

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20575 - L2 Version 2  
Chandra X-Ray Center

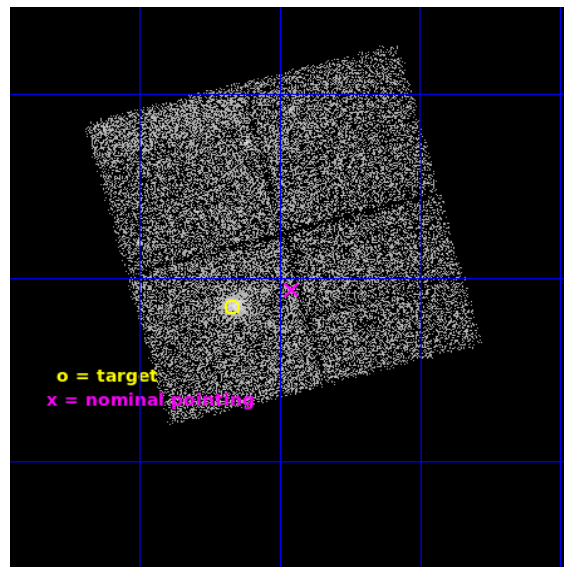
L2 Processing Date : Oct 25 2020

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# 1 Front

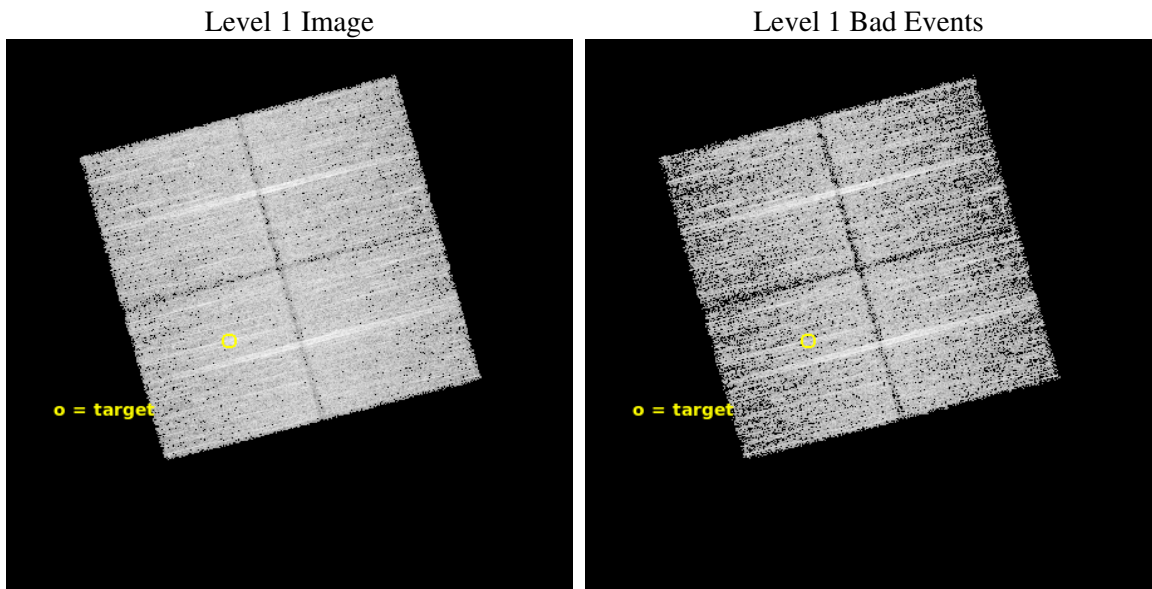
seq_num	801774	Sequence number
obs_id	20575	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1439+1208	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	219.791667	Observer's specified target RA [deg]
dec_targ	12.140278	Observer's specified target Dec [deg]
ra_nom	219.73909531752	Nominal RA [deg]
dec_nom	12.155957128308	Nominal Dec [deg]
roll_nom	164.84584743988	Nominal Roll [deg]
revision	2	Processing version of data
ontime	13376.459072828	Sum of GTIs [s]
livetime	13201.685787436	Livetime [s]
ontime0	13376.459072709	Sum of GTIs [s]
ontime1	13379.600103021	Sum of GTIs [s]
ontime2	13379.600103021	Sum of GTIs [s]
ontime3	13376.459072828	Sum of GTIs [s]
l2events	37534	Number of level 2 events



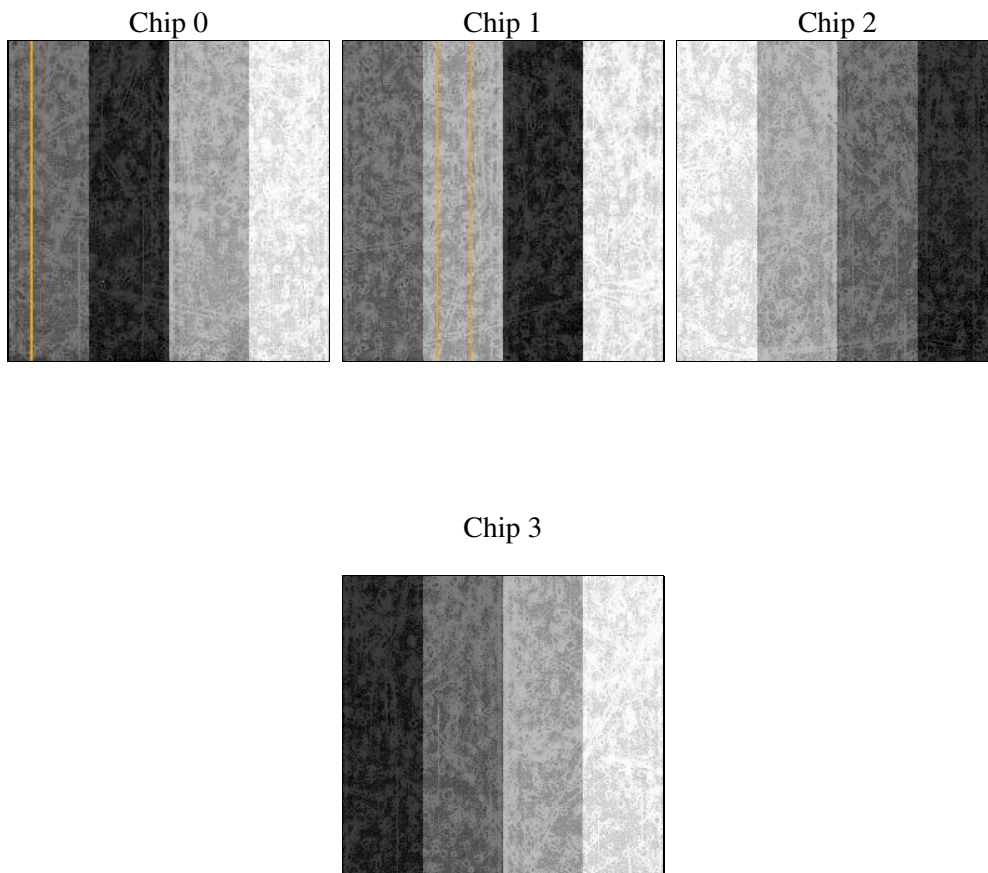
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	13300.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	13376.459072828	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime0	13376.459072709	Sum of GTIs [s]
date	2020-10-25T15:30:36	Date and time of file creation	ontime1	13379.600103021	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	13379.600103021	Sum of GTIs [s]
			ontime3	13376.459072828	Sum of GTIs [s]
			l1events	377394	Number of level 1 events

