

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22260 - L2 Version 1
Chandra X-Ray Center

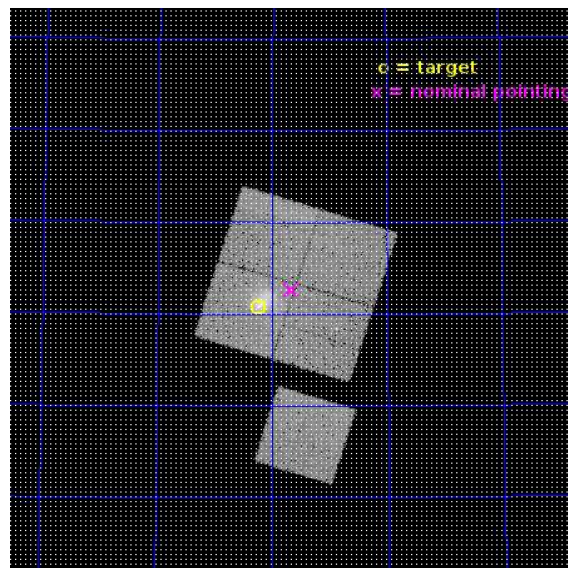
L2 Processing Date : Jun 22 2019

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1 Front

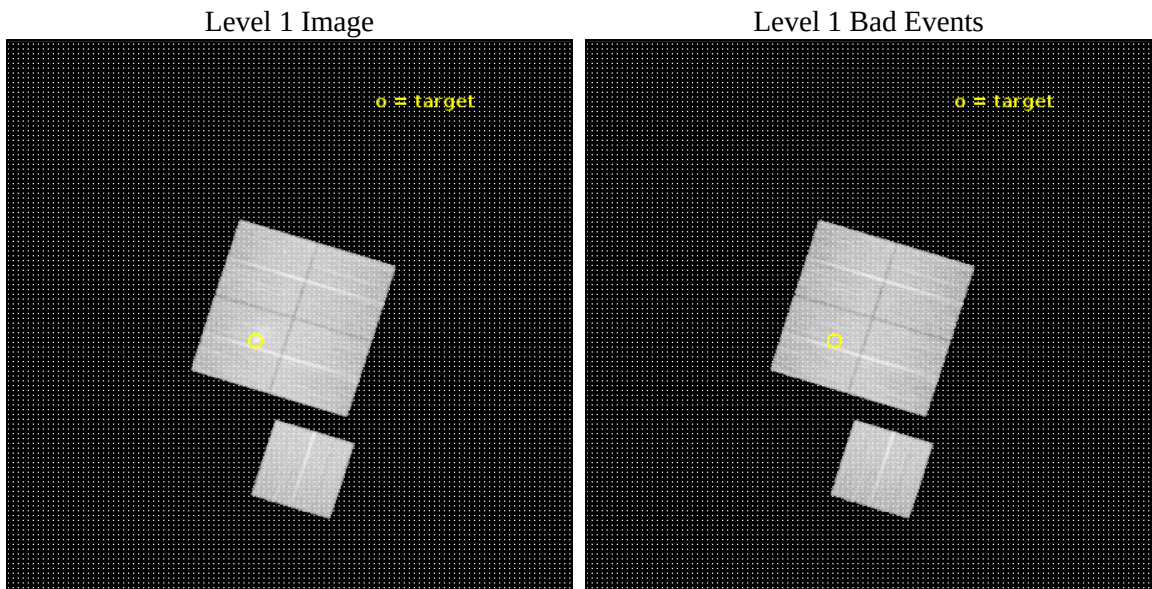
seq_num	801762	Sequence number
obs_id	22260	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.91676110835	Nominal RA [deg]
dec_nom	66.377818118832	Nominal Dec [deg]
roll_nom	197.34105495461	Nominal Roll [deg]
revision	1	Processing version of data
ontime	26070.21308434	Sum of GTIs [s]
livetime	25729.586557782	Livetime [s]
ontime0	26070.08996439	Sum of GTIs [s]
ontime1	26041.86220181	Sum of GTIs [s]
ontime2	26067.03108418	Sum of GTIs [s]
ontime3	26070.21308434	Sum of GTIs [s]
ontime6	26066.907963872	Sum of GTIs [s]
l2events	107270	Number of level 2 events



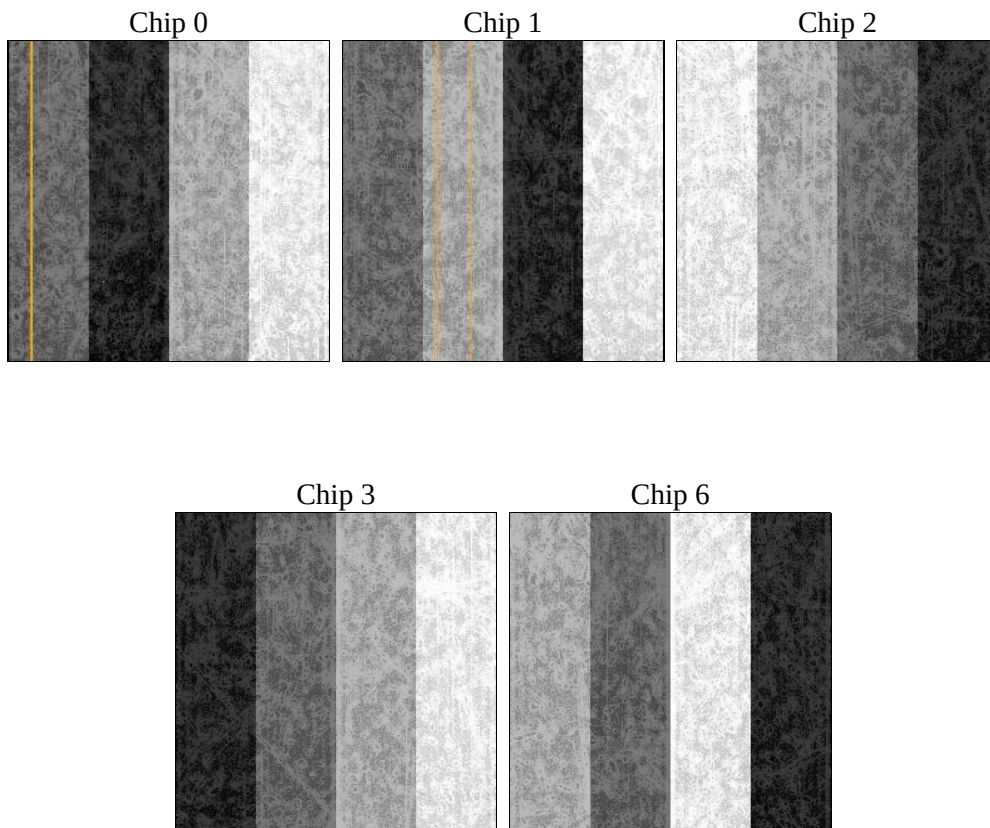
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	26070.21308434	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	26070.08996439	Sum of GTIs [s]
date	2019-06-23T00:55:16	Date and time of file creation	ontime1	26041.86220181	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	26067.03108418	Sum of GTIs [s]
			ontime3	26070.21308434	Sum of GTIs [s]
			ontime6	26066.907963872	Sum of GTIs [s]
			l1events	990500	Number of level 1 events

