

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 21010 - L2 Version 2  
Chandra X-Ray Center

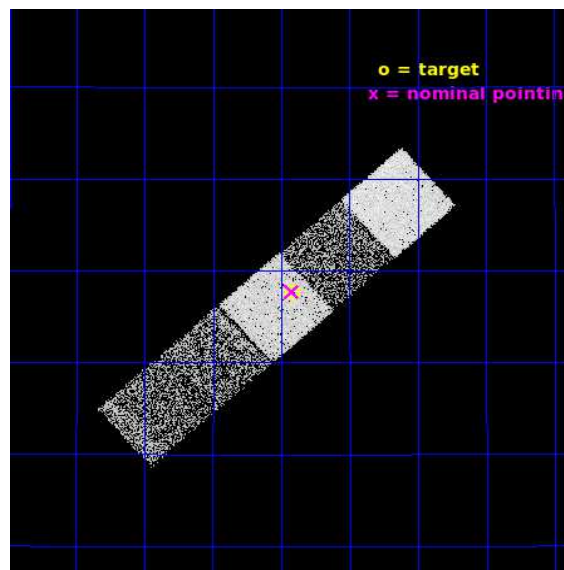
L2 Processing Date : Oct 25 2020

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# 1 Front

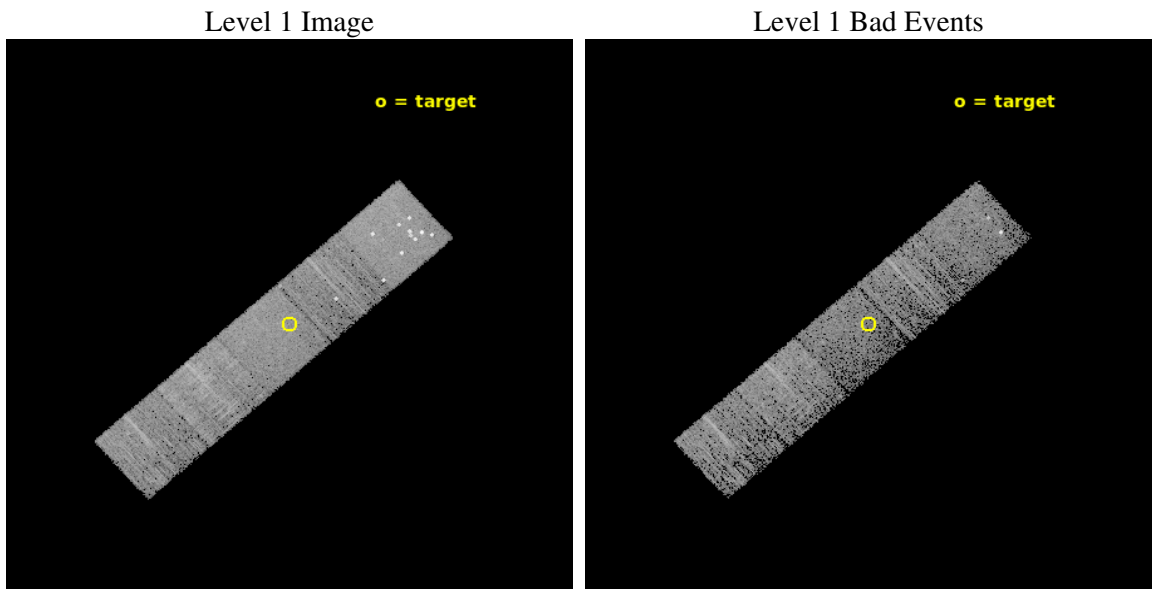
seq_num	703651	Sequence number
obs_id	21010	Observation id
title	LOW SURFACE BRIGHTNESS GALAXIES AND THE BLACK HOLE OCCUPATION FRACTION	Proposal title
observer	Elena Gallo	Principal investigator
object	UGC 08839	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	208.854167	Observer's specified target RA [deg]
dec_targ	17.794944	Observer's specified target Dec [deg]
ra_nom	208.85552960555	Nominal RA [deg]
dec_nom	17.795287265343	Nominal Dec [deg]
roll_nom	138.14422250978	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3492.6058818102	Sum of GTIs [s]
livetime	3446.9724147453	Livetime [s]
ontime5	3492.5648418665	Sum of GTIs [s]
ontime6	3492.5238018036	Sum of GTIs [s]
ontime7	3492.6058818102	Sum of GTIs [s]
ontime8	3489.3417421579	Sum of GTIs [s]
ontime9	3492.441721797	Sum of GTIs [s]
l2events	40430	Number of level 2 events



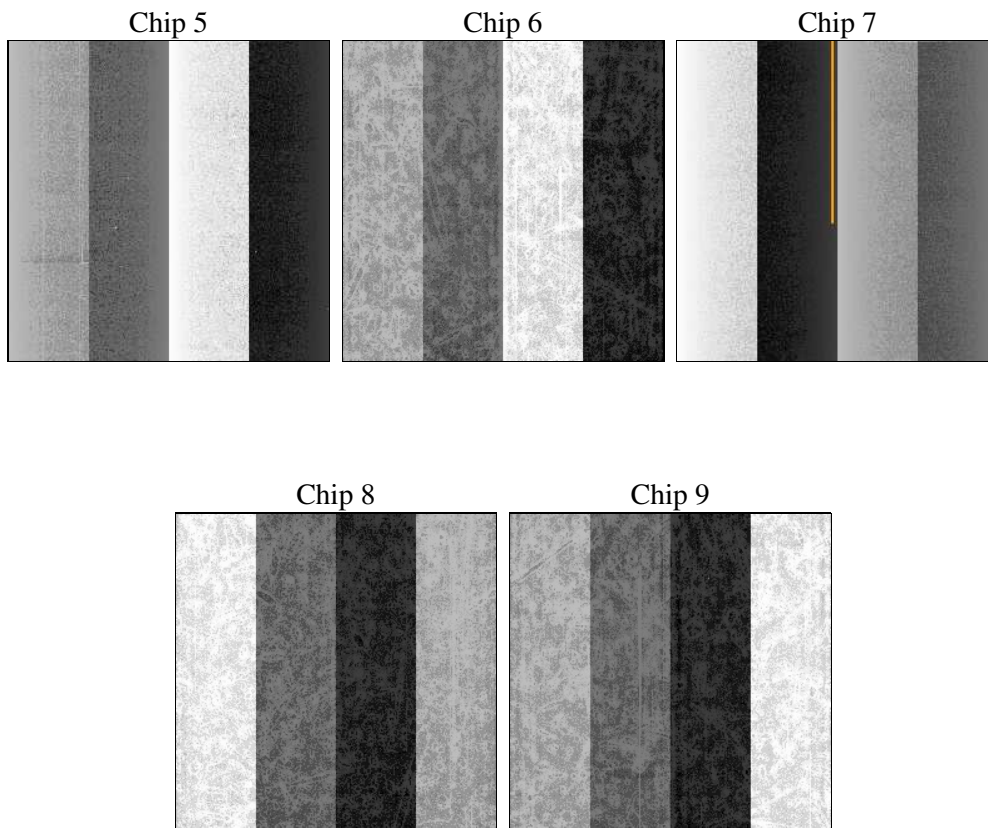
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3600.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	3492.6058818102	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime5	3492.5648418665	Sum of GTIs [s]
date	2020-10-25T10:22:31	Date and time of file creation	ontime6	3492.5238018036	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	3492.6058818102	Sum of GTIs [s]
			ontime8	3489.3417421579	Sum of GTIs [s]
			ontime9	3492.441721797	Sum of GTIs [s]
			l1events	181032	Number of level 1 events

