

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4384 - L2 Version 3  
Chandra X-Ray Center

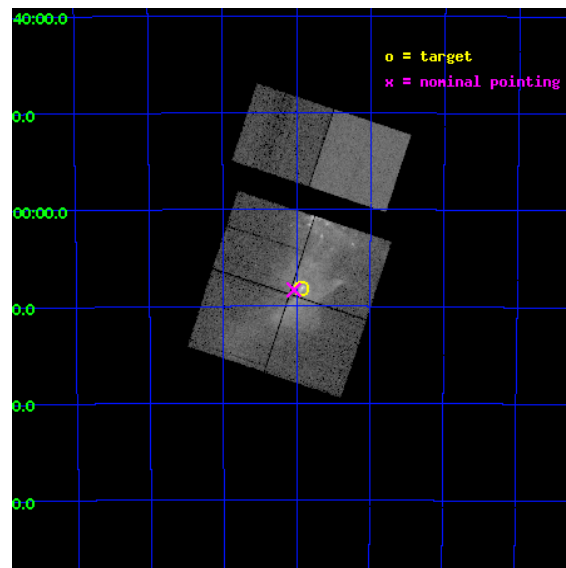
L2 Processing Date : Oct 26 2012

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# 1 Front

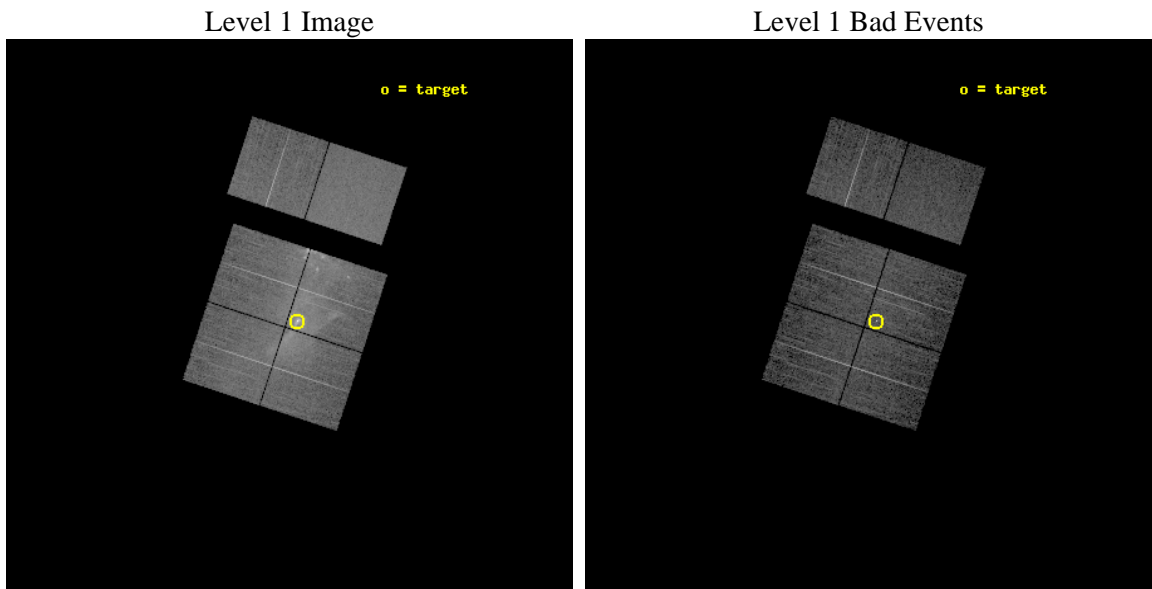
seq_num	500313	Sequence number
obs_id	4384	Observation id
title	MULTI-EPOCH OBSERVATIONS OF PSR B1509-58 AND ITS NEBULA	Proposal t
observer	Prof. Bryan Gaensler	Principal investigator
object	PSR B1509-58	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	228.481667	Observer's specified target RA [deg]
dec_targ	-59.135889	Observer's specified target Dec [deg]
ra_nom	228.50909301223	Nominal RA [deg]
dec_nom	-59.138436680877	Nominal Dec [deg]
roll_nom	18.226659073809	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10019.199962676	Sum of GTIs [s]
livetime	9892.3308199102	Livetime [s]
ontime0	10019.199962676	Sum of GTIs [s]
ontime1	10019.199962676	Sum of GTIs [s]
ontime2	10019.199962676	Sum of GTIs [s]
ontime3	10019.199962676	Sum of GTIs [s]
ontime6	10019.199962676	Sum of GTIs [s]
ontime7	10019.199962676	Sum of GTIs [s]
l2events	216844	Number of level 2 events



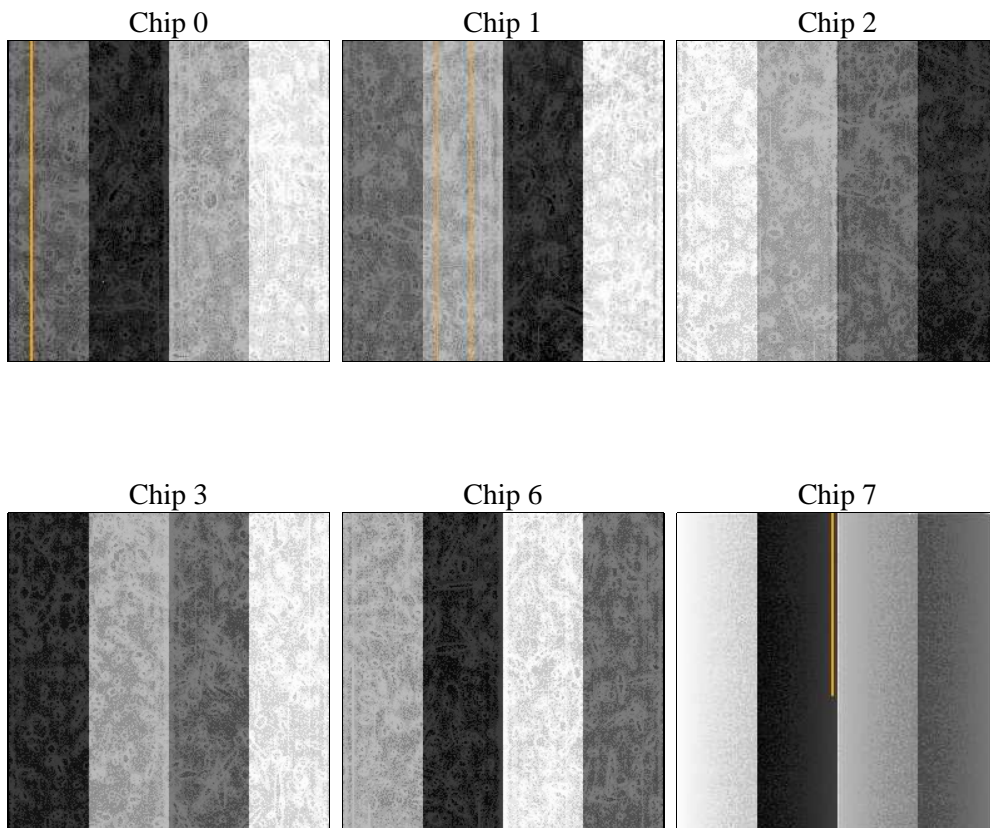
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9902.814000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	10019.199962676	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime0	10019.199962676	Sum of GTIs [s]
date	2012-10-26T21:55:58	Date and time of file creation	ontime1	10019.199962676	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	10019.199962676	Sum of GTIs [s]
			ontime3	10019.199962676	Sum of GTIs [s]
			ontime6	10019.199962676	Sum of GTIs [s]
			ontime7	10019.199962676	Sum of GTIs [s]
			l1events	567461	Number of level 1 events

