

# V&V Reference Report

## L2 ASCDS Version : 10.4.3.1

Observation 18113 - L2 Version 2  
Chandra X-Ray Center

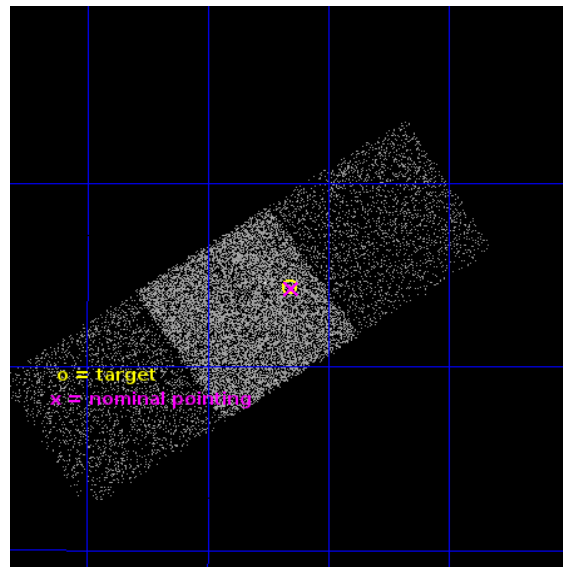
L2 Processing Date : Feb 10 2016

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# 1 Front

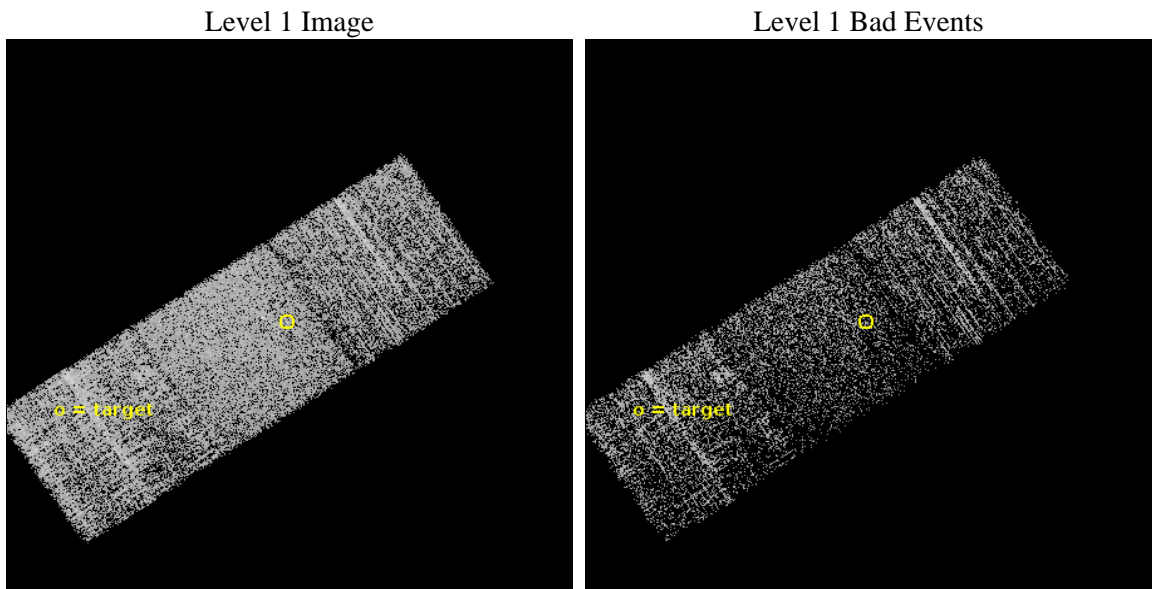
seq_num	703179	Sequence number
obs_id	18113	Observation id
title	Bridging the Gap Between Weak-Line and Typical Quasars	Proposal ti
observer	Prof. William Brandt	Principal investigator
object	SDSS J1012+3244	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	153.04	Observer's specified target RA [deg]
dec_targ	32.739278	Observer's specified target Dec [deg]
ra_nom	153.03814955646	Nominal RA [deg]
dec_nom	32.737487565064	Nominal Dec [deg]
roll_nom	146.30168280028	Nominal Roll [deg]
revision	2	Processing version of data
ontime	4212.9000325203	Sum of GTIs [s]
liveltime	4157.8553921035	Livetime [s]
ontime6	4212.8824299574	Sum of GTIs [s]
ontime7	4212.9000325203	Sum of GTIs [s]
ontime8	4212.8413898945	Sum of GTIs [s]
l2events	19121	Number of level 2 events



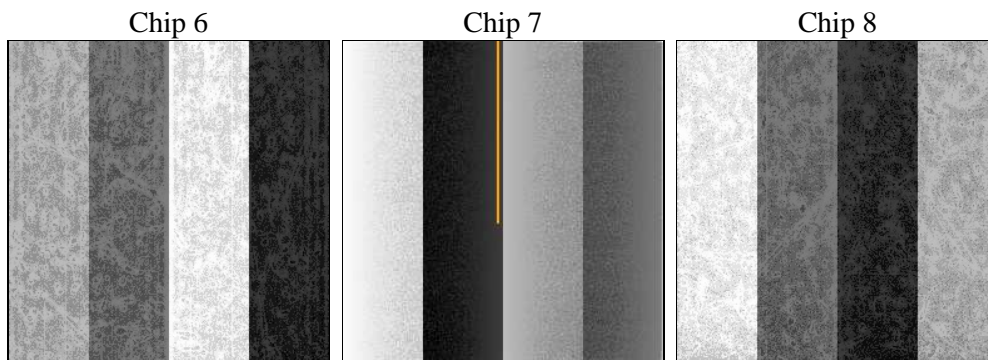
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4100.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3.1	Processing system revision	ontime	4212.9000325203	Sum of GTIs [s]
caldbver	4.7.0	&#160	ontime6	4212.8824299574	Sum of GTIs [s]
date	2016-02-11T02:57:04	Date and time of file creation	ontime7	4212.9000325203	Sum of GTIs [s]
revision	2	Processing version of data	ontime8	4212.8413898945	Sum of GTIs [s]
			l1events	90618	Number of level 1 events

### 2.1.4 Events

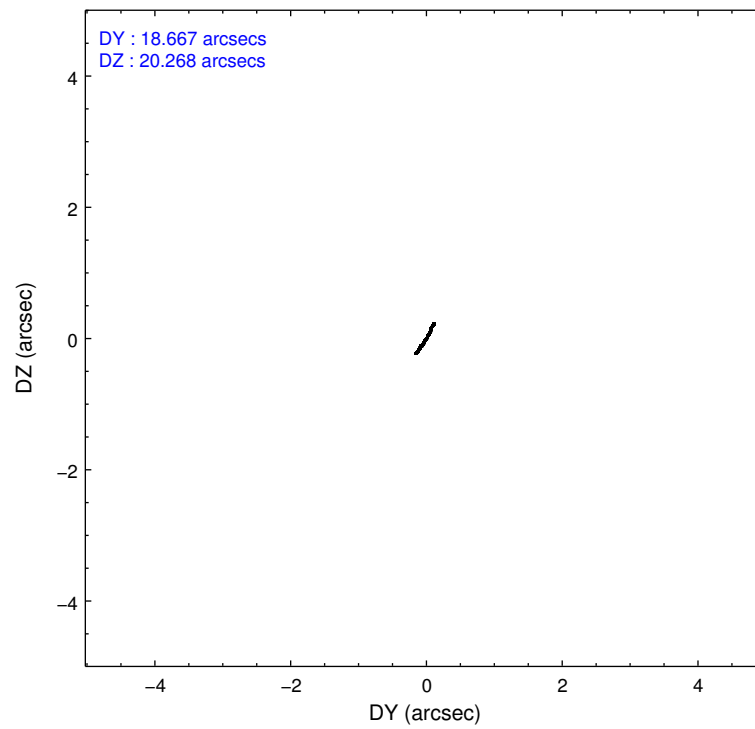
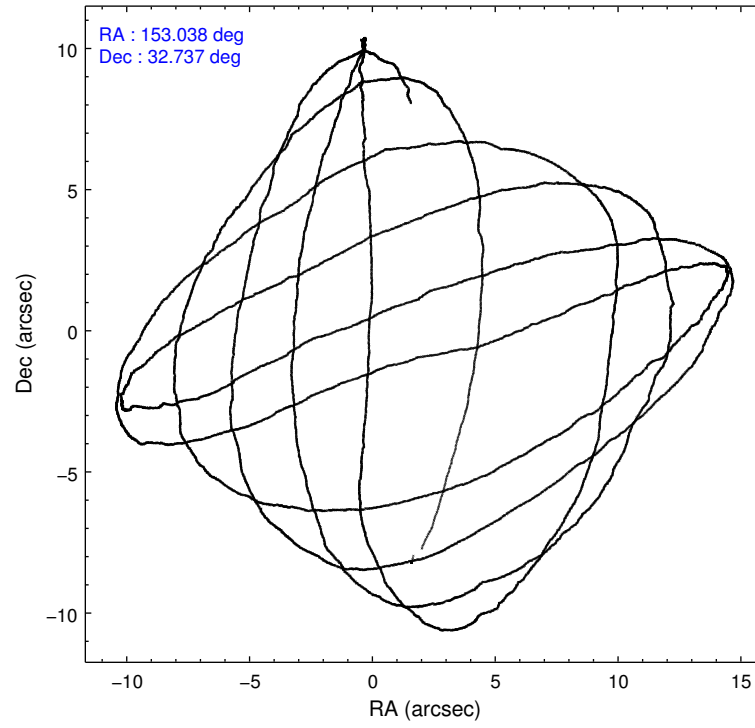
	ccd 6	ccd 7	ccd 8
level 1 events	25595	32639	32384
rejected events	22639	18483	23999
rejected %	88%	56%	74%