### 2.1.4 Events

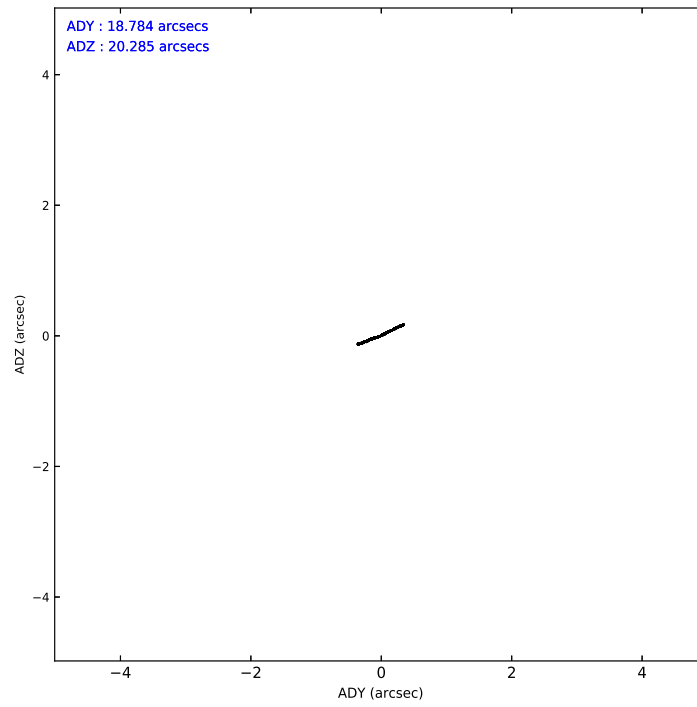
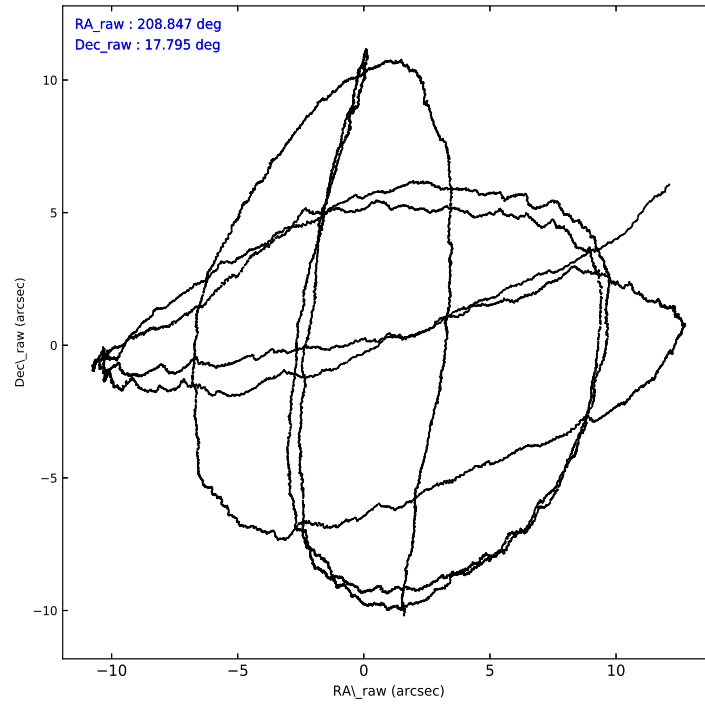
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	52126	28135	33359	38769	28643
rejected events	23654	24468	19137	29484	25502
rejected %	45%	86%	57%	76%	89%

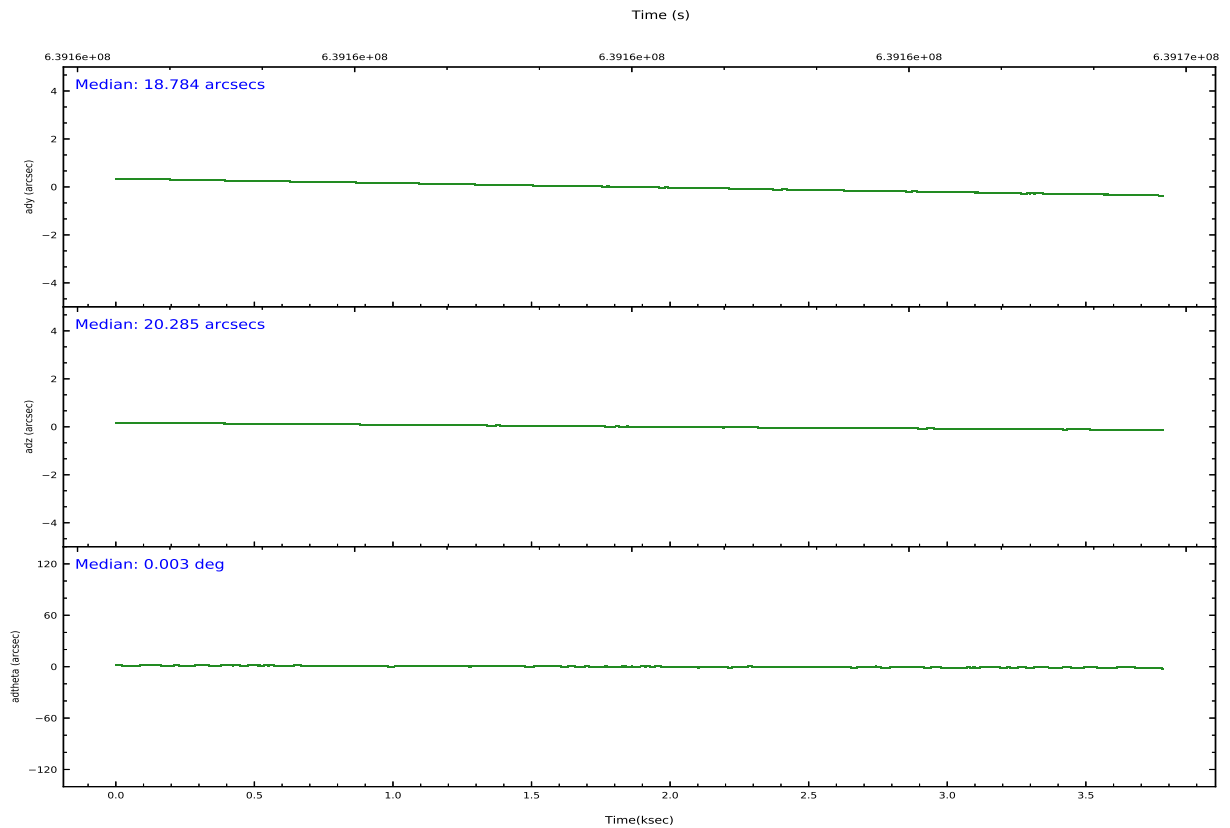
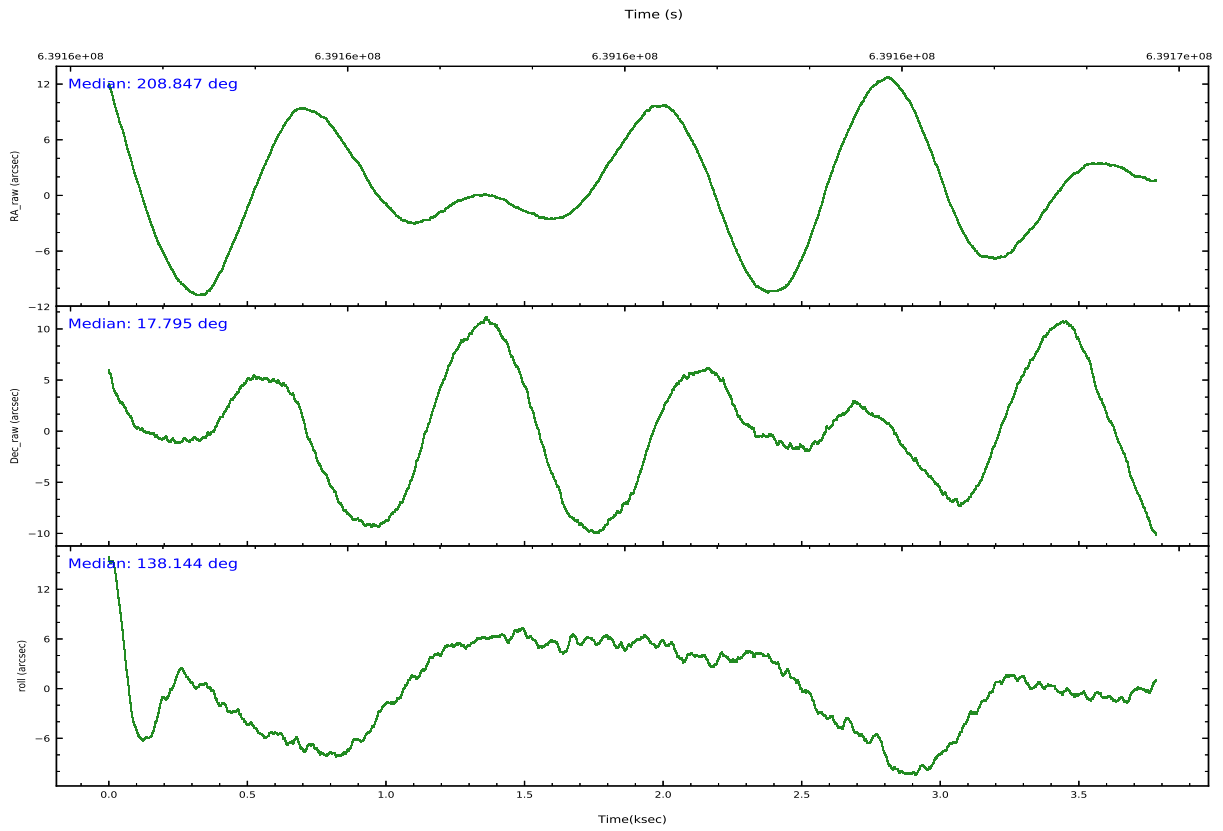
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6878	1555	1170	2463	1107
	13%	5%	3%	6%	3%
grade 1 events	101	16	48	30	21
	0%	0%	0%	0%	0%
grade 2 events	8269	846	2944	2348	728
	15%	3%	8%	6%	2%
grade 3 events	954	262	1102	932	286
	1%	0%	3%	2%	0%
grade 4 events	982	248	1131	867	297
	1%	0%	3%	2%	1%
grade 5 events	2944	1198	3243	1830	1358
	5%	4%	9%	4%	4%
grade 6 events	11417	760	7888	2697	727
	21%	2%	23%	6%	2%
grade 7 events	20581	23250	15833	27602	24119
	39%	82%	47%	71%	84%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	208.875628	208.85552960555	CCD I2 on	N	N
[deg] Pointing Dec	17.789183	17.795287265343	CCD I3 on	N	N
[deg] Pointing Roll	137.993438	138.14422250978	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)	639162318.184000	639161423.07389	CCD S5 on	O2	Y
Observation start date	2018-04-03T17:04:09	2018-04-03T16:50:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	639165918.184000	639166839.68671	On-chip summing requested	N	N
Observation end date	2018-04-03T18:04:09	2018-04-03T18:20:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



