

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 21968 - L2 Version 1  
Chandra X-Ray Center

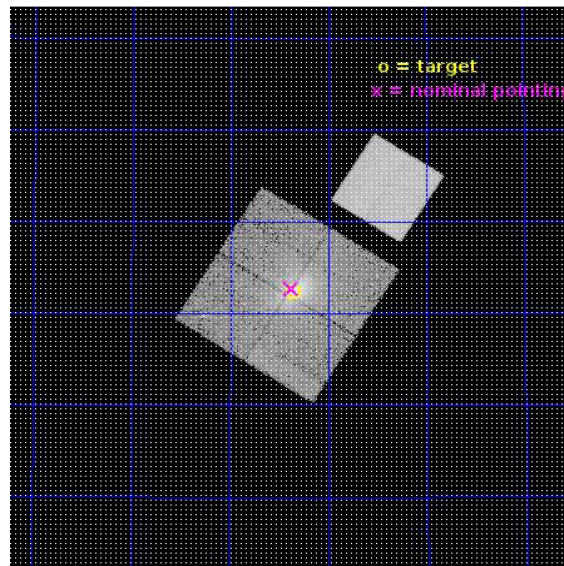
L2 Processing Date : Jan 3 2019

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# 1 Front

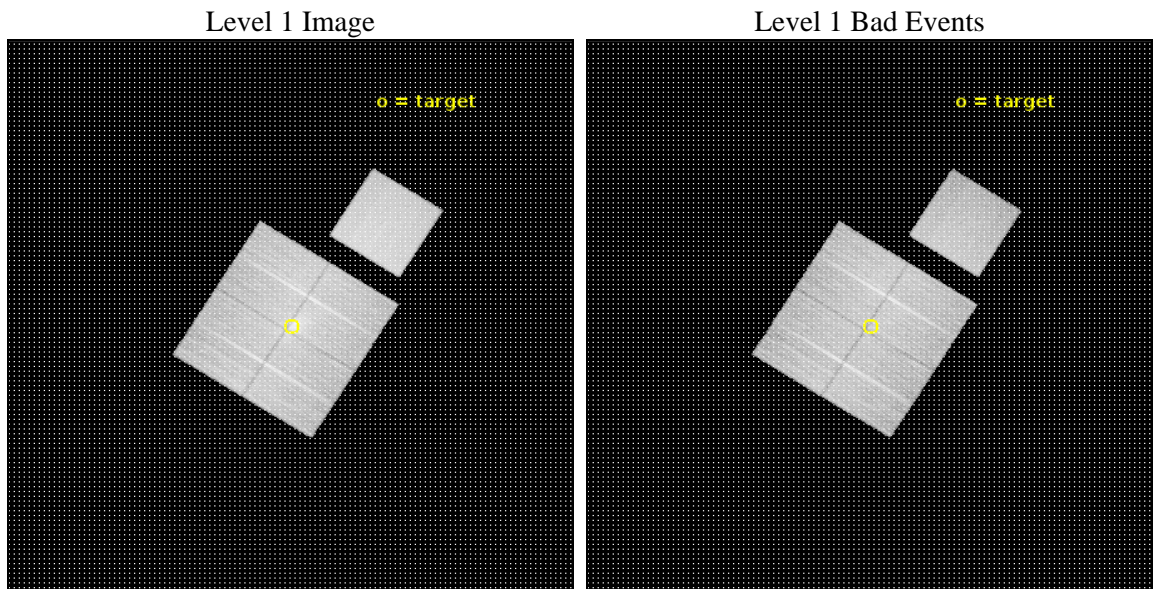
seq_num	801798	Sequence number
obs_id	21968	Observation id
title	Witnessing the formation of a radio halo	Proposal title
observer	Ralph Kraft	Principal investigator
object	Abell 2219	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	250.089167	Observer's specified target RA [deg]
dec_targ	46.705833	Observer's specified target Dec [deg]
ra_nom	250.09428705368	Nominal RA [deg]
dec_nom	46.711996278644	Nominal Dec [deg]
roll_nom	32.104493684131	Nominal Roll [deg]
revision	1	Processing version of data
ontime	23048.459167004	Sum of GTIs [s]
livetime	22747.314079958	Livetime [s]
ontime0	23048.459167242	Sum of GTIs [s]
ontime1	23051.600177407	Sum of GTIs [s]
ontime2	23042.177096844	Sum of GTIs [s]
ontime3	23048.459167004	Sum of GTIs [s]
ontime7	23051.600177407	Sum of GTIs [s]
l2events	188630	Number of level 2 events



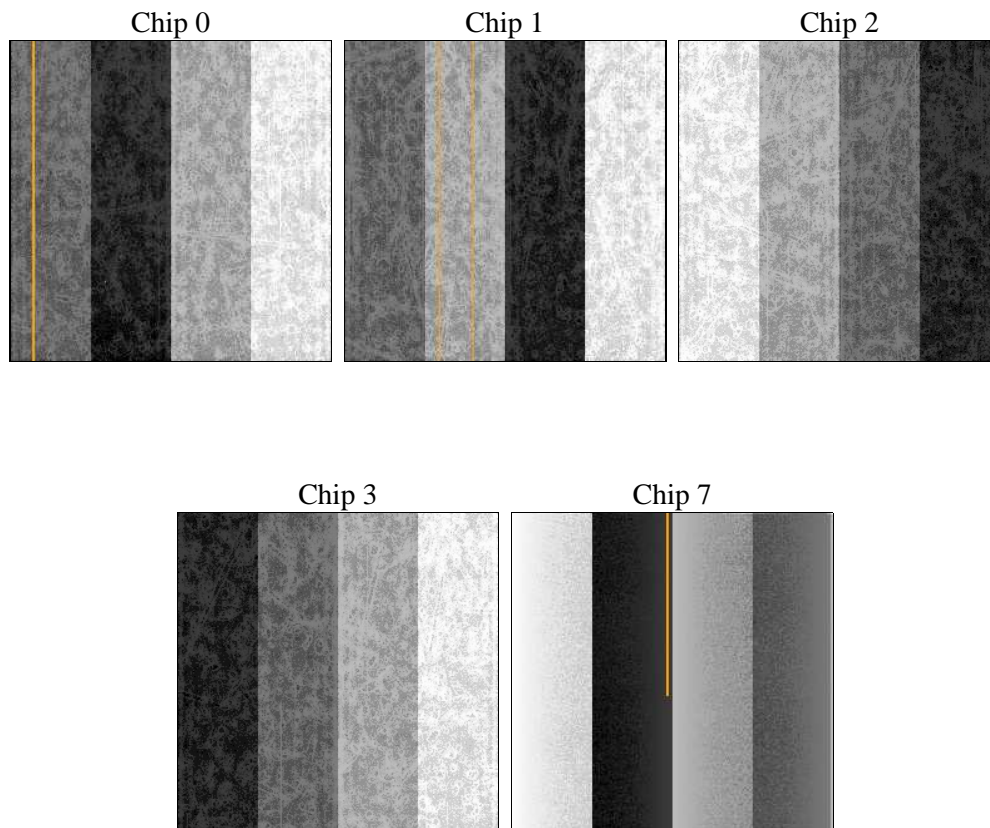
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	23048.459167004	Sum of GTIs [s]
caldsver	4.8.2	&#160	ontime0	23048.459167242	Sum of GTIs [s]
date	2019-01-04T04:13:16	Date and time of file creation	ontime1	23051.600177407	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	23042.177096844	Sum of GTIs [s]
			ontime3	23048.459167004	Sum of GTIs [s]
			ontime7	23051.600177407	Sum of GTIs [s]
			l1events	942970	Number of level 1 events

