

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 15292 - L2 Version 3
Chandra X-Ray Center

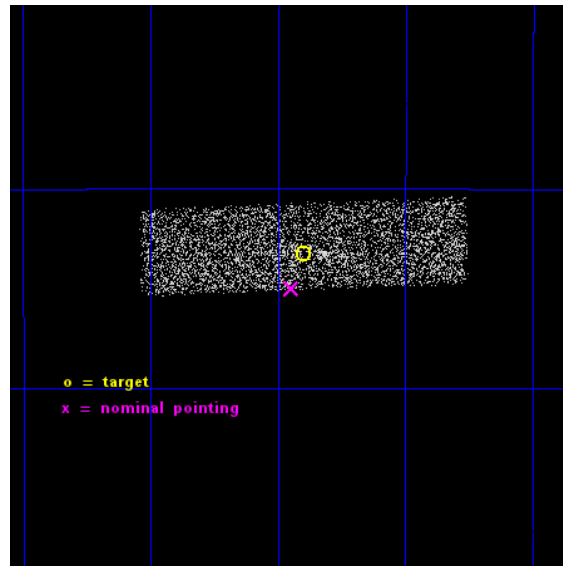
L2 Processing Date : Dec 7 2014

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1 Front

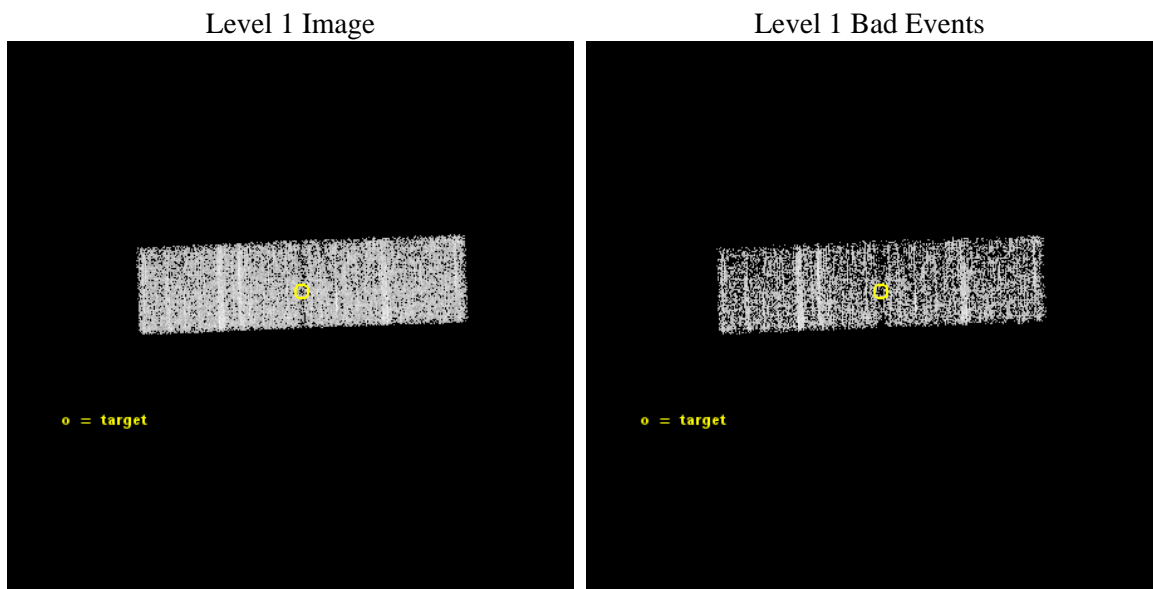
seq_num	100092	Sequence number
obs_id	15292	Observation id
title	Venus at Solar Maximum	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	272.85065	Observer's specified target RA [deg]
dec_targ	-27.22106	Observer's specified target Dec [deg]
ra_nom	272.86180703076	Nominal RA [deg]
dec_nom	-27.249948042823	Nominal Dec [deg]
roll_nom	267.82850464326	Nominal Roll [deg]
revision	3	Processing version of data
ontime	8984.000133872	Sum of GTIs [s]
livetime	8759.3234864447	Livetime [s]
ontime1	8984.000133872	Sum of GTIs [s]
ontime3	8984.000133872	Sum of GTIs [s]
l2events	6287	Number of level 2 events



