

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 16441 - L2 Version 3  
Chandra X-Ray Center

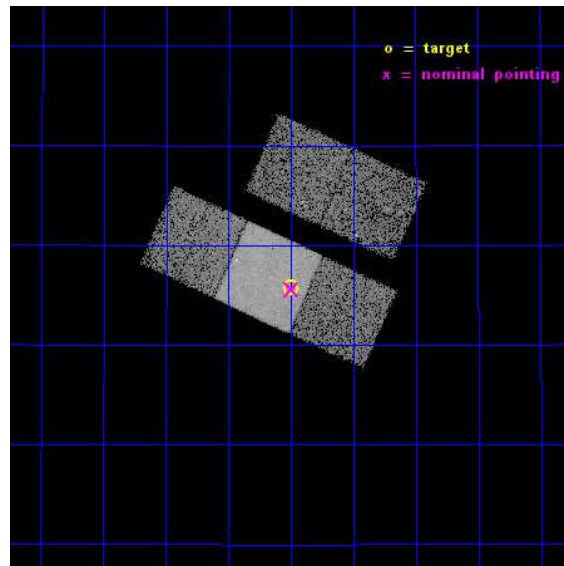
L2 Processing Date : Dec 8 2014

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# 1 Front

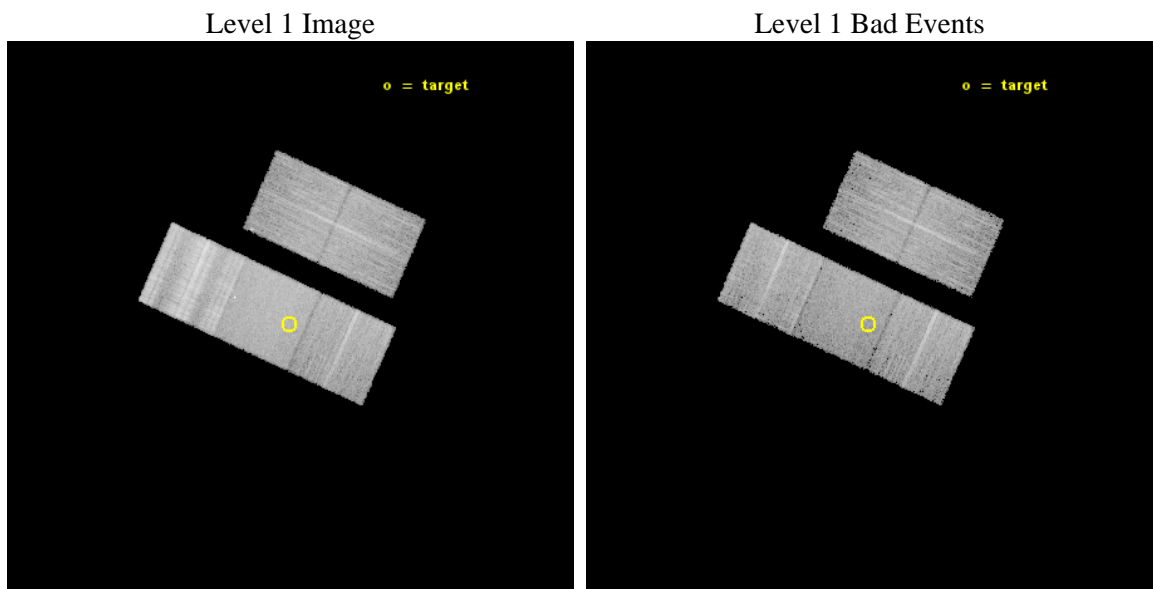
seq_num	502265	Sequence number
obs_id	16441	Observation id
title	GRB130831A: the birth of a magnetar	Proposal title
observer	Dr Massimiliano De Pasquale	Principal investigator
object	GRB130831A	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	358.624583	Observer's specified target RA [deg]
dec_targ	29.4295	Observer's specified target Dec [deg]
ra_nom	358.62405542766	Nominal RA [deg]
dec_nom	29.426489735255	Nominal Dec [deg]
roll_nom	204.24305744238	Nominal Roll [deg]
revision	3	Processing version of data
ontime	15069.100115895	Sum of GTIs [s]
livetime	14872.211229171	Livetime [s]
ontime2	15069.100115895	Sum of GTIs [s]
ontime3	15069.100115895	Sum of GTIs [s]
ontime6	15069.100115895	Sum of GTIs [s]
ontime7	15069.100115895	Sum of GTIs [s]
ontime8	15069.100115895	Sum of GTIs [s]
l2events	75617	Number of level 2 events



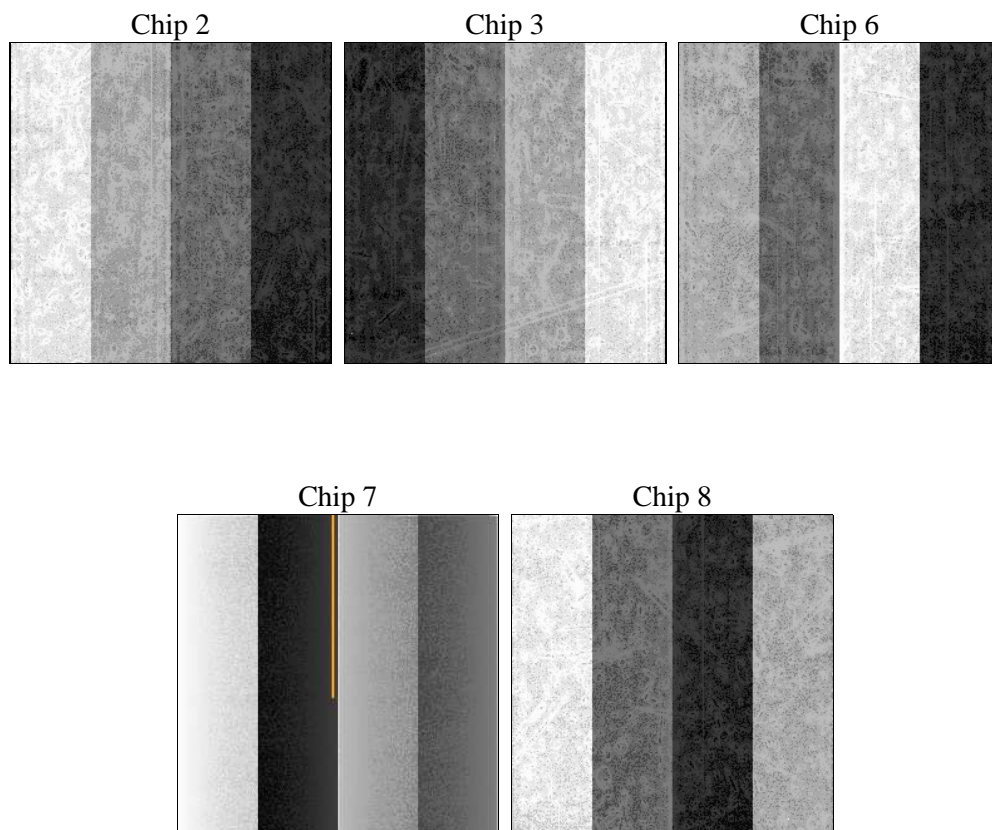
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	15069.100115895	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	15069.100115895	Sum of GTIs [s]
date	2014-12-08T17:19:36	Date and time of file creation	ontime3	15069.100115895	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	15069.100115895	Sum of GTIs [s]
			ontime7	15069.100115895	Sum of GTIs [s]
			ontime8	15069.100115895	Sum of GTIs [s]
			l1events	477657	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	74712	74102	77165	101306	150372
rejected events	64904	65577	67084	57059	76648
rejected %	86%	88%	86%	56%	50%