### 2.1.4 Events

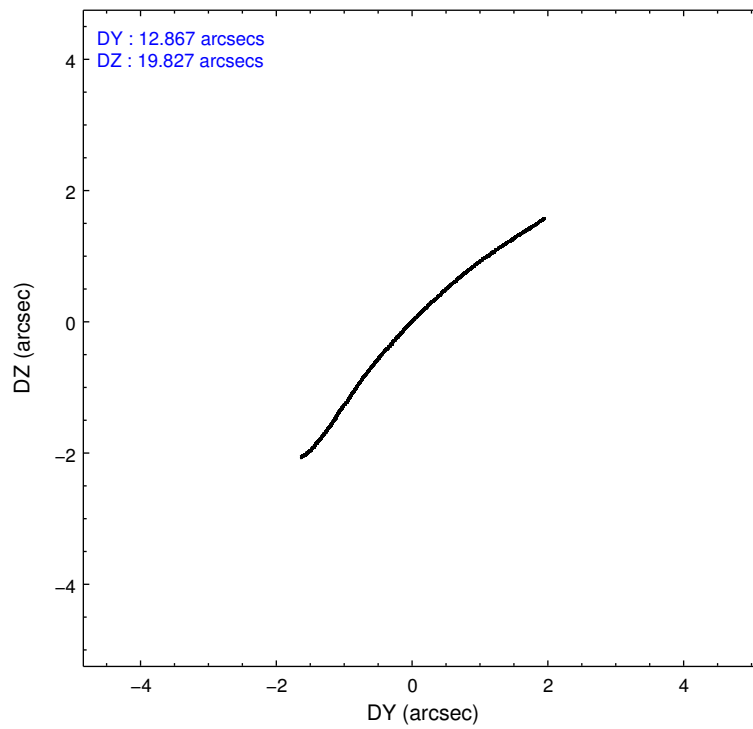
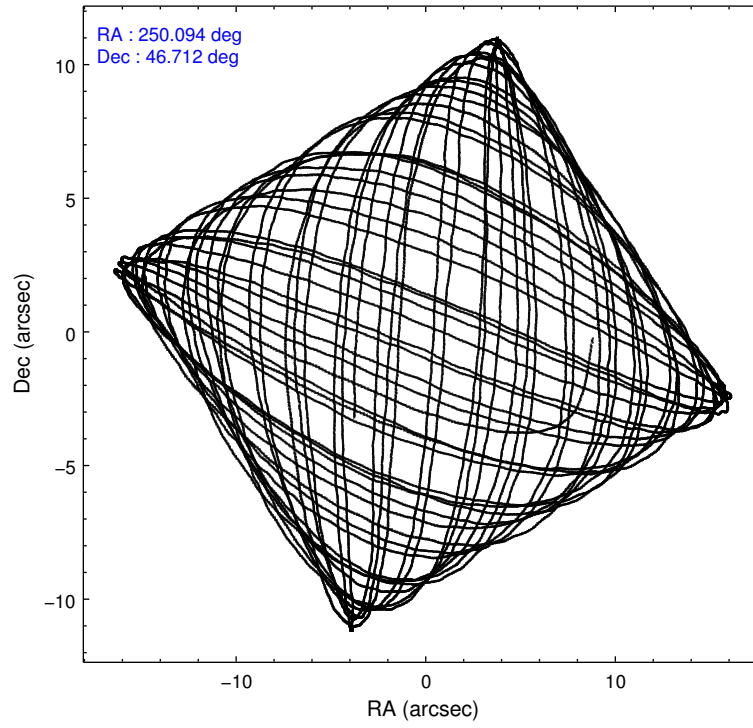
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	167863	172011	184348	190933	227815
rejected events	144376	146038	160252	157256	129796
rejected %	86%	84%	86%	82%	56%

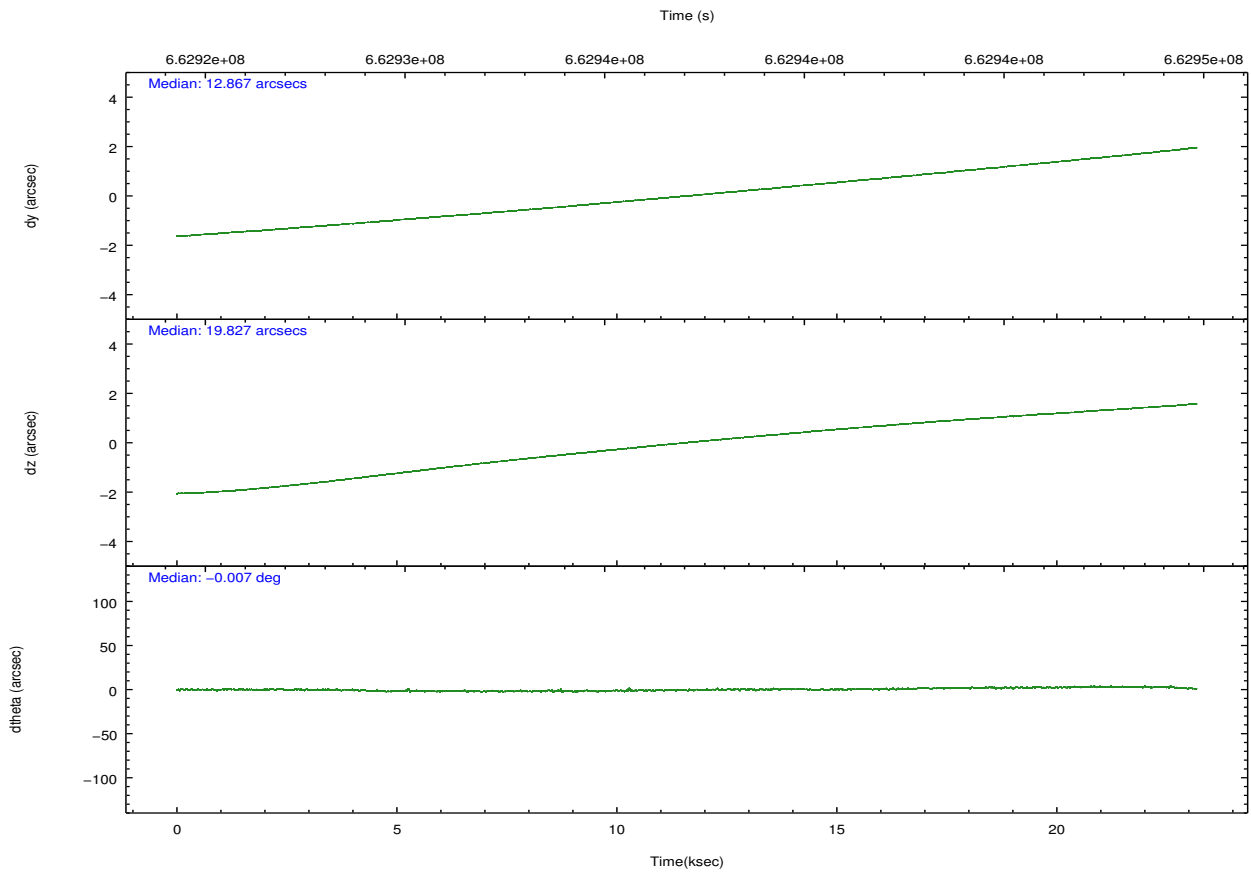
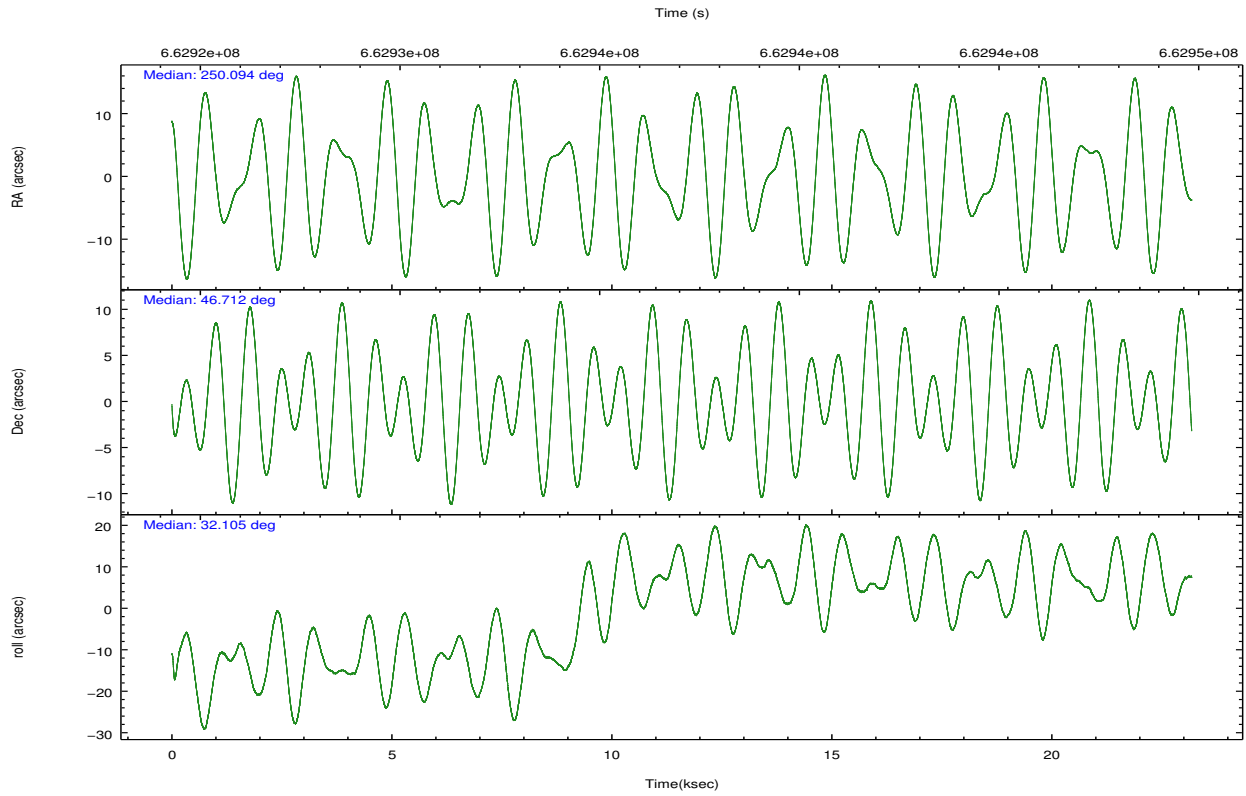
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	9705	10214	10755	18610	8310
	5%	5%	5%	9%	3%
grade 1 events	105	98	152	187	348
	0%	0%	0%	0%	0%
grade 2 events	5481	6535	5156	5593	20872
	3%	3%	2%	2%	9%
grade 3 events	2060	2112	1994	2482	7680
	1%	1%	1%	1%	3%
grade 4 events	1992	2000	2129	2419	7414
	1%	1%	1%	1%	3%
grade 5 events	7552	7718	7000	8377	22191
	4%	4%	3%	4%	9%
grade 6 events	4250	5120	4065	4581	53767
	2%	2%	2%	2%	23%
grade 7 events	136718	138214	153097	148684	107233
	81%	80%	83%	77%	47%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	250.075595	250.0942870536835	CCD I2 on	Y	Y
[deg] Pointing Dec	46.687534	46.71199627864437	CCD I3 on	Y	Y
[deg] Pointing Roll	31.909405	32.10449368413083	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	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	662925641.184000	662924393.1637599	CCD S5 on	N	N
Observation start date	2019-01-03T17:59:32	2019-01-03T17:39:53	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	662948641.184000	662949605.09027	On-chip summing requested	N	N
Observation end date	2019-01-04T00:22:52	2019-01-04T00:40:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





