

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15471 - L2 Version 3  
Chandra X-Ray Center

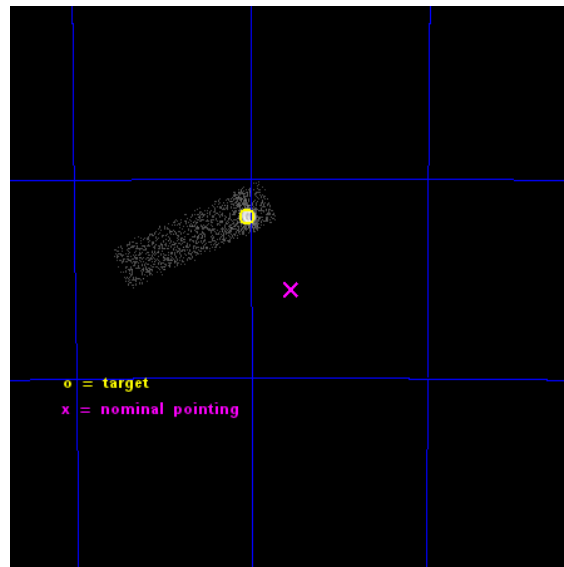
L2 Processing Date : Dec 1 2014

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# 1 Front

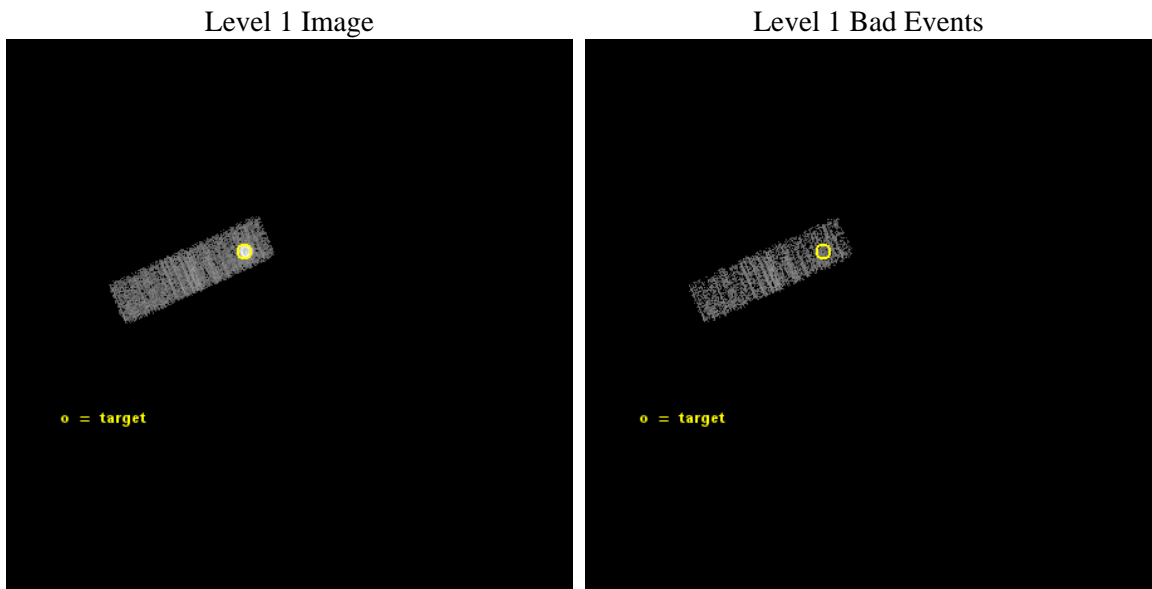
seq_num	590524	Sequence number
obs_id	15471	Observation id
title	AO-14 Calibration Observations of E0102-72	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72 I3,-120,-4.0,0.5,0	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	15.886116485138	Nominal RA [deg]
dec_nom	-72.092792982913	Nominal Dec [deg]
roll_nom	246.12761047017	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10064.800150037	Sum of GTIs [s]
livetime	9573.6708361427	Livetime [s]
ontime3	10064.800150037	Sum of GTIs [s]
l2events	24517	Number of level 2 events



## 2 OBI

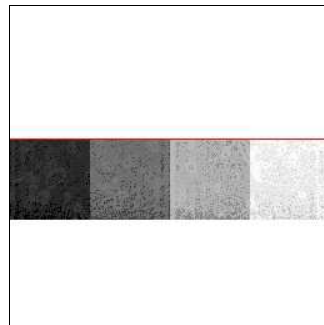
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 3



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10064.800150037	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime3	10064.800150037	Sum of GTIs [s]
date	2014-12-01T14:03:23	Date and time of file creation	l1events	39053	Number of level 1 events
revision	3	Processing version of data			

### 2.1.4 Events

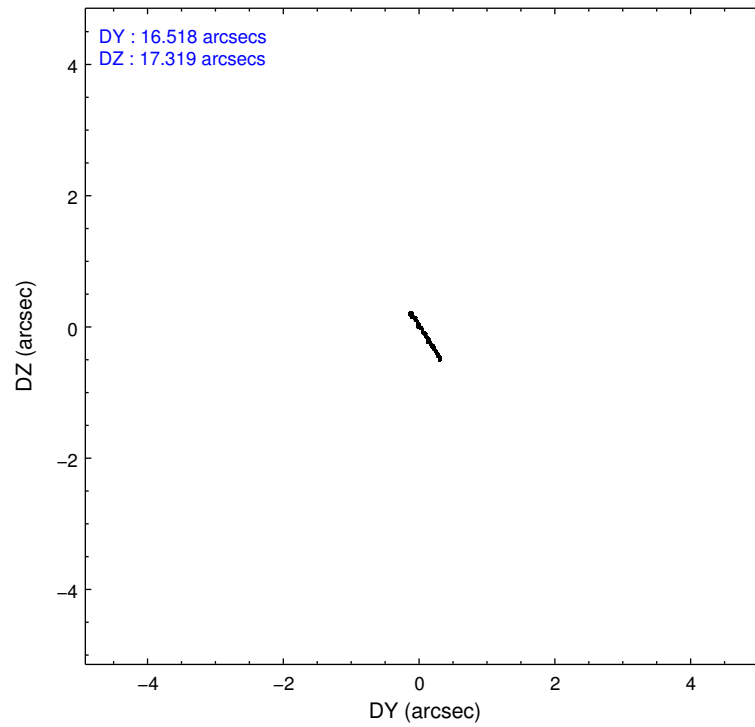
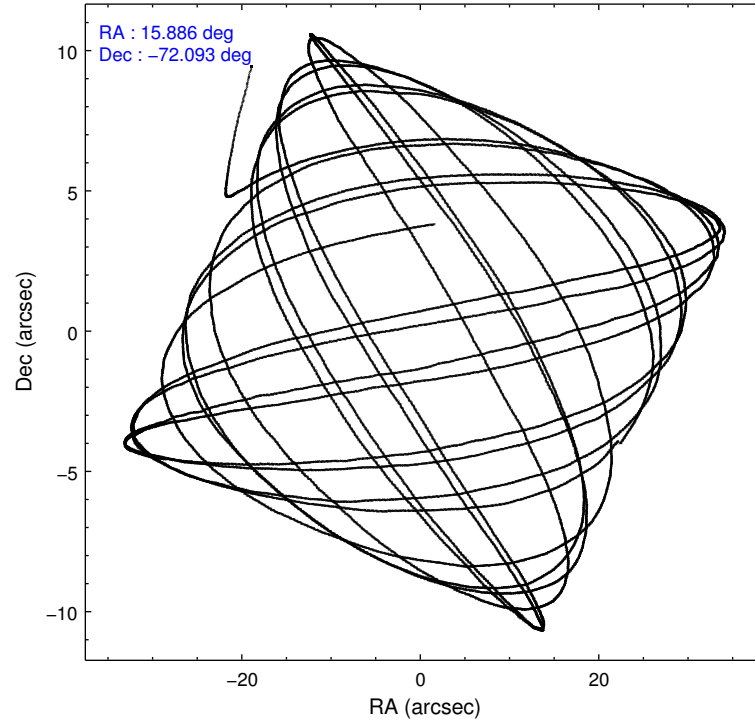
	<b>ccd 3</b>
level 1 events	39053
rejected events	14266
rejected %	<b>36%</b>

