

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 14503 - L2 Version 2
Chandra X-Ray Center

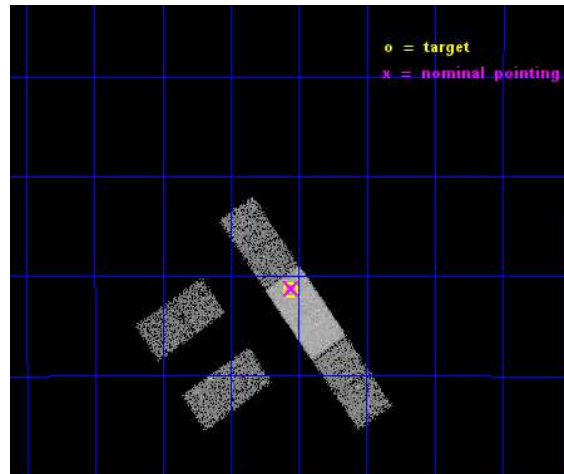
L2 Processing Date : Dec 8 2014

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1 Front

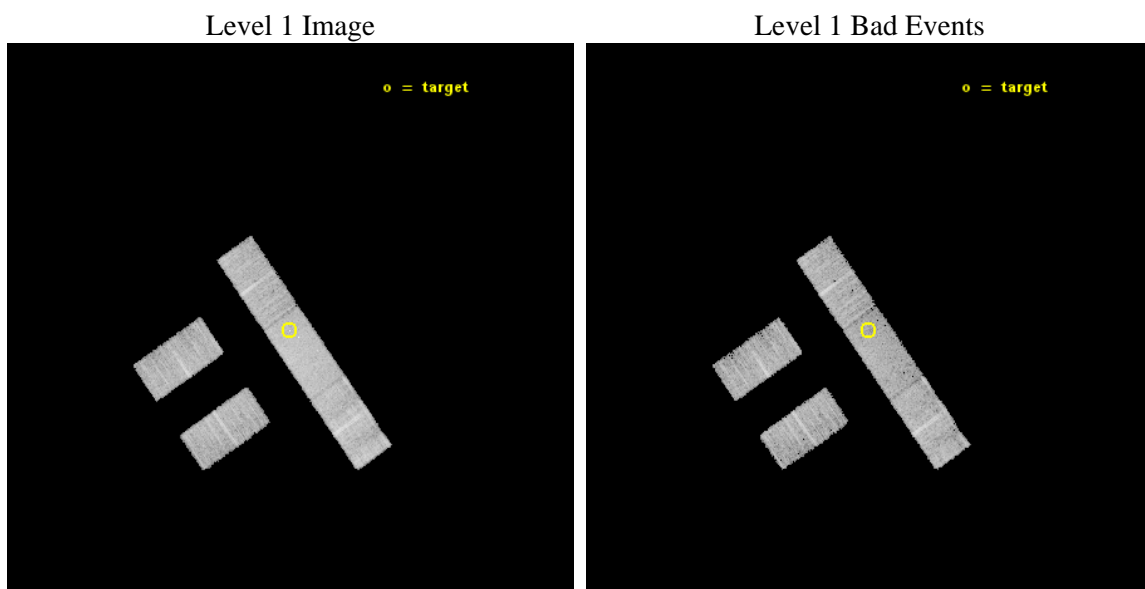
seq_num	702740	Sequence number
obs_id	14503	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	HE1104-1805	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.639583	Observer's specified target RA [deg]
dec_targ	-18.356722	Observer's specified target Dec [deg]
ra_nom	166.63838257024	Nominal RA [deg]
dec_nom	-18.353940814809	Nominal Dec [deg]
roll_nom	55.156199801584	Nominal Roll [deg]
revision	2	Processing version of data
ontime	13115.244585335	Sum of GTIs [s]
livetime	12806.090494802	Livetime [s]
ontime2	13115.080425322	Sum of GTIs [s]
ontime3	13115.162505329	Sum of GTIs [s]
ontime6	13115.203545332	Sum of GTIs [s]
ontime7	13115.244585335	Sum of GTIs [s]
ontime8	13115.121465325	Sum of GTIs [s]
l2events	34018	Number of level 2 events



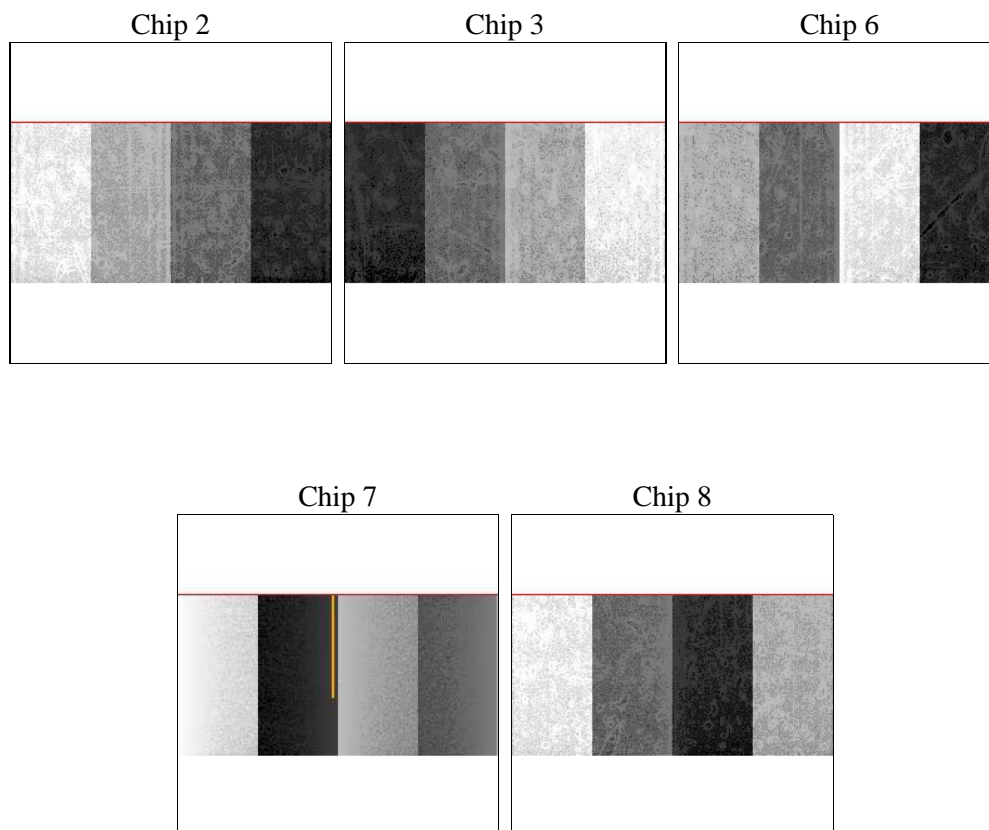
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	13049.957000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	13115.244585335	Sum of GTIs [s]
caldbver	4.6.4	 	ontime2	13115.080425322	Sum of GTIs [s]
date	2014-12-08T07:36:57	Date and time of file creation	ontime3	13115.162505329	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	13115.203545332	Sum of GTIs [s]
			ontime7	13115.244585335	Sum of GTIs [s]
			ontime8	13115.121465325	Sum of GTIs [s]
			l1events	188522	Number of level 1 events

