

V&V Reference Report

L2 ASCDS Version : 10.4.3

Observation 18721 - L2 Version 2
Chandra X-Ray Center

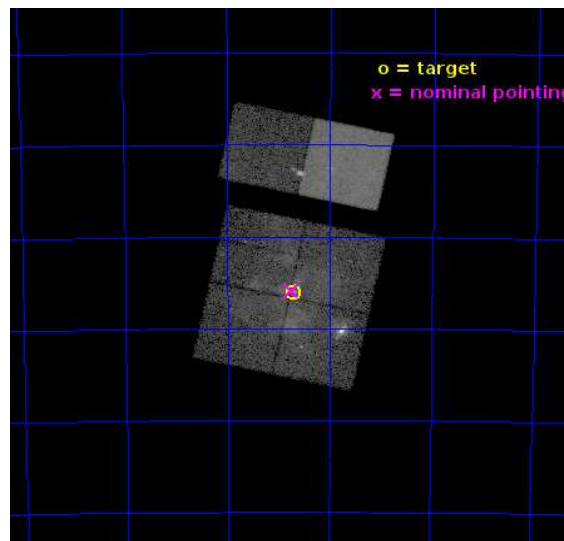
L2 Processing Date : Dec 16 2015

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1 Front

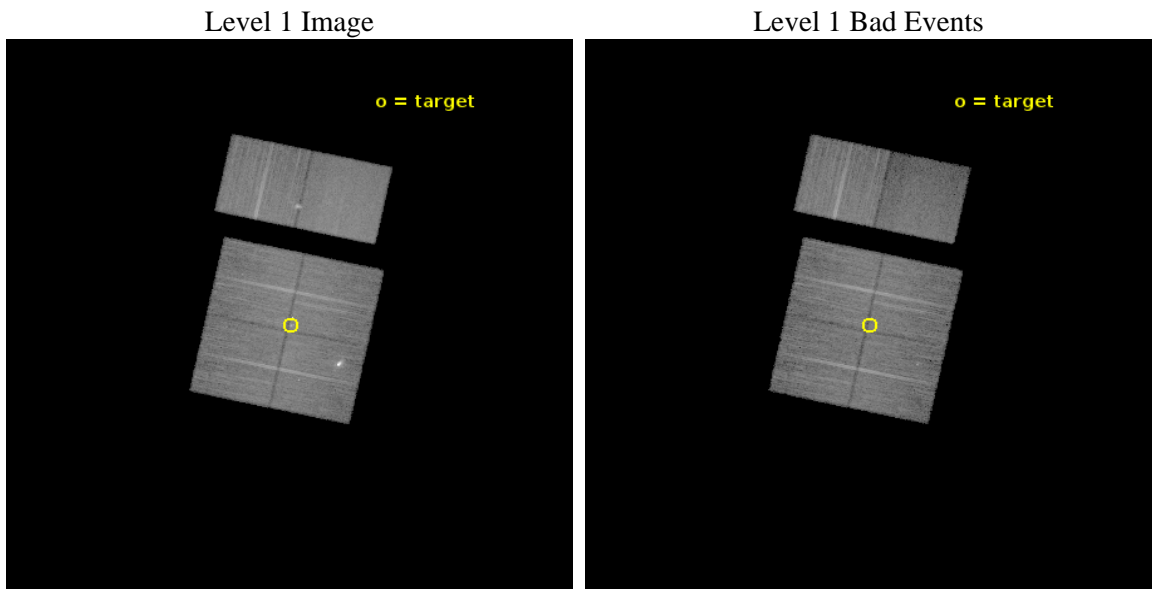
seq_num	901116	Sequence number
obs_id	18721	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.687295542198	Nominal RA [deg]
dec_nom	-69.098360921353	Nominal Dec [deg]
roll_nom	12.218593894919	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25926.318345547	Sum of GTIs [s]
livetime	25598.023691701	Livetime [s]
ontime0	25932.800386429	Sum of GTIs [s]
ontime1	25932.800386429	Sum of GTIs [s]
ontime2	25926.318415642	Sum of GTIs [s]
ontime3	25926.318345547	Sum of GTIs [s]
ontime6	25932.800386429	Sum of GTIs [s]
ontime7	25932.800386429	Sum of GTIs [s]
l2events	171491	Number of level 2 events



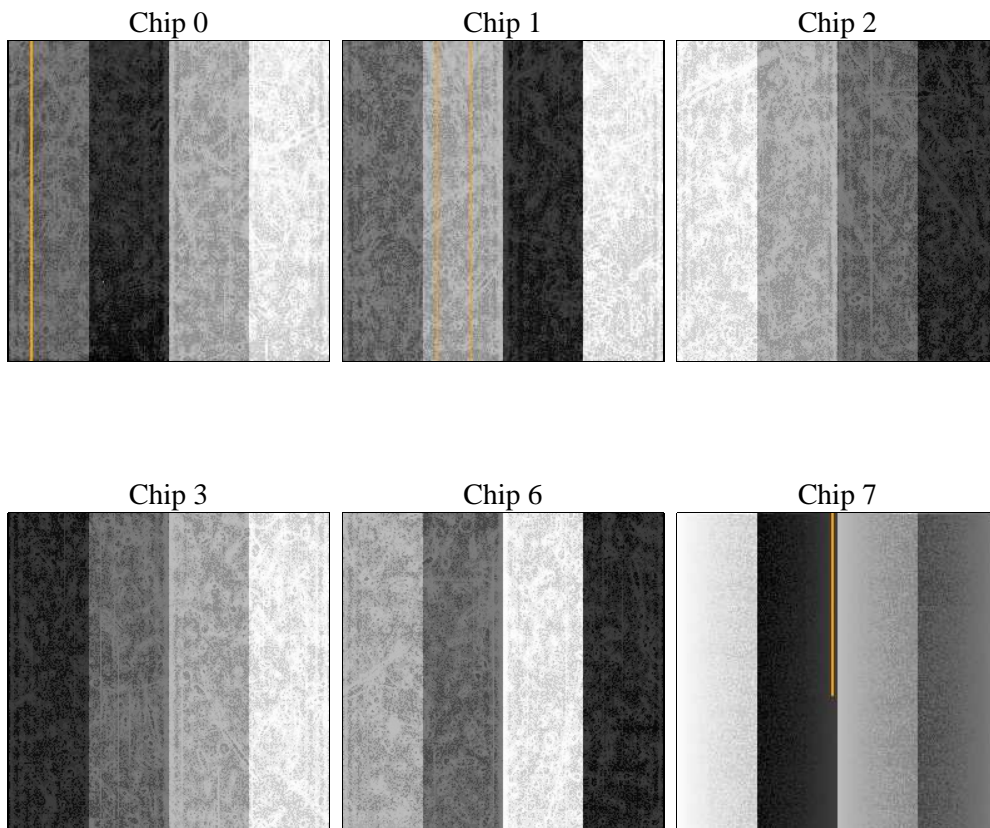
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	25926.318345547	Sum of GTIs [s]
caldbver	4.7.0	 	ontime0	25932.800386429	Sum of GTIs [s]
date	2015-12-16T16:12:46	Date and time of file creation	ontime1	25932.800386429	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	25926.318415642	Sum of GTIs [s]
			ontime3	25926.318345547	Sum of GTIs [s]
			ontime6	25932.800386429	Sum of GTIs [s]
			ontime7	25932.800386429	Sum of GTIs [s]
			l1events	837248	Number of level 1 events

