

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4841 - L2 Version 5  
Chandra X-Ray Center

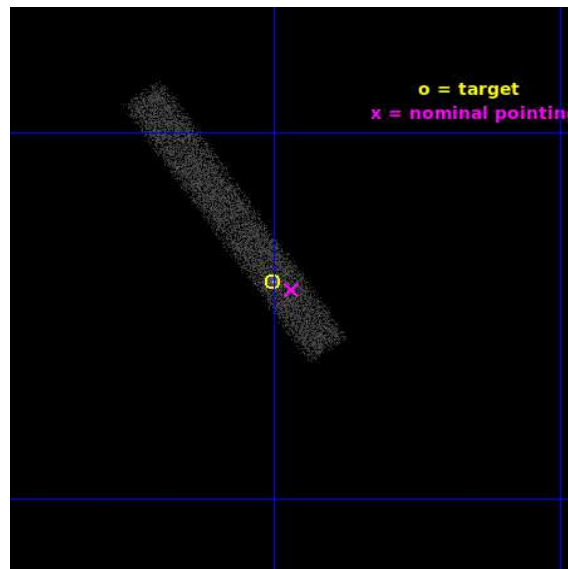
L2 Processing Date : Sep 25 2020

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# 1 Front

seq_num	700923	Sequence number
obs_id	4841	Observation id
title	The Physics of Relativistic Jets: Chandra Imaging of Extended Jets in Gamma-loud Blazars	Proposal title
observer	Dr. FABRIZIO TAVECCHIO	Principal investigator
object	PKS 1229-02	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.0	Observer's specified target RA [deg]
dec_targ	-2.401472	Observer's specified target Dec [deg]
ra_nom	187.99185954887	Nominal RA [deg]
dec_nom	-2.4049397856135	Nominal Dec [deg]
roll_nom	235.15600294824	Nominal Roll [deg]
revision	5	Processing version of data
ontime	20189.600300819	Sum of GTIs [s]
livetime	18310.901778359	Livetime [s]
ontime7	20189.600300819	Sum of GTIs [s]
l2events	15443	Number of level 2 events

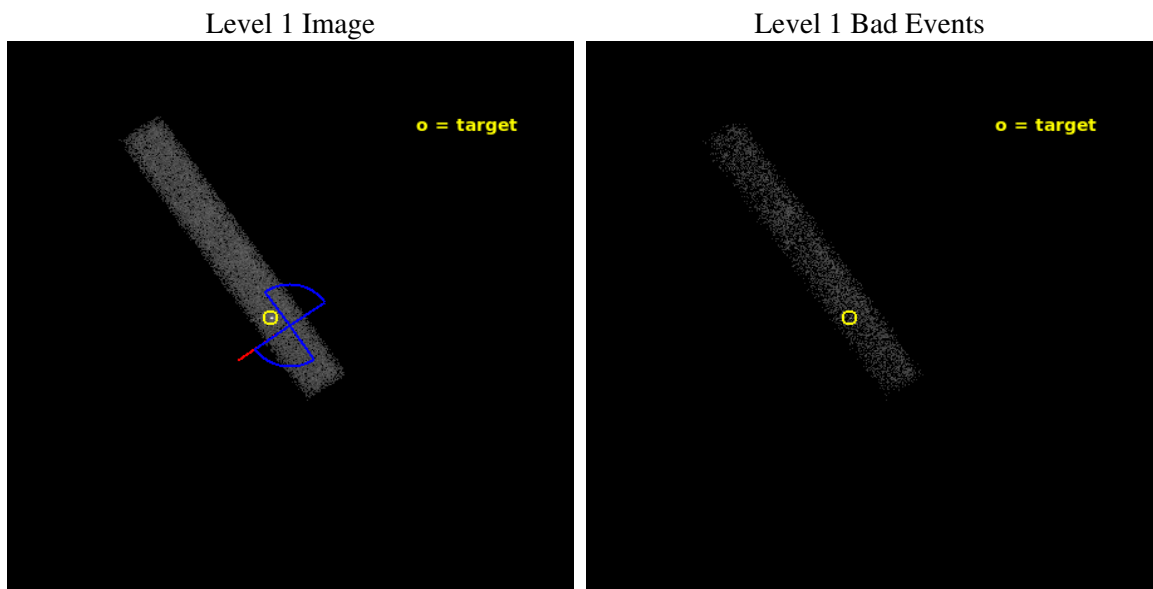




## 2 OBI

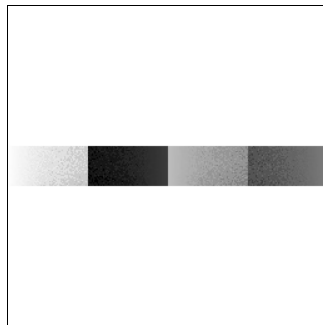
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	20189.600300819	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime7	20189.600300819	Sum of GTIs [s]
date	2020-09-25T08:50:35	Date and time of file creation	l1events	31896	Number of level 1 events
revision	5	Processing version of data			

### 2.1.4 Events

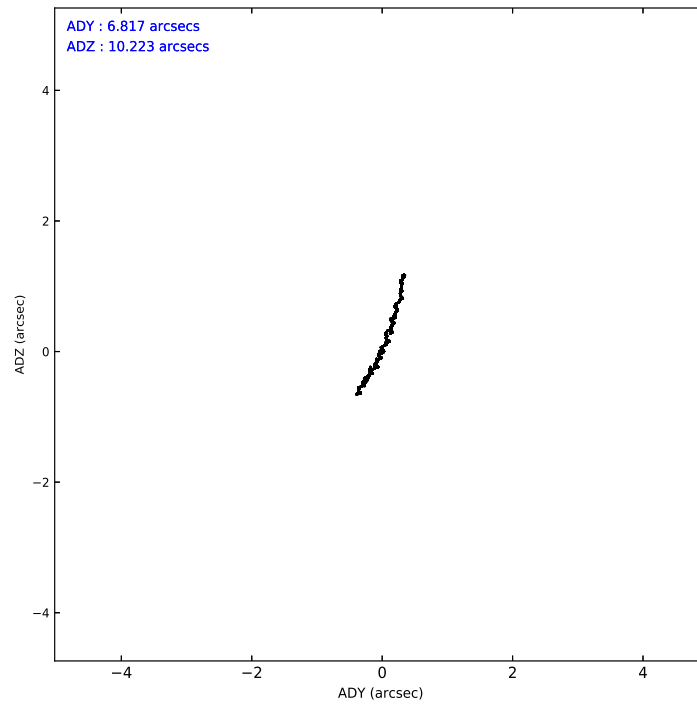
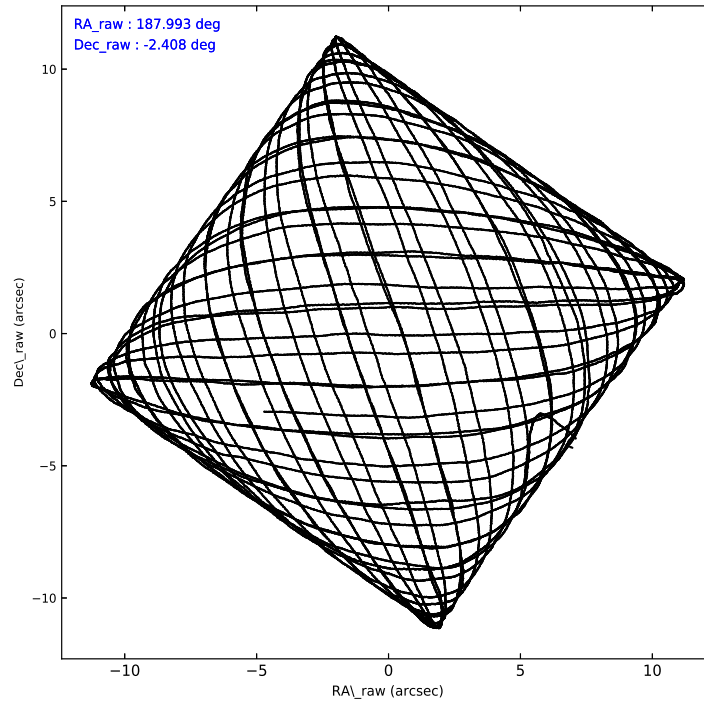
	<b>ccd 7</b>
level 1 events	31896
rejected events	15929
rejected %	49%

