

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19969 - L2 Version 2
Chandra X-Ray Center

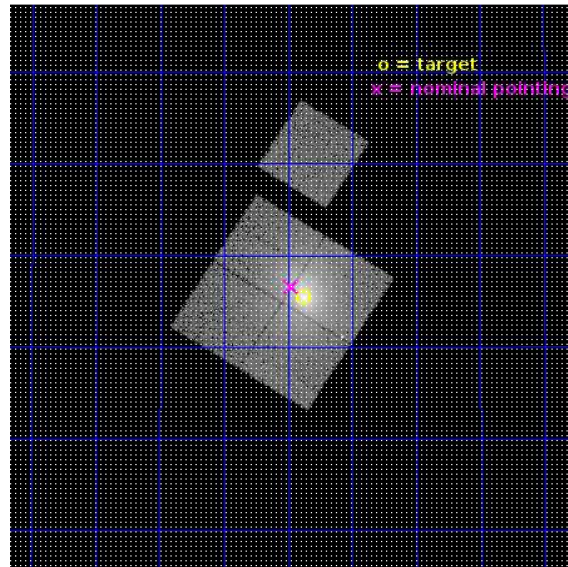
L2 Processing Date : Dec 5 2017

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1 Front

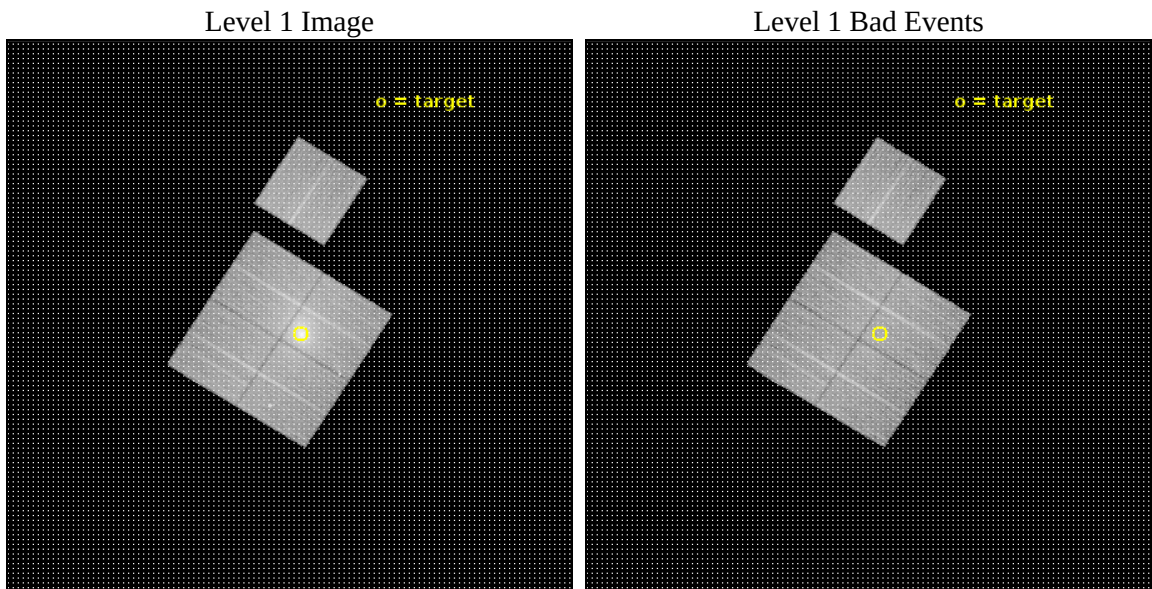
seq_num	890148	Sequence number
obs_id	19969	Observation id
title	AO-18 (Fall 2017) Calibration Observations of A1795	Proposal title
observer	CXC Calibration	Principal investigator
object	A1795	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	207.219583	Observer's specified target RA [deg]
dec_targ	26.590833	Observer's specified target Dec [deg]
ra_nom	207.2436303838	Nominal RA [deg]
dec_nom	26.609907093454	Nominal Dec [deg]
roll_nom	32.19798559112	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20063.200154424	Sum of GTIs [s]
livetime	19801.059674093	Livetime [s]
ontime0	20060.059114099	Sum of GTIs [s]
ontime1	20063.200154424	Sum of GTIs [s]
ontime2	20063.200154424	Sum of GTIs [s]
ontime3	20063.200154424	Sum of GTIs [s]
ontime6	20063.200154424	Sum of GTIs [s]
l2events	186363	Number of level 2 events



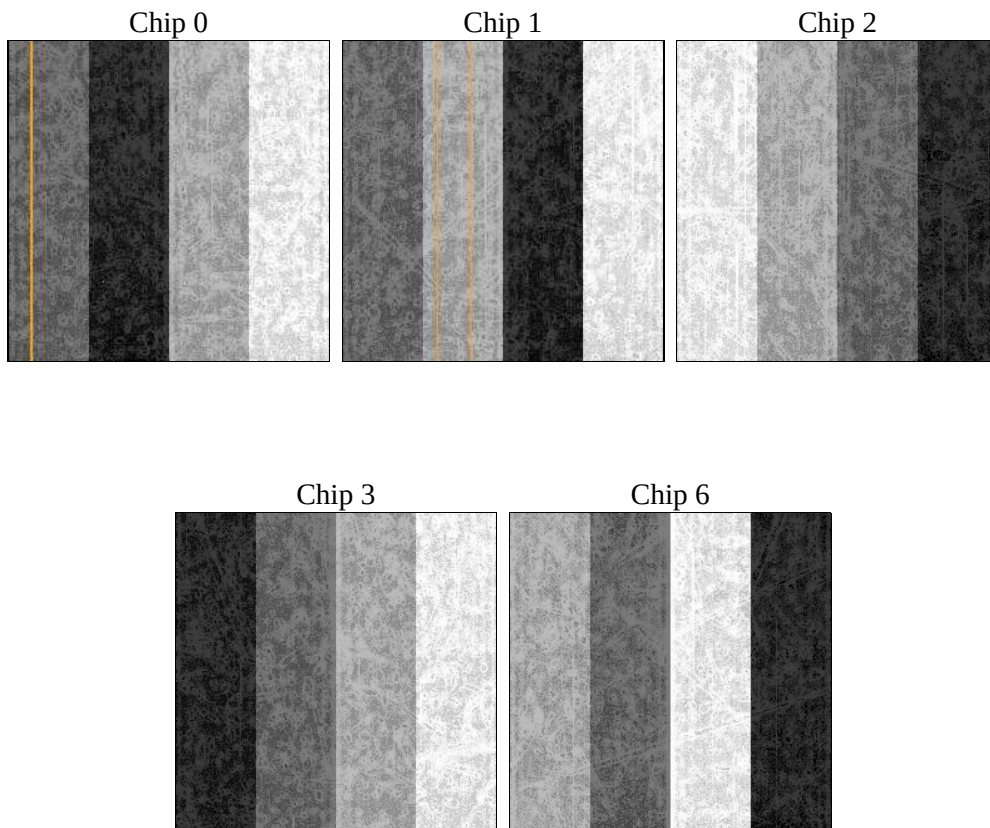
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	20063.200154424	Sum of GTIs [s]
caldsver	4.7.6	 	ontime0	20060.059114099	Sum of GTIs [s]
date	2017-12-05T16:11:21	Date and time of file creation	ontime1	20063.200154424	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20063.200154424	Sum of GTIs [s]
			ontime3	20063.200154424	Sum of GTIs [s]
			ontime6	20063.200154424	Sum of GTIs [s]
			l1events	825208	Number of level 1 events

