

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6109 - L2 Version 4
Chandra X-Ray Center

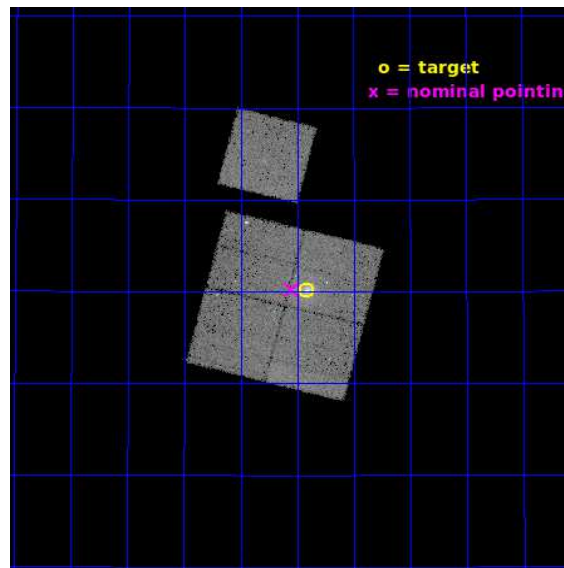
L2 Processing Date : Oct 5 2020

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1 Front

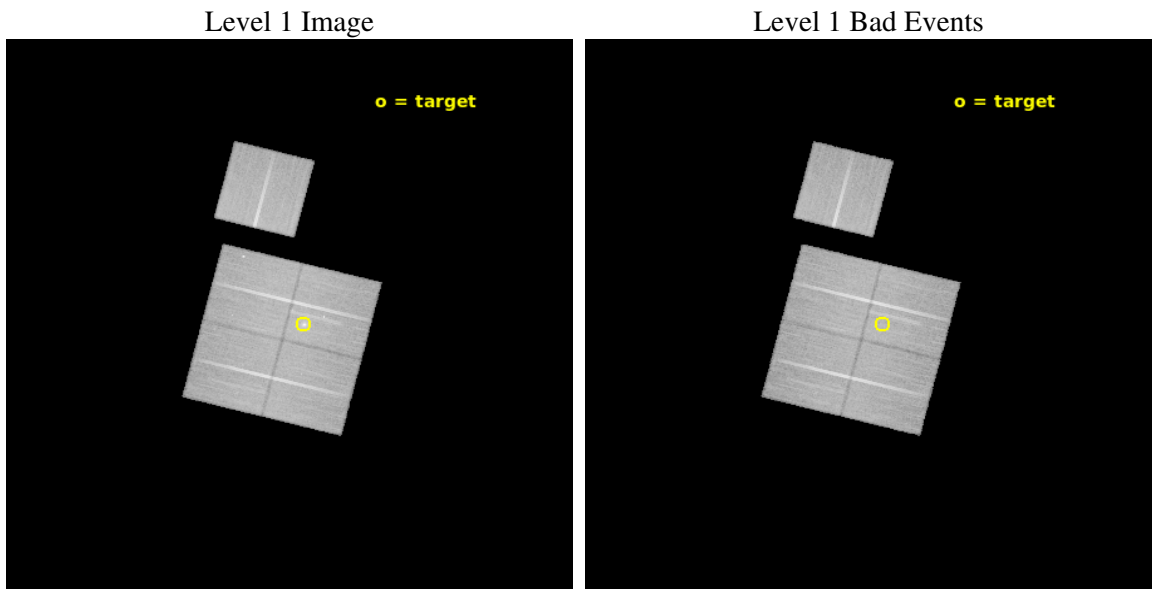
seq_num	800557	Sequence number
obs_id	6109	Observation id
title	Probing dark energy using the X-ray gas mass fraction in dynamically relaxed galaxy clusters	Proposal title
observer	Steve Allen	Principal investigator
object	MACS1621.6+3810	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	245.353333	Observer's specified target RA [deg]
dec_targ	38.168889	Observer's specified target Dec [deg]
ra_nom	245.38672479997	Nominal RA [deg]
dec_nom	38.170195986369	Nominal Dec [deg]
roll_nom	14.288503395477	Nominal Roll [deg]
revision	4	Processing version of data
ontime	38046.258936673	Sum of GTIs [s]
livetime	37549.156554417	Livetime [s]
ontime0	38043.117976367	Sum of GTIs [s]
ontime1	38043.117966384	Sum of GTIs [s]
ontime2	38043.117986321	Sum of GTIs [s]
ontime3	38046.258936673	Sum of GTIs [s]
ontime6	38043.117976427	Sum of GTIs [s]
l2events	108563	Number of level 2 events



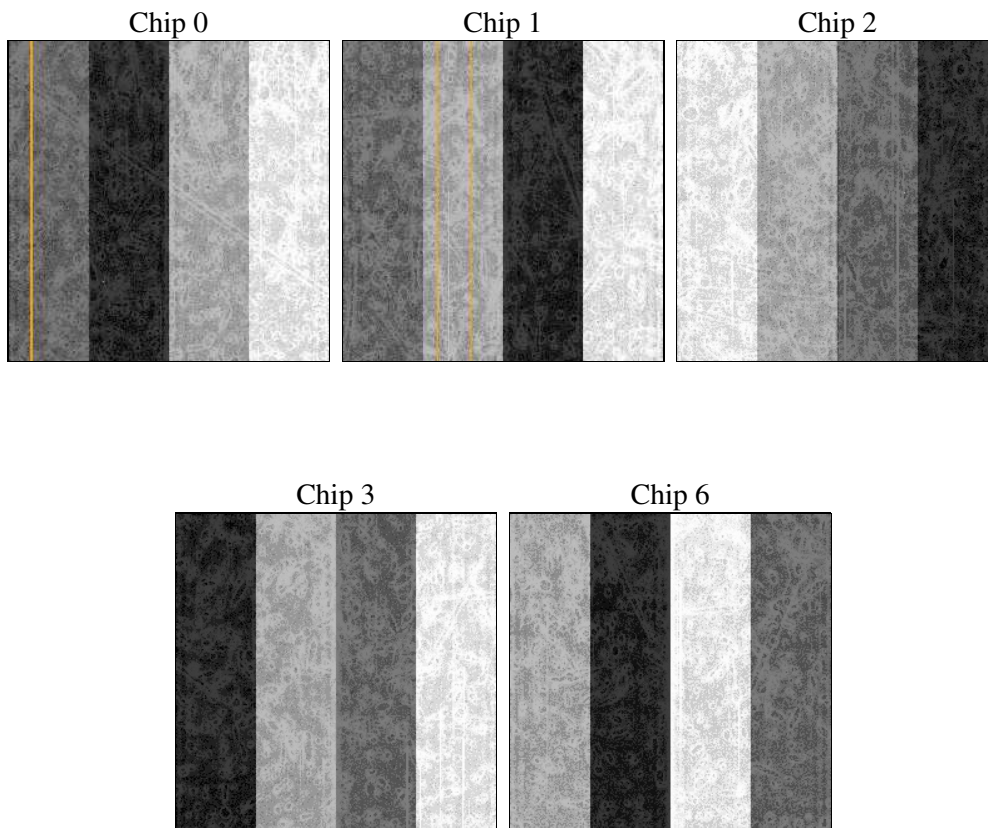
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	38046.258936673	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	38043.117976367	Sum of GTIs [s]
date	2020-10-05T12:58:37	Date and time of file creation	ontime1	38043.117966384	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	38043.117986321	Sum of GTIs [s]
			ontime3	38046.258936673	Sum of GTIs [s]
			ontime6	38043.117976427	Sum of GTIs [s]
			l1events	1196297	Number of level 1 events