2.1.4 Events

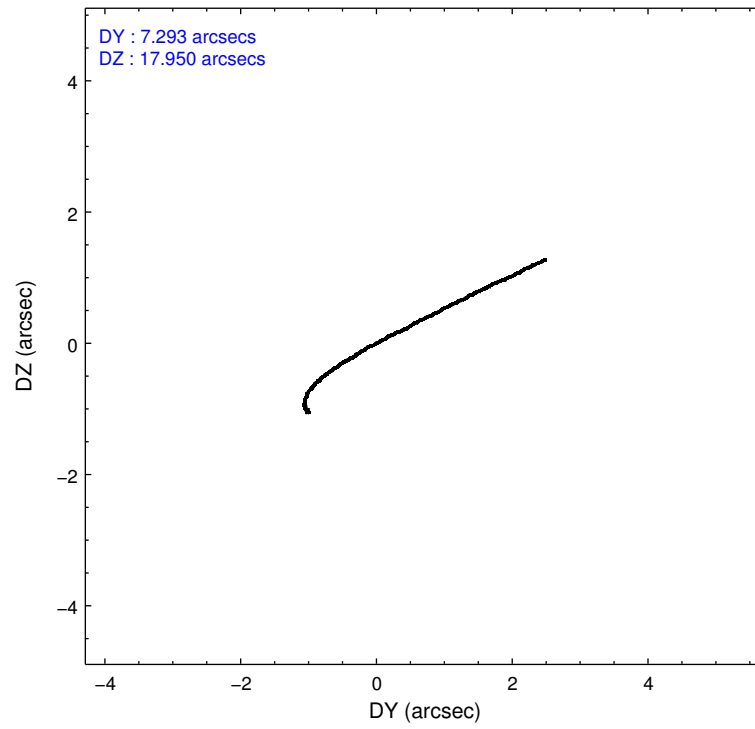
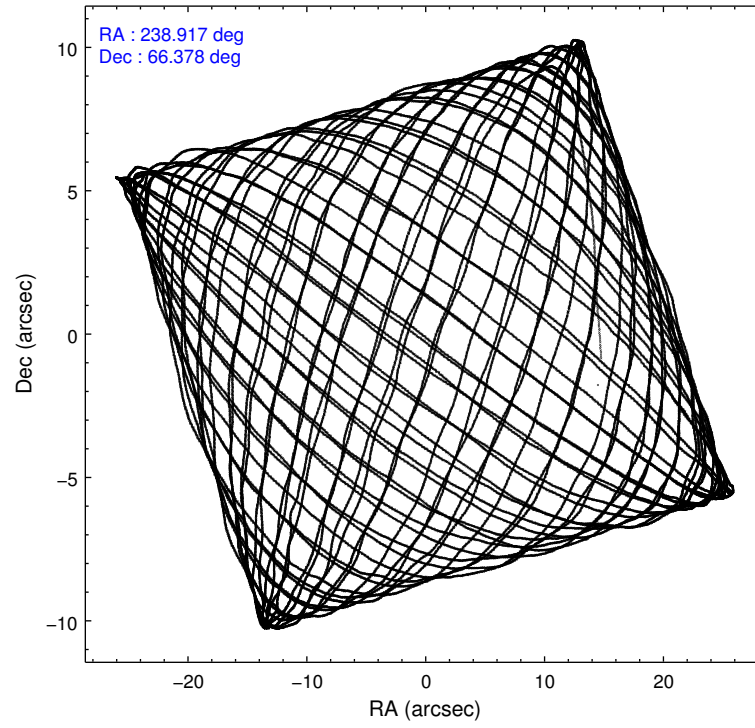
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	182587	189986	206035	209300	202592
rejected events	159762	164727	183687	176187	180208
rejected %	87%	86%	89%	84%	88%

