

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20573 - L2 Version 3  
Chandra X-Ray Center

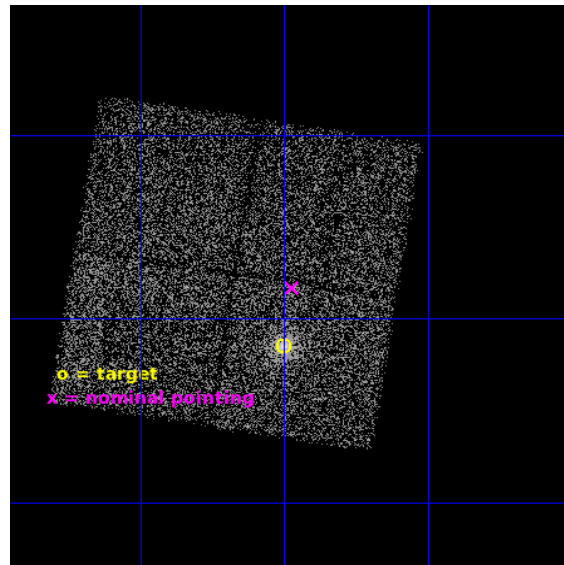
L2 Processing Date : Oct 25 2020

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# 1 Front

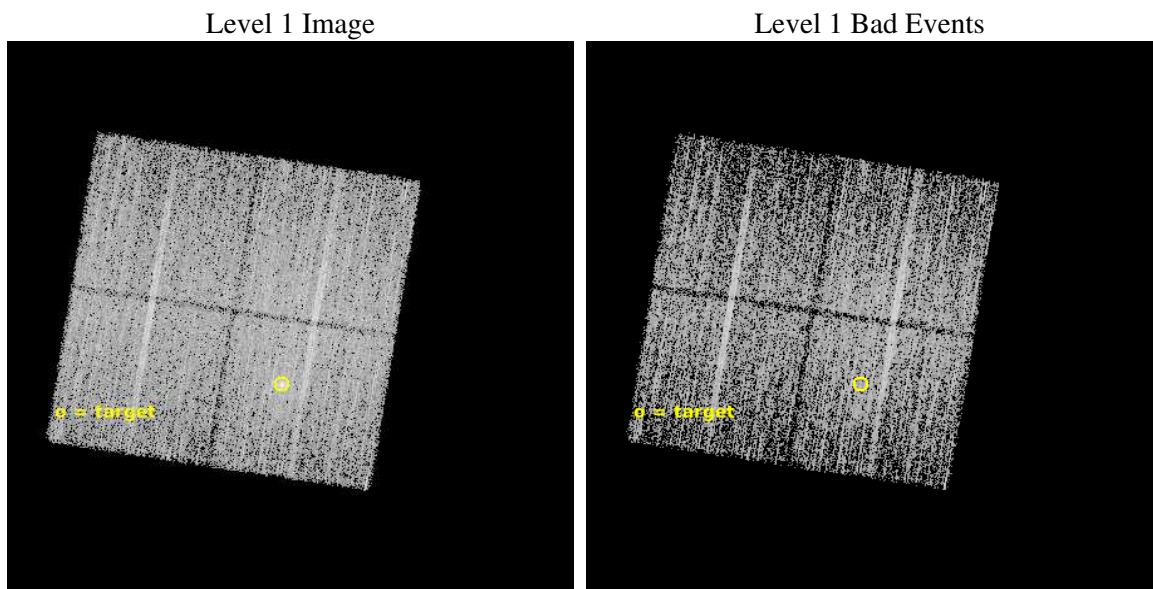
seq_num	801772	Sequence number
obs_id	20573	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1336-0331	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	204.0	Observer's specified target RA [deg]
dec_targ	-3.524722	Observer's specified target Dec [deg]
ra_nom	203.99338888424	Nominal RA [deg]
dec_nom	-3.4717192964108	Nominal Dec [deg]
roll_nom	99.019828698947	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9280.8744977713	Sum of GTIs [s]
livetime	9159.6130399775	Livetime [s]
ontime0	9280.751377821	Sum of GTIs [s]
ontime1	9277.6514173746	Sum of GTIs [s]
ontime2	9280.8334578276	Sum of GTIs [s]
ontime3	9280.8744977713	Sum of GTIs [s]
l2events	27556	Number of level 2 events



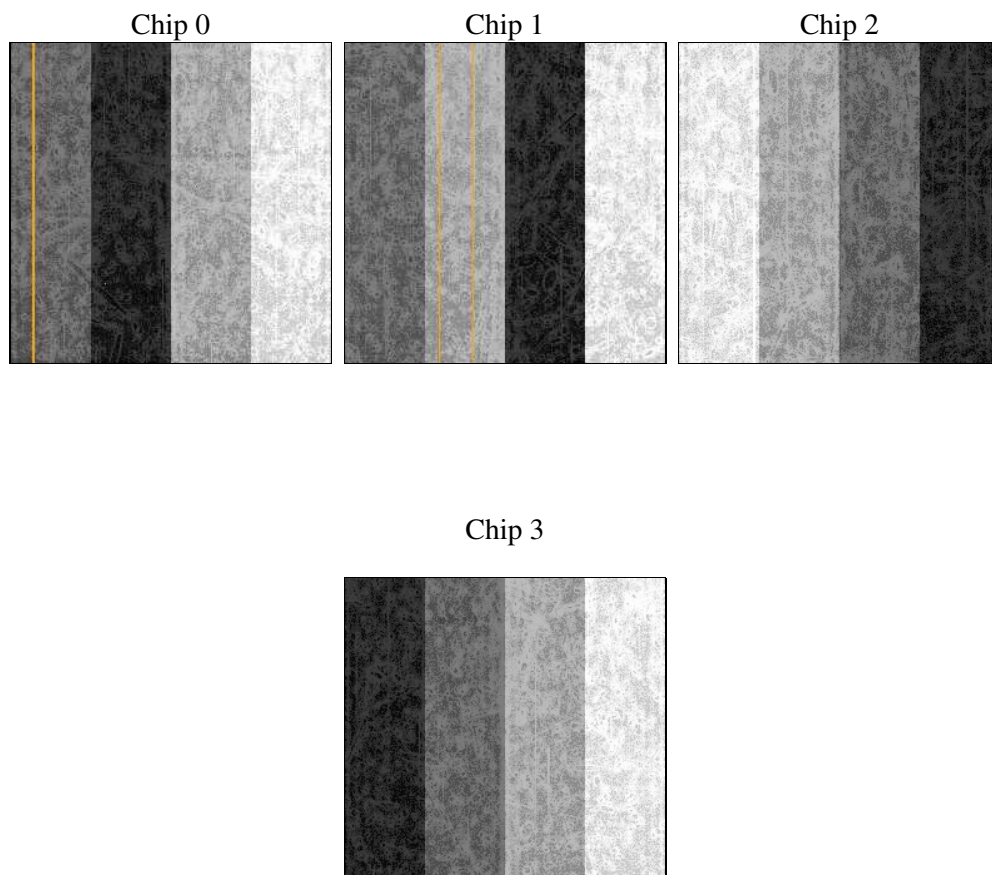
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9200.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	9280.8744977713	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime0	9280.751377821	Sum of GTIs [s]
date	2020-10-25T10:28:31	Date and time of file creation	ontime1	9277.6514173746	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	9280.8334578276	Sum of GTIs [s]
			ontime3	9280.8744977713	Sum of GTIs [s]
			l1events	255448	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	57216	61502	68813	67917
rejected events	49632	52999	61289	58646
rejected %	86%	86%	89%	86%

