

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17063 - L2 Version 1  
Chandra X-Ray Center

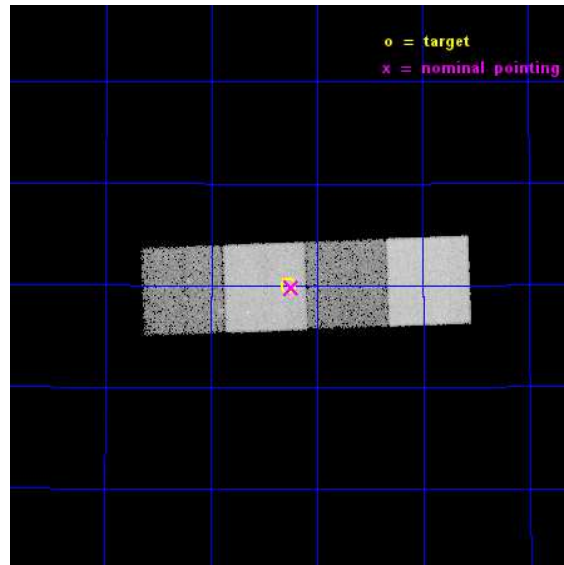
L2 Processing Date : Mar 2 2015

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# 1 Front

seq_num	703067	Sequence number
obs_id	17063	Observation id
title	ULTRAMASSIVE BLACK HOLES: FUNDAMENTAL PLANE AND CORONAE	Proposal t
observer	Dr. Kayhan Gultekin	Principal investigator
object	PGC 032873	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	164.066667	Observer's specified target RA [deg]
dec_targ	42.333083	Observer's specified target Dec [deg]
ra_nom	164.06078314692	Nominal RA [deg]
dec_nom	42.329797490824	Nominal Dec [deg]
roll_nom	177.89758472154	Nominal Roll [deg]
revision	1	Processing version of data
ontime	23689.32990706	Sum of GTIs [s]
livetime	23379.811371993	Livetime [s]
ontime5	23689.288867116	Sum of GTIs [s]
ontime6	23689.247827053	Sum of GTIs [s]
ontime7	23689.32990706	Sum of GTIs [s]
ontime8	23689.206787109	Sum of GTIs [s]
l2events	175742	Number of level 2 events

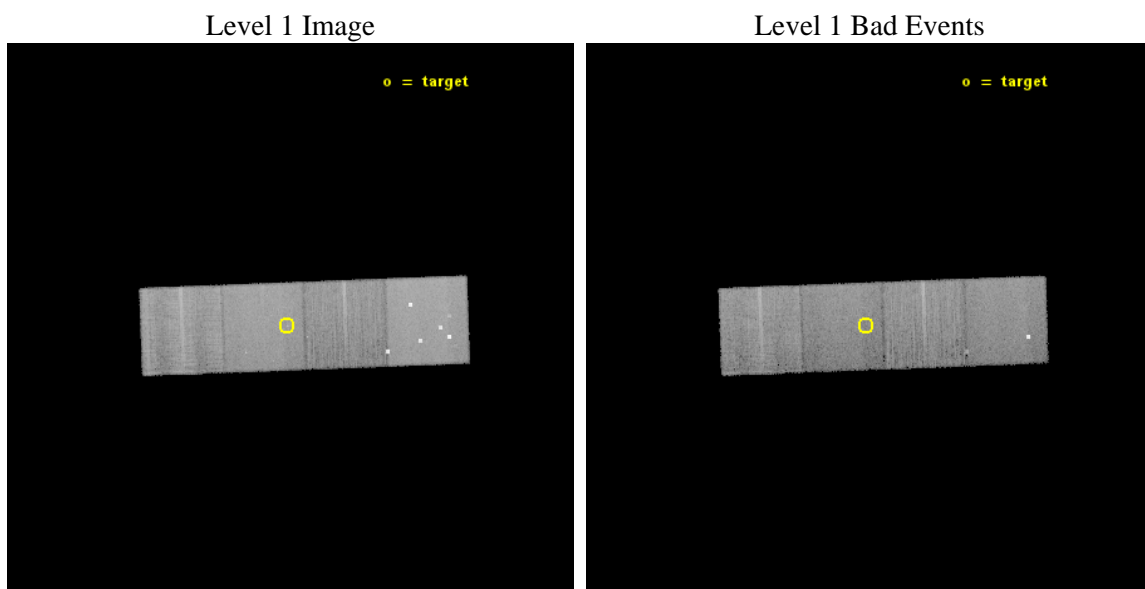




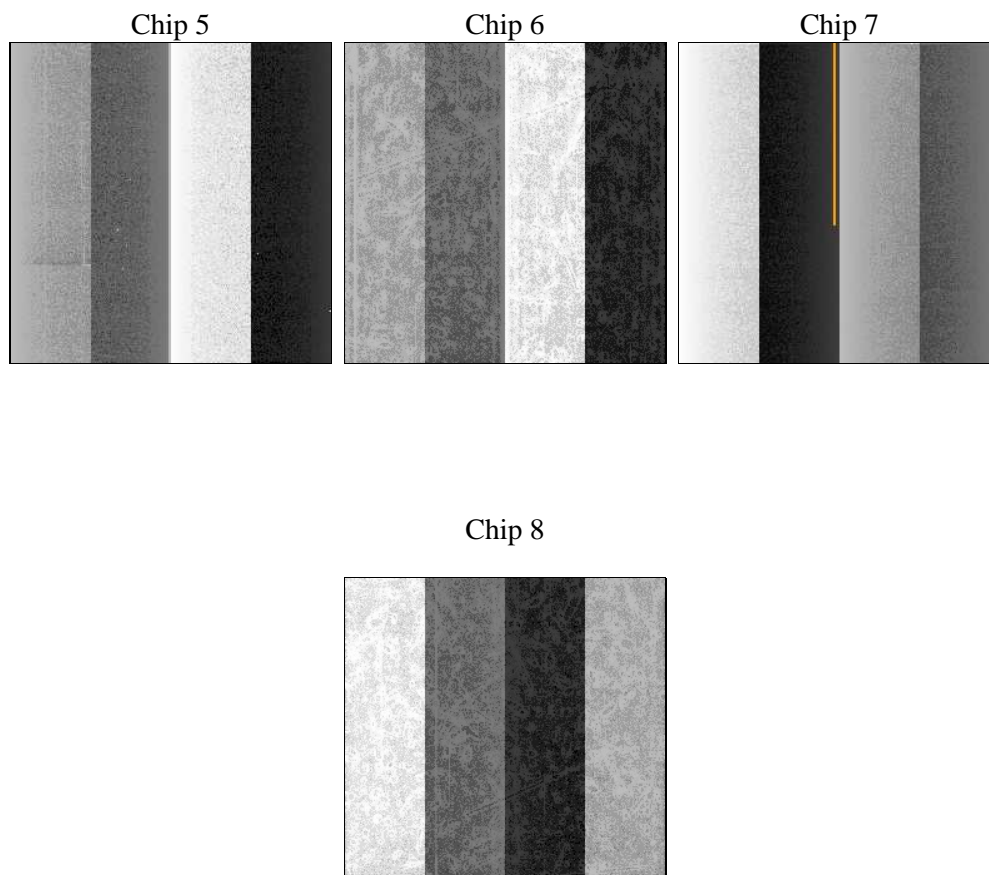
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	23629.731000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	23689.32990706	Sum of GTIs [s]
caldsver	4.6.7	&#160	ontime5	23689.288867116	Sum of GTIs [s]
date	2015-03-03T03:24:36	Date and time of file creation	ontime6	23689.247827053	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	23689.32990706	Sum of GTIs [s]
			ontime8	23689.206787109	Sum of GTIs [s]
			l1events	632533	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	211572	115803	154402	150756
rejected events	103016	101846	87130	110027
rejected %	48%	87%	56%	72%

