

# V&V Reference Report

## L2 ASCDS Version : 10.1

Observation 16497 - L2 Version 2  
Chandra X-Ray Center

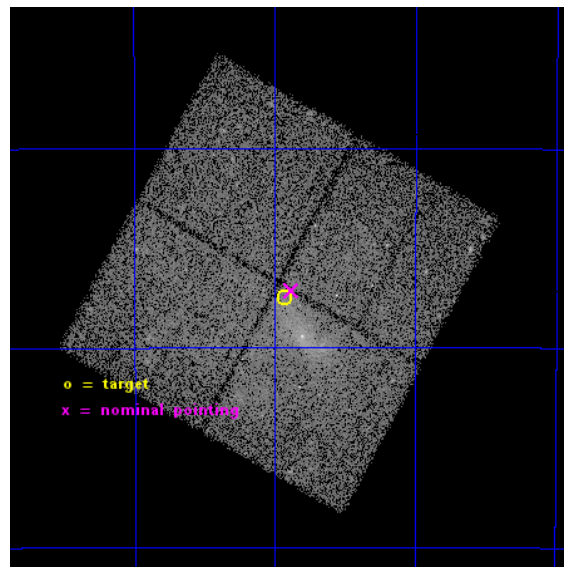
L2 Processing Date : Dec 9 2014

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# 1 Front

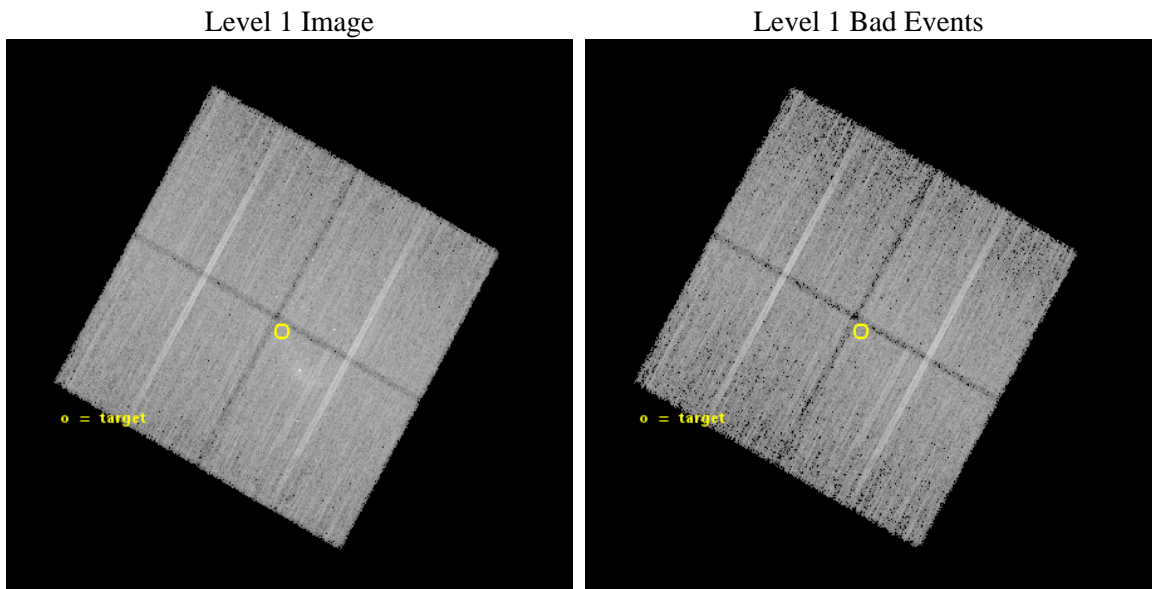
seq_num	501950	Sequence number
obs_id	16497	Observation id
title	A Detailed Study of the Composite Supernova Remnant MSH 11-62	Prop
observer	Dr. Patrick Slane	Principal investigator
object	MSH 11-62	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	167.982333	Observer's specified target RA [deg]
dec_targ	-60.624583	Observer's specified target Dec [deg]
ra_nom	167.97040263249	Nominal RA [deg]
dec_nom	-60.619018645421	Nominal Dec [deg]
roll_nom	119.19829552475	Nominal Roll [deg]
revision	2	Processing version of data
ontime	38092.800292969	Sum of GTIs [s]
livetime	37595.08981363	Livetime [s]
ontime0	38092.749515951	Sum of GTIs [s]
ontime1	38092.790555954	Sum of GTIs [s]
ontime2	38089.659302711	Sum of GTIs [s]
ontime3	38092.800292969	Sum of GTIs [s]
l2events	105642	Number of level 2 events



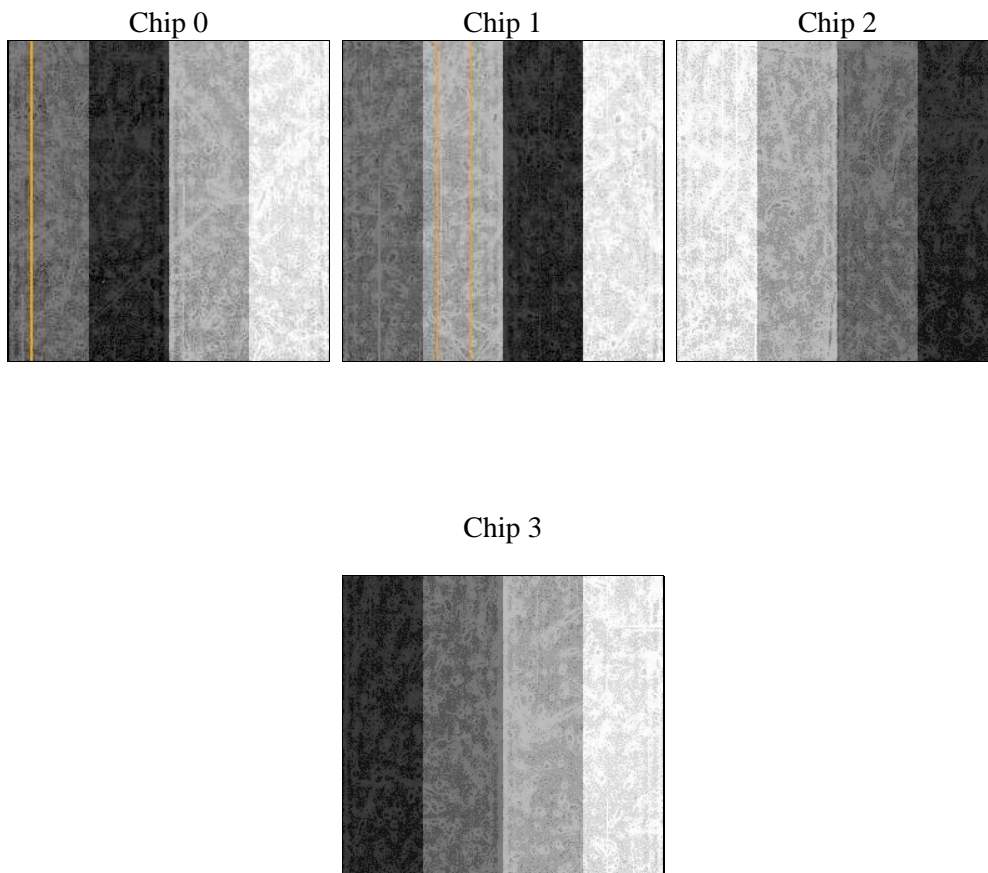
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	38092.800292969	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	38092.749515951	Sum of GTIs [s]
date	2014-12-09T04:32:10	Date and time of file creation	ontime1	38092.790555954	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	38089.659302711	Sum of GTIs [s]
			ontime3	38092.800292969	Sum of GTIs [s]
			l1events	722422	Number of level 1 events