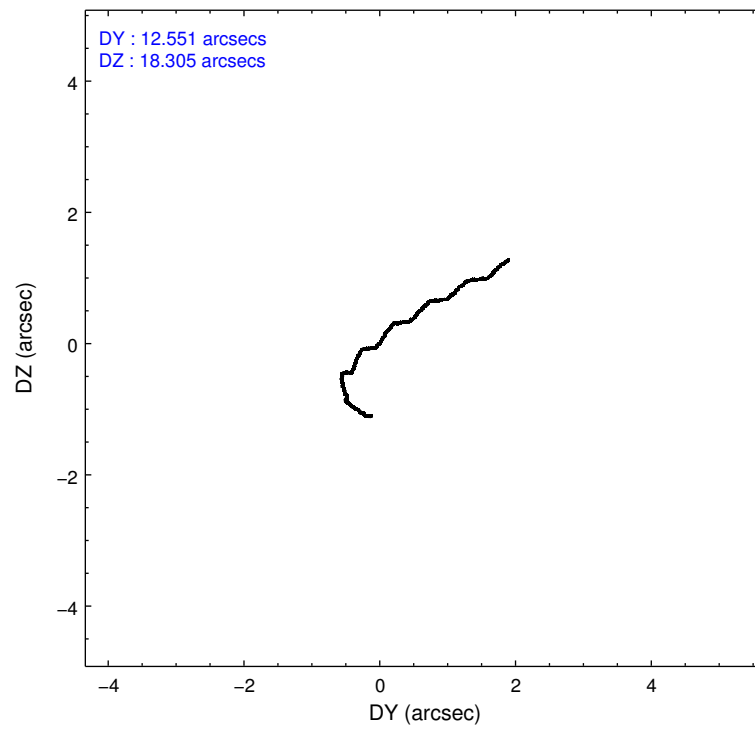
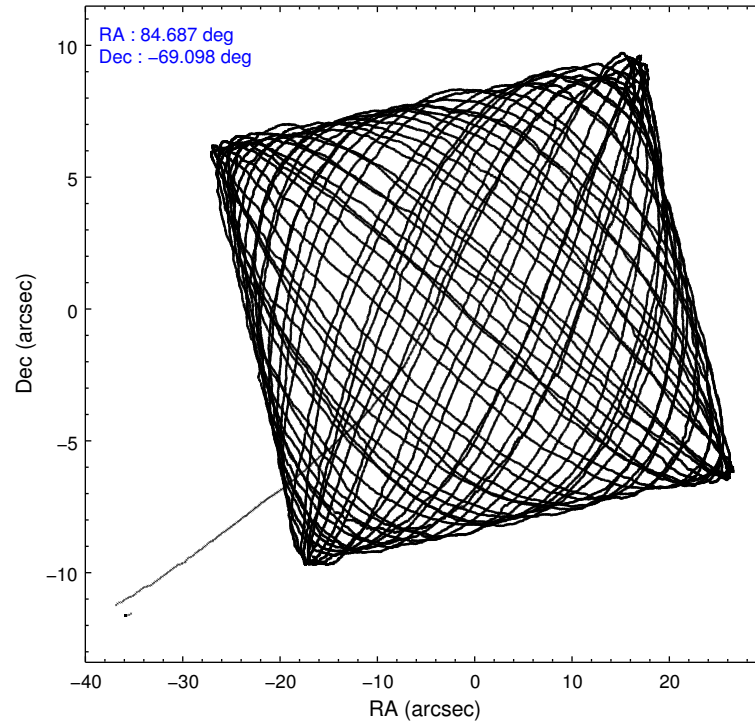
2.1.4 Events

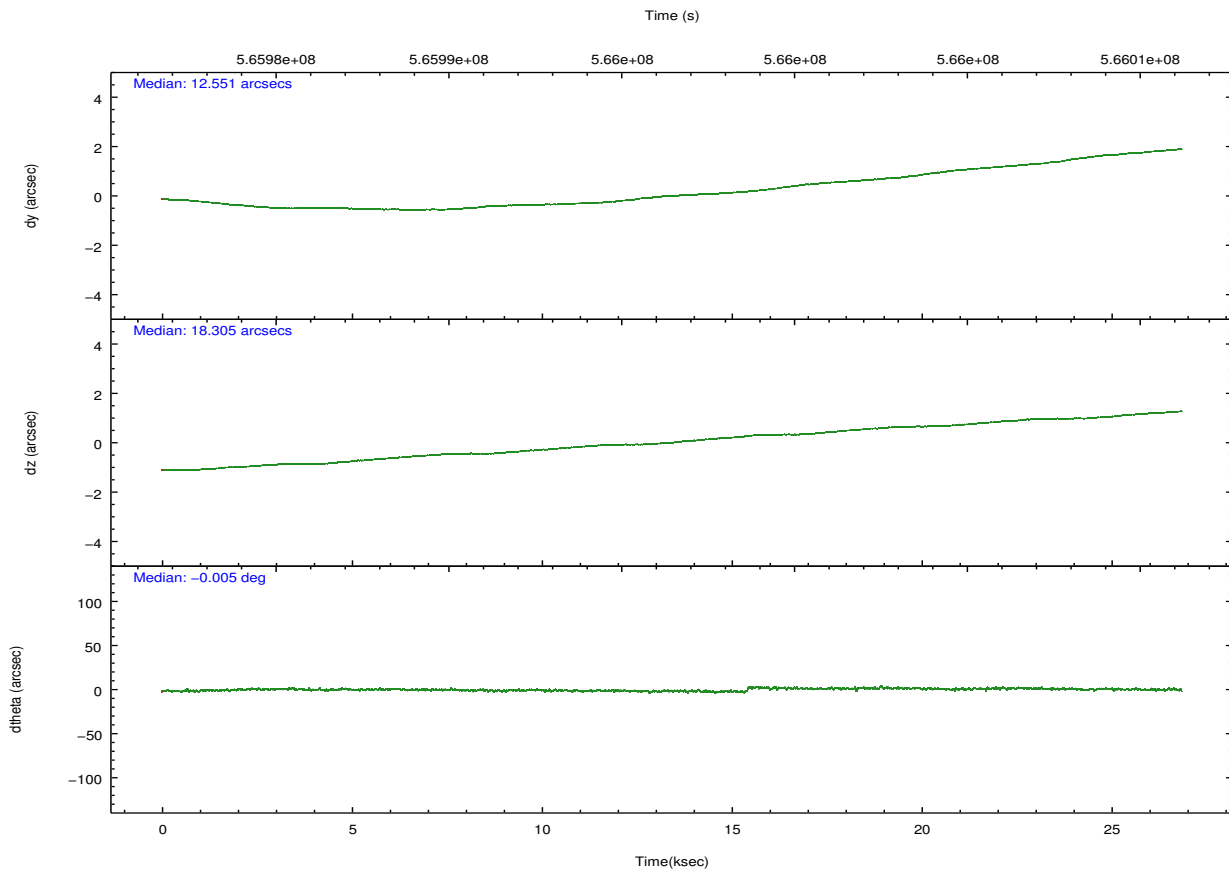
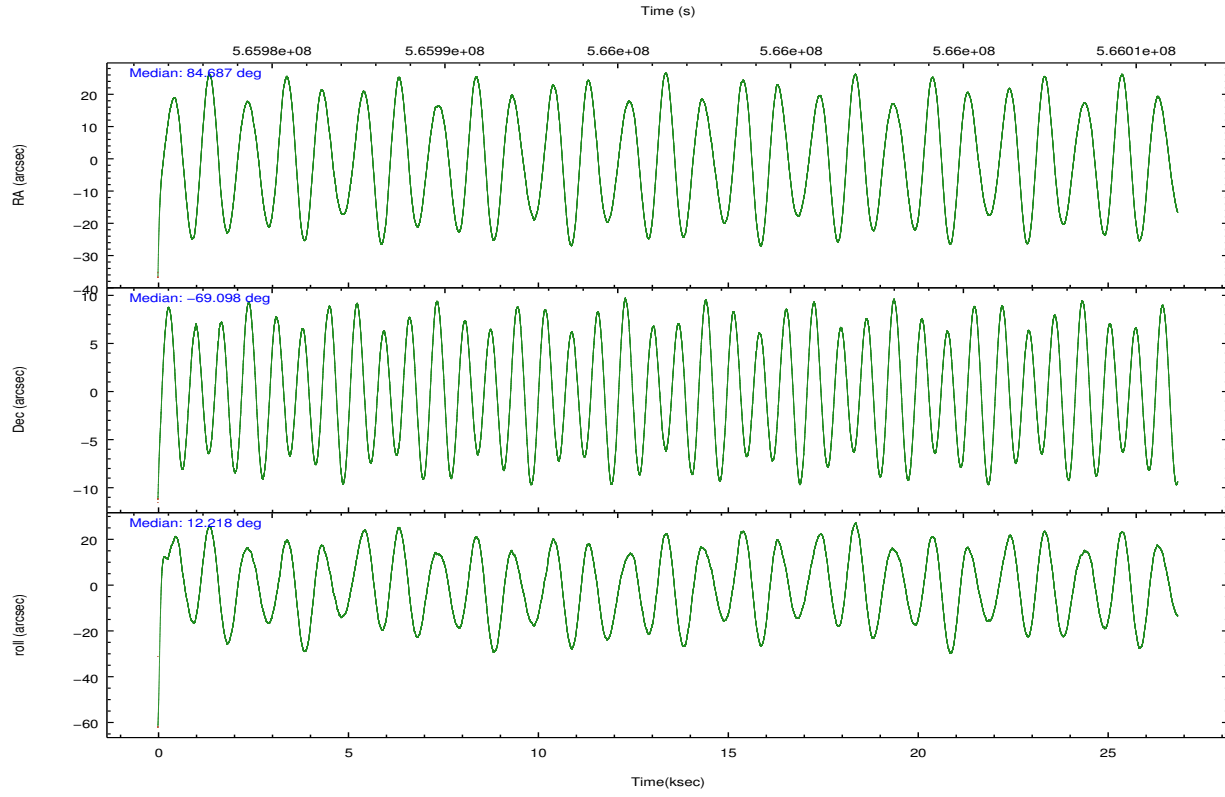
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	125039	143504	139564	135336	140966	152839	grade 0 events	8993	22591	10242	11873	7057	7213
rejected events	106082	106751	119646	113658	123479	79939		7%	15%	7%	8%	5%	4%
rejected %	84%	74%	85%	83%	87%	52%	grade 1 events	76	168	84	121	61	240
								0%	0%	0%	0%	0%	0%
							grade 2 events	4020	5971	4014	3609	3901	16084
								3%	4%	2%	2%	2%	10%
							grade 3 events	1521	2195	1495	1639	1484	5917
								1%	1%	1%	1%	1%	3%
							grade 4 events	1449	2135	1523	1655	1505	5945
								1%	1%	1%	1%	1%	3%
							grade 5 events	4771	5169	4494	5615	5550	15157
								3%	3%	3%	4%	3%	9%
							grade 6 events	2975	3863	2647	2905	3543	37750
								2%	2%	1%	2%	2%	24%
							grade 7 events	101234	101412	115065	107919	117865	64533
								80%	70%	82%	79%	83%	42%

