

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 13137 - L2 Version 3  
Chandra X-Ray Center

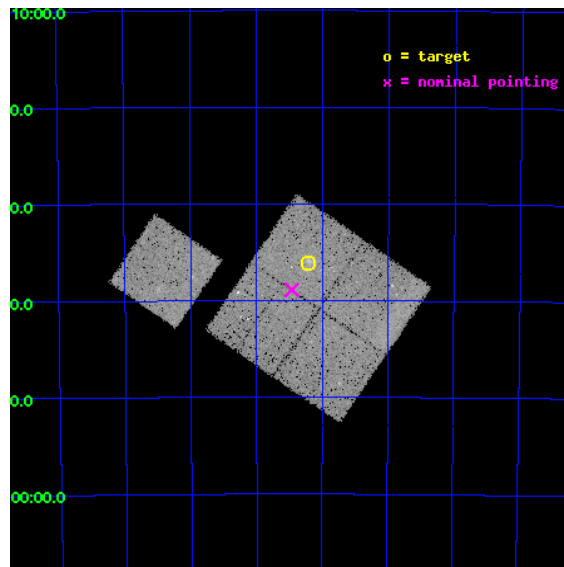
L2 Processing Date : Mar 9 2012

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# 1 Front

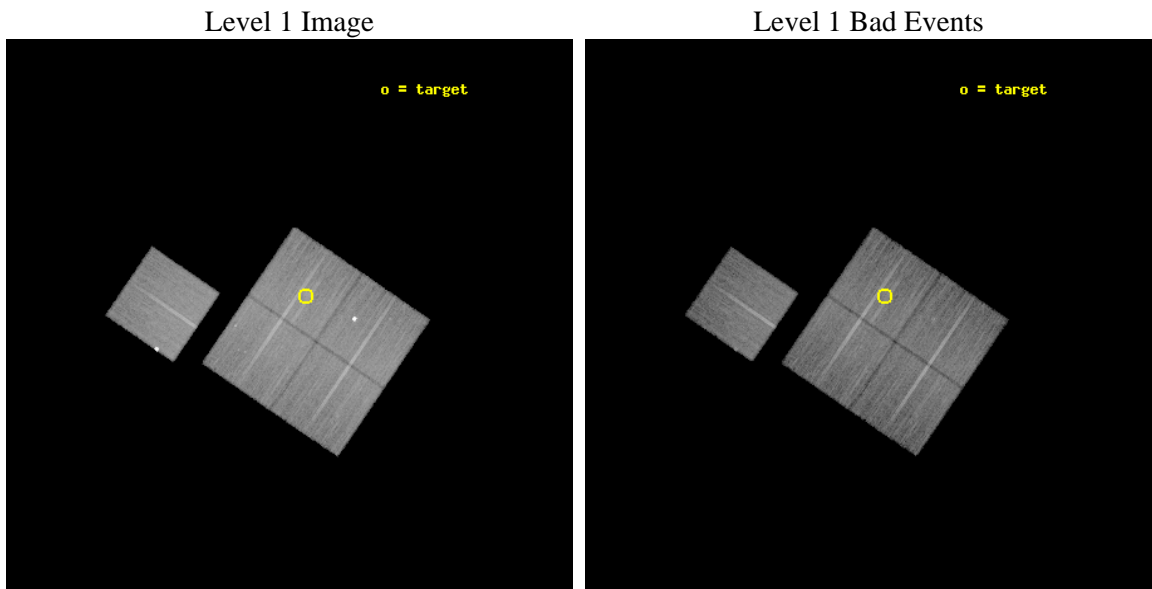
seq_num	801058	Sequence number
obs_id	13137	Observation id
title	Chandra Observations of a Sample of High Redshift SZE Selected Galaxy Clusters	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	SPT-CL 0324-6236	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	51.0525	Observer's specified target RA [deg]
dec_targ	-62.602111	Observer's specified target Dec [deg]
ra_nom	51.11552292054	Nominal RA [deg]
dec_nom	-62.648159441224	Nominal Dec [deg]
roll_nom	304.26467499079	Nominal Roll [deg]
revision	3	Processing version of data
ontime	24046.65917474	Sum of GTIs [s]
livetime	23732.471869729	Livetime [s]
ontime0	24046.65917474	Sum of GTIs [s]
ontime1	24040.377184272	Sum of GTIs [s]
ontime2	24046.659194708	Sum of GTIs [s]
ontime3	24046.65917474	Sum of GTIs [s]
ontime6	24049.800184965	Sum of GTIs [s]
l2events	81706	Number of level 2 events



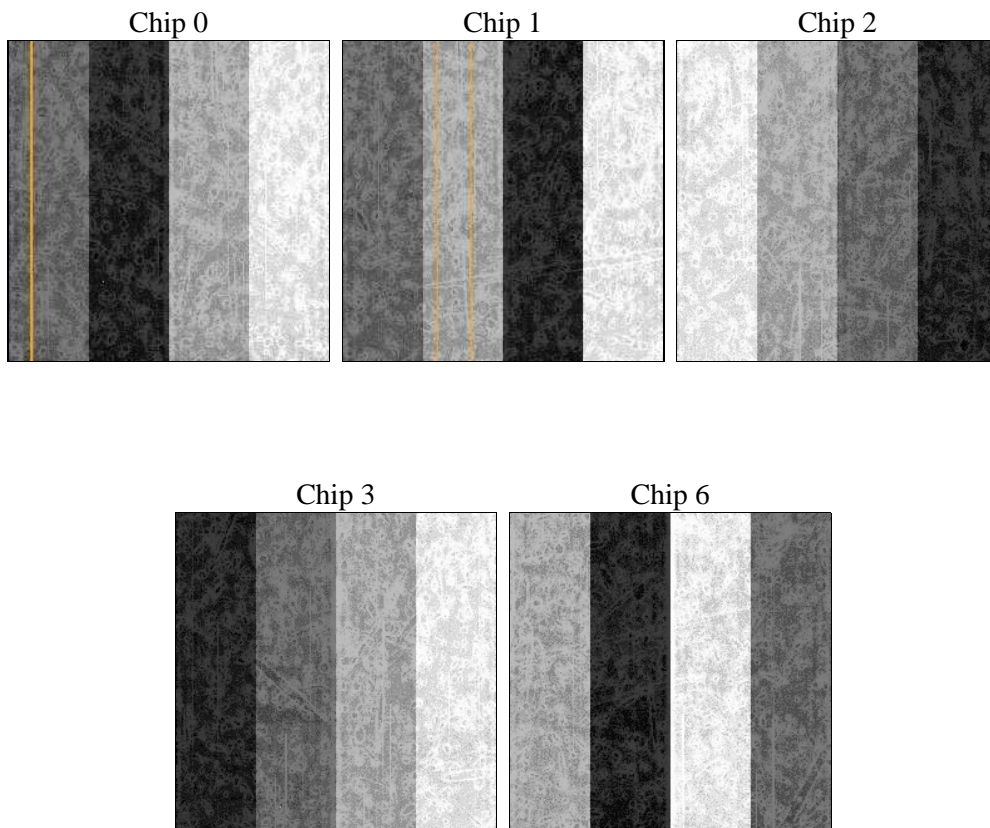
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	24046.65917474	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	24046.65917474	Sum of GTIs [s]
date	2012-03-09T05:03:14	Date and time of file creation	ontime1	24040.377184272	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	24046.659194708	Sum of GTIs [s]
			ontime3	24046.65917474	Sum of GTIs [s]
			ontime6	24049.800184965	Sum of GTIs [s]
			l1events	864180	Number of level 1 events

