

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10969 - L2 Version 3  
Chandra X-Ray Center

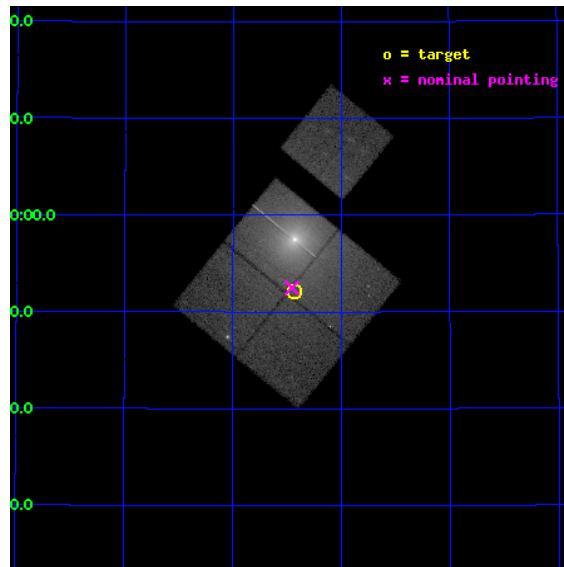
L2 Processing Date : Jun 25 2012

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# 1 Front

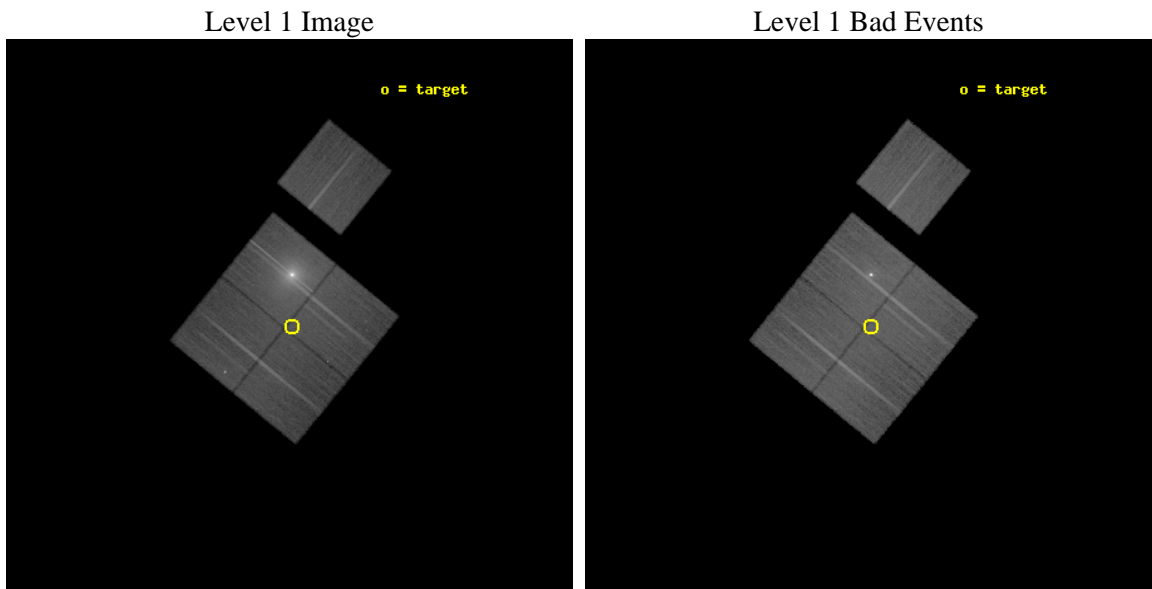
seq_num	200601	Sequence number
obs_id	10969	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.108132	Observer's specified target RA [deg]
dec_targ	40.868162	Observer's specified target Dec [deg]
ra_nom	308.11401965757	Nominal RA [deg]
dec_nom	40.874903038271	Nominal Dec [deg]
roll_nom	39.204830451728	Nominal Roll [deg]
revision	3	Processing version of data
ontime	29096.518303037	Sum of GTIs [s]
livetime	28716.350870862	Livetime [s]
ontime0	29102.800223827	Sum of GTIs [s]
ontime1	29090.236422181	Sum of GTIs [s]
ontime2	29093.37744236	Sum of GTIs [s]
ontime3	29096.518303037	Sum of GTIs [s]
ontime6	29099.65923363	Sum of GTIs [s]
l2events	403820	Number of level 2 events



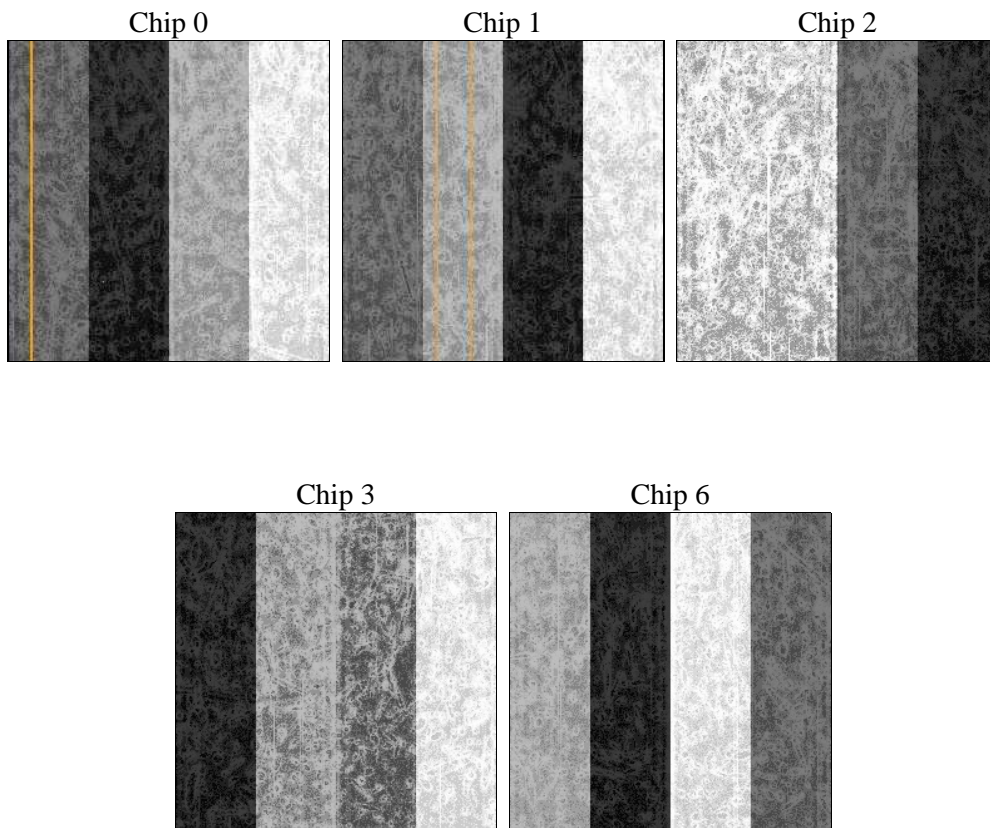
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29055.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	29096.518303037	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime0	29102.800223827	Sum of GTIs [s]
date	2012-06-25T20:57:23	Date and time of file creation	ontime1	29090.236422181	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	29093.37744236	Sum of GTIs [s]
			ontime3	29096.518303037	Sum of GTIs [s]
			ontime6	29099.65923363	Sum of GTIs [s]
			l1events	1500428	Number of level 1 events

