

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 4653 - L2 Version 5  
Chandra X-Ray Center

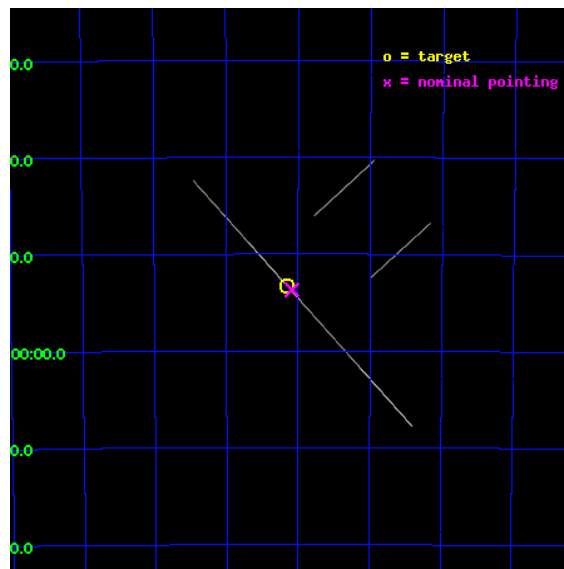
L2 Processing Date : Apr 12 2013

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# 1 Front

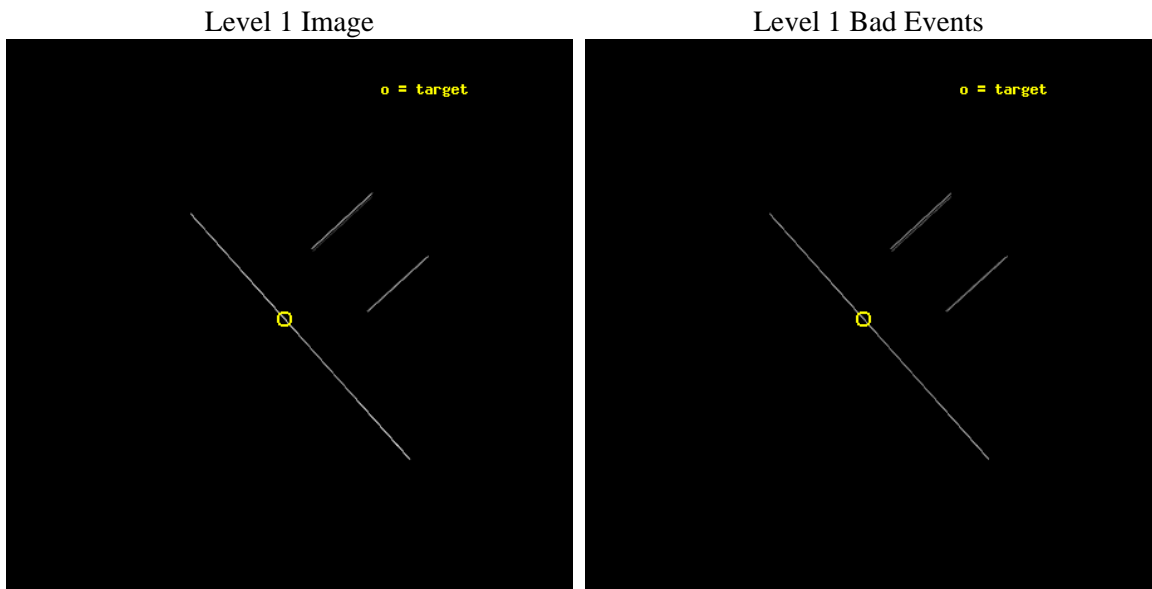
seq_num	500472	Sequence number
obs_id	4653	Observation id
title	X-ray Bursts from Anomalous X-ray Pulsars	Proposal title
observer	Professor Victoria Kaspi	Principal investigator
object	1E 1048.1-5937	Source name
ra_targ	162.537083	Observer's specified target RA [deg]
dec_targ	-59.889	Observer's specified target Dec [deg]
ra_nom	162.52184833723	Nominal RA [deg]
dec_nom	-59.89494360401	Nominal Dec [deg]
roll_nom	227.89305200924	Nominal Roll [deg]
revision	5	Processing version of data
ontime	28856.25	Sum of GTIs [s]
livetime	28743.530273438	Livetime [s]
ontime2	28856.25	Sum of GTIs [s]
ontime3	28856.25	Sum of GTIs [s]
ontime5	28856.25	Sum of GTIs [s]
ontime6	28856.25	Sum of GTIs [s]
ontime7	28856.25	Sum of GTIs [s]
ontime8	28856.25	Sum of GTIs [s]
l2events	447990	Number of level 2 events



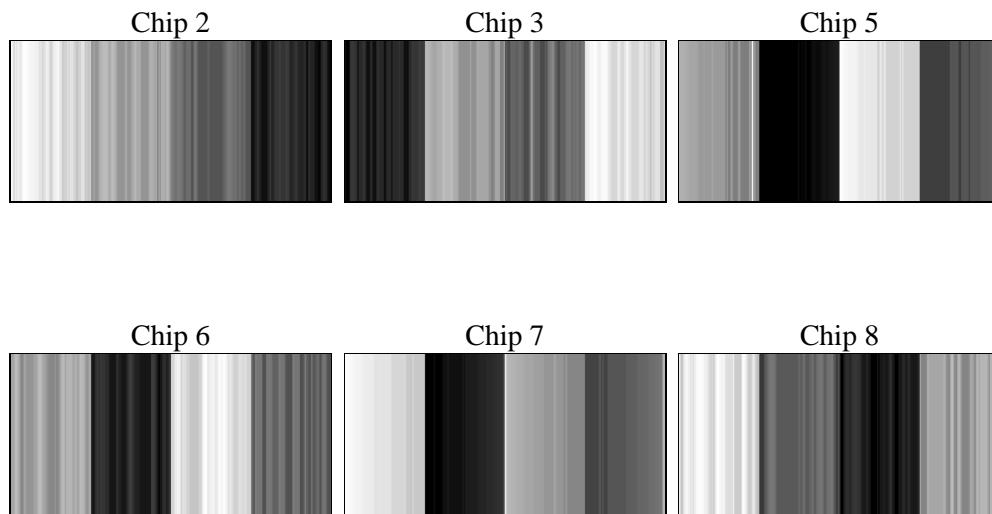
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28676.536000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	28856.25	Sum of GTIs [s]
caldbver	4.5.6	&#160	ontime2	28856.25	Sum of GTIs [s]
date	2013-04-12T23:39:22	Date and time of file creation	ontime3	28856.25	Sum of GTIs [s]
revision	5	Processing version of data	ontime5	28856.25	Sum of GTIs [s]
			ontime6	28856.25	Sum of GTIs [s]
			ontime7	28856.25	Sum of GTIs [s]
			ontime8	28856.25	Sum of GTIs [s]
			l1events	651030	Number of level 1 events

