

# V&V Reference Report

## L2 ASCDS Version : 10.5

Observation 18288 - L2 Version 2  
Chandra X-Ray Center

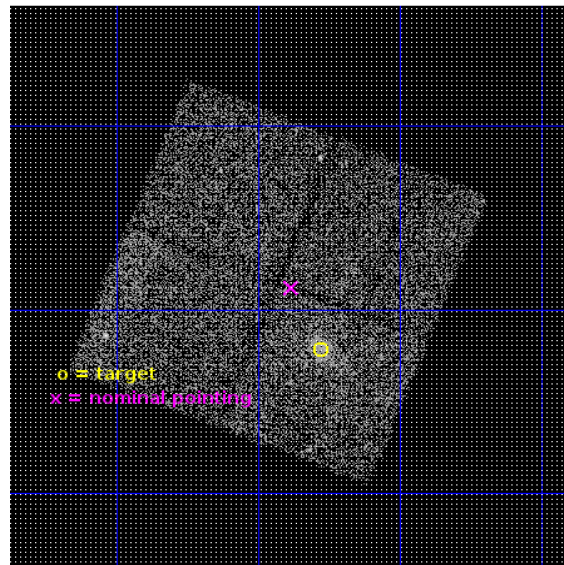
L2 Processing Date : Jul 5 2016

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# 1 Front

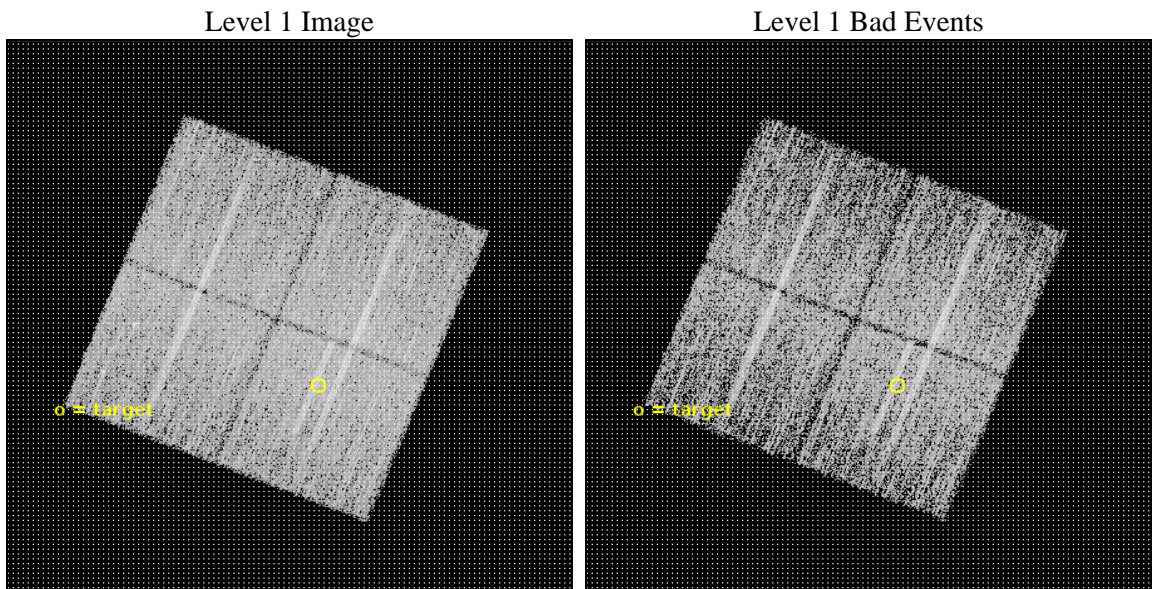
seq_num	801606	Sequence number
obs_id	18288	Observation id
title	Building a Cheap and Cheerful SZ-selected sample of galaxy clusters with the Planck Catalogue.	Proposal title
observer	Mariachiara Rossetti	Principal investigator
object	PSZ2 G140.90-52.52	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	23.82012	Observer's specified target RA [deg]
dec_targ	8.79736	Observer's specified target Dec [deg]
ra_nom	23.845696361131	Nominal RA [deg]
dec_nom	8.8534902148246	Nominal Dec [deg]
roll_nom	111.7670888866	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12418.240424395	Sum of GTIs [s]
livetime	12255.986971074	Livetime [s]
ontime0	12418.117304444	Sum of GTIs [s]
ontime1	12418.158344388	Sum of GTIs [s]
ontime2	12418.199384212	Sum of GTIs [s]
ontime3	12418.240424395	Sum of GTIs [s]
l2events	30592	Number of level 2 events



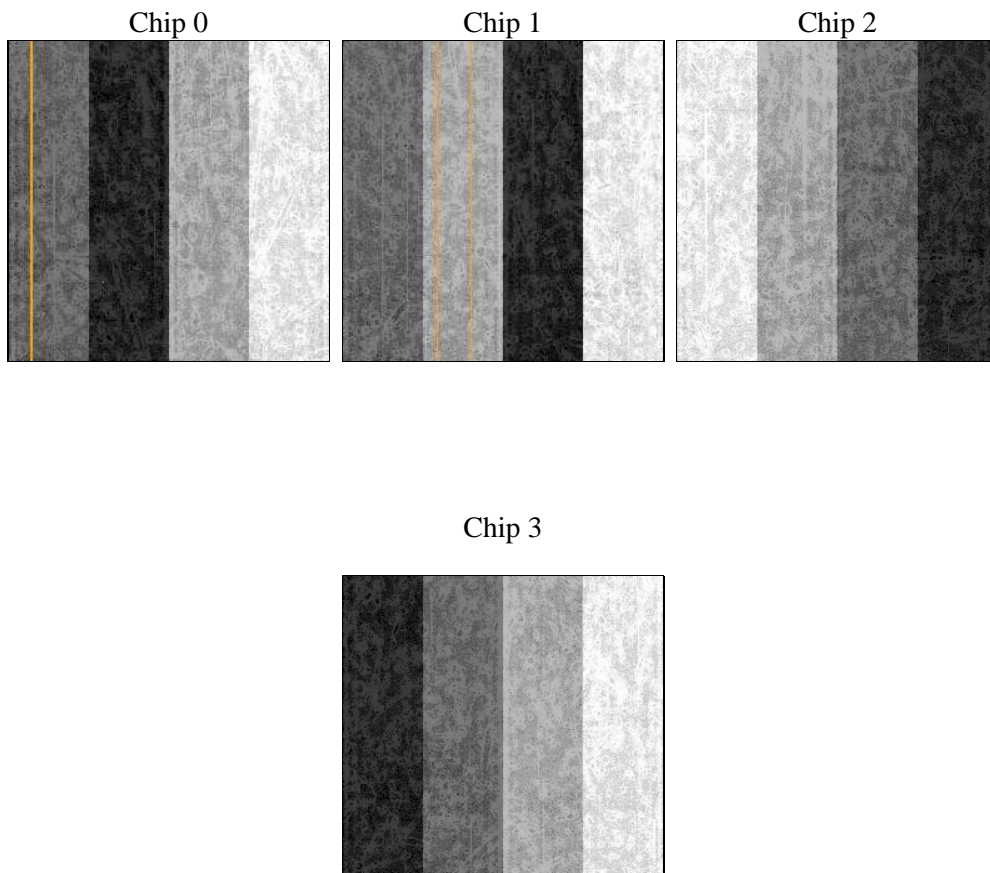
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	12627.637000	[s] Scheduled observation exposure time
ascdsver	10.5	Processing system revision	ontime	12418.240424395	Sum of GTIs [s]
caldsver	4.7.2	&#160	ontime0	12418.117304444	Sum of GTIs [s]
date	2016-07-05T18:51:25	Date and time of file creation	ontime1	12418.158344388	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	12418.199384212	Sum of GTIs [s]
			ontime3	12418.240424395	Sum of GTIs [s]
			l1events	309817	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	72240	74424	80702	82451
rejected events	63195	64422	72404	73108
rejected %	87%	86%	89%	88%

