

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 14030 - L2 Version 2  
Chandra X-Ray Center

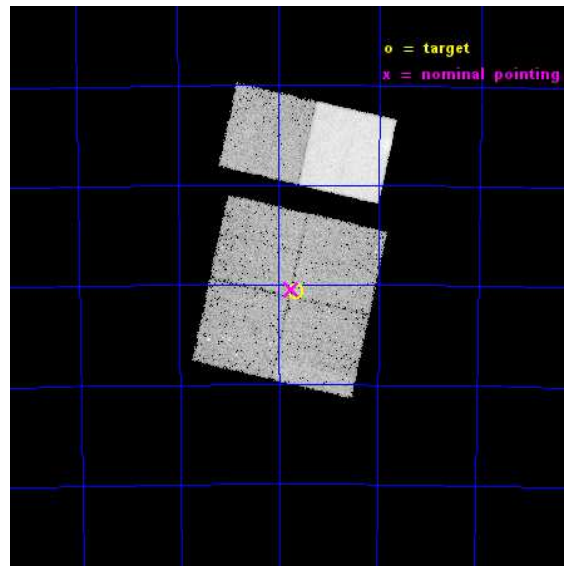
L2 Processing Date : Nov 29 2014

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# 1 Front

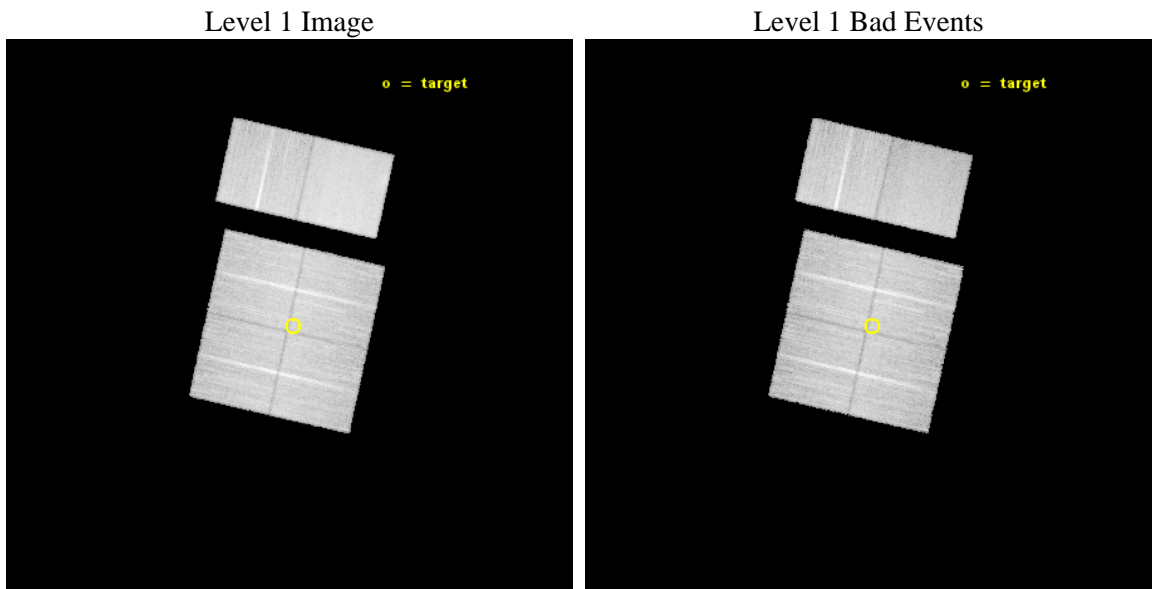
seq_num	900996	Sequence number
obs_id	14030	Observation id
title	Probing the Nature and Role of X-ray Emission in HII Regions with Chandra	Proposal title
observer	Dr. Laura Lopez	Principal investigator
object	N127A	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	80.416667	Observer's specified target RA [deg]
dec_targ	-69.678611	Observer's specified target Dec [deg]
ra_nom	80.436814930511	Nominal RA [deg]
dec_nom	-69.674577123748	Nominal Dec [deg]
roll_nom	12.671483380779	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29967.958848119	Sum of GTIs [s]
livetime	29588.486508645	Livetime [s]
ontime0	29967.958908081	Sum of GTIs [s]
ontime1	29971.199888408	Sum of GTIs [s]
ontime2	29971.199888408	Sum of GTIs [s]
ontime3	29967.958848119	Sum of GTIs [s]
ontime6	29971.199888408	Sum of GTIs [s]
ontime7	29971.199888408	Sum of GTIs [s]
l2events	176567	Number of level 2 events



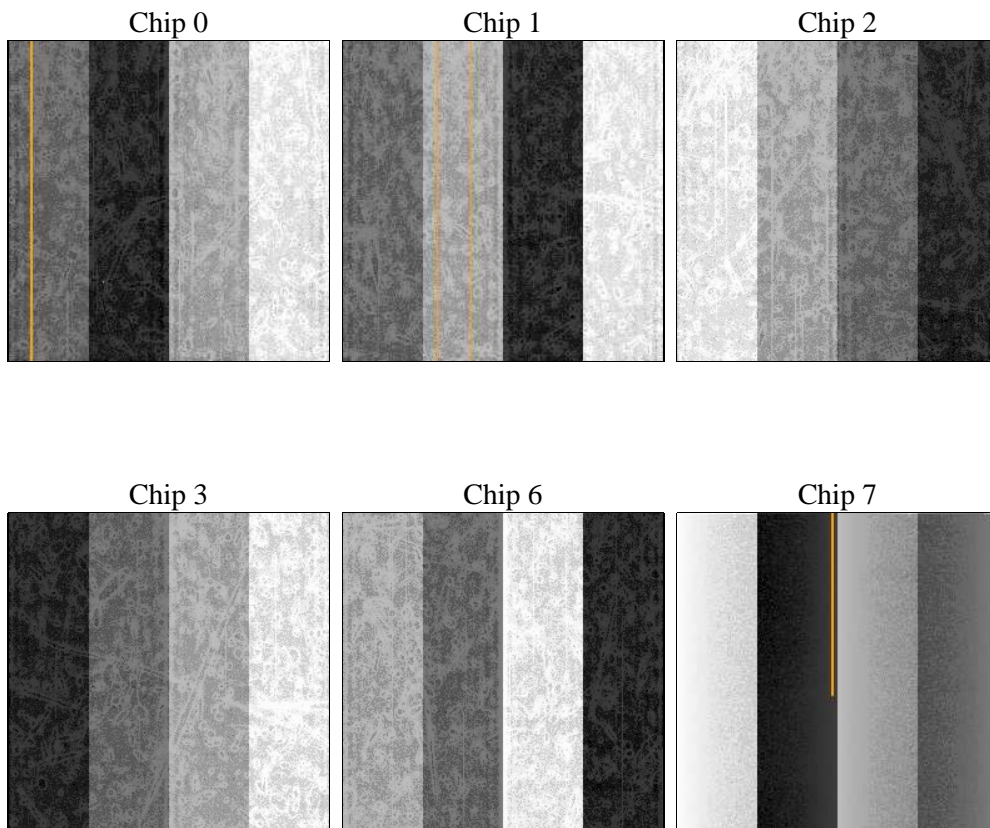
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	29967.958848119	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	29967.958908081	Sum of GTIs [s]
date	2014-11-30T00:42:47	Date and time of file creation	ontime1	29971.199888408	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	29971.199888408	Sum of GTIs [s]
			ontime3	29967.958848119	Sum of GTIs [s]
			ontime6	29971.199888408	Sum of GTIs [s]
			ontime7	29971.199888408	Sum of GTIs [s]
			l1events	956911	Number of level 1 events

