

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20577 - L2 Version 2  
Chandra X-Ray Center

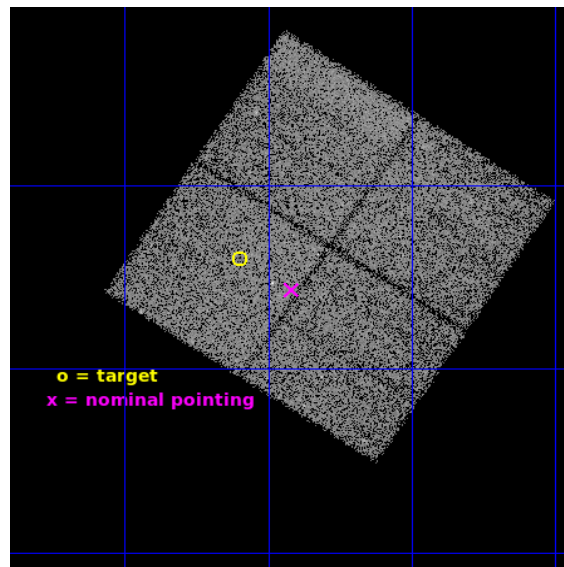
L2 Processing Date : Oct 25 2020

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# 1 Front

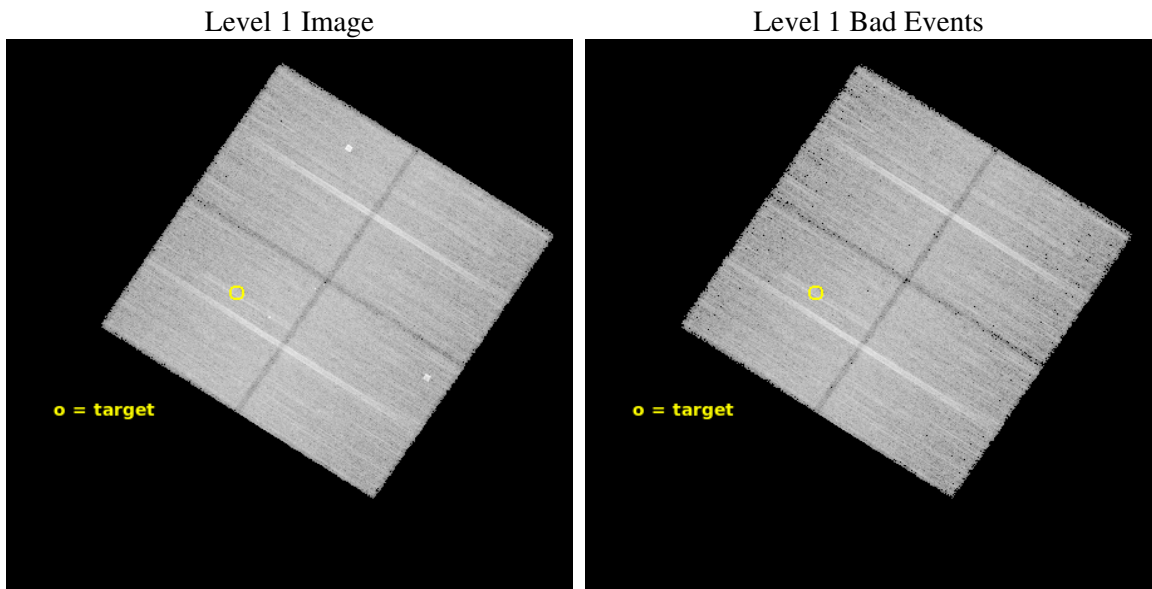
seq_num	801776	Sequence number
obs_id	20577	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1458-0024	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	224.65	Observer's specified target RA [deg]
dec_targ	-0.400278	Observer's specified target Dec [deg]
ra_nom	224.60434606591	Nominal RA [deg]
dec_nom	-0.42817833697114	Nominal Dec [deg]
roll_nom	213.33317054545	Nominal Roll [deg]
revision	2	Processing version of data
ontime	36474.55924058	Sum of GTIs [s]
livetime	35997.992271922	Livetime [s]
ontime0	36477.687671781	Sum of GTIs [s]
ontime1	36477.700280666	Sum of GTIs [s]
ontime2	36477.700280666	Sum of GTIs [s]
ontime3	36474.55924058	Sum of GTIs [s]
l2events	99602	Number of level 2 events



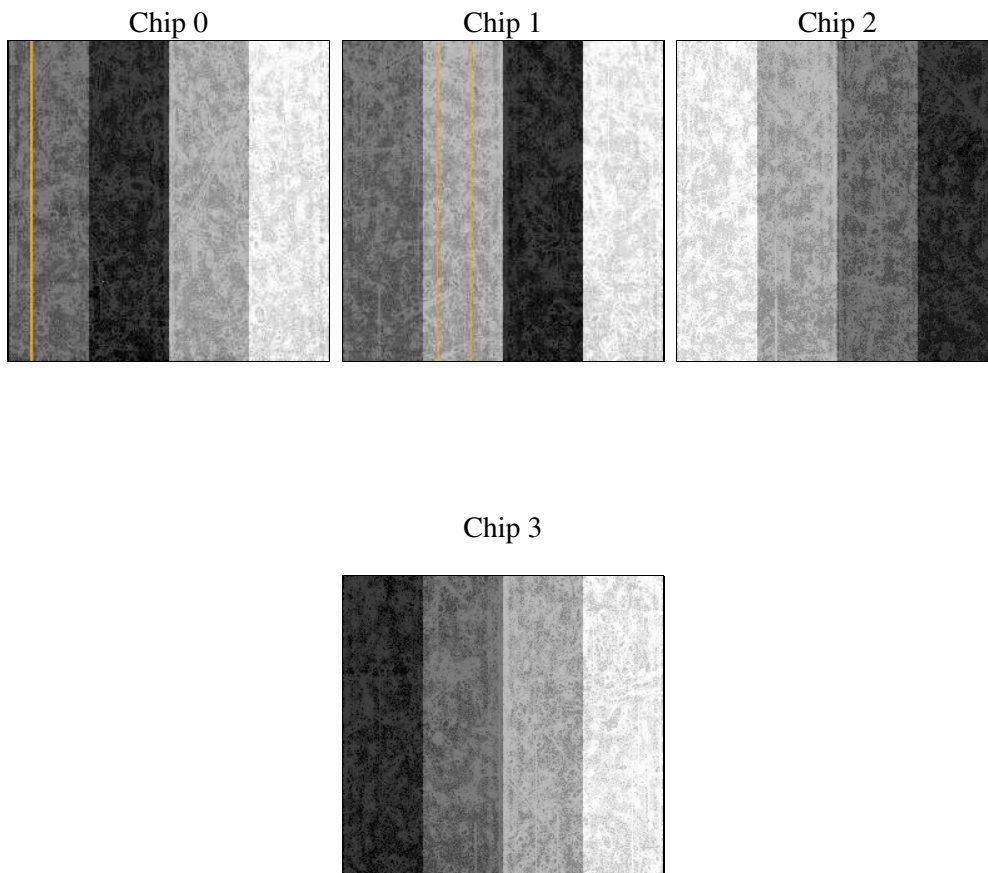
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36400.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	36474.55924058	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime0	36477.687671781	Sum of GTIs [s]
date	2020-10-26T00:13:20	Date and time of file creation	ontime1	36477.700280666	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	36477.700280666	Sum of GTIs [s]
			ontime3	36474.55924058	Sum of GTIs [s]
			l1events	1028797	Number of level 1 events