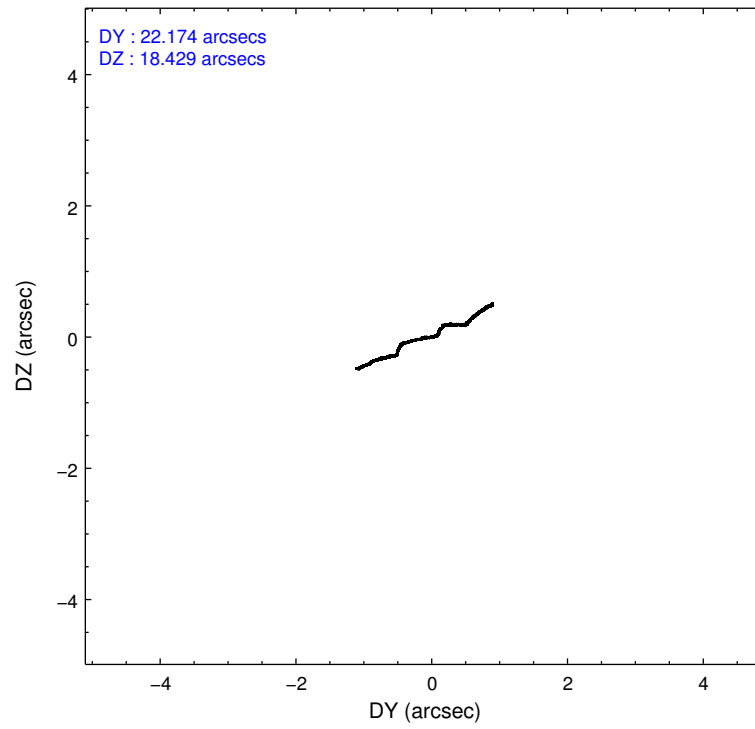
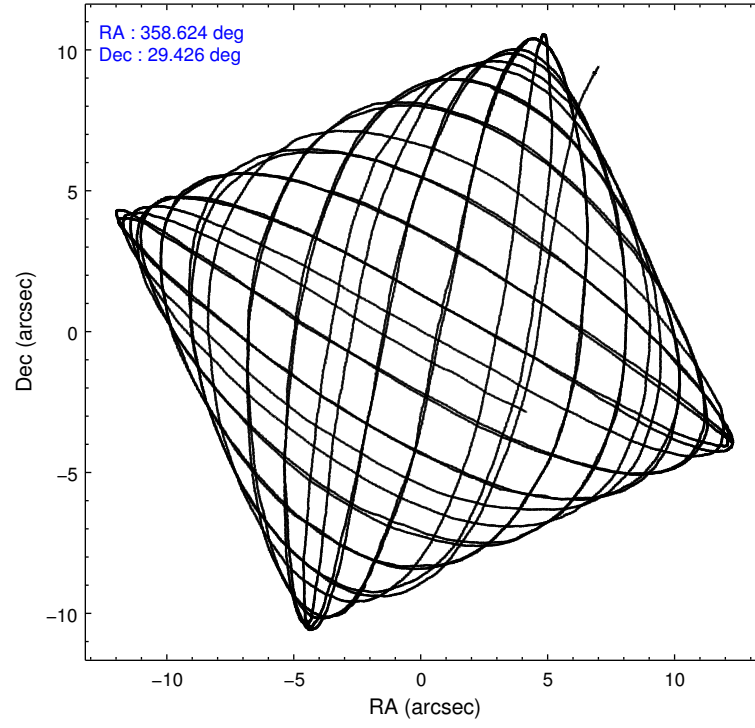
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	3977	3192	3953	4136	25690
	5%	4%	5%	4%	17%
grade 1 events	46	40	55	174	217
	0%	0%	0%	0%	0%
grade 2 events	2412	1853	2336	9259	10065
	3%	2%	3%	9%	6%
grade 3 events	754	871	880	3778	12793
	1%	1%	1%	3%	8%
grade 4 events	1059	882	875	3746	11853
	1%	1%	1%	3%	7%
grade 5 events	3188	3727	3684	10062	5912
	4%	5%	4%	9%	3%
grade 6 events	1610	1727	2037	23336	13326
	2%	2%	2%	23%	8%
grade 7 events	61666	61810	63345	46815	70516
	82%	83%	82%	46%	46%