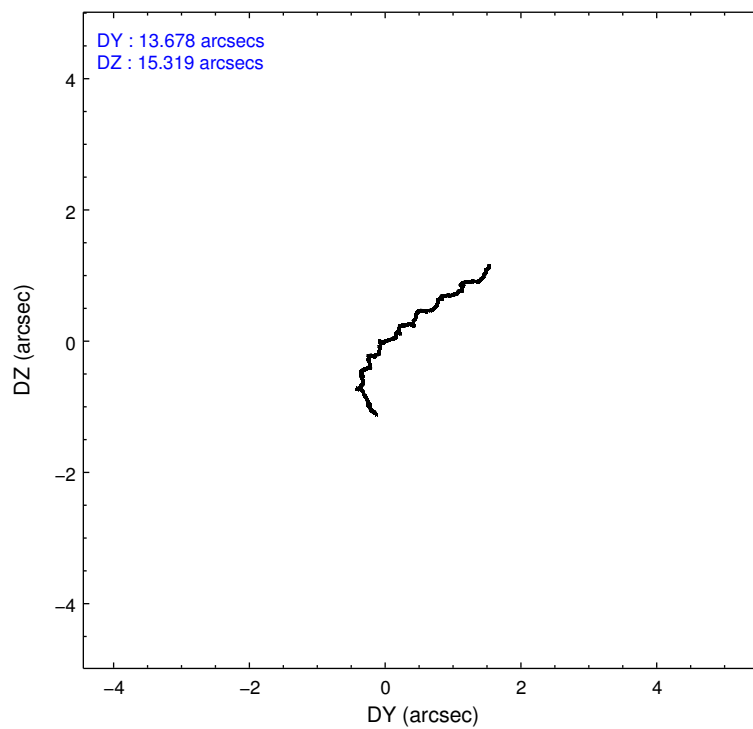
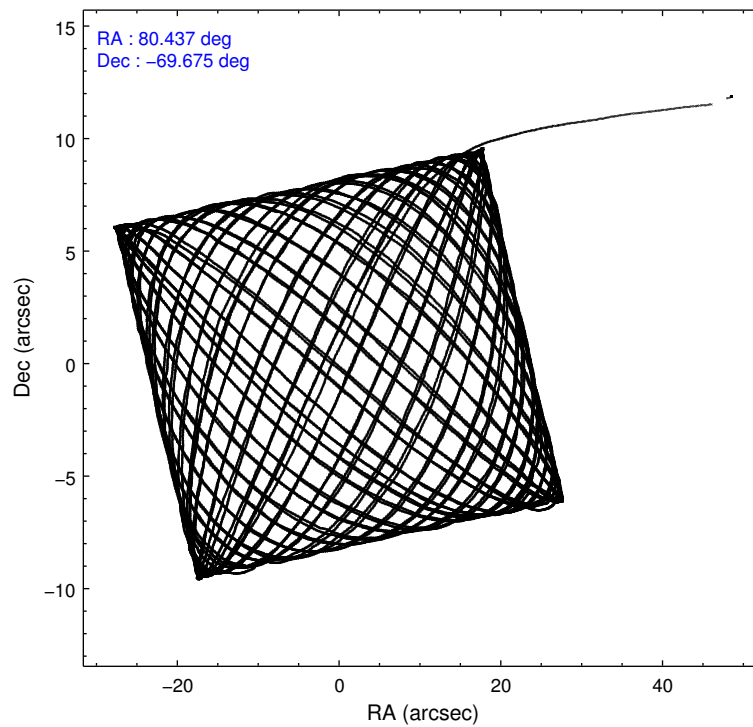
### 2.1.4 Events

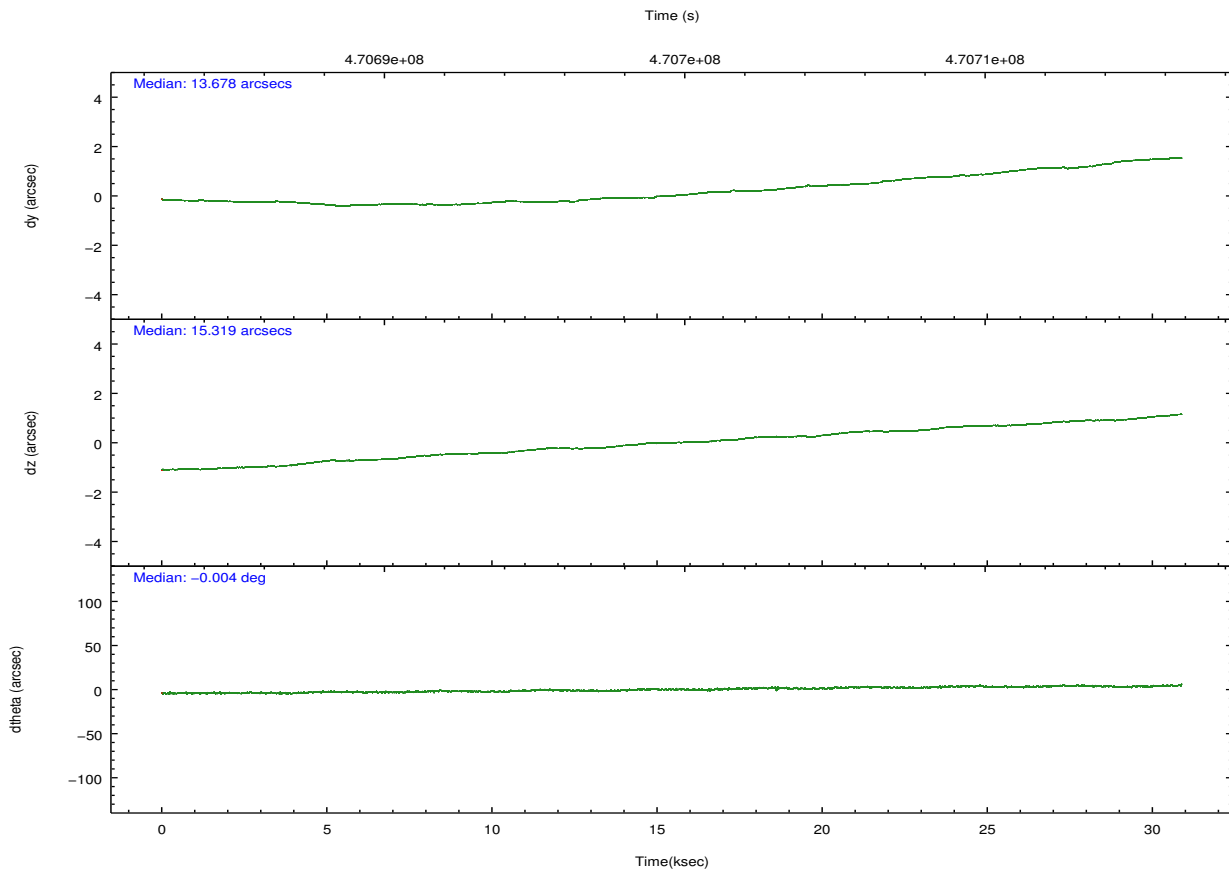
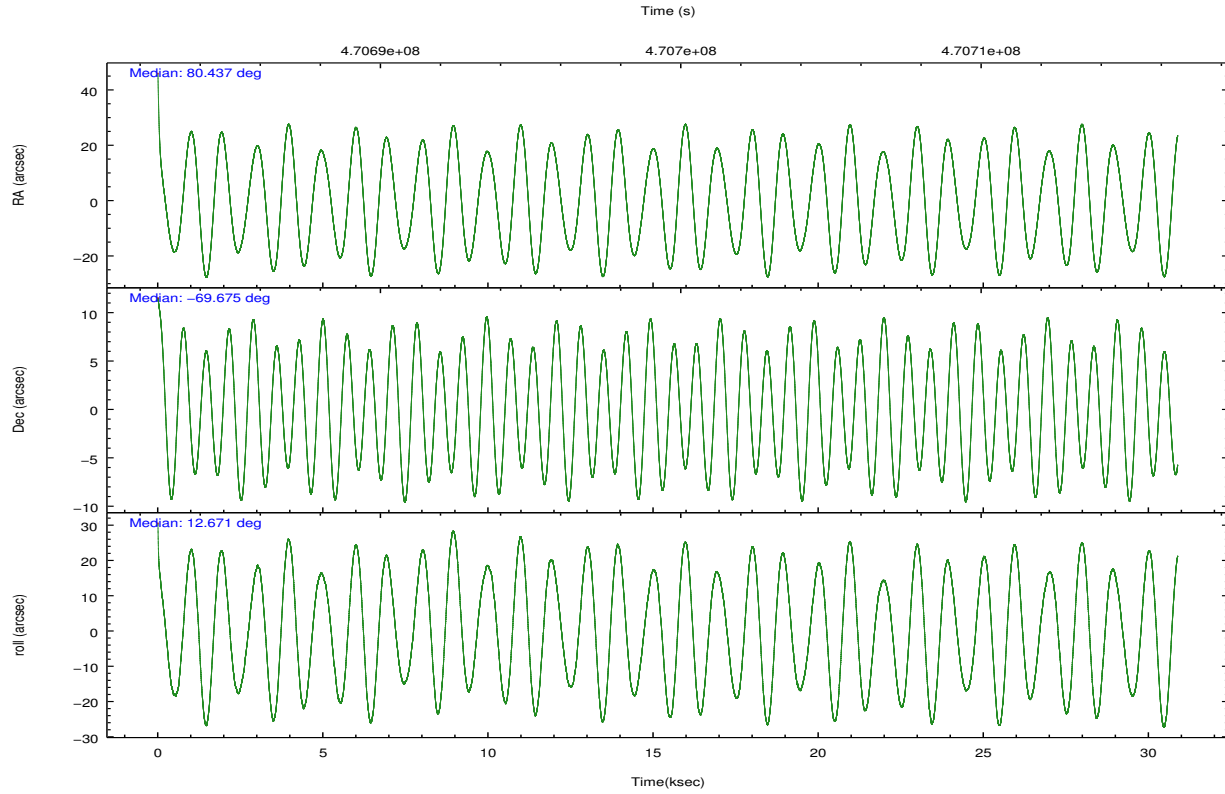
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	140216	144789	152958	149837	159107	210004	grade 0 events	7791	8179	8173	7227	7766	9459
rejected events	120525	123637	133415	131519	138701	115939		5%	5%	5%	4%	4%	4%
rejected %	85%	85%	87%	87%	87%	55%	grade 1 events	72	73	96	91	72	260
								0%	0%	0%	0%	0%	0%
							grade 2 events	4470	4875	4389	3858	4453	19445
								3%	3%	2%	2%	2%	9%
							grade 3 events	1949	1948	1856	1849	1977	8185
								1%	1%	1%	1%	1%	3%
							grade 4 events	1755	1969	1828	1840	1926	7940
								1%	1%	1%	1%	1%	3%
							grade 5 events	7093	7356	6669	7924	8072	21558
								5%	5%	4%	5%	5%	10%
							grade 6 events	3728	4184	3297	3545	4286	49042
								2%	2%	2%	2%	2%	23%
							grade 7 events	113358	116205	126650	123503	130555	94115
								80%	80%	82%	82%	82%	44%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	80.378799	80.43681493051128	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.693286	-69.6745771237477	CCD I3 on	Y	Y
[deg] Pointing Roll	12.408399	12.67148338077859	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	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	470685016.184000	470683226.79576	CCD S5 on	N	N
Observation start date	2012-11-30T17:49:09	2012-11-30T17:20:26	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470715016.184000	470715674.1975	On-chip summing requested	N	N
Observation end date	2012-12-01T02:09:09	2012-12-01T02:21:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





