

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5159 - L2 Version 5  
Chandra X-Ray Center

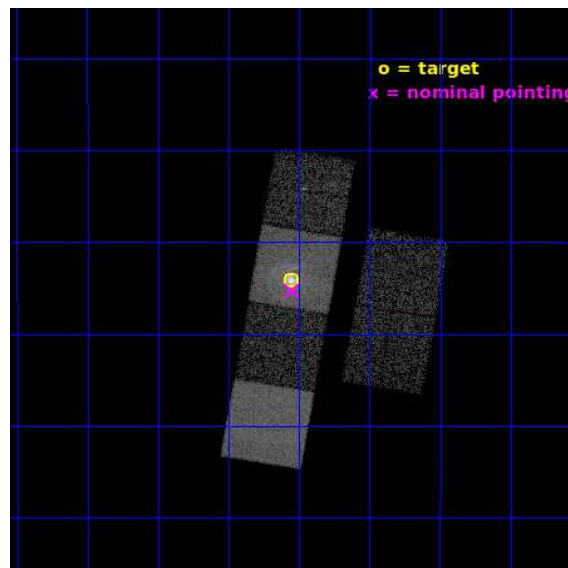
L2 Processing Date : Oct 3 2020

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# 1 Front

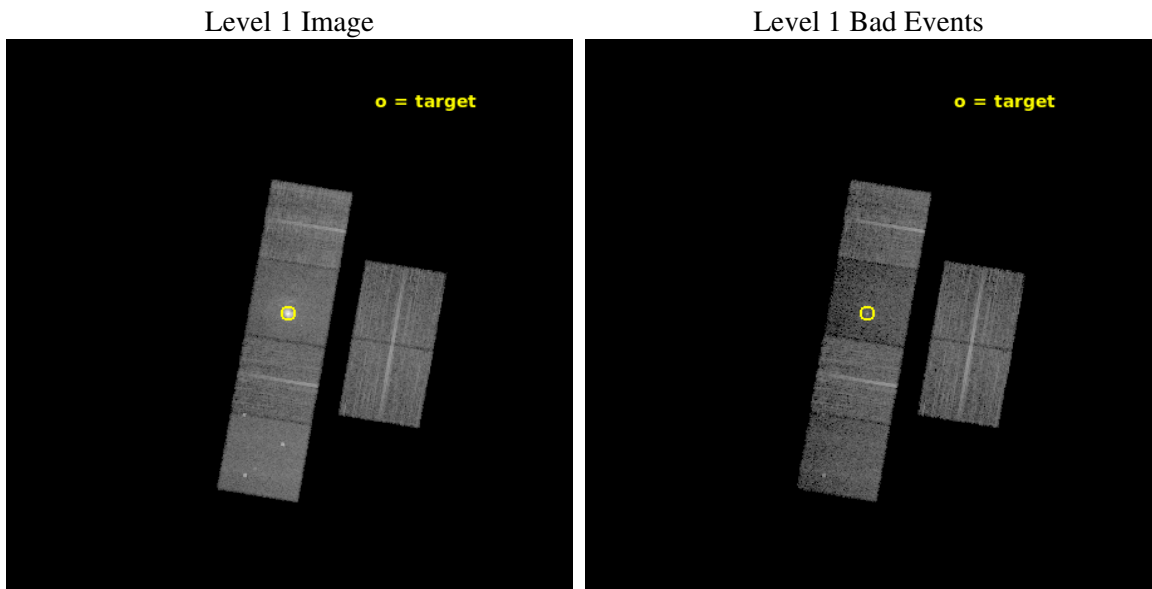
seq_num	590357	Sequence number
obs_id	5159	Observation id
title	AO5B Observations of the Standard Candles Cas A and G21.5-09	Propo
observer	CXC Calibration	Principal investigator
object	SNR G21.5-0.9	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.389583	Observer's specified target RA [deg]
dec_targ	-10.568528	Observer's specified target Dec [deg]
ra_nom	278.3877810605	Nominal RA [deg]
dec_nom	-10.587889538437	Nominal Dec [deg]
roll_nom	279.66863230468	Nominal Roll [deg]
revision	5	Processing version of data
ontime	9955.1765023768	Sum of GTIs [s]
livetime	9829.1180632161	Livetime [s]
ontime2	9955.199962914	Sum of GTIs [s]
ontime3	9955.0533823669	Sum of GTIs [s]
ontime5	9955.1354623735	Sum of GTIs [s]
ontime6	9955.0944223702	Sum of GTIs [s]
ontime7	9955.1765023768	Sum of GTIs [s]
ontime8	9955.0123423934	Sum of GTIs [s]
l2events	122546	Number of level 2 events



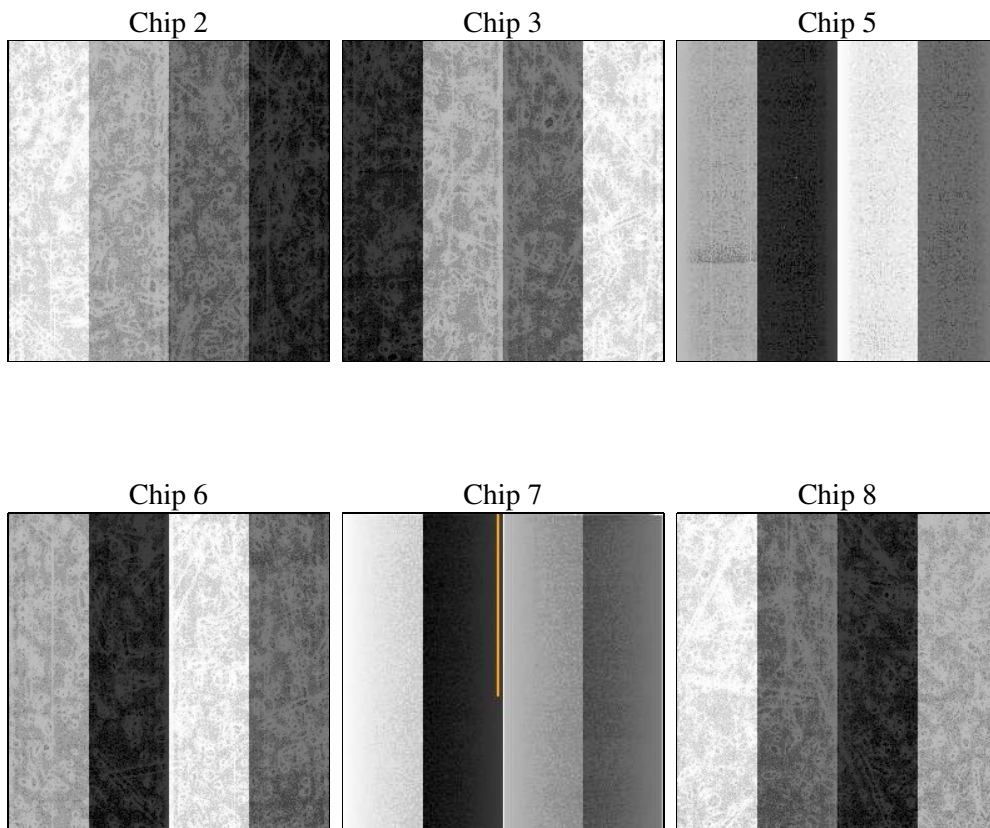
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	9955.1765023768	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	9955.199962914	Sum of GTIs [s]
date	2020-10-03T20:58:38	Date and time of file creation	ontime3	9955.0533823669	Sum of GTIs [s]
revision	5	Processing version of data	ontime5	9955.1354623735	Sum of GTIs [s]
			ontime6	9955.0944223702	Sum of GTIs [s]
			ontime7	9955.1765023768	Sum of GTIs [s]
			ontime8	9955.0123423934	Sum of GTIs [s]
			l1events	441631	Number of level 1 events

