

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20459 - L2 Version 2  
Chandra X-Ray Center

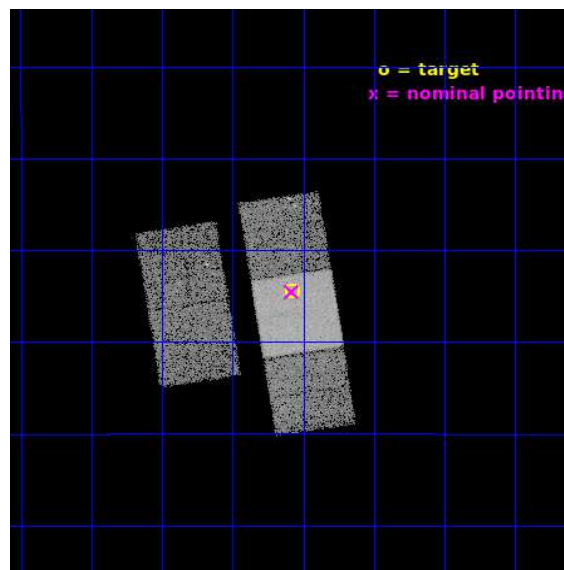
L2 Processing Date : Oct 27 2020

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# 1 Front

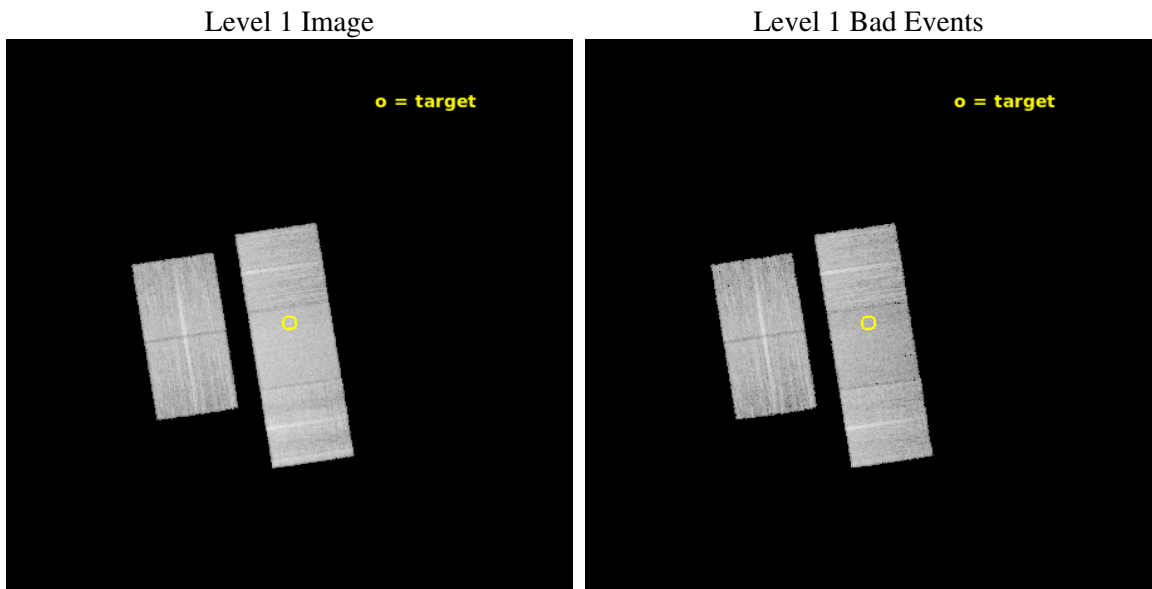
seq_num	703562	Sequence number
obs_id	20459	Observation id
title	Understanding AGN Accretion State Transitions with a Statistical Sample of Changing-Look Quasars	Proposal title
observer	John Ruan	Principal investigator
object	SDSS J000904.54-103428.6	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	2.26875	Observer's specified target RA [deg]
dec_targ	-10.574639	Observer's specified target Dec [deg]
ra_nom	2.2700775271722	Nominal RA [deg]
dec_nom	-10.575428121746	Nominal Dec [deg]
roll_nom	81.153356423038	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12055.90009284	Sum of GTIs [s]
livetime	11898.380882703	Livetime [s]
ontime2	12055.90009284	Sum of GTIs [s]
ontime3	12055.90009284	Sum of GTIs [s]
ontime6	12052.759082556	Sum of GTIs [s]
ontime7	12055.90009284	Sum of GTIs [s]
ontime8	12055.90009284	Sum of GTIs [s]
l2events	86545	Number of level 2 events



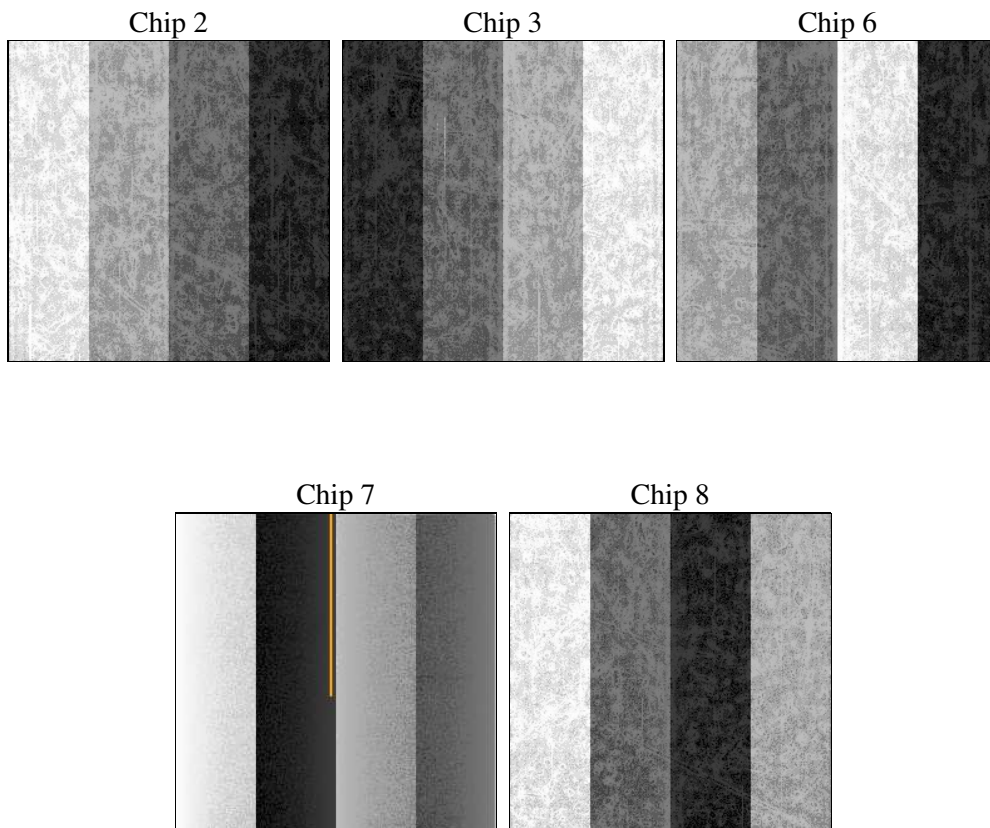
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	12055.90009284	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime2	12055.90009284	Sum of GTIs [s]
date	2020-10-27T16:03:11	Date and time of file creation	ontime3	12055.90009284	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	12052.759082556	Sum of GTIs [s]
			ontime7	12055.90009284	Sum of GTIs [s]
			ontime8	12055.90009284	Sum of GTIs [s]
			l1events	513018	Number of level 1 events

