

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 14590 - L2 Version 2  
Chandra X-Ray Center

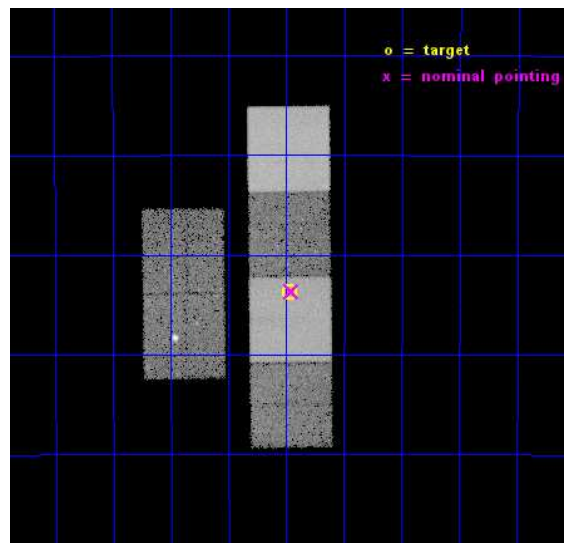
L2 Processing Date : Dec 9 2014

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# 1 Front

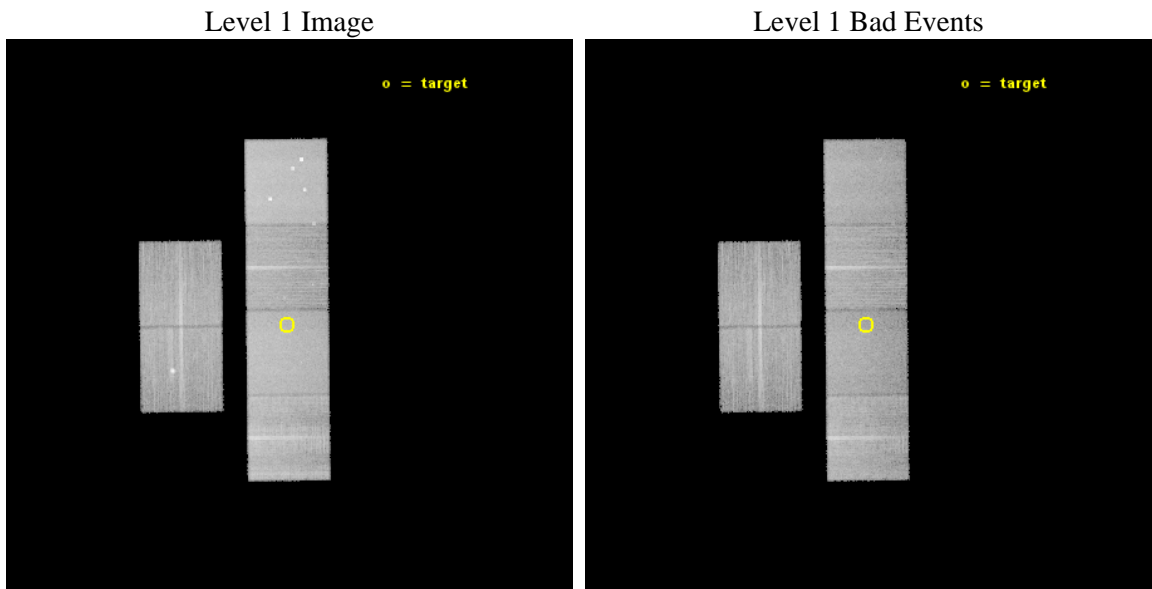
seq_num	200891	Sequence number
obs_id	14590	Observation id
title	COMPACT AND DIFFUSE X-RAY SOURCES IN THE YOUNGEST PLANETARY NEBULAE	&#160
observer	Dr. Joel Kastner	Principal investigator
object	NGC 6072	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	243.242083	Observer's specified target RA [deg]
dec_targ	-36.229472	Observer's specified target Dec [deg]
ra_nom	243.23892829157	Nominal RA [deg]
dec_nom	-36.227825945012	Nominal Dec [deg]
roll_nom	89.364404680342	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29961.437969565	Sum of GTIs [s]
livetime	29582.048201383	Livetime [s]
ontime2	29958.237999201	Sum of GTIs [s]
ontime3	29958.073879123	Sum of GTIs [s]
ontime5	29961.396929562	Sum of GTIs [s]
ontime6	29961.355889559	Sum of GTIs [s]
ontime7	29961.437969565	Sum of GTIs [s]
ontime8	29954.791858375	Sum of GTIs [s]
l2events	255696	Number of level 2 events



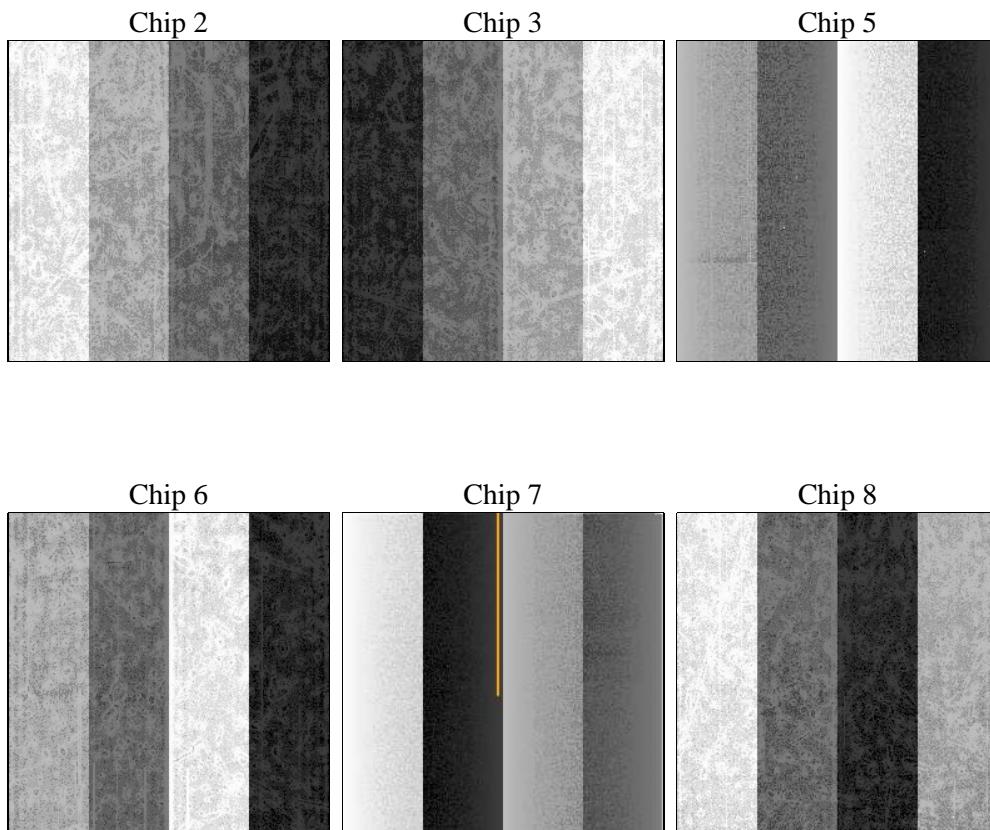
## 2 OBI

### 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	10.3.1	Processing system revision	ontime	29961.437969565	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	29958.237999201	Sum of GTIs [s]
date	2014-12-09T23:54:55	Date and time of file creation	ontime3	29958.073879123	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	29961.396929562	Sum of GTIs [s]
			ontime6	29961.355889559	Sum of GTIs [s]
			ontime7	29961.437969565	Sum of GTIs [s]
			ontime8	29954.791858375	Sum of GTIs [s]
			l1events	1053816	Number of level 1 events