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	84.630127	84.68729554219755	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.116960	-69.09836092135302	CCD I3 on	Y	Y
[deg] Pointing Roll	11.956522	12.21859389491896	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)	565983870.184000	565981994.9007601	CCD S5 on	N	N
Observation start date	2015-12-08T17:43:22	2015-12-08T17:13:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	566009870.184000	566010519.62738	On-chip summing requested	N	N
Observation end date	2015-12-09T00:56:42	2015-12-09T01:08:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





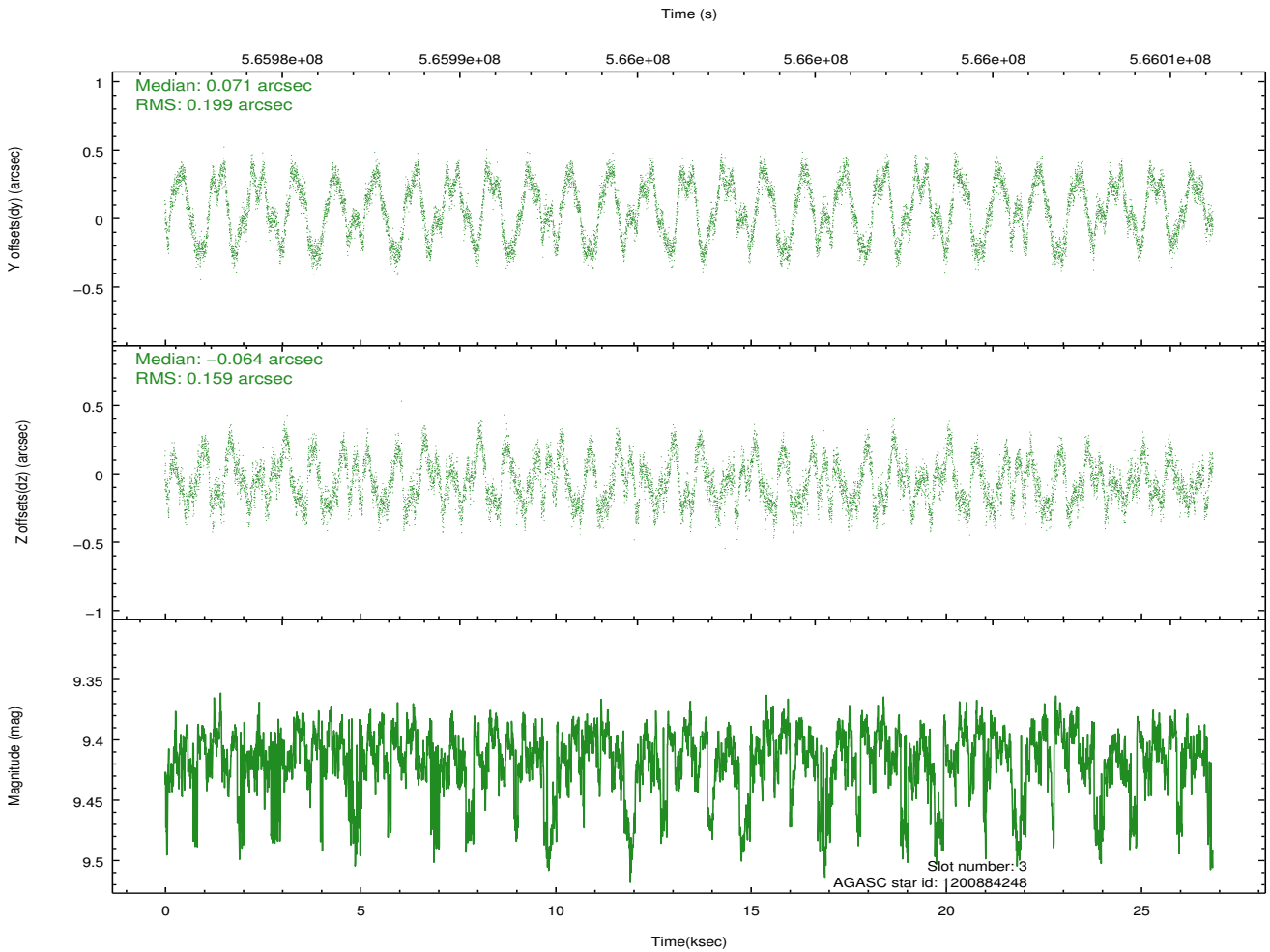
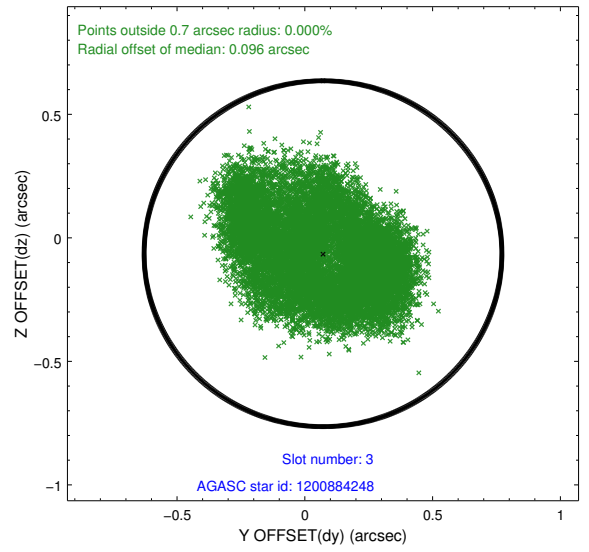
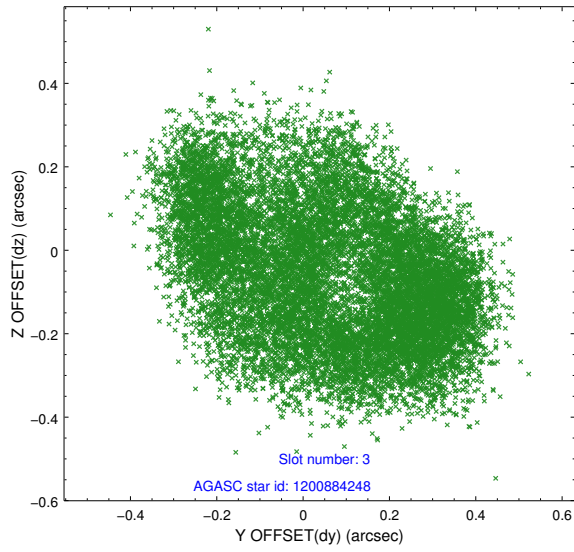
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-4	7.18	6549	0.290	0.054	0.022	0.034	0.000000	0.000000	2146.91	1057.98
1	FID		ACIS-I-5	7.26	6549	-0.417	0.035	0.014	0.026	0.000000	0.000000	-1821.63	1055.63
2	FID		ACIS-I-6	7.25	6549	0.028	-0.022	0.030	0.043	0.000000	0.000000	392.09	1700.02
3	GUIDE	used	1200884248	9.41	13084	0.071	-0.064	0.281	0.397	83.880915	-68.565170	-553.54	2142.01
4	GUIDE	used	1200885760	9.43	13088	0.178	0.127	0.186	0.297	83.723637	-68.777667	-904.28	1431.36
5	GUIDE	used	1201016584	9.41	13086	-0.272	-0.039	0.131	0.208	85.677603	-68.415933	1877.07	2170.32
6	GUIDE	used	1201020040	8.56	13093	0.017	-0.027	0.090	0.146	85.379163	-68.879396	1126.58	629.92
7	GUIDE	used	1201018384	9.04	13080	0.012	-0.001	0.104	0.167	85.801362	-68.593260	1893.78	1511.54