### 2.1.4 Events

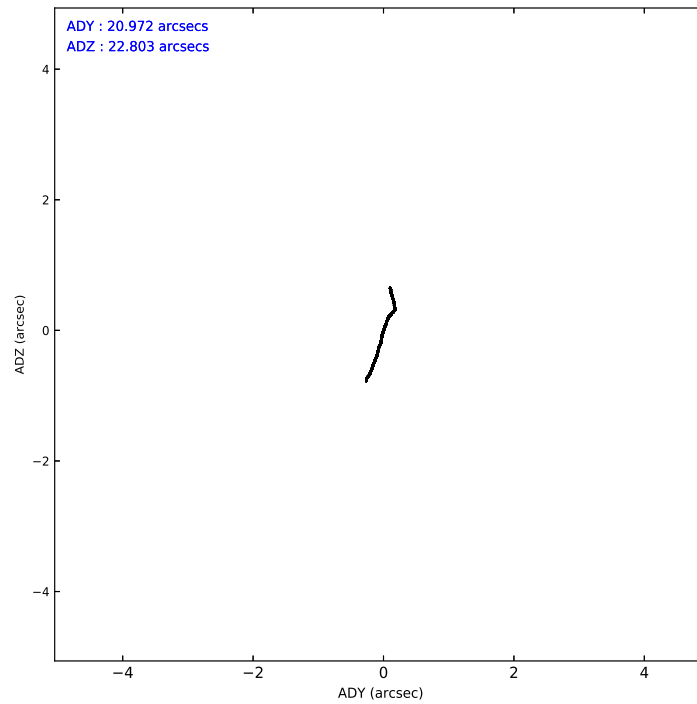
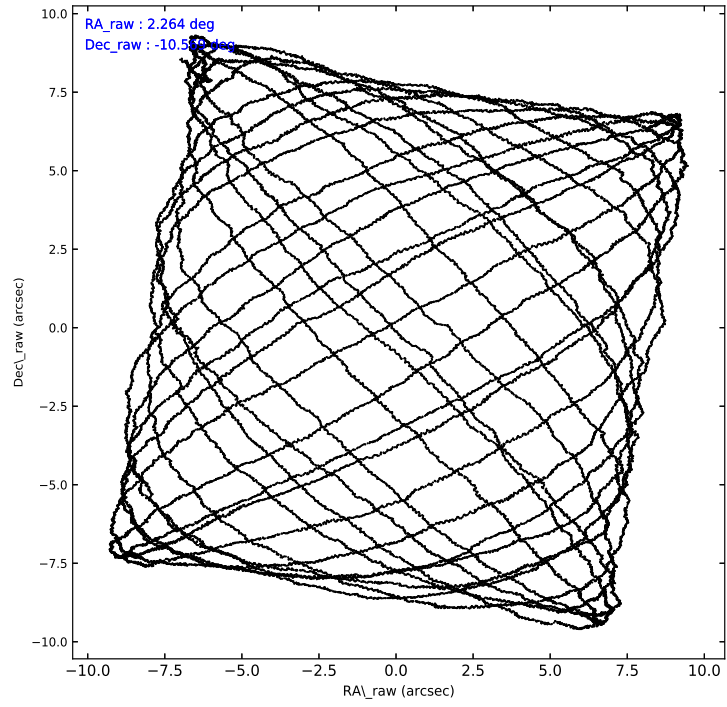
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	88108	87278	96600	118655	122377
rejected events	78066	77713	86031	67050	88362
rejected %	88%	89%	89%	56%	72%

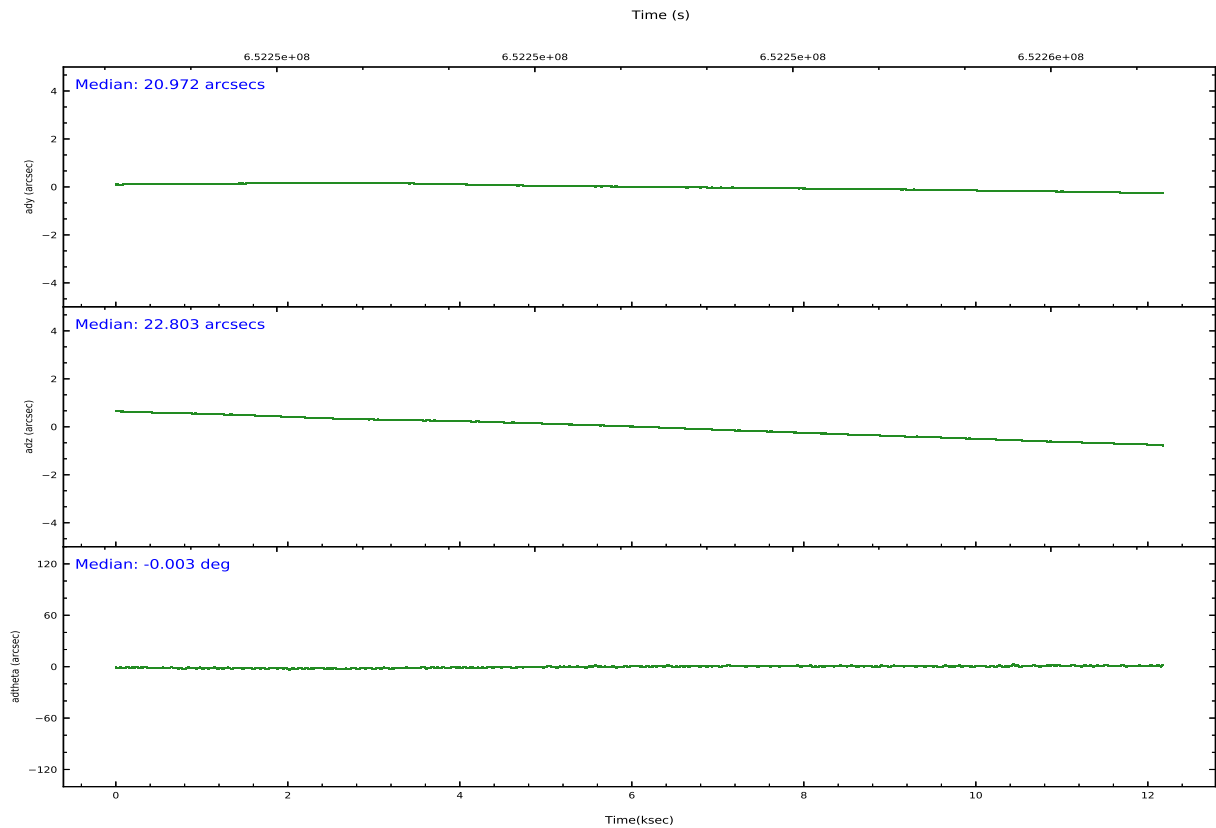
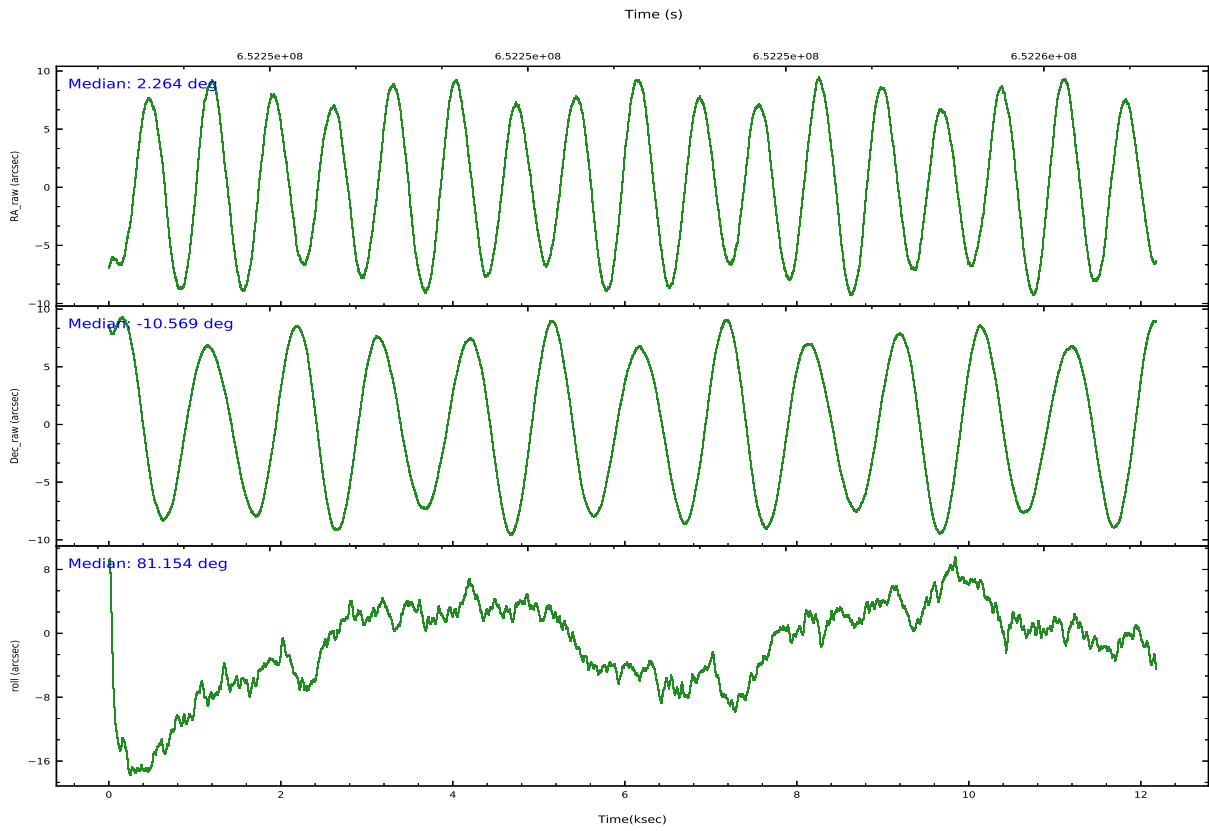
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	3718	3484	3574	4400	10013
	4%	3%	3%	3%	8%
grade 1 events	44	54	47	182	91
	0%	0%	0%	0%	0%
grade 2 events	2411	2083	2455	11223	7915
	2%	2%	2%	9%	6%
grade 3 events	988	958	1010	4022	3791
	1%	1%	1%	3%	3%
grade 4 events	1030	1006	1076	3989	3514
	1%	1%	1%	3%	2%
grade 5 events	3610	4327	4393	11663	6674
	4%	4%	4%	9%	5%
grade 6 events	1899	2040	2460	28010	8808
	2%	2%	2%	23%	7%
grade 7 events	74408	73326	81585	55166	81571
	84%	84%	84%	46%	66%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-23678	ACIS-23678	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	2.274808	2.2700775271722	CCD I2 on	O1	Y
[deg] Pointing Dec	-10.593907	-10.575428121746	CCD I3 on	O2	Y
[deg] Pointing Roll	81.001110	81.15335642303801	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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	Y	Y
[s] Observation start time (MET)	652244306.184000	652243008.38564	CCD S5 on	N	N
Observation start date	2018-09-02T02:57:17	2018-09-02T02:36:48	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	652256306.184000	652257684.3365099	On-chip summing requested	N	N
Observation end date	2018-09-02T06:17:17	2018-09-02T06:41:24	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