### 2.1.4 Events

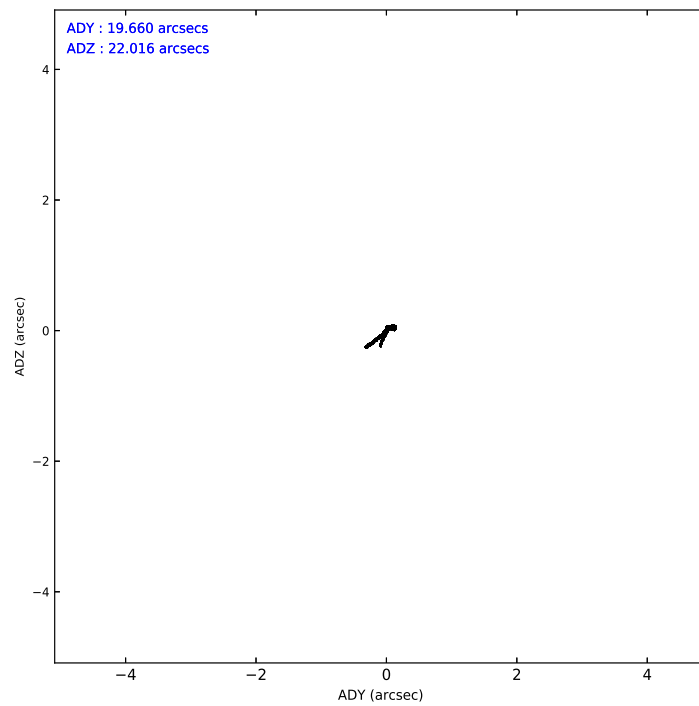
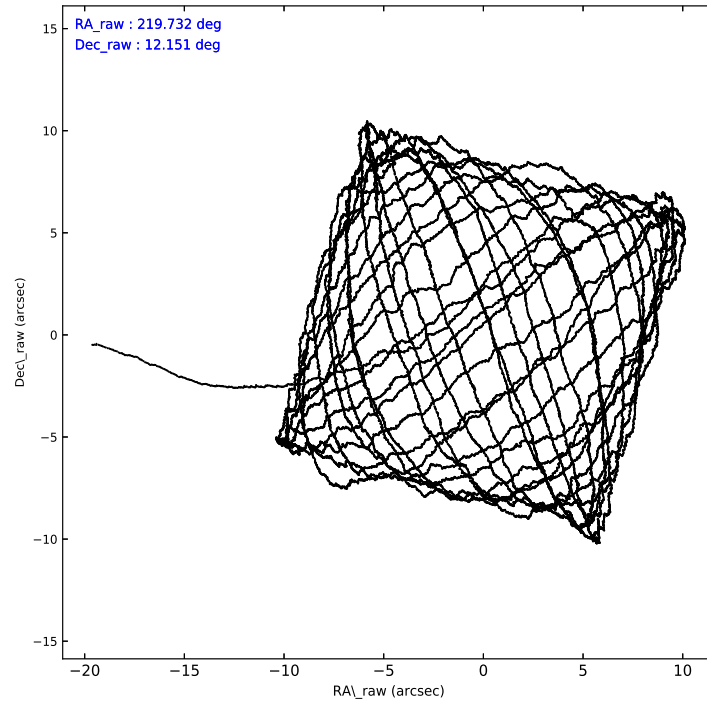
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	89100	93354	96708	98232
rejected events	78318	81190	86450	86587
rejected %	87%	86%	89%	88%

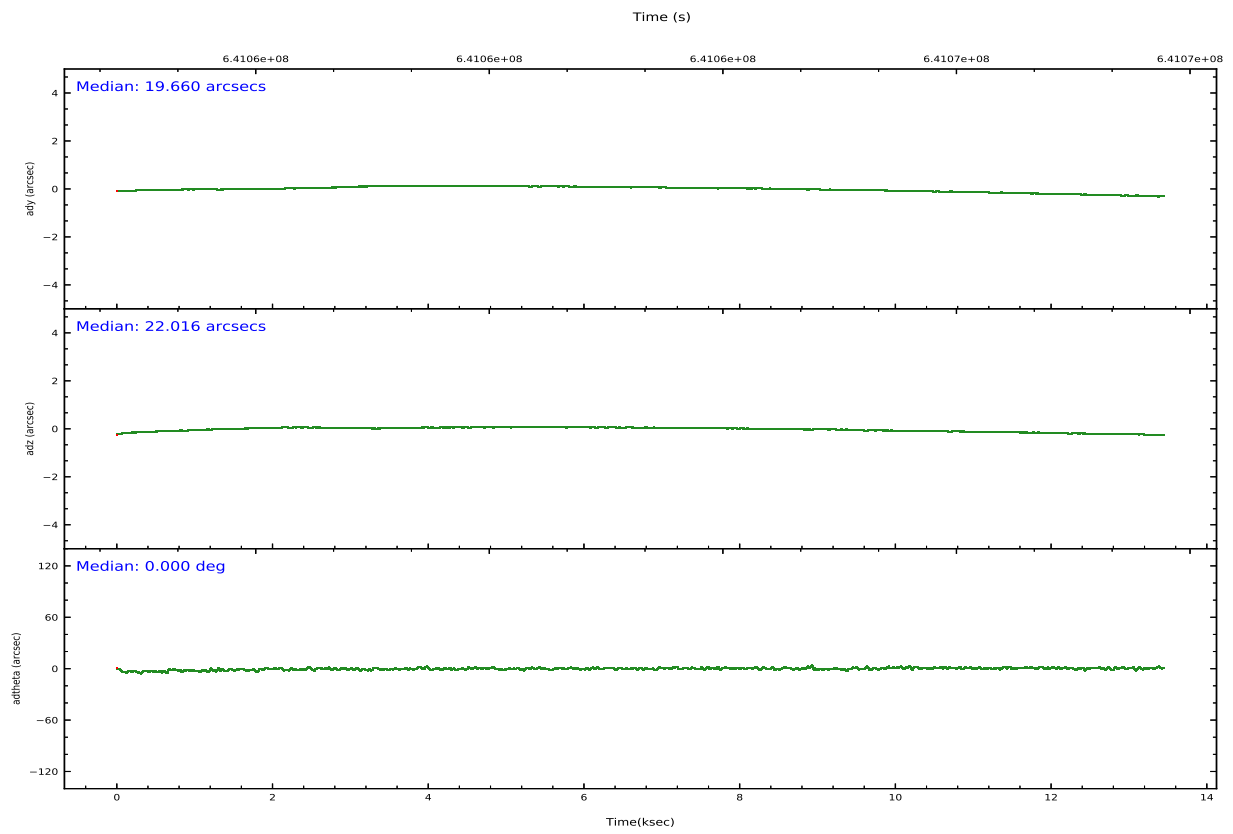
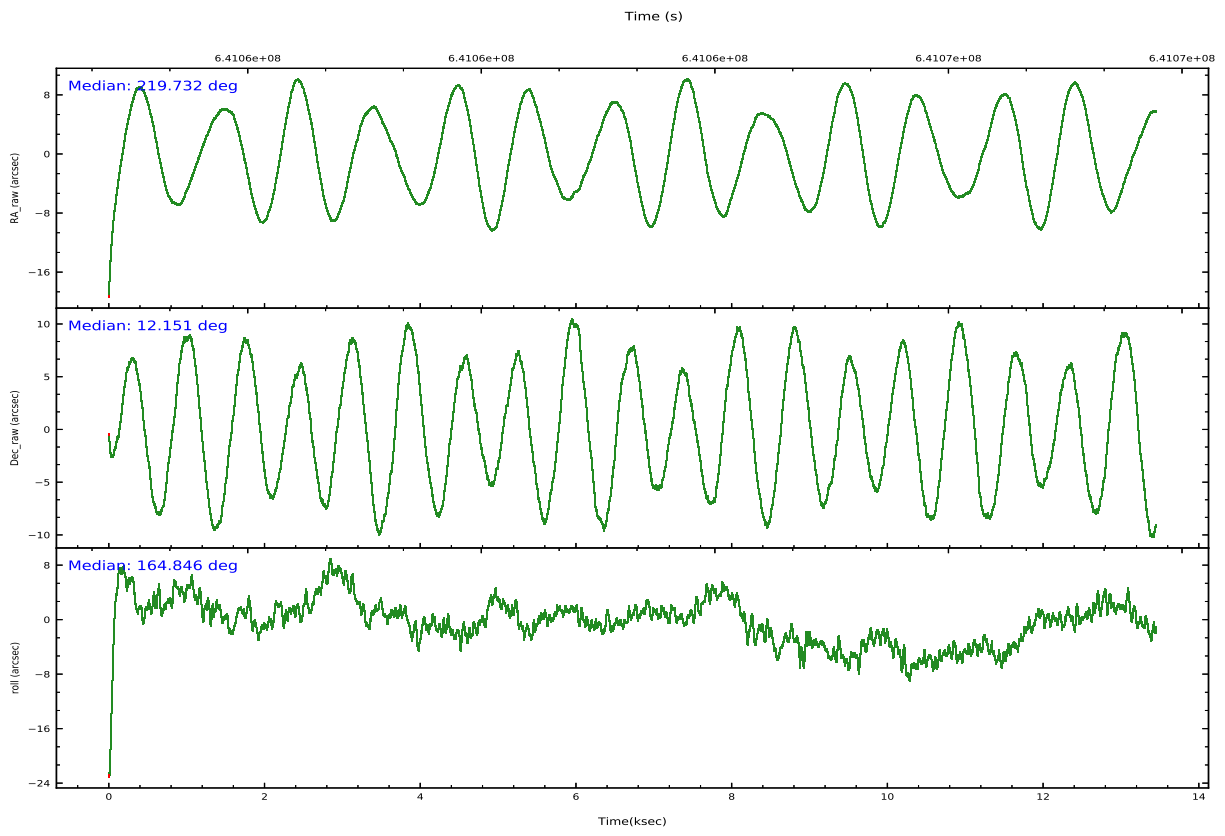
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	3724	3993	3635	4814
	4%	4%	3%	4%
grade 1 events	51	53	50	58
	0%	0%	0%	0%
grade 2 events	2622	3187	2507	2360
	2%	3%	2%	2%
grade 3 events	1106	1133	1037	1098
	1%	1%	1%	1%
grade 4 events	1038	1120	1042	1168
	1%	1%	1%	1%
grade 5 events	3998	4260	3786	4679
	4%	4%	3%	4%
grade 6 events	2296	2735	2040	2207
	2%	2%	2%	2%
grade 7 events	74265	76873	82611	81848
	83%	82%	85%	83%

