

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15296 - L2 Version 2  
Chandra X-Ray Center

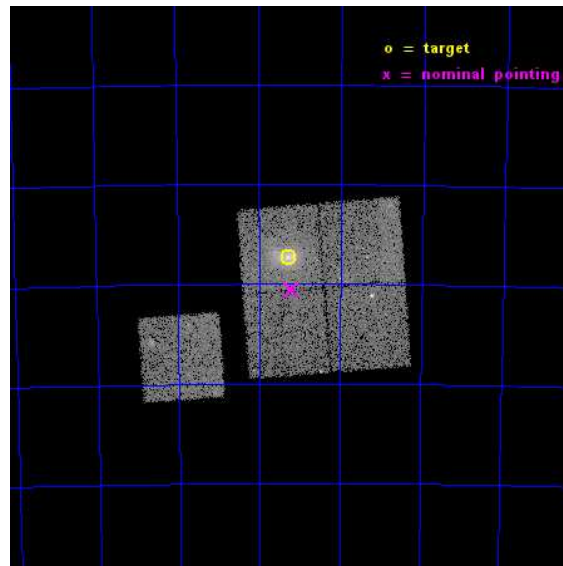
L2 Processing Date : Dec 10 2014

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# 1 Front

seq_num	801329	Sequence number
obs_id	15296	Observation id
title	Observing Distant Planck Clusters (Type A)	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	G284.99-23.70	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	110.823	Observer's specified target RA [deg]
dec_targ	-73.455	Observer's specified target Dec [deg]
ra_nom	110.80172032735	Nominal RA [deg]
dec_nom	-73.509048339864	Nominal Dec [deg]
roll_nom	265.61758756067	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20081.729301512	Sum of GTIs [s]
livetime	19819.346724234	Livetime [s]
ontime0	20084.747132003	Sum of GTIs [s]
ontime1	20081.64728117	Sum of GTIs [s]
ontime2	20084.82921201	Sum of GTIs [s]
ontime3	20081.729301512	Sum of GTIs [s]
ontime6	20084.706092	Sum of GTIs [s]
l2events	57753	Number of level 2 events

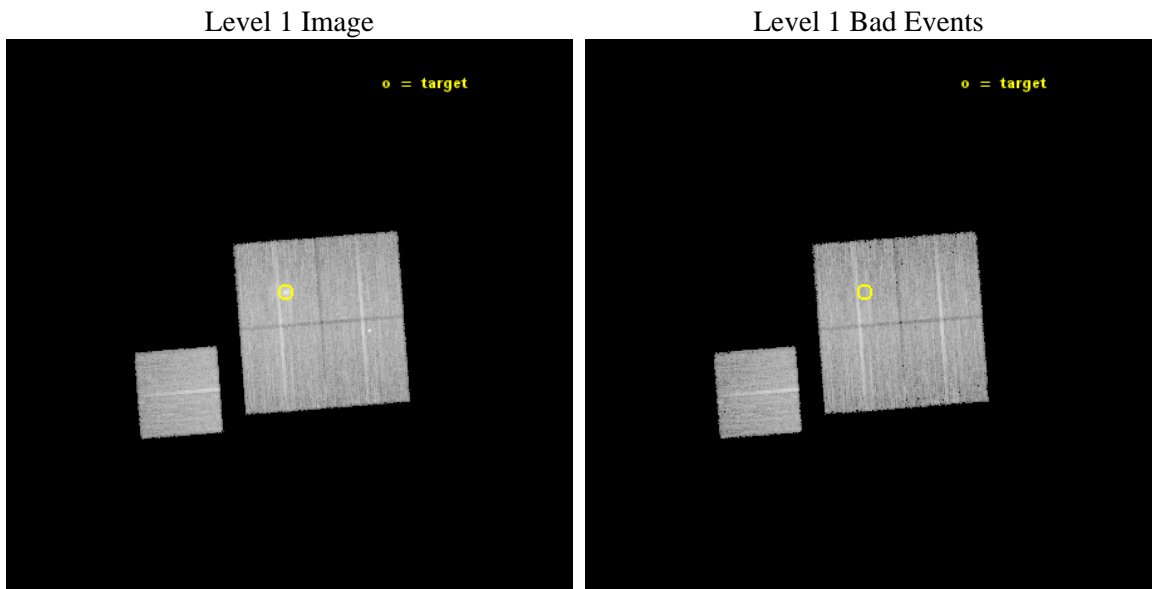




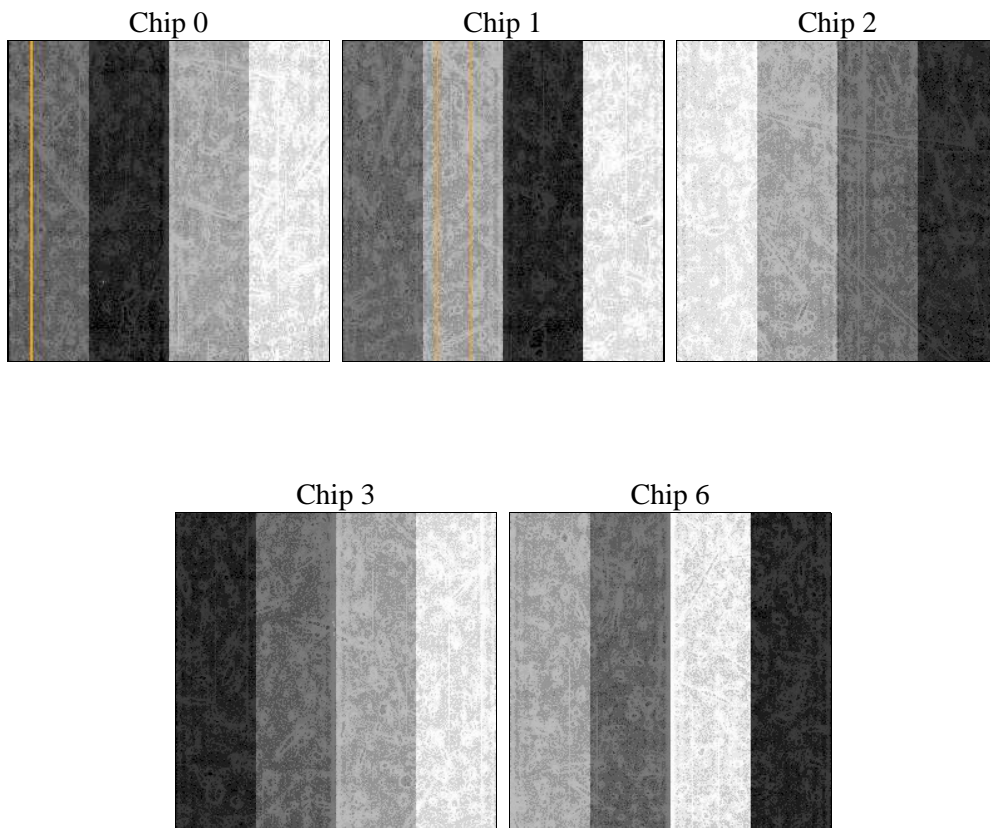
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	20081.729301512	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	20084.747132003	Sum of GTIs [s]
date	2014-12-11T03:28:31	Date and time of file creation	ontime1	20081.64728117	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20084.82921201	Sum of GTIs [s]
			ontime3	20081.729301512	Sum of GTIs [s]
			ontime6	20084.706092	Sum of GTIs [s]
			l1events	459790	Number of level 1 events

