

V&V Reference Report

L2 ASCDS Version : 10.2.4

Observation 14528 - L2 Version 2
Chandra X-Ray Center

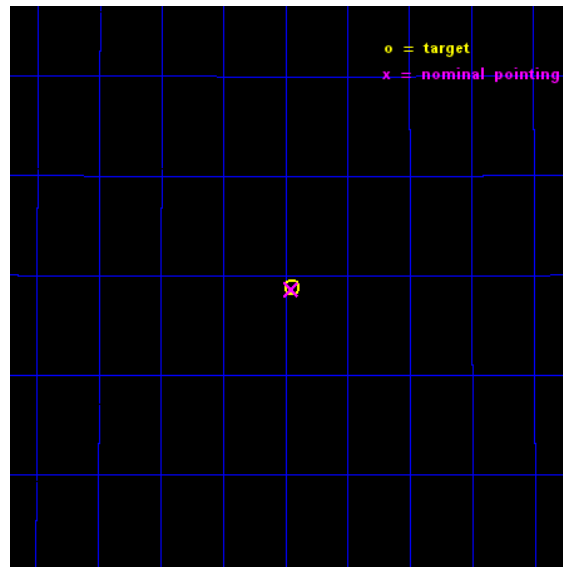
L2 Processing Date : Dec 12 2014

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

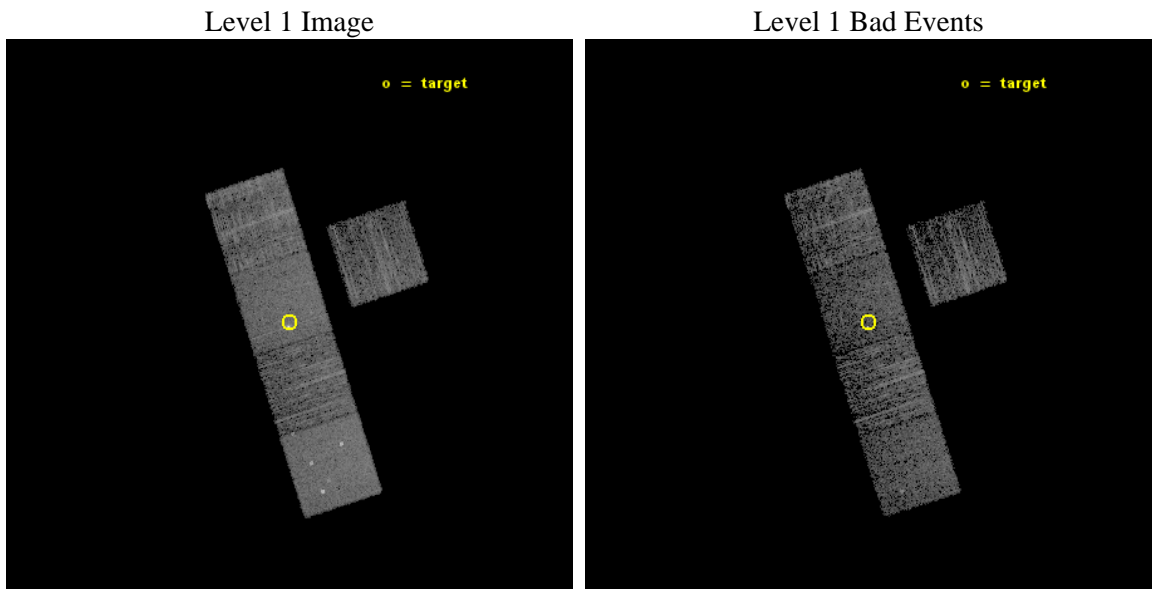
seq_num	601024	Sequence number
obs_id	14528	Observation id
title	Orphanage	Proposal title
observer	ASC CXC	Principal investigator
object	Mkn 766	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	184.610417	Observer's specified target RA [deg]
dec_targ	29.812778	Observer's specified target Dec [deg]
ra_nom	184.61267122953	Nominal RA [deg]
dec_nom	29.810423883033	Nominal Dec [deg]
roll_nom	252.15550647001	Nominal Roll [deg]
revision	2	Processing version of data
ontime	0.0	Sum of GTIs [s]
livetime	0.0	Livetime [s]
ontime3	0.0	Sum of GTIs [s]
ontime5	0.0	Sum of GTIs [s]
ontime6	0.0	Sum of GTIs [s]
ontime7	0.0	Sum of GTIs [s]
ontime8	0.0	Sum of GTIs [s]
l2events	0	Number of level 2 events



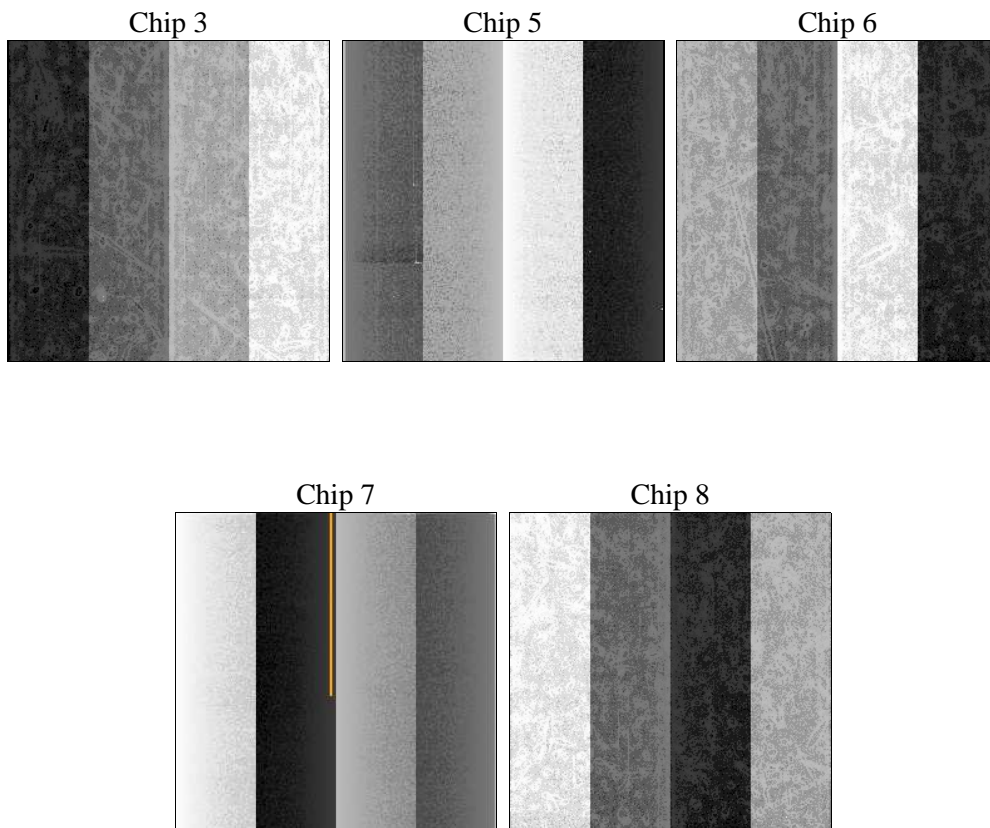
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31700.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	0.0	Sum of GTIs [s]
caldbver	4.6.4	 	ontime3	5162.8418144584	Sum of GTIs [s]
date	2014-12-12T20:26:18	Date and time of file creation	ontime5	5162.923894465	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	5162.8828544617	Sum of GTIs [s]
			ontime7	5162.9649344683	Sum of GTIs [s]
			ontime8	5162.8007744551	Sum of GTIs [s]
			l1events	162047	Number of level 1 events