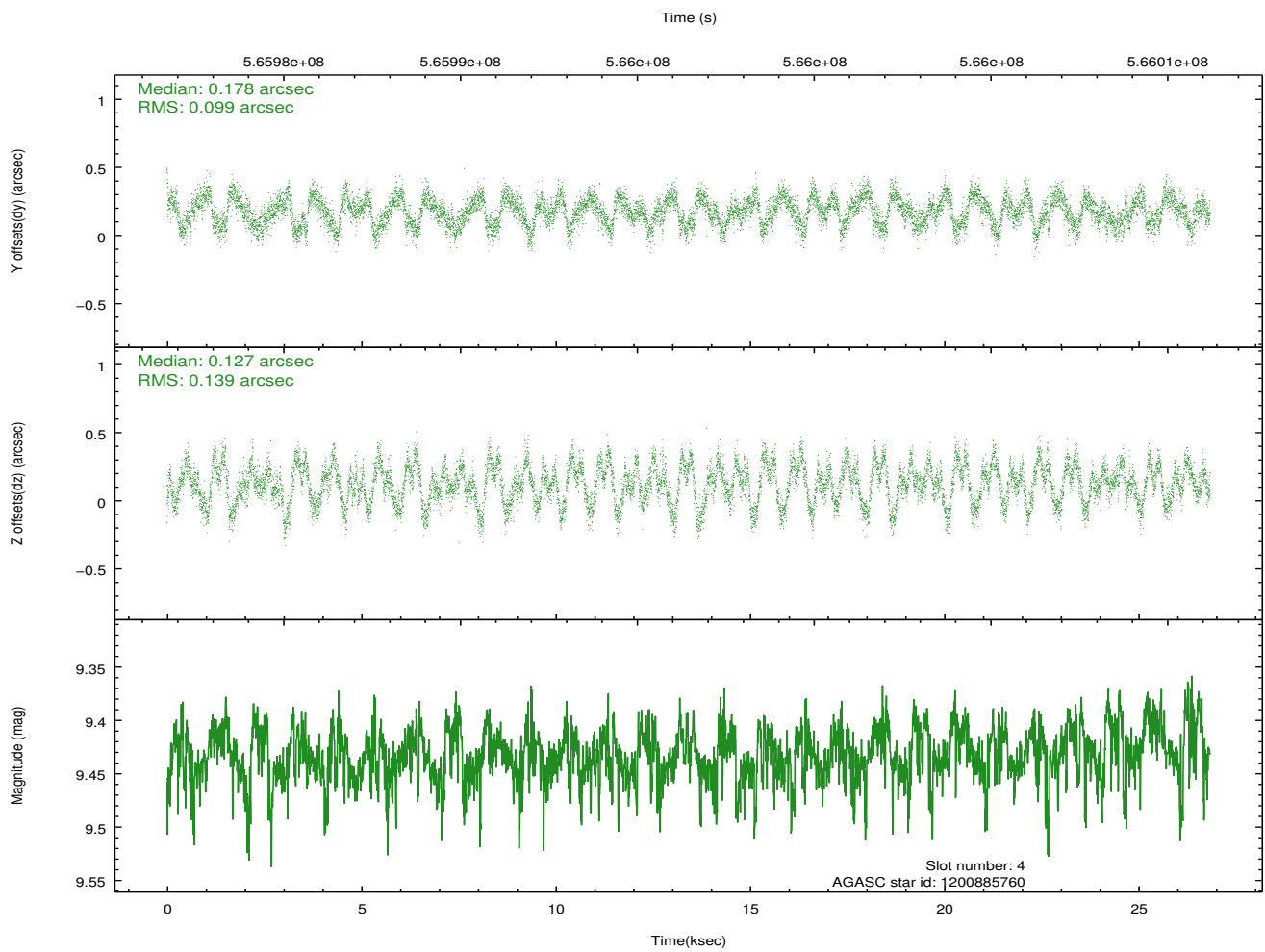
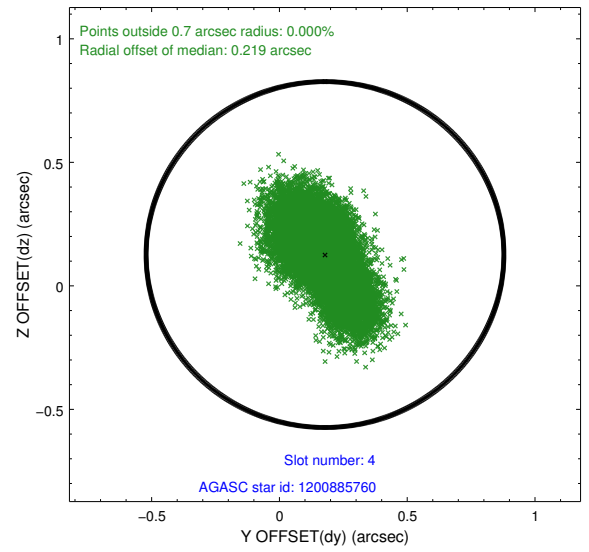
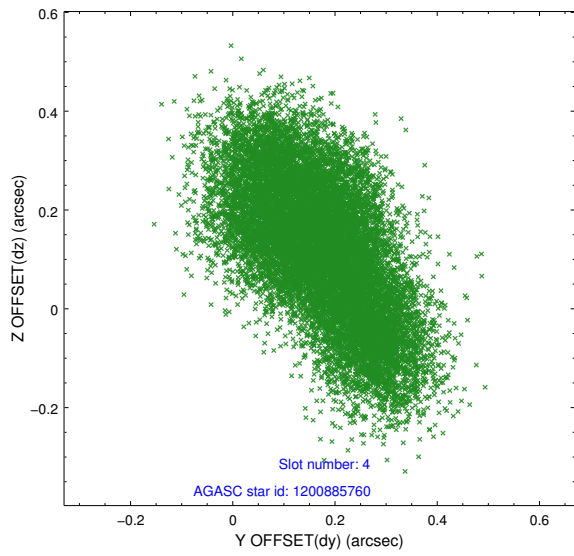
∞