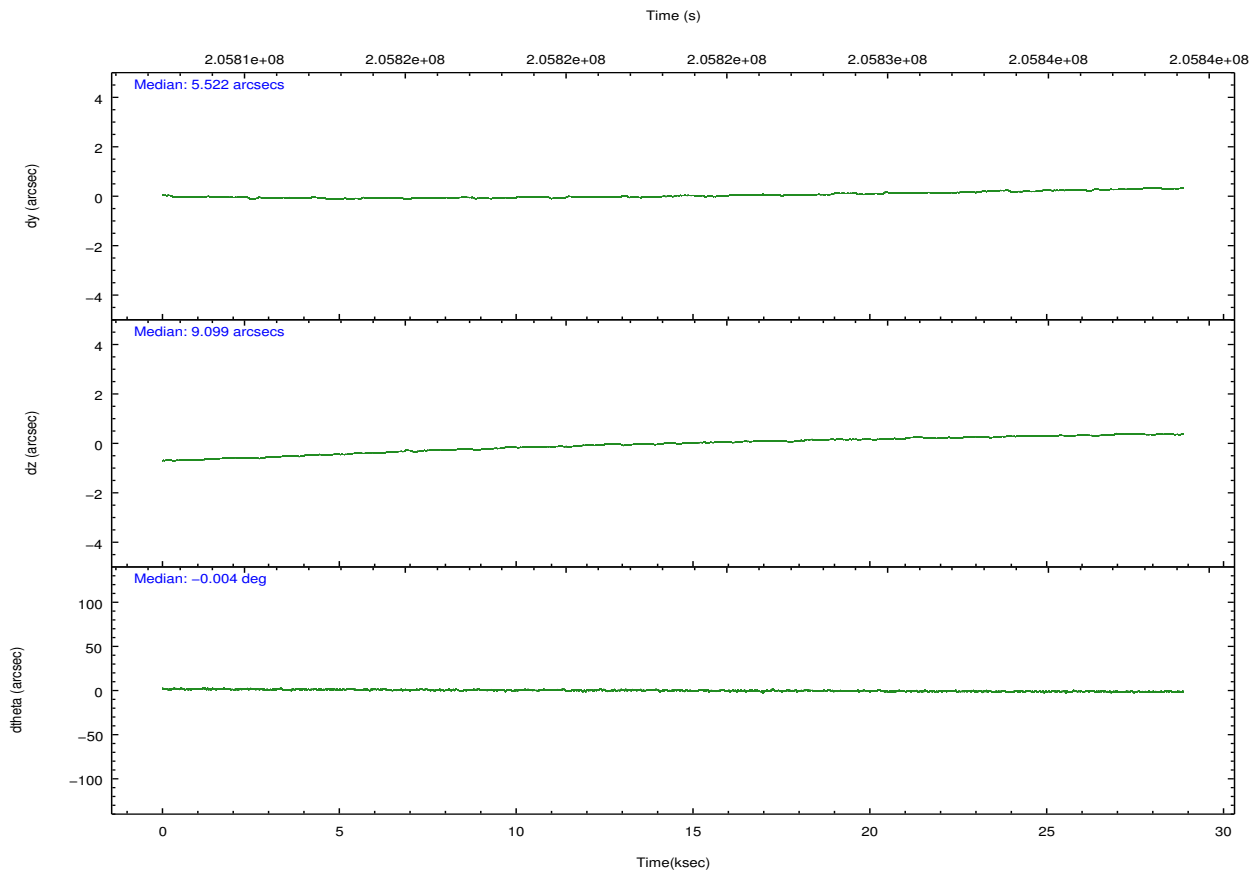
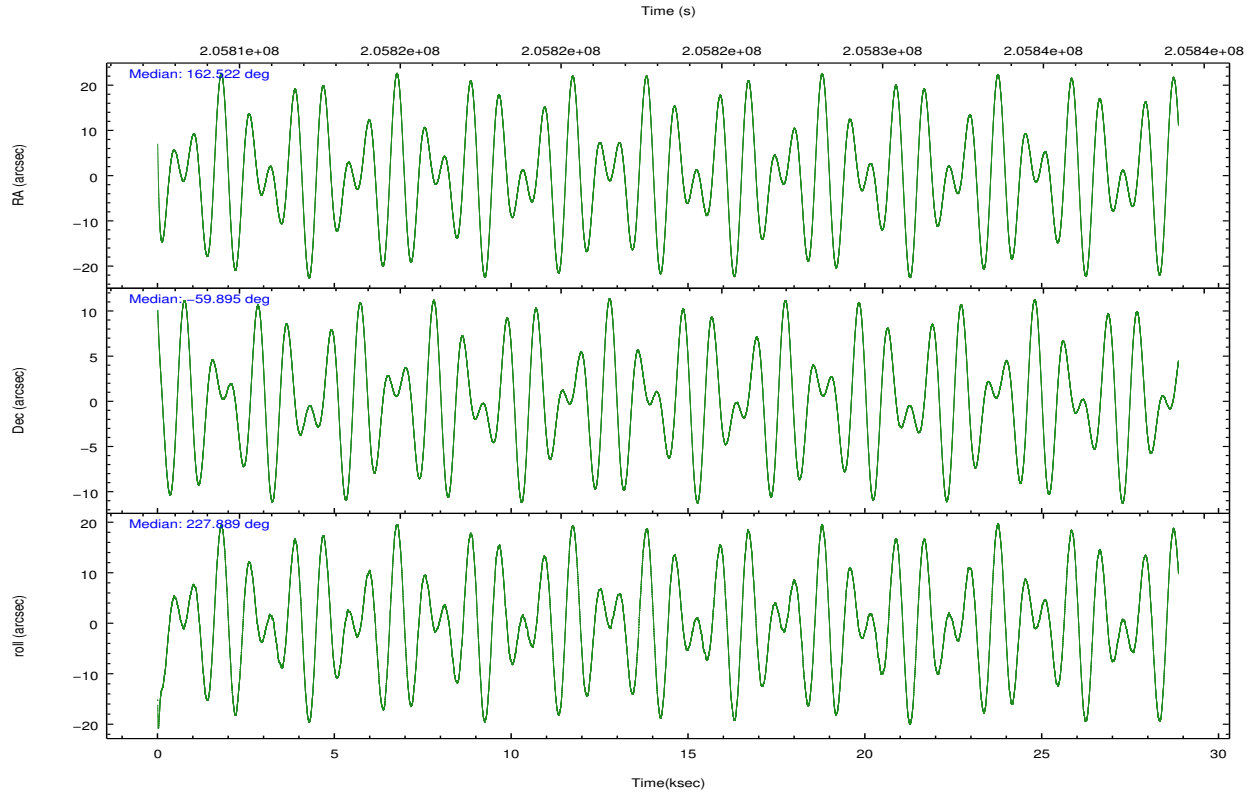
### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	47629	49118	208510	51362	197674	96737	grade 0 events	6548	5407	33749	5279	23193	15071
rejected events	9477	9950	27254	10897	29999	17228		13%	11%	16%	10%	11%	15%
rejected %	19%	20%	13%	21%	15%	17%	grade 1 events	159	179	309	174	387	270
								0%	0%	0%	0%	0%	0%
							grade 2 events	15435	16432	54039	16884	43114	26488
								32%	33%	25%	32%	21%	27%
							grade 3 events	4802	5429	4620	5036	14604	9092
								10%	11%	2%	9%	7%	9%
							grade 4 events	4820	4596	4430	4692	14342	9001
								10%	9%	2%	9%	7%	9%
							grade 5 events	8194	8652	21052	9656	25873	13087
								17%	17%	10%	18%	13%	13%
							grade 6 events	7671	8423	90311	9641	76161	22297
								16%	17%	43%	18%	38%	23%
							grade 7 events	0	0	0	0	0	1431
								0%	0%	0%	0%	0%	1%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	CC33_FAINT	CC33_FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	162.532515	162.5218483372291	Subarray requested	NONE	NONE
[deg] Pointing Dec	-59.868229	-59.89494360400955	Alternating exposures requested	N	N
[deg] Pointing Roll	227.745662	227.8930520092392	[s] Primary exposure time	0.000000	0
[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)	205809087.184000	205808048.17356			
Observation start date	2004-07-10T01:10:23	2004-07-10T00:54:08			
[s] Observation end time (MET)	205837763.184000	205837993.54989			
Observation end date	2004-07-10T09:08:19	2004-07-10T09:13:13			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect

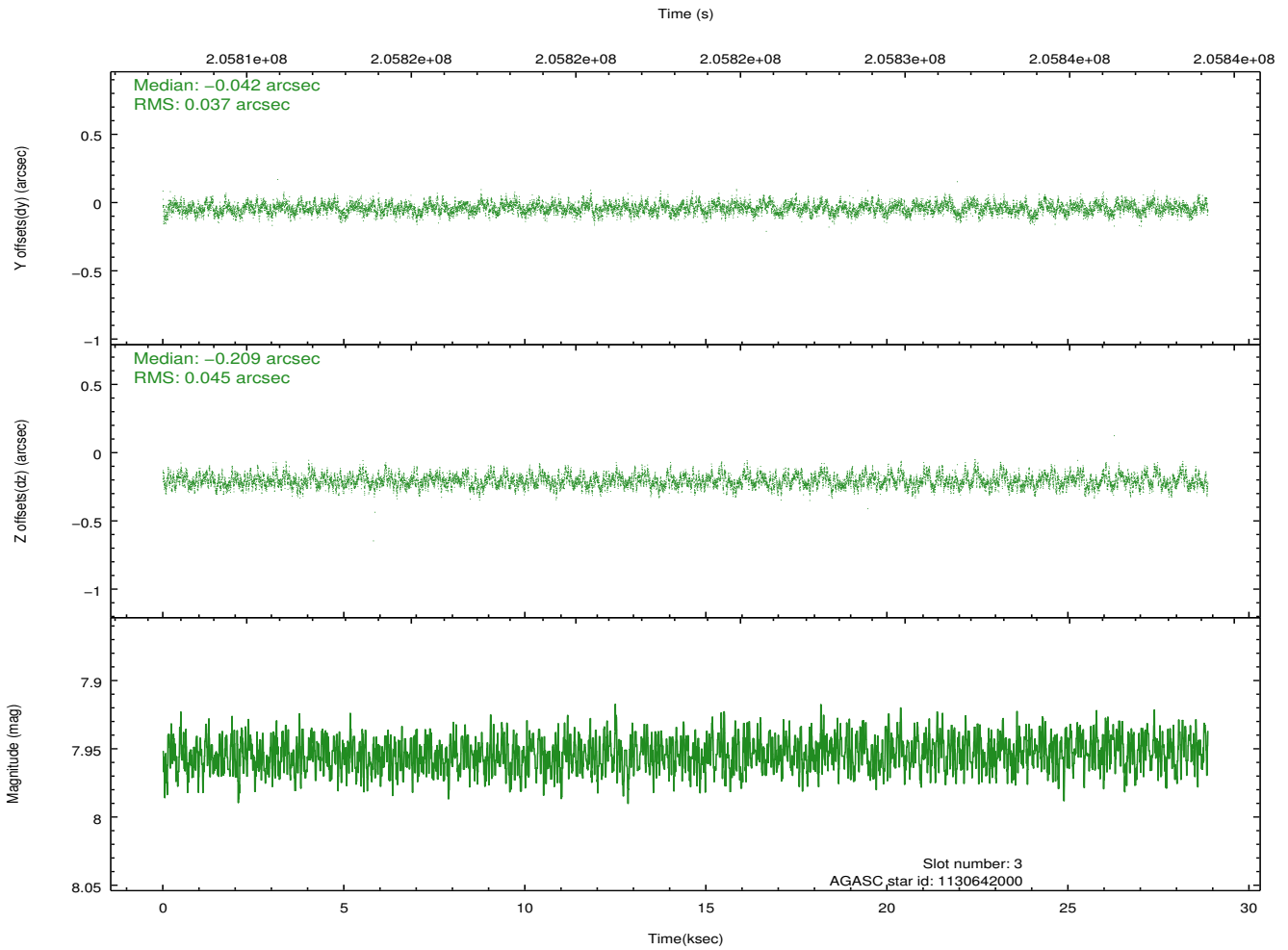
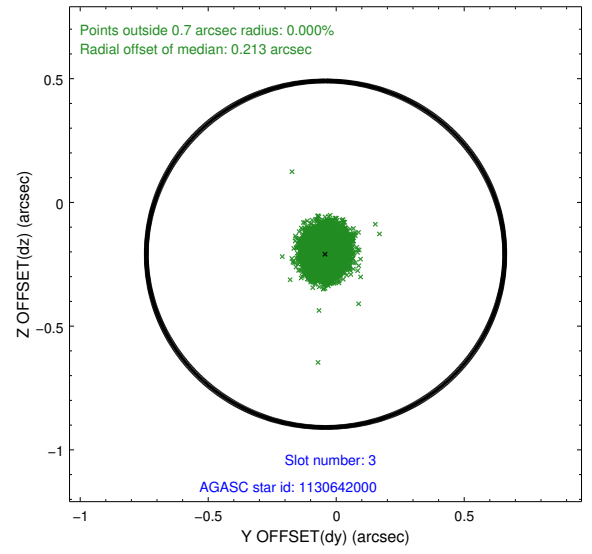
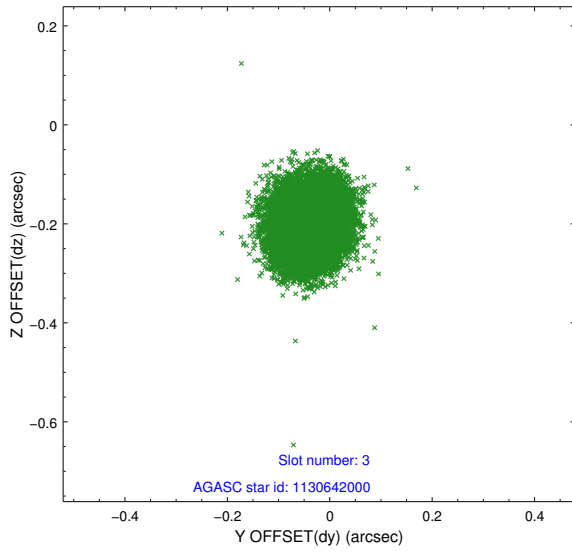


