

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15368 - L2 Version 3  
Chandra X-Ray Center

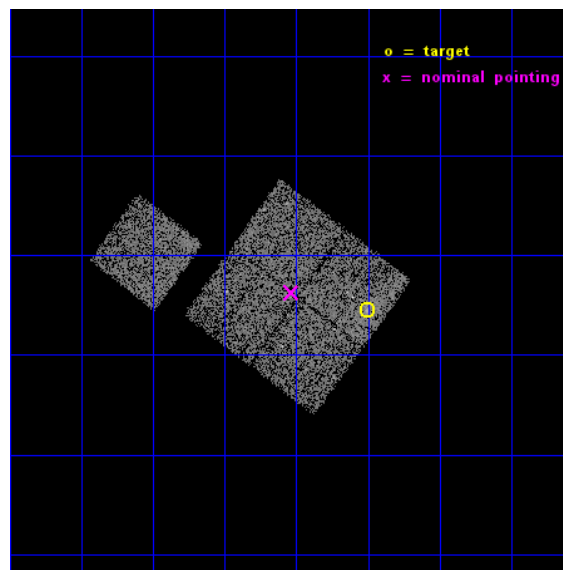
L2 Processing Date : Nov 29 2014

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# 1 Front

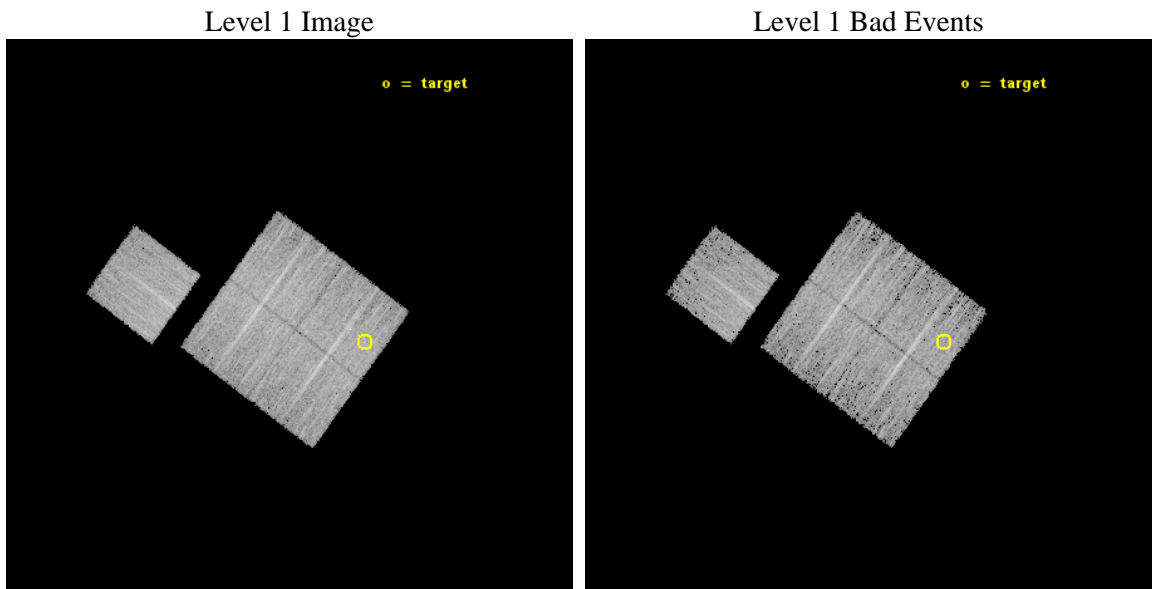
seq_num	801358	Sequence number
obs_id	15368	Observation id
title	A Search for Cool Cores in a Sample of $z = 0.4$ Galaxy Clusters	Pro
observer	Professor Gordon Garmire	Principal investigator
object	GMBCG J030.12745+00.74201	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	30.127083	Observer's specified target RA [deg]
dec_targ	0.742	Observer's specified target Dec [deg]
ra_nom	30.258618996459	Nominal RA [deg]
dec_nom	0.77133829174357	Nominal Dec [deg]
roll_nom	306.56999851567	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10083.040608466	Sum of GTIs [s]
livetime	9951.2982598896	Livetime [s]
ontime0	10082.999568462	Sum of GTIs [s]
ontime1	10083.040608466	Sum of GTIs [s]
ontime2	10083.081648469	Sum of GTIs [s]
ontime3	10083.122688472	Sum of GTIs [s]
ontime6	10082.958528459	Sum of GTIs [s]
l2events	26997	Number of level 2 events



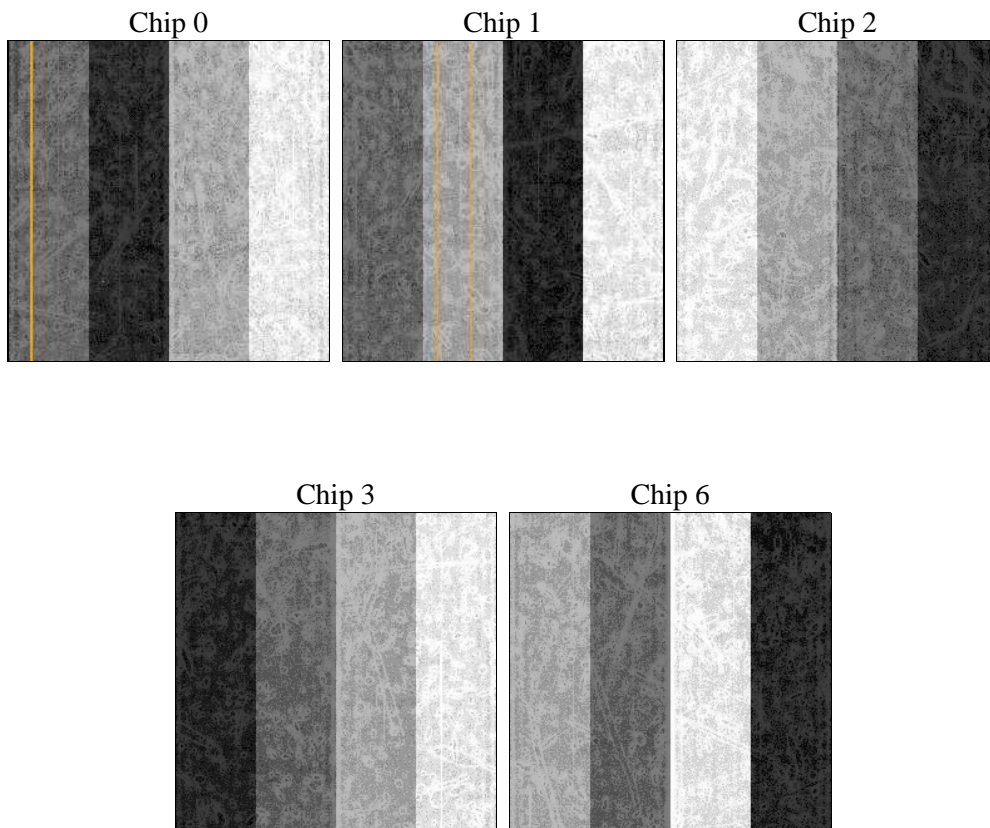
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10083.040608466	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	10082.999568462	Sum of GTIs [s]
date	2014-11-30T01:35:50	Date and time of file creation	ontime1	10083.040608466	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	10083.081648469	Sum of GTIs [s]
			ontime3	10083.122688472	Sum of GTIs [s]
			ontime6	10082.958528459	Sum of GTIs [s]
			l1events	251059	Number of level 1 events

