

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 14578 - L2 Version 2  
Chandra X-Ray Center

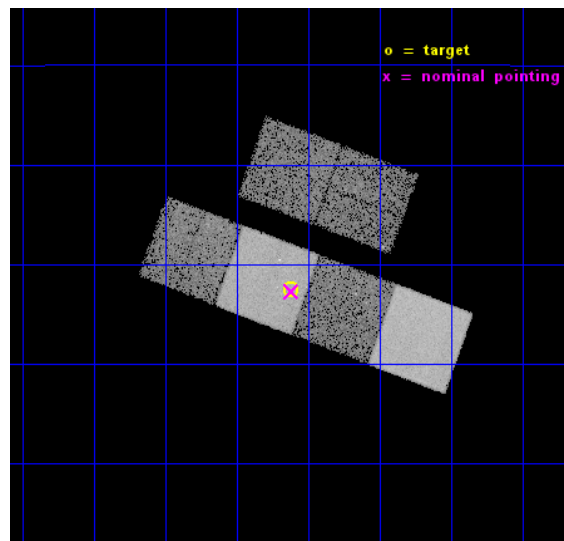
L2 Processing Date : Dec 4 2014

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# 1 Front

seq_num	200879	Sequence number
obs_id	14578	Observation id
title	COMPACT AND DIFFUSE X-RAY SOURCES IN THE YOUNGEST PLANETARY NEBULAE	&#160
observer	Dr. Joel Kastner	Principal investigator
object	PN G034.1-10.5	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	292.78	Observer's specified target RA [deg]
dec_targ	-3.70875	Observer's specified target Dec [deg]
ra_nom	292.77935508354	Nominal RA [deg]
dec_nom	-3.7117135813233	Nominal Dec [deg]
roll_nom	200.15657044463	Nominal Roll [deg]
revision	2	Processing version of data
ontime	18870.399929762	Sum of GTIs [s]
livetime	18631.451563461	Livetime [s]
ontime2	18870.399929762	Sum of GTIs [s]
ontime3	18870.327867746	Sum of GTIs [s]
ontime5	18870.399929762	Sum of GTIs [s]
ontime6	18870.36890775	Sum of GTIs [s]
ontime7	18870.399929762	Sum of GTIs [s]
ontime8	18870.286827743	Sum of GTIs [s]
l2events	152737	Number of level 2 events

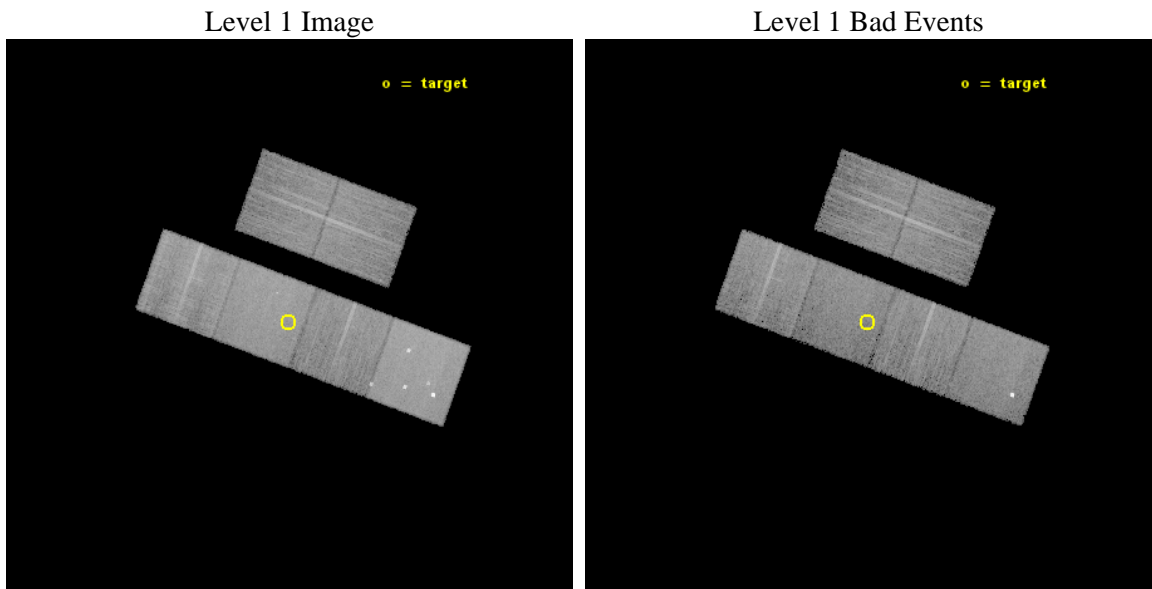




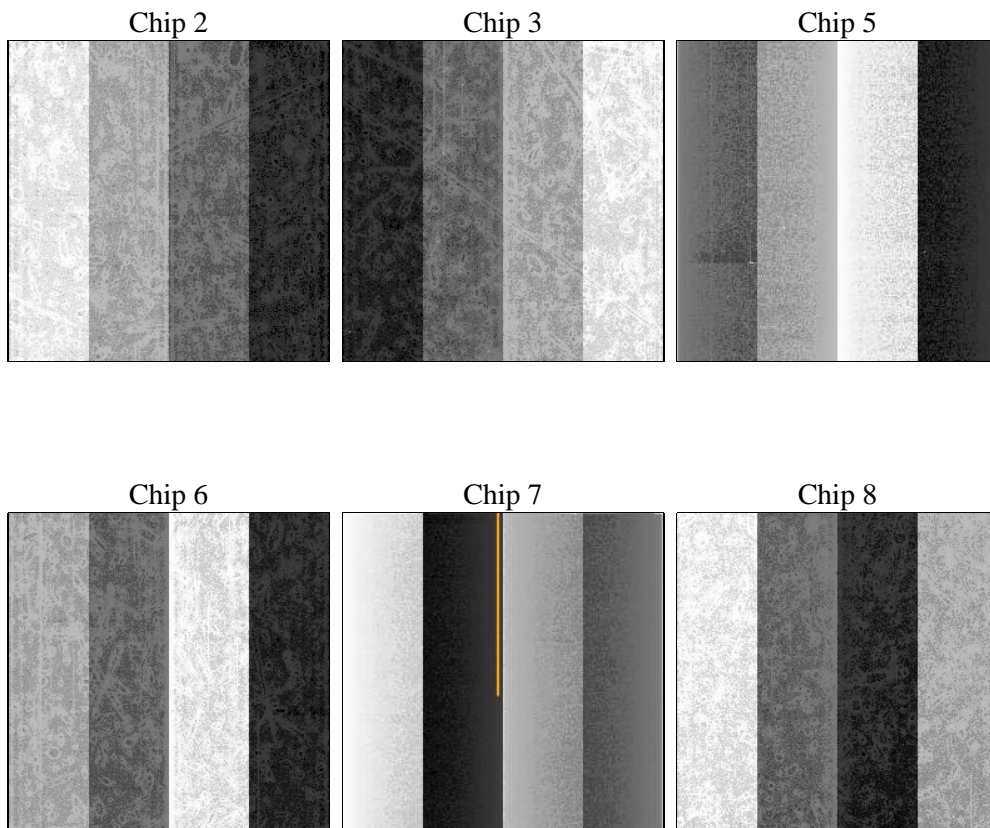
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18906.678000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	18870.399929762	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	18870.399929762	Sum of GTIs [s]
date	2014-12-04T19:03:18	Date and time of file creation	ontime3	18870.327867746	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	18870.399929762	Sum of GTIs [s]
			ontime6	18870.36890775	Sum of GTIs [s]
			ontime7	18870.399929762	Sum of GTIs [s]
			ontime8	18870.286827743	Sum of GTIs [s]
			l1events	644112	Number of level 1 events

