

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5947 - L2 Version 4  
Chandra X-Ray Center

L2 Processing Date : Oct 8 2020

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# 1 Front

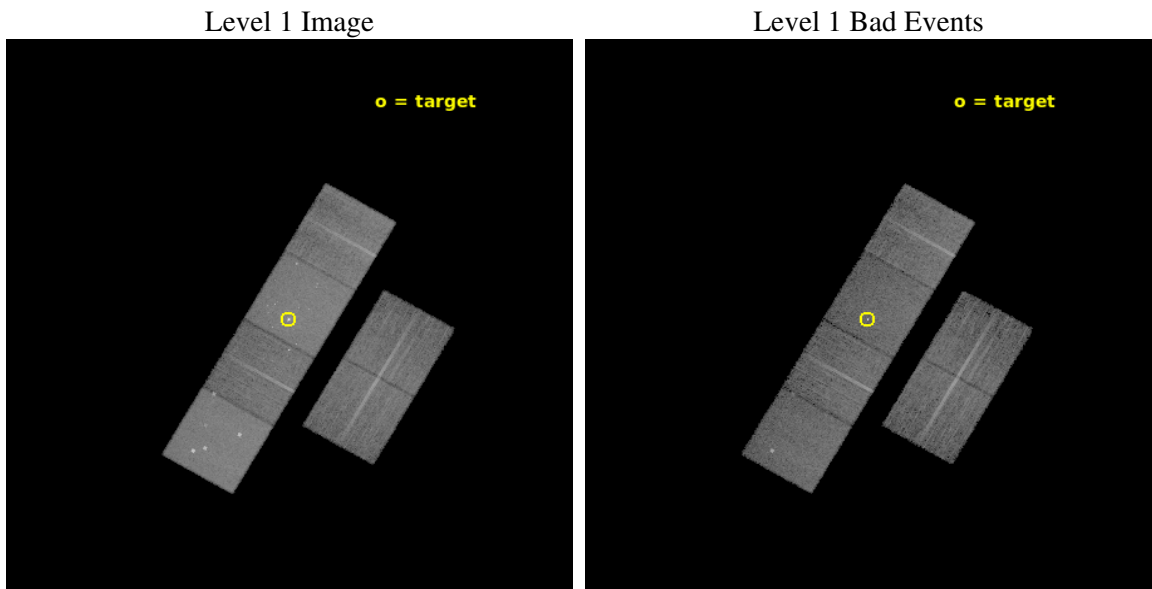
seq_num	600466	Sequence number
obs_id	5947	Observation id
title	An Unprecedented View of a Galaxy's Dynamic X-ray Source Population	&#160
observer	David Pooley	Principal investigator
object	M81	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.888333	Observer's specified target RA [deg]
dec_targ	69.065306	Observer's specified target Dec [deg]
ra_nom	148.88643749602	Nominal RA [deg]
dec_nom	69.056595365937	Nominal Dec [deg]
roll_nom	300.03677356781	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10835.192171872	Sum of GTIs [s]
livetime	10697.990444422	Livetime [s]
ontime2	10835.199959636	Sum of GTIs [s]
ontime3	10835.06907177	Sum of GTIs [s]
ontime5	10835.151131868	Sum of GTIs [s]
ontime6	10835.110111773	Sum of GTIs [s]
ontime7	10835.192171872	Sum of GTIs [s]
ontime8	10831.786951989	Sum of GTIs [s]
l2events	215421	Number of level 2 events



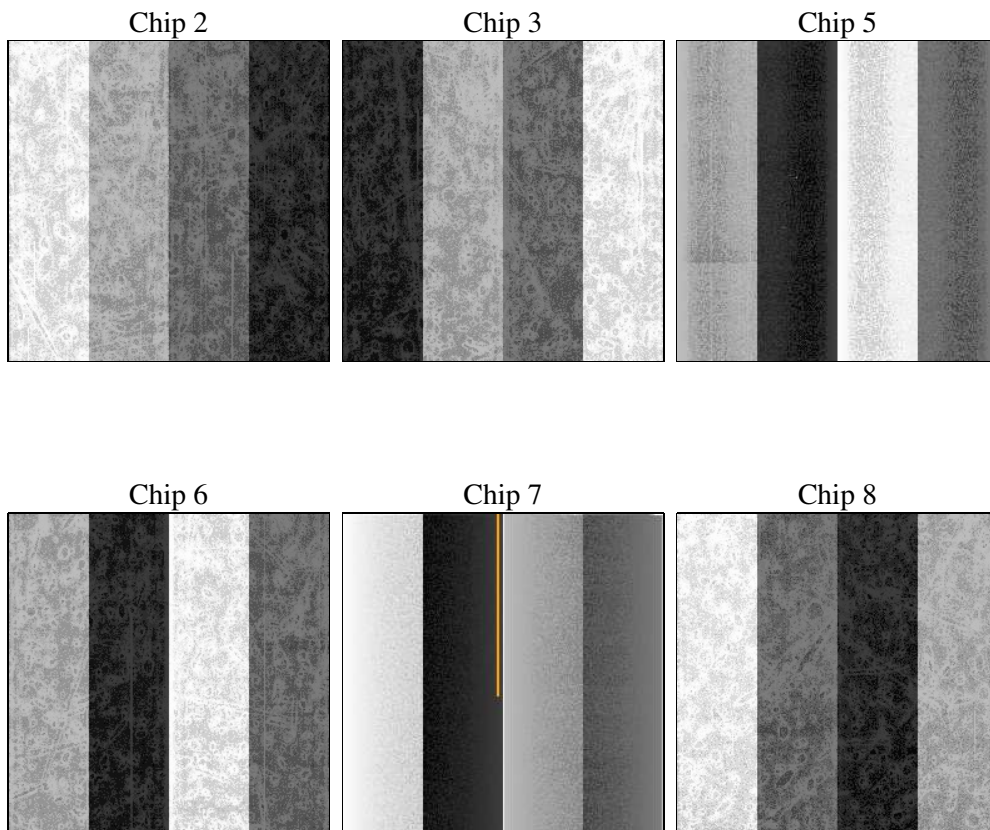
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11081.997000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	10835.192171872	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	10835.199959636	Sum of GTIs [s]
date	2020-10-09T02:06:56	Date and time of file creation	ontime3	10835.06907177	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	10835.151131868	Sum of GTIs [s]
			ontime6	10835.110111773	Sum of GTIs [s]
			ontime7	10835.192171872	Sum of GTIs [s]
			ontime8	10831.786951989	Sum of GTIs [s]
			l1events	705593	Number of level 1 events

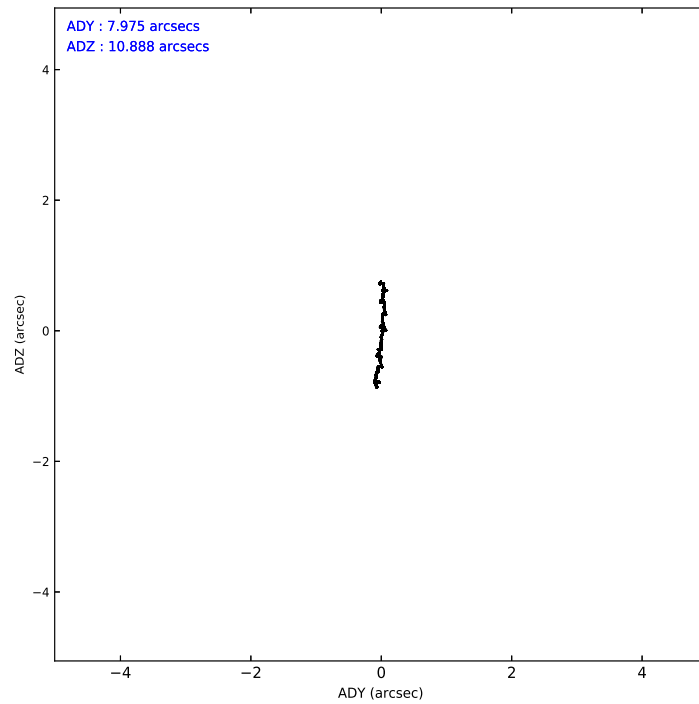
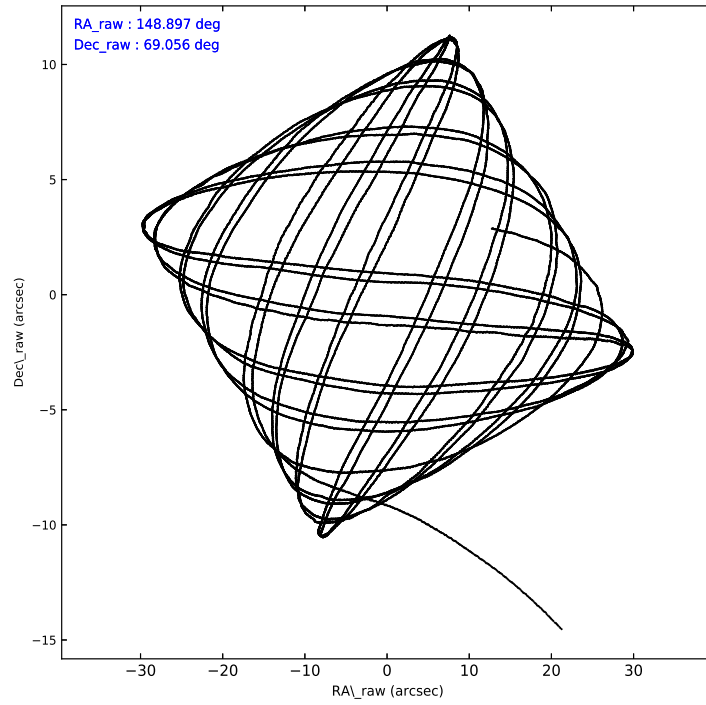
### 2.1.4 Events

