

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20136 - L2 Version 3  
Chandra X-Ray Center

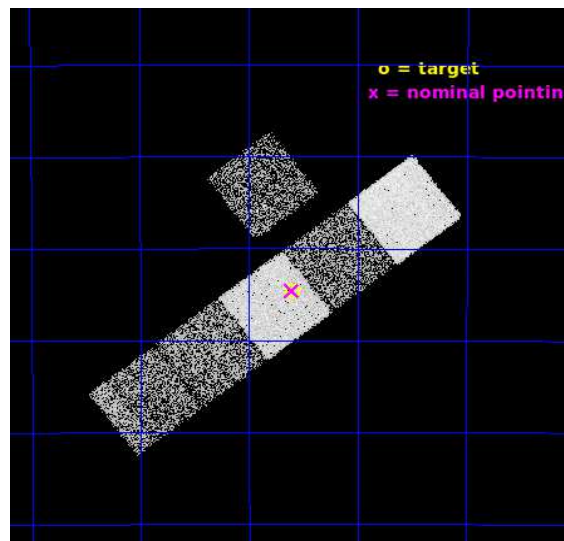
L2 Processing Date : Oct 25 2020

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# 1 Front

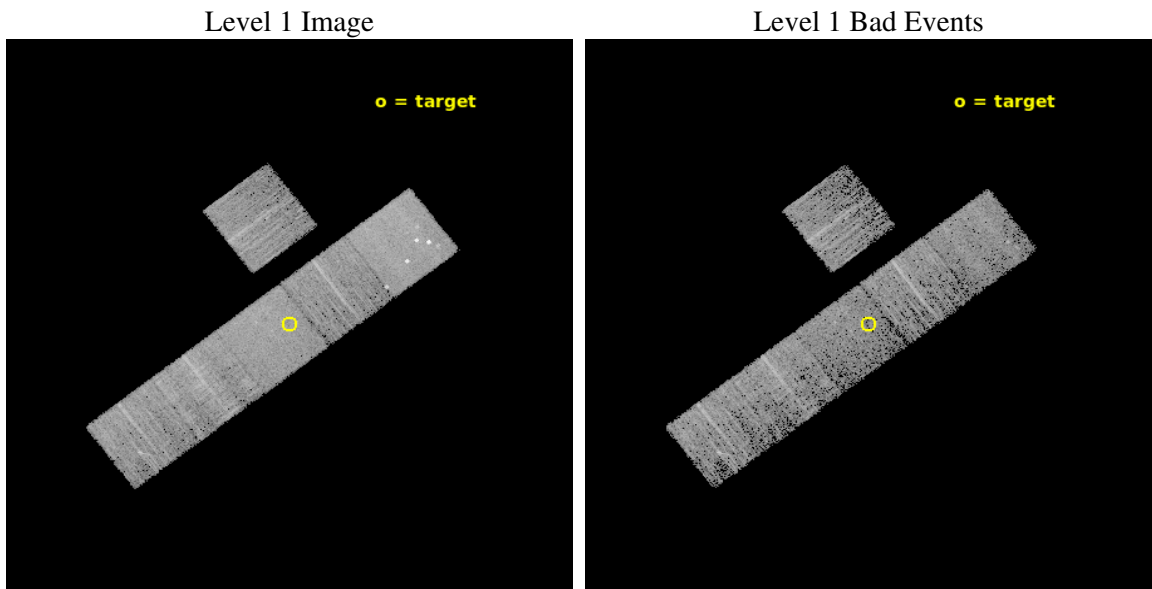
seq_num	201158	Sequence number
obs_id	20136	Observation id
title	A Comprehensive Search for X-ray Emission from the Coolest Magnetically Active Brown Dwarfs	Proposal title
observer	Peter Williams	Principal investigator
object	GJ 1001 B	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	1.15	Observer's specified target RA [deg]
dec_targ	-40.743889	Observer's specified target Dec [deg]
ra_nom	1.1512766134119	Nominal RA [deg]
dec_nom	-40.743310153985	Nominal Dec [deg]
roll_nom	142.43708685222	Nominal Roll [deg]
revision	3	Processing version of data
ontime	4348.3497462273	Sum of GTIs [s]
livetime	4293.2883234787	Livetime [s]
ontime2	4344.9445157051	Sum of GTIs [s]
ontime5	4348.3087061644	Sum of GTIs [s]
ontime6	4348.2676662207	Sum of GTIs [s]
ontime7	4348.3497462273	Sum of GTIs [s]
ontime8	4348.2266261578	Sum of GTIs [s]
ontime9	4338.6676250696	Sum of GTIs [s]
l2events	52904	Number of level 2 events



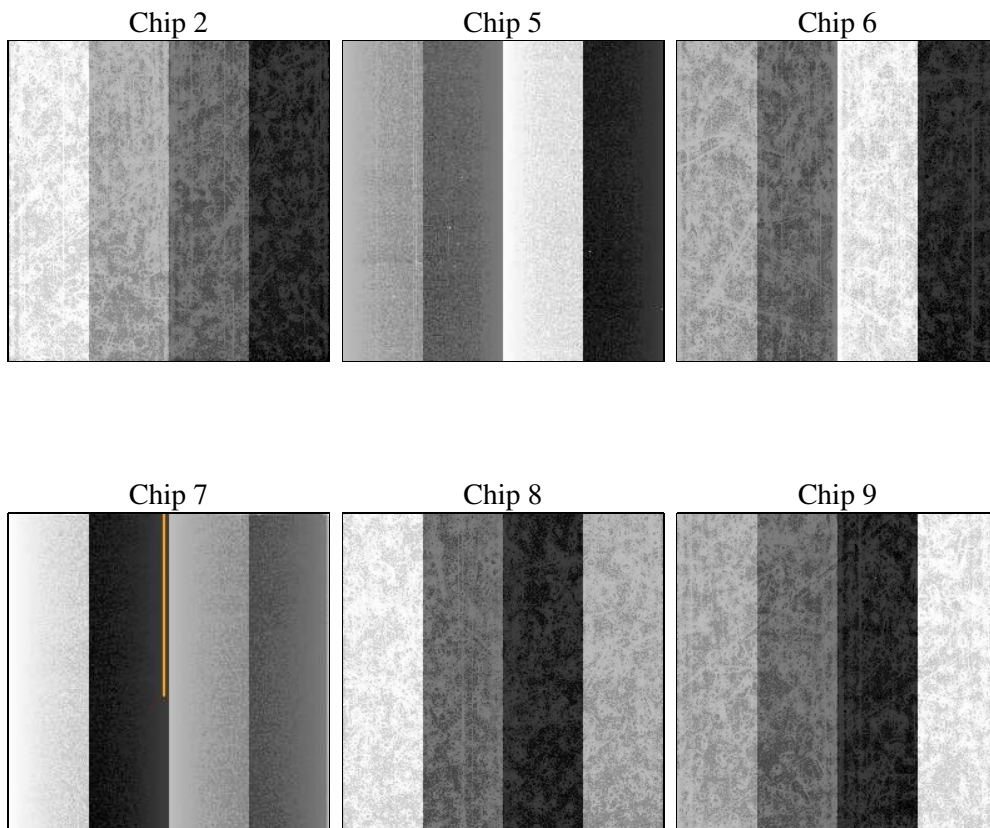
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4400.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	4348.3497462273	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime2	4344.9445157051	Sum of GTIs [s]
date	2020-10-25T15:55:49	Date and time of file creation	ontime5	4348.3087061644	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	4348.2676662207	Sum of GTIs [s]
			ontime7	4348.3497462273	Sum of GTIs [s]
			ontime8	4348.2266261578	Sum of GTIs [s]
			ontime9	4338.6676250696	Sum of GTIs [s]
			l1events	238454	Number of level 1 events