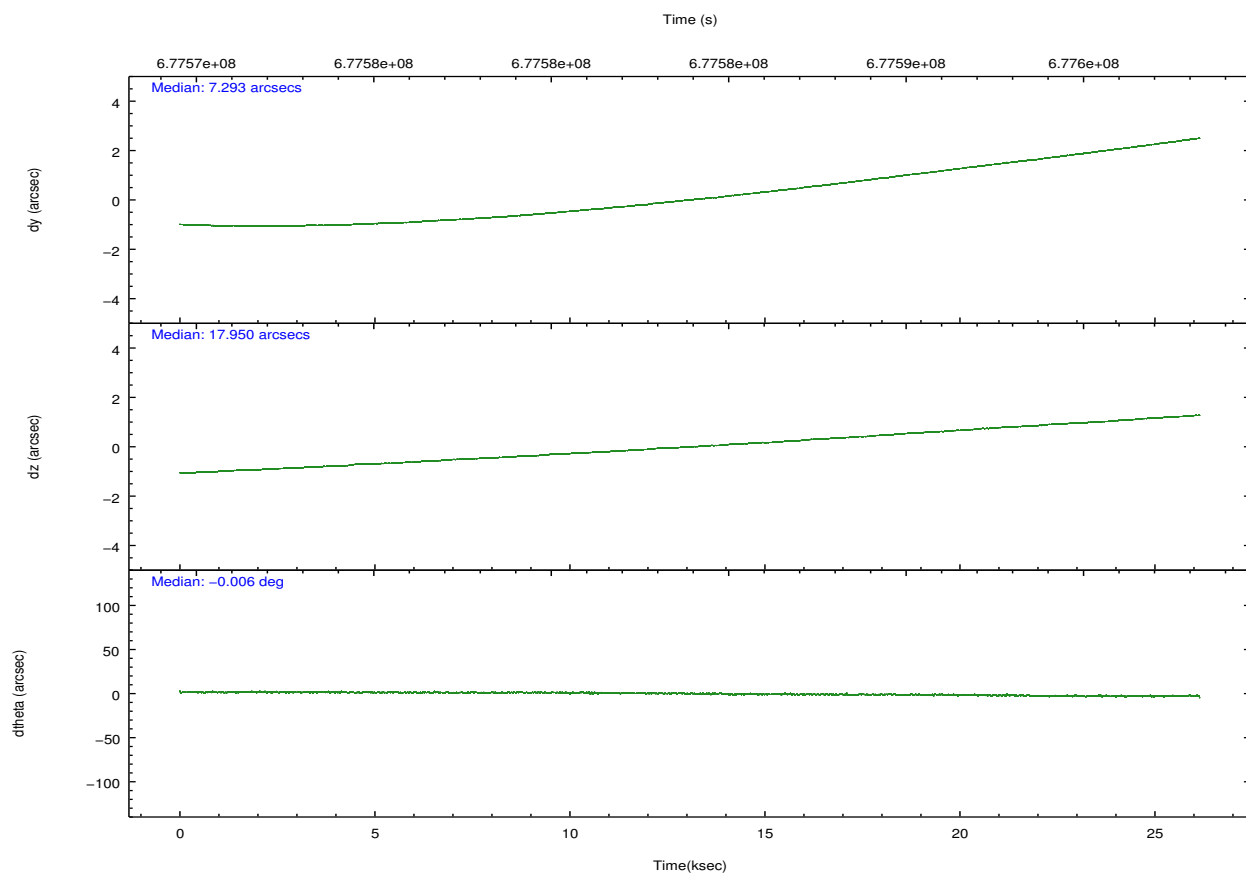
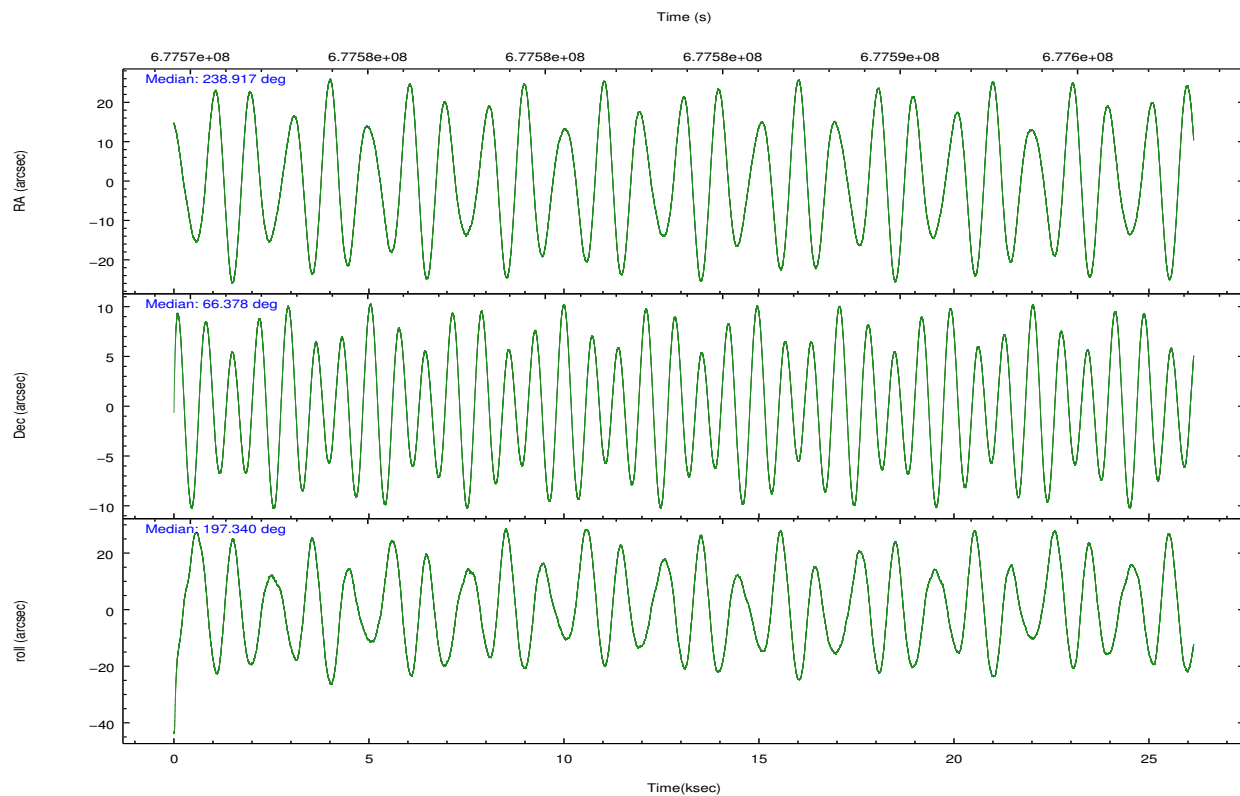
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	7710	8543	7791	16934	7170
	4%	4%	3%	8%	3%
grade 1 events	103	112	129	167	114
	0%	0%	0%	0%	0%
grade 2 events	5823	6601	5732	6013	5392
	3%	3%	2%	2%	2%
grade 3 events	2407	2257	2185	2633	2163
	1%	1%	1%	1%	1%
grade 4 events	2159	2198	2229	2605	2210
	1%	1%	1%	1%	1%
grade 5 events	8622	8904	8373	9849	9314
	4%	4%	4%	4%	4%
grade 6 events	4730	5664	4414	4930	5451
	2%	2%	2%	2%	2%
grade 7 events	151033	155707	175182	166169	170778
	82%	81%	85%	79%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	238.963259	238.9167611083459	CCD I2 on	Y	Y
[deg] Pointing Dec	66.398165	66.37781811883193	CCD I3 on	Y	Y
[deg] Pointing Roll	197.089782	197.3410549546122	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	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	677570960.184000	677569957.91512	CCD S5 on	N	N
Observation start date	2019-06-22T06:08:11	2019-06-22T05:52:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	677596960.184000	677597681.0917799	On-chip summing requested	N	N
Observation end date	2019-06-22T13:21:31	2019-06-22T13:34:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



