

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4725 - L2 Version 4  
Chandra X-Ray Center

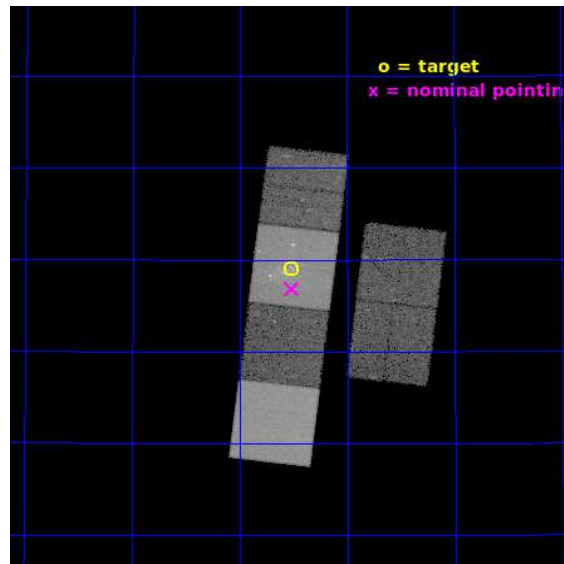
L2 Processing Date : Sep 27 2020

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# 1 Front

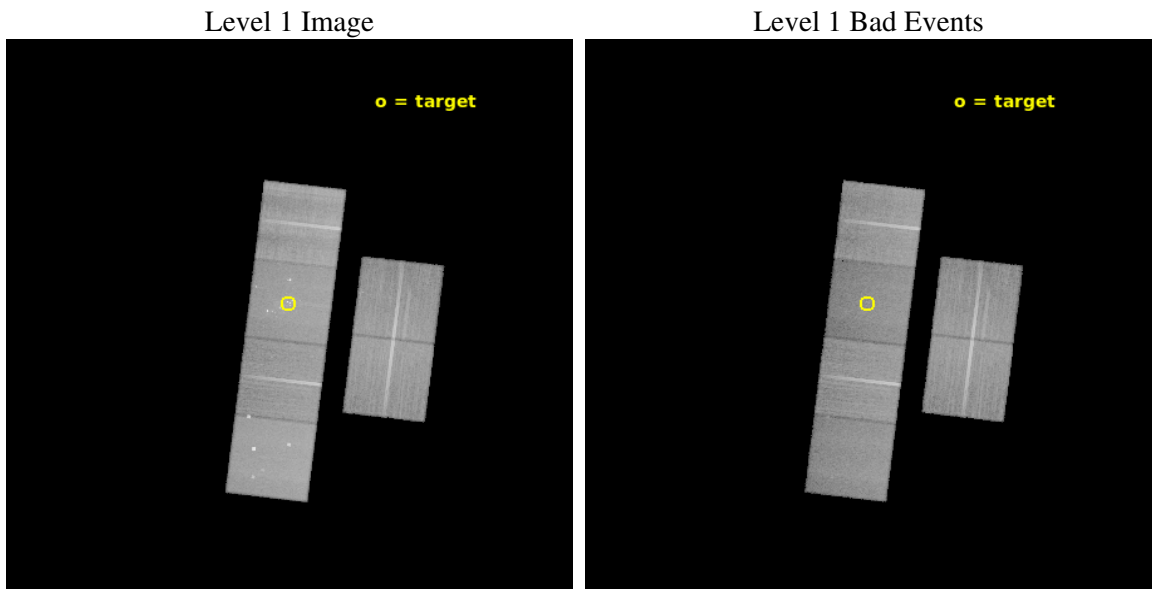
seq_num	600380	Sequence number
obs_id	4725	Observation id
title	The ultraluminous X-ray sources of NGC 4485/4490	Proposal title
observer	Dr Timothy Roberts	Principal investigator
object	NGC 4485/NGC 4490	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.63	Observer's specified target RA [deg]
dec_targ	41.65	Observer's specified target Dec [deg]
ra_nom	187.62883517978	Nominal RA [deg]
dec_nom	41.614519937522	Nominal Dec [deg]
roll_nom	276.83239464803	Nominal Roll [deg]
revision	4	Processing version of data
ontime	38959.941156298	Sum of GTIs [s]
livetime	38466.606922517	Livetime [s]
ontime2	38953.500275731	Sum of GTIs [s]
ontime3	38953.336185455	Sum of GTIs [s]
ontime5	38959.900116295	Sum of GTIs [s]
ontime6	38956.618116021	Sum of GTIs [s]
ontime7	38959.941156298	Sum of GTIs [s]
ontime8	38956.536036044	Sum of GTIs [s]
l2events	343982	Number of level 2 events



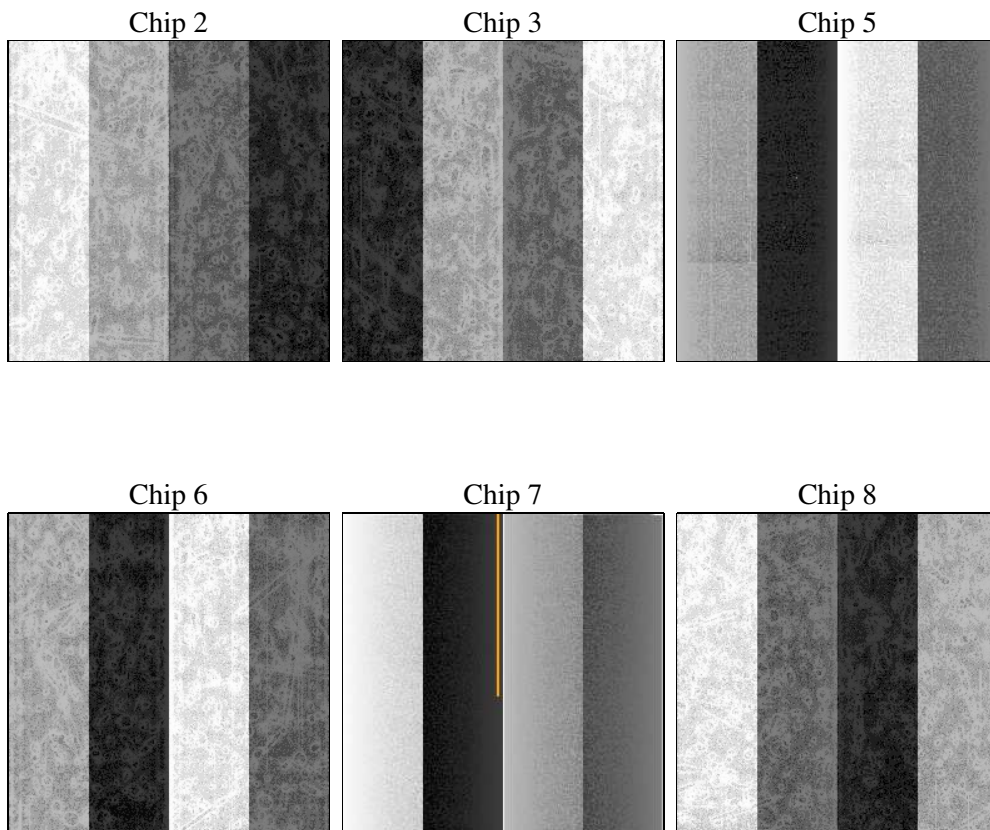
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	3	Obi number	sched_exp_time	39000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	38959.941156298	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	38953.500275731	Sum of GTIs [s]
date	2020-09-27T13:51:05	Date and time of file creation	ontime3	38953.336185455	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	38959.900116295	Sum of GTIs [s]
			ontime6	38956.618116021	Sum of GTIs [s]
			ontime7	38959.941156298	Sum of GTIs [s]
			ontime8	38956.536036044	Sum of GTIs [s]
			l1events	1548739	Number of level 1 events

