

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5929 - L2 Version 4  
Chandra X-Ray Center

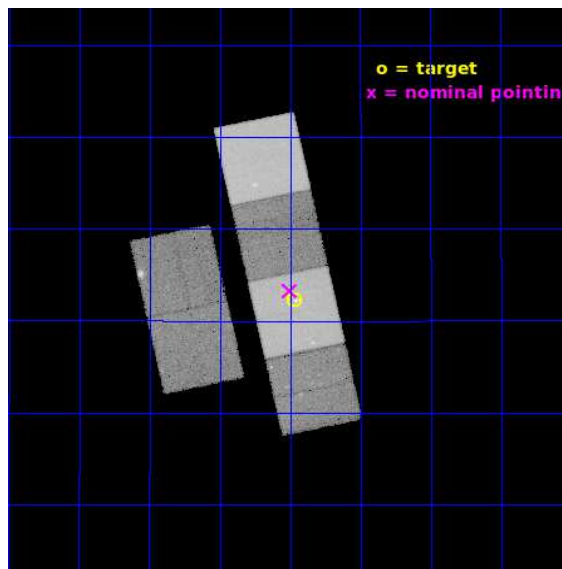
L2 Processing Date : Oct 6 2020

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# 1 Front

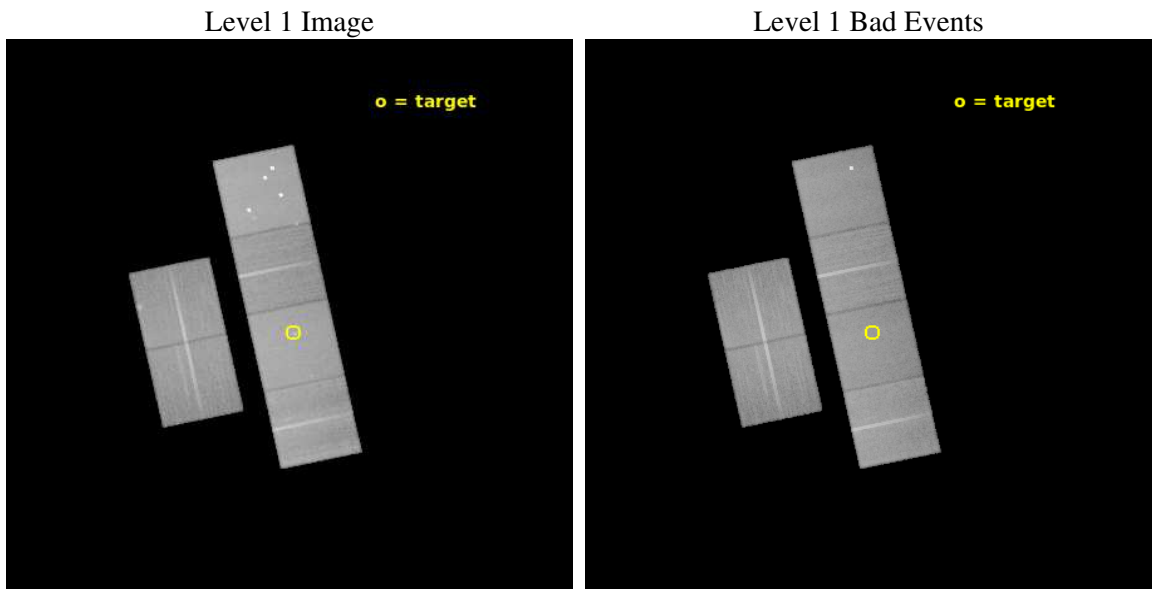
seq_num	600448	Sequence number
obs_id	5929	Observation id
title	X-rays and Galactic Structure	Proposal title
observer	Douglas Swartz	Principal investigator
object	NGC 3351	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	160.991667	Observer's specified target RA [deg]
dec_targ	11.704167	Observer's specified target Dec [deg]
ra_nom	161.000205491	Nominal RA [deg]
dec_nom	11.721440985588	Nominal Dec [deg]
roll_nom	77.894096970026	Nominal Roll [deg]
revision	4	Processing version of data
ontime	39958.399851143	Sum of GTIs [s]
livetime	39452.422532168	Livetime [s]
ontime2	39958.399851143	Sum of GTIs [s]
ontime3	39958.399851143	Sum of GTIs [s]
ontime5	39958.399851143	Sum of GTIs [s]
ontime6	39955.158860862	Sum of GTIs [s]
ontime7	39958.399851143	Sum of GTIs [s]
ontime8	39958.399851143	Sum of GTIs [s]
l2events	473485	Number of level 2 events



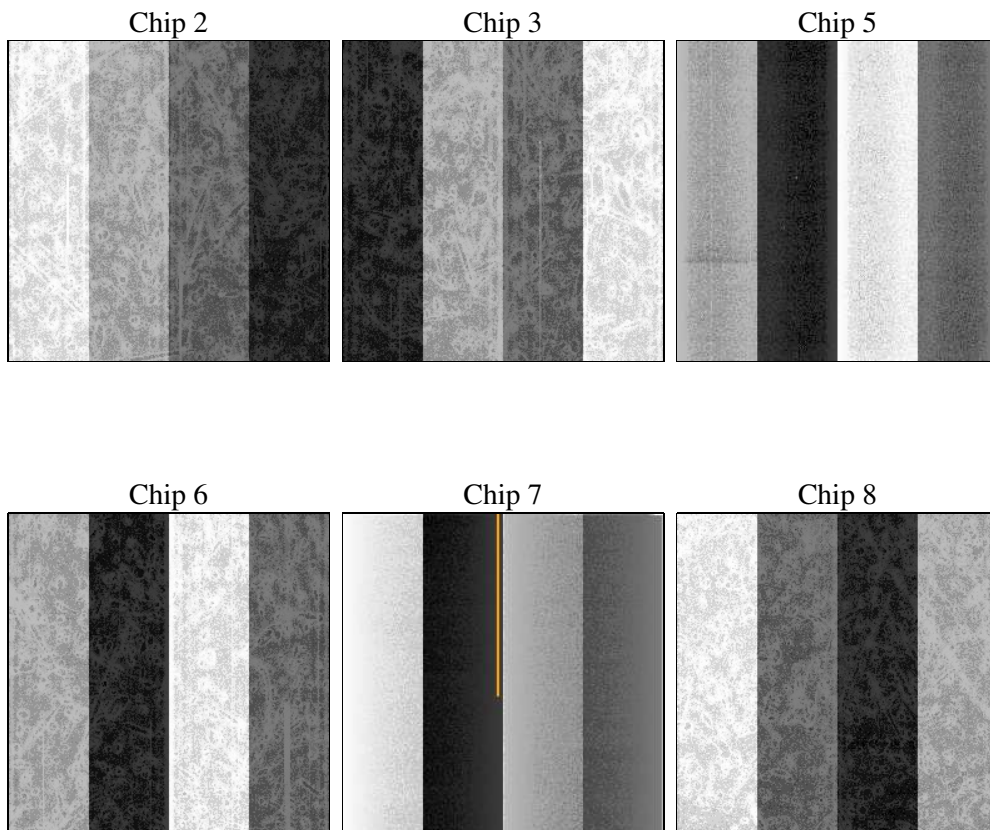
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	39958.399851143	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	39958.399851143	Sum of GTIs [s]
date	2020-10-06T15:24:33	Date and time of file creation	ontime3	39958.399851143	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	39958.399851143	Sum of GTIs [s]
			ontime6	39955.158860862	Sum of GTIs [s]
			ontime7	39958.399851143	Sum of GTIs [s]
			ontime8	39958.399851143	Sum of GTIs [s]
			l1events	2091149	Number of level 1 events