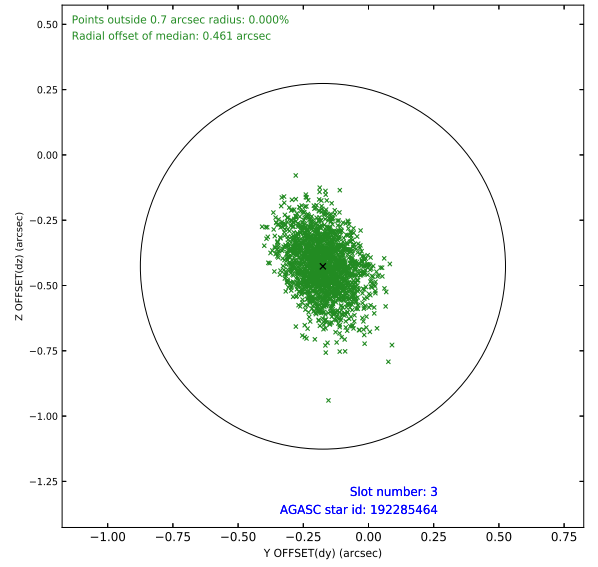
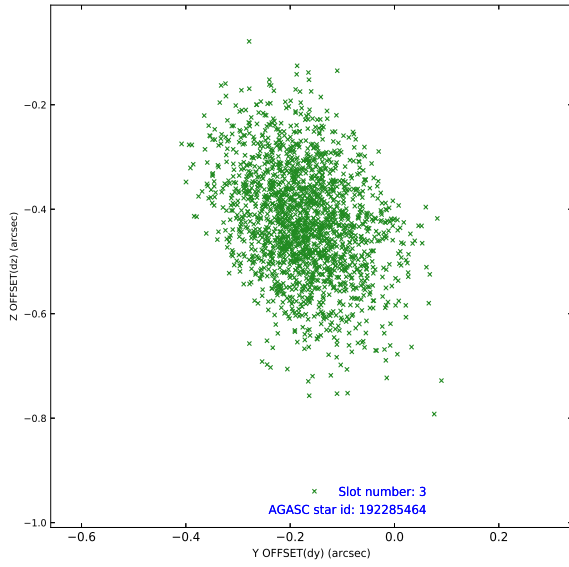


### Slot Statistics

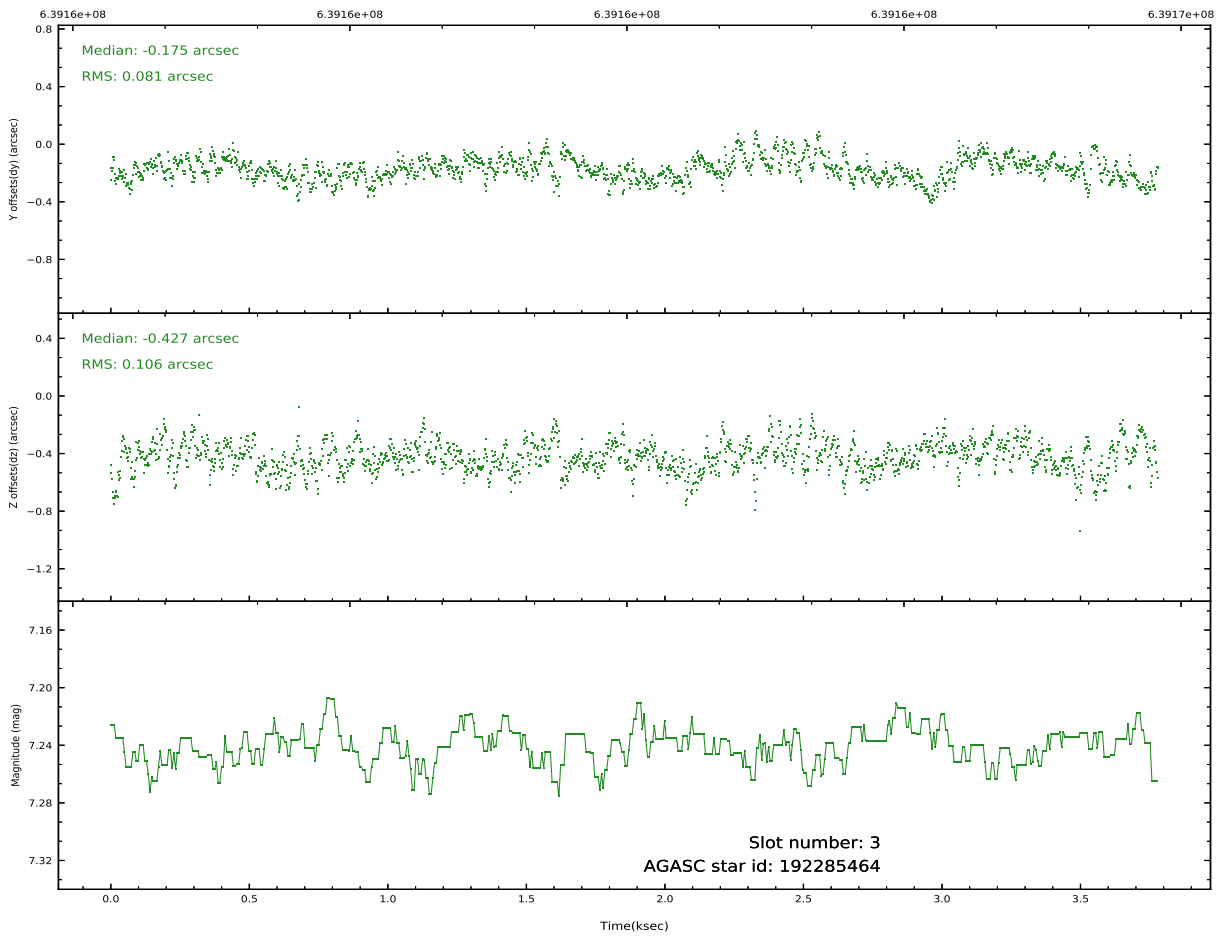
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.09	922	1.000	0.097	-0.084	0.007	0.013	0.000000	0.000000	-771.98	-1741
1	FID		ACIS-S-4	7.19	922	1.000	0.147	-0.024	0.006	0.011	0.000000	0.000000	2140.82	164
2	FID		ACIS-S-5	7.18	922	1.000	-0.275	0.117	0.007	0.013	0.000000	0.000000	-1822.83	160
3	GUIDE	used	192285464	7.24	1845	1.000	-0.175	-0.427	0.140	0.236	208.479947	17.280787	-213.40	2269
4	GUIDE	used	192285496	8.35	1843	1.000	0.036	0.041	0.123	0.219	208.901084	17.295535	-1254.53	1263
5	GUIDE	used	192677952	9.23	1845	1.000	0.137	0.097	0.205	0.320	208.719264	18.036016	991.92	-301
6	GUIDE	used	192678072	9.46	1844	1.000	-0.098	0.219	0.258	0.406	209.808177	17.848209	-2226.45	-2302
7	GUIDE	used	192678280	7.54	1844	1.000	0.085	0.069	0.138	0.244	209.396717	18.260570	-187.42	-2455

