

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4989 - L2 Version 4  
Chandra X-Ray Center

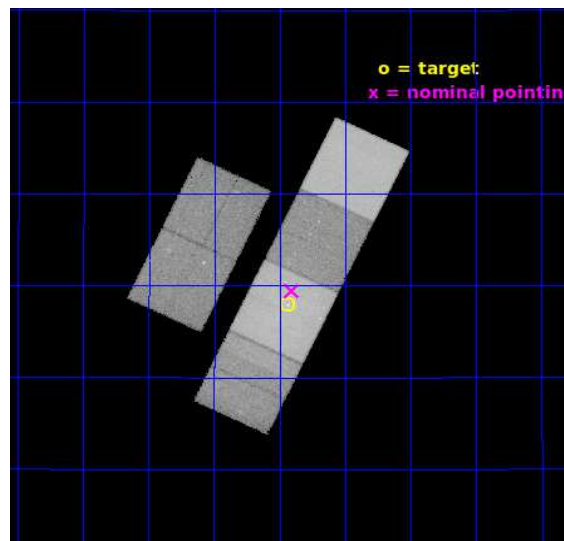
L2 Processing Date : Sep 24 2020

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# 1 Front

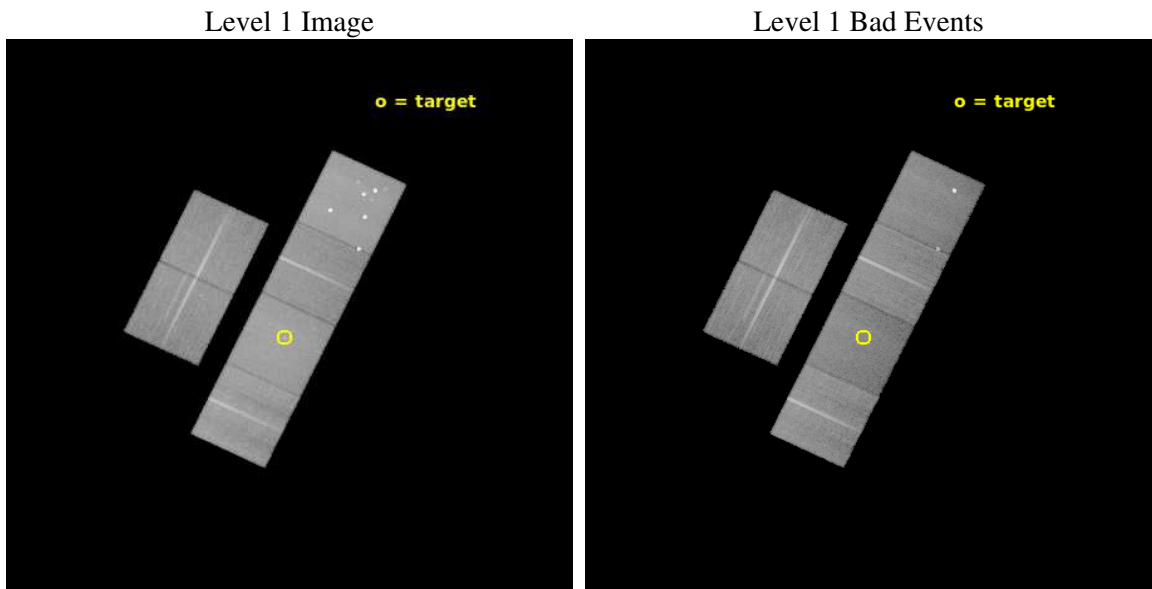
seq_num	800432	Sequence number
obs_id	4989	Observation id
title	X-Ray Bright Hickson Compact Groups: the Origin and Distribution of Metallicity and the Regulation of Cooling Flows	Proposal title
observer	Dr. Jan Vrtillek	Principal investigator
object	HCG 51	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	170.61	Observer's specified target RA [deg]
dec_targ	24.298333	Observer's specified target Dec [deg]
ra_nom	170.60143766563	Nominal RA [deg]
dec_nom	24.324351851552	Nominal Dec [deg]
roll_nom	115.65893884345	Nominal Roll [deg]
revision	4	Processing version of data
ontime	39033.599854589	Sum of GTIs [s]
livetime	38539.332910018	Livetime [s]
ontime2	39033.599854589	Sum of GTIs [s]
ontime3	39033.599854589	Sum of GTIs [s]
ontime5	39033.599854589	Sum of GTIs [s]
ontime6	39033.599854589	Sum of GTIs [s]
ontime7	39033.599854589	Sum of GTIs [s]
ontime8	39023.876963556	Sum of GTIs [s]
l2events	582928	Number of level 2 events



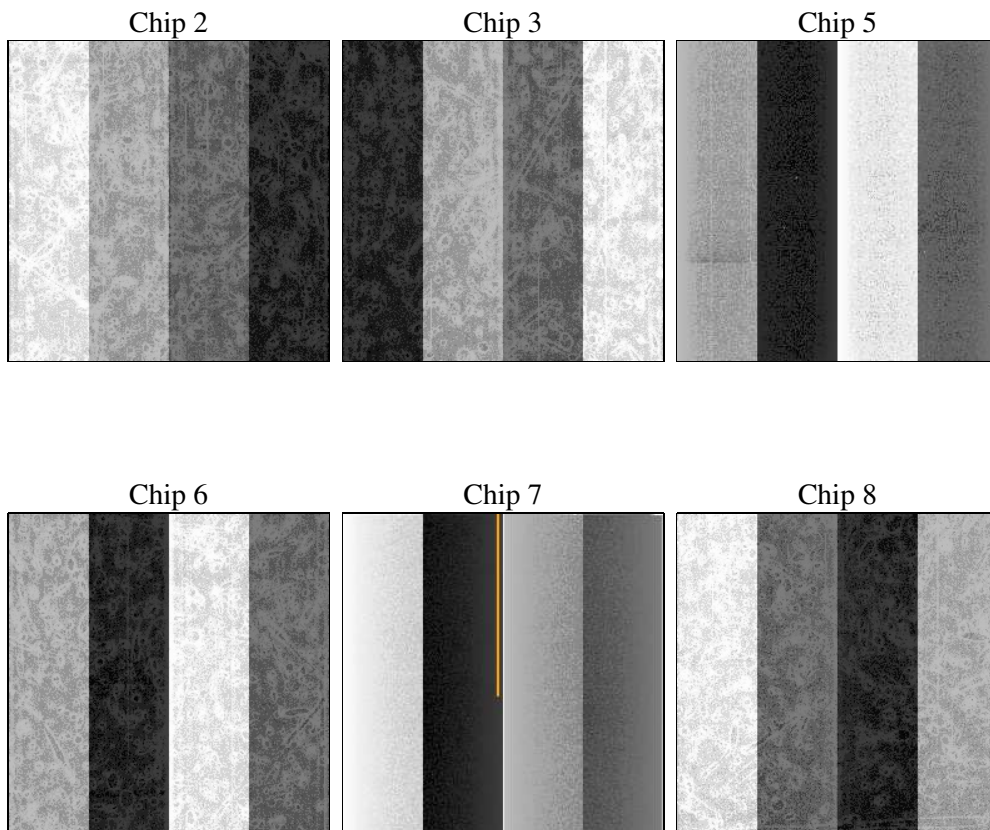
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38881.628000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	39033.599854589	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	39033.599854589	Sum of GTIs [s]
date	2020-09-24T01:34:12	Date and time of file creation	ontime3	39033.599854589	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	39033.599854589	Sum of GTIs [s]
			ontime6	39033.599854589	Sum of GTIs [s]
			ontime7	39033.599854589	Sum of GTIs [s]
			ontime8	39023.876963556	Sum of GTIs [s]
			l1events	1804232	Number of level 1 events

