

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19400 - L2 Version 3
Chandra X-Ray Center

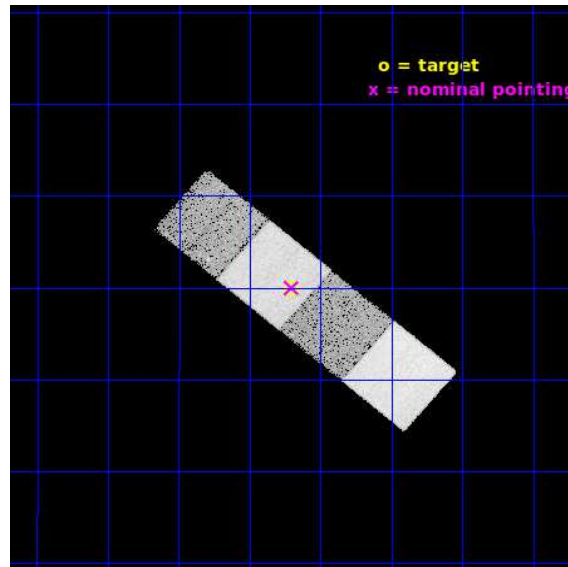
L2 Processing Date : Oct 25 2020

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1 Front

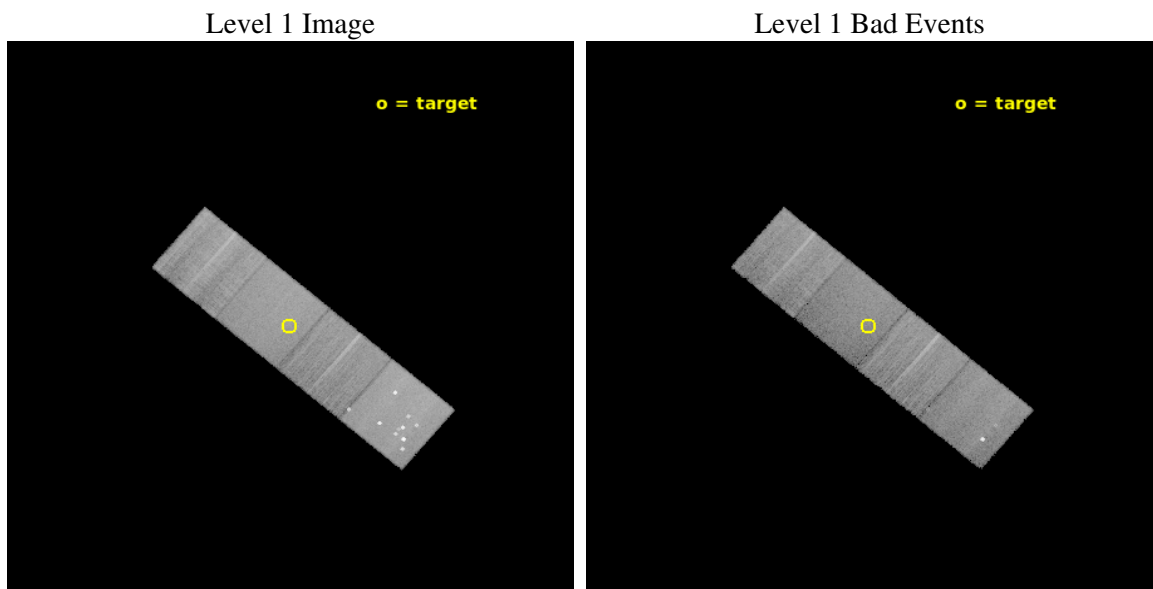
seq_num	601357	Sequence number
obs_id	19400	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	NGC 4316	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	185.675833	Observer's specified target RA [deg]
dec_targ	9.332472	Observer's specified target Dec [deg]
ra_nom	185.67562858416	Nominal RA [deg]
dec_nom	9.3337646458963	Nominal Dec [deg]
roll_nom	220.14616549041	Nominal Roll [deg]
revision	3	Processing version of data
ontime	15061.456266761	Sum of GTIs [s]
livetime	14864.667252553	Livetime [s]
ontime5	15061.415226817	Sum of GTIs [s]
ontime6	15058.233146548	Sum of GTIs [s]
ontime7	15061.456266761	Sum of GTIs [s]
ontime8	15058.192106485	Sum of GTIs [s]
l2events	159718	Number of level 2 events



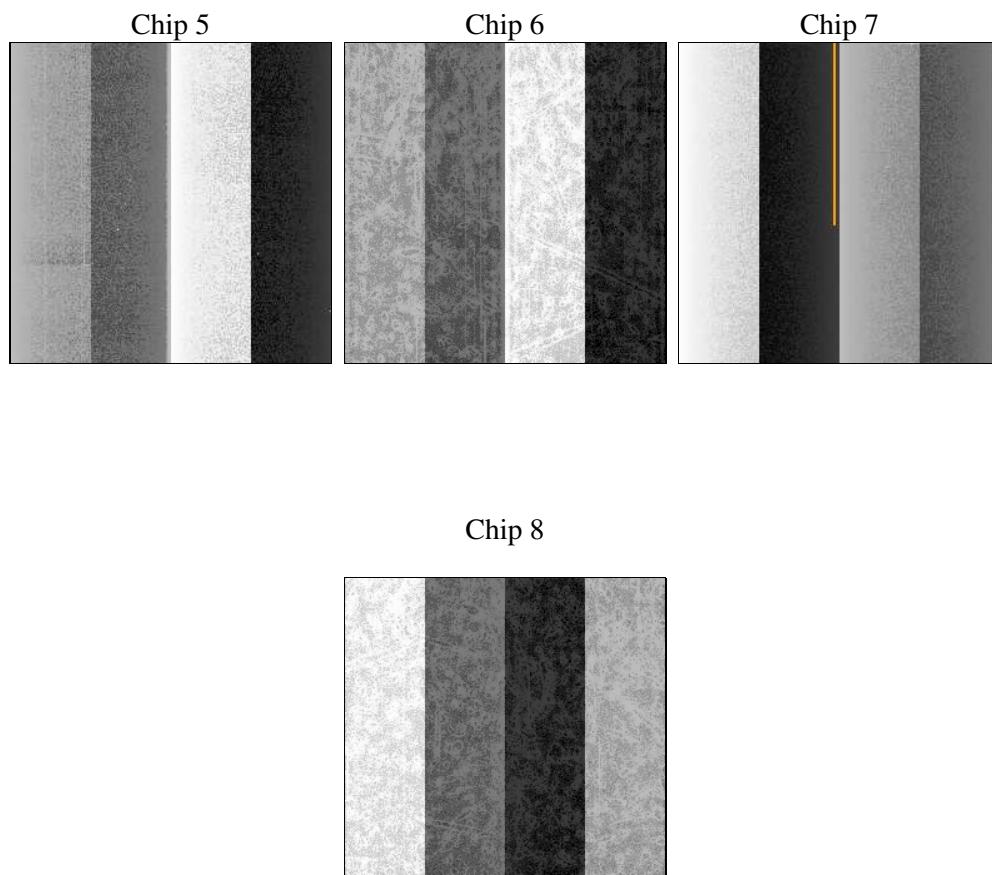
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	15061.456266761	Sum of GTIs [s]
caldsver	4.9.3	 	ontime5	15061.415226817	Sum of GTIs [s]
date	2020-10-25T14:32:23	Date and time of file creation	ontime6	15058.233146548	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	15061.456266761	Sum of GTIs [s]
			ontime8	15058.192106485	Sum of GTIs [s]
			l1events	595963	Number of level 1 events

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	200570	112134	139923	143336
rejected events	95590	99892	79026	106562
rejected %	47%	89%	56%	74%

