

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15108 - L2 Version 2  
Chandra X-Ray Center

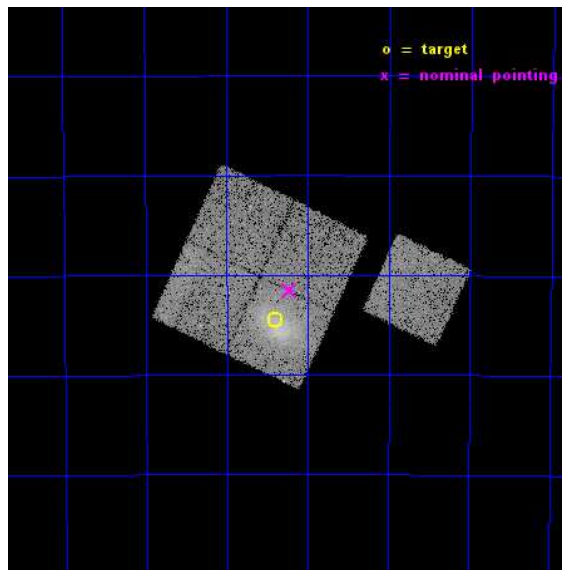
L2 Processing Date : Dec 10 2014

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# 1 Front

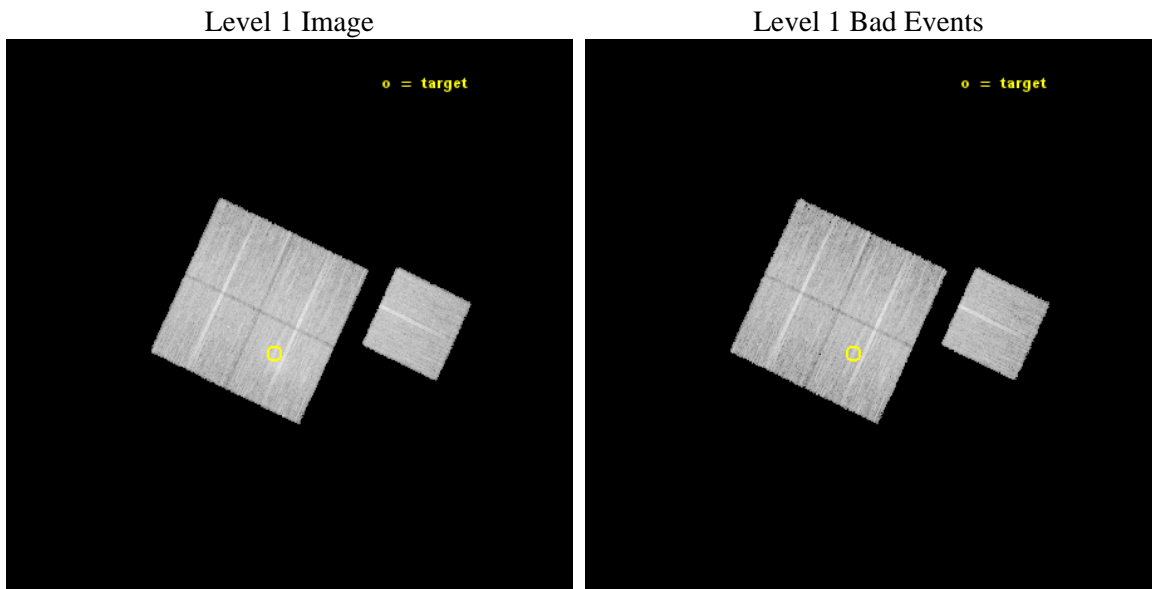
seq_num	801237	Sequence number
obs_id	15108	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G342.31-34.90	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	305.85125	Observer's specified target RA [deg]
dec_targ	-55.574028	Observer's specified target Dec [deg]
ra_nom	305.80667989102	Nominal RA [deg]
dec_nom	-55.525817664931	Nominal Dec [deg]
roll_nom	115.21901937119	Nominal Roll [deg]
revision	2	Processing version of data
ontime	21088.150167108	Sum of GTIs [s]
livetime	20812.617960304	Livetime [s]
ontime0	21088.027047098	Sum of GTIs [s]
ontime1	21084.927116752	Sum of GTIs [s]
ontime2	21088.109127104	Sum of GTIs [s]
ontime3	21088.150167108	Sum of GTIs [s]
ontime6	21084.845036745	Sum of GTIs [s]
l2events	60753	Number of level 2 events



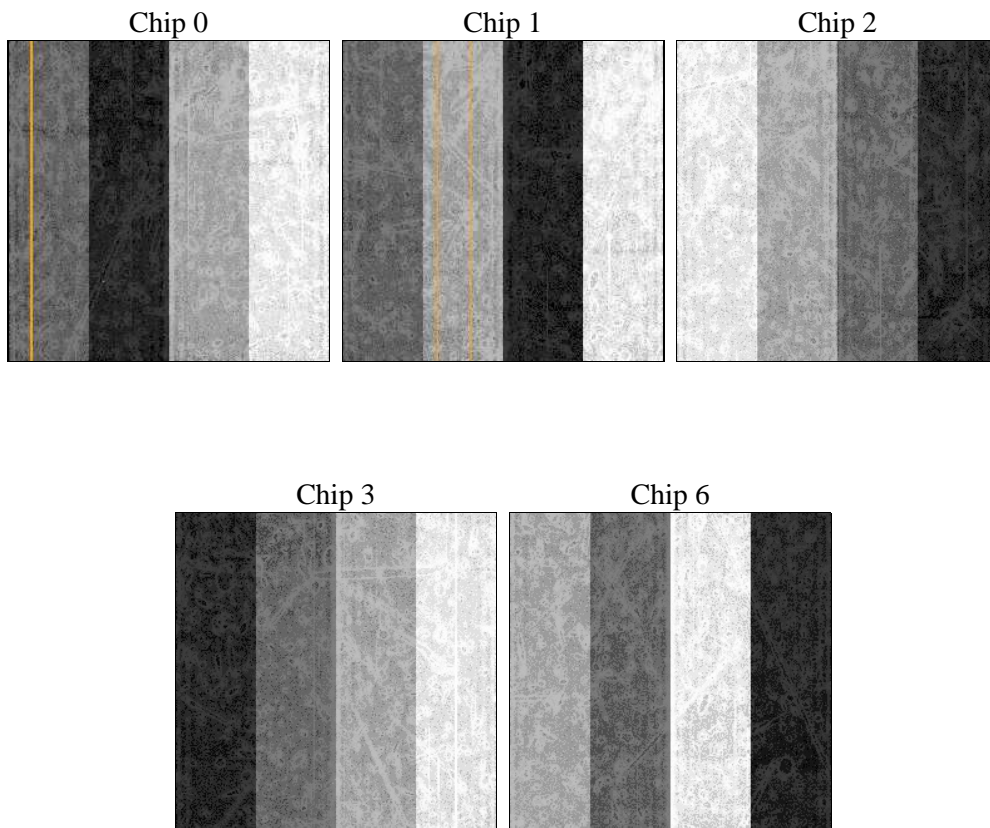
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	21000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	21088.150167108	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	21088.027047098	Sum of GTIs [s]
date	2014-12-10T17:00:17	Date and time of file creation	ontime1	21084.927116752	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	21088.109127104	Sum of GTIs [s]
			ontime3	21088.150167108	Sum of GTIs [s]
			ontime6	21084.845036745	Sum of GTIs [s]
			l1events	484229	Number of level 1 events

