

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15184 - L2 Version 2  
Chandra X-Ray Center

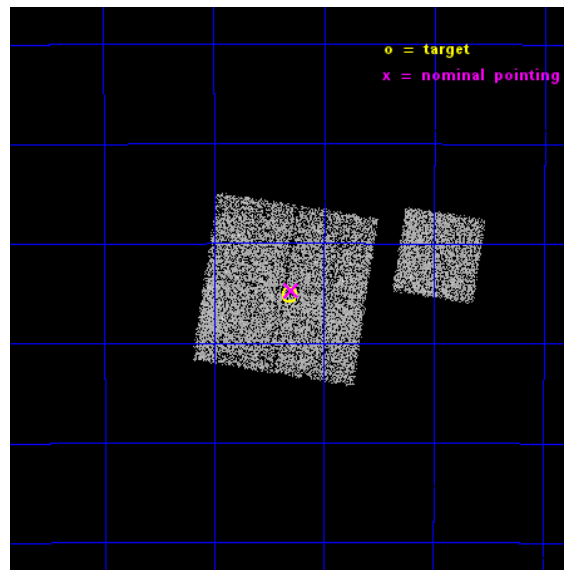
L2 Processing Date : Nov 29 2014

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# 1 Front

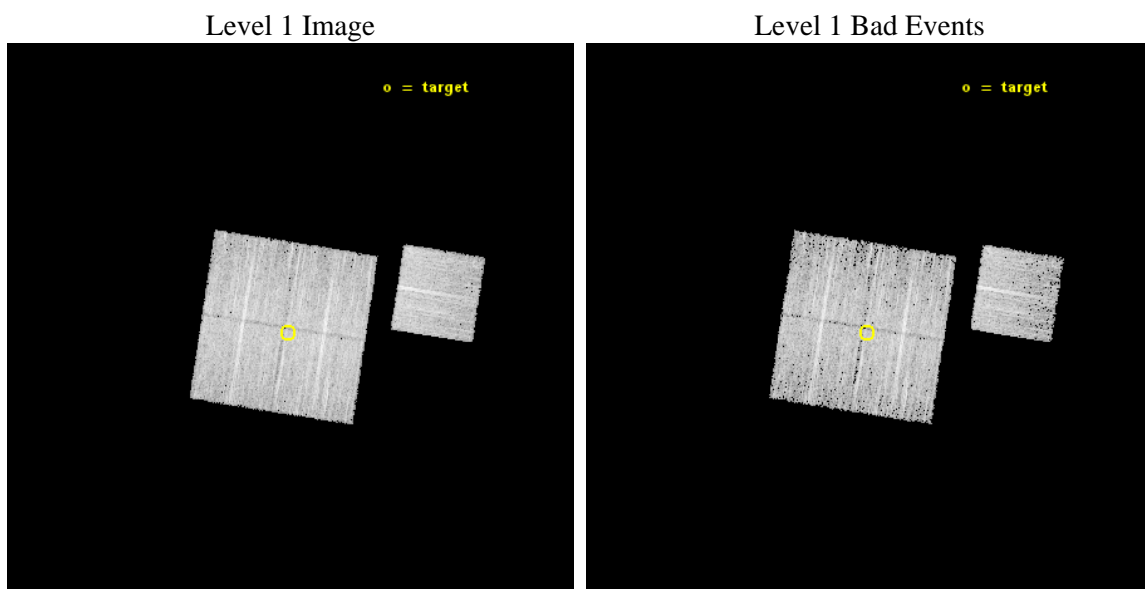
seq_num	801309	Sequence number
obs_id	15184	Observation id
title	Joint Chandra and Suzaku exploration of the outskirts of the nearby, X-ray bright Centaurus cluster	Proposal title
observer	Mr Stephen Walker	Principal investigator
object	Centaurus Cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	191.32875	Observer's specified target RA [deg]
dec_targ	-39.9195	Observer's specified target Dec [deg]
ra_nom	191.32406051212	Nominal RA [deg]
dec_nom	-39.912247679281	Nominal Dec [deg]
roll_nom	98.85913661421	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10084.300077558	Sum of GTIs [s]
livetime	9952.5412730906	Livetime [s]
ontime0	10084.300077558	Sum of GTIs [s]
ontime1	10081.159107208	Sum of GTIs [s]
ontime2	10084.300077558	Sum of GTIs [s]
ontime3	10084.300077558	Sum of GTIs [s]
ontime6	10084.300077558	Sum of GTIs [s]
l2events	25546	Number of level 2 events



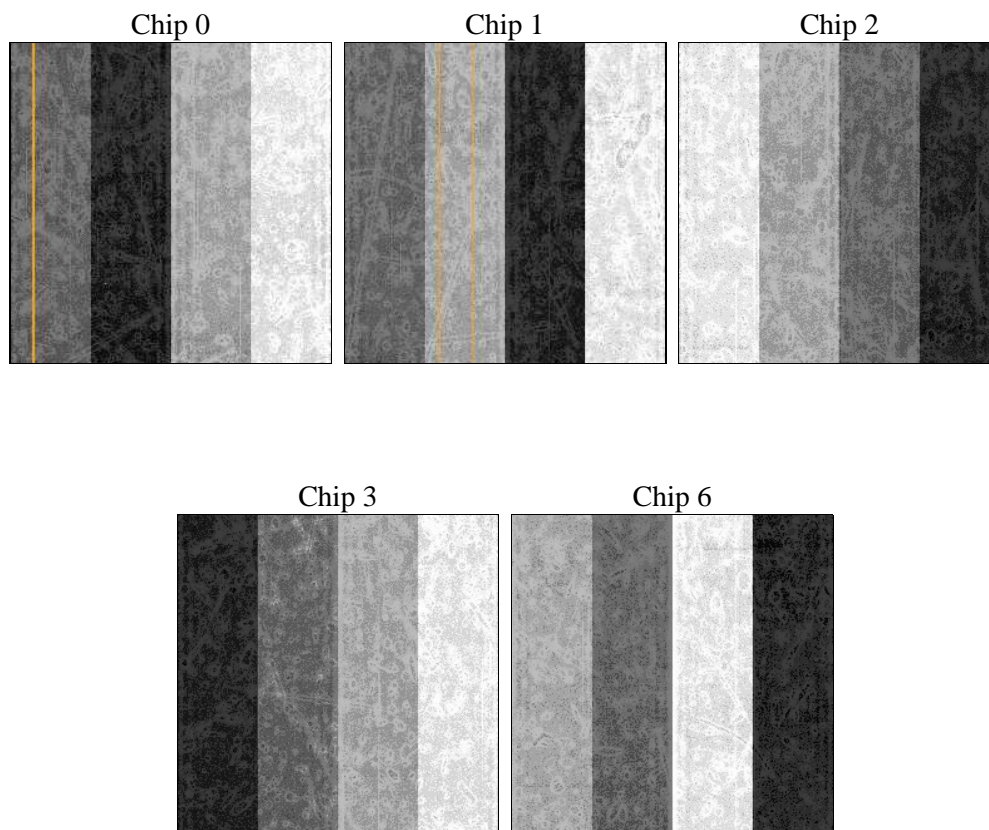
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10084.300077558	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10084.300077558	Sum of GTIs [s]
date	2014-11-30T01:31:07	Date and time of file creation	ontime1	10081.159107208	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10084.300077558	Sum of GTIs [s]
			ontime3	10084.300077558	Sum of GTIs [s]
			ontime6	10084.300077558	Sum of GTIs [s]
			l1events	244057	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	47808	47132	50023	50462	48632
rejected events	41894	40497	44215	44803	42480
rejected %	87%	85%	88%	88%	87%