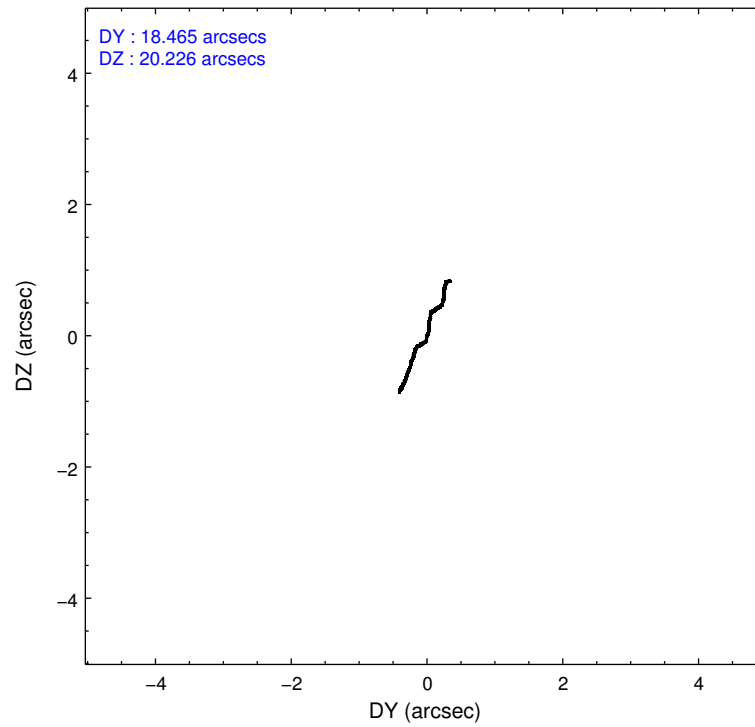
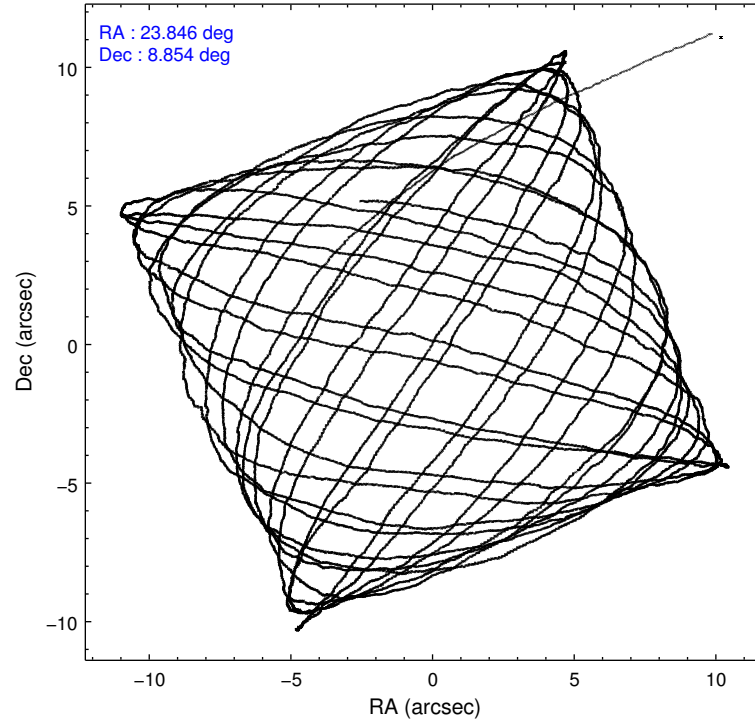
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	3174	3375	2908	3797
	4%	4%	3%	4%
grade 1 events	38	41	53	44
	0%	0%	0%	0%
grade 2 events	2260	2539	2085	1910
	3%	3%	2%	2%
grade 3 events	866	947	806	903
	1%	1%	0%	1%
grade 4 events	872	907	904	932
	1%	1%	1%	1%
grade 5 events	3380	3468	3061	3930
	4%	4%	3%	4%
grade 6 events	1877	2237	1598	1804
	2%	3%	1%	2%
grade 7 events	59773	60910	69287	69131
	82%	81%	85%	83%

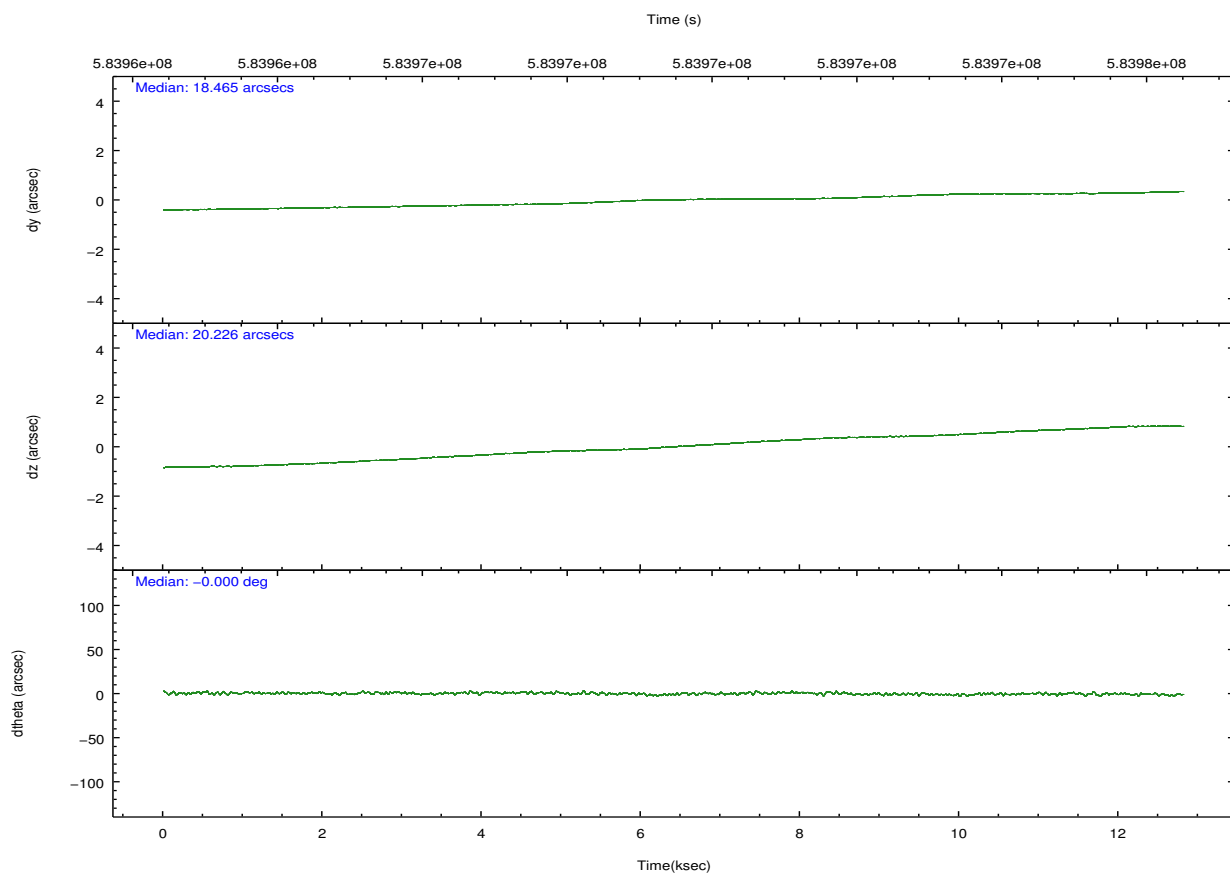
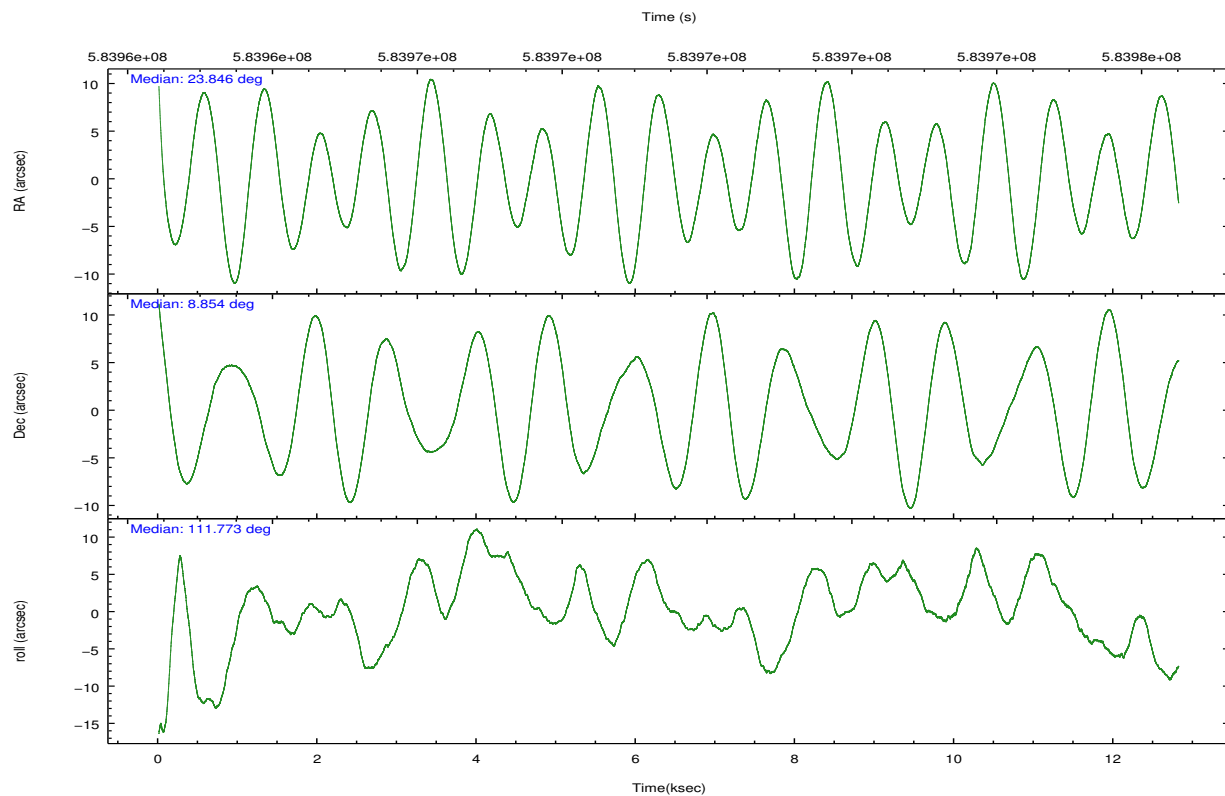