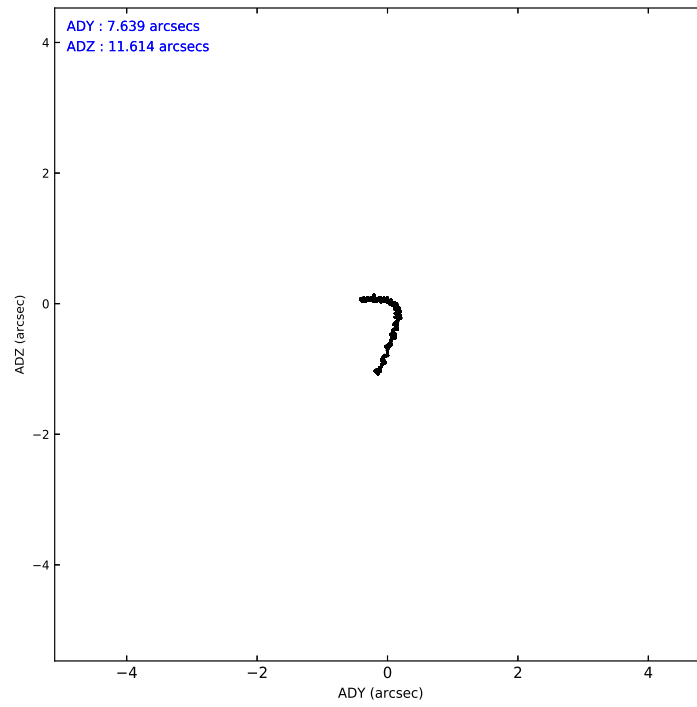
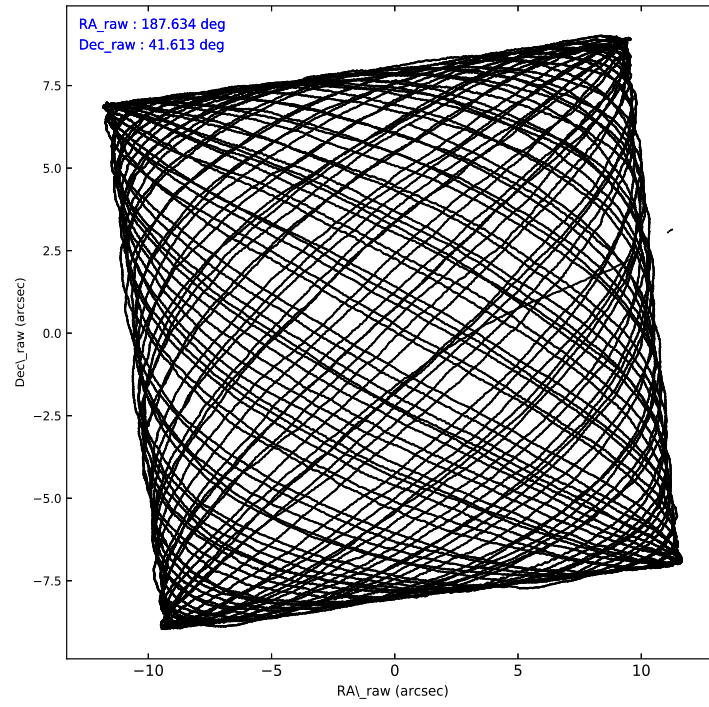
### 2.1.4 Events

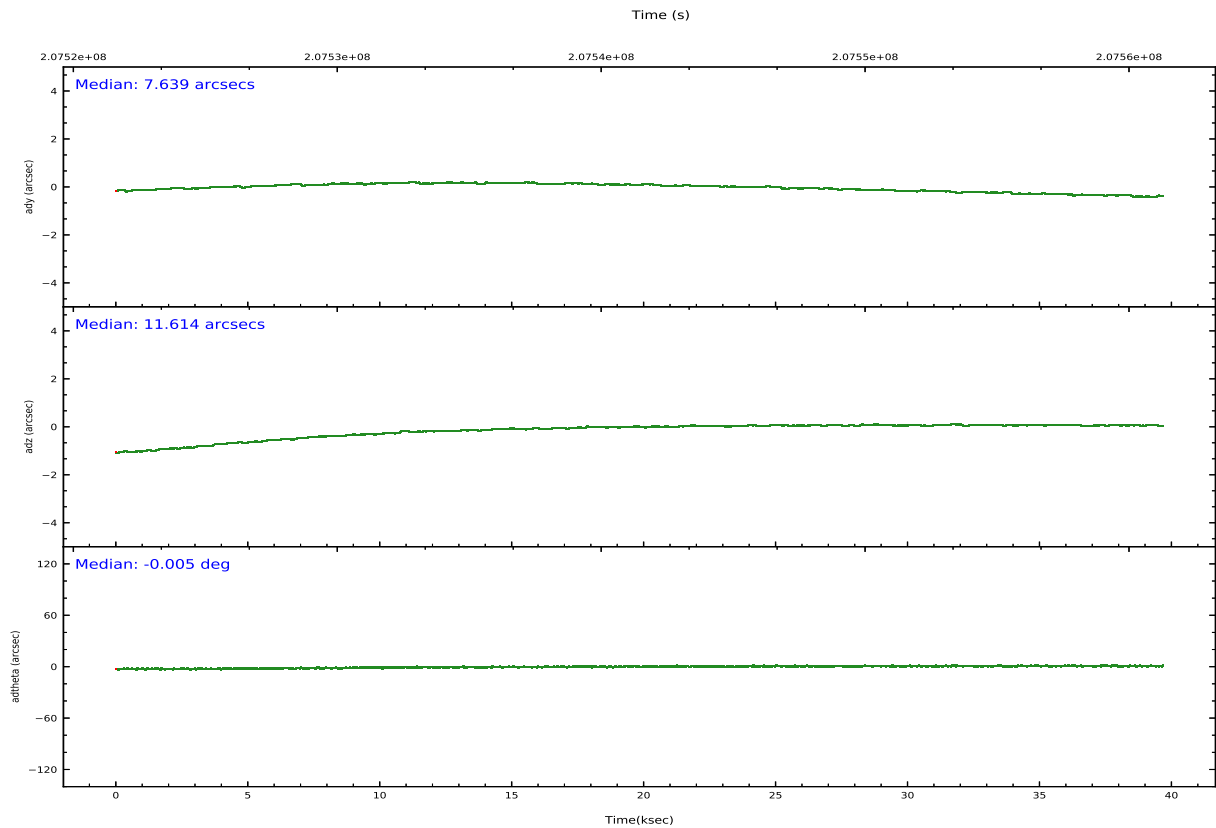
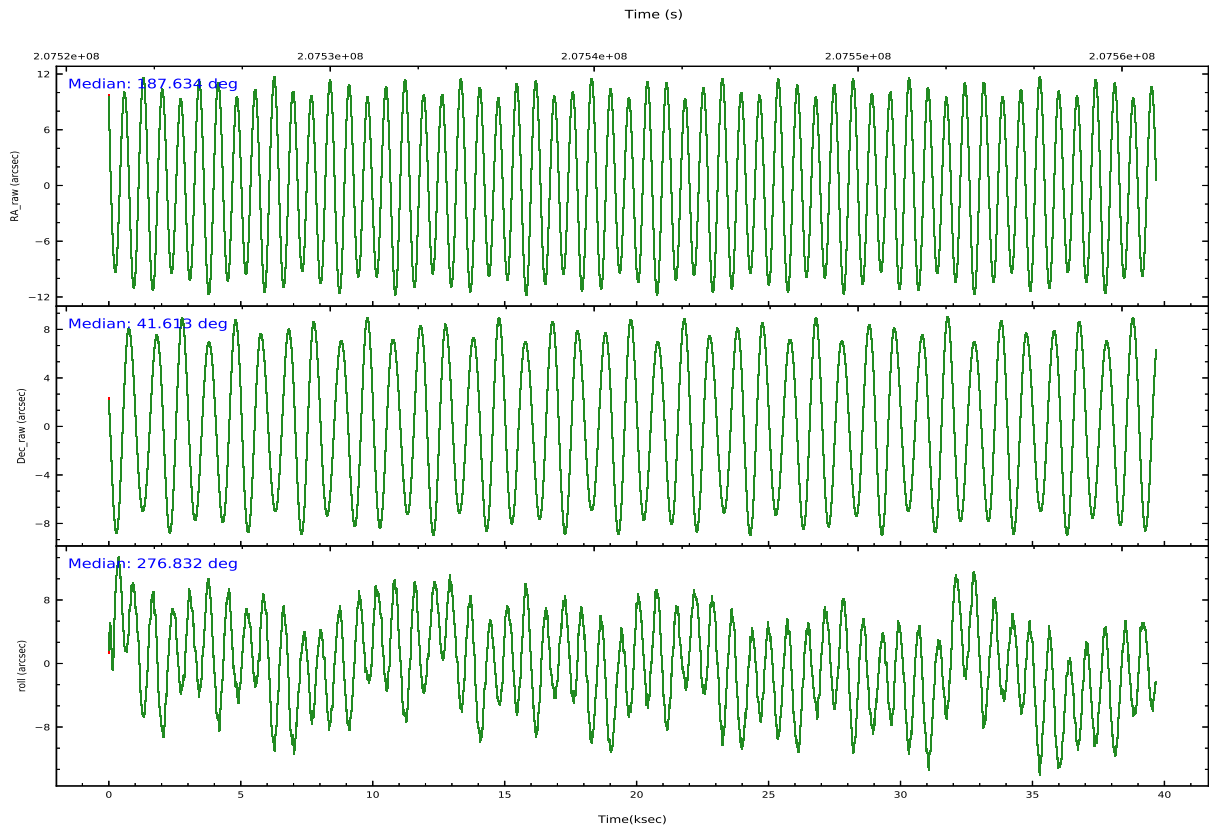
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	238176	216464	306996	228344	262650	296109	grade 0 events	8259	7371	19298	8440	14263	23965
rejected events	215331	195650	152570	204780	135024	218575		3%	3%	6%	3%	5%	8%
rejected %	90%	90%	49%	89%	51%	73%	grade 1 events	113	118	355	104	240	251
								0%	0%	0%	0%	0%	0%
							grade 2 events	5421	4482	43601	5029	26477	15908
								2%	2%	14%	2%	10%	5%
							grade 3 events	2481	2465	7135	2617	12656	9583
								1%	1%	2%	1%	4%	3%
							grade 4 events	2517	2372	6596	2504	12340	8786
								1%	1%	2%	1%	4%	2%
							grade 5 events	7575	8533	24524	8804	26674	12857
								3%	3%	7%	3%	10%	4%
							grade 6 events	4168	4126	77810	4975	61900	19338
								1%	1%	25%	2%	23%	6%
							grade 7 events	207642	186997	127677	195871	108100	205421
								87%	86%	41%	85%	41%	69%

