

V&V Reference Report

L2 ASCDS Version : 10.5

Observation 17133 - L2 Version 2
Chandra X-Ray Center

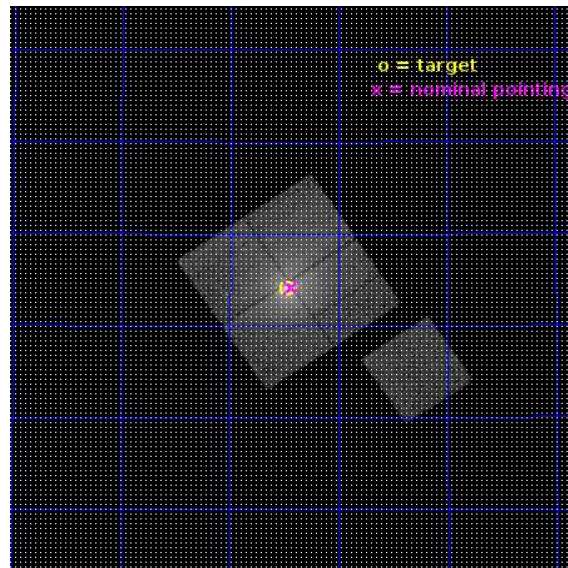
L2 Processing Date : Jun 23 2016

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1 Front

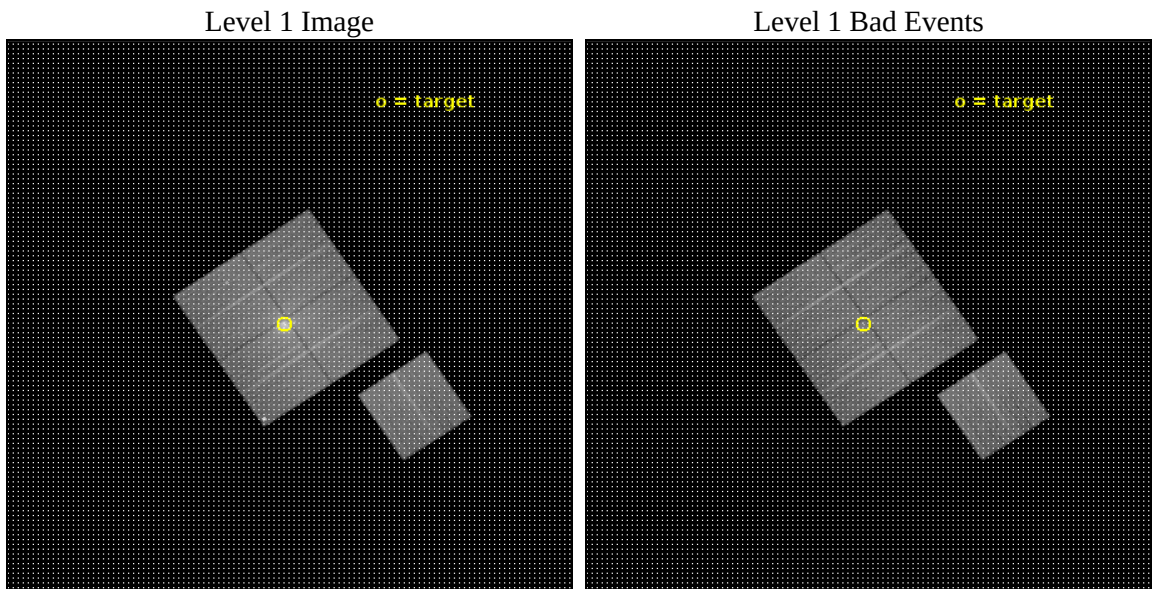
seq_num	703131	Sequence number
obs_id	17133	Observation id
title	The Rise to Power: Half a Billion Years of Intense AGN Activity in the Merging Cluster Cygnus A	Proposal title
observer	Dr. Michael Wise	Principal investigator
object	Cygnus A - Nucleus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.867917	Observer's specified target RA [deg]
dec_targ	40.733889	Observer's specified target Dec [deg]
ra_nom	299.85854969407	Nominal RA [deg]
dec_nom	40.735557963227	Nominal Dec [deg]
roll_nom	146.21479979417	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30640.359225512	Sum of GTIs [s]
livetime	30240.020375126	Livetime [s]
ontime0	30630.936104536	Sum of GTIs [s]
ontime1	30637.218205452	Sum of GTIs [s]
ontime2	30637.218155146	Sum of GTIs [s]
ontime3	30640.359225512	Sum of GTIs [s]
ontime6	30643.500235796	Sum of GTIs [s]
l2events	241916	Number of level 2 events



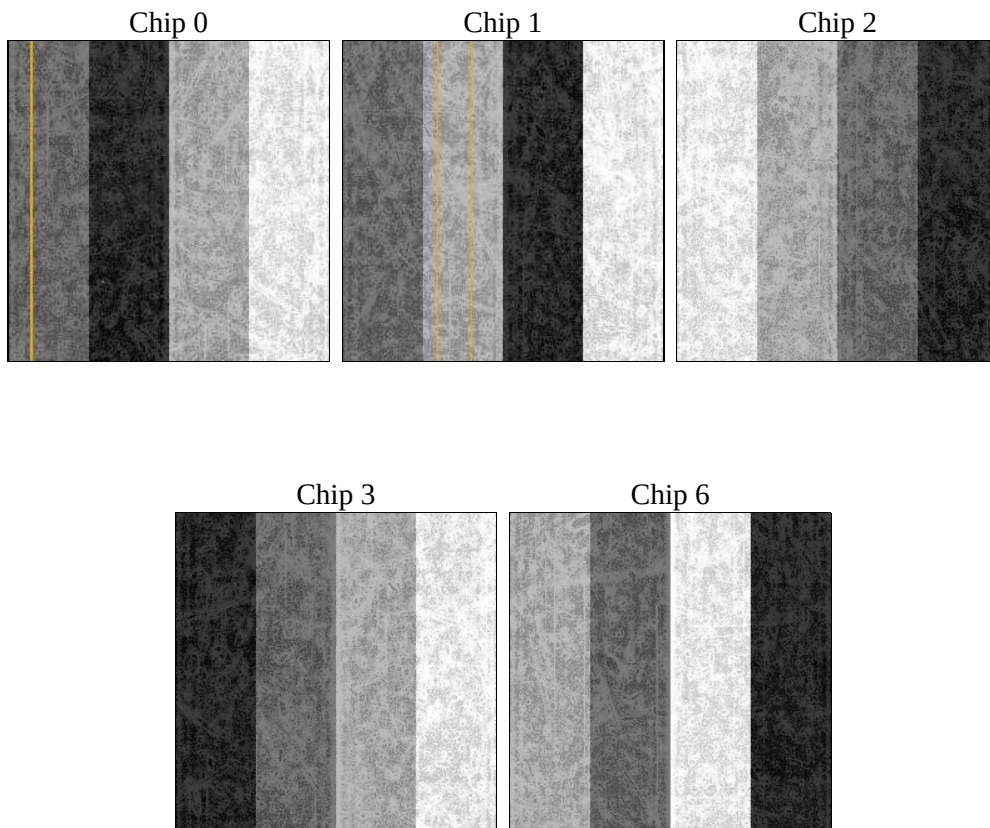
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30600.000000	[s] Scheduled observation exposure time
ascdsver	10.5	Processing system revision	ontime	30640.359225512	Sum of GTIs [s]
caldsver	4.7.2	 	ontime0	30630.936104536	Sum of GTIs [s]
date	2016-06-23T18:28:44	Date and time of file creation	ontime1	30637.218205452	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	30637.218155146	Sum of GTIs [s]
			ontime3	30640.359225512	Sum of GTIs [s]
			ontime6	30643.500235796	Sum of GTIs [s]
			l1events	1104001	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	204091	202943	225953	278135	192879
rejected events	153961	155560	176429	172295	170465
rejected %	75%	76%	78%	61%	88%