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	23.867674	23.84569636113137	Subarray requested	NONE	NONE
[deg] Pointing Dec	8.836509	8.85349021482461	Alternating exposures requested	N	N
[deg] Pointing Roll	111.555014	111.7670888865994	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	583963273.184000	583962335.22421			
Observation start date	2016-07-03T20:00:05	2016-07-03T19:45:35			
[s] Observation end time (MET)	583975901.184000	583976137.36251			
Observation end date	2016-07-03T23:30:33	2016-07-03T23:35:37			
Read mode	TIMED	TIMED			

## 2.3 Aspect



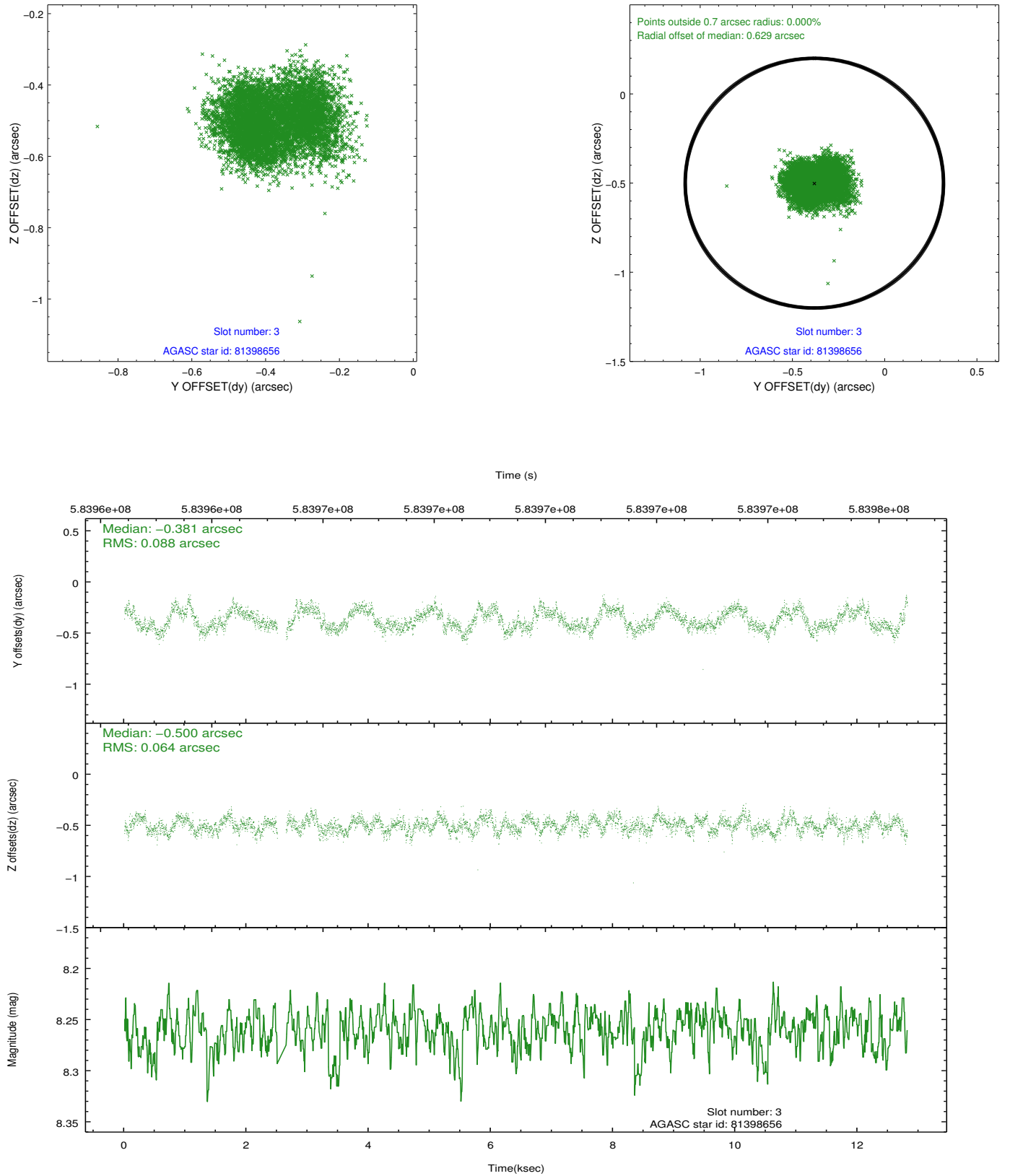


### Slot Statistics

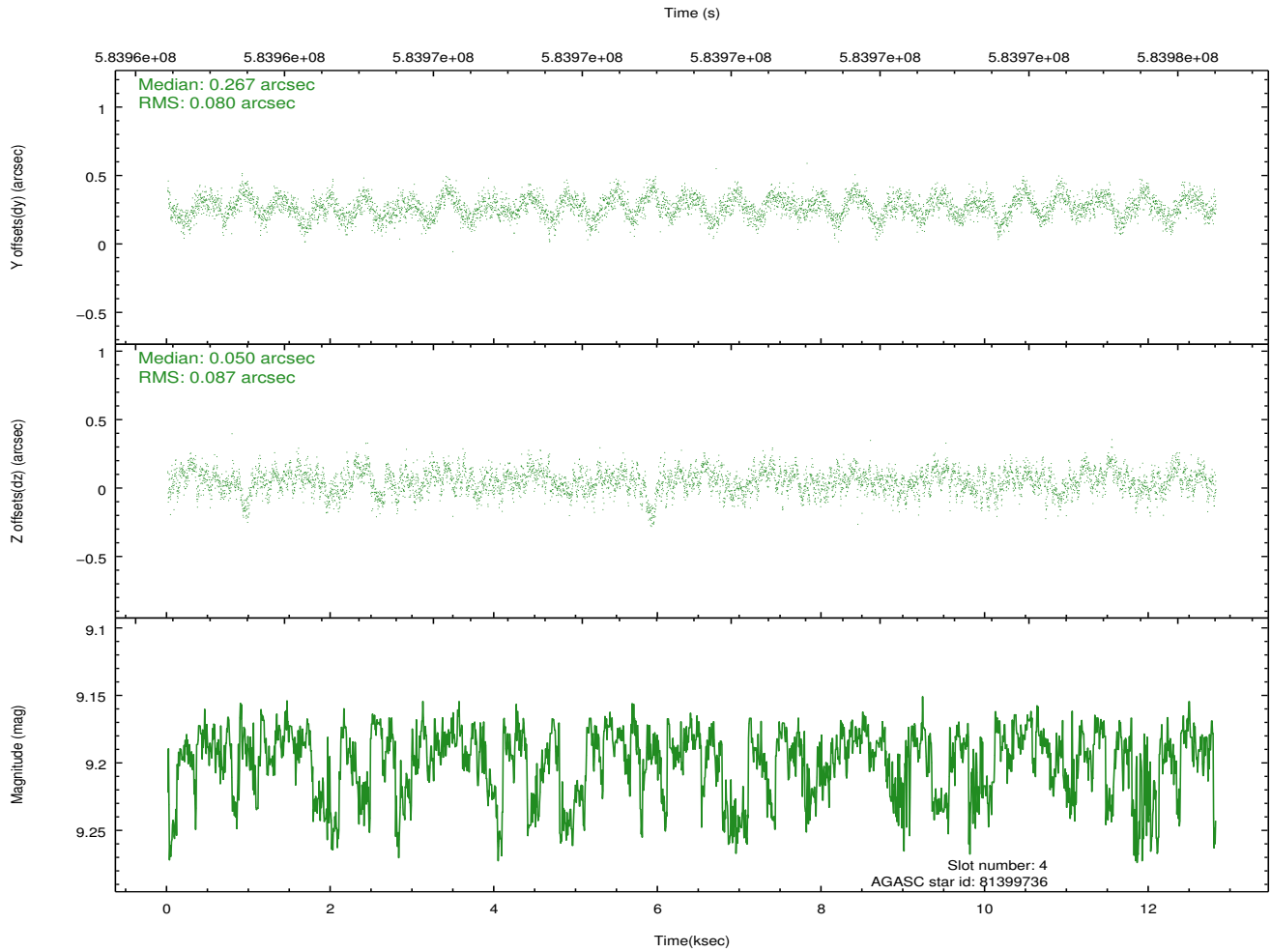
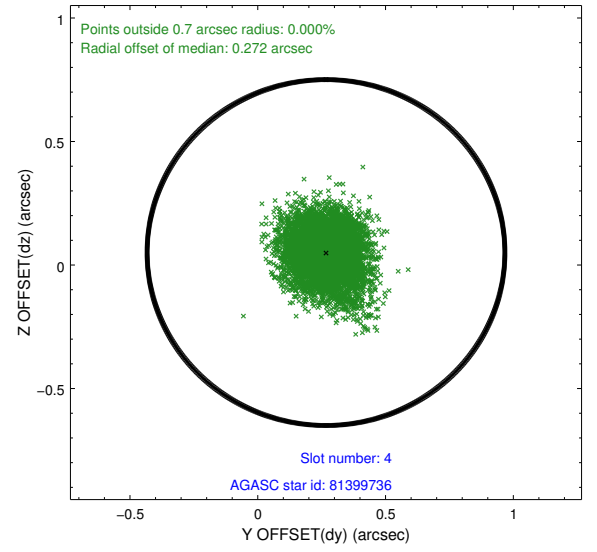
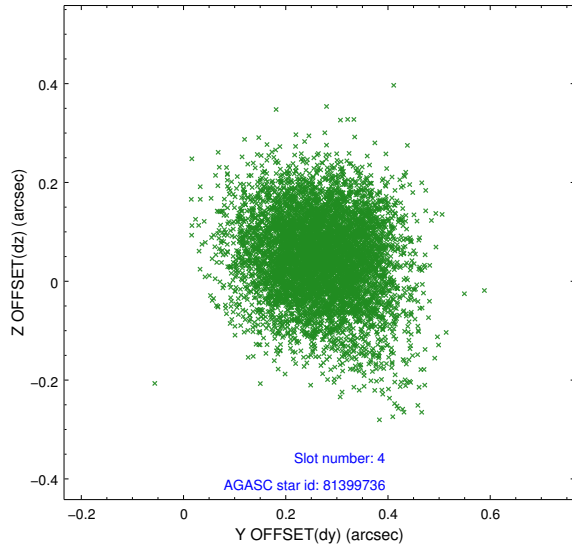
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	3125	-0.071	-0.053	0.034	0.048	0.000000	0.000000	920.84	-844.04
1	FID		ACIS-I-2	7.14	3124	-0.320	-0.161	0.020	0.027	0.000000	0.000000	-773.29	-850.74
2	FID		ACIS-I-4	7.18	3125	0.293	0.282	0.017	0.024	0.000000	0.000000	2140.97	1055.86
3	GUIDE	used	81398656	8.26	6176	-0.381	-0.500	0.117	0.178	23.482471	8.993627	1029.42	1065.30
4	GUIDE	used	81399736	9.19	6241	0.267	0.050	0.125	0.205	23.507447	8.385602	-1038.12	1789.66
5	GUIDE	used	81400040	6.75	6251	0.082	0.094	0.106	0.174	23.719048	8.274850	-1686.13	1235.98
6	GUIDE	used	81404016	9.38	6244	0.320	0.015	0.164	0.269	23.545627	8.228777	-1612.74	1870.85
7	GUIDE	used	81398720	9.34	6247	-0.290	0.357	0.164	0.300	23.042891	9.237057	2419.83	2194.96

