

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 19407 - L2 Version 3  
Chandra X-Ray Center

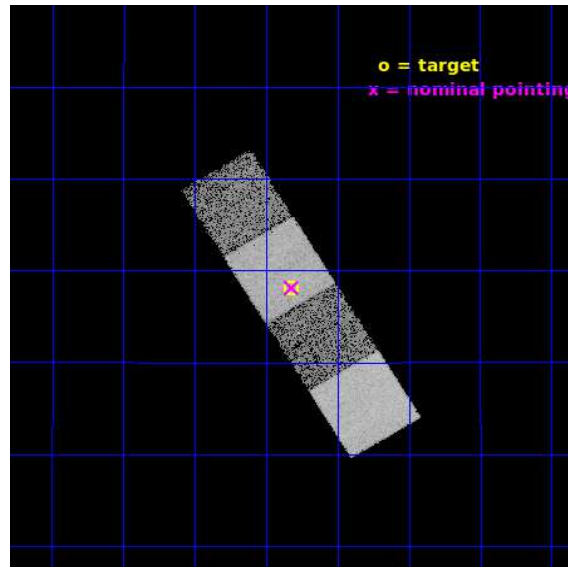
L2 Processing Date : Oct 25 2020

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# 1 Front

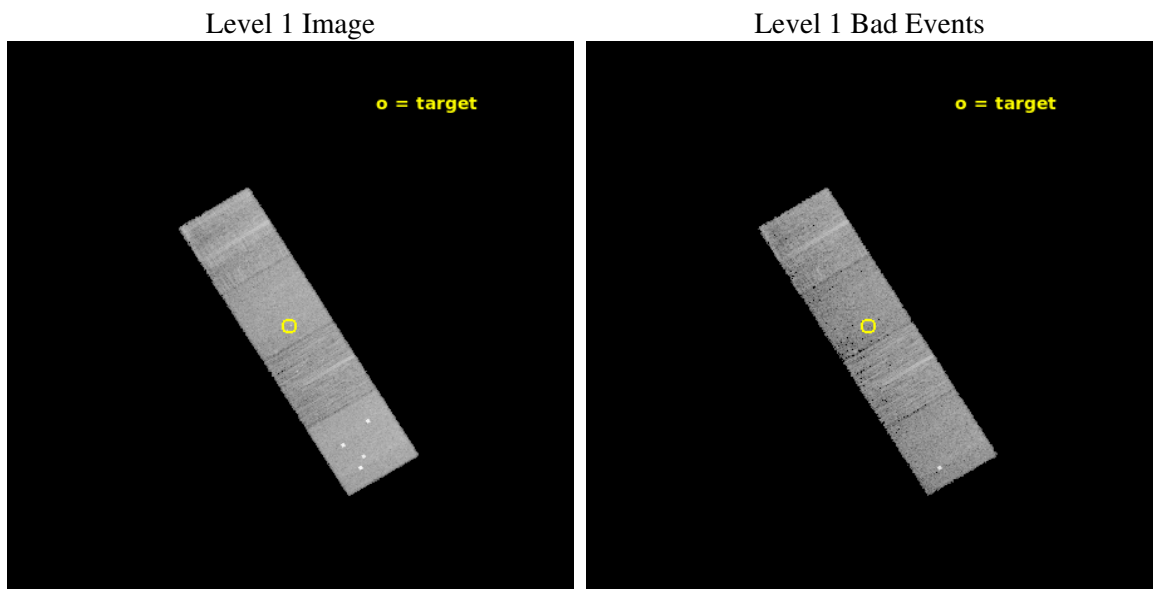
seq_num	601364	Sequence number
obs_id	19407	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	NGC 4532	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.580417	Observer's specified target RA [deg]
dec_targ	6.467694	Observer's specified target Dec [deg]
ra_nom	188.57988786204	Nominal RA [deg]
dec_nom	6.4689562259343	Nominal Dec [deg]
roll_nom	238.58802154567	Nominal Roll [deg]
revision	3	Processing version of data
ontime	8062.360970974	Sum of GTIs [s]
livetime	7957.0202894644	Livetime [s]
ontime5	8062.3199310303	Sum of GTIs [s]
ontime6	8062.2788909674	Sum of GTIs [s]
ontime7	8062.360970974	Sum of GTIs [s]
ontime8	8062.2378510237	Sum of GTIs [s]
l2events	90690	Number of level 2 events



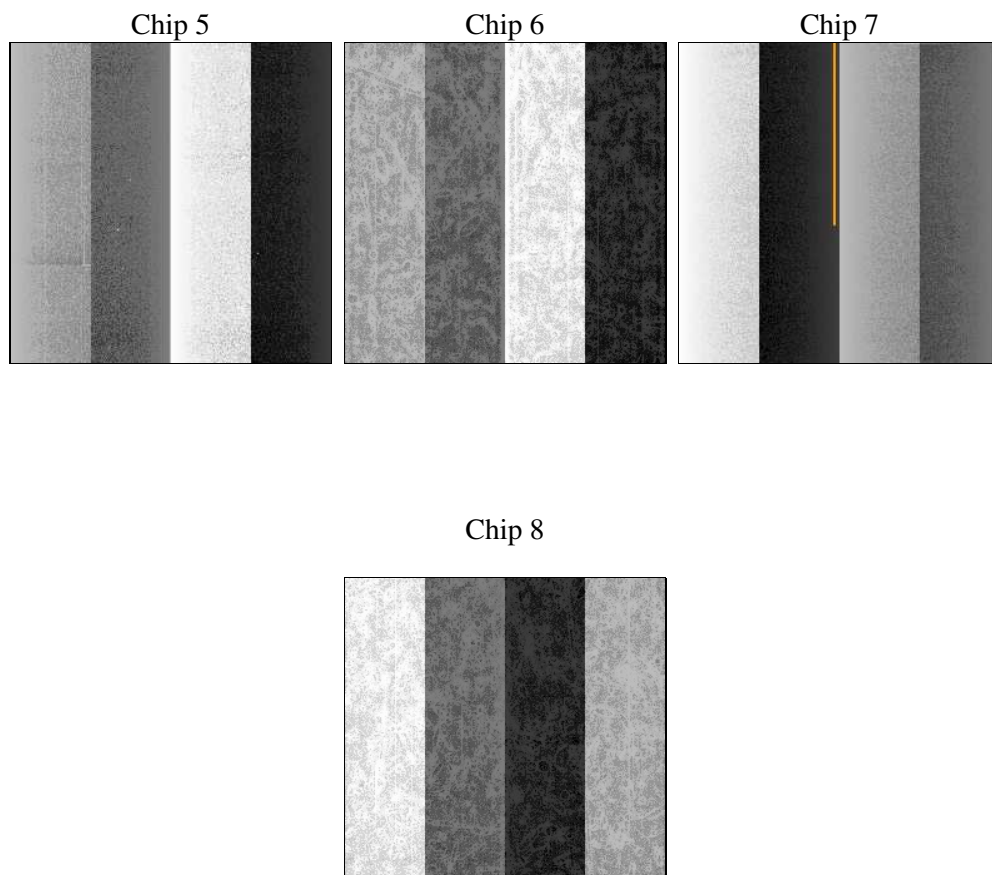
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	8062.360970974	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime5	8062.3199310303	Sum of GTIs [s]
date	2020-10-25T22:57:23	Date and time of file creation	ontime6	8062.2788909674	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	8062.360970974	Sum of GTIs [s]
			ontime8	8062.2378510237	Sum of GTIs [s]
			l1events	325428	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	103694	62594	78687	80453
rejected events	50581	55555	43995	59425
rejected %	48%	88%	55%	73%

