

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20936 - L2 Version 3
Chandra X-Ray Center

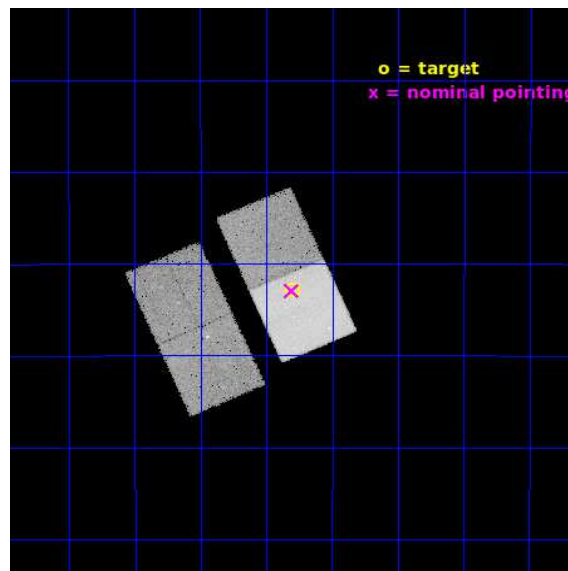
L2 Processing Date : Oct 24 2020

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 5	10
2.4.3	Slot 6	11
2.4.4	Slot 7	12
2.5	FID Slots	13
2.5.1	Slot 0	13
2.5.2	Slot 1	14
2.5.3	Slot 2	15
A	Summary	16
A.1	Status	16
A.2	Comments	16

1 Front

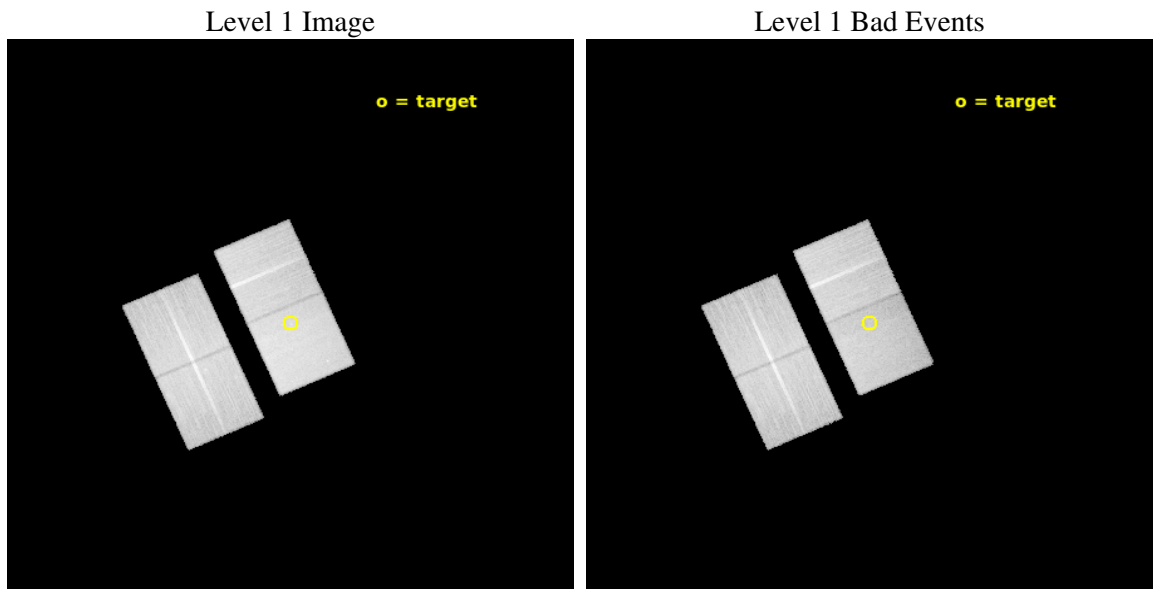
seq_num	402020	Sequence number
obs_id	20936	Observation id
title	GW170817: Tracking the X-ray light curve to study the origin of the emission	Proposal title
observer	Belinda Wilkes	Principal investigator
object	GW170817	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	197.450417	Observer's specified target RA [deg]
dec_targ	-23.381472	Observer's specified target Dec [deg]
ra_nom	197.45144008232	Nominal RA [deg]
dec_nom	-23.382367295513	Nominal Dec [deg]
roll_nom	66.149599745705	Nominal Roll [deg]
revision	3	Processing version of data
ontime	32168.700247526	Sum of GTIs [s]
livetime	31748.39249654	Livetime [s]
ontime2	32165.559267163	Sum of GTIs [s]
ontime3	32168.700247526	Sum of GTIs [s]
ontime6	32168.700247526	Sum of GTIs [s]
ontime7	32168.700247526	Sum of GTIs [s]
l2events	196870	Number of level 2 events



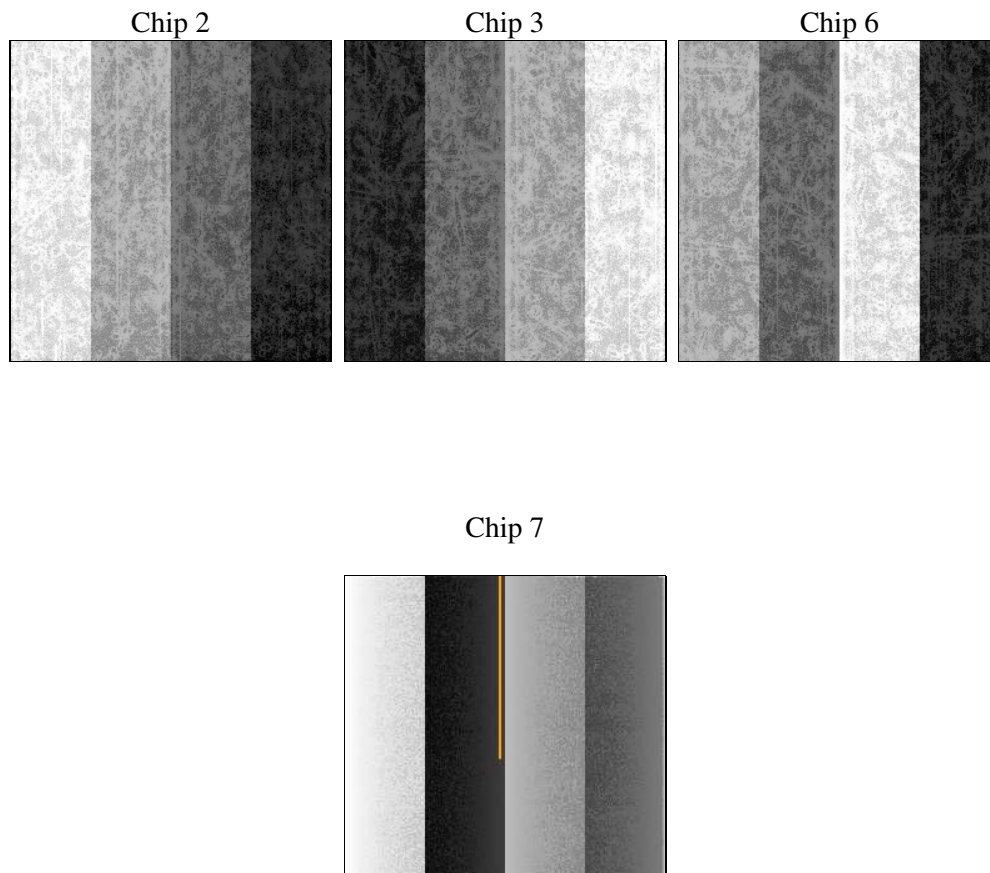
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32103.400000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	32168.700247526	Sum of GTIs [s]
caldsver	4.9.3	 	ontime2	32165.559267163	Sum of GTIs [s]
date	2020-10-24T07:51:03	Date and time of file creation	ontime3	32168.700247526	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	32168.700247526	Sum of GTIs [s]
			ontime7	32168.700247526	Sum of GTIs [s]
			l1events	1044275	Number of level 1 events