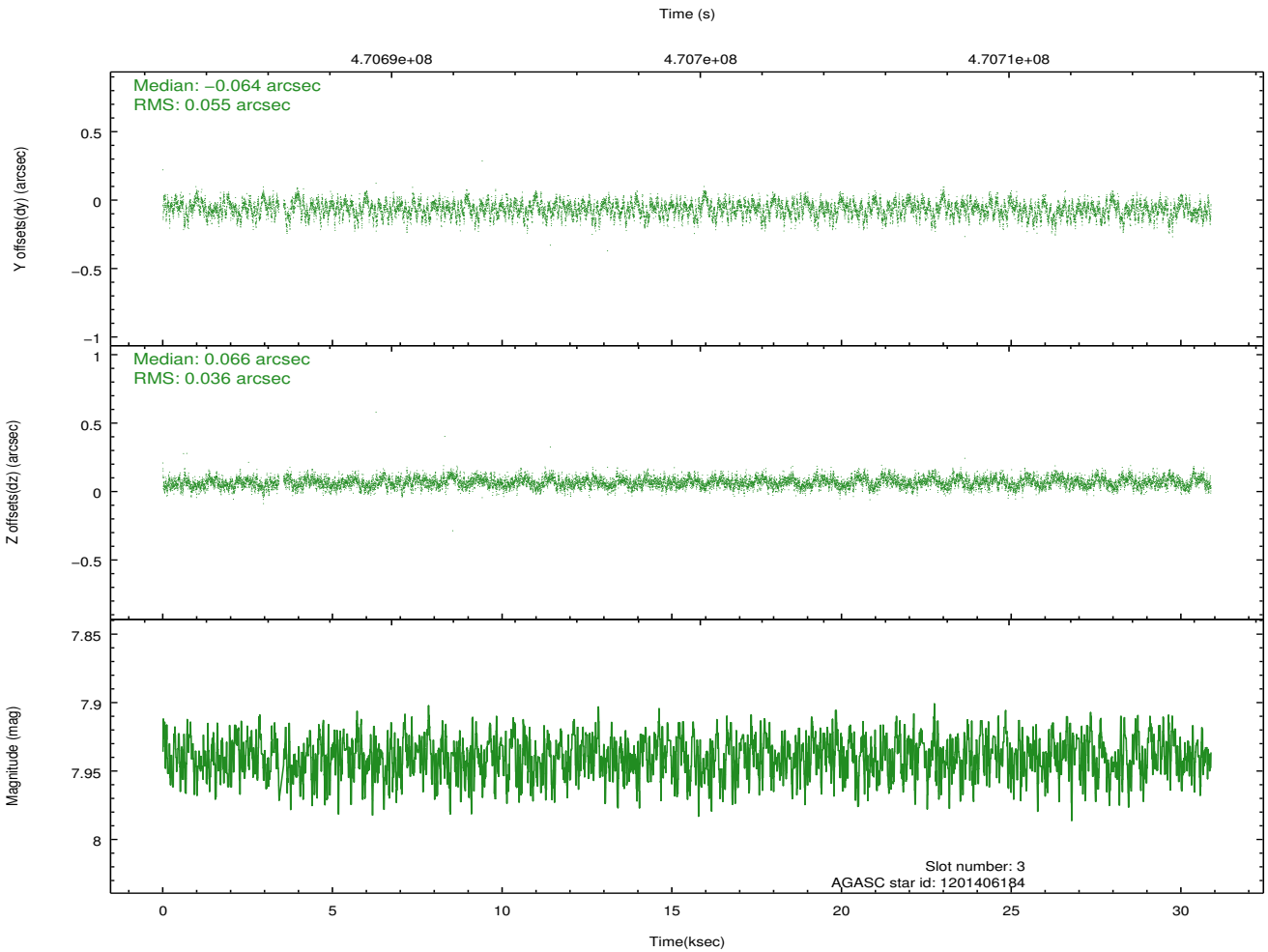
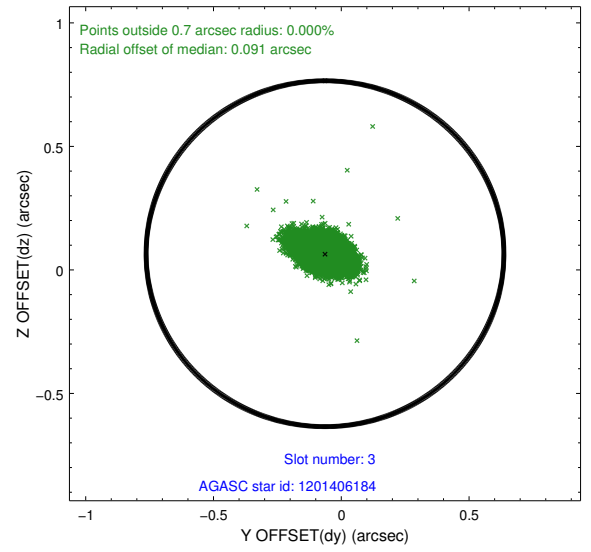
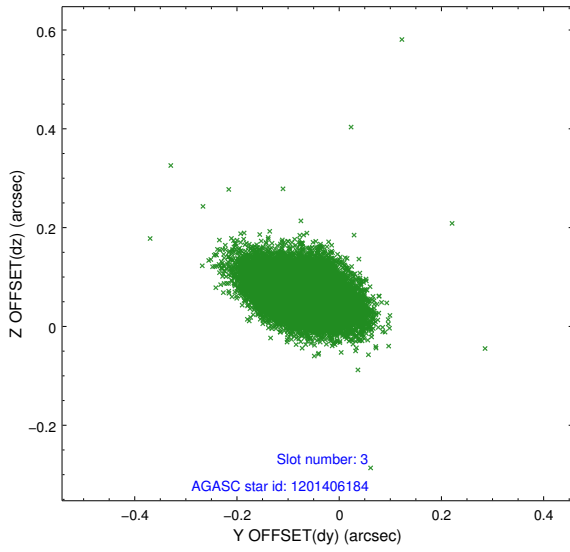
### Slot Statistics

