

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 15097 - L2 Version 2  
Chandra X-Ray Center

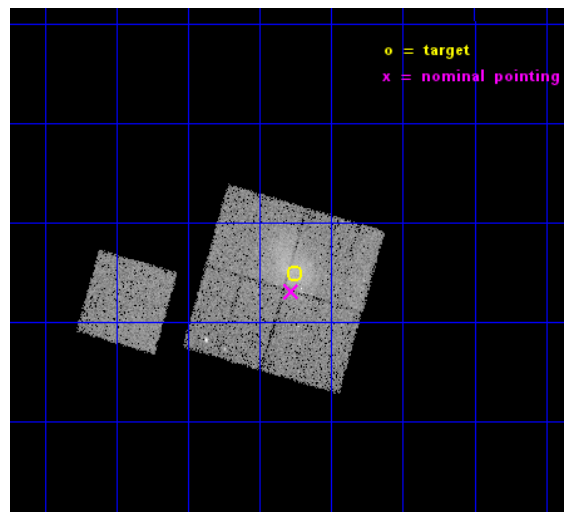
L2 Processing Date : Dec 7 2014

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# 1 Front

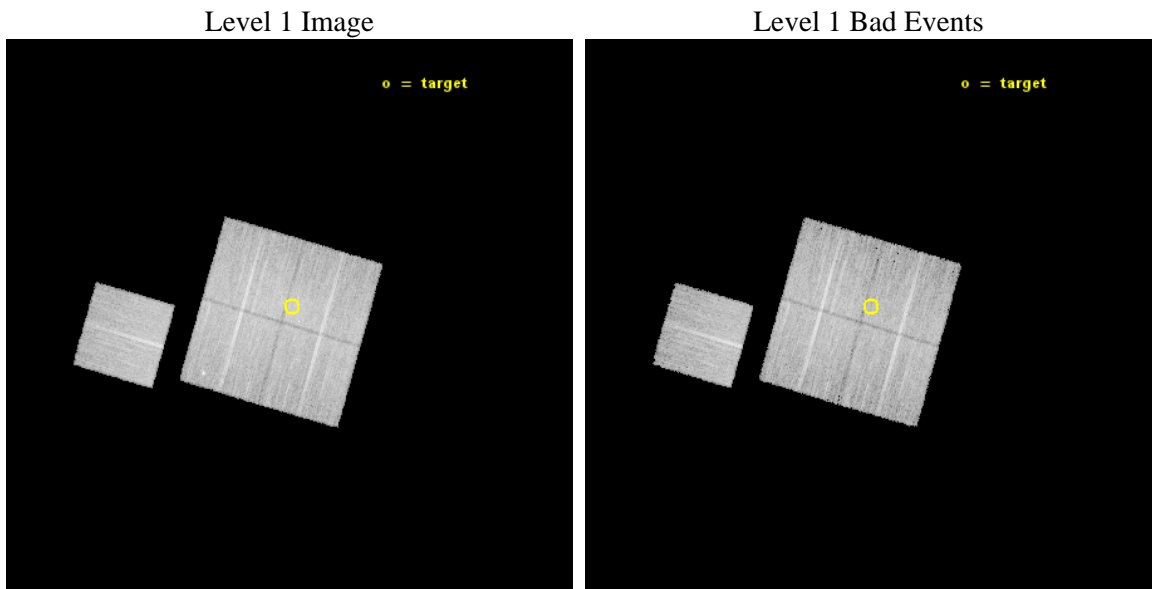
seq_num	801226	Sequence number
obs_id	15097	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G055.97-34.88	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	323.813	Observer's specified target RA [deg]
dec_targ	1.414	Observer's specified target Dec [deg]
ra_nom	323.81940638371	Nominal RA [deg]
dec_nom	1.3852760551018	Nominal Dec [deg]
roll_nom	286.19894773668	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20083.976443946	Sum of GTIs [s]
livetime	19821.564506098	Livetime [s]
ontime0	20083.935403943	Sum of GTIs [s]
ontime1	20083.976443946	Sum of GTIs [s]
ontime2	20080.876483738	Sum of GTIs [s]
ontime3	20080.91754359	Sum of GTIs [s]
ontime6	20083.89436394	Sum of GTIs [s]
l2events	72343	Number of level 2 events



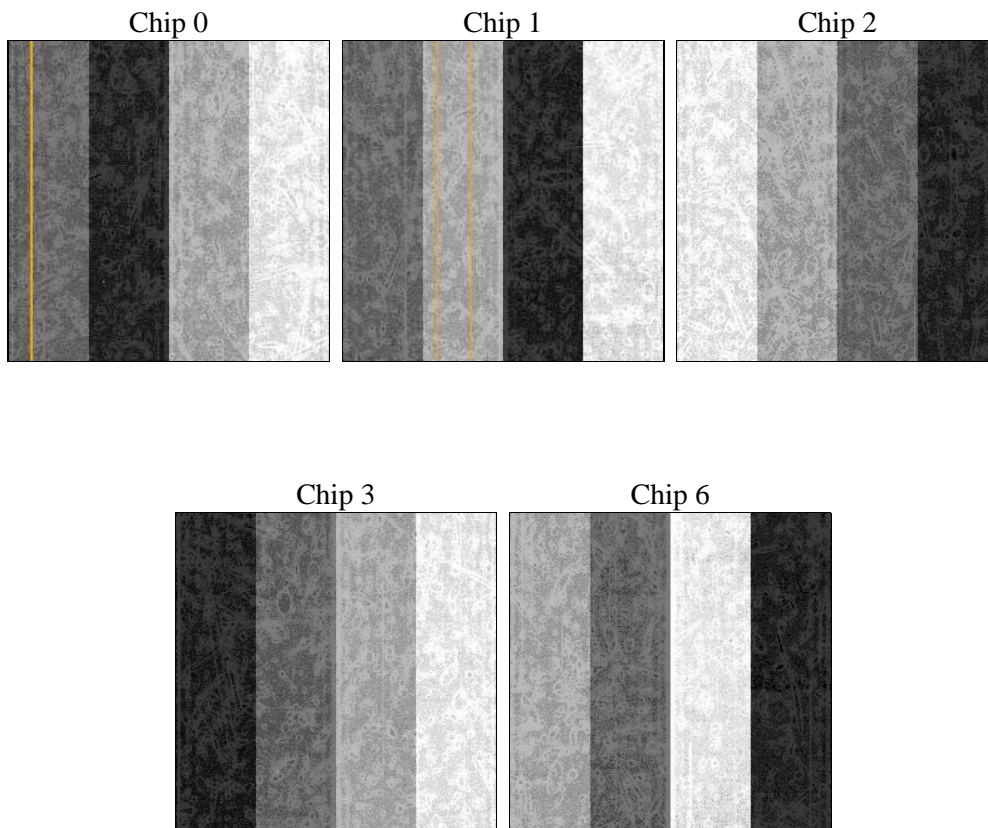
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	20083.976443946	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	20083.935403943	Sum of GTIs [s]
date	2014-12-07T21:35:55	Date and time of file creation	ontime1	20083.976443946	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20080.876483738	Sum of GTIs [s]
			ontime3	20080.91754359	Sum of GTIs [s]
			ontime6	20083.89436394	Sum of GTIs [s]
			l1events	504221	Number of level 1 events