2.1.4 Events

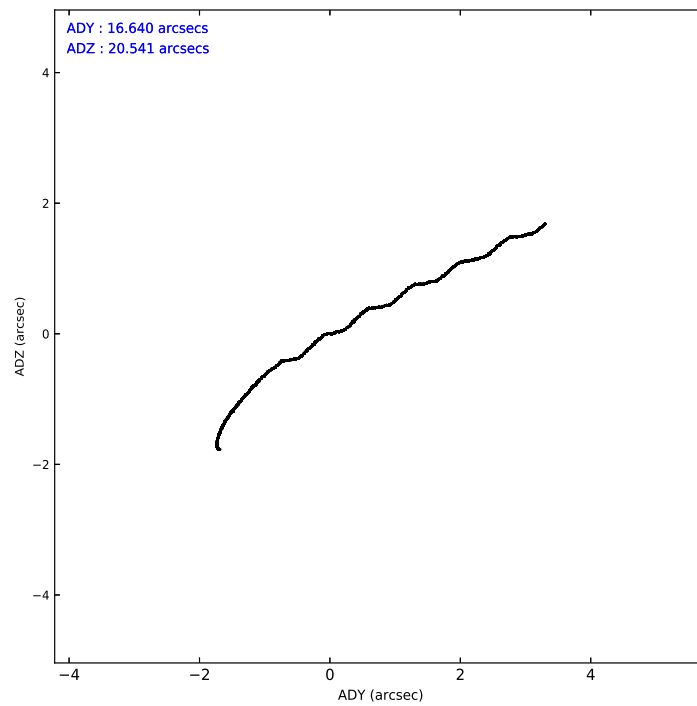
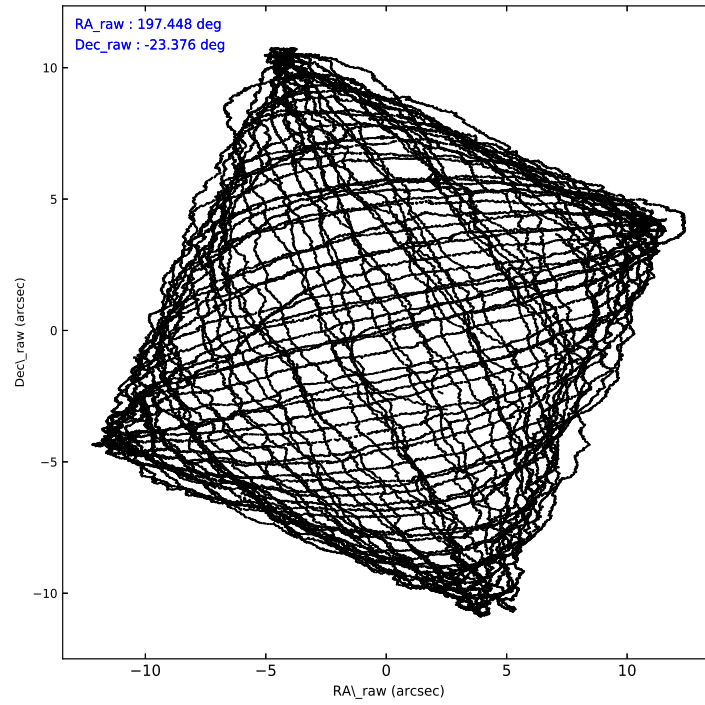
	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	244763	240448	250664	308400
rejected events	219885	215288	223722	173849
rejected %	89%	89%	89%	56%

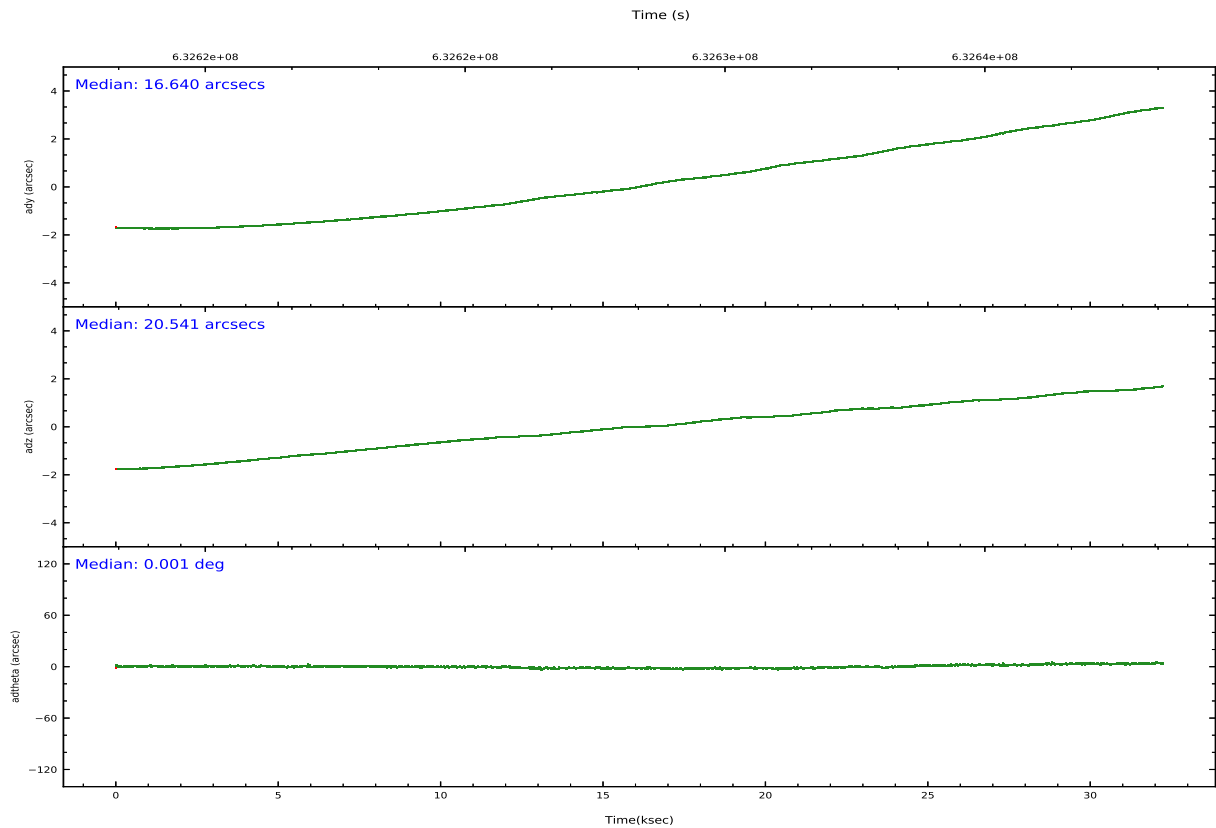
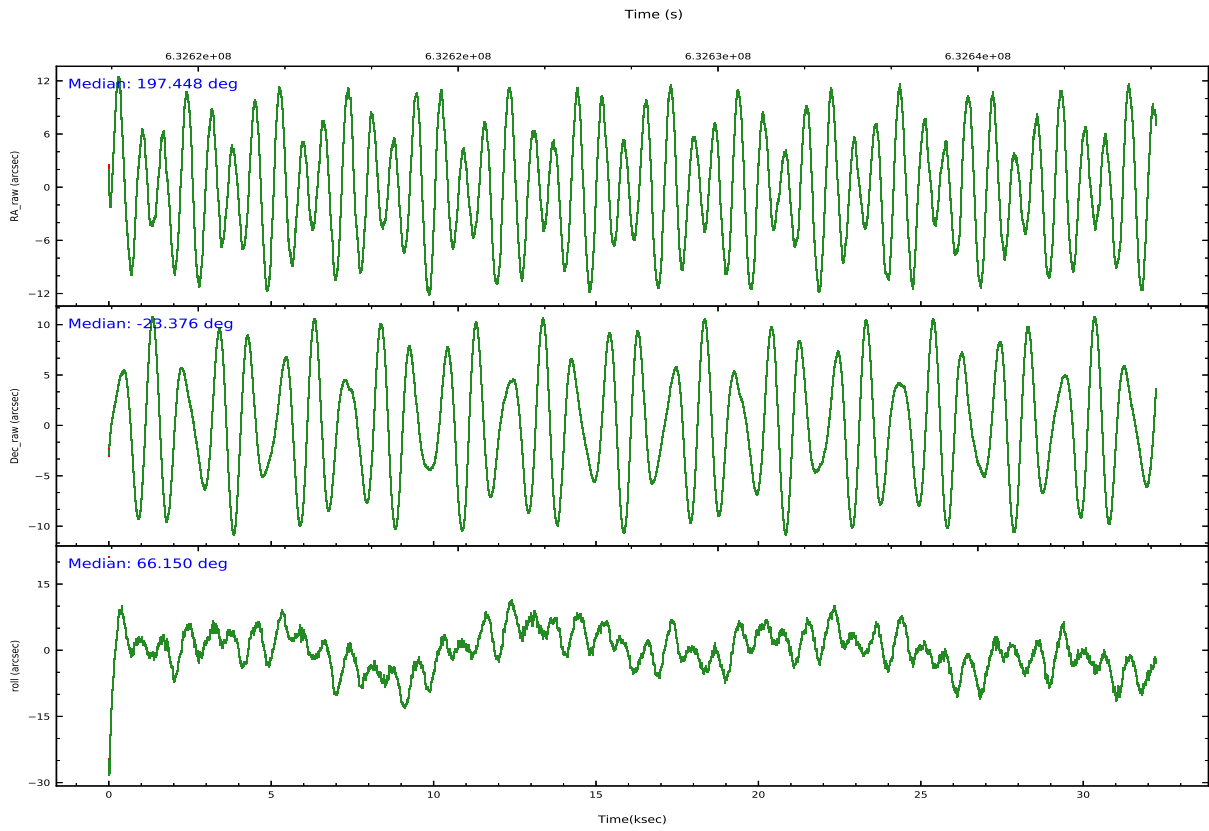
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	8714	9247	8438	11456
	3%	3%	3%	3%
grade 1 events	121	161	107	460
	0%	0%	0%	0%
grade 2 events	6063	5393	6744	28207
	2%	2%	2%	9%
grade 3 events	2505	2617	2547	10740
	1%	1%	1%	3%
grade 4 events	2561	2651	2398	10642
	1%	1%	0%	3%
grade 5 events	9156	11002	10638	30741
	3%	4%	4%	9%
grade 6 events	5039	5254	6818	73520
	2%	2%	2%	23%
grade 7 events	210604	204123	212974	142634
	86%	84%	84%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	197.451347	197.45144008232	CCD I2 on	O1	Y
[deg] Pointing Dec	-23.402802	-23.382367295513	CCD I3 on	O2	Y
[deg] Pointing Roll	66.000364	66.149599745705	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O3	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	N	N
[s] Observation start time (MET)	632613386.184000	632611725.47541	CCD S5 on	N	N
Observation start date	2018-01-17T21:55:17	2018-01-17T21:28:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	632645489.184000	632646296.16495	On-chip summing requested	N	N
Observation end date	2018-01-18T06:50:20	2018-01-18T07:04:56	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