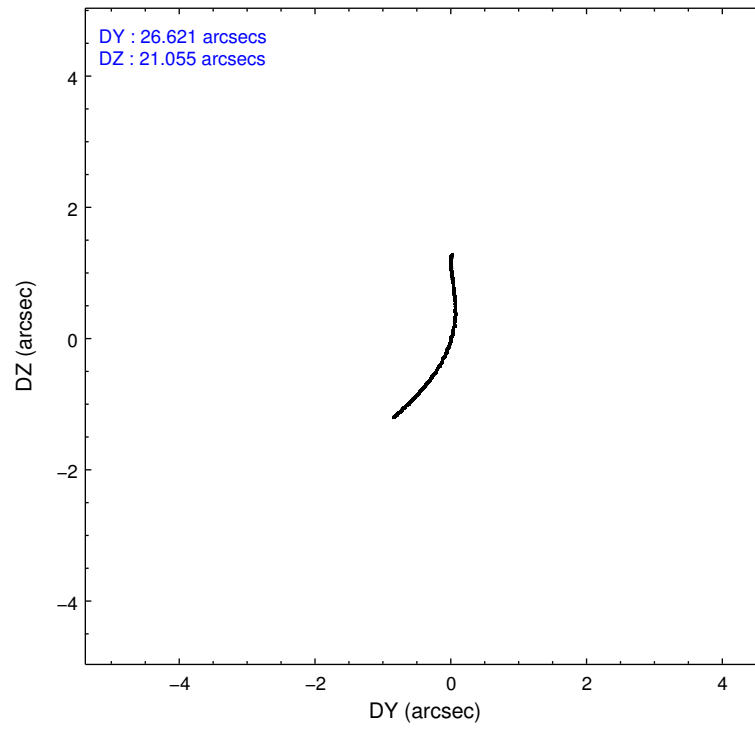
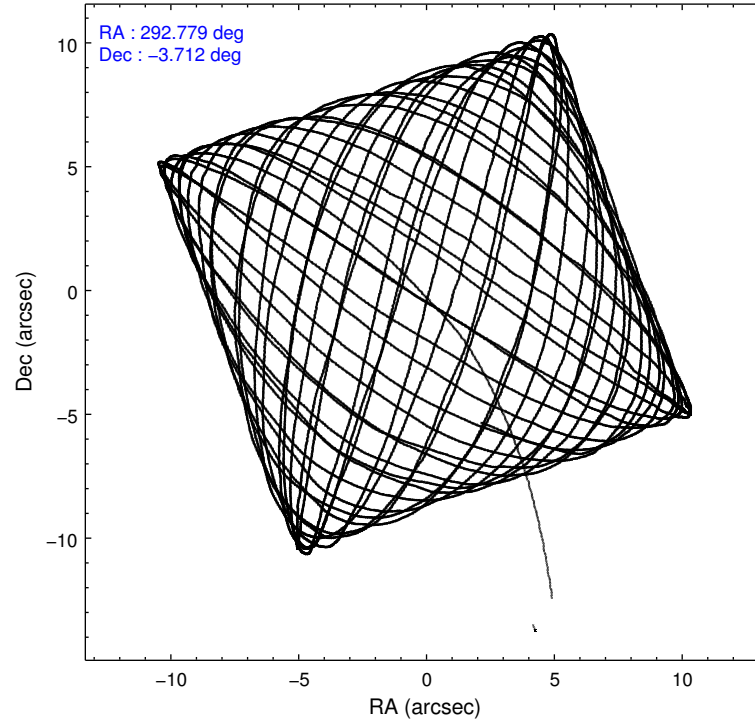
### 2.1.4 Events

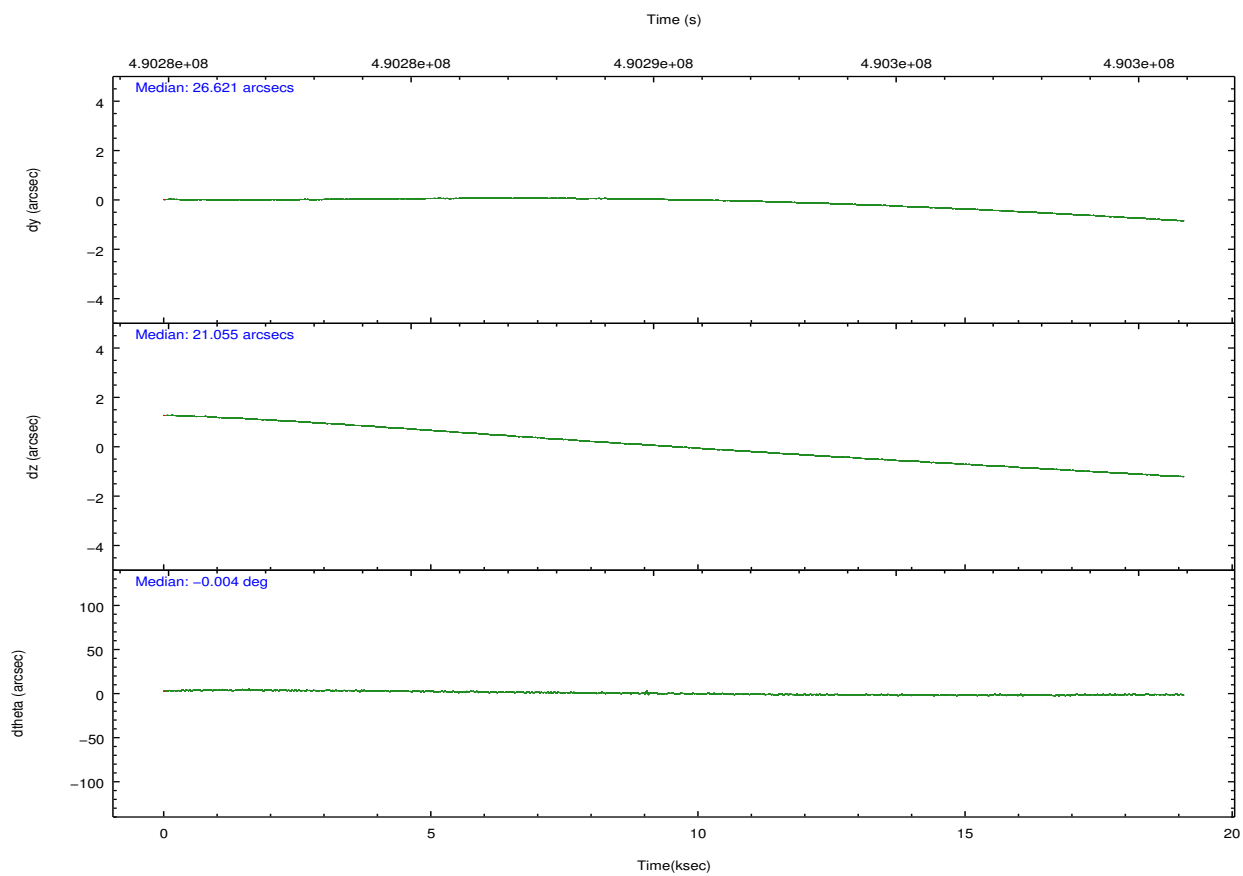
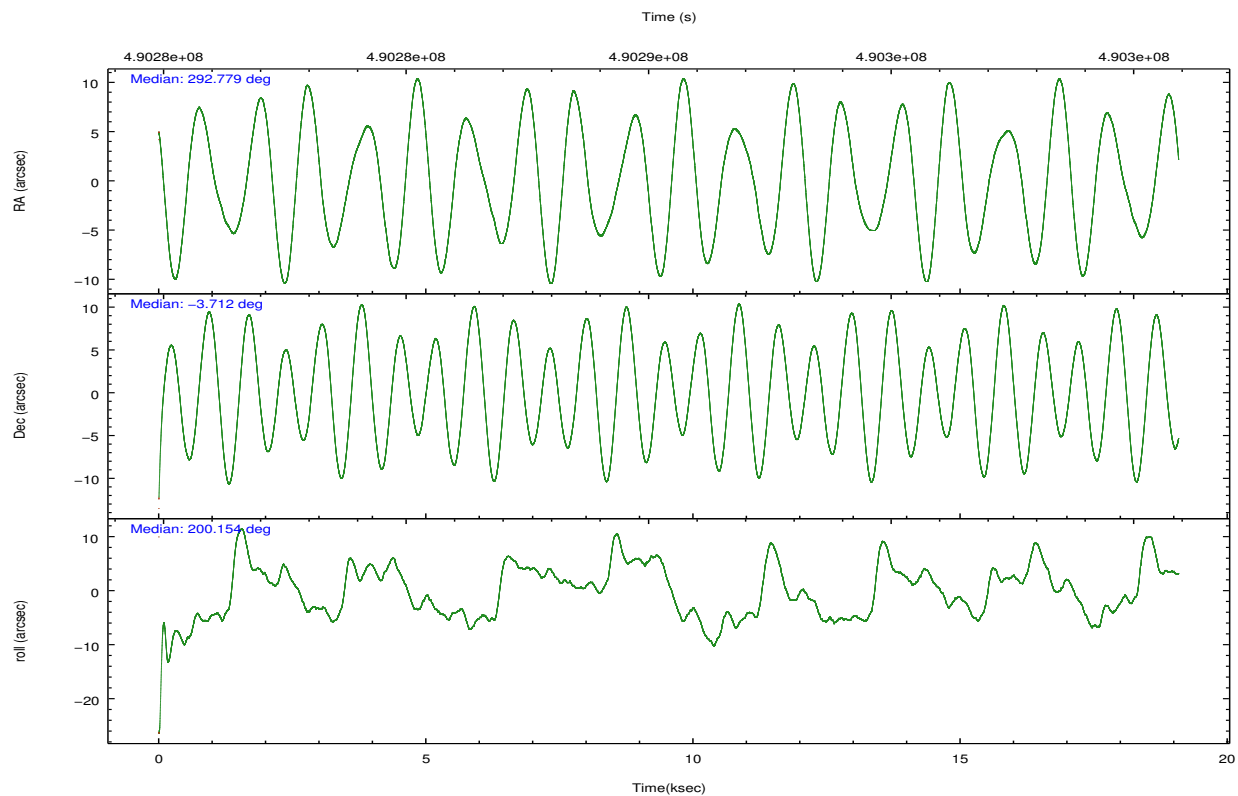
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	85991	82050	153404	87553	119573	115541	grade 0 events	3513	3238	10084	3579	4765	8859
rejected events	76210	72476	80141	76866	66951	84707		4%	3%	6%	4%	3%	7%
rejected %	88%	88%	52%	87%	55%	73%	grade 1 events	44	53	300	41	144	83
								0%	0%	0%	0%	0%	0%
							grade 2 events	2365	2198	21144	2432	10729	7316
								2%	2%	13%	2%	8%	6%
							grade 3 events	994	1038	2359	1082	4514	3224
								1%	1%	1%	1%	3%	2%
							grade 4 events	1019	1070	2336	1114	4566	3037
								1%	1%	1%	1%	3%	2%
							grade 5 events	3799	4566	10646	4593	12753	6677
								4%	5%	6%	5%	10%	5%
							grade 6 events	1894	2034	37370	2484	28061	8399
								2%	2%	24%	2%	23%	7%
							grade 7 events	72363	67853	69165	72228	54041	77946
								84%	82%	45%	82%	45%	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	292.796613	292.7793550835353	CCD I2 on	O3	Y
[deg] Pointing Dec	-3.690477	-3.711713581323292	CCD I3 on	O2	Y
[deg] Pointing Roll	200.001074	200.1565704446292	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)	490281050.184000	490279840.00585	CCD S5 on	N	N
Observation start date	2013-07-15T13:09:43	2013-07-15T12:50:40	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	490299956.184000	490300184.20696	On-chip summing requested	N	N
Observation end date	2013-07-15T18:24:49	2013-07-15T18:29:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



