

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 15204 - L2 Version 3
Chandra X-Ray Center

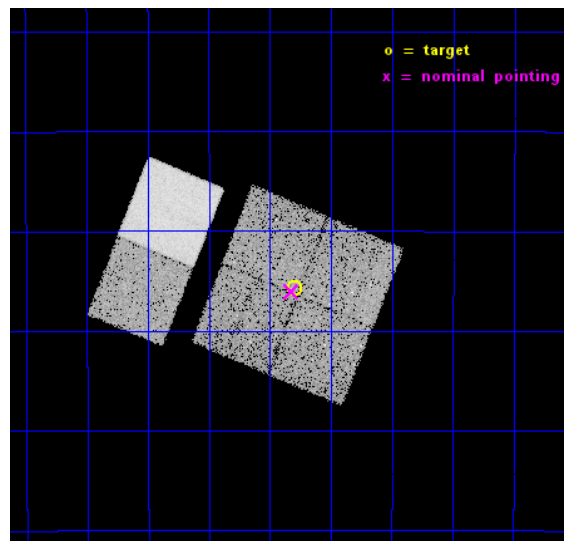
L2 Processing Date : Dec 2 2014

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1 Front

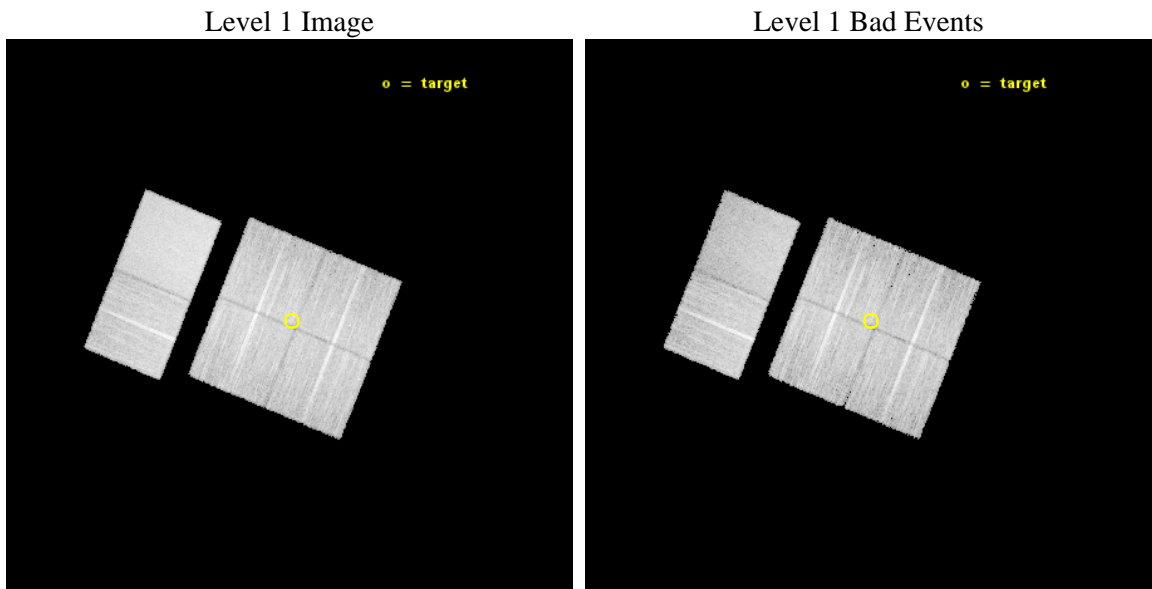
seq_num	901034	Sequence number
obs_id	15204	Observation id
title	Mapping Galaxy Groups and the Hot WHIM in Shapley Supercluster Filaments with Chandra and Suzaku	Proposal title
observer	Dr Marie Machacek	Principal investigator
object	Shapley A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	201.45	Observer's specified target RA [deg]
dec_targ	-31.594722	Observer's specified target Dec [deg]
ra_nom	201.45606588926	Nominal RA [deg]
dec_nom	-31.600956494322	Nominal Dec [deg]
roll_nom	292.17902169249	Nominal Roll [deg]
revision	3	Processing version of data
ontime	19970.342206419	Sum of GTIs [s]
livetime	19717.465708704	Livetime [s]
ontime0	19970.219086409	Sum of GTIs [s]
ontime1	19967.019116223	Sum of GTIs [s]
ontime2	19970.301166415	Sum of GTIs [s]
ontime3	19970.342206419	Sum of GTIs [s]
ontime6	19970.424286425	Sum of GTIs [s]
ontime7	19970.383246422	Sum of GTIs [s]
l2events	116914	Number of level 2 events



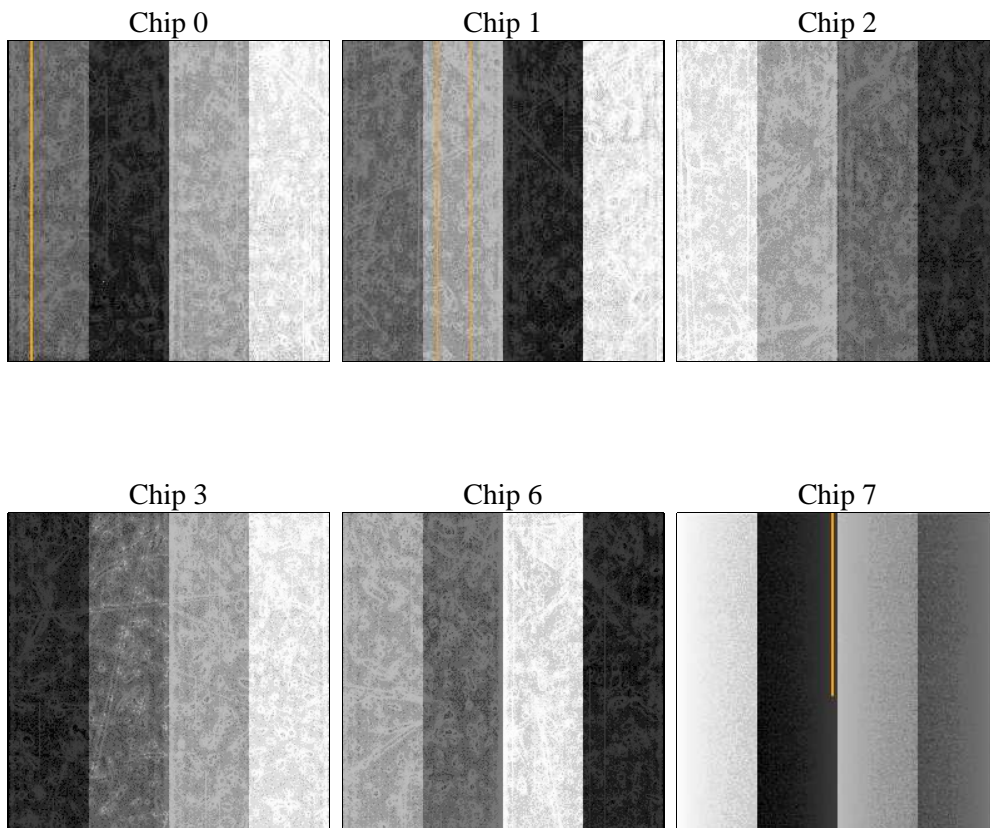
2 OBI

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	10.3	Processing system revision	ontime	19970.342206419	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	19970.219086409	Sum of GTIs [s]
date	2014-12-03T03:58:57	Date and time of file creation	ontime1	19967.019116223	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	19970.301166415	Sum of GTIs [s]
			ontime3	19970.342206419	Sum of GTIs [s]
			ontime6	19970.424286425	Sum of GTIs [s]
			ontime7	19970.383246422	Sum of GTIs [s]
			l1events	649729	Number of level 1 events