### 2.1.4 Events

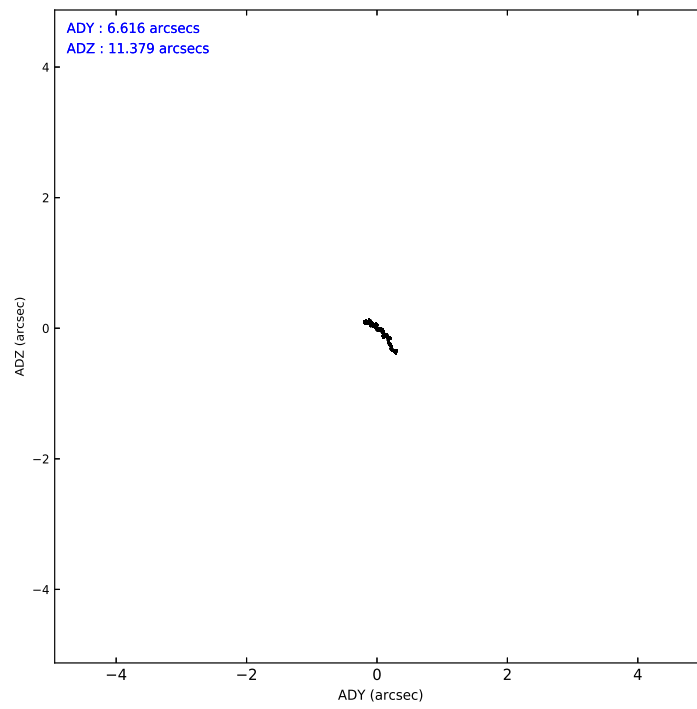
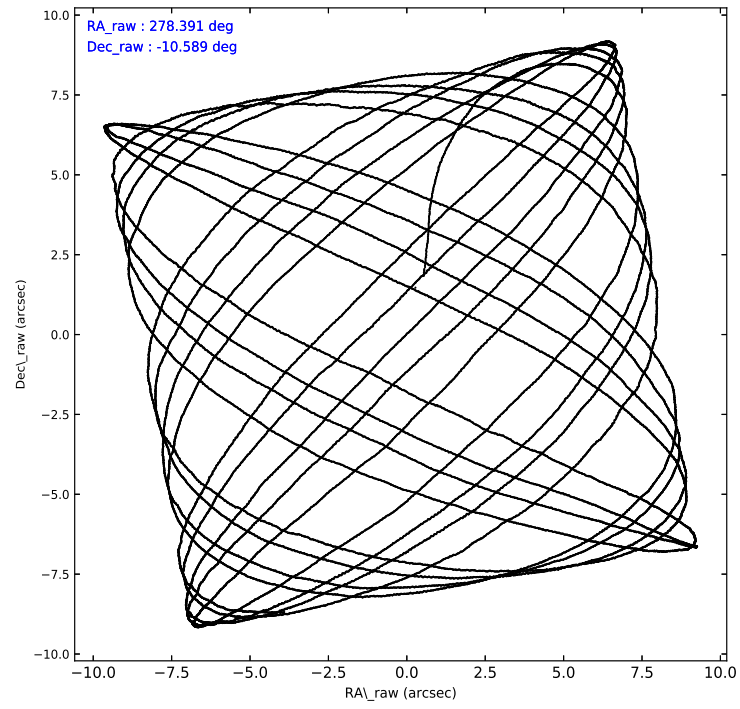
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	67052	62062	75622	64915	94721	77259	grade 0 events	2427	2498	4371	2695	10951	5850
rejected events	60772	55956	35814	58051	30333	58323		3%	4%	5%	4%	11%	7%
rejected %	90%	90%	47%	89%	32%	75%	grade 1 events	27	22	106	30	145	61
								0%	0%	0%	0%	0%	0%
							grade 2 events	1474	1216	11916	1445	14965	4284
								2%	1%	15%	2%	15%	5%
							grade 3 events	685	671	2016	742	6963	1984
								1%	1%	2%	1%	7%	2%
							grade 4 events	674	665	1862	677	6815	1842
								1%	1%	2%	1%	7%	2%
							grade 5 events	1623	1986	6367	2023	6591	3094
								2%	3%	8%	3%	6%	4%
							grade 6 events	1023	1060	19652	1309	24711	5024
								1%	1%	25%	2%	26%	6%
							grade 7 events	59119	53944	29332	55994	23580	55120
								88%	86%	38%	86%	24%	71%

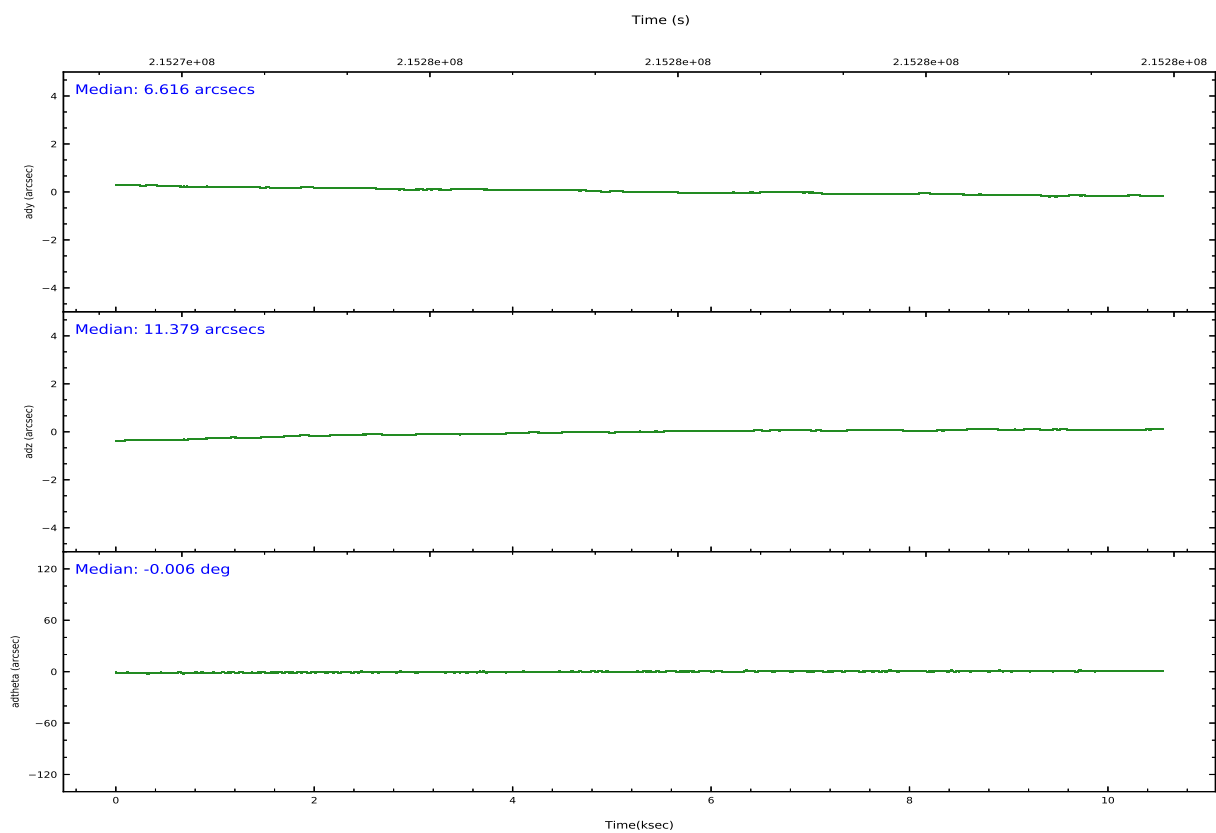
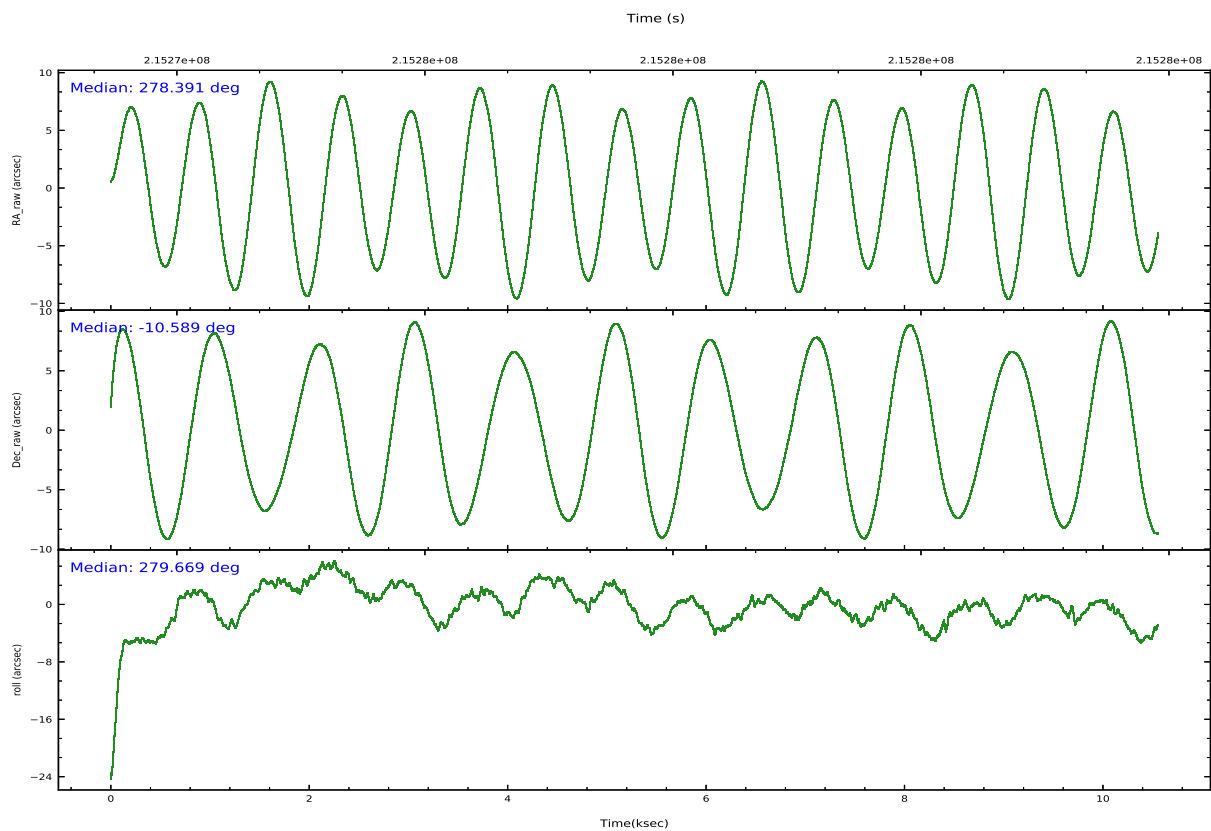