## 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	219.759082	219.73909531752	CCD I2 on	Y	Y
[deg] Pointing Dec	12.158540	12.155957128308	CCD I3 on	Y	Y
[deg] Pointing Roll	164.637201	164.84584743988	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	-225.8433433320239	CCD S3 on	O2	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	641057367.184000	641056069.06074	CCD S5 on	N	N
Observation start date	2018-04-25T15:28:18	2018-04-25T15:07:49	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	641070667.184000	641071472.76165	On-chip summing requested	N	N
Observation end date	2018-04-25T19:09:58	2018-04-25T19:24:32	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





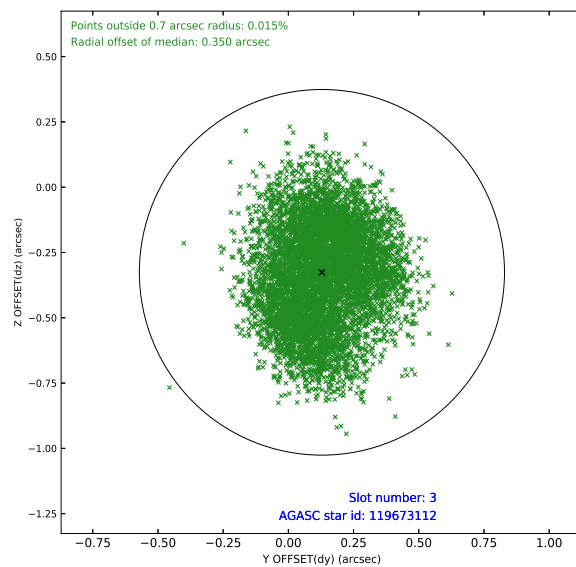
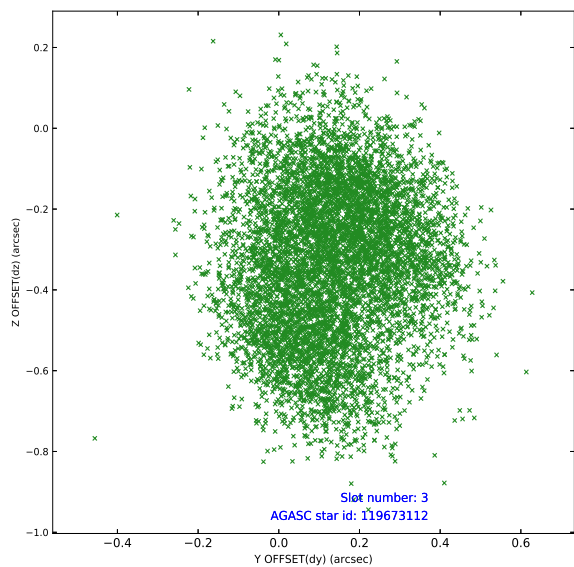
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.17	3282	1.000	0.197	-0.077	0.013	0.027	0.000000	0.000000	919.70	-1004
1	FID		ACIS-I-2	7.12	3282	1.000	-0.216	0.091	0.008	0.013	0.000000	0.000000	-775.02	-1010
2	FID		ACIS-I-4	7.08	3280	1.000	-0.080	0.053	0.012	0.032	0.000000	0.000000	2138.78	895
3	GUIDE	used	119673112	9.65	6528	1.000	0.129	-0.326	0.254	0.382	219.411528	12.187130	1207.20	223
4	GUIDE	used	119810680	9.01	6550	1.000	-0.365	-0.000	0.204	0.313	219.582018	11.672265	139.64	1854
5	GUIDE	used	119810904	7.88	6562	1.000	-0.035	0.238	0.132	0.240	220.280633	12.109988	-1816.01	-319
6	GUIDE	used	119813568	8.50	6557	1.000	0.145	0.125	0.150	0.252	220.170731	12.278743	-1280.43	-801
7	GUIDE	used	120071456	8.19	6559	1.000	0.132	-0.031	0.139	0.241	219.524028	12.803618	1410.83	-2019

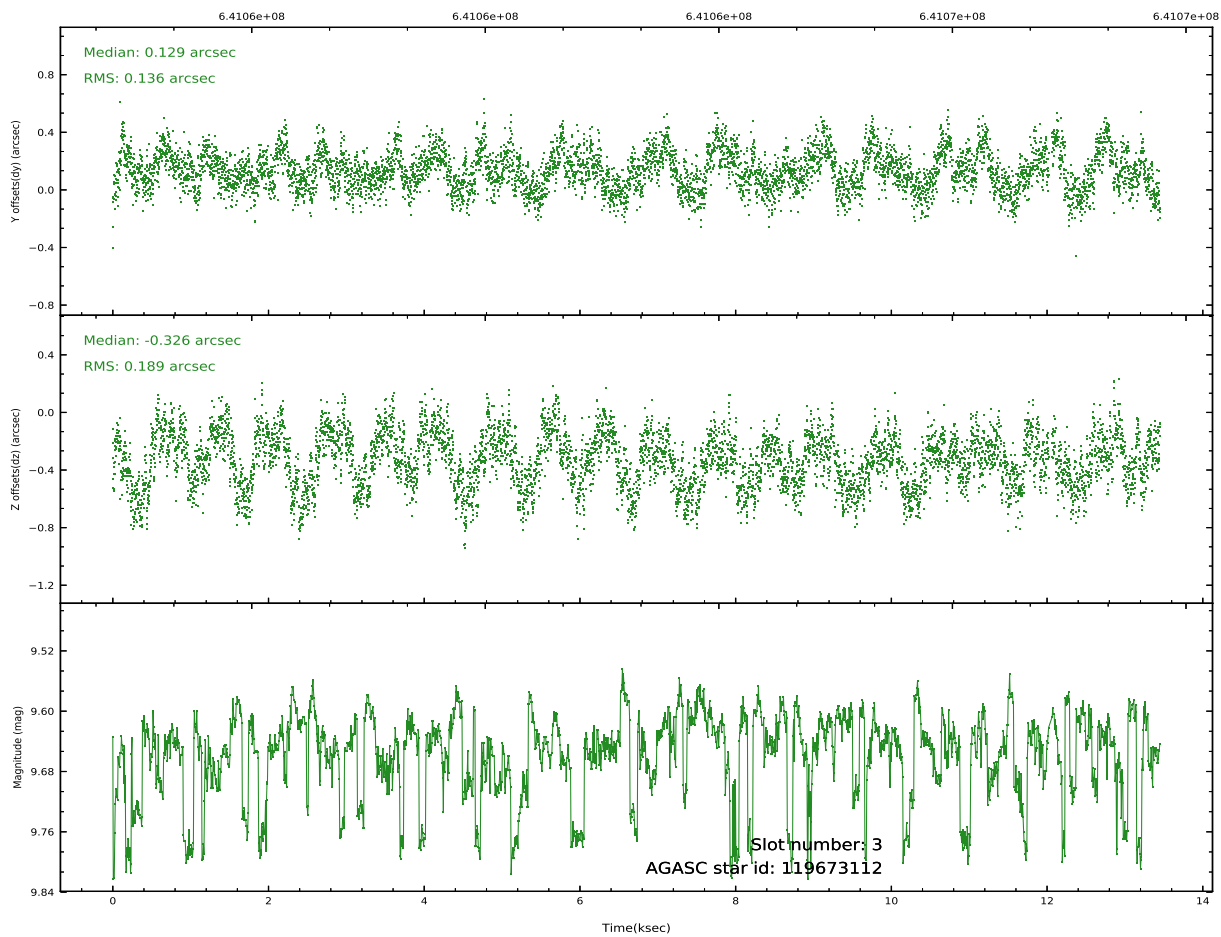
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## 2.4 Star Slots