### 2.1.4 Events

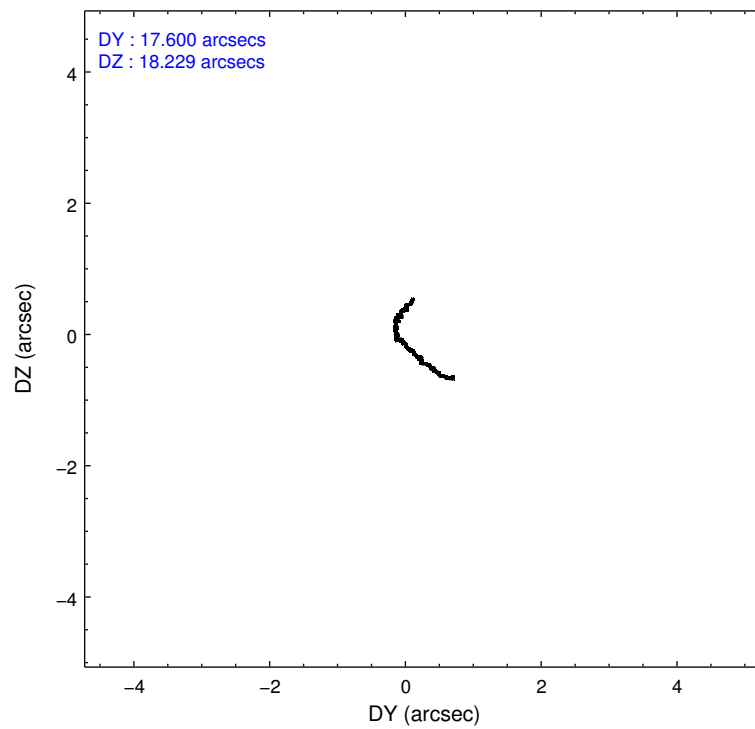
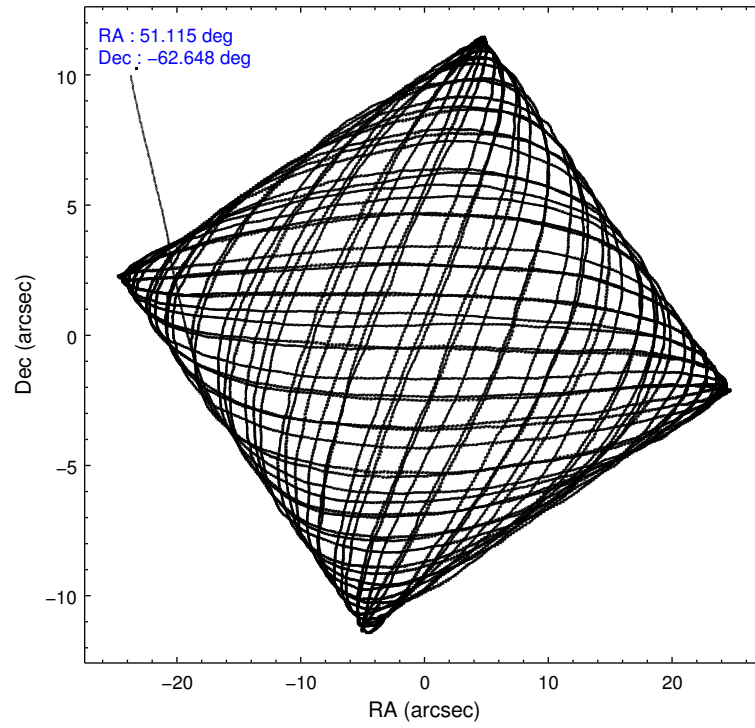
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	154668	179813	174218	171835	183646
rejected events	135653	144019	154665	153083	153029
rejected %	87%	80%	88%	89%	83%

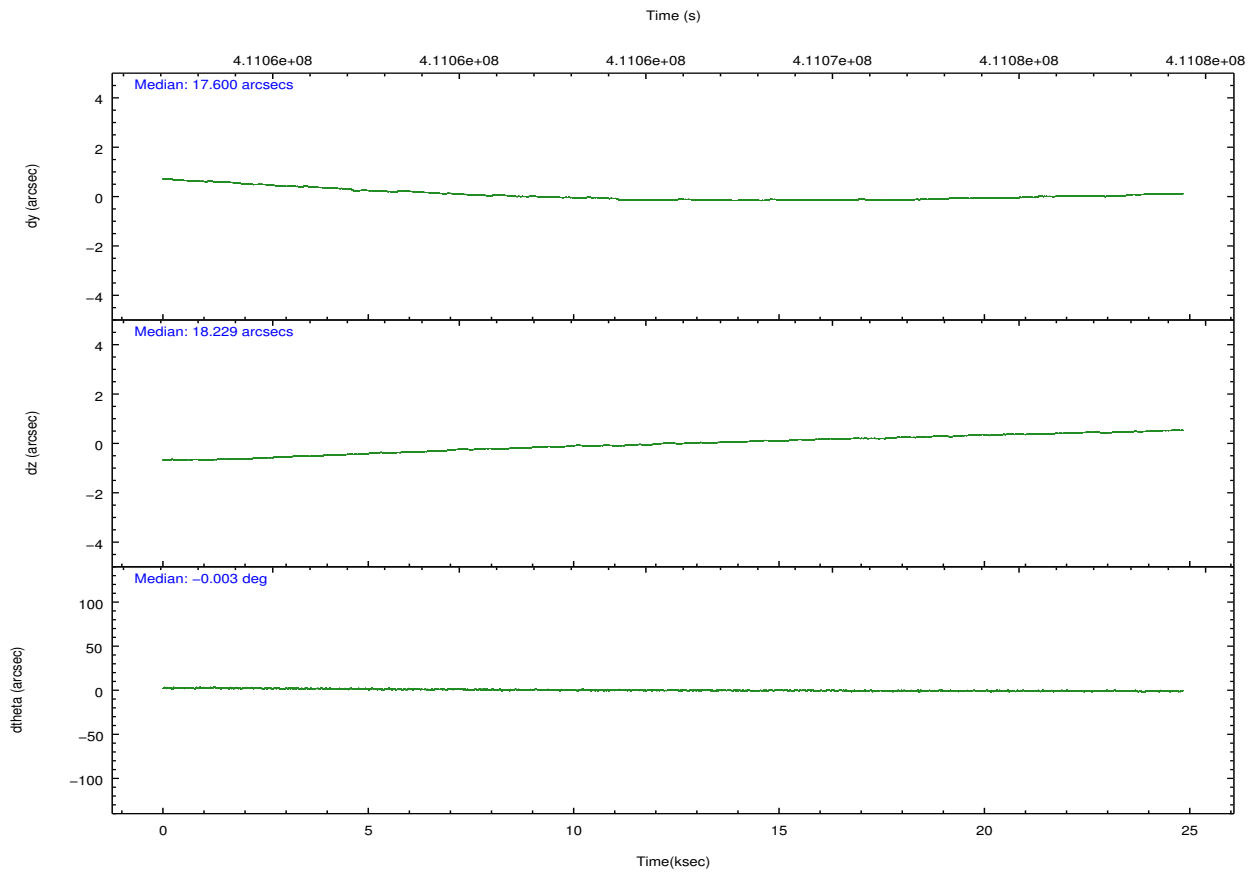
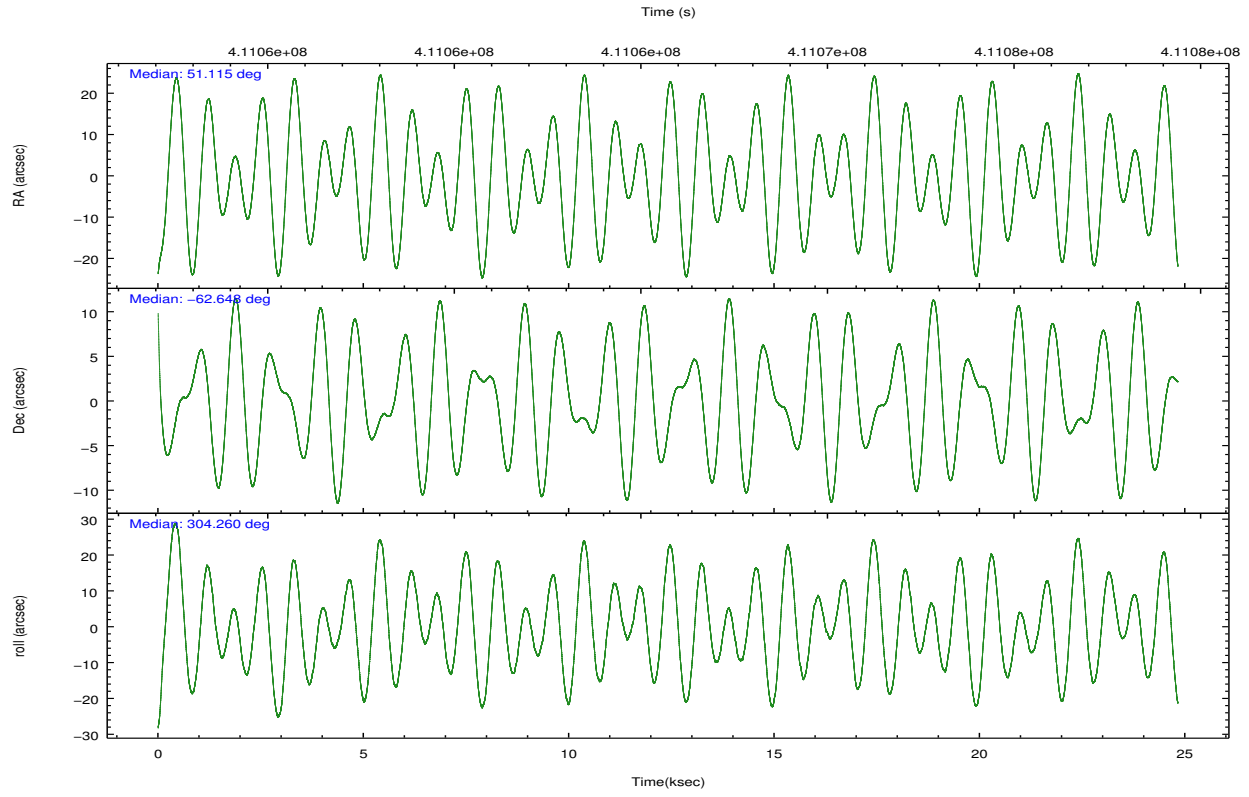
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6572	7529	7332	6999	13730
	4%	4%	4%	4%	7%
grade 1 events	112	85	98	119	142
	0%	0%	0%	0%	0%
grade 2 events	4633	19564	4700	4062	8569
	2%	10%	2%	2%	4%
grade 3 events	2149	2185	1963	1998	2047
	1%	1%	1%	1%	1%
grade 4 events	1912	2100	1967	1915	1981
	1%	1%	1%	1%	1%
grade 5 events	7256	7617	6928	8109	7804
	4%	4%	3%	4%	4%
grade 6 events	3753	4426	3592	3788	4300
	2%	2%	2%	2%	2%
grade 7 events	128281	136307	147638	144845	145073
	82%	75%	84%	84%	78%