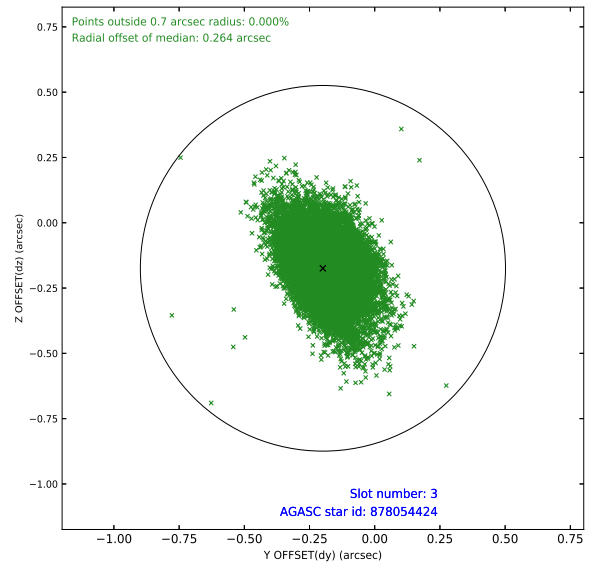
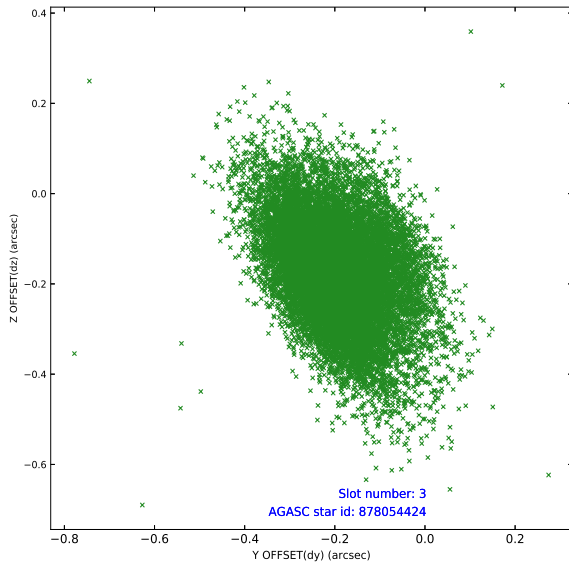