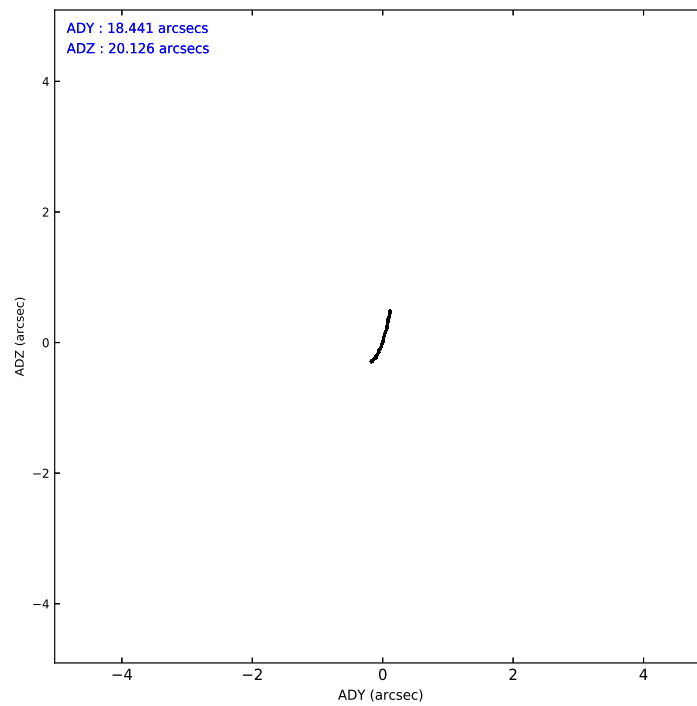
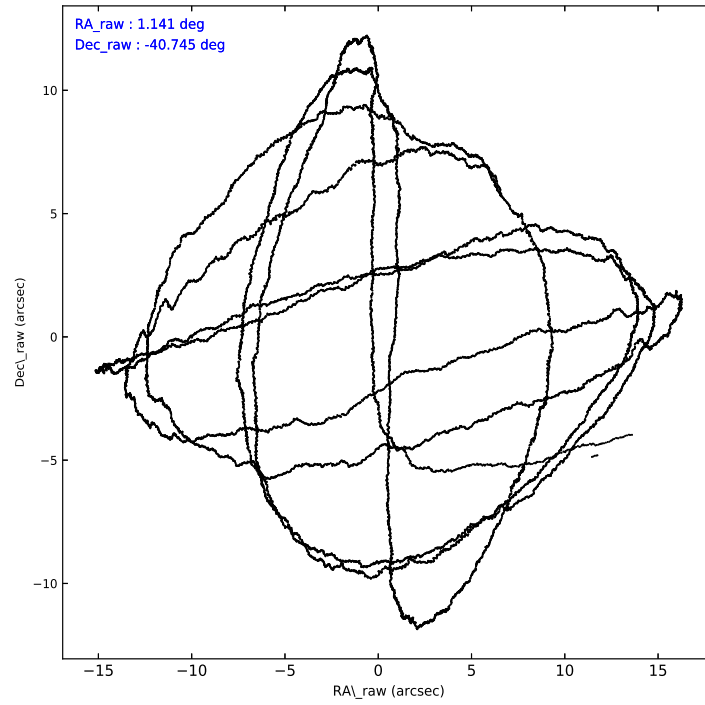
### 2.1.4 Events

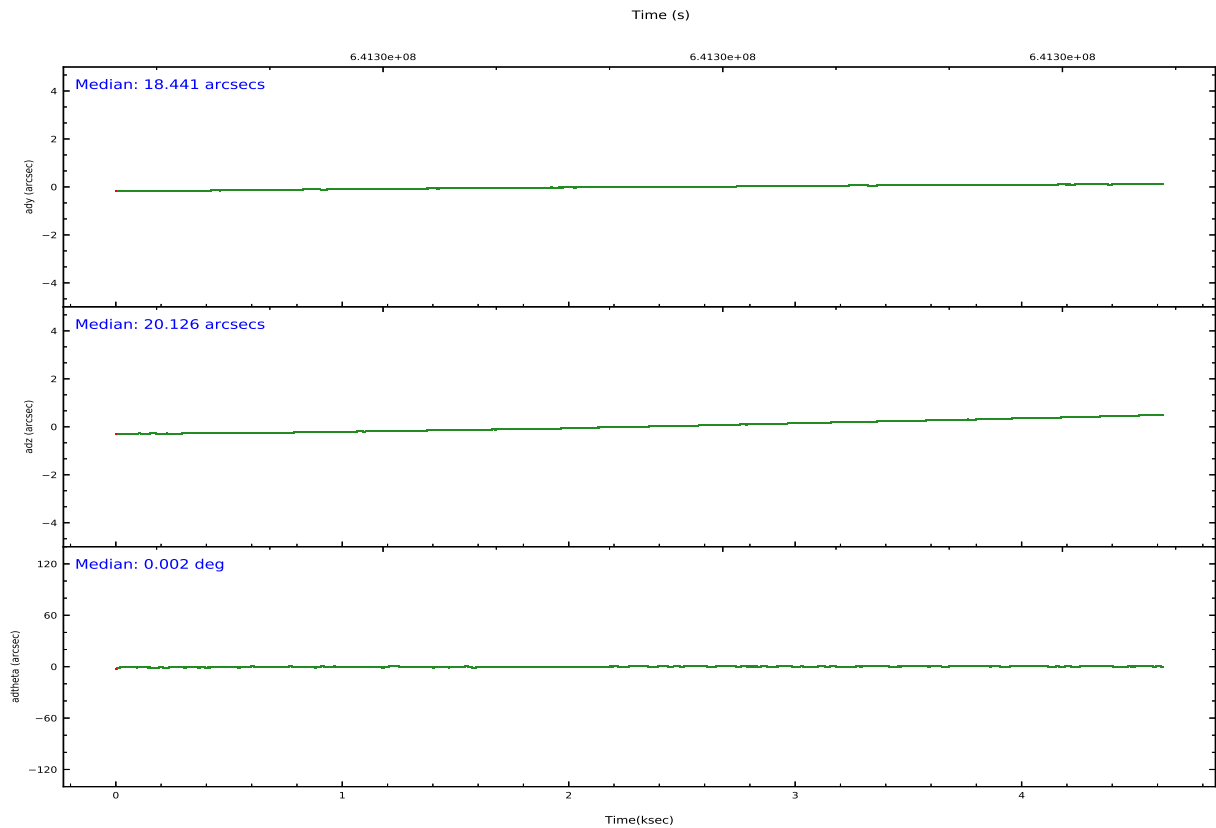
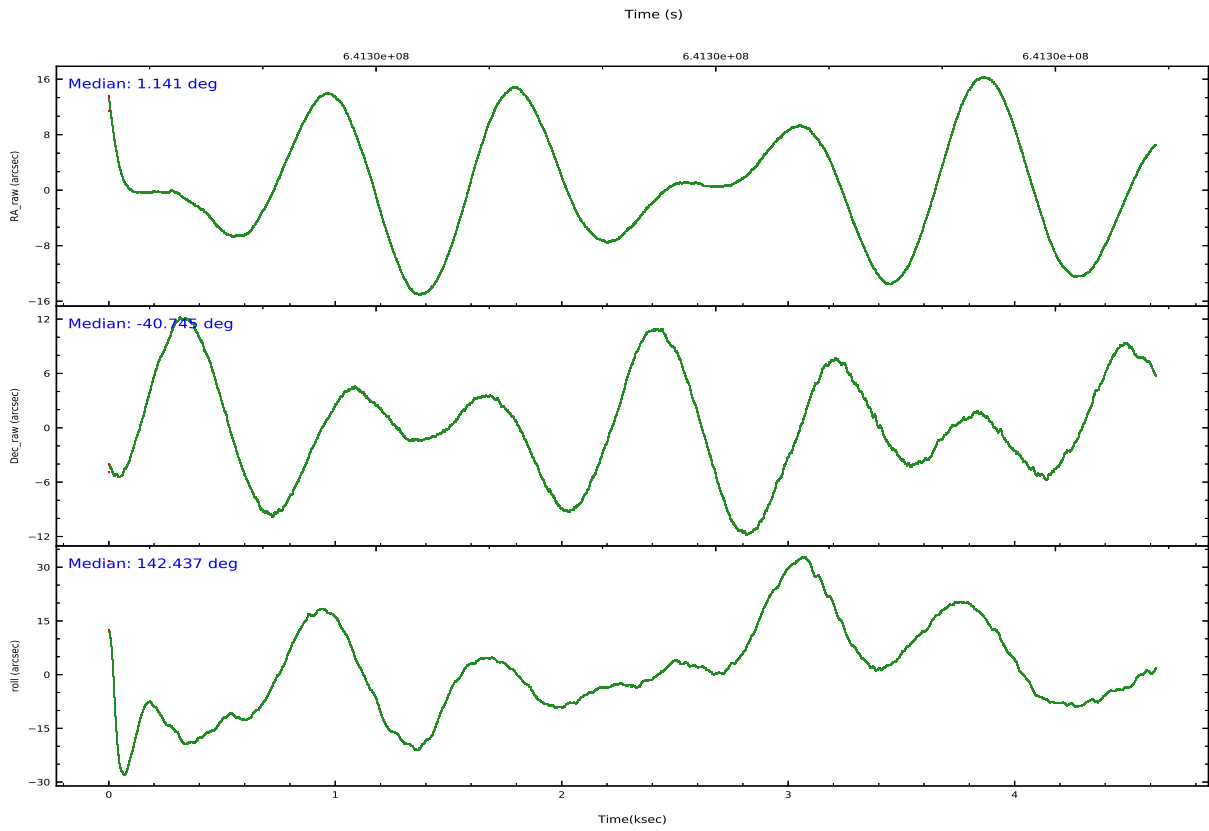
	ccd 2	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 2	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	31853	55615	33363	41585	41556	34482	grade 0 events	1199	4651	999	1608	2831	1269
rejected events	28591	27042	29855	23854	31342	30622		3%	8%	2%	3%	6%	3%
rejected %	89%	48%	89%	57%	75%	88%	grade 1 events	19	269	13	56	29	16
								0%	0%	0%	0%	0%	0%
							grade 2 events	742	8714	961	3722	2502	993
								2%	15%	2%	8%	6%	2%
							grade 3 events	333	818	284	1432	1093	332
								1%	1%	0%	3%	2%	0%
							grade 4 events	333	801	299	1330	1006	336
								1%	1%	0%	3%	2%	0%
							grade 5 events	1147	3232	1387	3897	2143	1562
								3%	5%	4%	9%	5%	4%
							grade 6 events	658	13602	968	9647	2785	932
								2%	24%	2%	23%	6%	2%
							grade 7 events	27422	23528	28452	19893	29167	29042
								86%	42%	85%	47%	70%	84%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-256789	ACIS-256789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	1.176973	1.1512766134119	CCD I2 on	O1	Y
[deg] Pointing Dec	-40.748038	-40.743310153985	CCD I3 on	N	N
[deg] Pointing Roll	142.311471	142.43708685222	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O5	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O4	Y
[s] Observation start time (MET)	641298046.184000	641296909.73747	CCD S5 on	O2	Y
Observation start date	2018-04-28T10:19:37	2018-04-28T10:01:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	641302446.184000	641303093.05033	On-chip summing requested	N	N
Observation end date	2018-04-28T11:32:57	2018-04-28T11:44:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





