

V&V Reference Report

L2 ASCDS Version : 10.3.3

Observation 16447 - L2 Version 2
Chandra X-Ray Center

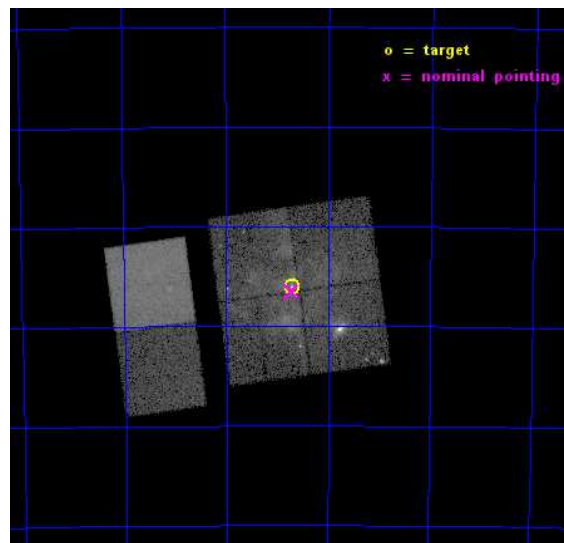
L2 Processing Date : Mar 30 2015

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1 Front

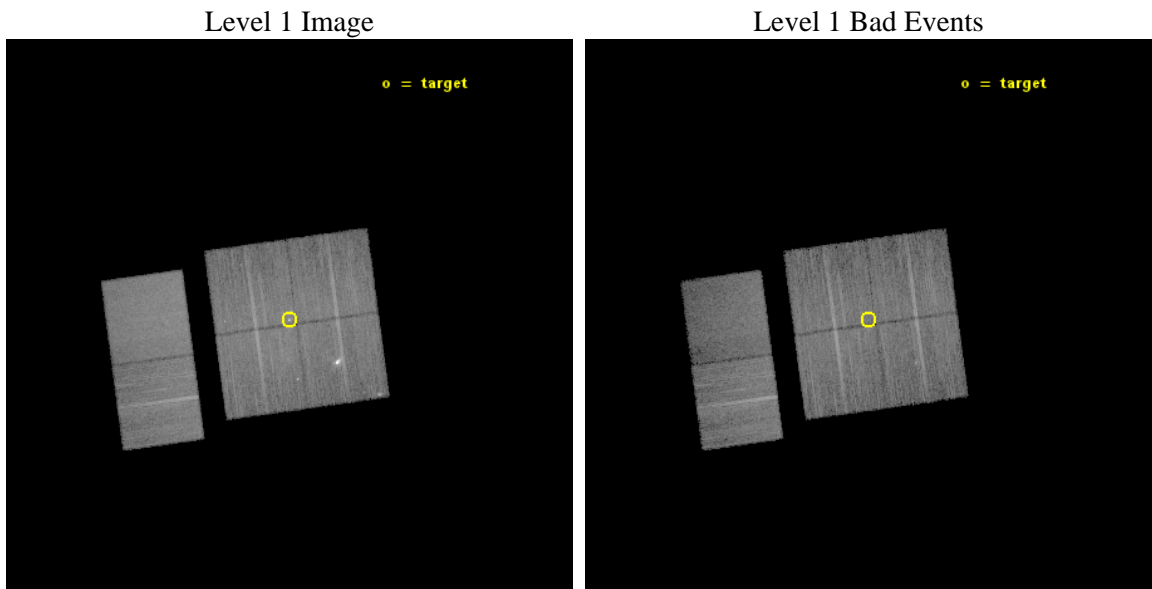
seq_num	901116	Sequence number
obs_id	16447	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.680495672574	Nominal RA [deg]
dec_nom	-69.108857136234	Nominal Dec [deg]
roll_nom	262.2122574461	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27212.800405502	Sum of GTIs [s]
livetime	26868.215541187	Livetime [s]
ontime0	27212.800405502	Sum of GTIs [s]
ontime1	27212.800405502	Sum of GTIs [s]
ontime2	27212.800405502	Sum of GTIs [s]
ontime3	27212.800405502	Sum of GTIs [s]
ontime6	27212.800405502	Sum of GTIs [s]
ontime7	27212.800405502	Sum of GTIs [s]
l2events	166039	Number of level 2 events



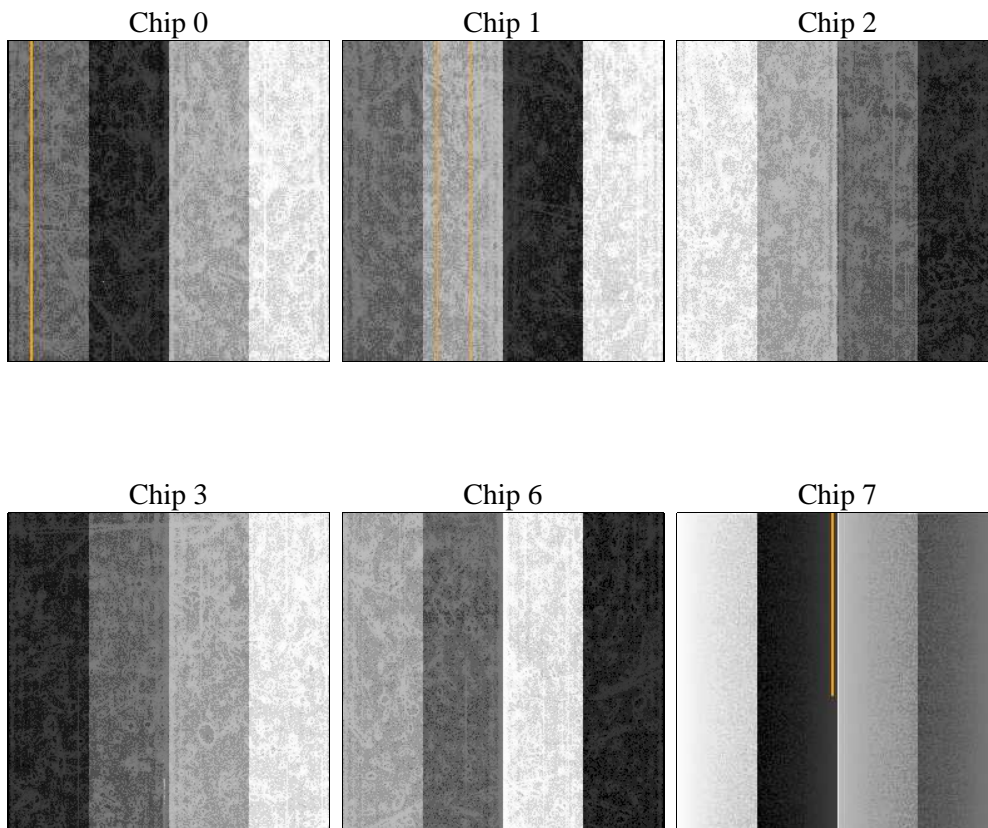
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27256.884000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	27212.800405502	Sum of GTIs [s]
caldbver	4.6.7	 	ontime0	27212.800405502	Sum of GTIs [s]
date	2015-03-30T18:01:56	Date and time of file creation	ontime1	27212.800405502	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	27212.800405502	Sum of GTIs [s]
			ontime3	27212.800405502	Sum of GTIs [s]
			ontime6	27212.800405502	Sum of GTIs [s]
			ontime7	27212.800405502	Sum of GTIs [s]
			l1events	733138	Number of level 1 events