### 2.1.4 Events

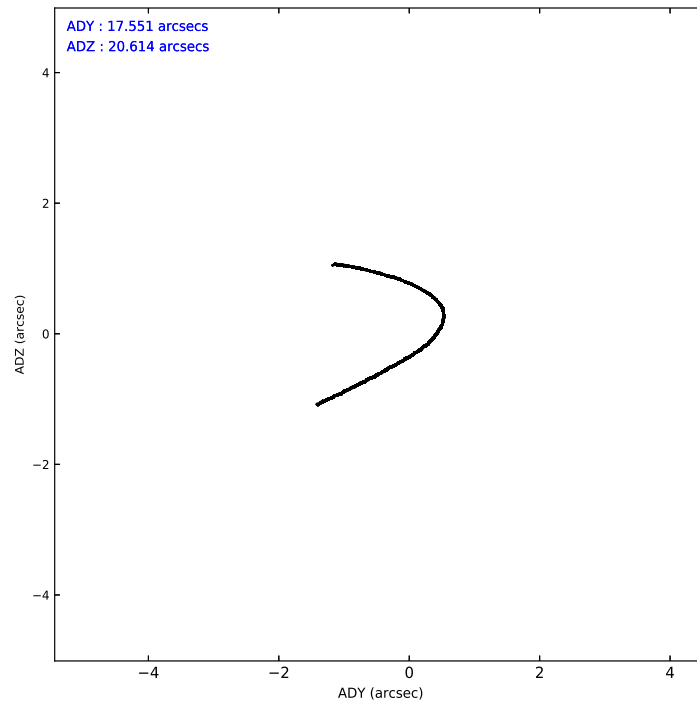
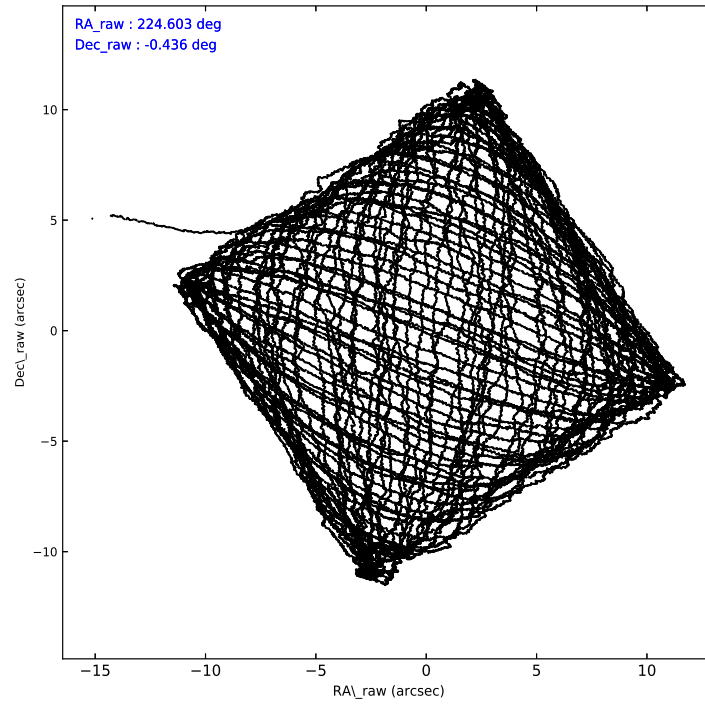
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	245431	248669	271301	263396
rejected events	215684	214385	240809	234651
rejected %	87%	86%	88%	89%

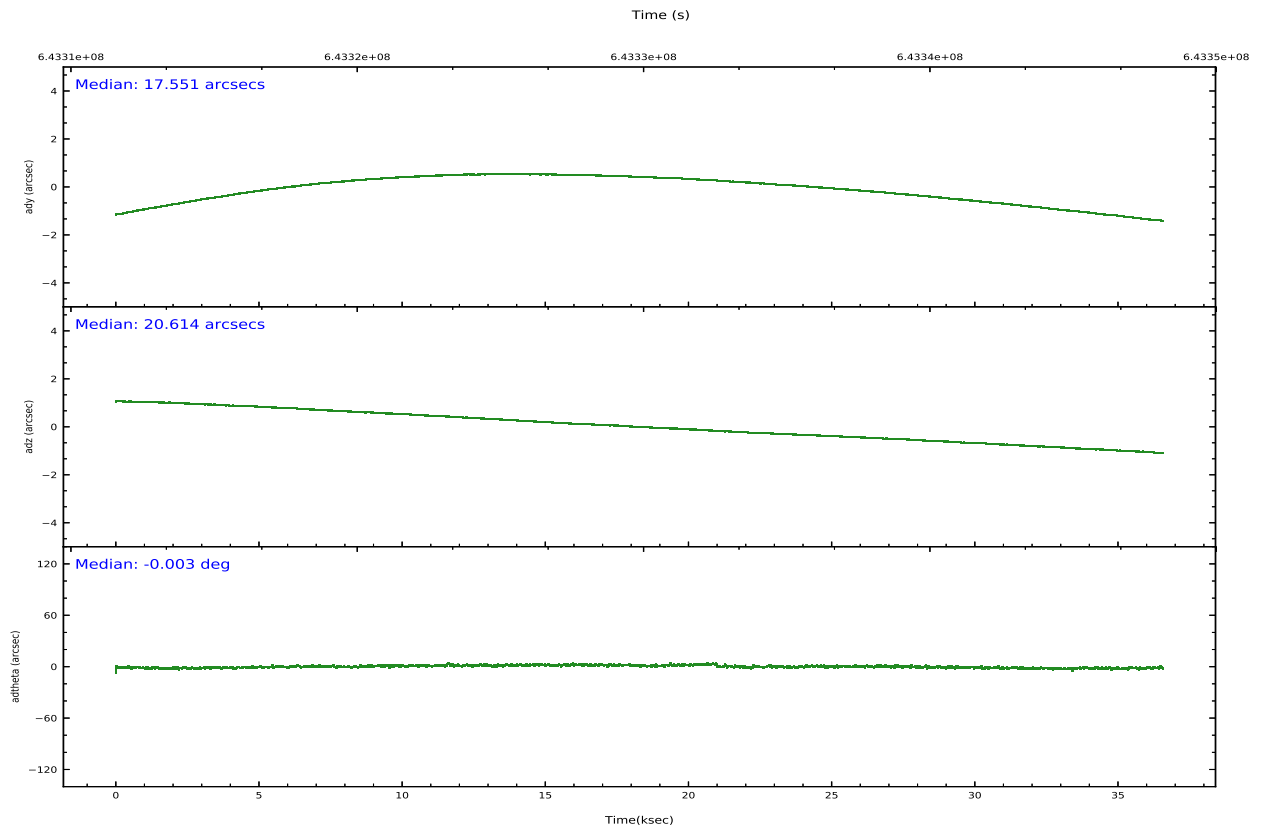
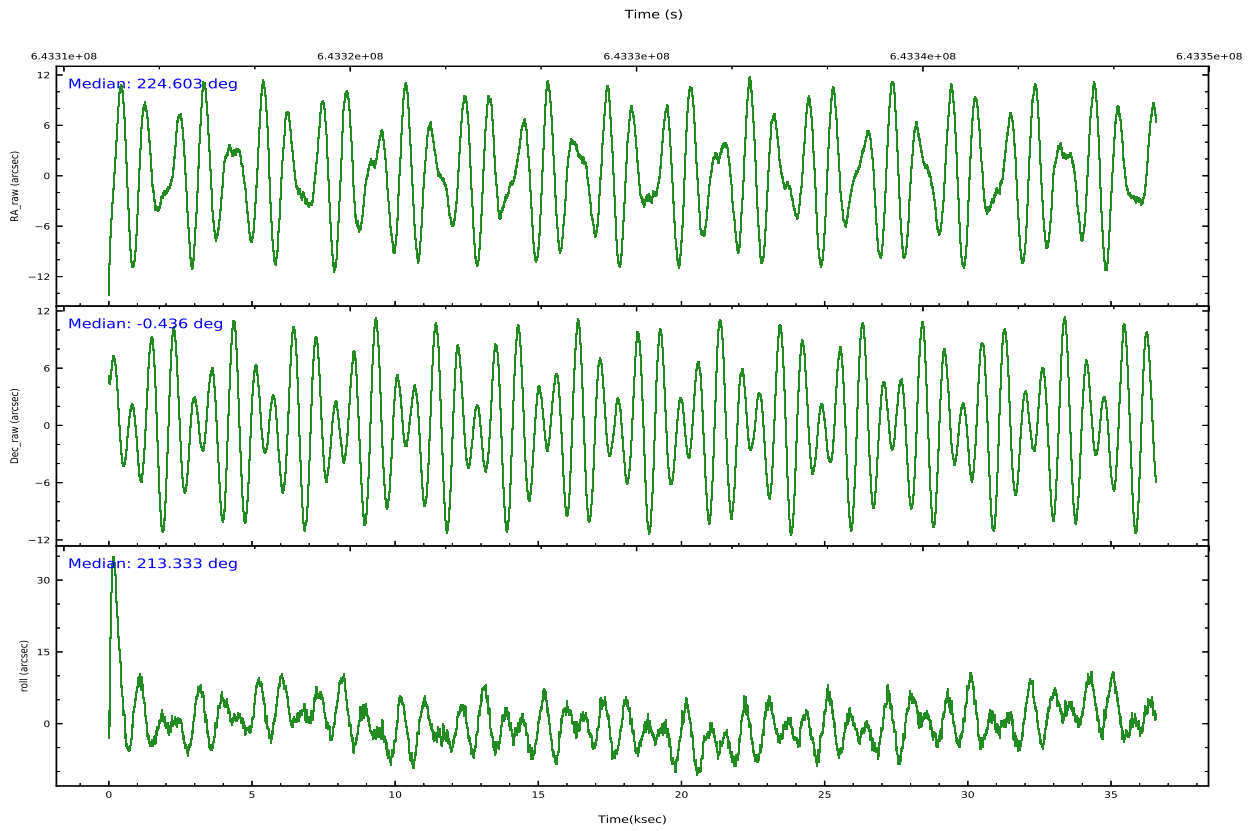
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	9961	12584	11653	10256
	4%	5%	4%	3%
grade 1 events	142	143	167	170
	0%	0%	0%	0%
grade 2 events	7528	8073	7168	6303
	3%	3%	2%	2%
grade 3 events	3016	3141	2820	3031
	1%	1%	1%	1%
grade 4 events	2916	3094	3045	3000
	1%	1%	1%	1%
grade 5 events	11450	11804	10756	12849
	4%	4%	3%	4%
grade 6 events	6333	7403	5812	6163
	2%	2%	2%	2%
grade 7 events	204085	202427	229880	221624
	83%	81%	84%	84%