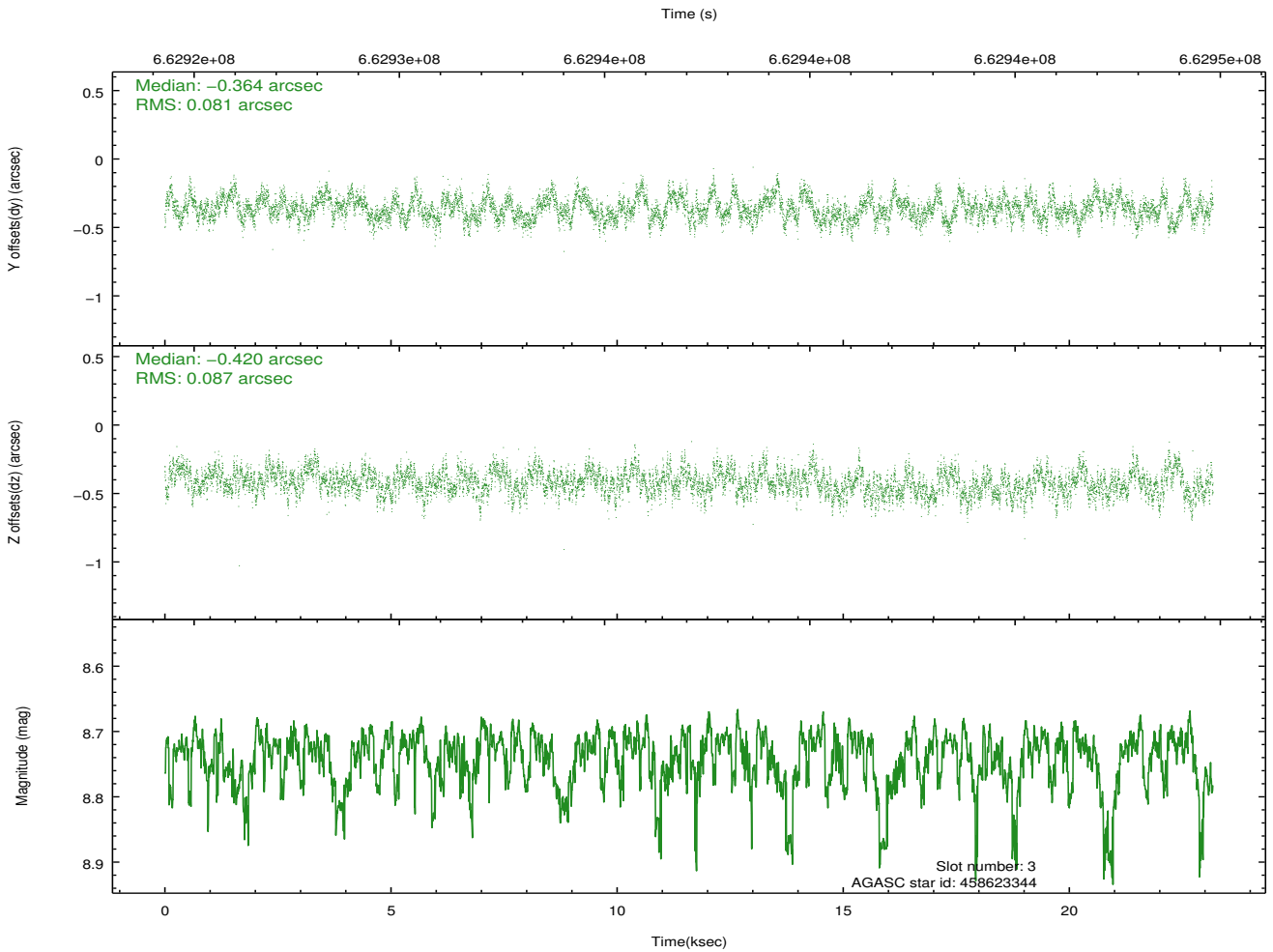
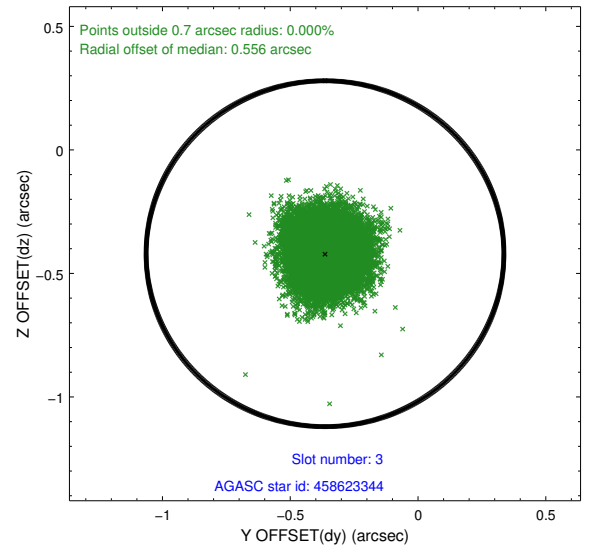
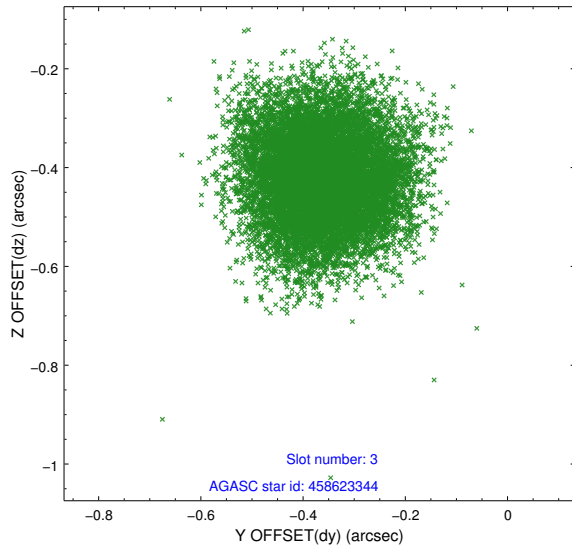
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.23	5654	1.000	0.099	-0.092	0.038	0.052	0.000000	0.000000	926.77	-843
1	FID		ACIS-I-5	7.22	5654	1.000	-0.485	0.011	0.017	0.033	0.000000	0.000000	-1822.01	1053
2	FID		ACIS-I-6	7.23	5654	1.000	0.299	0.151	0.034	0.042	0.000000	0.000000	392.14	1698
3	GUIDE	used	458623344	8.74	11299	1.000	-0.364	-0.420	0.128	0.201	250.330399	47.465003	2006.99	2048
4	GUIDE	used	458623752	7.88	11306	1.000	0.309	0.511	0.107	0.171	249.631548	46.393849	-1492.38	-311
5	GUIDE	used	458626288	8.94	11293	1.000	-0.161	-0.331	0.123	0.209	250.637186	47.079533	1916.60	473
6	GUIDE	used	458626368	8.13	11302	1.000	-0.111	-0.040	0.181	0.281	249.060506	46.794229	-1912.33	1662
7	GUIDE	used	458634664	9.24	11295	1.000	0.307	0.287	0.200	0.335	251.009501	46.332103	1301.86	-2300