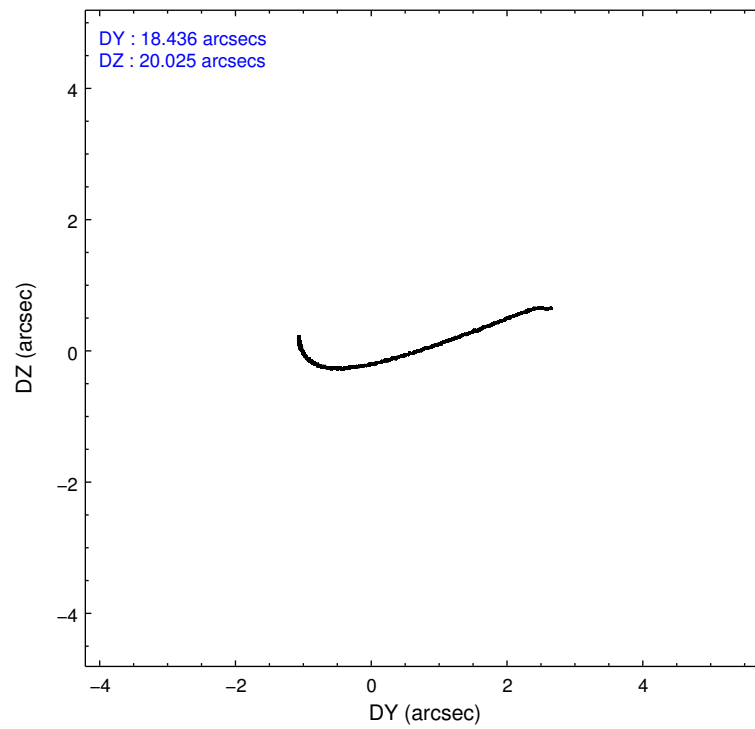
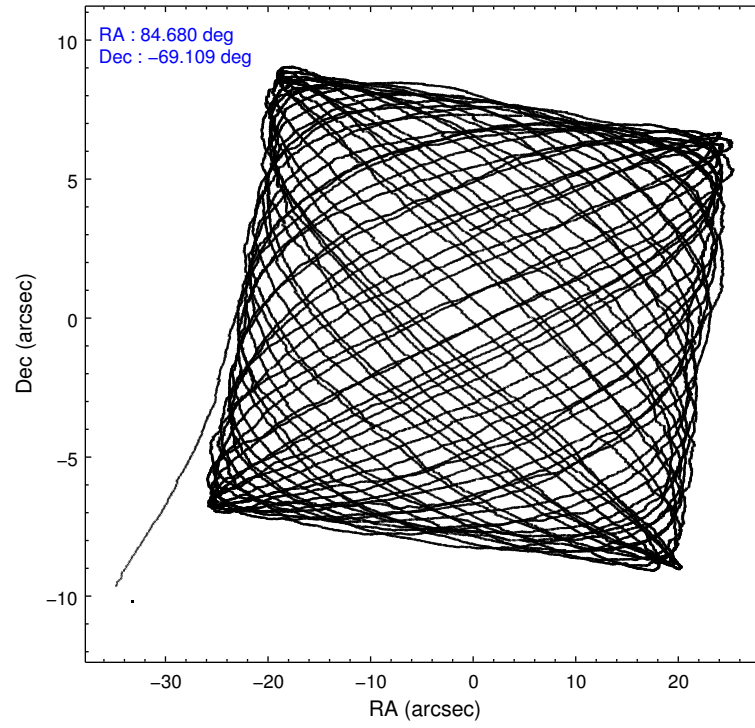
2.1.4 Events

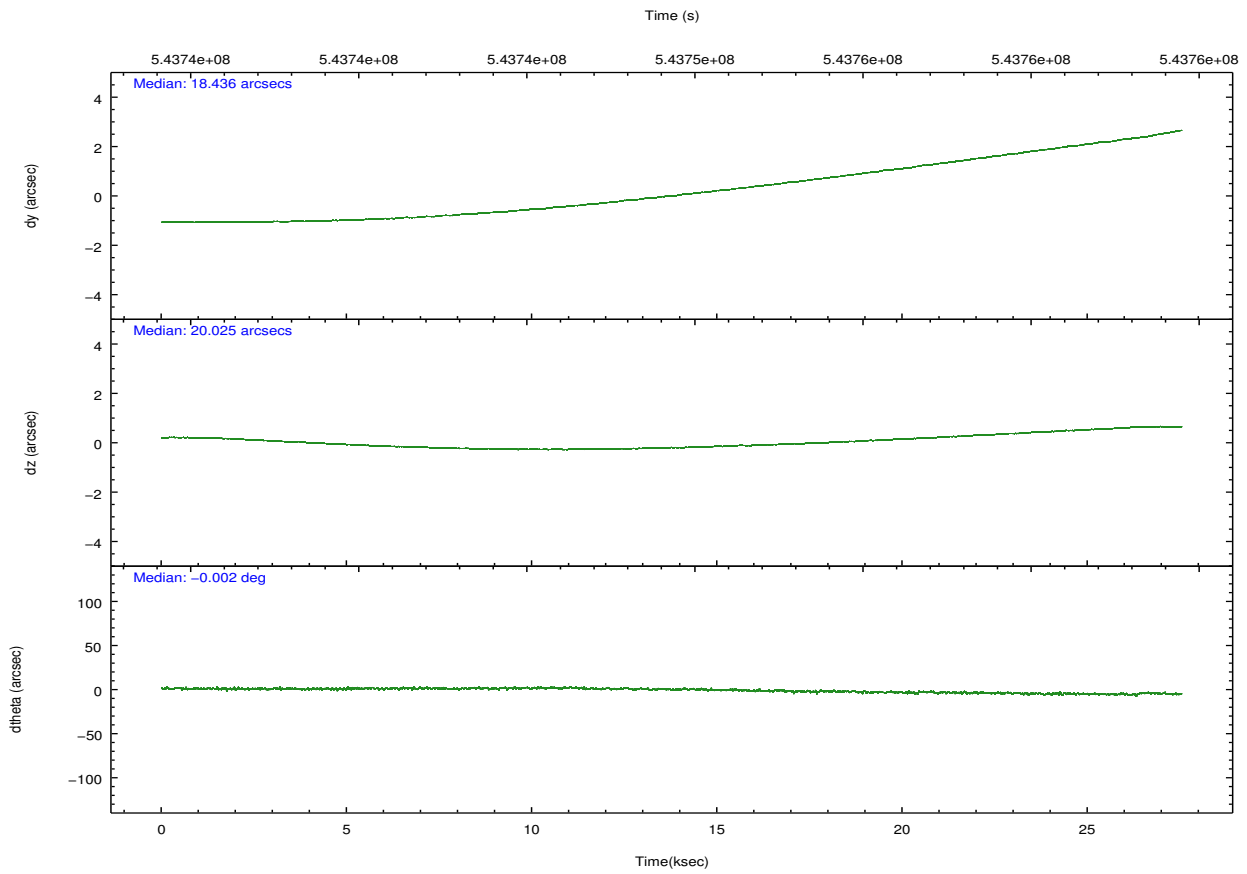
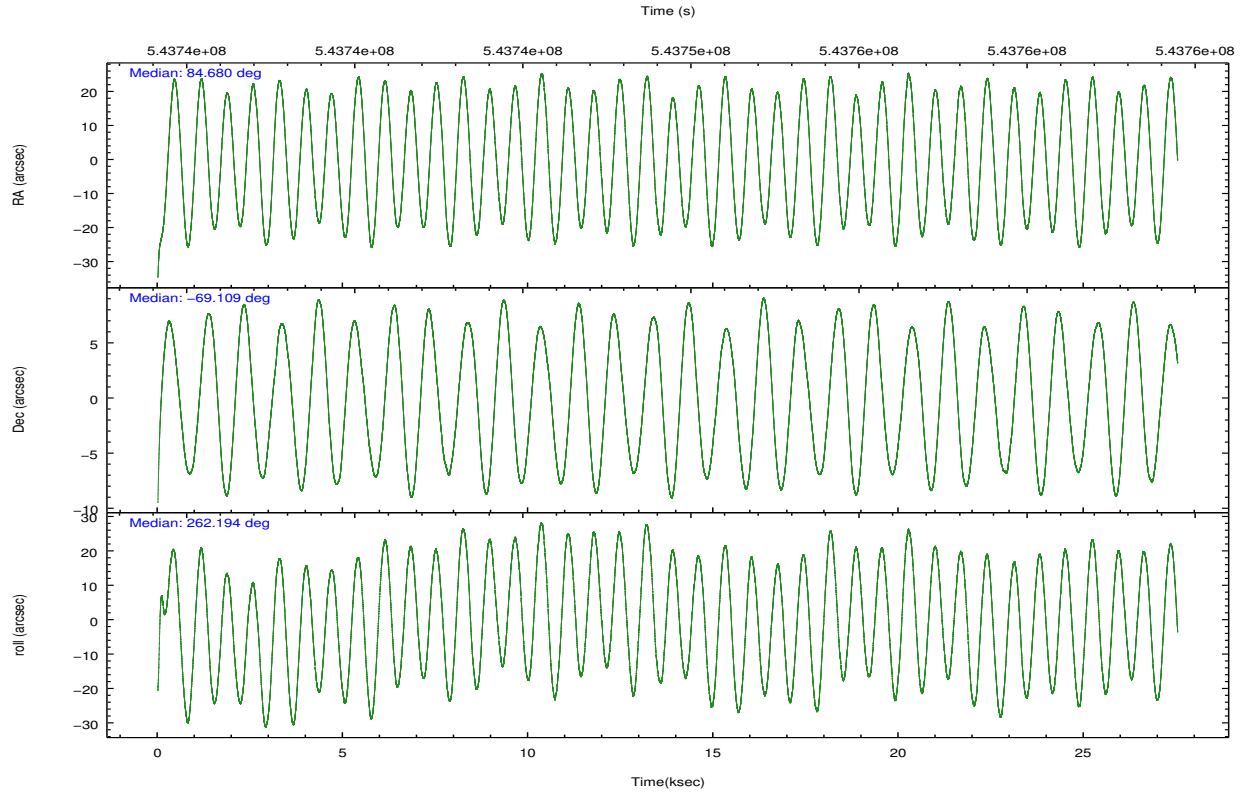
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	125838	110842	122755	116978	117844	138881	grade 0 events	22859	9274	12344	13486	6397	7519
rejected events	90481	91878	100958	94012	102064	71397		18%	8%	10%	11%	5%	5%
rejected %	71%	82%	82%	80%	86%	51%	grade 1 events	153	73	90	106	66	230
								0%	0%	0%	0%	0%	0%
							grade 2 events	5431	3707	3952	3678	3432	15014
								4%	3%	3%	3%	2%	10%
							grade 3 events	2045	1510	1484	1614	1450	5905
								1%	1%	1%	1%	1%	4%
							grade 4 events	1960	1457	1568	1515	1394	5898
								1%	1%	1%	1%	1%	4%
							grade 5 events	4405	4841	4136	5224	5321	14257
								3%	4%	3%	4%	4%	10%
							grade 6 events	3066	3019	2449	2675	3109	33158
								2%	2%	1%	2%	2%	23%
							grade 7 events	85919	86961	96732	88680	96675	56900
								68%	78%	78%	75%	82%	40%