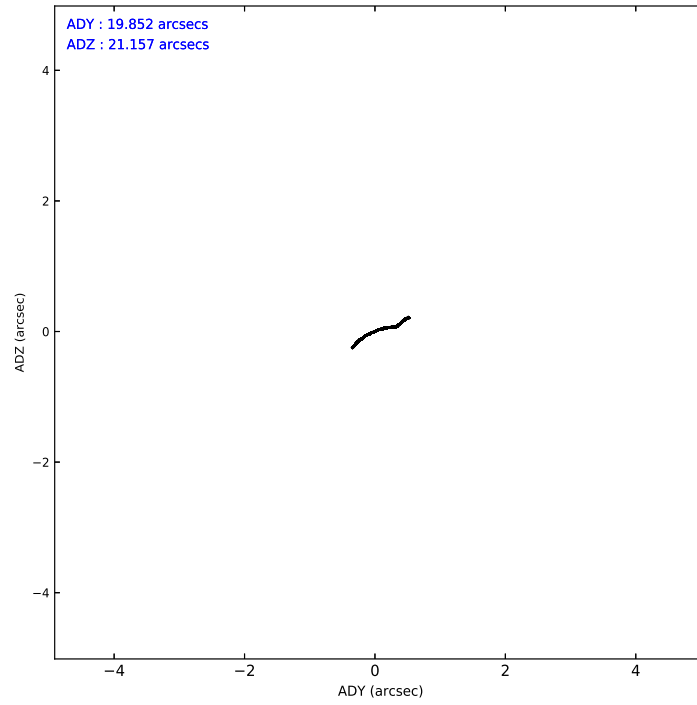
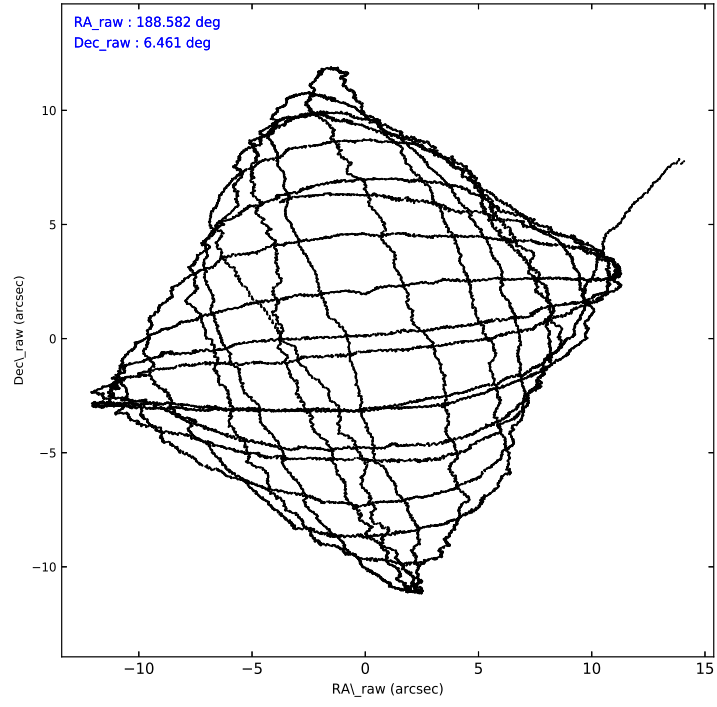
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	9452	2380	3025	6072
	9%	3%	3%	7%
grade 1 events	268	25	121	63
	0%	0%	0%	0%
grade 2 events	15254	1621	7498	4966
	14%	2%	9%	6%
grade 3 events	1408	735	2703	2275
	1%	1%	3%	2%
grade 4 events	1331	690	2785	2119
	1%	1%	3%	2%
grade 5 events	6744	2773	7705	4221
	6%	4%	9%	5%
grade 6 events	25694	1615	18699	5599
	24%	2%	23%	6%
grade 7 events	43543	52755	36151	55138
	41%	84%	45%	68%

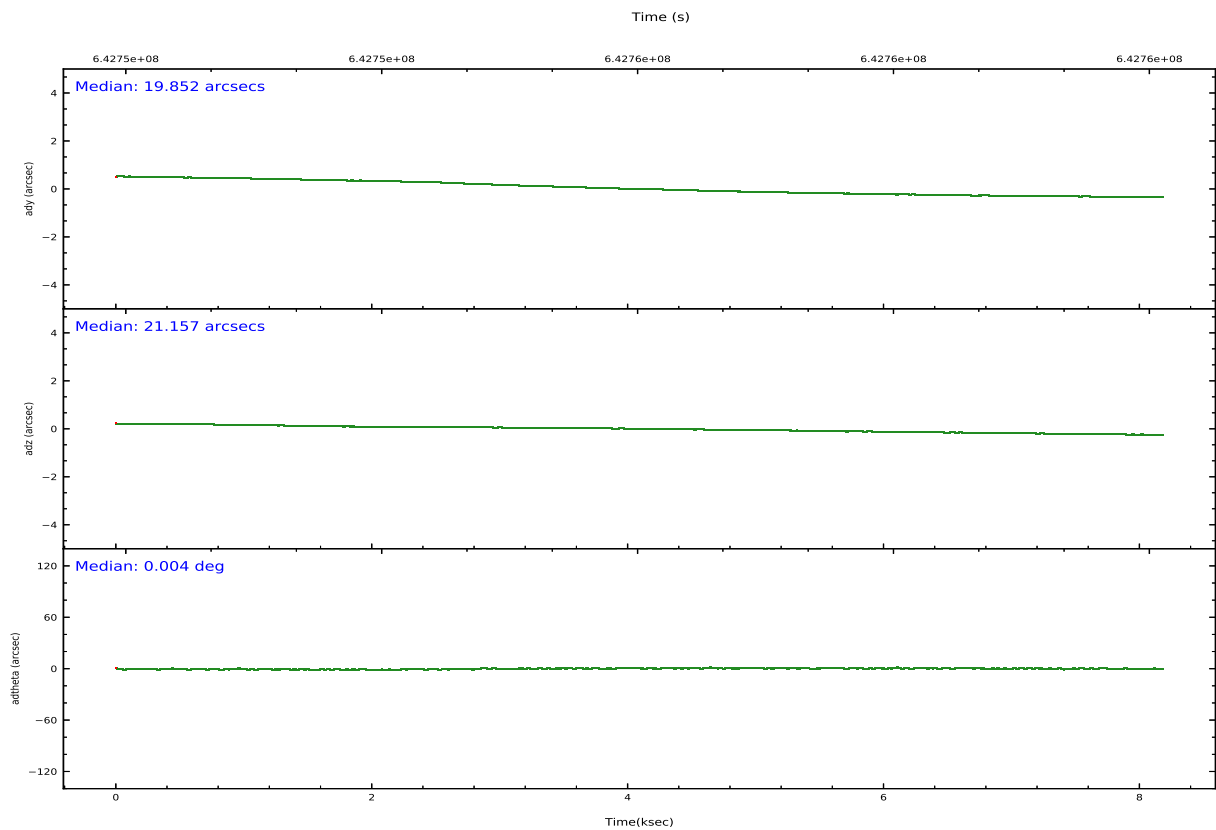
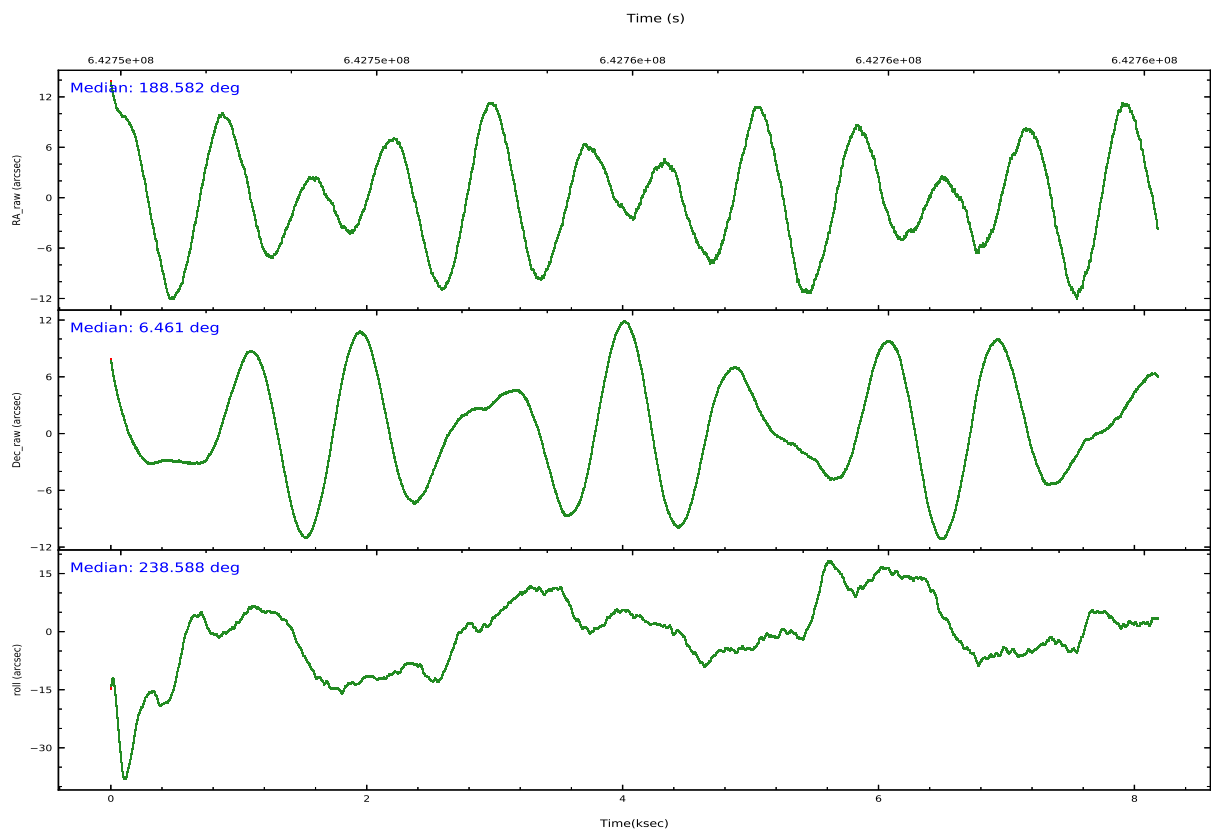