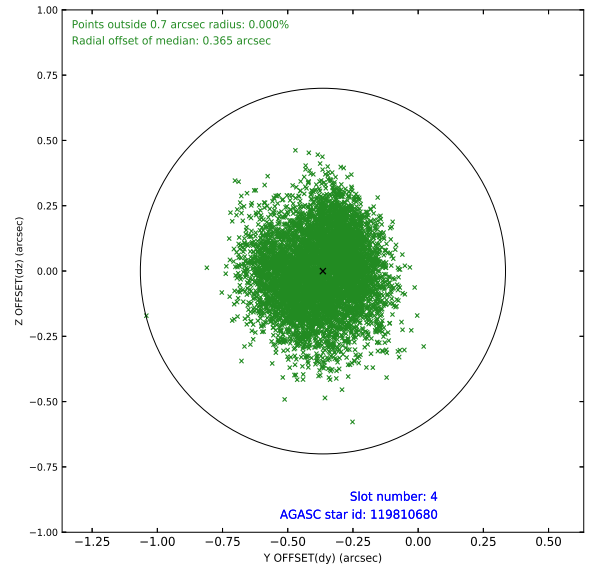
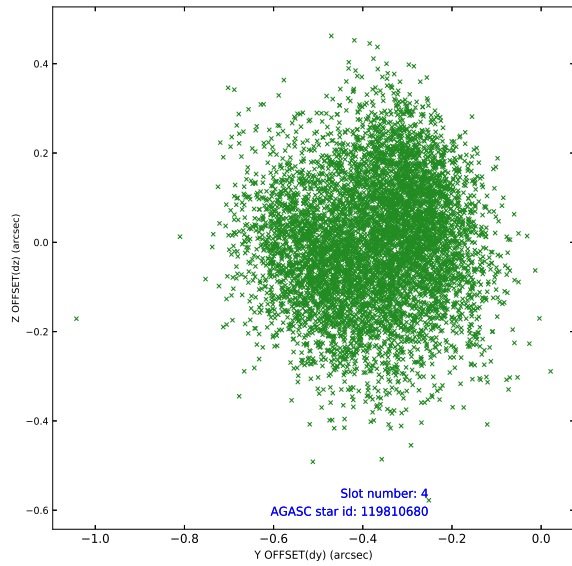
### 2.4.1 Slot 3



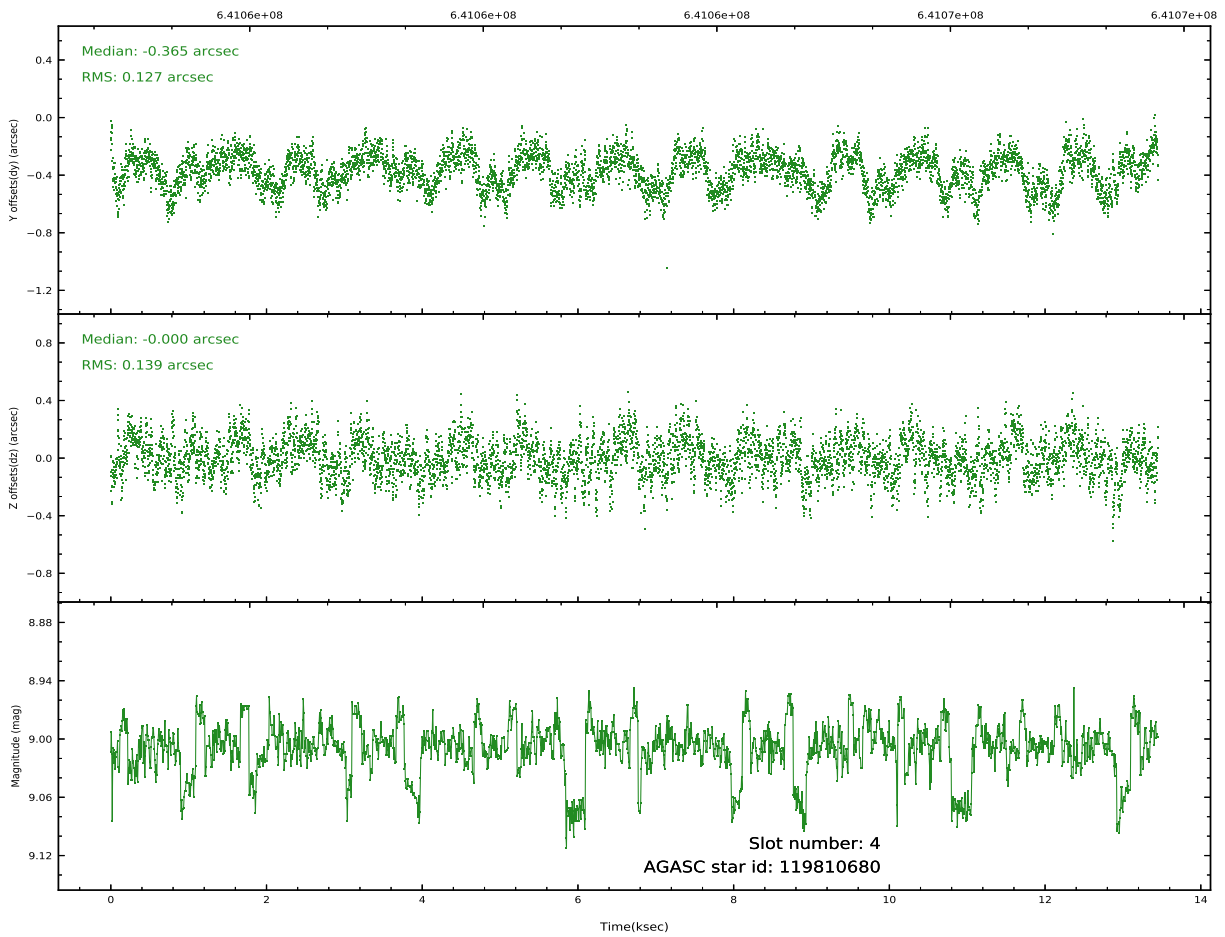
Time (s)



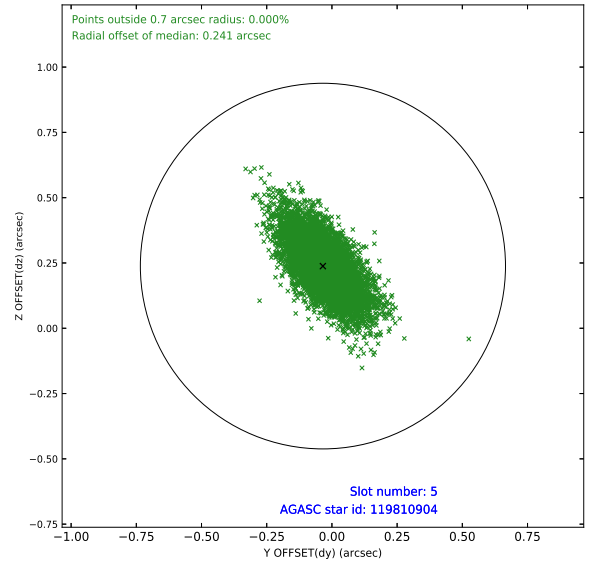
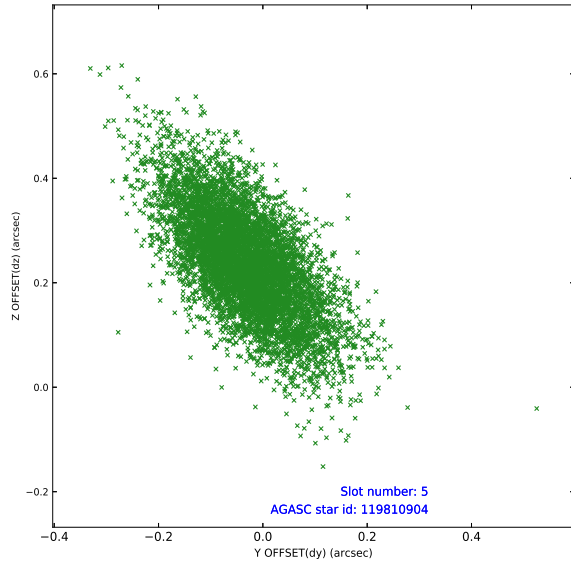
## 2.4.2 Slot 4