Slot Statistics

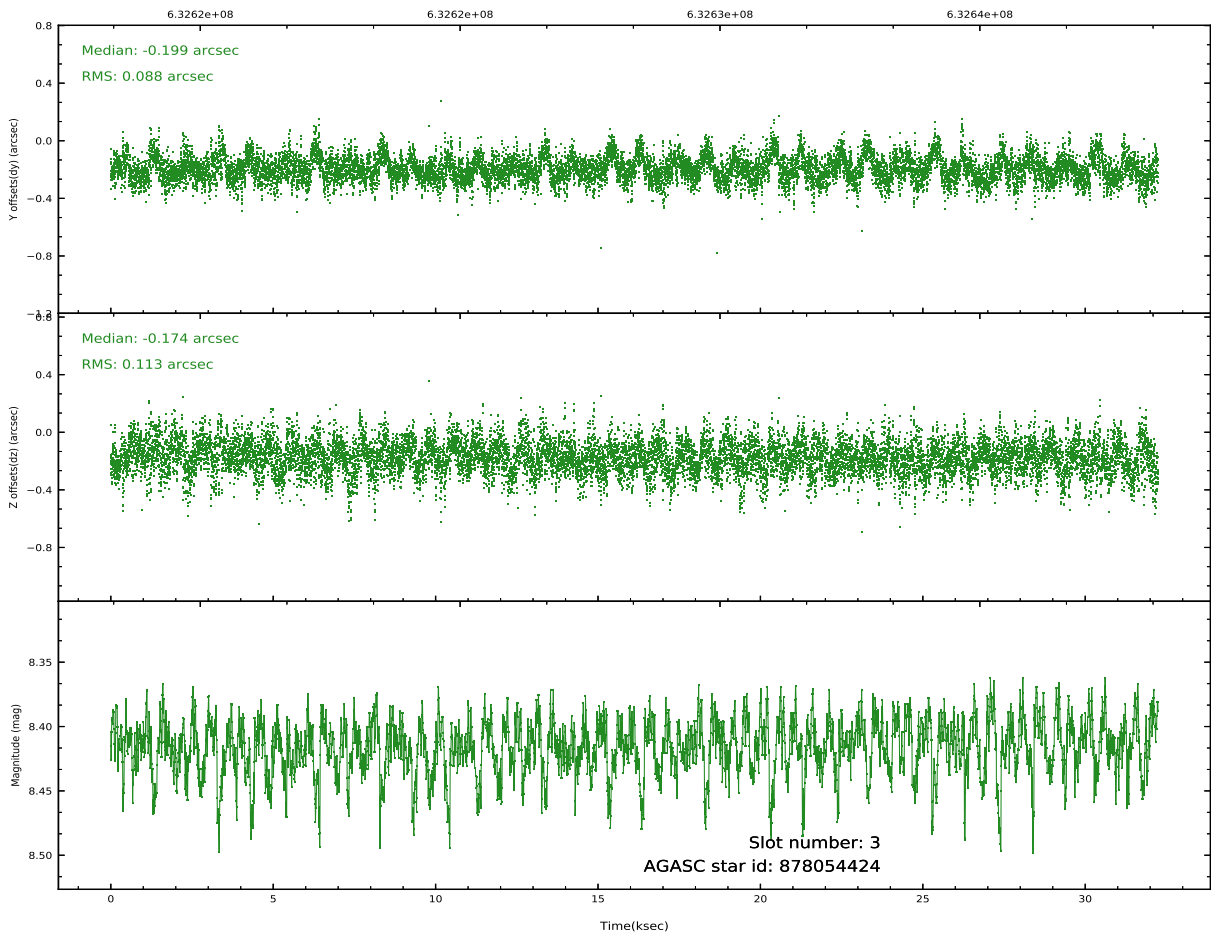
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-1	7.21	7863	1.000	0.146	-0.060	0.040	0.056	0.000000	0.000000	926.09	-1737
1	FID		ACIS-S-2	7.12	7864	1.000	-0.146	0.037	0.033	0.044	0.000000	0.000000	-770.08	-1742
2	FID		ACIS-S-4	7.23	7863	1.000	-0.036	0.030	0.030	0.040	0.000000	0.000000	2143.32	166
3	GUIDE	used	878054424	8.41	15723	1.000	-0.199	-0.174	0.147	0.256	197.311680	-23.210058	445.30	703
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	878058424	9.20	15715	1.000	0.423	0.250	0.210	0.333	197.645163	-24.009629	-1736.47	-1470
6	GUIDE	used	878061480	7.95	15725	1.000	-0.398	-0.316	0.142	0.255	197.360027	-22.852260	1686.18	1083
7	GUIDE	used	878056592	8.74	15721	1.000	0.176	0.240	0.154	0.271	197.586702	-23.861101	-1325.91	-1076

2.4 Star Slots

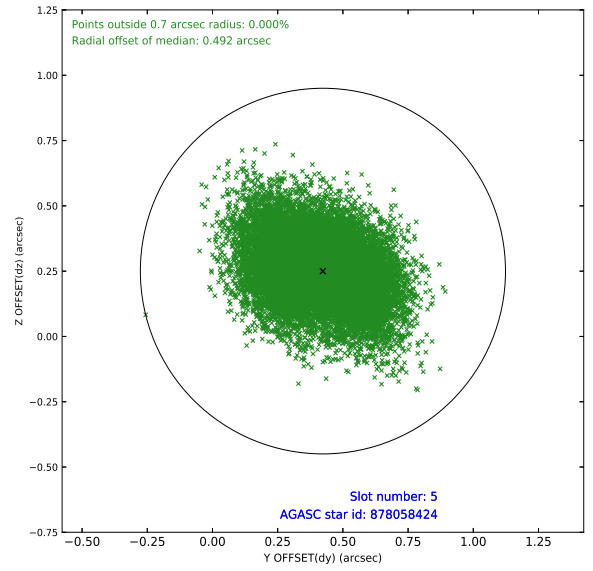
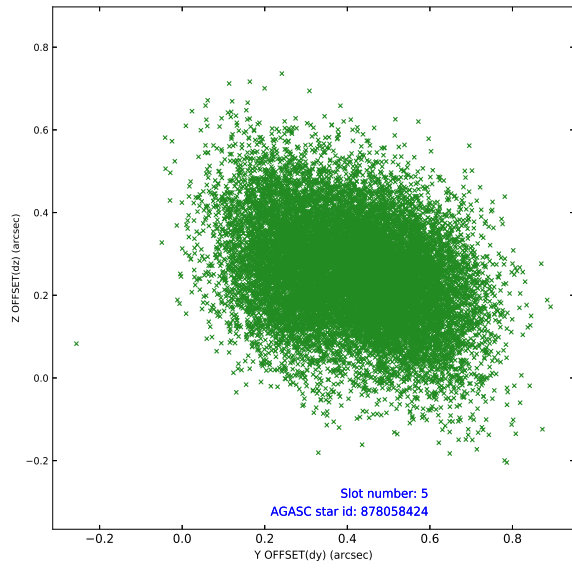
2.4.1 Slot 3



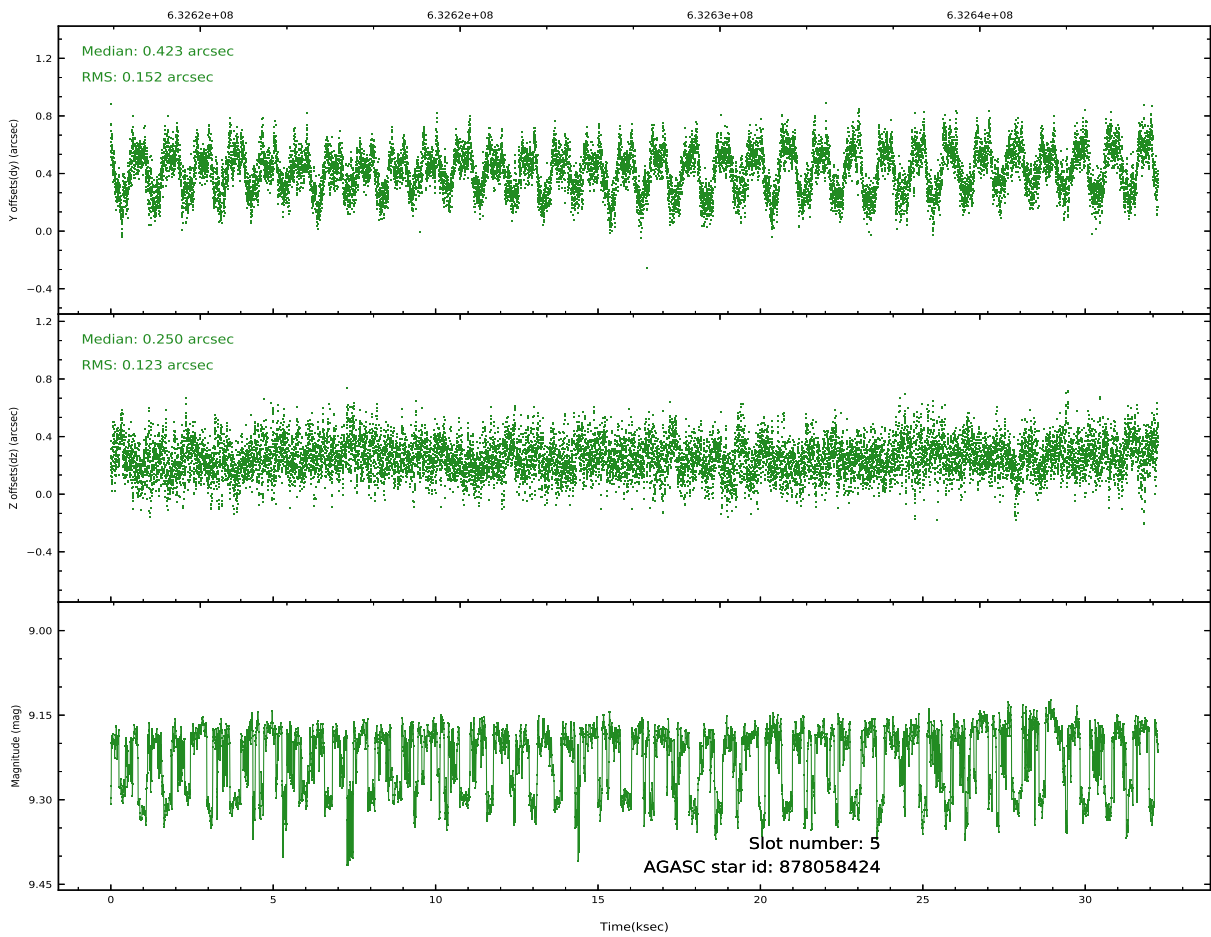
Time (s)