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-5678	ACIS-5678	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	188.582347	188.57988786204	Subarray requested	NONE	NONE
[deg] Pointing Dec	6.488299	6.4689562259343	Alternating exposures requested	N	N
[deg] Pointing Roll	238.441096	238.58802154567	[s] Primary exposure time	0.000000	3.1
[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)	642752108.184000	642751318.71088			
Observation start date	2018-05-15T06:13:59	2018-05-15T06:01:58			
[s] Observation end time (MET)	642760108.184000	642760829.17395			
Observation end date	2018-05-15T08:27:19	2018-05-15T08:40:29			
Read mode	TIMED	TIMED			

## 2.3 Aspect



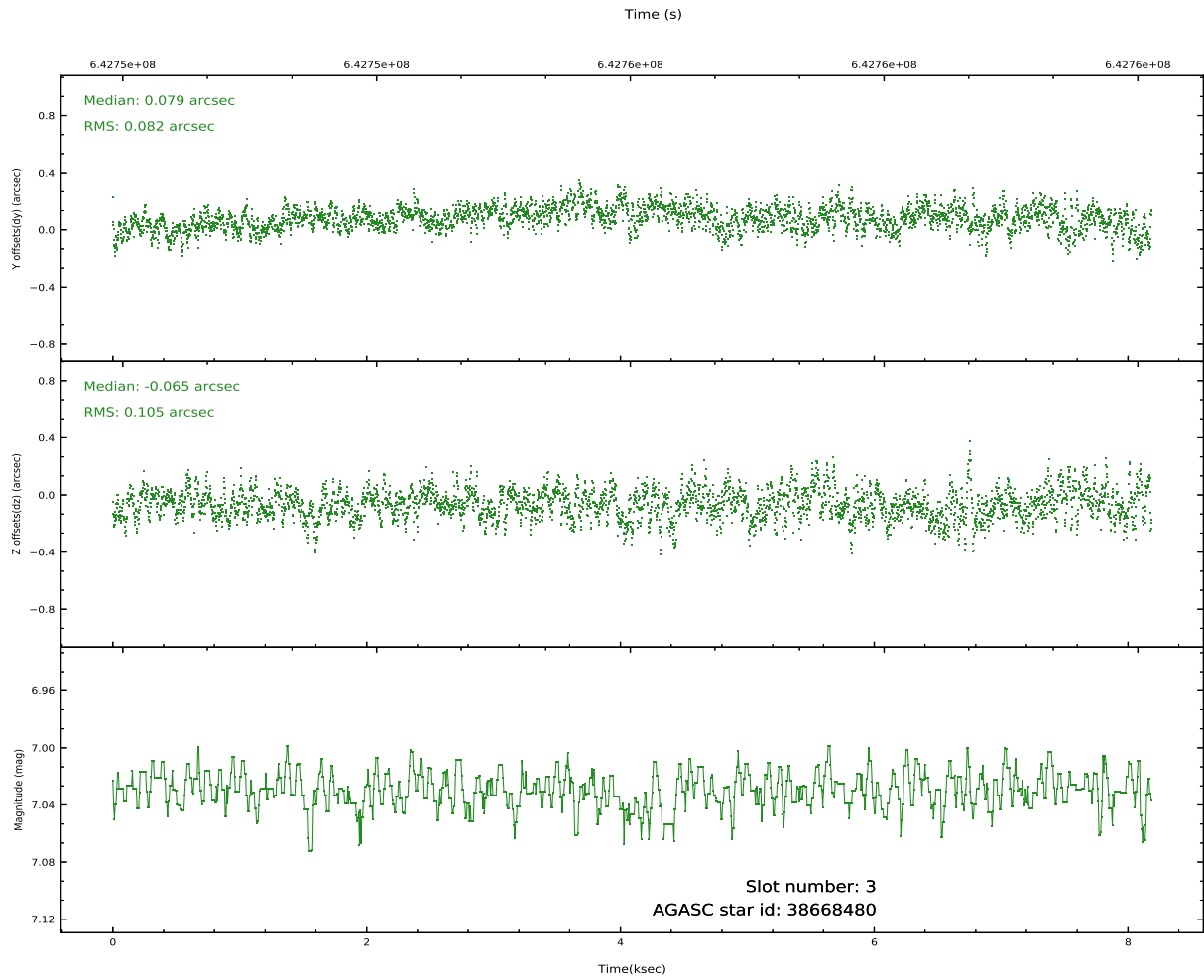
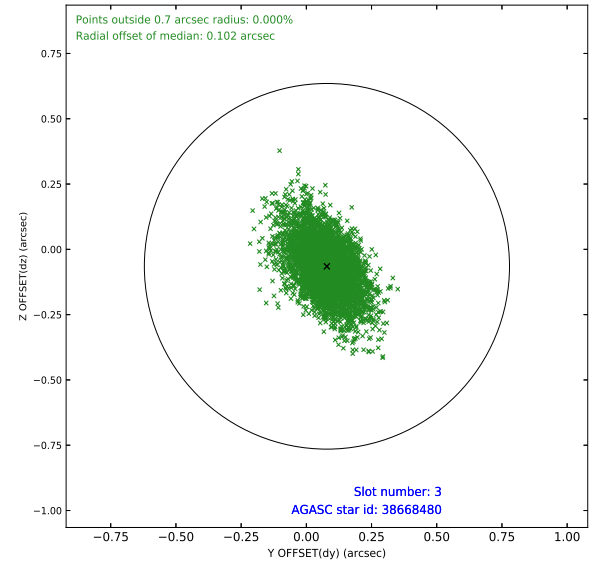
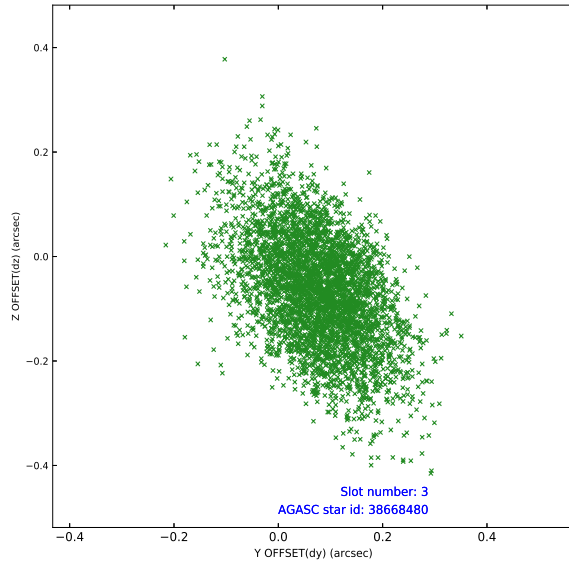


