

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 21548 - L2 Version 2
Chandra X-Ray Center

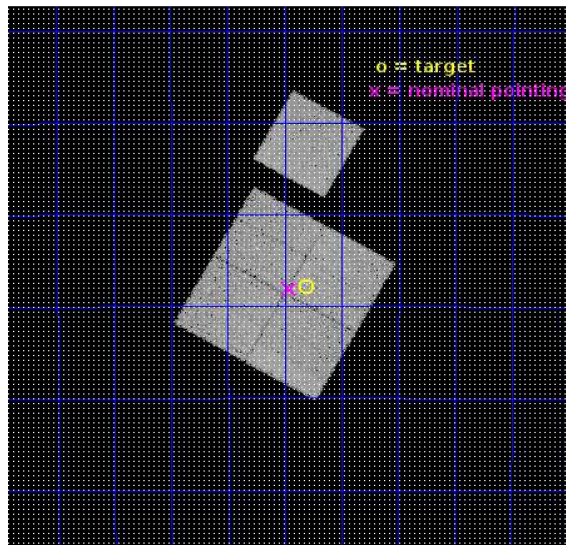
L2 Processing Date : Aug 15 2019

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1 Front

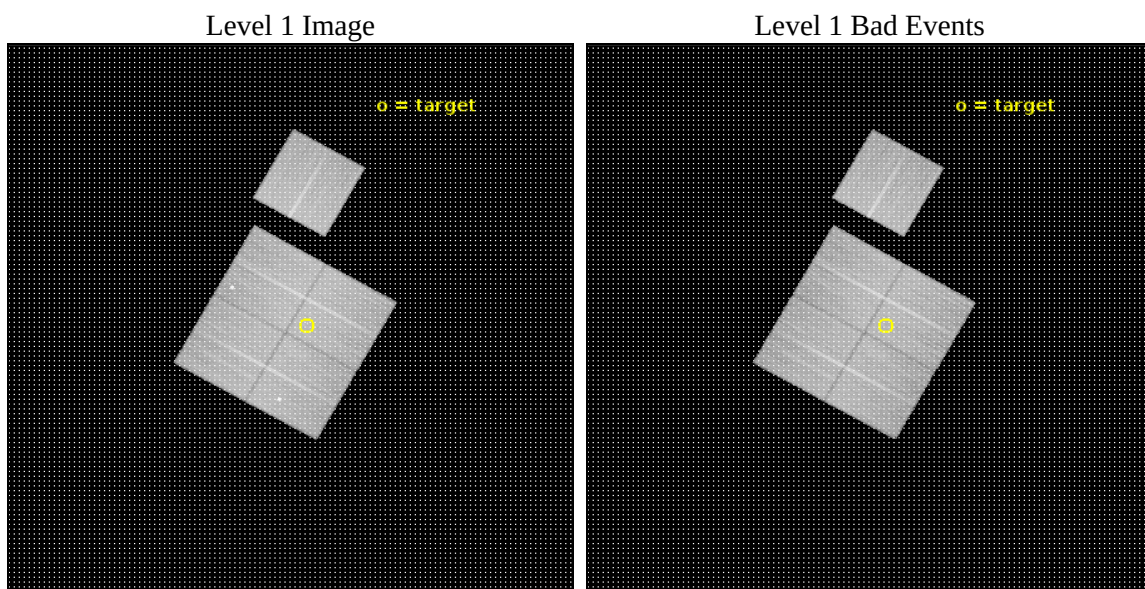
seq_num	801830	Sequence number
obs_id	21548	Observation id
title	A Unique Sample of Extreme-BCG Clusters at $0.2 < z < 0.6$	Proposal
observer	Michael McDonald	Principal investigator
object	CHIPS2155-3727	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	328.827917	Observer's specified target RA [deg]
dec_targ	-37.463611	Observer's specified target Dec [deg]
ra_nom	328.86465960099	Nominal RA [deg]
dec_nom	-37.467841228451	Nominal Dec [deg]
roll_nom	29.371538362764	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31367.657278895	Sum of GTIs [s]
livetime	30957.815744013	Livetime [s]
ontime0	31367.534179091	Sum of GTIs [s]
ontime1	31370.7162292	Sum of GTIs [s]
ontime2	31367.616188884	Sum of GTIs [s]
ontime3	31367.657278895	Sum of GTIs [s]
ontime6	31367.493119001	Sum of GTIs [s]
l2events	115023	Number of level 2 events



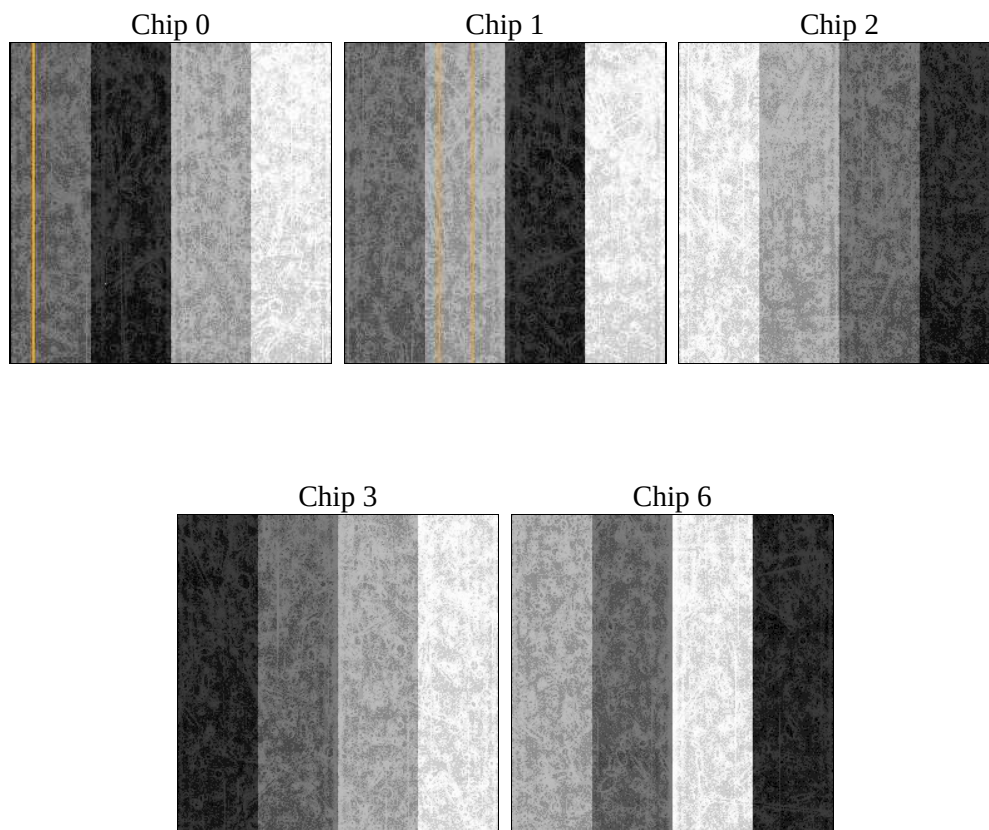
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31300.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	31367.657278895	Sum of GTIs [s]
caldsver	4.8.3.1	 	ontime0	31367.534179091	Sum of GTIs [s]
date	2019-08-15T16:05:07	Date and time of file creation	ontime1	31370.7162292	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	31367.616188884	Sum of GTIs [s]
			ontime3	31367.657278895	Sum of GTIs [s]
			ontime6	31367.493119001	Sum of GTIs [s]
			l1events	1190452	Number of level 1 events

