

V&V Reference Report

L2 ASCDS Version : 10.4.3

Observation 18671 - L2 Version 2
Chandra X-Ray Center

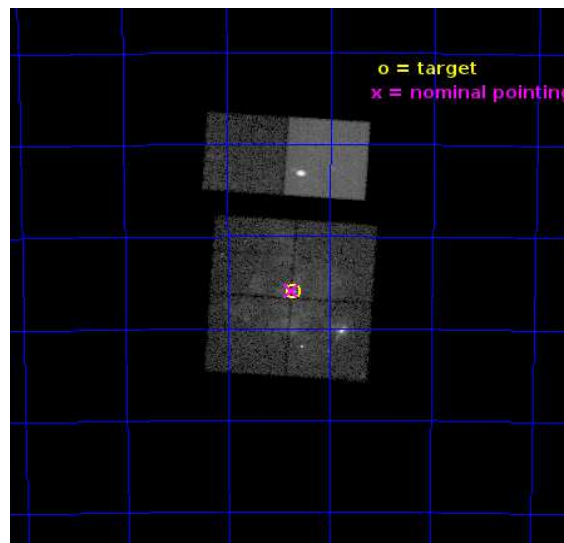
L2 Processing Date : Dec 17 2015

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1 Front

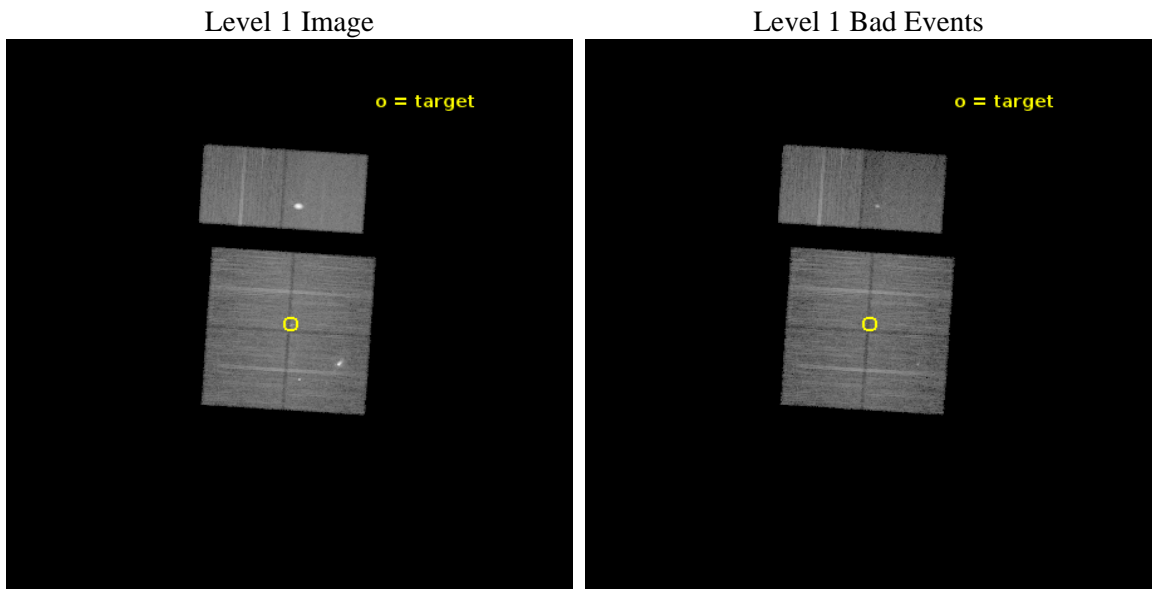
seq_num	901116	Sequence number
obs_id	18671	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.688247900802	Nominal RA [deg]
dec_nom	-69.098925943911	Nominal Dec [deg]
roll_nom	3.8194891888946	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25945.60038662	Sum of GTIs [s]
livetime	25617.061571959	Livetime [s]
ontime0	25945.60038662	Sum of GTIs [s]
ontime1	25942.359376311	Sum of GTIs [s]
ontime2	25945.60038662	Sum of GTIs [s]
ontime3	25945.60038662	Sum of GTIs [s]
ontime6	25945.60038662	Sum of GTIs [s]
ontime7	25945.60038662	Sum of GTIs [s]
l2events	207282	Number of level 2 events



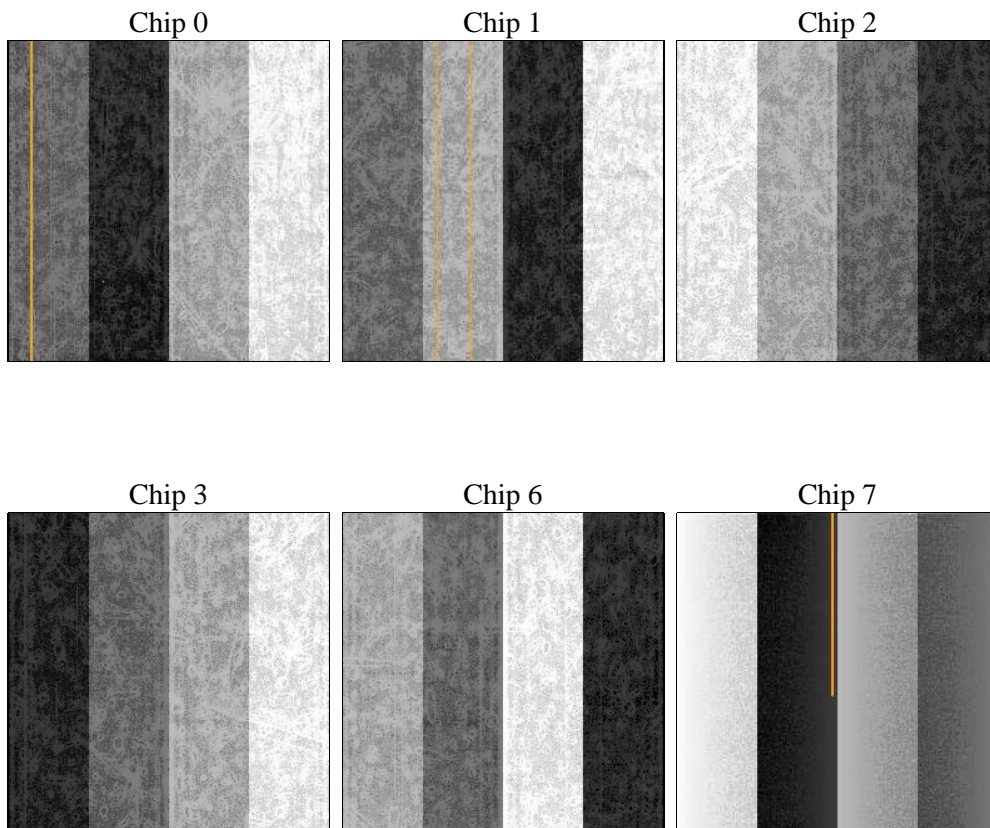
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	25945.60038662	Sum of GTIs [s]
caldsver	4.7.0	 	ontime0	25945.60038662	Sum of GTIs [s]
date	2015-12-17T15:29:15	Date and time of file creation	ontime1	25942.359376311	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	25945.60038662	Sum of GTIs [s]
			ontime3	25945.60038662	Sum of GTIs [s]
			ontime6	25945.60038662	Sum of GTIs [s]
			ontime7	25945.60038662	Sum of GTIs [s]
			l1events	860609	Number of level 1 events

