

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 13748 - L2 Version 3  
Chandra X-Ray Center

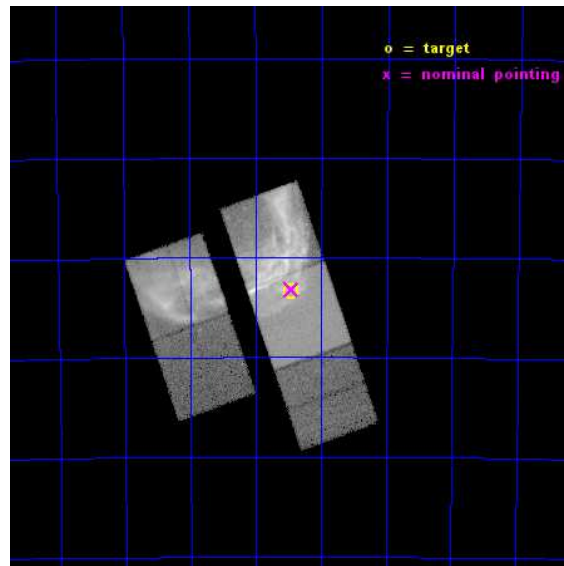
L2 Processing Date : Dec 1 2014

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# 1 Front

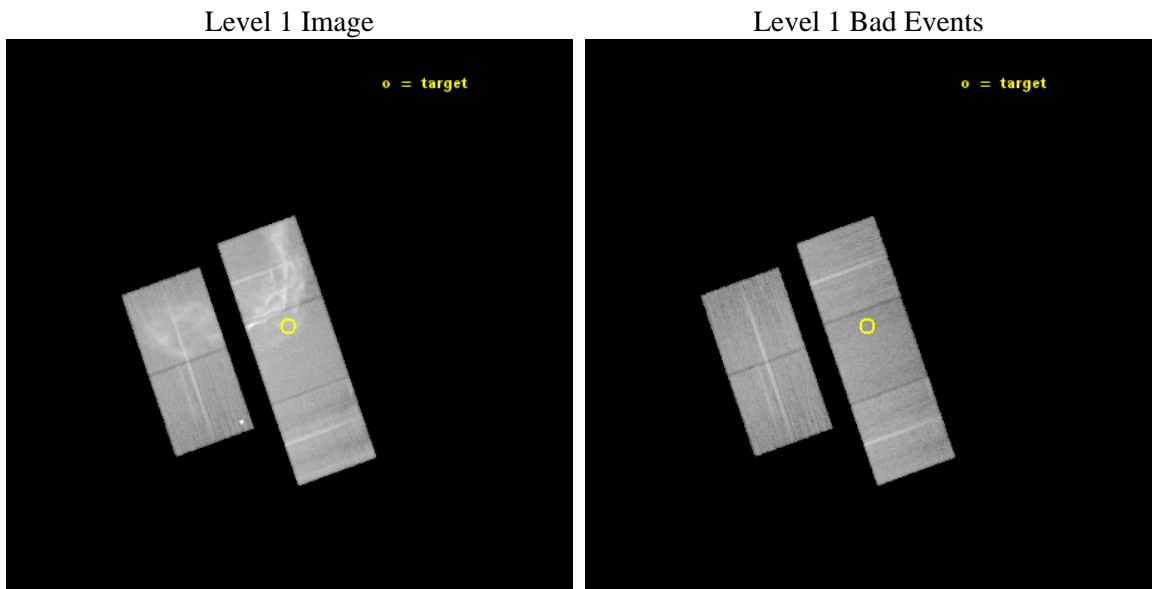
seq_num	501581	Sequence number
obs_id	13748	Observation id
title	Expansion Measurements of the Southwestern Rim of RCW86	Proposal t
observer	Dr. Satoru Katsuda	Principal investigator
object	RCW86	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	220.11798	Observer's specified target RA [deg]
dec_targ	-62.722094	Observer's specified target Dec [deg]
ra_nom	220.11390657488	Nominal RA [deg]
dec_nom	-62.719719214538	Nominal Dec [deg]
roll_nom	70.653010308265	Nominal Roll [deg]
revision	3	Processing version of data
ontime	36625.585591674	Sum of GTIs [s]
livetime	36147.045352555	Livetime [s]
ontime2	36625.421431661	Sum of GTIs [s]
ontime3	36625.503511667	Sum of GTIs [s]
ontime6	36625.544551671	Sum of GTIs [s]
ontime7	36625.585591674	Sum of GTIs [s]
ontime8	36619.180490911	Sum of GTIs [s]
l2events	660185	Number of level 2 events



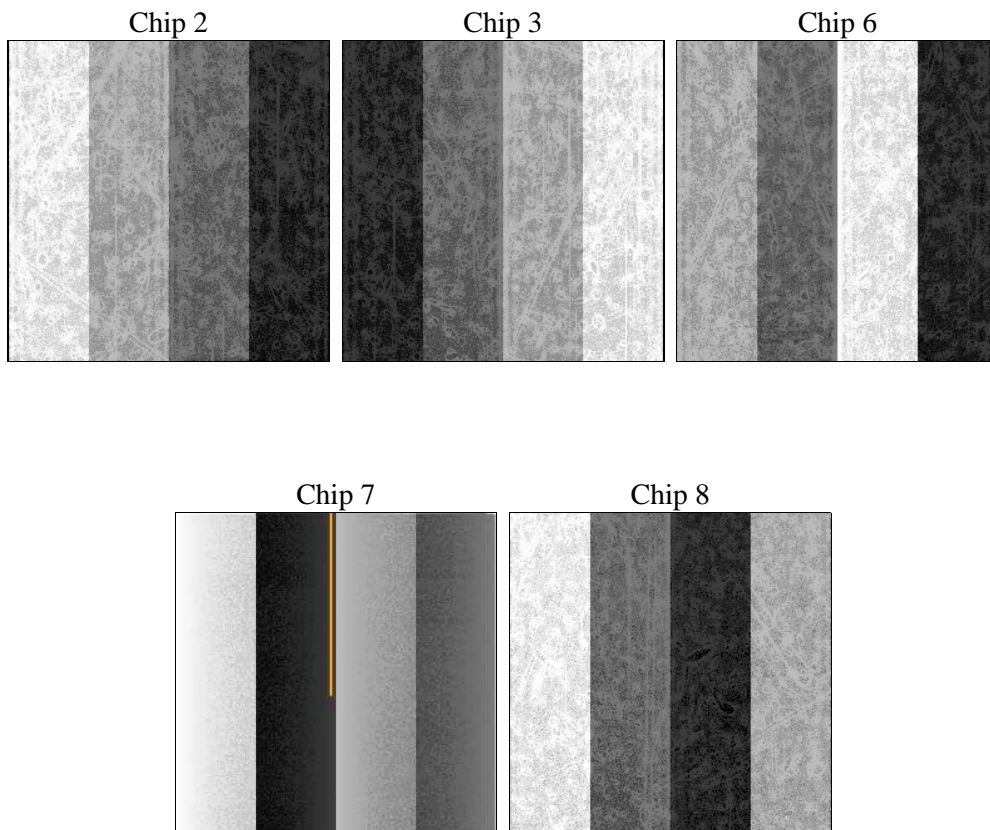
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36560.242000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	36625.585591674	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	36625.421431661	Sum of GTIs [s]
date	2014-12-01T16:34:34	Date and time of file creation	ontime3	36625.503511667	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	36625.544551671	Sum of GTIs [s]
			ontime7	36625.585591674	Sum of GTIs [s]
			ontime8	36619.180490911	Sum of GTIs [s]
			l1events	1649669	Number of level 1 events

