

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 14471 - L2 Version 3  
Chandra X-Ray Center

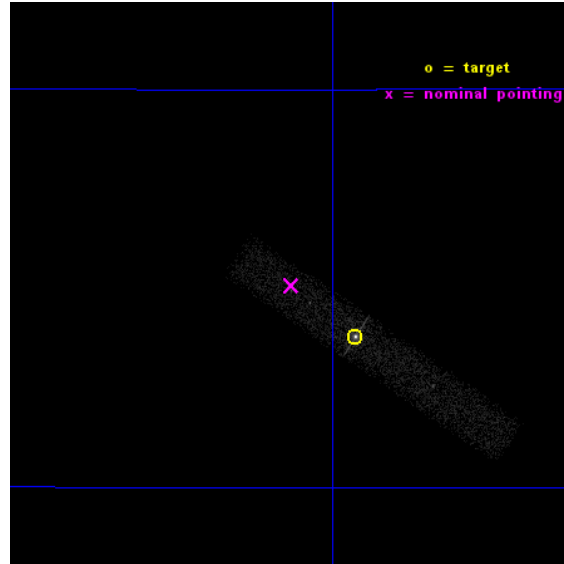
L2 Processing Date : Nov 27 2014

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# 1 Front

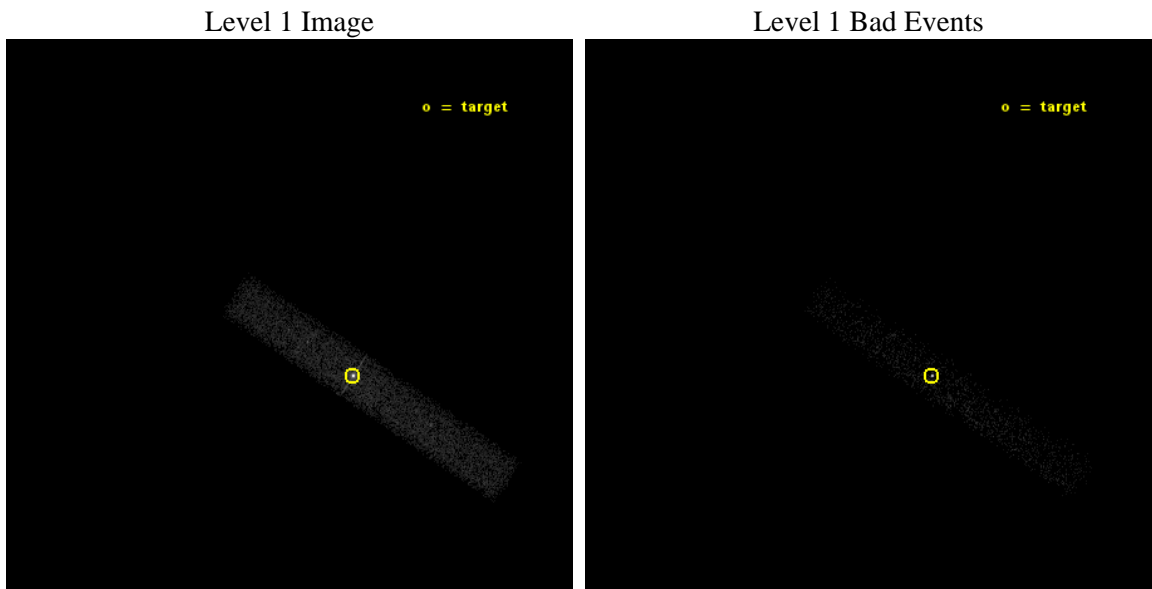
seq_num	401436	Sequence number
obs_id	14471	Observation id
title	Constraining the irradiated disk and the nature of the companion star in an ultraluminous X-ray source	Proposal title
observer	Dr. Fabien Grise	Principal investigator
object	Holmberg IX X-1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	149.472083	Observer's specified target RA [deg]
dec_targ	69.063361	Observer's specified target Dec [deg]
ra_nom	149.54982640607	Nominal RA [deg]
dec_nom	69.084755266464	Nominal Dec [deg]
roll_nom	33.555938340446	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14070.639339209	Sum of GTIs [s]
livetime	12761.327171421	Livetime [s]
ontime7	14070.639339209	Sum of GTIs [s]
l2events	23804	Number of level 2 events



## 2 OBI

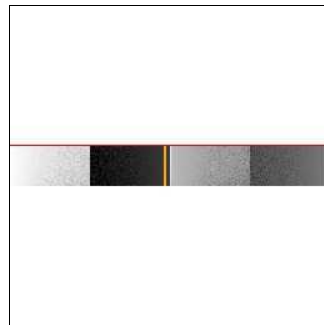
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	14070.639339209	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	14070.639339209	Sum of GTIs [s]
date	2014-11-27T13:25:08	Date and time of file creation	l1events	33635	Number of level 1 events
revision	3	Processing version of data			

### 2.1.4 Events

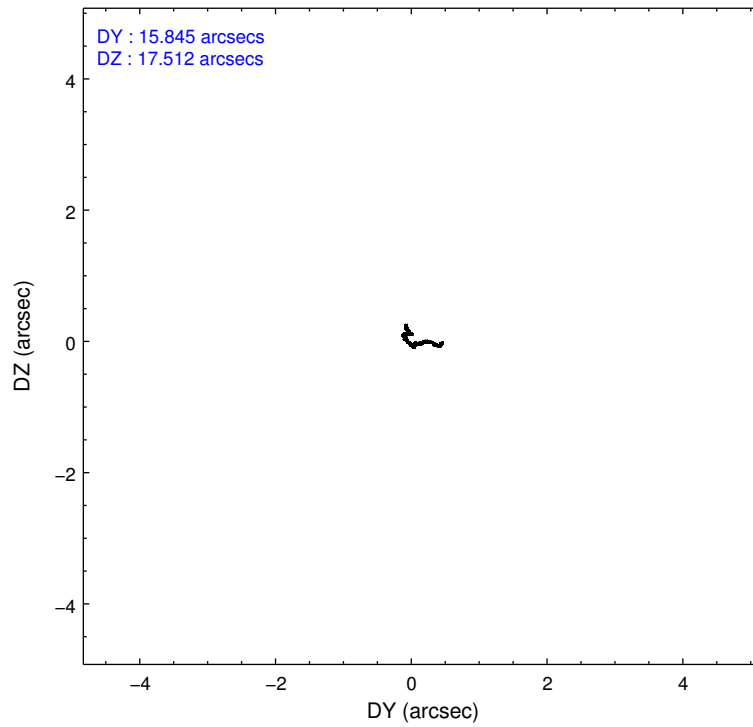
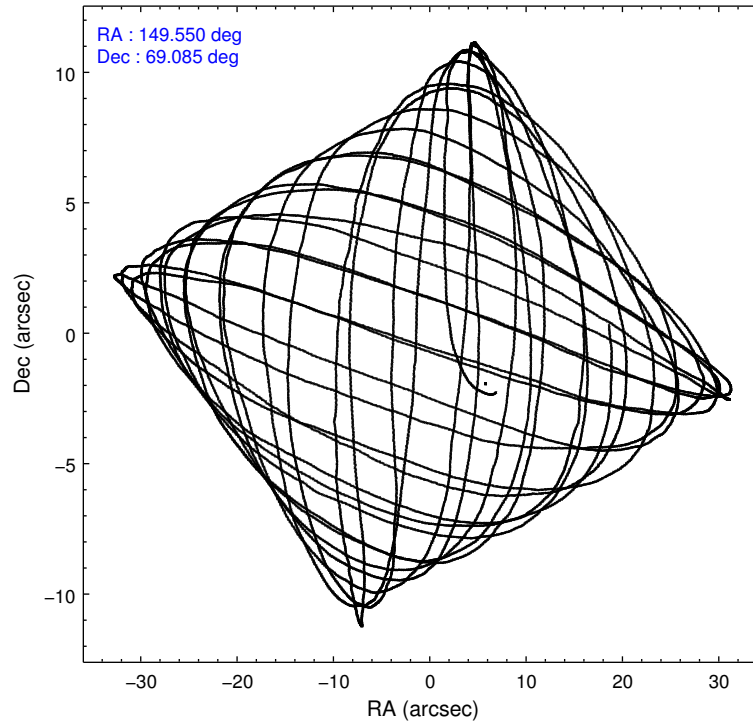
	<b>ccd 7</b>
level 1 events	33635
rejected events	9529
rejected %	28%