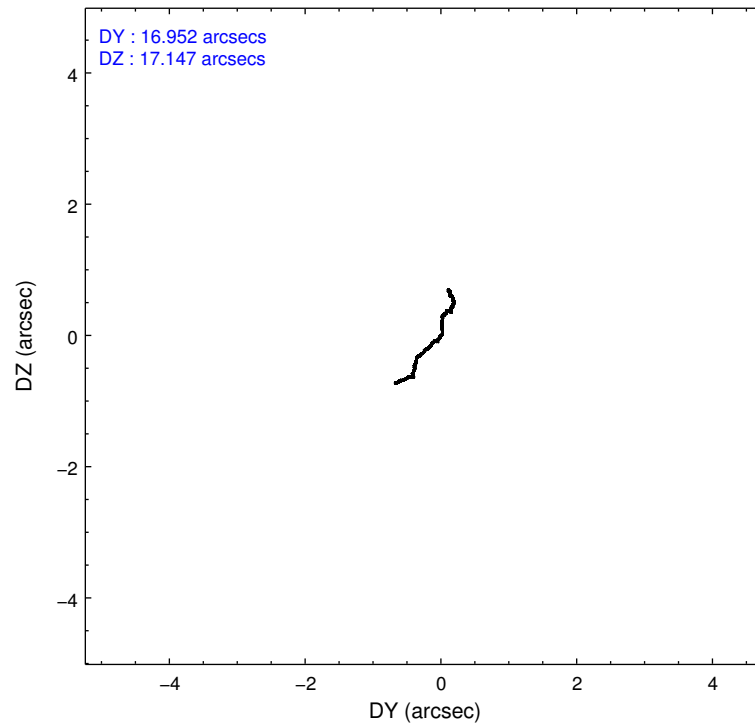
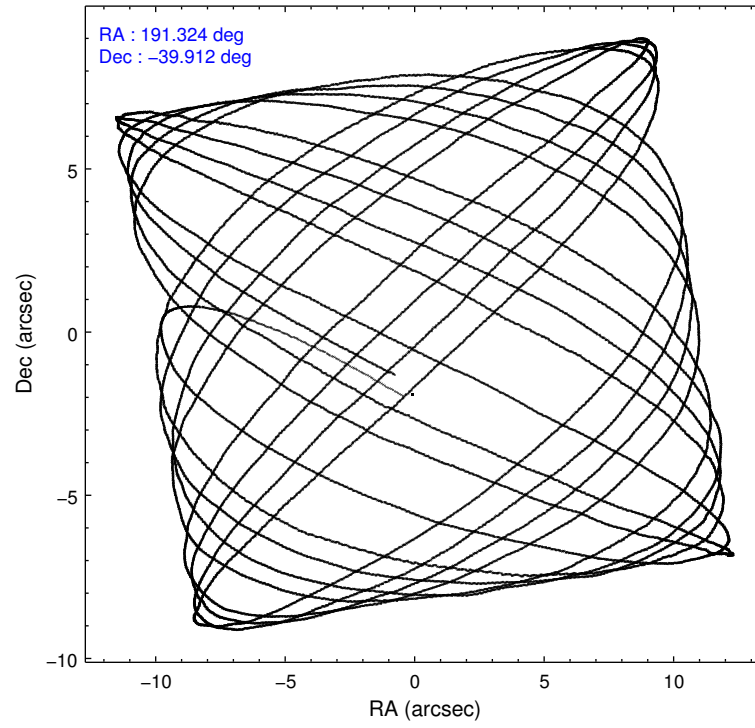
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2095	2297	2028	2062	2184
	4%	4%	4%	4%	4%
grade 1 events	40	21	25	28	30
	0%	0%	0%	0%	0%
grade 2 events	1469	1657	1464	1232	1409
	3%	3%	2%	2%	2%
grade 3 events	578	642	621	579	598
	1%	1%	1%	1%	1%
grade 4 events	576	662	597	605	589
	1%	1%	1%	1%	1%
grade 5 events	2316	2513	2203	2573	2558
	4%	5%	4%	5%	5%
grade 6 events	1200	1380	1099	1182	1377
	2%	2%	2%	2%	2%
grade 7 events	39534	37960	41986	42201	39887
	82%	80%	83%	83%	82%