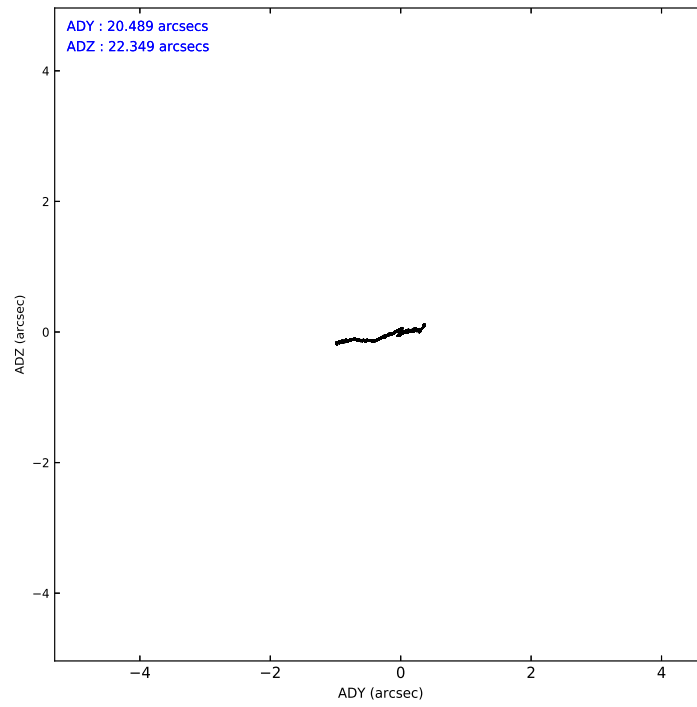
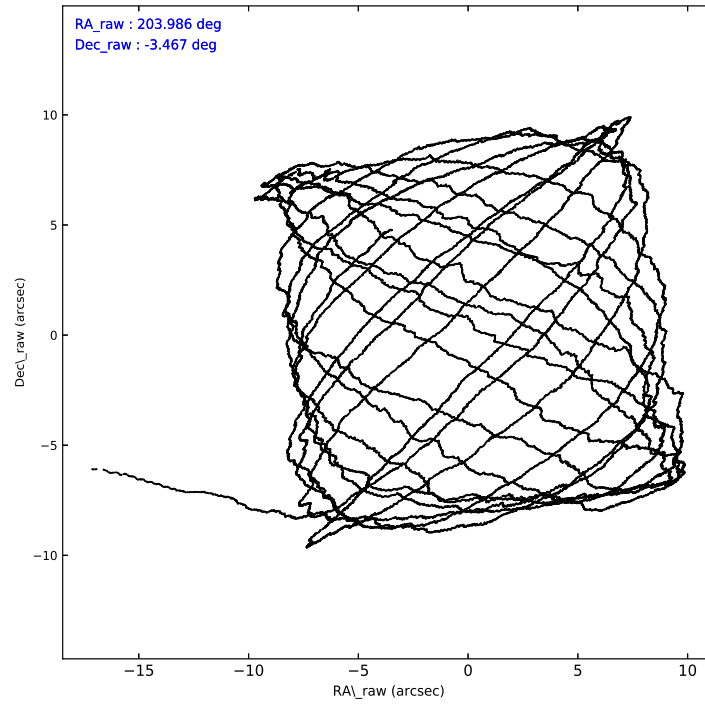
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	2589	2926	2536	4159
	4%	4%	3%	6%
grade 1 events	34	44	44	41
	0%	0%	0%	0%
grade 2 events	1934	2168	1975	1828
	3%	3%	2%	2%
grade 3 events	792	814	729	809
	1%	1%	1%	1%
grade 4 events	759	825	766	850
	1%	1%	1%	1%
grade 5 events	2860	2986	2749	3294
	4%	4%	3%	4%
grade 6 events	1511	1773	1520	1630
	2%	2%	2%	2%
grade 7 events	46737	49966	58494	55306
	81%	81%	85%	81%

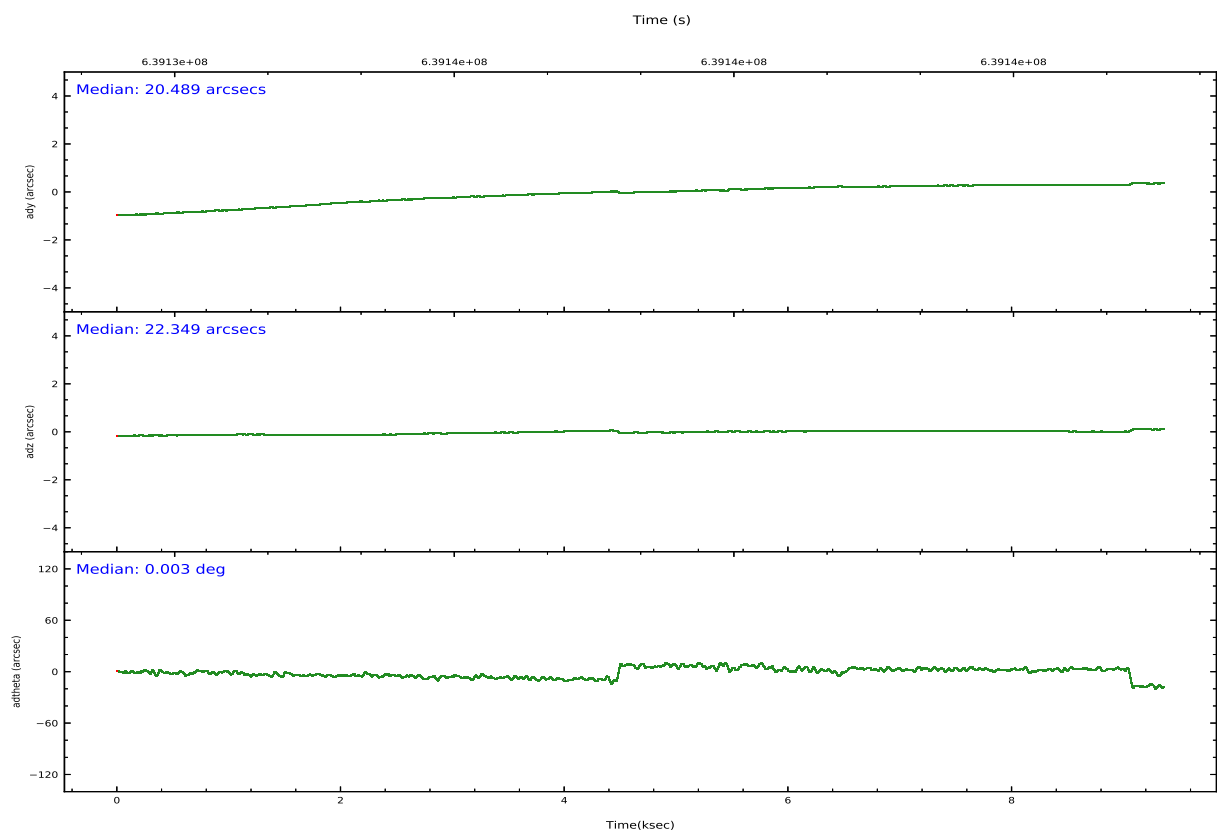
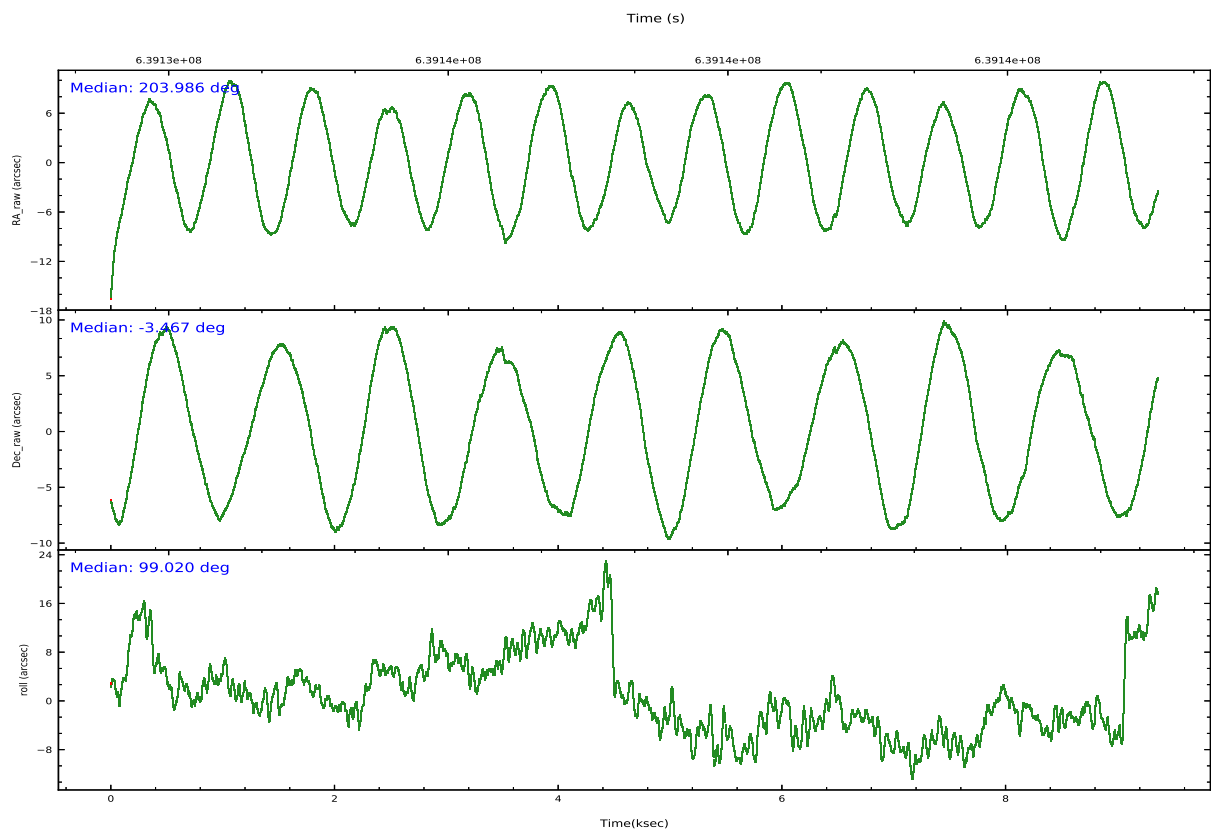