### 2.1.4 Events

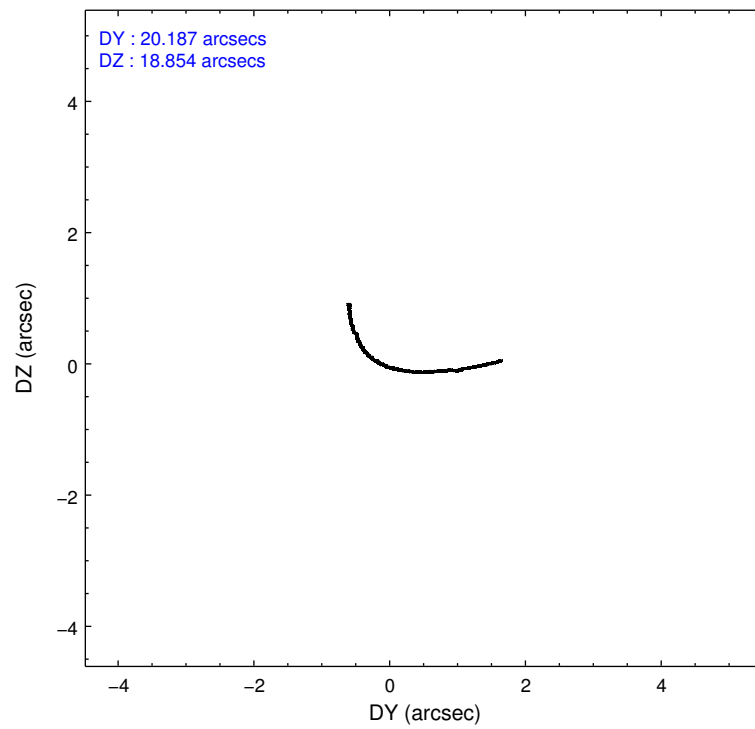
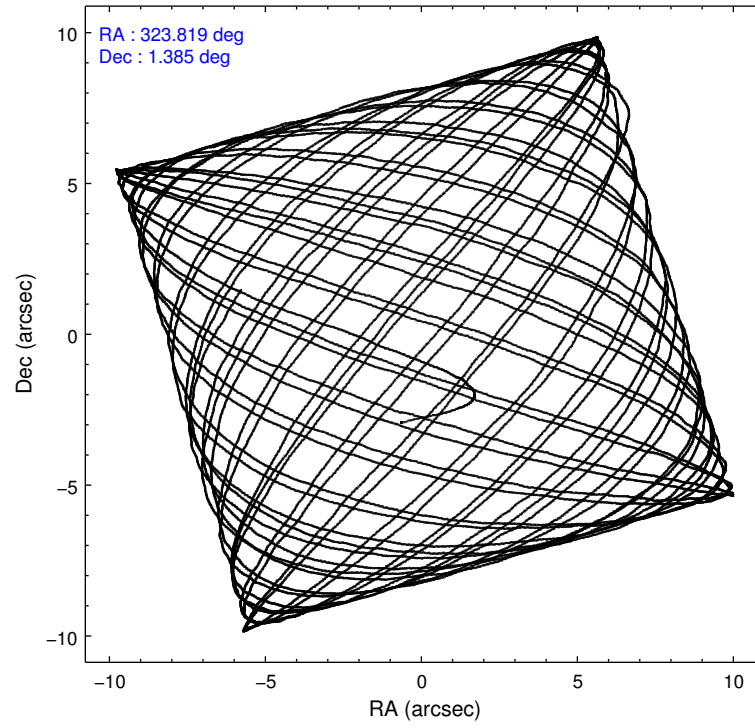
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	94505	99815	103819	105739	100343
rejected events	79751	78999	89004	87775	85737
rejected %	84%	79%	85%	83%	85%

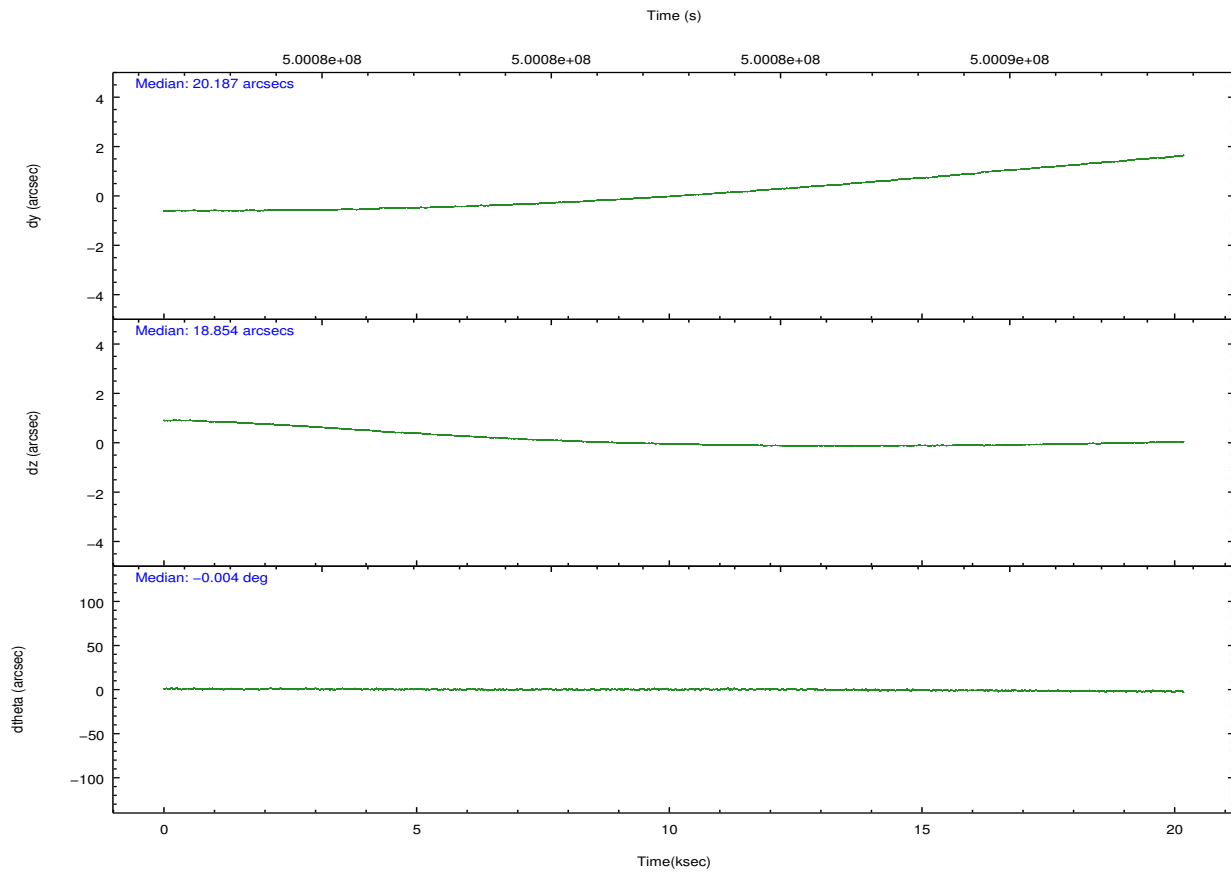
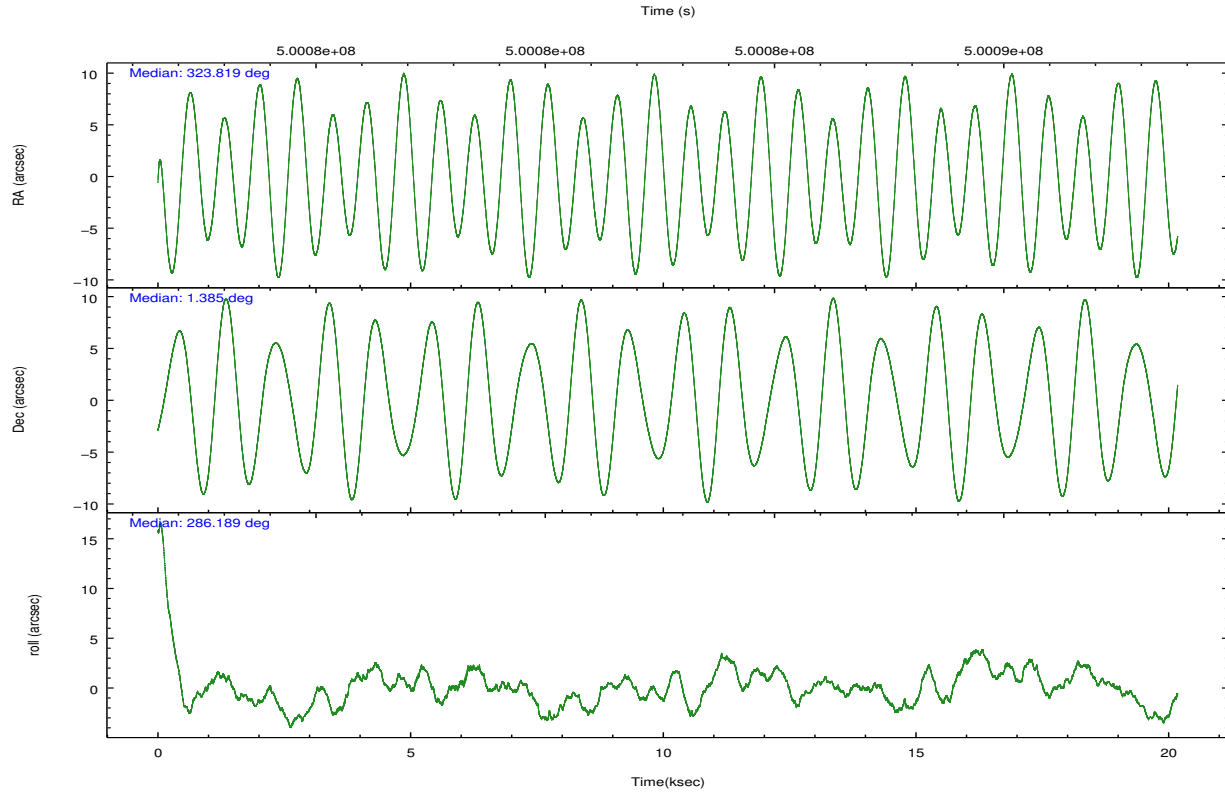
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5509	9581	5801	8285	4937
	5%	9%	5%	7%	4%
grade 1 events	74	59	57	73	54
	0%	0%	0%	0%	0%
grade 2 events	3412	4251	3375	3448	3192
	3%	4%	3%	3%	3%
grade 3 events	1418	1615	1329	1429	1387
	1%	1%	1%	1%	1%
grade 4 events	1293	1553	1378	1495	1354
	1%	1%	1%	1%	1%
grade 5 events	4575	5050	4501	5405	5157
	4%	5%	4%	5%	5%
grade 6 events	3126	3819	2938	3311	3739
	3%	3%	2%	3%	3%
grade 7 events	75098	73887	84440	82293	80523
	79%	74%	81%	77%	80%