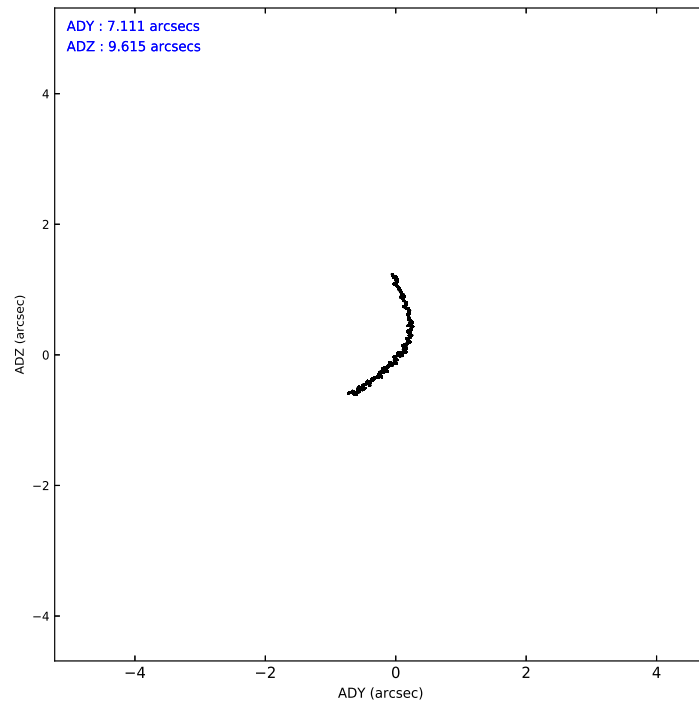
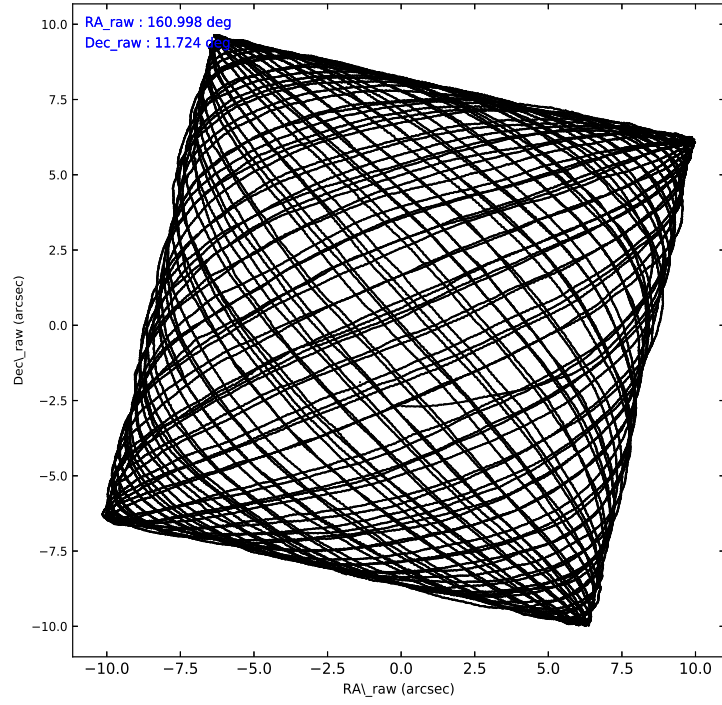
### 2.1.4 Events

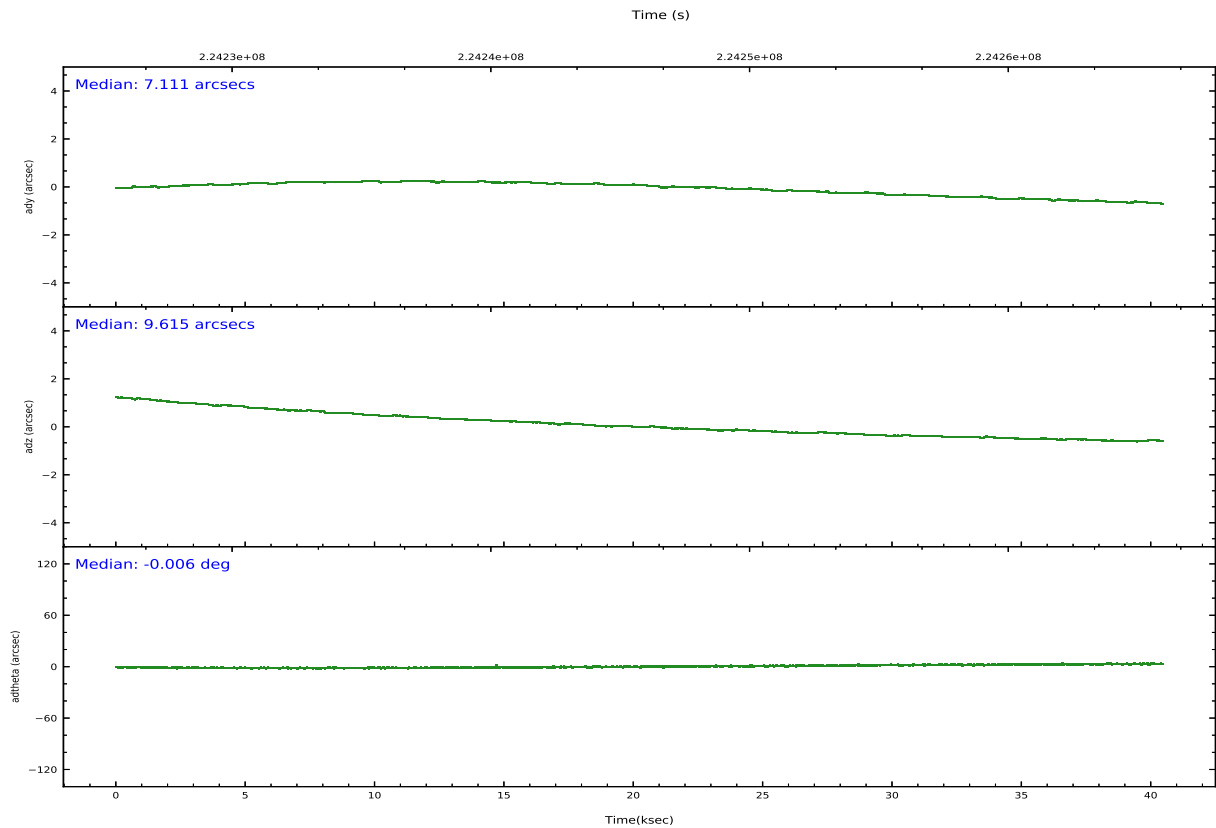
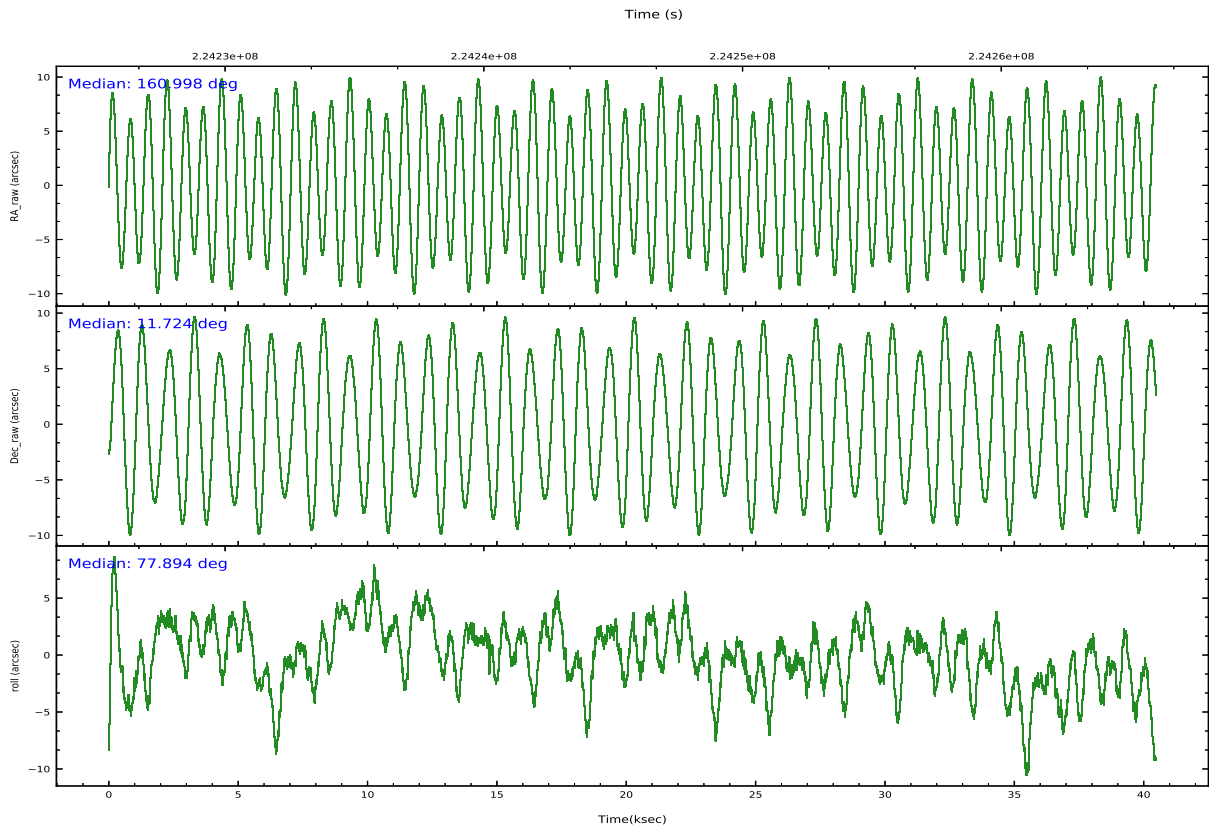
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	293618	279124	467607	288697	396218	365885	grade 0 events	16364	14865	45902	13828	15295	26353
rejected events	257619	245011	241049	253885	229779	284790		5%	5%	9%	4%	3%	7%
rejected %	87%	87%	51%	87%	57%	77%	grade 1 events	171	149	2960	142	373	269
								0%	0%	0%	0%	0%	0%
							grade 2 events	7390	6711	61179	7466	33265	17700
								2%	2%	13%	2%	8%	4%
							grade 3 events	3192	3357	7761	3328	14682	8554
								1%	1%	1%	1%	3%	2%
							grade 4 events	3315	3275	7495	3243	14563	7962
								1%	1%	1%	1%	3%	2%
							grade 5 events	11731	12923	34491	13625	37274	17599
								3%	4%	7%	4%	9%	4%
							grade 6 events	5745	5909	104267	6954	88663	20534
								1%	2%	22%	2%	22%	5%
							grade 7 events	245710	231935	203552	240111	192103	266914
								83%	83%	43%	83%	48%	72%