2.1.4 Events

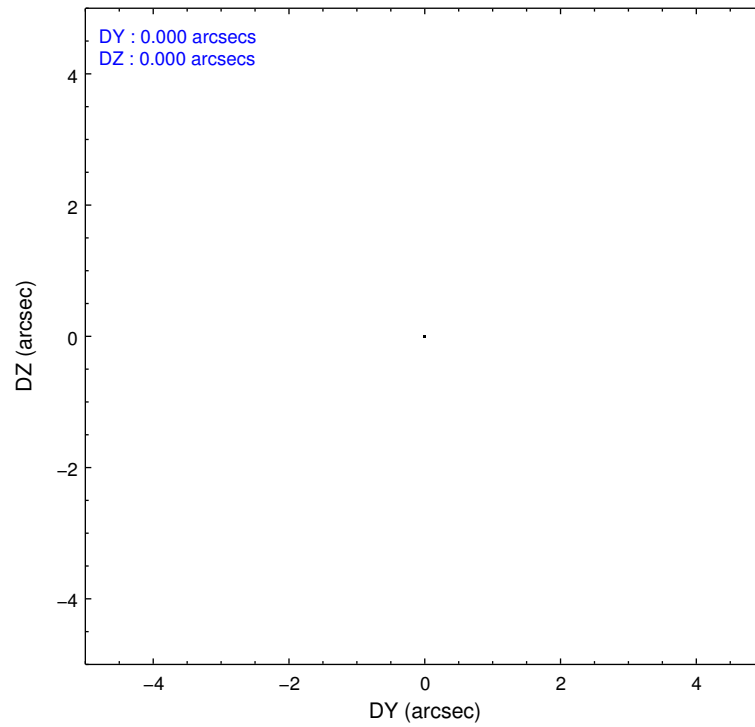
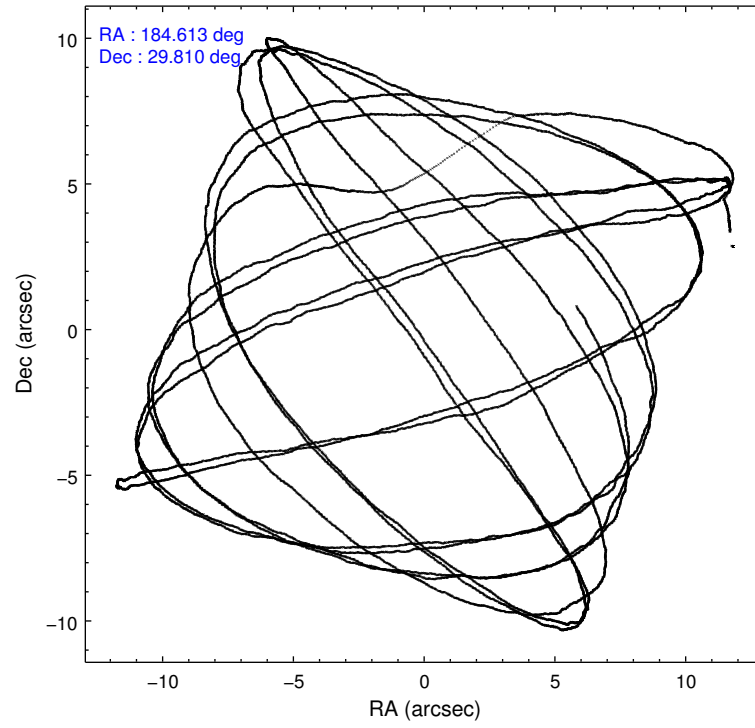
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	23169	42867	25893	37069	33049
rejected events	20443	21199	22930	19515	23454
rejected %	88%	49%	88%	52%	70%

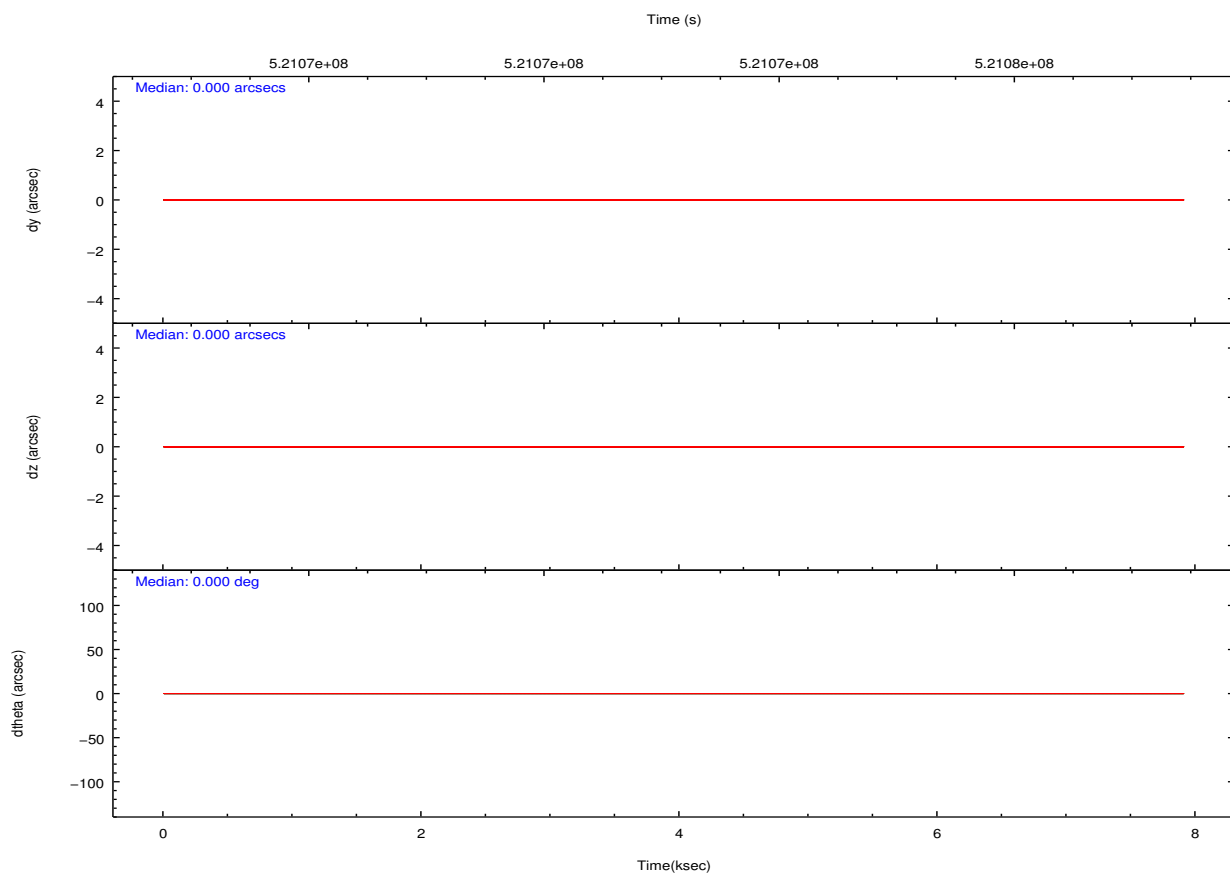
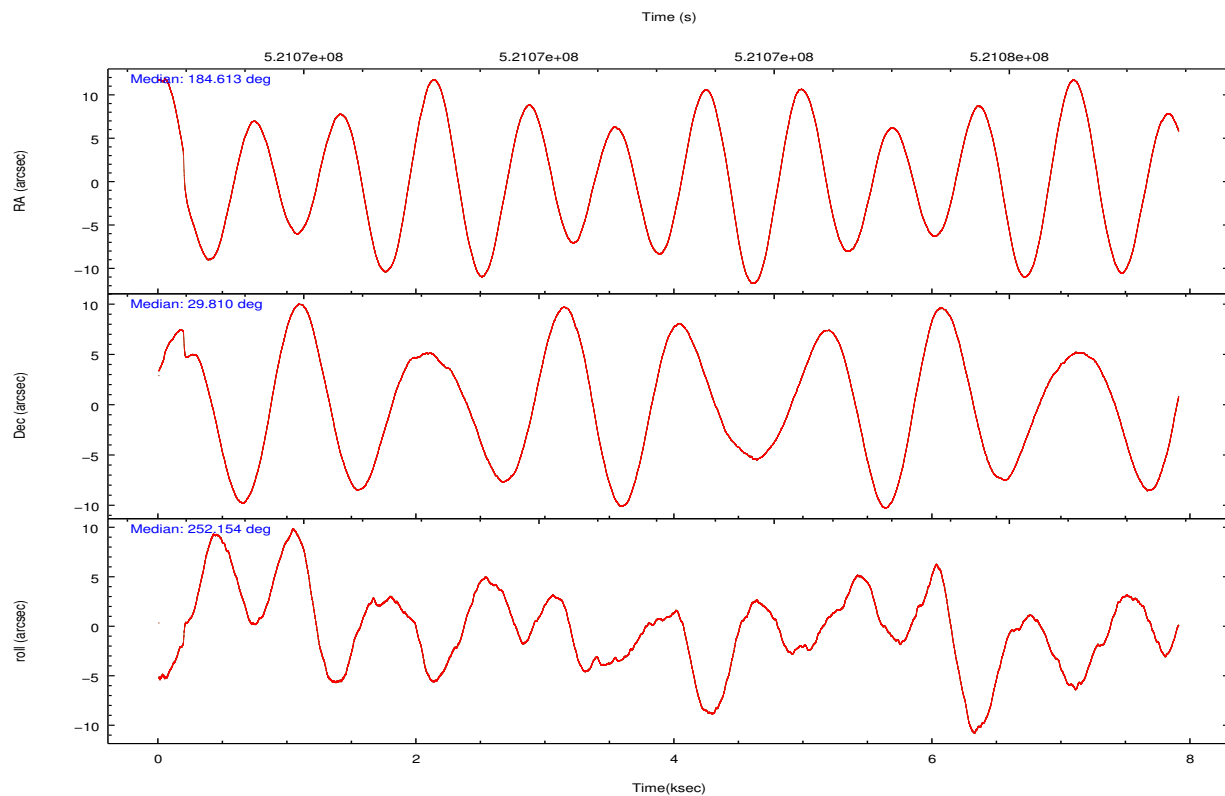
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	940	3255	1041	2245	2762
	4%	7%	4%	6%	8%
grade 1 events	15	232	13	117	17
	0%	0%	0%	0%	0%
grade 2 events	641	6201	670	3778	2223
	2%	14%	2%	10%	6%
grade 3 events	279	697	307	1562	961
	1%	1%	1%	4%	2%
grade 4 events	297	684	286	1477	982
	1%	1%	1%	3%	2%
grade 5 events	1314	2997	1276	3590	1847
	5%	6%	4%	9%	5%
grade 6 events	569	10831	659	8492	2667
	2%	25%	2%	22%	8%
grade 7 events	19114	17970	21641	15808	21590
	82%	41%	83%	42%	65%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	54.618157	184.6126712295319	Subarray requested	NONE	NONE
[deg] Pointing Dec	-35.428631	29.81042388303294	Alternating exposures requested	N	N
[deg] Pointing Roll	132.059092	252.155506470005	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	521071975.184000	521069159.15943			
Observation start date	2014-07-06T22:11:48	2014-07-06T21:25:59			
[s] Observation end time (MET)	521103675.184000	521077067.03487			
Observation end date	2014-07-07T07:00:08	2014-07-06T23:37:47			
Read mode	TIMED	TIMED			