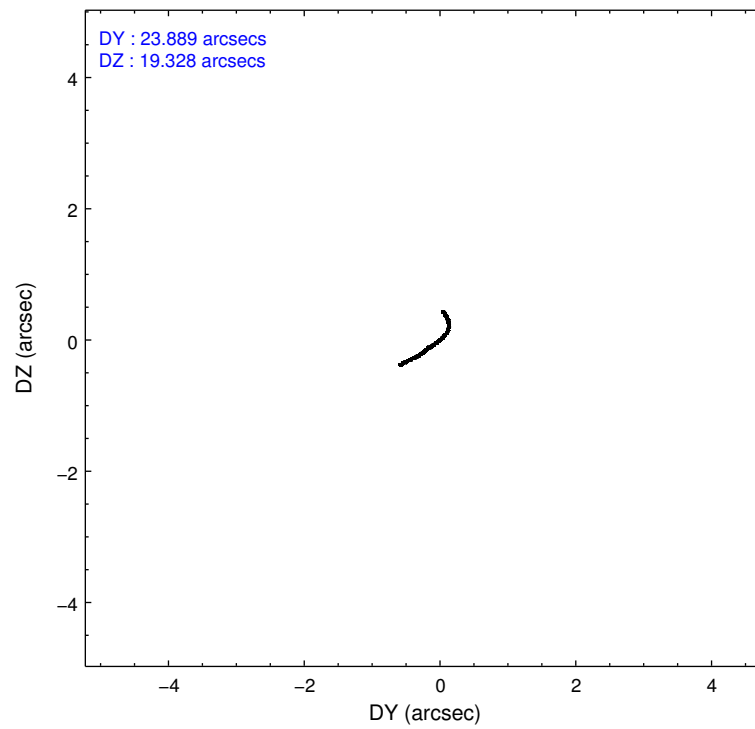
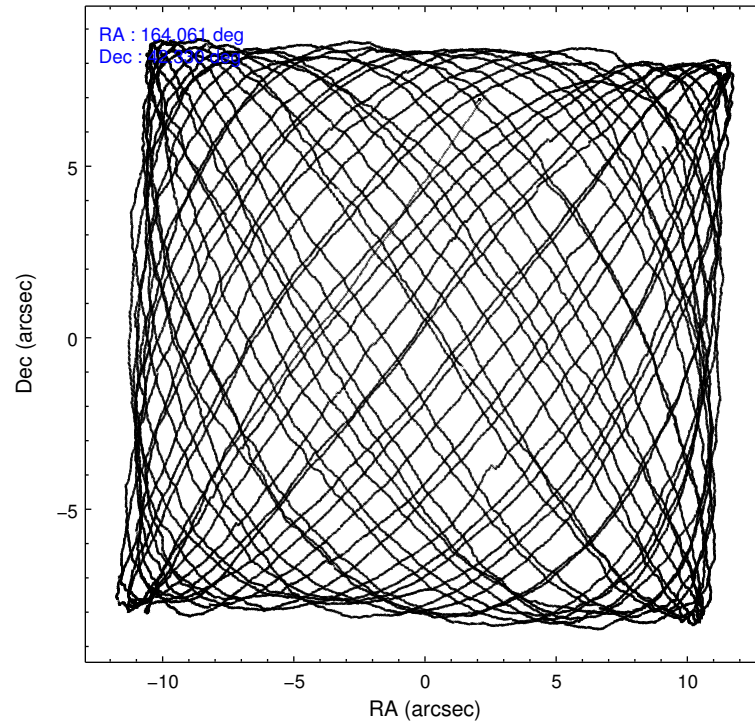
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	21489	4680	6017	11427
	10%	4%	3%	7%
grade 1 events	584	52	180	104
	0%	0%	0%	0%
grade 2 events	29058	3230	14060	9806
	13%	2%	9%	6%
grade 3 events	4910	1374	5709	4327
	2%	1%	3%	2%
grade 4 events	3777	1428	5566	4069
	1%	1%	3%	2%
grade 5 events	14854	6051	15714	8498
	7%	5%	10%	5%
grade 6 events	49336	3247	35928	11107
	23%	2%	23%	7%
grade 7 events	87564	95741	71228	101418
	41%	82%	46%	67%