## 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	51.061541	51.11555229205395	CCD I2 on	Y	Y
[deg] Pointing Dec	-62.636295	-62.64815944122435	CCD I3 on	Y	Y
[deg] Pointing Roll	304.008025	304.2646749907939	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	-225.840463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	411054145.184000	411052429.10272	CCD S5 on	N	N
Observation start date	2011-01-10T13:41:19	2011-01-10T13:13:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411078145.184000	411078886.40408	On-chip summing requested	N	N
Observation end date	2011-01-10T20:21:19	2011-01-10T20:34:46	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



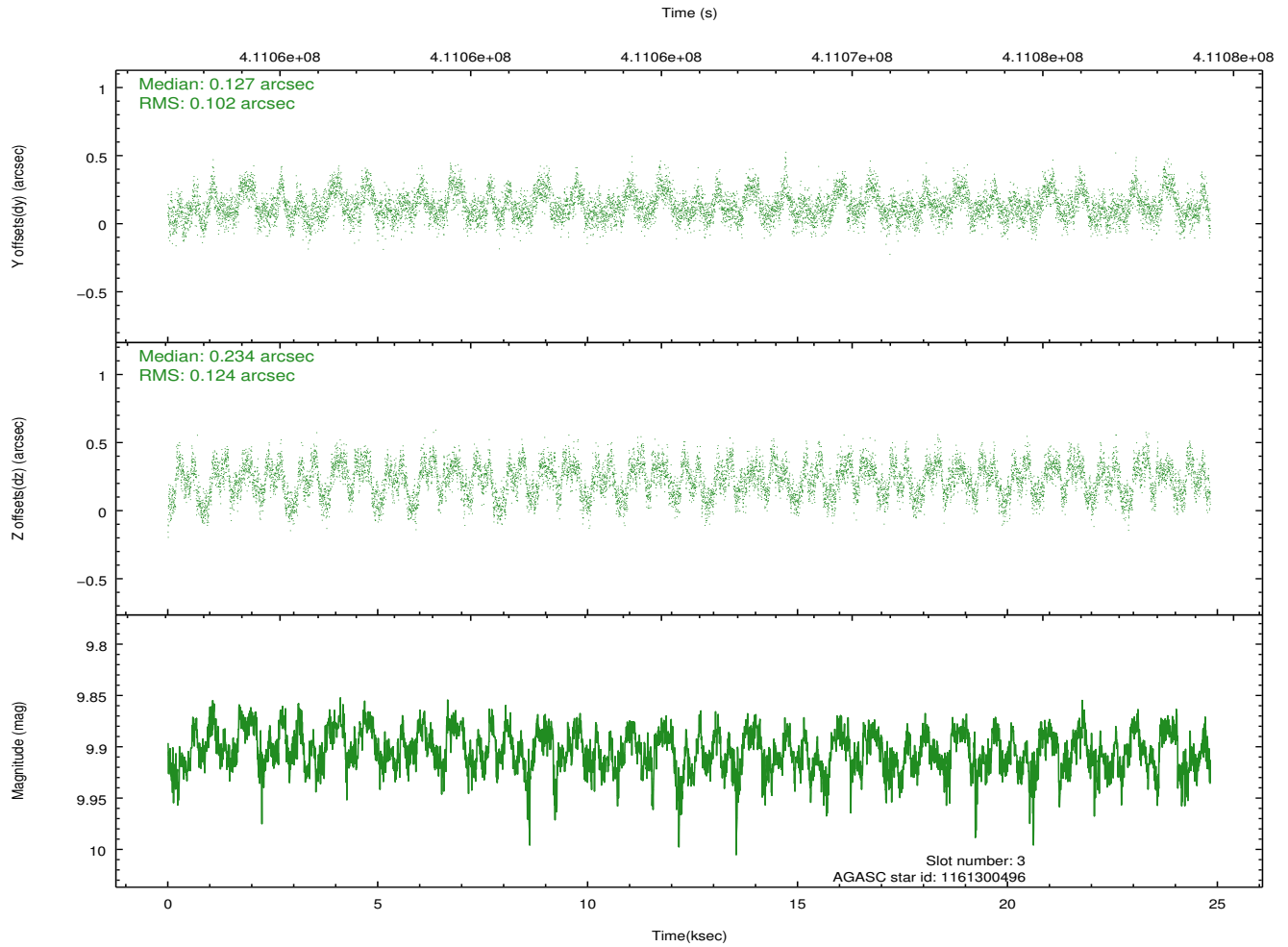
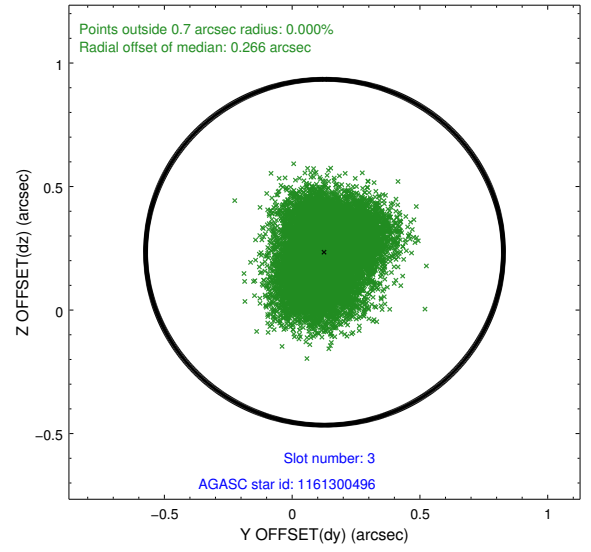
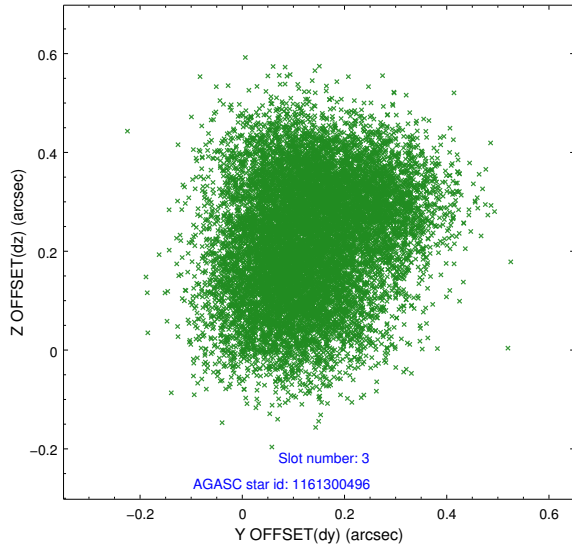