Slot Statistics

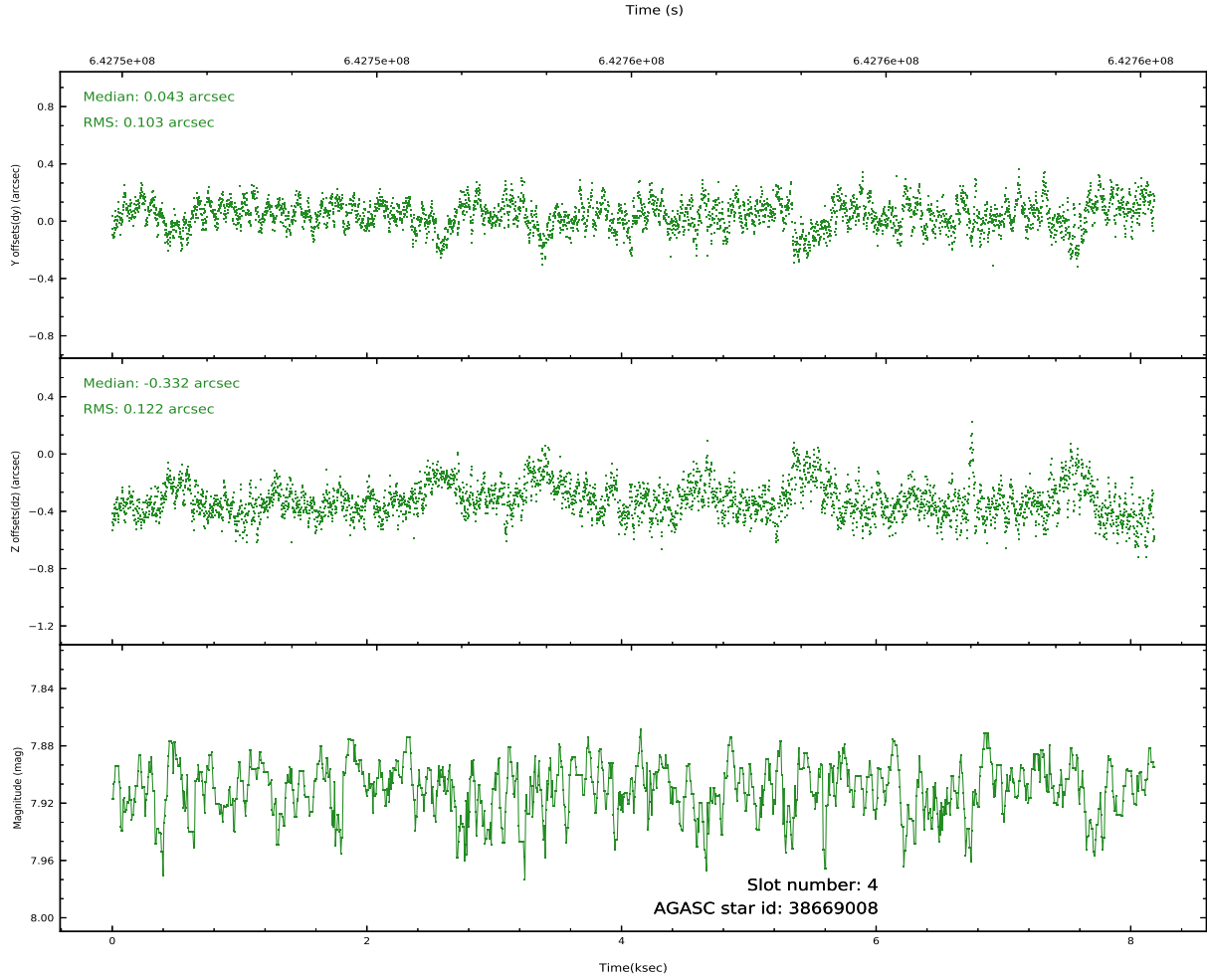
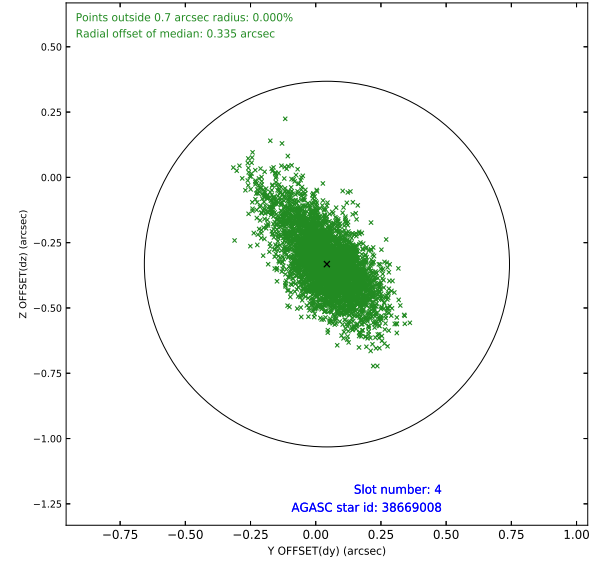
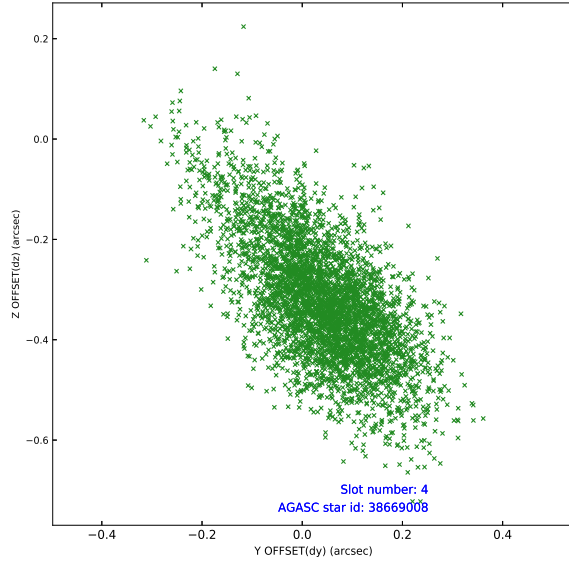
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	6.97	1996	1.000	0.104	-0.086	0.007	0.013	0.000000	0.000000	-773.15	-1742
1	FID		ACIS-S-4	7.09	1997	1.000	0.115	-0.027	0.010	0.016	0.000000	0.000000	2140.10	164
2	FID		ACIS-S-5	7.07	1996	1.000	-0.250	0.122	0.010	0.015	0.000000	0.000000	-1825.20	159
3	GUIDE	used	38668480	7.03	3992	1.000	0.079	-0.065	0.137	0.242	188.284505	7.250208	-1779.85	-2342
4	GUIDE	used	38669008	7.91	3994	1.000	0.043	-0.332	0.158	0.303	188.586775	6.378843	329.62	220
5	GUIDE	used	38670056	9.99	3968	1.000	0.082	0.277	0.259	0.411	188.338609	7.336647	-2146.11	-2339
6	GUIDE	used	38674160	10.09	3959	1.000	-0.198	0.114	0.250	0.427	189.315664	6.575042	-1640.83	2069
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