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	7533	0.097	-0.012	0.027	0.034	0.000000	0.000000	925.69	-838.89
1	FID		ACIS-I-2	7.01	7532	-0.070	-0.052	0.018	0.031	0.000000	0.000000	-768.53	-845.47
2	FID		ACIS-I-5	7.08	7533	-0.123	0.135	0.023	0.032	0.000000	0.000000	-1822.90	1058.61
3	GUIDE	used	1201406184	7.94	14997	-0.064	0.066	0.068	0.116	82.503234	-69.975517	2329.77	-1598.94
4	GUIDE	used	1201409160	7.85	15063	-0.014	-0.051	0.073	0.111	81.660661	-70.063595	1247.40	-1655.55
5	GUIDE	used	1201409312	9.23	15038	-0.165	-0.229	0.099	0.159	80.915231	-69.503059	807.38	520.82
6	GUIDE	used	1201409432	9.01	15042	0.185	0.291	0.090	0.149	79.317334	-70.259796	-1700.29	-1724.87
7	GUIDE	used	1201411776	8.84	15058	0.061	-0.078	0.098	0.158	79.010603	-70.456328	-2202.69	-2346.36

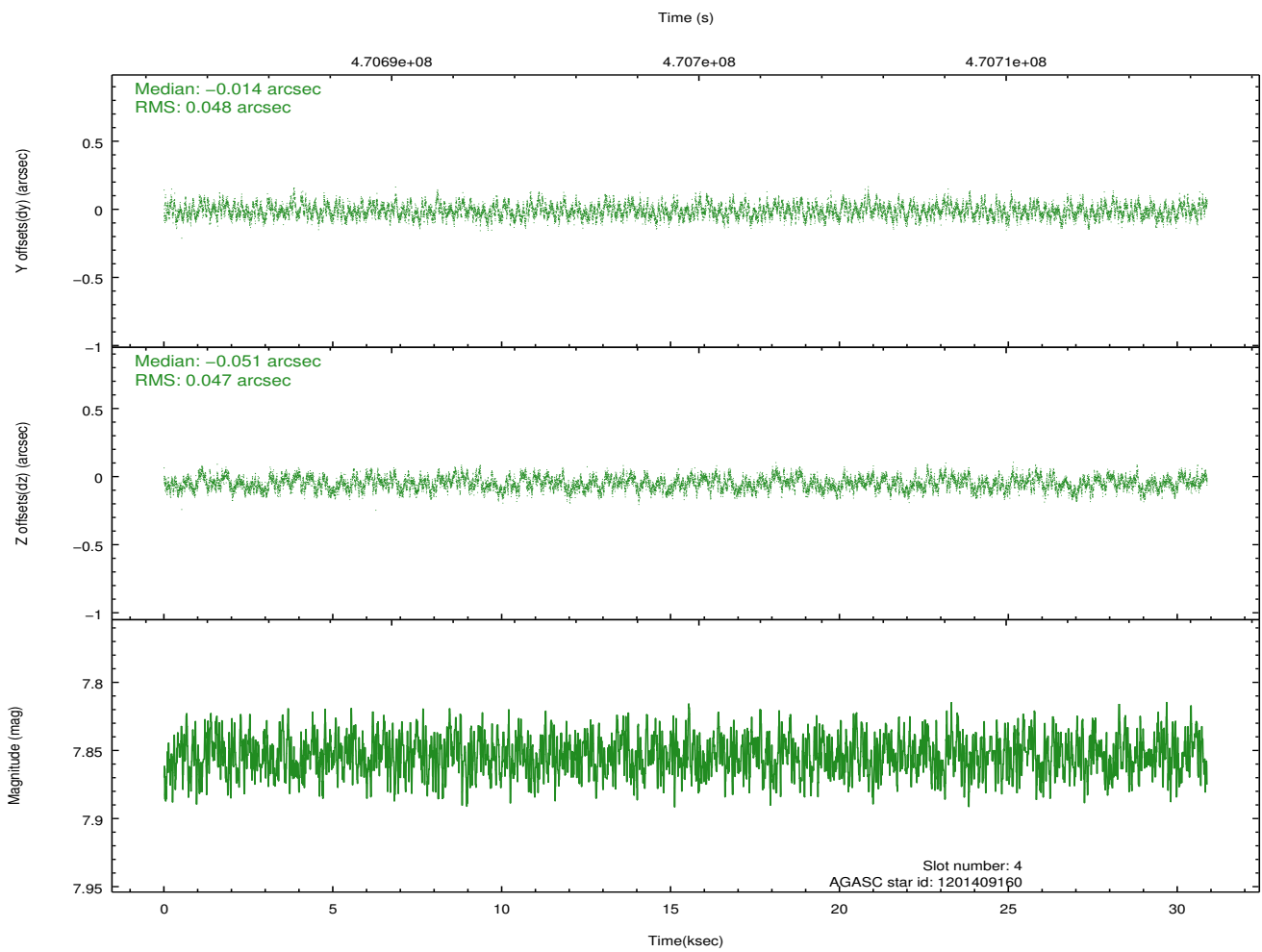
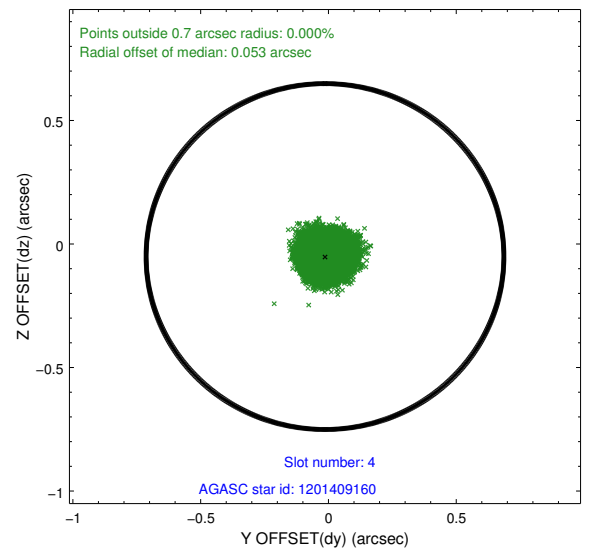
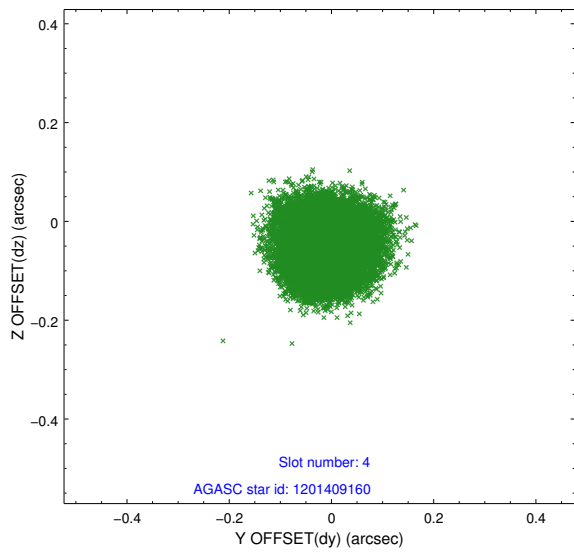
∞