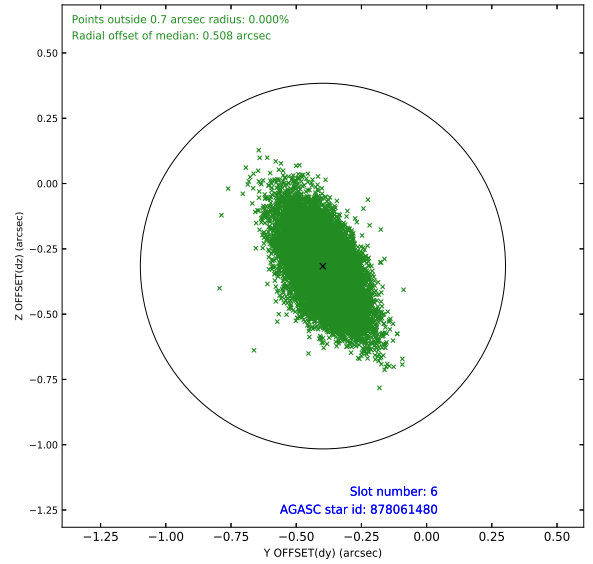
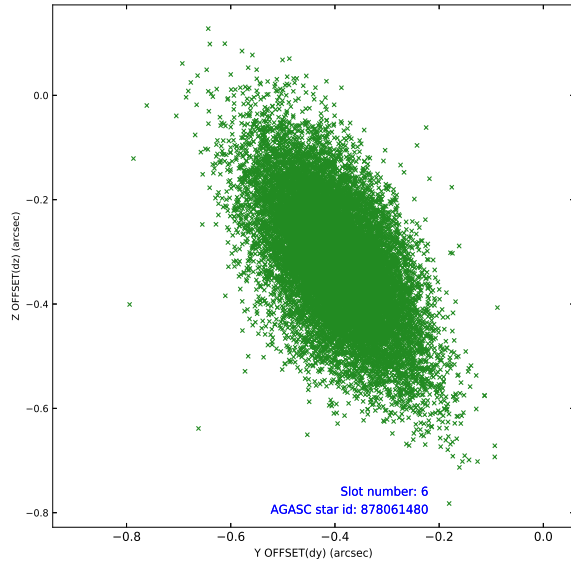
2.4.2 Slot 5



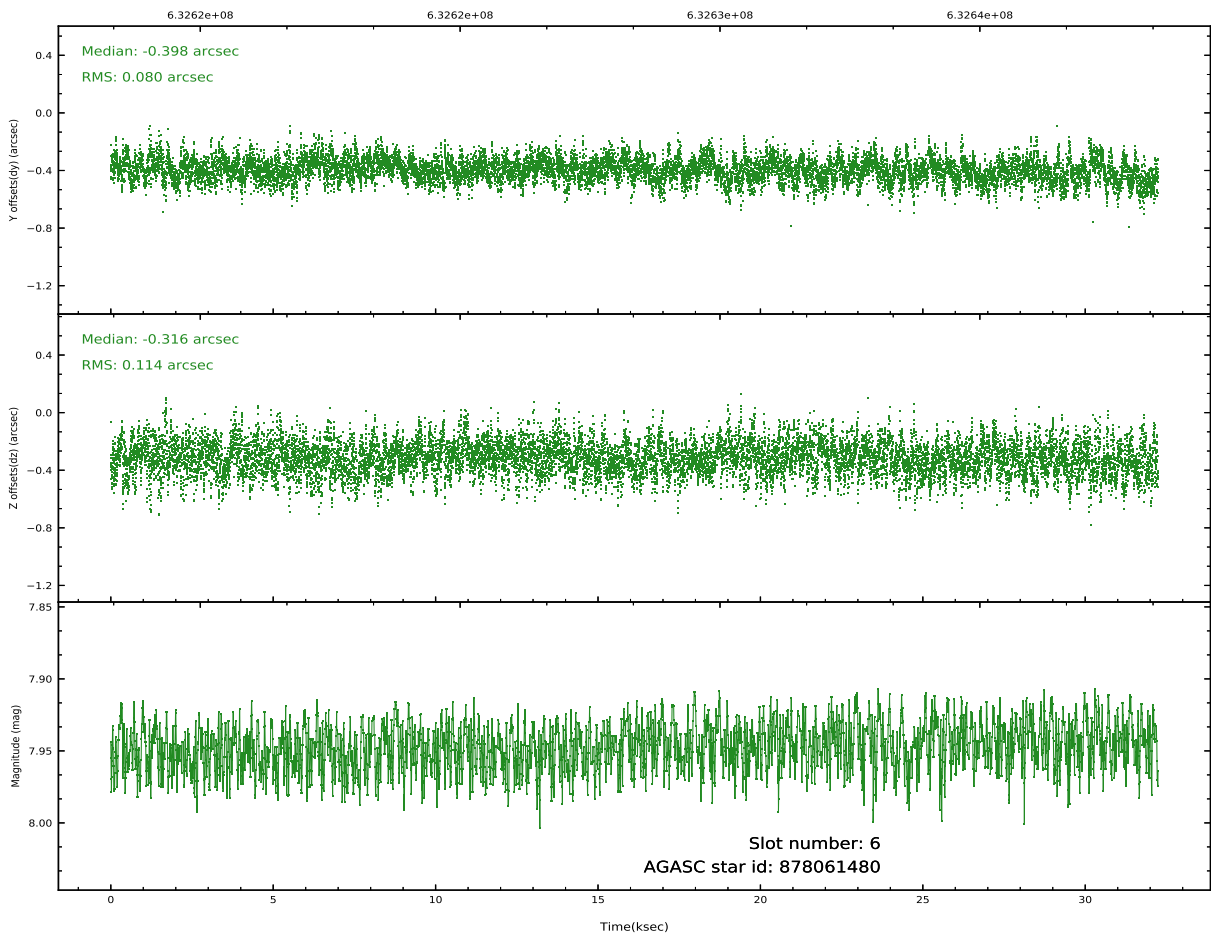
Time (s)