## 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	224.615685	224.60434606591	CCD I2 on	Y	Y
[deg] Pointing Dec	-0.411242	-0.42817833697114	CCD I3 on	Y	Y
[deg] Pointing Roll	213.125160	213.33317054545	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)	643311745.184000	643310647.91895	CCD S5 on	N	N
Observation start date	2018-05-21T17:41:16	2018-05-21T17:24:07	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	643348145.184000	643348927.05871	On-chip summing requested	N	N
Observation end date	2018-05-22T03:47:56	2018-05-22T04:02:07	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





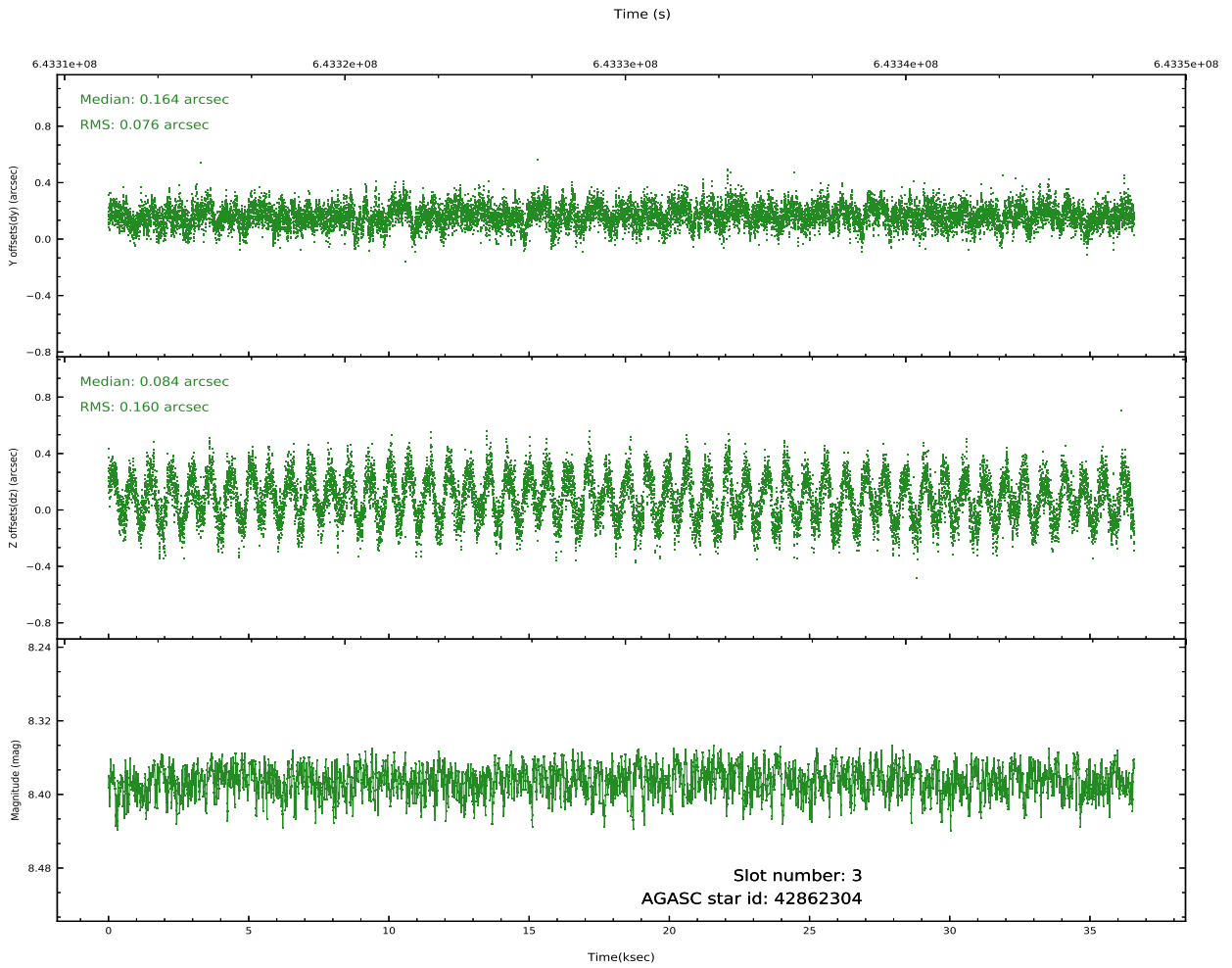
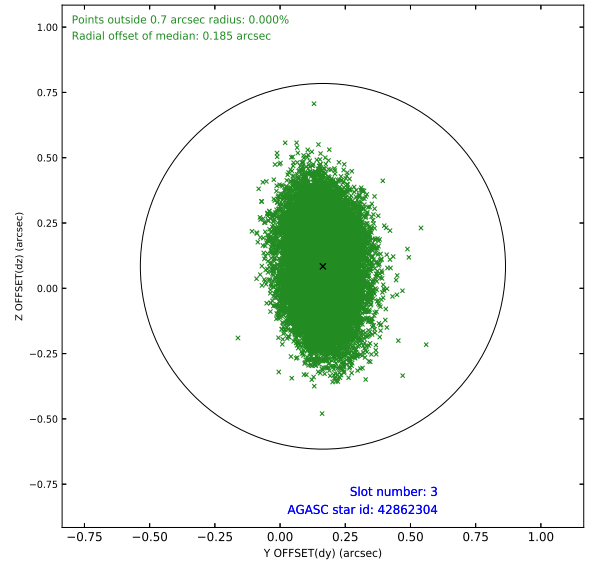
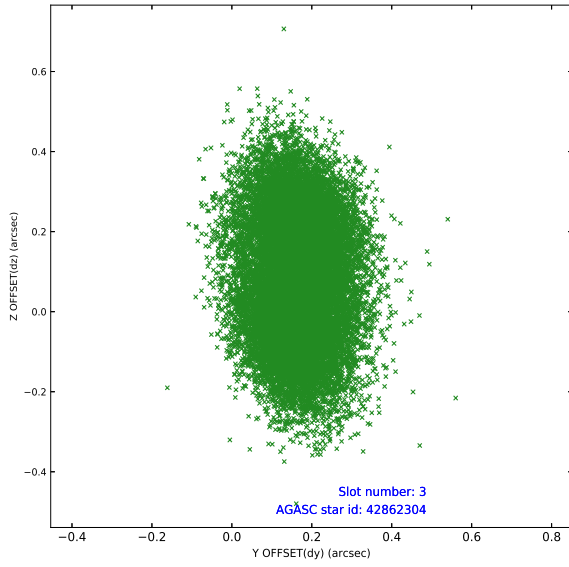
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.15	8921	1.000	0.054	-0.128	0.020	0.036	0.000000	0.000000	921.91	-1003
1	FID		ACIS-I-4	7.07	8921	1.000	-0.082	-0.035	0.021	0.043	0.000000	0.000000	2141.35	897
2	FID		ACIS-I-6	7.16	8922	1.000	-0.069	0.231	0.022	0.067	0.000000	0.000000	387.68	1538
3	GUIDE	used	42862304	8.38	17832	1.000	0.164	0.084	0.191	0.300	224.534064	0.106262	-771.05	-1720
4	GUIDE	used	653657096	9.33	17827	1.000	-0.011	-0.093	0.192	0.311	224.260804	-0.804211	1843.43	486
5	GUIDE	used	653659904	8.43	17831	1.000	-0.026	0.230	0.123	0.209	224.961055	-0.072836	-1704.30	-342
6	GUIDE	used	655361272	8.81	17823	1.000	-0.131	-0.041	0.130	0.222	225.288837	-0.363392	-2123.87	1180
7	GUIDE	used	653658304	7.92	17837	1.000	0.004	-0.188	0.151	0.251	224.735028	-0.342694	-494.40	28