2.1.4 Events

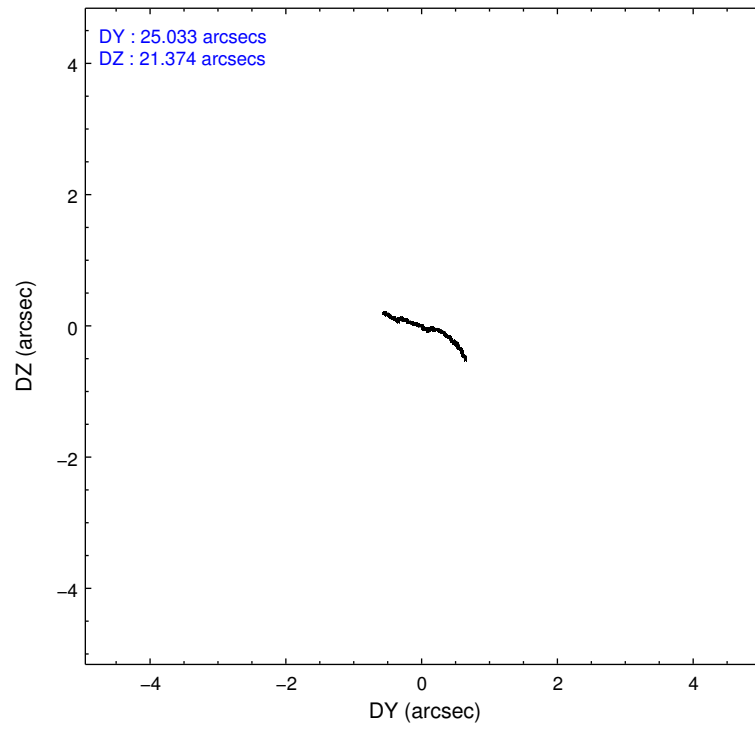
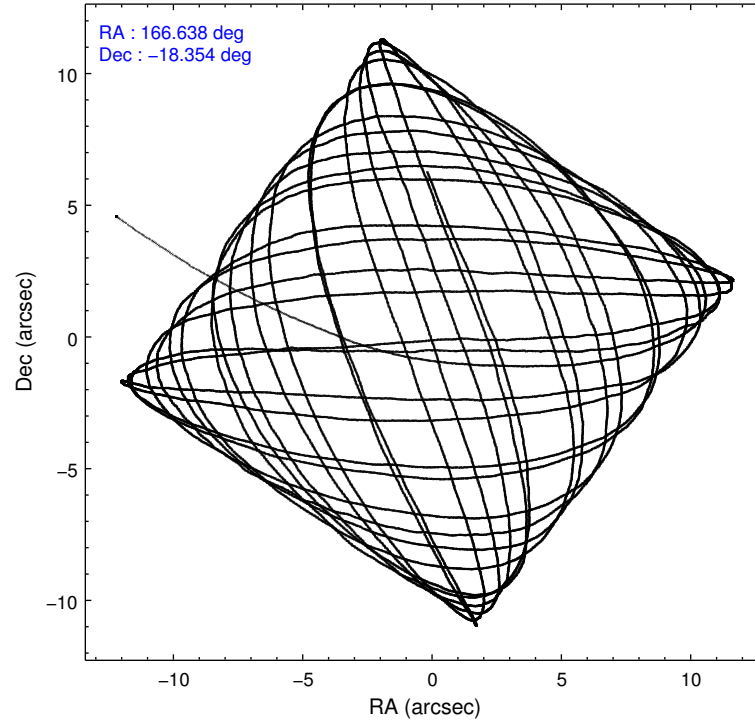
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	32262	31853	33977	45014	45416
rejected events	28572	27931	29685	24555	33311
rejected %	88%	87%	87%	54%	73%

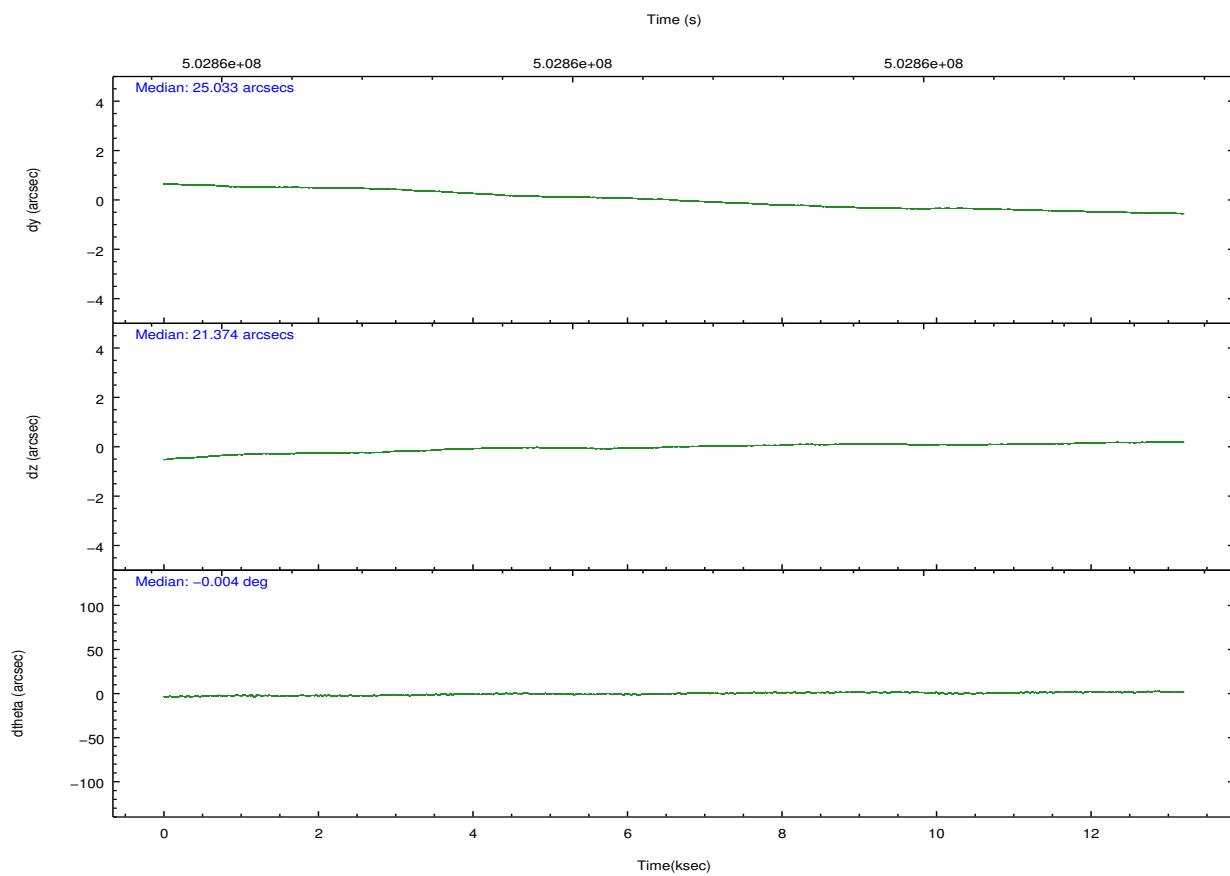
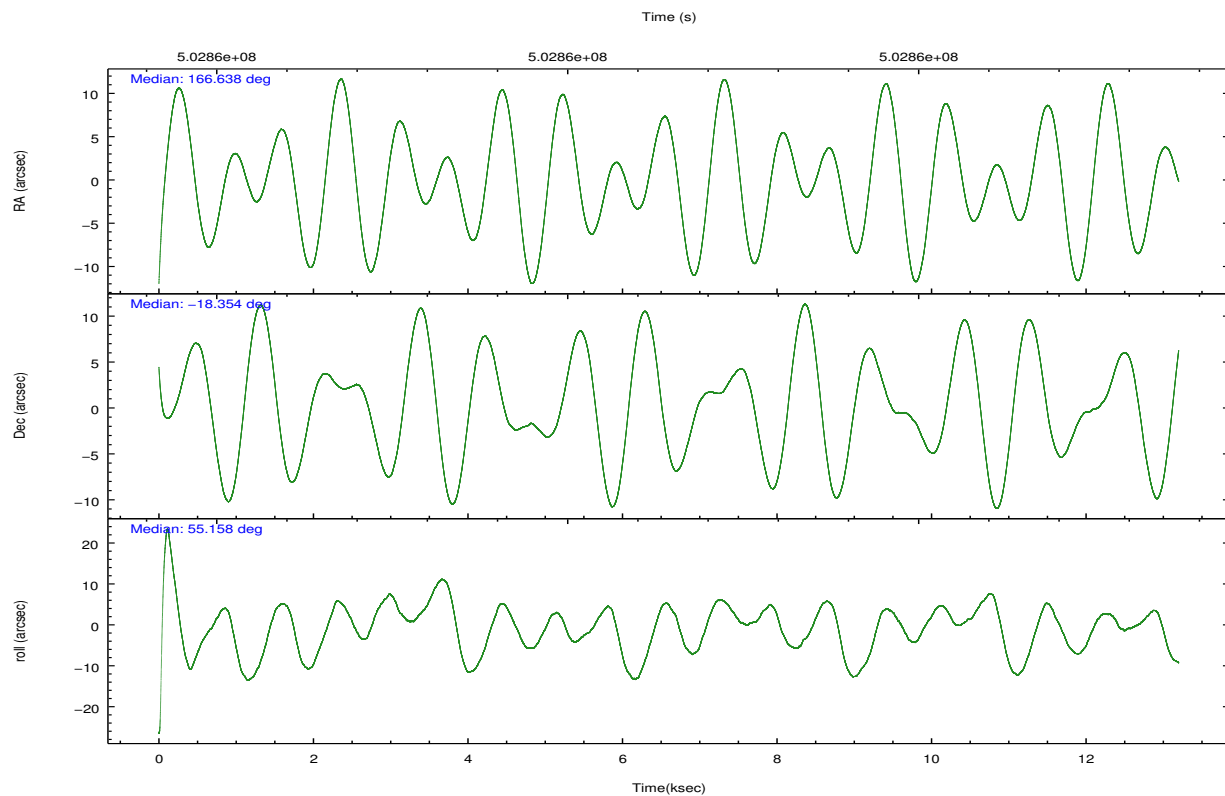
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1226	1320	1461	2162	3602
	3%	4%	4%	4%	7%
grade 1 events	10	11	19	50	32
	0%	0%	0%	0%	0%
grade 2 events	843	818	923	4236	2608
	2%	2%	2%	9%	5%
grade 3 events	408	480	502	1962	1294
	1%	1%	1%	4%	2%
grade 4 events	494	477	498	1899	1330
	1%	1%	1%	4%	2%
grade 5 events	1333	1720	1770	4814	2491
	4%	5%	5%	10%	5%
grade 6 events	719	829	909	10211	3271
	2%	2%	2%	22%	7%
grade 7 events	27229	26198	27895	19680	30788
	84%	82%	82%	43%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	166.636314	166.6383825702384	CCD I2 on	O4	Y
[deg] Pointing Dec	-18.381203	-18.35394081480855	CCD I3 on	O3	Y
[deg] Pointing Roll	54.998972	55.15619980158399	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O2	Y
[s] Observation start time (MET)	502854996.184000	502853985.65549	CCD S5 on	N	N
Observation start date	2013-12-08T01:55:29	2013-12-08T01:39:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	502868046.184000	502868273.13128	On-chip summing requested	N	N
Observation end date	2013-12-08T05:32:59	2013-12-08T05:37:53	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