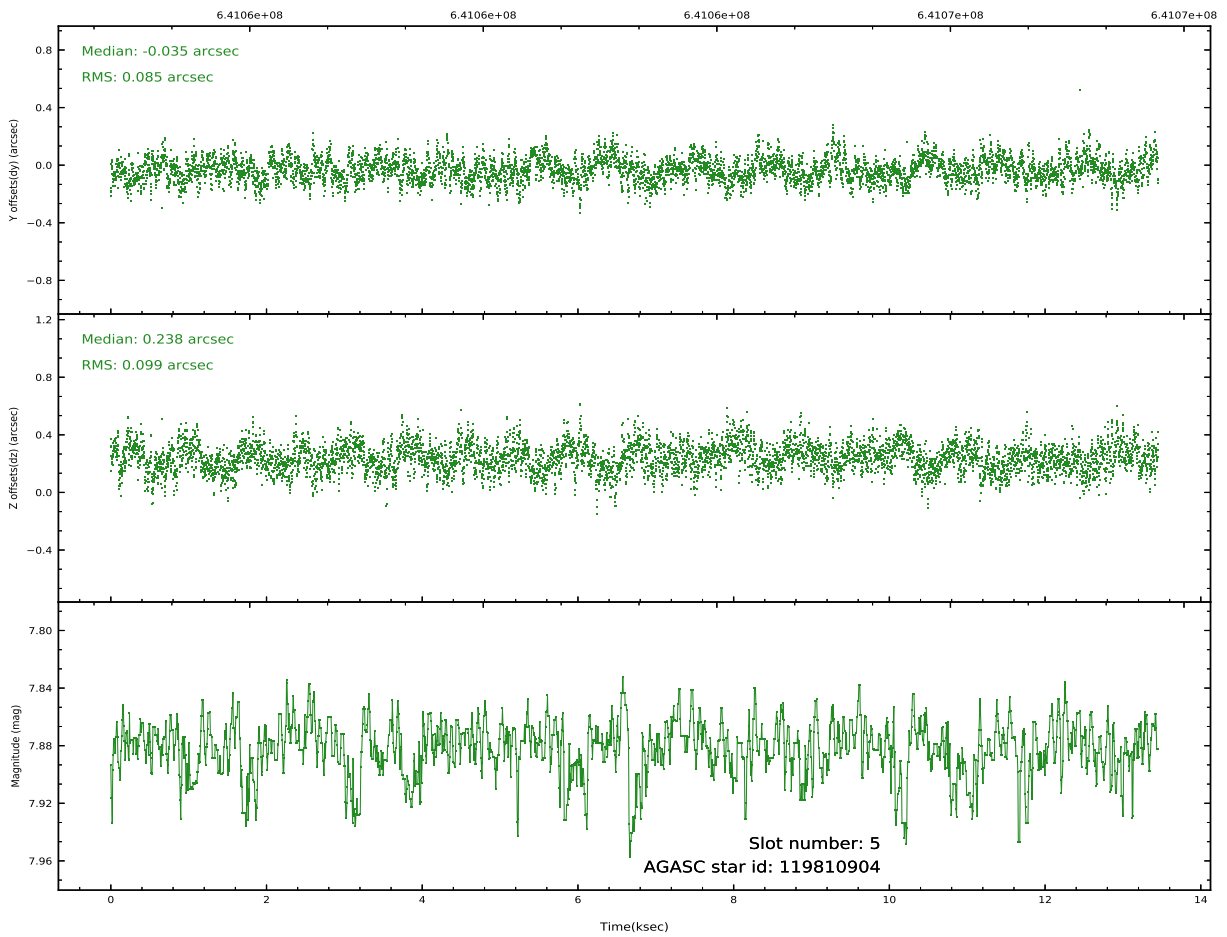
Time (s)



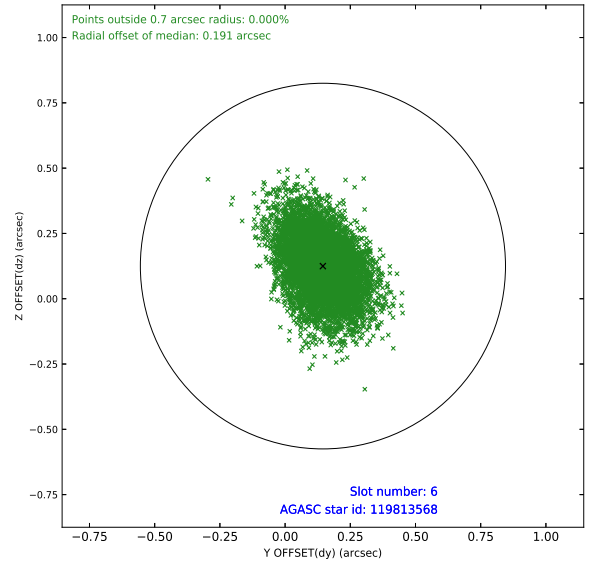
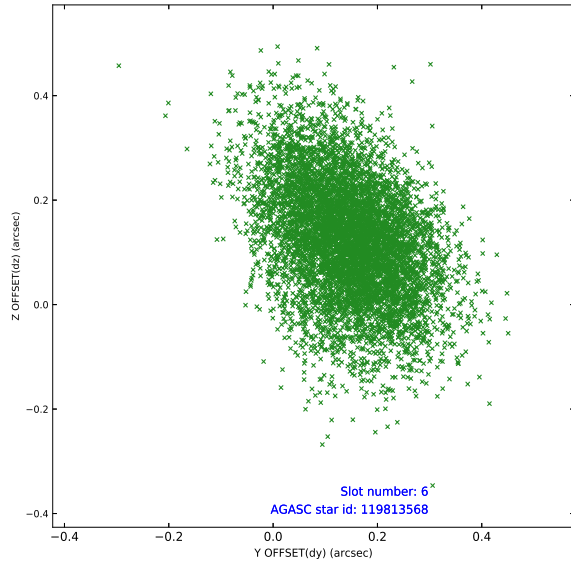
### 2.4.3 Slot 5



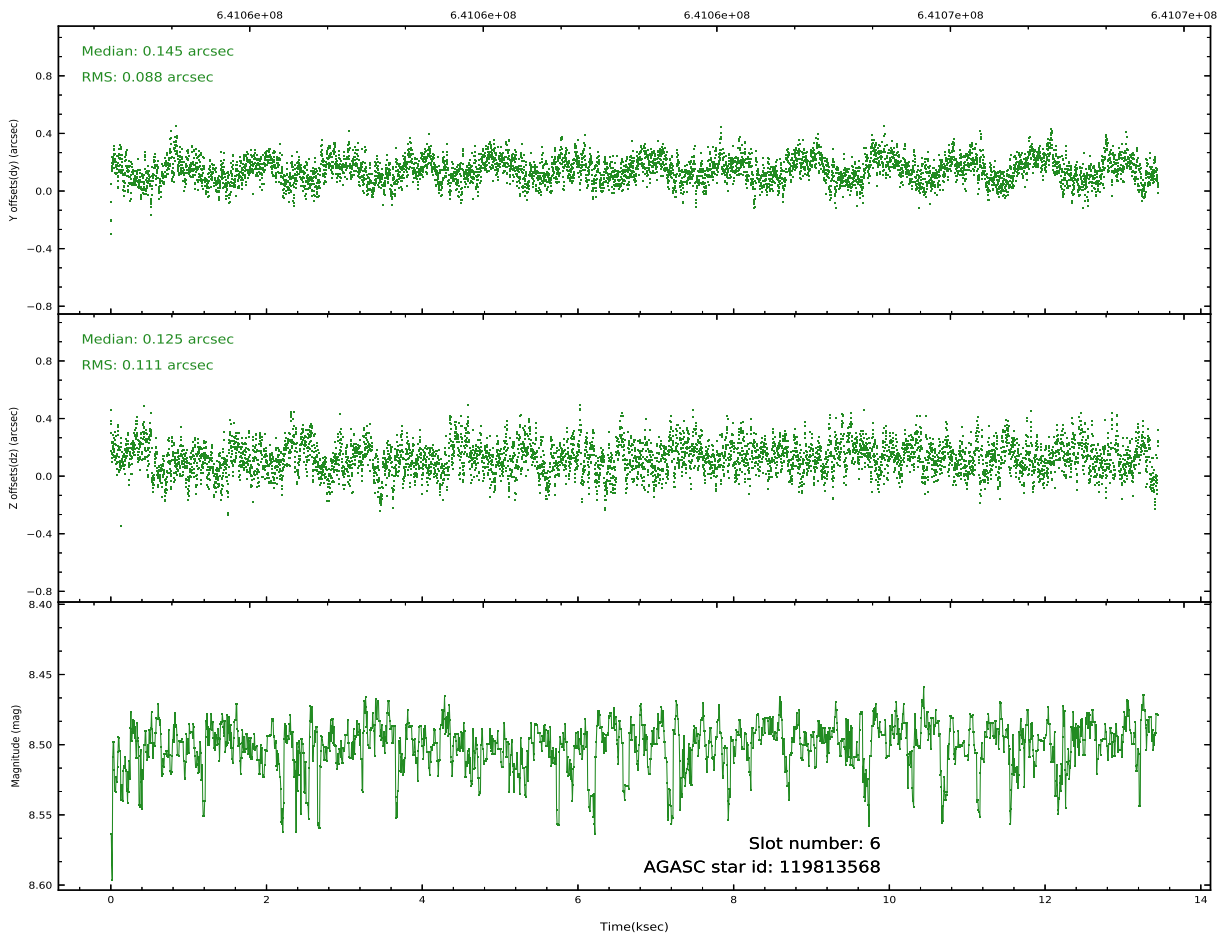
Time (s)