## 2.4 Star Slots

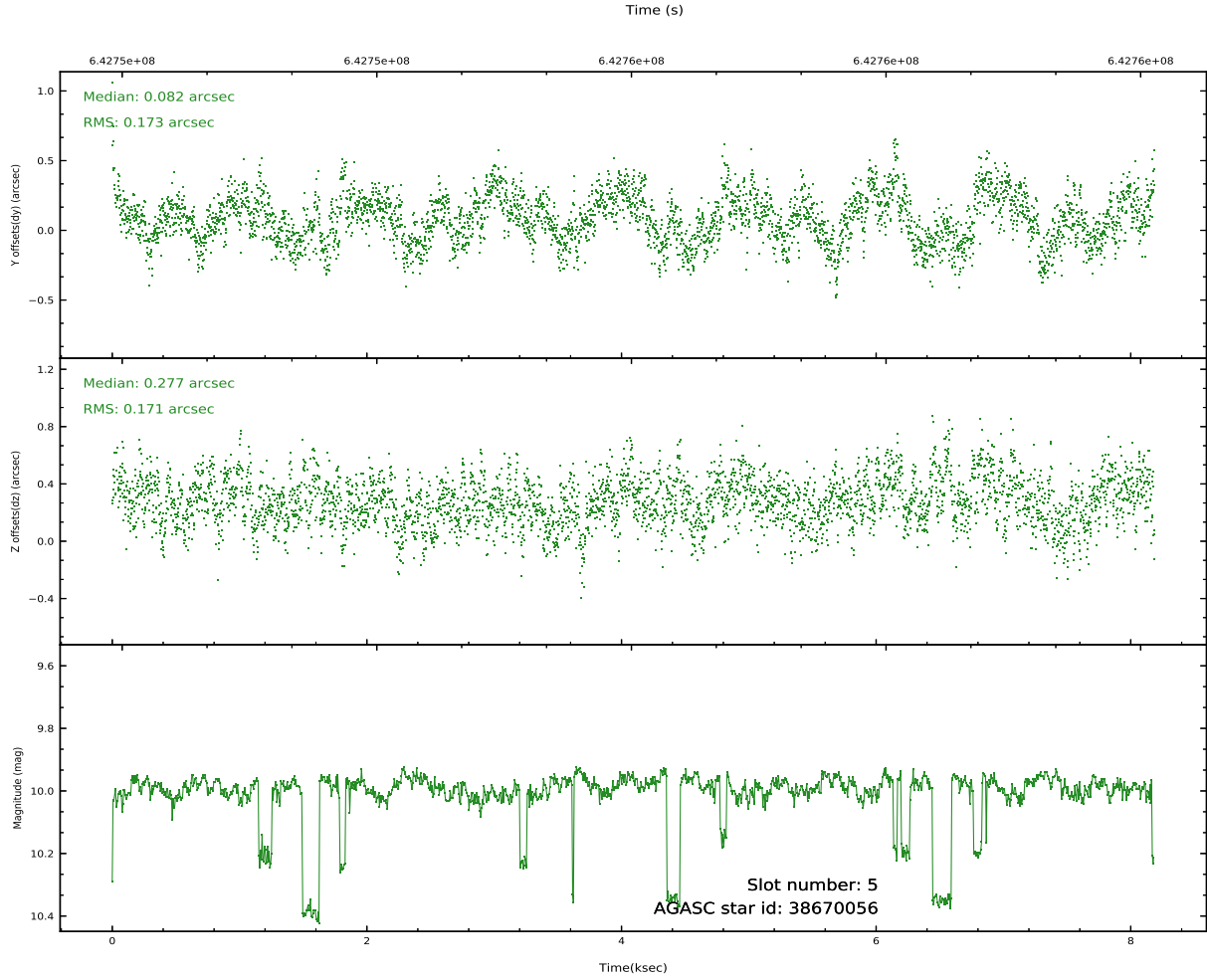
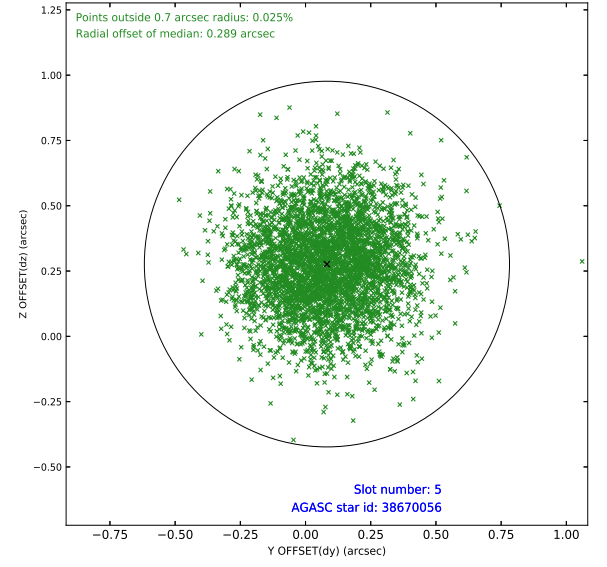
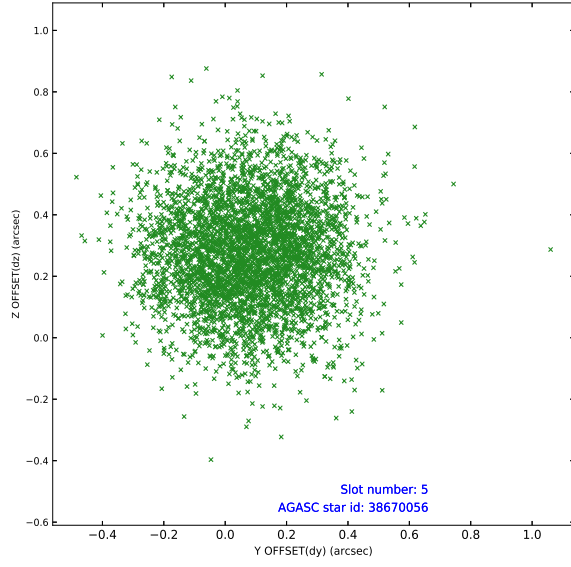
### 2.4.1 Slot 3



