

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5505 - L2 Version 4  
Chandra X-Ray Center

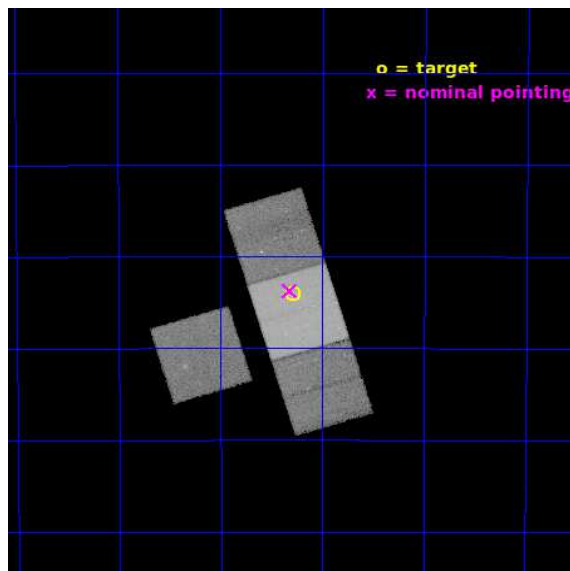
L2 Processing Date : Oct 7 2020

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# 1 Front

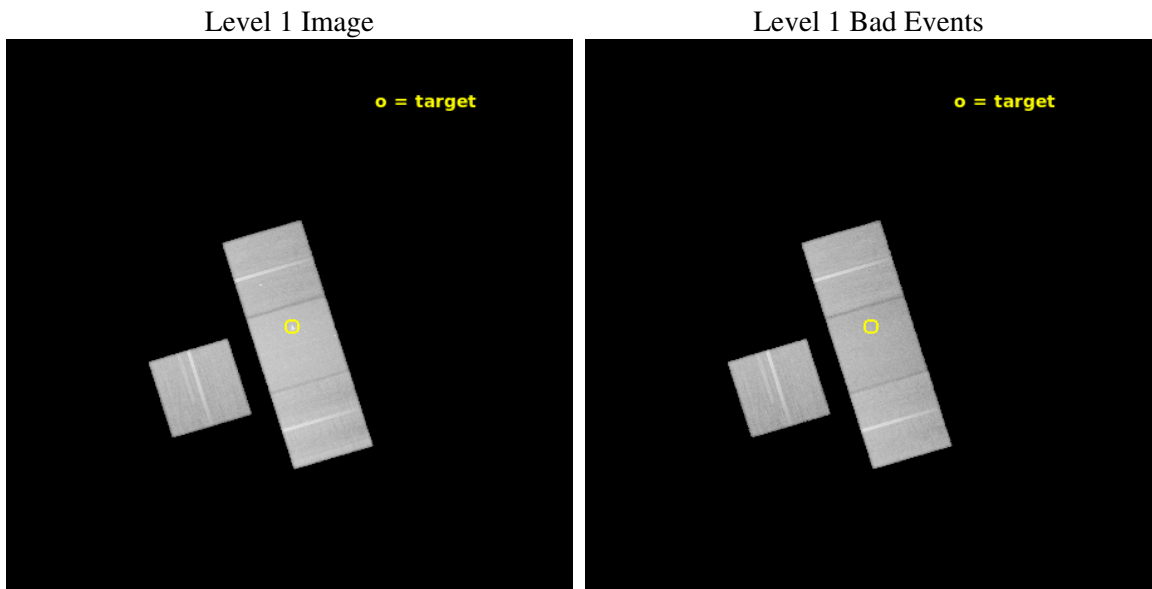
seq_num	400435	Sequence number
obs_id	5505	Observation id
title	X-ray Binaries in the Ultrahigh Collision Rate Globular Cluster NGC 6388	Proposal title
observer	Haldan Cohn	Principal investigator
object	NGC 6388	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	264.070833	Observer's specified target RA [deg]
dec_targ	-44.735	Observer's specified target Dec [deg]
ra_nom	264.07989355621	Nominal RA [deg]
dec_nom	-44.729071589483	Nominal Dec [deg]
roll_nom	72.973924748139	Nominal Roll [deg]
revision	4	Processing version of data
ontime	45163.899913132	Sum of GTIs [s]
livetime	44573.800311588	Livetime [s]
ontime3	45157.617942721	Sum of GTIs [s]
ontime6	45163.899913132	Sum of GTIs [s]
ontime7	45163.899913132	Sum of GTIs [s]
ontime8	45154.477042139	Sum of GTIs [s]
l2events	329982	Number of level 2 events



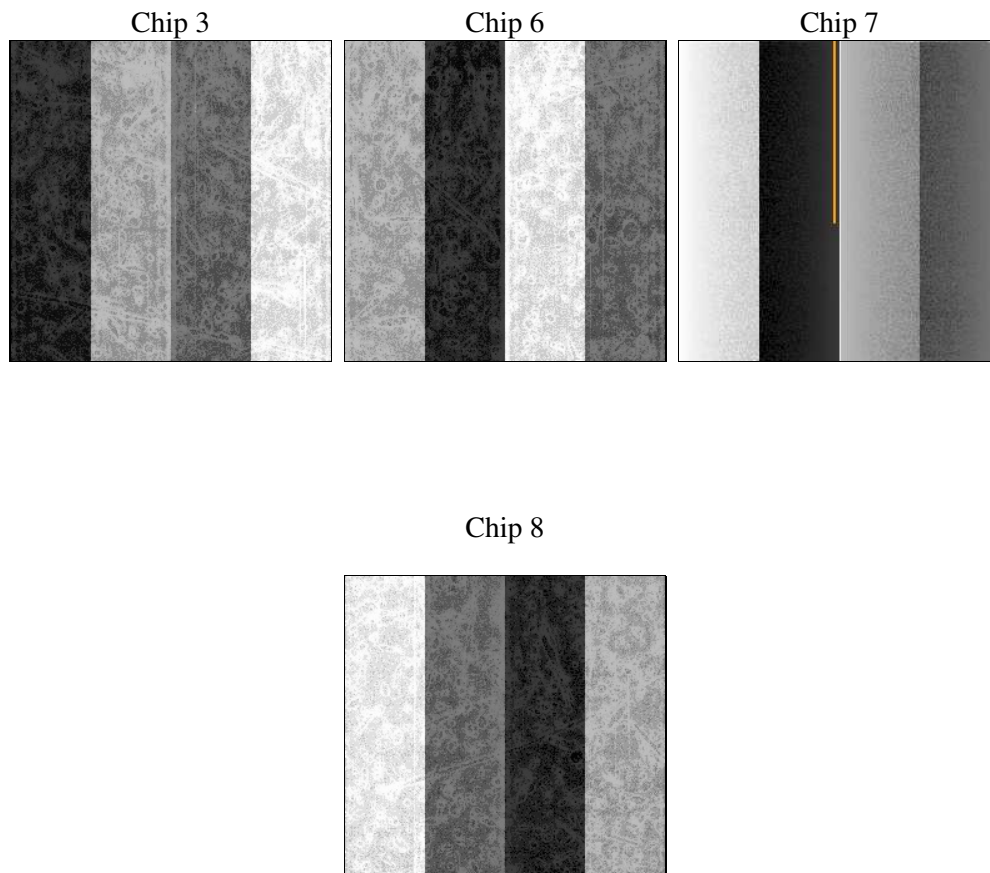
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	45163.899913132	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime3	45157.617942721	Sum of GTIs [s]
date	2020-10-07T23:52:38	Date and time of file creation	ontime6	45163.899913132	Sum of GTIs [s]
revision	4	Processing version of data	ontime7	45163.899913132	Sum of GTIs [s]
			ontime8	45154.477042139	Sum of GTIs [s]
			l1events	1651560	Number of level 1 events