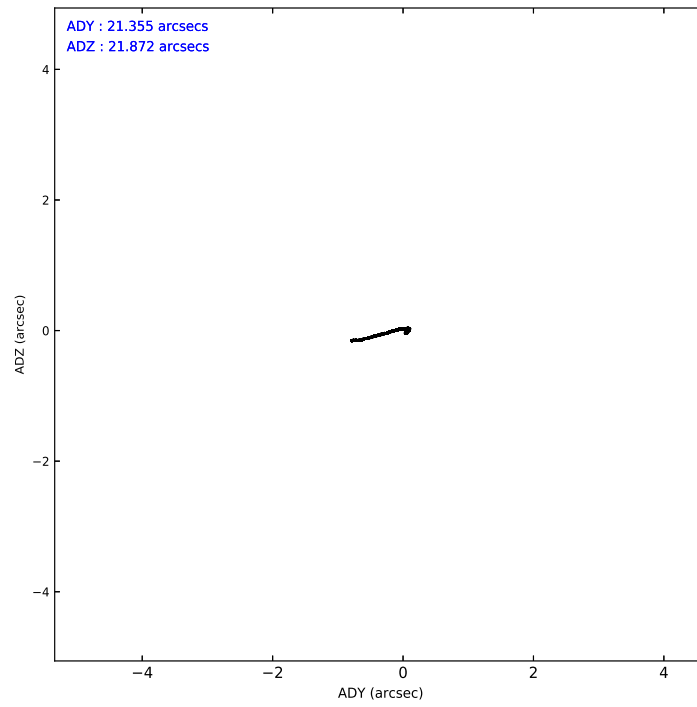
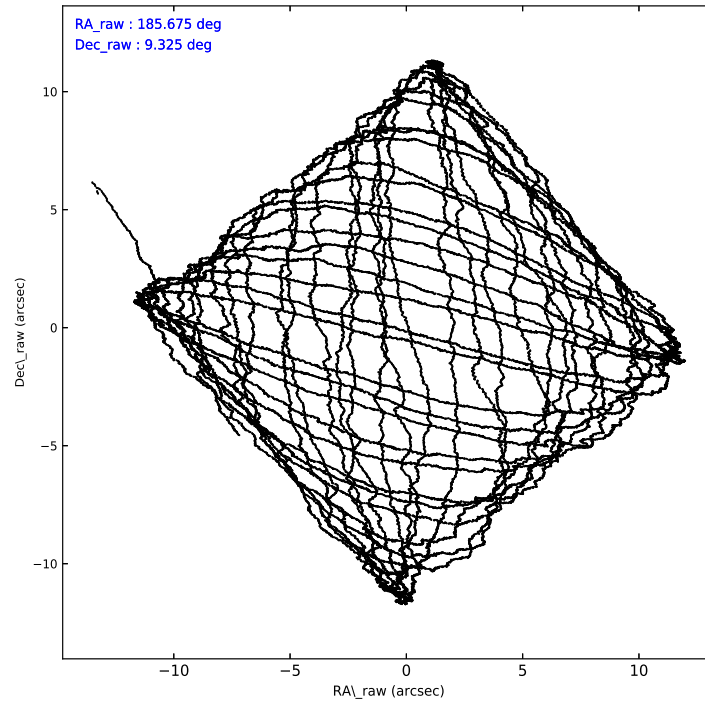
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	22241	3857	5172	10528
	11%	3%	3%	7%
grade 1 events	472	66	184	109
	0%	0%	0%	0%
grade 2 events	30167	2994	12726	8837
	15%	2%	9%	6%
grade 3 events	3146	1149	4977	3826
	1%	1%	3%	2%
grade 4 events	2954	1158	4625	3552
	1%	1%	3%	2%
grade 5 events	11519	4966	13744	7587
	5%	4%	9%	5%
grade 6 events	46533	3092	33419	10038
	23%	2%	23%	7%
grade 7 events	83538	94852	65076	98859
	41%	84%	46%	68%

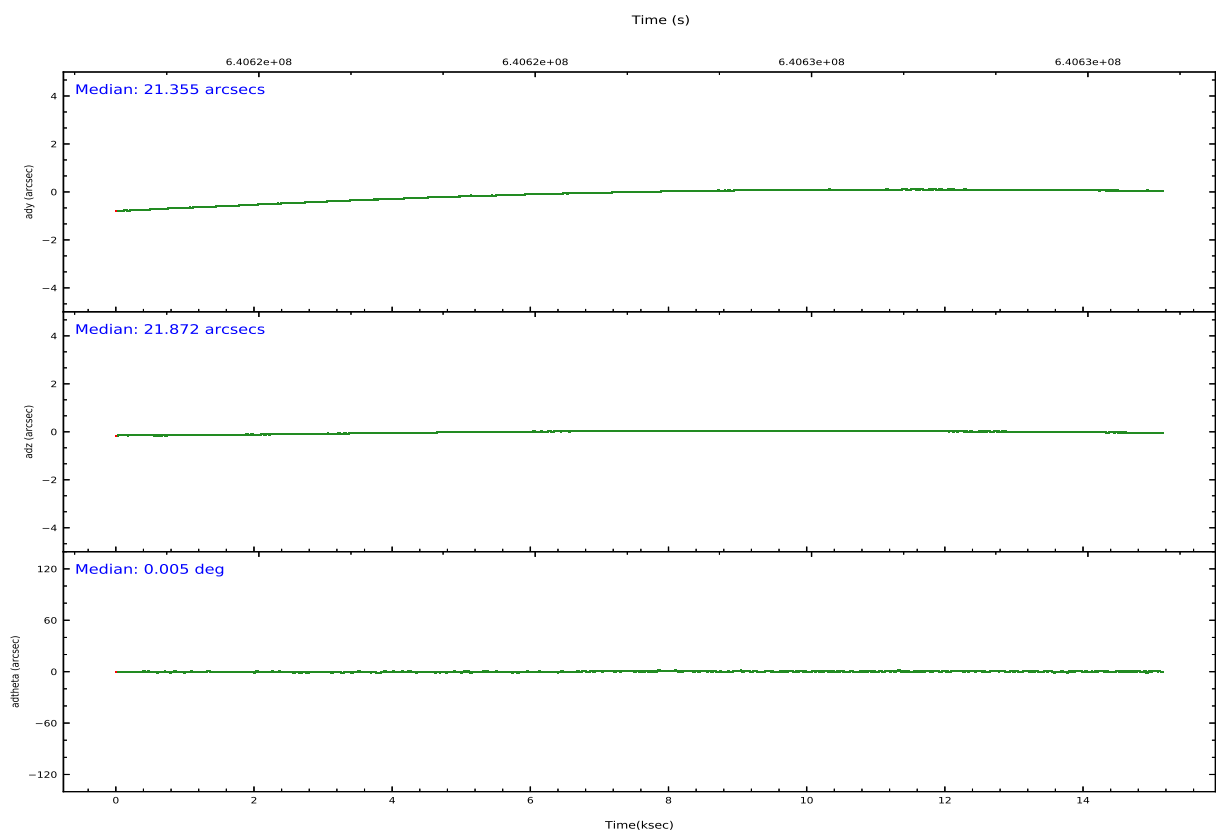
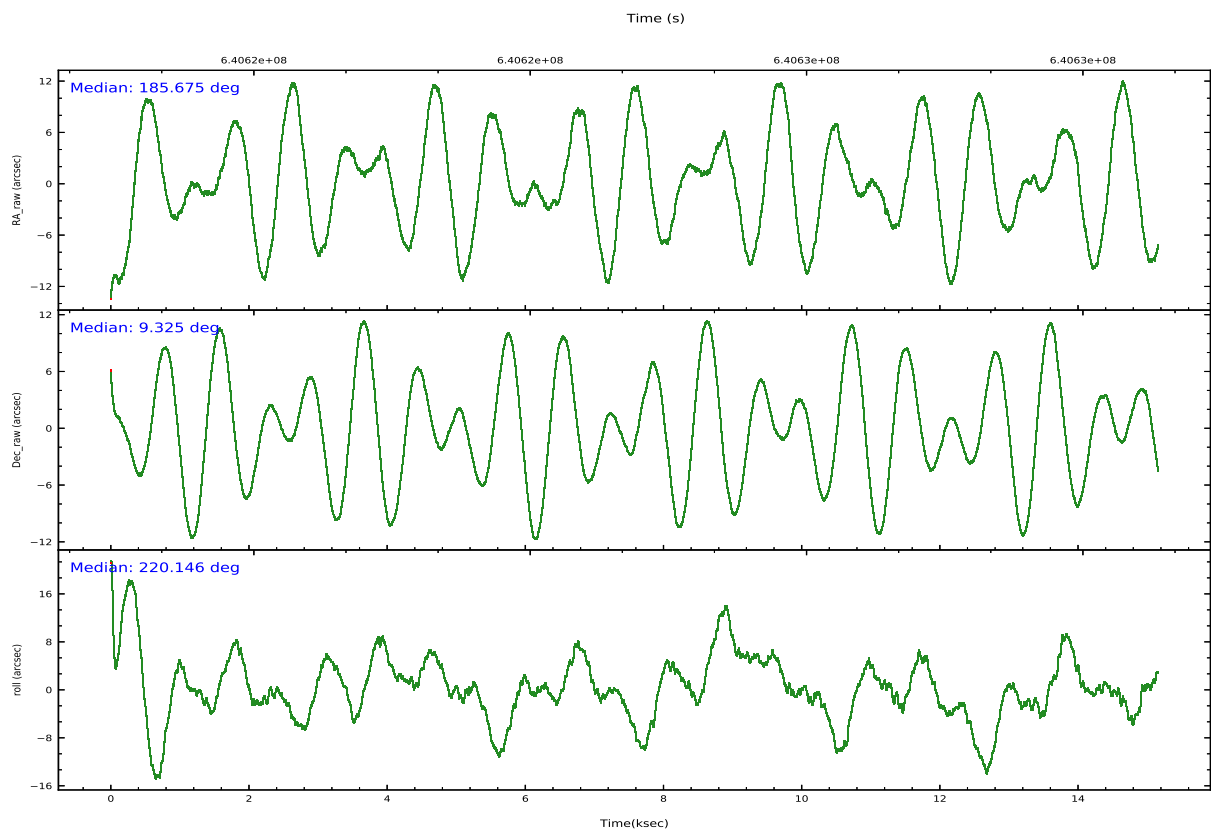
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	185.684043	185.67562858416
[deg] Pointing Dec	9.350880	9.3337646458963
[deg] Pointing Roll	219.998668	220.14616549041
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	640618089.184000	640616373.75977
Observation start date	2018-04-20T13:27:00	2018-04-20T12:59:33
[s] Observation end time (MET)	640633089.184000	640633600.9357899
Observation end date	2018-04-20T17:37:00	2018-04-20T17:46:40
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