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	204.003664	203.99338888424	CCD I2 on	Y	Y
[deg] Pointing Dec	-3.488244	-3.4717192964108	CCD I3 on	Y	Y
[deg] Pointing Roll	98.821603	99.01982869894699	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	N
[mm] SIM translation stage pos	-225.840463	-225.8458576473255	CCD S3 on	O2	N
[mm] SIM translation stage offset	-7.752	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	639132146.184000	639131075.3846	CCD S5 on	N	N
Observation start date	2018-04-03T08:41:17	2018-04-03T08:24:35	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	639141346.184000	639142419.06027	On-chip summing requested	N	N
Observation end date	2018-04-03T11:14:37	2018-04-03T11:33:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



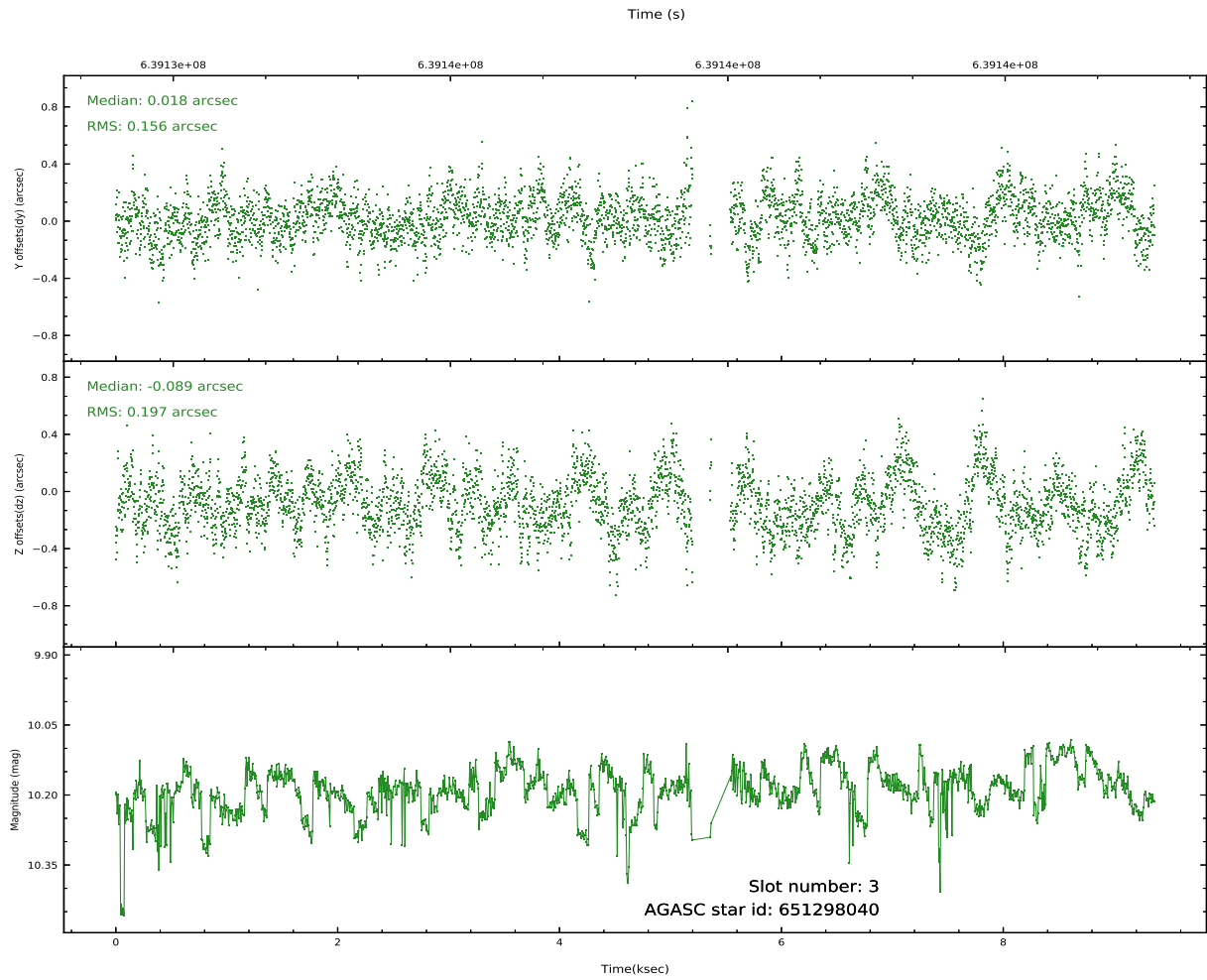
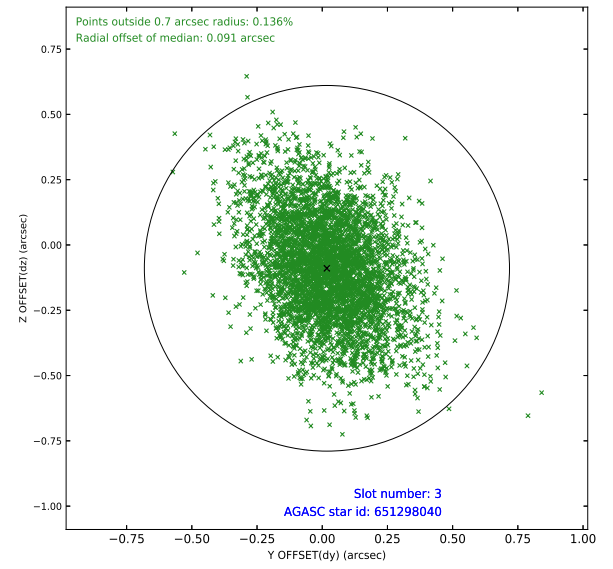
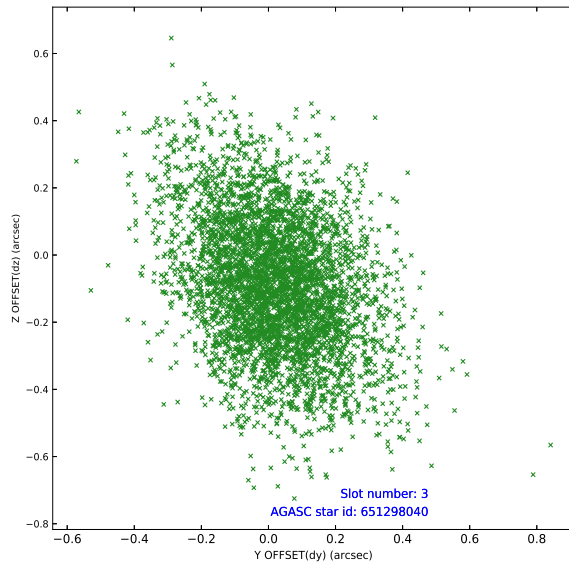