## 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	161.006724	161.000205491	Subarray requested	NONE	NONE
[deg] Pointing Dec	11.698230	11.721440985588	Alternating exposures requested	N	N
[deg] Pointing Roll	77.733952	77.894096970026	[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)	224225984.184000	224224873.33596			
Observation start date	2005-02-08T04:58:40	2005-02-08T04:41:13			
[s] Observation end time (MET)	224265984.184000	224266626.71285			
Observation end date	2005-02-08T16:05:20	2005-02-08T16:17:06			
Read mode	TIMED	TIMED			

## 2.3 Aspect





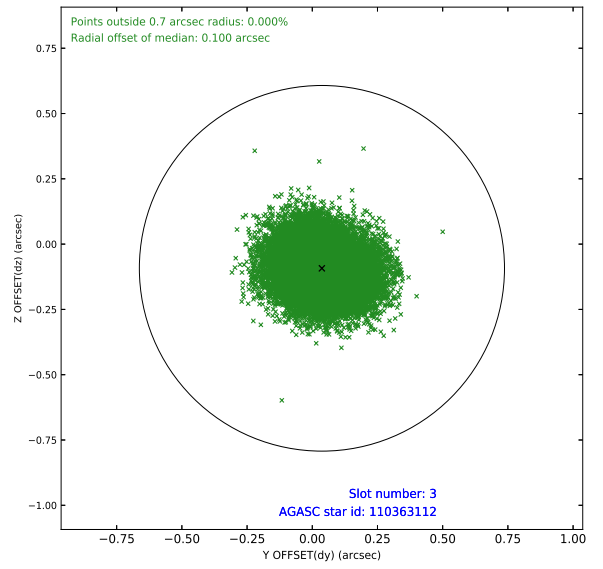
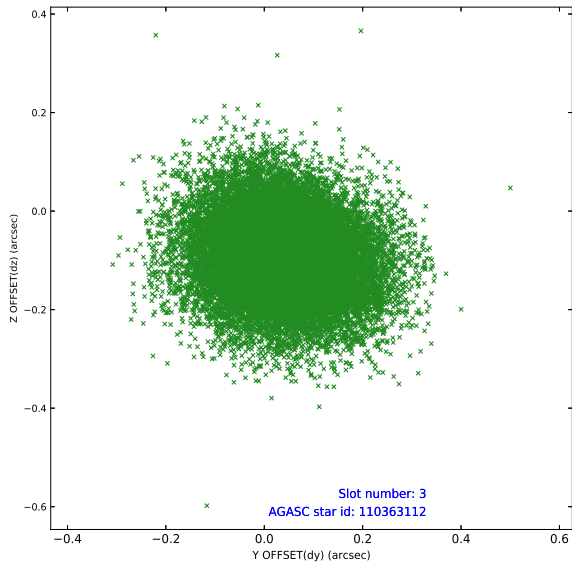
### Slot Statistics

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-2	7.10	9873	1.000	-0.079	-0.074	0.012	0.020	0.000000	0.000000	-759.80	-1730
1	FID		ACIS-S-4	7.21	9874	1.000	0.152	0.057	0.006	0.012	0.000000	0.000000	2153.64	177
2	FID		ACIS-S-5	7.24	9874	1.000	-0.105	0.026	0.011	0.021	0.000000	0.000000	-1812.71	171
3	GUIDE	used	110363112	10.04	19732	1.000	0.037	-0.093	0.134	0.219	160.492613	11.398369	-1438.67	1543
4	GUIDE	used	110363240	8.15	19747	1.000	-0.131	-0.060	0.063	0.101	160.564767	12.418075	2203.17	2069
5	GUIDE	used	111280632	9.90	19736	1.000	0.023	0.024	0.109	0.175	161.089942	11.335611	-1212.83	-564
6	GUIDE	used	111281680	10.27	19735	1.000	0.068	0.132	0.132	0.214	161.020105	11.200959	-1739.13	-426
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