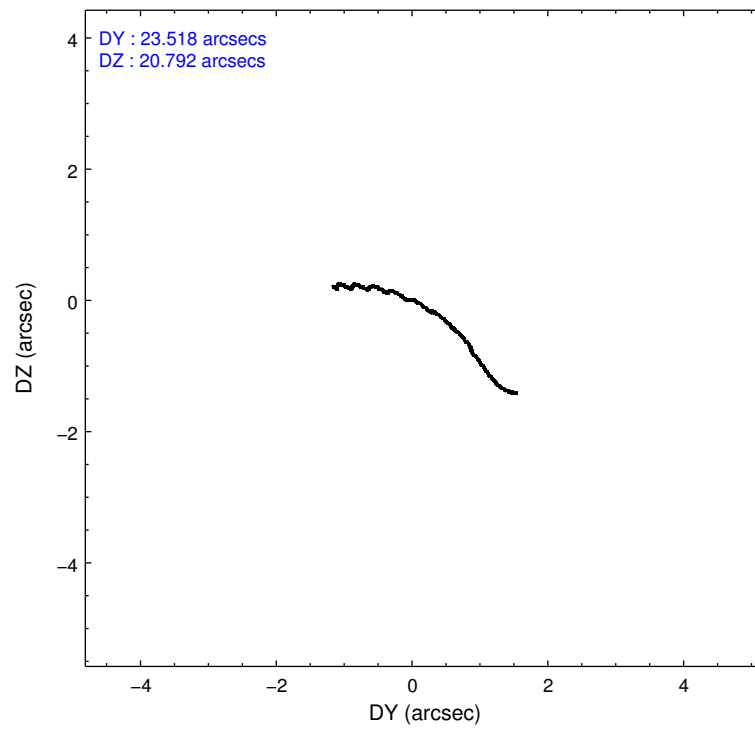
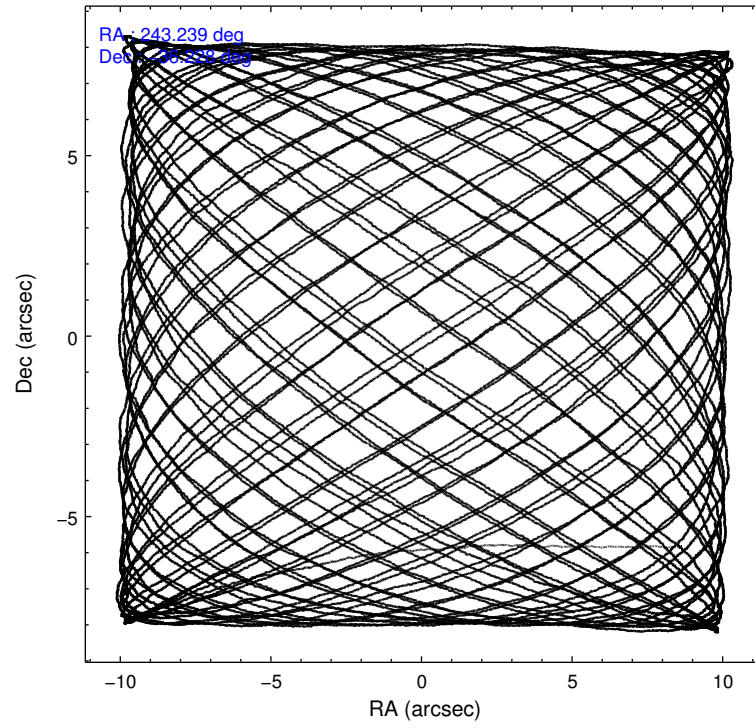
### 2.1.4 Events

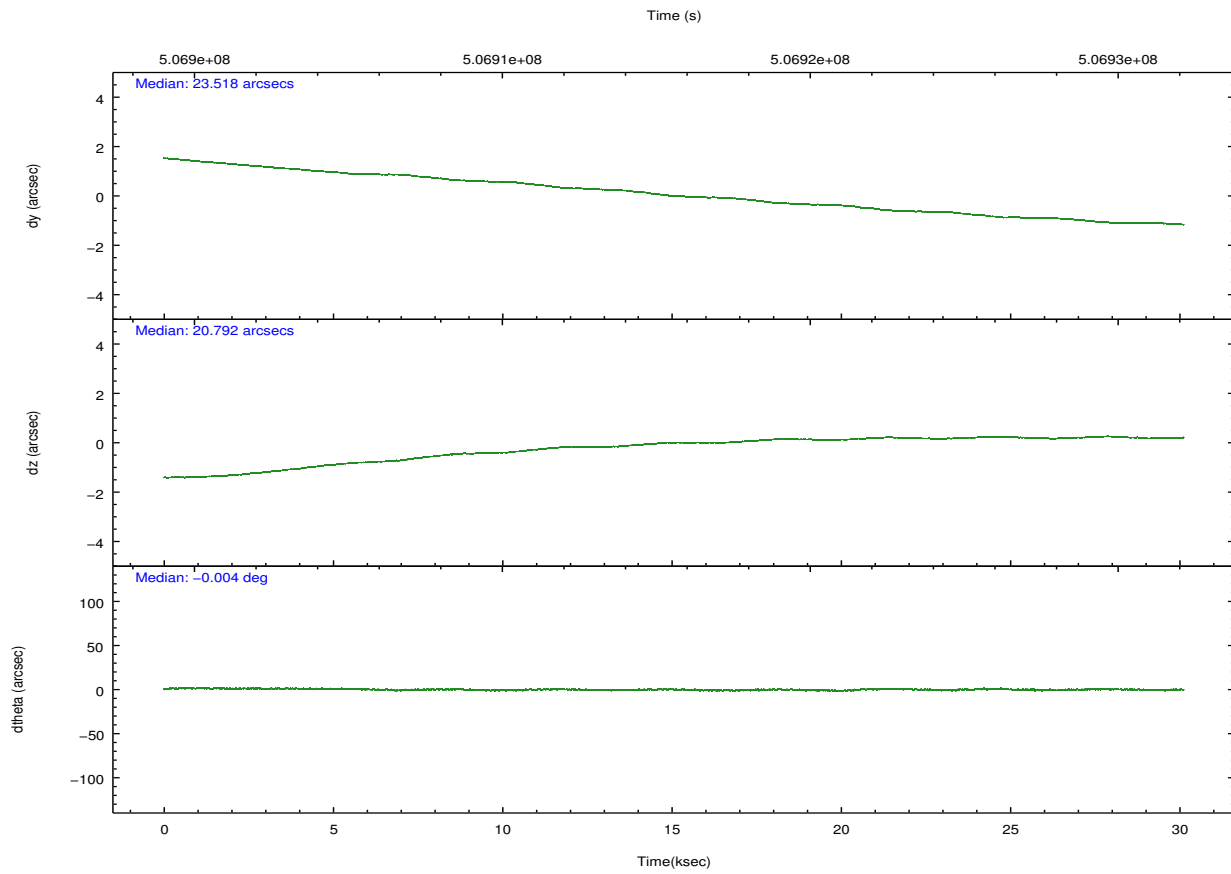
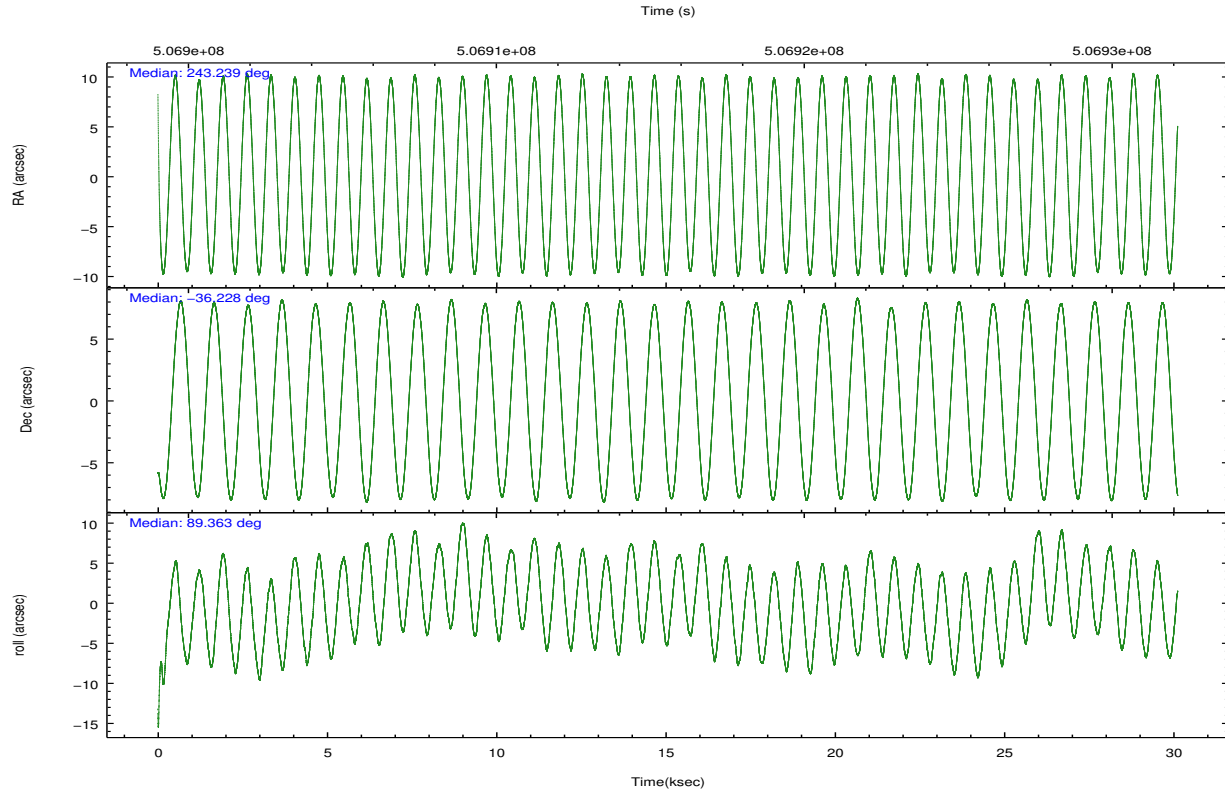
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	142670	137031	242587	143287	195755	192486	grade 0 events	6045	8229	13562	6420	7342	15242
rejected events	125933	118001	123712	125226	111144	141263		4%	6%	5%	4%	3%	7%
rejected %	88%	86%	50%	87%	56%	73%	grade 1 events	77	74	585	71	215	121
								0%	0%	0%	0%	0%	0%
							grade 2 events	4092	3886	35353	4113	17252	12142
								2%	2%	14%	2%	8%	6%
							grade 3 events	1614	1758	3792	1778	7229	5303
								1%	1%	1%	1%	3%	2%
							grade 4 events	1664	1799	3764	1680	6880	4963
								1%	1%	1%	1%	3%	2%
							grade 5 events	6583	7550	17288	7393	19793	10954
								4%	5%	7%	5%	10%	5%
							grade 6 events	3327	3363	62423	4073	45932	13583
								2%	2%	25%	2%	23%	7%
							grade 7 events	119268	110372	105820	117759	91112	130178
								83%	80%	43%	82%	46%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	243.255966	243.2389282915709	CCD I2 on	O3	Y
[deg] Pointing Dec	-36.251456	-36.22782594501238	CCD I3 on	O2	Y
[deg] Pointing Roll	89.217855	89.36440468034212	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	506900623.184000	506899410.77772	CCD S5 on	N	N
Observation start date	2014-01-23T21:42:36	2014-01-23T21:23:30	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	506930623.184000	506931428.19198	On-chip summing requested	N	N
Observation end date	2014-01-24T06:02:36	2014-01-24T06:17:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