Slot Statistics

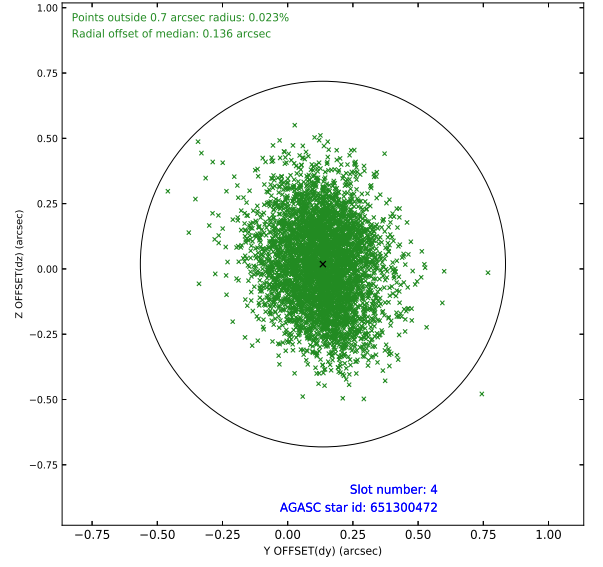
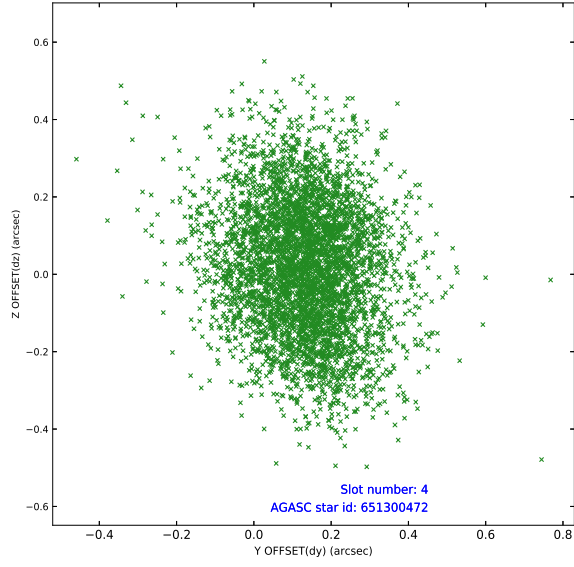
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.11	2276	1.000	0.167	0.024	0.013	0.019	0.000000	0.000000	918.87	-1005
1	FID		ACIS-I-2	7.05	2284	1.000	-0.228	0.021	0.013	0.019	0.000000	0.000000	-775.70	-1010
2	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
3	GUIDE	used	651298040	10.19	4396	1.000	0.018	-0.089	0.259	0.448	204.257202	-2.972569	1695.39	-1185
4	GUIDE	used	651300472	9.74	4417	1.000	0.135	0.018	0.218	0.359	204.029211	-2.932538	1963.73	-397
5	GUIDE	used	651300808	9.89	4486	1.000	0.097	-0.159	0.225	0.382	203.417919	-3.585529	-24.14	2133
6	GUIDE	used	651304600	8.29	4565	1.000	0.067	0.288	0.157	0.261	204.626572	-3.706834	-1121.19	-2087
7	GUIDE	used	651297560	8.60	4482	1.000	-0.311	-0.067	0.162	0.278	203.380411	-2.924440	2348.32	1903