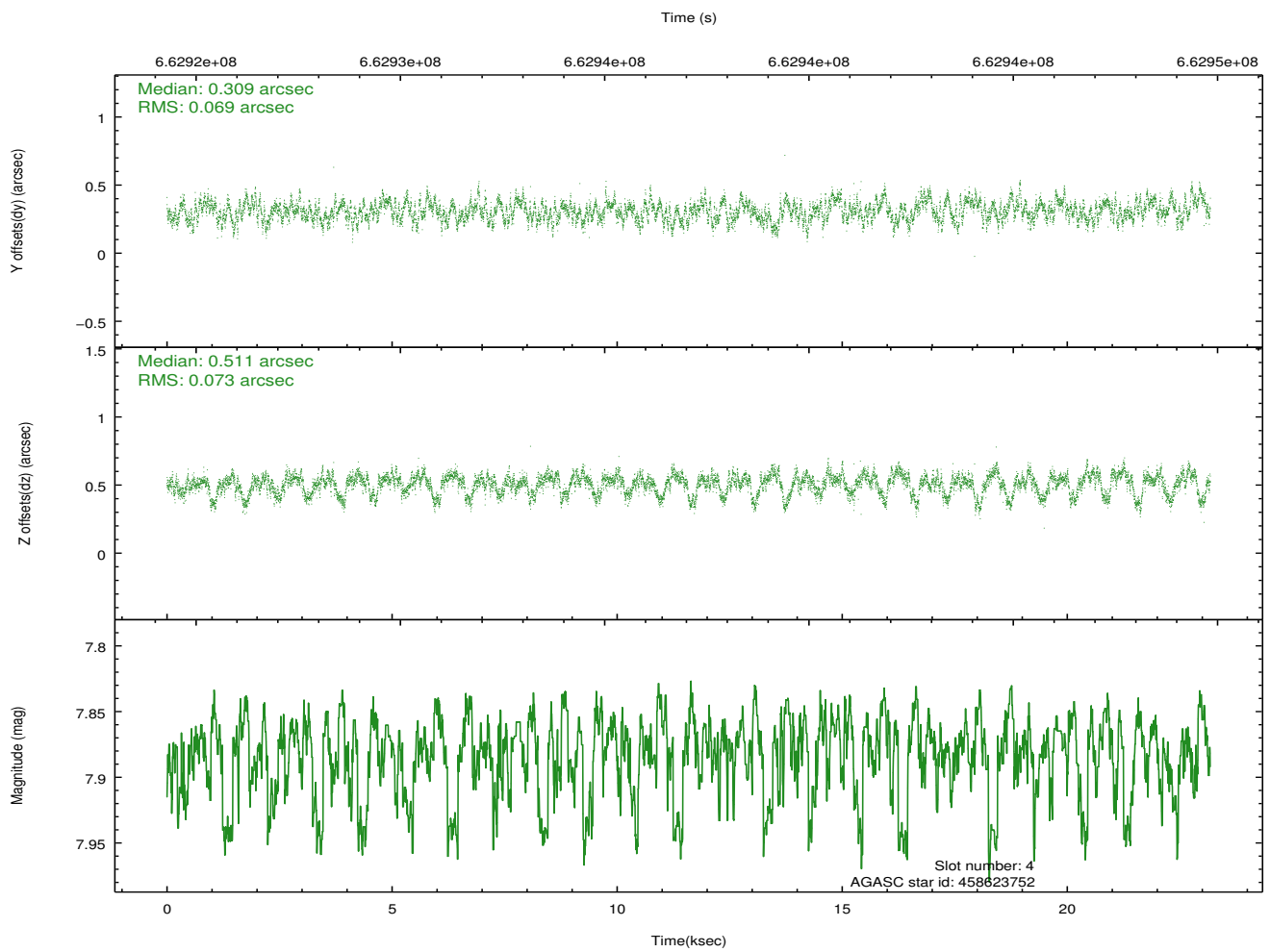
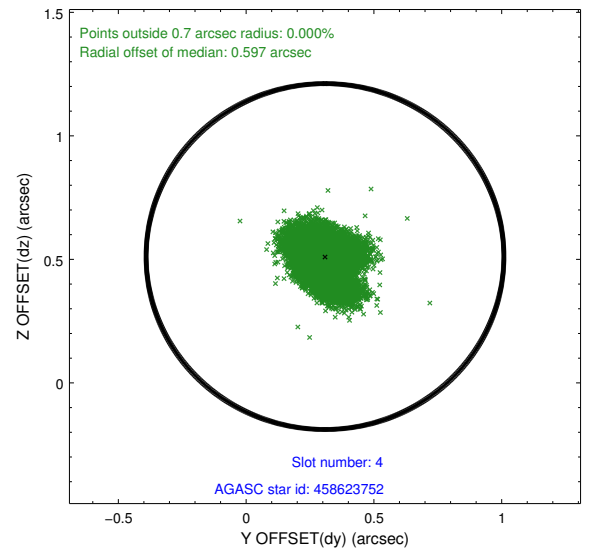
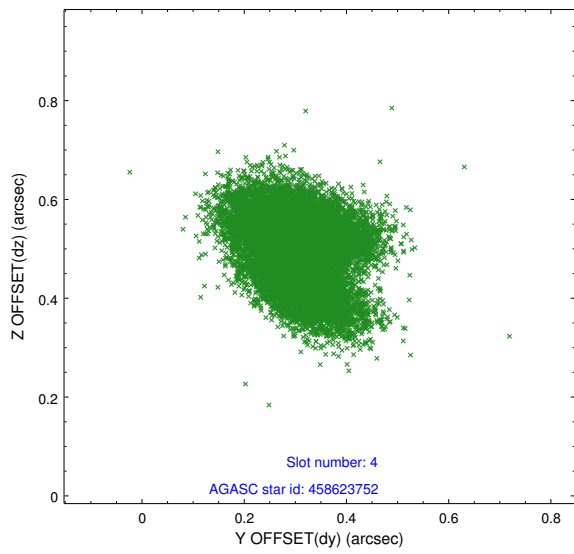
∞