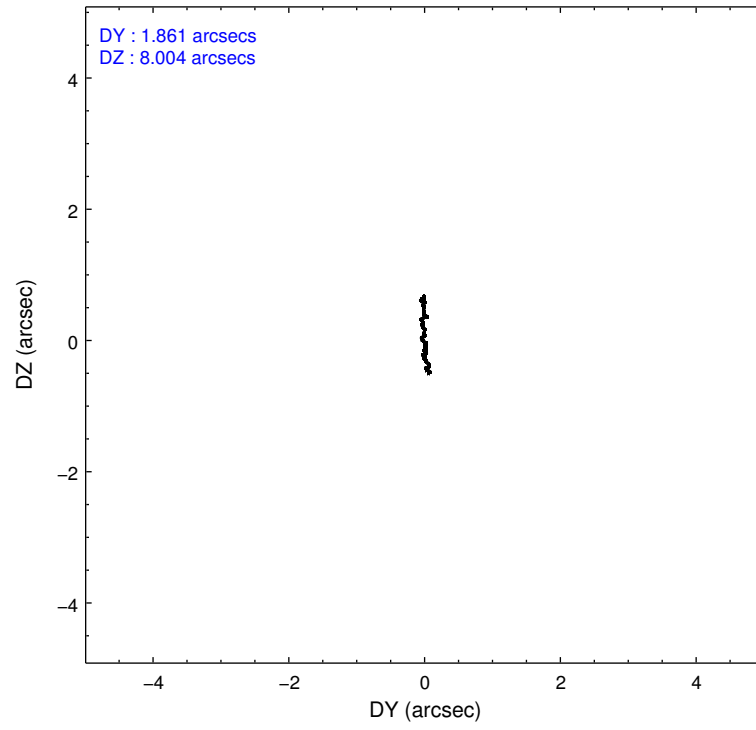
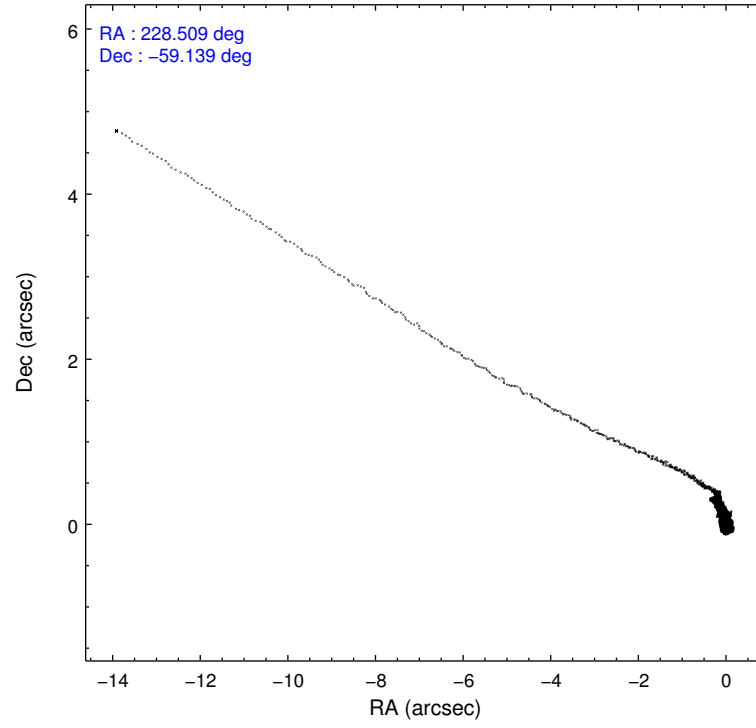
### 2.1.4 Events