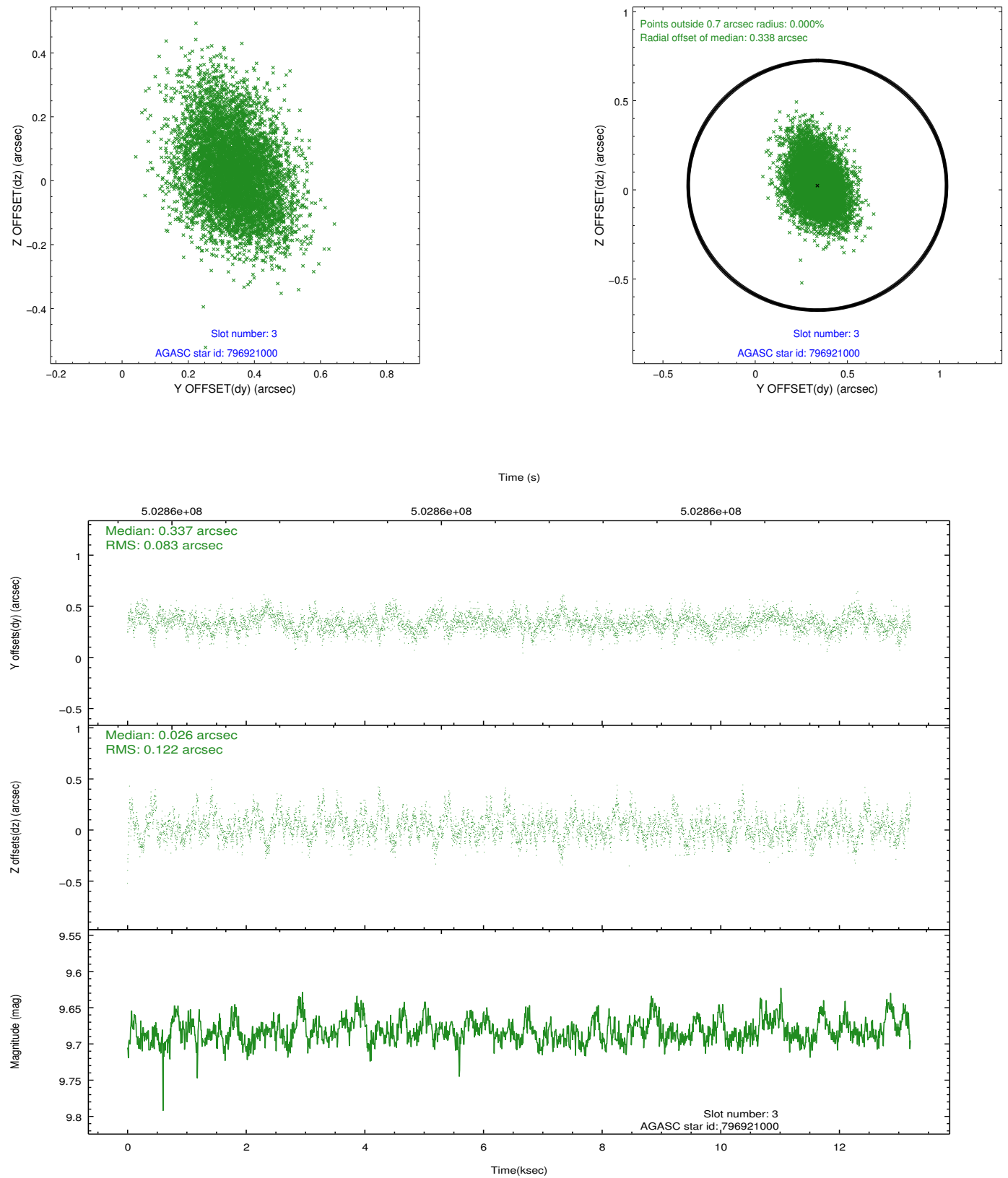


Slot Statistics

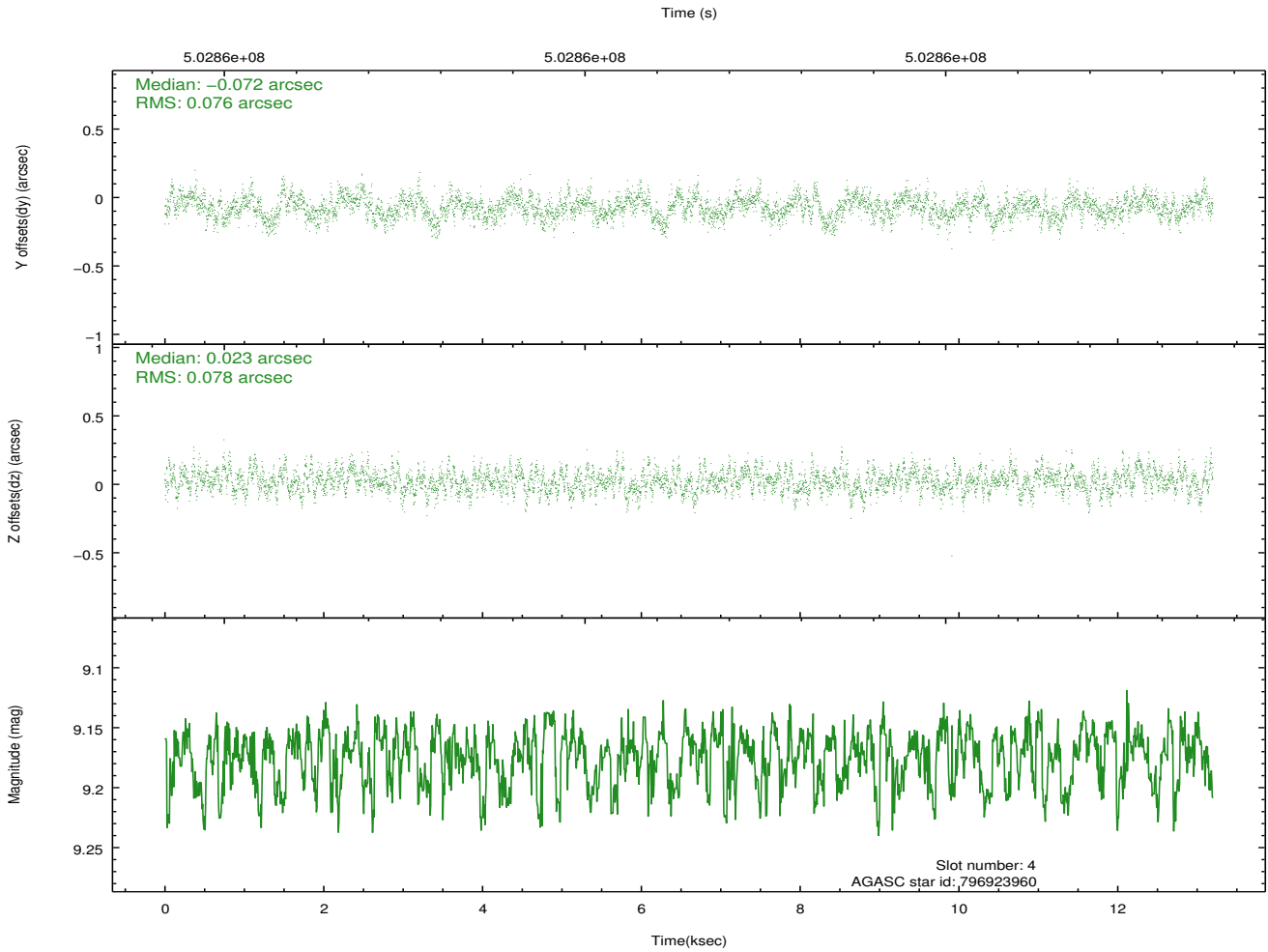
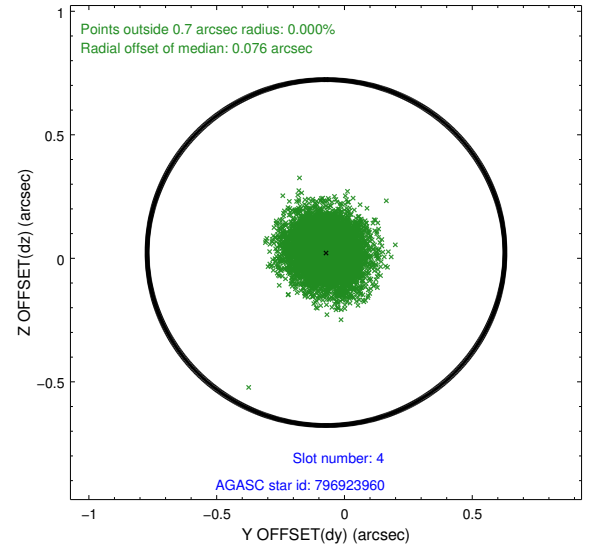
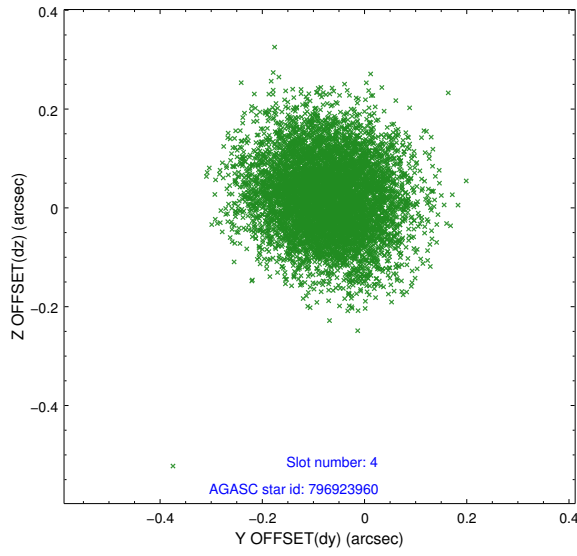
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.99	3220	-0.178	-0.015	0.012	0.018	0.000000	0.000000	-778.47	-1742.84
1	FID		ACIS-S-4	7.09	3220	0.344	0.090	0.006	0.011	0.000000	0.000000	2135.17	165.35
2	FID		ACIS-S-5	7.11	3219	-0.197	-0.066	0.014	0.022	0.000000	0.000000	-1830.86	159.31
3	GUIDE	used	796921000	9.68	6430	0.337	0.026	0.154	0.264	166.658084	-18.401963	-17.98	-103.37
4	GUIDE	used	796923960	9.17	6438	-0.072	0.023	0.117	0.187	167.114946	-18.113690	1726.56	-789.64
5	GUIDE	used	796928784	8.42	6430	-0.582	-0.223	0.092	0.149	166.853792	-17.800971	2138.24	587.29
6	GUIDE	used	796928880	9.89	6434	0.564	0.295	0.265	0.431	166.621408	-18.801010	-1268.40	-825.86
7	GUIDE	used	796930872	10.09	6282	-0.279	-0.142	0.337	0.478	166.504684	-19.082395	-2325.05	-1080.99

