

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 15205 - L2 Version 3
Chandra X-Ray Center

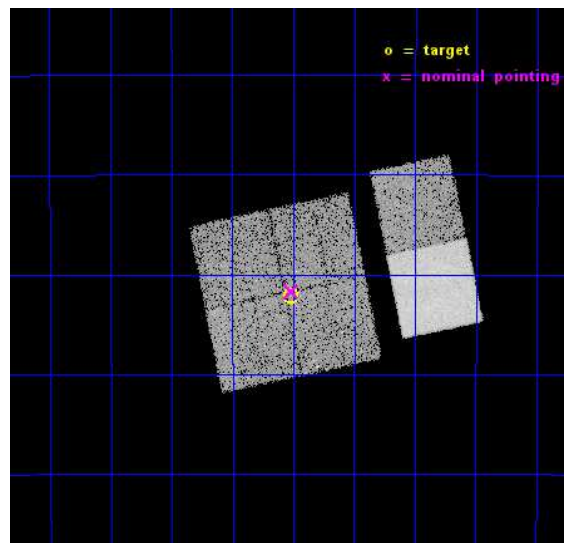
L2 Processing Date : Dec 8 2014

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1 Front

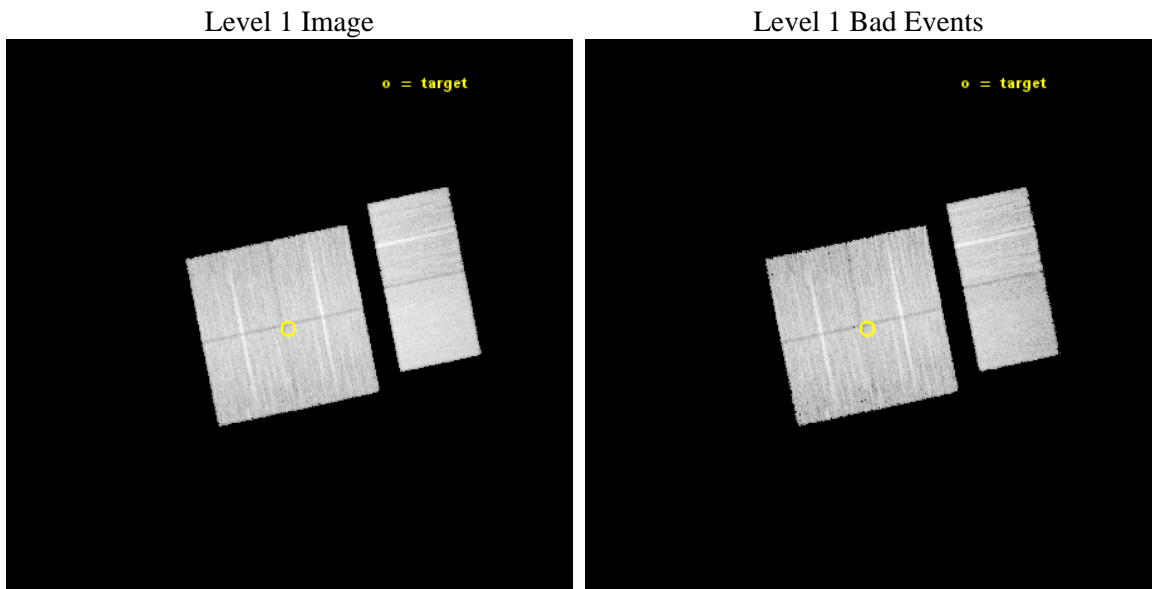
seq_num	901035	Sequence number
obs_id	15205	Observation id
title	Mapping Galaxy Groups and the Hot WHIM in Shapley Supercluster Filaments with Chandra and Suzaku	Proposal title
observer	Dr Marie Machacek	Principal investigator
object	Shapley B	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	201.62982	Observer's specified target RA [deg]
dec_targ	-31.86978	Observer's specified target Dec [deg]
ra_nom	201.62888631068	Nominal RA [deg]
dec_nom	-31.861728600782	Nominal Dec [deg]
roll_nom	78.345629177005	Nominal Roll [deg]
revision	3	Processing version of data
ontime	19974.142848015	Sum of GTIs [s]
livetime	19721.218224288	Livetime [s]
ontime0	19974.019728005	Sum of GTIs [s]
ontime1	19974.060768008	Sum of GTIs [s]
ontime2	19974.101808012	Sum of GTIs [s]
ontime3	19974.142848015	Sum of GTIs [s]
ontime6	19974.224928021	Sum of GTIs [s]
ontime7	19974.183888018	Sum of GTIs [s]
l2events	104957	Number of level 2 events



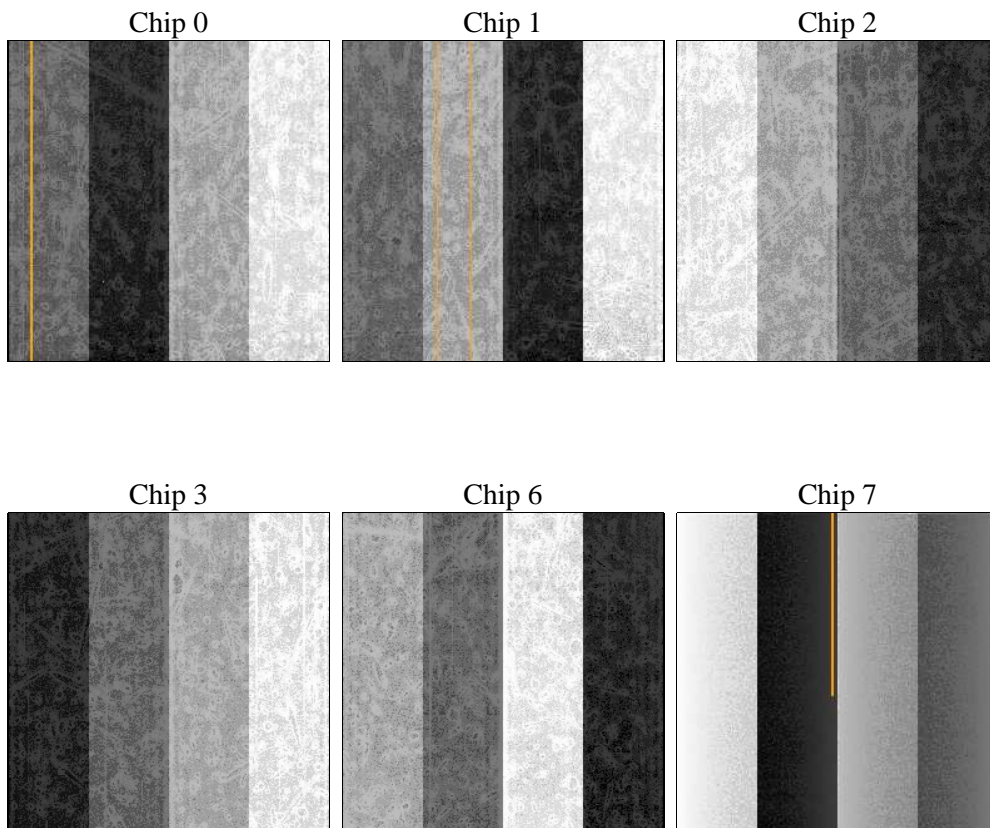
2 OBI

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	10.3.1	Processing system revision	ontime	19974.142848015	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	19974.019728005	Sum of GTIs [s]
date	2014-12-08T12:31:26	Date and time of file creation	ontime1	19974.060768008	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	19974.101808012	Sum of GTIs [s]
			ontime3	19974.142848015	Sum of GTIs [s]
			ontime6	19974.224928021	Sum of GTIs [s]
			ontime7	19974.183888018	Sum of GTIs [s]
			l1events	582449	Number of level 1 events