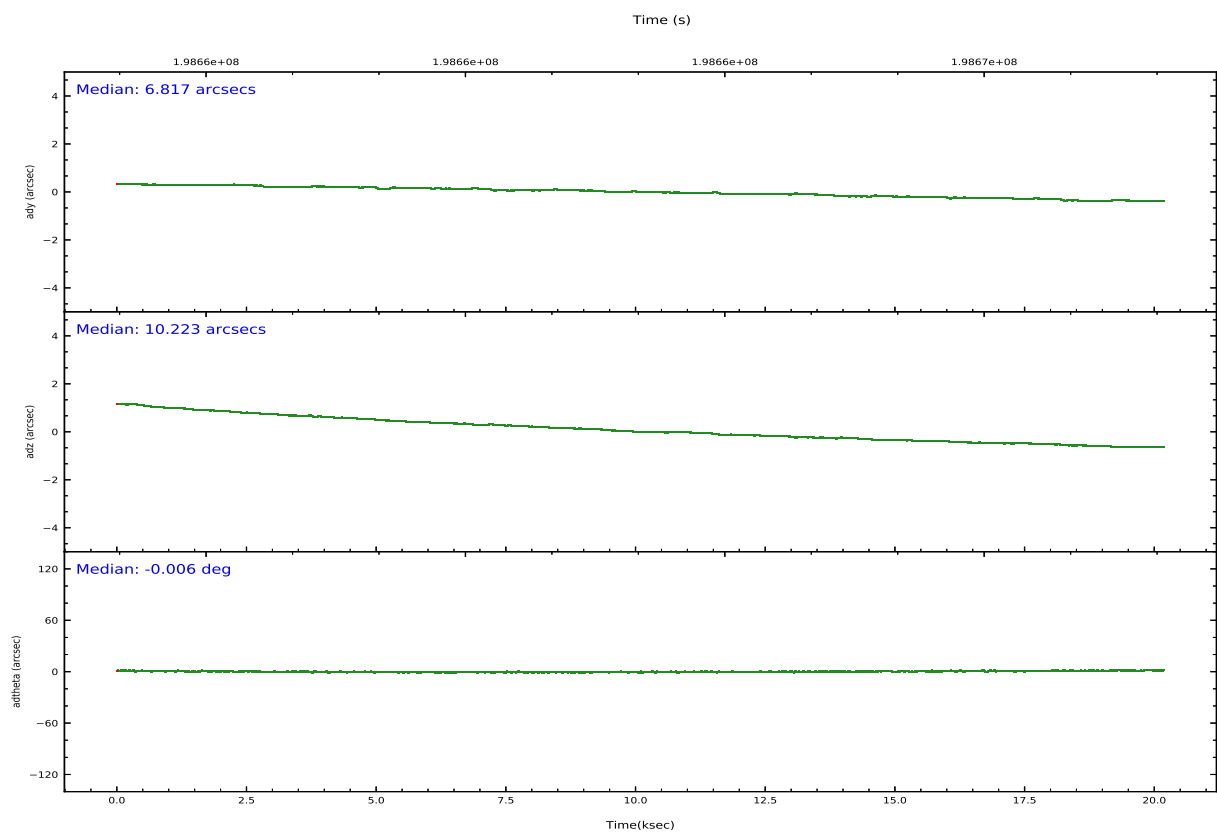
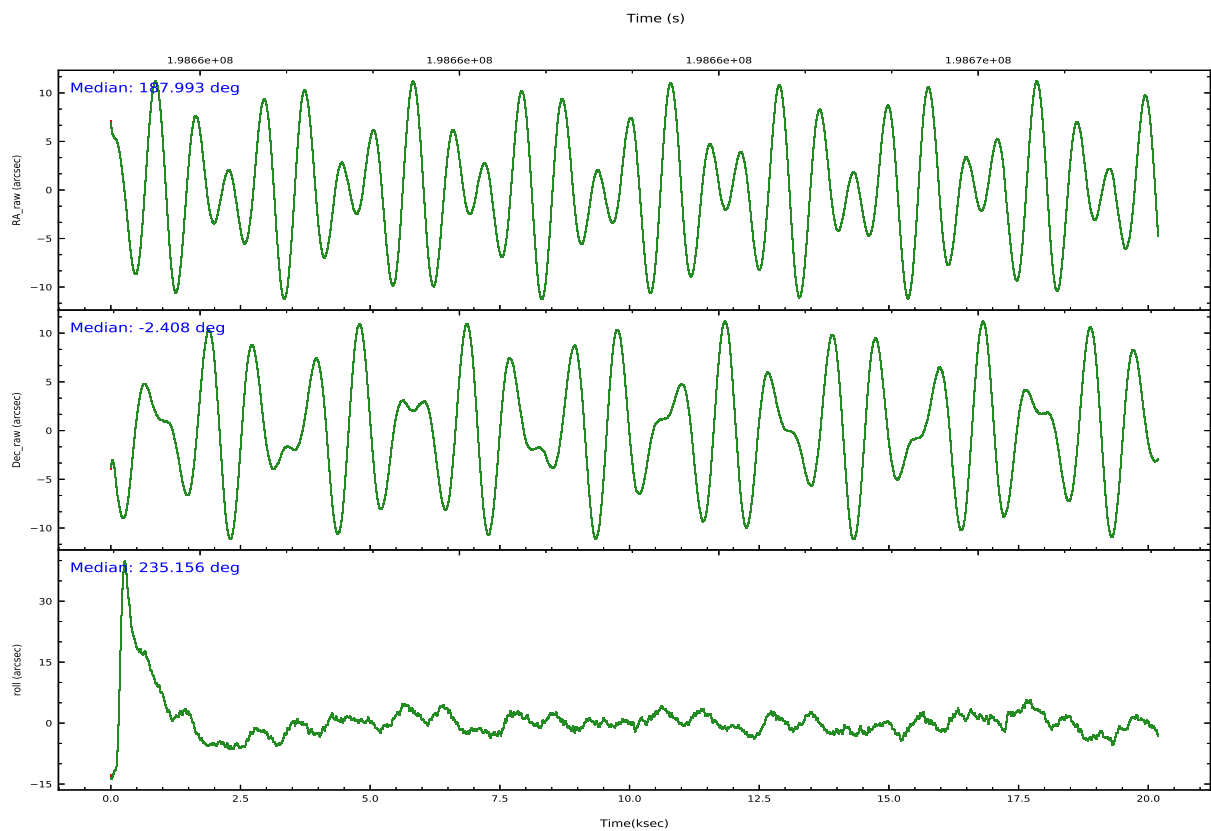
	<b>ccd 7</b>
grade 0 events	2682
	8%
grade 1 events	42
	0%
grade 2 events	3365
	10%
grade 3 events	2061
	6%
grade 4 events	2157
	6%
grade 5 events	2569
	8%
grade 6 events	6432
	20%
grade 7 events	12588
	39%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	187.995103	187.99185954887	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	-2.381155	-2.4049397856135	Subarray start row	449	449
[deg] Pointing Roll	234.999793	235.15600294824	Subarray row count	128	128
[deg] Roll angle	190.000000	190.000000	Alternating exposures requested	N	N
[deg] Roll tolerance	45.000000	45.000000	[s] Primary exposure time	0.000000	0.4
Roll constraint allows 180D rotation	Y	Y			
[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)	198653470.184000	198652071.34481			
Observation start date	2004-04-18T05:30:06	2004-04-18T05:07:51			
[s] Observation end time (MET)	198673470.184000	198675041.08332			
Observation end date	2004-04-18T11:03:26	2004-04-18T11:30:41			
Read mode	TIMED	TIMED			