### 2.1.4 Events

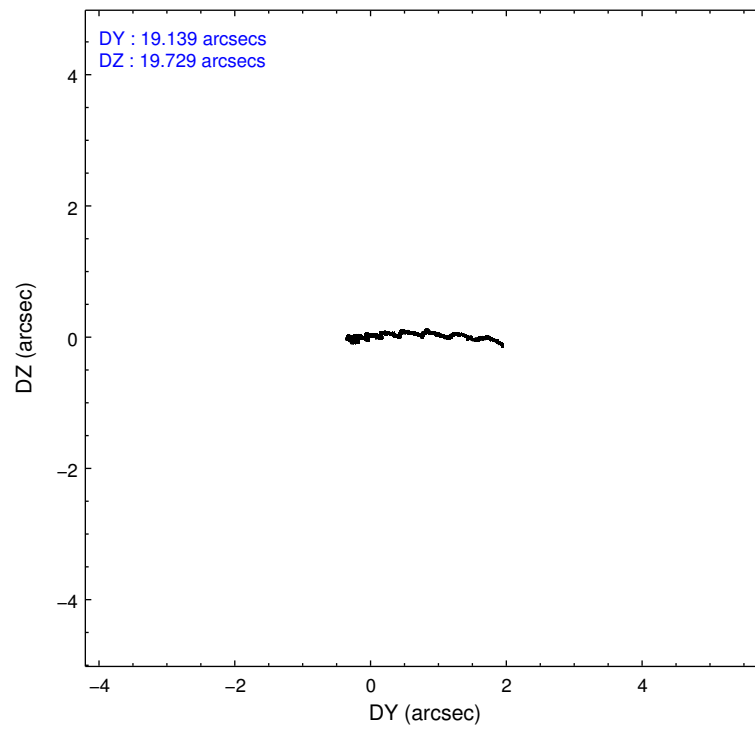
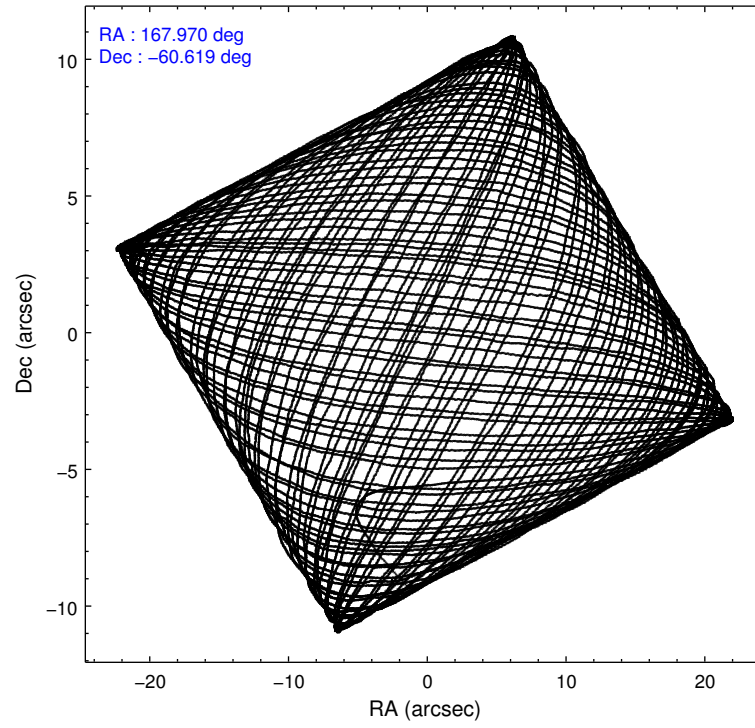
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	166353	174077	189843	192149
rejected events	138760	143448	160065	155817
rejected %	83%	82%	84%	81%

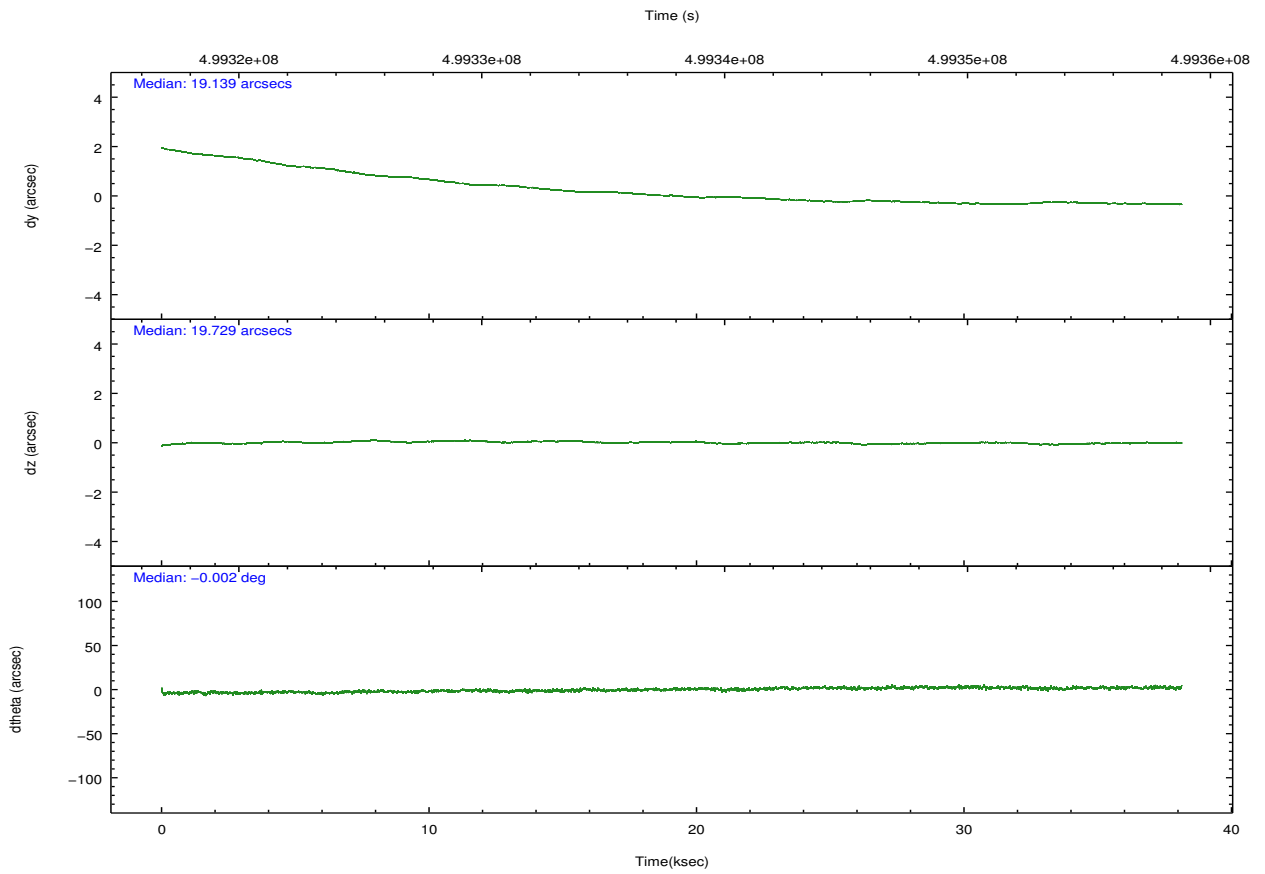
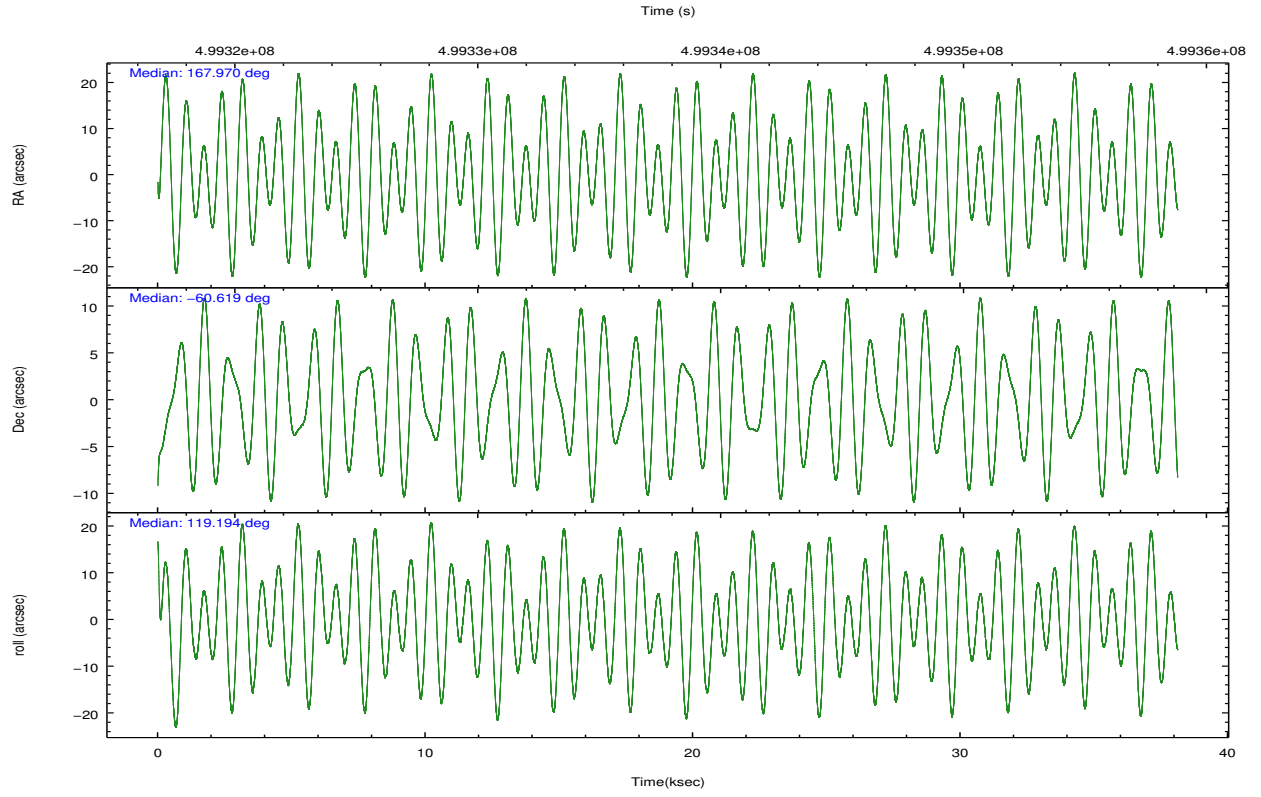
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	12293	14286	14313	20261
	7%	8%	7%	10%
grade 1 events	121	105	143	170
	0%	0%	0%	0%
grade 2 events	6187	6069	6312	6228
	3%	3%	3%	3%
grade 3 events	2376	2481	2280	2680
	1%	1%	1%	1%
grade 4 events	2218	2555	2480	2517
	1%	1%	1%	1%
grade 5 events	7165	7651	6783	8118
	4%	4%	3%	4%
grade 6 events	4521	5240	4395	4651
	2%	3%	2%	2%
grade 7 events	131472	135690	153137	147524
	79%	77%	80%	76%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	168.018667	167.9704026324925	Subarray requested	NONE	NONE
[deg] Pointing Dec	-60.632992	-60.6190186454208	Alternating exposures requested	N	N
[deg] Pointing Roll	119.031666	119.1982955247452	[s] Primary exposure time	0.000000	3.1
[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)	499318891.184000	499317676.0117			
Observation start date	2013-10-28T03:40:24	2013-10-28T03:21:16			
[s] Observation end time (MET)	499356891.184000	499357874.4639			
Observation end date	2013-10-28T14:13:44	2013-10-28T14:31:14			
Read mode	TIMED	TIMED			