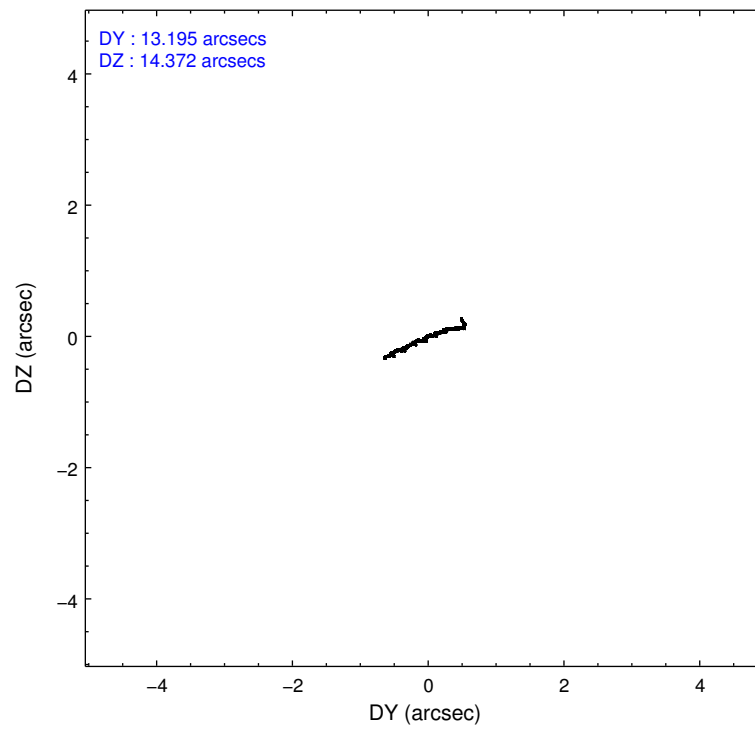
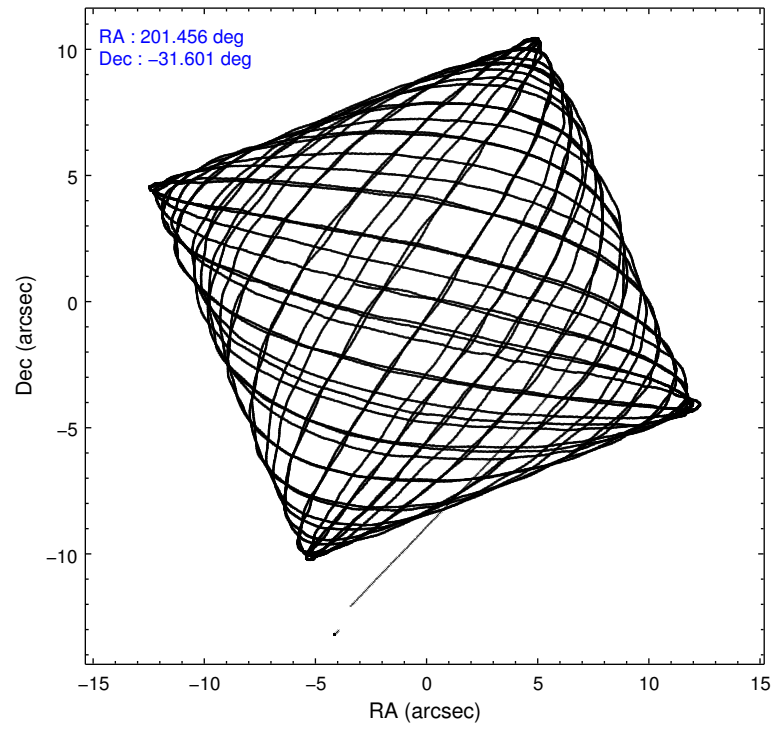
2.1.4 Events

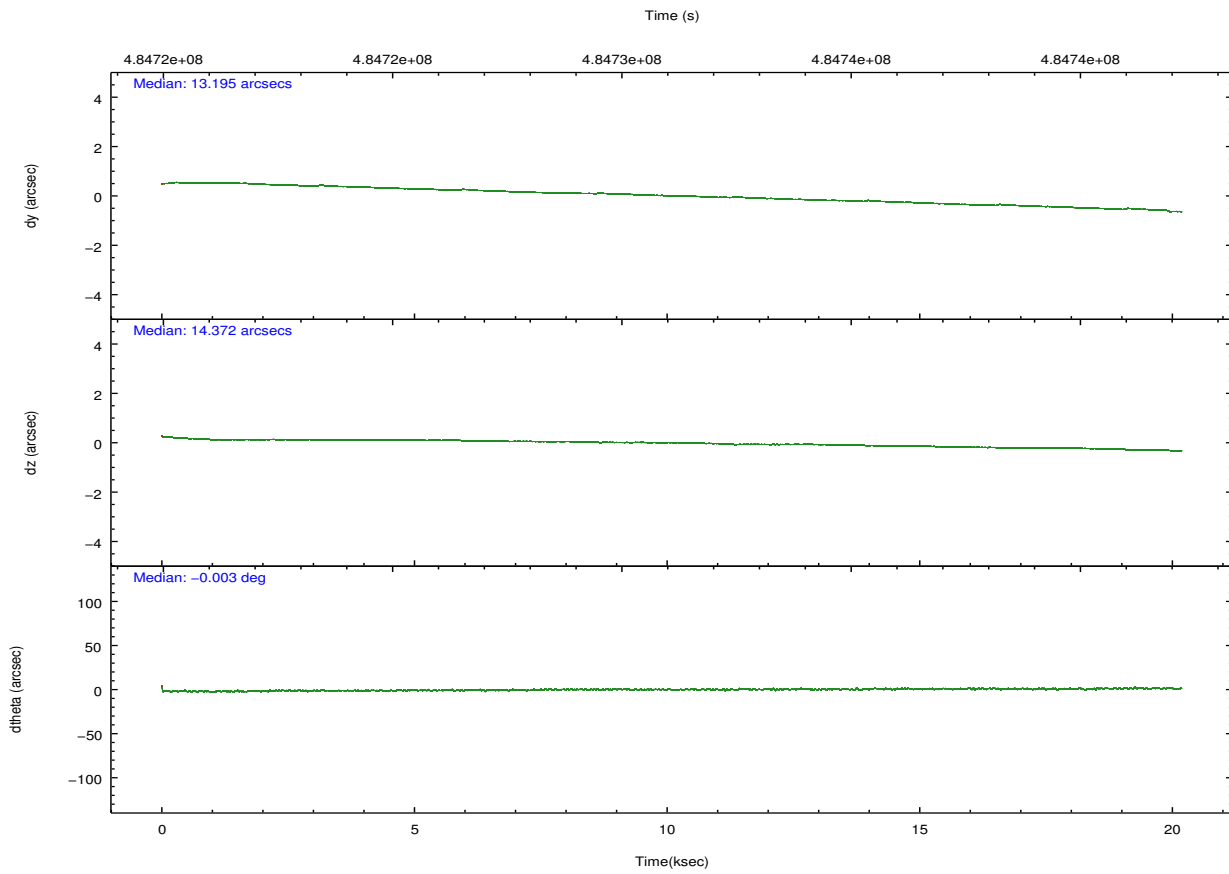
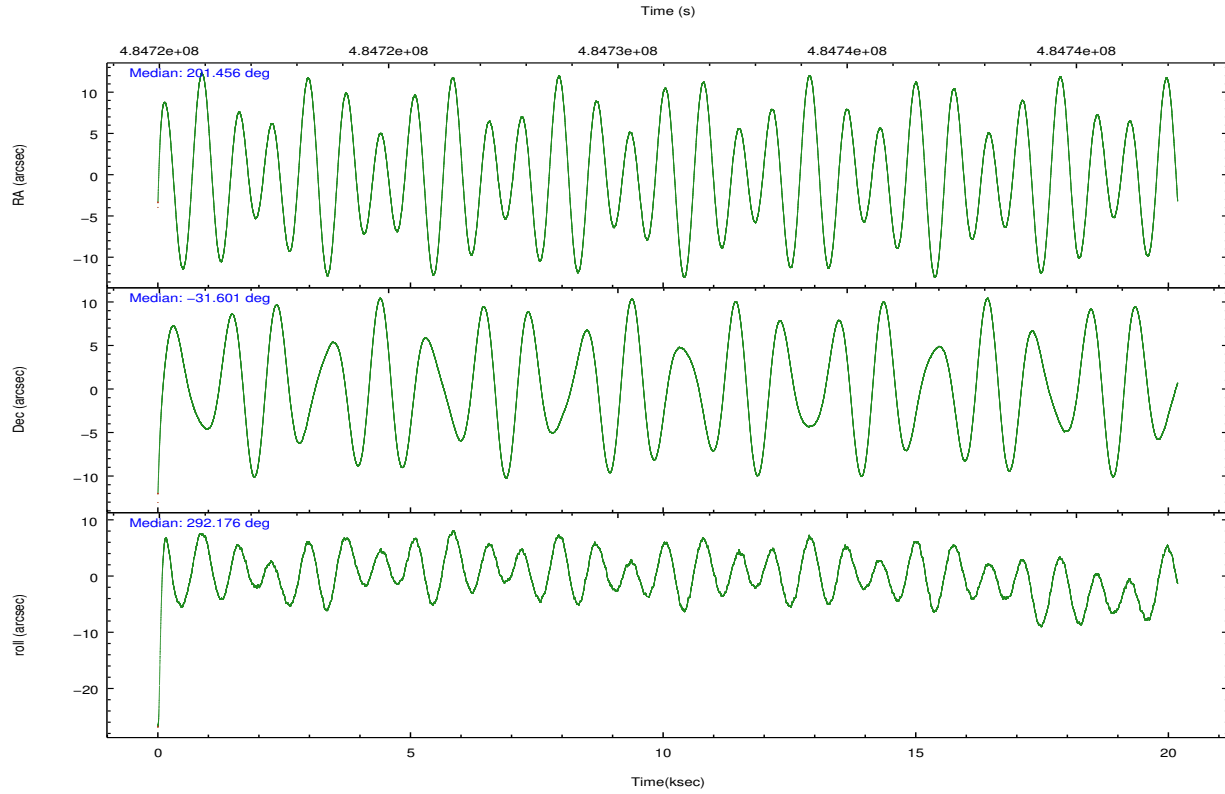
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	95402	95840	106480	99703	109911	142393	grade 0 events	4385	4939	4498	4208	5826	6078
rejected events	82933	82056	94622	88064	95428	78873		4%	5%	4%	4%	5%	4%
rejected %	86%	85%	88%	88%	86%	55%	grade 1 events	67	64	66	66	63	189
								0%	0%	0%	0%	0%	0%
							grade 2 events	3018	3274	2770	2553	3030	13099
								3%	3%	2%	2%	2%	9%
							grade 3 events	1273	1411	1155	1236	1316	5530
								1%	1%	1%	1%	1%	3%
							grade 4 events	1261	1331	1169	1224	1292	5455
								1%	1%	1%	1%	1%	3%
							grade 5 events	4747	4994	4509	5318	5406	14303
								4%	5%	4%	5%	4%	10%
							grade 6 events	2534	2829	2269	2418	3024	33370
								2%	2%	2%	2%	2%	23%
							grade 7 events	78117	76998	90044	82680	89954	64369
								81%	80%	84%	82%	81%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	201.430453	201.4560658892622	CCD I2 on	Y	Y
[deg] Pointing Dec	-31.584190	-31.60095649432177	CCD I3 on	Y	Y
[deg] Pointing Roll	291.956935	292.1790216924912	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	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5899487761303	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.002504226799430853	CCD S4 on	N	N
[s] Observation start time (MET)	484721177.184000	484719889.66654	CCD S5 on	N	N
Observation start date	2013-05-12T04:45:10	2013-05-12T04:24:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	484741177.184000	484742330.50526	On-chip summing requested	N	N
Observation end date	2013-05-12T10:18:30	2013-05-12T10:38:50	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