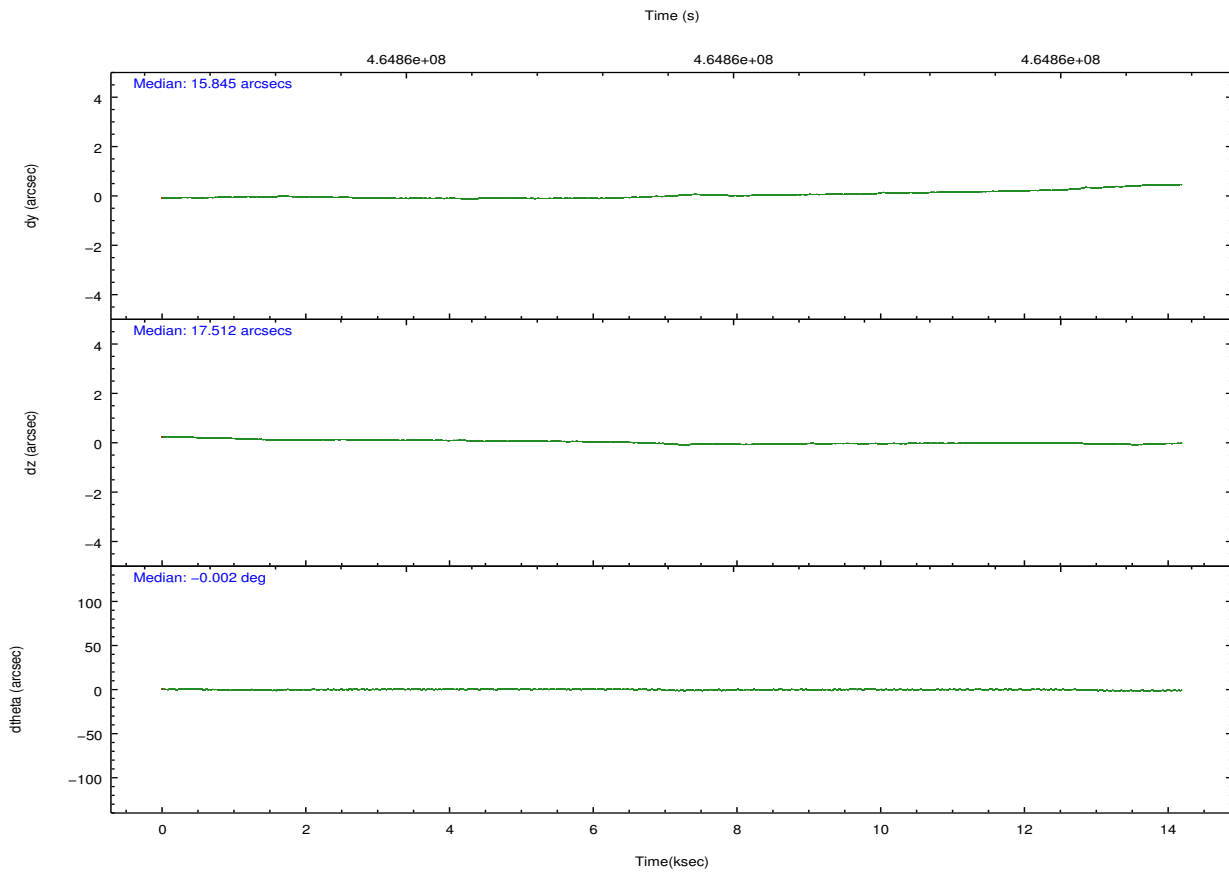
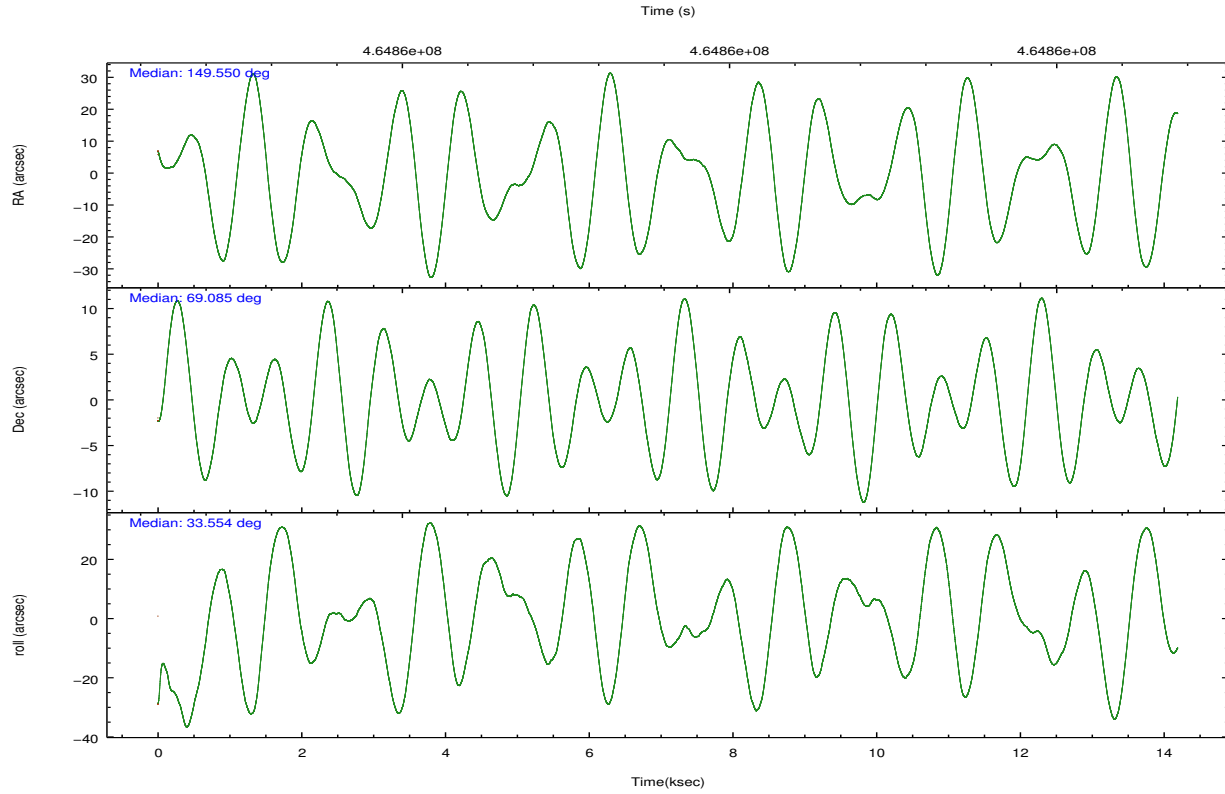
	<b>ccd 7</b>
grade 0 events	5124
	15%
grade 1 events	359
	1%
grade 2 events	5942
	17%
grade 3 events	2930
	8%
grade 4 events	2717
	8%
grade 5 events	2392
	7%
grade 6 events	7393
	21%
grade 7 events	6778
	20%

