

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13757 - L2 Version 2  
Chandra X-Ray Center

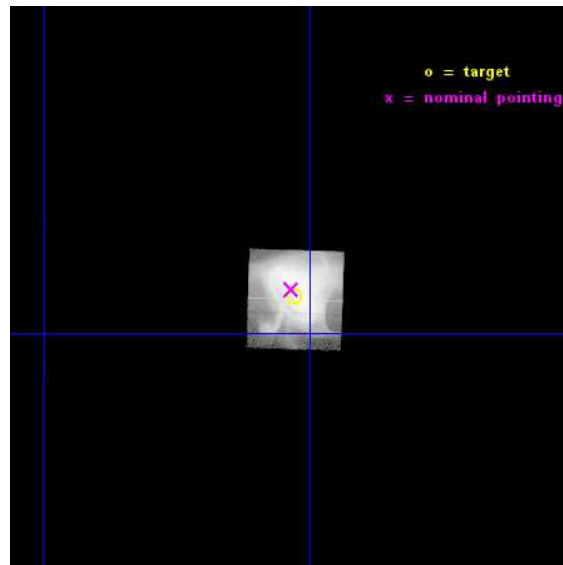
L2 Processing Date : Nov 28 2014

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# 1 Front

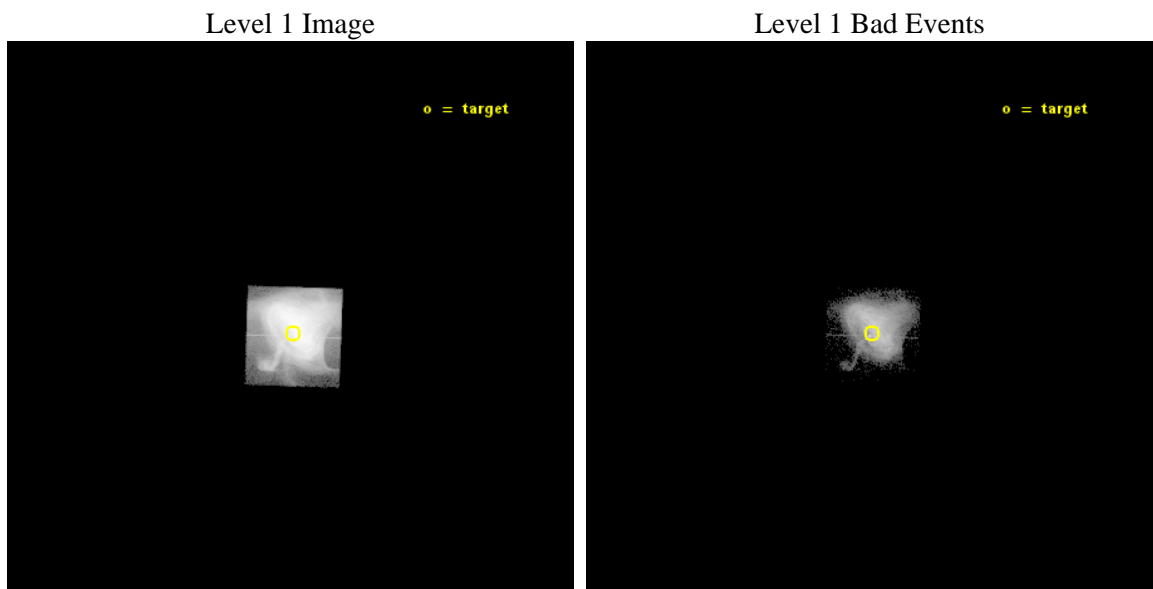
seq_num	501590	Sequence number
obs_id	13757	Observation id
title	Joint Chandra and HST Monitoring of the Crab Nebula	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.633265941025	Nominal RA [deg]
dec_nom	22.018481811749	Nominal Dec [deg]
roll_nom	91.934041648447	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3450.6126394868	Sum of GTIs [s]
liveltime	599.21033575641	Livetime [s]
ontime7	3450.6126394868	Sum of GTIs [s]
l2events	1712398	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	3450.6126394868	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	3450.6126394868	Sum of GTIs [s]
date	2014-11-28T10:50:55	Date and time of file creation	l1events	1891202	Number of level 1 events
revision	2	Processing version of data			

### 2.1.3 Events

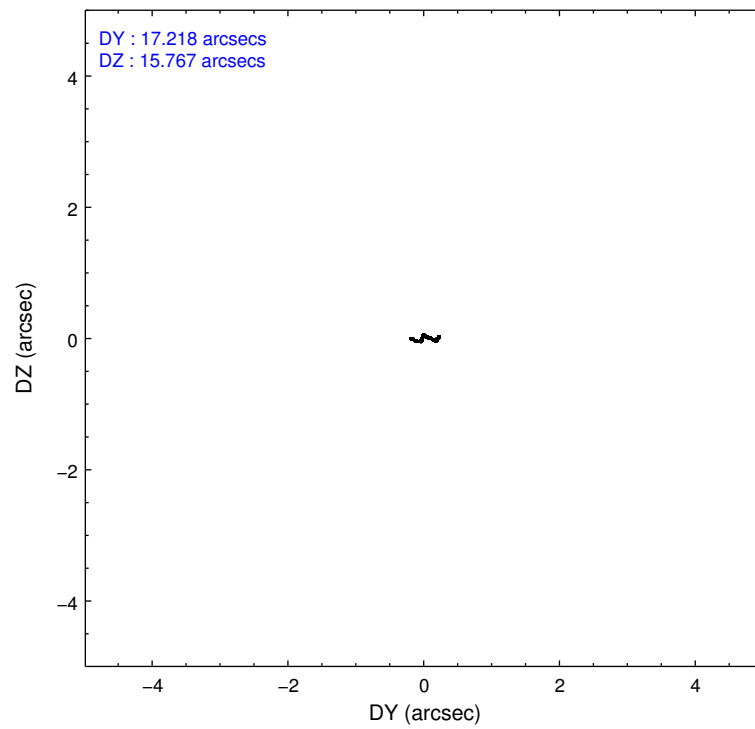
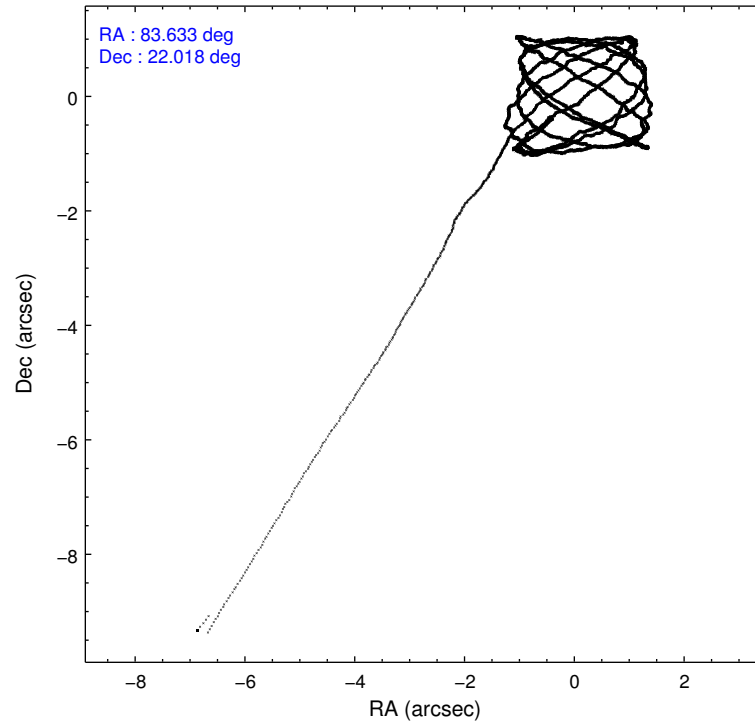
	<b>ccd 7</b>
level 1 events	1891202
rejected events	167016
rejected %	8%