2.1.4 Events

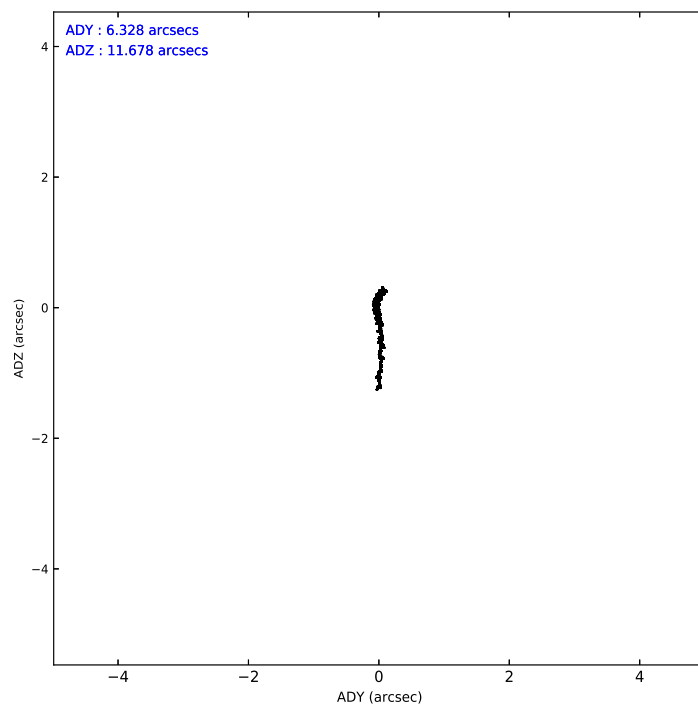
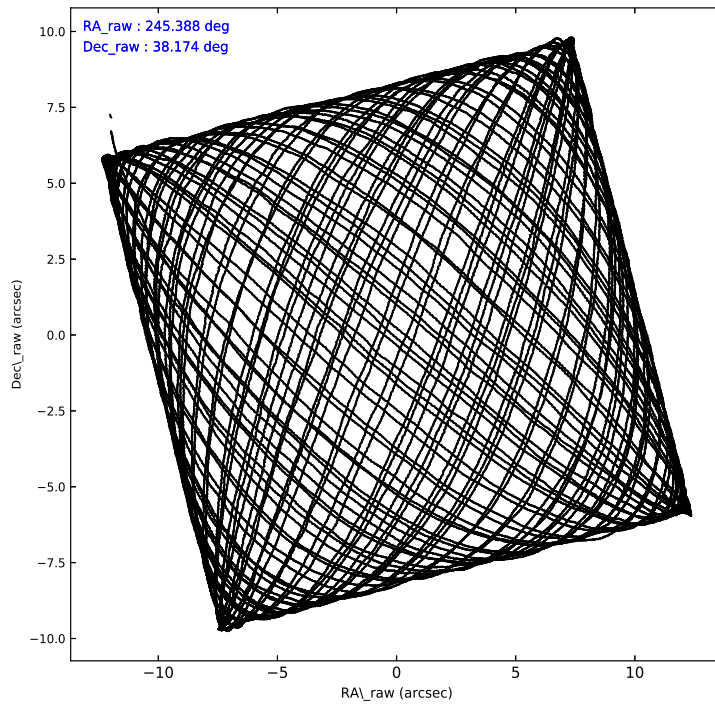
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	226711	228912	250041	247534	243099
rejected events	202250	201992	225439	217626	219085
rejected %	89%	88%	90%	87%	90%

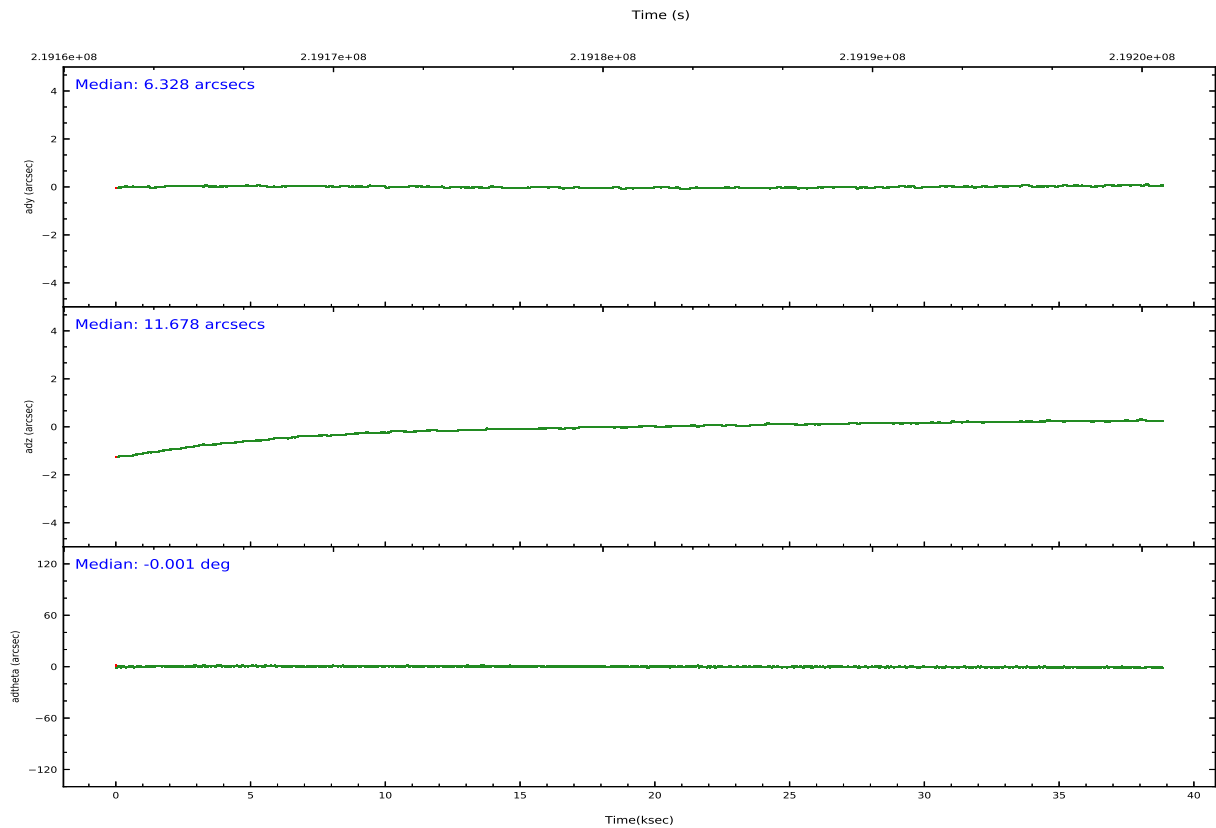
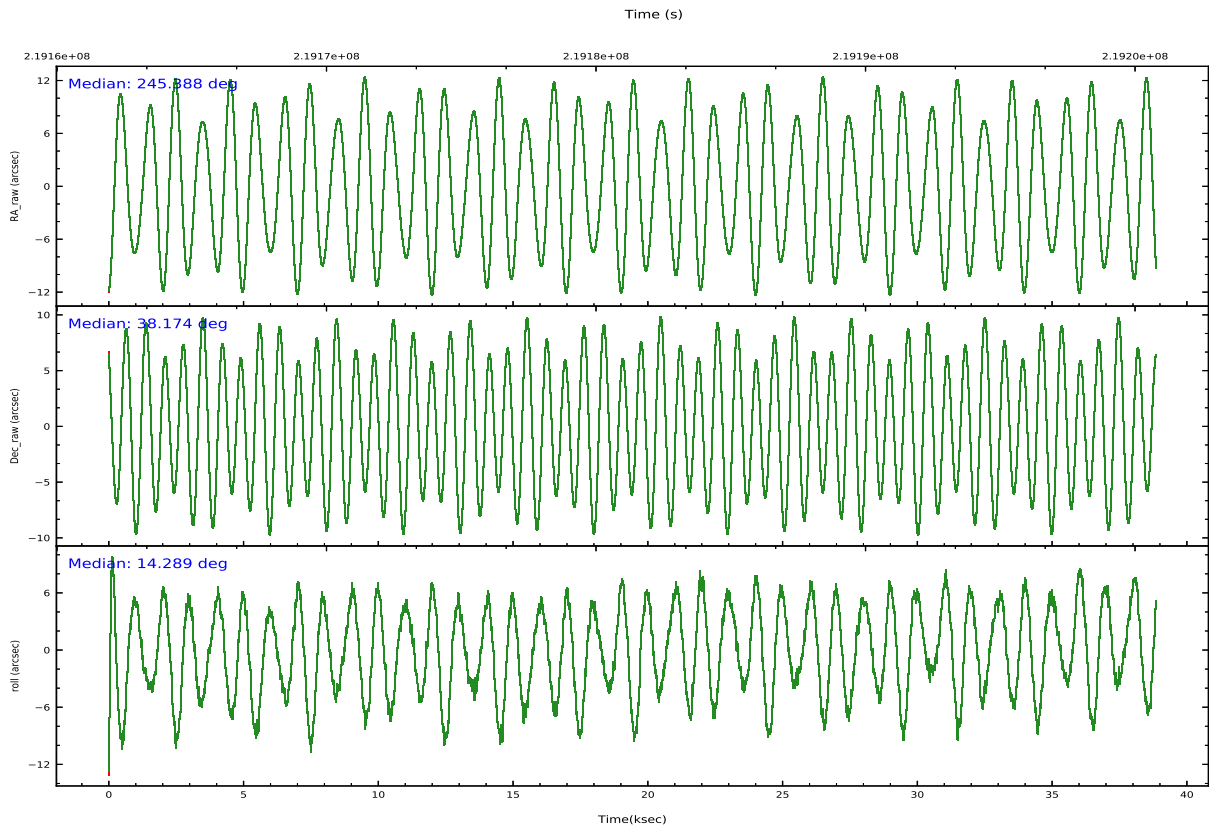
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8651	10083	9466	14305	8270
	3%	4%	3%	5%	3%
grade 1 events	120	123	133	154	106
	0%	0%	0%	0%	0%
grade 2 events	5753	5591	5542	5492	5237
	2%	2%	2%	2%	2%
grade 3 events	2808	3037	2587	2809	2666
	1%	1%	1%	1%	1%
grade 4 events	2568	2905	2630	2718	2707
	1%	1%	1%	1%	1%
grade 5 events	8376	8910	7690	9430	9452
	3%	3%	3%	3%	3%
grade 6 events	4683	5305	4379	4586	5140
	2%	2%	1%	1%	2%
grade 7 events	193752	192958	217614	208040	209521
	85%	84%	87%	84%	86%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	245.363115	245.38672479997	Subarray requested	NONE	NONE
[deg] Pointing Dec	38.154668	38.170195986369	Alternating exposures requested	N	N
[deg] Pointing Roll	14.095919	14.288503395477	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	219162783.184000	219161518.14509			
Observation start date	2004-12-11T14:31:59	2004-12-11T14:11:58			
[s] Observation end time (MET)	219200783.184000	219201598.20939			
Observation end date	2004-12-12T01:05:19	2004-12-12T01:19:58			
Read mode	TIMED	TIMED			