## 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	149.516686	149.5498264060654	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	69.060112	69.0847552664639	Subarray start row	449	449
[deg] Pointing Roll	33.430285	33.55593834044644	Subarray row count	128	128
[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	0.4
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	464852156.184000	464851477.19505			
Observation start date	2012-09-24T05:34:49	2012-09-24T05:24:37			
[s] Observation end time (MET)	464866156.184000	464866937.27088			
Observation end date	2012-09-24T09:28:09	2012-09-24T09:42:17			
Read mode	TIMED	TIMED			

## 2.3 Aspect





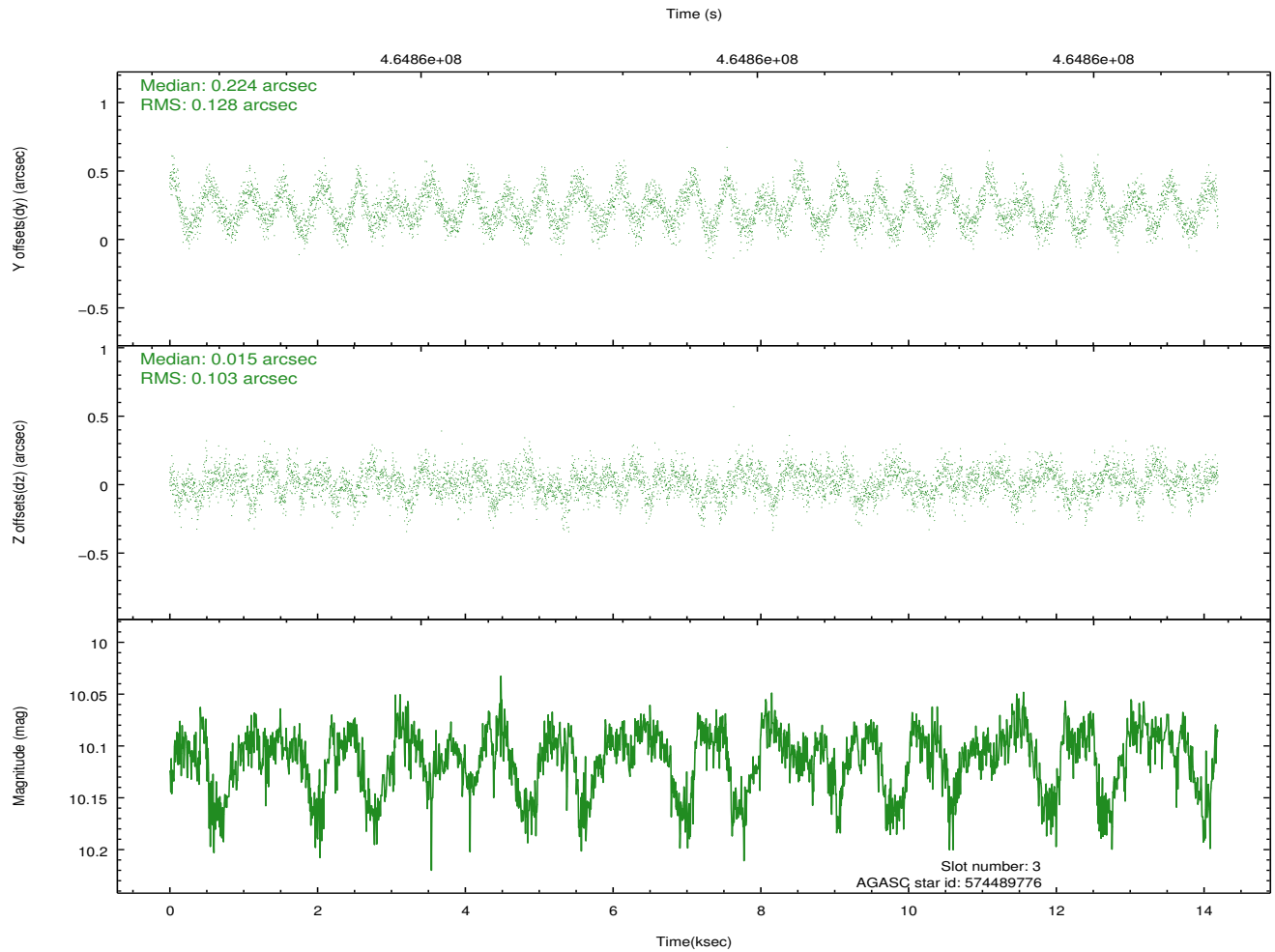
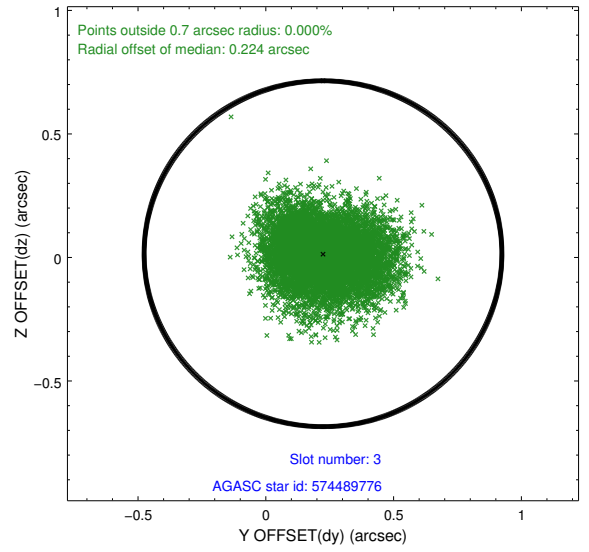
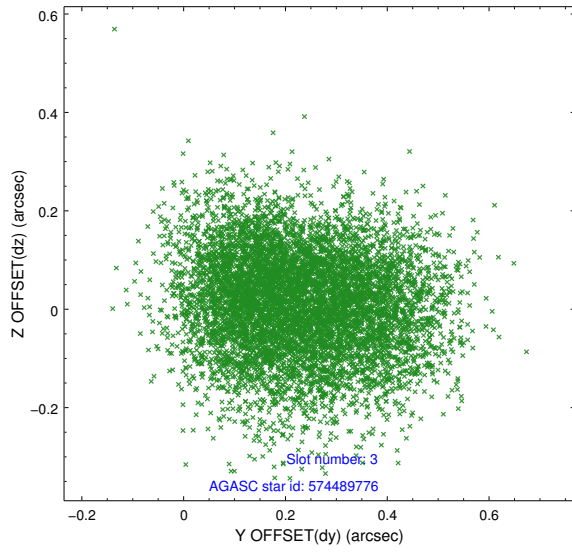
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.91	3462	-0.082	-0.027	0.006	0.010	0.000000	0.000000	-769.02	-1738.94
1	FID		ACIS-S-4	7.01	3462	0.183	0.047	0.006	0.011	0.000000	0.000000	2144.43	169.19
2	FID		ACIS-S-5	7.02	3462	-0.132	-0.011	0.007	0.011	0.000000	0.000000	-1821.44	163.28
3	GUIDE	used	574489776	10.11	6915	0.224	0.015	0.177	0.280	148.323662	69.046710	-1299.55	818.02
4	GUIDE	used	574491280	9.34	6890	-0.079	-0.017	0.133	0.219	148.611567	69.450135	-178.38	1808.62
5	GUIDE	used	574496080	9.86	6865	-0.263	-0.121	0.189	0.297	149.336129	69.802025	1283.52	2352.03
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	574493848	10.17	6785	0.101	0.114	0.164	0.281	147.355161	69.035593	-2344.06	1501.03