### 2.1.4 Events

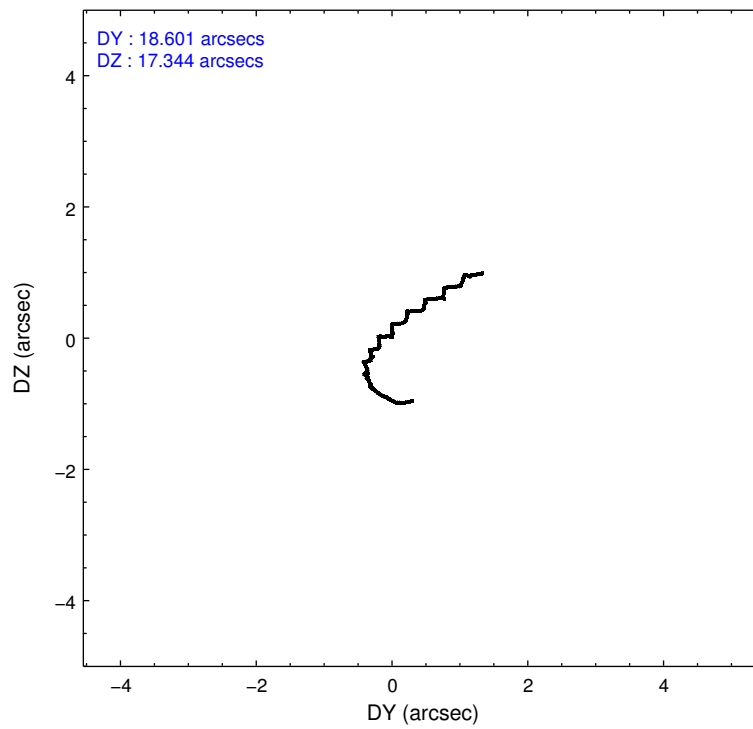
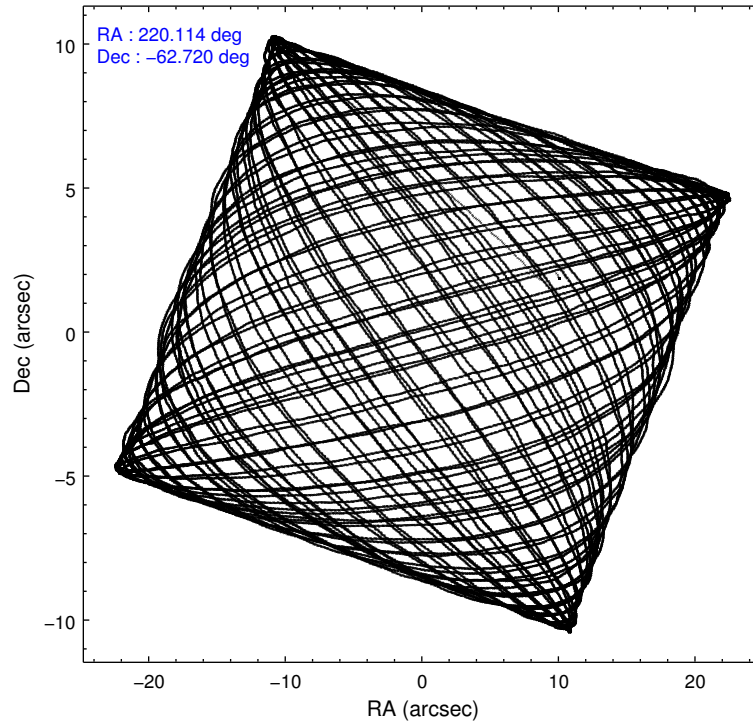
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	332035	209690	479388	347518	281038
rejected events	176092	177411	186598	152965	205133
rejected %	53%	84%	38%	44%	72%

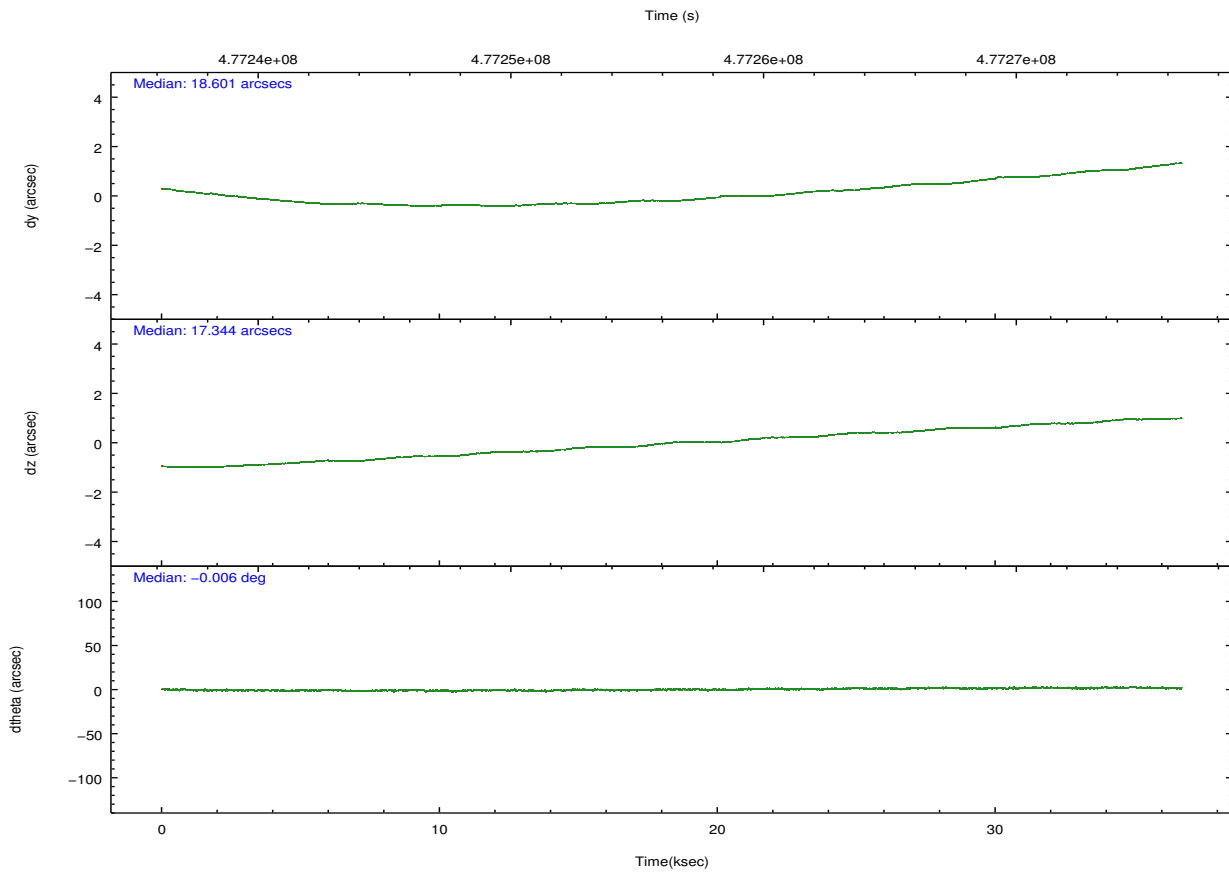
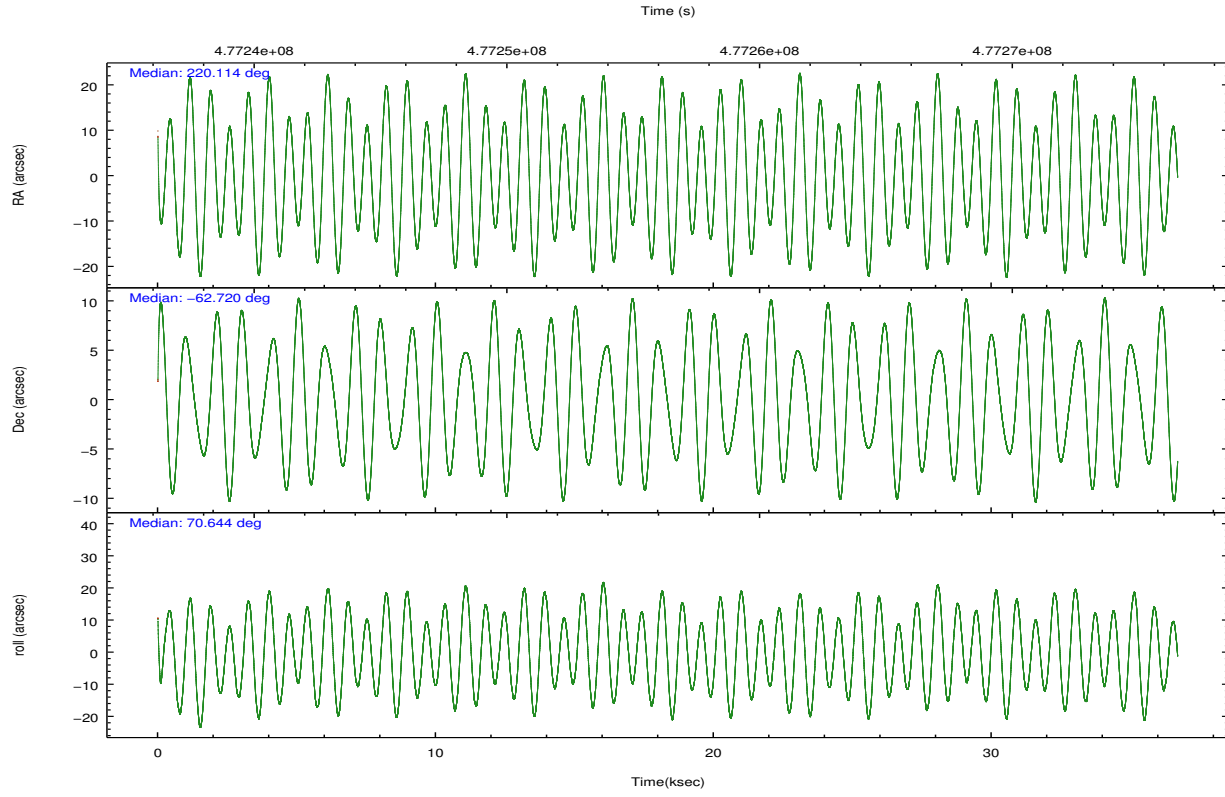
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	121435	9947	243459	33945	22593
	36%	4%	50%	9%	8%
grade 1 events	538	130	792	359	198
	0%	0%	0%	0%	0%
grade 2 events	16878	12760	26200	45867	17870
	5%	6%	5%	13%	6%
grade 3 events	5680	2430	7583	19205	7784
	1%	1%	1%	5%	2%
grade 4 events	5607	2411	7483	18758	7200
	1%	1%	1%	5%	2%
grade 5 events	8926	10608	11225	28588	15015
	2%	5%	2%	8%	5%
grade 6 events	6371	4736	8101	76813	20465
	1%	2%	1%	22%	7%
grade 7 events	166600	166668	174545	123983	189913
	50%	79%	36%	35%	67%