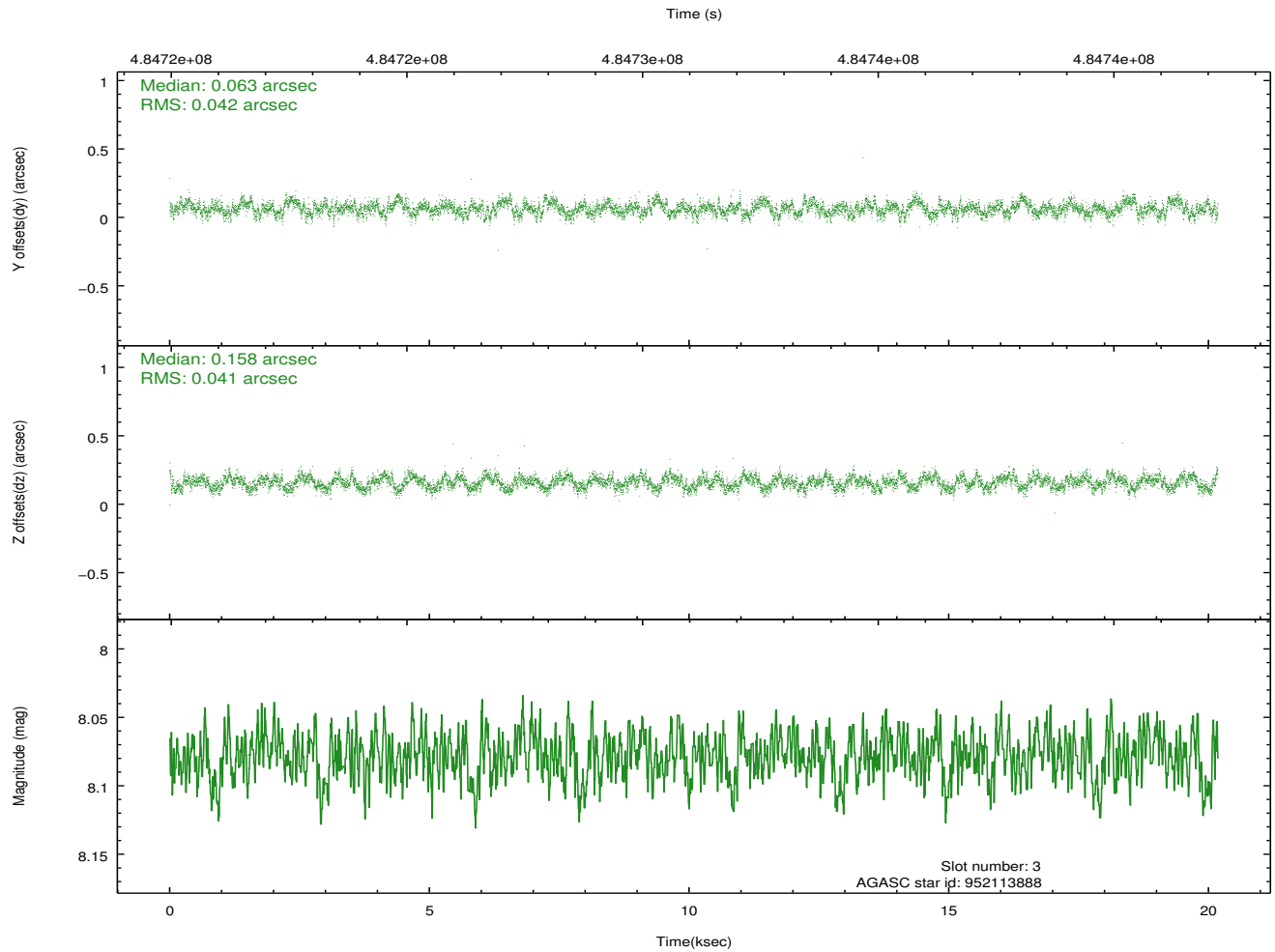
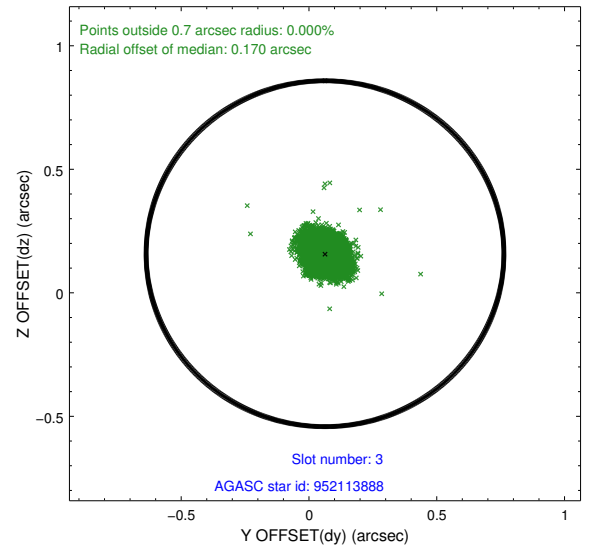
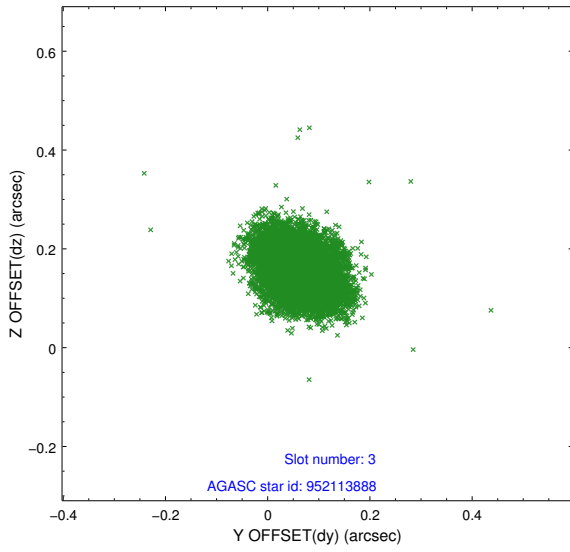
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.10	4923	-0.020	0.014	0.010	0.019	0.000000	0.000000	926.30	-837.85
1	FID		ACIS-I-4	7.02	4923	0.217	0.024	0.010	0.017	0.000000	0.000000	2146.67	1061.88
2	FID		ACIS-I-5	7.09	4922	-0.294	0.033	0.011	0.019	0.000000	0.000000	-1821.75	1059.92
3	GUIDE	used	952113888	8.08	9846	0.063	0.158	0.063	0.101	201.647854	-31.450482	-195.99	798.42
4	GUIDE	used	952114664	9.03	9843	0.114	0.117	0.105	0.160	201.542617	-31.430449	-384.03	526.34
5	GUIDE	used	952114936	8.49	9843	0.091	0.208	0.077	0.120	201.294532	-31.198626	-1442.58	131.17
6	GUIDE	used	952115624	8.87	9837	-0.197	-0.378	0.077	0.123	201.610177	-31.193444	-1097.58	1038.60
7	GUIDE	used	952646080	7.55	9845	-0.071	-0.103	0.052	0.085	202.214424	-32.002598	2299.98	1653.47