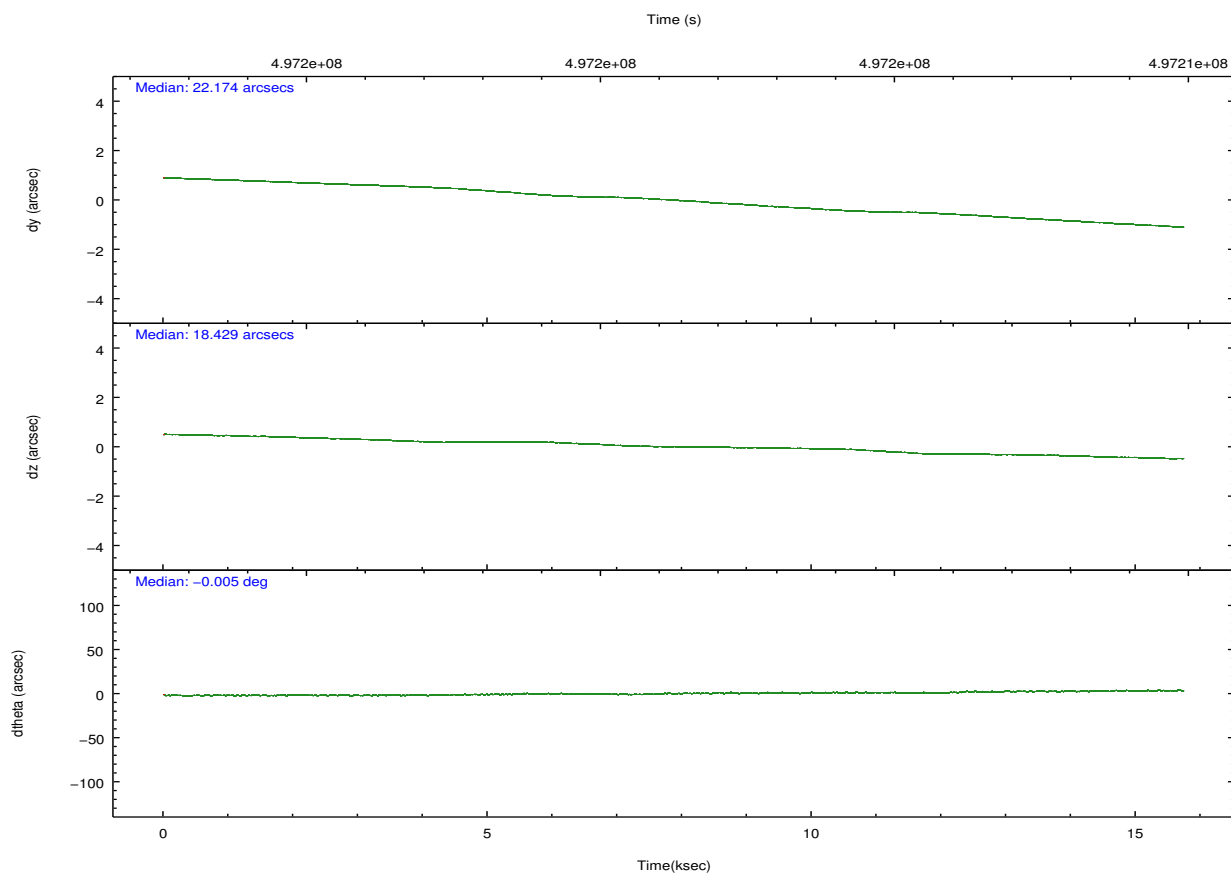
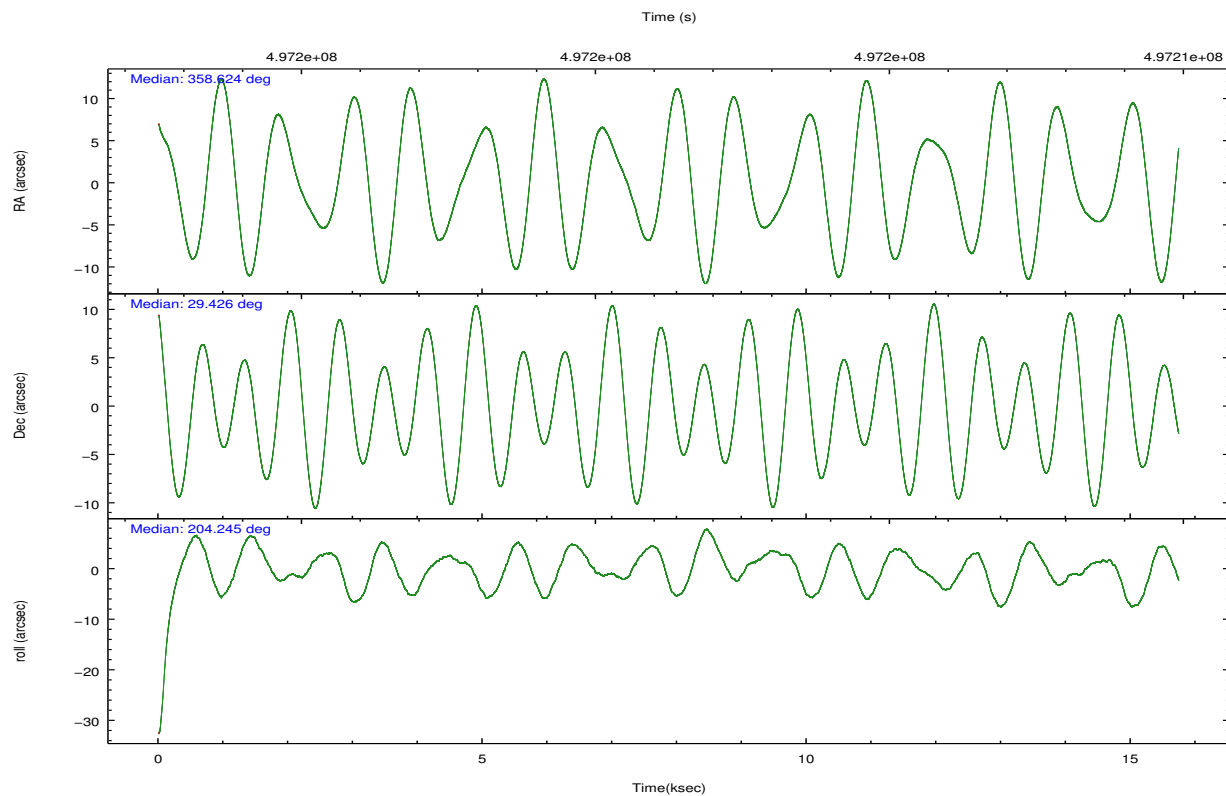


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	358.642088	358.6240554276634	Subarray requested	NONE	NONE
[deg] Pointing Dec	29.448908	29.42648973525495	Alternating exposures requested	N	N
[deg] Pointing Roll	204.077569	204.2430574423808	[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	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	497194125.184000	497192908.80797			
Observation start date	2013-10-03T13:27:38	2013-10-03T13:08:28			
[s] Observation end time (MET)	497209125.184000	497210067.3089			
Observation end date	2013-10-03T17:37:38	2013-10-03T17:54:27			
Read mode	TIMED	TIMED			

