

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 7444 - L2 Version 3
Chandra X-Ray Center

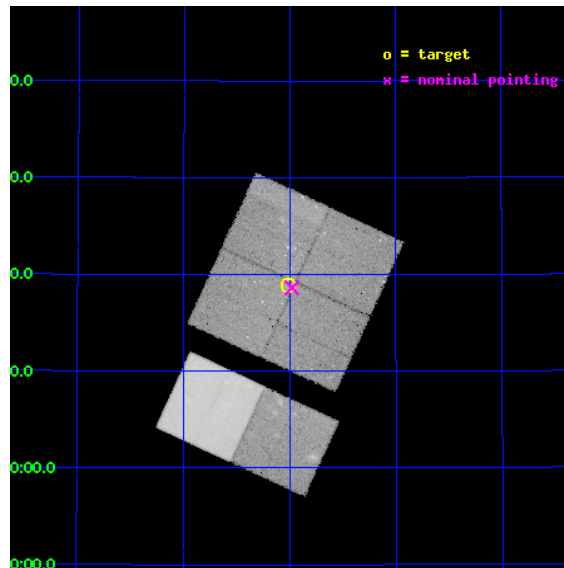
L2 Processing Date : Apr 30 2012

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1 Front

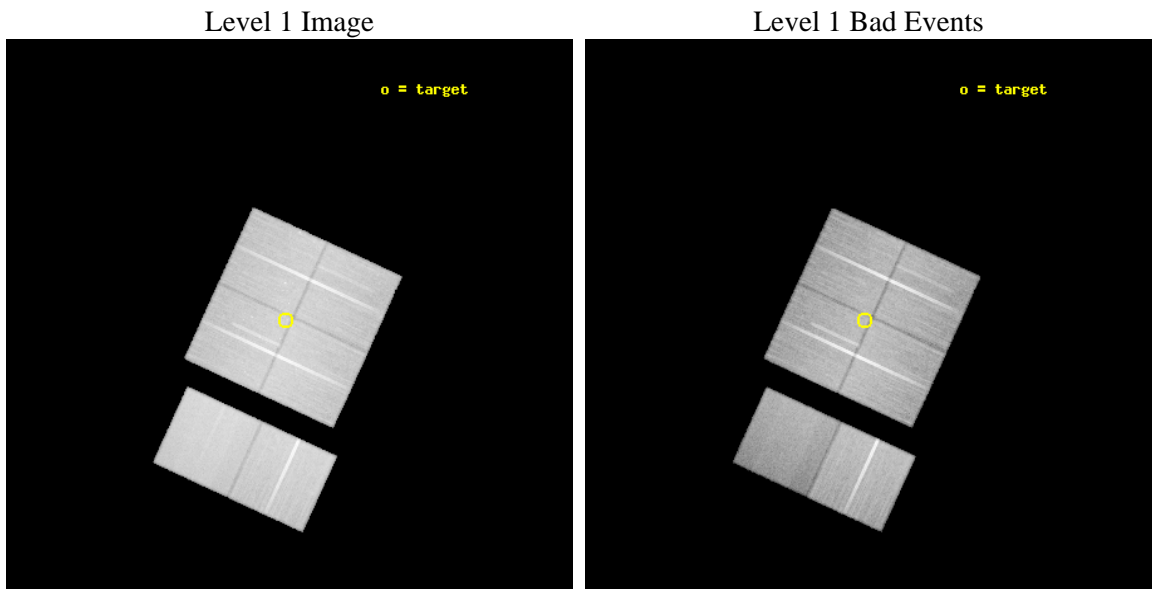
seq_num	200454	Sequence number
obs_id	7444	Observation id
title	The high-mass star forming region DR21	Proposal title
observer	Dr. Francesco Damiani	Principal investigator
object	DR 21	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	309.752917	Observer's specified target RA [deg]
dec_targ	42.315778	Observer's specified target Dec [deg]
ra_nom	309.74480285212	Nominal RA [deg]
dec_nom	42.310360117113	Nominal Dec [deg]
roll_nom	204.72941528746	Nominal Roll [deg]
revision	3	Processing version of data
ontime	49331.076835513	Sum of GTIs [s]
livetime	48706.417037014	Livetime [s]
ontime0	49340.799816251	Sum of GTIs [s]
ontime1	49334.317815781	Sum of GTIs [s]
ontime2	49337.558806062	Sum of GTIs [s]
ontime3	49331.076835513	Sum of GTIs [s]
ontime6	49337.55882591	Sum of GTIs [s]
ontime7	49340.799816251	Sum of GTIs [s]
l2events	377379	Number of level 2 events



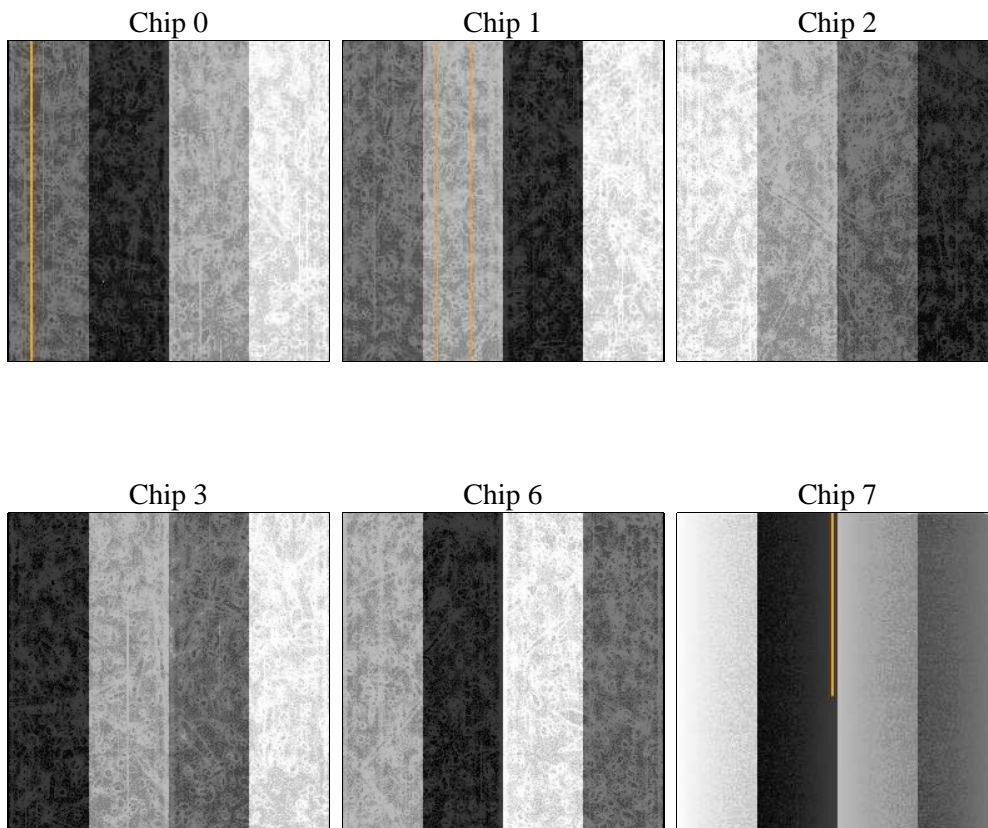
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49300.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	49331.076835513	Sum of GTIs [s]
caldbver	4.4.9	 	ontime0	49340.799816251	Sum of GTIs [s]
date	2012-04-30T17:50:13	Date and time of file creation	ontime1	49334.317815781	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	49337.558806062	Sum of GTIs [s]
			ontime3	49331.076835513	Sum of GTIs [s]
			ontime6	49337.55882591	Sum of GTIs [s]
			ontime7	49340.799816251	Sum of GTIs [s]
			l1events	2465735	Number of level 1 events