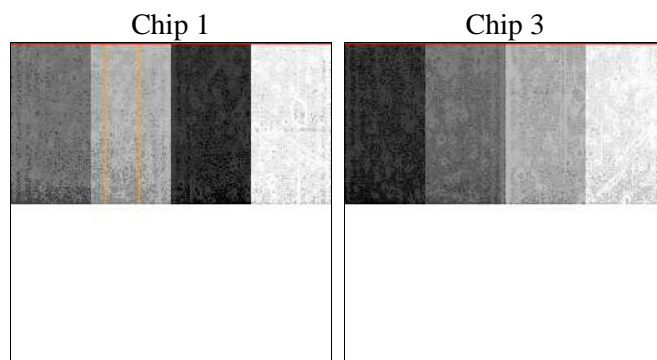
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8900.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	8984.000133872	Sum of GTIs [s]
caldsver	4.6.4	 	ontime1	8984.000133872	Sum of GTIs [s]
date	2014-12-07T21:35:58	Date and time of file creation	ontime3	8984.000133872	Sum of GTIs [s]
revision	3	Processing version of data	l1events	50250	Number of level 1 events

2.1.4 Events

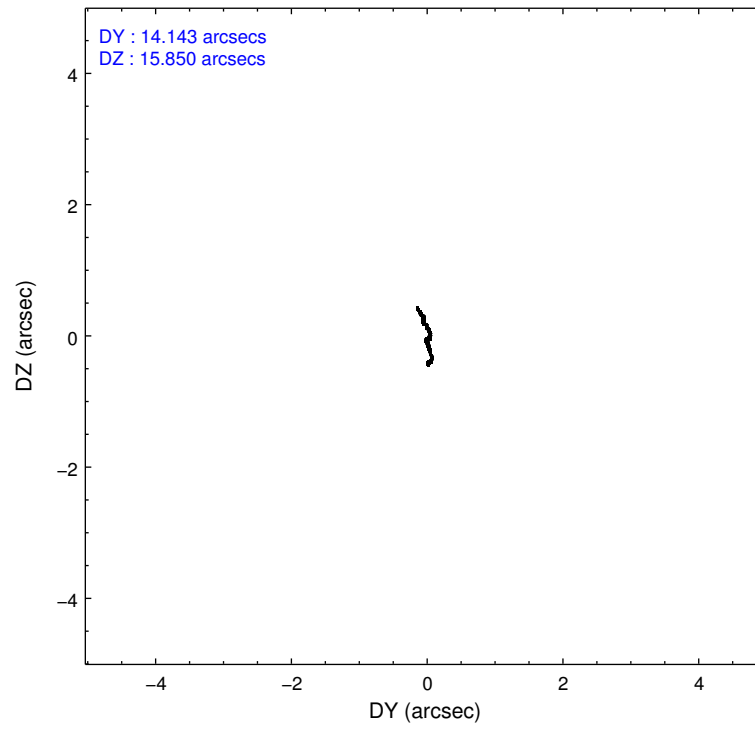
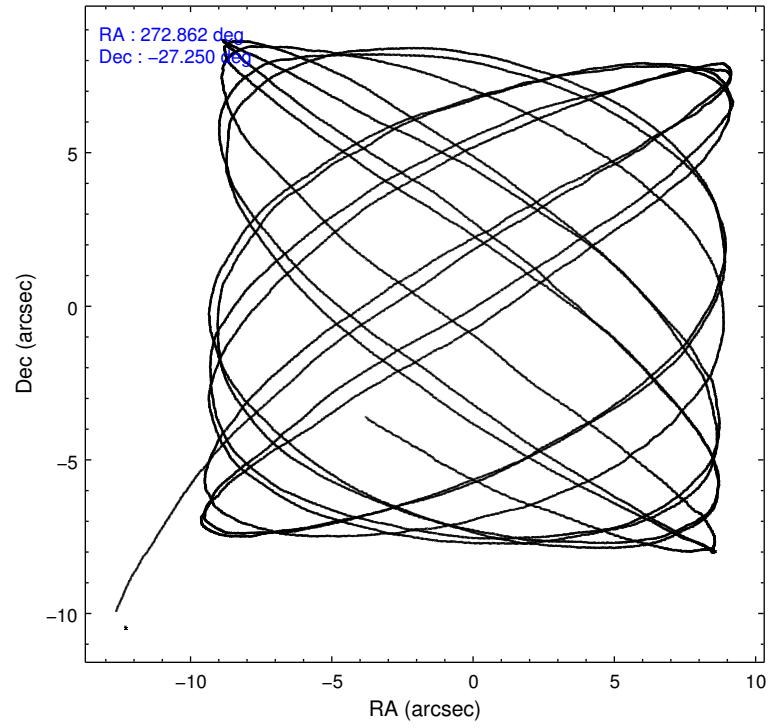
	ccd 1	ccd 3
level 1 events	24301	25949
rejected events	20425	22518
rejected %	84%	86%