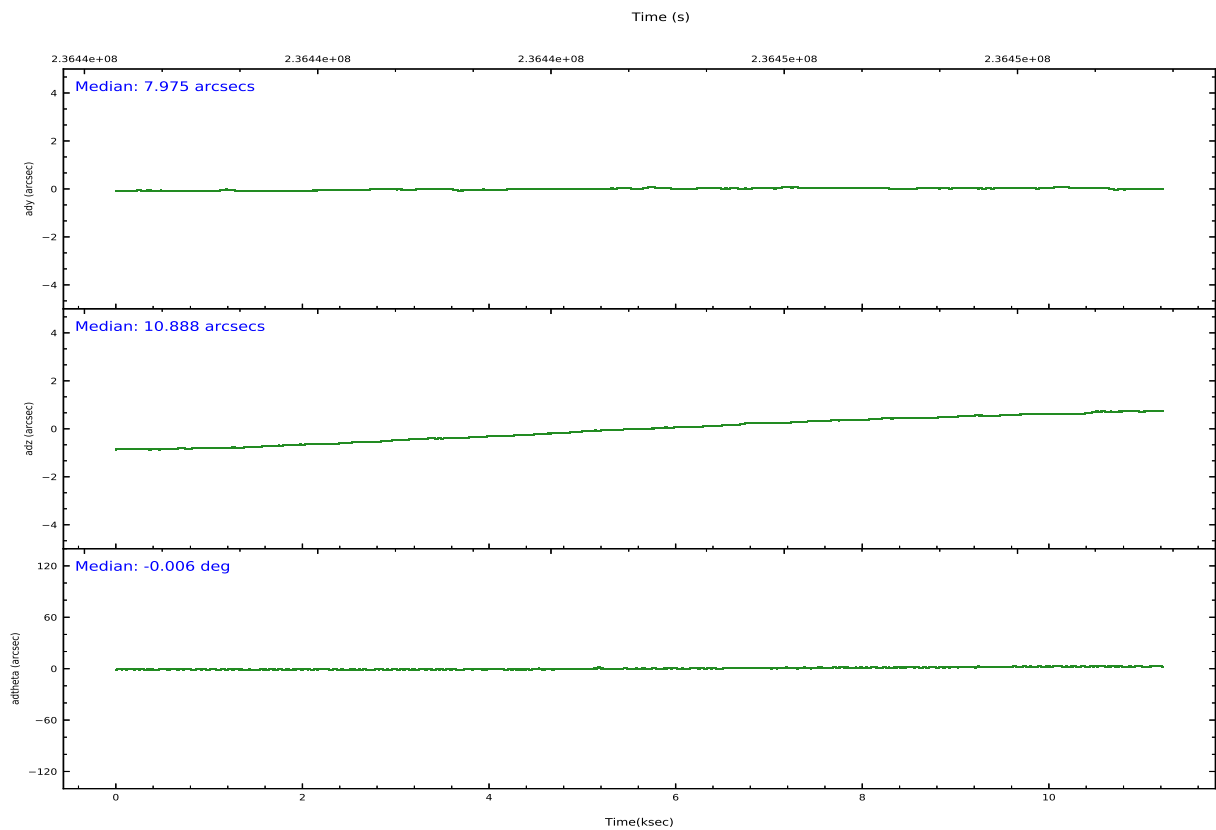
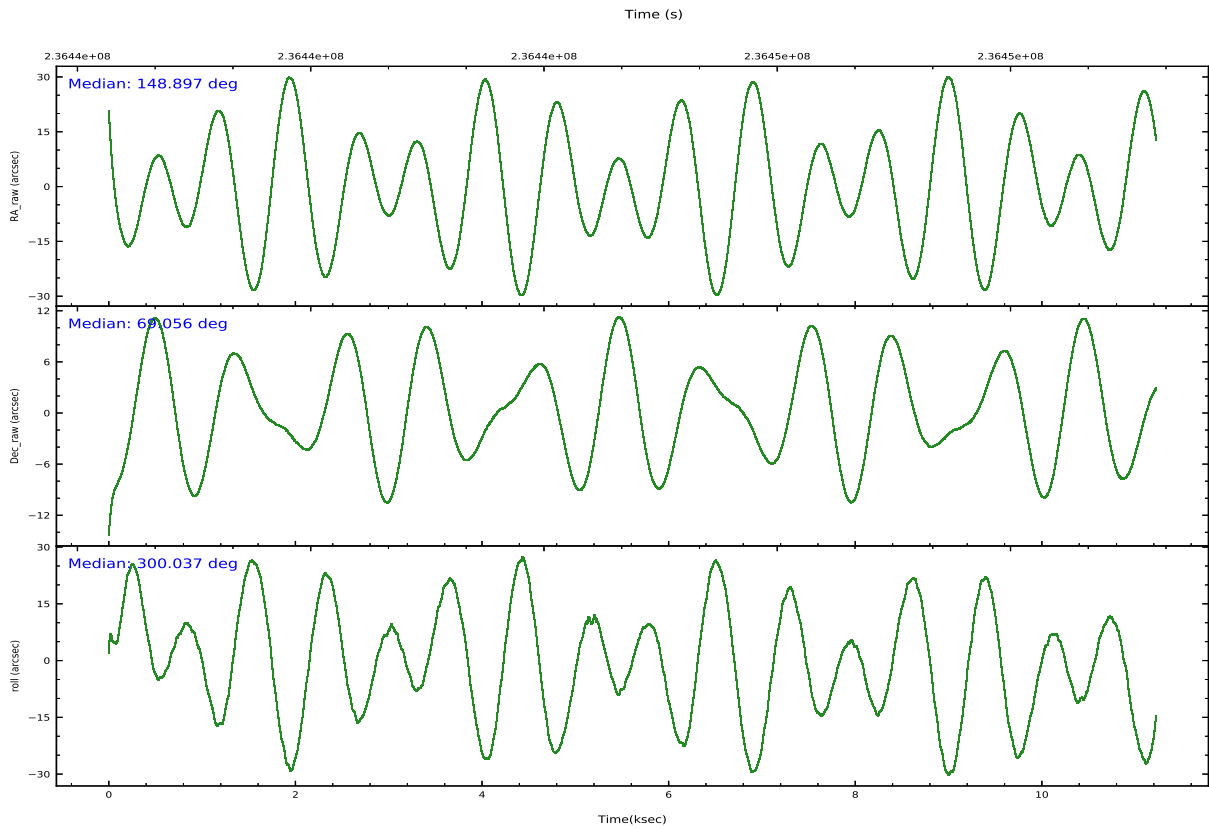
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	95960	90082	152022	98946	147962	120621	grade 0 events	11463	11113	11153	12593	8170	14879
rejected events	77277	71807	72554	77874	72510	88060		11%	12%	7%	12%	5%	12%
rejected %	80%	79%	47%	78%	49%	73%	grade 1 events	106	111	299	92	184	113
								0%	0%	0%	0%	0%	0%
							grade 2 events	2912	2717	23214	3347	14574	5861
								3%	3%	15%	3%	9%	4%
							grade 3 events	1186	1208	3191	1364	6233	2851
								1%	1%	2%	1%	4%	2%
							grade 4 events	1210	1216	3026	1330	6233	2727
								1%	1%	1%	1%	4%	2%
							grade 5 events	3449	3798	9806	4091	11472	5138
								3%	4%	6%	4%	7%	4%
							grade 6 events	1927	2029	38930	2450	40280	6259
								2%	2%	25%	2%	27%	5%
							grade 7 events	73707	67890	62403	73679	60816	82793
								76%	75%	41%	74%	41%	68%