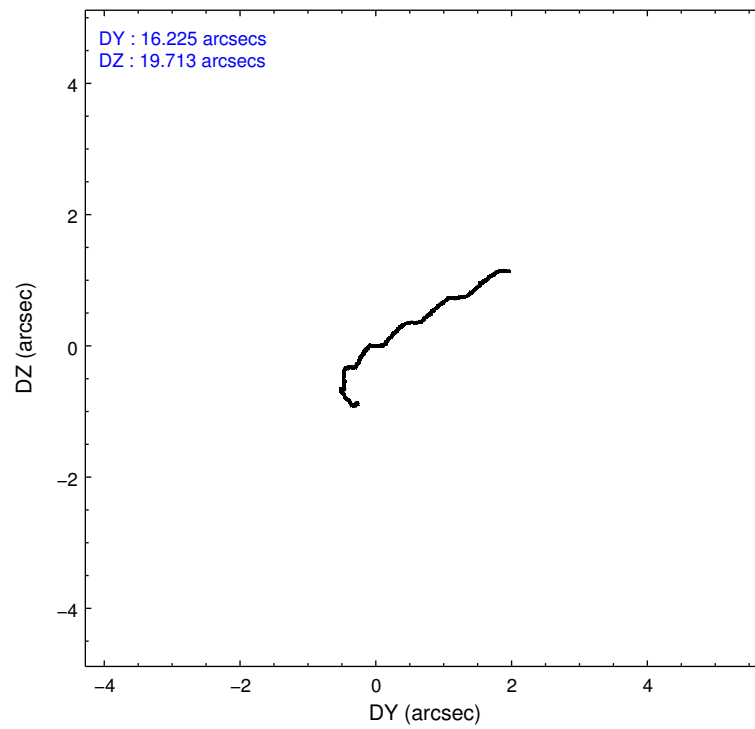
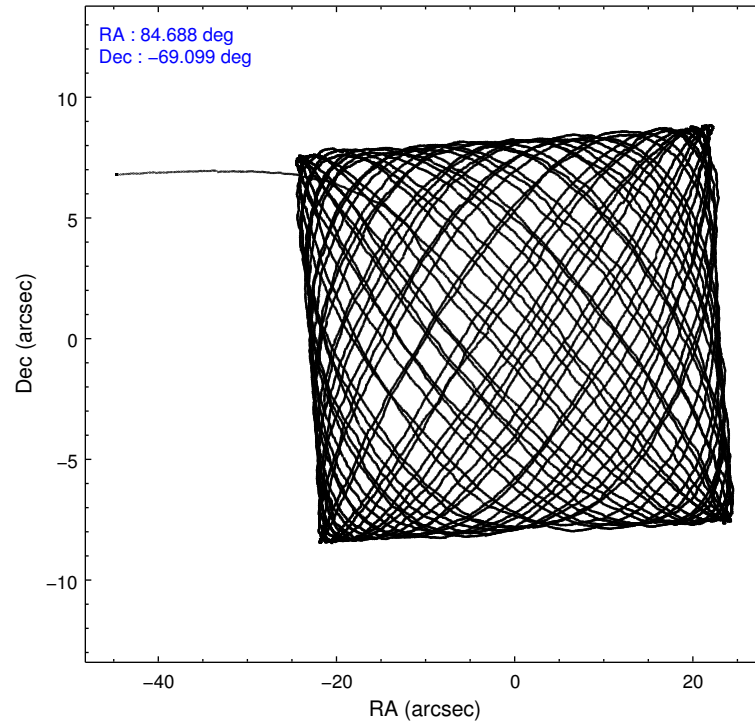
2.1.4 Events

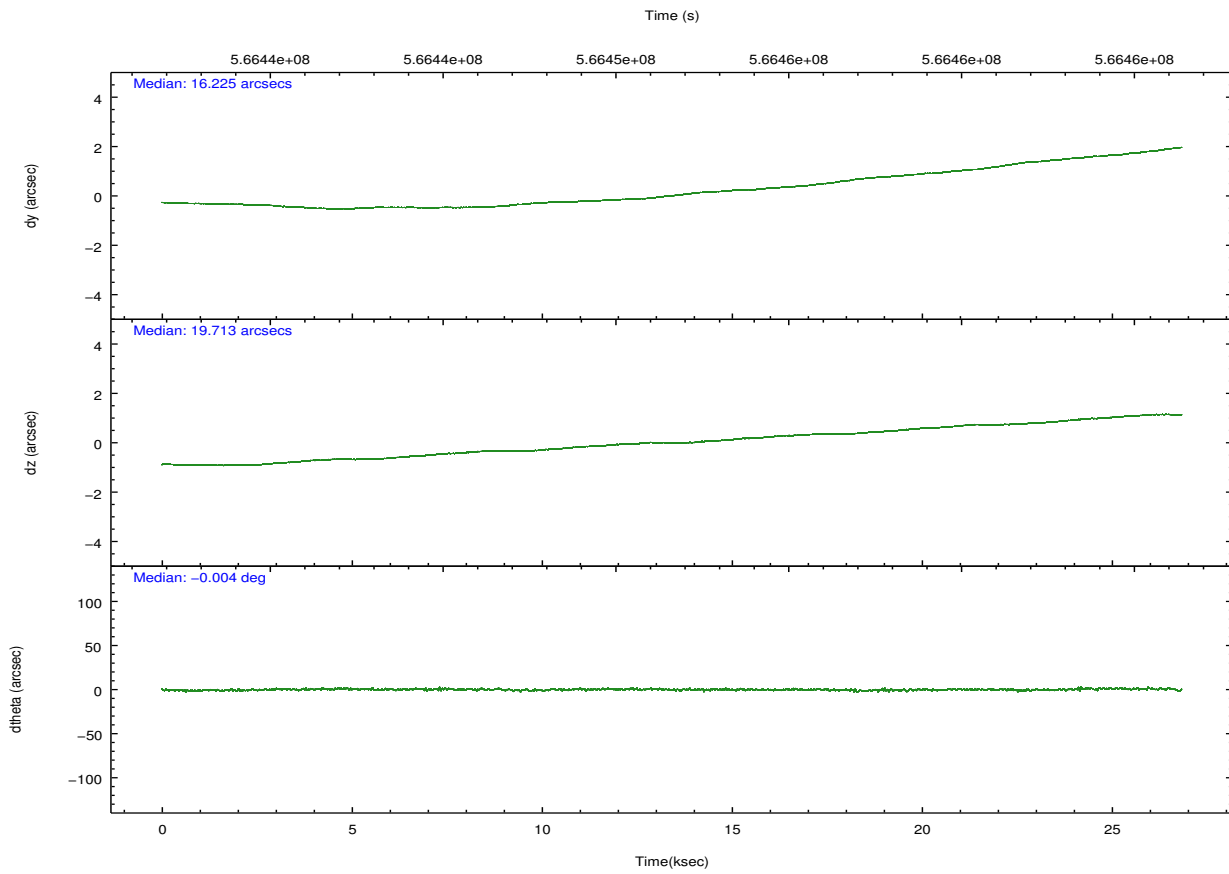
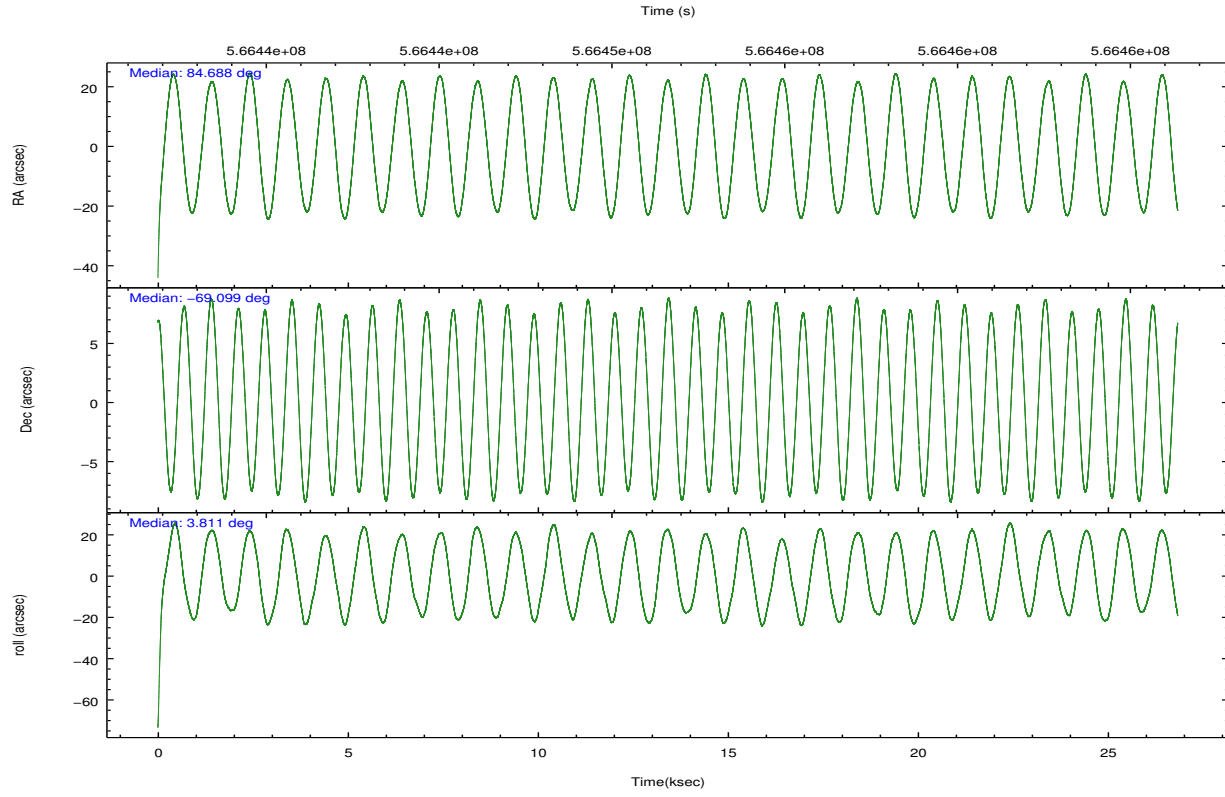
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	120942	137831	141936	136898	134303	188699	grade 0 events	9222	23266	10174	12076	5964	17527
rejected events	101720	100074	121993	114804	118242	79708		7%	16%	7%	8%	4%	9%
rejected %	84%	72%	85%	83%	88%	42%	grade 1 events	82	173	86	124	87	363
								0%	0%	0%	0%	0%	0%
							grade 2 events	4151	6069	4085	3875	3759	25657
								3%	4%	2%	2%	2%	13%
							grade 3 events	1494	2331	1546	1615	1471	10376
								1%	1%	1%	1%	1%	5%
							grade 4 events	1501	2293	1546	1729	1502	10221
								1%	1%	1%	1%	1%	5%
							grade 5 events	4868	5275	4577	5741	5789	16256
								4%	3%	3%	4%	4%	8%
							grade 6 events	2856	3802	2596	2807	3367	45219
								2%	2%	1%	2%	2%	23%
							grade 7 events	96768	94622	117326	108931	112364	63080
								80%	68%	82%	79%	83%	33%

