

V&V Reference Report

L2 ASCDS Version : 10.2.2

Observation 16621 - L2 Version 2
Chandra X-Ray Center

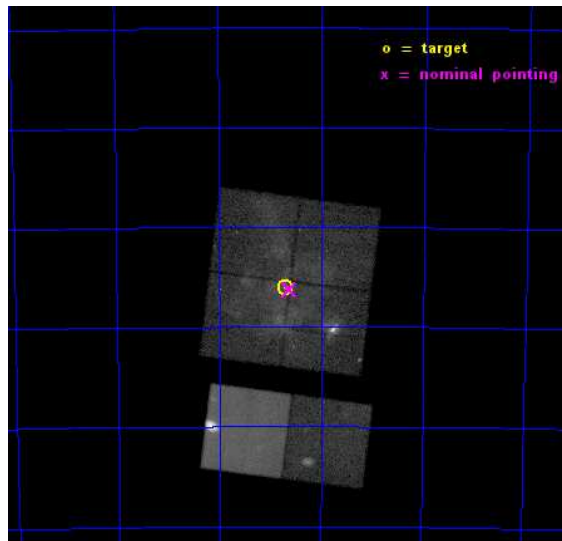
L2 Processing Date : Dec 11 2014

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

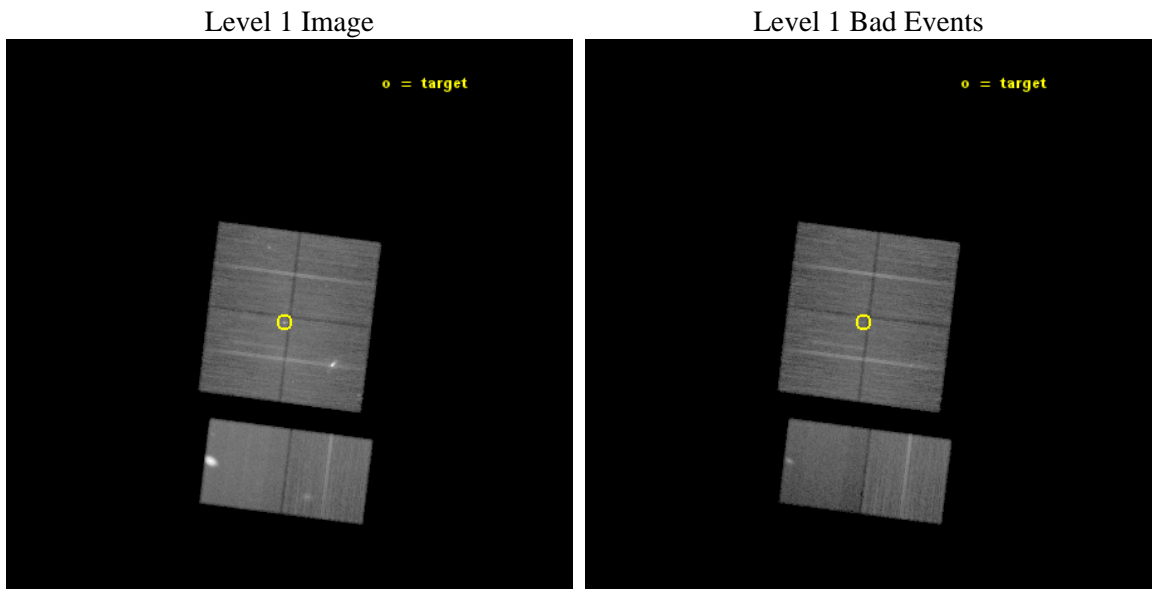
seq_num	901116	Sequence number
obs_id	16621	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.656036200956	Nominal RA [deg]
dec_nom	-69.104150512418	Nominal Dec [deg]
roll_nom	187.18942095475	Nominal Roll [deg]
revision	2	Processing version of data
ontime	44969.138363957	Sum of GTIs [s]
livetime	44399.712056829	Livetime [s]
ontime0	44969.015243948	Sum of GTIs [s]
ontime1	44965.81529361	Sum of GTIs [s]
ontime2	44962.615323424	Sum of GTIs [s]
ontime3	44969.138363957	Sum of GTIs [s]
ontime6	44969.220443964	Sum of GTIs [s]
ontime7	44969.179403961	Sum of GTIs [s]
l2events	440364	Number of level 2 events



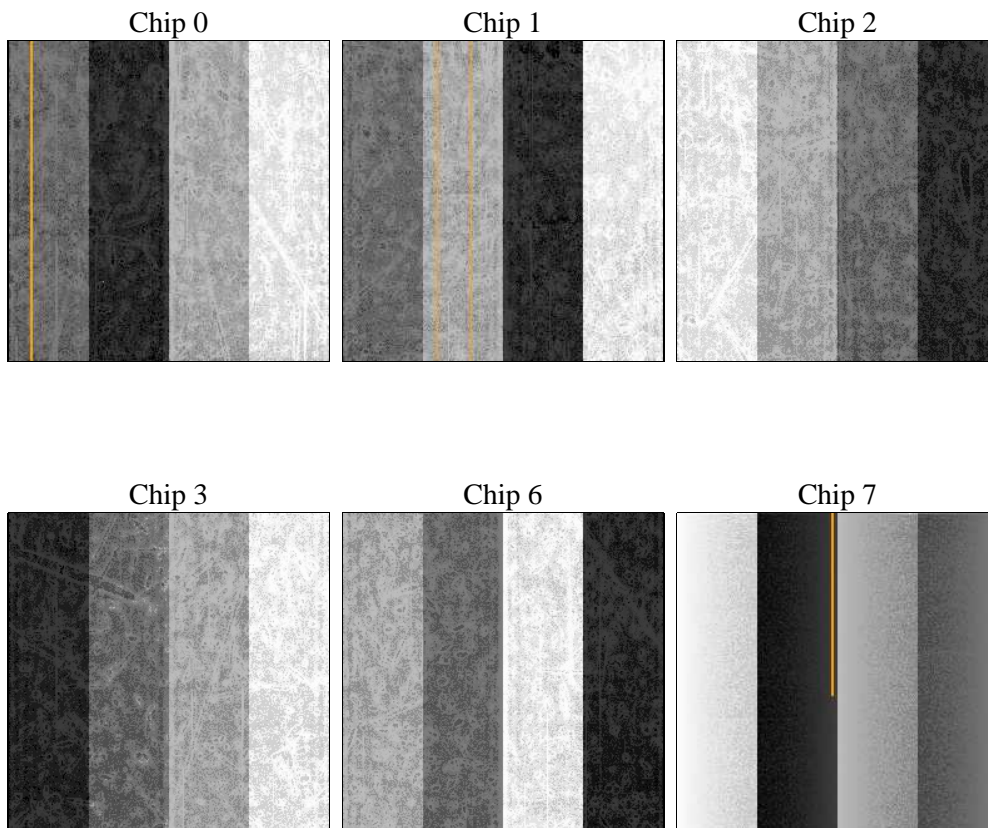
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	44969.138363957	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	44969.015243948	Sum of GTIs [s]
date	2014-12-12T02:56:52	Date and time of file creation	ontime1	44965.81529361	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	44962.615323424	Sum of GTIs [s]
			ontime3	44969.138363957	Sum of GTIs [s]
			ontime6	44969.220443964	Sum of GTIs [s]
			ontime7	44969.179403961	Sum of GTIs [s]
			l1events	1451516	Number of level 1 events

