

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15132 - L2 Version 2  
Chandra X-Ray Center

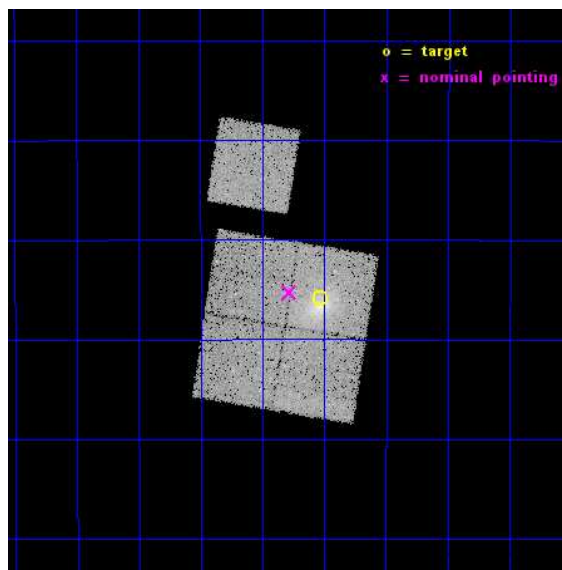
L2 Processing Date : Dec 10 2014

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# 1 Front

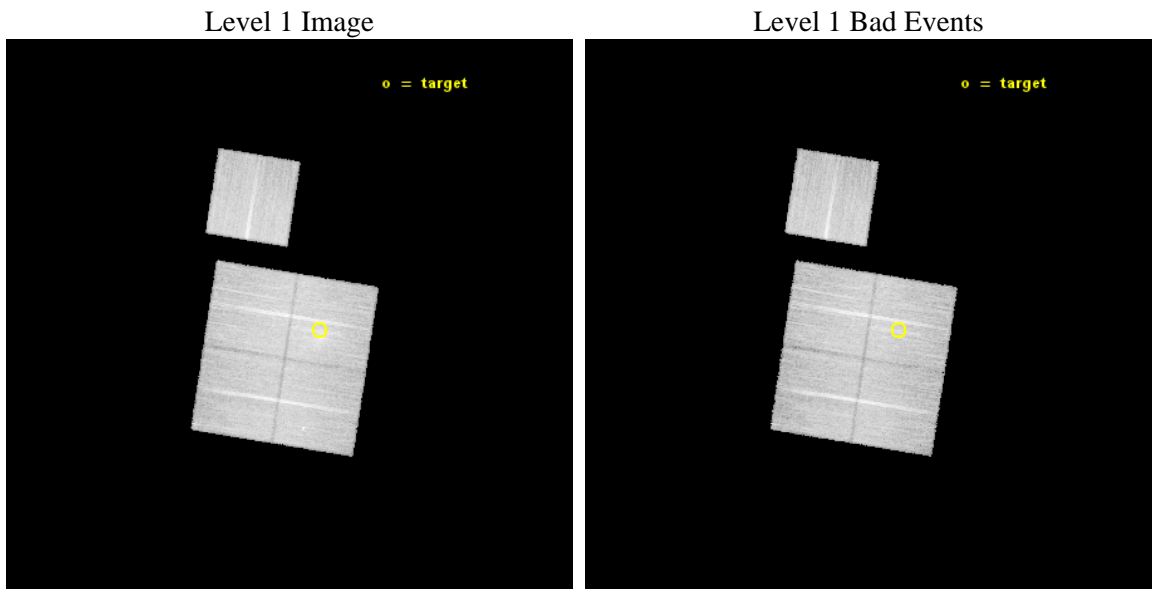
seq_num	801261	Sequence number
obs_id	15132	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G264.41+19.48	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	150.00875	Observer's specified target RA [deg]
dec_targ	-30.2655	Observer's specified target Dec [deg]
ra_nom	150.07050752218	Nominal RA [deg]
dec_nom	-30.254705547997	Nominal Dec [deg]
roll_nom	9.1044725758732	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31083.647419453	Sum of GTIs [s]
livetime	30677.516682469	Livetime [s]
ontime0	31086.665349782	Sum of GTIs [s]
ontime1	31083.565339446	Sum of GTIs [s]
ontime2	31086.747429788	Sum of GTIs [s]
ontime3	31083.647419453	Sum of GTIs [s]
ontime6	31086.624309778	Sum of GTIs [s]
l2events	86071	Number of level 2 events



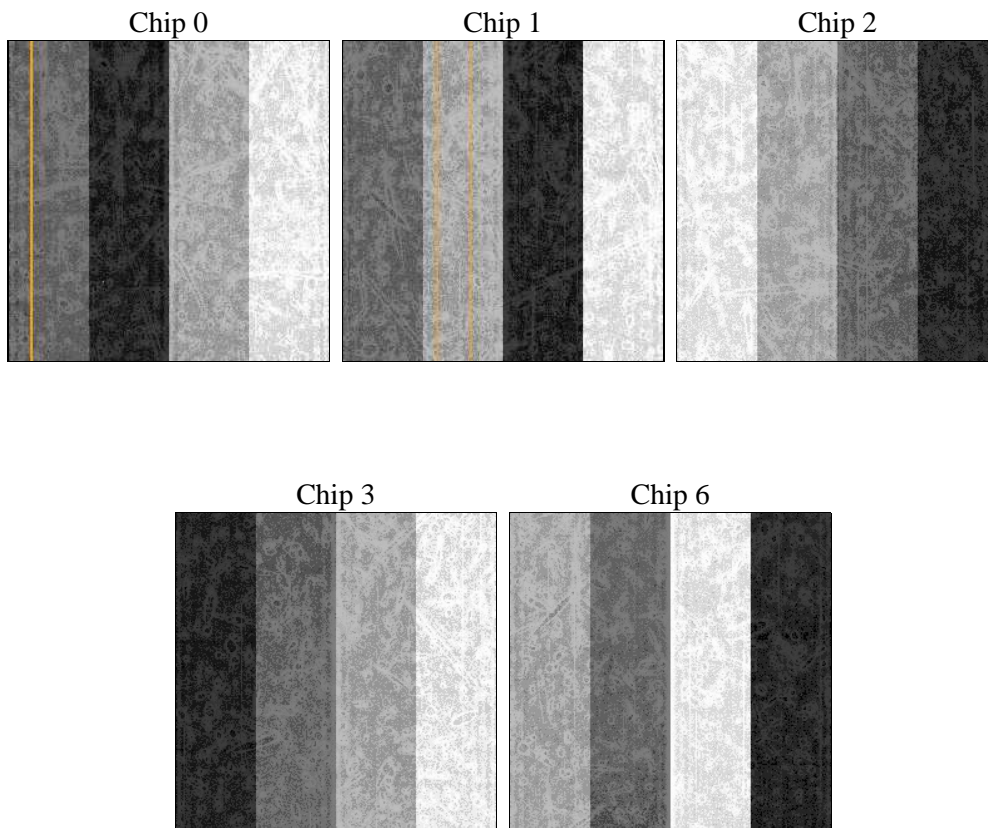
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	31083.647419453	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	31086.665349782	Sum of GTIs [s]
date	2014-12-10T07:07:50	Date and time of file creation	ontime1	31083.565339446	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	31086.747429788	Sum of GTIs [s]
			ontime3	31083.647419453	Sum of GTIs [s]
			ontime6	31086.624309778	Sum of GTIs [s]
			l1events	728732	Number of level 1 events