## 2.2 Compared Parameters

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	278.373418	278.3877810605	Subarray requested	NONE	NONE
[deg] Pointing Dec	-10.568488	-10.587889538437	Alternating exposures requested	N	N
[deg] Pointing Roll	279.506262	279.66863230468	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	212976064.184000	212976064.184000			
[s] Window stop time (MET)	218160064.184000	218160064.184000			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	215272391.184000	215271241.17044			
Observation start date	2004-10-27T13:52:07	2004-10-27T13:34:01			
[s] Observation end time (MET)	215282391.184000	215283039.43347			
Observation end date	2004-10-27T16:38:47	2004-10-27T16:50:39			
Read mode	TIMED	TIMED			

## 2.3 Aspect



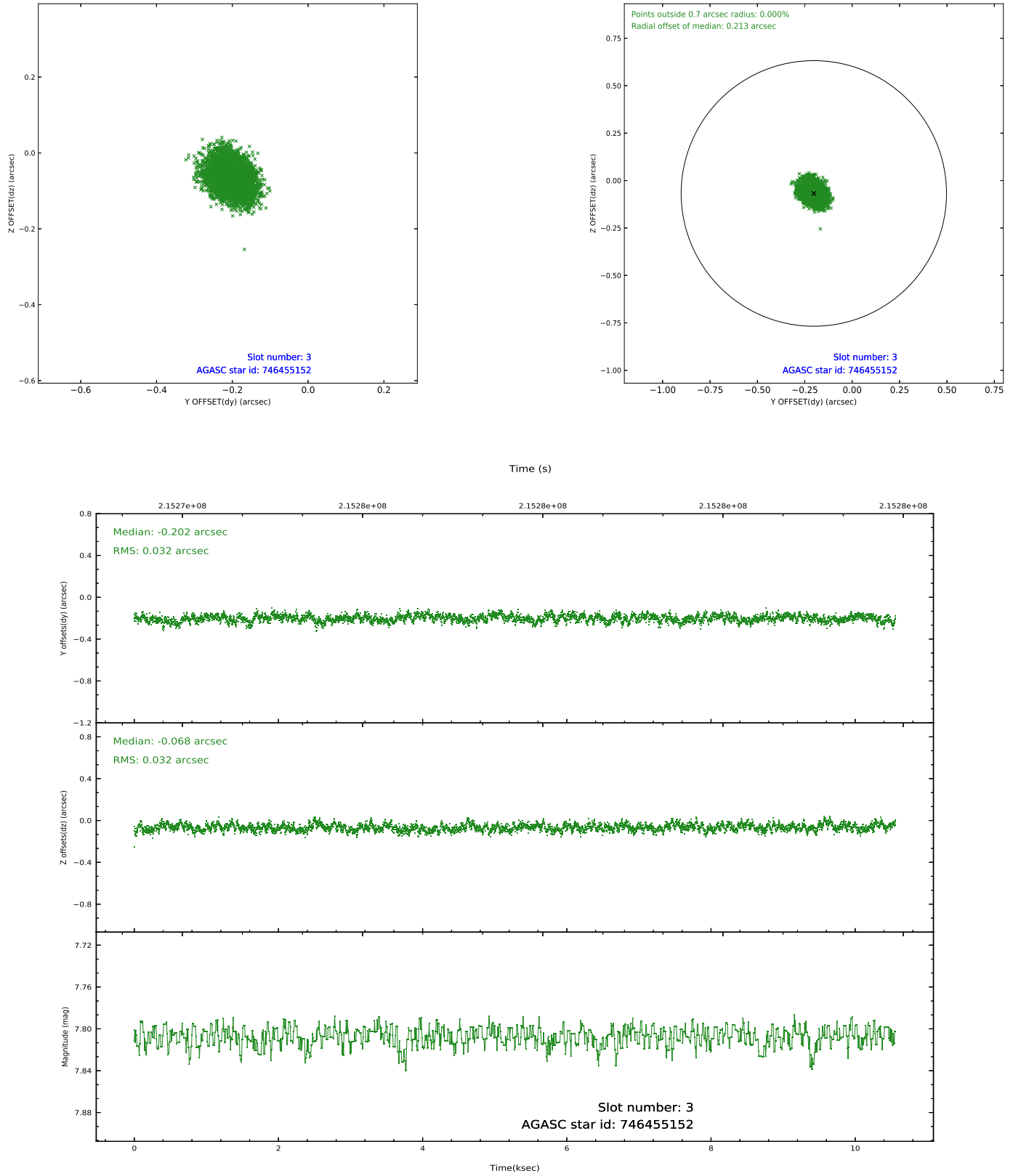


Slot Statistics

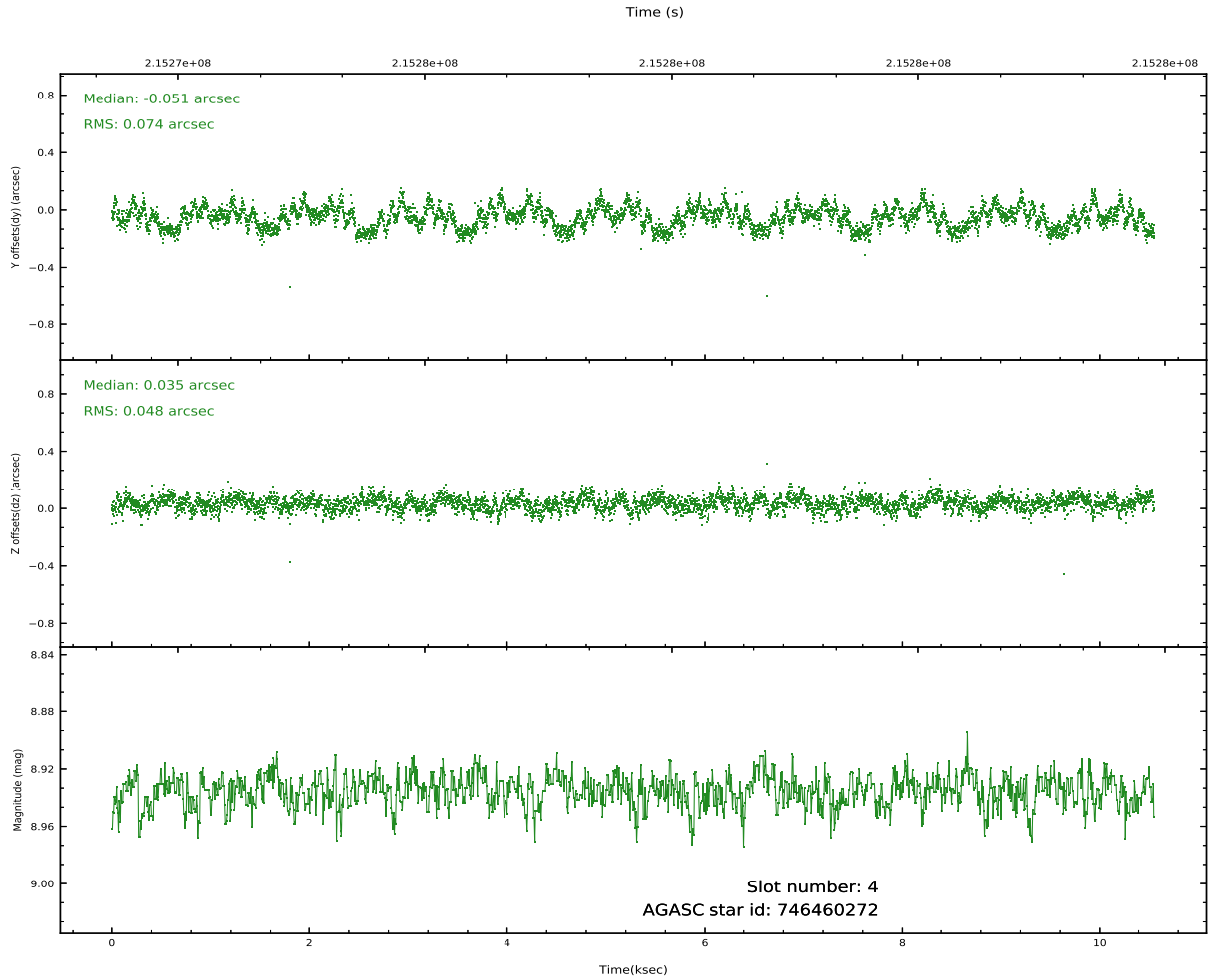
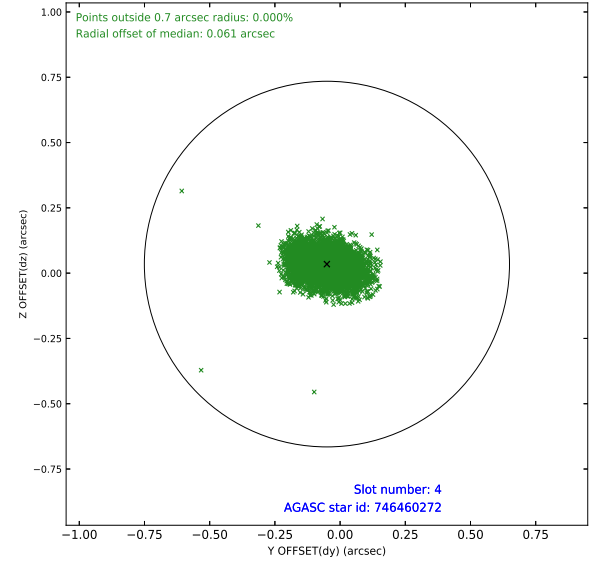
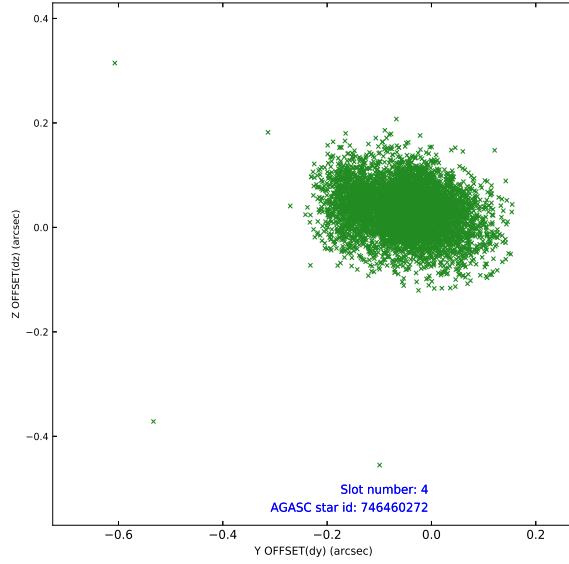
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.09	2575	1.000	-0.079	-0.052	0.007	0.011	0.000000	0.000000	-759.42	-1732
1	FID		ACIS-S-4	7.21	2575	1.000	0.132	0.052	0.009	0.015	0.000000	0.000000	2153.80	175
2	FID		ACIS-S-5	7.23	2576	1.000	-0.084	0.008	0.008	0.015	0.000000	0.000000	-1811.68	169
3	GUIDE	used	746455152	7.81	5151	1.000	-0.202	-0.068	0.048	0.078	278.447893	-9.976732	-2057.55	612
4	GUIDE	used	746460272	8.93	5147	1.000	-0.051	0.035	0.094	0.151	278.847488	-10.152127	-1200.14	1904
5	GUIDE	used	746460328	9.77	5145	1.000	-0.165	0.123	0.122	0.195	278.603974	-9.898096	-2244.97	1205
6	GUIDE	used	746462392	8.54	5148	1.000	0.163	0.055	0.078	0.122	279.038421	-10.890715	1535.61	2127
7	GUIDE	used	746995400	9.50	5140	1.000	0.260	-0.149	0.129	0.207	278.078957	-11.289885	2390.91	-1453