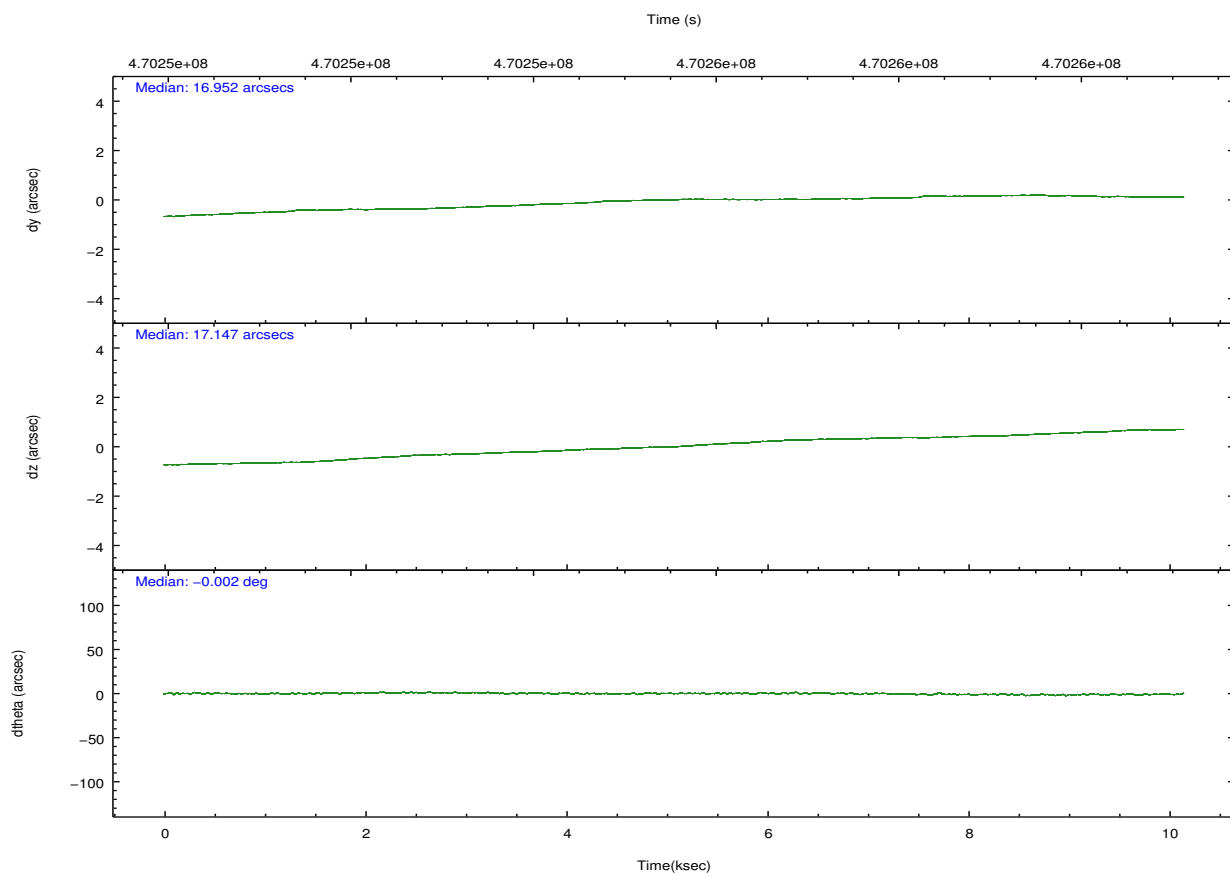
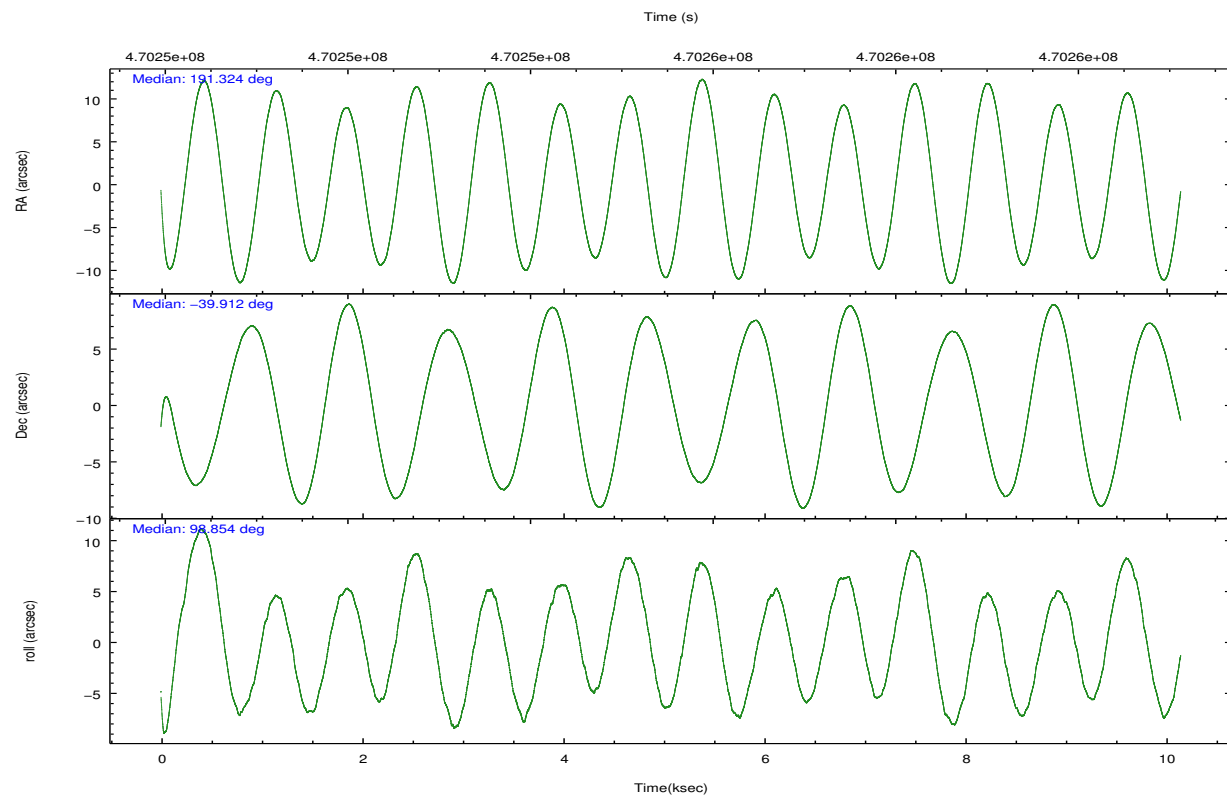


## 2.2 Compared Parameters

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	191.346718	191.324060512119	CCD I2 on	Y	Y
[deg] Pointing Dec	-39.933589	-39.91224767928113	CCD I3 on	Y	Y
[deg] Pointing Roll	98.665001	98.85913661421003	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)	470250600.184000	470249627.17244	CCD S5 on	N	N
Observation start date	2012-11-25T17:08:53	2012-11-25T16:53:47	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470260600.184000	470260734.07304	On-chip summing requested	N	N
Observation end date	2012-11-25T19:55:33	2012-11-25T19:58:54	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