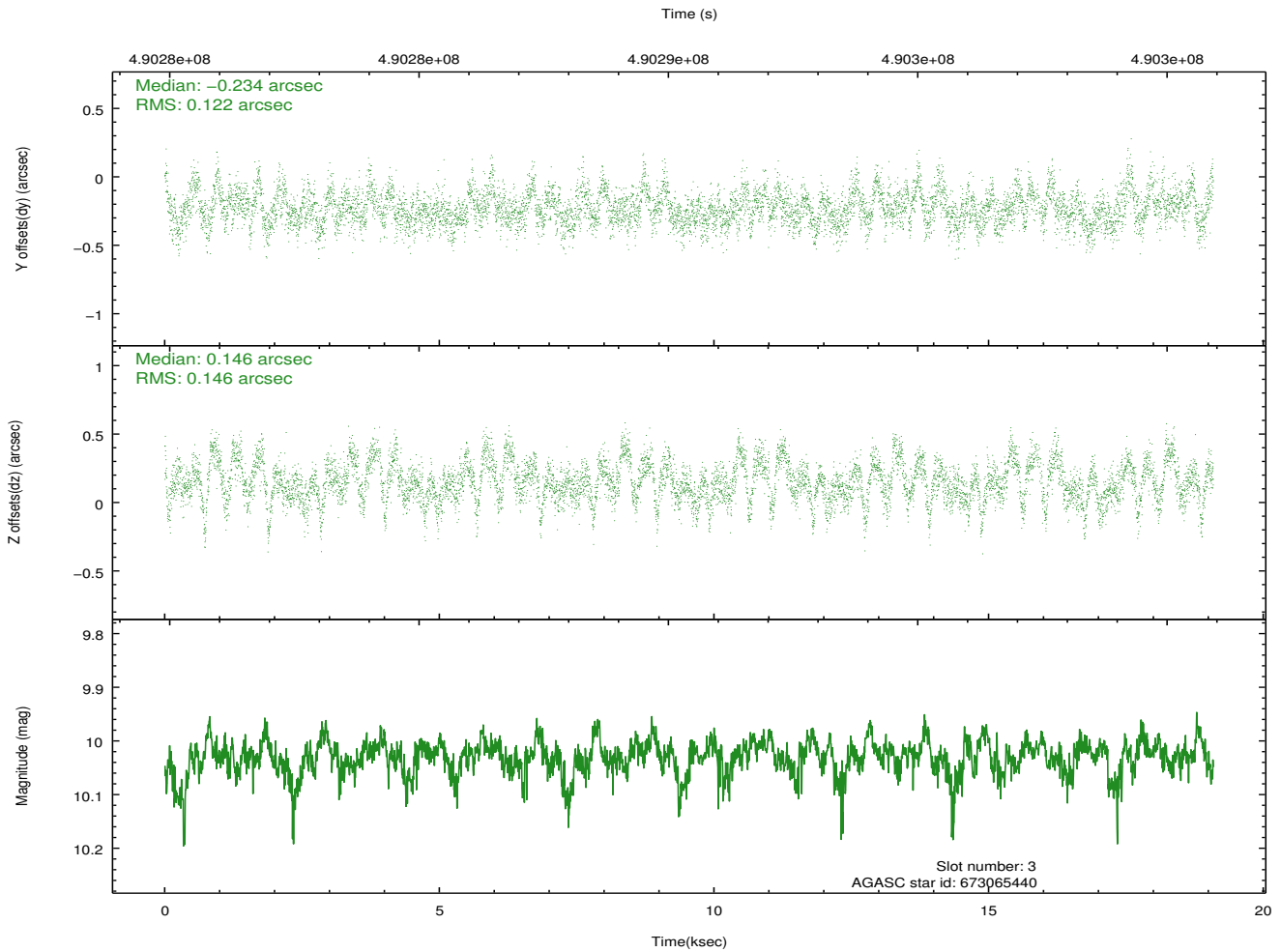
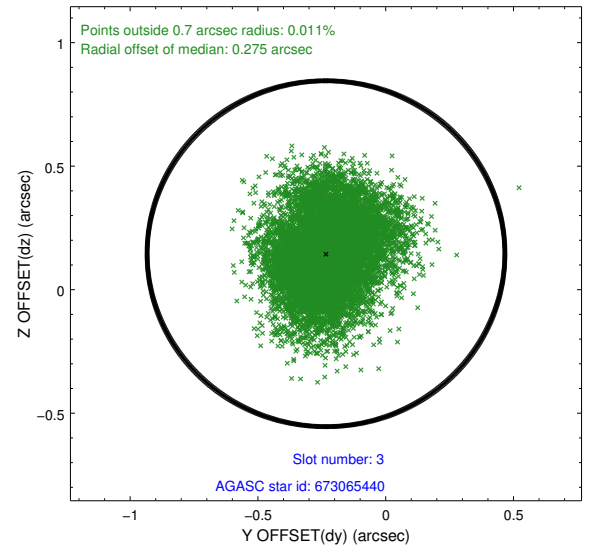
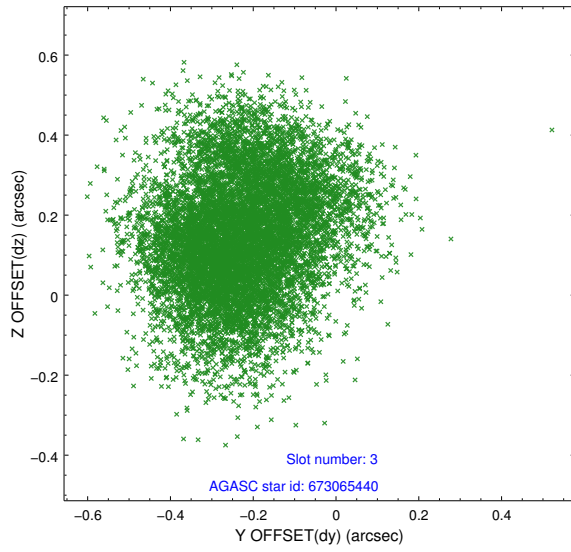