## 2.3 Aspect



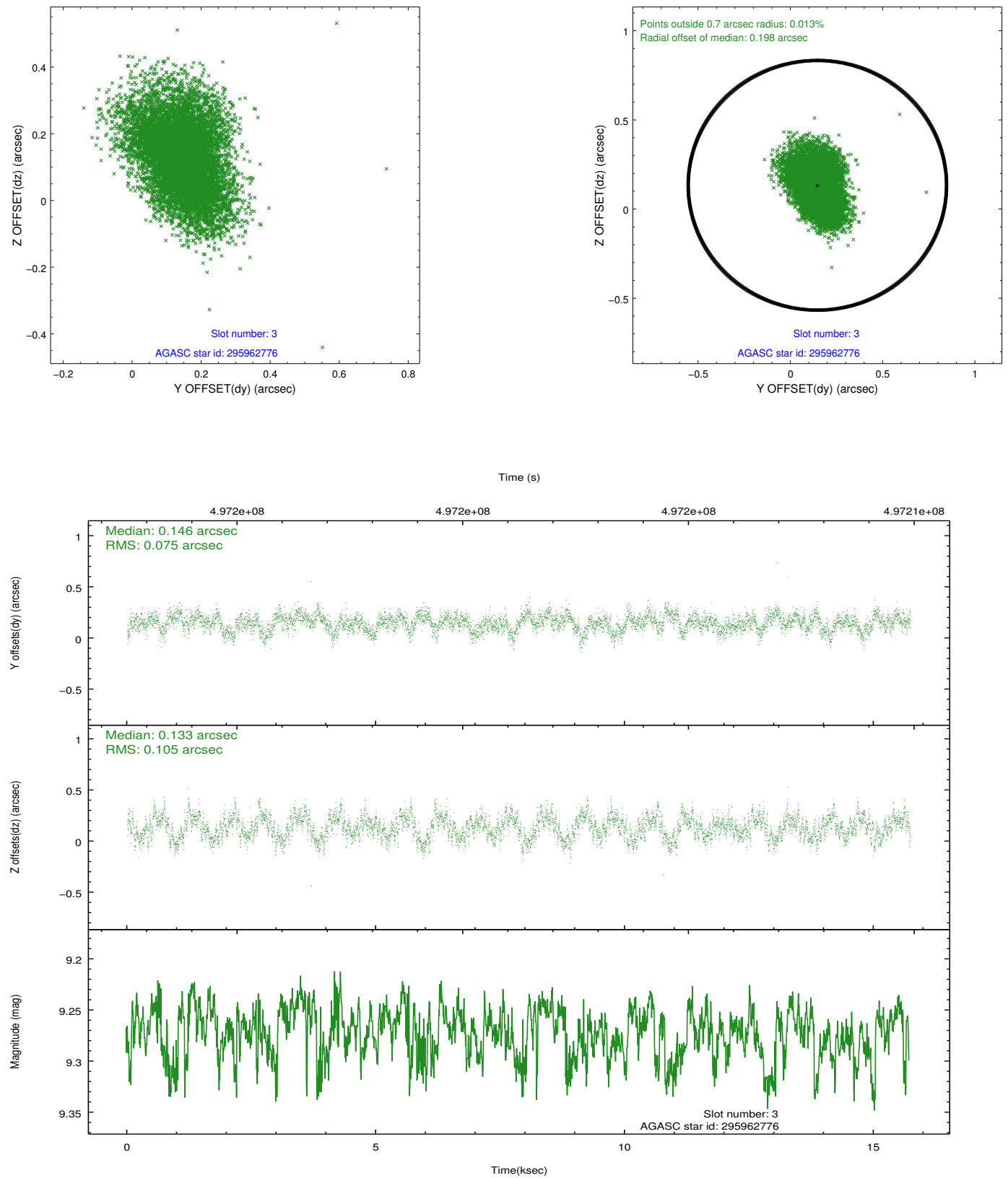


### Slot Statistics

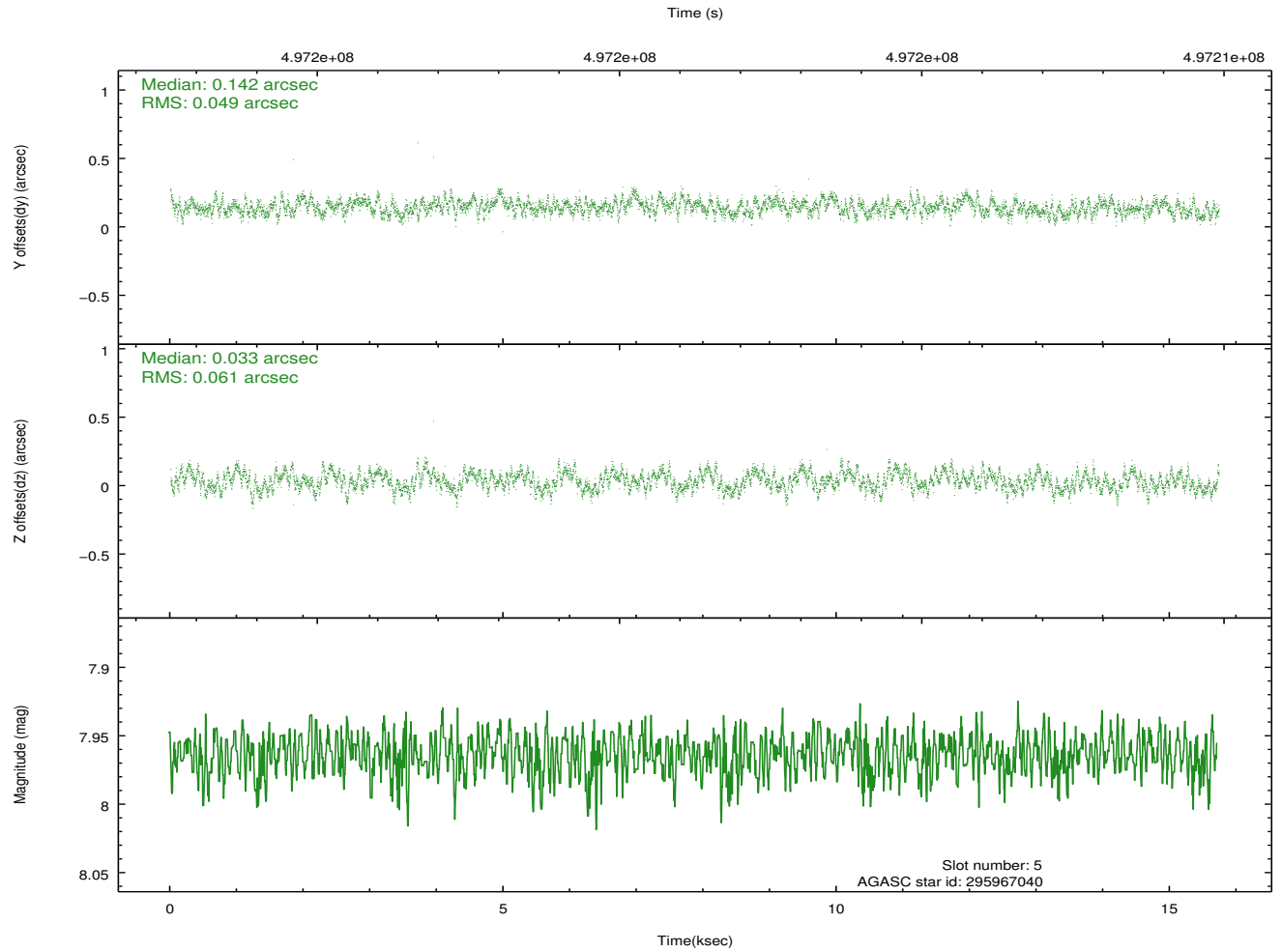
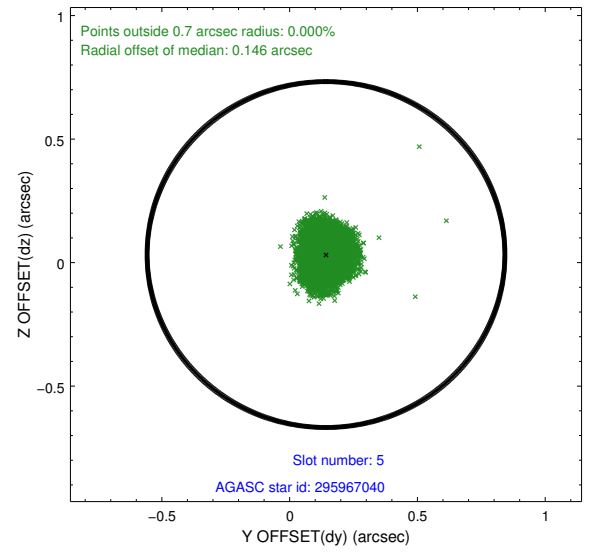
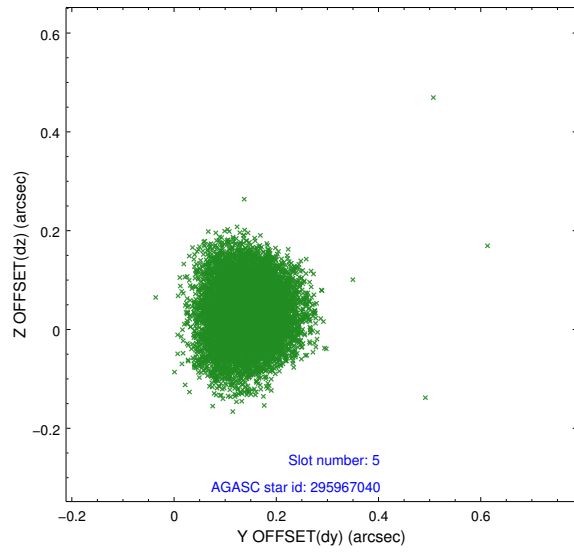
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	6.98	3838	0.045	0.007	0.010	0.021	0.000000	0.000000	920.79	-1735.54
1	FID		ACIS-S-4	6.99	3838	0.189	-0.022	0.029	0.052	0.000000	0.000000	2138.49	168.31
2	FID		ACIS-S-5	7.00	3838	-0.265	0.028	0.031	0.044	0.000000	0.000000	-1828.05	162.25
3	GUIDE	used	295962776	9.27	7653	0.146	0.133	0.138	0.227	358.775687	29.243672	-81.31	845.86
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	GUIDE	used	295967040	7.96	7676	0.142	0.033	0.084	0.130	358.755595	29.450493	-327.03	140.09
6	GUIDE	used	295980488	8.82	7637	-0.096	-0.036	0.081	0.134	358.139317	28.952243	2174.23	983.37
7	GUIDE	used	295972328	8.58	7672	-0.189	-0.125	0.079	0.125	358.421579	28.806802	1578.11	1826.48