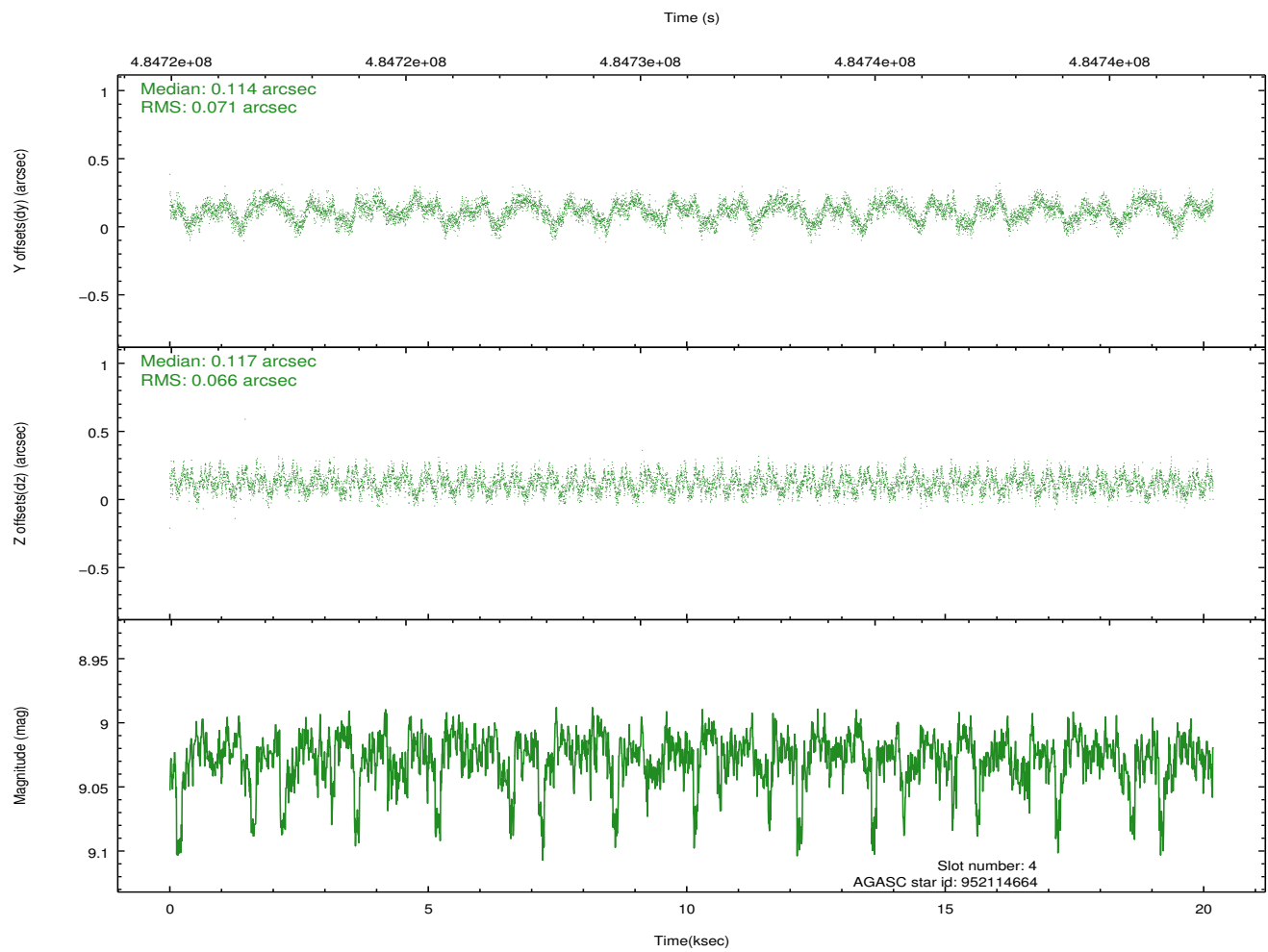
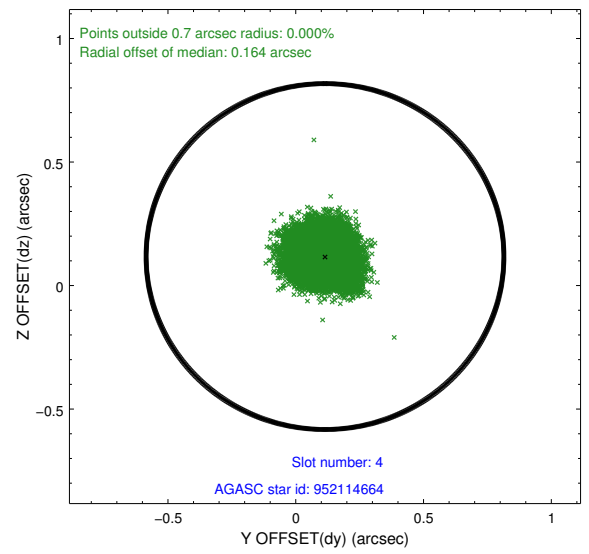
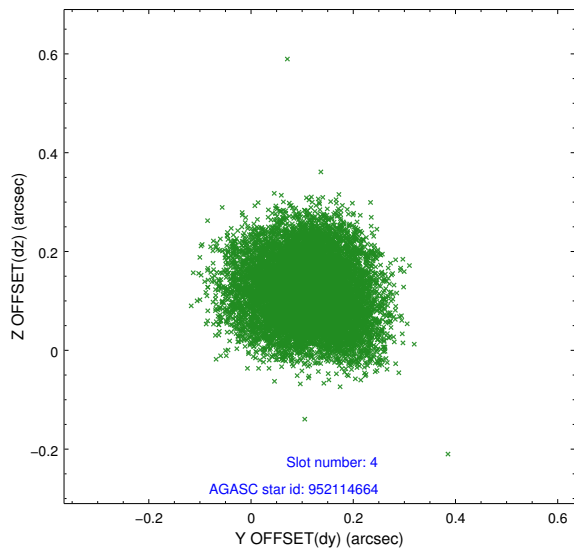
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2.4 Star Slots