## 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	323.799492	323.8194063837061	CCD I2 on	Y	Y
[deg] Pointing Dec	1.404232	1.385276055101824	CCD I3 on	Y	Y
[deg] Pointing Roll	285.990754	286.1989477366783	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	-238.422463	-238.4149198398239	CCD S3 on	N	N
[mm] SIM translation stage offset	4.83	4.822466836894193	CCD S4 on	N	N
[s] Observation start time (MET)	500072755.184000	500071364.1905	CCD S5 on	N	N
Observation start date	2013-11-05T21:04:48	2013-11-05T20:42:44	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	500092755.184000	500093784.52923	On-chip summing requested	N	N
Observation end date	2013-11-06T02:38:08	2013-11-06T02:56:24	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





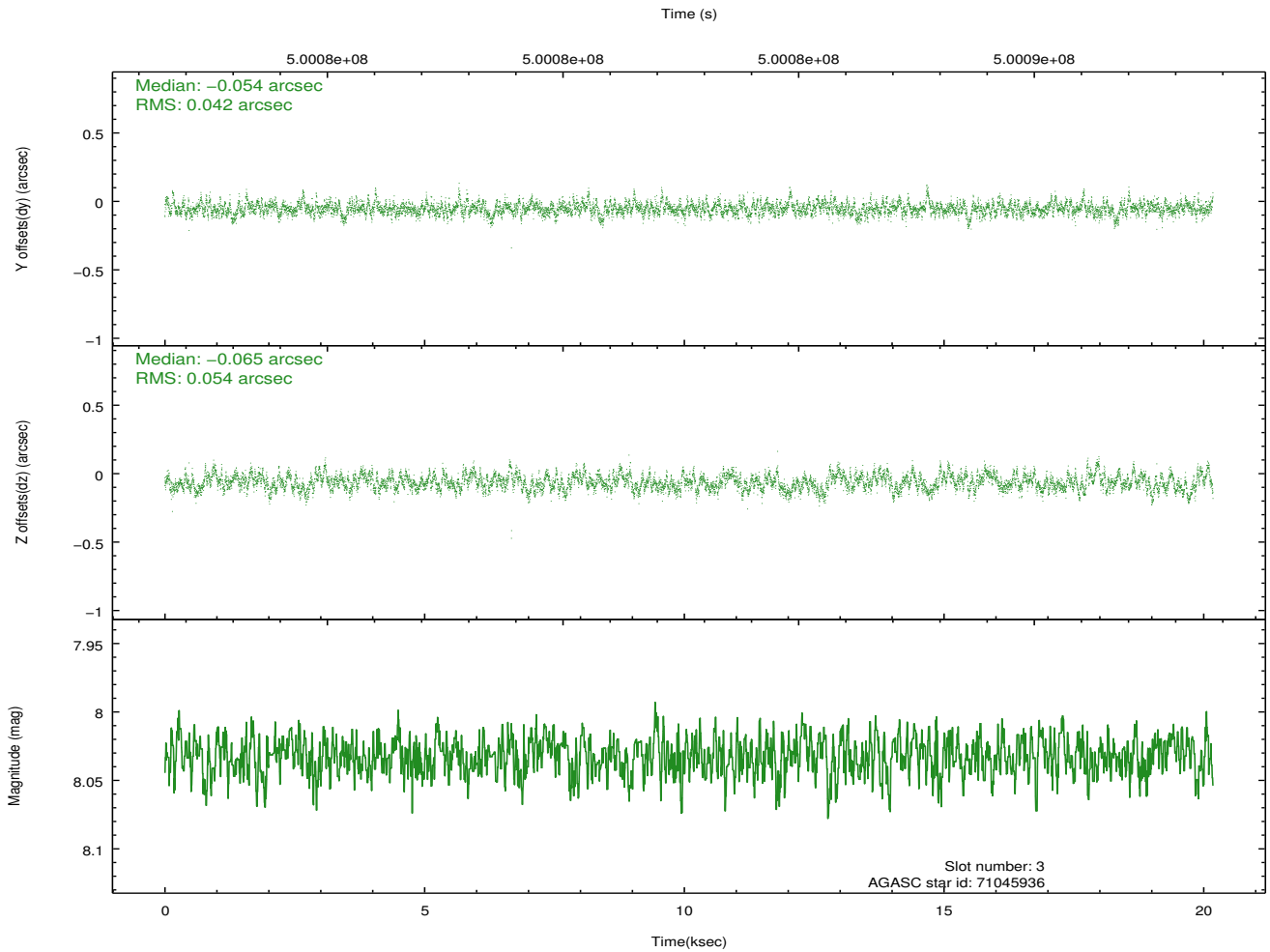
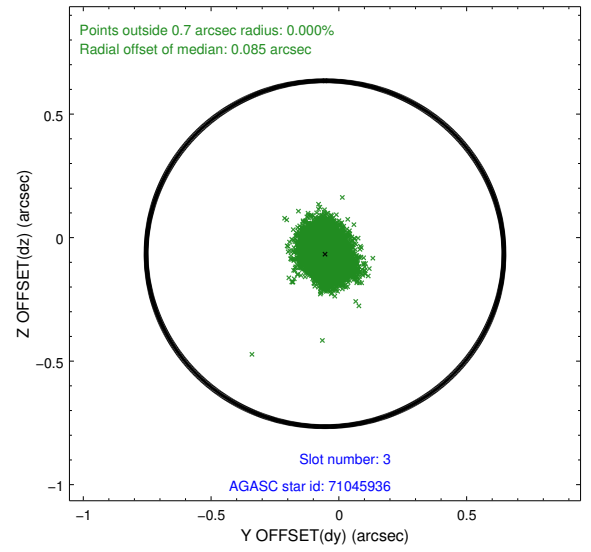
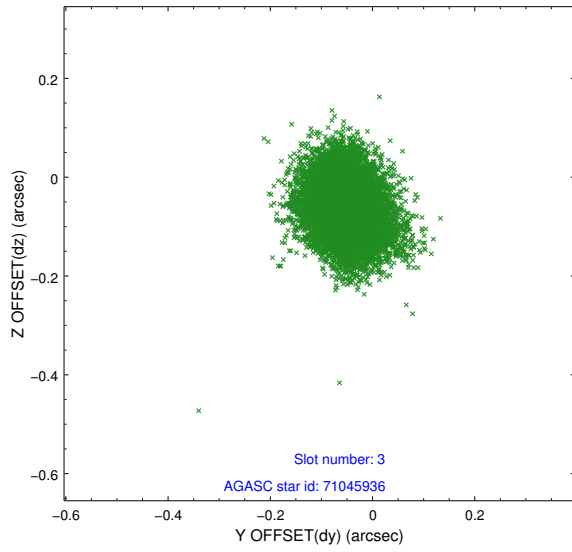
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.10	4922	-0.008	0.085	0.014	0.027	0.000000	0.000000	919.05	-743.44
1	FID		ACIS-I-5	7.07	4922	-0.207	0.014	0.013	0.032	0.000000	0.000000	-1829.22	1153.81
2	FID		ACIS-I-6	7.06	4922	0.125	-0.031	0.014	0.033	0.000000	0.000000	384.44	1798.56
3	GUIDE	used	71045936	8.03	9840	-0.054	-0.065	0.073	0.120	323.338333	1.084101	652.36	-1912.27
4	GUIDE	used	71047304	8.00	9844	0.206	0.266	0.088	0.142	323.512734	1.382353	-207.76	-1013.42
5	GUIDE	used	71047072	9.00	9839	0.098	-0.153	0.111	0.172	323.264848	0.813095	1516.48	-2435.89
6	GUIDE	used	71178640	9.19	9839	-0.050	-0.163	0.152	0.234	324.390131	1.438488	467.07	2077.17
7	GUIDE	used	71569672	9.08	9840	-0.206	0.112	0.113	0.184	323.911752	2.098475	-2291.24	1077.05