## 2.4 Star Slots

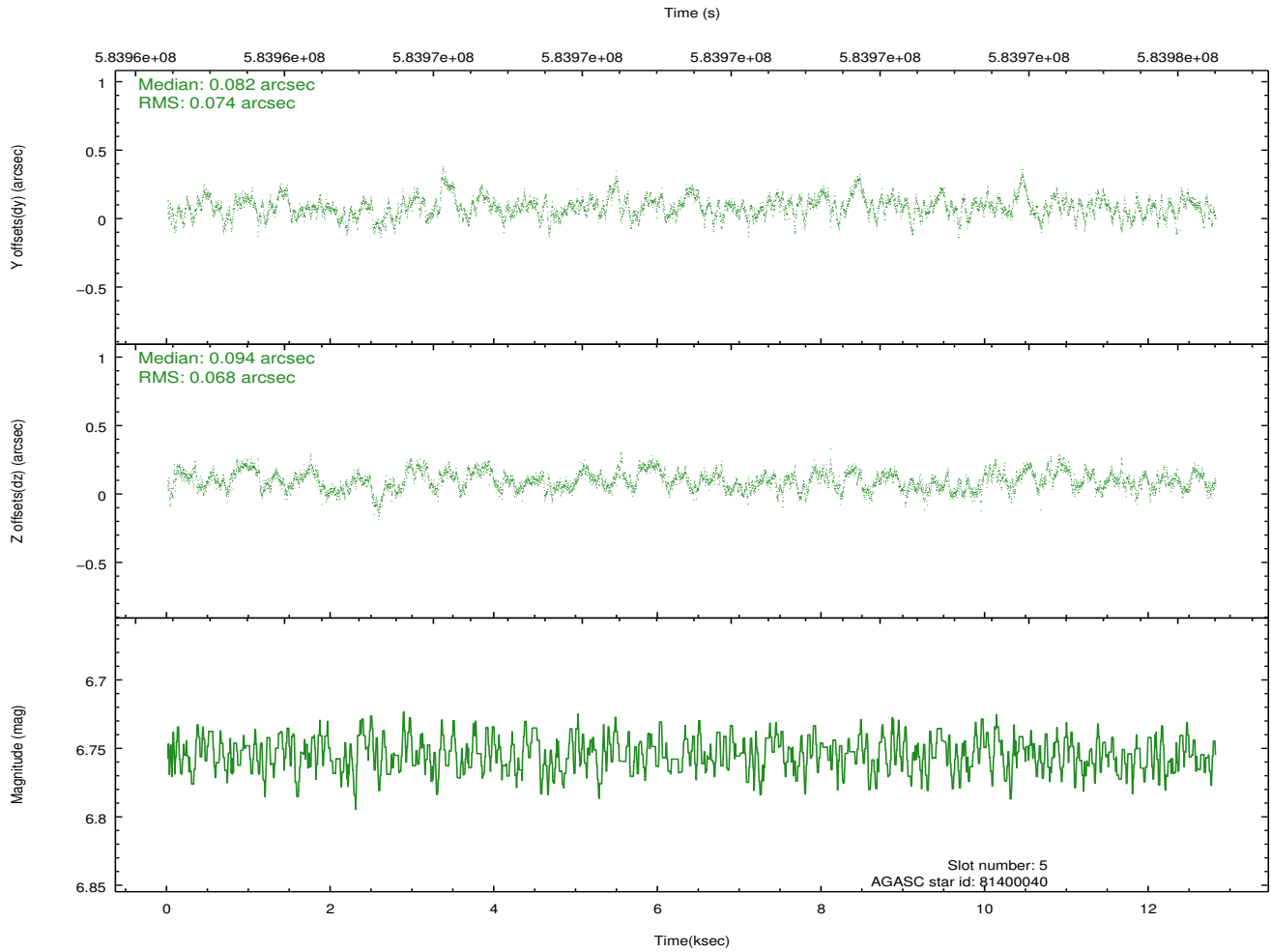
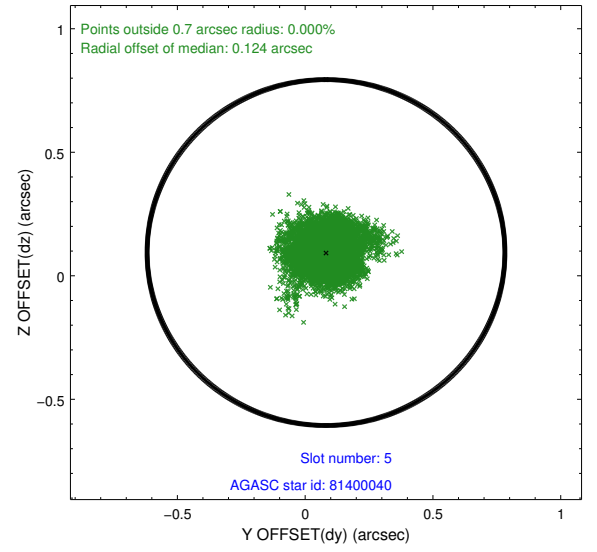
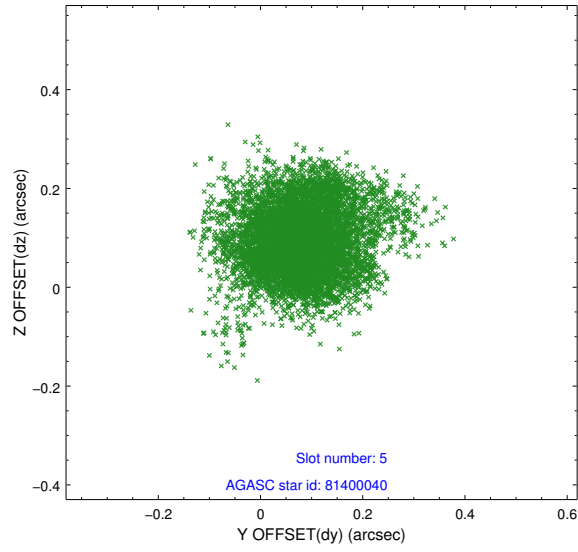
### 2.4.1 Slot 3