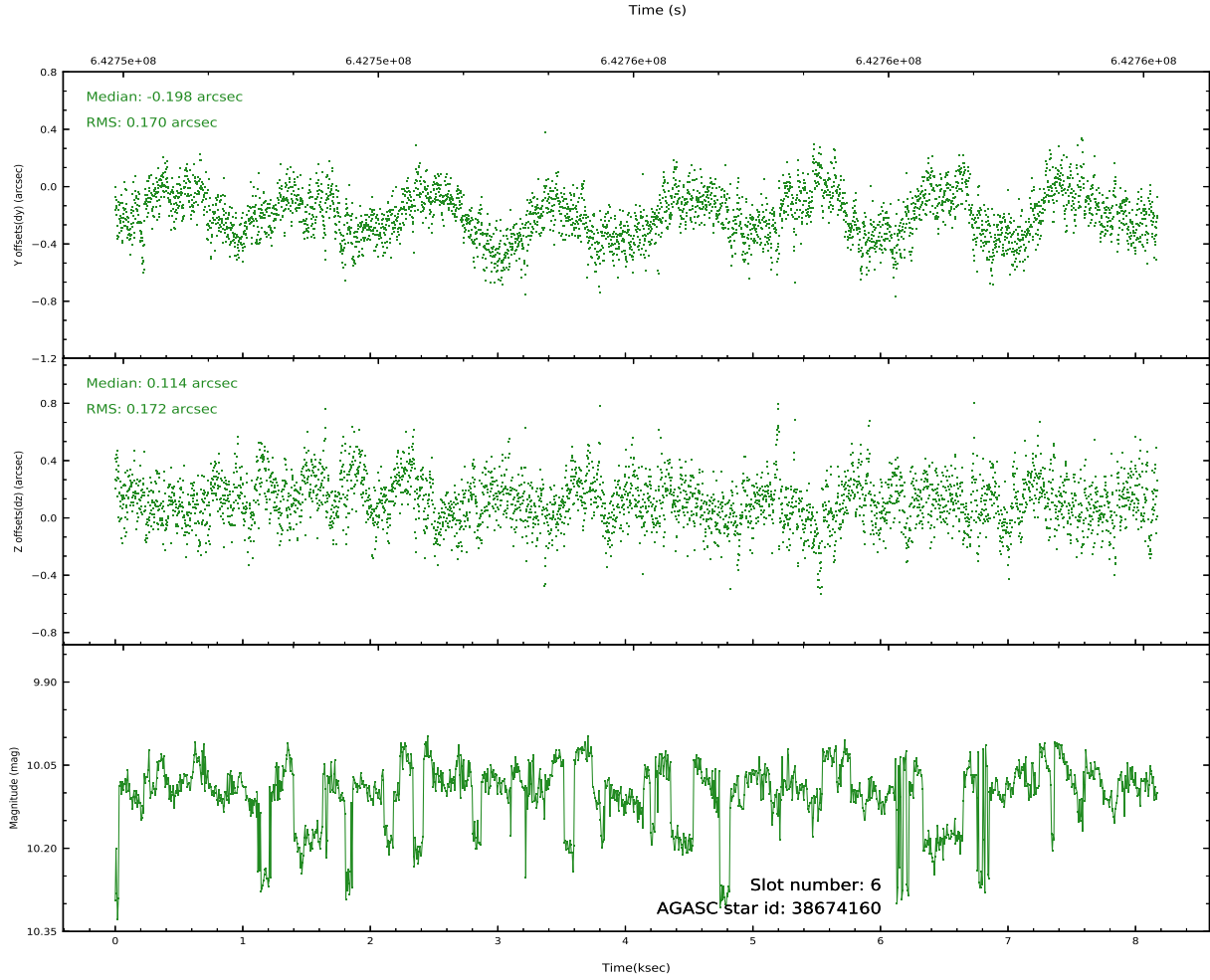
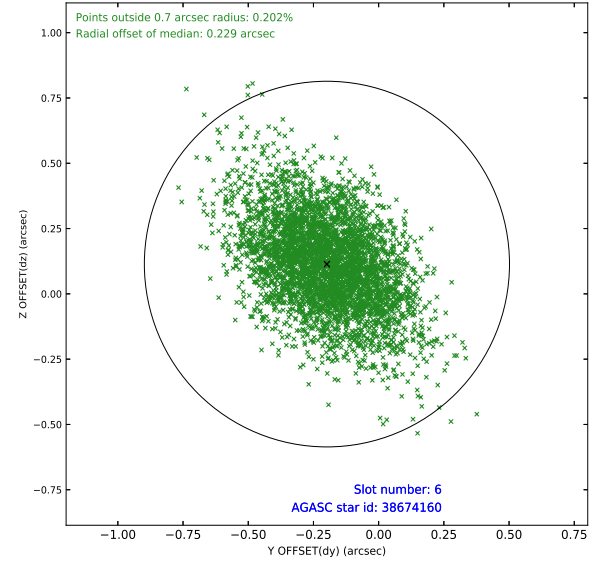
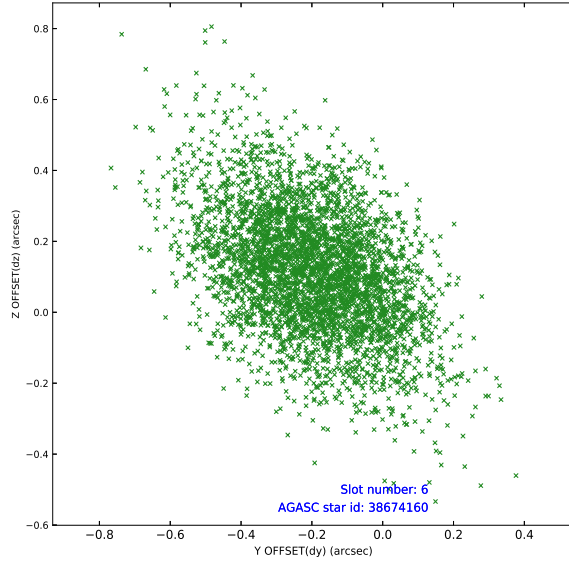
## 2.4.2 Slot 4