2.4 Star Slots

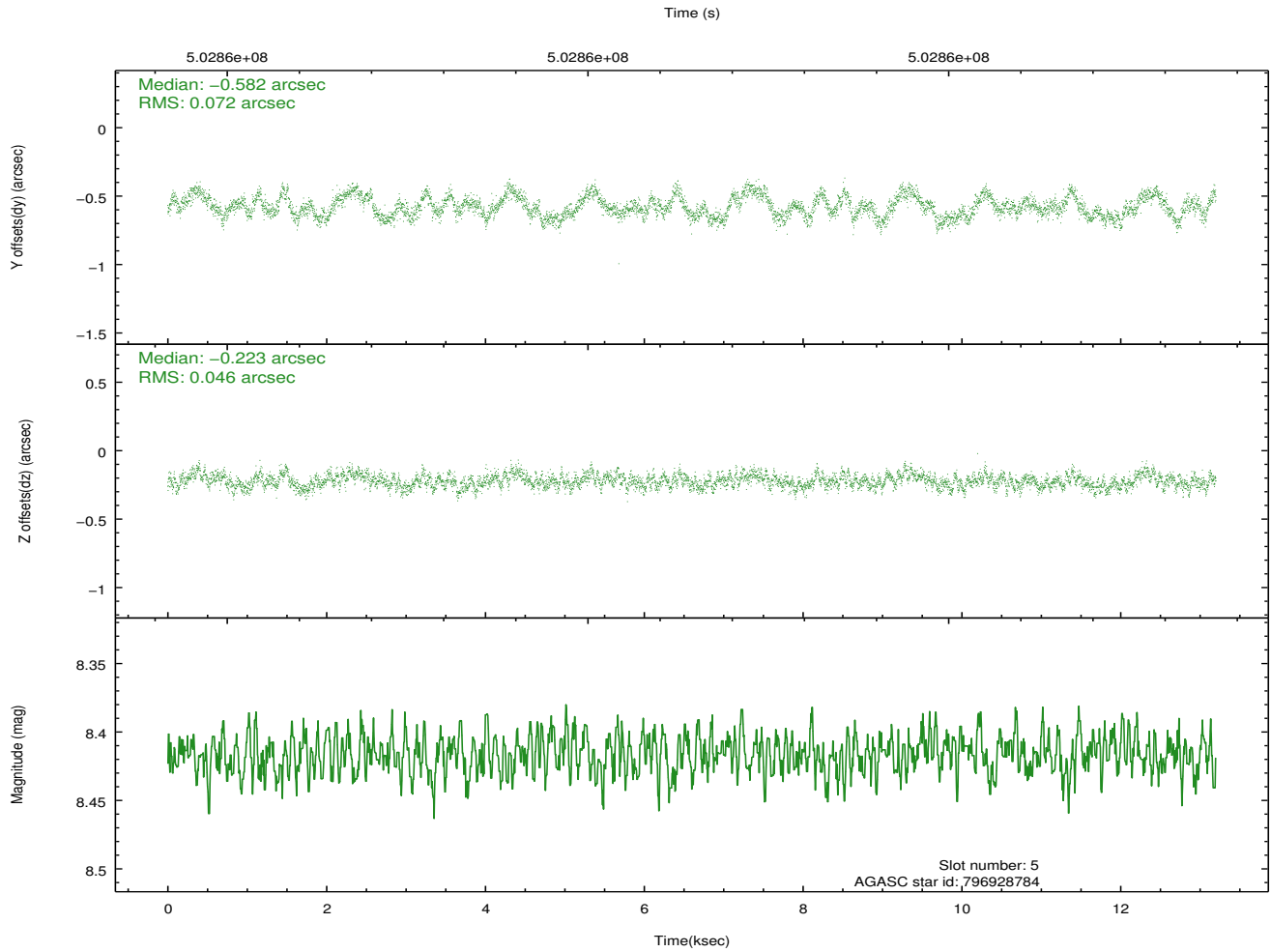
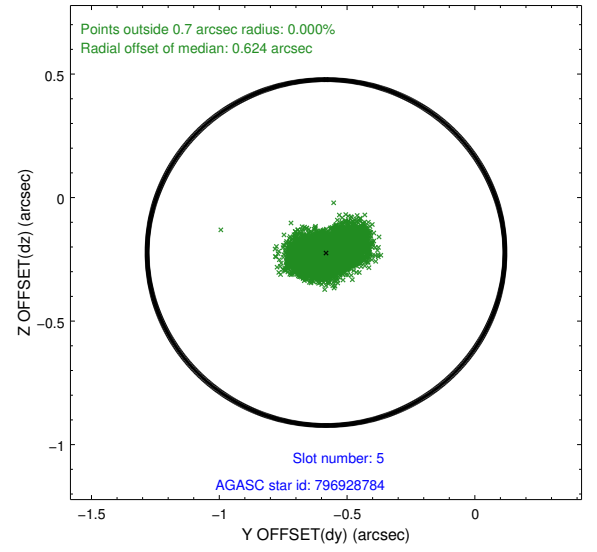
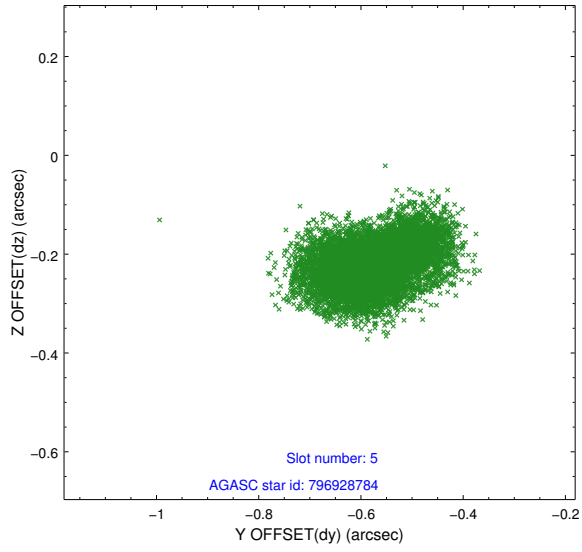
2.4.1 Slot 3



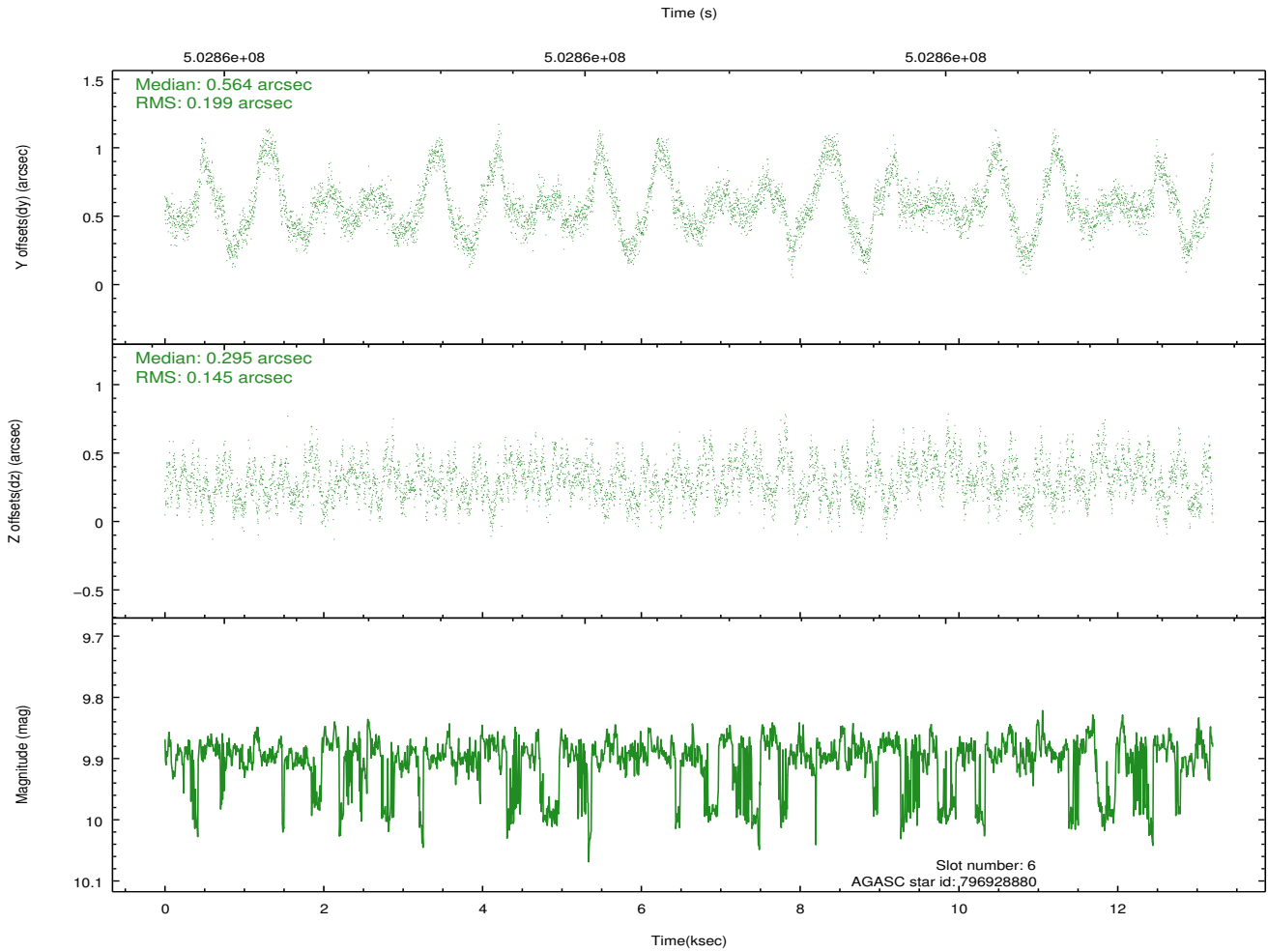
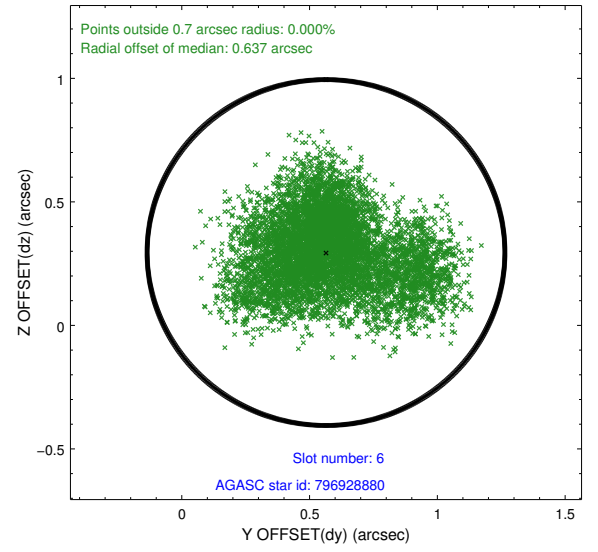
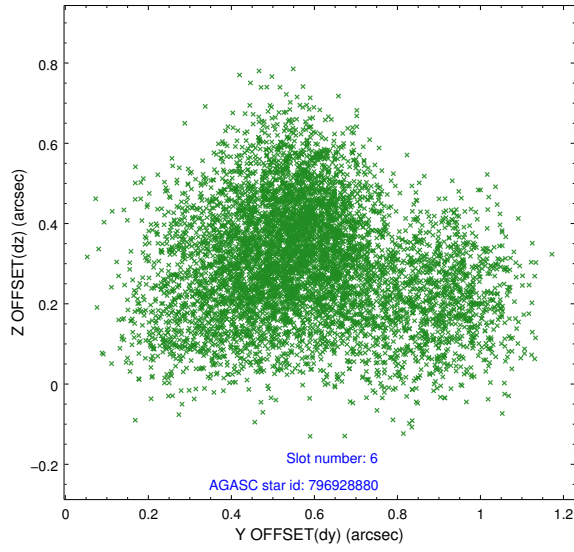
2.4.2 Slot 4