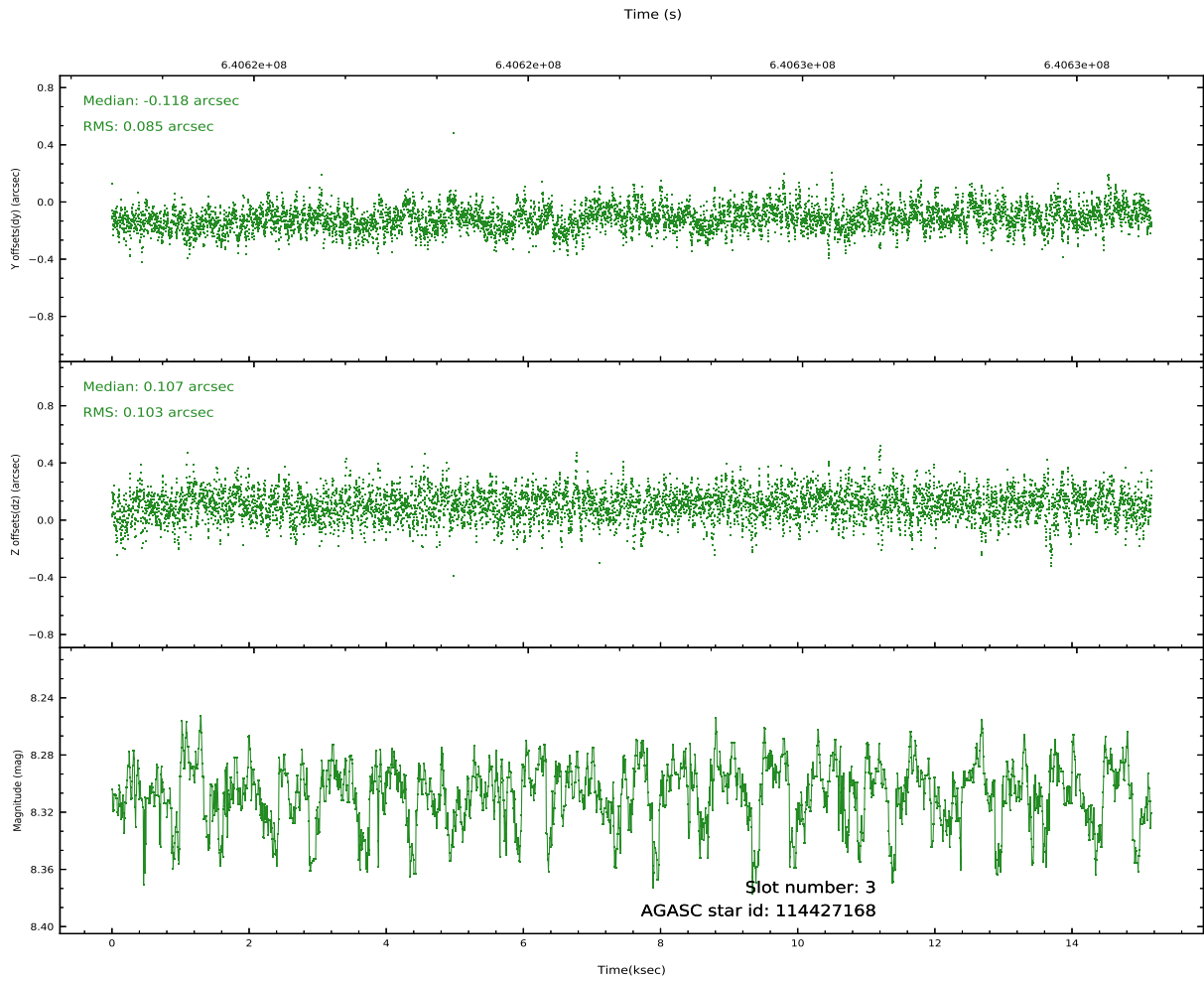
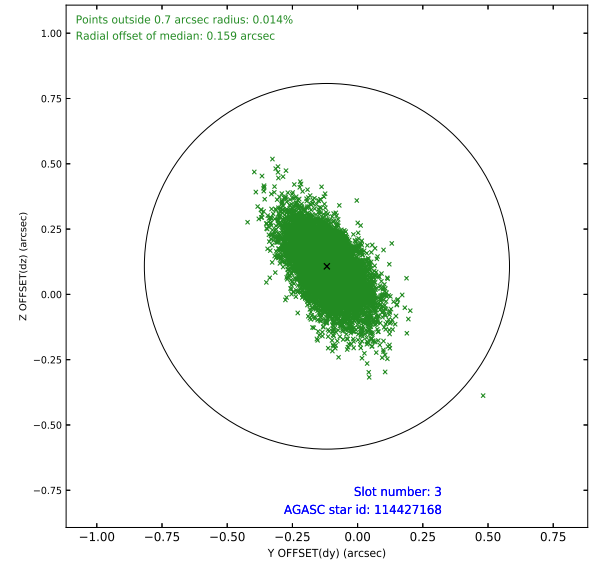
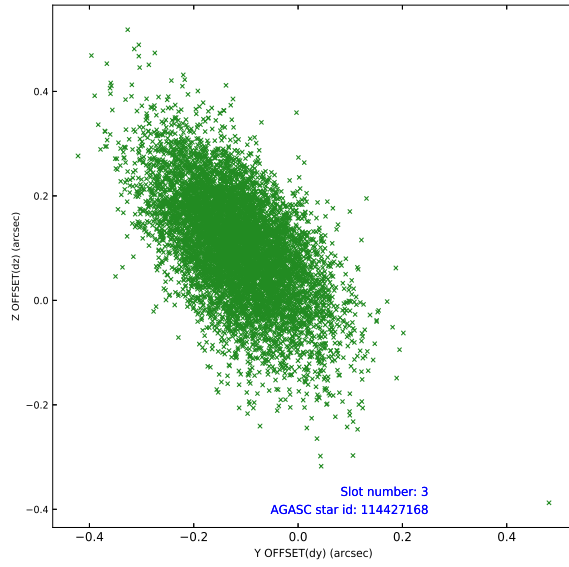