2.3 Aspect





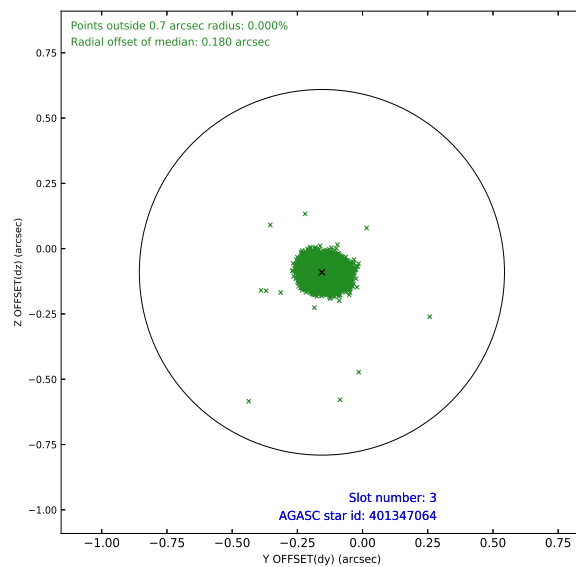
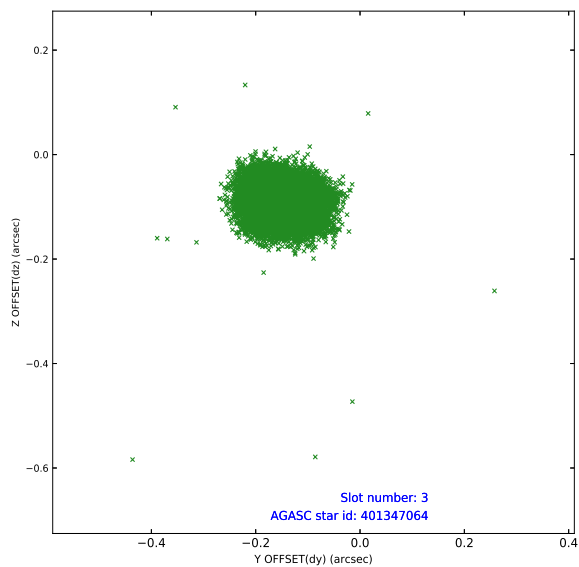
Slot Statistics

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	7.24	9478	1.000	0.091	-0.038	0.013	0.025	0.000000	0.000000	933.37	-920
1	FID		ACIS-I-5	7.22	9479	1.000	-0.241	0.087	0.008	0.013	0.000000	0.000000	-1815.03	977
2	FID		ACIS-I-6	7.25	9479	1.000	0.058	0.021	0.010	0.028	0.000000	0.000000	398.90	1621
3	GUIDE	used	401347064	7.71	18956	1.000	-0.156	-0.091	0.052	0.083	245.989801	38.641750	2137.54	1277
4	GUIDE	used	401352992	9.63	18946	1.000	0.100	0.060	0.096	0.155	244.701659	37.819192	-2116.52	-706
5	GUIDE	used	401357120	7.06	18956	1.000	-0.055	0.062	0.047	0.075	244.752378	37.765715	-2025.48	-929
6	GUIDE	used	401357328	9.00	18946	1.000	0.050	0.043	0.078	0.130	246.205033	38.152914	2312.80	-575
7	GUIDE	used	401357888	8.51	18953	1.000	0.056	-0.074	0.067	0.108	244.567474	38.275306	-2072.42	978

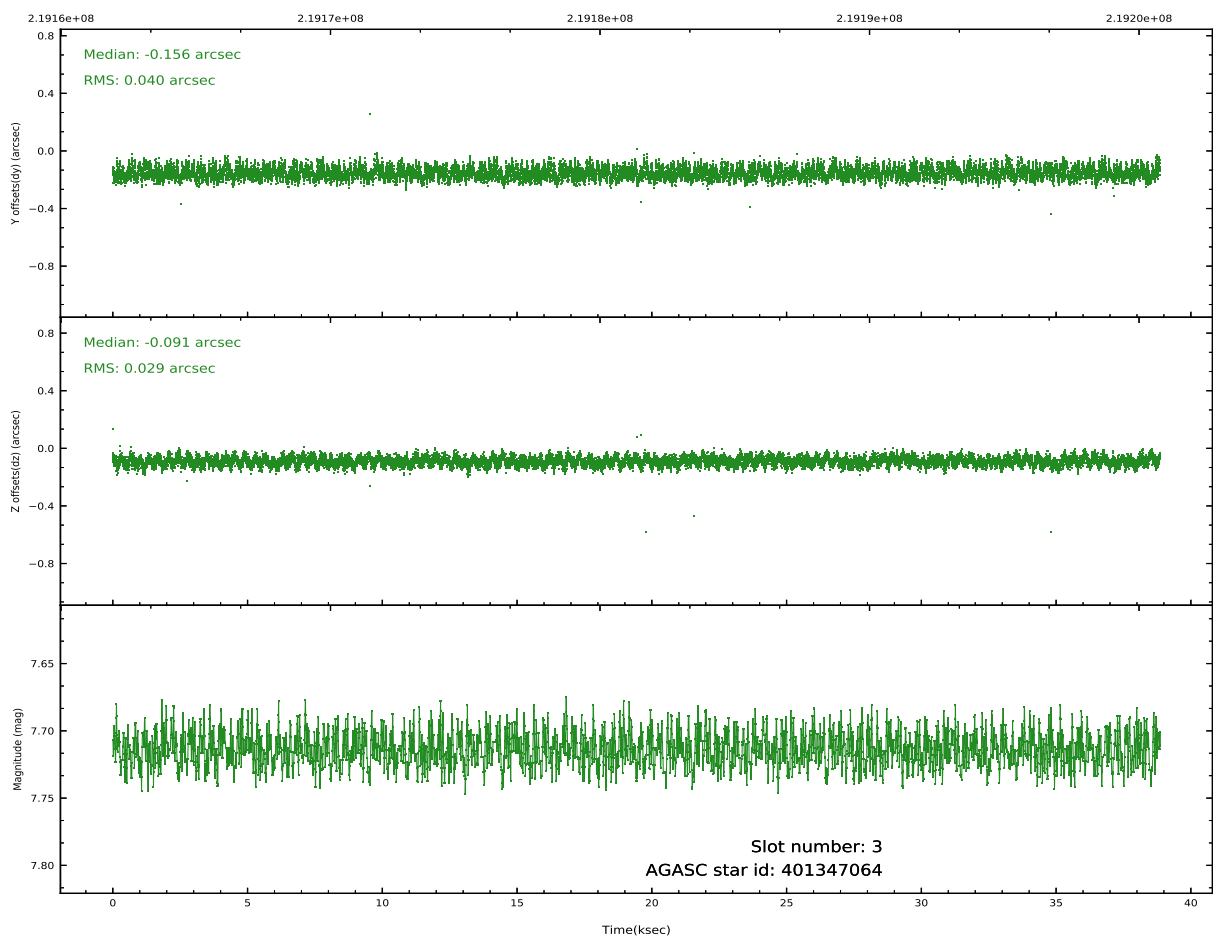
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2.4 Star Slots

