

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 13973 - L2 Version 2  
Chandra X-Ray Center

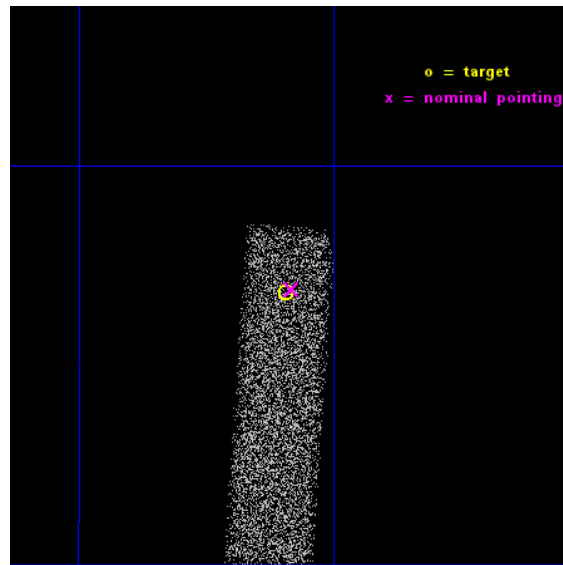
L2 Processing Date : Dec 1 2014

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# 1 Front

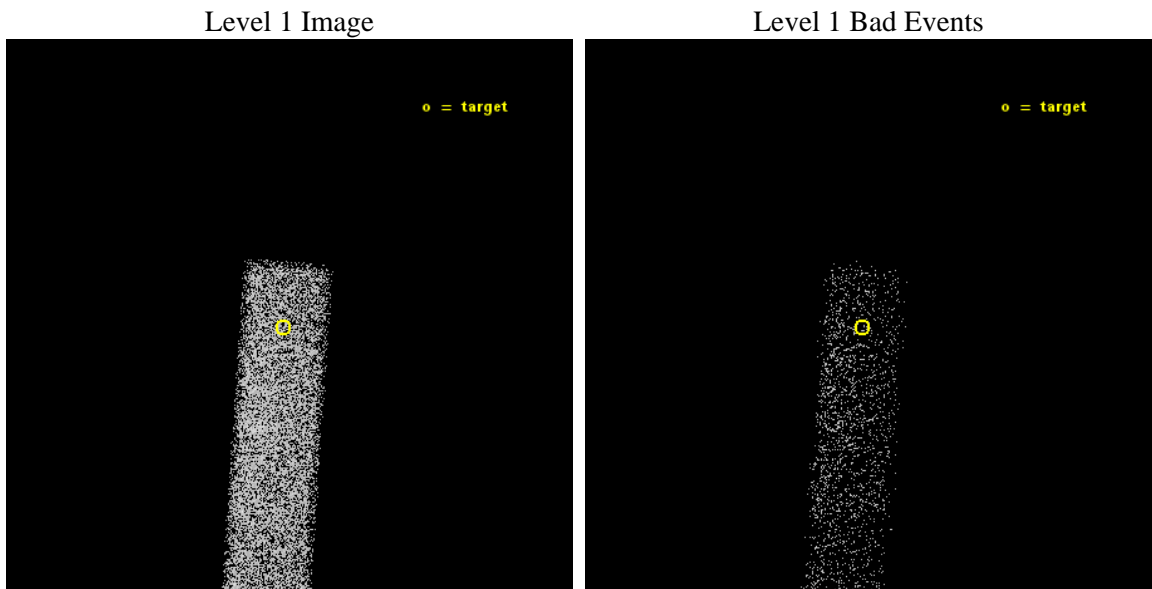
seq_num	702694	Sequence number
obs_id	13973	Observation id
title	Black Holes at the Centers of Nearby Dwarf Galaxies	Proposal title
observer	Dr. Edward Moran	Principal investigator
object	J1009+2656	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	152.39875	Observer's specified target RA [deg]
dec_targ	26.946944	Observer's specified target Dec [deg]
ra_nom	152.395786017	Nominal RA [deg]
dec_nom	26.94840514638	Nominal Dec [deg]
roll_nom	93.967854185318	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9567.8622244	Sum of GTIs [s]
livetime	9100.9818552269	Livetime [s]
ontime7	9567.8622244	Sum of GTIs [s]
l2events	8328	Number of level 2 events



## 2 OBI

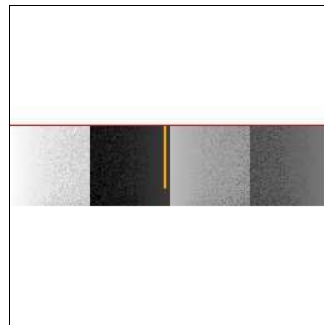
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9507.928000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	9567.8622244	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	9567.8622244	Sum of GTIs [s]
date	2014-12-01T03:22:25	Date and time of file creation	l1events	18153	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

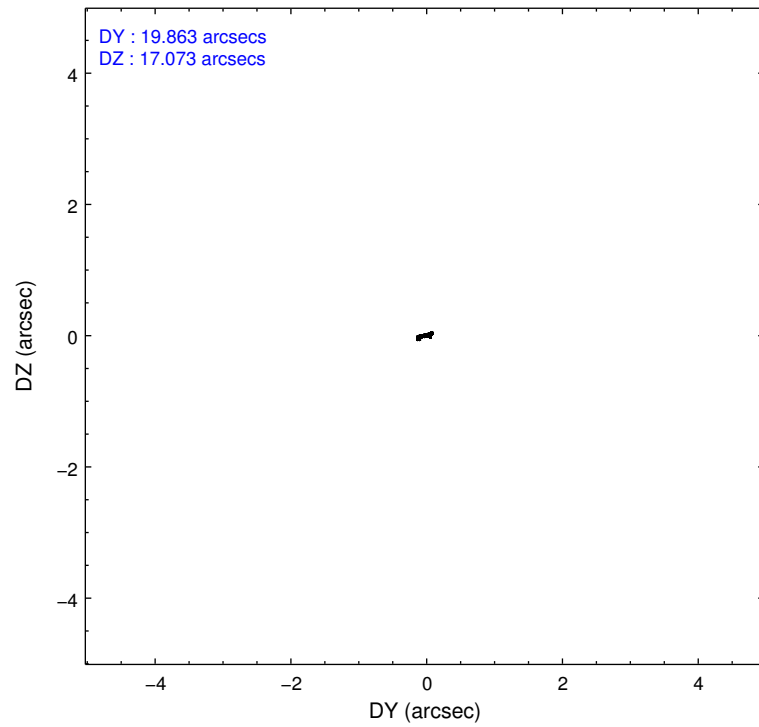
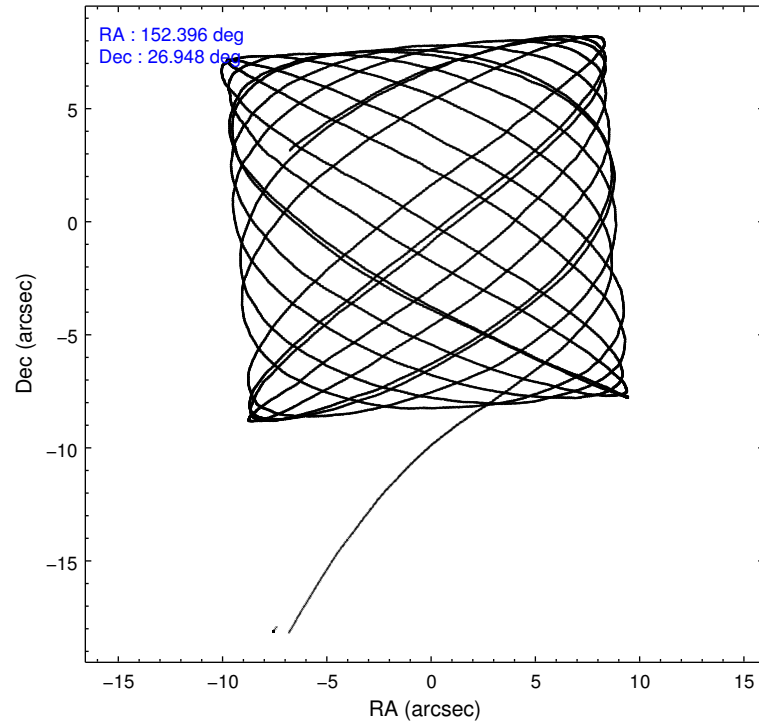
	<b>ccd 7</b>
level 1 events	18153
rejected events	9529
rejected %	52%