### 2.1.4 Events

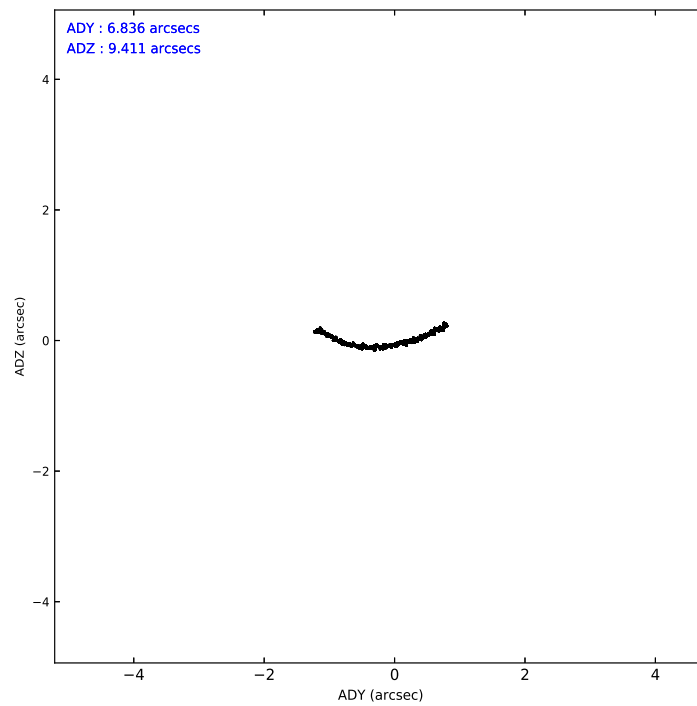
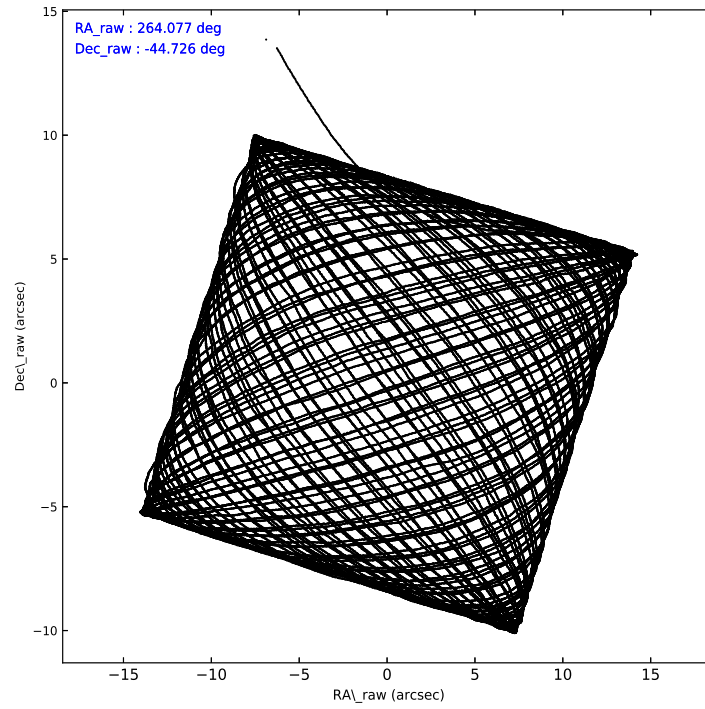
	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	348733	363231	489857	449739
rejected events	304304	315199	280123	350902
rejected %	87%	86%	57%	78%

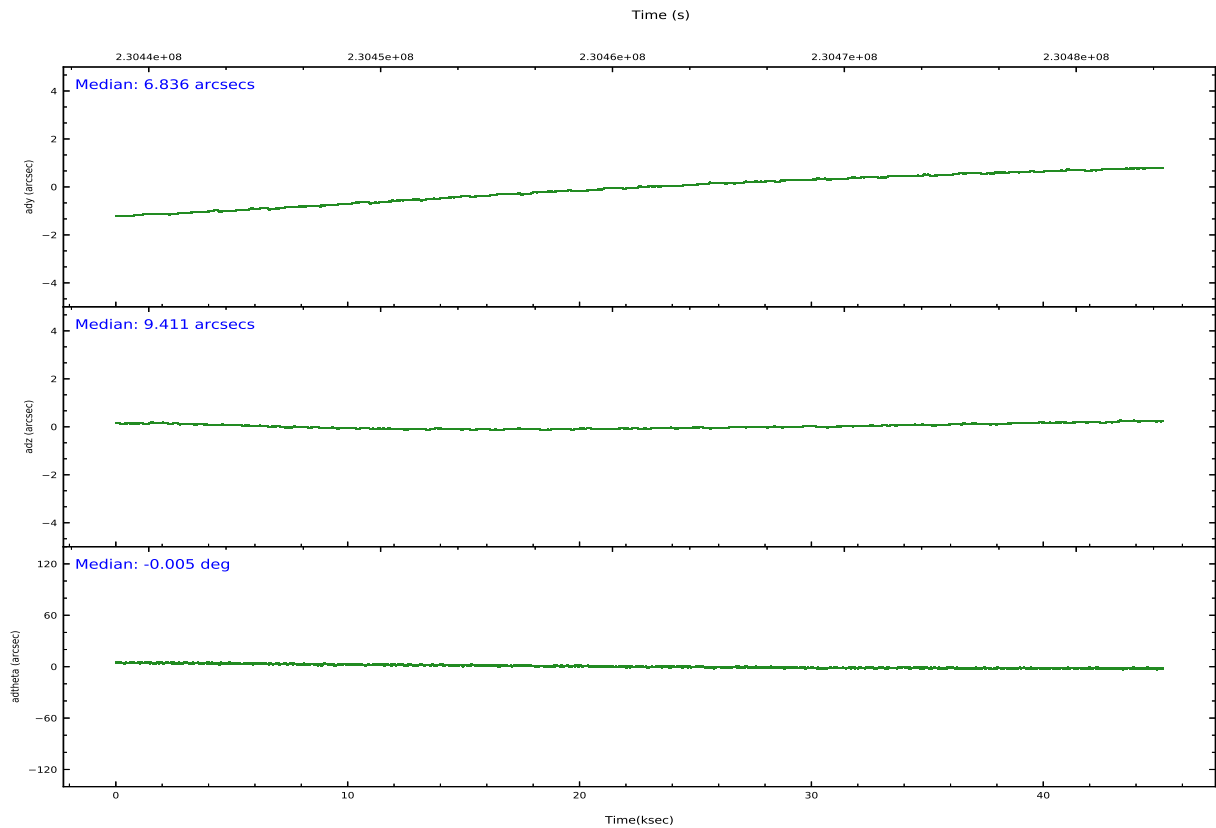
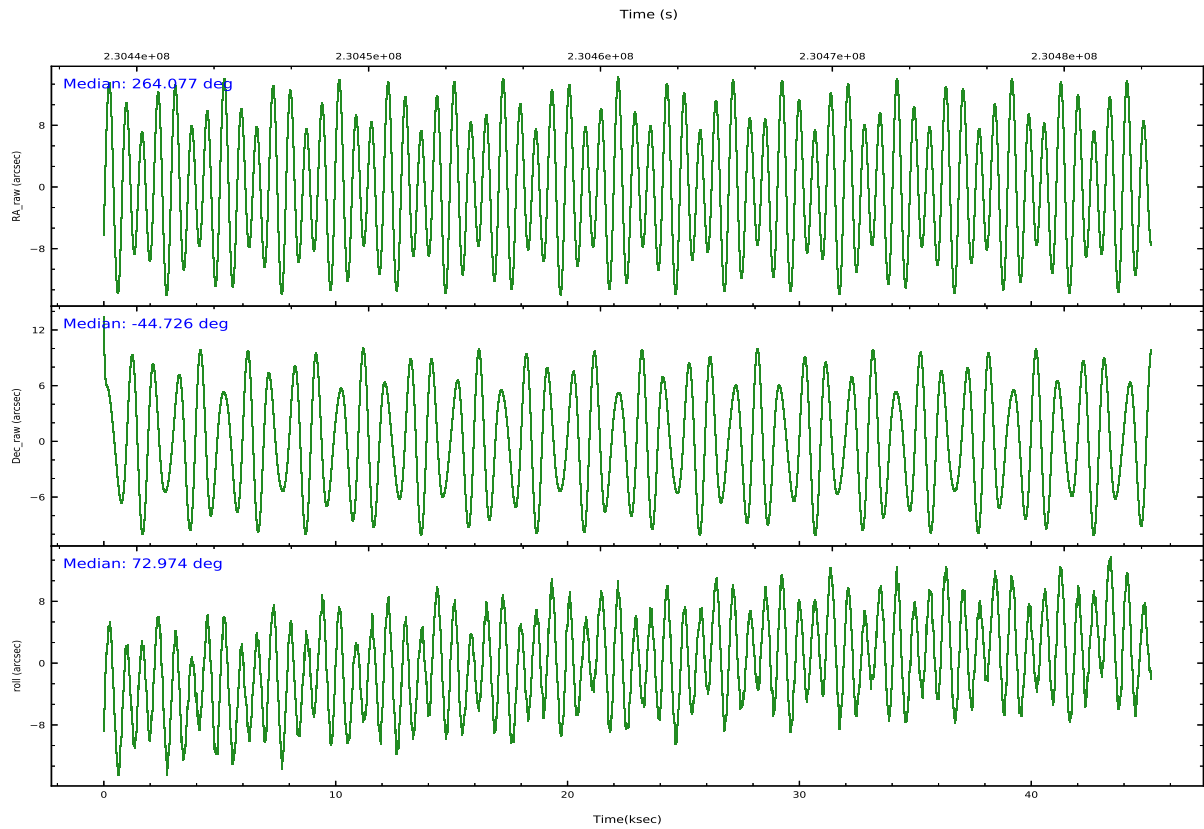
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	21206	21680	21862	33618
	6%	5%	4%	7%
grade 1 events	213	176	486	327
	0%	0%	0%	0%
grade 2 events	8077	9260	42880	21308
	2%	2%	8%	4%
grade 3 events	3957	4320	18948	10096
	1%	1%	3%	2%
grade 4 events	4061	4285	18601	9157
	1%	1%	3%	2%
grade 5 events	15781	16540	45220	21507
	4%	4%	9%	4%
grade 6 events	7253	8596	107921	24949
	2%	2%	22%	5%
grade 7 events	288185	298374	233939	328777
	82%	82%	47%	73%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-3678	ACIS-3678	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	264.086154	264.07989355621	Subarray requested	NONE	NONE
[deg] Pointing Dec	-44.752850	-44.729071589483	Alternating exposures requested	N	N
[deg] Pointing Roll	72.823263	72.973924748139	[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)	230438747.184000	230437712.2677			
Observation start date	2005-04-21T02:44:43	2005-04-21T02:28:32			
[s] Observation end time (MET)	230483747.184000	230484164.24481			
Observation end date	2005-04-21T15:14:43	2005-04-21T15:22:44			
Read mode	TIMED	TIMED			