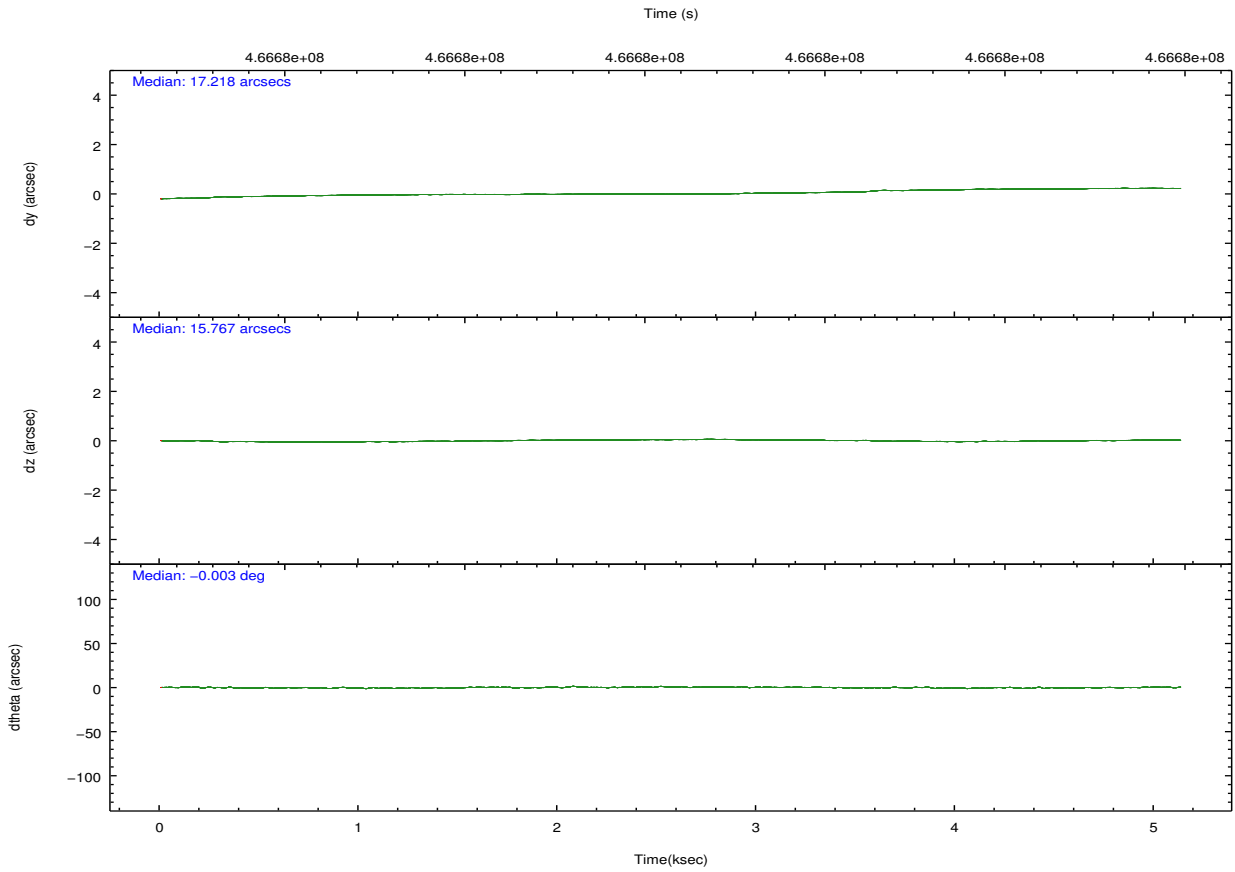
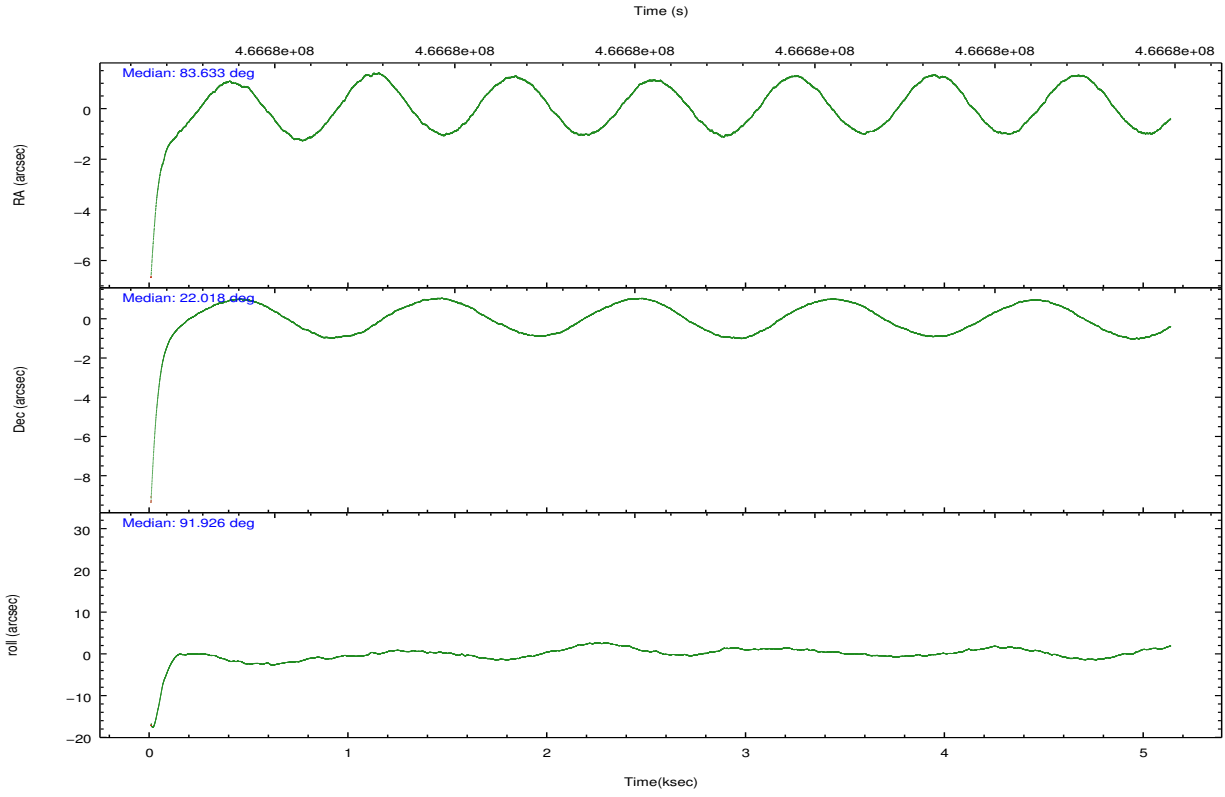
	<b>ccd 7</b>
grade 0 events	385496
	20%
grade 1 events	21642
	1%
grade 2 events	475614
	25%
grade 3 events	191770
	10%
grade 4 events	189620
	10%
grade 5 events	60949
	3%
grade 6 events	482844
	25%
grade 7 events	83267
	4%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.649252	83.63326594102521	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	21.995496	22.01848181174906	Subarray start row	235	235
[deg] Pointing Roll	91.771468	91.93404164844702	Subarray row count	300	300
[s] Window start time (MET)	466646467.184000	466646467.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	467251266.184000	467251266.184000	[s] Primary exposure time	0.000000	0.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.676523	-187.6684941084384			
[mm] SIM translation stage offset	-2.456	-2.464028474569403			
[s] Observation start time (MET)	466677707.184000	466676537.45543			
Observation start date	2012-10-15T08:40:40	2012-10-15T08:22:17			
[s] Observation end time (MET)	466682707.184000	466683789.33082			
Observation end date	2012-10-15T10:04:00	2012-10-15T10:23:09			
Read mode	TIMED	TIMED			