## 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	220.125752	220.1139065748835	Subarray requested	NONE	NONE
[deg] Pointing Dec	-62.746515	-62.71971921453794	Alternating exposures requested	N	N
[deg] Pointing Roll	70.506906	70.65301030826457	[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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	477238170.184000	477237093.03659			
Observation start date	2013-02-14T14:08:23	2013-02-14T13:51:33			
[s] Observation end time (MET)	477274730.184000	477274957.05114			
Observation end date	2013-02-15T00:17:43	2013-02-15T00:22:37			
Read mode	TIMED	TIMED			

## 2.3 Aspect





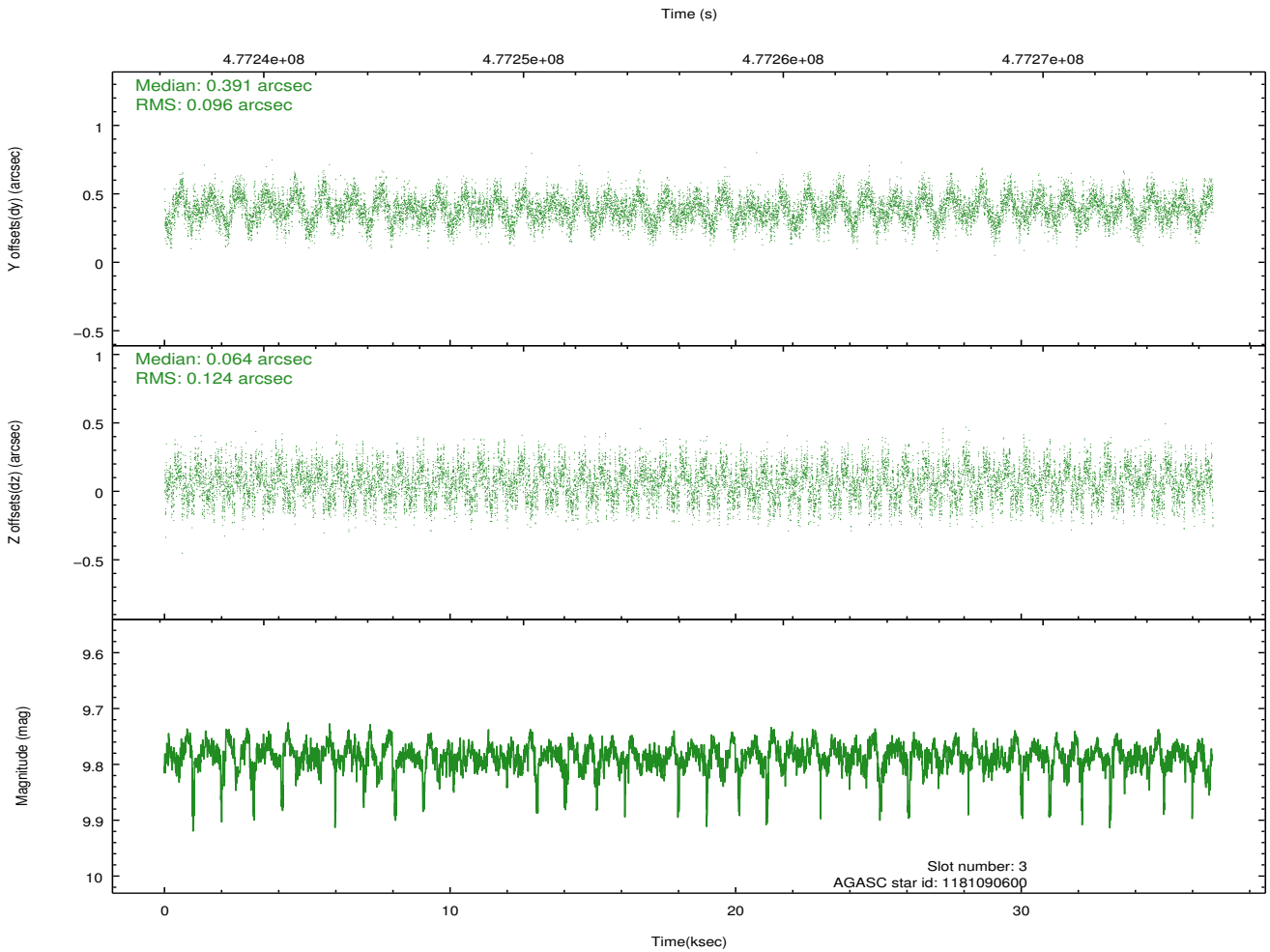
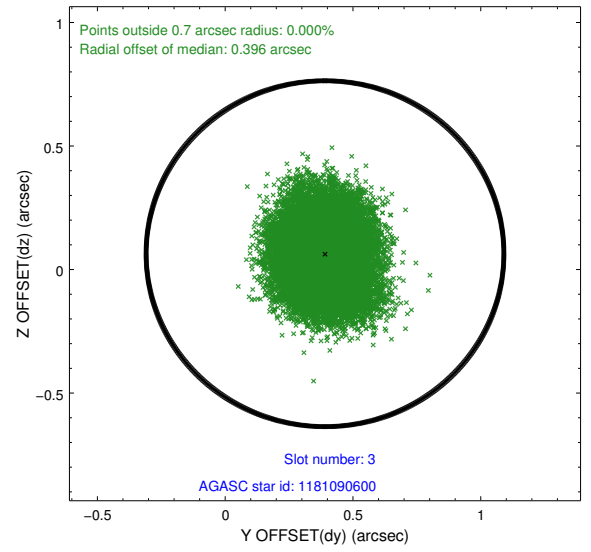
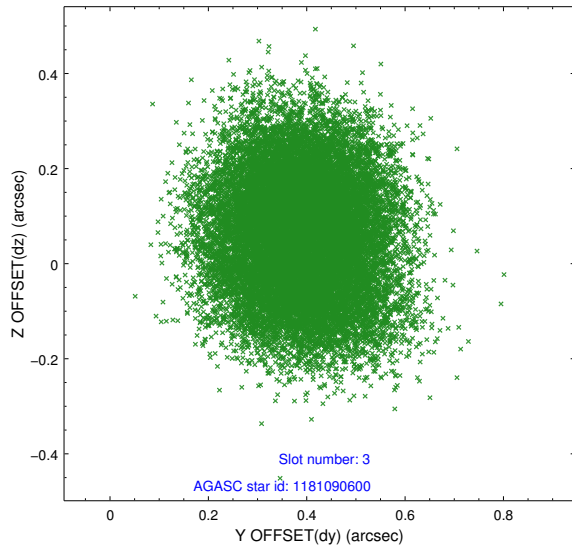
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.08	8952	0.125	-0.106	0.033	0.087	0.000000	0.000000	924.37	-1734.42
1	FID		ACIS-S-5	7.12	8951	-0.210	0.071	0.015	0.034	0.000000	0.000000	-1824.95	163.25
2	FID		ACIS-S-6	7.21	8949	0.067	0.040	0.043	0.055	0.000000	0.000000	389.82	807.23
3	GUIDE	used	1181090600	9.79	17883	0.391	0.064	0.171	0.260	220.510169	-63.034606	-769.16	-938.08
4	GUIDE	used	1181093336	9.59	17781	0.249	0.335	0.151	0.240	220.776875	-63.106347	-871.62	-1433.17
5	GUIDE	used	1181104896	6.75	17903	-0.449	-0.560	0.091	0.146	219.299869	-62.010896	2022.02	2196.06
6	GUIDE	used	1181107448	9.22	17895	0.050	-0.275	0.097	0.154	219.084809	-62.741785	-569.45	1618.94
7	GUIDE	used	1181109144	8.35	17896	-0.246	0.441	0.094	0.148	221.655127	-62.786083	678.16	-2429.93