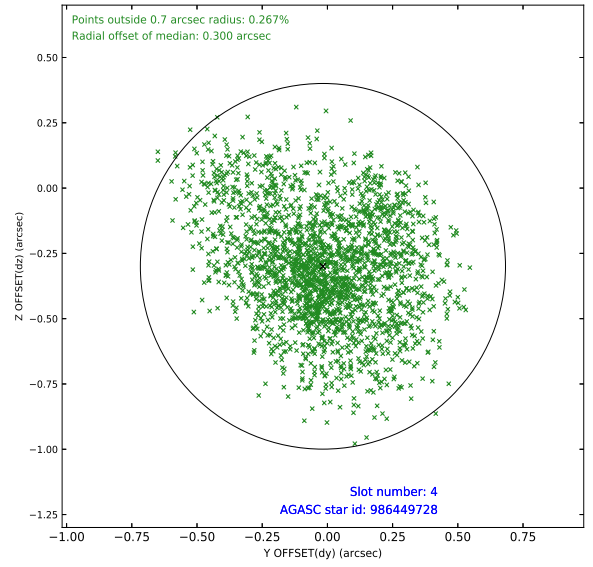
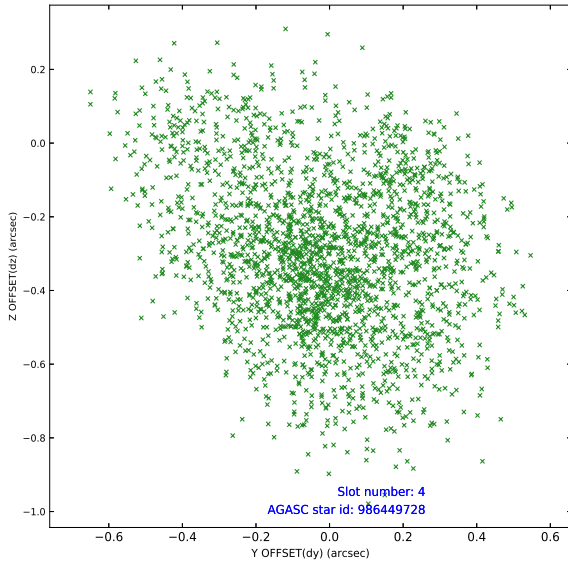
### Slot Statistics

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	7.25	1128	1.000	0.305	-0.169	0.011	0.017	0.000000	0.000000	924.62	-1737
1	FID		ACIS-S-4	7.27	1129	1.000	0.082	-0.025	0.009	0.015	0.000000	0.000000	2142.77	165
2	FID		ACIS-S-5	7.26	1129	1.000	-0.414	0.206	0.008	0.013	0.000000	0.000000	-1823.04	161
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
4	GUIDE	used	986449728	9.84	2251	1.000	-0.017	-0.300	0.338	0.523	0.918710	-41.095886	-212.19	1420
5	GUIDE	used	986450760	9.97	2254	1.000	-0.109	0.231	0.356	0.561	1.722697	-40.990438	-1710.08	-211
6	GUIDE	used	986452176	8.78	2256	1.000	-0.083	-0.004	0.186	0.298	1.707271	-40.913300	-1508.89	-407
7	GUIDE	used	986453000	8.39	2256	1.000	0.214	0.091	0.158	0.258	1.855872	-40.479572	-887.44	-1897