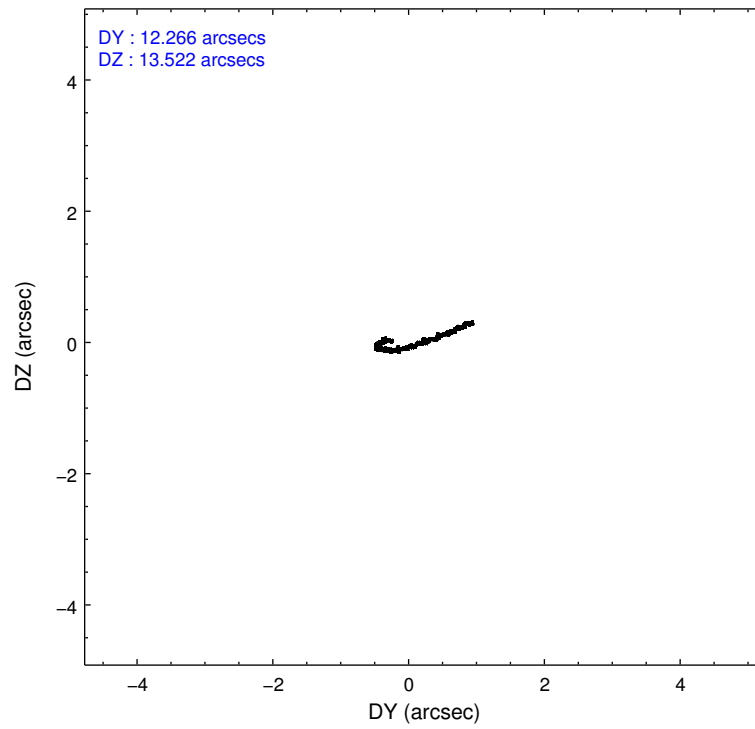
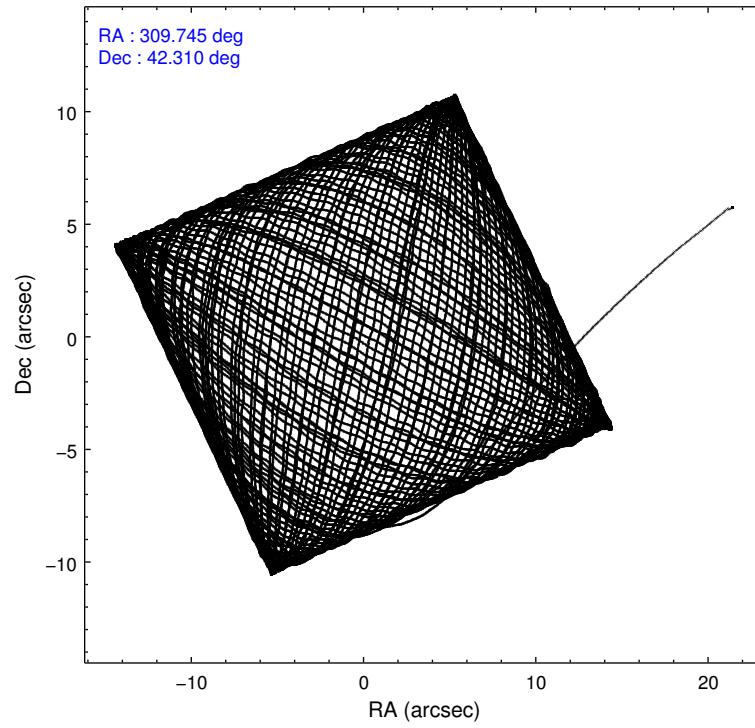
2.1.4 Events

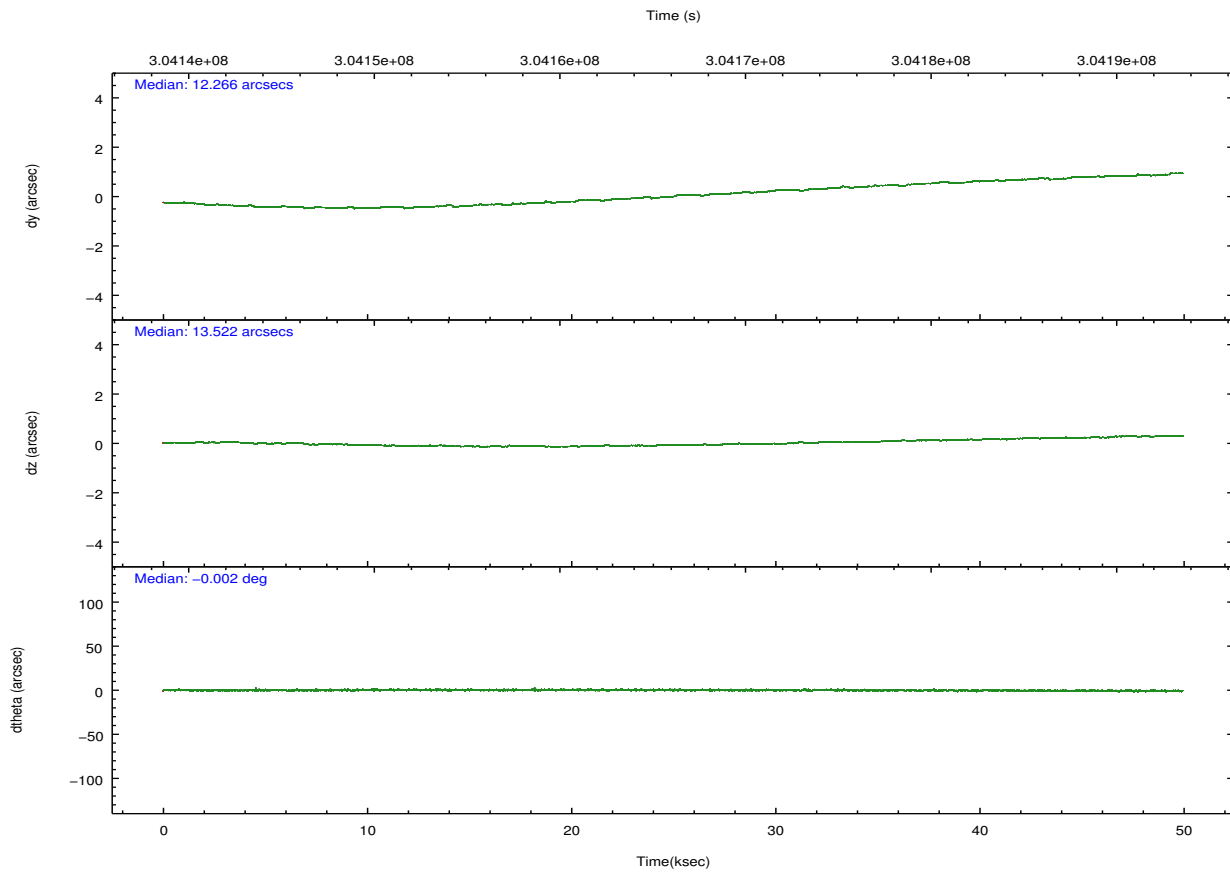
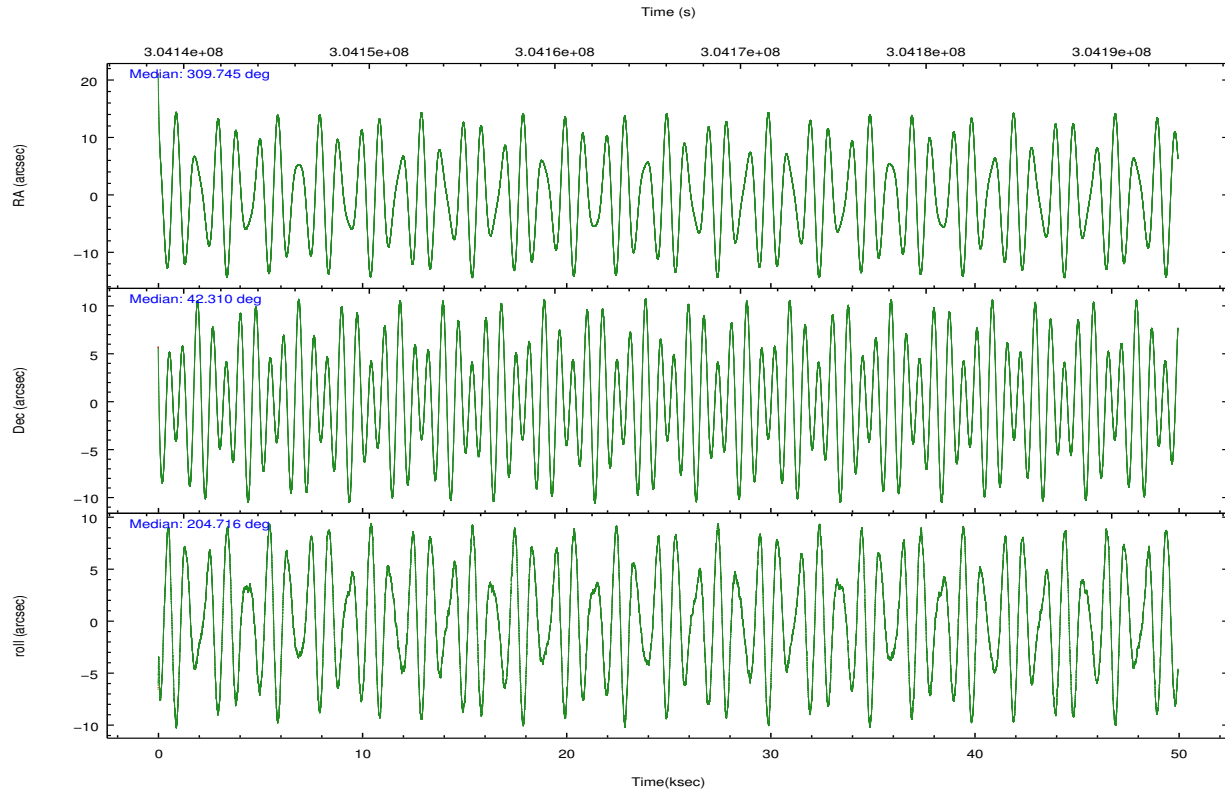
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	380448	379906	426604	404143	430578	444056	grade 0 events	16178	19091	15742	15949	16917	18679
rejected events	338662	331382	386025	363417	386249	241969		4%	5%	3%	3%	3%	4%
rejected %	89%	87%	90%	89%	89%	54%	grade 1 events	228	186	247	251	201	480
								0%	0%	0%	0%	0%	0%
							grade 2 events	9406	10607	9152	8361	9489	40839
								2%	2%	2%	2%	2%	9%
							grade 3 events	4473	4850	4227	4401	4555	18057
								1%	1%	0%	1%	1%	4%
							grade 4 events	4216	4863	4321	4316	4430	17864
								1%	1%	1%	1%	1%	4%
							grade 5 events	13618	14785	12909	15760	16263	45772
								3%	3%	3%	3%	3%	10%
							grade 6 events	7516	9116	7144	7712	8947	106682
								1%	2%	1%	1%	2%	24%
							grade 7 events	324813	316408	372862	347393	369776	195683
								85%	83%	87%	85%	85%	44%