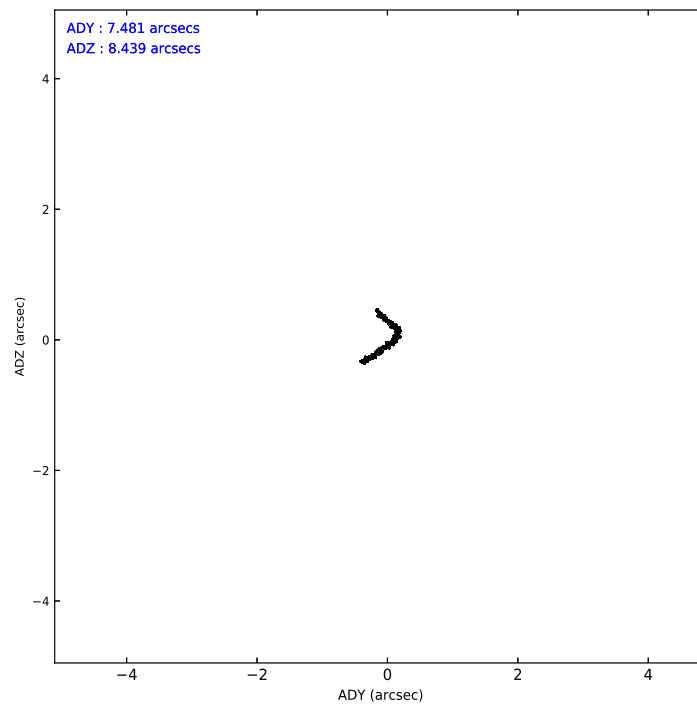
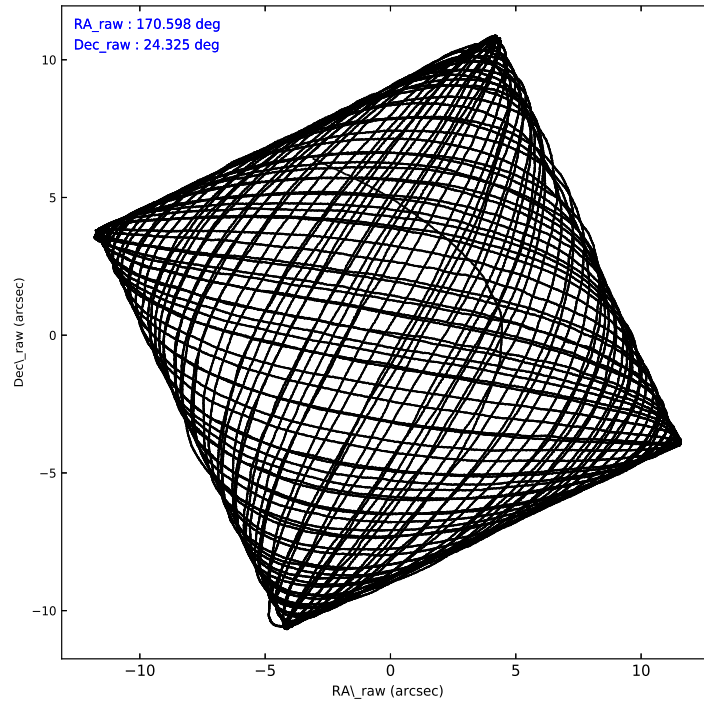
### 2.1.4 Events

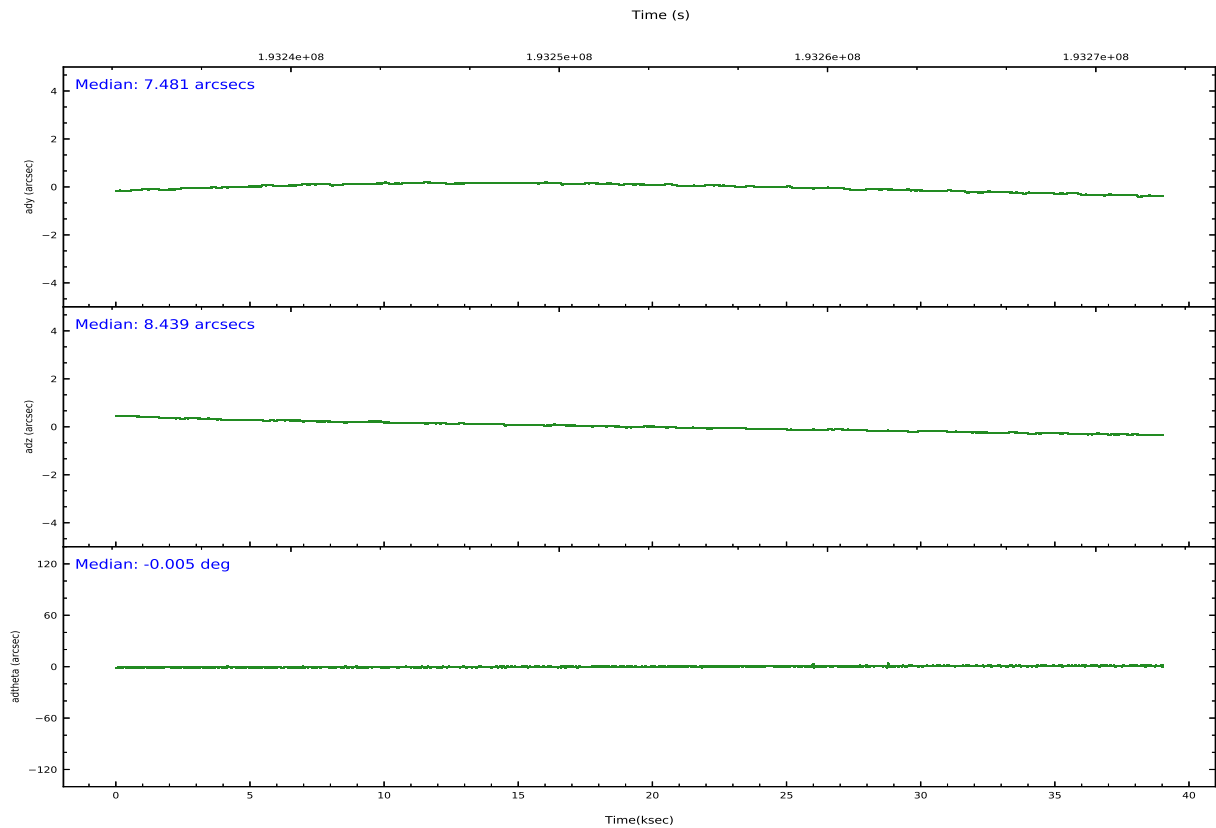
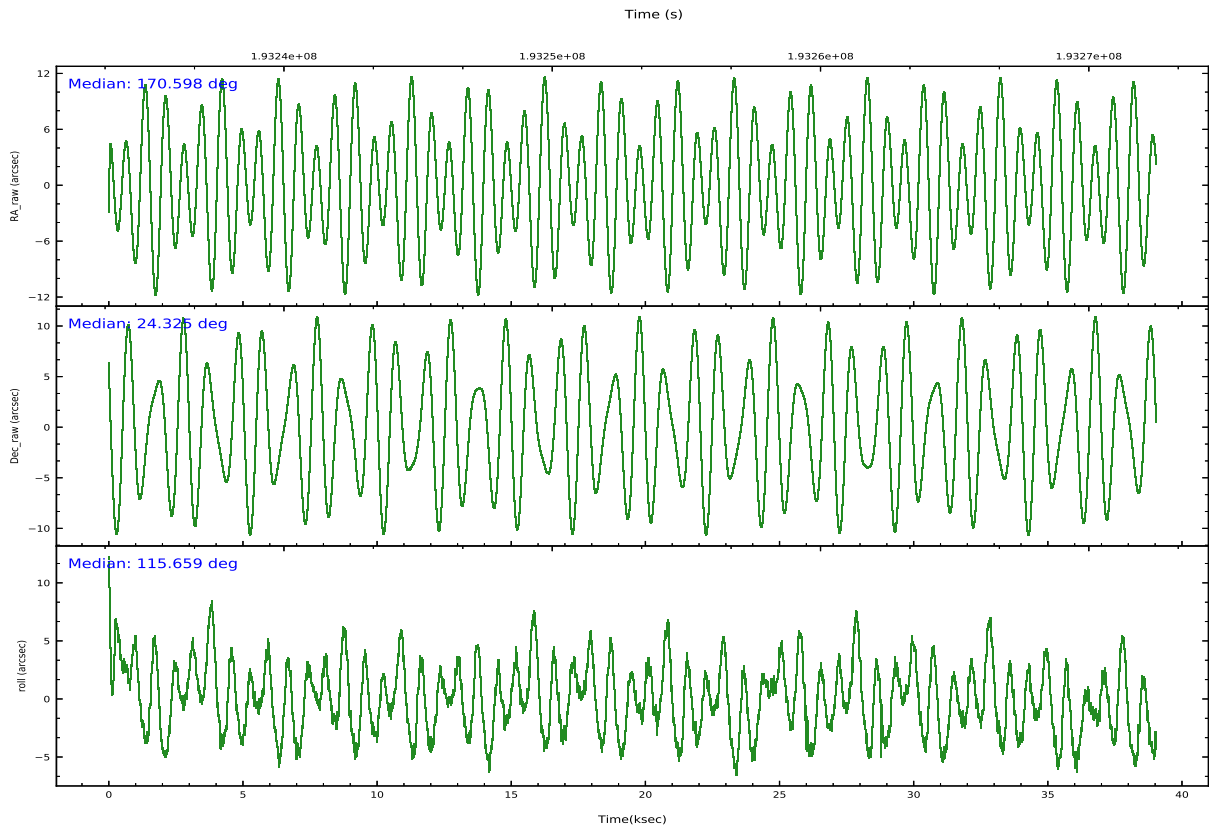
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	262547	241202	401777	255926	327958	314822	grade 0 events	28230	28368	50791	33464	23520	49949
rejected events	211892	190591	167115	197144	135656	212119		10%	11%	12%	13%	7%	15%
rejected %	80%	79%	41%	77%	41%	67%	grade 1 events	234	230	543	206	215	300
								0%	0%	0%	0%	0%	0%
							grade 2 events	8533	8093	61874	9296	37364	18270
								3%	3%	15%	3%	11%	5%
							grade 3 events	3769	3909	10720	4089	17546	8347
								1%	1%	2%	1%	5%	2%
							grade 4 events	3805	3862	9335	4064	16920	7951
								1%	1%	2%	1%	5%	2%
							grade 5 events	7395	8429	24955	8728	25678	12014
								2%	3%	6%	3%	7%	3%
							grade 6 events	7036	7094	107059	8625	100495	20164
								2%	2%	26%	3%	30%	6%
							grade 7 events	203545	181217	136500	187454	106220	197827
								77%	75%	33%	73%	32%	62%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	170.622843	170.60143766563	Subarray requested	NONE	NONE
[deg] Pointing Dec	24.310198	24.324351851552	Alternating exposures requested	N	N
[deg] Pointing Roll	115.494710	115.65893884345	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	193233628.184000	193231927.48191			
Observation start date	2004-02-15T11:59:24	2004-02-15T11:32:07			
[s] Observation end time (MET)	193272510.184000	193272824.4712			
Observation end date	2004-02-15T22:47:26	2004-02-15T22:53:44			
Read mode	TIMED	TIMED			