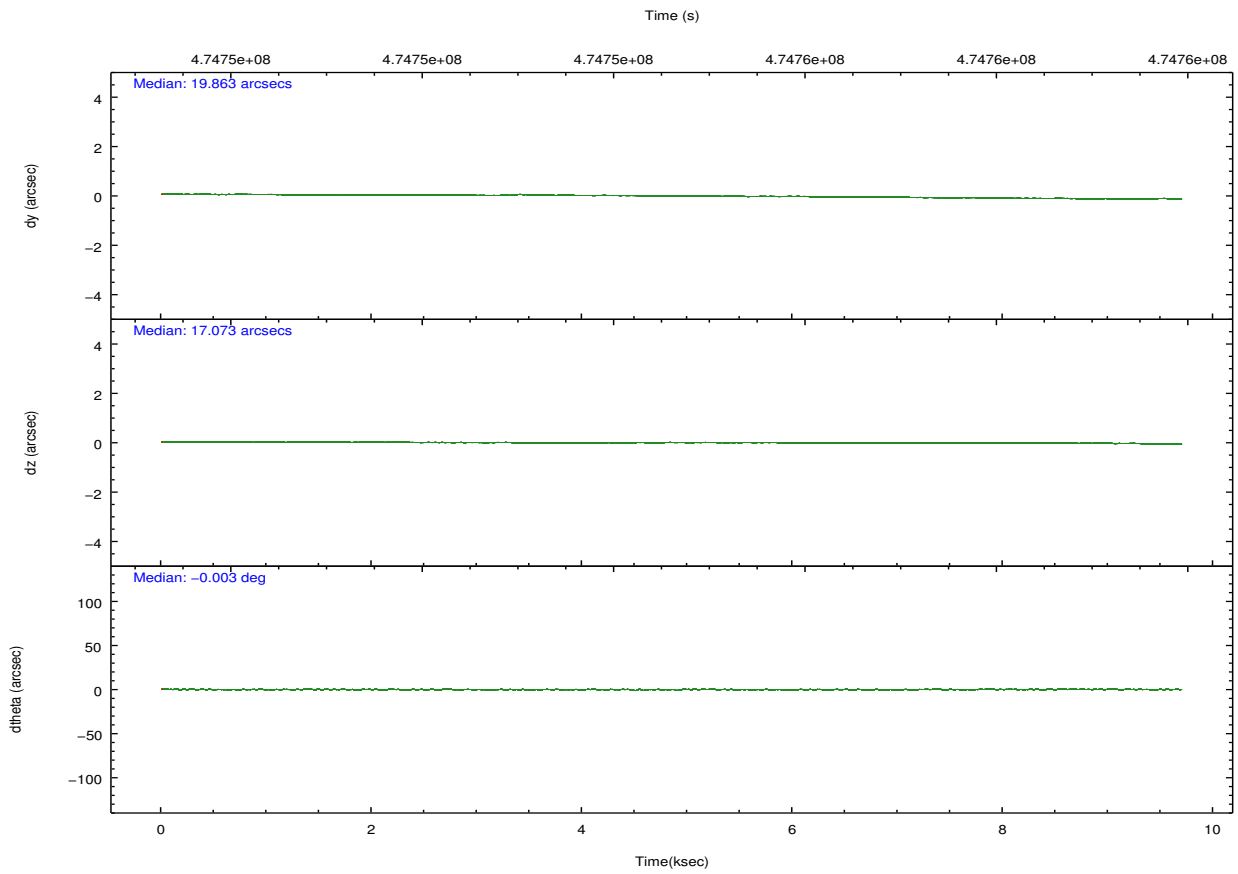
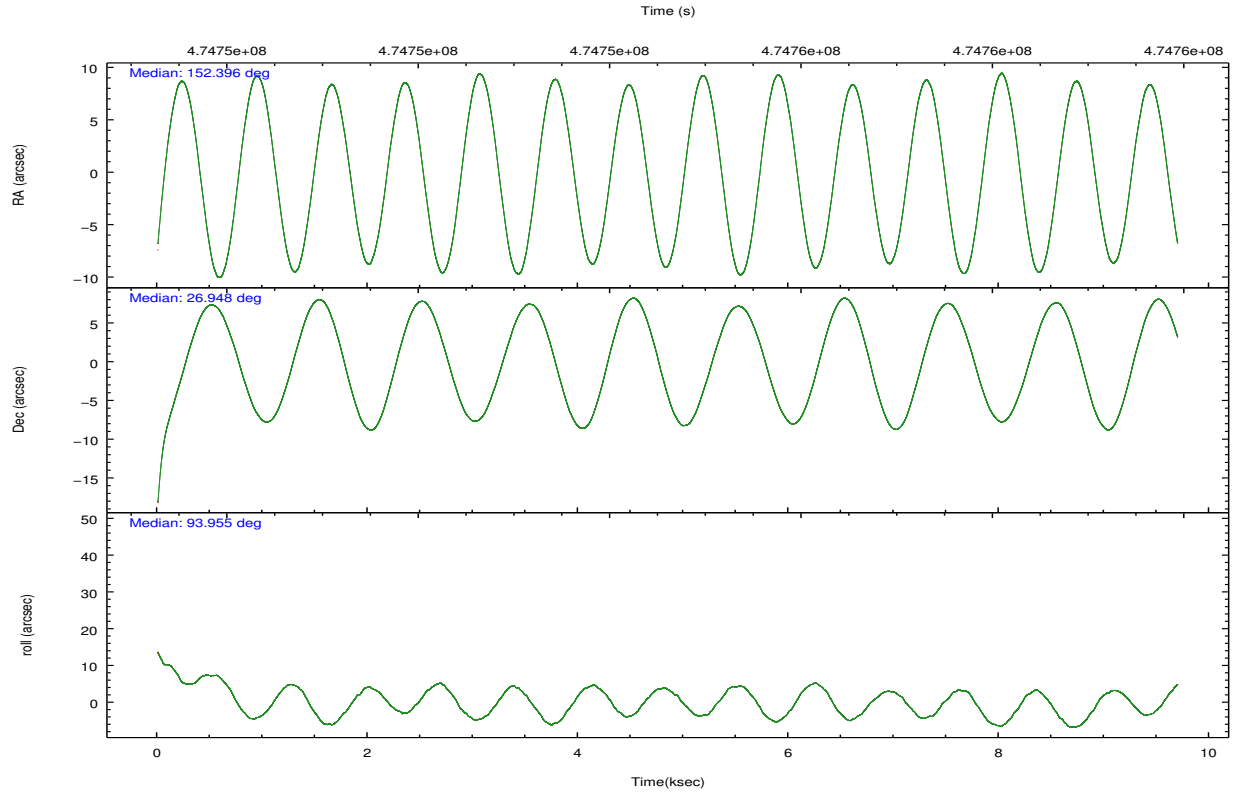
	<b>ccd 7</b>
grade 0 events	863
	4%
grade 1 events	28
	0%
grade 2 events	1713
	9%
grade 3 events	959
	5%
grade 4 events	898
	4%
grade 5 events	1989
	10%
grade 6 events	4191
	23%
grade 7 events	7512
	41%