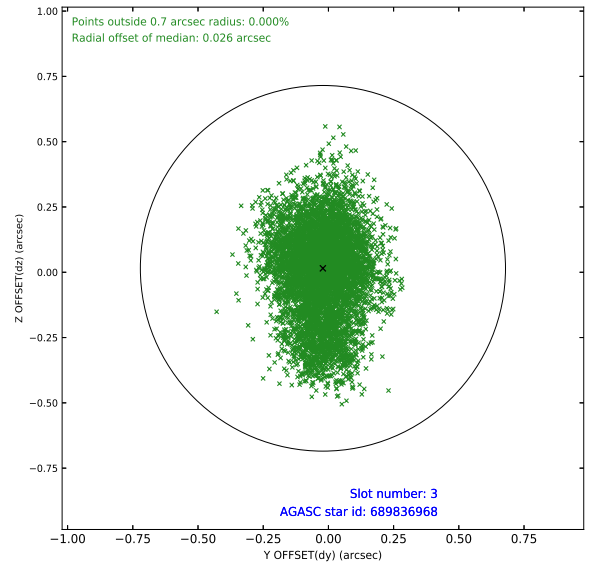
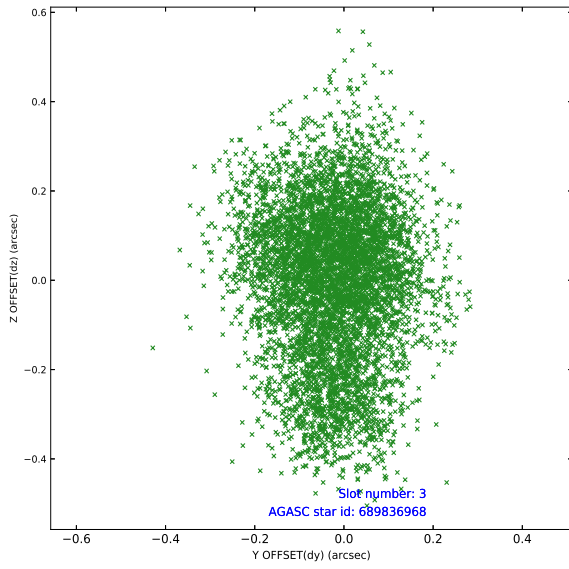
### Slot Statistics

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	7.01	2971	1.000	0.092	0.052	0.019	0.042	0.000000	0.000000	921.95	-1739
1	FID		ACIS-S-4	7.03	2971	1.000	-0.010	-0.151	0.008	0.013	0.000000	0.000000	2139.55	163
2	FID		ACIS-S-6	7.20	2971	1.000	-0.105	0.112	0.017	0.029	0.000000	0.000000	388.31	801
3	GUIDE	used	689836968	9.54	5934	1.000	-0.021	0.015	0.208	0.354	1.878784	-10.706391	-621.71	1321
4	GUIDE	used	689838408	9.47	5931	1.000	-0.255	-0.311	0.199	0.312	2.253624	-10.389679	713.58	189
5	GUIDE	used	689965048	8.89	5933	1.000	0.028	0.150	0.160	0.254	2.768745	-10.877876	-737.35	-1884
6	GUIDE	used	689965456	9.31	5933	1.000	0.107	0.086	0.153	0.252	2.681071	-10.849483	-684.86	-1562
7	GUIDE	used	689967688	8.98	5932	1.000	0.193	0.075	0.223	0.374	2.588206	-10.964097	-1143.36	-1302

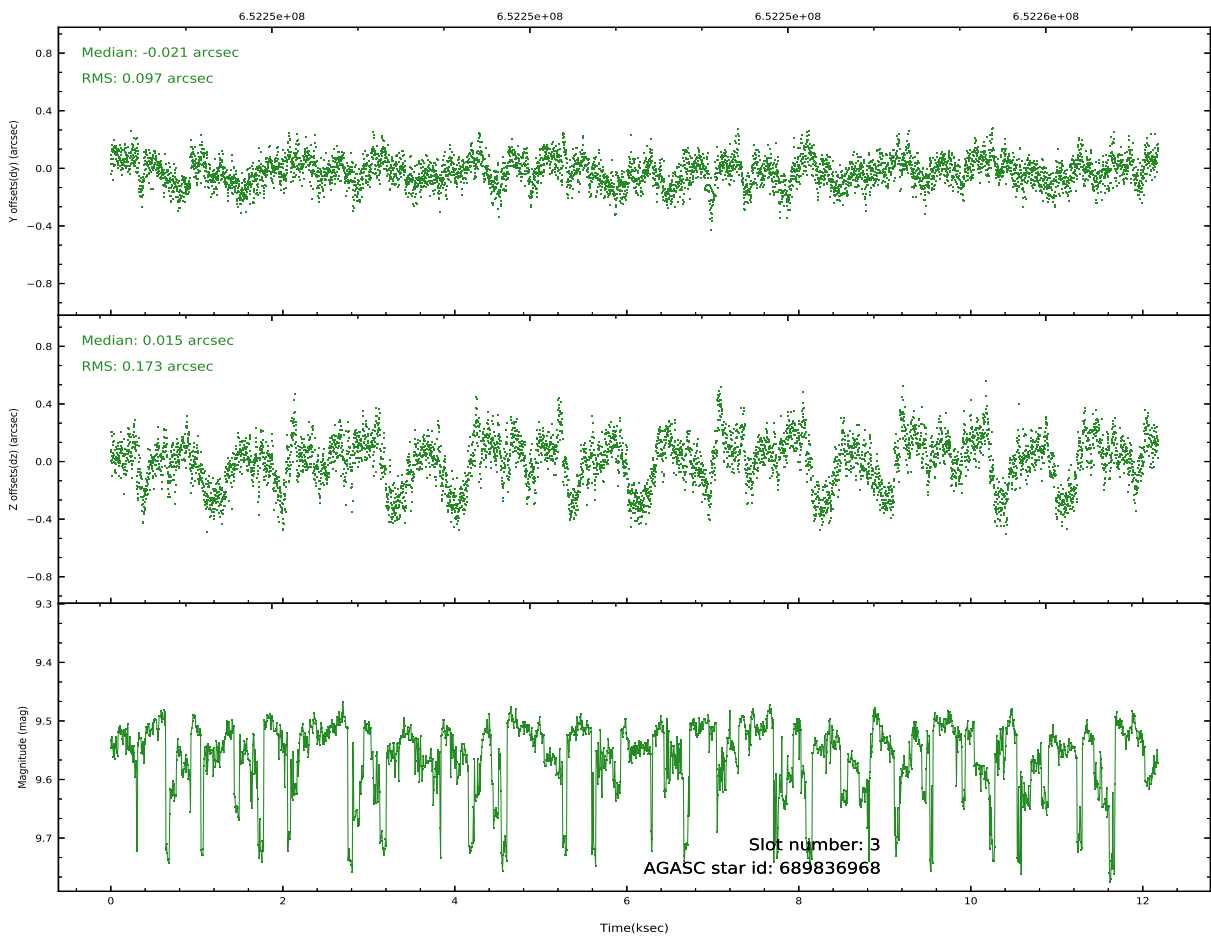
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## 2.4 Star Slots