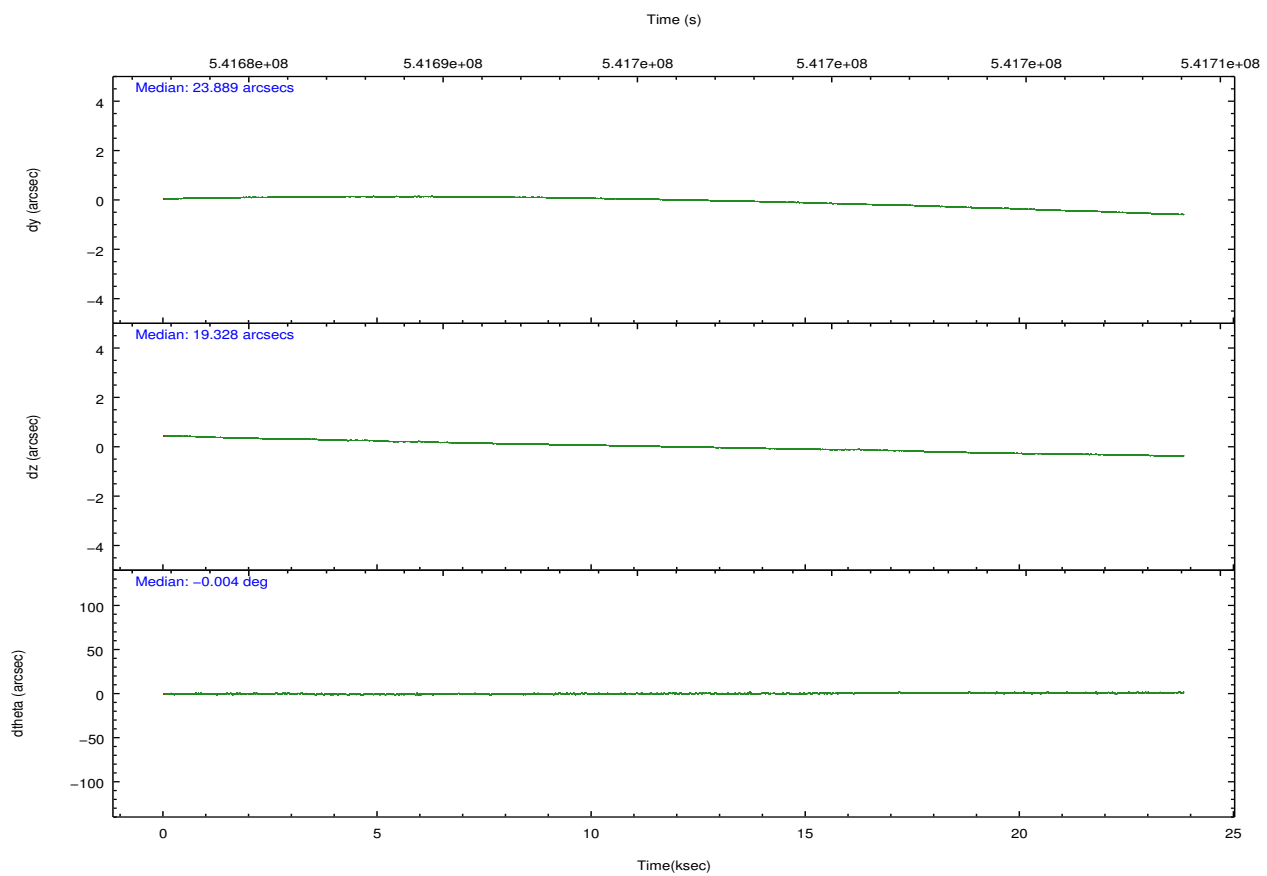
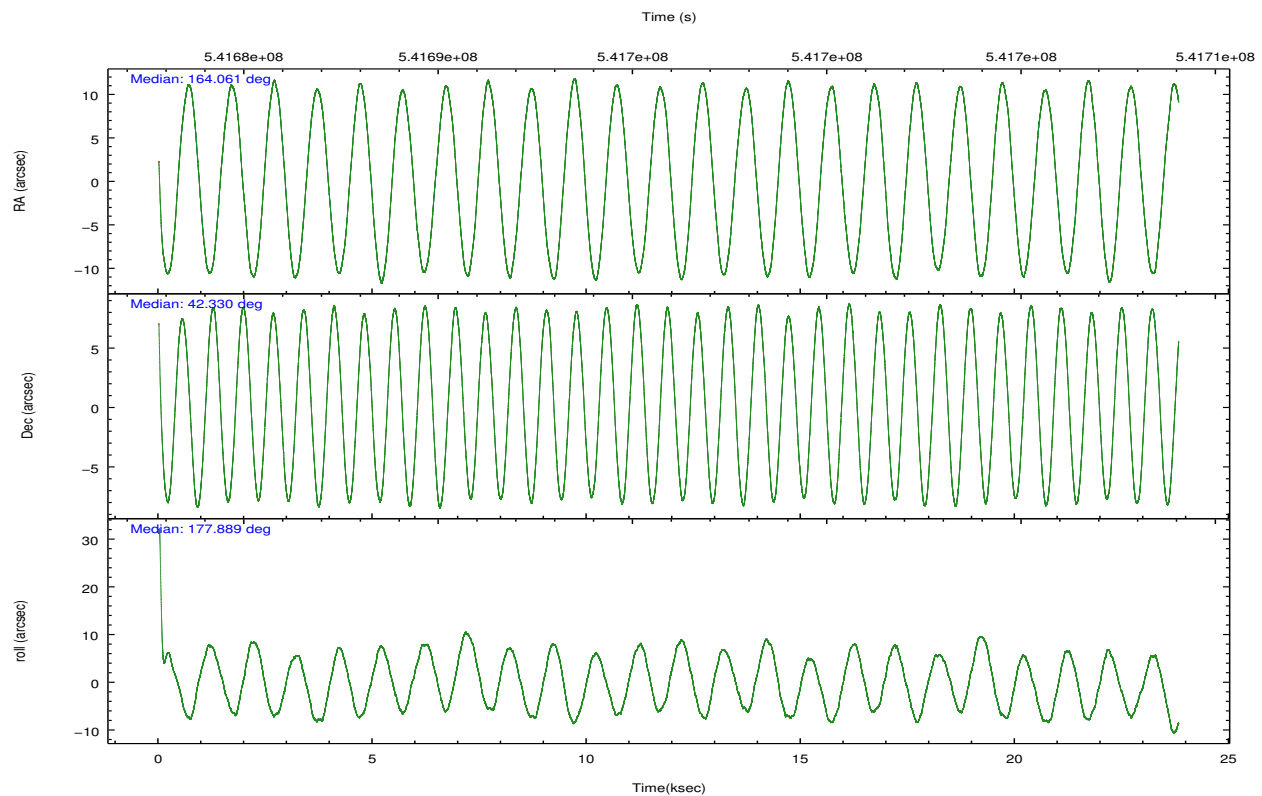
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	164.093370	164.0607831469184
[deg] Pointing Dec	42.342981	42.32979749082401
[deg] Pointing Roll	177.718986	177.8975847215411
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	541684240.184000	541683357.60637
Observation start date	2015-03-02T11:49:33	2015-03-02T11:35:57
[s] Observation end time (MET)	541707870.184000	541708095.9827501
Observation end date	2015-03-02T18:23:23	2015-03-02T18:28:15
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