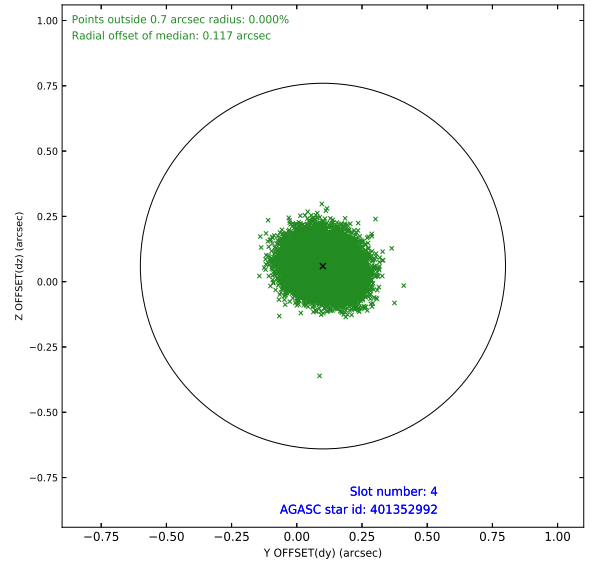
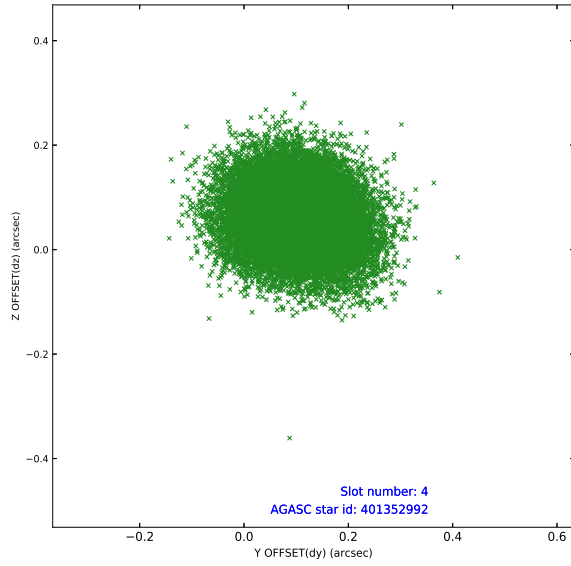
2.4.1 Slot 3



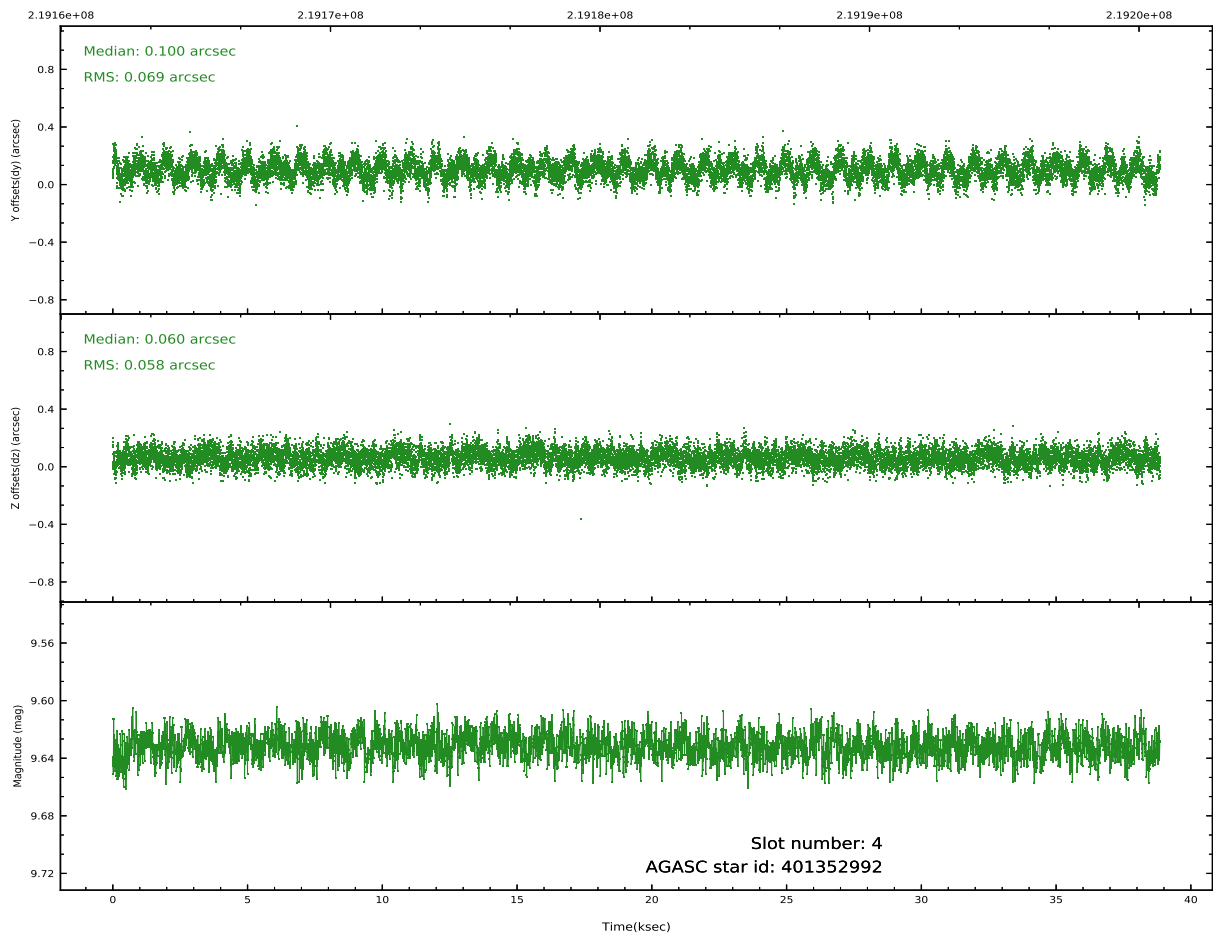
Time (s)



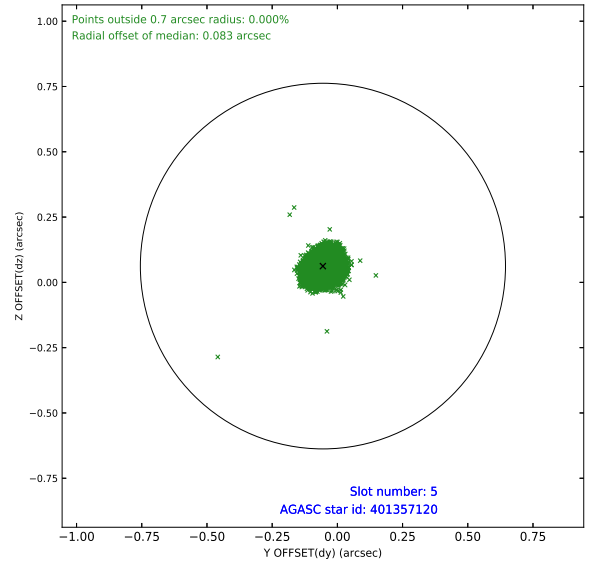
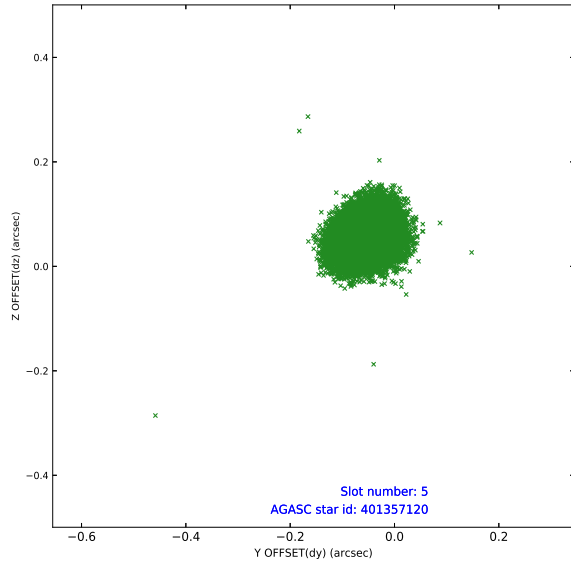
2.4.2 Slot 4