### Slot Statistics

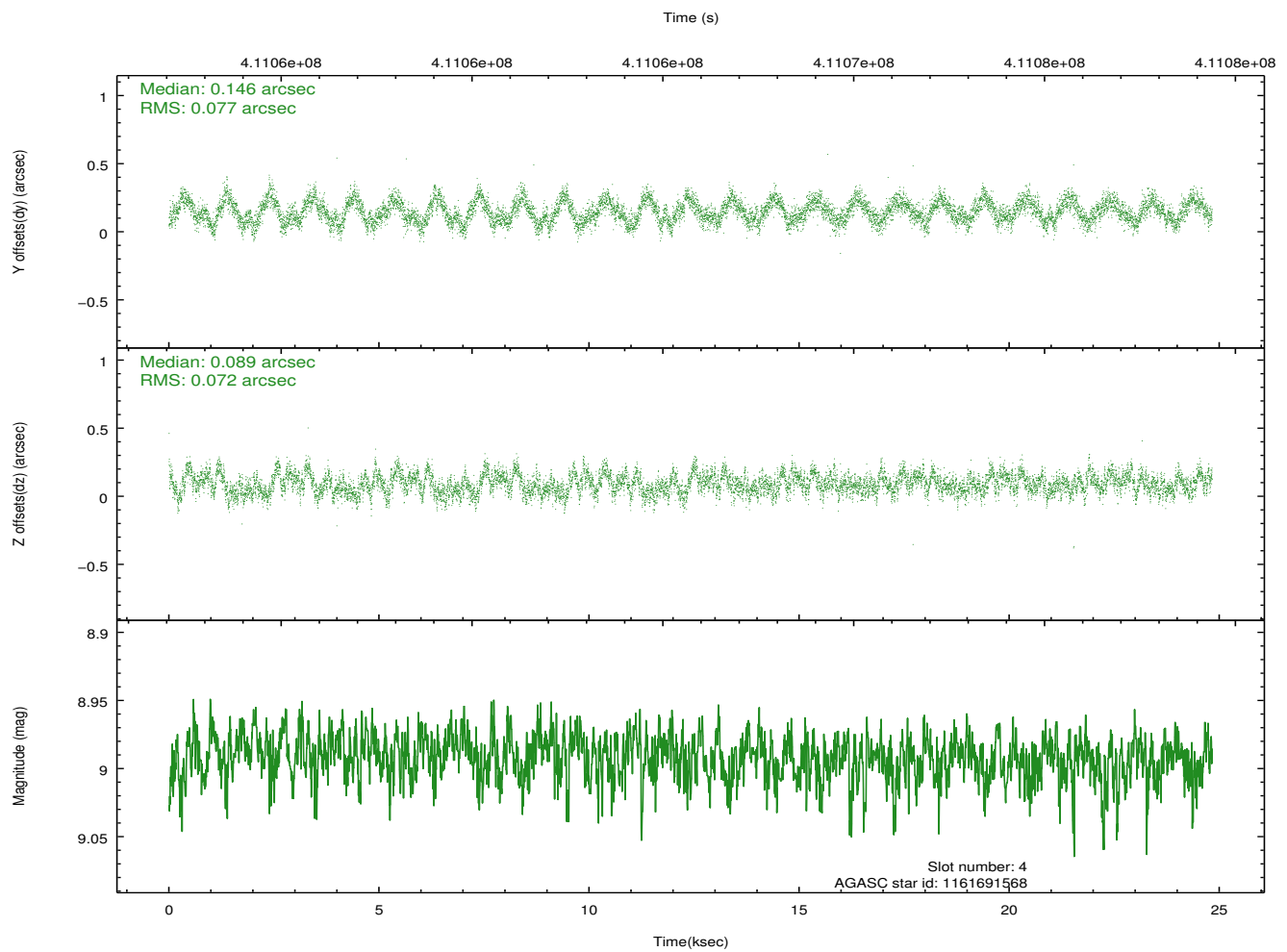
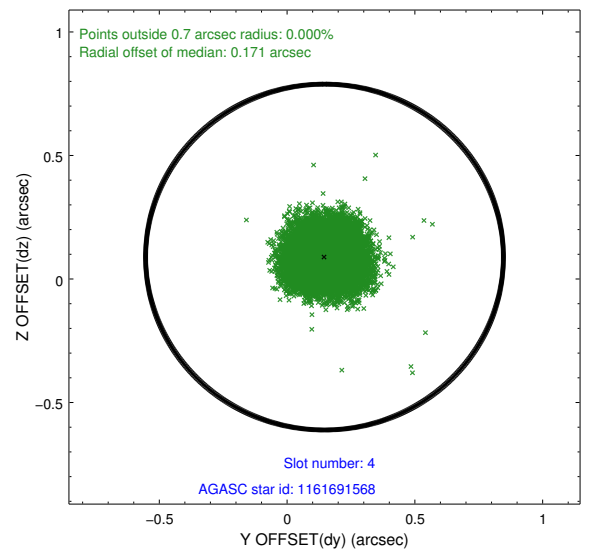
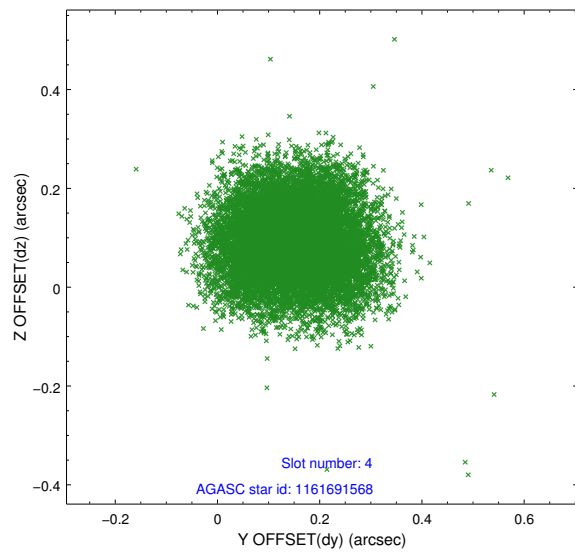
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.05	6055	0.116	-0.068	0.017	0.048	0.000000	0.000000	921.72	-1001.00
1	FID	ACIS-I-5	7.04	6055	-0.257	0.106	0.017	0.051	0.000000	0.000000	-1826.76	896.51
2	FID	ACIS-I-6	7.06	6055	0.051	0.035	0.008	0.014	0.000000	0.000000	386.99	1541.14
3	GUIDE	1161300496	9.90	12100	0.127	0.234	0.175	0.267	50.194363	-62.274473	-1882.38	-478.18
4	GUIDE	1161691568	8.99	12059	0.146	0.089	0.114	0.176	50.557270	-62.678745	-336.56	-777.73
5	GUIDE	1162608808	8.76	12110	-0.049	-0.100	0.091	0.142	51.680106	-62.824639	1134.90	461.31
6	GUIDE	1162608880	9.30	12066	-0.027	-0.176	0.145	0.219	52.292117	-62.532121	848.12	1892.56
7	GUIDE	1161298232	9.33	12097	-0.221	-0.043	0.124	0.198	51.136434	-61.825313	-2349.00	1739.56