## 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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	148.831014	148.88643749602	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.069461	69.056595365937	Alternating exposures requested	N	N
[deg] Pointing Roll	299.942099	300.03677356781	[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)	236440480.184000	236439281.2663			
Observation start date	2005-06-29T13:53:36	2005-06-29T13:34:41			
[s] Observation end time (MET)	236451562.184000	236451788.82937			
Observation end date	2005-06-29T16:58:18	2005-06-29T17:03:08			
Read mode	TIMED	TIMED			

## 2.3 Aspect





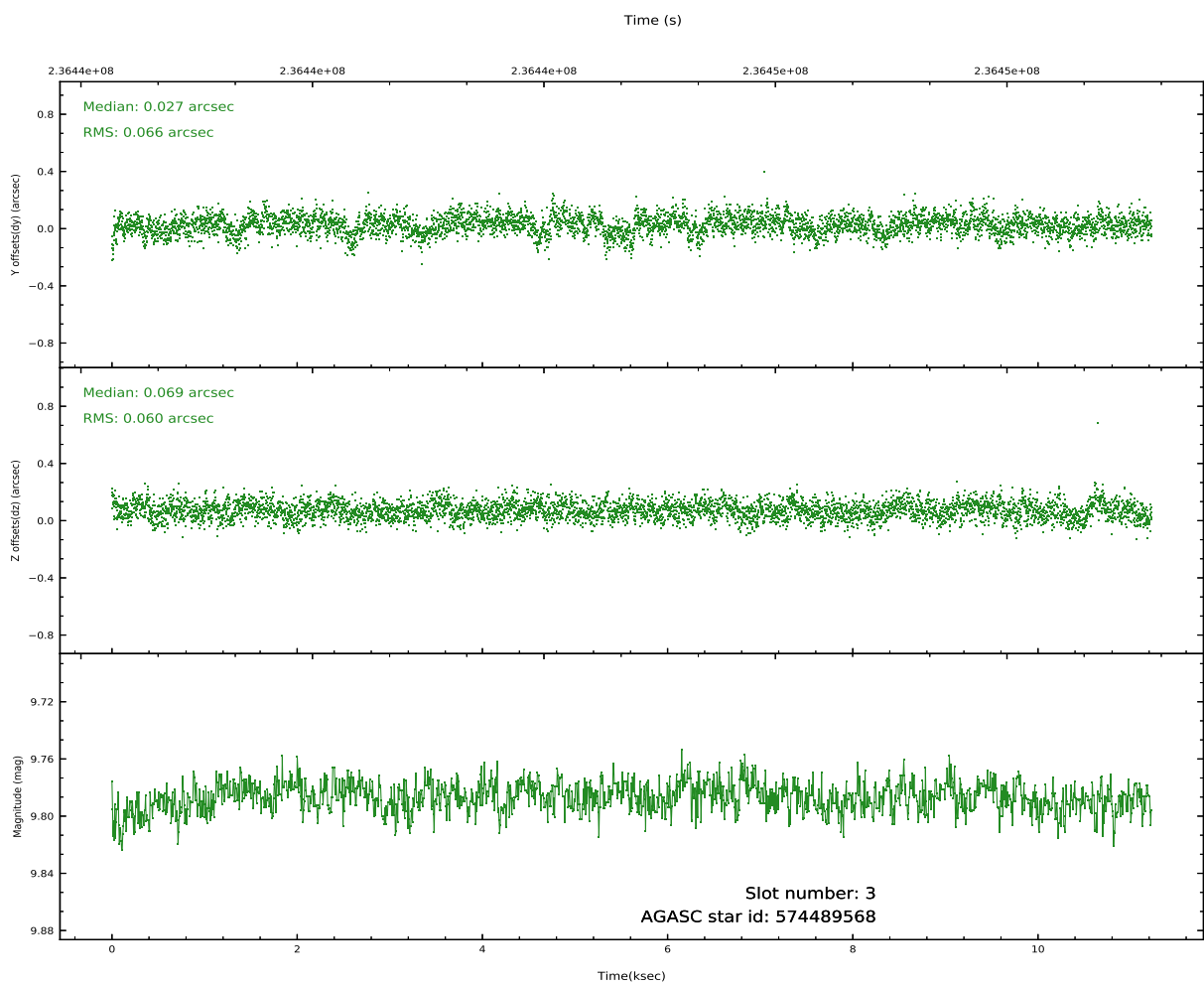
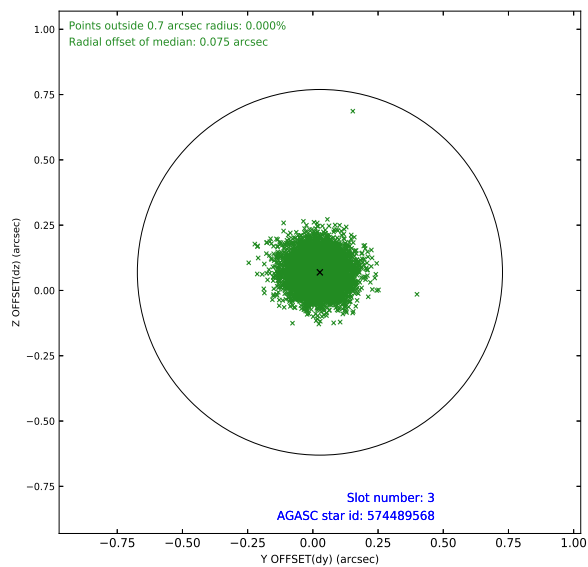
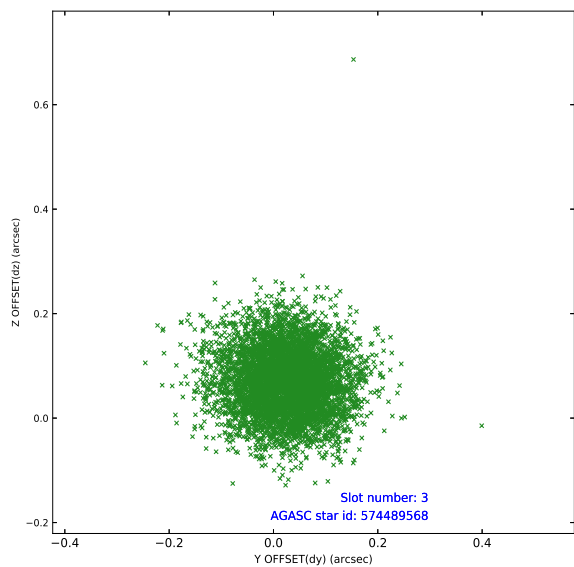
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.19	2738	1.000	0.019	-0.111	0.024	0.041	0.000000	0.000000	935.33	-1727
1	FID		ACIS-S-4	7.21	2738	1.000	0.133	0.072	0.015	0.027	0.000000	0.000000	2153.07	176
2	FID		ACIS-S-5	7.23	2738	1.000	-0.180	0.051	0.012	0.018	0.000000	0.000000	-1813.19	170
3	GUIDE	used	574489568	9.79	5468	1.000	0.027	0.069	0.094	0.154	147.223974	69.438157	-2186.87	-1084
4	GUIDE	used	574490960	9.73	5470	1.000	-0.054	0.010	0.111	0.183	148.185918	69.658768	-2245.07	361
5	GUIDE	used	574491280	9.34	5406	1.000	-0.019	-0.027	0.095	0.151	148.611567	69.450135	-1326.39	443
6	GUIDE	used	574497600	10.45	5470	1.000	0.127	-0.114	0.160	0.264	147.824120	68.451903	1253.00	-2257
7	GUIDE	used	574491184	9.06	5474	1.000	-0.082	0.057	0.084	0.134	148.582453	69.768699	-2335.97	988