### 2.1.4 Events

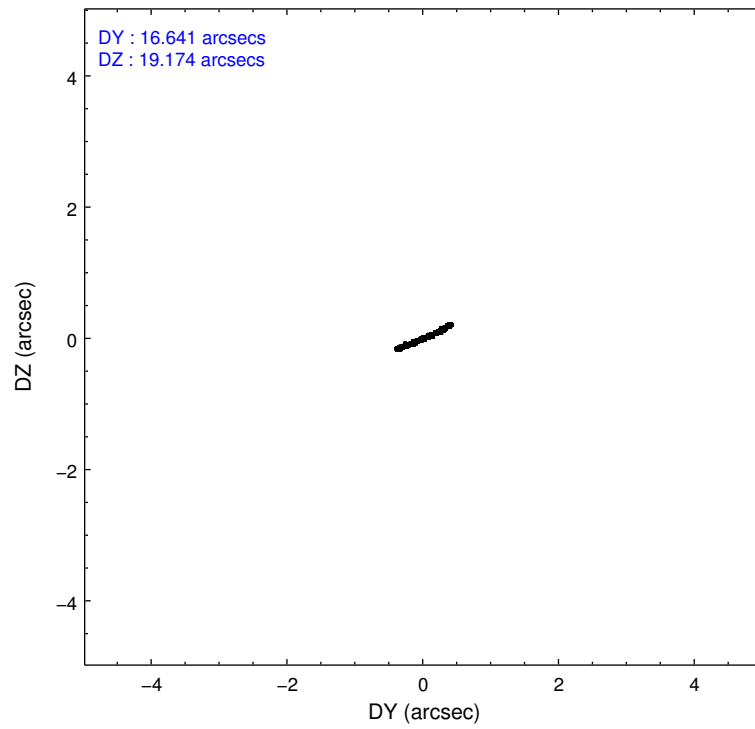
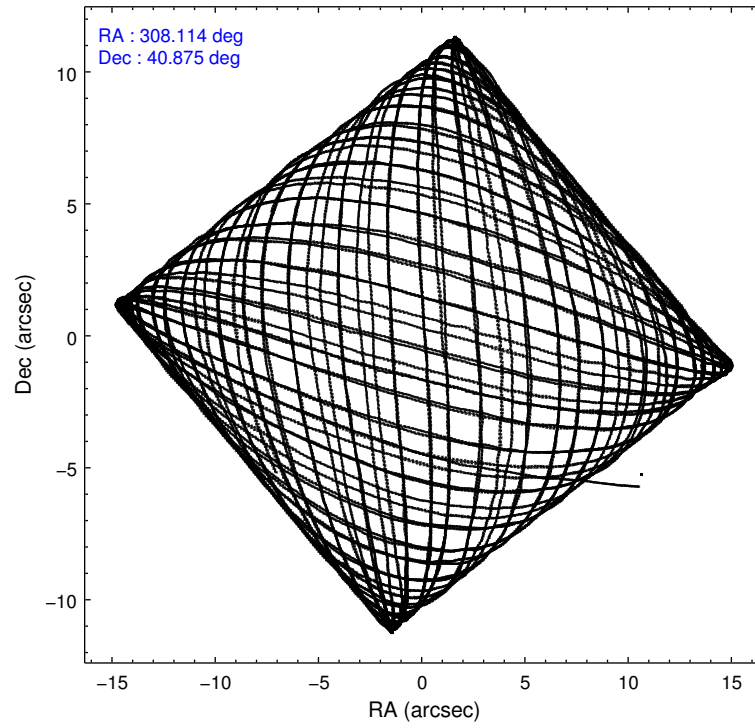
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	222833	212683	576434	257332	231146
rejected events	181875	179426	264047	205293	197409
rejected %	81%	84%	45%	79%	85%

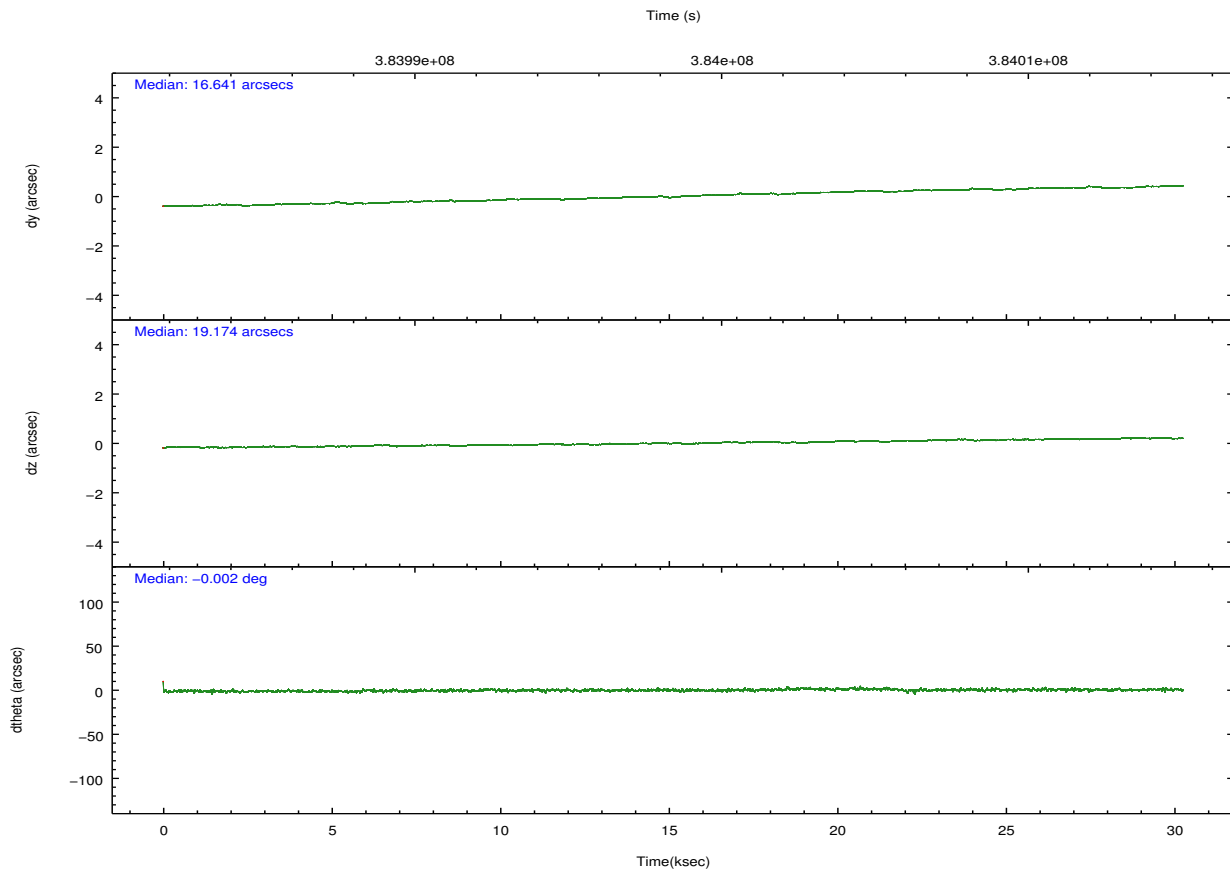
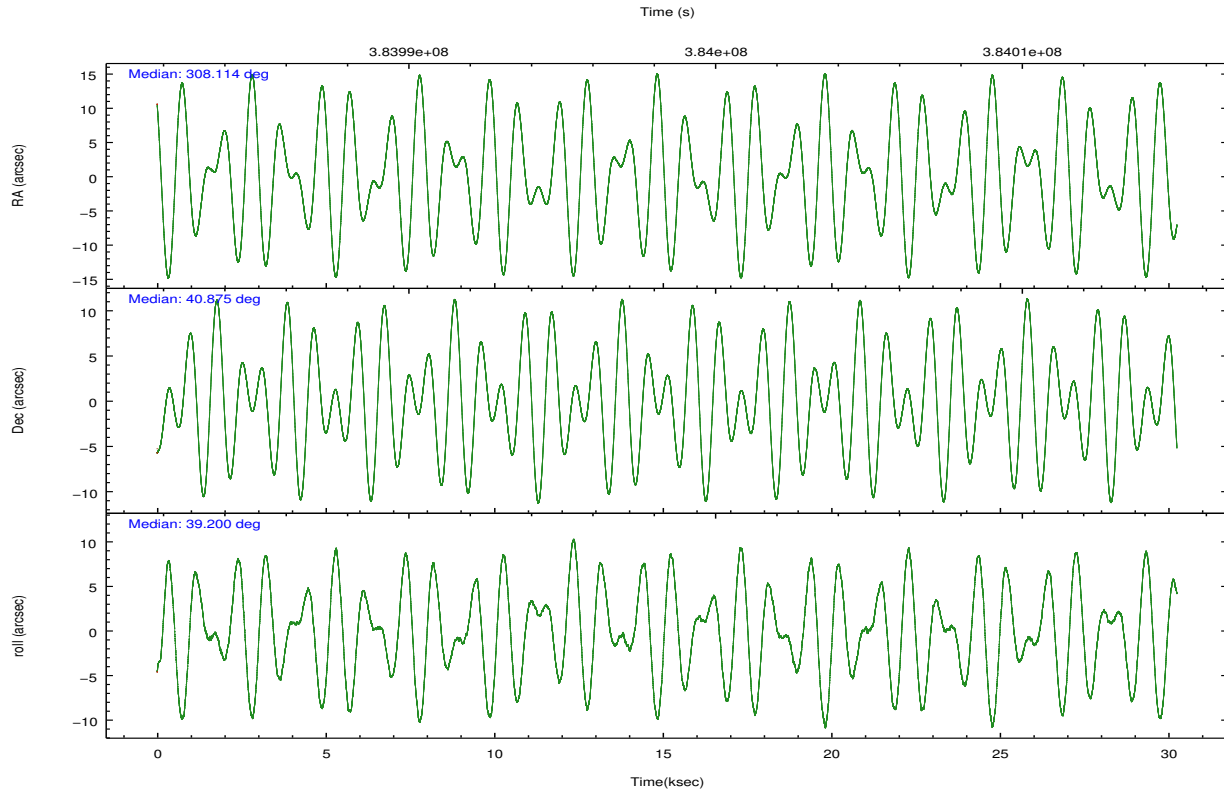
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	21729	15281	196125	30448	16442
	9%	7%	34%	11%	7%
grade 1 events	211	170	7944	319	181
	0%	0%	1%	0%	0%
grade 2 events	7925	6748	46736	8708	6562
	3%	3%	8%	3%	2%
grade 3 events	3208	2944	18458	3687	2888
	1%	1%	3%	1%	1%
grade 4 events	2945	2923	18541	3705	2766
	1%	1%	3%	1%	1%
grade 5 events	7512	8041	15465	8738	8083
	3%	3%	2%	3%	3%
grade 6 events	5158	5363	32560	5496	5092
	2%	2%	5%	2%	2%
grade 7 events	174145	171213	240605	196231	189132
	78%	80%	41%	76%	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	308.101264	308.1140196575716	CCD I2 on	Y	Y
[deg] Pointing Dec	40.849154	40.87490303827116	CCD I3 on	Y	Y
[deg] Pointing Roll	39.004484	39.20483045172788	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)	383984477.184000	383983039.74221	CCD S5 on	N	N
Observation start date	2010-03-03T06:20:11	2010-03-03T05:57:19	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	384013532.184000	384014421.1438	On-chip summing requested	N	N
Observation end date	2010-03-03T14:24:26	2010-03-03T14:40:21	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