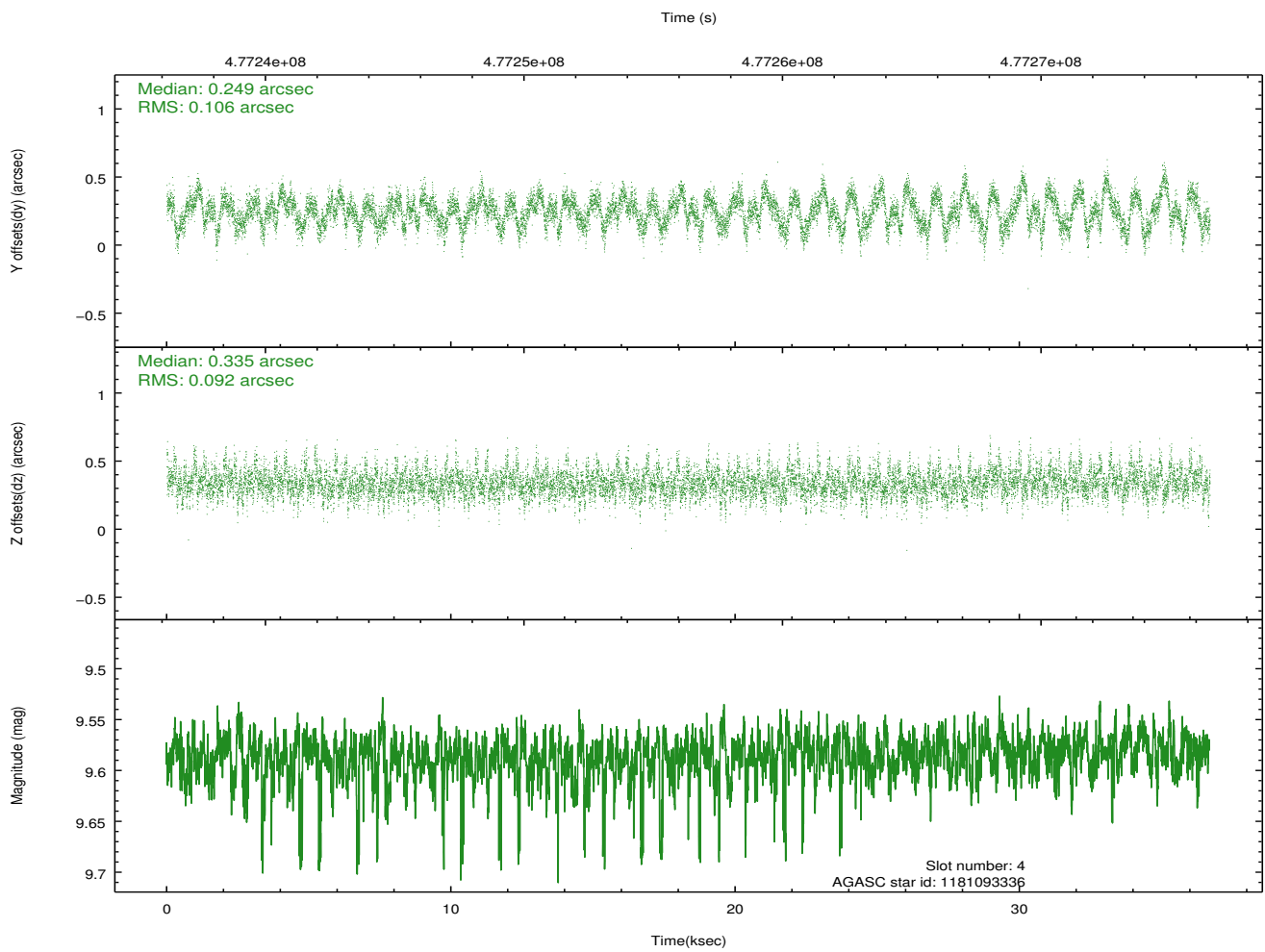
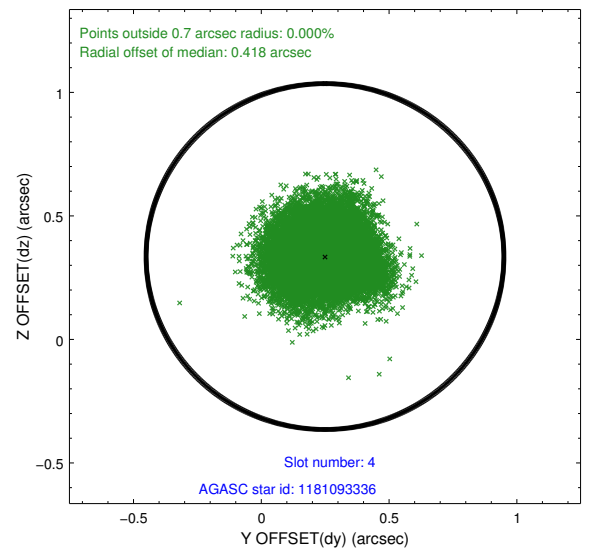
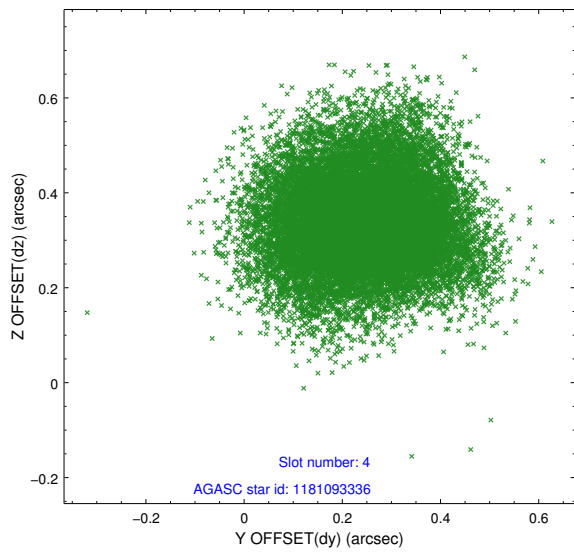
∞