## 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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	152.413241	152.395786017003	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	26.925926	26.94840514638017	Subarray start row	385	385
[deg] Pointing Roll	93.803328	93.96785418531751	Subarray row count	256	256
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.8
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	474749958.184000	474749057.10225			
Observation start date	2013-01-16T18:58:11	2013-01-16T18:44:17			
[s] Observation end time (MET)	474759466.184000	474759694.04032			
Observation end date	2013-01-16T21:36:39	2013-01-16T21:41:34			
Read mode	TIMED	TIMED			

## 2.3 Aspect





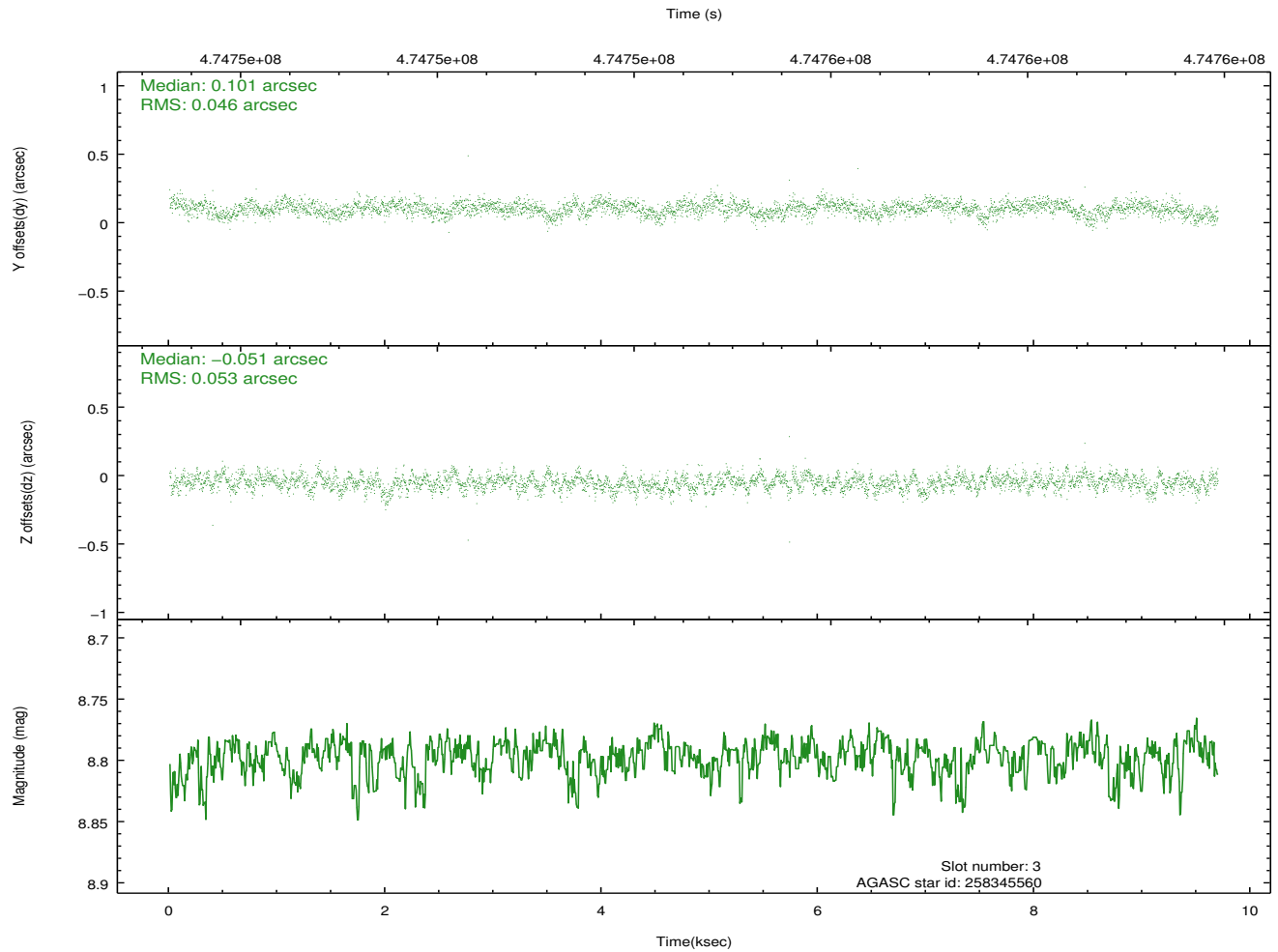
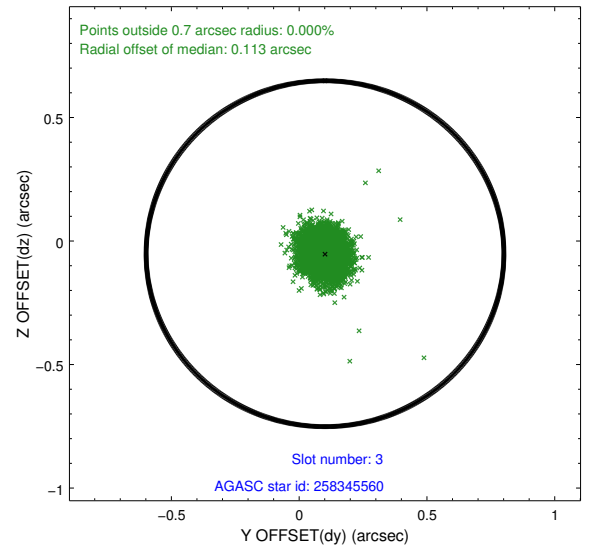
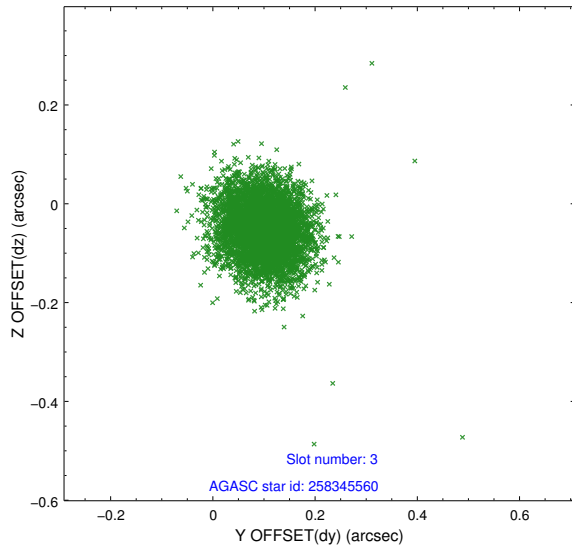
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.05	2365	-0.135	-0.065	0.008	0.015	0.000000	0.000000	-773.12	-1738.51
1	FID		ACIS-S-4	7.14	2365	0.318	0.083	0.008	0.016	0.000000	0.000000	2140.39	169.49
2	FID		ACIS-S-5	7.16	2365	-0.214	-0.009	0.009	0.021	0.000000	0.000000	-1825.30	163.78
3	GUIDE	used	258345560	8.80	4728	0.101	-0.051	0.073	0.119	151.964123	26.668490	-826.30	1503.23
4	GUIDE	used	258346560	8.60	4728	-0.047	0.394	0.080	0.130	153.084301	27.103623	500.94	-2186.11
5	GUIDE	used	258347512	8.43	4728	-0.092	-0.139	0.090	0.145	152.376159	27.054401	469.43	88.14
6	GUIDE	used	258347848	8.96	4725	0.004	-0.050	0.101	0.172	151.978946	26.485640	-1486.40	1501.33
7	GUIDE	used	258348624	8.38	4724	0.032	-0.162	0.078	0.128	151.865468	26.783701	-391.06	1791.03