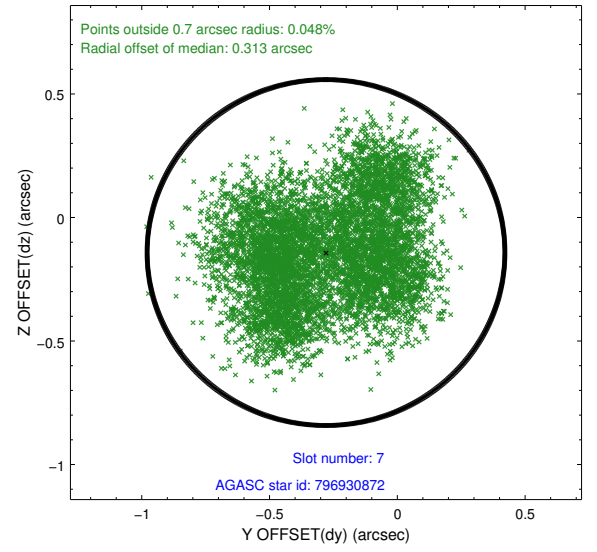
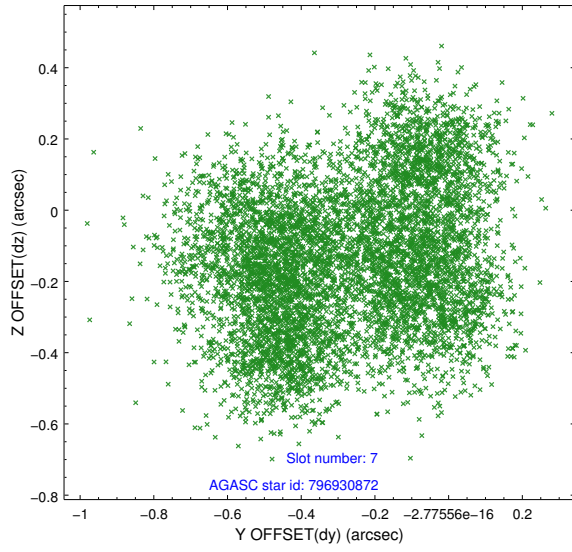
2.4.3 Slot 5