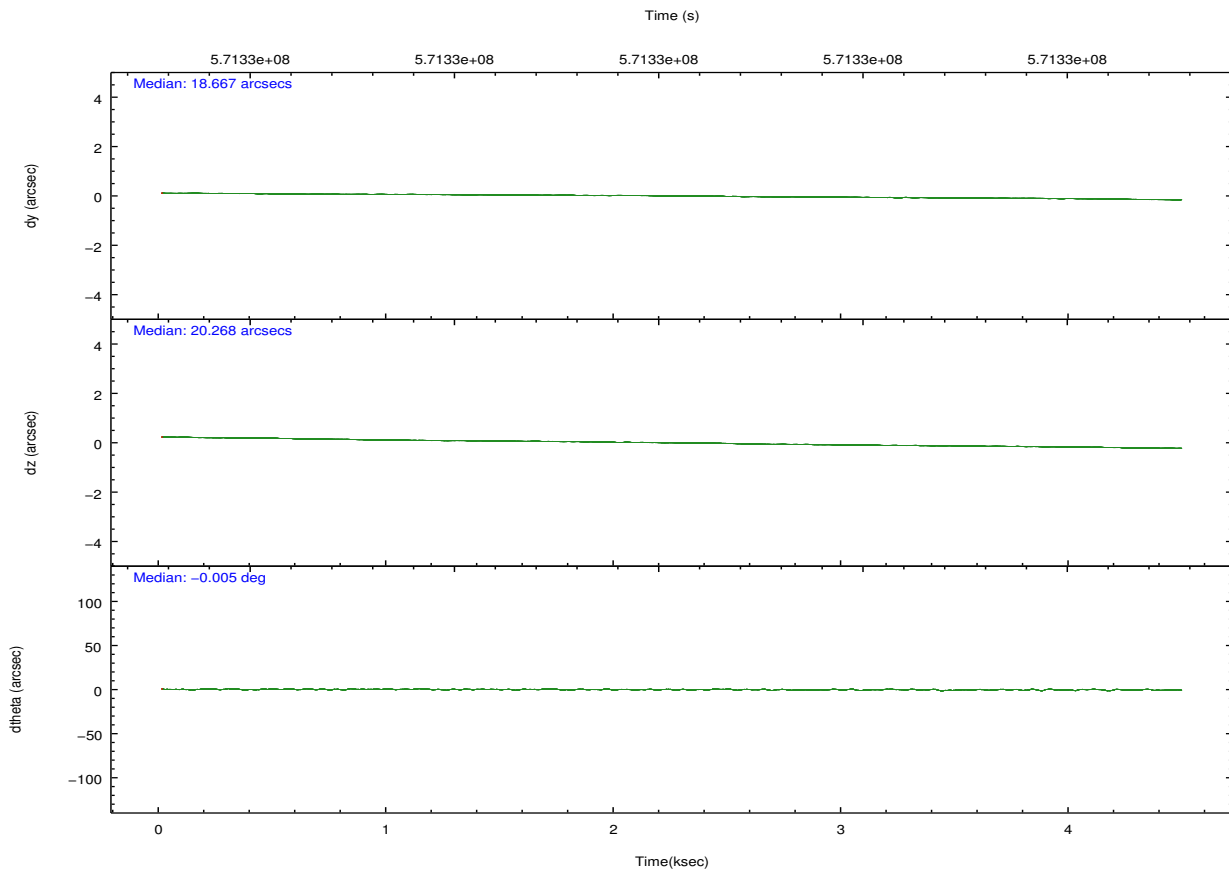
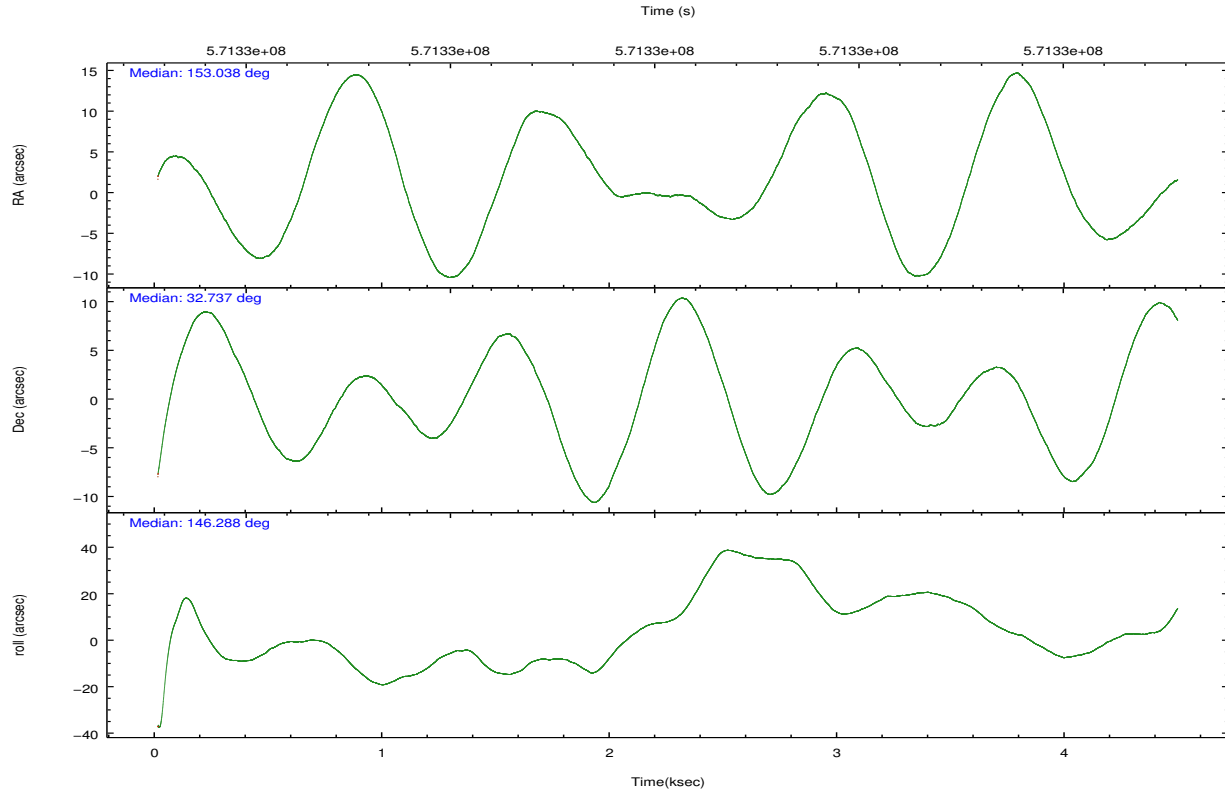
	ccd 6	ccd 7	ccd 8
grade 0 events	968	1262	2300
	3%	3%	7%
grade 1 events	18	40	27
	0%	0%	0%
grade 2 events	722	3074	2165
	2%	9%	6%
grade 3 events	283	1084	840
	1%	3%	2%
grade 4 events	306	1182	782
	1%	3%	2%
grade 5 events	1232	3302	1859
	4%	10%	5%
grade 6 events	680	7572	2319
	2%	23%	7%
grade 7 events	21386	15123	22092
	83%	46%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-678	ACIS-678	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	153.070835	153.0381495564622	Subarray requested	NONE	NONE
[deg] Pointing Dec	32.735976	32.73748756506367	Alternating exposures requested	N	N
[deg] Pointing Roll	146.127559	146.3016828002793	[s] Primary exposure time	0.000000	3.1
[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)	571326224.184000	571325289.96659			
Observation start date	2016-02-08T13:42:36	2016-02-08T13:28:09			
[s] Observation end time (MET)	571330324.184000	571331083.26692			
Observation end date	2016-02-08T14:50:56	2016-02-08T15:04:43			
Read mode	TIMED	TIMED			

