

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 21090 - L2 Version 3
Chandra X-Ray Center

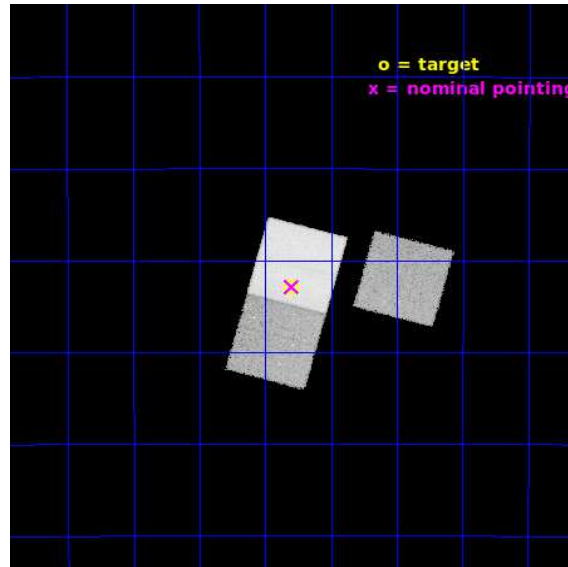
L2 Processing Date : Oct 25 2020

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 4	10
2.4.3	Slot 5	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

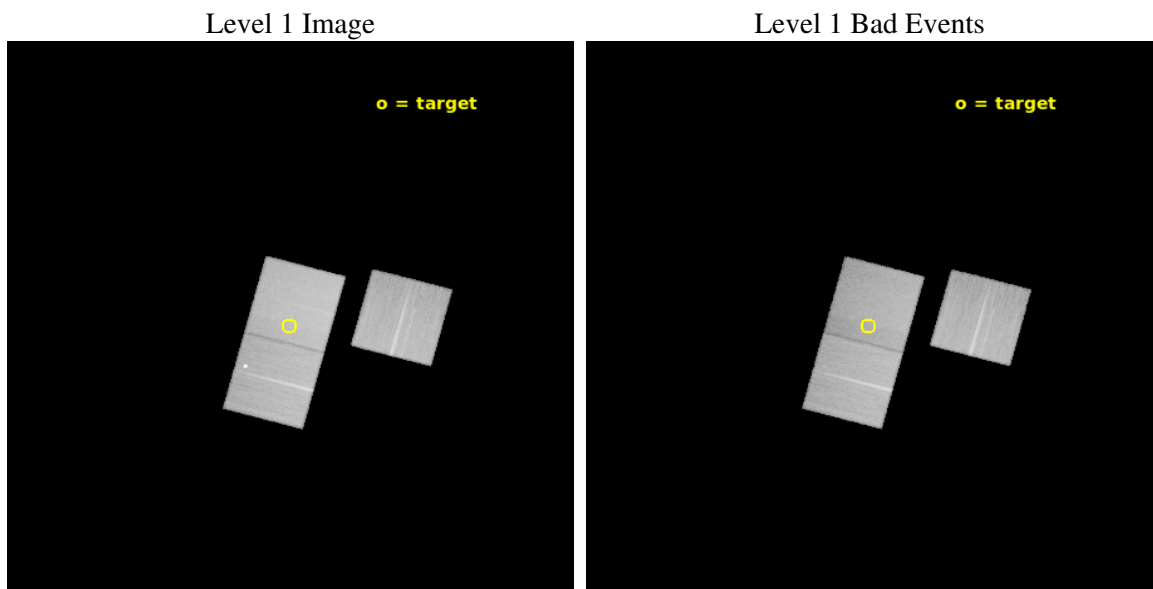
seq_num	402025	Sequence number
obs_id	21090	Observation id
title	GW170817: Long term tracking of the the X-ray light curve.	Proposa
observer	Belinda Wilkes	Principal investigator
object	GW170817	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	197.450417	Observer's specified target RA [deg]
dec_targ	-23.381472	Observer's specified target Dec [deg]
ra_nom	197.44921314318	Nominal RA [deg]
dec_nom	-23.381067339037	Nominal Dec [deg]
roll_nom	285.15758832214	Nominal Roll [deg]
revision	3	Processing version of data
ontime	46610.472566247	Sum of GTIs [s]
livetime	46001.472428038	Livetime [s]
ontime3	46594.68511498	Sum of GTIs [s]
ontime6	46610.431526303	Sum of GTIs [s]
ontime7	46610.472566247	Sum of GTIs [s]
l2events	248870	Number of level 2 events



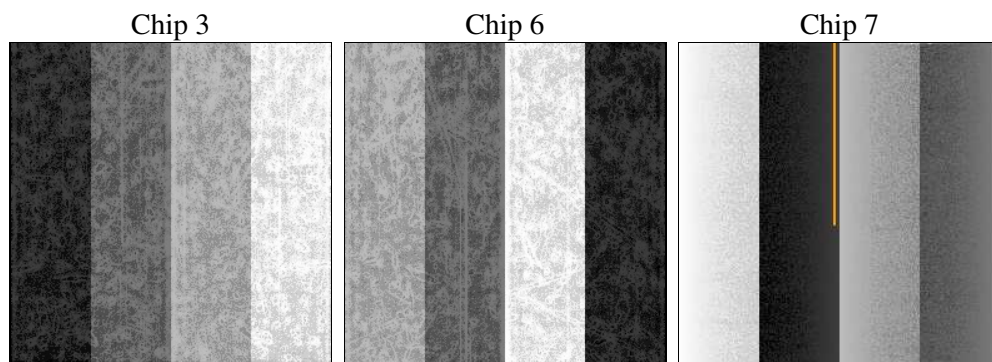
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	46500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	46610.472566247	Sum of GTIs [s]
caldsver	4.9.3	 	ontime3	46594.68511498	Sum of GTIs [s]
date	2020-10-25T21:10:55	Date and time of file creation	ontime6	46610.431526303	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	46610.472566247	Sum of GTIs [s]
			l1events	1160980	Number of level 1 events

2.1.4 Events

	ccd 3	ccd 6	ccd 7
level 1 events	347943	372081	440956
rejected events	313411	327934	252099
rejected %	90%	88%	57%