### 2.1.4 Events

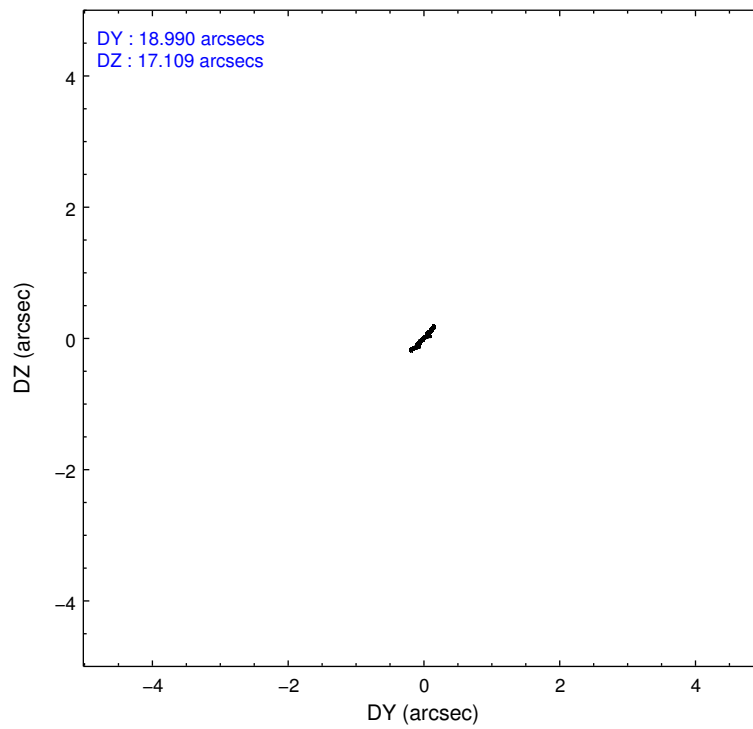
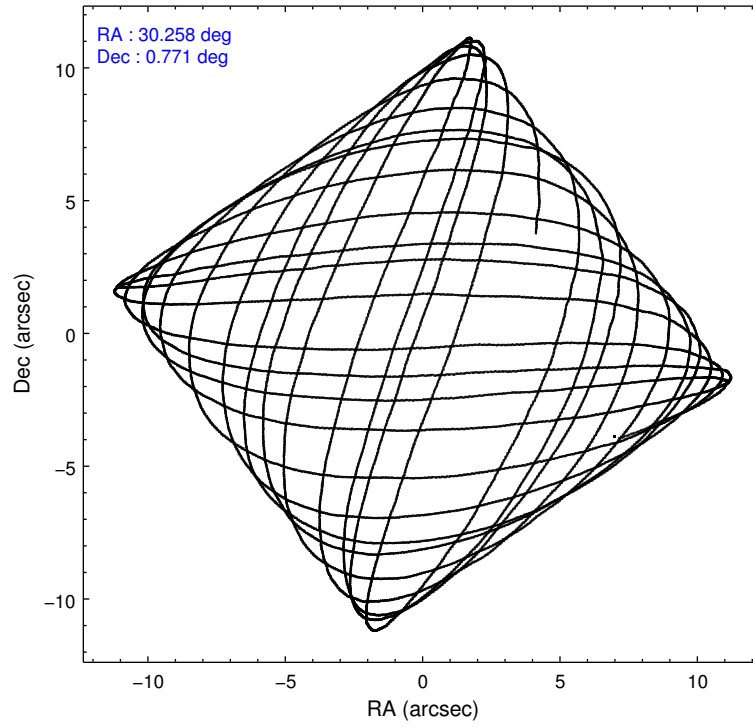
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	46617	49981	50666	52750	51045
rejected events	40371	42650	44530	46999	44909
rejected %	86%	85%	87%	89%	87%

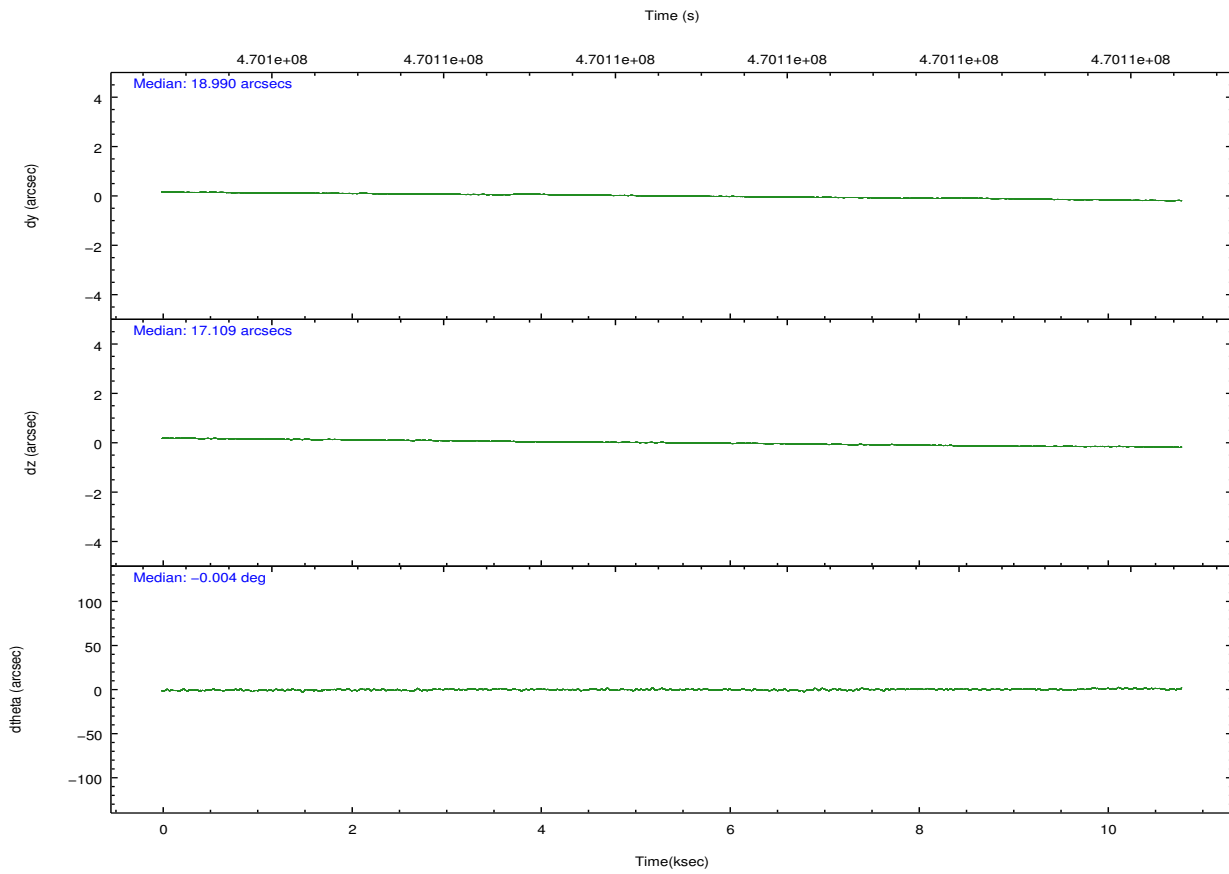
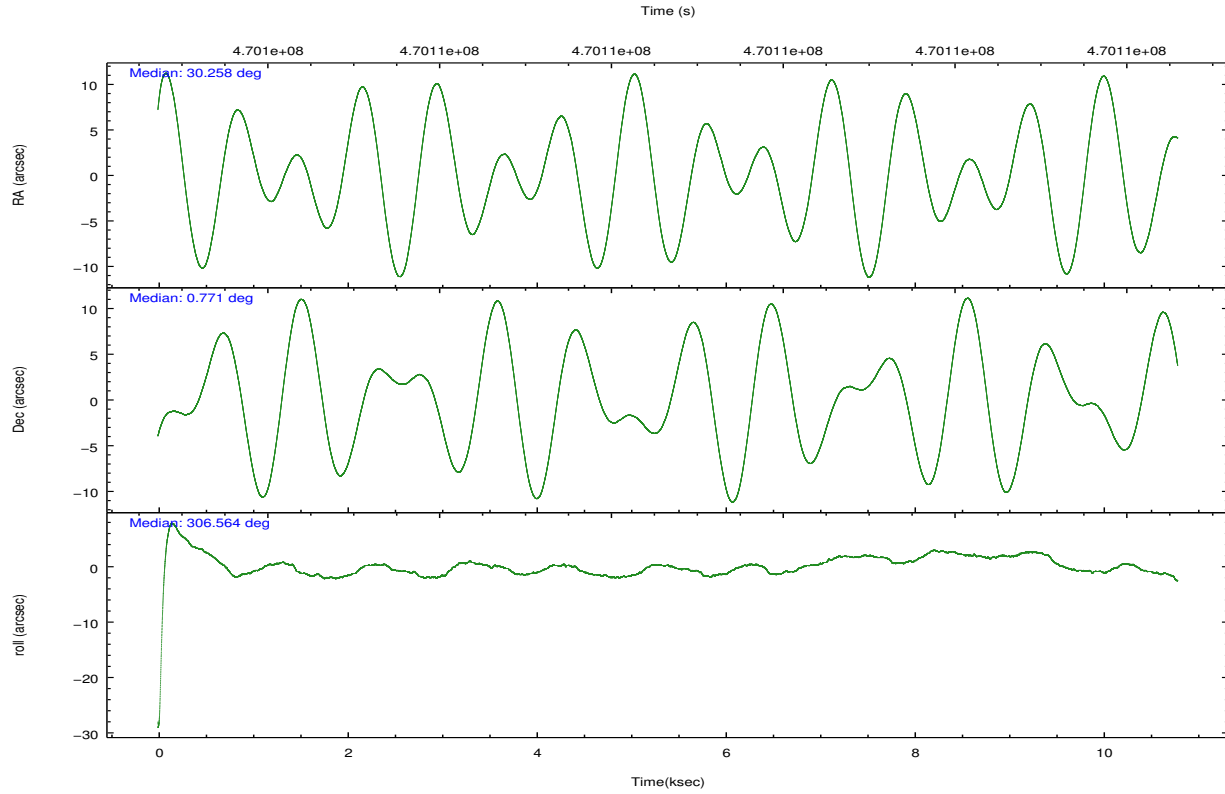
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2274	2761	2283	1933	2157
	4%	5%	4%	3%	4%
grade 1 events	19	32	31	31	31
	0%	0%	0%	0%	0%
grade 2 events	1496	1648	1401	1295	1374
	3%	3%	2%	2%	2%
grade 3 events	685	732	620	655	611
	1%	1%	1%	1%	1%
grade 4 events	592	671	636	630	601
	1%	1%	1%	1%	1%
grade 5 events	2443	2616	2315	2782	2573
	5%	5%	4%	5%	5%
grade 6 events	1202	1522	1196	1243	1397
	2%	3%	2%	2%	2%
grade 7 events	37906	39999	42184	44181	42301
	81%	80%	83%	83%	82%