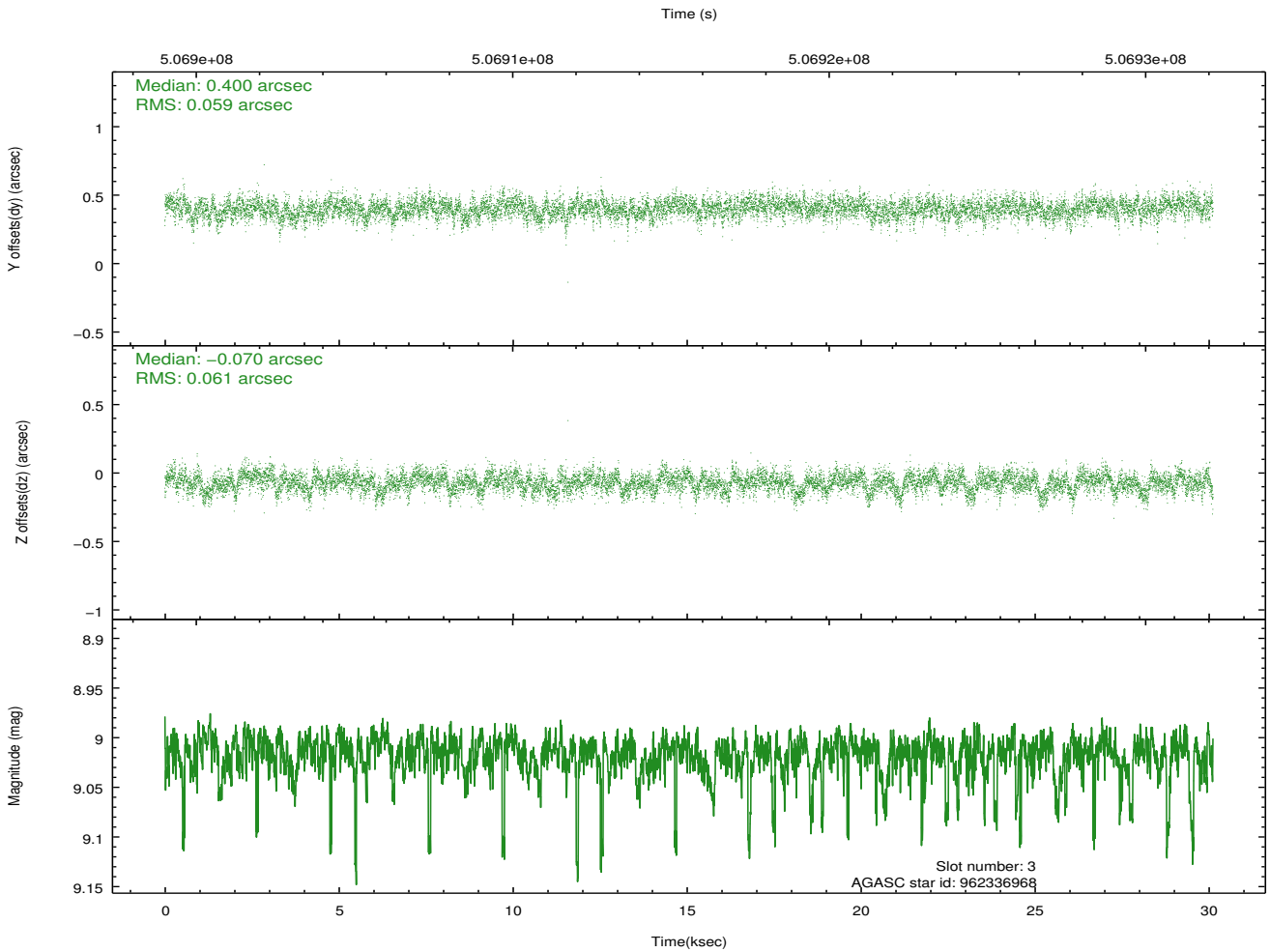
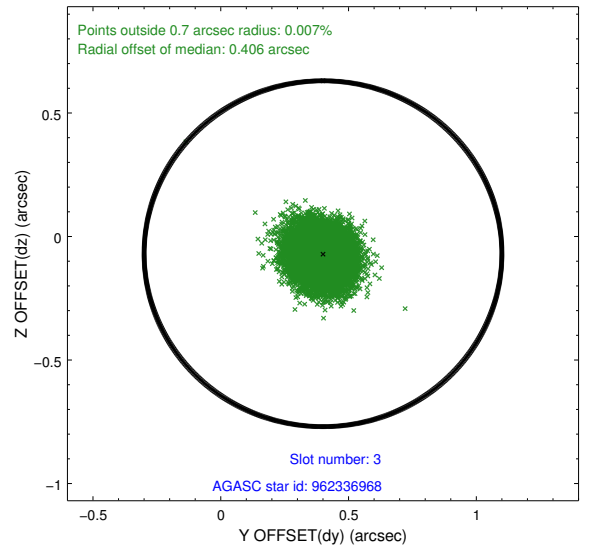
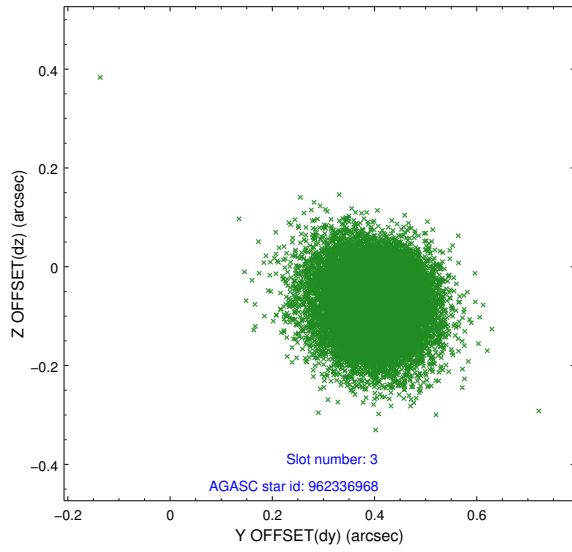
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.03	7347	-0.151	-0.016	0.040	0.053	0.000000	0.000000	-776.94	-1742.03
1	FID		ACIS-S-4	7.12	7345	0.337	0.077	0.048	0.074	0.000000	0.000000	2136.78	166.48
2	FID		ACIS-S-5	7.14	7345	-0.210	-0.053	0.023	0.033	0.000000	0.000000	-1829.75	160.08
3	GUIDE	used	962336968	9.02	14685	0.400	-0.070	0.090	0.147	242.650726	-36.844653	-2164.90	1714.09
4	GUIDE	used	962338904	8.58	14689	0.079	-0.020	0.077	0.121	242.747328	-36.521876	-997.46	1458.20
5	GUIDE	used	962340168	7.27	14693	-0.358	-0.250	0.092	0.140	242.502344	-35.642559	2151.78	2234.03
6	GUIDE	used	962340880	8.31	14629	0.042	-0.027	0.079	0.123	242.878403	-36.379409	-477.46	1088.12
7	GUIDE	used	964037448	8.88	14684	-0.163	0.370	0.092	0.148	243.431674	-35.892918	1296.99	-494.25