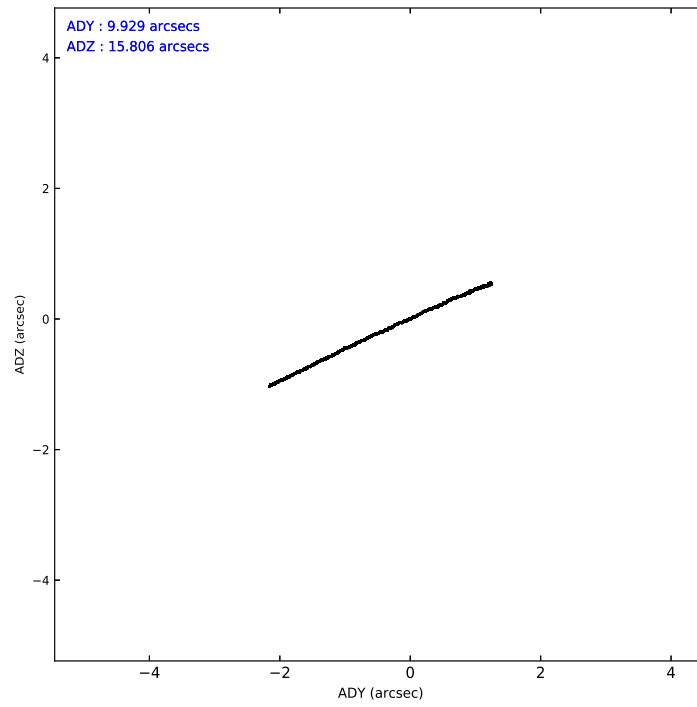
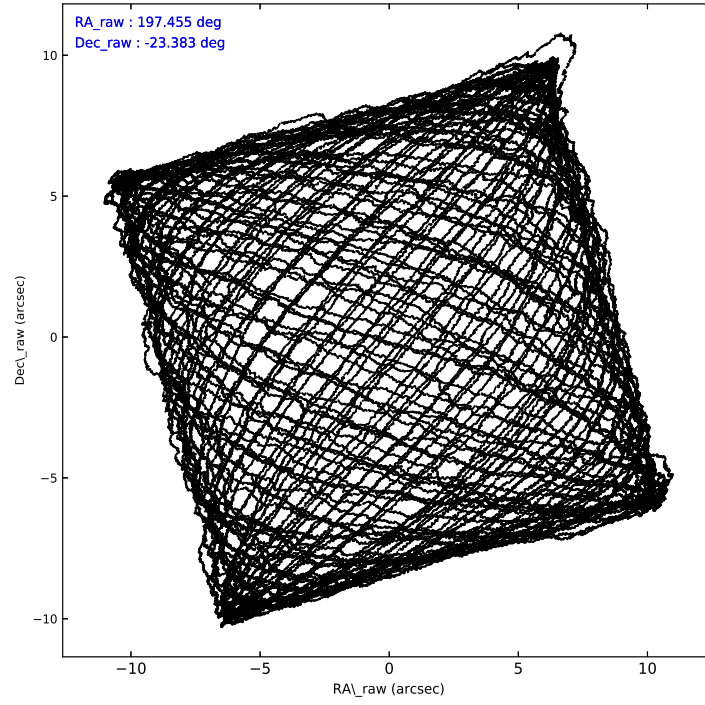
	ccd 3	ccd 6	ccd 7
grade 0 events	12016	16812	15291
	3%	4%	3%
grade 1 events	169	197	697
	0%	0%	0%
grade 2 events	7346	10497	39244
	2%	2%	8%
grade 3 events	3654	3316	14530
	1%	0%	3%
grade 4 events	3675	3261	14087
	1%	0%	3%
grade 5 events	15191	14423	42164
	4%	3%	9%
grade 6 events	7844	10267	105727
	2%	2%	23%
grade 7 events	298048	313308	209216
	85%	84%	47%

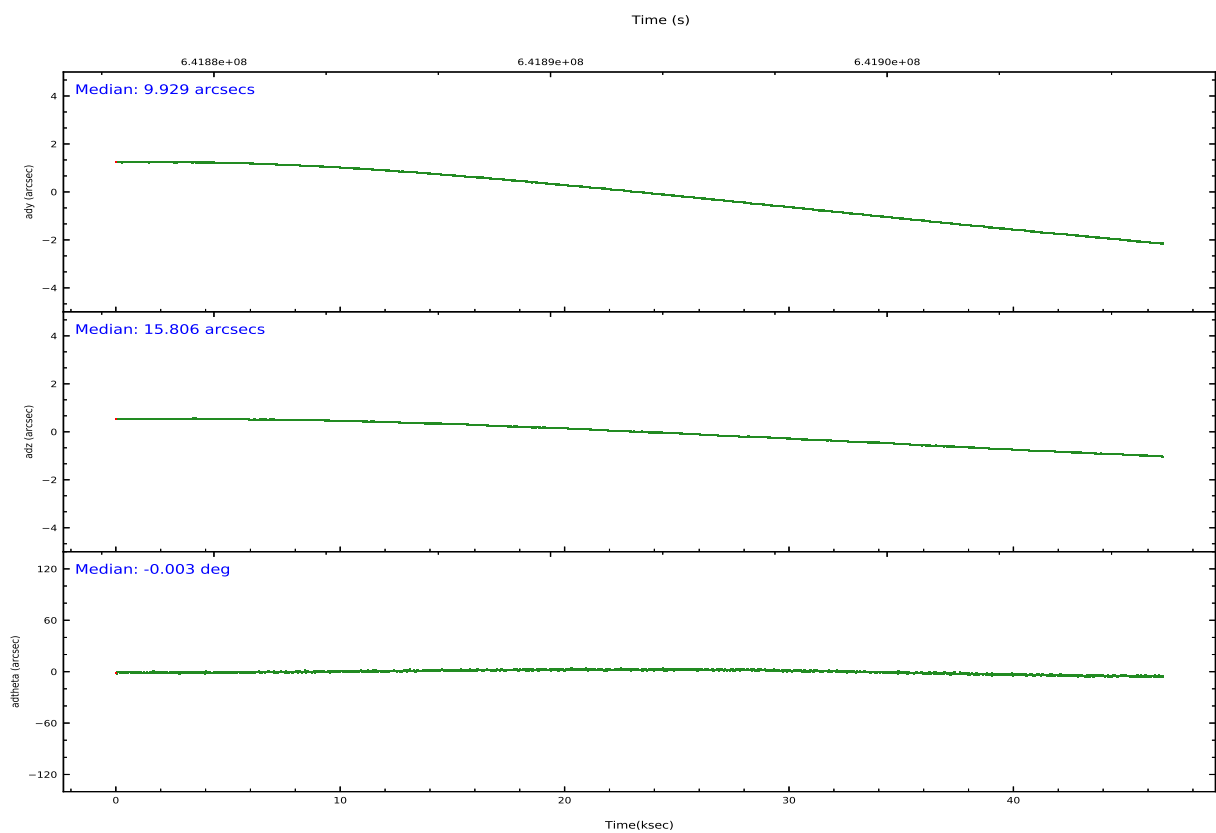
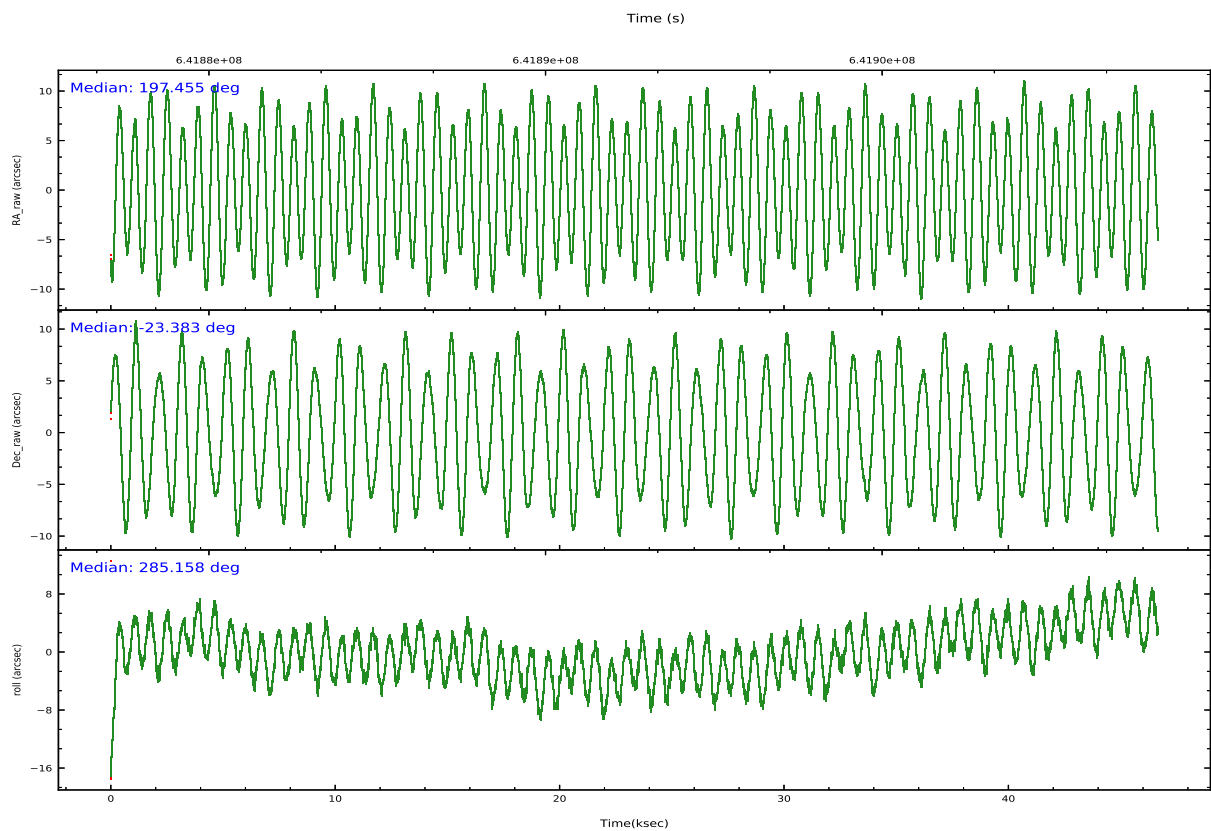
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-367	ACIS-367
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	197.433360	197.44921314318
[deg] Pointing Dec	-23.363594	-23.381067339037
[deg] Pointing Roll	284.993230	285.15758832214
[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)	641870799.184000	641869367.1462801
Observation start date	2018-05-05T01:25:30	2018-05-05T01:02:47
[s] Observation end time (MET)	641917299.184000	641918288.34916
Observation end date	2018-05-05T14:20:30	2018-05-05T14:38:08
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	O1	N
CCD I3 on	O2	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O3	Y
CCD S3 on	Y	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
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