## 2.3 Aspect



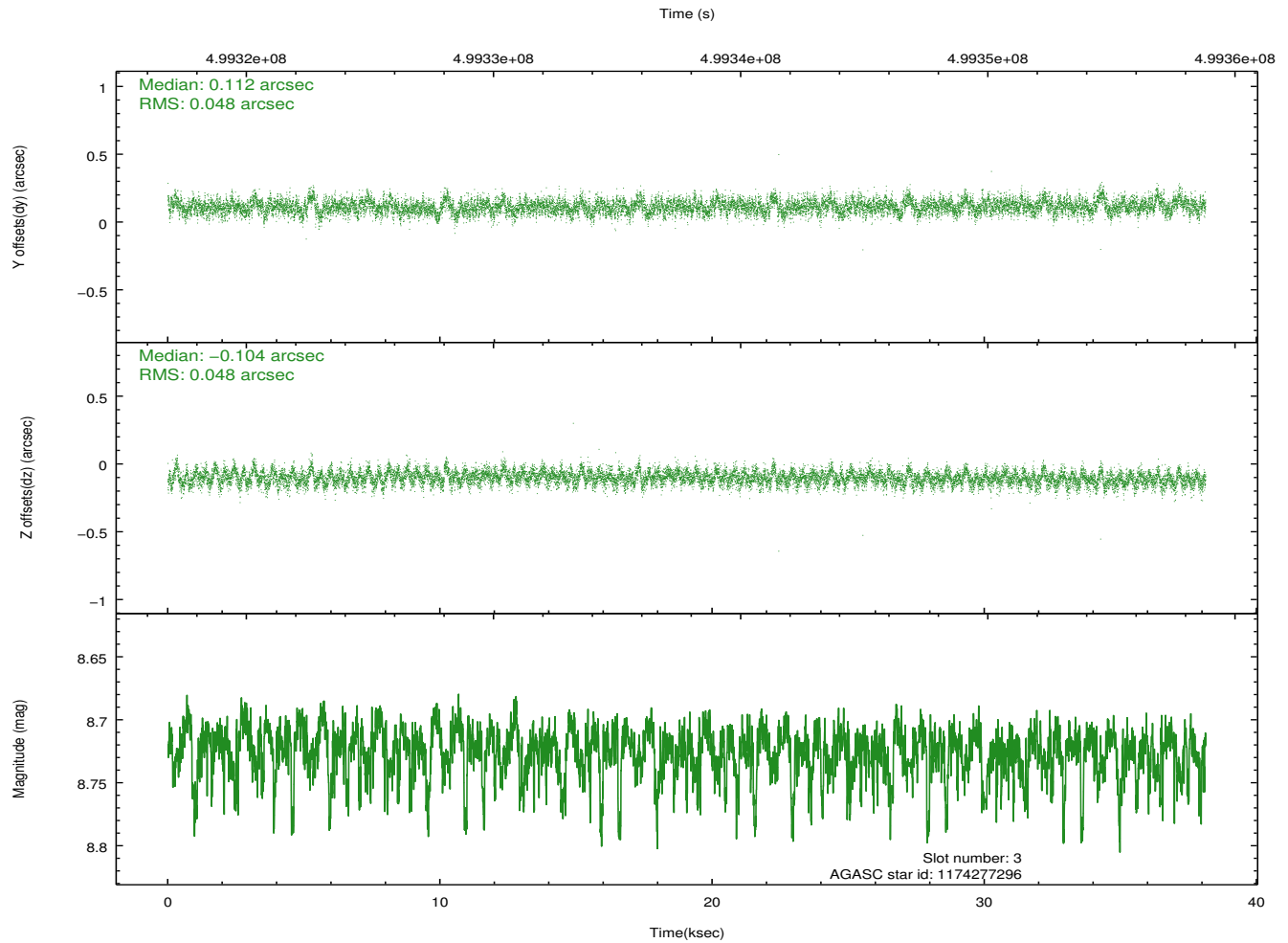
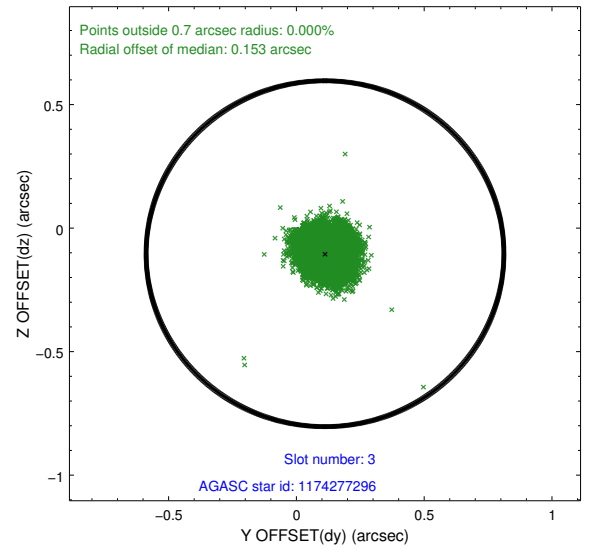
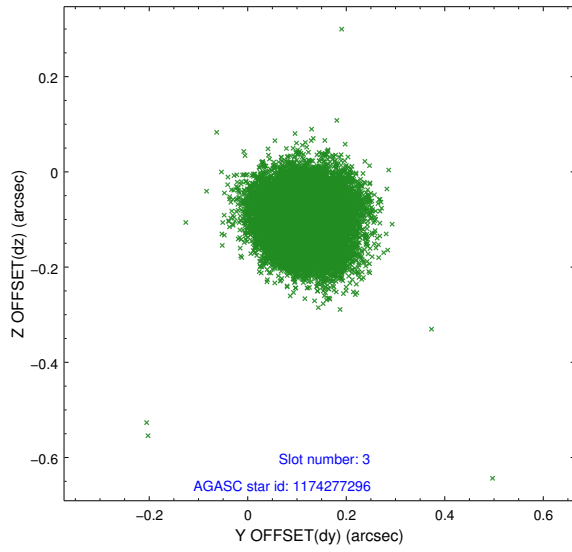