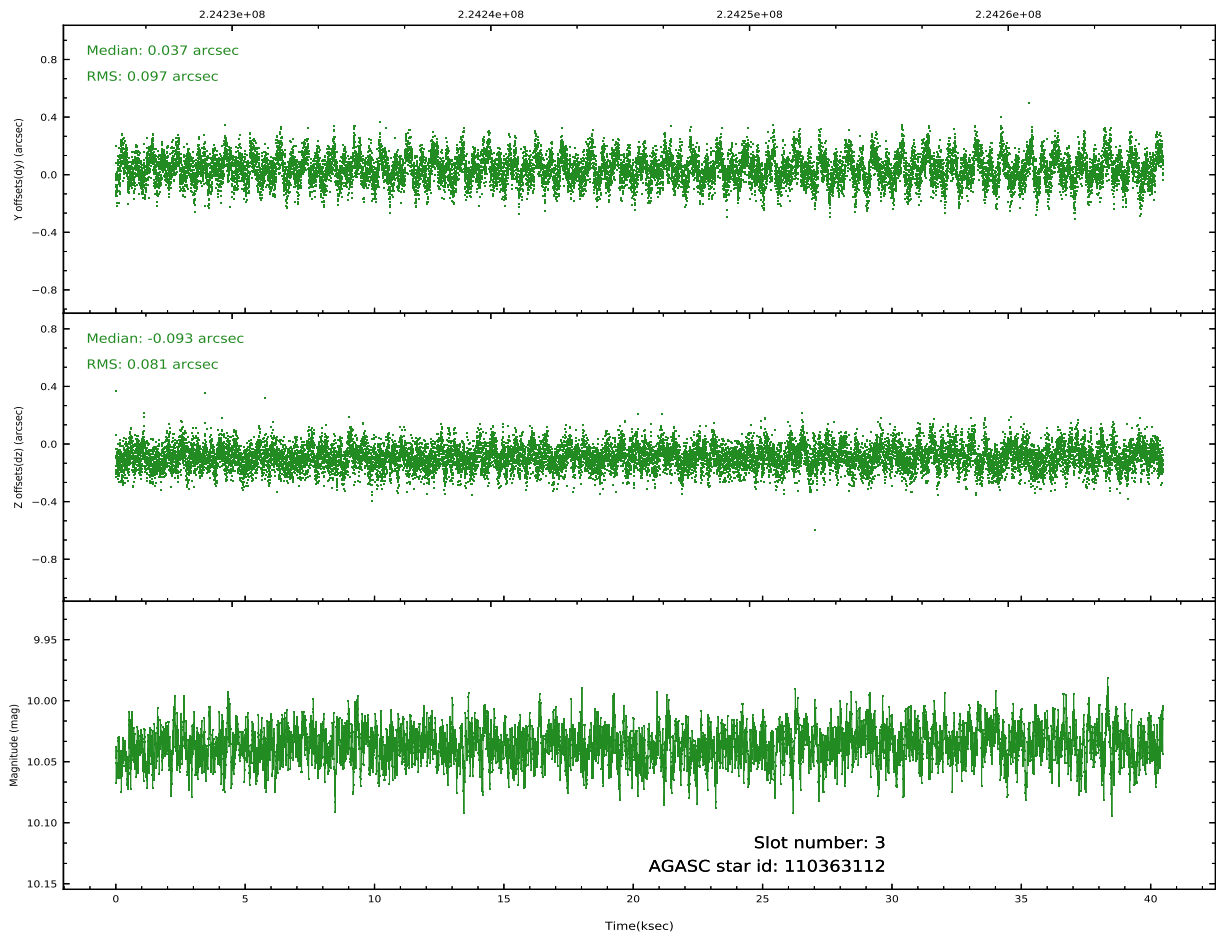
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## 2.4 Star Slots

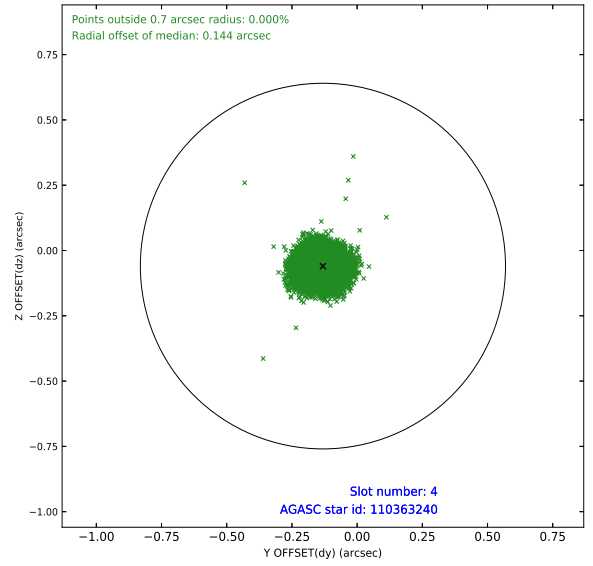
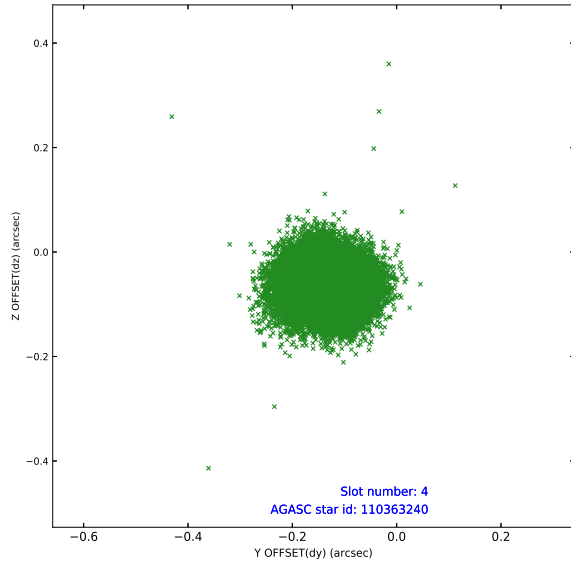
### 2.4.1 Slot 3



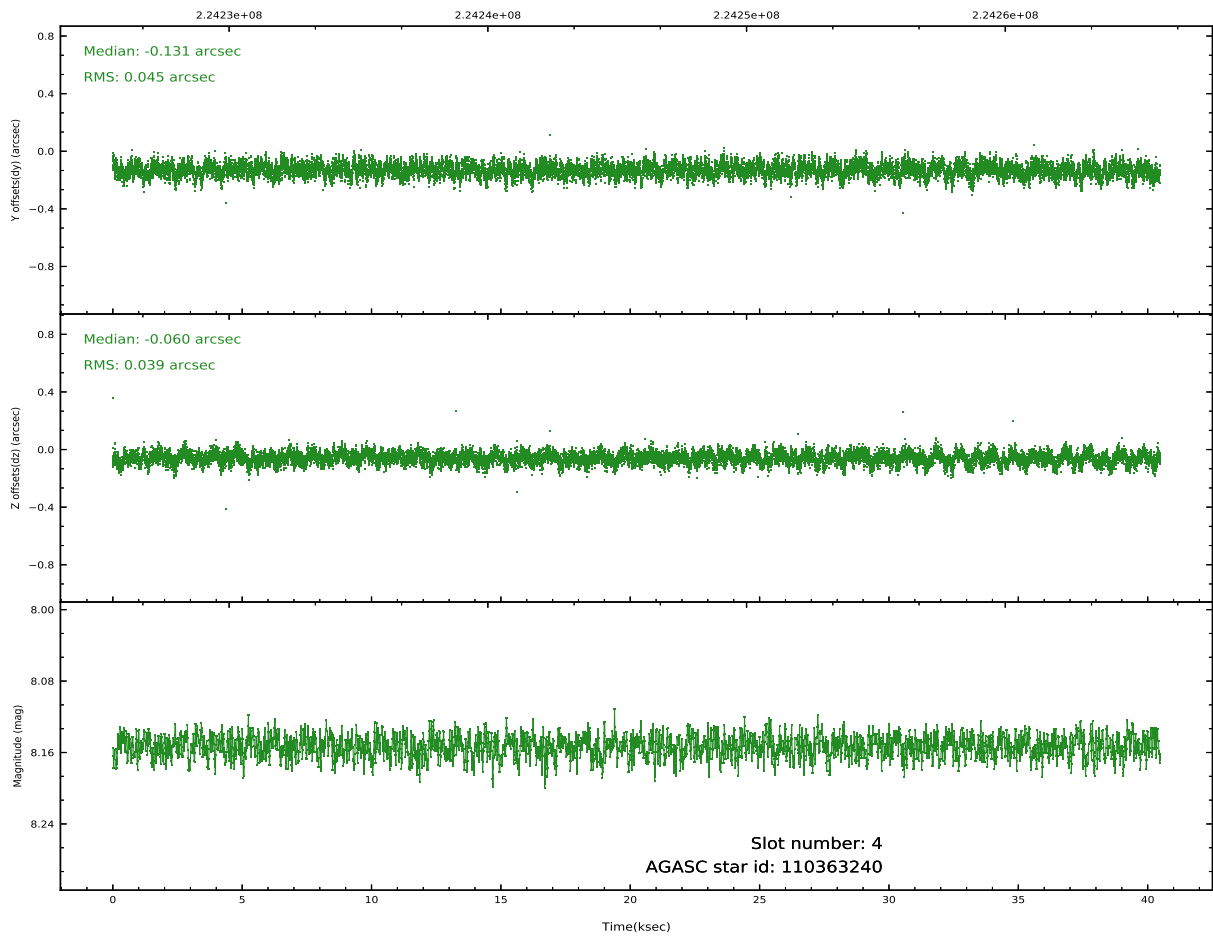
Time (s)