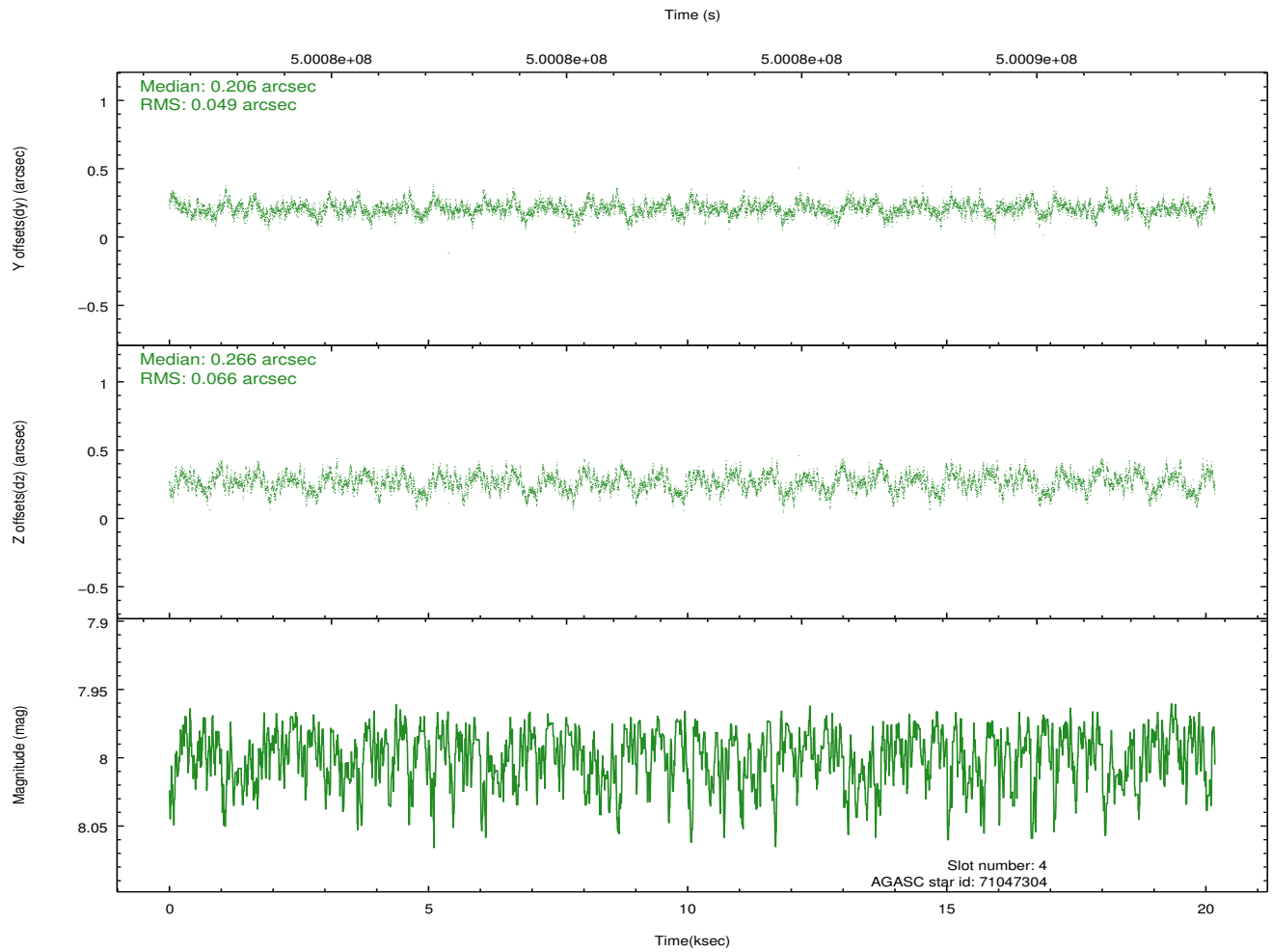
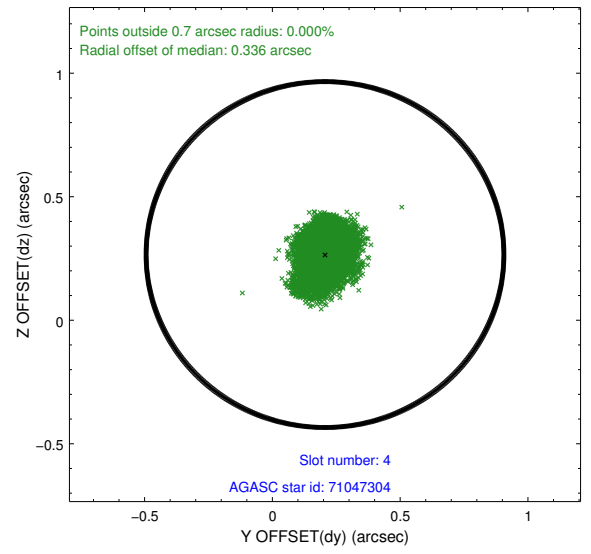
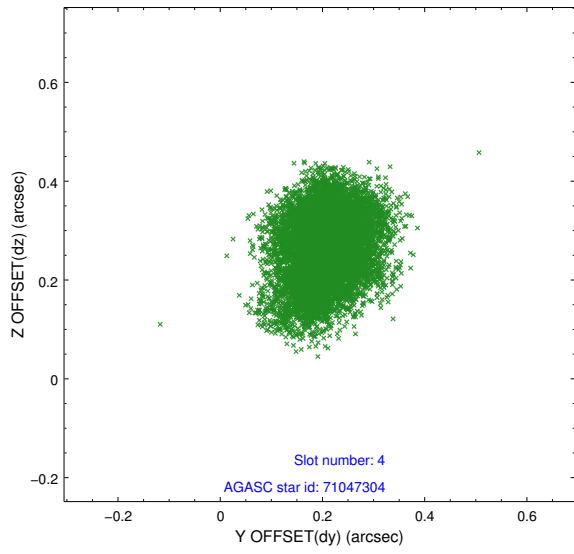
∞