## 2.3 Aspect



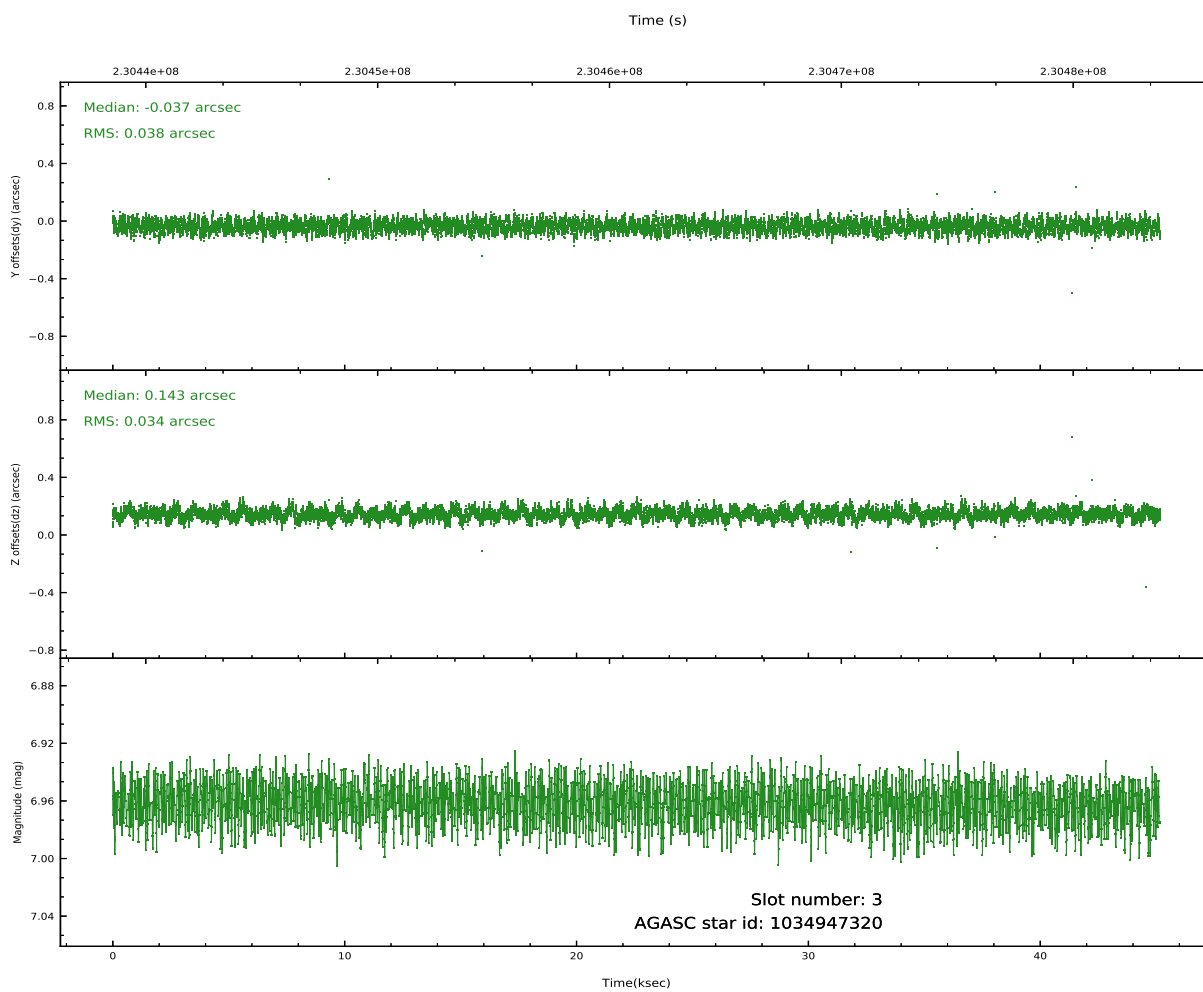
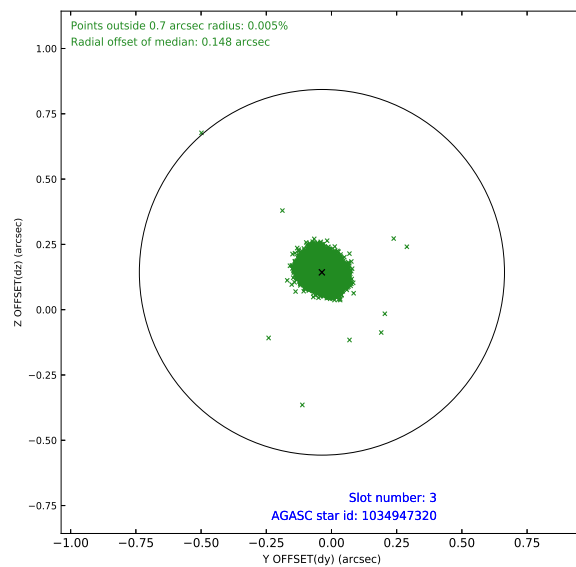
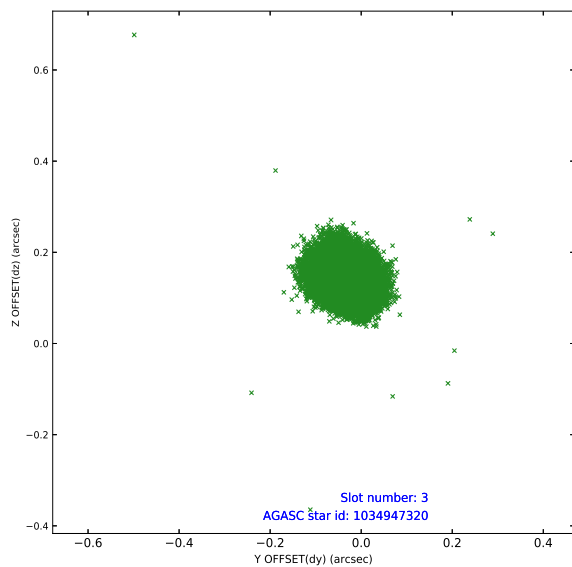