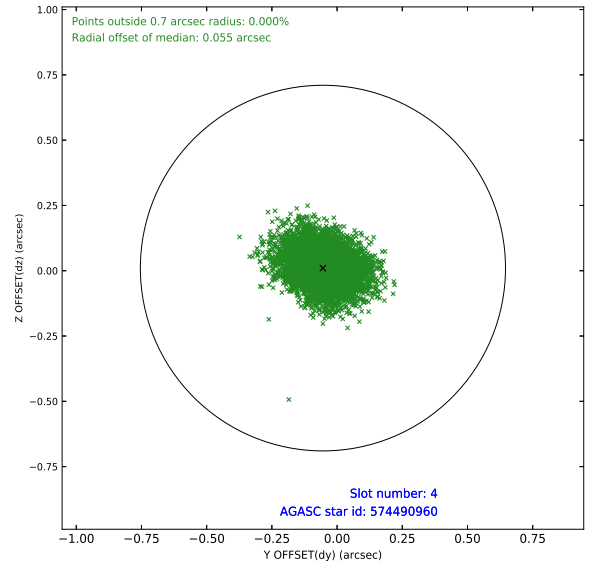
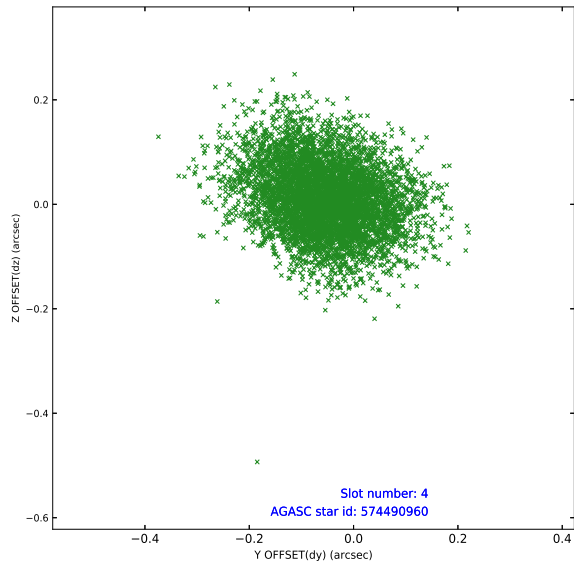
∞

## 2.4 Star Slots

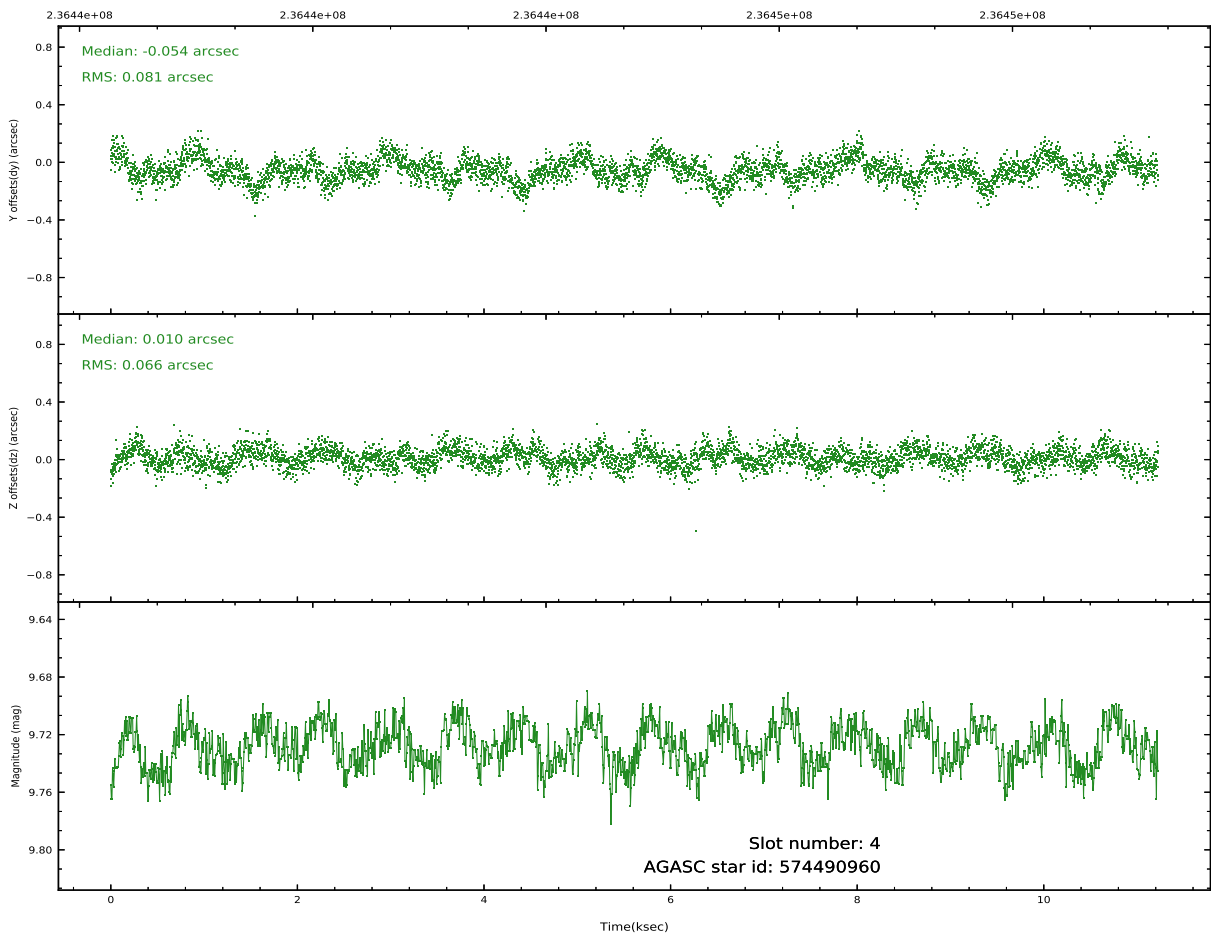
### 2.4.1 Slot 3



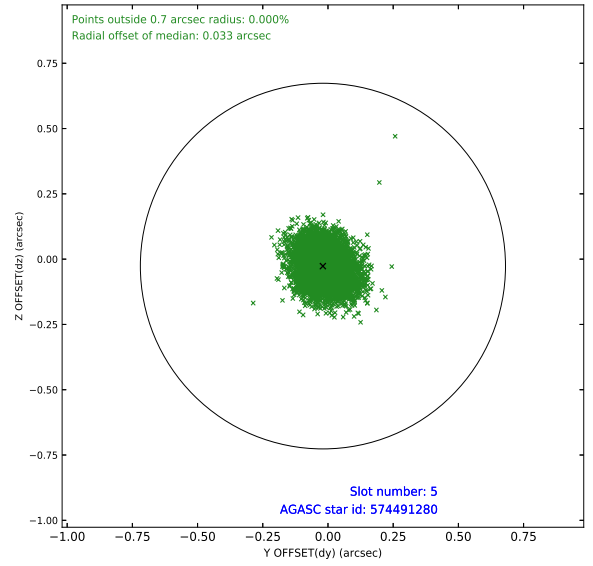
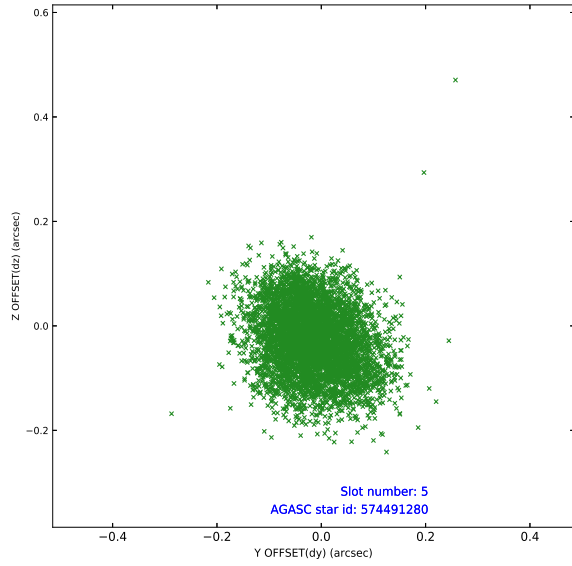
## 2.4.2 Slot 4