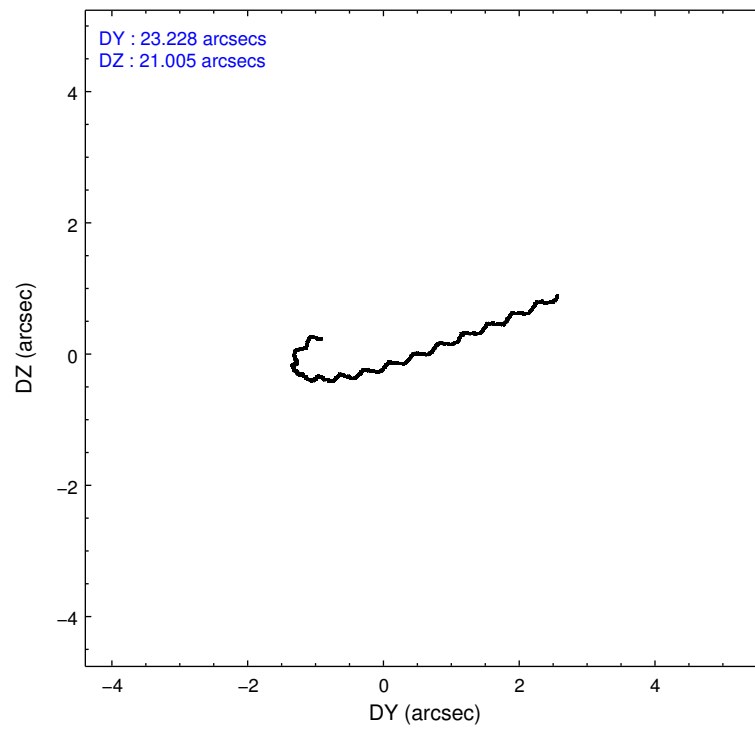
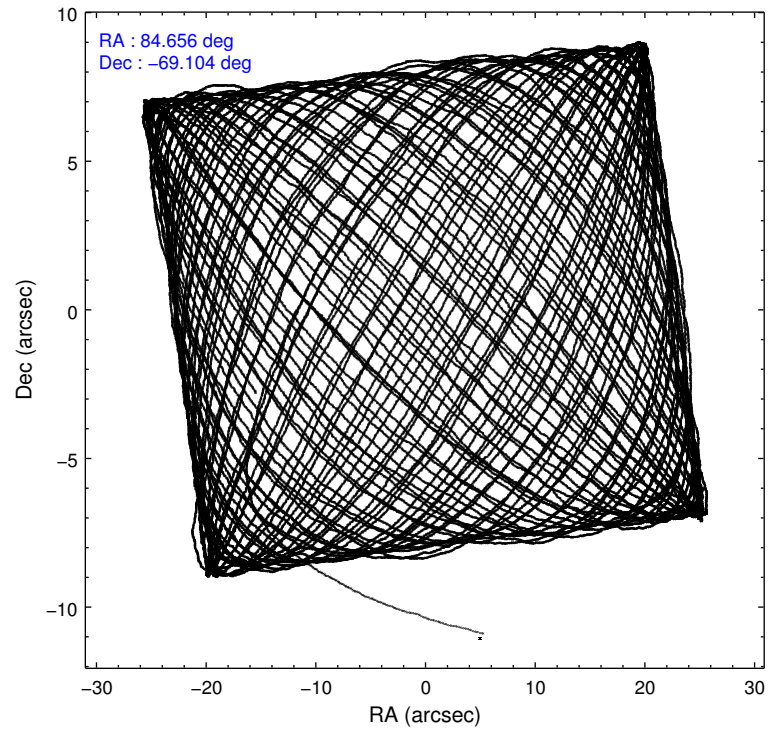
2.1.4 Events

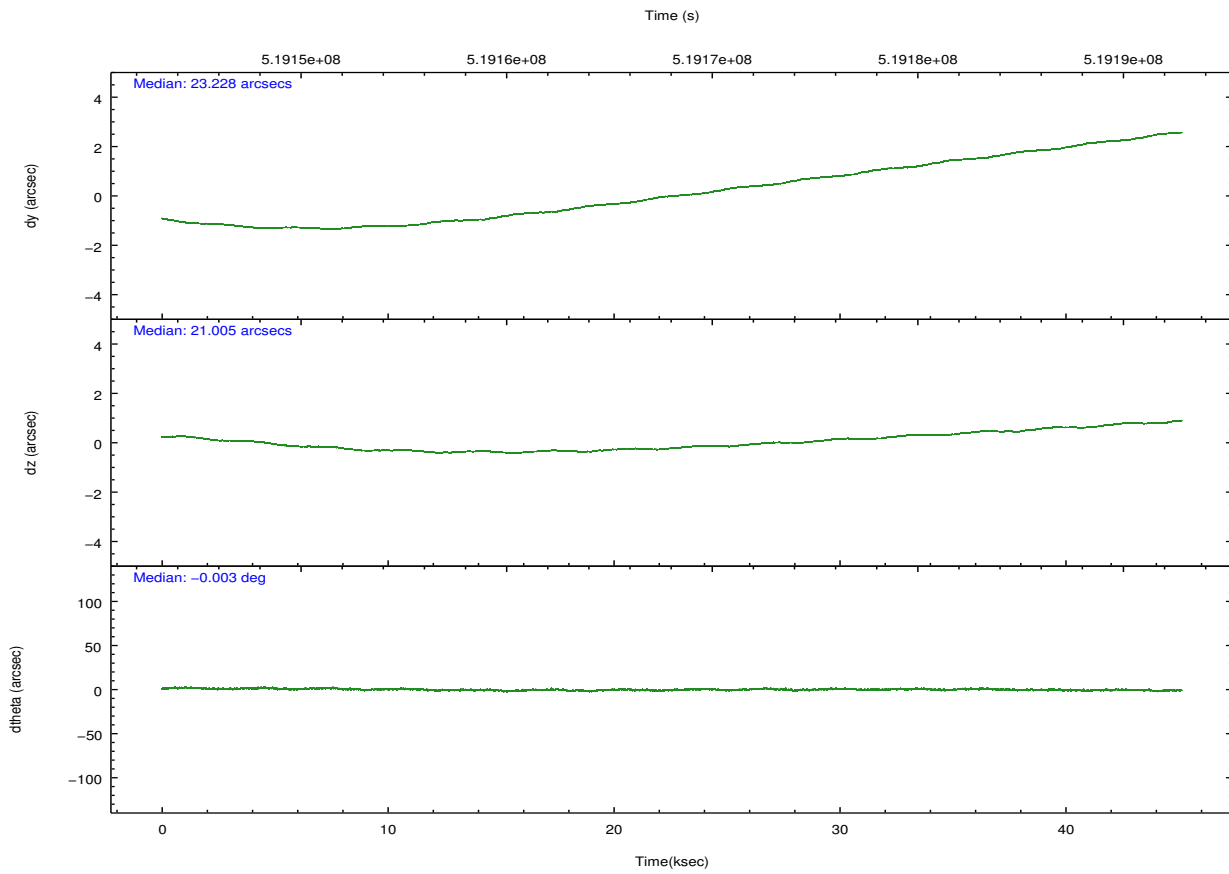
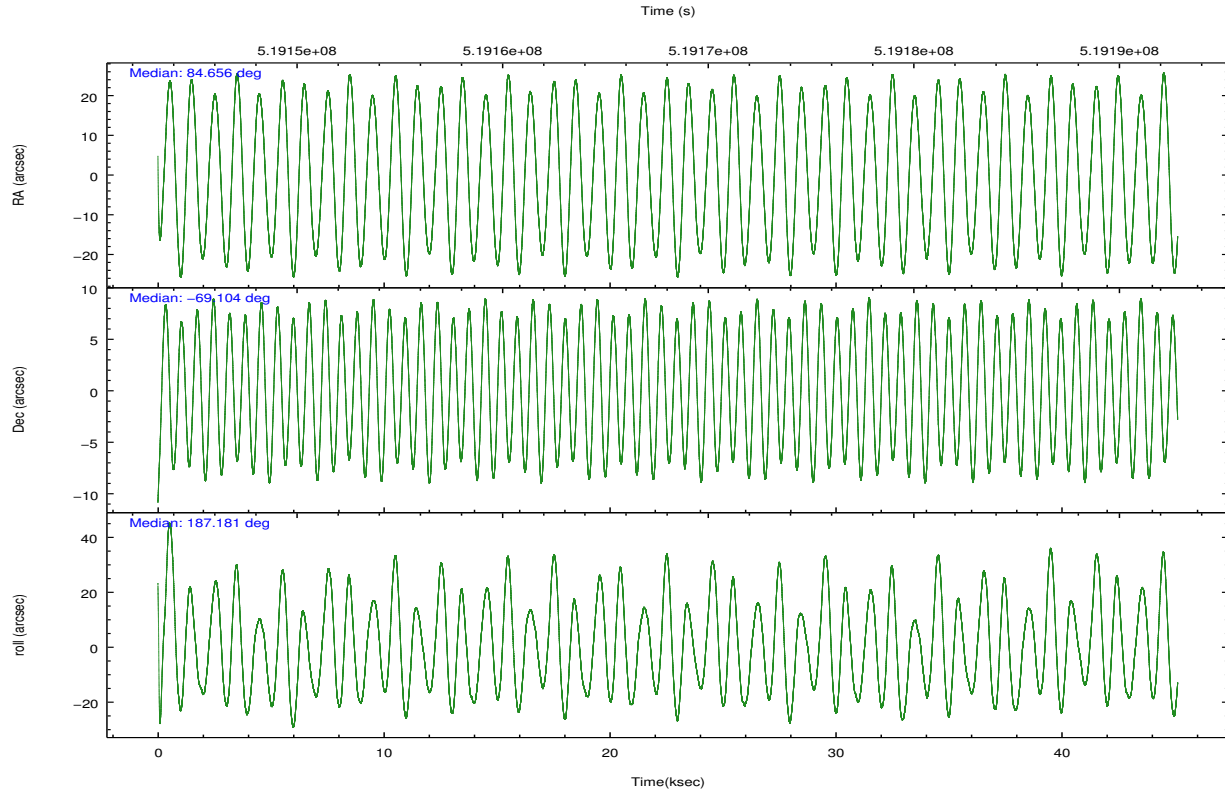
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	194700	193044	244810	213378	216221	389363	grade 0 events	16252	18889	43163	24057	16136	50868
rejected events	162040	156311	179916	172611	183023	128146		8%	9%	17%	11%	7%	13%
rejected %	83%	80%	73%	80%	84%	32%	grade 1 events	136	145	361	202	131	561
								0%	0%	0%	0%	0%	0%
							grade 2 events	6775	6771	9777	6608	6459	64156
								3%	3%	3%	3%	2%	16%
							grade 3 events	2554	2788	3468	2650	2593	26607
								1%	1%	1%	1%	1%	6%
							grade 4 events	2369	2795	3519	2758	2592	26697
								1%	1%	1%	1%	1%	6%
							grade 5 events	8049	8750	7397	9401	9559	26838
								4%	4%	3%	4%	4%	6%
							grade 6 events	4713	5493	4974	4701	5422	92931
								2%	2%	2%	2%	2%	23%
							grade 7 events	153852	147413	172151	163001	173329	100705
								79%	76%	70%	76%	80%	25%