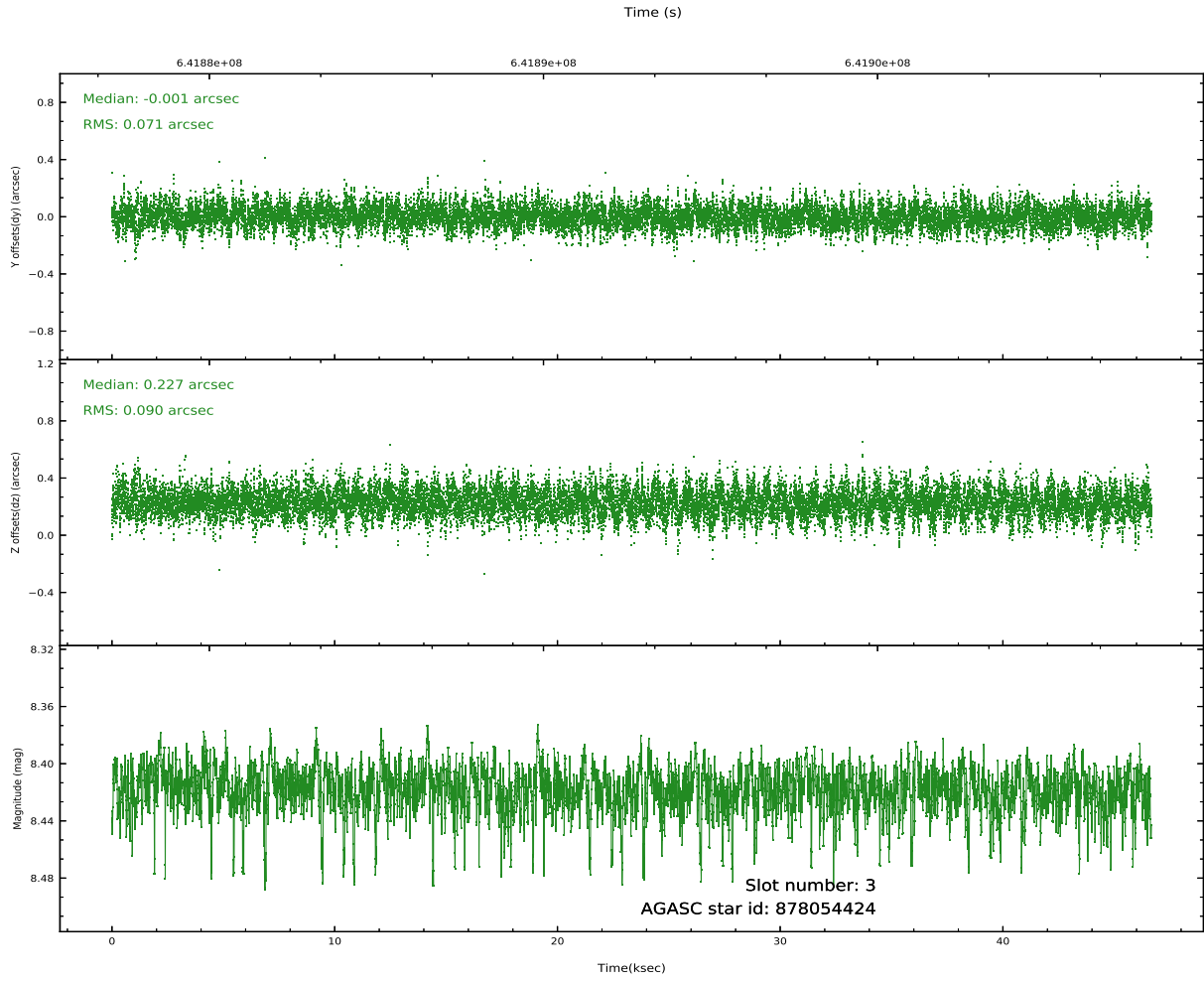
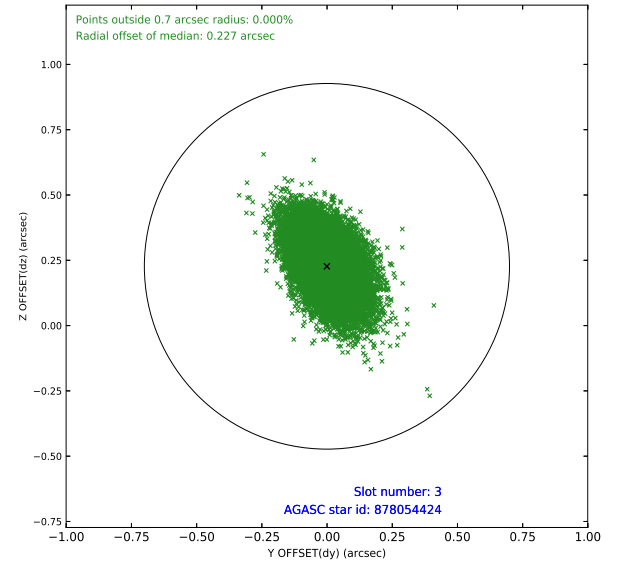
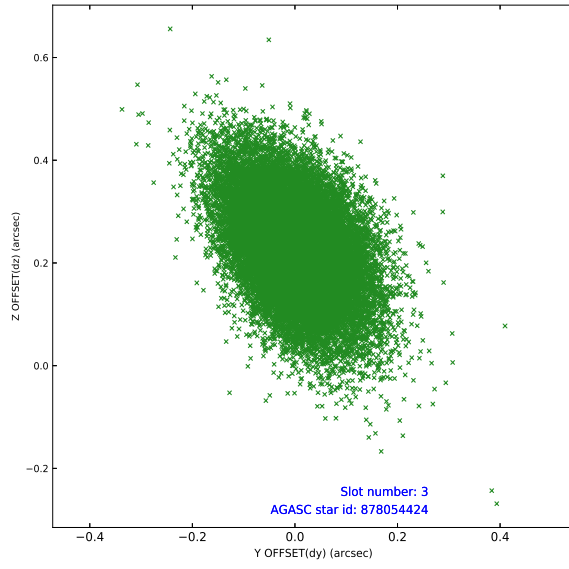