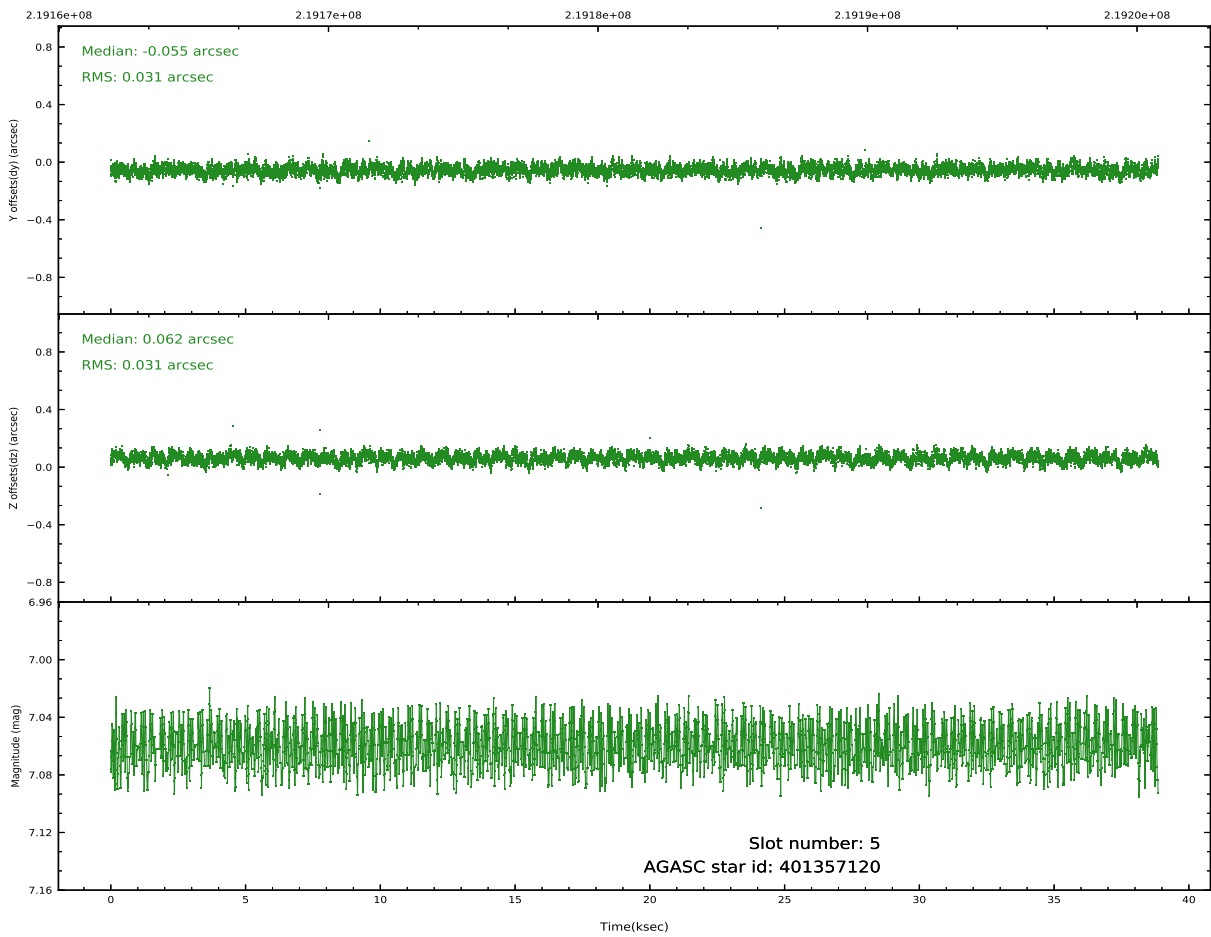
Time (s)



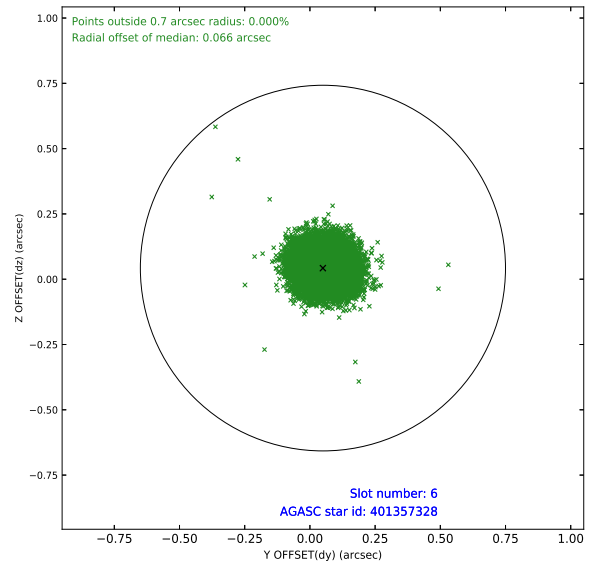
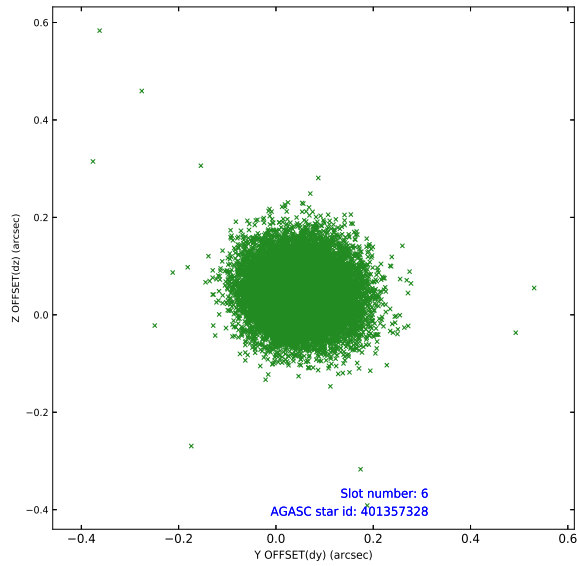
2.4.3 Slot 5



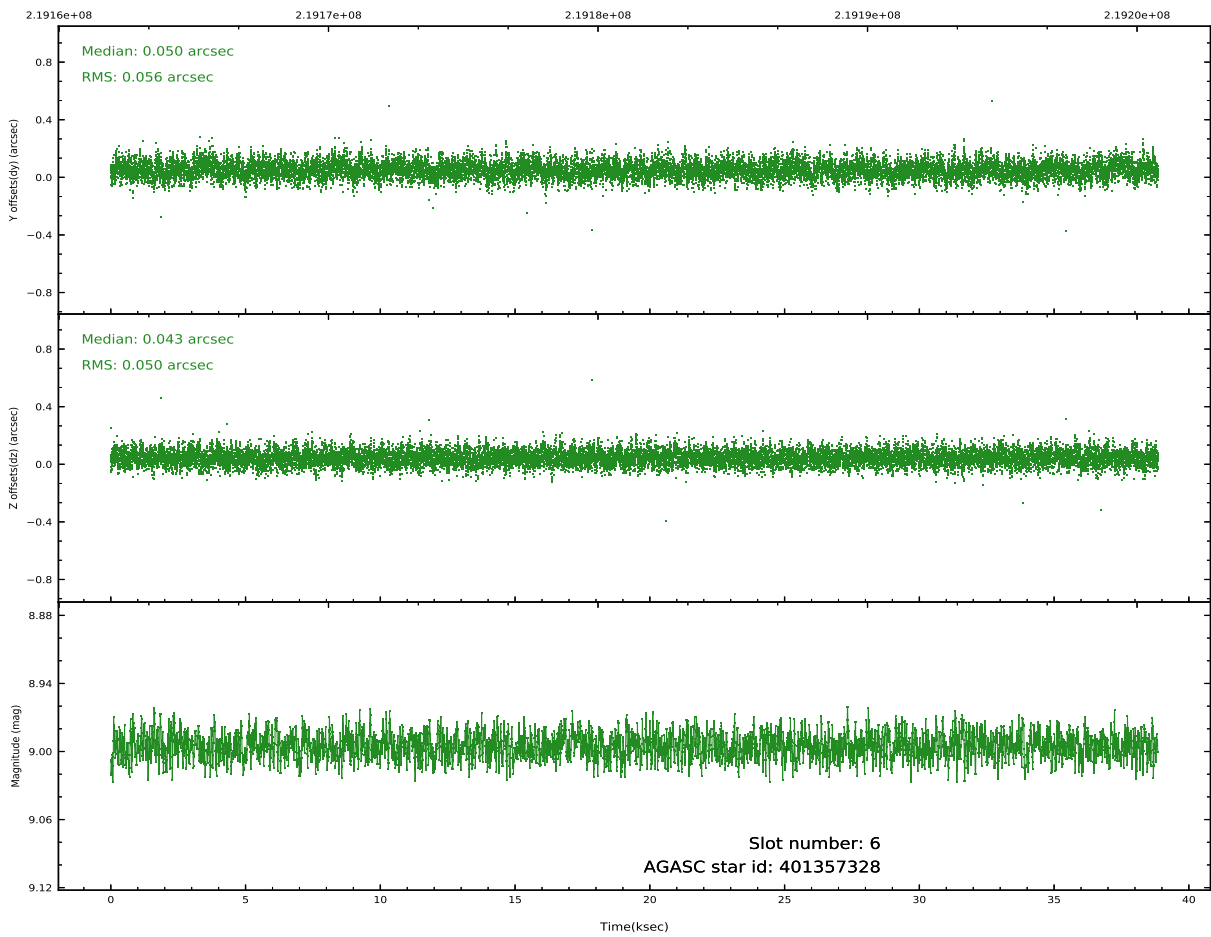
Time (s)