## 2.4 Star Slots

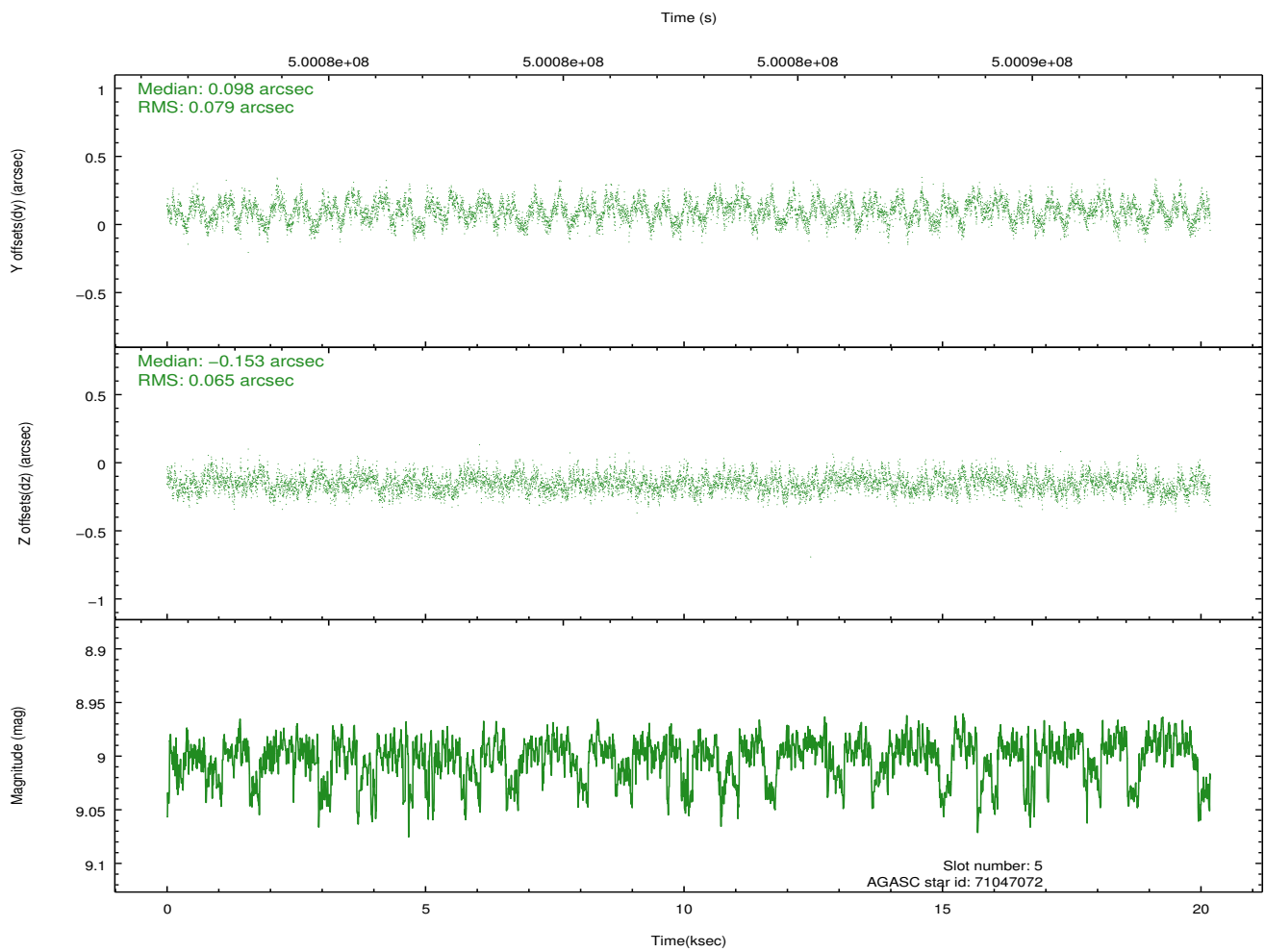
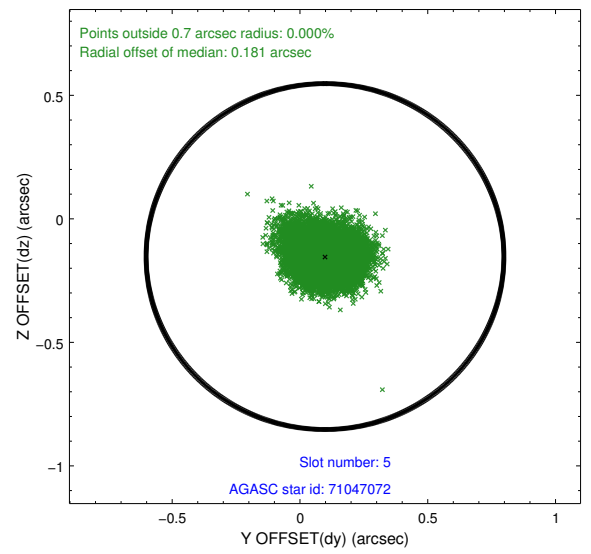
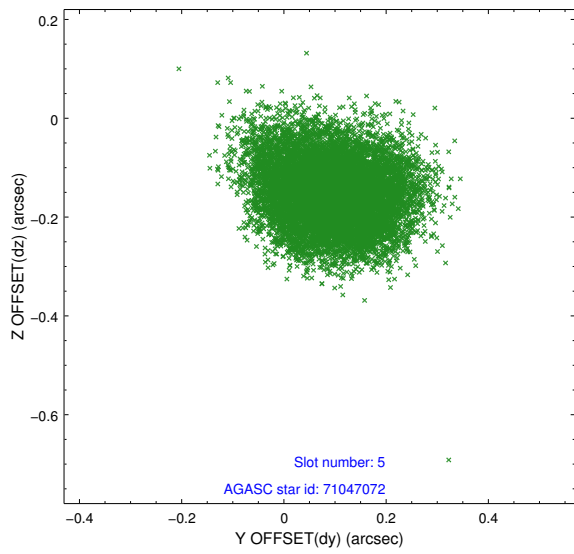
### 2.4.1 Slot 3



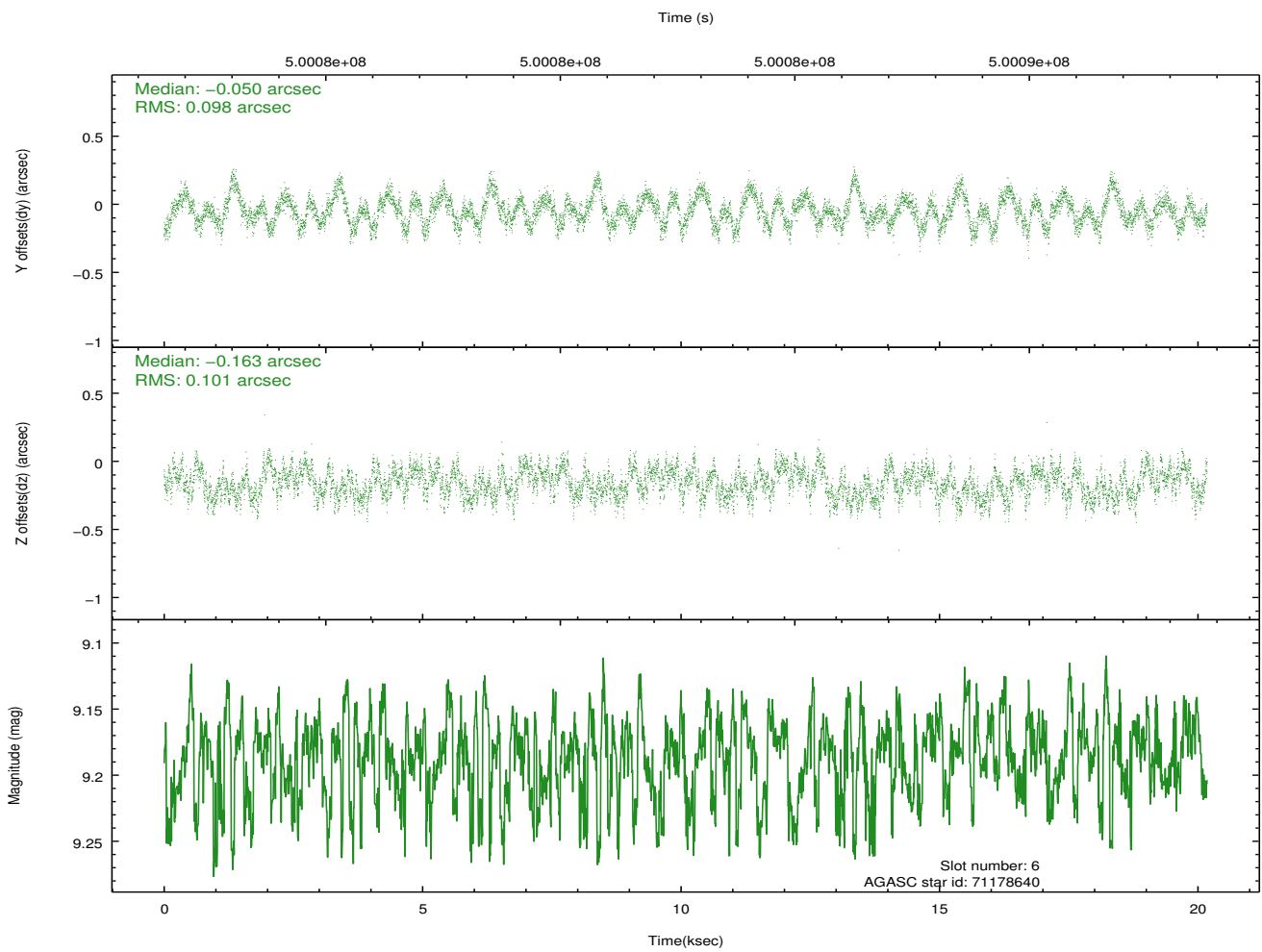
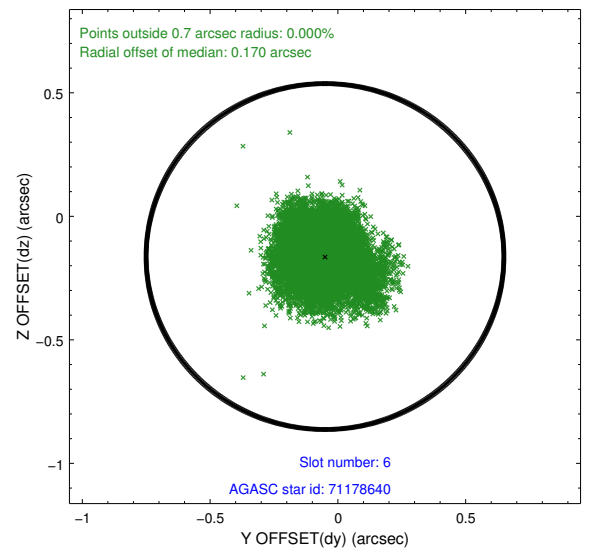
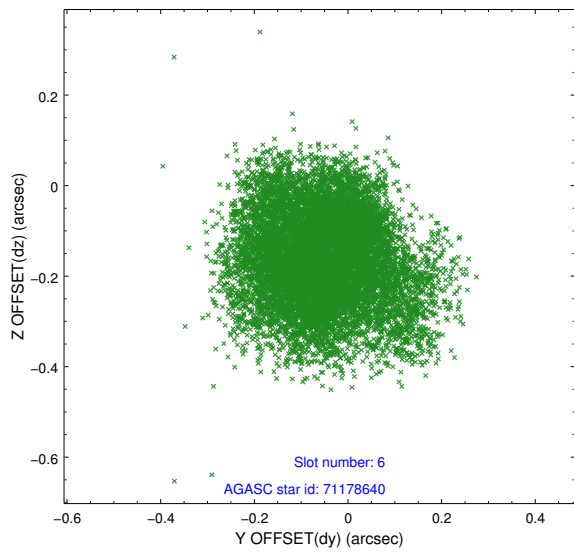
## 2.4.2 Slot 4