## 2.3 Aspect



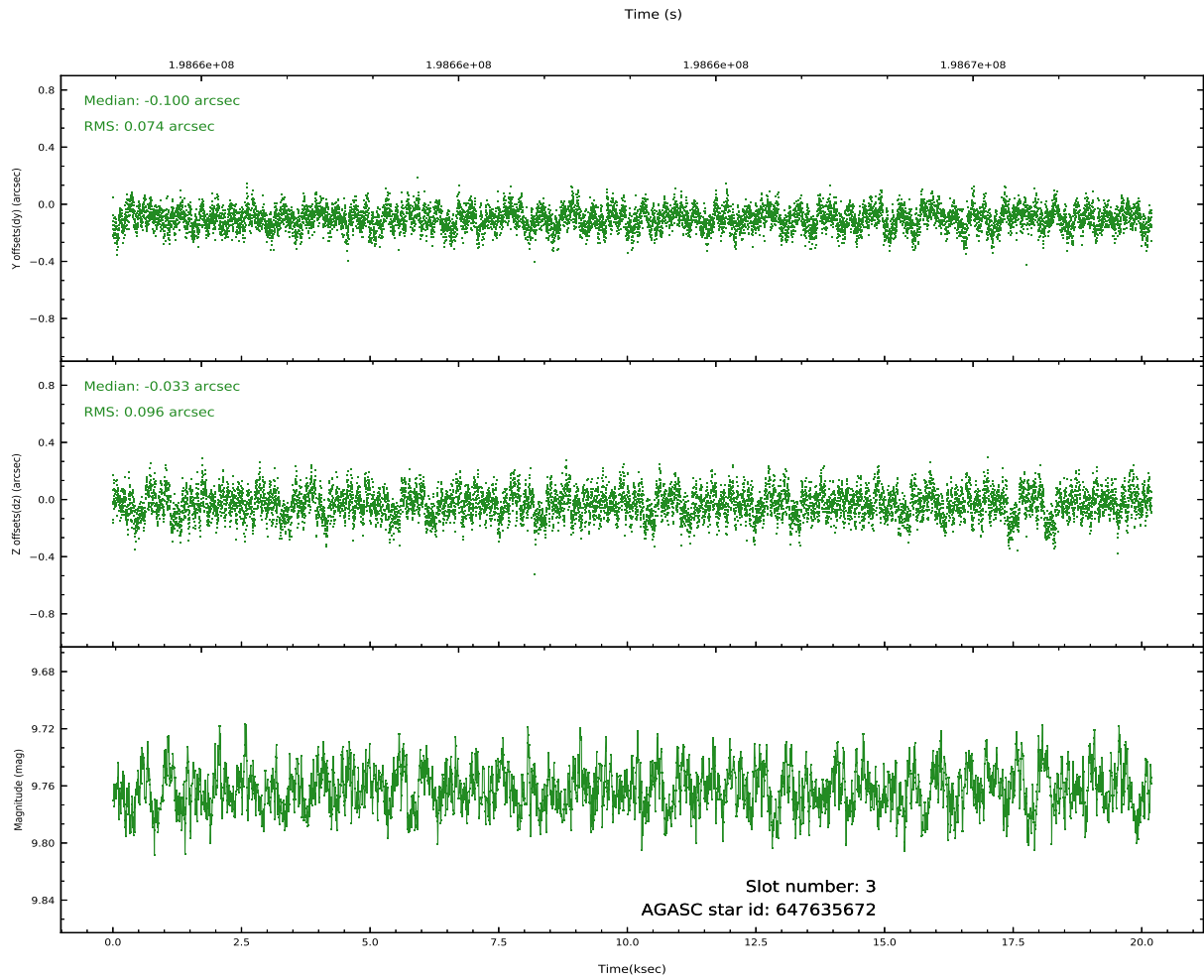
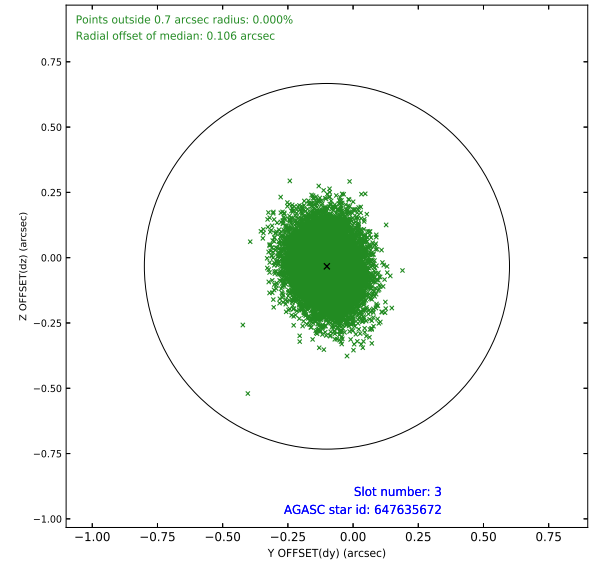
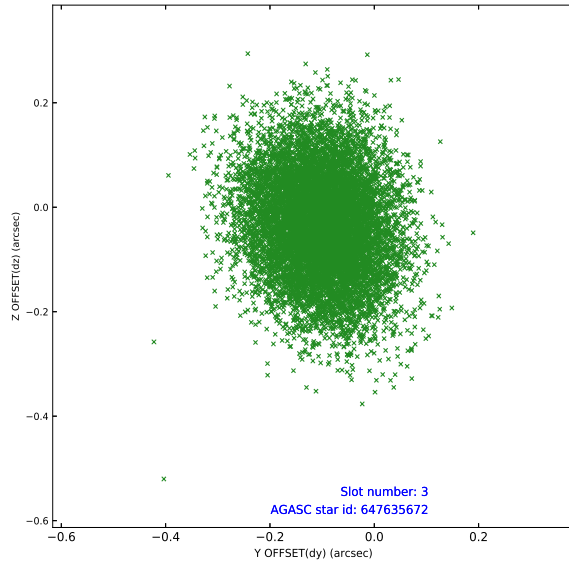