## 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	30.233317	30.25861899645882	CCD I2 on	Y	Y
[deg] Pointing Dec	0.782124	0.7713382917435705	CCD I3 on	Y	Y
[deg] Pointing Roll	306.361692	306.5699985156671	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	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	470104041.184000	470102797.96455	CCD S5 on	N	N
Observation start date	2012-11-24T00:26:14	2012-11-24T00:06:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470114041.184000	470114940.1152	On-chip summing requested	N	N
Observation end date	2012-11-24T03:12:54	2012-11-24T03:29:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





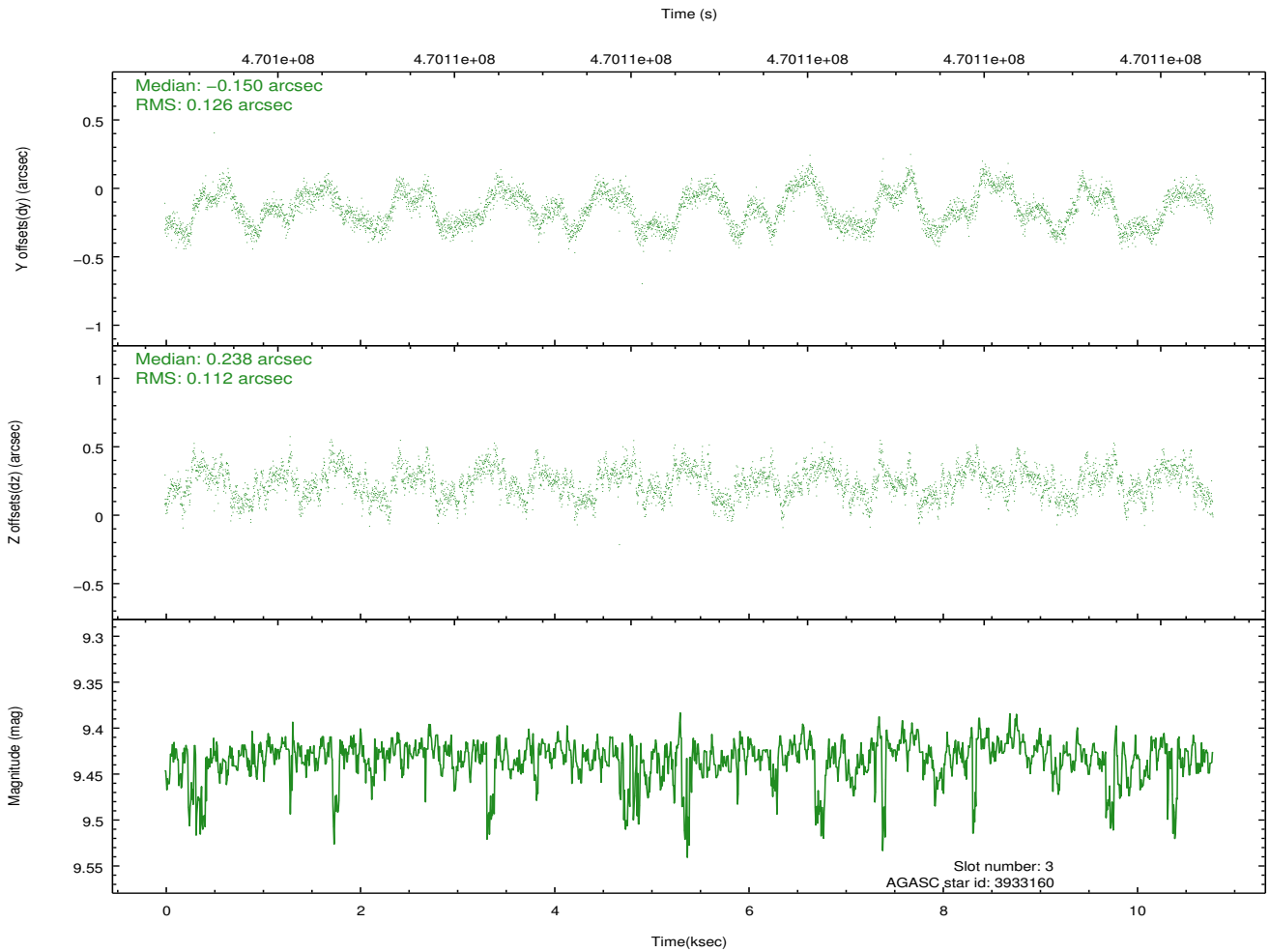
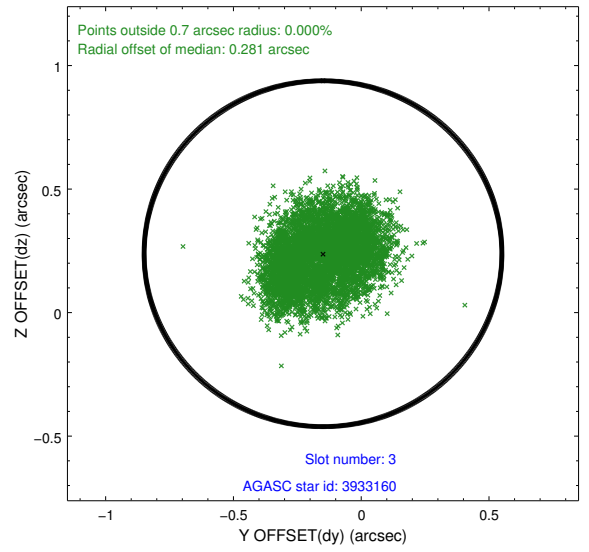
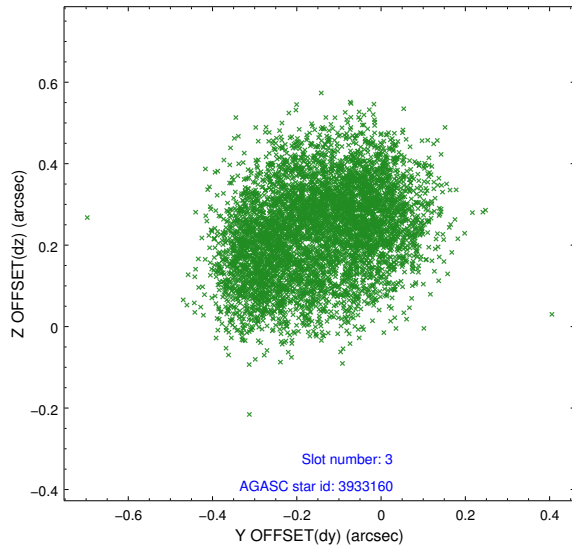
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.02	2632	-0.133	-0.141	0.009	0.016	0.000000	0.000000	-773.91	-847.29
1	FID		ACIS-I-4	7.04	2632	0.304	0.113	0.007	0.013	0.000000	0.000000	2140.30	1058.99
2	FID		ACIS-I-5	7.10	2631	-0.272	0.097	0.009	0.014	0.000000	0.000000	-1827.32	1057.24
3	GUIDE	used	3933160	9.43	5249	-0.150	0.238	0.186	0.270	29.607018	0.758442	-1267.60	-1865.75
4	GUIDE	used	3933408	8.52	5262	0.219	0.107	0.095	0.152	29.793077	0.506917	-141.16	-1863.57
5	GUIDE	used	3936888	9.63	5253	0.039	-0.025	0.116	0.192	29.975632	1.145154	-1601.84	27.69
6	GUIDE	used	4858264	8.58	5265	-0.002	-0.190	0.128	0.184	30.366209	0.475653	1173.28	-269.27
7	GUIDE	used	4854512	8.67	5262	-0.114	-0.129	0.075	0.123	30.414072	1.343154	-1239.92	1721.83