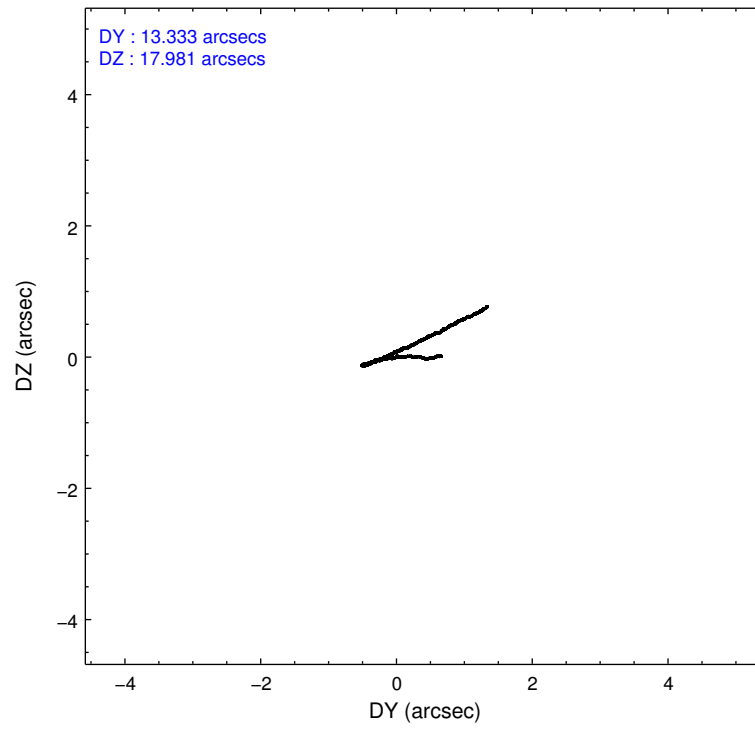
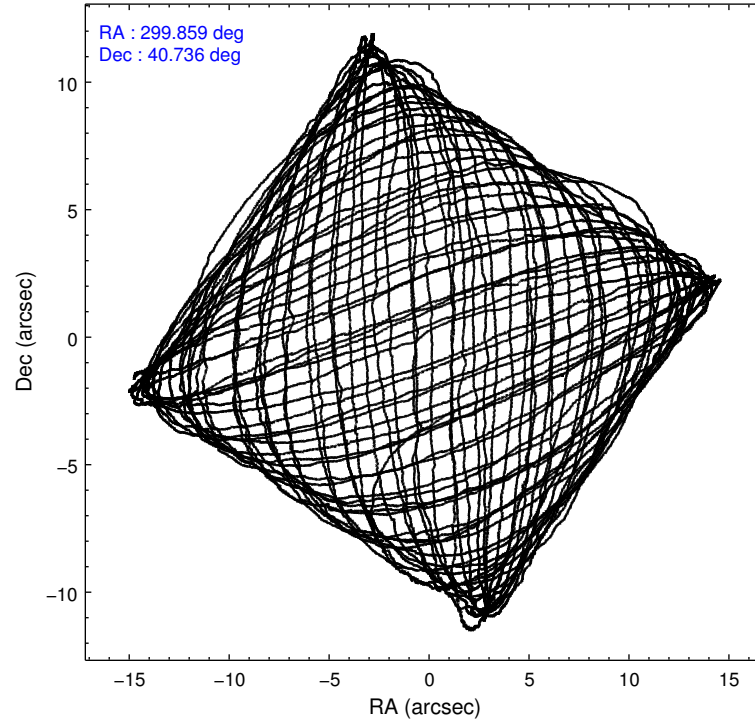
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	29833	26084	30508	75651	7884
	14%	12%	13%	27%	4%
grade 1 events	190	151	226	814	92
	0%	0%	0%	0%	0%
grade 2 events	8601	9245	7876	12552	4984
	4%	4%	3%	4%	2%
grade 3 events	3225	2920	3110	4910	2155
	1%	1%	1%	1%	1%
grade 4 events	3063	2953	3003	4899	2154
	1%	1%	1%	1%	1%
grade 5 events	8135	8573	7699	9965	8722
	3%	4%	3%	3%	4%
grade 6 events	5426	6190	5037	7853	5239
	2%	3%	2%	2%	2%
grade 7 events	145618	146827	168494	161491	161649
	71%	72%	74%	58%	83%