### Slot Statistics

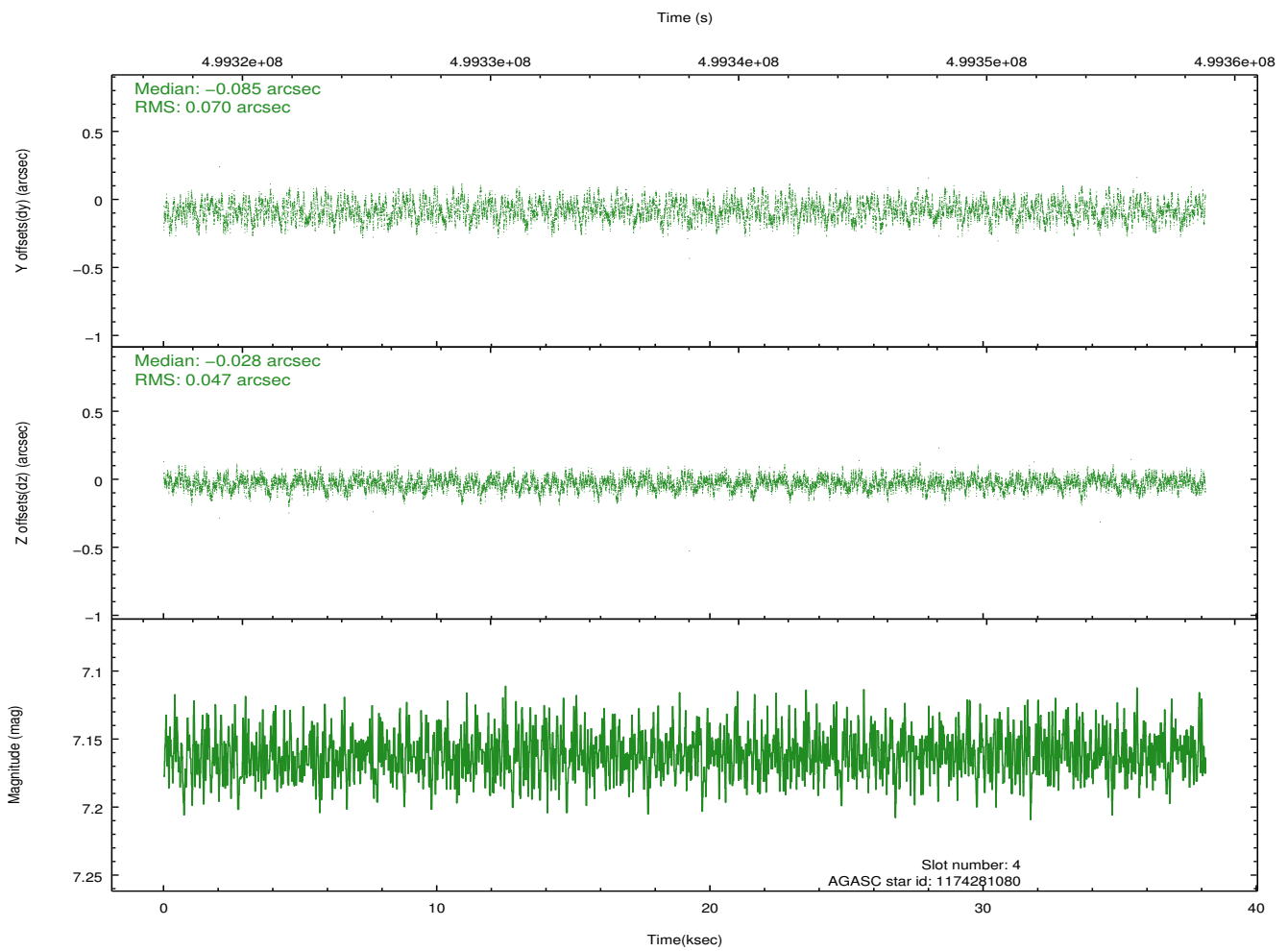
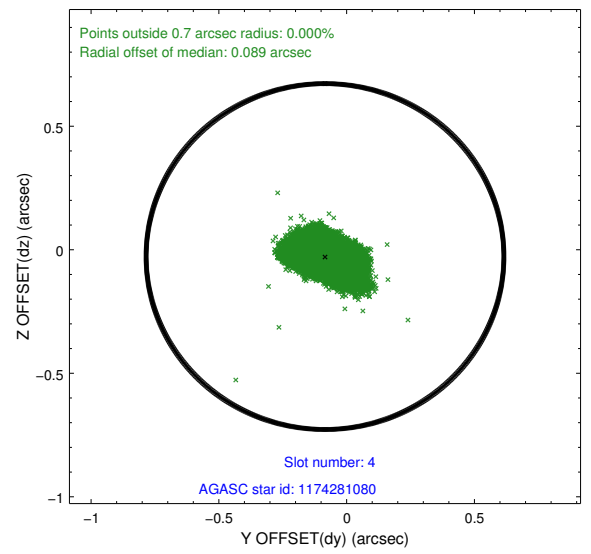
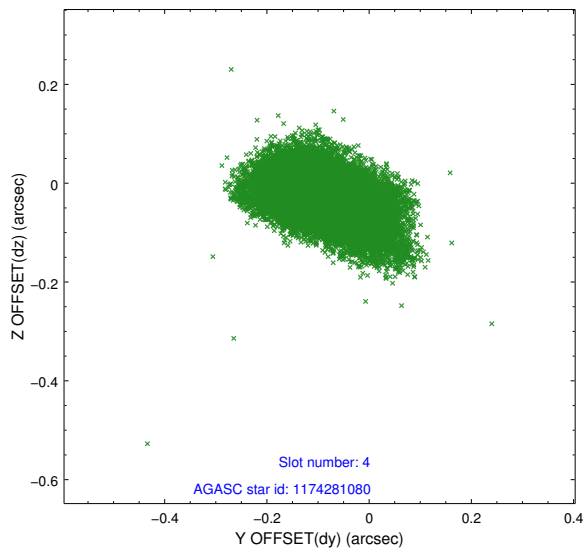
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.06	9298	-0.057	0.028	0.012	0.021	0.000000	0.000000	919.86	-843.42
1	FID		ACIS-I-2	6.97	9298	-0.141	-0.069	0.011	0.018	0.000000	0.000000	-774.30	-849.98
2	FID		ACIS-I-4	6.98	9298	0.100	0.109	0.008	0.014	0.000000	0.000000	2139.89	1056.45
3	GUIDE	used	1174277296	8.72	18587	0.112	-0.104	0.072	0.116	167.558753	-61.273161	-1630.96	1815.66
4	GUIDE	used	1174281080	7.16	18597	-0.085	-0.028	0.090	0.146	167.918264	-60.310825	1101.08	-405.53
5	GUIDE	used	1174282864	8.20	18591	-0.077	0.100	0.082	0.132	167.509743	-60.095137	2133.56	-138.80
6	GUIDE	used	1174292200	8.65	18589	-0.005	0.094	0.106	0.162	169.118665	-60.567864	-752.73	-1807.76
7	GUIDE	used	1174277360	8.32	18587	0.044	-0.057	0.082	0.130	167.516992	-60.979156	-667.07	1372.54