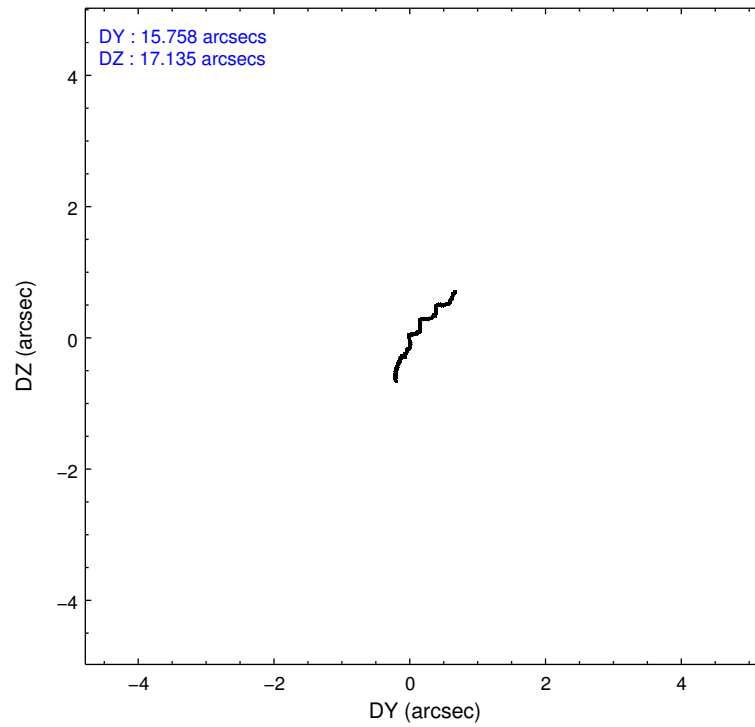
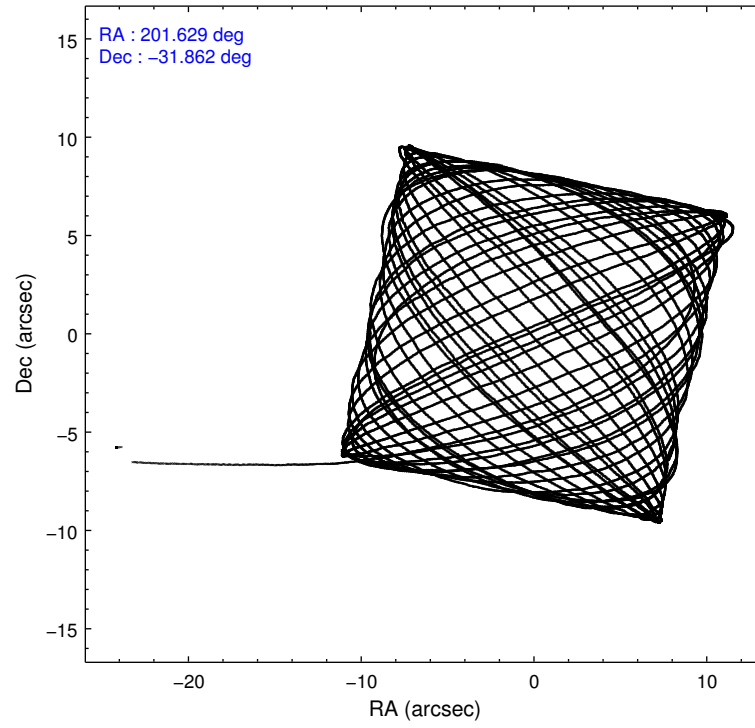
2.1.4 Events

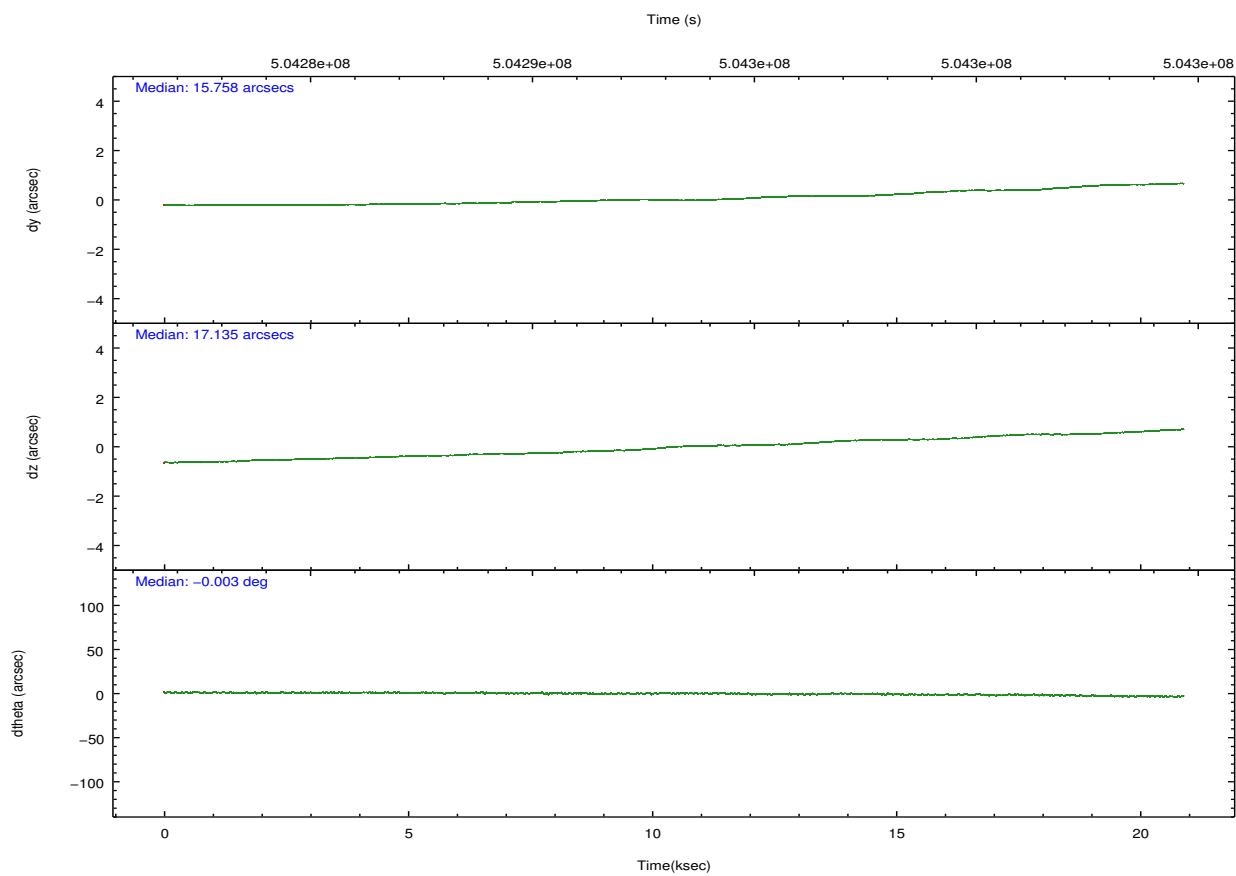
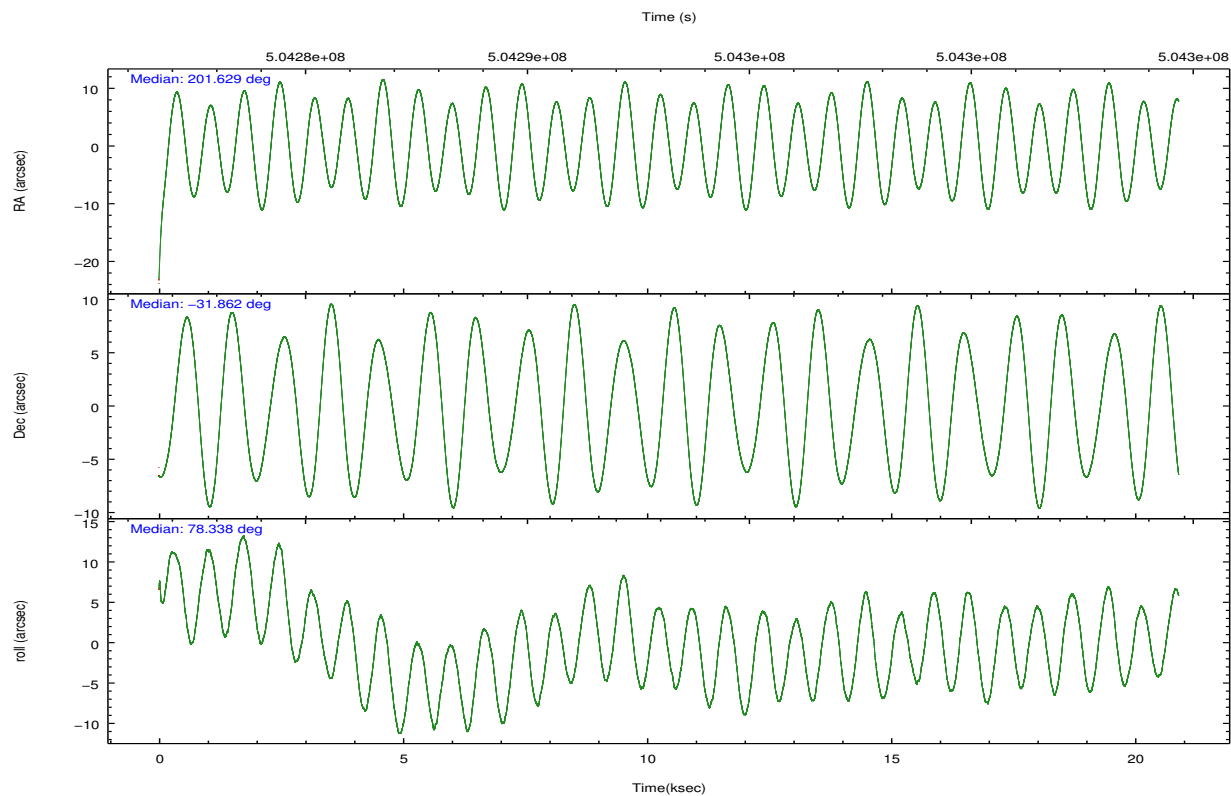
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	83382	86331	93138	89464	100230	129904	grade 0 events	4305	4549	3968	3867	4113	5170
rejected events	71668	73813	81956	78719	88241	73031		5%	5%	4%	4%	4%	3%
rejected %	85%	85%	87%	87%	88%	56%	grade 1 events	47	36	47	61	47	169
								0%	0%	0%	0%	0%	0%
							grade 2 events	2805	3074	2803	2308	2680	11617
								3%	3%	3%	2%	2%	8%
							grade 3 events	1234	1130	1131	1147	1267	4851
								1%	1%	1%	1%	1%	3%
							grade 4 events	1124	1175	1175	1145	1167	4813
								1%	1%	1%	1%	1%	3%
							grade 5 events	4403	4797	4395	5116	5260	13652
								5%	5%	4%	5%	5%	10%
							grade 6 events	2249	2594	2105	2278	2762	30430
								2%	3%	2%	2%	2%	23%
							grade 7 events	67215	68976	77514	73542	82934	59202
								80%	79%	83%	82%	82%	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	201.639197	201.6288863106835	CCD I2 on	Y	Y
[deg] Pointing Dec	-31.887798	-31.8617286007818	CCD I3 on	Y	Y
[deg] Pointing Roll	78.142386	78.34562917700487	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	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	504283633.184000	504282277.62135	CCD S5 on	N	N
Observation start date	2013-12-24T14:46:06	2013-12-24T14:24:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	504303633.184000	504304262.33509	On-chip summing requested	N	N
Observation end date	2013-12-24T20:19:26	2013-12-24T20:31:02	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