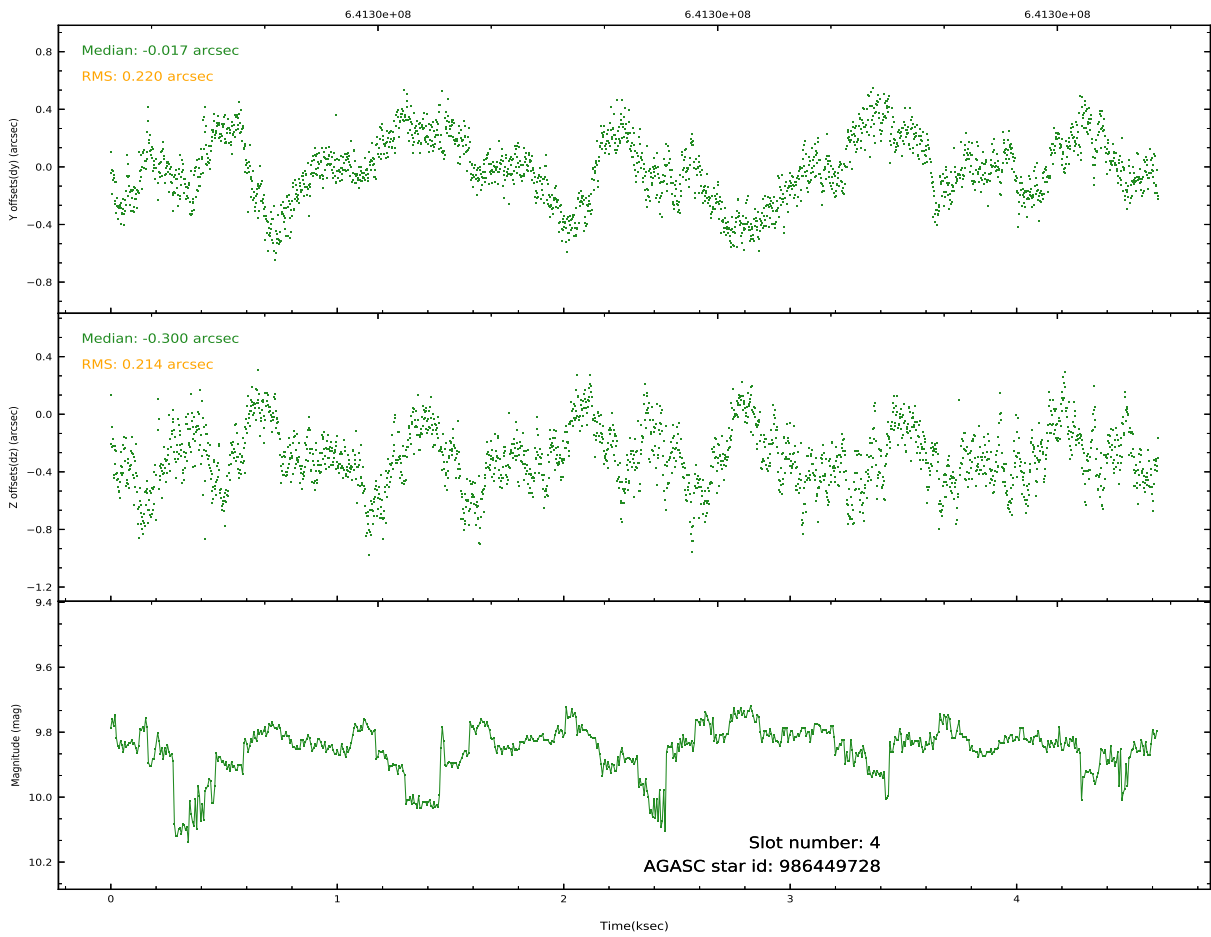
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## 2.4 Star Slots

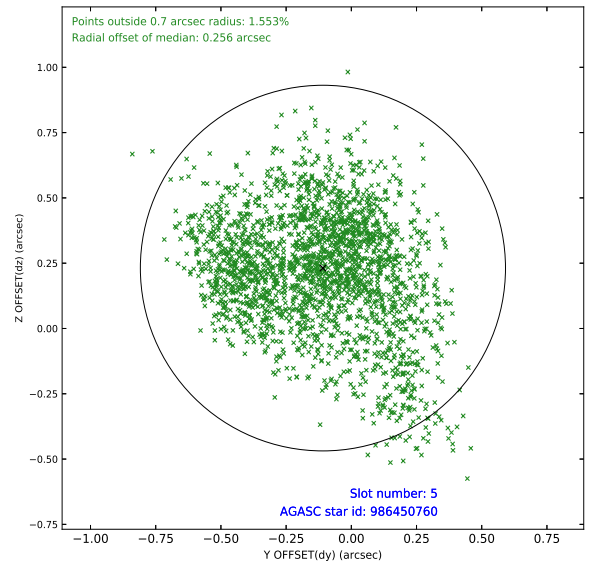
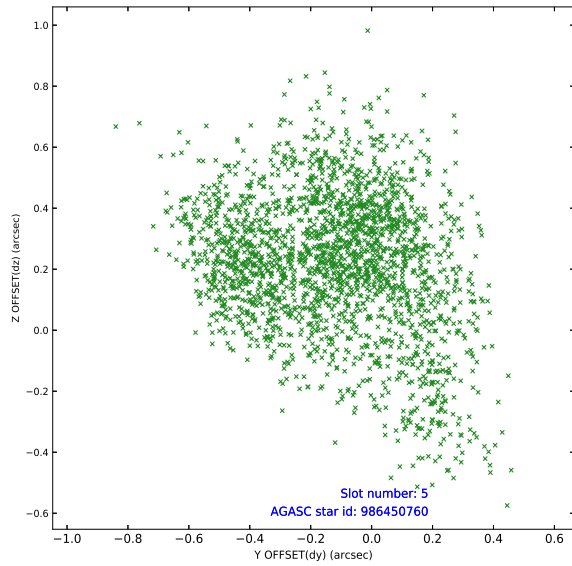
### 2.4.1 Slot 4



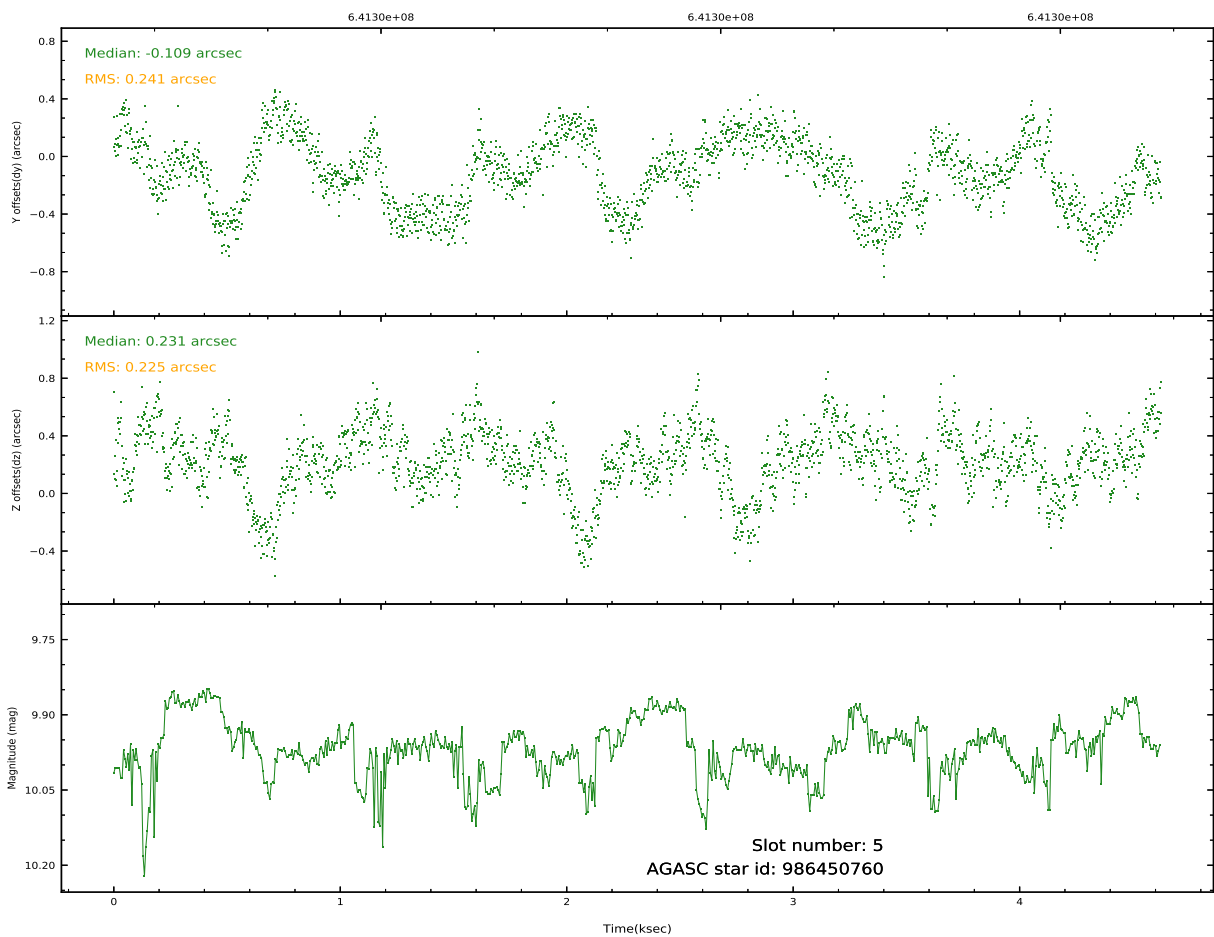
Time (s)