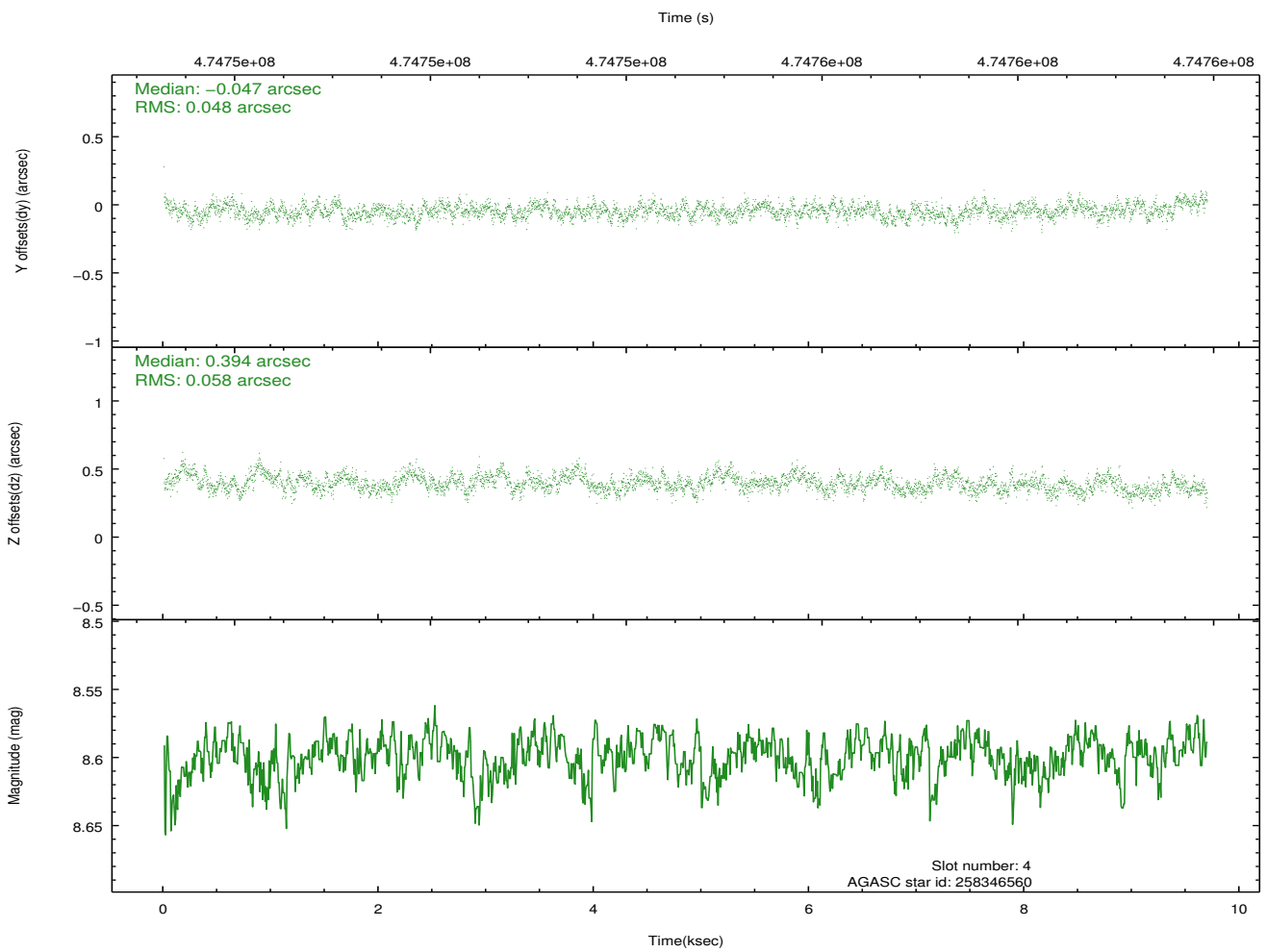
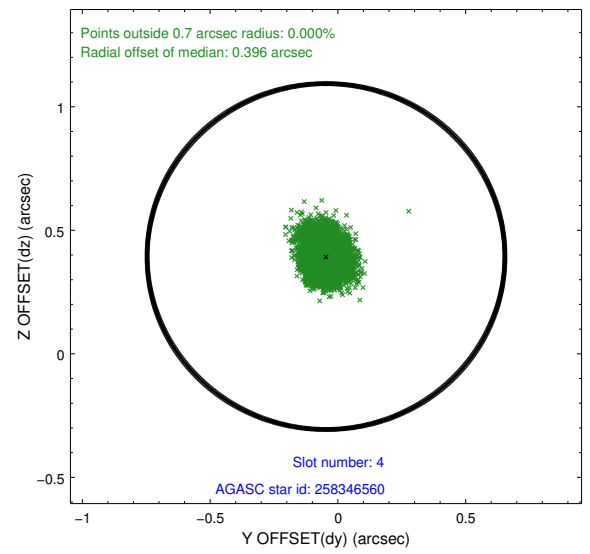
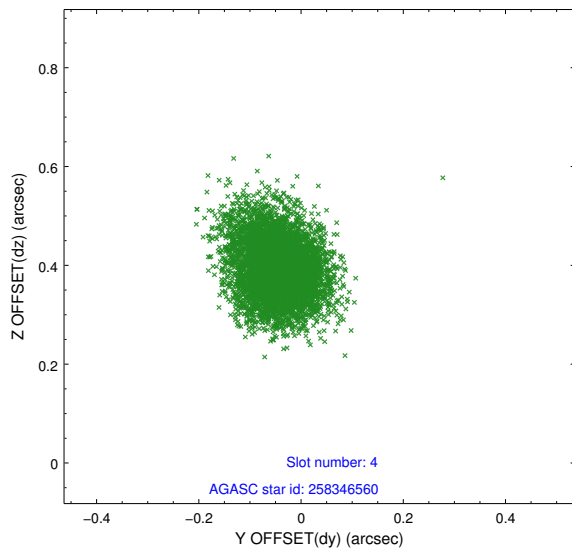
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## 2.4 Star Slots