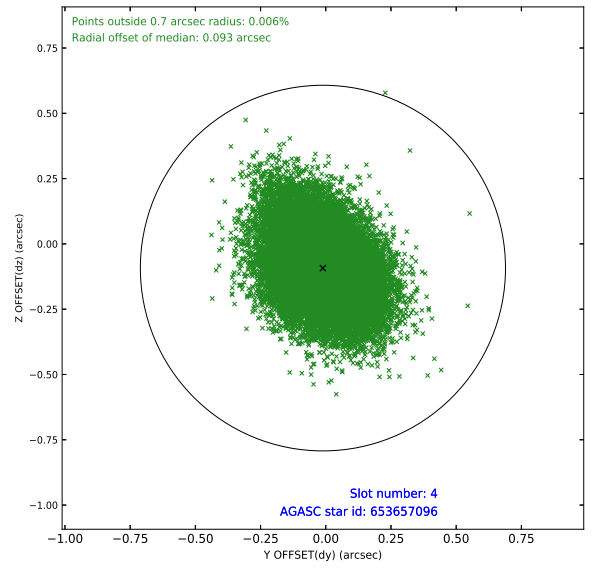
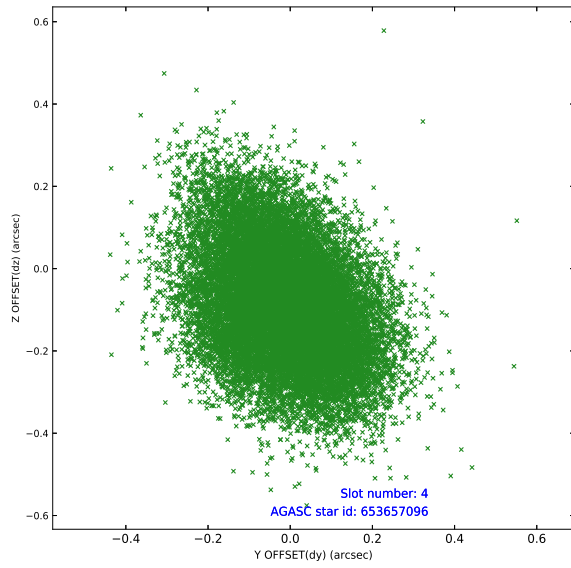
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## 2.4 Star Slots

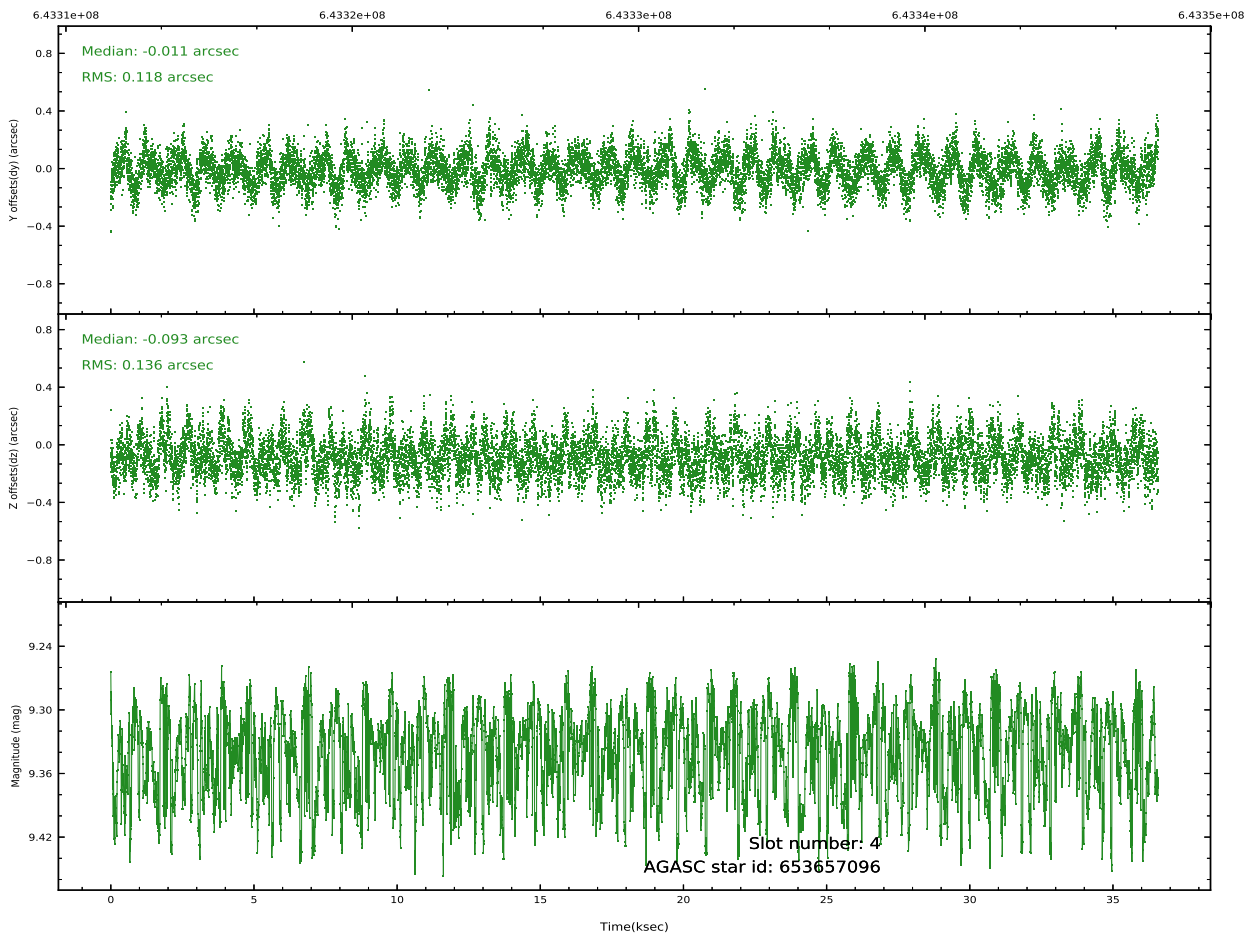
### 2.4.1 Slot 3



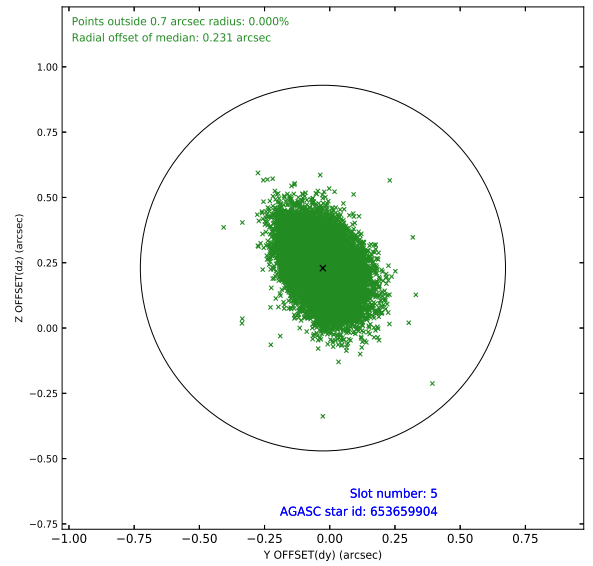
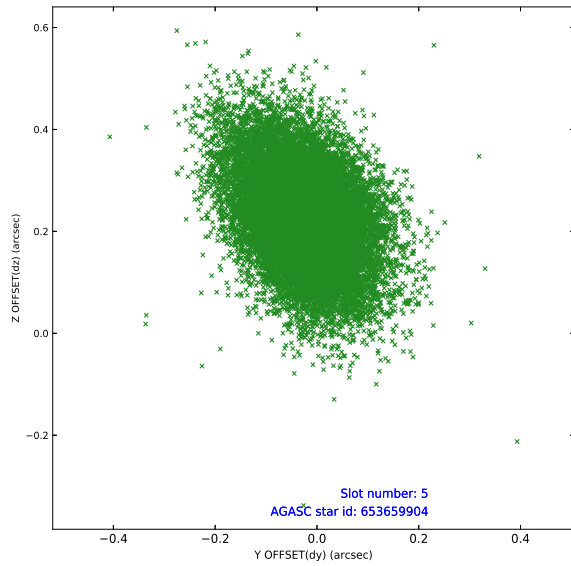
## 2.4.2 Slot 4