## 2.3 Aspect



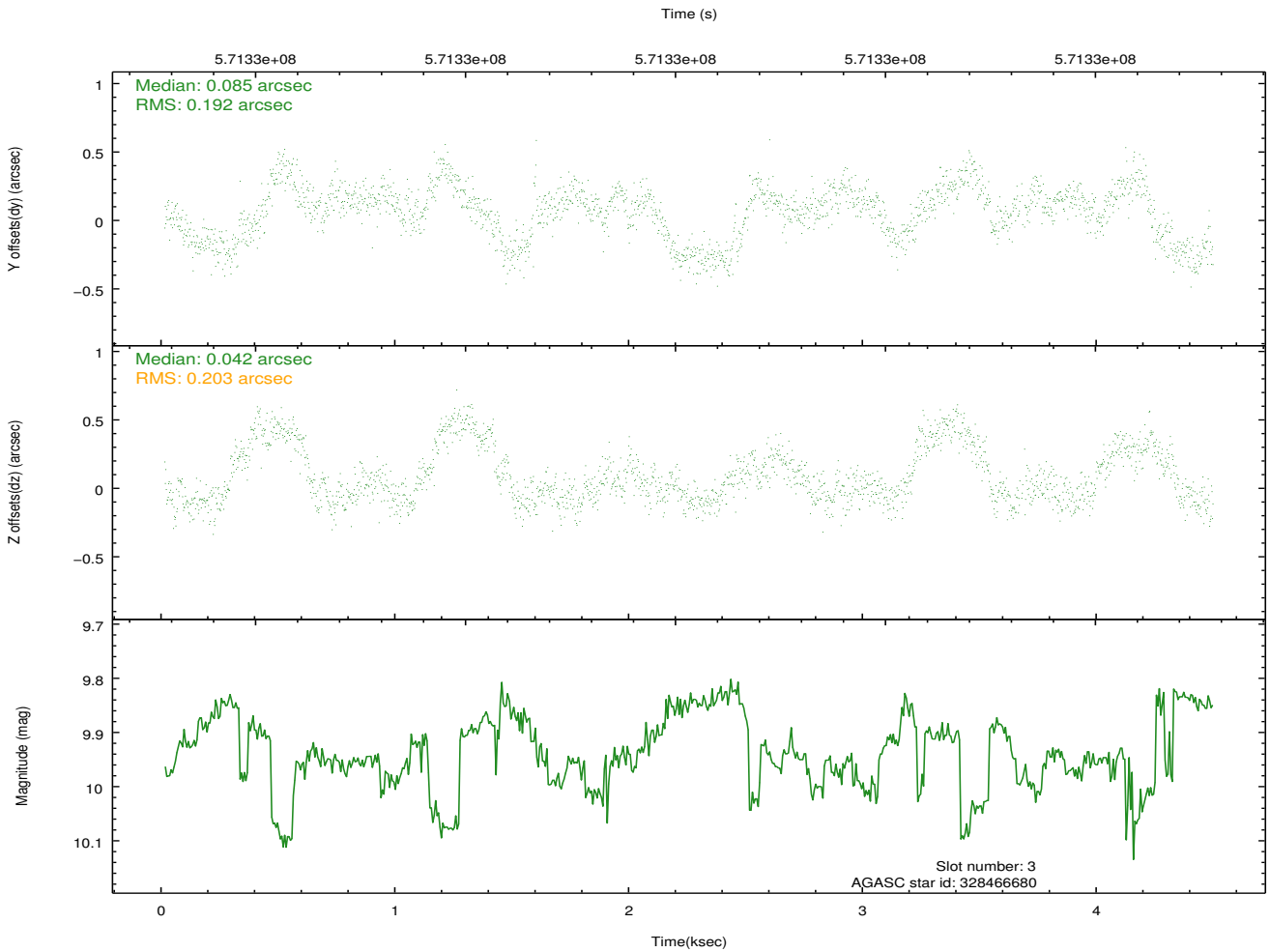
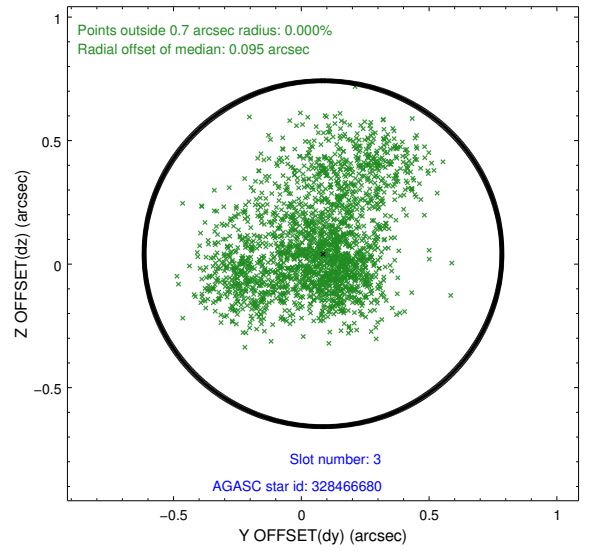
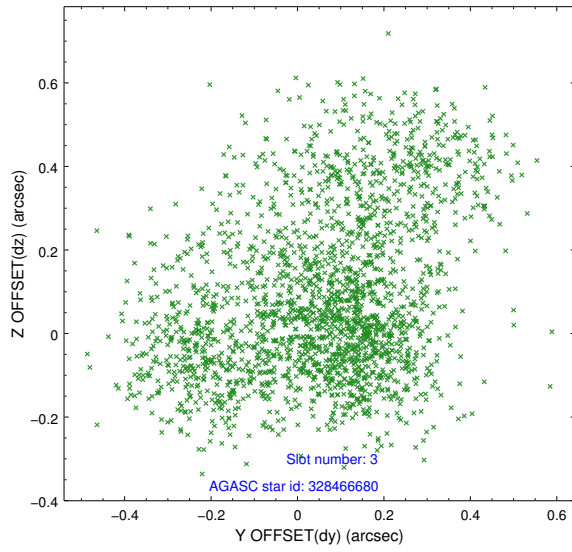