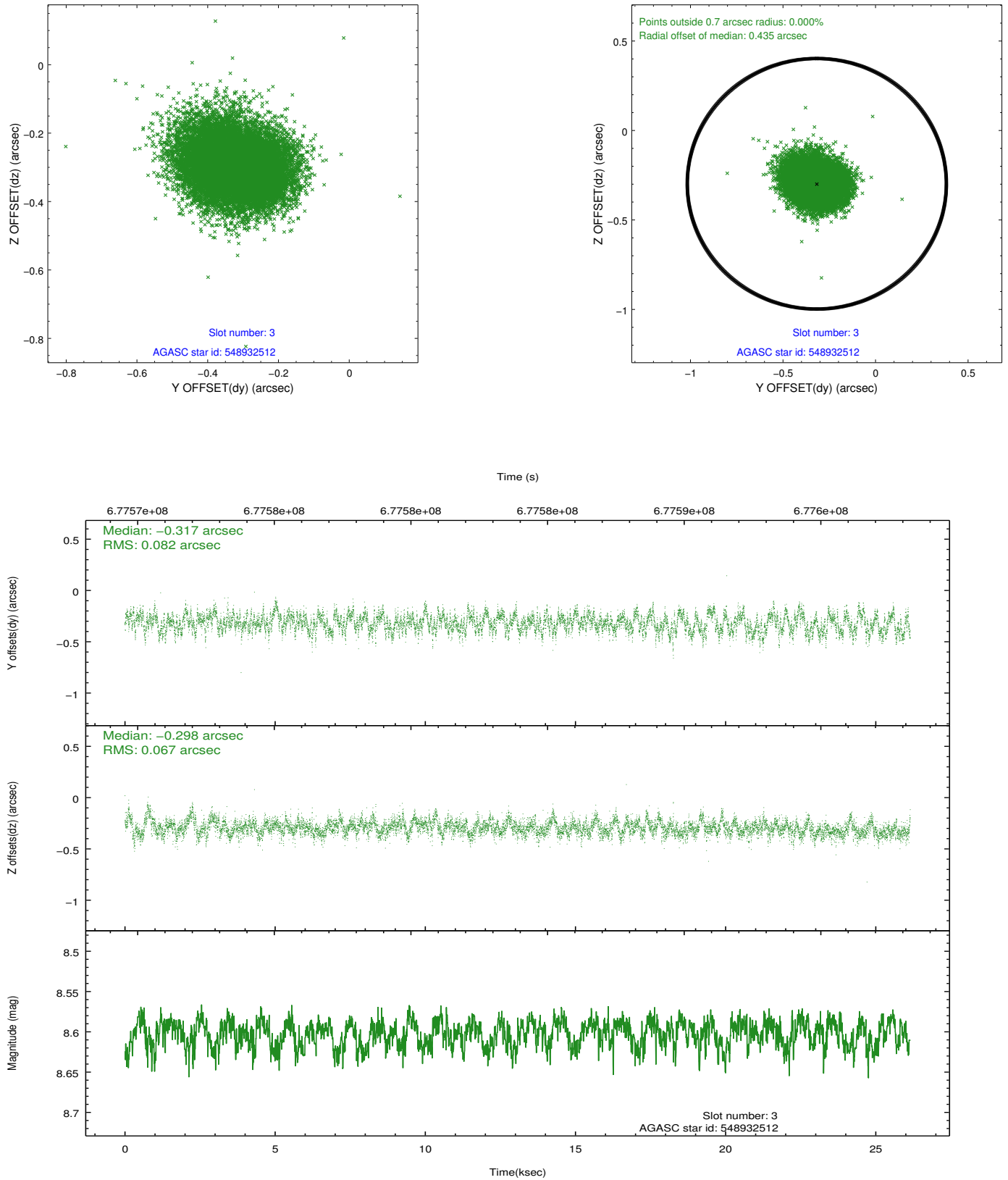


Slot Statistics

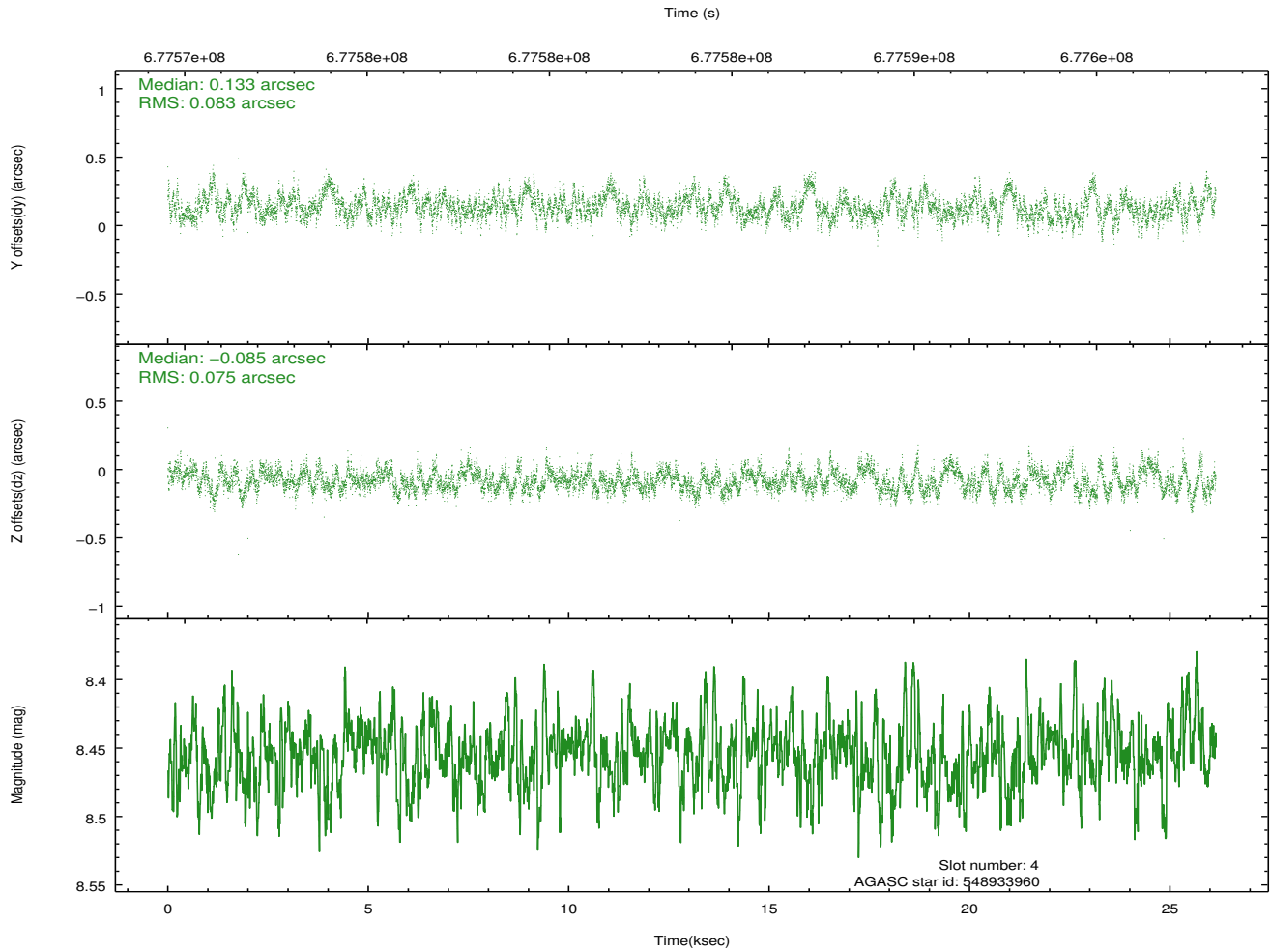
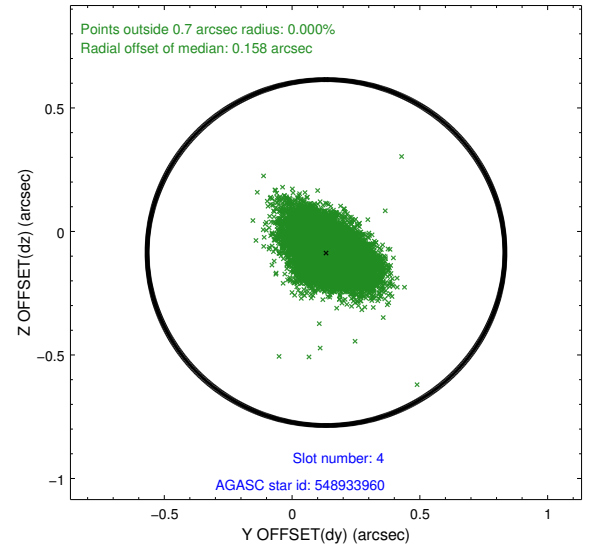
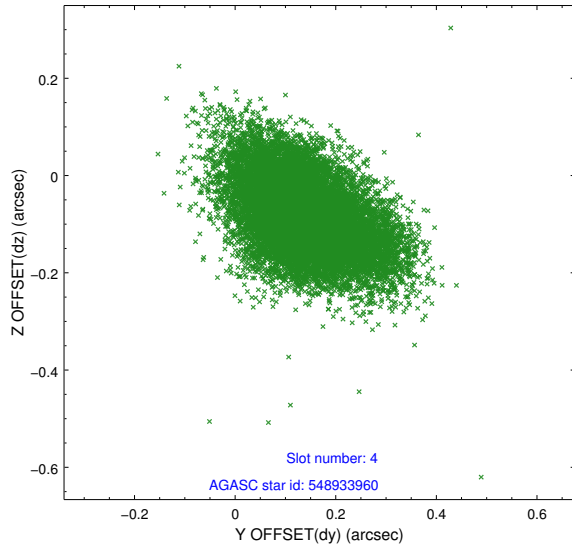
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.19	6378	1.000	0.119	-0.071	0.046	0.074	0.000000	0.000000	932.31	-841
1	FID		ACIS-I-5	7.15	6378	1.000	-0.440	0.053	0.017	0.028	0.000000	0.000000	-1816.43	1055
2	FID		ACIS-I-6	7.15	6378	1.000	0.229	0.090	0.031	0.065	0.000000	0.000000	397.68	1700
3	GUIDE	used	548932512	8.60	12749	1.000	-0.317	-0.298	0.113	0.180	239.727627	66.054972	-706.62	1502
4	GUIDE	used	548933960	8.45	12751	1.000	0.133	-0.085	0.117	0.197	237.671184	66.428675	1740.91	-668
5	GUIDE	used	548937184	9.87	12694	1.000	0.035	0.053	0.195	0.332	238.771821	66.565432	85.31	-656
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	549849072	9.12	12742	1.000	0.148	0.327	0.122	0.214	240.420863	66.802816	-2409.96	-807