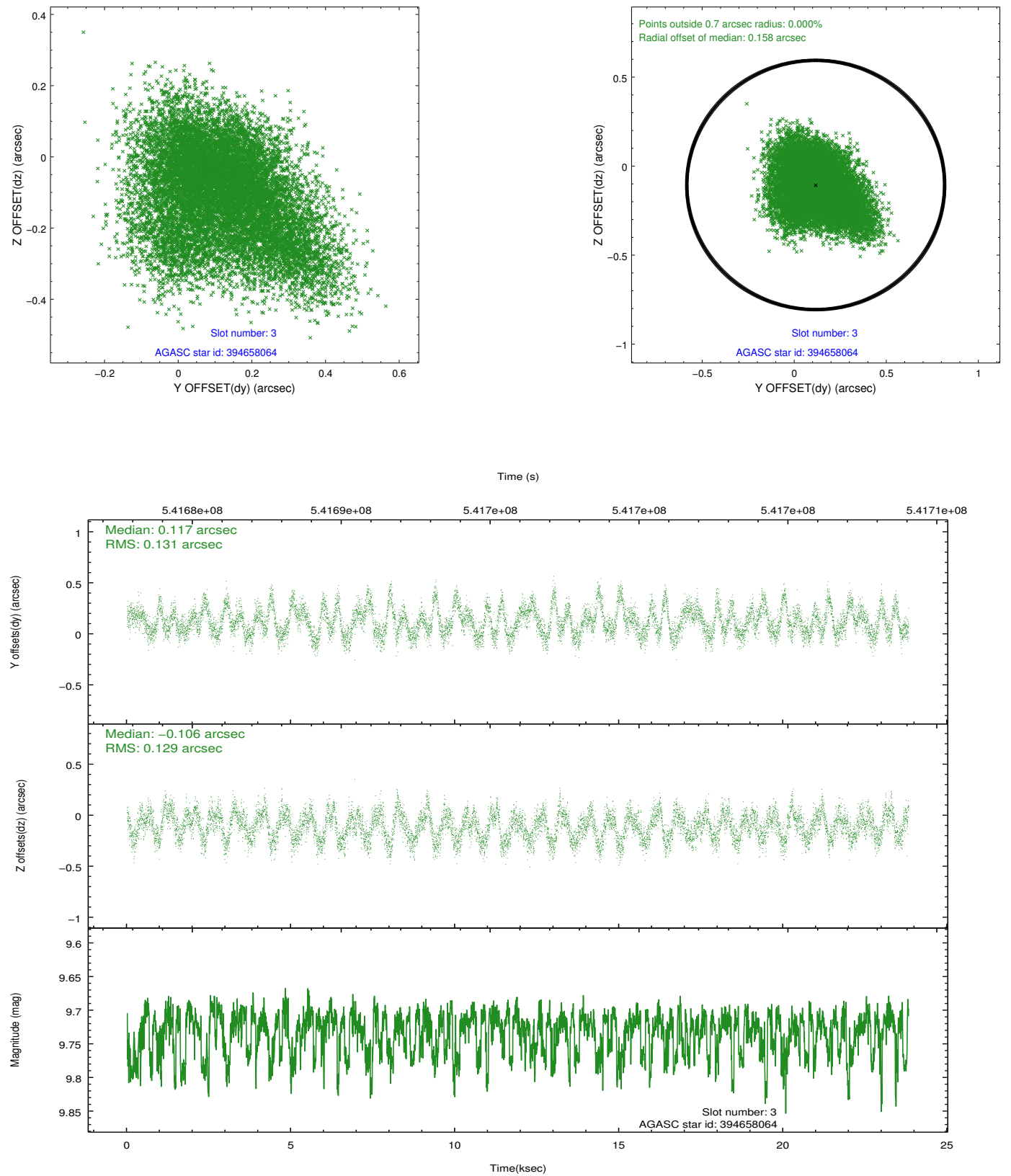


### Slot Statistics

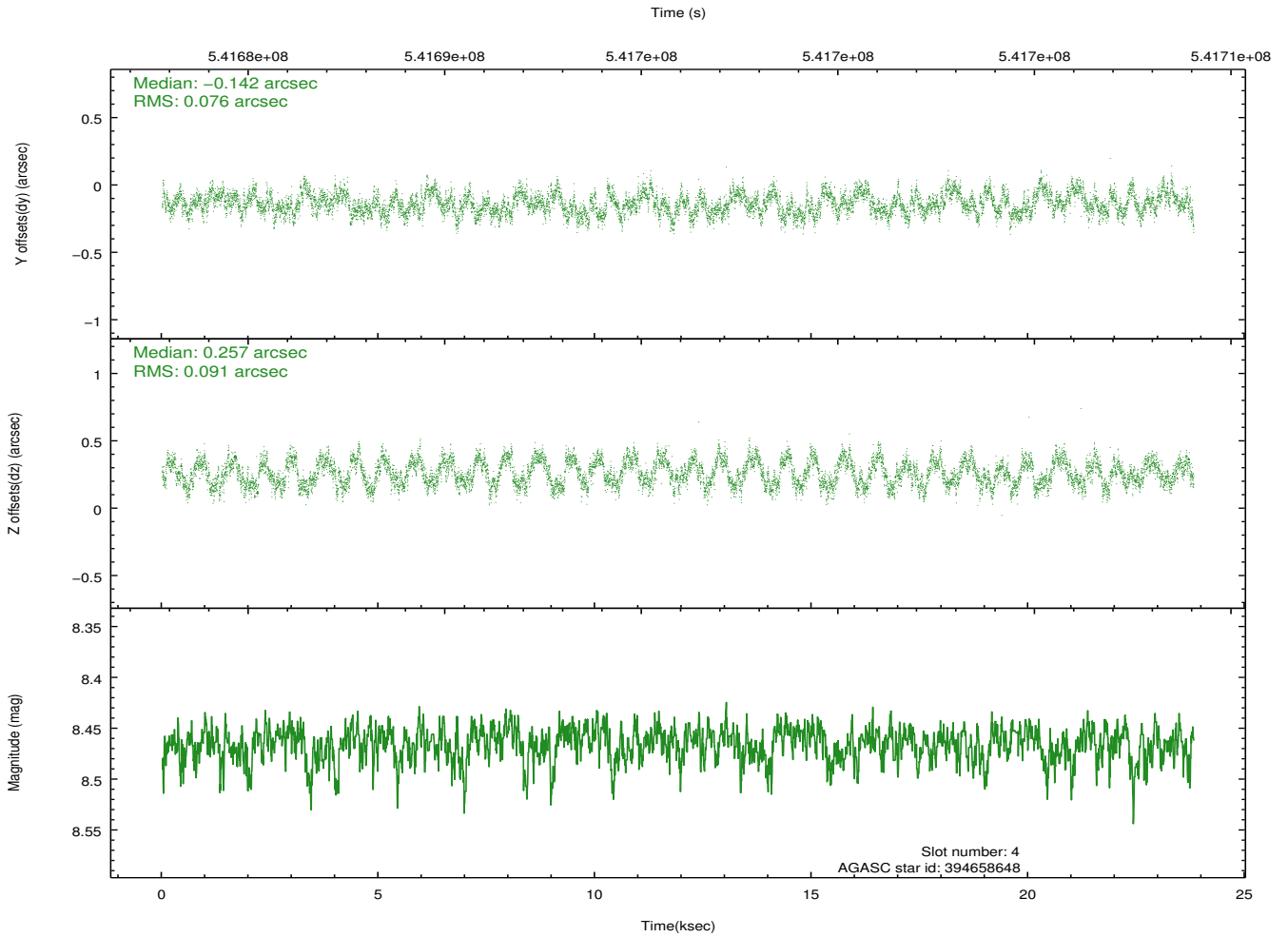
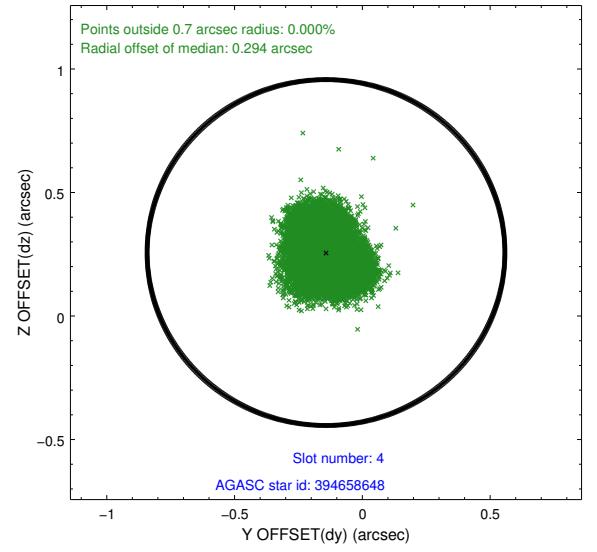
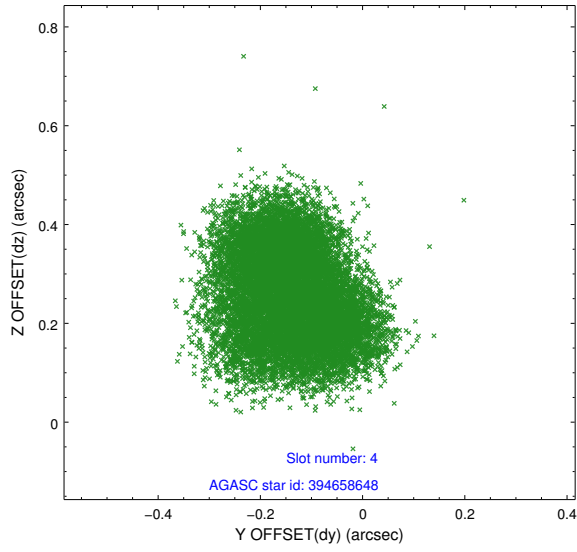
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	5809	-0.205	-0.085	0.019	0.036	0.000000	0.000000	-777.21	-1740.87
1	FID		ACIS-S-4	7.12	5809	0.444	0.121	0.010	0.026	0.000000	0.000000	2136.64	167.68
2	FID		ACIS-S-5	7.13	5809	-0.272	-0.029	0.018	0.030	0.000000	0.000000	-1829.96	161.36
3	GUIDE	used	394658064	9.73	11599	0.117	-0.106	0.196	0.316	164.719465	41.947080	-1731.21	1351.27
4	GUIDE	used	394658648	8.46	11616	-0.142	0.257	0.130	0.193	163.710510	42.859211	1083.87	-1818.05
5	GUIDE	used	394659808	9.64	11611	0.093	-0.211	0.145	0.234	164.672693	42.121221	-1576.89	730.77
6	GUIDE	used	394660048	9.34	11605	-0.044	0.123	0.234	0.342	164.917815	42.156666	-2223.18	573.03
7	GUIDE	used	394660208	9.41	11602	-0.060	-0.053	0.183	0.313	163.616392	42.544985	1294.01	-679.02