## 2.3 Aspect





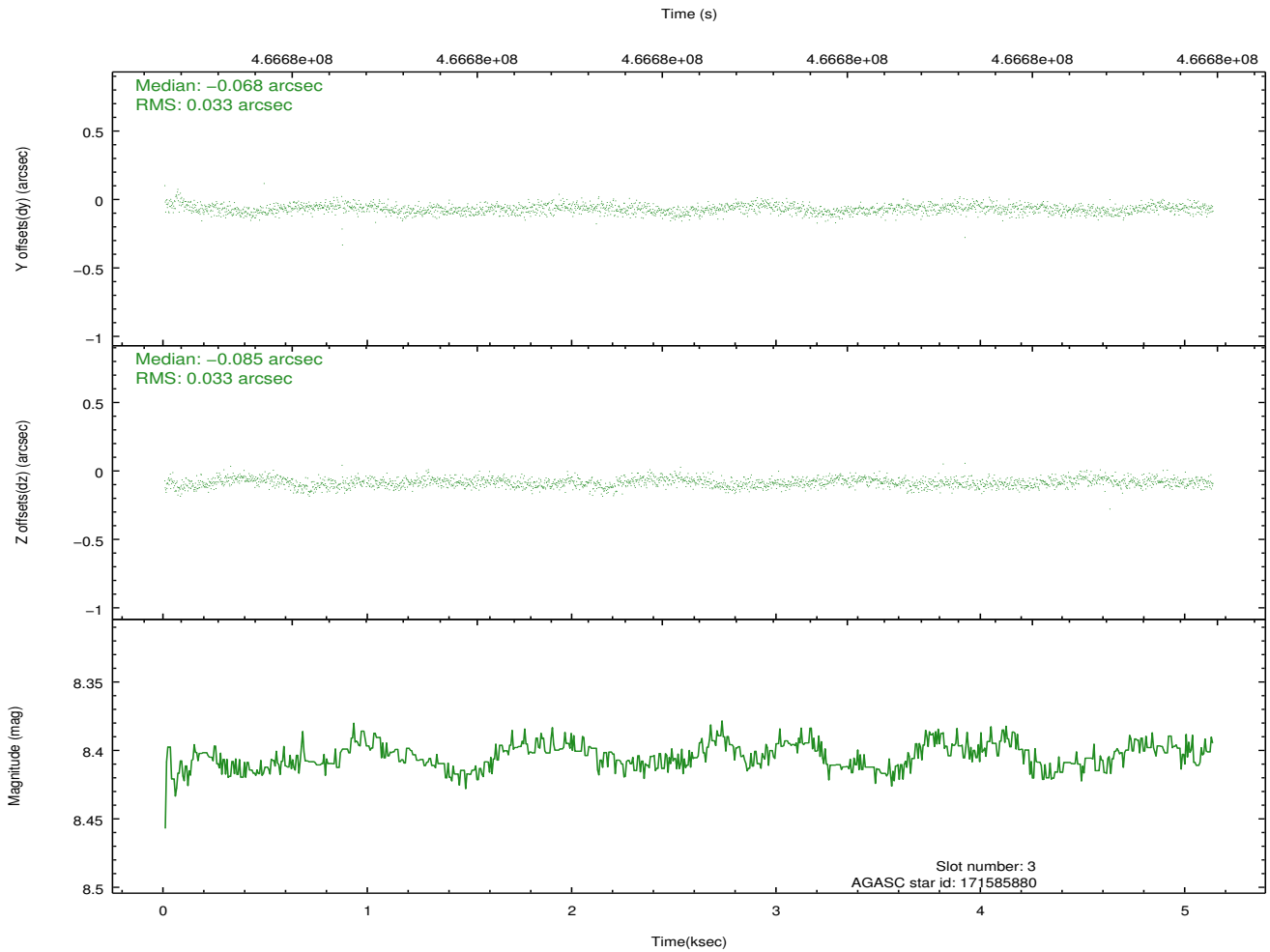
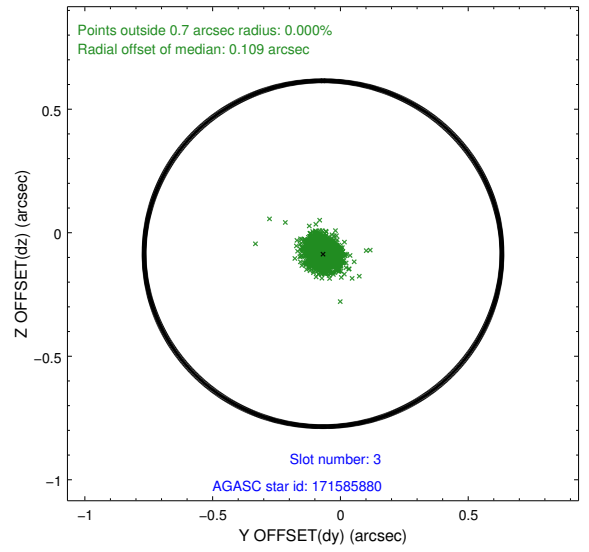
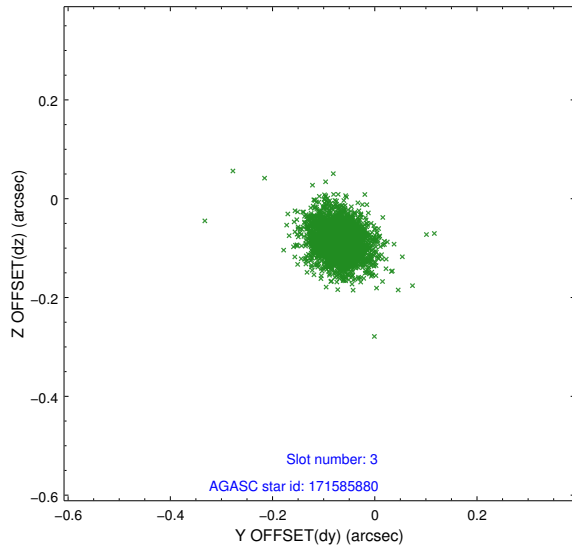
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.00	1252	-0.118	-0.031	0.006	0.010	0.000000	0.000000	-770.27	-1788.09
1	FID		ACIS-S-4	7.08	1252	0.232	0.065	0.006	0.011	0.000000	0.000000	2142.85	119.17
2	FID		ACIS-S-5	7.13	1252	-0.145	-0.026	0.007	0.013	0.000000	0.000000	-1821.59	114.16
3	GUIDE	used	171585880	8.40	2496	-0.068	-0.085	0.048	0.080	83.676260	22.176319	648.21	-110.15
4	GUIDE	used	171586032	8.97	2503	-0.009	0.221	0.061	0.101	83.950197	22.083225	286.41	-1013.06
5	GUIDE	used	171597832	9.15	2498	0.225	-0.174	0.079	0.132	83.183230	21.366702	-2211.48	1630.67
6	GUIDE	used	171721904	9.16	2500	-0.026	-0.008	0.084	0.144	84.272676	22.116922	376.68	-2091.18
7	GUIDE	used	243941560	8.34	2501	-0.115	0.048	0.062	0.102	83.733264	22.568598	2053.88	-343.31