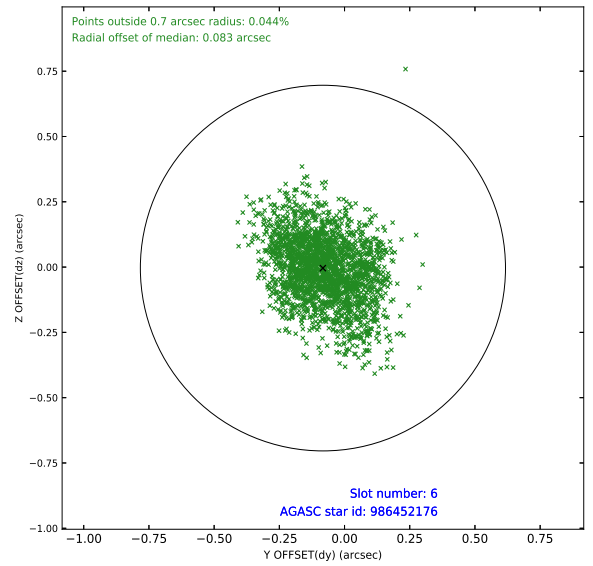
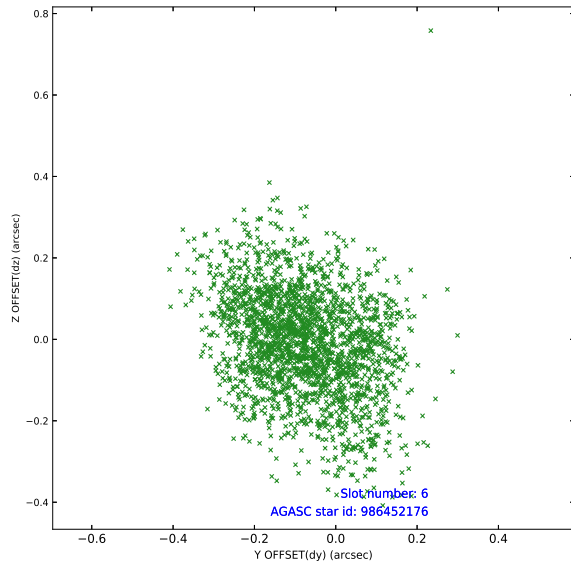
## 2.4.2 Slot 5



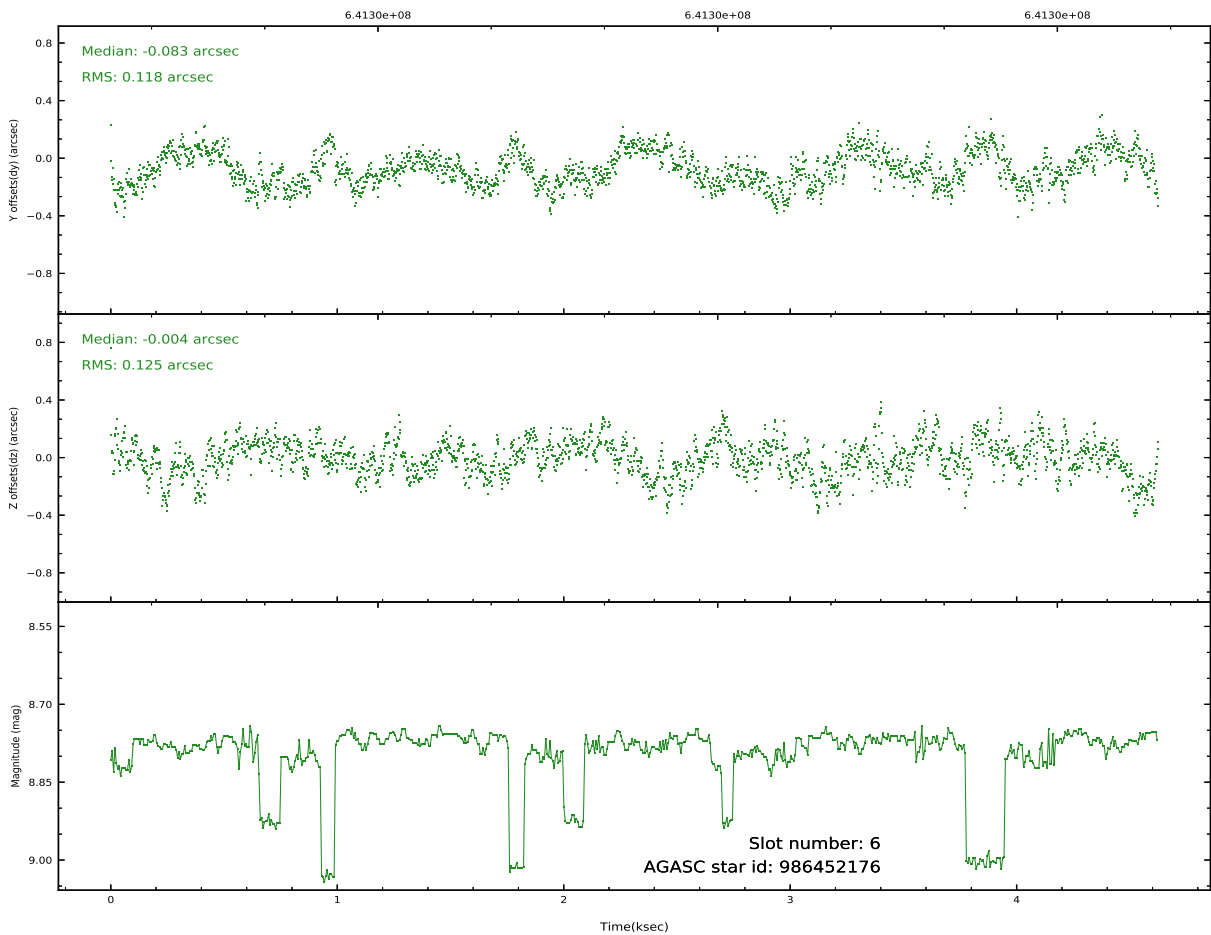
Time (s)