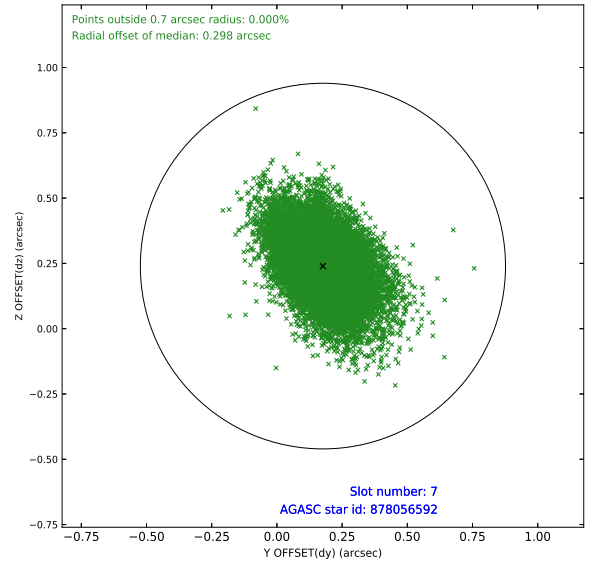
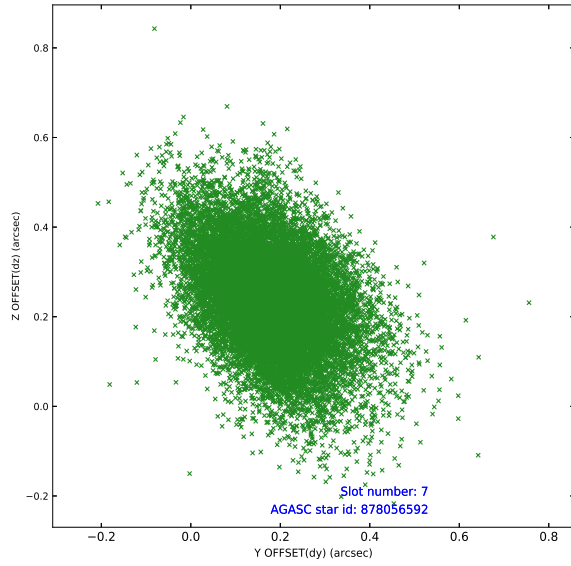
2.4.3 Slot 6



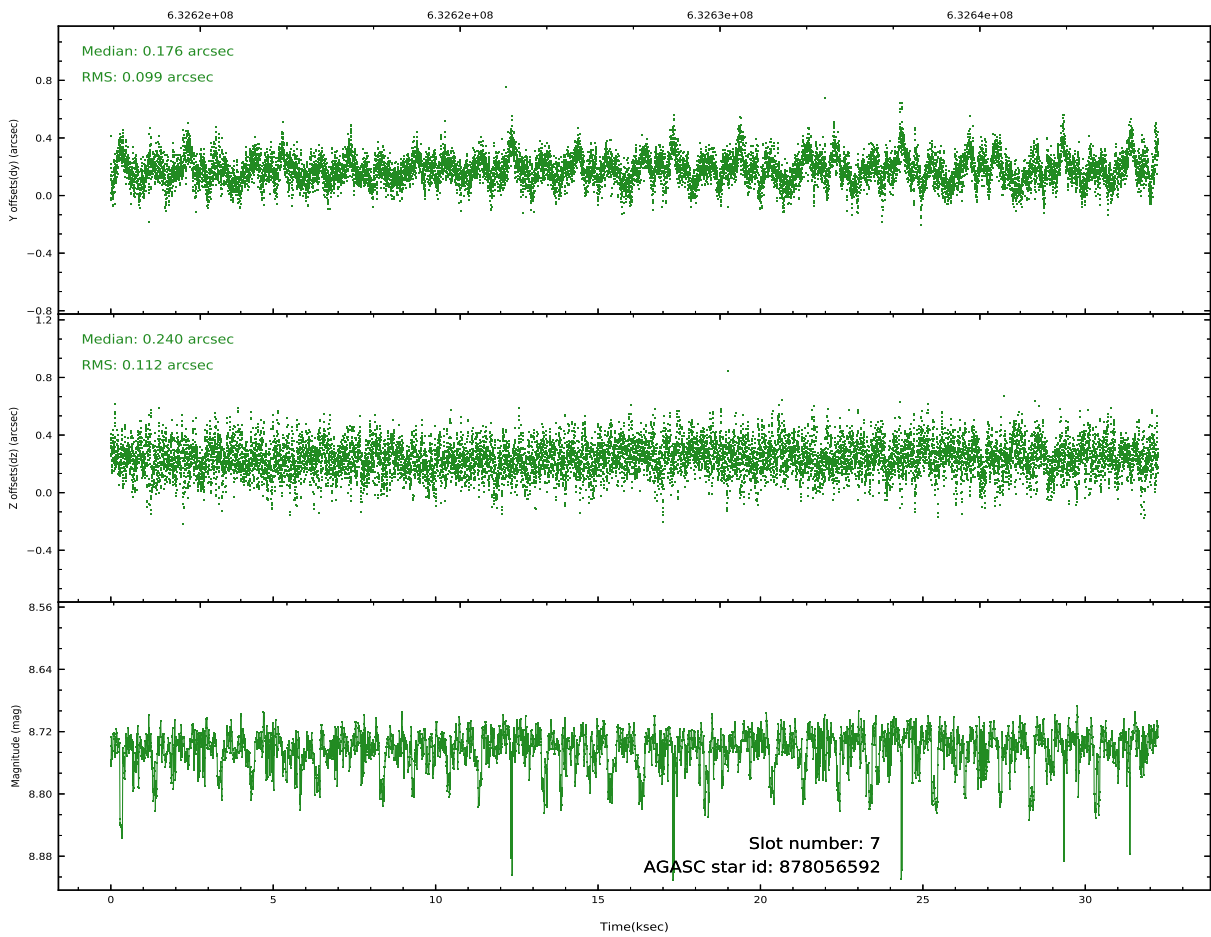
Time (s)