## 2.3 Aspect





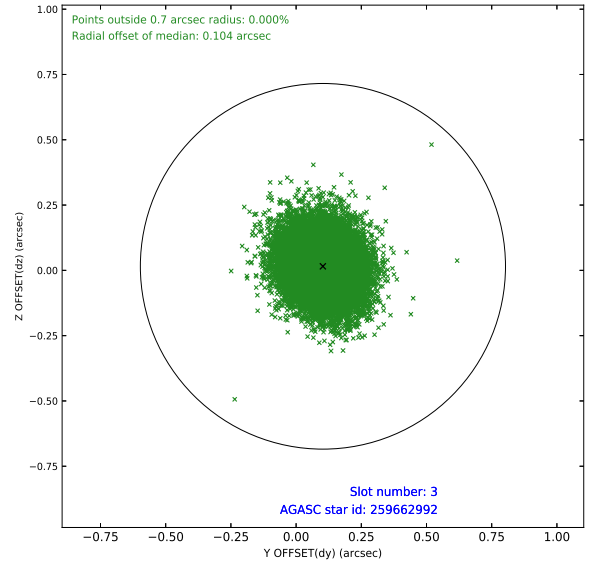
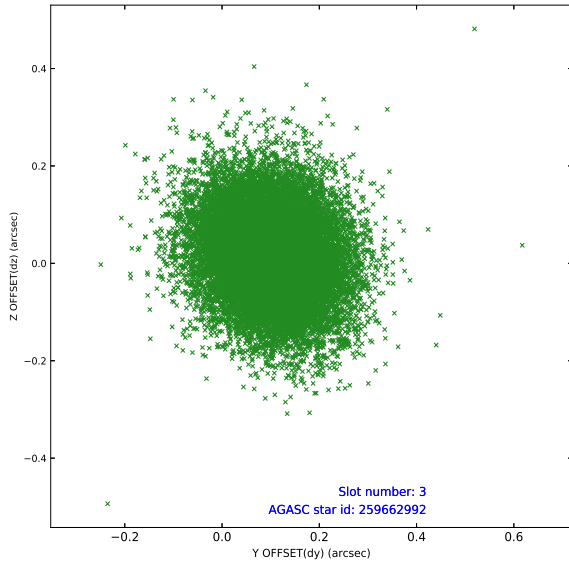
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	9522	1.000	-0.037	-0.074	0.007	0.012	0.000000	0.000000	-760.23	-1729
1	FID		ACIS-S-4	7.20	9521	1.000	0.117	0.038	0.008	0.014	0.000000	0.000000	2153.17	178
2	FID		ACIS-S-5	7.23	9520	1.000	-0.111	0.045	0.010	0.017	0.000000	0.000000	-1813.15	172
3	GUIDE	used	259662992	9.90	19023	1.000	0.103	0.016	0.122	0.200	170.634435	23.634300	-2212.45	1012
4	GUIDE	used	259663424	8.86	19038	1.000	-0.060	-0.106	0.088	0.166	170.243291	23.834131	-1007.61	1865
5	GUIDE	used	259663456	8.70	19040	1.000	-0.154	0.079	0.070	0.114	170.962709	24.951050	1606.47	-1994
6	GUIDE	used	259665288	8.62	19042	1.000	0.059	-0.006	0.060	0.099	170.672049	24.733578	1307.19	-800
7	GUIDE	used	259665864	9.69	19030	1.000	0.053	0.020	0.115	0.179	170.950609	24.417770	-111.53	-1136

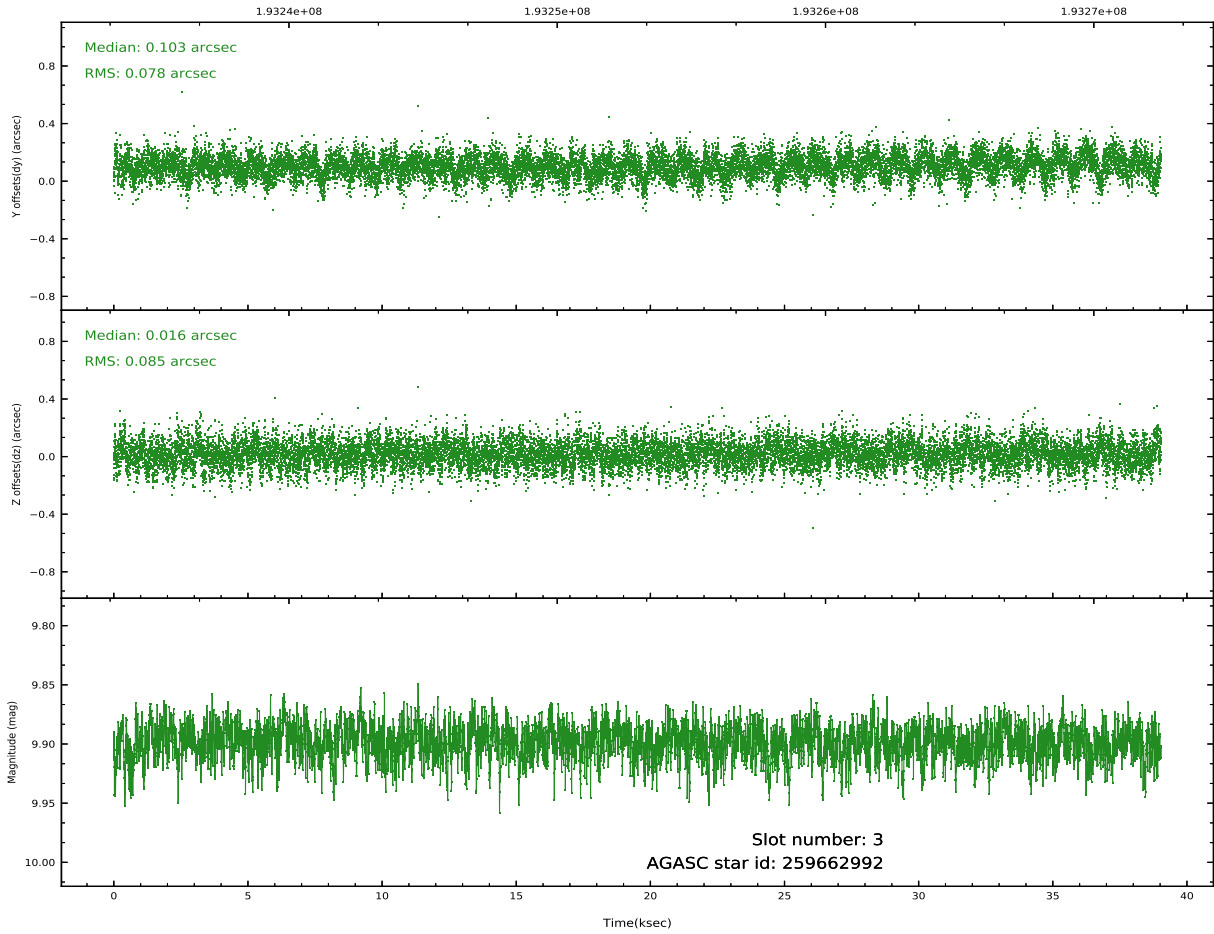
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## 2.4 Star Slots