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	84.624056	84.68824790080176	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.114336	-69.09892594391117	CCD I3 on	Y	Y
[deg] Pointing Roll	3.550853	3.819489188894635	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)	566439031.184000	566437272.76405	CCD S5 on	N	N
Observation start date	2015-12-14T00:09:23	2015-12-13T23:41:12	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	566465031.184000	566465904.09067	On-chip summing requested	N	N
Observation end date	2015-12-14T07:22:43	2015-12-14T07:38:24	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





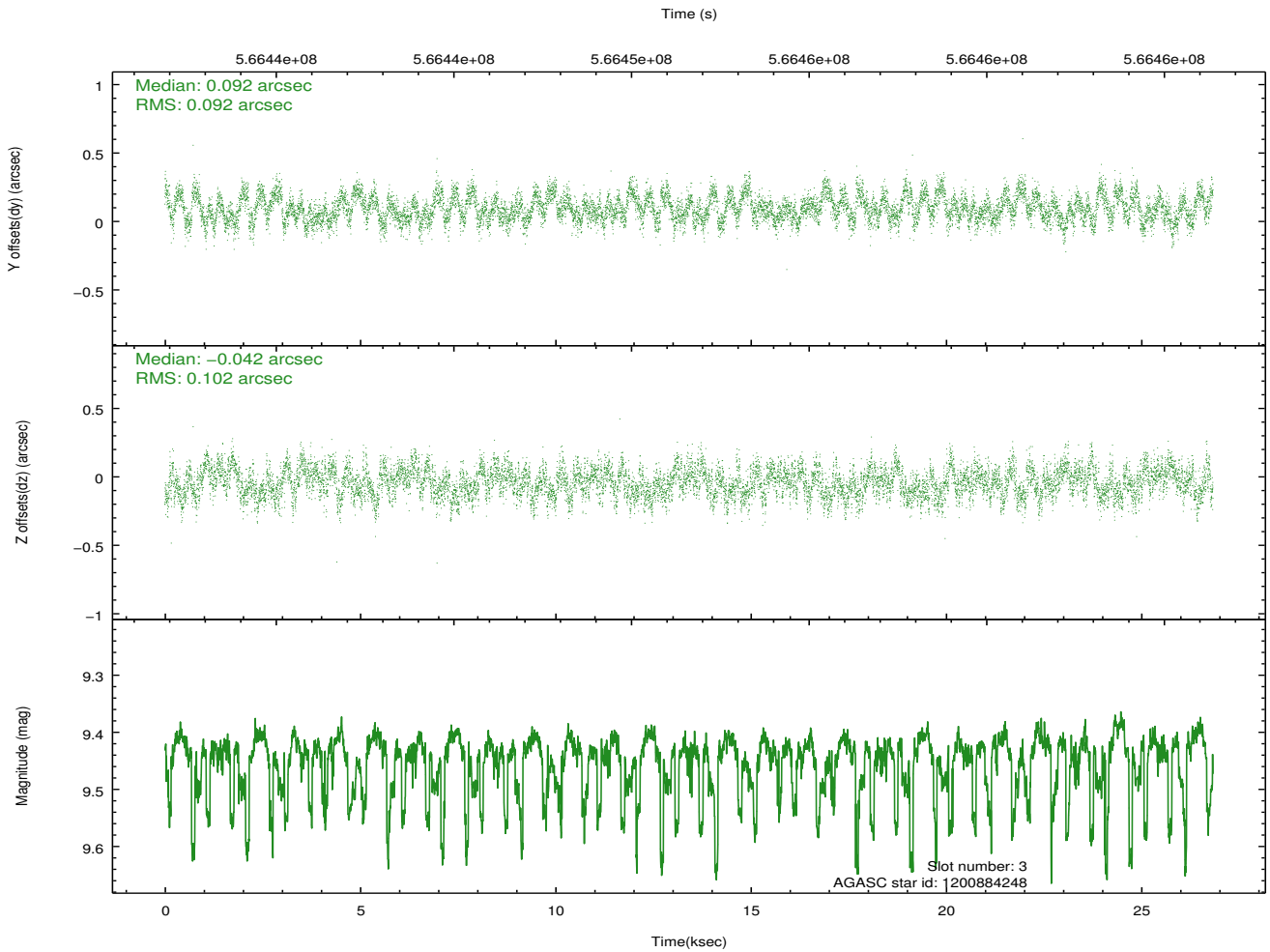
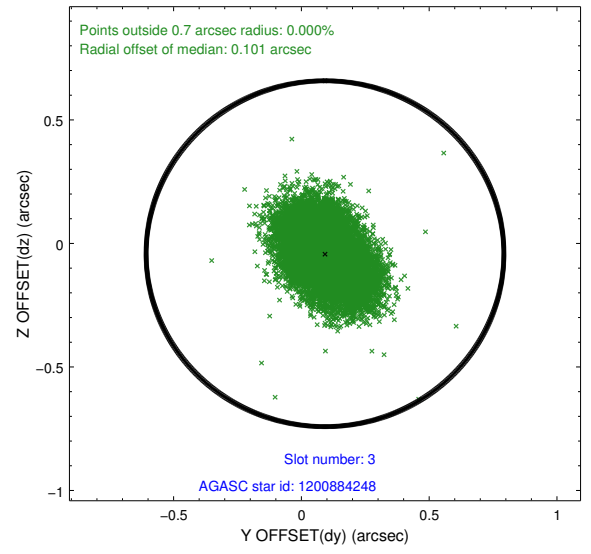
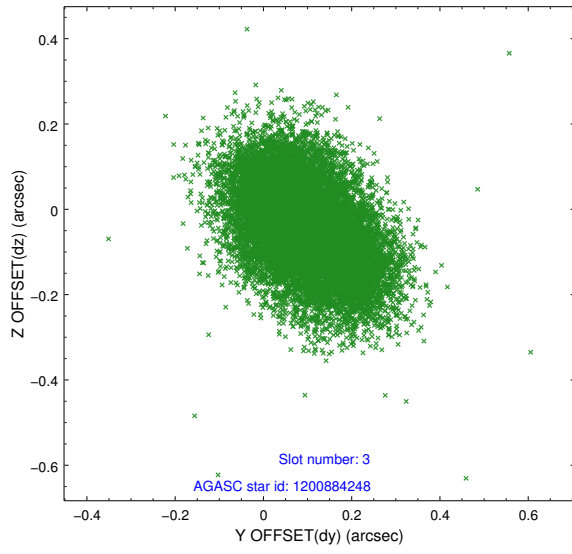
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.15	6545	-0.177	-0.036	0.020	0.045	0.000000	0.000000	-771.43	-849.90
1	FID		ACIS-I-4	7.18	6544	0.442	0.105	0.023	0.068	0.000000	0.000000	2143.16	1056.45
2	FID		ACIS-I-5	7.24	6545	-0.371	0.001	0.029	0.051	0.000000	0.000000	-1825.38	1054.20
3	GUIDE	used	1200884248	9.44	13084	0.092	-0.042	0.148	0.233	83.880915	-68.565170	-853.36	2028.08
4	GUIDE	used	1200885760	9.43	13086	0.164	0.109	0.132	0.217	83.723637	-68.777667	-1096.43	1273.74
5	GUIDE	used	1201018312	9.59	13075	-0.050	0.423	0.218	0.323	86.298231	-69.115627	2142.04	-166.08
6	GUIDE	used	1201020040	8.58	13088	-0.117	-0.223	0.097	0.152	85.379163	-68.879396	1029.68	777.47
7	GUIDE	used	1201018384	9.02	13083	-0.114	-0.250	0.161	0.253	85.801362	-68.593260	1659.73	1761.92