2.3 Aspect



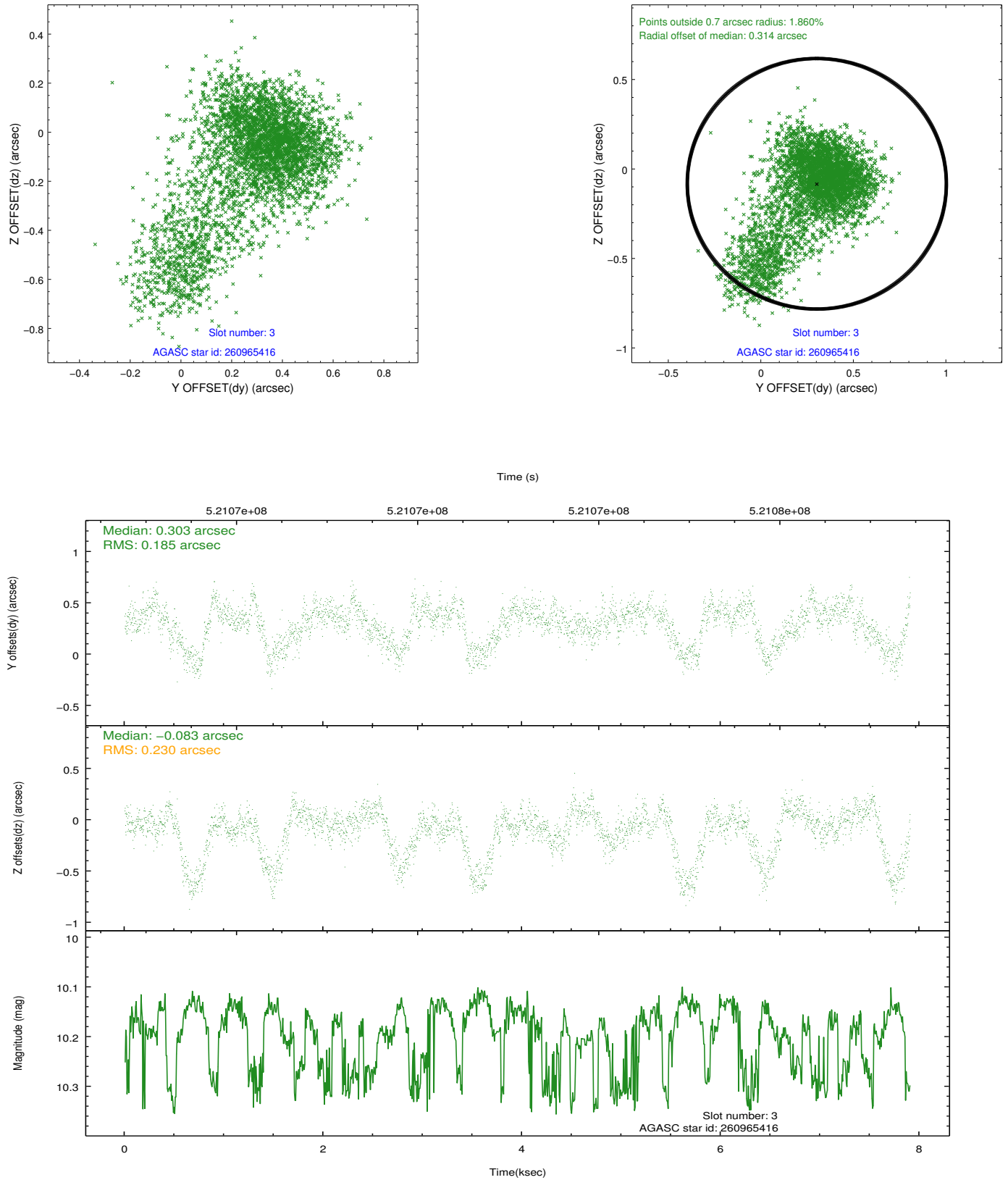


Slot Statistics

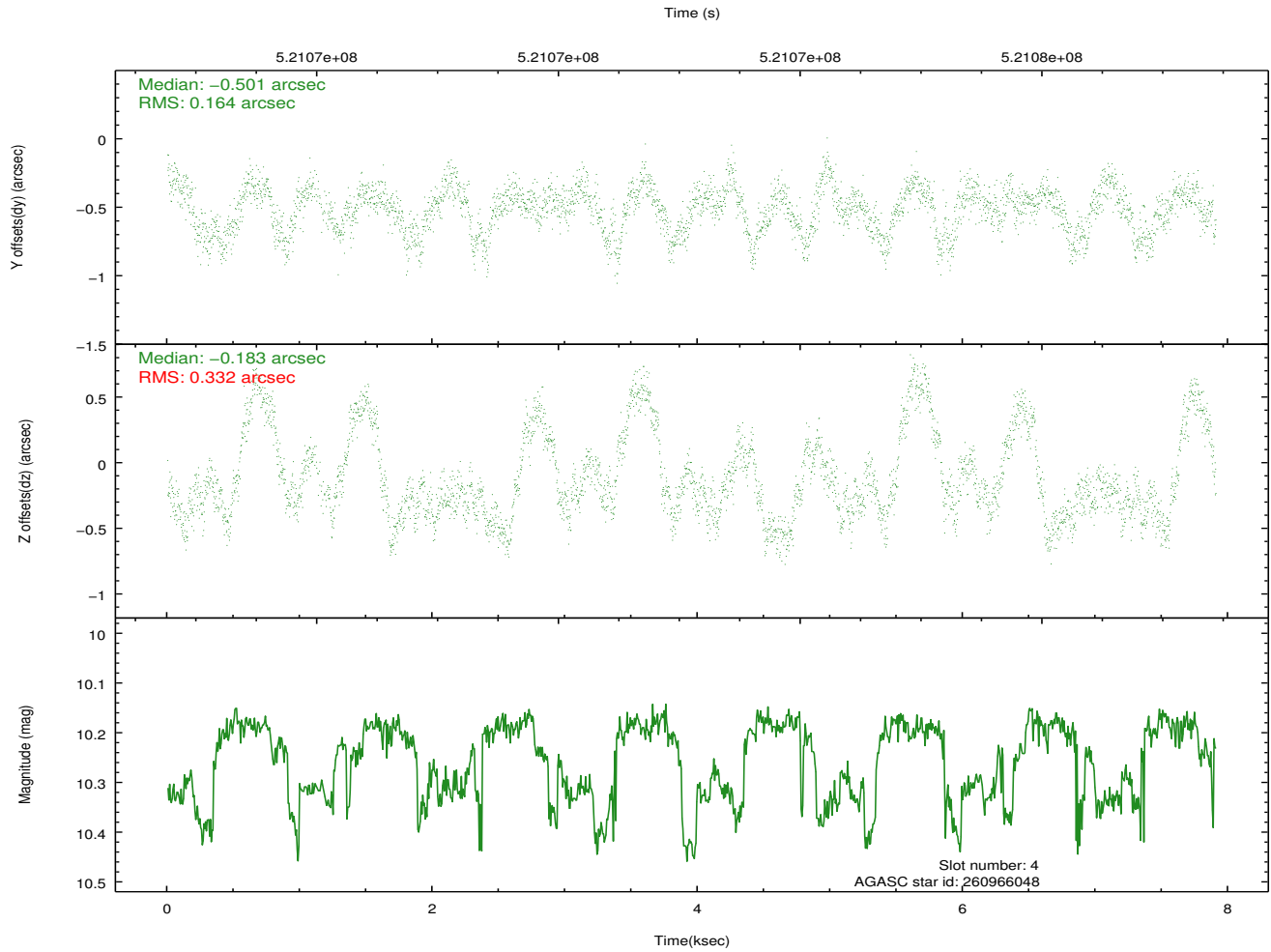
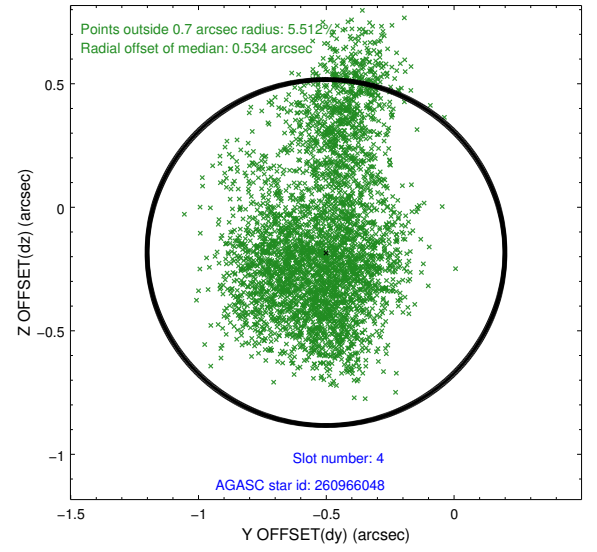
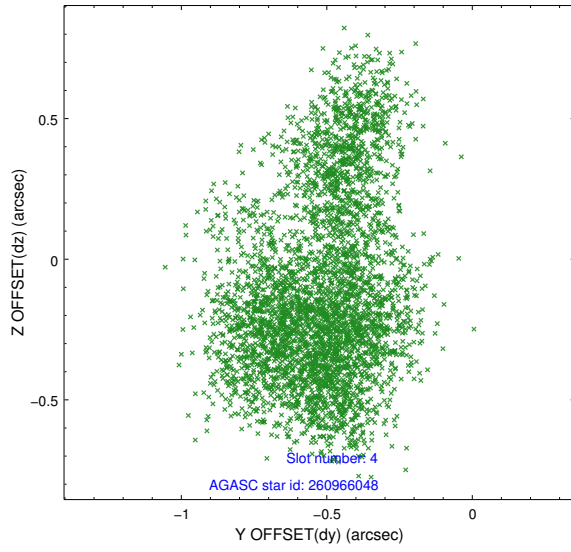
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	BAD		ACIS-S-2	6.96	25	-15.182	-17.852	0.066	0.078	0.000000	0.000000	-767.88	-1738.77
1	BAD		ACIS-S-4	7.05	27	-15.267	-17.838	0.061	0.077	0.000000	0.000000	2117.07	105.29
2	BAD		ACIS-S-5	7.09	24	-15.243	-18.072	0.061	0.075	0.000000	0.000000	-1732.64	167.61
3	GUIDE	used	260965416	10.19	3817	0.303	-0.083	0.265	0.613	184.798422	29.200373	1992.74	1283.83
4	GUIDE	used	260966048	10.24	3810	-0.501	-0.183	0.367	0.713	185.169624	29.533581	489.16	2016.38
5	GUIDE	used	331368240	6.52	3857	-0.215	0.071	0.120	0.207	184.631757	30.249046	-1434.23	-378.52
6	GUIDE	used	331352880	9.65	3853	0.065	0.225	0.167	0.259	184.726920	30.468207	-2276.89	-344.41
7	GUIDE	used	260968144	10.21	3838	0.395	-0.056	0.245	0.391	184.193166	29.586641	1254.22	-950.00