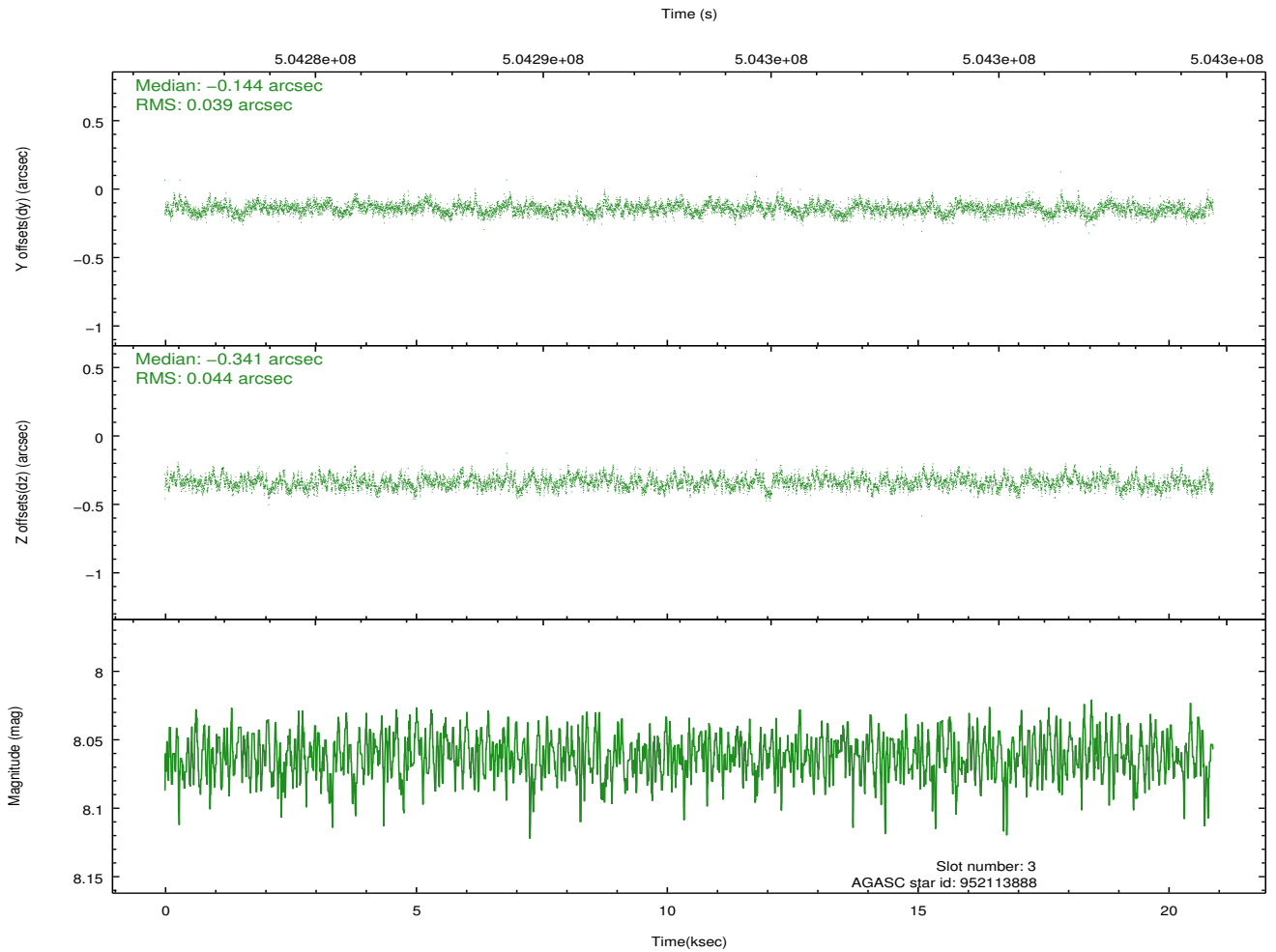
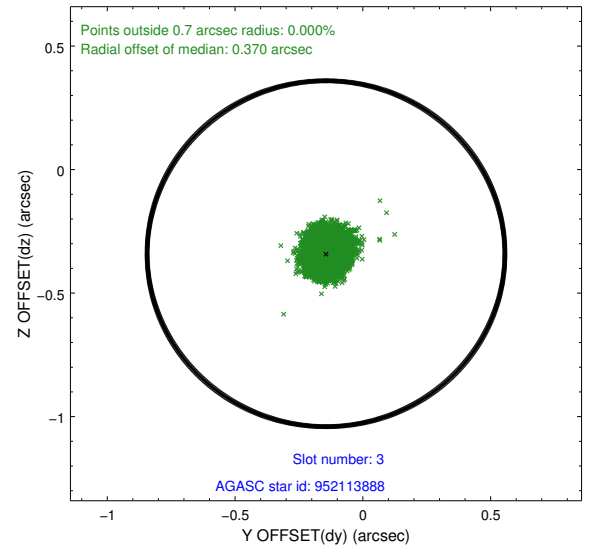
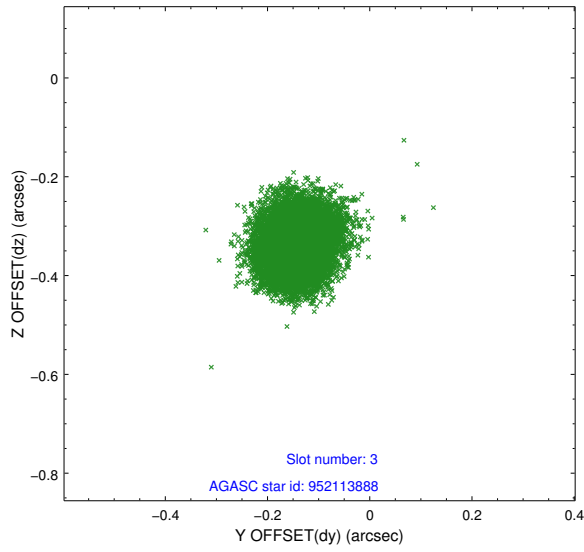