### Slot Statistics

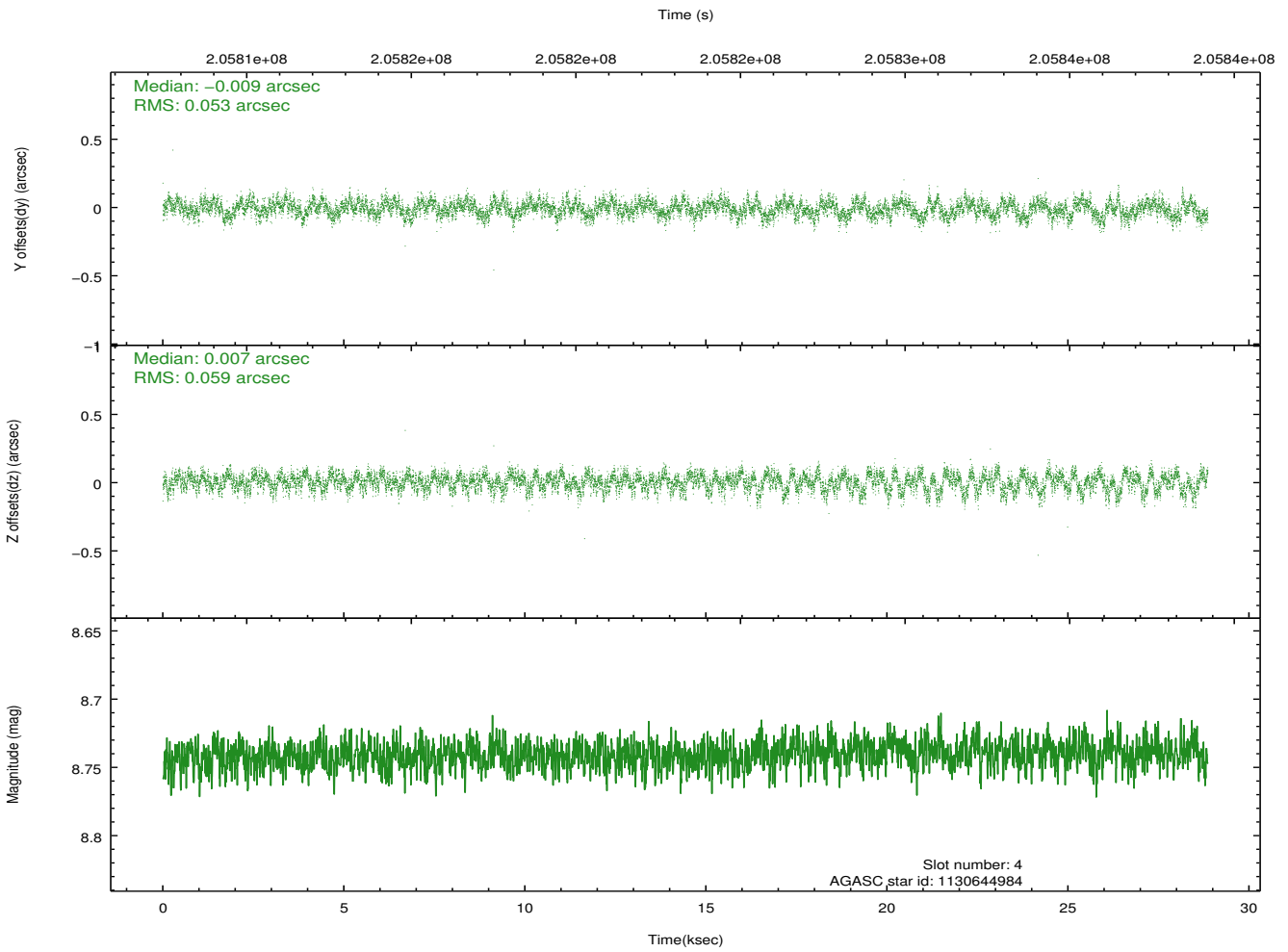
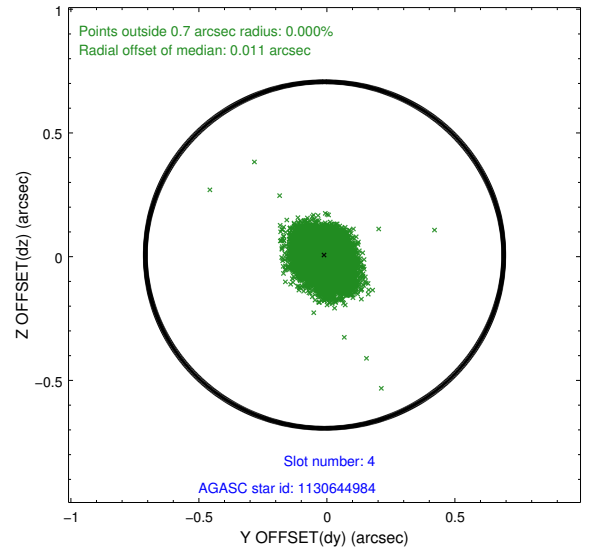
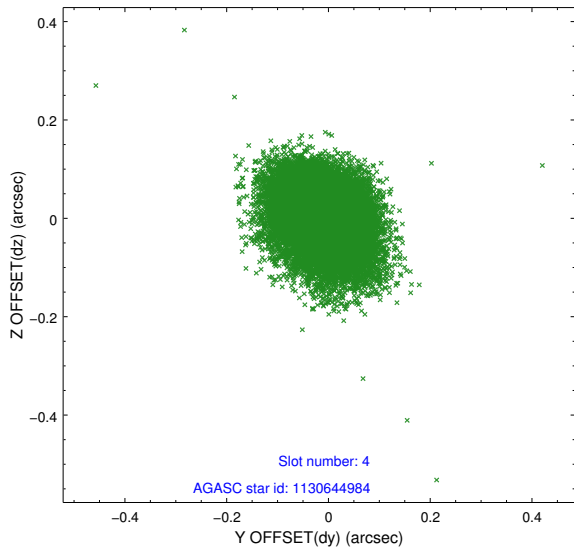
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	7040	0.008	0.011	0.009	0.017	0.000000	0.000000	937.71	-1725.85
1	FID	ACIS-S-2	7.10	7040	-0.091	-0.051	0.009	0.016	0.000000	0.000000	-758.25	-1730.50
2	FID	ACIS-S-4	7.20	7040	0.057	0.045	0.009	0.016	0.000000	0.000000	2155.01	178.23
3	GUIDE	1130642000	7.95	14079	-0.042	-0.209	0.063	0.100	162.836255	-59.743891	-700.74	107.58
4	GUIDE	1130644984	8.74	14074	-0.009	0.007	0.083	0.135	162.123834	-59.745452	173.16	-844.13
5	GUIDE	1130767056	8.82	14076	-0.108	0.066	0.112	0.175	164.277994	-59.801070	-2273.44	2204.72
6	GUIDE	1174033144	8.43	14072	-0.064	0.082	0.060	0.098	161.168741	-60.059230	2175.29	-1333.70
7	GUIDE	1174031160	8.82	14073	0.223	0.057	0.070	0.109	162.483783	-60.757597	2427.93	2089.93

## 2.4 Star Slots

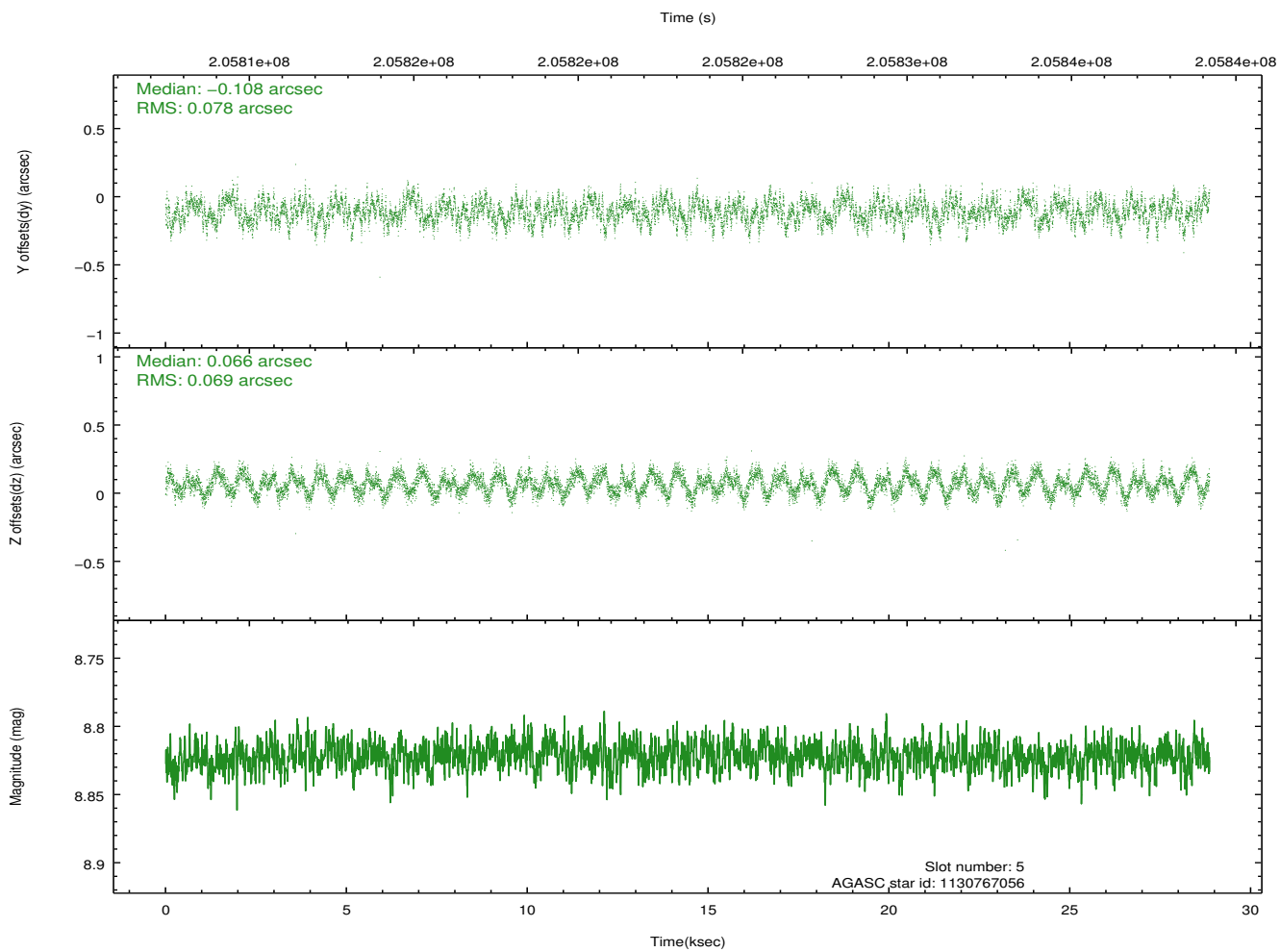
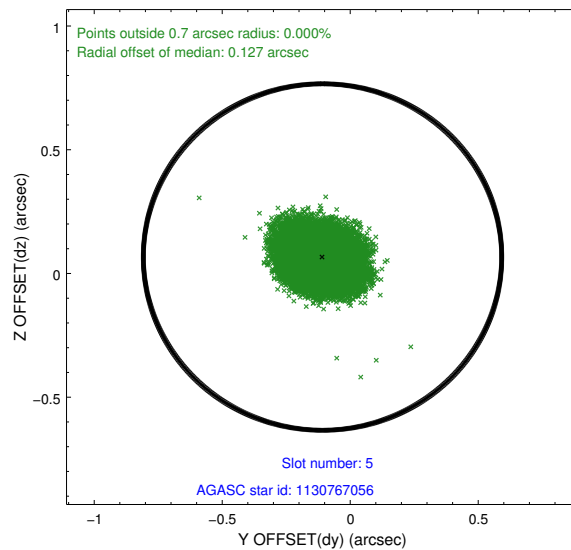
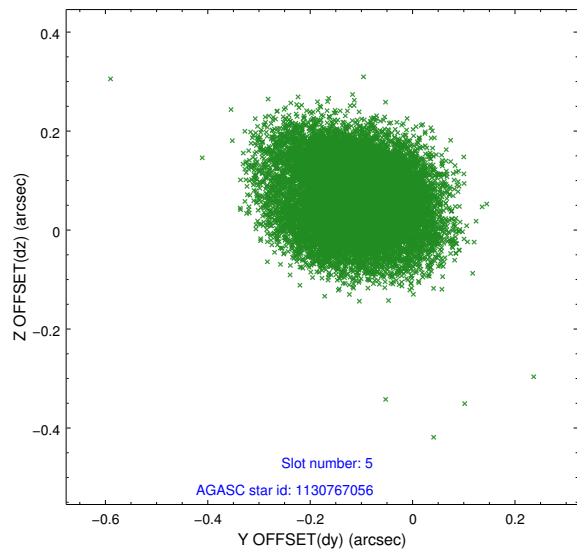
### 2.4.1 Slot 3