## 2.4 Star Slots

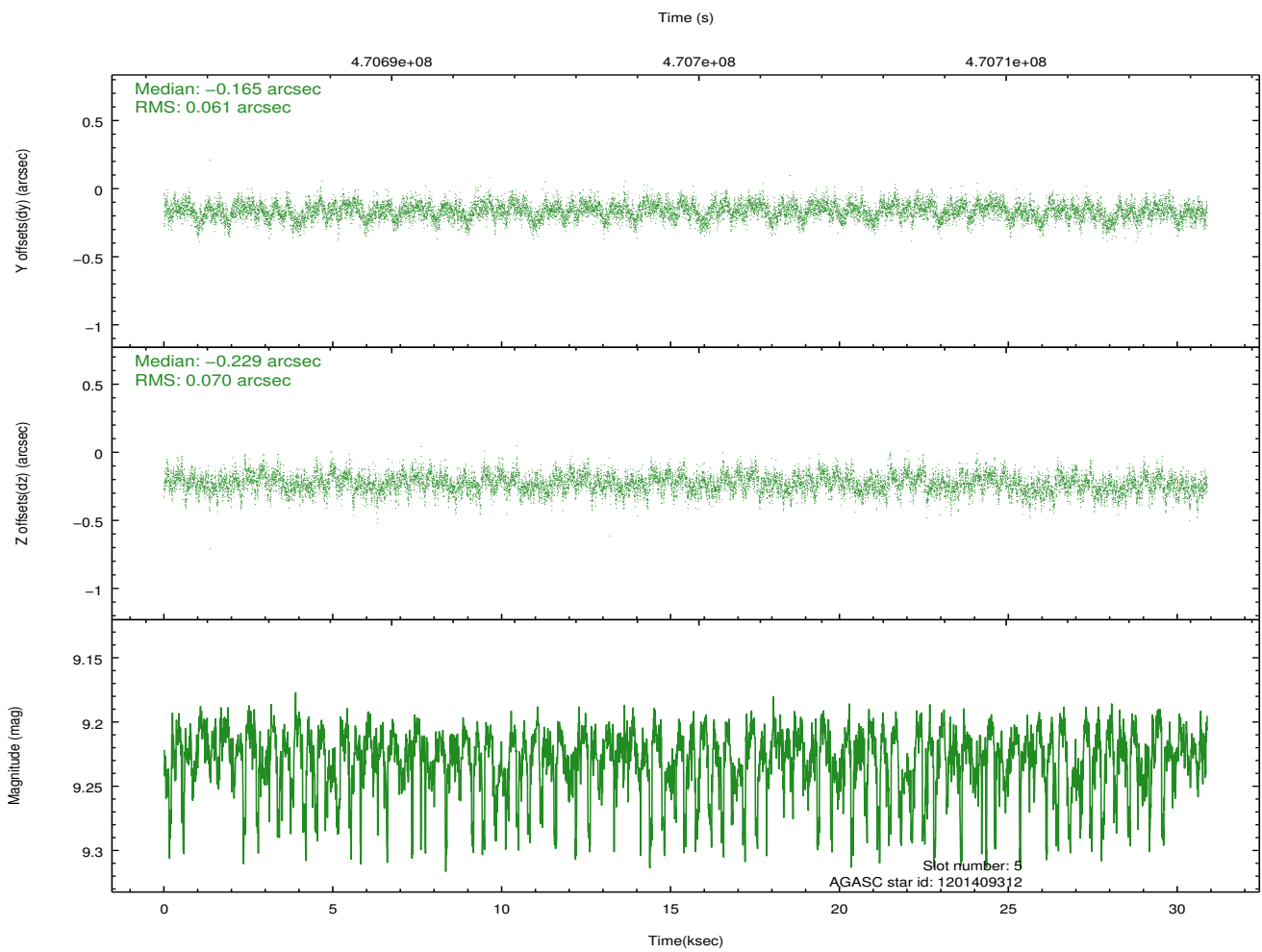
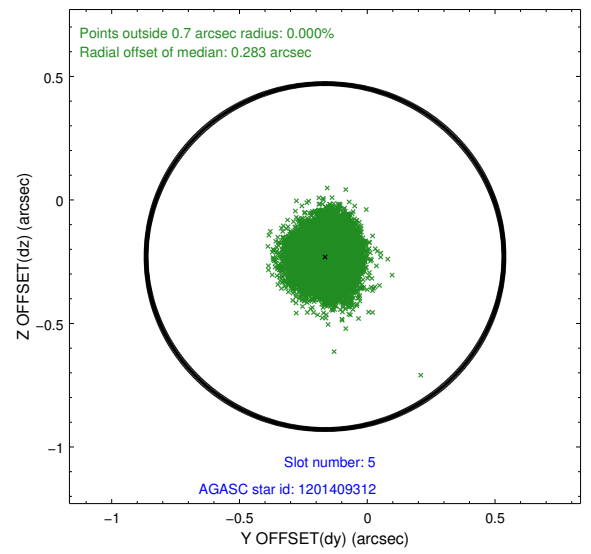
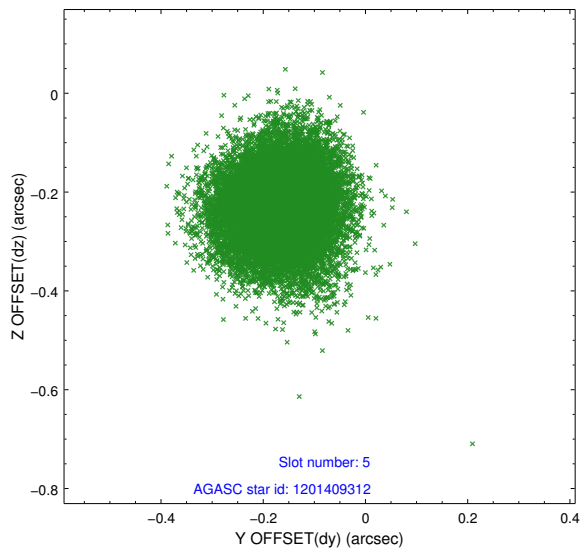
### 2.4.1 Slot 3



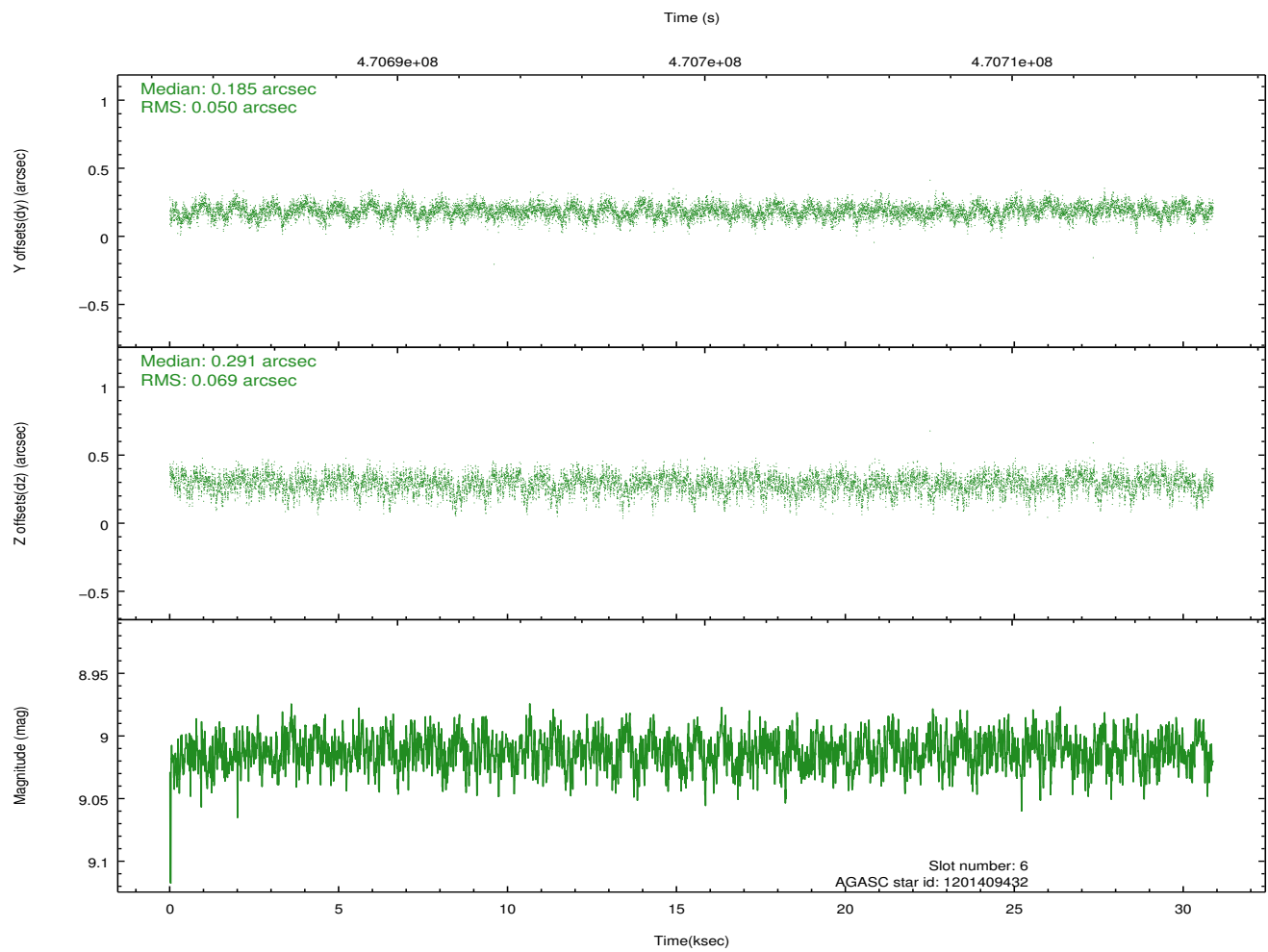
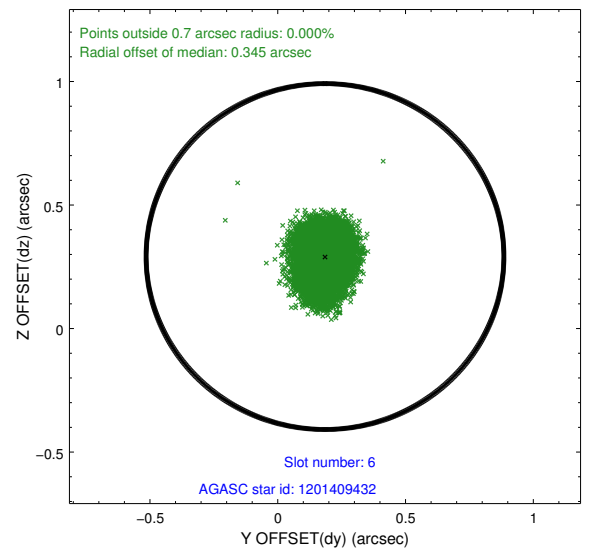
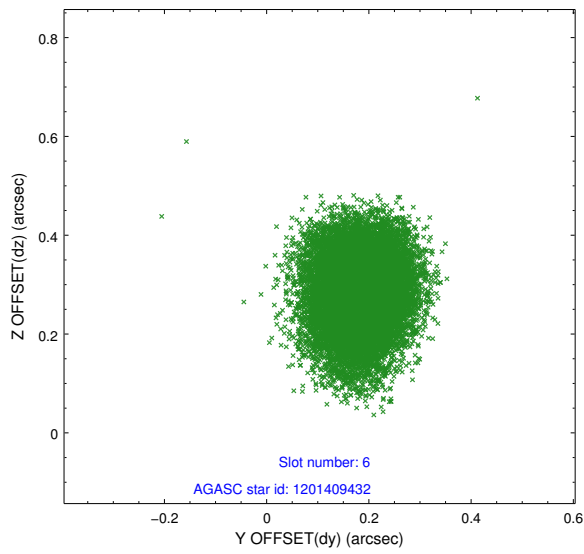
## 2.4.2 Slot 4