## 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	187.611364	187.62883517978	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.634267	41.614519937522	Alternating exposures requested	N	N
[deg] Pointing Roll	276.689153	276.83239464803	[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	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	207522295.184000	207521083.08716			
Observation start date	2004-07-29T21:03:51	2004-07-29T20:44:43			
[s] Observation end time (MET)	207561295.184000	207561576.73896			
Observation end date	2004-07-30T07:53:51	2004-07-30T07:59:36			
Read mode	TIMED	TIMED			

## 2.3 Aspect





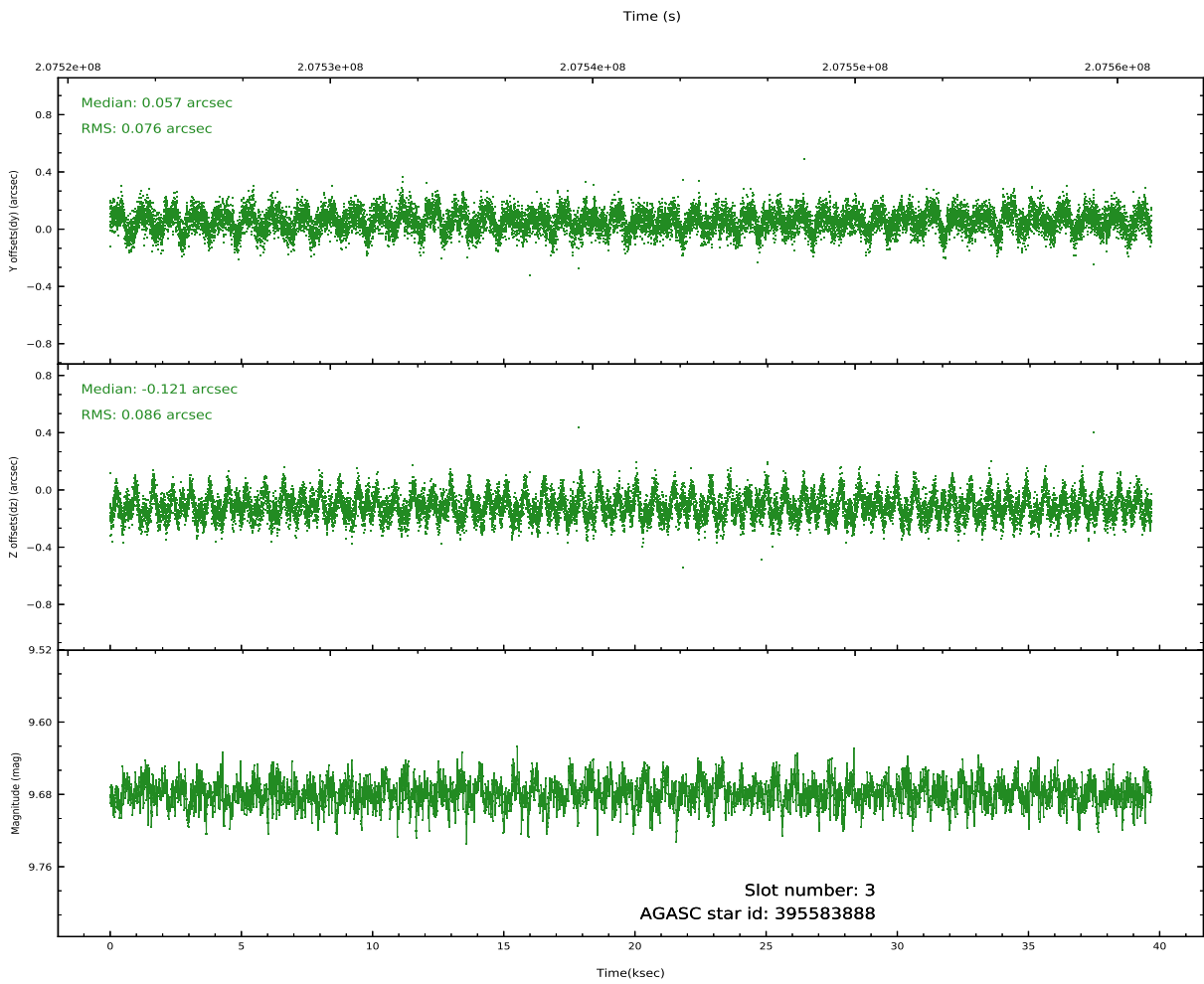
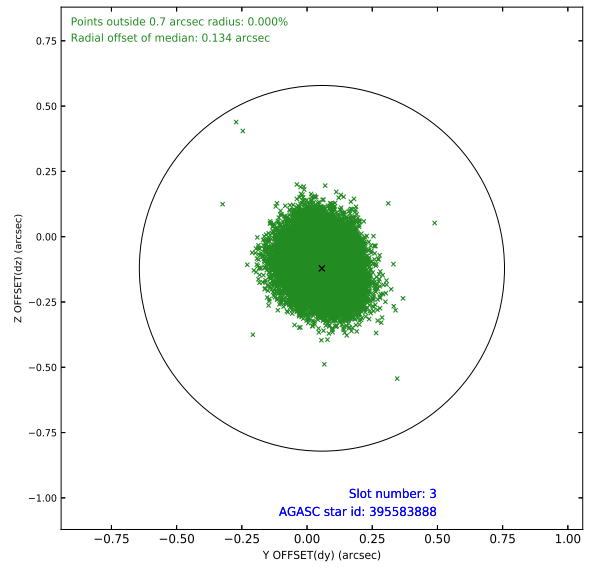
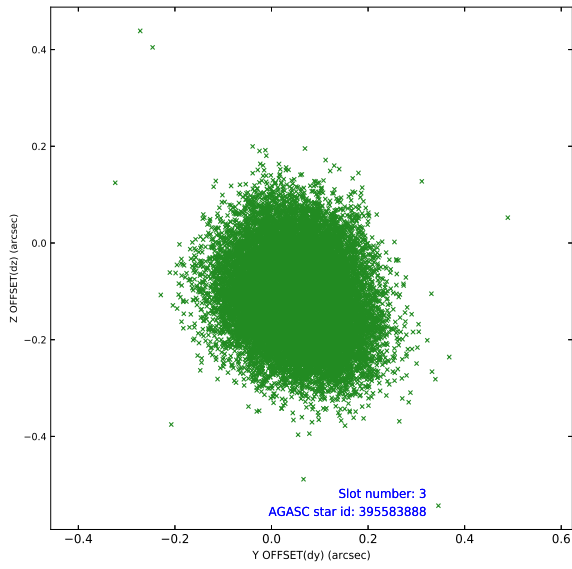
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	9680	1.000	-0.053	-0.048	0.009	0.017	0.000000	0.000000	-760.38	-1732
1	FID		ACIS-S-4	7.20	9679	1.000	0.128	0.039	0.009	0.016	0.000000	0.000000	2153.02	175
2	FID		ACIS-S-5	7.23	9680	1.000	-0.104	0.018	0.009	0.016	0.000000	0.000000	-1813.30	169
3	GUIDE	used	395583888	9.68	19342	1.000	0.057	-0.121	0.124	0.196	187.778753	41.111279	1922.56	231
4	GUIDE	used	395847744	9.54	19339	1.000	0.073	0.097	0.101	0.158	187.588656	41.269628	1297.14	-213
5	GUIDE	used	395851440	9.33	19346	1.000	-0.167	-0.013	0.093	0.147	187.131494	42.071574	-1716.26	-1089
6	GUIDE	used	395582784	10.19	19345	1.000	0.239	-0.133	0.136	0.230	186.865042	40.916080	2323.43	-2316
7	GUIDE	used	395841840	10.25	19338	1.000	-0.200	0.162	0.167	0.281	188.237245	42.332306	-2307.77	1948