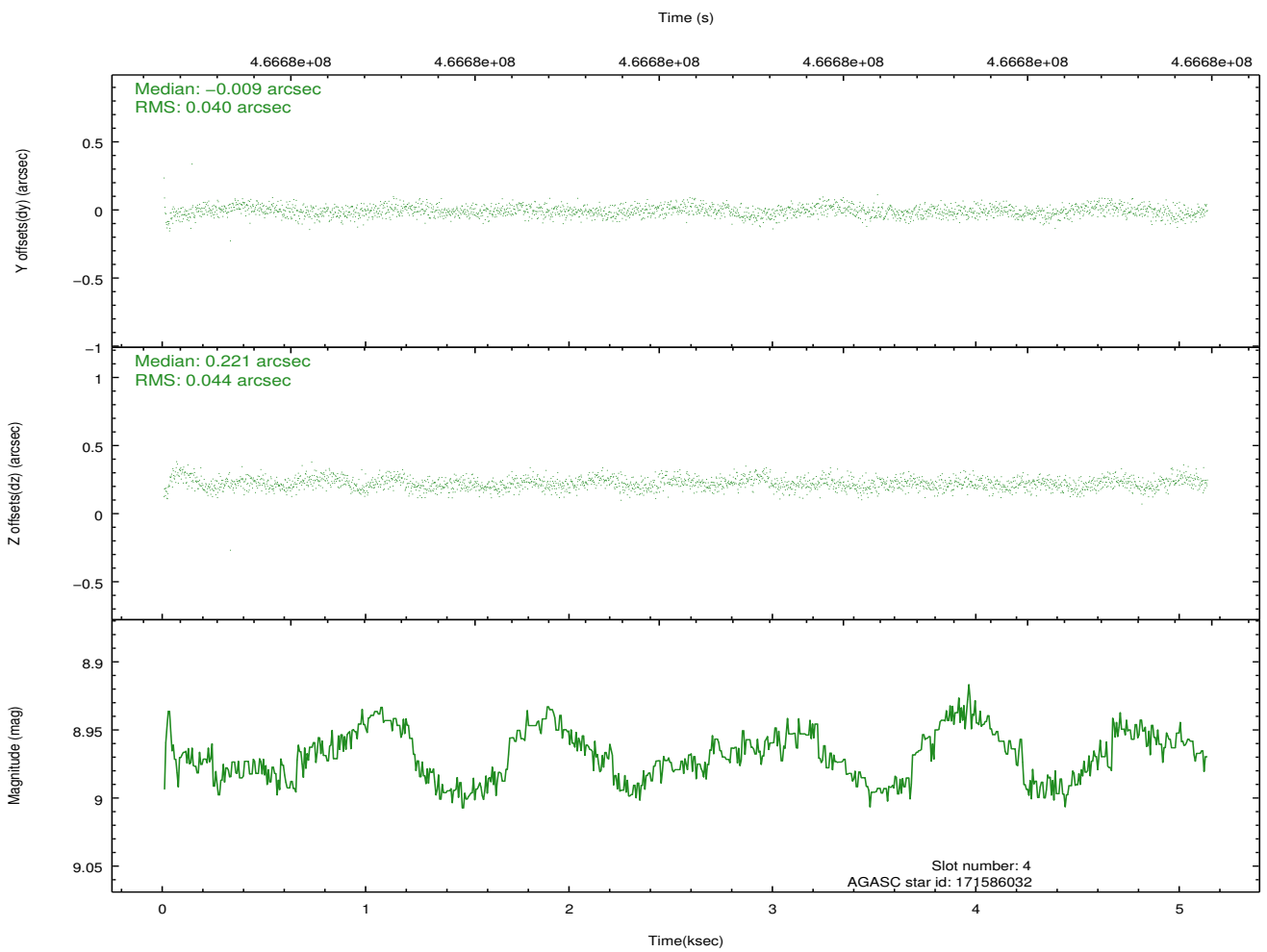
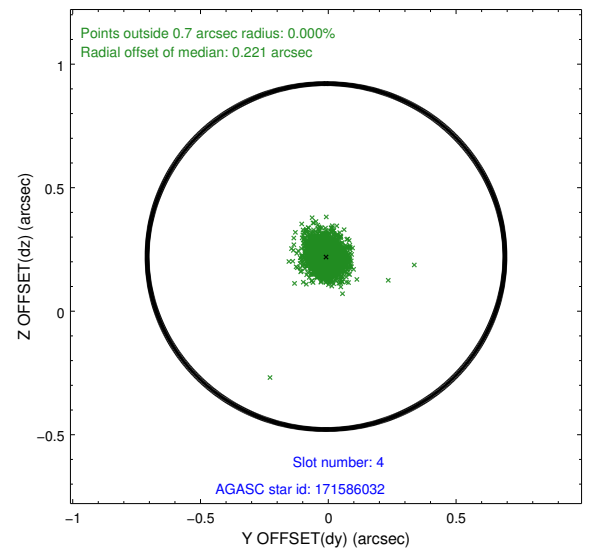
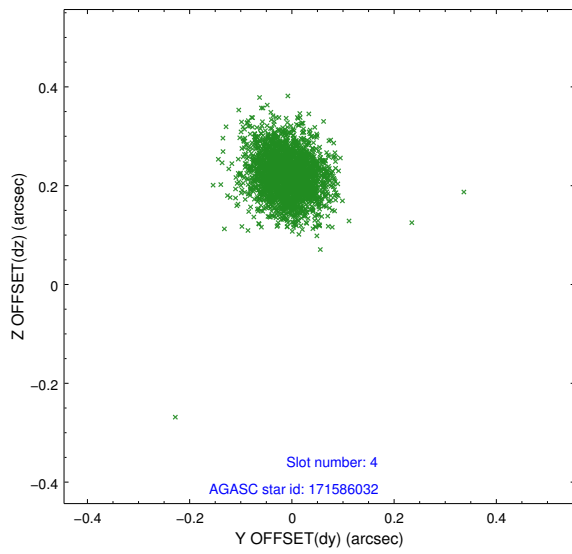
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## 2.4 Star Slots

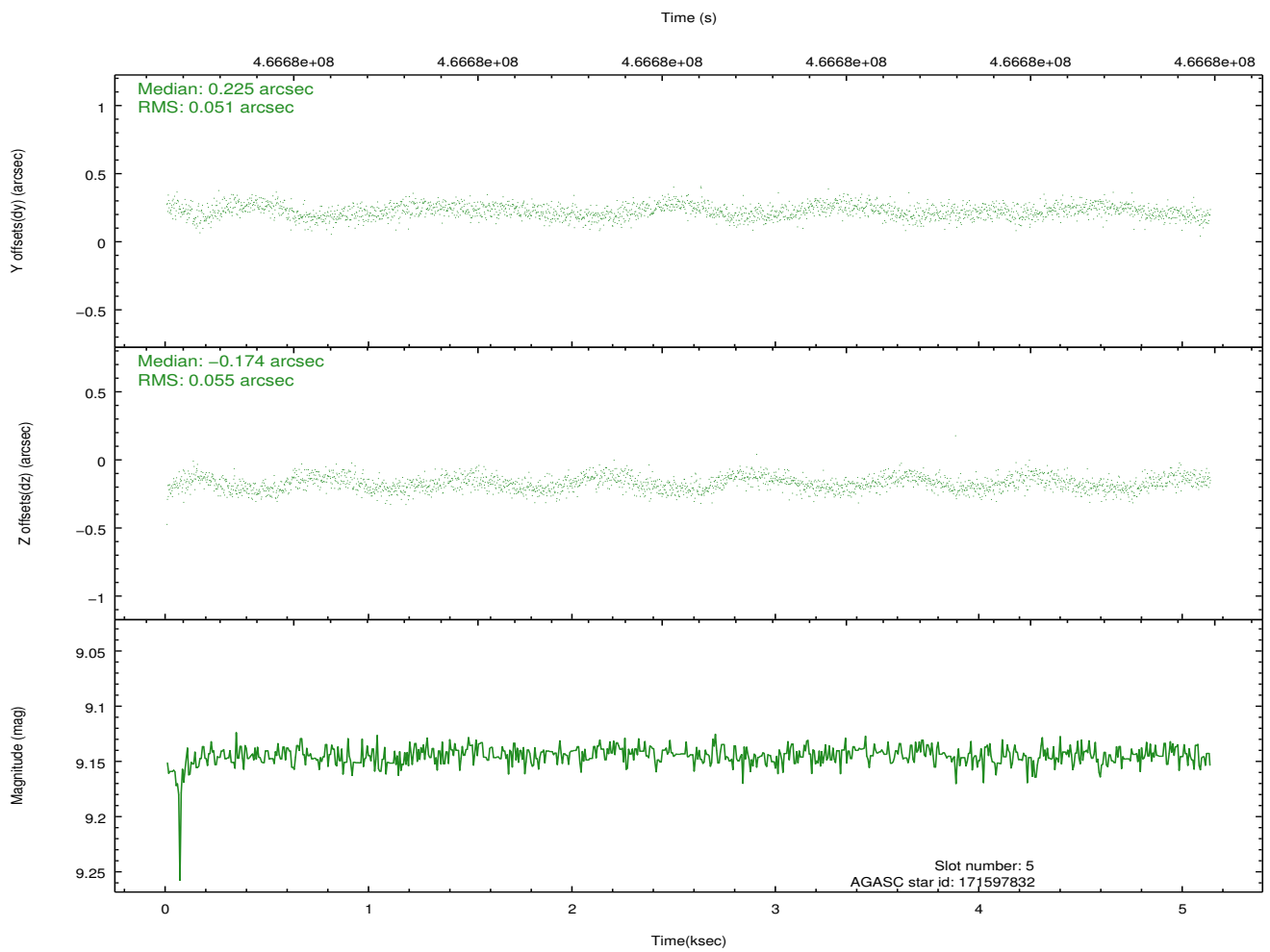
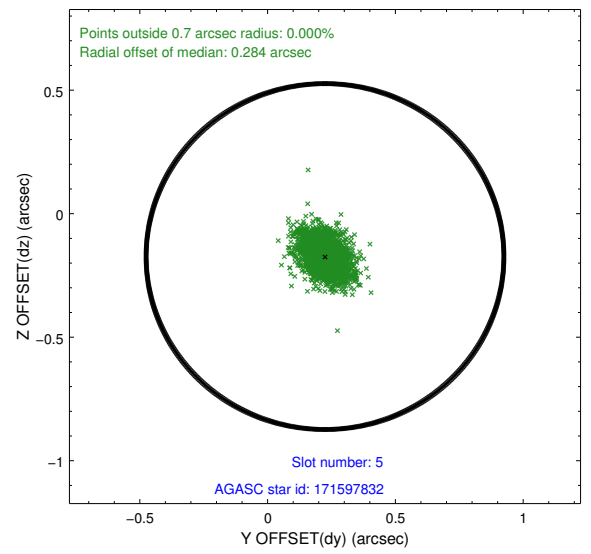
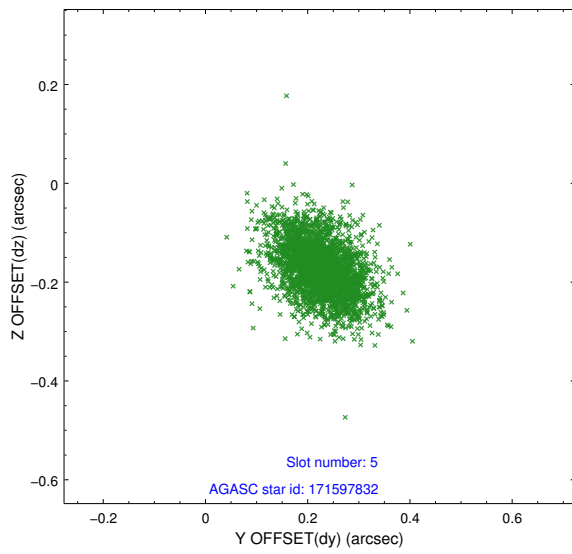
### 2.4.1 Slot 3



