

V&V Reference Report

L2 ASCDS Version : 10.4

Observation 17660 - L2 Version 2
Chandra X-Ray Center

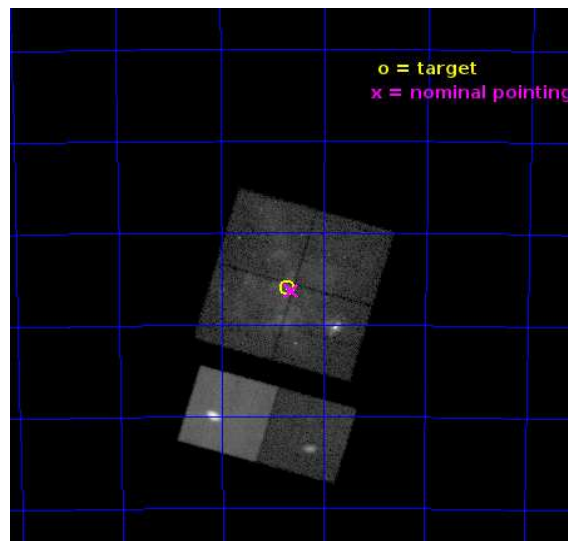
L2 Processing Date : Jun 8 2015

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1 Front

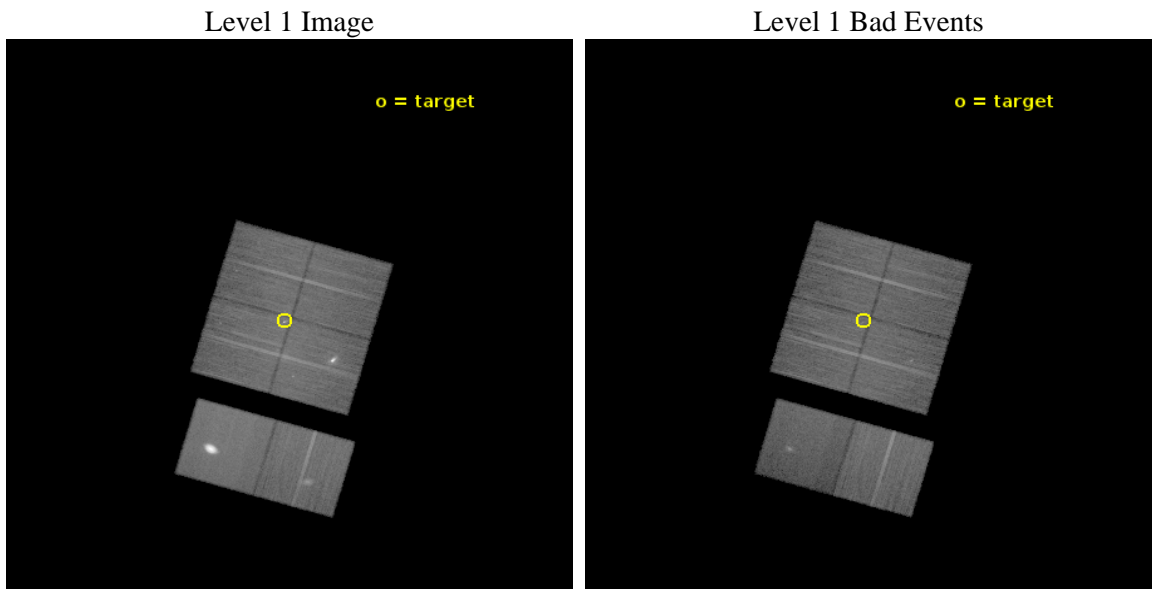
seq_num	901116	Sequence number
obs_id	17660	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.657583314891	Nominal RA [deg]
dec_nom	-69.105327432681	Nominal Dec [deg]
roll_nom	196.19086833734	Nominal Roll [deg]
revision	2	Processing version of data
ontime	39456.00058794	Sum of GTIs [s]
livetime	38956.384950944	Livetime [s]
ontime0	39455.988342404	Sum of GTIs [s]
ontime1	39449.518756747	Sum of GTIs [s]
ontime2	39456.00058794	Sum of GTIs [s]
ontime3	39456.00058794	Sum of GTIs [s]
ontime6	39452.759587765	Sum of GTIs [s]
ontime7	39456.00058794	Sum of GTIs [s]
l2events	393942	Number of level 2 events



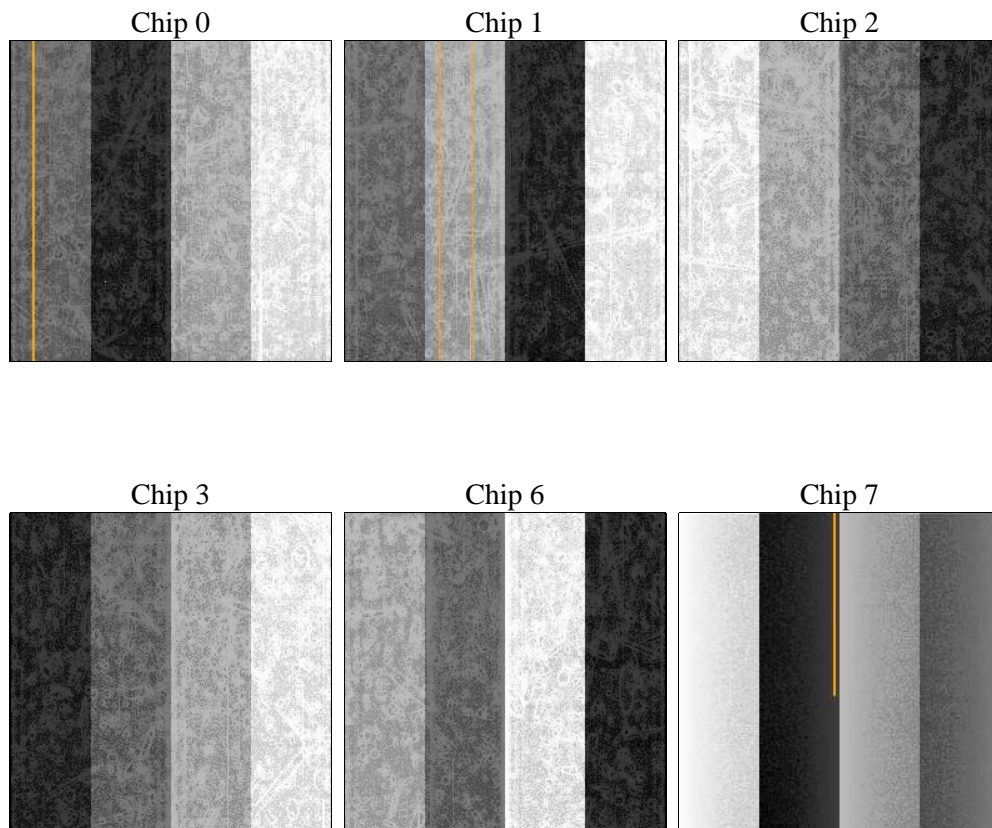
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	39500.000000	[s] Scheduled observation exposure time
ascdsver	10.4	Processing system revision	ontime	39456.00058794	Sum of GTIs [s]
caldsver	4.6.7	 	ontime0	39455.988342404	Sum of GTIs [s]
date	2015-06-08T19:37:49	Date and time of file creation	ontime1	39449.518756747	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	39456.00058794	Sum of GTIs [s]
			ontime3	39456.00058794	Sum of GTIs [s]
			ontime6	39452.759587765	Sum of GTIs [s]
			ontime7	39456.00058794	Sum of GTIs [s]
			l1events	1351824	Number of level 1 events