## 2.4 Star Slots

### 2.4.1 Slot 3

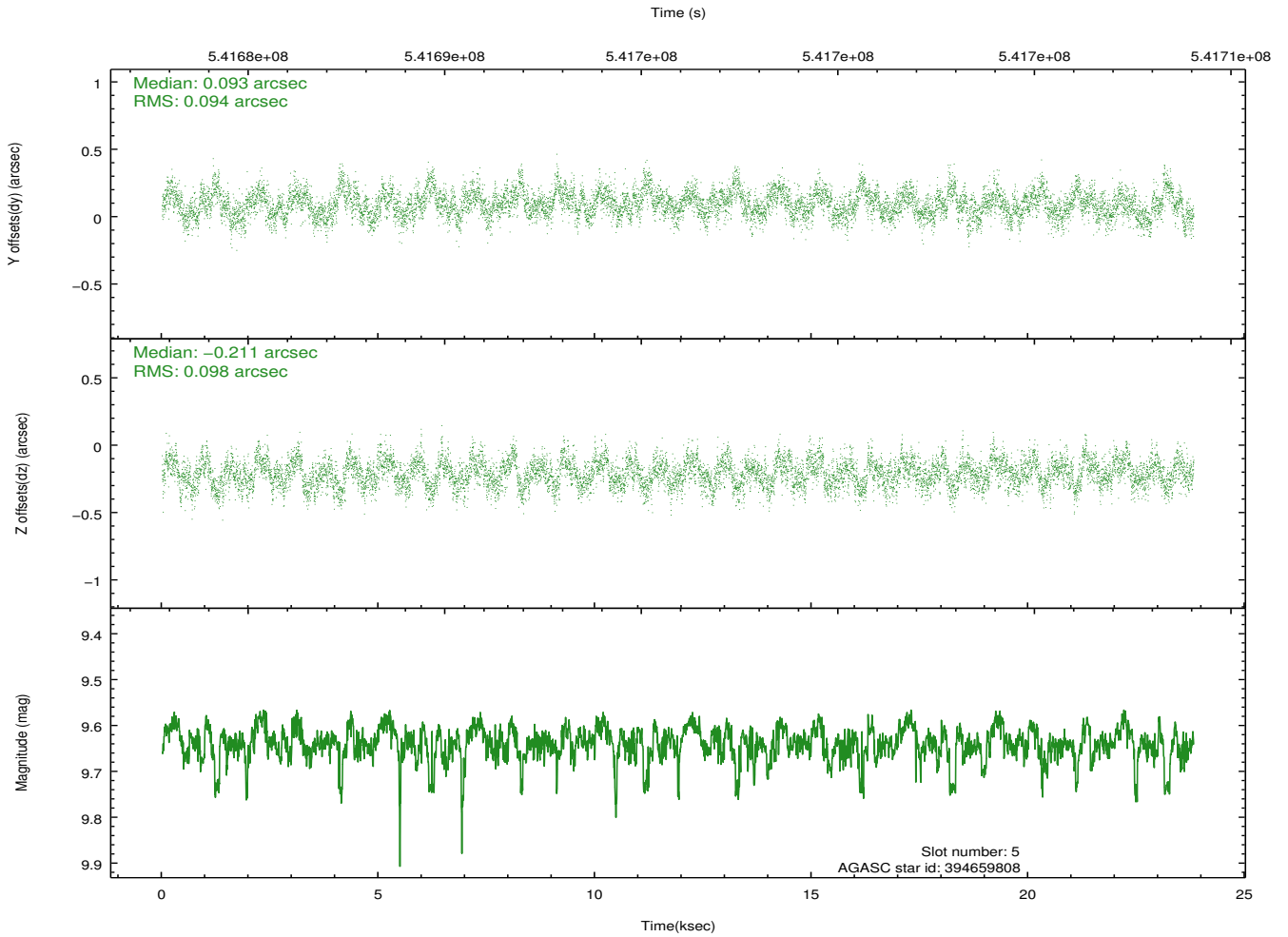
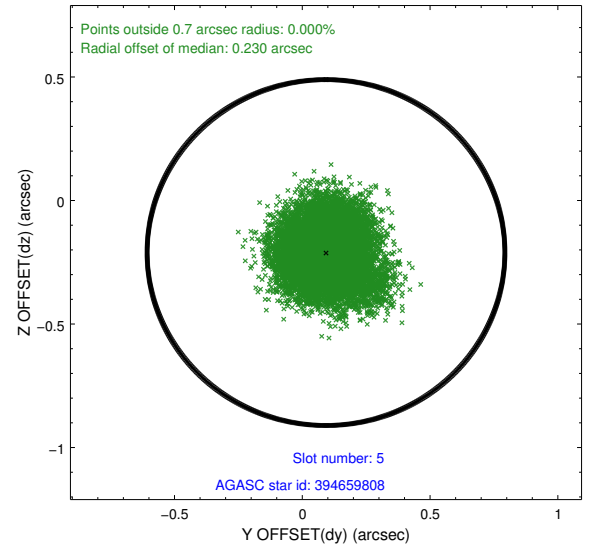
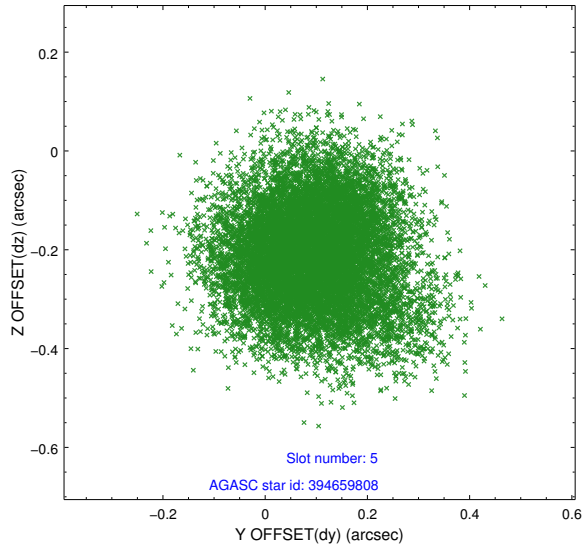