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	84.651004	84.68049567257445	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.083353	-69.10885713623414	CCD I3 on	Y	Y
[deg] Pointing Roll	261.976029	262.2122574460962	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)	543735846.184000	543734819.88366	CCD S5 on	N	N
Observation start date	2015-03-26T05:42:59	2015-03-26T05:26:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	543763103.184000	543763339.9977601	On-chip summing requested	N	N
Observation end date	2015-03-26T13:17:16	2015-03-26T13:22:19	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





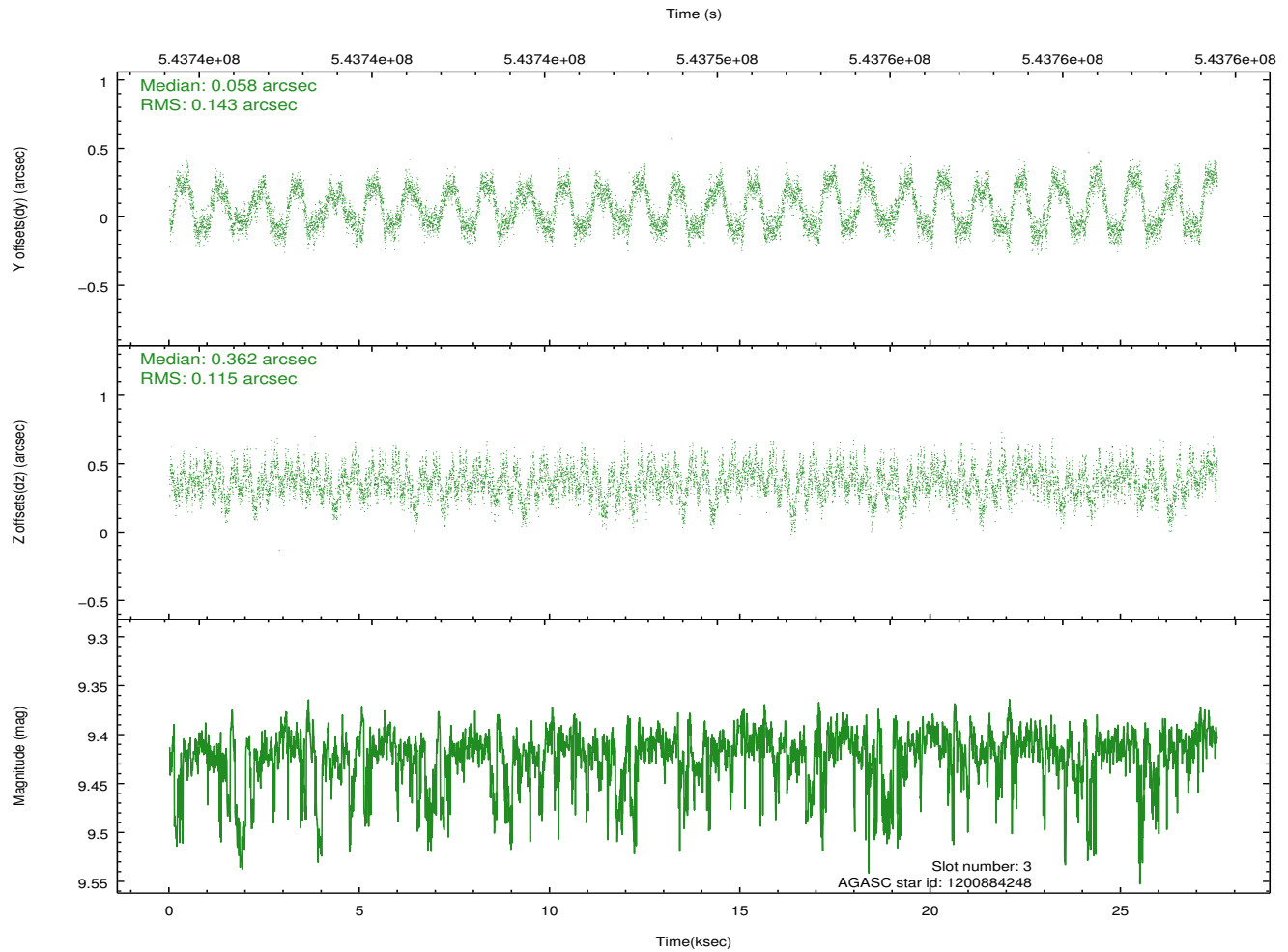
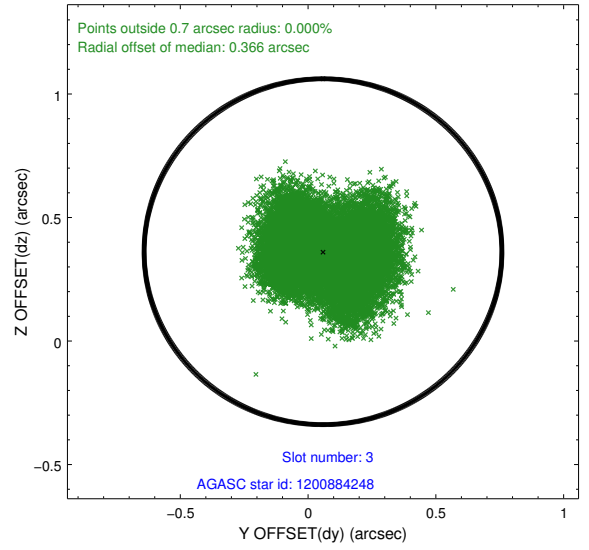
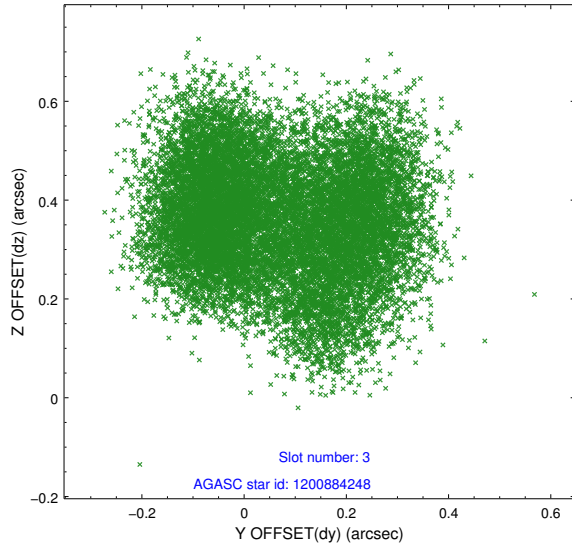
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.07	6715	-0.116	-0.015	0.026	0.057	0.000000	0.000000	920.54	-843.84
1	FID		ACIS-I-4	7.01	6712	0.112	0.107	0.029	0.049	0.000000	0.000000	2140.87	1056.05
2	FID		ACIS-I-6	7.07	6714	-0.091	-0.023	0.028	0.043	0.000000	0.000000	386.61	1698.22
3	GUIDE	used	1200884248	9.42	13422	0.058	0.362	0.202	0.292	83.880915	-68.565170	-1699.09	-1262.12
4	GUIDE	used	1200885760	9.45	13413	0.087	0.317	0.129	0.210	83.723637	-68.777667	-911.09	-1348.47
5	GUIDE	used	1201018312	9.60	13423	-0.270	-0.519	0.138	0.225	86.298231	-69.115627	-152.57	2112.93
6	GUIDE	used	1201018384	9.04	13427	0.112	-0.047	0.125	0.202	85.801362	-68.593260	-1944.25	1252.94
7	GUIDE	used	1201020040	8.58	13425	0.004	-0.113	0.101	0.163	85.379163	-68.879396	-853.43	833.72