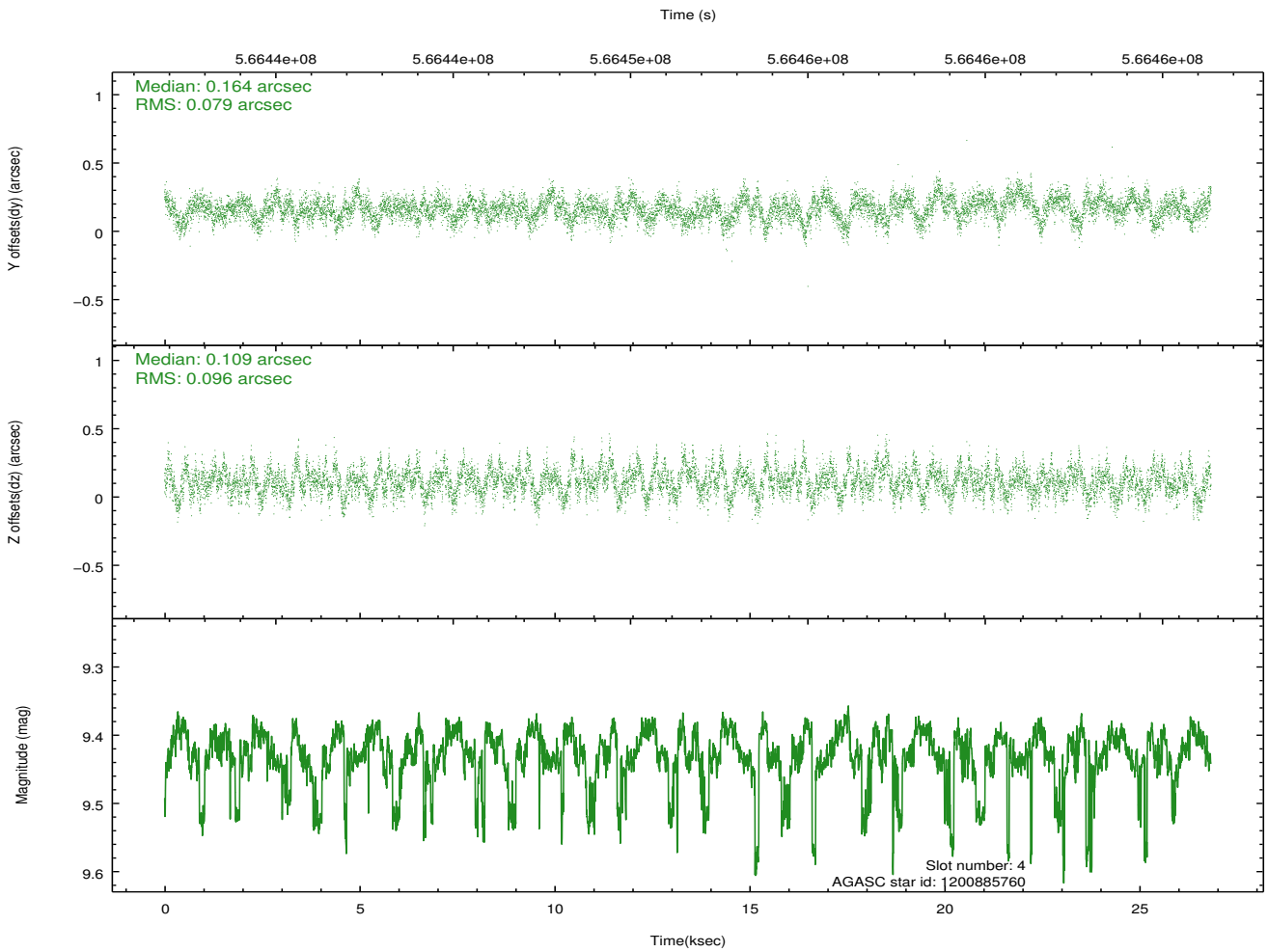
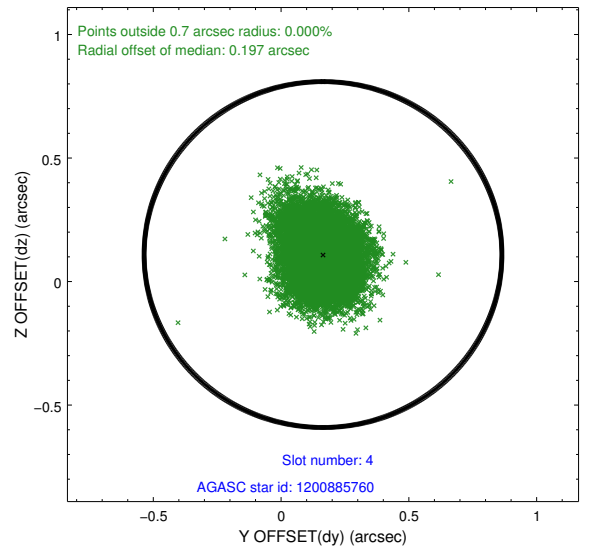
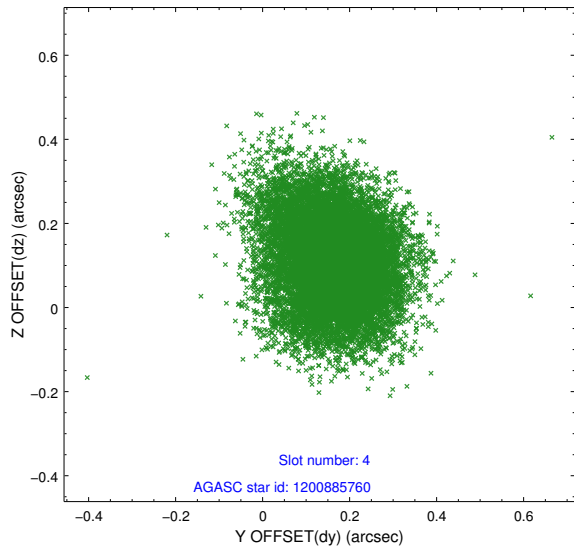
∞