## 2.4.2 Slot 4

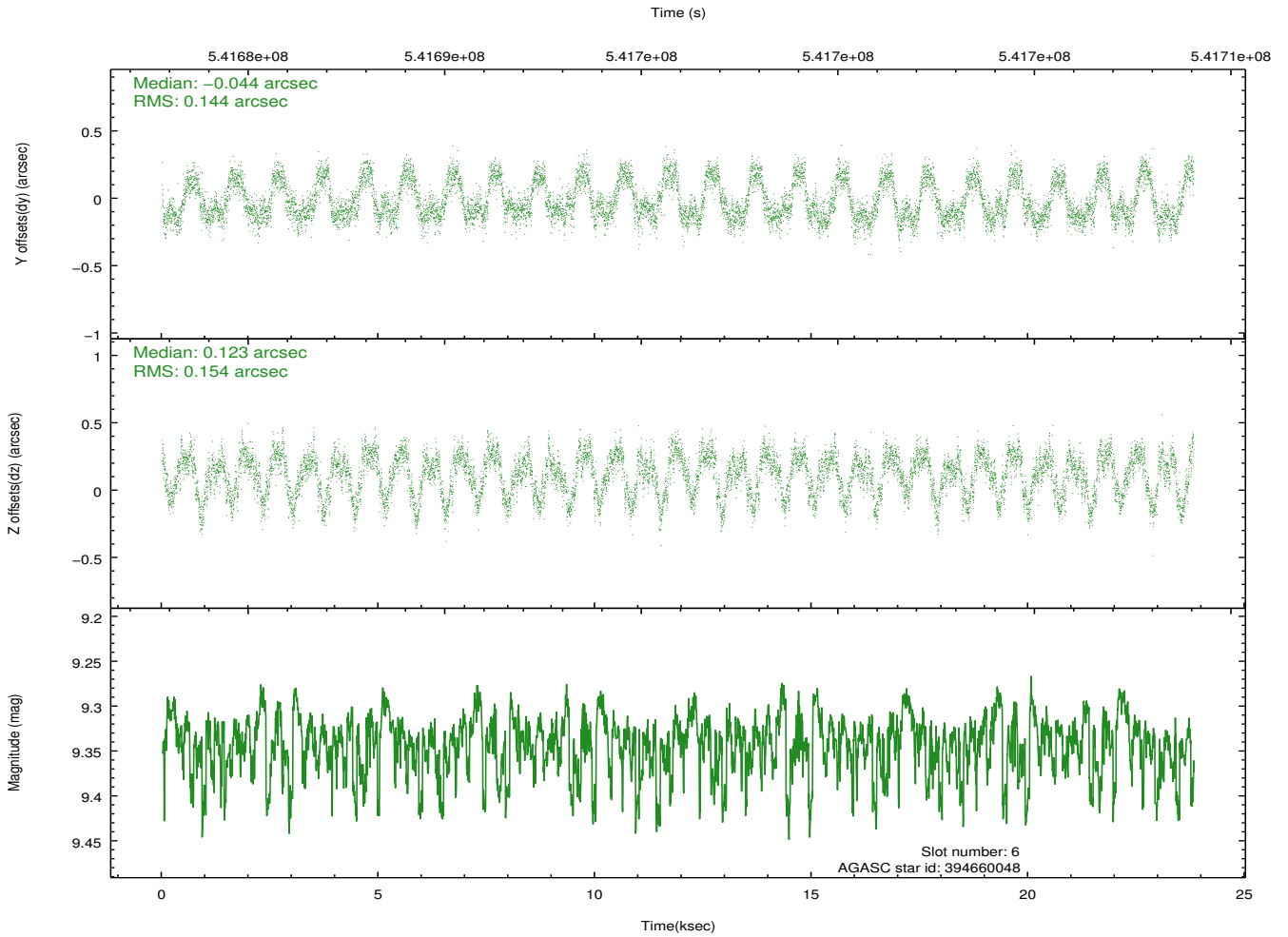
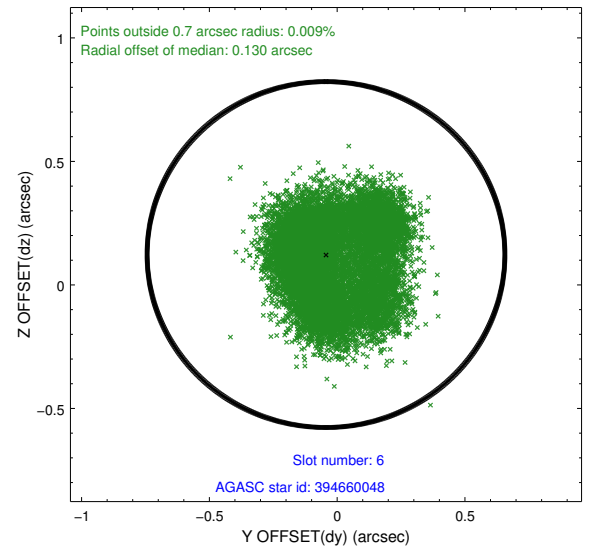
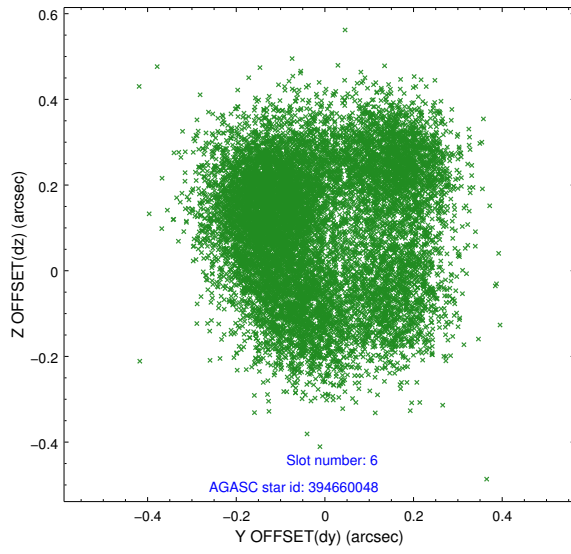




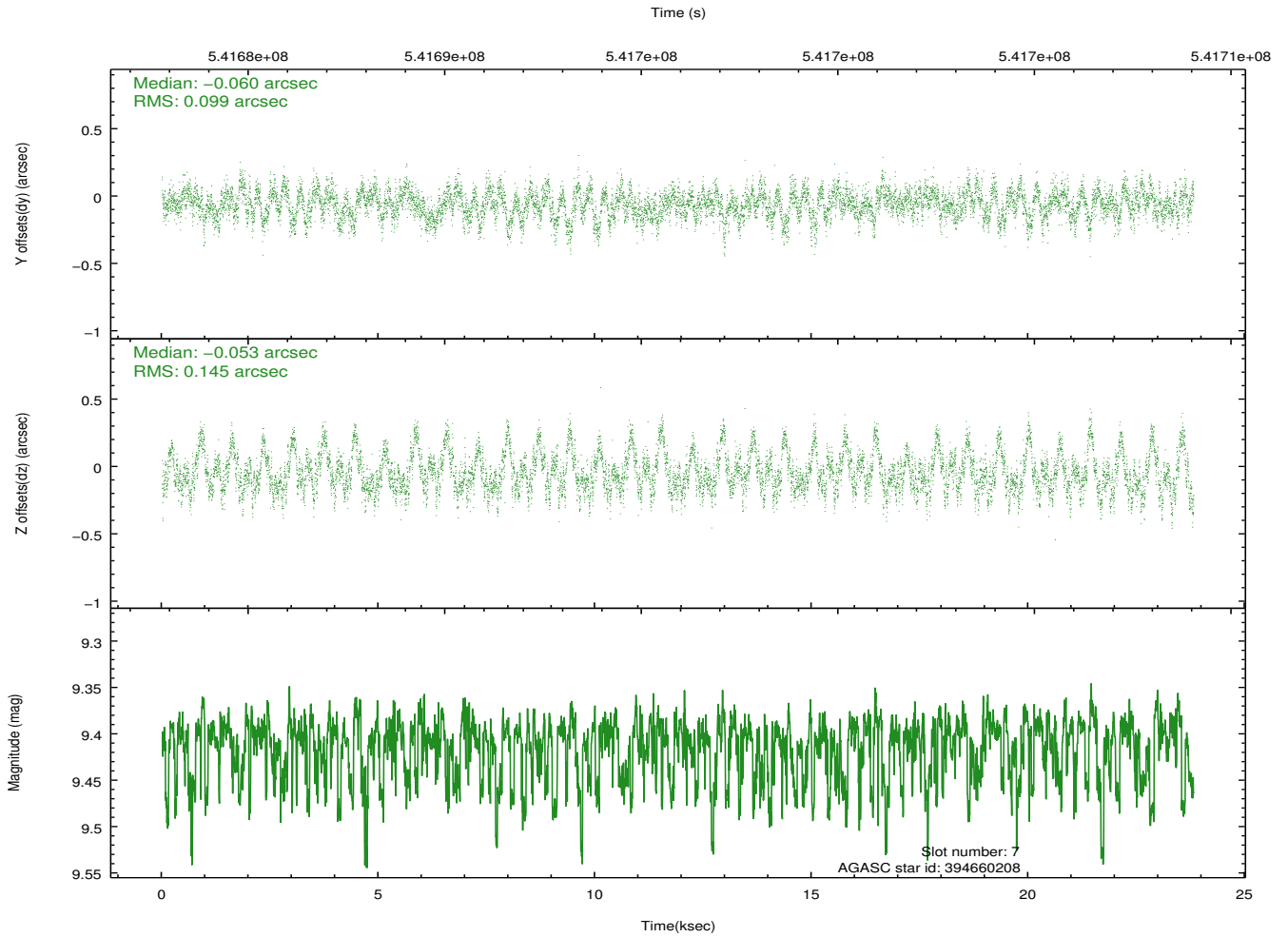
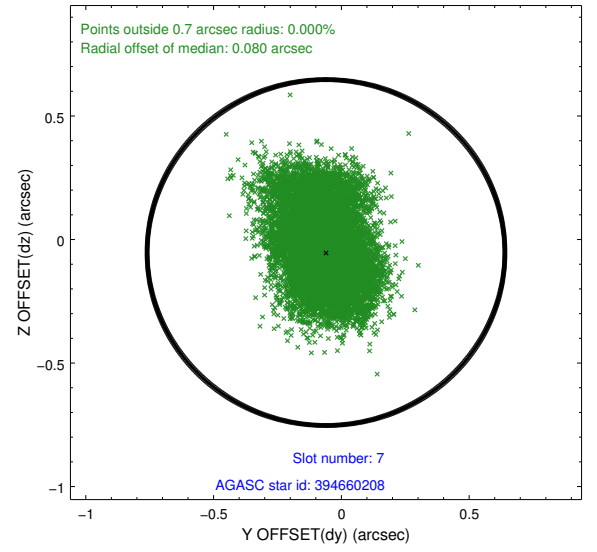
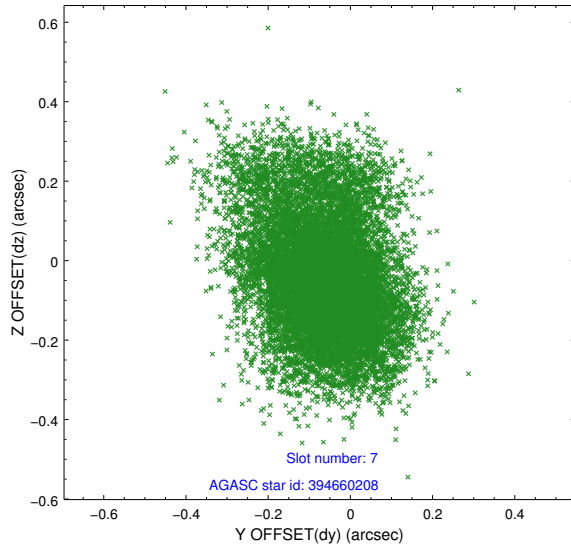
### 2.4.3 Slot 5