## 2.4 Star Slots

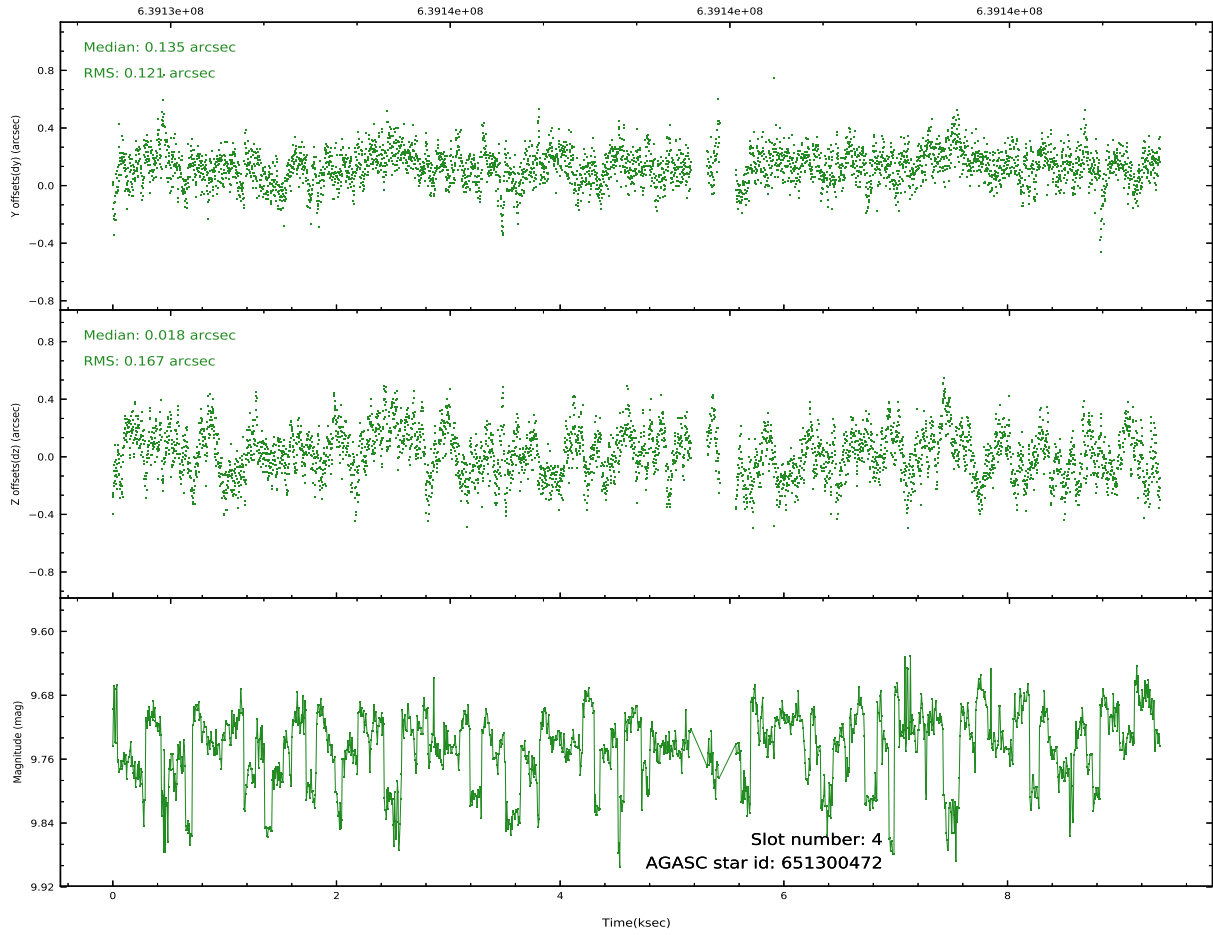
### 2.4.1 Slot 3



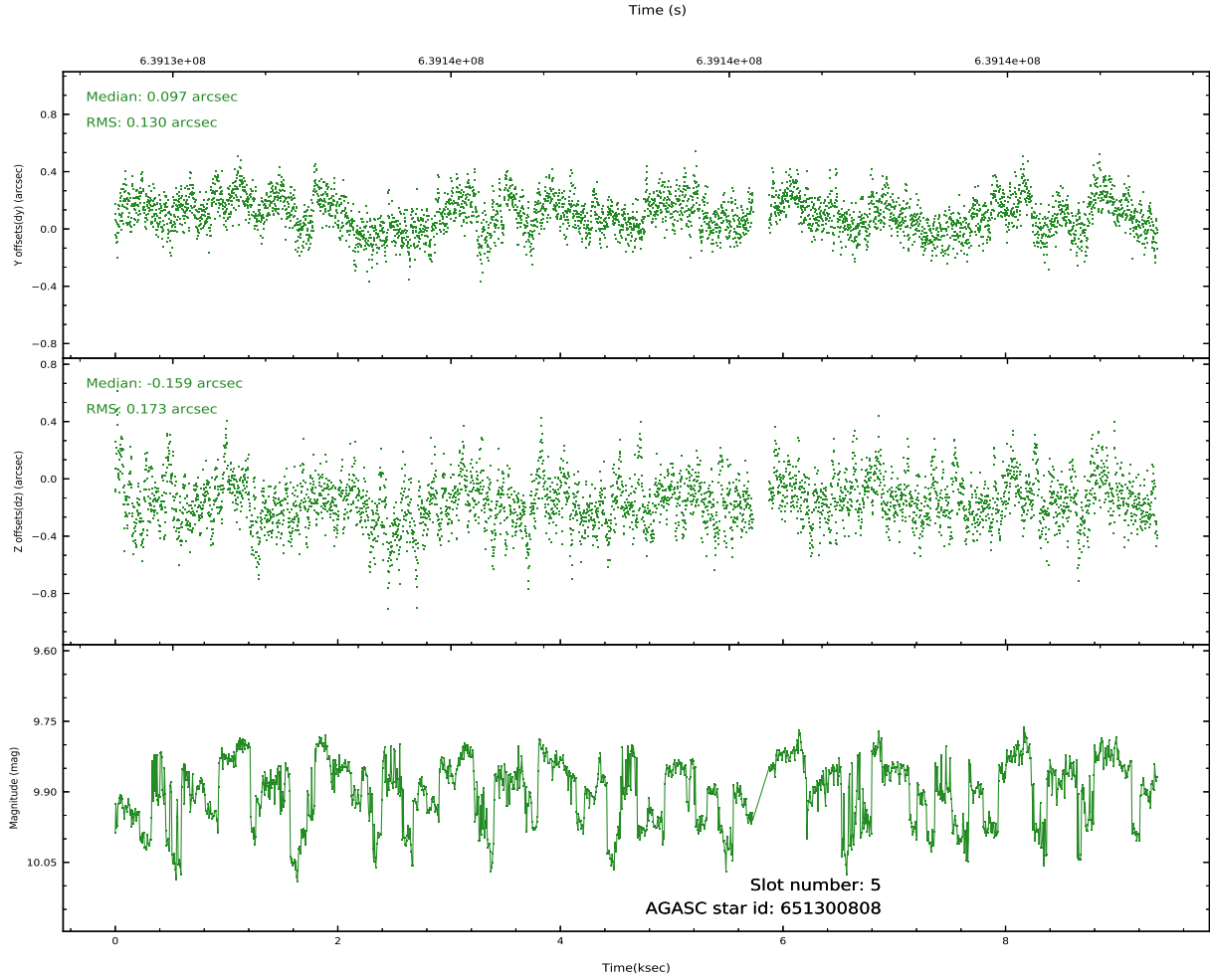
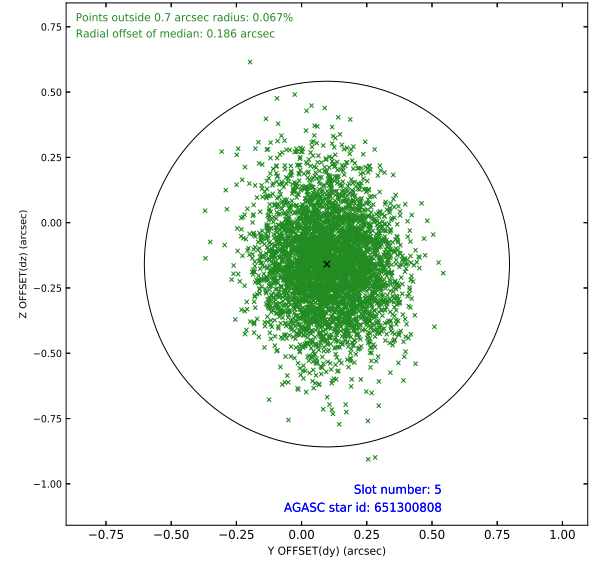
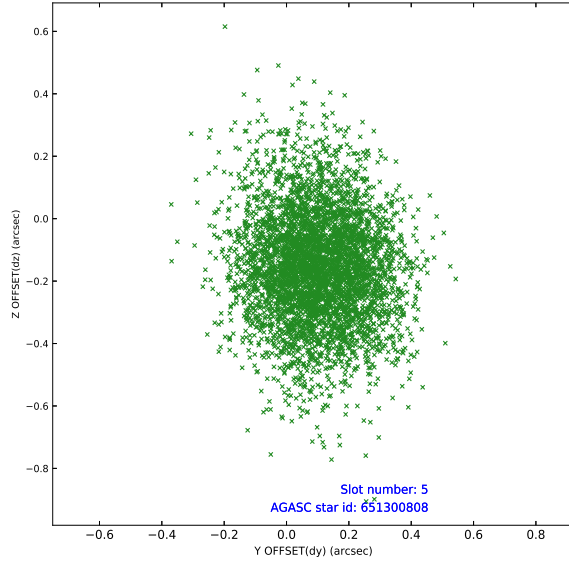
## 2.4.2 Slot 4