### 2.4.3 Slot 5



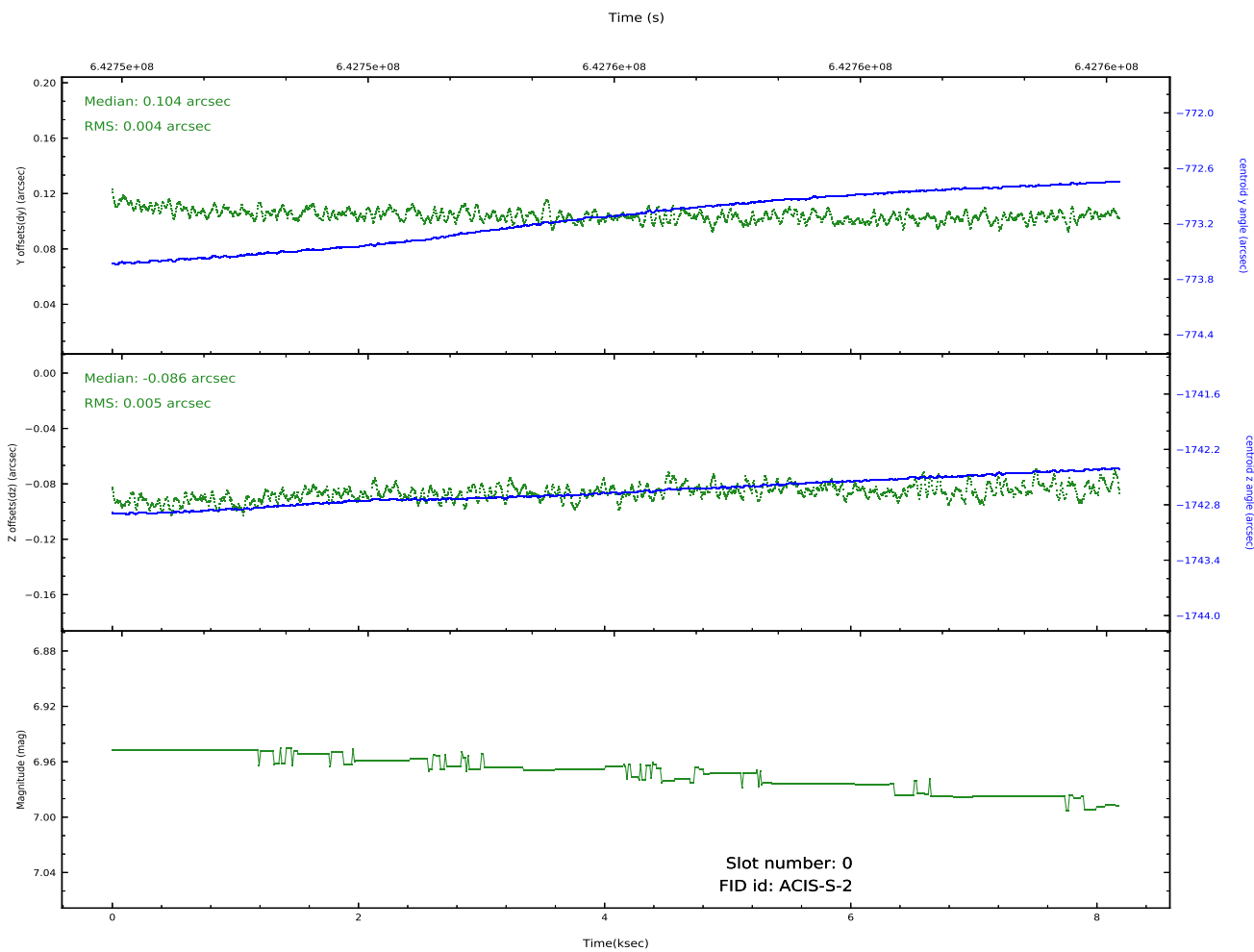
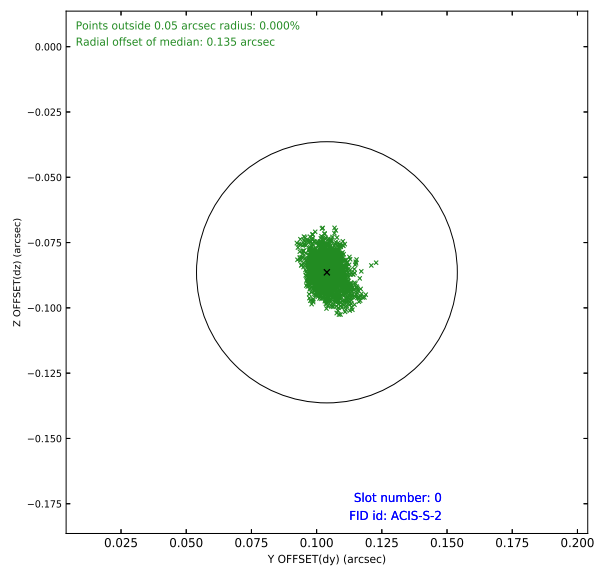
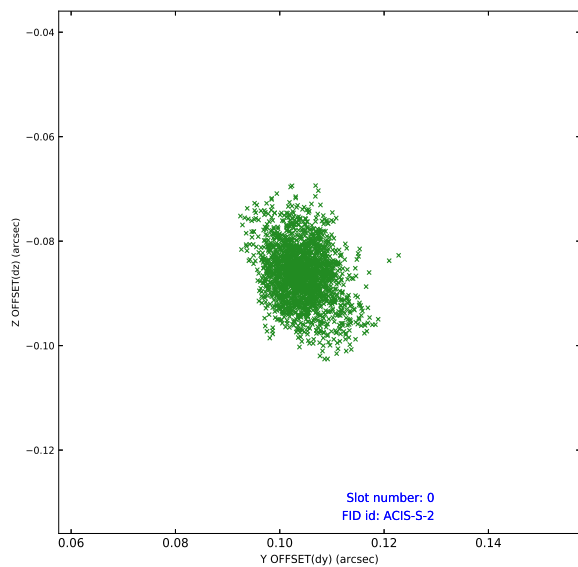
## 2.4.4 Slot 6



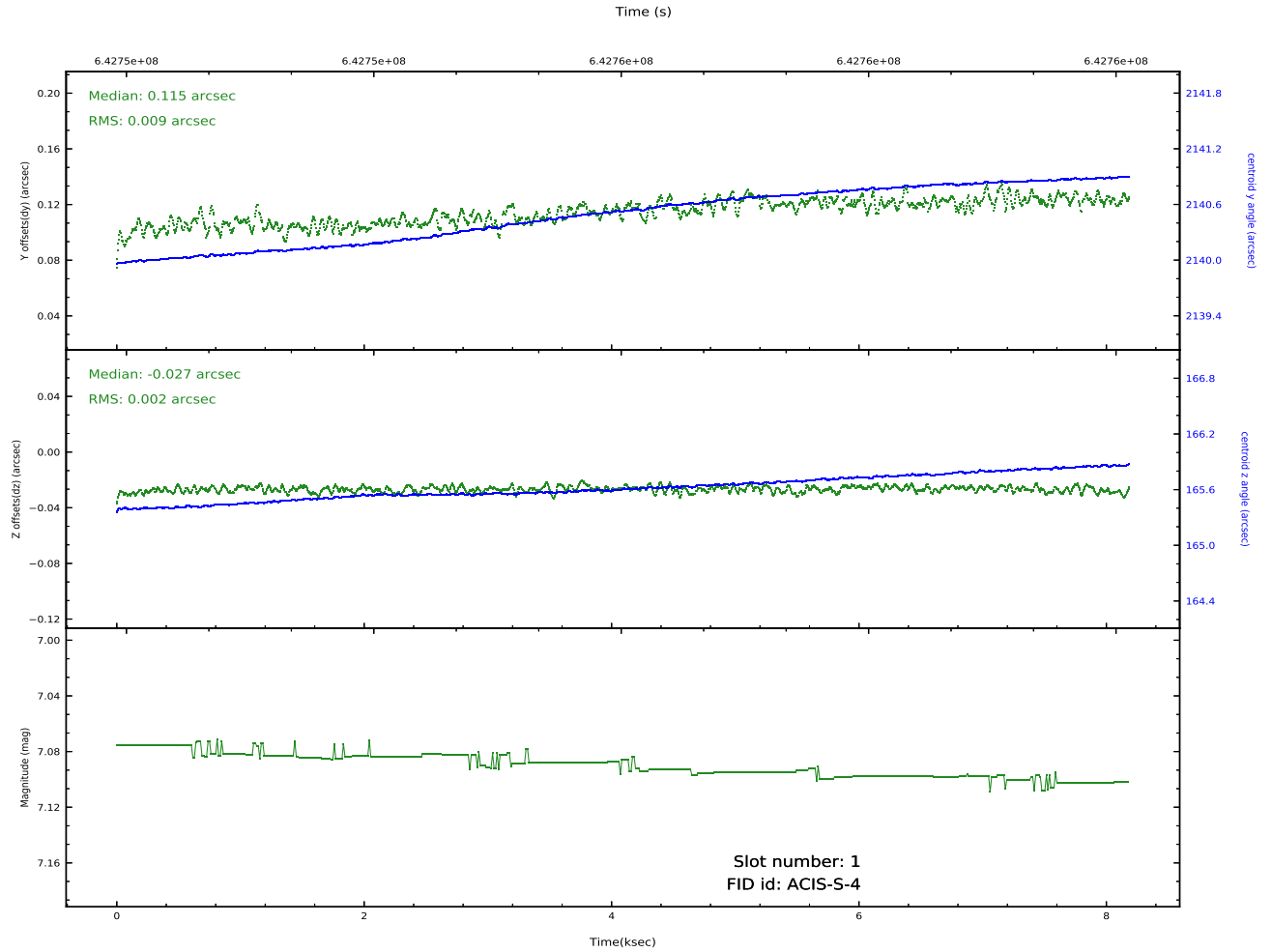
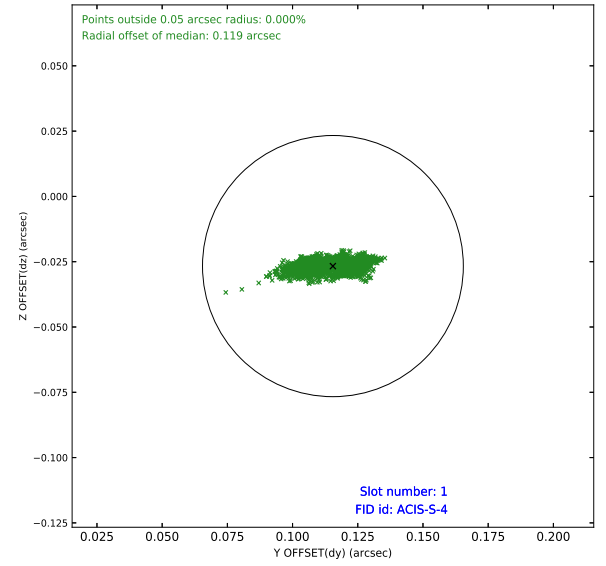
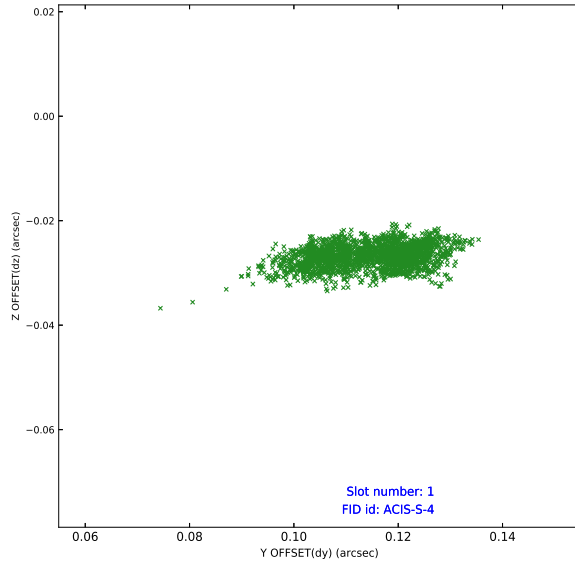