### Slot Statistics

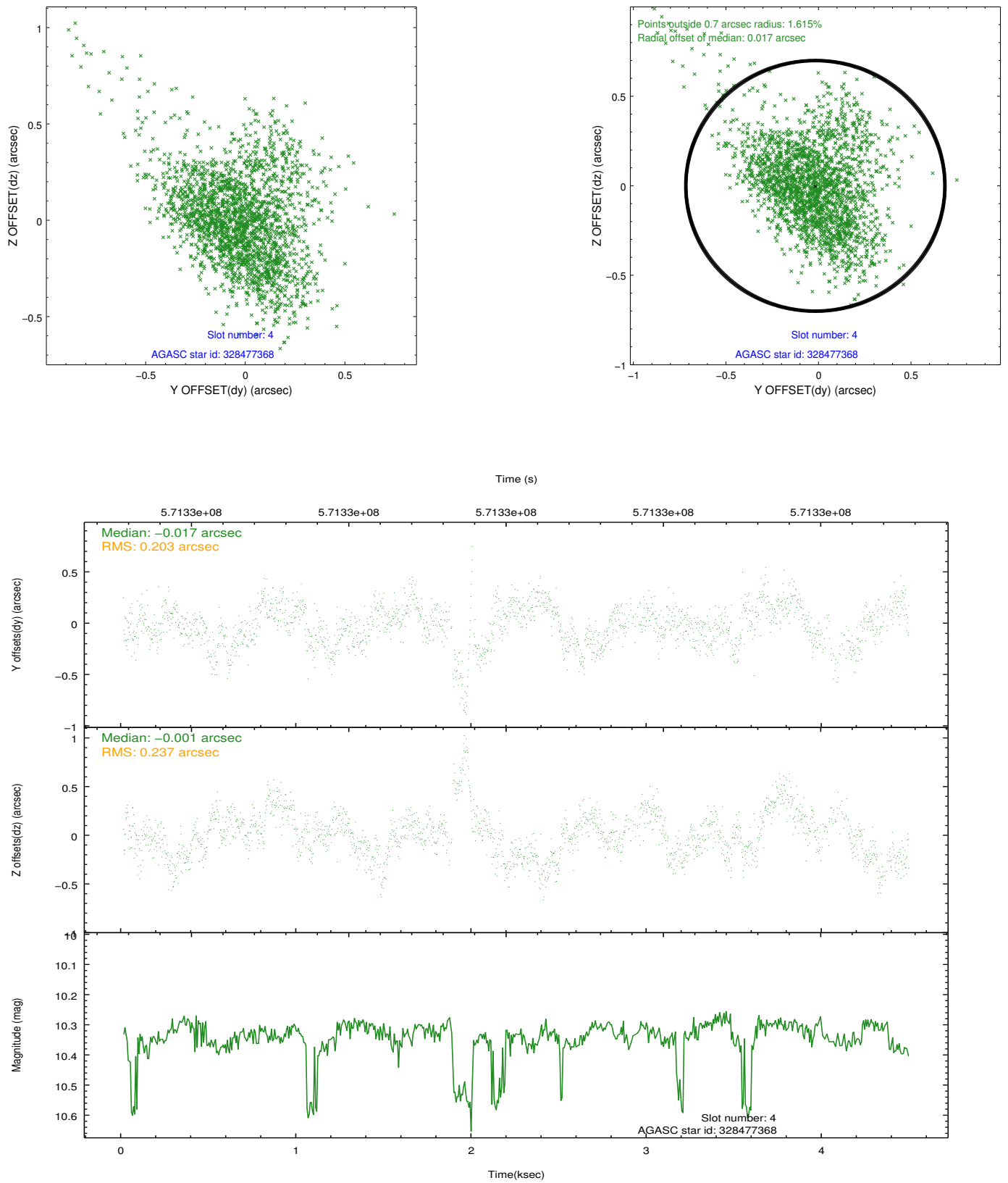
lot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.12	1094	-0.199	-0.100	0.008	0.013	0.000000	0.000000	-771.91	-1741.84
1	FID		ACIS-S-4	7.23	1094	0.450	0.123	0.006	0.010	0.000000	0.000000	2141.37	165.46
2	FID		ACIS-S-5	7.24	1094	-0.283	-0.014	0.008	0.012	0.000000	0.000000	-1823.09	160.52
3	GUIDE	used	328466680	9.94	2178	0.085	0.042	0.311	0.489	152.906358	32.627398	196.11	602.47
4	GUIDE	used	328477368	10.33	2105	-0.017	-0.001	0.314	0.540	152.960684	33.524128	1856.29	-2170.73
5	GUIDE	used	328477416	7.81	2187	0.018	-0.087	0.093	0.154	152.956145	33.124798	1068.12	-970.24
6	GUIDE	used	329392328	9.45	2185	0.026	0.117	0.175	0.295	153.137919	33.160677	685.12	-1381.82
7	BAD	used	329393152	9.92	2006	-0.080	-0.128	0.249	0.420	153.561758	32.824839	-1051.57	-1095.45

## 2.4 Star Slots

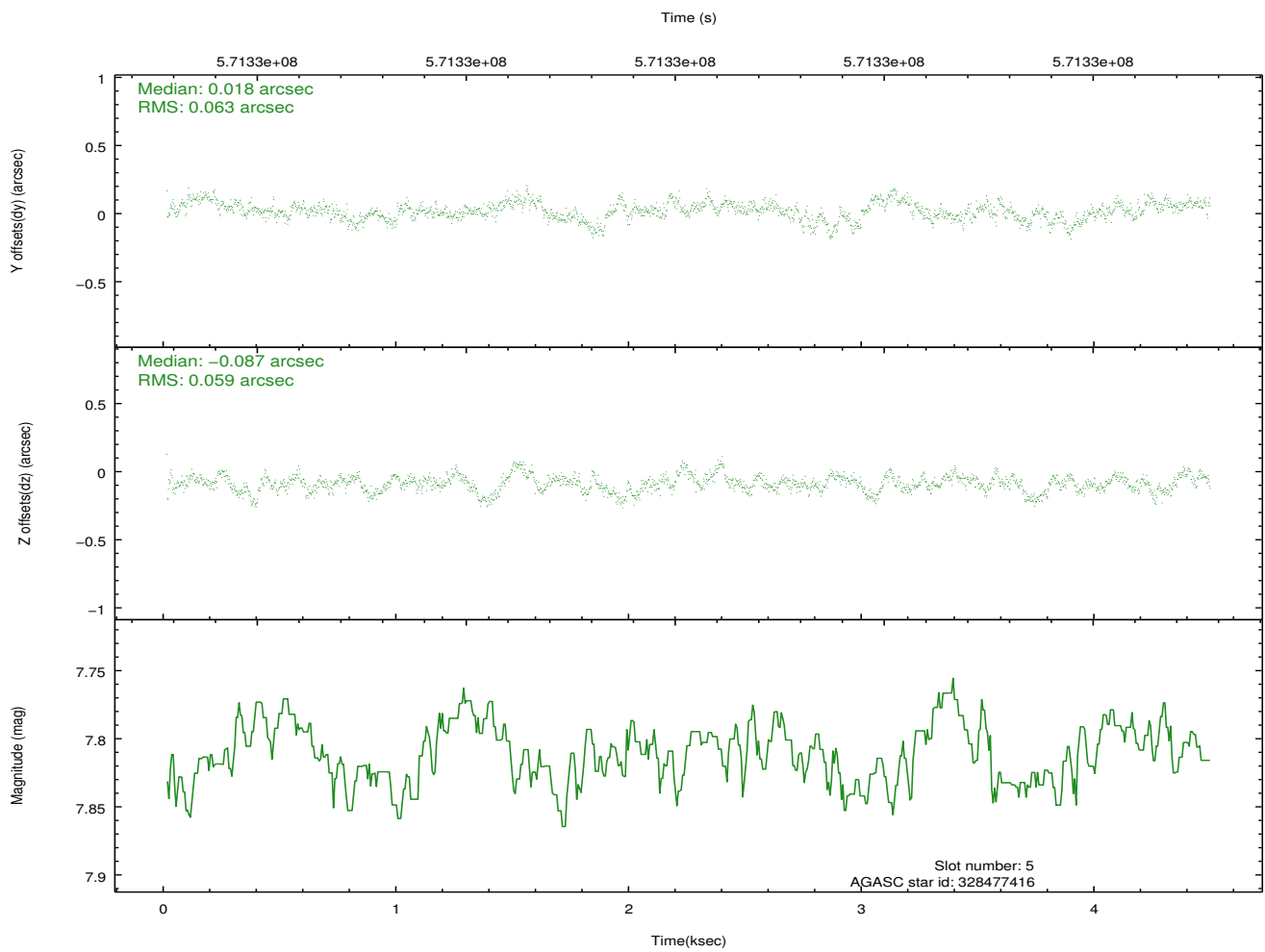
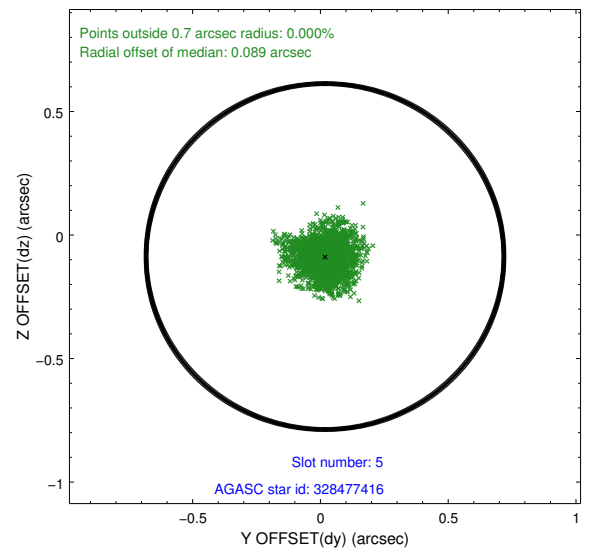
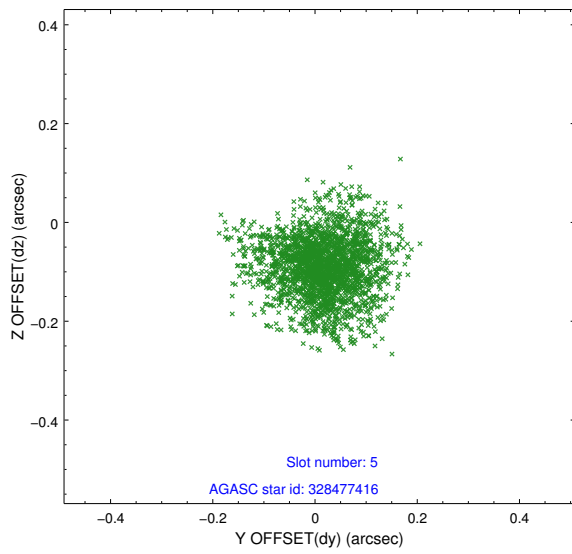
### 2.4.1 Slot 3