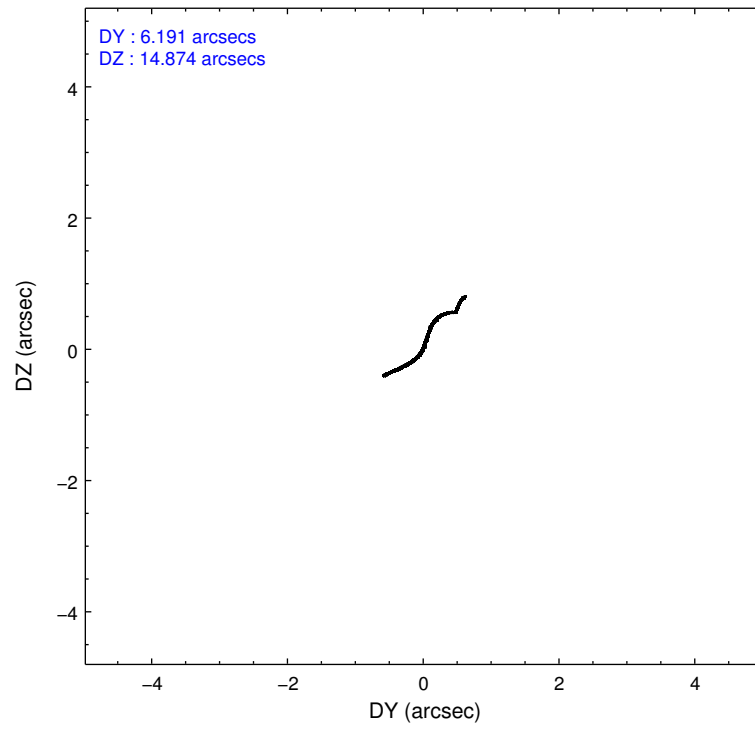
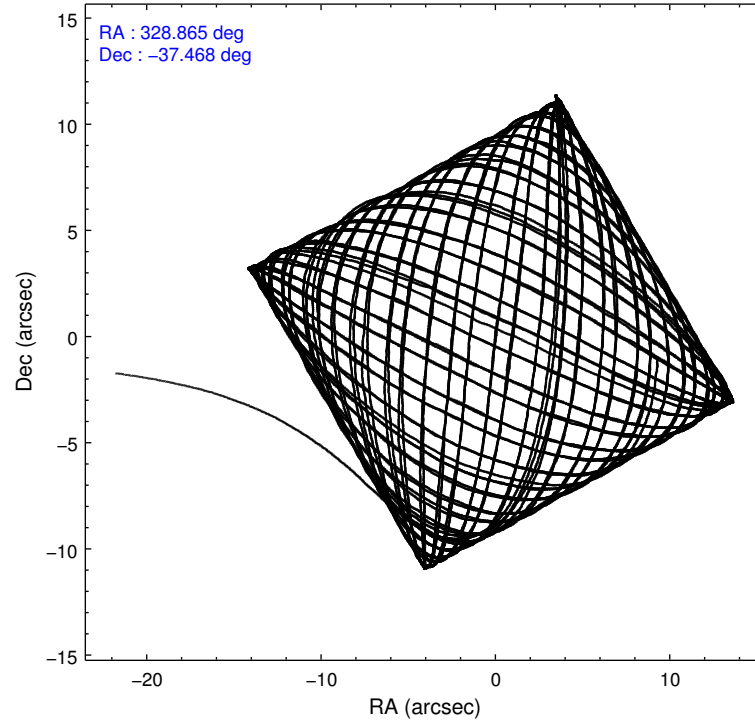
2.1.4 Events

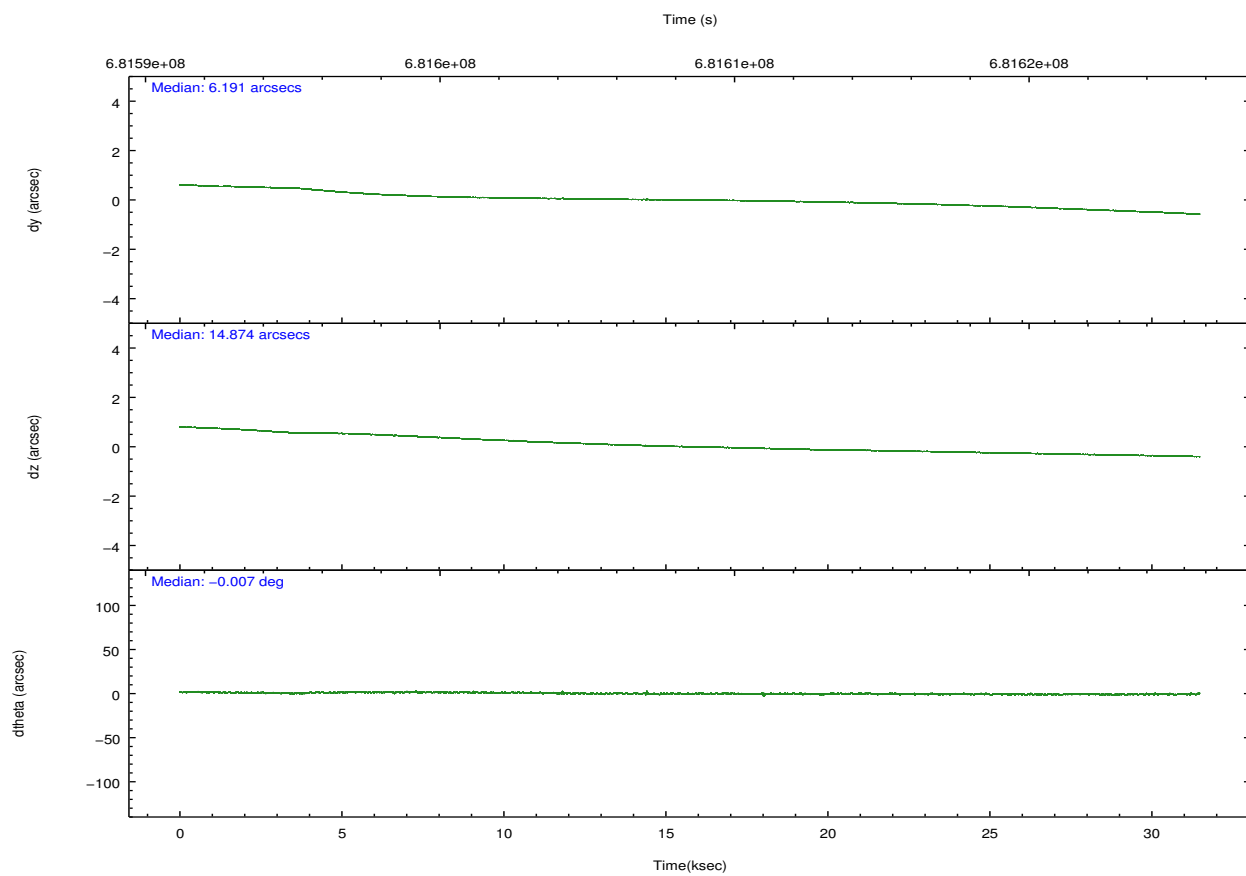
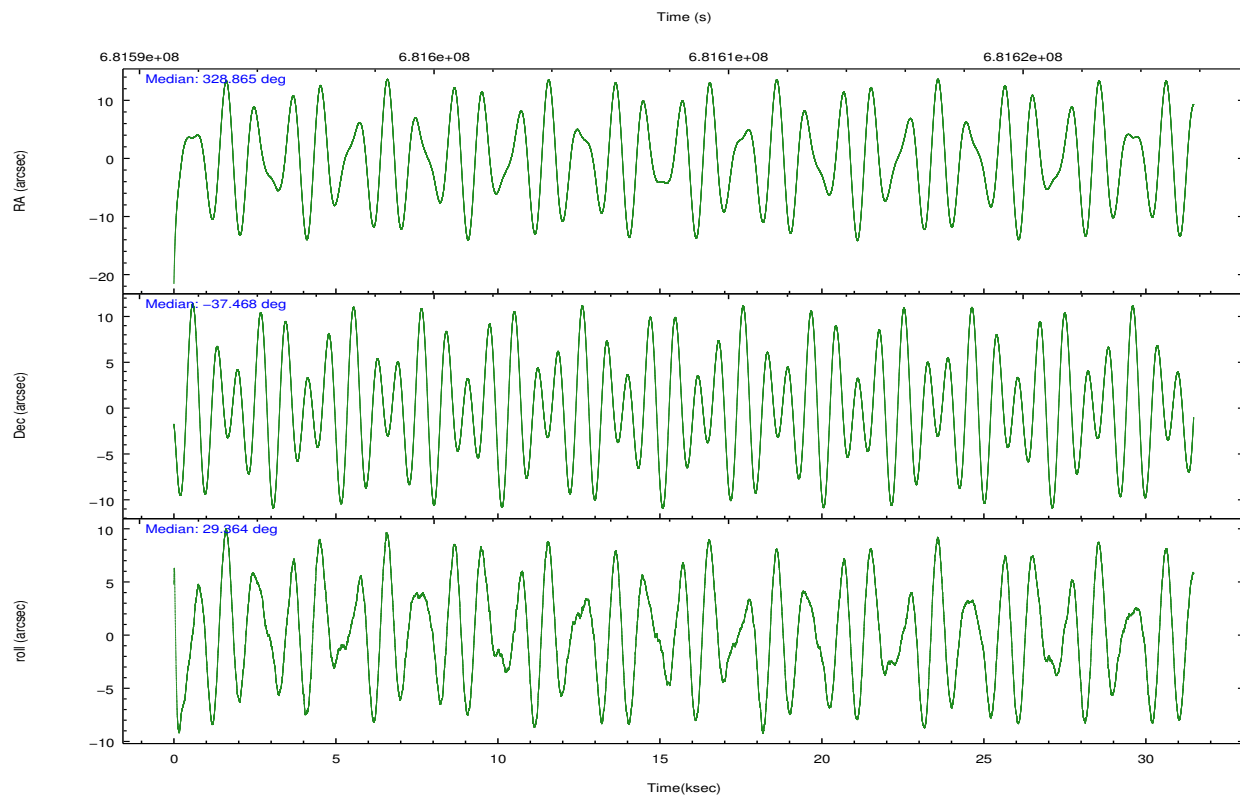
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	226685	233424	245240	242649	242454	grade 0 events	9184	13063	12905	9287	8492
rejected events	199260	200484	215039	216590	215803		4%	5%	5%	3%	3%
rejected %	87%	85%	87%	89%	89%	grade 1 events	136	137	187	158	91
							0%	0%	0%	0%	0%
						grade 2 events	6956	7572	6637	5837	6532
							3%	3%	2%	2%	2%
						grade 3 events	2779	2694	2621	2679	2487
							1%	1%	1%	1%	1%
						grade 4 events	2623	2791	2679	2706	2521
							1%	1%	1%	1%	1%
						grade 5 events	10674	10572	10269	11639	10832
							4%	4%	4%	4%	4%
						grade 6 events	5887	6831	5363	5553	6625
							2%	2%	2%	2%	2%
						grade 7 events	188446	189764	204579	204790	204874
							83%	81%	83%	84%	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	328.847062	328.8646596009935	CCD I2 on	Y	Y
[deg] Pointing Dec	-37.491616	-37.46784122845099	CCD I3 on	Y	Y
[deg] Pointing Roll	29.152138	29.37153836276354	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)	681592904.184000	681591589.73168	CCD S5 on	N	N
Observation start date	2019-08-07T19:20:35	2019-08-07T18:59:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	681624204.184000	681625086.73369	On-chip summing requested	N	N
Observation end date	2019-08-08T04:02:15	2019-08-08T04:18:06	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