## 2.4.4 Slot 6

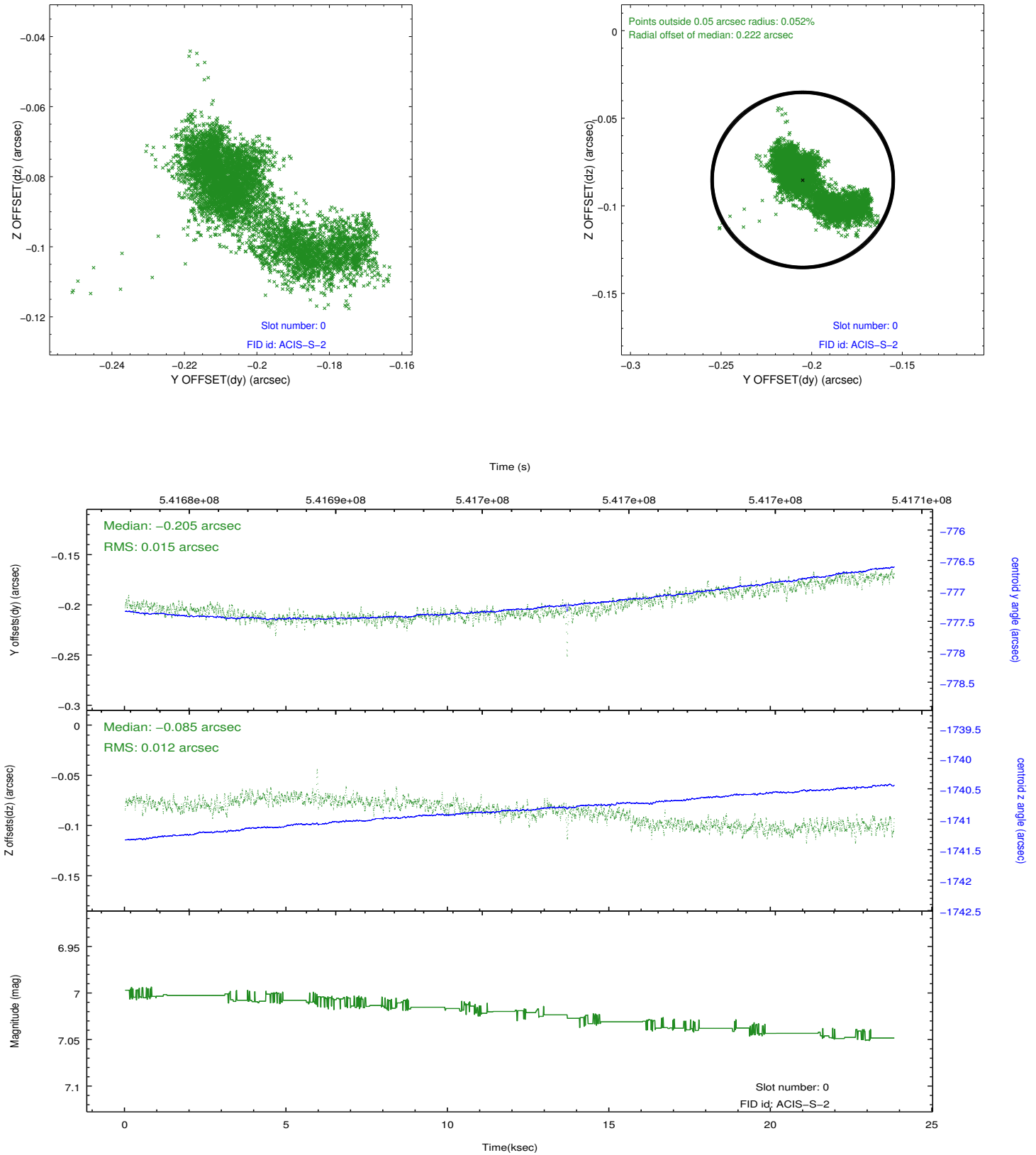


## 2.4.5 Slot 7

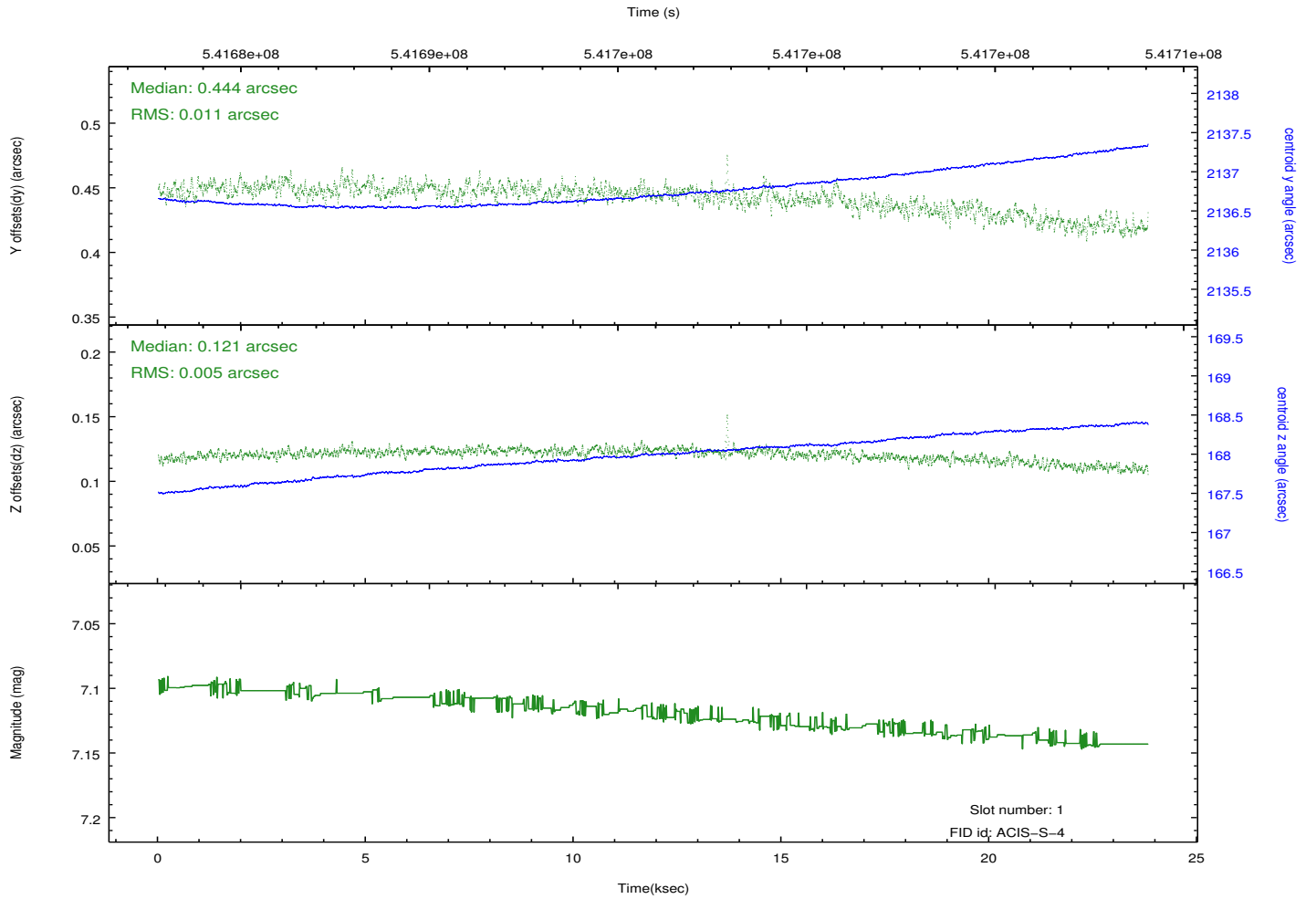
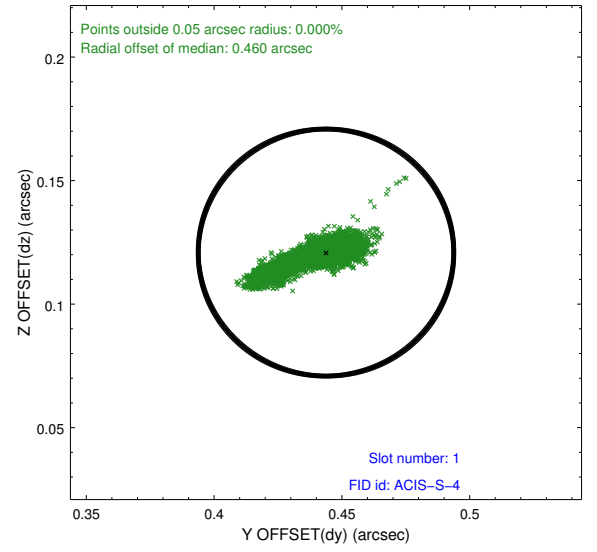
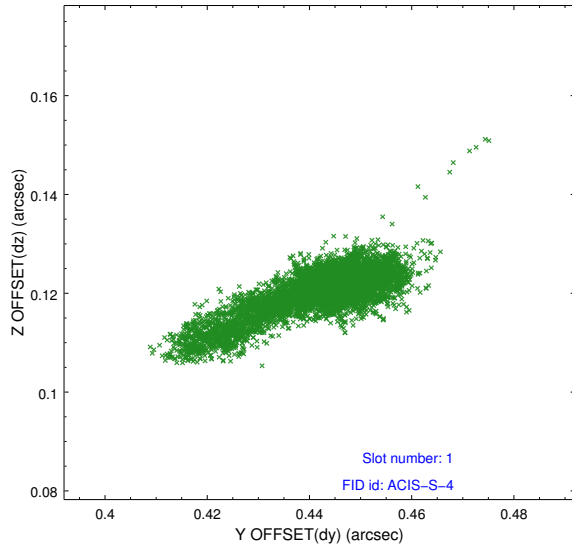