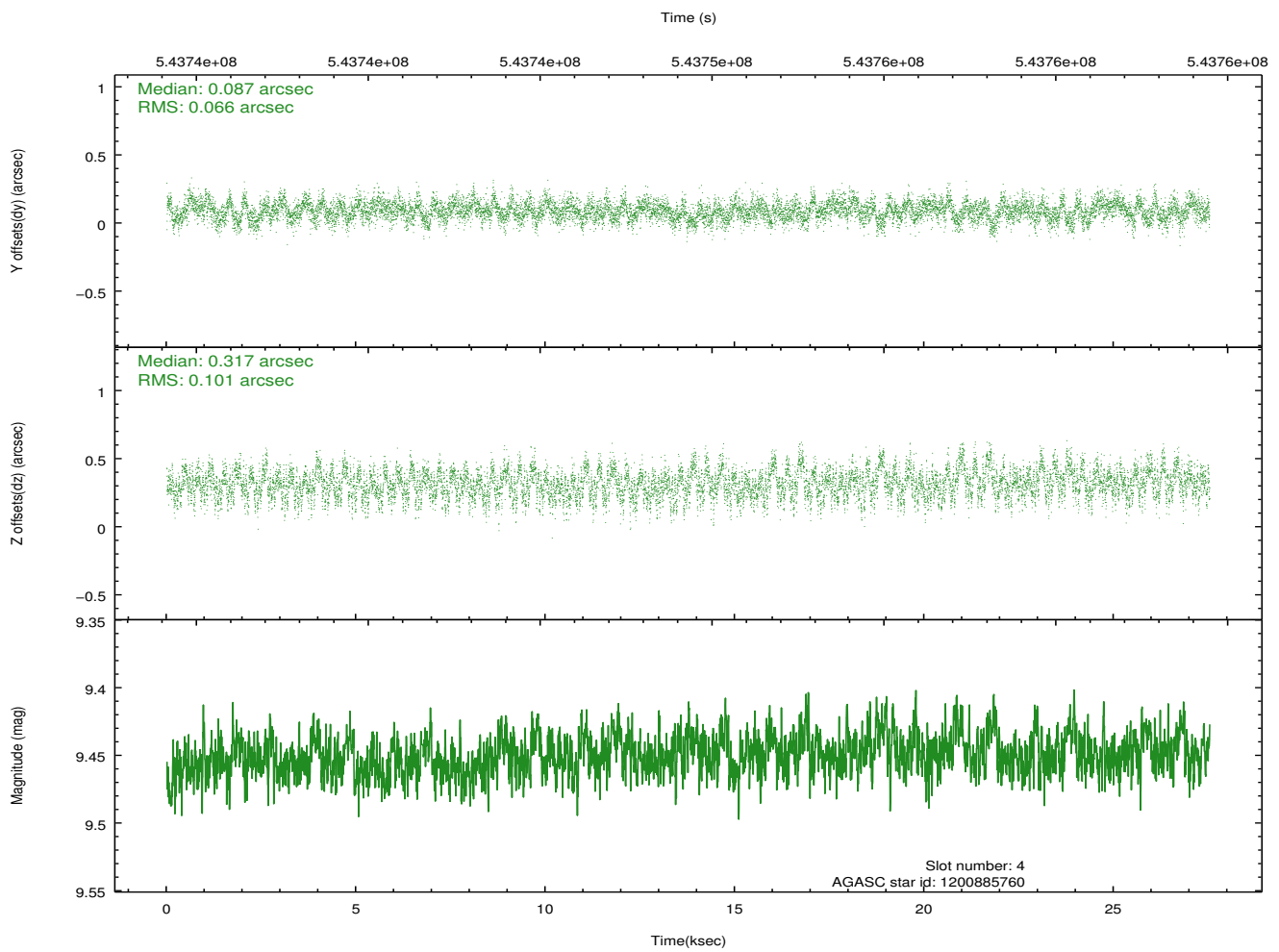
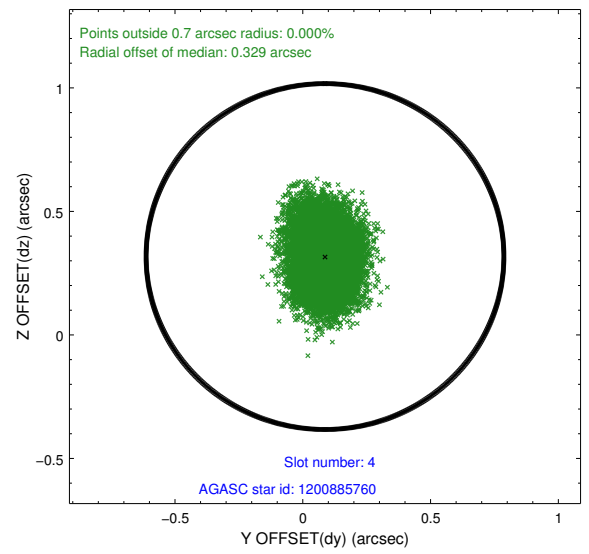
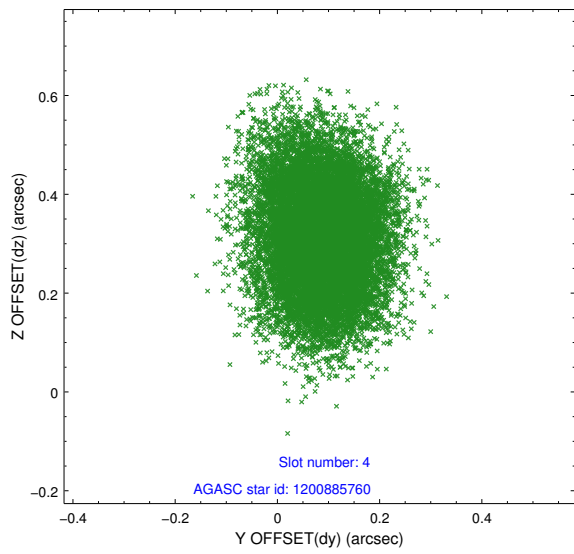
∞