Slot Statistics

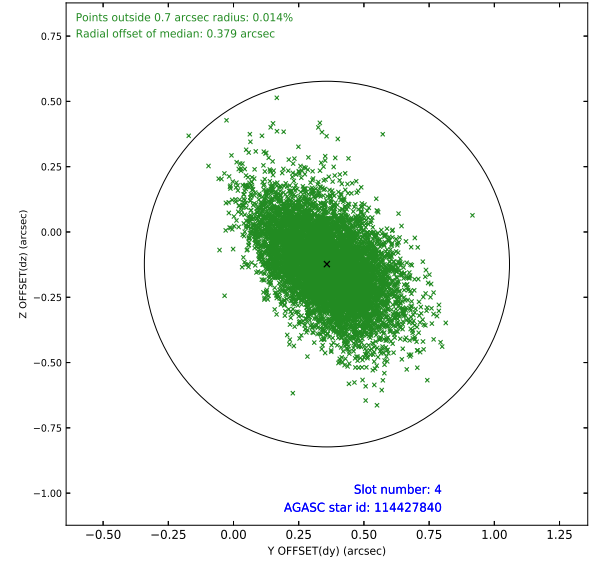
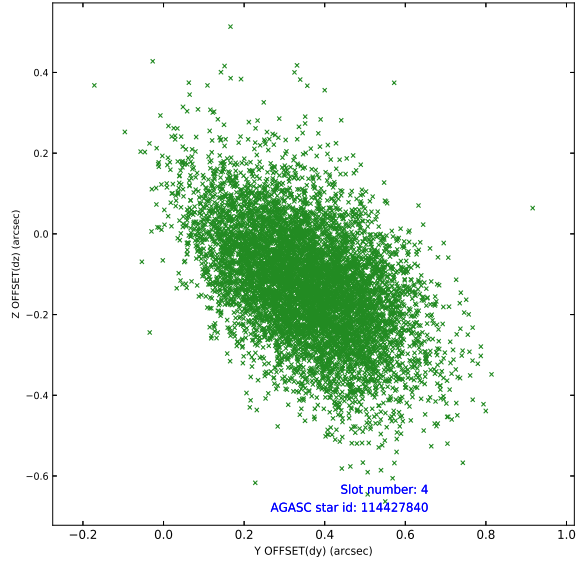
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.16	3696	1.000	0.316	-0.122	0.013	0.023	0.000000	0.000000	921.67	-1739
1	FID		ACIS-S-4	7.20	3698	1.000	-0.015	-0.063	0.015	0.031	0.000000	0.000000	2139.25	164
2	FID		ACIS-S-5	7.19	3697	1.000	-0.330	0.196	0.008	0.013	0.000000	0.000000	-1827.13	159
3	GUIDE	used	114427168	8.30	7394	1.000	-0.118	0.107	0.135	0.246	185.592494	9.942686	-1119.89	-1840
4	GUIDE	used	114427840	9.13	7387	1.000	0.358	-0.123	0.203	0.347	184.848289	9.464691	2009.12	-2224
5	GUIDE	used	114428088	9.06	7322	1.000	-0.009	-0.001	0.204	0.328	185.114749	9.175334	1955.98	-817
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	114430640	8.88	7382	1.000	-0.238	0.020	0.196	0.327	185.276838	9.371034	1061.72	-985