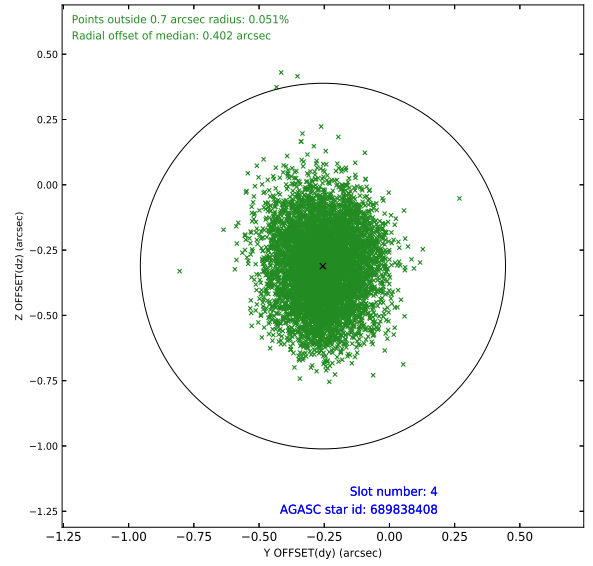
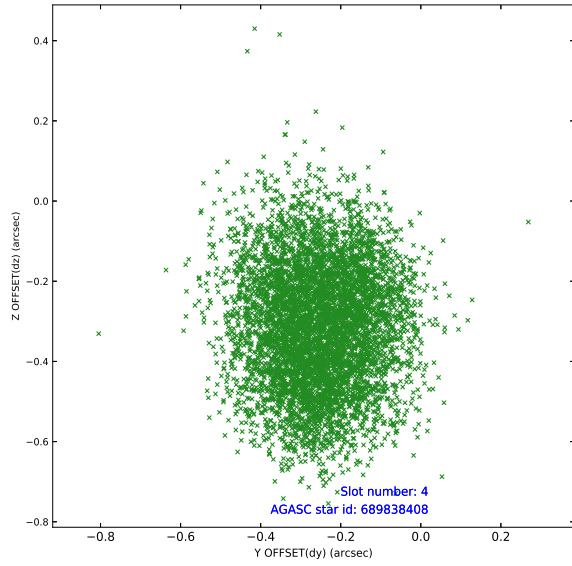
### 2.4.1 Slot 3



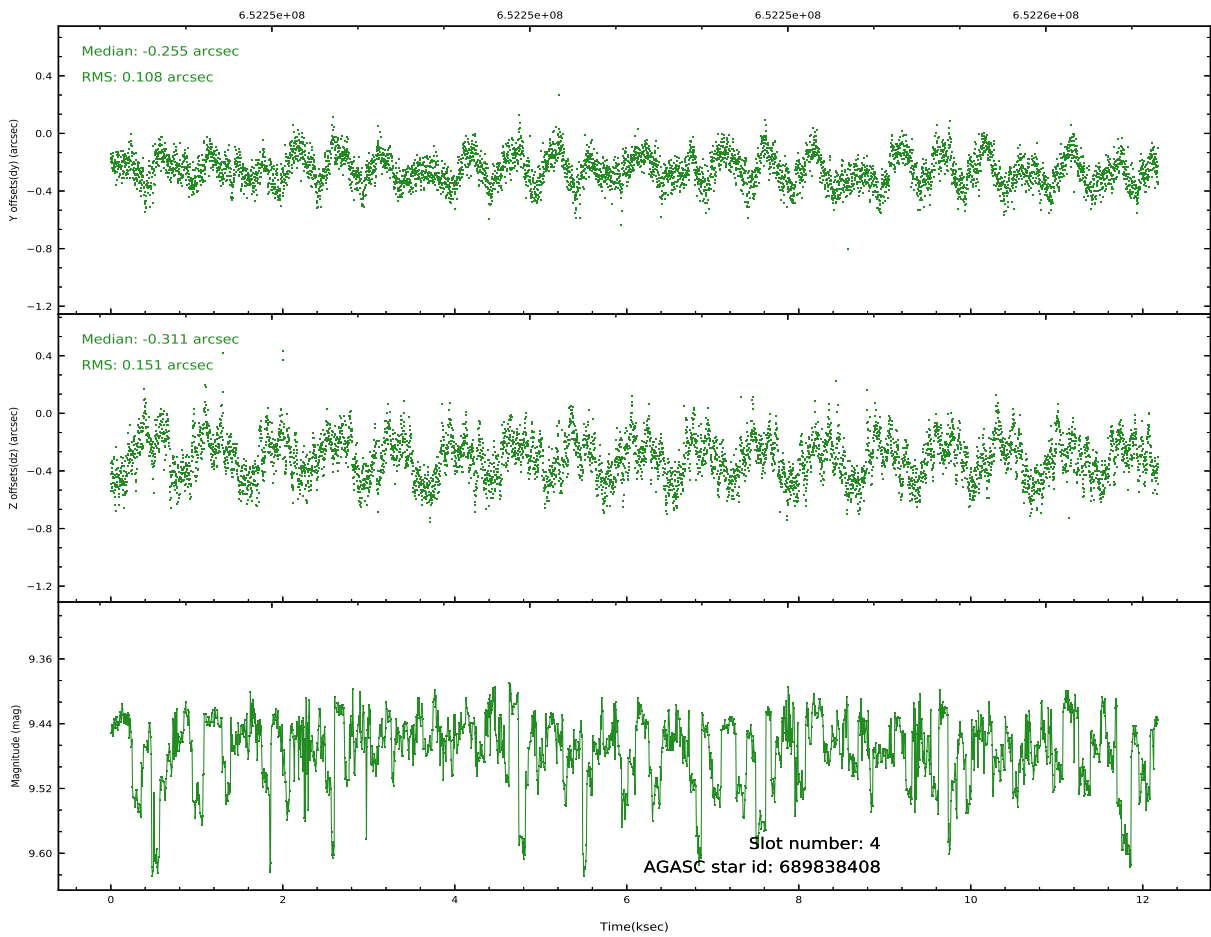
Time (s)



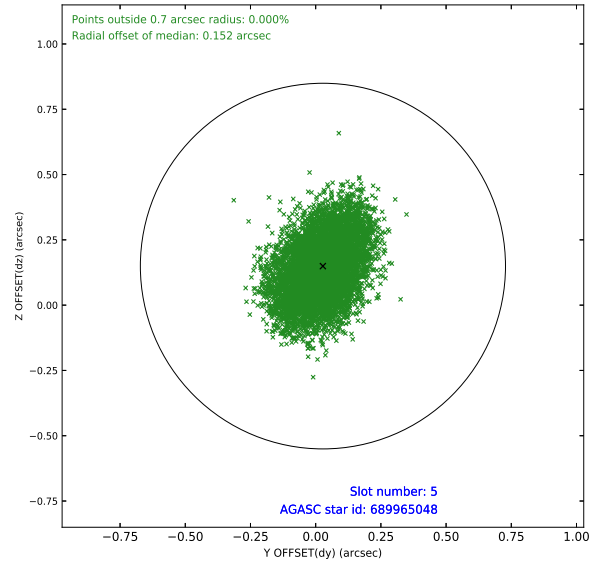
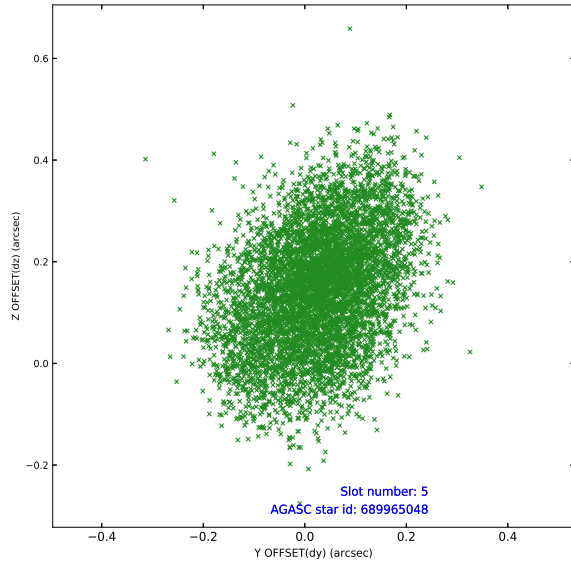
## 2.4.2 Slot 4