### 2.1.4 Events

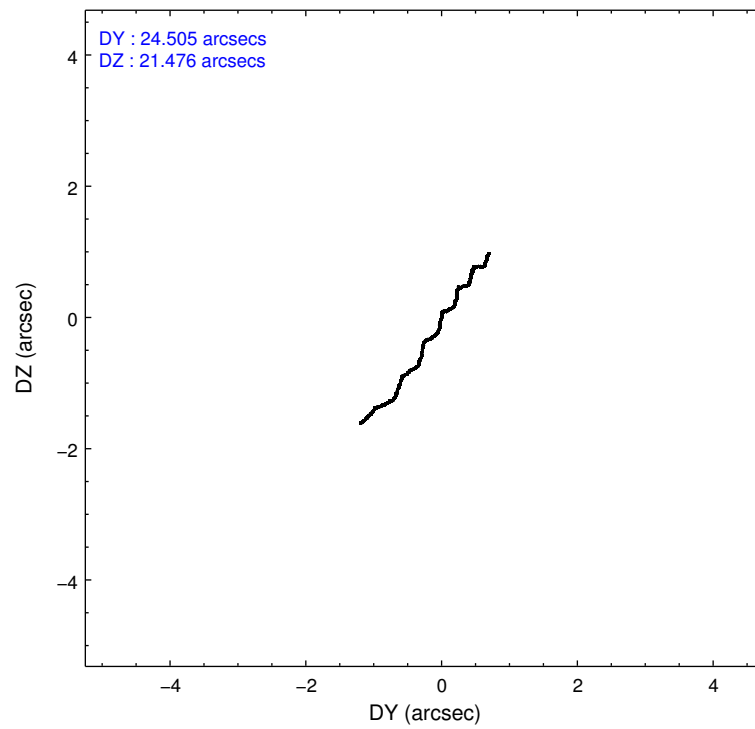
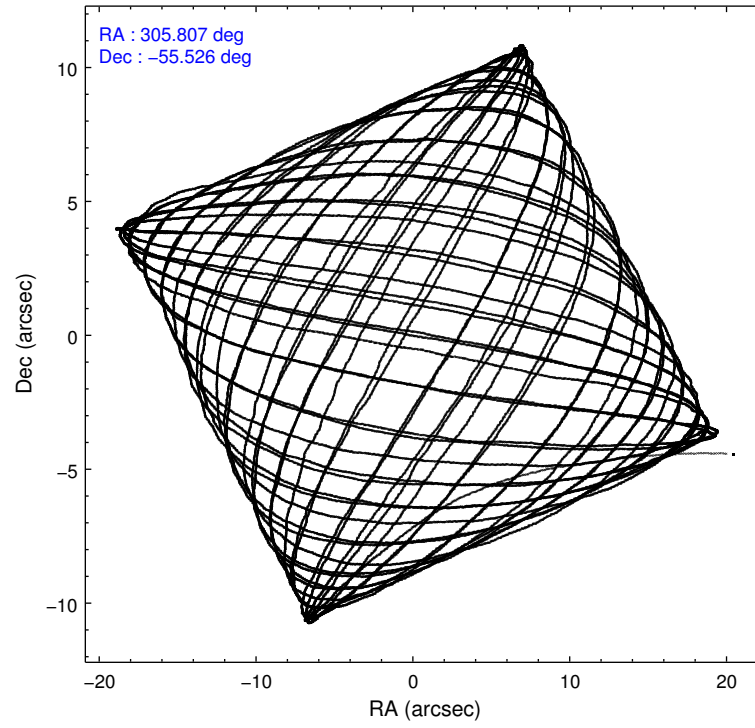
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	89460	94862	96798	107067	96042
rejected events	77588	81051	85050	85876	84117
rejected %	86%	85%	87%	80%	87%

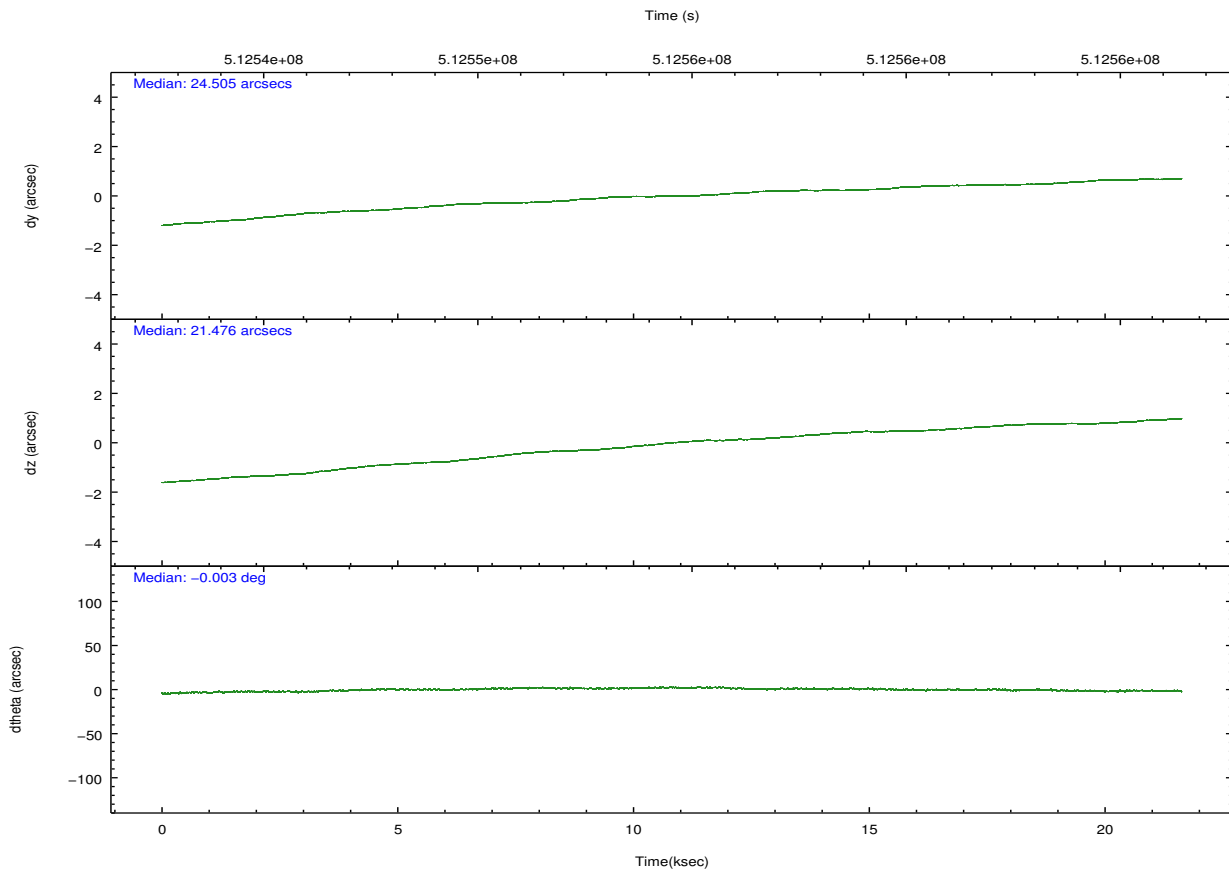
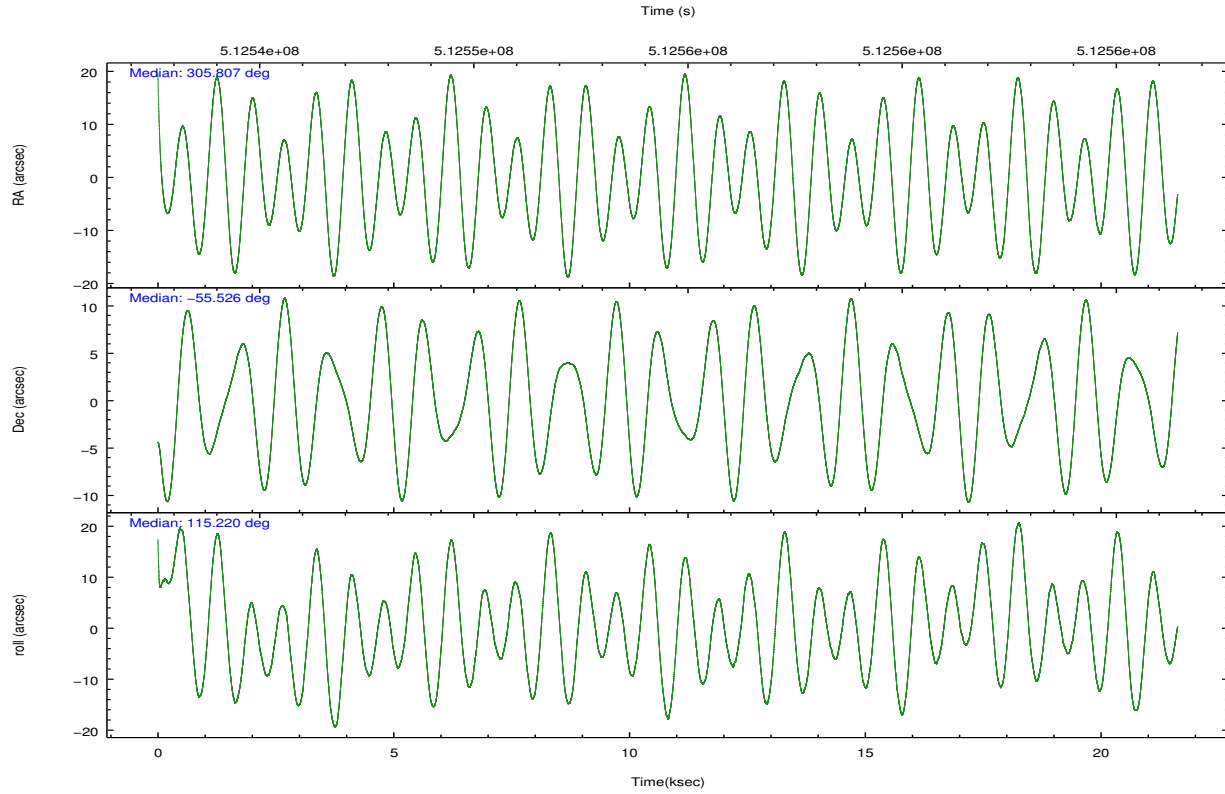
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3998	4886	4299	11957	4007
	4%	5%	4%	11%	4%
grade 1 events	43	46	47	90	58
	0%	0%	0%	0%	0%
grade 2 events	3030	3343	2860	3573	2656
	3%	3%	2%	3%	2%
grade 3 events	1276	1330	1159	1497	1223
	1%	1%	1%	1%	1%
grade 4 events	1164	1340	1170	1542	1228
	1%	1%	1%	1%	1%
grade 5 events	4519	4933	4417	5456	5085
	5%	5%	4%	5%	5%
grade 6 events	2406	2912	2261	2622	2811
	2%	3%	2%	2%	2%
grade 7 events	73024	76072	80585	80330	78974
	81%	80%	83%	75%	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	305.846721	305.8066798910222	CCD I2 on	Y	Y
[deg] Pointing Dec	-55.541380	-55.52581766493063	CCD I3 on	Y	Y
[deg] Pointing Roll	115.043350	115.2190193711939	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)	512544336.184000	512543011.37593	CCD S5 on	N	N
Observation start date	2014-03-30T05:24:29	2014-03-30T05:03:31	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	512565336.184000	512566179.9647	On-chip summing requested	N	N
Observation end date	2014-03-30T11:14:29	2014-03-30T11:29:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