## 2.4 Star Slots

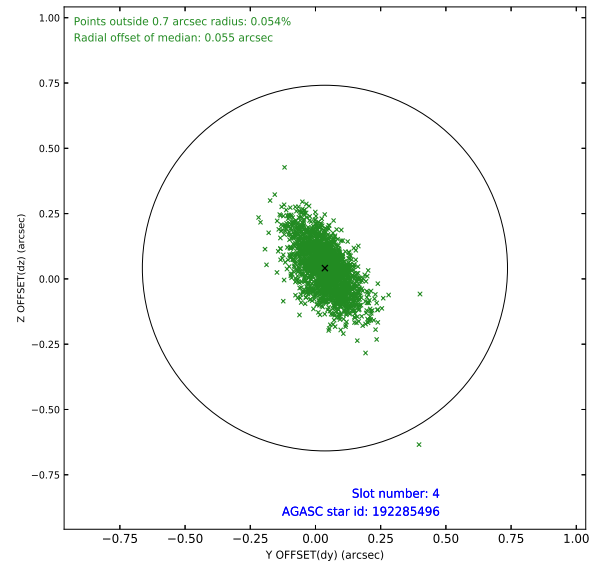
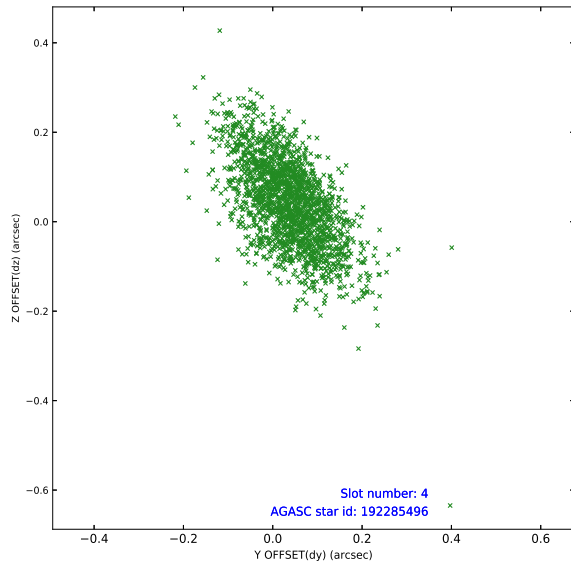
### 2.4.1 Slot 3



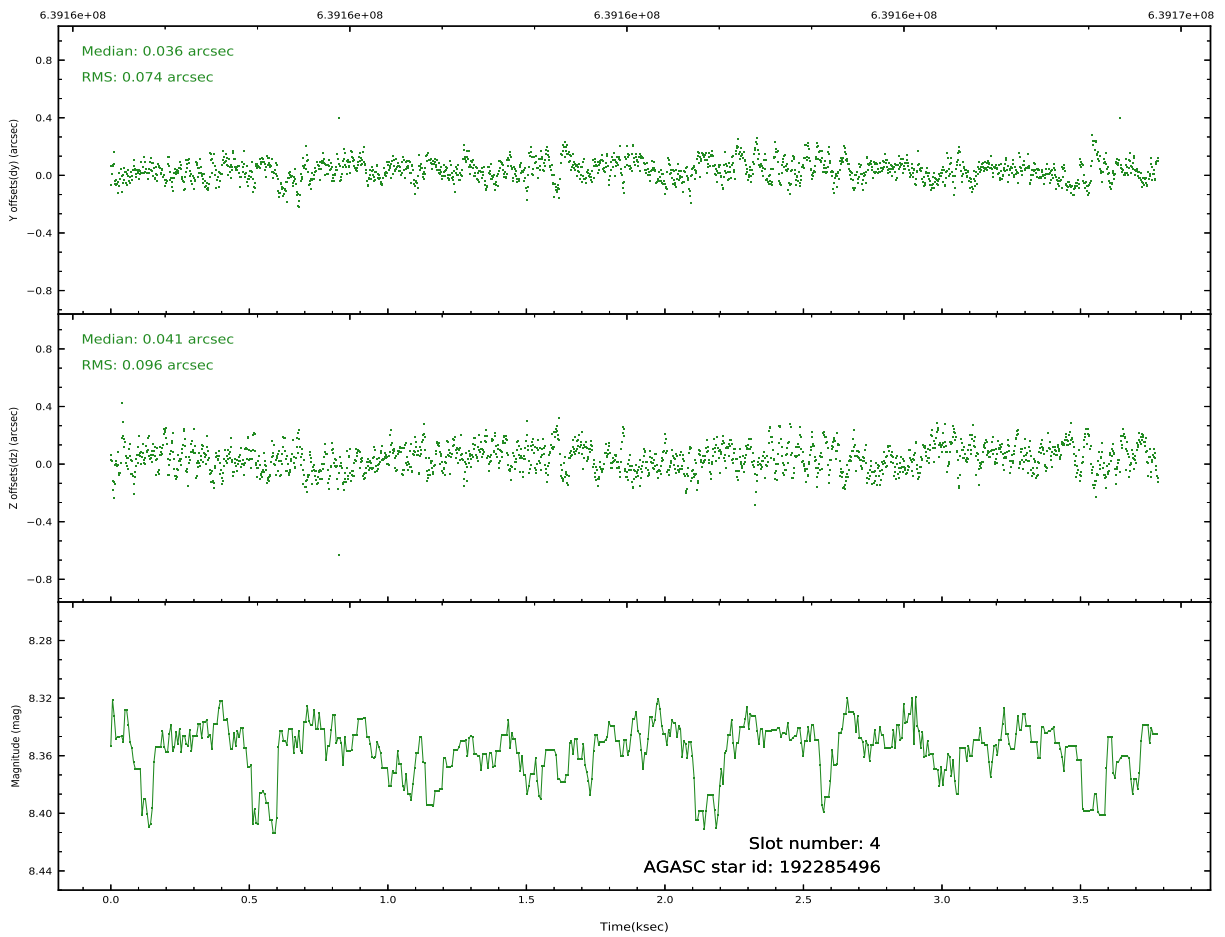
Time (s)



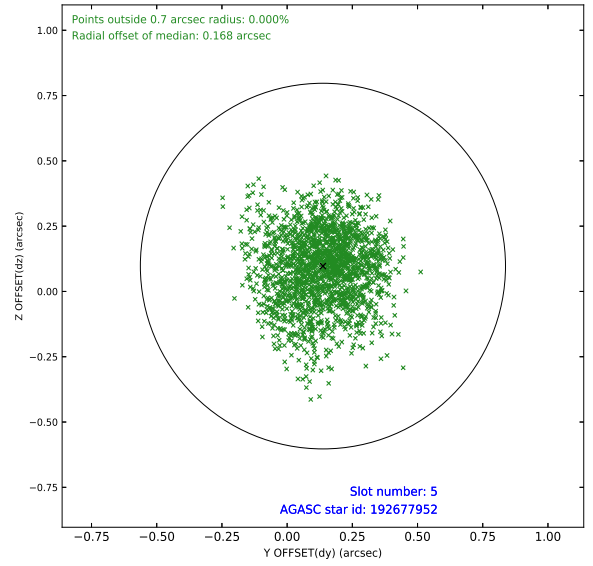
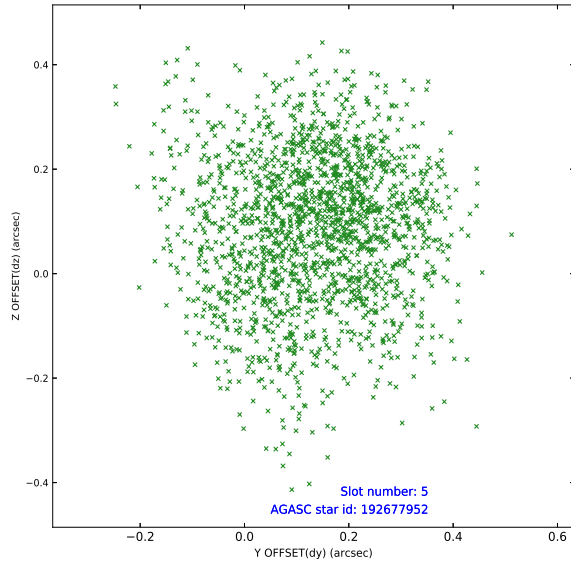
## 2.4.2 Slot 4