### 2.1.4 Events

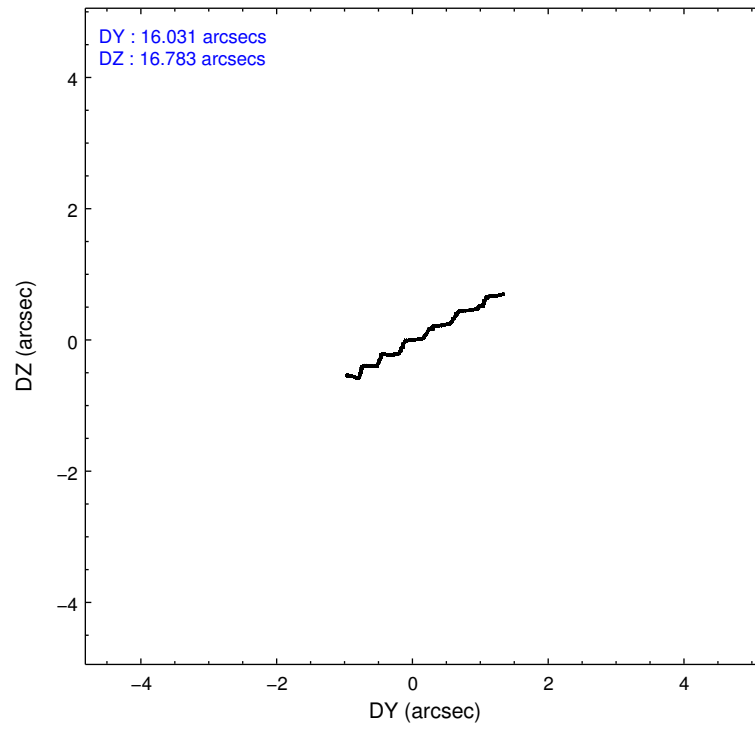
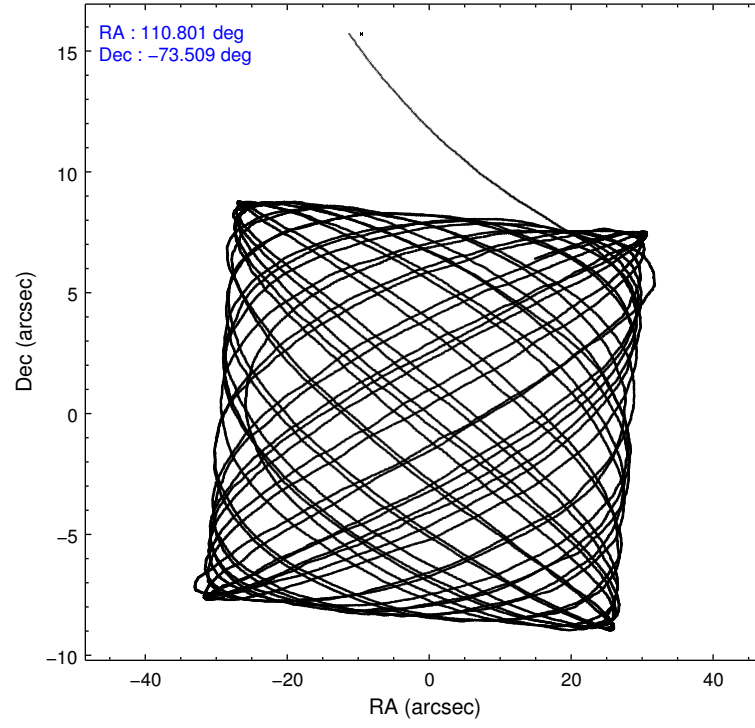
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	85982	87396	93654	101551	91207
rejected events	74360	74279	82643	82218	79565
rejected %	86%	84%	88%	80%	87%

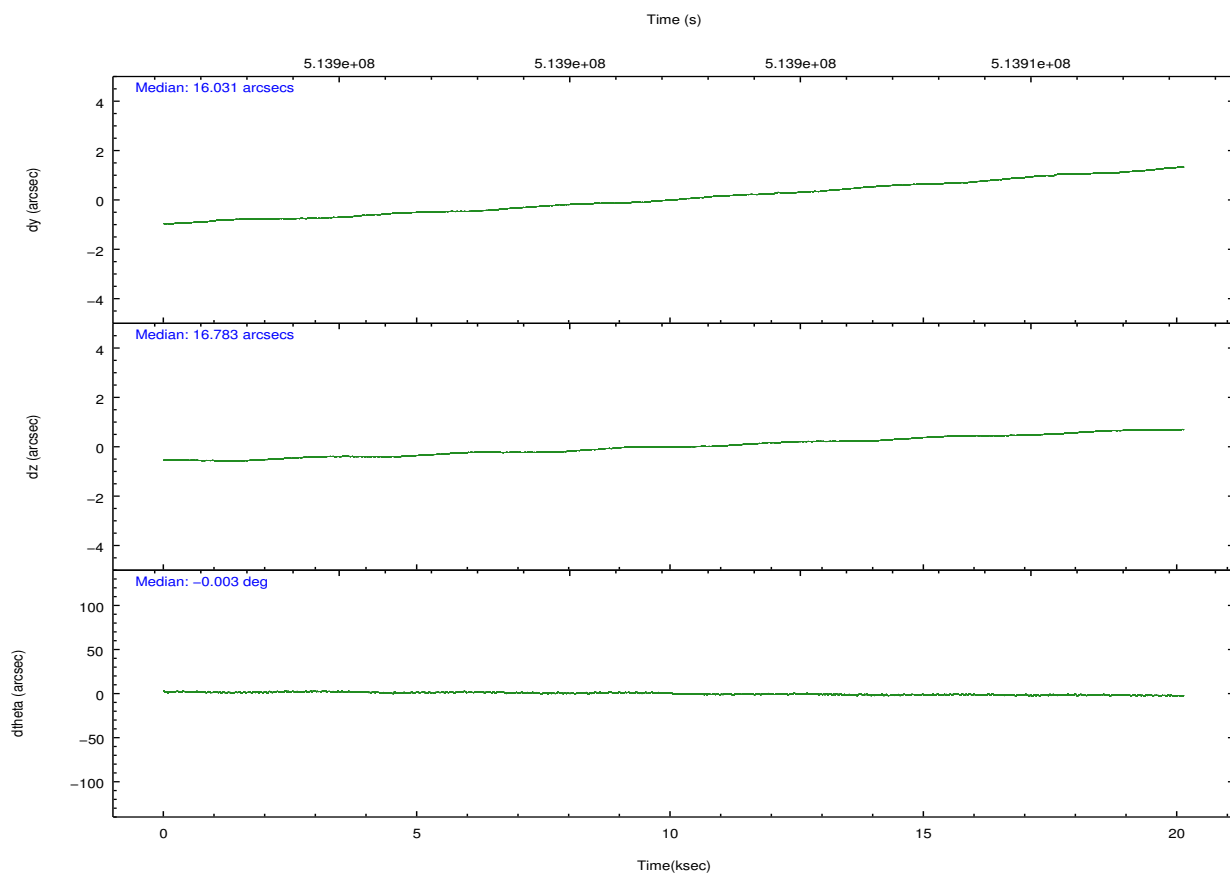
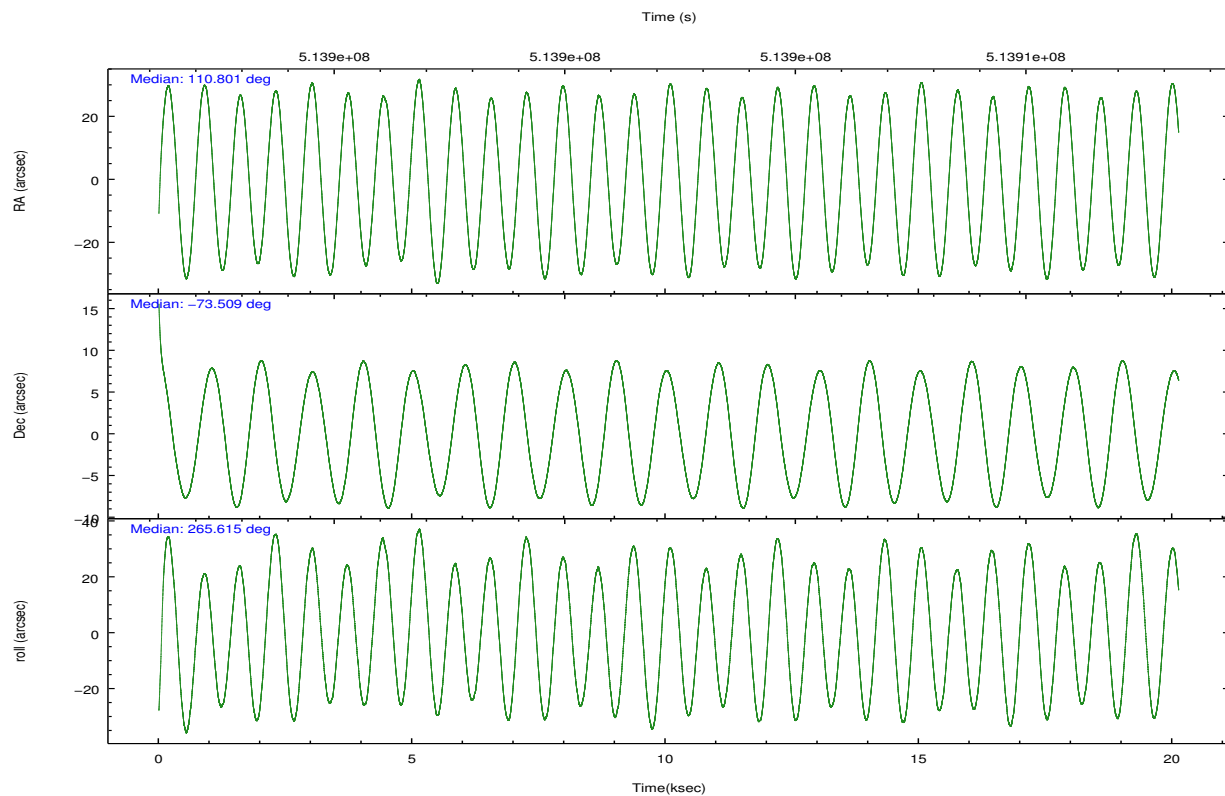
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4221	4791	3966	10702	3993
	4%	5%	4%	10%	4%
grade 1 events	44	43	54	81	45
	0%	0%	0%	0%	0%
grade 2 events	2751	3192	2705	3184	2506
	3%	3%	2%	3%	2%
grade 3 events	1229	1206	1042	1438	1218
	1%	1%	1%	1%	1%
grade 4 events	1133	1205	1127	1439	1222
	1%	1%	1%	1%	1%
grade 5 events	4432	4778	4322	5153	4935
	5%	5%	4%	5%	5%
grade 6 events	2293	2731	2173	2581	2704
	2%	3%	2%	2%	2%
grade 7 events	69879	69450	78265	76973	74584
	81%	79%	83%	75%	81%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	110.759469	110.8017203273499	CCD I2 on	Y	Y
[deg] Pointing Dec	-73.484320	-73.50904833986421	CCD I3 on	Y	Y
[deg] Pointing Roll	265.368407	265.6175875606692	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-225.840463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	513892330.184000	513891122.71282	CCD S5 on	N	N
Observation start date	2014-04-14T19:51:03	2014-04-14T19:32:02	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	513912330.184000	513913680.91406	On-chip summing requested	N	N
Observation end date	2014-04-15T01:24:23	2014-04-15T01:48:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