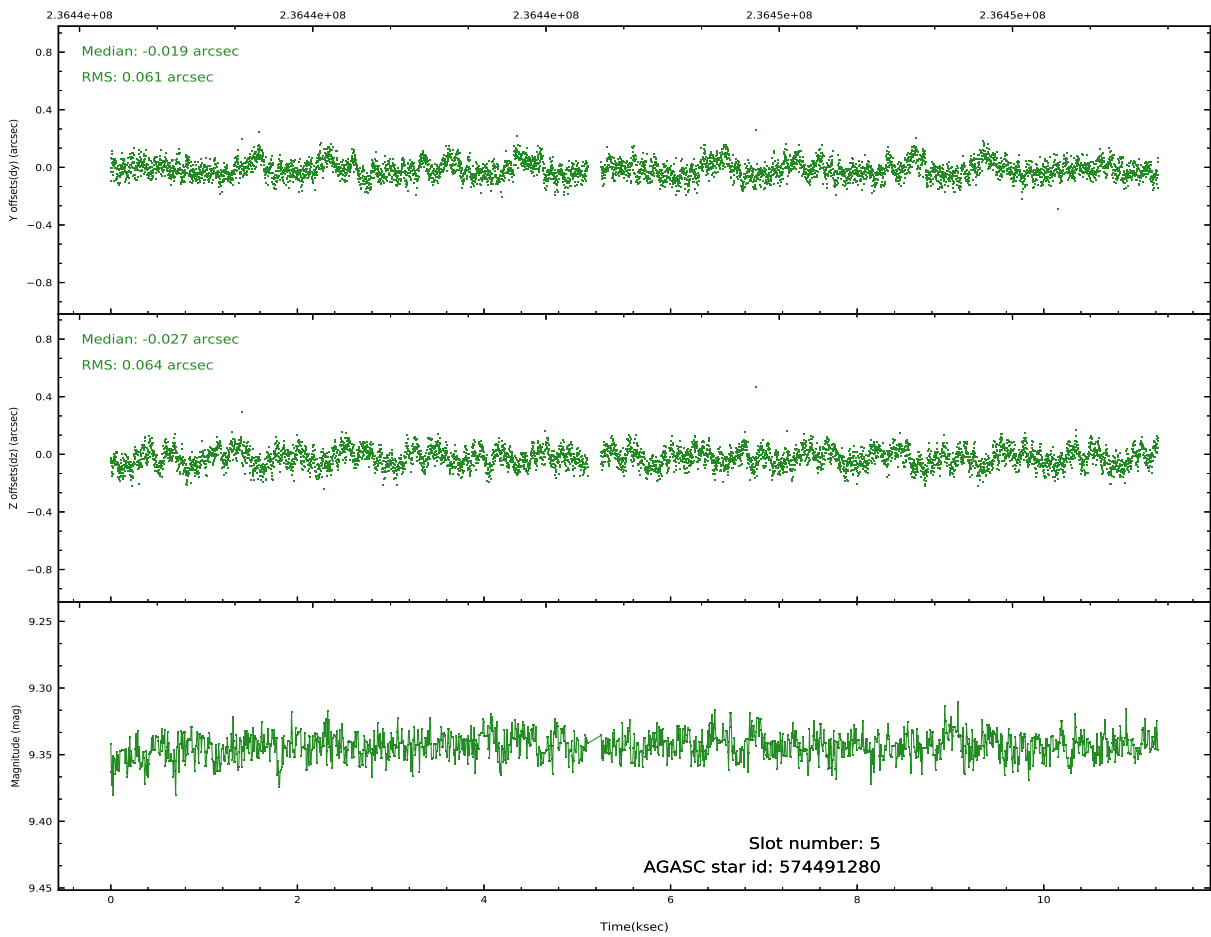
Time (s)



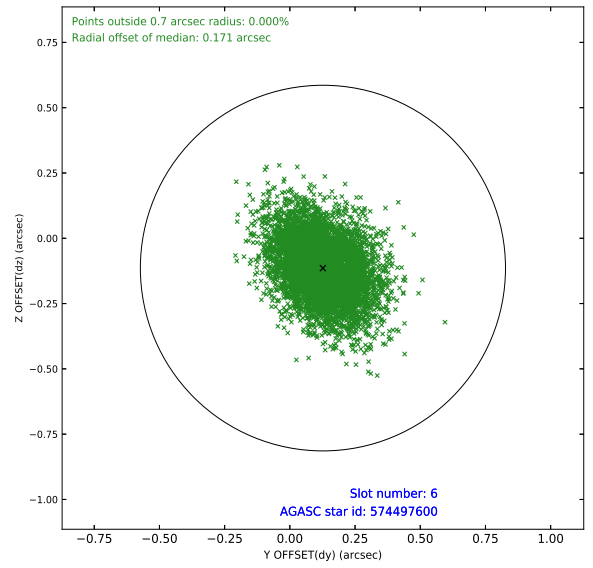
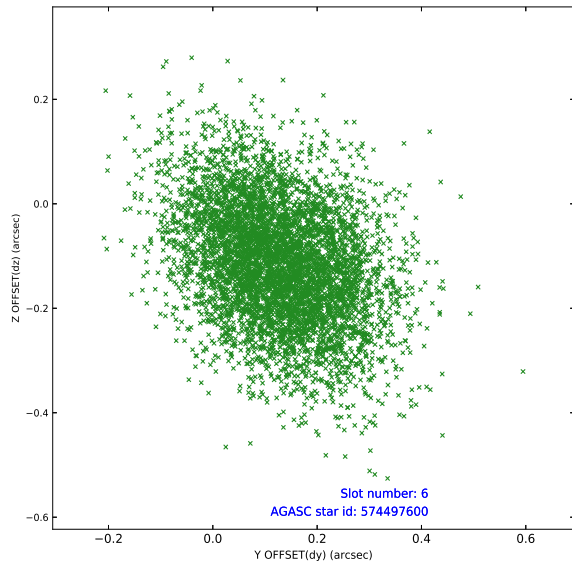
### 2.4.3 Slot 5



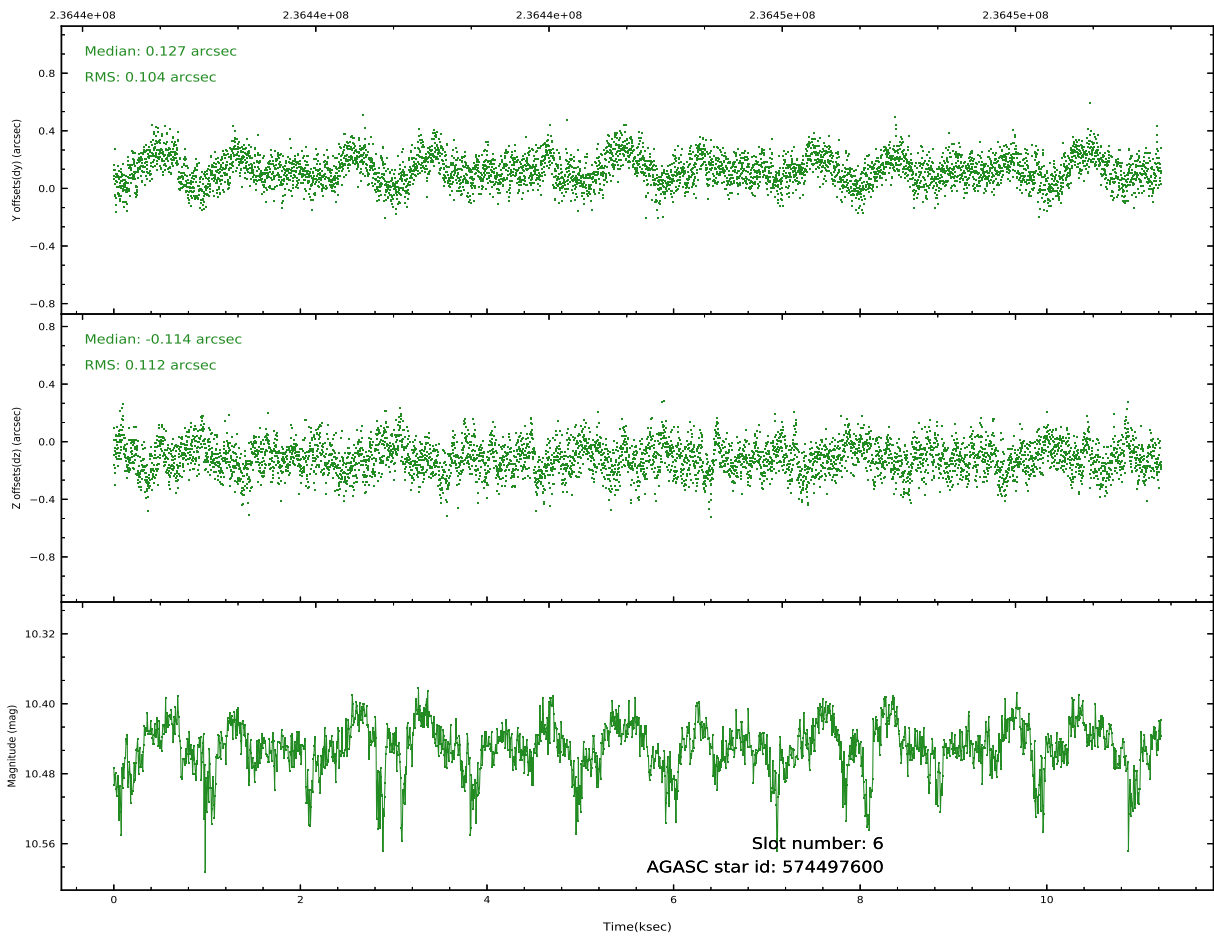
Time (s)