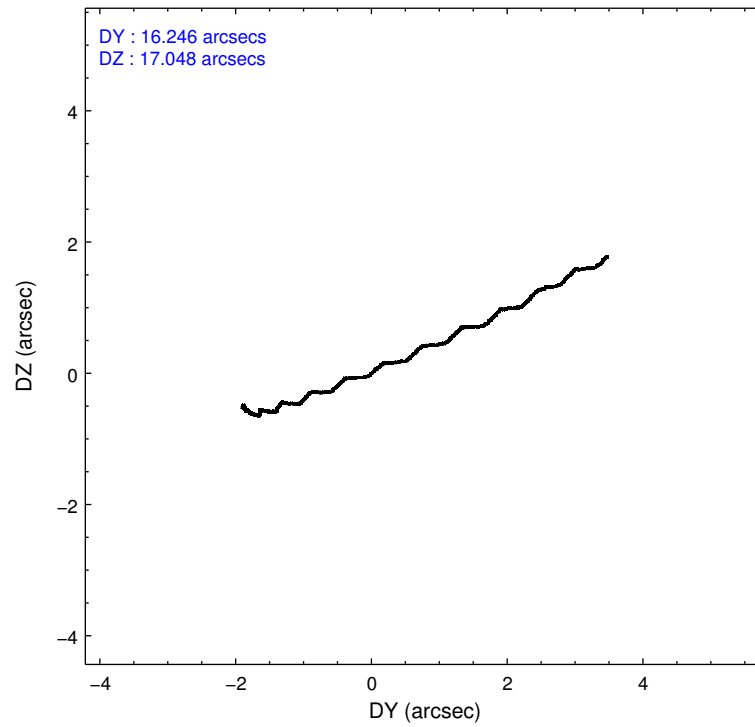
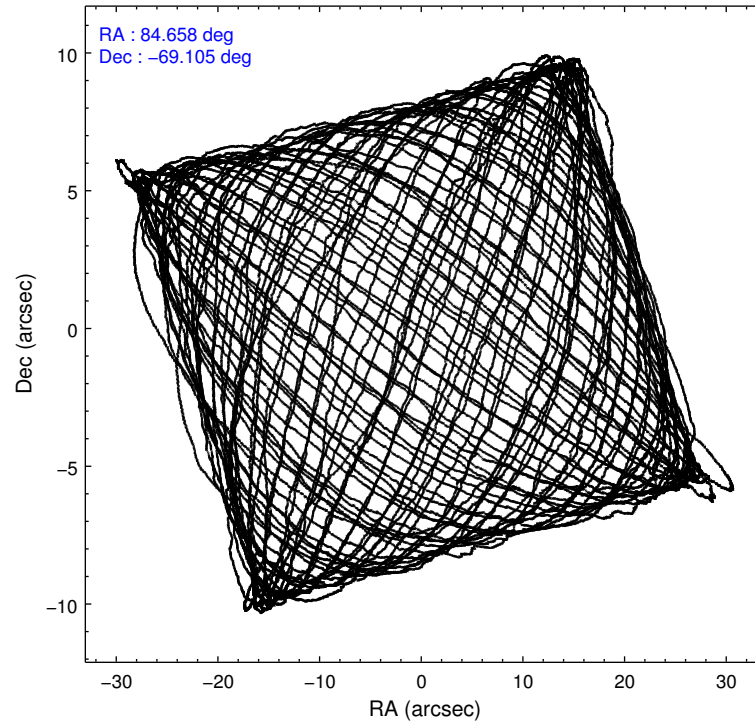
2.1.4 Events

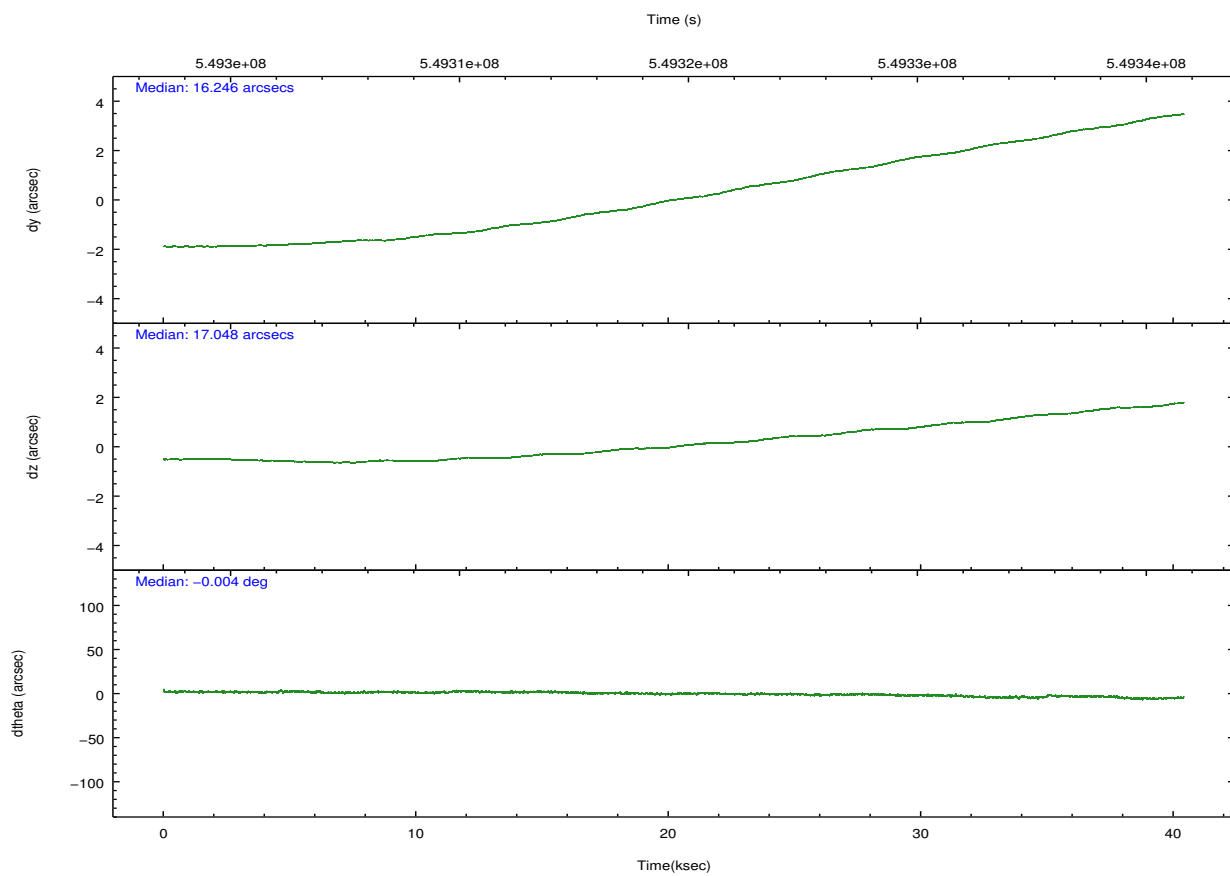
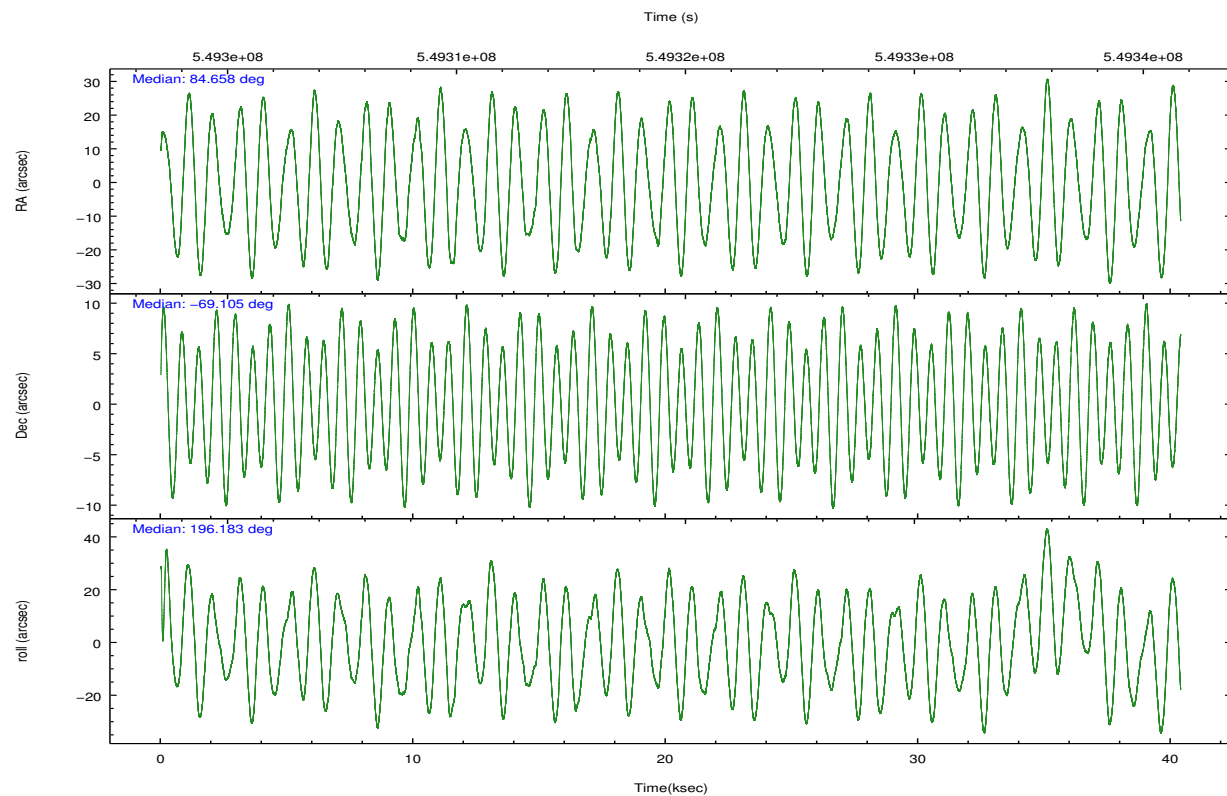
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	179494	185390	226737	203410	203841	352952	grade 0 events	14118	15604	36305	19962	14712	47020
rejected events	150486	153571	170757	168491	173400	117223		7%	8%	16%	9%	7%	13%
rejected %	83%	82%	75%	82%	85%	33%	grade 1 events	116	128	310	162	107	449
								0%	0%	0%	0%	0%	0%
							grade 2 events	6148	6218	8774	5929	5982	57462
								3%	3%	3%	2%	2%	16%
							grade 3 events	2336	2551	3131	2365	2387	24395
								1%	1%	1%	1%	1%	6%
							grade 4 events	2247	2580	3123	2444	2406	24694
								1%	1%	1%	1%	1%	6%
							grade 5 events	7199	7831	6819	8417	8642	24597
								4%	4%	3%	4%	4%	6%
							grade 6 events	4165	4871	4656	4228	4957	82193
								2%	2%	2%	2%	2%	23%
							grade 7 events	143165	145607	163619	159903	164648	92142
								79%	78%	72%	78%	80%	26%