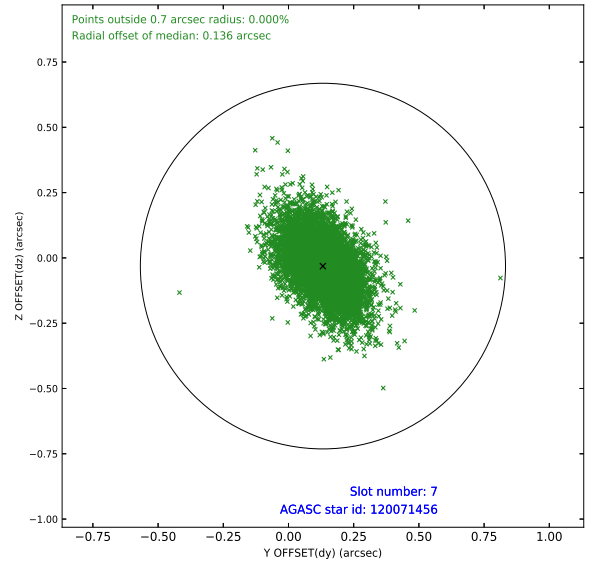
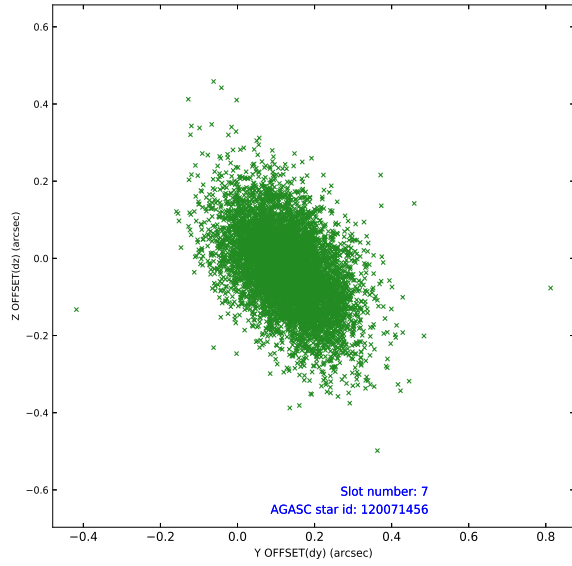
## 2.4.4 Slot 6



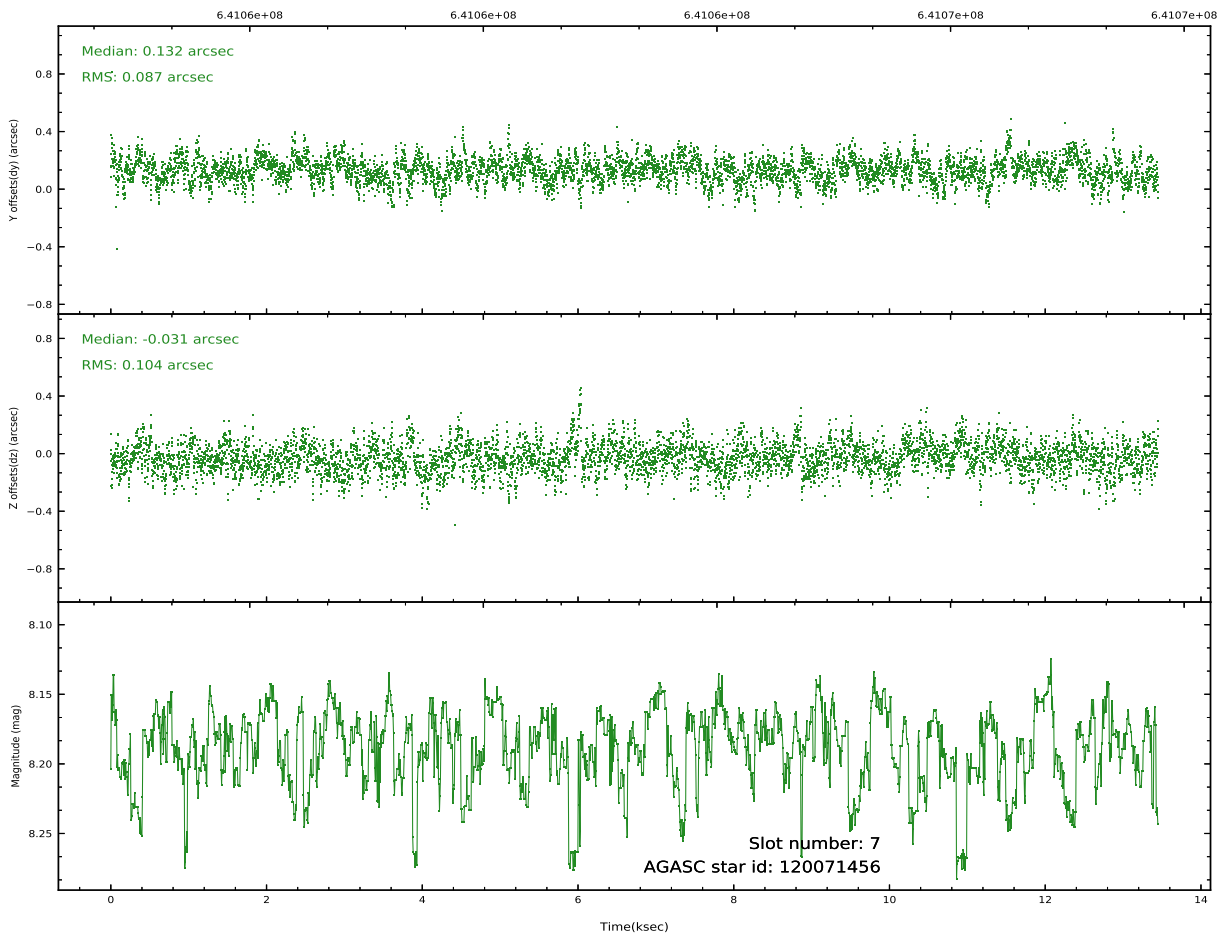
Time (s)



## 2.4.5 Slot 7

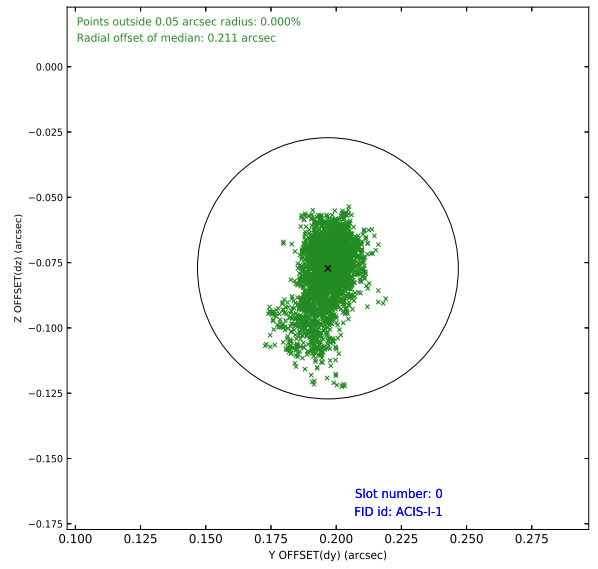
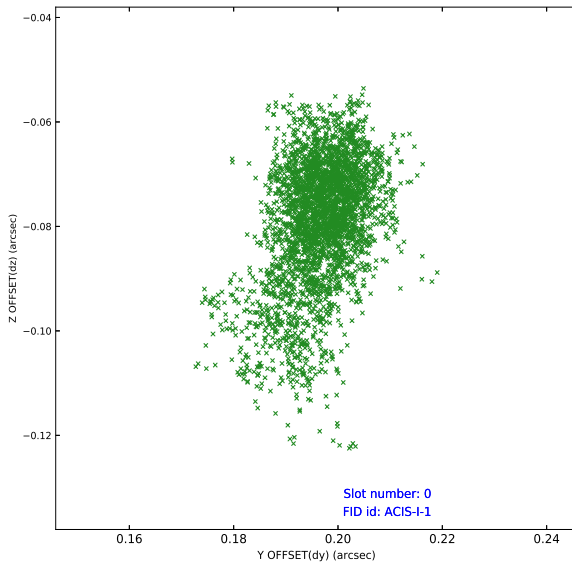