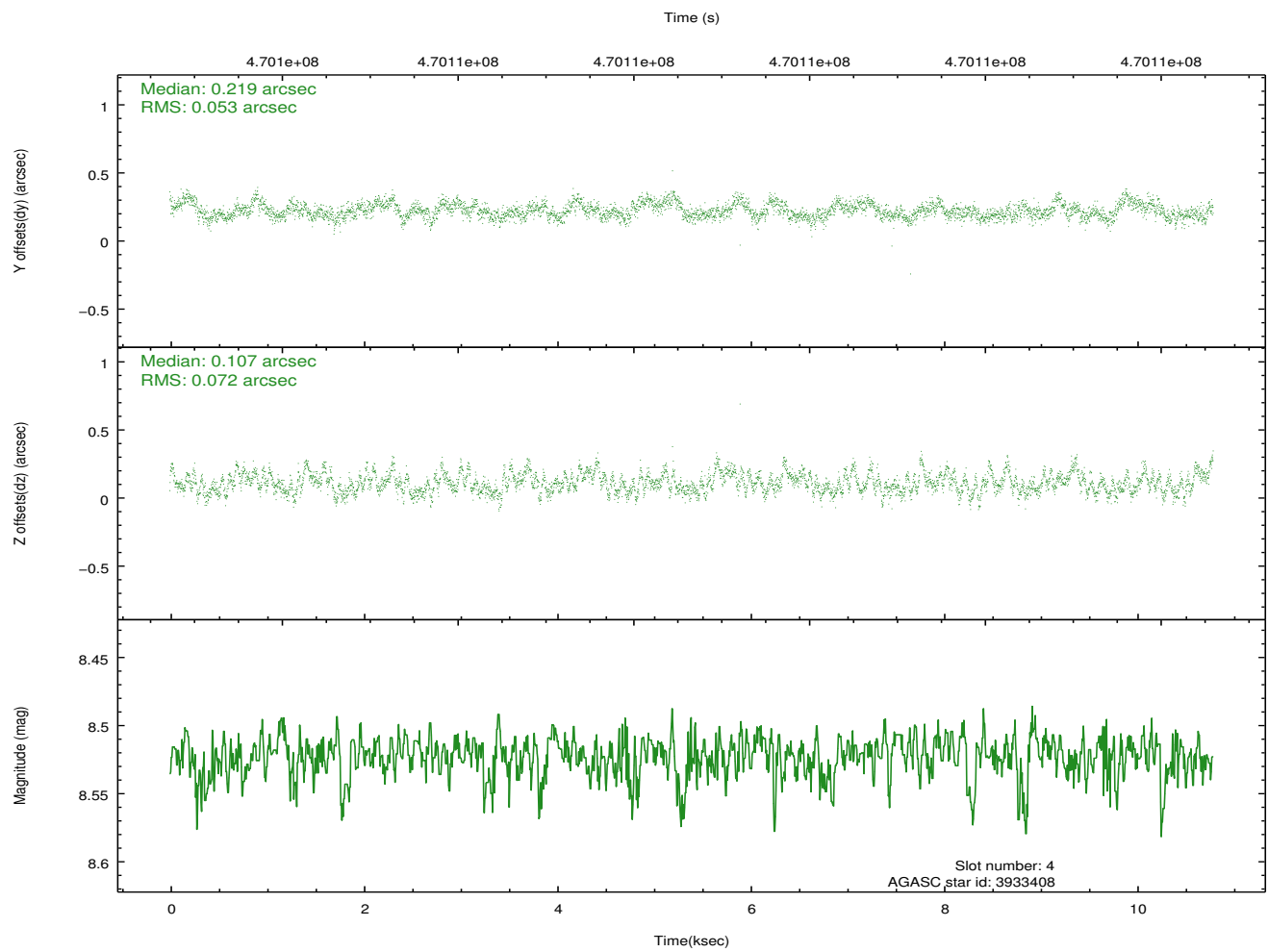
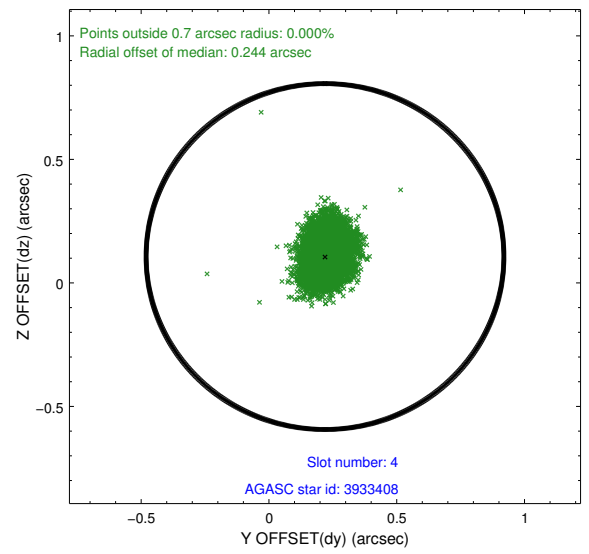
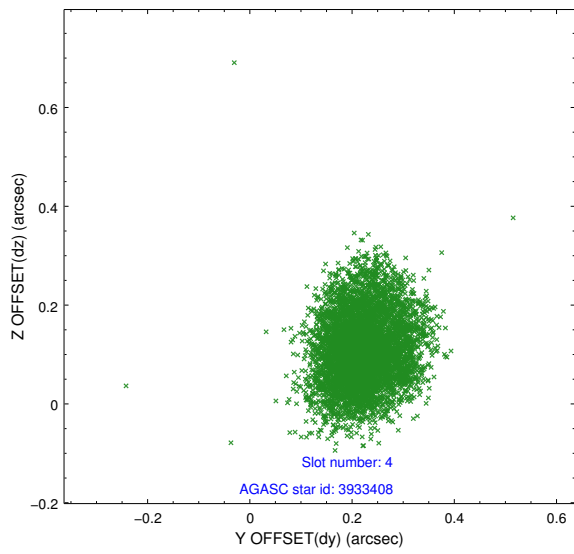
∞