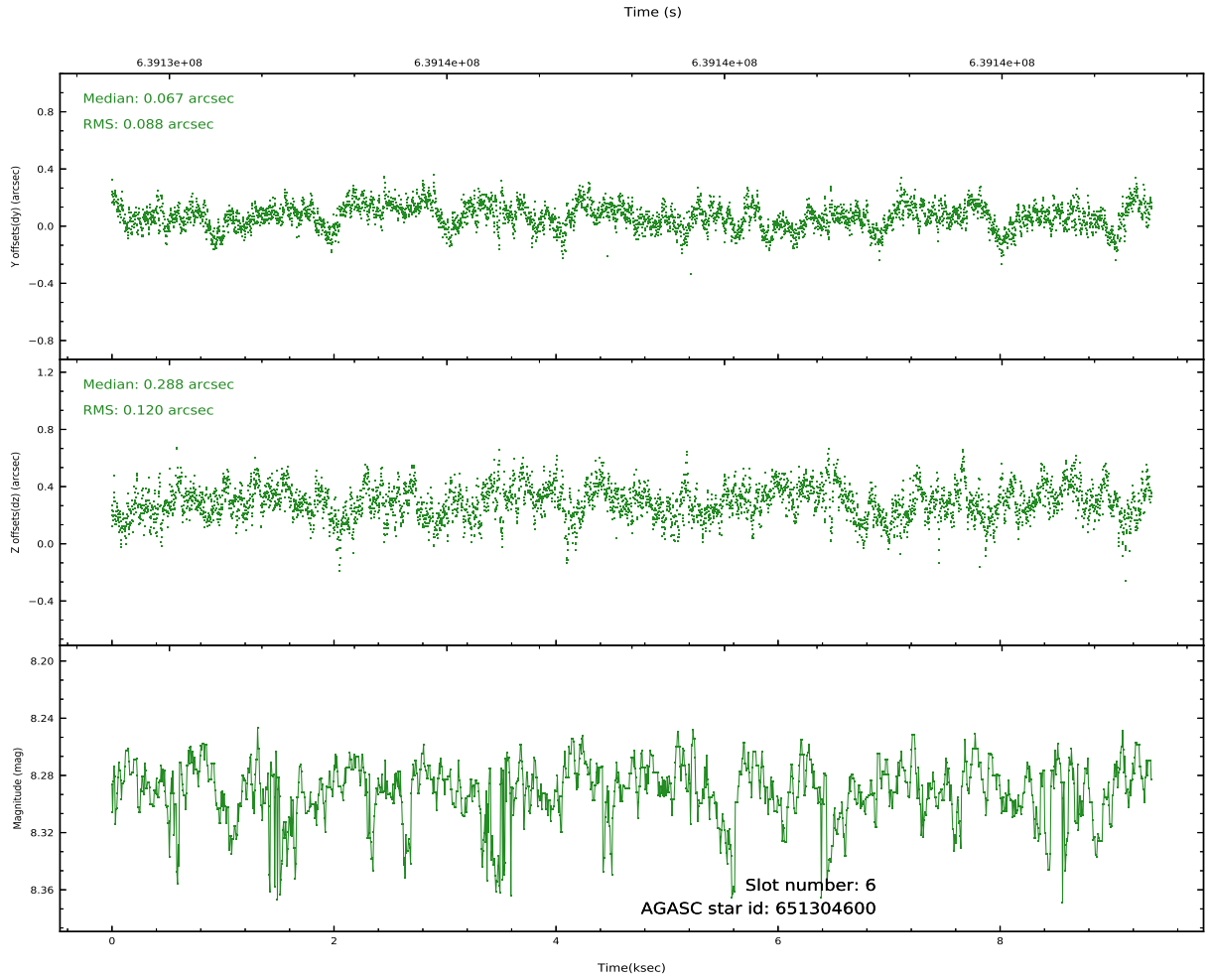
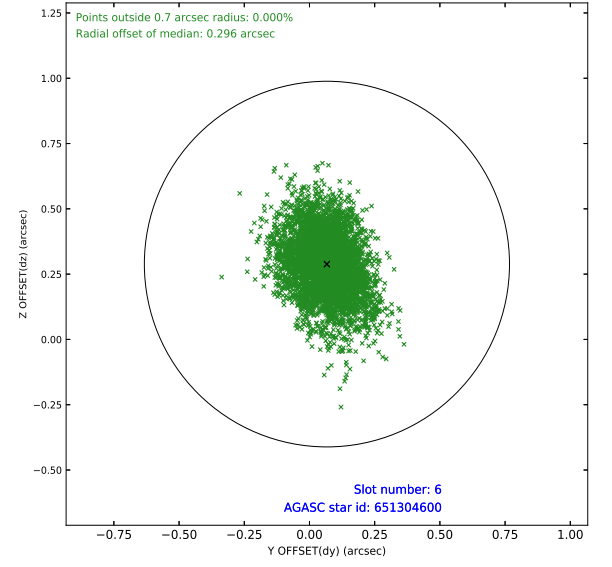
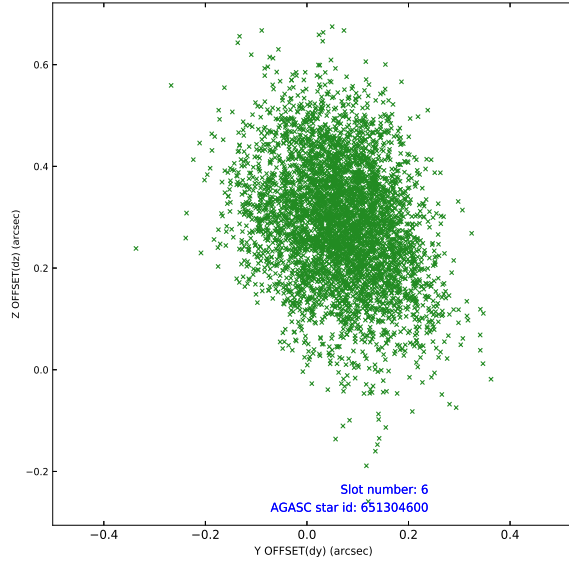
Time (s)