Slot Statistics

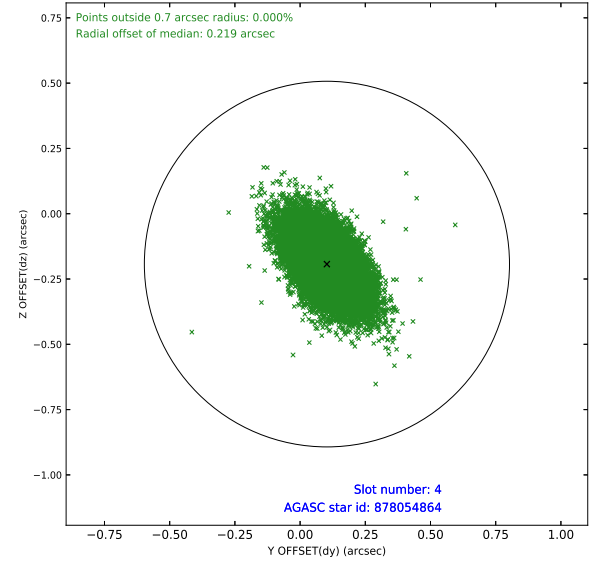
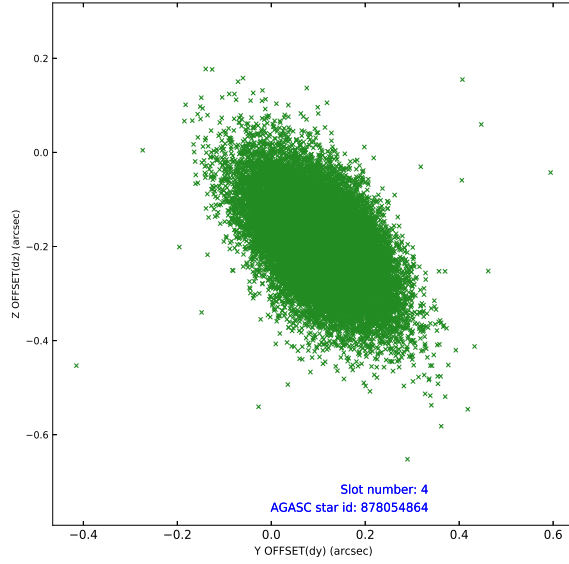
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.22	11383	1.000	0.120	-0.119	0.022	0.033	0.000000	0.000000	933.47	-1732
1	FID		ACIS-S-2	7.11	11383	1.000	-0.091	0.043	0.024	0.040	0.000000	0.000000	-762.64	-1737
2	FID		ACIS-S-6	7.37	11382	1.000	-0.053	0.077	0.016	0.021	0.000000	0.000000	399.05	808
3	GUIDE	used	878054424	8.42	22751	1.000	-0.001	0.227	0.119	0.206	197.311680	-23.210058	-636.84	-245
4	GUIDE	used	878054864	8.15	22756	1.000	0.103	-0.193	0.118	0.209	197.588589	-23.624647	1041.11	251
5	GUIDE	used	878061480	7.94	22728	1.000	-0.169	-0.098	0.103	0.185	197.360027	-22.852260	-1840.49	240
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	878058424	9.23	22746	1.000	0.063	0.070	0.167	0.275	197.645163	-24.009629	2427.46	70