## 2.4 Star Slots

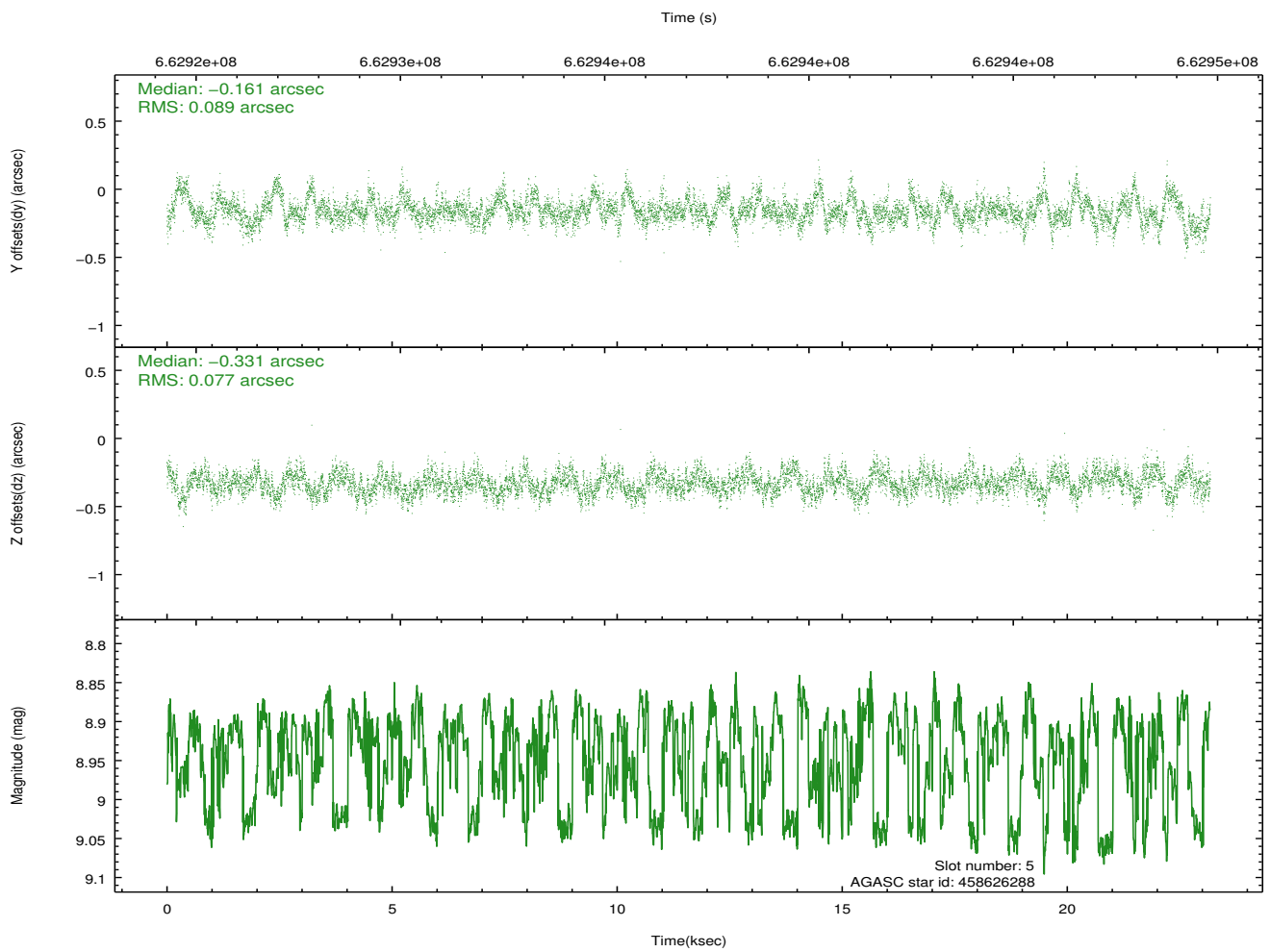
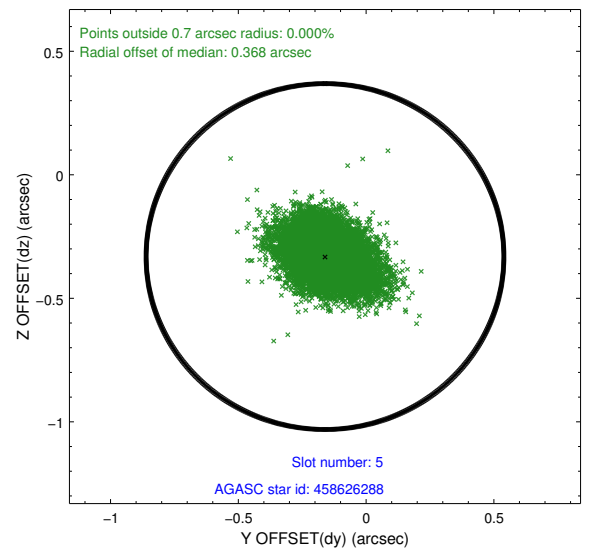
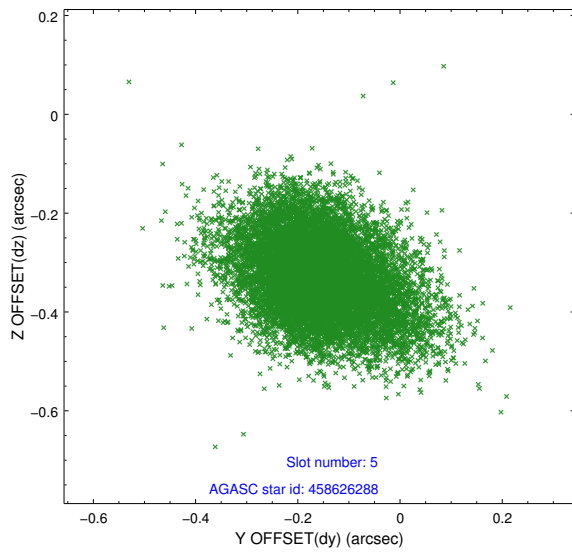
### 2.4.1 Slot 3



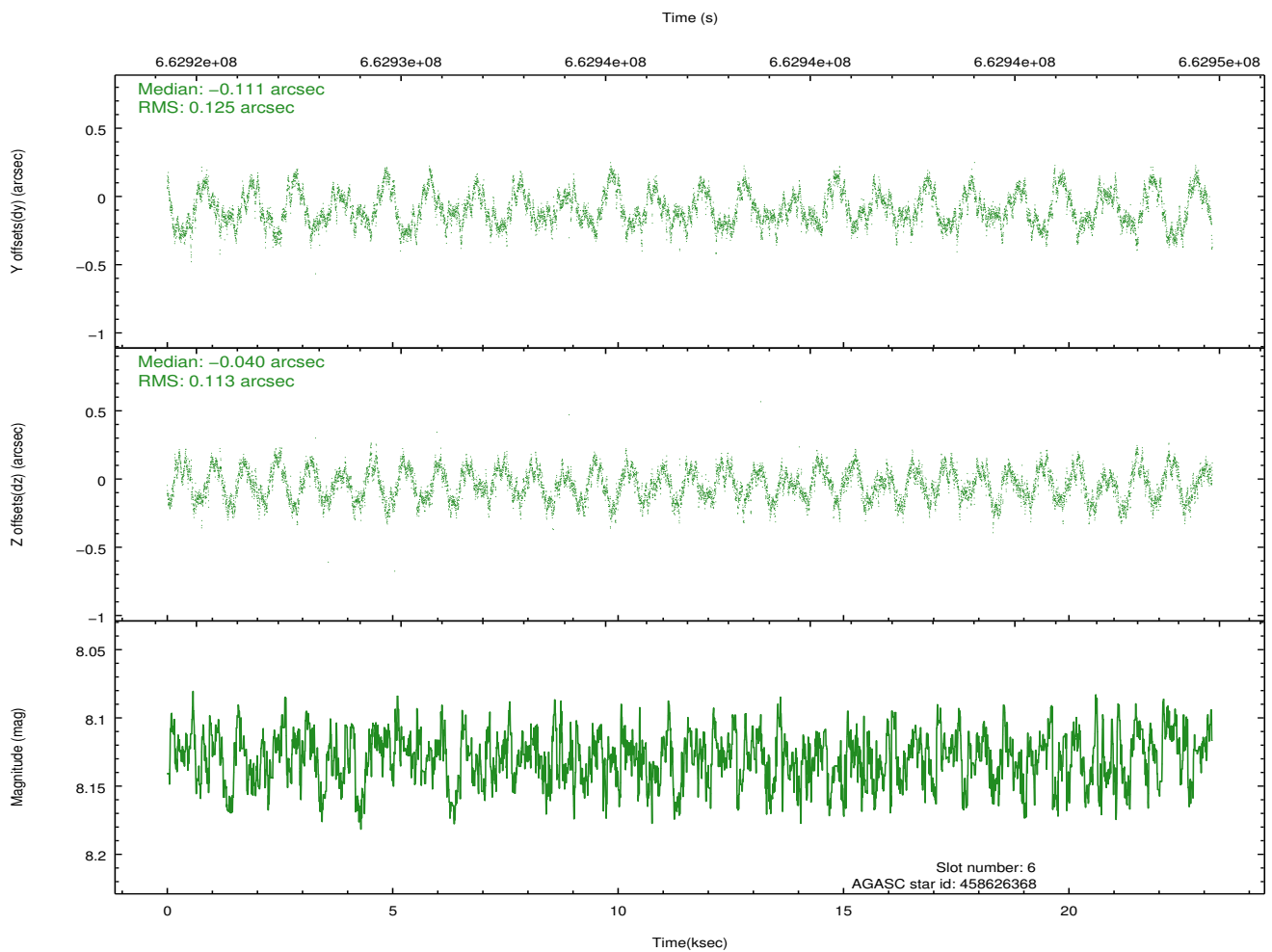
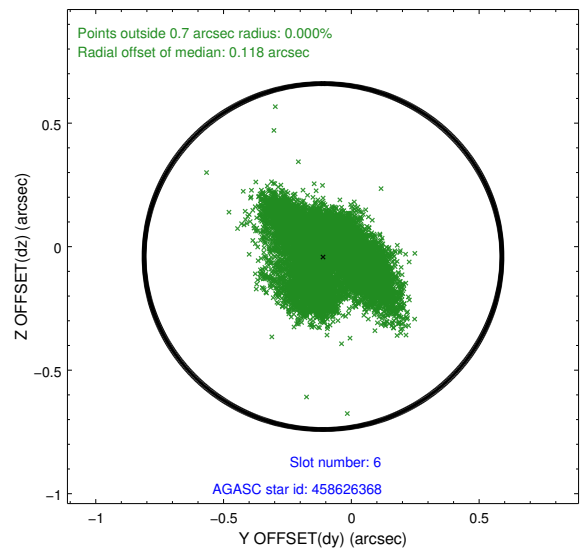
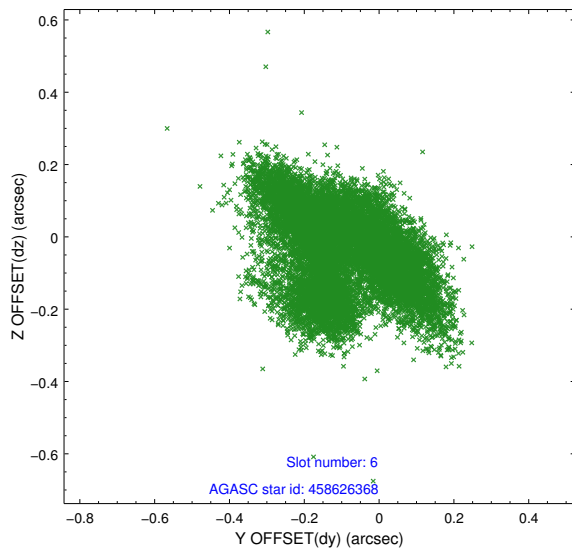
## 2.4.2 Slot 4