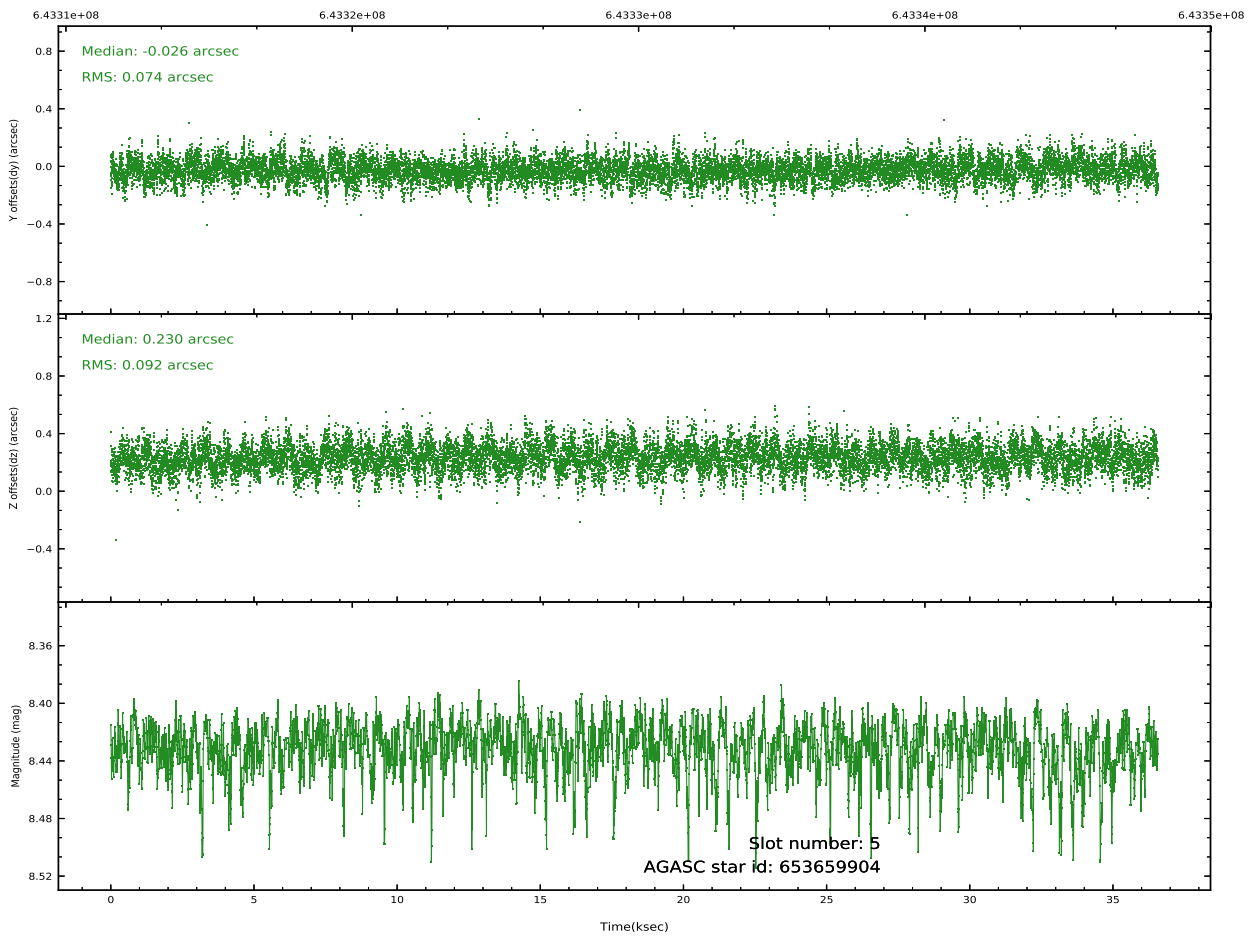
Time (s)



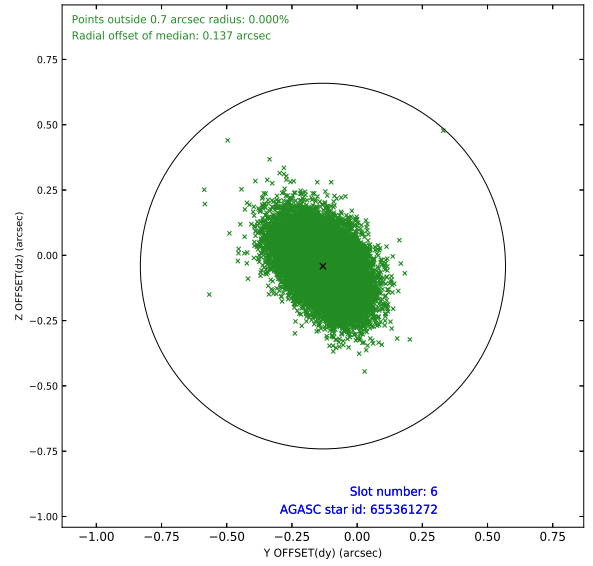
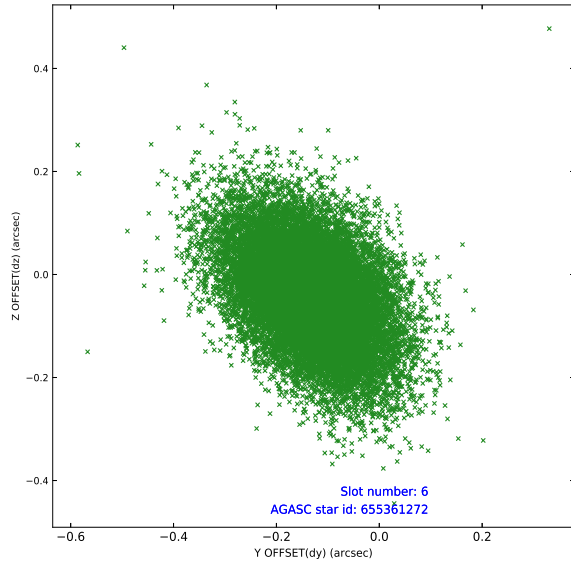
### 2.4.3 Slot 5



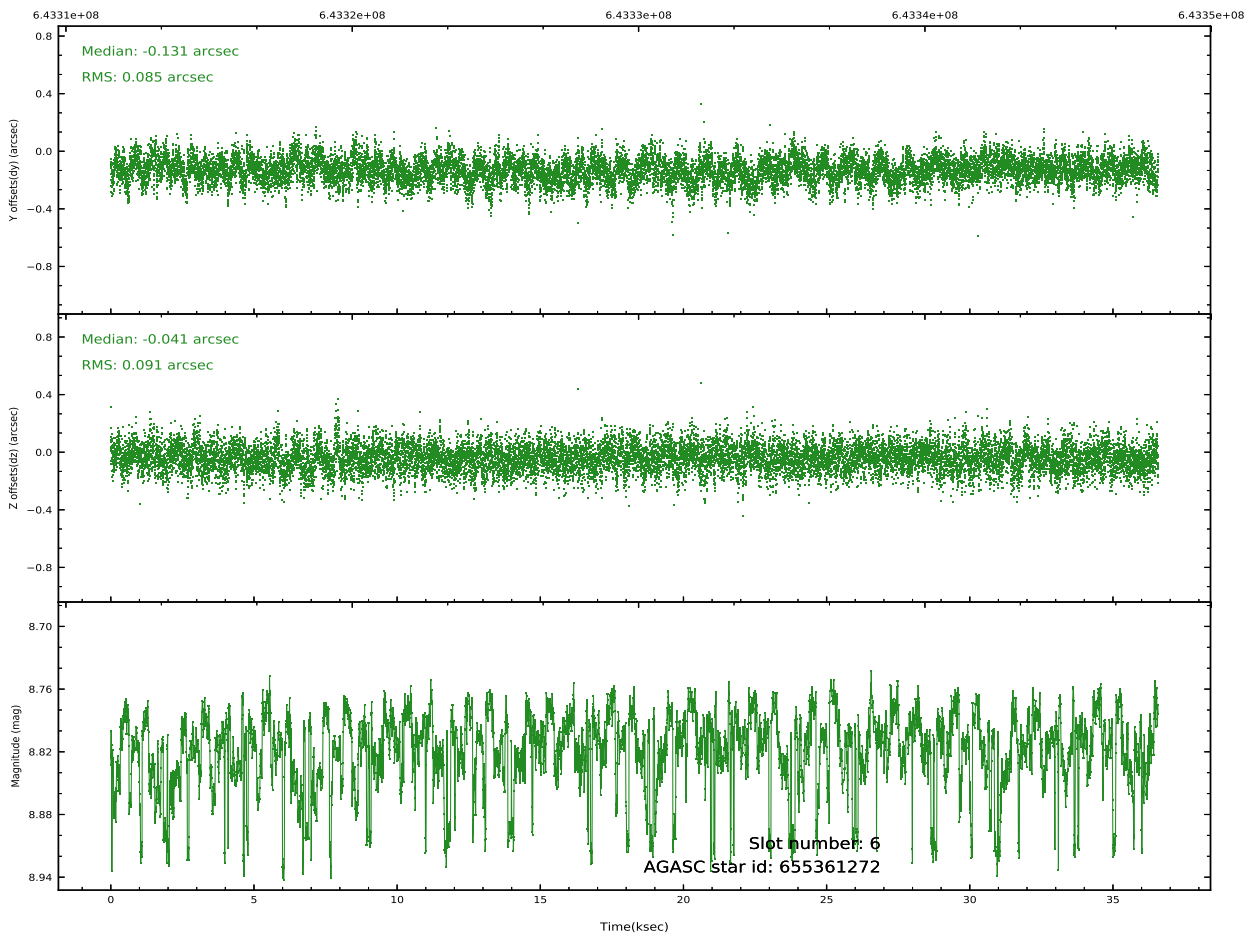
Time (s)