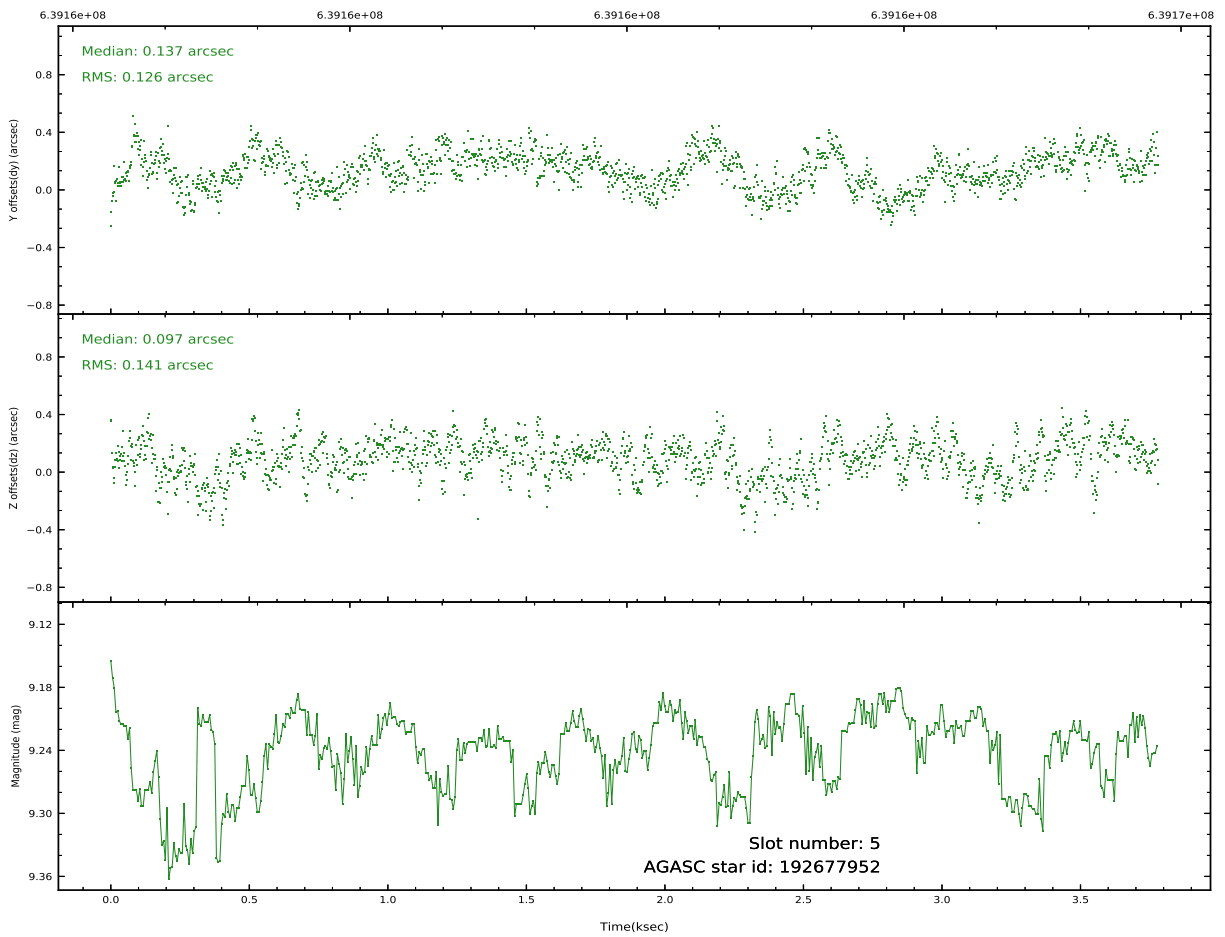
Time (s)



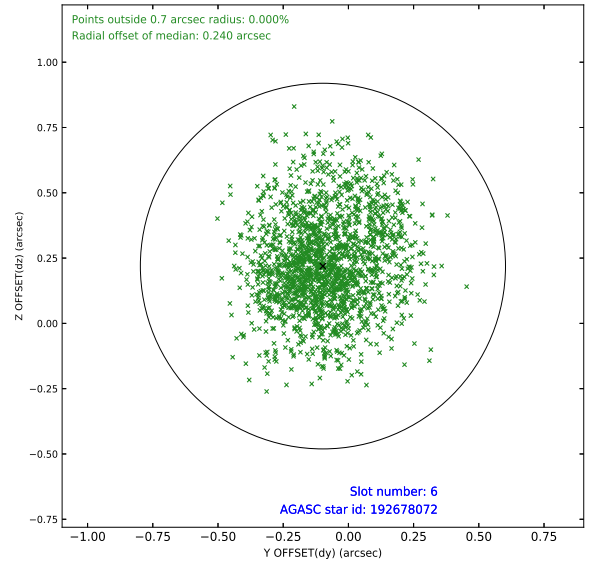
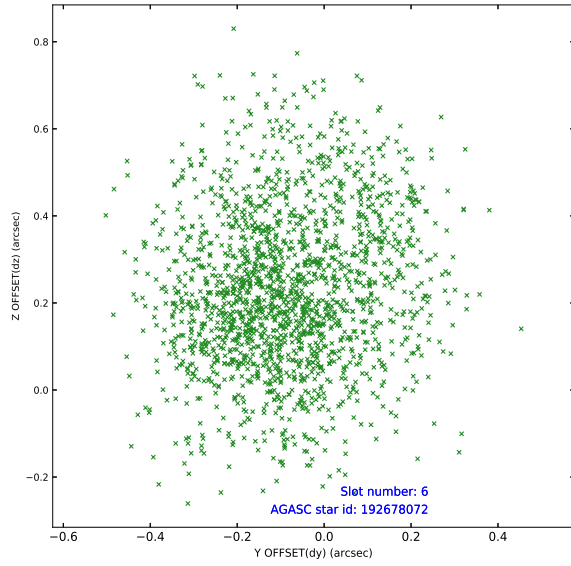
### 2.4.3 Slot 5



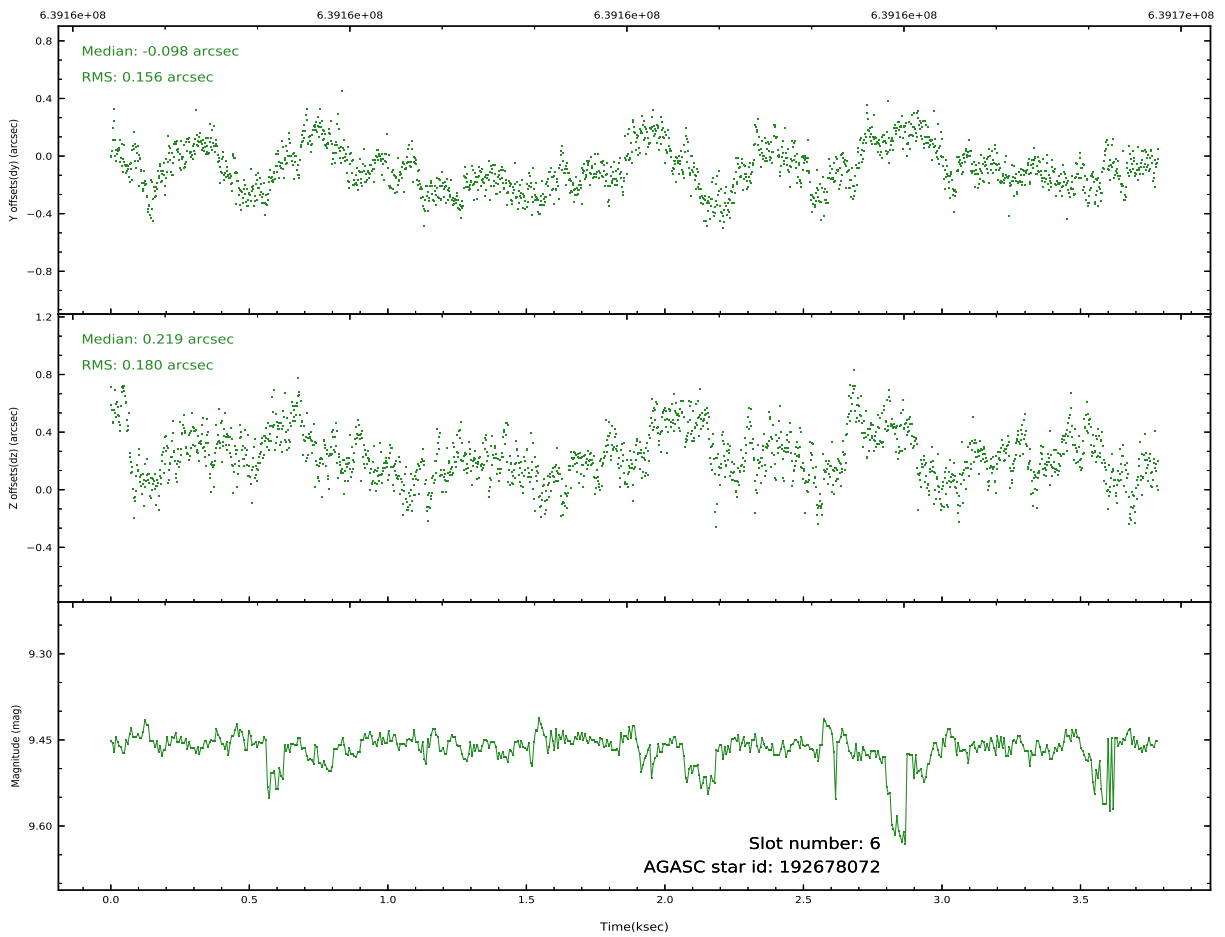
Time (s)