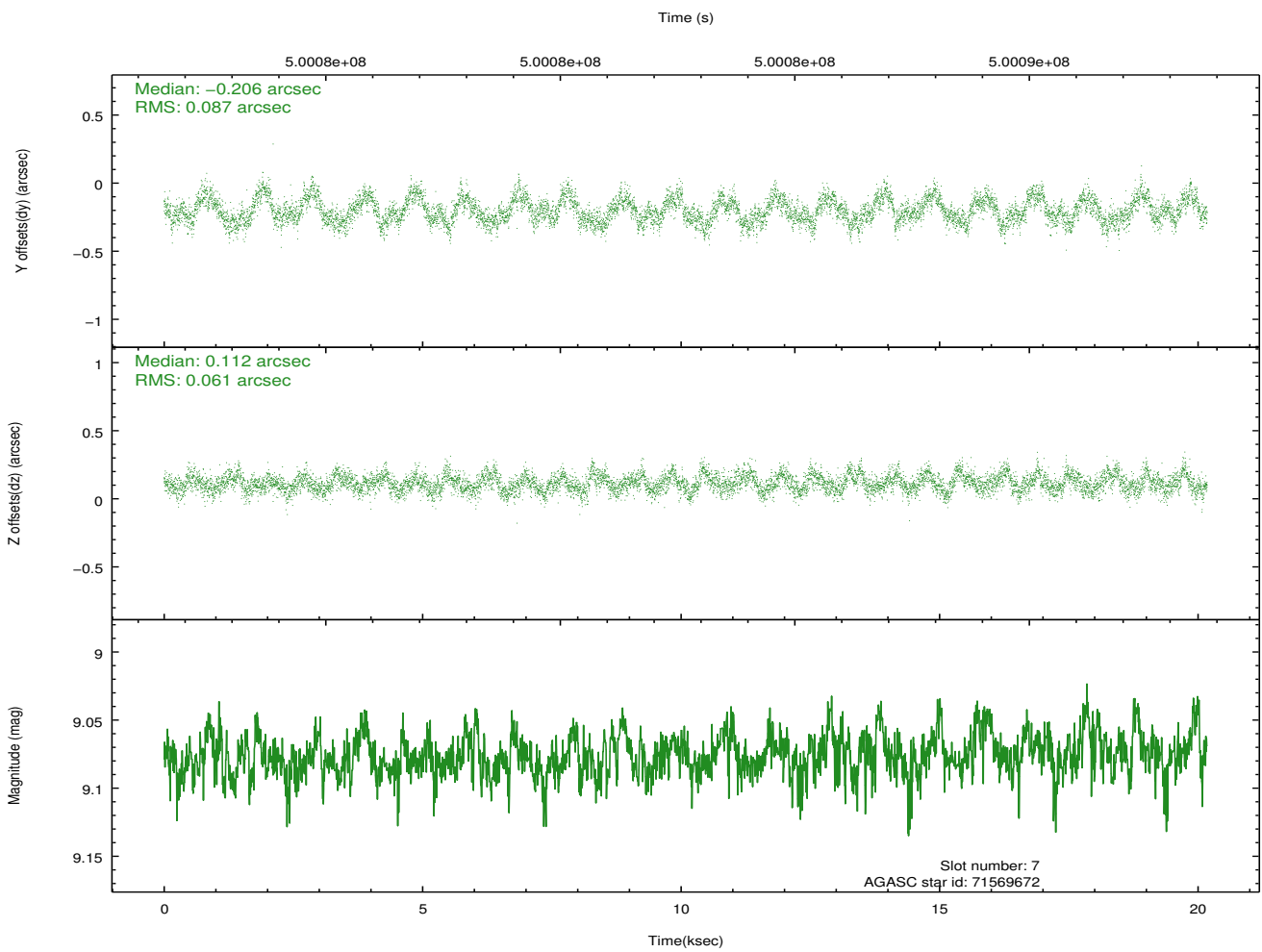
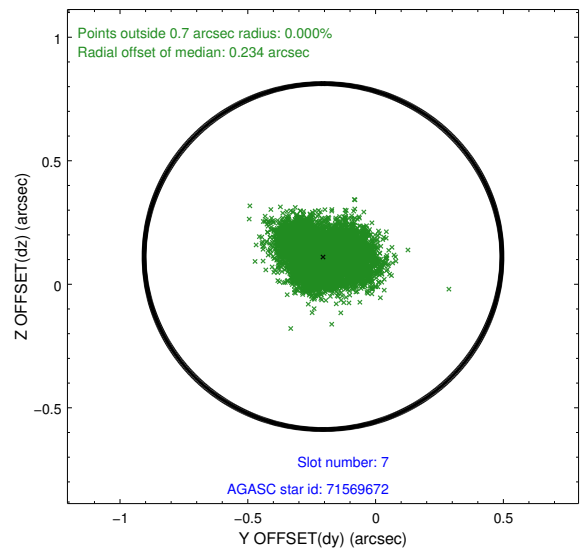
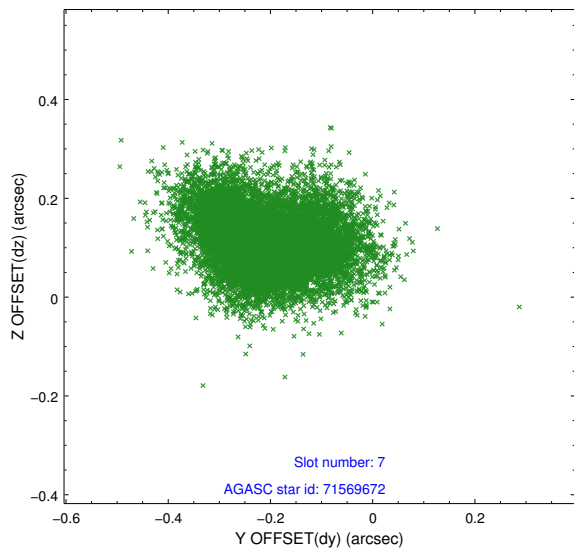
### 2.4.3 Slot 5