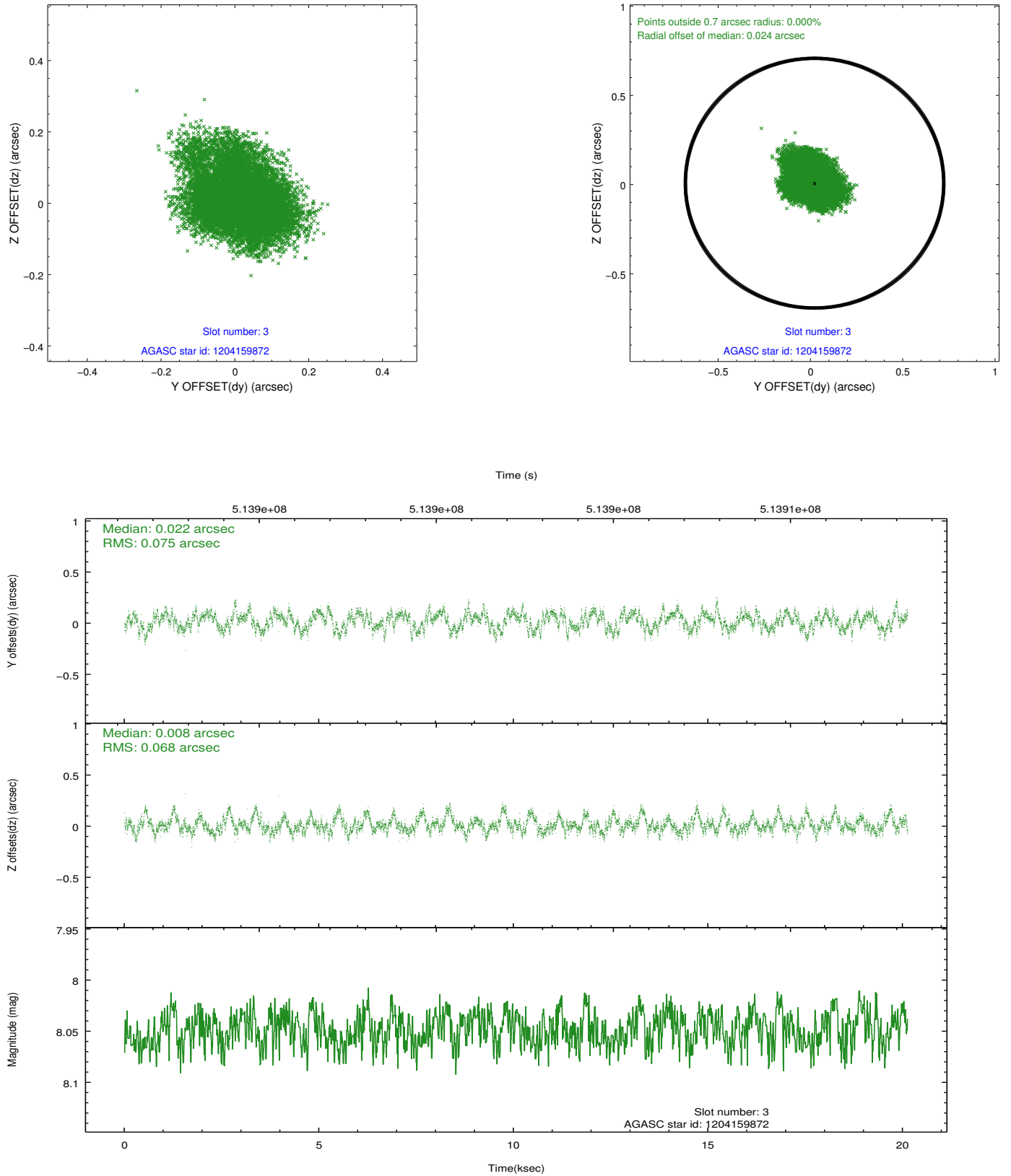


### Slot Statistics

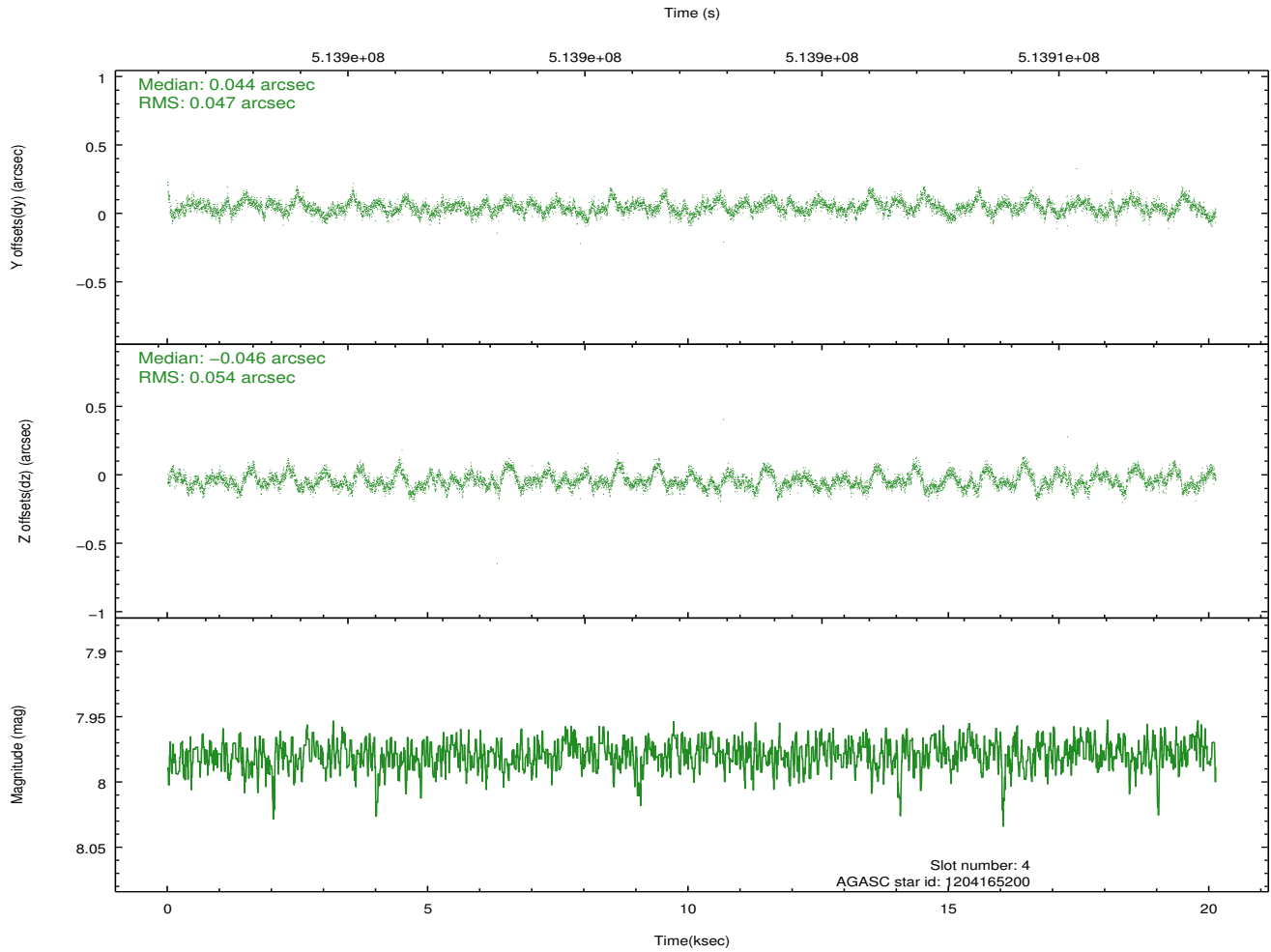
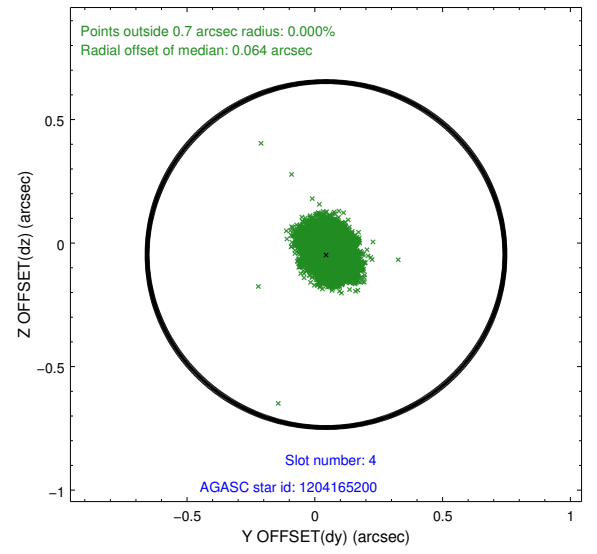
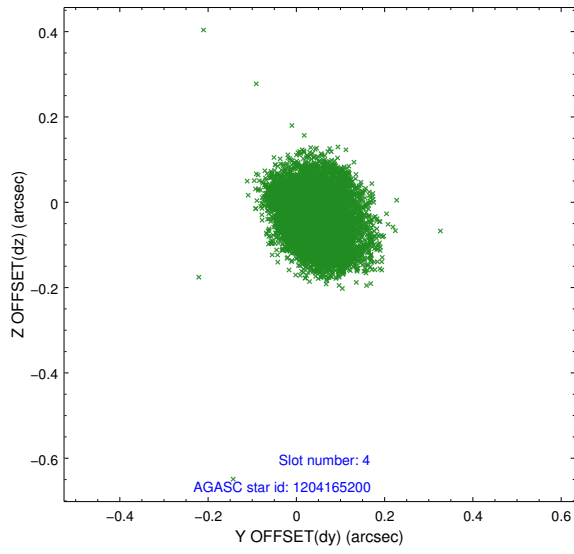
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.14	4909	0.168	-0.133	0.011	0.016	0.000000	0.000000	923.37	-999.64
1	FID		ACIS-I-5	7.13	4909	-0.314	0.133	0.011	0.017	0.000000	0.000000	-1825.16	897.93
2	FID		ACIS-I-6	7.14	4908	0.053	0.068	0.014	0.025	0.000000	0.000000	388.54	1542.63
3	GUIDE	used	1204159872	8.05	9819	0.022	0.008	0.107	0.175	111.813006	-73.092730	-1484.54	986.89
4	GUIDE	used	1204165200	7.98	9817	0.044	-0.046	0.076	0.126	112.308943	-72.914550	-2155.65	1469.82
5	GUIDE	used	1204683616	8.95	9812	-0.140	0.193	0.100	0.176	108.343959	-74.054271	2286.12	-2210.28
6	GUIDE	used	1204688536	8.97	9814	-0.003	-0.088	0.110	0.171	110.722996	-73.928102	1595.35	92.64
7	GUIDE	used	1204159744	9.26	9805	0.082	-0.080	0.170	0.268	112.798891	-72.875414	-2322.43	1980.67