2.4.4 Slot 7

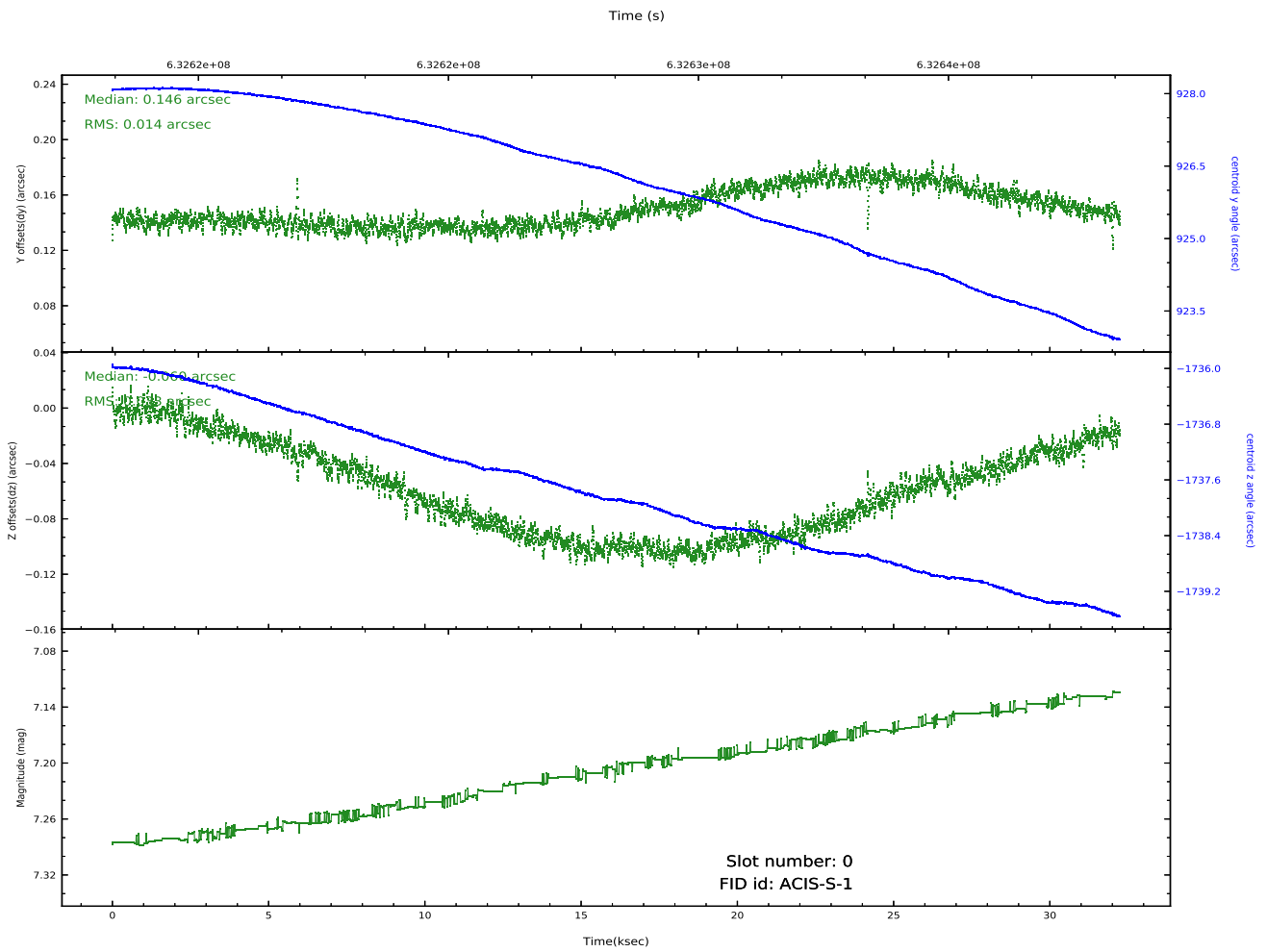
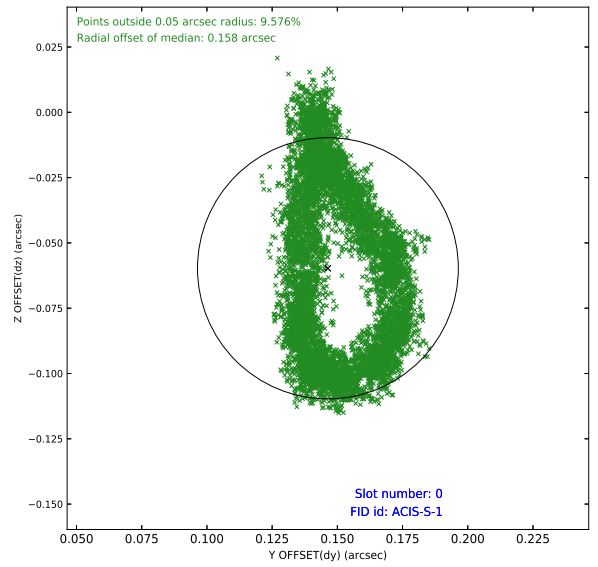
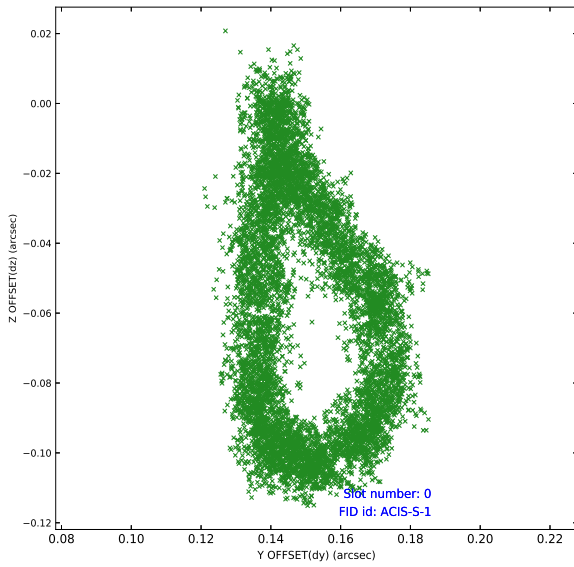


Time (s)

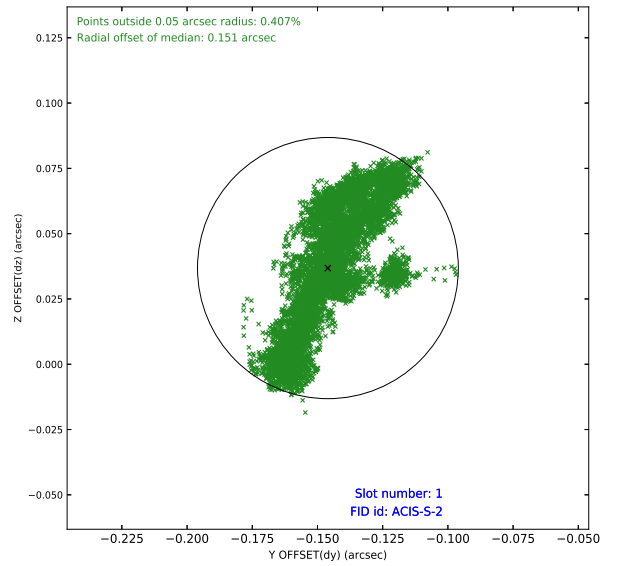
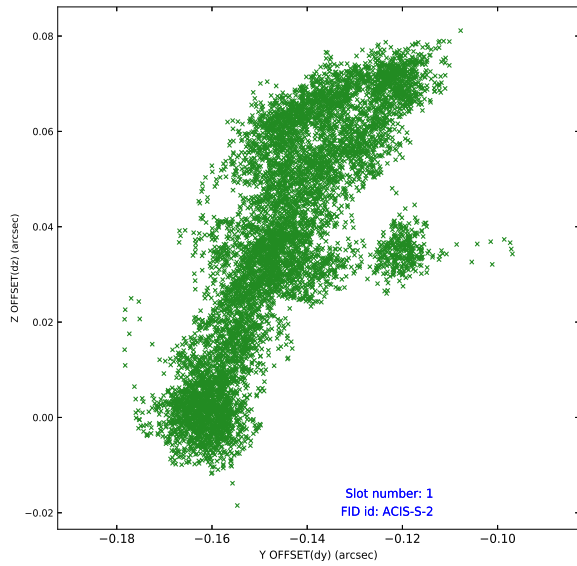