2.4 Star Slots

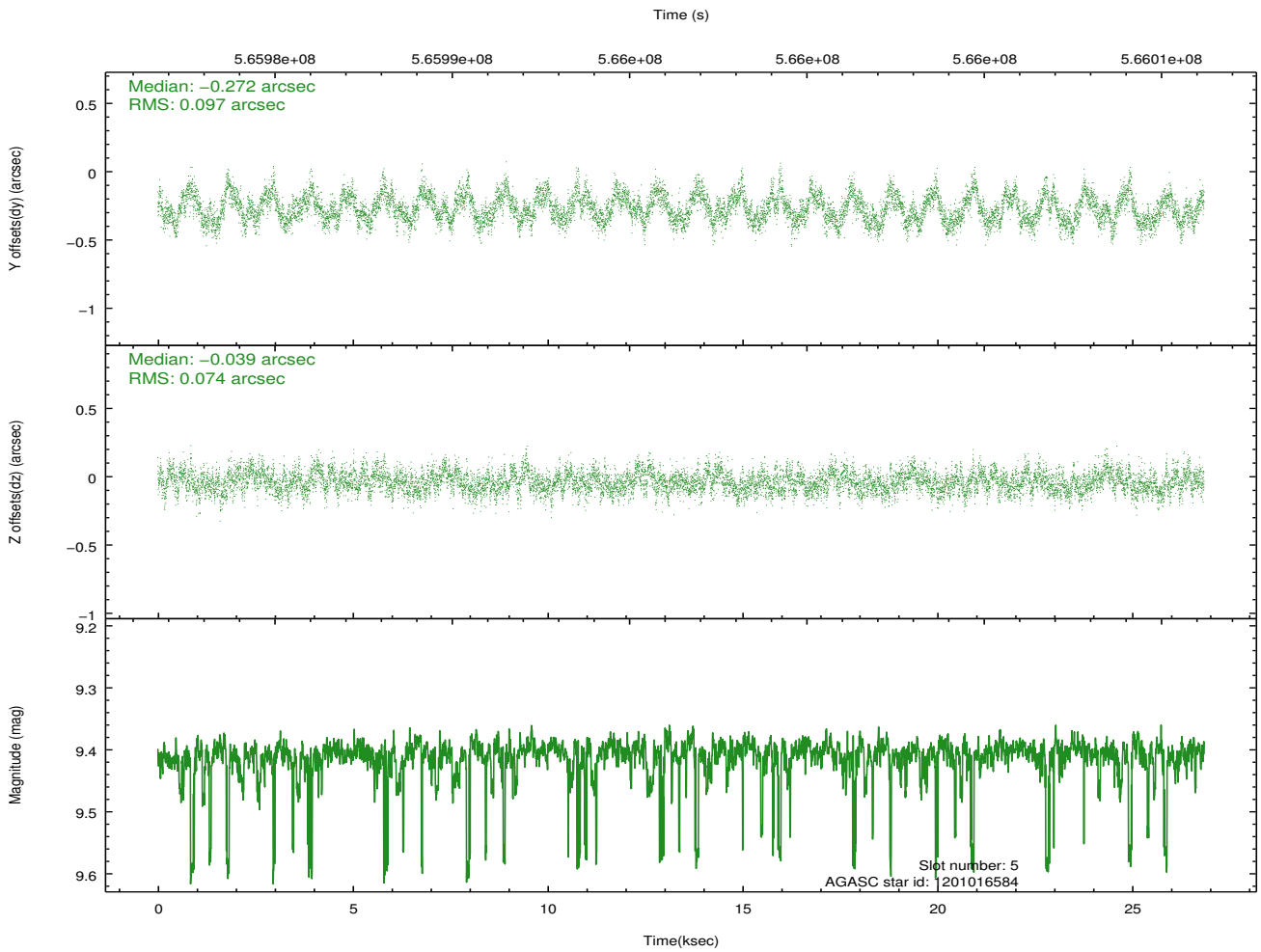
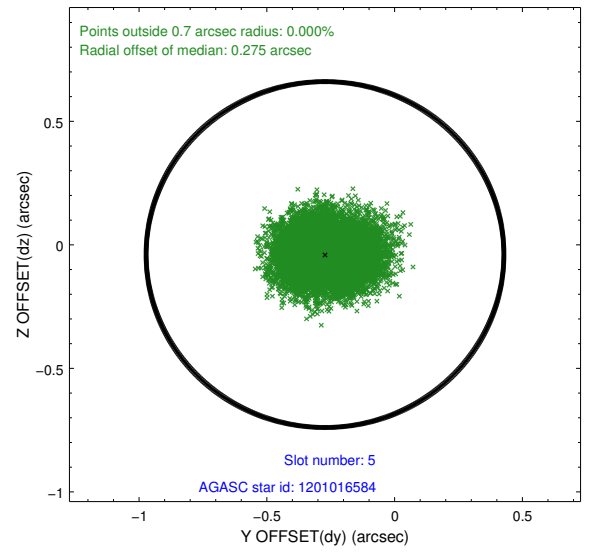
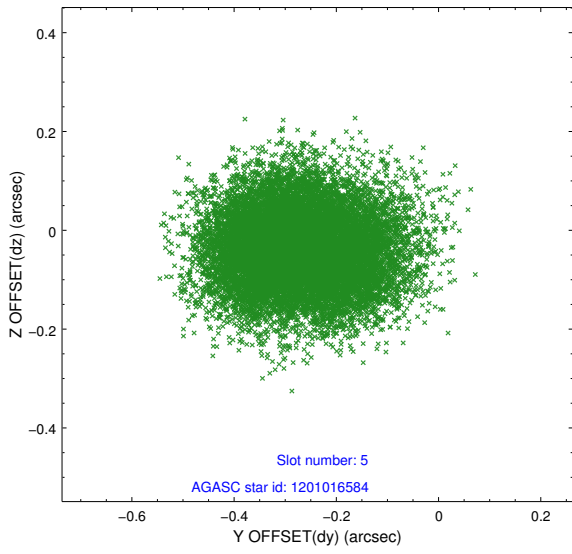
2.4.1 Slot 3



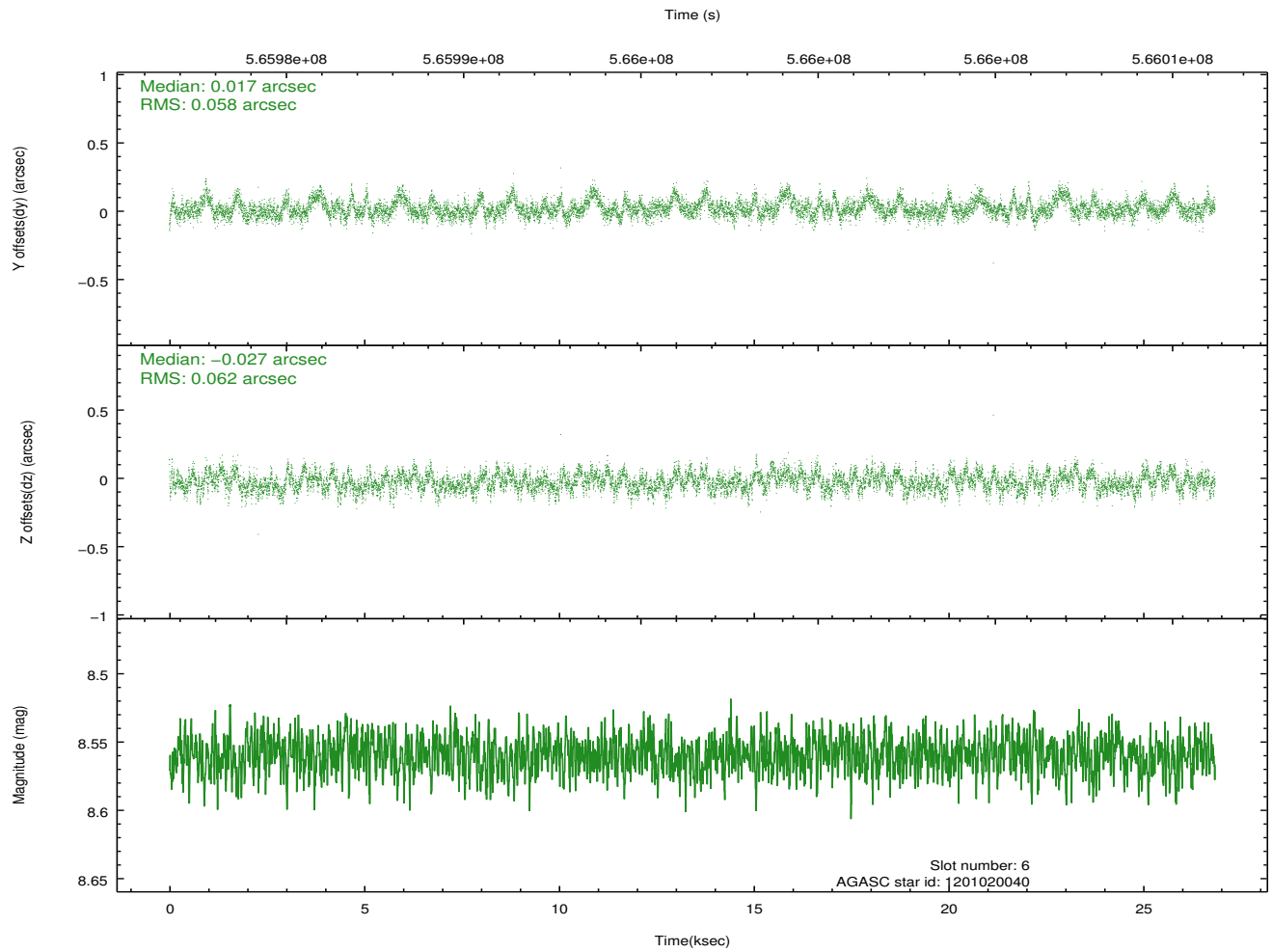
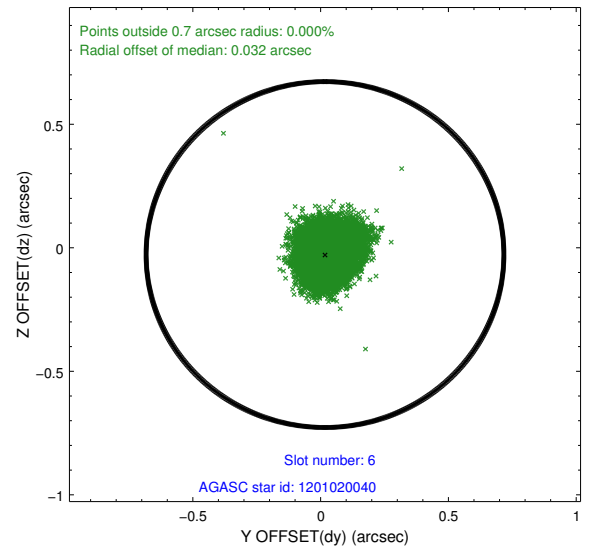
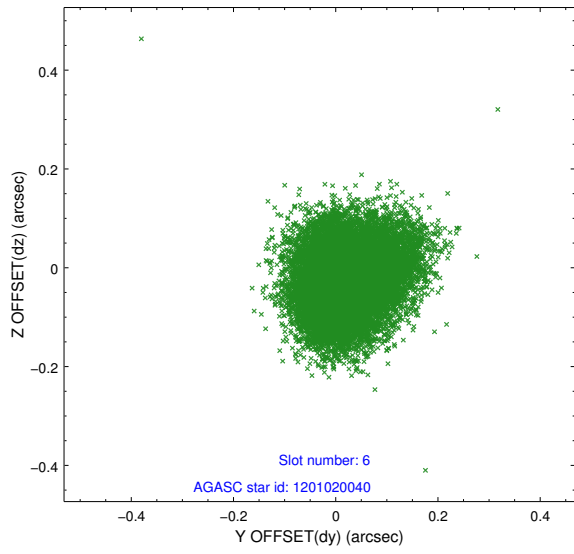
2.4.2 Slot 4