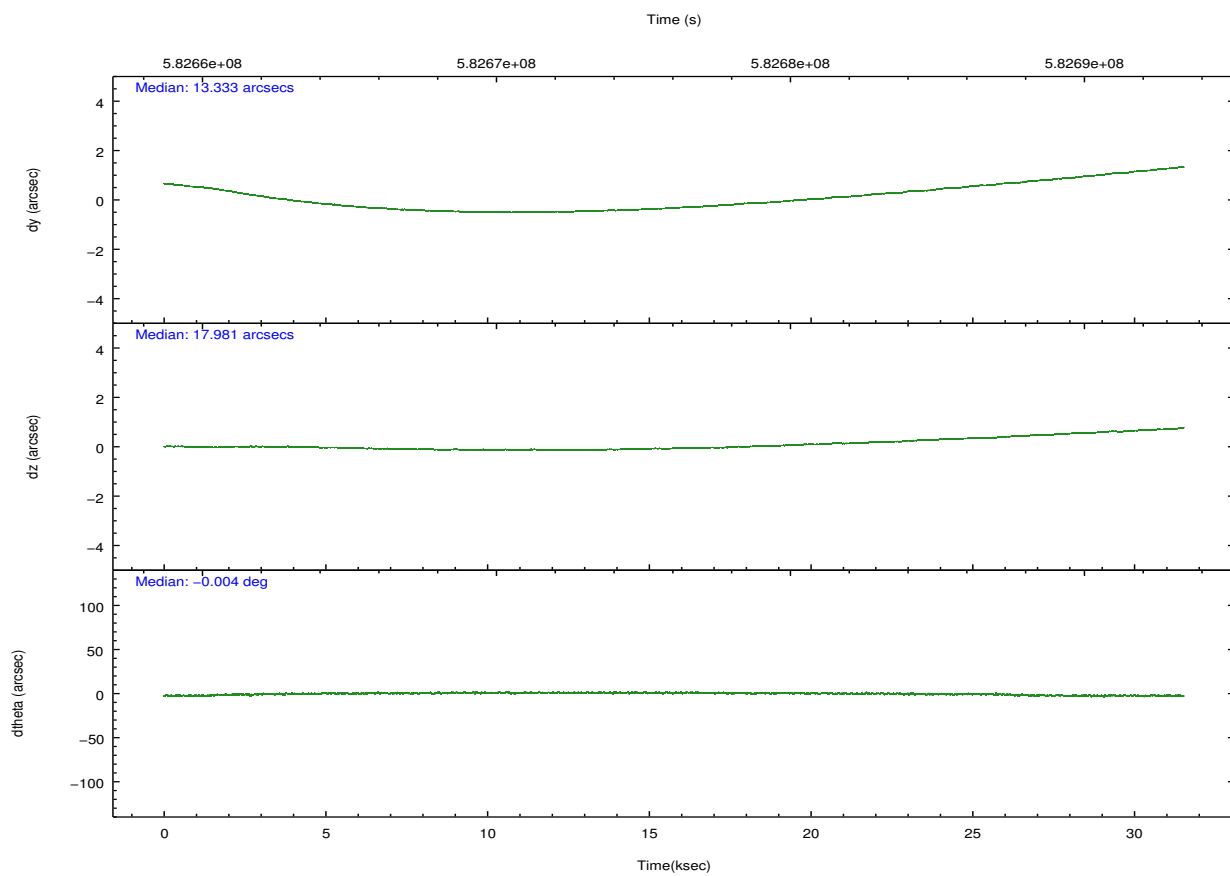
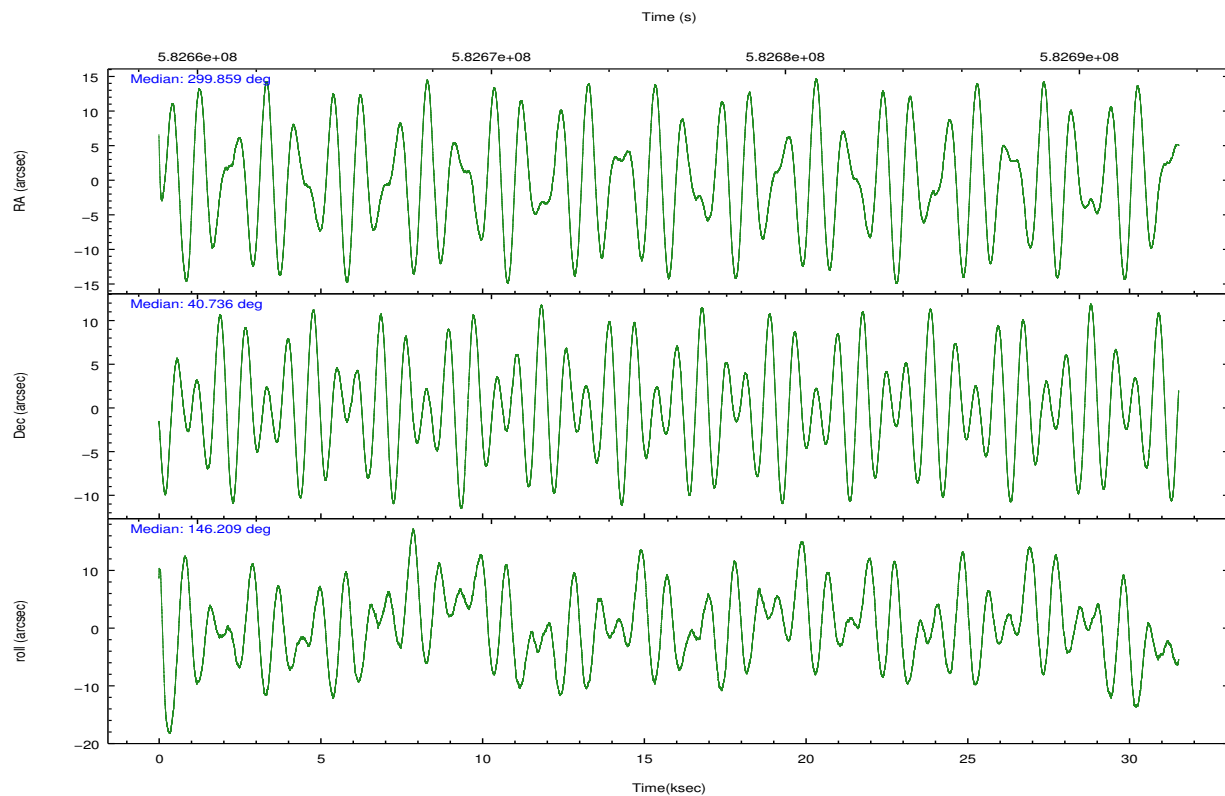
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	299.894884	299.858549694068
[deg] Pointing Dec	40.733845	40.735557963227
[deg] Pointing Roll	145.982403	146.2147997941716
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	582661207.184000	582659560.1495399
Observation start date	2016-06-18T18:18:59	2016-06-18T17:52:40
[s] Observation end time (MET)	582691807.184000	582692451.8889199
Observation end date	2016-06-19T02:48:59	2016-06-19T03:00:51
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
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



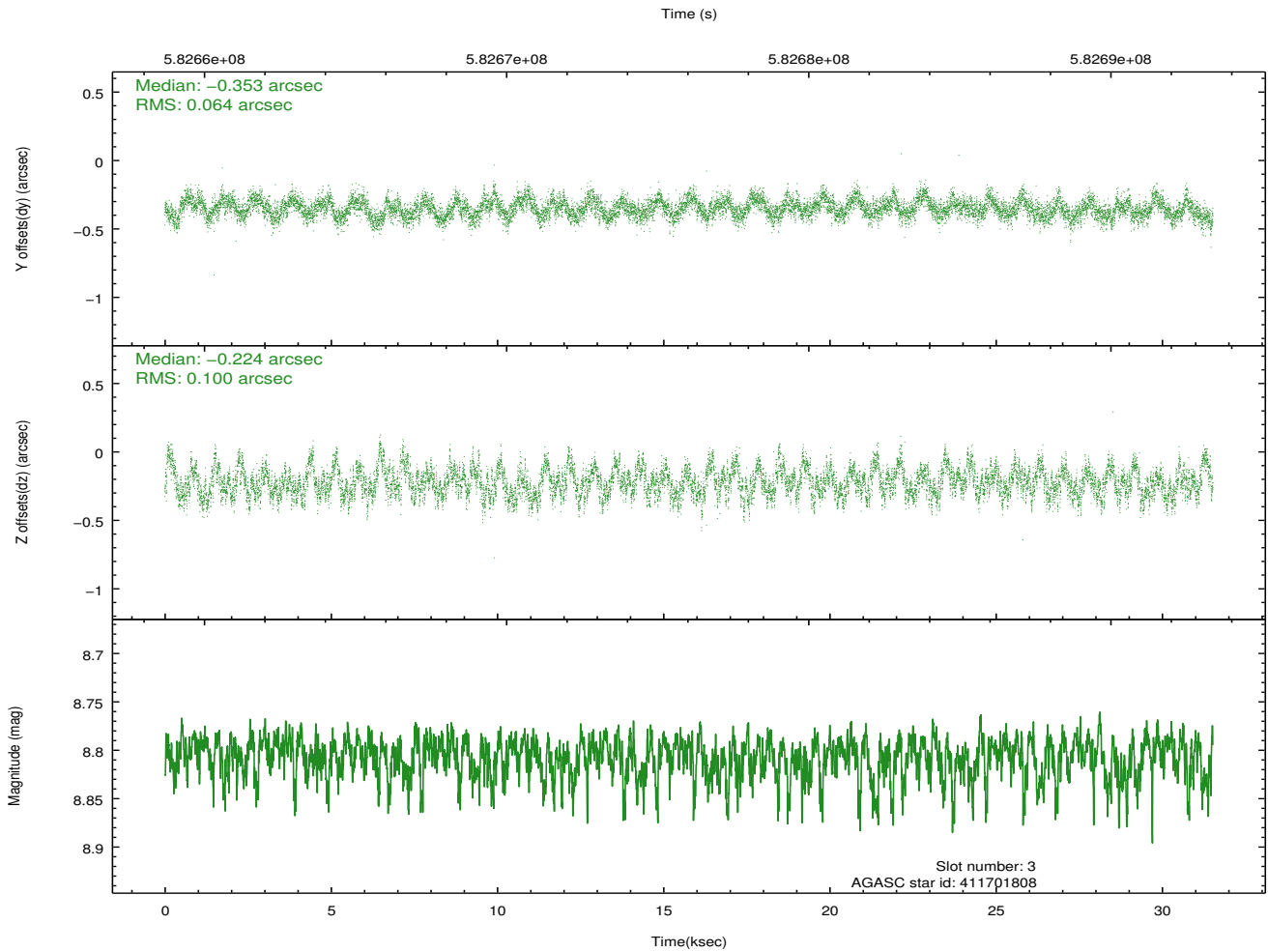
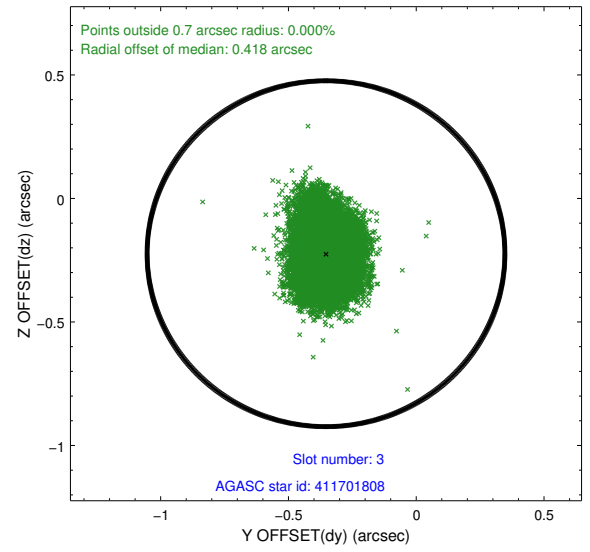
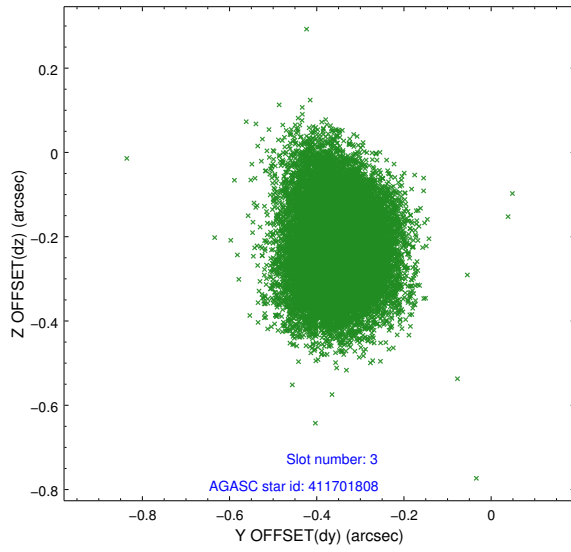