## 2.4 Star Slots

### 2.4.1 Slot 3

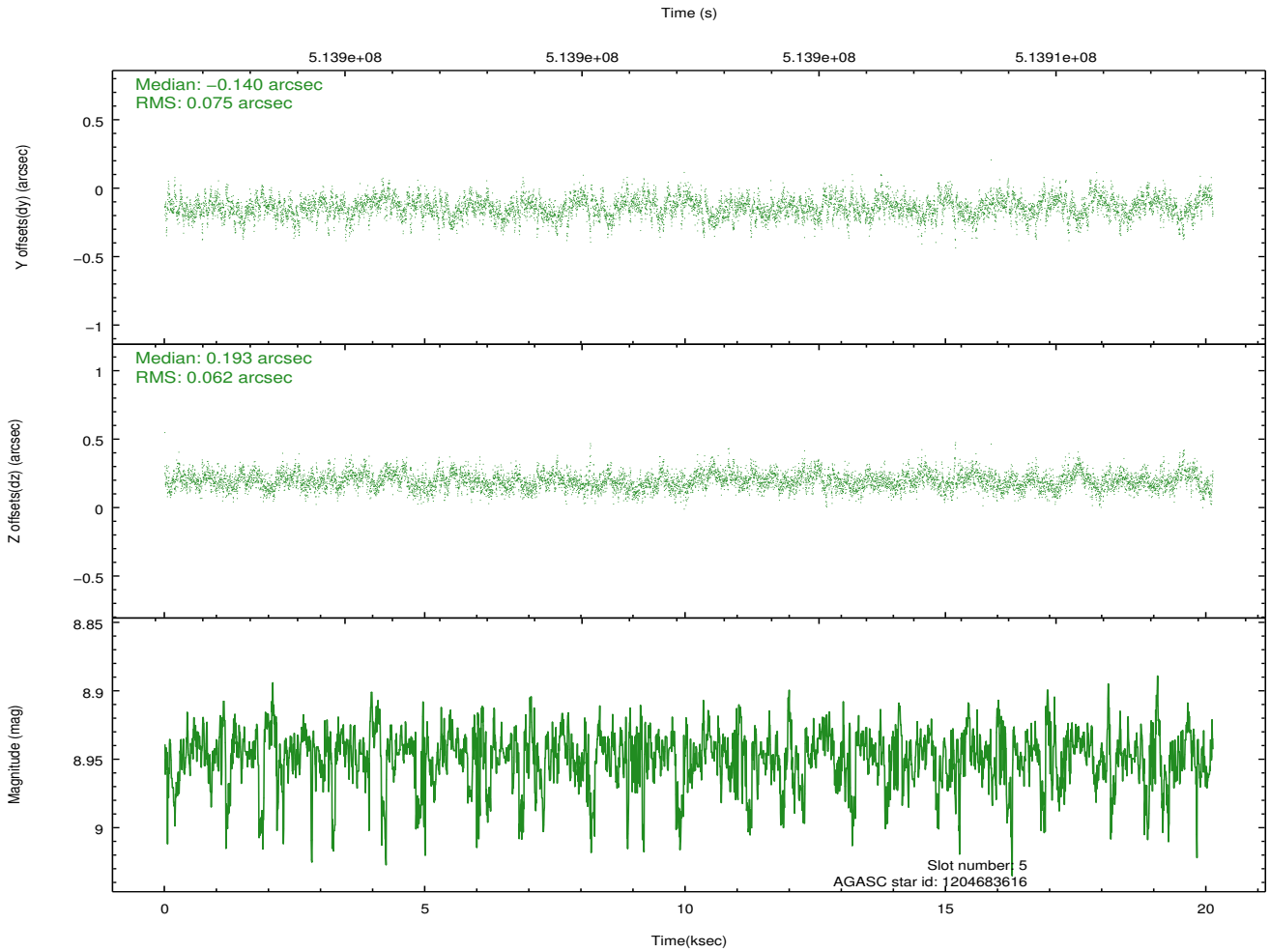
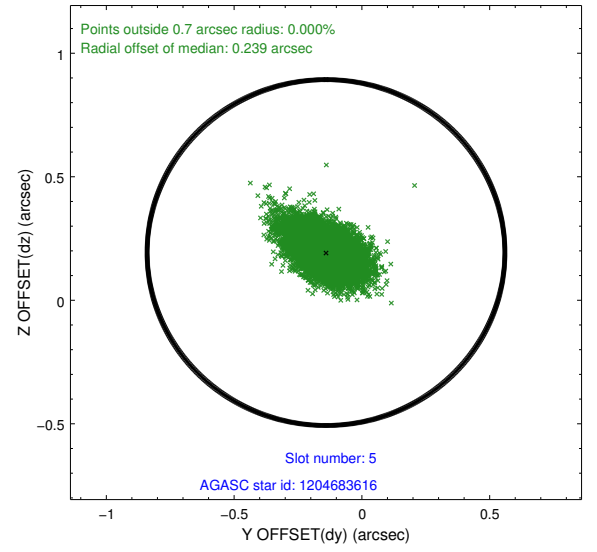
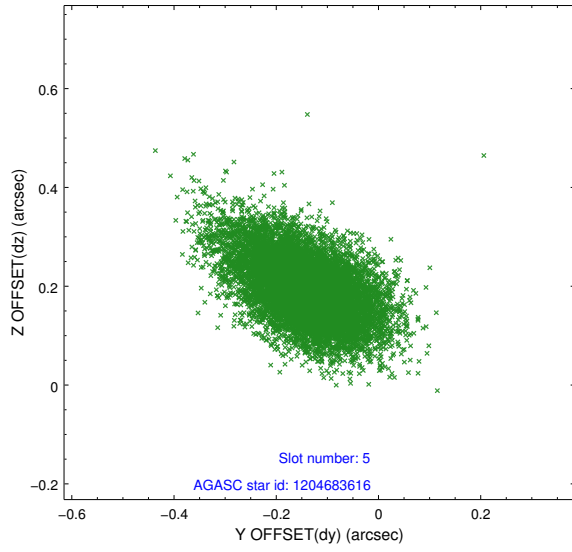