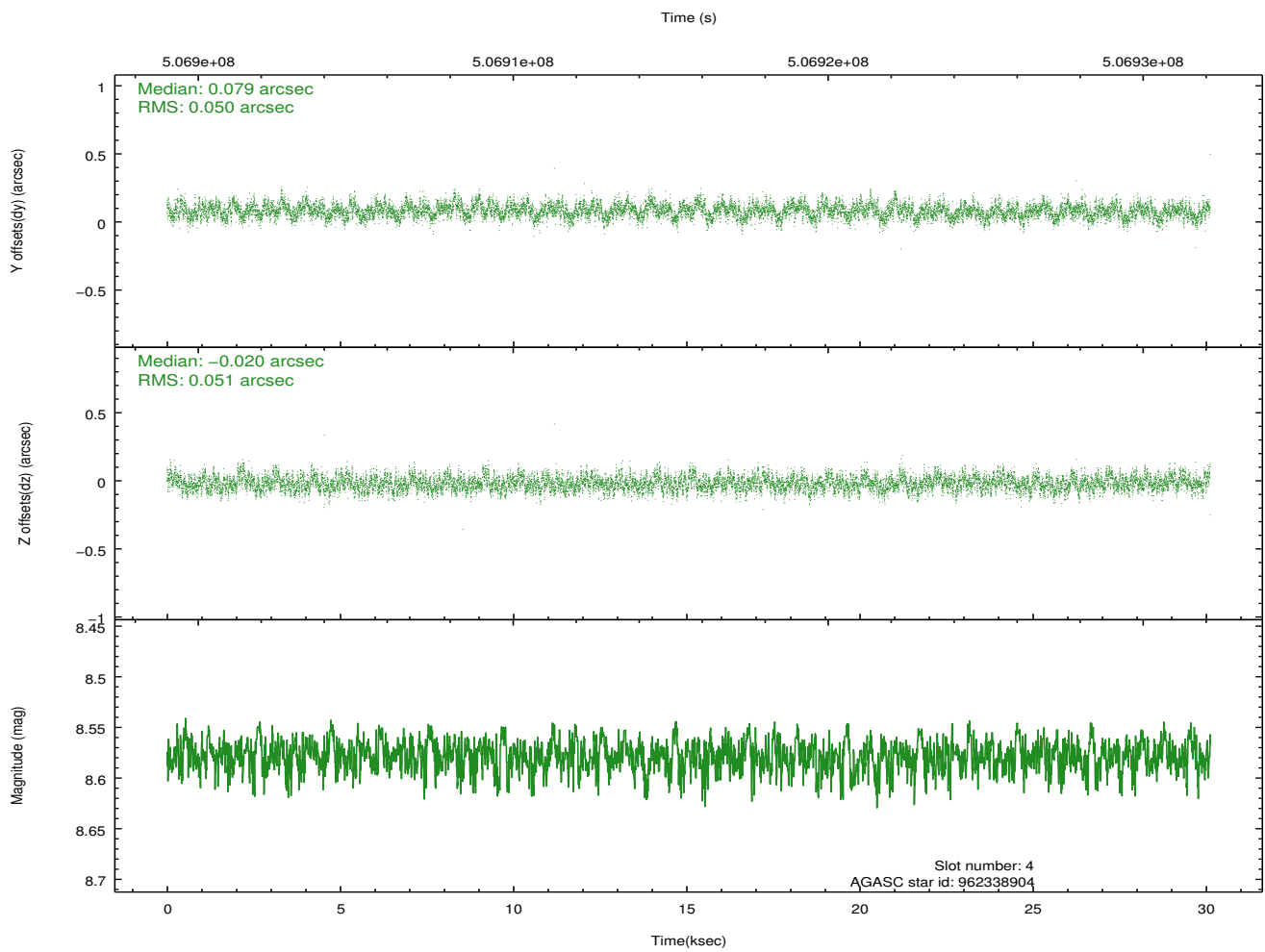
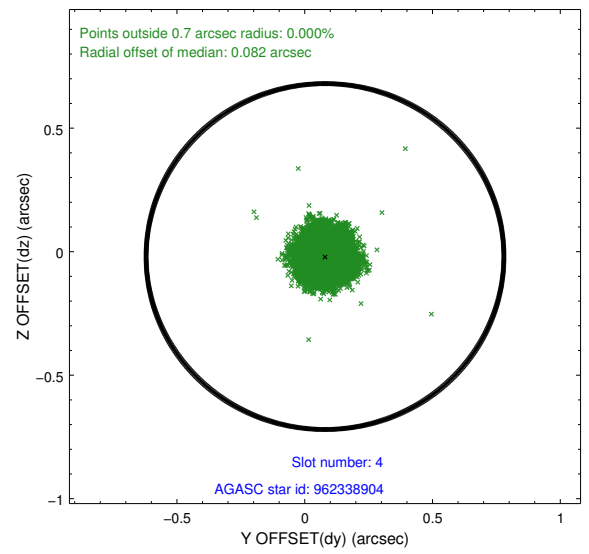
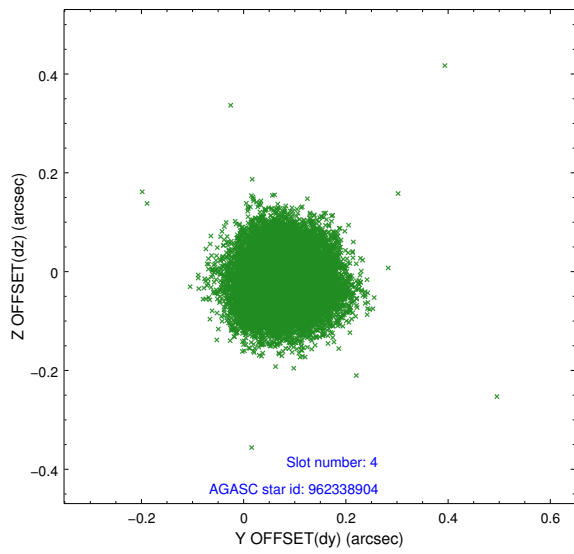
∞