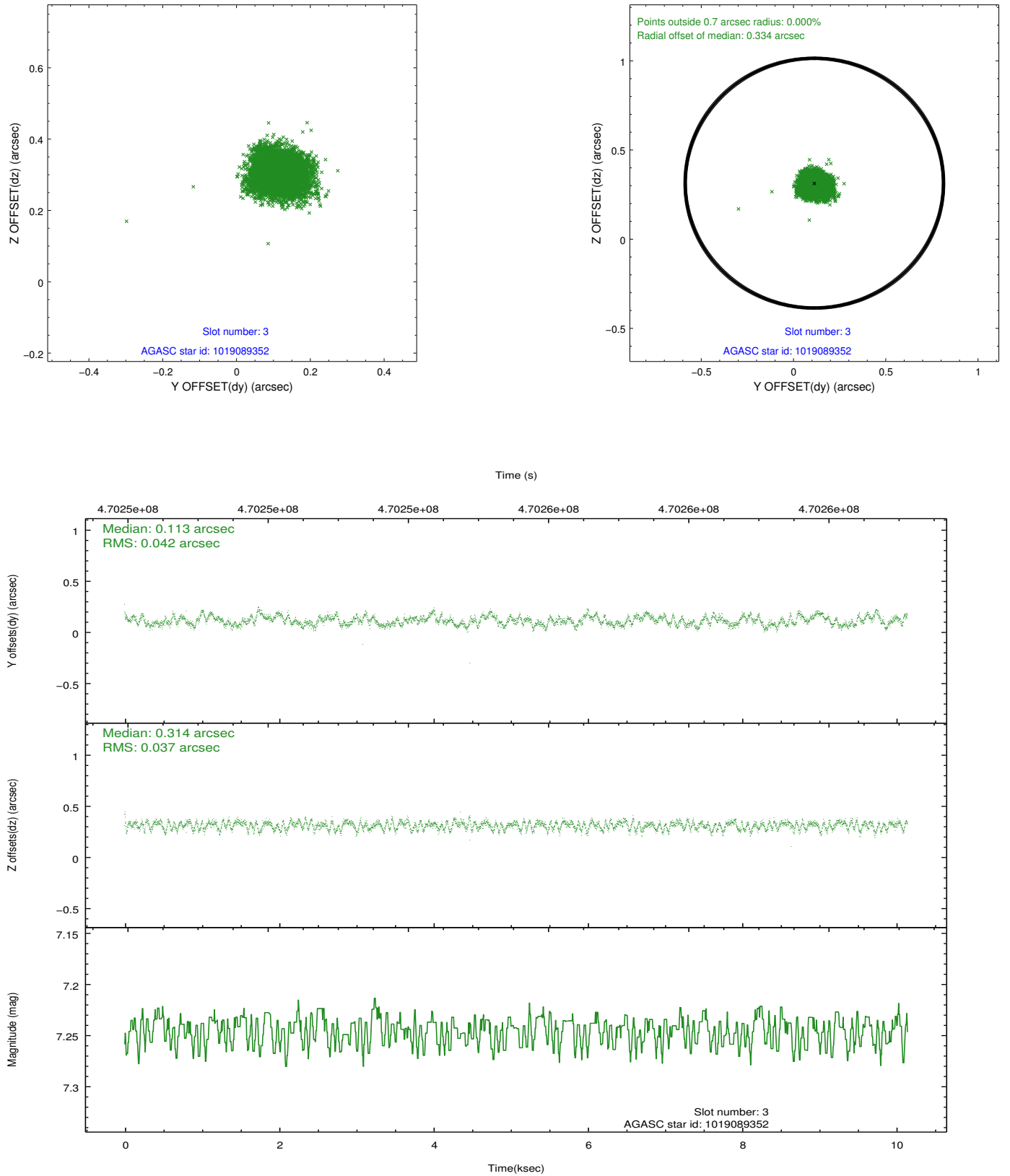
### Slot Statistics

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	0.058	-0.009	0.014	0.024	0.000000	0.000000	922.63	-840.81
1	FID		ACIS-I-5	7.07	2475	-0.230	0.060	0.008	0.014	0.000000	0.000000	-1825.48	1056.48
2	FID		ACIS-I-6	7.08	2475	0.081	0.018	0.017	0.026	0.000000	0.000000	387.63	1701.53
3	GUIDE	used	1019089352	7.24	4951	0.113	0.314	0.059	0.093	191.830631	-40.127246	-893.09	-1210.95
4	GUIDE	used	1019089792	8.91	4930	-0.147	-0.053	0.094	0.150	190.585914	-39.523689	1767.93	1867.56
5	GUIDE	used	1019099112	7.57	4950	0.114	0.236	0.058	0.095	191.717552	-40.300293	-1460.51	-806.62
6	GUIDE	used	1019101328	6.78	4950	0.075	-0.142	0.077	0.137	190.859432	-40.177847	-671.43	1457.43
7	GUIDE	used	1019084936	8.46	4941	-0.156	-0.350	0.090	0.141	190.582410	-39.936294	298.18	2088.79

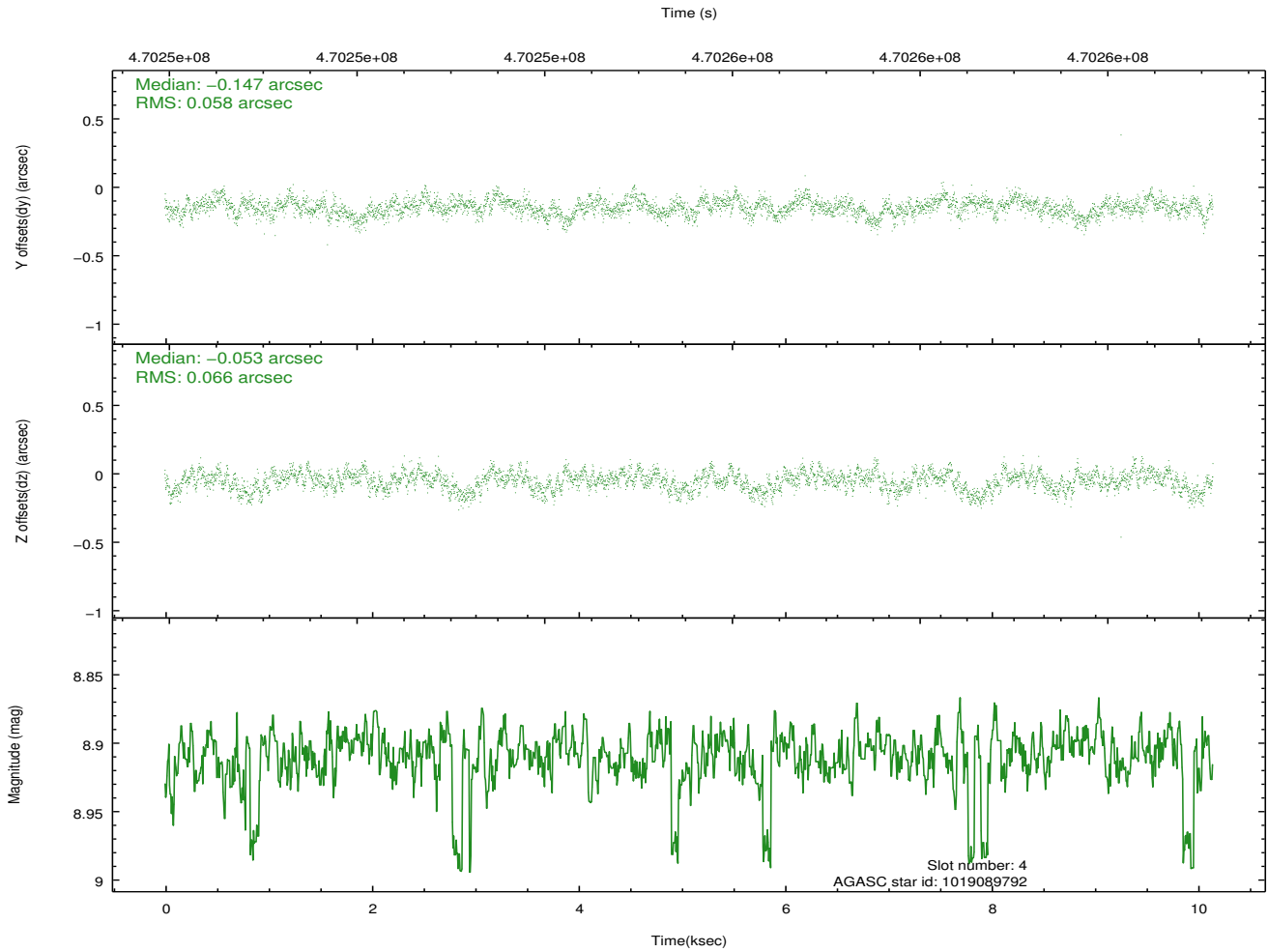
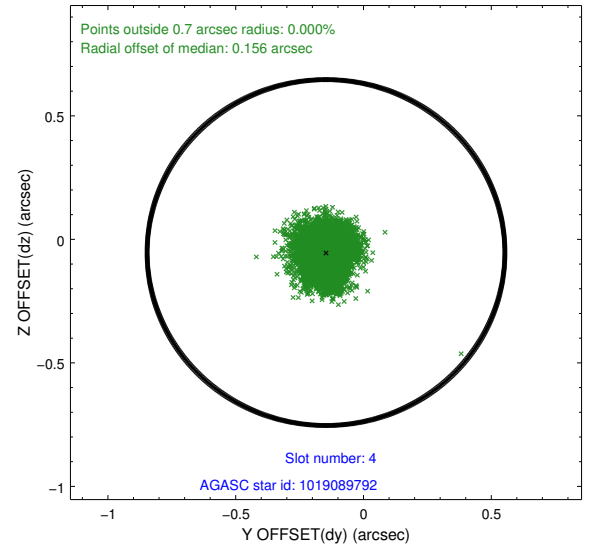
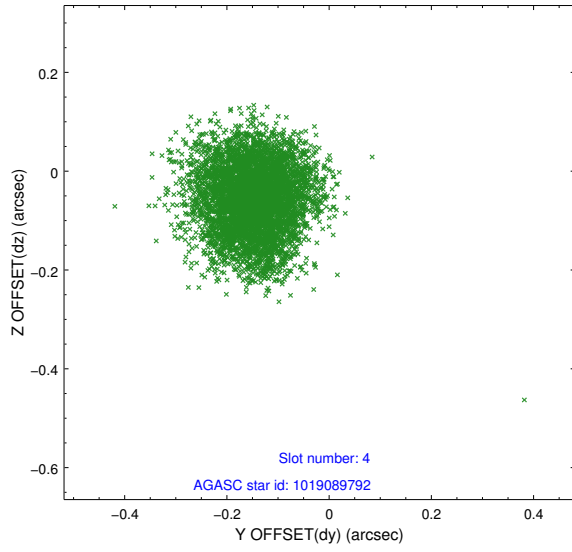
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## 2.4 Star Slots