### Slot Statistics

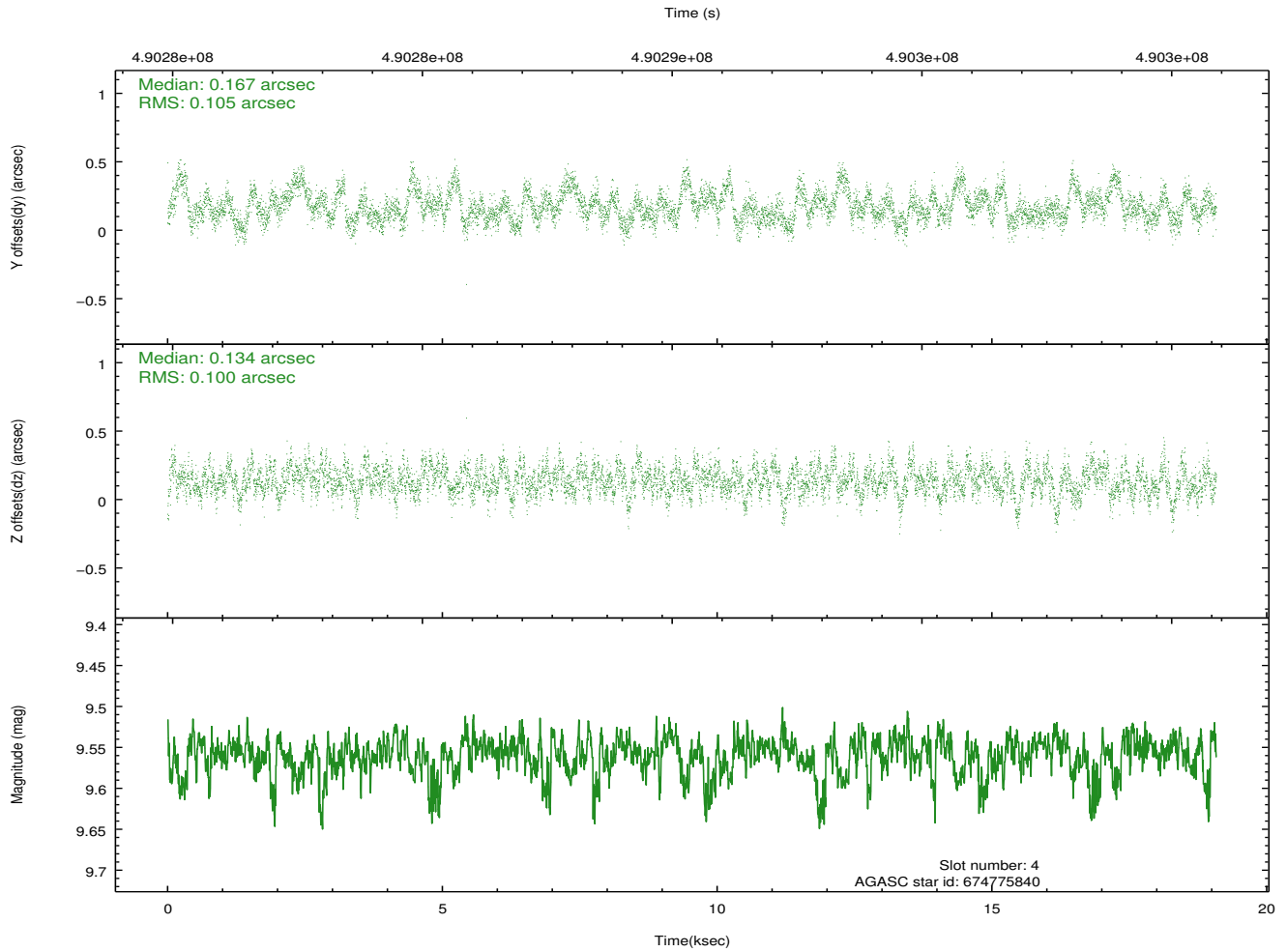
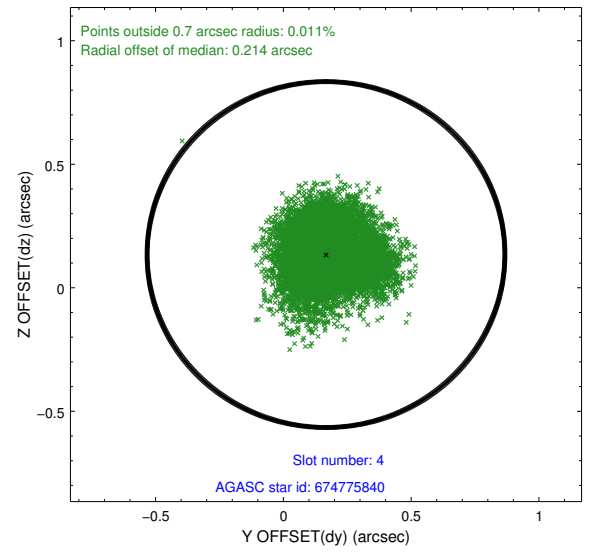
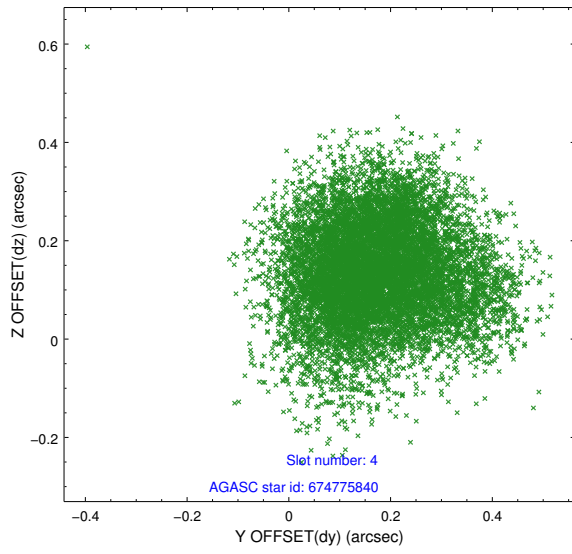
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.92	4656	-0.169	-0.001	0.024	0.043	0.000000	0.000000	-779.92	-1742.58
1	FID		ACIS-S-4	7.01	4656	0.333	0.083	0.009	0.014	0.000000	0.000000	2133.76	165.78
2	FID		ACIS-S-5	7.03	4655	-0.197	-0.074	0.025	0.041	0.000000	0.000000	-1832.53	159.53
3	GUIDE	used	673065440	10.03	9204	-0.234	0.146	0.204	0.324	292.172167	-3.619151	2020.90	-1007.37
4	GUIDE	used	674775840	9.56	9256	0.167	0.134	0.154	0.249	292.903897	-3.467066	-636.45	-623.49
5	GUIDE	used	675286760	9.31	9262	0.039	-0.130	0.127	0.207	292.973228	-3.893477	-345.71	903.90
6	GUIDE	used	673582416	8.91	9305	-0.176	-0.252	0.134	0.205	292.335368	-4.377475	2401.91	1758.52
7	GUIDE	used	674775904	10.22	9275	0.185	0.100	0.286	0.439	292.817787	-3.292726	-560.48	-1318.96