2.4 Star Slots

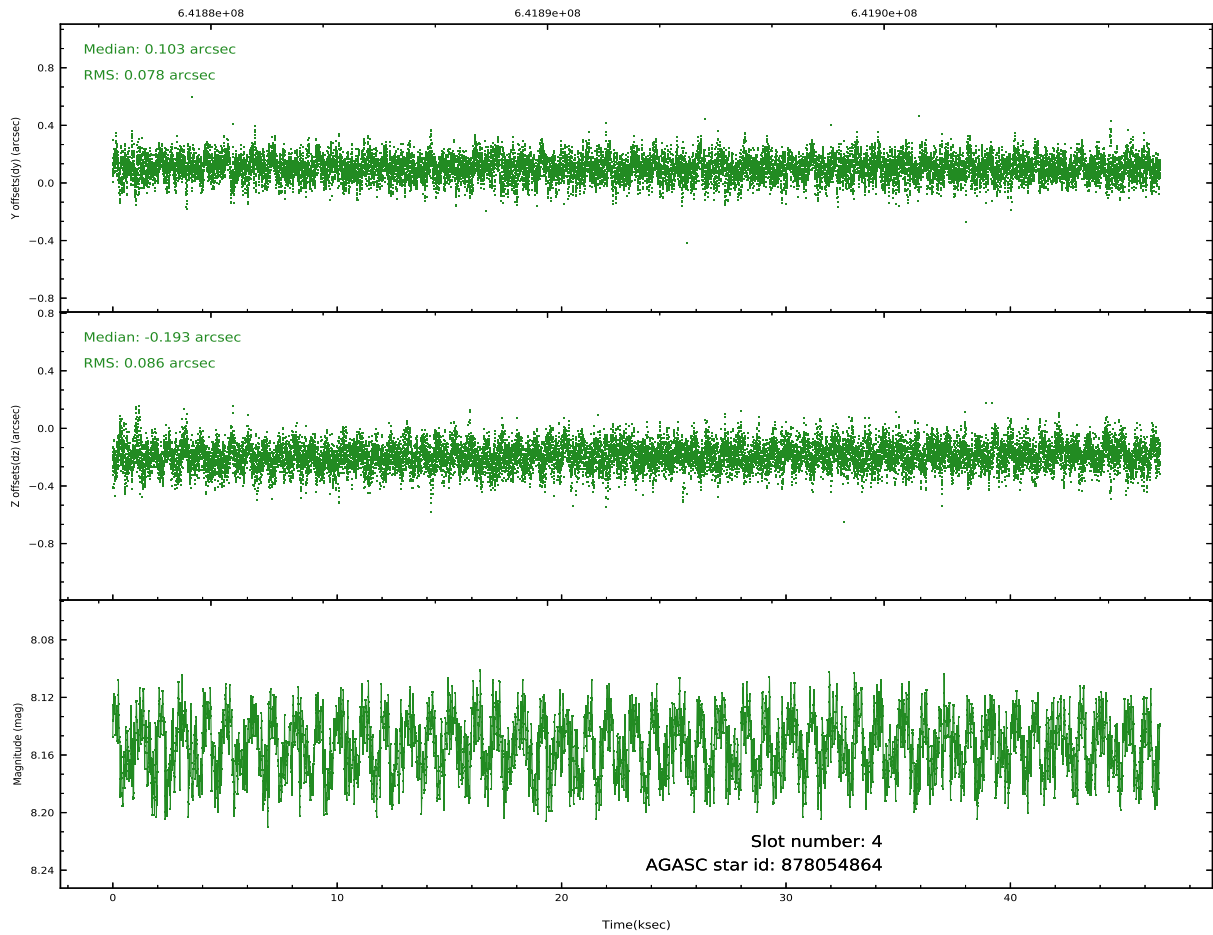
2.4.1 Slot 3



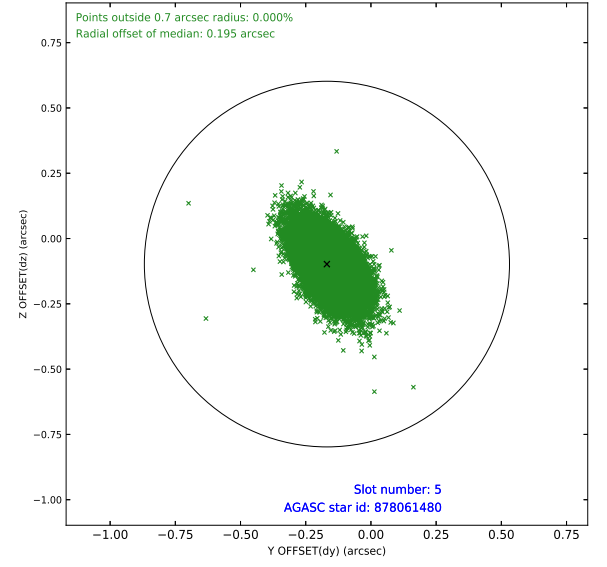
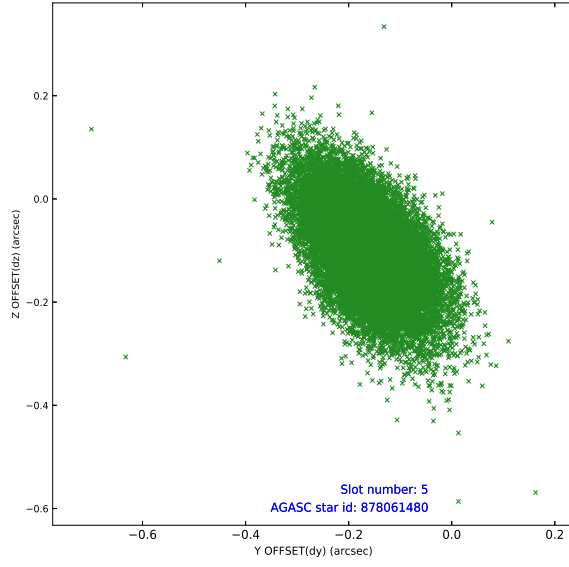
2.4.2 Slot 4



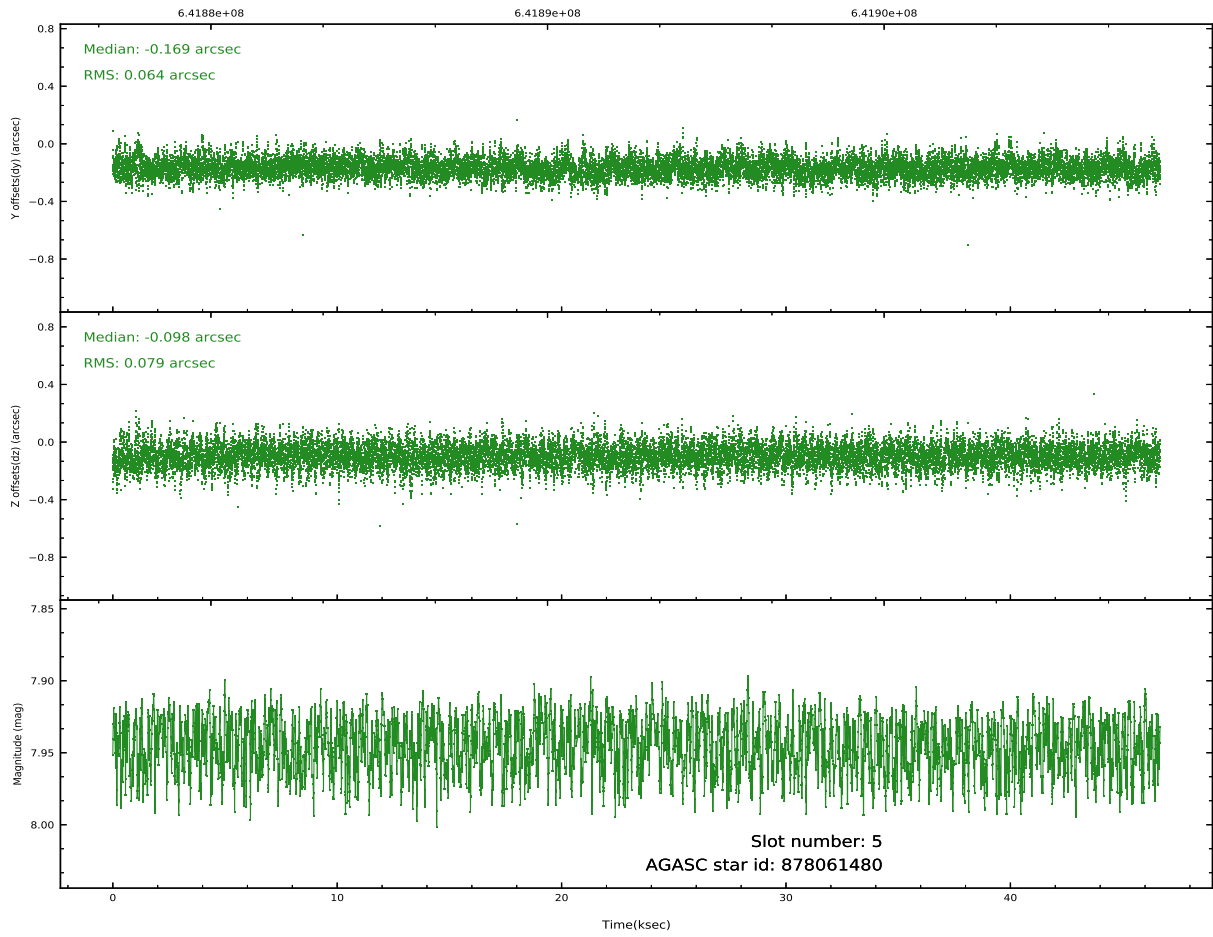
Time (s)



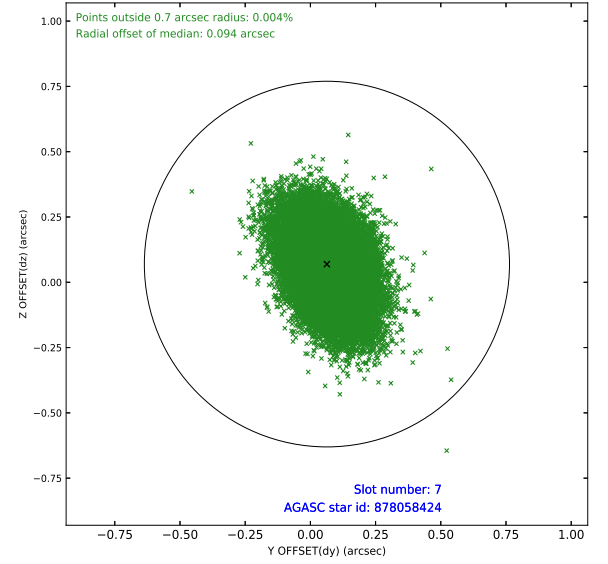
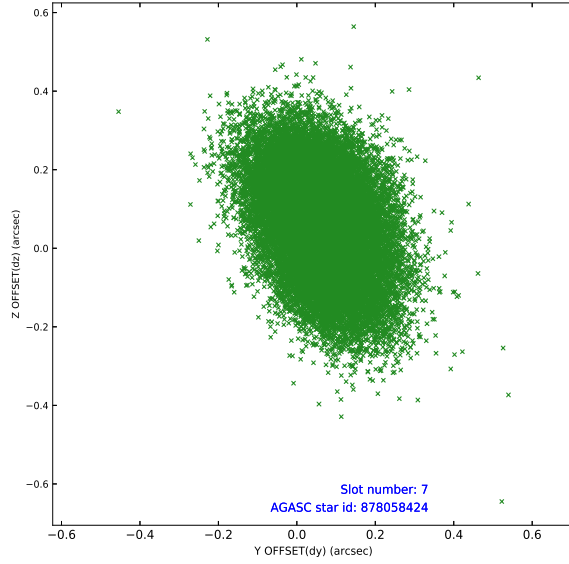
2.4.3 Slot 5