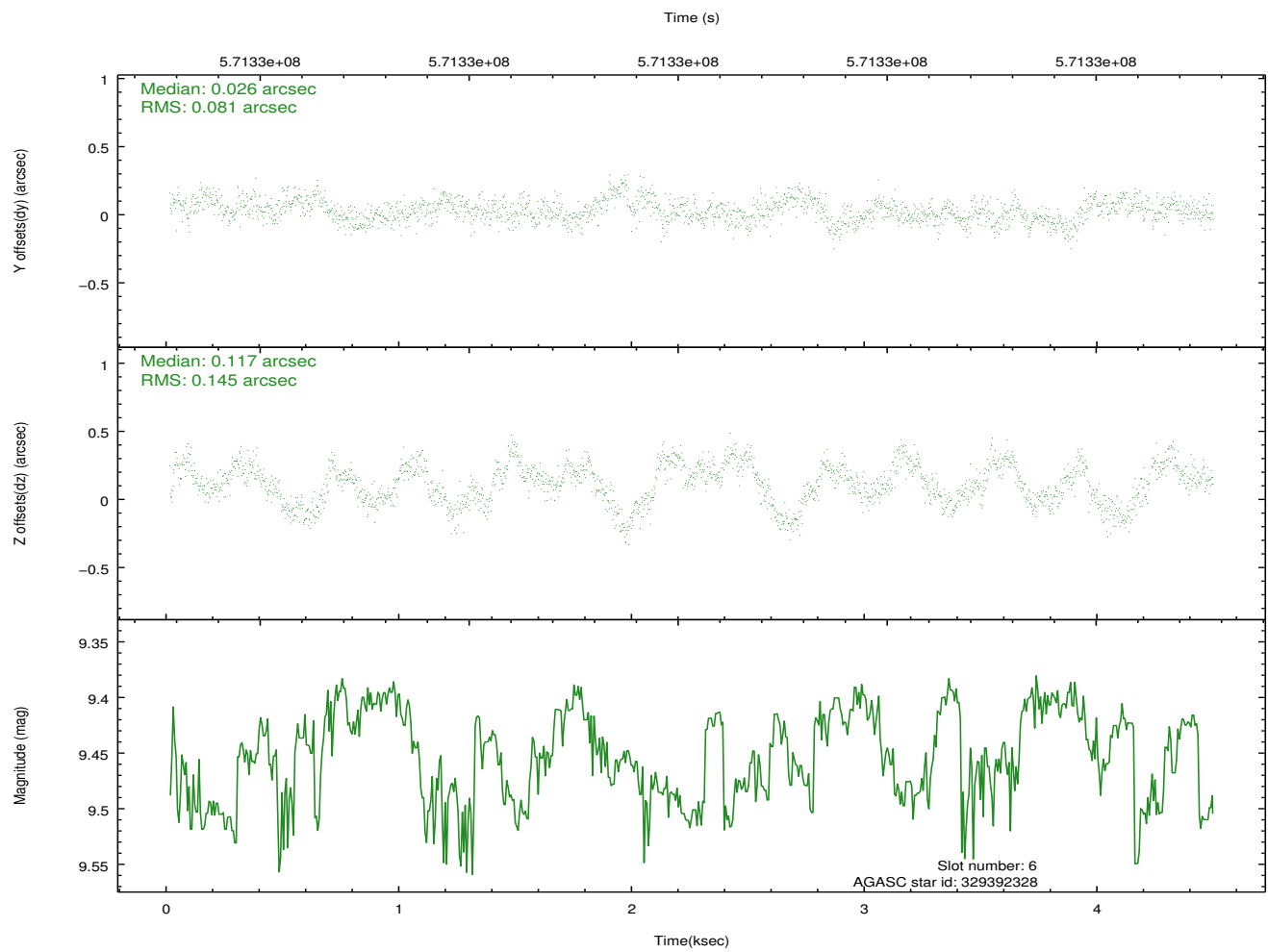
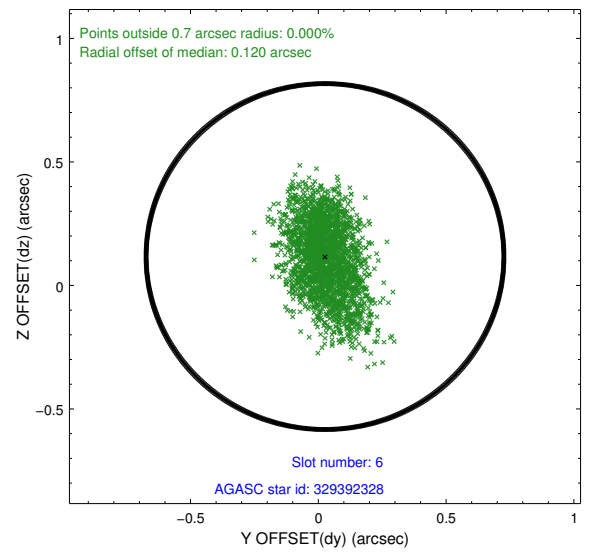
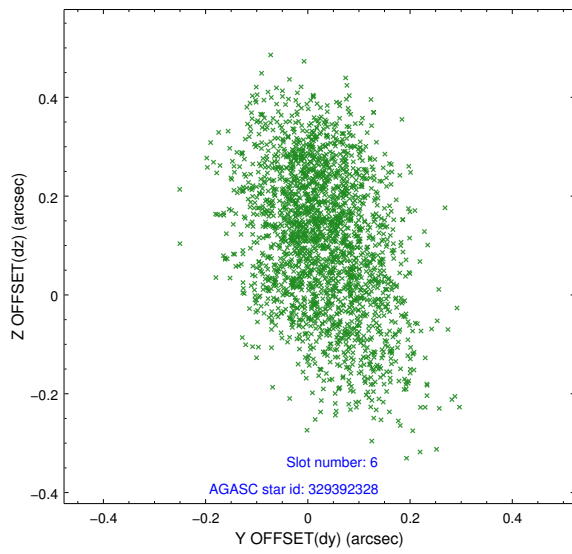
## 2.4.2 Slot 4