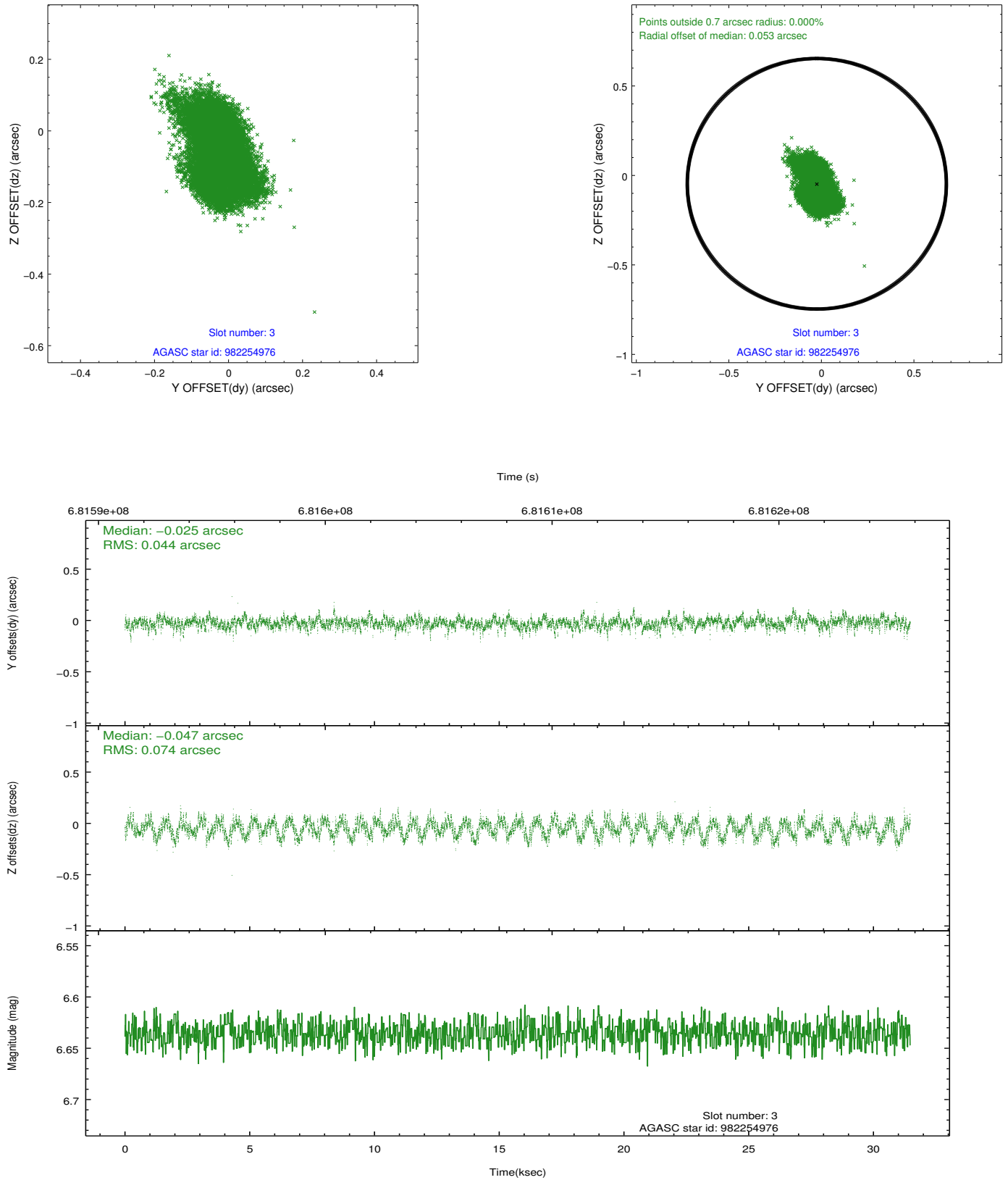


Slot Statistics

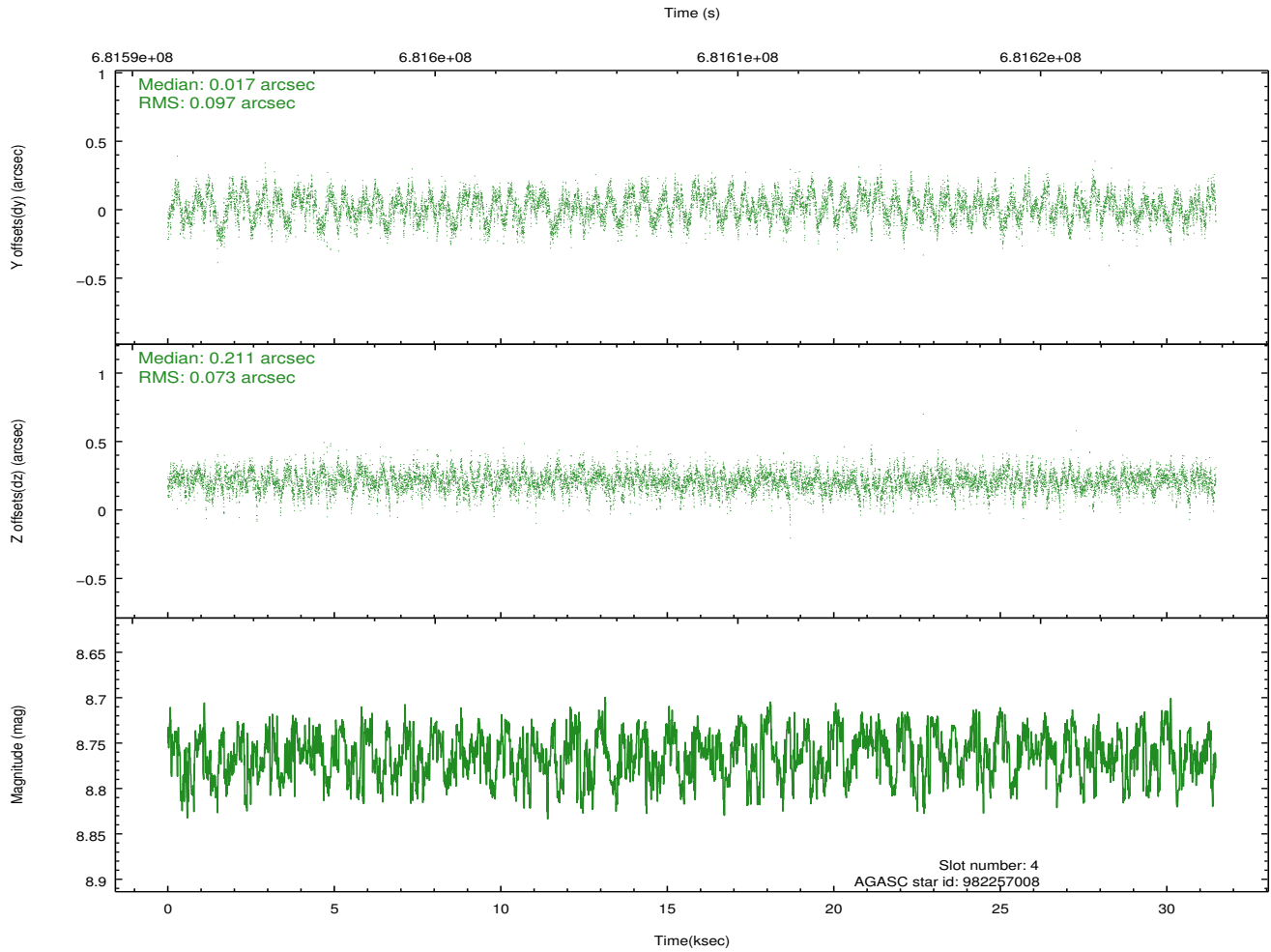
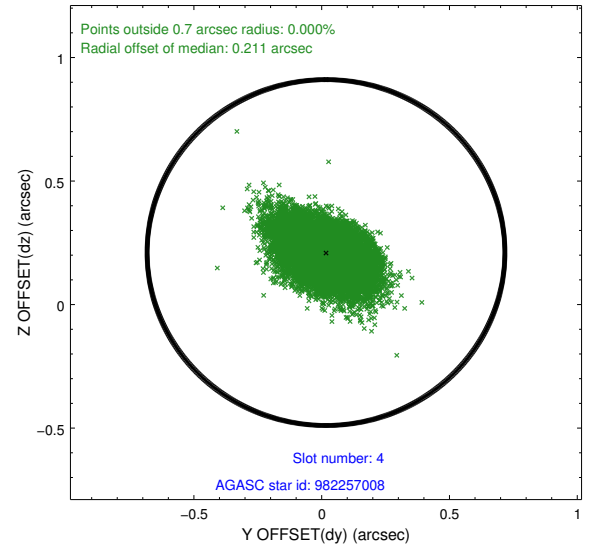
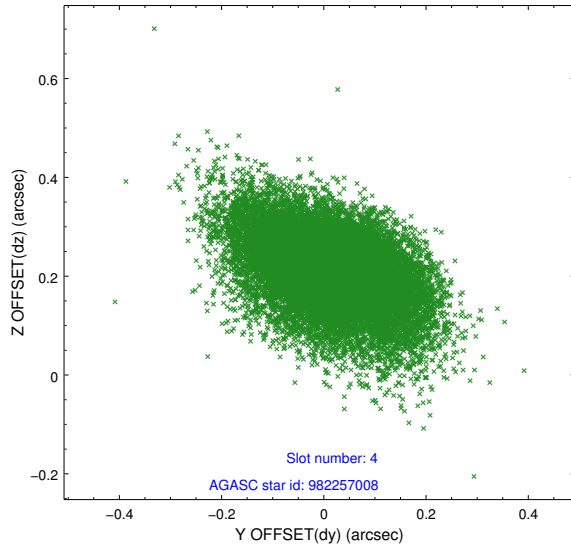
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.14	7677	1.000	0.093	-0.111	0.023	0.039	0.000000	0.000000	933.68	-838
1	FID		ACIS-I-5	7.09	7676	1.000	-0.416	0.023	0.011	0.022	0.000000	0.000000	-1815.07	1058
2	FID		ACIS-I-6	7.12	7677	1.000	0.230	0.160	0.018	0.026	0.000000	0.000000	399.07	1703
3	GUIDE	used	982254976	6.64	15355	1.000	-0.025	-0.047	0.092	0.151	328.061811	-37.326164	-1677.40	1606
4	GUIDE	used	982257008	8.76	15337	1.000	0.017	0.211	0.127	0.214	327.850916	-37.408797	-2349.97	1634
5	GUIDE	used	1046217840	6.75	15354	1.000	0.010	0.087	0.116	0.177	329.259309	-37.658780	732.27	-1099
6	GUIDE	used	1046219424	8.84	15343	1.000	0.206	0.121	0.157	0.245	329.710388	-37.739713	1706.73	-1986
7	GUIDE	used	982258776	8.11	15349	1.000	-0.207	-0.377	0.116	0.187	329.087852	-36.813856	1793.20	1791