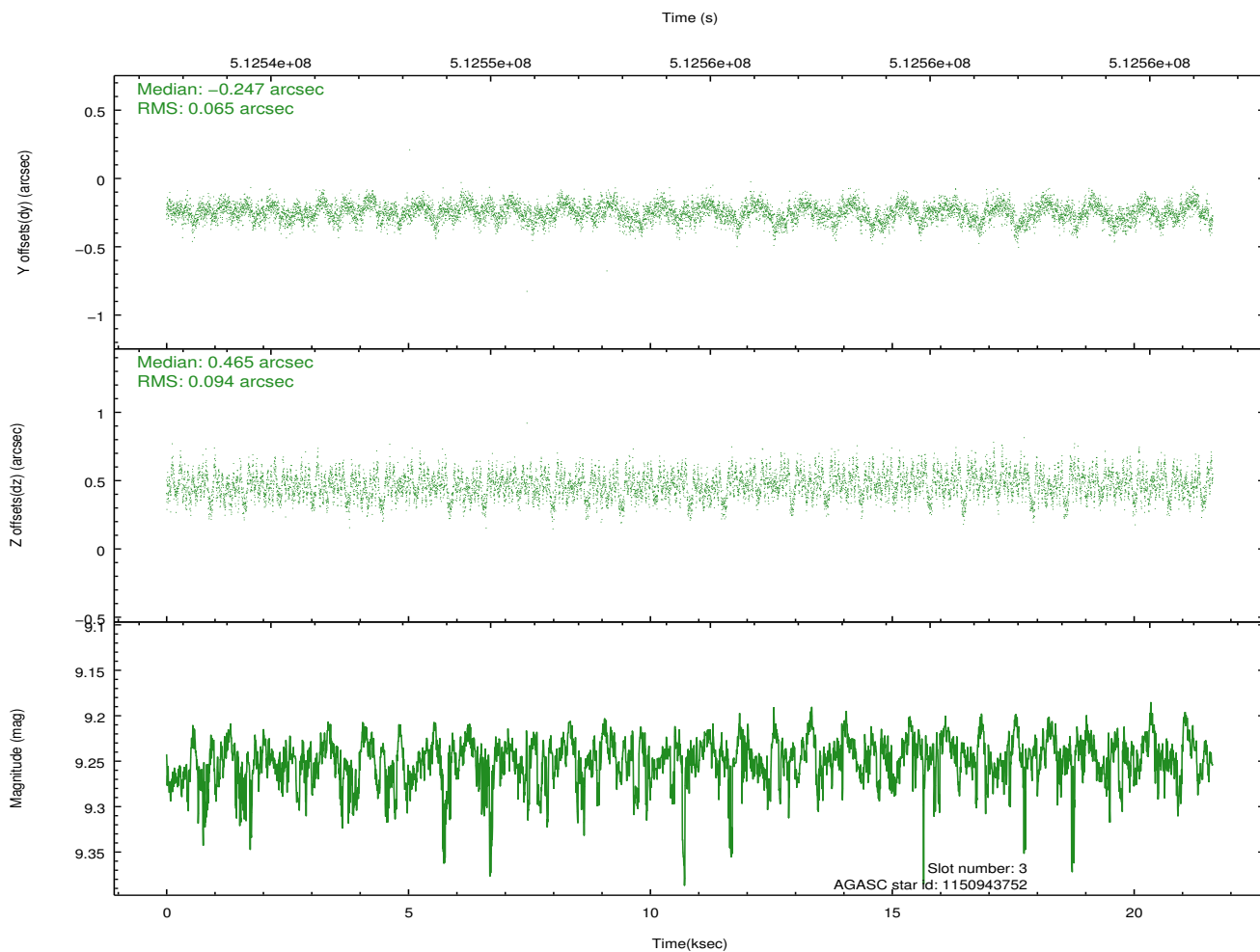
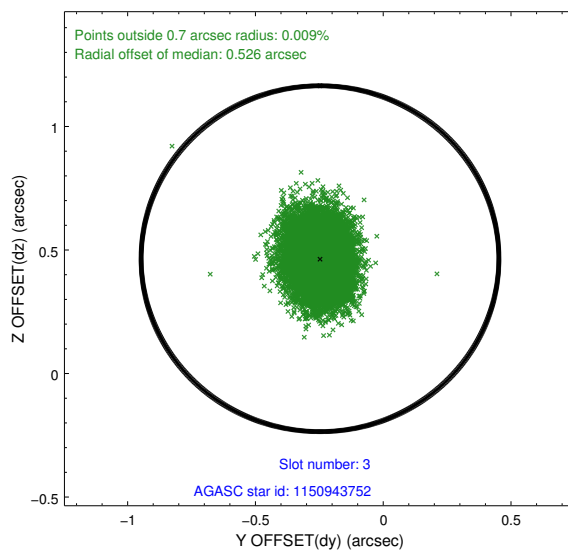
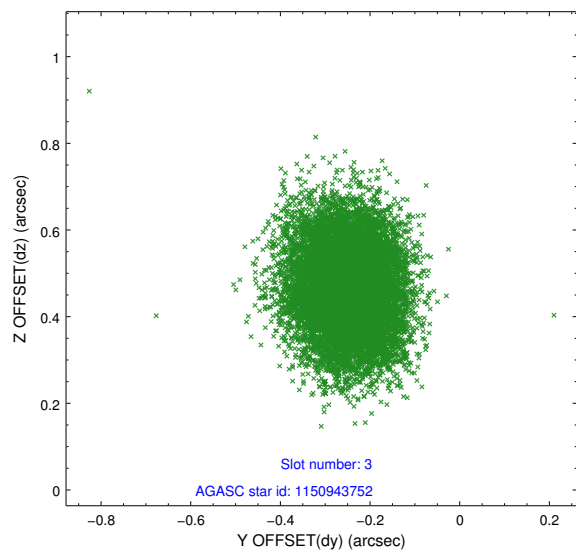
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	5275	0.142	-0.099	0.023	0.030	0.000000	0.000000	914.79	-1004.23
1	FID		ACIS-I-5	7.06	5275	-0.373	0.095	0.014	0.033	0.000000	0.000000	-1833.79	893.26
2	FID		ACIS-I-6	7.08	5275	0.140	0.088	0.028	0.040	0.000000	0.000000	380.09	1538.00
3	GUIDE	used	1150943752	9.25	10540	-0.247	0.465	0.123	0.196	306.577796	-55.209104	440.84	-1862.92
4	GUIDE	used	1150947880	9.40	10545	-0.460	-0.498	0.100	0.161	304.530456	-55.227653	2143.86	1980.52
5	GUIDE	used	1150951984	7.97	10551	0.259	0.063	0.075	0.126	306.235027	-55.939622	-1631.61	-101.22
6	GUIDE	used	1150954744	9.31	10543	-0.038	-0.417	0.135	0.231	305.323712	-55.767657	-293.25	1305.84
7	GUIDE	used	1152658680	9.14	10542	0.481	0.384	0.111	0.180	307.365168	-55.795126	-2158.24	-2382.34