## 2.4.2 Slot 4

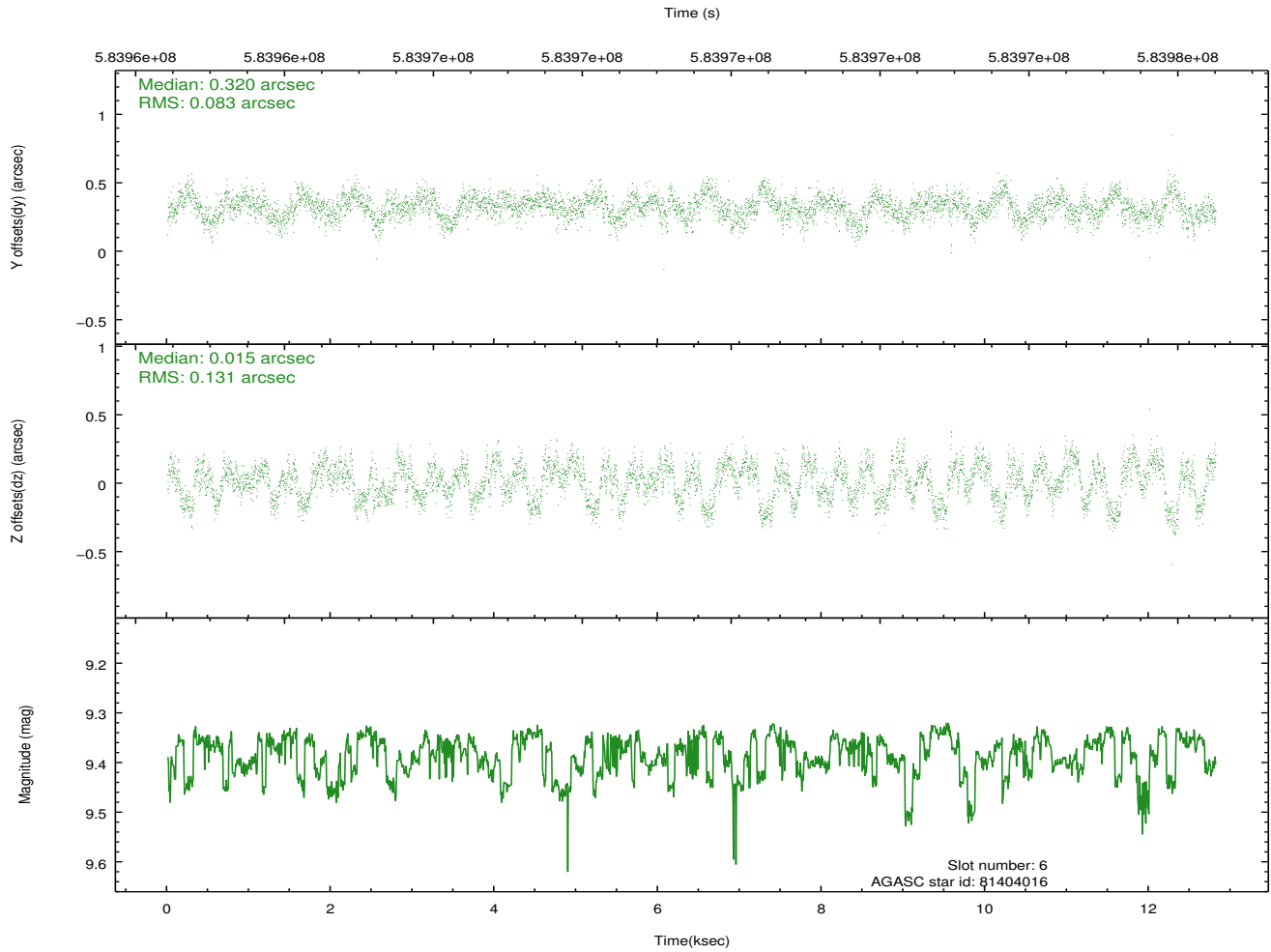
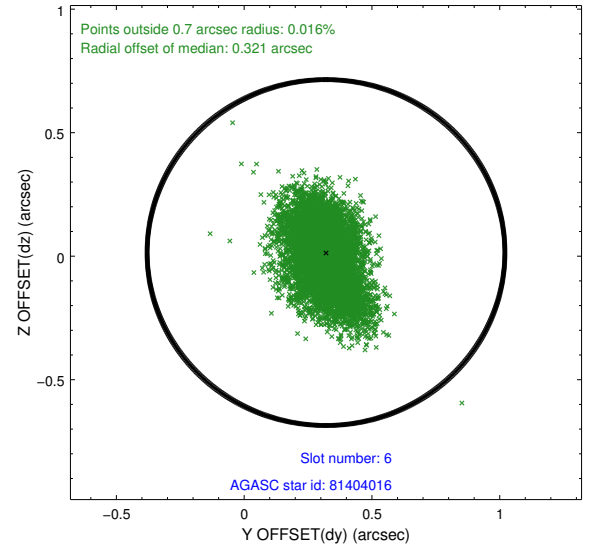
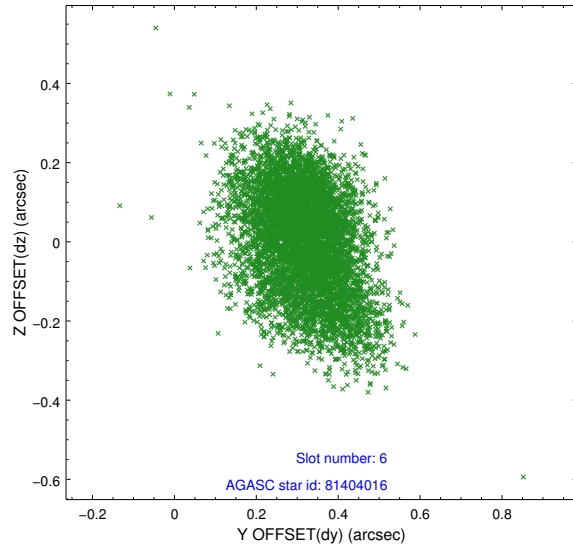