2.4 Star Slots

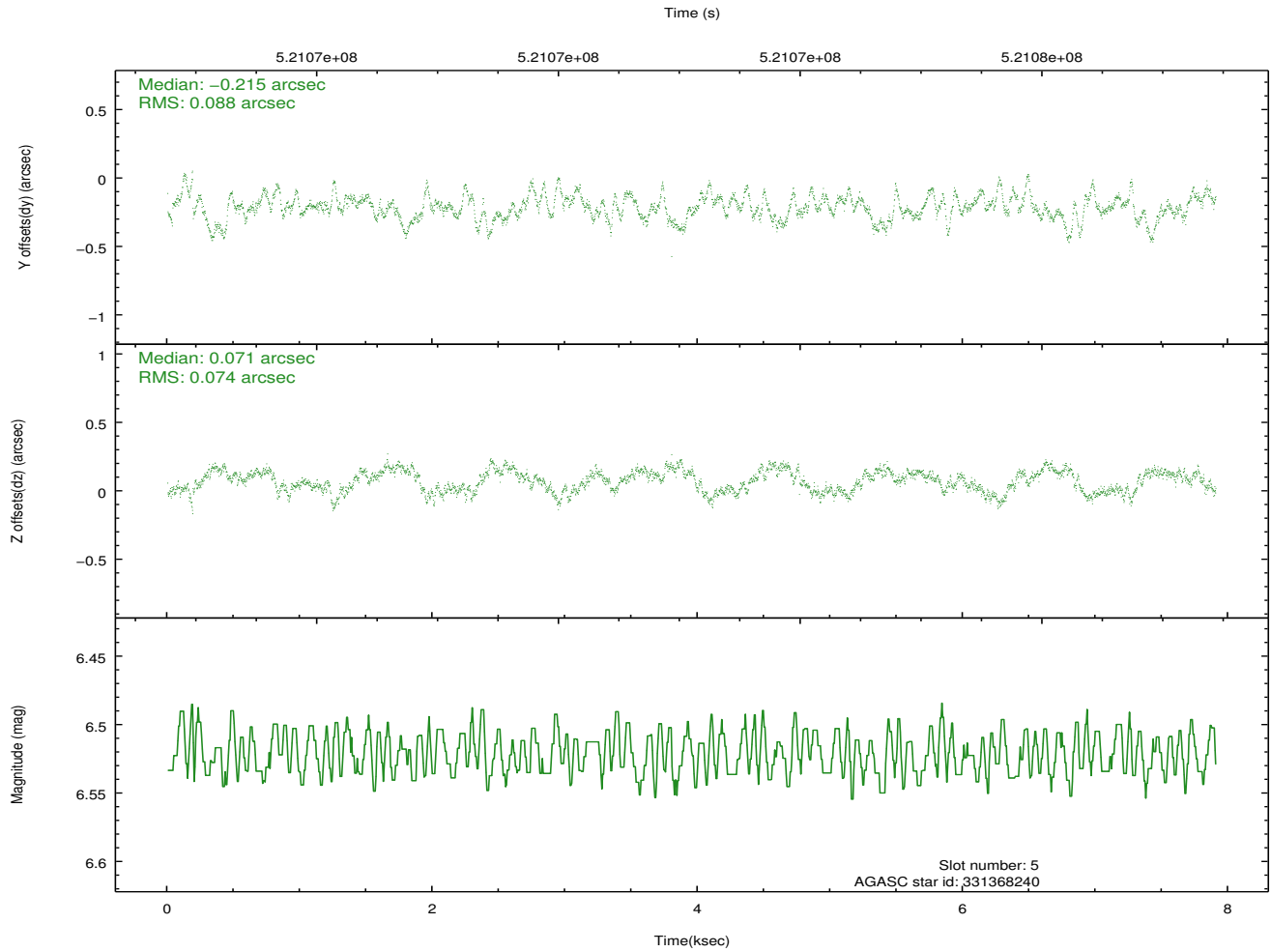
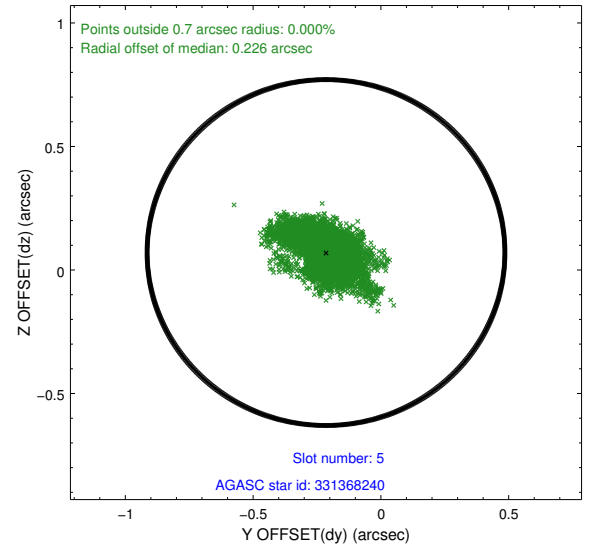
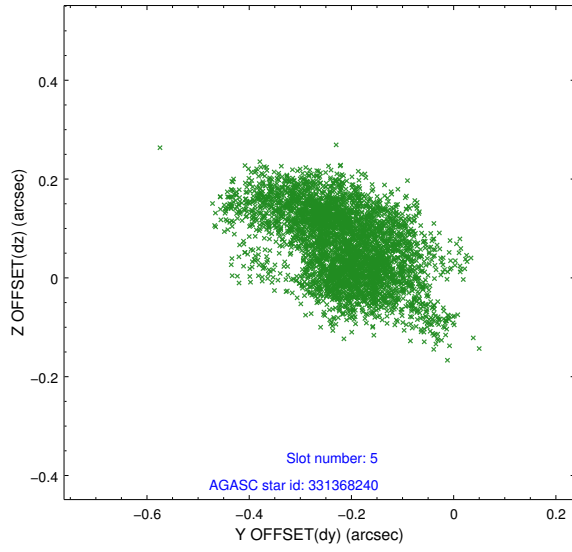
2.4.1 Slot 3