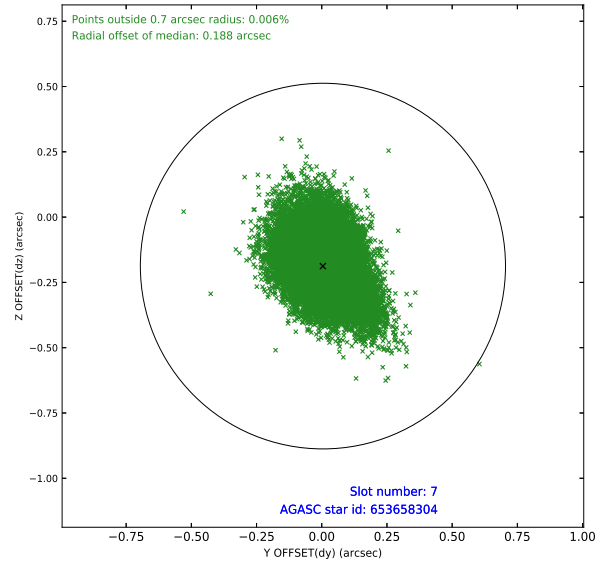
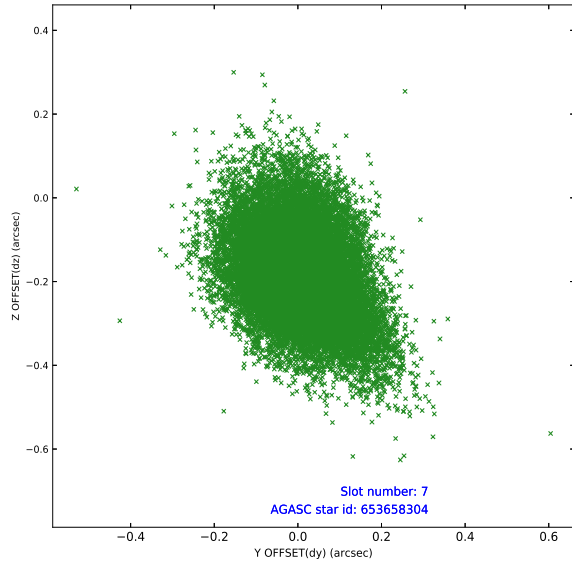
## 2.4.4 Slot 6



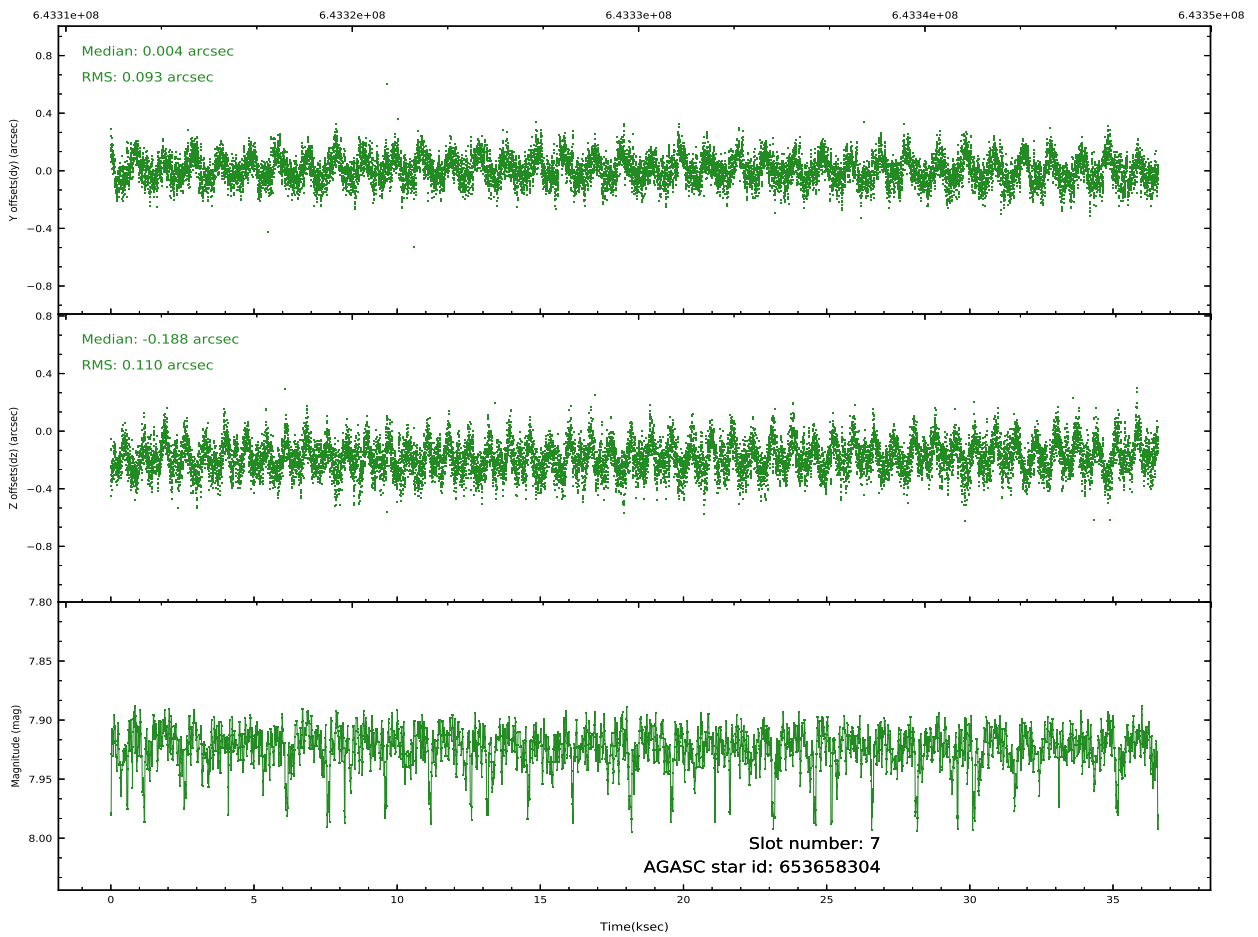
Time (s)