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	84.710873	84.65758331489084	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.085320	-69.10532743268081	CCD I3 on	Y	Y
[deg] Pointing Roll	196.031951	196.1908683373447	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)	549300054.184000	549298528.90798	CCD S5 on	N	N
Observation start date	2015-05-29T15:19:47	2015-05-29T14:55:28	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	549339554.184000	549340540.07284	On-chip summing requested	N	N
Observation end date	2015-05-30T02:18:07	2015-05-30T02:35:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



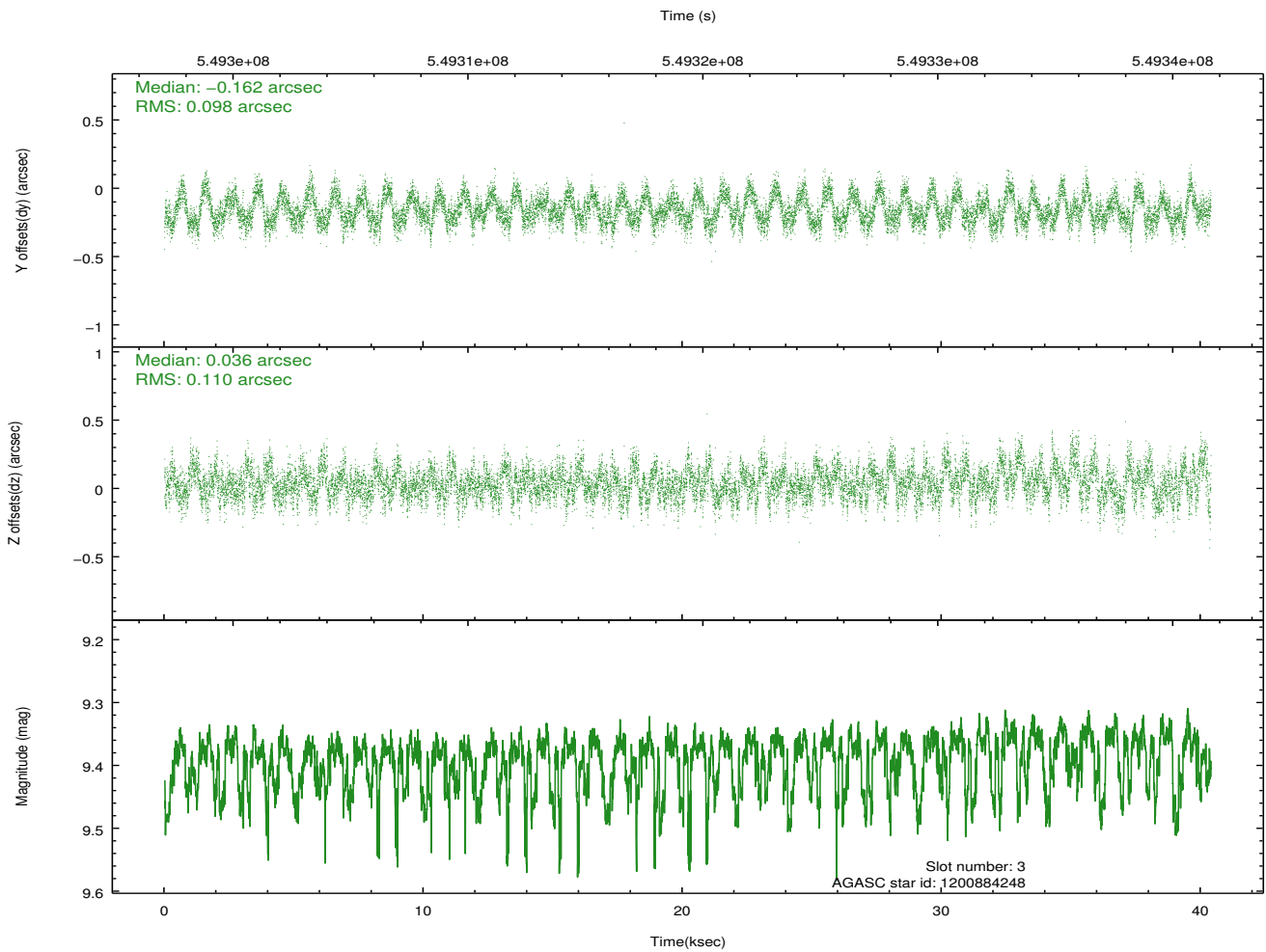
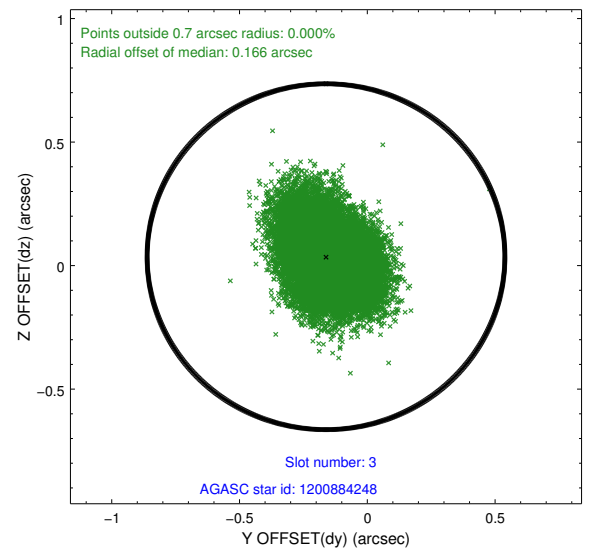
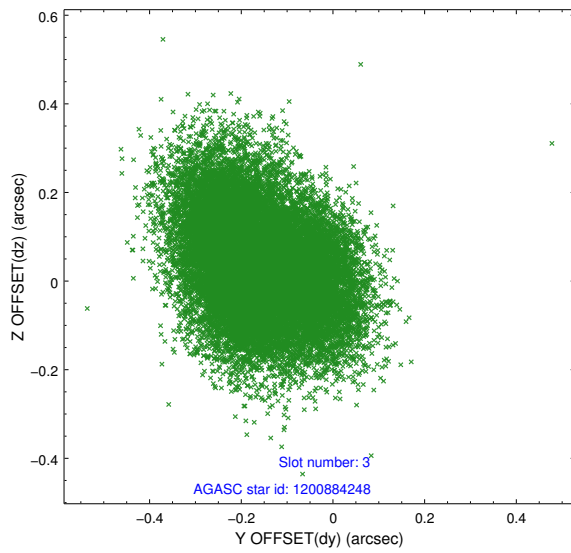