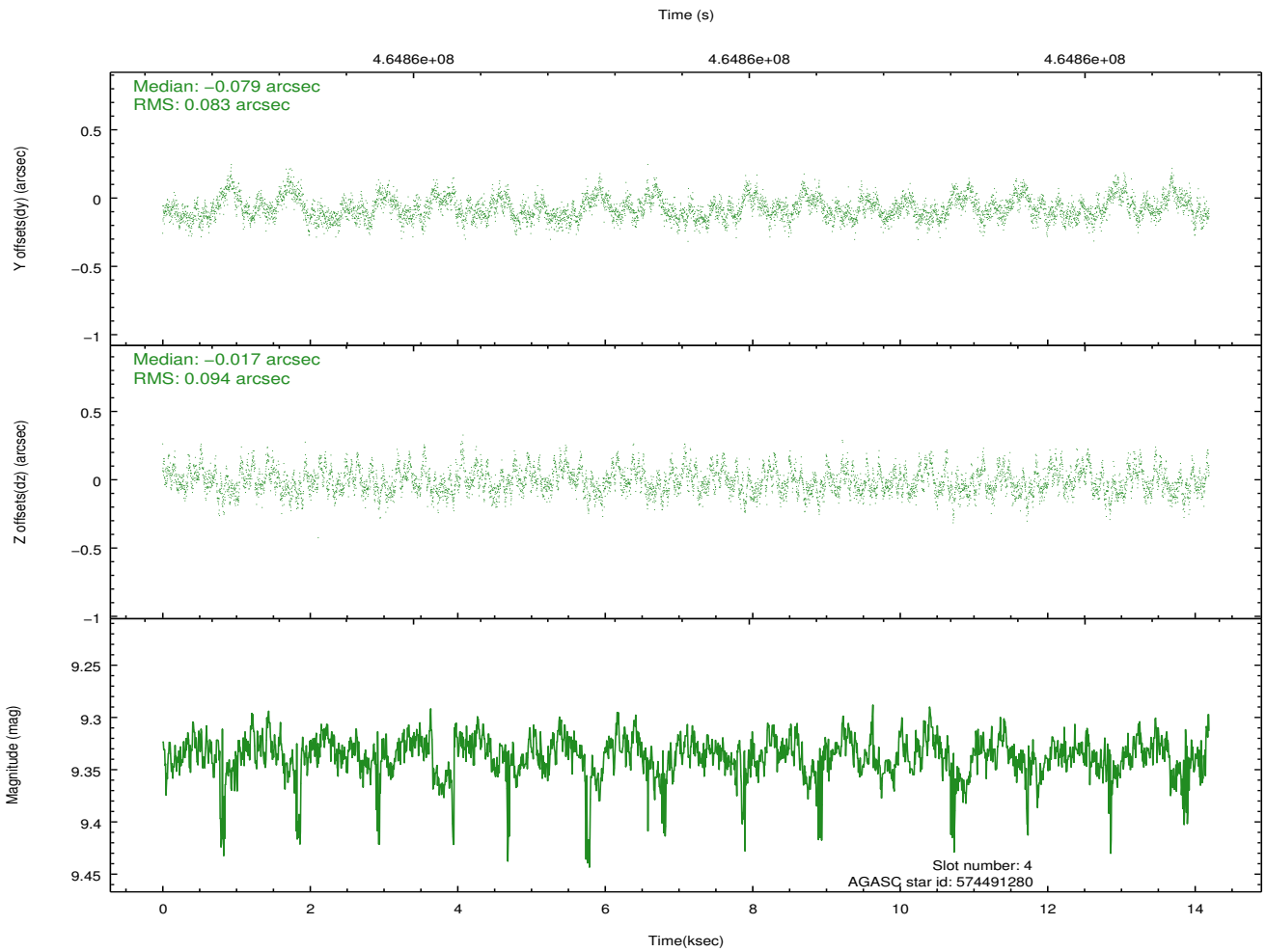
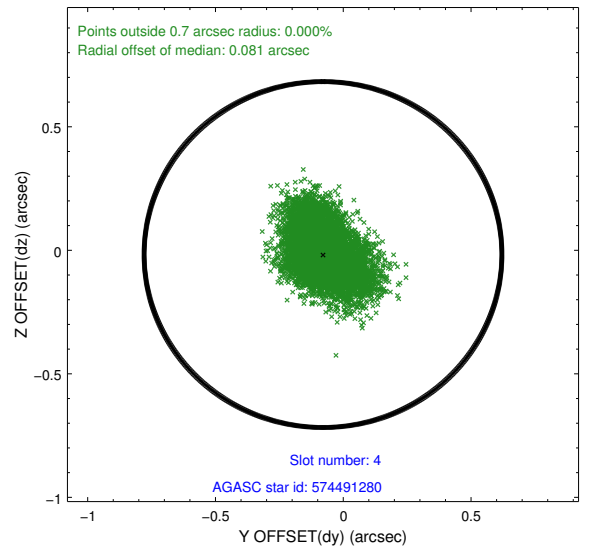
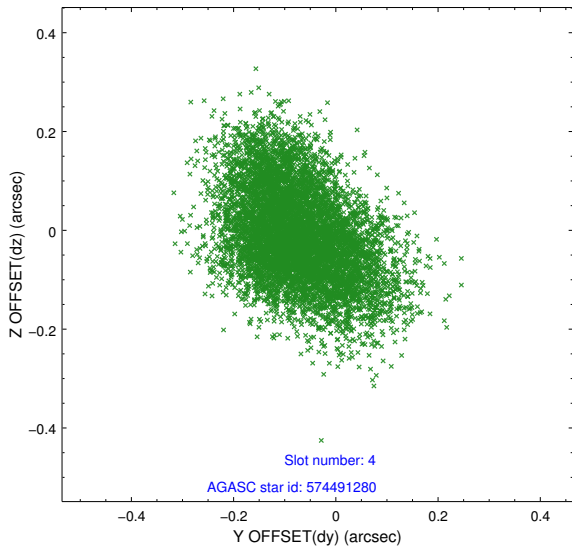
∞