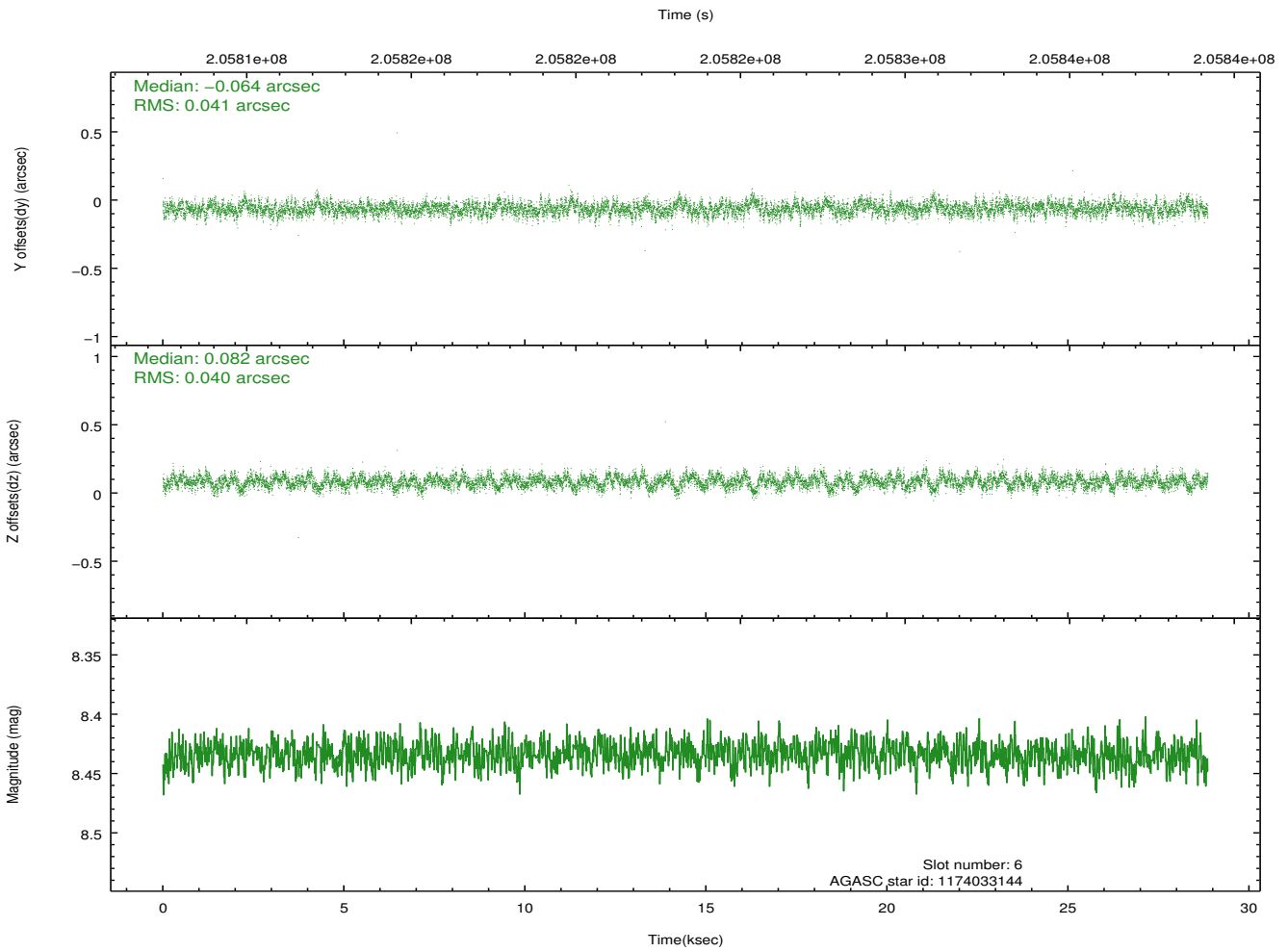
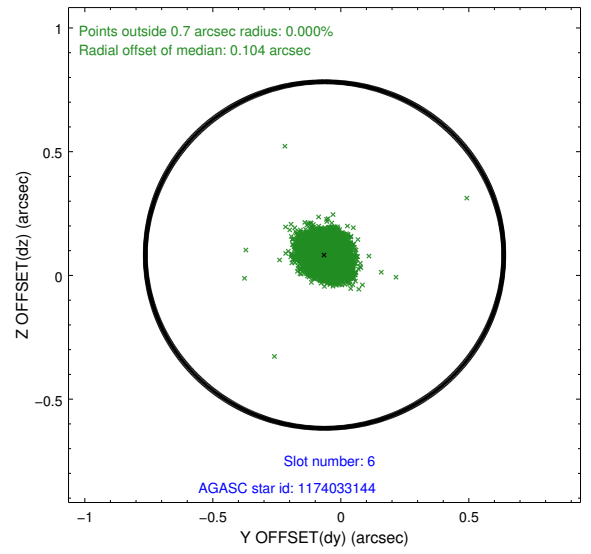
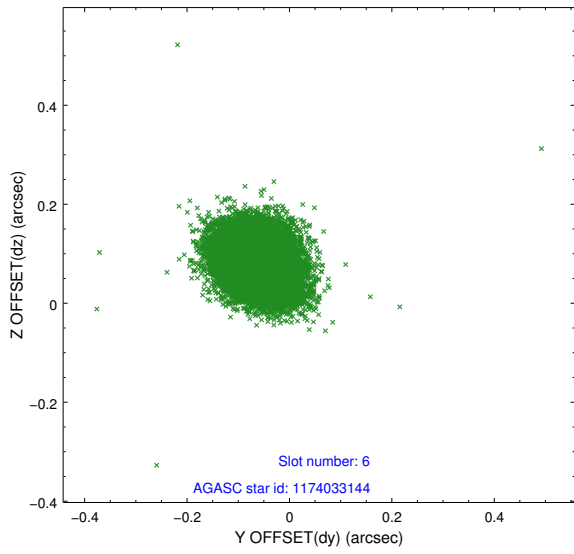
### 2.4.2 Slot 4