2.4 Star Slots

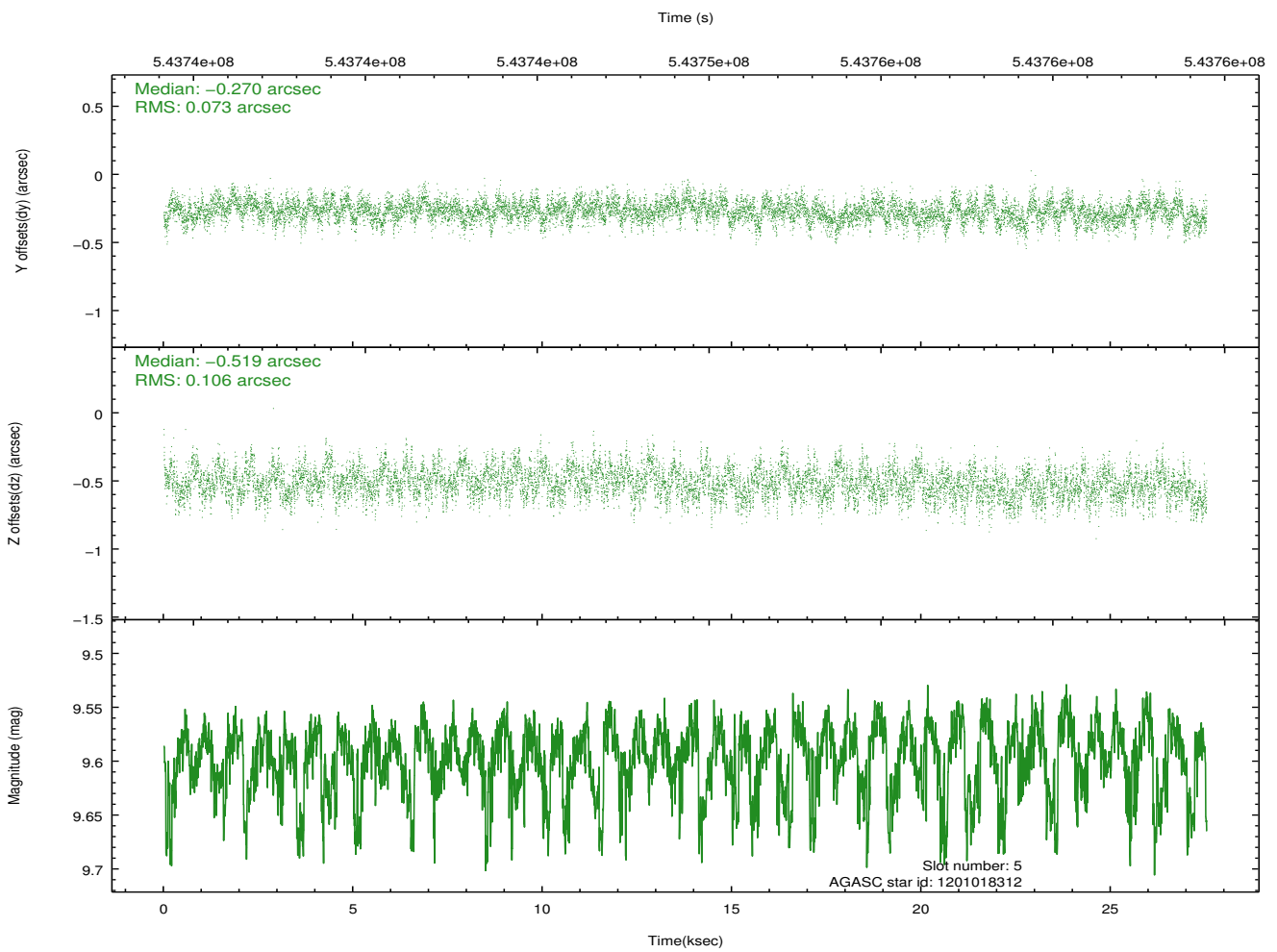
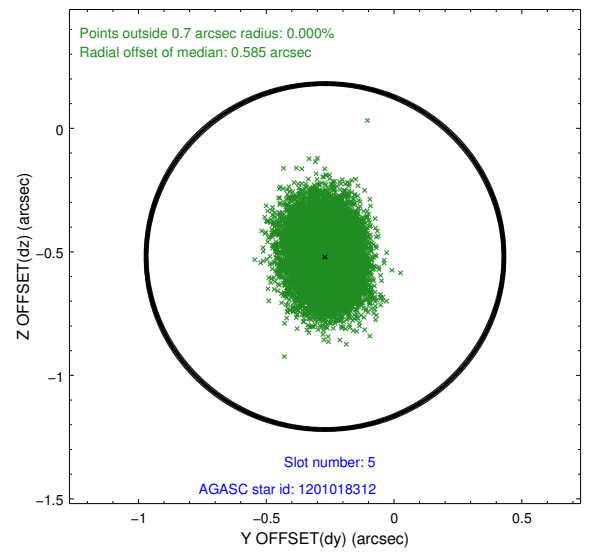
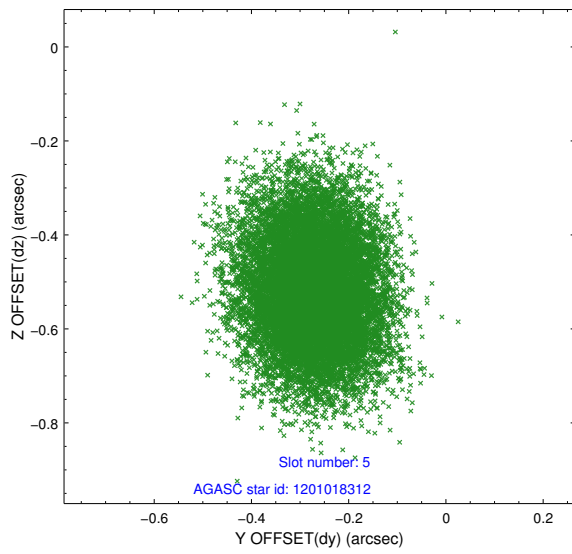
2.4.1 Slot 3



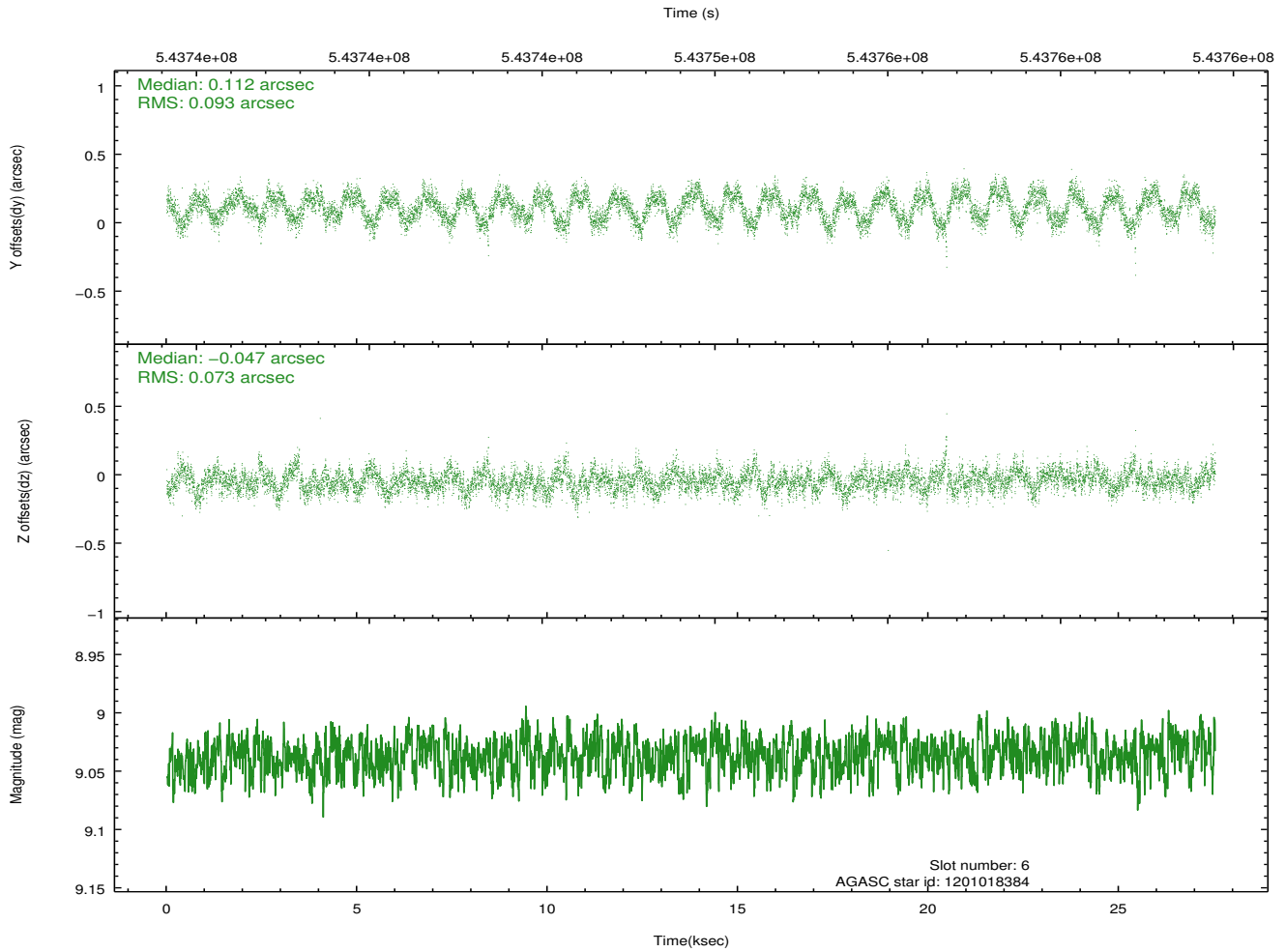
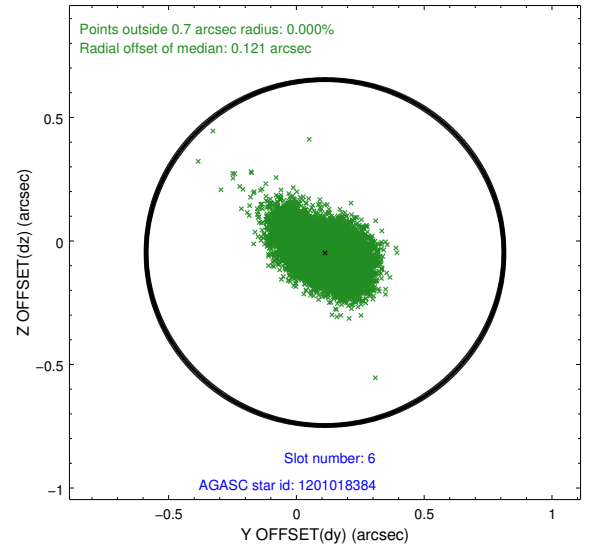
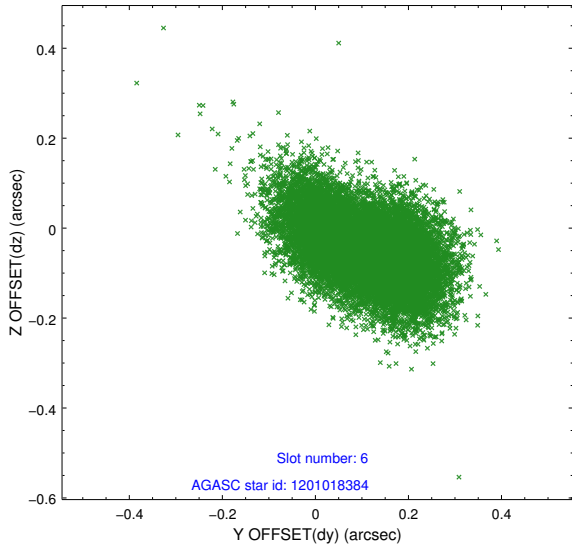
2.4.2 Slot 4