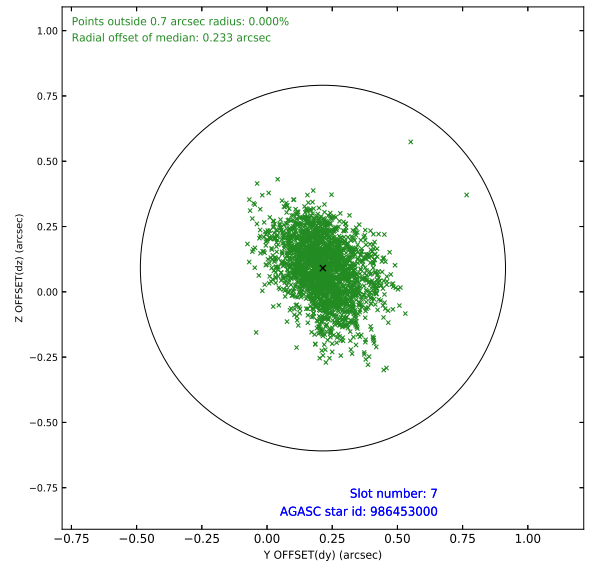
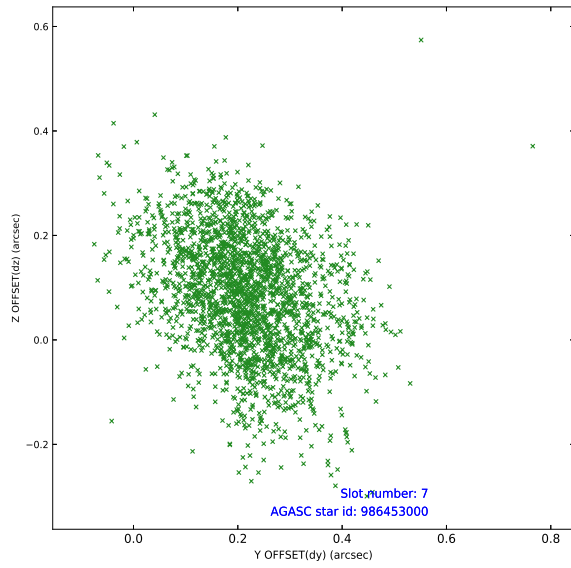
### 2.4.3 Slot 6



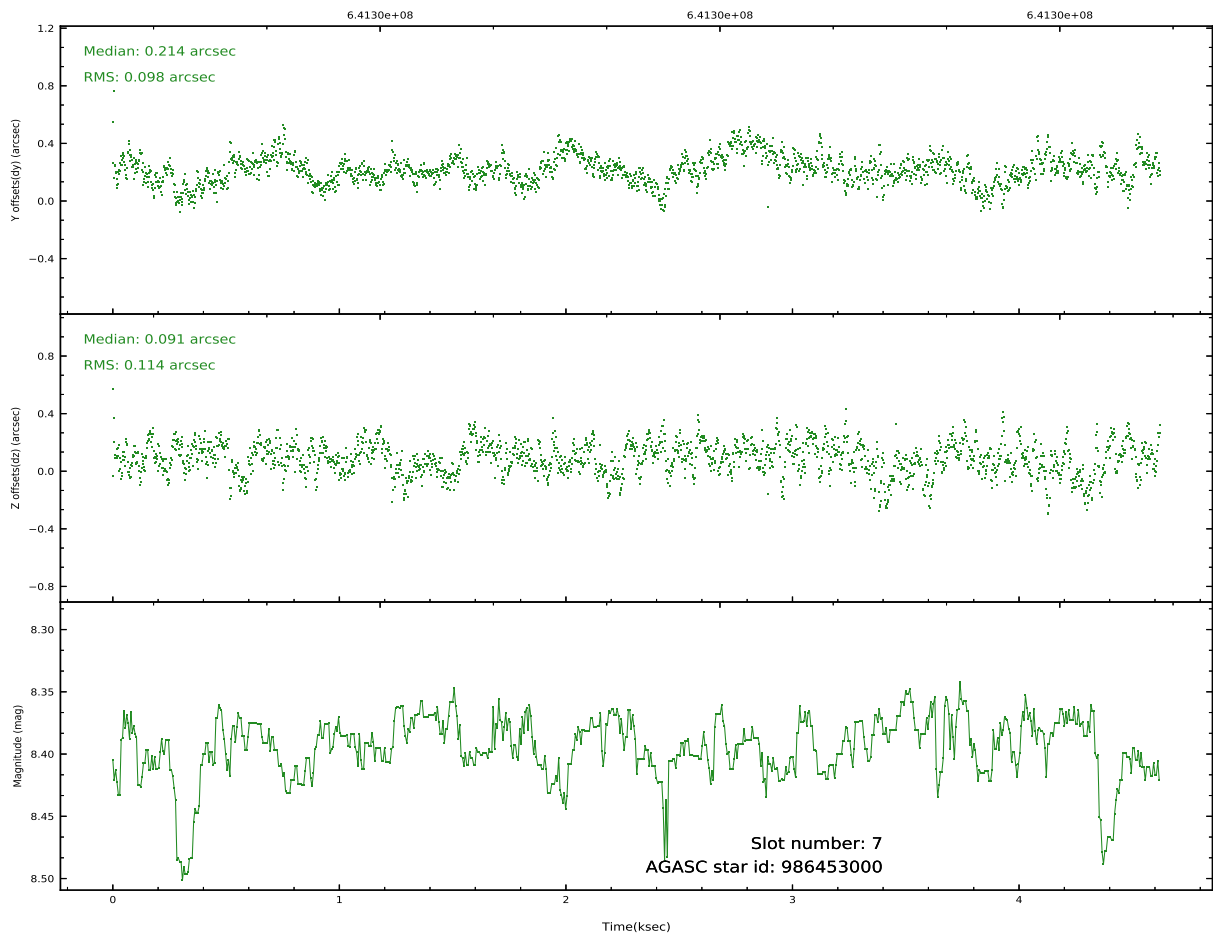
Time (s)