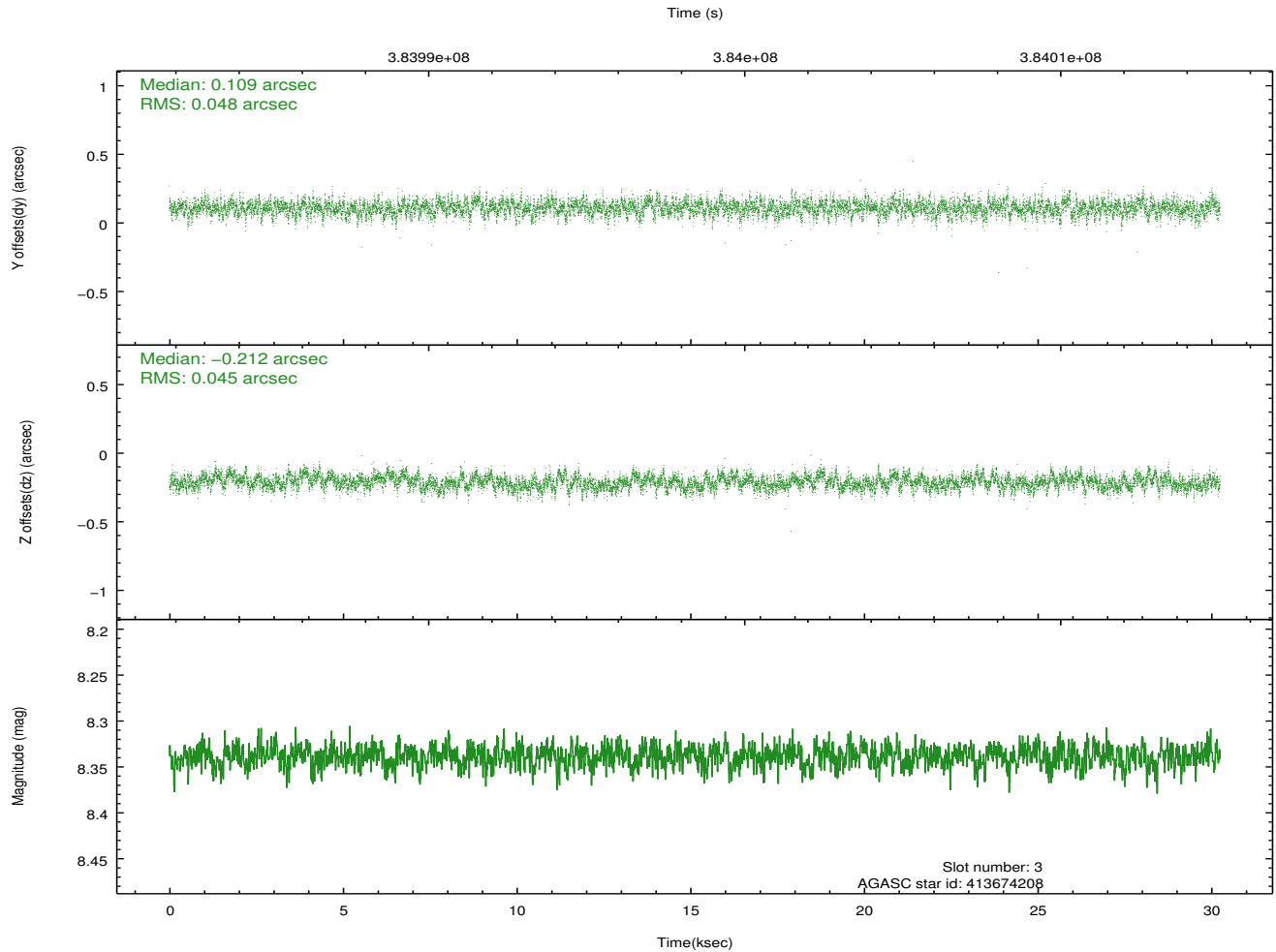
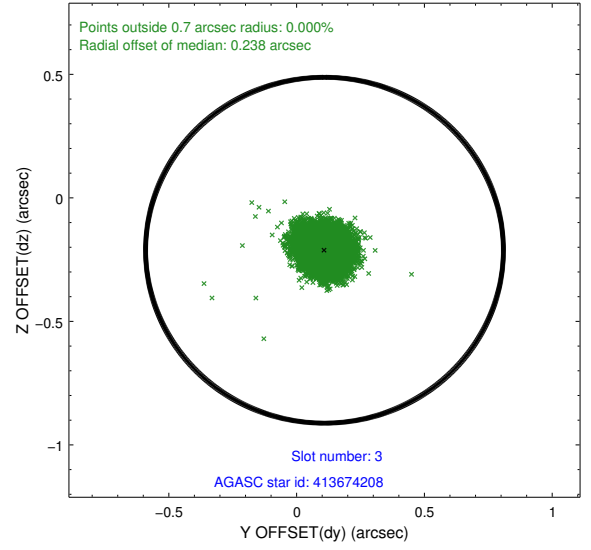
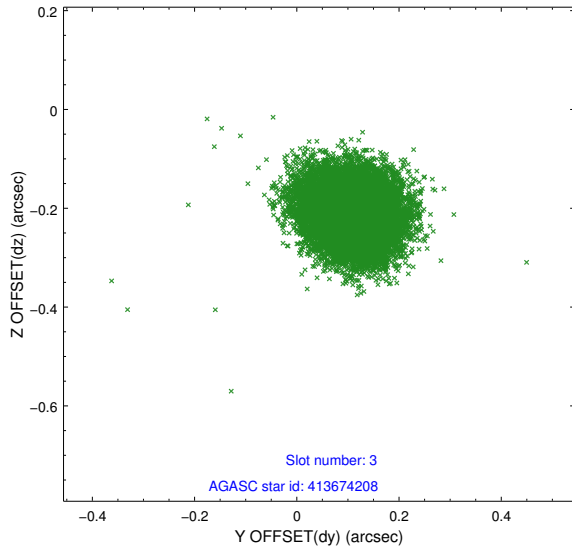