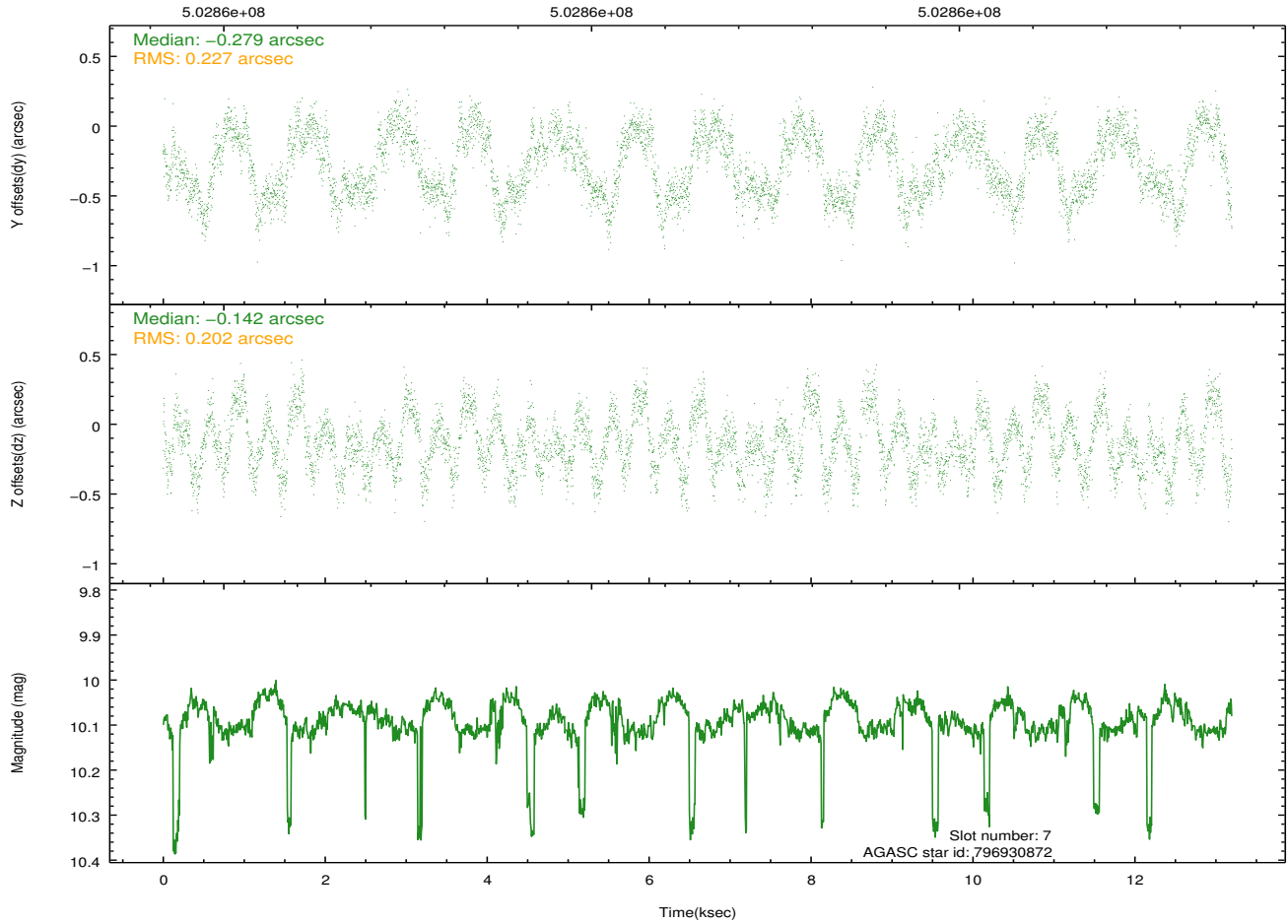
2.4.4 Slot 6



2.4.5 Slot 7

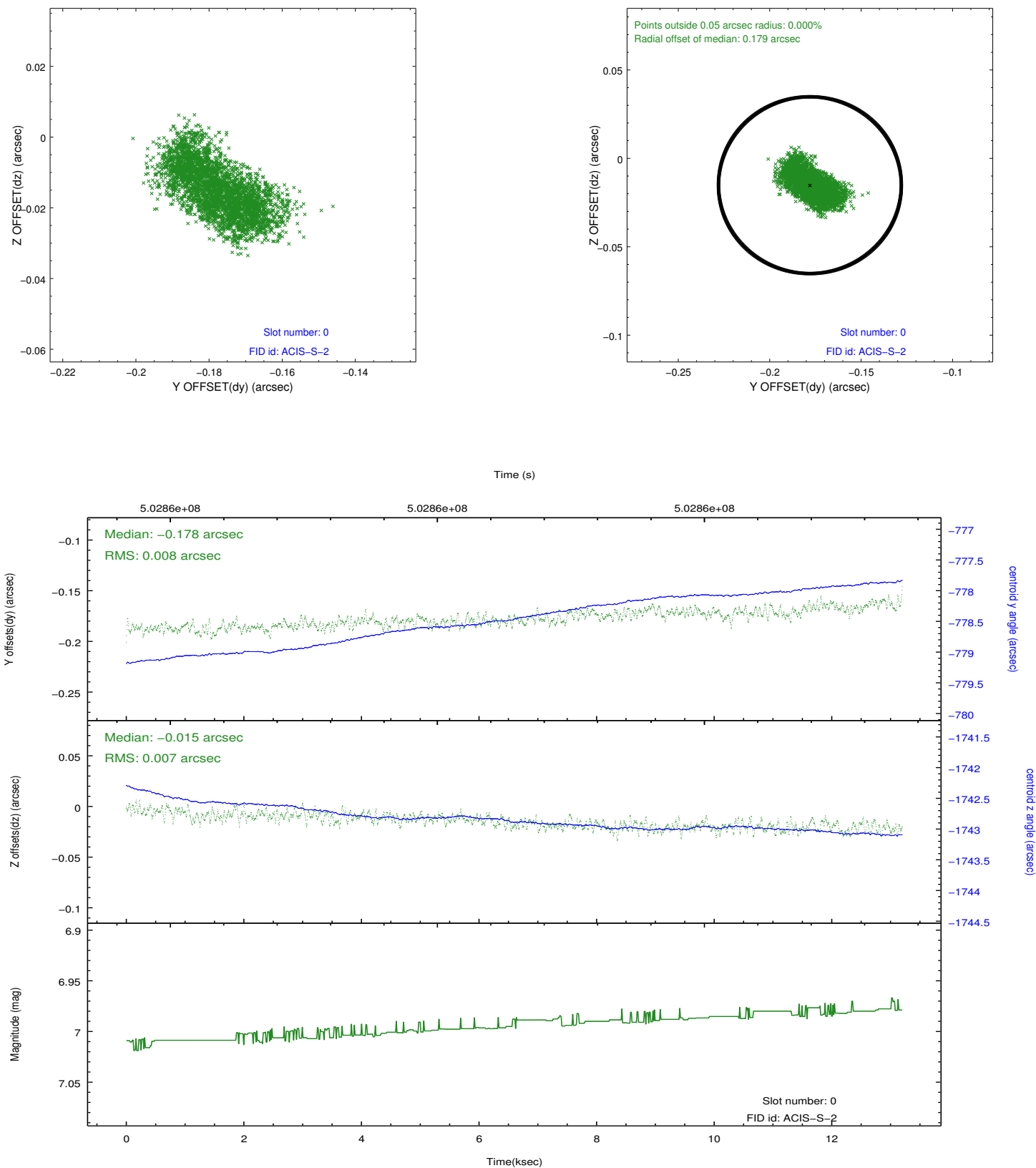


Time (s)