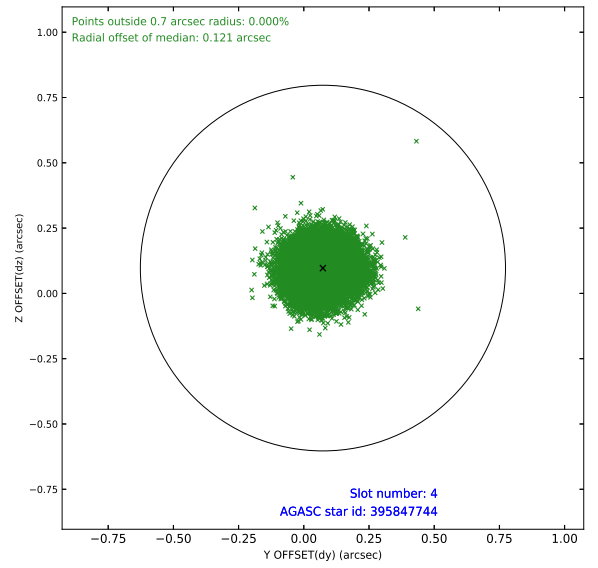
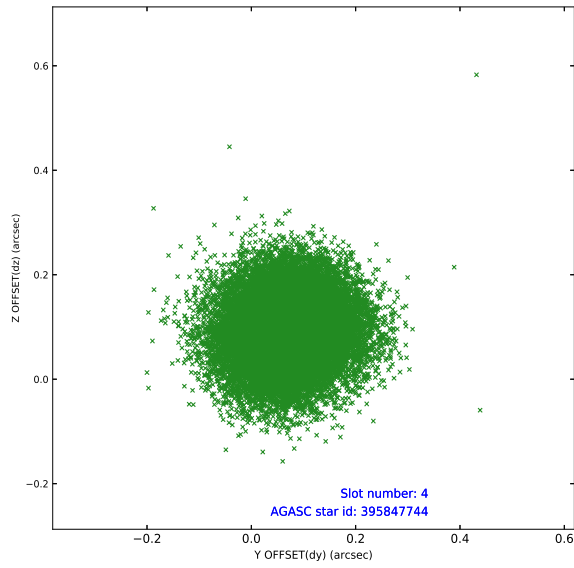
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## 2.4 Star Slots

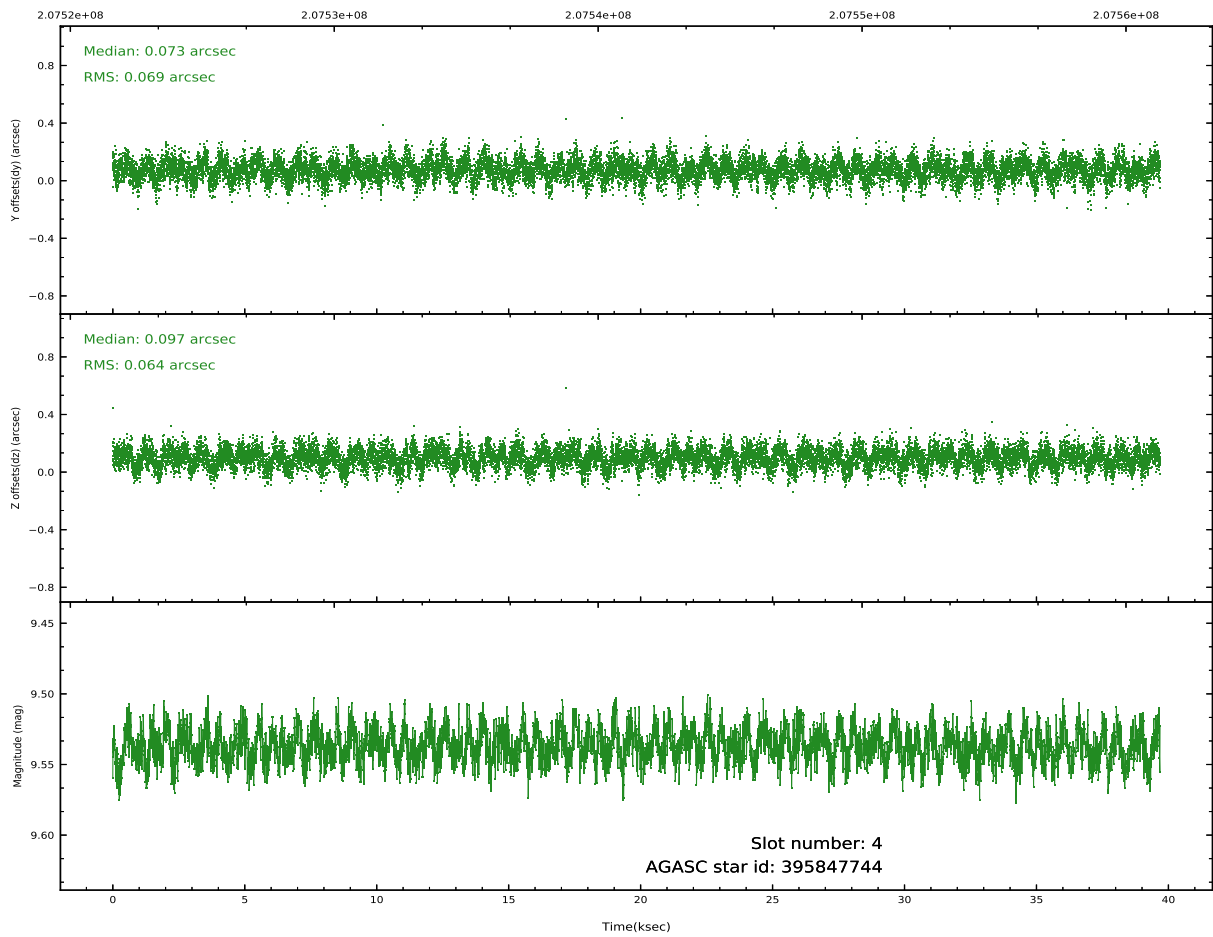
### 2.4.1 Slot 3



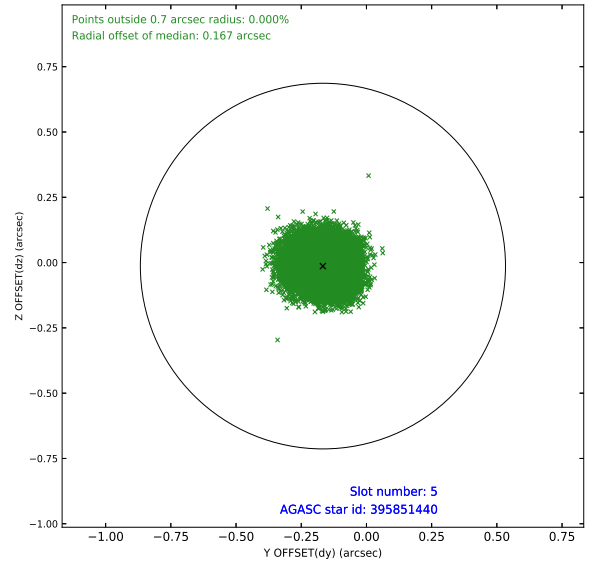
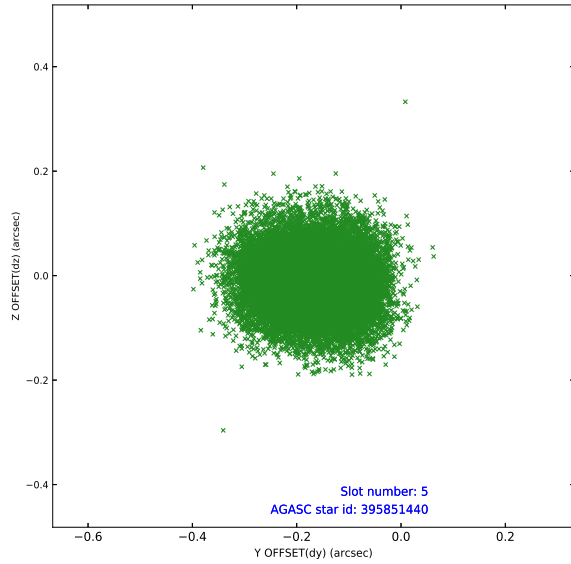
## 2.4.2 Slot 4