Time (s)

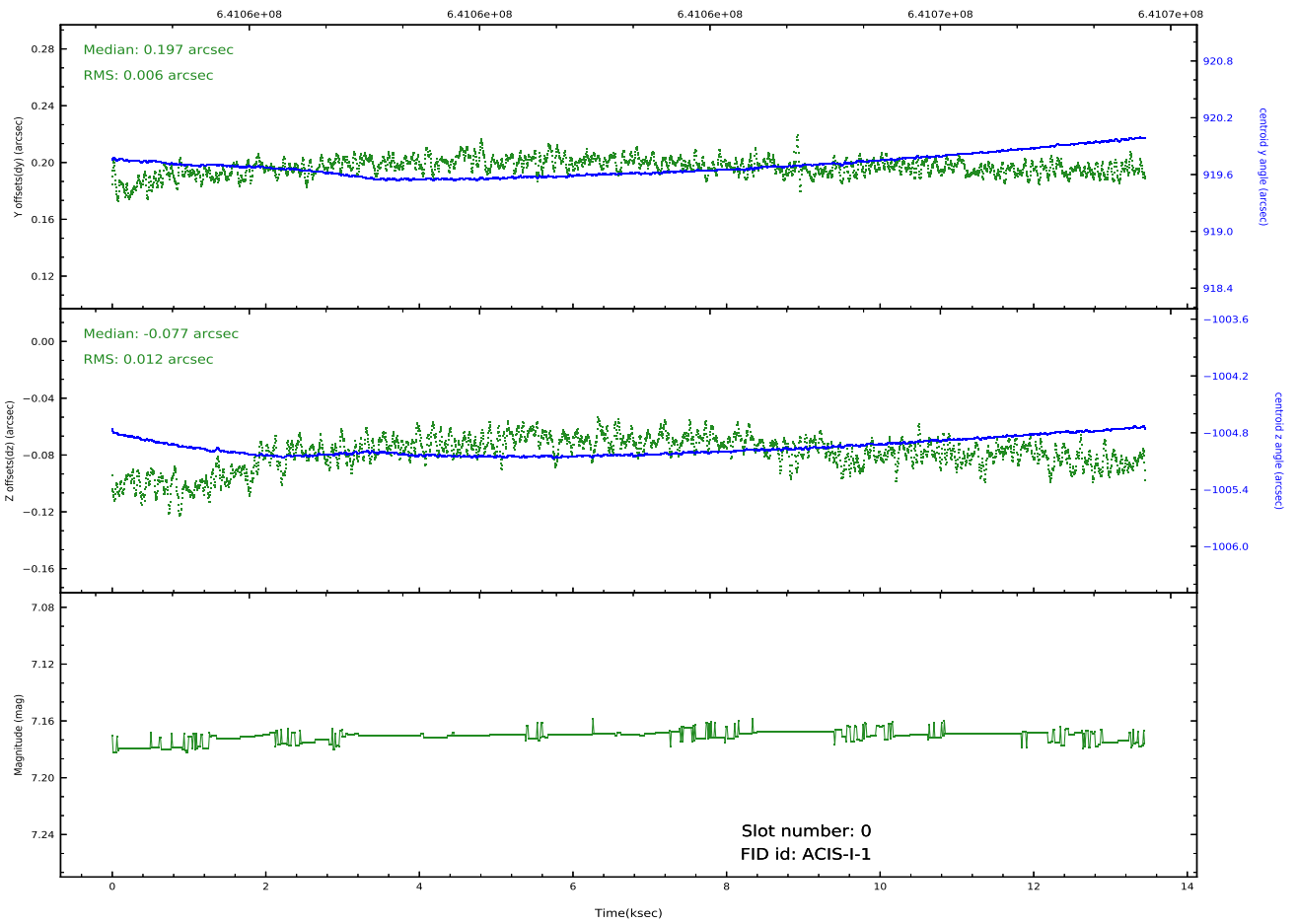


## 2.5 FID Slots

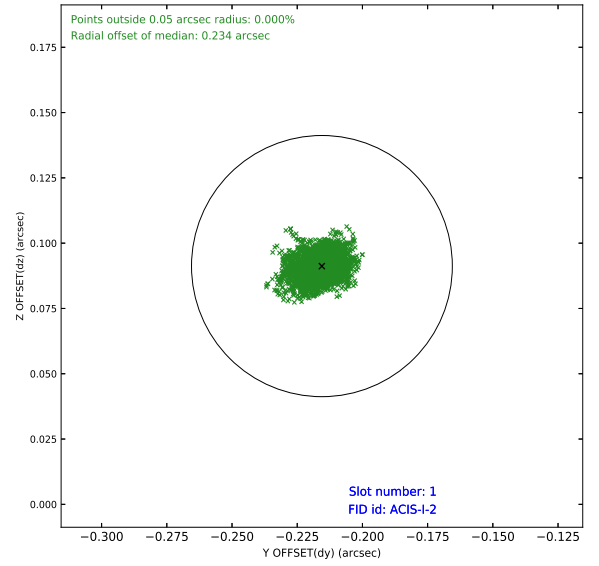
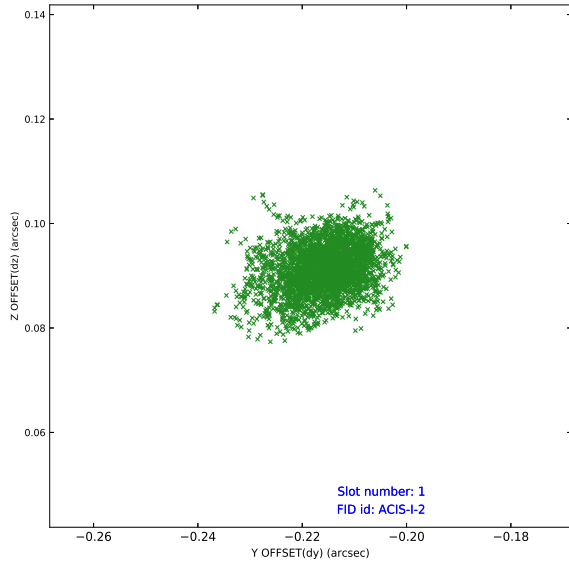
### 2.5.1 Slot 0