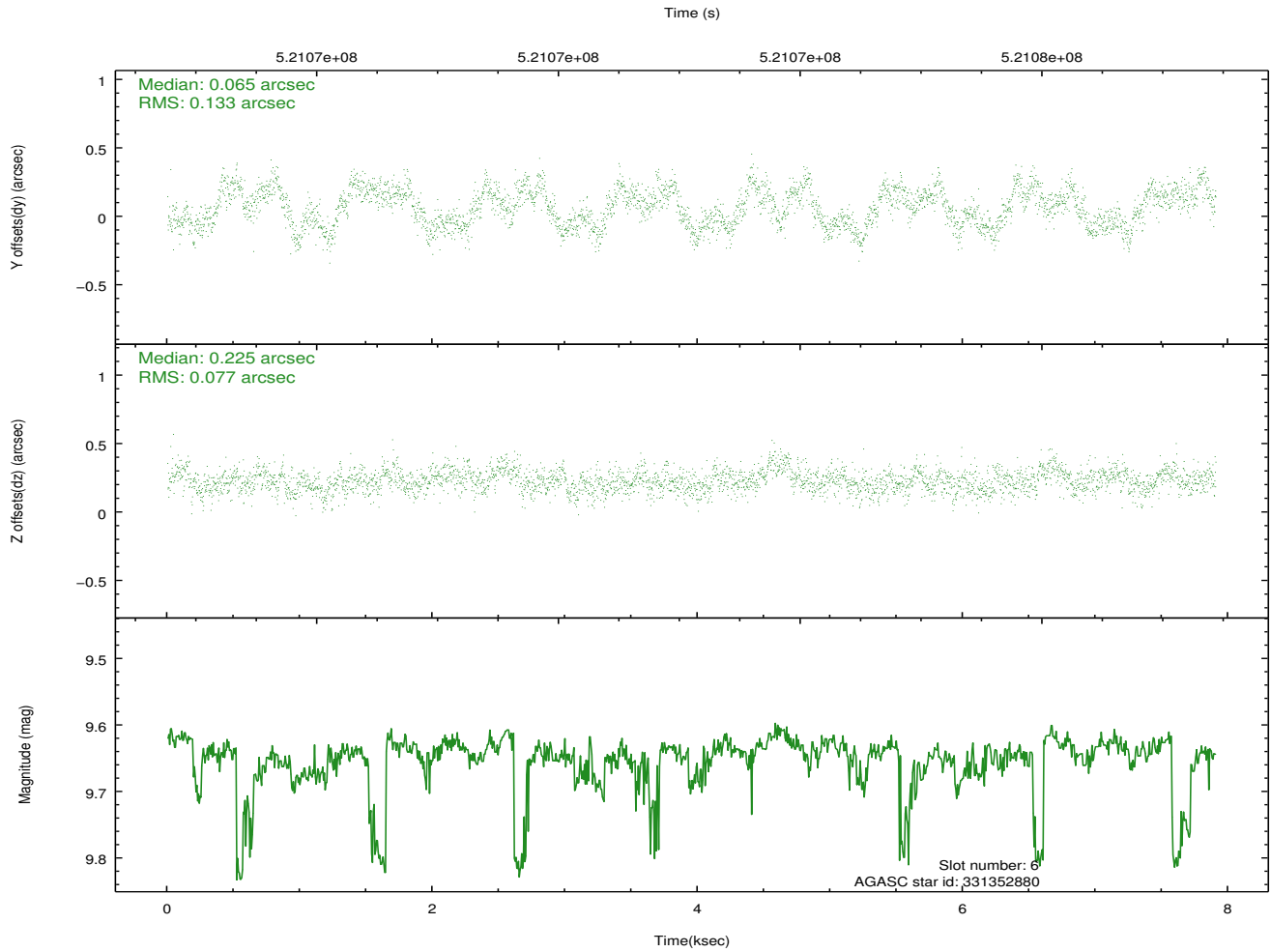
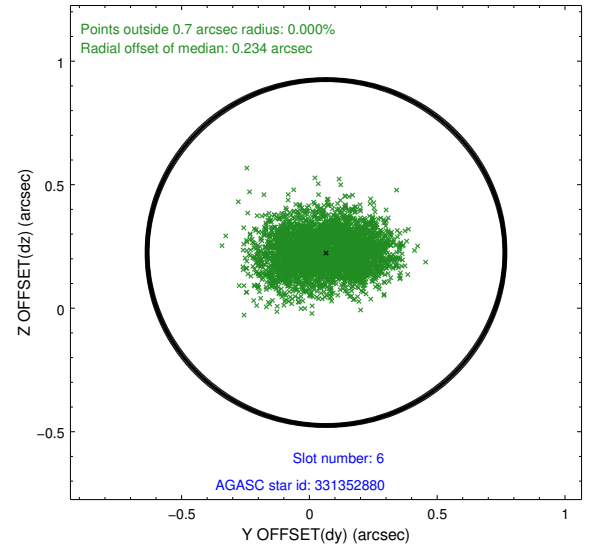
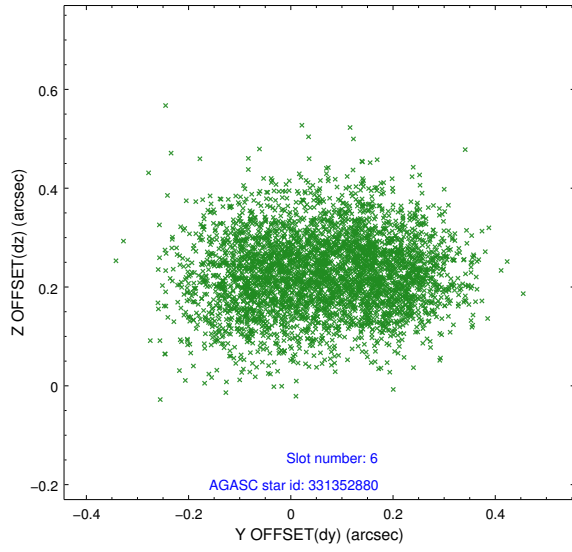
2.4.2 Slot 4