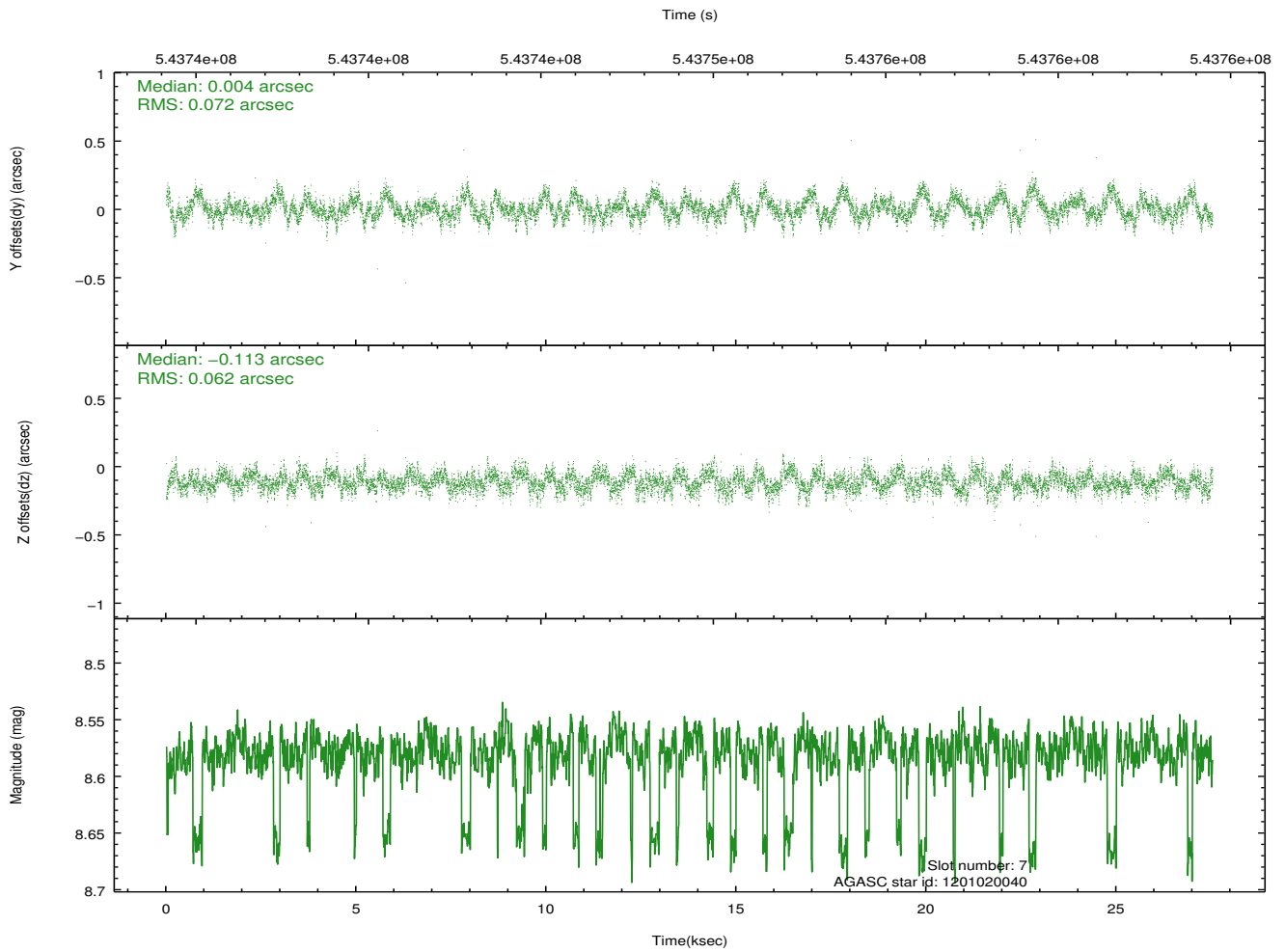
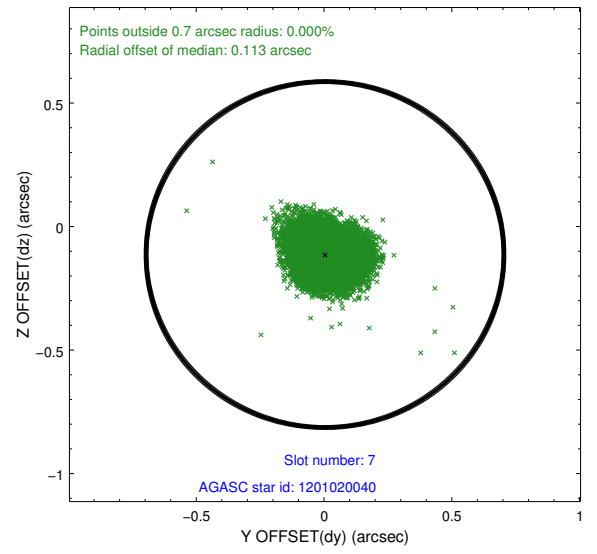
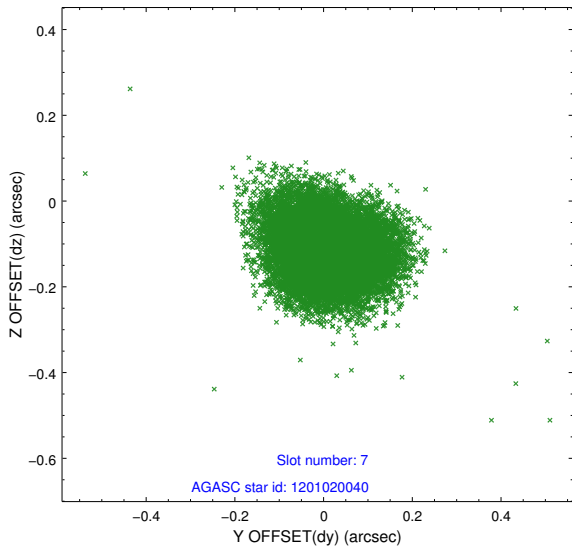
2.4.3 Slot 5