2.4 Star Slots

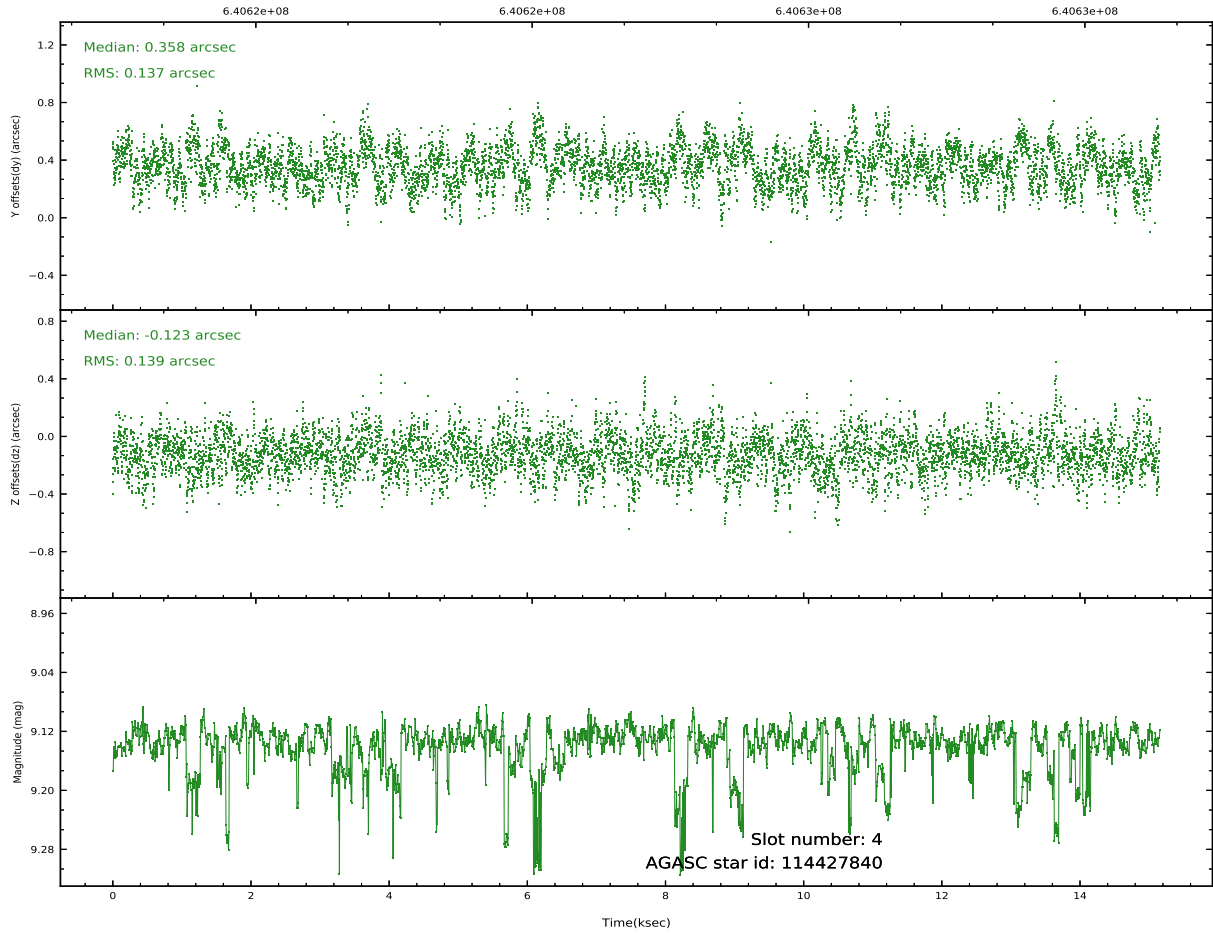
2.4.1 Slot 3



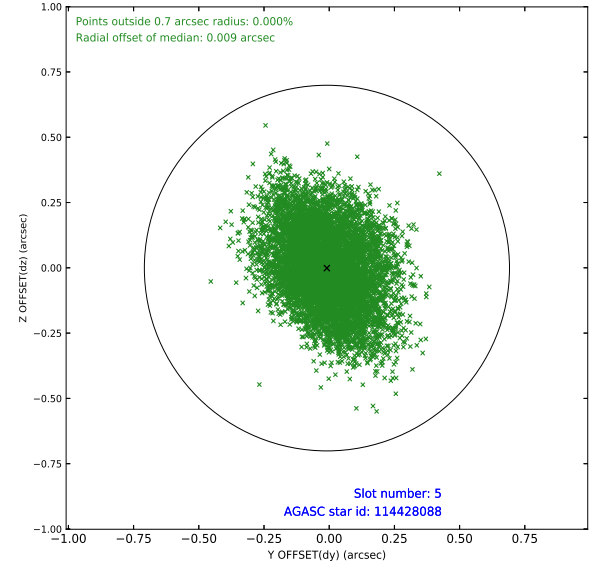
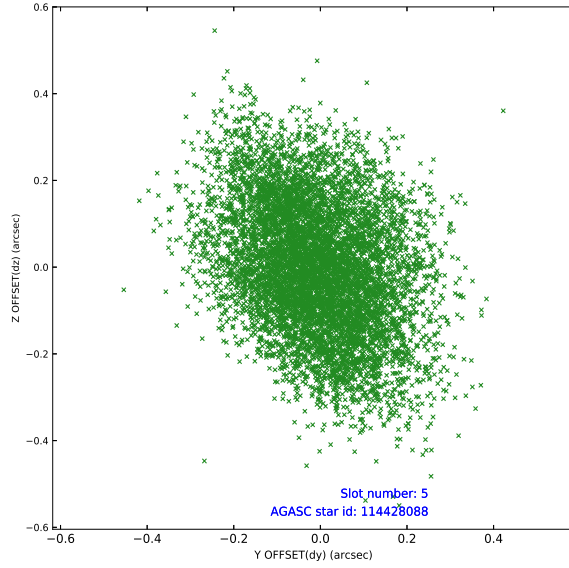
2.4.2 Slot 4



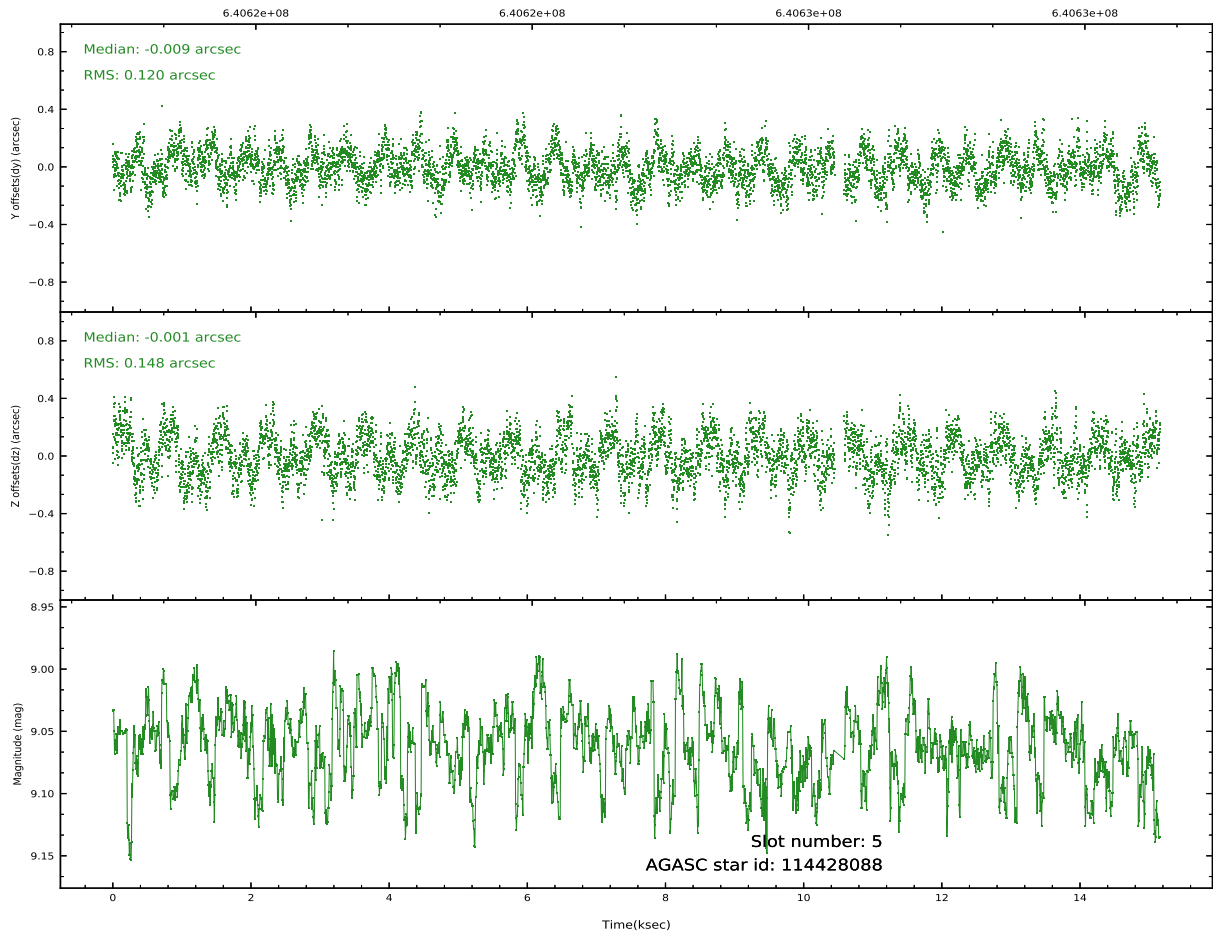
Time (s)



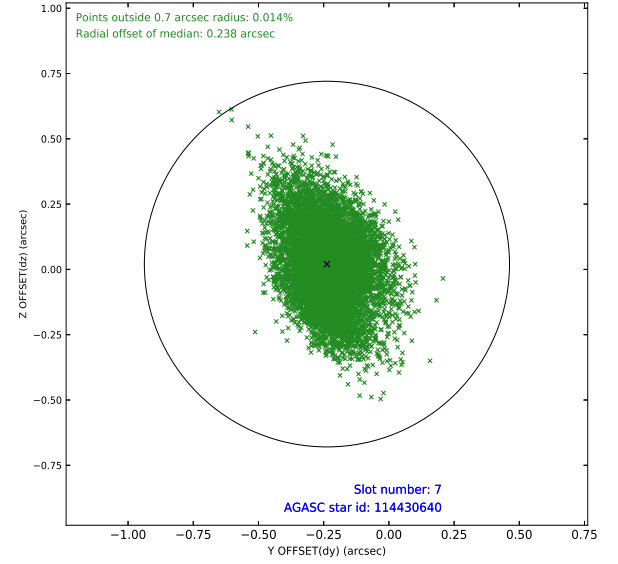
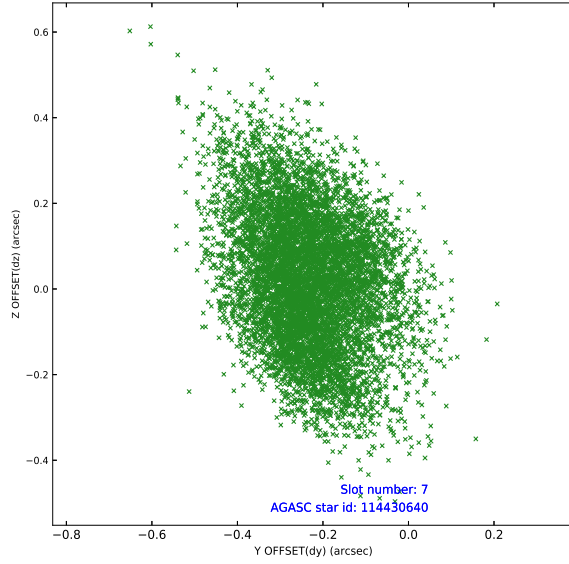
2.4.3 Slot 5