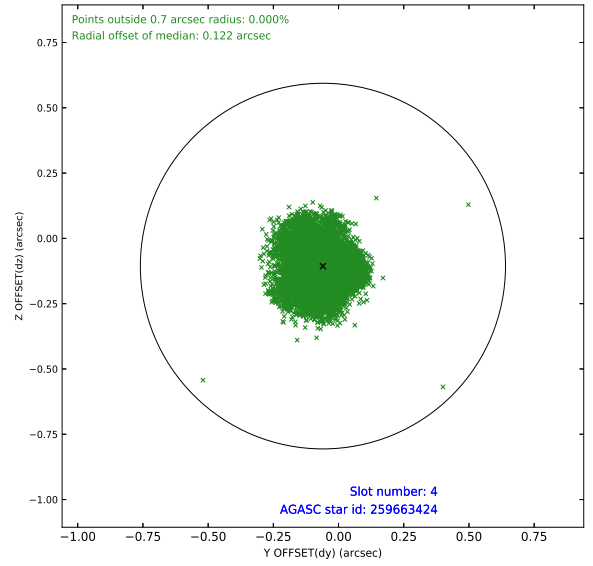
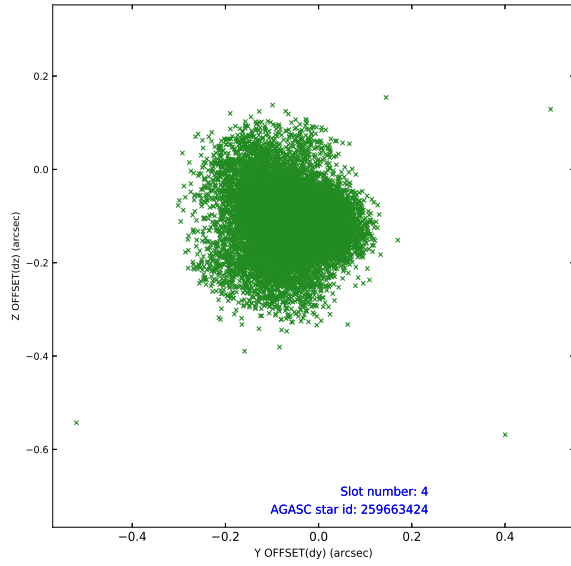
### 2.4.1 Slot 3



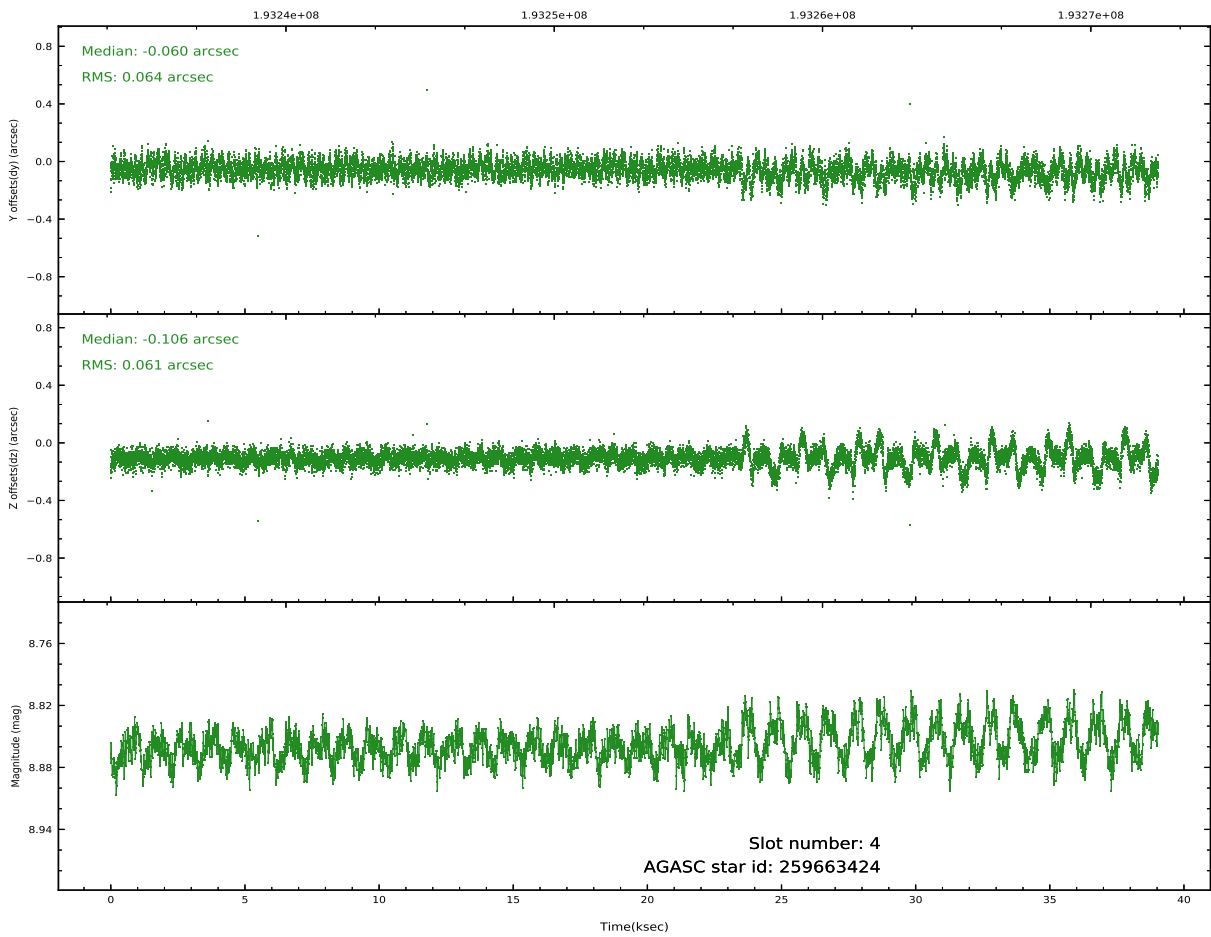
Time (s)



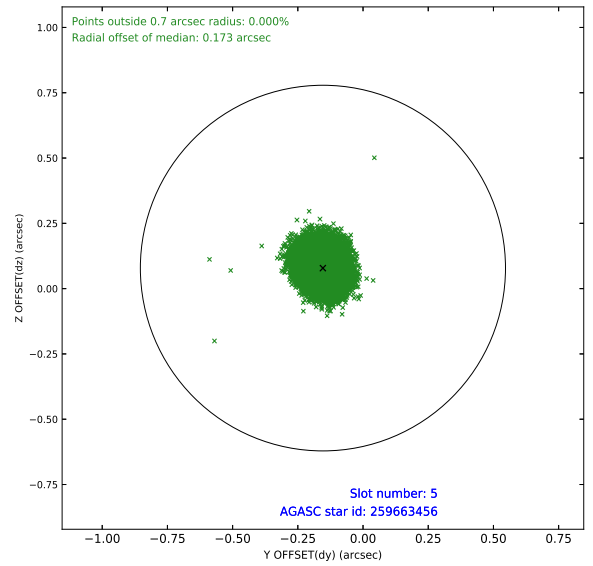
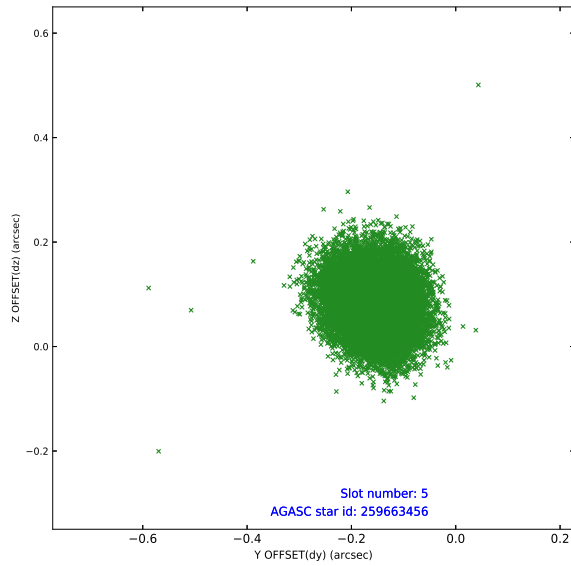
## 2.4.2 Slot 4