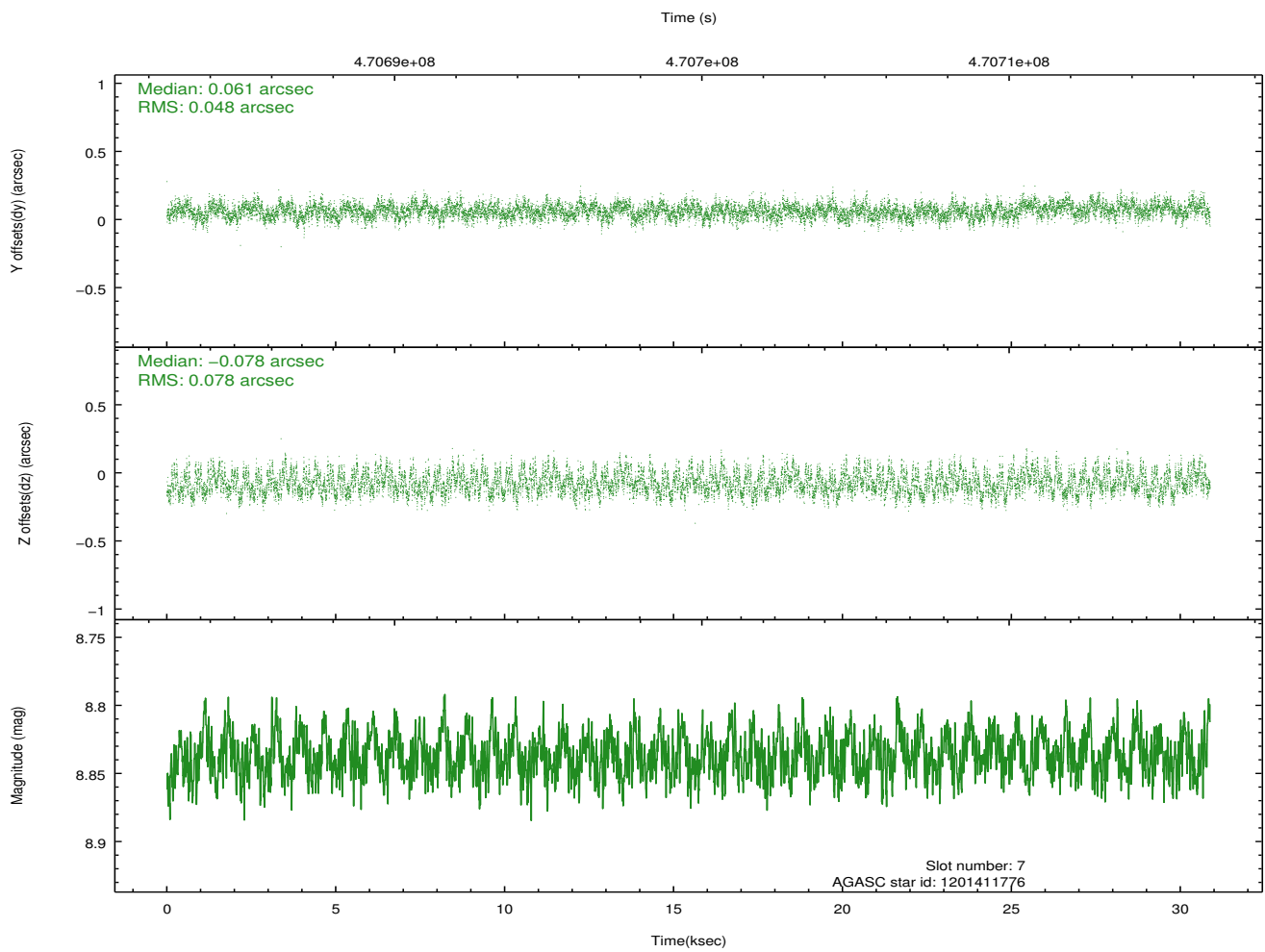
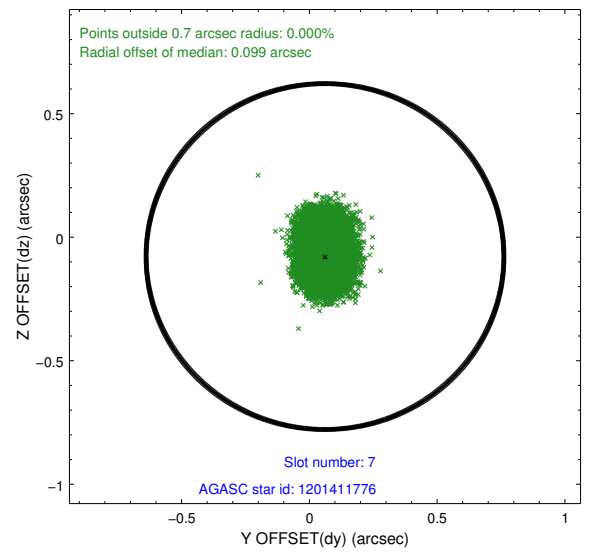
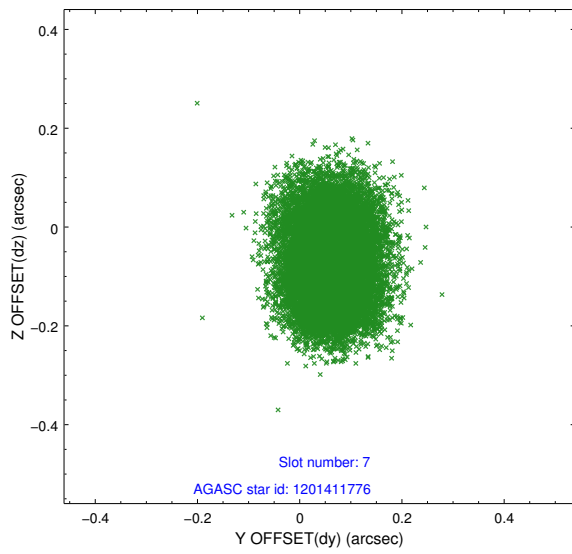
### 2.4.3 Slot 5