## 2.4 Star Slots

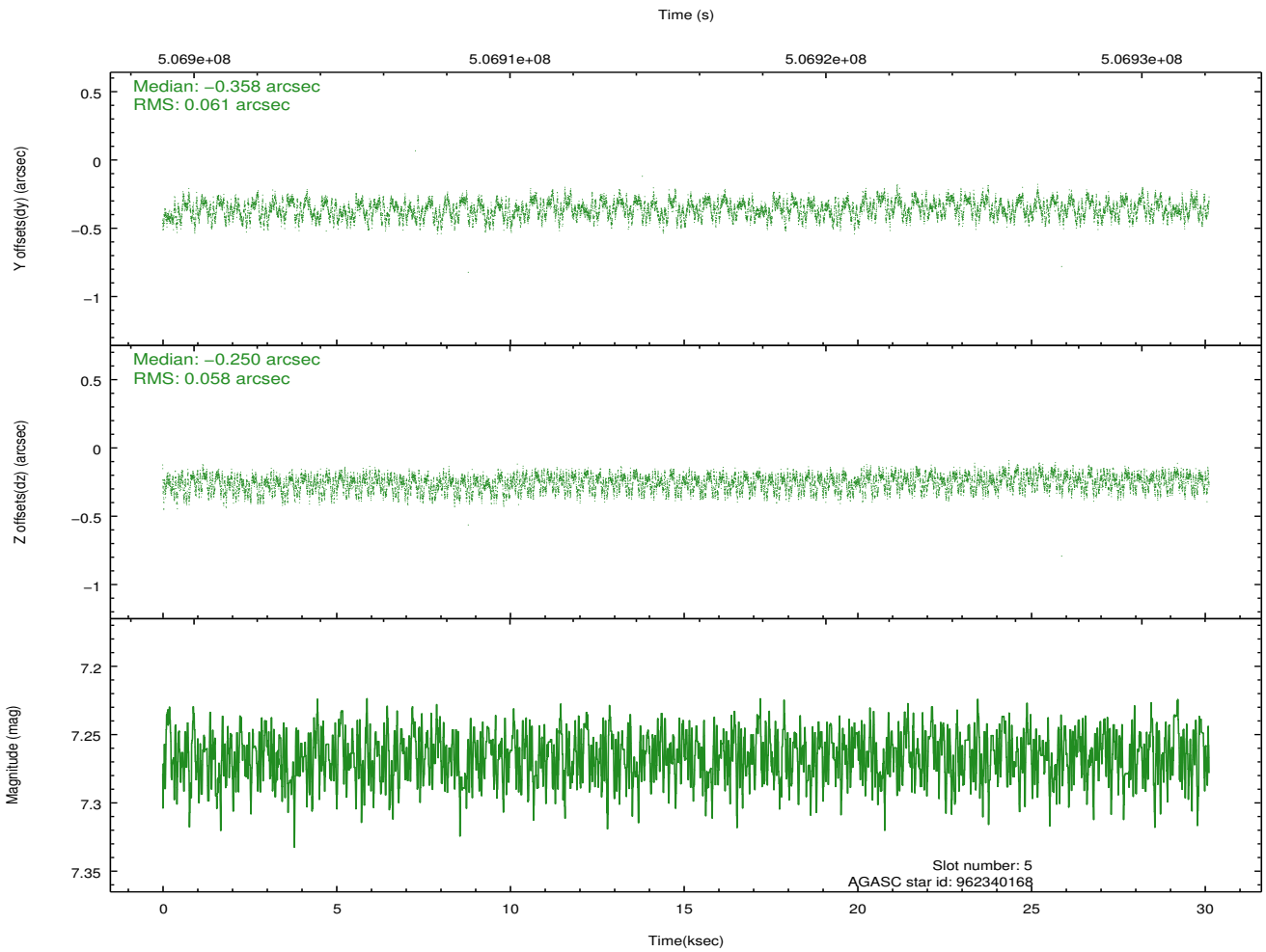
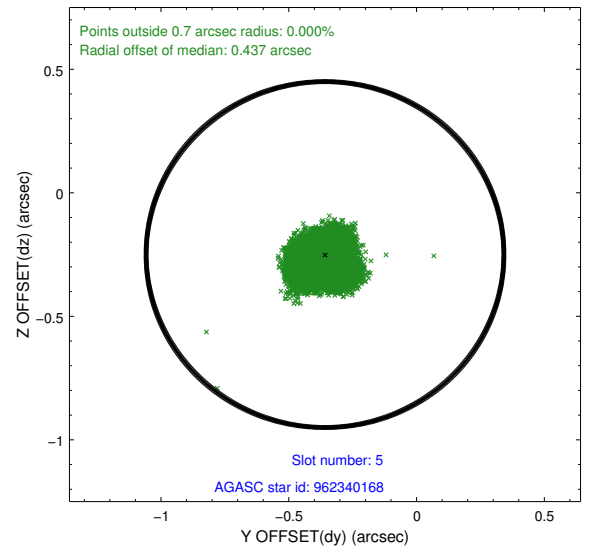
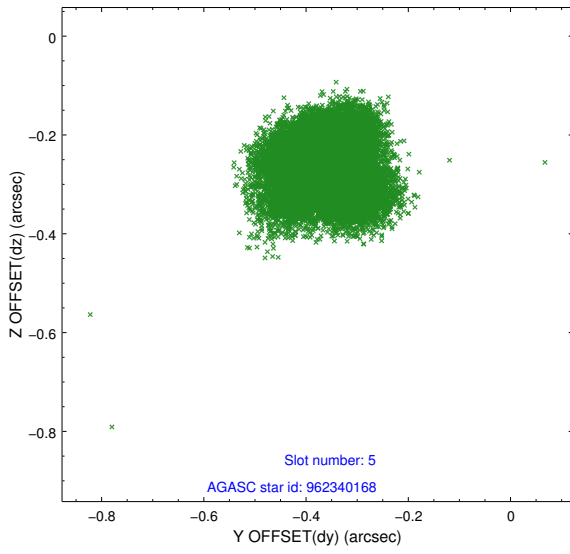
### 2.4.1 Slot 3



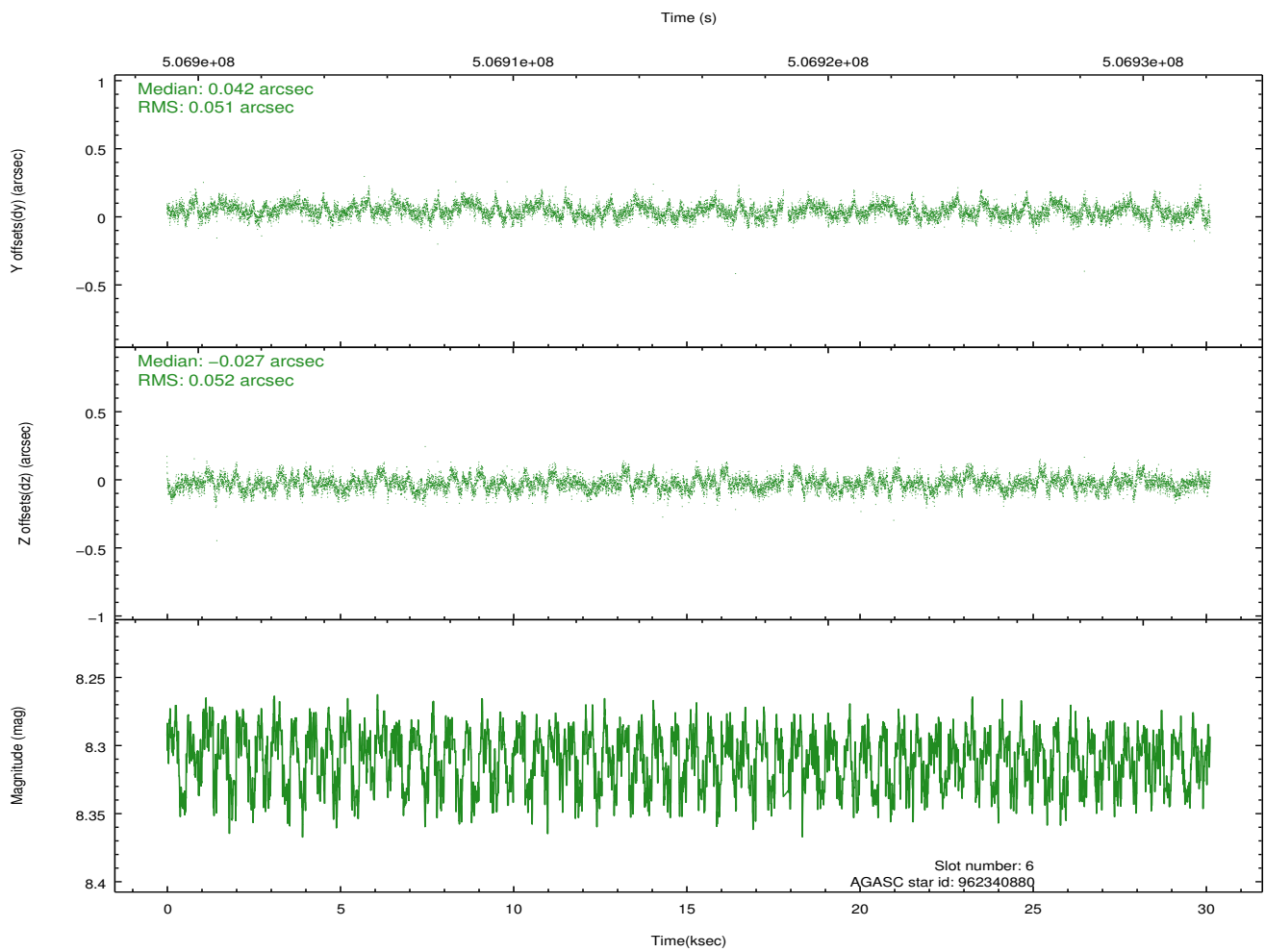
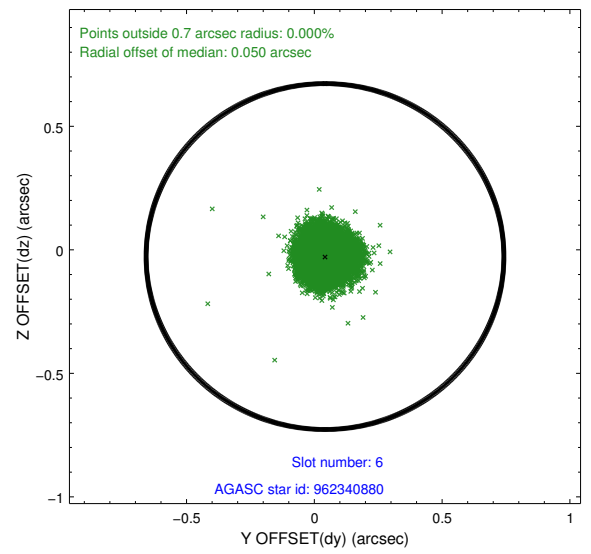
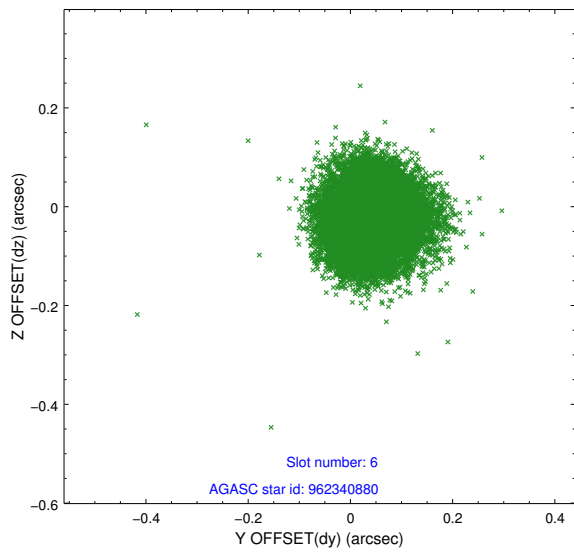
## 2.4.2 Slot 4