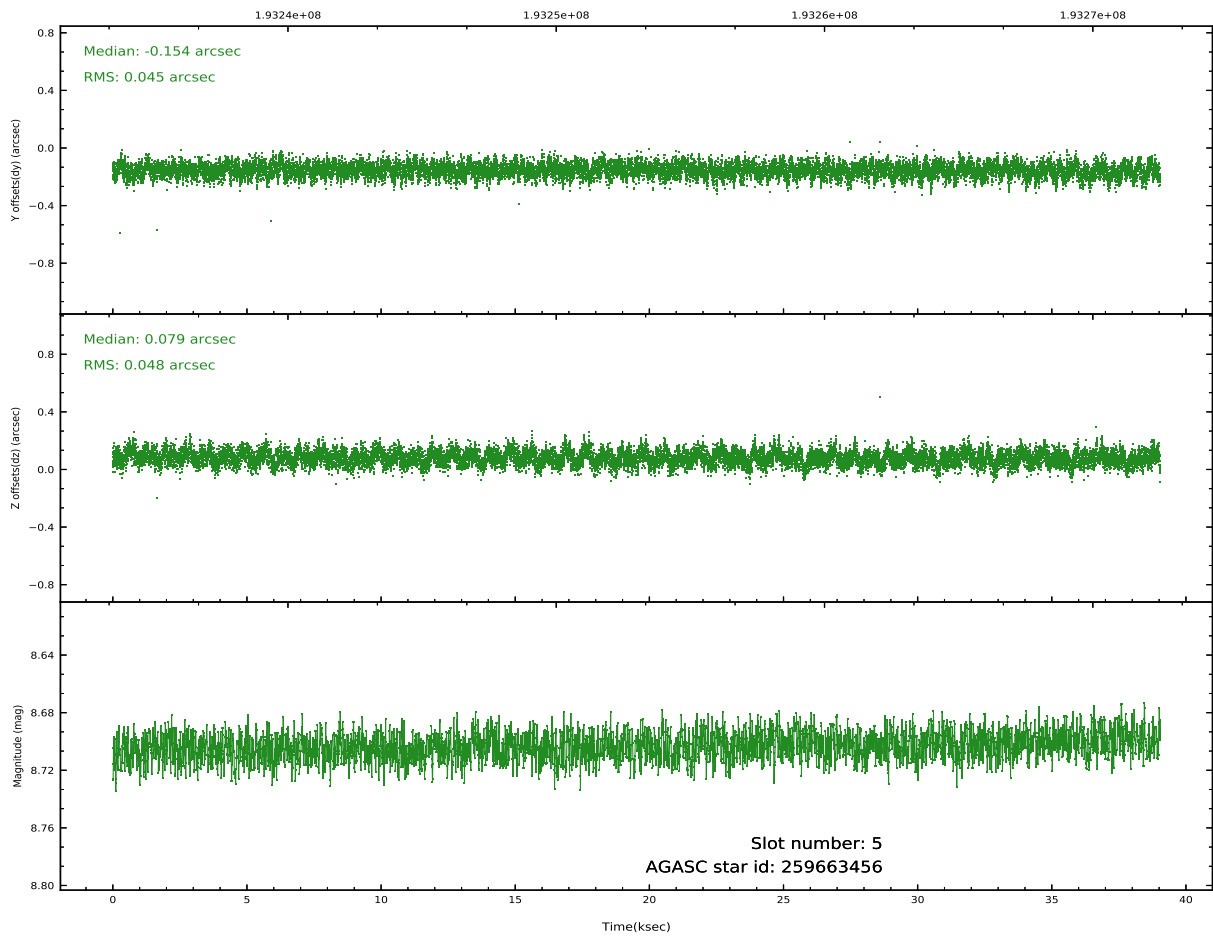
Time (s)



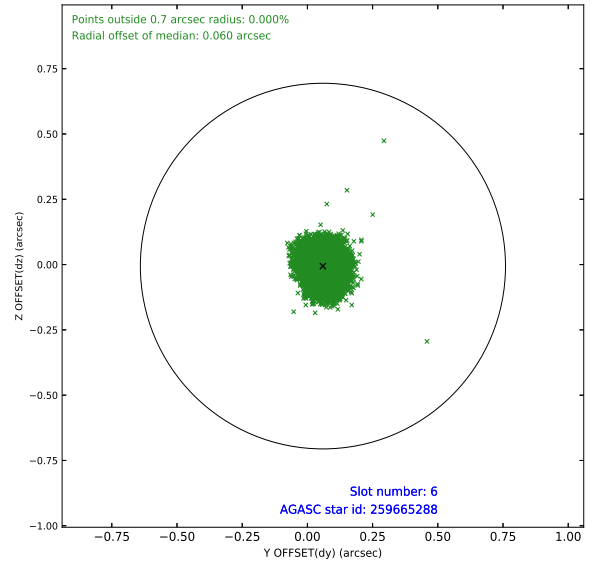
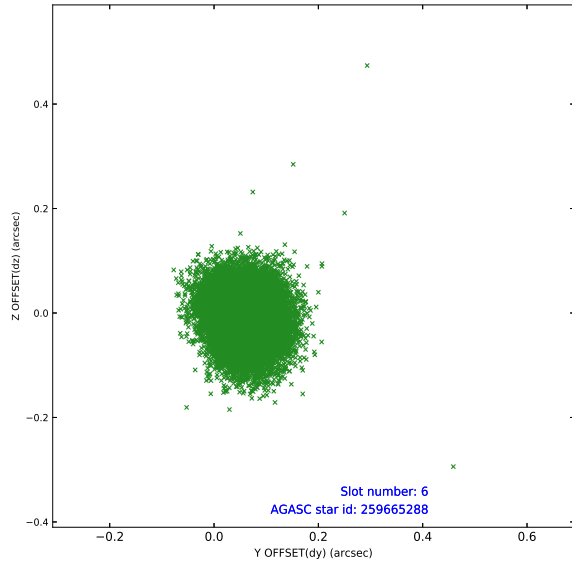
### 2.4.3 Slot 5



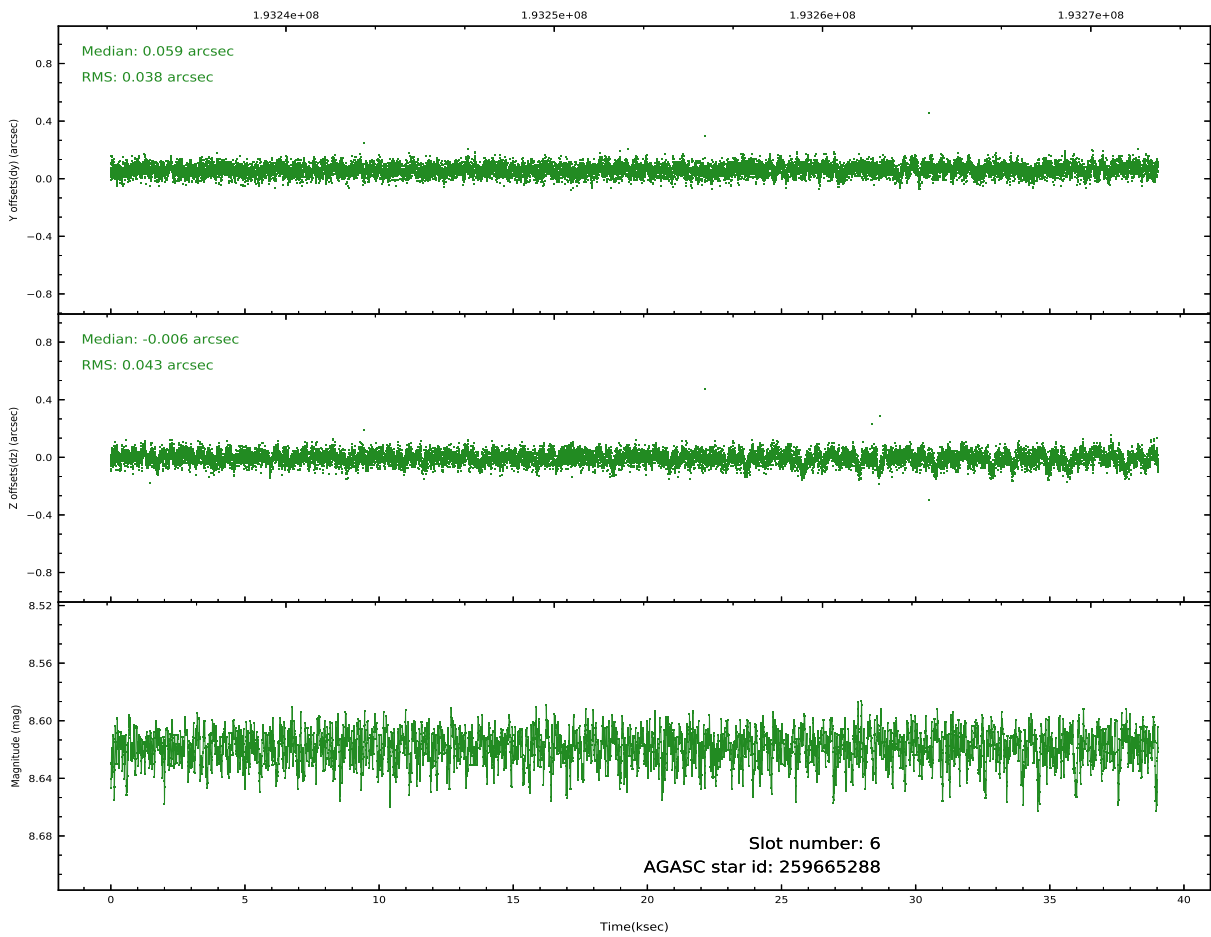
Time (s)