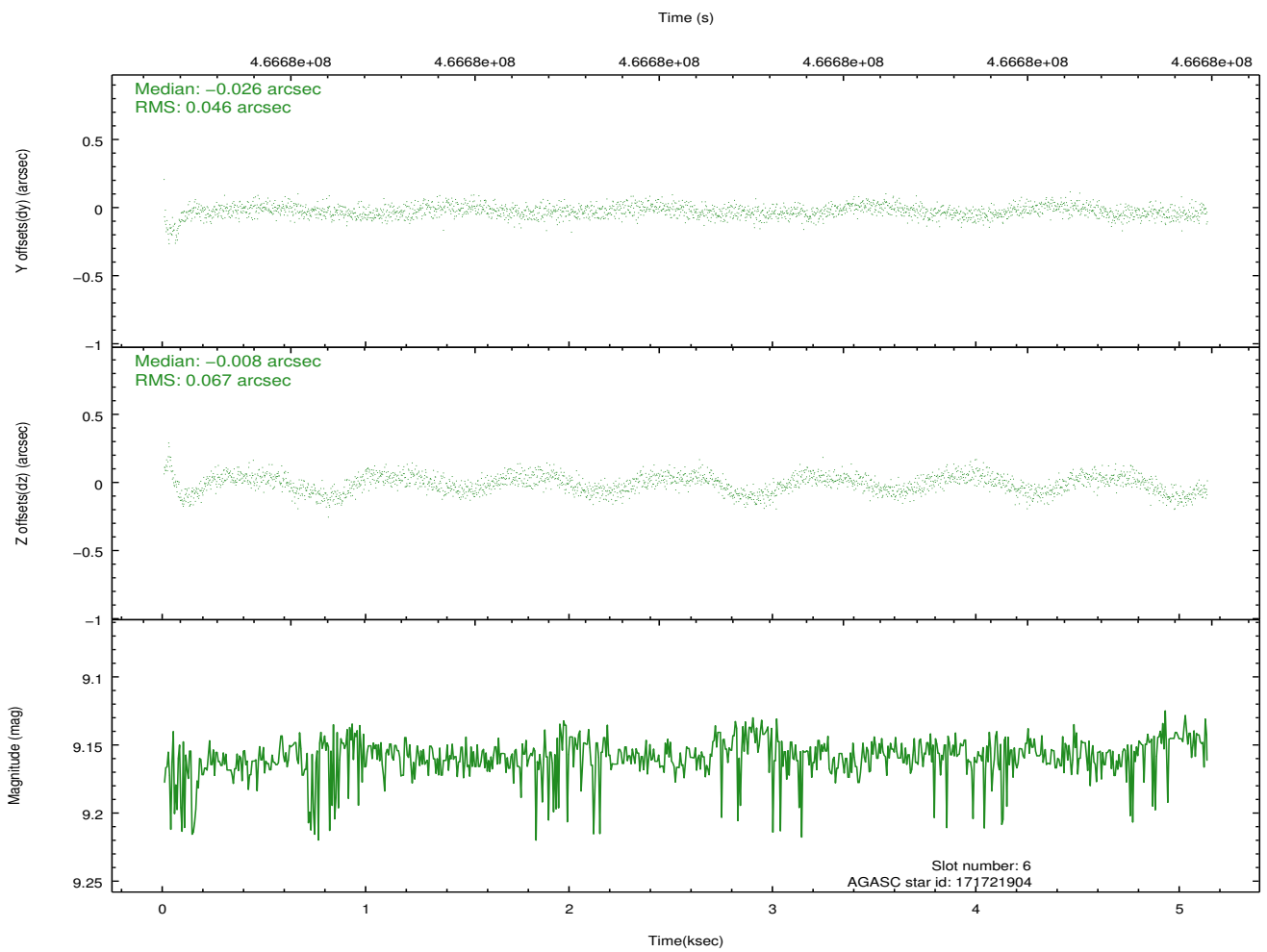
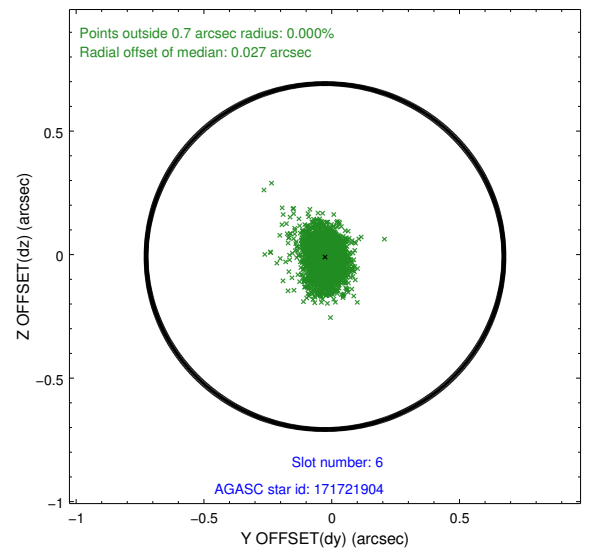
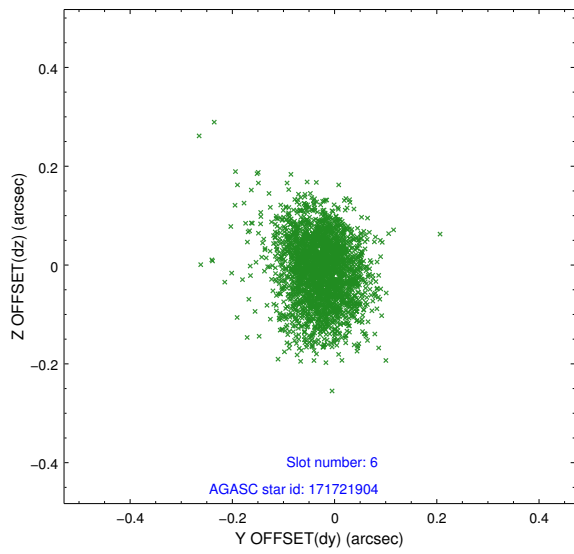
## 2.4.2 Slot 4