Slot Statistics

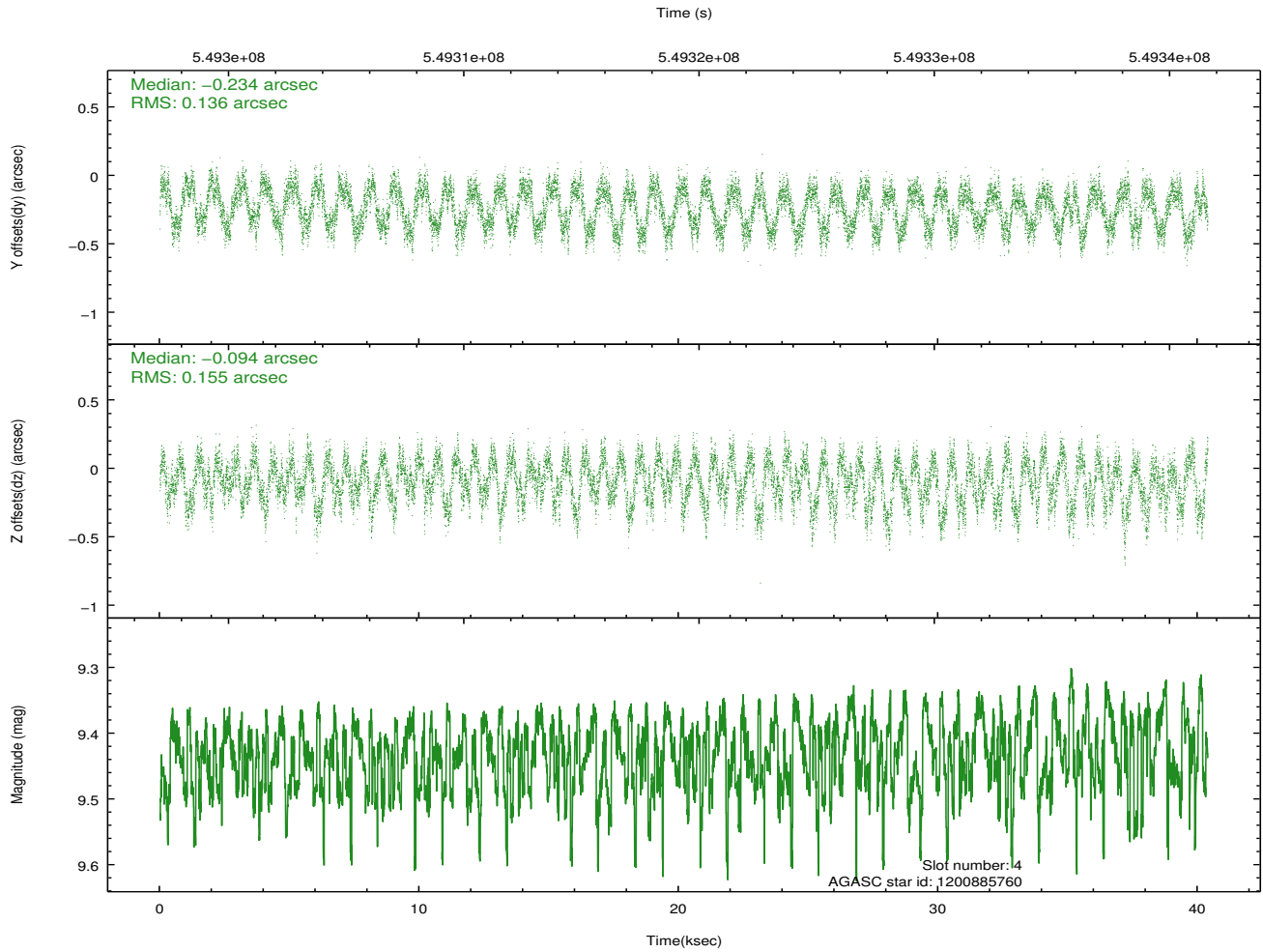
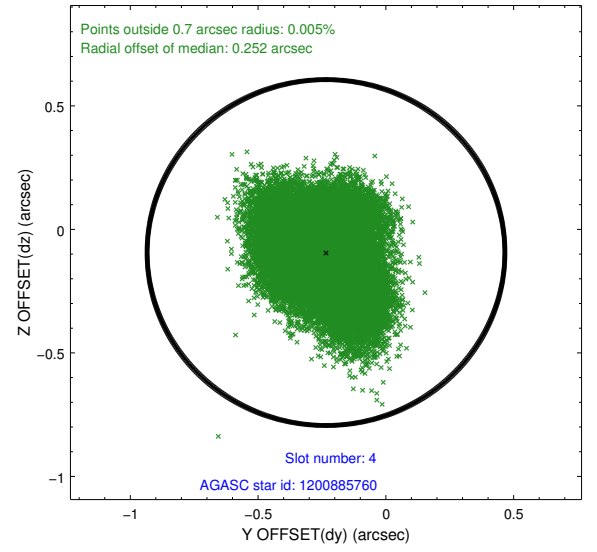
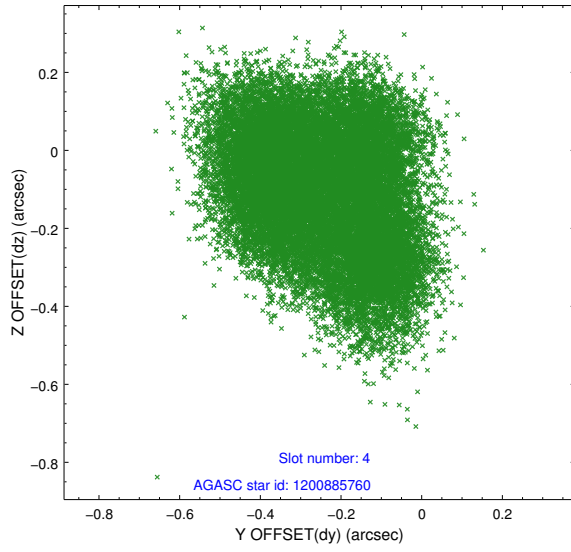
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.02	9852	-0.018	-0.081	0.034	0.076	0.000000	0.000000	922.95	-840.96
1	FID		ACIS-I-4	6.95	9848	0.233	0.088	0.059	0.079	0.000000	0.000000	2143.21	1059.04
2	FID		ACIS-I-5	7.02	9852	-0.323	0.064	0.035	0.051	0.000000	0.000000	-1825.40	1056.74
3	GUIDE	used	1200884248	9.39	19685	-0.162	0.036	0.157	0.251	83.880915	-68.565170	534.54	-2093.91
4	GUIDE	used	1200885760	9.43	19687	-0.234	-0.094	0.224	0.333	83.723637	-68.777667	933.92	-1409.34
5	GUIDE	used	1201016584	9.36	19682	0.396	0.061	0.188	0.290	85.677603	-68.415933	-1891.93	-1952.81
6	GUIDE	used	1201018384	9.02	19688	0.077	-0.024	0.186	0.268	85.801362	-68.593260	-1862.74	-1294.63
7	GUIDE	used	1201020040	8.59	19693	-0.092	0.018	0.091	0.148	85.379163	-68.879396	-1036.15	-468.41