## 2.4 Star Slots

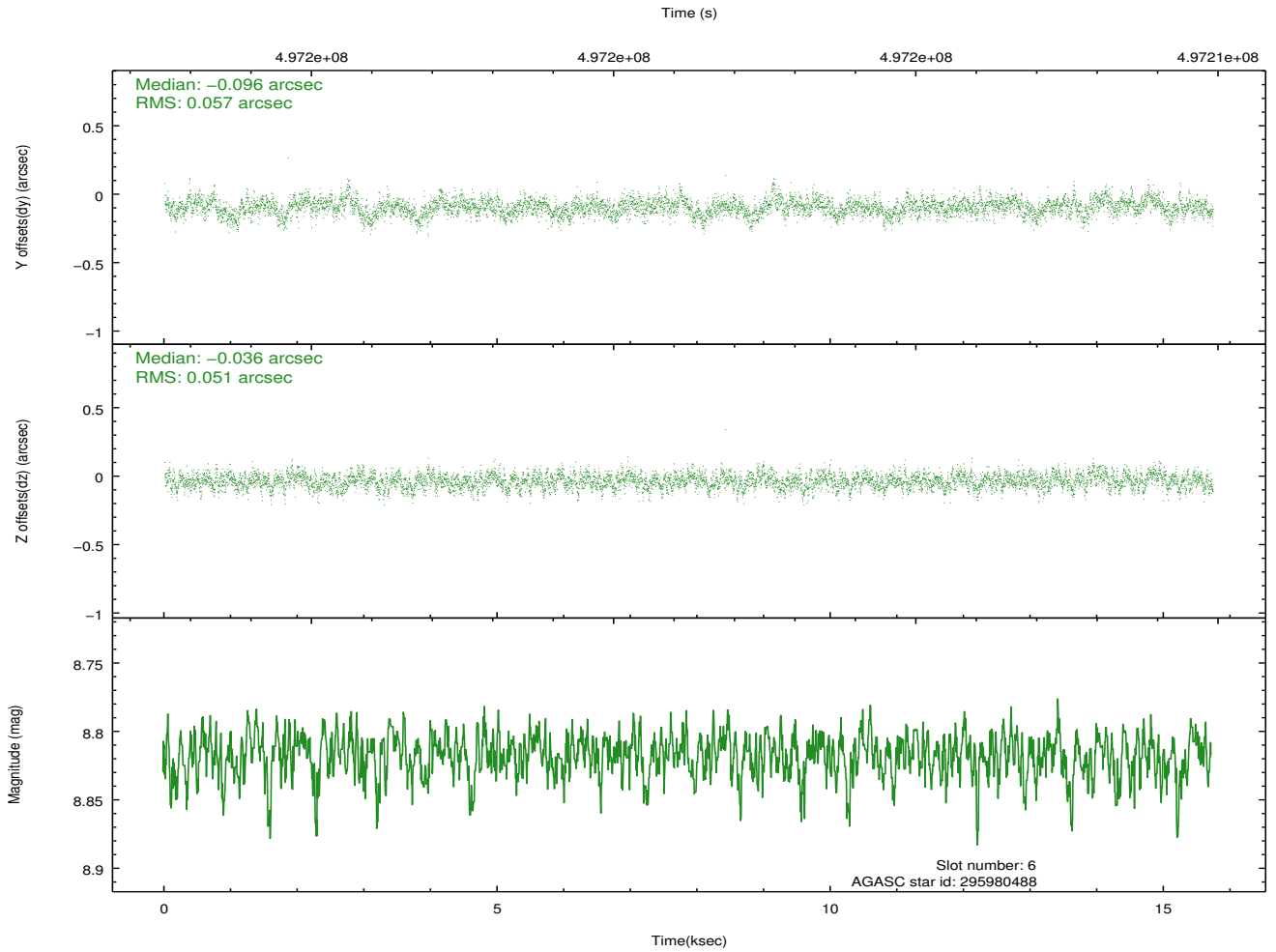
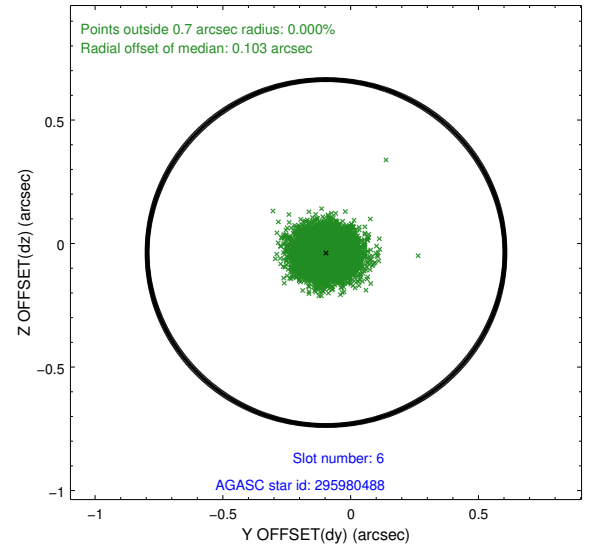
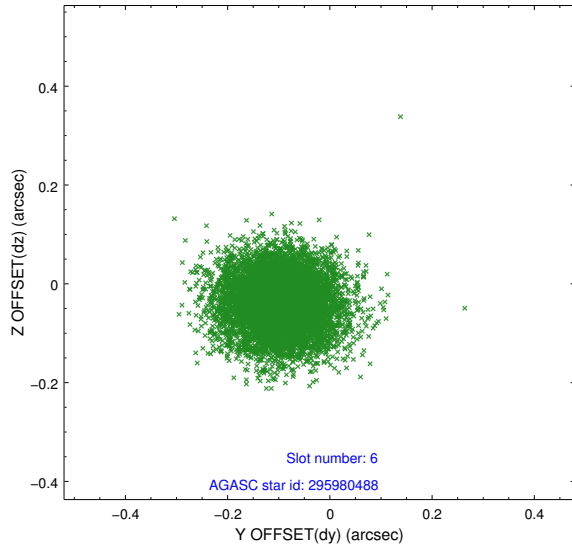
### 2.4.1 Slot 3