## 2.5 FID Slots

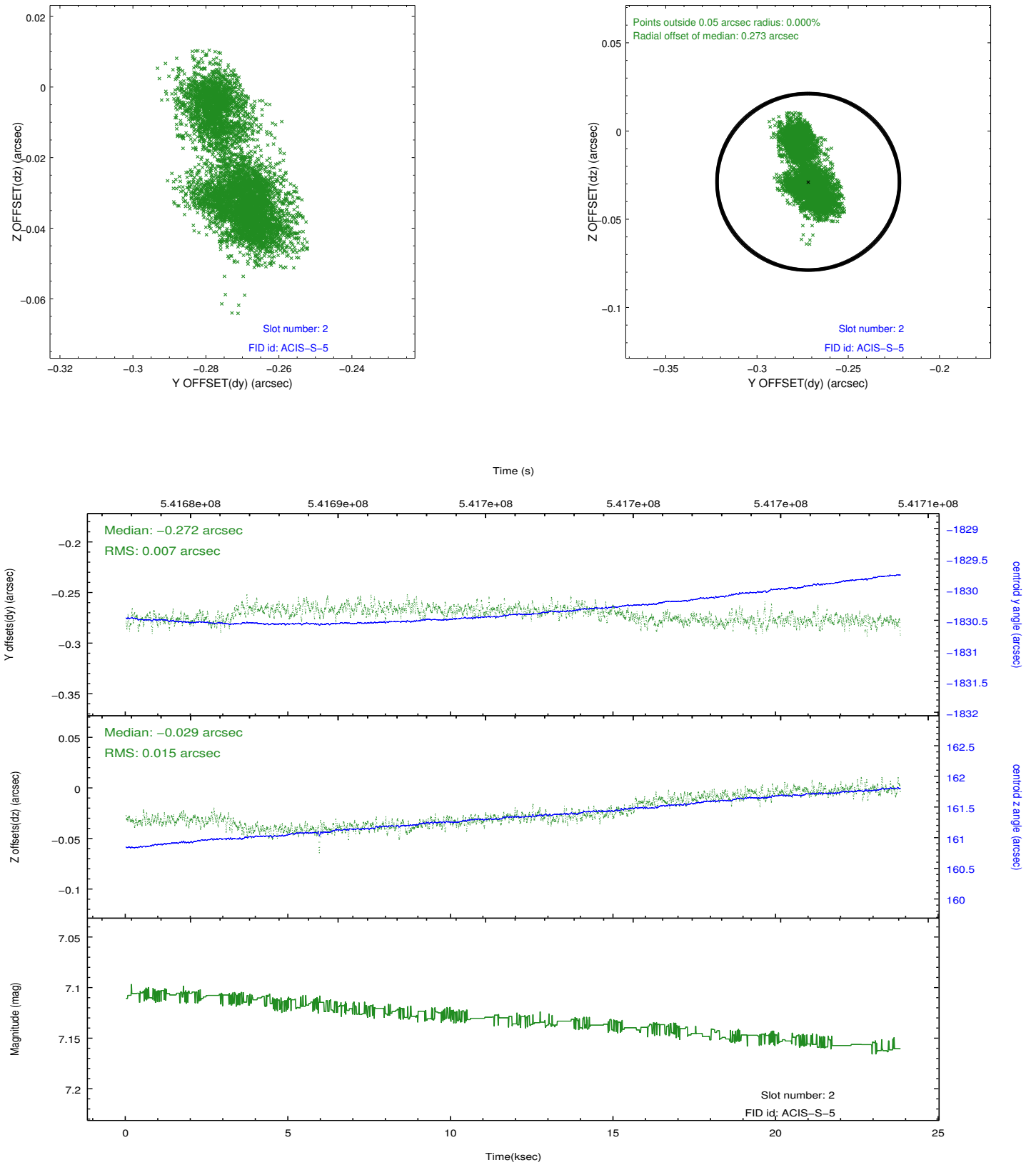
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.03.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.68932990706

### A.2 Comments

The slot 1 radial offset of 0.460 arcsec is acceptable.