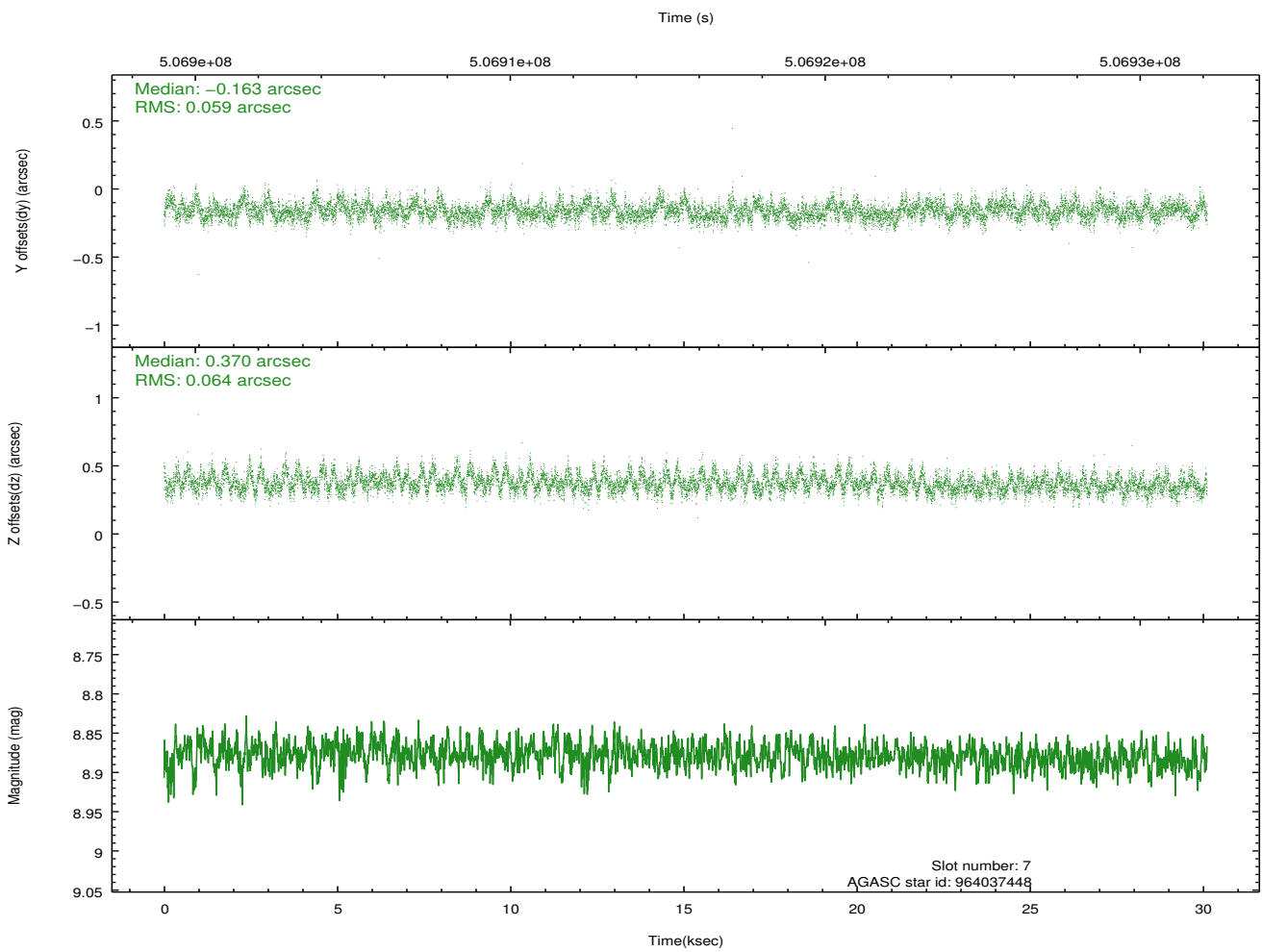
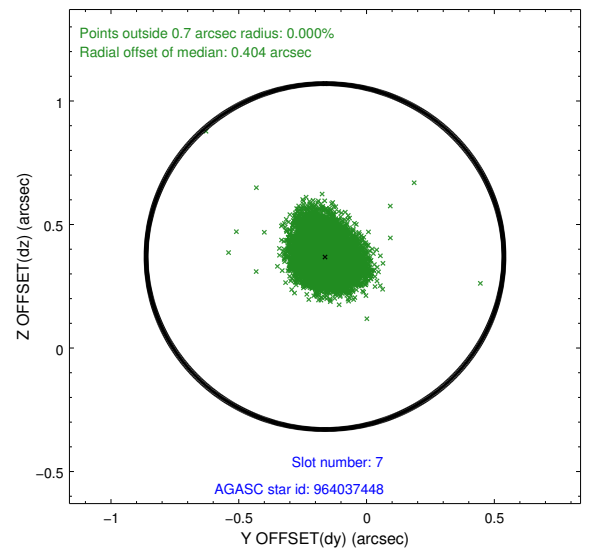
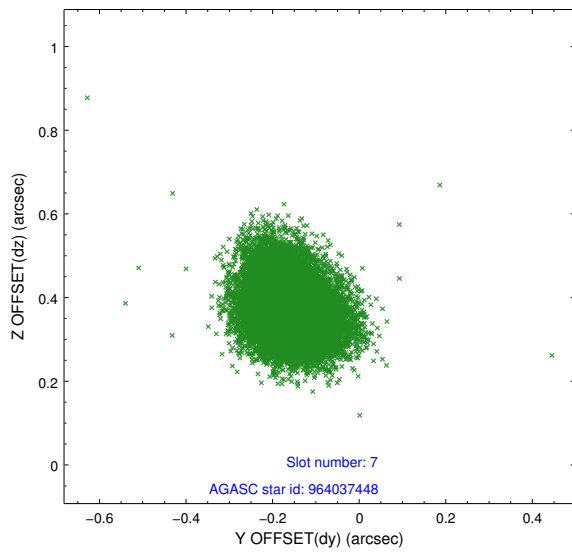
### 2.4.3 Slot 5