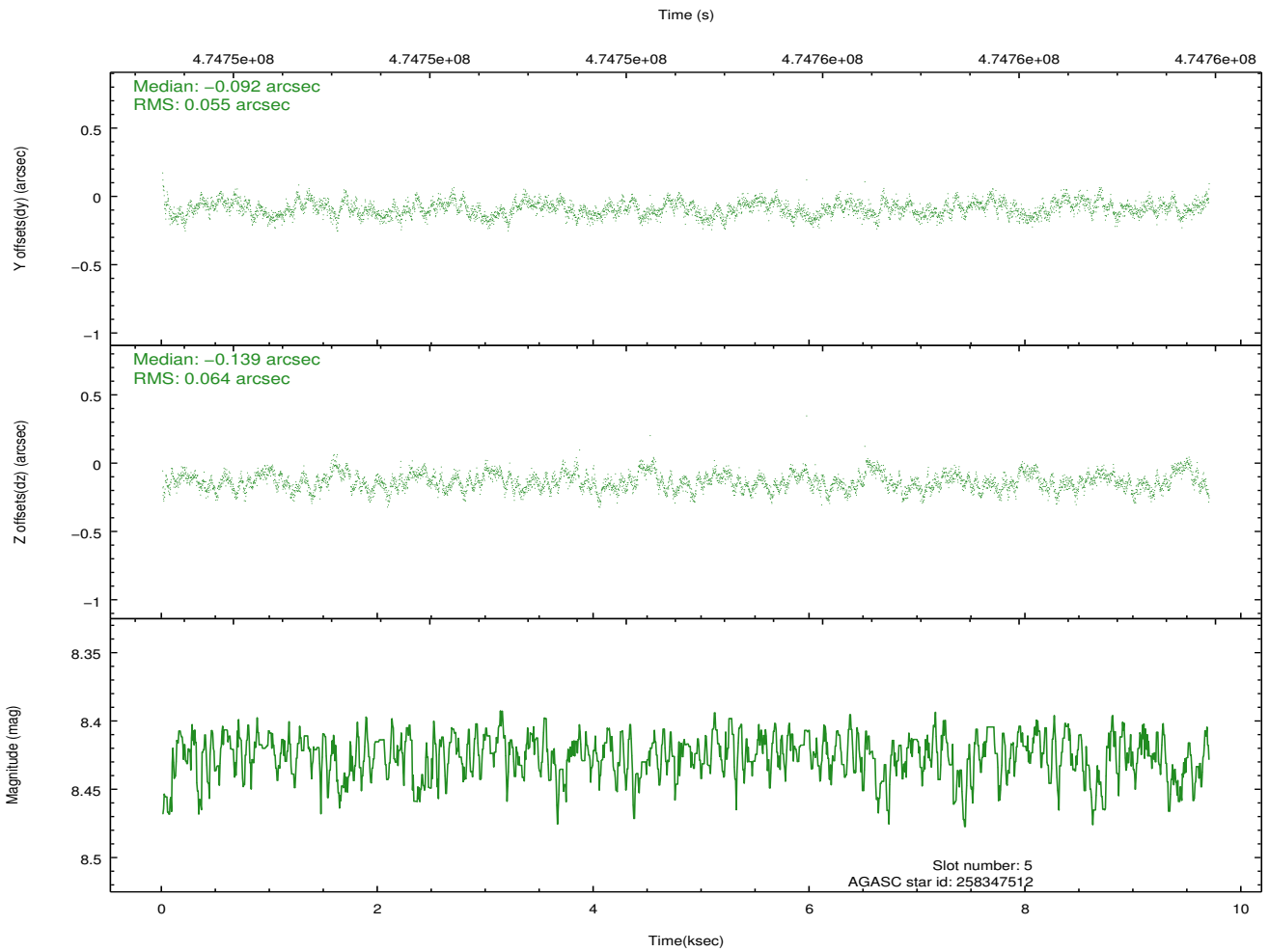
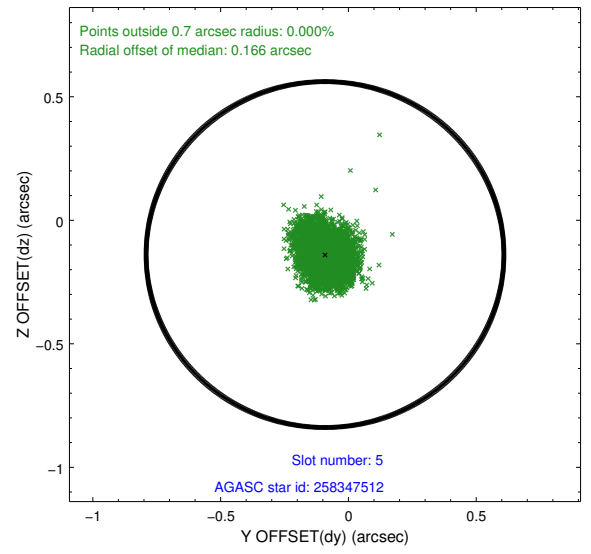
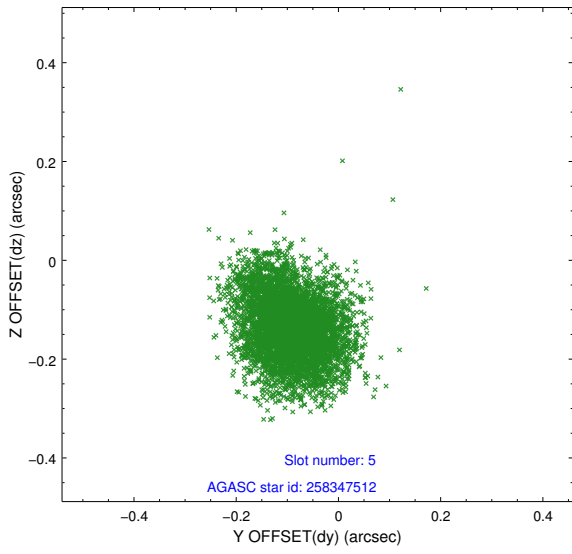
### 2.4.1 Slot 3



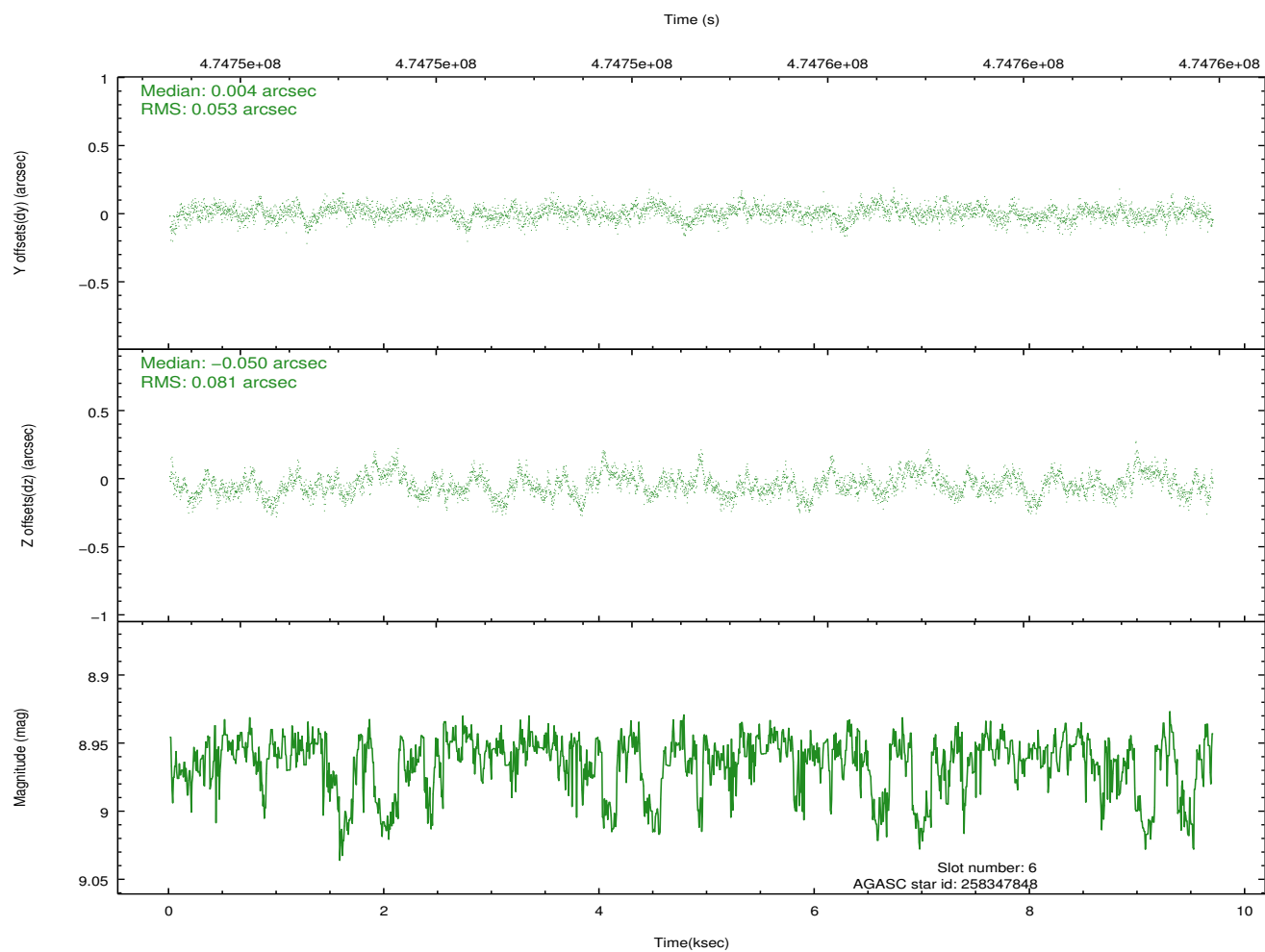
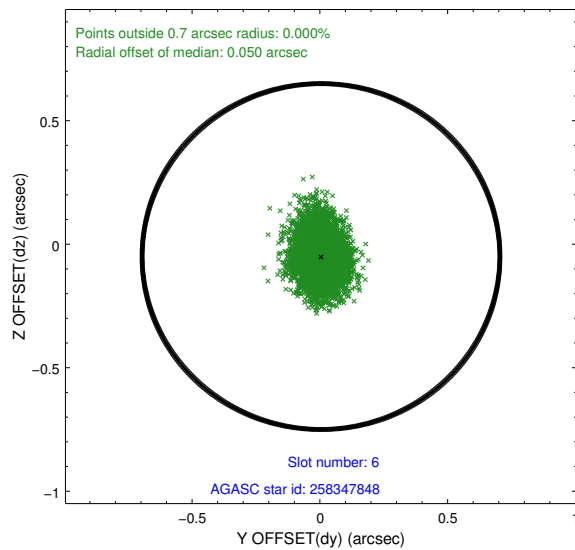
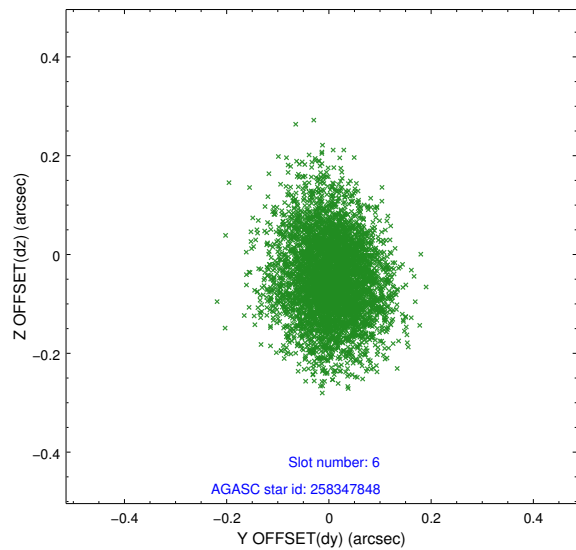
## 2.4.2 Slot 4