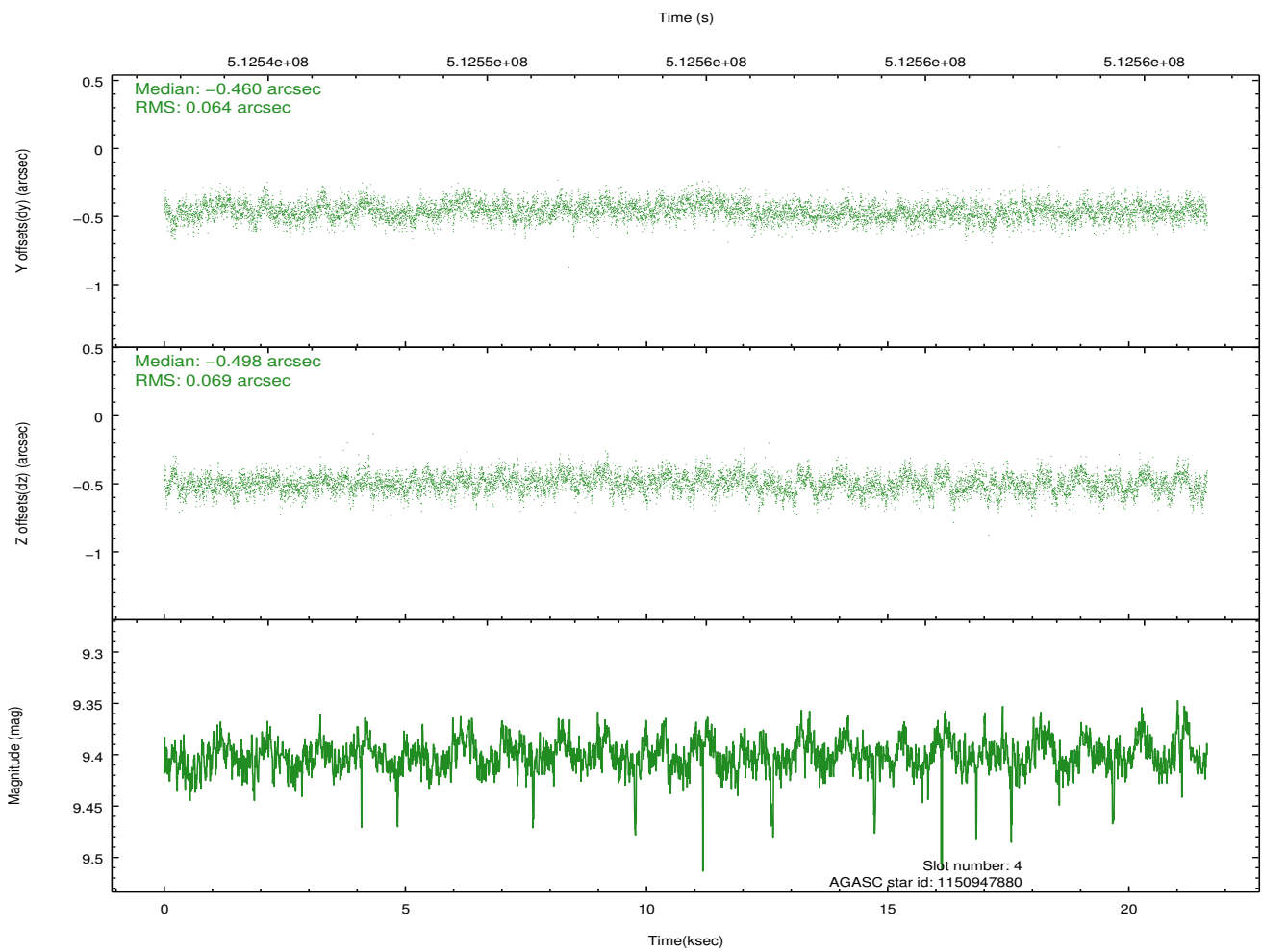
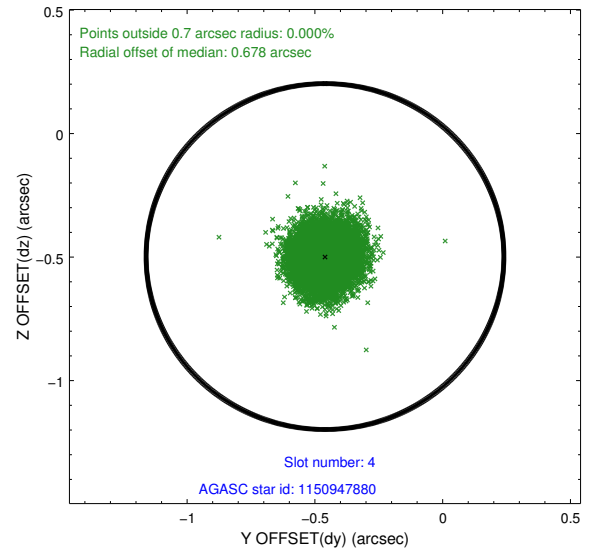
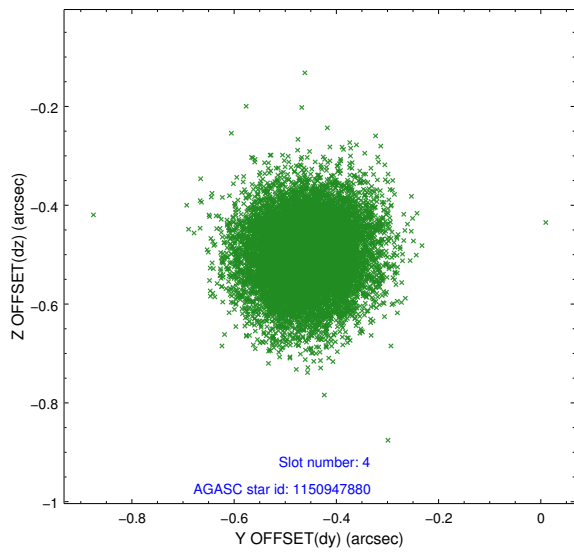
∞