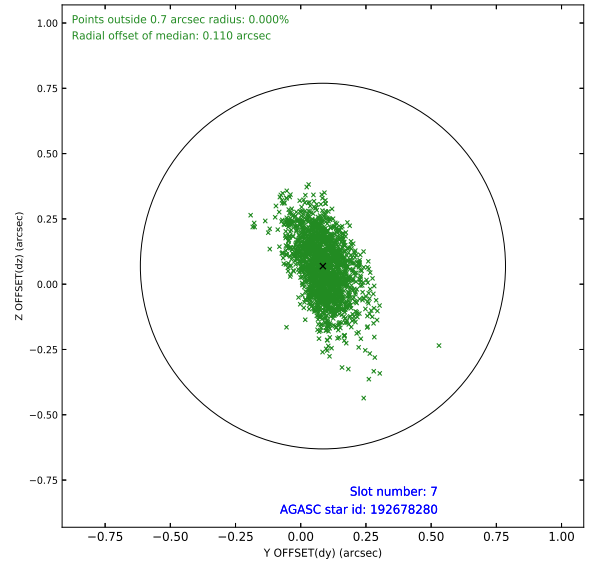
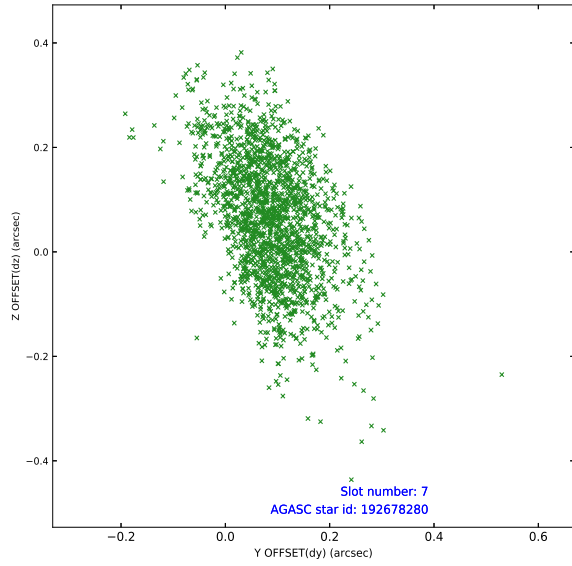
## 2.4.4 Slot 6



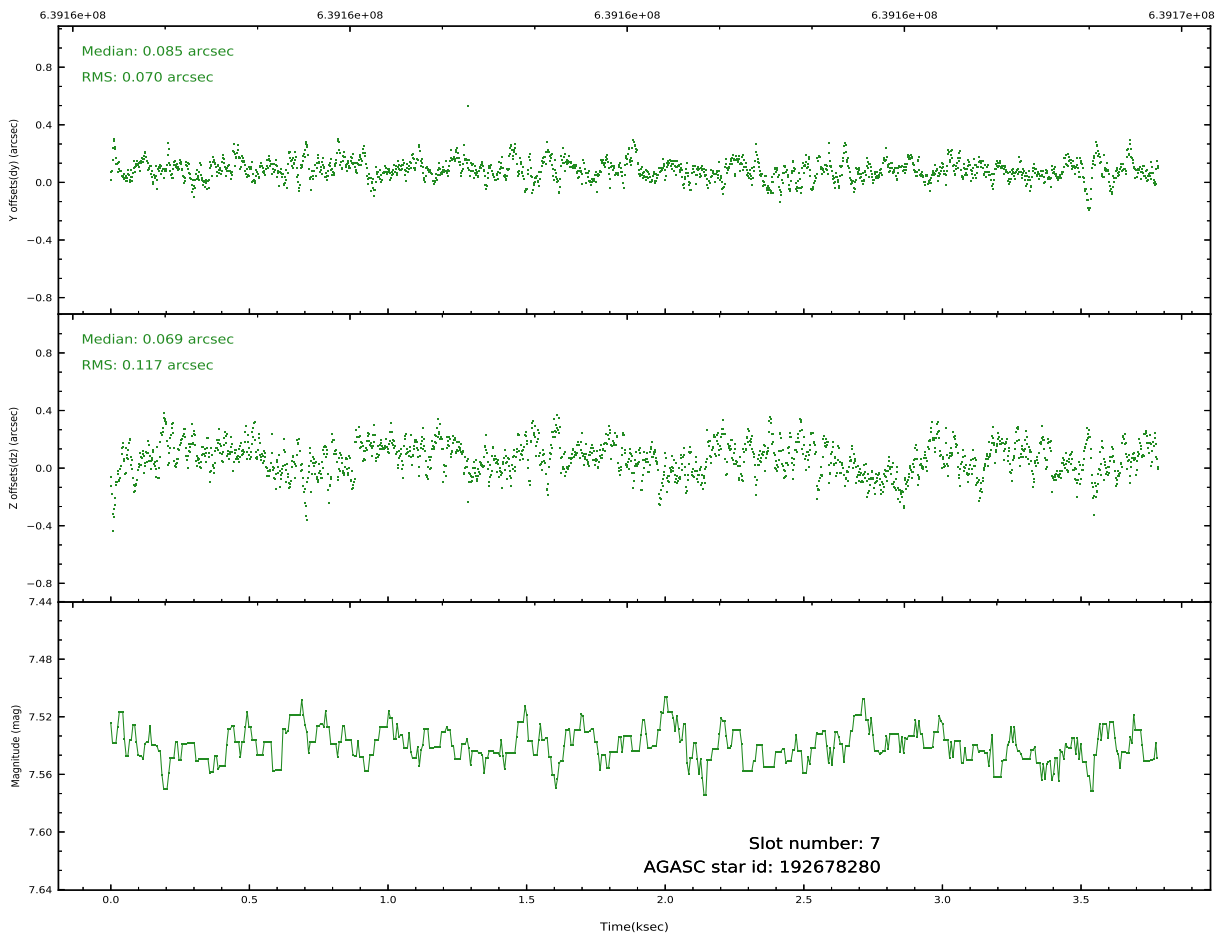
Time (s)