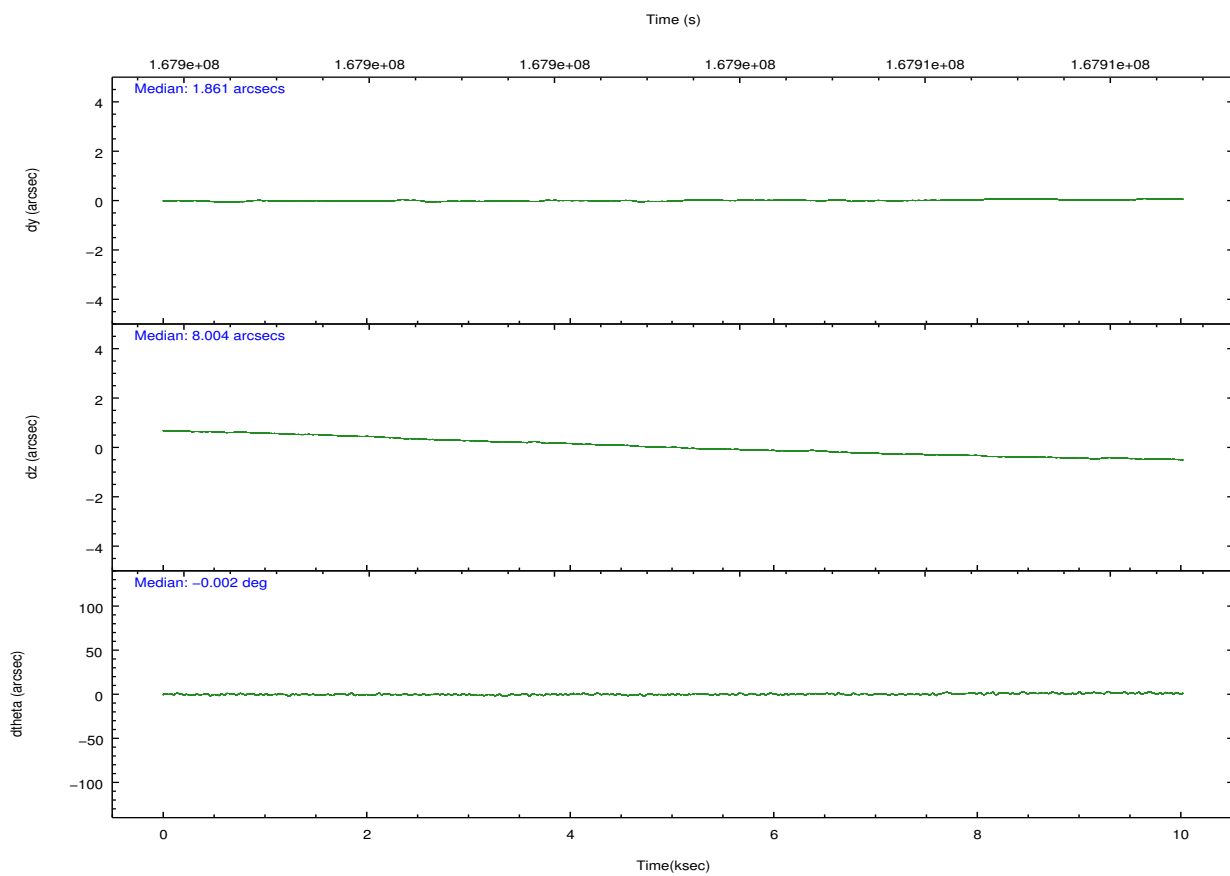
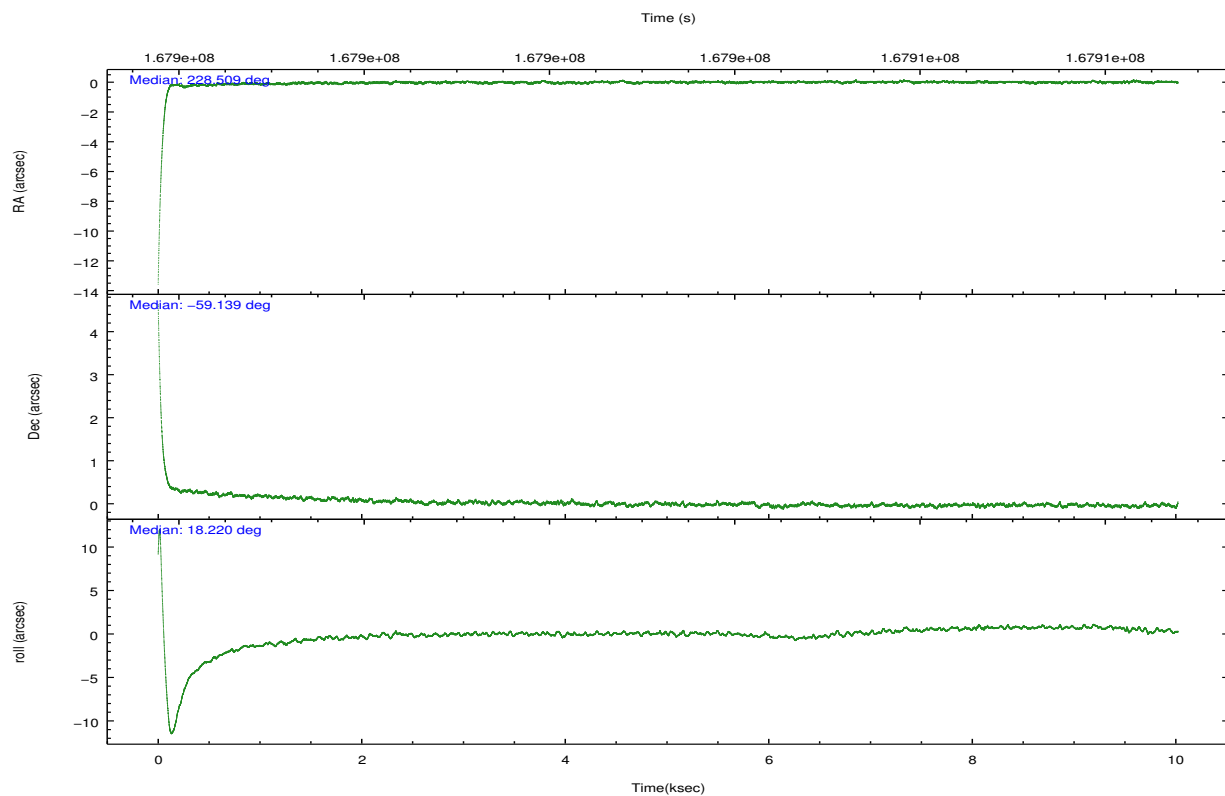
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	82583	84782	90345	128090	77156	104505	grade 0 events	20417	22397	23043	51272	10697	5596
rejected events	53445	51994	59328	60000	60043	53230		24%	26%	25%	40%	13%	5%
rejected %	64%	61%	65%	46%	77%	50%	grade 1 events	99	98	149	642	70	83
								0%	0%	0%	0%	0%	0%
							grade 2 events	4051	4942	3932	8258	2770	10039
								4%	5%	4%	6%	3%	9%
							grade 3 events	1552	1778	1556	3004	1102	4612
								1%	2%	1%	2%	1%	4%
							grade 4 events	1499	1686	1479	3018	1101	4448
								1%	1%	1%	2%	1%	4%
							grade 5 events	2649	2693	2642	3520	3027	8471
								3%	3%	2%	2%	3%	8%
							grade 6 events	2495	2817	2188	3942	2225	28266
								3%	3%	2%	3%	2%	27%
							grade 7 events	49821	48371	55356	54434	56164	42990
								60%	57%	61%	42%	72%	41%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	228.473708	228.5090930122277	Subarray requested	NONE	NONE
[deg] Pointing Dec	-59.158951	-59.13843668087686	Alternating exposures requested	N	N
[deg] Pointing Roll	17.987554	18.22665907380902	[s] Primary exposure time	0.000000	3.2
[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)	167898390.184000	167897193.58084			
Observation start date	2003-04-28T06:25:26	2003-04-28T06:06:33			
[s] Observation end time (MET)	167908292.184000	167908606.95633			
Observation end date	2003-04-28T09:10:28	2003-04-28T09:16:46			
Read mode	TIMED	TIMED			