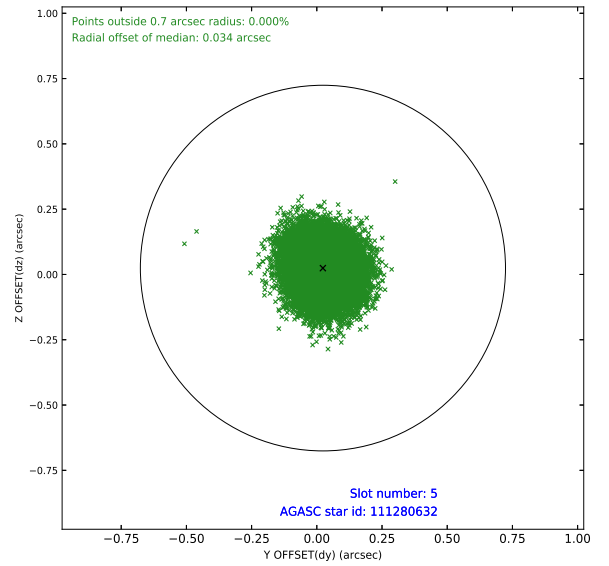
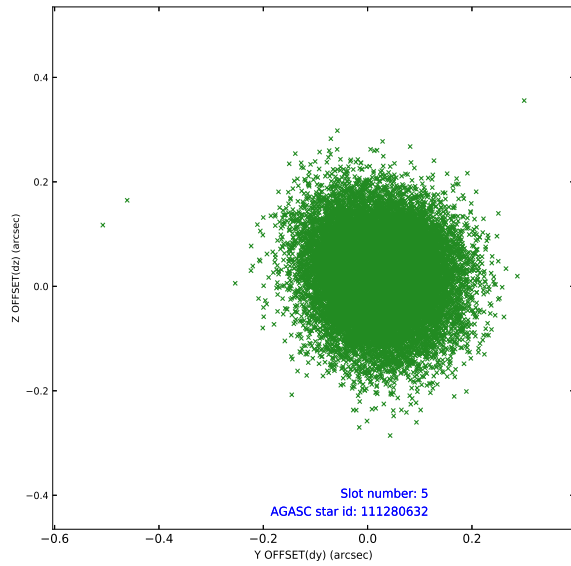
## 2.4.2 Slot 4



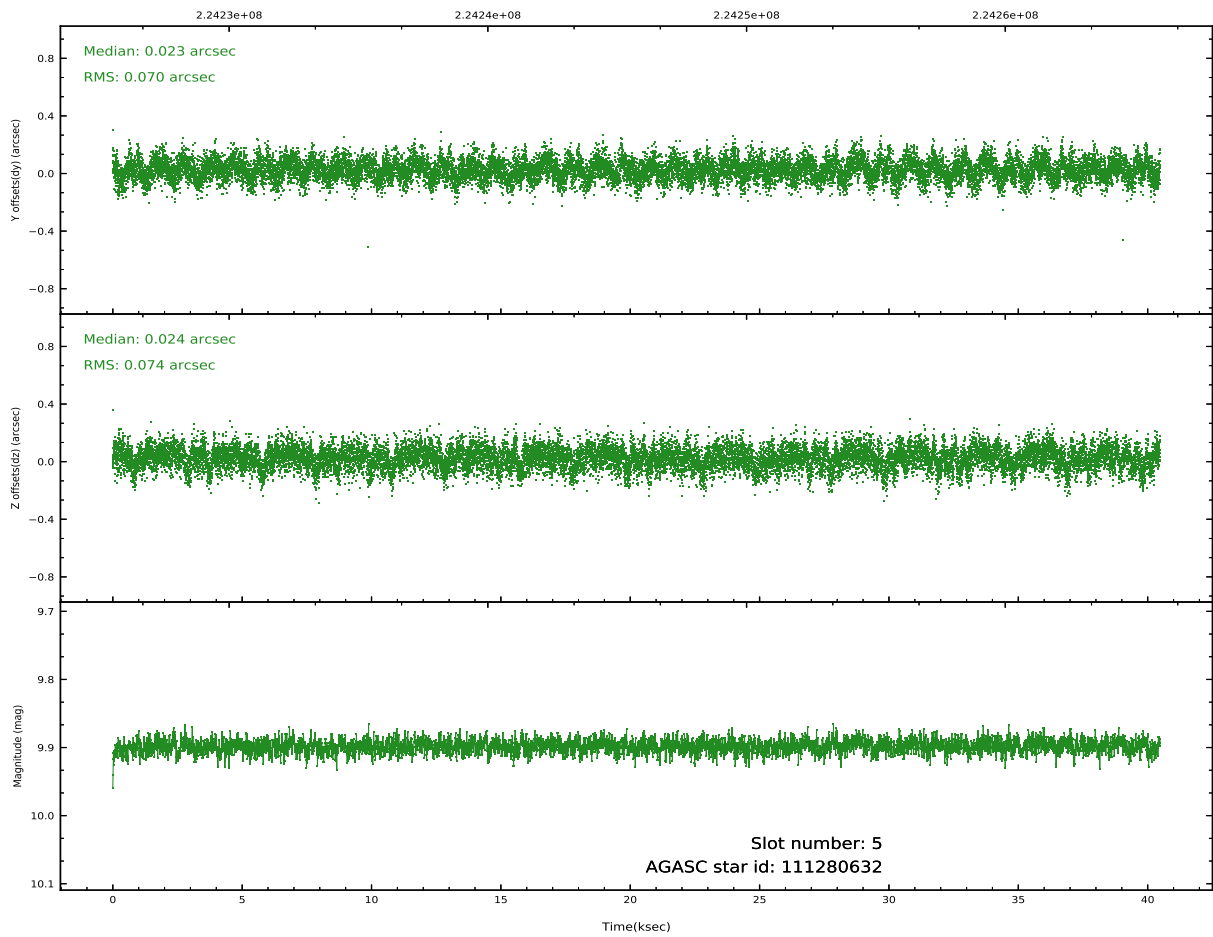
Time (s)