2.4 Star Slots

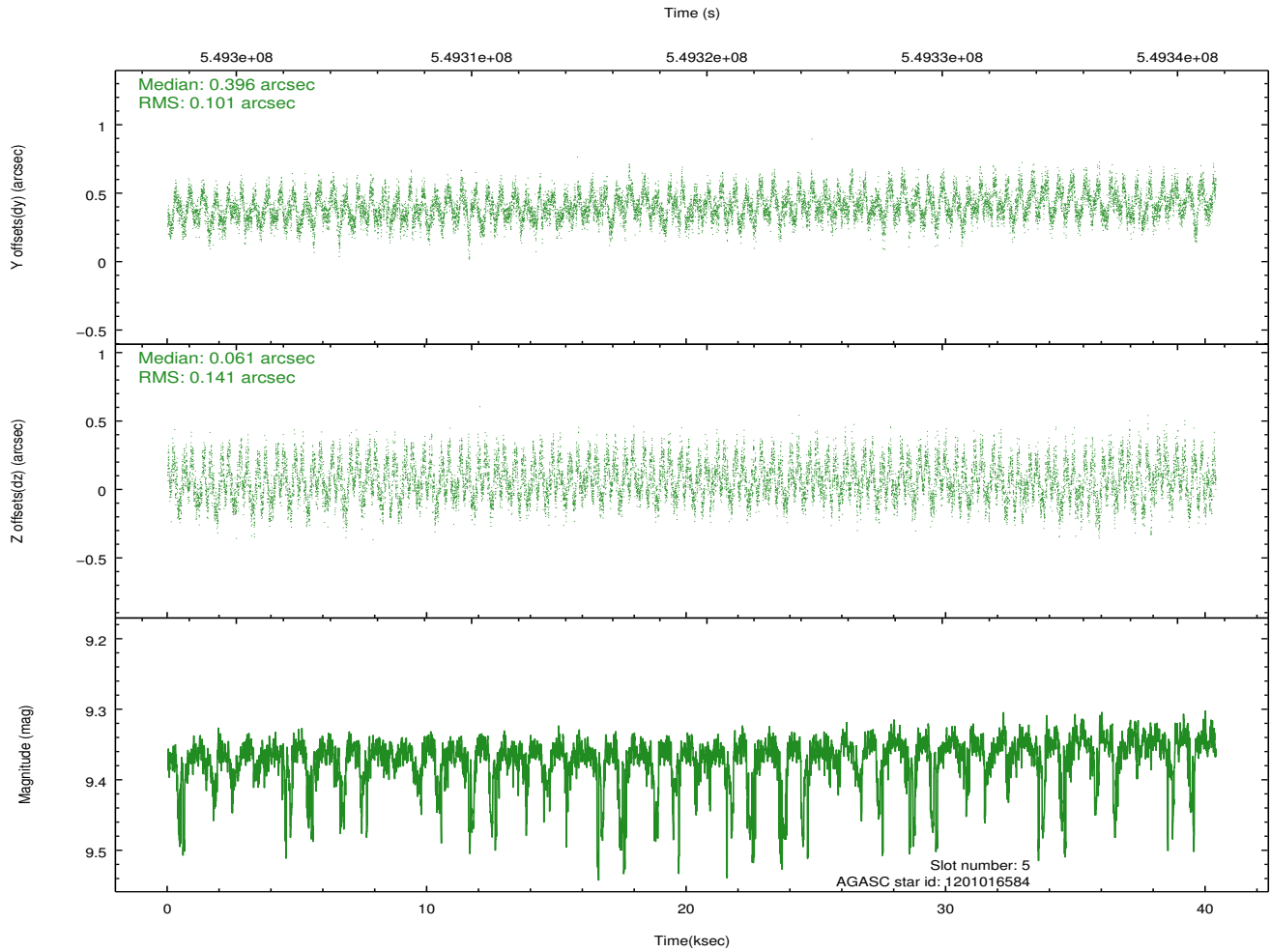
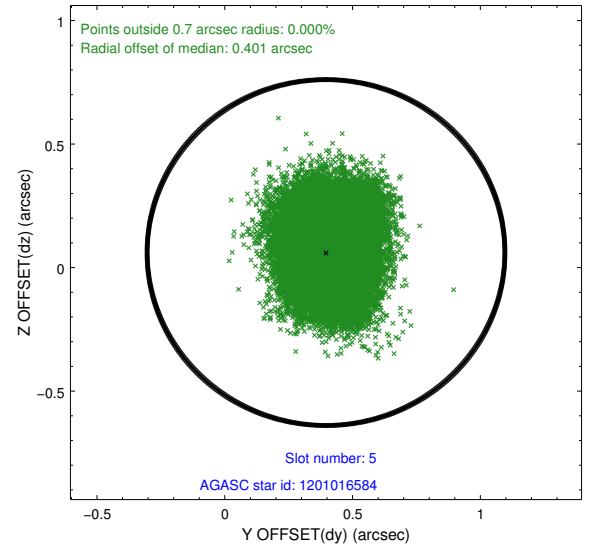
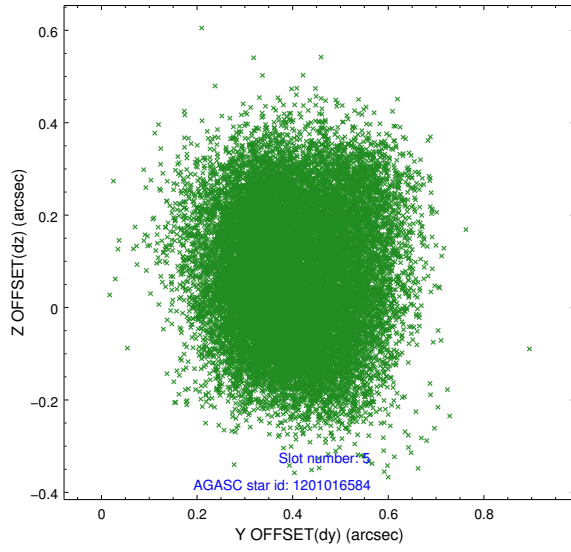
2.4.1 Slot 3



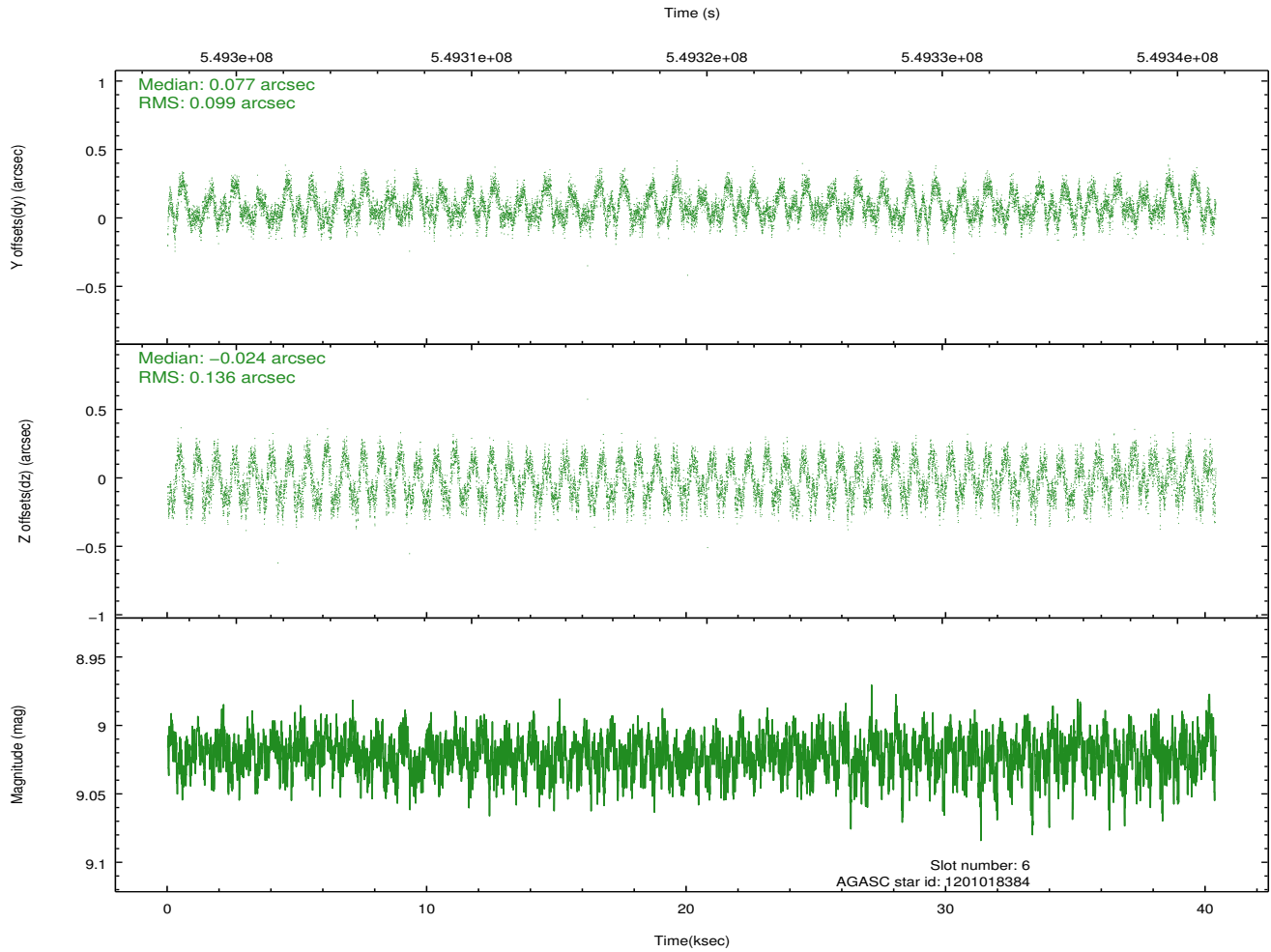
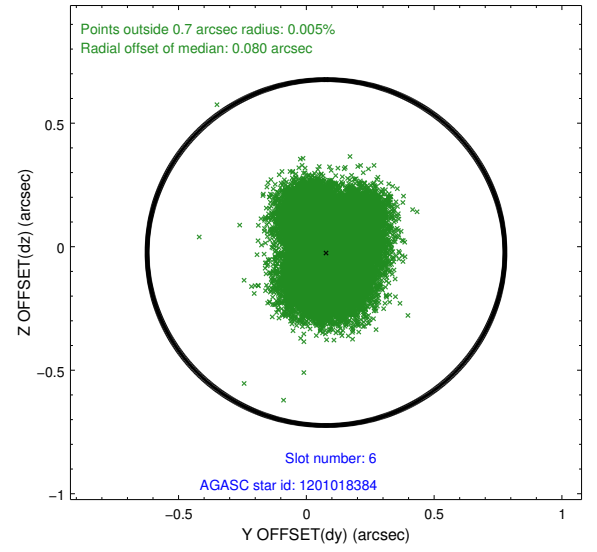
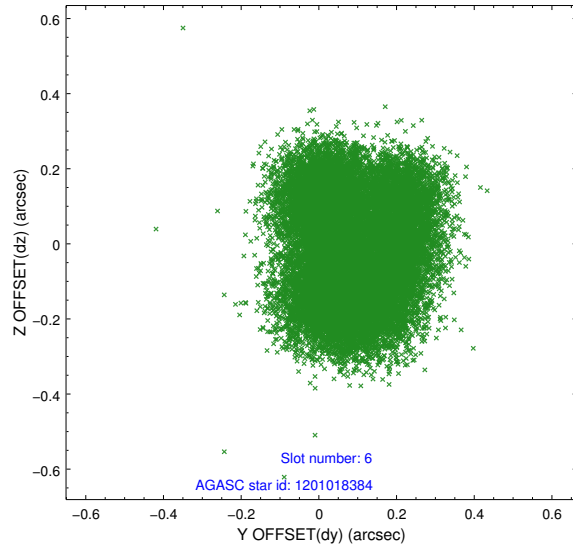
2.4.2 Slot 4