## 2.3 Aspect



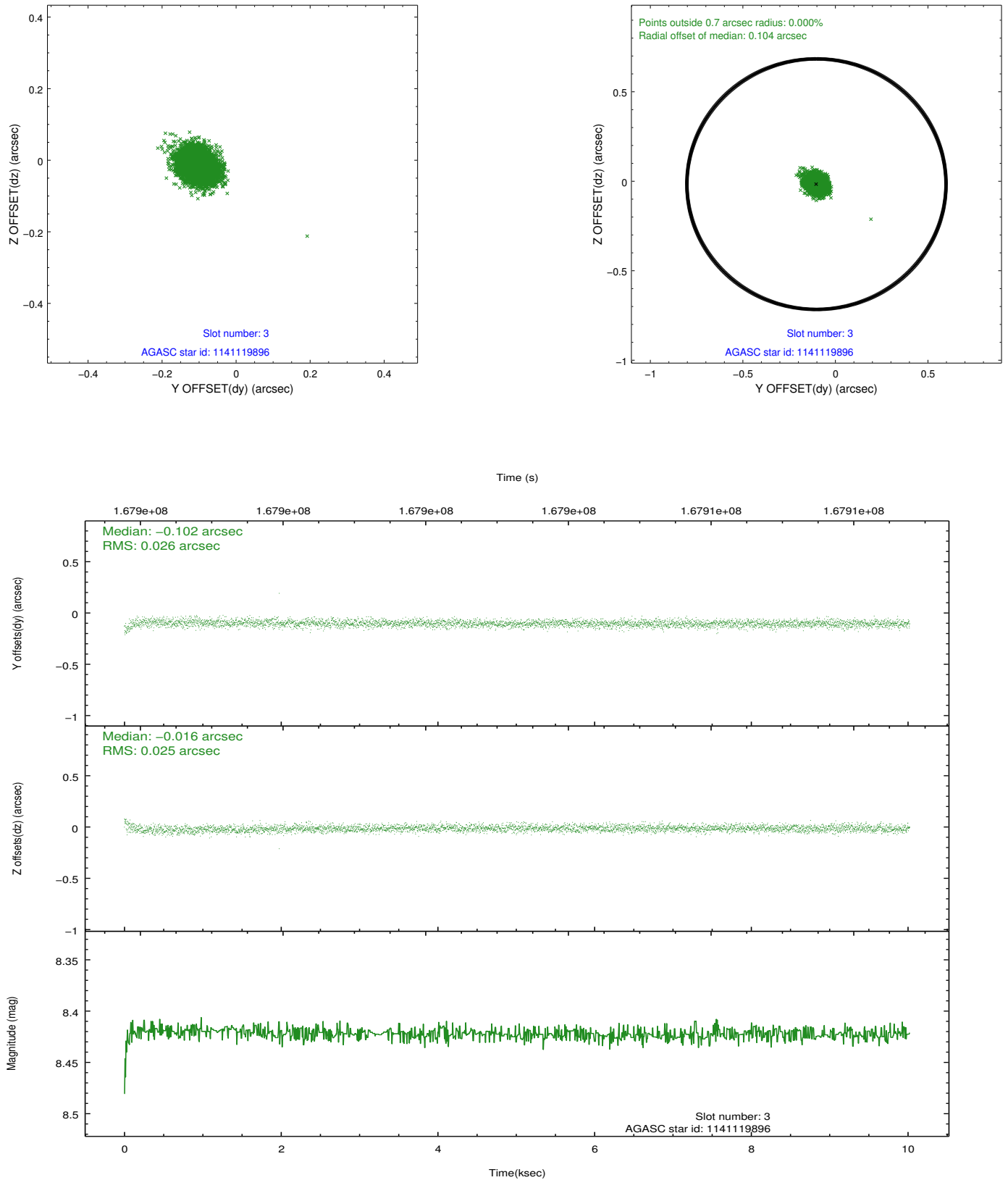


### Slot Statistics

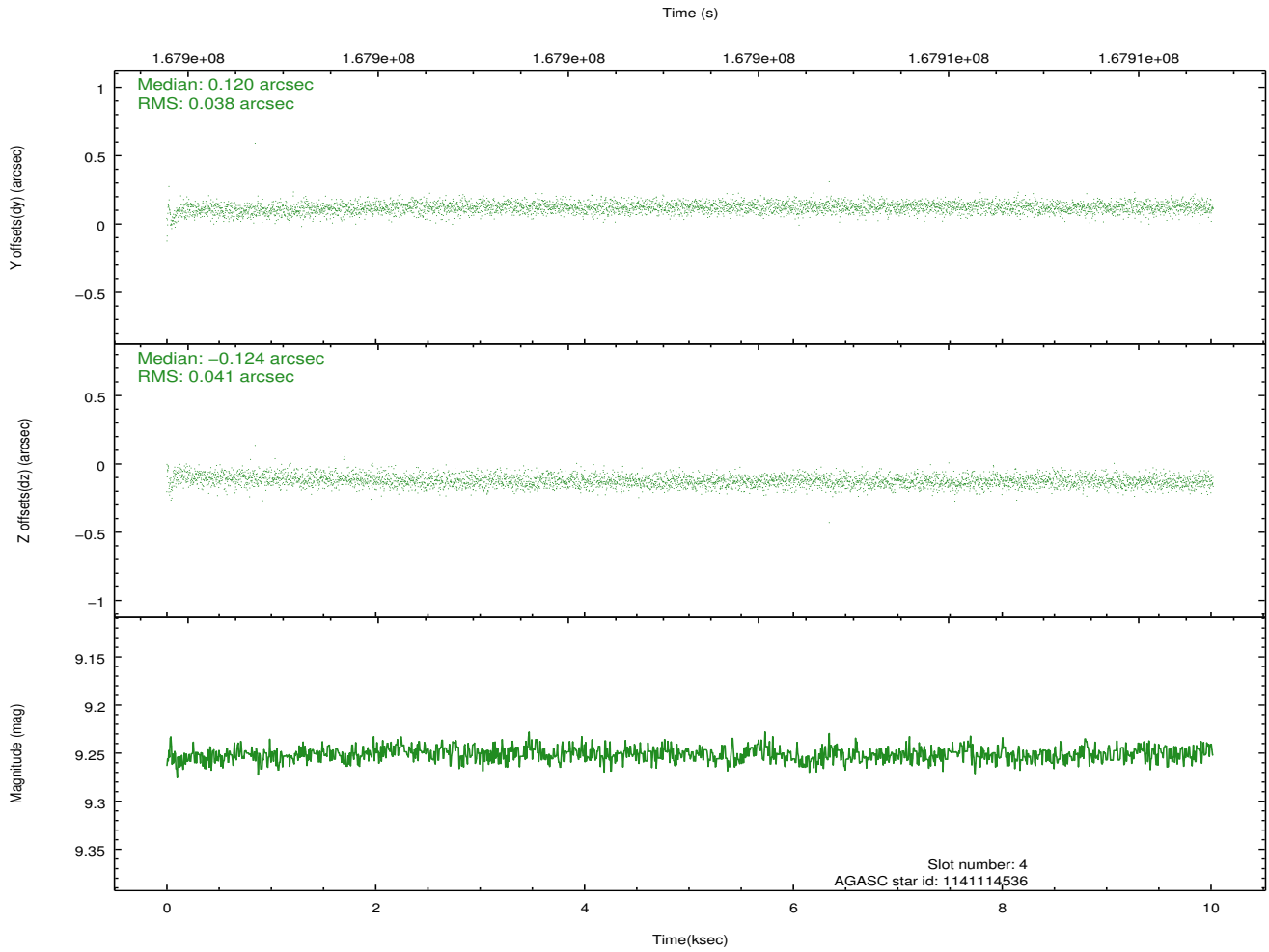
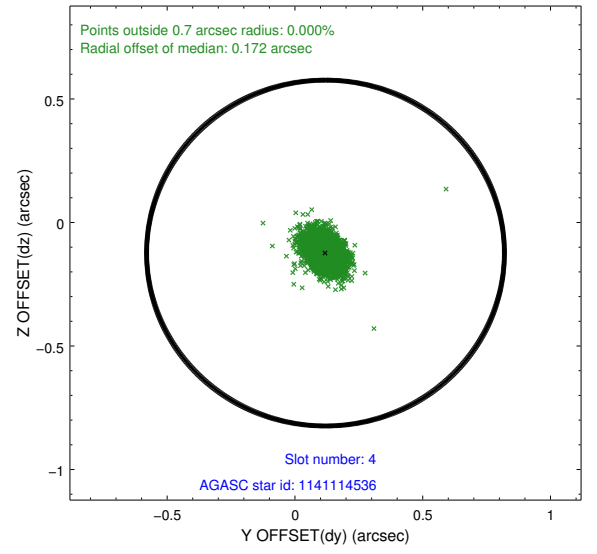
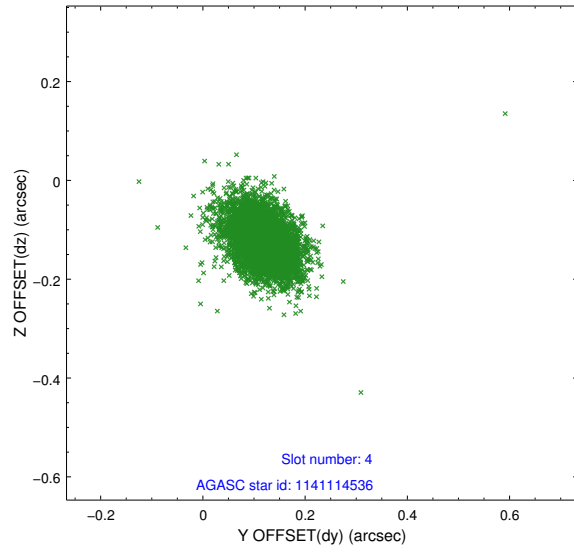
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	2445	-0.058	0.053	0.009	0.015	0.000000	0.000000	937.90	-831.42
1	FID	ACIS-I-4	7.19	2445	-0.004	0.042	0.012	0.018	0.000000	0.000000	2158.30	1068.11
2	FID	ACIS-I-6	7.26	2445	-0.034	-0.029	0.013	0.024	0.000000	0.000000	404.52	1710.84
3	GUIDE	1141119896	8.42	4890	-0.102	-0.016	0.038	0.063	229.637327	-59.405643	1747.98	-1520.55
4	GUIDE	1141114536	9.25	4889	0.120	-0.124	0.057	0.098	227.067565	-58.699394	-1998.58	2358.85
5	GUIDE	1141114296	9.22	4889	0.109	-0.094	0.057	0.099	227.097332	-58.697525	-1944.11	2350.03
6	GUIDE	1141116760	9.46	4889	-0.029	0.018	0.068	0.113	229.350077	-58.445284	2359.94	1924.43
7	GUIDE	1141116384	9.43	4886	-0.096	0.214	0.063	0.105	229.578291	-59.437206	1609.25	-1592.24