## 2.4.4 Slot 6

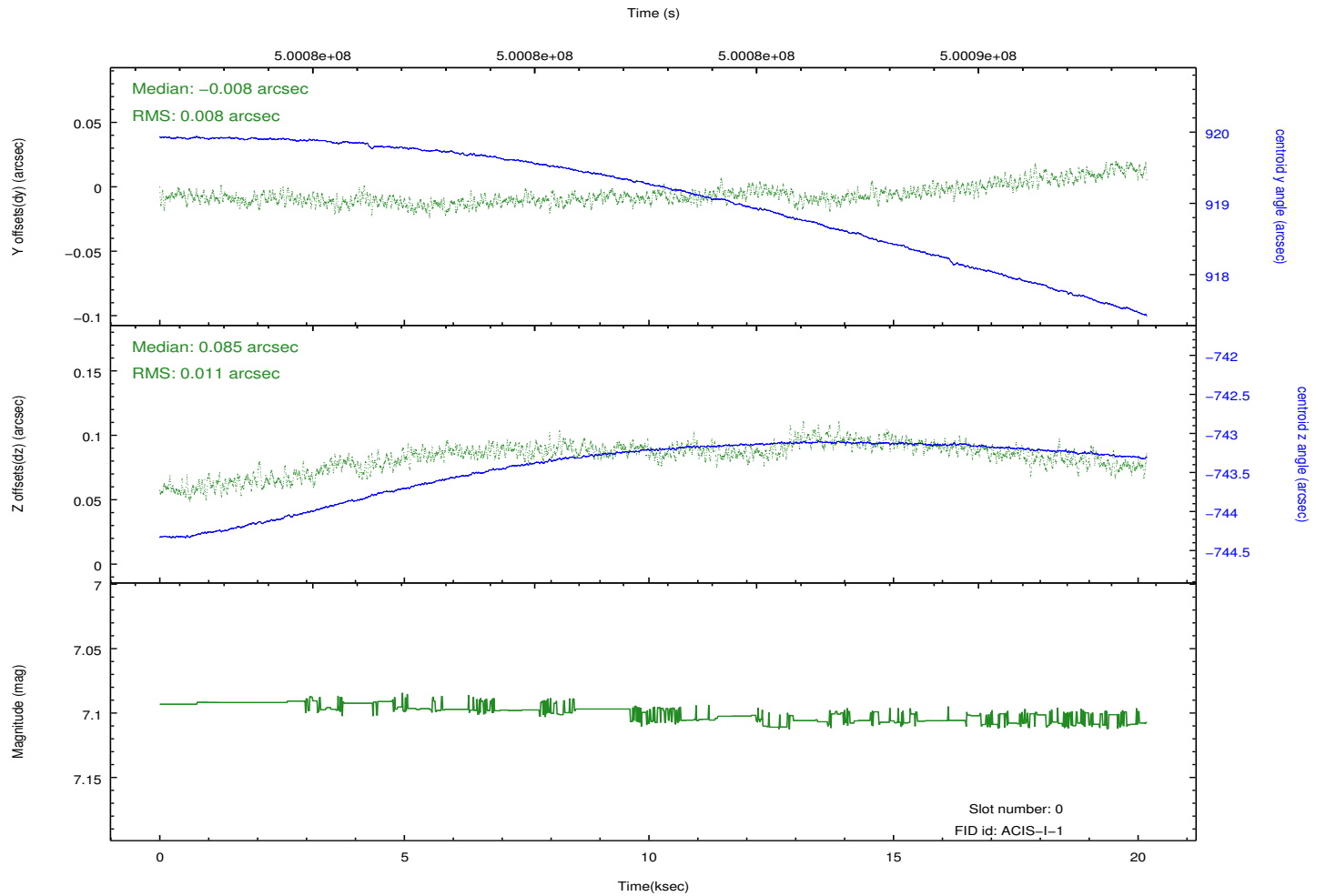
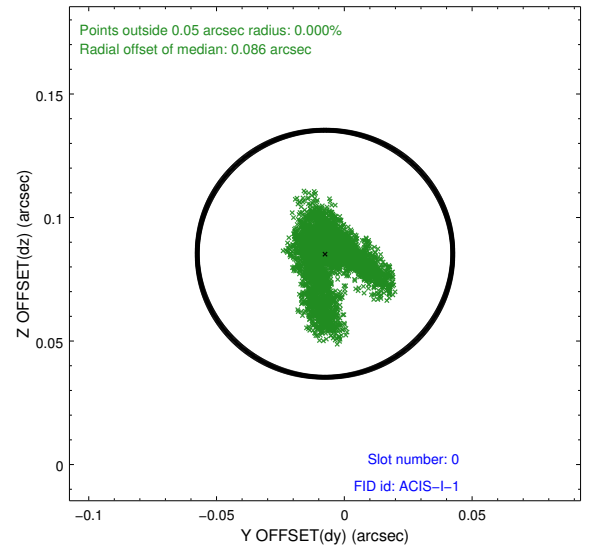
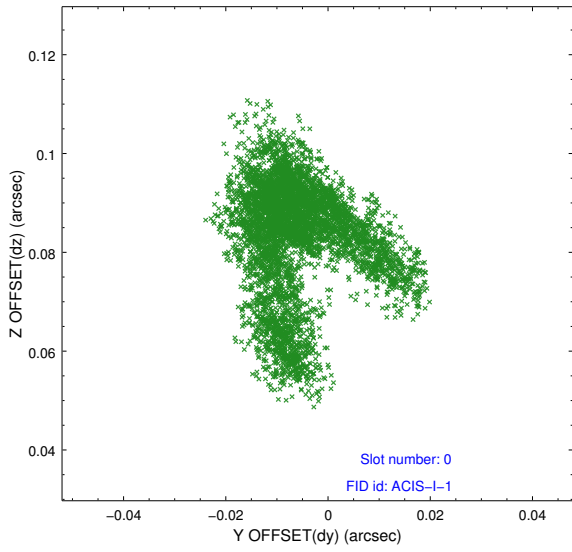


## 2.4.5 Slot 7

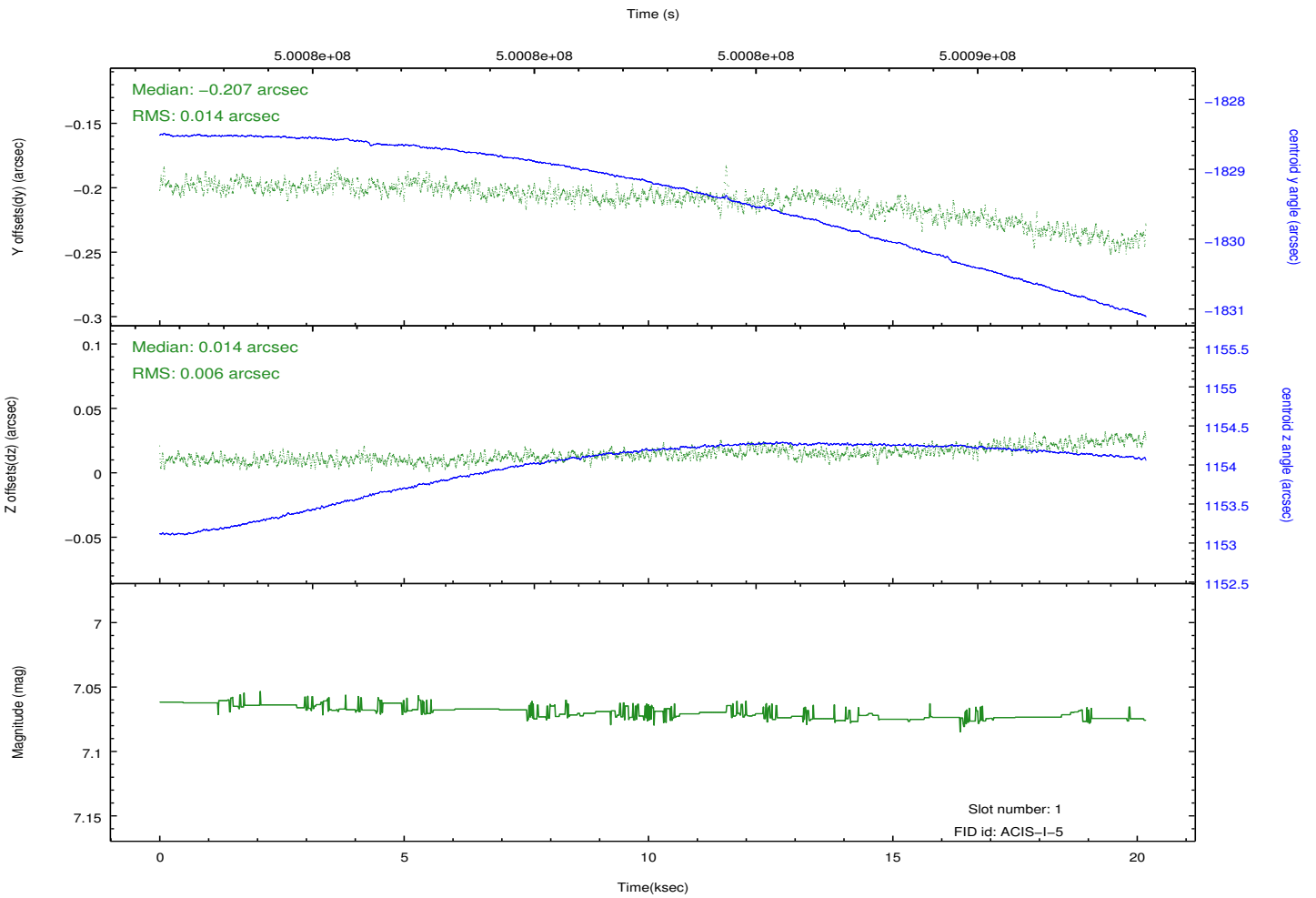
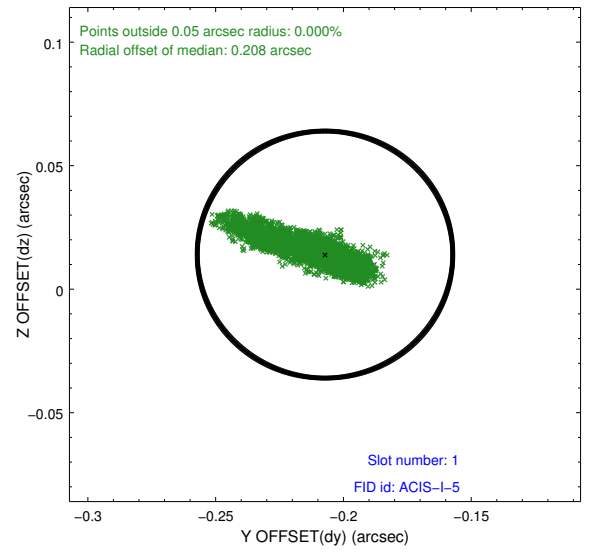
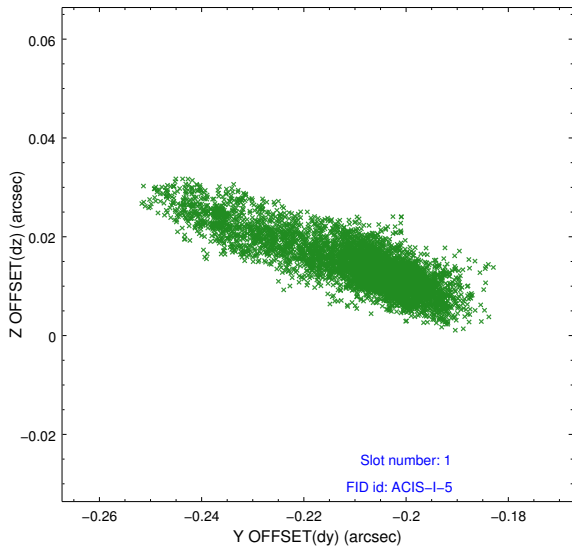