## 2.4.4 Slot 6

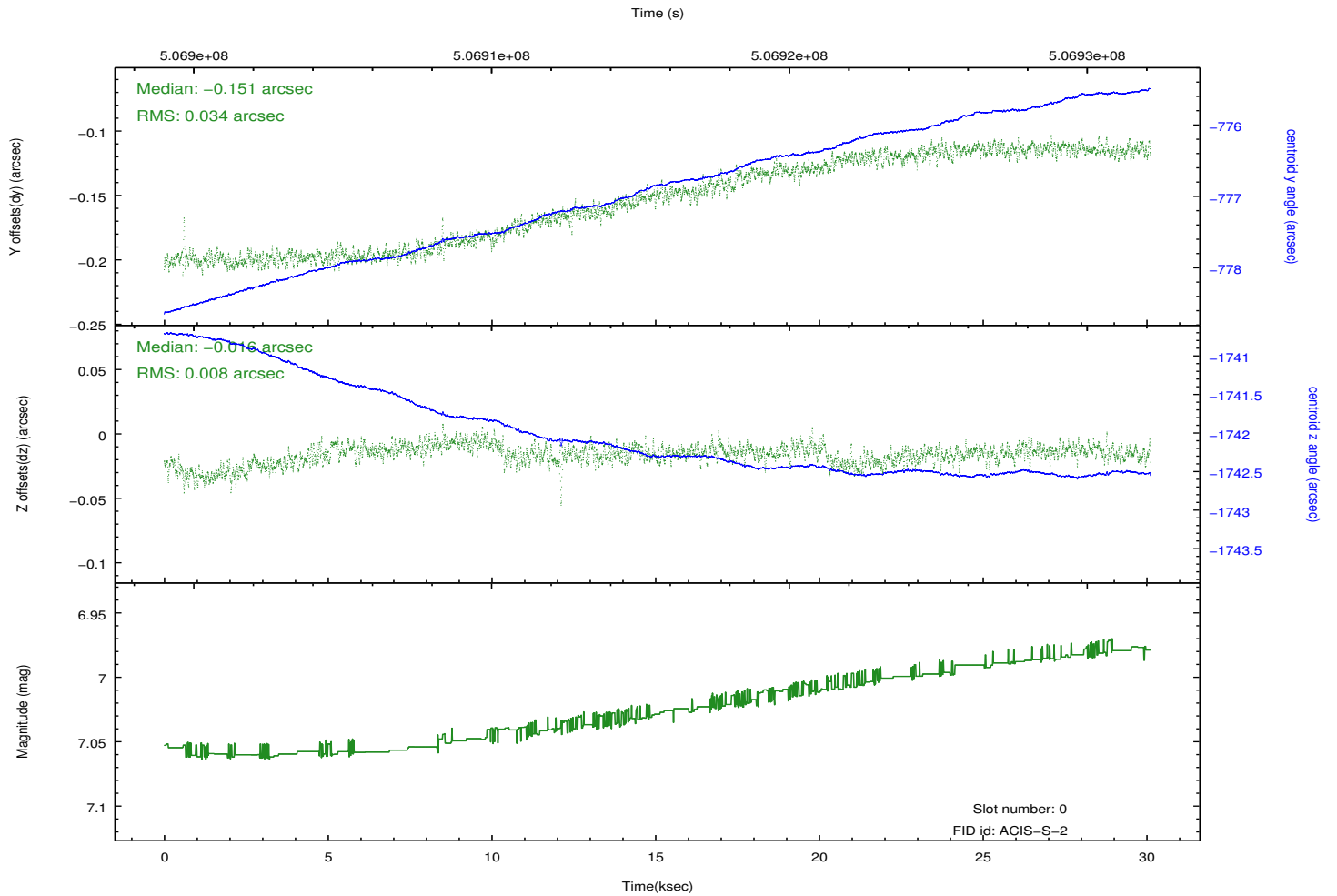
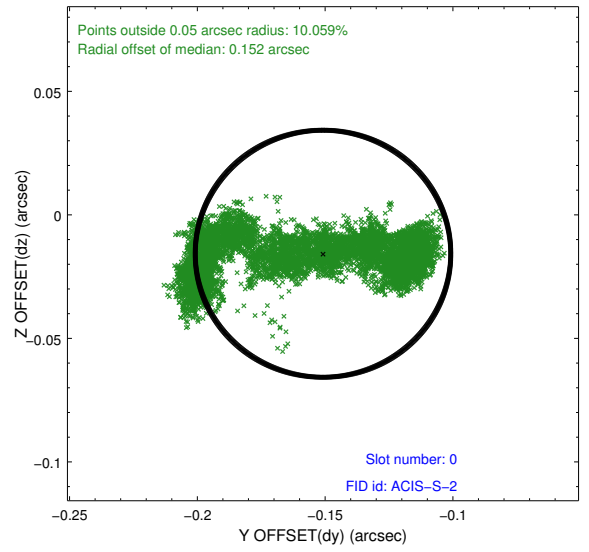
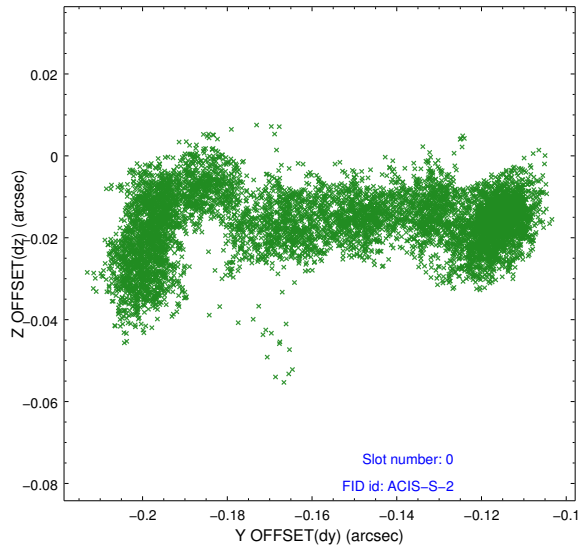


## 2.4.5 Slot 7

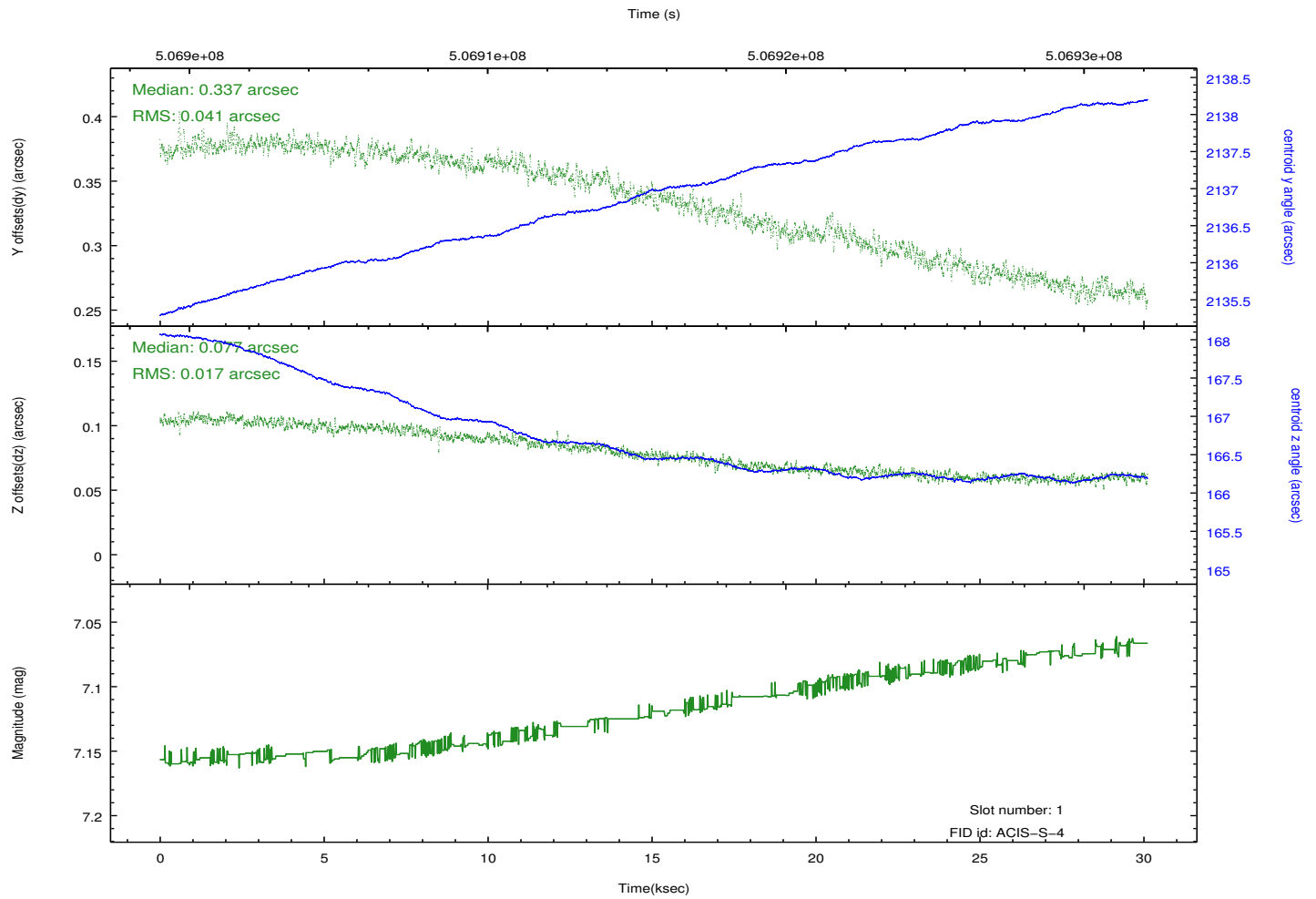
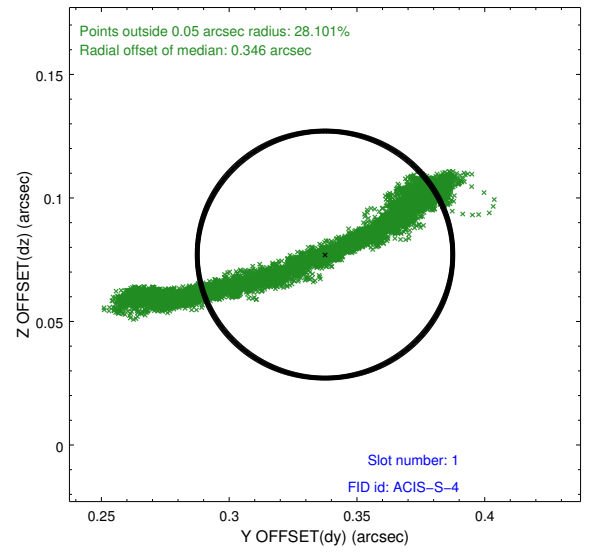
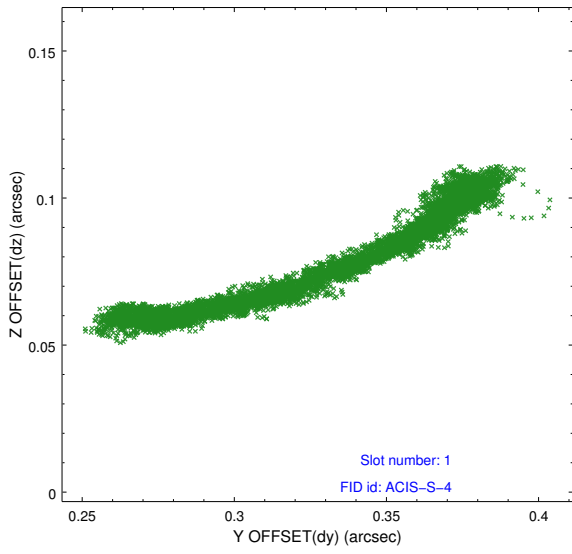