## 2.4.5 Slot 7

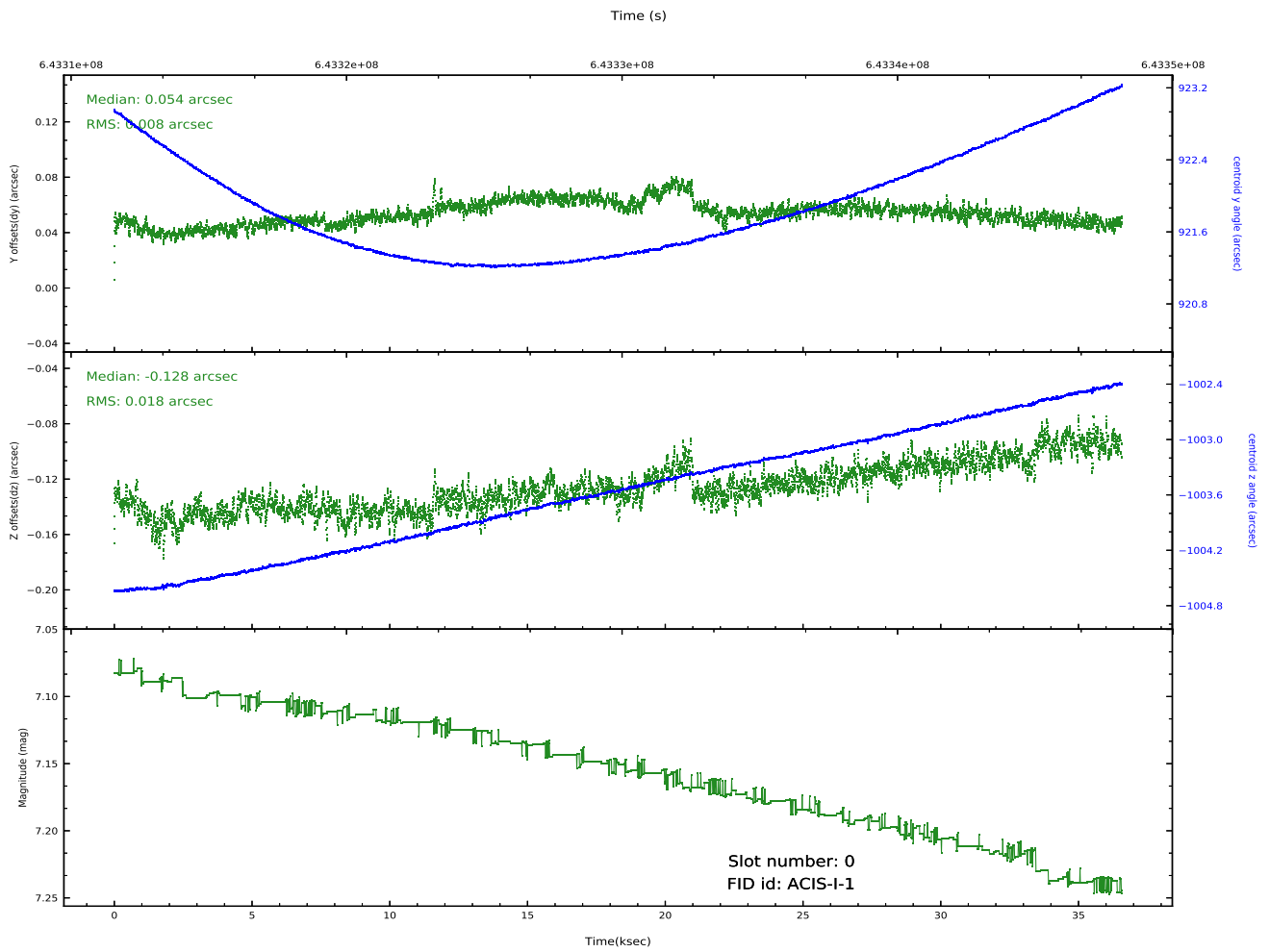
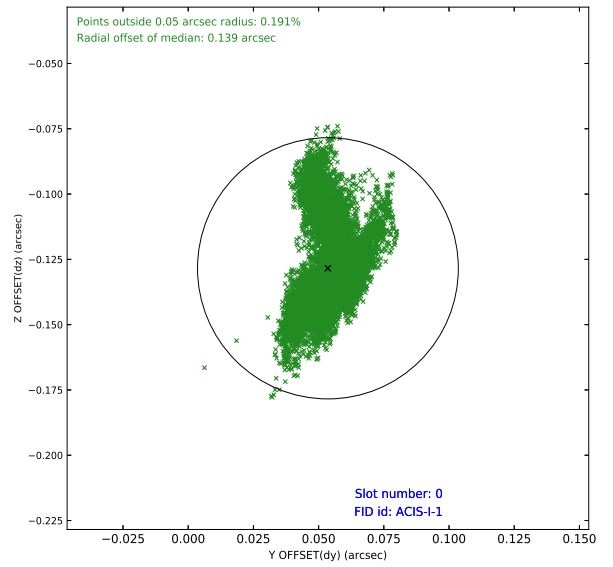
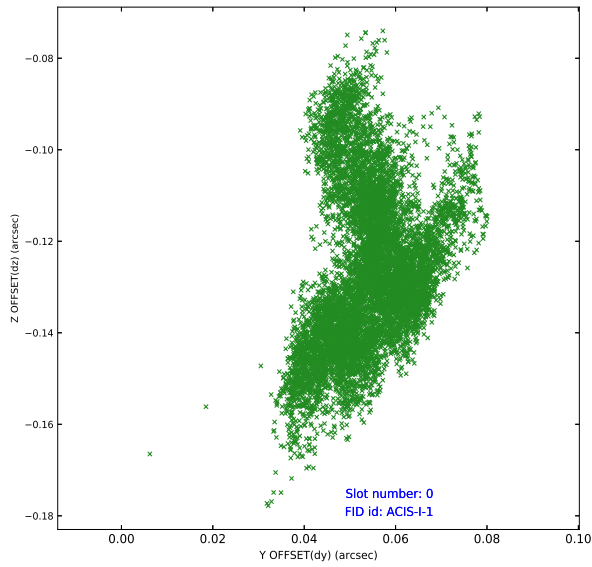


Time (s)

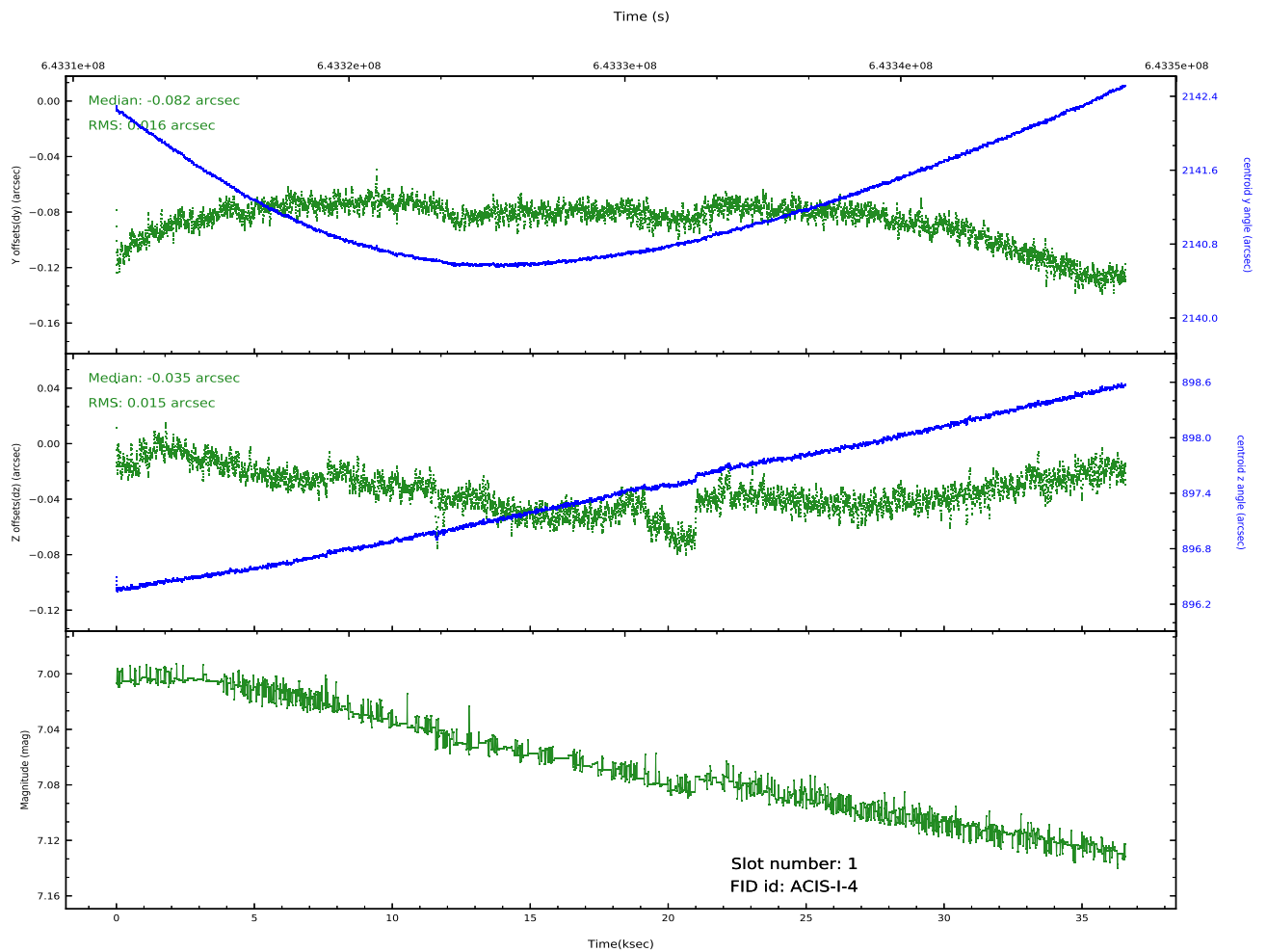
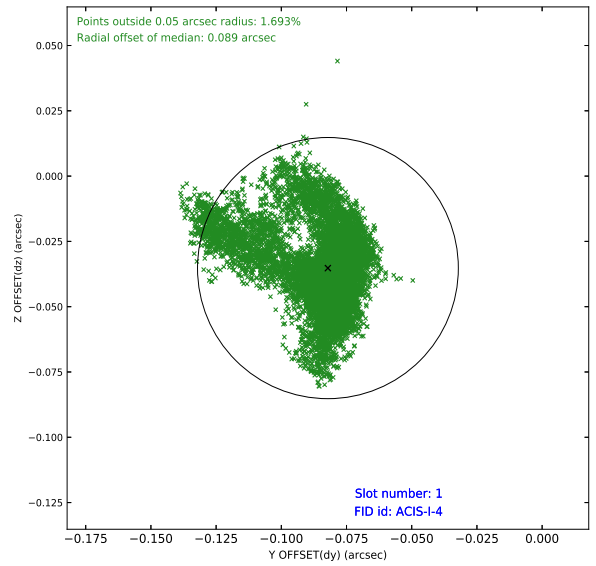
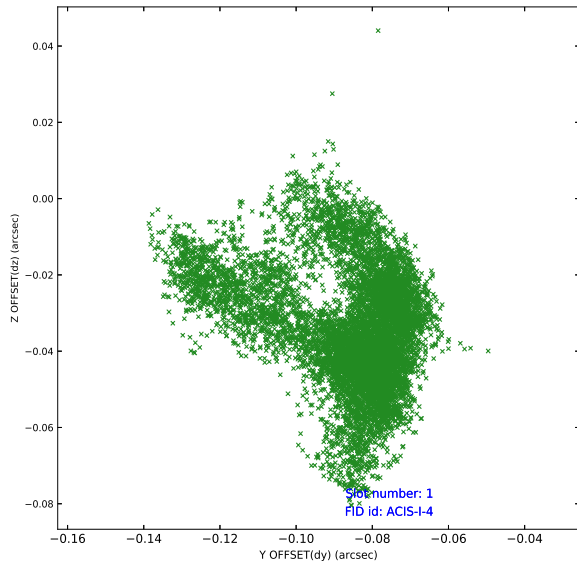