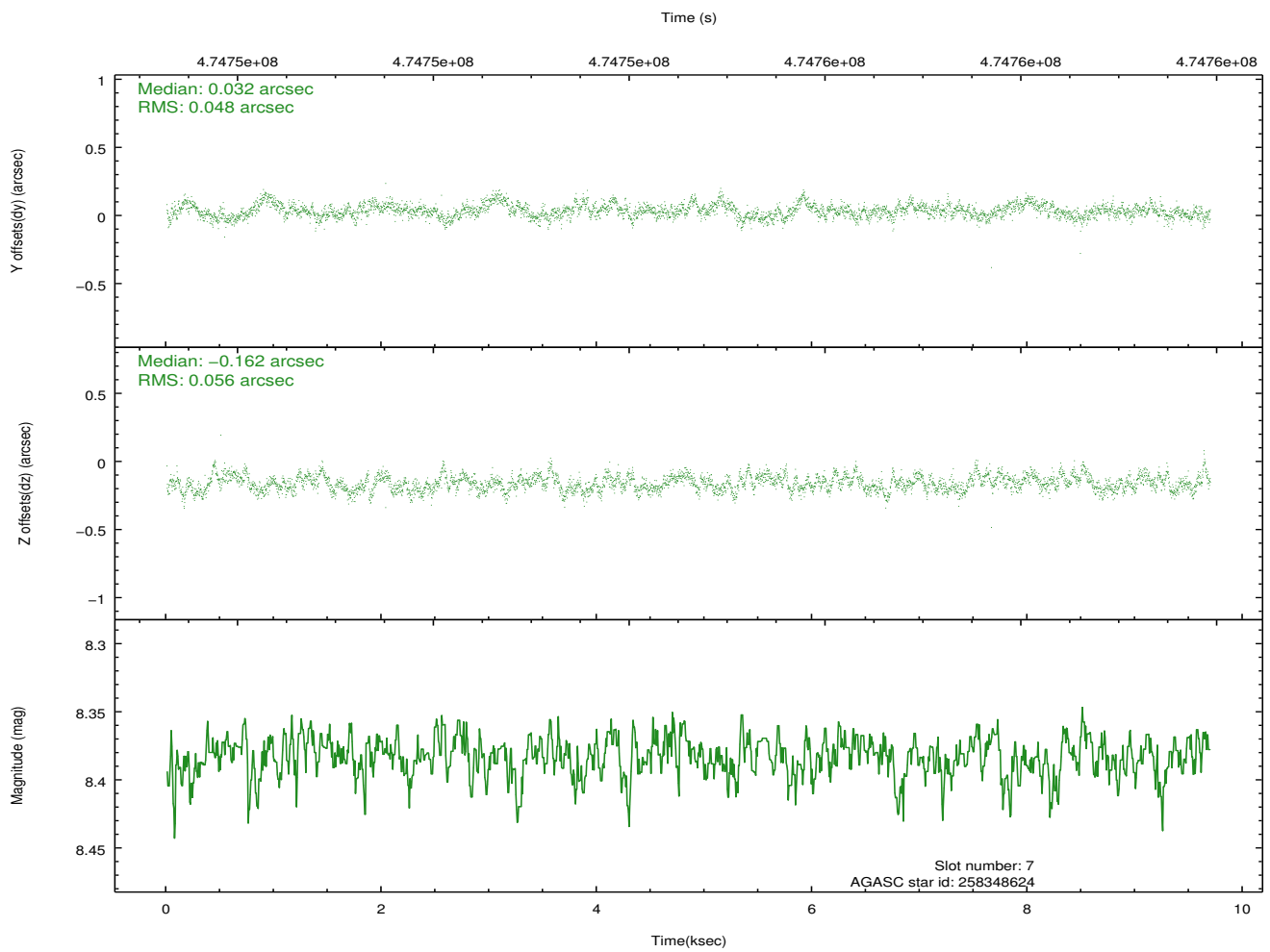
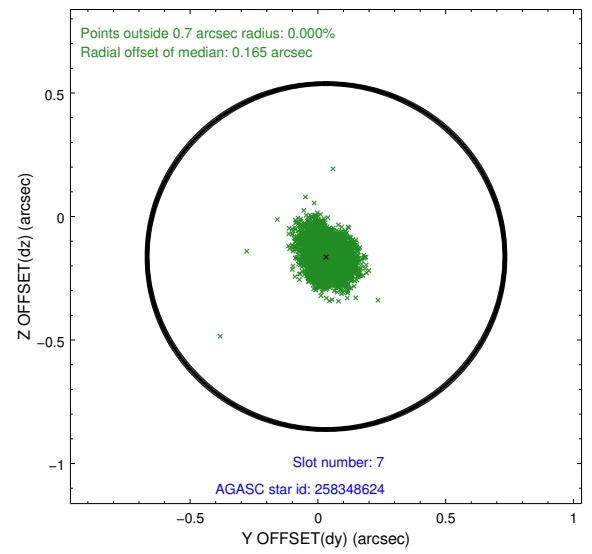
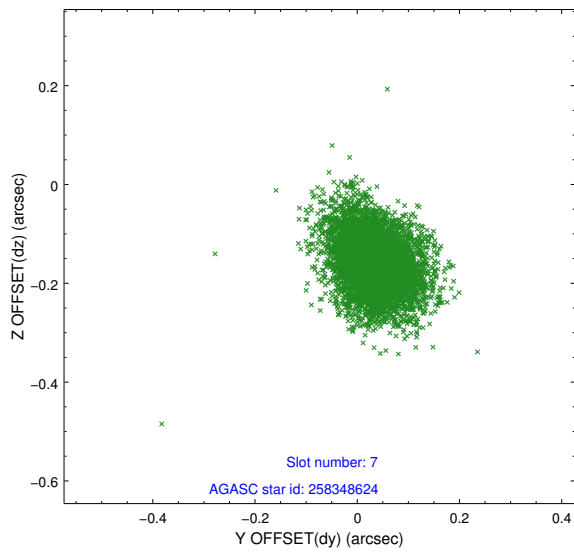
### 2.4.3 Slot 5