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	309.766154	309.7448028521196	CCD I2 on	Y	Y
[deg] Pointing Dec	42.332884	42.31036011711336	CCD I3 on	Y	Y
[deg] Pointing Roll	204.506346	204.7294152874619	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	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	304141762.184000	304140520.09087	CCD S5 on	N	N
Observation start date	2007-08-22T03:48:17	2007-08-22T03:28:40	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	304191062.184000	304191836.20583	On-chip summing requested	N	N
Observation end date	2007-08-22T17:29:57	2007-08-22T17:43:56	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



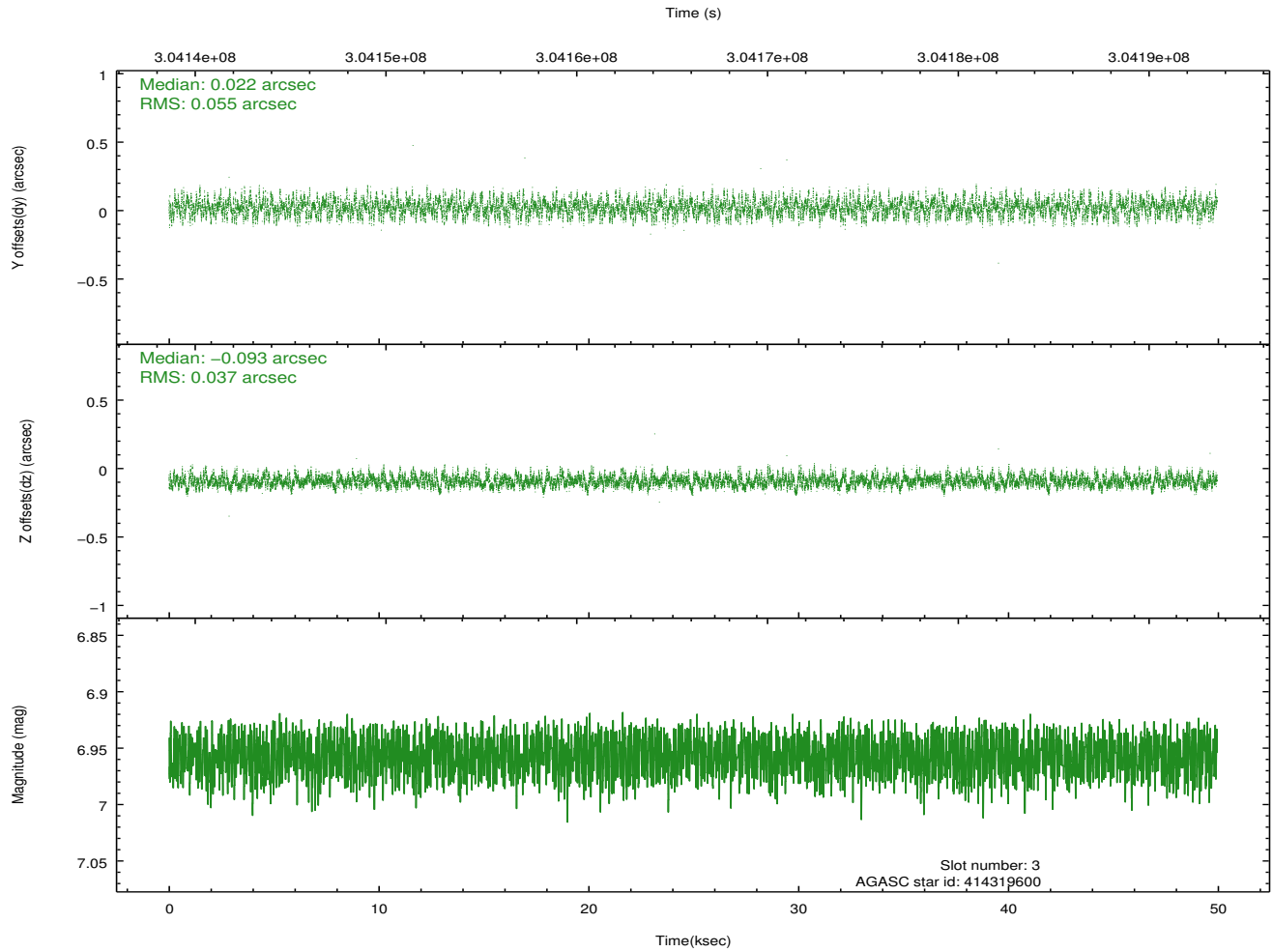
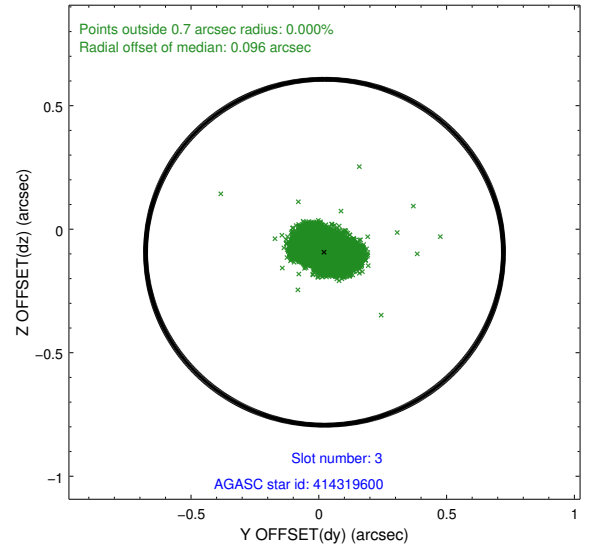
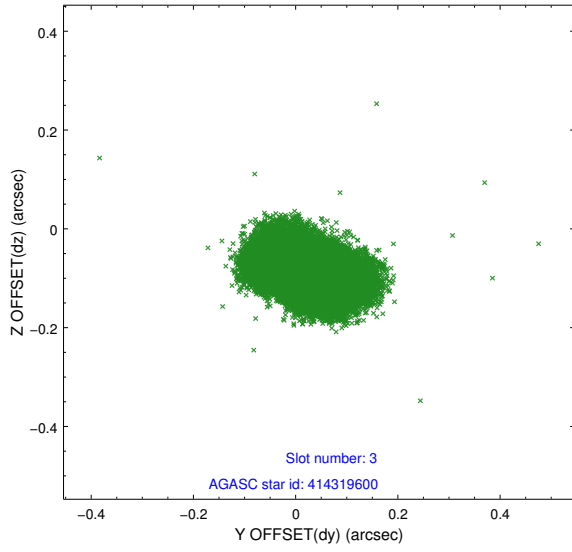