Slot Statistics

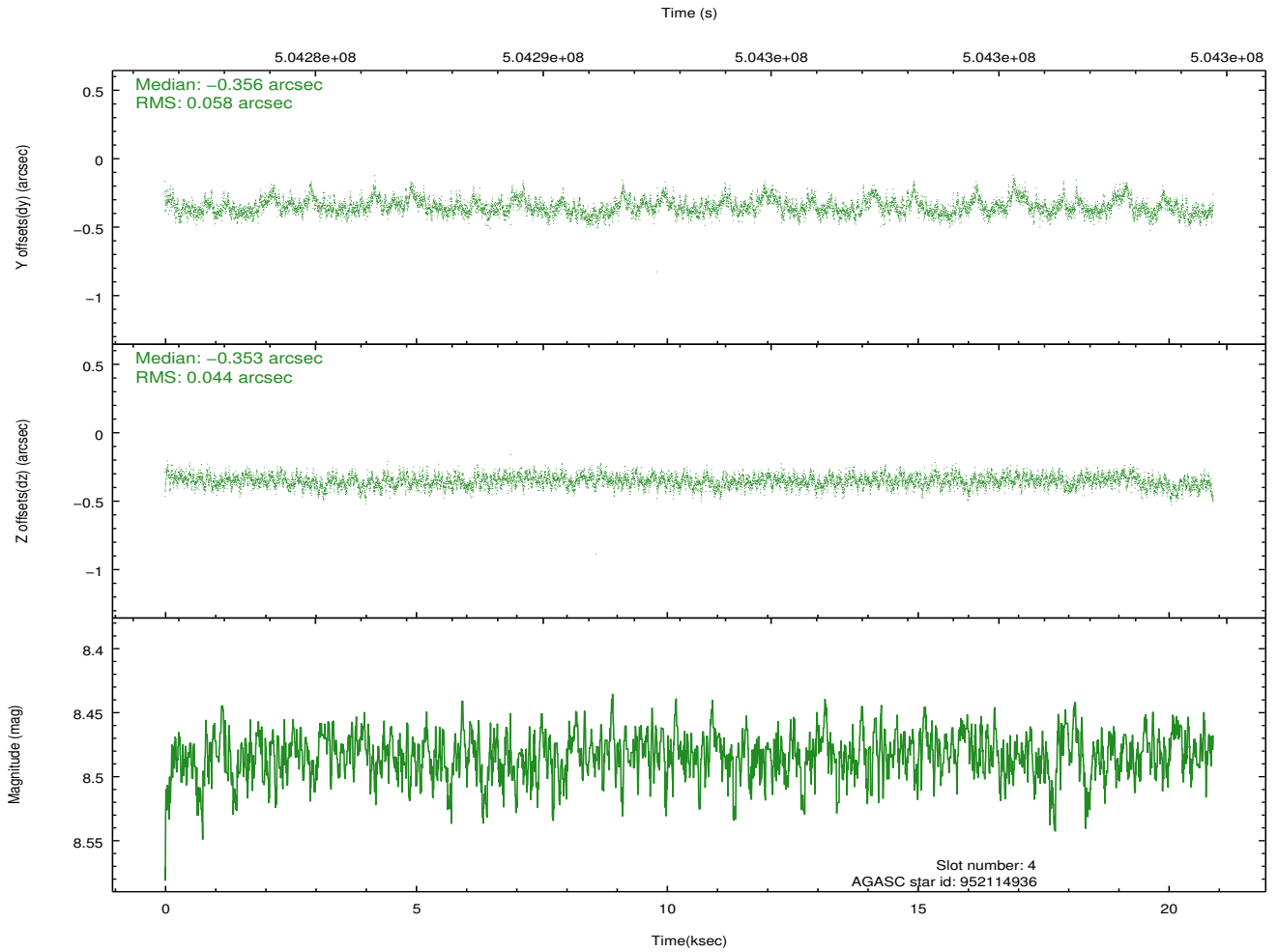
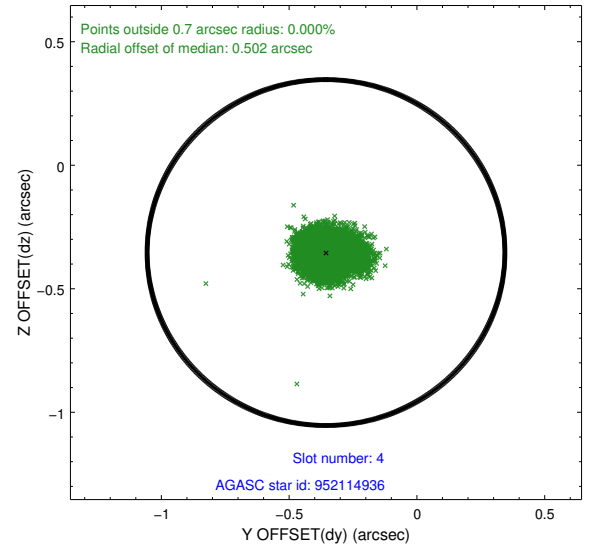
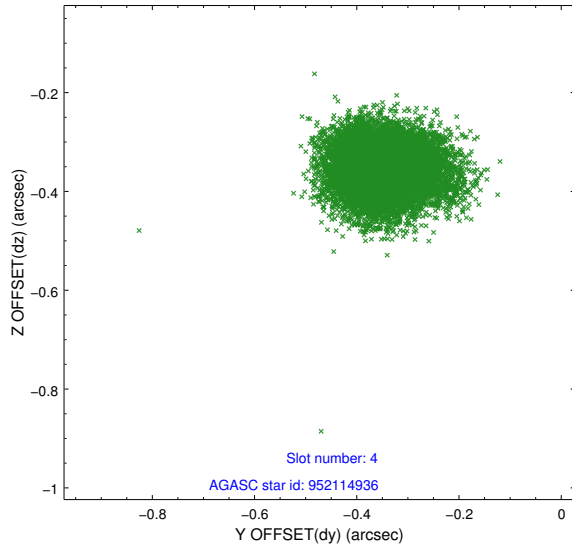
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.01	5097	0.090	-0.014	0.009	0.025	0.000000	0.000000	923.70	-840.76
1	FID		ACIS-I-2	6.93	5097	-0.052	-0.055	0.014	0.022	0.000000	0.000000	-770.43	-847.36
2	FID		ACIS-I-5	7.01	5097	-0.129	0.141	0.010	0.018	0.000000	0.000000	-1824.90	1056.73
3	GUIDE	used	952113888	8.06	10193	-0.144	-0.341	0.063	0.100	201.647854	-31.450482	1546.00	297.88
4	GUIDE	used	952114936	8.48	10191	-0.356	-0.353	0.076	0.128	201.294532	-31.198626	2207.83	1547.42
5	GUIDE	used	952640712	9.28	10187	0.397	0.405	0.110	0.179	202.219584	-32.375412	-1359.08	-2087.93
6	GUIDE	used	952646080	7.71	10193	0.124	0.171	0.079	0.128	202.214424	-32.002598	-47.74	-1804.63
7	GUIDE	used	952116240	8.40	10191	-0.023	0.127	0.092	0.152	202.422973	-31.388320	2246.36	-1988.84