## 2.4 Star Slots

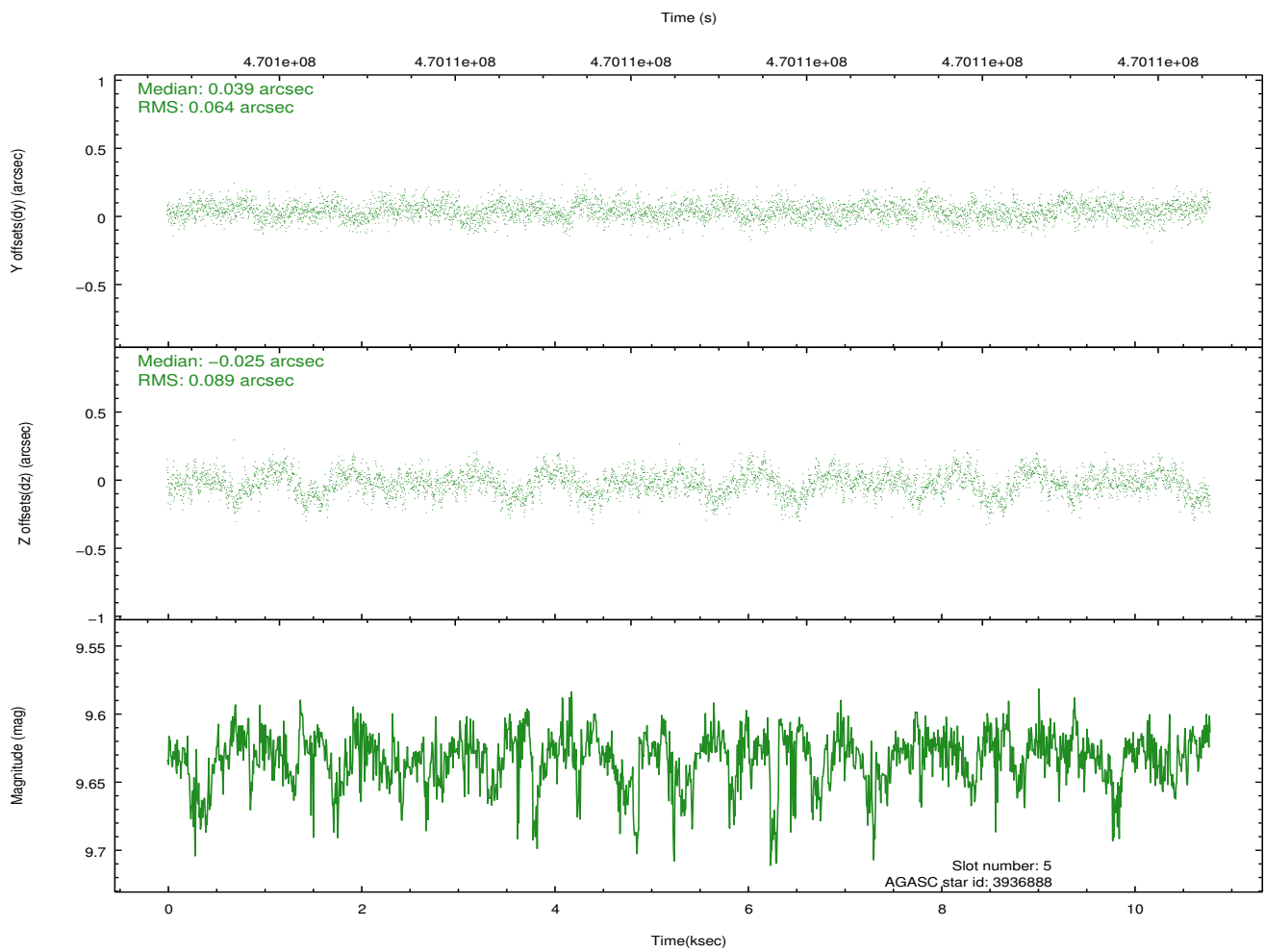
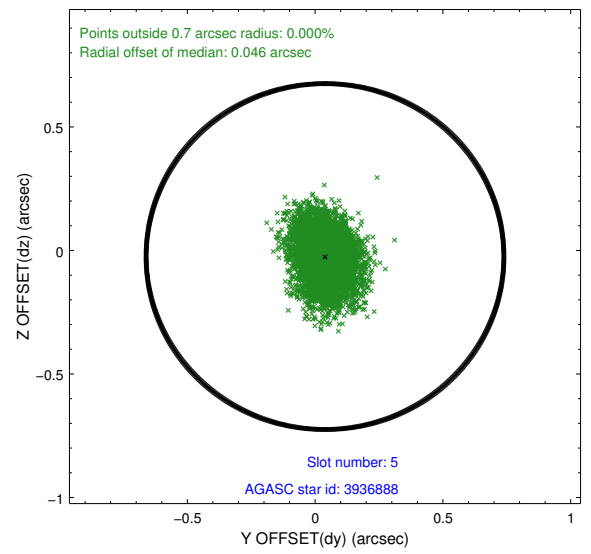
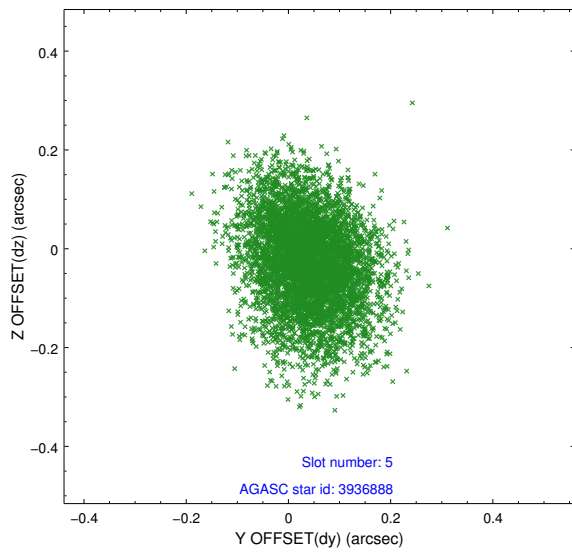
### 2.4.1 Slot 3



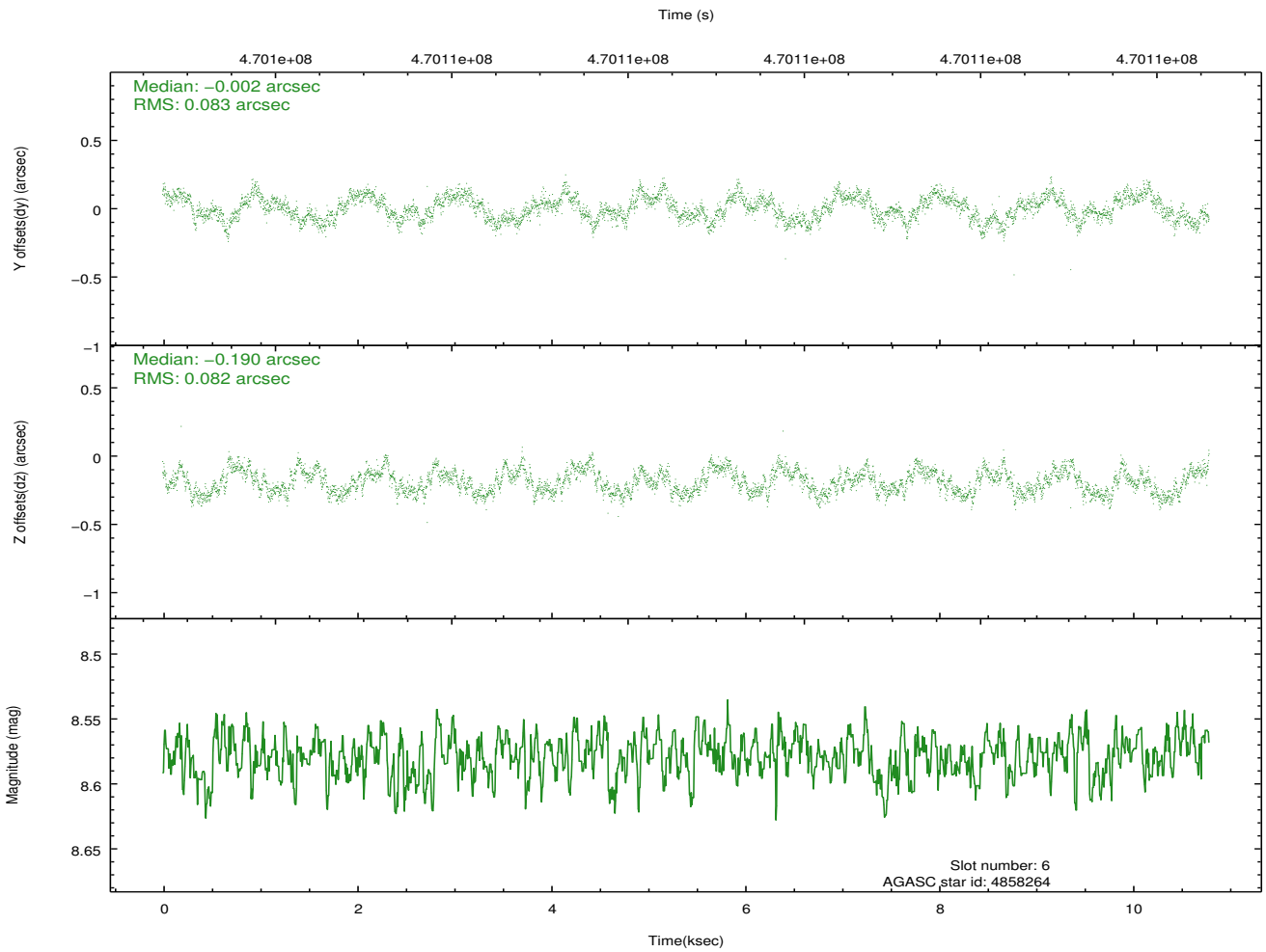
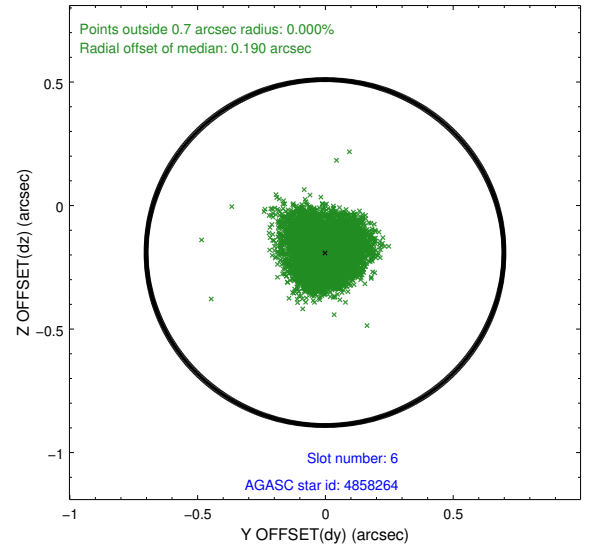
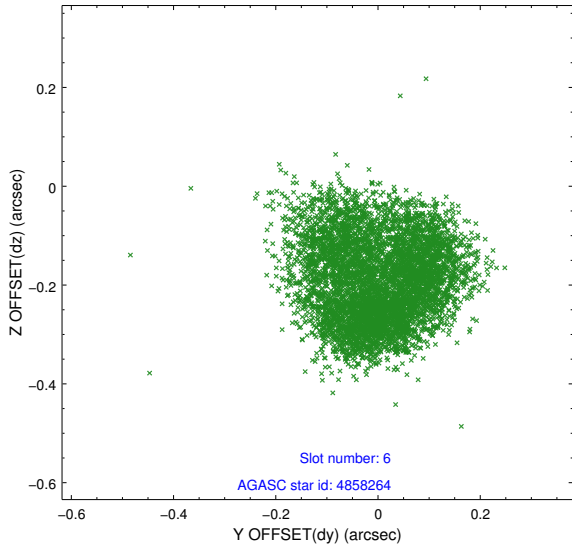
## 2.4.2 Slot 4