### 2.1.4 Events

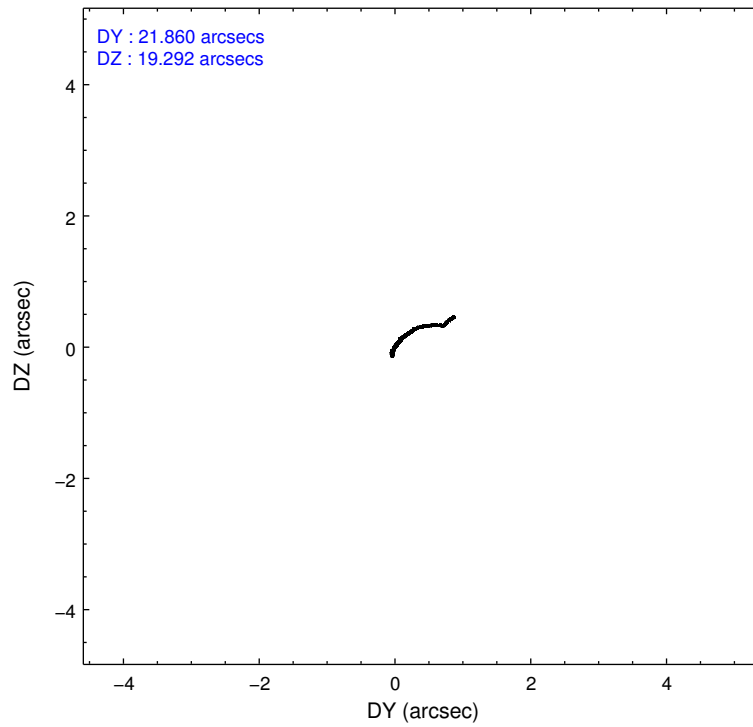
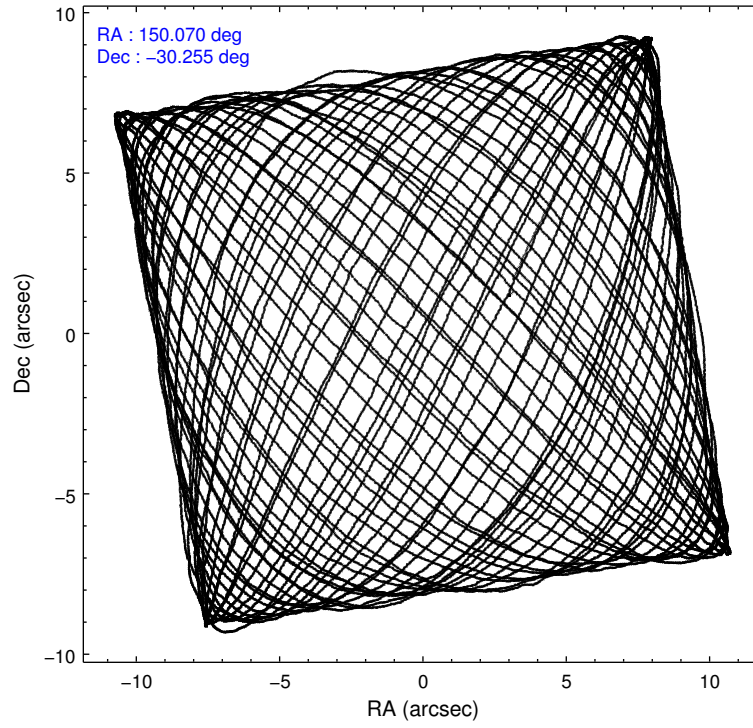
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	133072	138515	150263	157039	149843
rejected events	115424	118530	132900	130162	131832
rejected %	86%	85%	88%	82%	87%

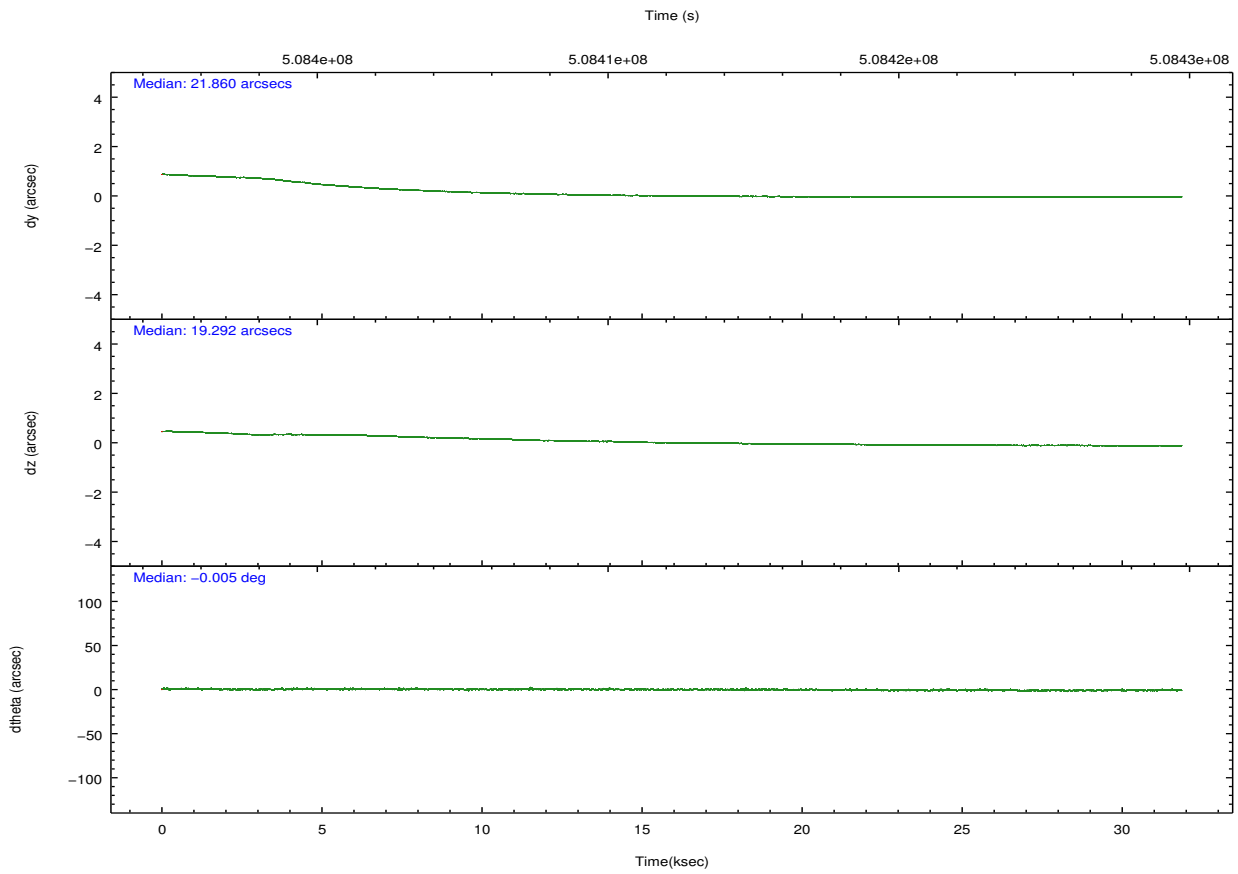
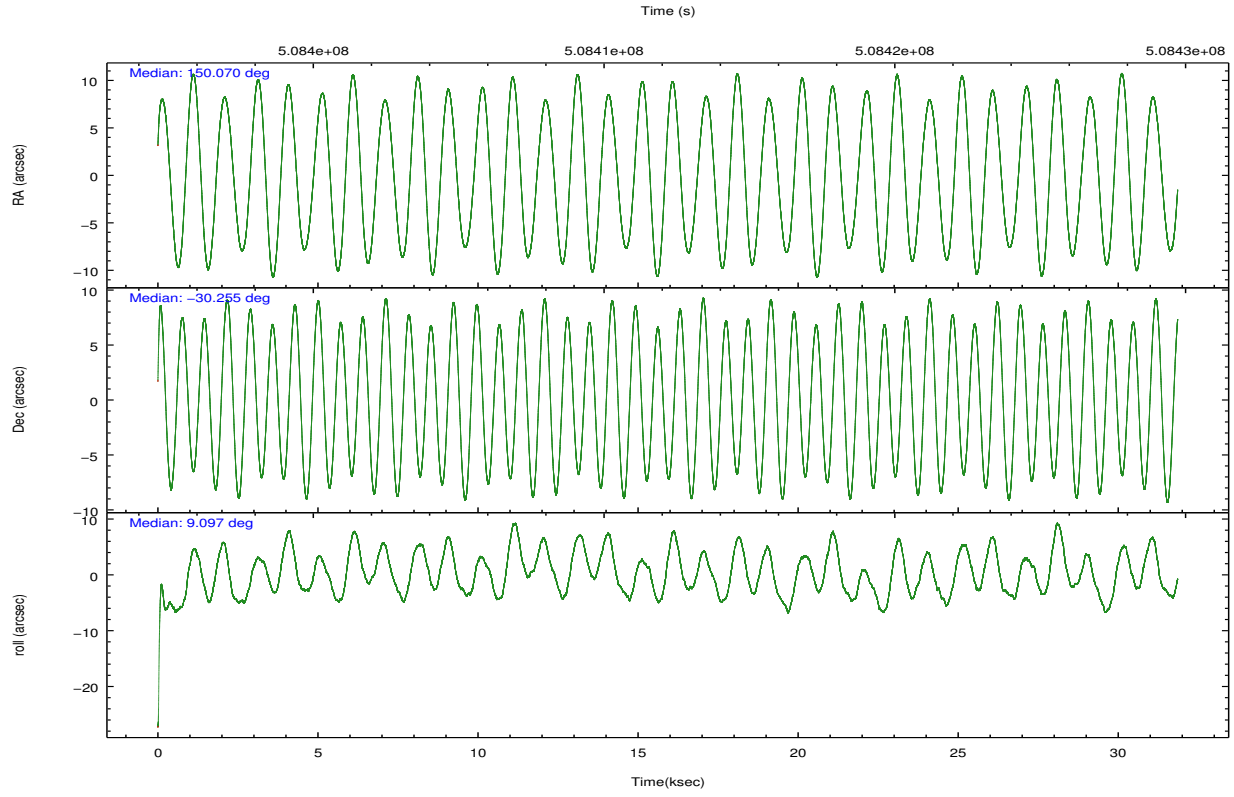
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6070	7493	6234	13984	5944
	4%	5%	4%	8%	3%
grade 1 events	86	92	96	128	70
	0%	0%	0%	0%	0%
grade 2 events	4270	4557	4249	4939	4081
	3%	3%	2%	3%	2%
grade 3 events	1882	1831	1742	2138	1886
	1%	1%	1%	1%	1%
grade 4 events	1781	1959	1768	2014	1854
	1%	1%	1%	1%	1%
grade 5 events	7231	7620	6684	8177	7718
	5%	5%	4%	5%	5%
grade 6 events	3649	4149	3376	3805	4248
	2%	2%	2%	2%	2%
grade 7 events	108103	110814	126114	121854	124042
	81%	80%	83%	77%	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	150.045882	150.0705075221814	CCD I2 on	Y	Y
[deg] Pointing Dec	-30.272129	-30.2547055479972	CCD I3 on	Y	Y
[deg] Pointing Roll	8.883393	9.10447257587318	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	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	508397114.184000	508395782.73494	CCD S5 on	N	N
Observation start date	2014-02-10T05:24:07	2014-02-10T05:03:02	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	508428114.184000	508428524.82424	On-chip summing requested	N	N
Observation end date	2014-02-10T14:00:47	2014-02-10T14:08:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