2.1.4 Events

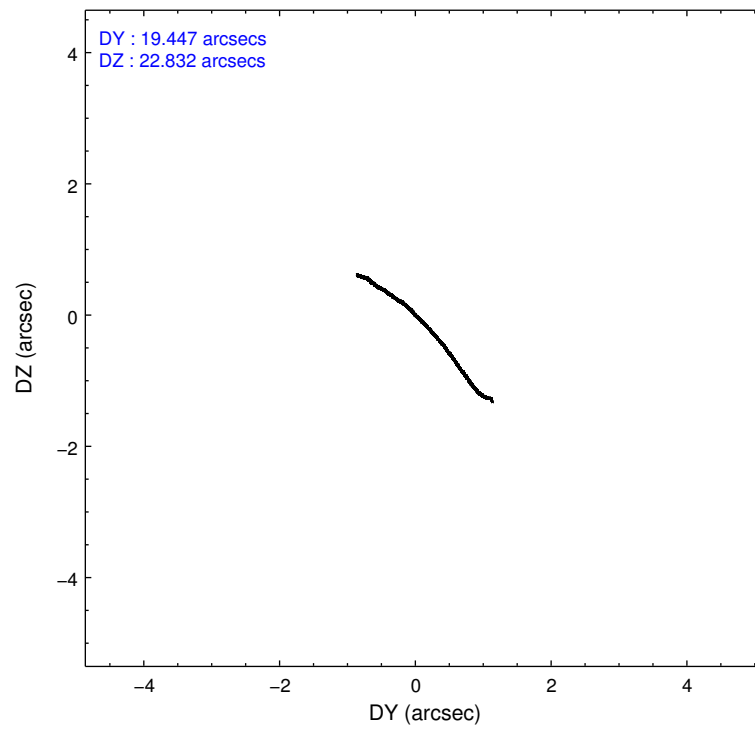
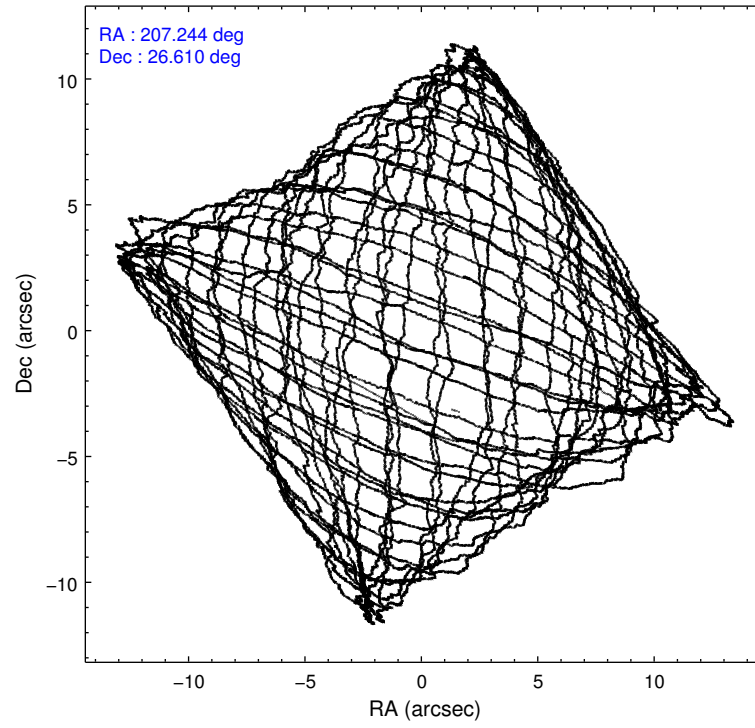
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	138783	148230	161745	231537	144913
rejected events	118909	117489	129357	127201	128774
rejected %	85%	79%	79%	54%	88%