## 2.4 Star Slots

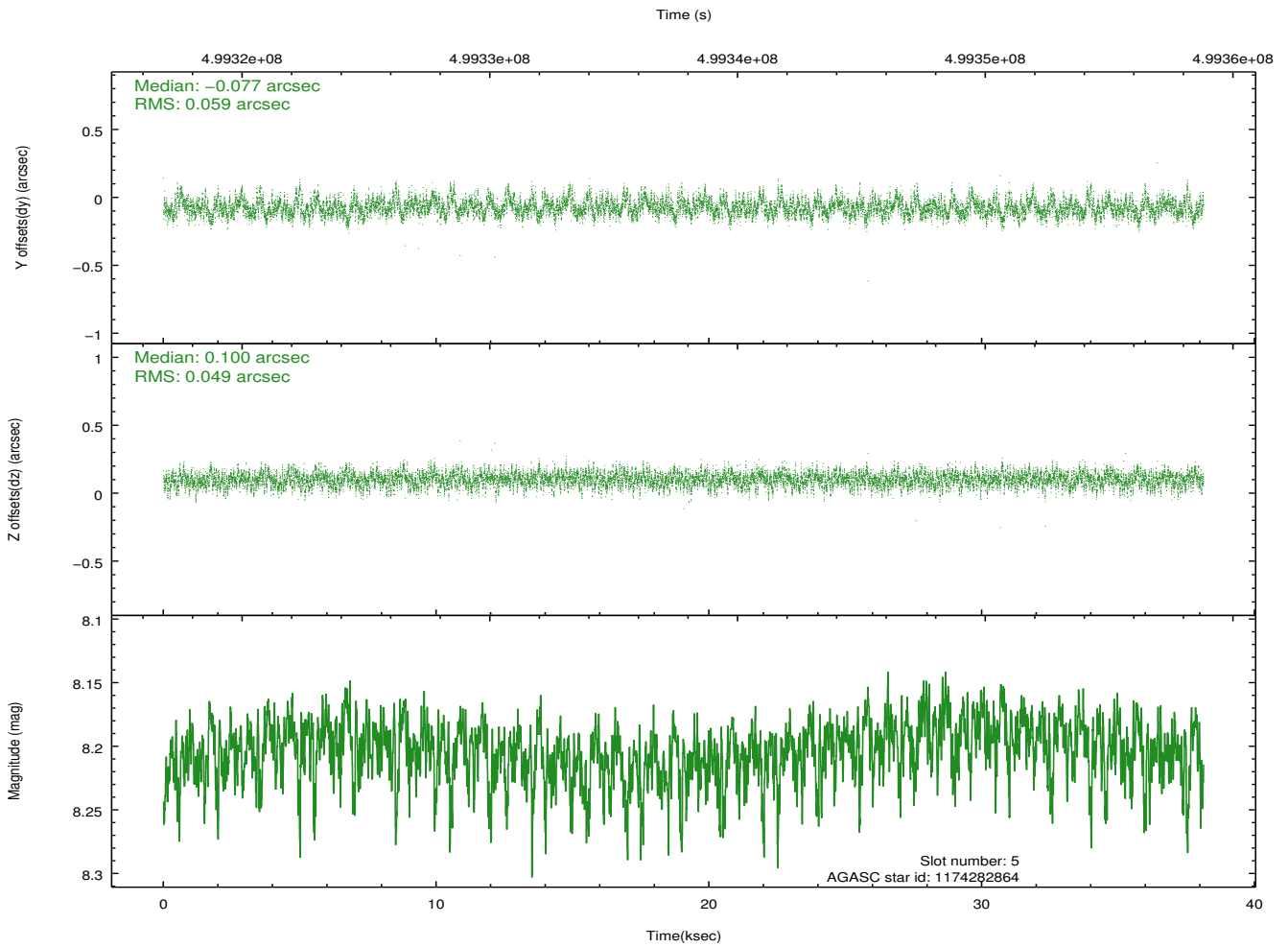
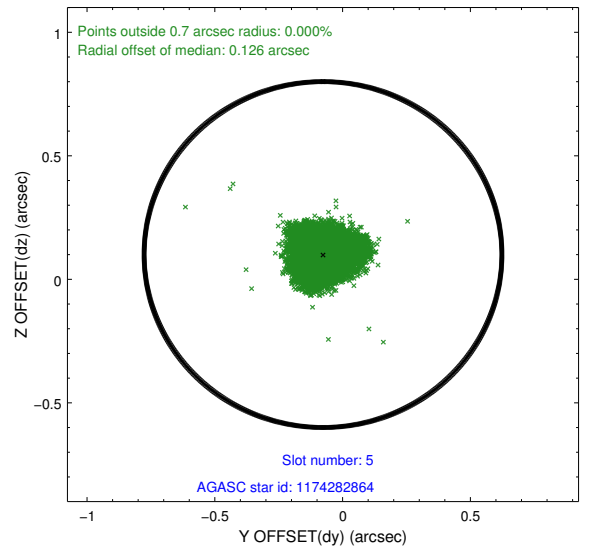
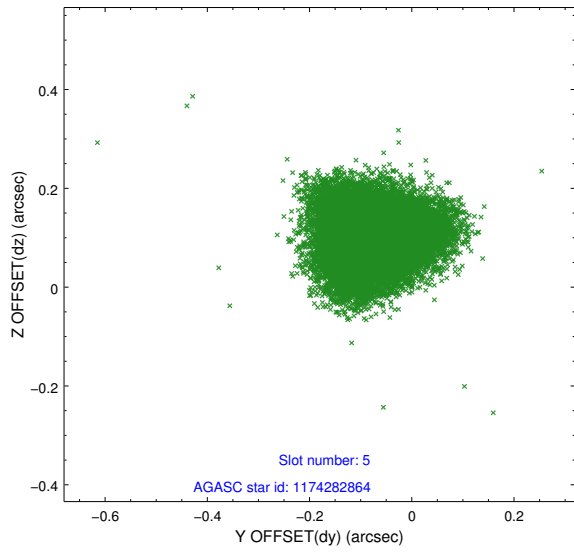
### 2.4.1 Slot 3



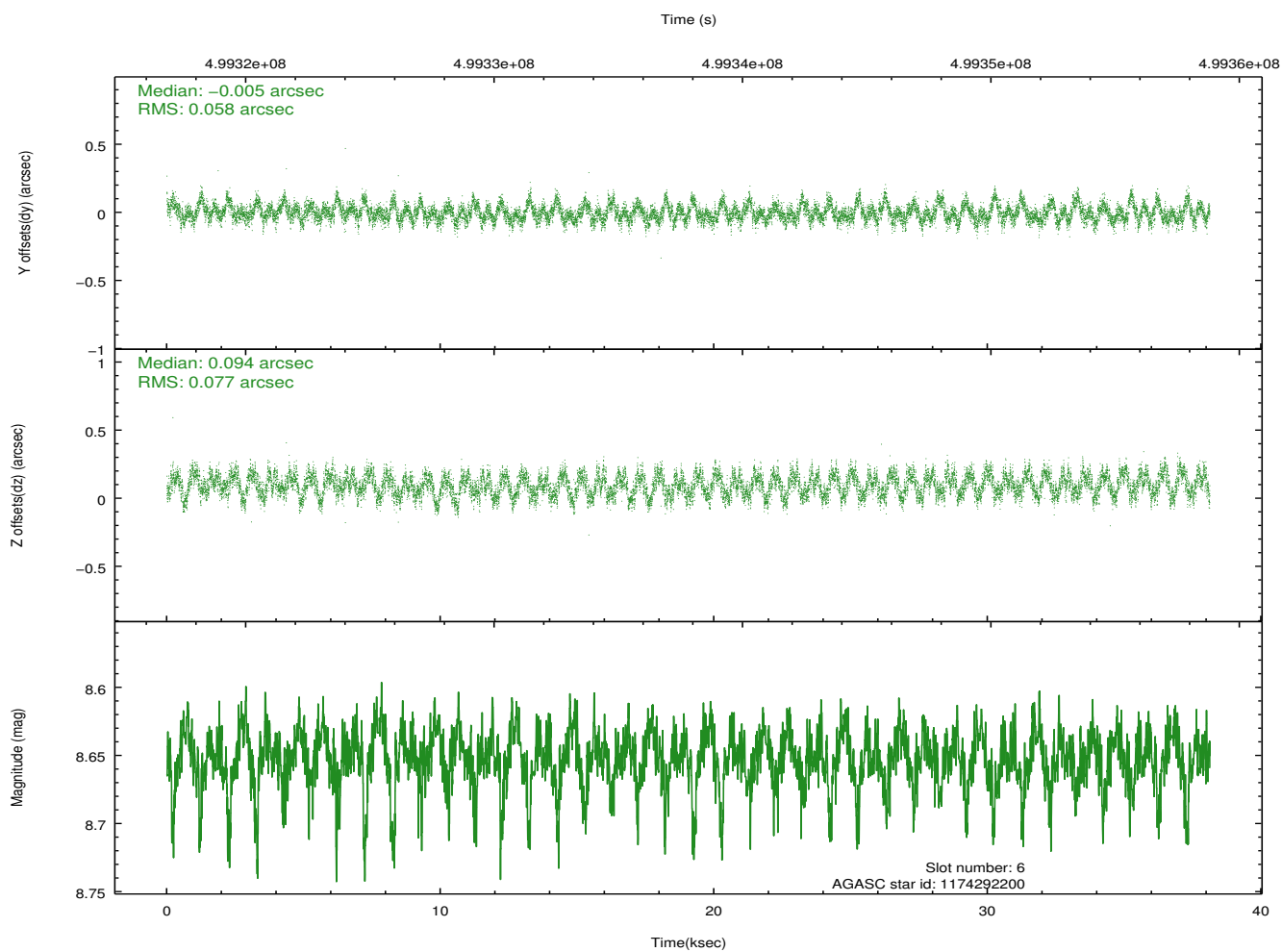
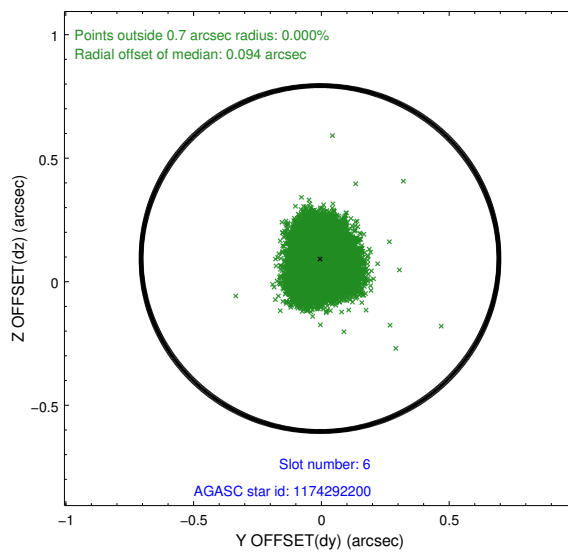
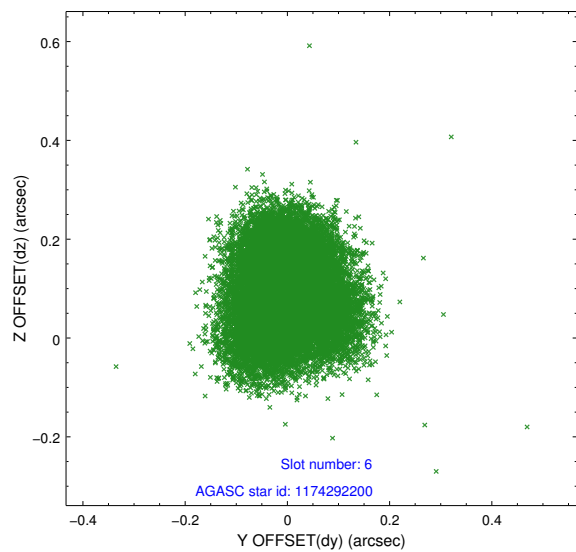
## 2.4.2 Slot 4