2.5 FID Slots

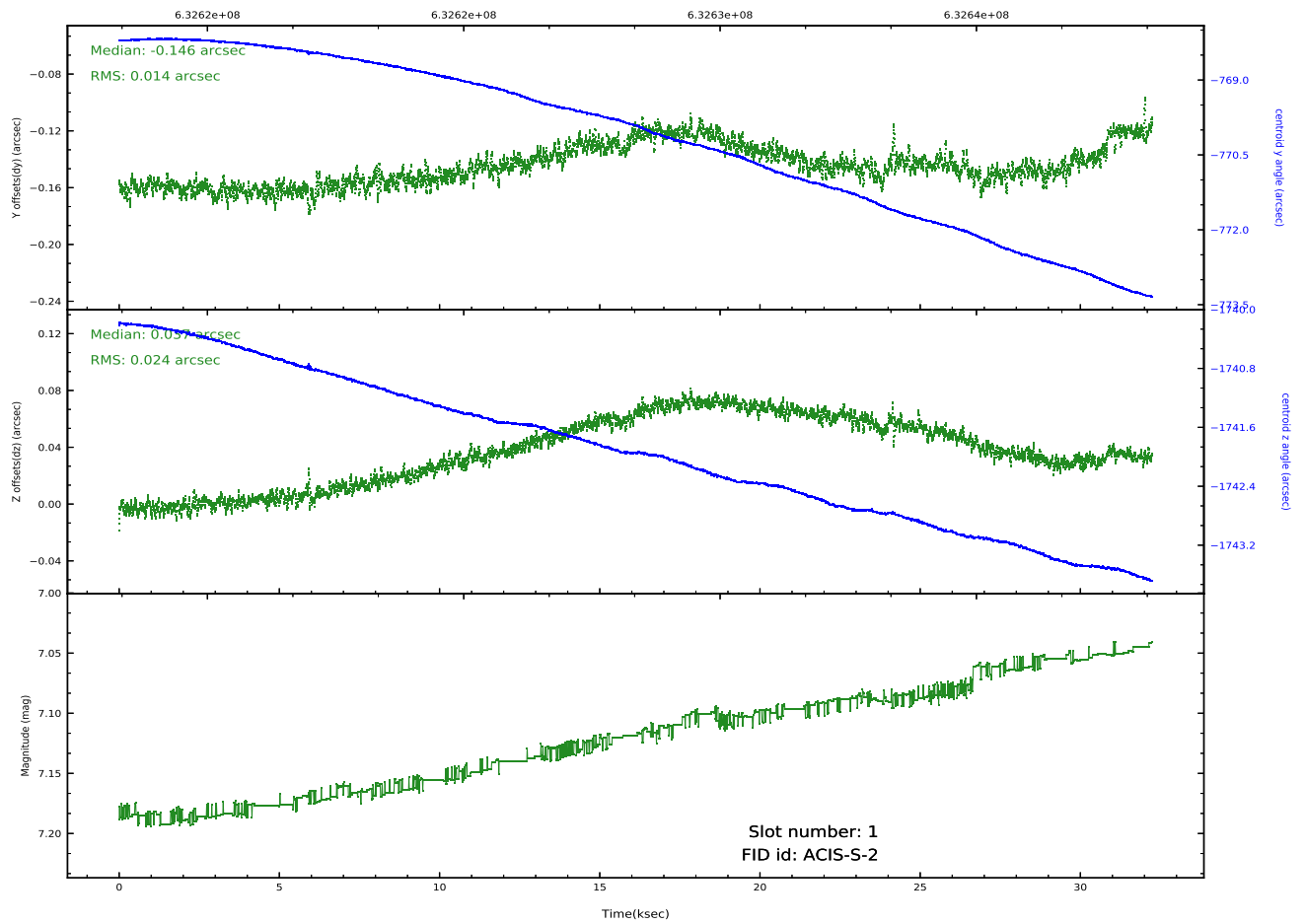
2.5.1 Slot 0



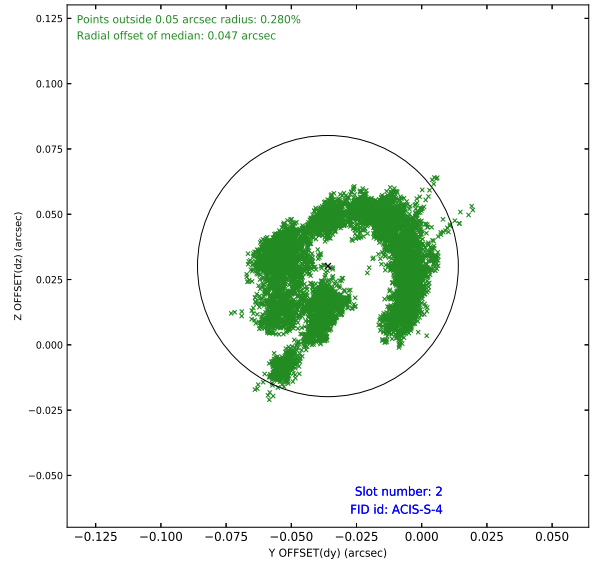
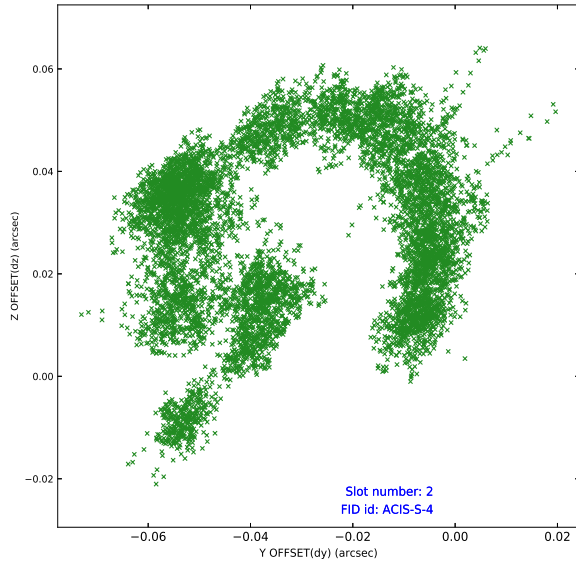
2.5.2 Slot 1



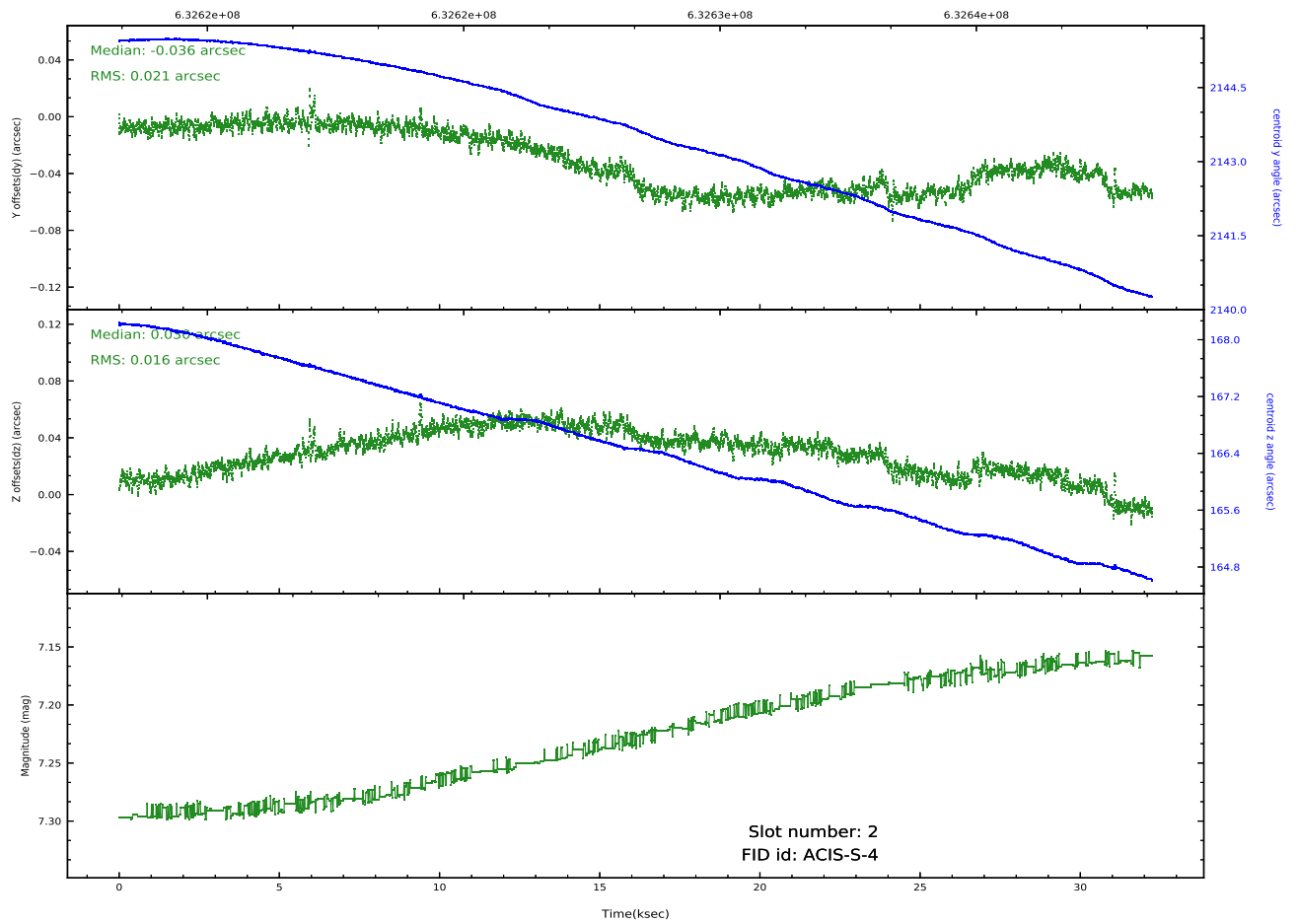
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.168700247526

A.2 Comments

The guide star in slot 4 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.