2.4 Star Slots

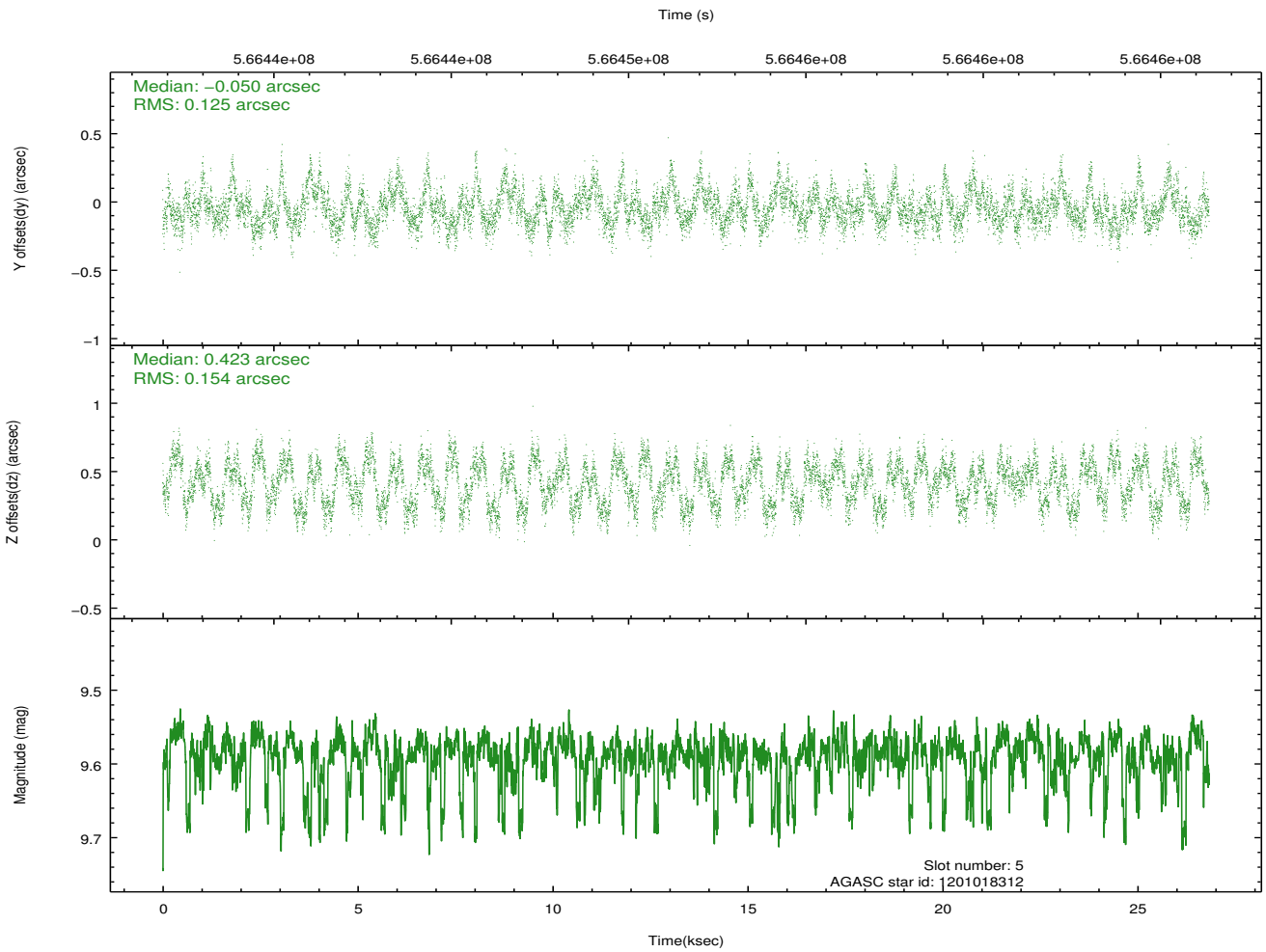
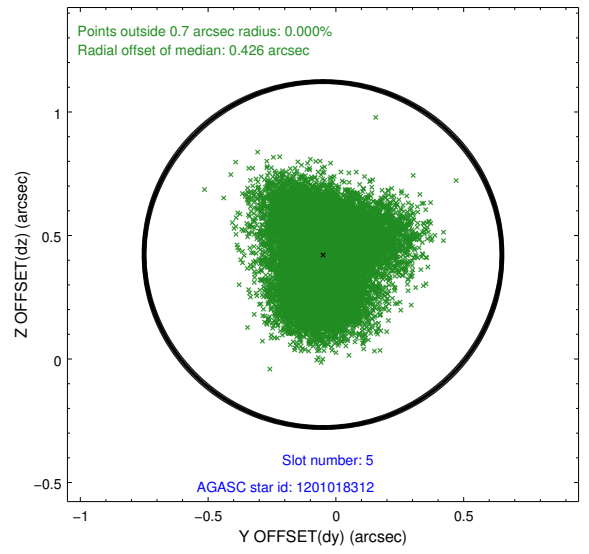
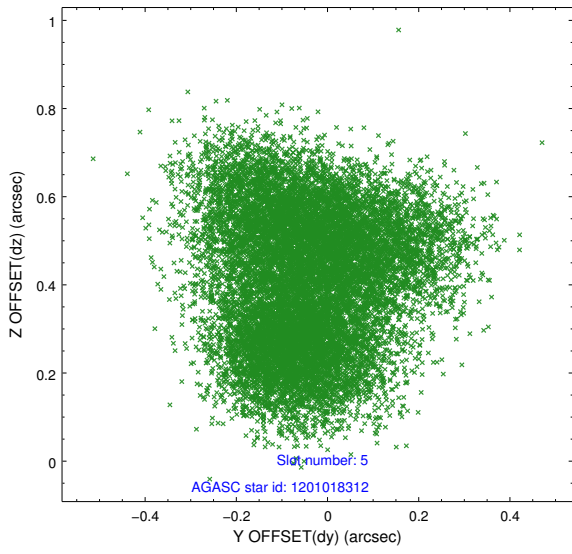
2.4.1 Slot 3



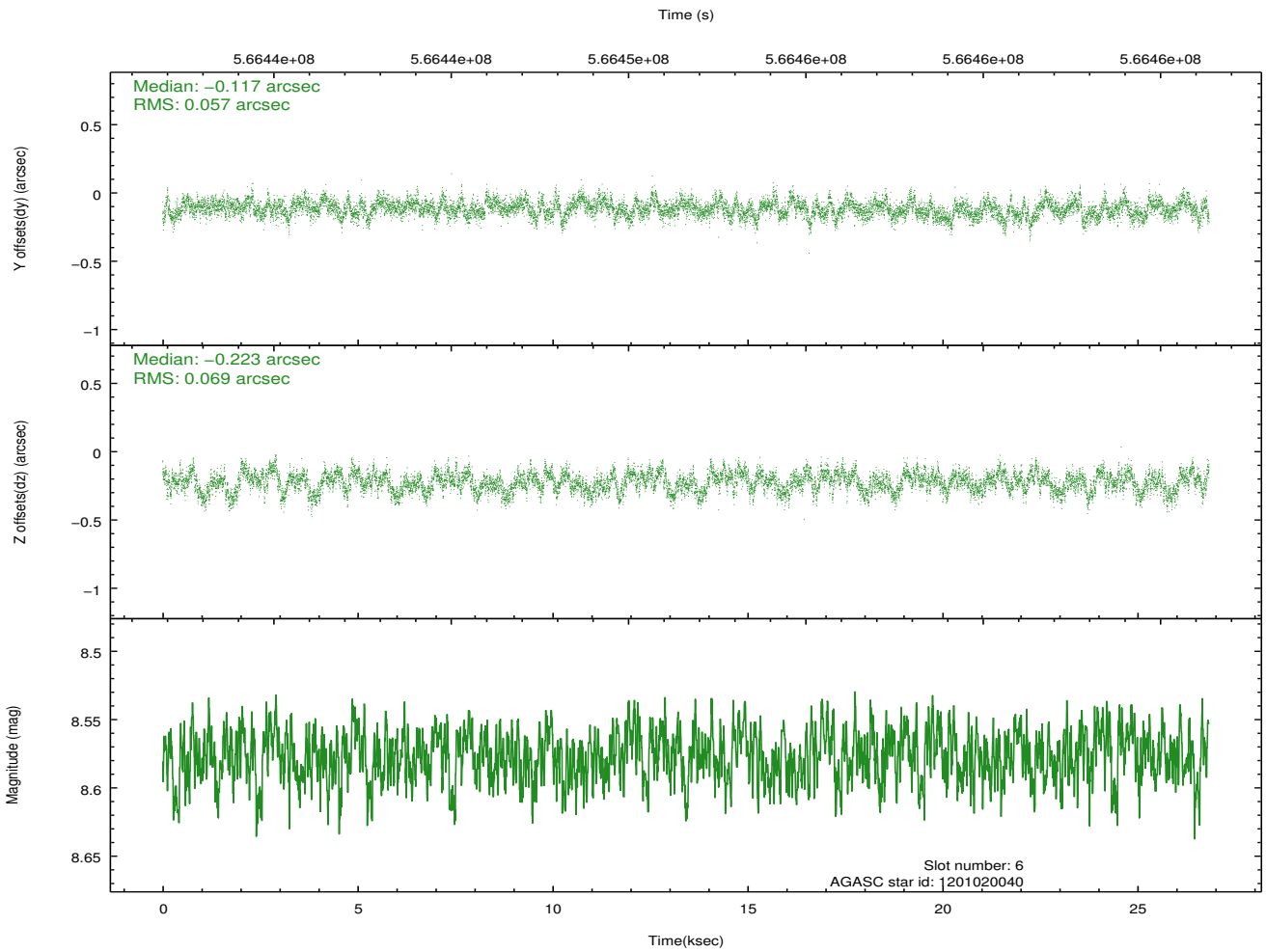
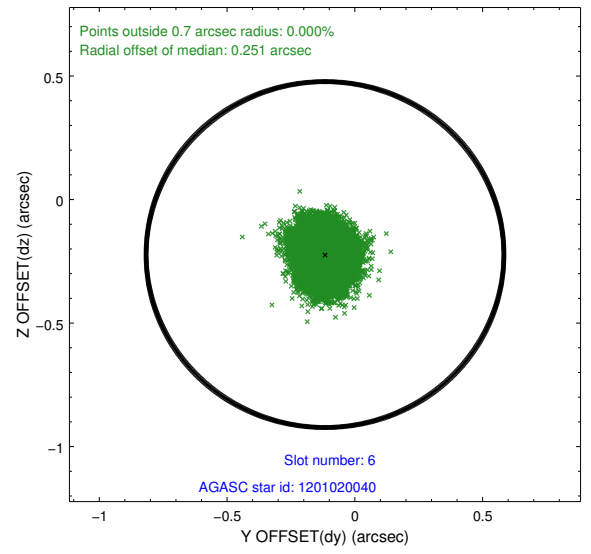
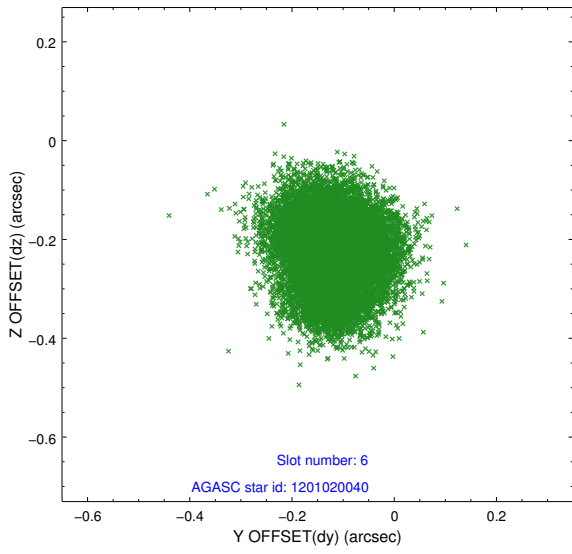
2.4.2 Slot 4