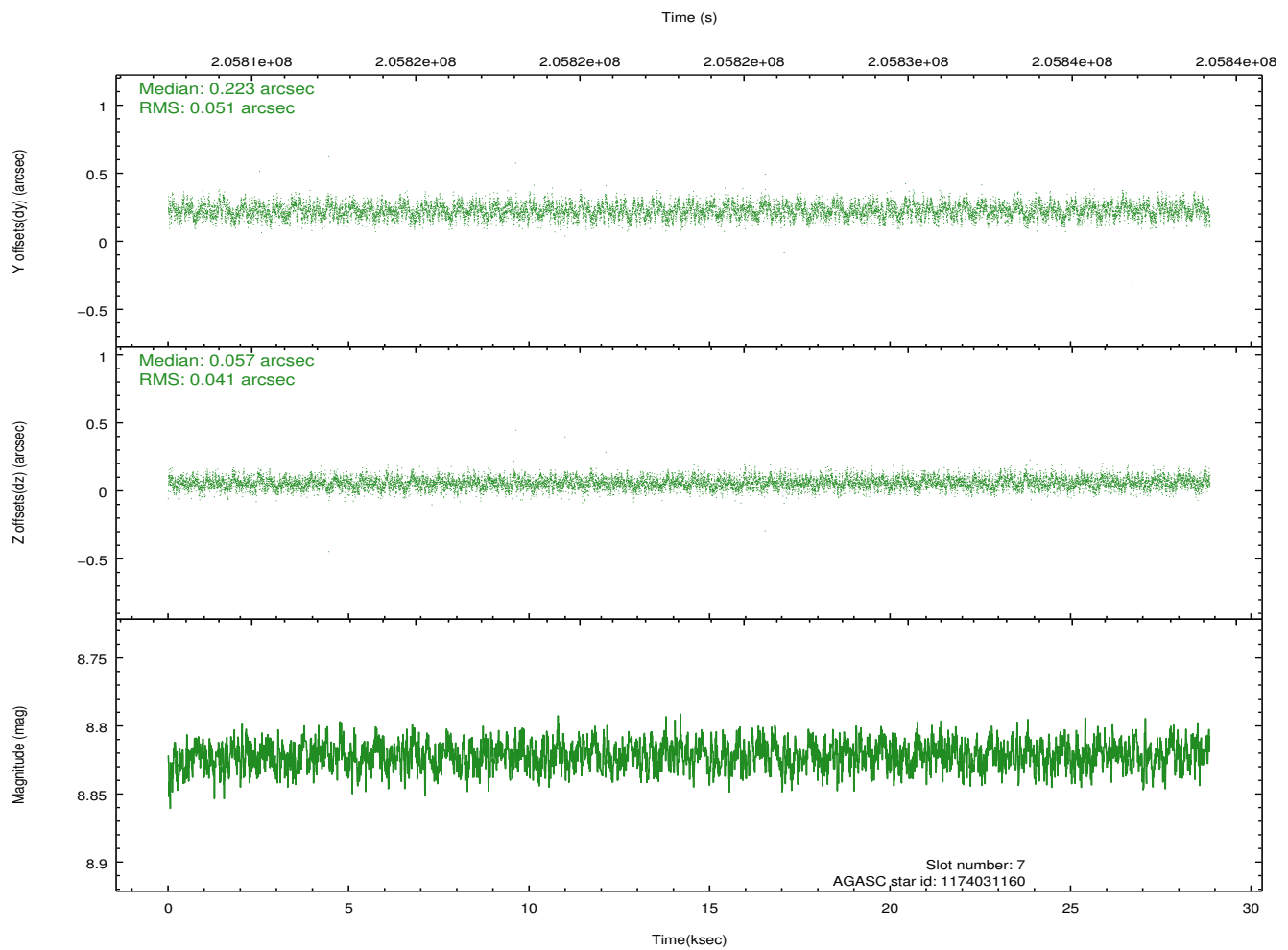
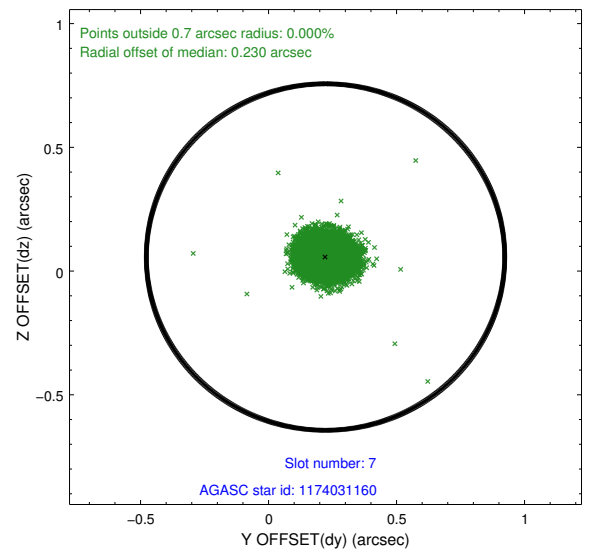
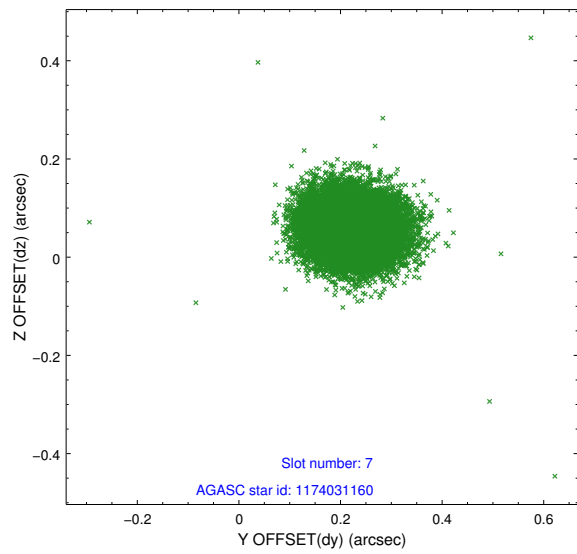
### 2.4.3 Slot 5