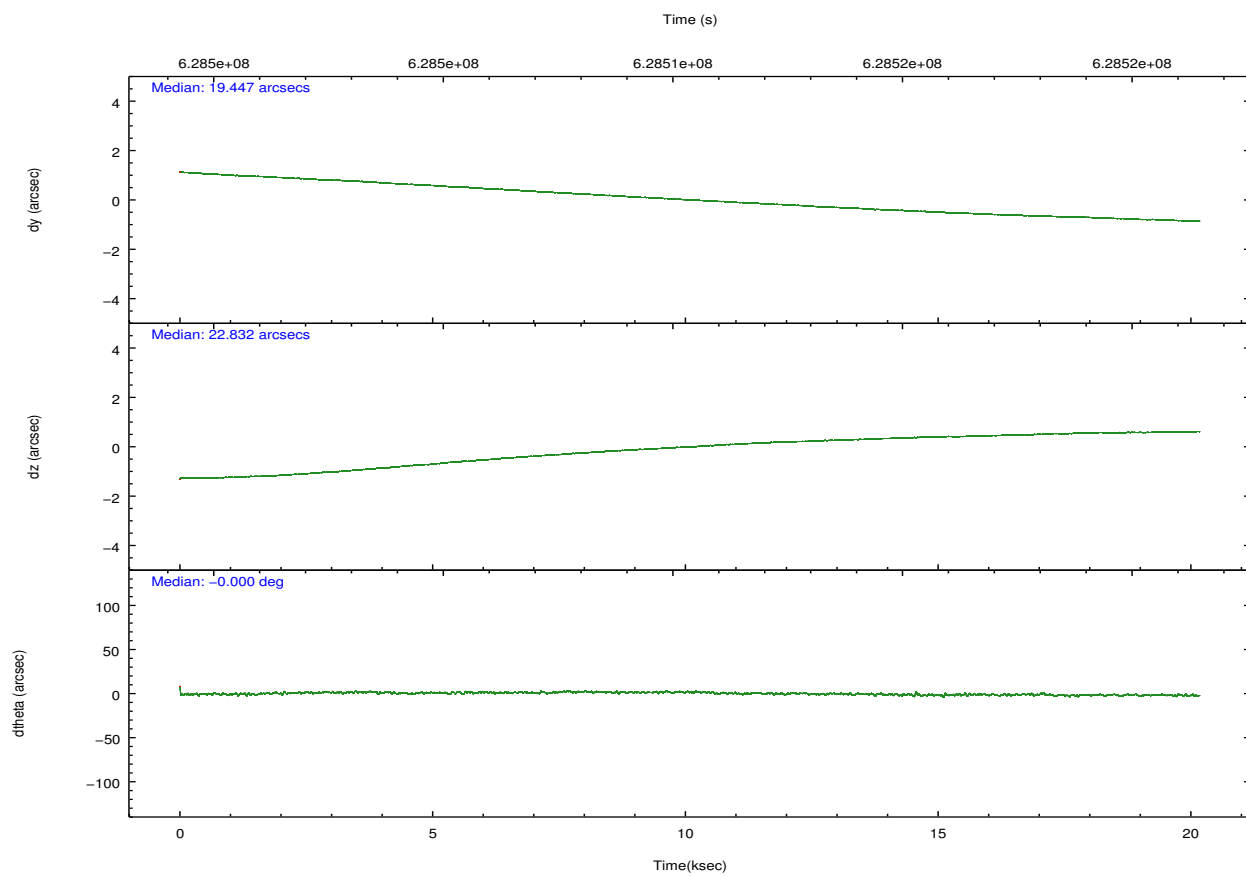
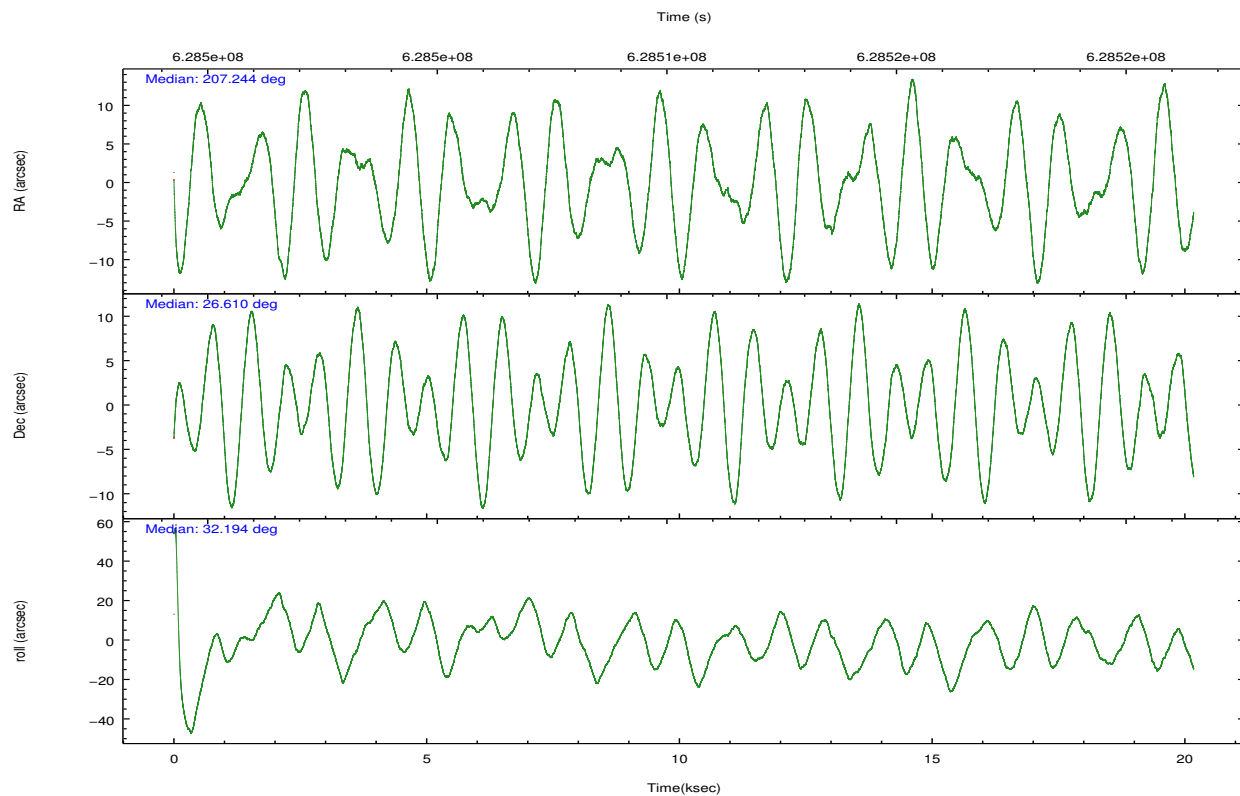
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8411	16078	19246	77779	5134
	6%	10%	11%	33%	3%
grade 1 events	94	116	179	462	66
	0%	0%	0%	0%	0%
grade 2 events	4581	6368	5408	12252	3973
	3%	4%	3%	5%	2%
grade 3 events	1755	1905	2089	4341	1555
	1%	1%	1%	1%	1%
grade 4 events	1591	1966	2111	4368	1511
	1%	1%	1%	1%	1%
grade 5 events	5891	6007	5687	7094	6300
	4%	4%	3%	3%	4%
grade 6 events	3540	4428	3536	5609	3966
	2%	2%	2%	2%	2%
grade 7 events	112920	111362	123489	119632	122408
	81%	75%	76%	51%	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	207.229358	207.2436303837991	CCD I2 on	Y	Y
[deg] Pointing Dec	26.585444	26.60990709345389	CCD I3 on	Y	Y
[deg] Pointing Roll	31.995624	32.19798559111969	CCD S0 on	N	N
[s] Window start time (MET)	626832069.184000	626832069.184000	CCD S1 on	N	N
[s] Window stop time (MET)	629683269.184000	629683269.184000	CCD S2 on	O1	Y
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-230.252463	-230.248423740357	CCD S5 on	N	N
[mm] SIM translation stage offset	-3.34	-3.34402926257269	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	628500470.184000	628499046.49615	On-chip summing requested	N	N
Observation start date	2017-12-01T07:26:41	2017-12-01T07:04:06	Subarray requested	NONE	NONE
[s] Observation end time (MET)	628520470.184000	628521058.37244	Alternating exposures requested	N	N
Observation end date	2017-12-01T13:00:01	2017-12-01T13:10:58	[s] Primary exposure time	0.000000	3.1
Read mode	TIMED	TIMED			