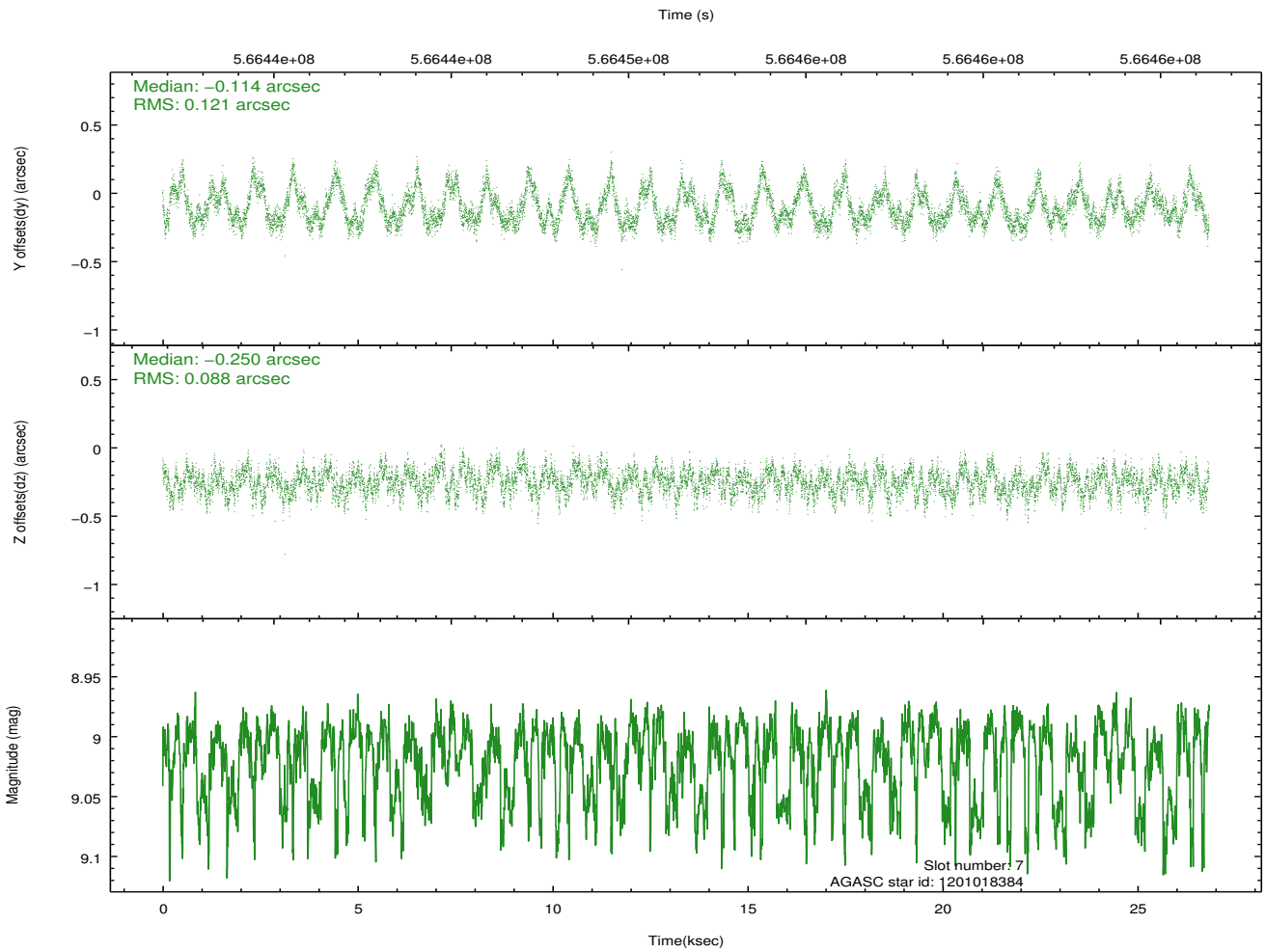
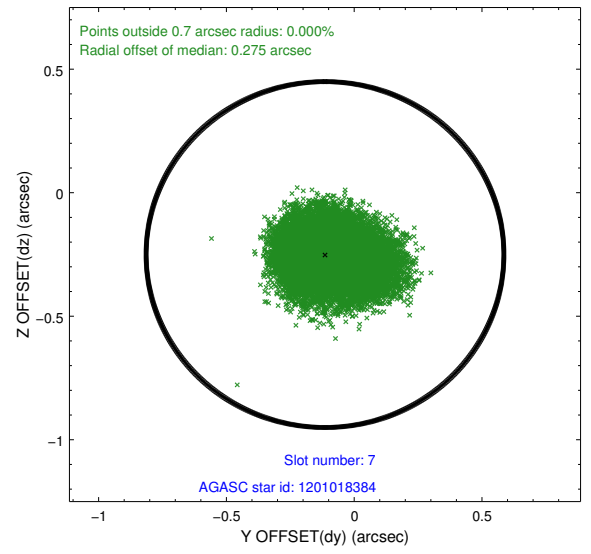
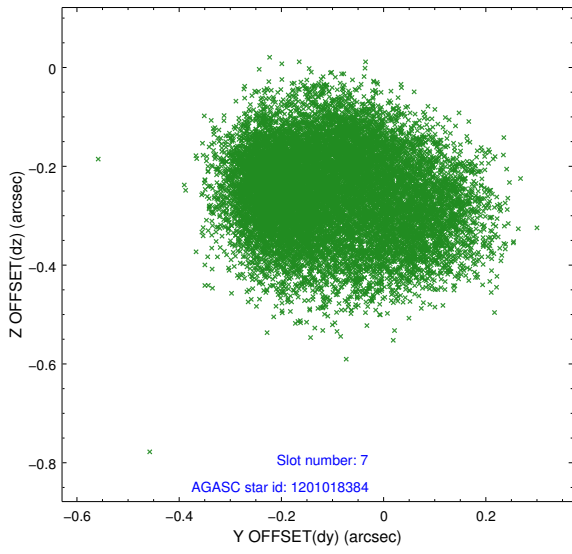
2.4.3 Slot 5