## 2.4 Star Slots

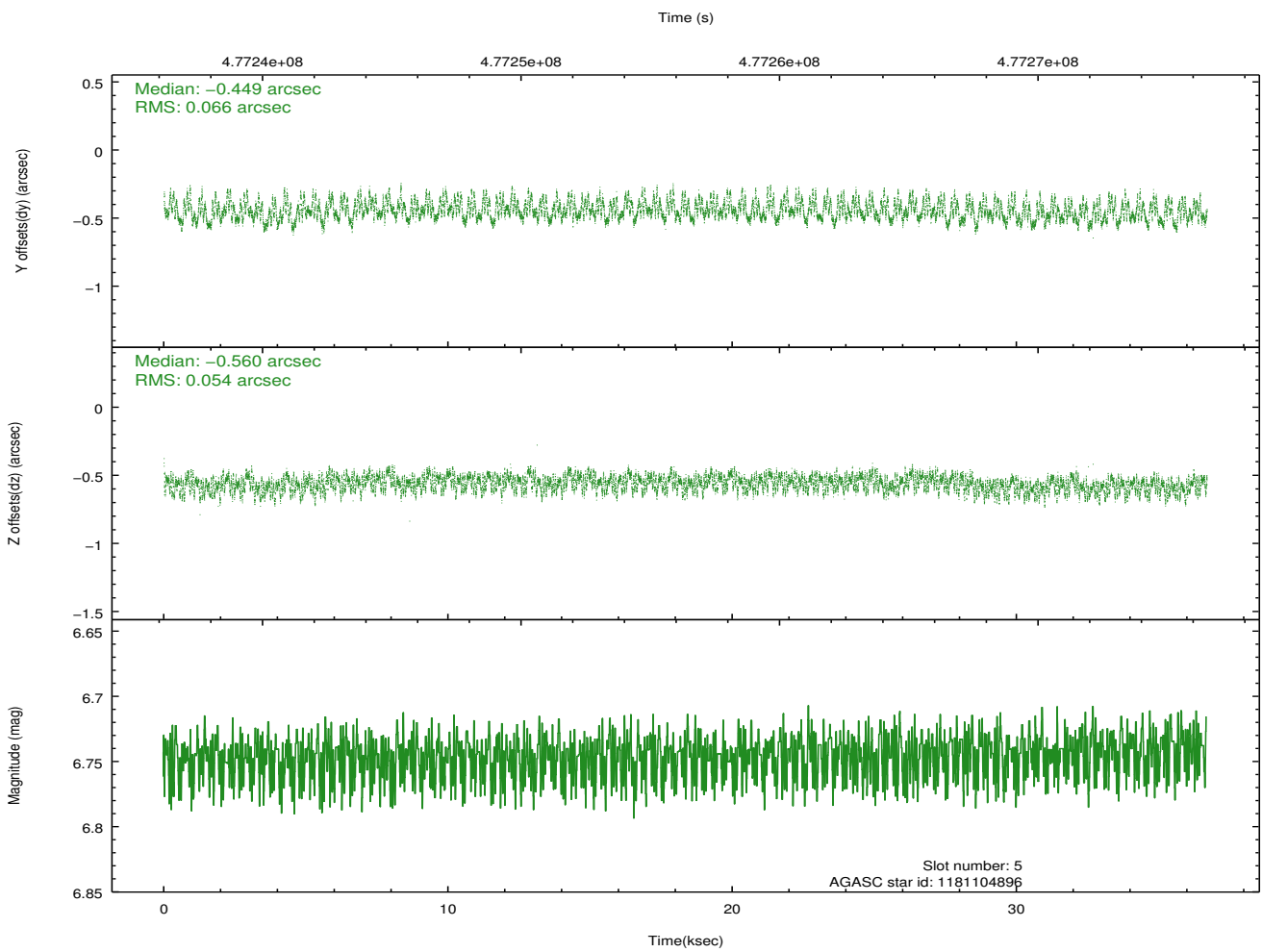
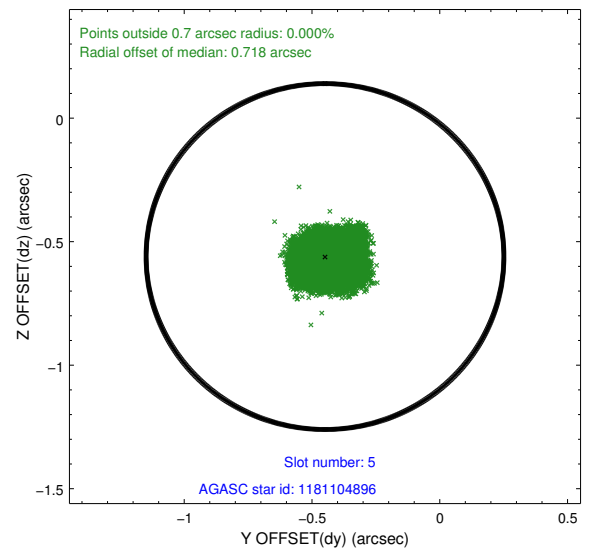
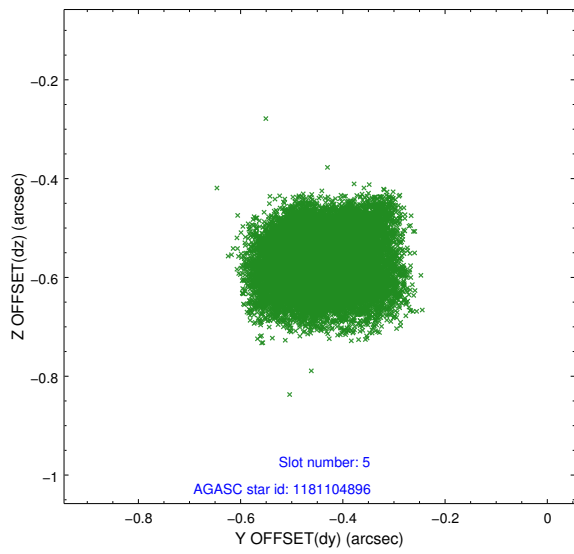
### 2.4.1 Slot 3



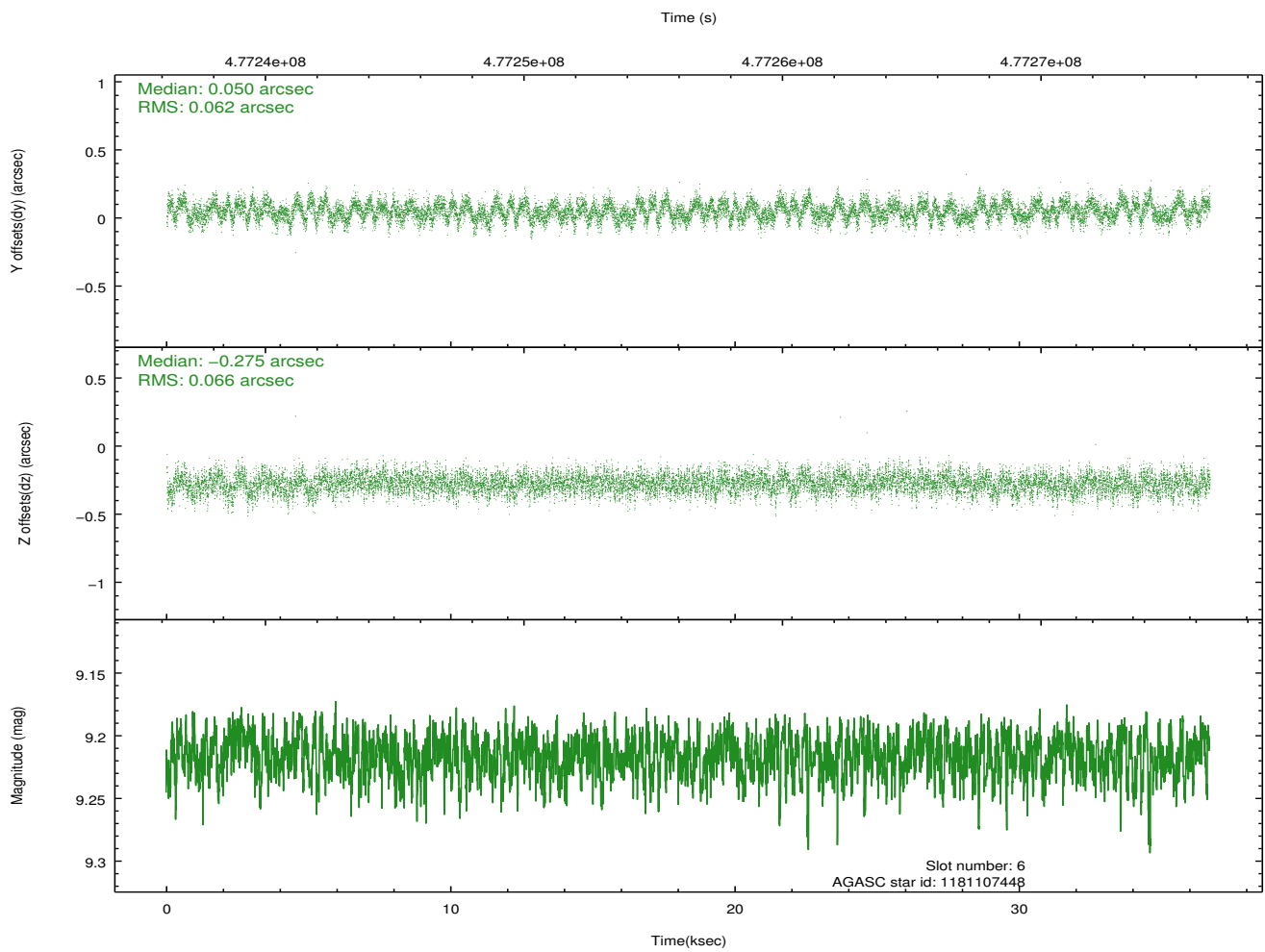
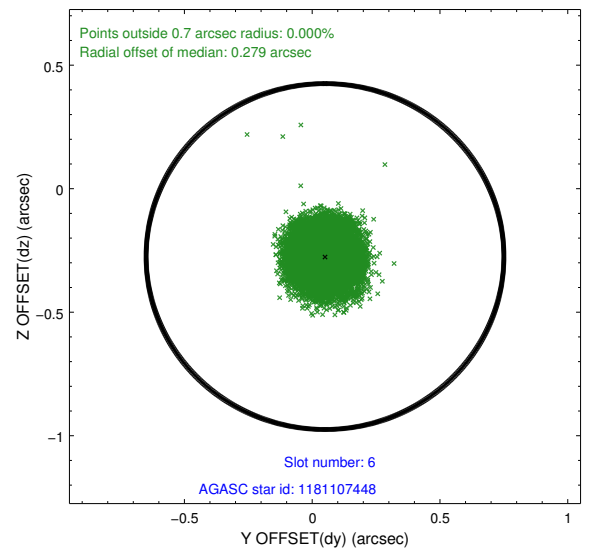
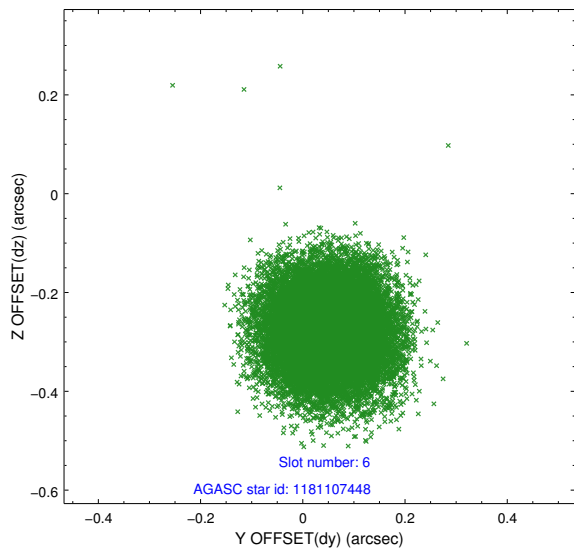
## 2.4.2 Slot 4