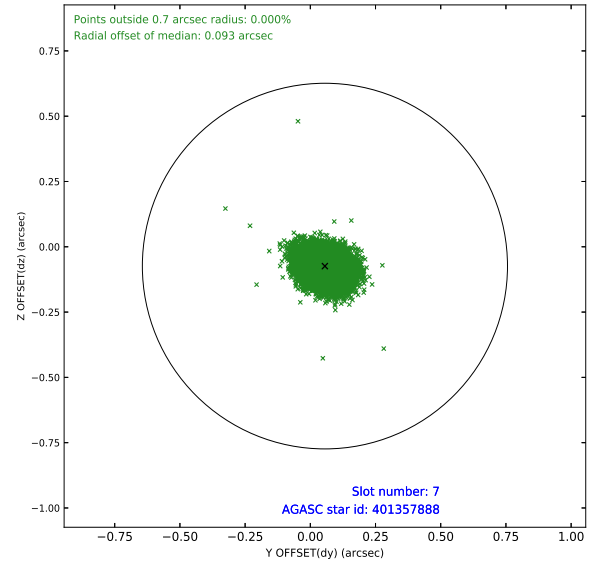
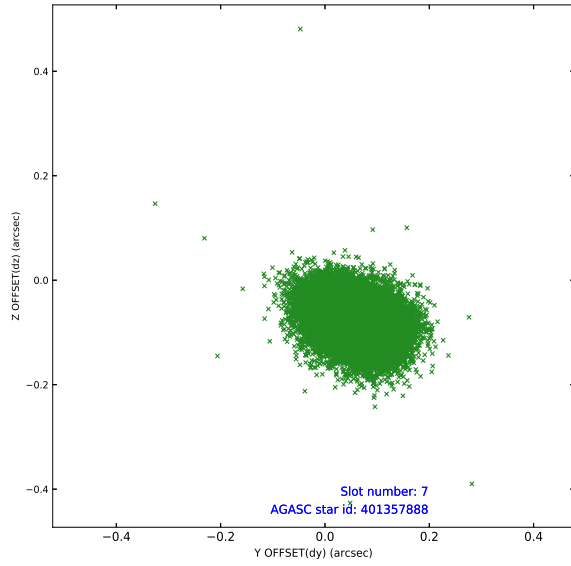
2.4.4 Slot 6



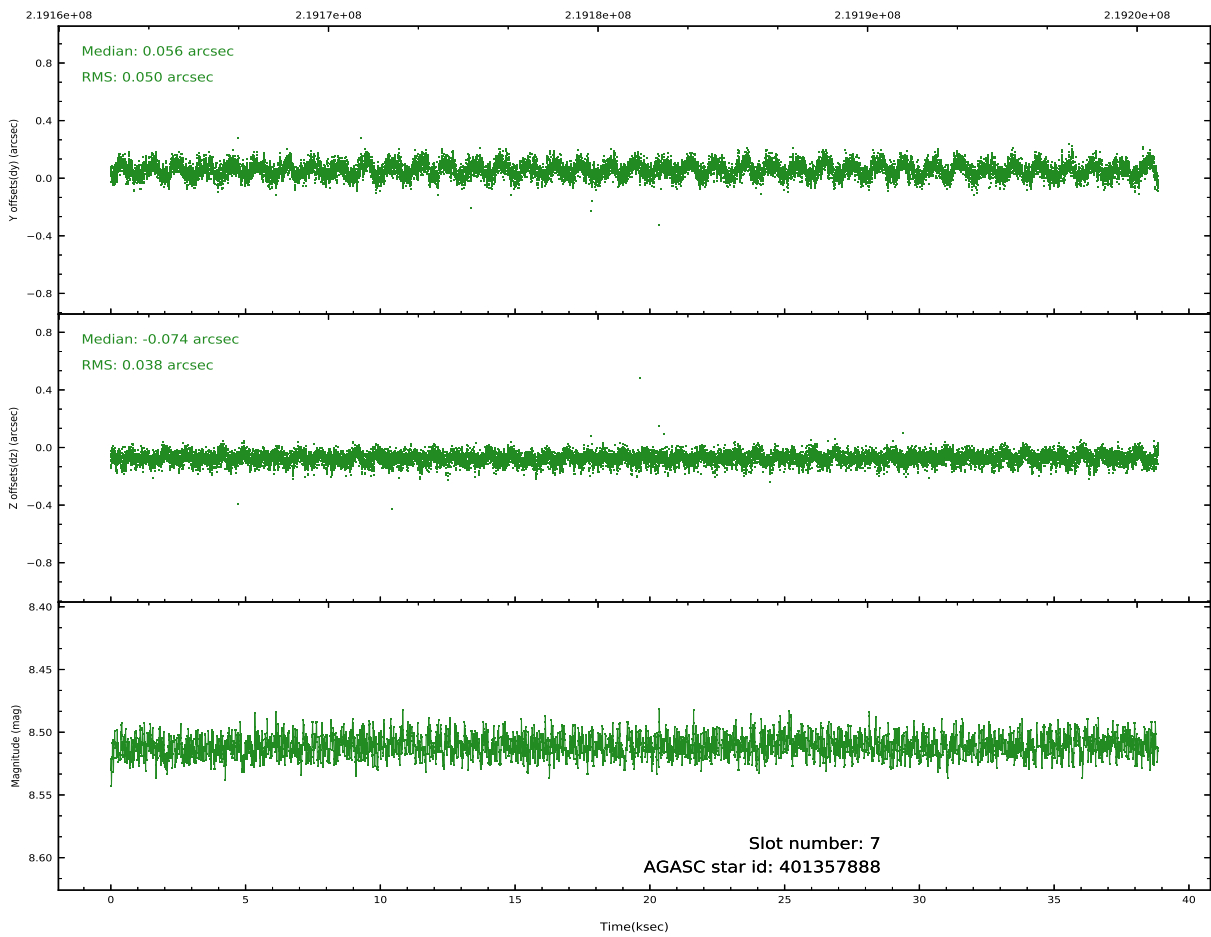
Time (s)



2.4.5 Slot 7

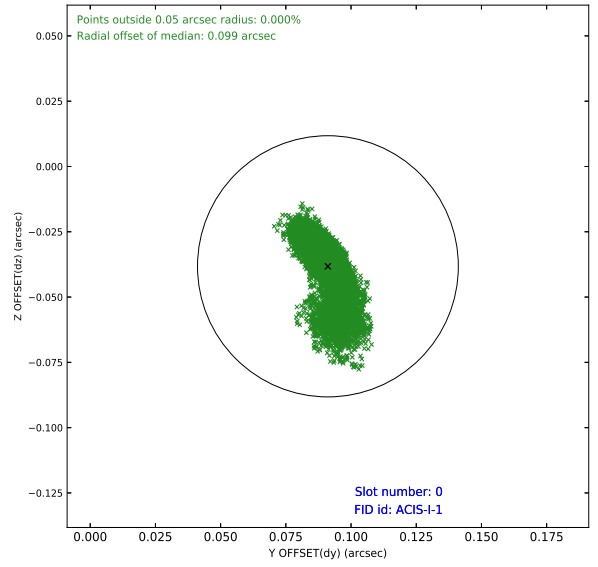
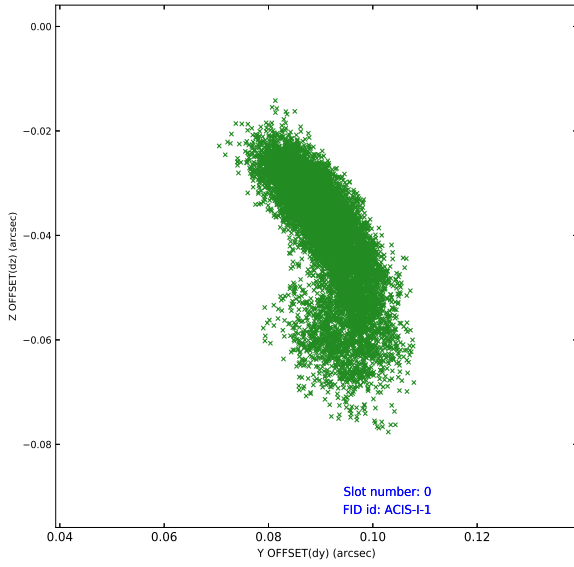