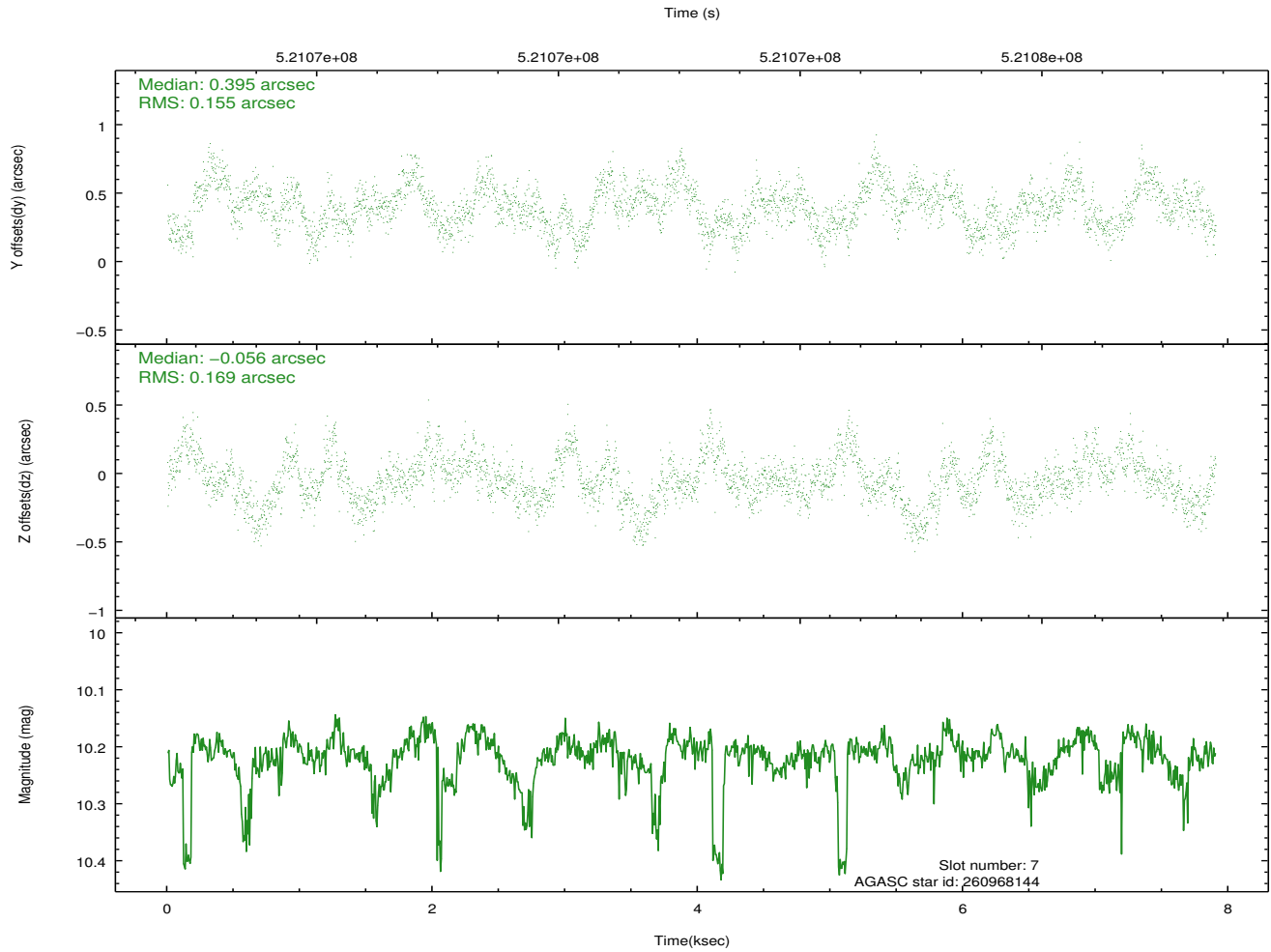
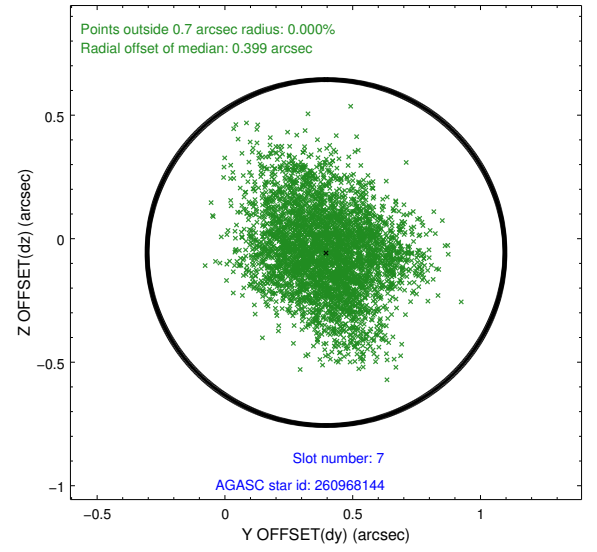
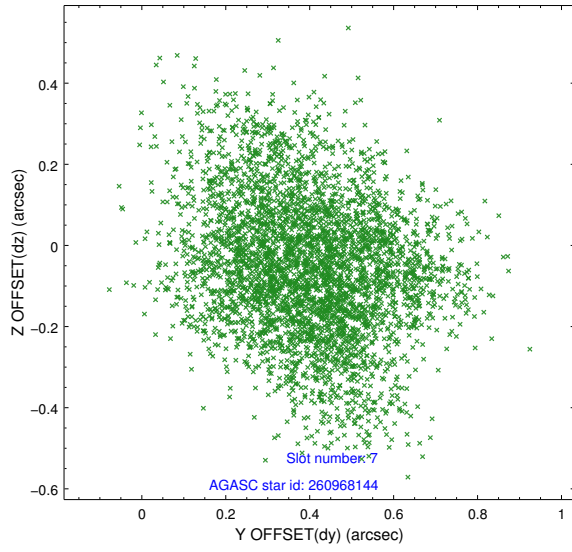
2.4.3 Slot 5