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	84.717223	84.65603620095567	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.087430	-69.10415051241759	CCD I3 on	Y	Y
[deg] Pointing Roll	187.037881	187.1894209547462	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)	519145592.184000	519144401.75291	CCD S5 on	N	N
Observation start date	2014-06-14T15:05:25	2014-06-14T14:46:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	519190592.184000	519191832.09303	On-chip summing requested	N	N
Observation end date	2014-06-15T03:35:25	2014-06-15T03:57:12	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





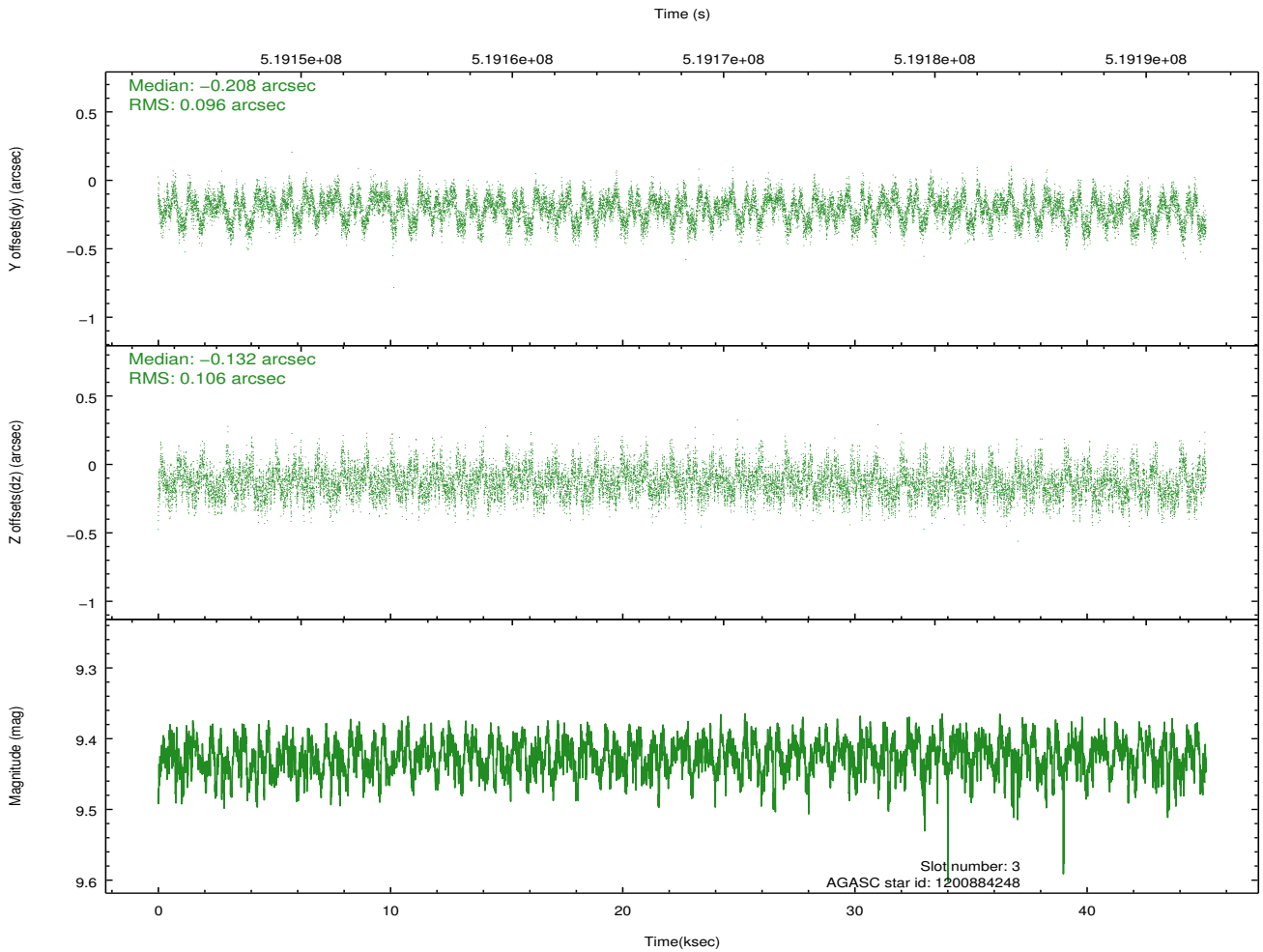
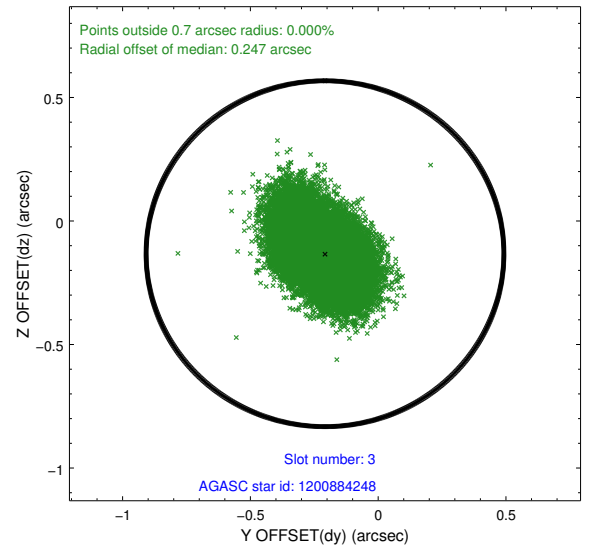
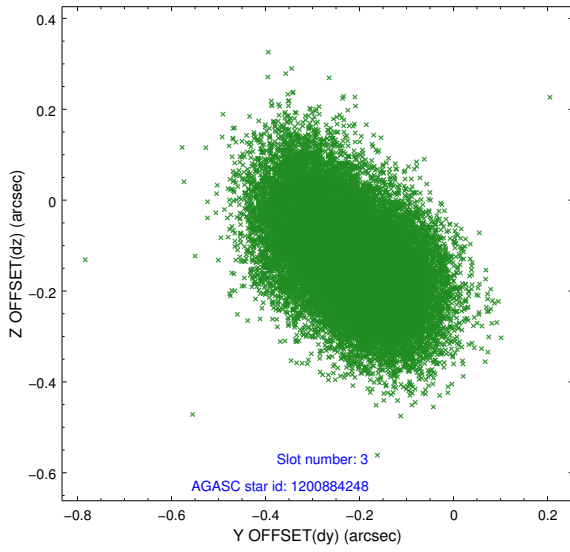
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	11008	0.068	-0.032	0.013	0.028	0.000000	0.000000	915.91	-844.82
1	FID		ACIS-I-5	7.07	11005	-0.276	0.053	0.011	0.018	0.000000	0.000000	-1832.59	1052.68
2	FID		ACIS-I-6	7.08	11008	0.118	0.050	0.014	0.028	0.000000	0.000000	381.44	1697.23
3	GUIDE	used	1200884248	9.42	21995	-0.208	-0.132	0.152	0.246	83.880915	-68.565170	862.49	-1993.25
4	GUIDE	used	1201016584	9.43	21999	0.199	0.290	0.149	0.263	85.677603	-68.415933	-1556.36	-2233.17
5	GUIDE	used	1201018312	9.55	21999	-0.019	-0.369	0.156	0.254	86.298231	-69.115627	-1997.62	374.91
6	GUIDE	used	1201018384	9.03	21992	0.085	0.166	0.241	0.334	85.801362	-68.593260	-1630.27	-1578.35
7	GUIDE	used	1201020040	8.58	21943	-0.070	0.021	0.130	0.195	85.379163	-68.879396	-943.07	-633.30