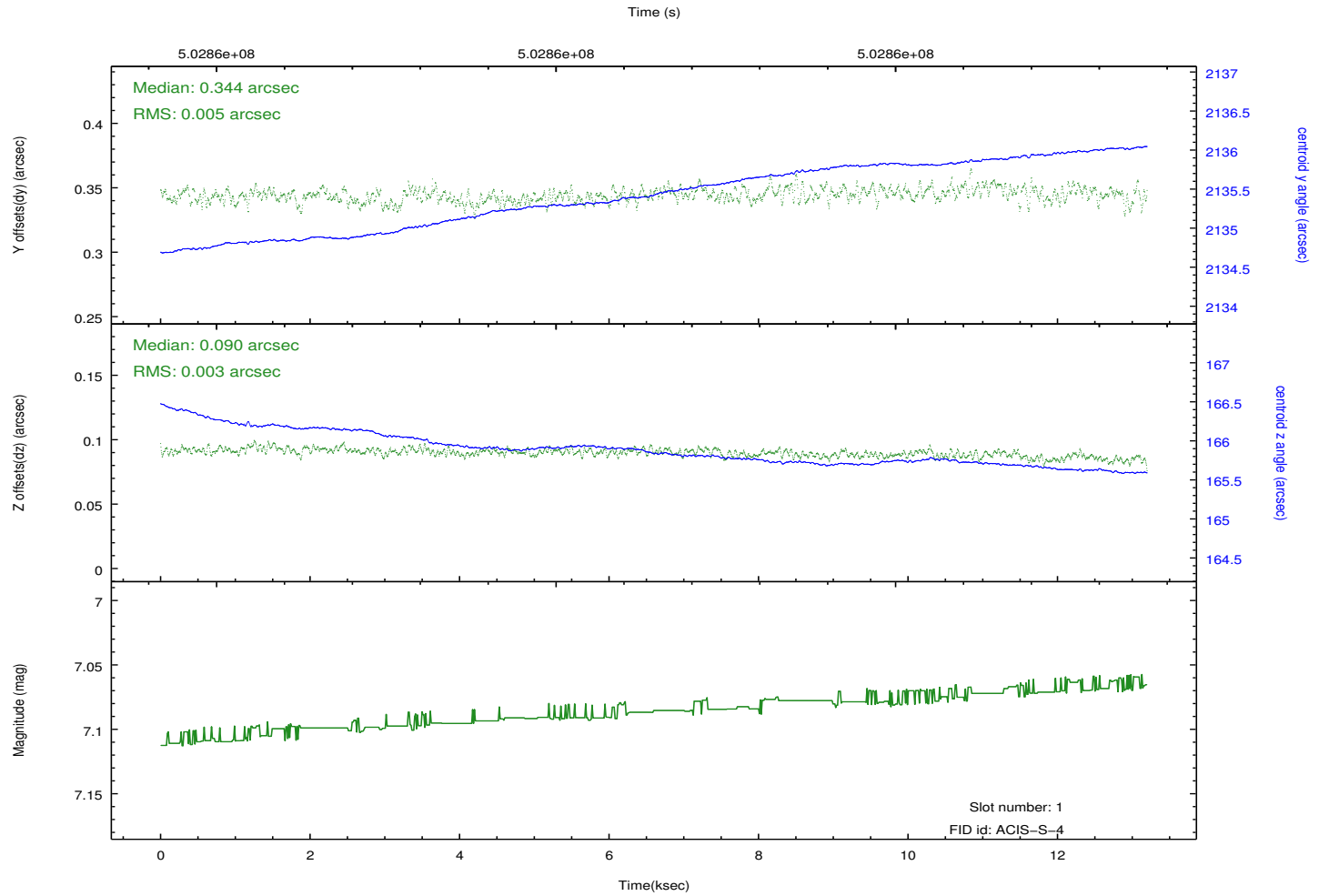
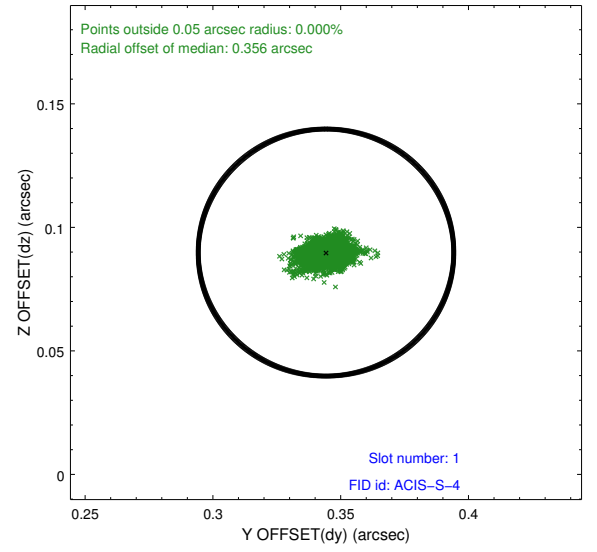
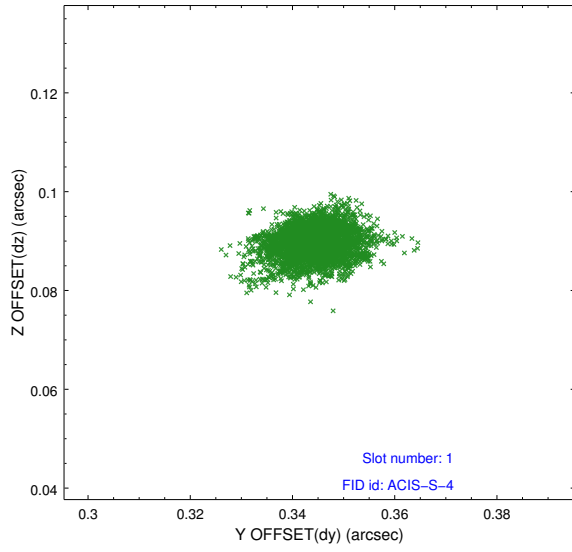