Time (s)

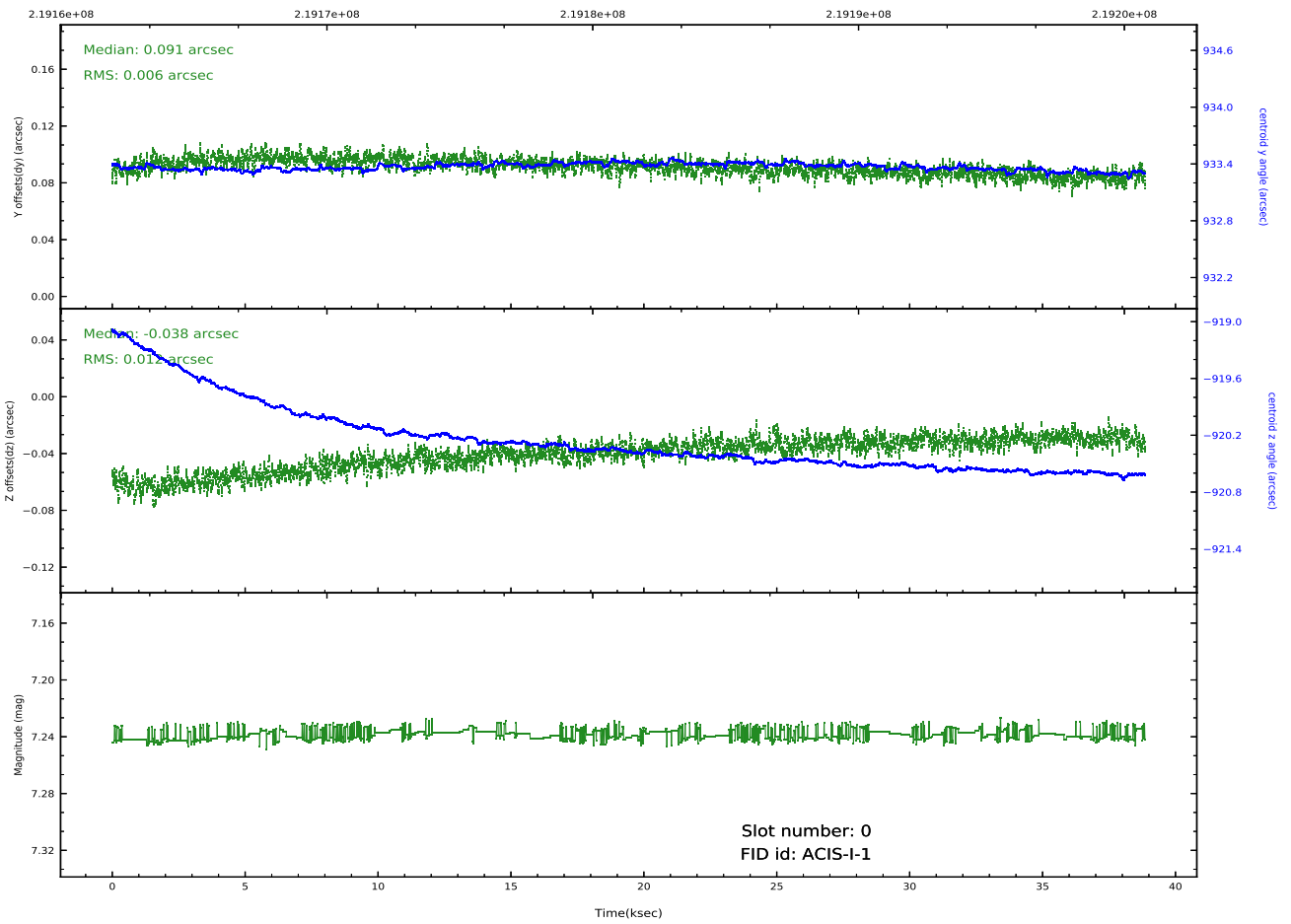


2.5 FID Slots

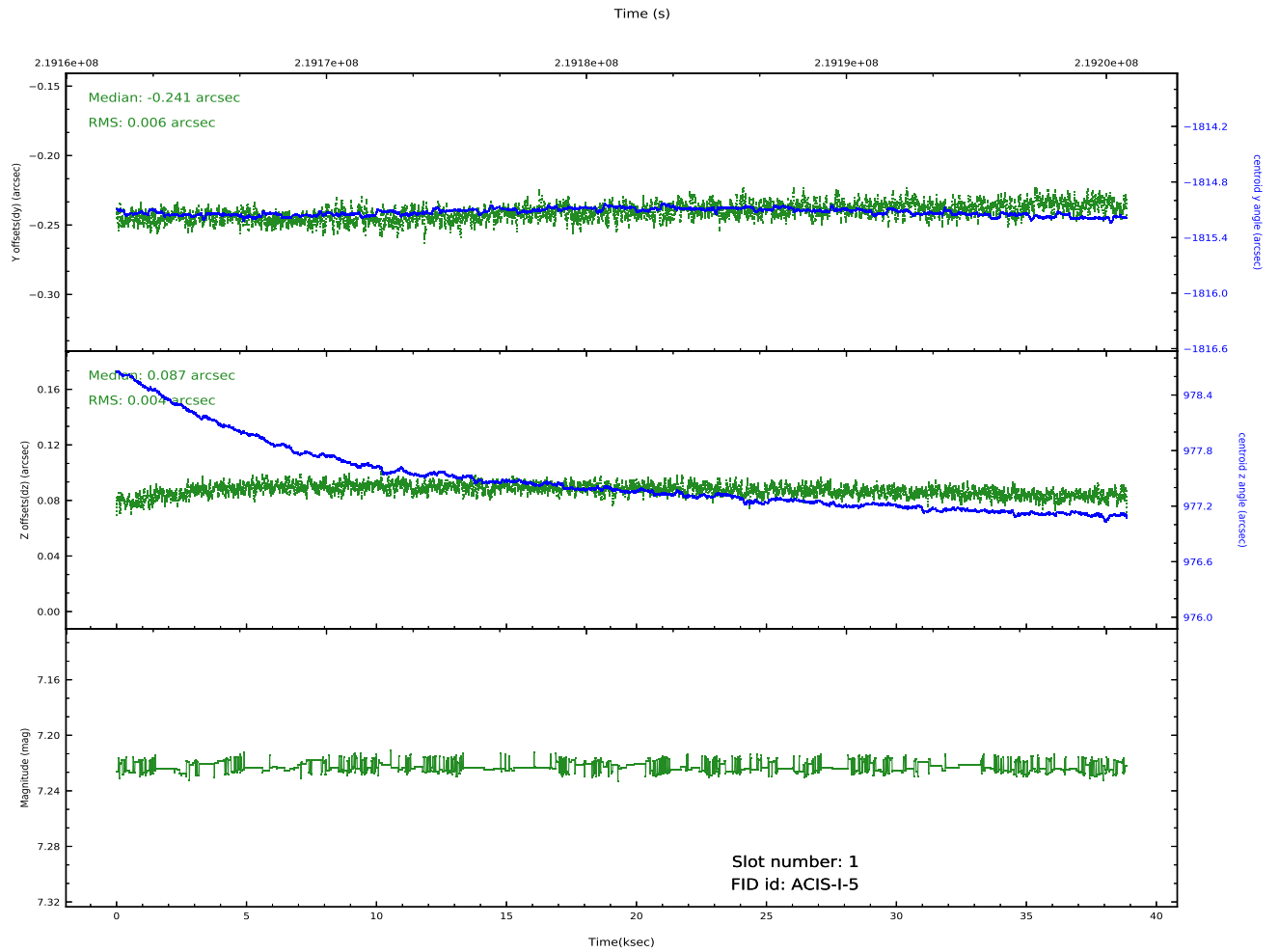
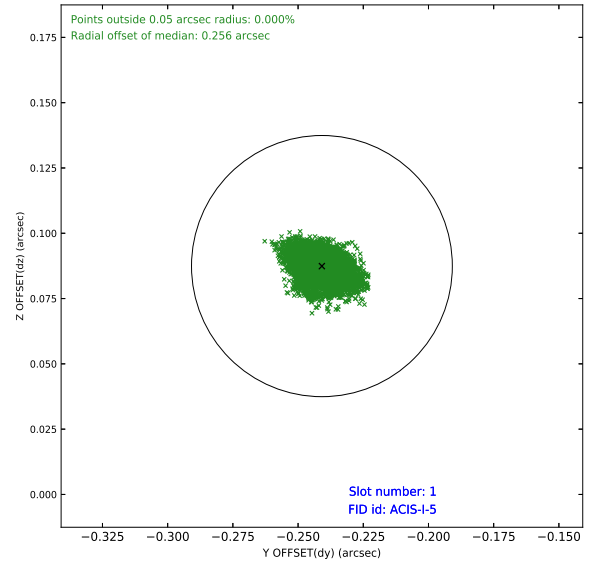
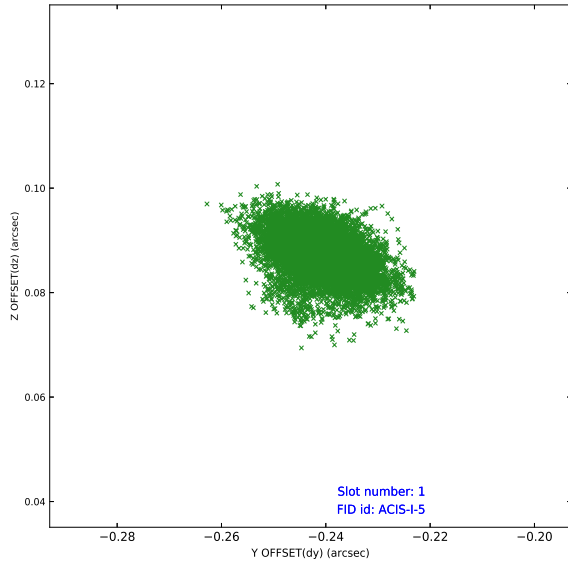
2.5.1 Slot 0