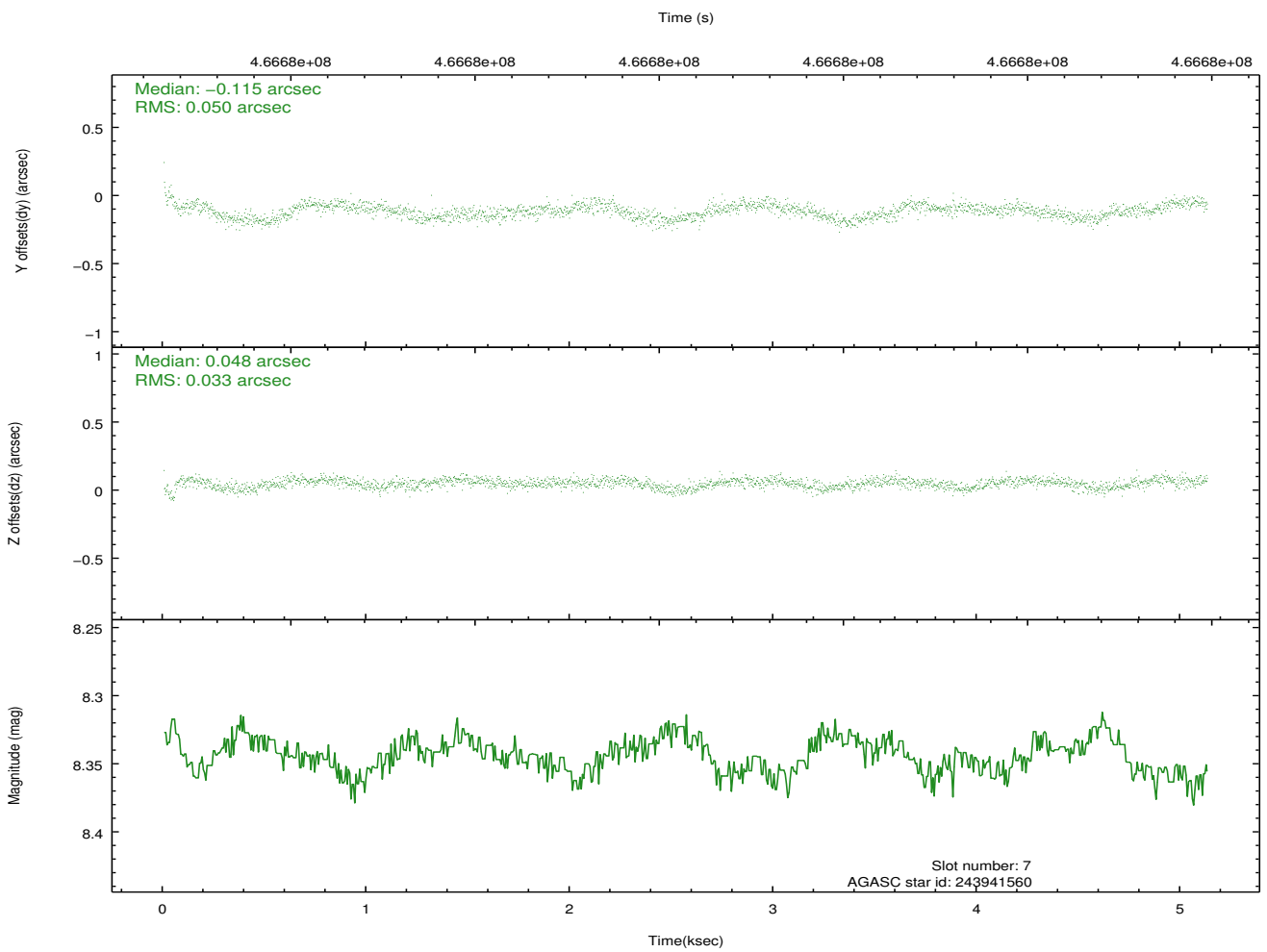
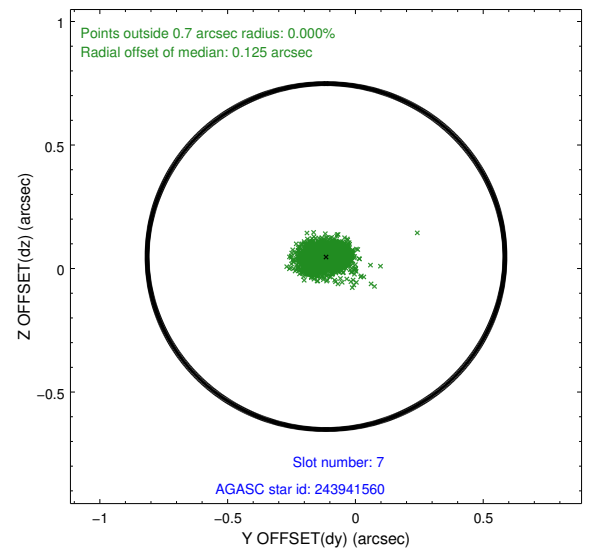
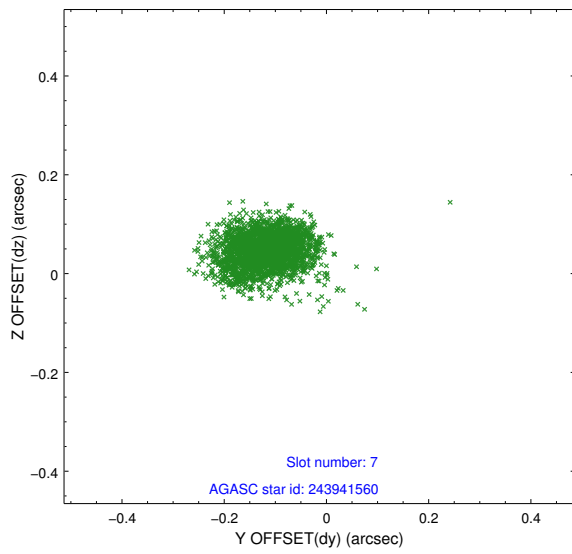
### 2.4.3 Slot 5