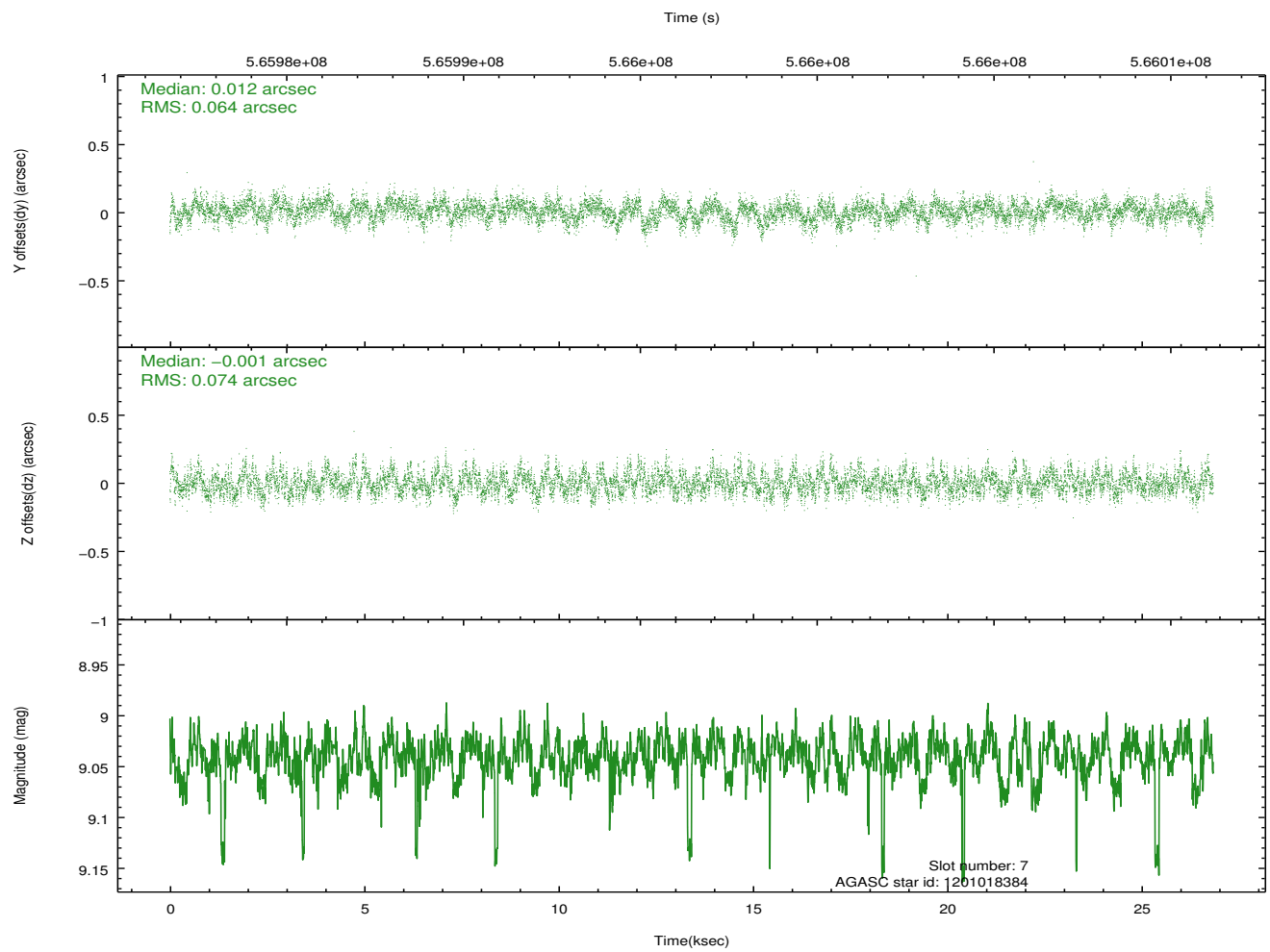
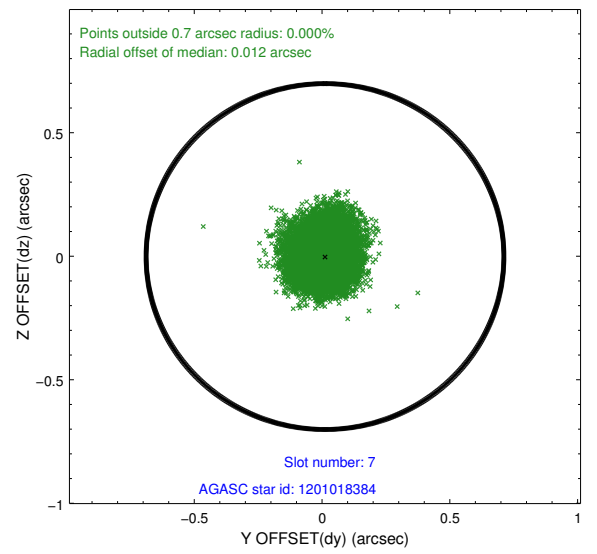
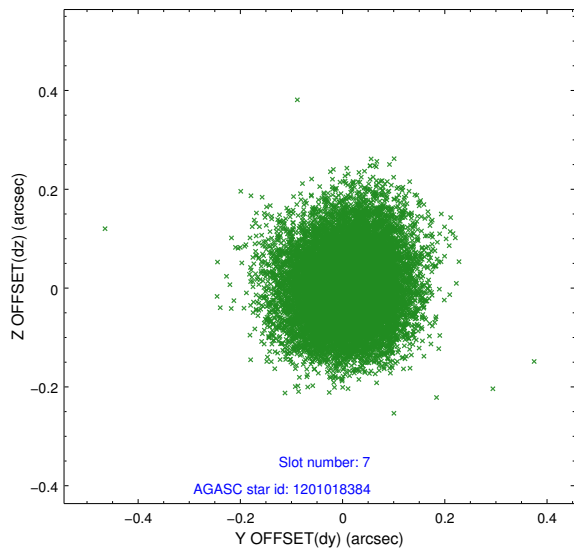
2.4.3 Slot 5