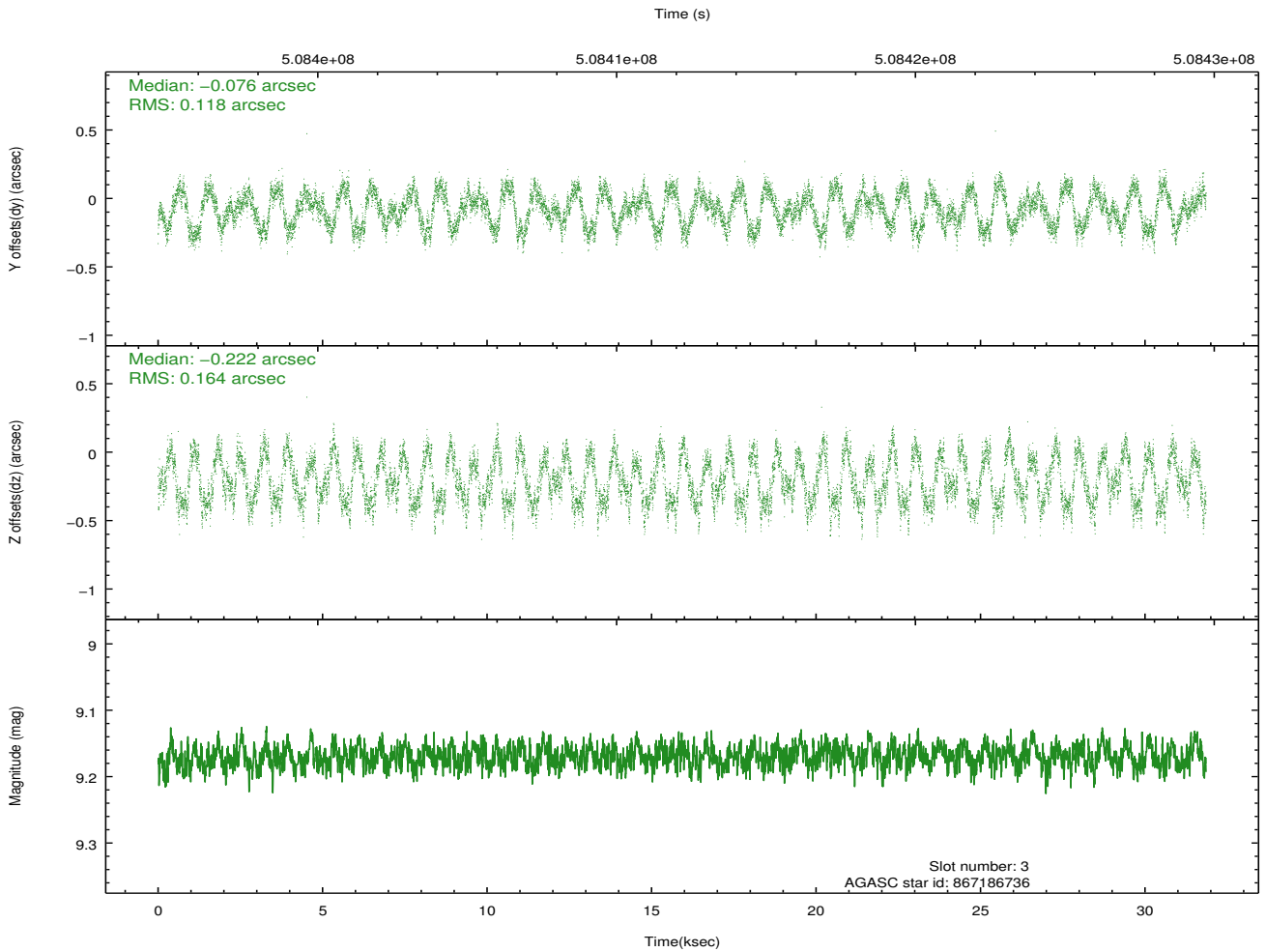
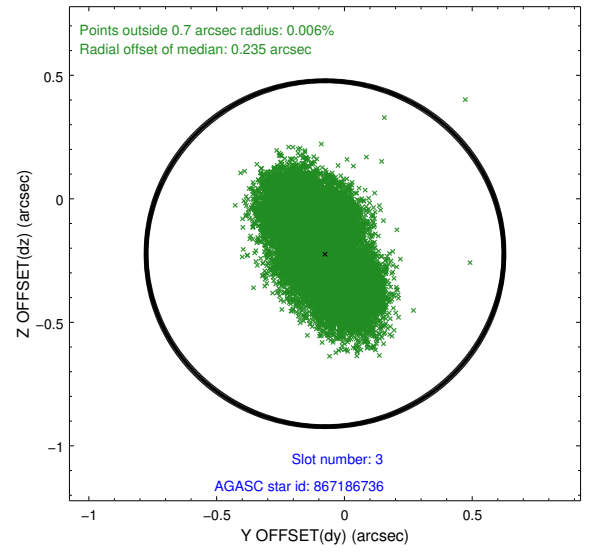
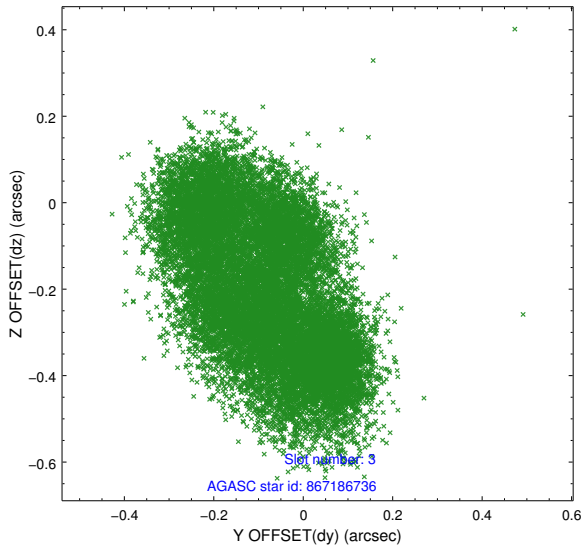
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.12	7770	0.123	-0.096	0.010	0.019	0.000000	0.000000	917.29	-1002.20
1	FID		ACIS-I-5	7.11	7771	-0.342	0.080	0.010	0.028	0.000000	0.000000	-1831.35	895.27
2	FID		ACIS-I-6	7.13	7770	0.128	0.086	0.012	0.029	0.000000	0.000000	382.65	1539.97
3	GUIDE	used	867186736	9.17	15483	-0.076	-0.222	0.223	0.327	150.120713	-29.734374	529.66	1876.81
4	GUIDE	used	939662928	9.13	15526	0.056	0.167	0.129	0.207	150.194531	-30.781602	171.76	-1882.82
5	GUIDE	used	939663504	8.56	15534	-0.136	0.225	0.119	0.174	150.406685	-30.802826	807.60	-2061.19
6	GUIDE	used	939788512	9.09	15534	-0.028	0.002	0.136	0.217	150.755880	-30.269340	2181.08	-336.51
7	GUIDE	used	867186920	9.66	15521	0.177	-0.214	0.282	0.426	149.266336	-29.729492	-2106.94	2298.05