### Slot Statistics

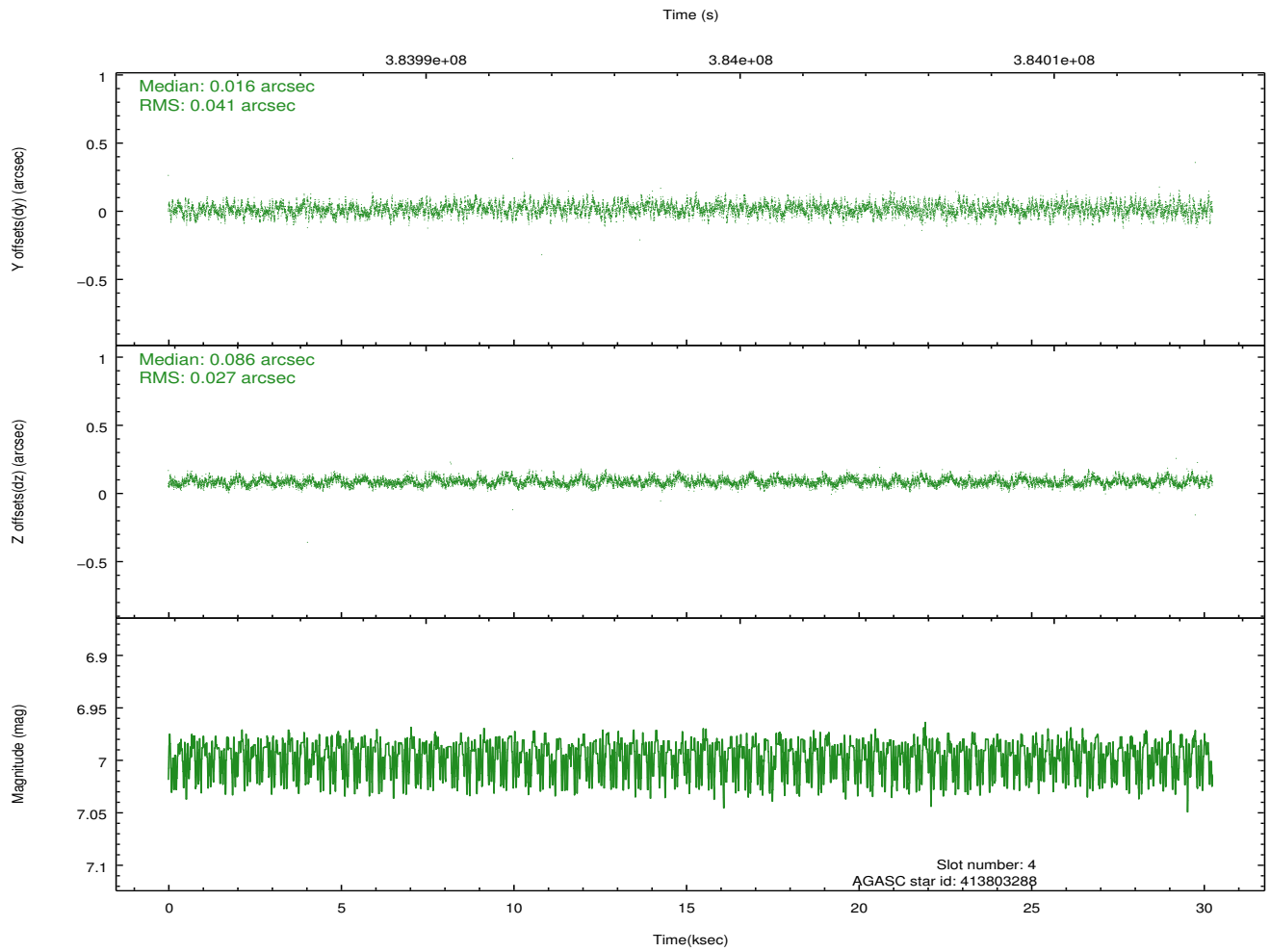
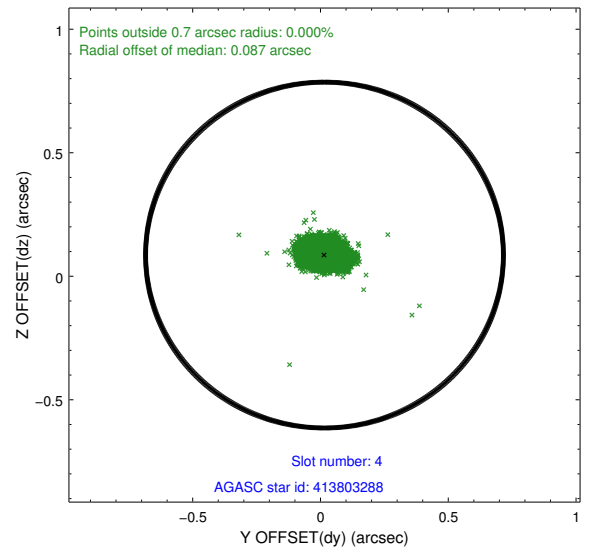
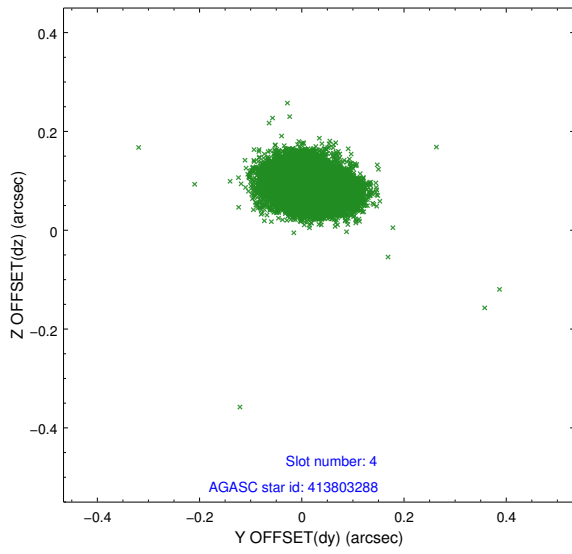
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.00	7379	-0.077	0.046	0.010	0.017	0.000000	0.000000	922.68	-842.85
1	FID	ACIS-I-2	6.93	7378	-0.113	-0.071	0.009	0.015	0.000000	0.000000	-771.41	-849.44
2	FID	ACIS-I-4	6.94	7376	0.092	0.093	0.009	0.015	0.000000	0.000000	2142.70	1056.96
3	GUIDE	413674208	8.34	14750	0.109	-0.212	0.070	0.114	307.139504	40.901877	-1905.02	1805.56
4	GUIDE	413803288	6.99	14758	0.016	0.086	0.051	0.086	307.629978	40.506899	-1775.68	-142.62
5	GUIDE	413803384	7.87	14747	0.025	0.156	0.059	0.093	308.178547	40.075249	-1587.77	-2298.79
6	GUIDE	413803744	8.84	14749	0.051	0.156	0.087	0.139	308.586342	40.704904	704.66	-1233.55
7	GUIDE	414326136	7.34	14752	-0.202	-0.183	0.072	0.119	308.256176	41.473642	1740.15	1484.64