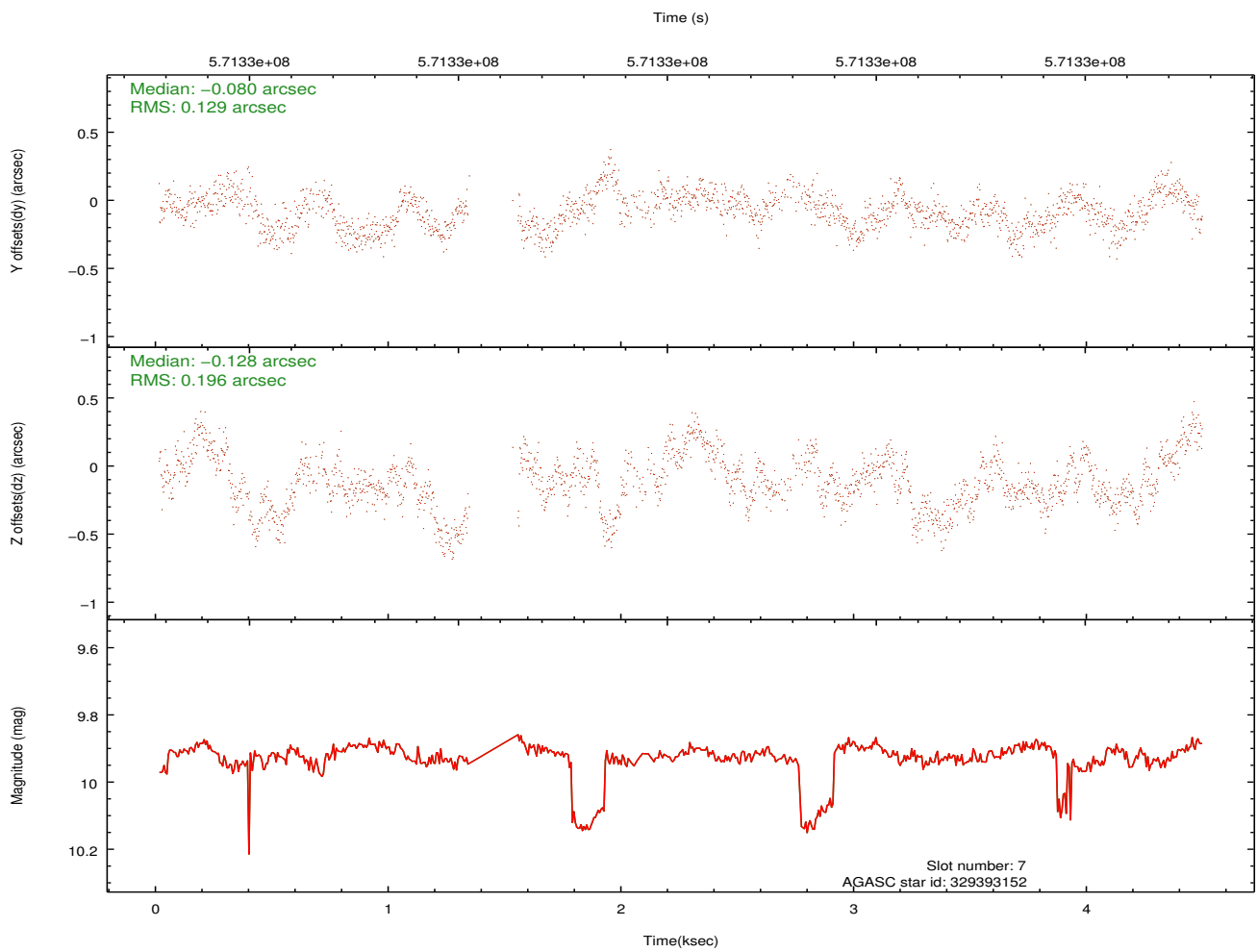
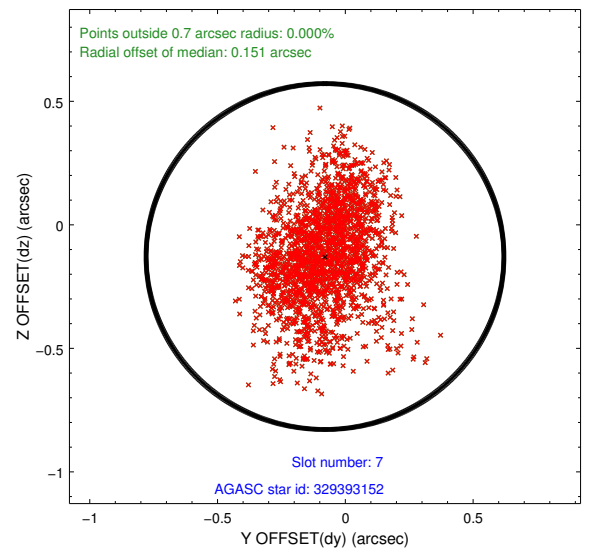
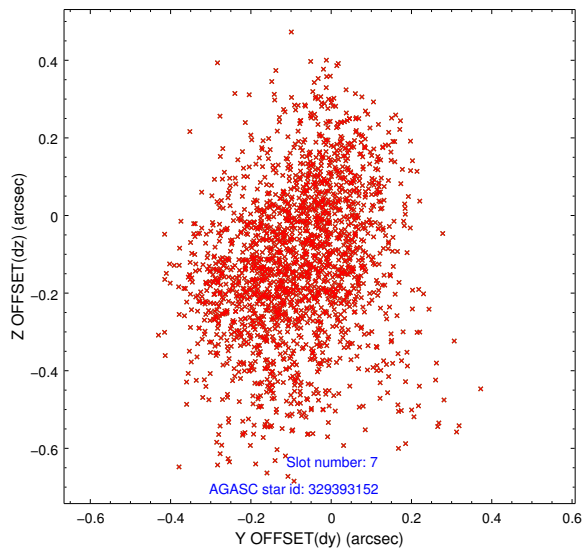
### 2.4.3 Slot 5