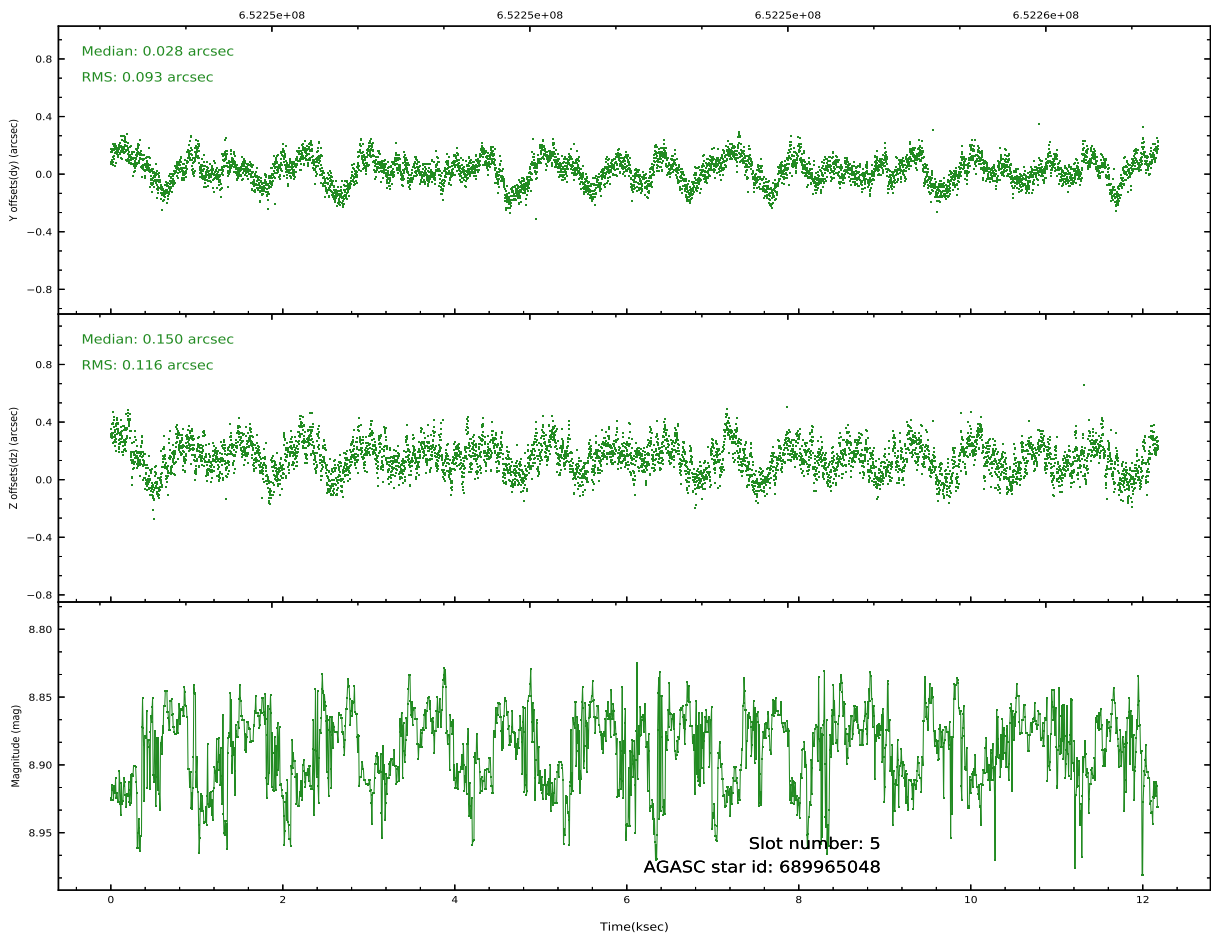
Time (s)



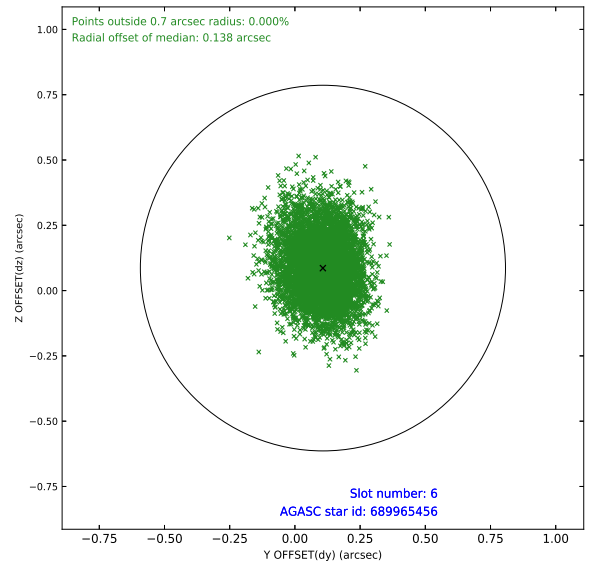
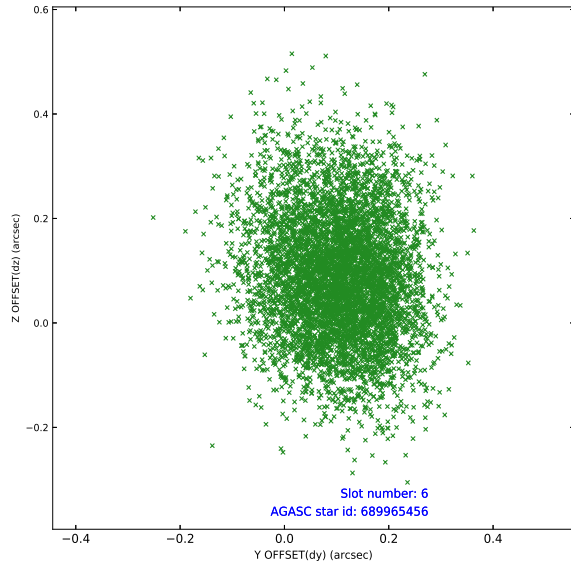
### 2.4.3 Slot 5



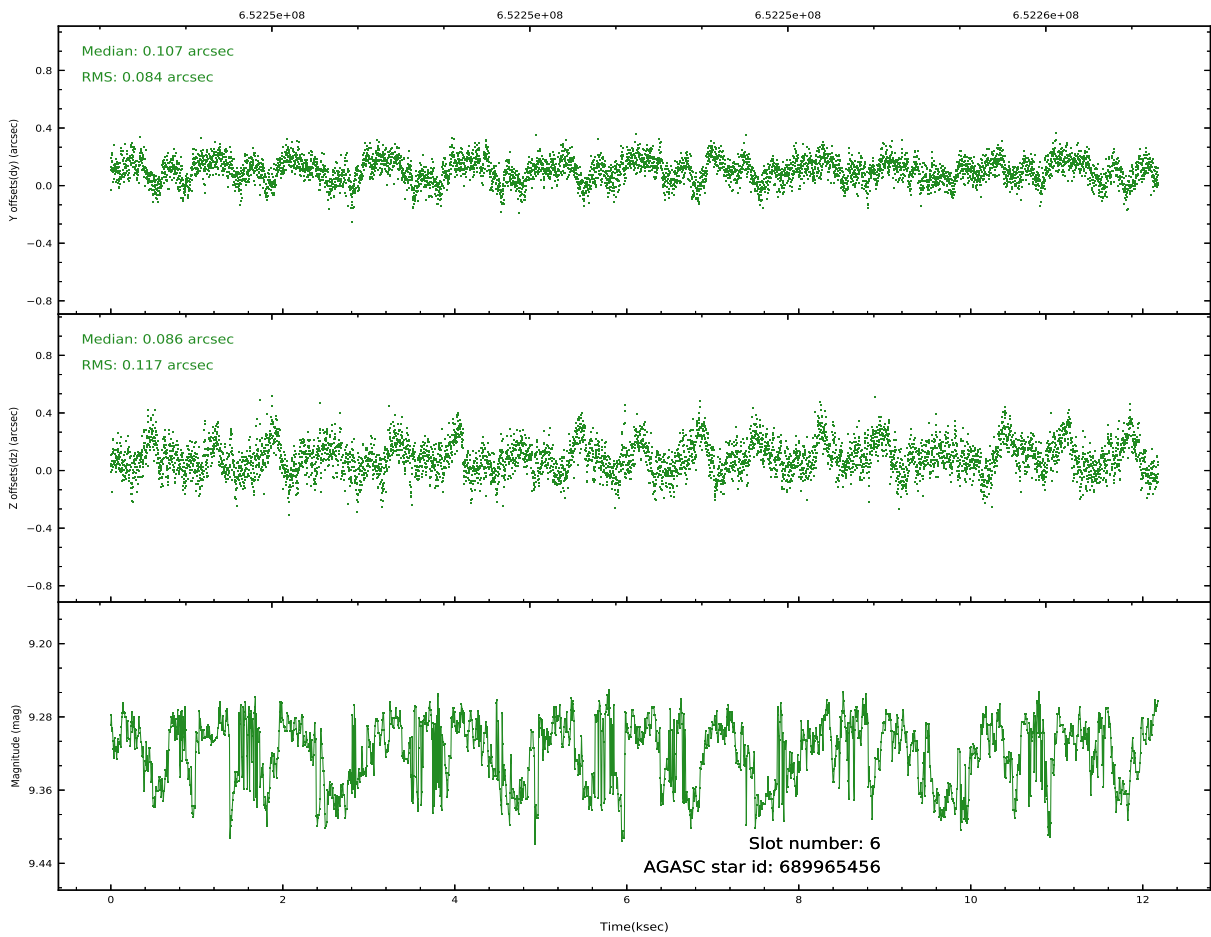
Time (s)