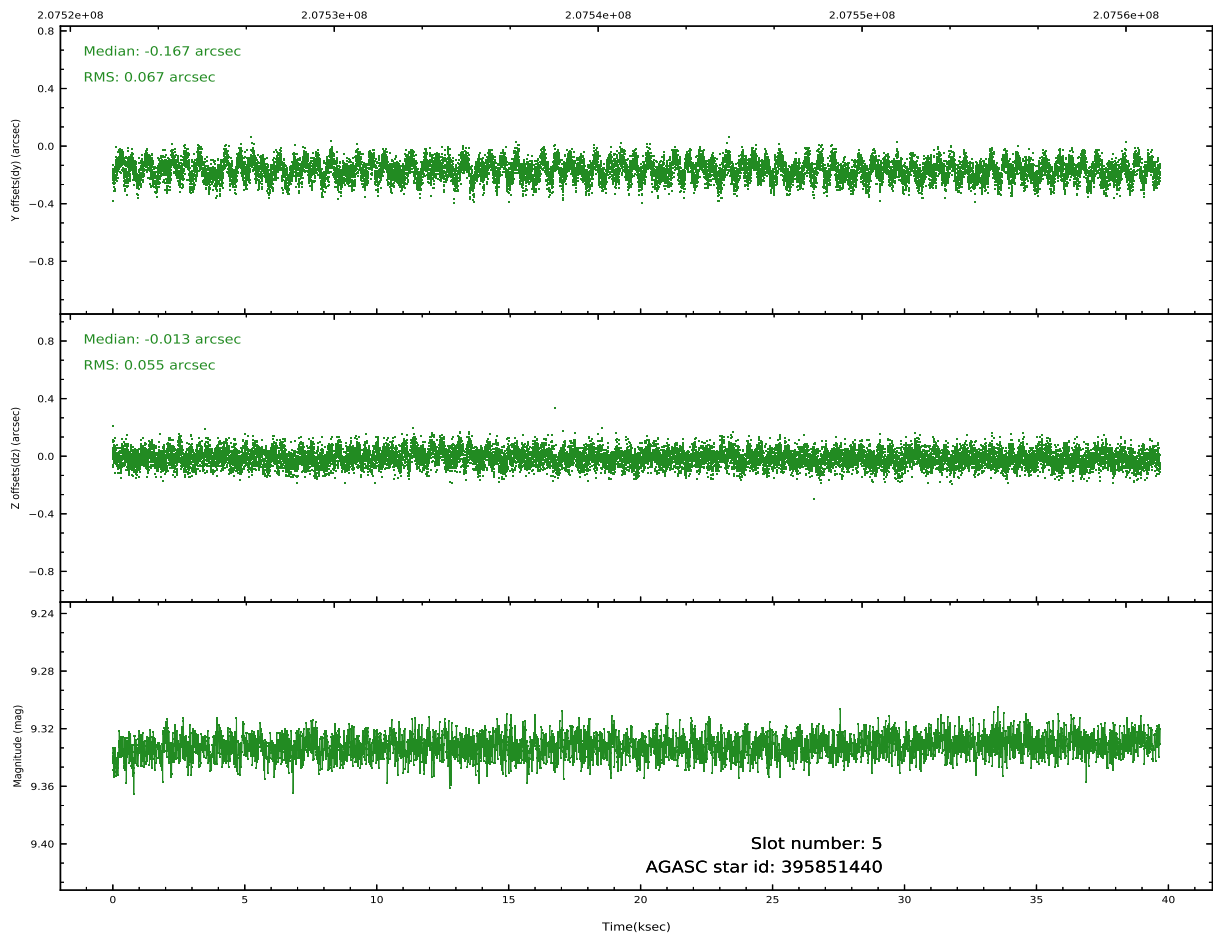
Time (s)



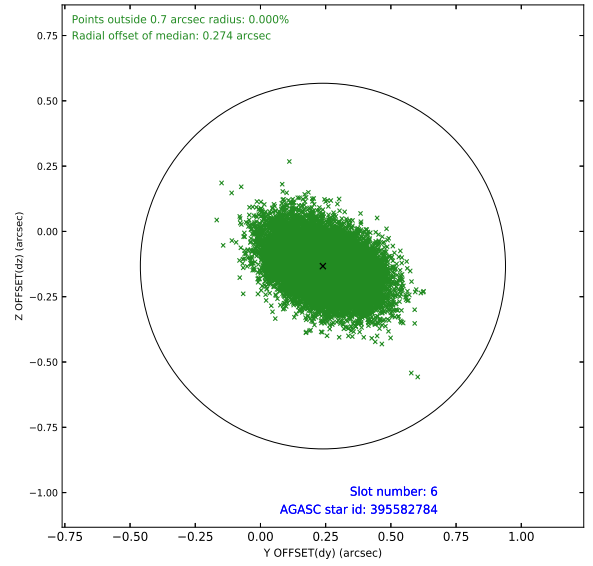
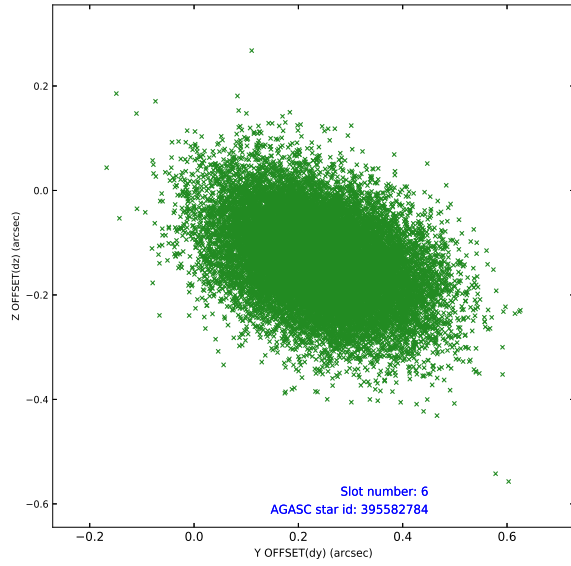
### 2.4.3 Slot 5



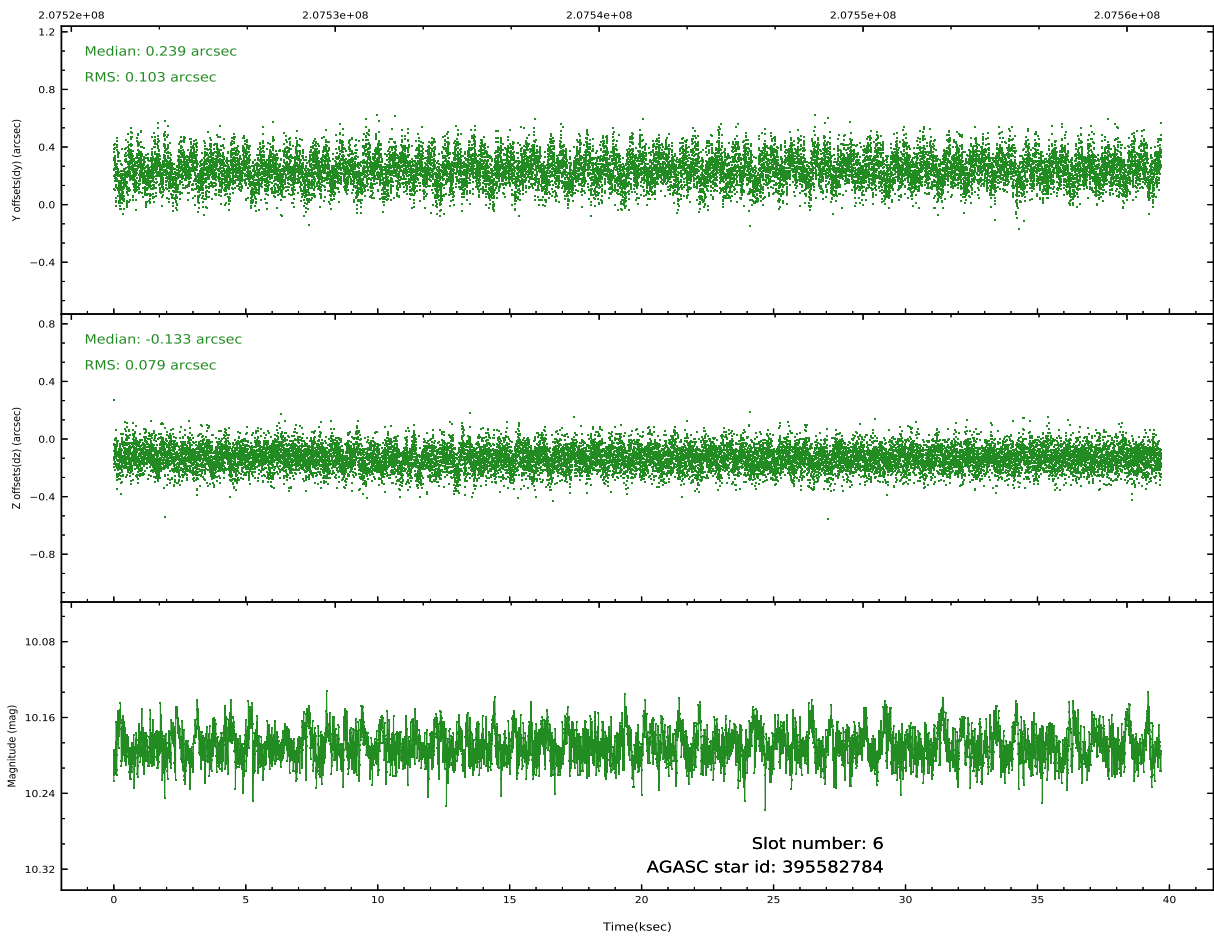
Time (s)