## 2.4.4 Slot 6

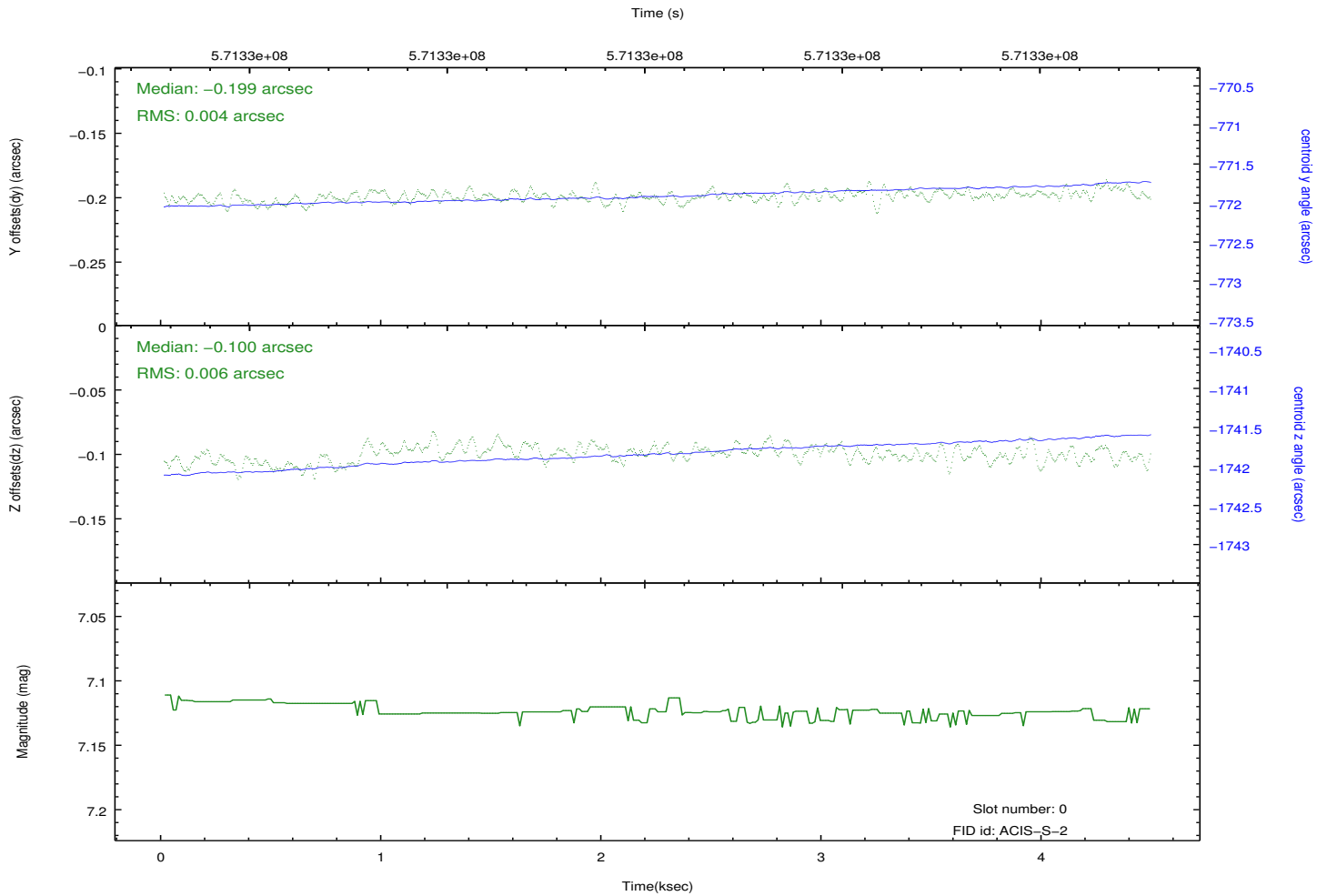
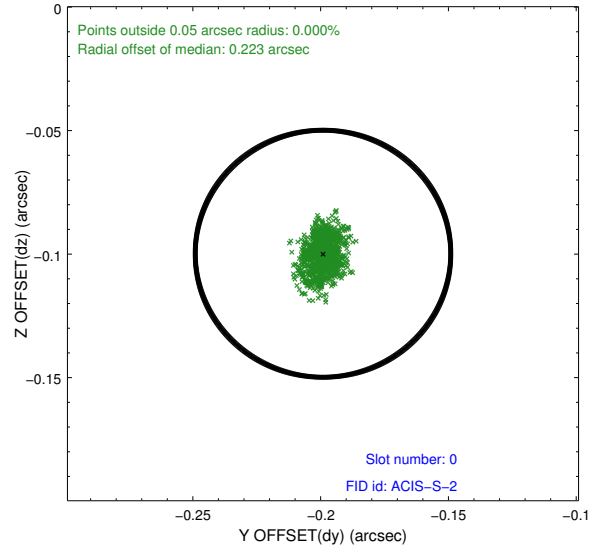
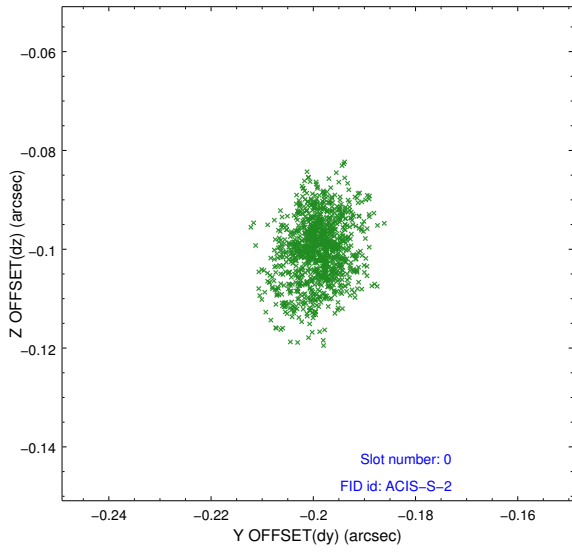


## 2.4.5 Slot 7

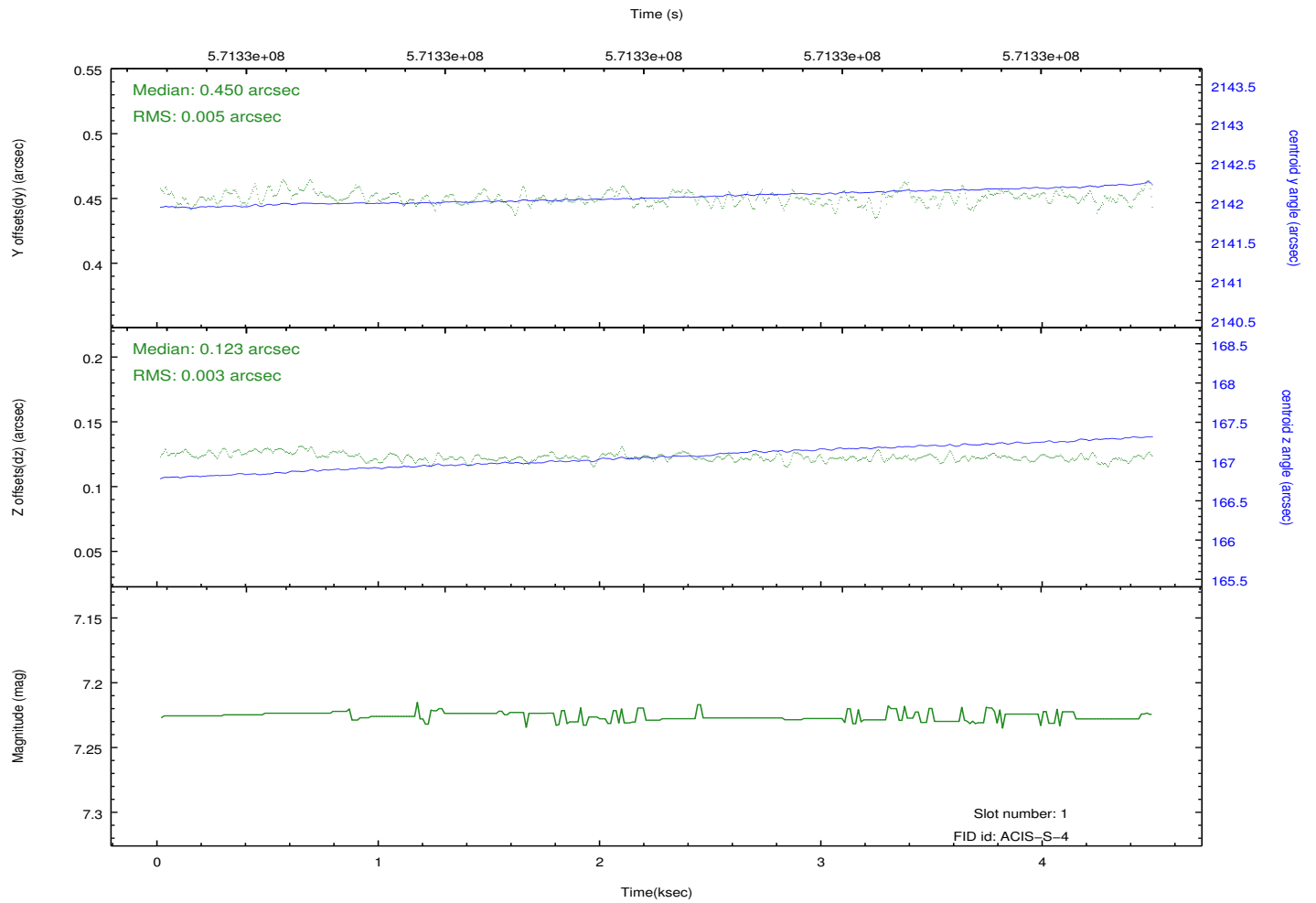
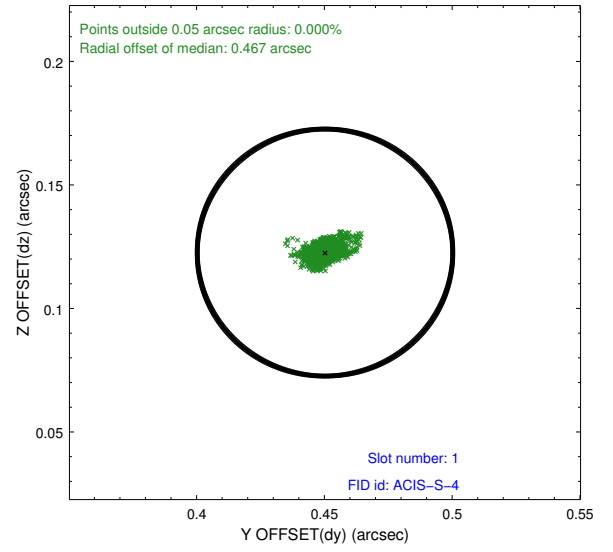
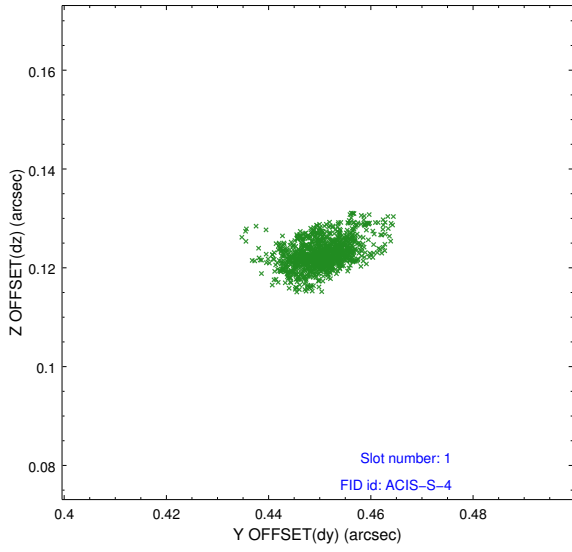