## 2.4 Star Slots

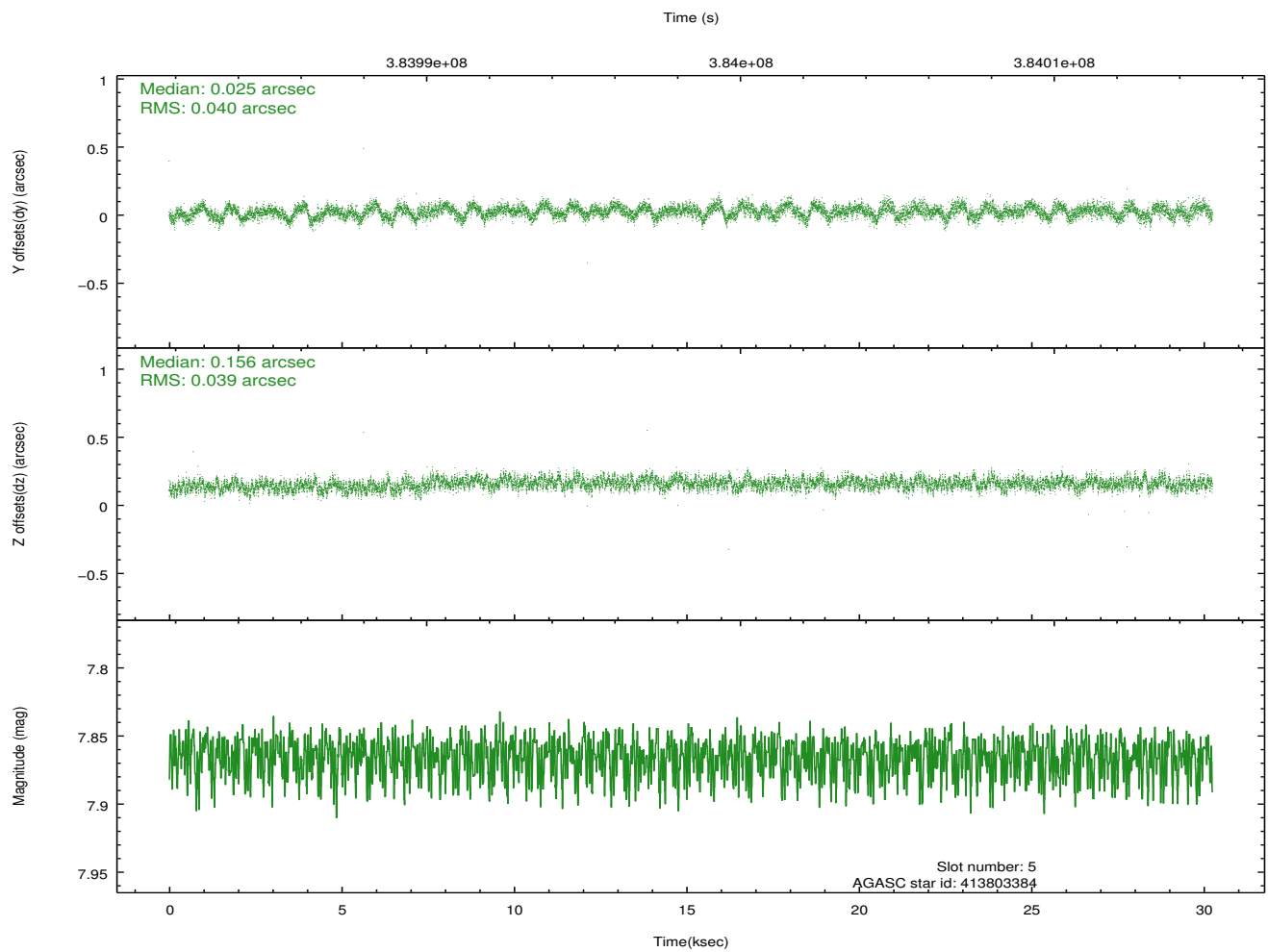
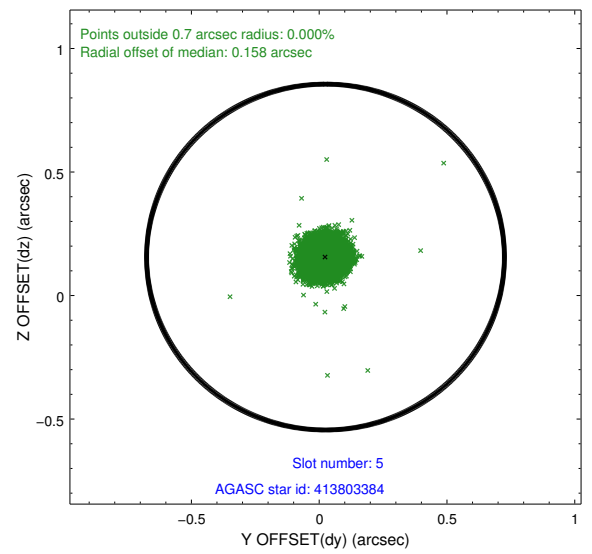
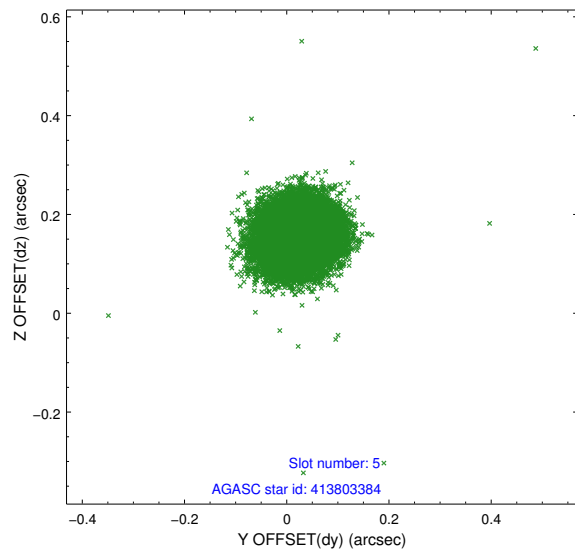
### 2.4.1 Slot 3



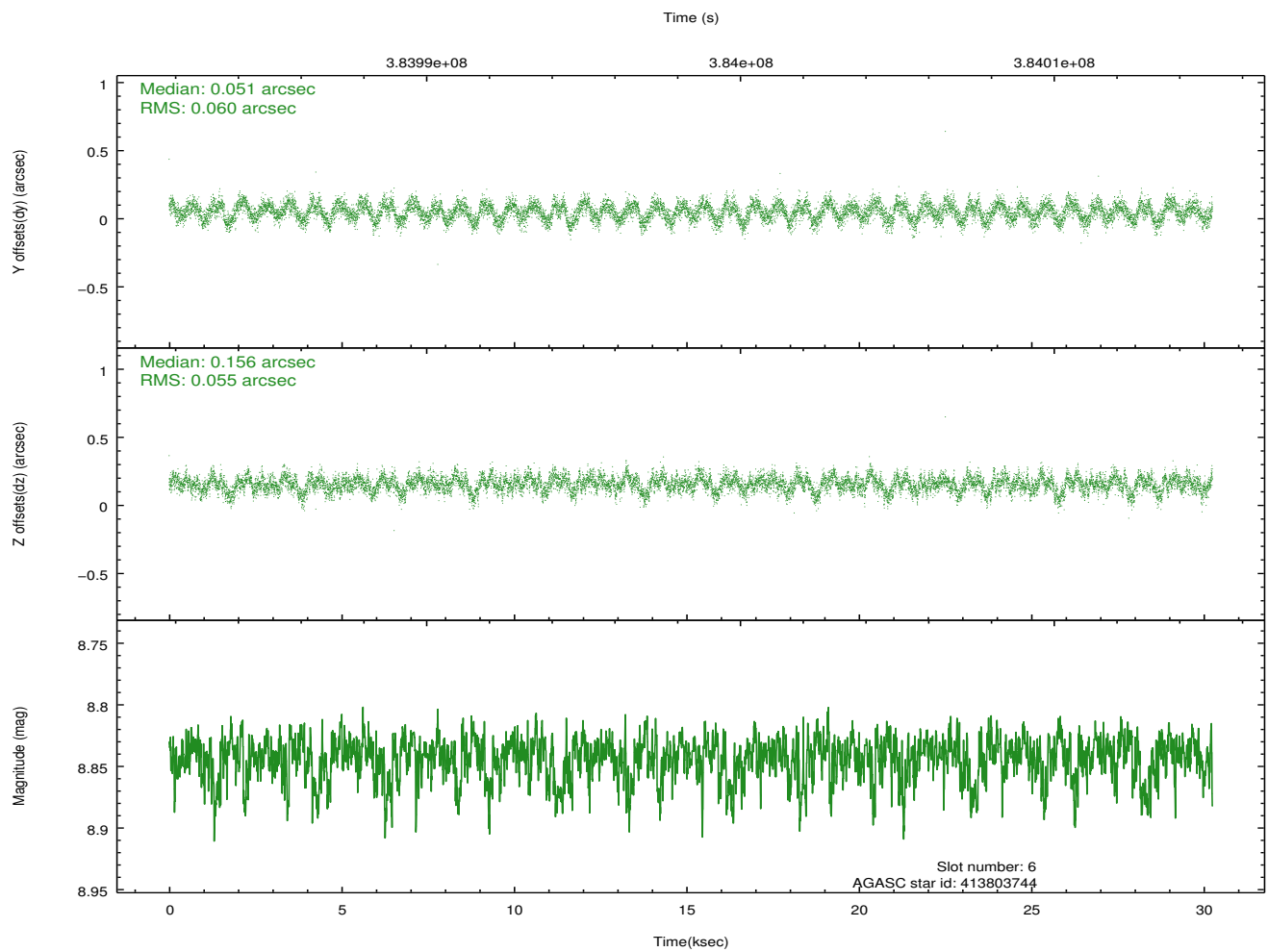
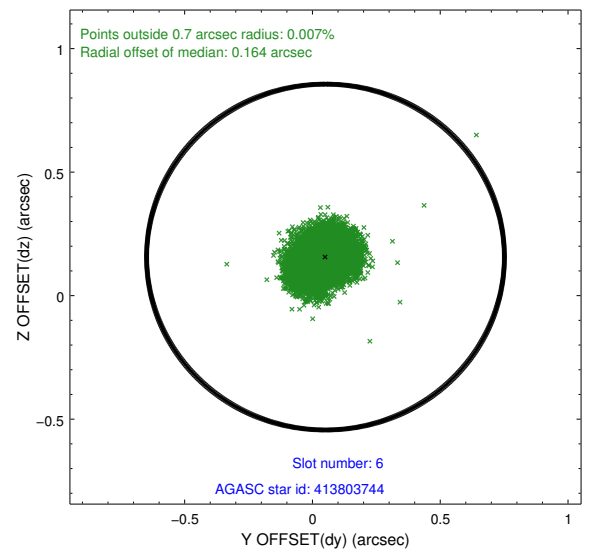
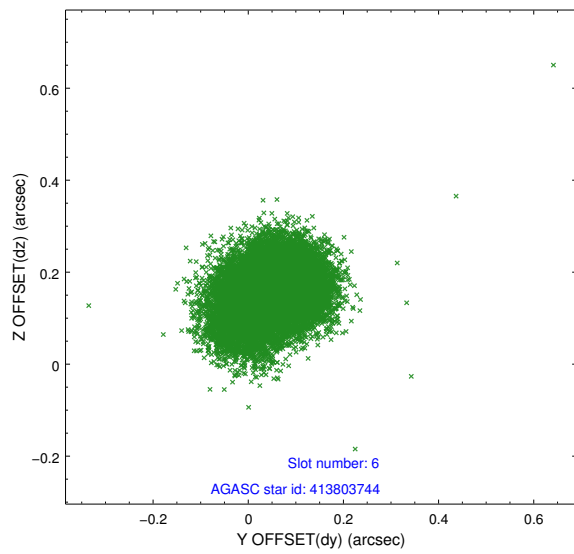
### 2.4.2 Slot 4