## 2.4 Star Slots

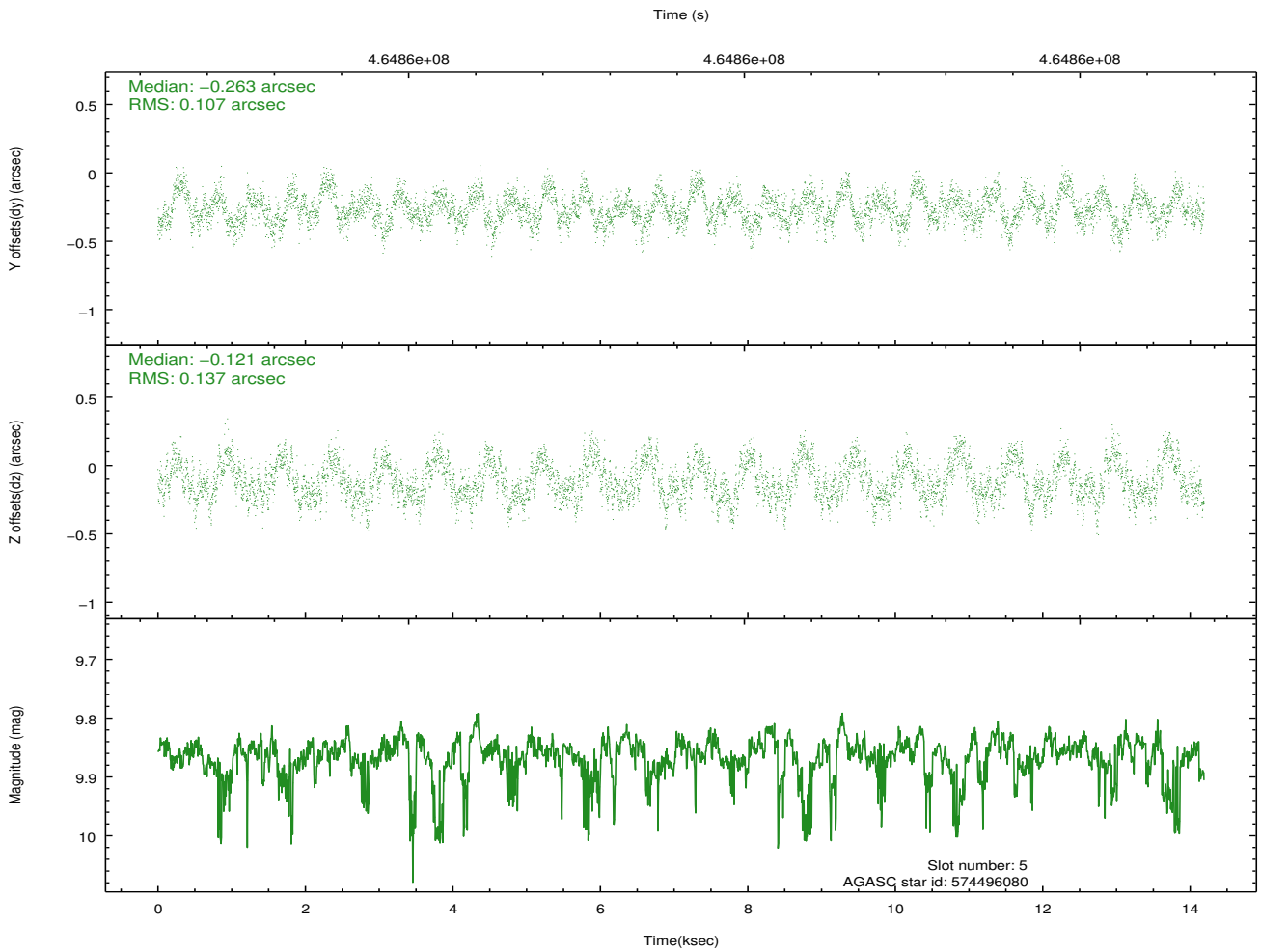
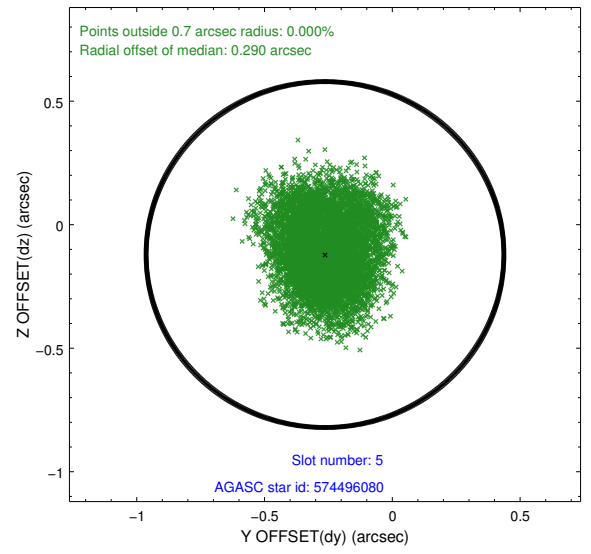
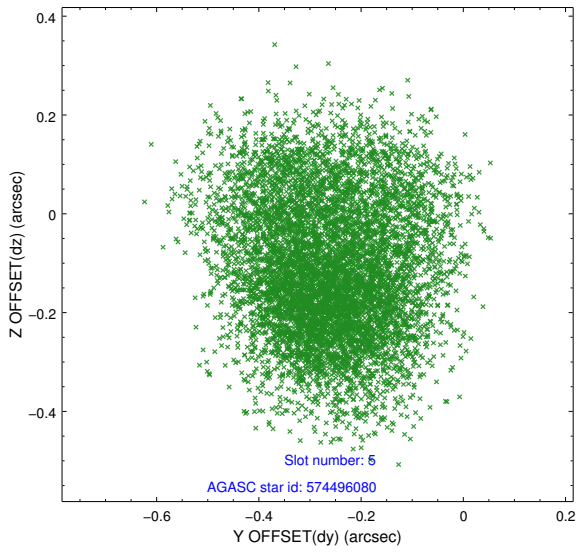
### 2.4.1 Slot 3