## 2.5 FID Slots

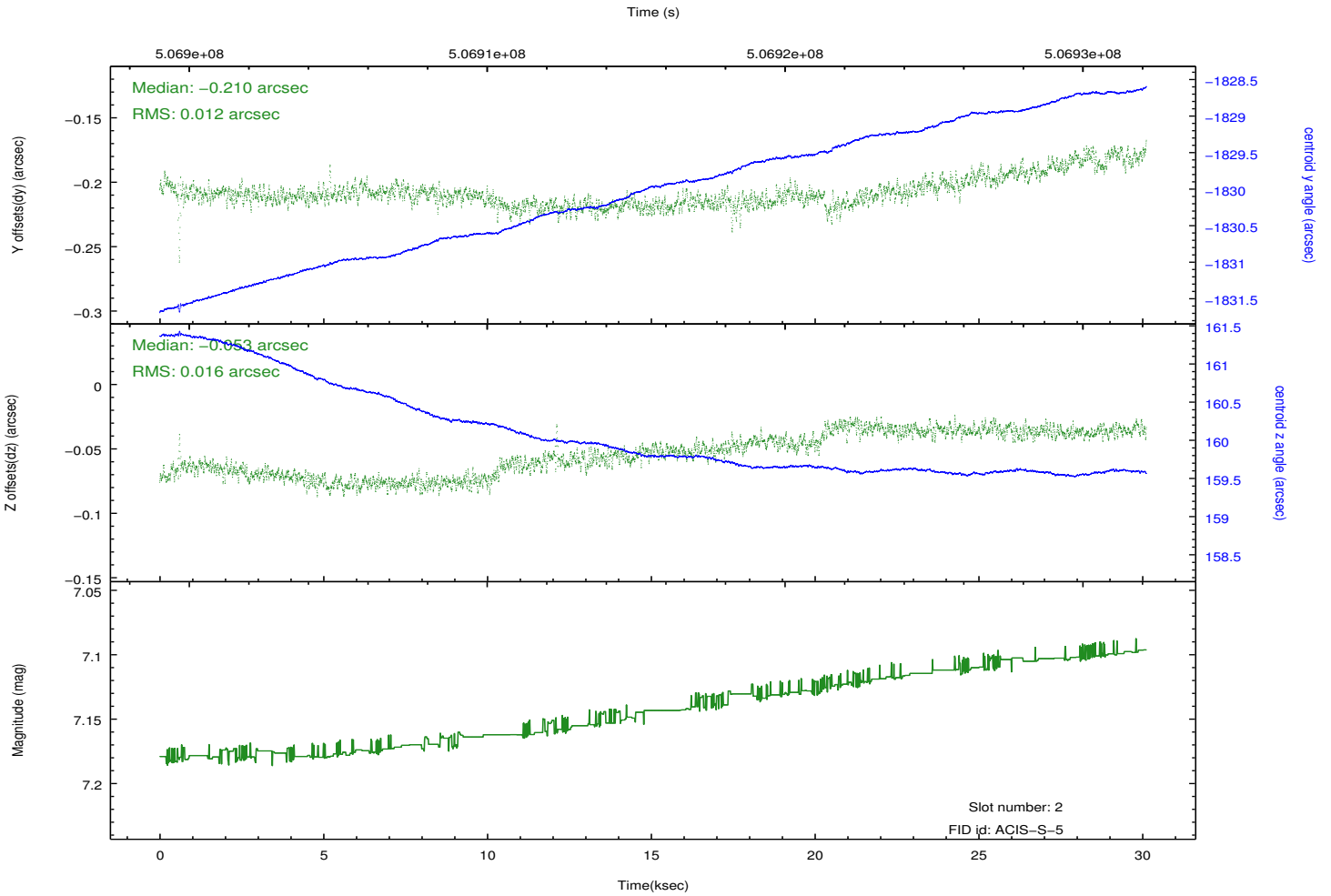
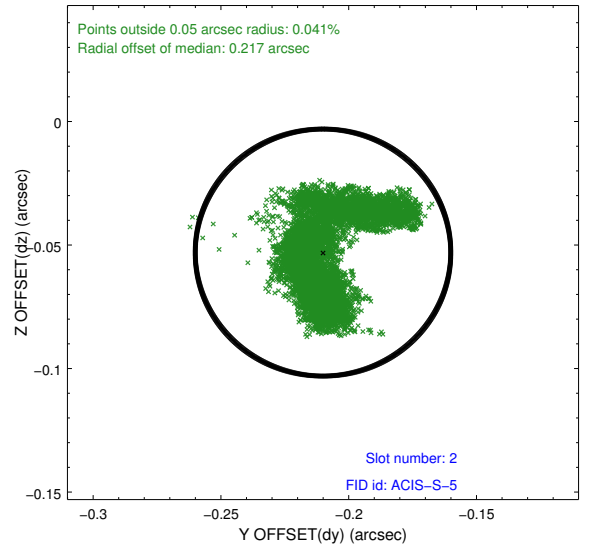
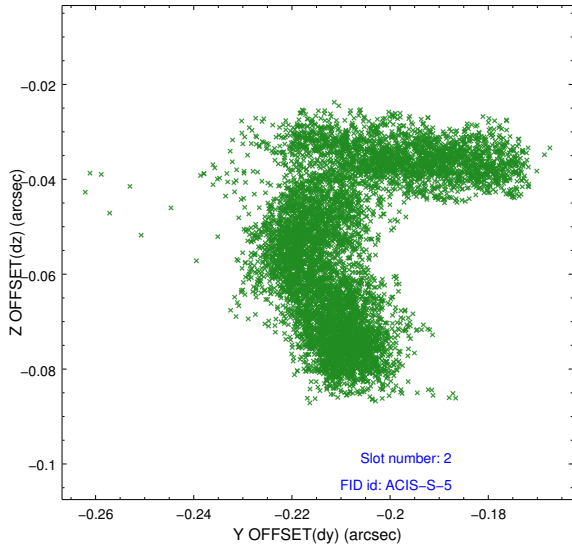
### 2.5.1 Slot 0



## 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)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.961437969565

## 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.