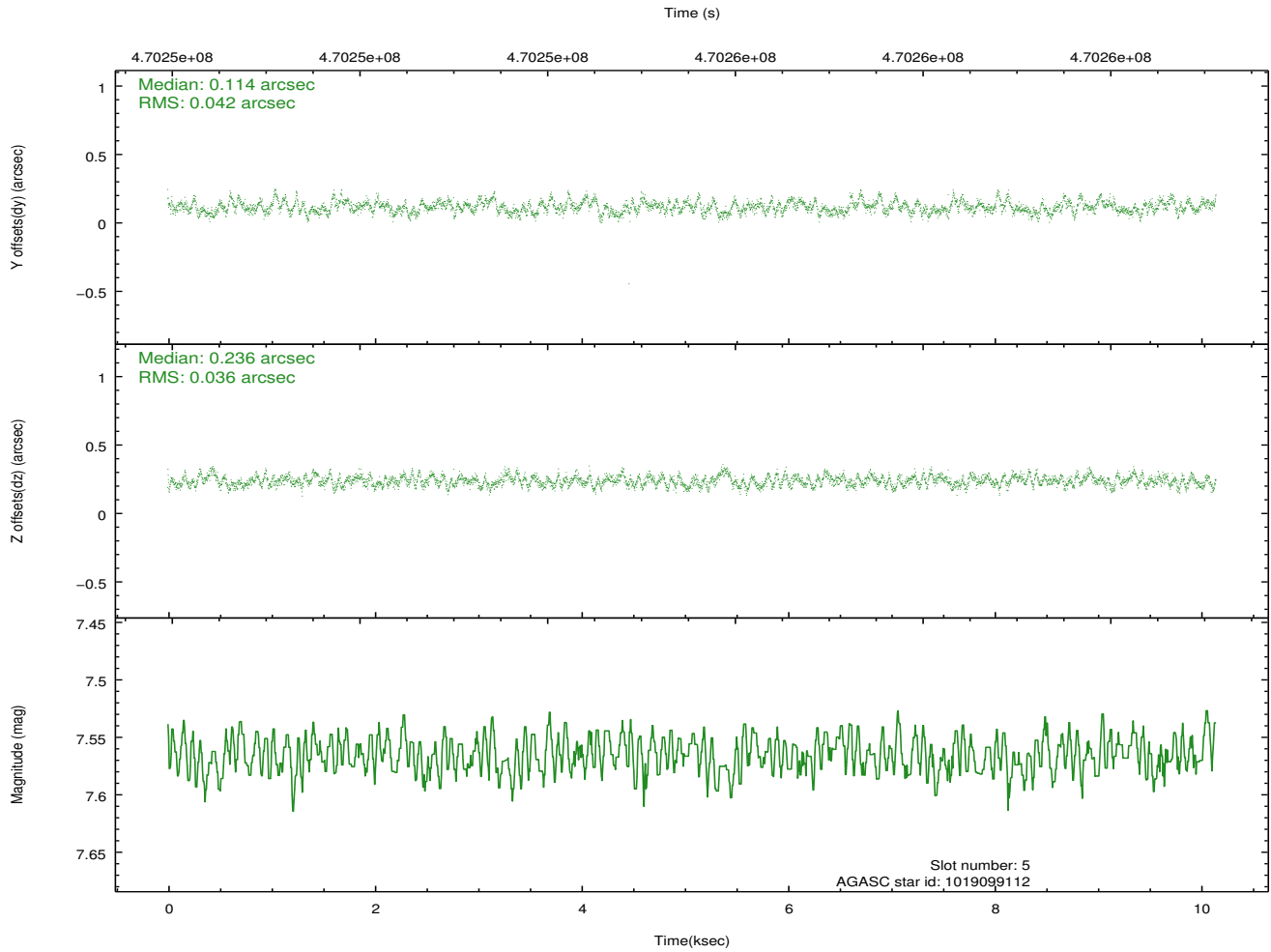
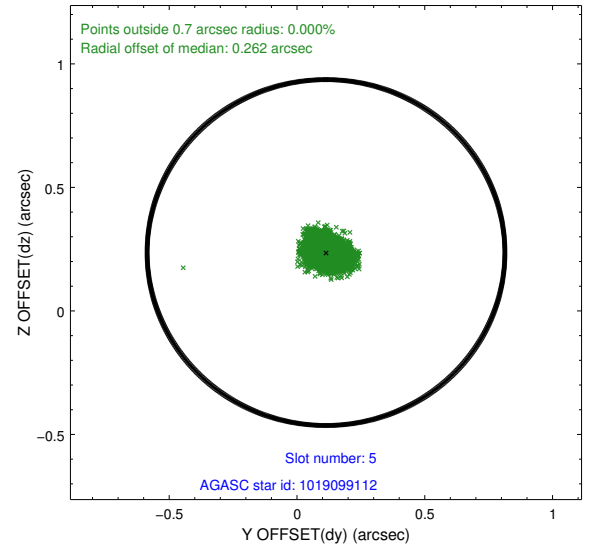
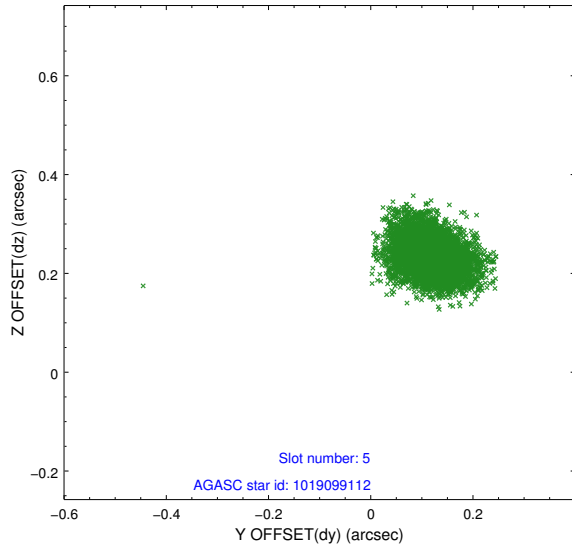
### 2.4.1 Slot 3