Slot Statistics

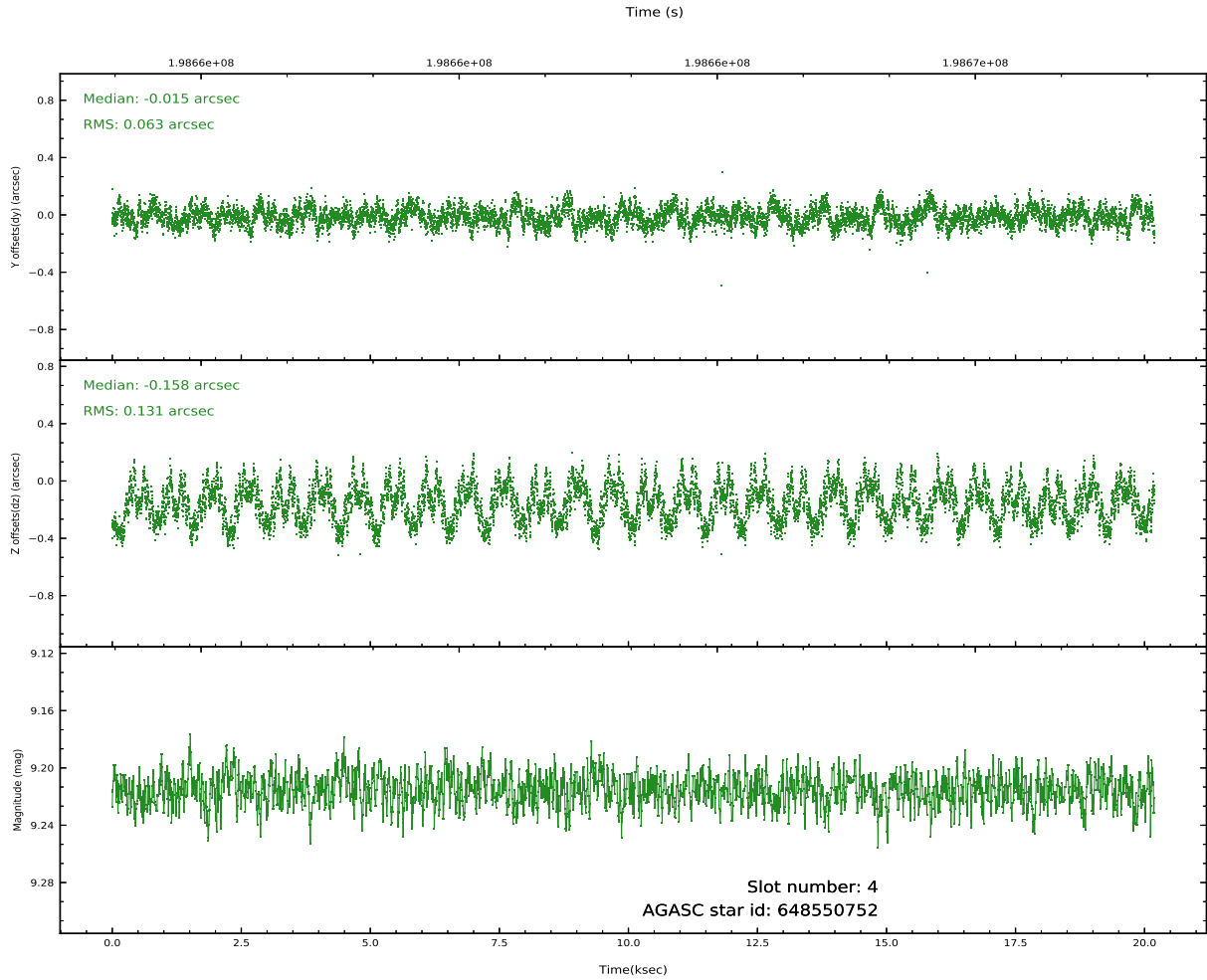
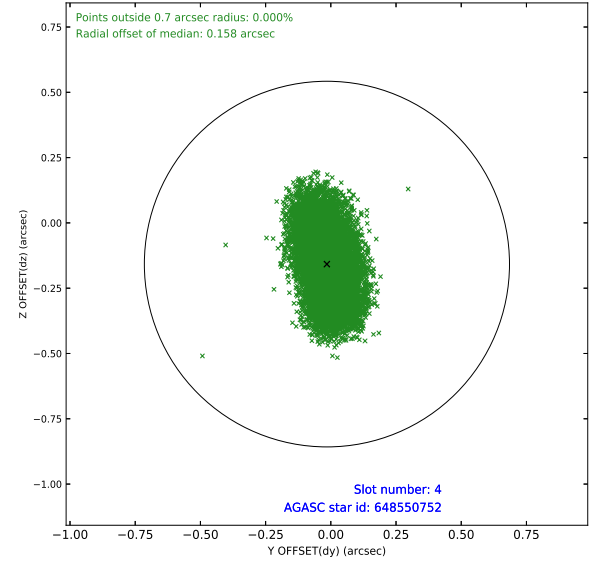
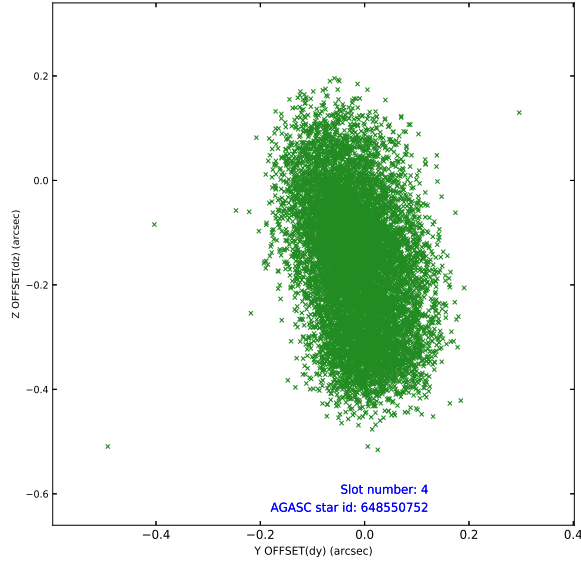
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	4925	1.000	-0.080	-0.047	0.014	0.024	0.000000	0.000000	-759.58	-1731
1	FID		ACIS-S-4	7.21	4925	1.000	0.126	0.051	0.010	0.021	0.000000	0.000000	2153.76	176
2	FID		ACIS-S-5	7.23	4925	1.000	-0.079	0.006	0.008	0.015	0.000000	0.000000	-1812.24	170
3	GUIDE	used	647635672	9.76	9840	1.000	-0.100	-0.033	0.130	0.208	187.306192	-2.209896	917.51	-2383
4	GUIDE	used	648550752	9.22	9845	1.000	-0.015	-0.158	0.159	0.246	187.581348	-1.942523	-438.75	-2125
5	GUIDE	used	648552520	10.03	9832	1.000	0.118	-0.054	0.266	0.376	187.797603	-2.144003	-291.12	-1071
6	GUIDE	used	648939216	10.11	9840	1.000	0.097	0.169	0.148	0.233	188.170028	-3.143856	1888.97	2090
7	GUIDE	used	648547192	10.53	9575	1.000	-0.081	0.079	0.222	0.383	188.710565	-2.078795	-2366.85	1485

## 2.4 Star Slots

### 2.4.1 Slot 3

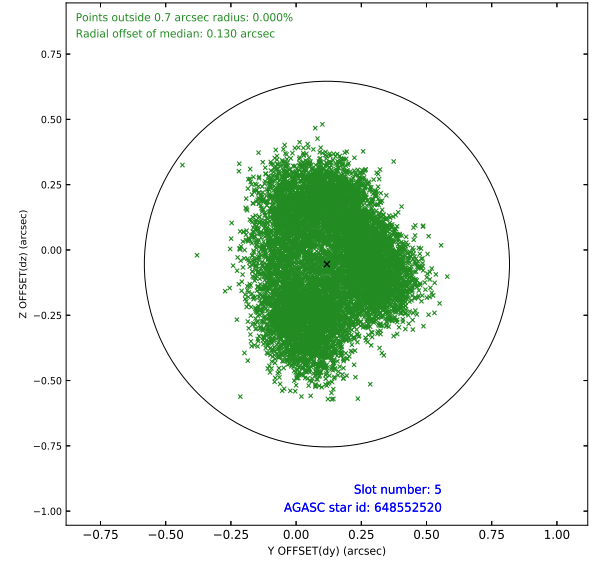
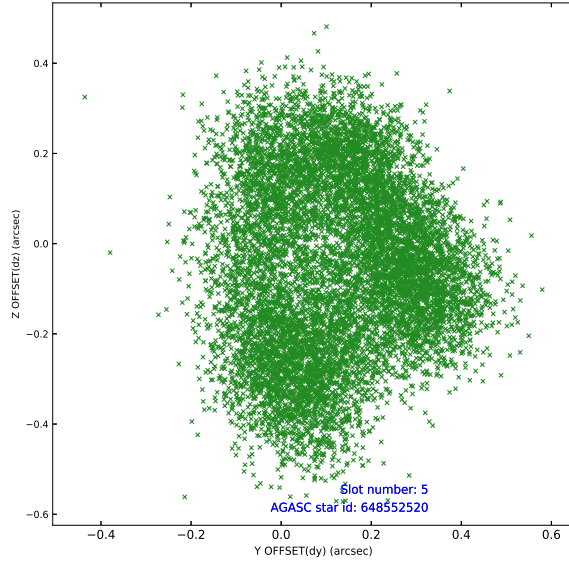