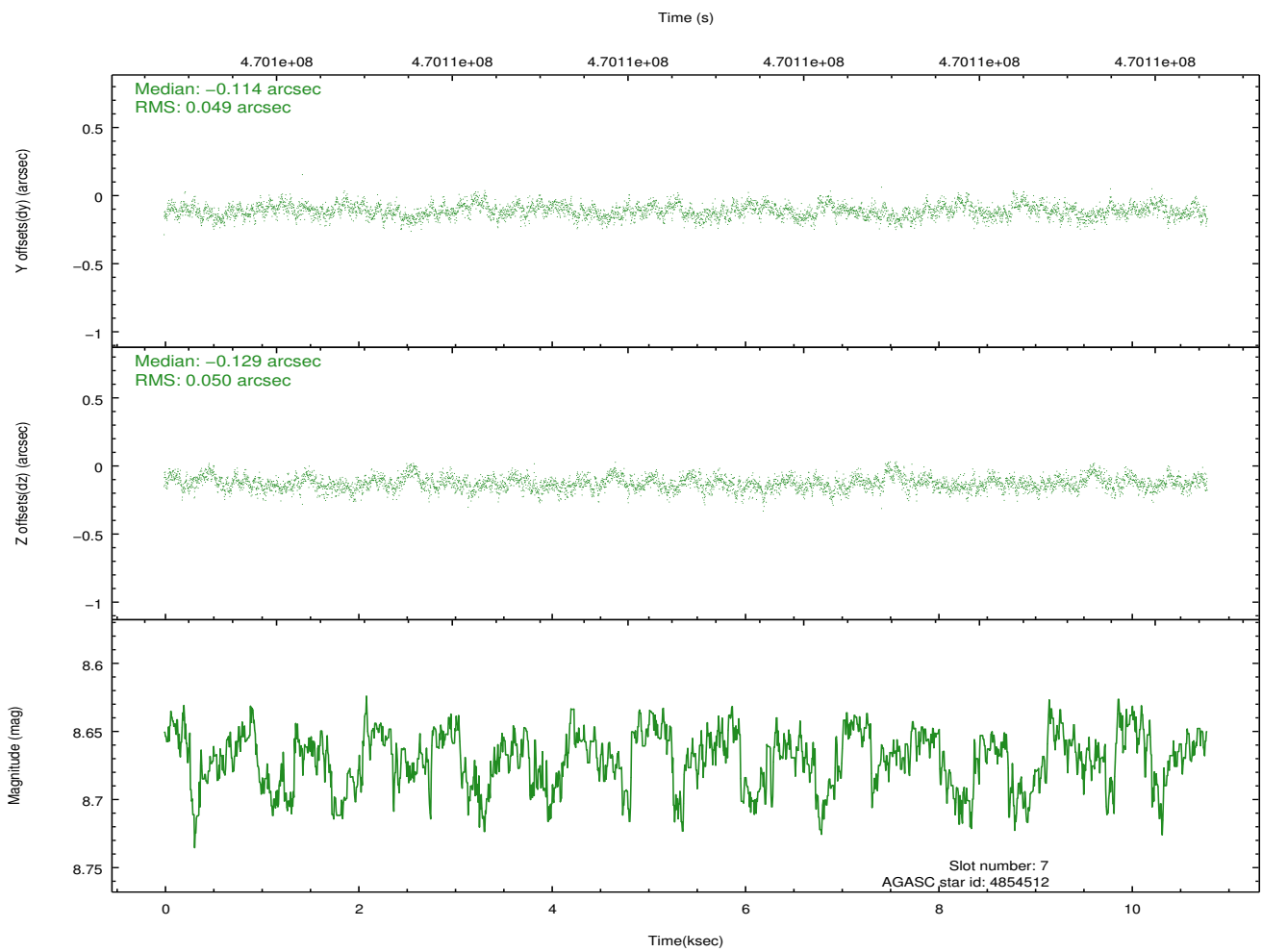
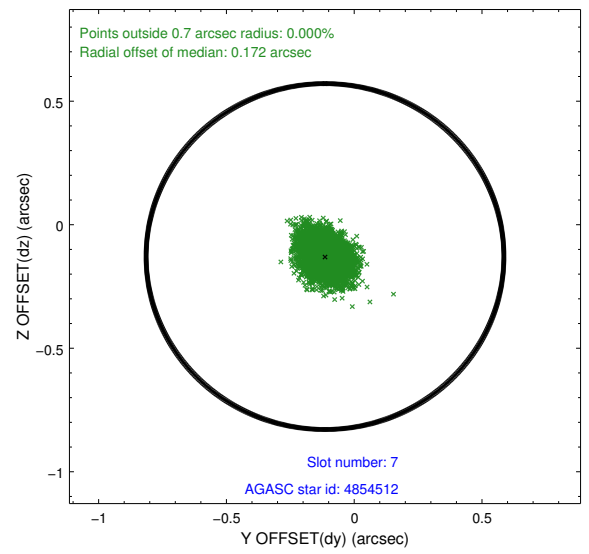
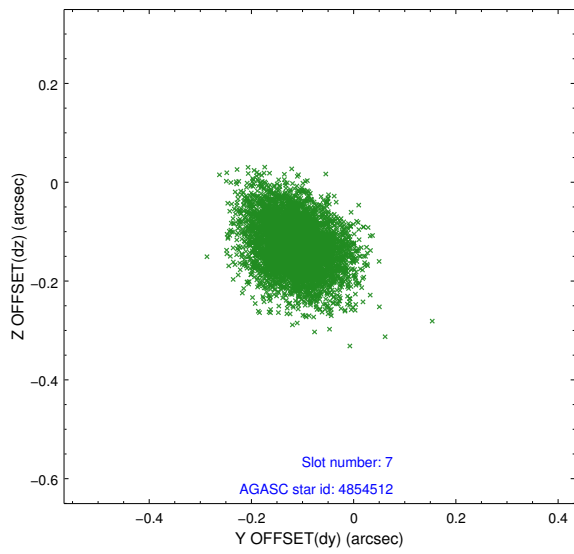
### 2.4.3 Slot 5