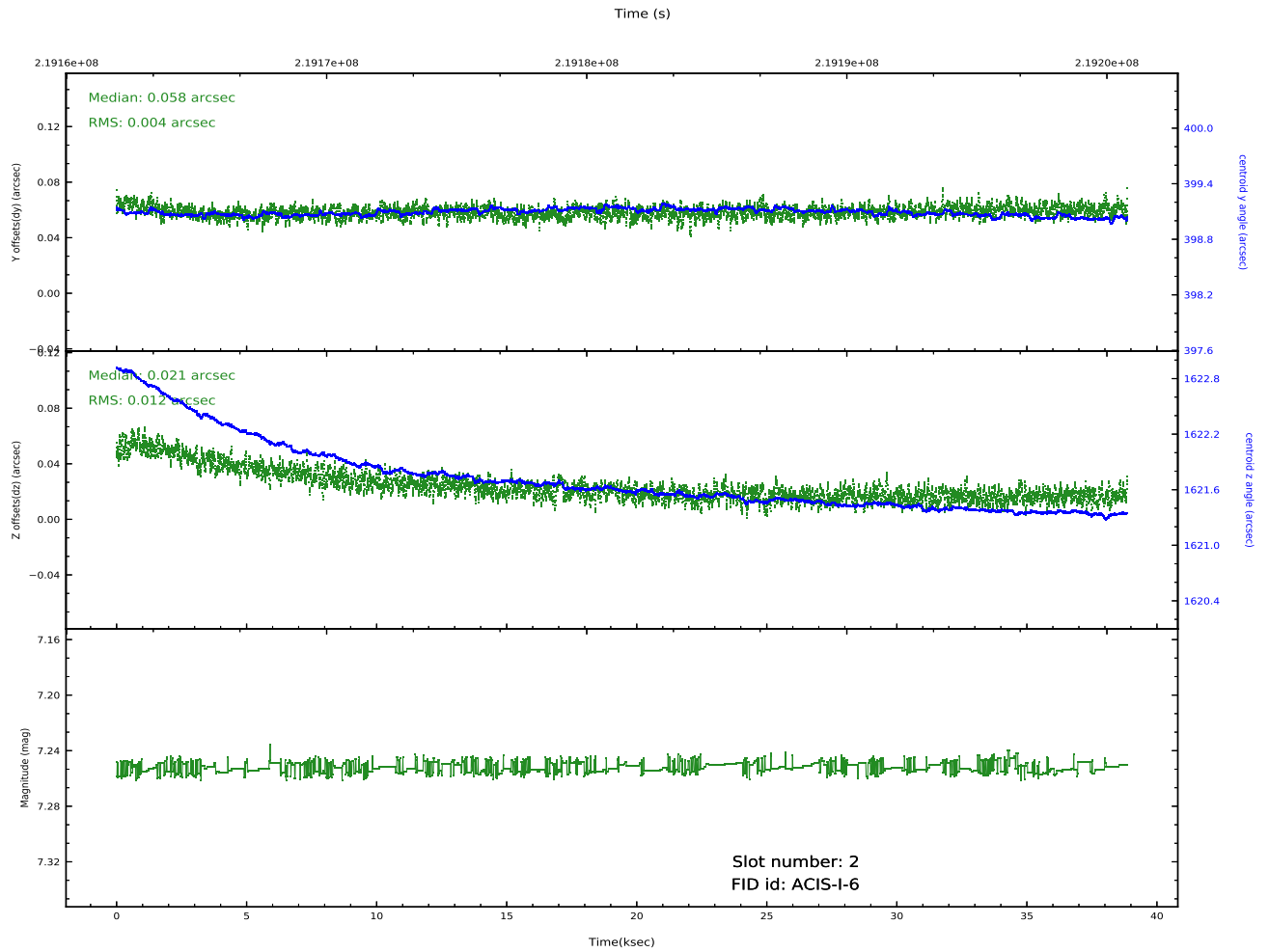
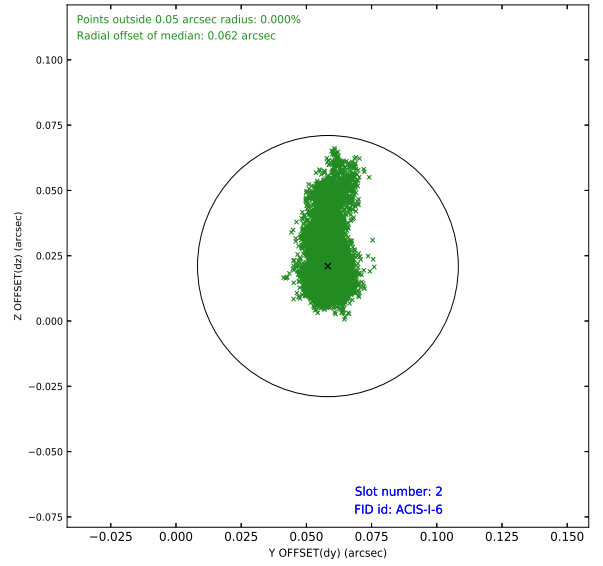
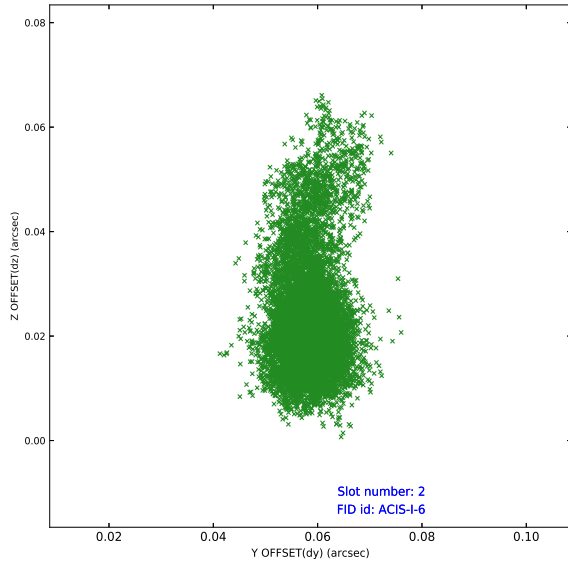
Time (s)



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.04625

A.2 Comments