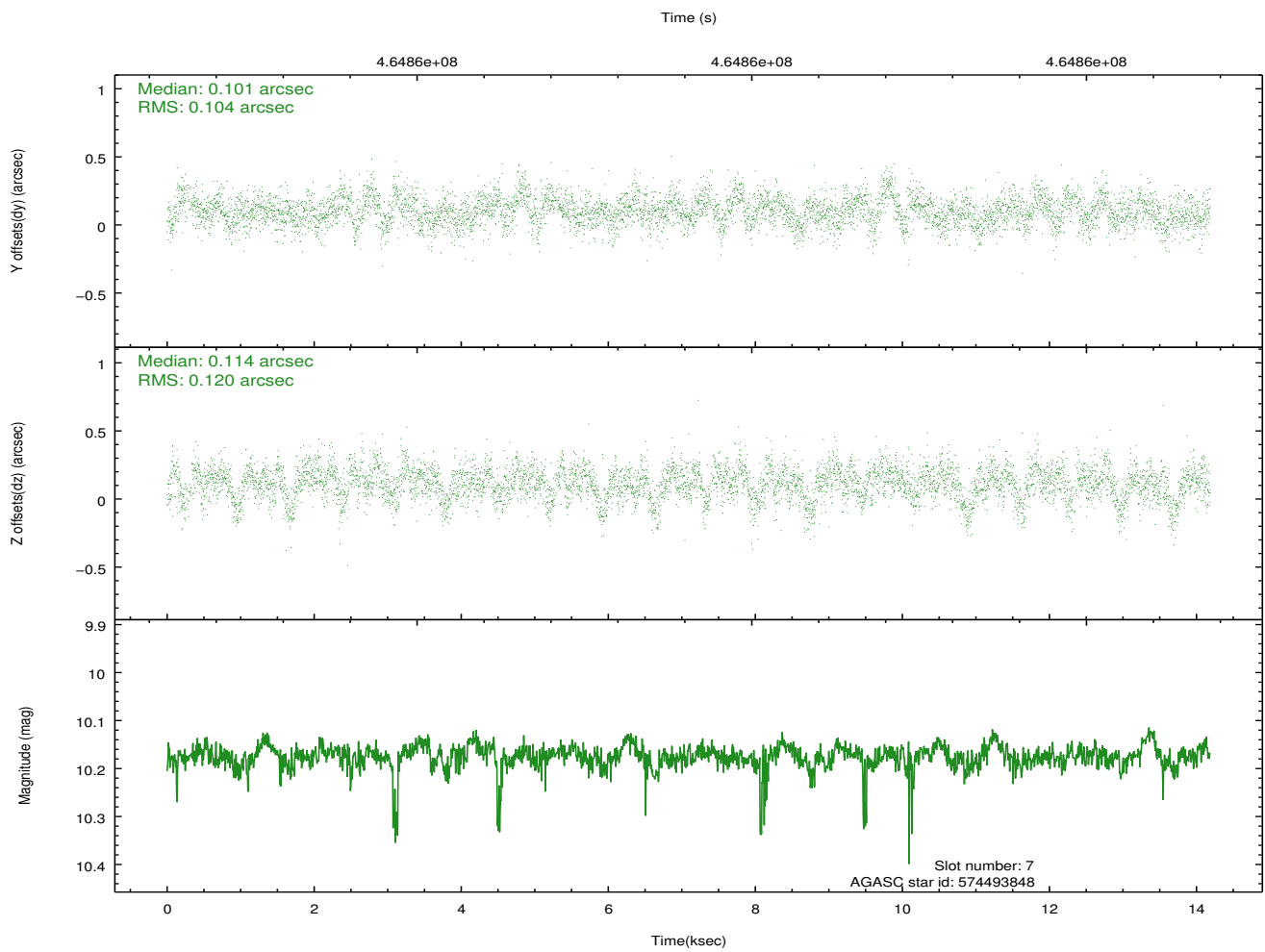
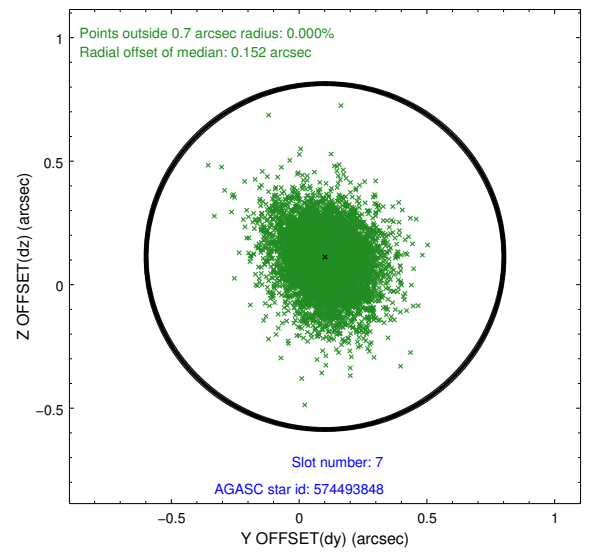
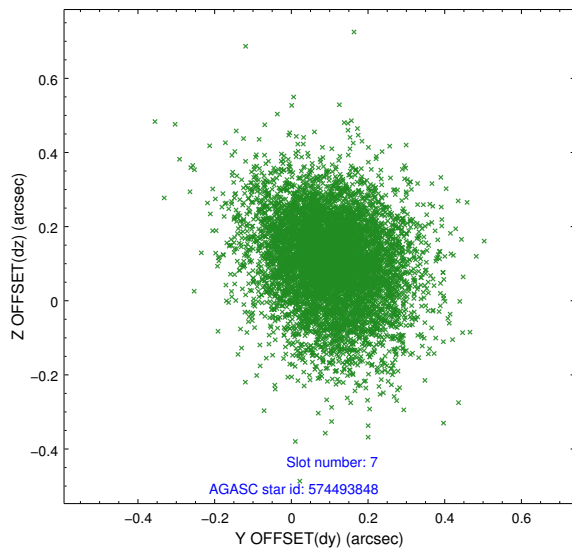
## 2.4.2 Slot 4



### 2.4.3 Slot 5

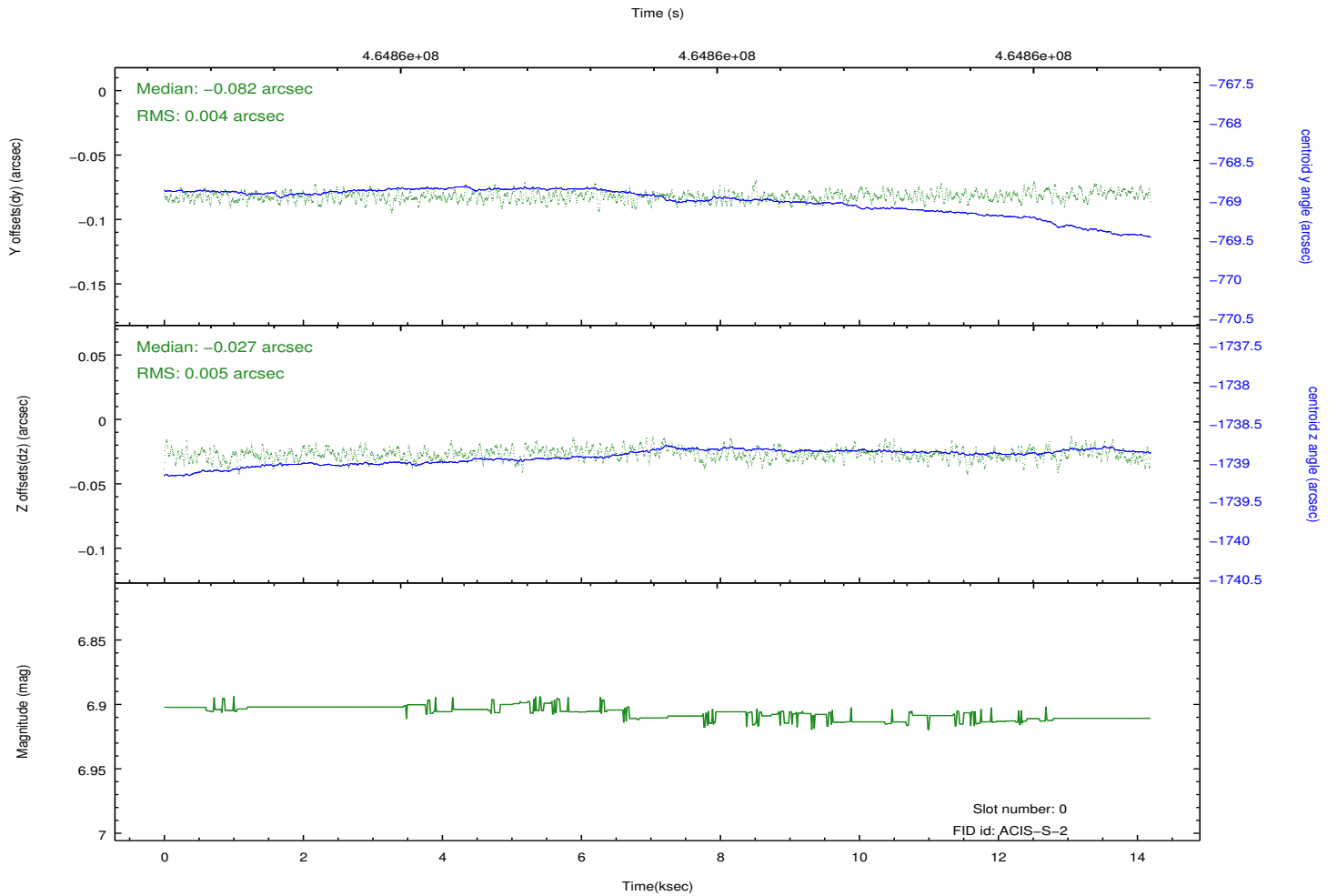
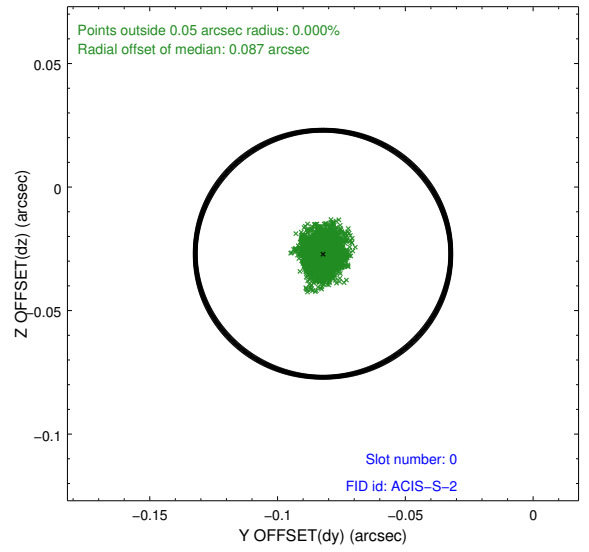
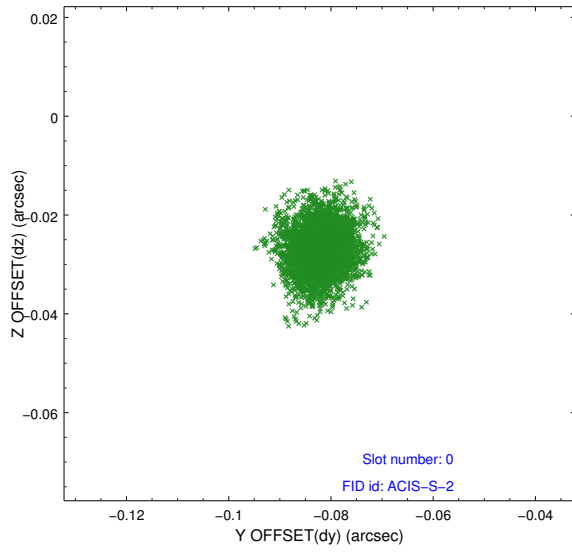