Slot Statistics

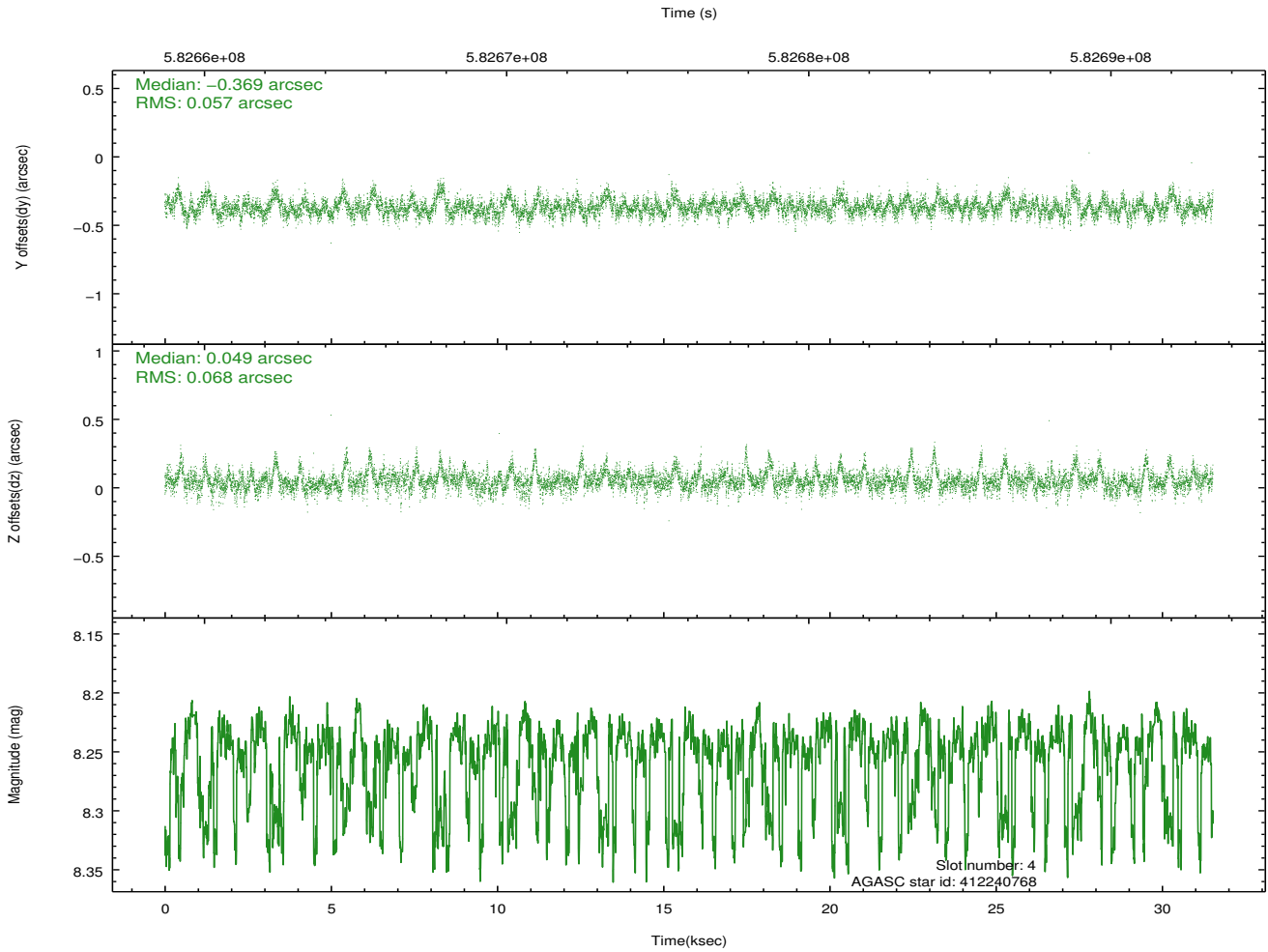
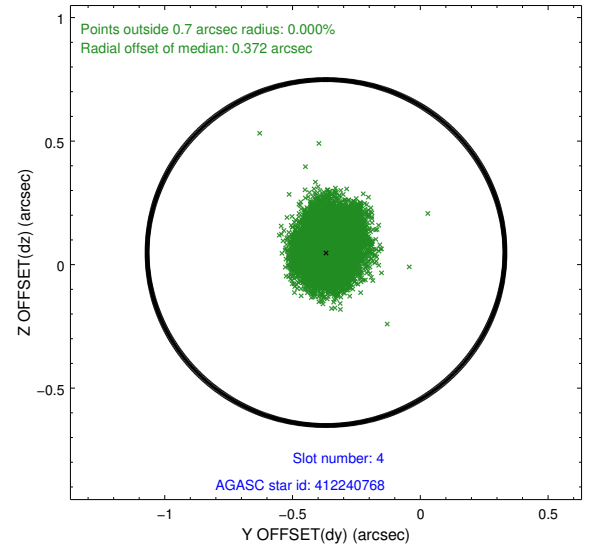
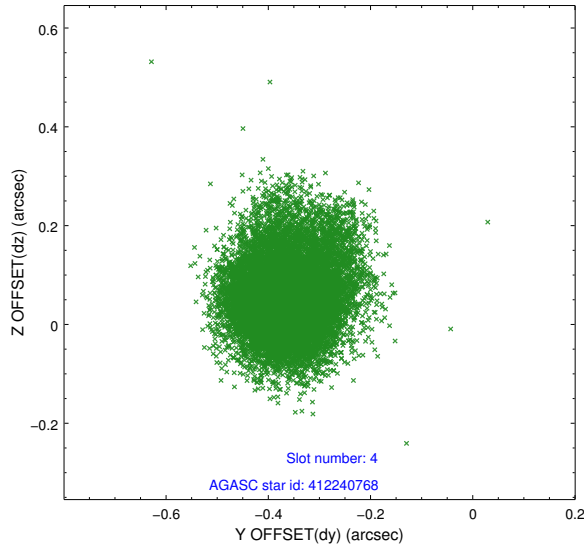
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	7690	0.064	-0.011	0.009	0.025	0.000000	0.000000	926.14	-841.76
1	FID		ACIS-I-5	7.25	7690	-0.311	0.043	0.011	0.021	0.000000	0.000000	-1822.37	1055.66
2	FID		ACIS-I-6	7.26	7688	0.155	0.039	0.012	0.028	0.000000	0.000000	391.63	1700.30
3	GUIDE	used	411701808	8.81	15370	-0.353	-0.224	0.127	0.205	299.419536	40.880184	1369.10	284.62
4	GUIDE	used	412240768	8.25	15374	-0.369	0.049	0.089	0.163	299.999696	41.280279	865.89	-1788.71
5	GUIDE	used	413412048	9.03	15371	0.177	0.095	0.119	0.186	300.720827	40.967507	-1383.63	-1961.79
6	GUIDE	used	413418680	9.25	15359	0.498	-0.007	0.134	0.218	300.860298	40.740057	-2160.95	-1502.71
7	GUIDE	used	413421016	8.68	15373	0.053	0.077	0.102	0.166	300.612426	40.446254	-2203.81	-247.87