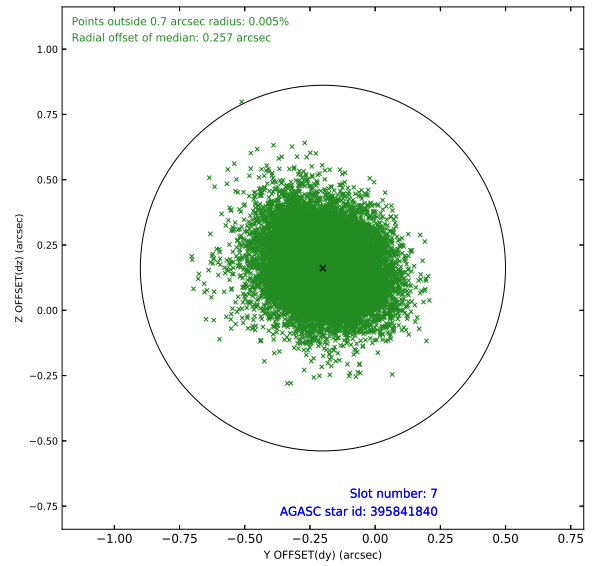
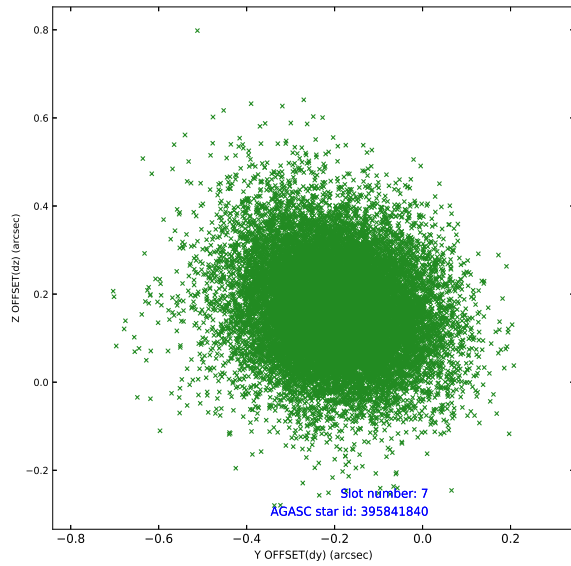
## 2.4.4 Slot 6



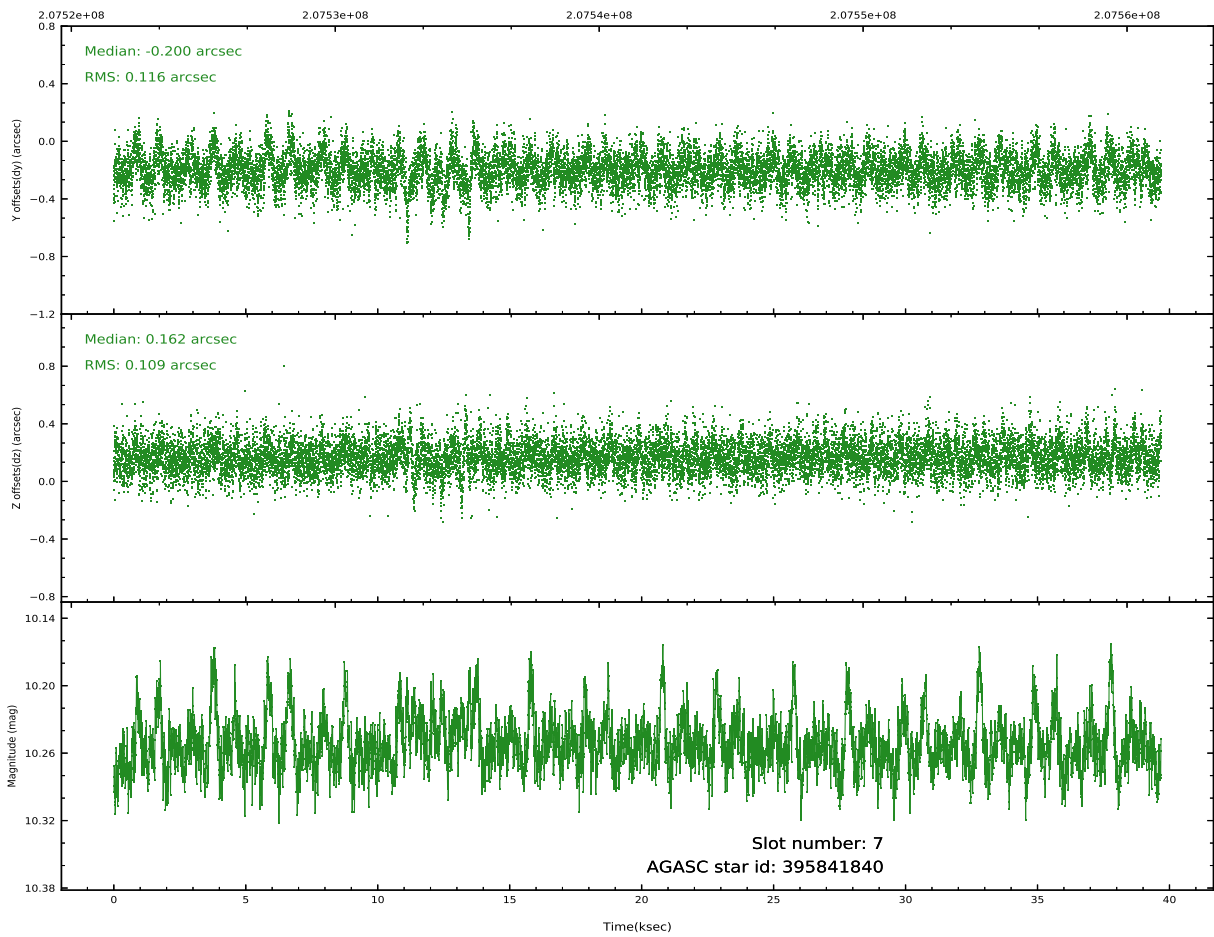
Time (s)