## 2.4 Star Slots

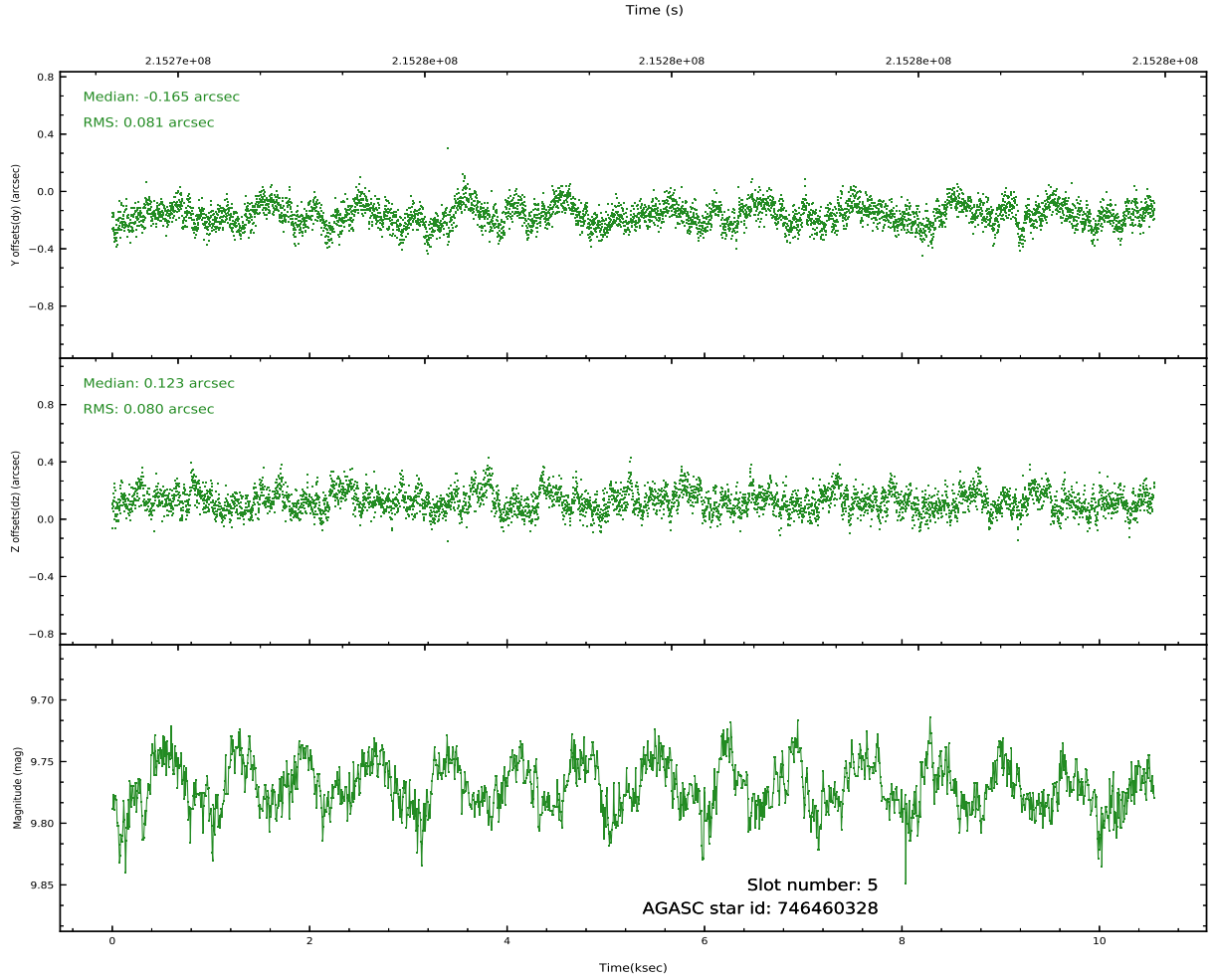
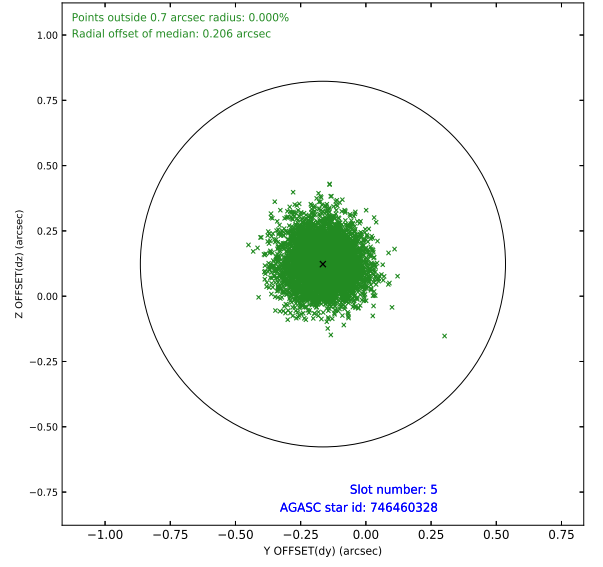
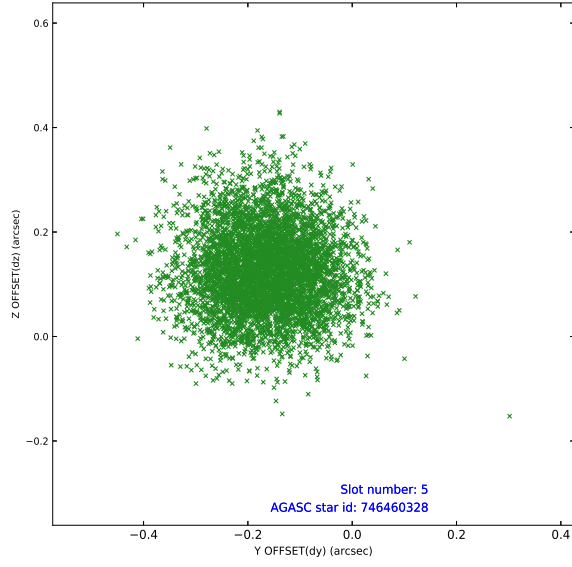