## 2.4 Star Slots

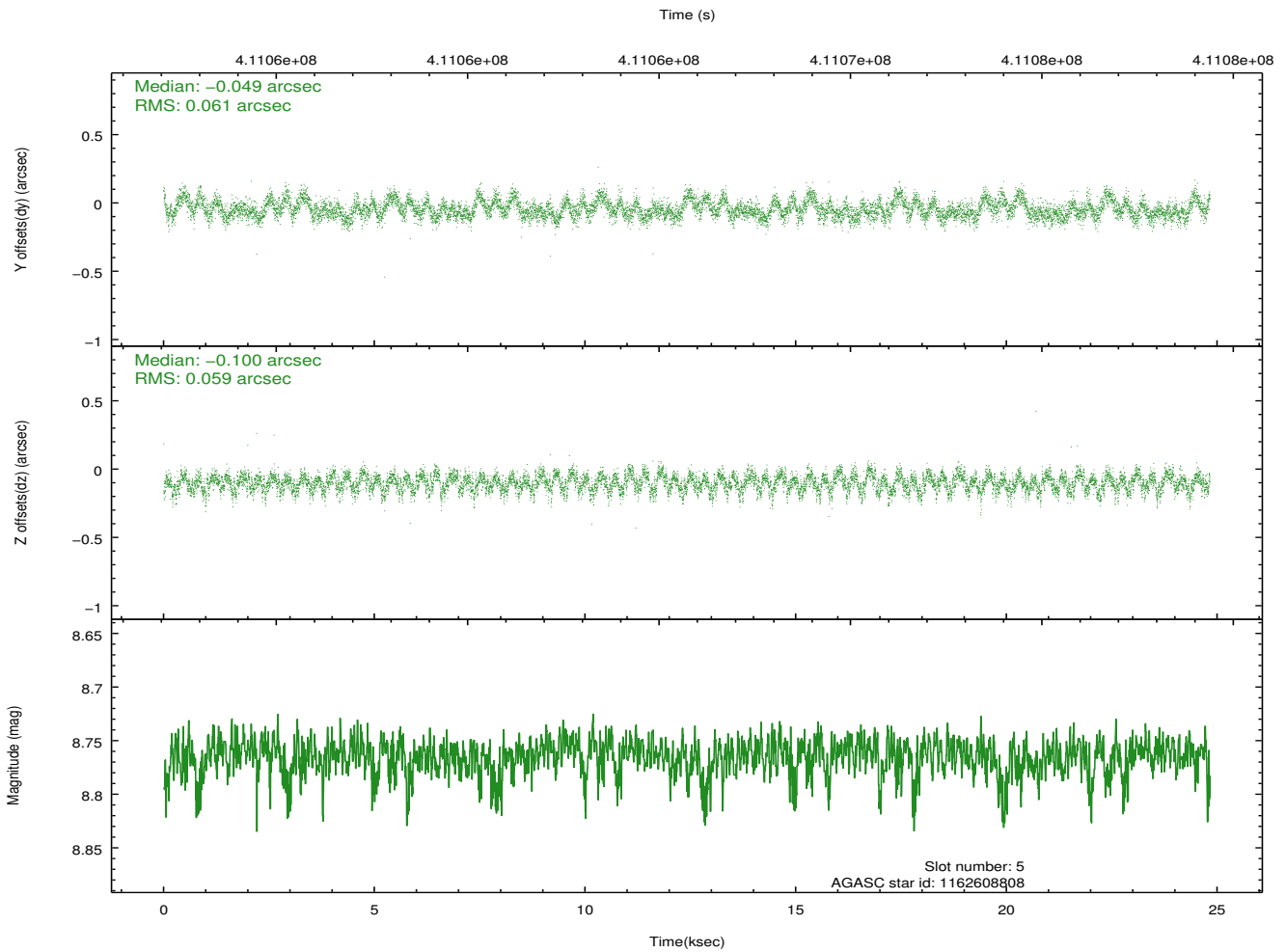
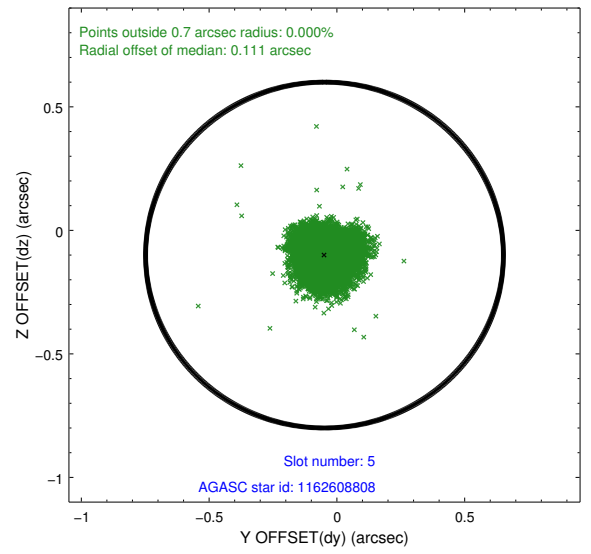
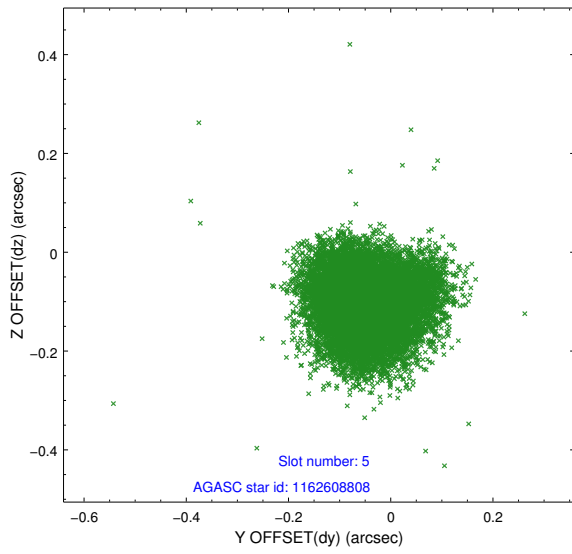
### 2.4.1 Slot 3