## 2.4.4 Slot 6

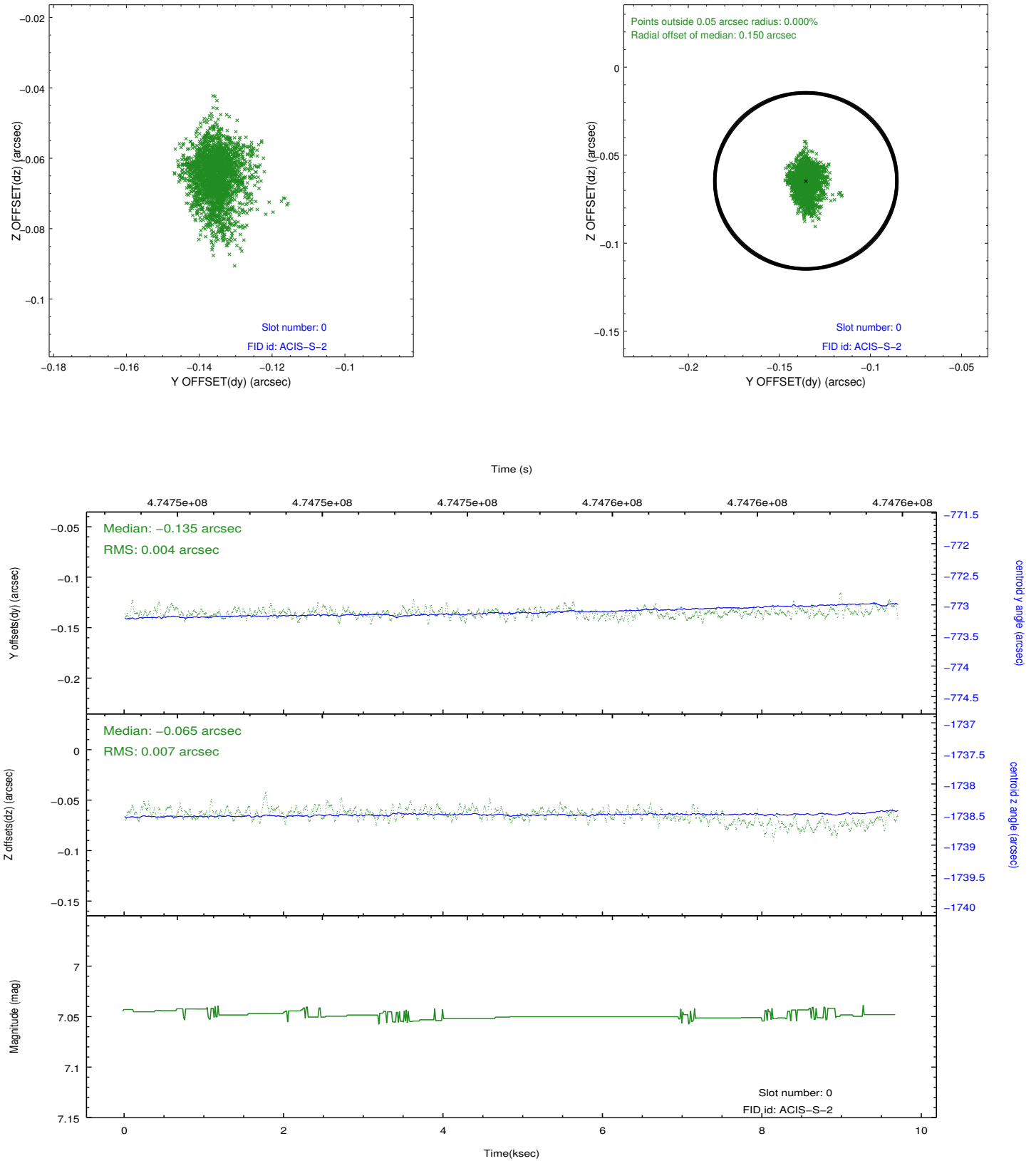


## 2.4.5 Slot 7

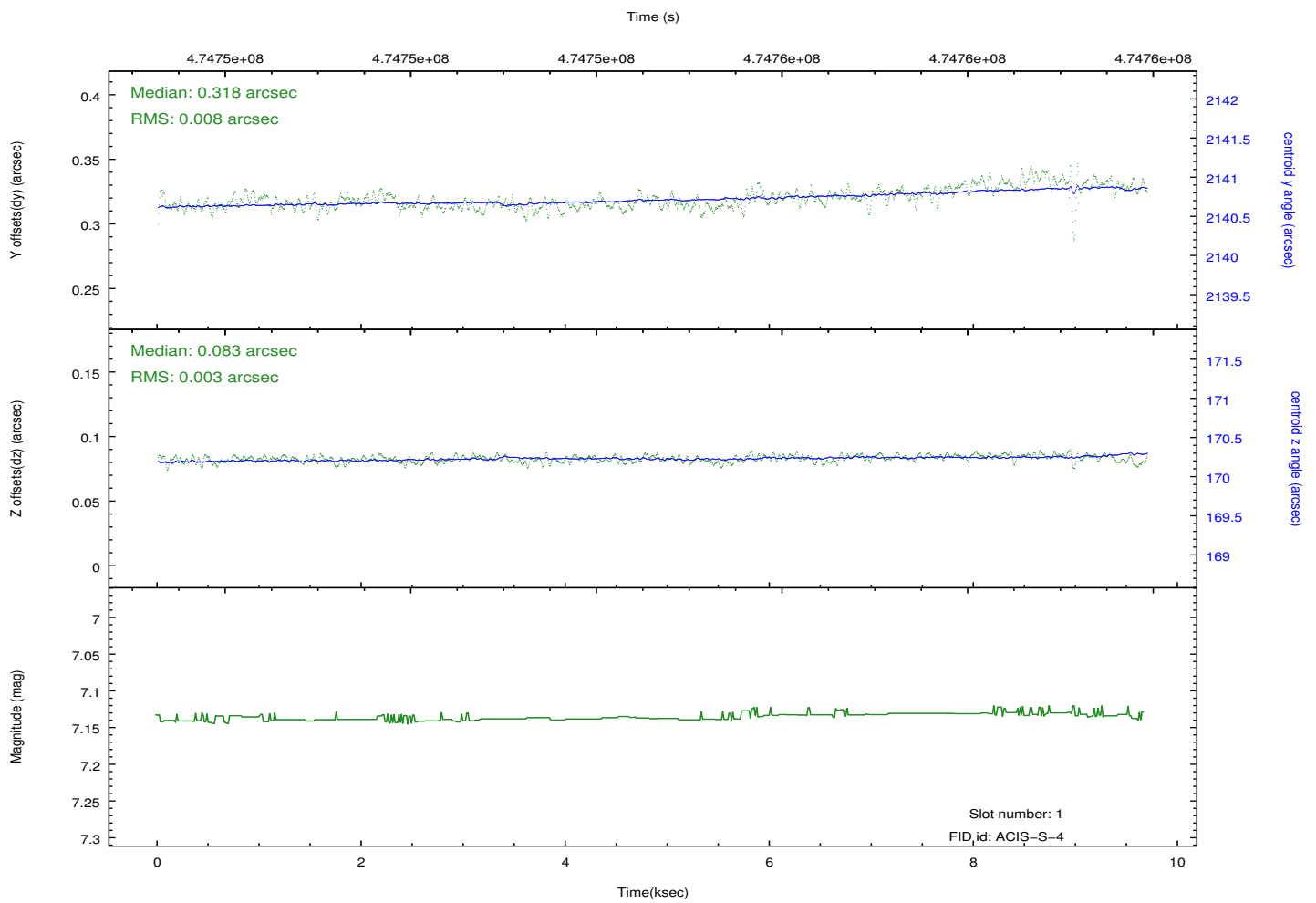
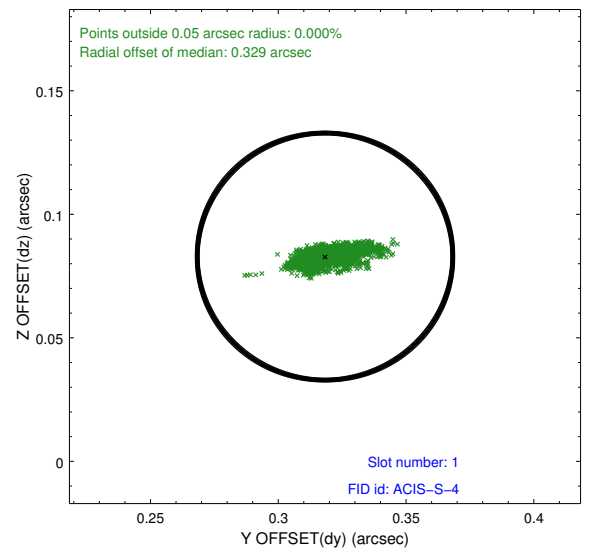
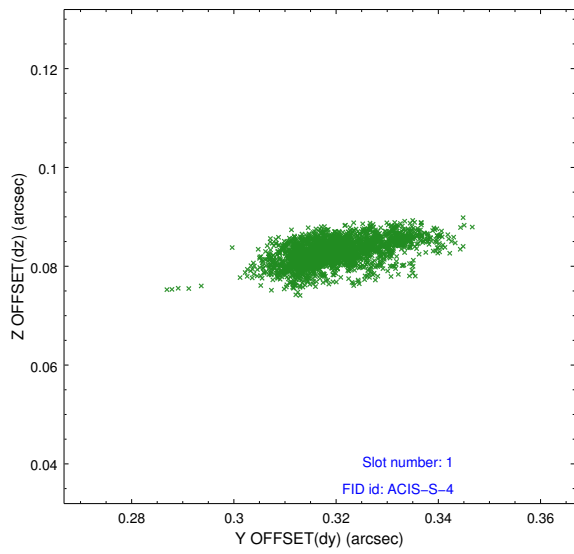