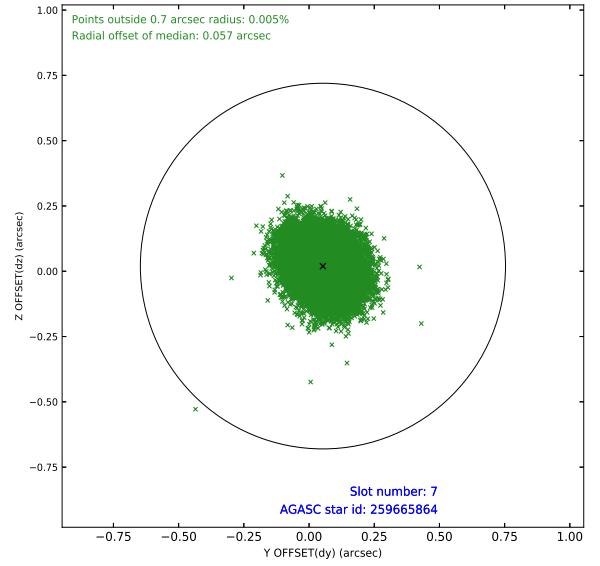
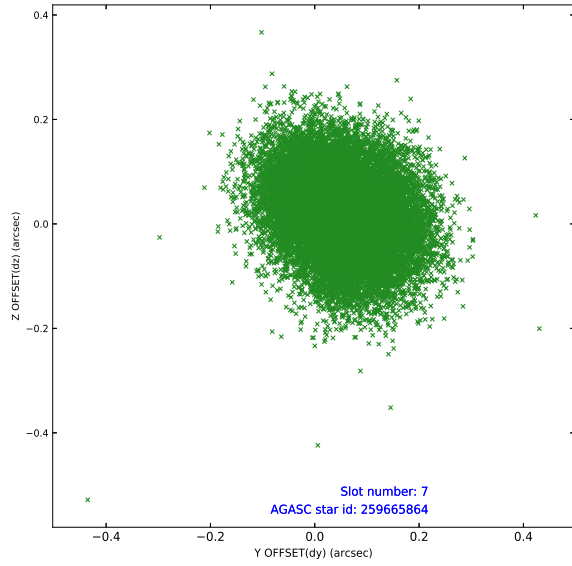
## 2.4.4 Slot 6



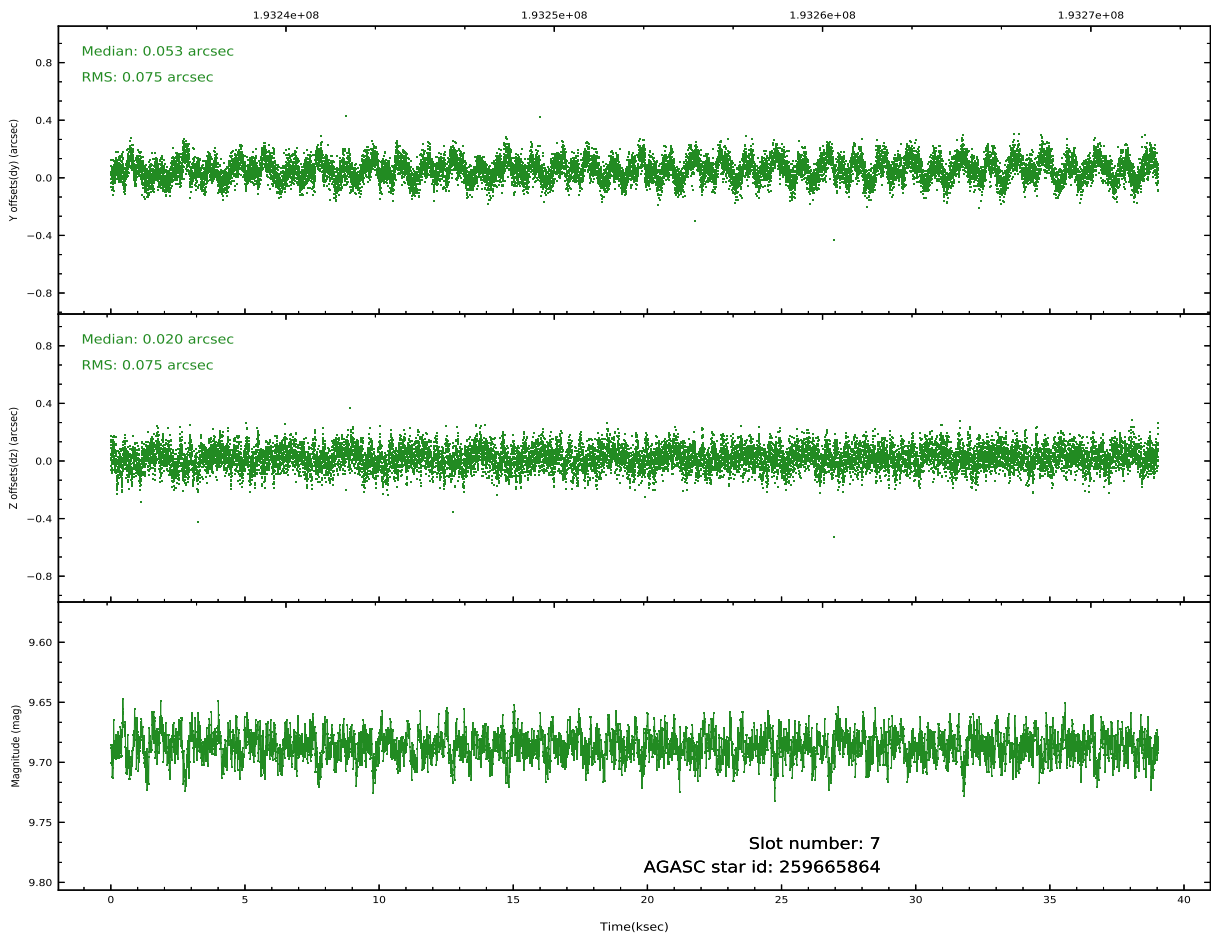
Time (s)