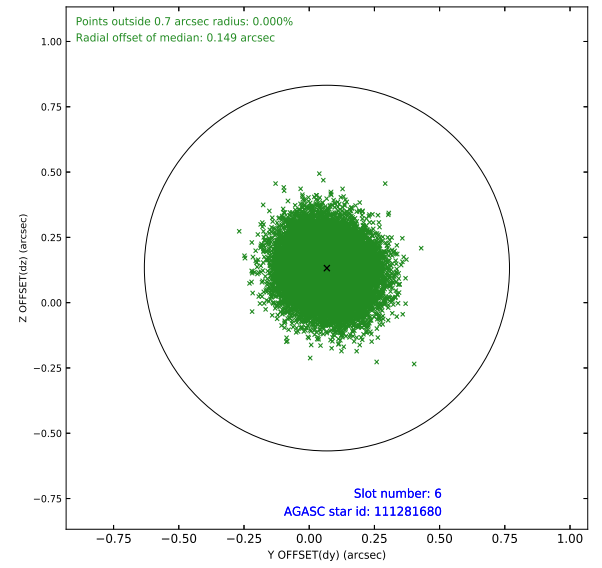
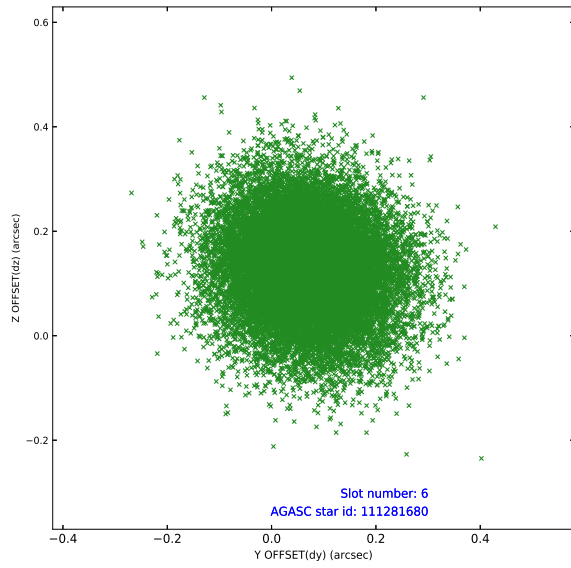
### 2.4.3 Slot 5



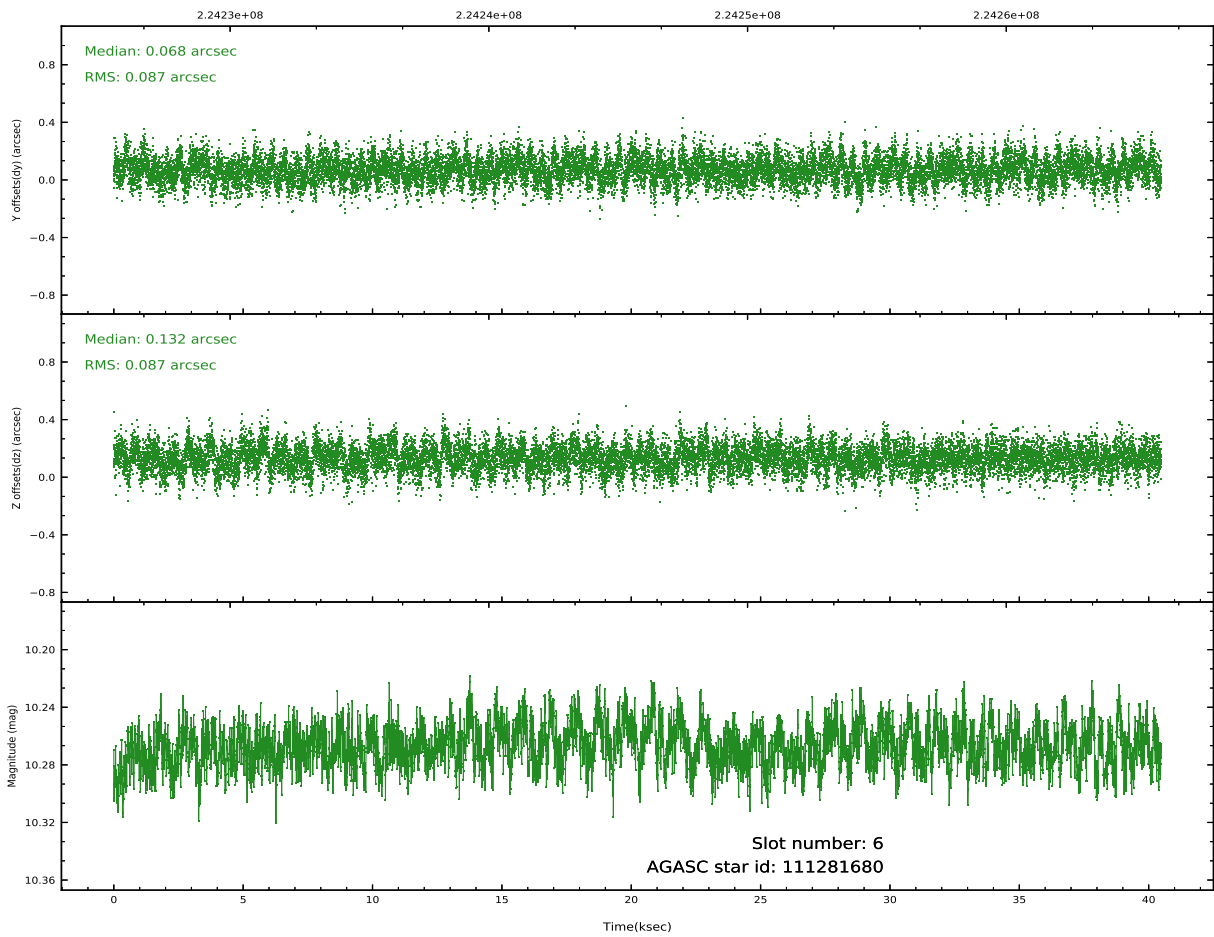
Time (s)