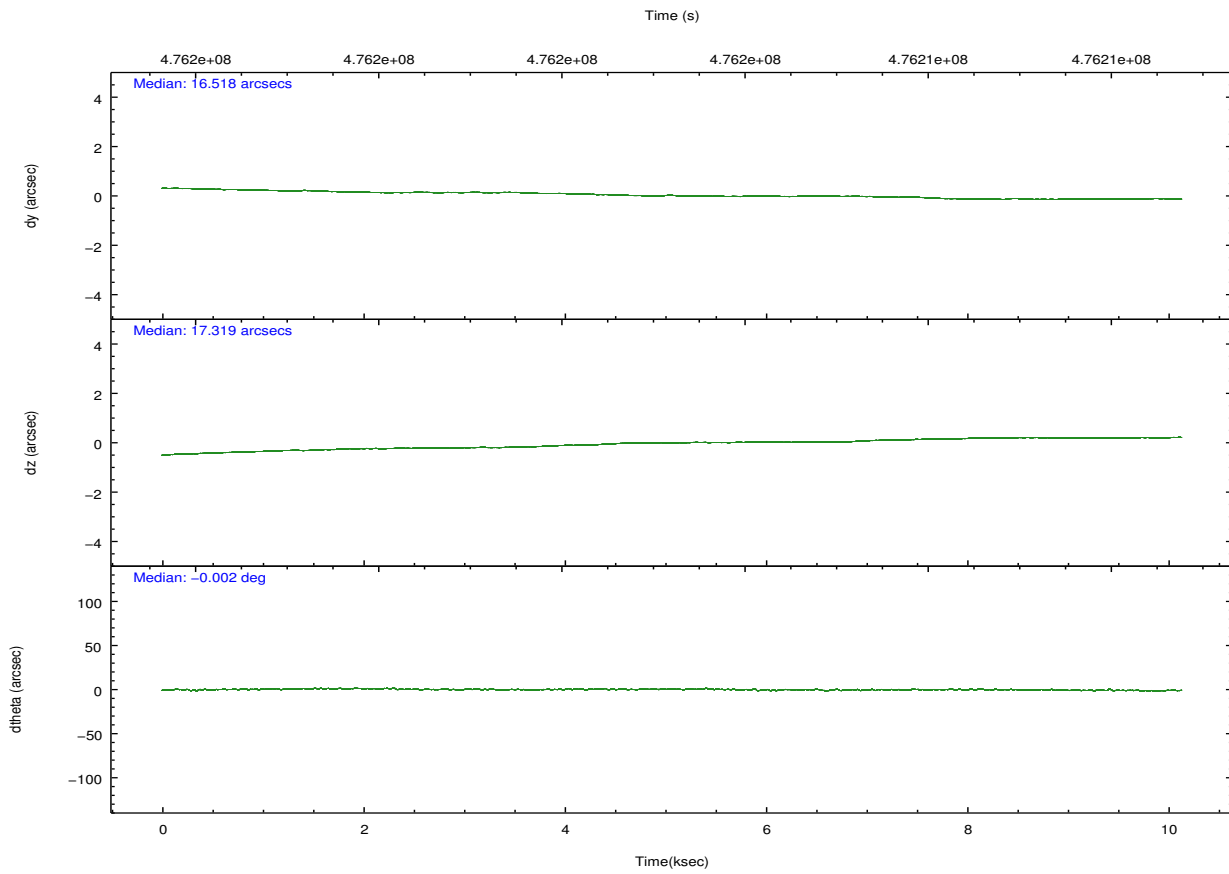
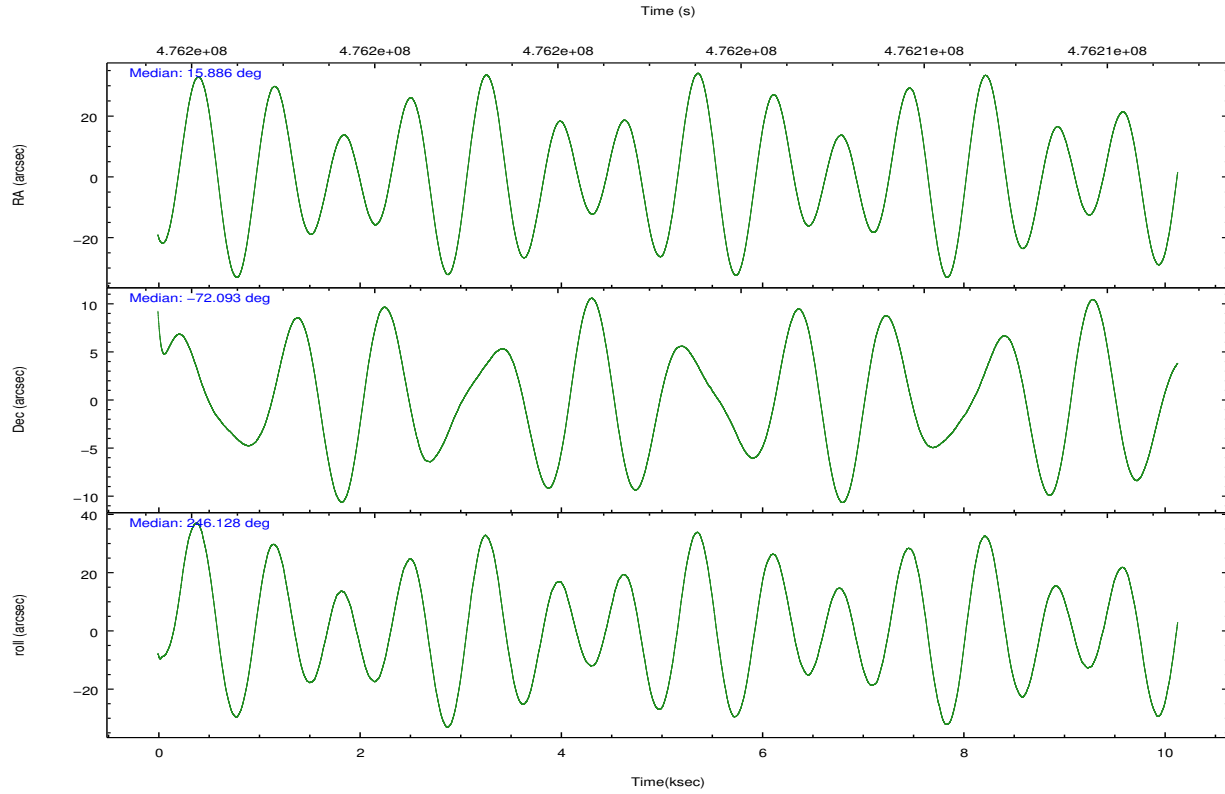
	<b>ccd 3</b>
grade 0 events	21123
	54%
grade 1 events	35
	0%
grade 2 events	1976
	5%
grade 3 events	632
	1%
grade 4 events	638
	1%
grade 5 events	602
	1%
grade 6 events	419
	1%
grade 7 events	13628
	34%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-3	ACIS-3	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	15.876333	15.8861164851379	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-72.065504	-72.09279298291344	Subarray start row	341	341
[deg] Pointing Roll	245.909626	246.1276104701718	Subarray row count	256	256
[s] Window start time (MET)	470707267.184000	470707267.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	483667267.184000	483667267.184000	[s] Primary exposure time	0.000000	0.8
[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)	476198269.184000	476197215.61789			
Observation start date	2013-02-02T13:16:42	2013-02-02T13:00:15			
[s] Observation end time (MET)	476208269.184000	476208821.18101			
Observation end date	2013-02-02T16:03:22	2013-02-02T16:13:41			
Read mode	TIMED	TIMED			