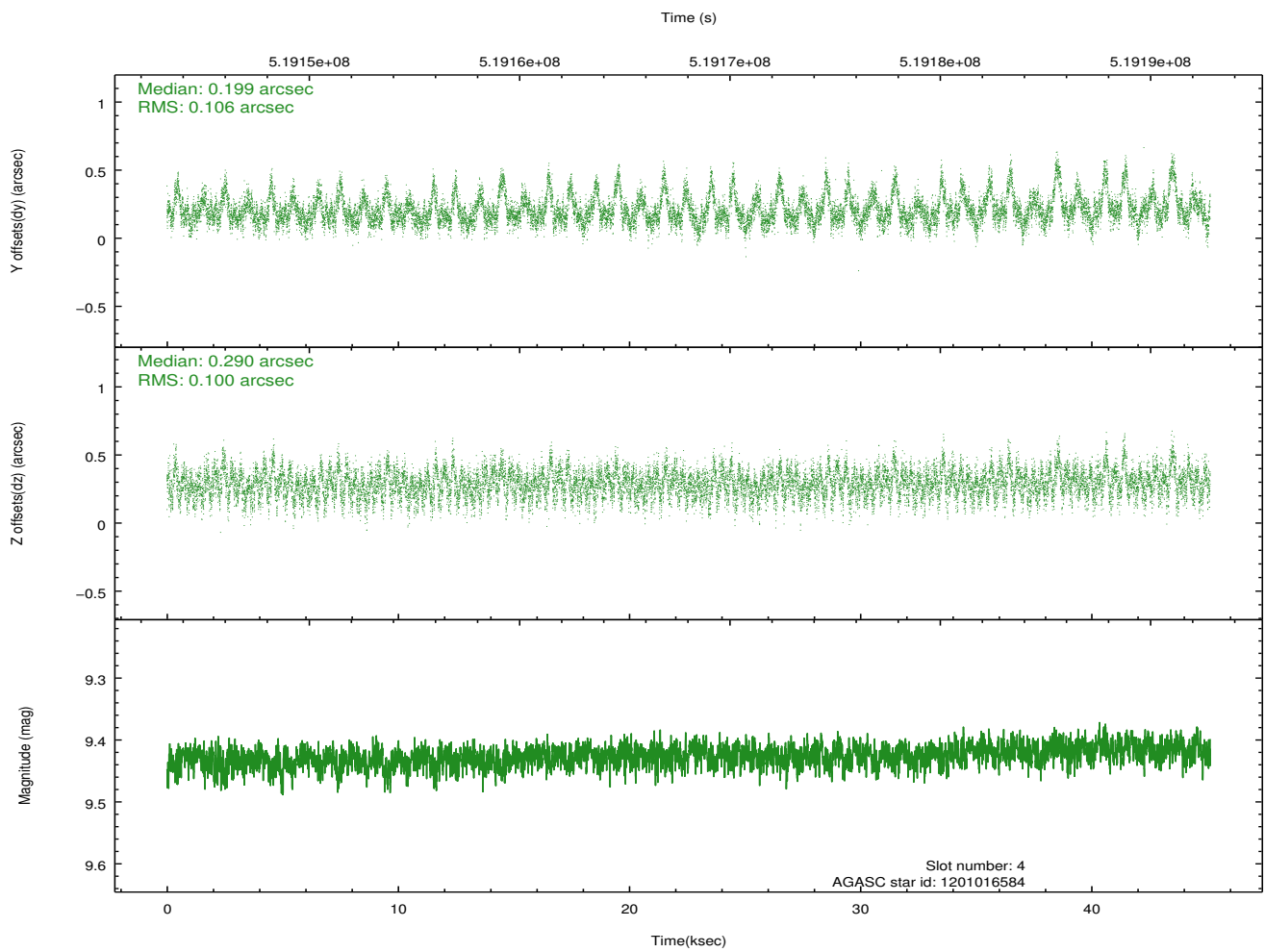
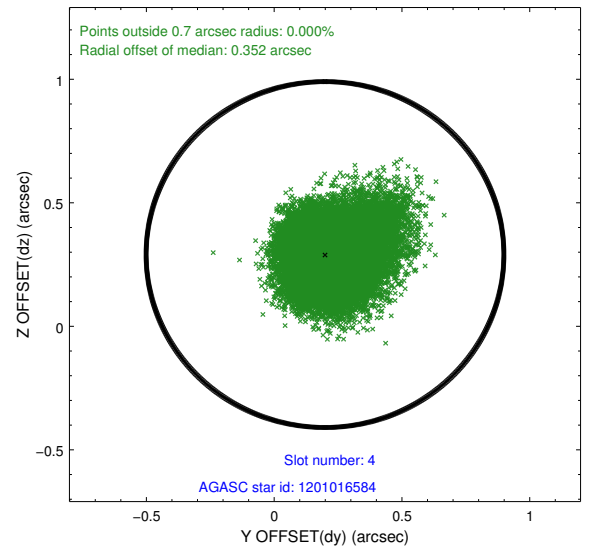
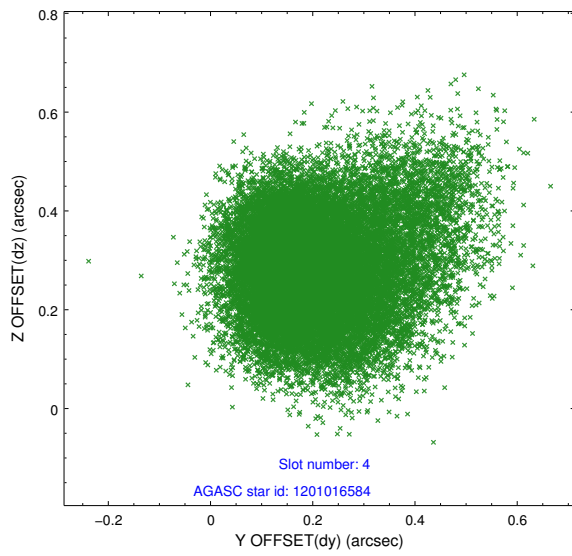
∞