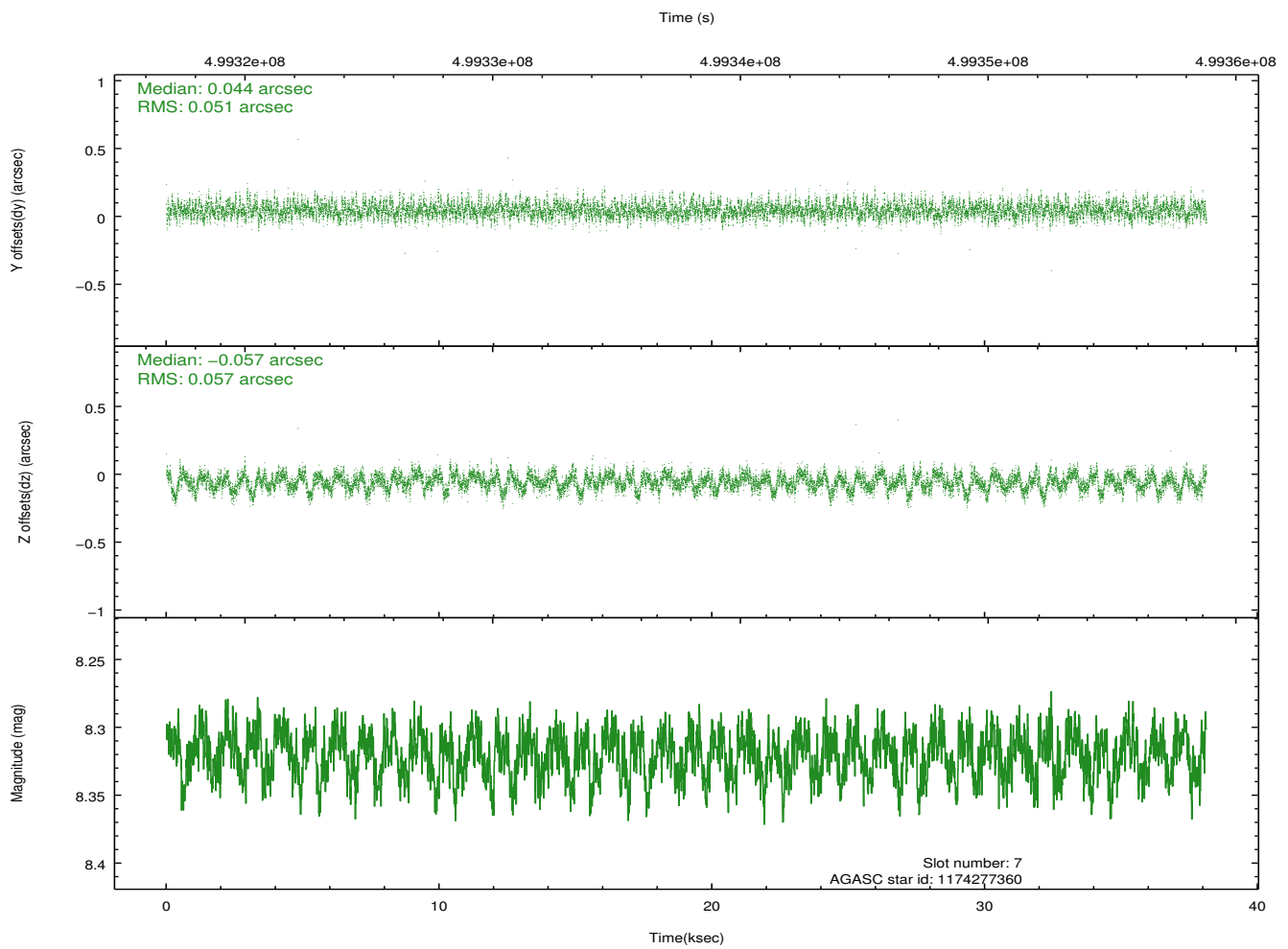
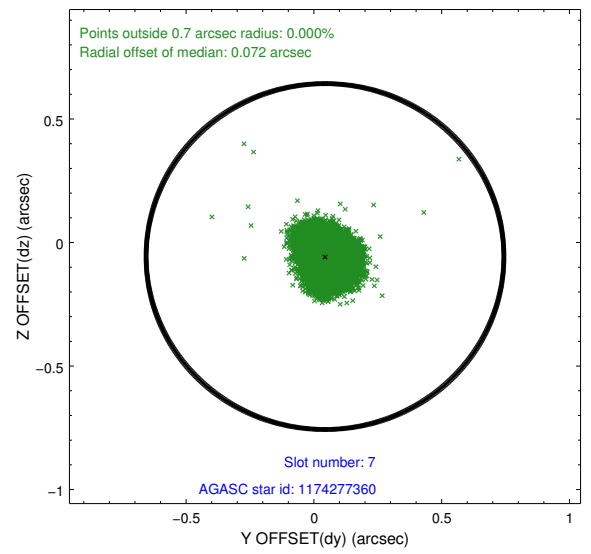
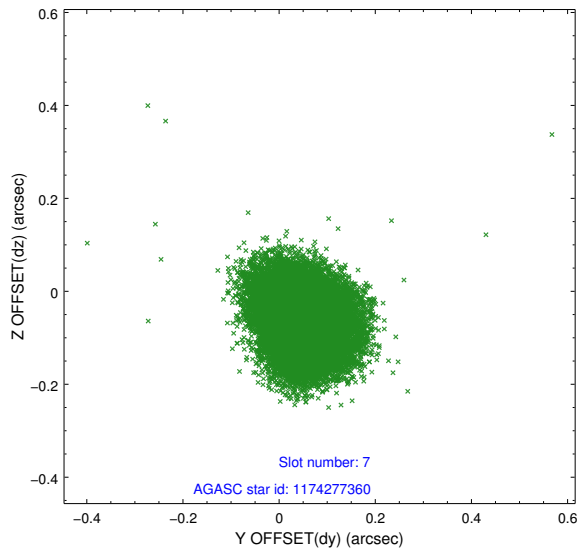
### 2.4.3 Slot 5