## 2.4 Star Slots

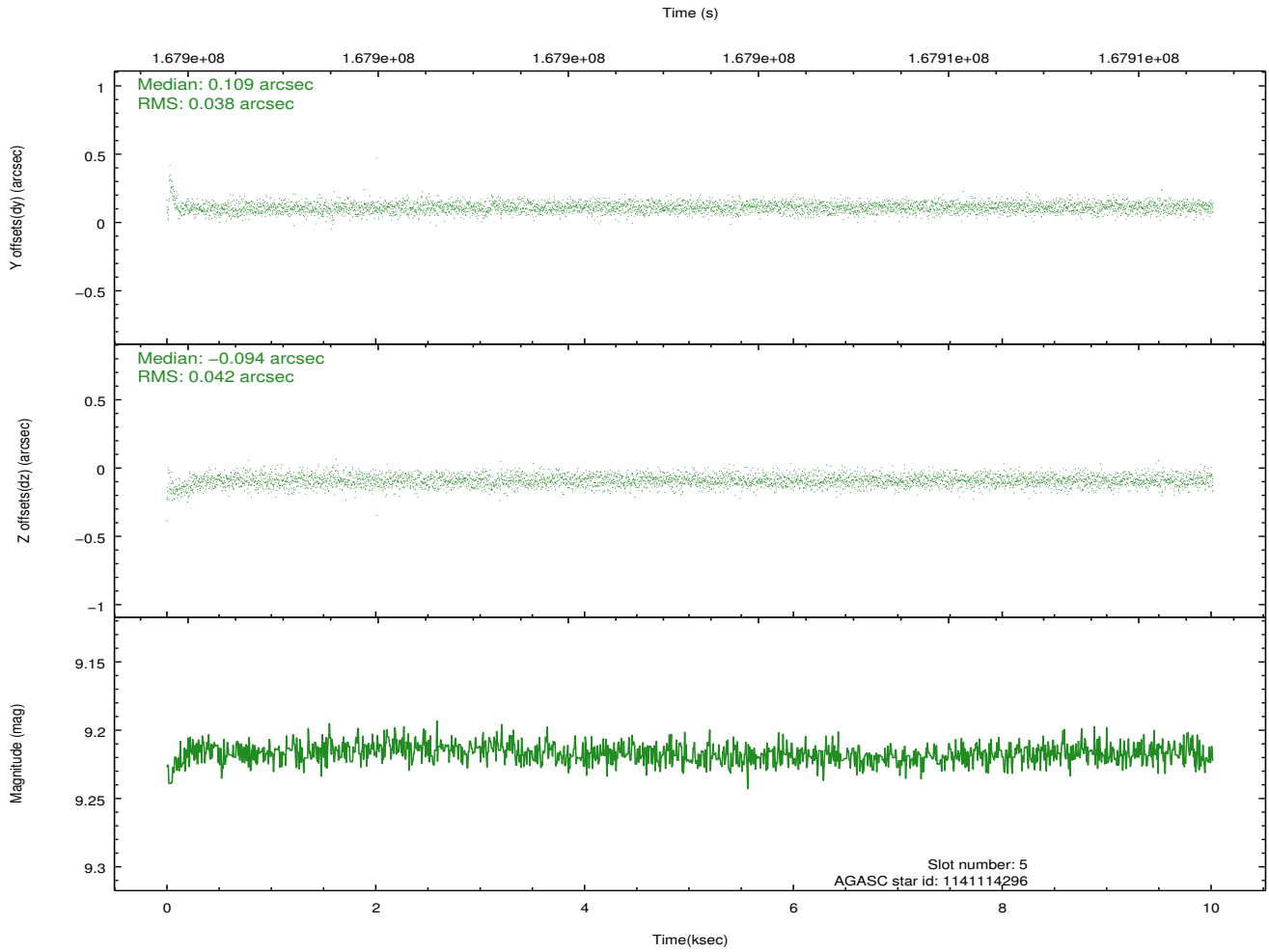
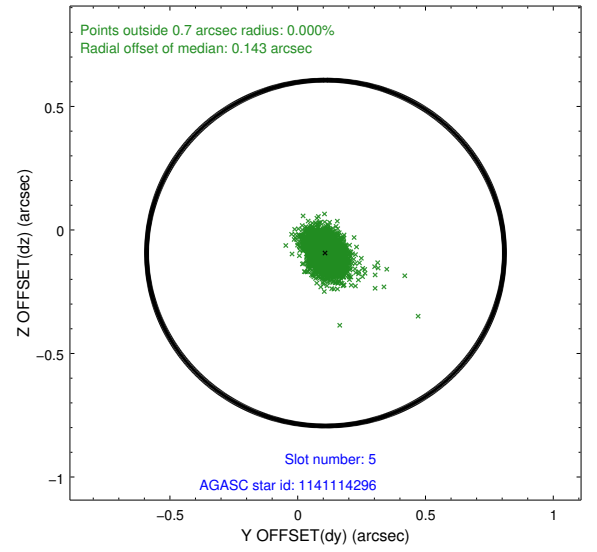
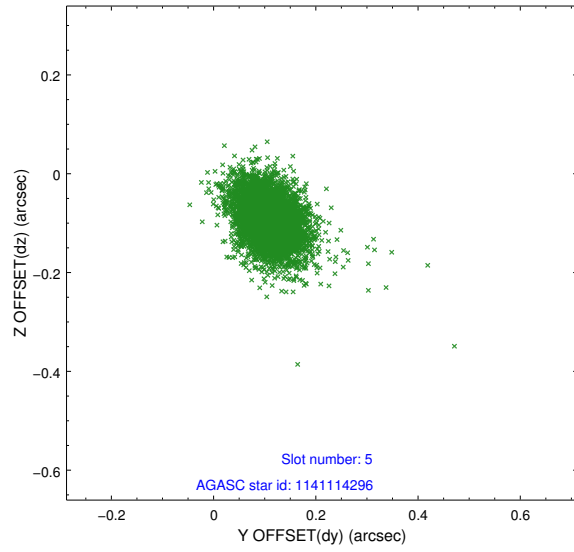
### 2.4.1 Slot 3