## 2.4.4 Slot 6

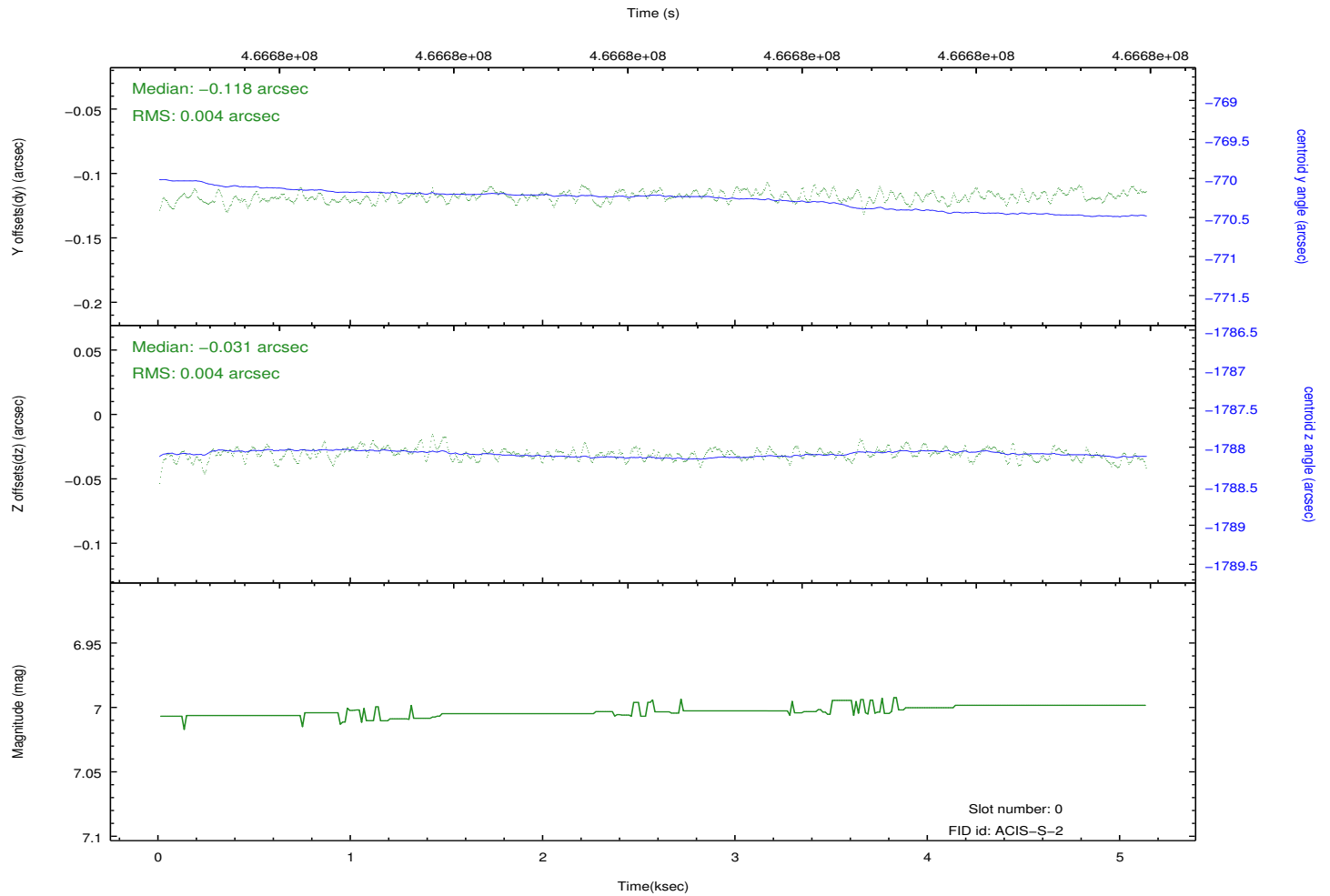
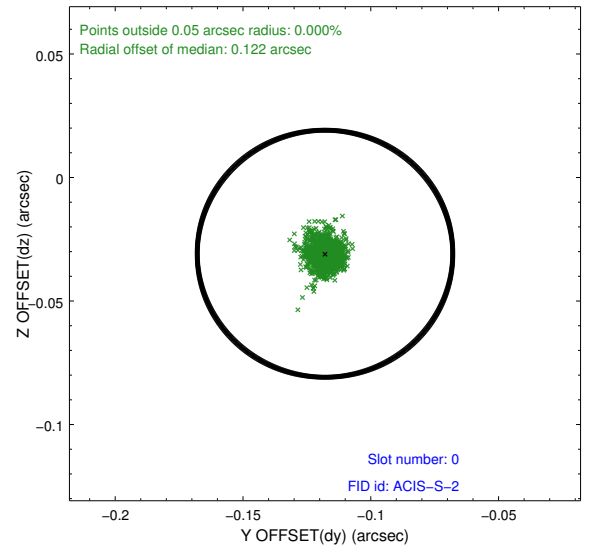
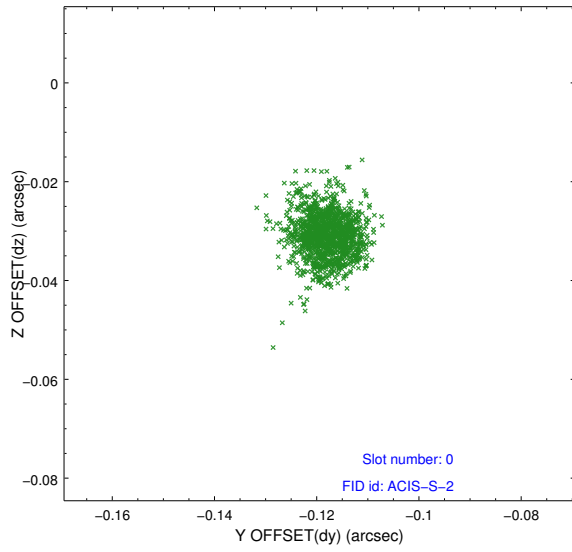


## 2.4.5 Slot 7

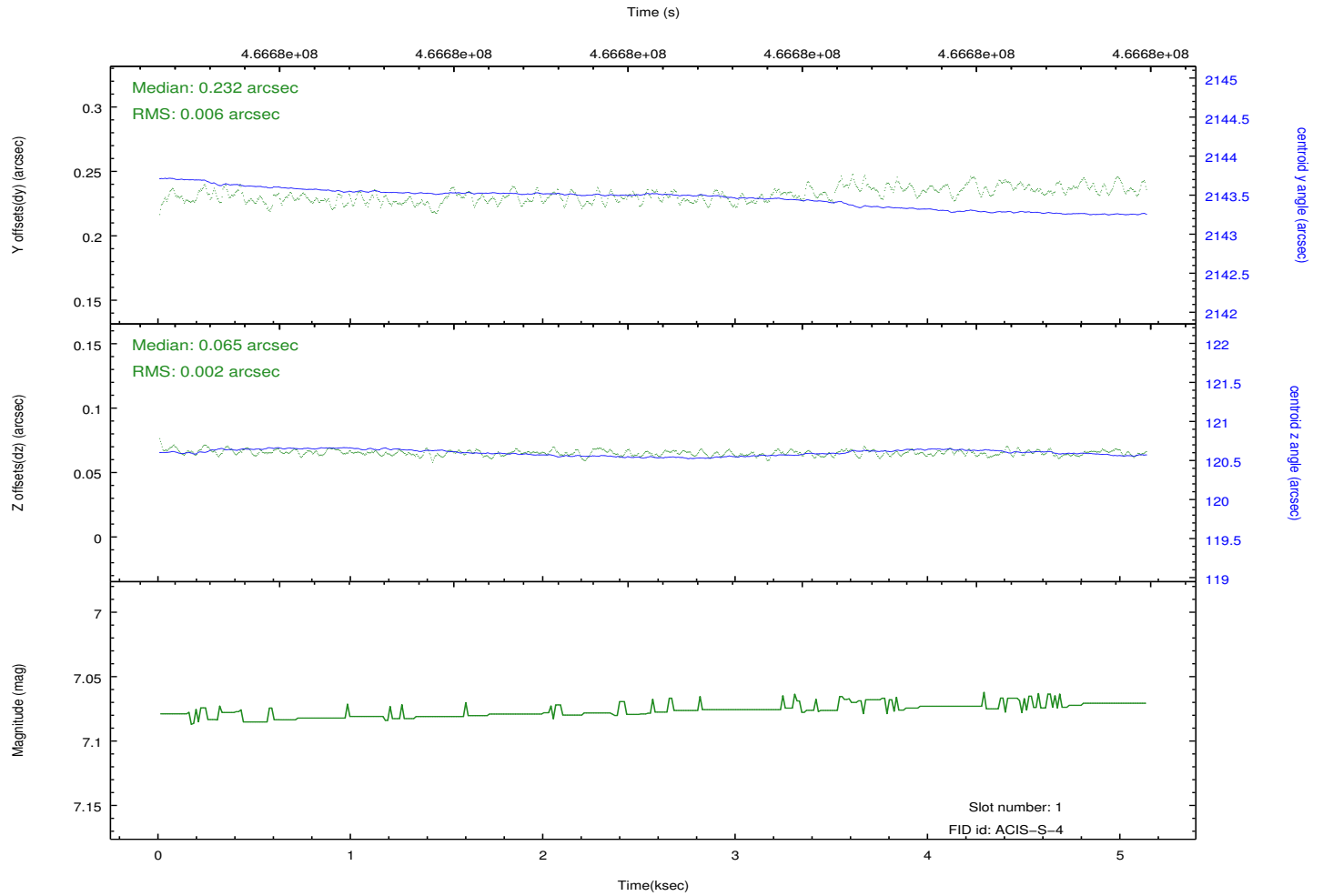
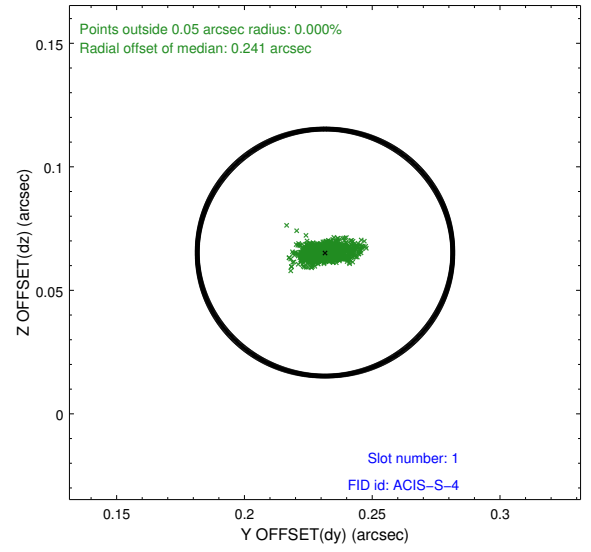
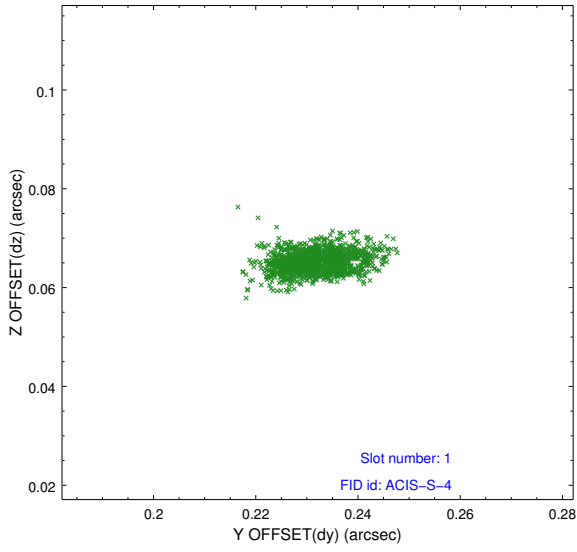