## 2.3 Aspect





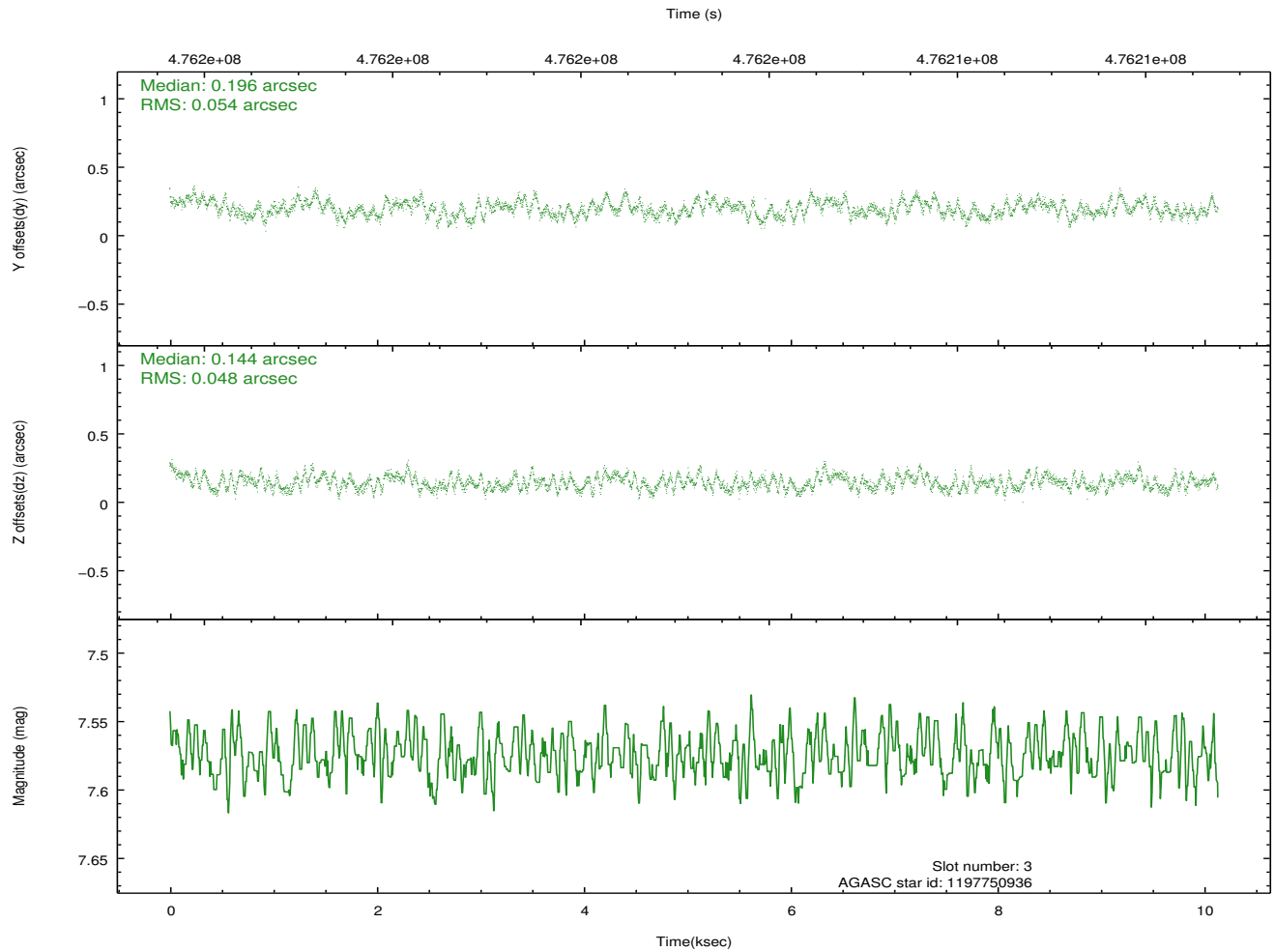
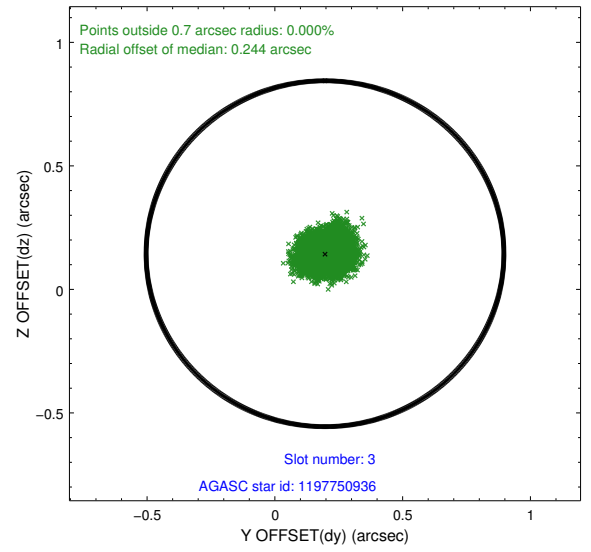
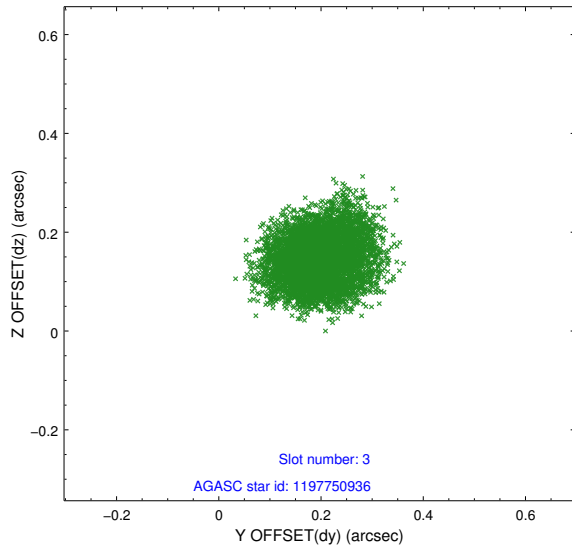
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.14	2472	0.065	-0.011	0.014	0.024	0.000000	0.000000	922.92	-840.94
1	FID		ACIS-I-5	7.14	2473	-0.231	0.067	0.009	0.016	0.000000	0.000000	-1825.19	1056.38
2	FID		ACIS-I-6	7.14	2472	0.075	0.014	0.013	0.022	0.000000	0.000000	387.92	1701.41
3	GUIDE	used	1197750936	7.58	4942	0.196	0.144	0.078	0.119	15.387940	-71.549550	-1465.45	-1264.35
4	GUIDE	used	1197884536	8.49	4945	-0.061	-0.036	0.070	0.115	17.160729	-71.835289	-1330.84	983.91
5	GUIDE	used	1197884712	8.29	4945	-0.001	-0.036	0.070	0.110	16.087398	-72.252690	521.21	487.27
6	GUIDE	used	1198189696	7.37	4945	-0.133	-0.070	0.058	0.095	15.223750	-72.697522	2366.20	293.05
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

