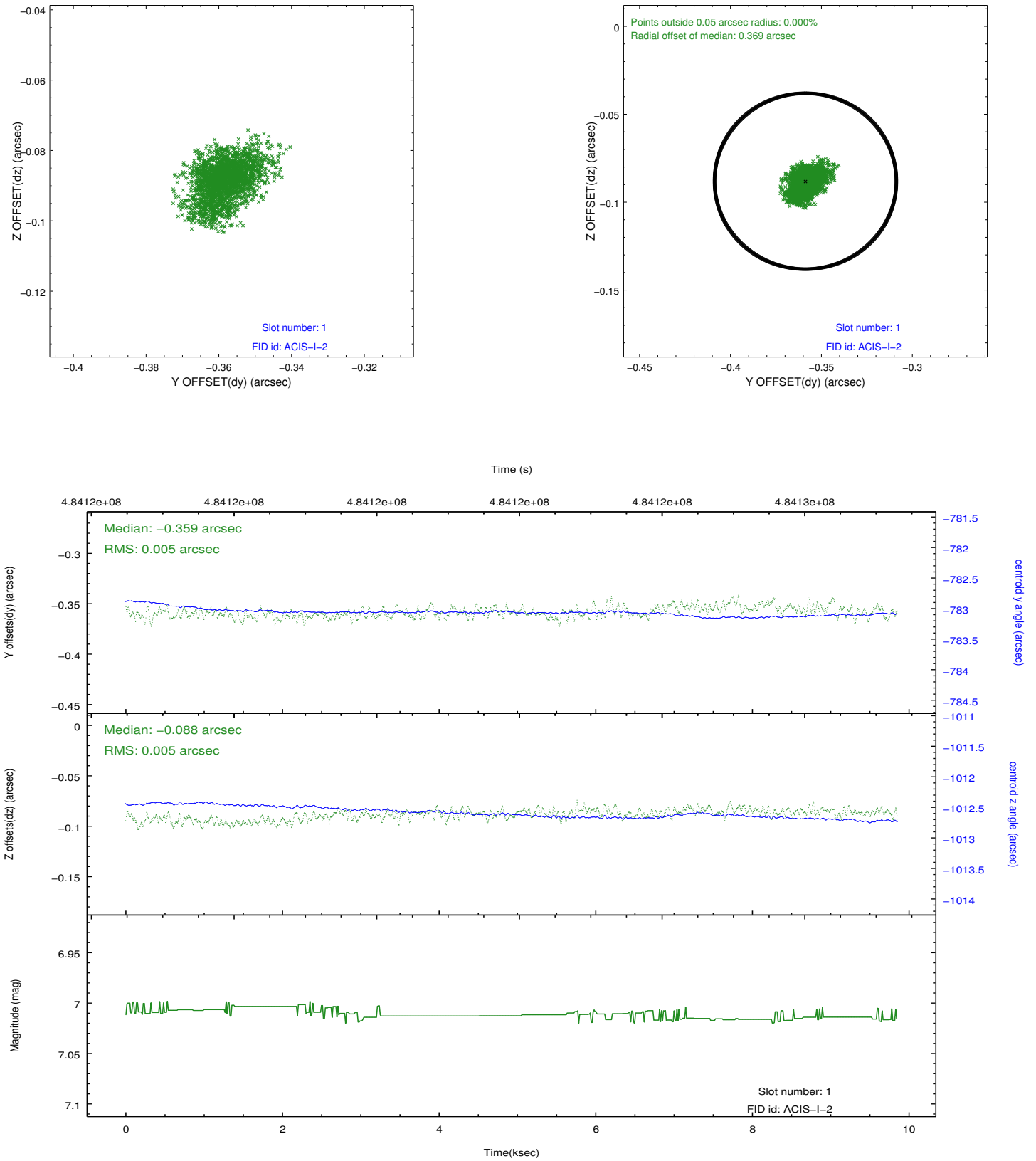


## 2.5 FID Slots

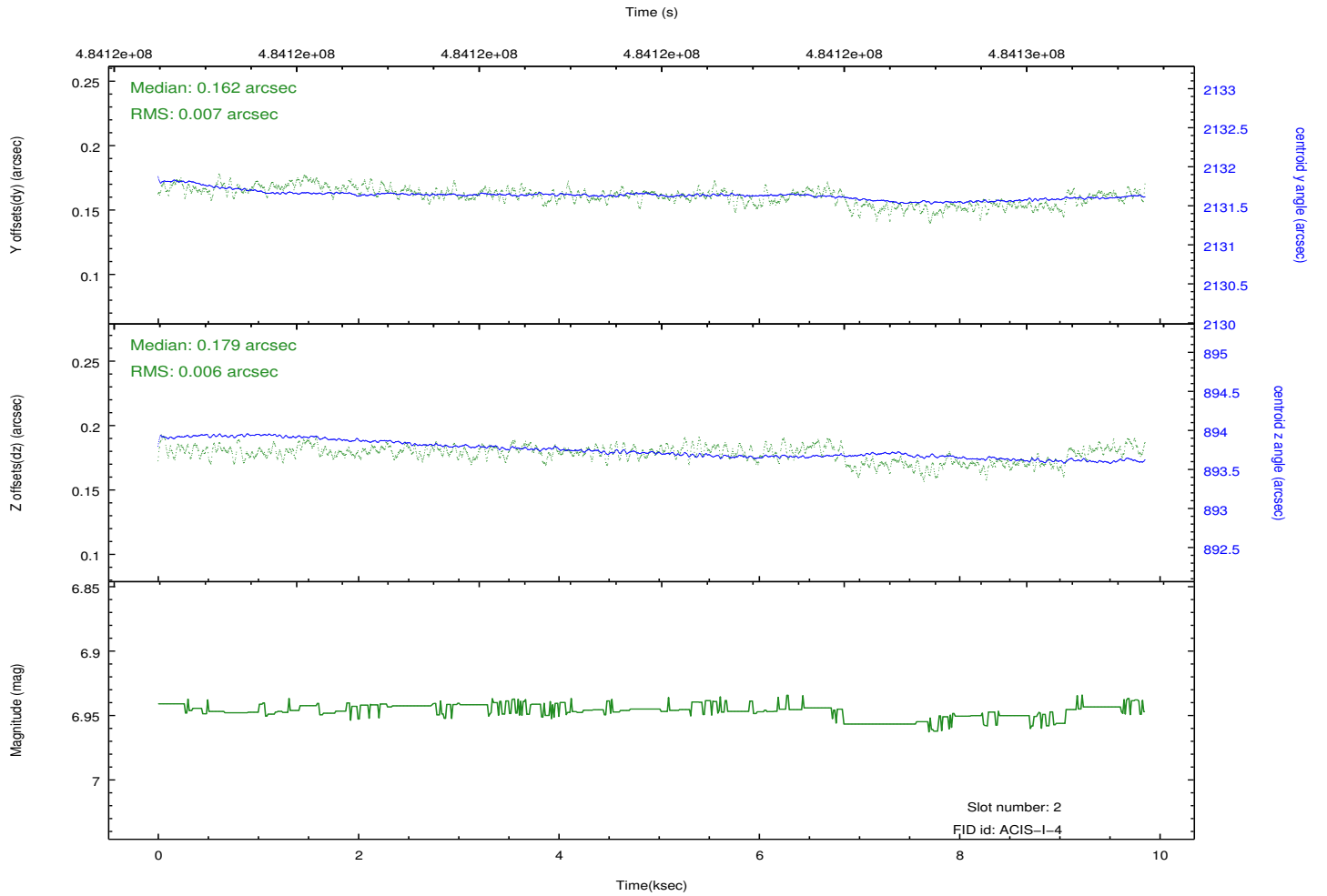
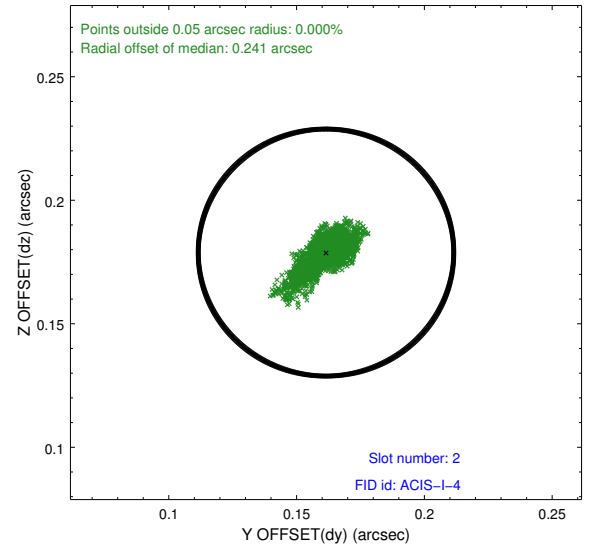
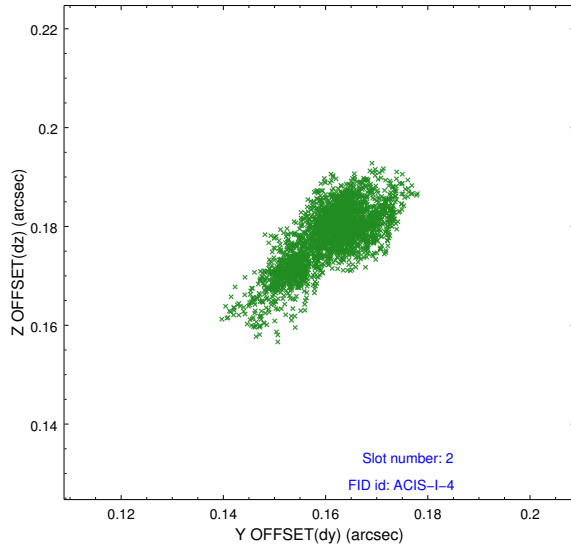
### 2.5.1 Slot 0



## 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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.7795208614469

## 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.