## 2.4.4 Slot 7

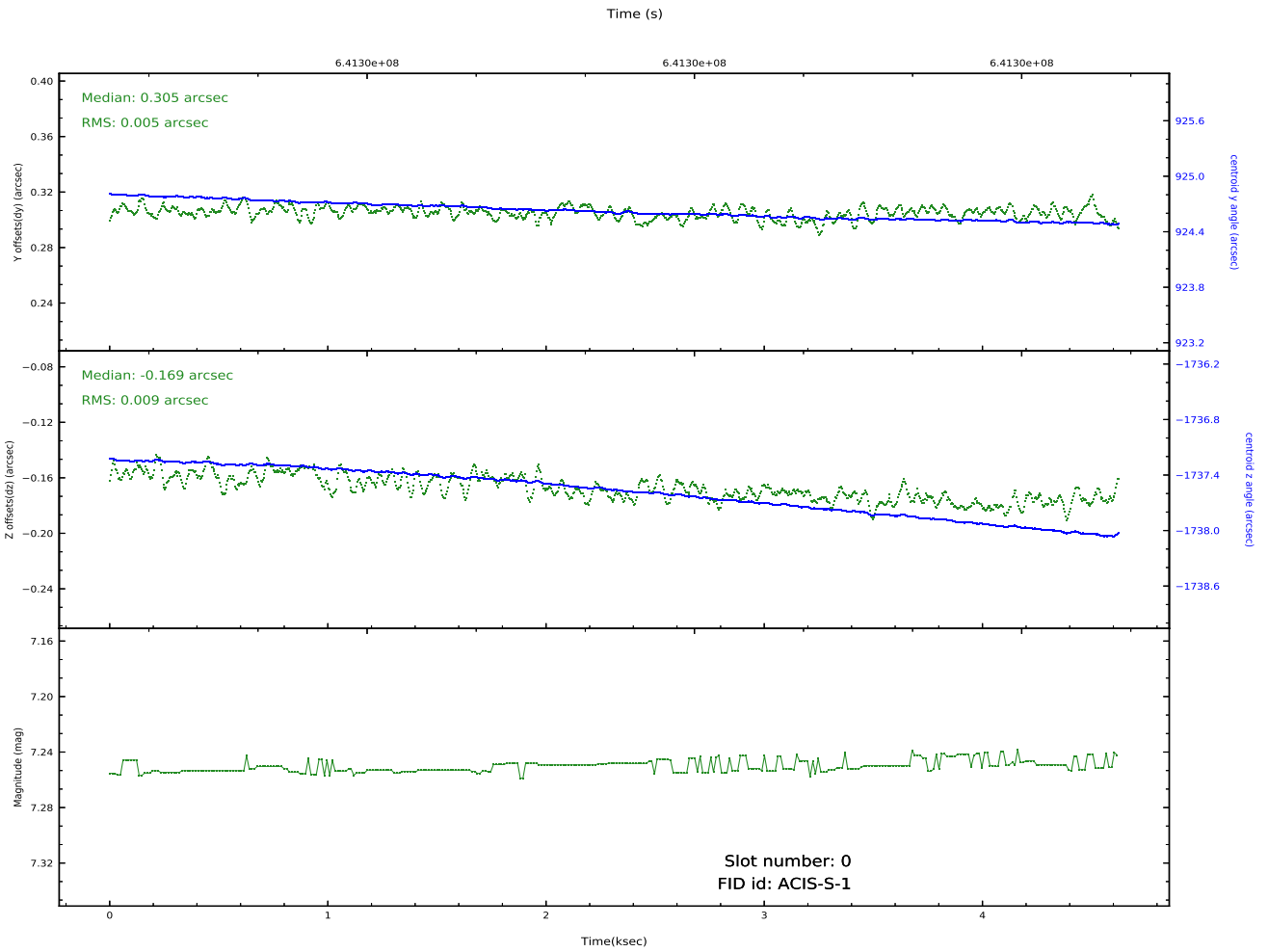
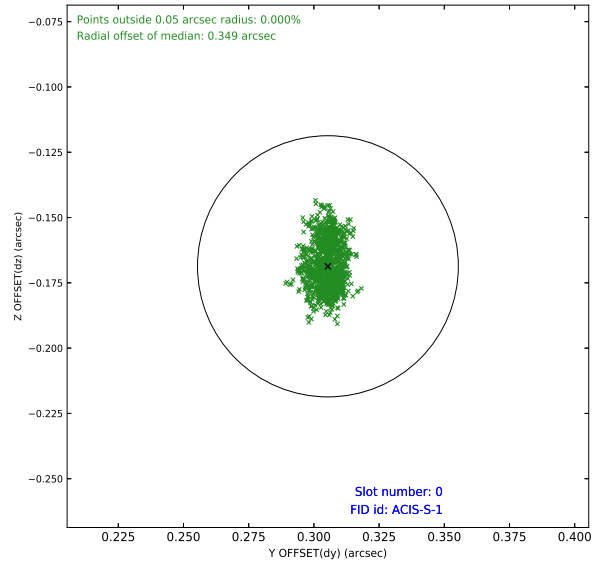
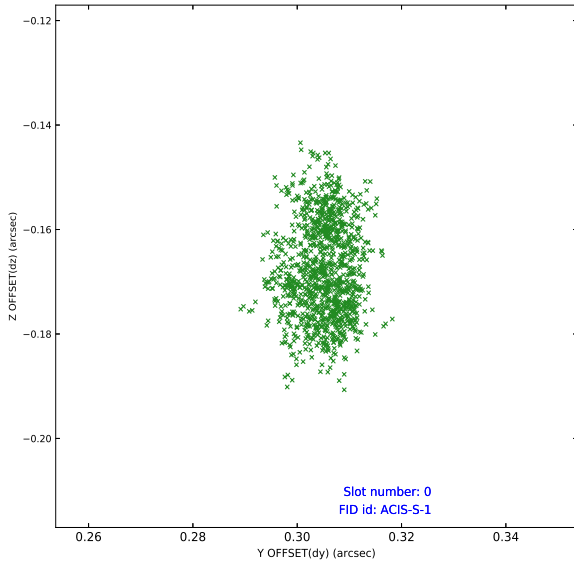


Time (s)

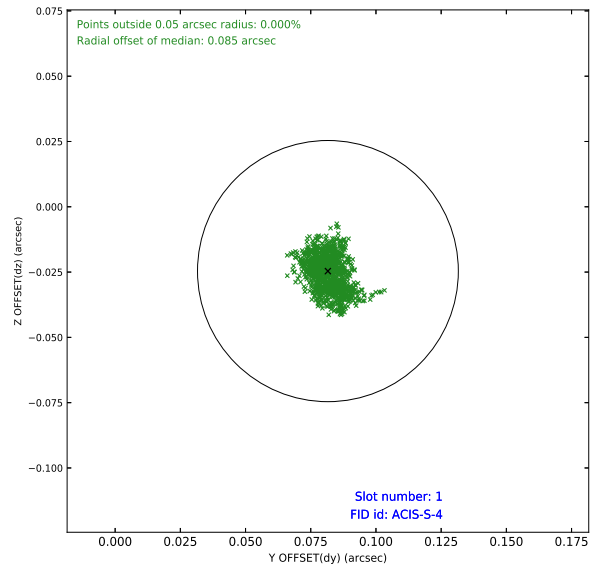
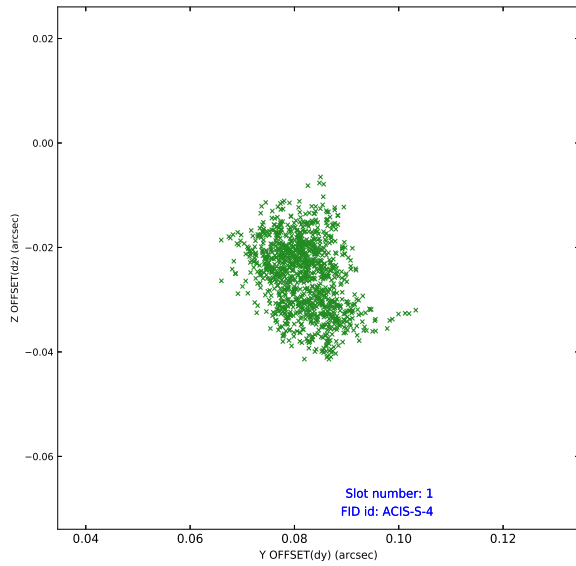