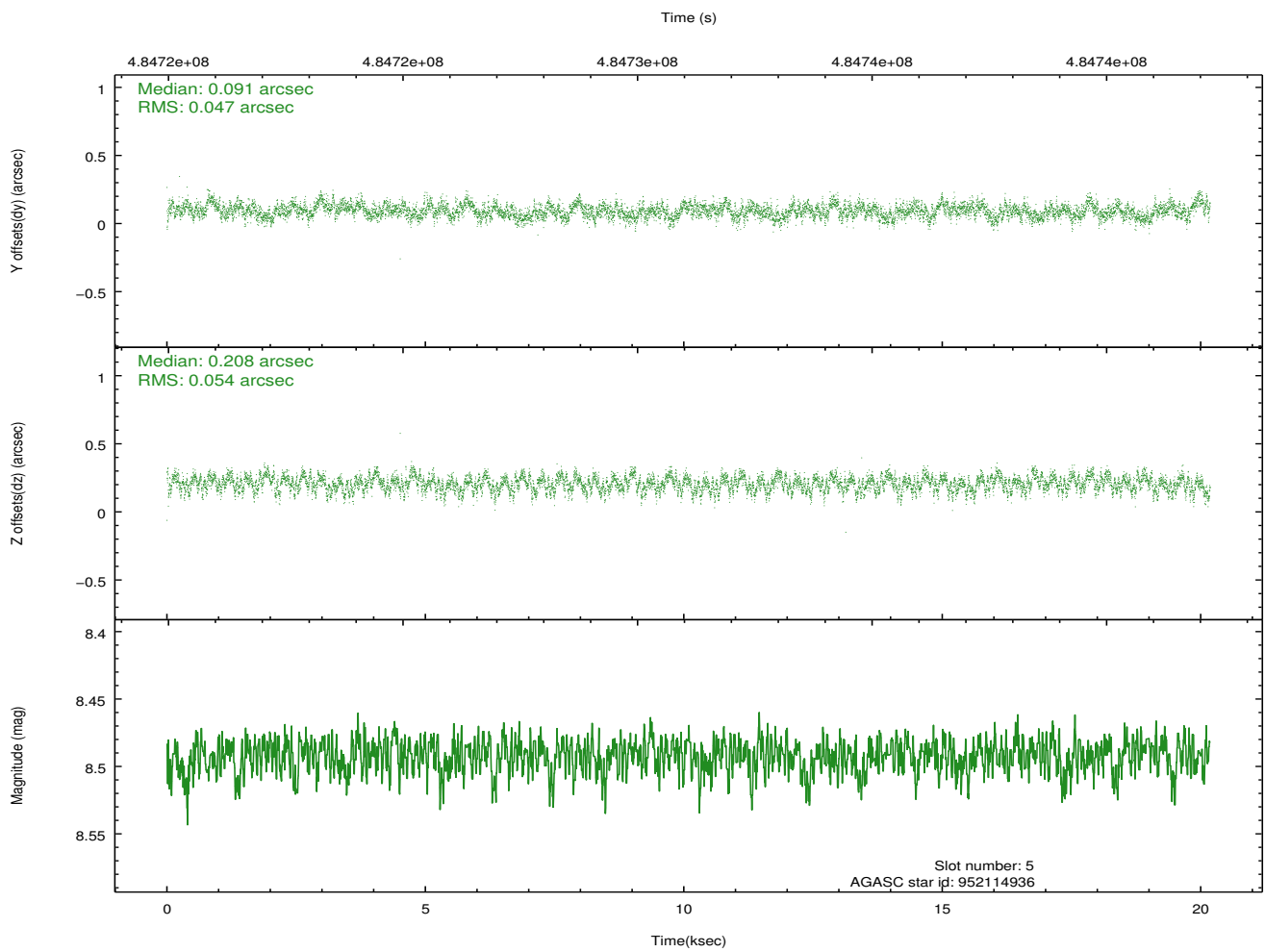
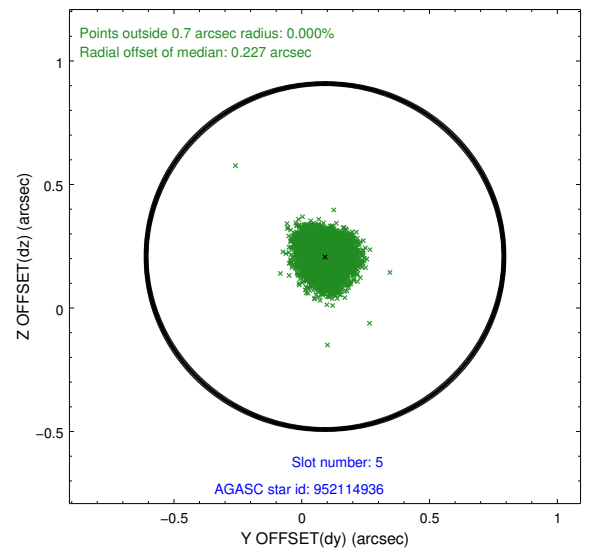
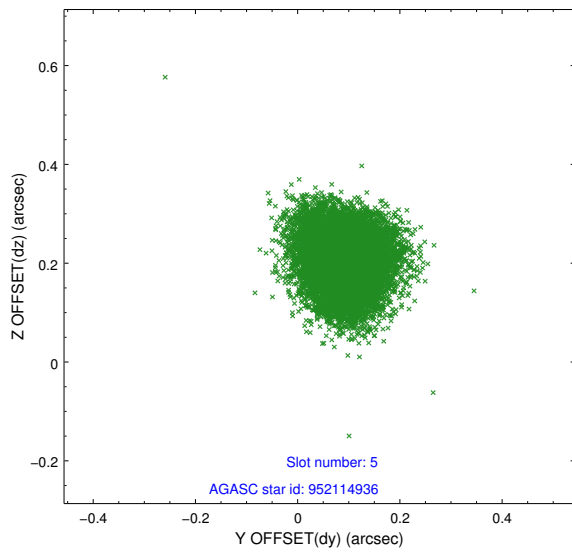
2.4.1 Slot 3