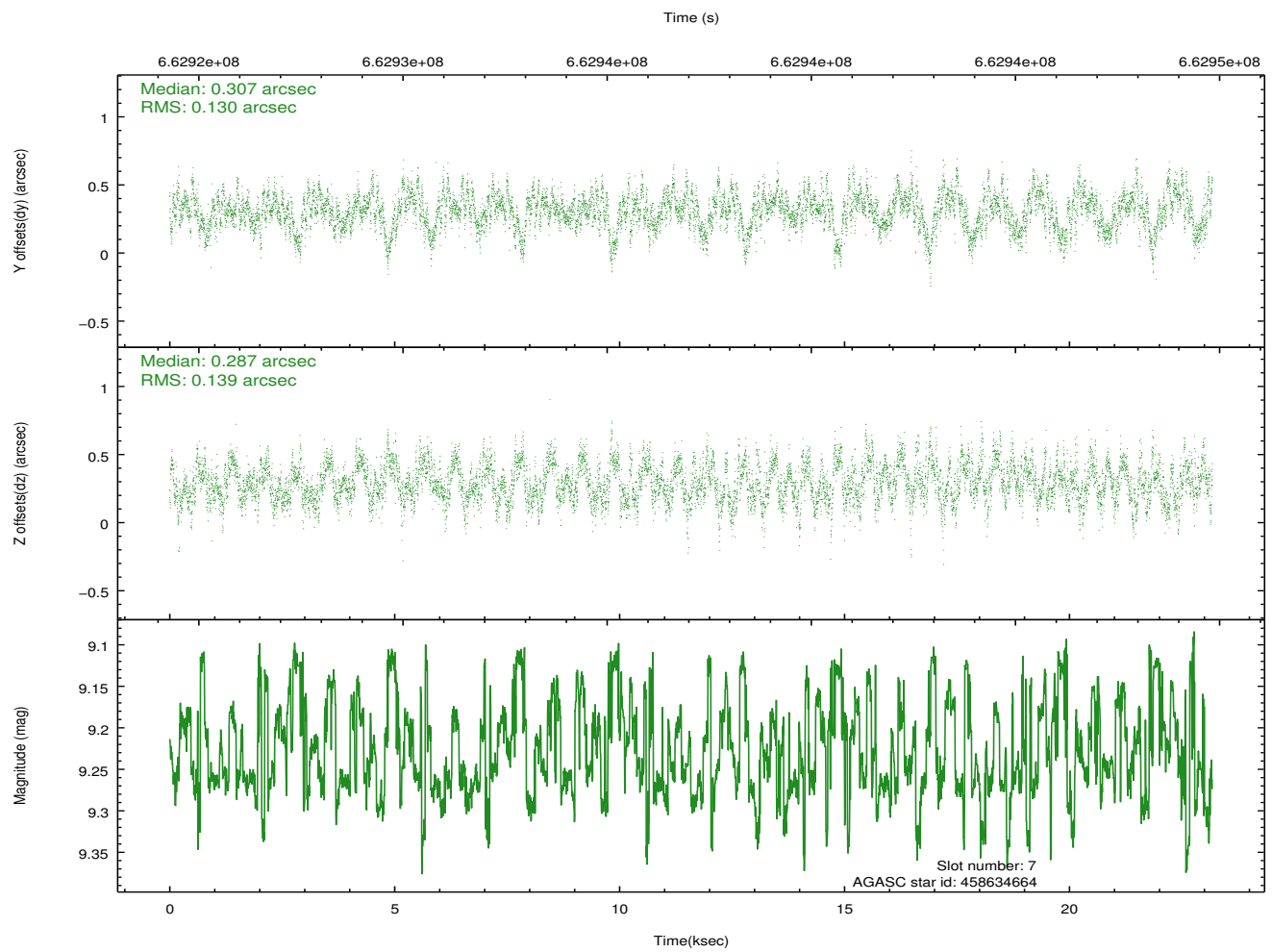
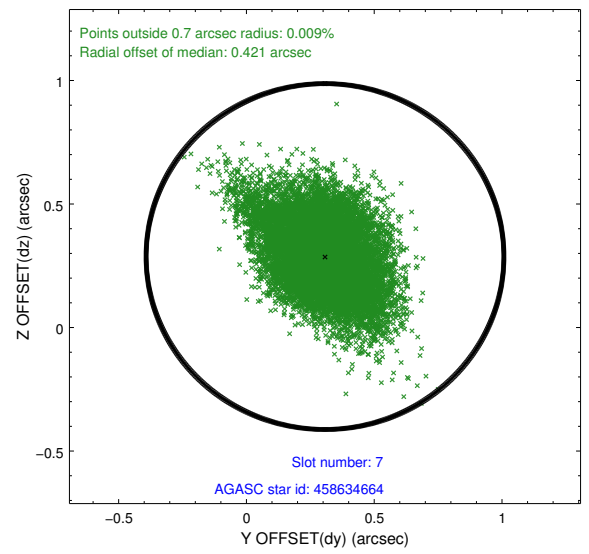
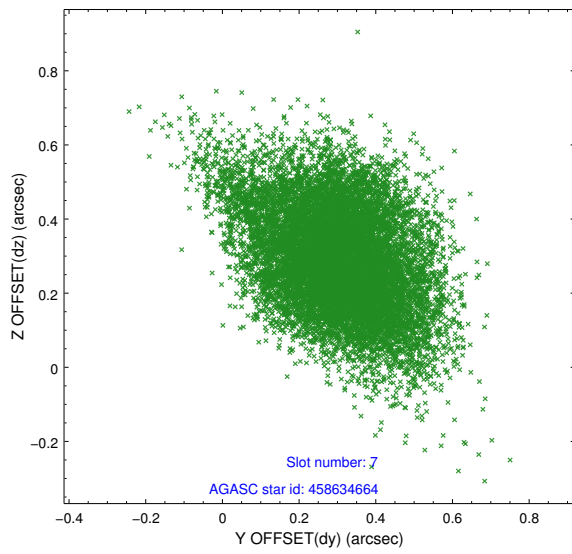
### 2.4.3 Slot 5