## 2.5 FID Slots

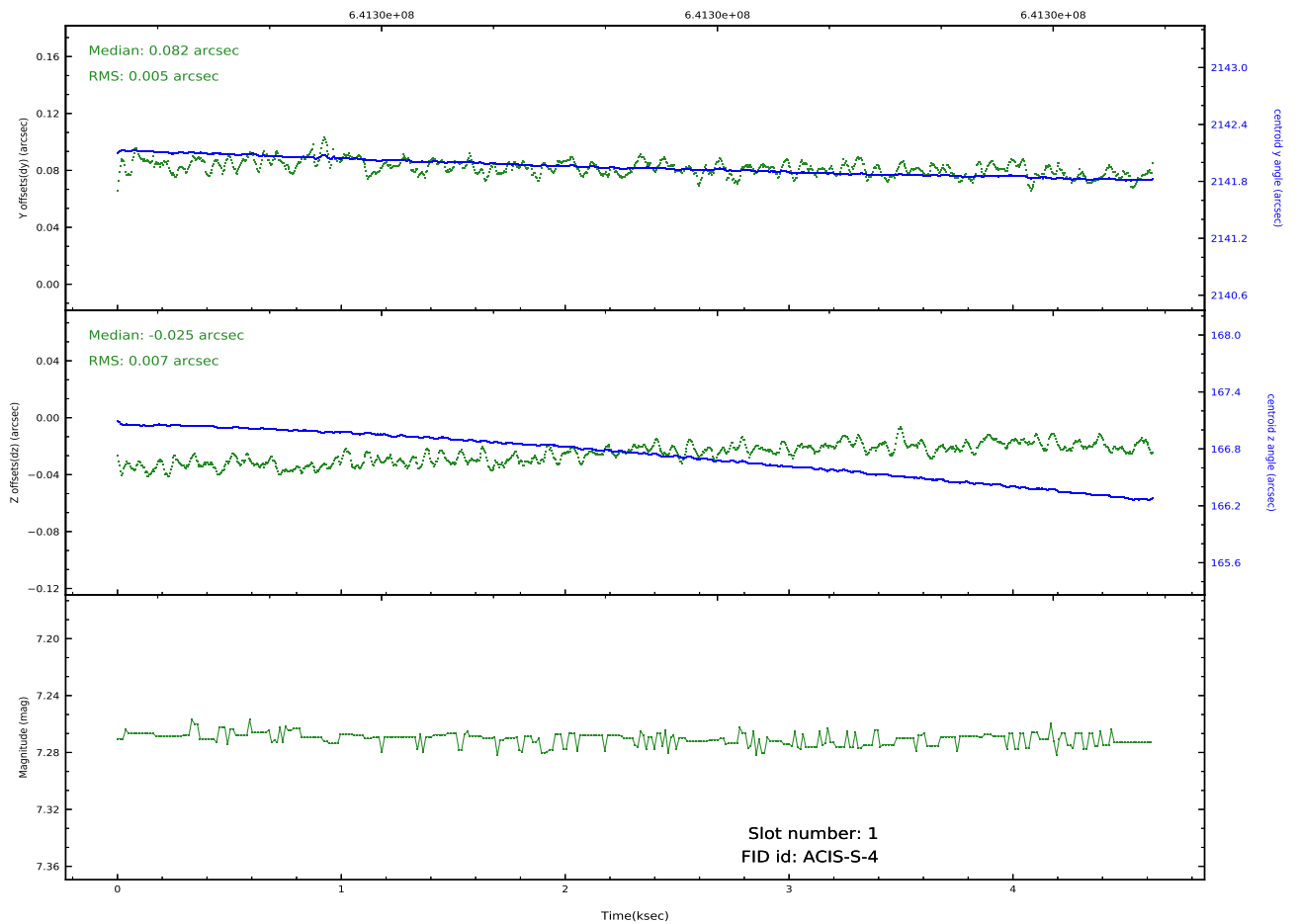
### 2.5.1 Slot 0



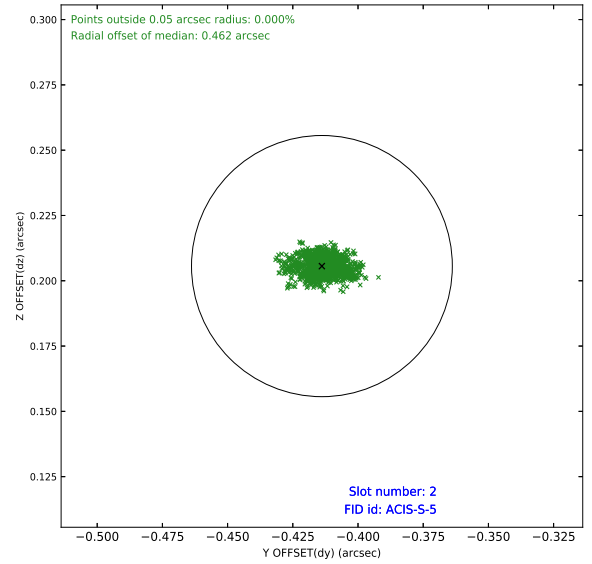
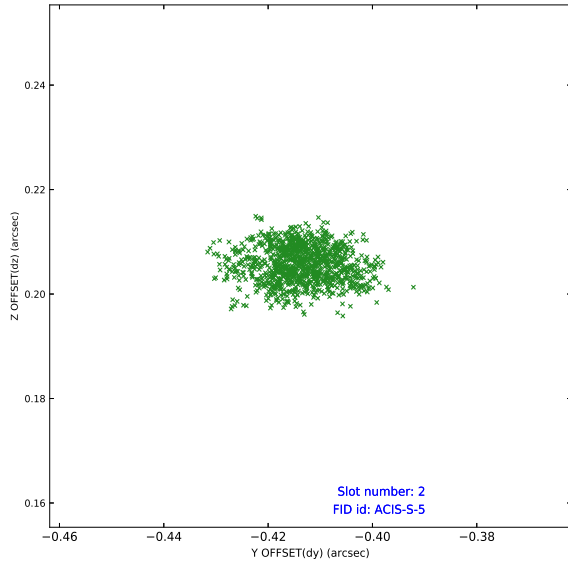
## 2.5.2 Slot 1



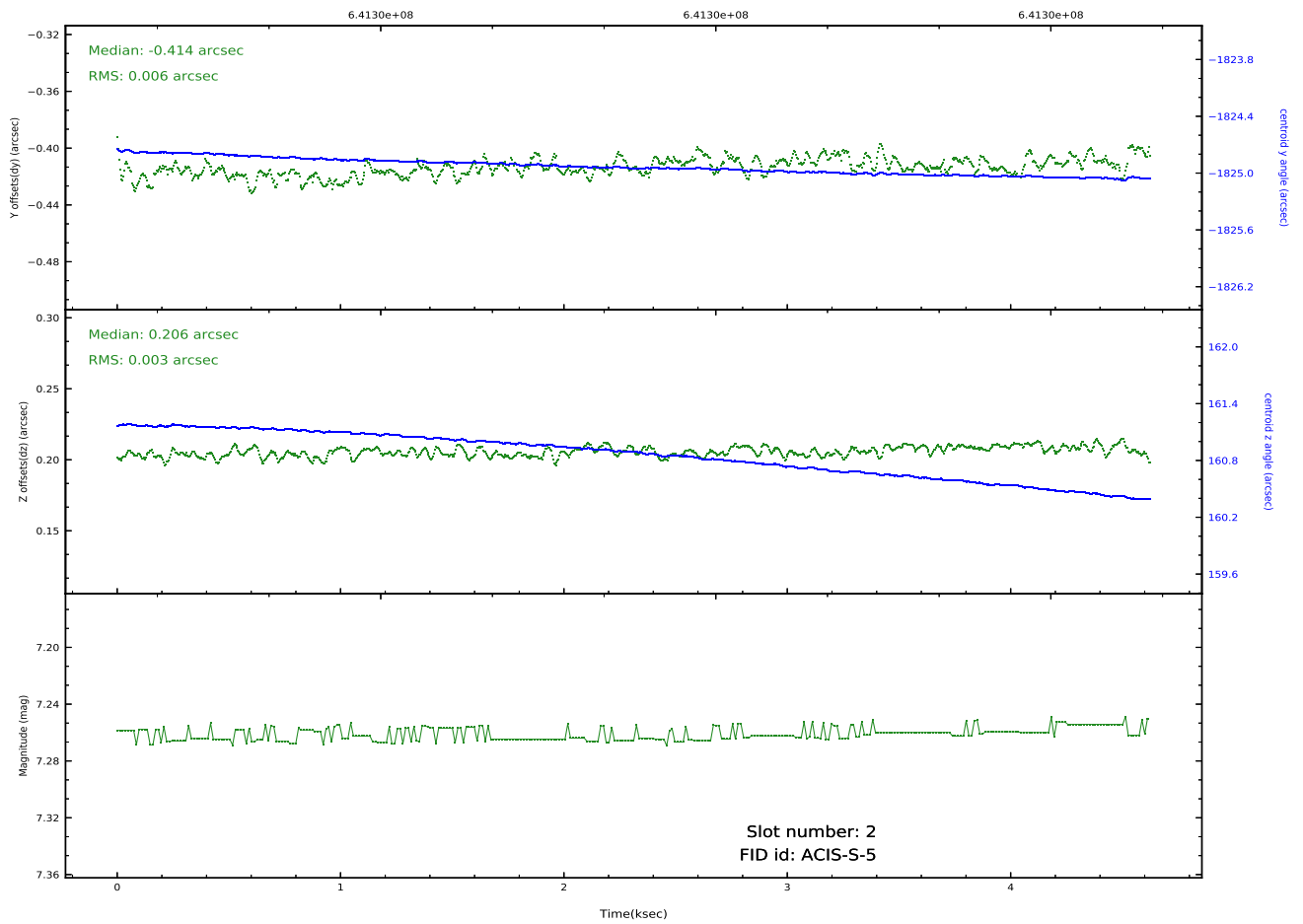
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.3483497470617

## A.2 Comments

The guide star in slot 3 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.