## 2.4.2 Slot 4

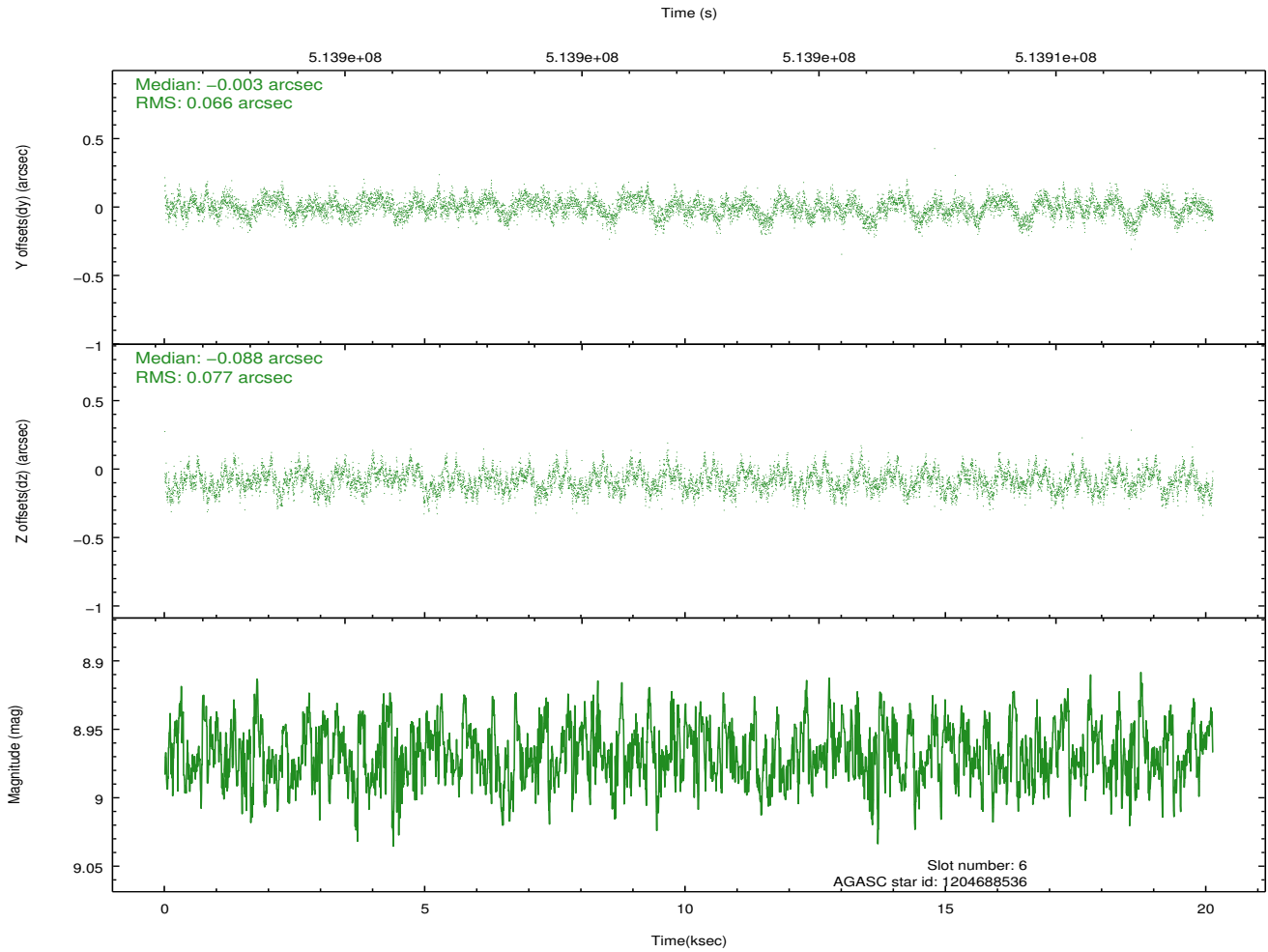
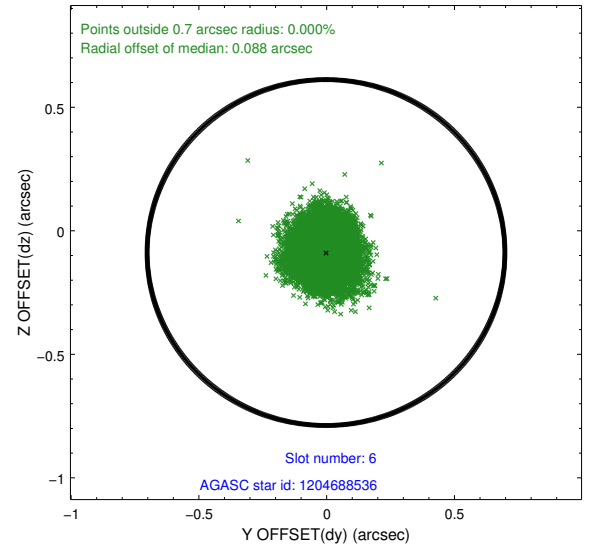
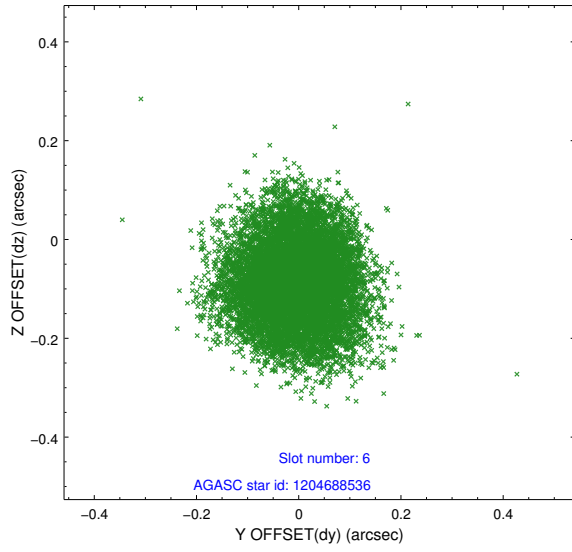