## 2.4.2 Slot 4

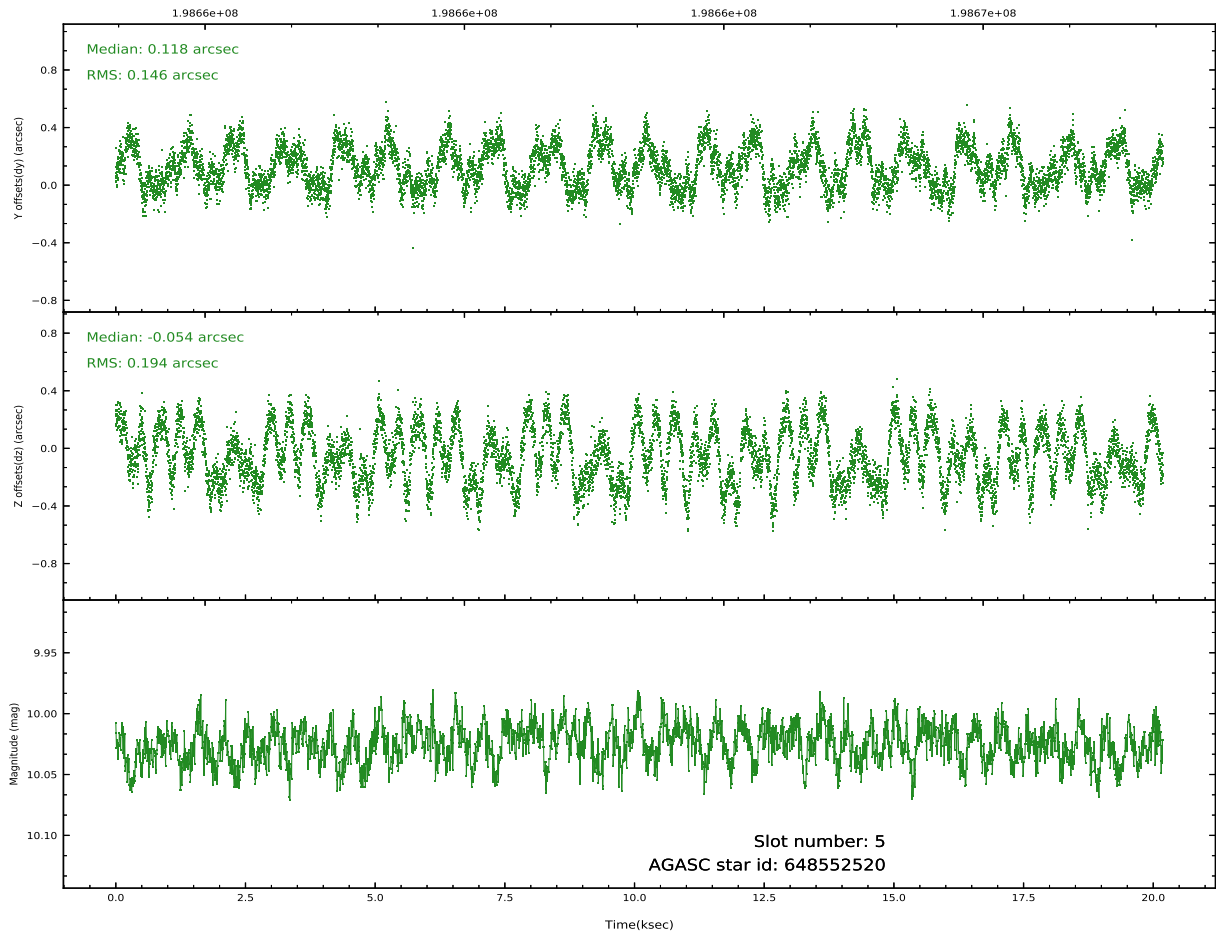




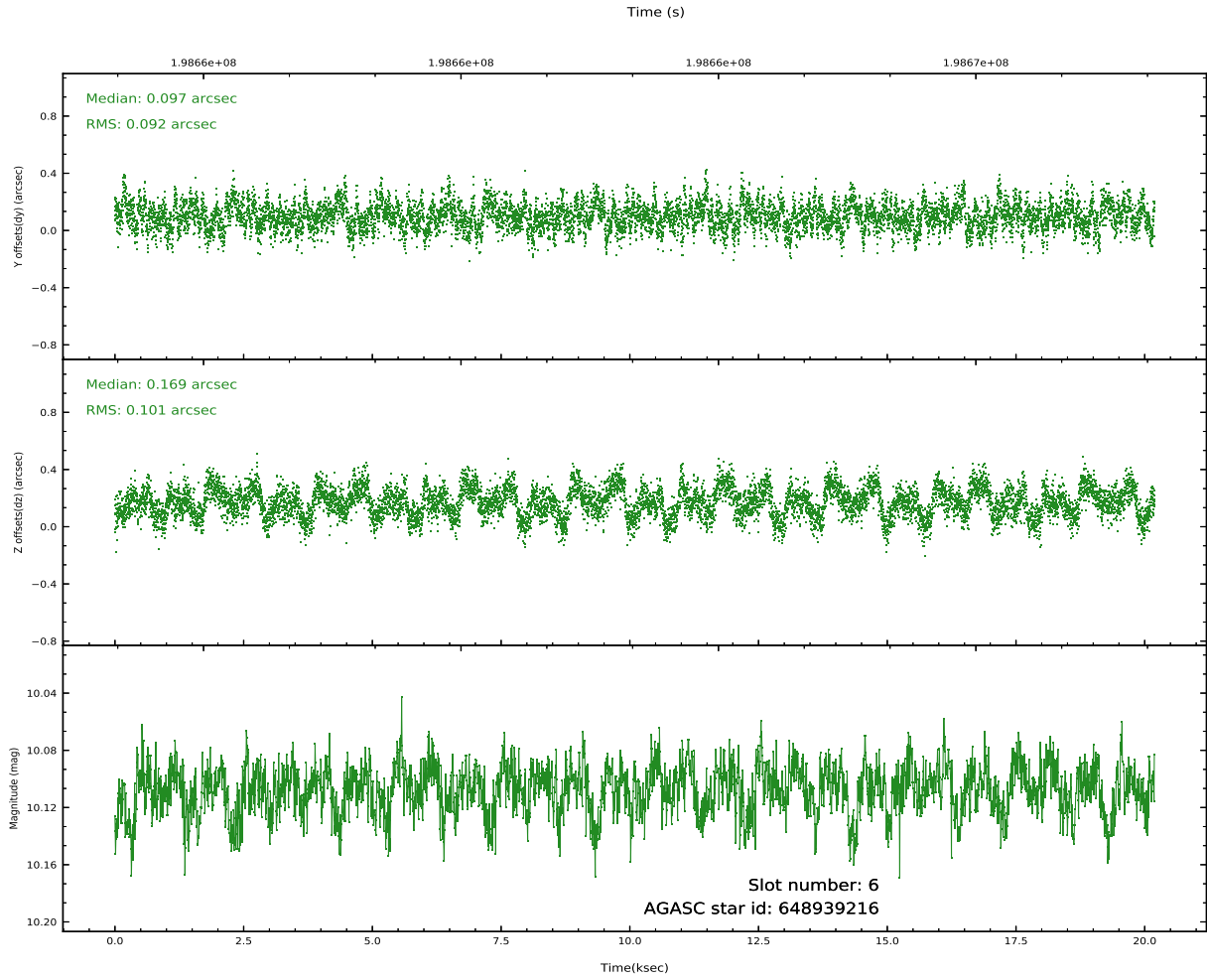
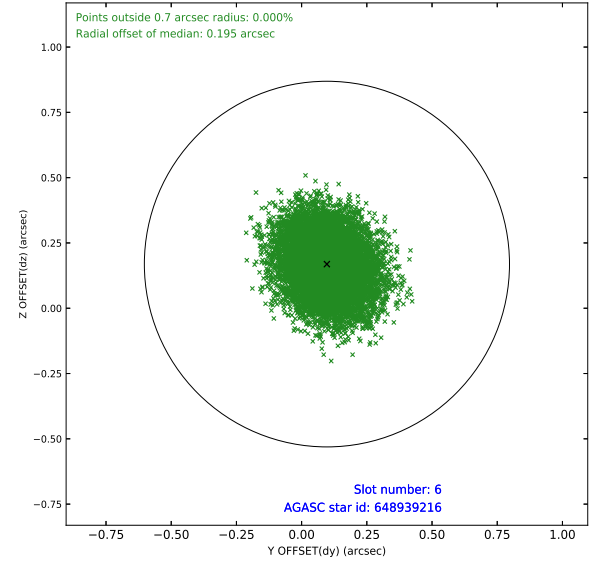
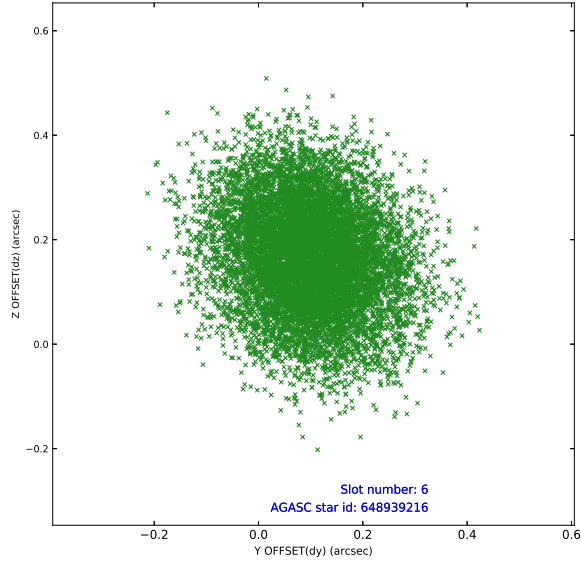
### 2.4.3 Slot 5