2.4.4 Slot 6

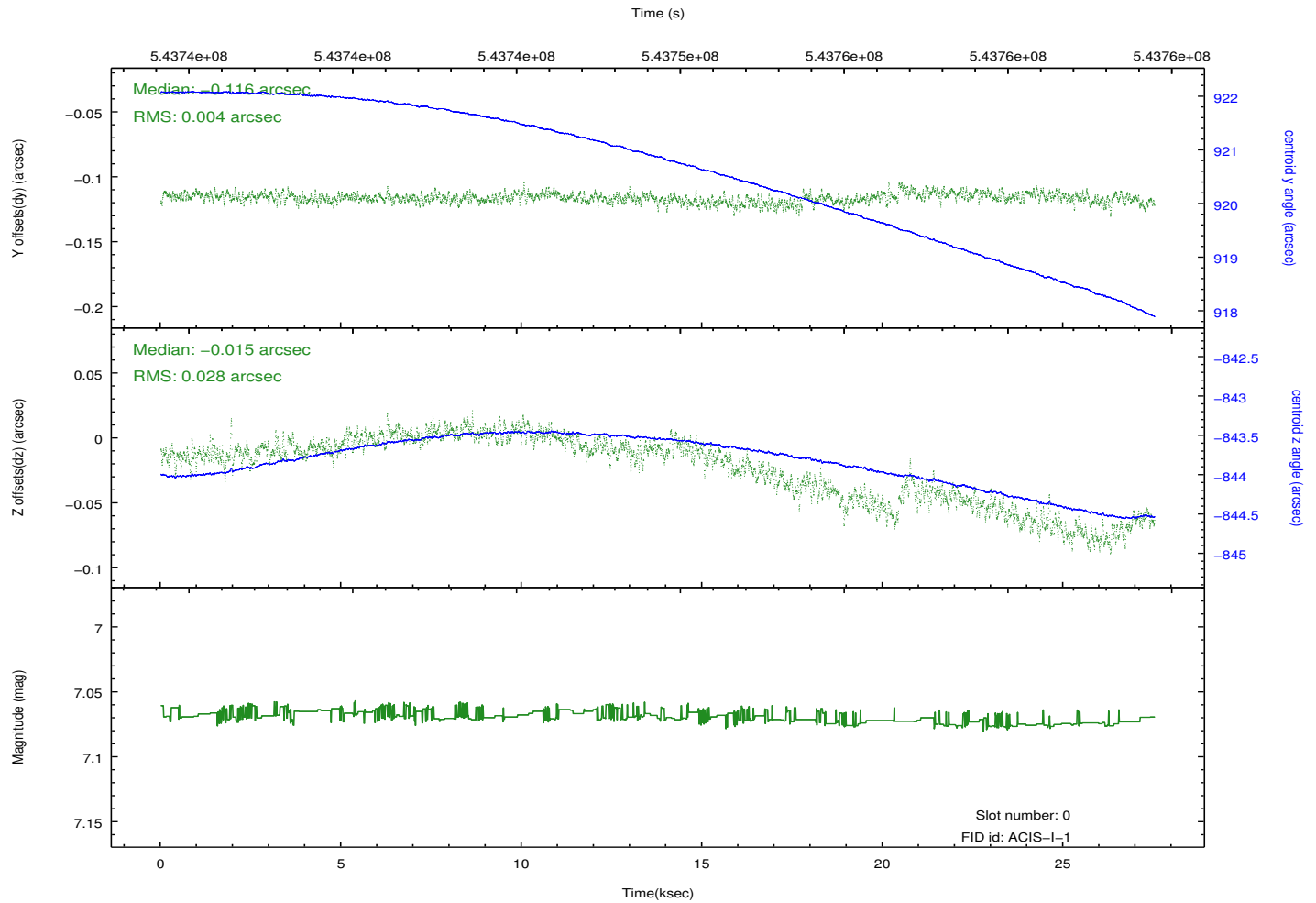
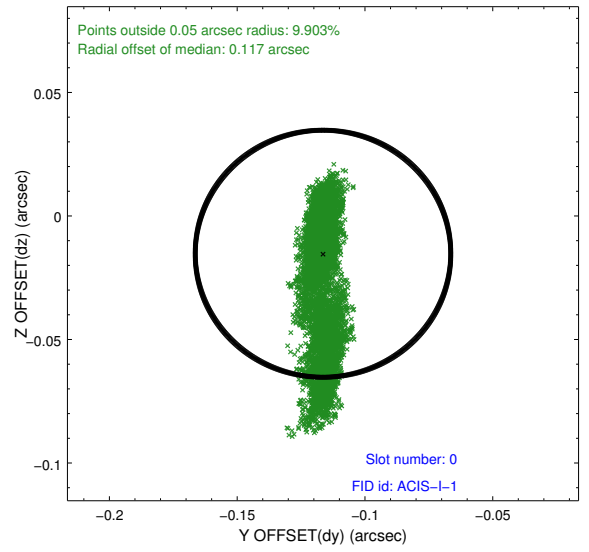
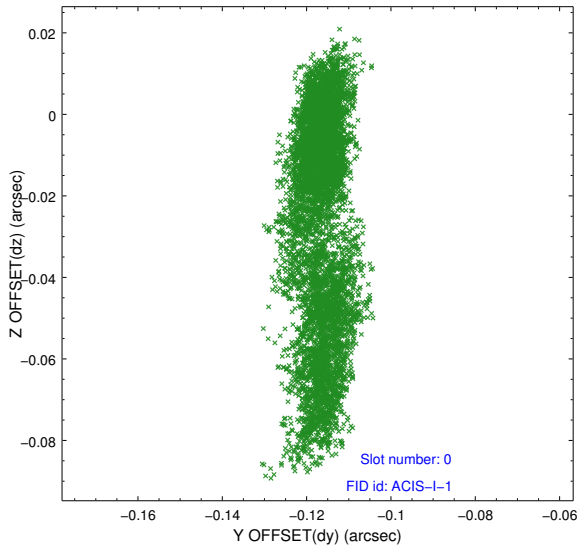


2.4.5 Slot 7

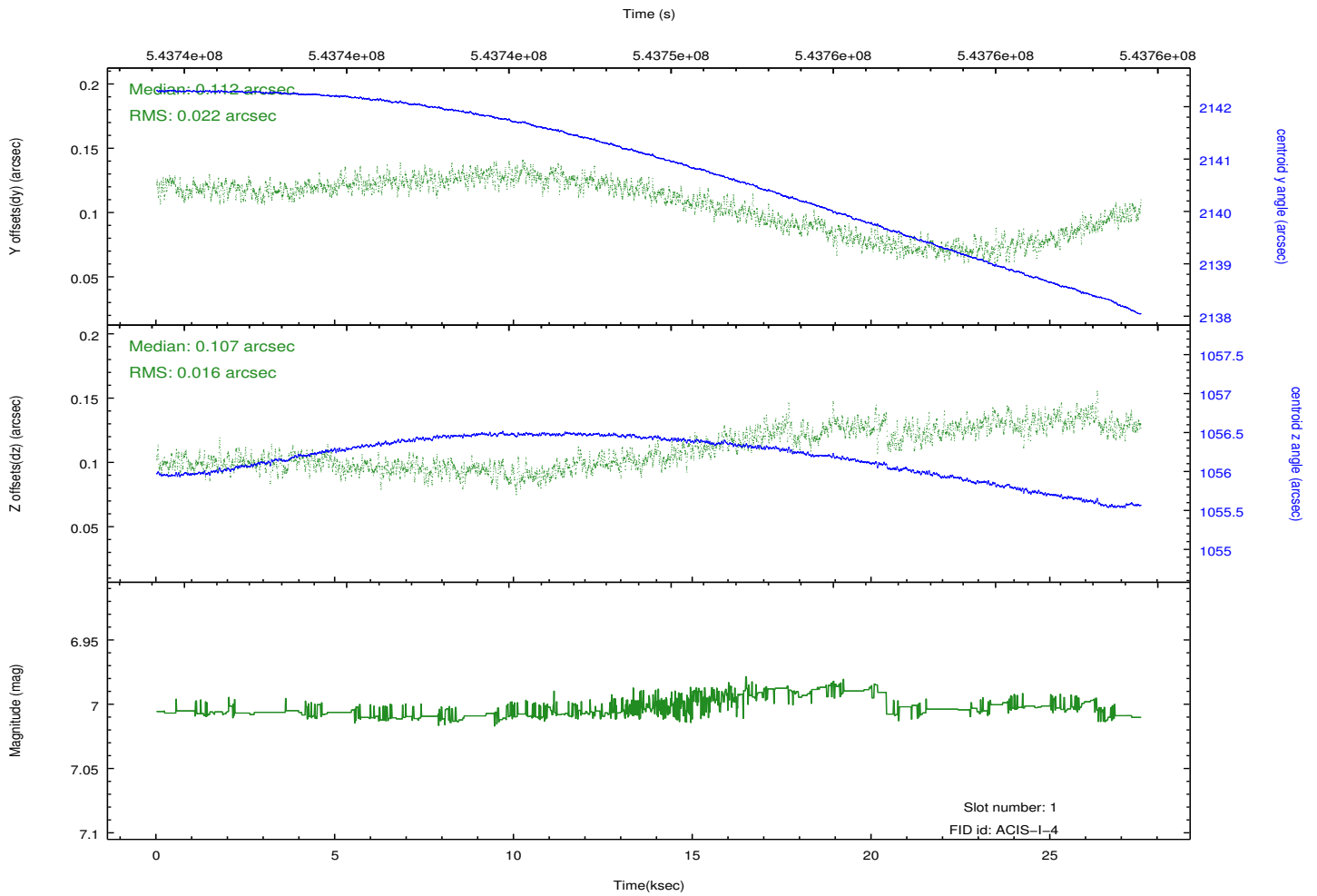
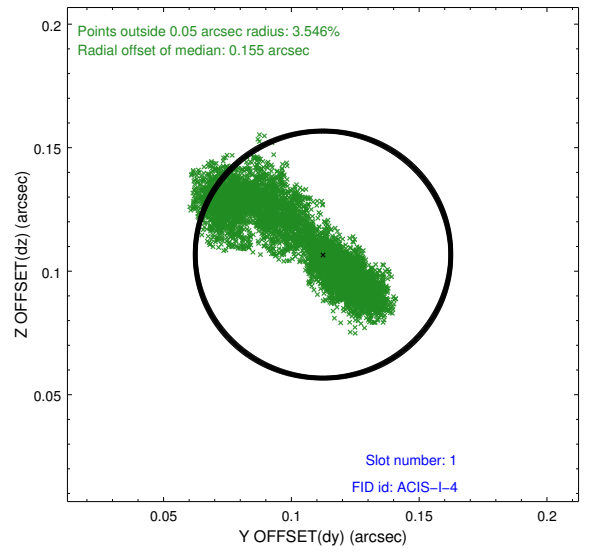
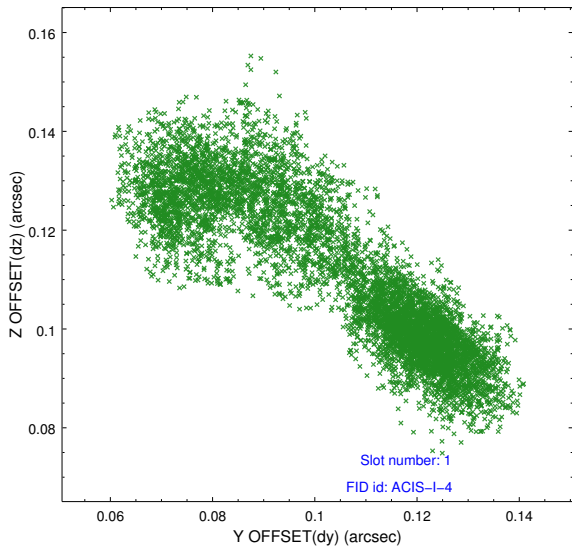