### 2.4.3 Slot 5

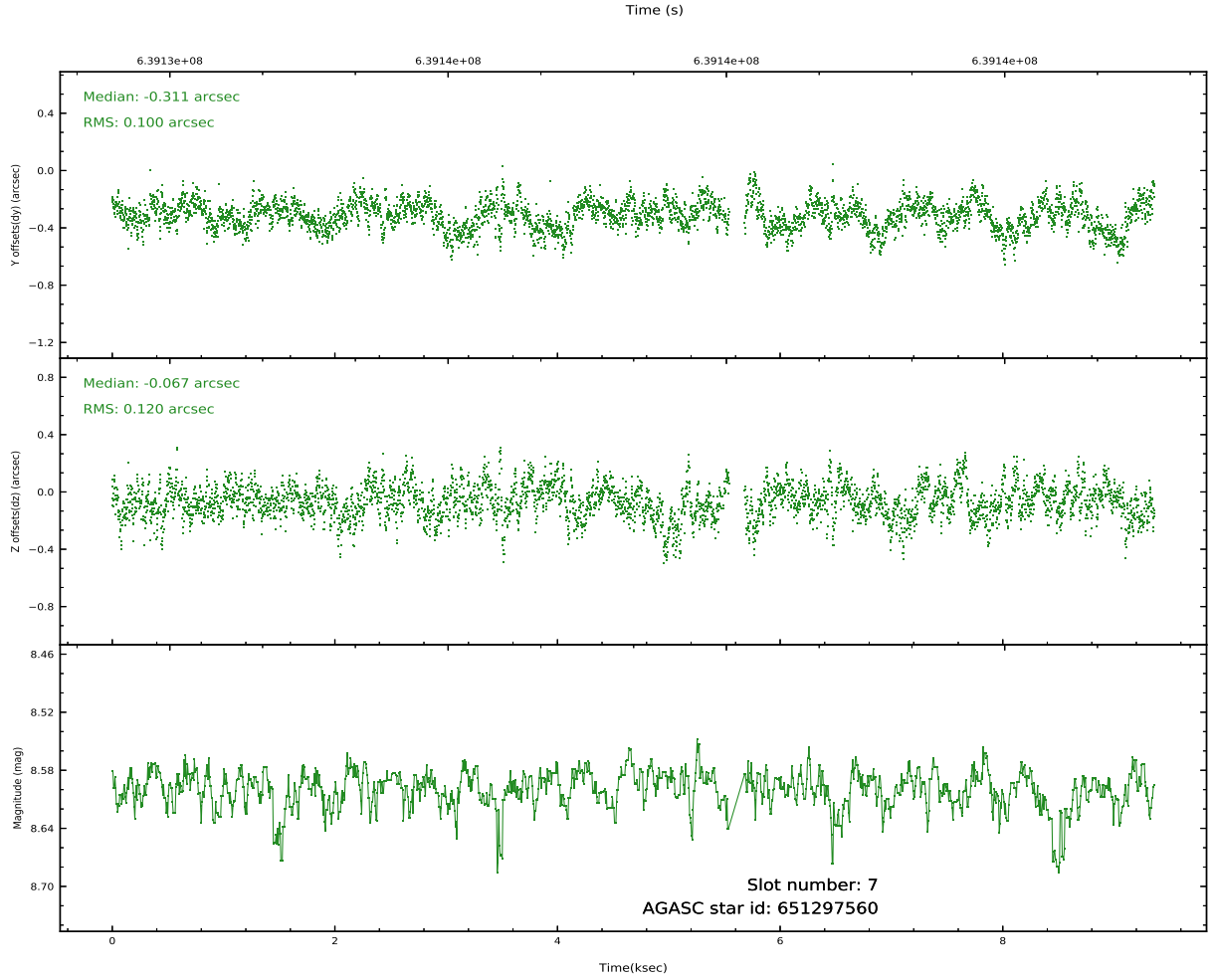
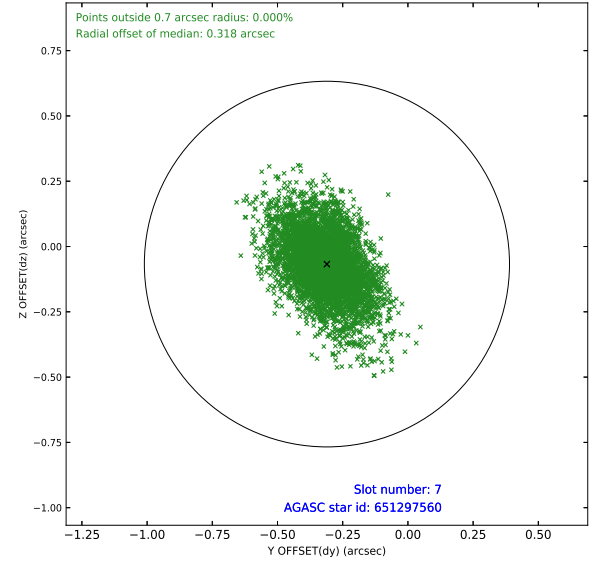
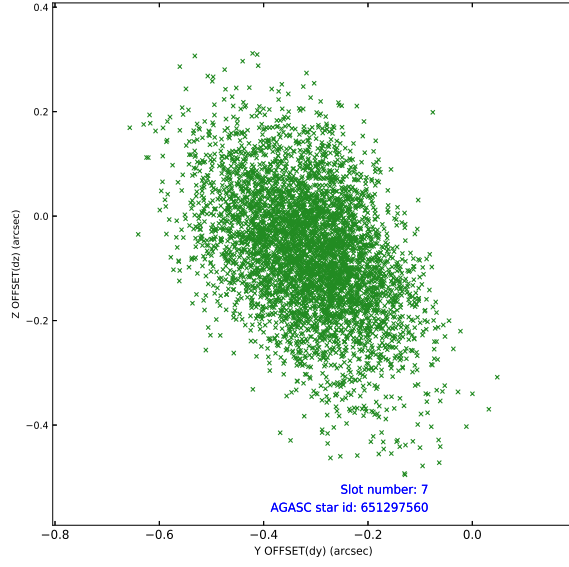


## 2.4.4 Slot 6



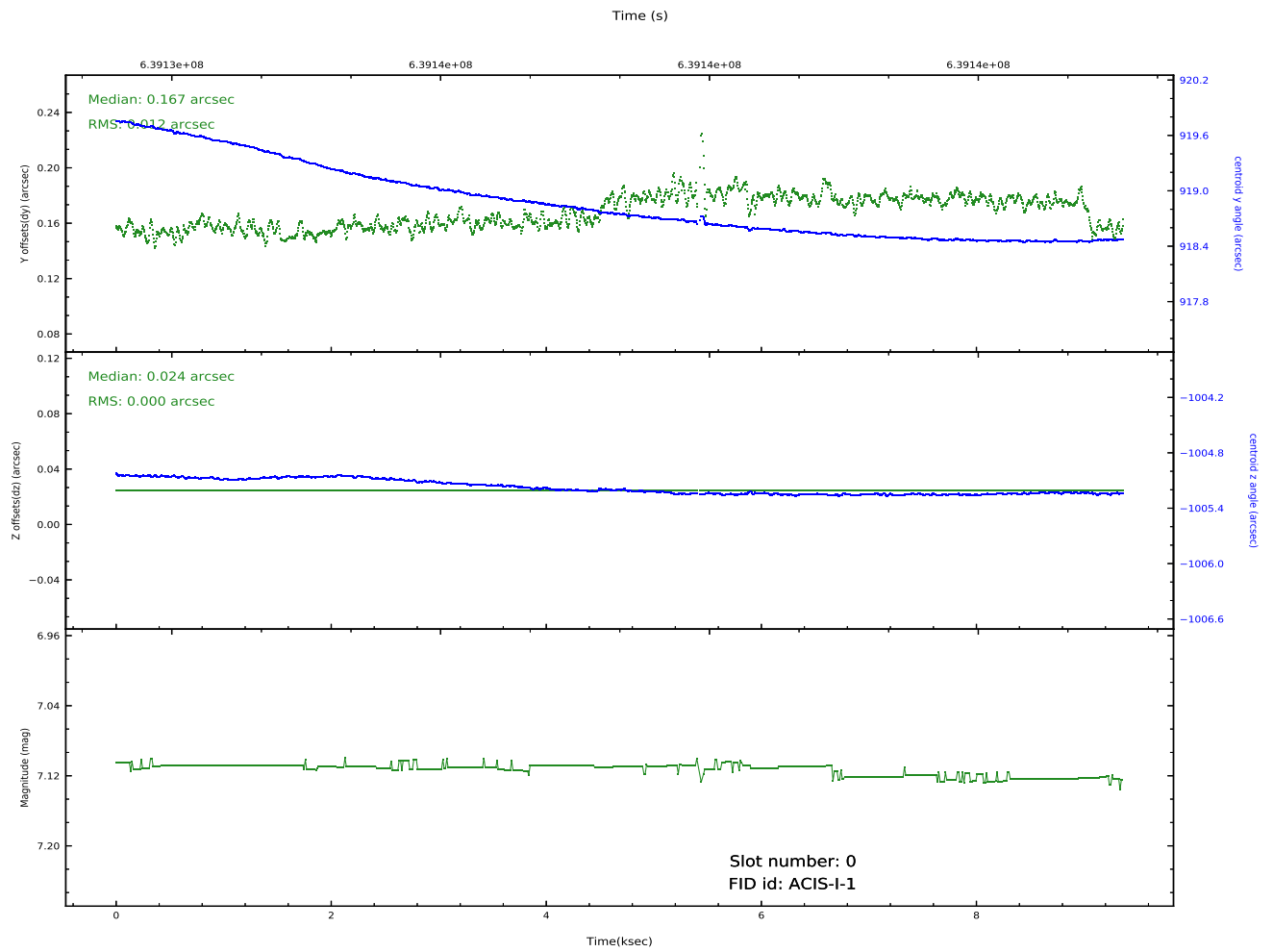
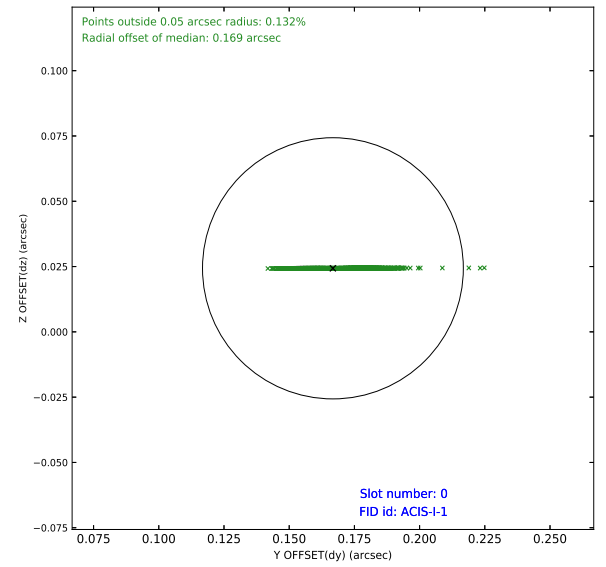
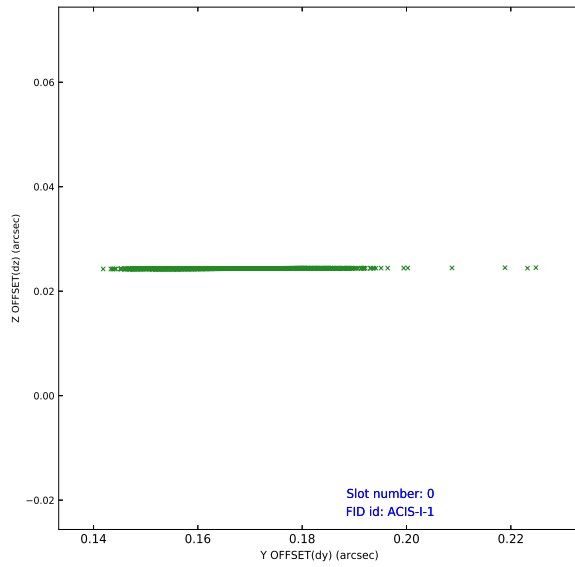