## 2.4.5 Slot 7

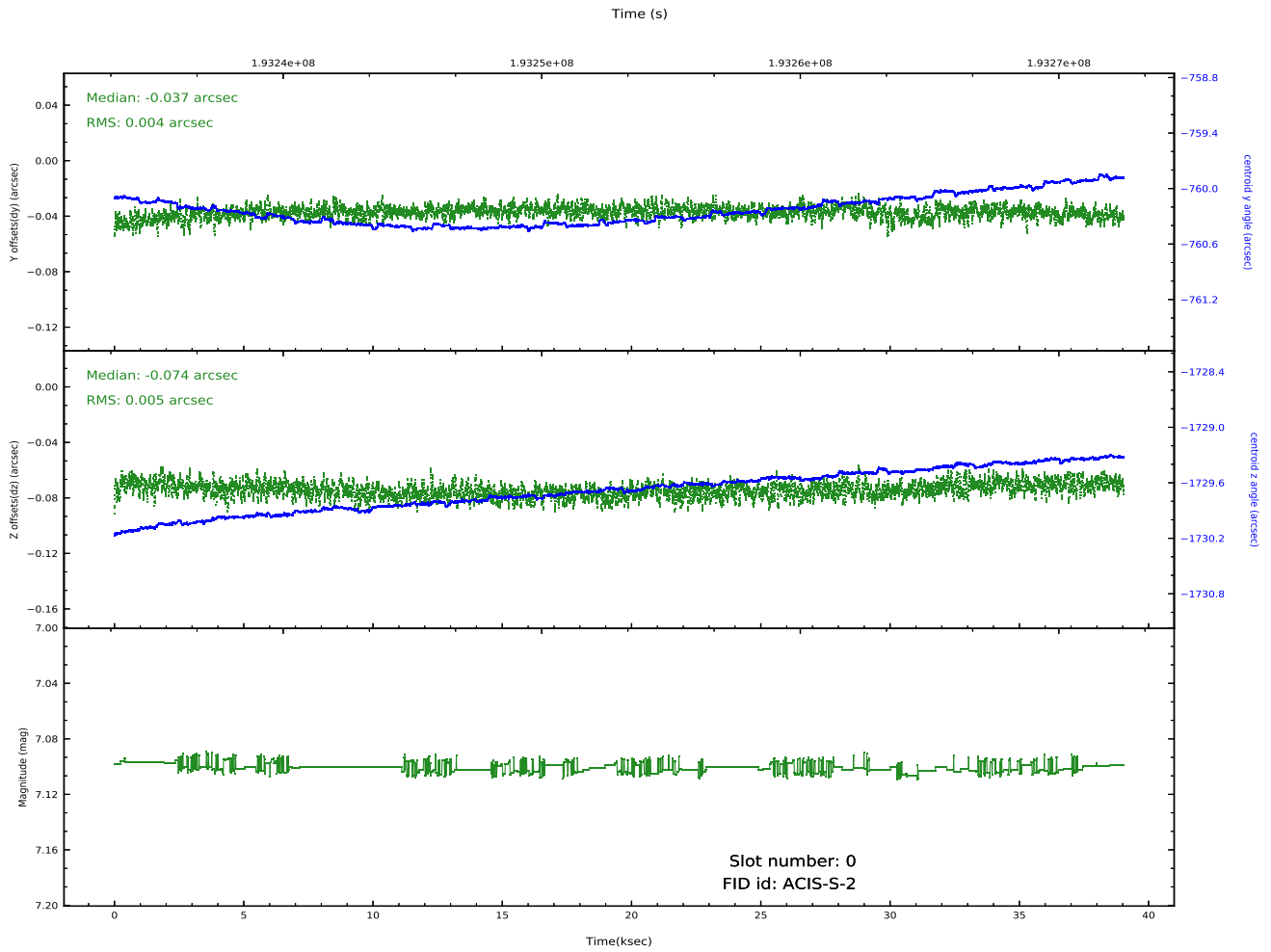
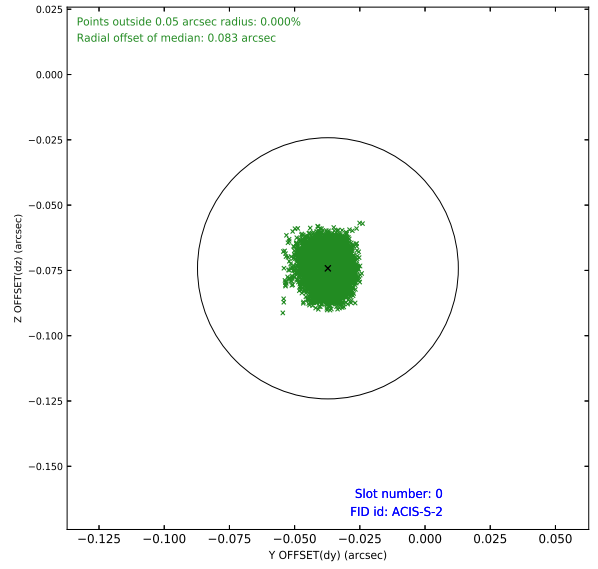
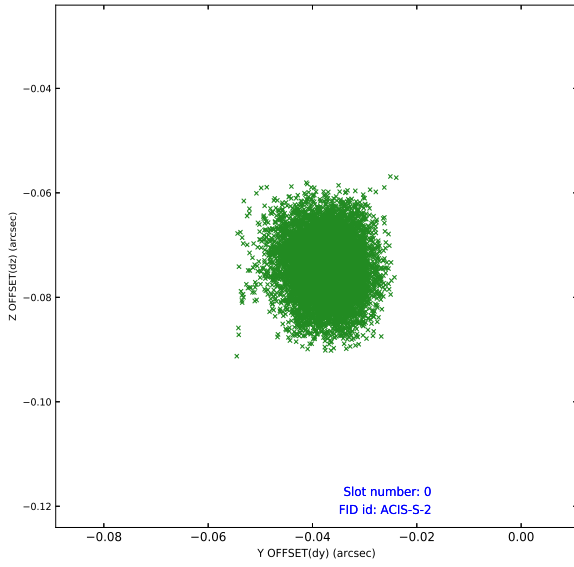


Time (s)

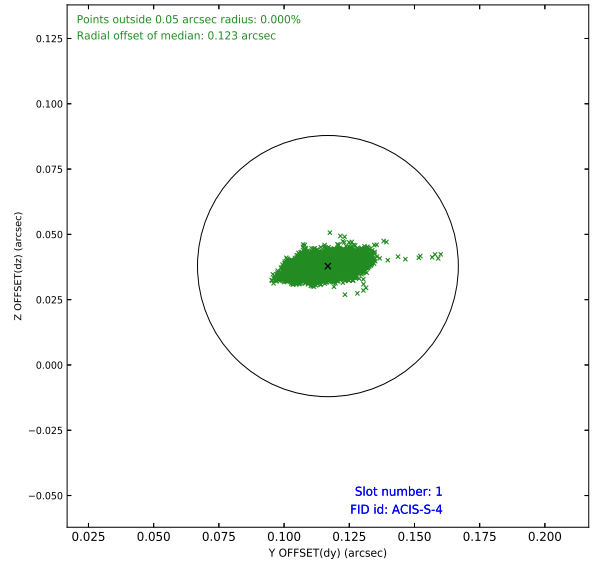
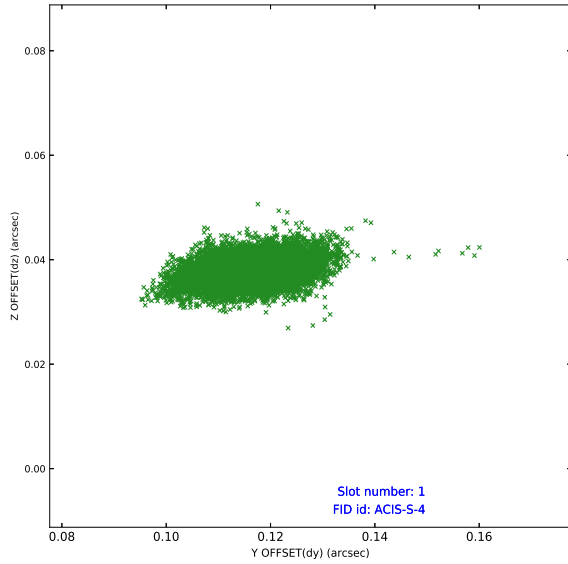