2.4 Star Slots

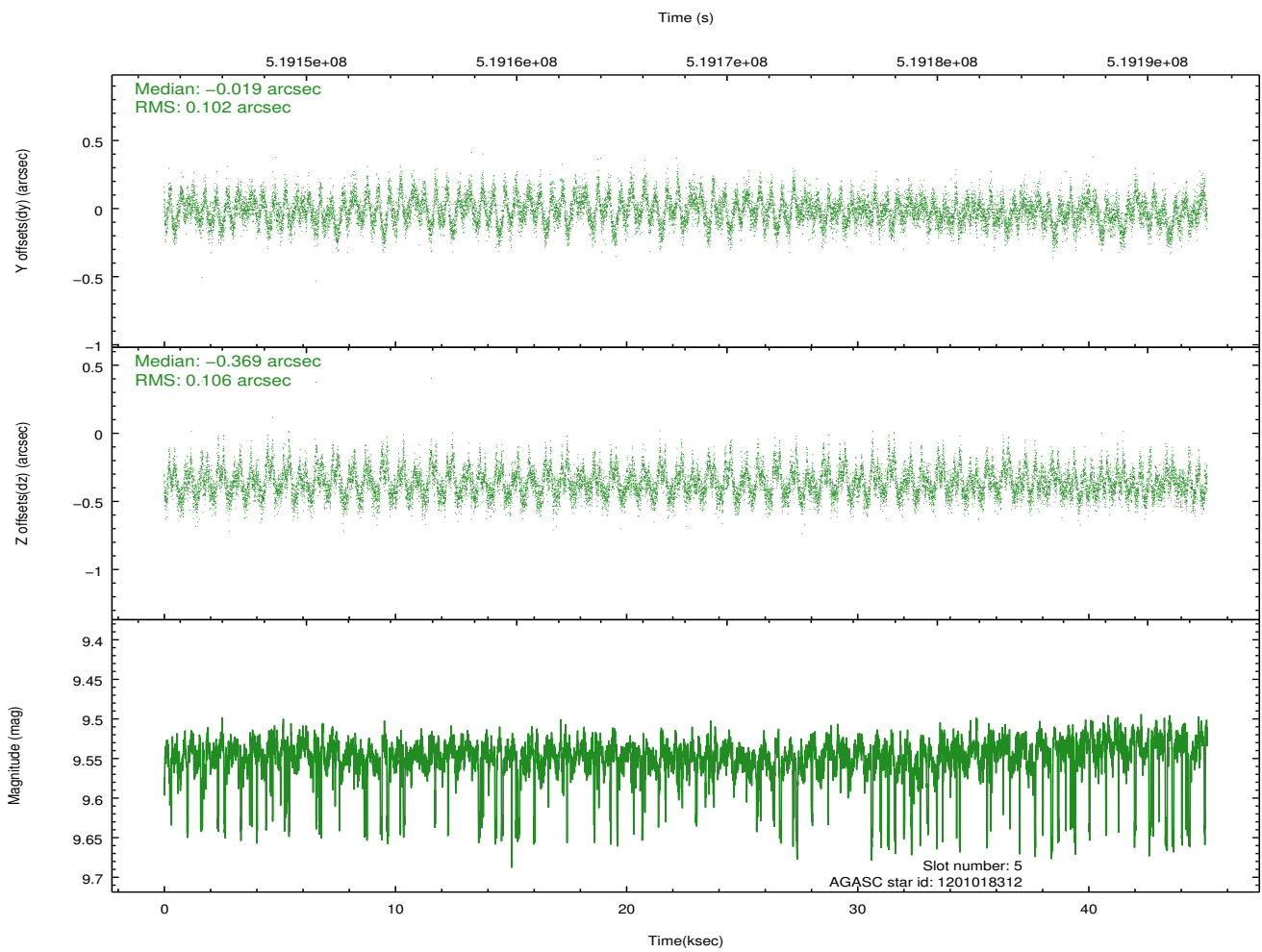
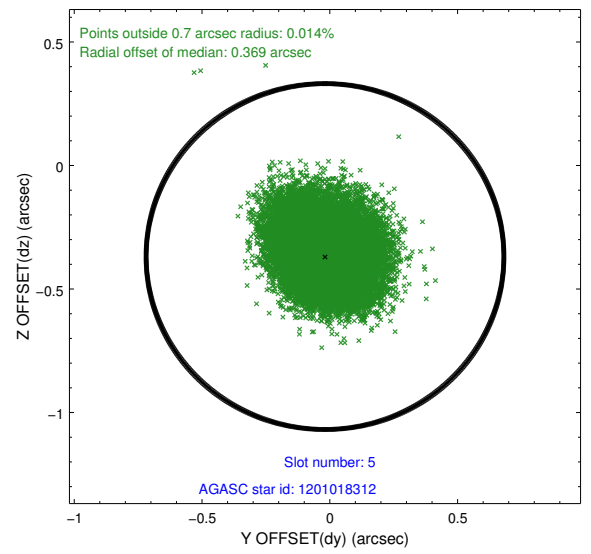
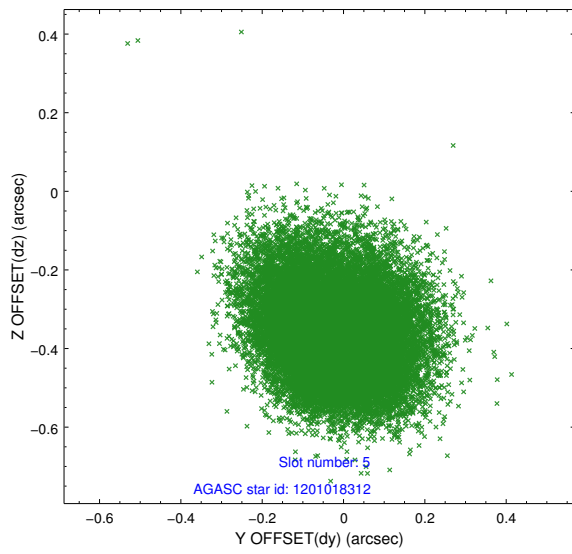
2.4.1 Slot 3



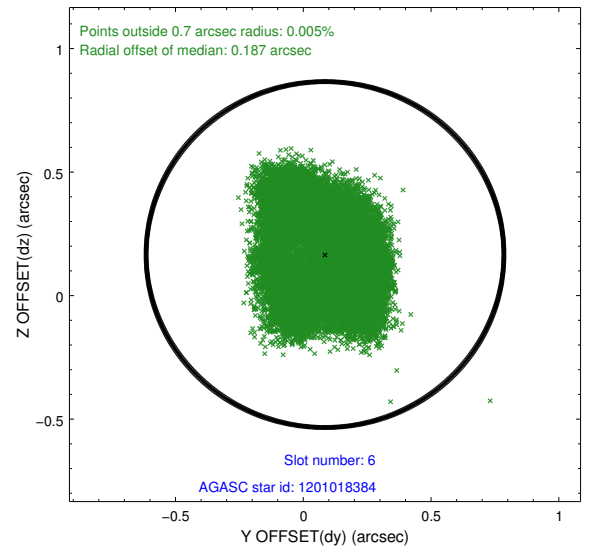
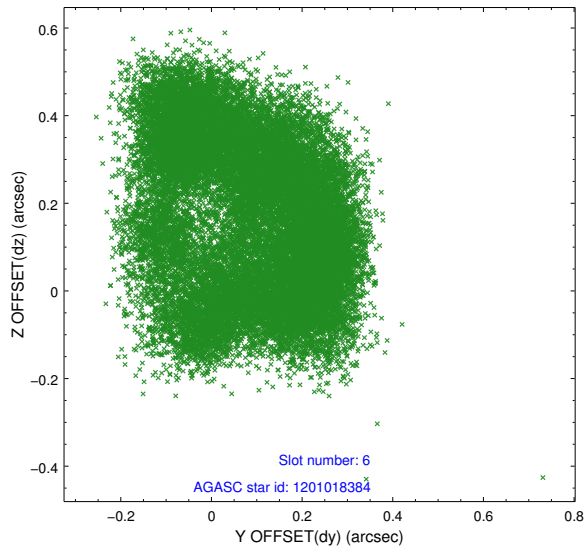
2.4.2 Slot 4