2.4 Star Slots

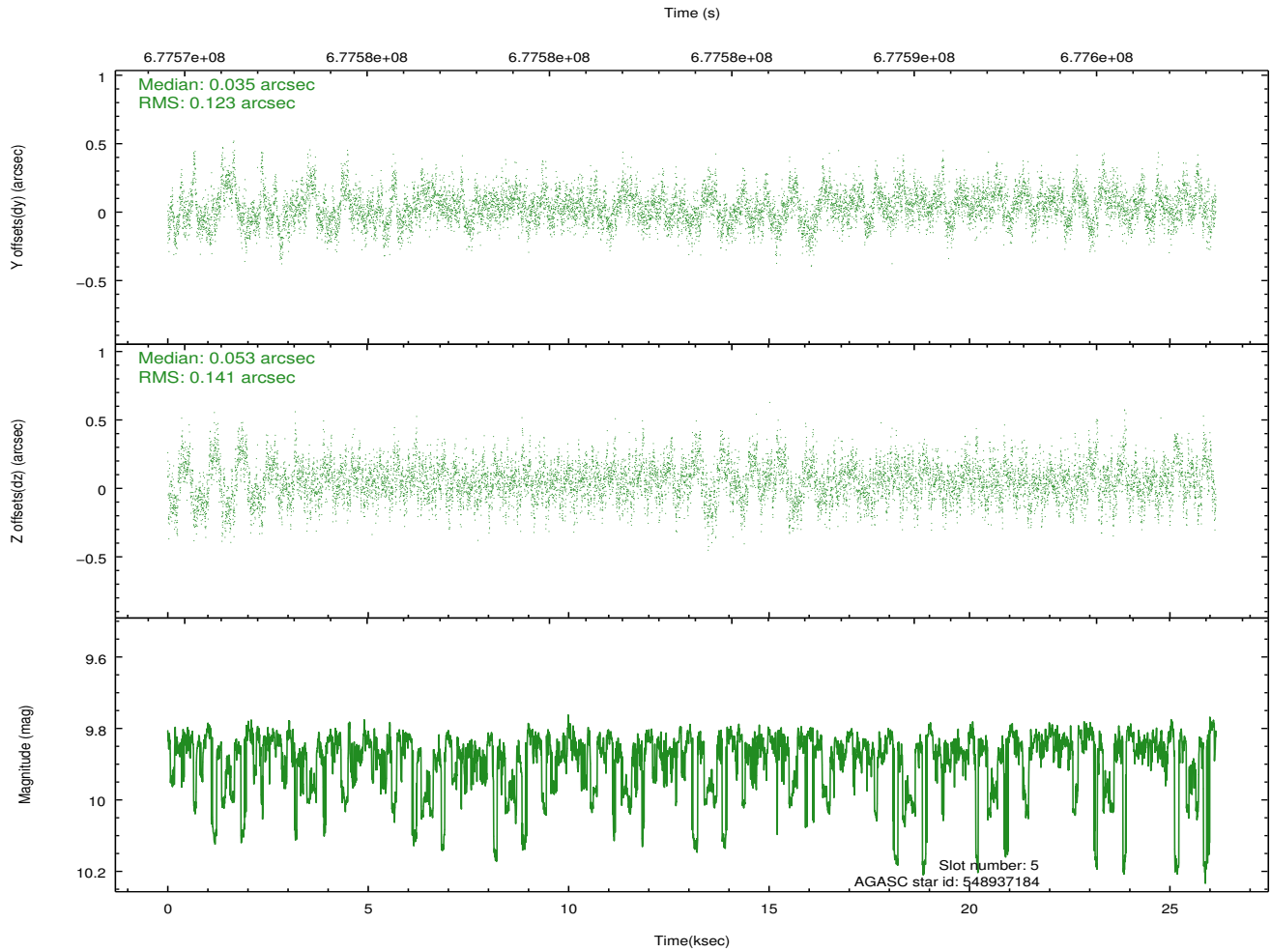
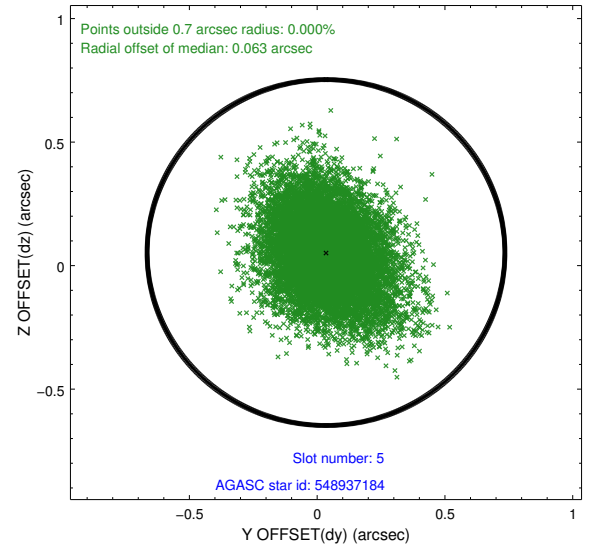
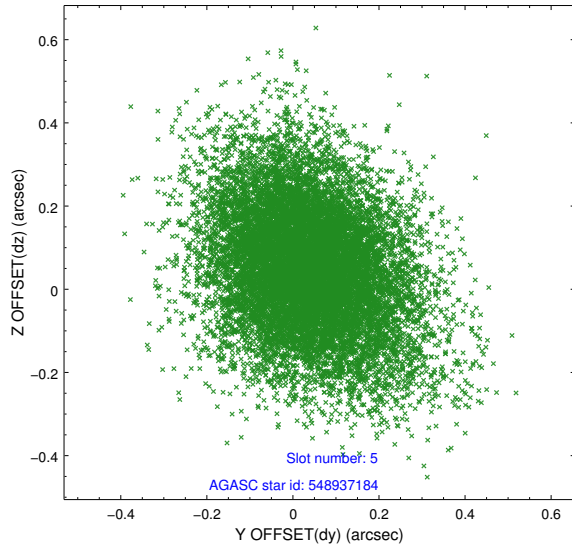
2.4.1 Slot 3