Slot Statistics

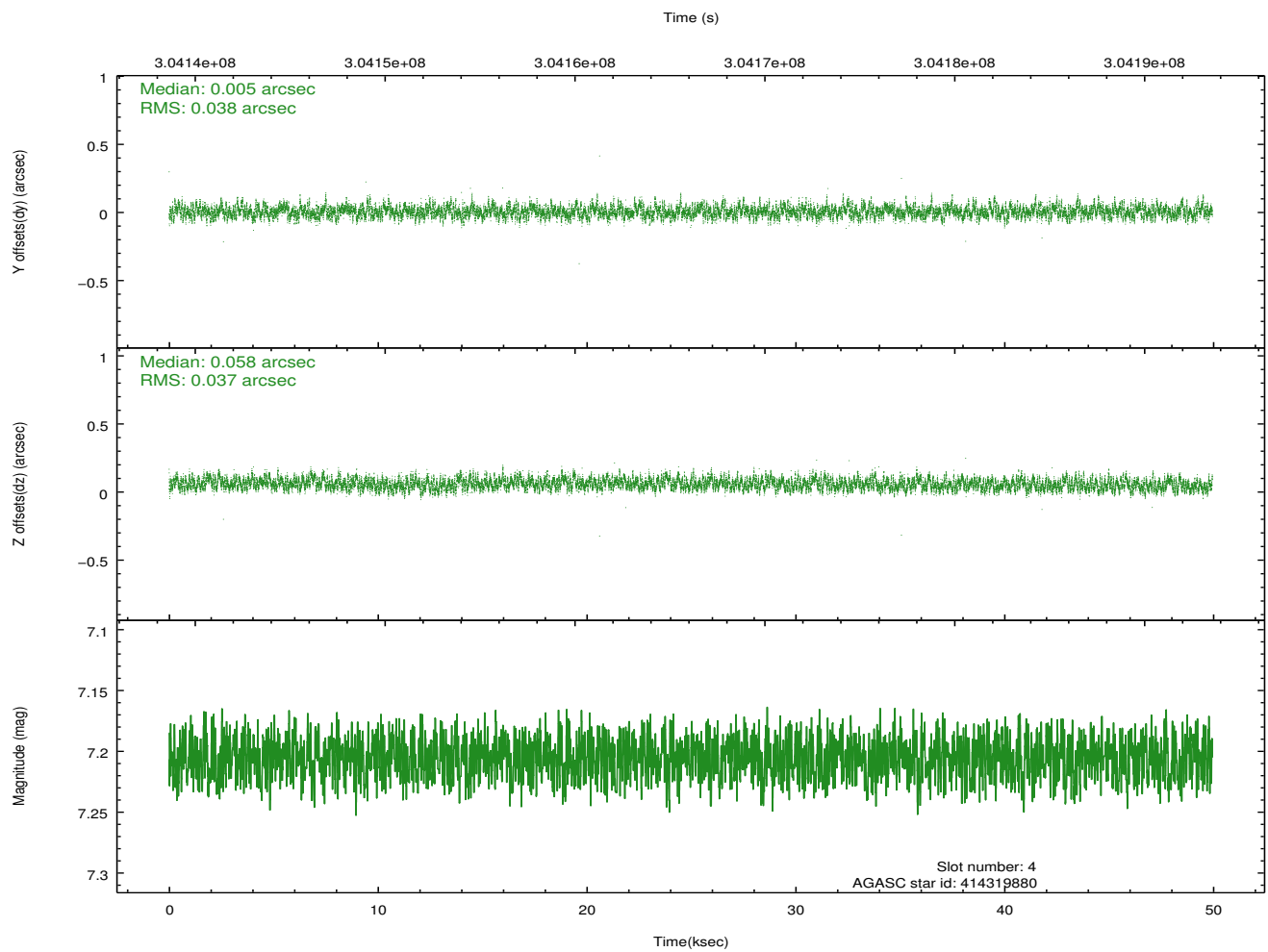
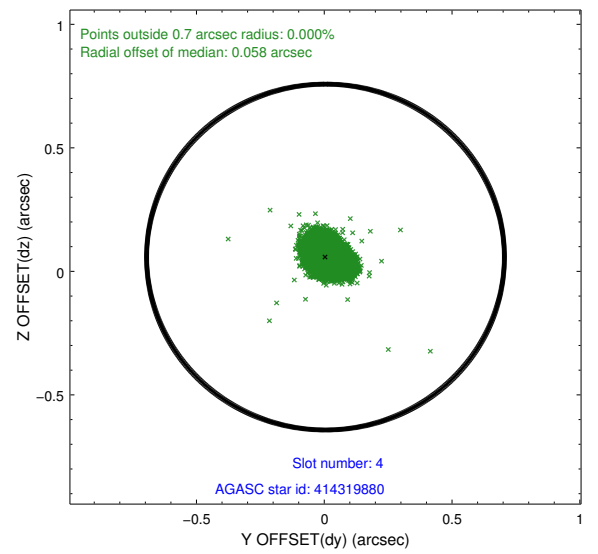
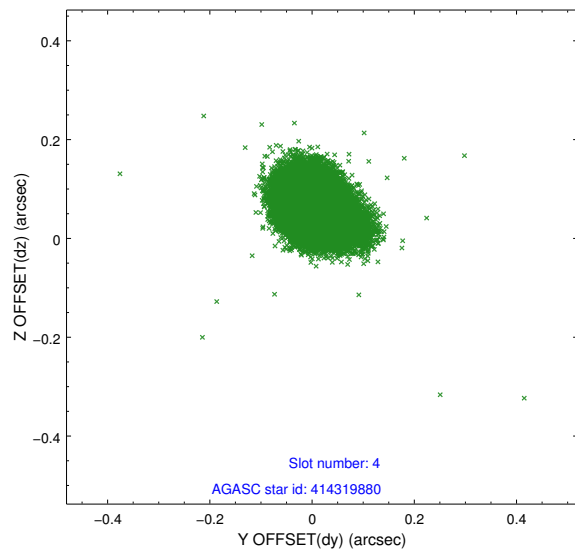
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.23	12184	0.037	0.004	0.011	0.019	0.000000	0.000000	927.21	-837.10
1	FID	ACIS-I-5	7.23	12184	-0.206	0.045	0.013	0.023	0.000000	0.000000	-1821.16	1060.42
2	FID	ACIS-I-6	7.24	12185	0.079	0.021	0.012	0.020	0.000000	0.000000	392.81	1704.89
3	GUIDE	414319600	6.96	24366	0.022	-0.093	0.071	0.113	309.887333	42.248554	-166.67	411.54
4	GUIDE	414319880	7.20	24367	0.005	0.058	0.056	0.090	309.495433	42.845641	-116.40	-1977.56
5	GUIDE	414322040	8.09	24361	-0.075	0.146	0.069	0.107	309.251919	42.770338	582.28	-1999.79
6	GUIDE	416028784	7.99	24368	-0.006	0.013	0.057	0.092	310.446946	42.008694	-1176.11	1810.74
7	GUIDE	416029472	8.54	24353	0.049	-0.129	0.075	0.123	310.573870	41.936611	-1381.28	2185.98