2.4 Star Slots

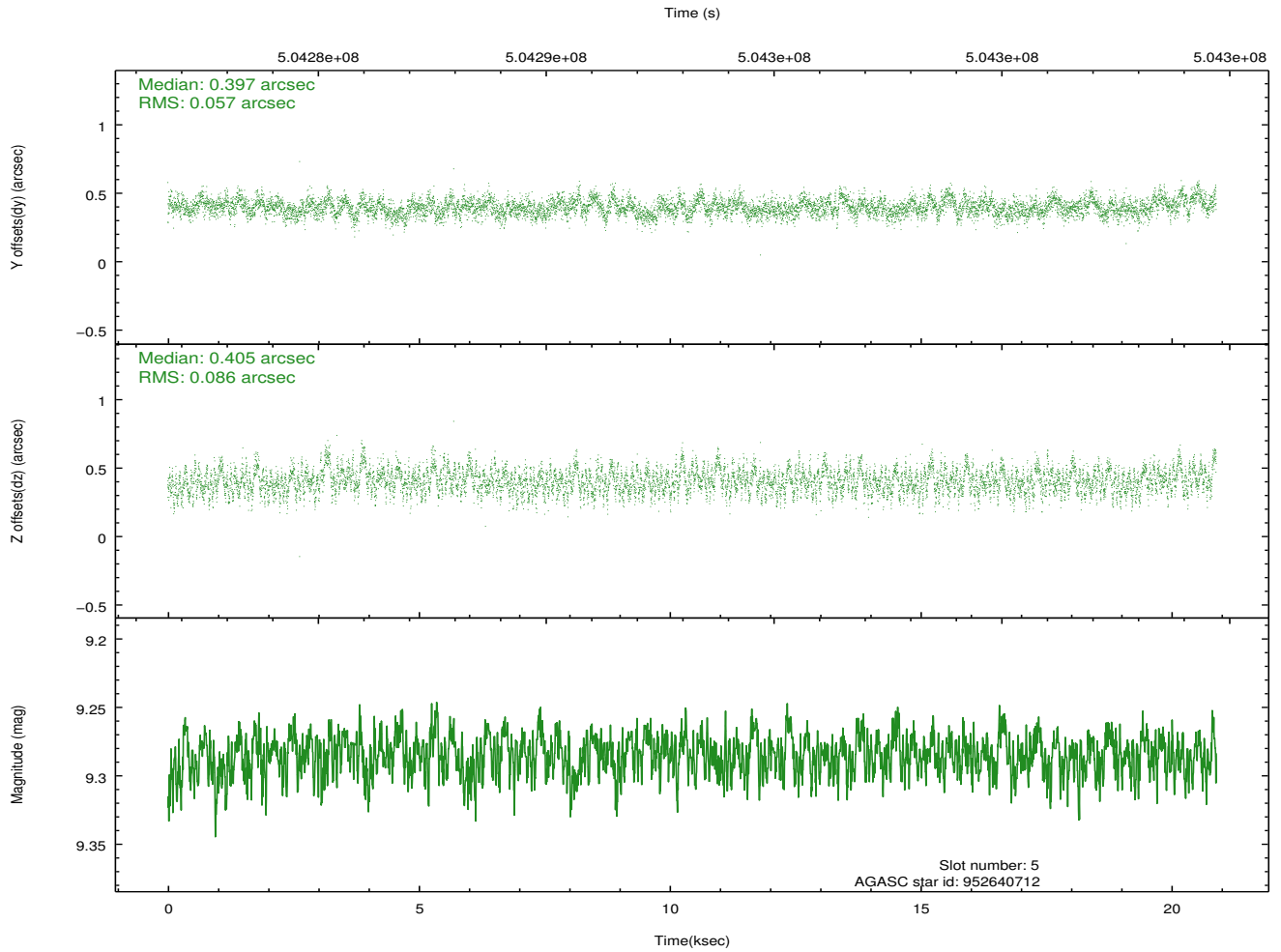
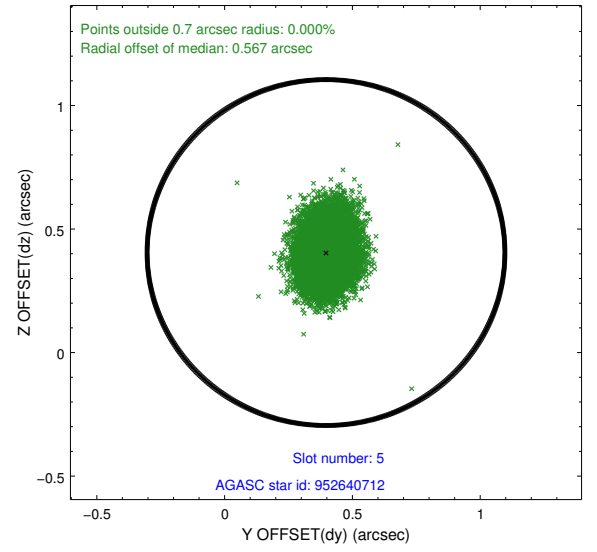
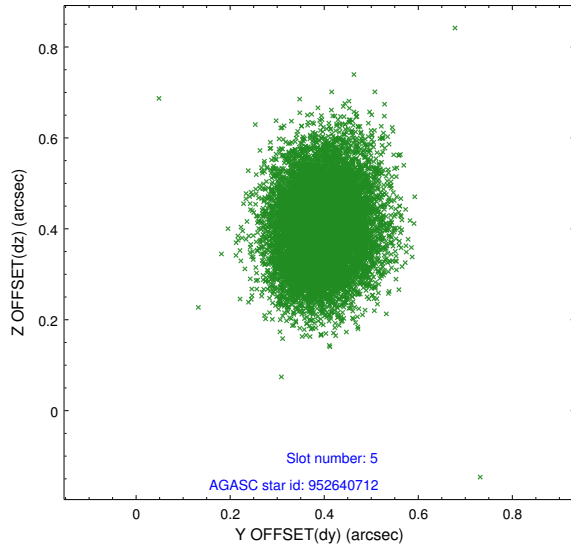
2.4.1 Slot 3