2.3 Aspect



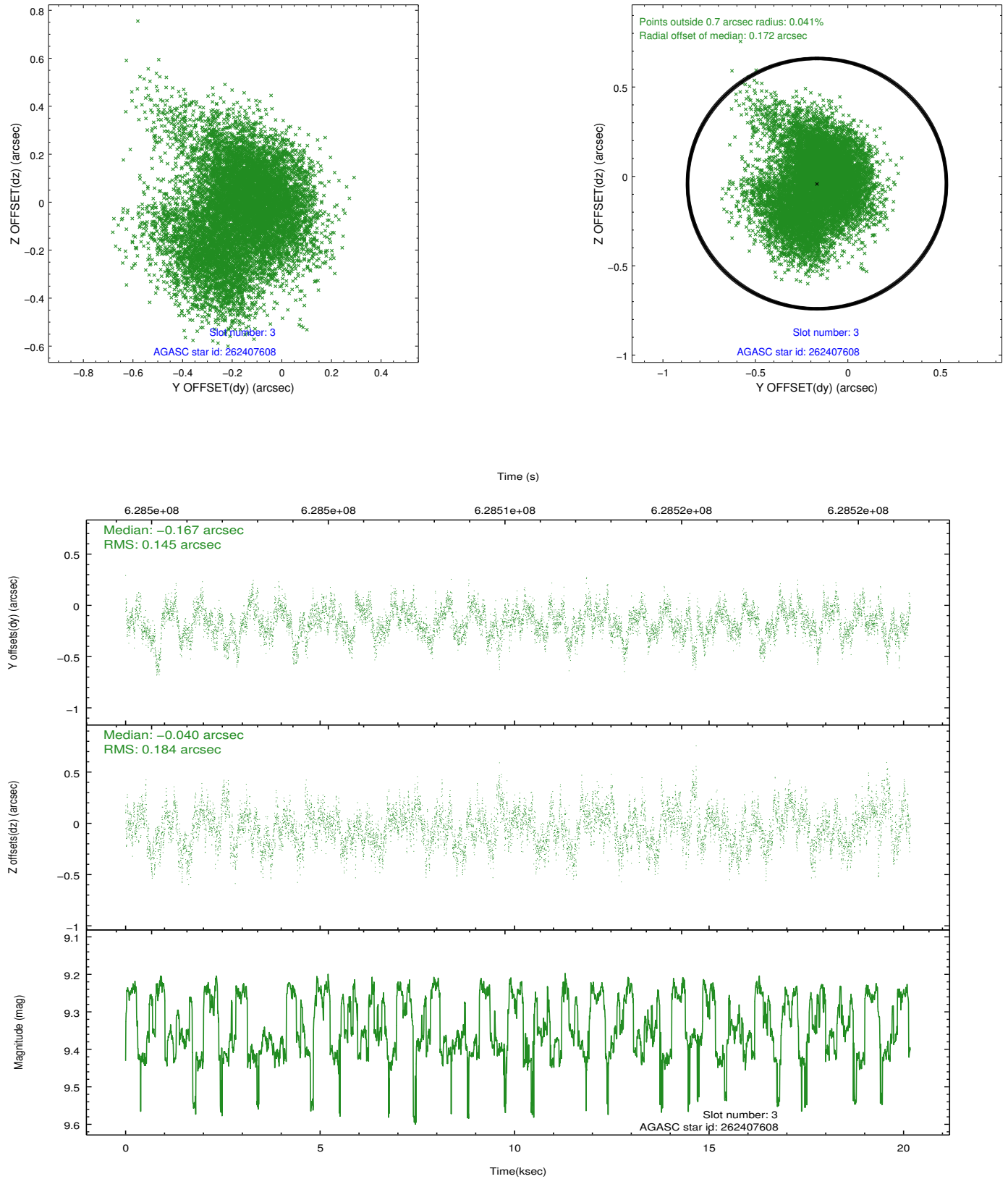


Slot Statistics

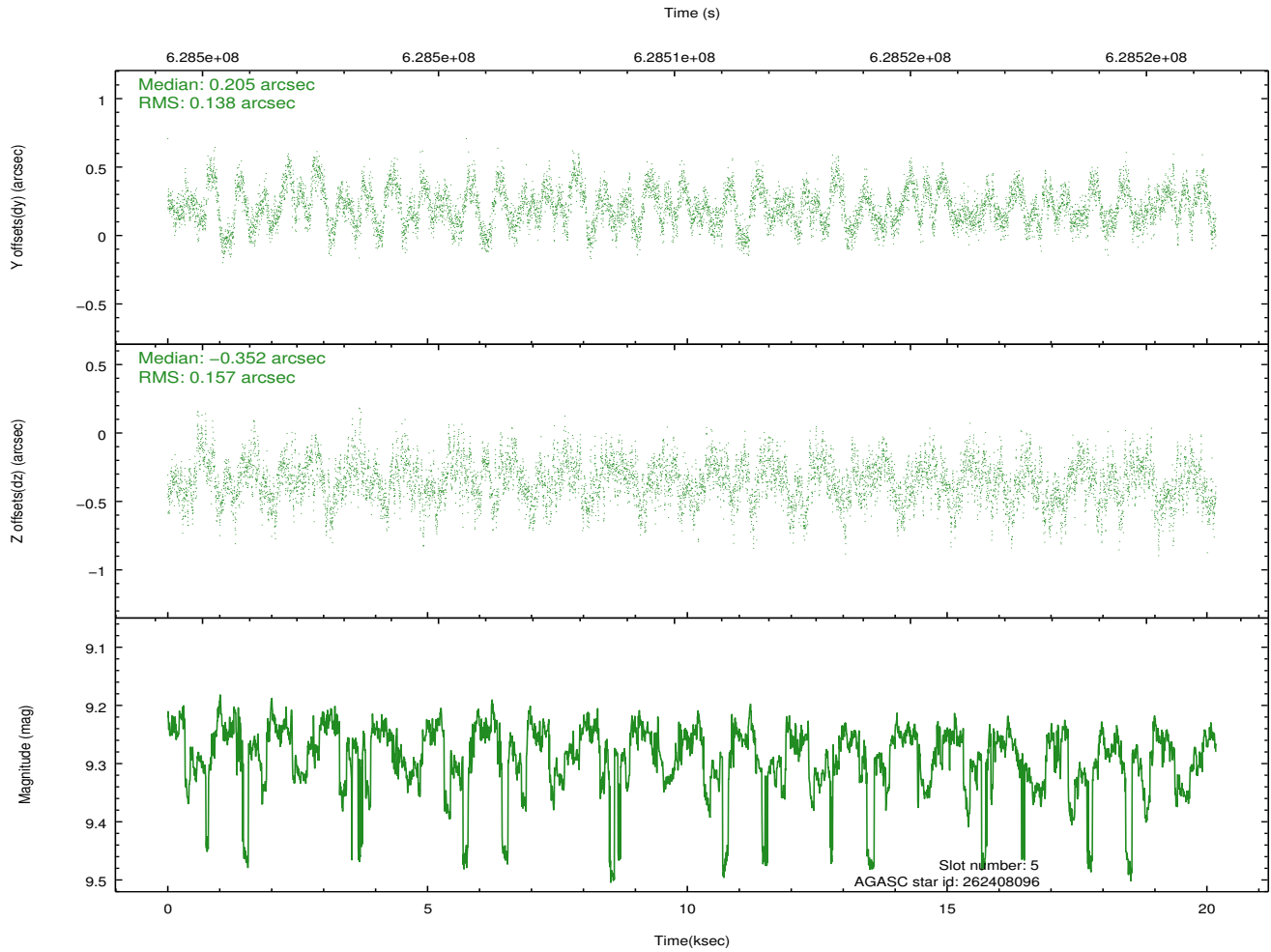
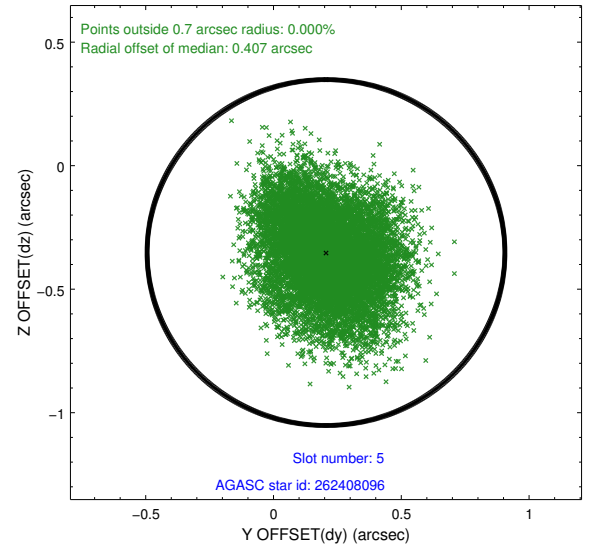
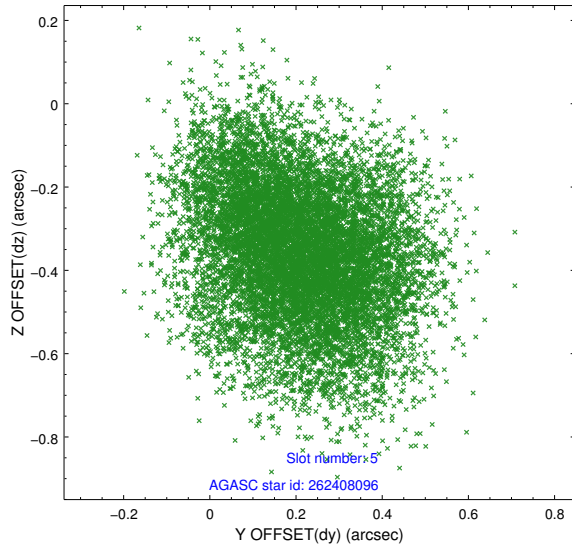
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	4921	0.177	0.023	0.037	0.052	0.000000	0.000000	919.92	-915.08
1	FID		ACIS-I-2	7.20	4919	-0.305	-0.131	0.020	0.038	0.000000	0.000000	-774.72	-921.28
2	FID		ACIS-I-6	7.24	4918	0.039	0.171	0.041	0.079	0.000000	0.000000	385.42	1626.81
3	GUIDE	used	262407608	9.35	9819	-0.167	-0.040	0.251	0.404	207.378401	26.435507	122.34	-712.16
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	GUIDE	used	262408096	9.28	9832	0.205	-0.352	0.227	0.355	207.011678	26.515421	-727.43	158.52
6	GUIDE	used	262409624	10.02	9759	-0.355	-0.222	0.267	0.430	207.610037	27.074851	1969.64	849.40
7	GUIDE	used	262411960	9.61	9823	0.303	0.616	0.226	0.359	207.327895	25.881727	-1070.26	-2316.72