## 2.4.4 Slot 6

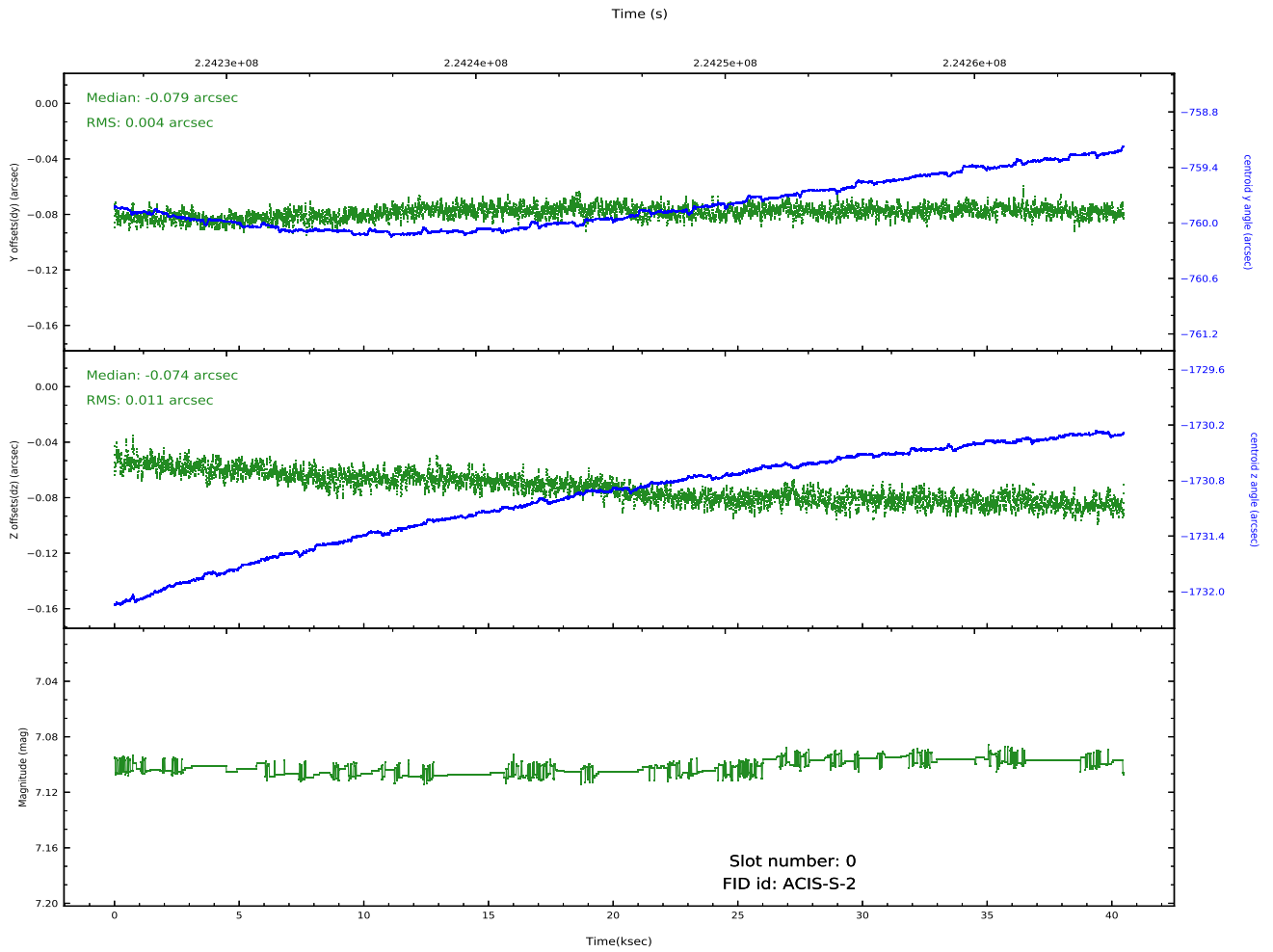
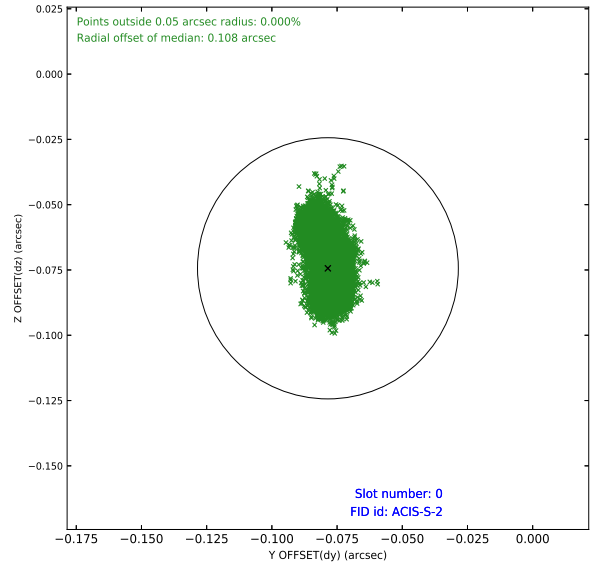
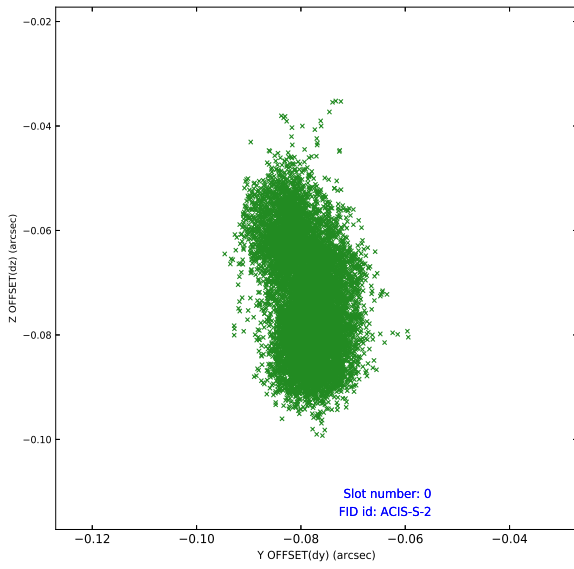


Time (s)

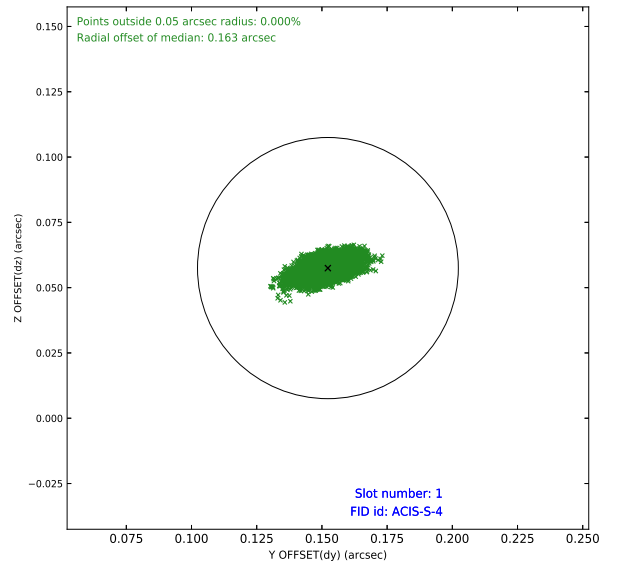
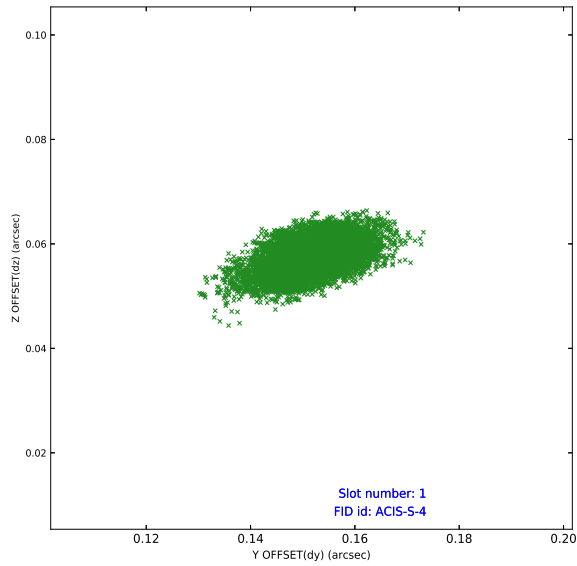