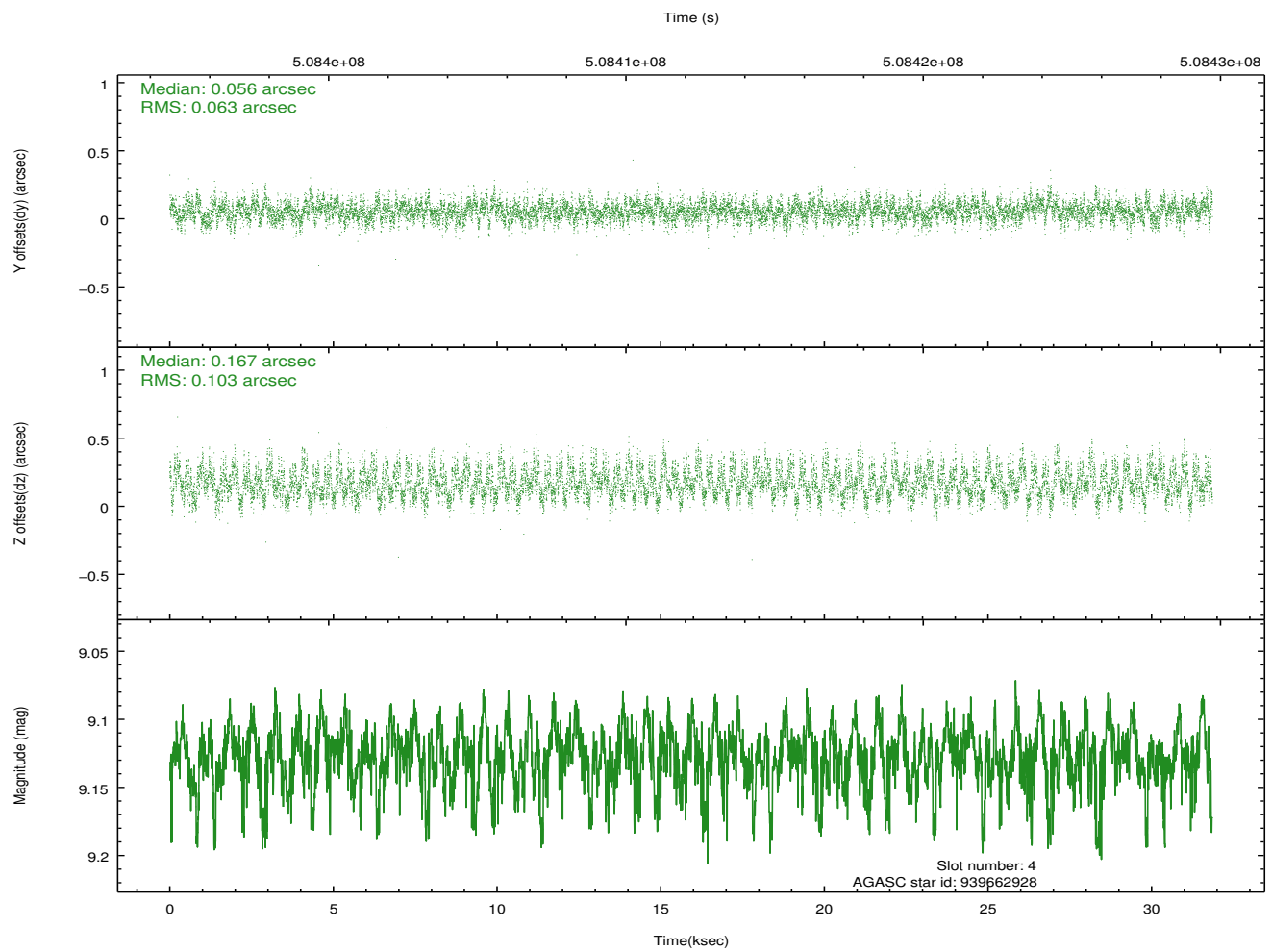
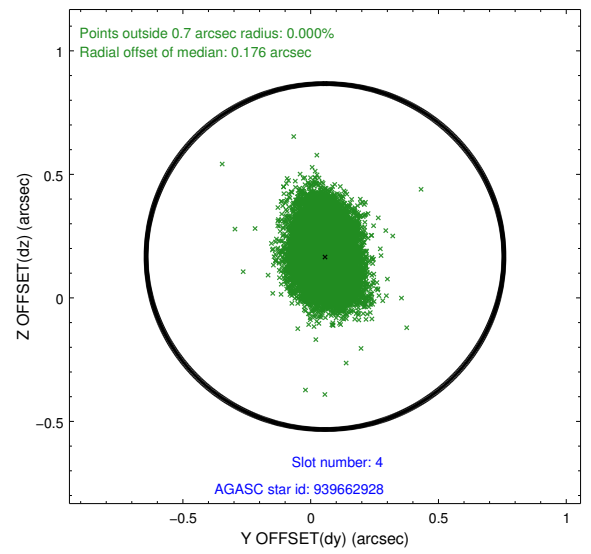
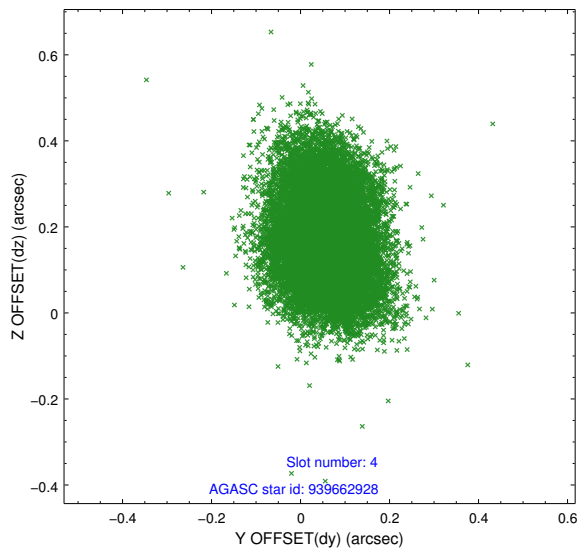
∞