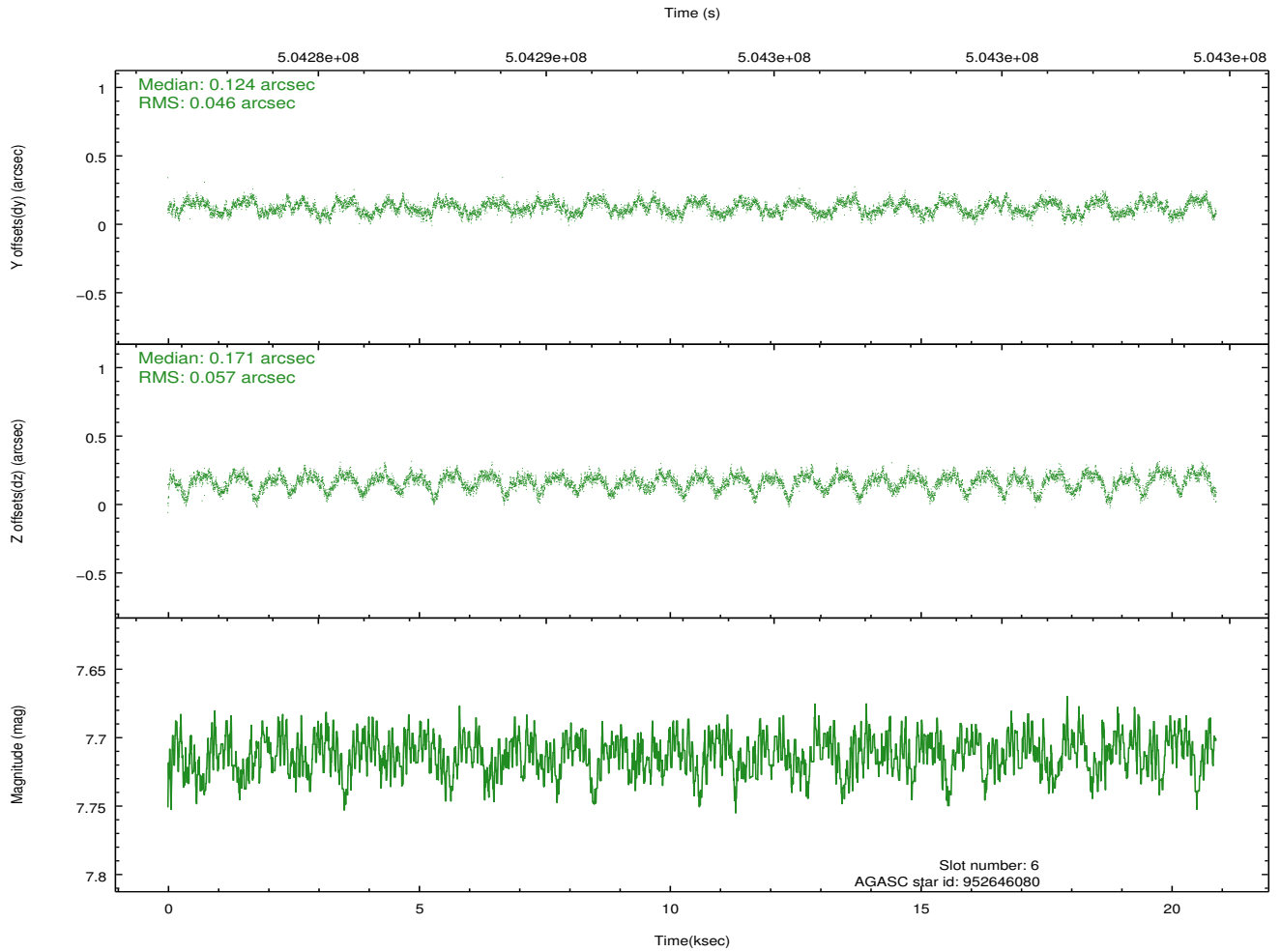
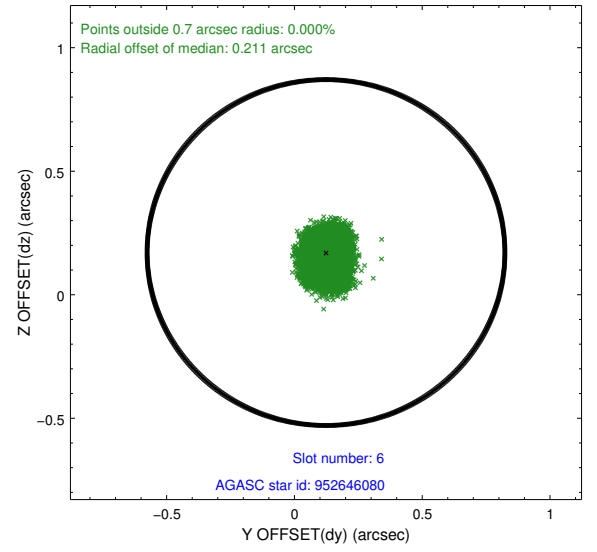
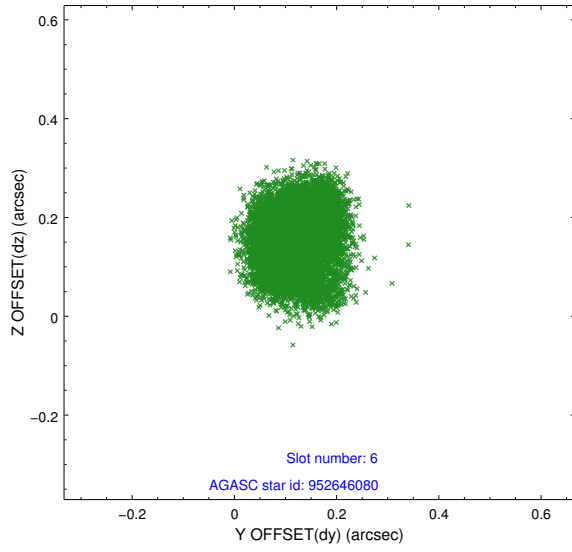
2.4.2 Slot 4



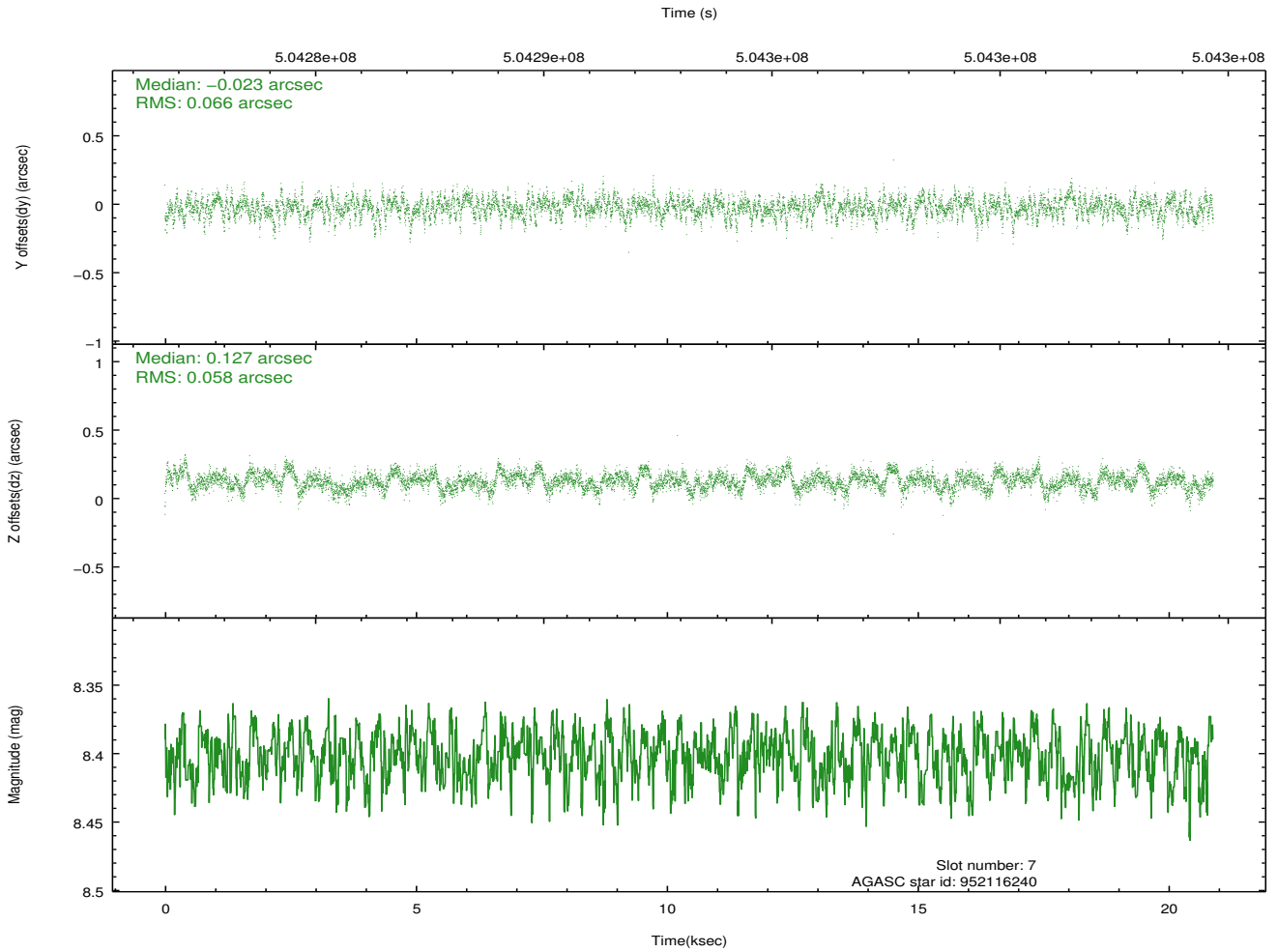
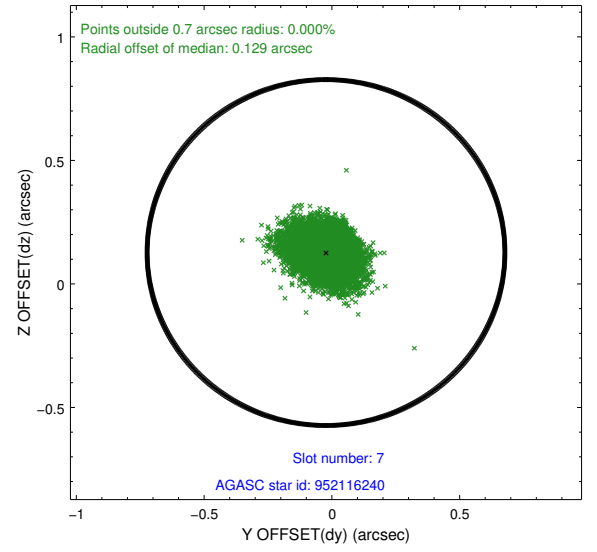
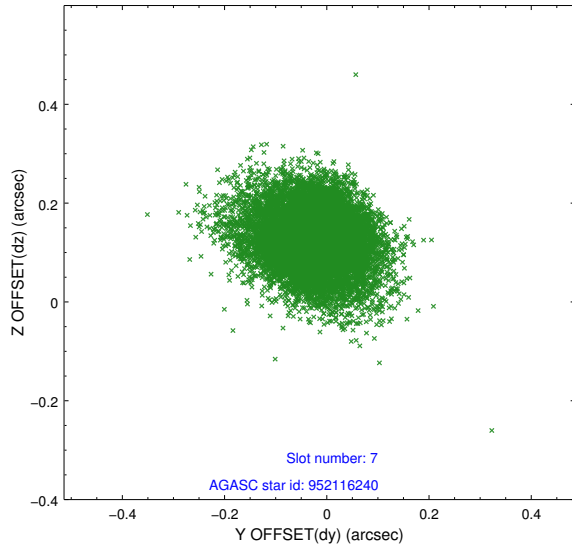
2.4.3 Slot 5