### 2.4.1 Slot 3



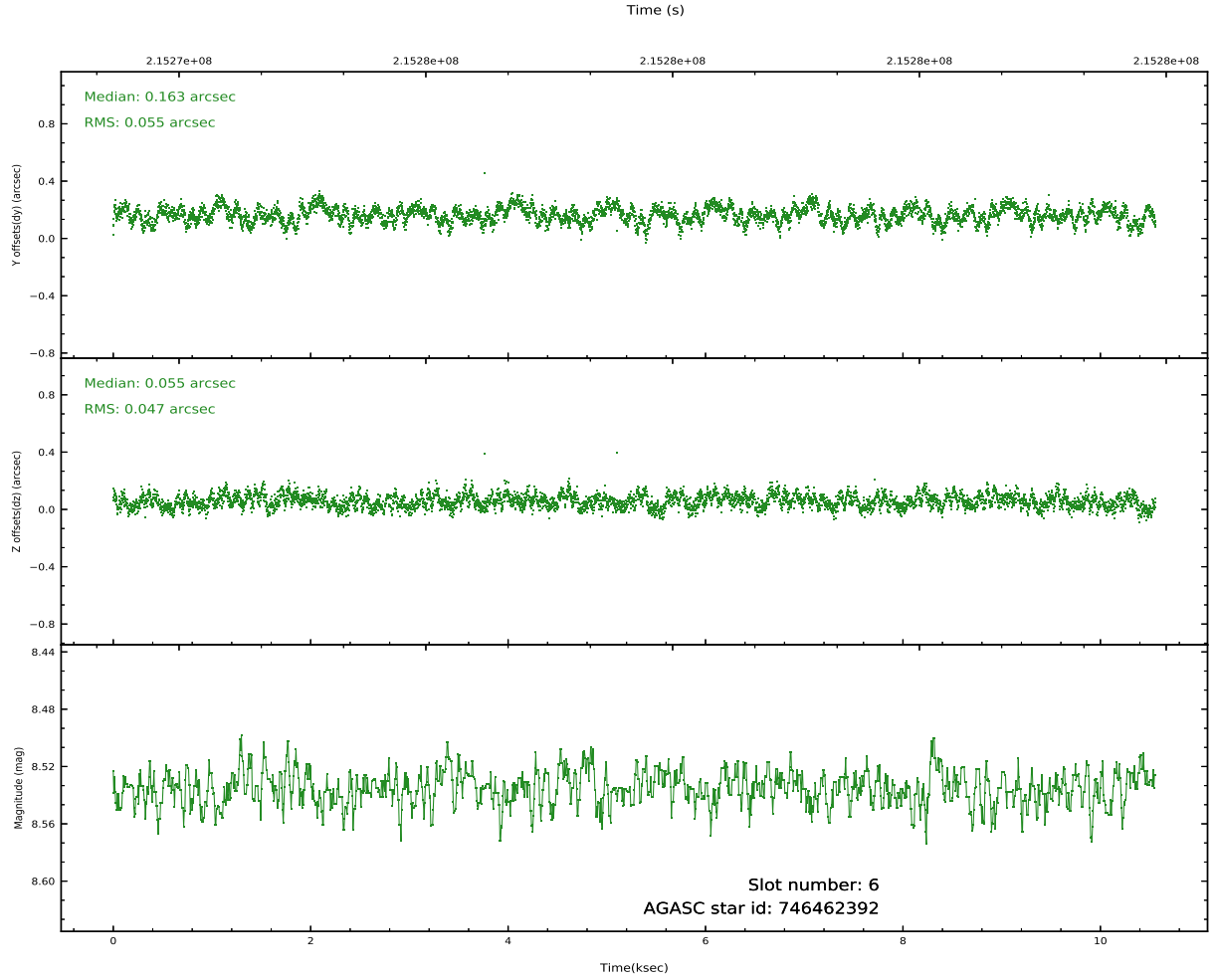
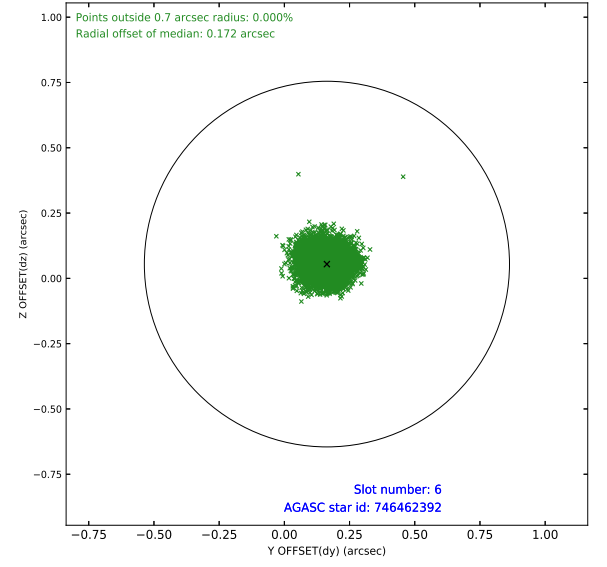
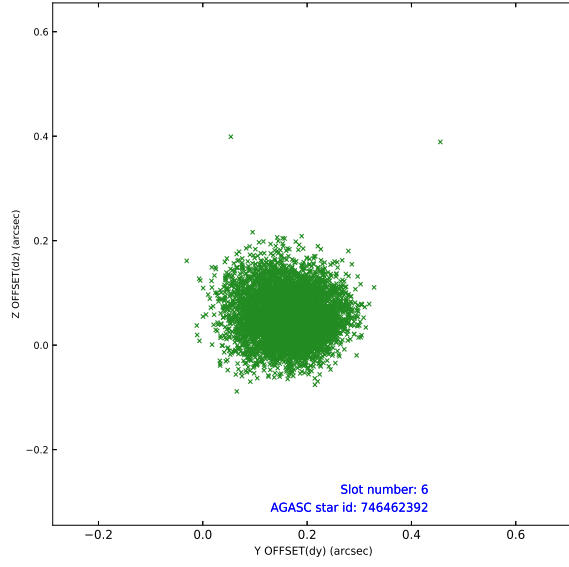
## 2.4.2 Slot 4