## 2.4 Star Slots

### 2.4.1 Slot 3

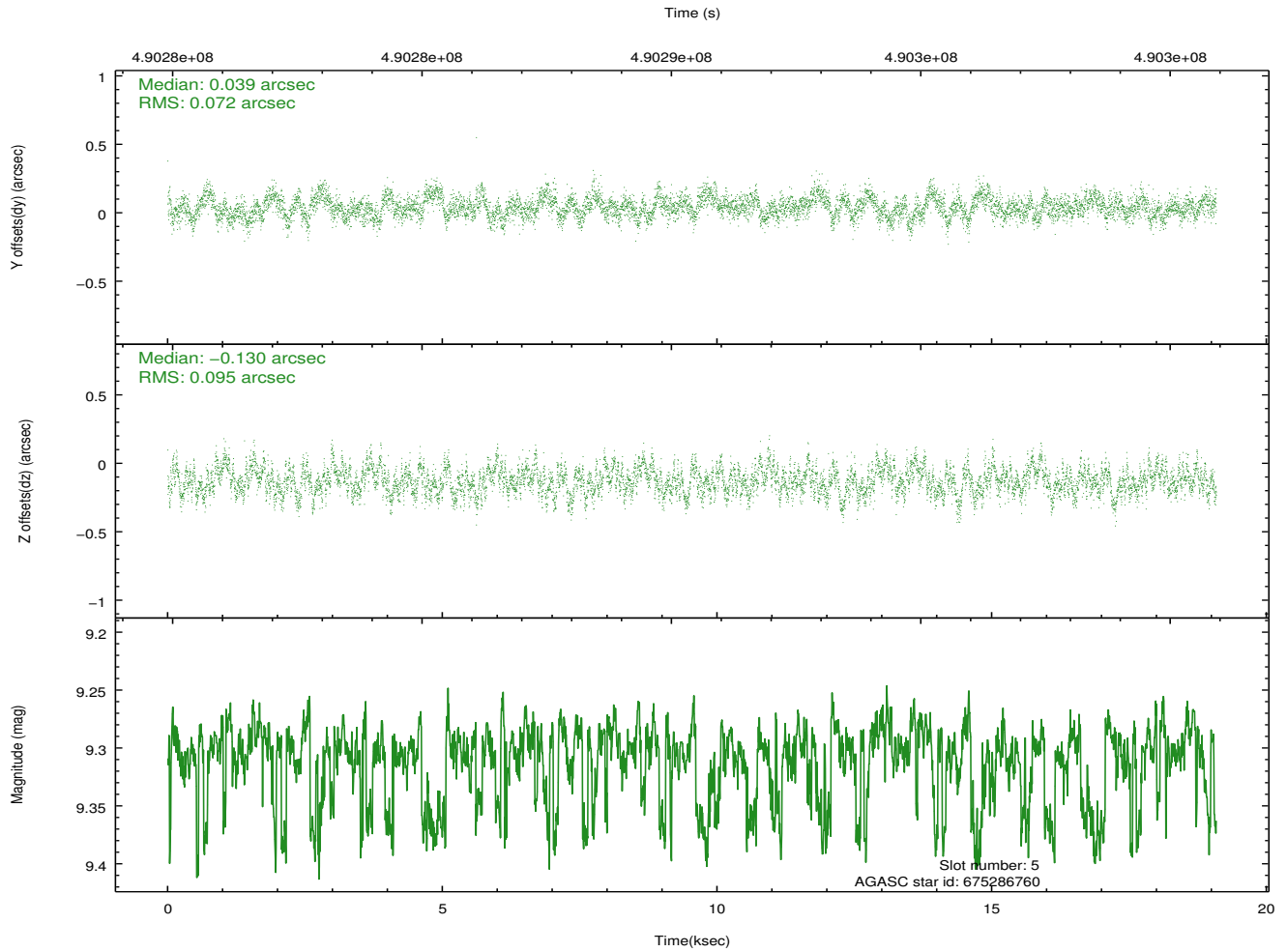
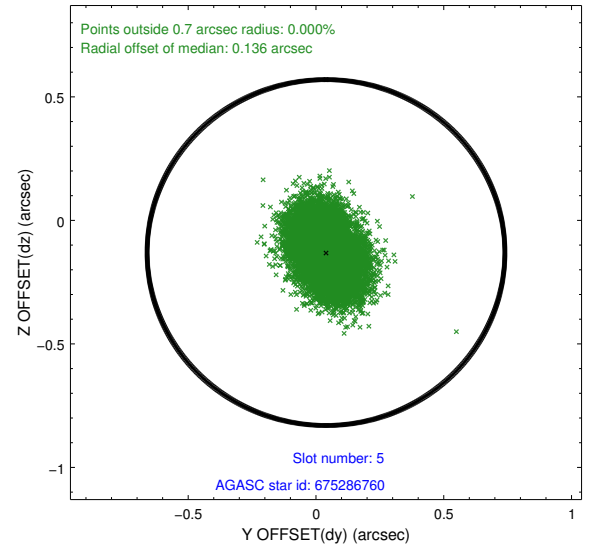
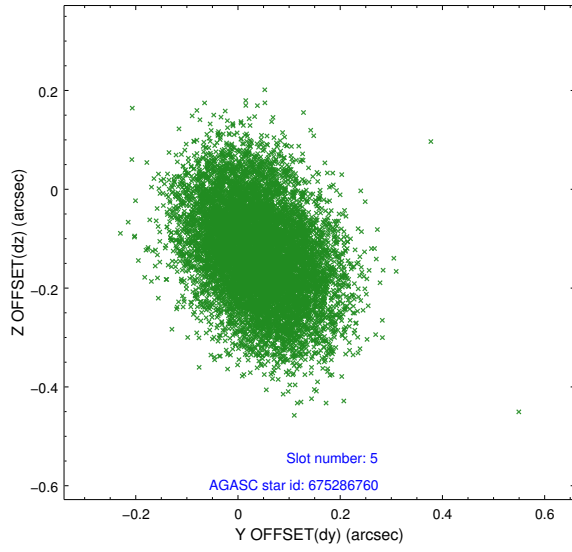


## 2.4.2 Slot 4

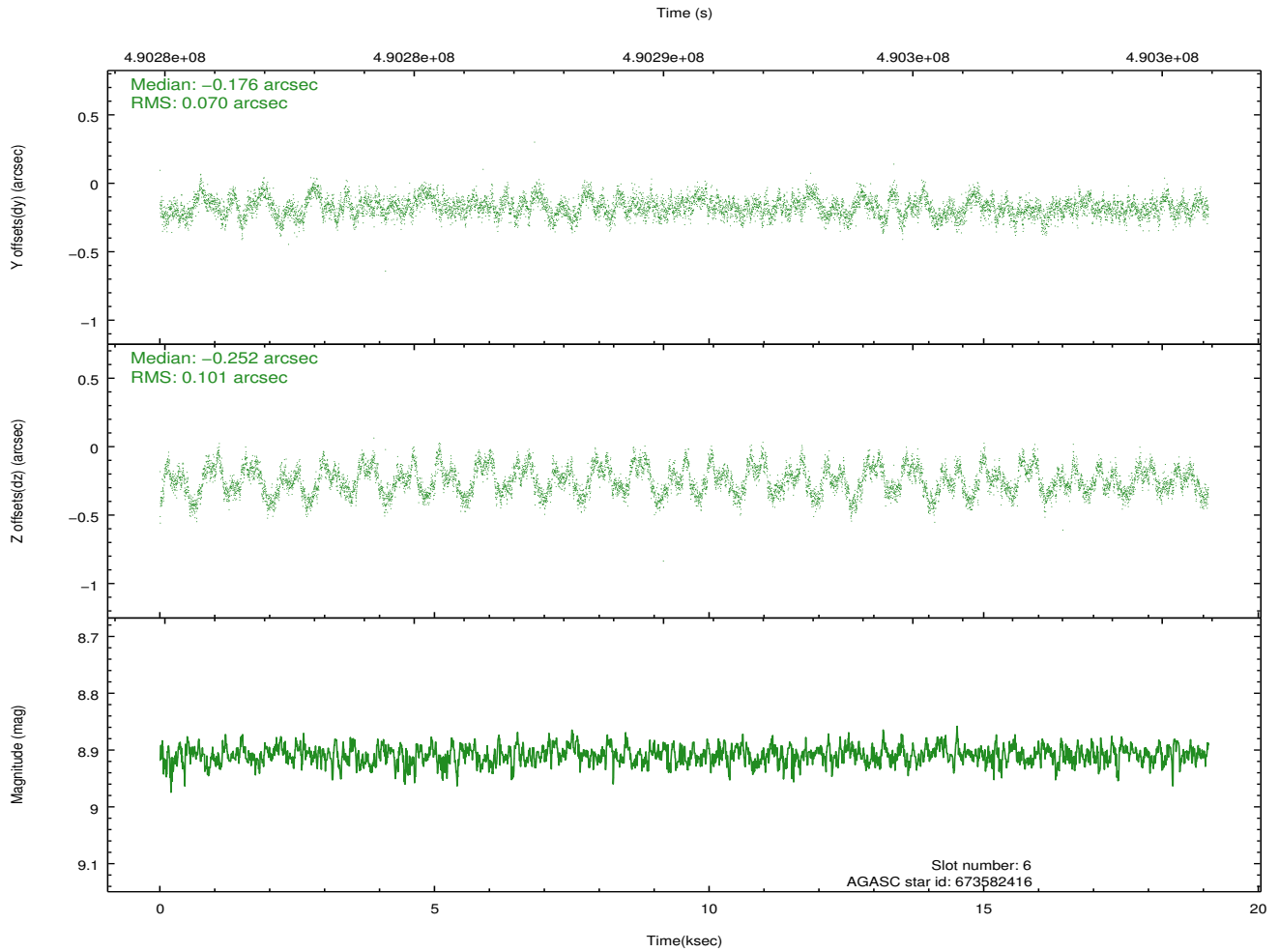
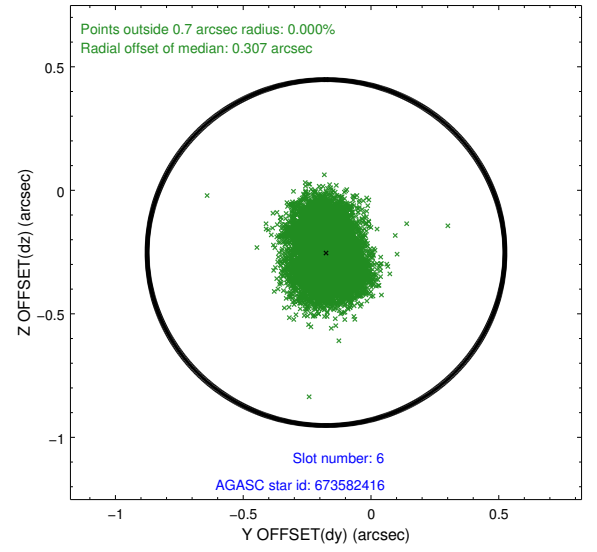
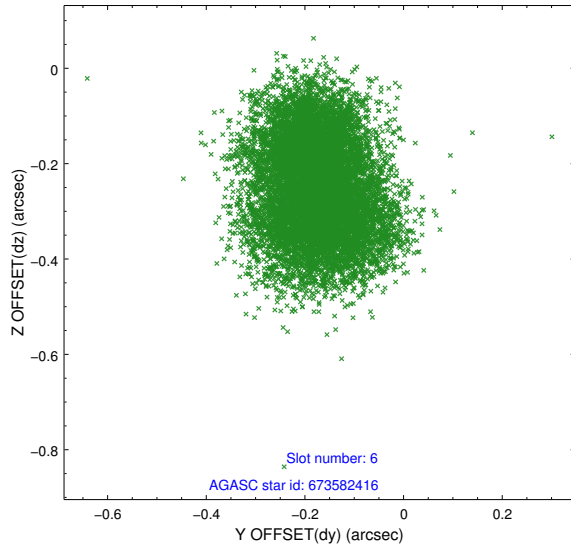