### 2.4.4 Slot 6

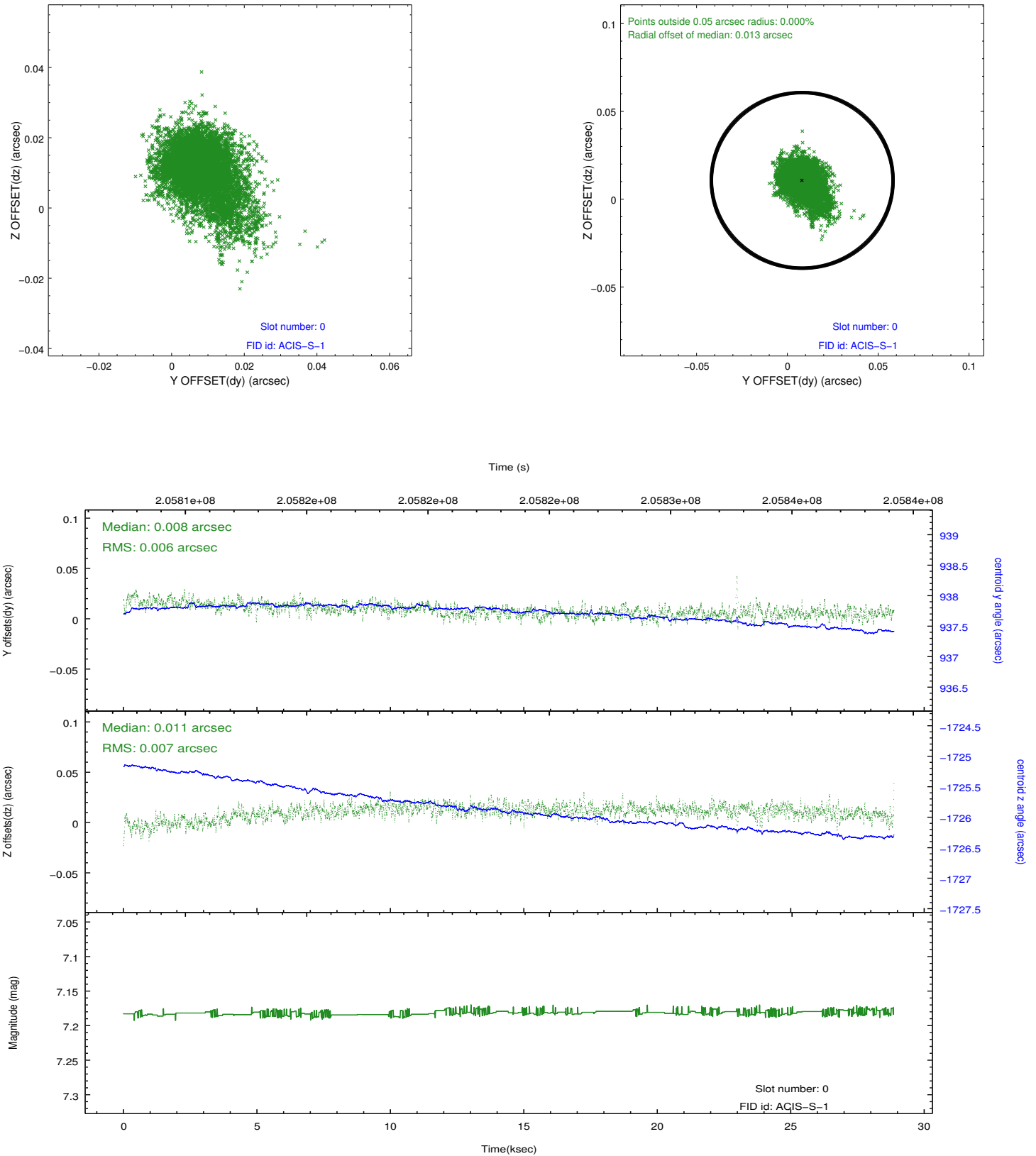


## 2.4.5 Slot 7

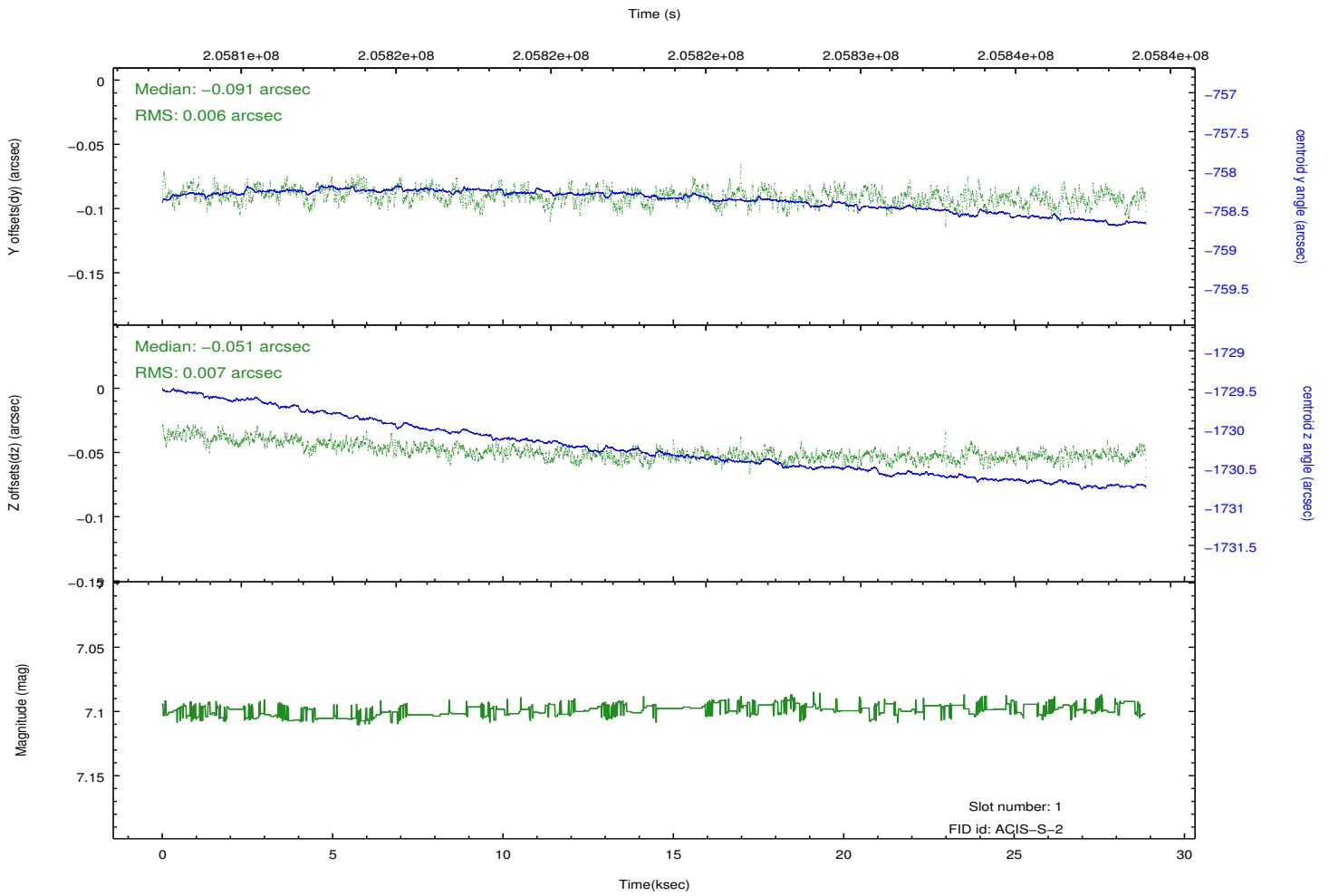
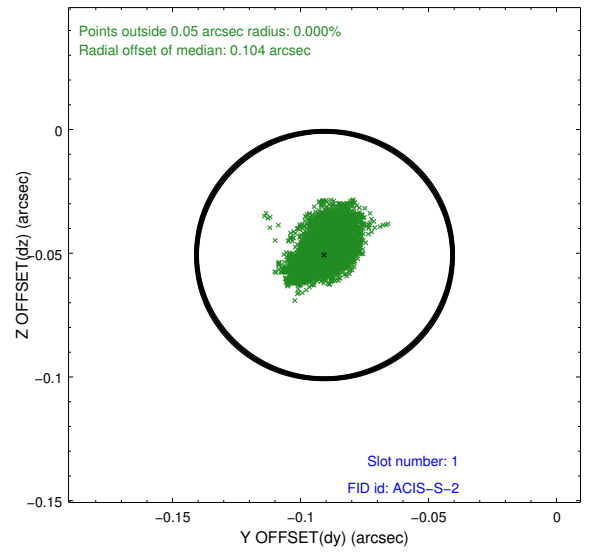
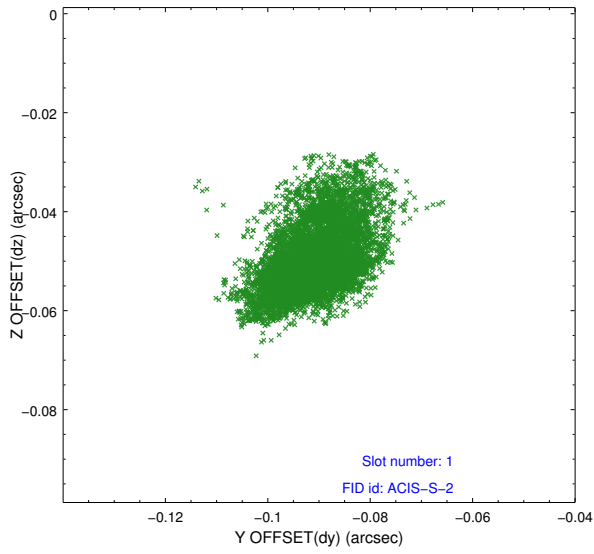