2.4 Star Slots

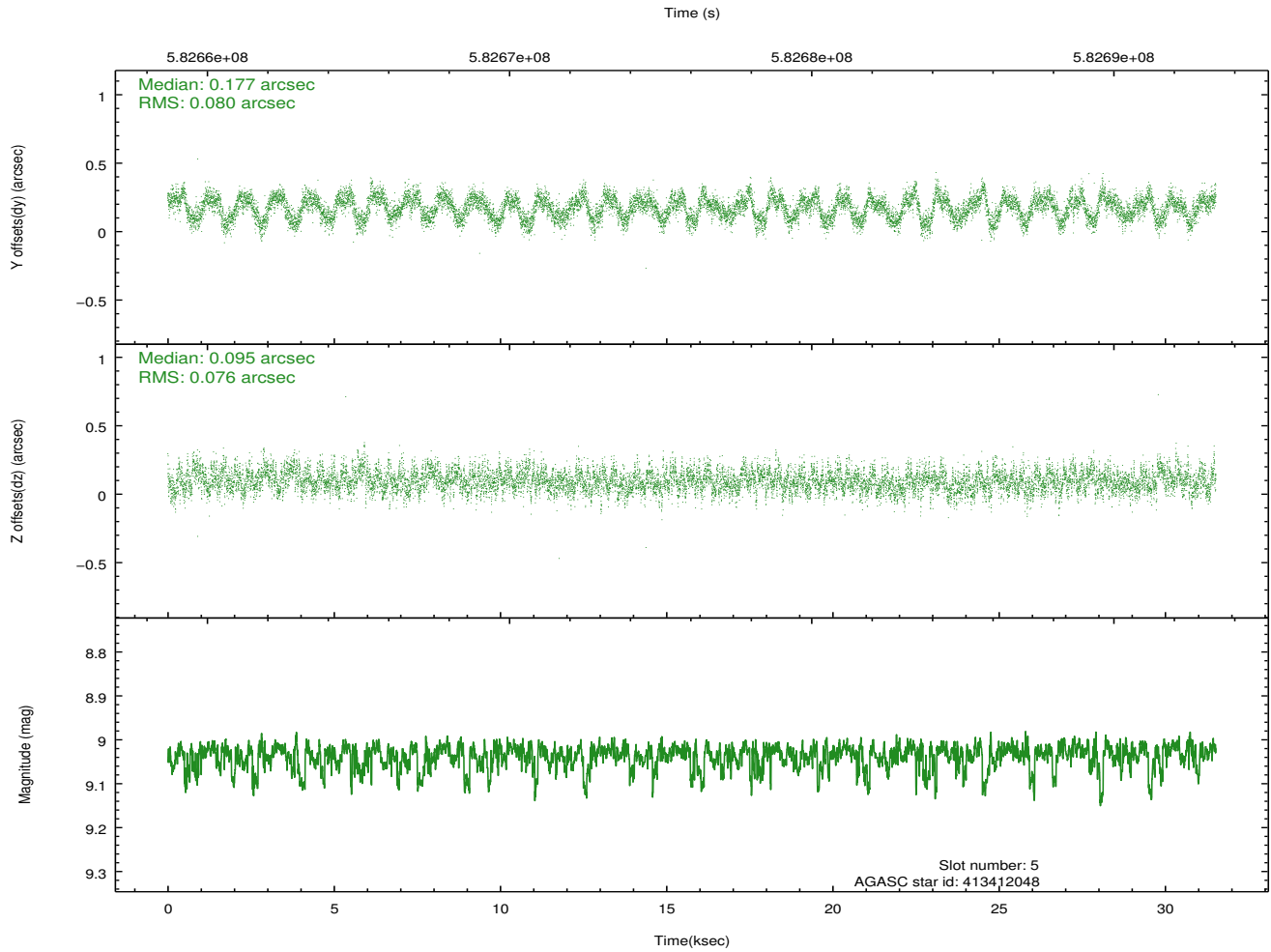
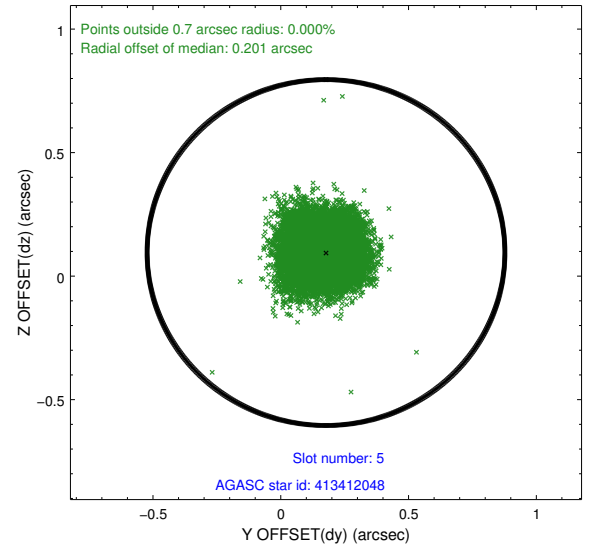
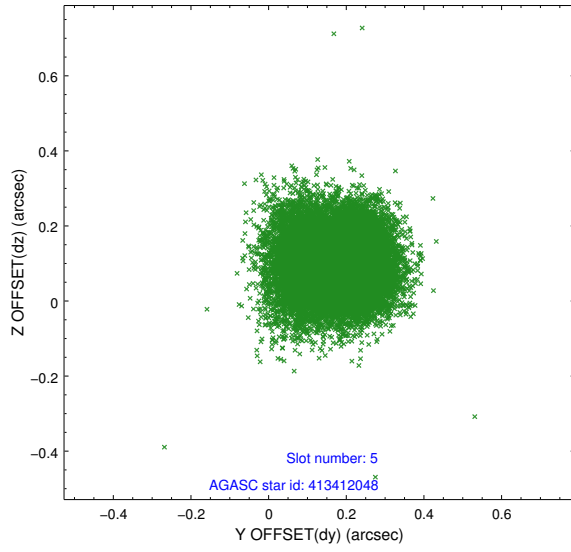
2.4.1 Slot 3