### Slot Statistics

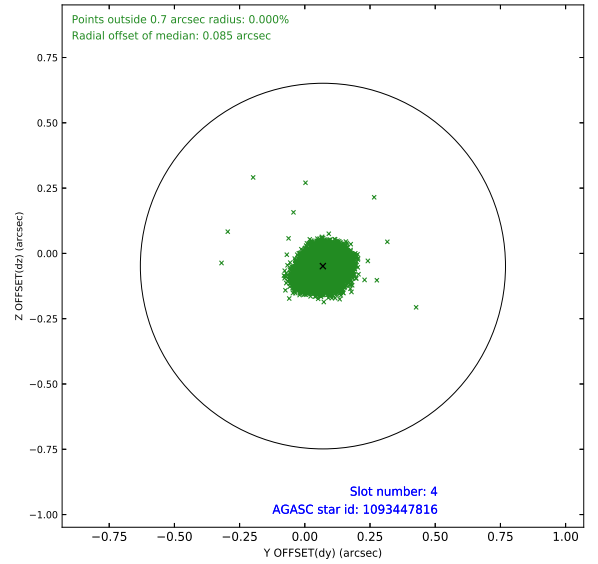
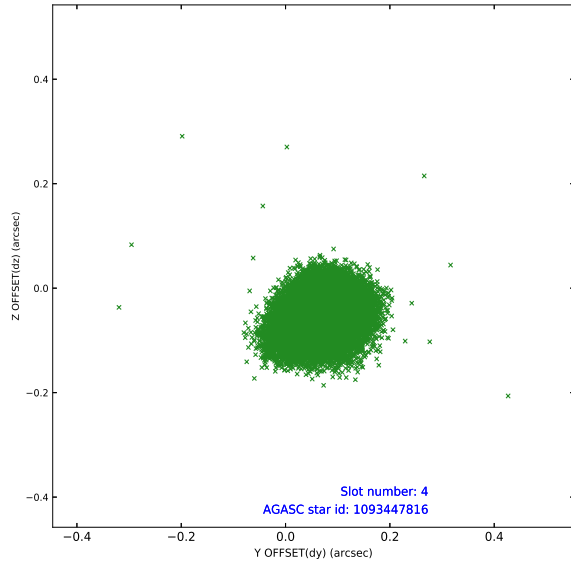
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-1	7.19	11017	1.000	0.053	-0.003	0.014	0.022	0.000000	0.000000	936.60	-1726
1	FID		ACIS-S-2	7.10	11018	1.000	-0.094	-0.061	0.013	0.025	0.000000	0.000000	-759.45	-1730
2	FID		ACIS-S-6	7.35	11017	1.000	0.019	0.070	0.011	0.019	0.000000	0.000000	402.24	815
3	GUIDE	used	1034947320	6.96	22032	1.000	-0.037	0.143	0.055	0.084	264.173264	-44.879236	-369.08	-346
4	GUIDE	used	1093447816	7.51	22031	1.000	0.069	-0.049	0.061	0.097	263.791954	-45.303183	-2113.94	126
5	GUIDE	used	1034965928	9.18	22023	1.000	-0.093	-0.071	0.083	0.134	263.810524	-44.053836	2192.34	1424
6	GUIDE	used	1034969200	9.35	22015	1.000	0.040	-0.119	0.092	0.151	264.026236	-44.199441	1857.84	736
7	GUIDE	used	1035084528	9.26	21953	1.000	0.027	0.096	0.102	0.167	265.175091	-44.382797	2082.76	-2288

## 2.4 Star Slots

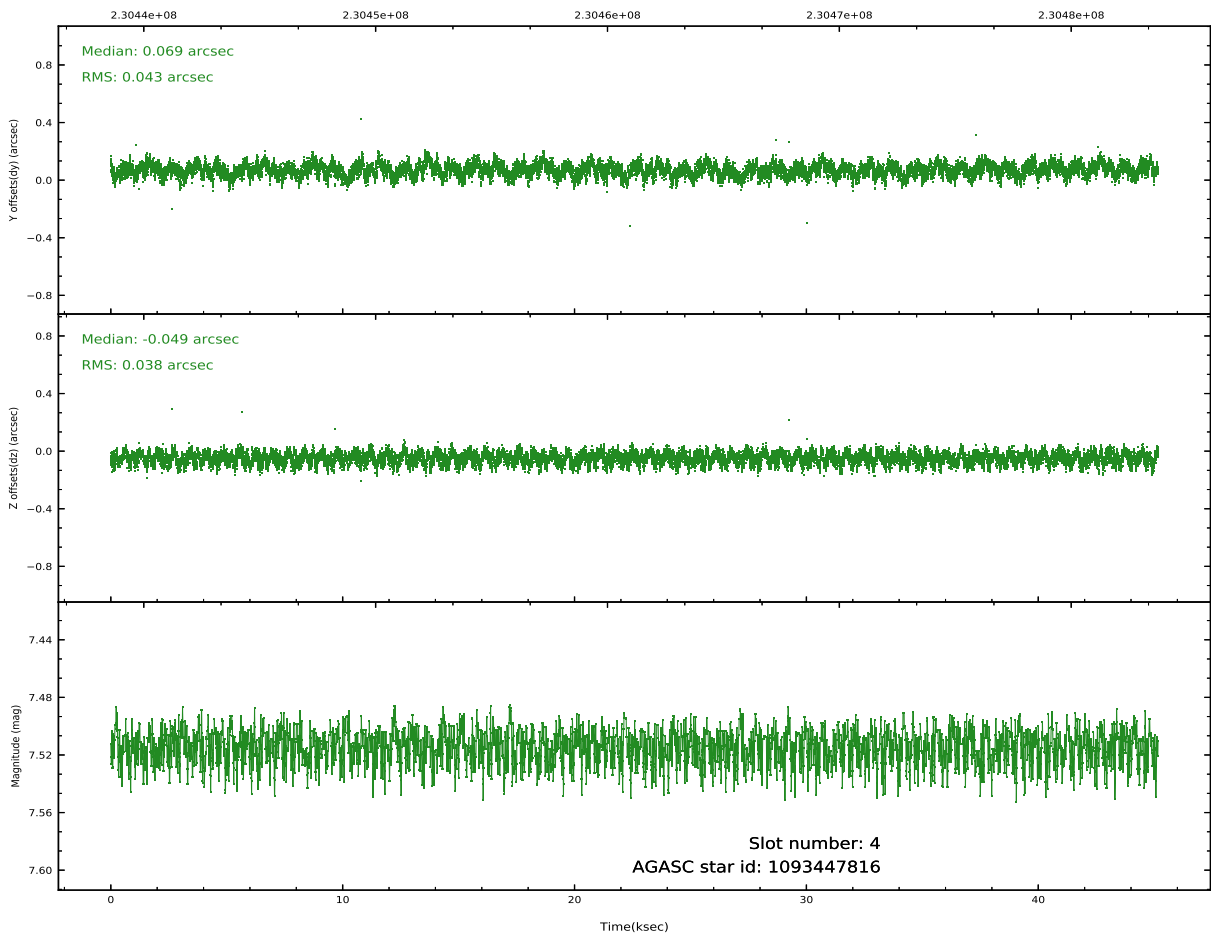
### 2.4.1 Slot 3



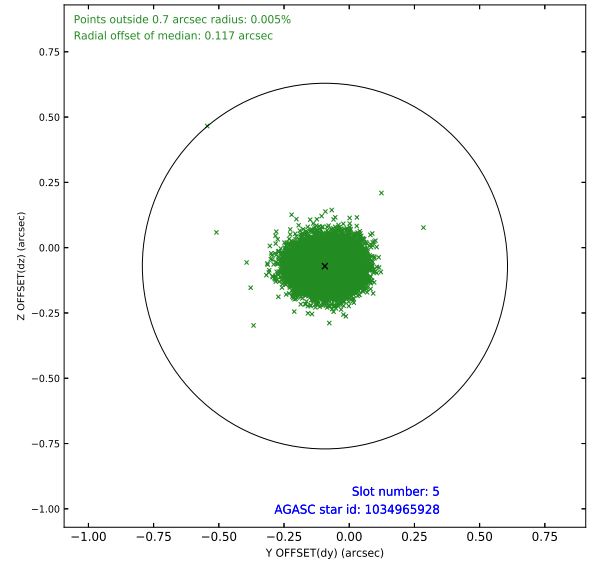
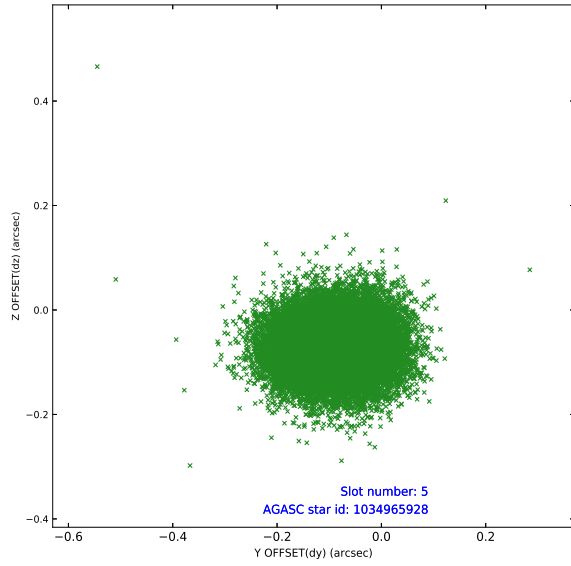
## 2.4.2 Slot 4