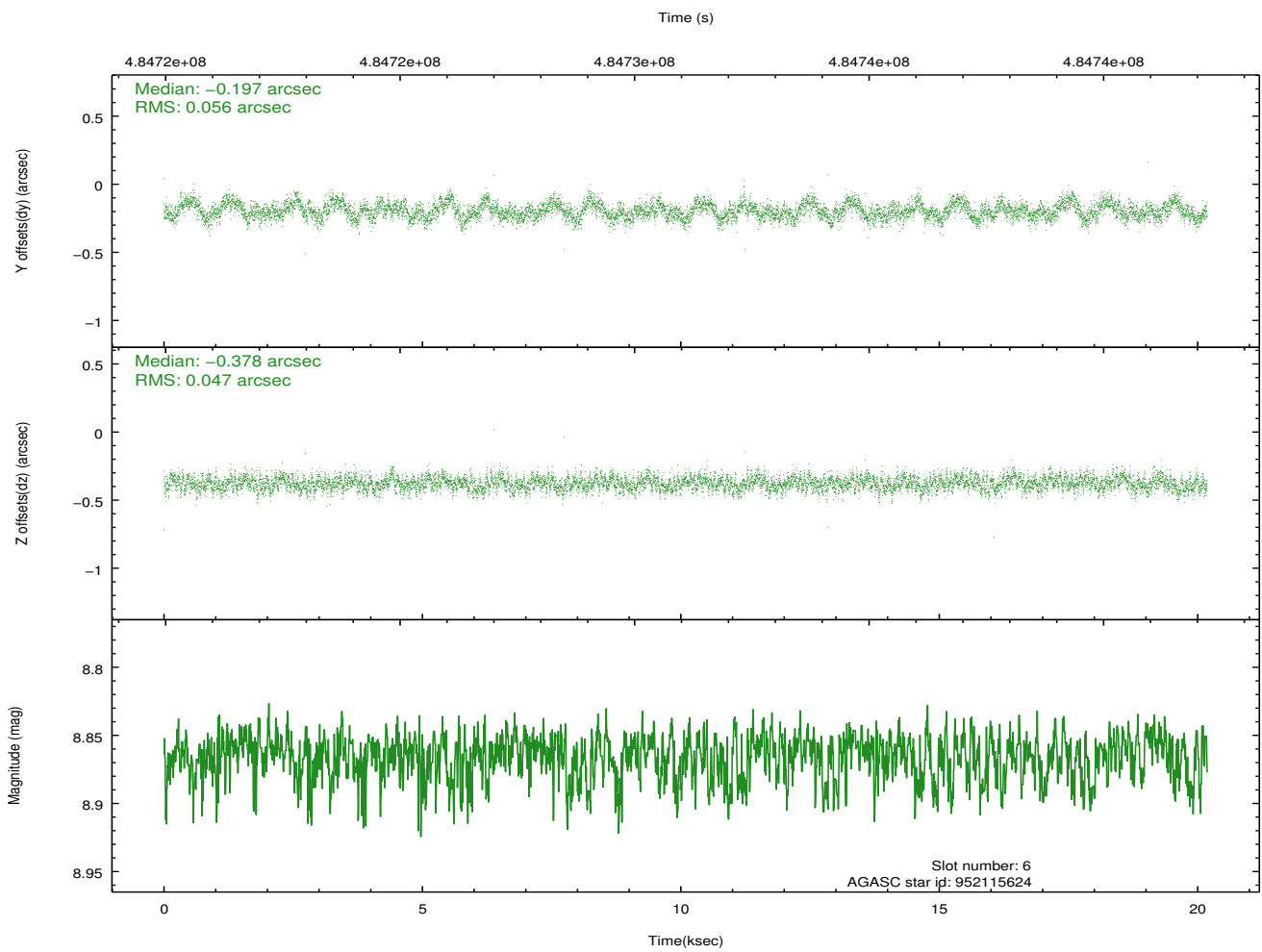
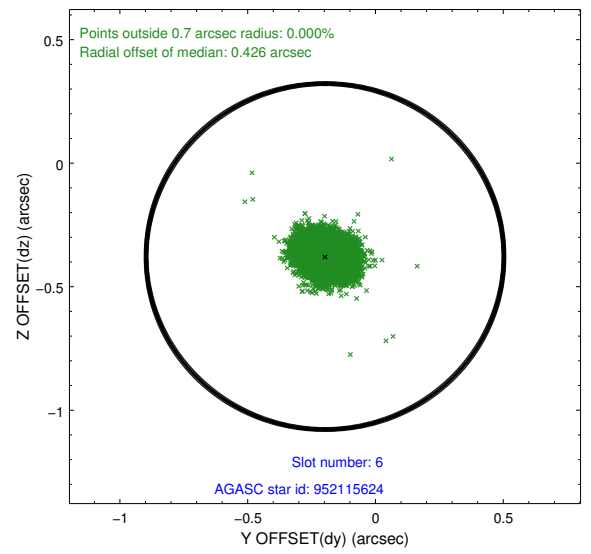
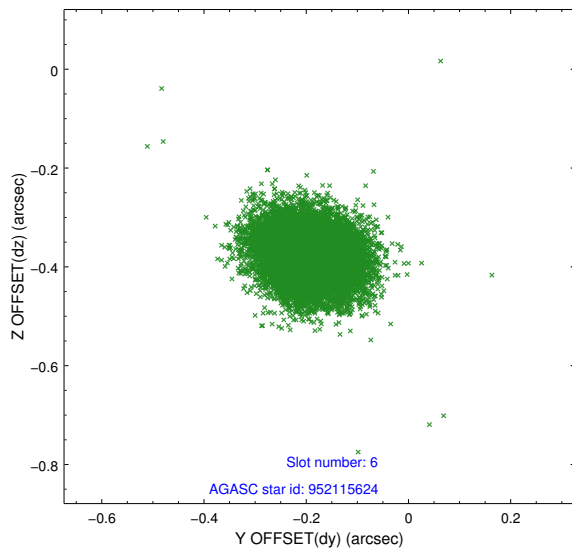
2.4.2 Slot 4



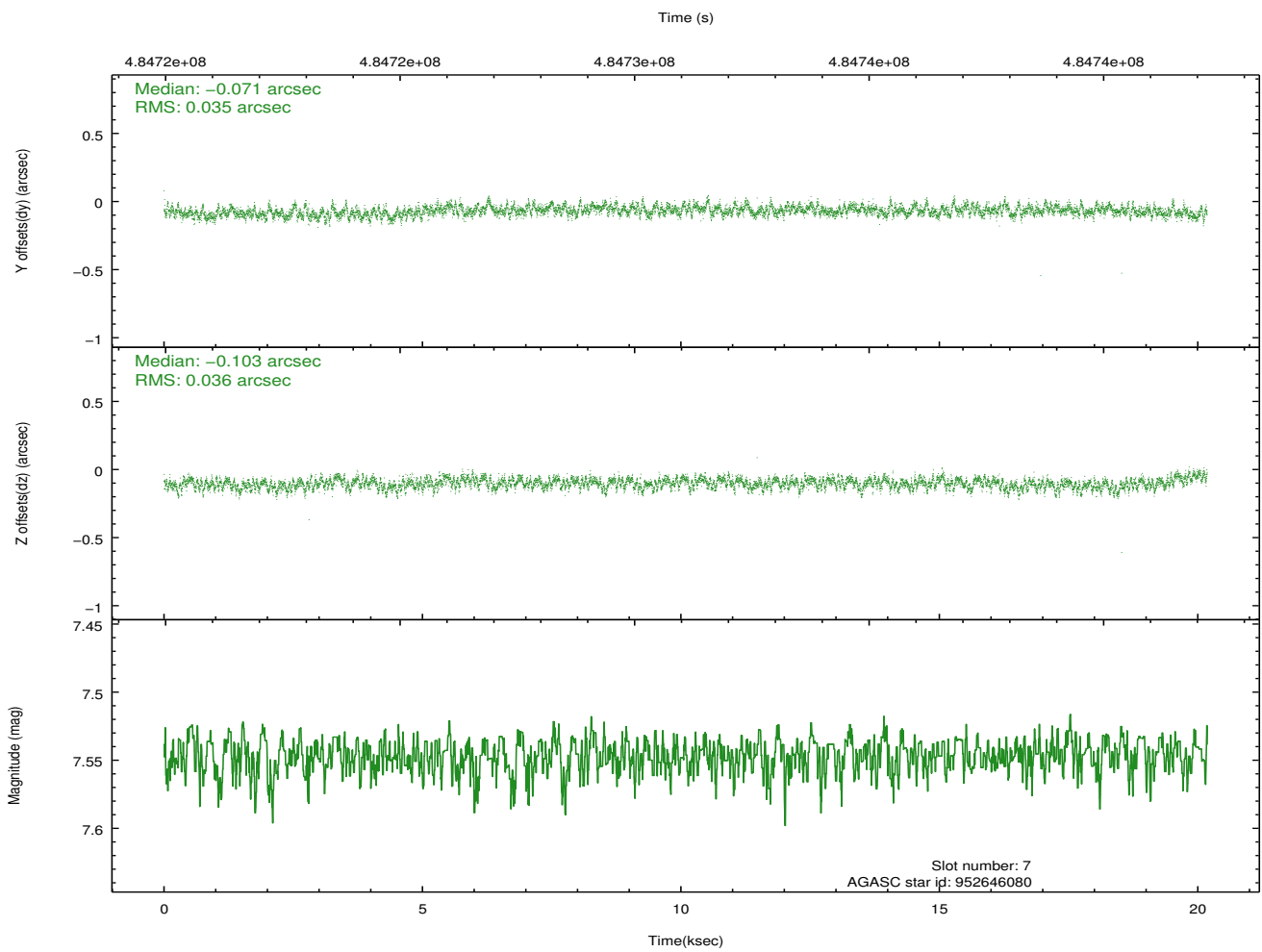
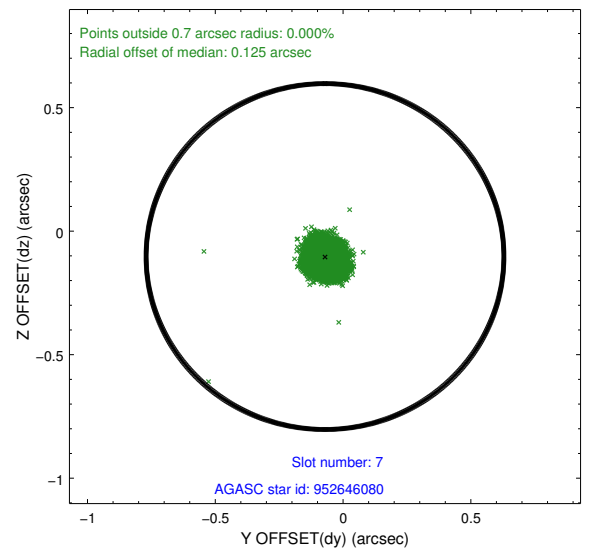
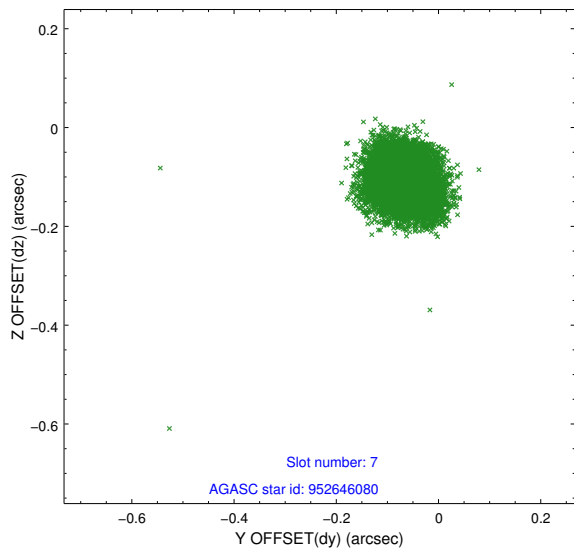
2.4.3 Slot 5