## 2.4 Star Slots

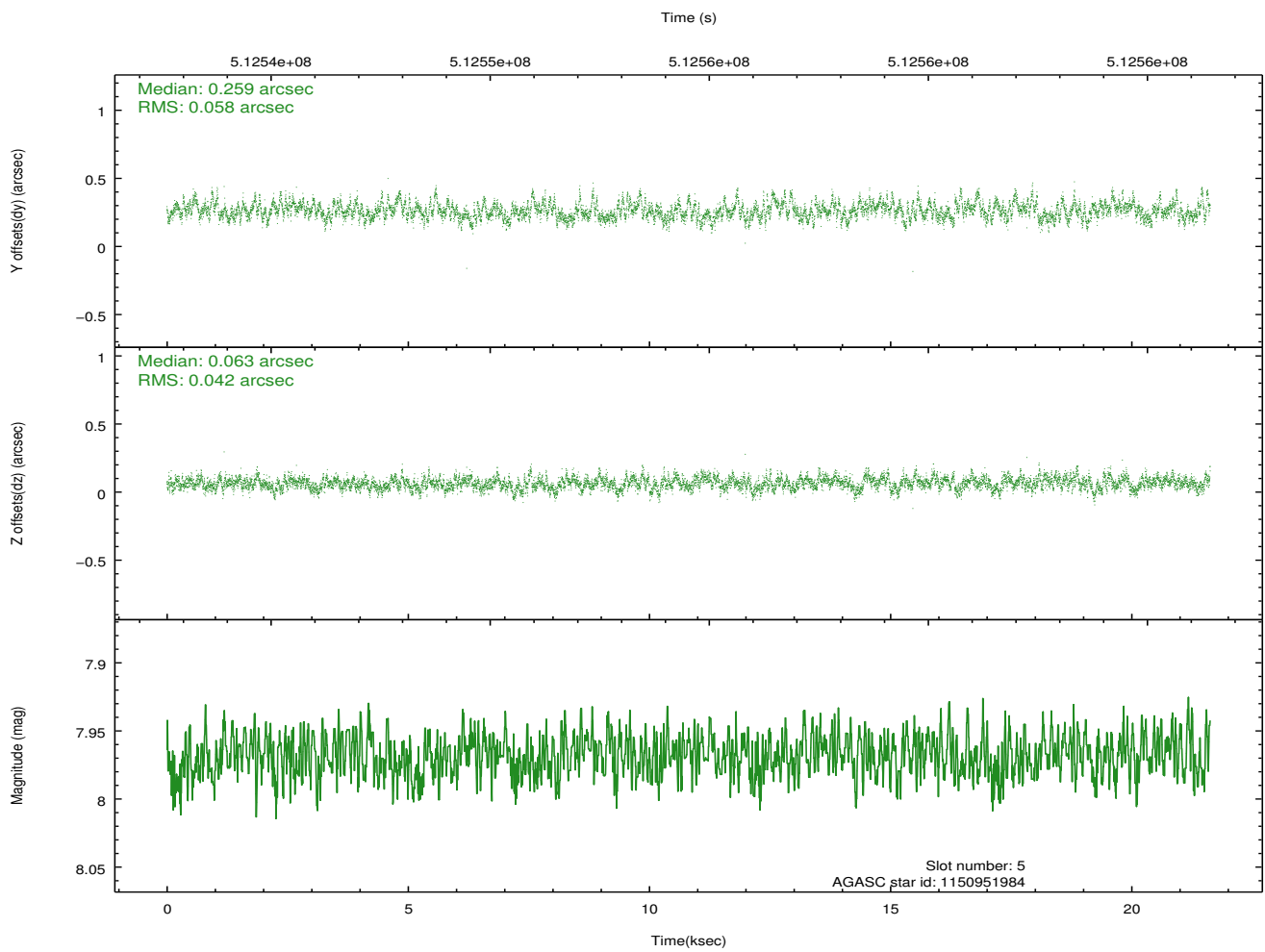
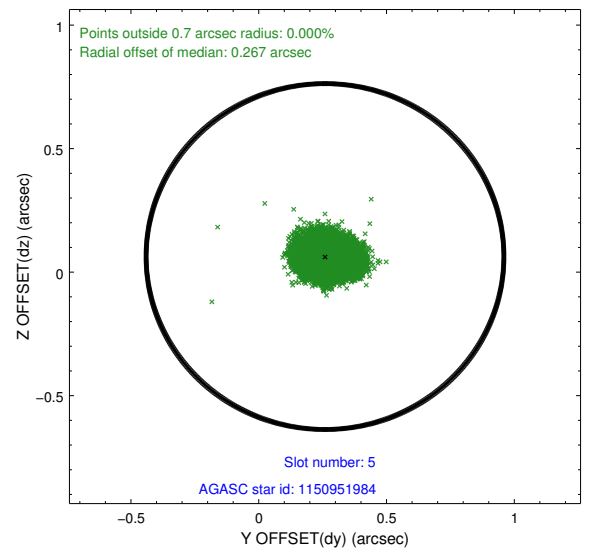
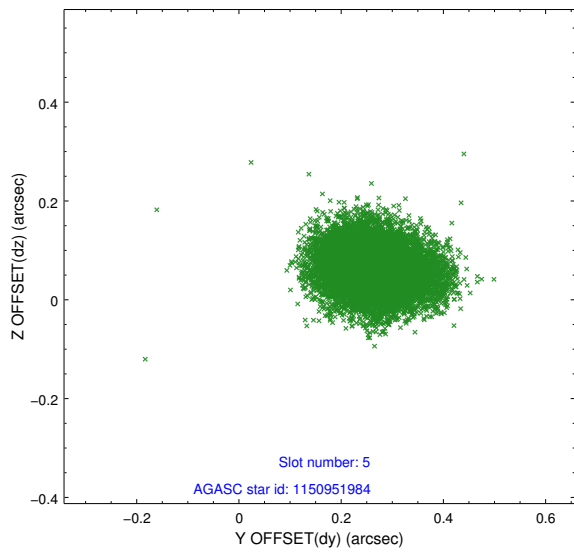
### 2.4.1 Slot 3



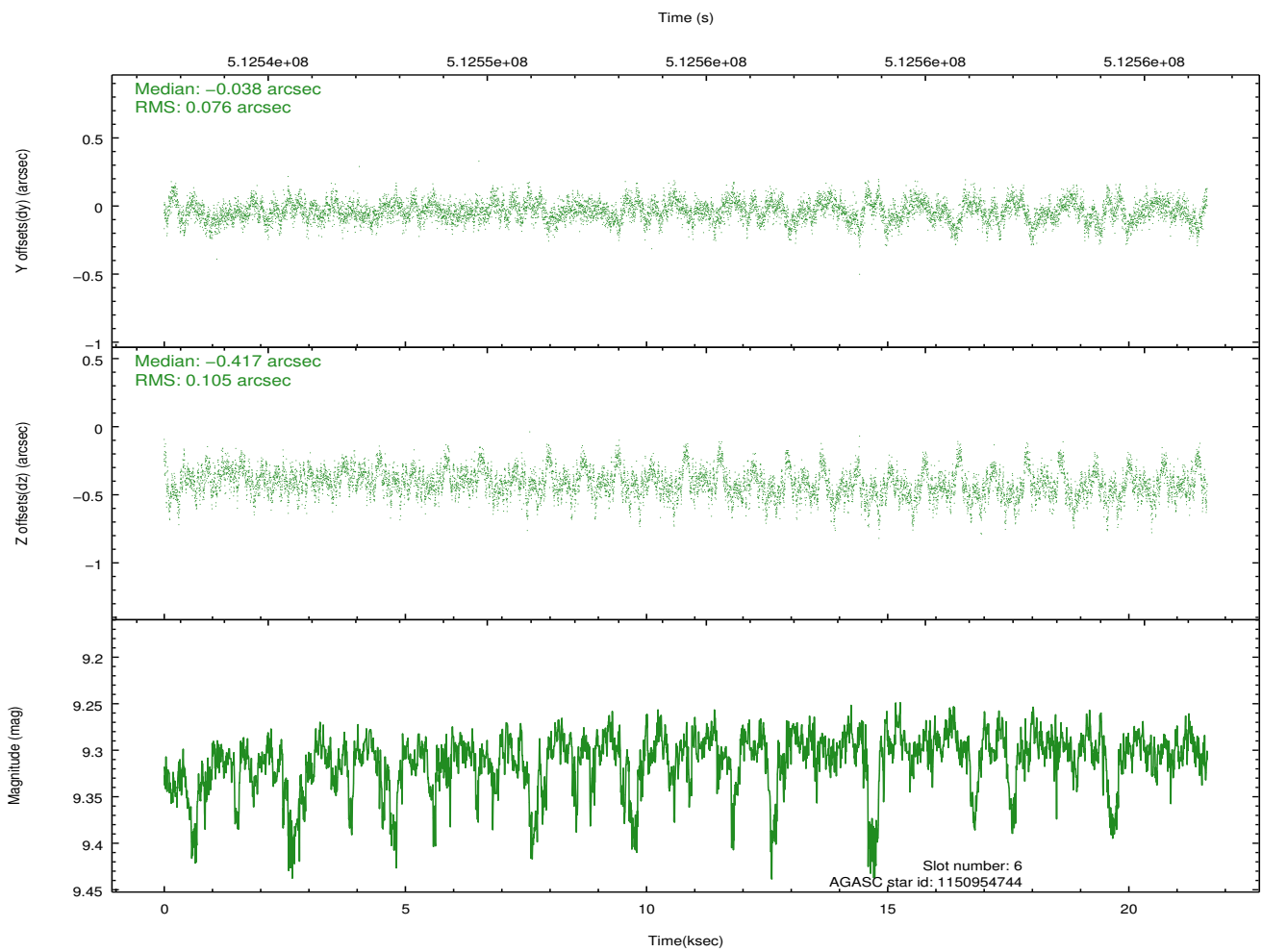
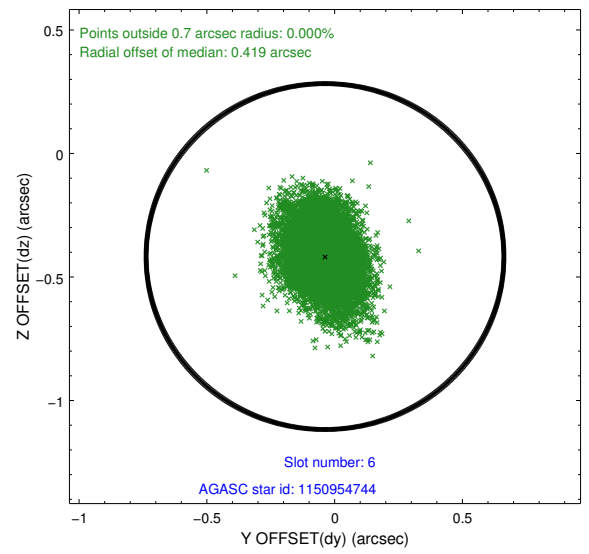
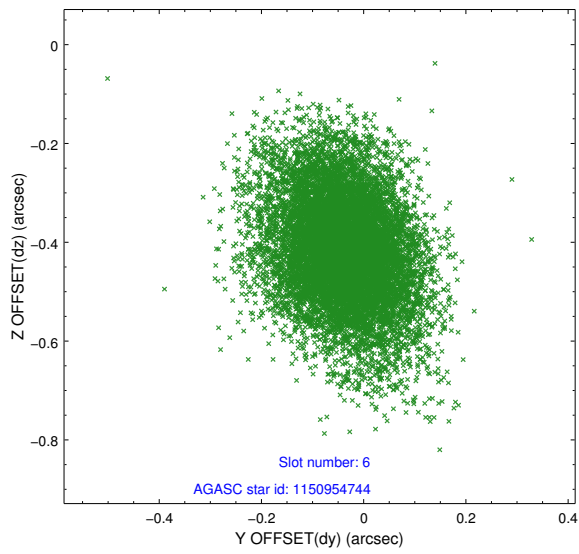
## 2.4.2 Slot 4