## 2.4.5 Slot 7

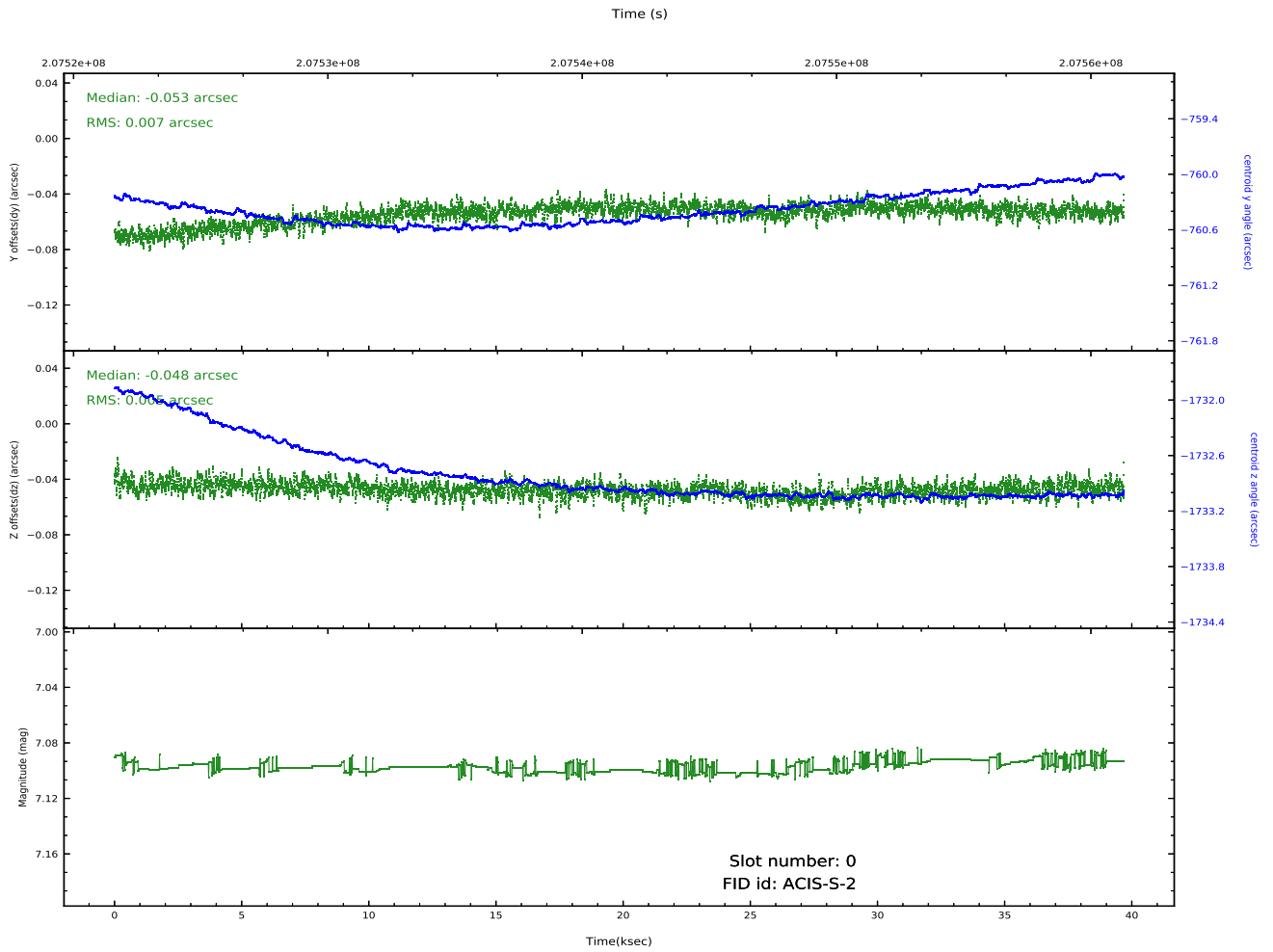
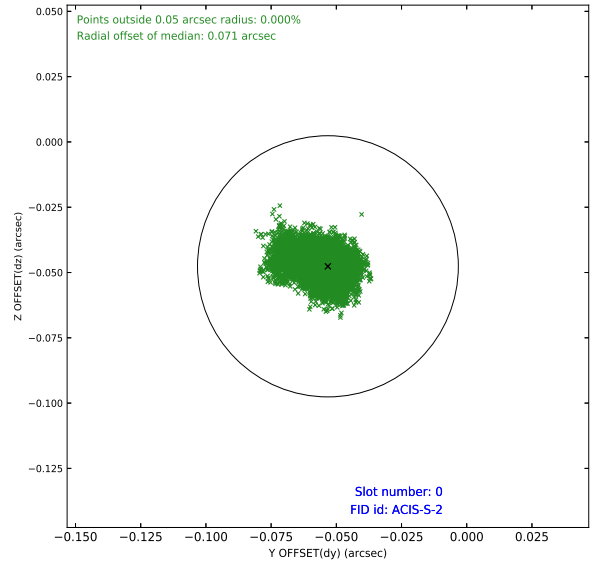
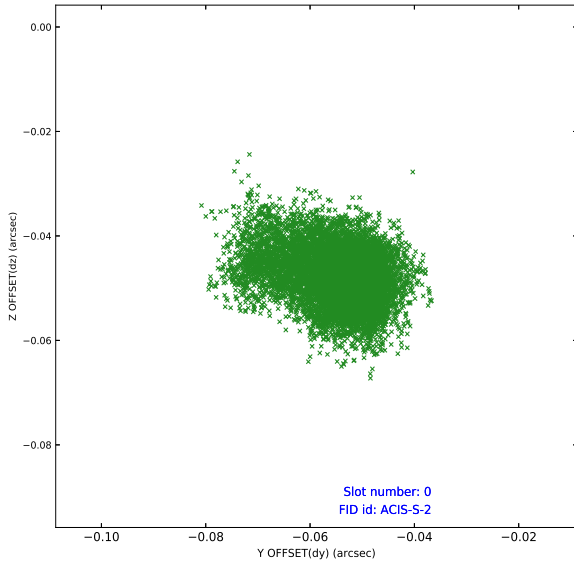


Time (s)

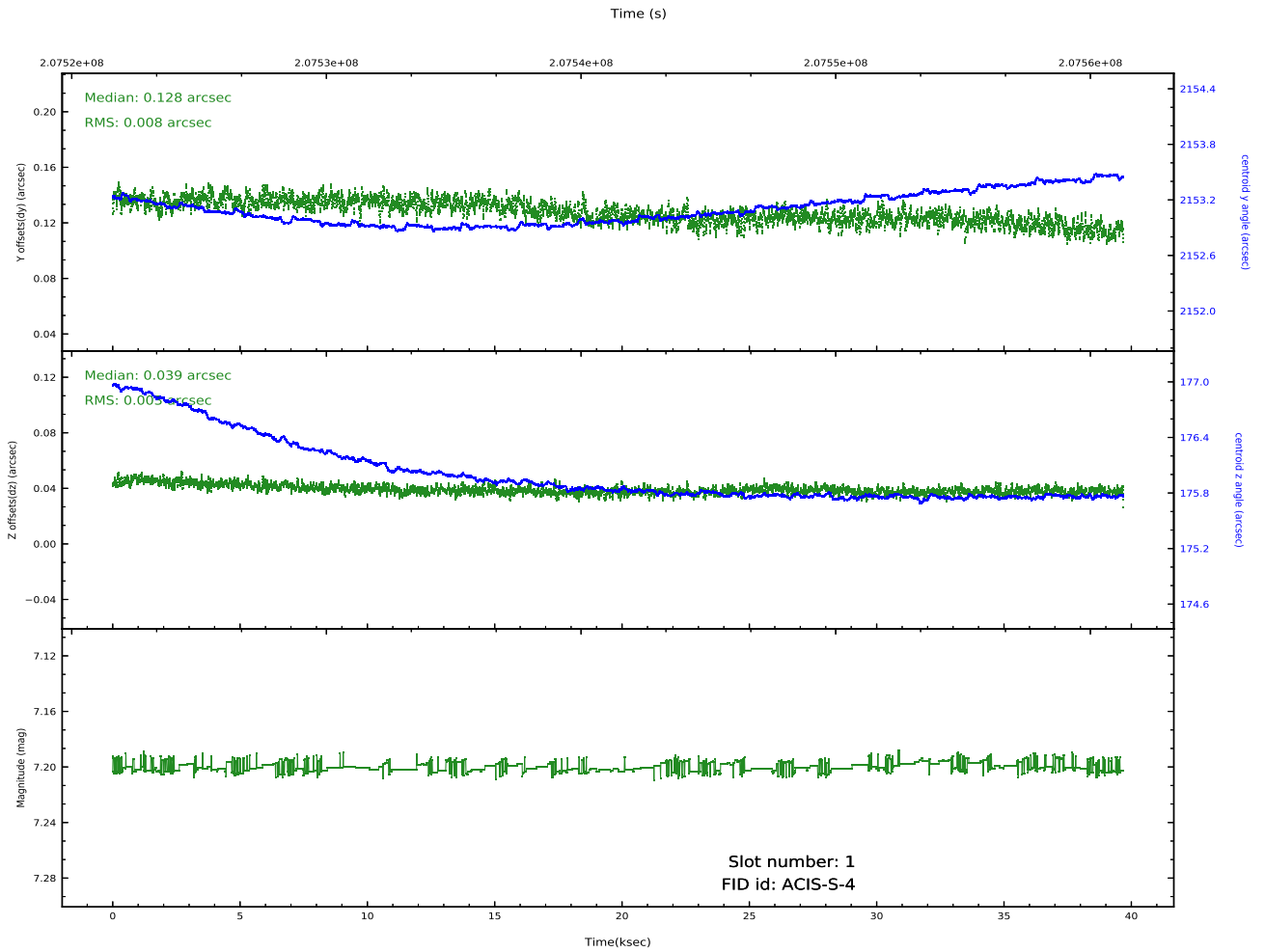
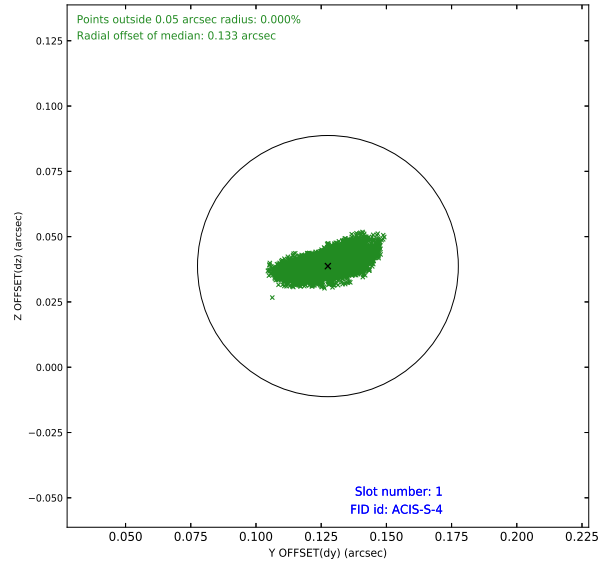
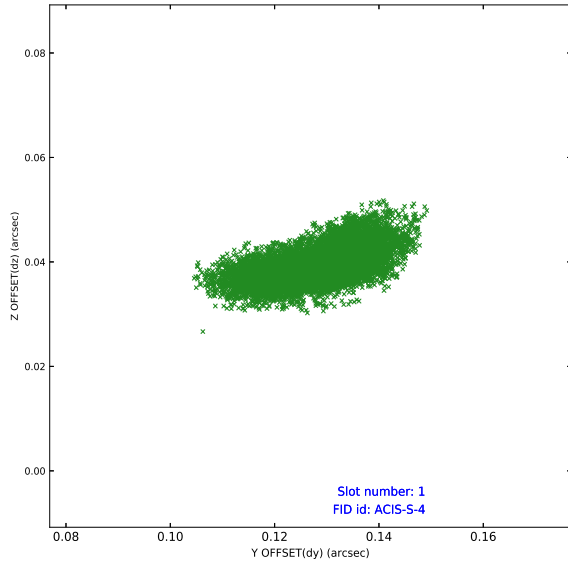