2.5 FID Slots

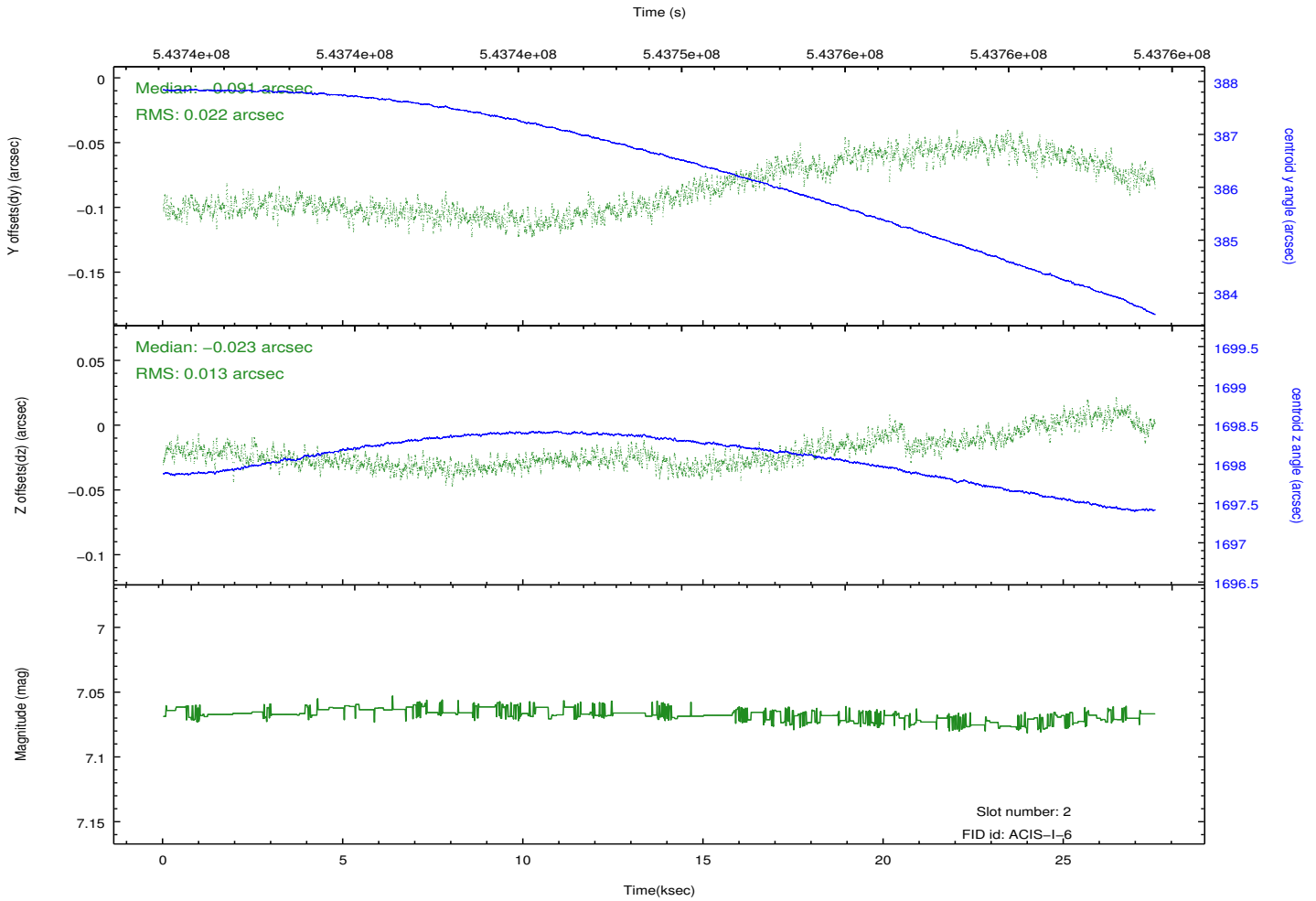
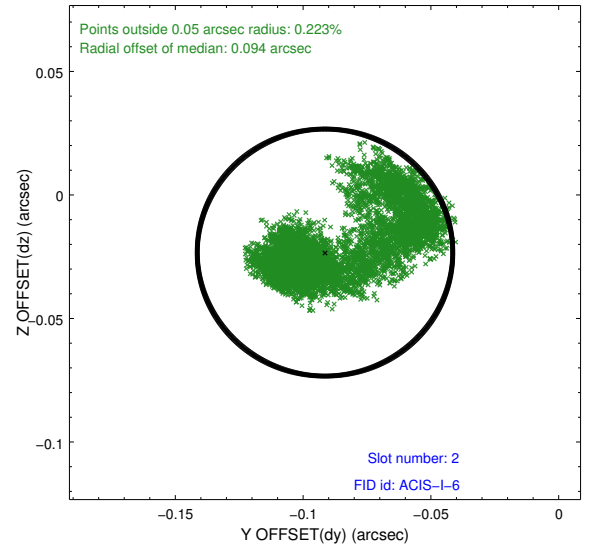
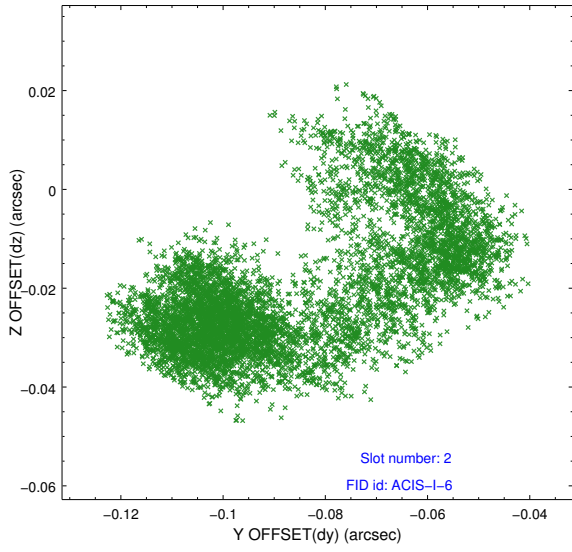
2.5.1 Slot 0



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)	2015.03.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.212800405502

A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 1 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: (84.39321, -68.95262), (84.38381, -68.95215), (84.32904, -69.09024), (84.33850, -69.09071).