2.4 Star Slots

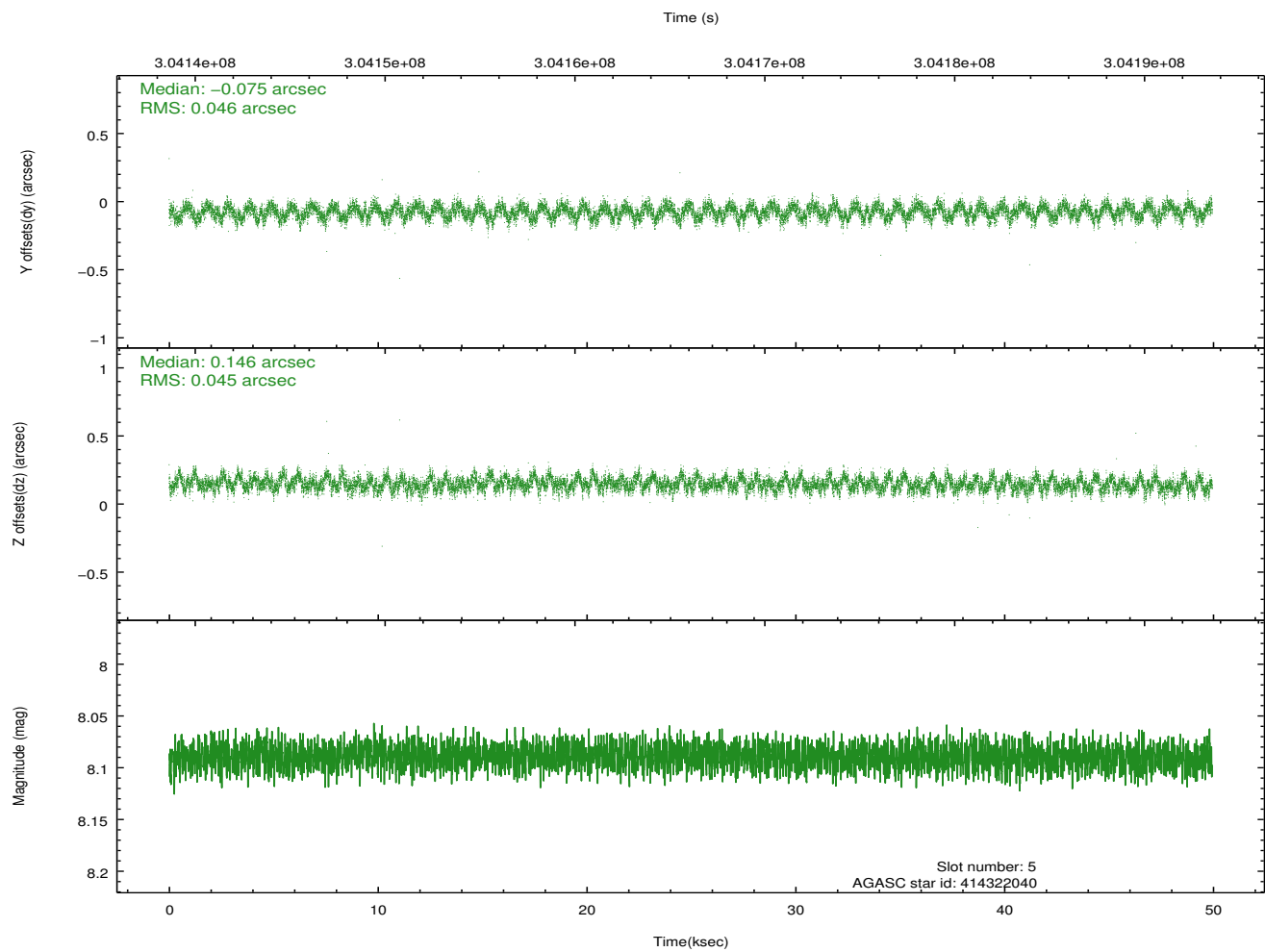
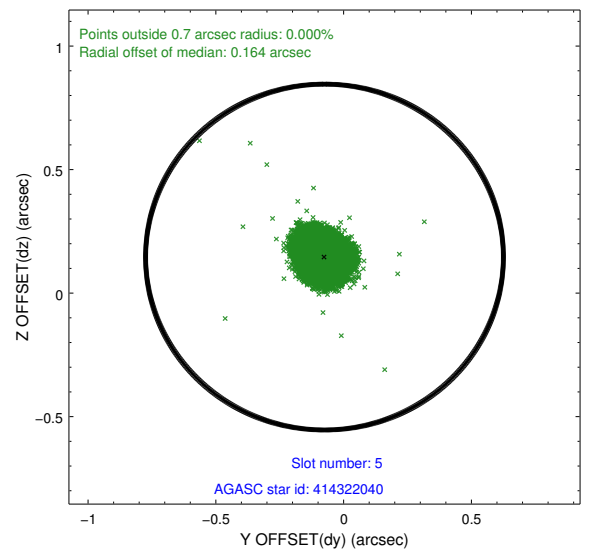
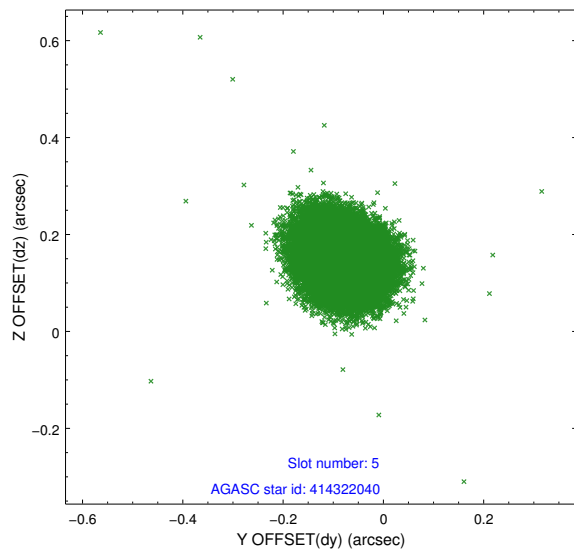
2.4.1 Slot 3



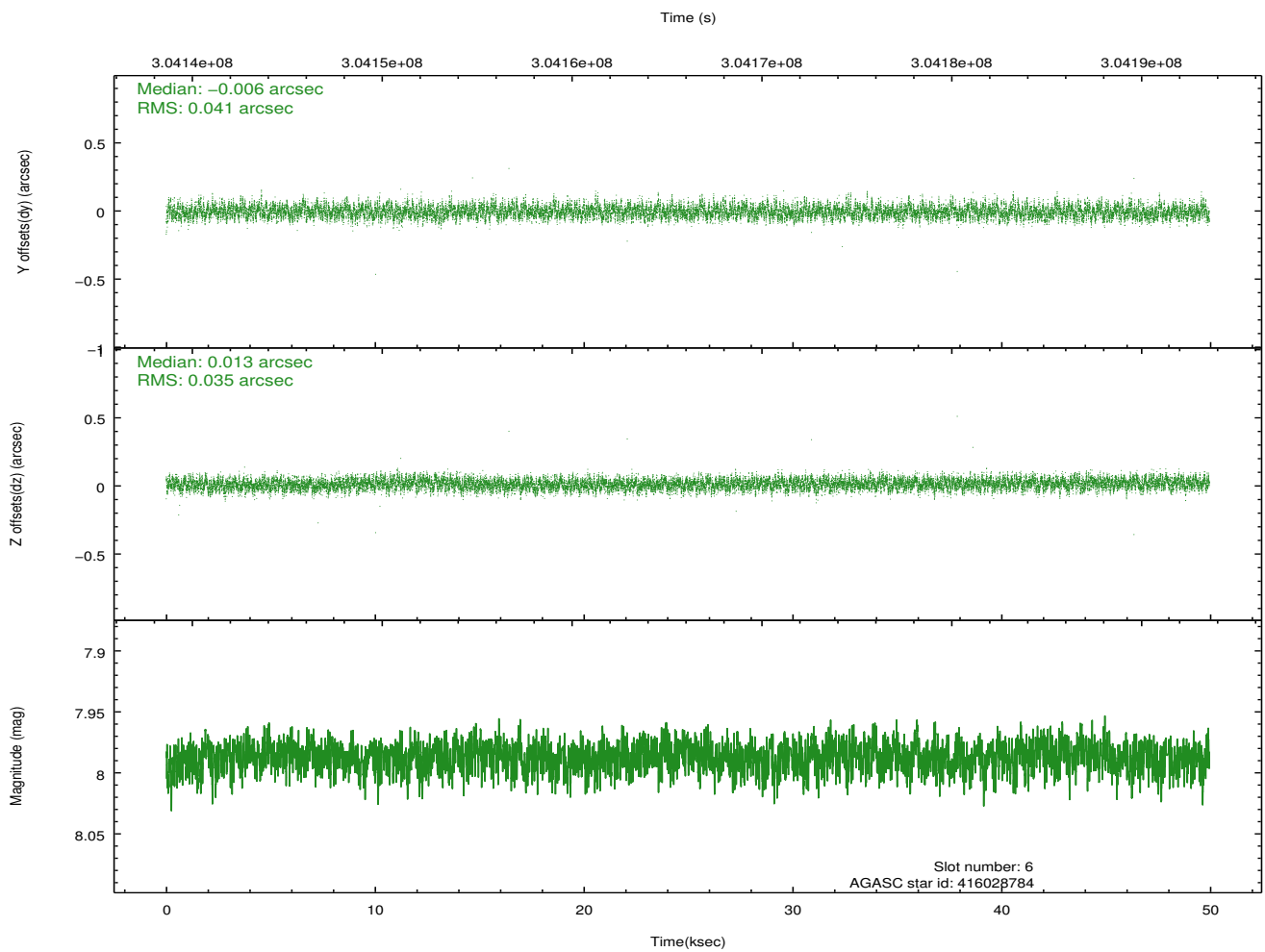
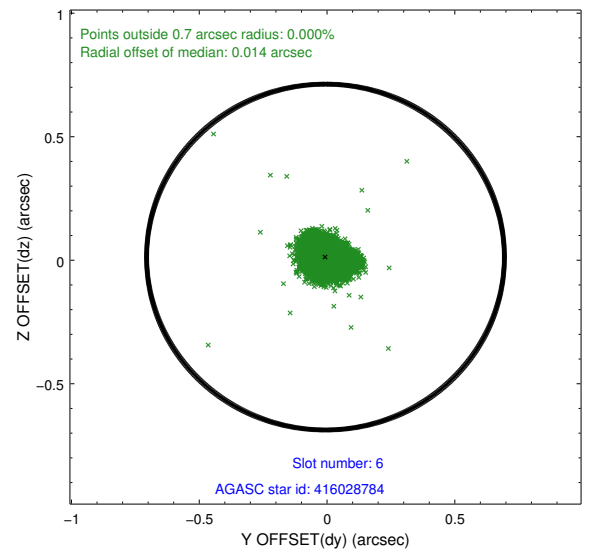
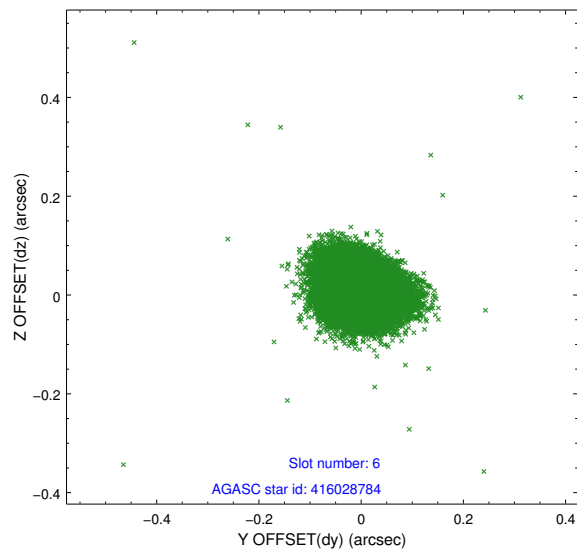
2.4.2 Slot 4