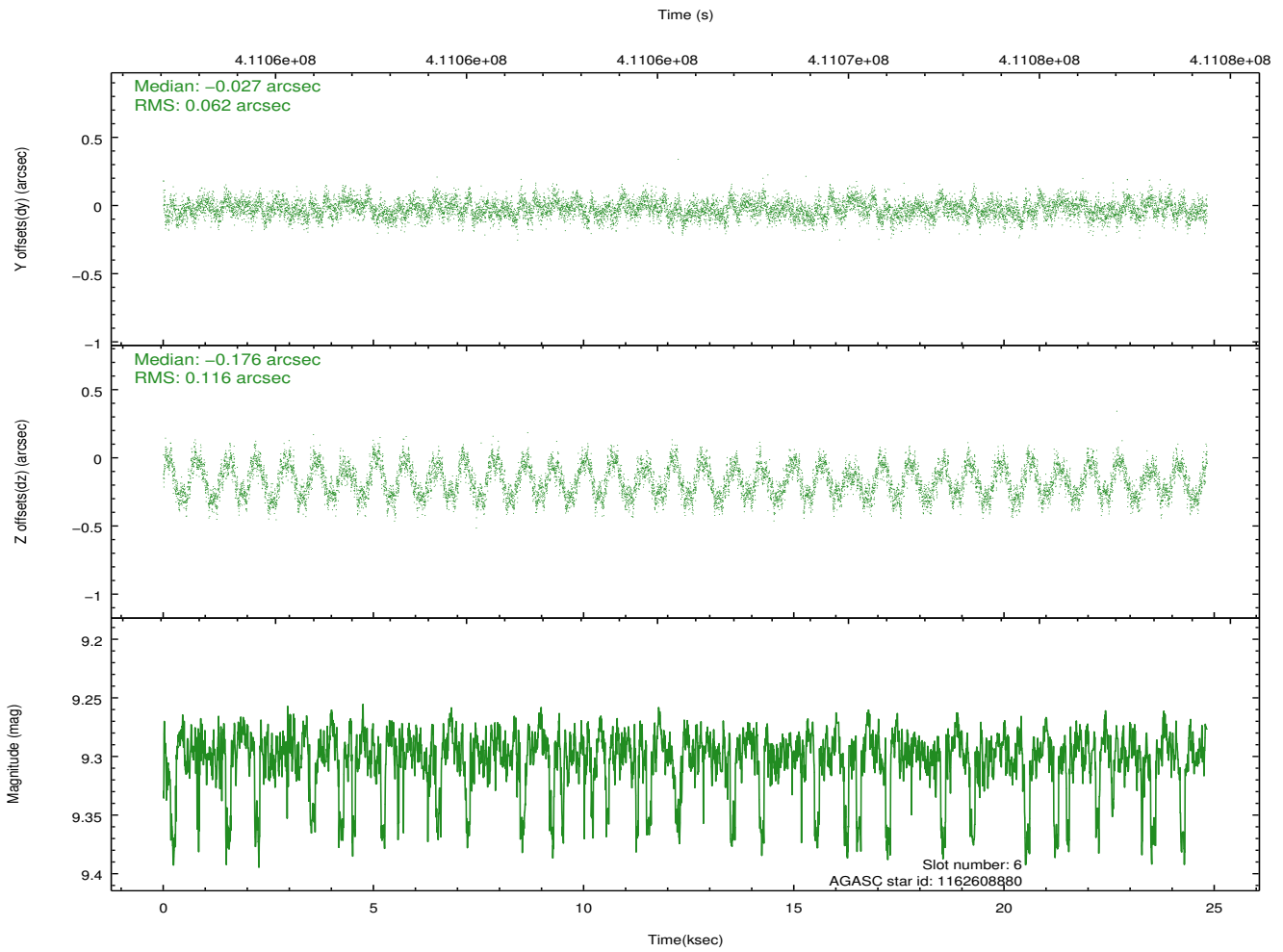
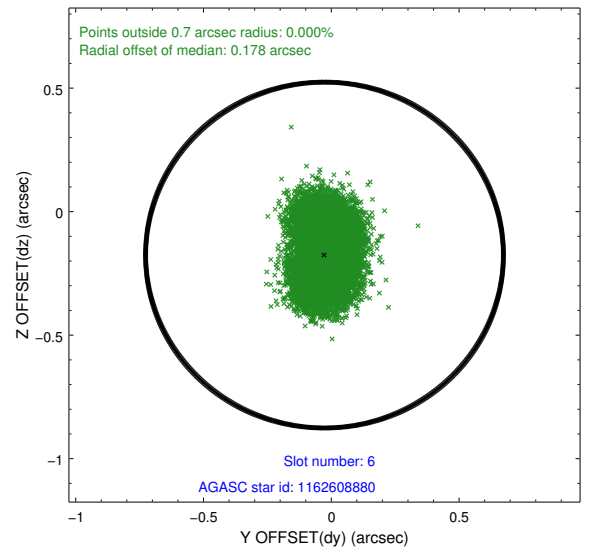
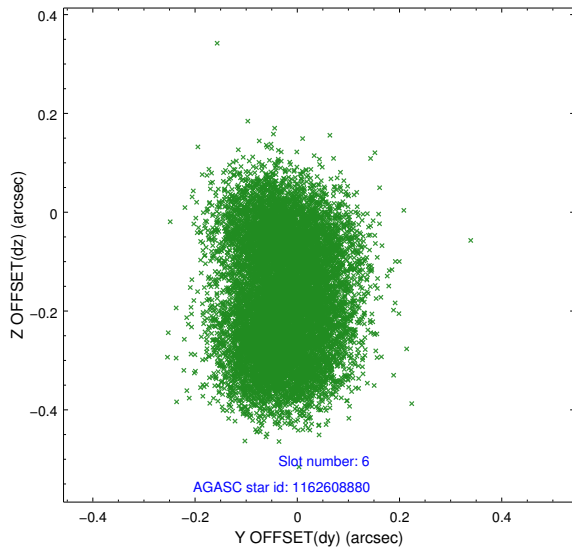
## 2.4.2 Slot 4



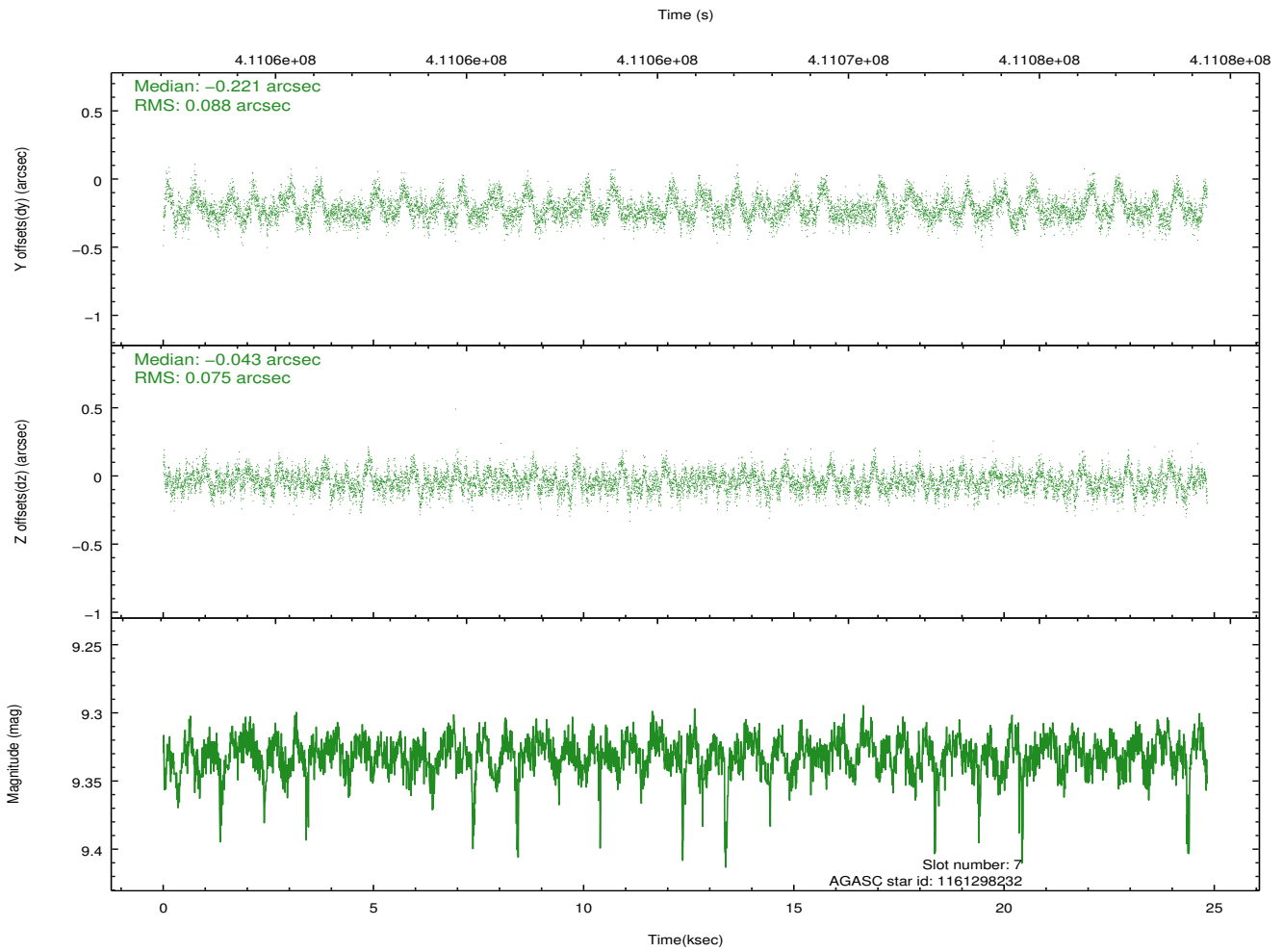
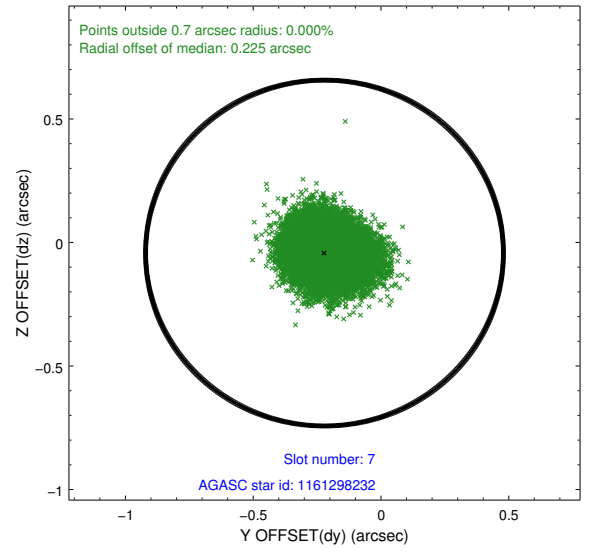
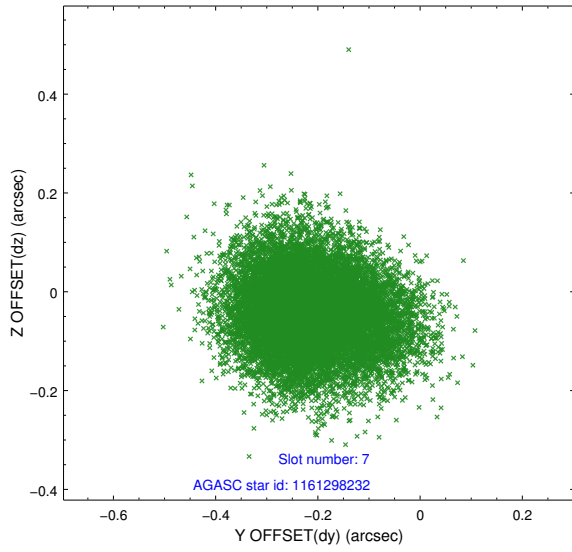
### 2.4.3 Slot 5