### 2.4.4 Slot 6

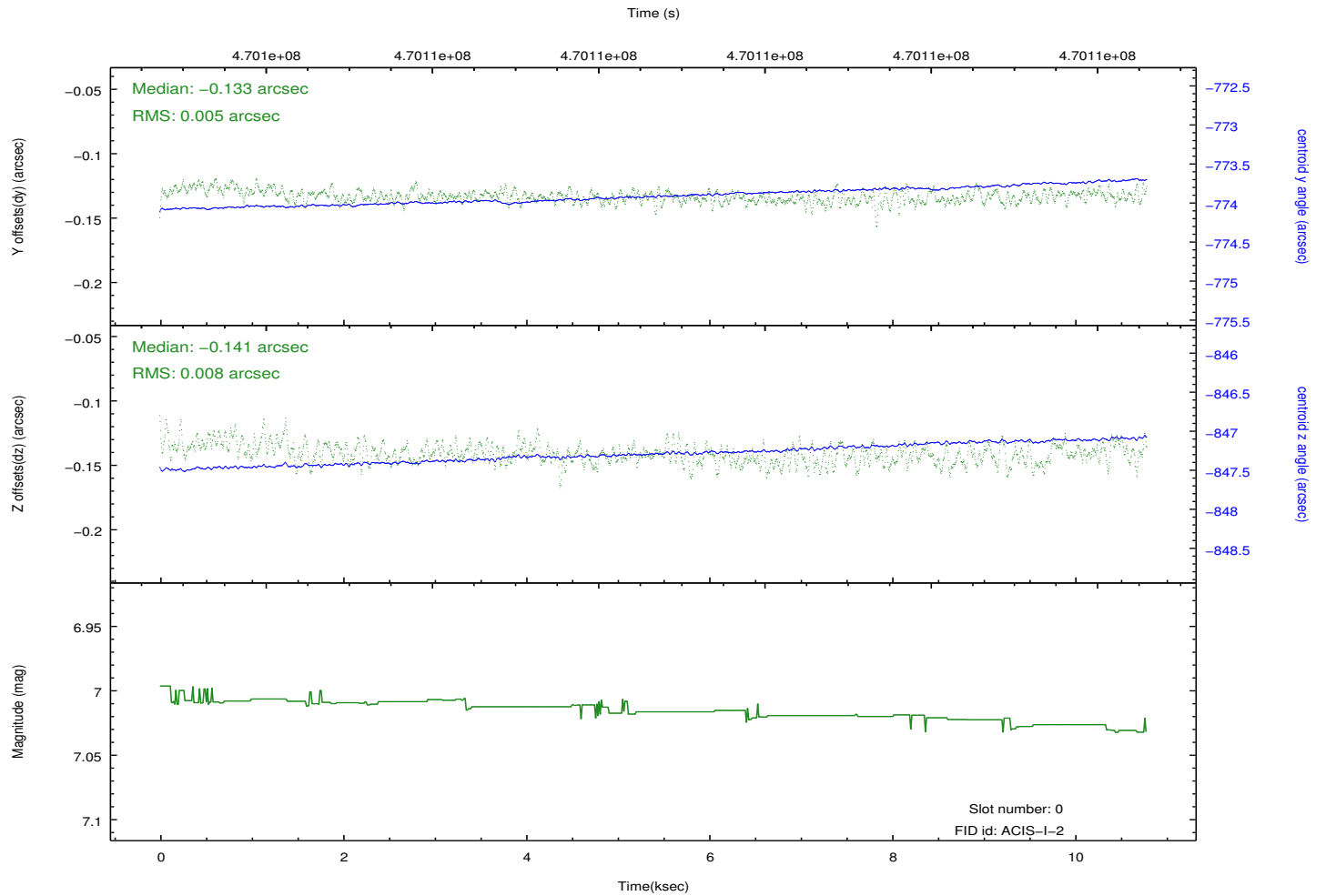
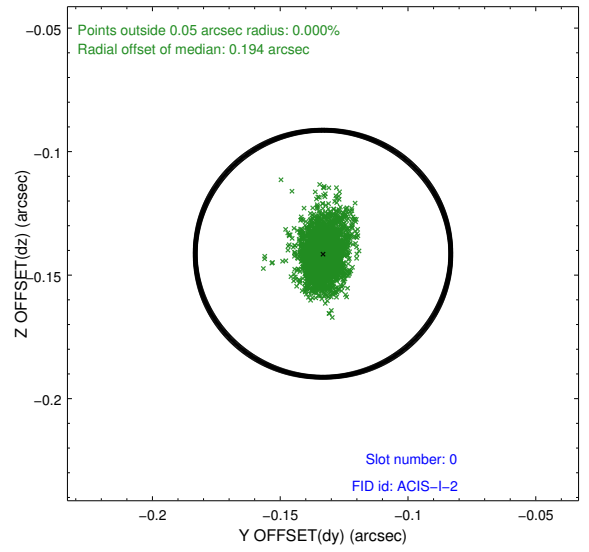
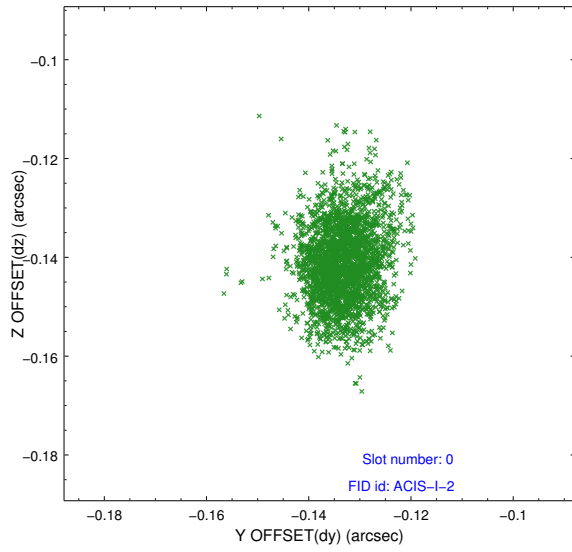


## 2.4.5 Slot 7

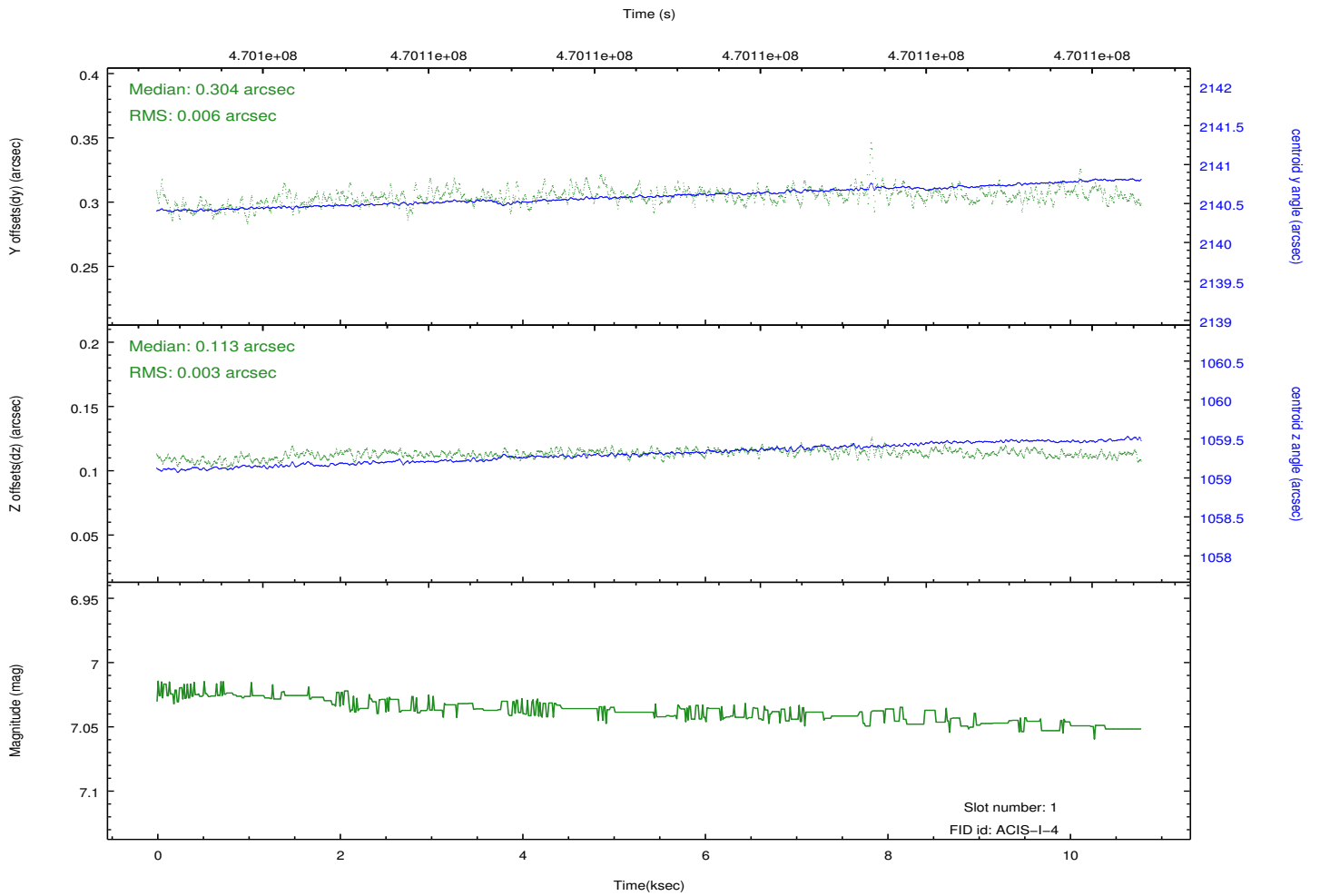
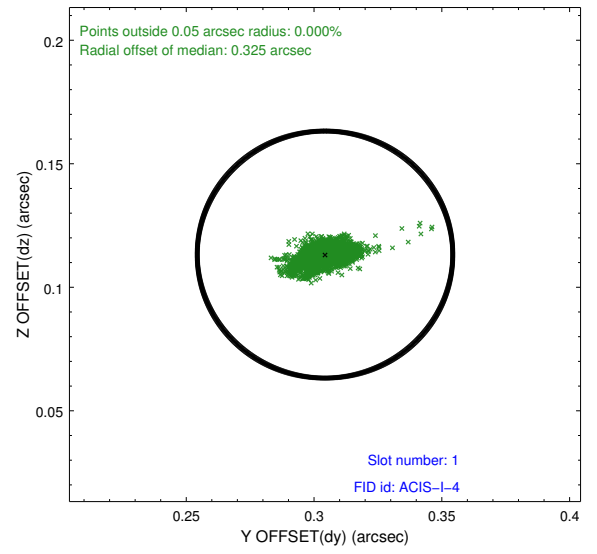
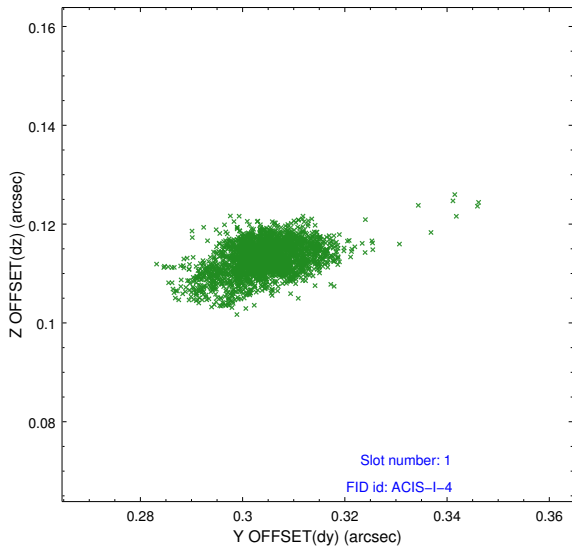