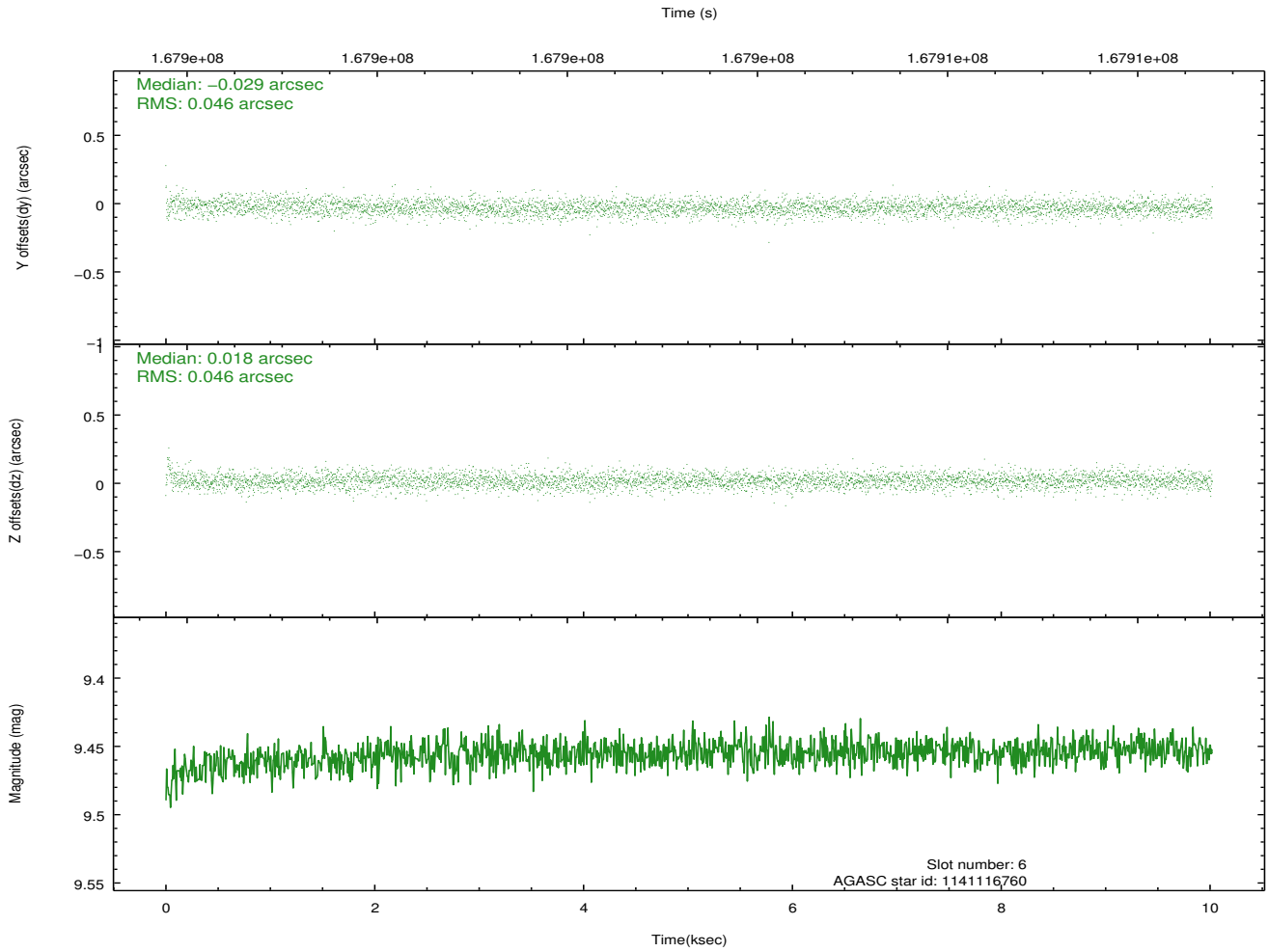
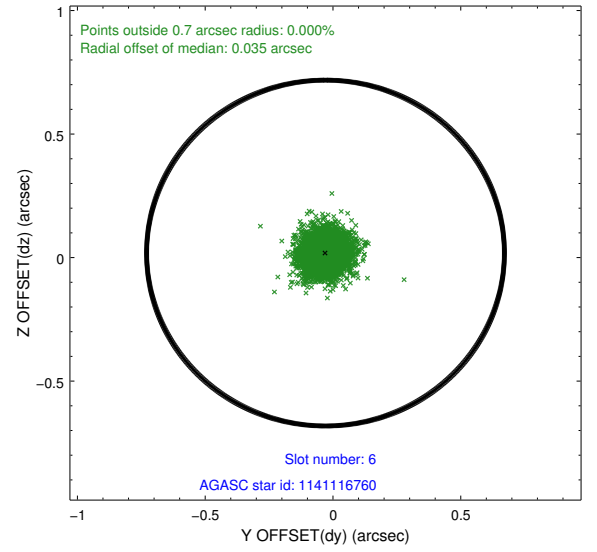
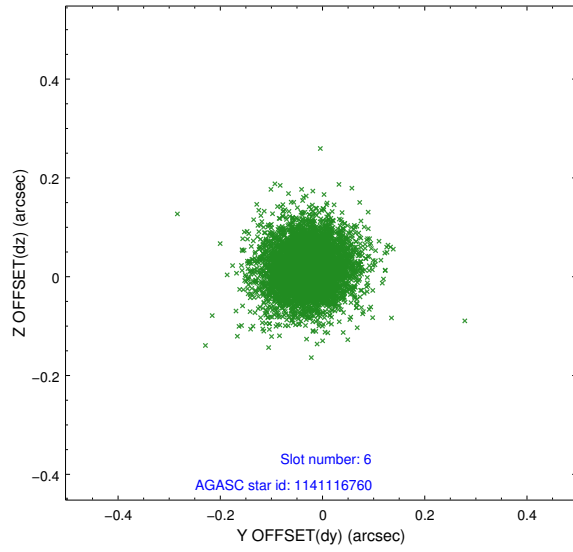
## 2.4.2 Slot 4