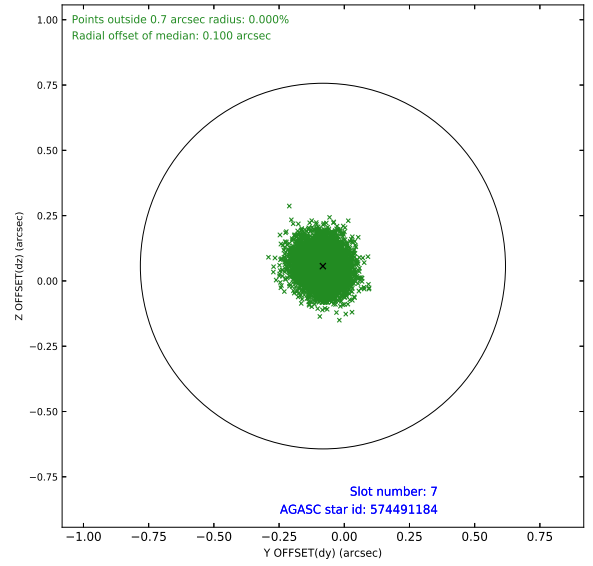
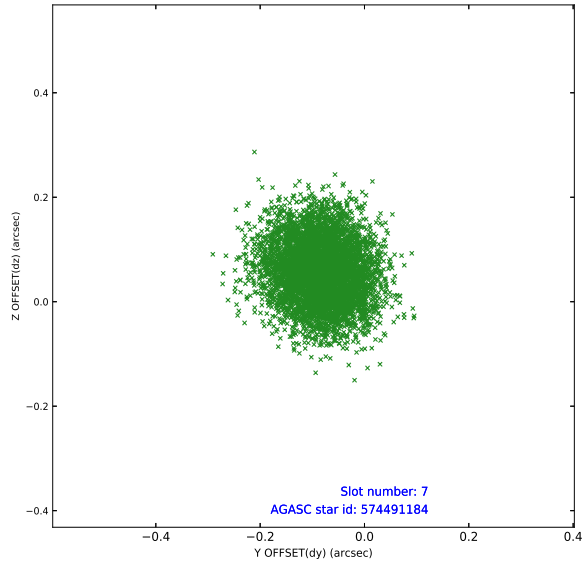
## 2.4.4 Slot 6



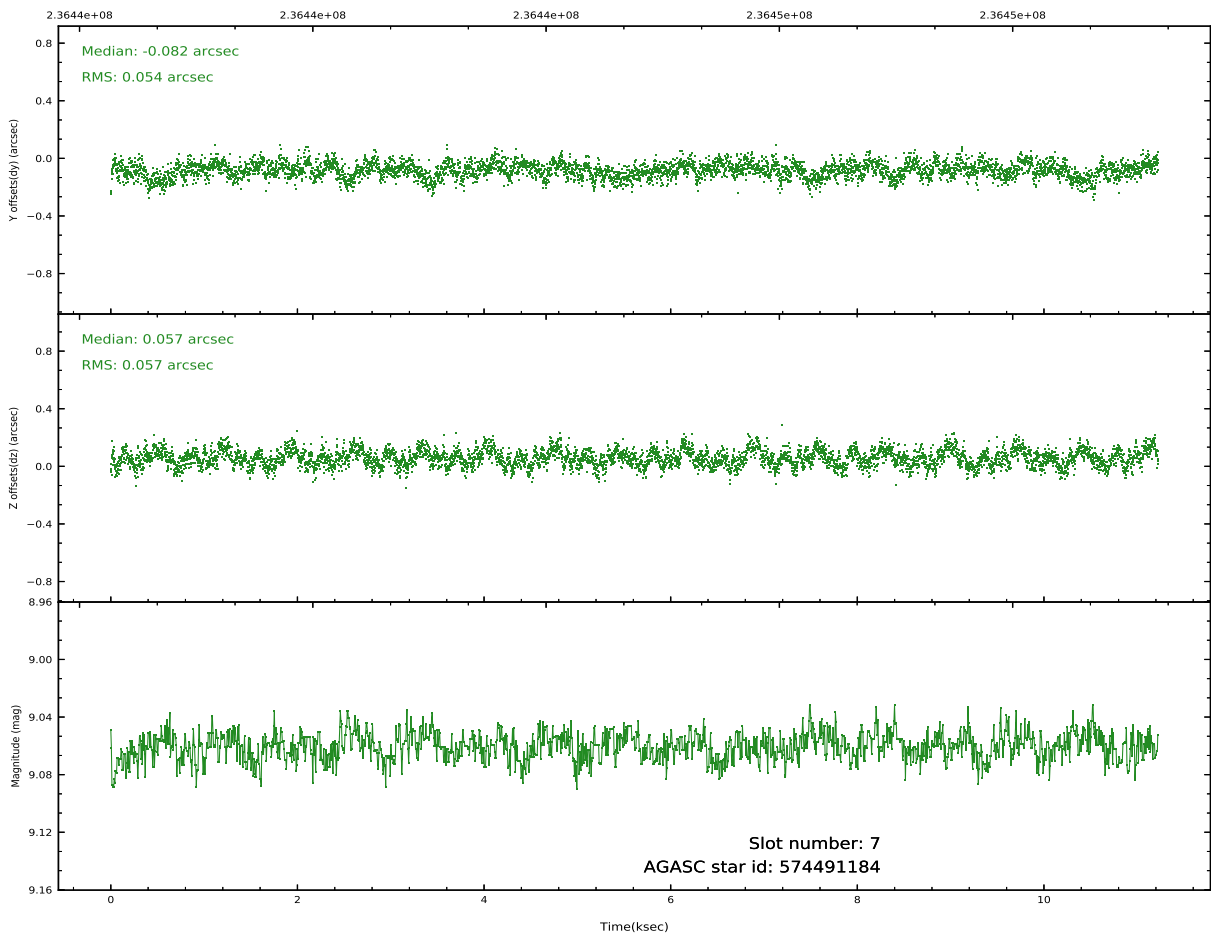
Time (s)