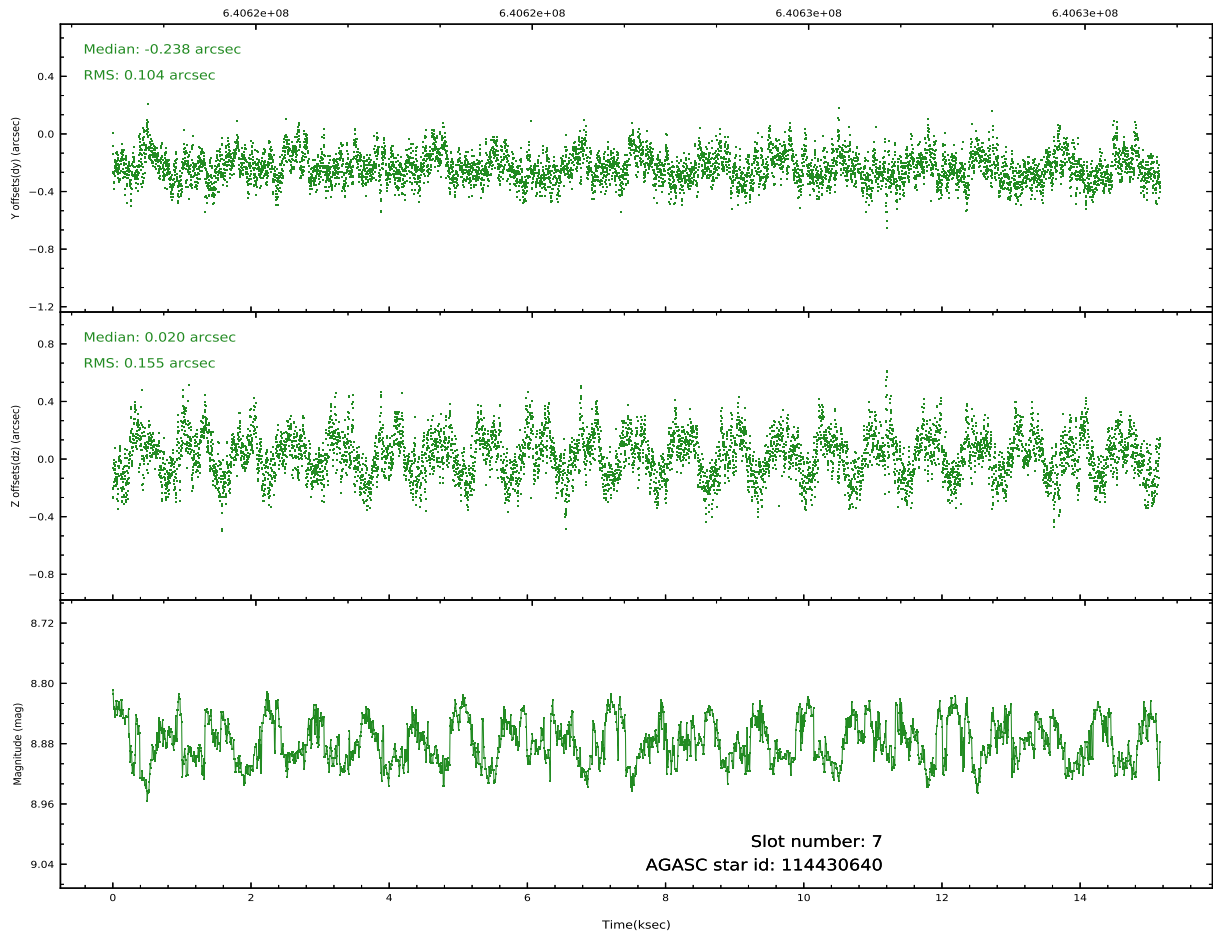
Time (s)