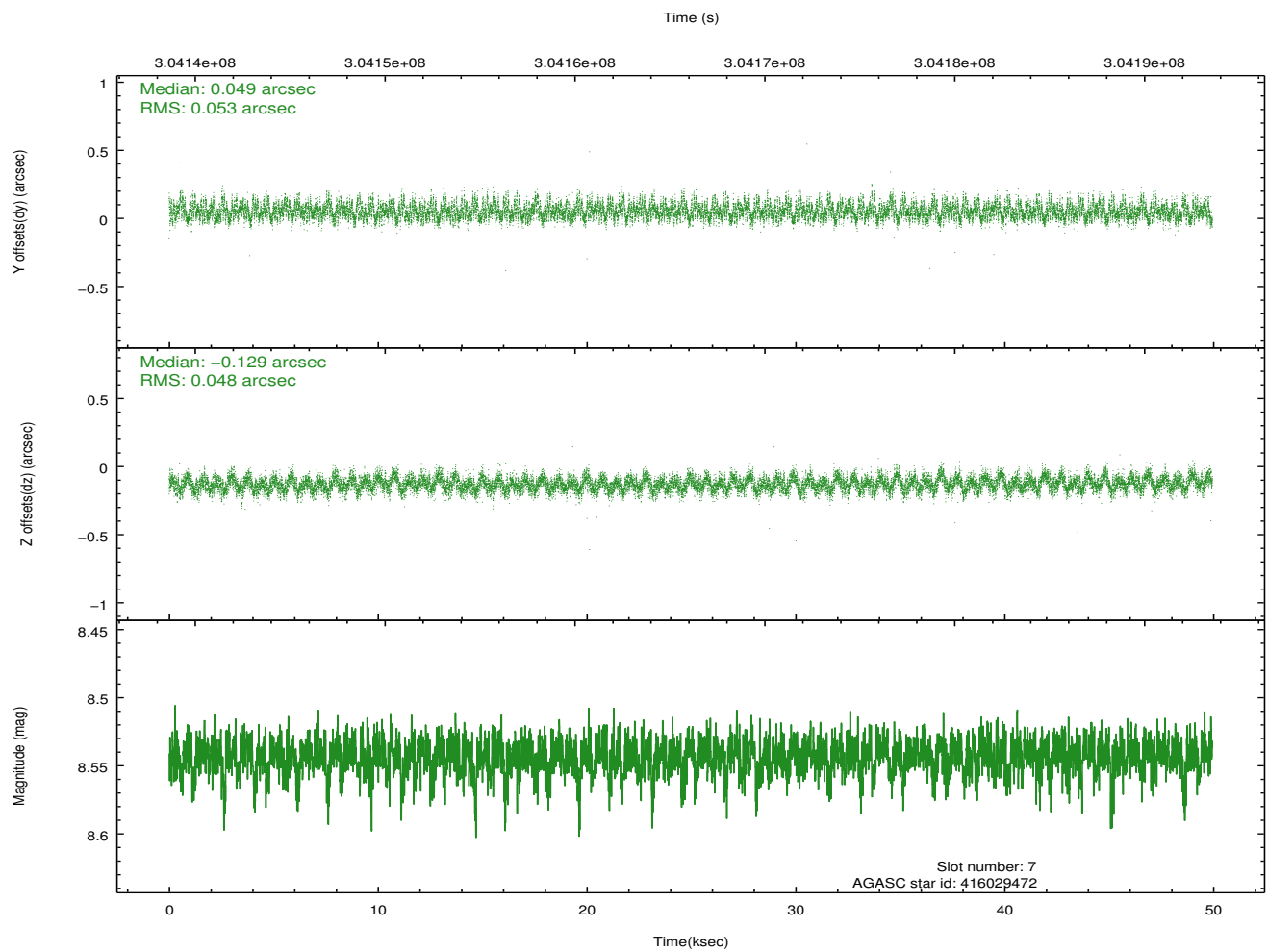
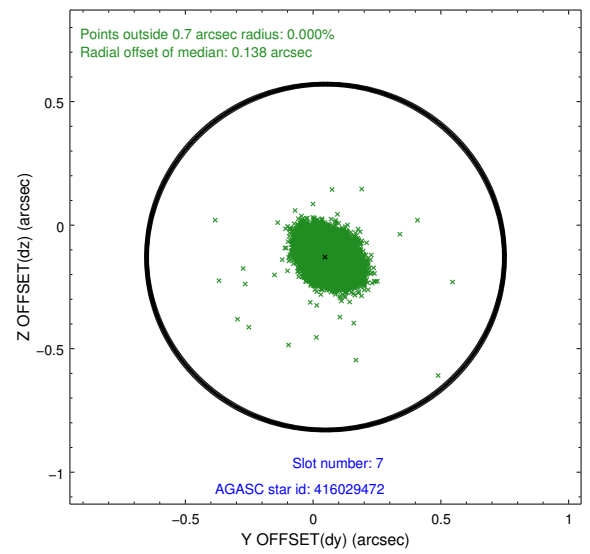
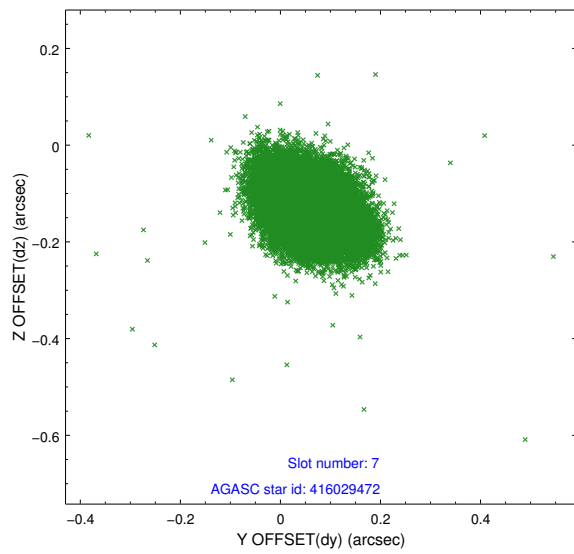
2.4.3 Slot 5