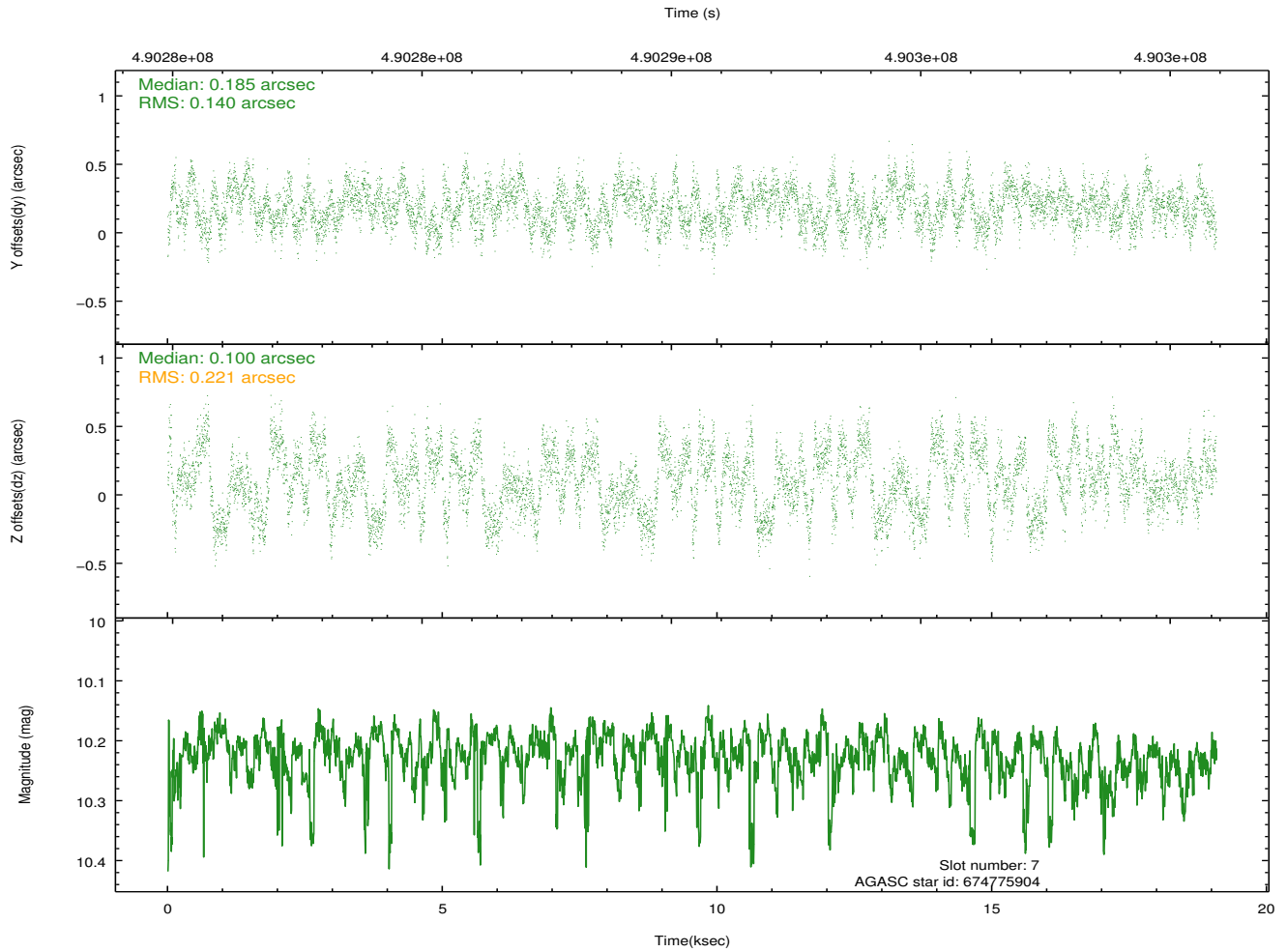
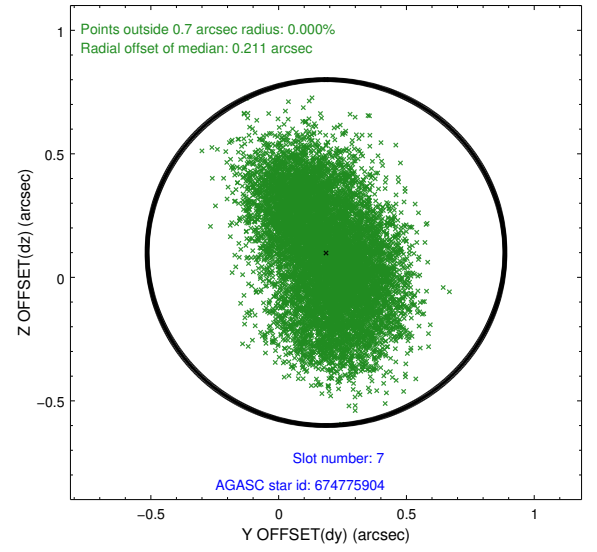
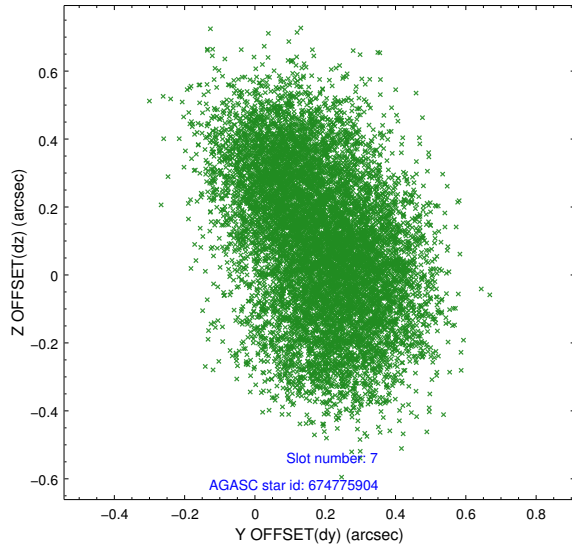
### 2.4.3 Slot 5