## 2.4.4 Slot 6

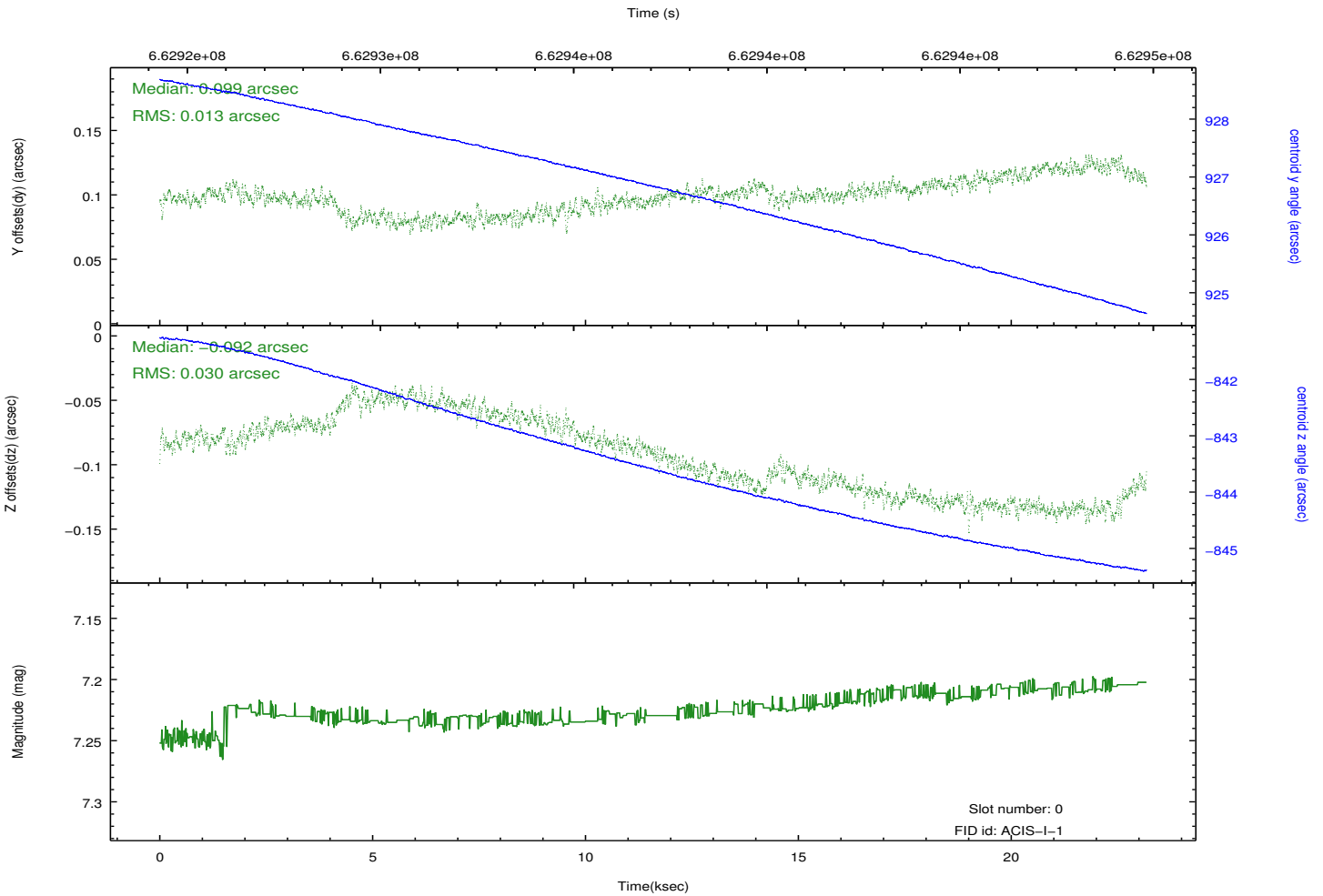
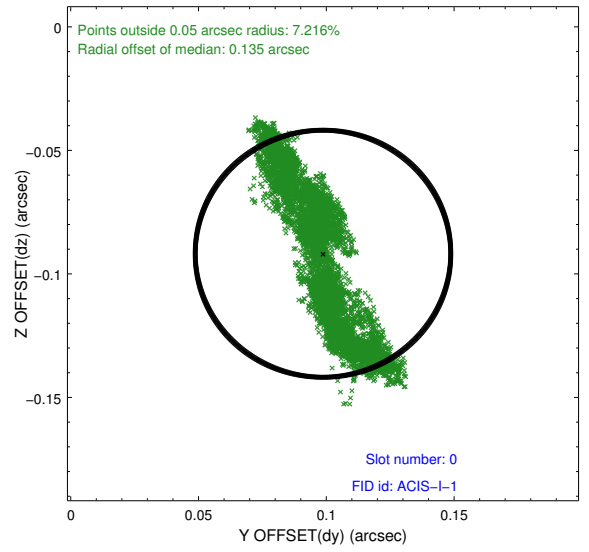
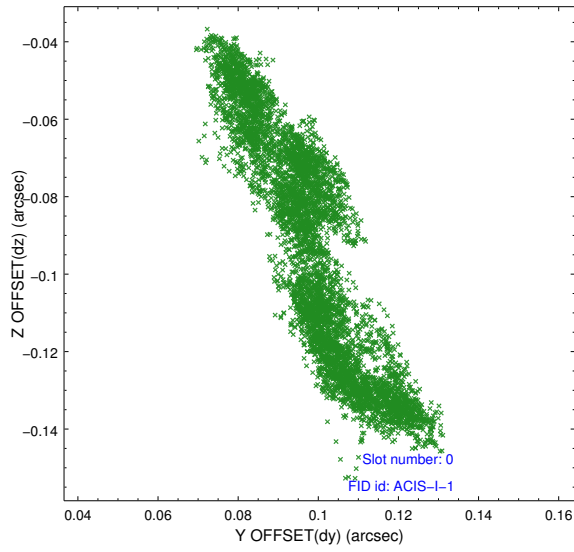


## 2.4.5 Slot 7

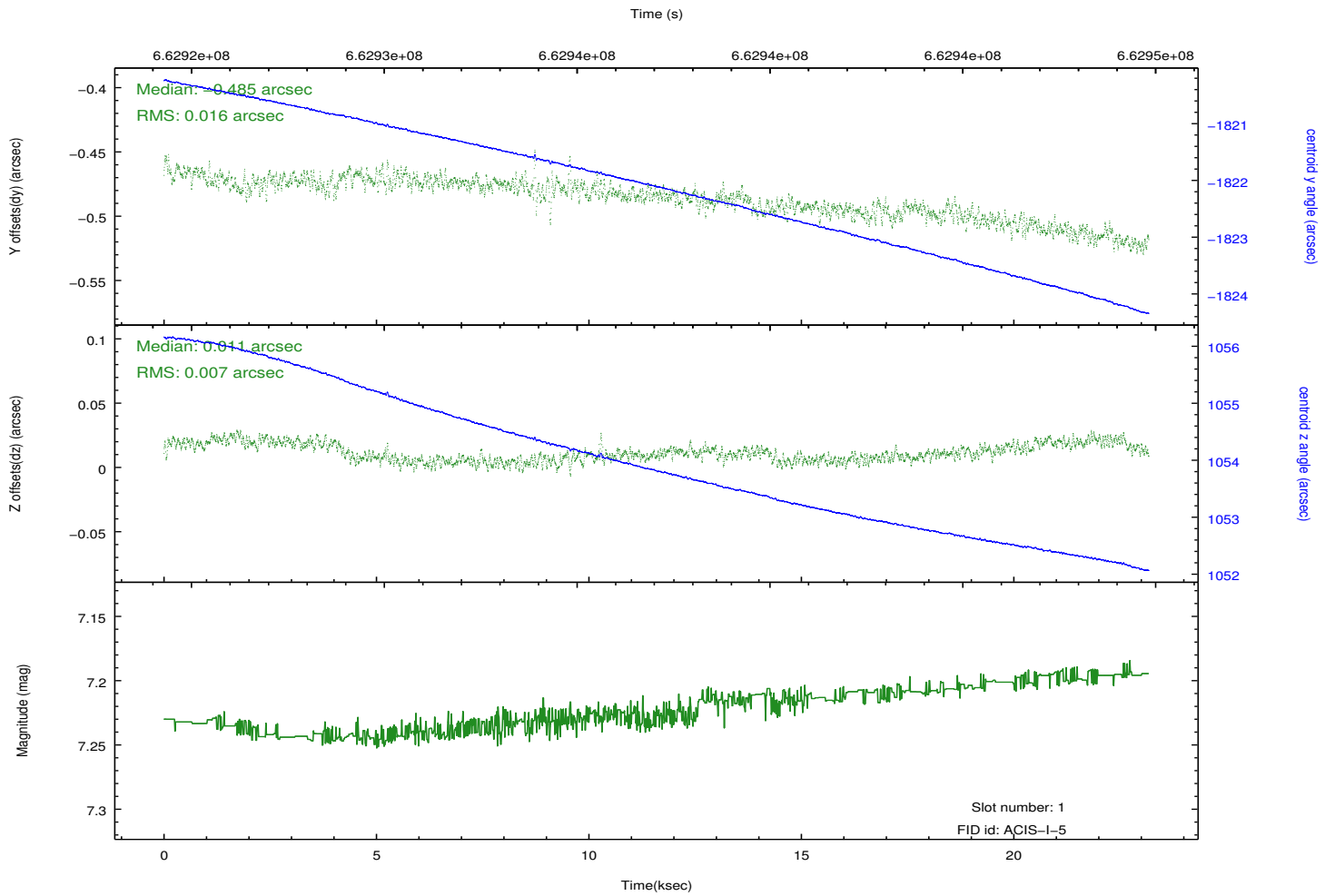
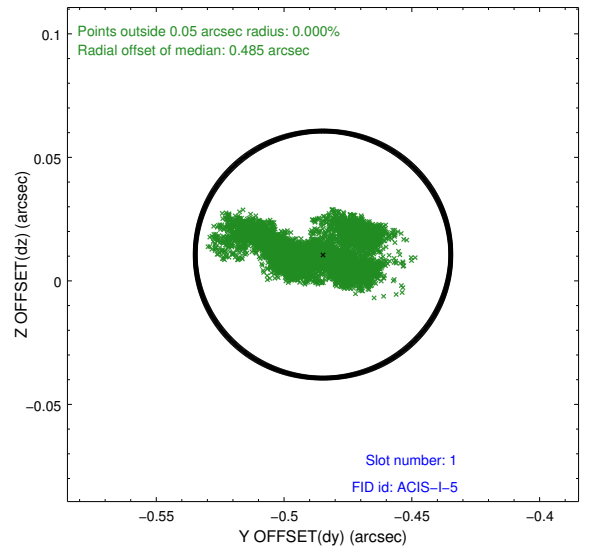
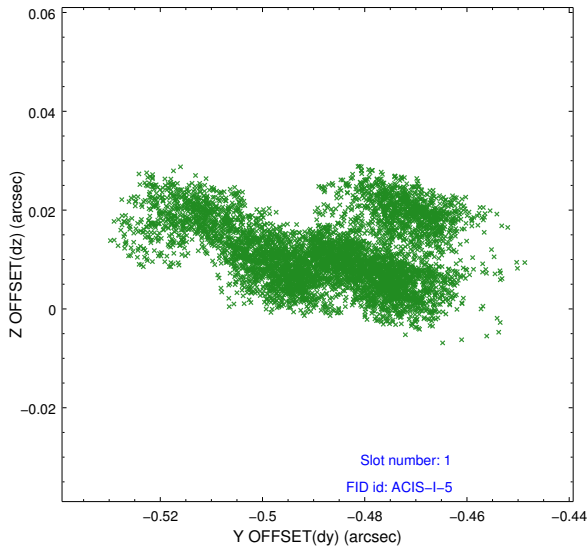