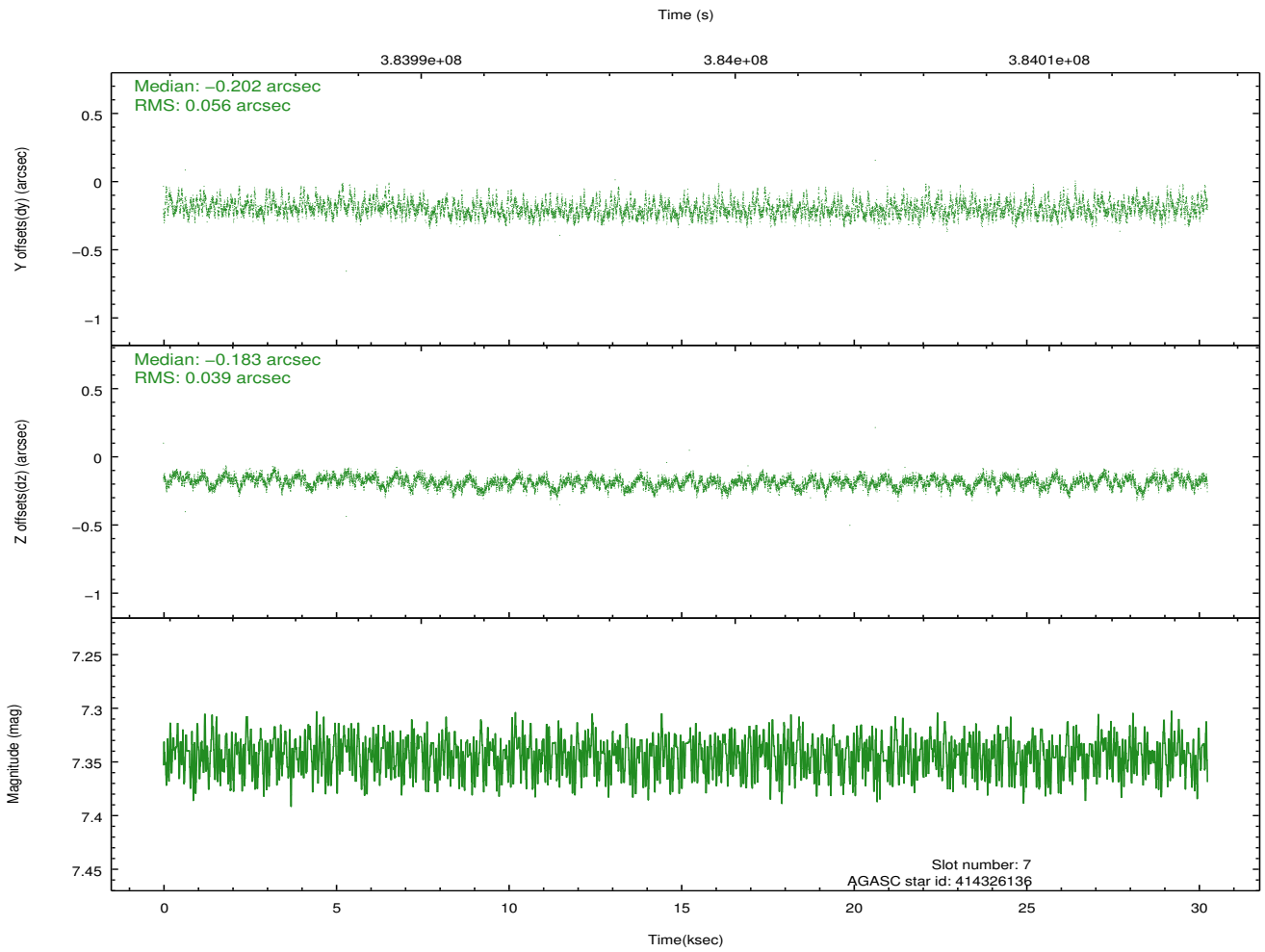
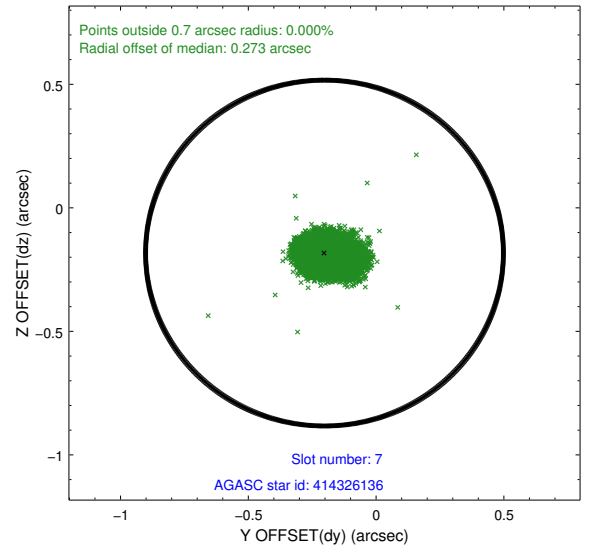
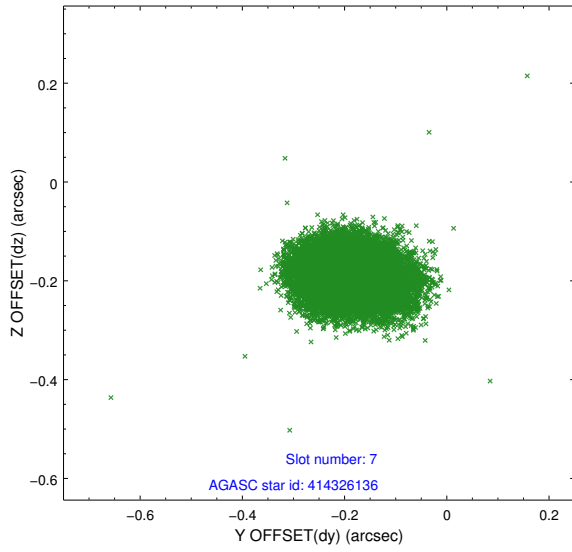
### 2.4.3 Slot 5