2.4 Star Slots

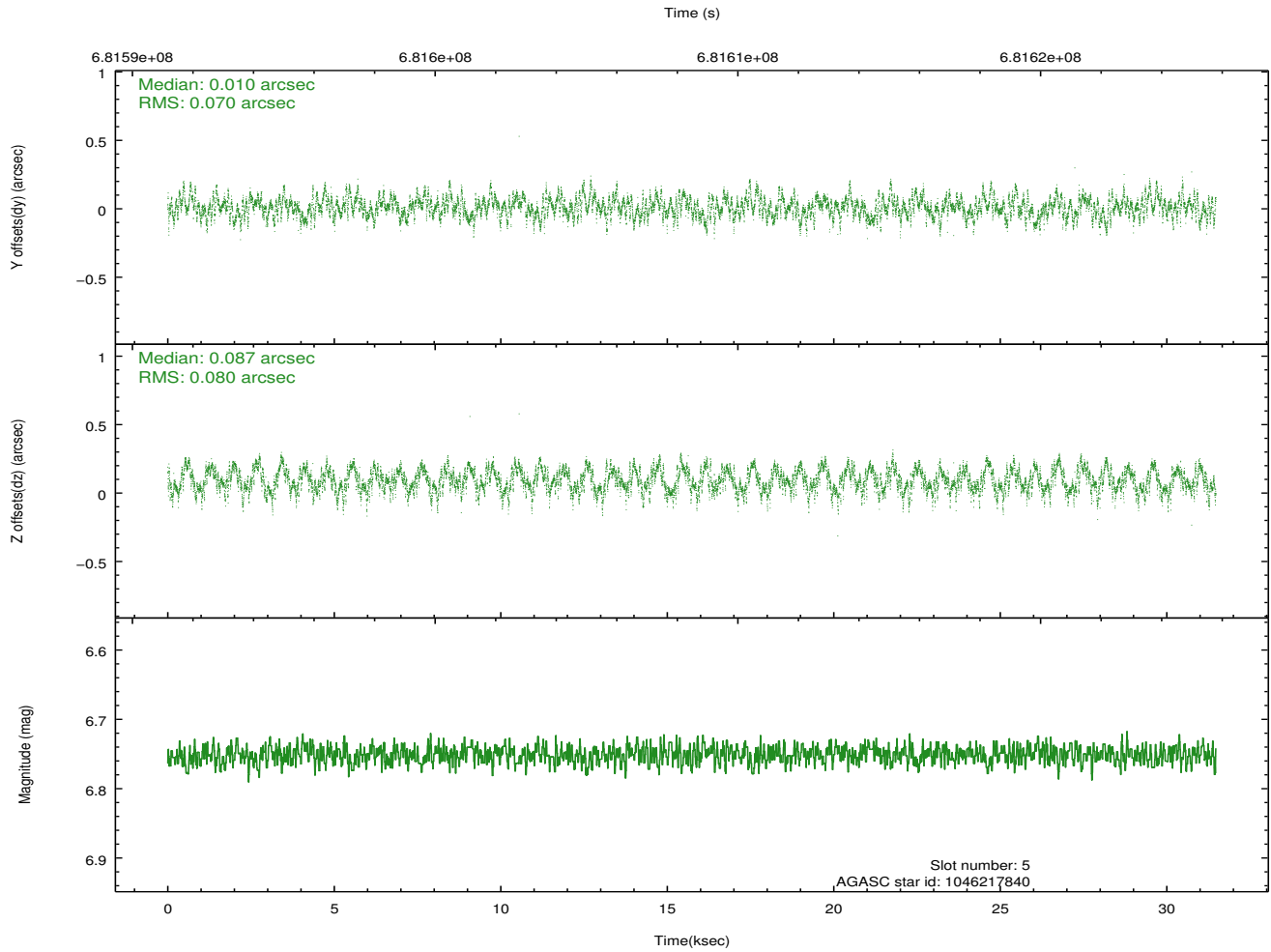
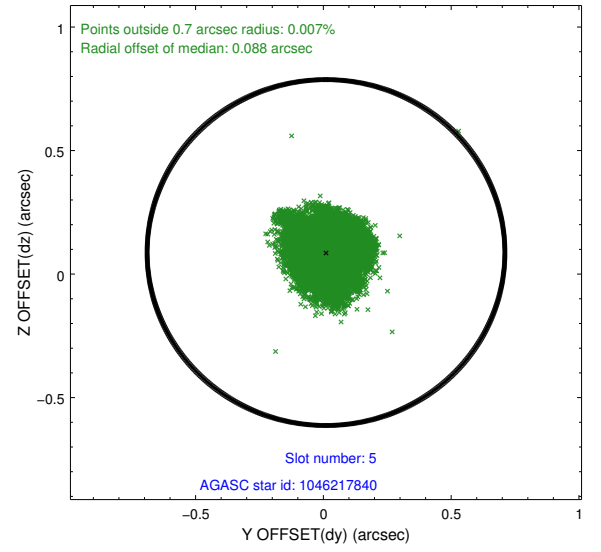
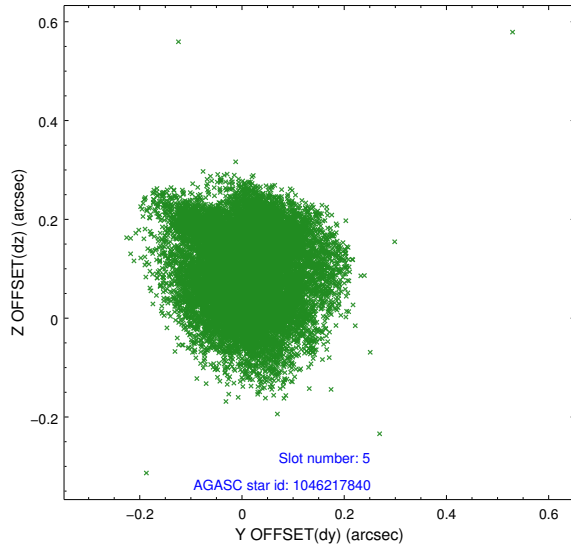
2.4.1 Slot 3