2.4.4 Slot 6

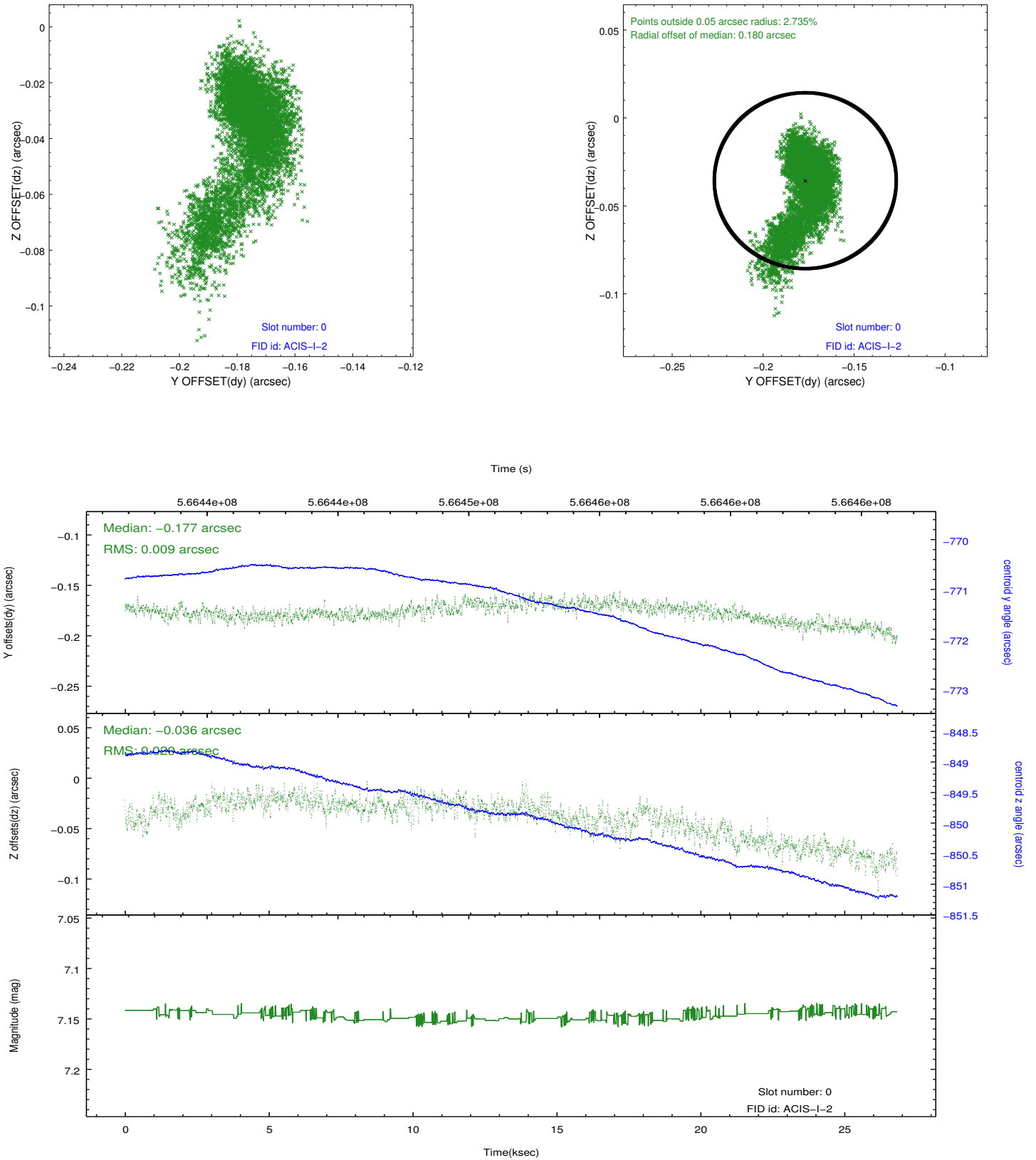


2.4.5 Slot 7

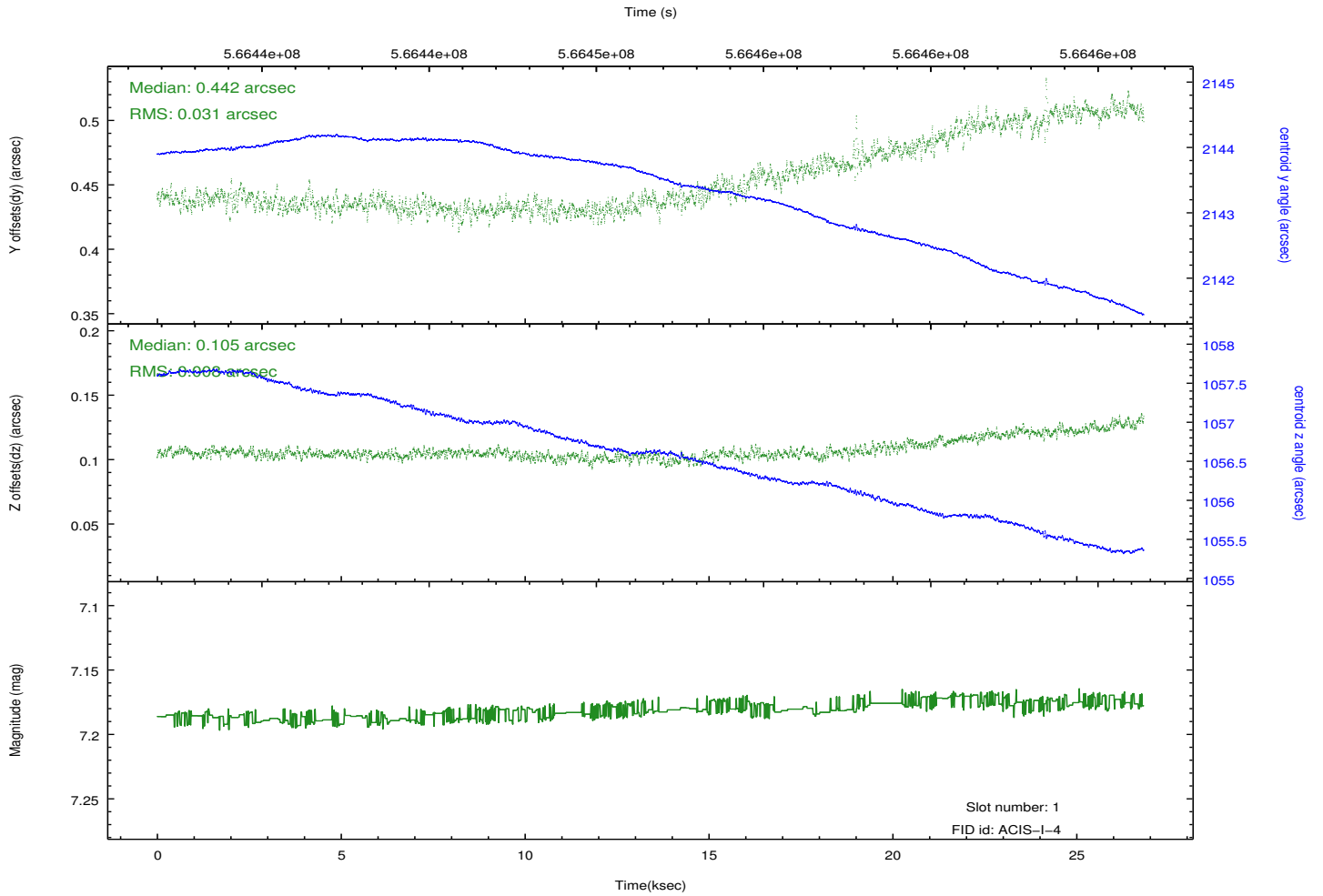
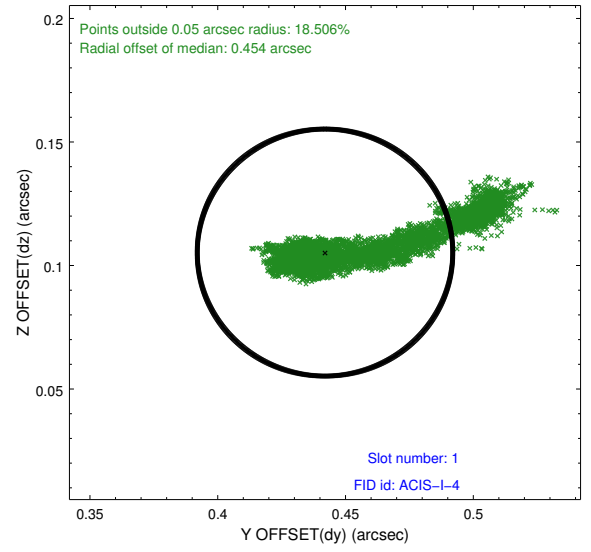
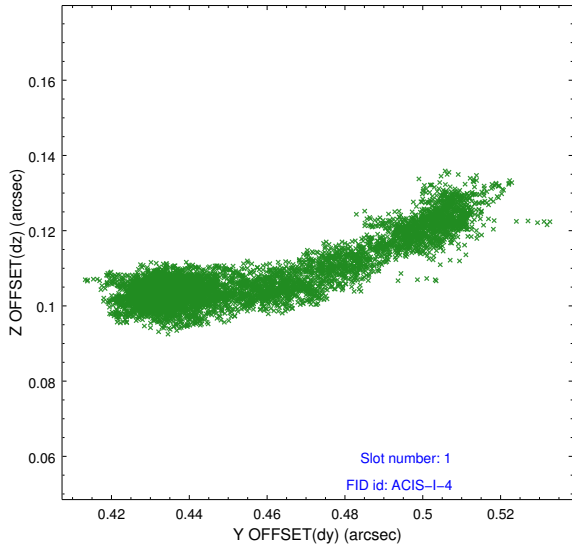