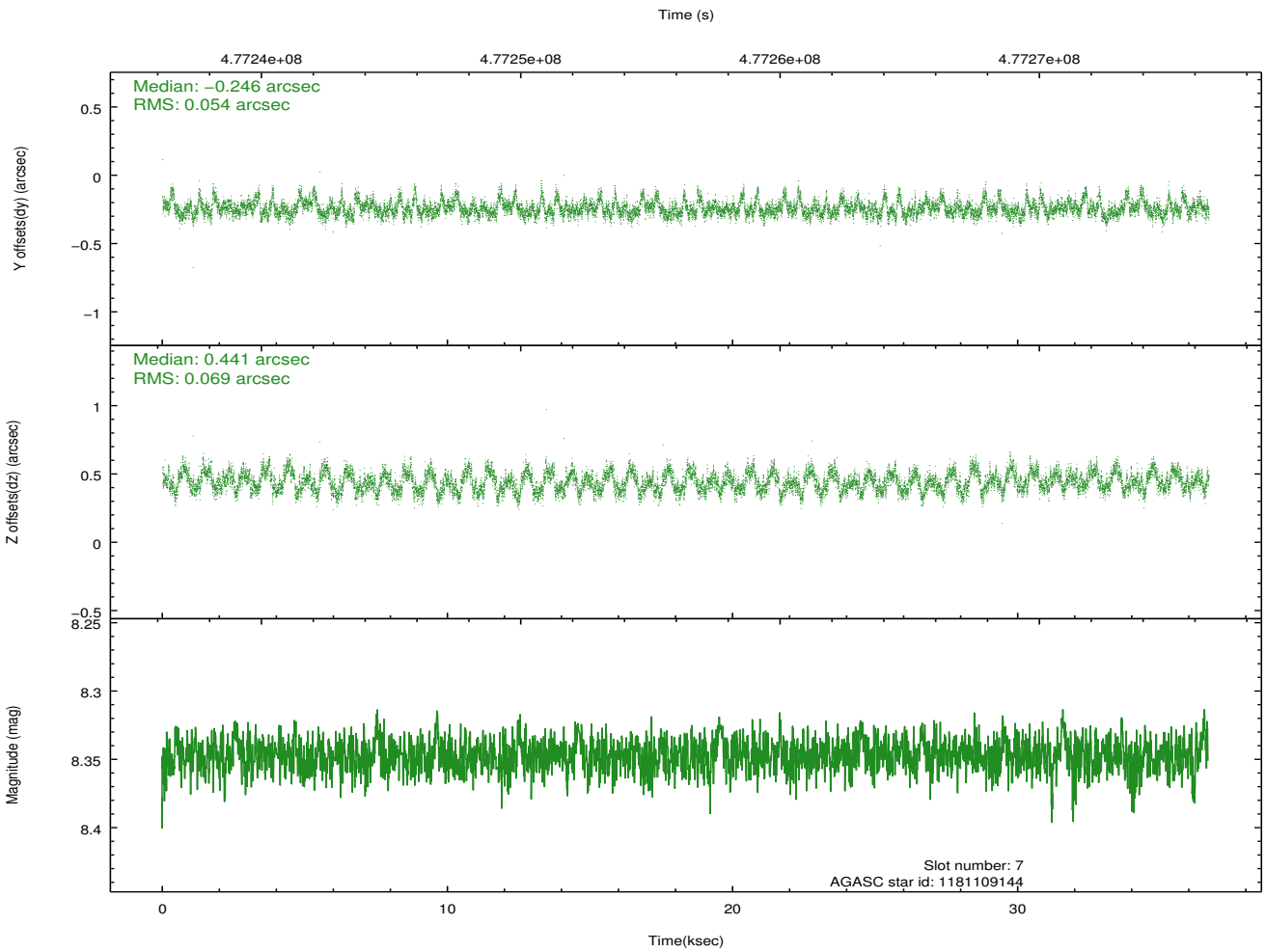
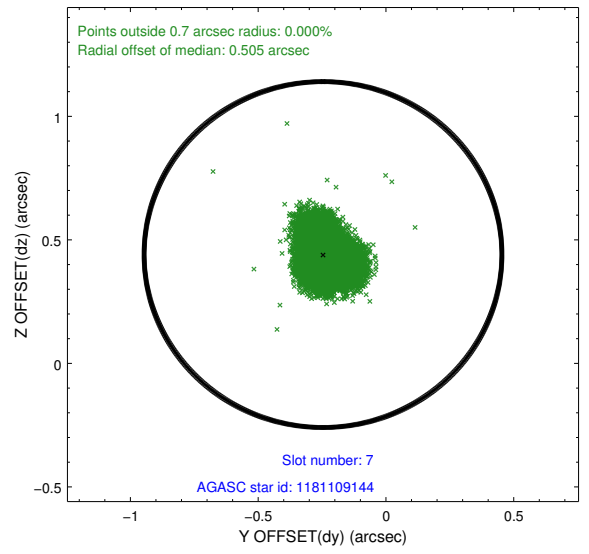
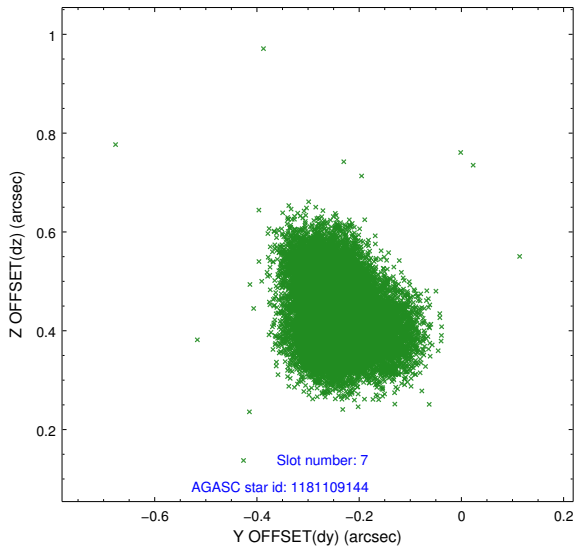
### 2.4.3 Slot 5