2.4.4 Slot 7

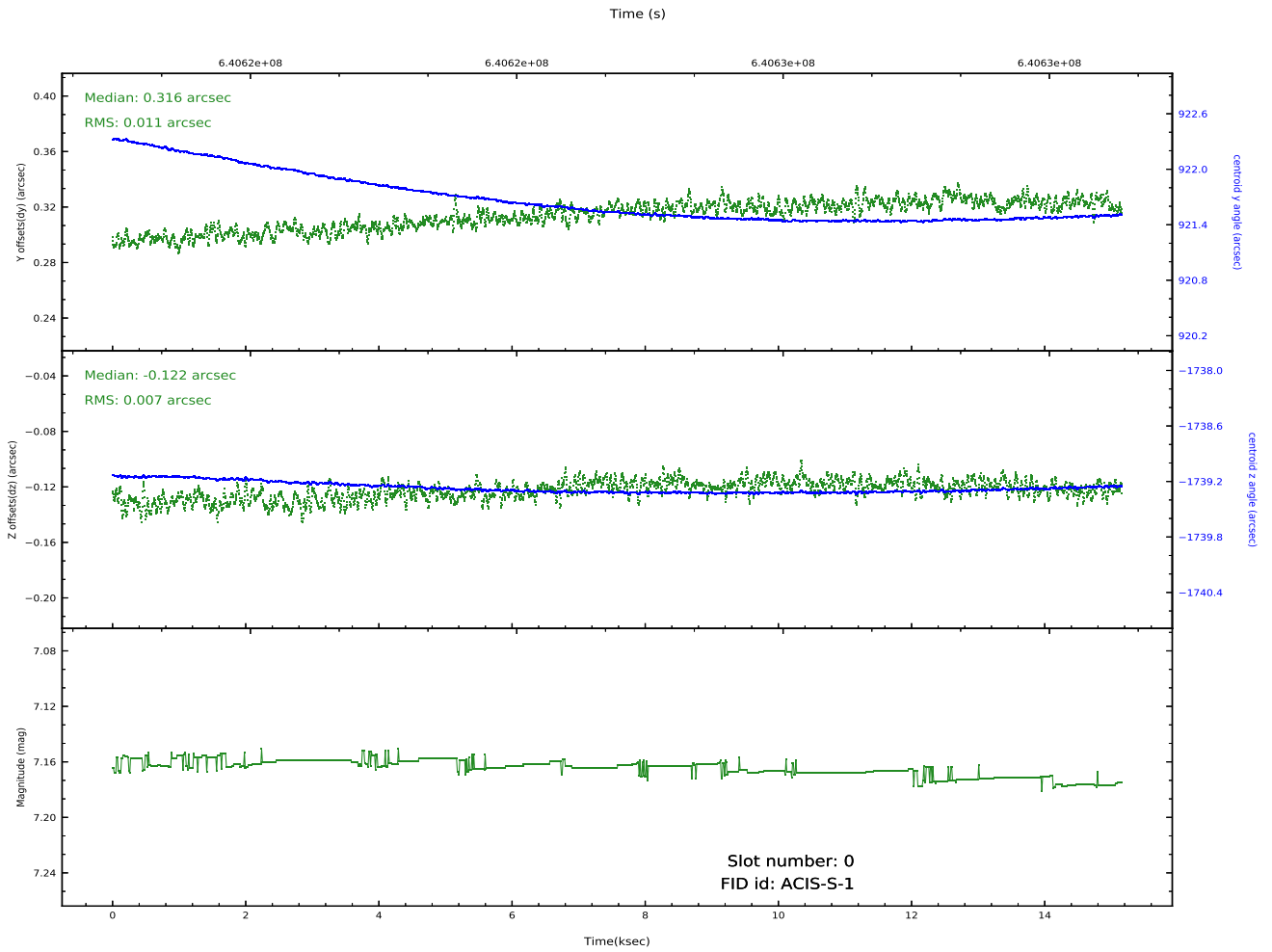
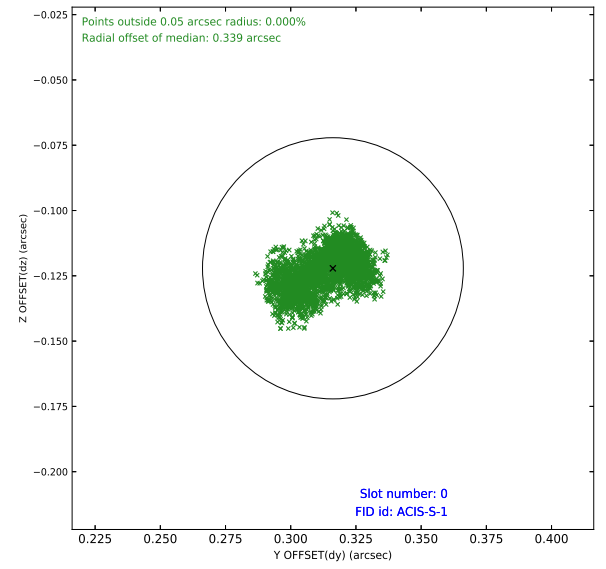
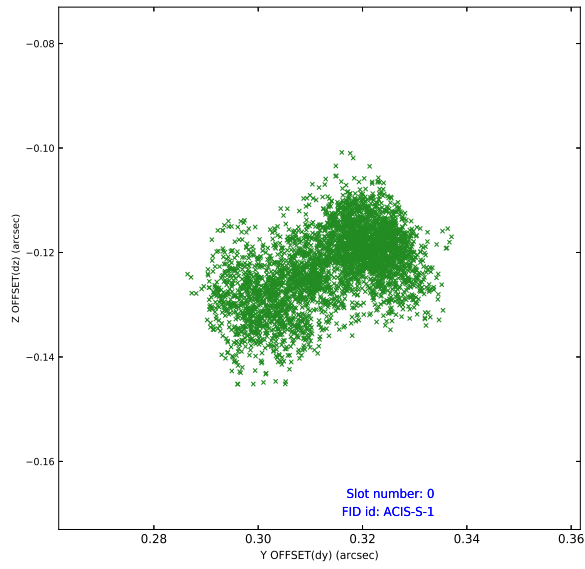


Time (s)

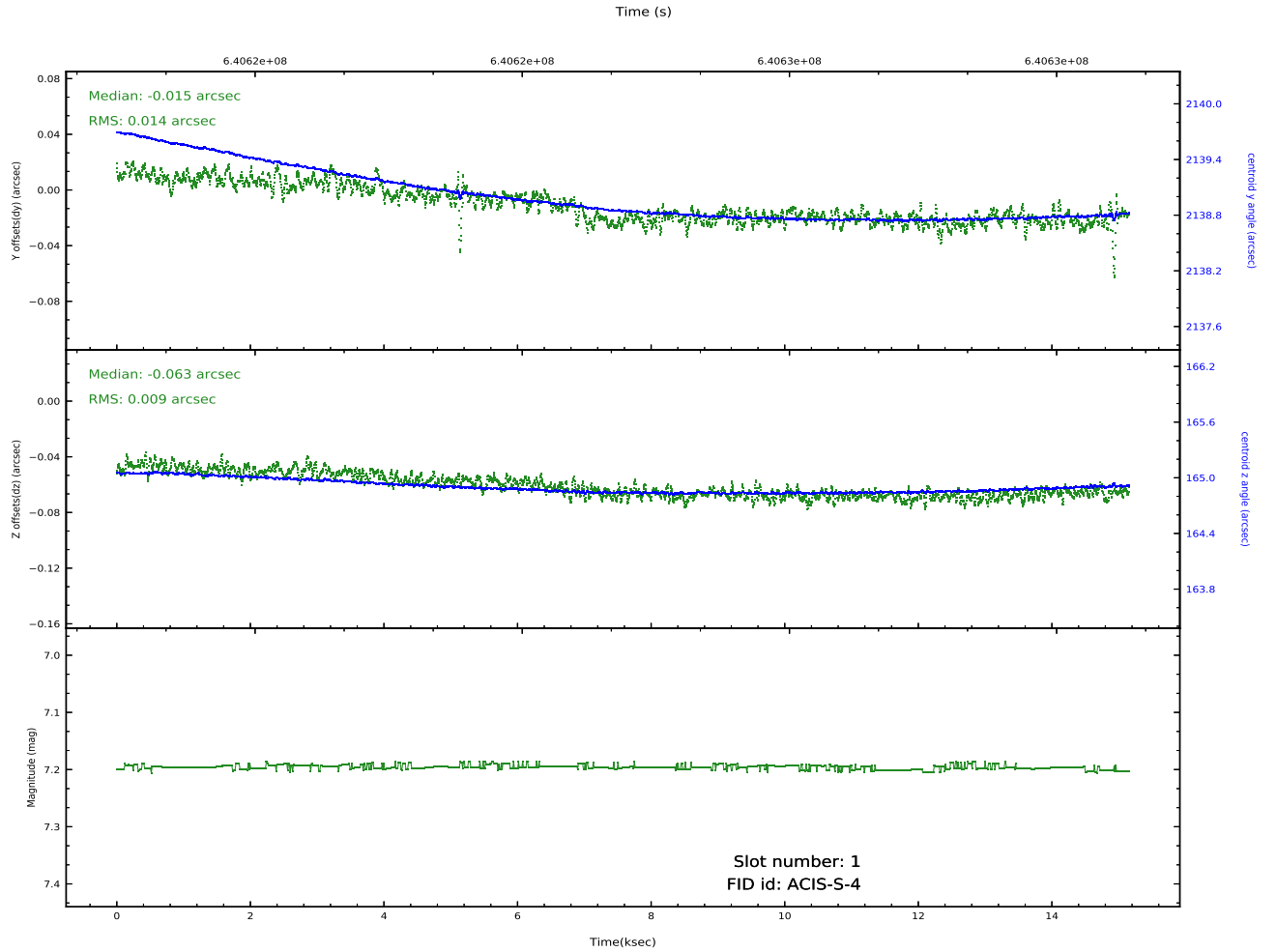
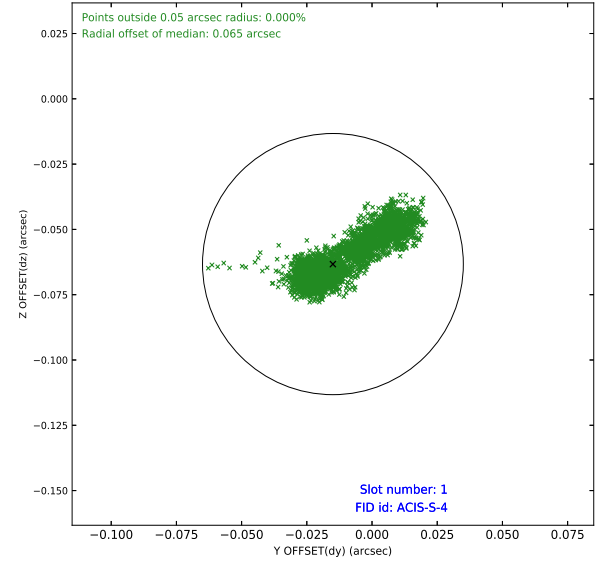
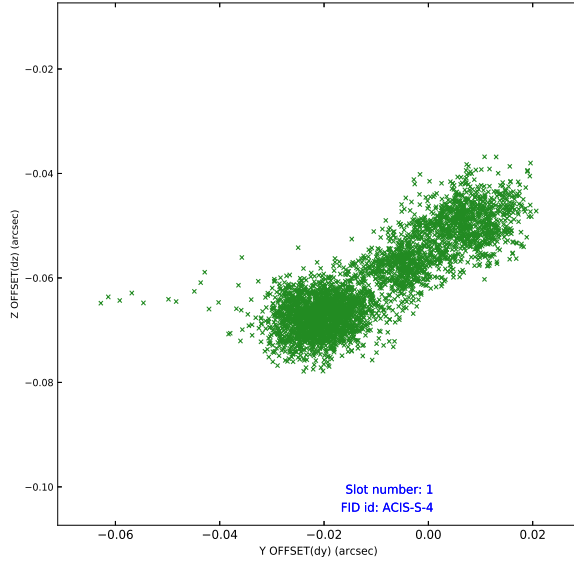