## 2.4.4 Slot 6

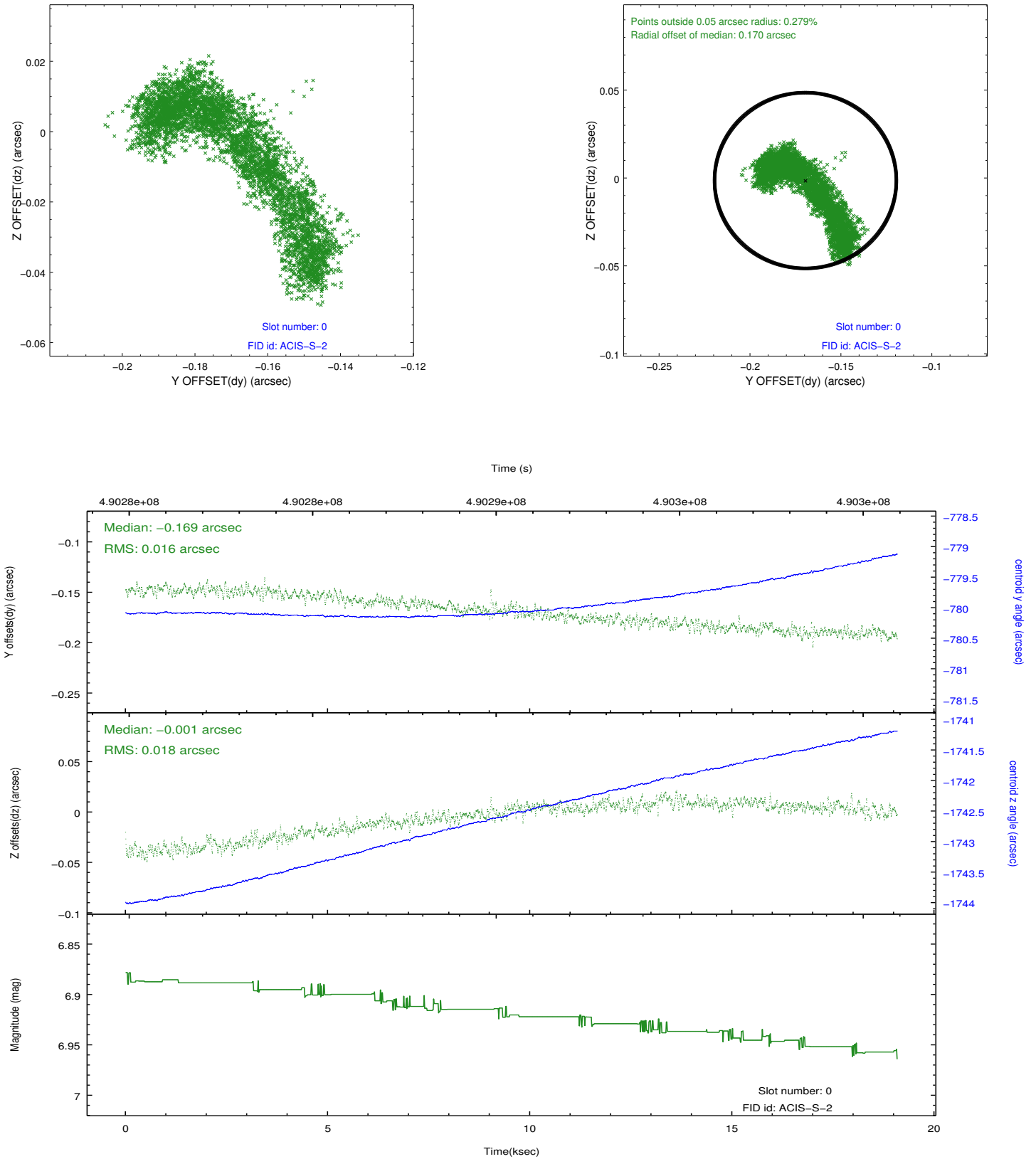


## 2.4.5 Slot 7

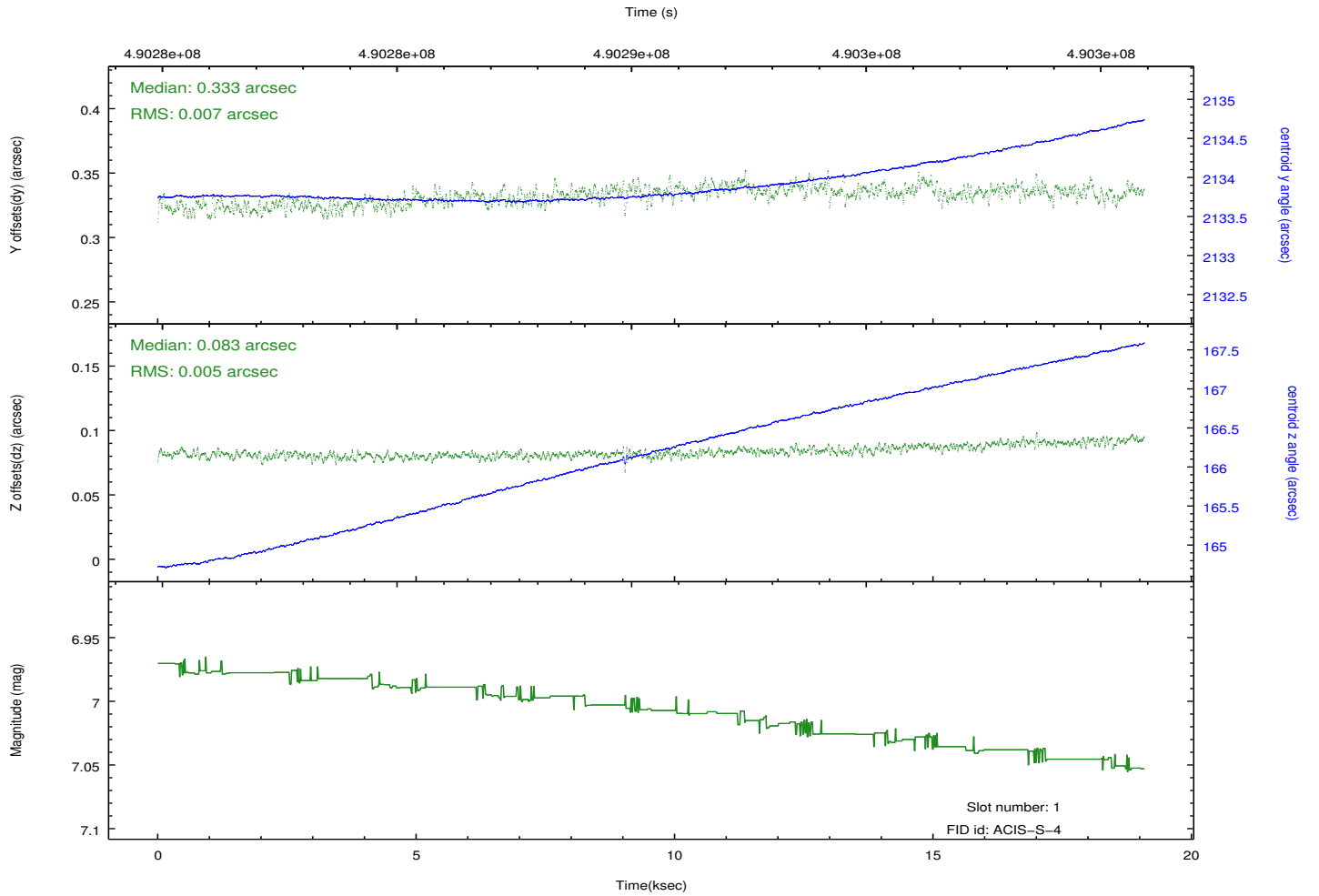
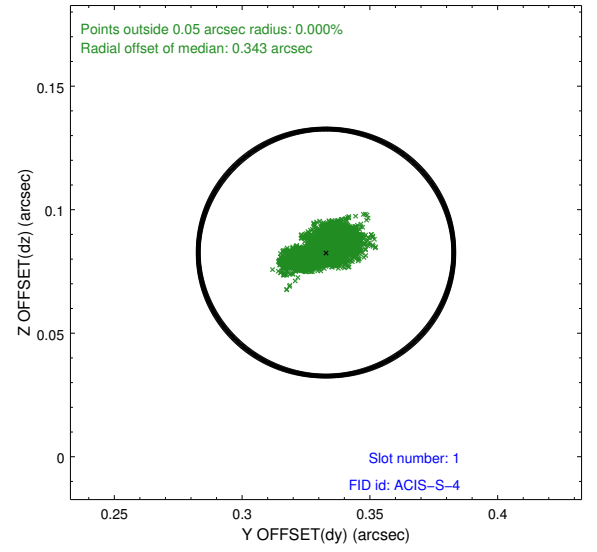
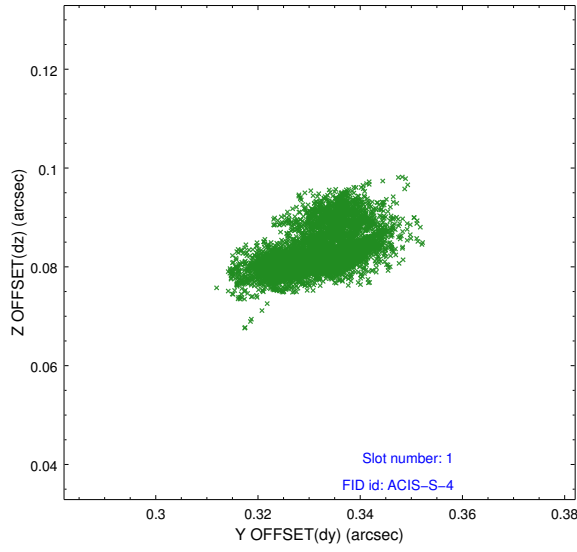