## 2.4.4 Slot 6

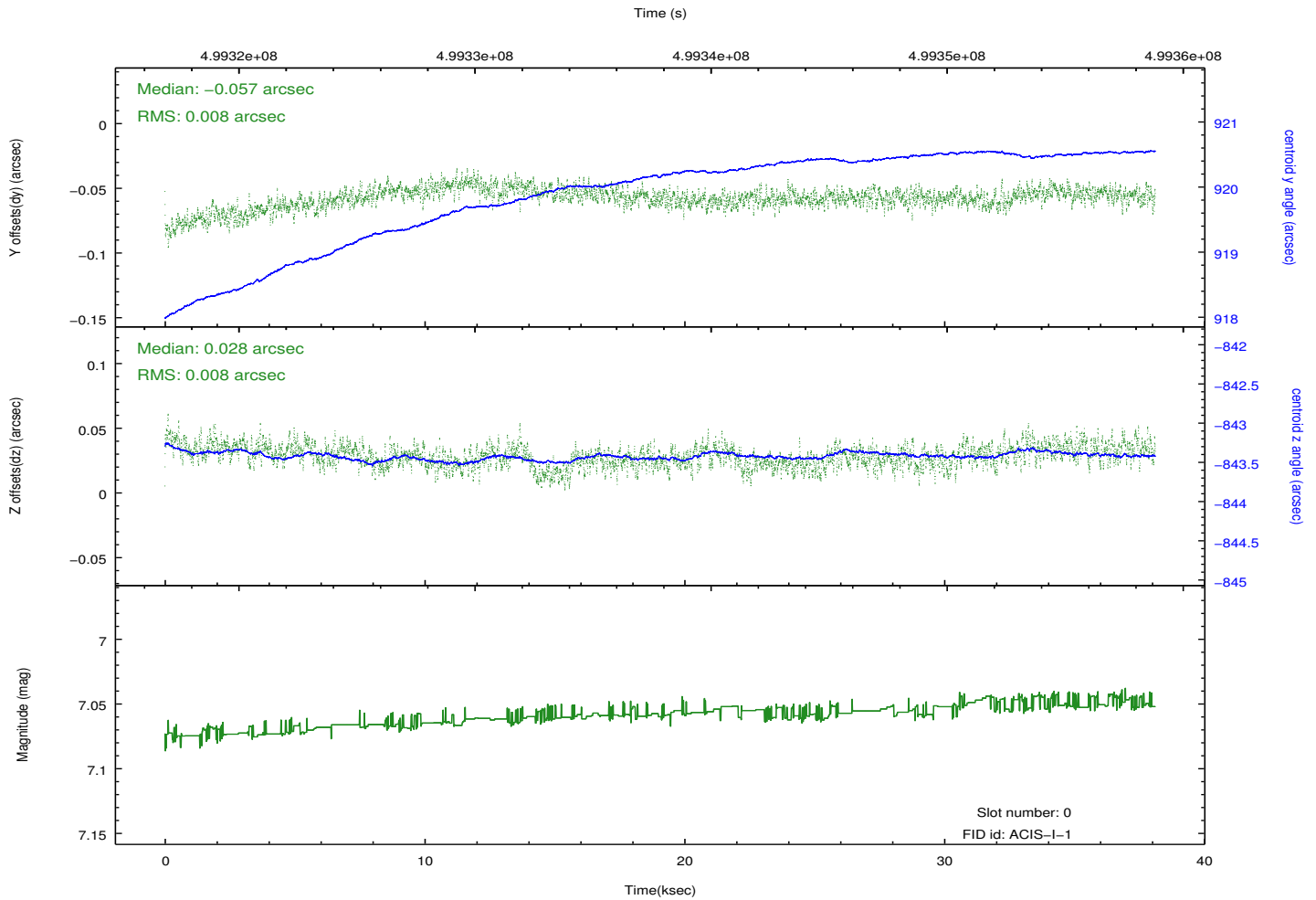
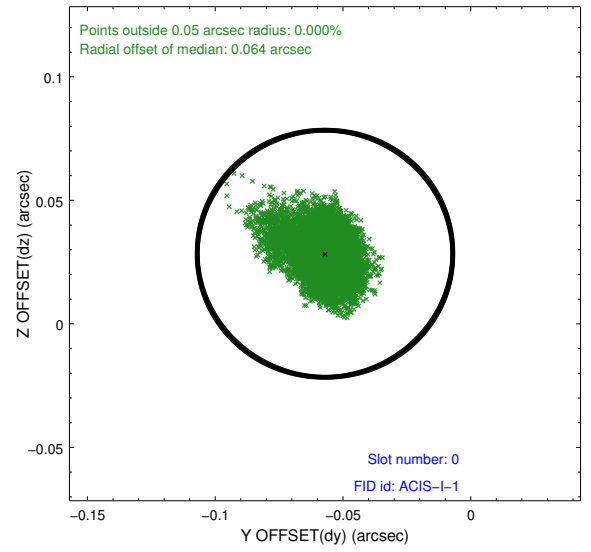
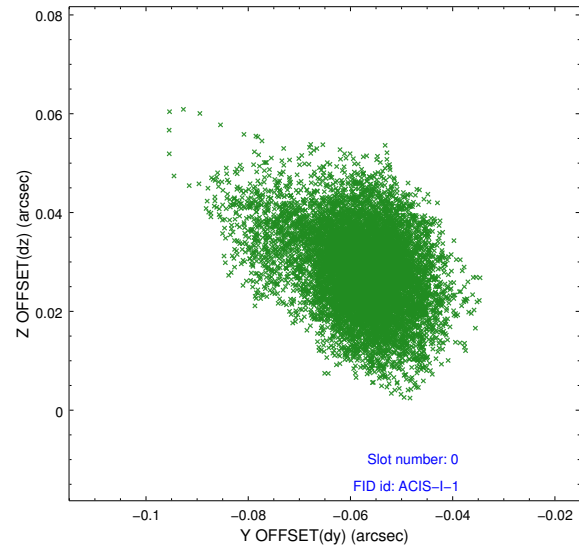


## 2.4.5 Slot 7

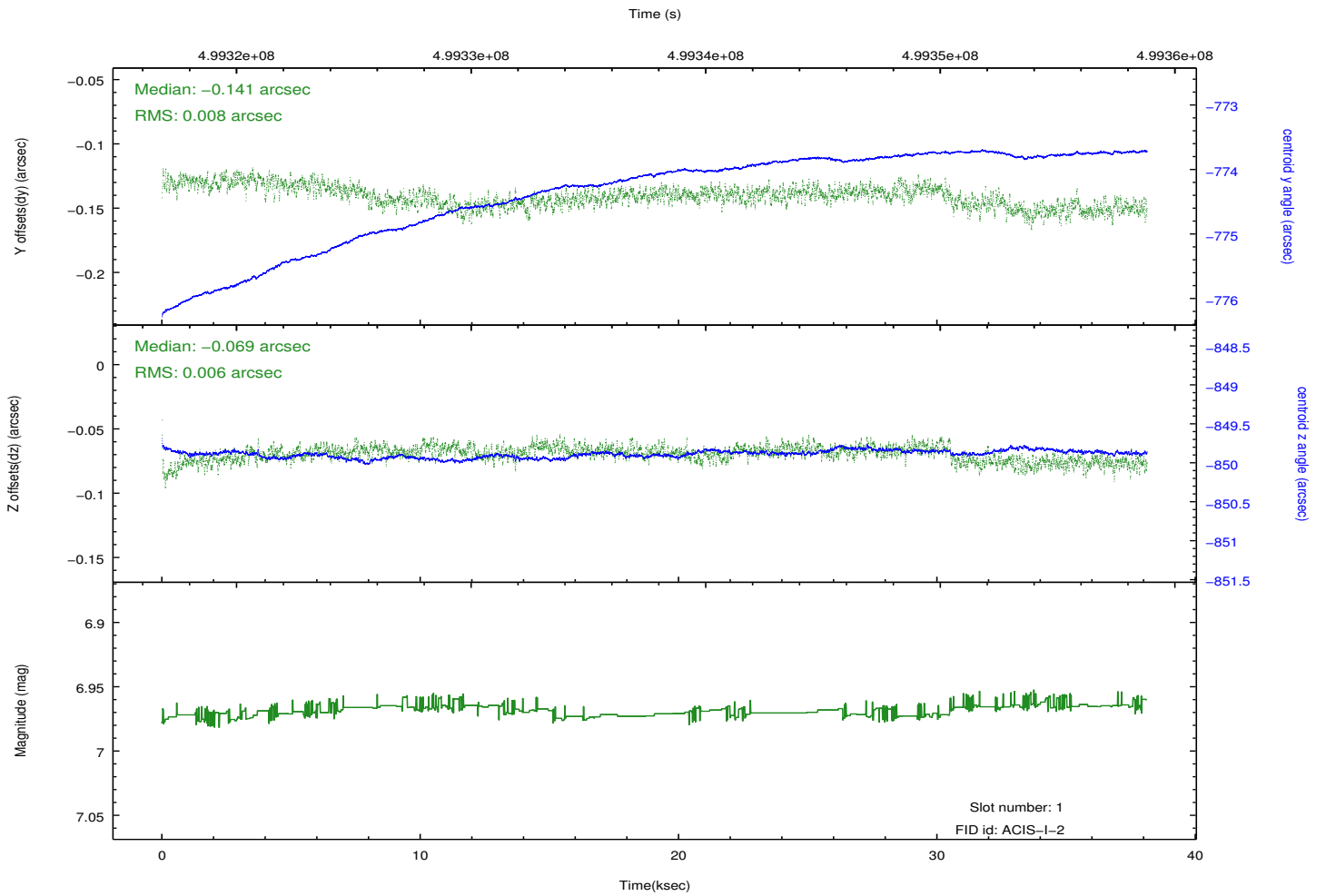
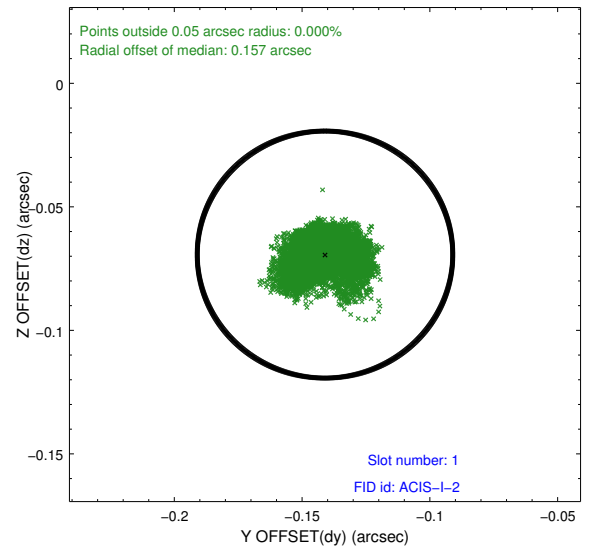
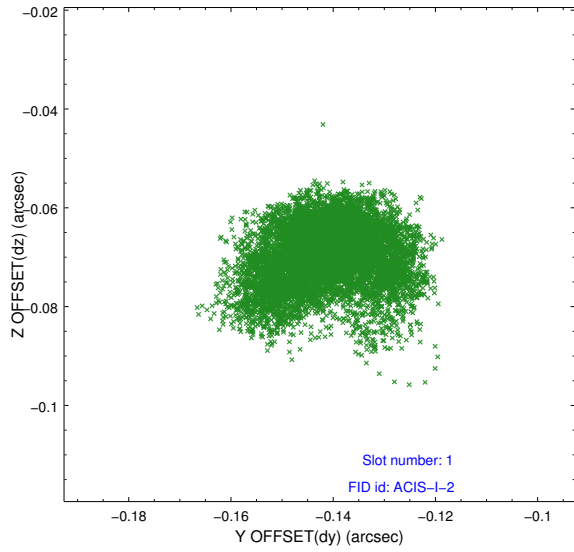