2.4 Star Slots

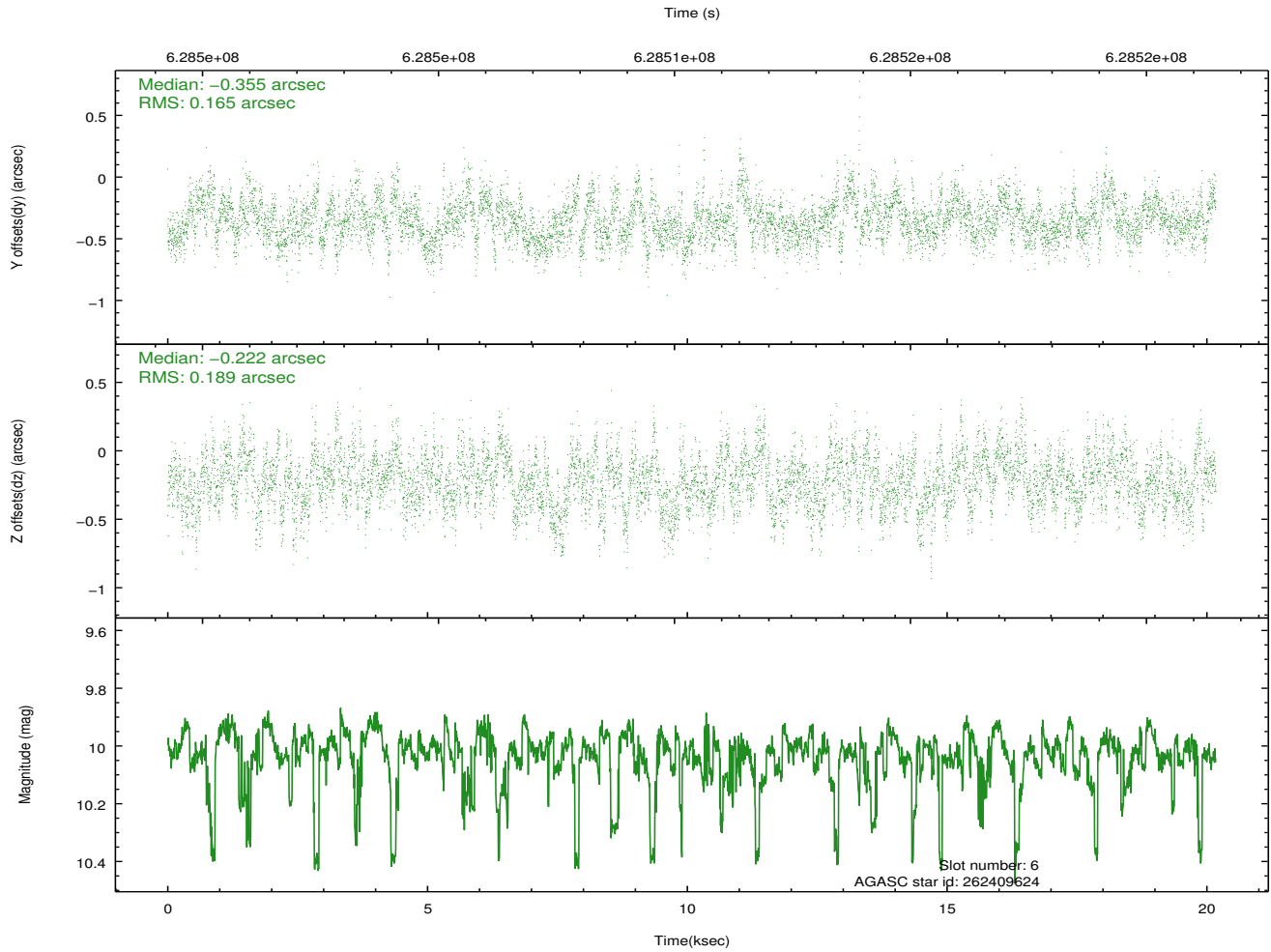
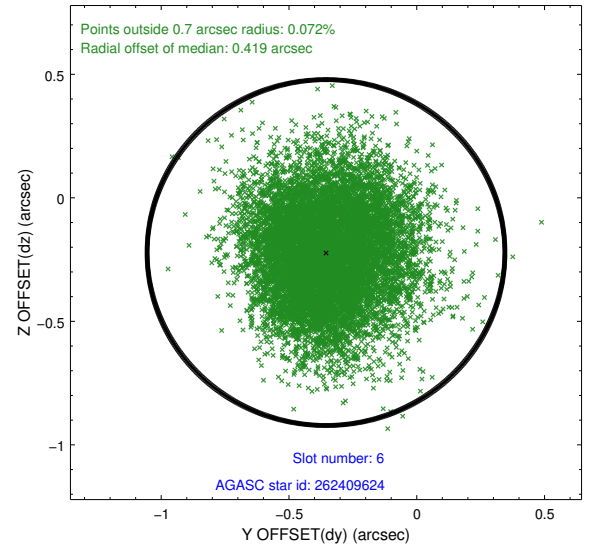
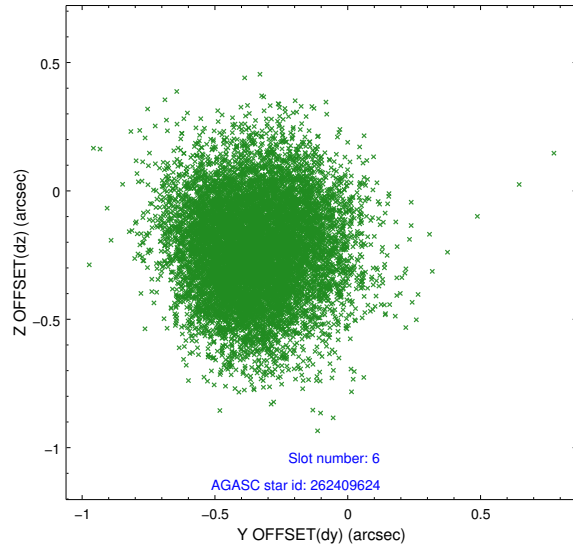
2.4.1 Slot 3