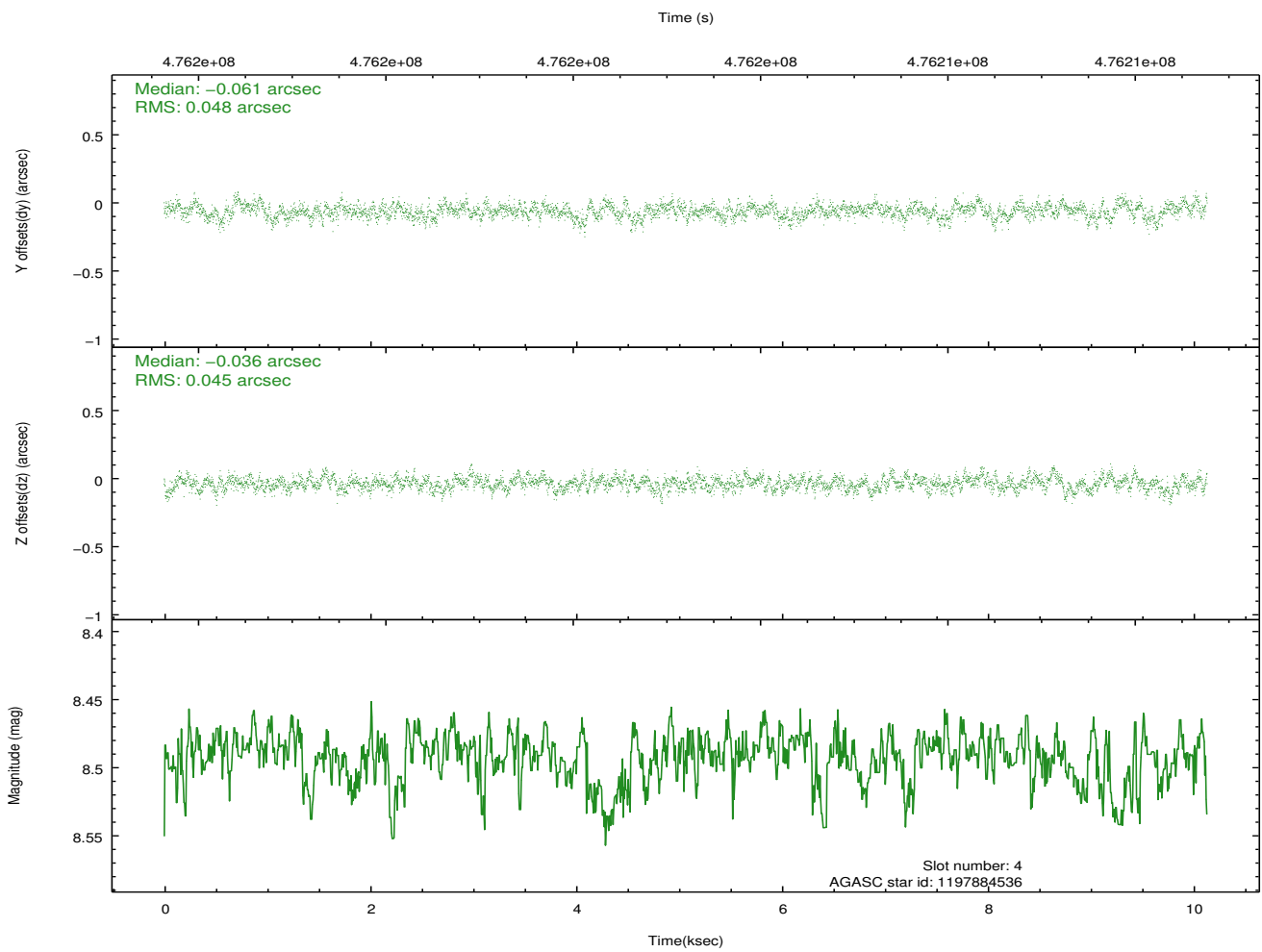
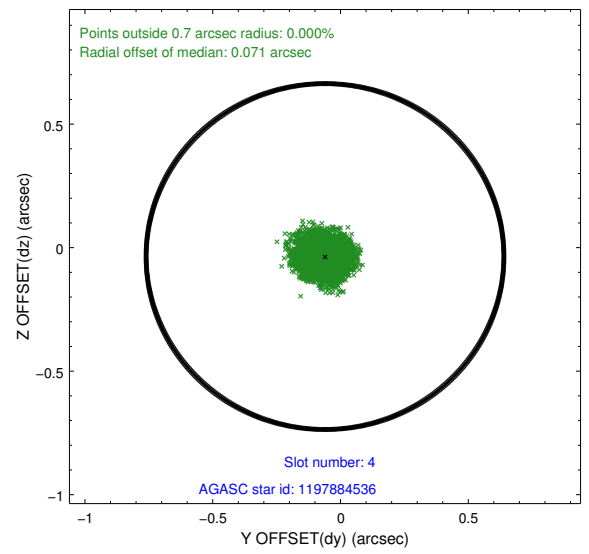
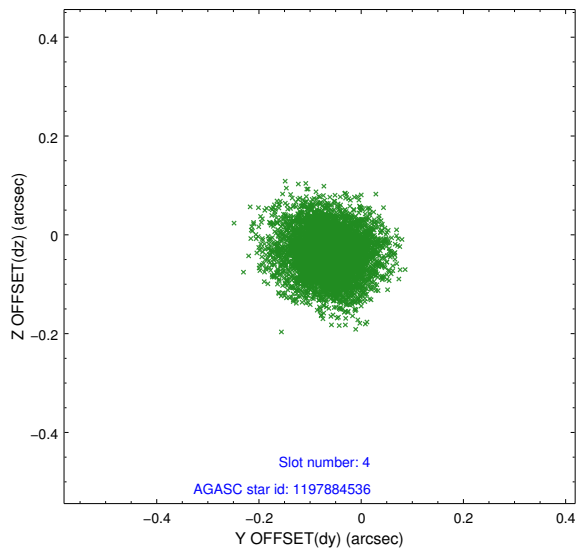
∞