## 2.5 FID Slots

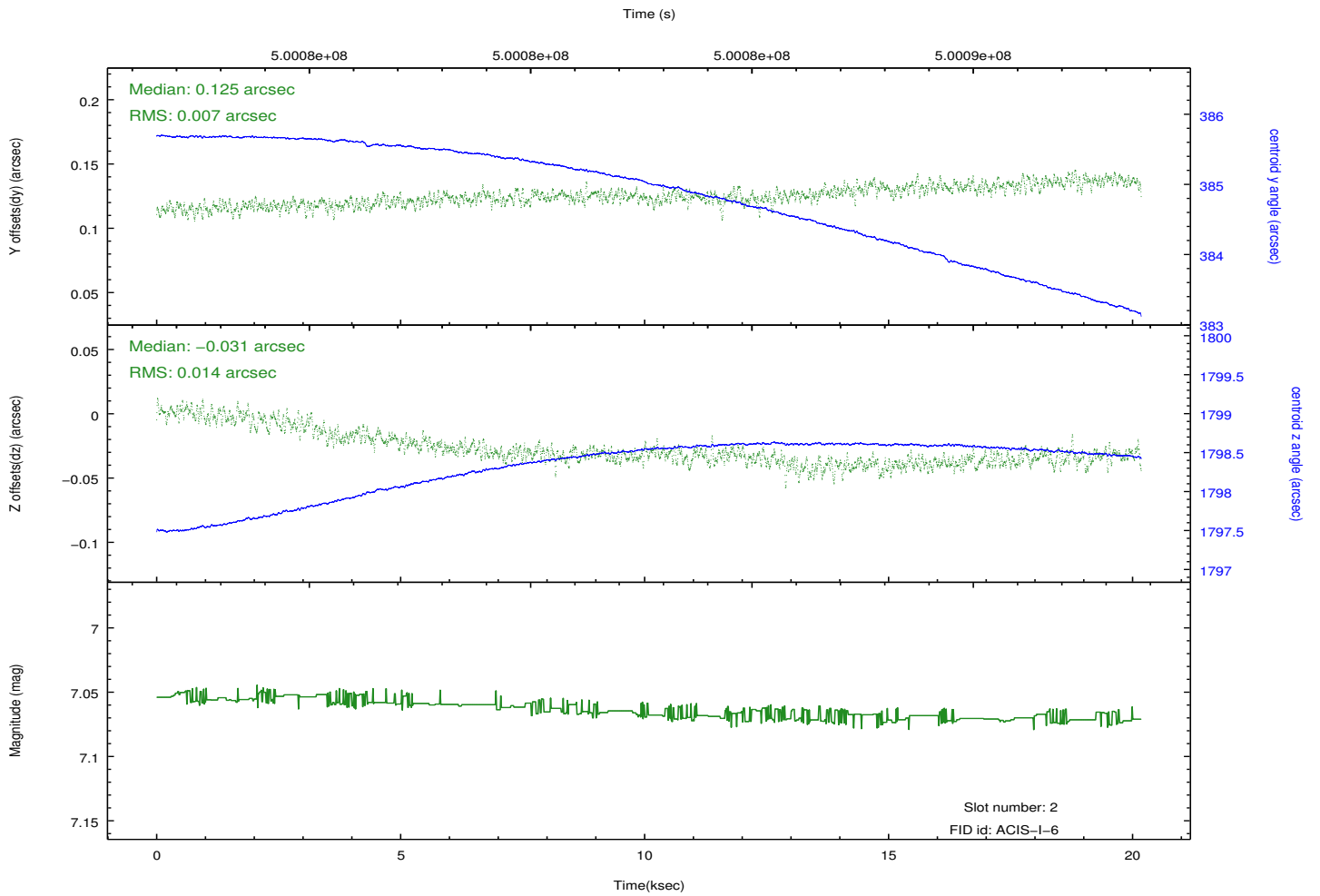
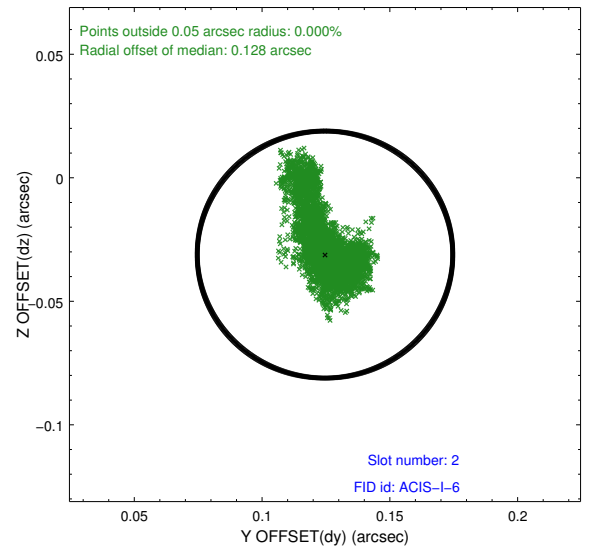
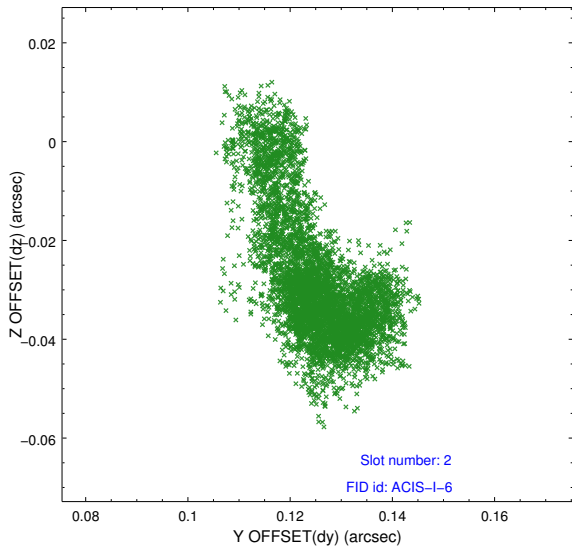
### 2.5.1 Slot 0



## 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)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.083976443946

## 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.