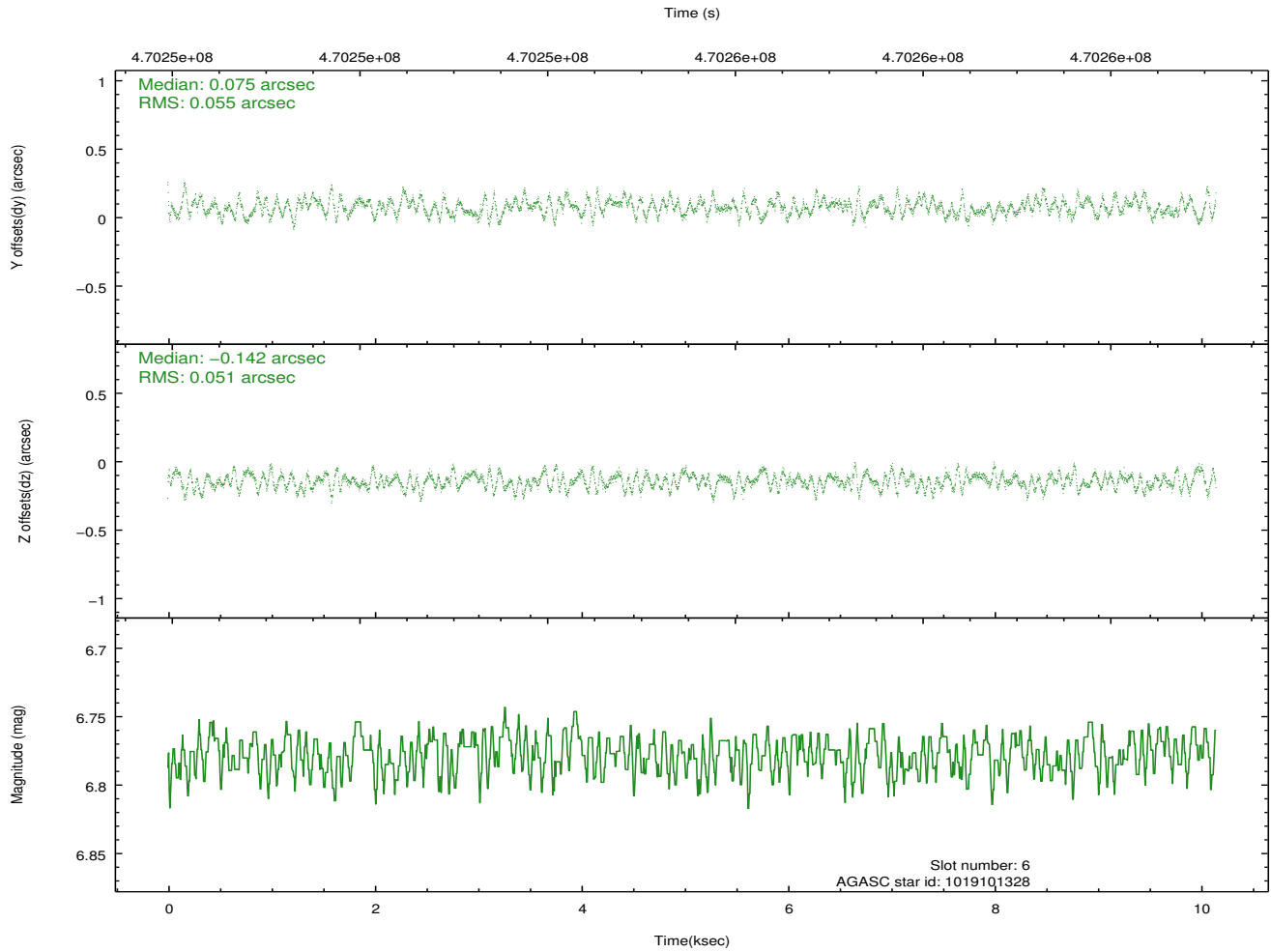
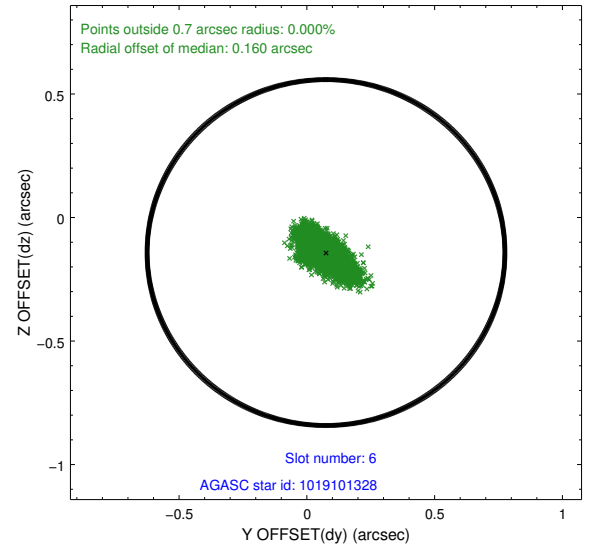
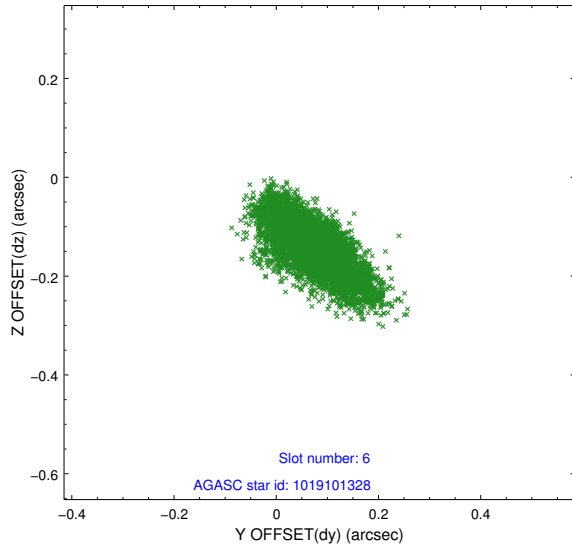
## 2.4.2 Slot 4