## 2.5 FID Slots

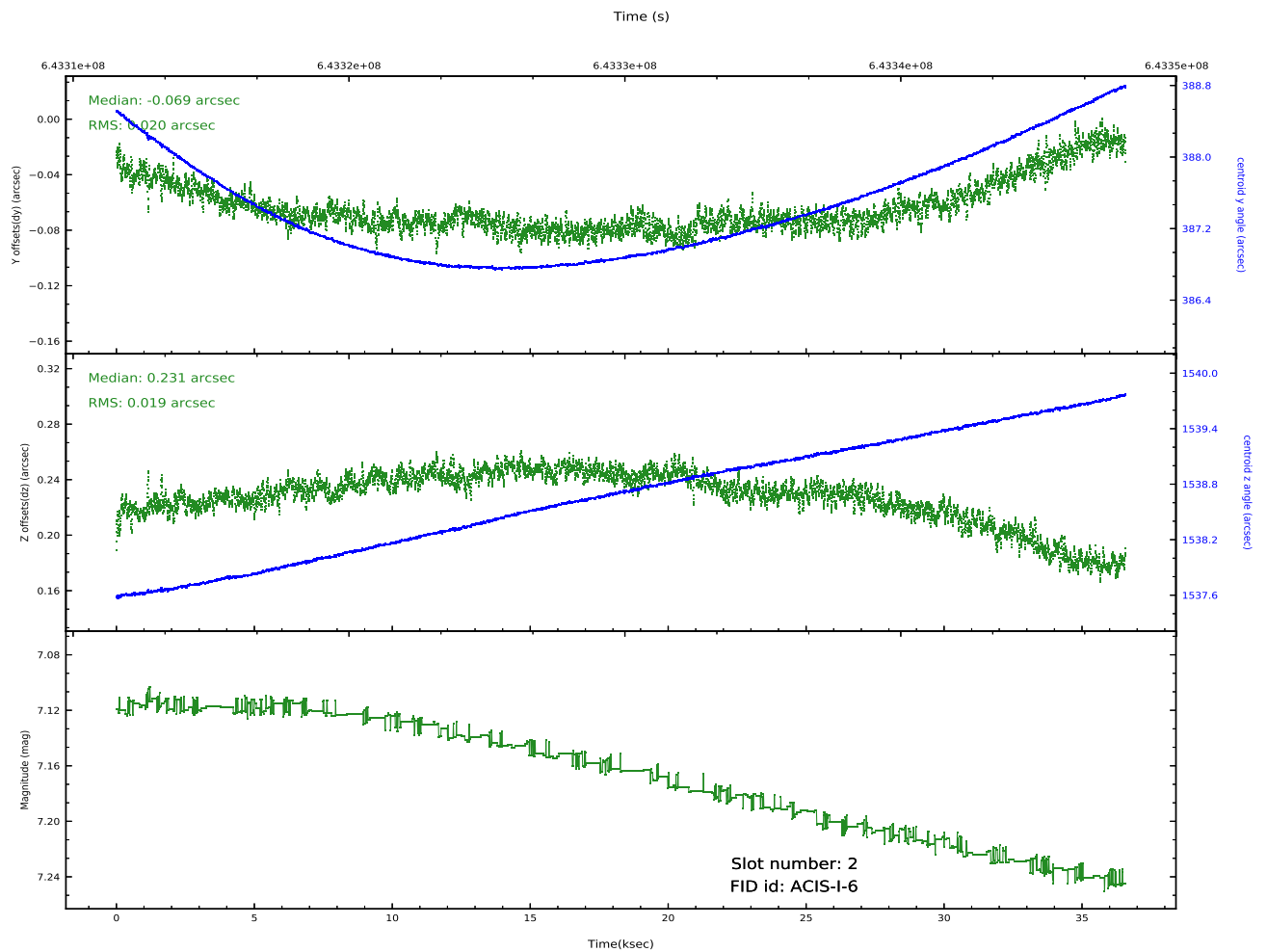
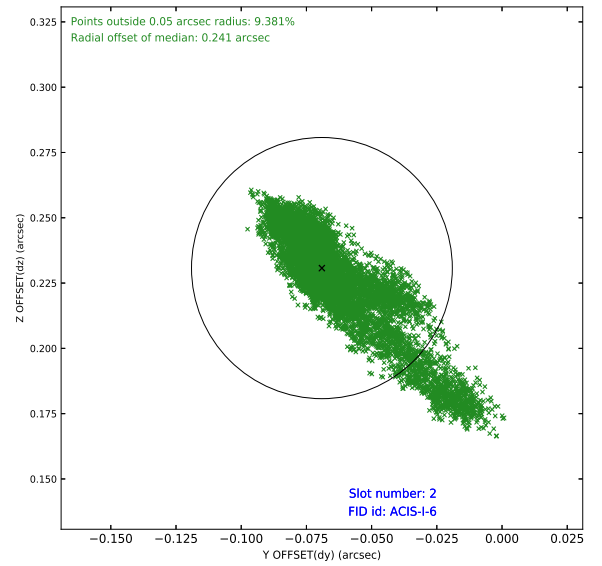
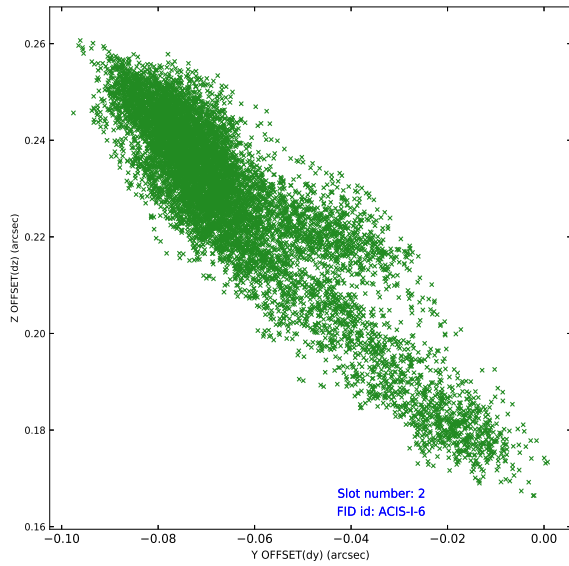
### 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2



# 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	36.474559240699

## A.2 Comments

Joint proposal with HST.

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Two optional chips were dropped.