### 2.4.4 Slot 6

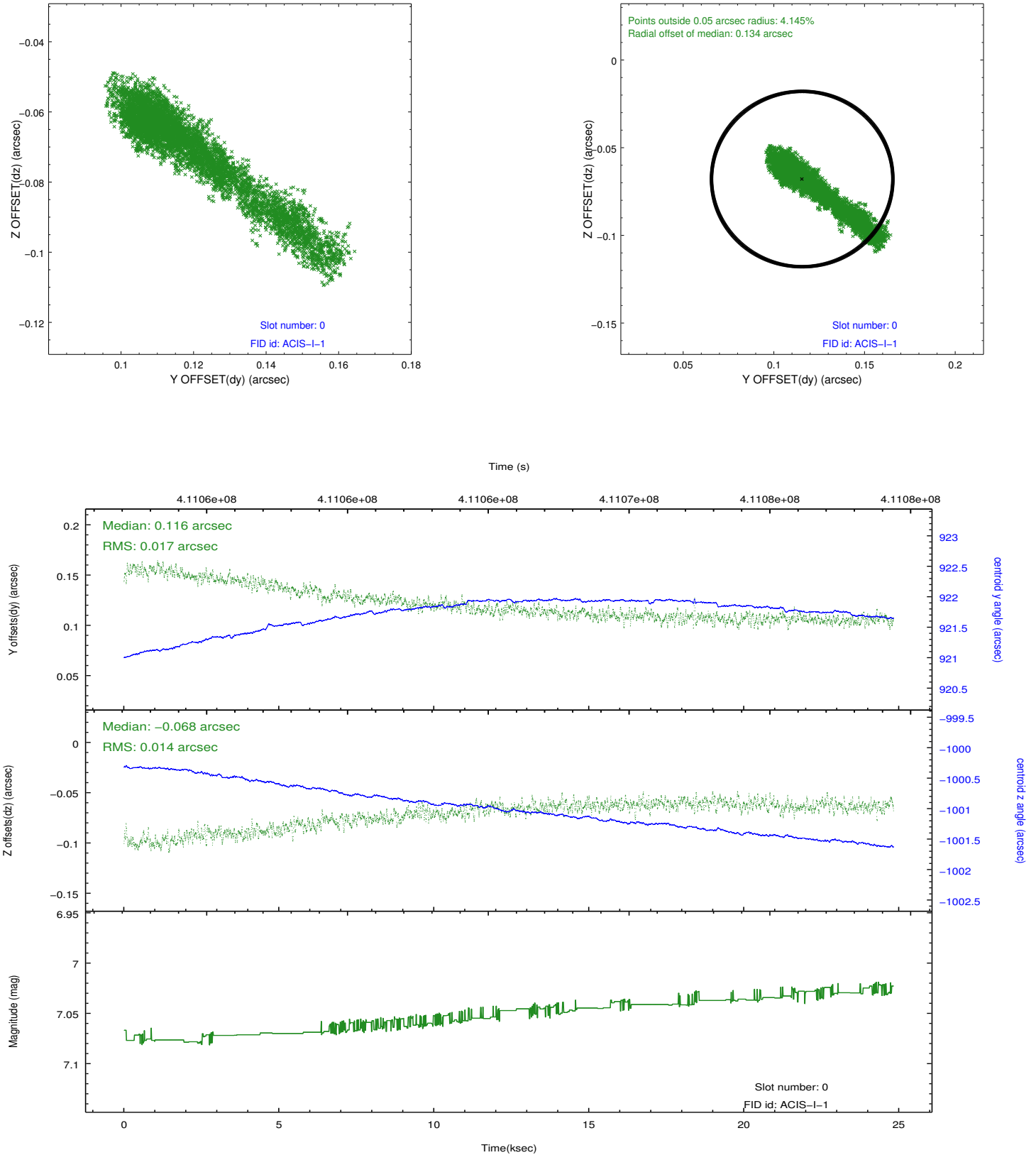


## 2.4.5 Slot 7

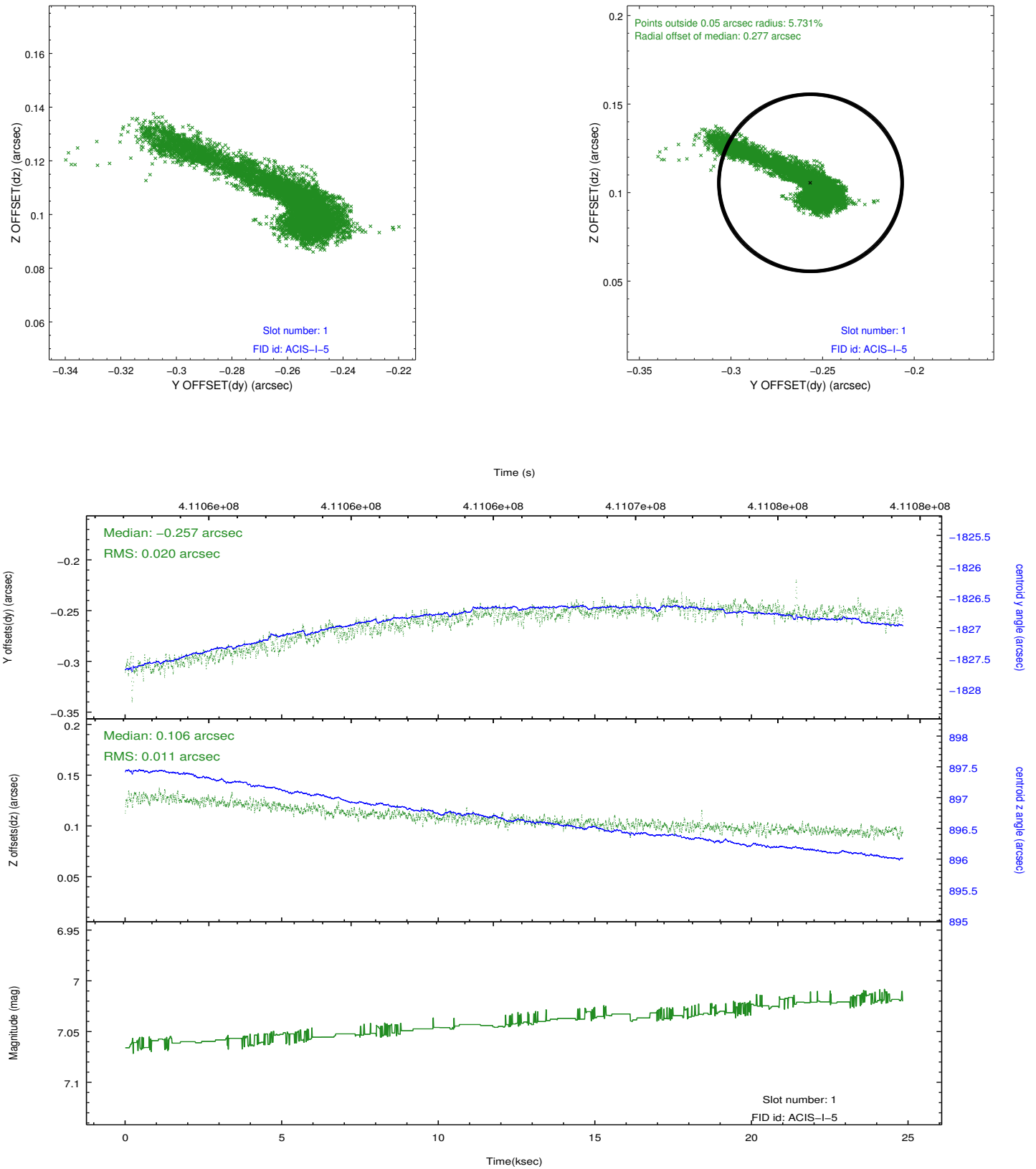


## 2.5 FID Slots

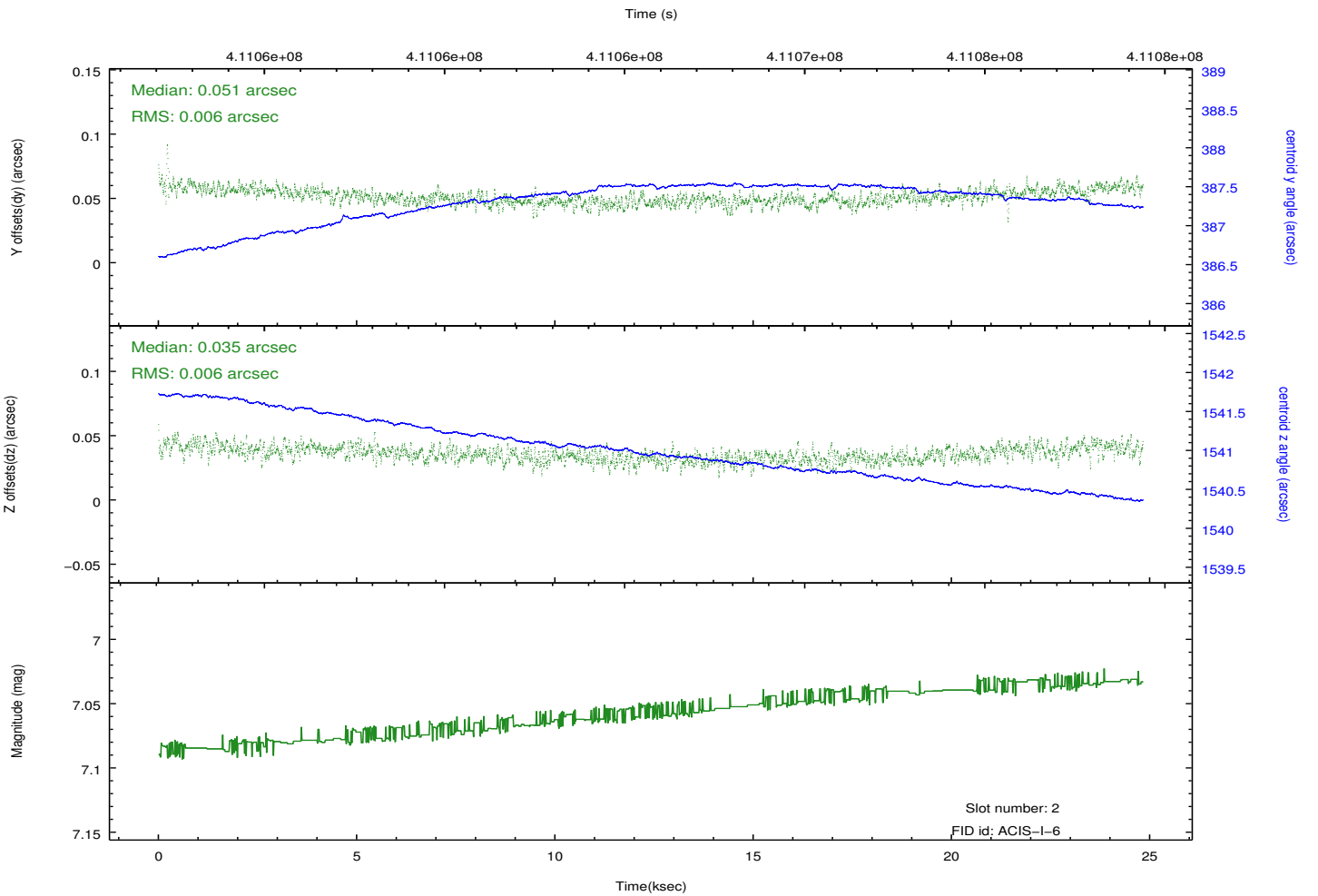
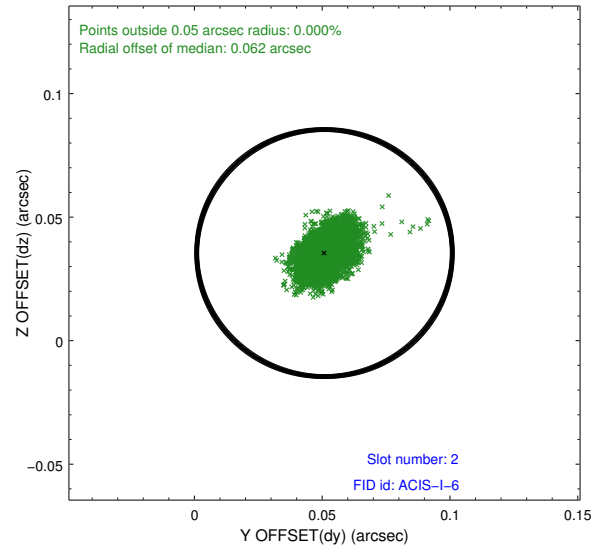
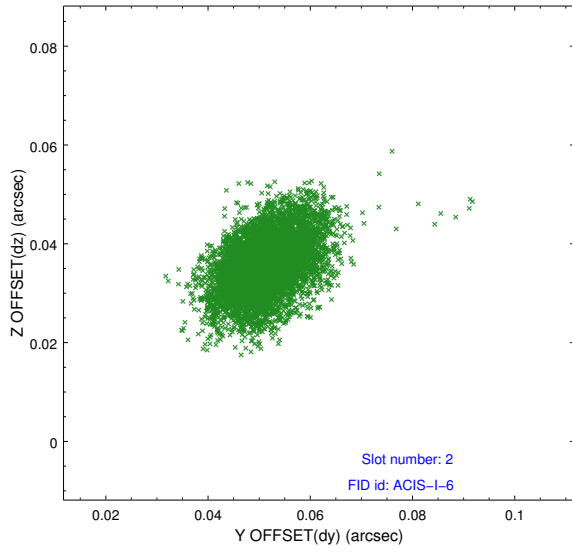
### 2.5.1 Slot 0



## 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)	2012.03.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.04665917474

## A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 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: (51.39702, -62.70663), (51.40264, -62.70485), (51.25568, -62.60649), (51.25007, -62.60827).