## 2.5 FID Slots

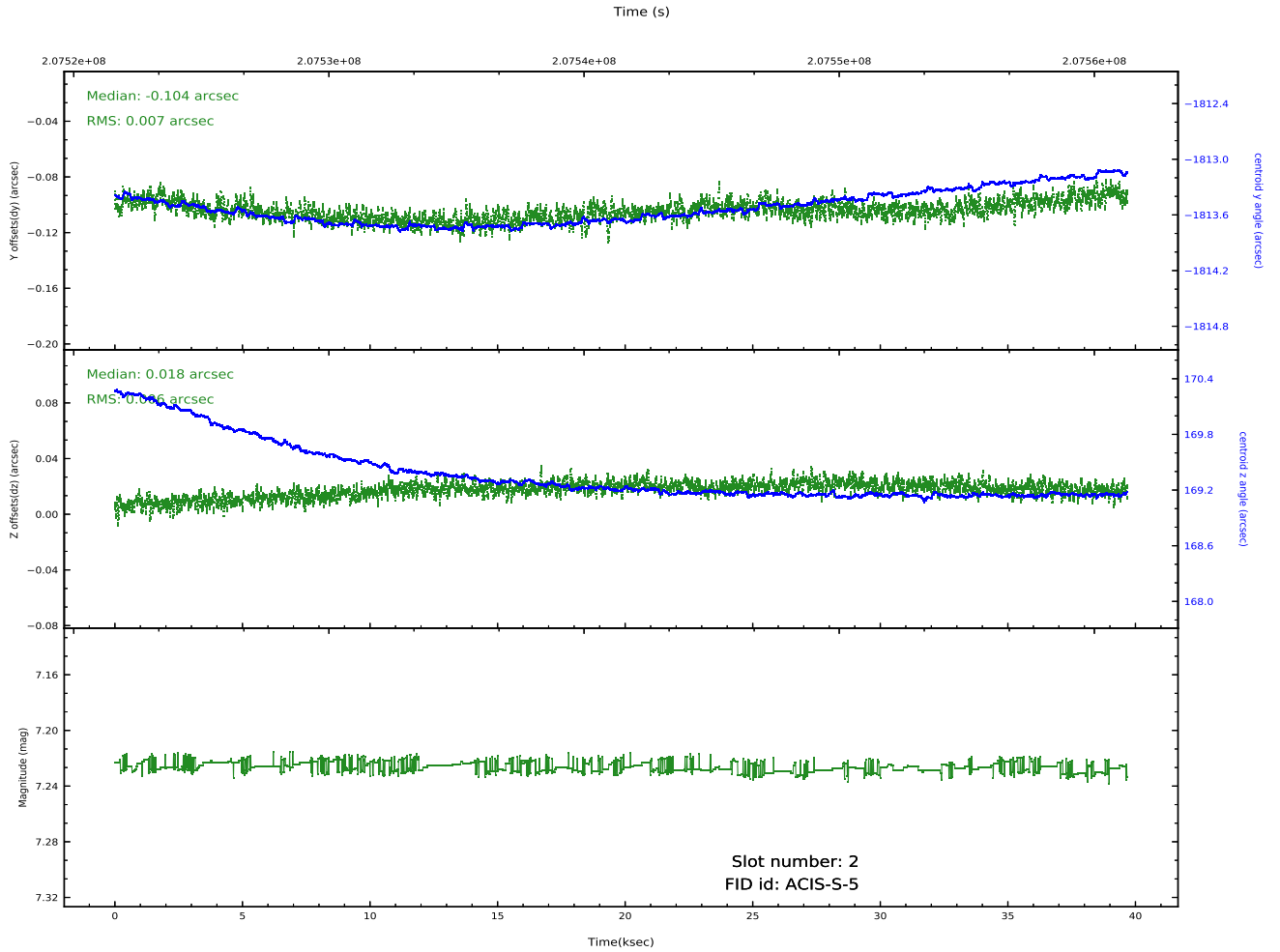
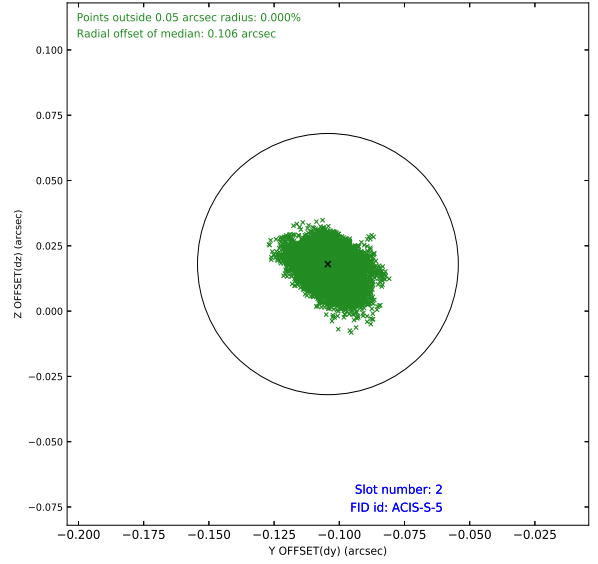
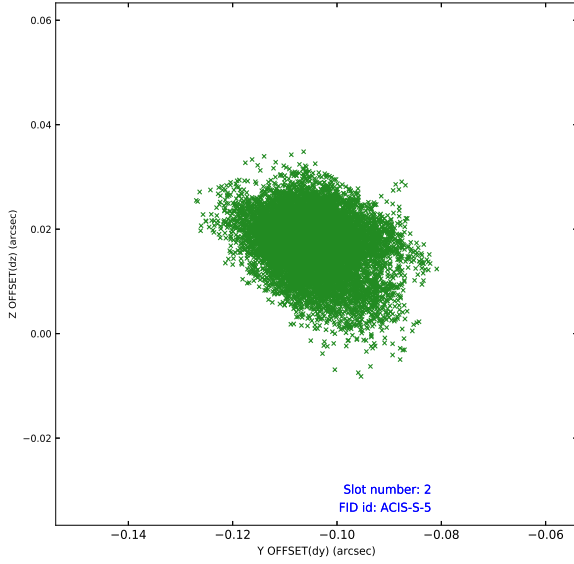
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.959

## A.2 Comments