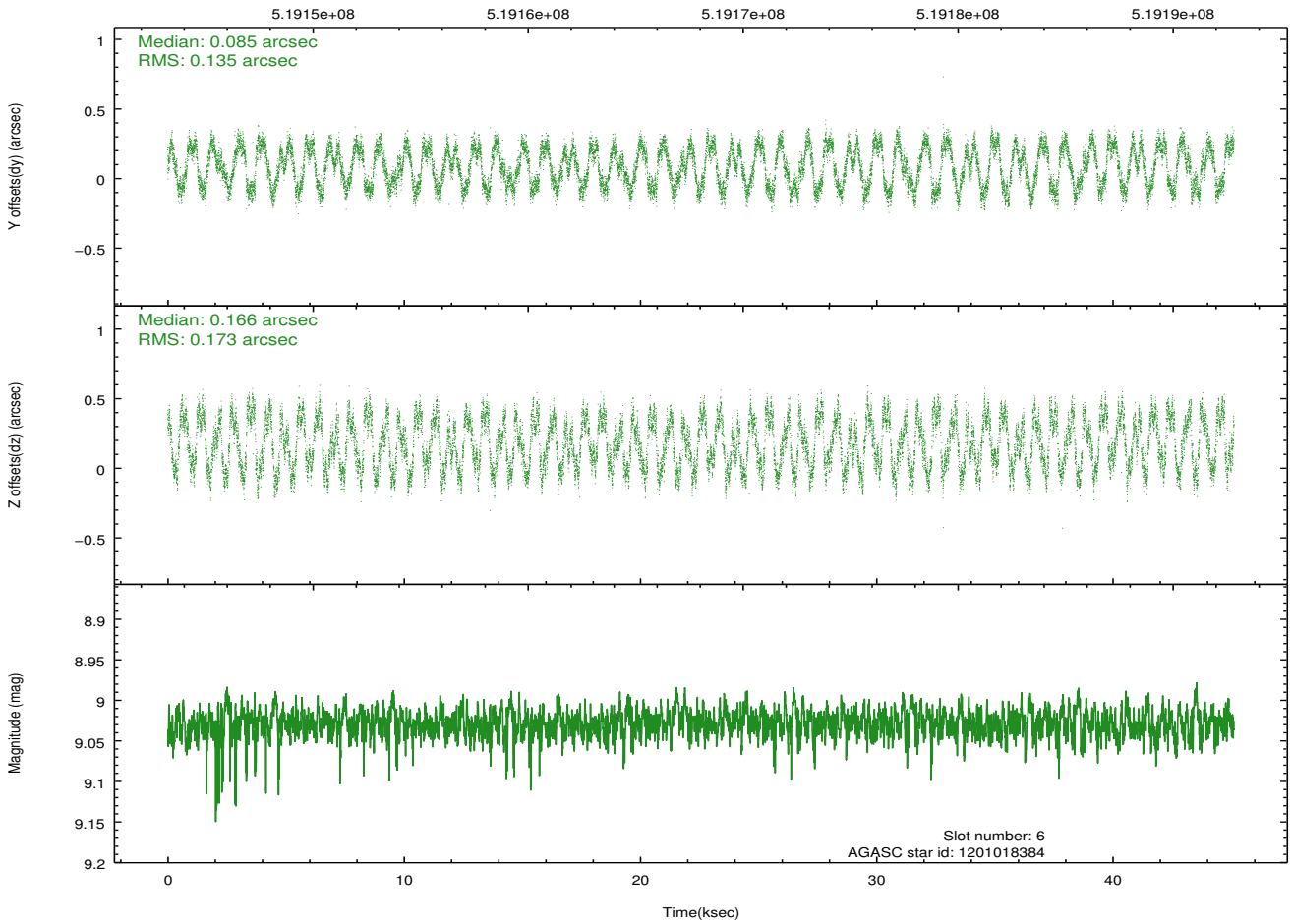
2.4.3 Slot 5



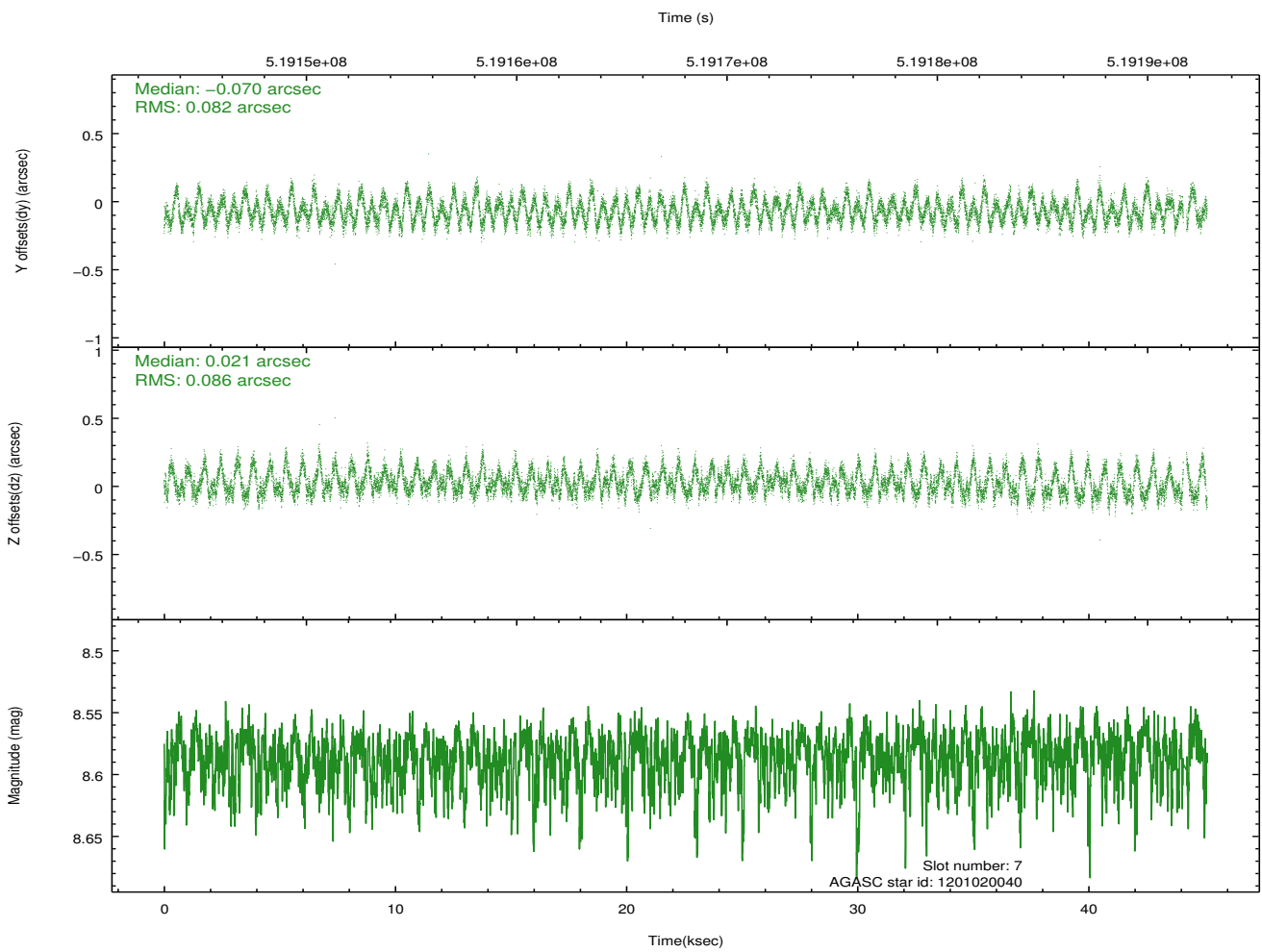
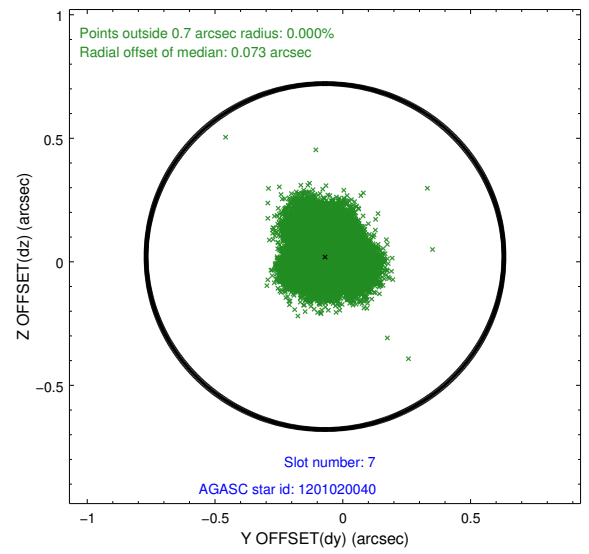
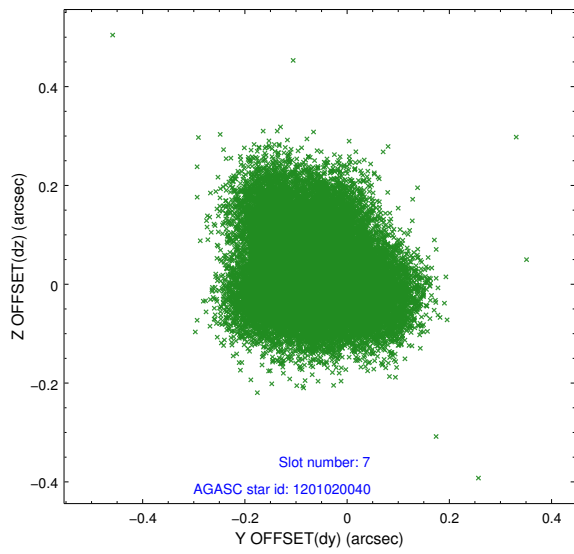
2.4.4 Slot 6



Time (s)