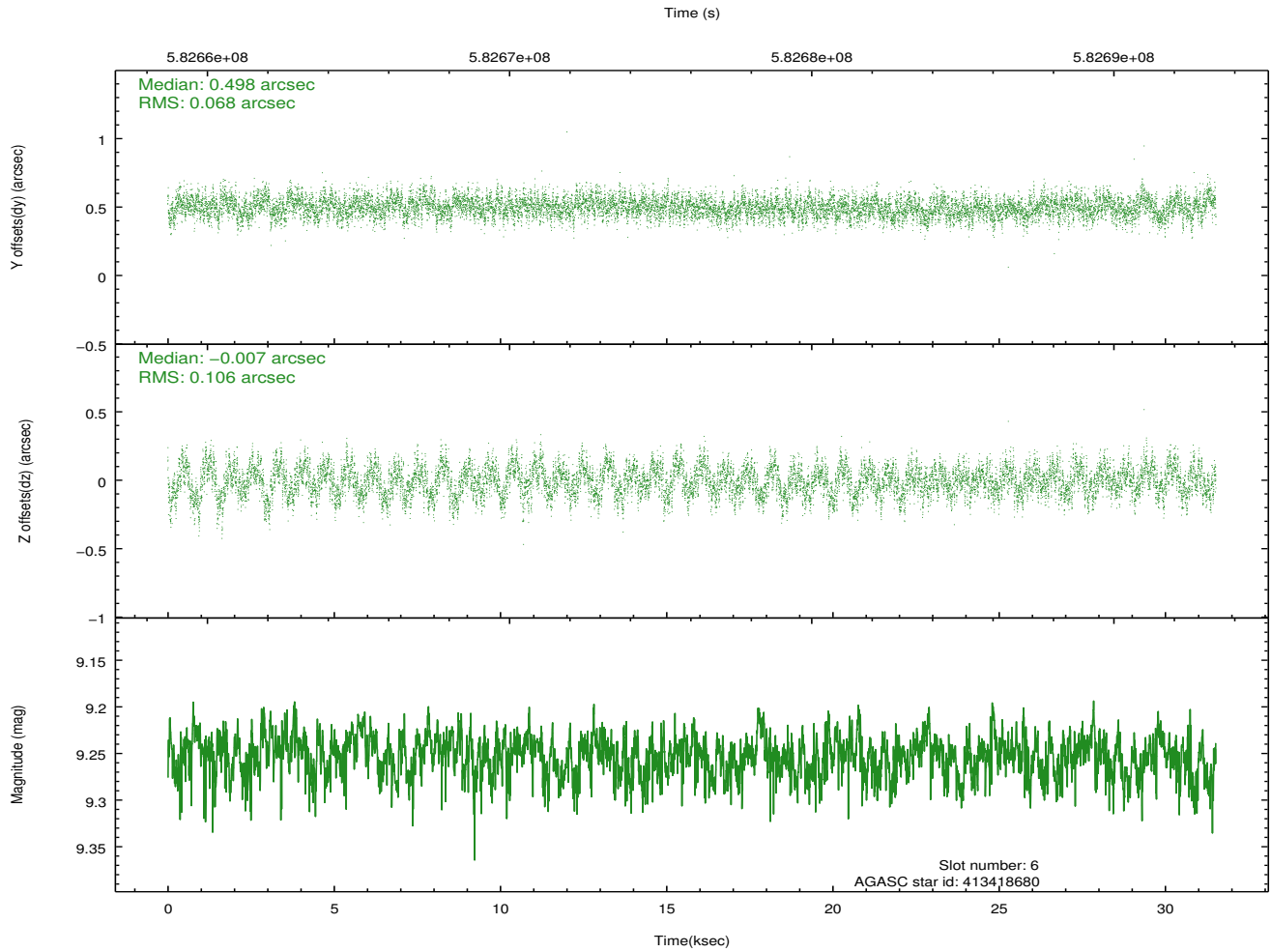
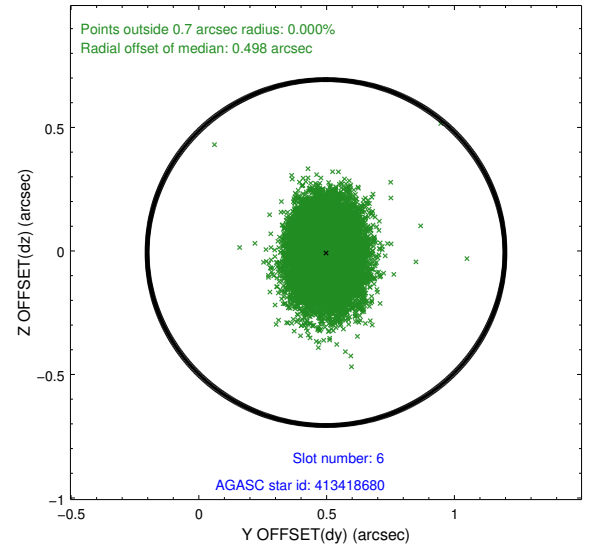
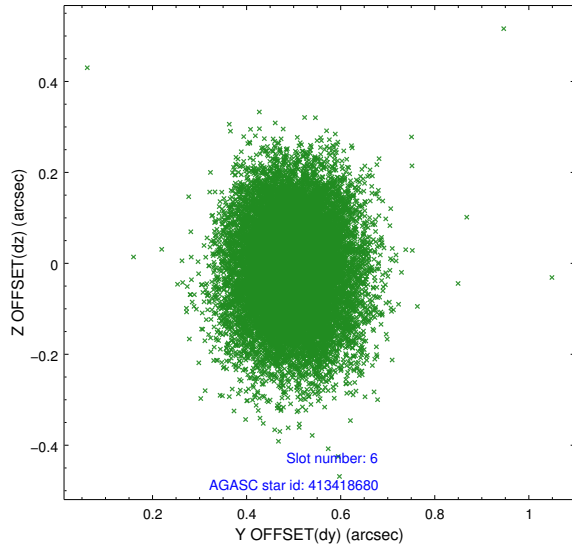
2.4.2 Slot 4