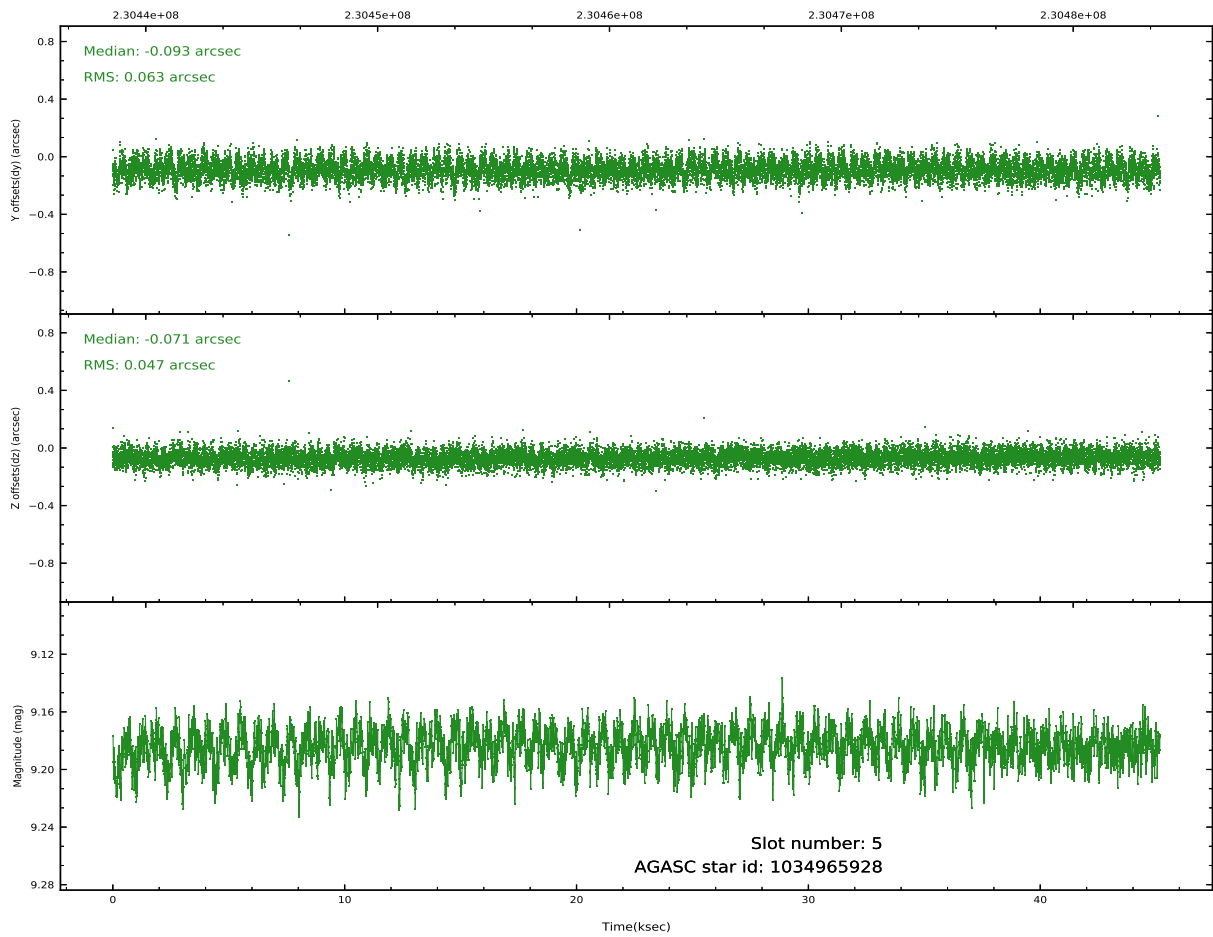
Time (s)



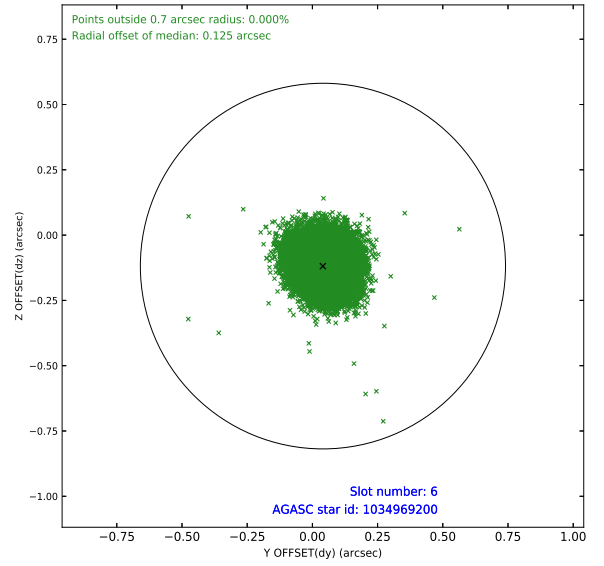
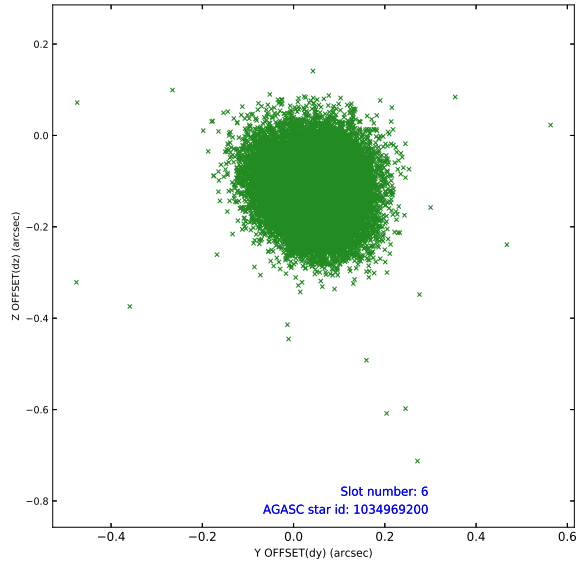
### 2.4.3 Slot 5



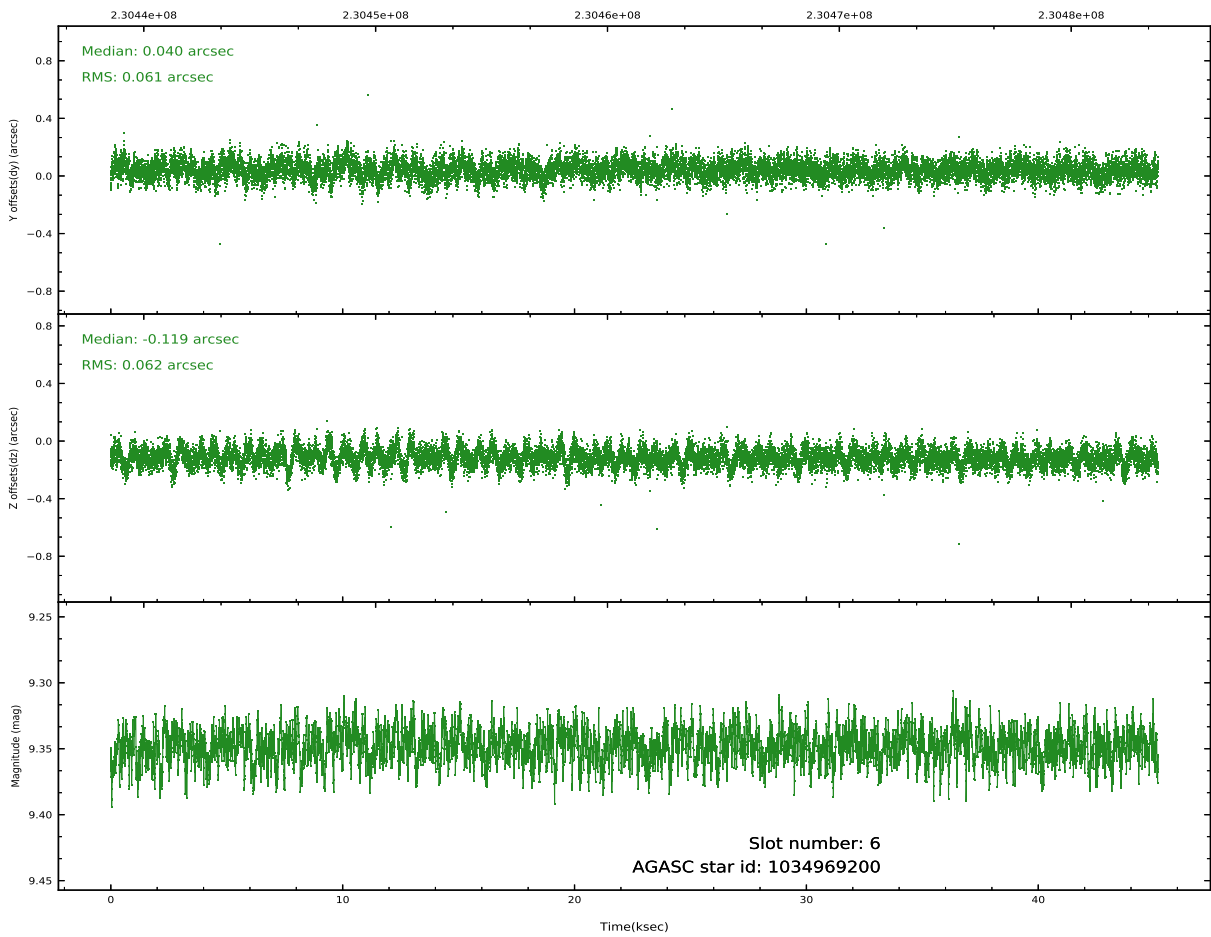
Time (s)