## 2.4.5 Slot 7

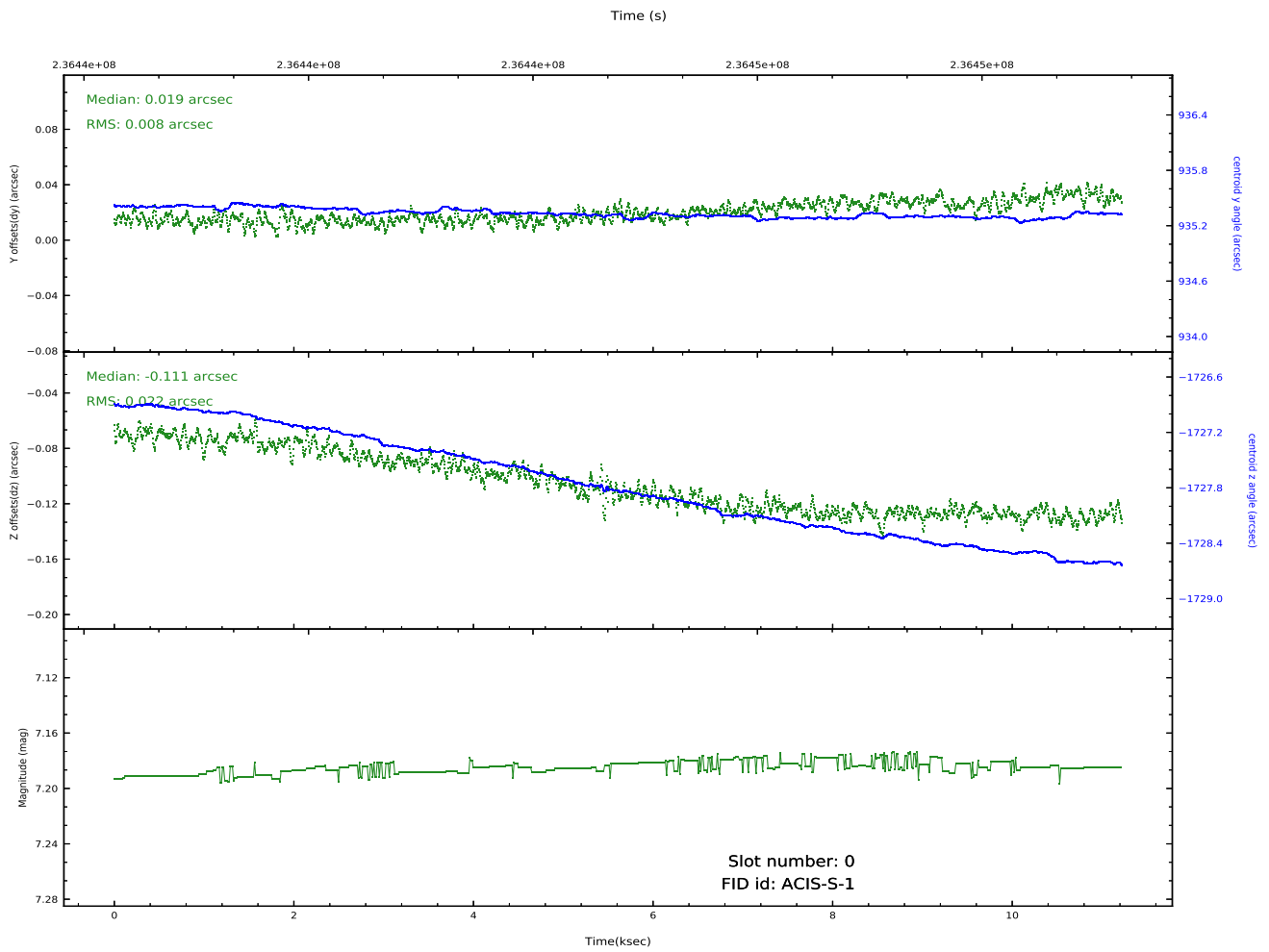
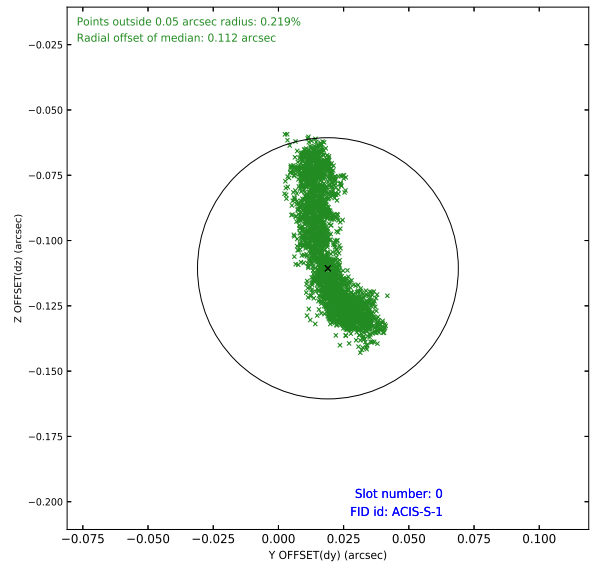
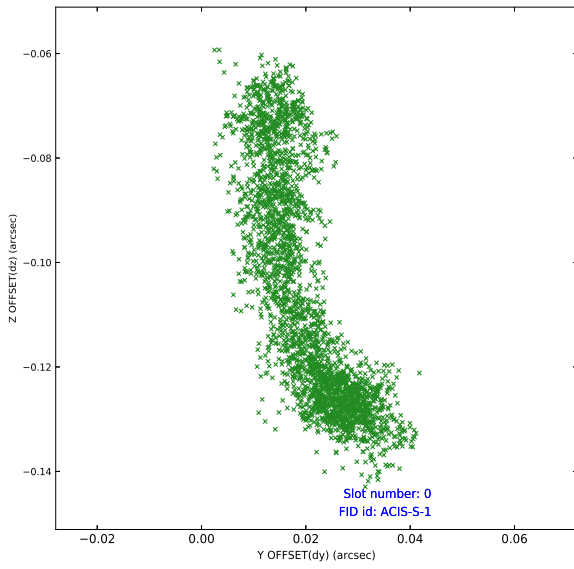


Time (s)

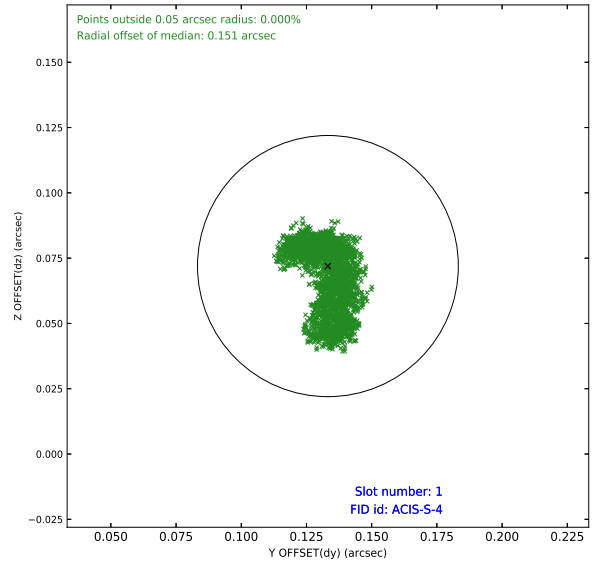
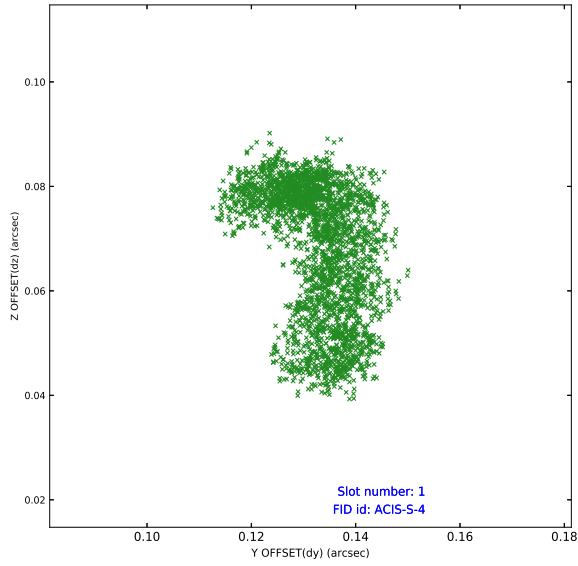