## 2.5 FID Slots

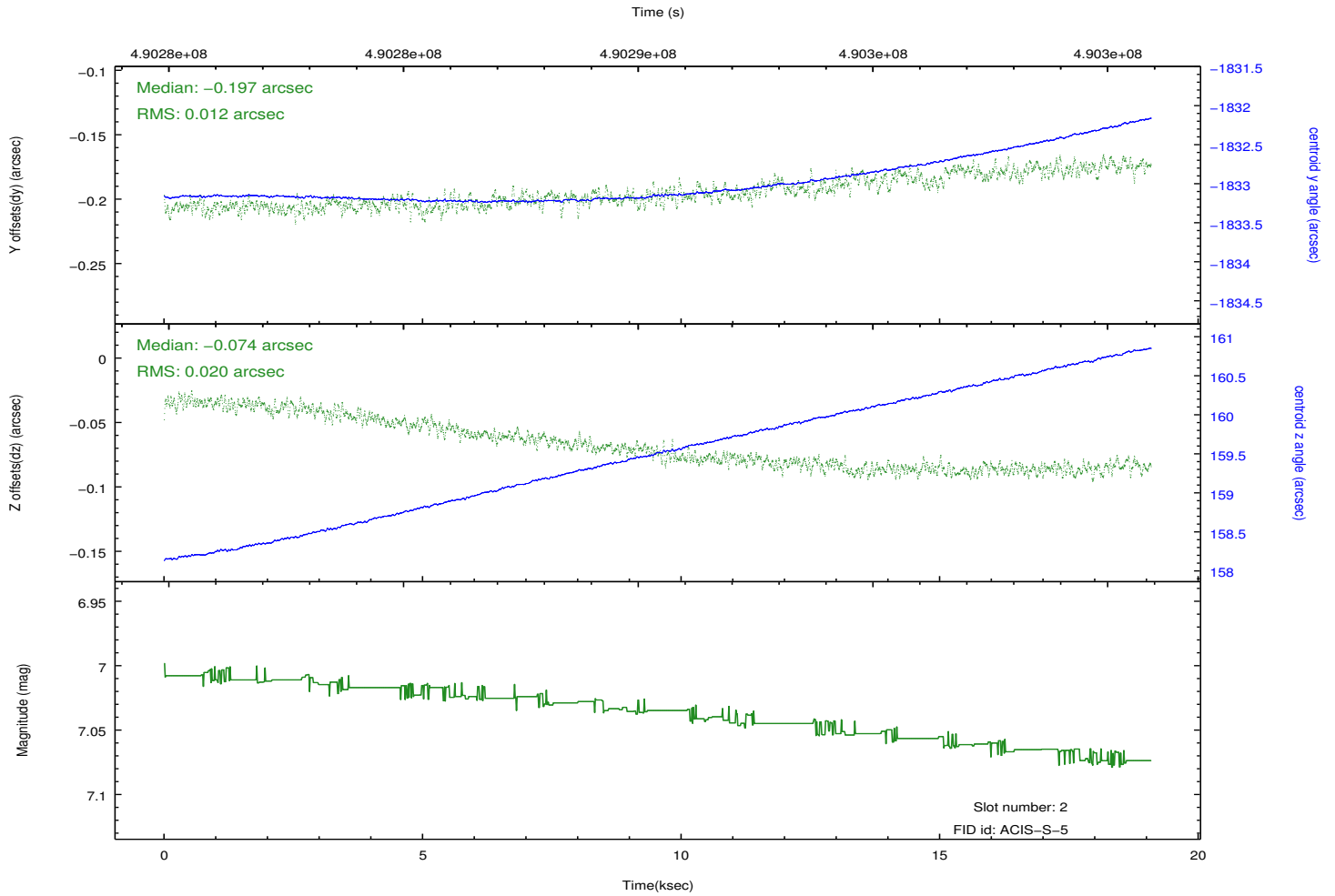
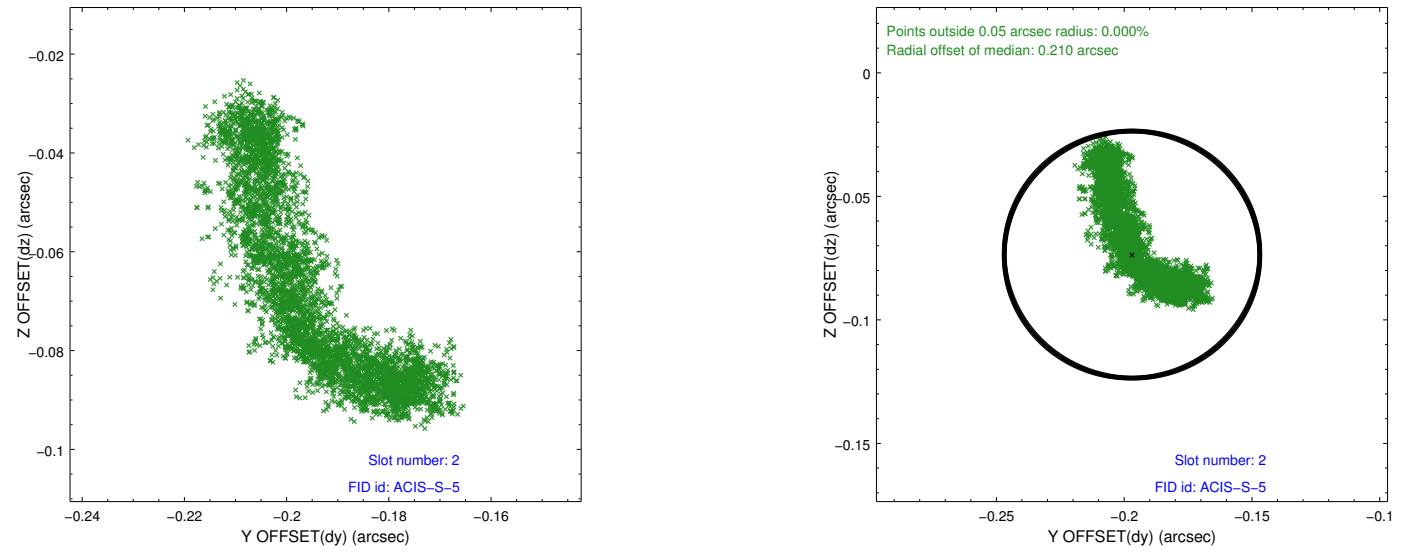
### 2.5.1 Slot 0



## 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)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.870399929762

## 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.