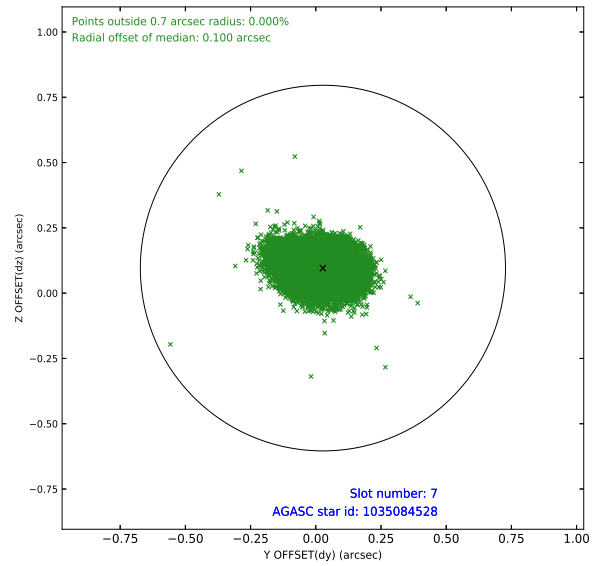
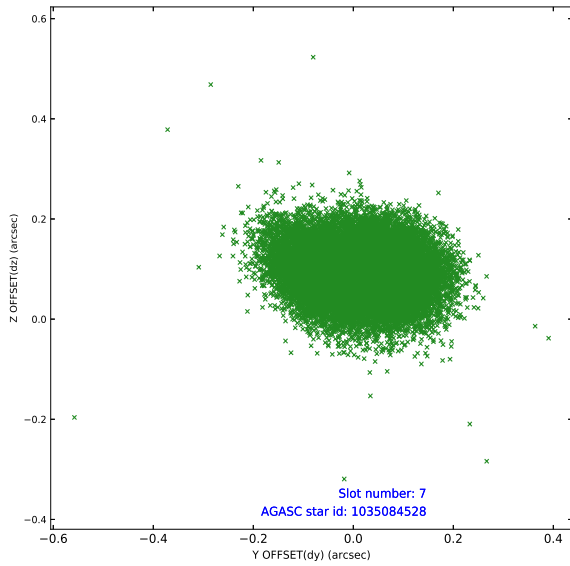
## 2.4.4 Slot 6



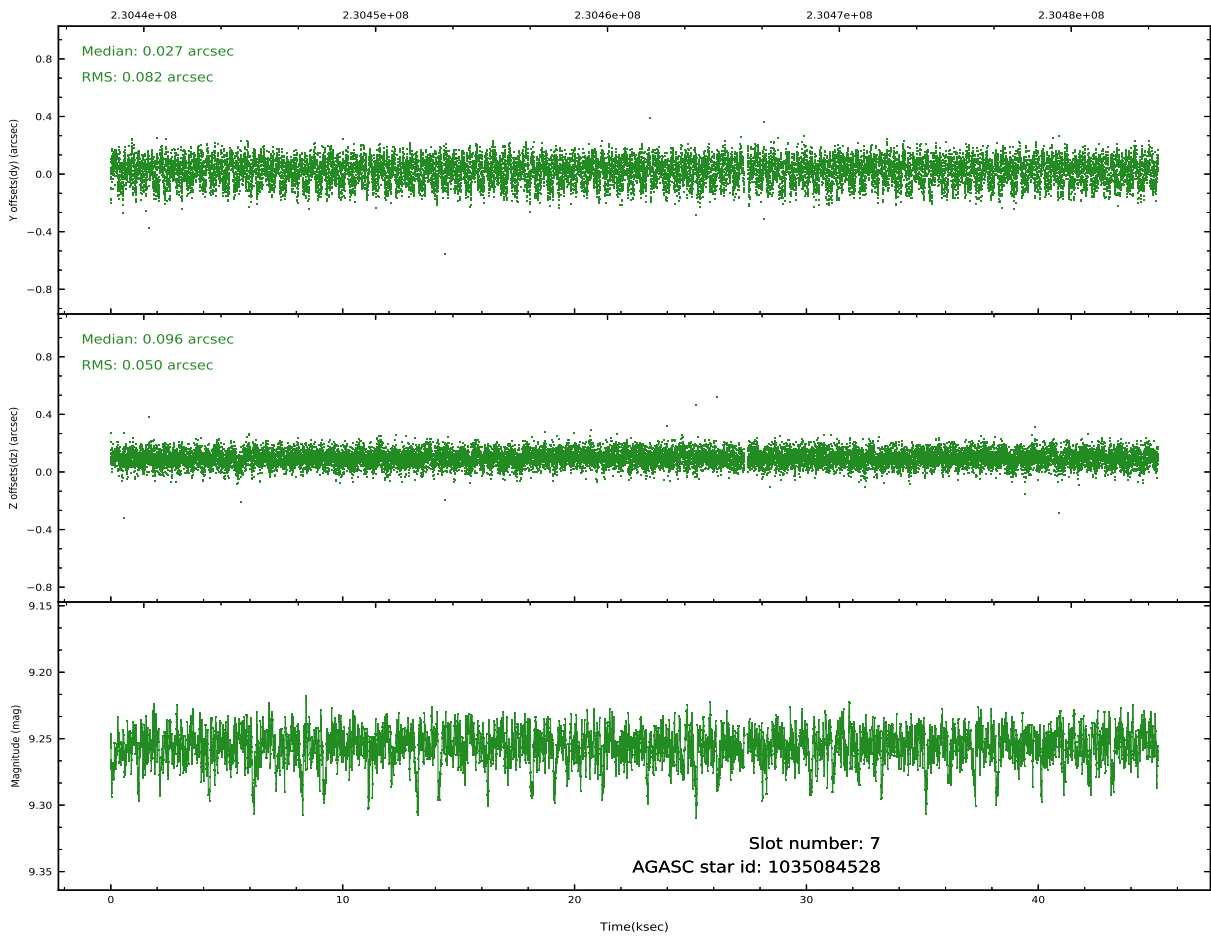
Time (s)