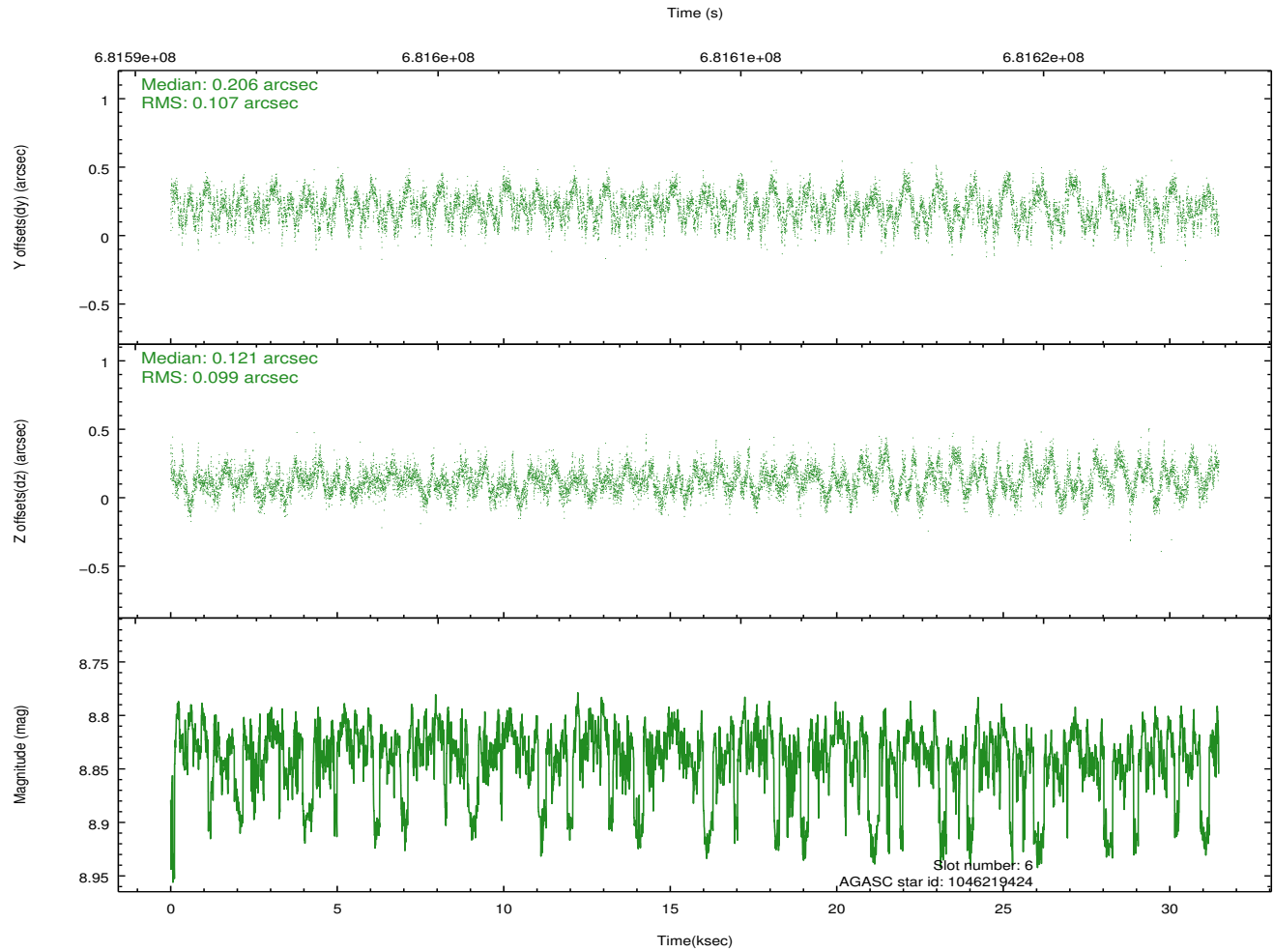
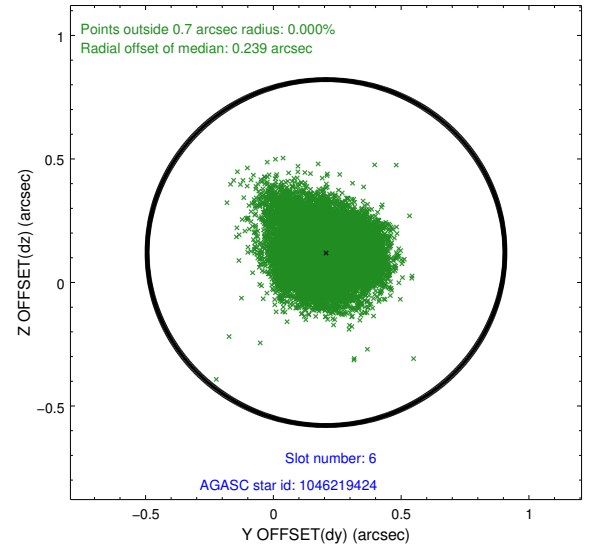
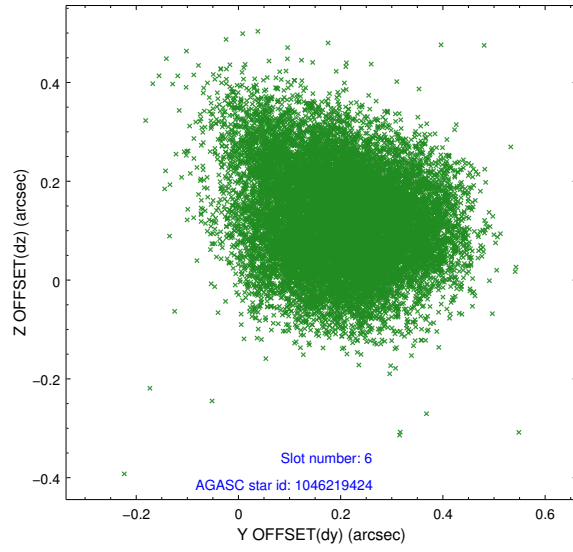
2.4.2 Slot 4