## 2.4.5 Slot 7

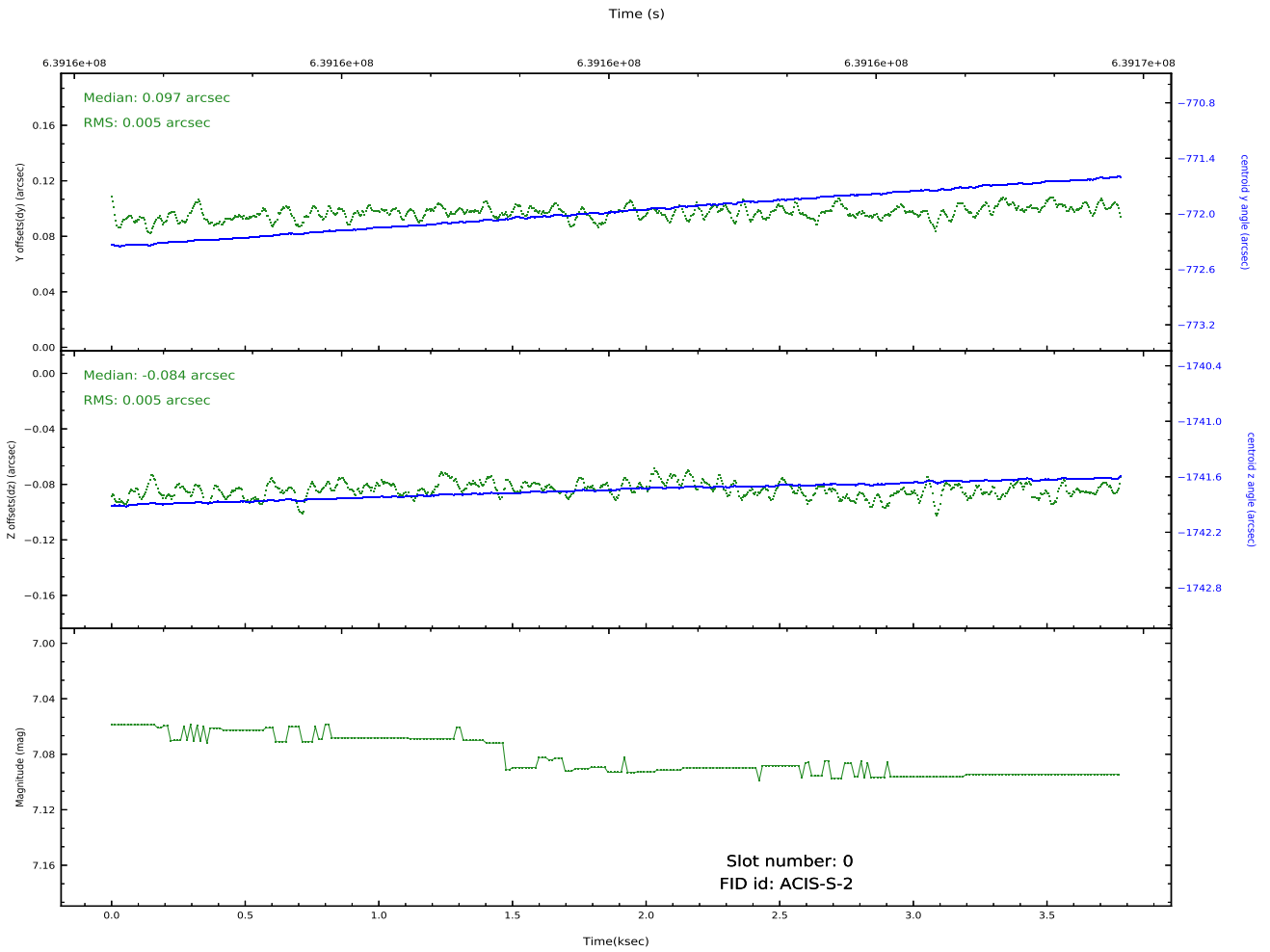
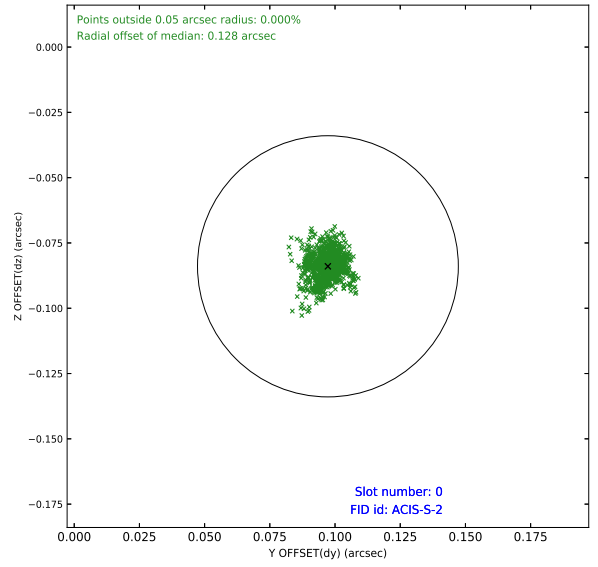
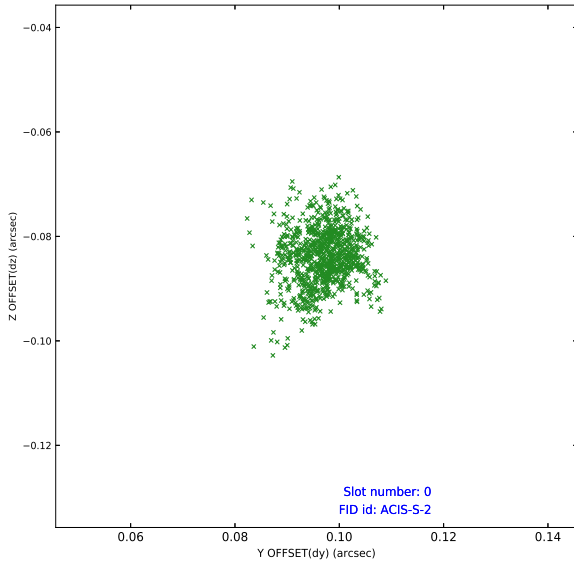


Time (s)

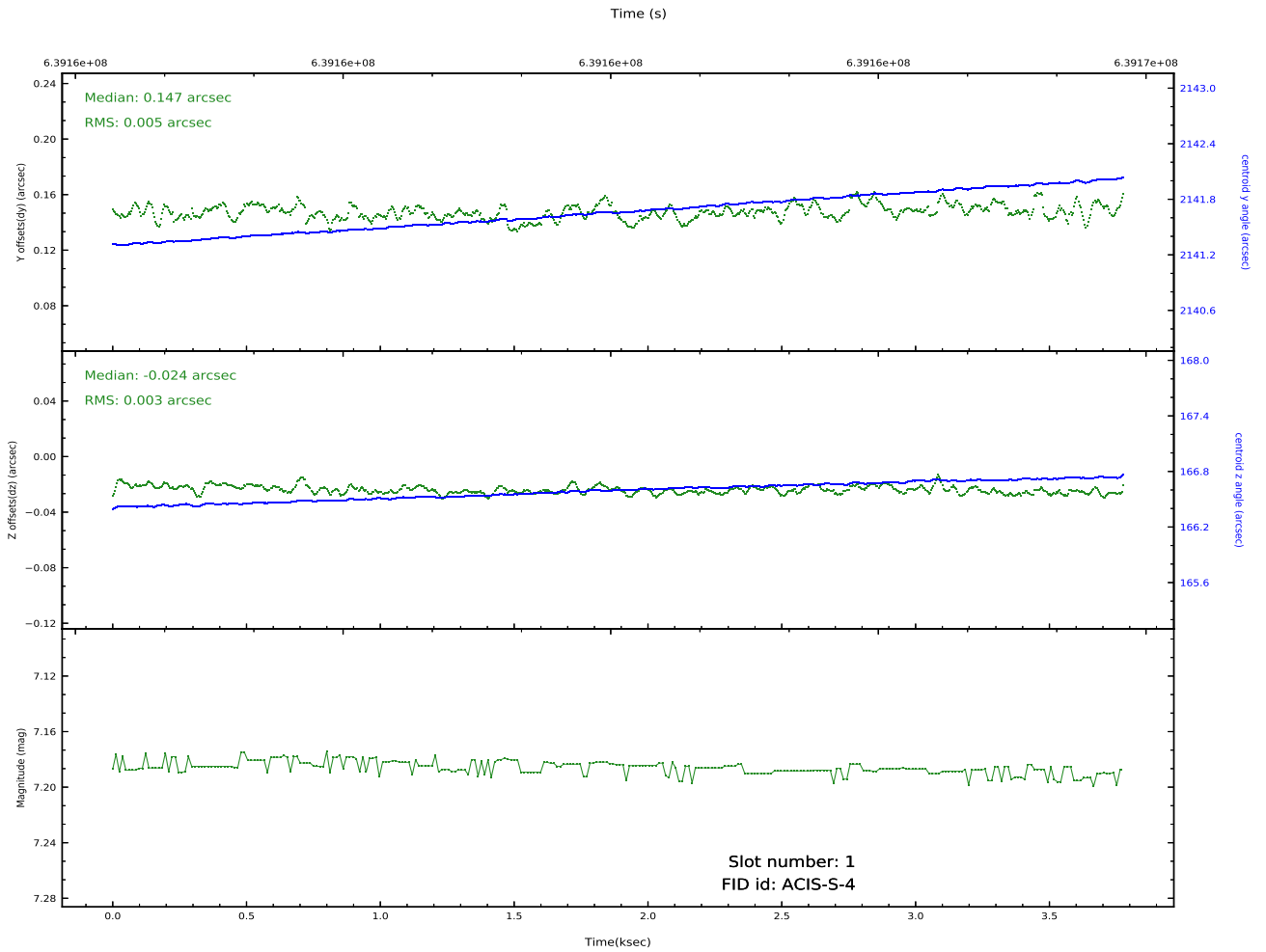
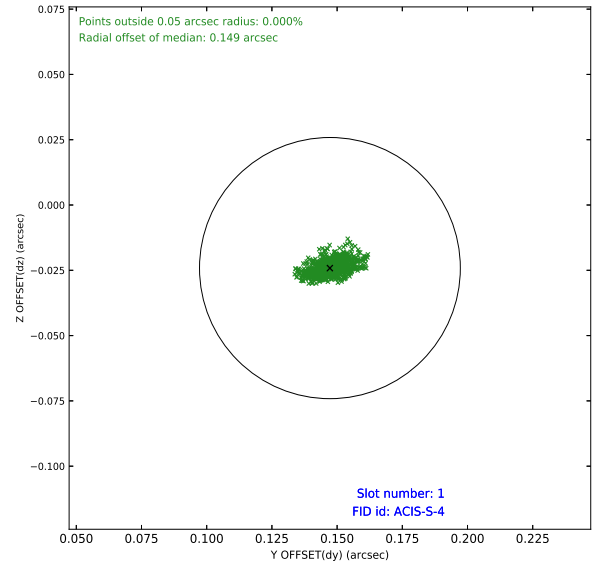
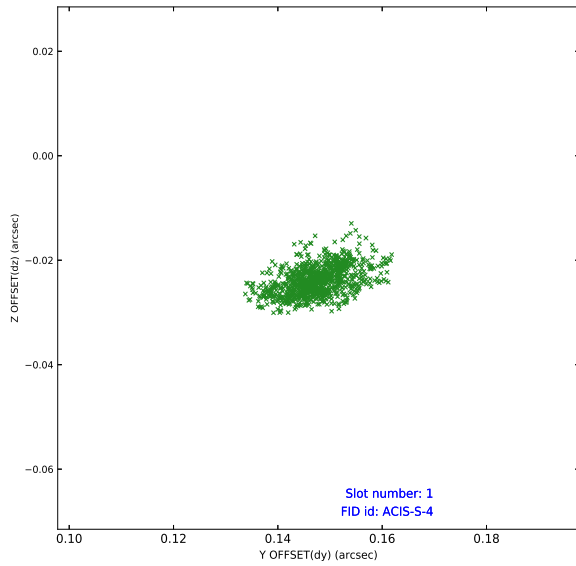