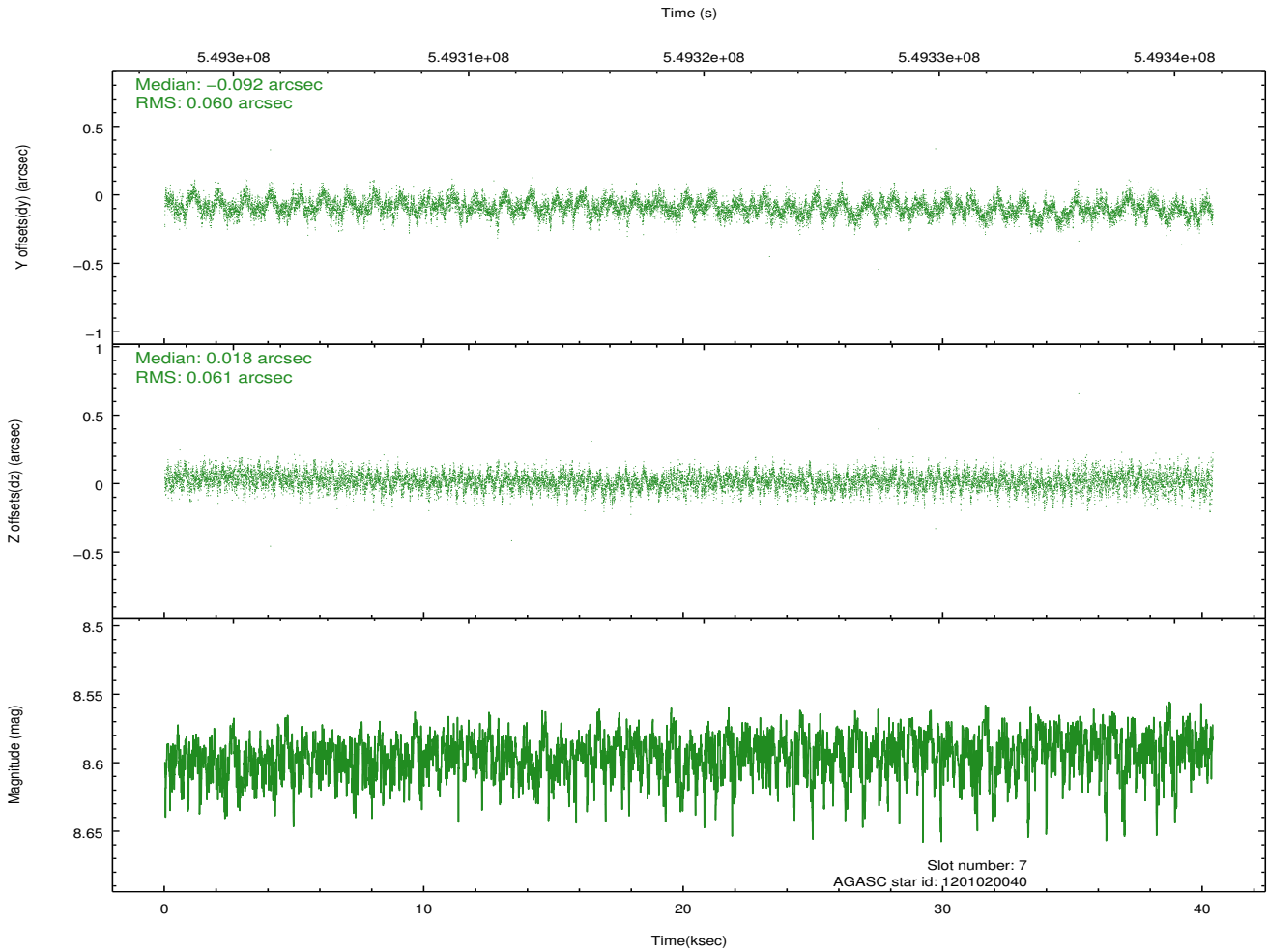
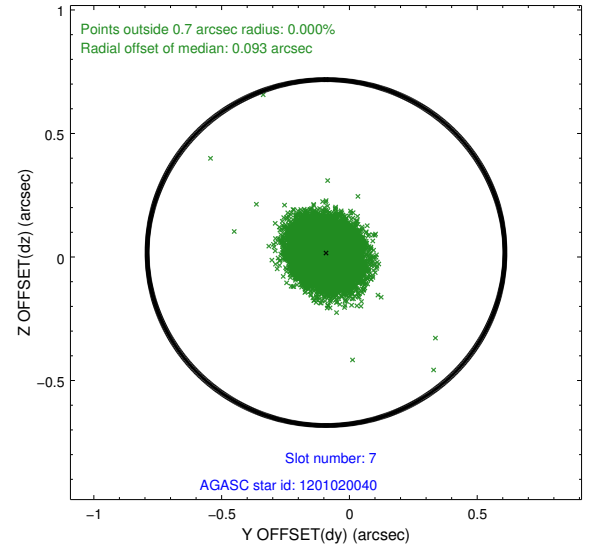
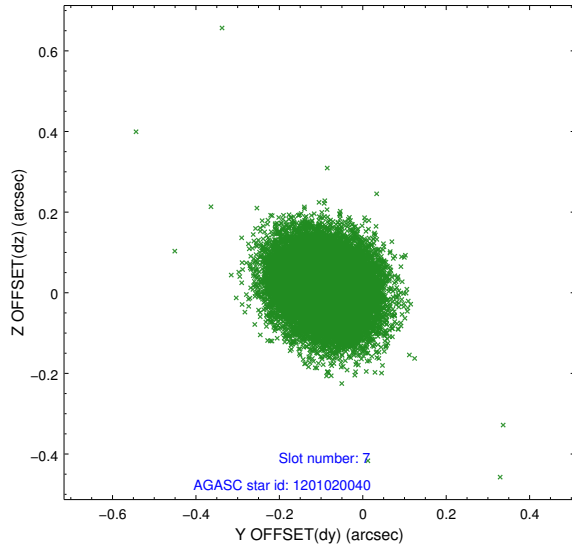
2.4.3 Slot 5