## 2.4 Star Slots

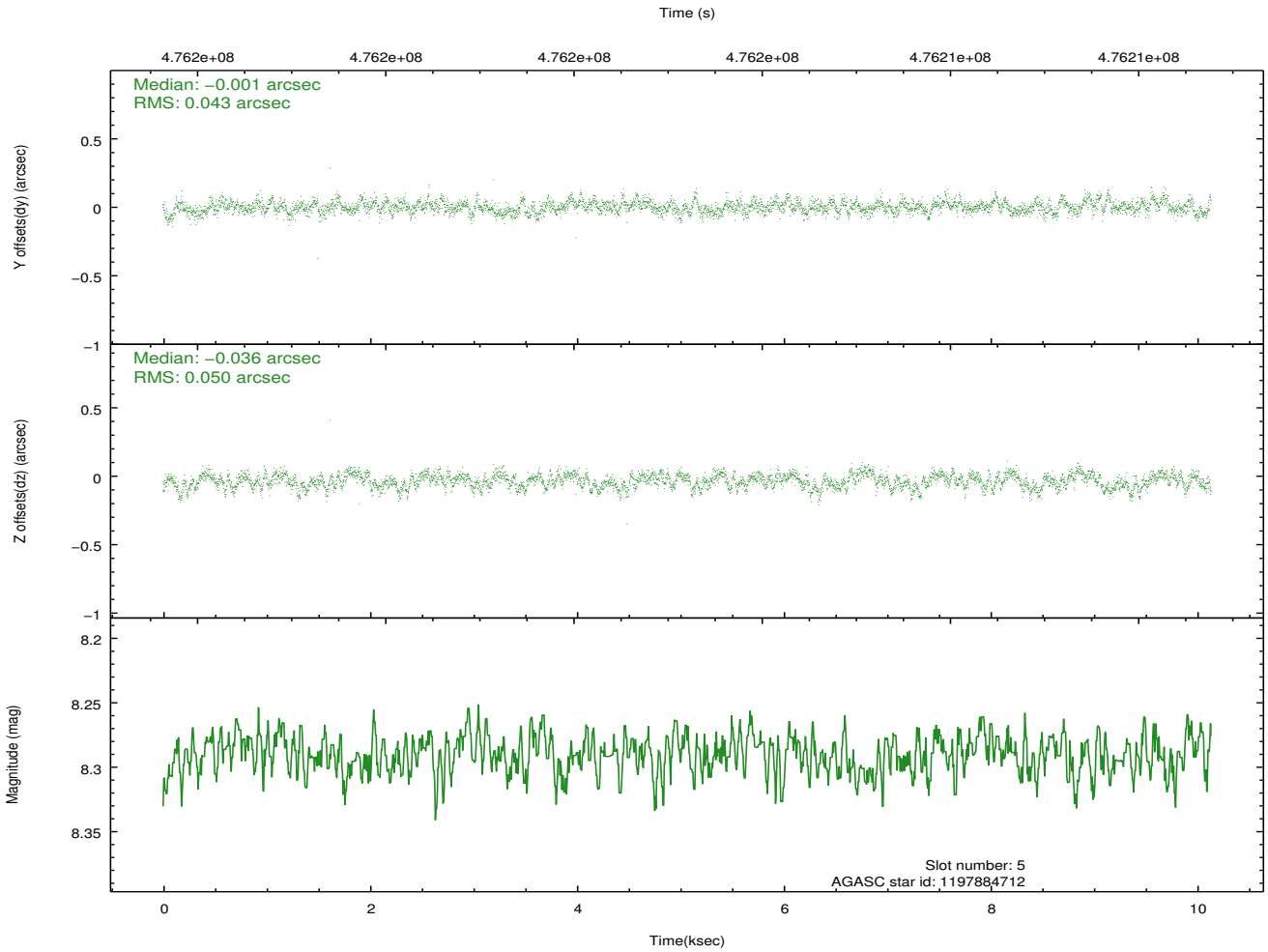
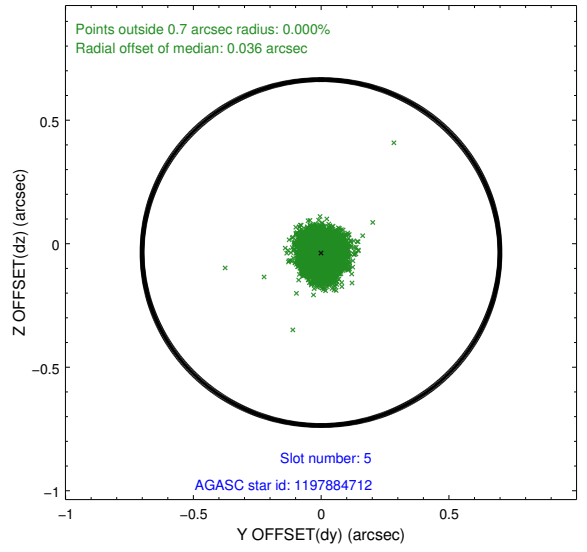
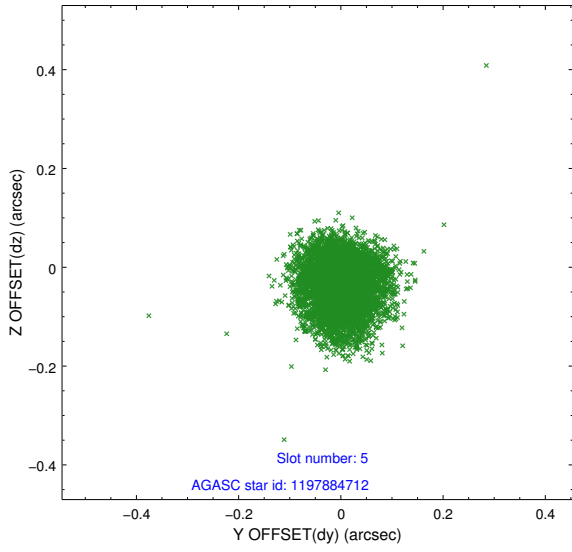
### 2.4.1 Slot 3