## 2.5 FID Slots

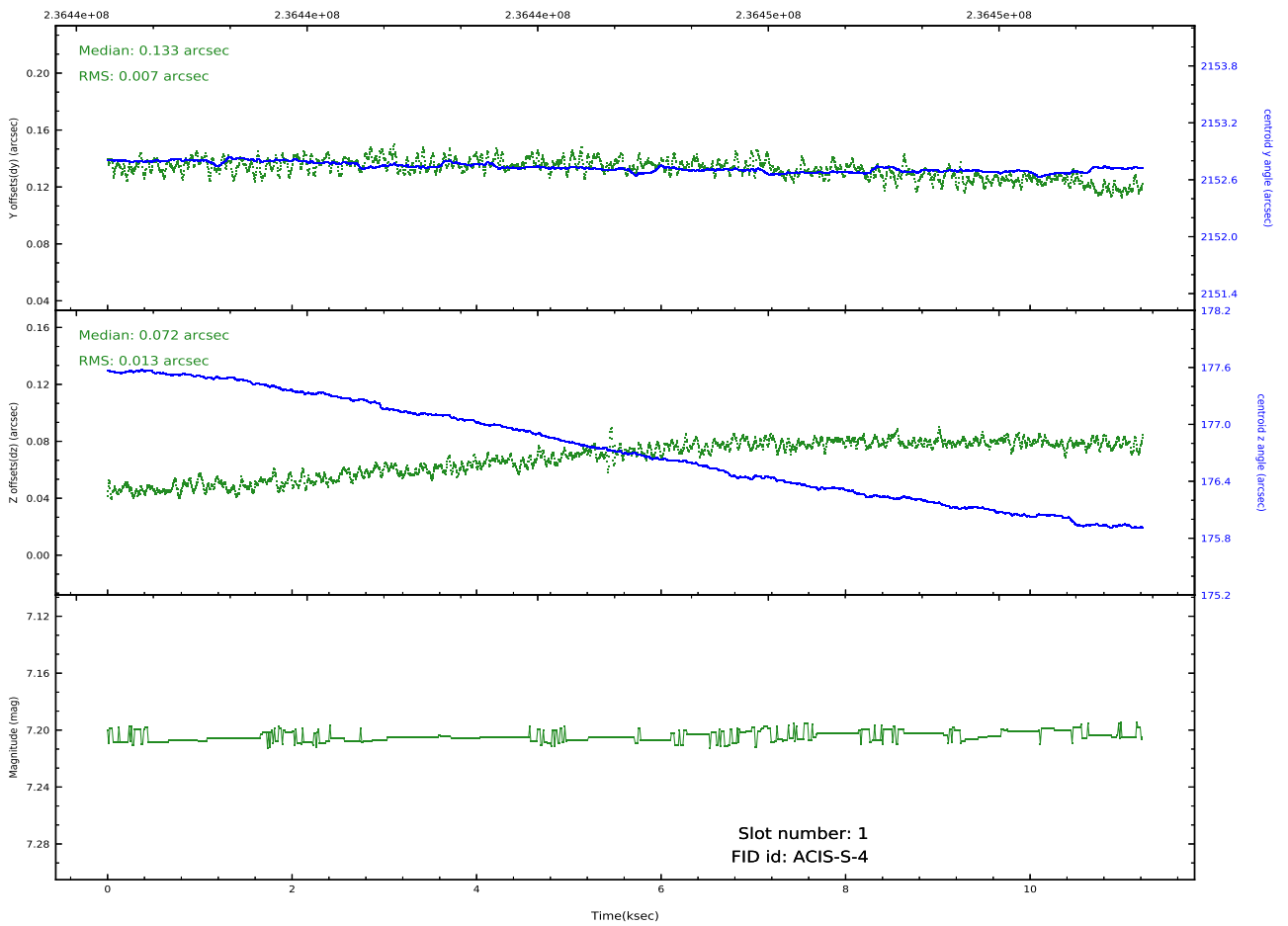
### 2.5.1 Slot 0



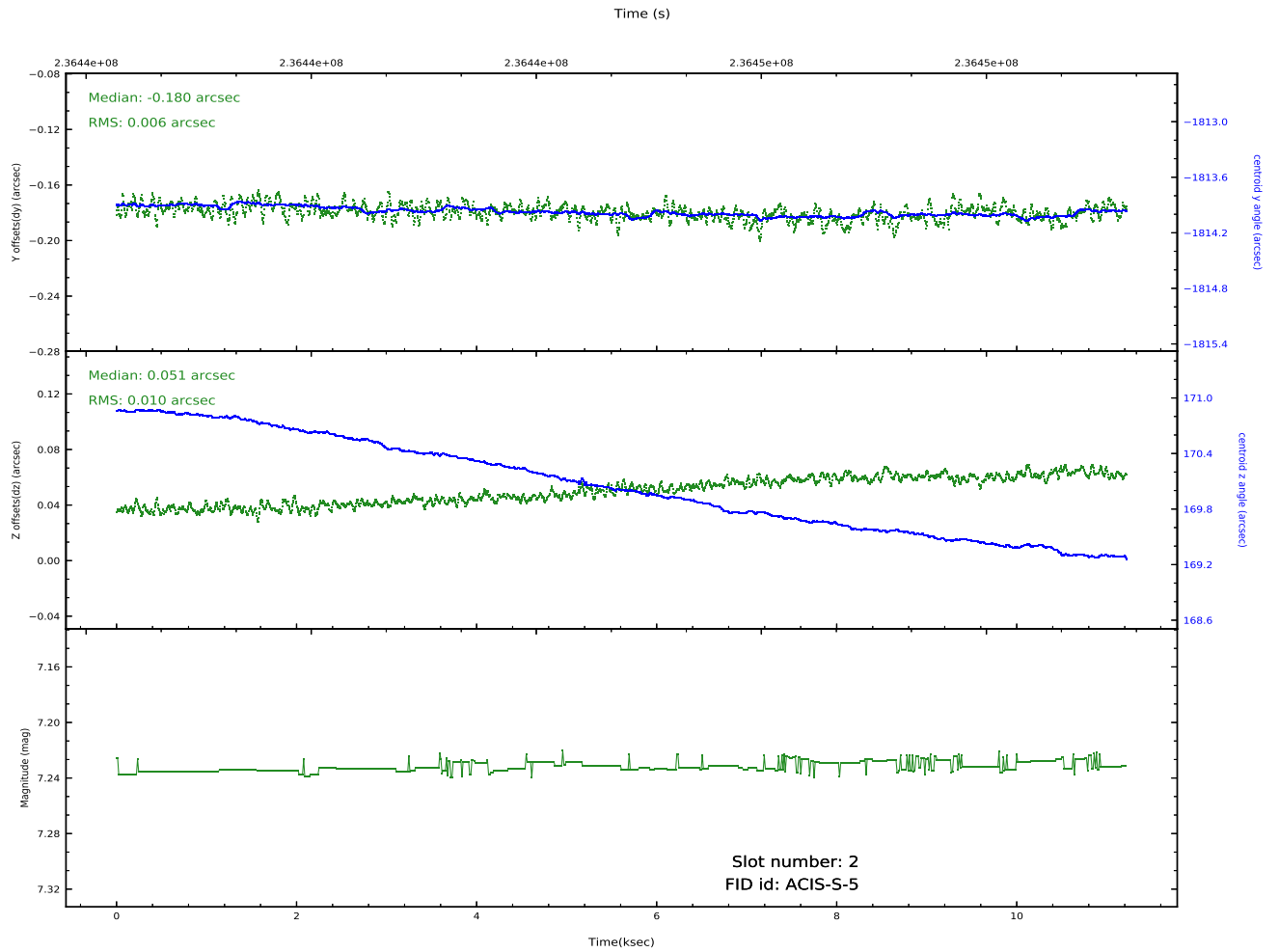
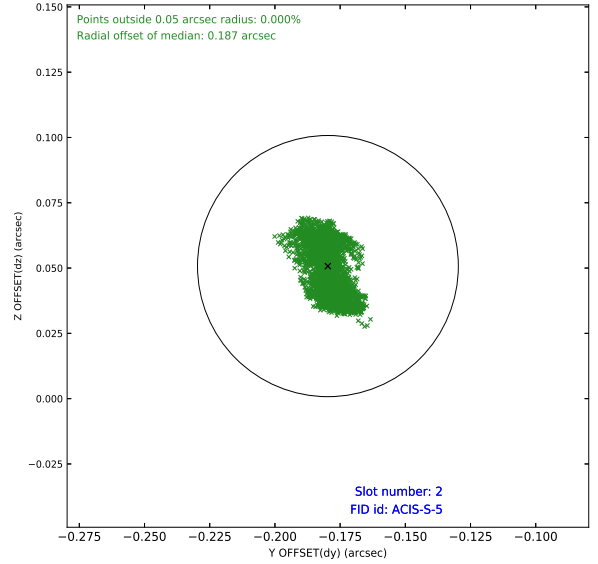
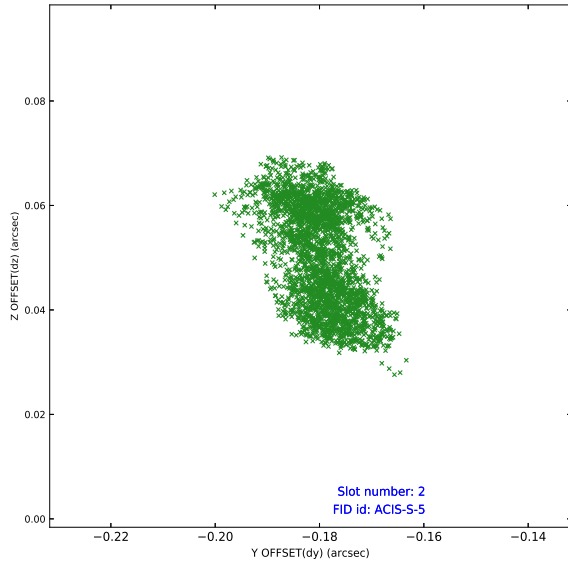
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.83519

## A.2 Comments