## 2.5 FID Slots

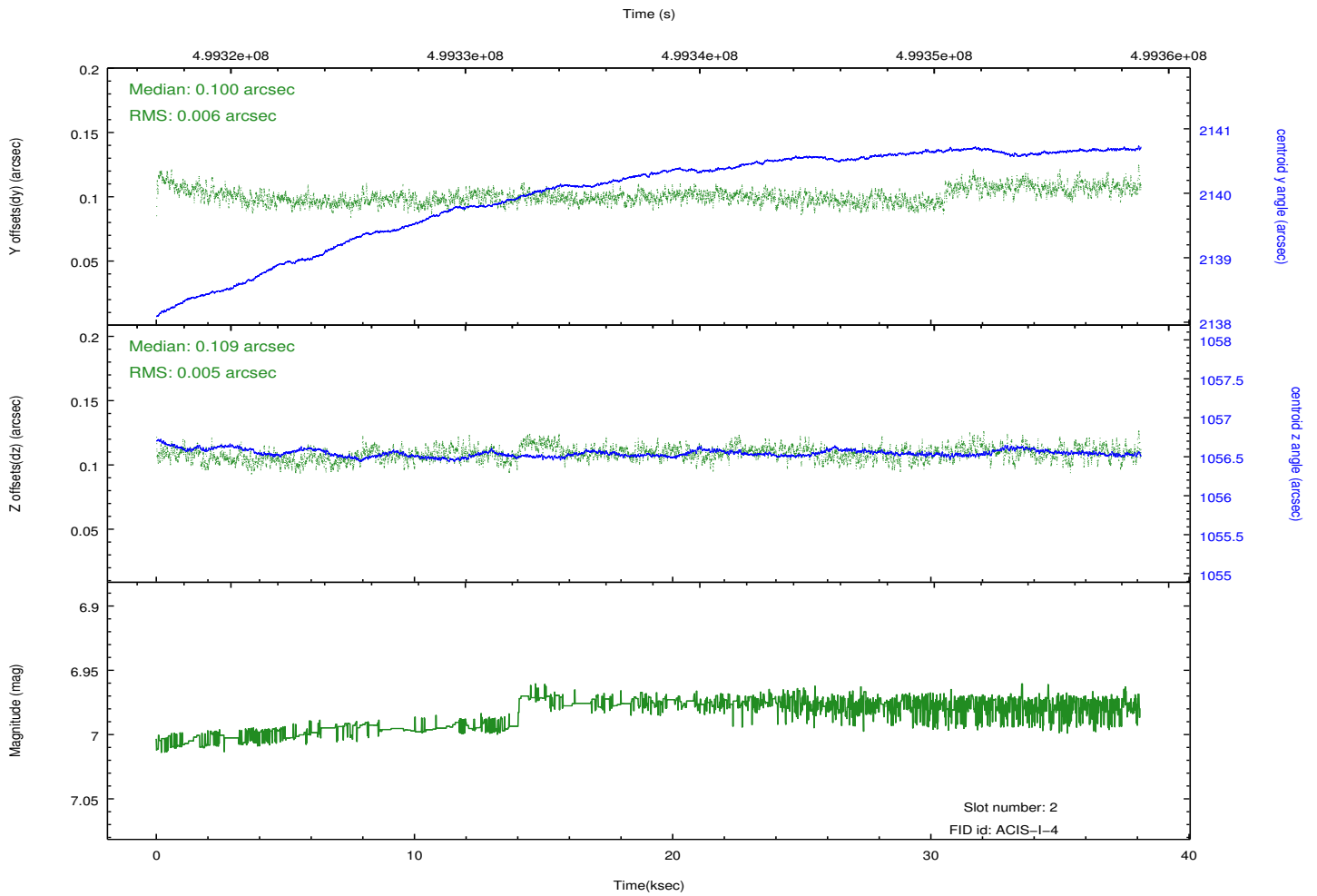
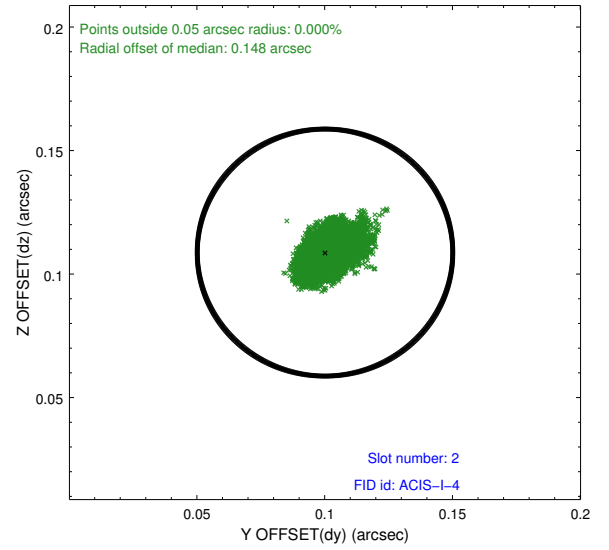
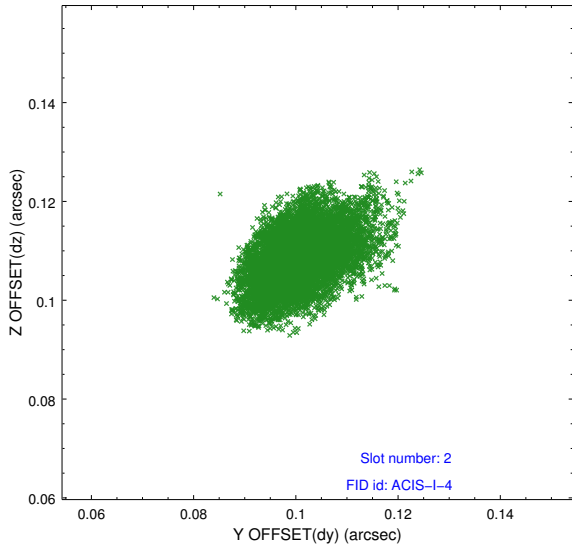
### 2.5.1 Slot 0



## 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)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.092800292969

## 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.