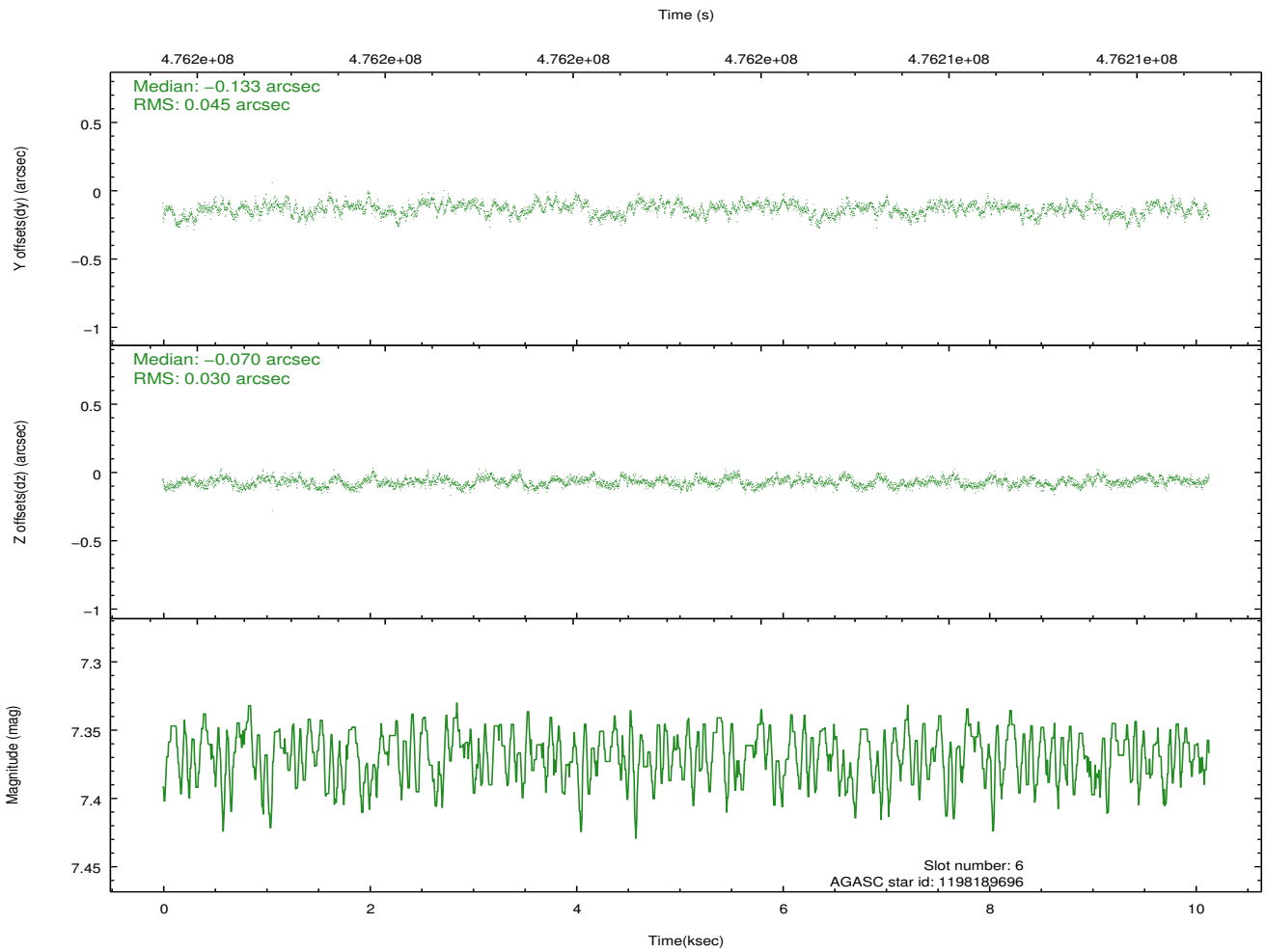
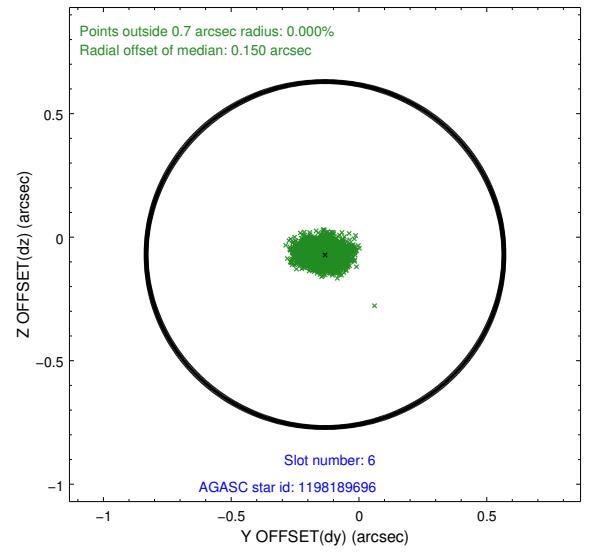
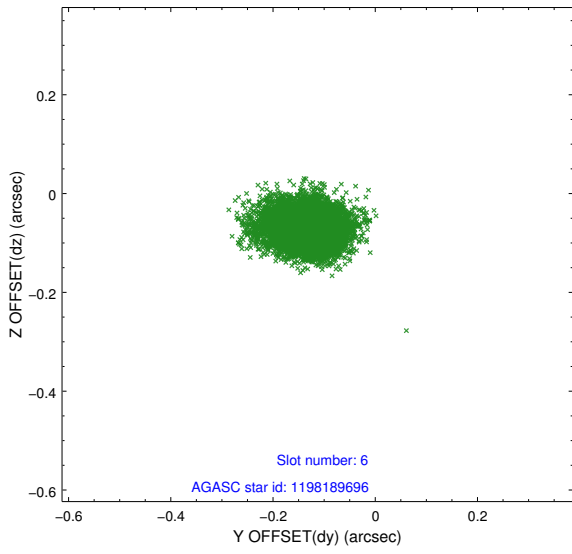
## 2.4.2 Slot 4



### 2.4.3 Slot 5

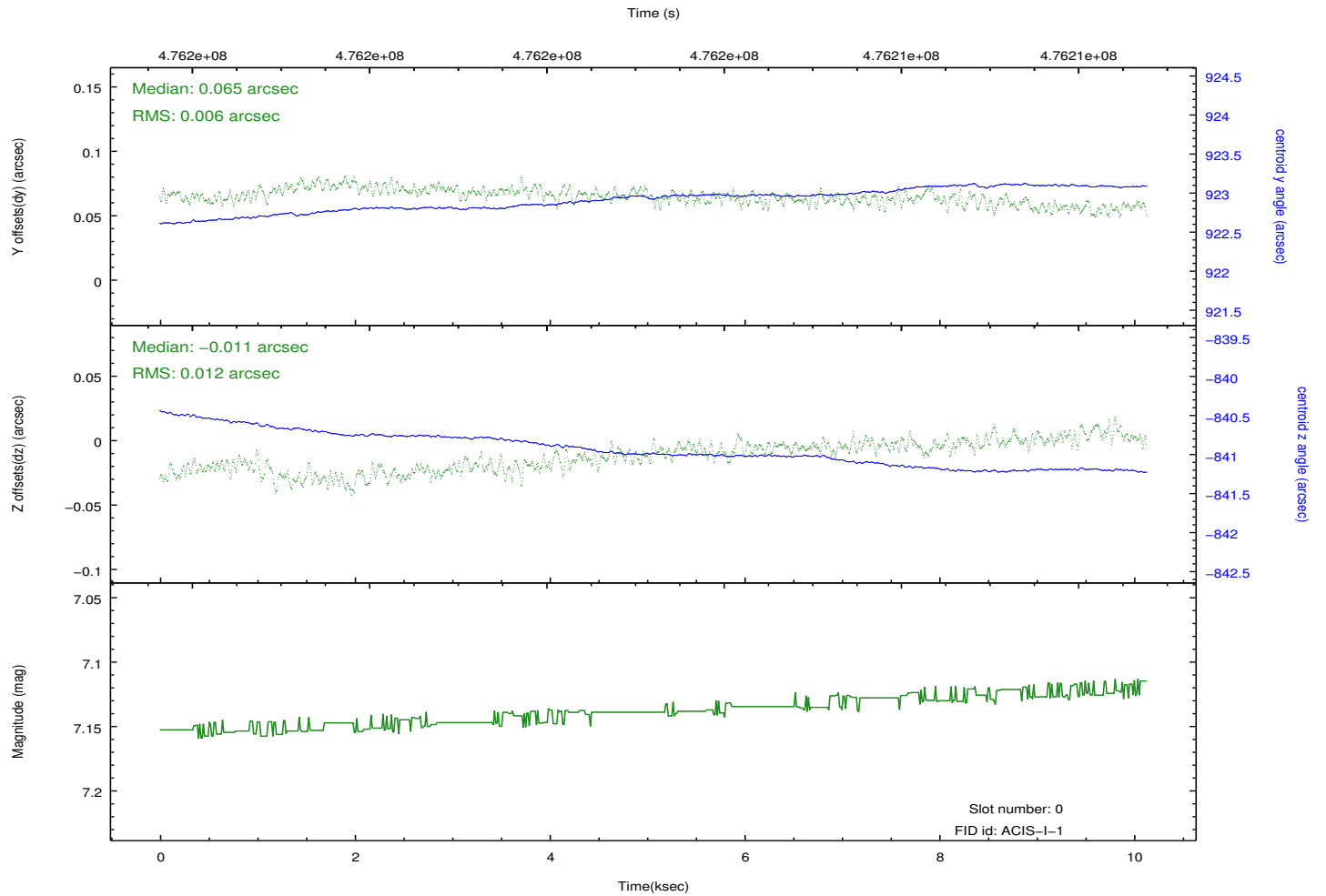
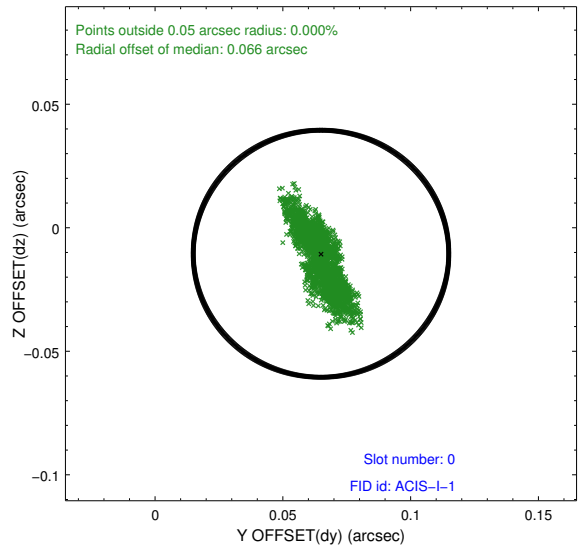
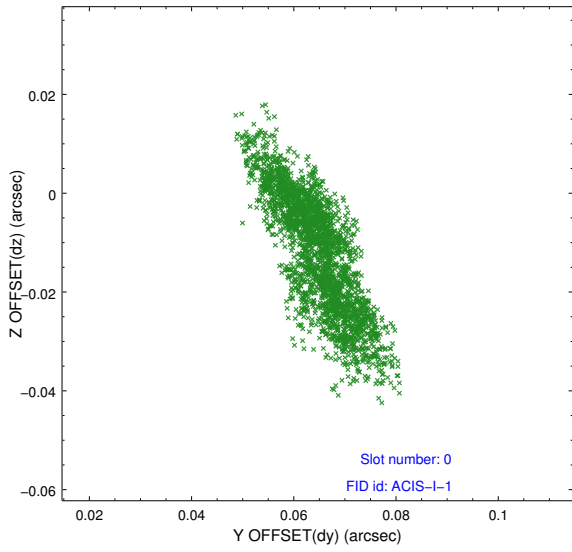