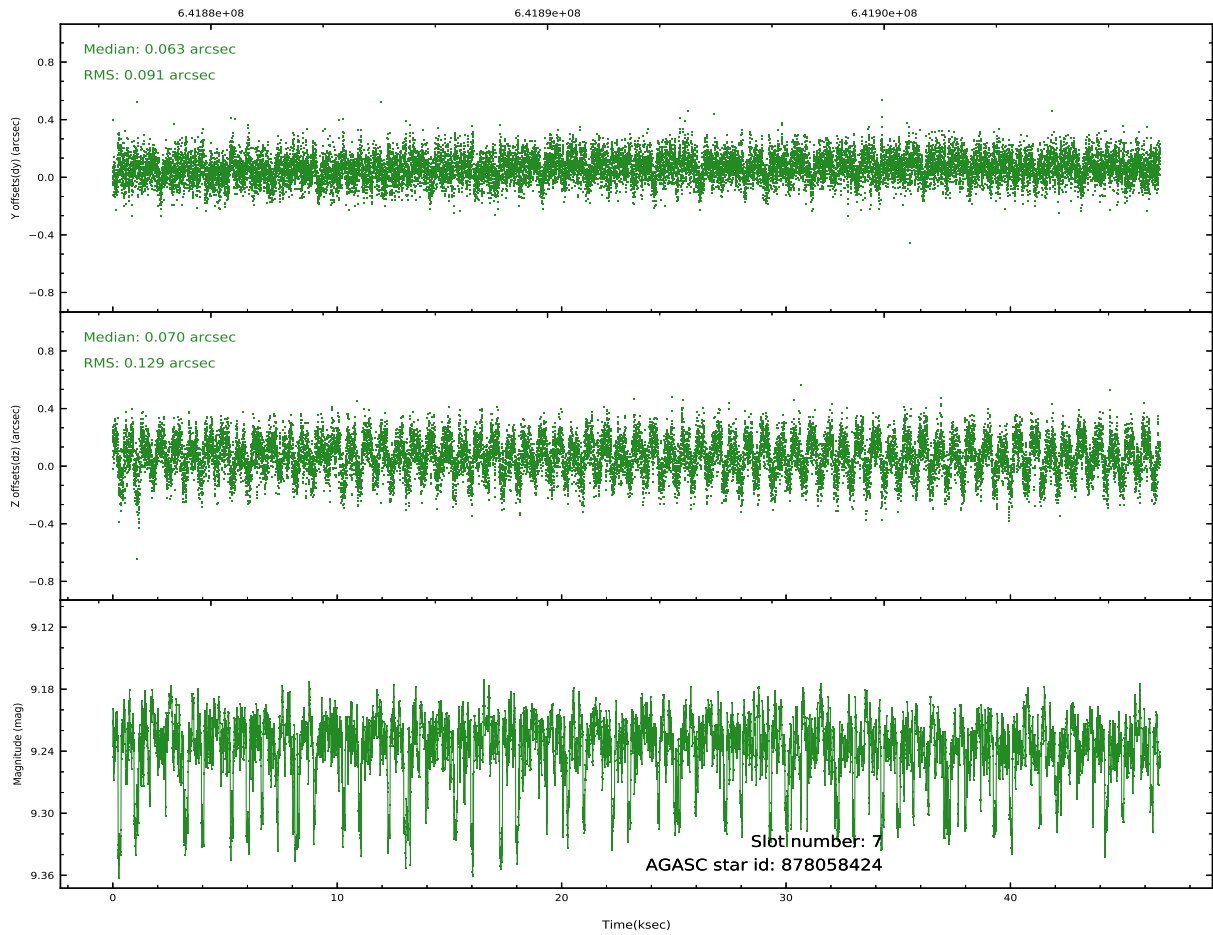
Time (s)



2.4.4 Slot 7

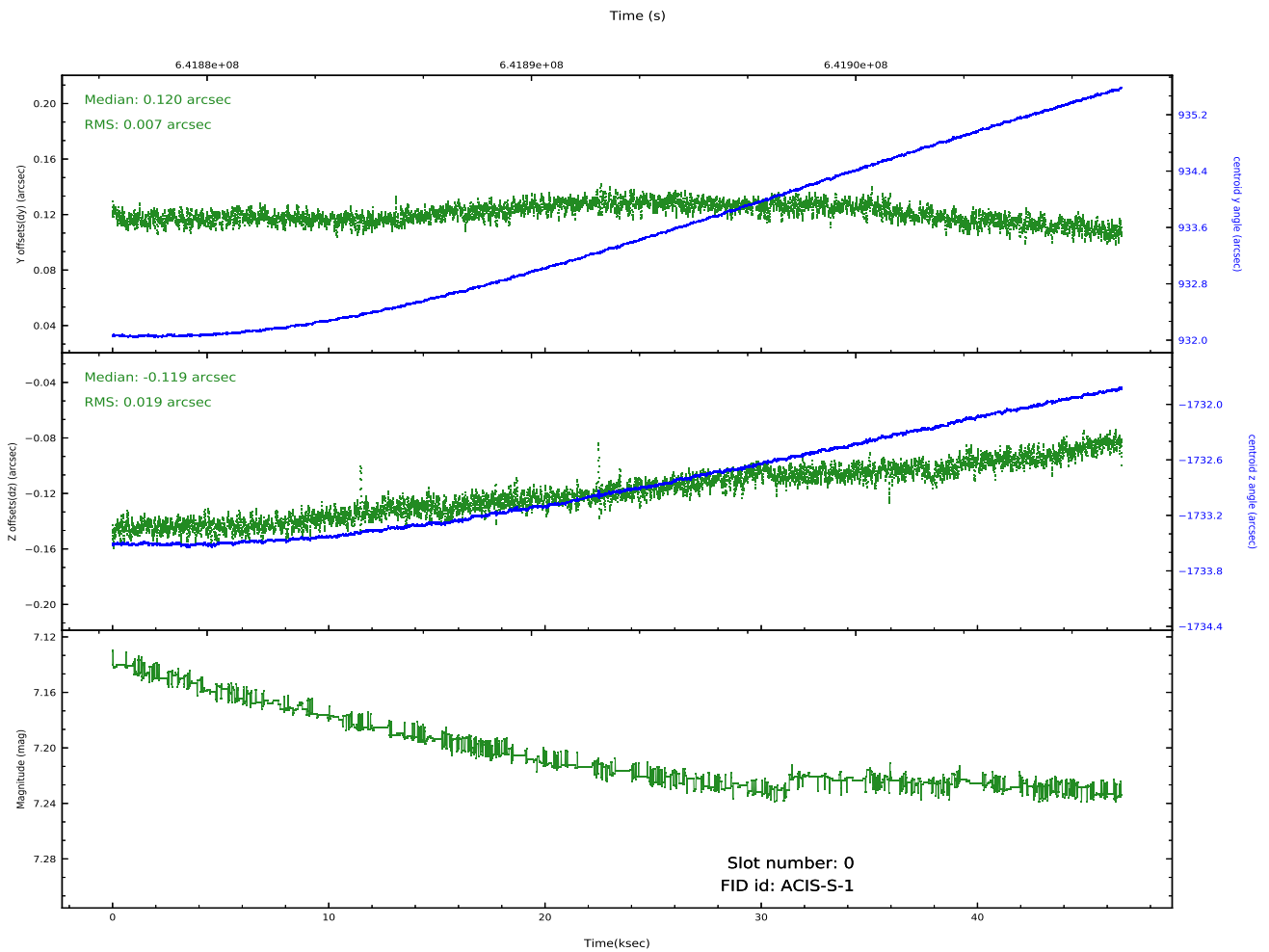
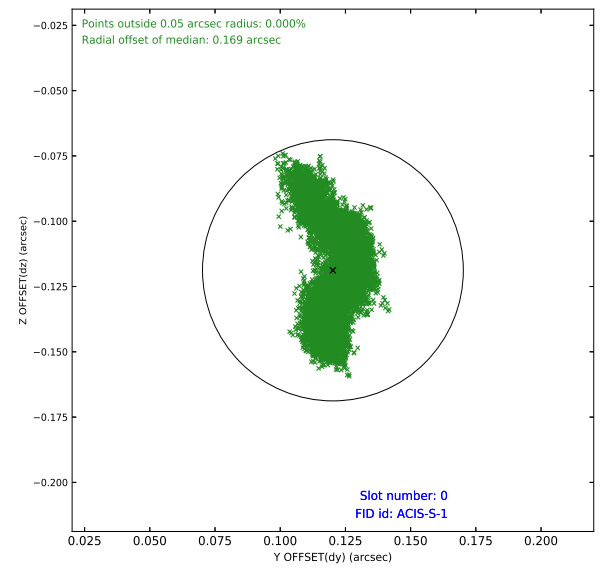
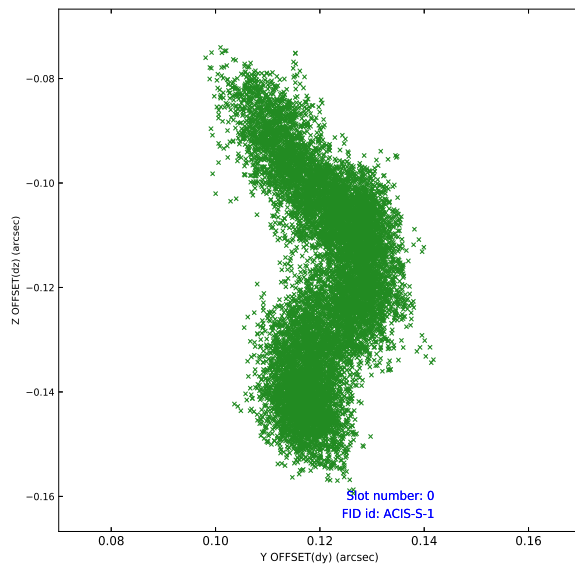