## 2.4.5 Slot 7

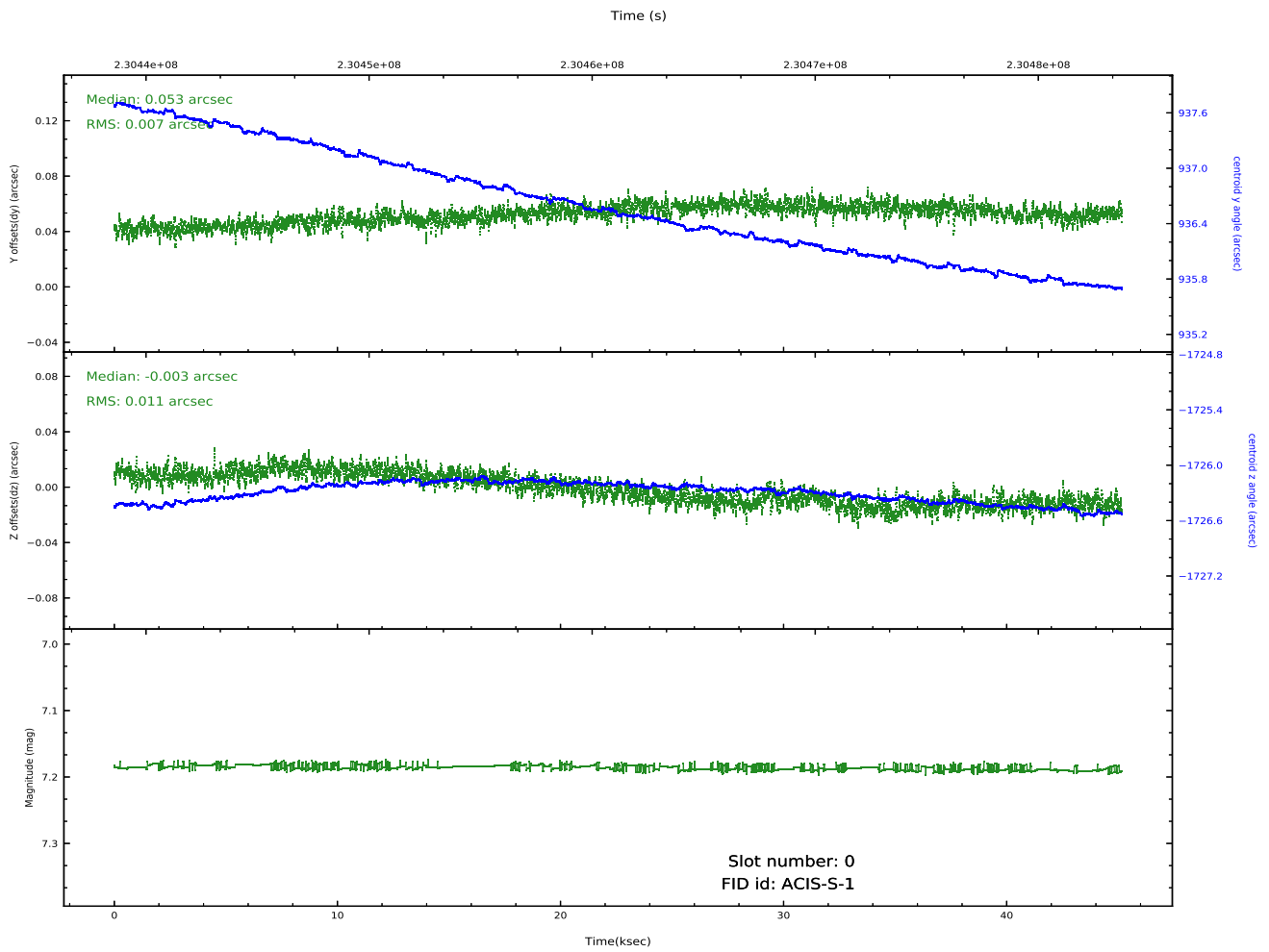
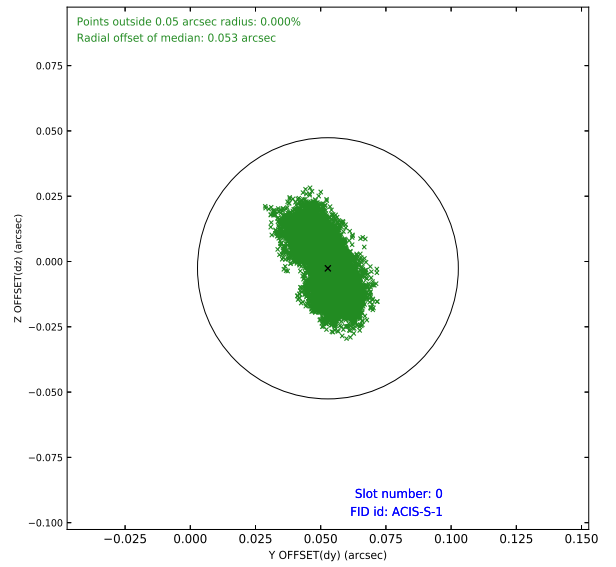
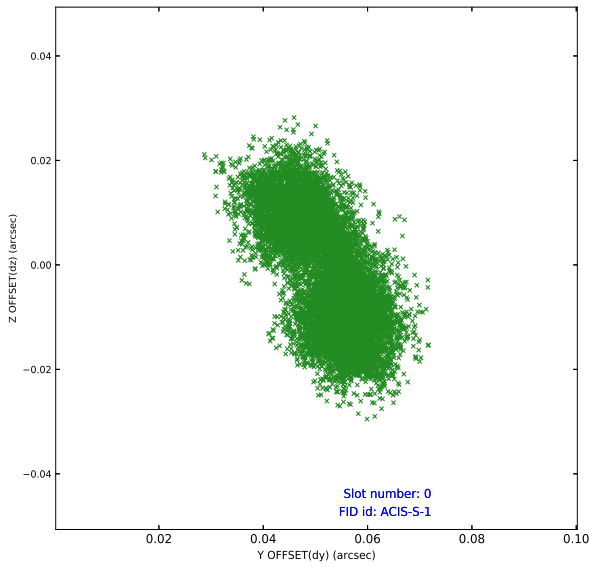


Time (s)

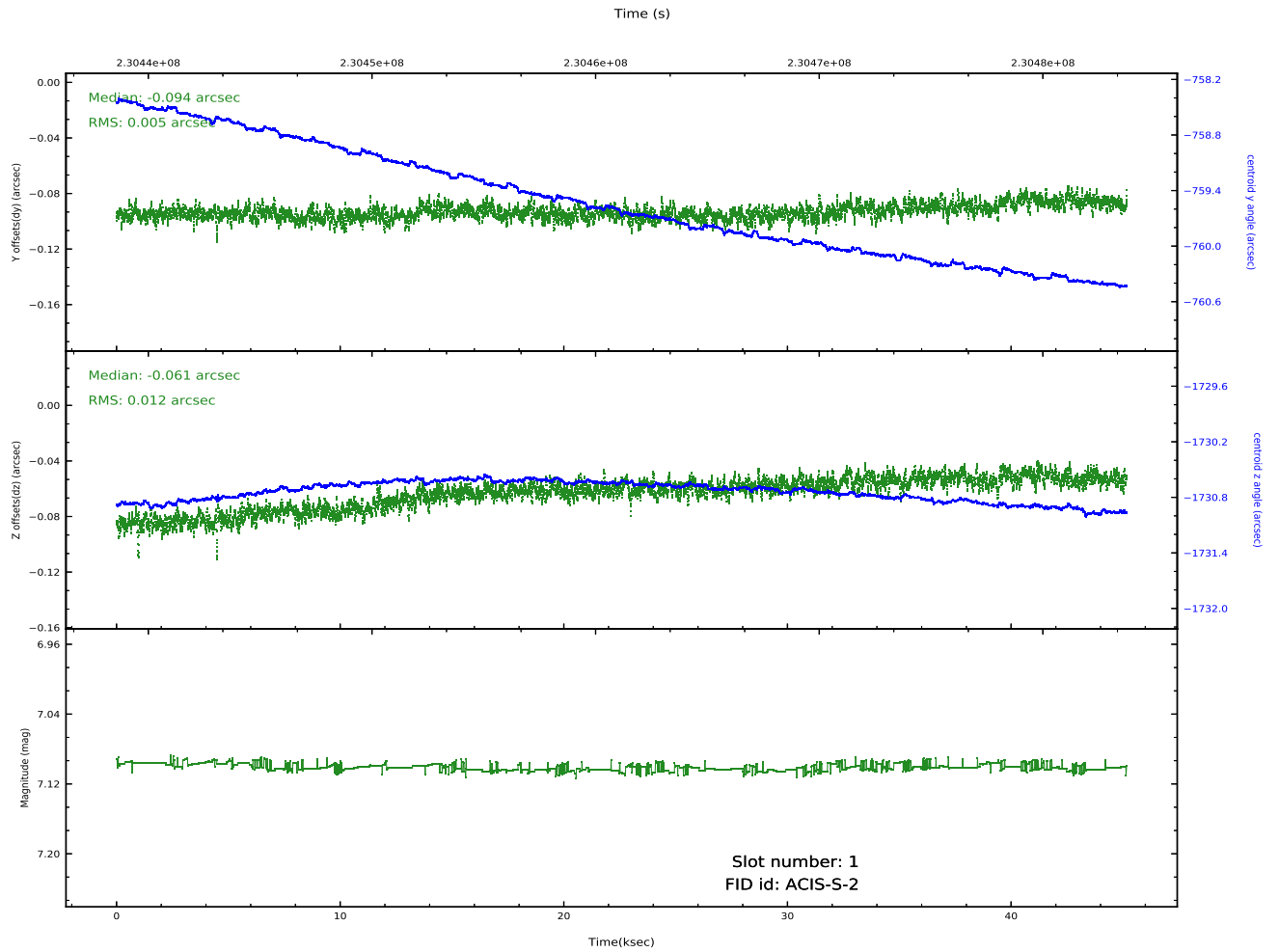
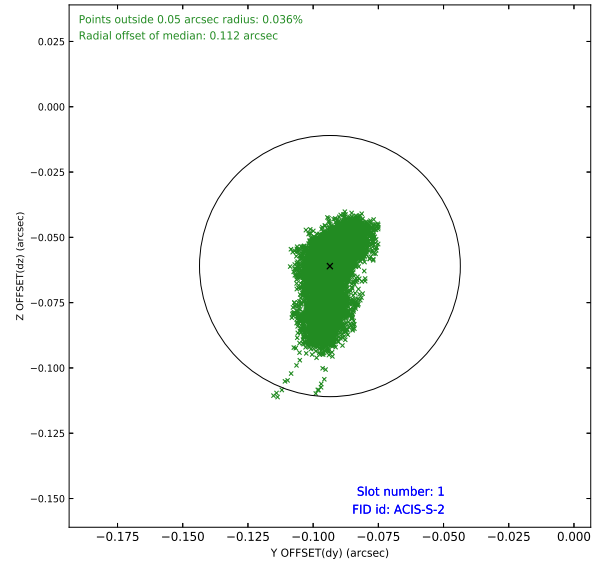
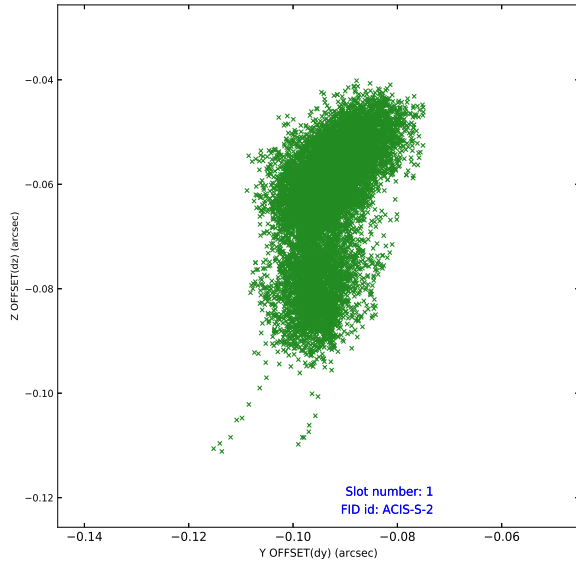