## 2.4 Star Slots

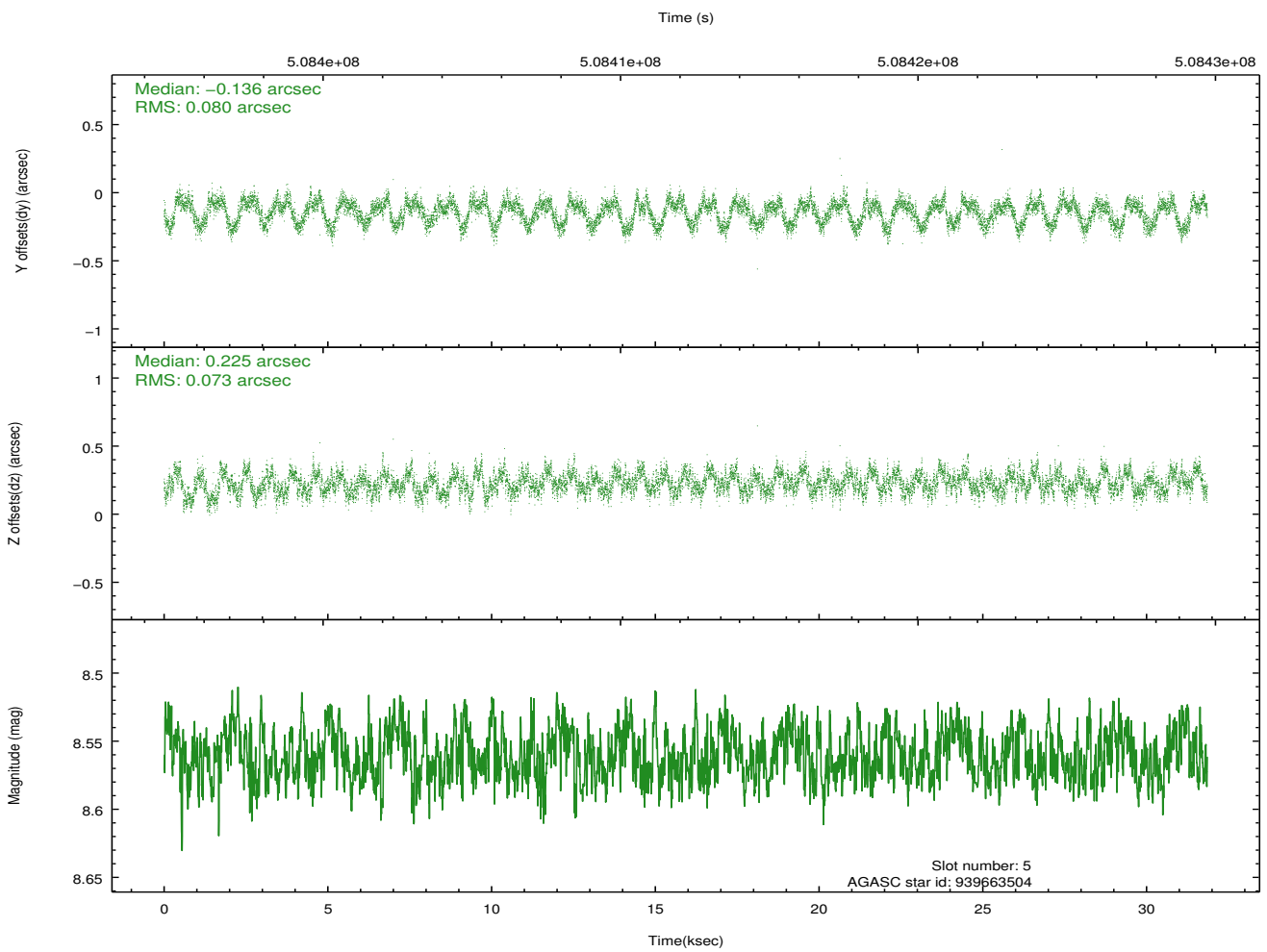
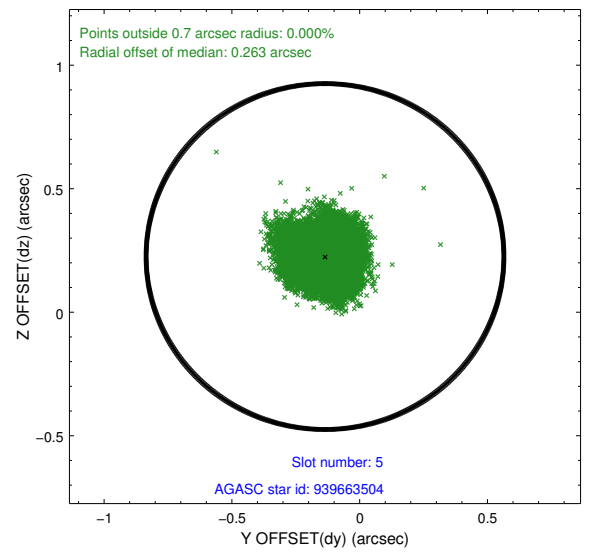
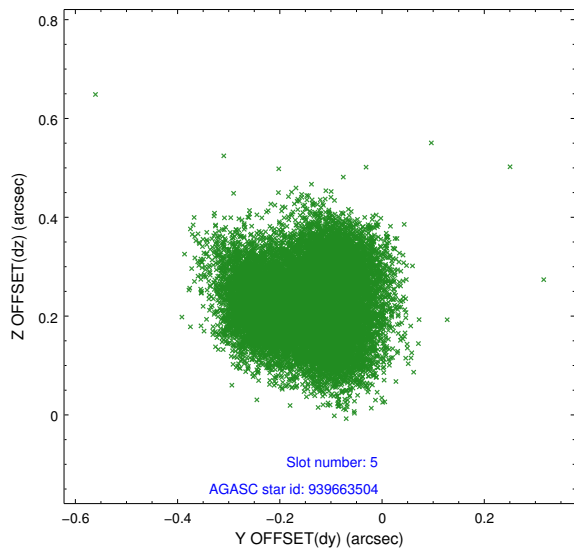
### 2.4.1 Slot 3



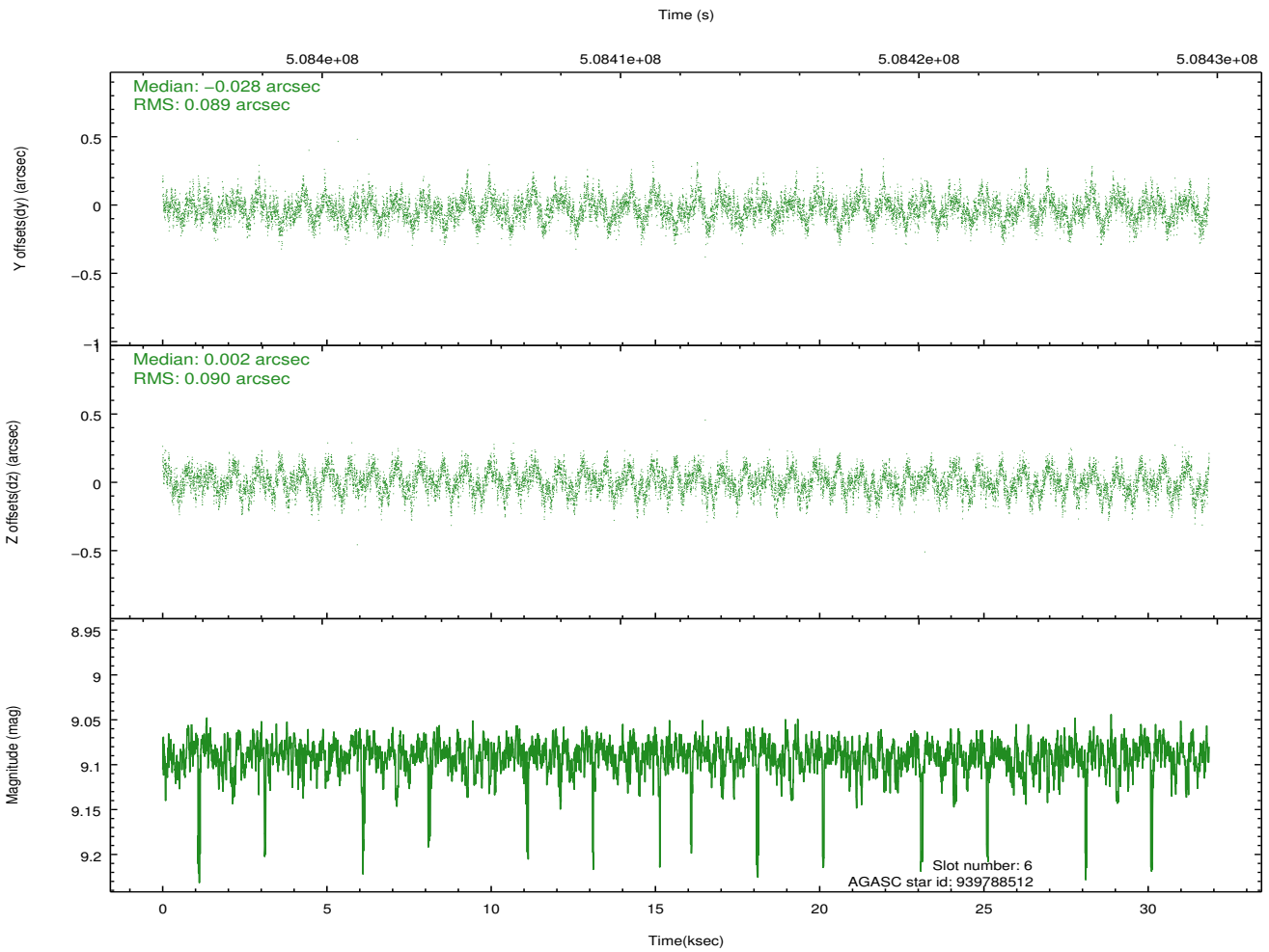
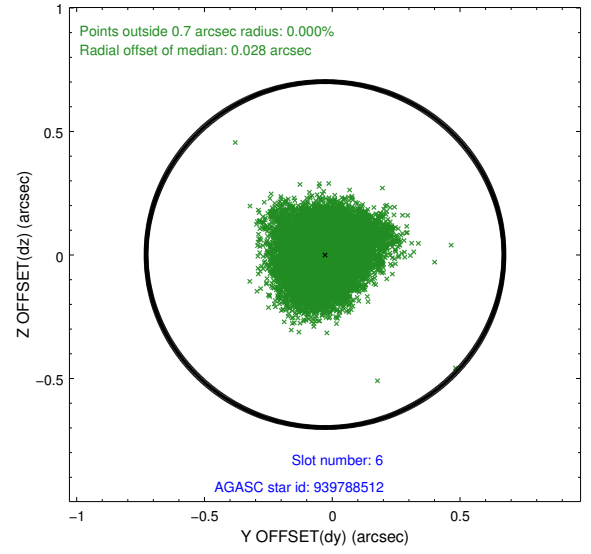
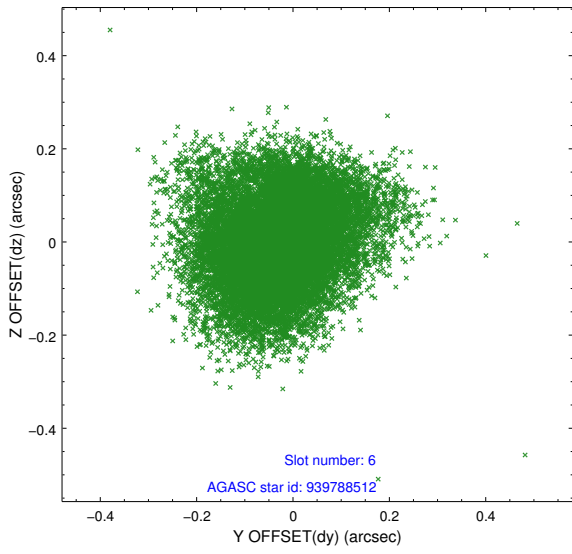
## 2.4.2 Slot 4