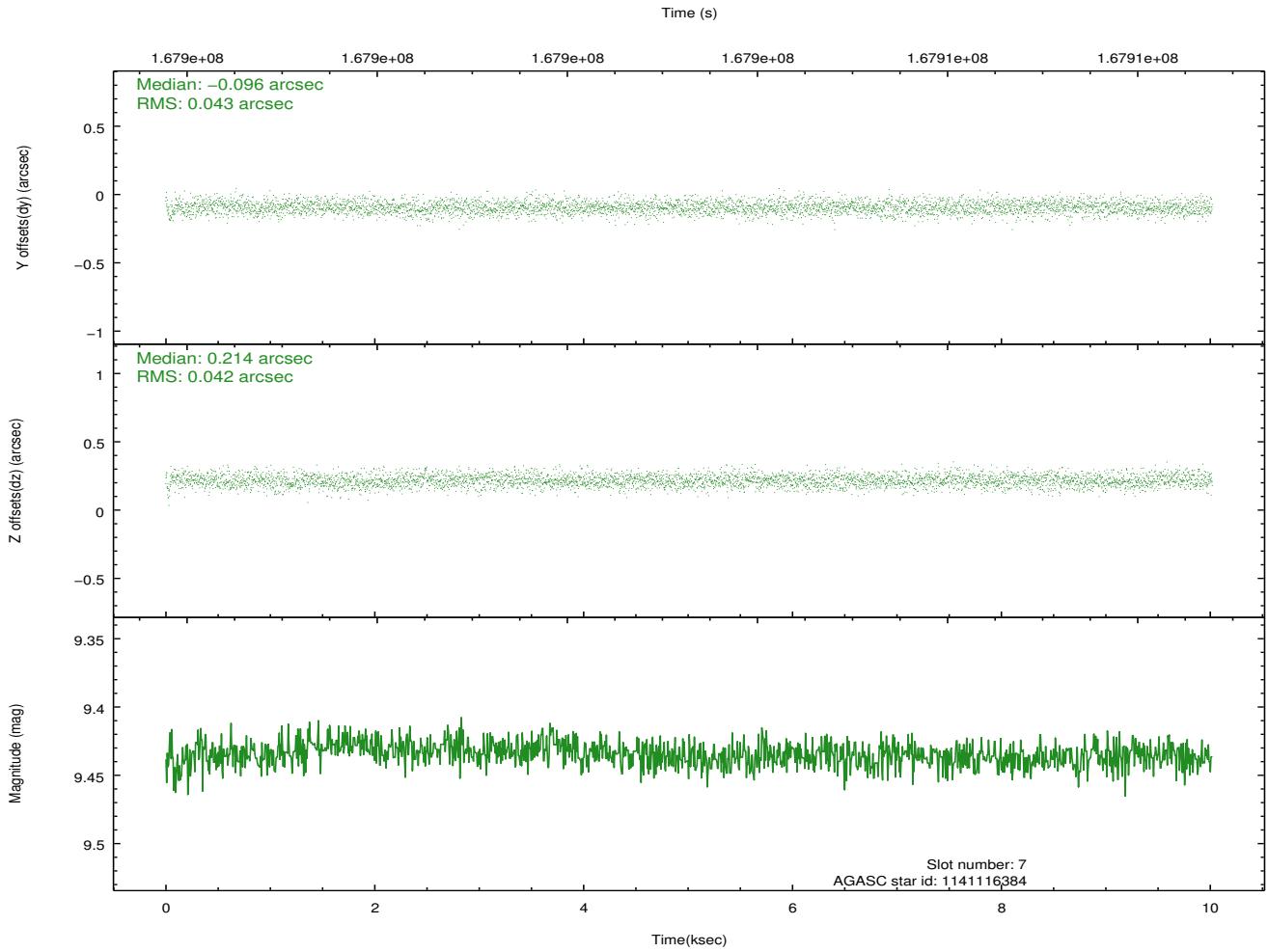
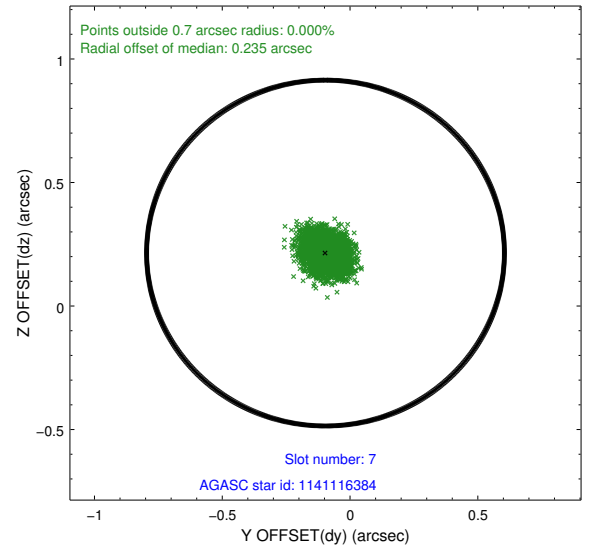
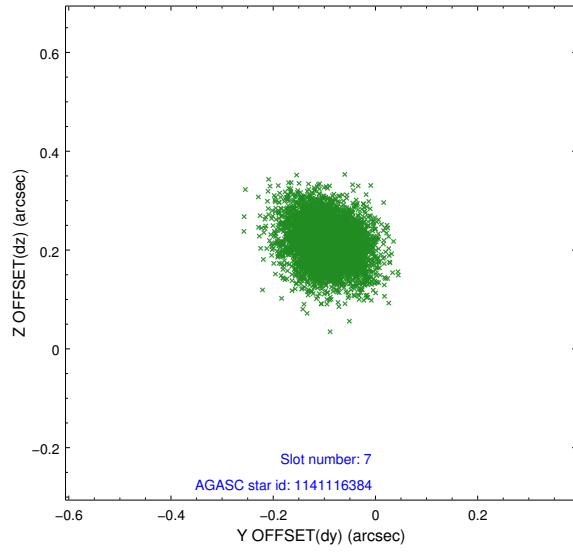
### 2.4.3 Slot 5