2.4.4 Slot 6

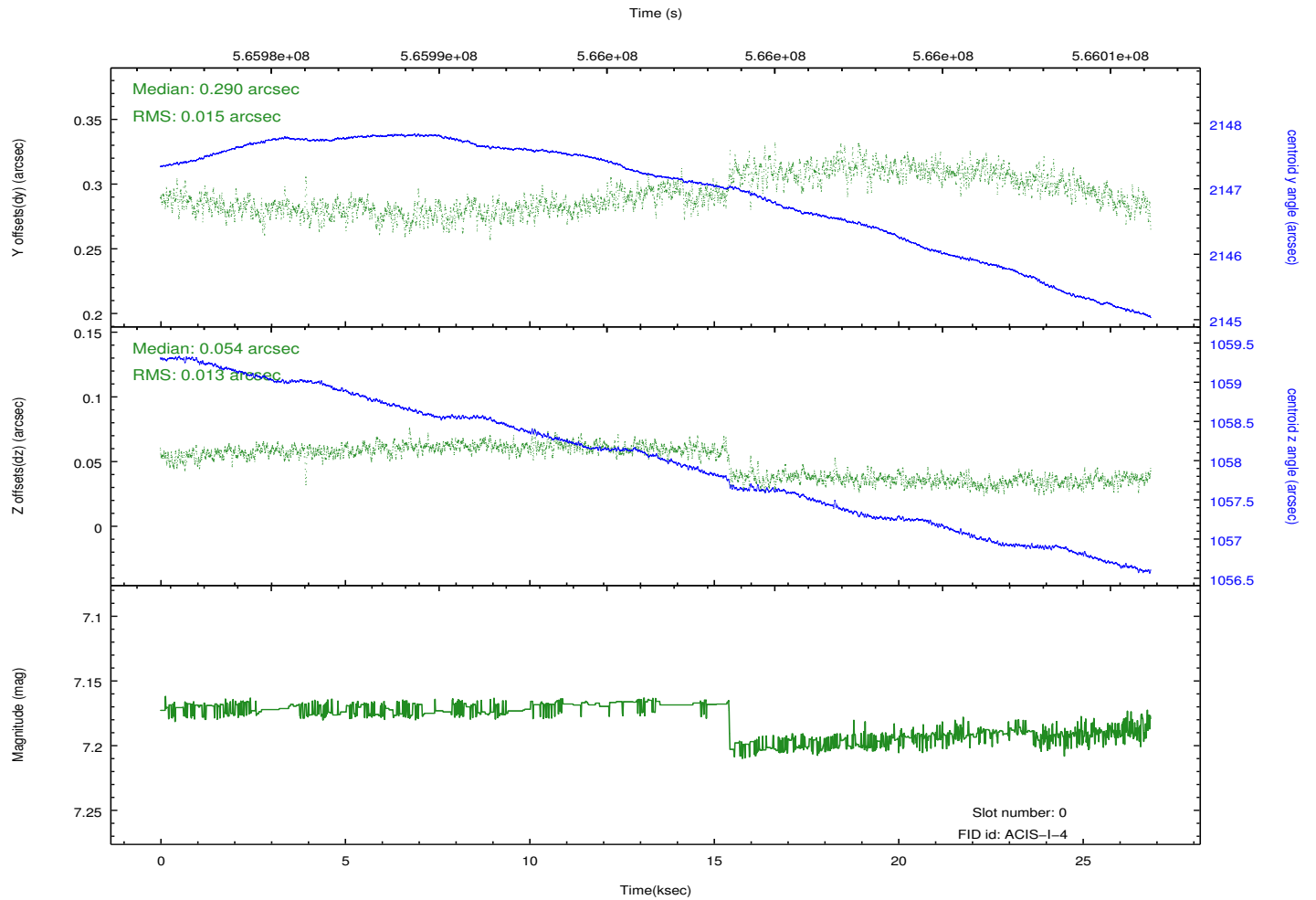
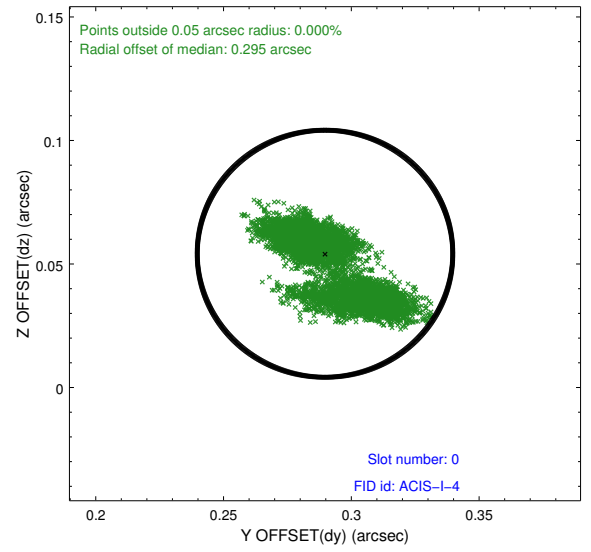
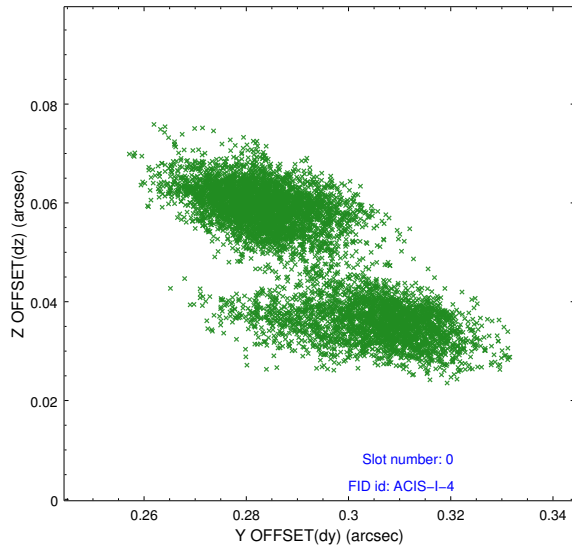


2.4.5 Slot 7

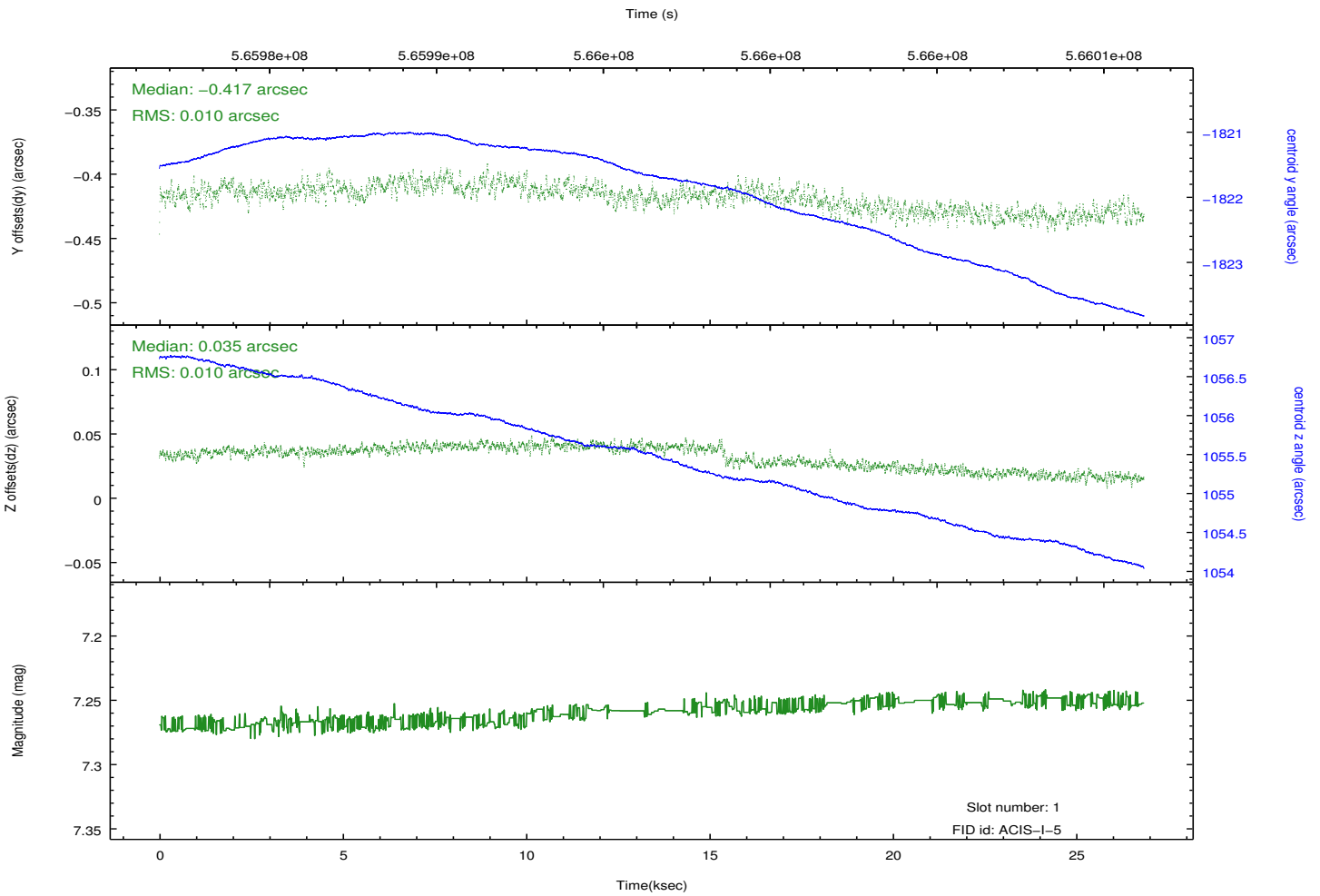
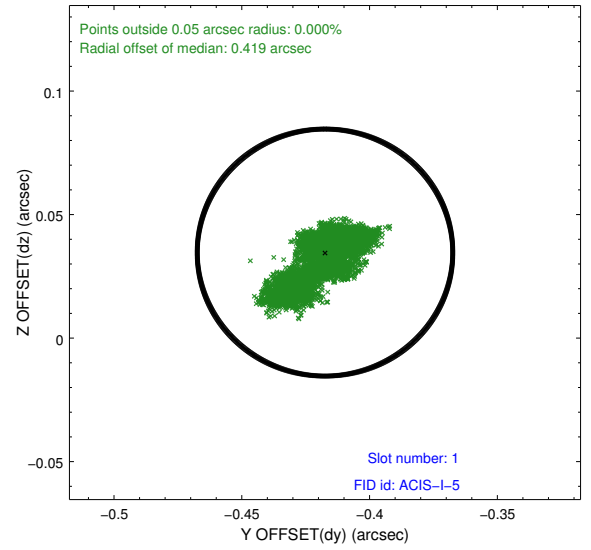
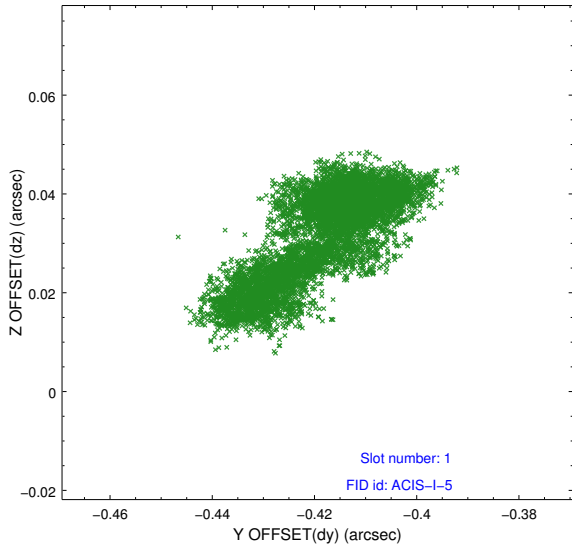