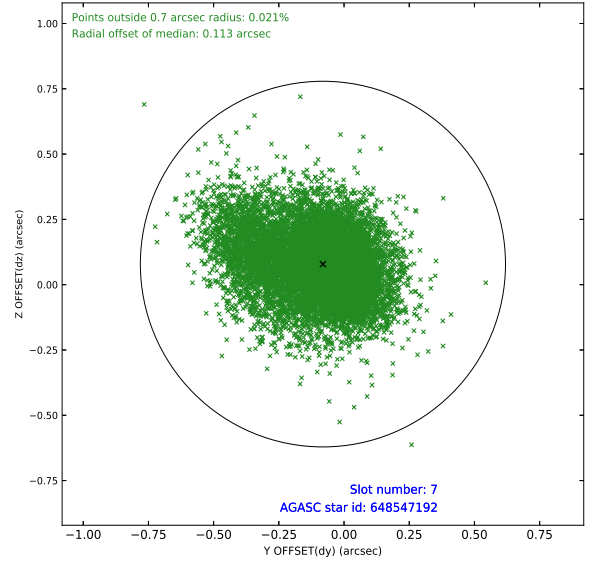
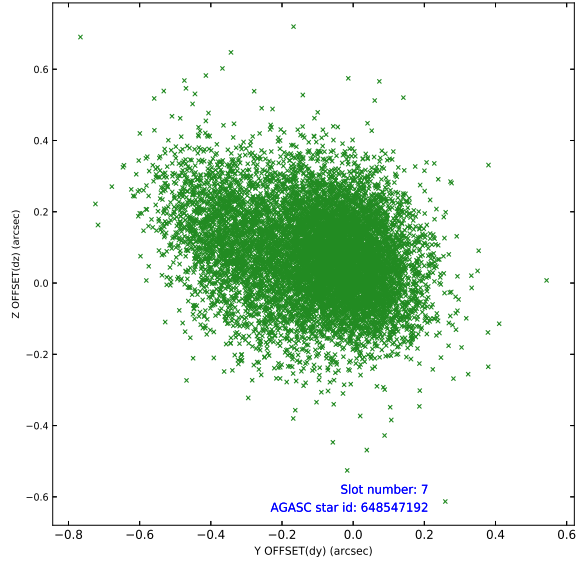
Time (s)