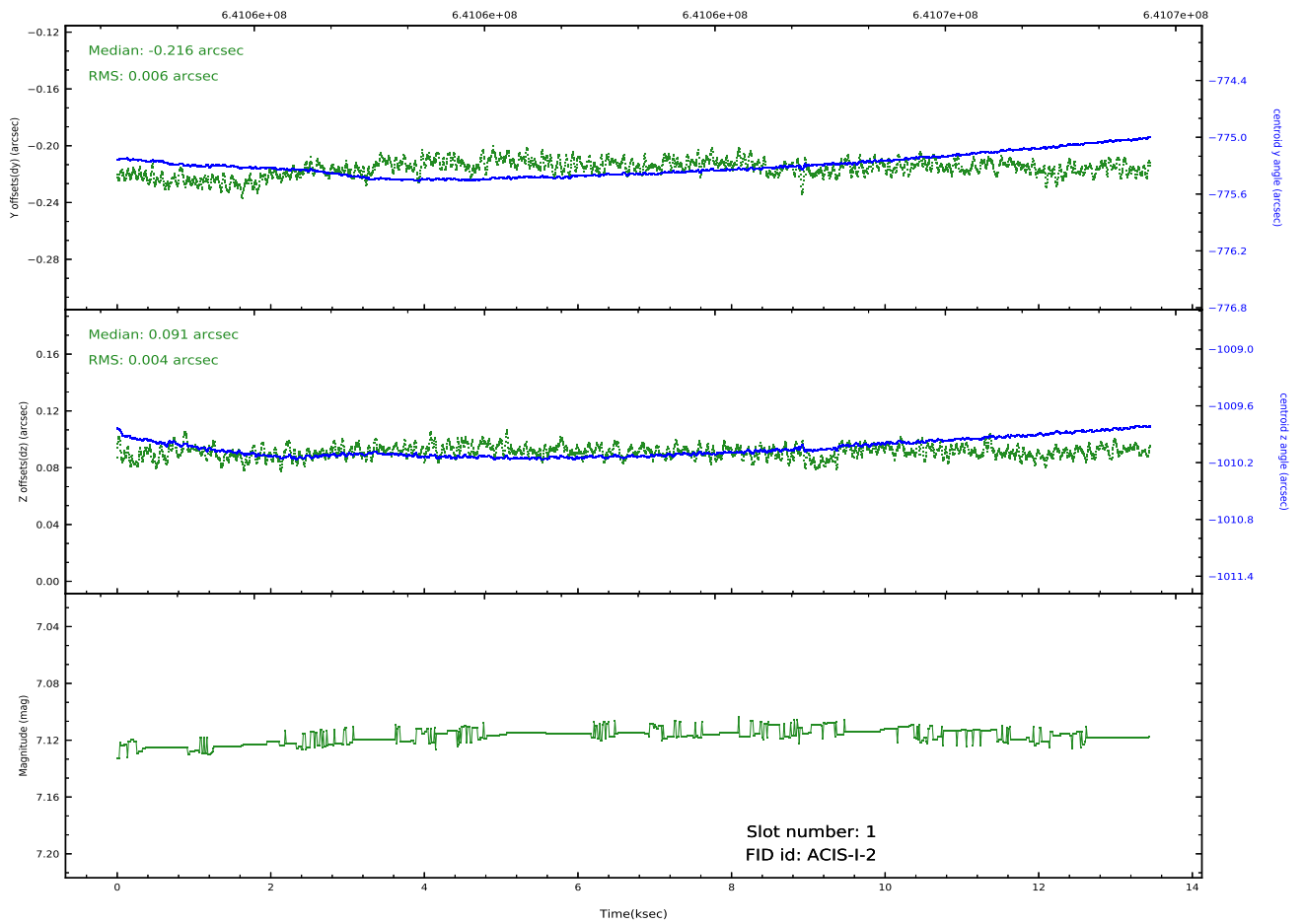
Time (s)



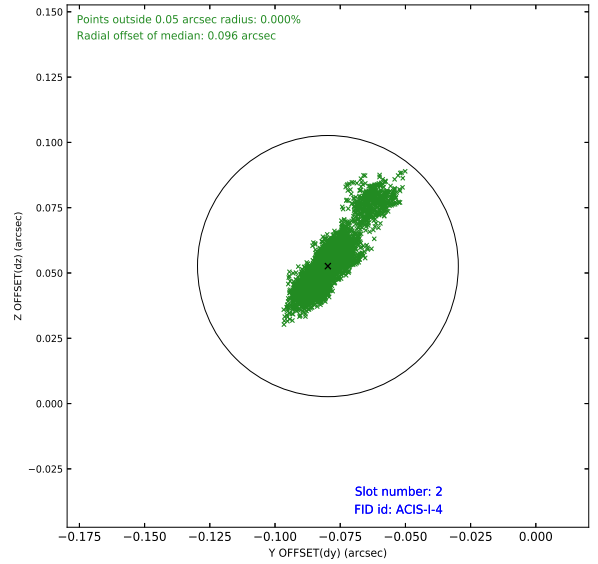
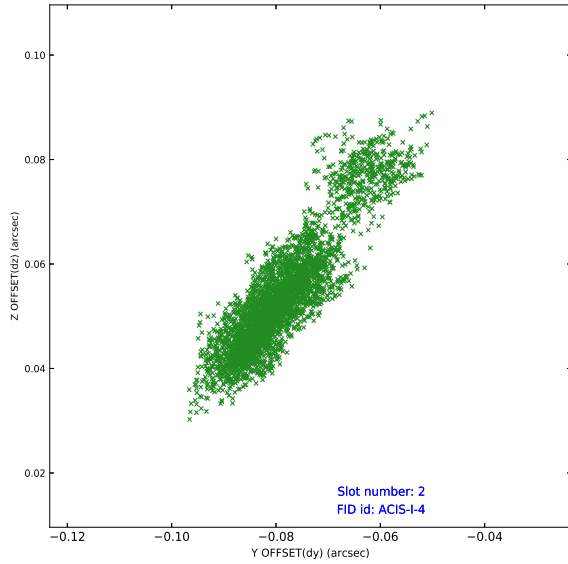
## 2.5.2 Slot 1



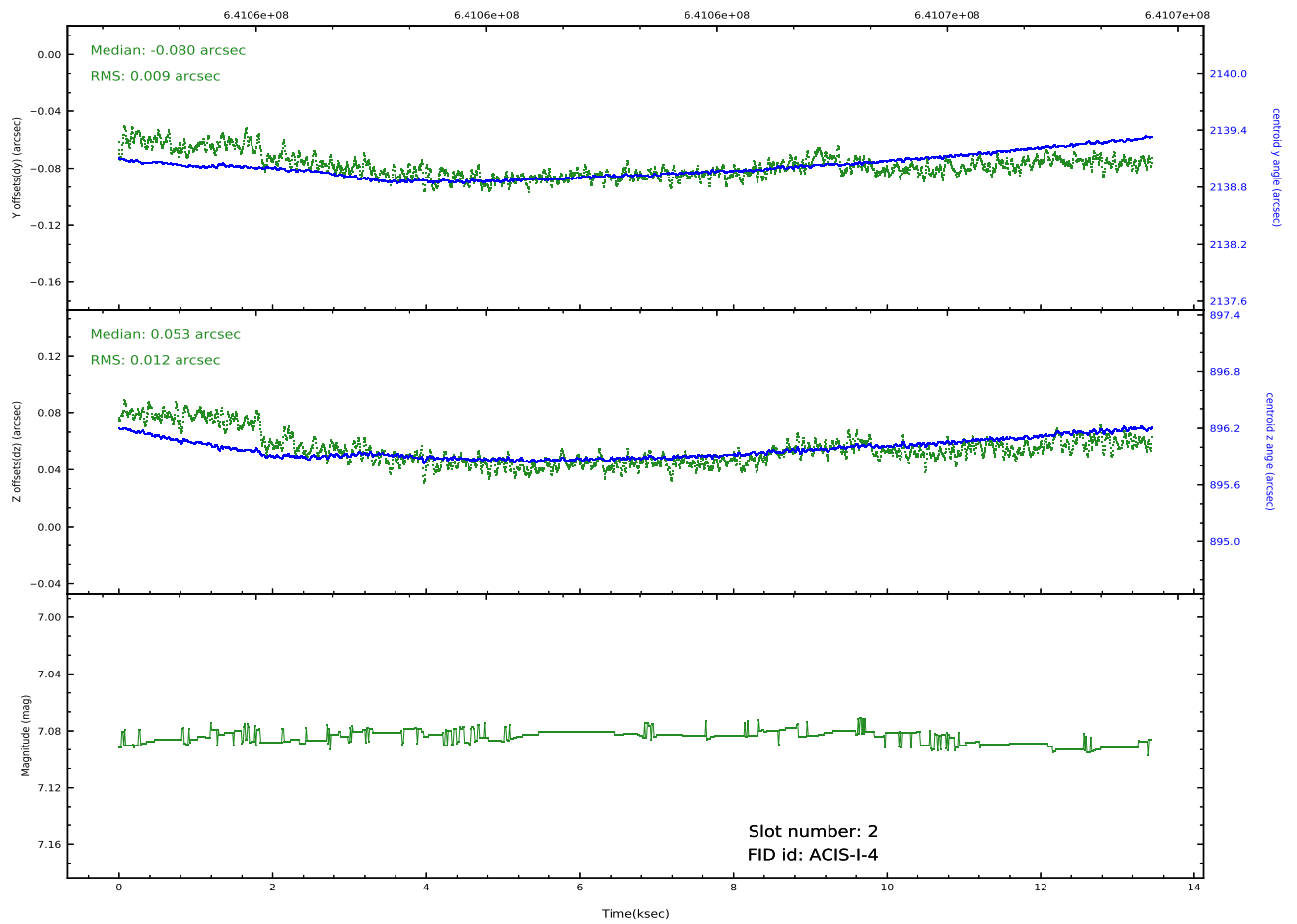
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.376459072828

## A.2 Comments

Joint proposal with HST.

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Two optional chips were dropped.