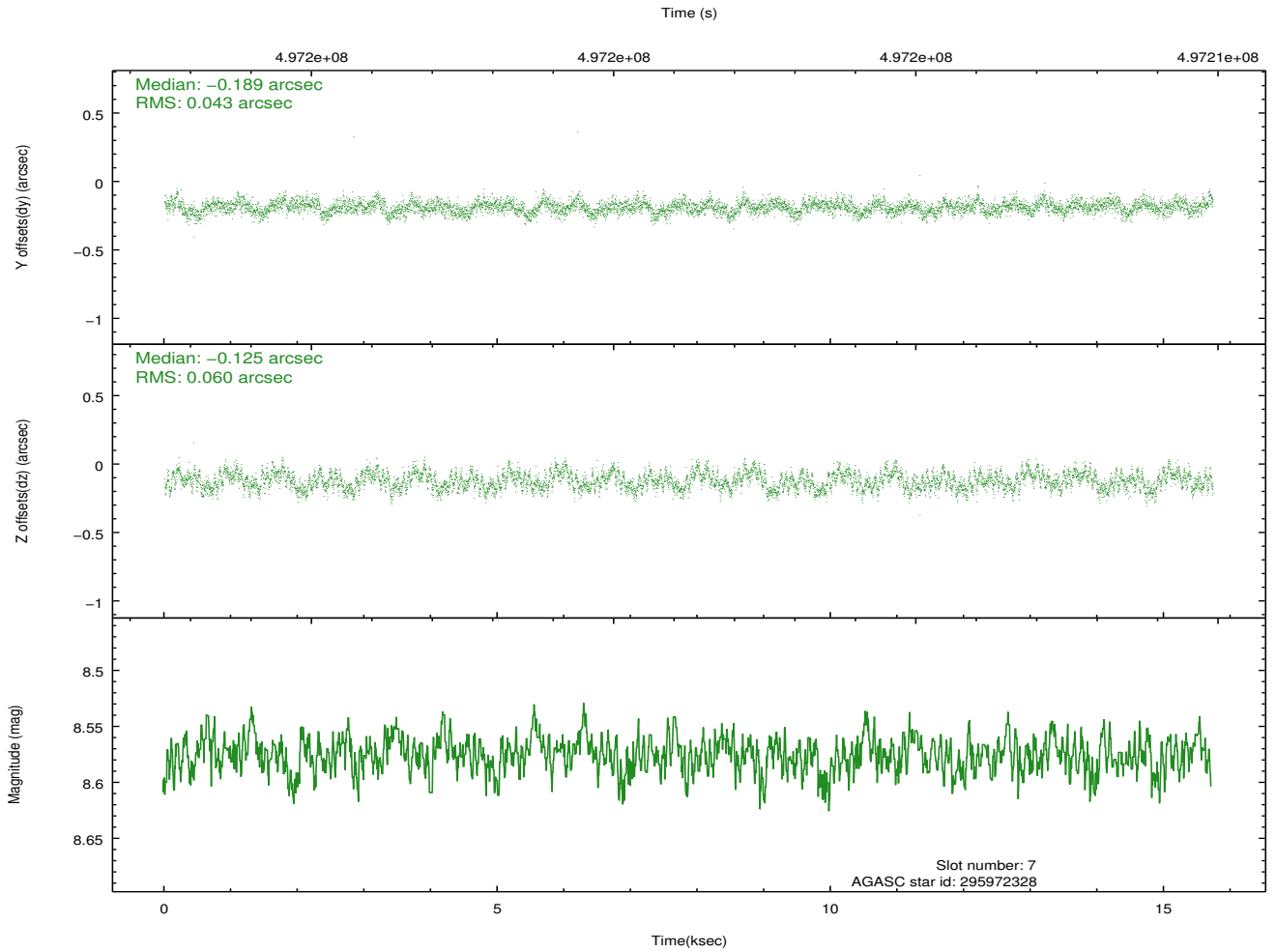
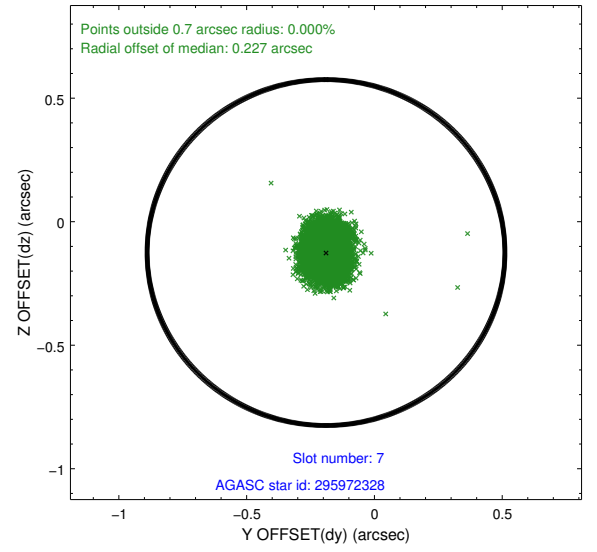
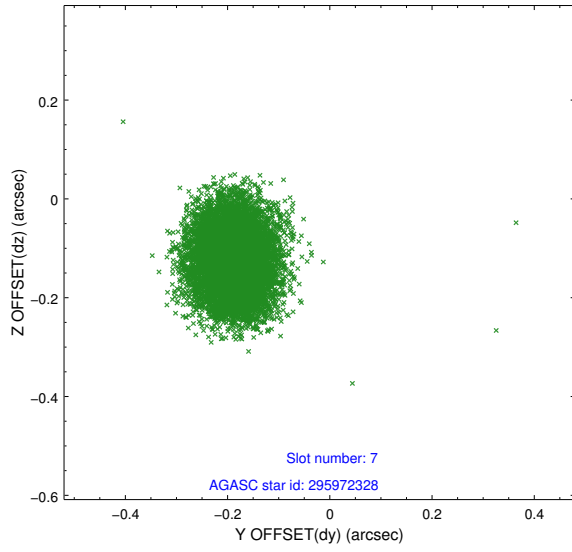
## 2.4.2 Slot 5