### 2.4.3 Slot 5

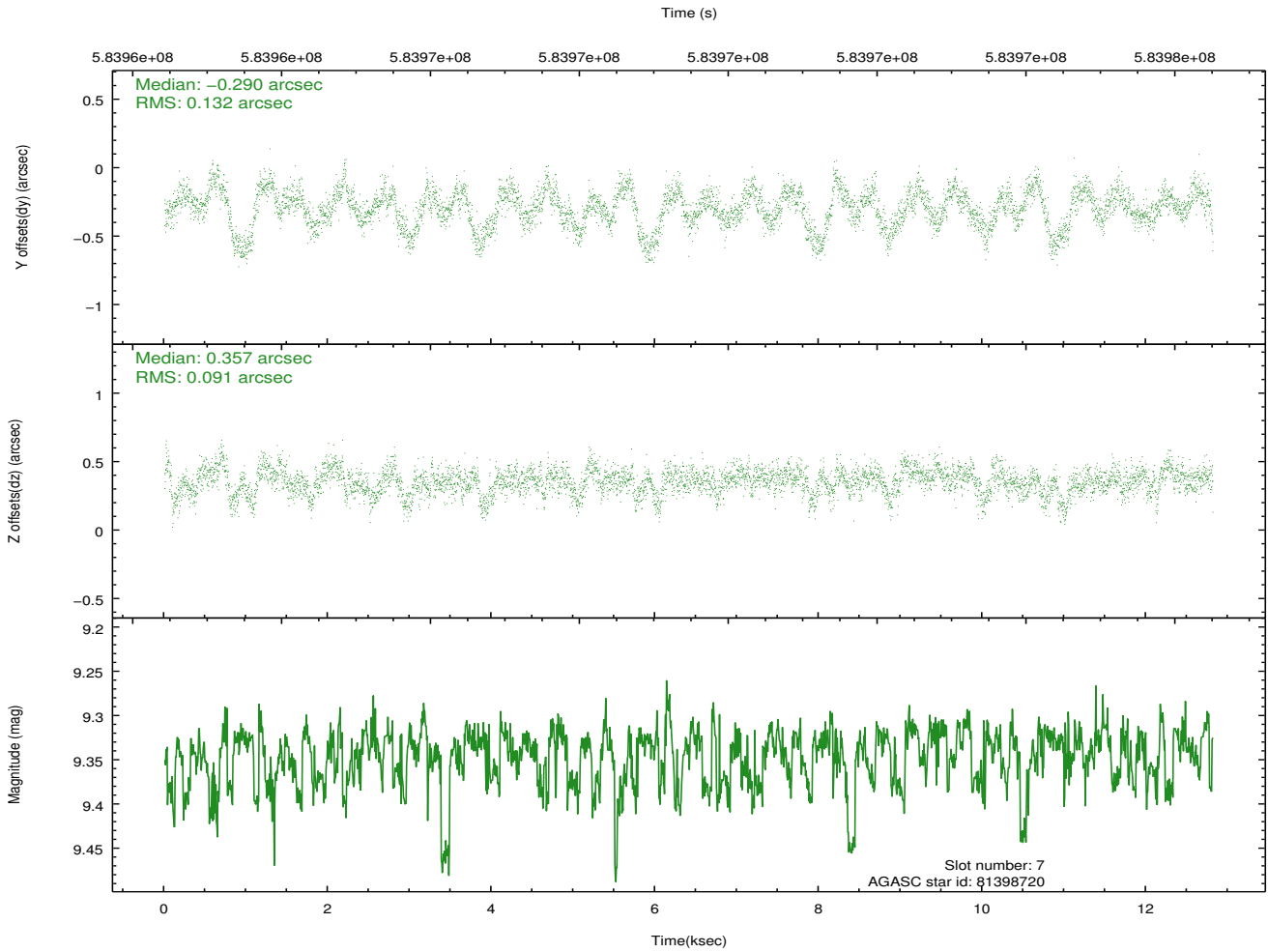
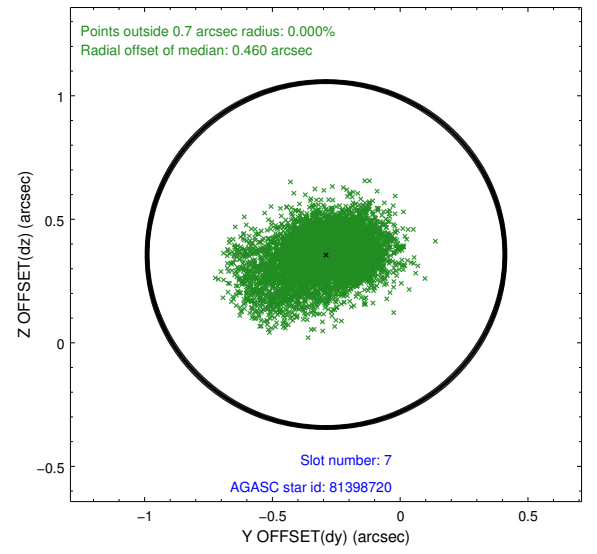
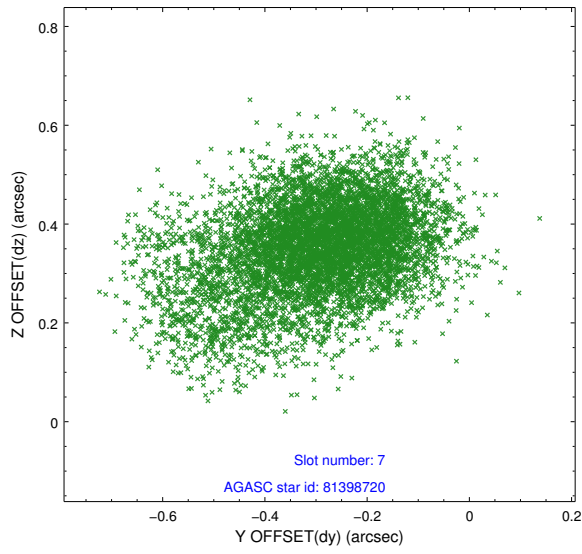