## 2.5 FID Slots

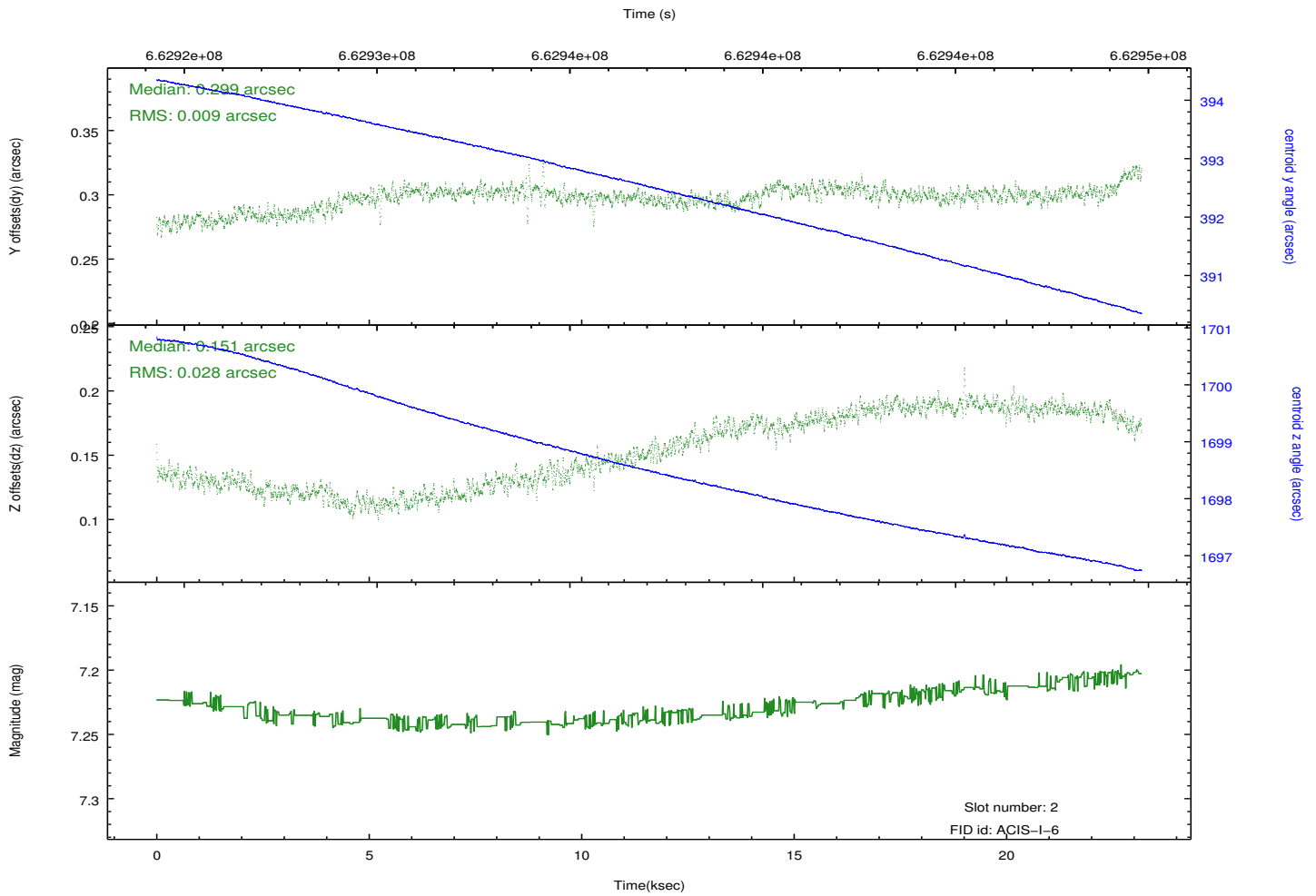
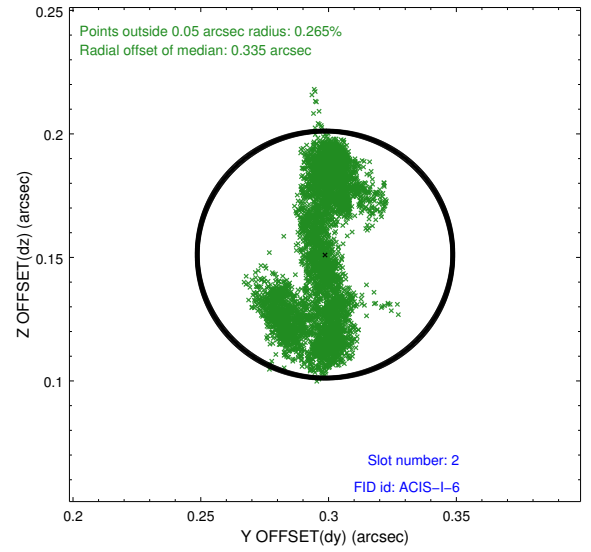
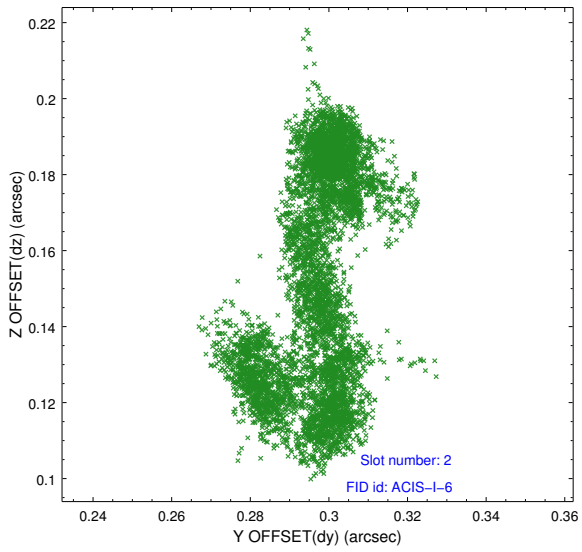
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.01.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.048459167004

## A.2 Comments