### 2.4.3 Slot 6



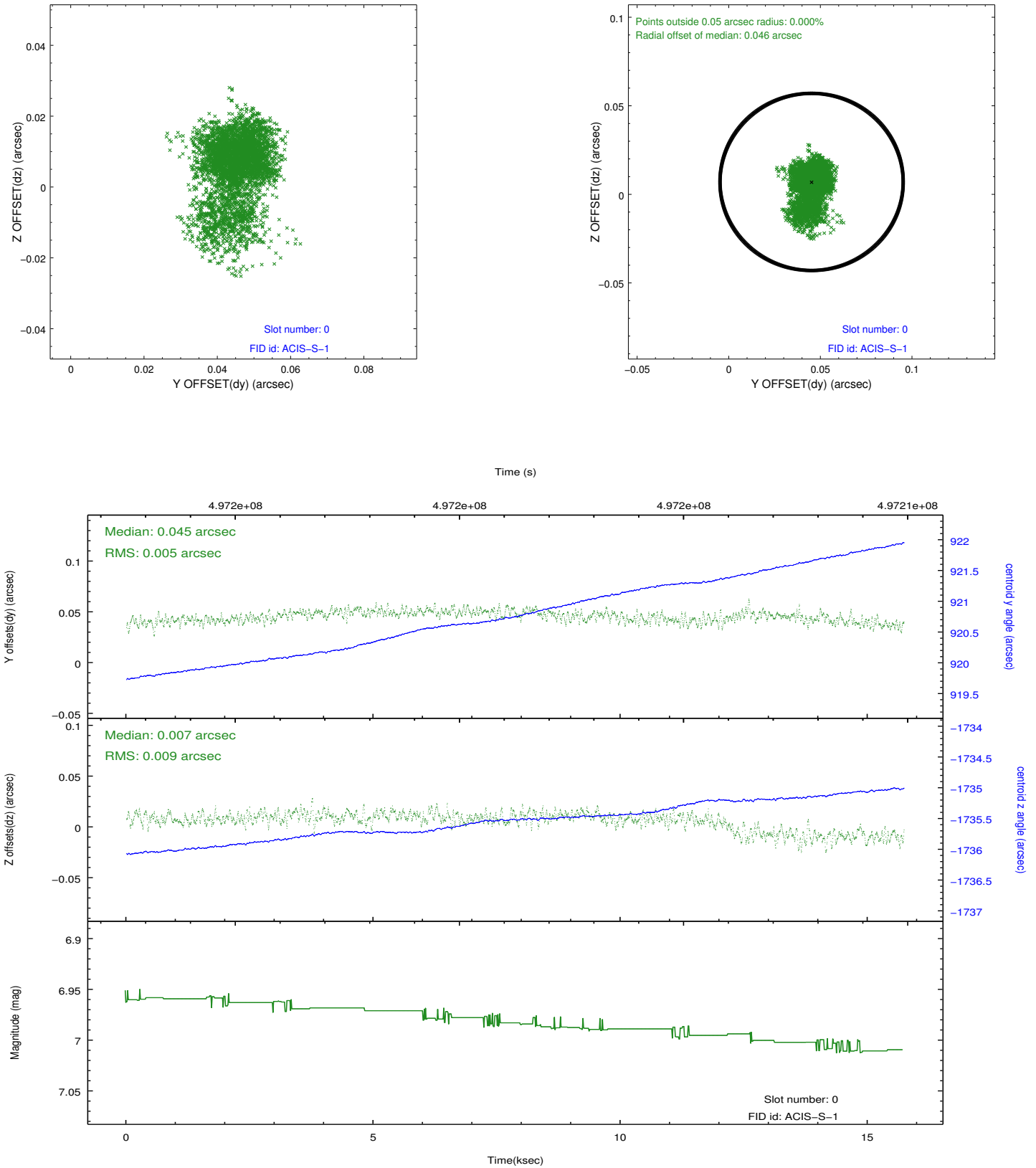
## 2.4.4 Slot 7



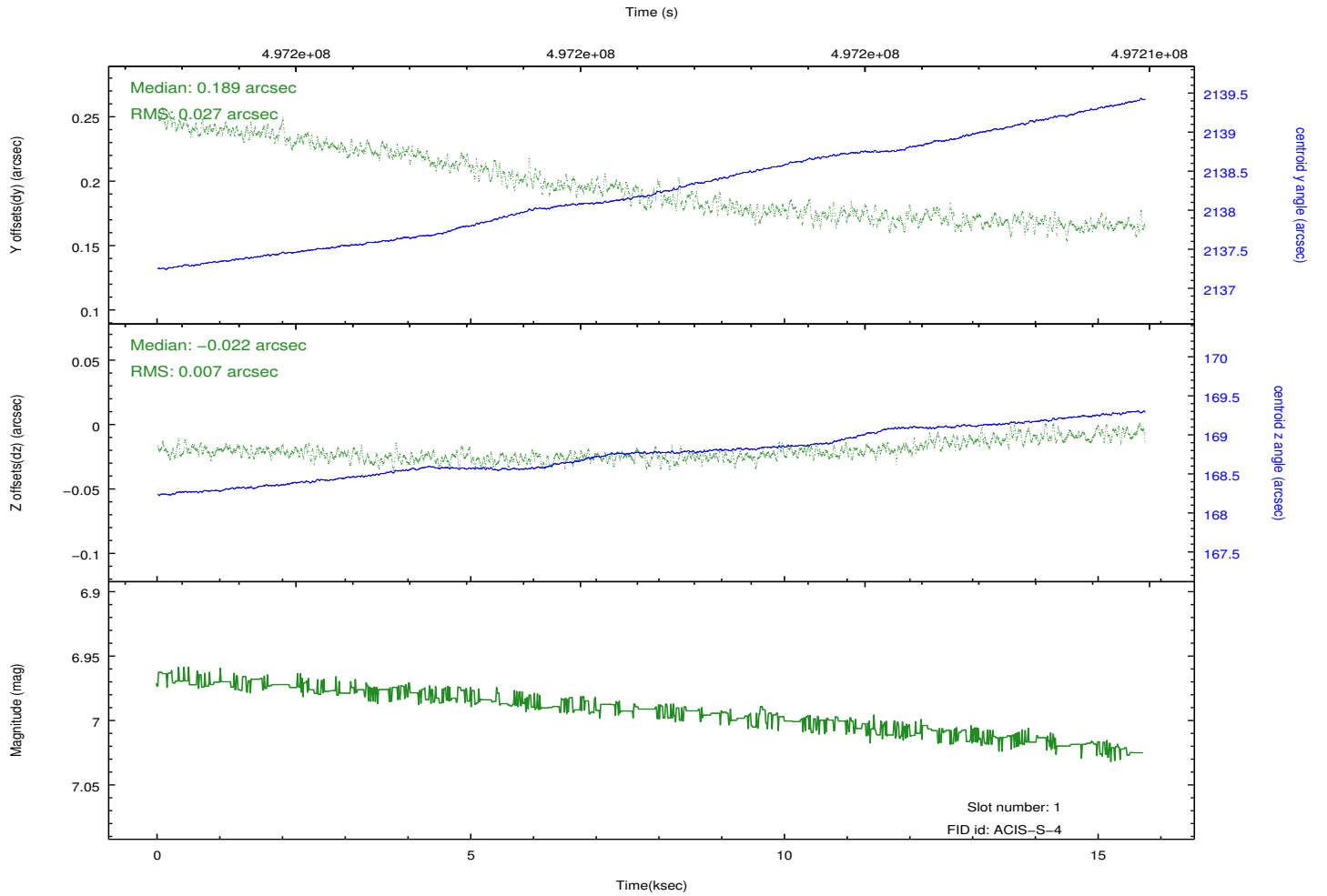
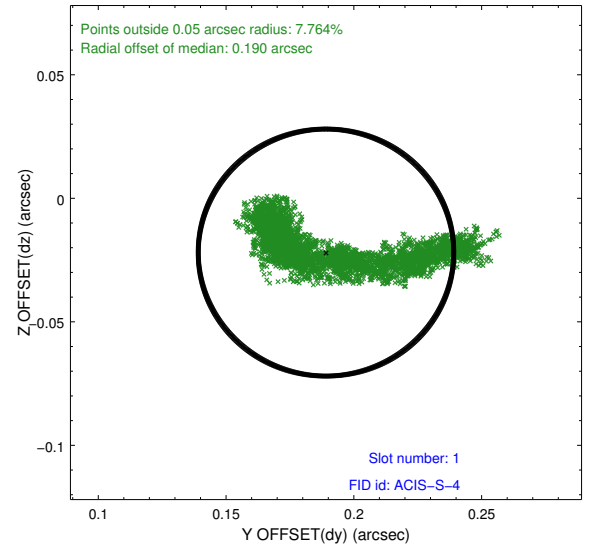
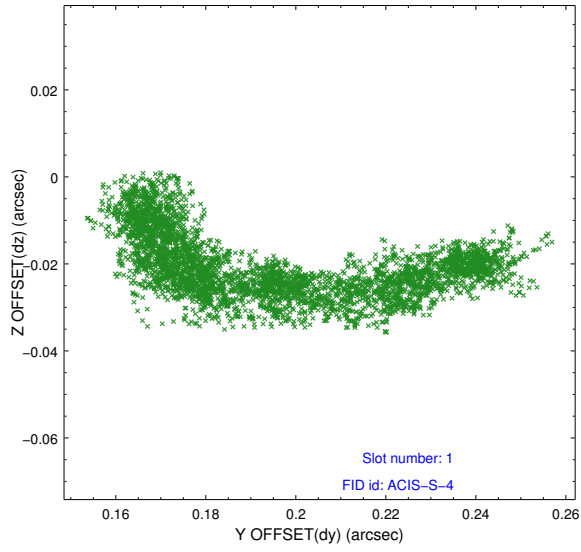