## 2.4.4 Slot 6

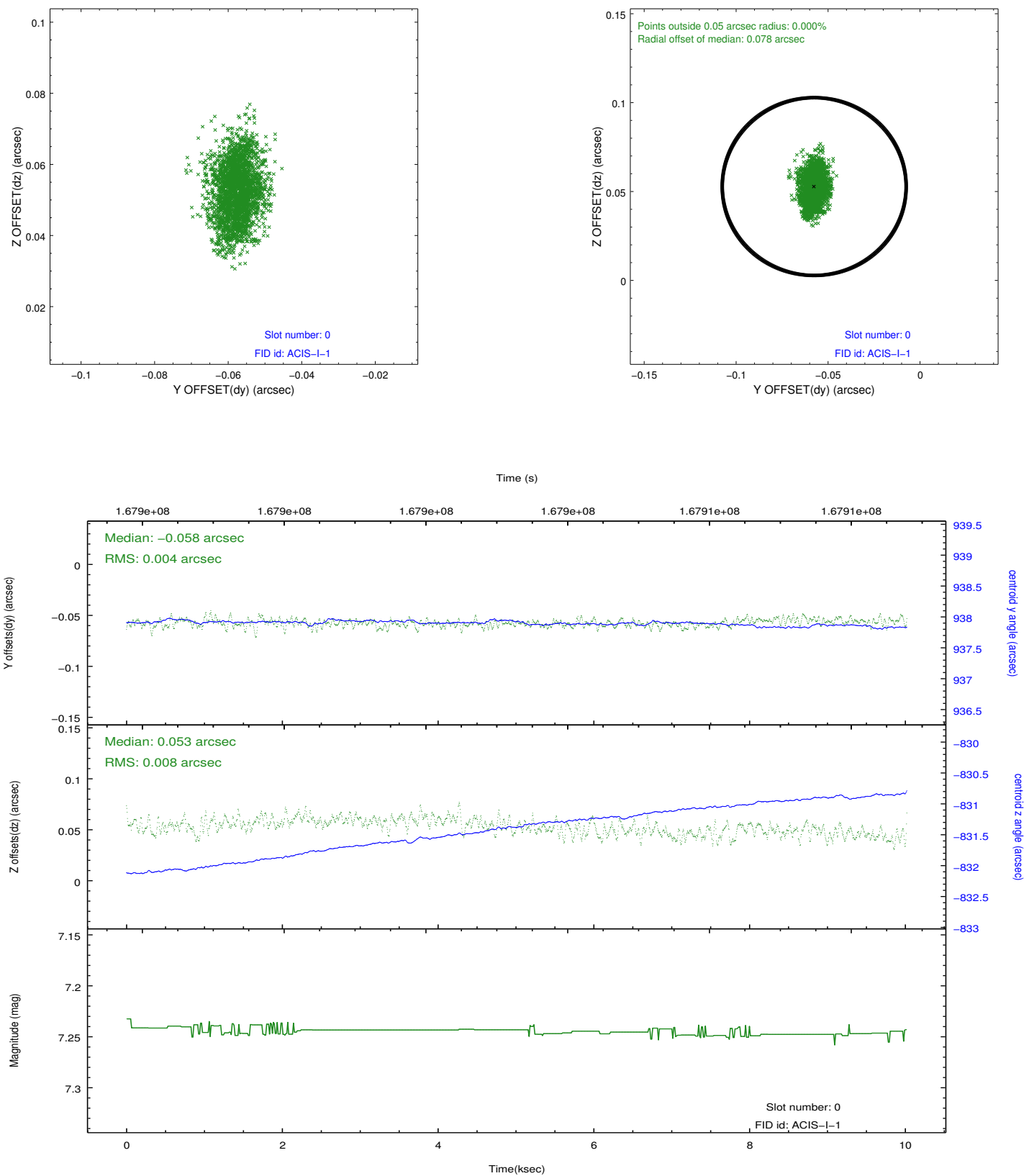


## 2.4.5 Slot 7

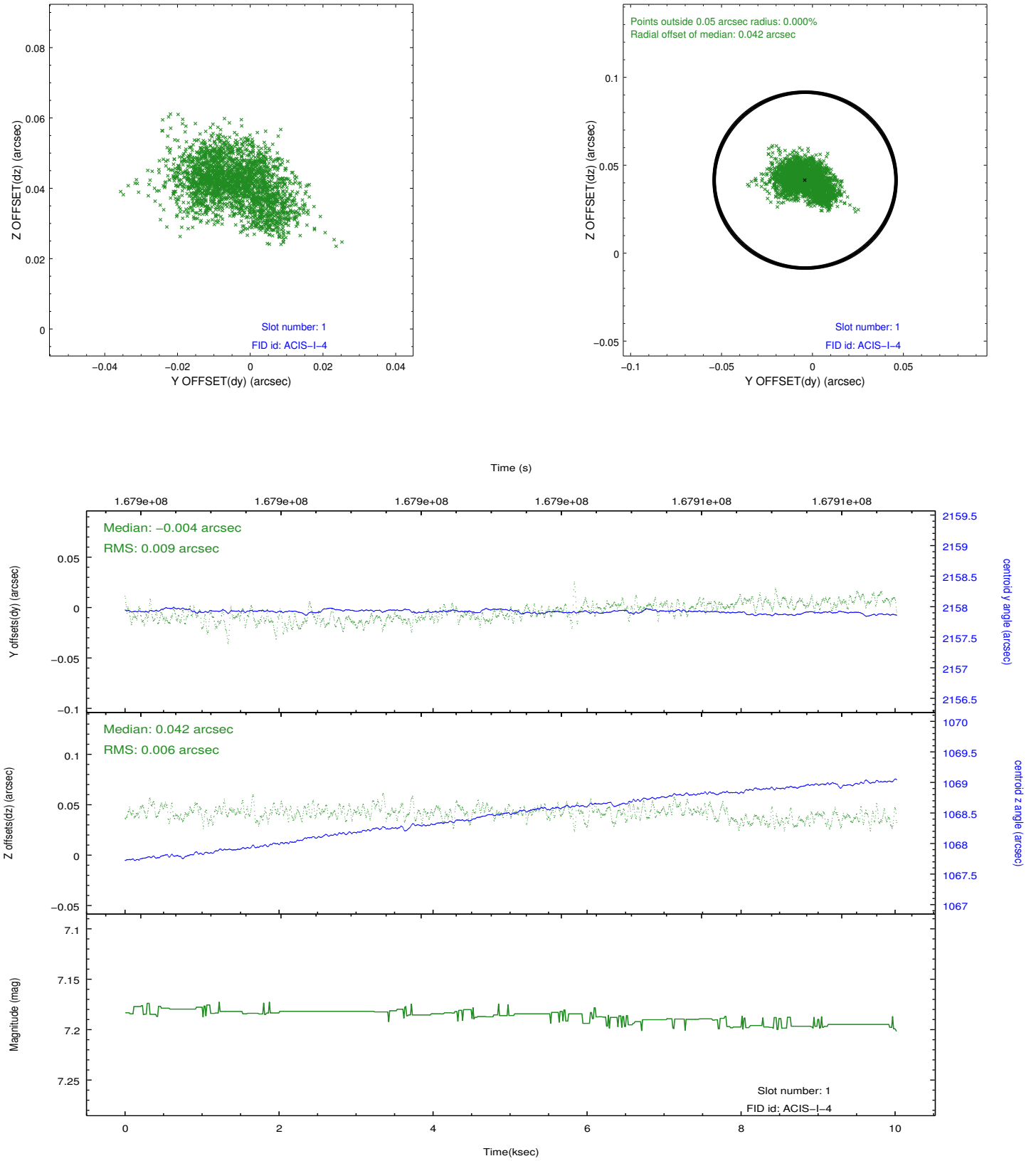


## 2.5 FID Slots

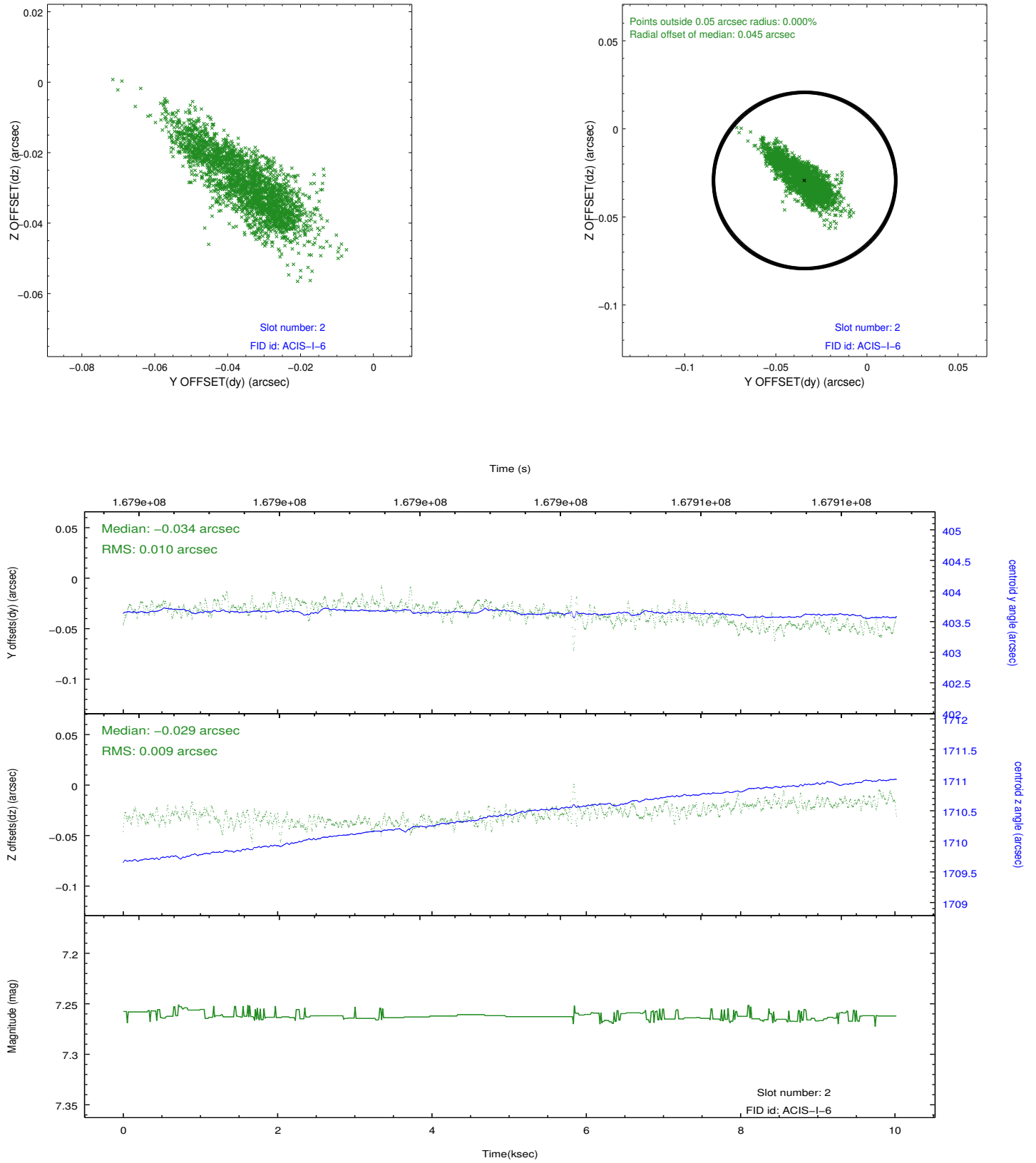
### 2.5.1 Slot 0



## 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)	2013.01.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.019

## A.2 Comments

This observation was taken with NO dither due to an error in the spacecraft load. The pixel-to-pixel variations will be larger than they would be in dither mode. The chip boundaries are very sharp. Columns of pixels with little or not sensitivity on the CCD chips is not unusual. They are not usually seen when an observation is dithered.