### 2.4.3 Slot 5

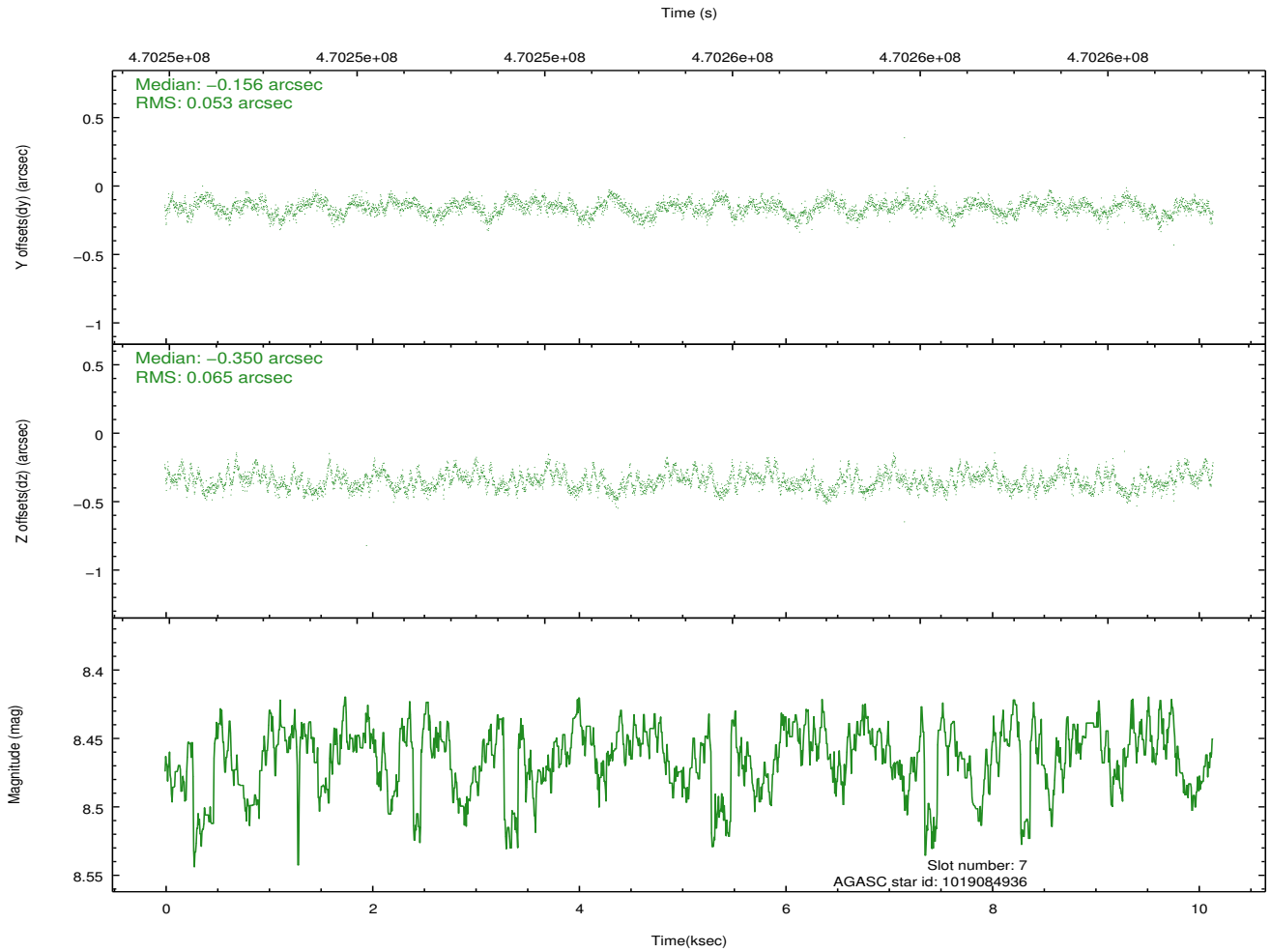
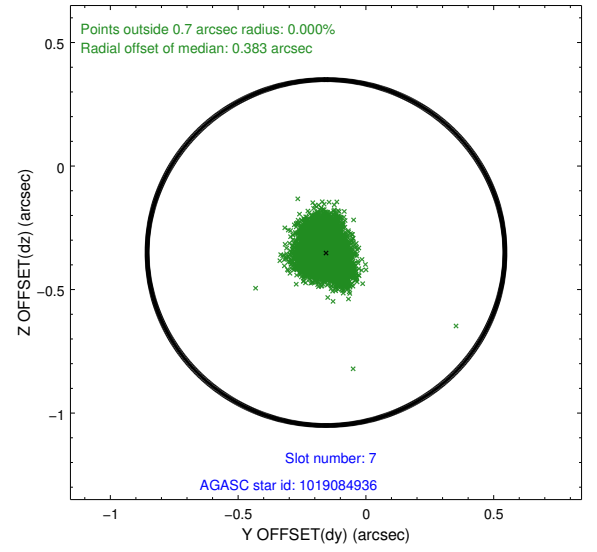
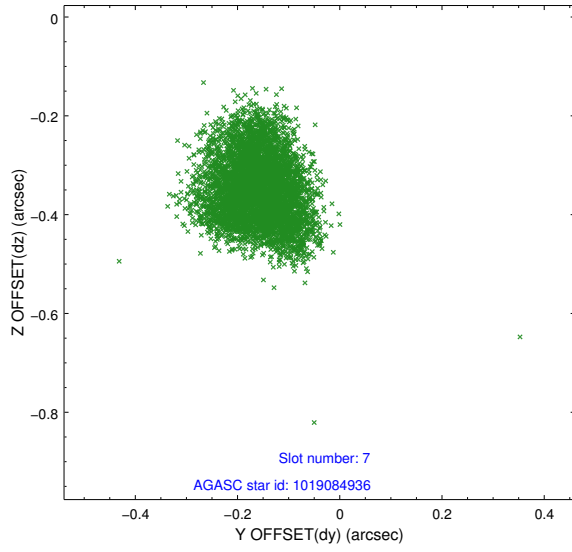