## 2.5 FID Slots

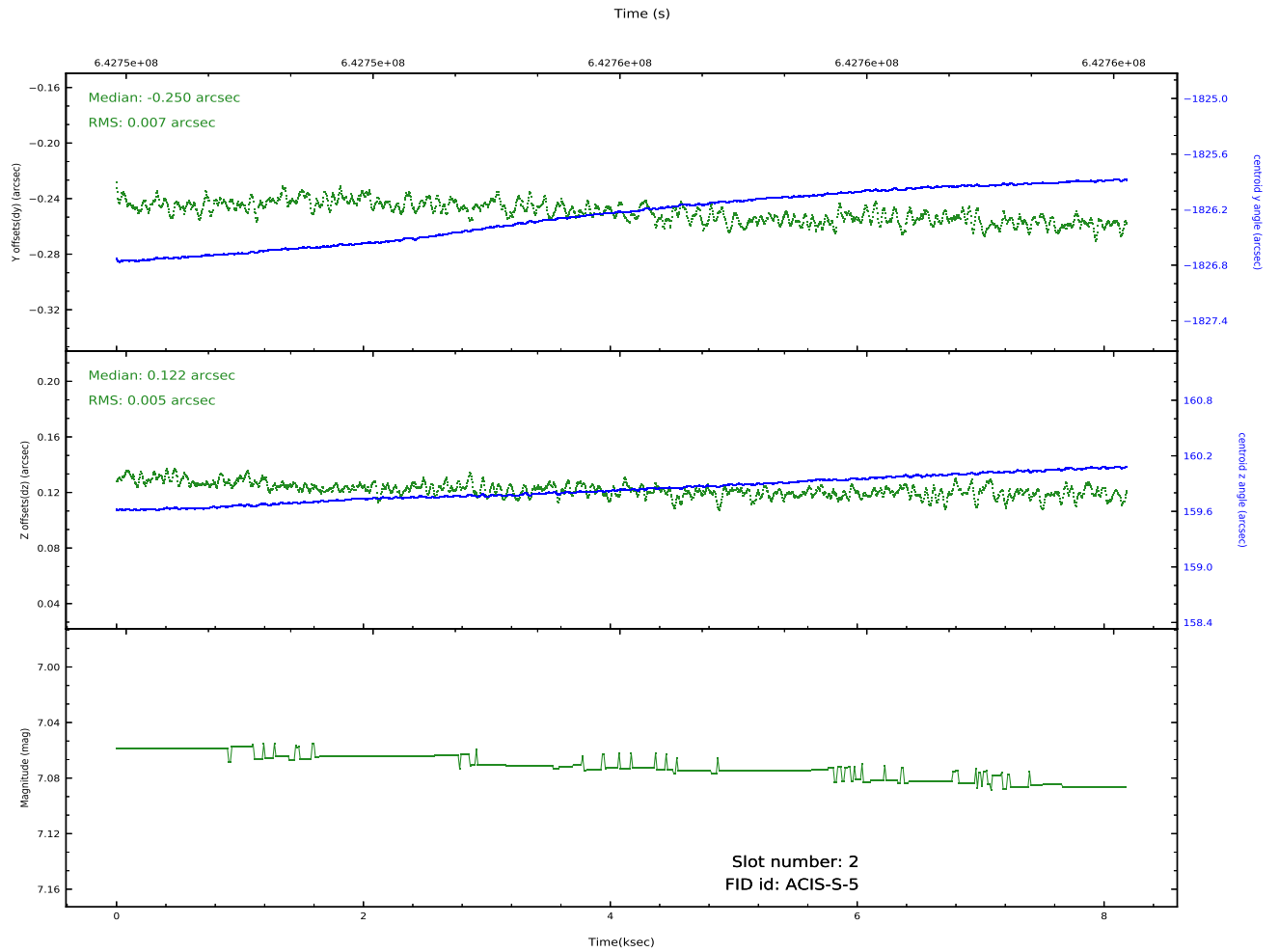
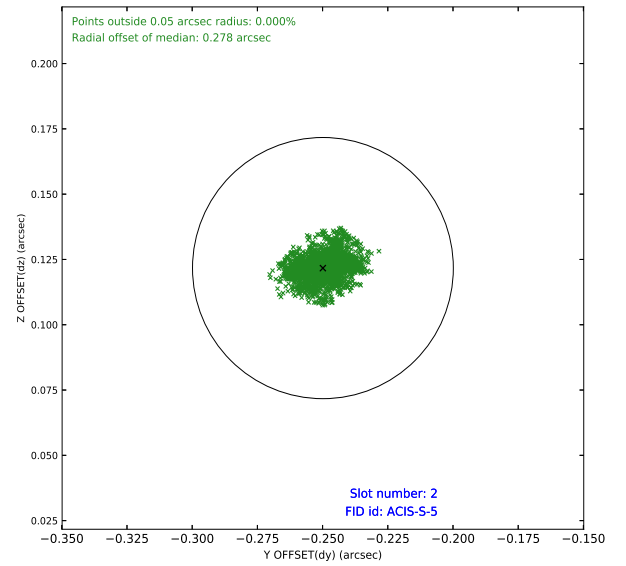
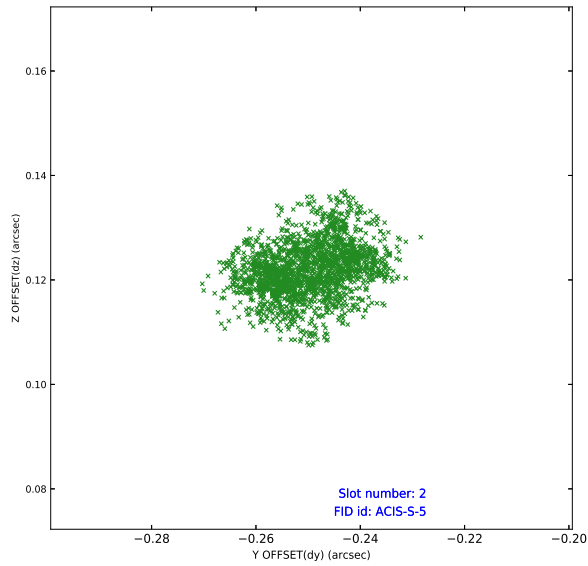
### 2.5.1 Slot 0



## 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)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0623609751463

## A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.