## 2.4.4 Slot 6

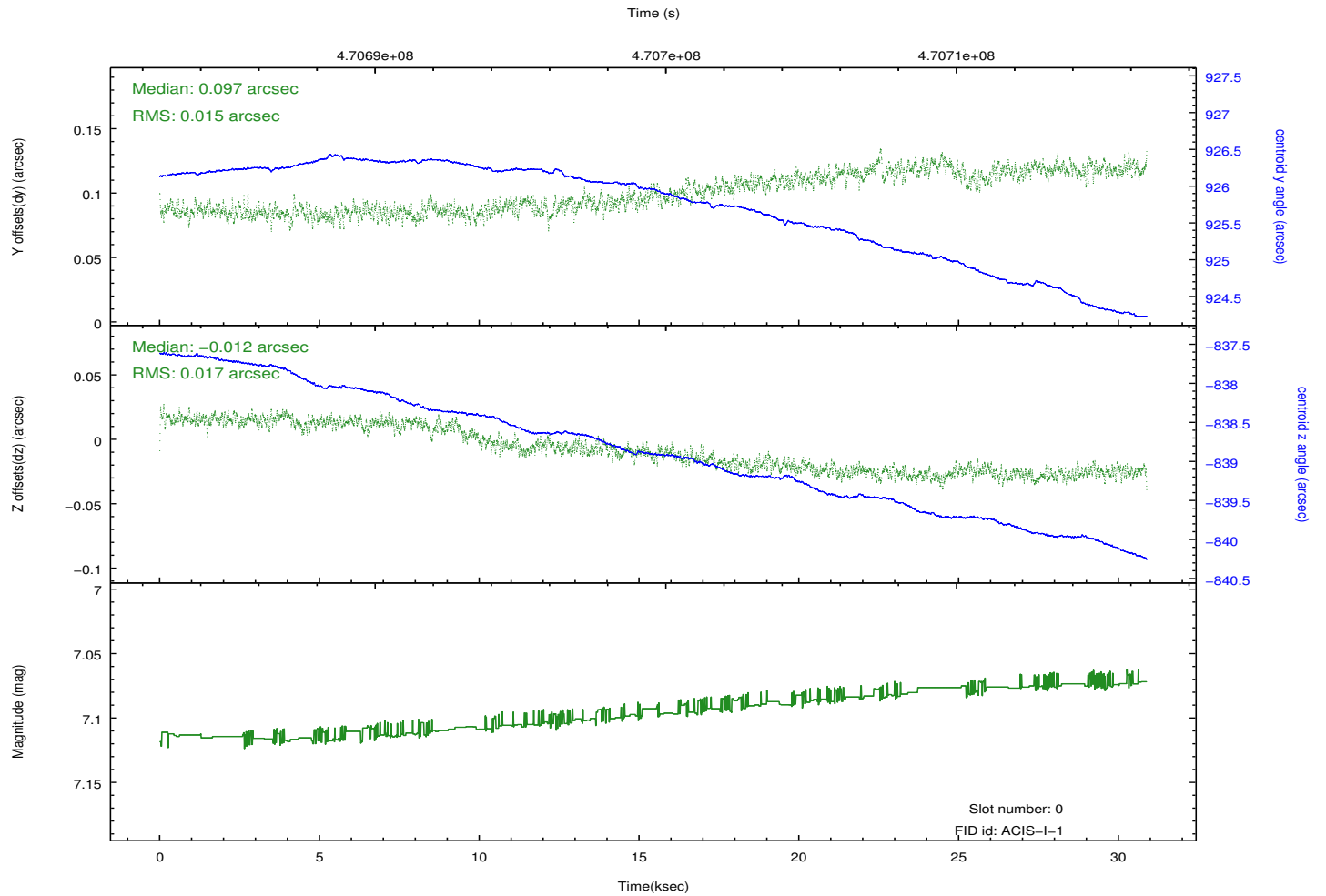
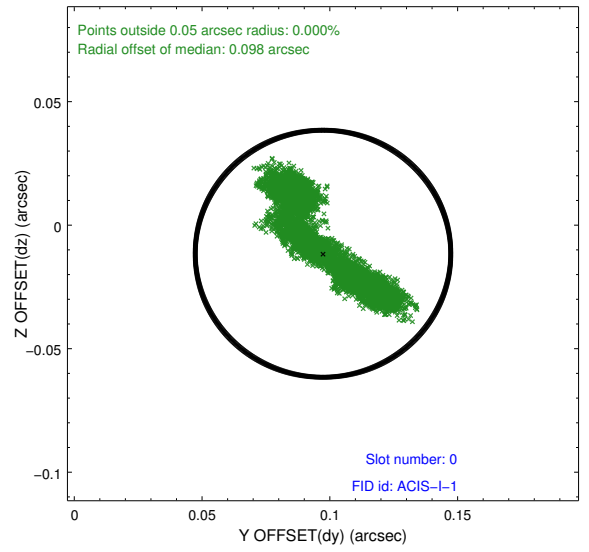
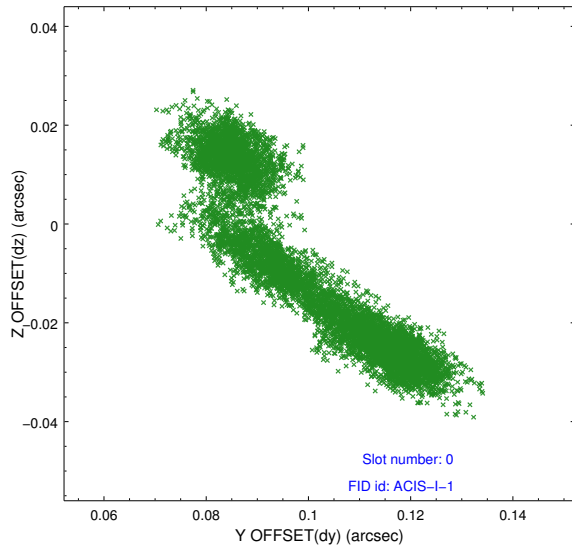


## 2.4.5 Slot 7

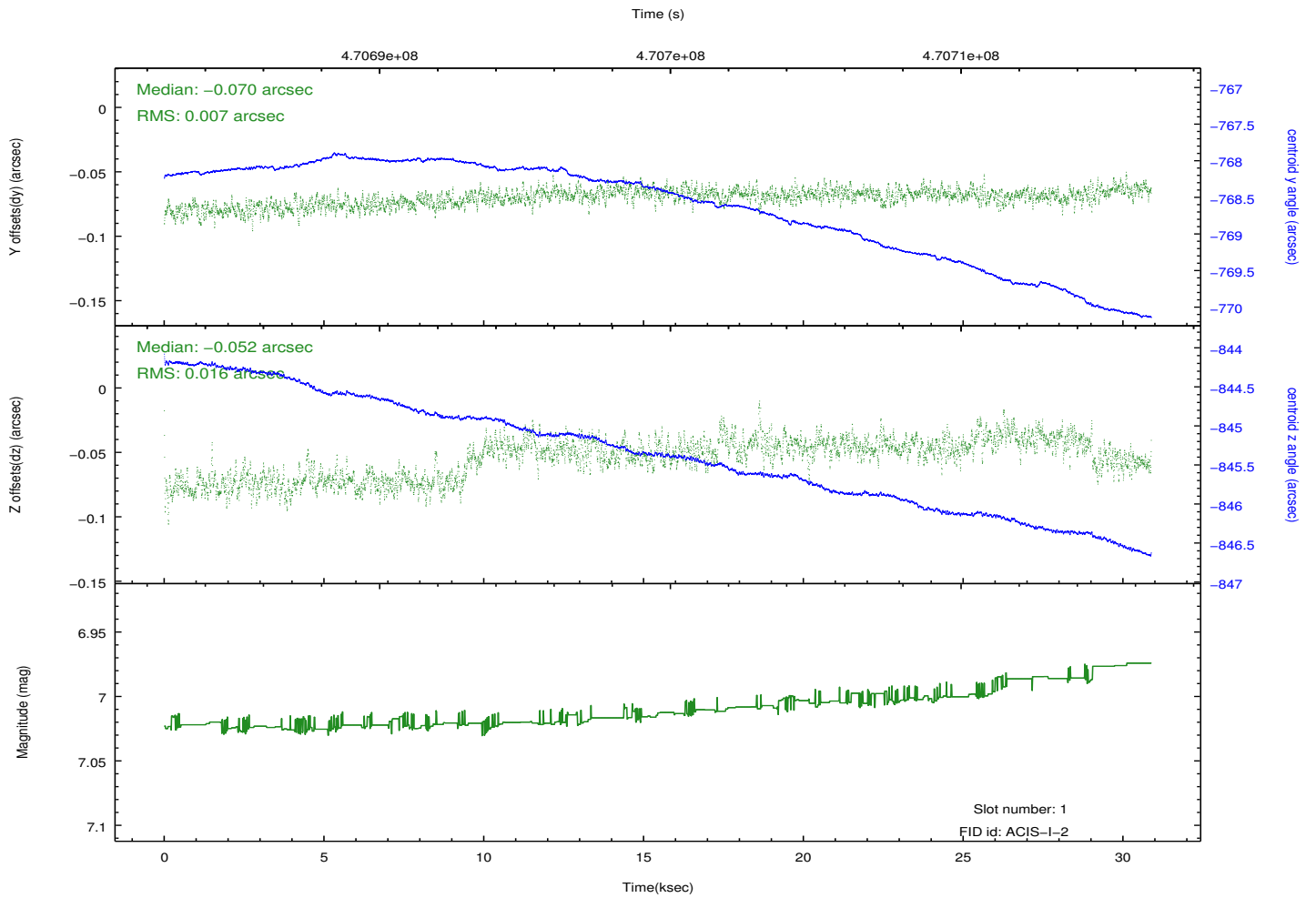
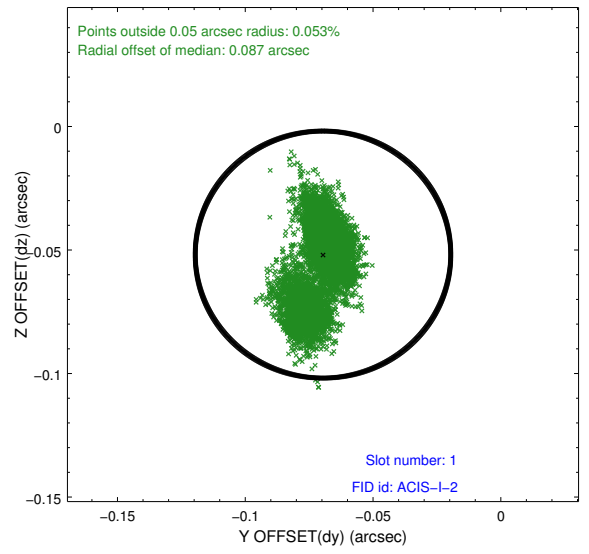
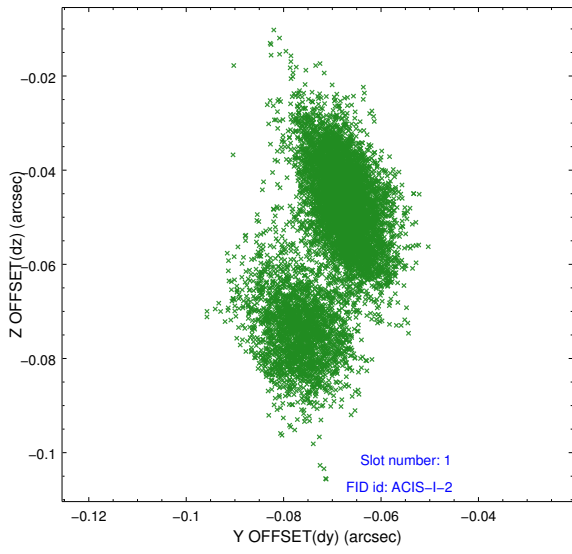