2.4.4 Slot 6

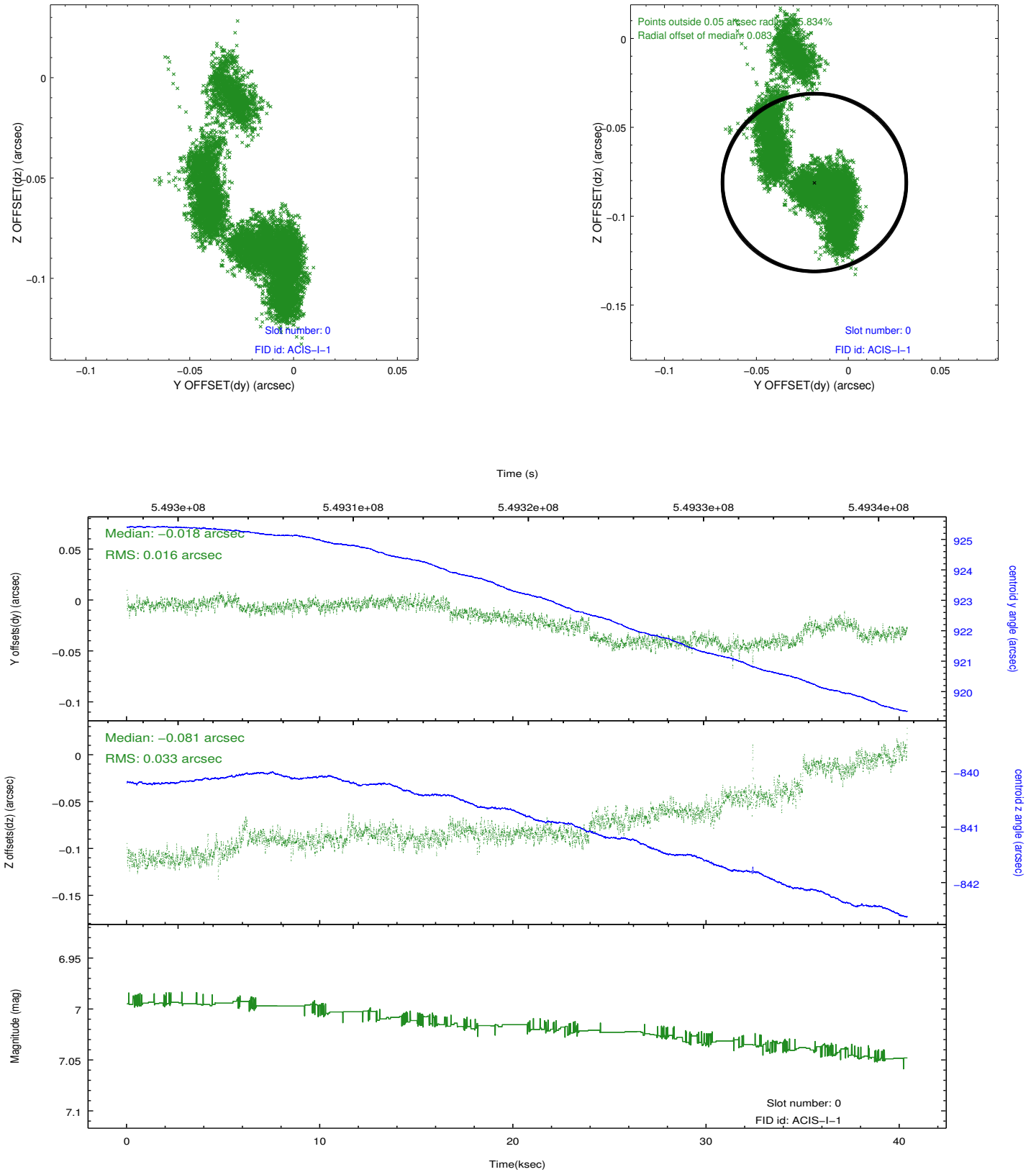


2.4.5 Slot 7

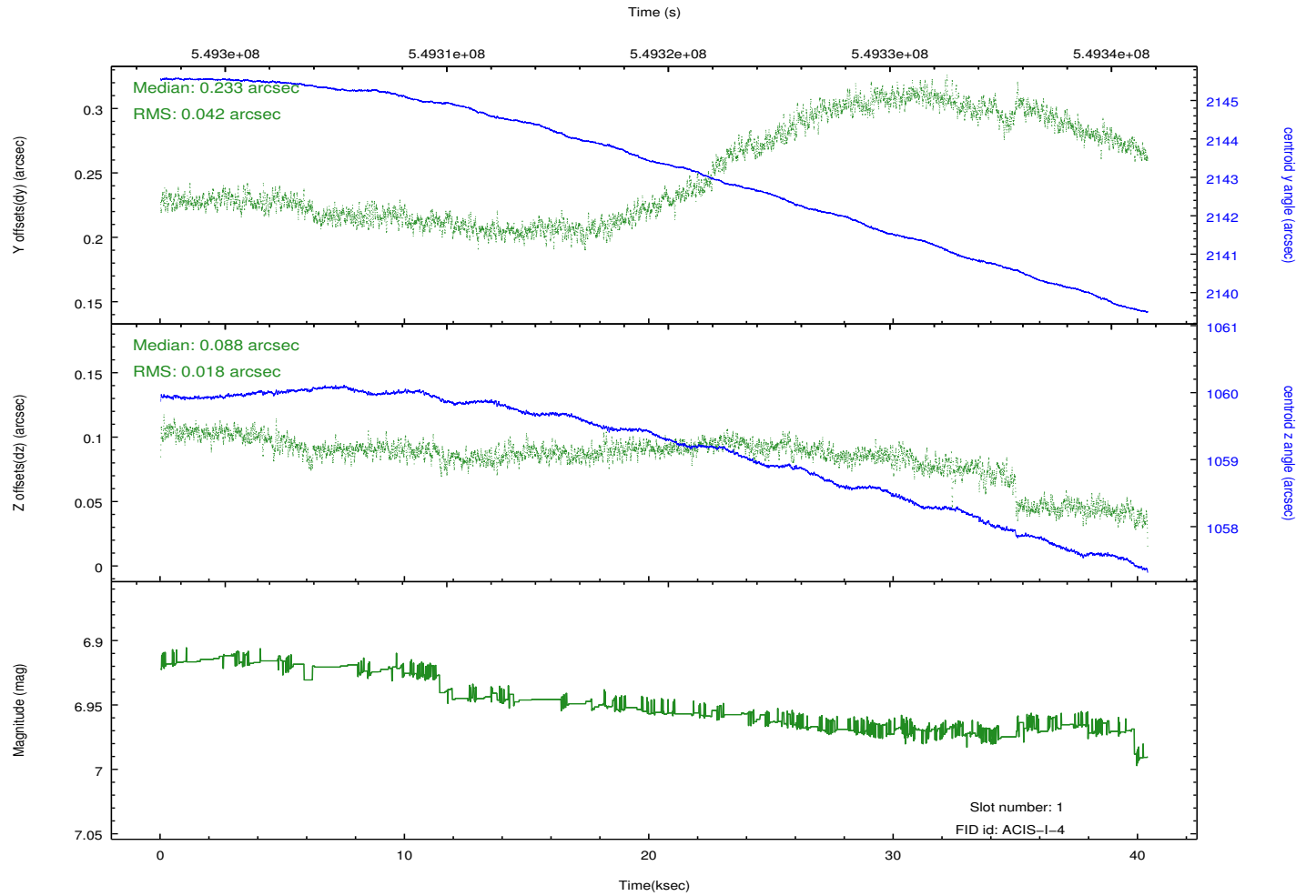
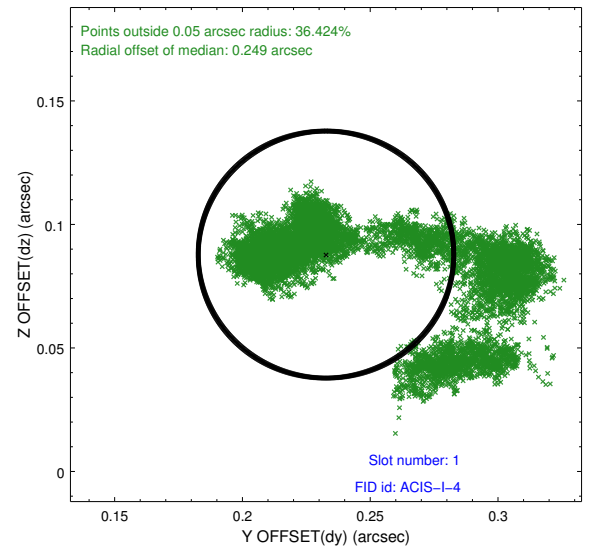
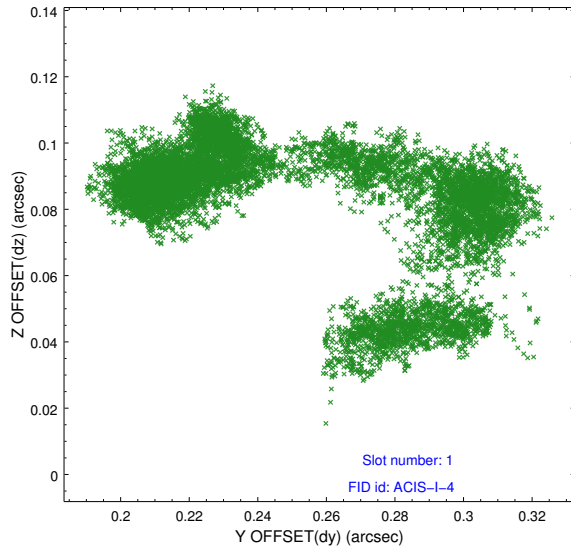