2.5 FID Slots

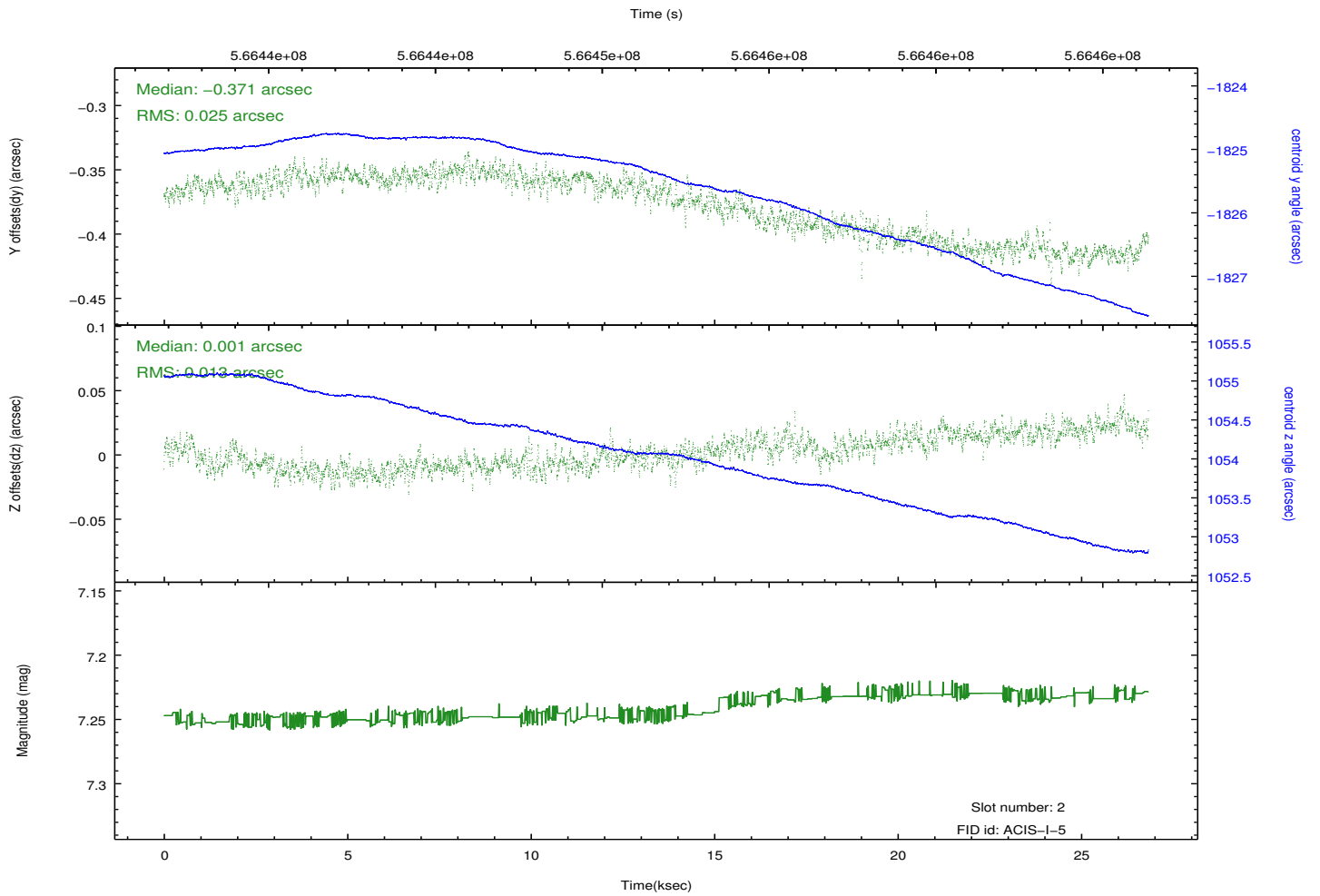
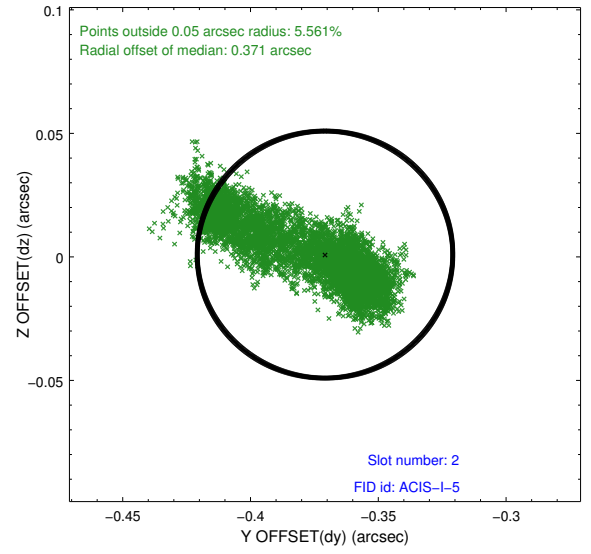
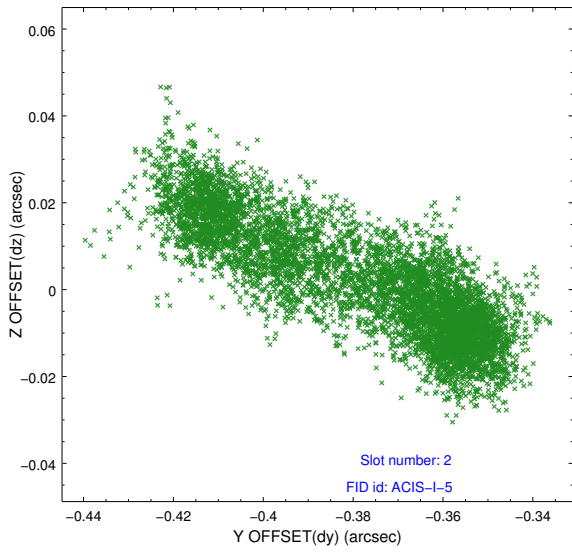
2.5.1 Slot 0



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)	2015.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.9456

A.2 Comments

Two discrete spatial regions 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.

One region affected by the anomaly is bounded by sky coords:

(84.88433, -69.21846), (84.87820, -69.18623), (84.80701, -69.18798),
(84.77853, -69.22106).

The other region affected by the anomaly is bounded by sky coords:

(84.95868, -69.12913), (84.95815, -69.12641), (84.70162, -69.13273),
(84.70212, -69.13545).