2.4.4 Slot 6

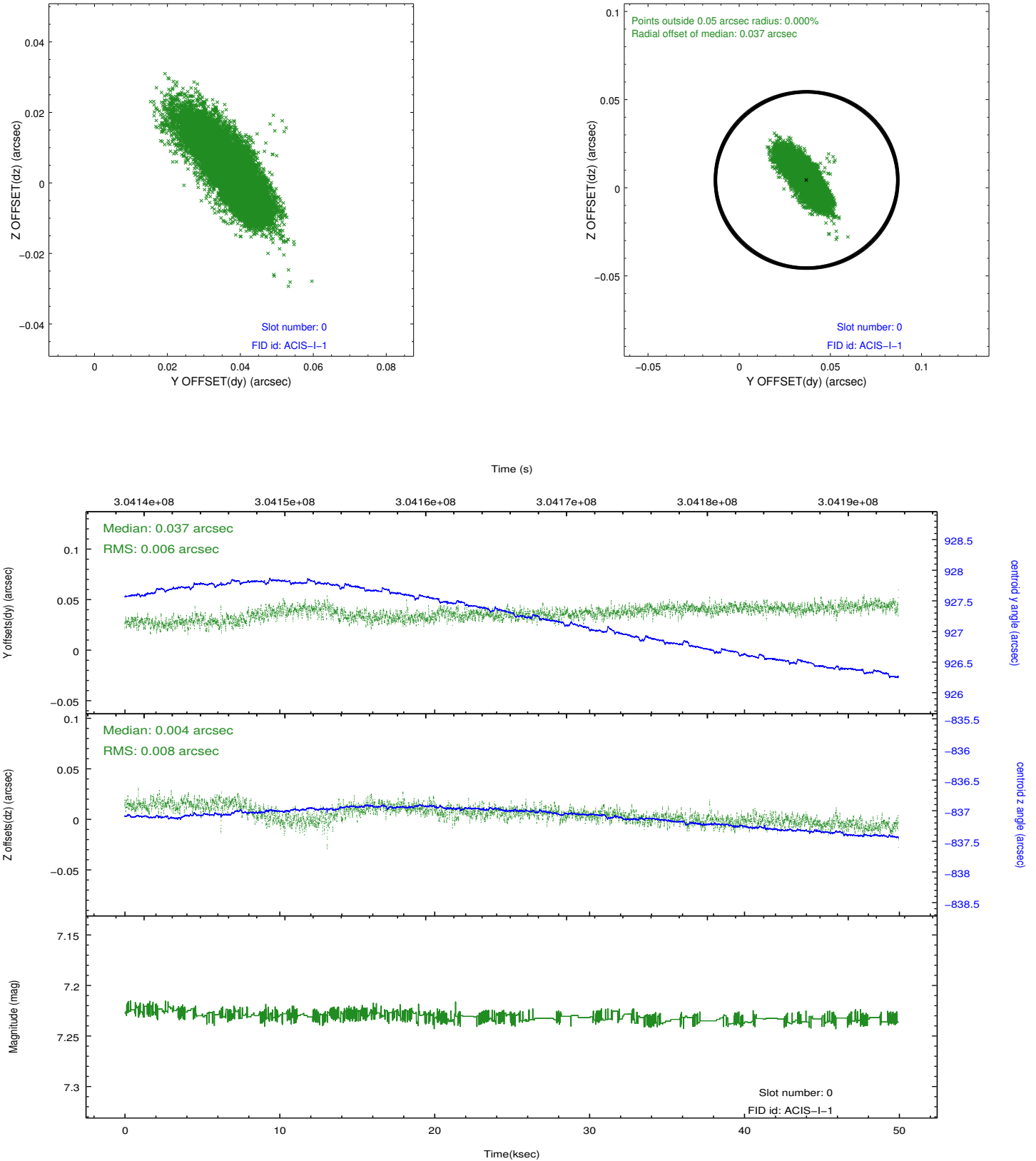


2.4.5 Slot 7

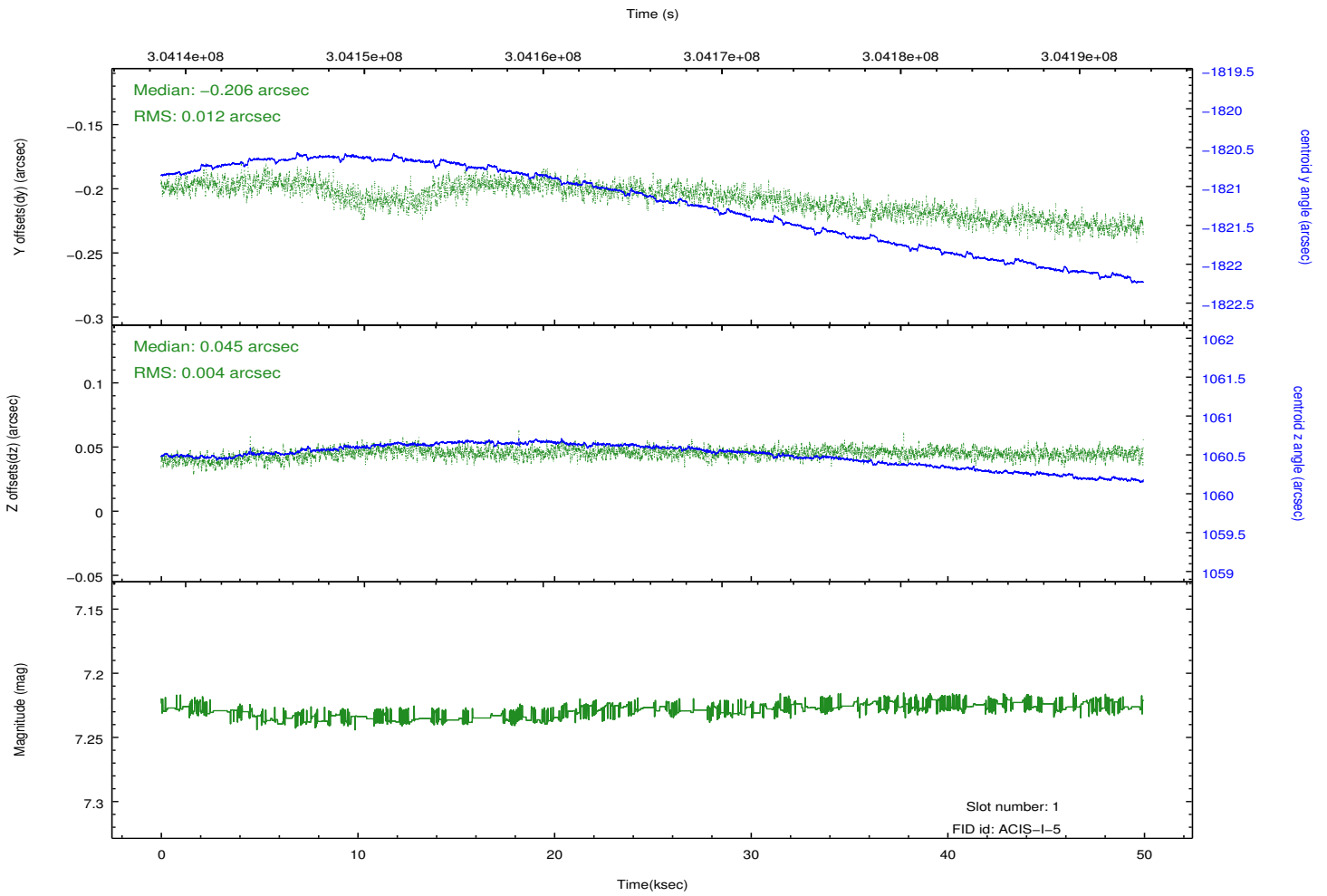
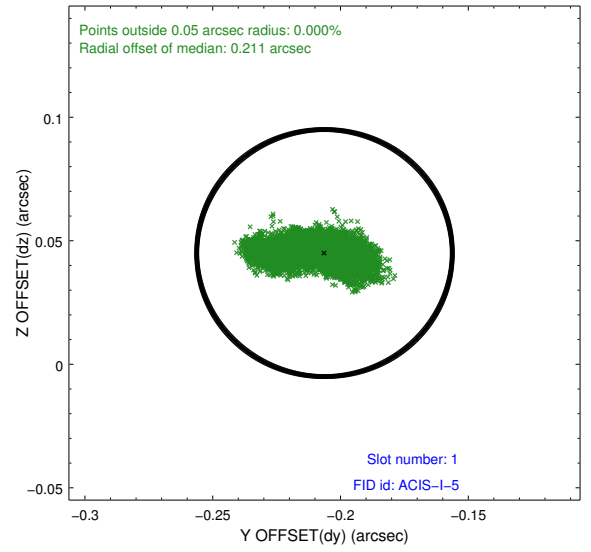
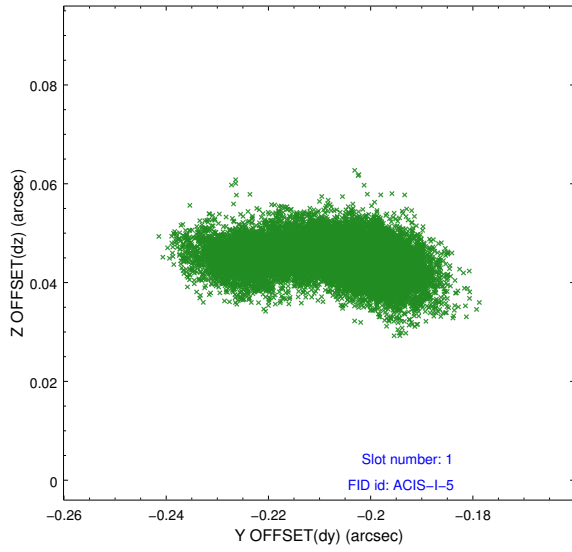