## 2.4.4 Slot 7

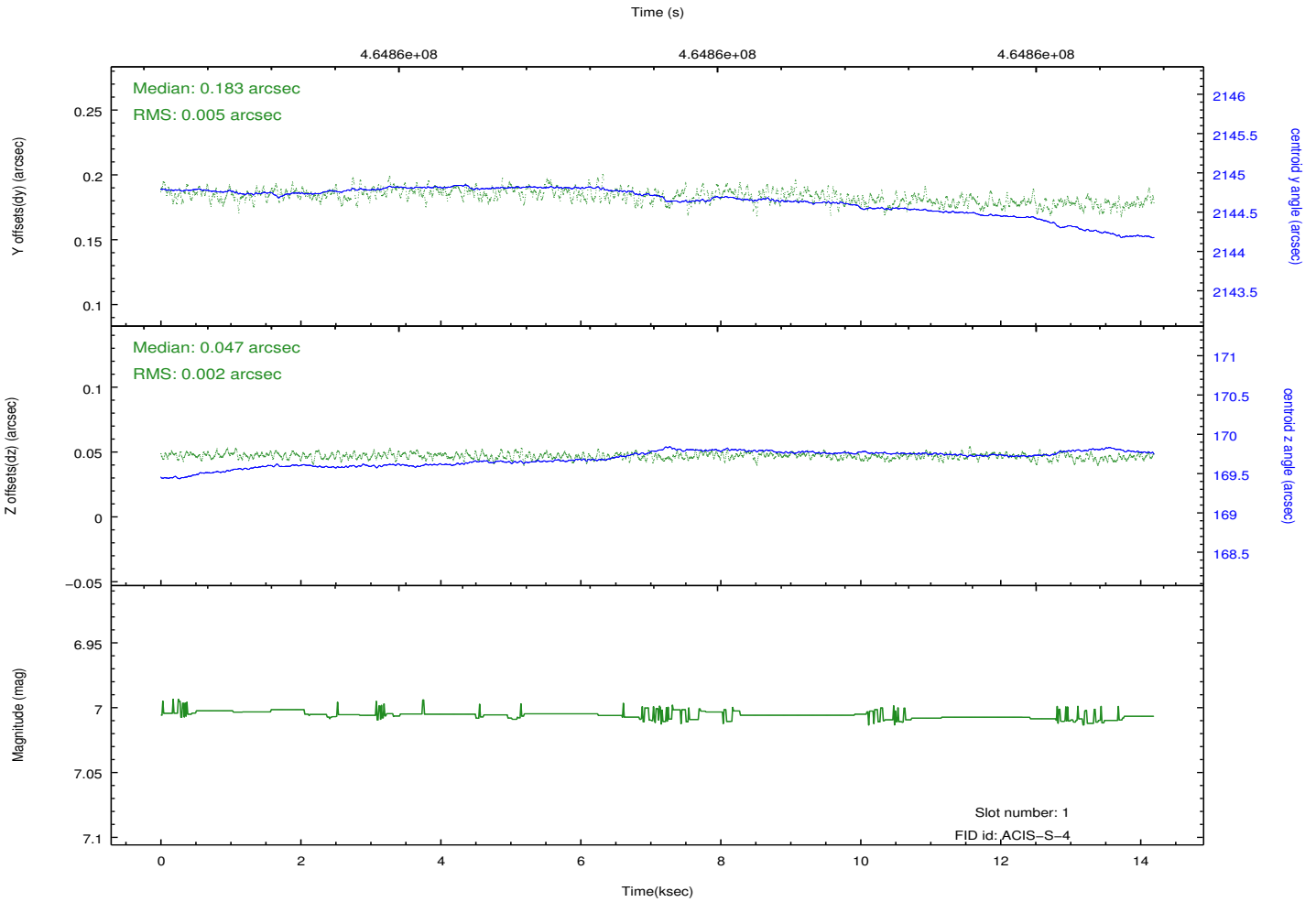
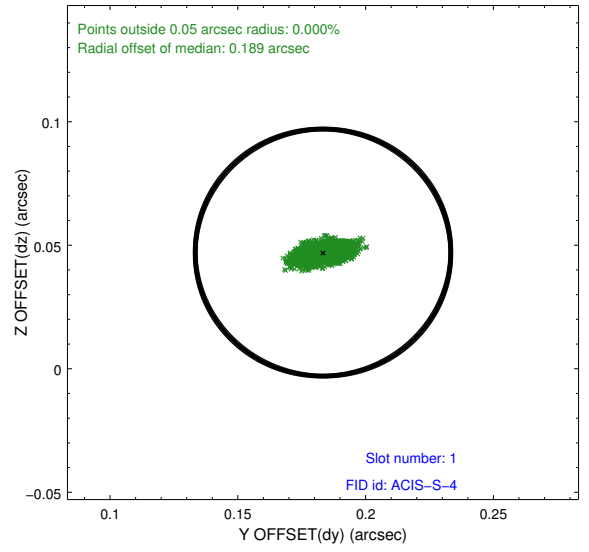
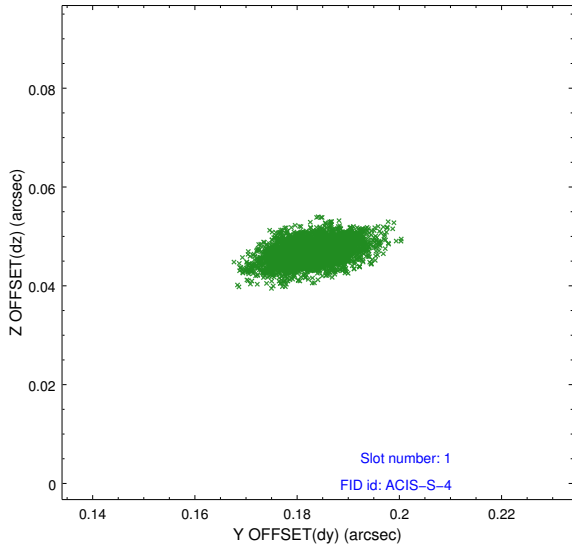