## 2.5 FID Slots

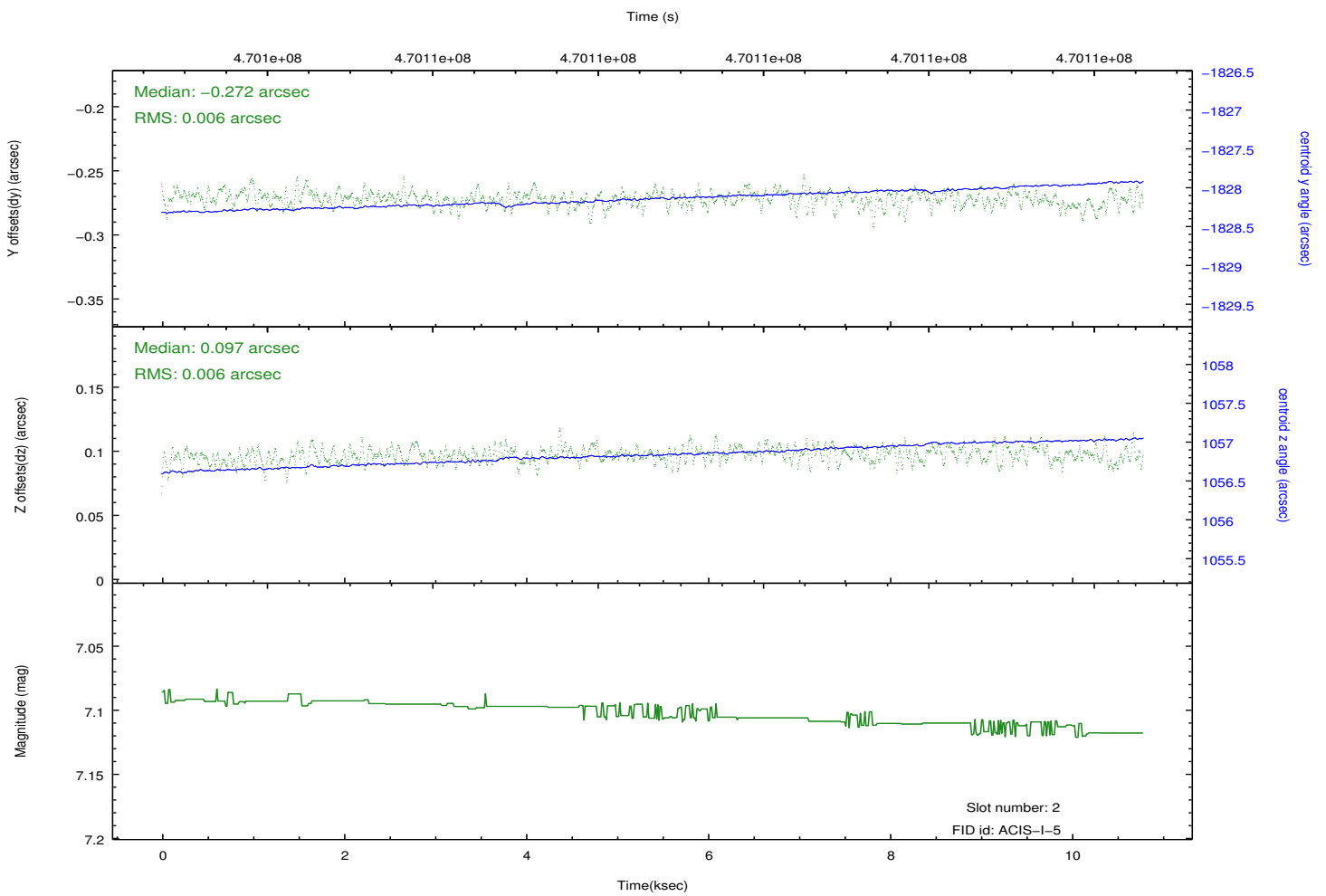
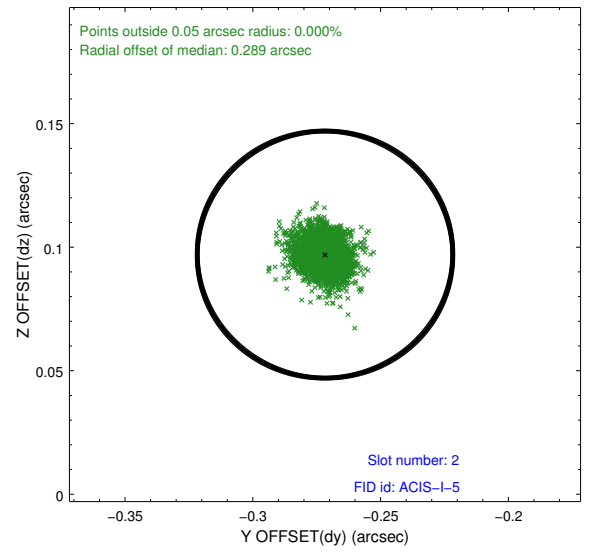
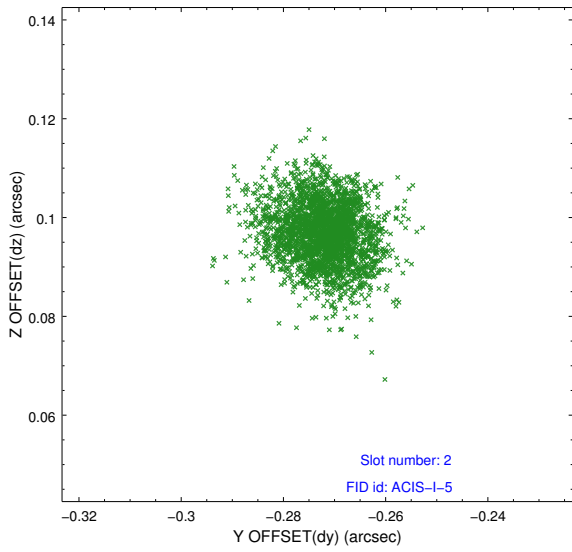
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.083040608466

## 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.