2.5 FID Slots

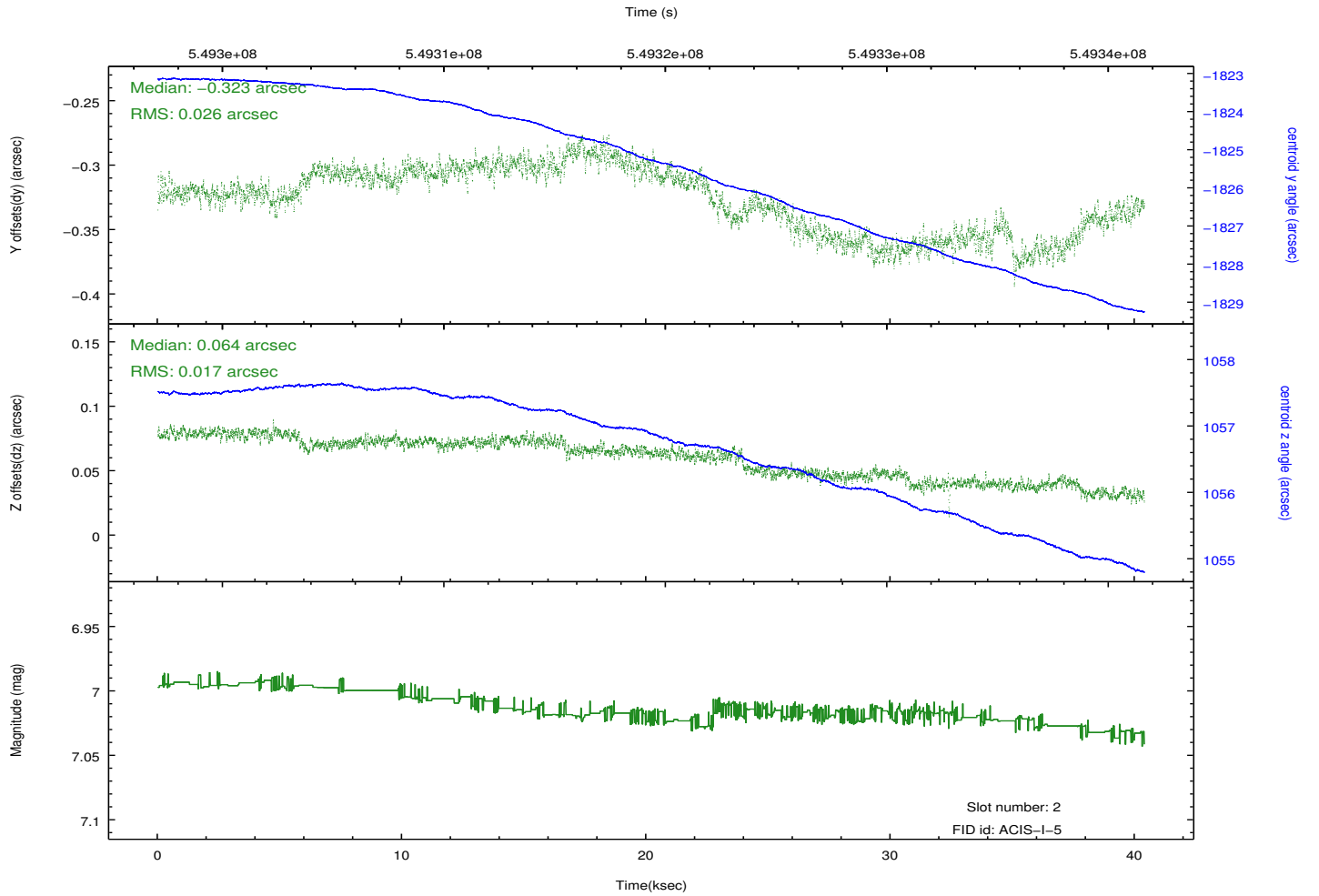
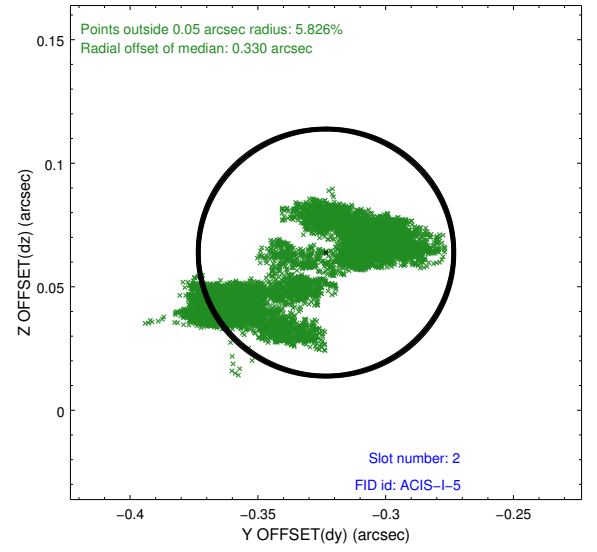
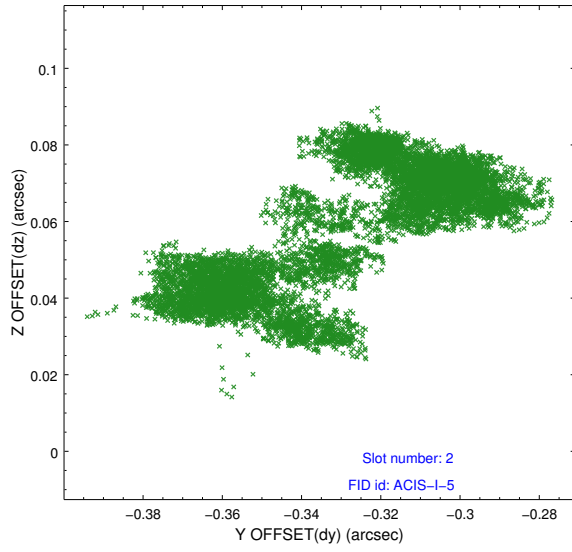
2.5.1 Slot 0



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)	2015.06.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.45600058794

A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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: (84.21140, -69.06438), (84.21623, -69.07055), (84.59129, -69.03221), (84.58636, -69.02605).