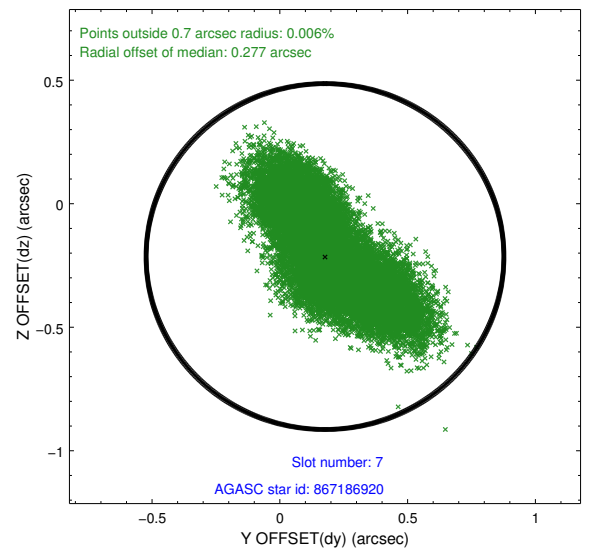
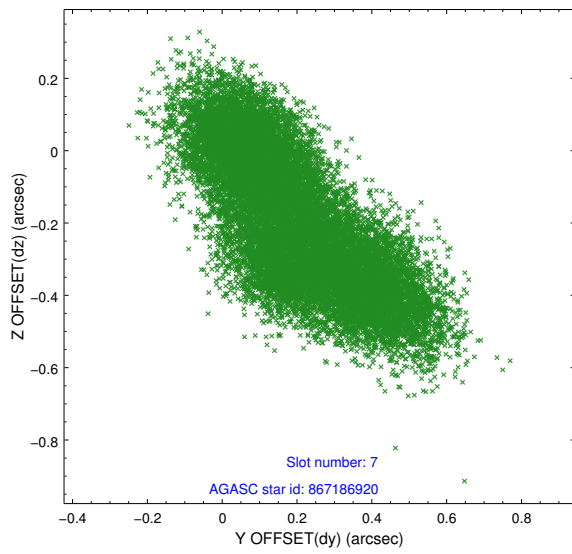
### 2.4.3 Slot 5