### 2.4.4 Slot 6

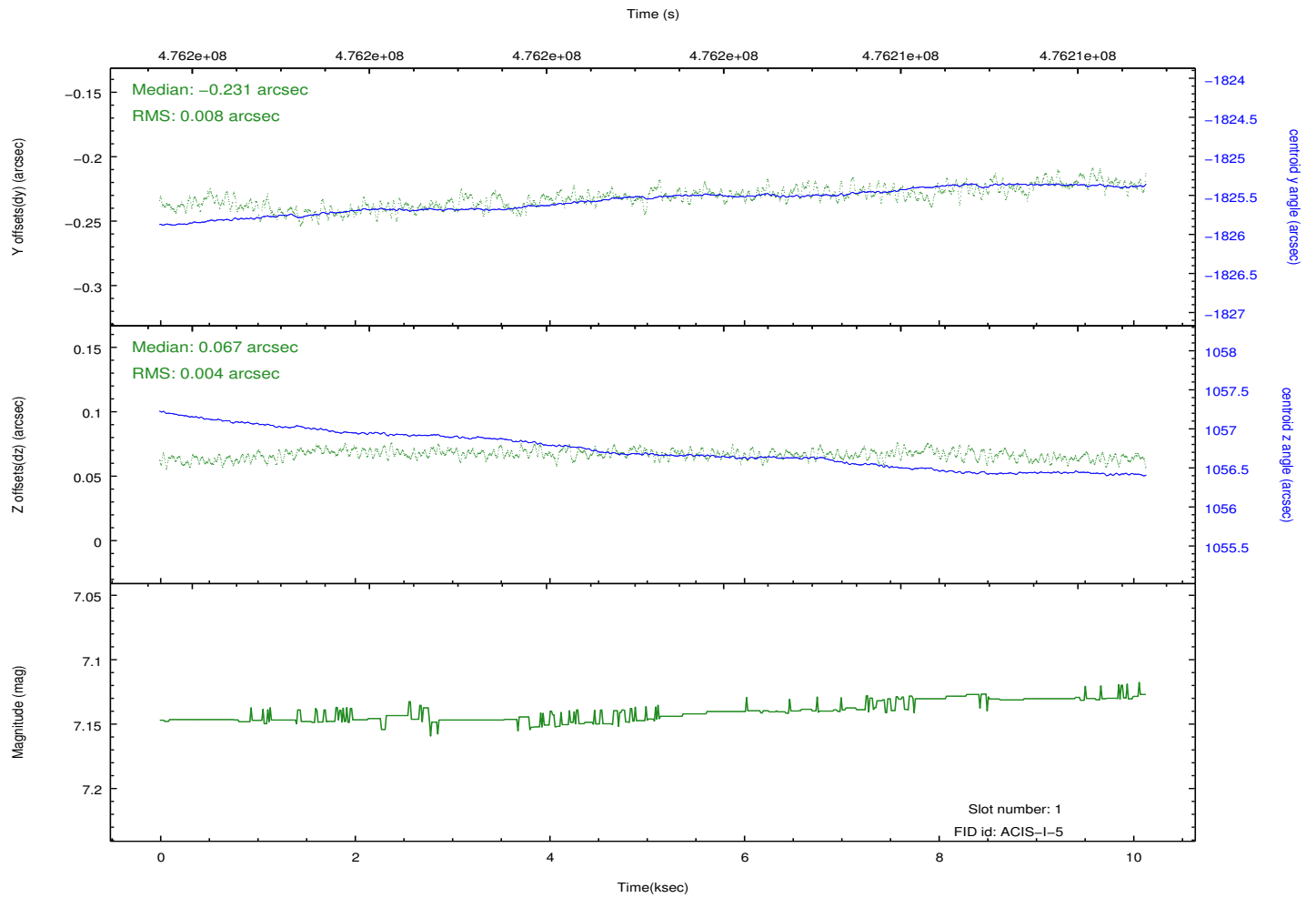
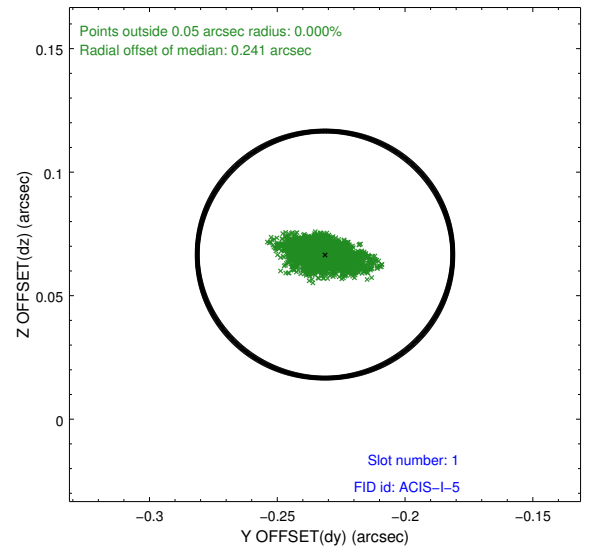
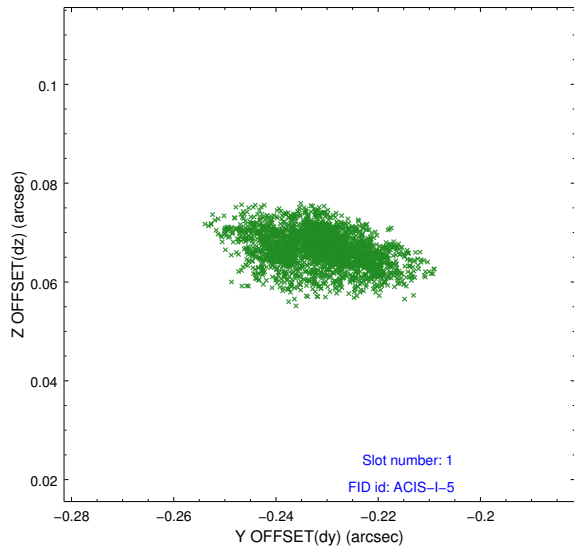