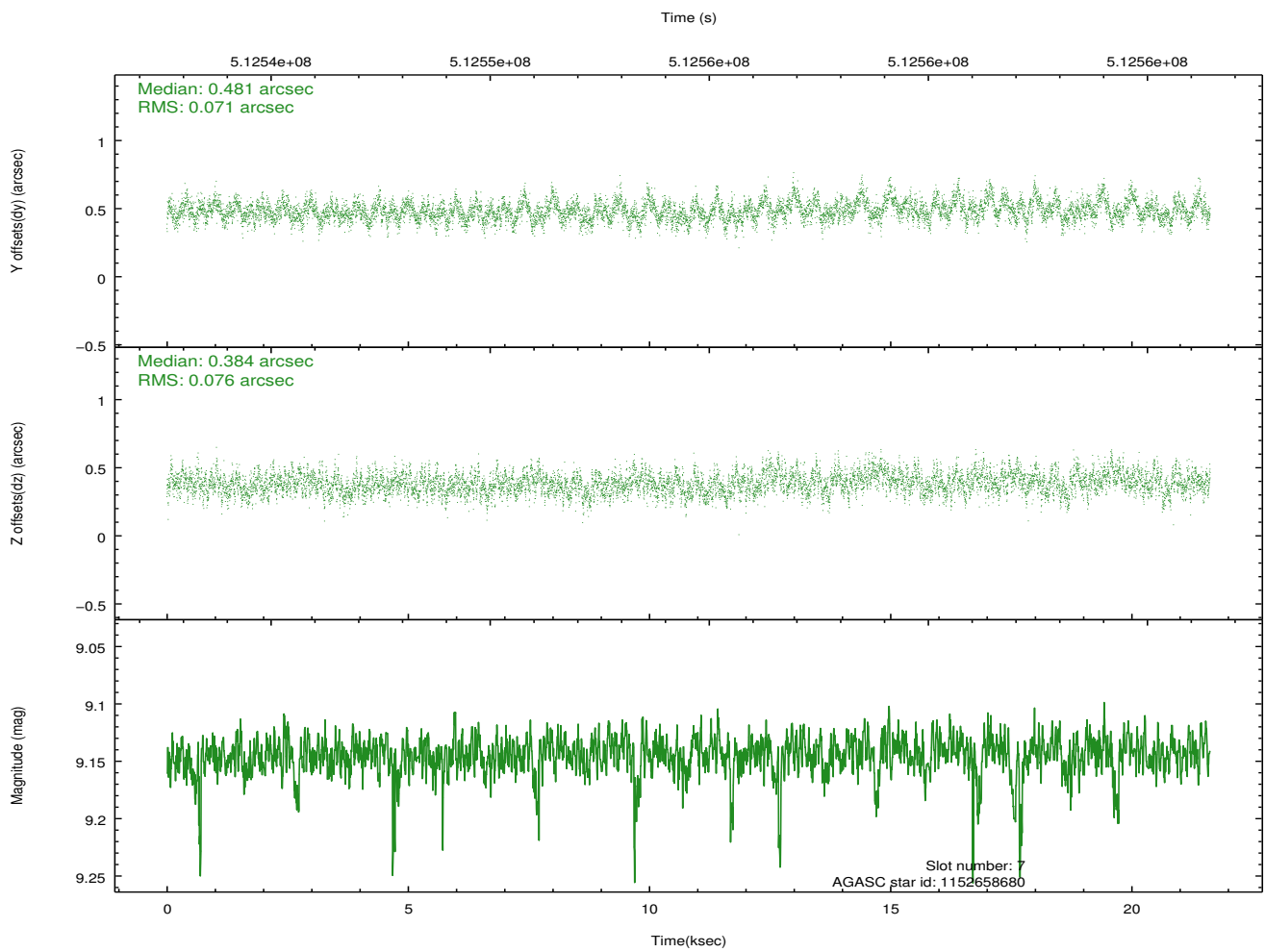
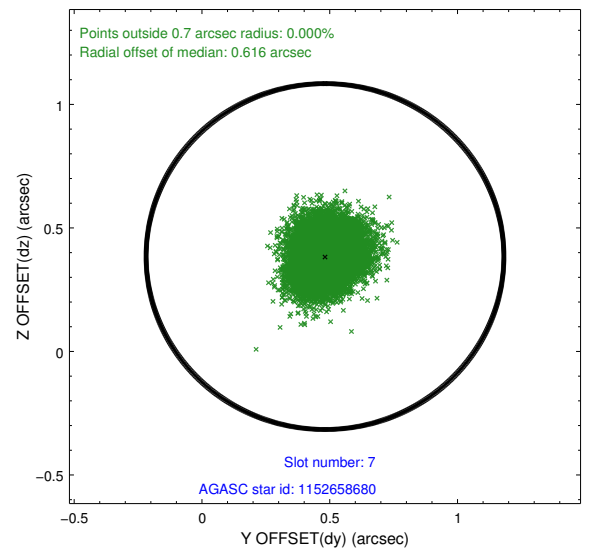
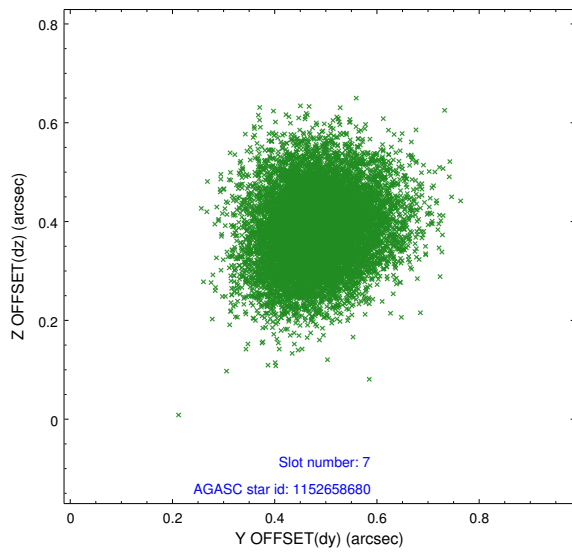
### 2.4.3 Slot 5