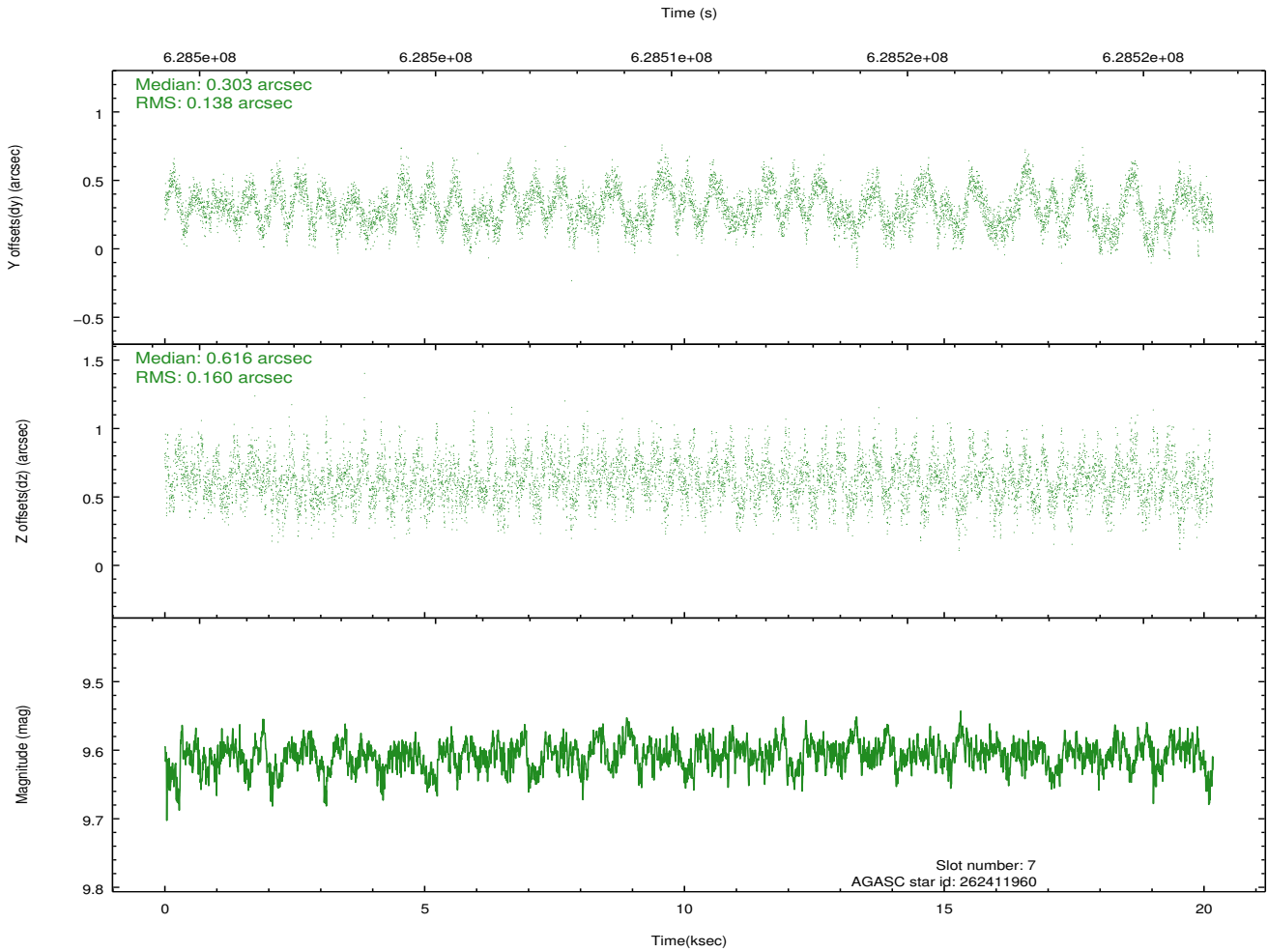
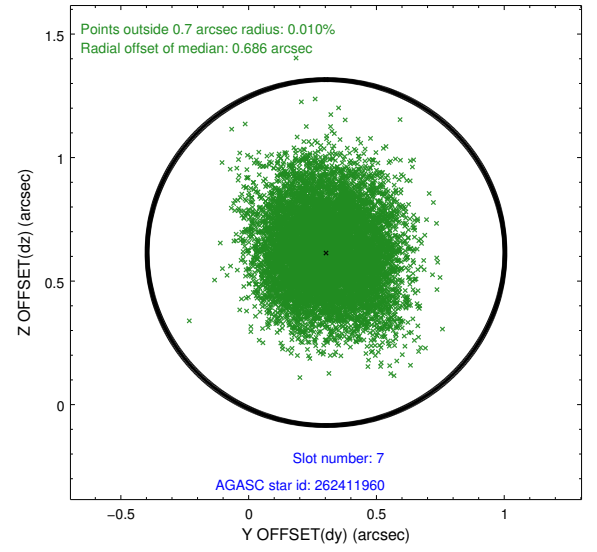
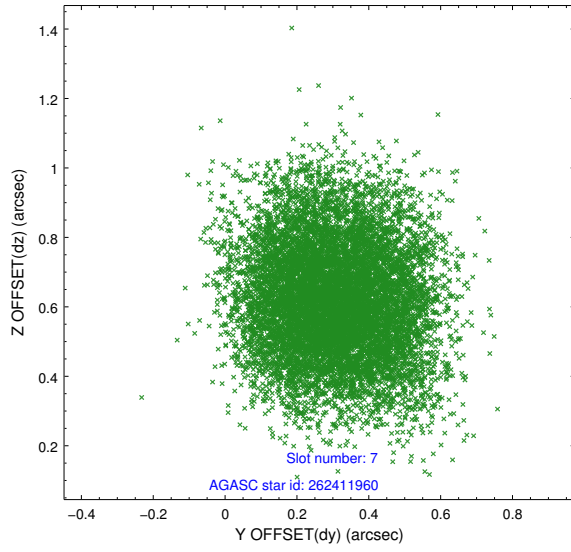
2.4.2 Slot 5