## 2.5 FID Slots

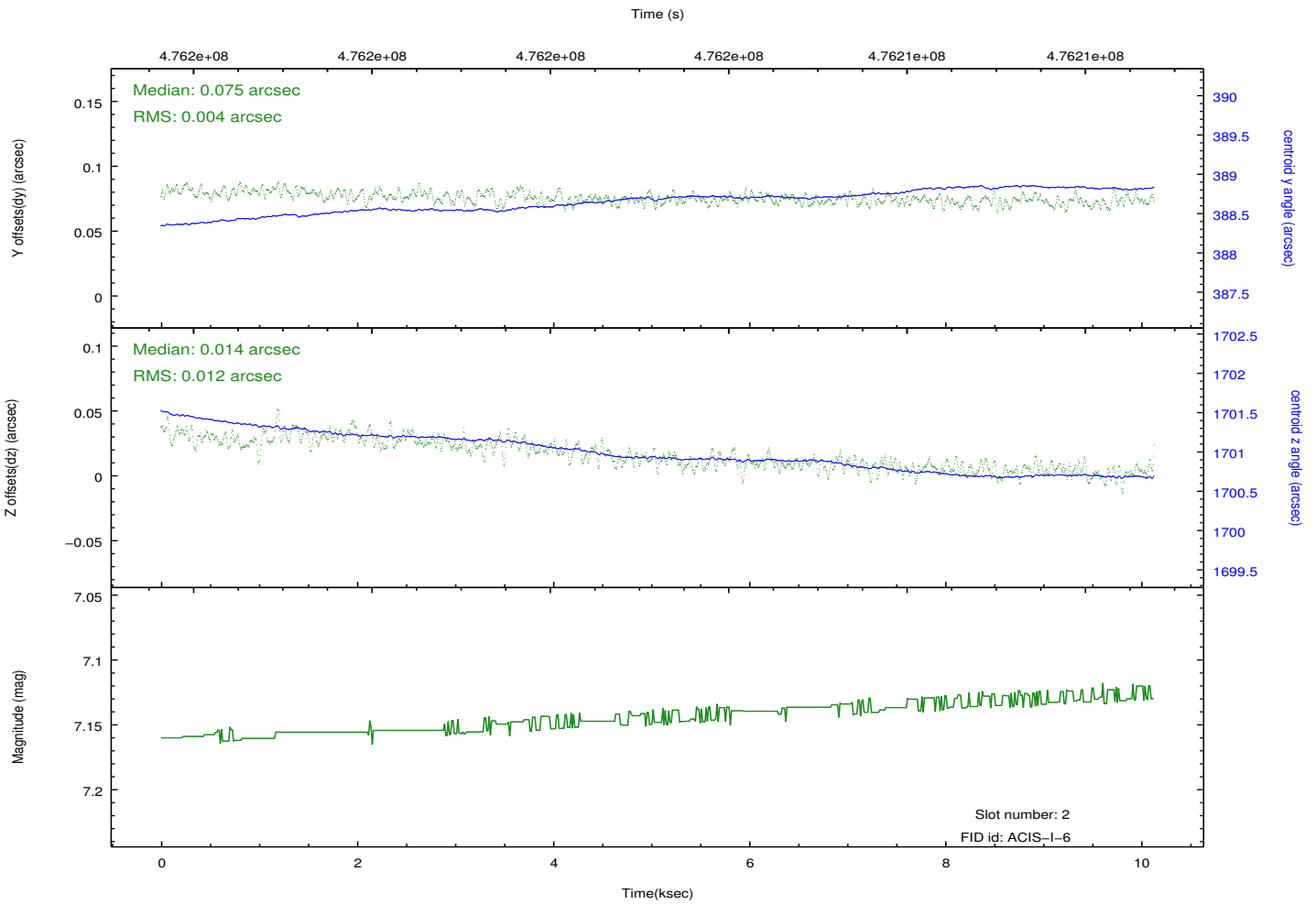
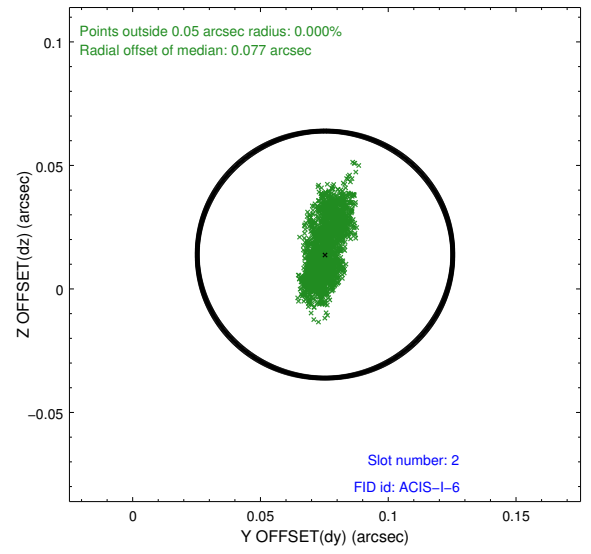
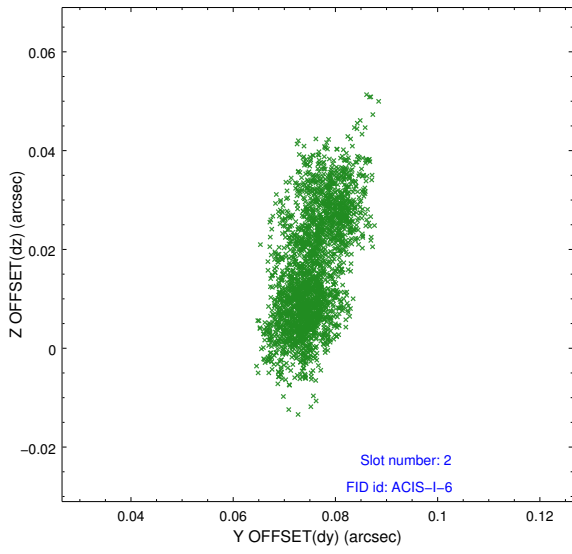
### 2.5.1 Slot 0



## 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)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.064800150037

## A.2 Comments

Window preference met.

The guide star in slot 7 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.

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.