## 2.4.4 Slot 6

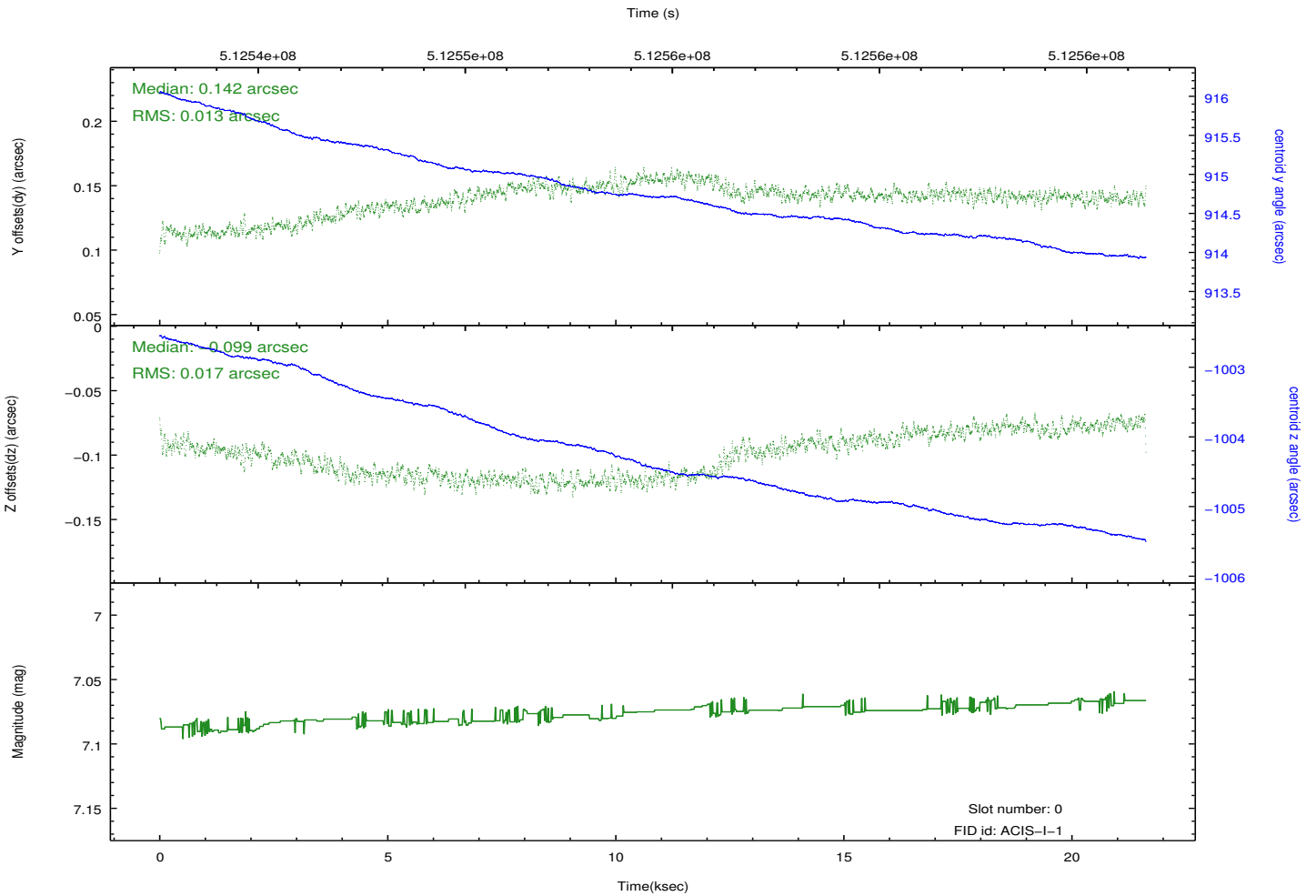
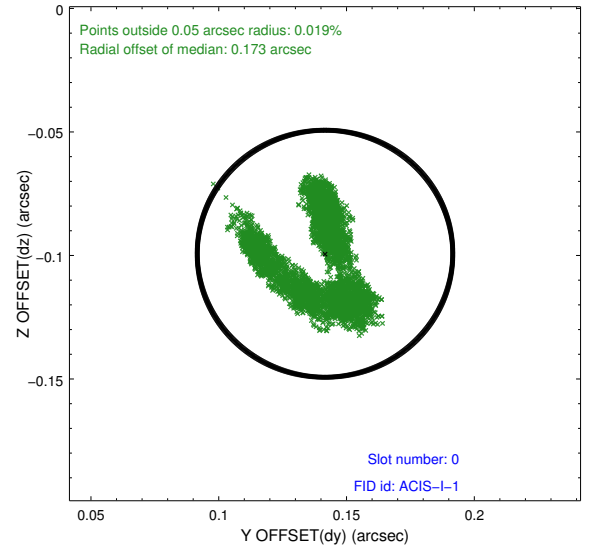
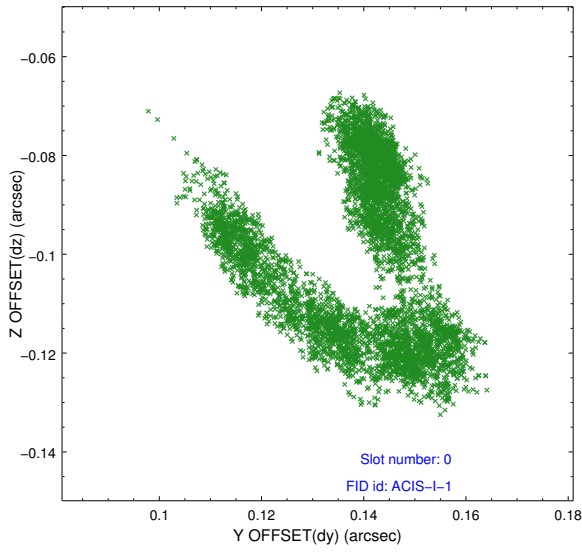


### 2.4.5 Slot 7

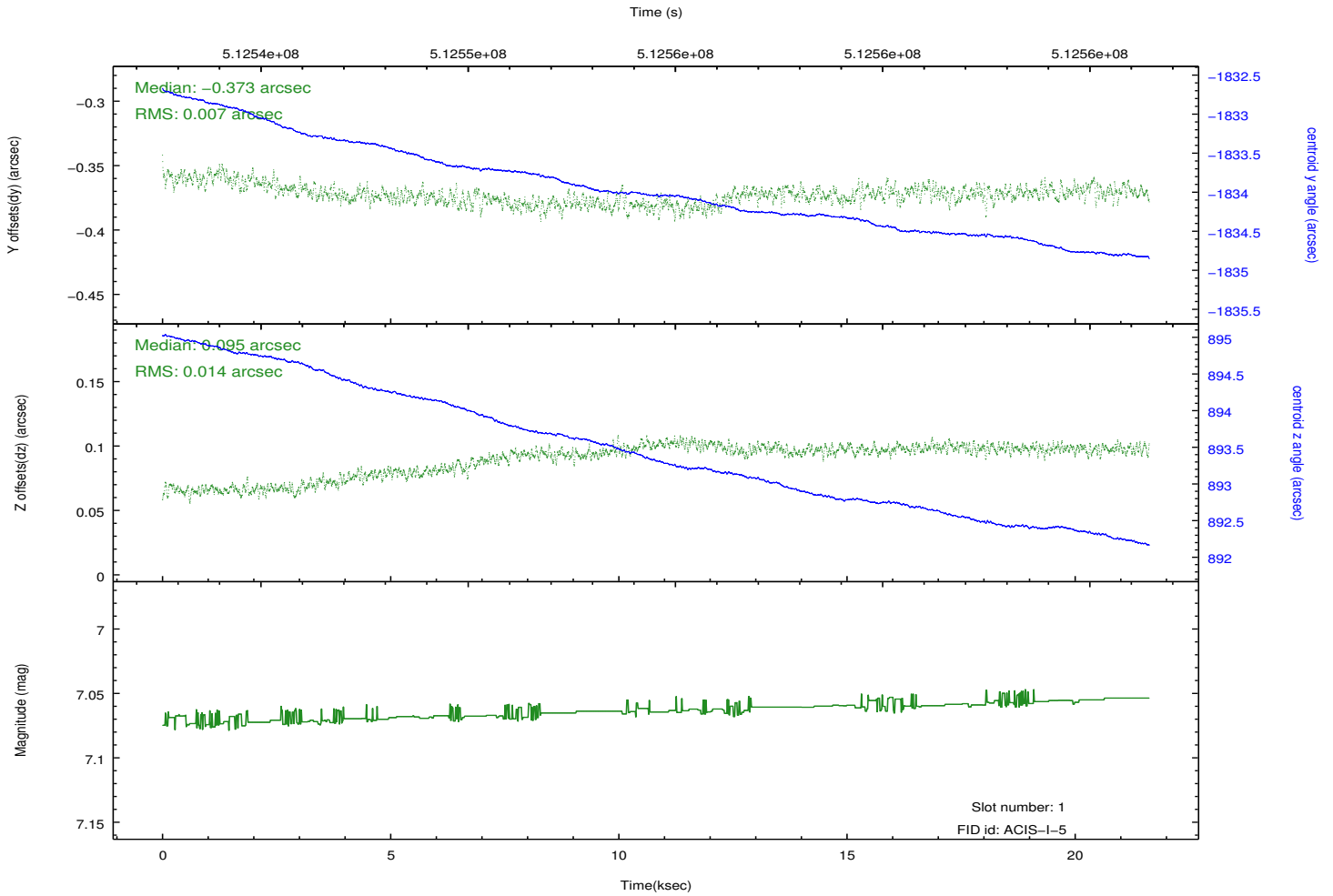
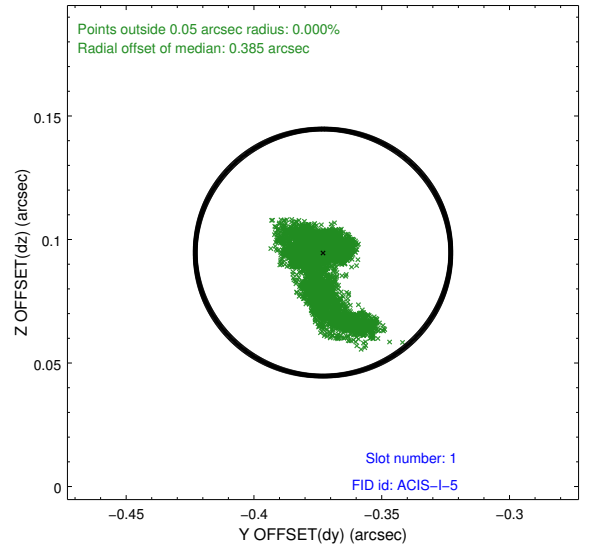
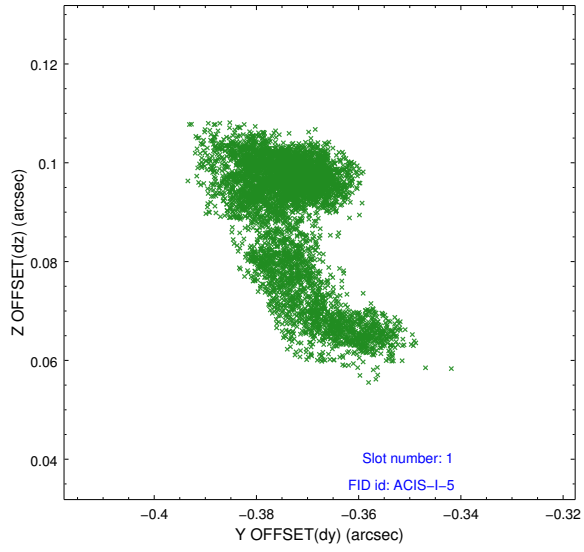