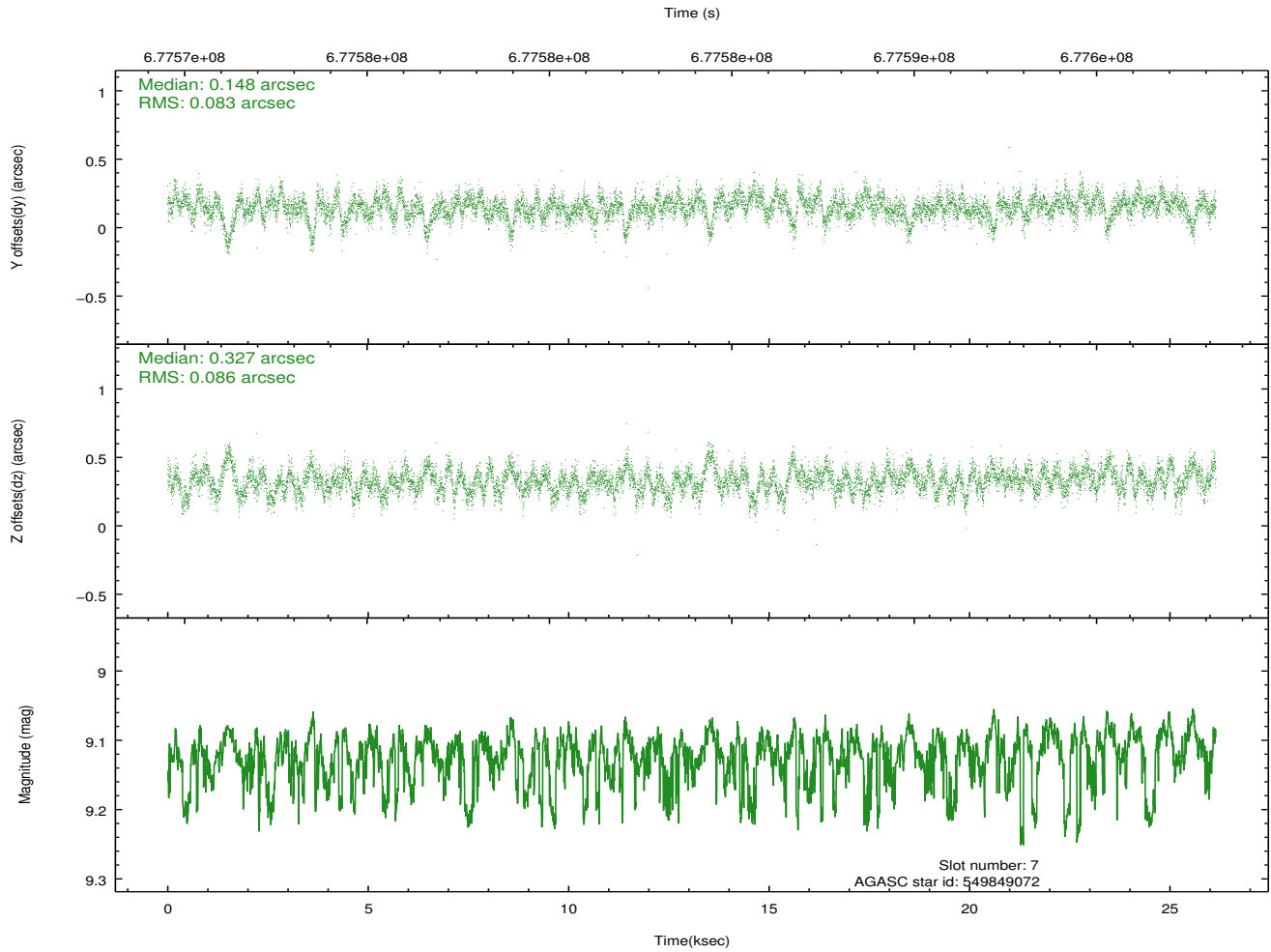
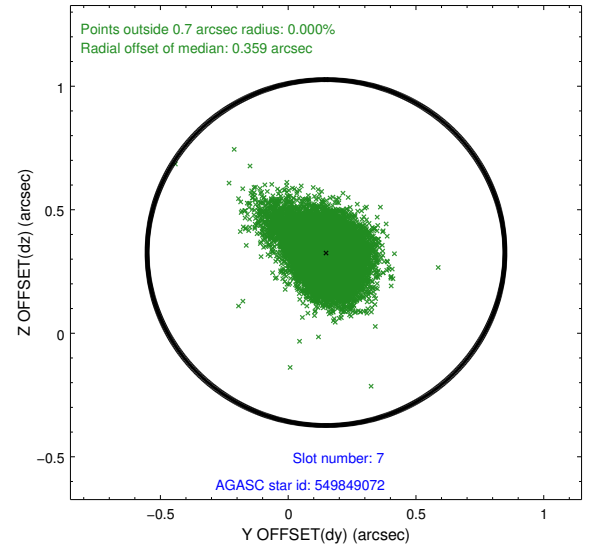
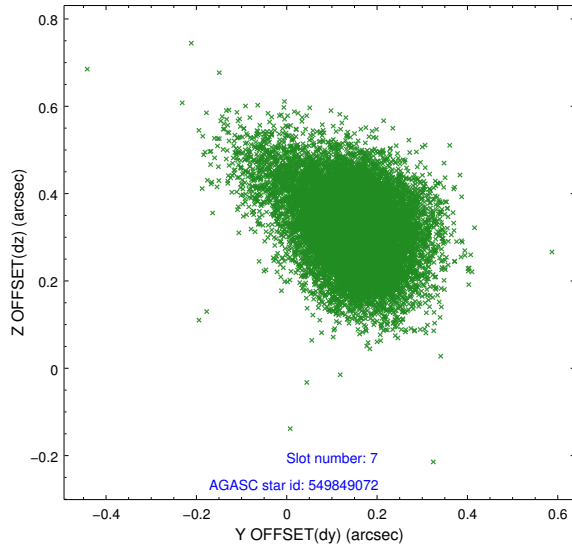
2.4.2 Slot 4