## 2.4.4 Slot 6

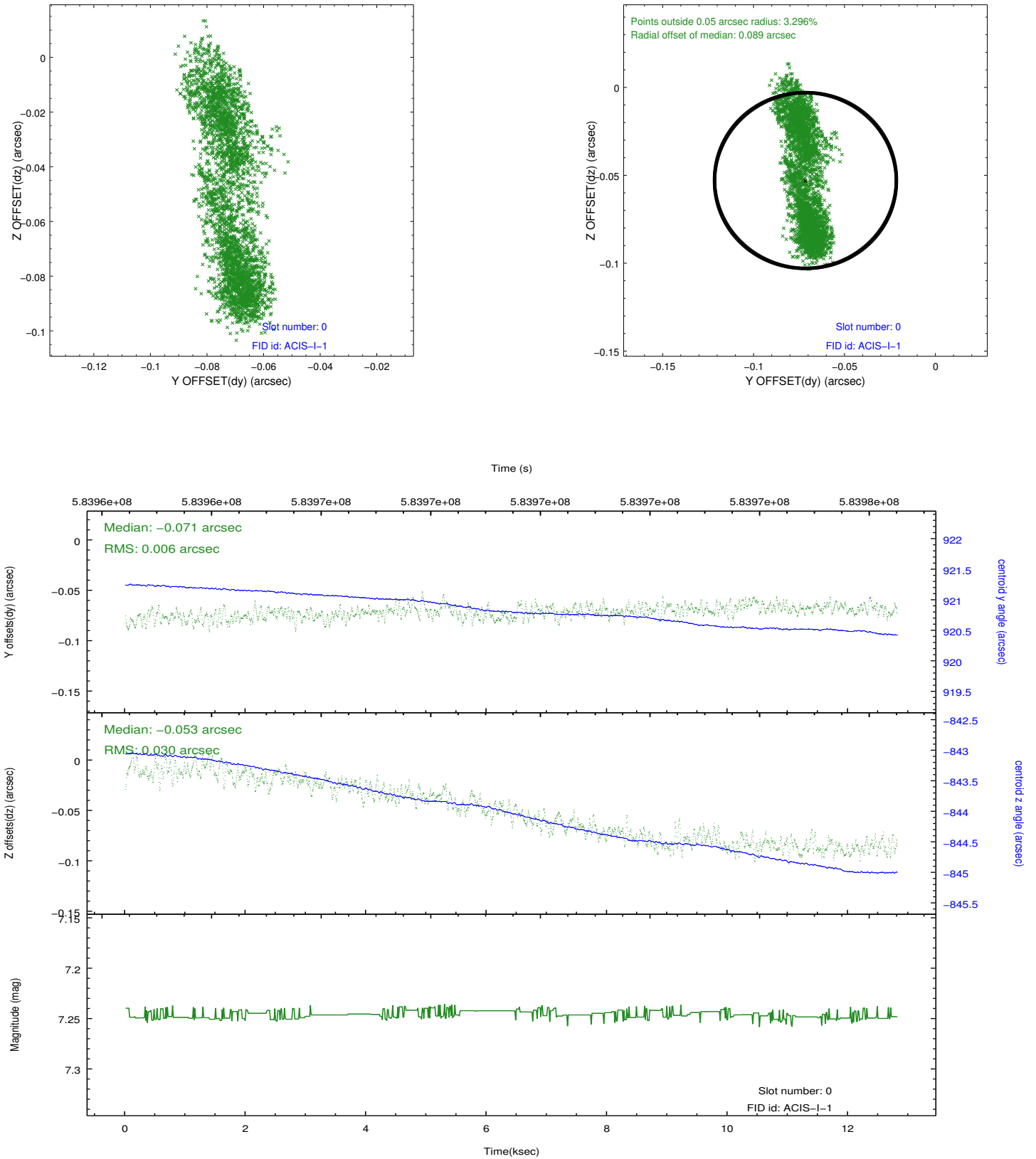


## 2.4.5 Slot 7

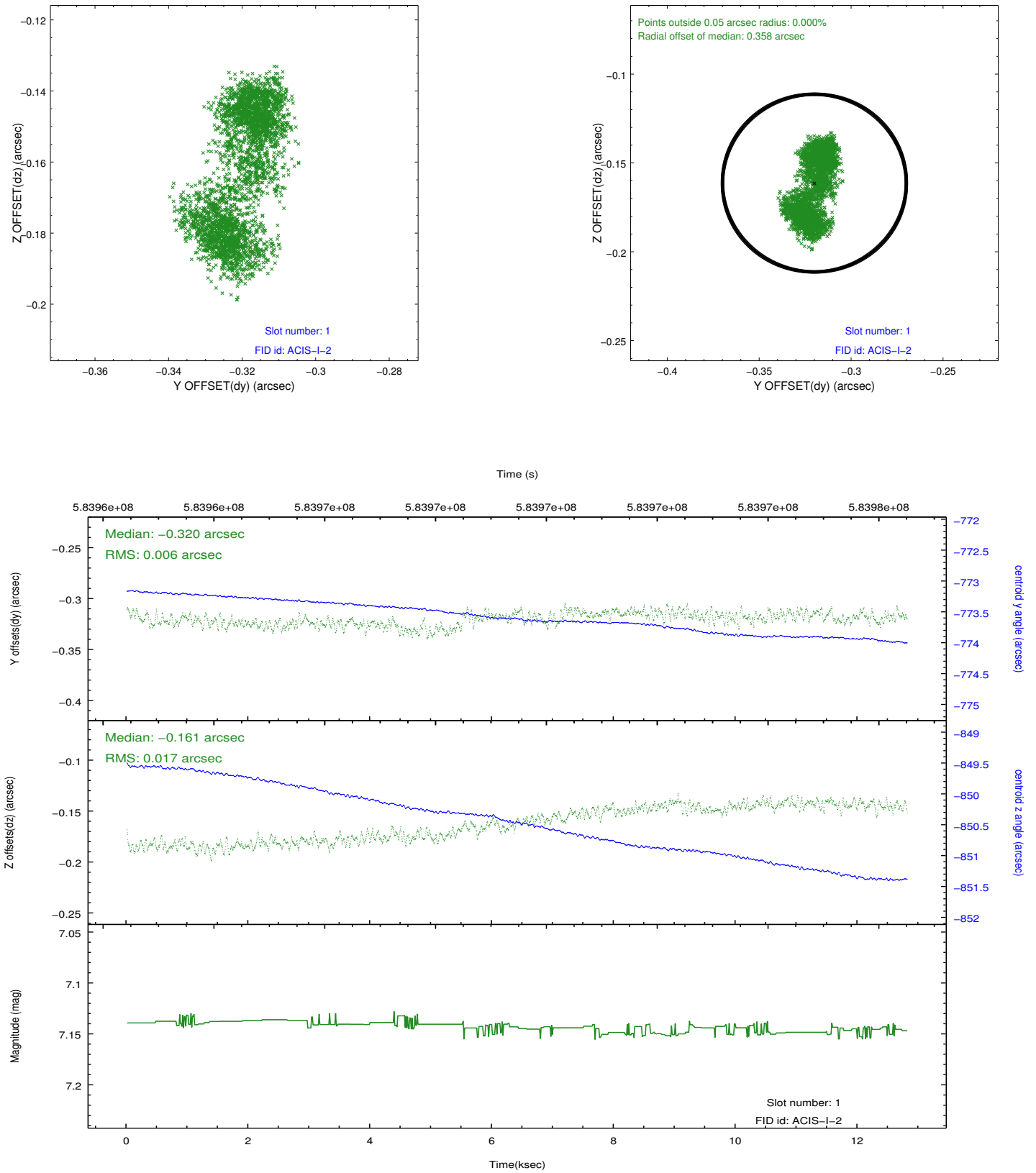


## 2.5 FID Slots

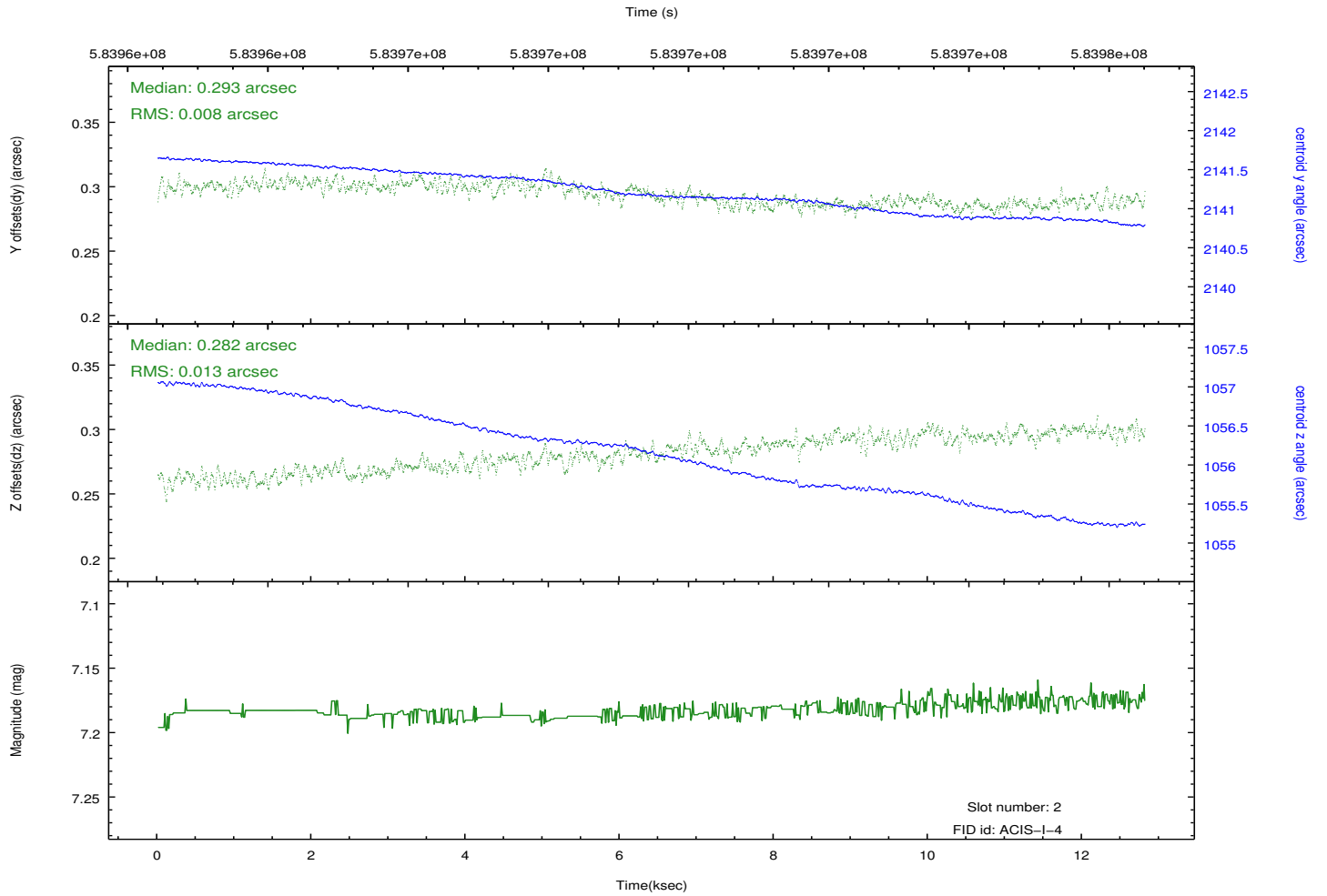
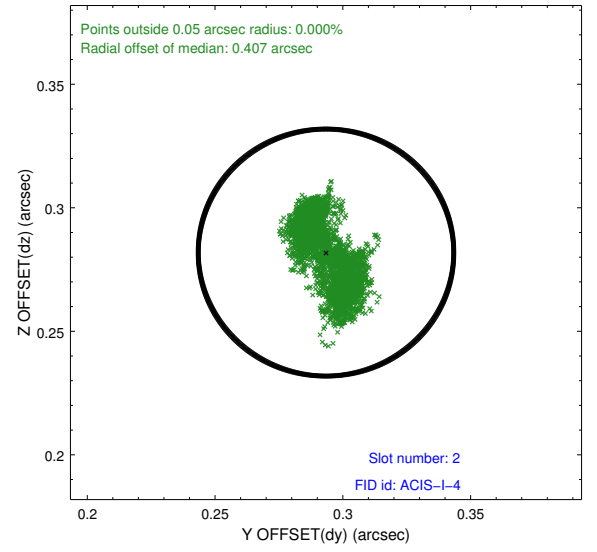
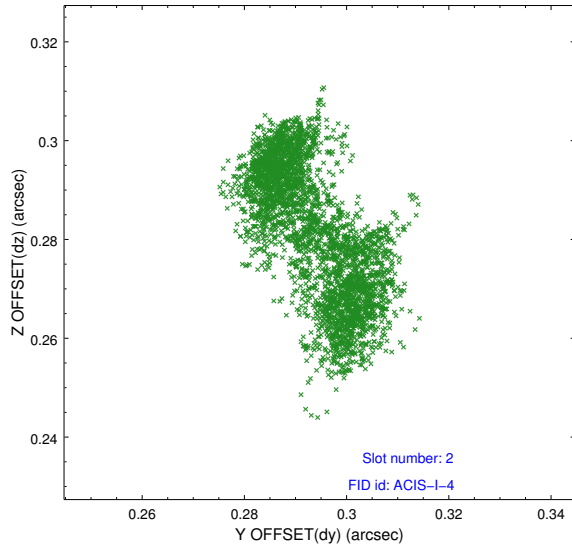
### 2.5.1 Slot 0



## 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)	2016.07.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.418240424395

## A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 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: (24.03512,8.77696), (24.04037,8.77904), (24.01241,8.84832), (24.00603,8.84902).