### 2.4.3 Slot 5

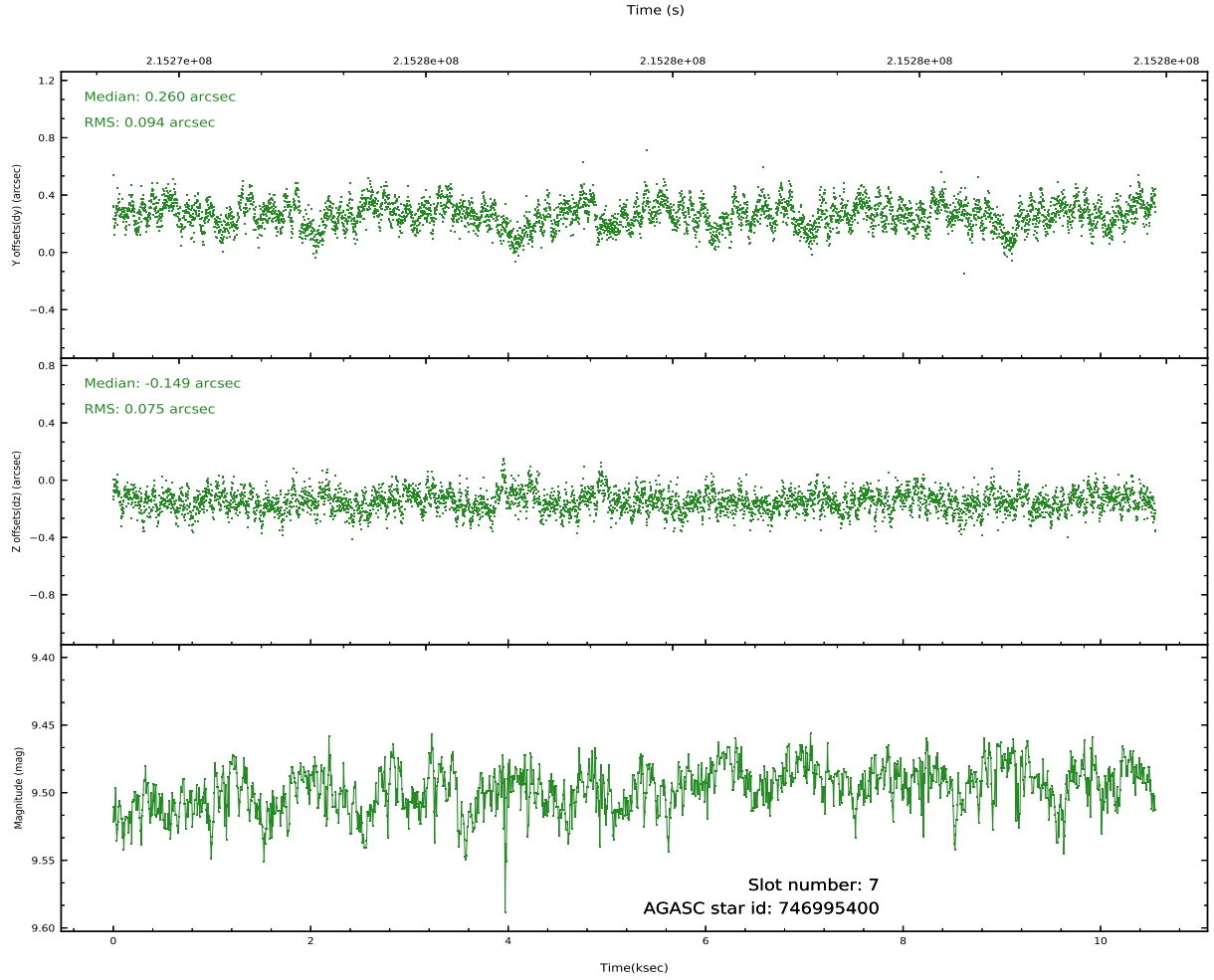
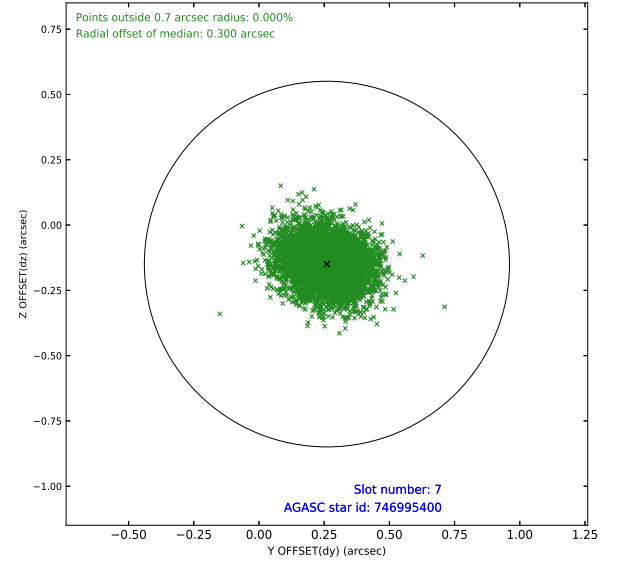
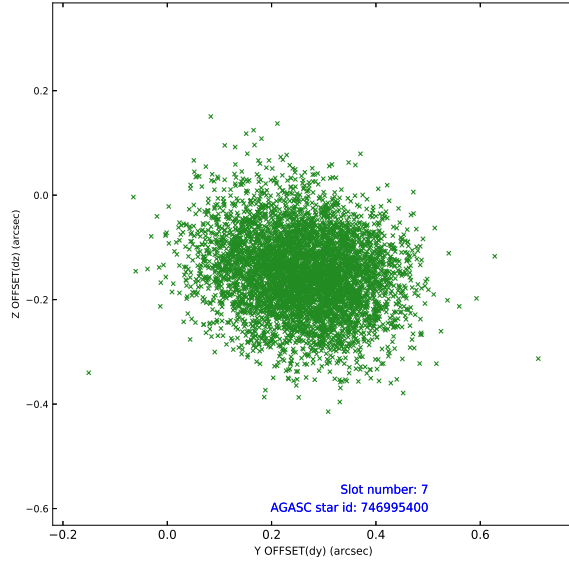