## 2.5 FID Slots

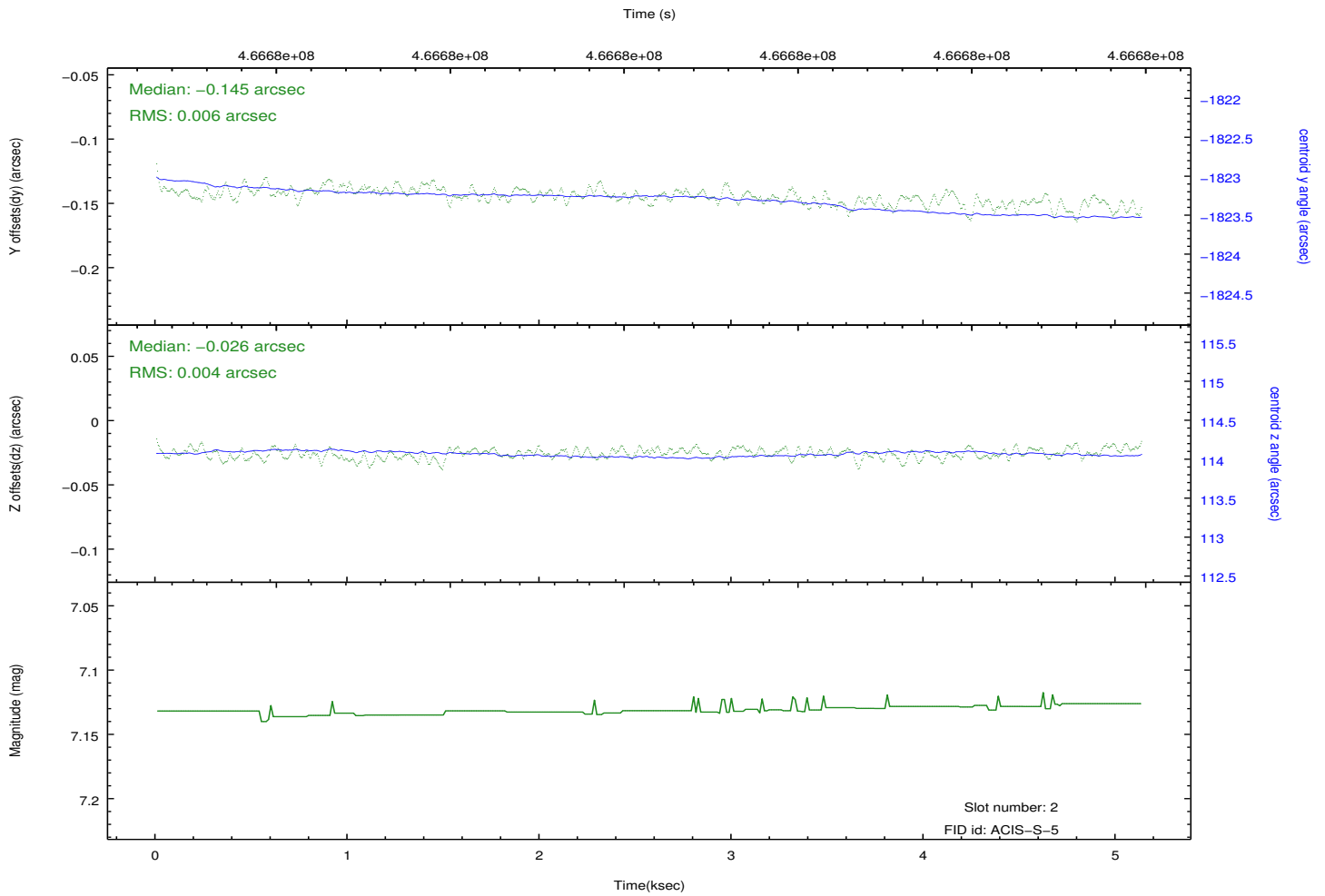
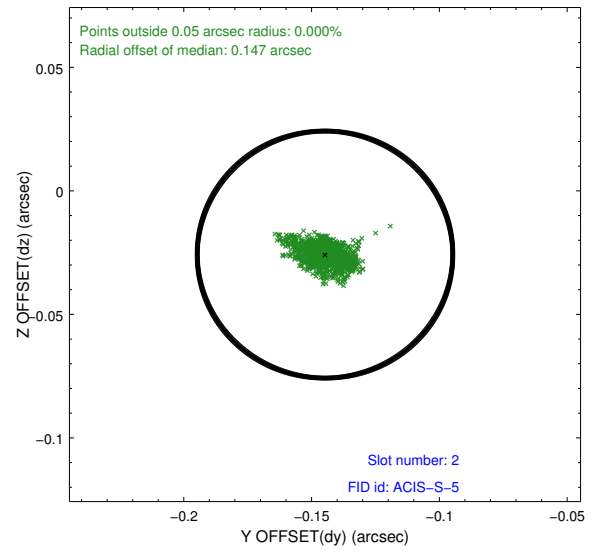
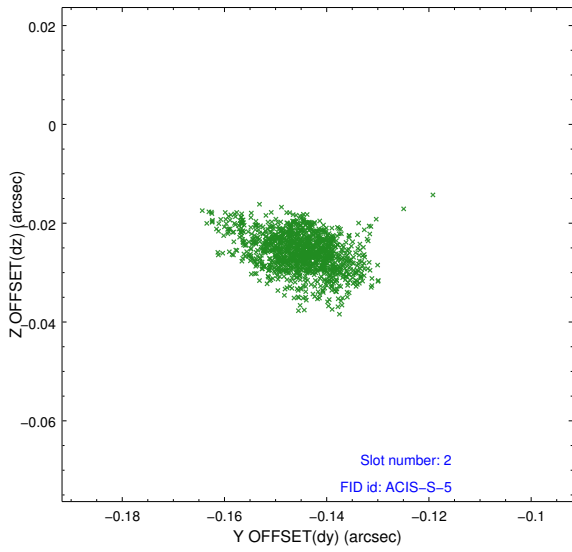
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5

## A.2 Comments

Spacecraft dither disabled. Charge time is more than ONTIME because of telemetry saturation, which is expected for this target. Charge time has been set to the original scheduled exposure time. Short livetime reflects the short detector read time compared to the overhead.

=====

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.