## 2.5 FID Slots

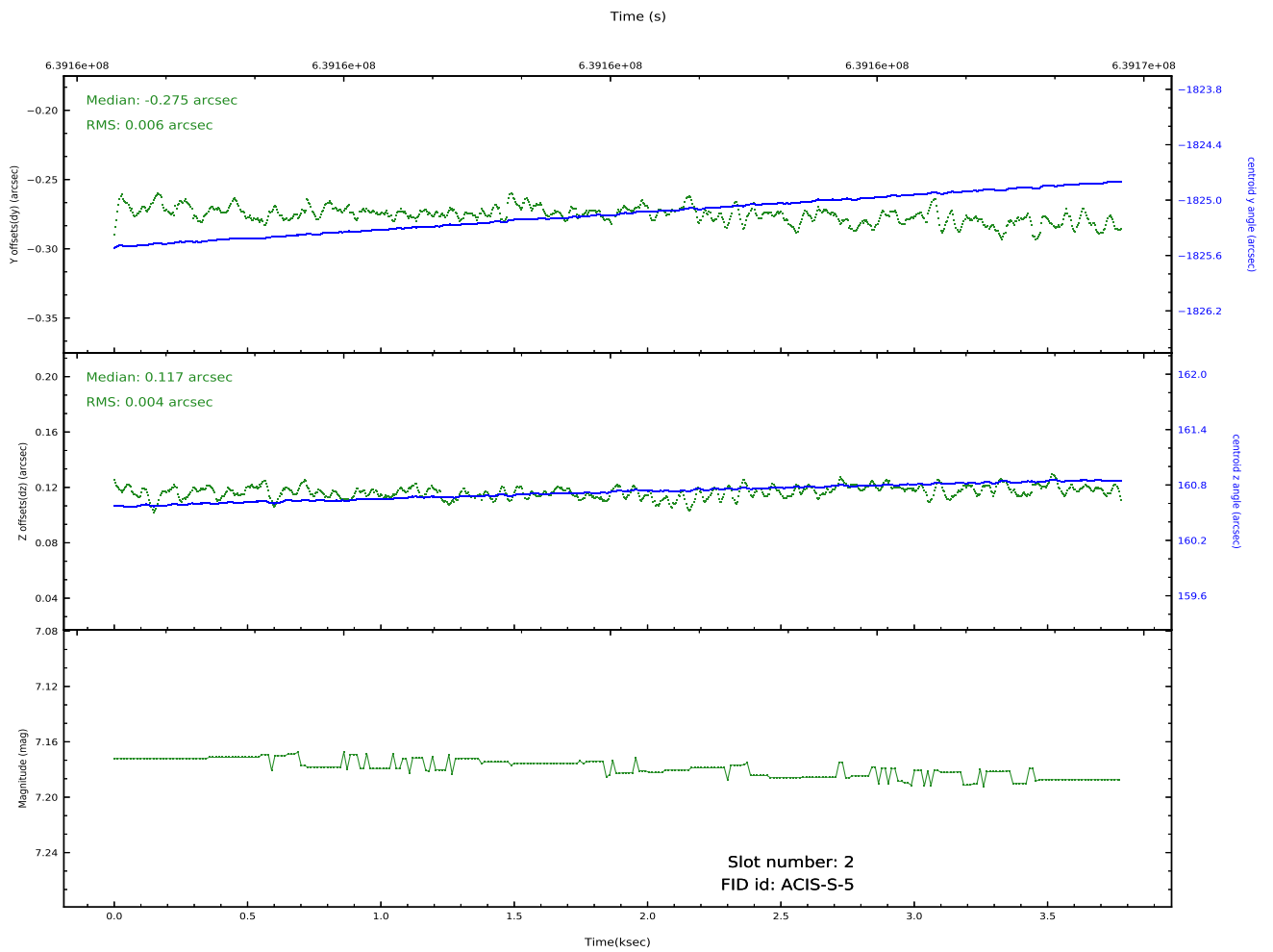
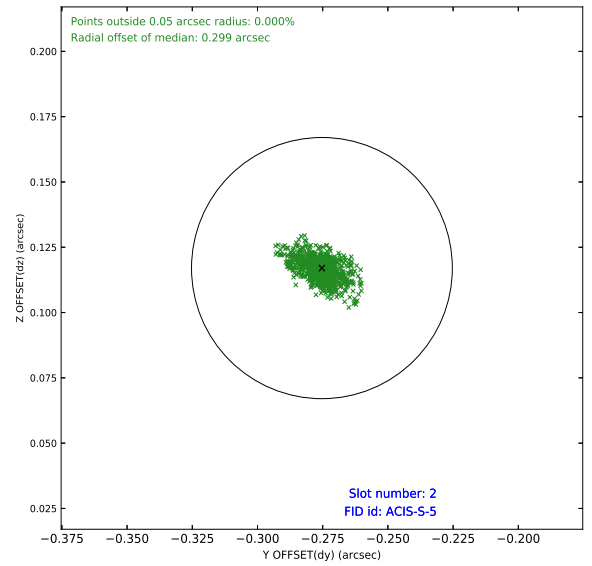
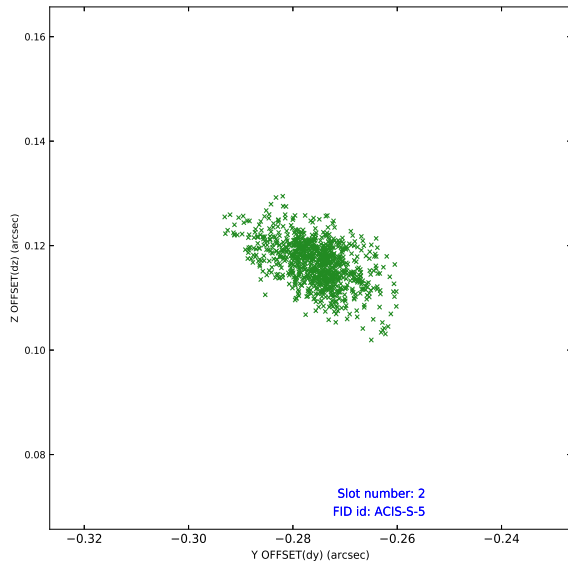
### 2.5.1 Slot 0



## 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)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.492605889082

## A.2 Comments