## 2.4.4 Slot 6



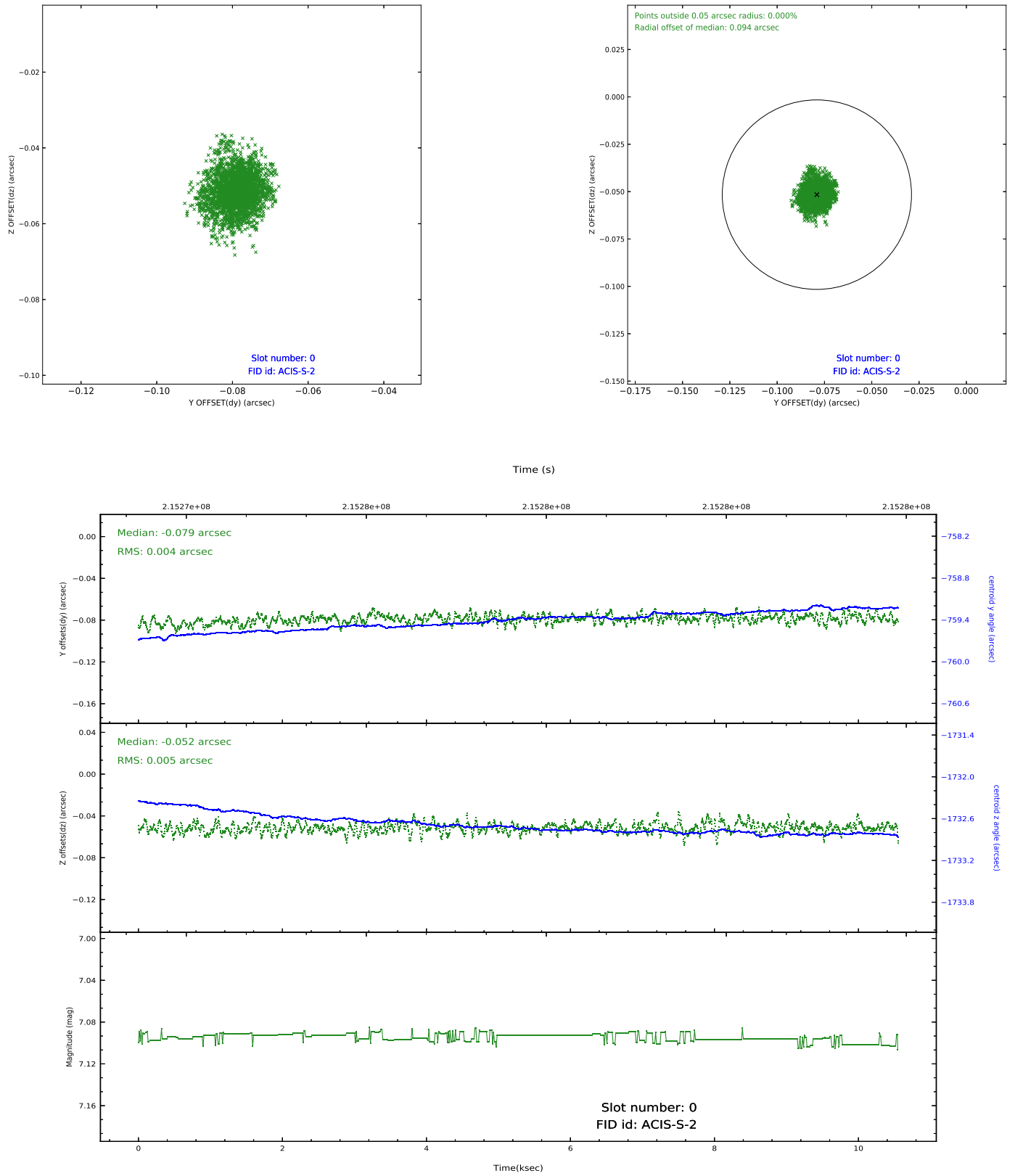


## 2.4.5 Slot 7

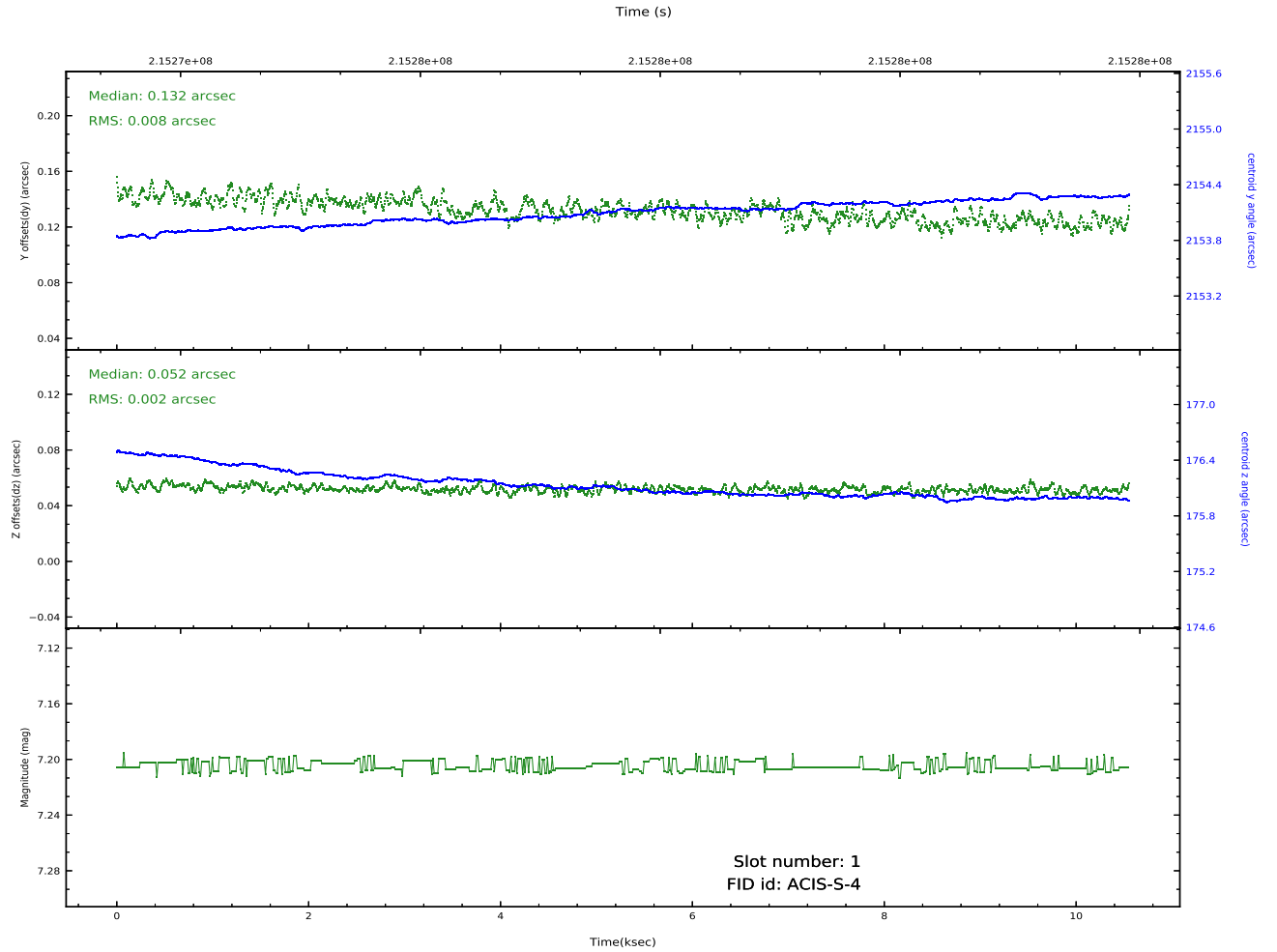
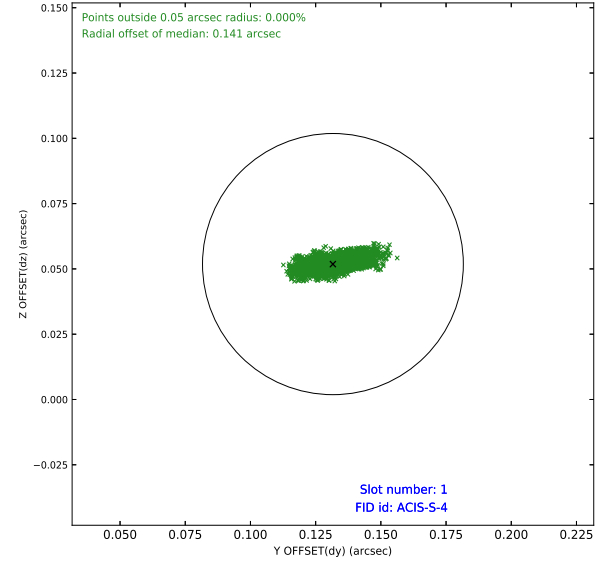
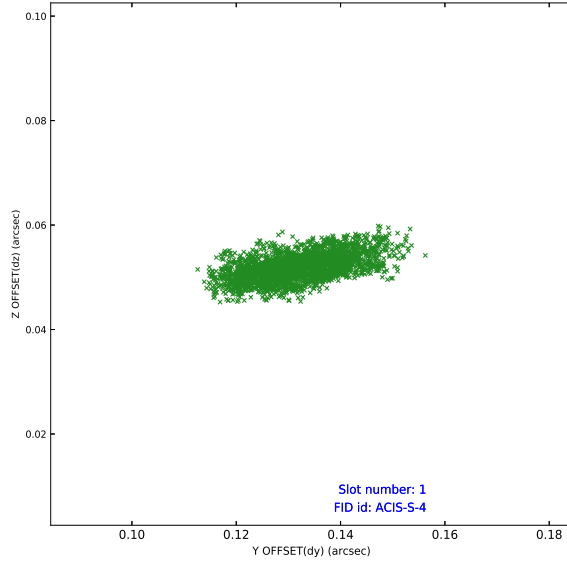