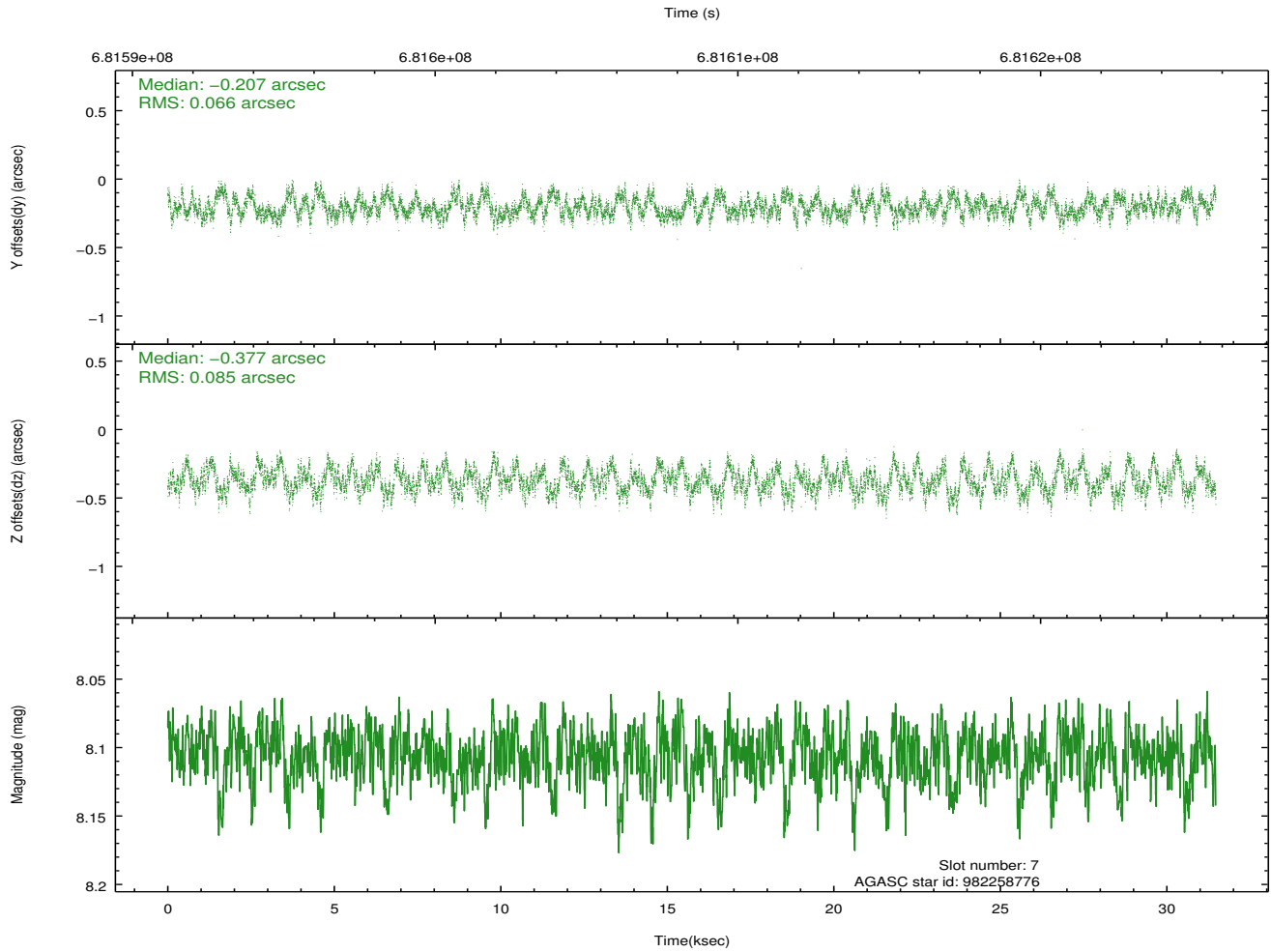
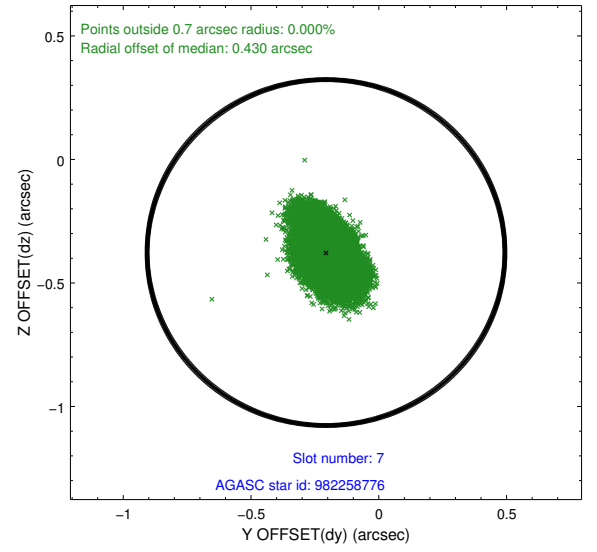
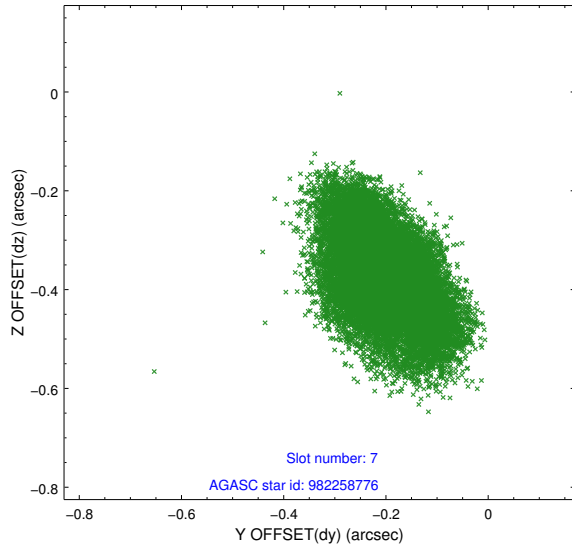
2.4.3 Slot 5