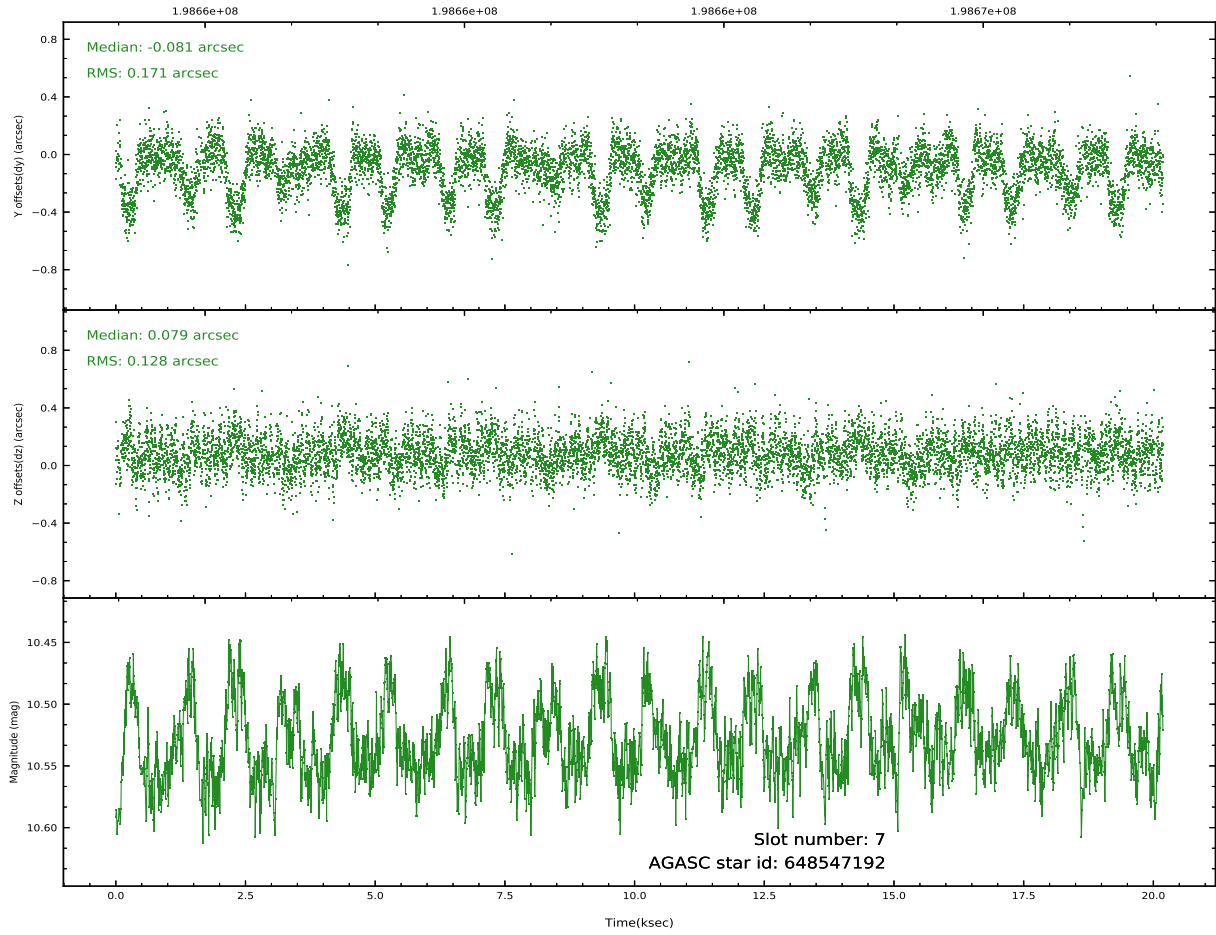
## 2.4.4 Slot 6



## 2.4.5 Slot 7

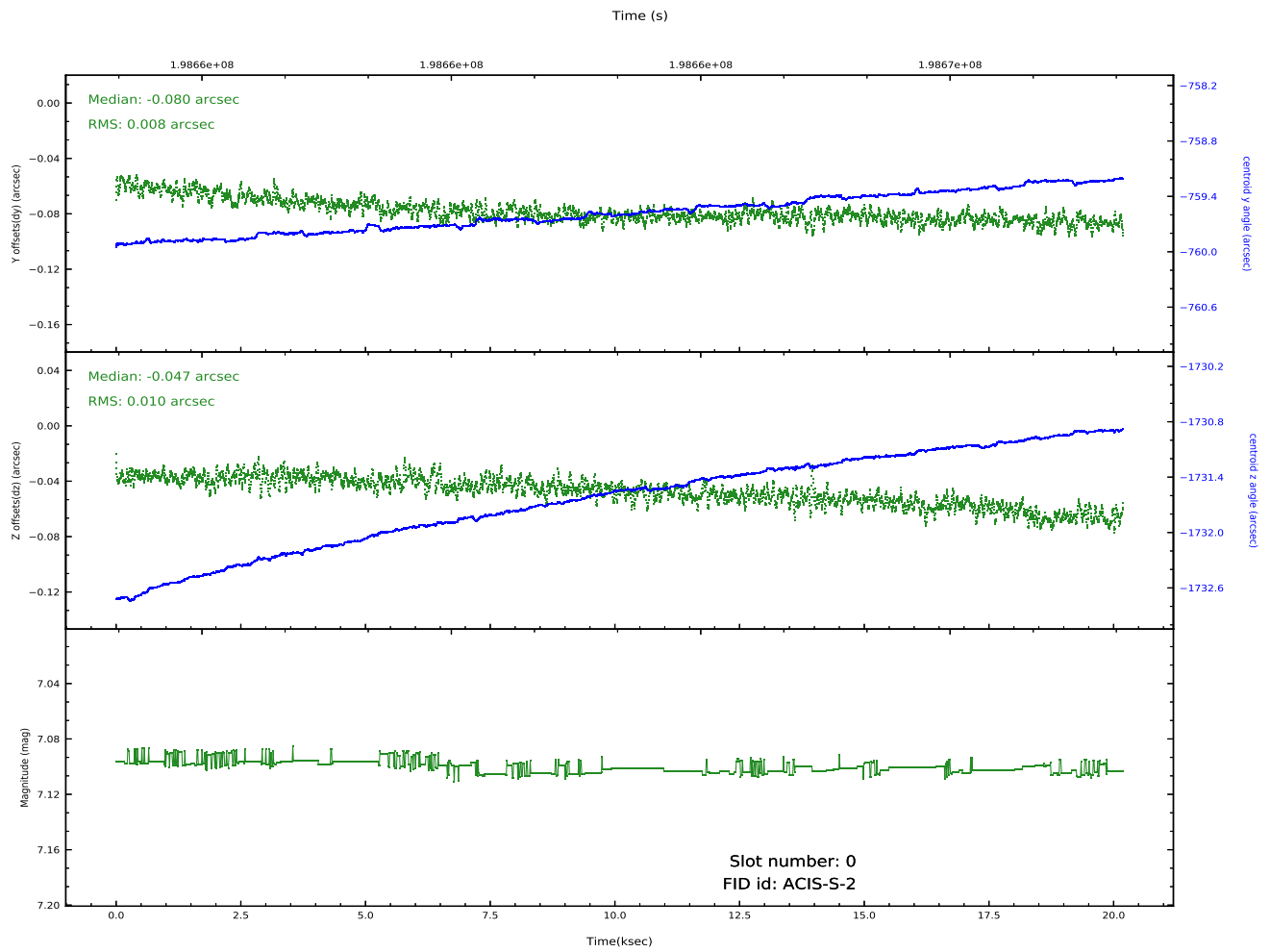
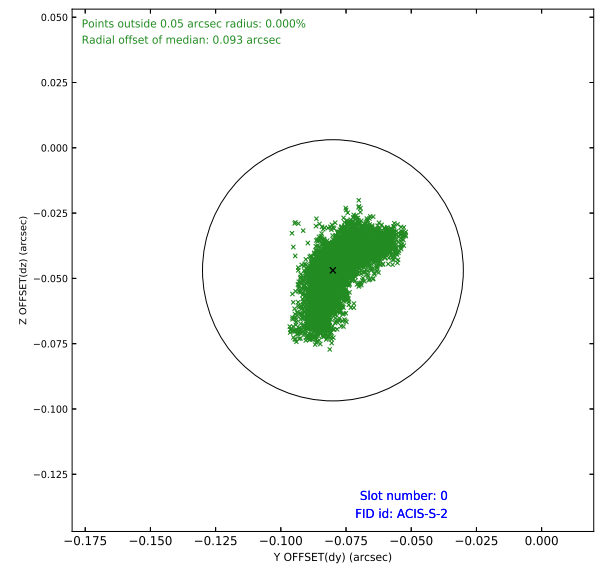
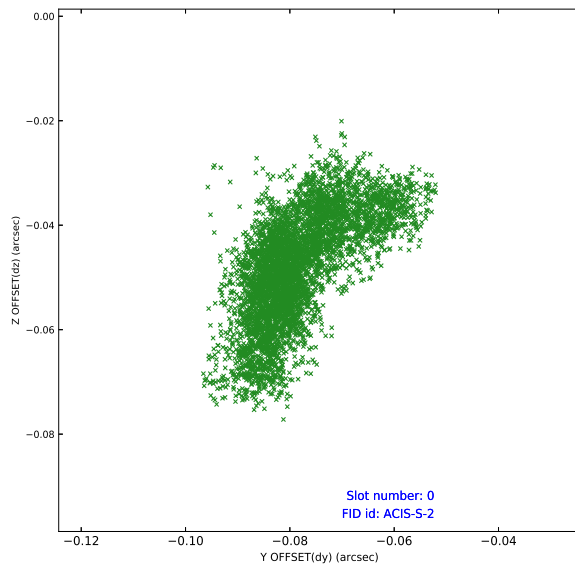


Time (s)

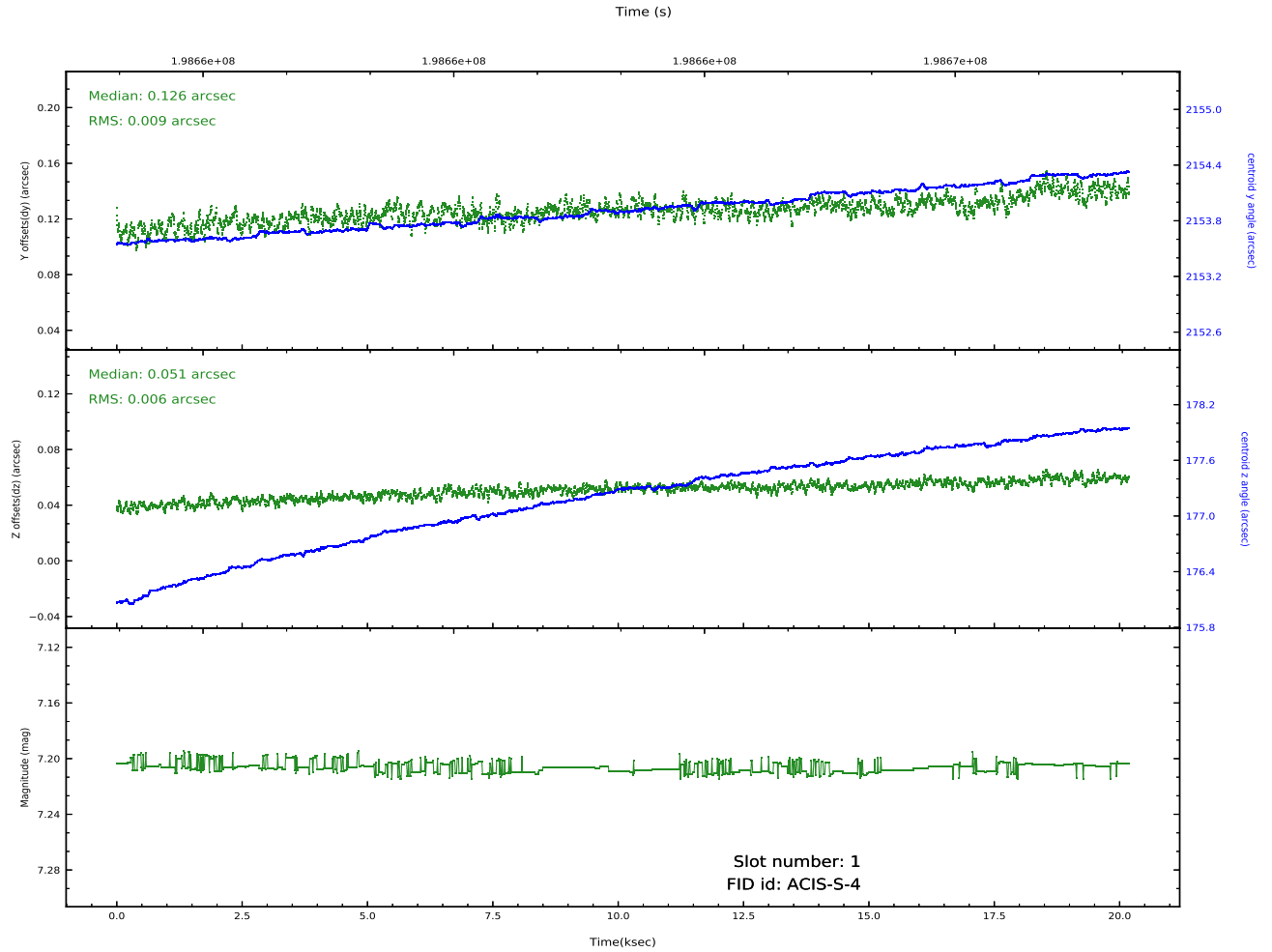
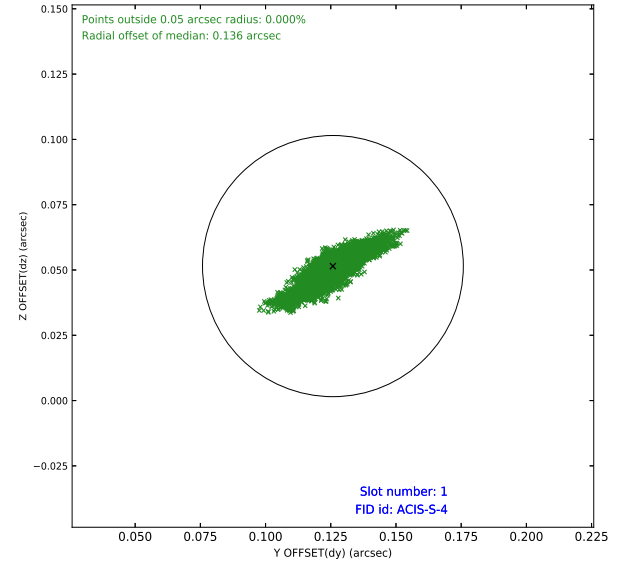
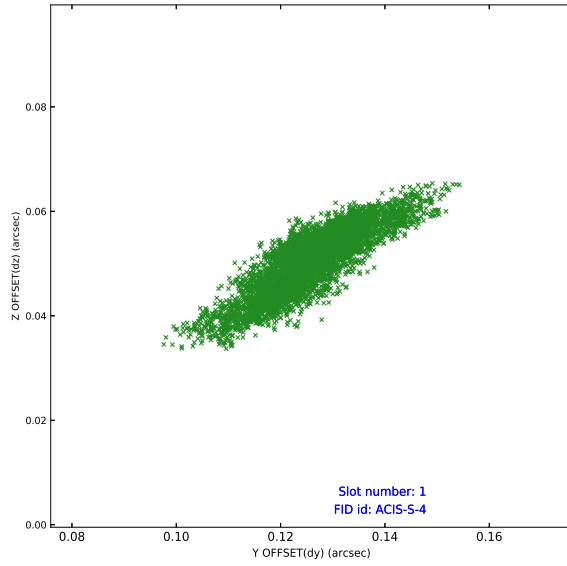