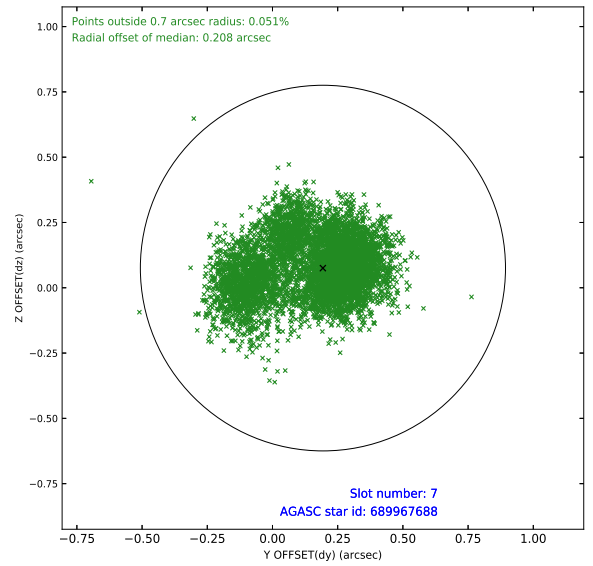
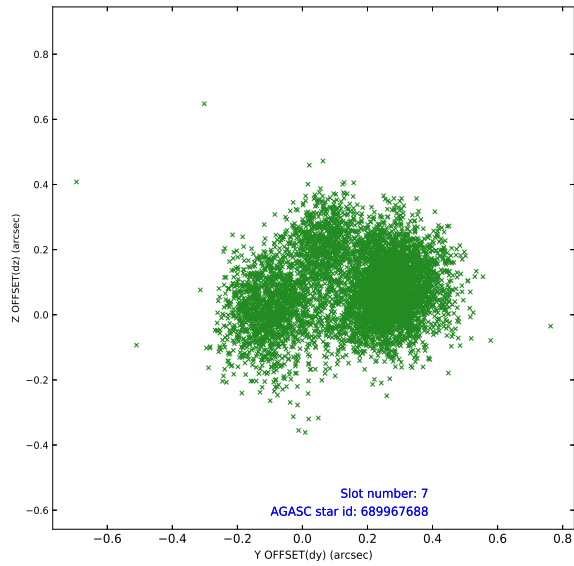
## 2.4.4 Slot 6



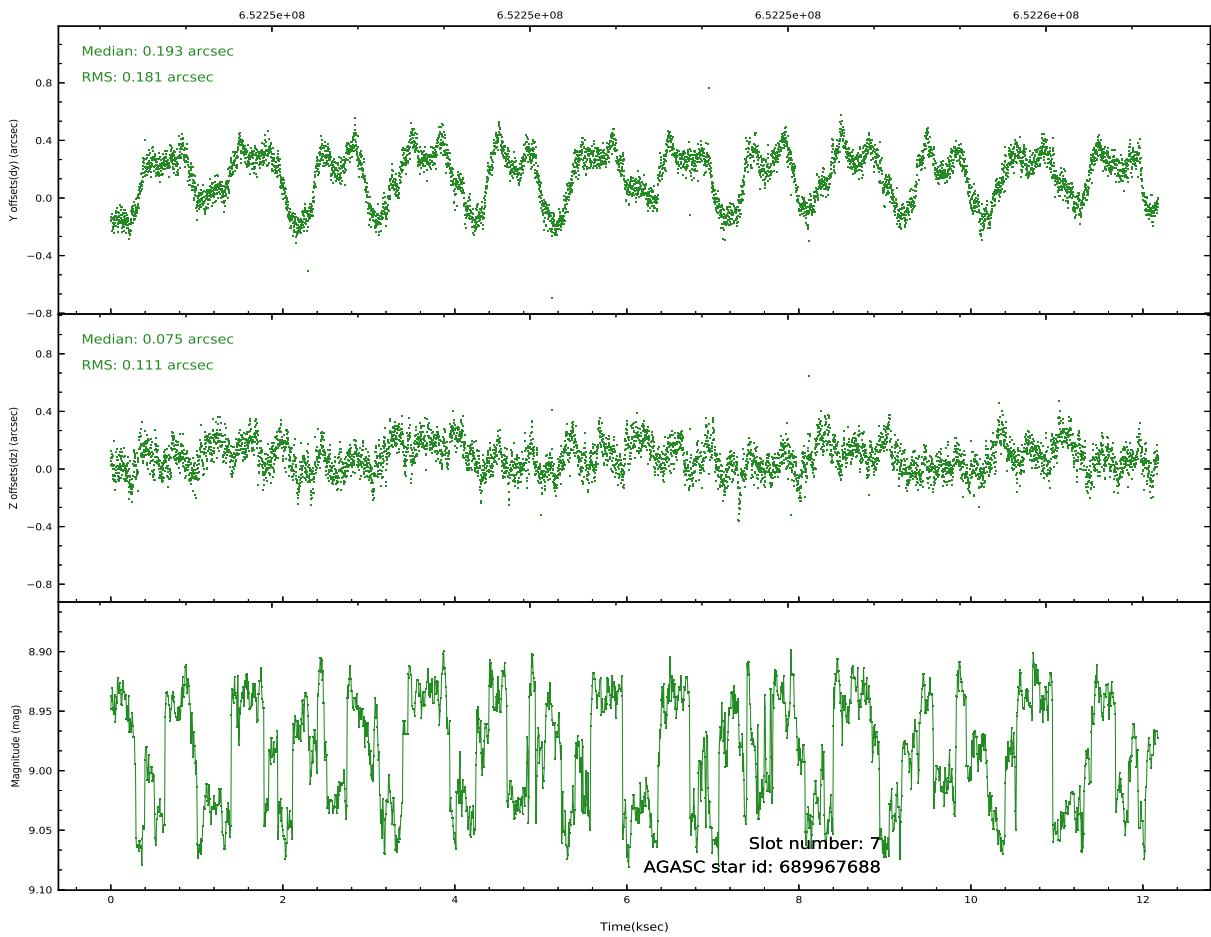
Time (s)