2.5 FID Slots

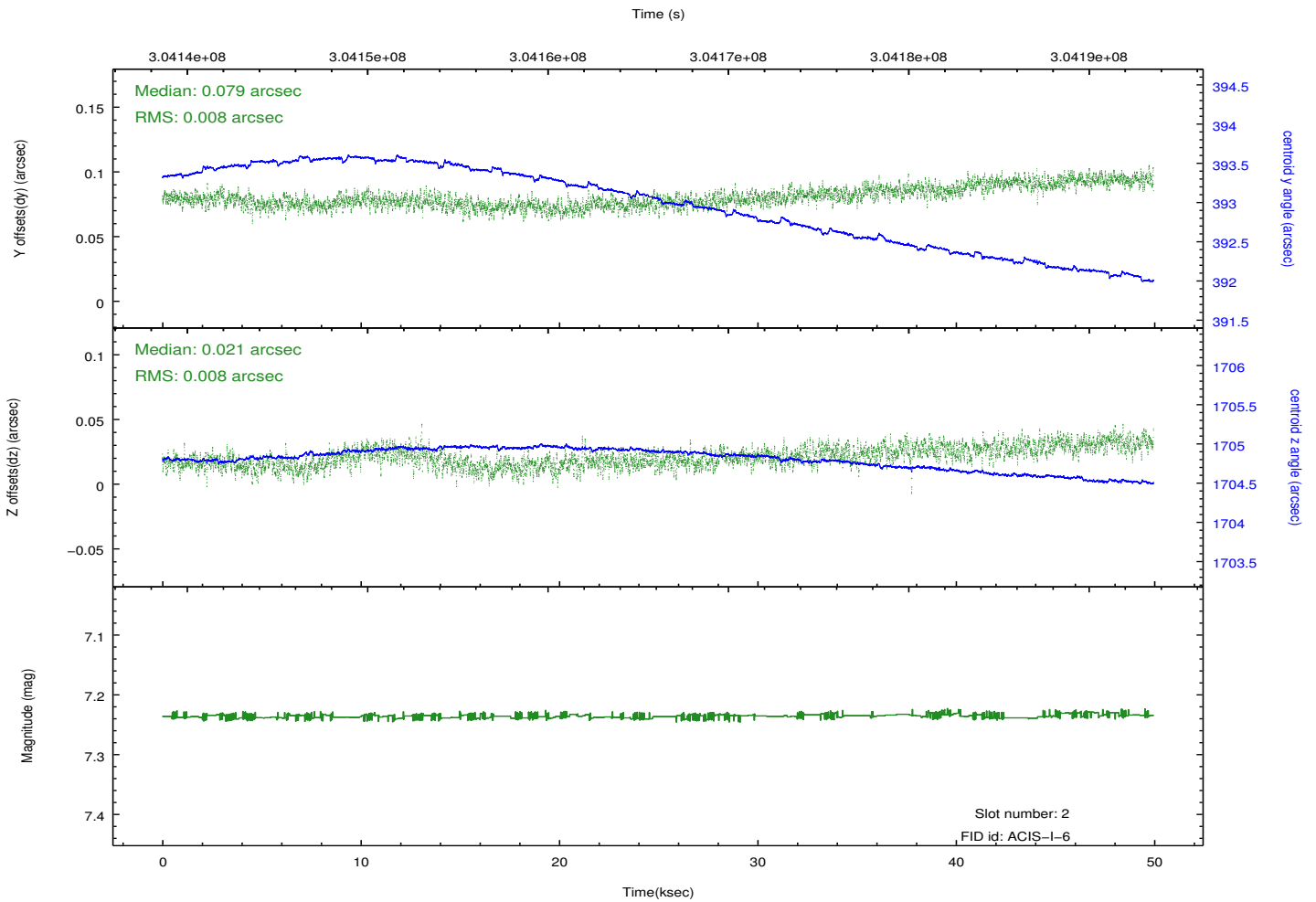
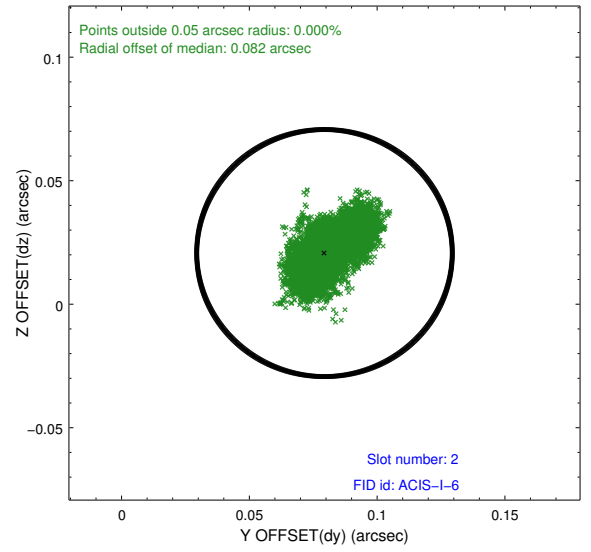
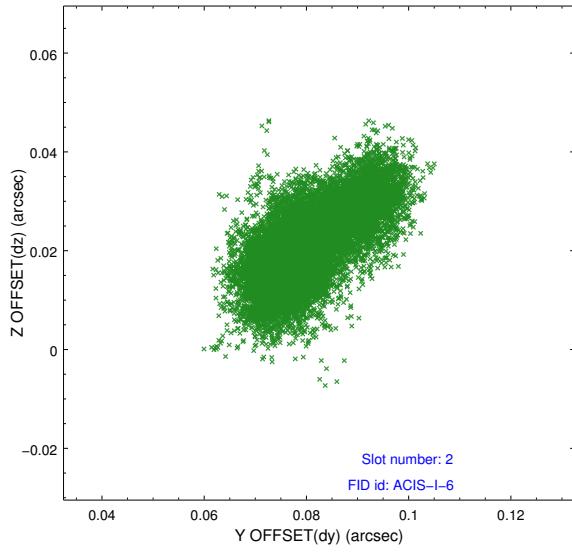
2.5.1 Slot 0



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)	2012.05.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.3310768

A.2 Comments

Spatial regions of the original bias maps for CCD = 0 and 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 maps for CCD = 0 and 6 have 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:

CCD 0:

(309.53625,42.30303), (309.53771,42.30067), (309.55929,42.30807), (309.56100,42.31151)

CCD 6:

(309.75796,42.01274), (309.76163,42.01400), (309.74223,42.04523), (309.73856,42.04397)