## 2.5 FID Slots

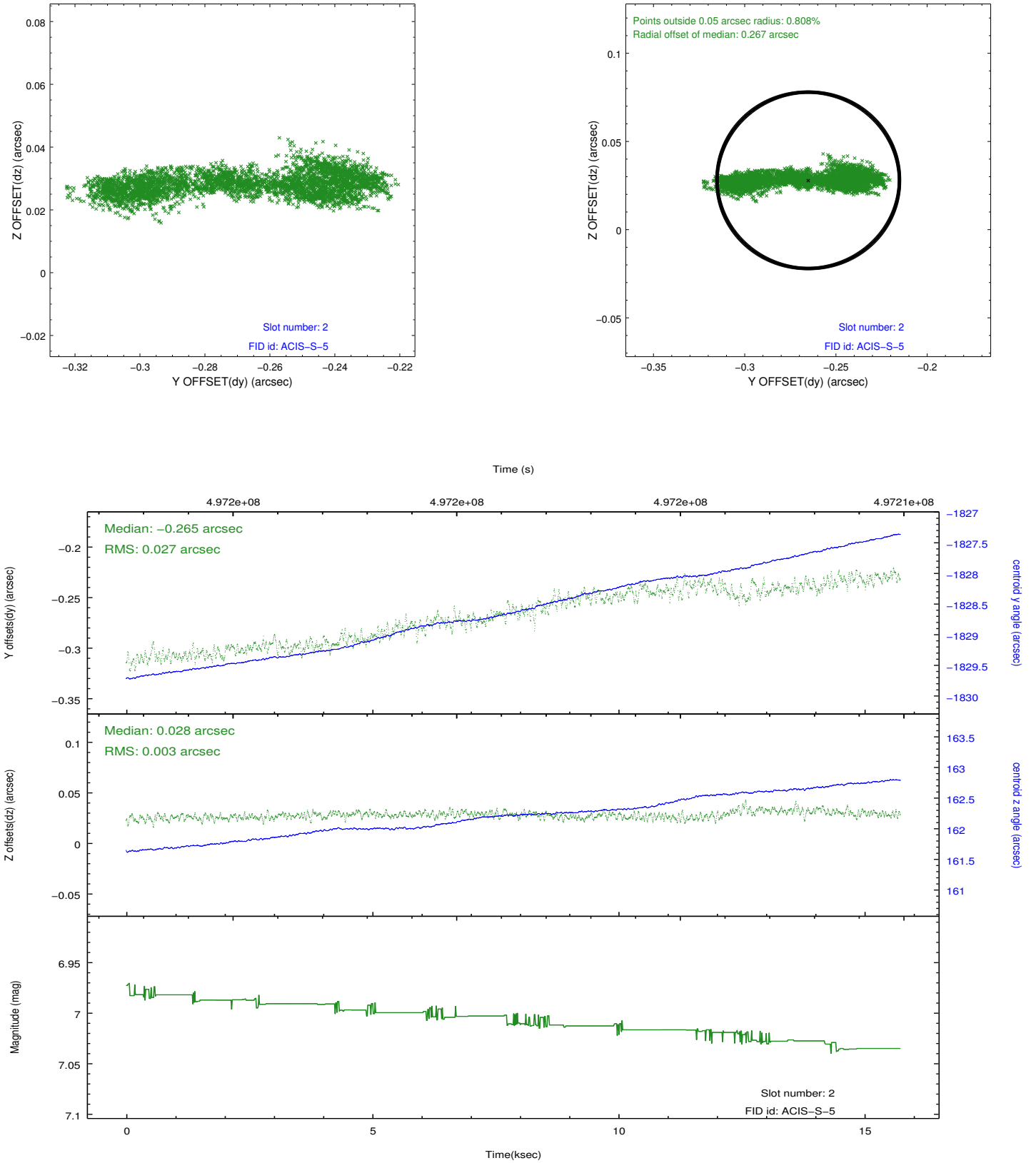
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.069100115895

## A.2 Comments

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.