## 2.4.5 Slot 7

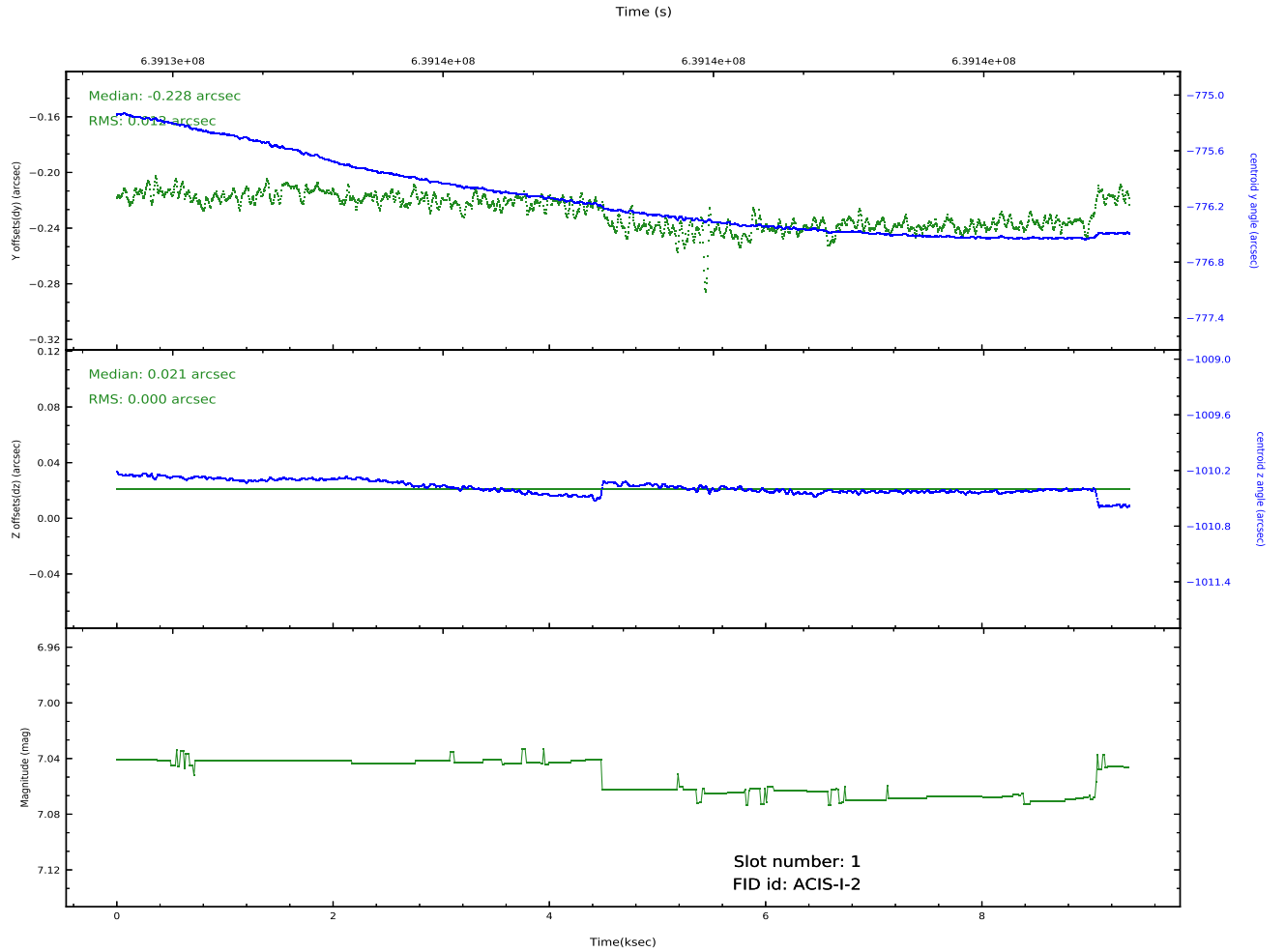
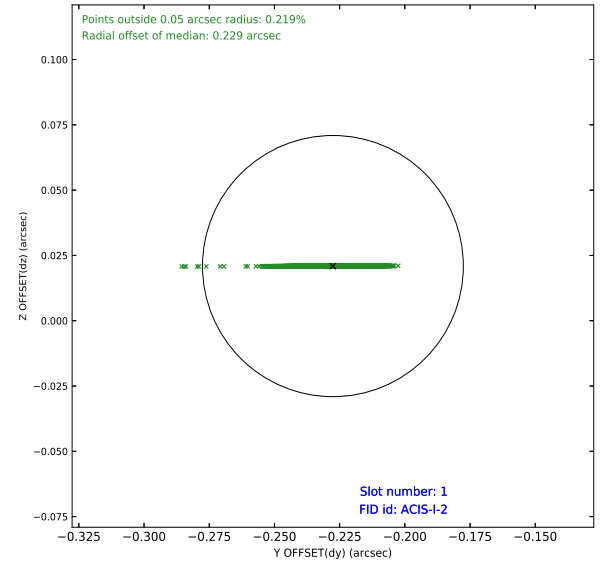
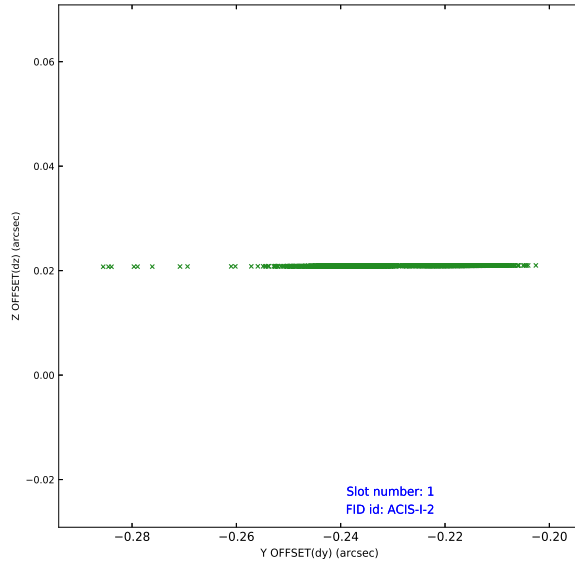


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.2808745049238

## A.2 Comments

The fid light in slot 2 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.

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Two optional chips were dropped.

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Joint proposal with HST.