## 2.5 FID Slots

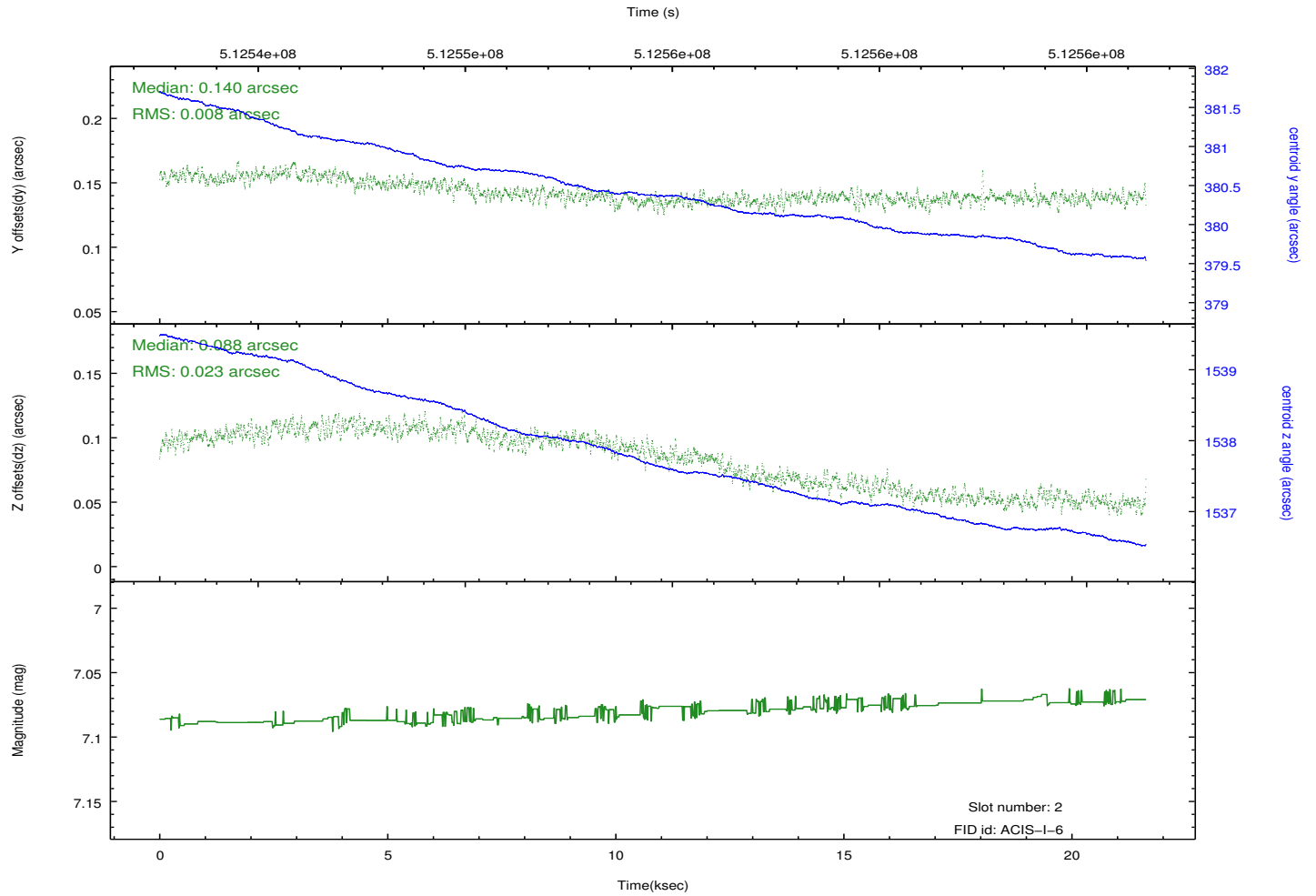
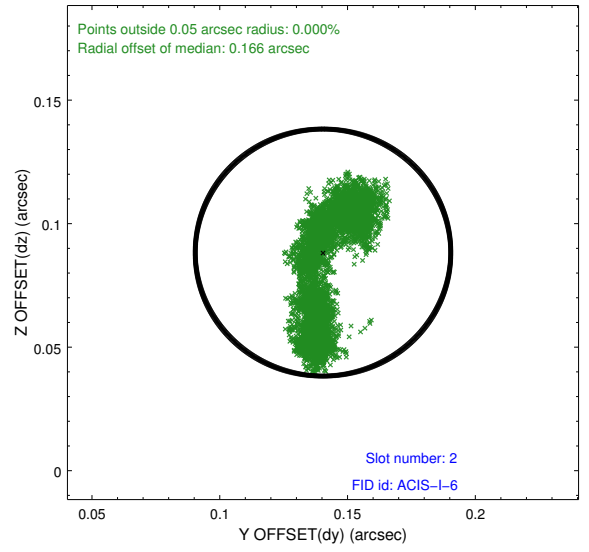
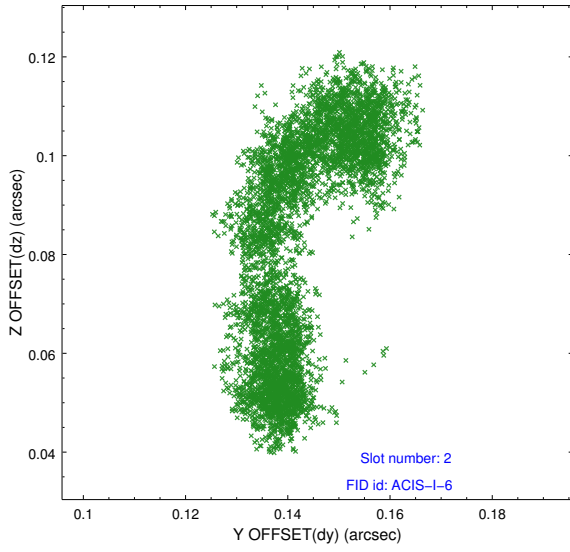
### 2.5.1 Slot 0



## 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	21.088150167108

## 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.