2.5 FID Slots

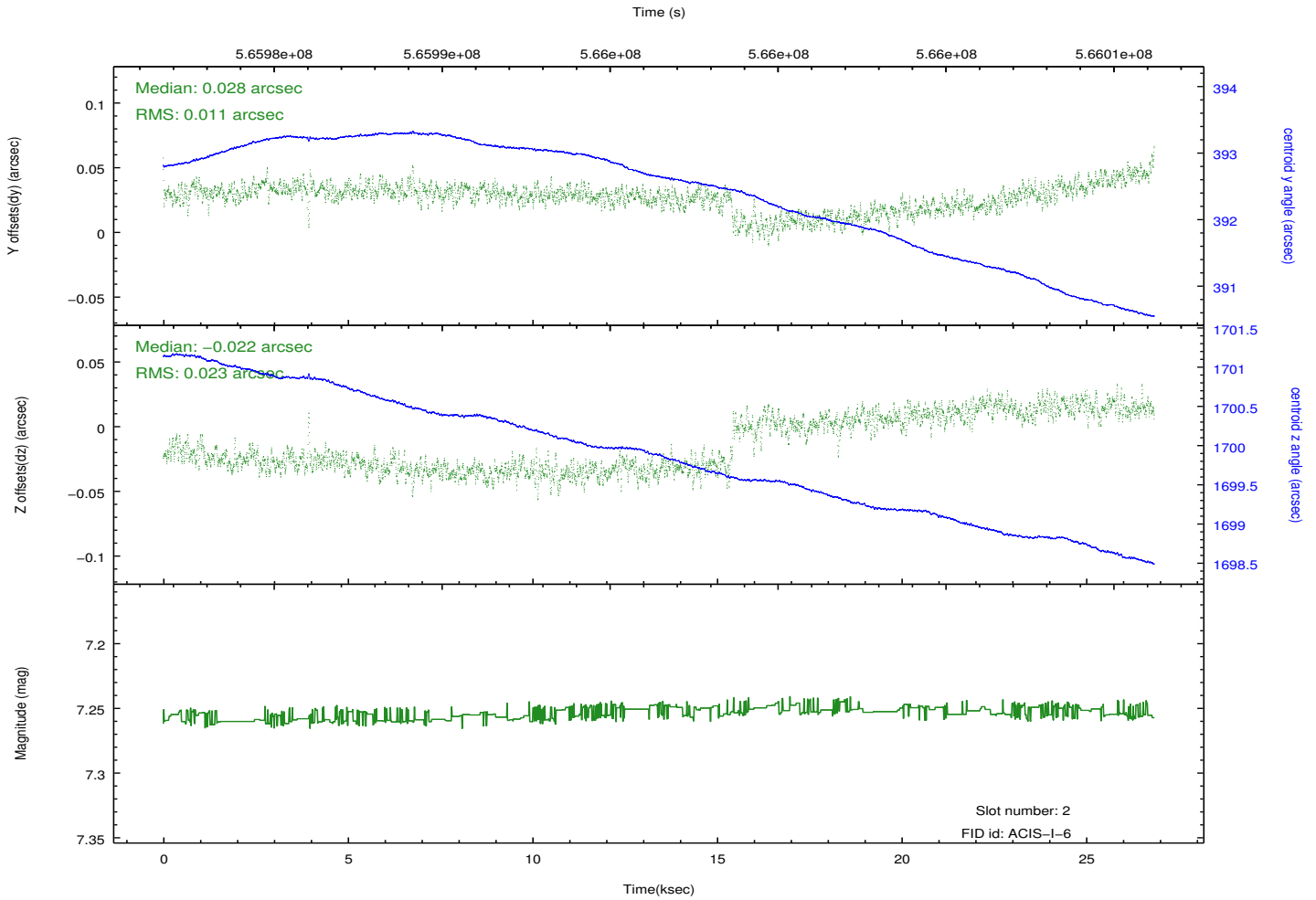
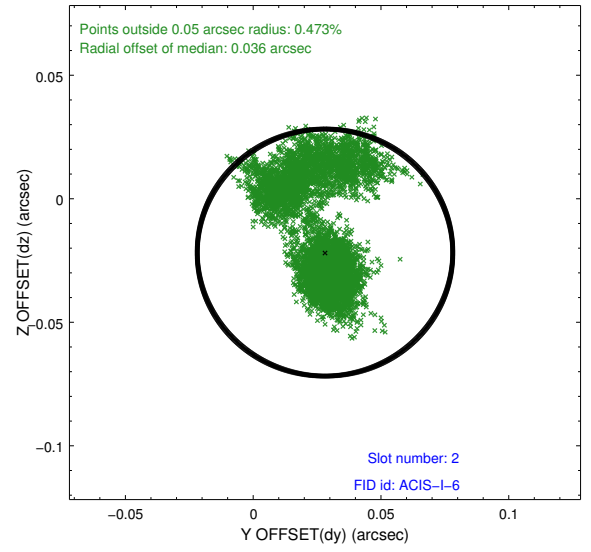
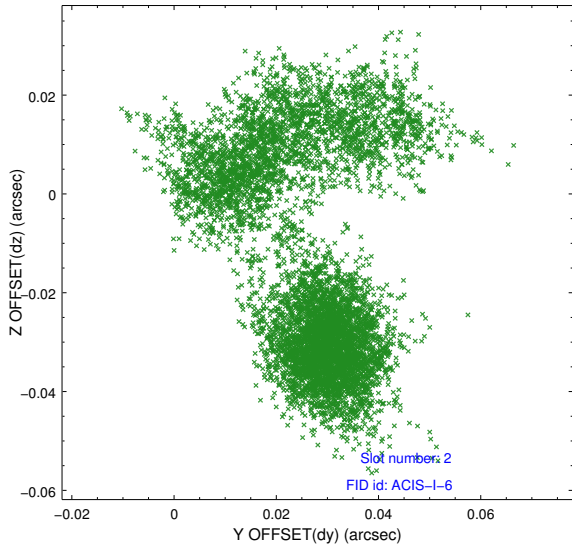
2.5.1 Slot 0



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)	2015.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.926318345547

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: (84.41259, -69.15005), (84.41700, -69.15738), (84.71055, -69.13496), (84.70604, -69.12763).