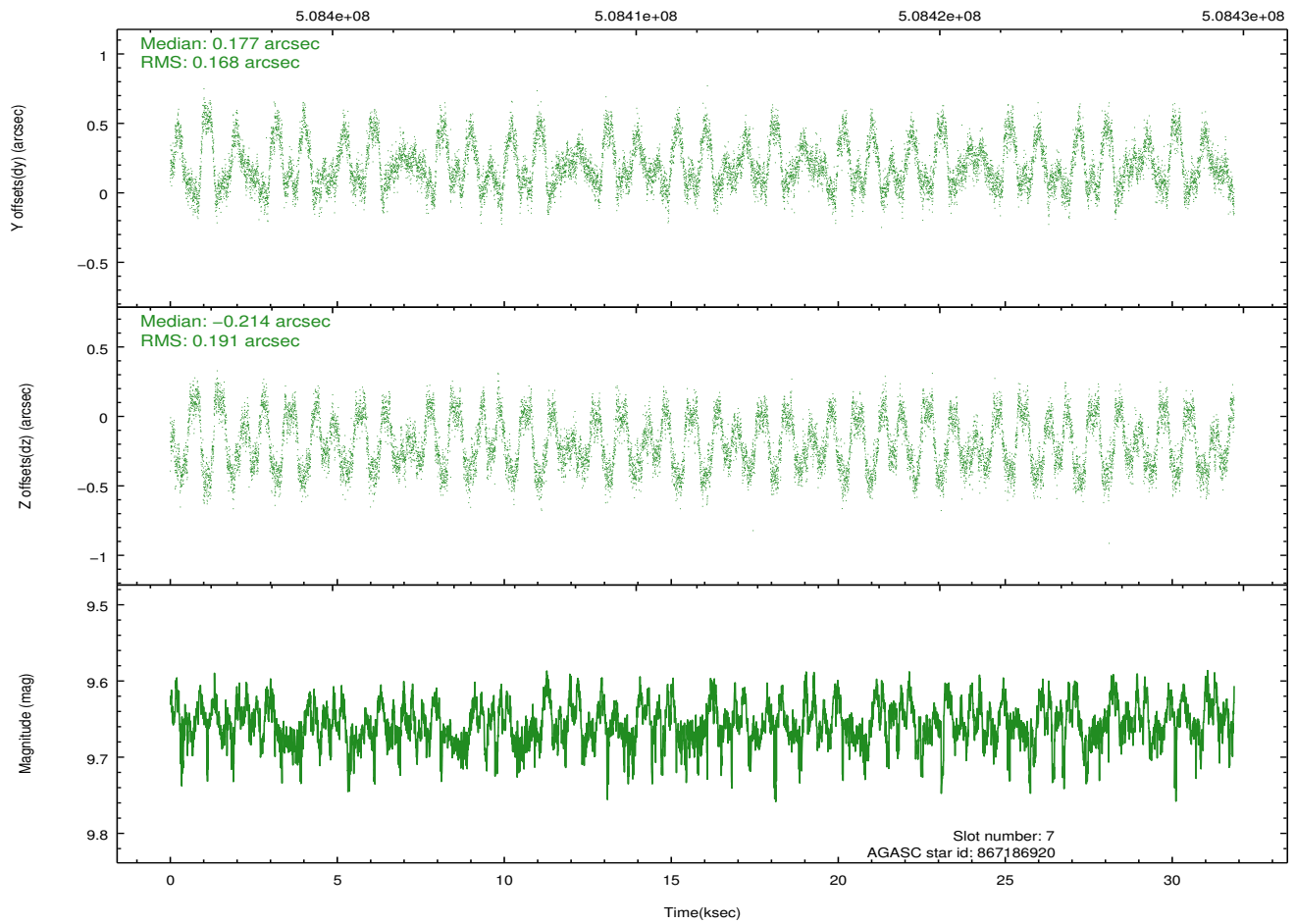
### 2.4.4 Slot 6



## 2.4.5 Slot 7

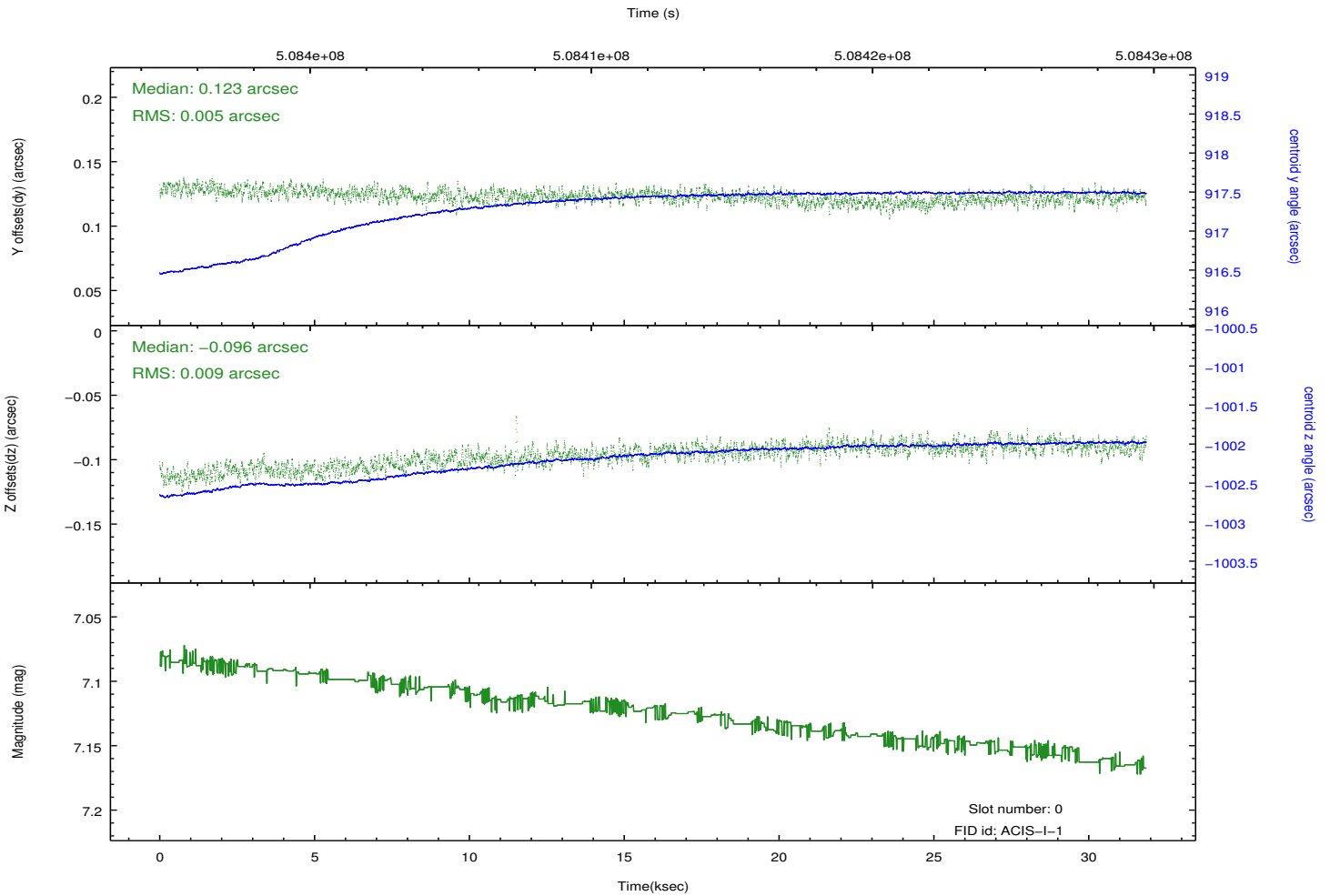
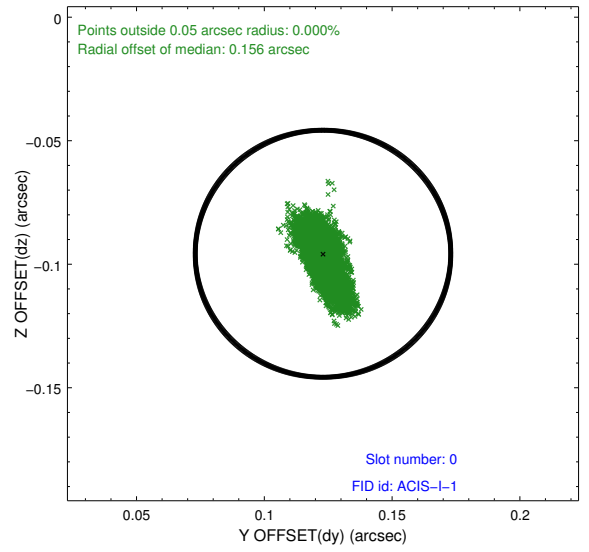
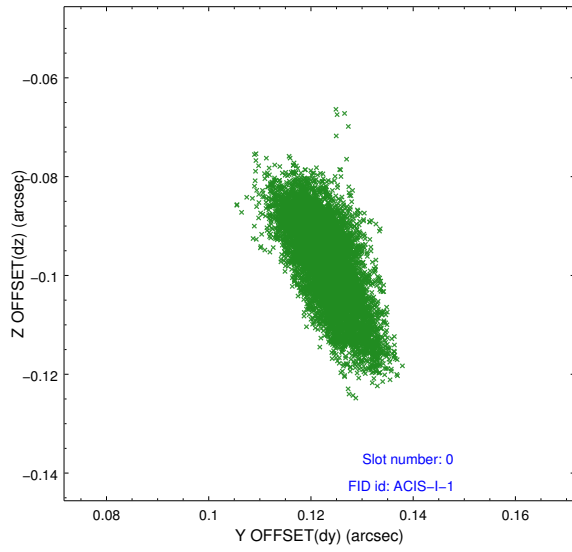


Time (s)

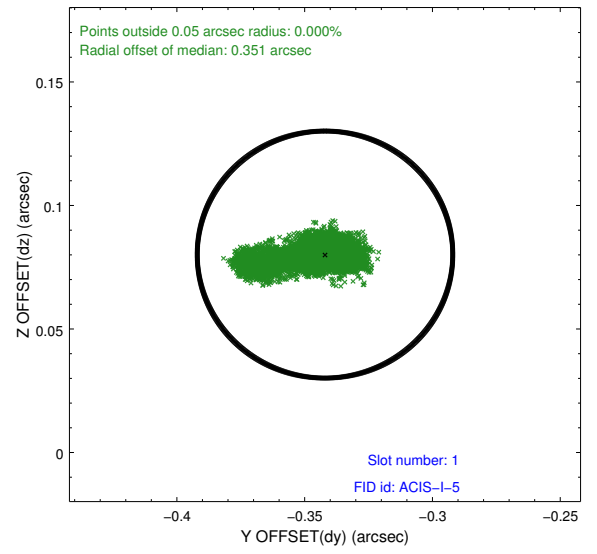
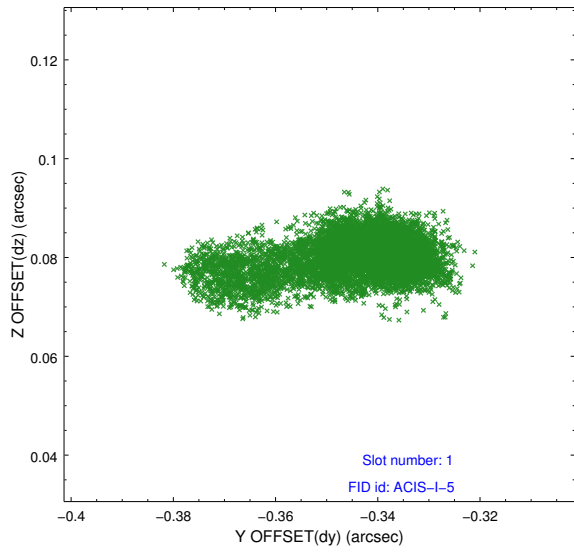