## 2.5 FID Slots

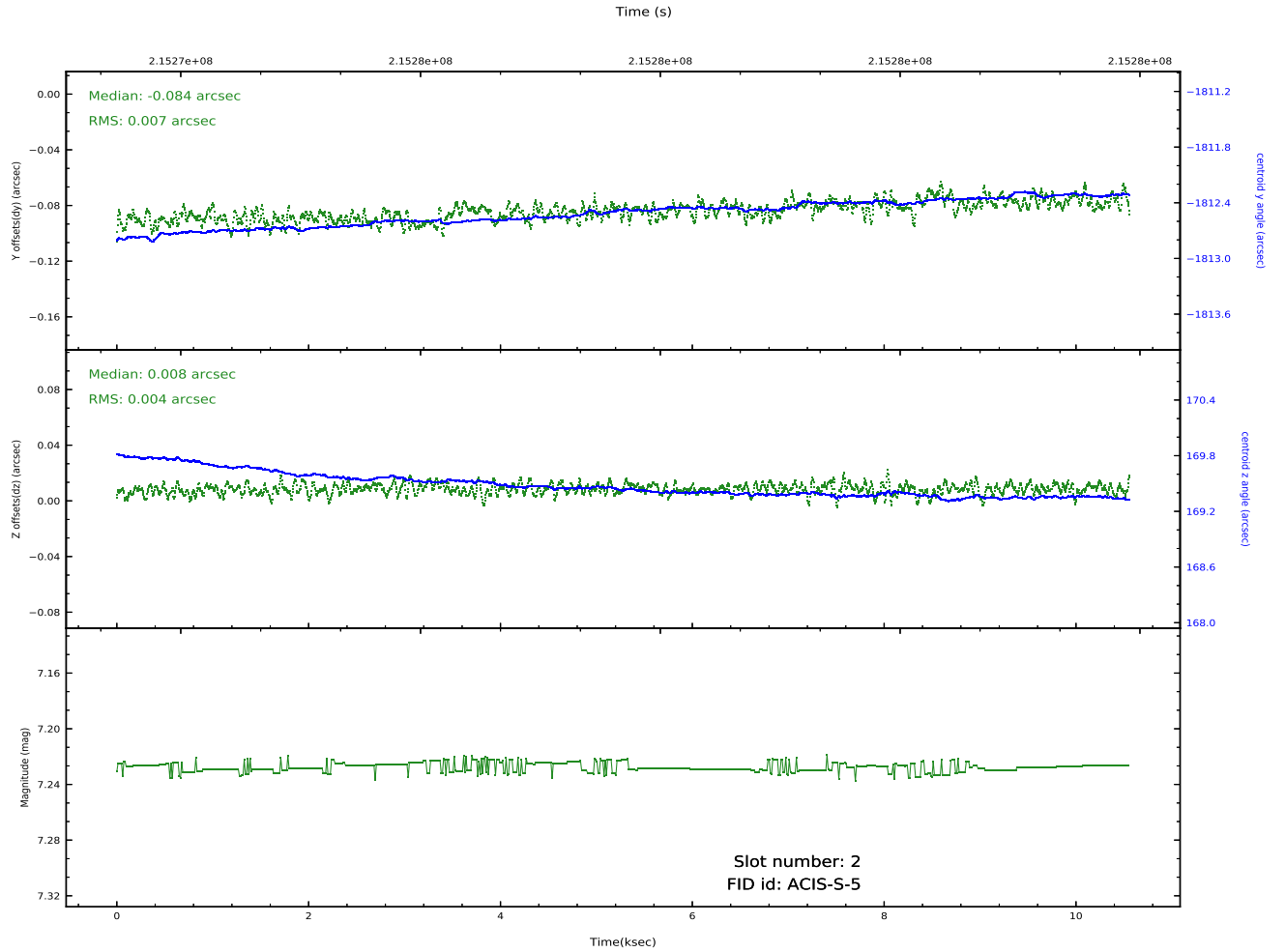
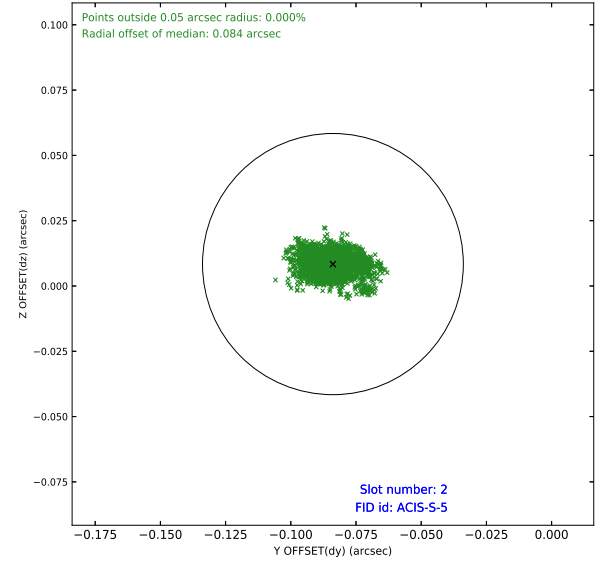
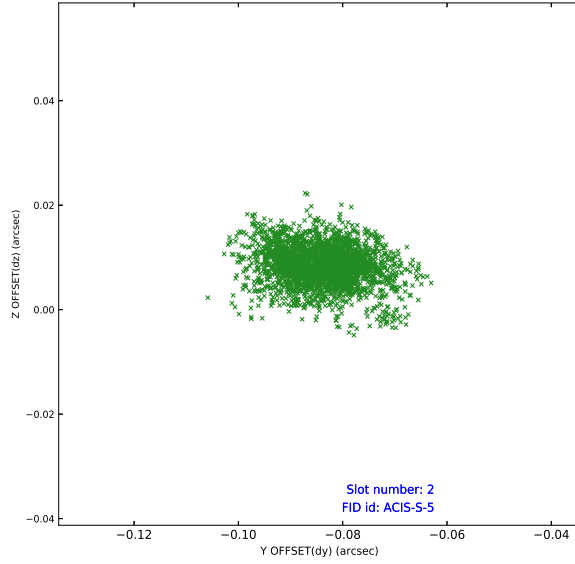
### 2.5.1 Slot 0



## 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)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.955

### A.2 Comments

Window constraint met.