2.4.3 Slot 5

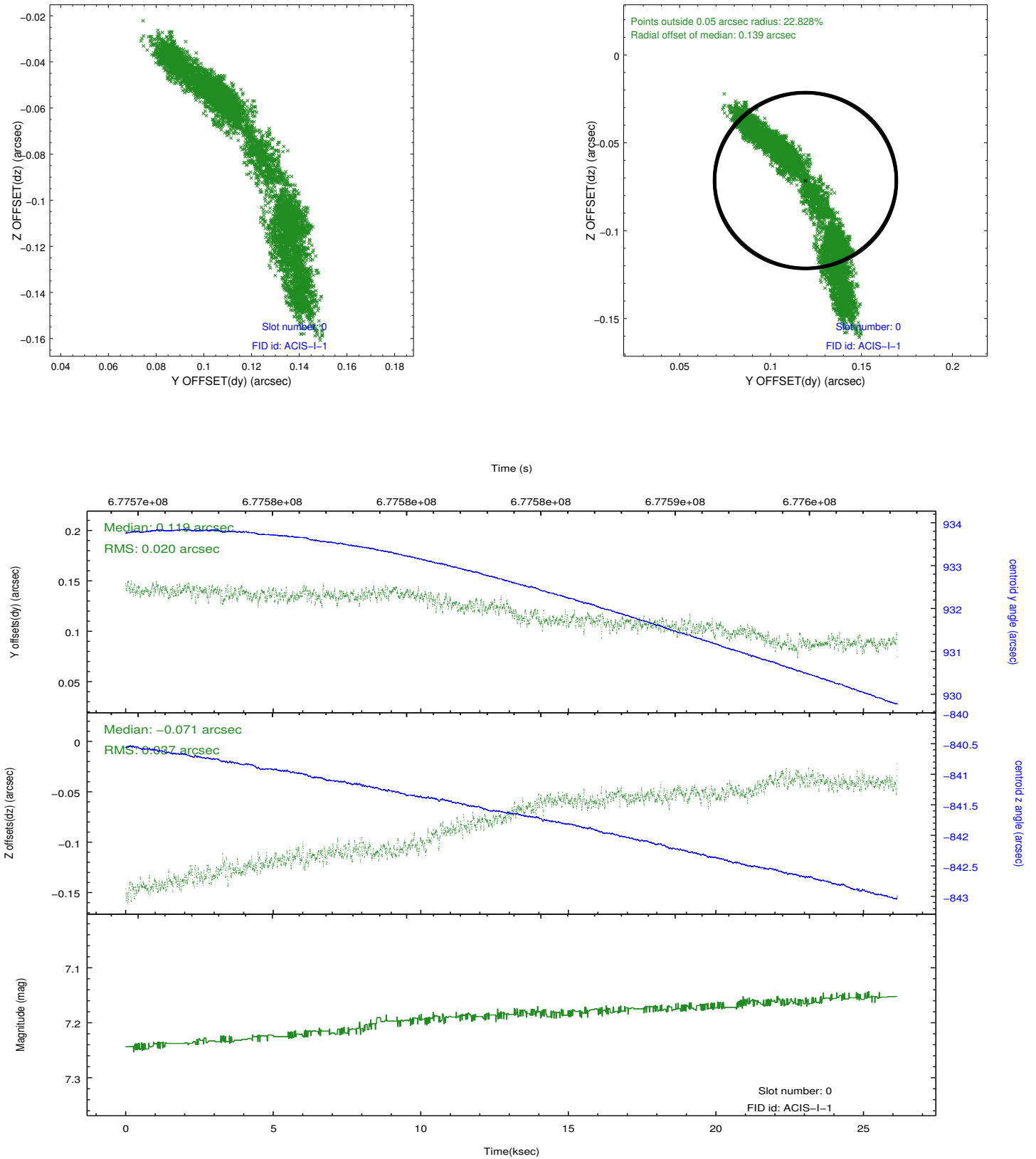


2.4.4 Slot 7

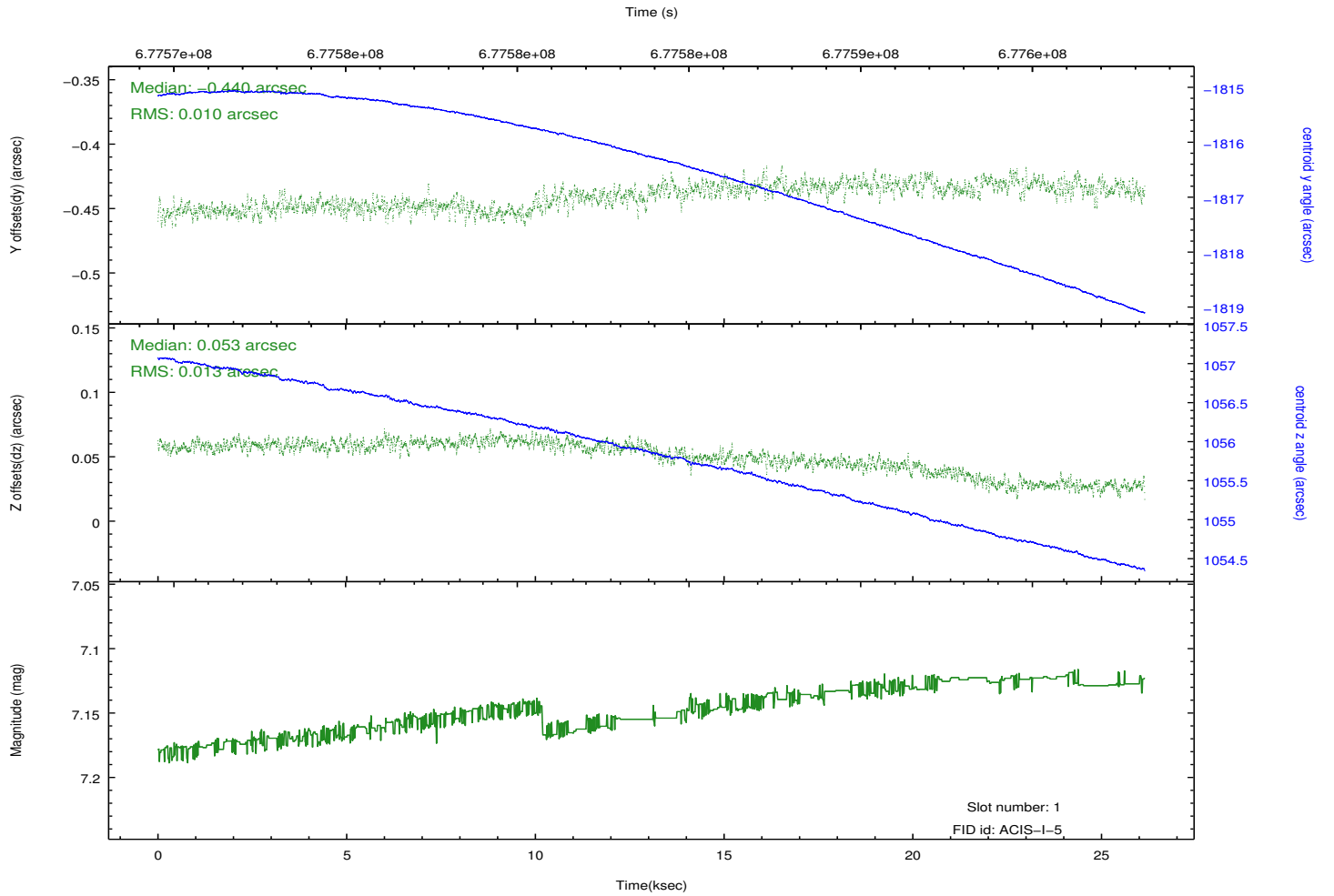
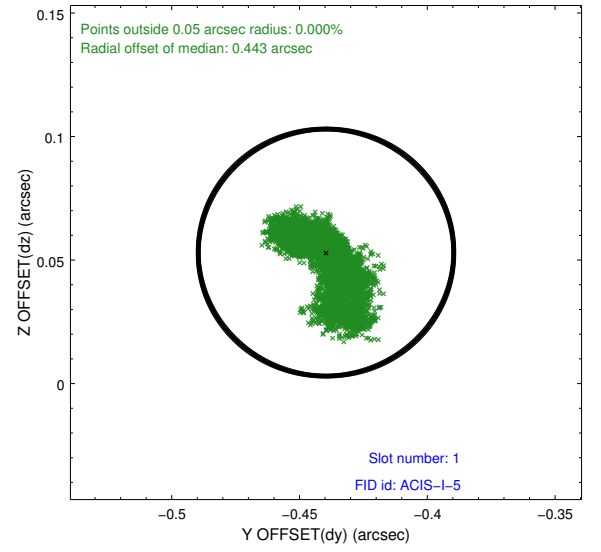
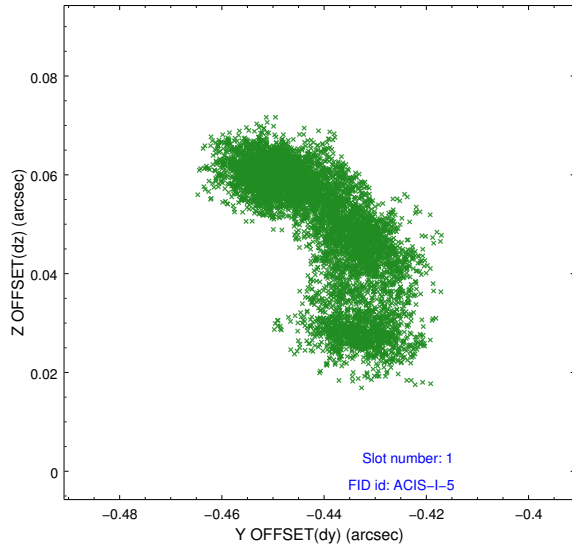