2.4.4 Slot 6

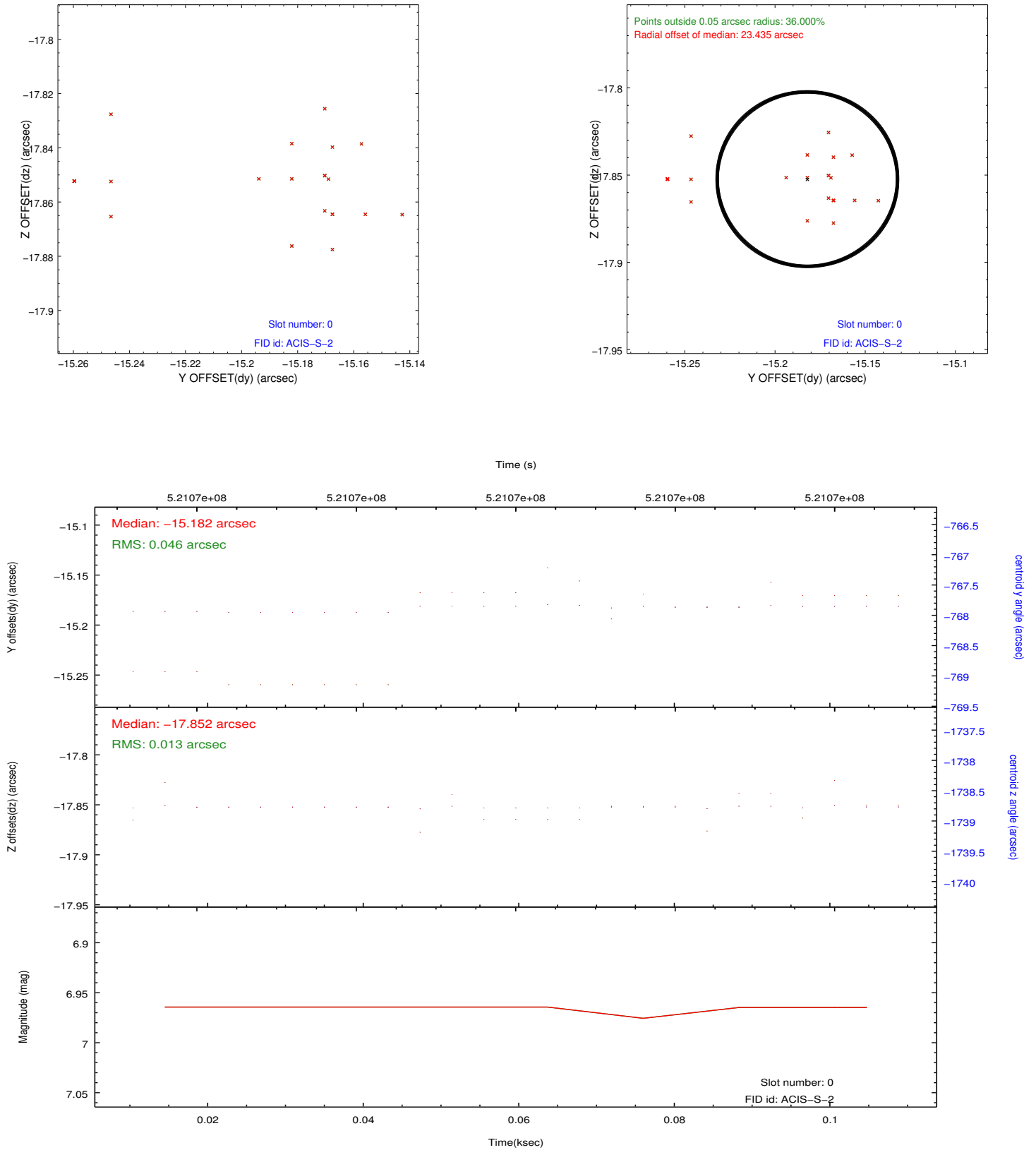


2.4.5 Slot 7

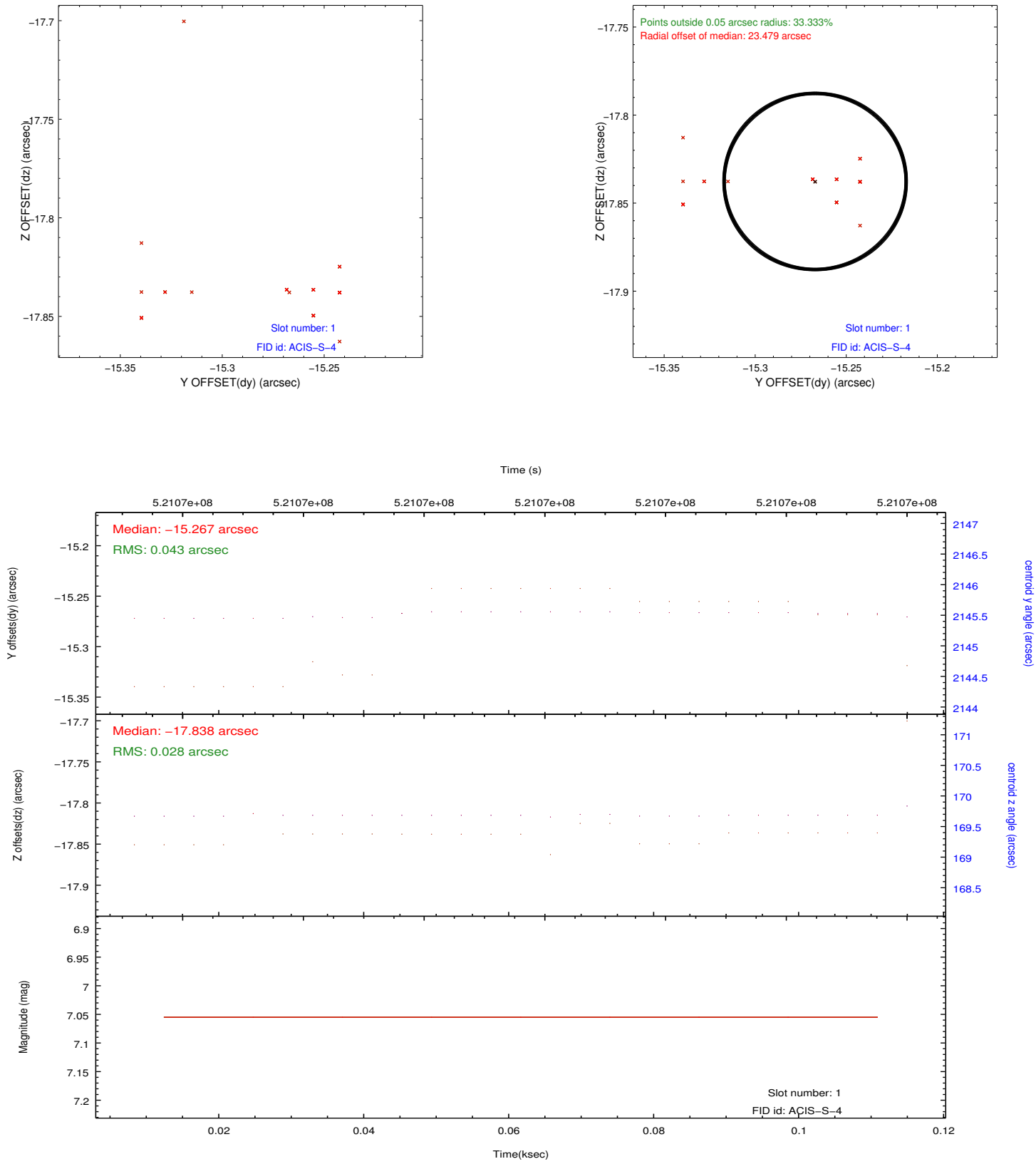


2.5 FID Slots

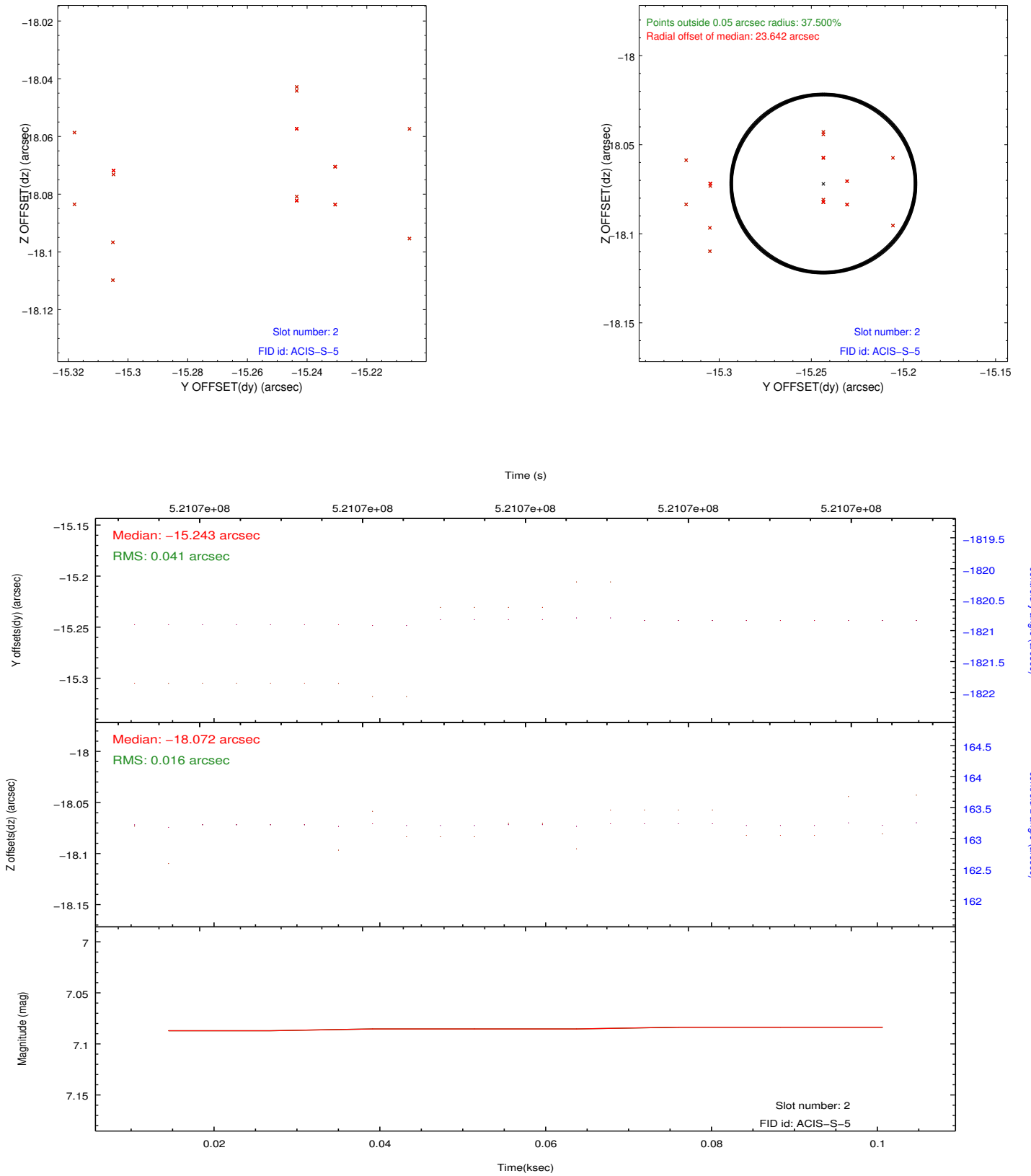
2.5.1 Slot 0



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)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5

A.2 Comments

This observation was taken during an anomalous situation on the spacecraft. The portion of the spacecraft load that defines the science instrument configuration was out of sync with the portion of the load that defines the spacecraft pointing. As a result, the intended target was not observed, but an exposure was taken of the previous target, Mkn 766. The configuration of the resulting exposure is not consistent with any Chandra approved proposal; therefore it is being made public and assigned a title of 'Orphanage'.

At the nominal end of obsid 16630, the previous observation of Mkn 766, the SIM shifted to the position requested for obsid 14528. The command to move the fid light readout windows to the new/expected locations on the aspect camera CCD was part of the vehicle commanding that was not executed due to the out-of-sync condition. Unfortunately, this means that the fid lights were not tracked at all. Due to the lack of fid lights, image reconstruction errors may be large, and none of the observation is considered 'good time'. This results in no Level 2 events. However, these events (with their potentially large position errors) may be 'recovered' by manually adjusting the good time intervals; please contact the CXC helpdesk for assistance.

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. Charge time for this processing is set to the previous value of 5 ksec.