## 2.4.4 Slot 6



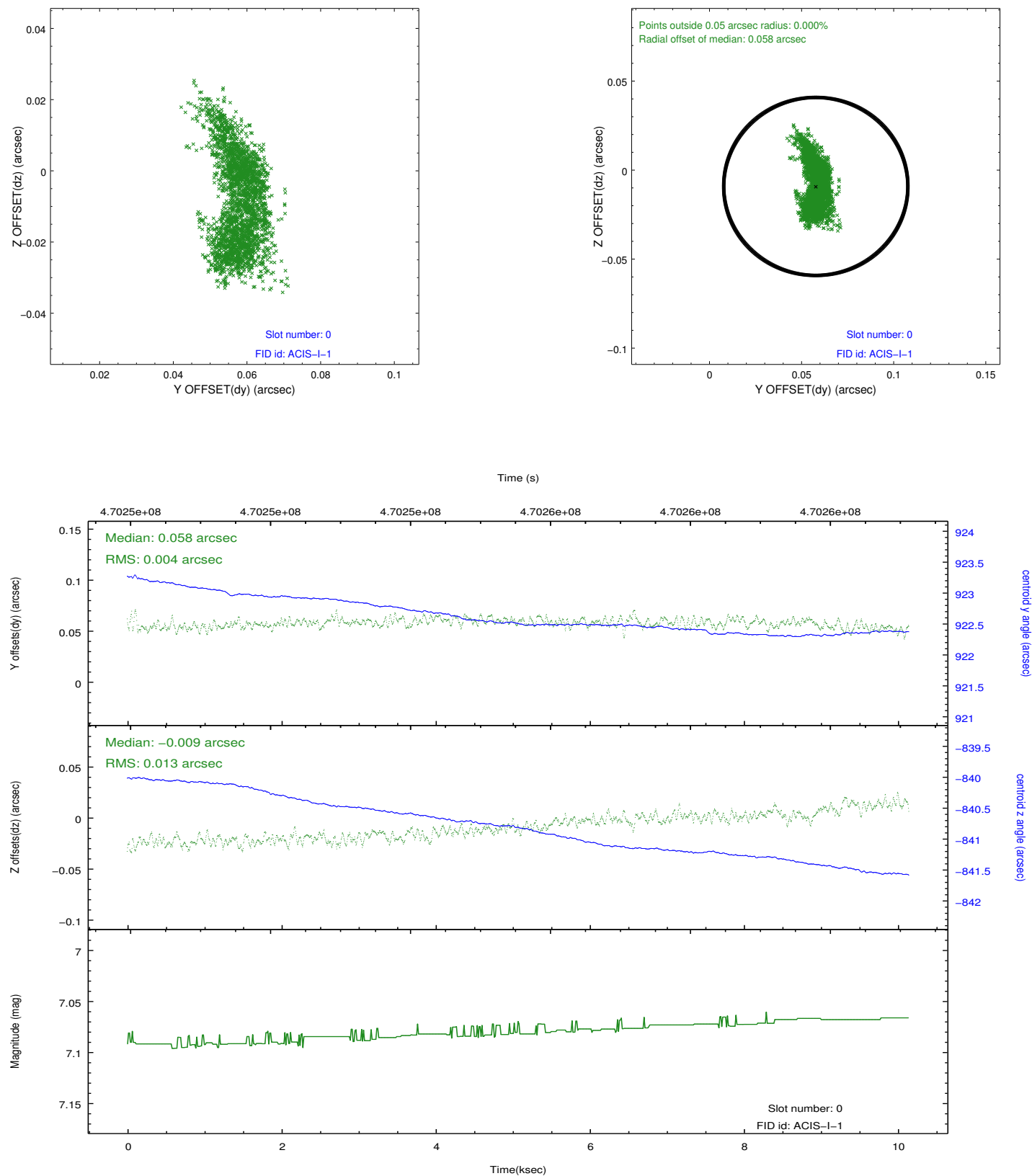


## 2.4.5 Slot 7

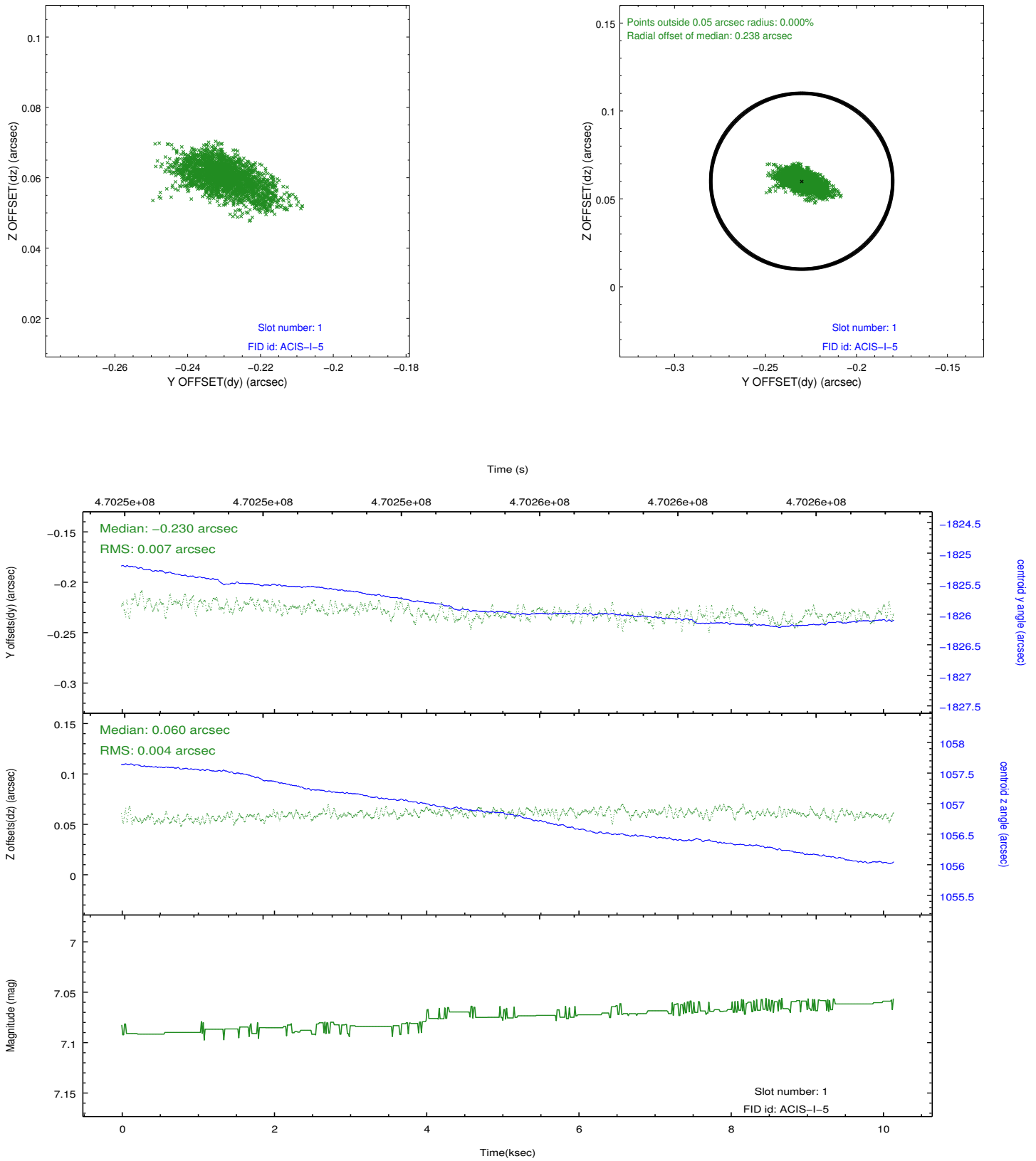


## 2.5 FID Slots

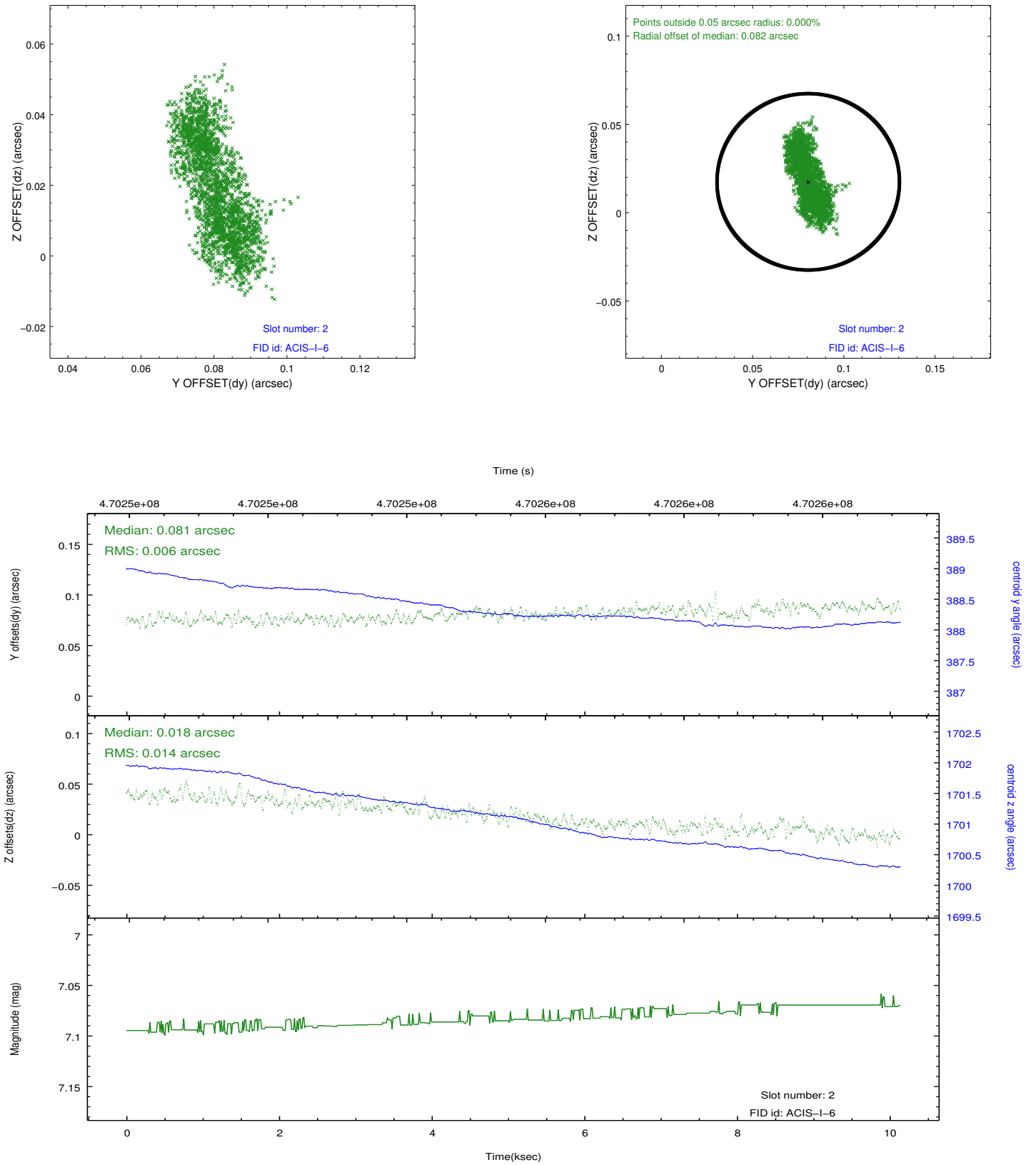
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.084300077558

## 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.