## 2.4.5 Slot 7

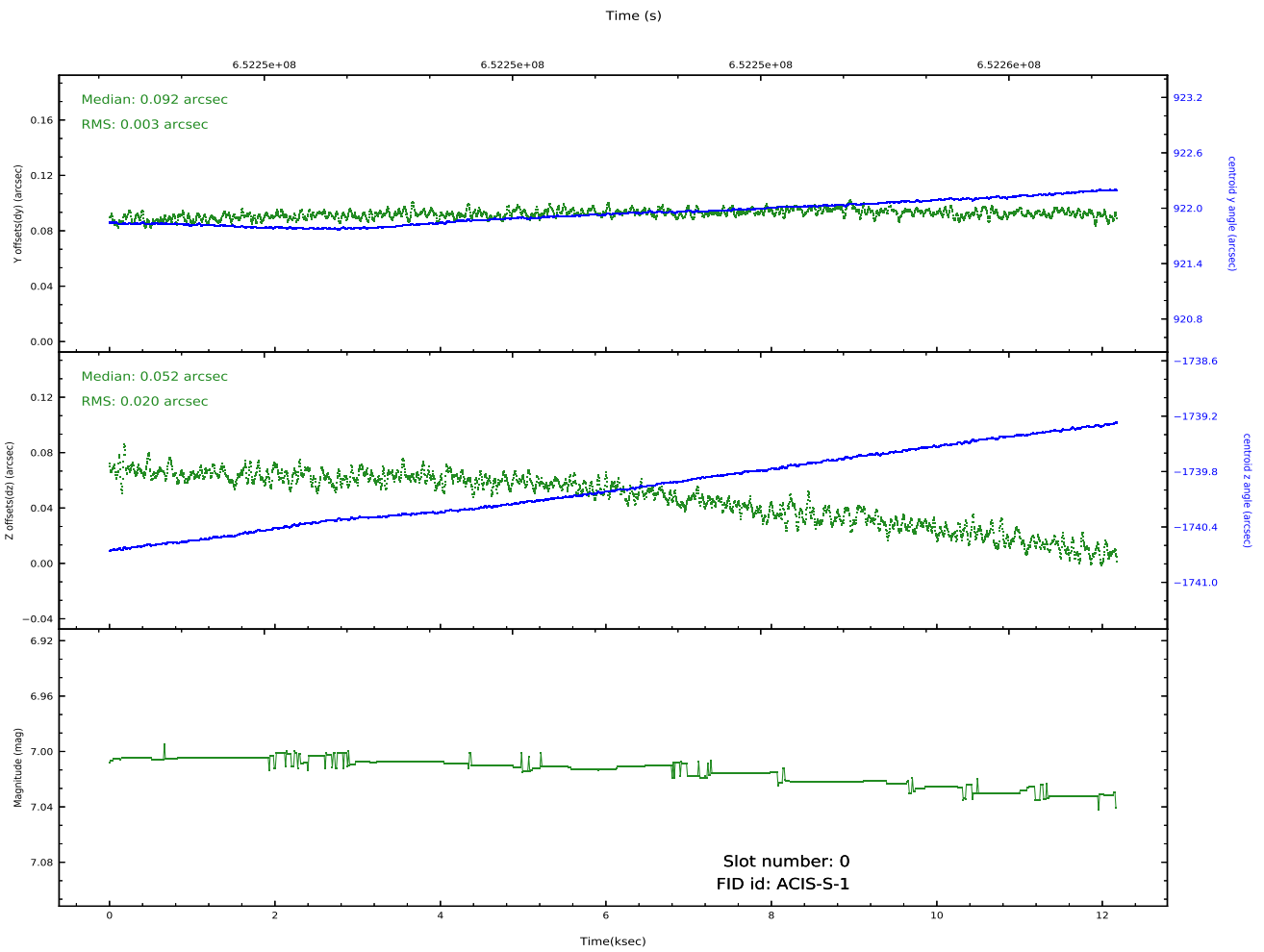
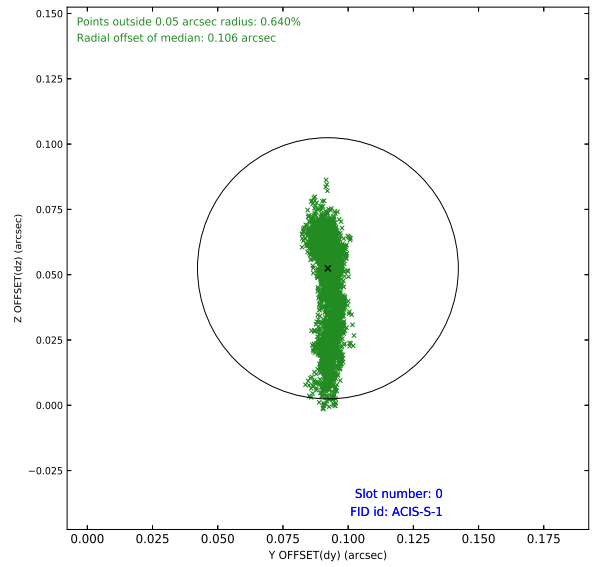
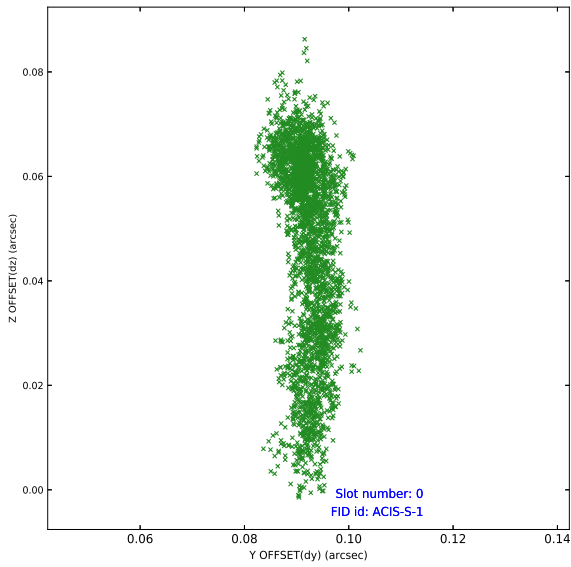


Time (s)

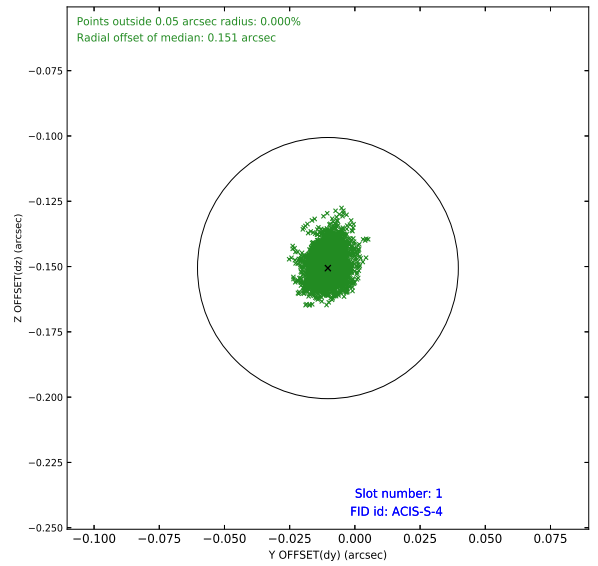
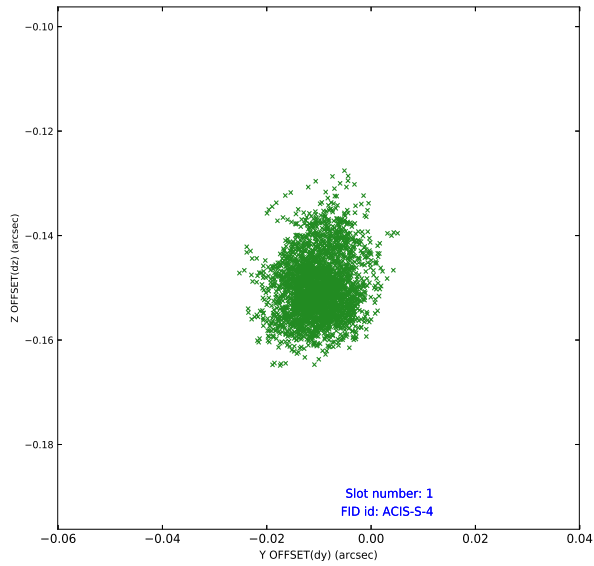