2.4.4 Slot 6

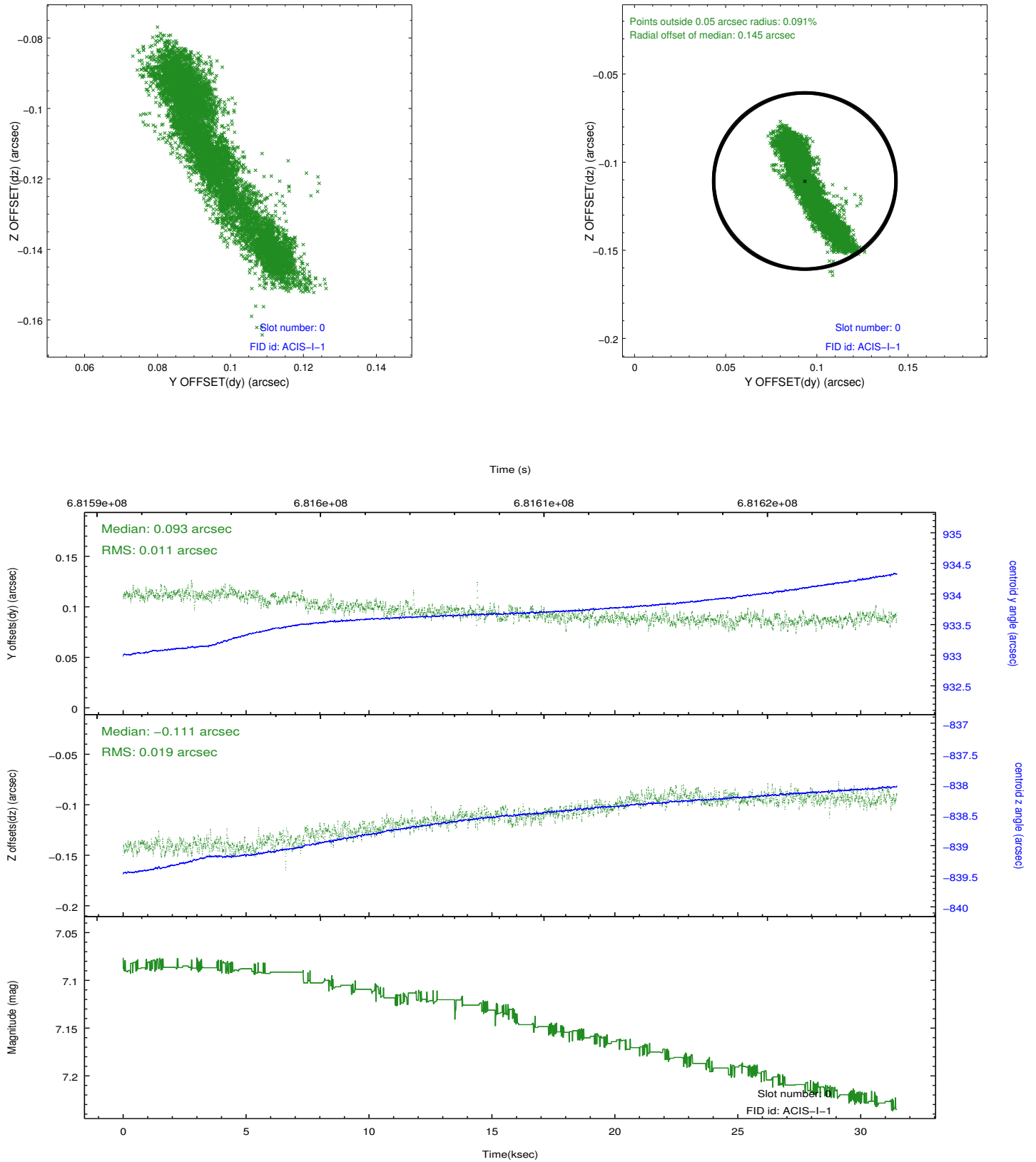


2.4.5 Slot 7

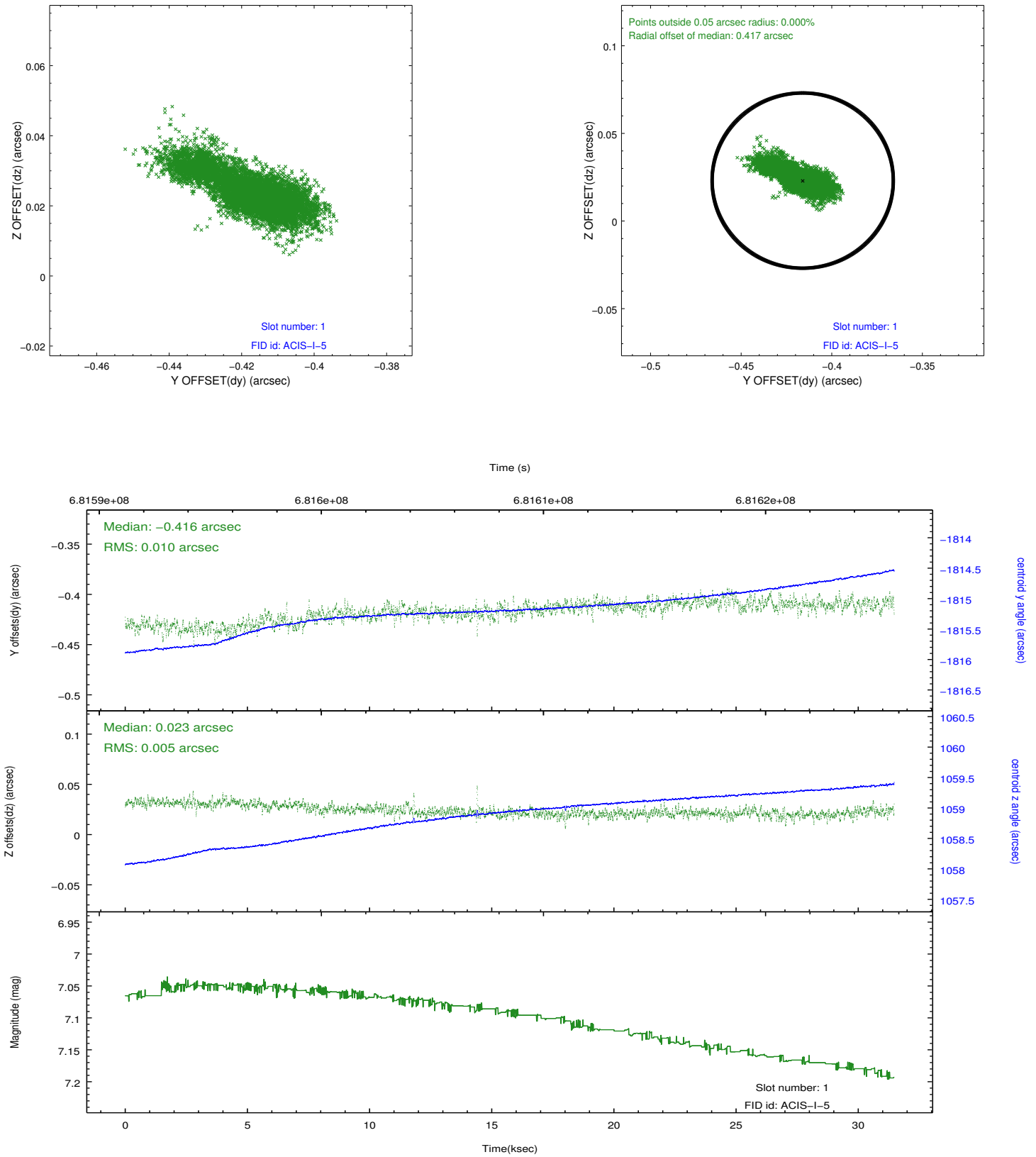


2.5 FID Slots

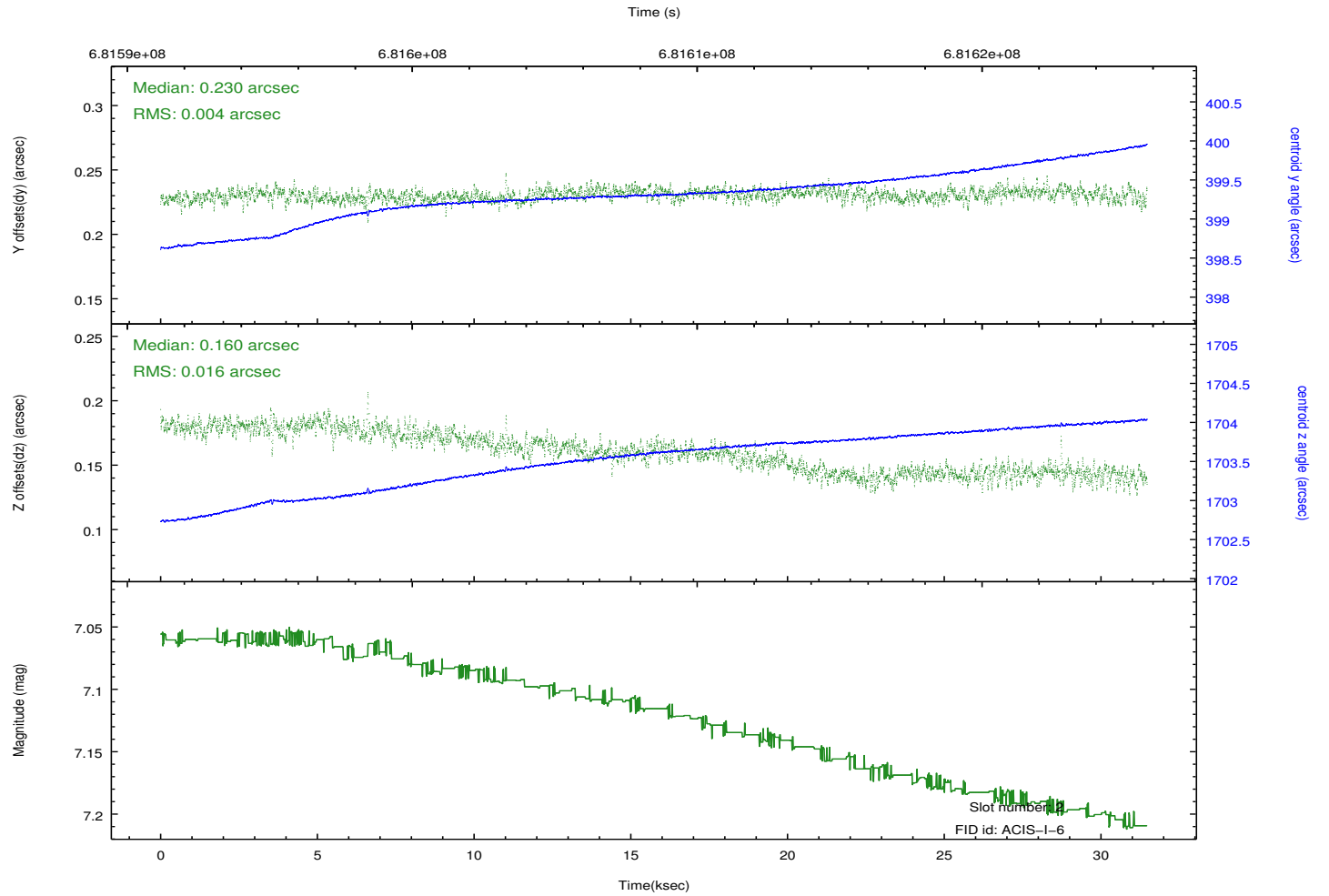
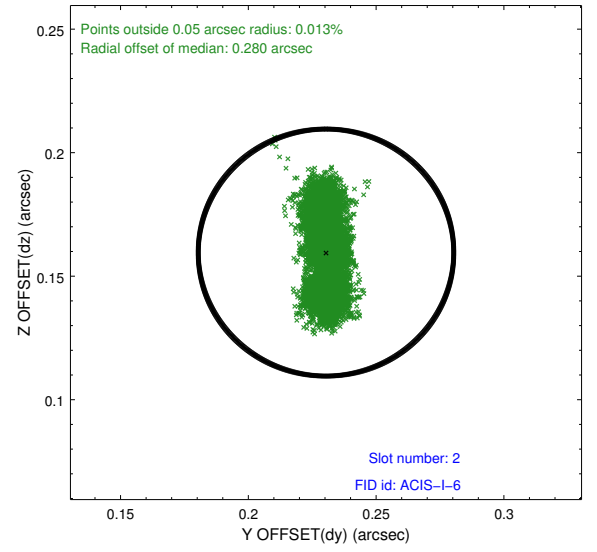
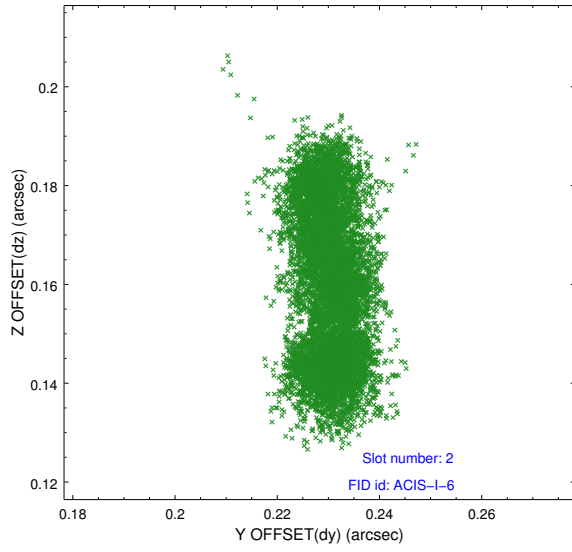
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.08.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.367657278895

A.2 Comments

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(328.65005,-37.44421), (328.65172,-37.44659), (328.76911,-37.39431),
(328.76744,-37.39193).