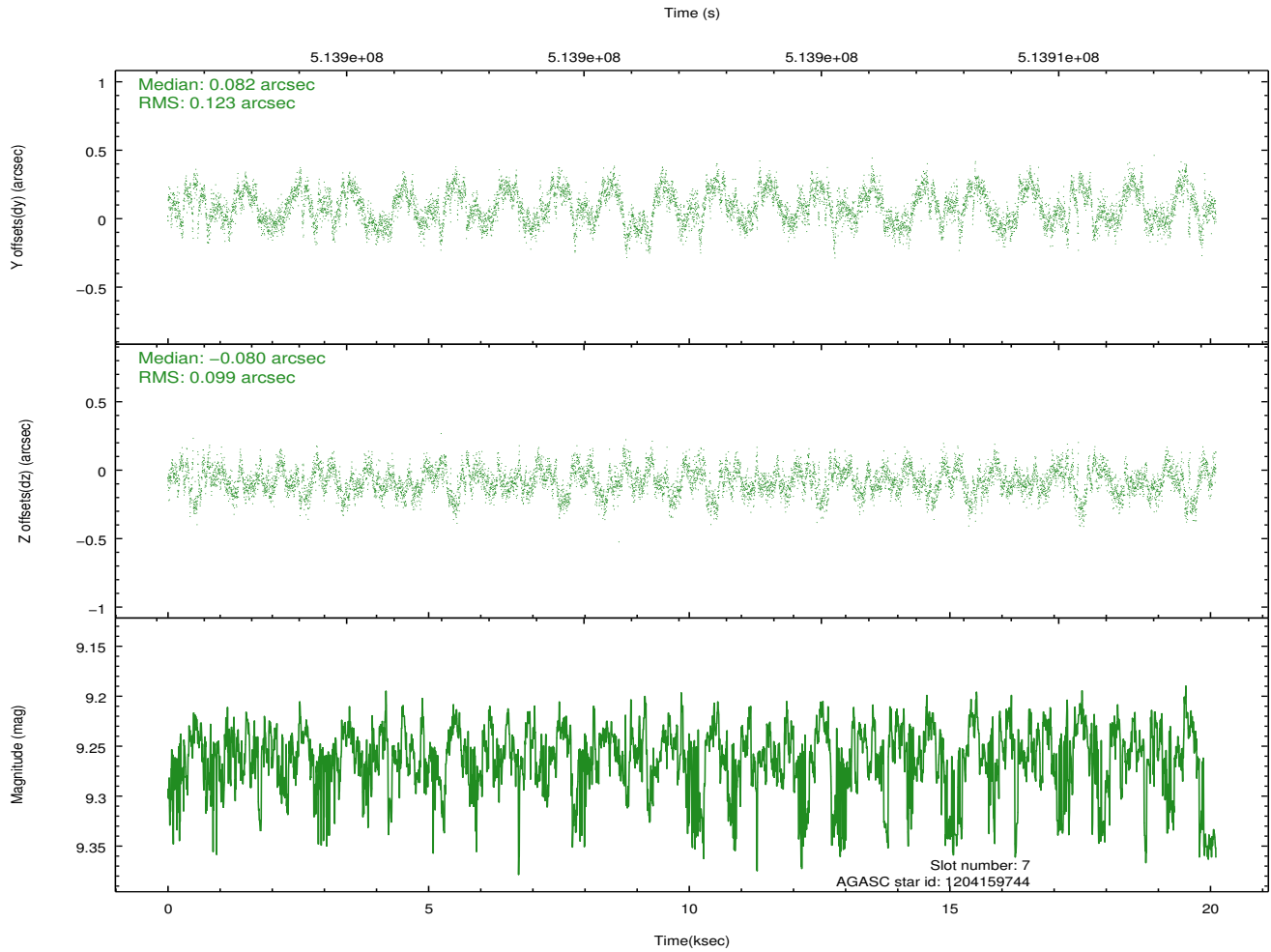
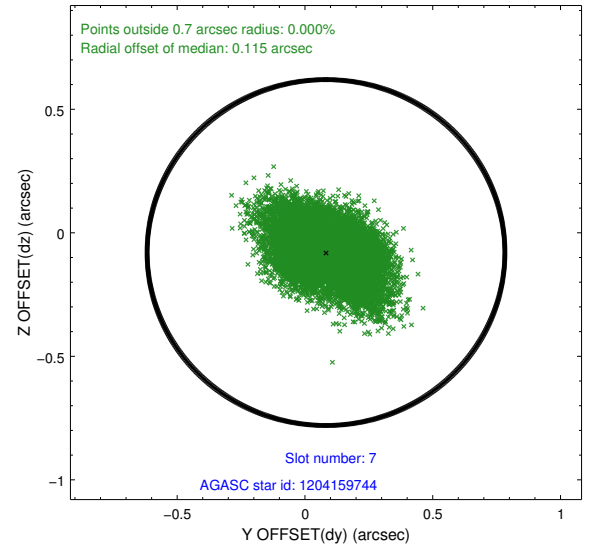
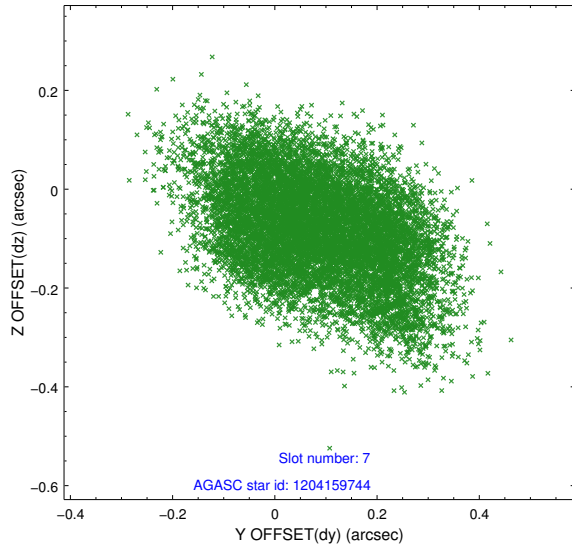
### 2.4.3 Slot 5