## 2.5 FID Slots

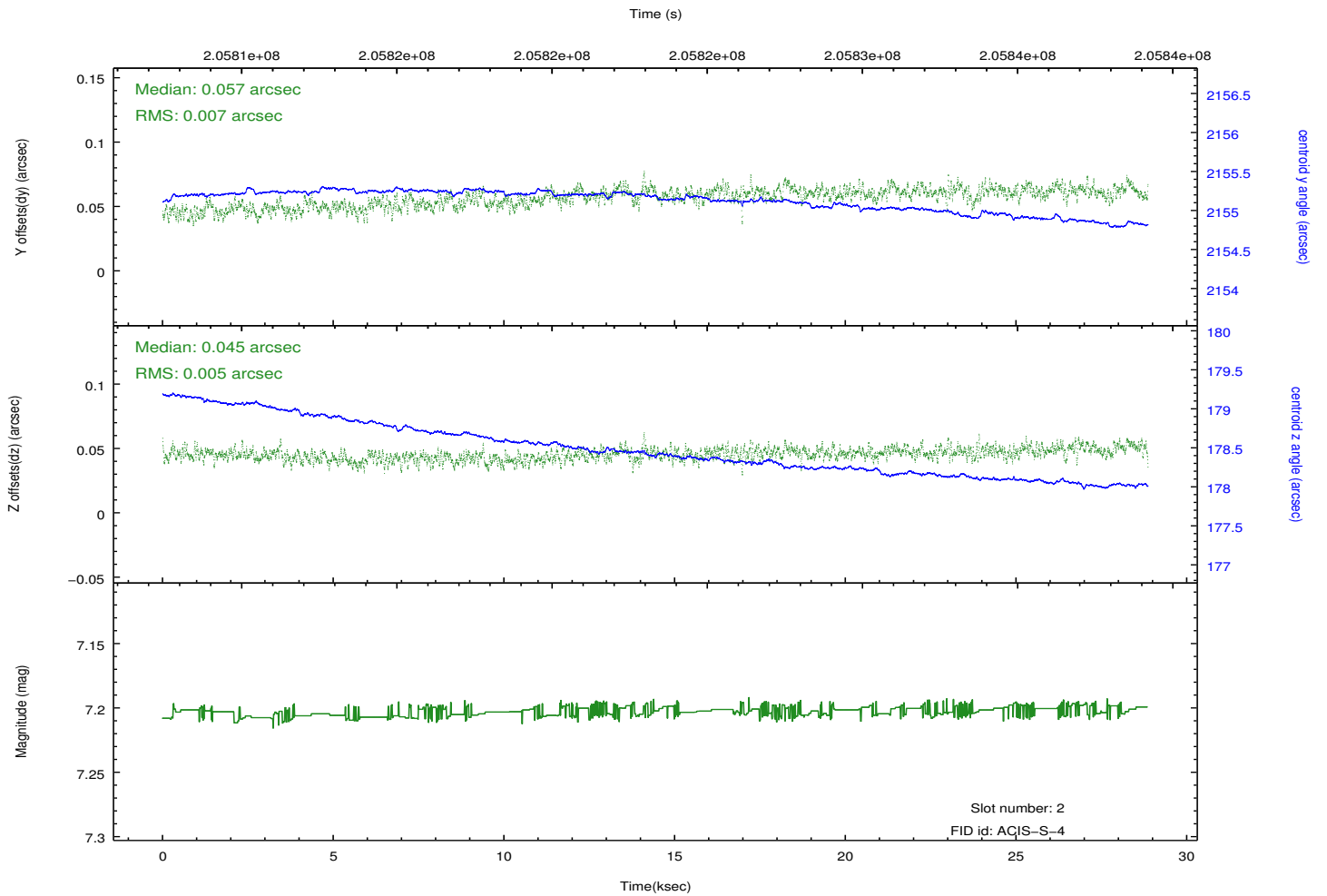
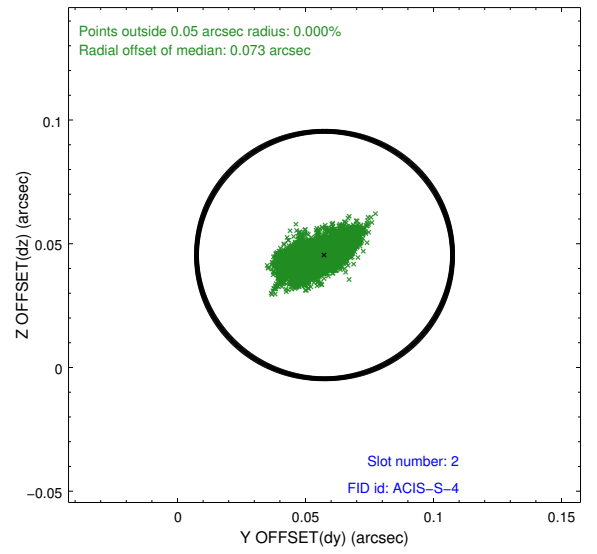
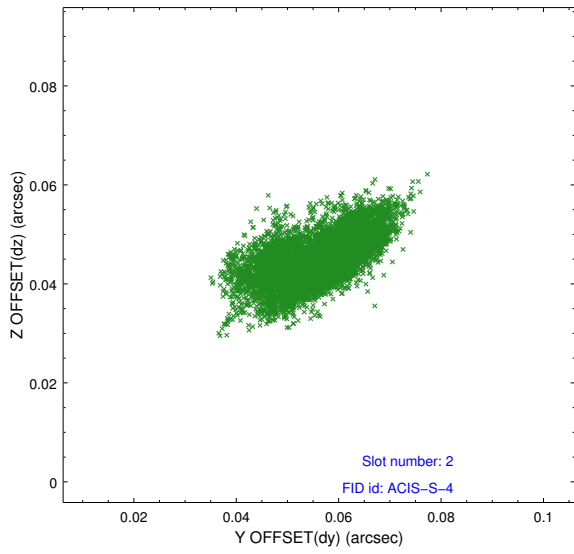
### 2.5.1 Slot 0



## 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)	2013.05.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.859

## A.2 Comments

Original bias file for chip 8 had anomalously high adu-value columns. The anomaly existed in columns 797-848. A replacement bias file was created using the Level 0 event and exposure data to model a reasonable bias map for chip 8.

Only the pixel values in columns 797-848 were replaced. === The technique uses the bias-less FEP event islands as the basic input. The event islands are corrected for overclocking, then arranged in an array according to their CCD columns, with the center pixel in each island excluded. The output bias value for each column is identified as the value for which 62.5% of all the pixels in the column have a higher value. The output is a one dimensional array of bias values, which is replicated to produce the 2-dimensional bias image.