## 2.5 FID Slots

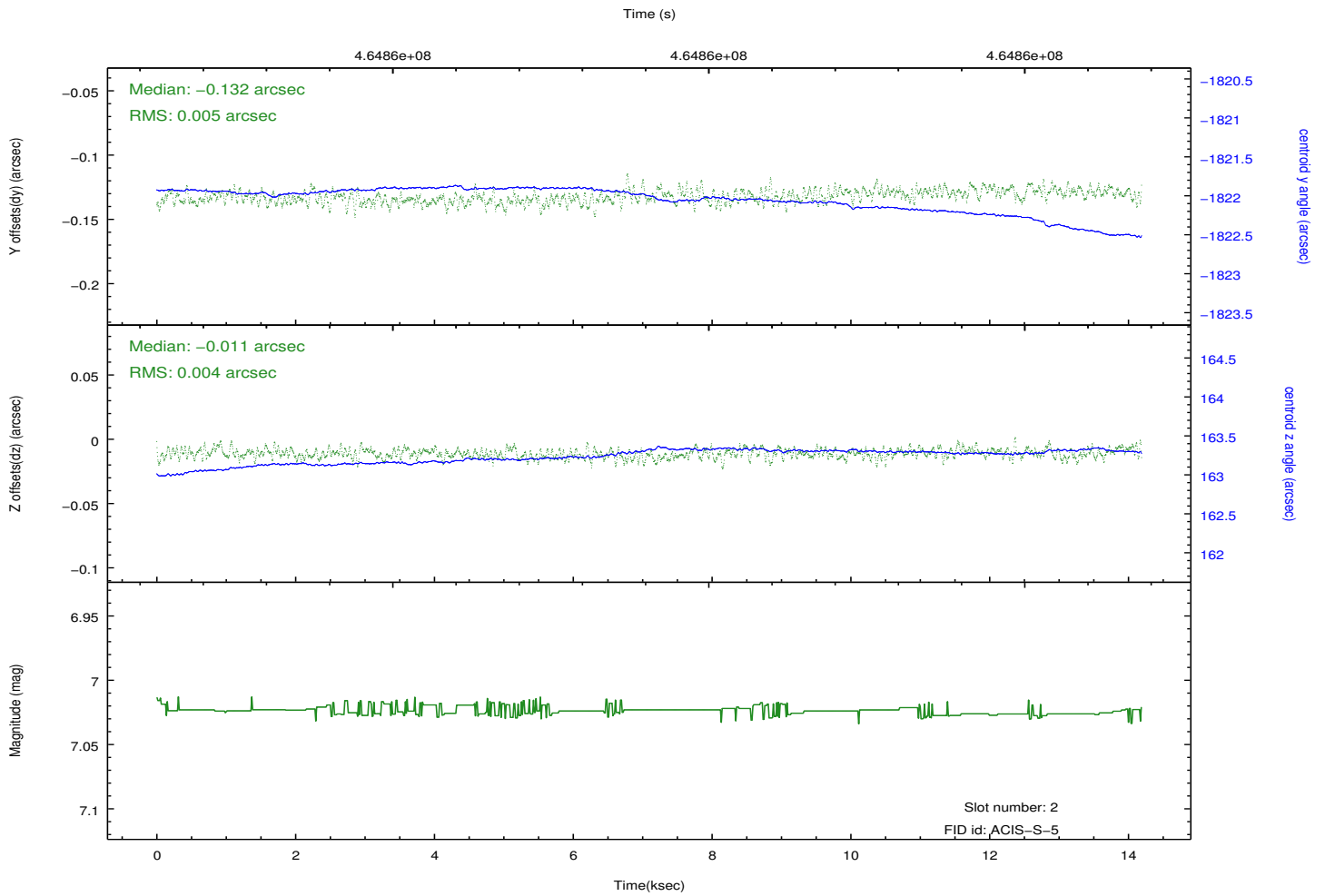
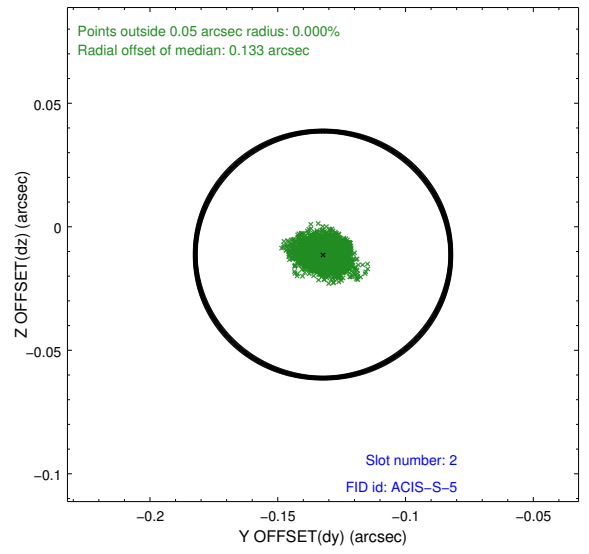
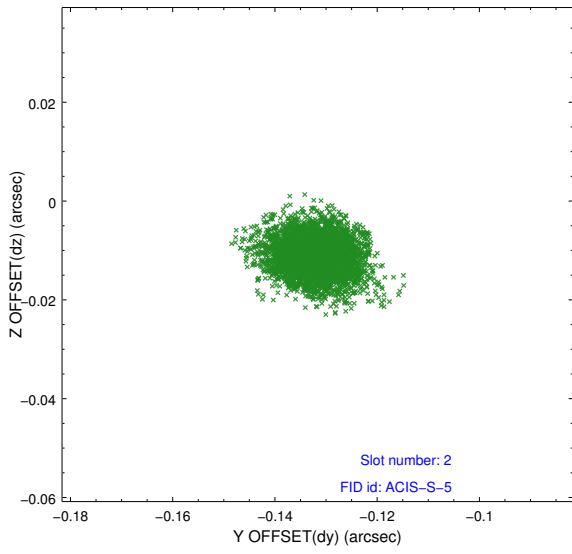
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.070639339209

## A.2 Comments

Joint proposal with HST.

The guide star in slot 6 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.