2.5 FID Slots

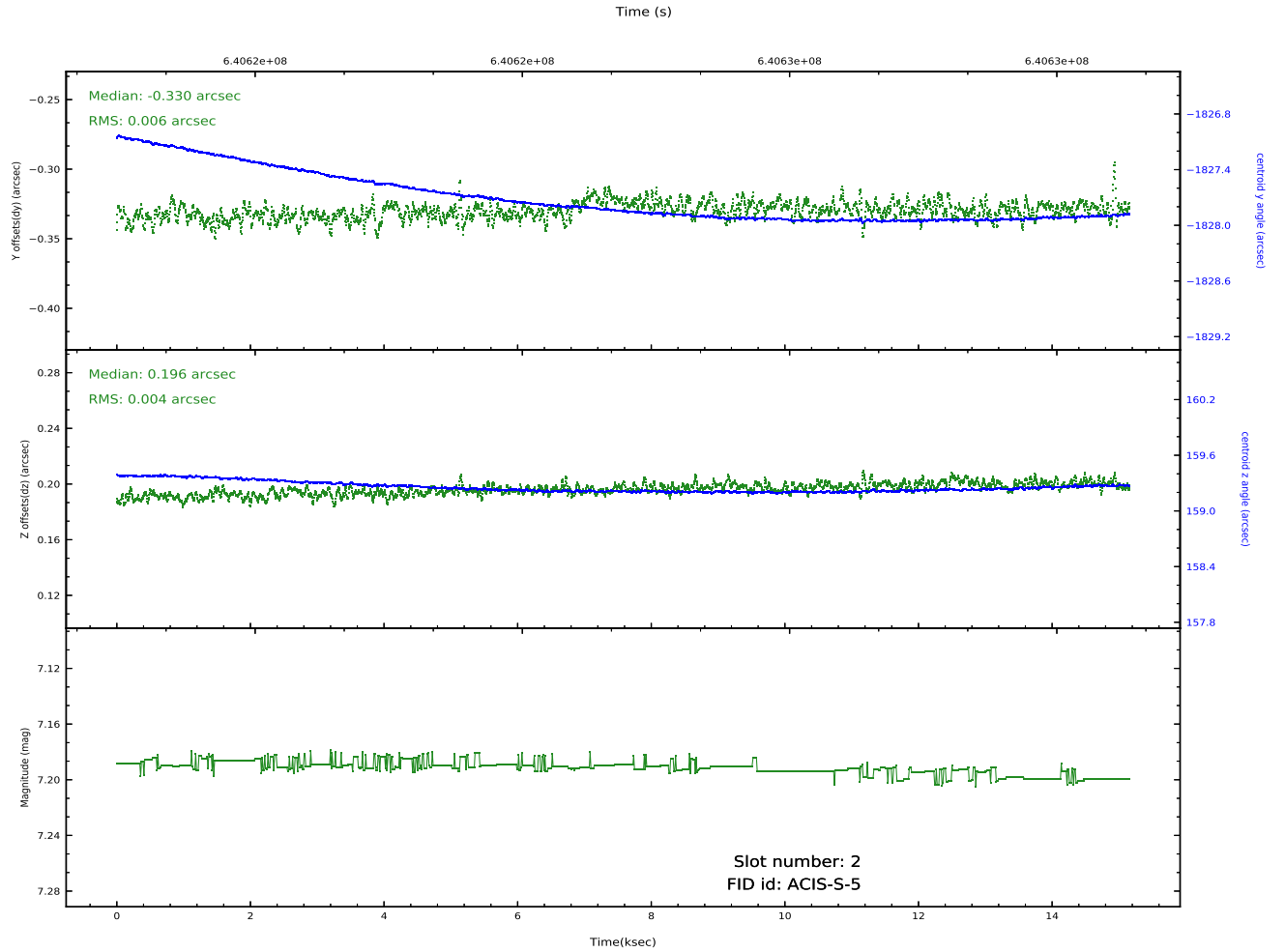
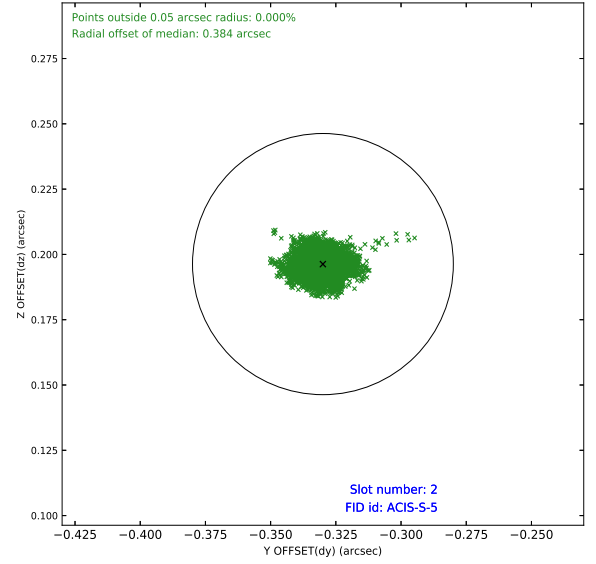
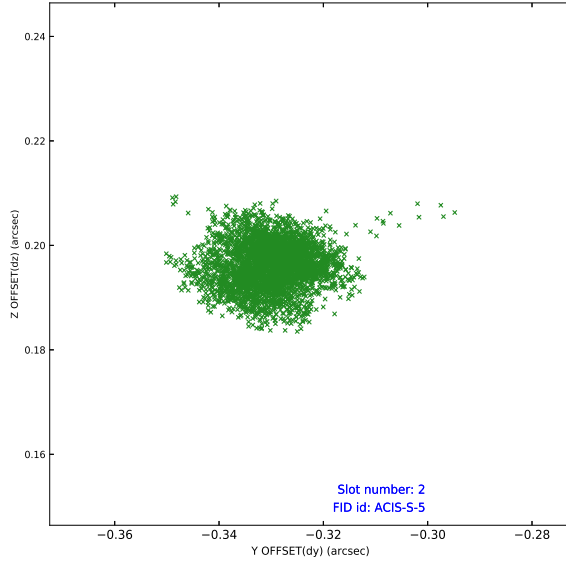
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.061456266999

A.2 Comments

The guide star in slot 6 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.