2.4.3 Slot 6

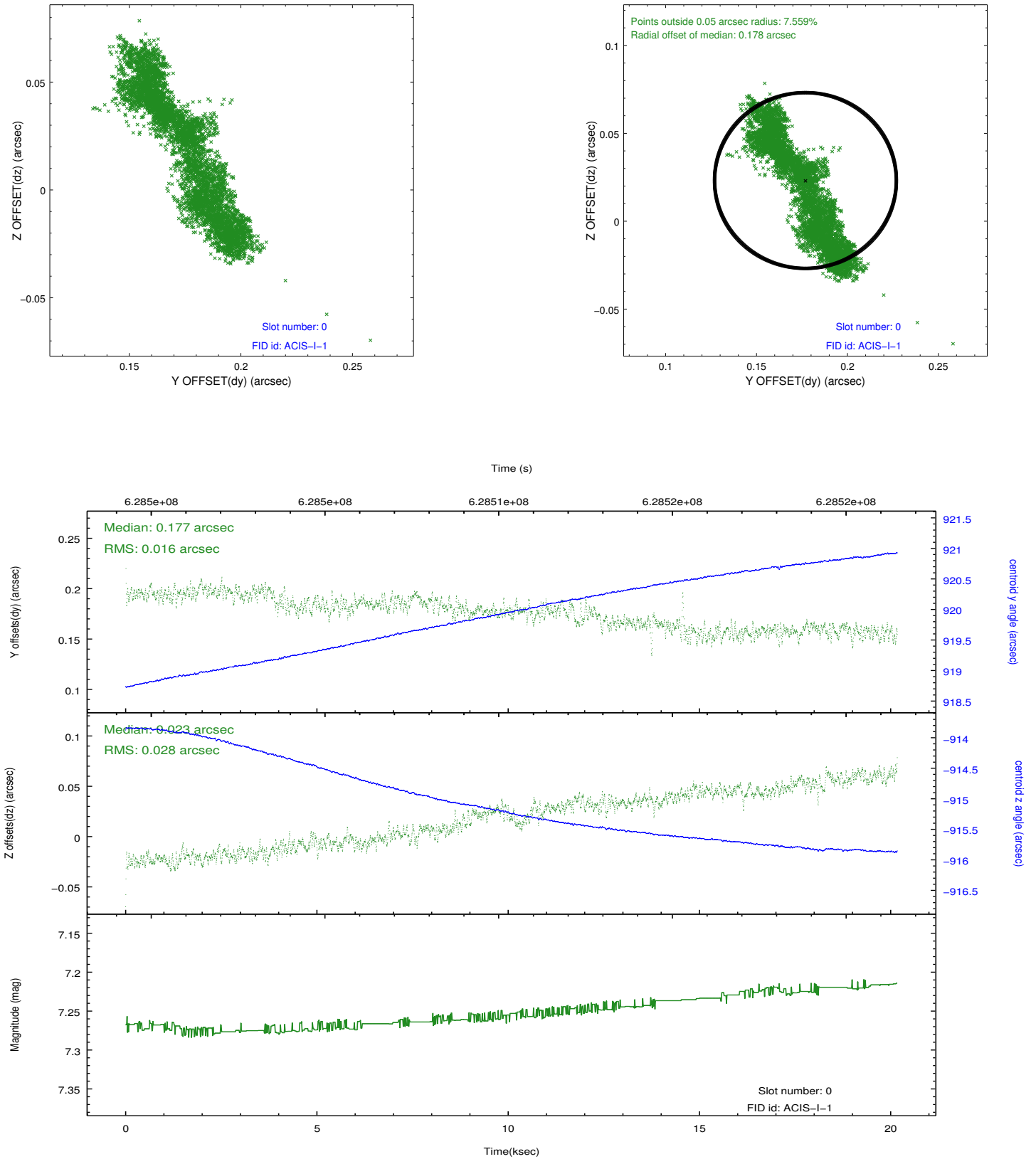


2.4.4 Slot 7

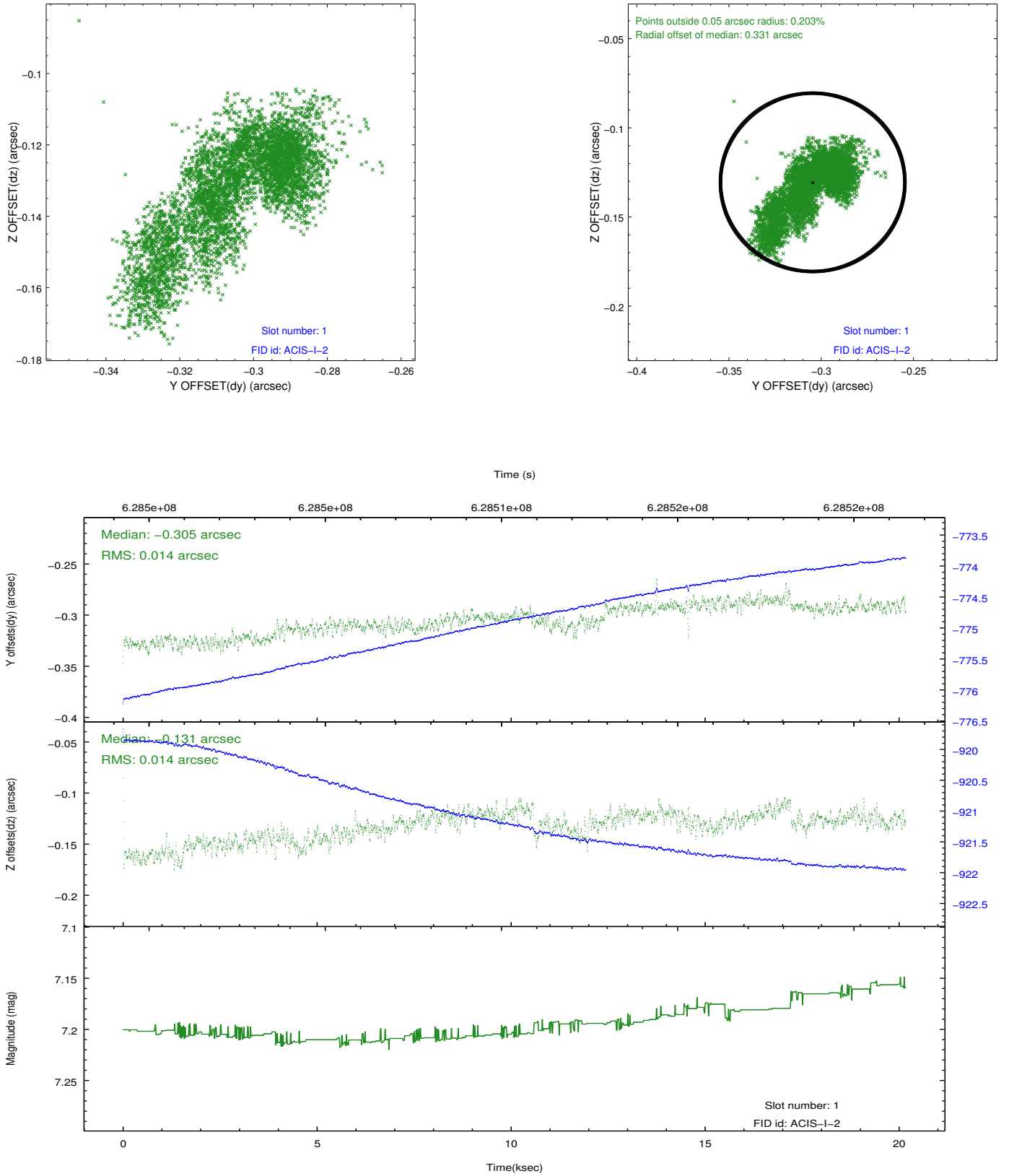


2.5 FID Slots

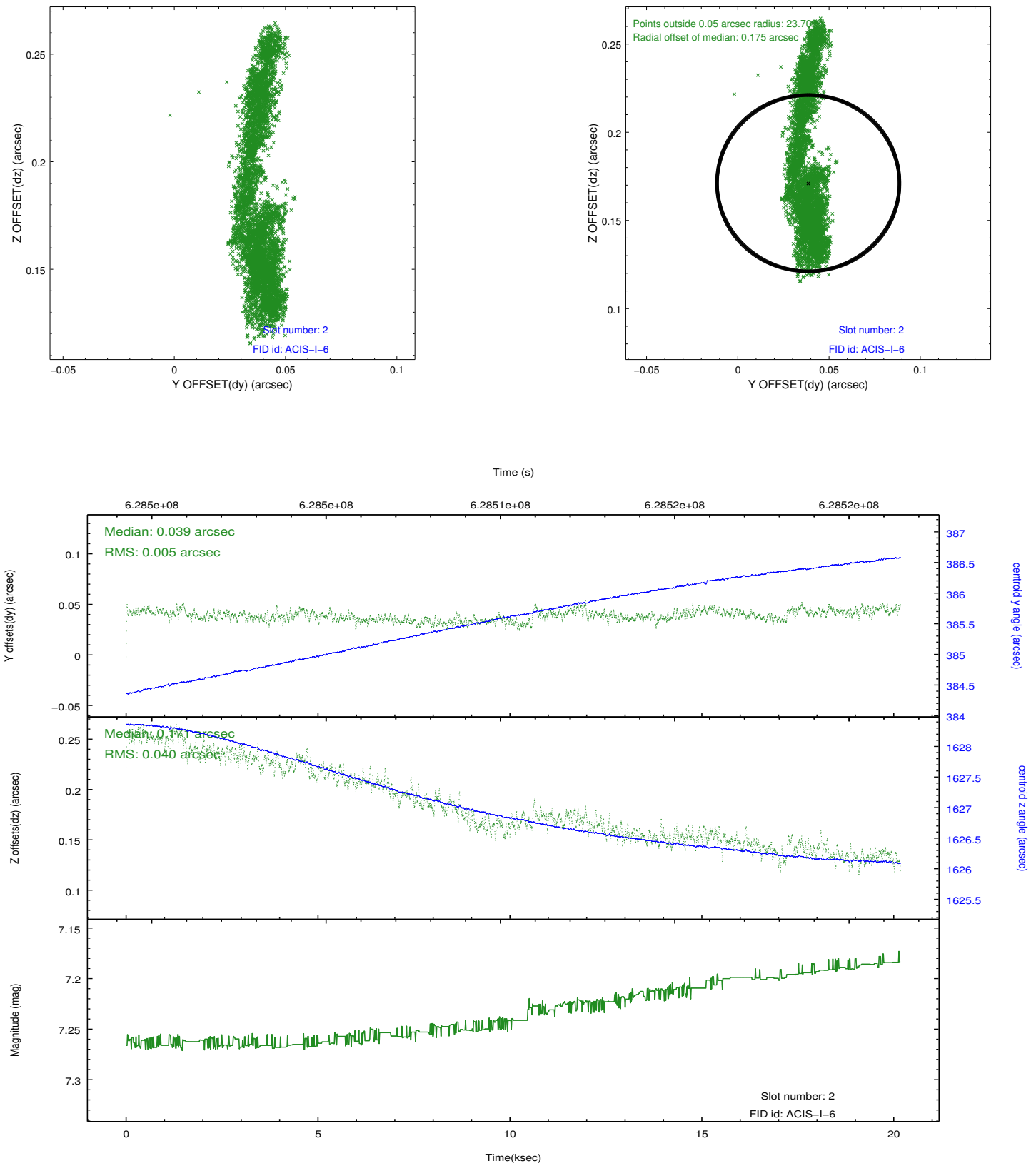
2.5.1 Slot 0



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)	2017.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.063200154424

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 guide star from the solution.

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A spatial region of the original bias map for CCD = 1 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 = 1 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:

(207.17902,26.43739),

(207.18188,26.43336), (207.23380,26.46266), (207.23094,26.46669)