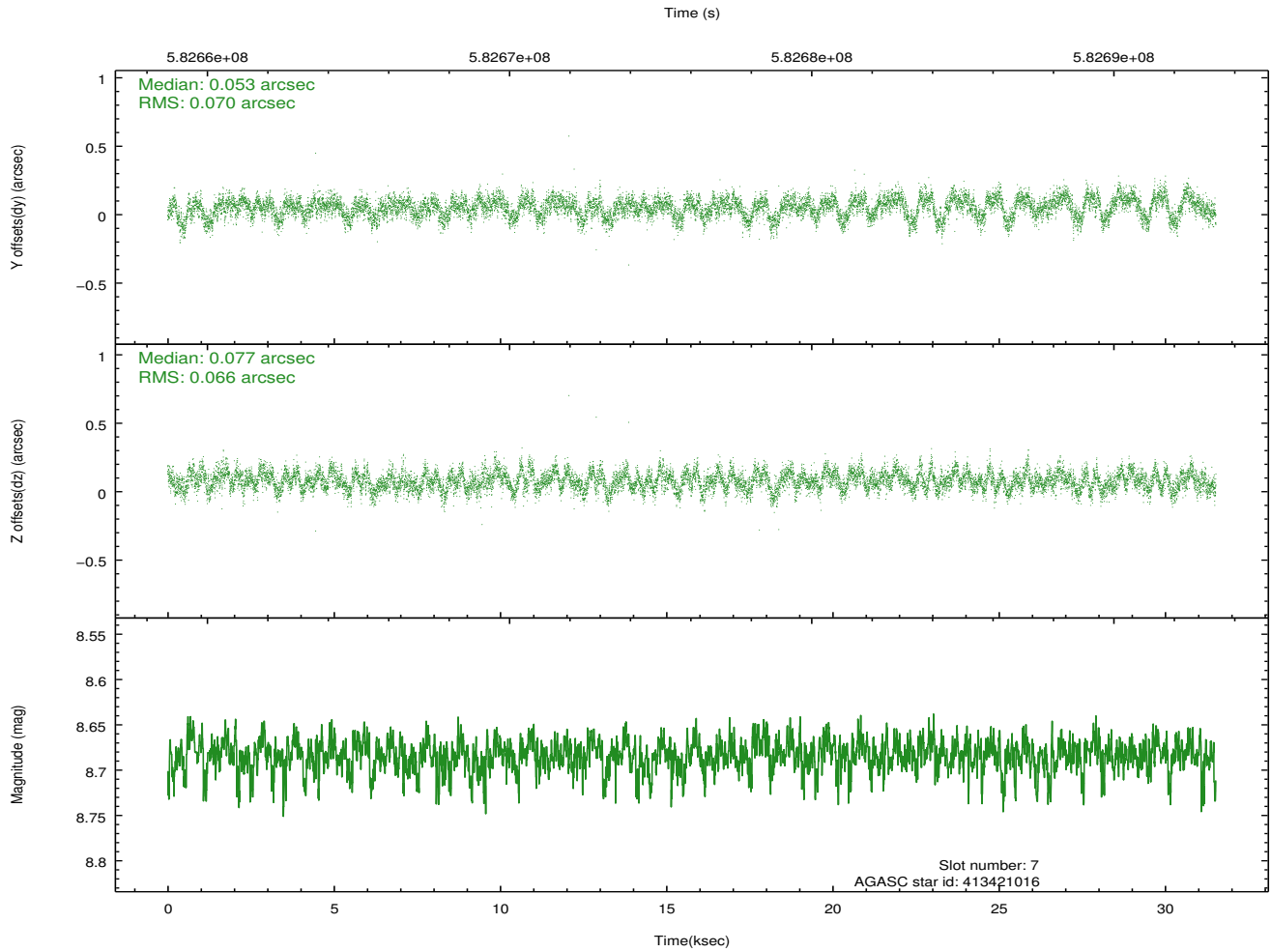
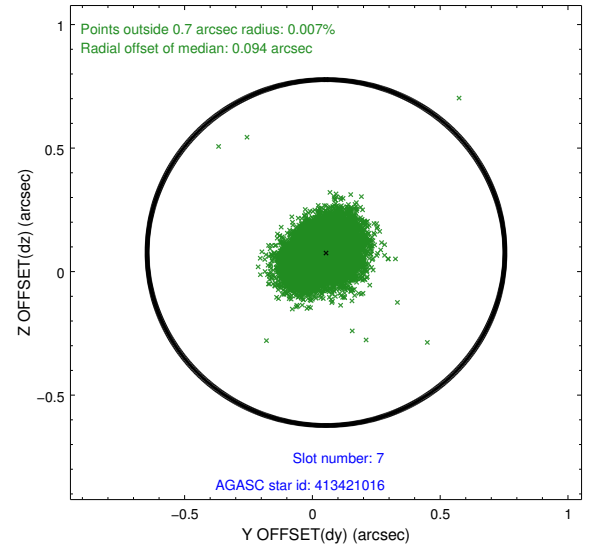
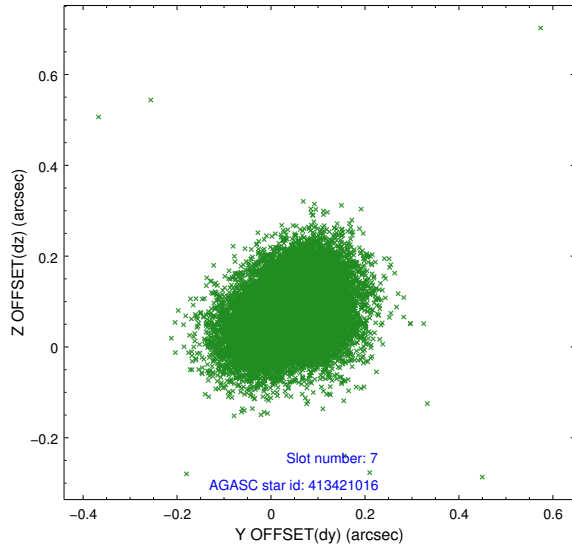
2.4.3 Slot 5