Time (s)

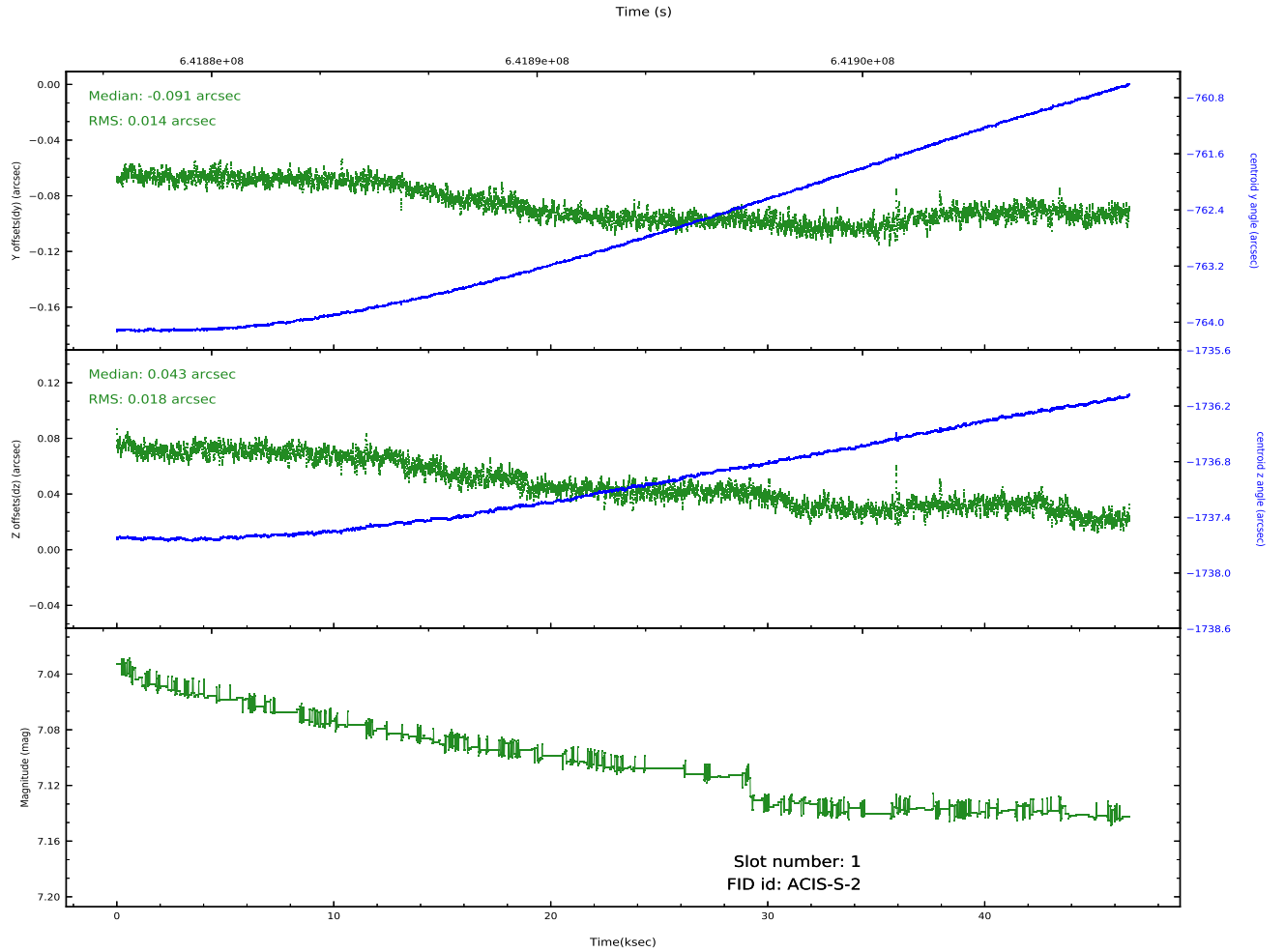
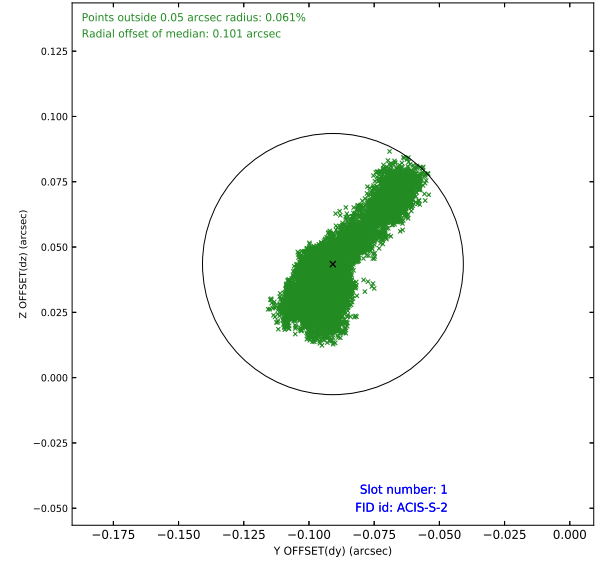
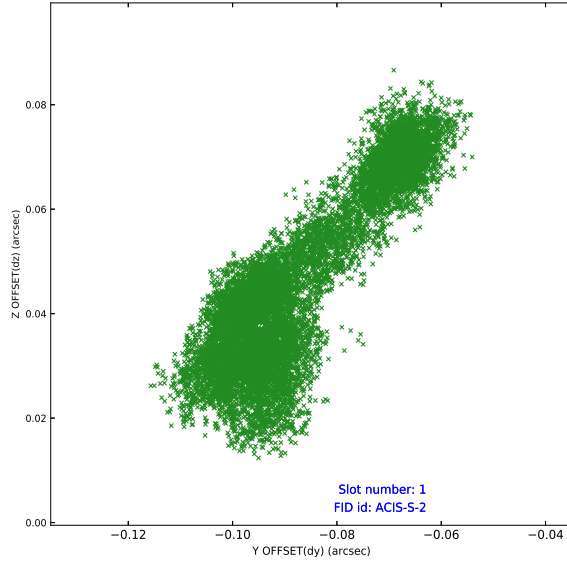