## 2.5 FID Slots

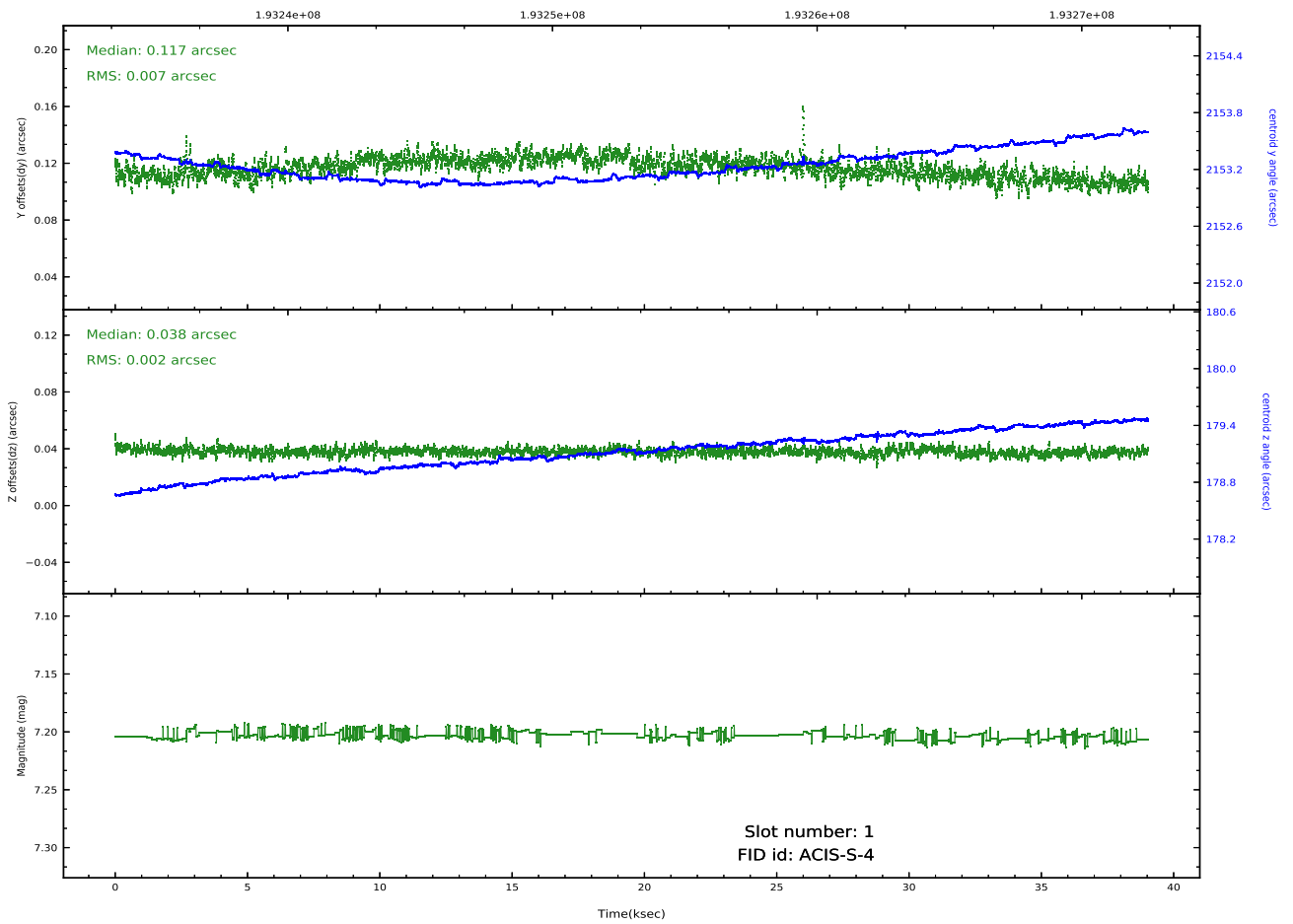
### 2.5.1 Slot 0



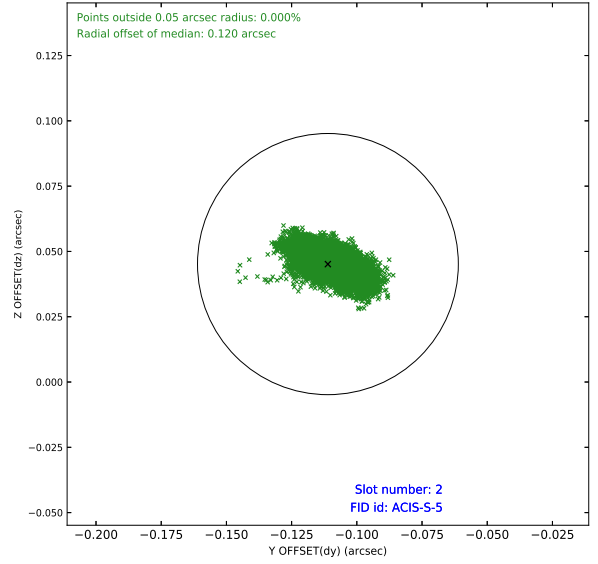
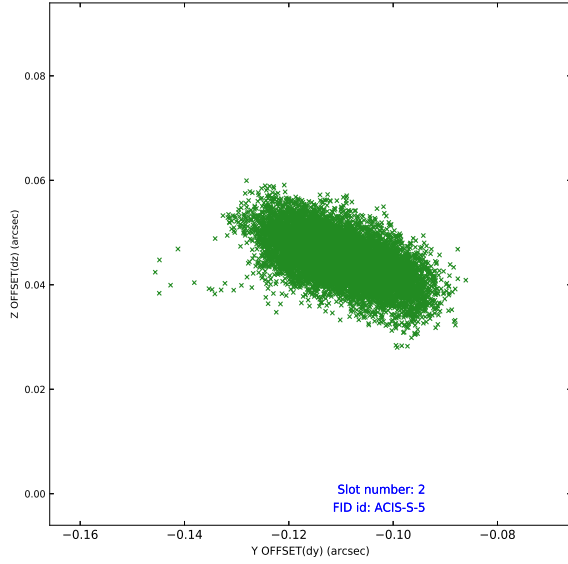
## 2.5.2 Slot 1



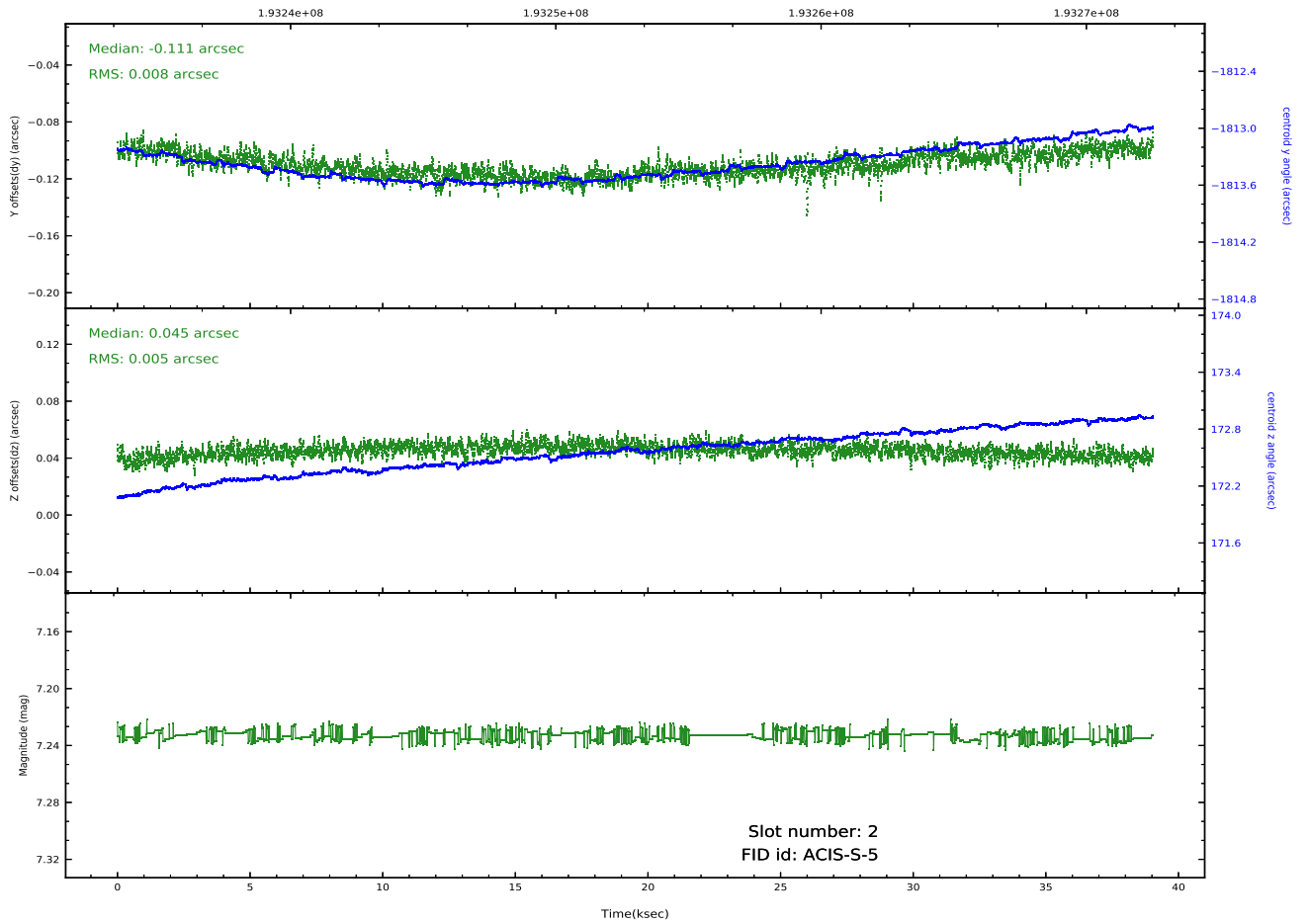
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.09.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.0335998

## A.2 Comments