## 2.5 FID Slots

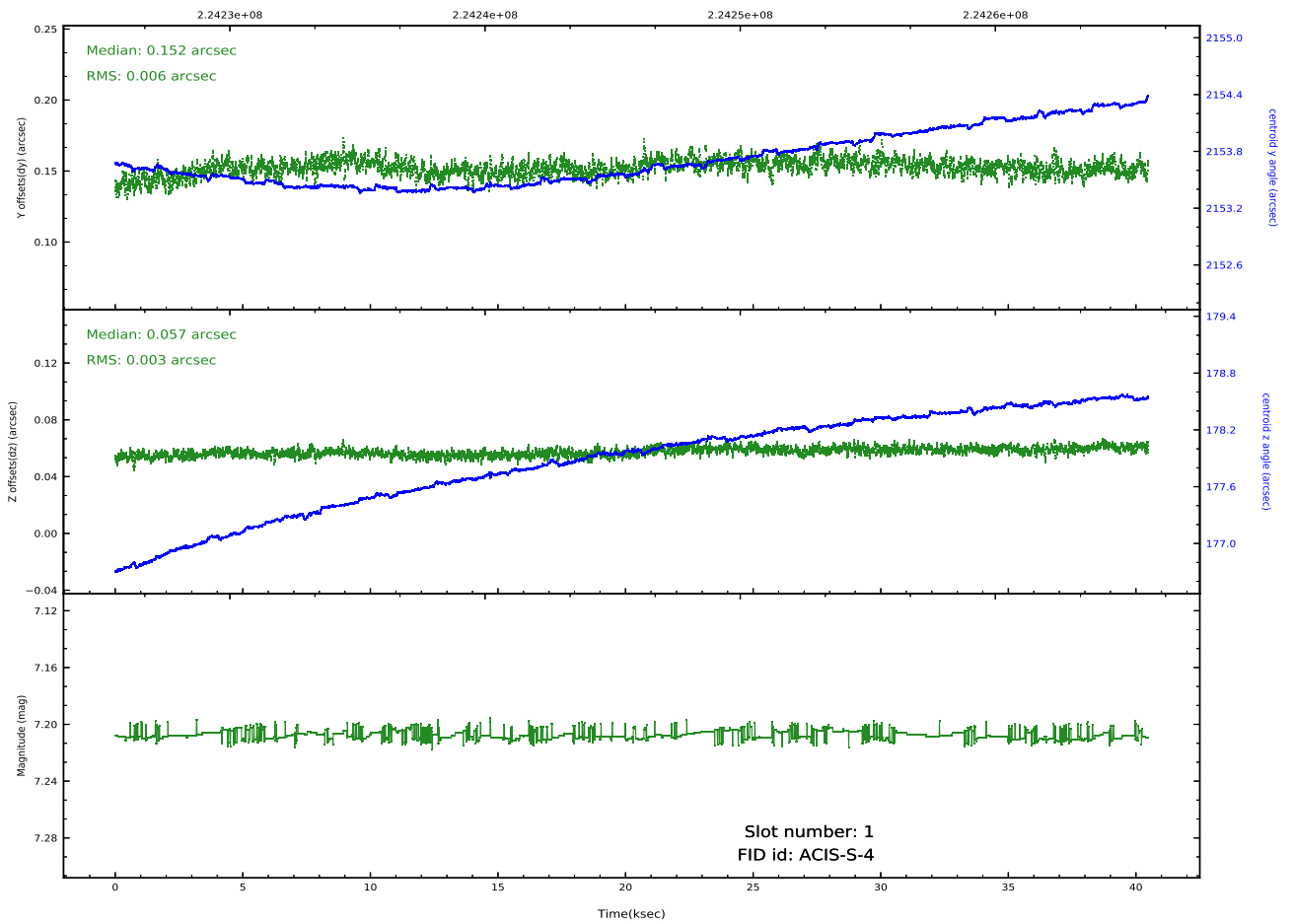
### 2.5.1 Slot 0



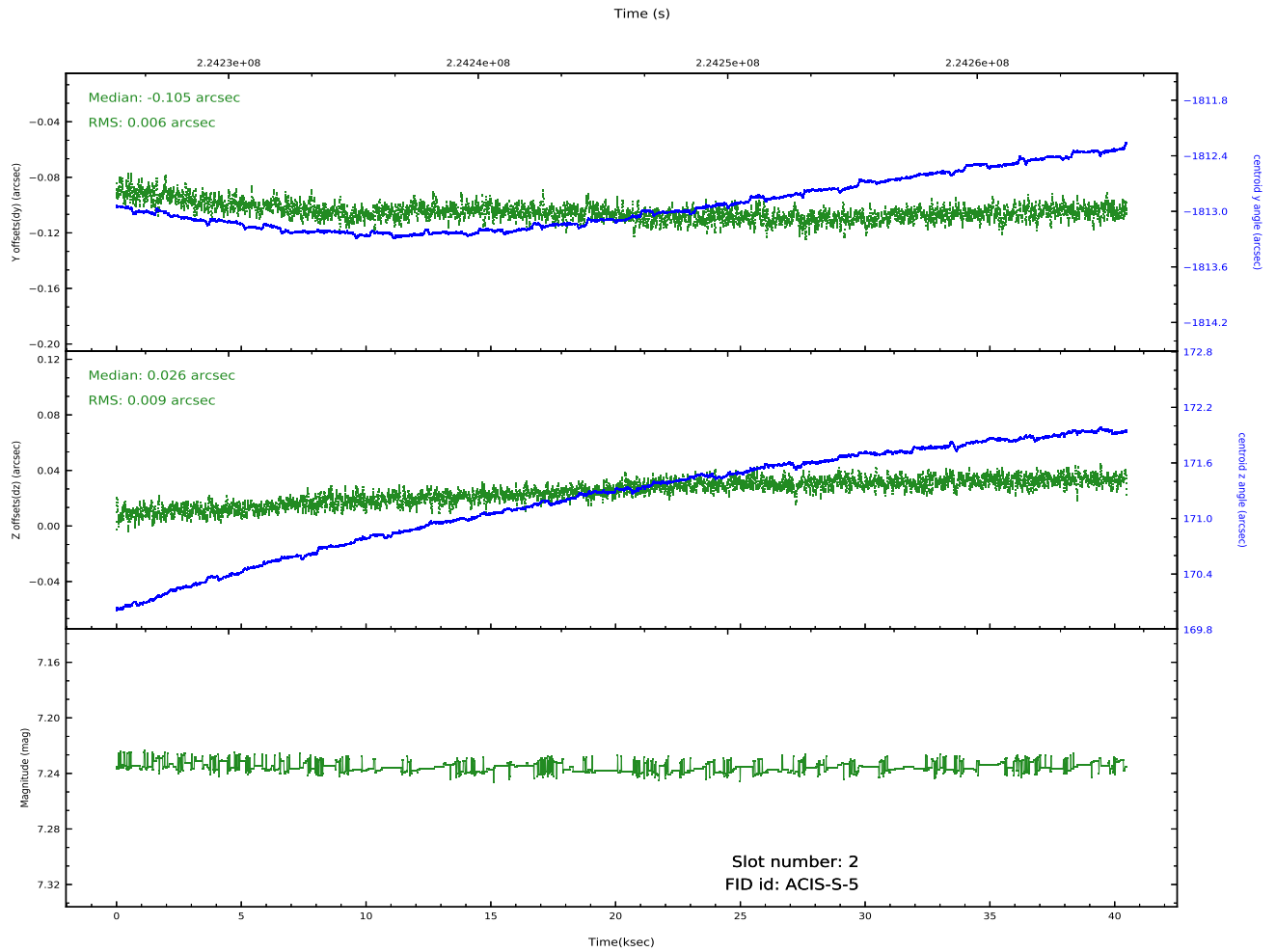
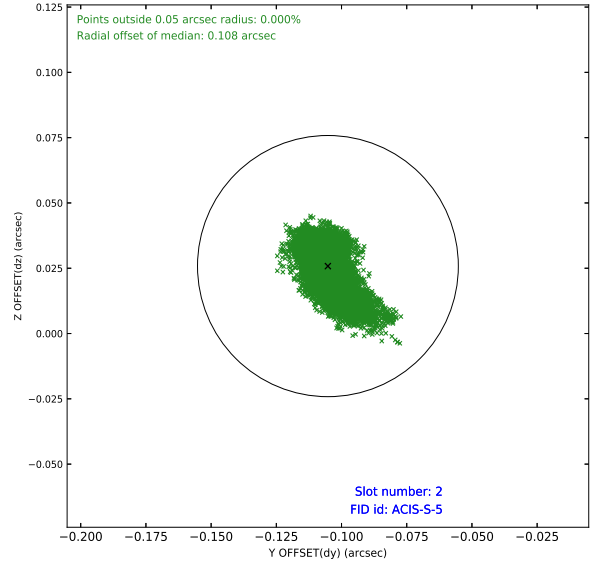
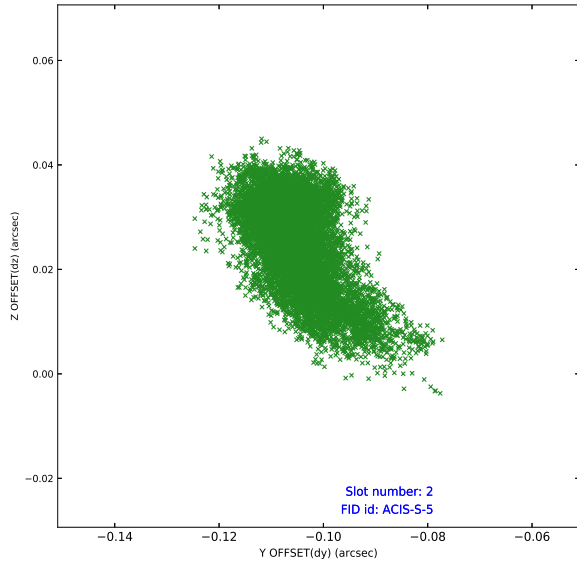
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.95839

## 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.