2.4.4 Slot 6

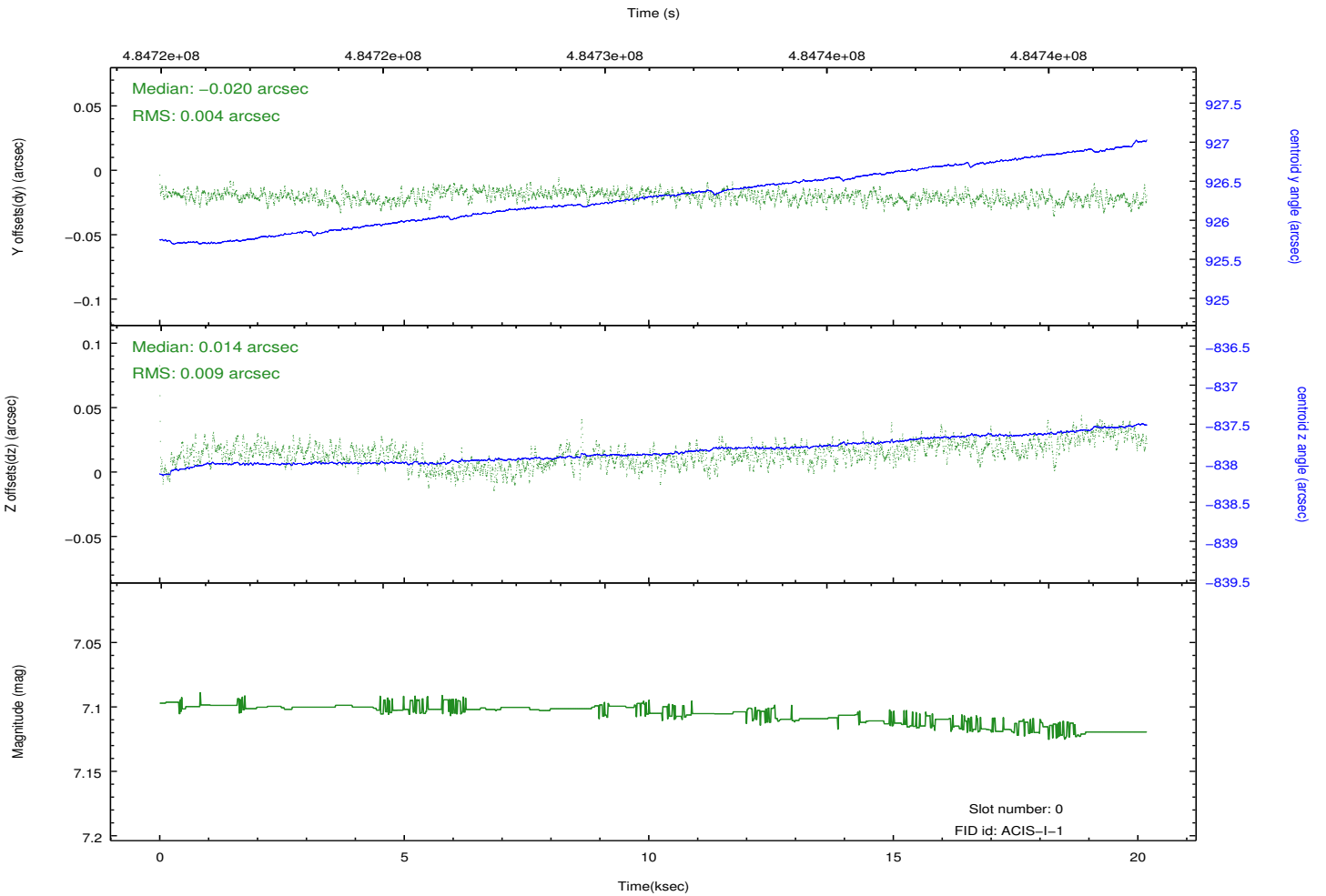
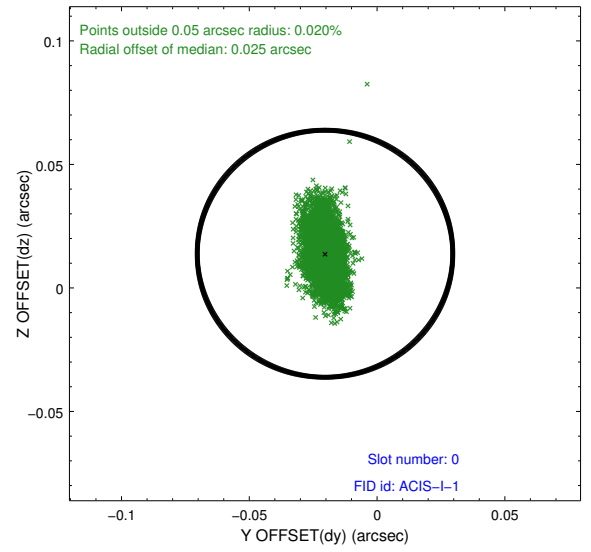
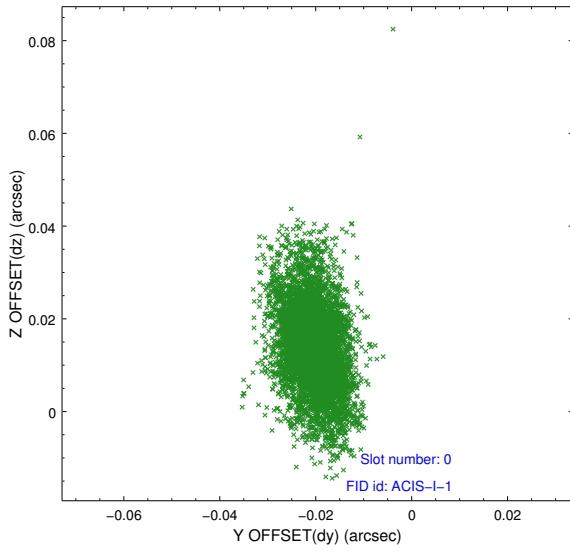