2.5 FID Slots

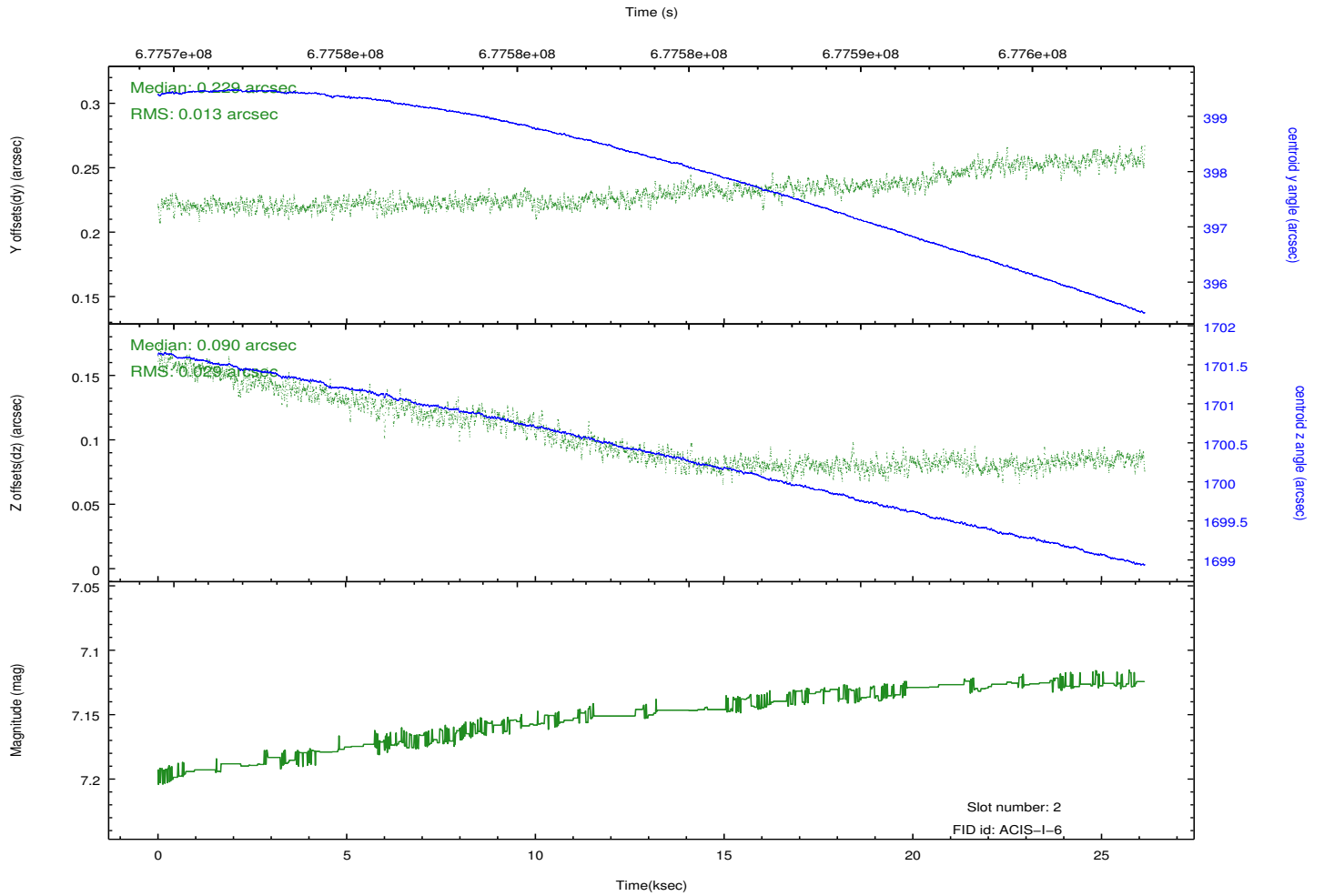
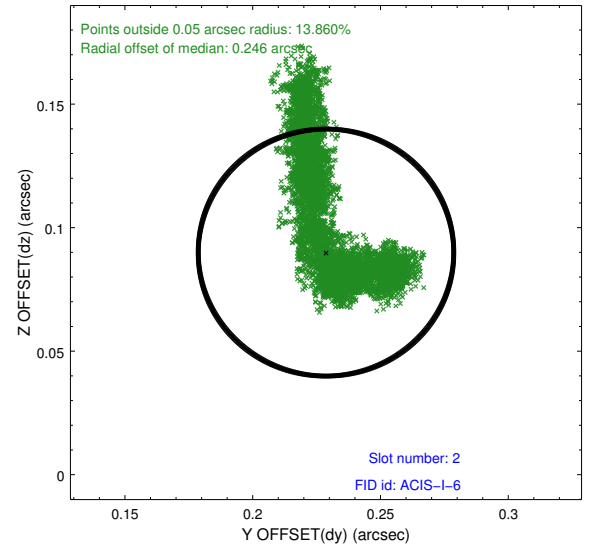
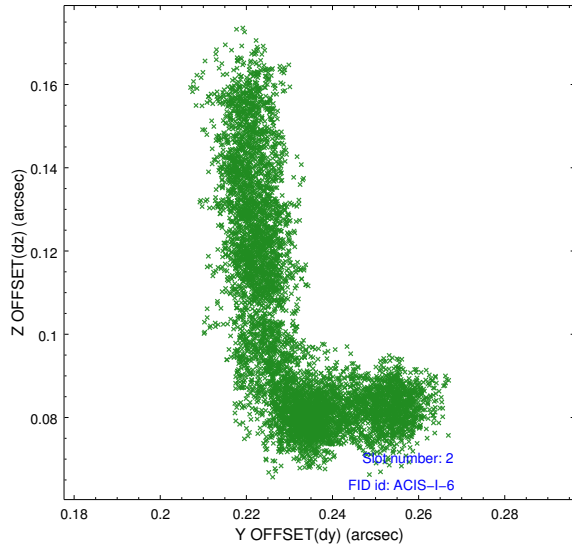
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.06.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.07021308434

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 guide star from the solution.