## 2.5 FID Slots

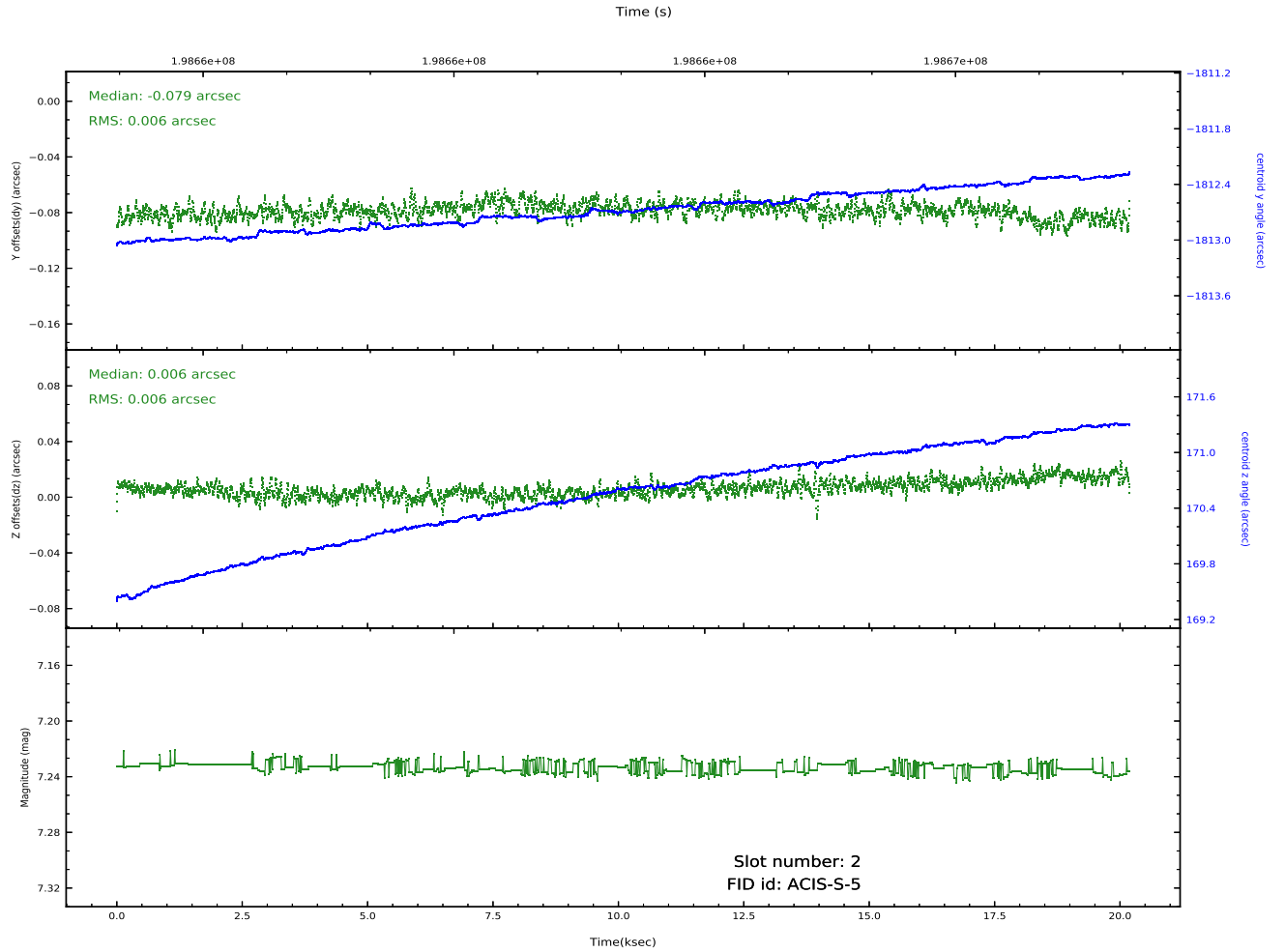
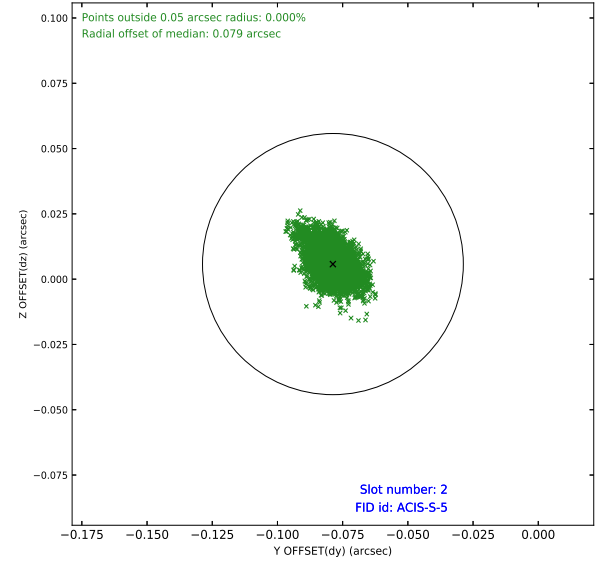
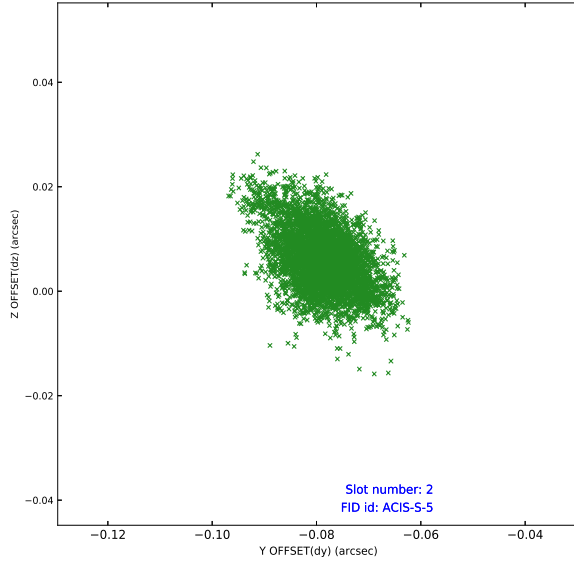
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.09.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.189

## A.2 Comments

Joint proposal with HST.  
Roll constraint was not met.