## 2.5 FID Slots

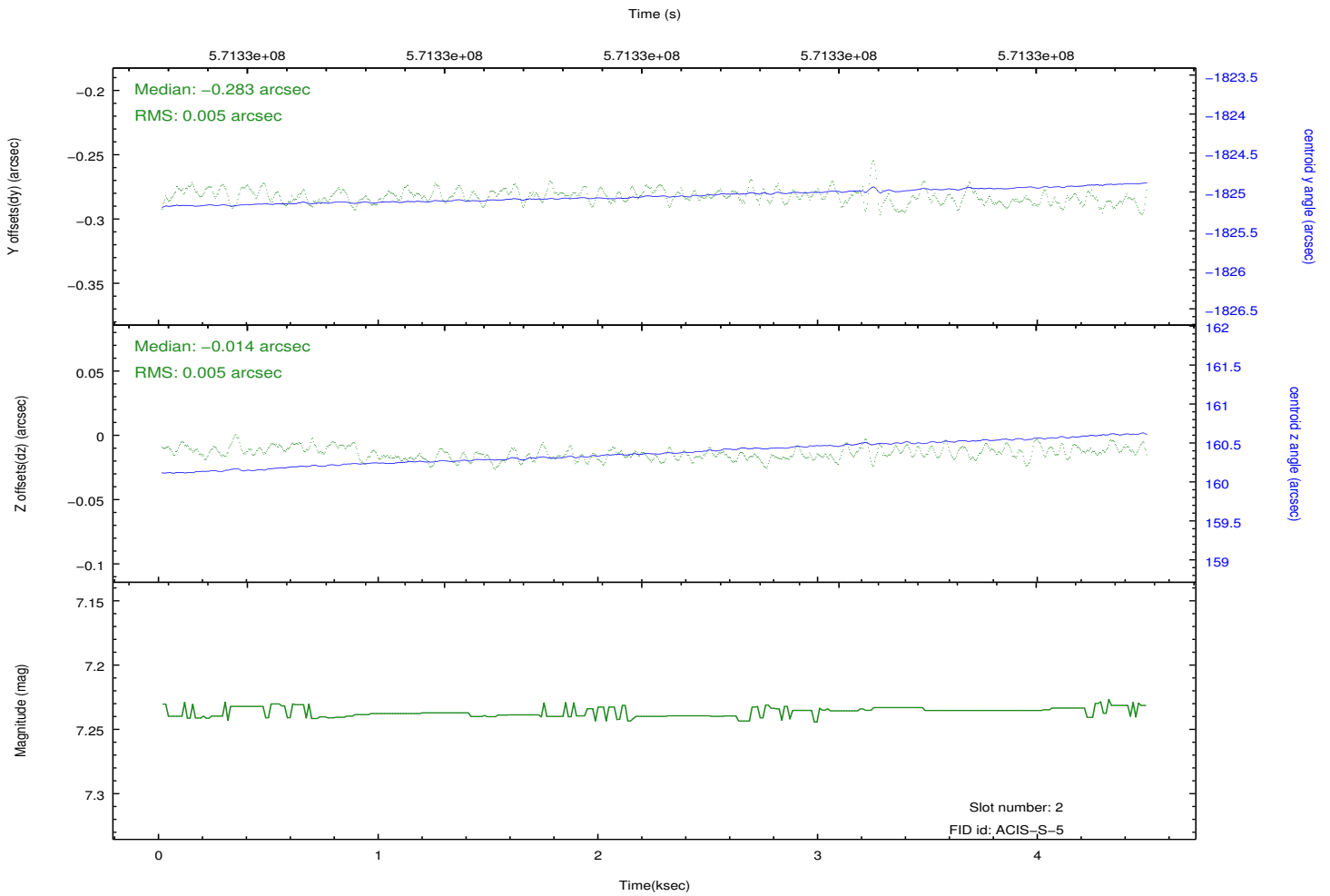
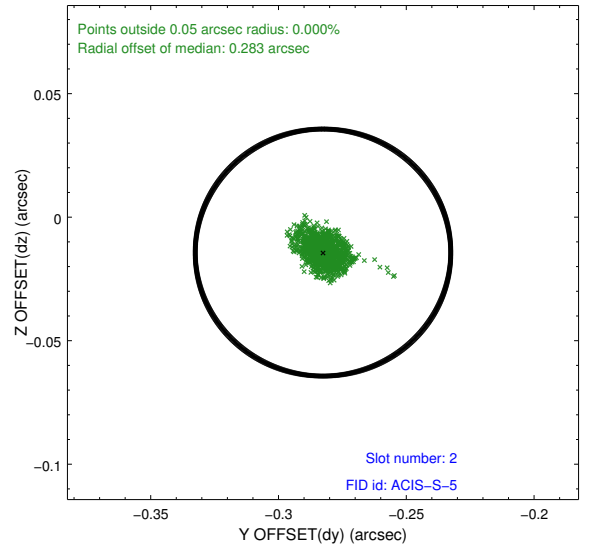
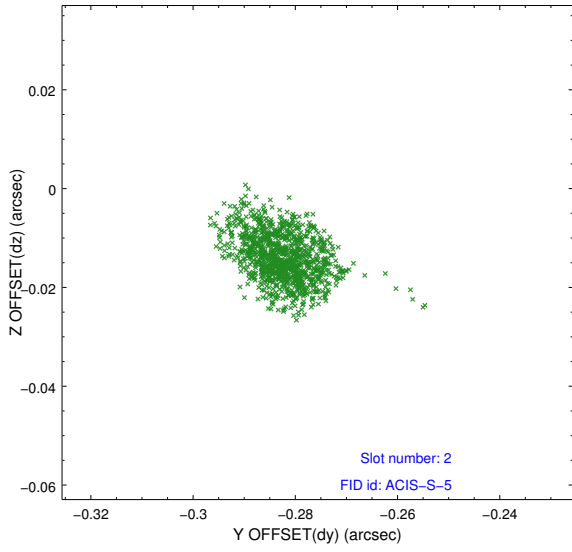
### 2.5.1 Slot 0



## 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)	2016.02.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.2129000325203

## A.2 Comments

A spatial region of the original bias map for CCD = 6 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 = 6 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: (152.95624, 32.70319), (152.95827, 32.70206), (153.01837, 32.77809), (153.01742, 32.78059).