## 2.4.4 Slot 6

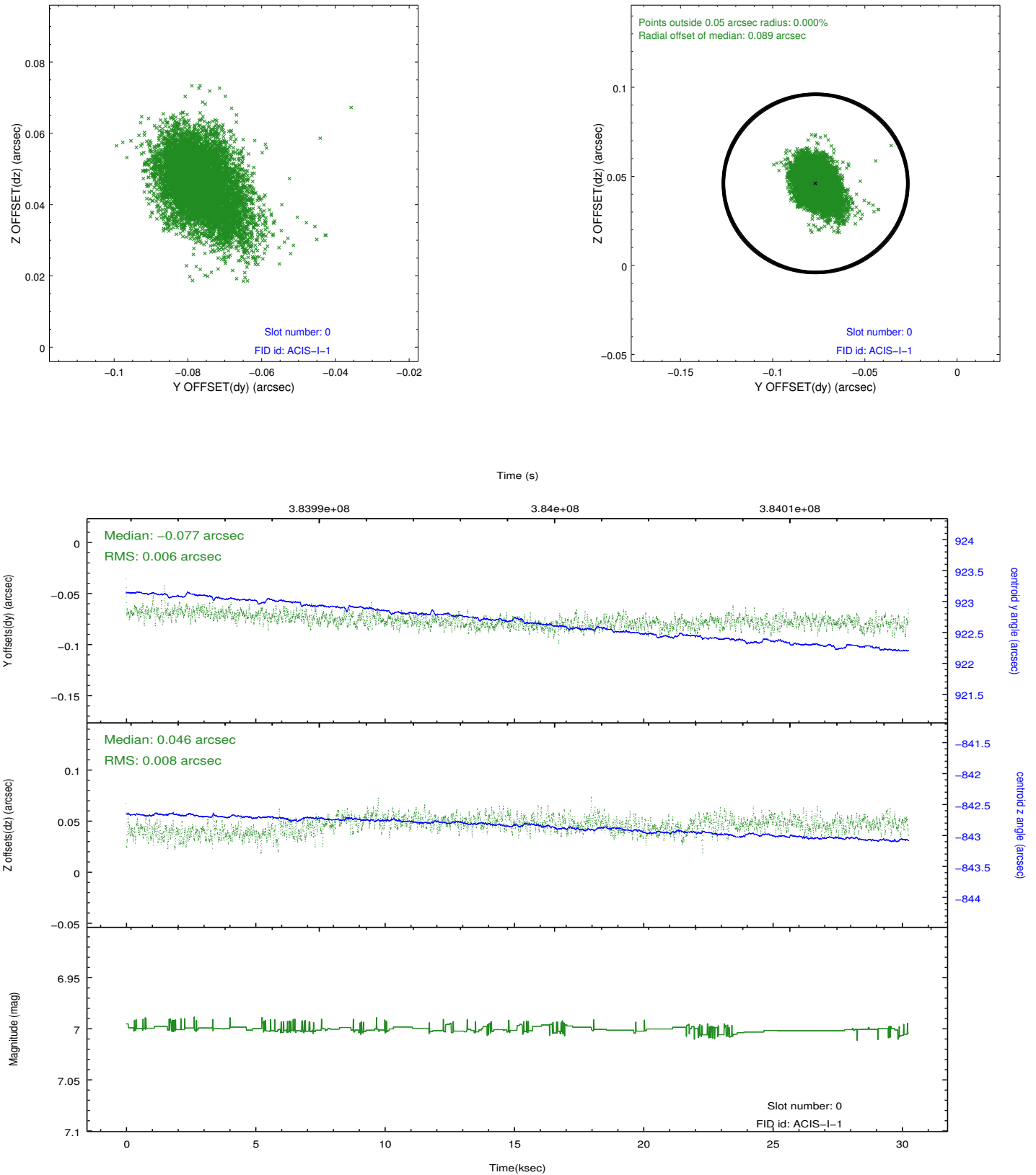


### 2.4.5 Slot 7

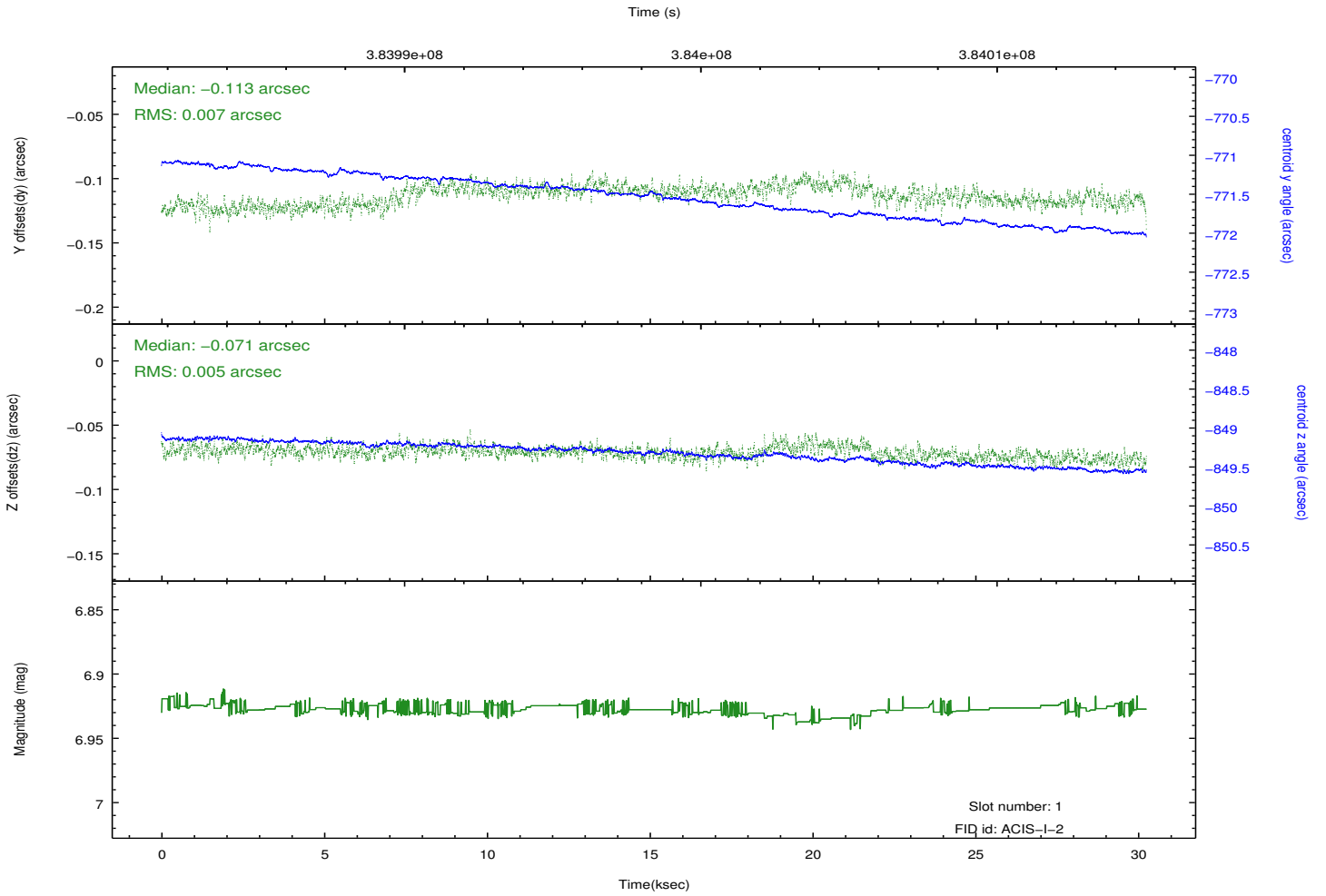
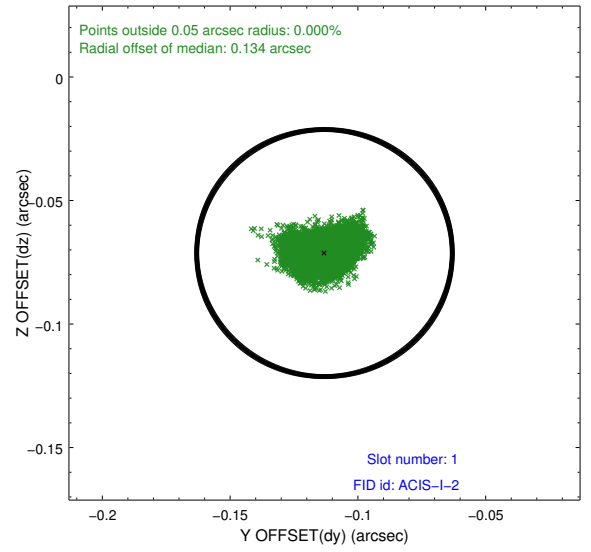
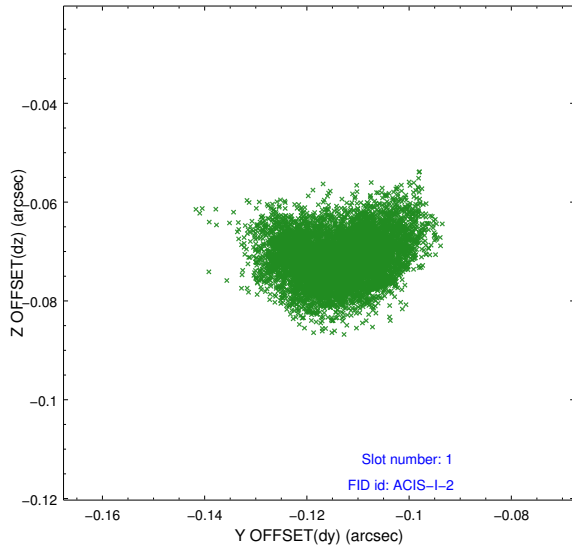