## 2.5 FID Slots

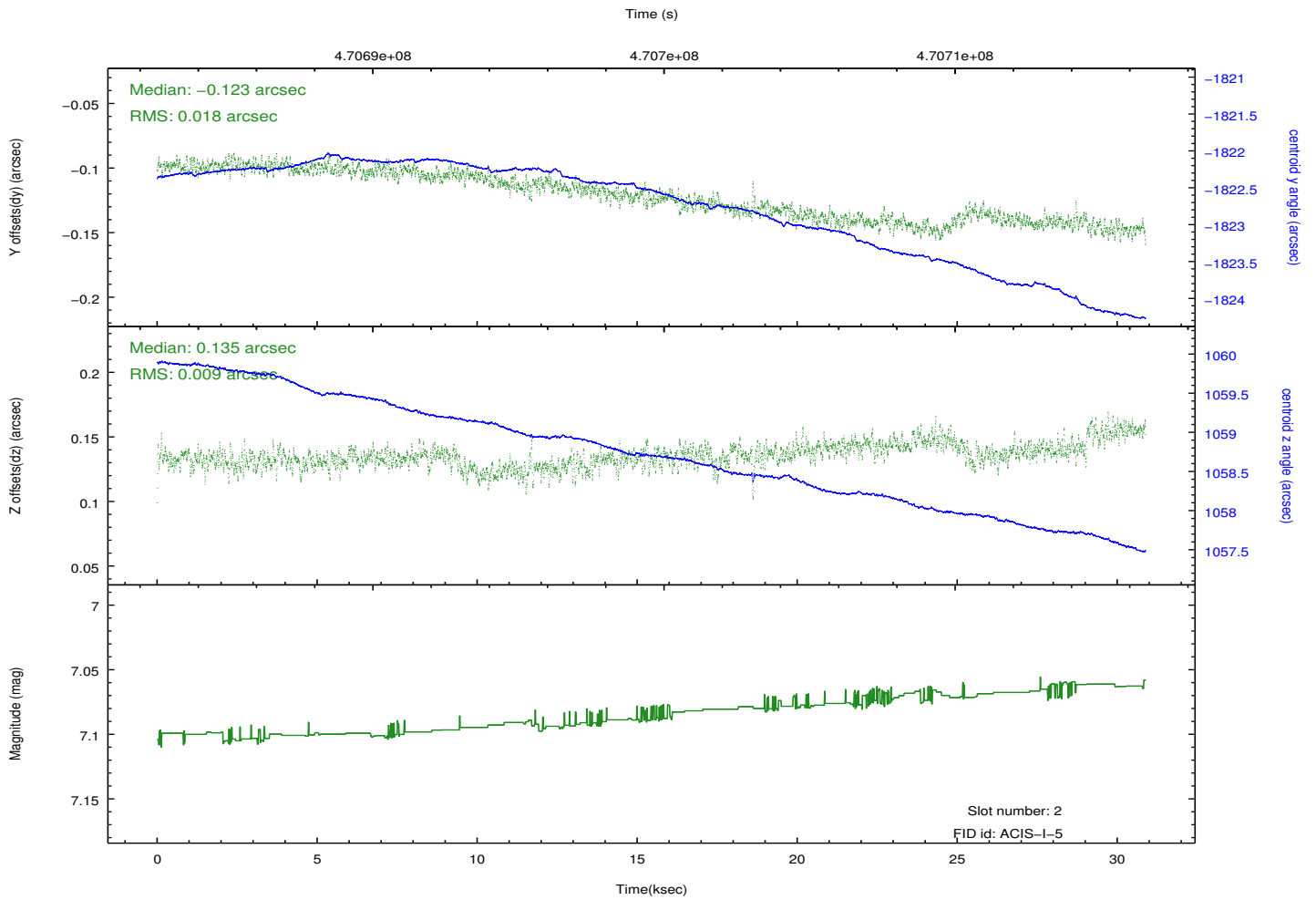
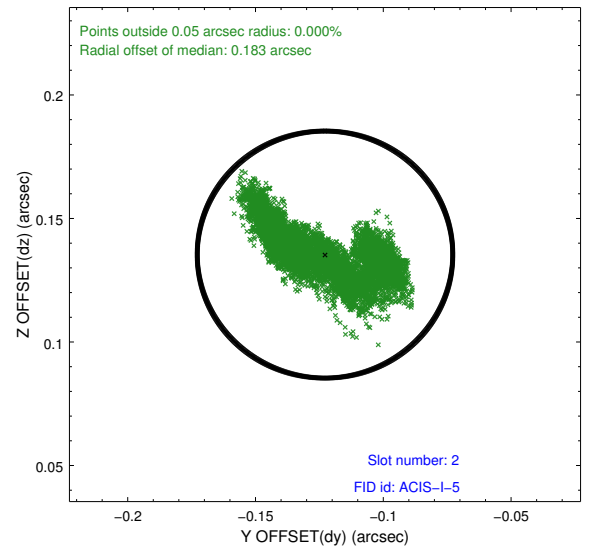
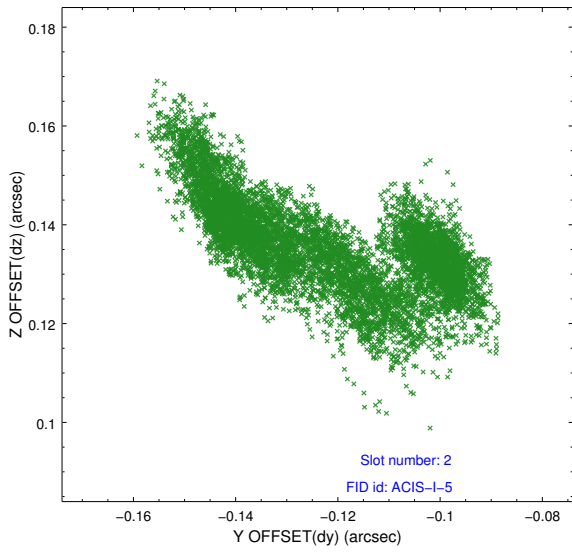
### 2.5.1 Slot 0



## 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	29.967958848119

## 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.