## 2.5 FID Slots

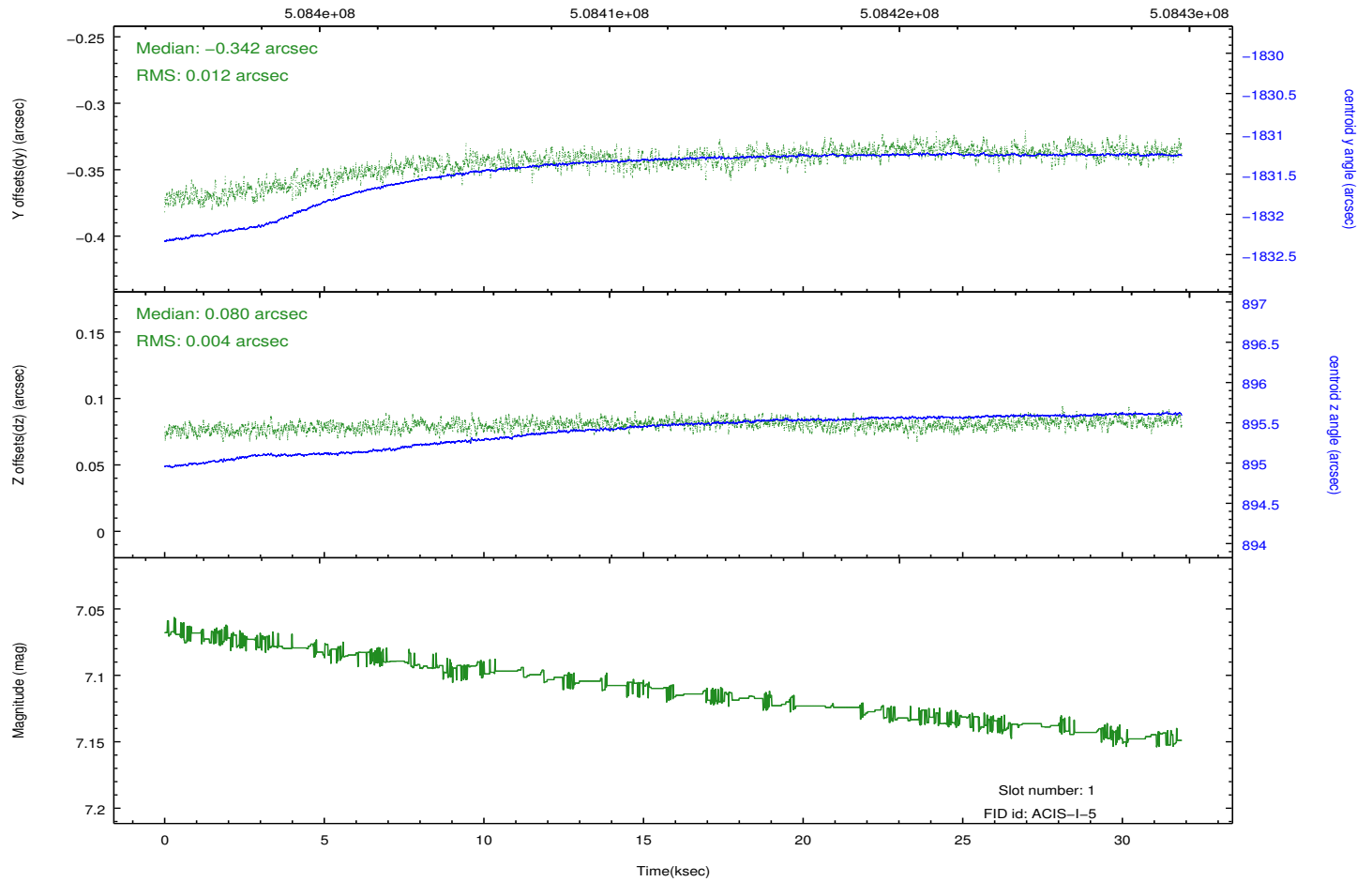
### 2.5.1 Slot 0



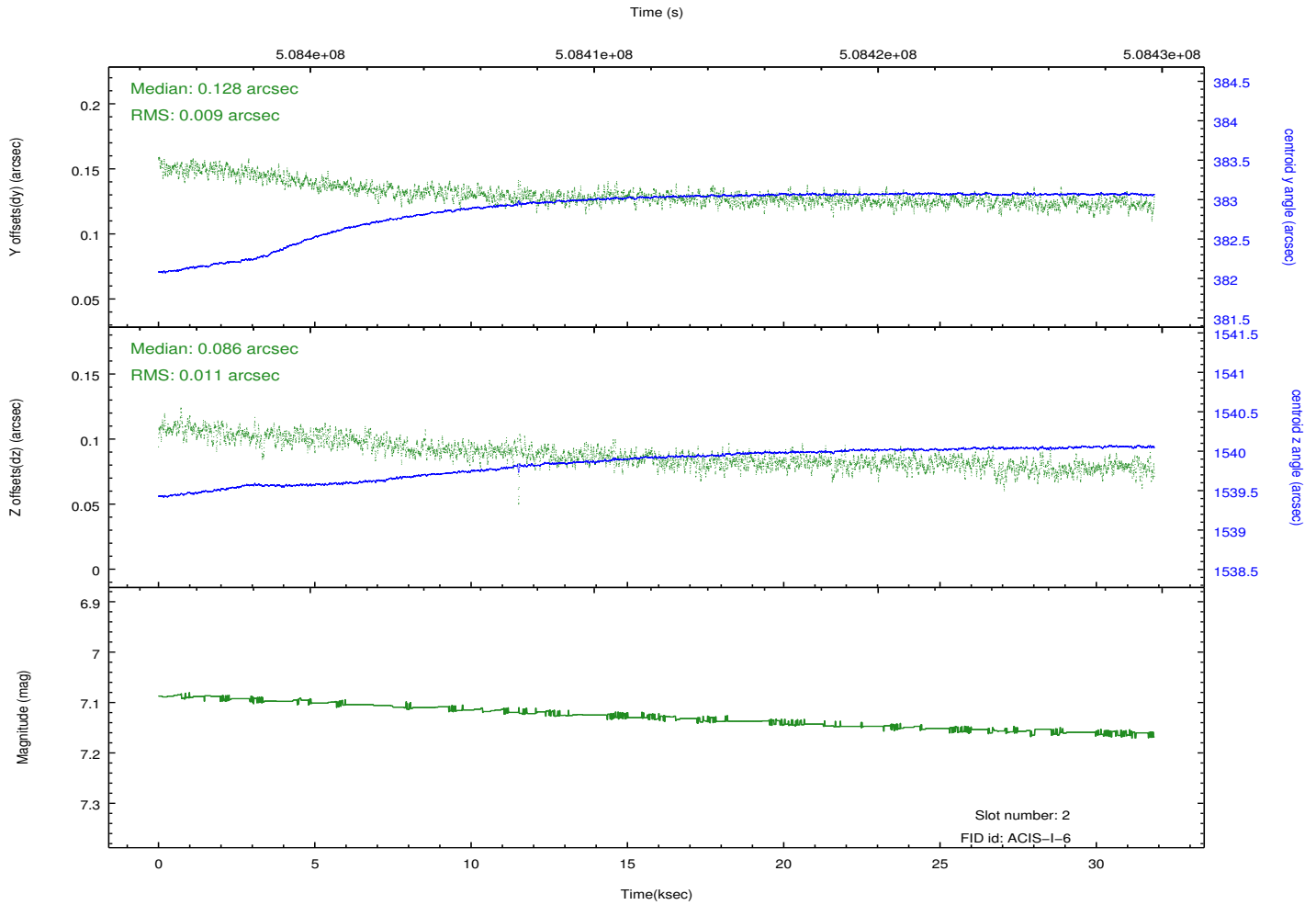
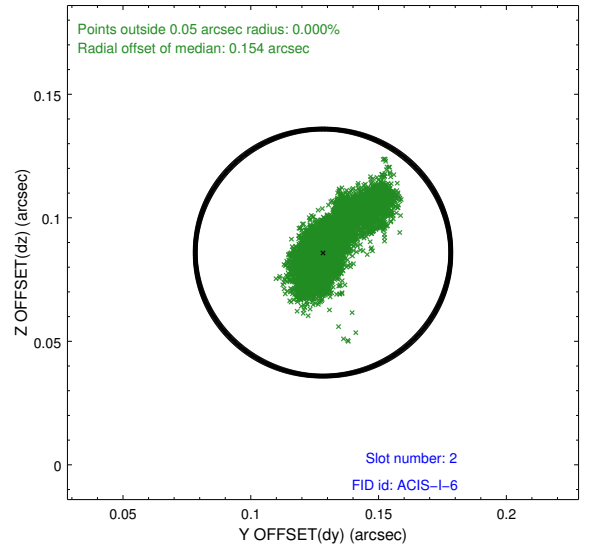
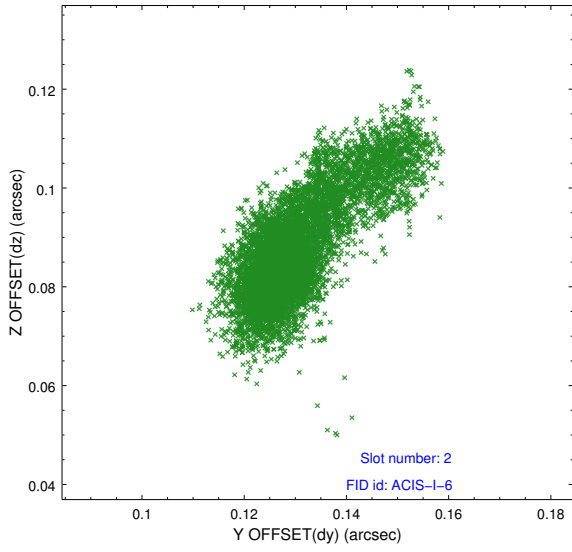
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.083647419453

## 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.