2.4.4 Slot 6

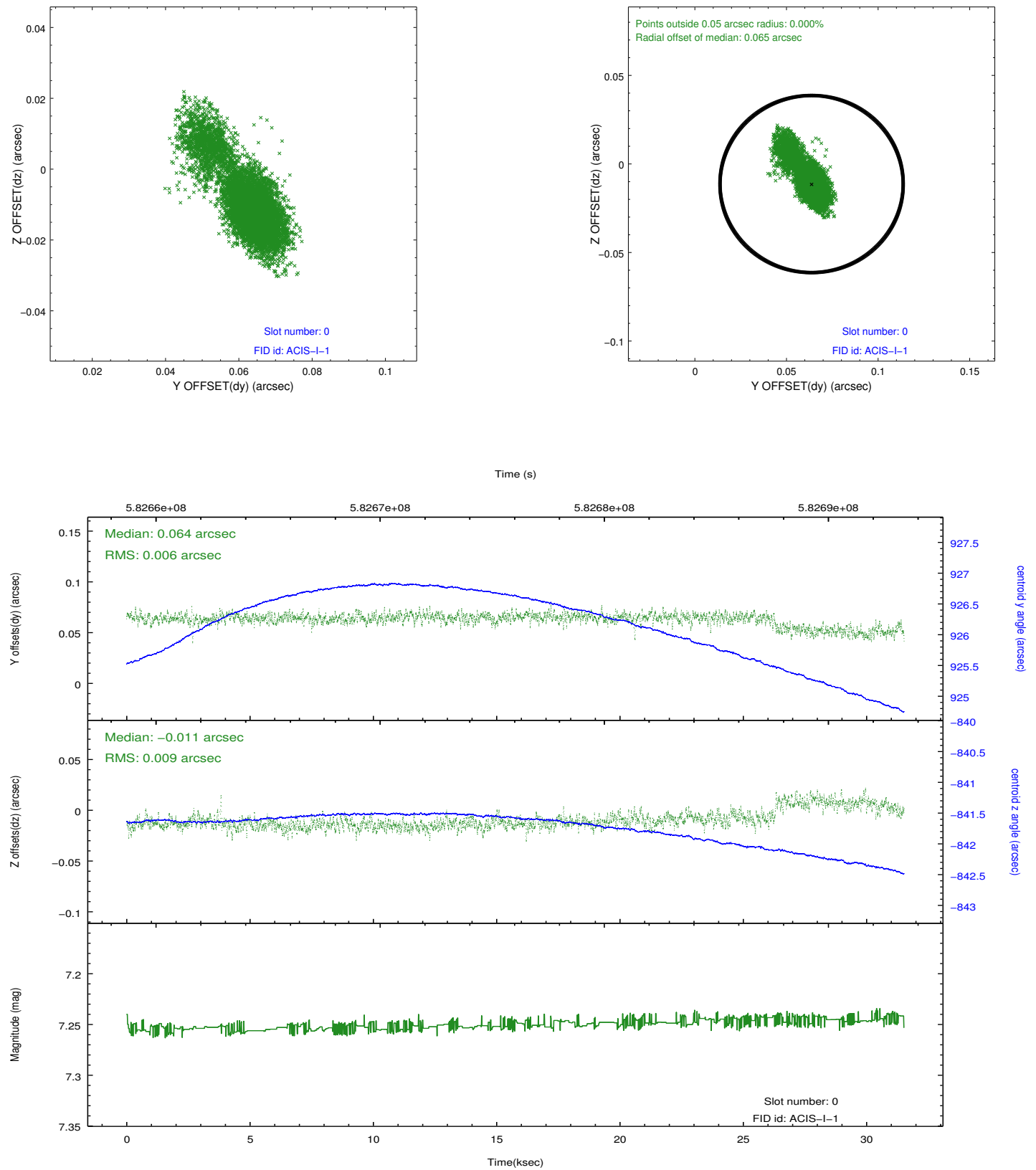


2.4.5 Slot 7

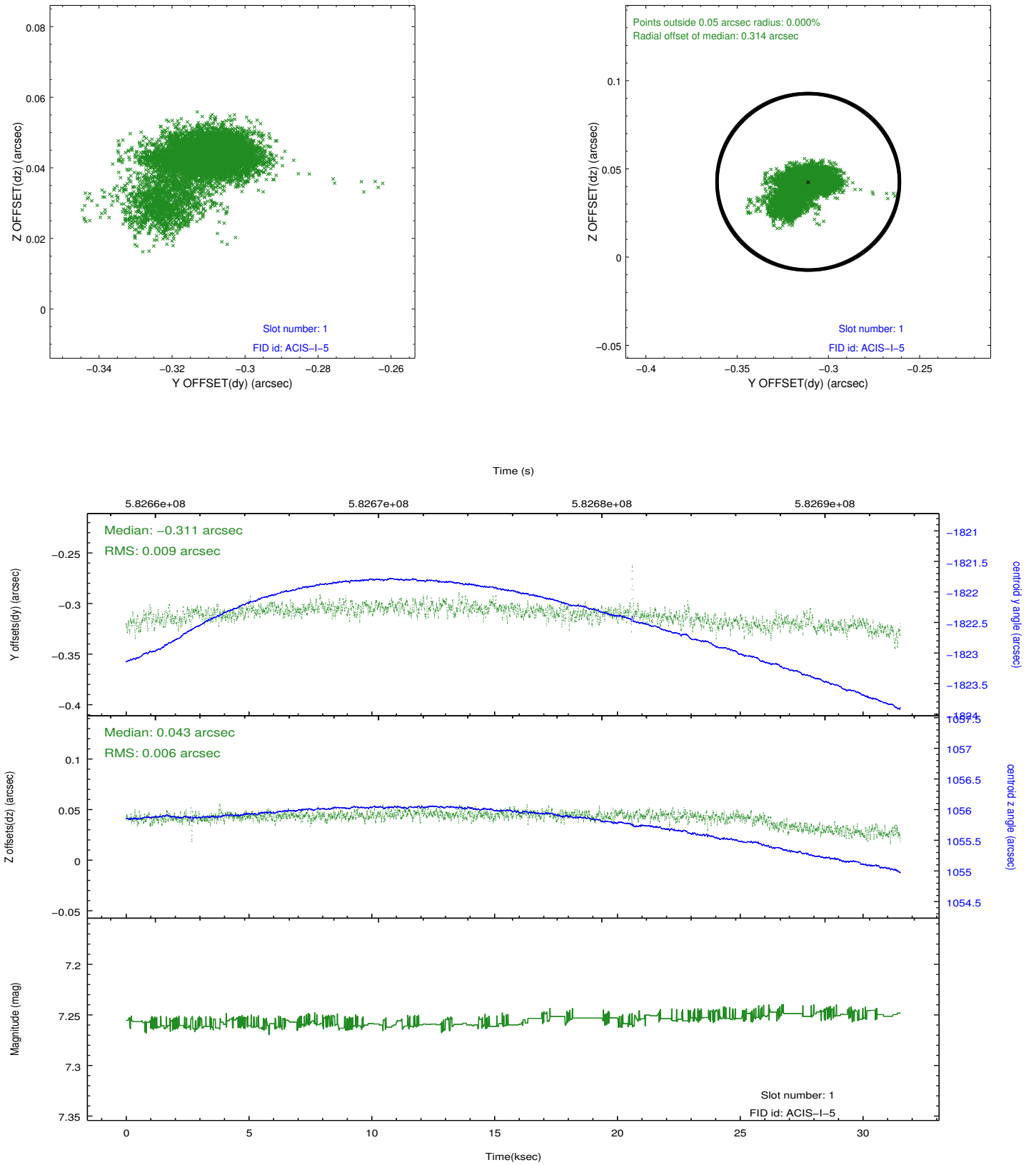


2.5 FID Slots

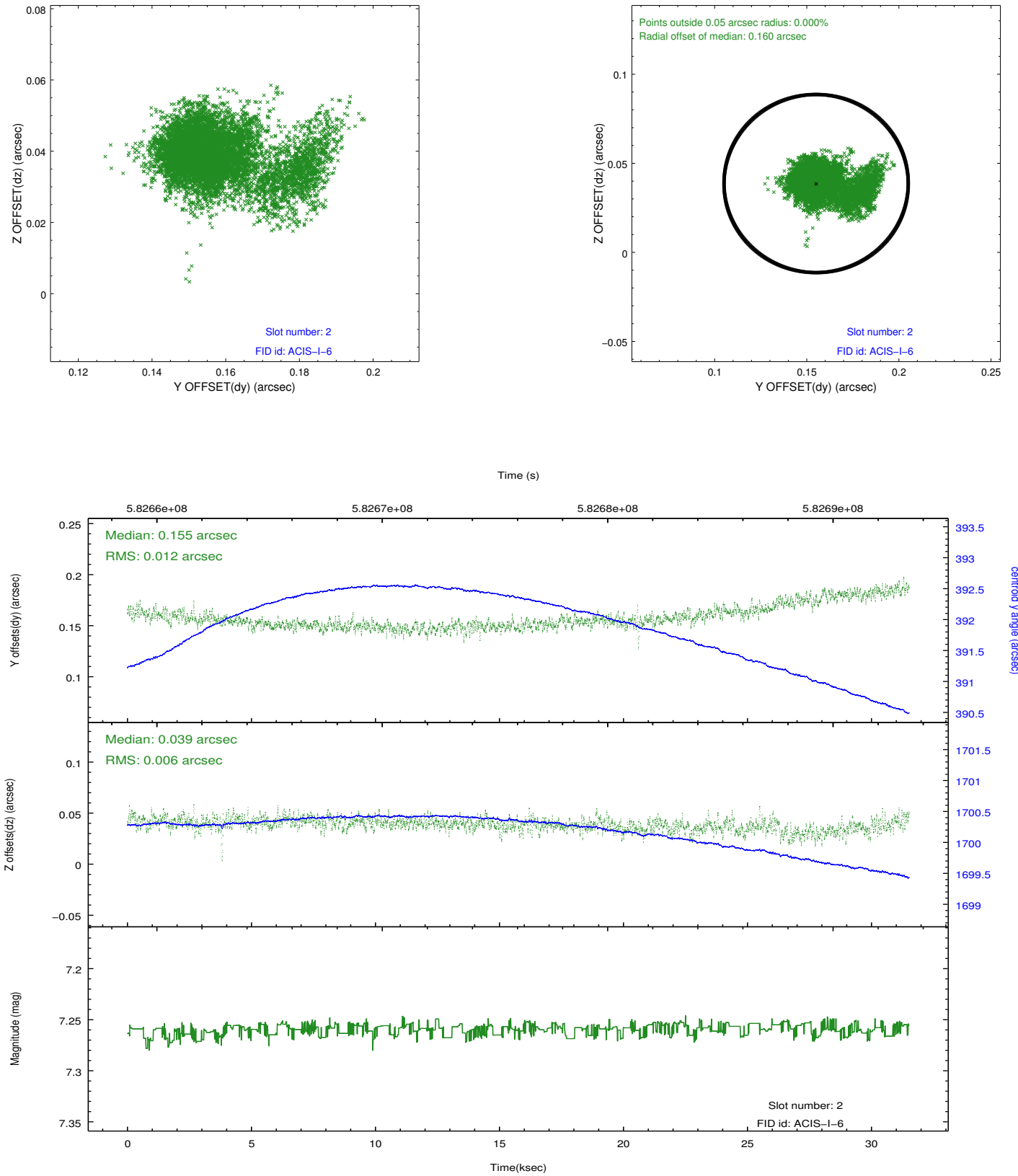
2.5.1 Slot 0



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)	2016.06.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.640359225512

A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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: (299.70143,40.76682), (299.69725,40.76204), (299.79529,40.71249), (299.79947,40.71726).