## 2.5 FID Slots

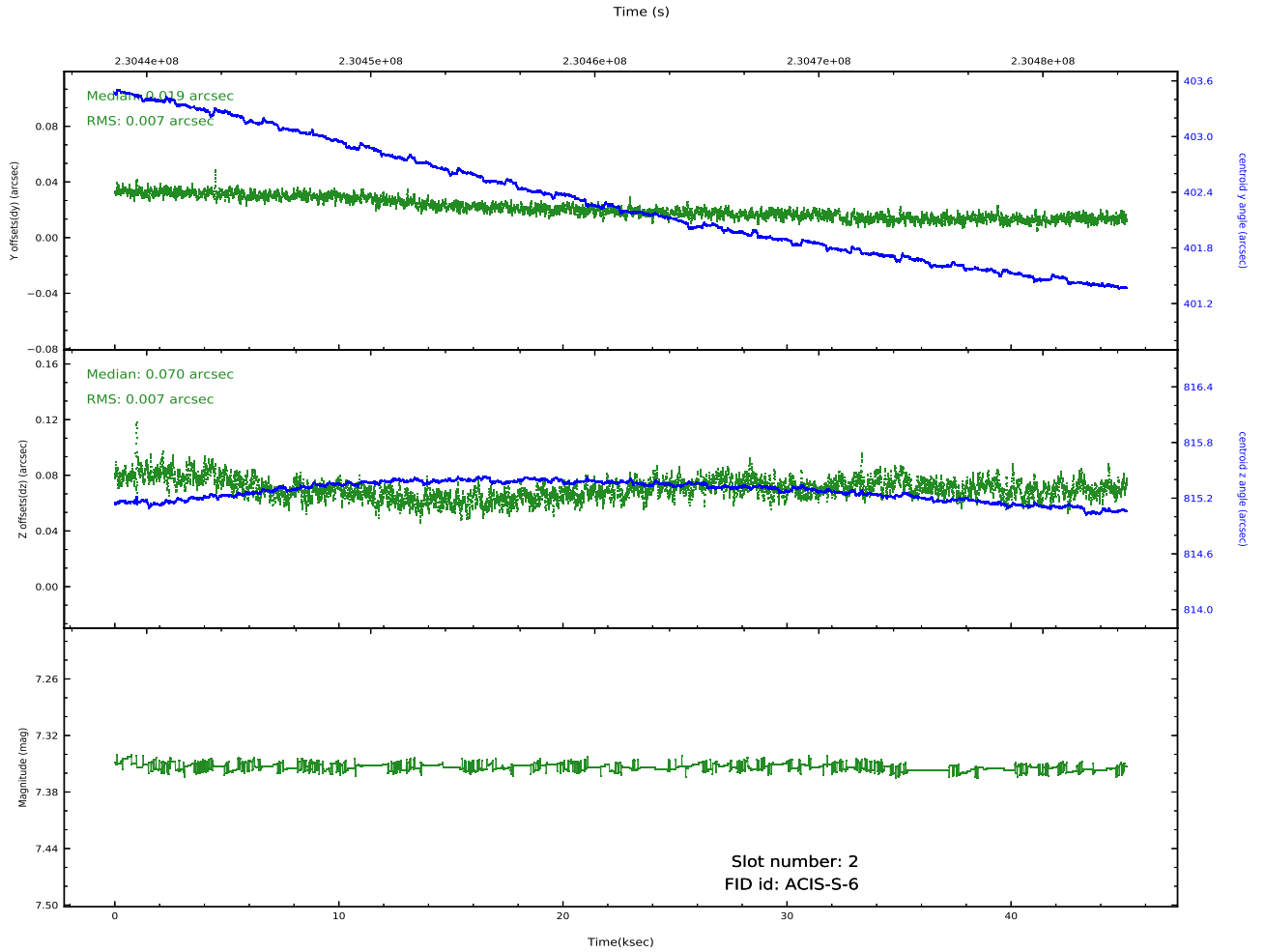
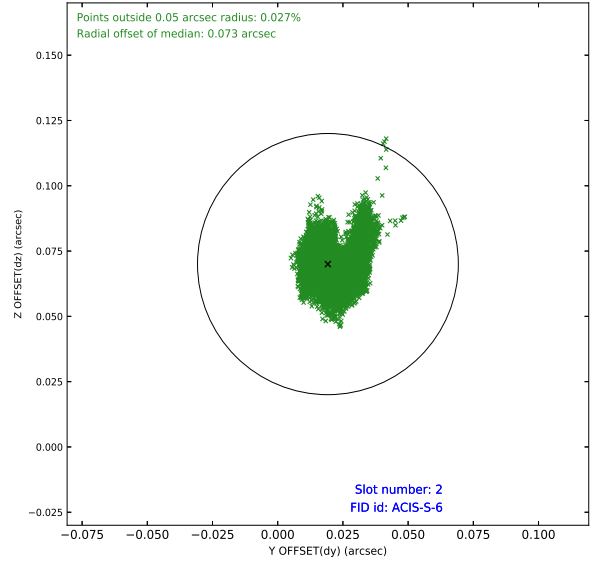
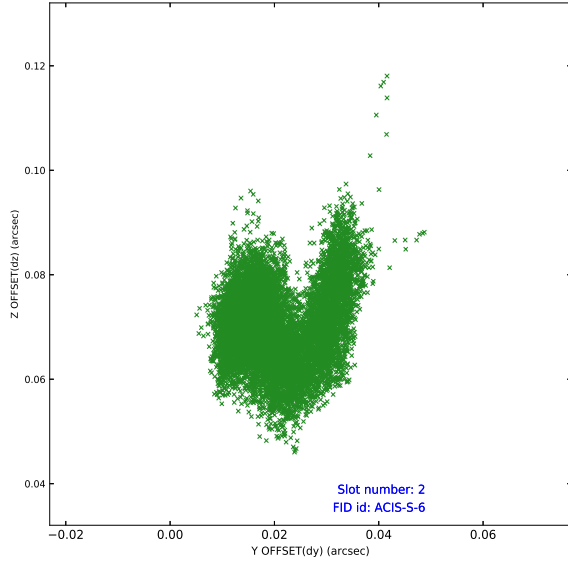
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.16389

## A.2 Comments

Joint proposal with HST. Streaks in column direction associated with the edges of the nodes on the CCD pass through some of the sources. This is not uncommon, but normally sources of interest are not at these points. Bias levels near node boundaries should be examined.