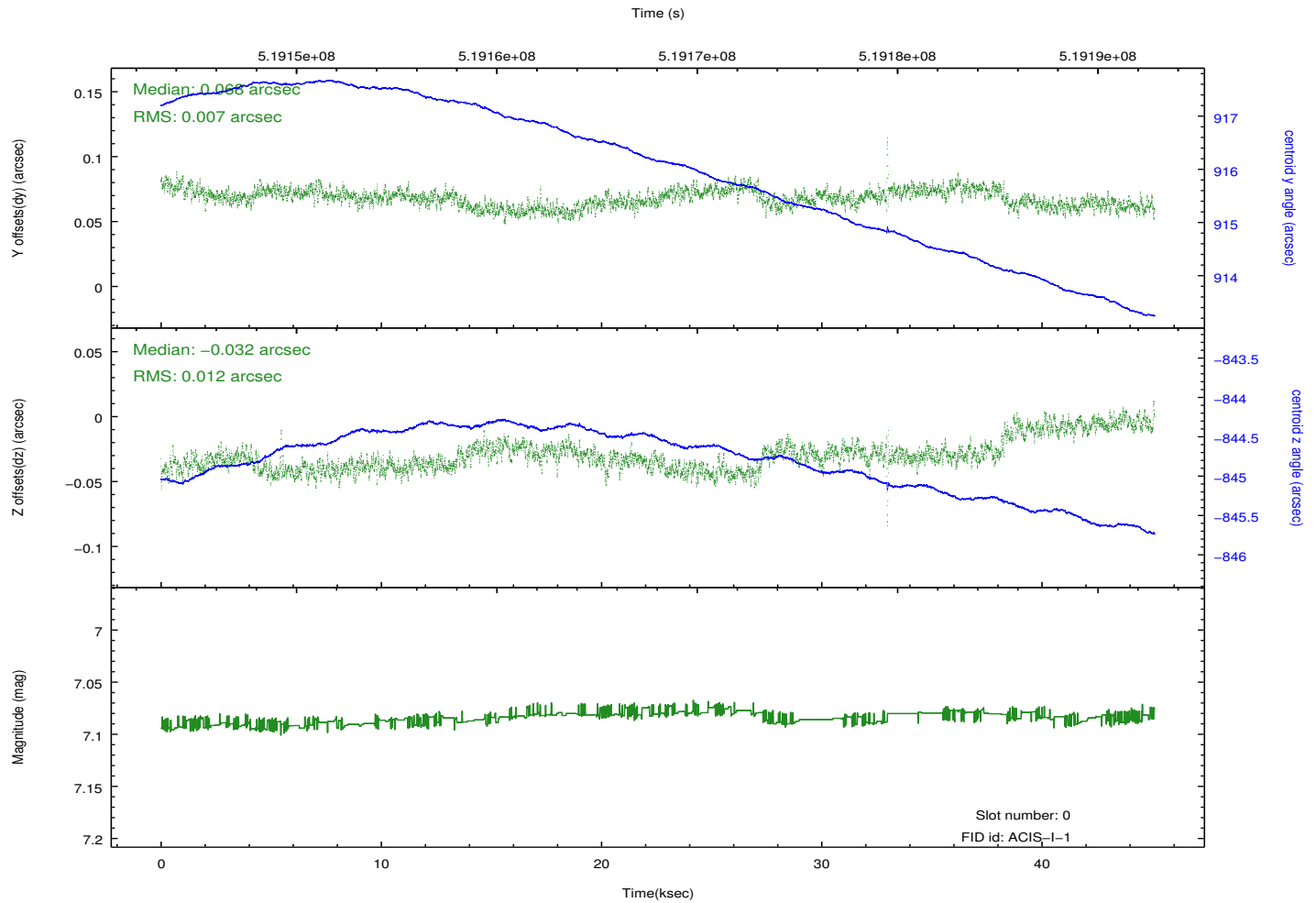
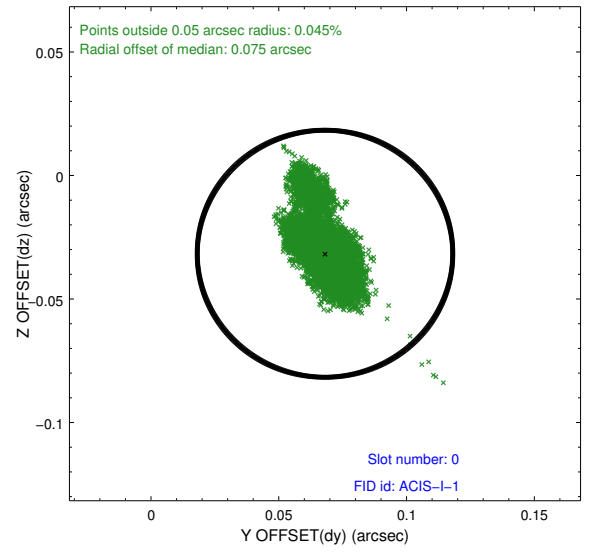
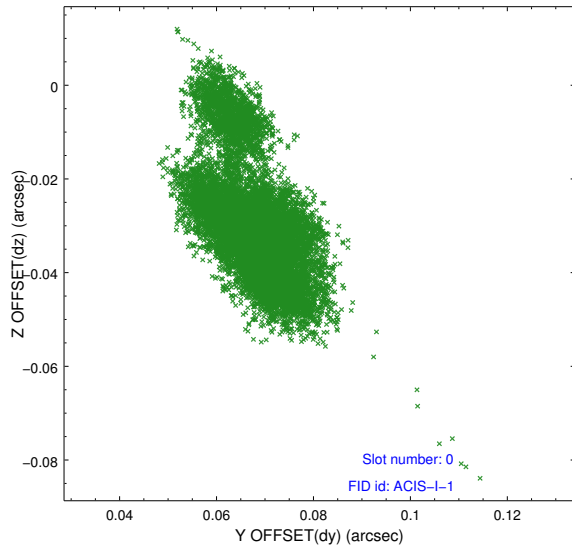


2.4.5 Slot 7

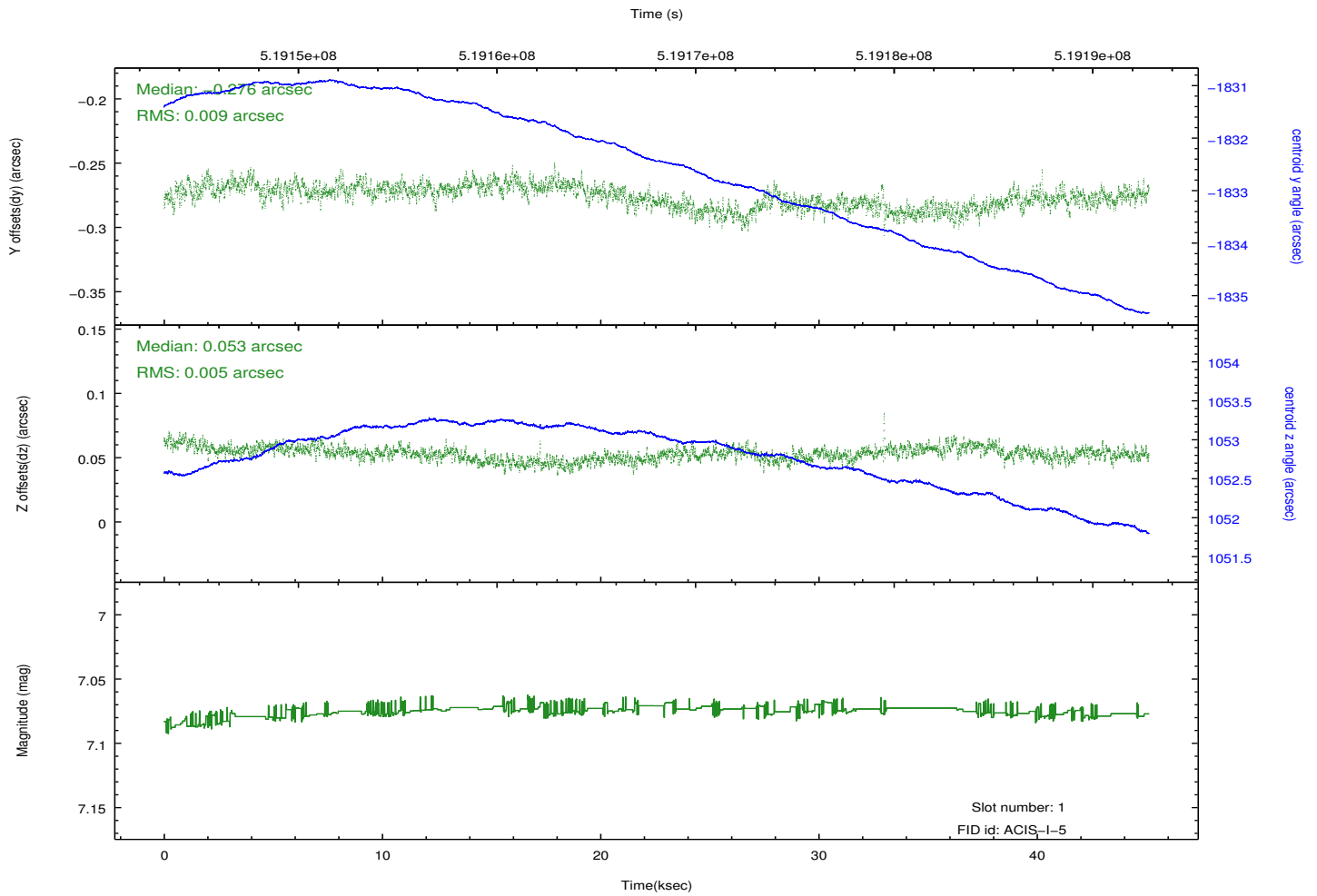
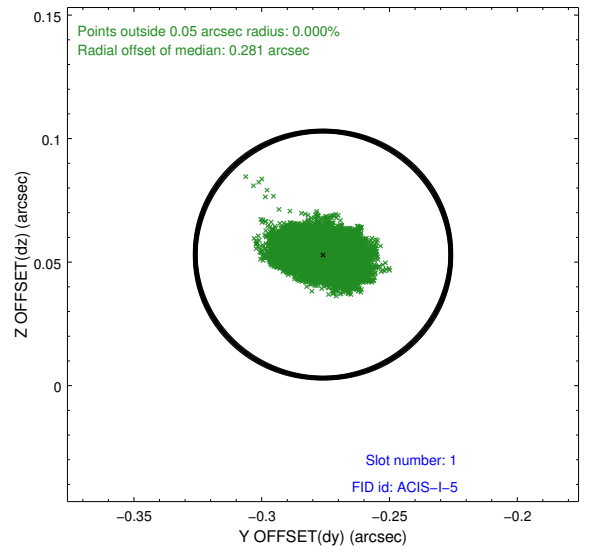
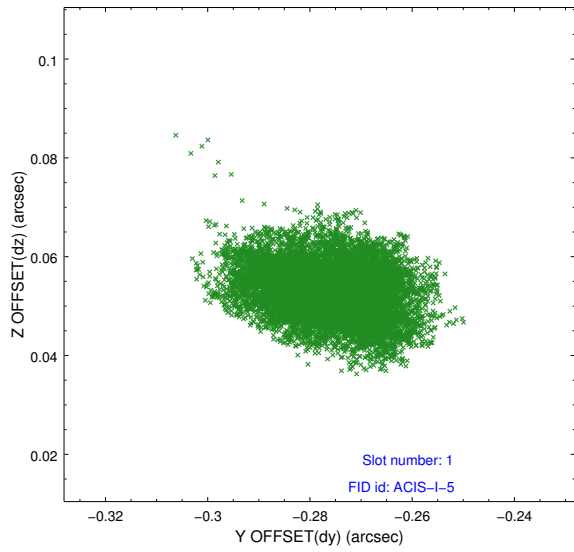