2.5 FID Slots

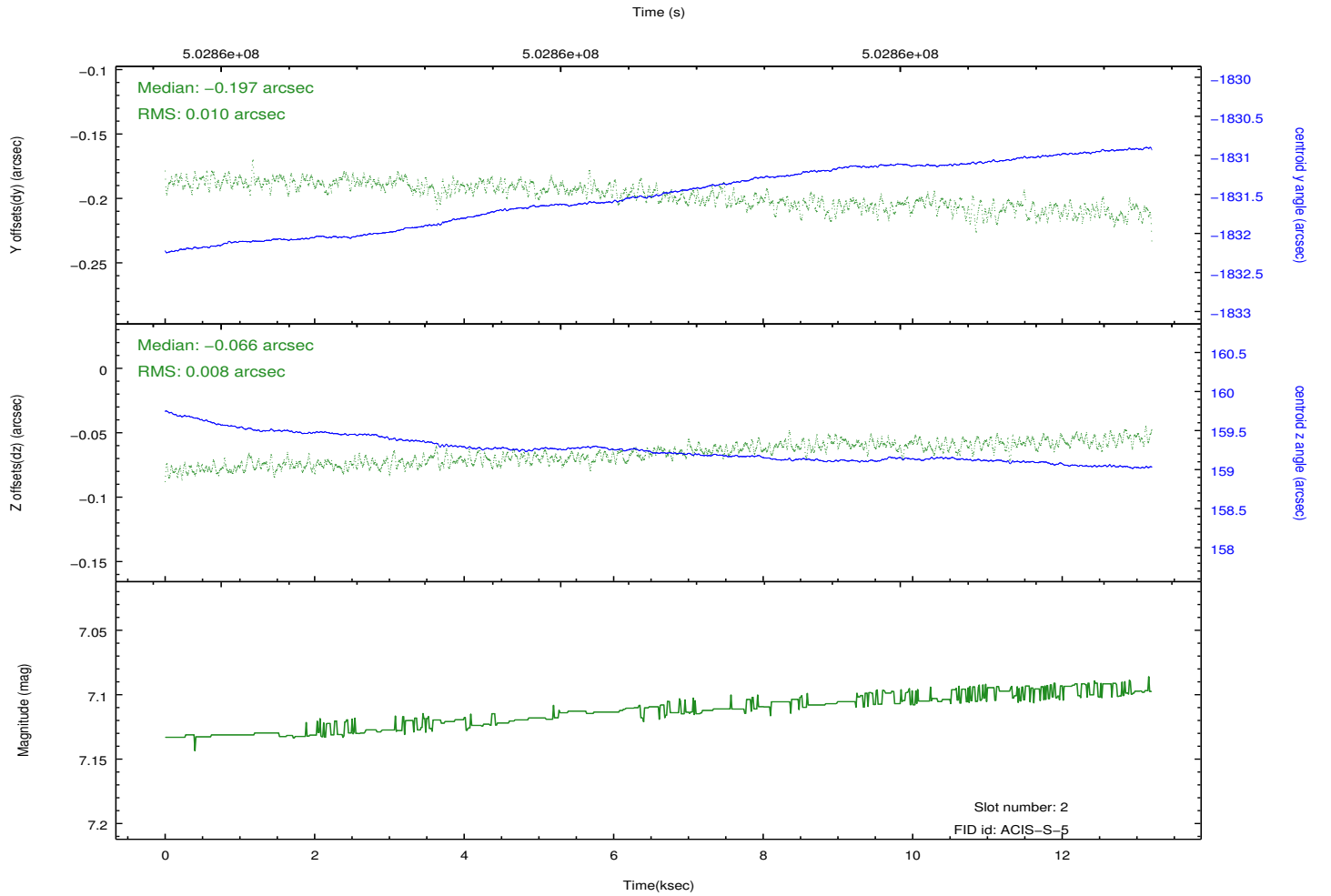
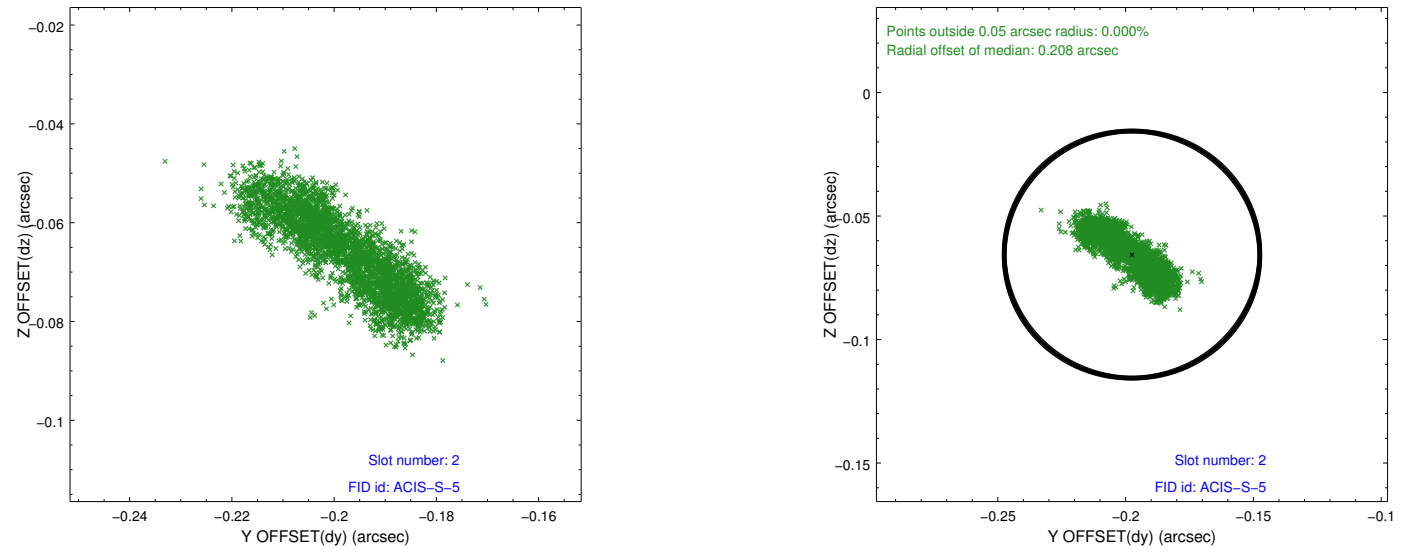
2.5.1 Slot 0



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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.115244585335

A.2 Comments

Joint proposal with HST.

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.