## 2.5 FID Slots

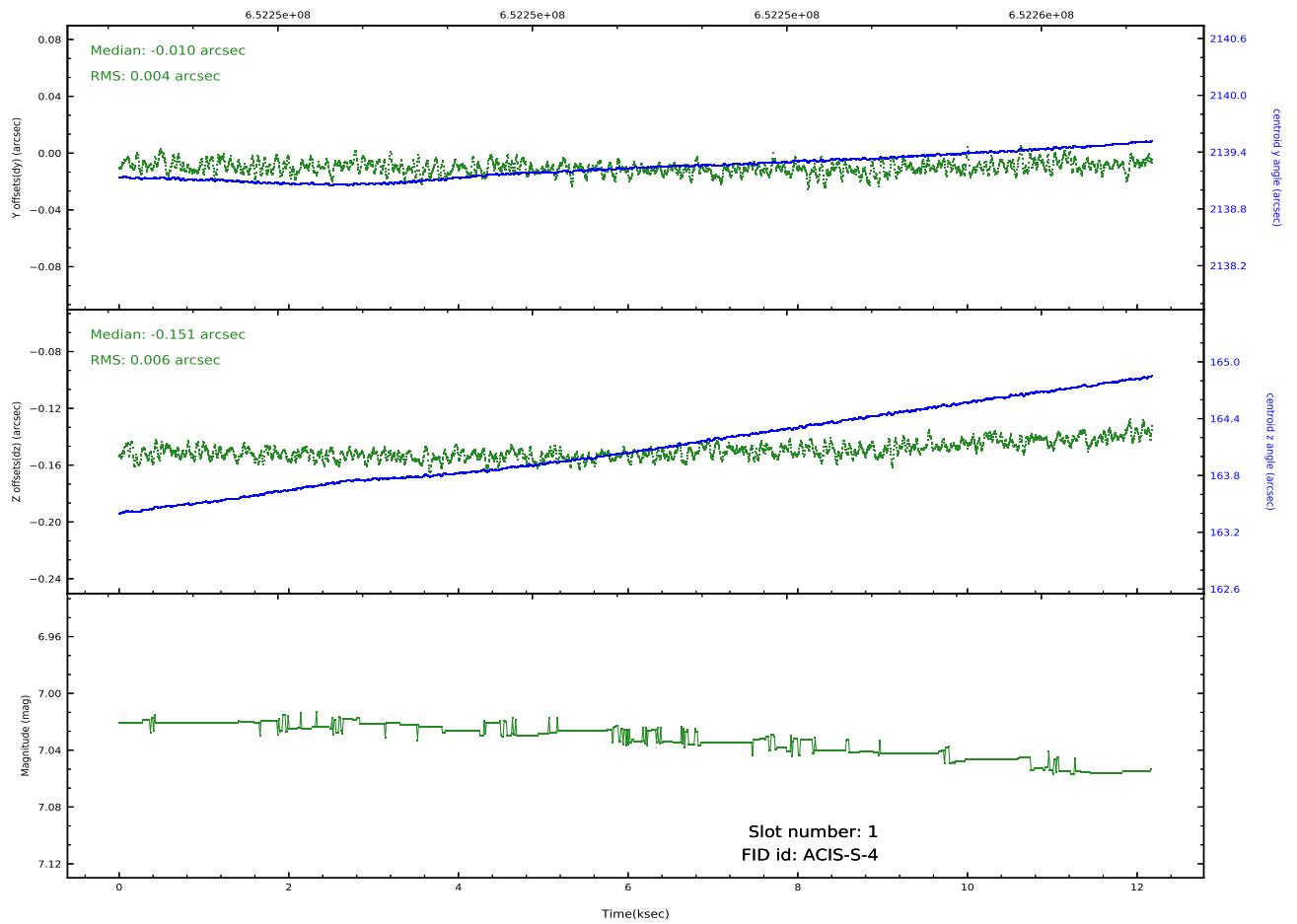
### 2.5.1 Slot 0



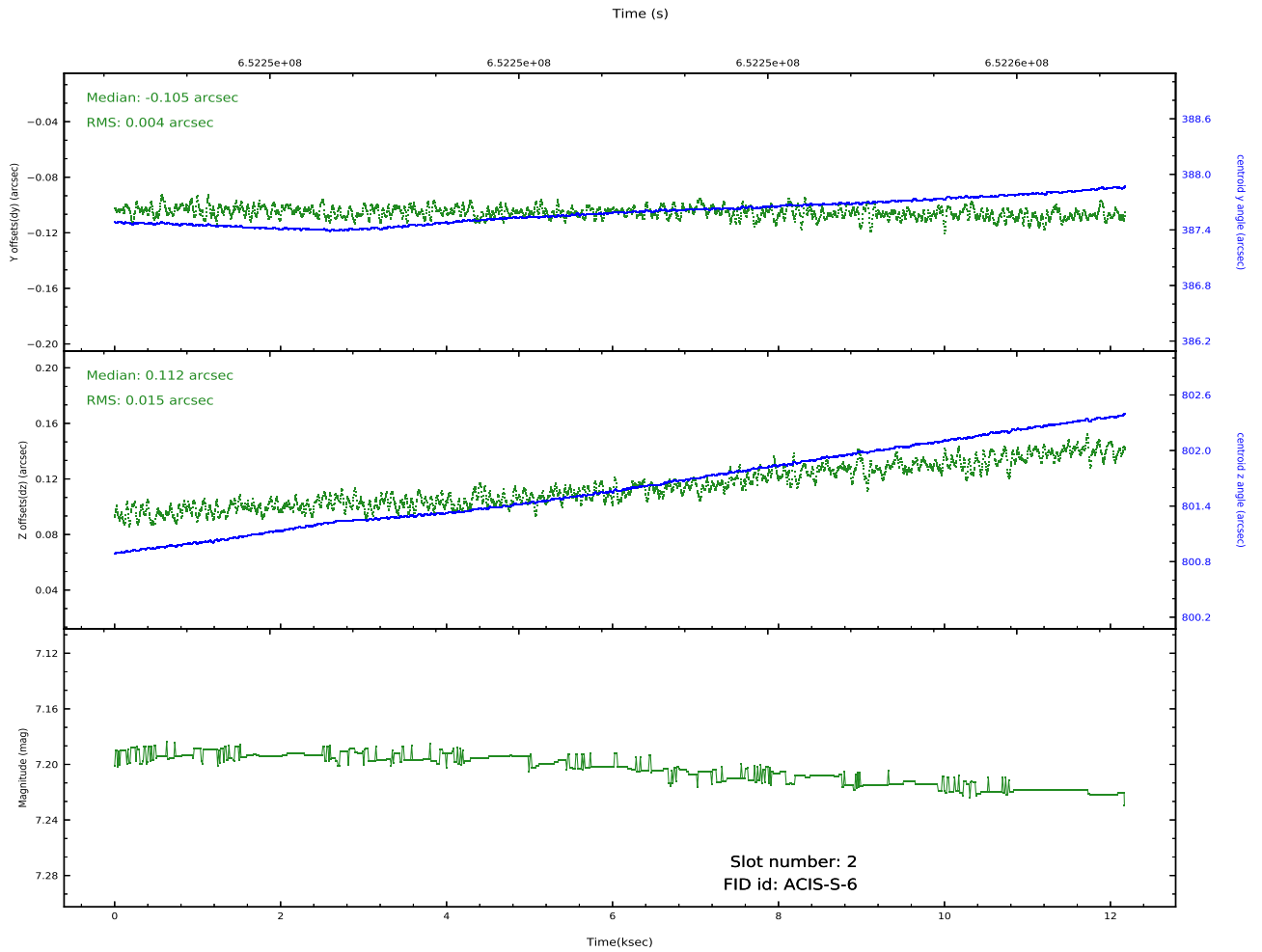
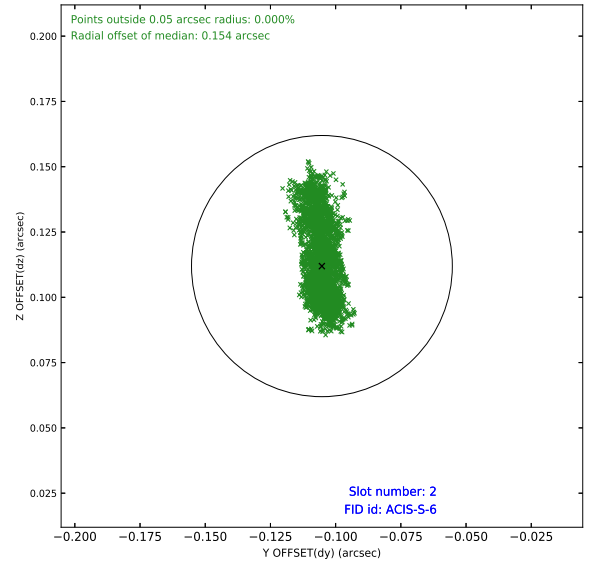
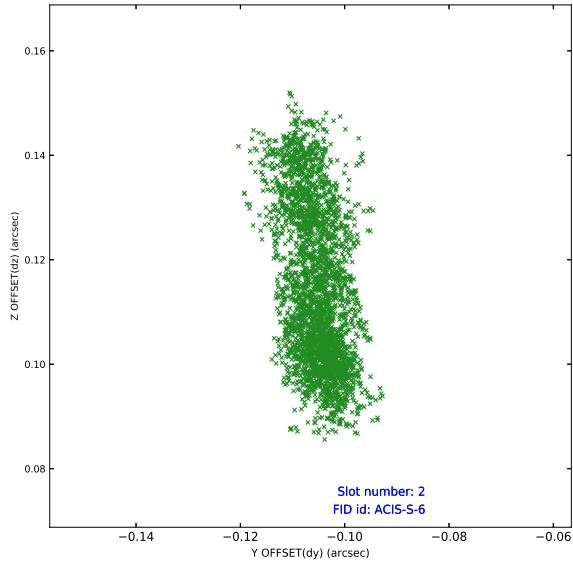
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.05590009284

## A.2 Comments