## 2.4.4 Slot 6

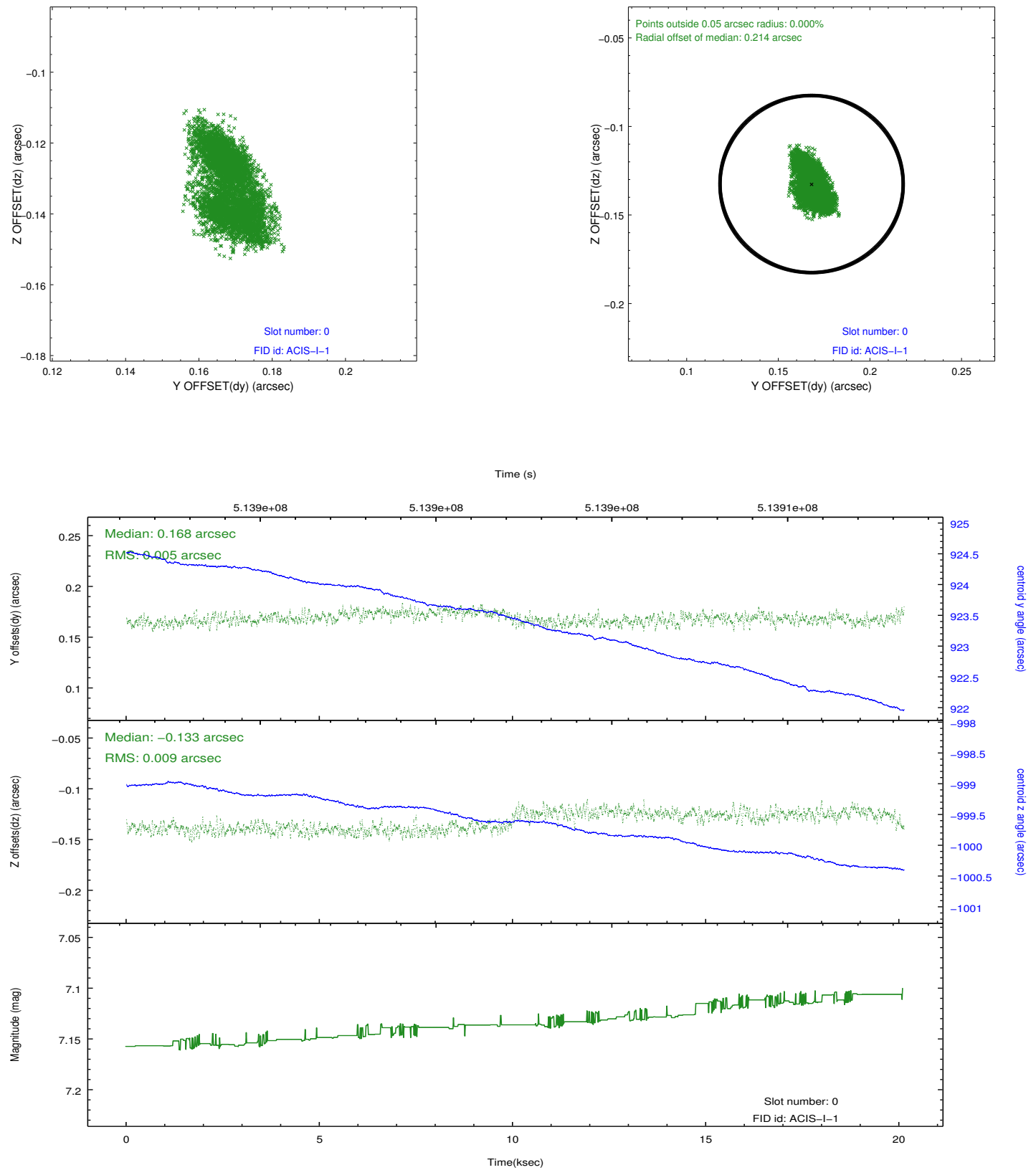


### 2.4.5 Slot 7

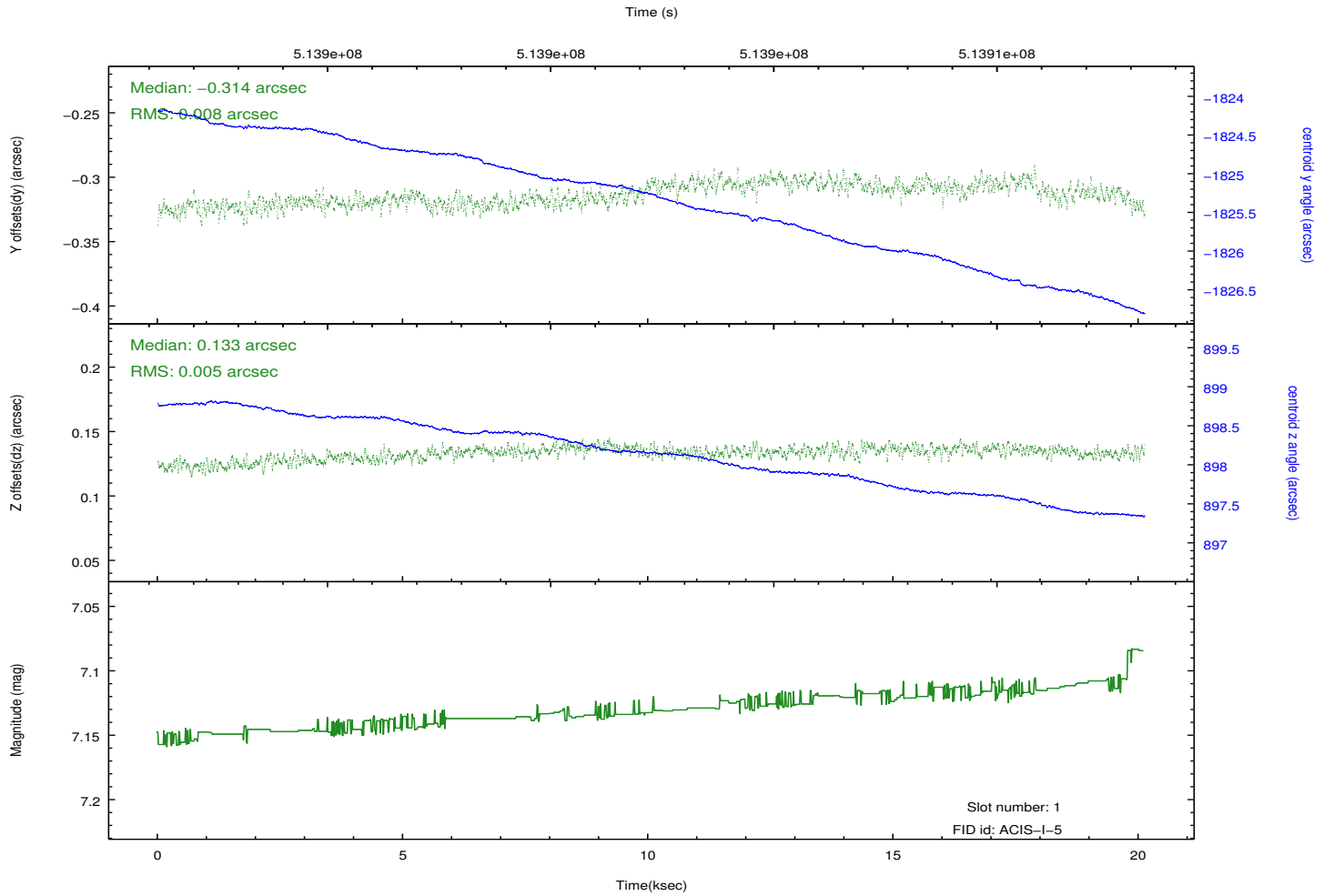
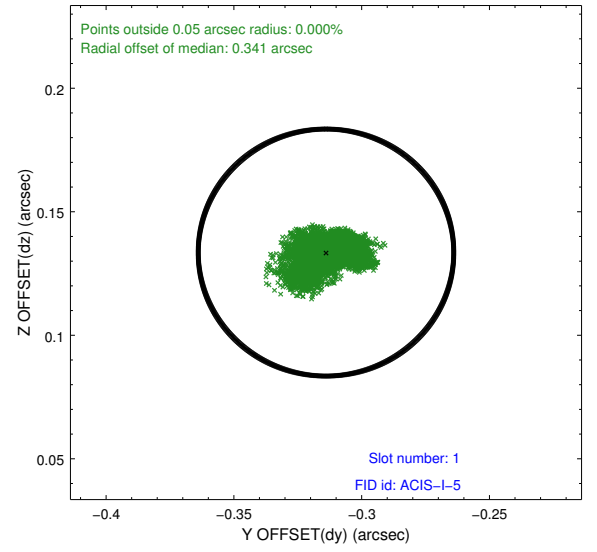
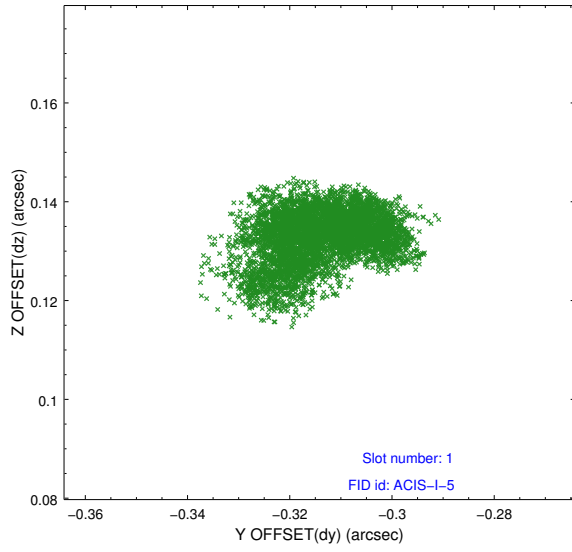