2.5 FID Slots

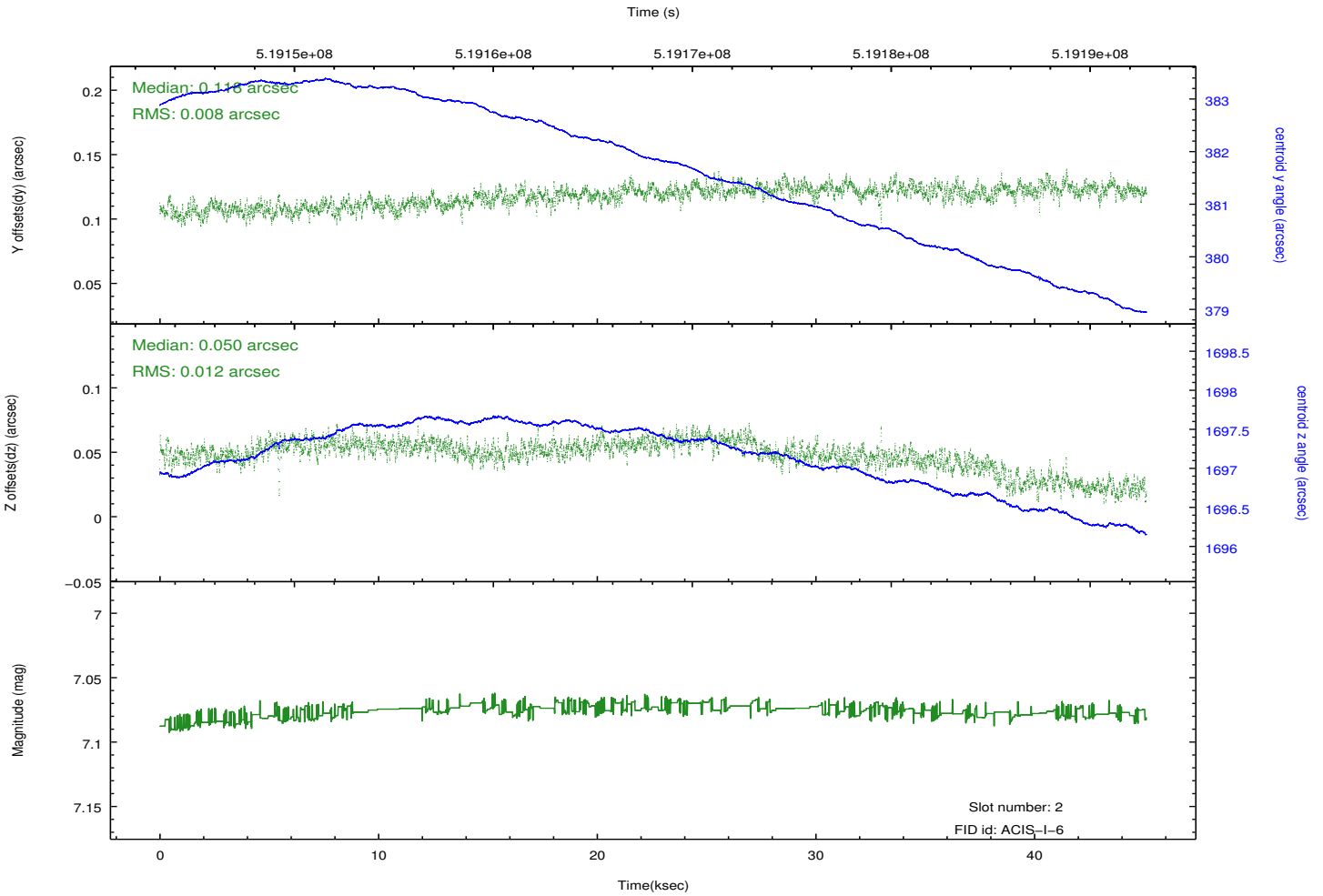
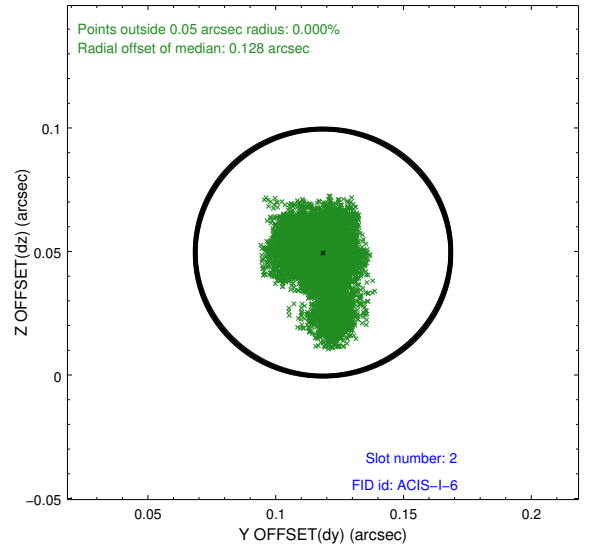
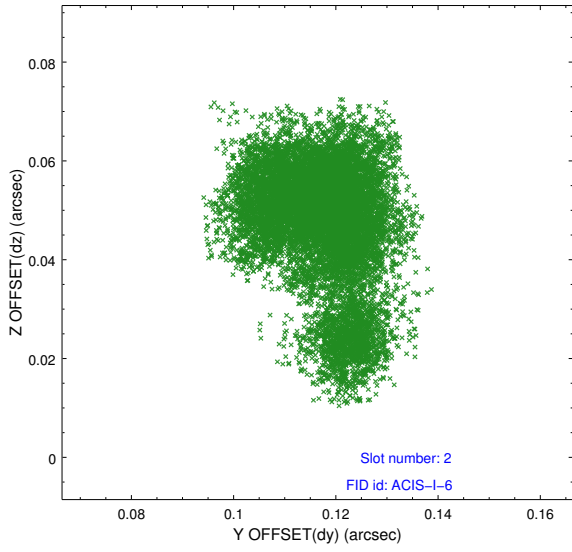
2.5.1 Slot 0



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)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	44.969138363957

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.