2.4.4 Slot 6

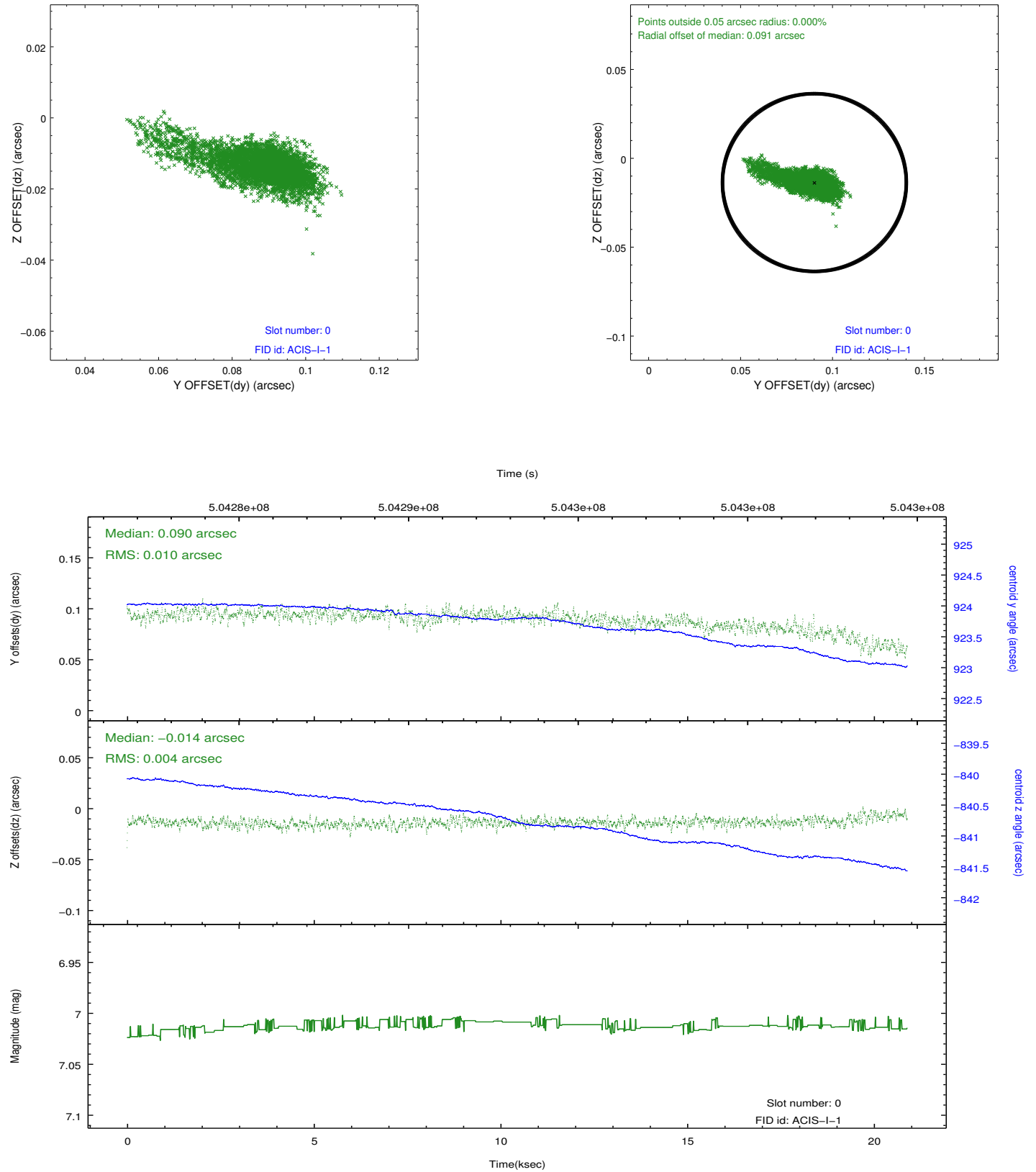


2.4.5 Slot 7

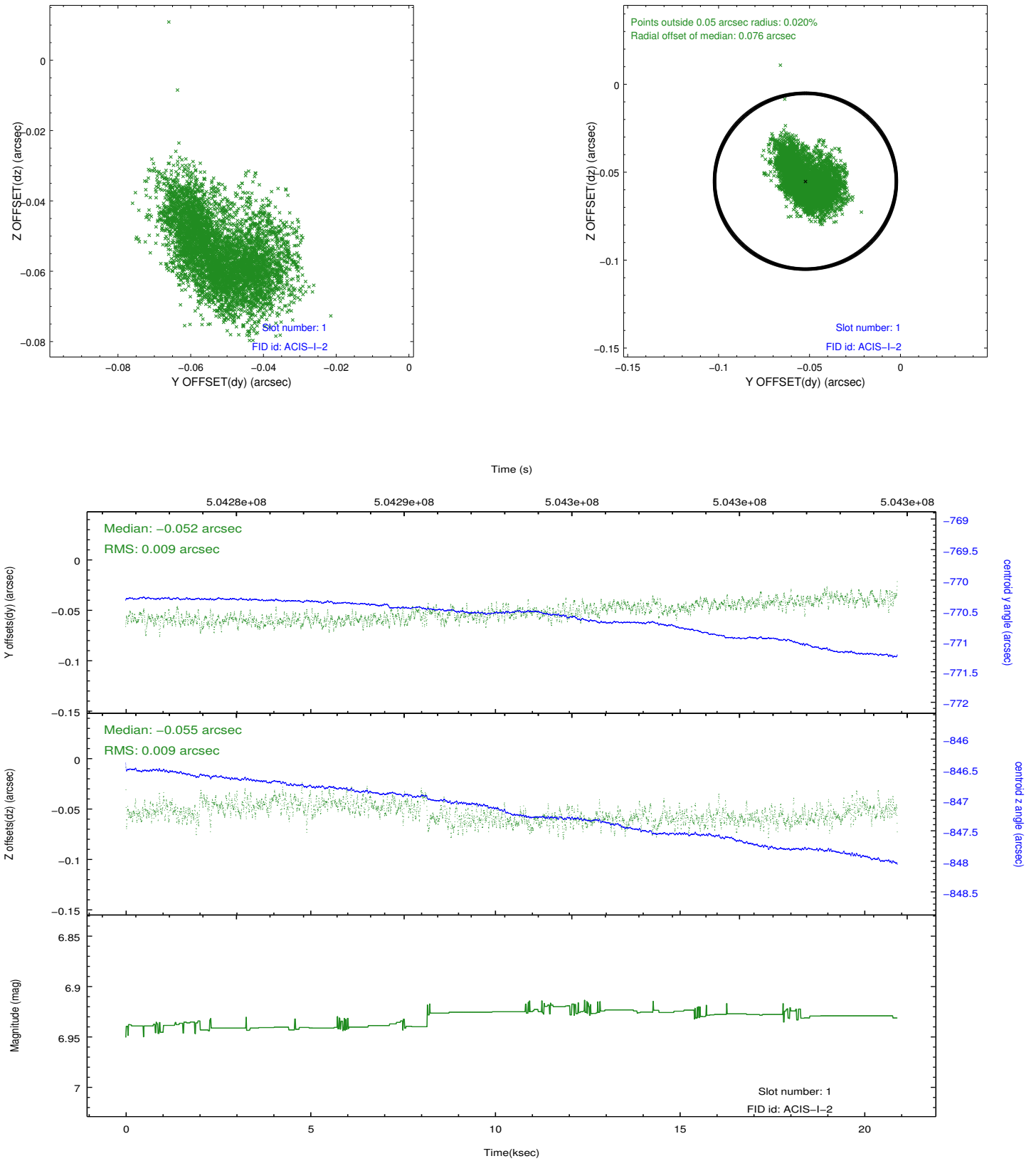


2.5 FID Slots

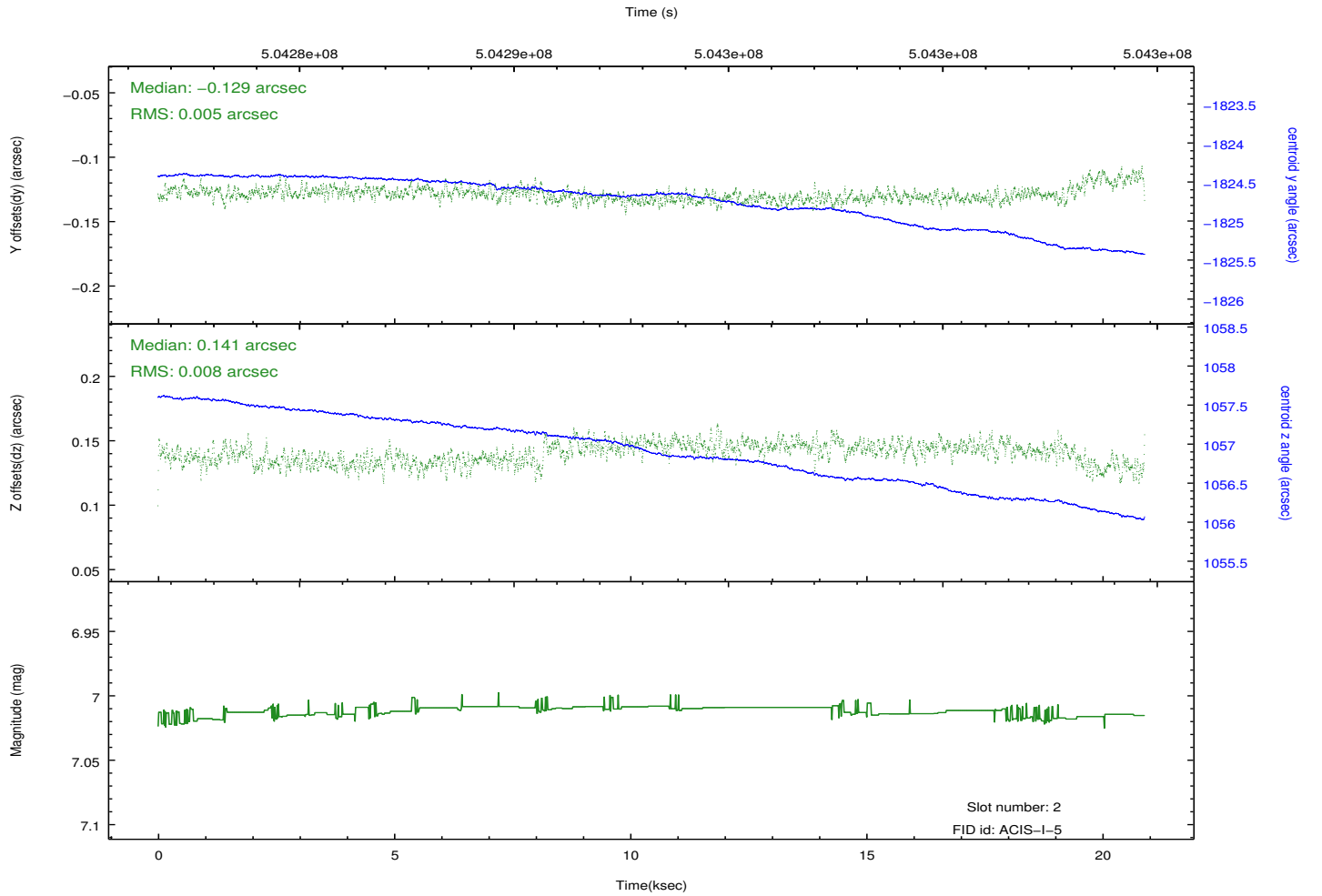
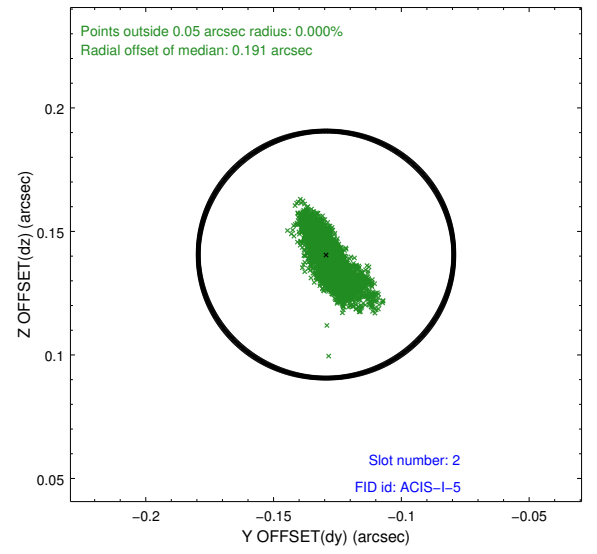
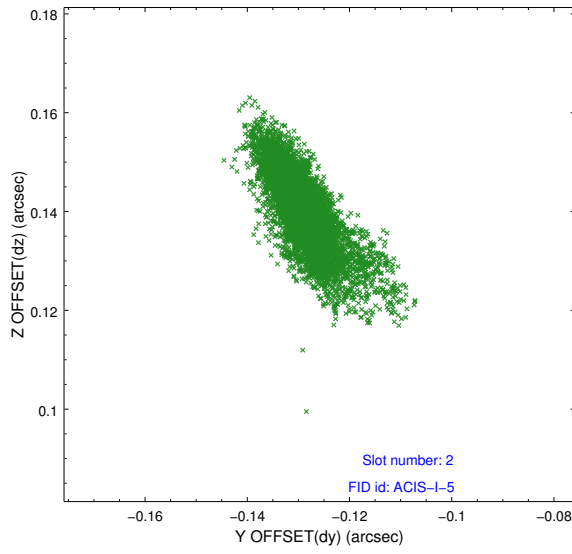
2.5.1 Slot 0



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	19.974142848015

A.2 Comments

Joint proposal with Suzaku. 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: (201.27620,-31.75666), (201.27463,-31.76307), (201.33544,-31.77385), (201.32947,-31.76610).

=====

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.