2.5 FID Slots

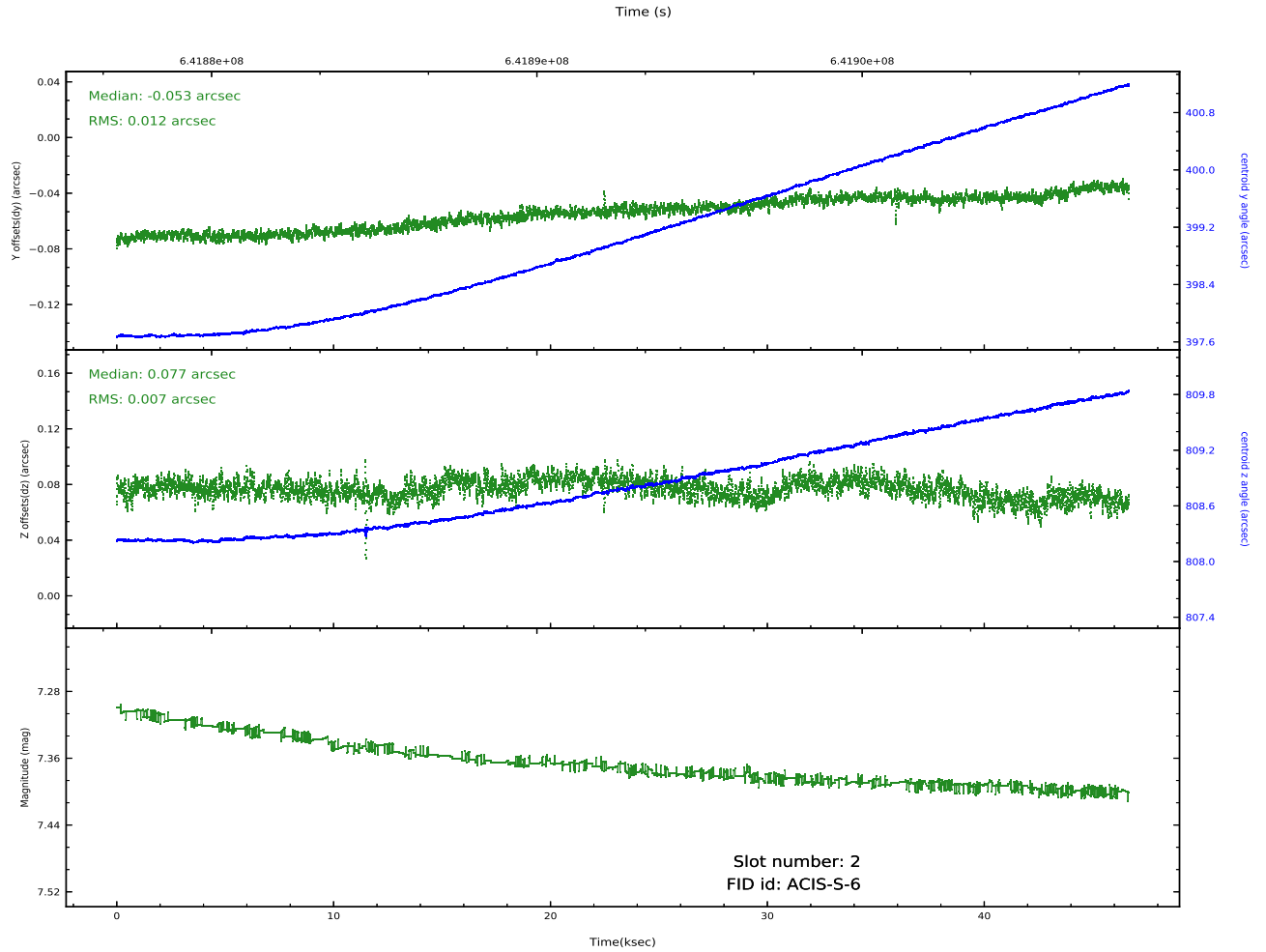
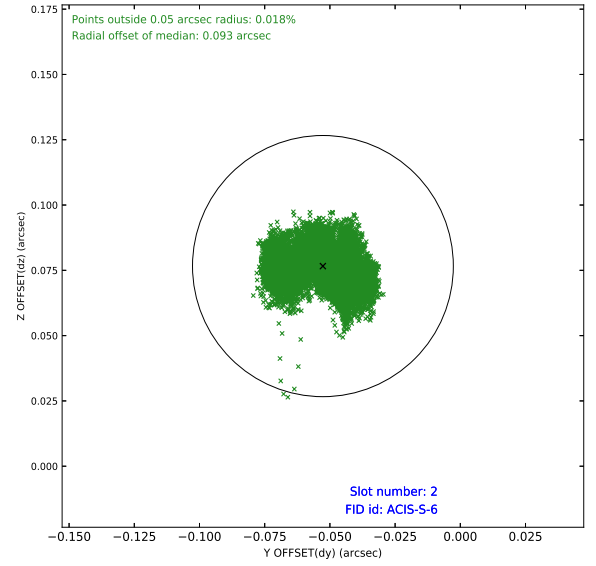
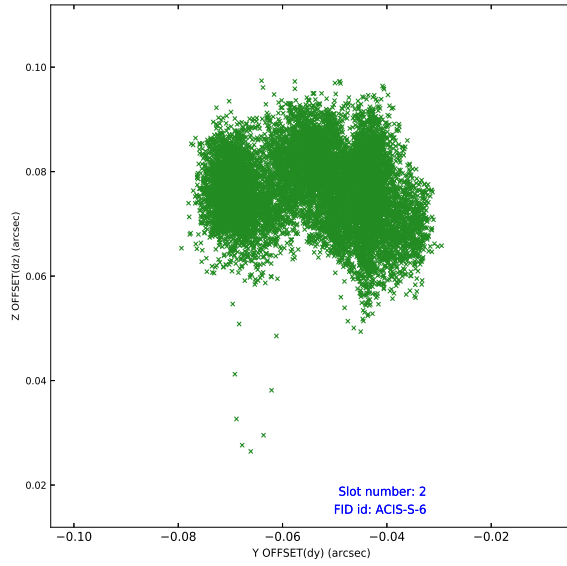
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.610472561479

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.

===

One optional chip was dropped.