## 2.4.4 Slot 6

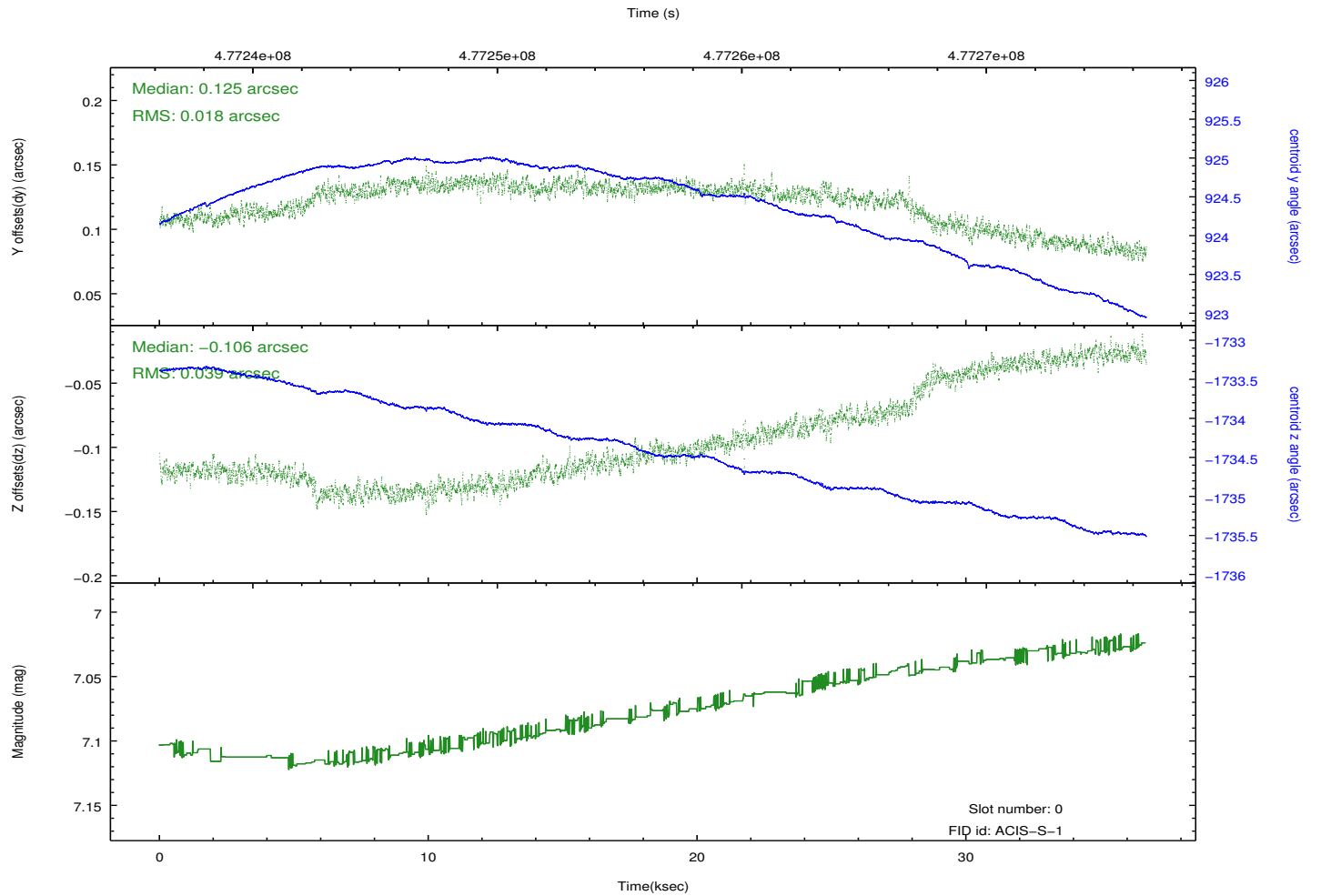
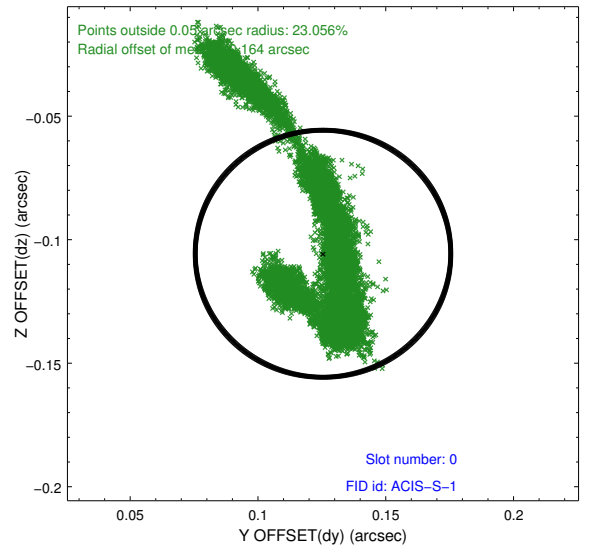
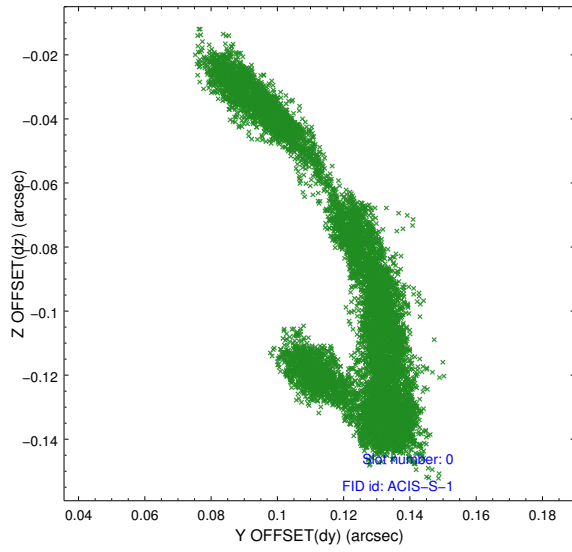


### 2.4.5 Slot 7

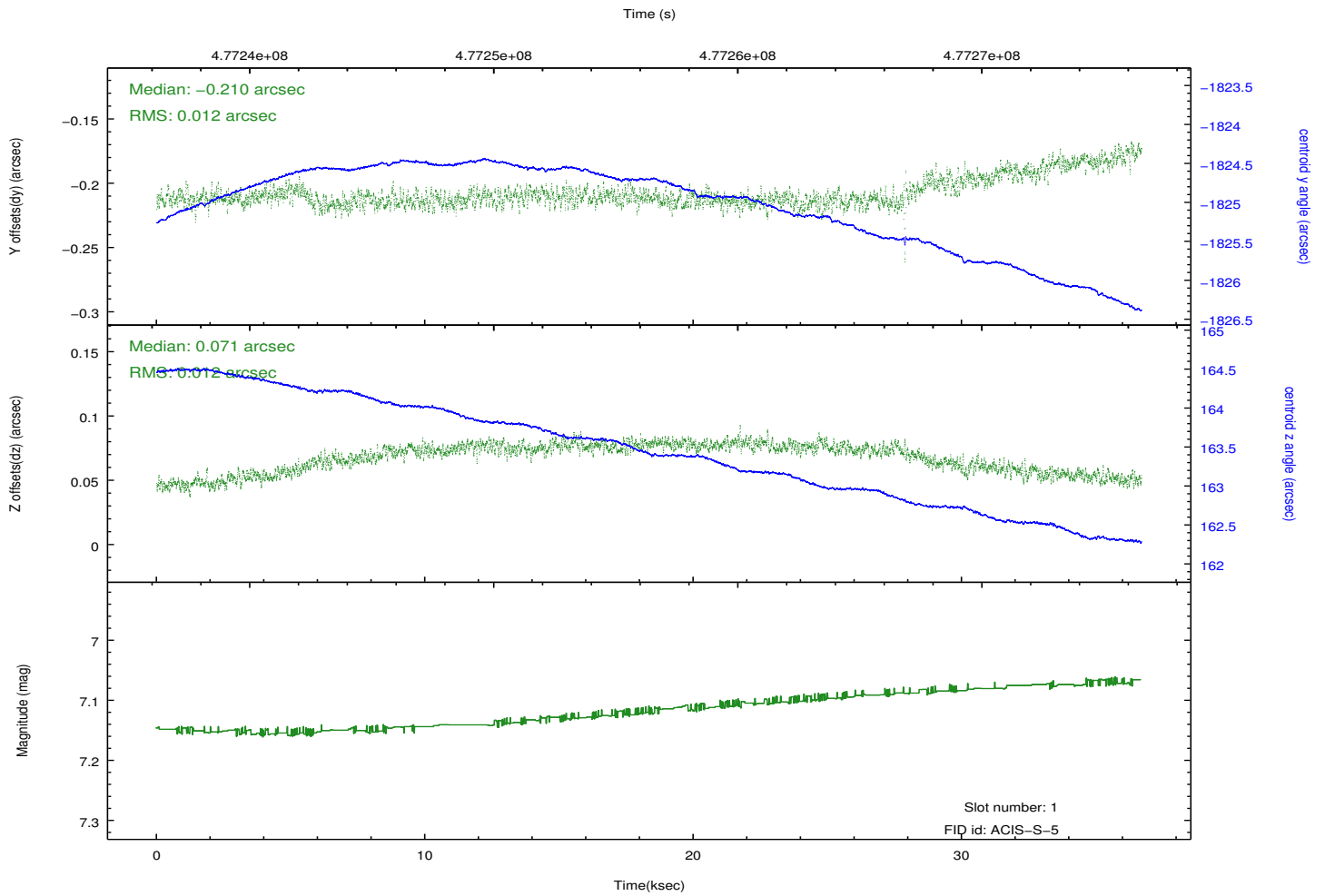
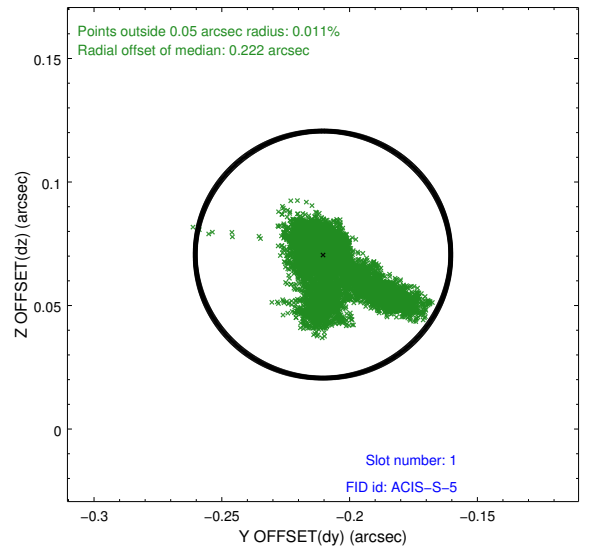
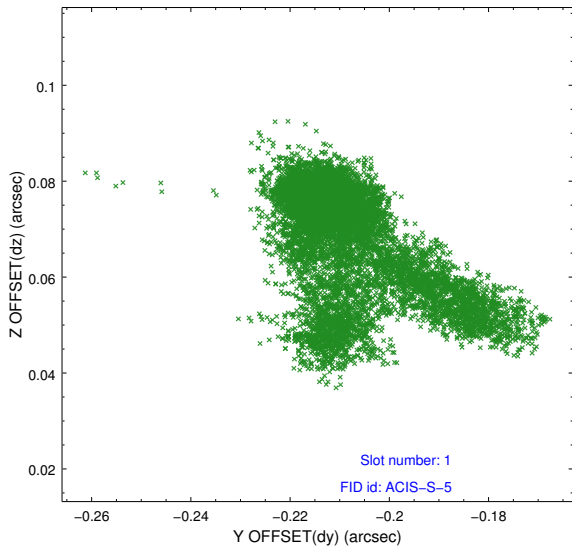