## 2.5 FID Slots

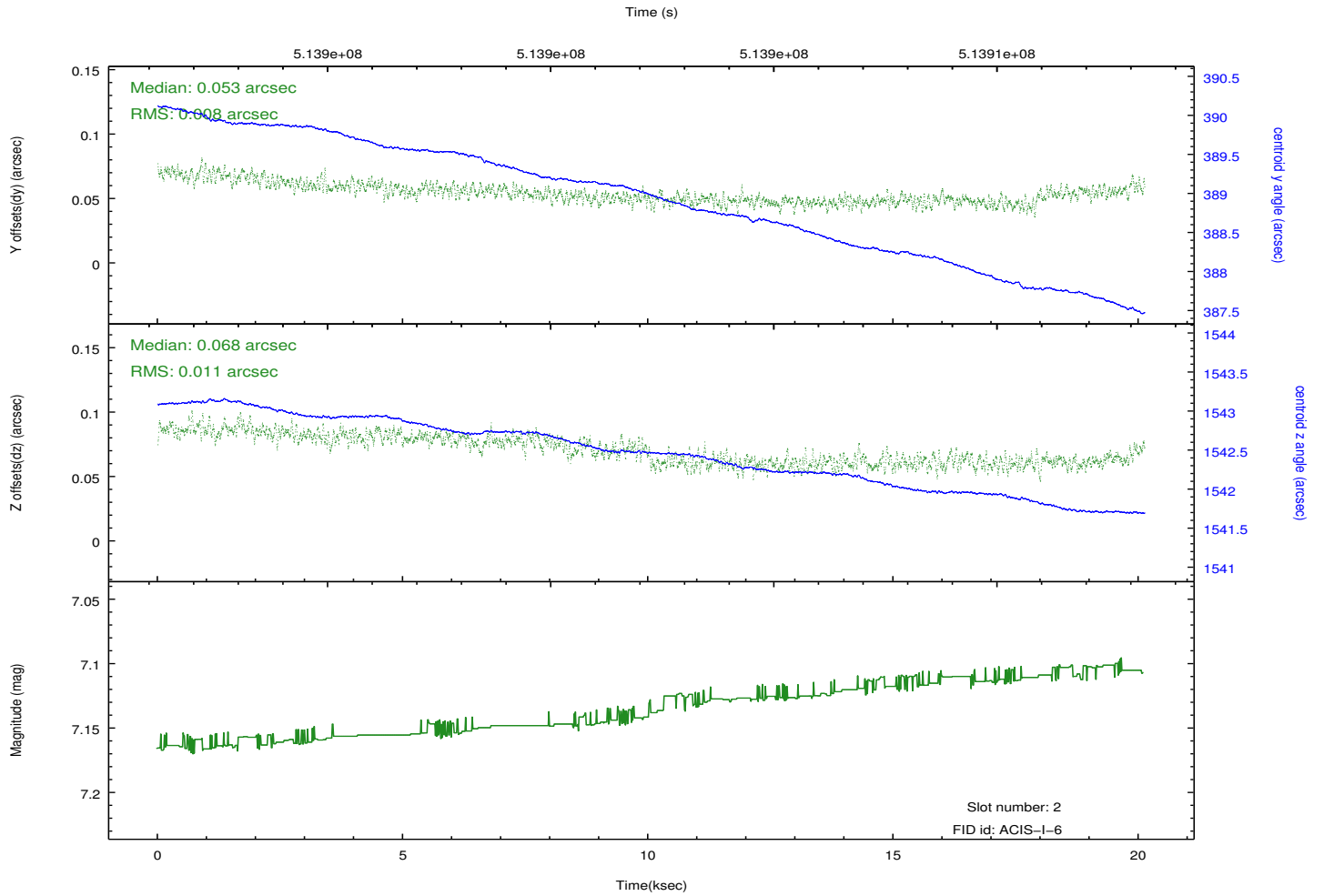
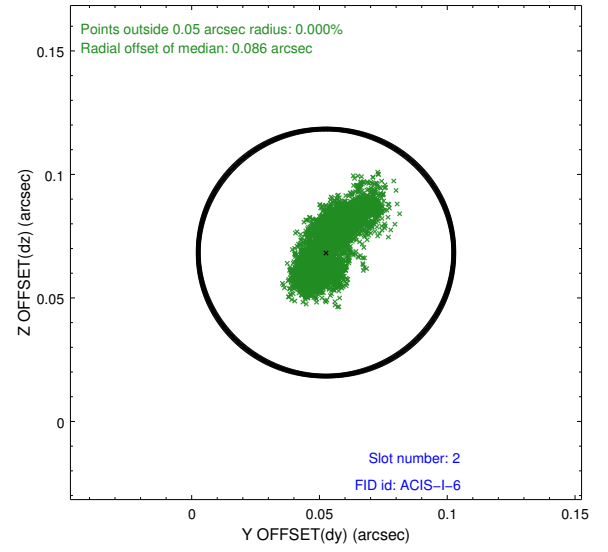
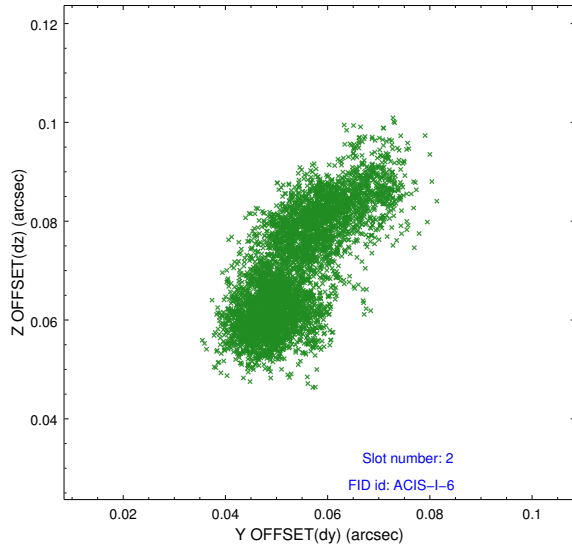
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.081729301512

## 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.