2.4.5 Slot 7

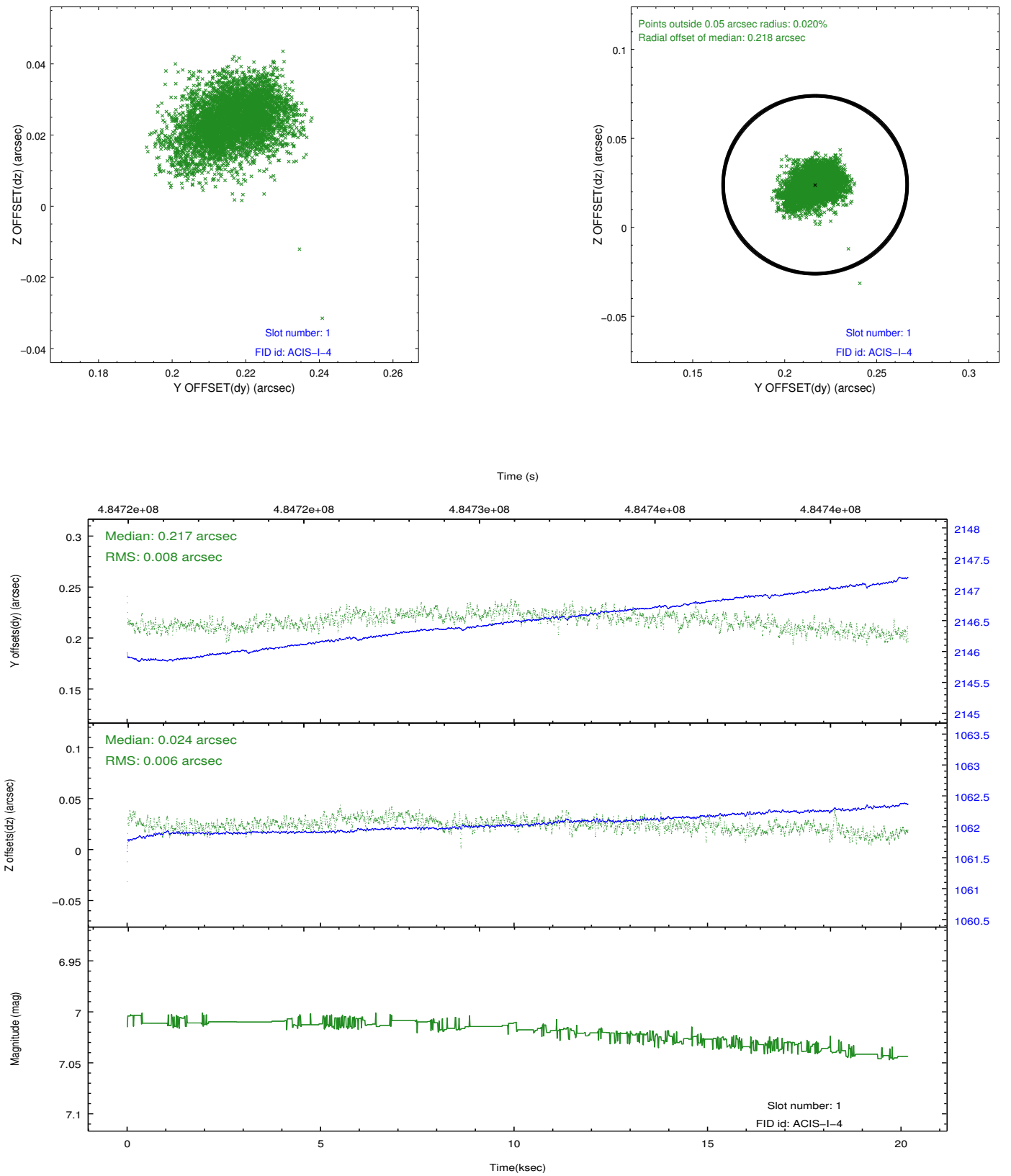


2.5 FID Slots

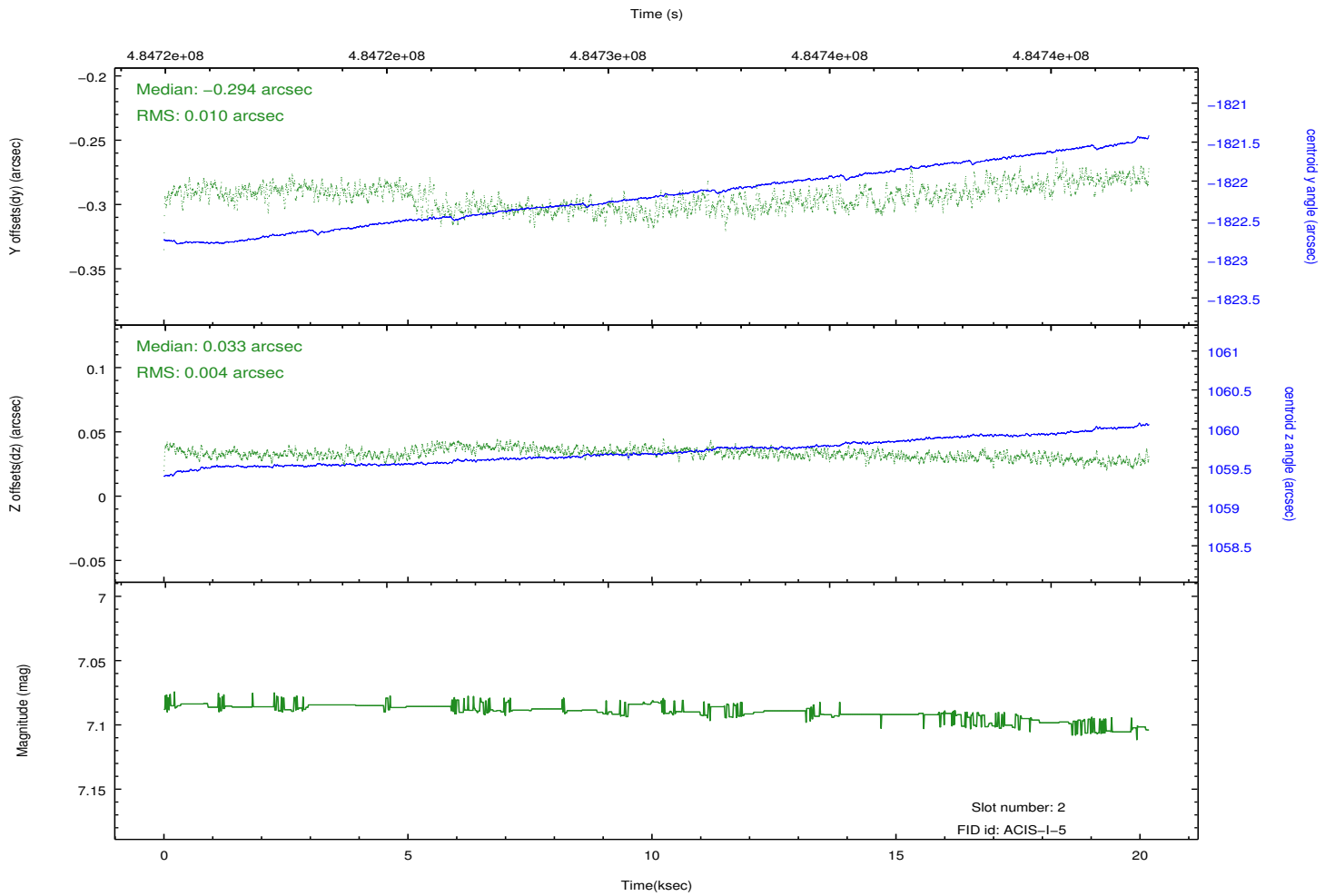
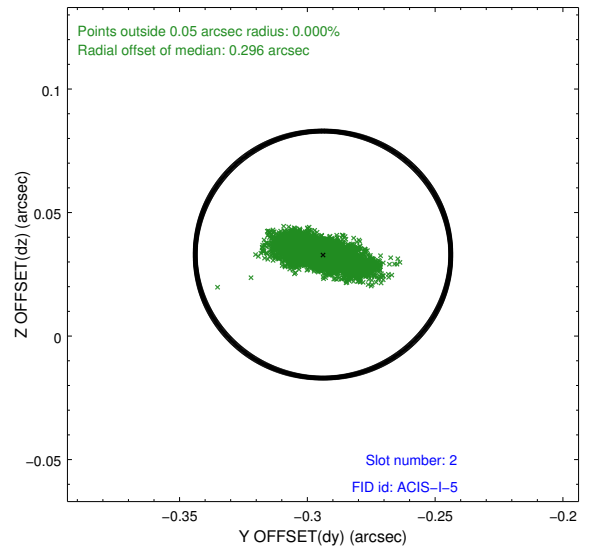
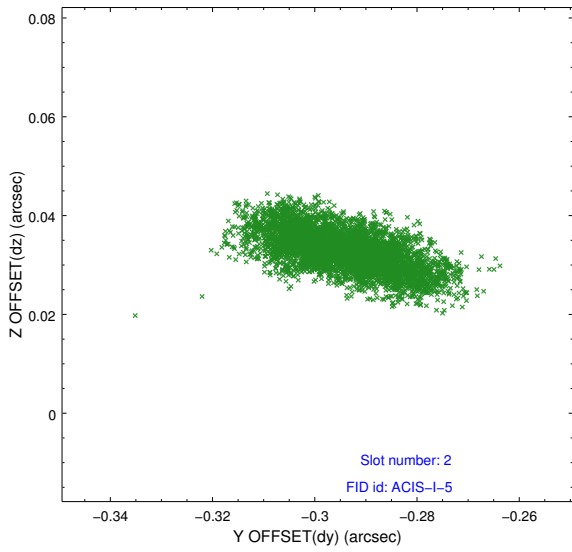
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.970342206419

A.2 Comments

Joint Proposal: Suzaku

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A spatial region of the original bias map for CCD = 6 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 = 6 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:
(201.77163,-31.58465), (201.76431,-31.56951), (201.70920,-31.58884), (201.70540,-31.60788)

=====

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.