## 2.5 FID Slots

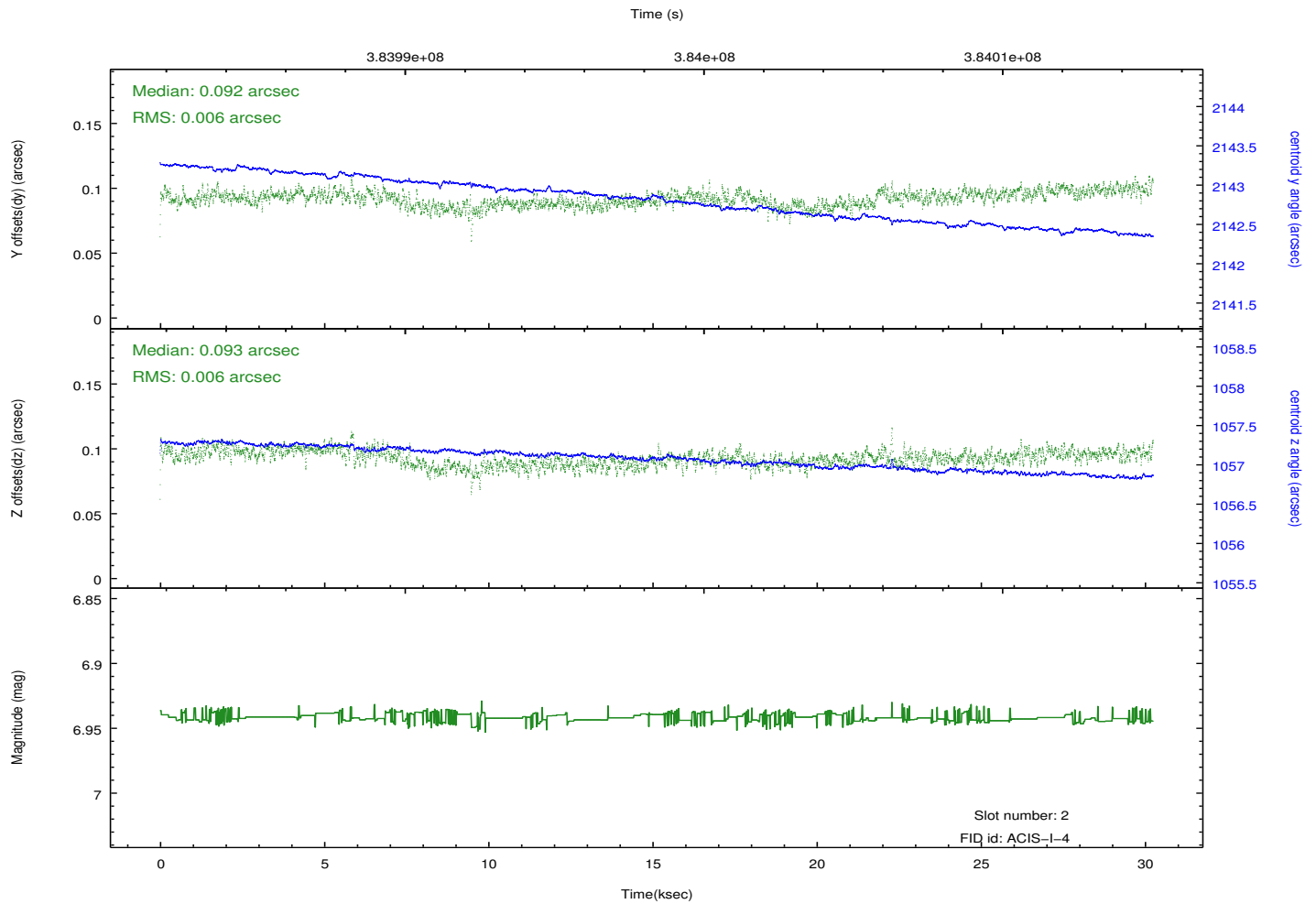
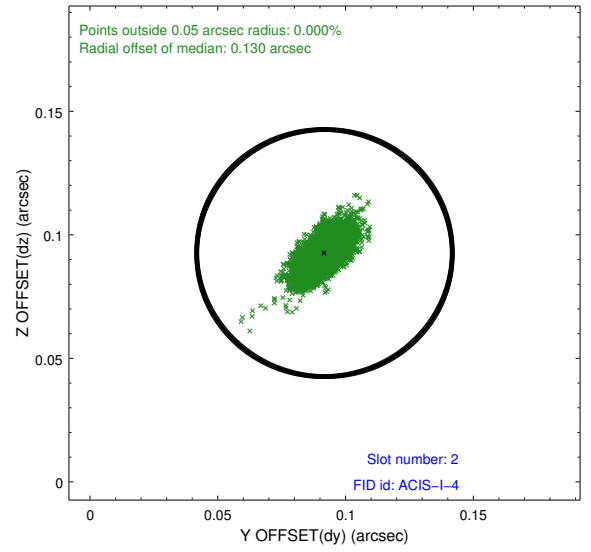
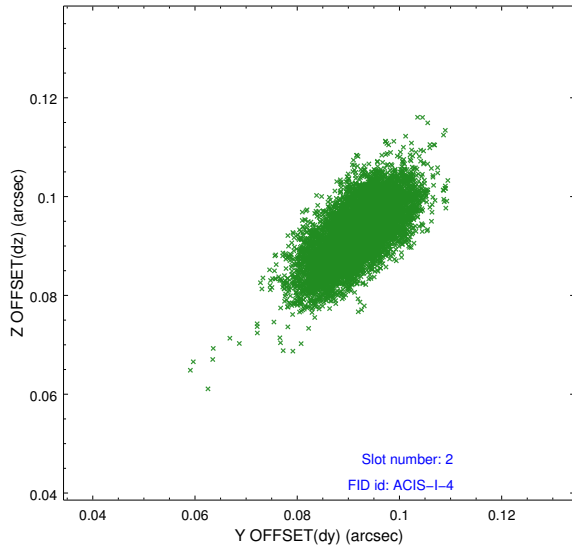
### 2.5.1 Slot 0



## 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)	2012.07.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.096518303156

## A.2 Comments

Strong piled-up source on chip 2 contaminated the bias file for that chip. This results in some pixels near and on the strong source having a bad status value. In addition, the bias map includes a region of contamination around the position of the source that is not marked as bad status. Care should be taken in working with this particular strong source. No other source in this observation is affected. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:

(308.11352,40.95673), (308.11009,40.95989), (308.10239,40.95515), (308.10583,40.95199)