## 2.5 FID Slots

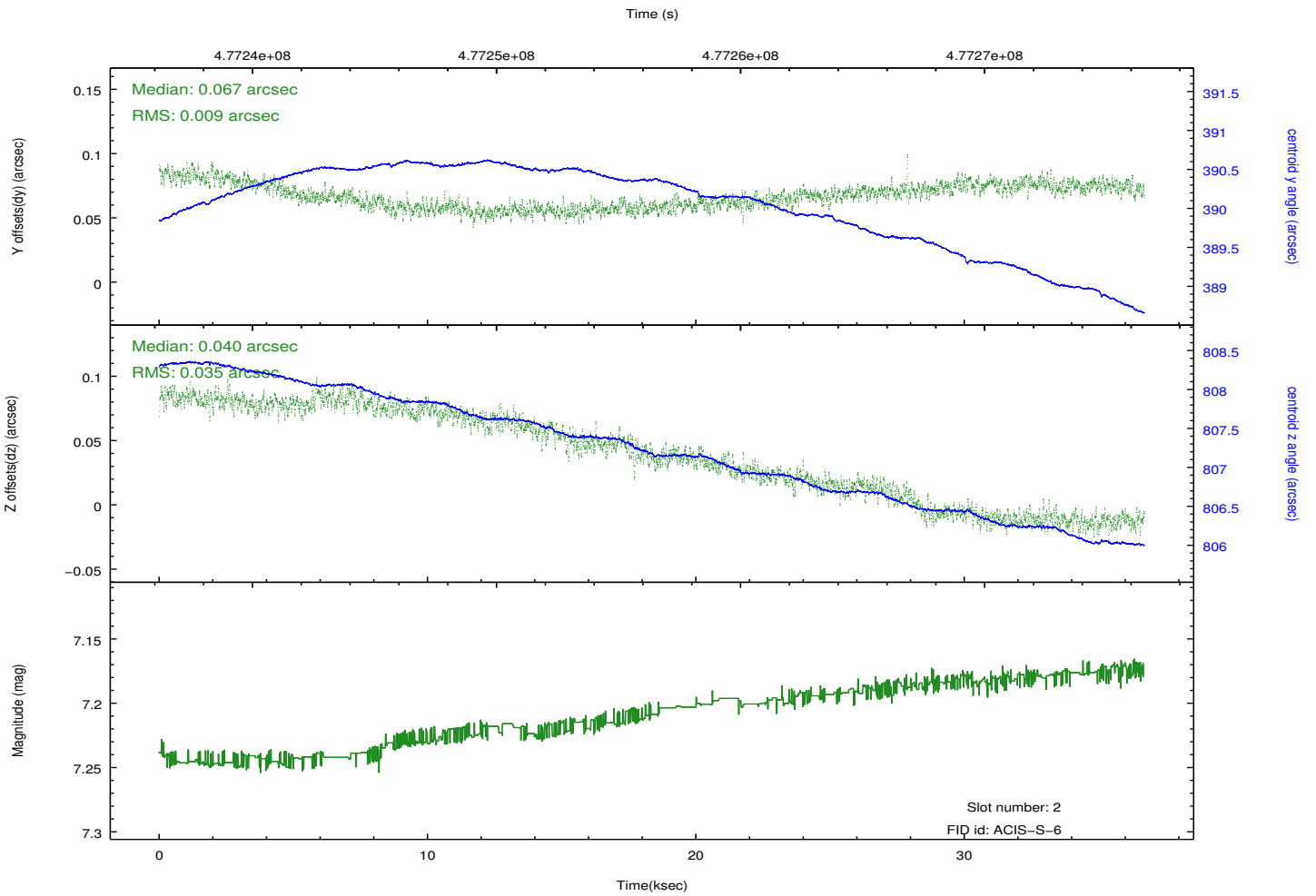
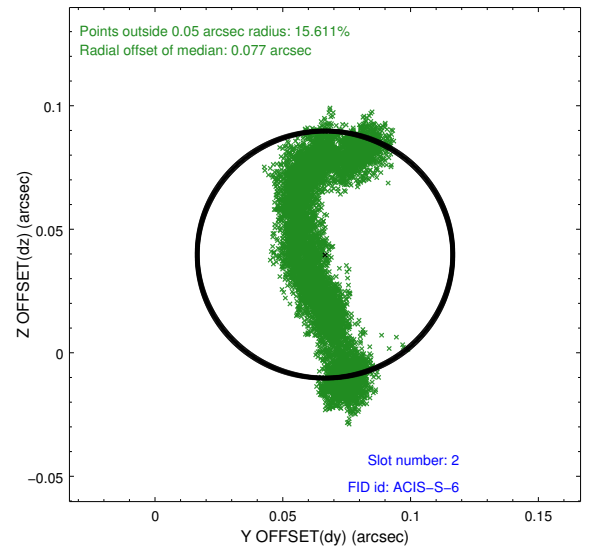
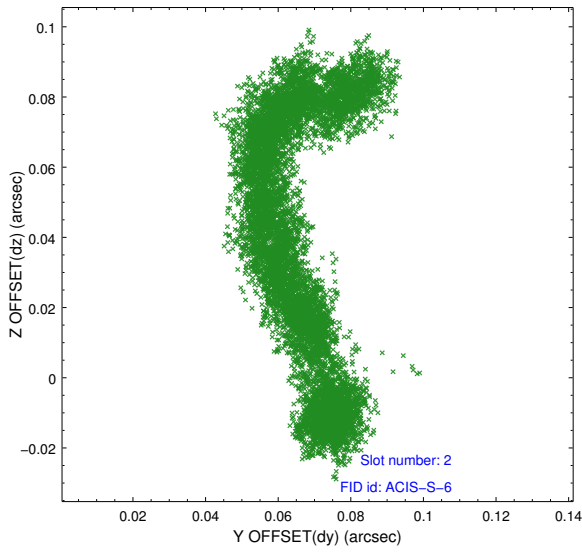
### 2.5.1 Slot 0



## 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)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.625585591674

## 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.