## 2.5 FID Slots

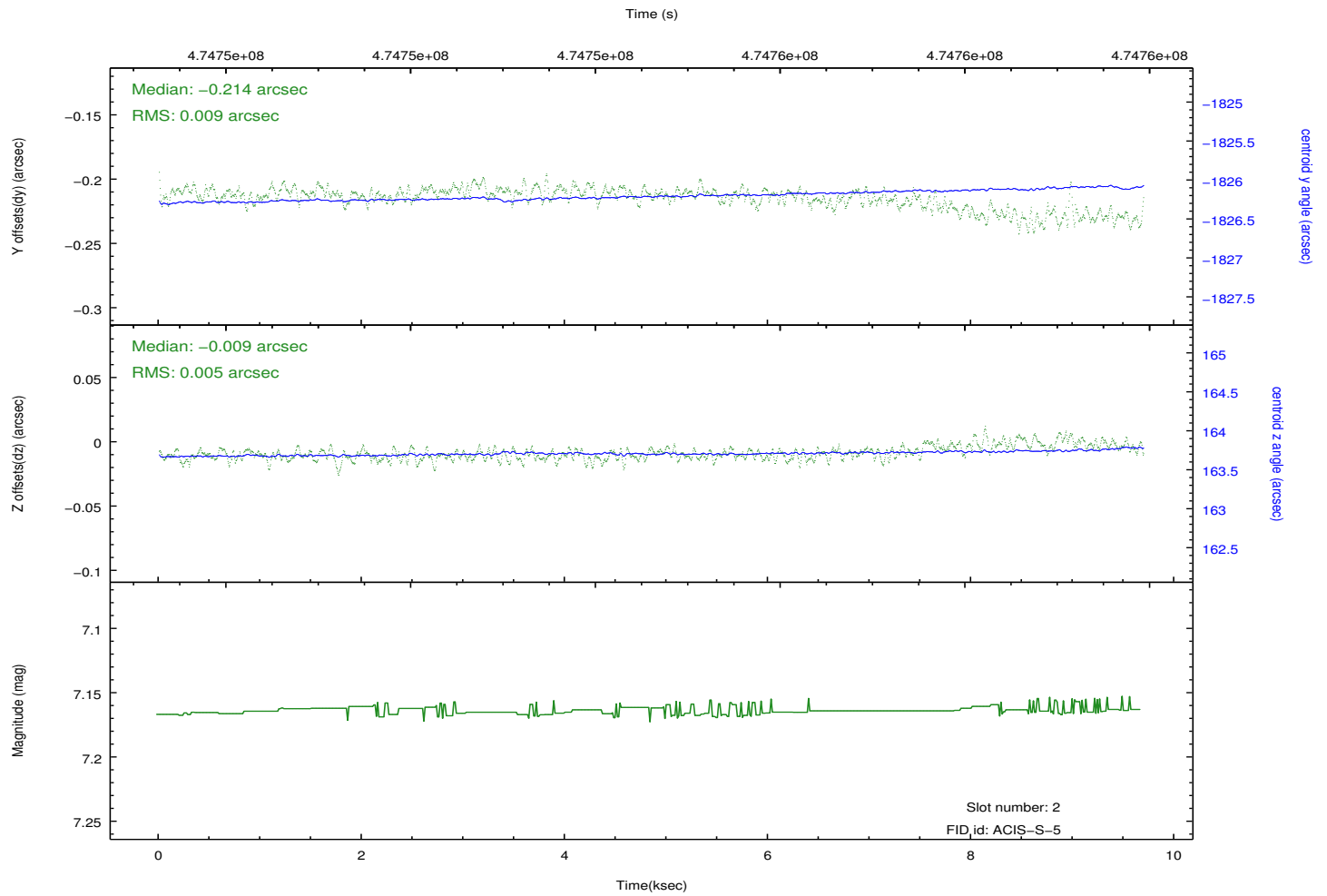
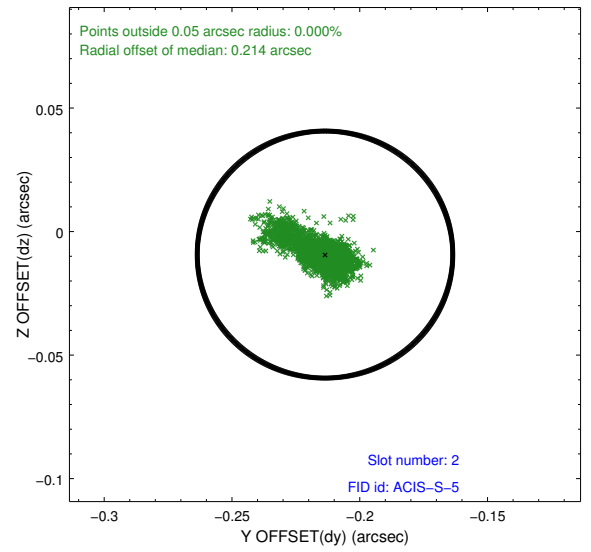
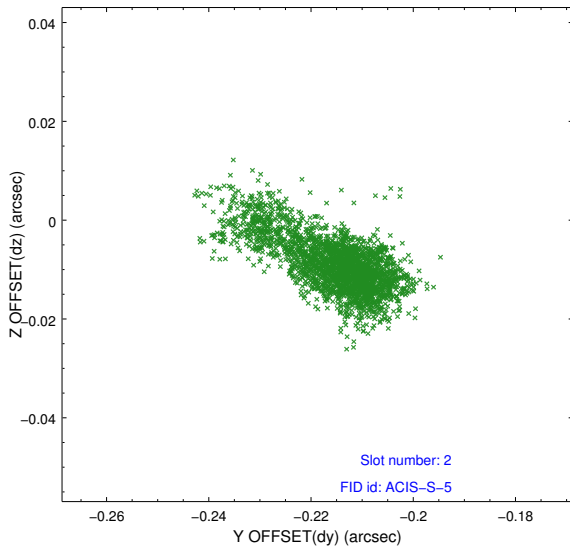
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.5678622244

## A.2 Comments

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.