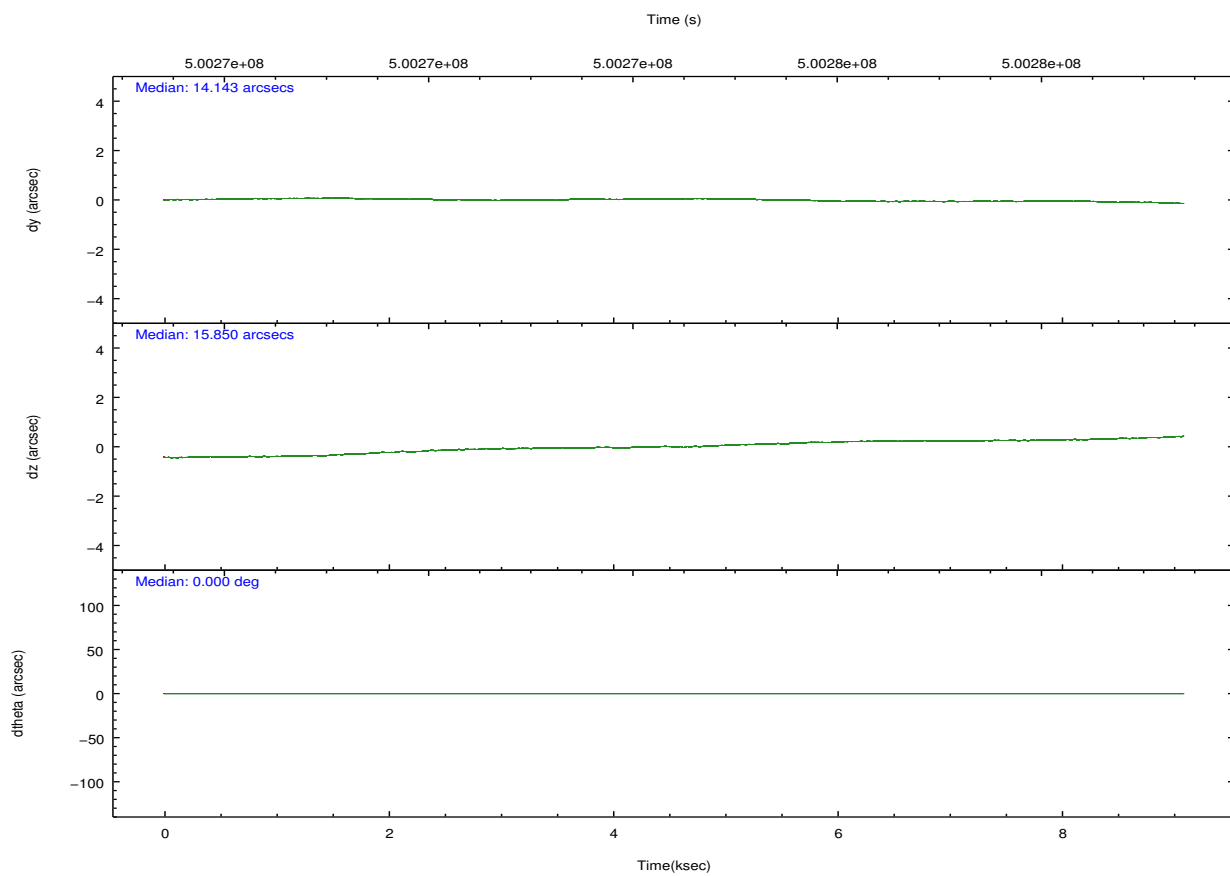
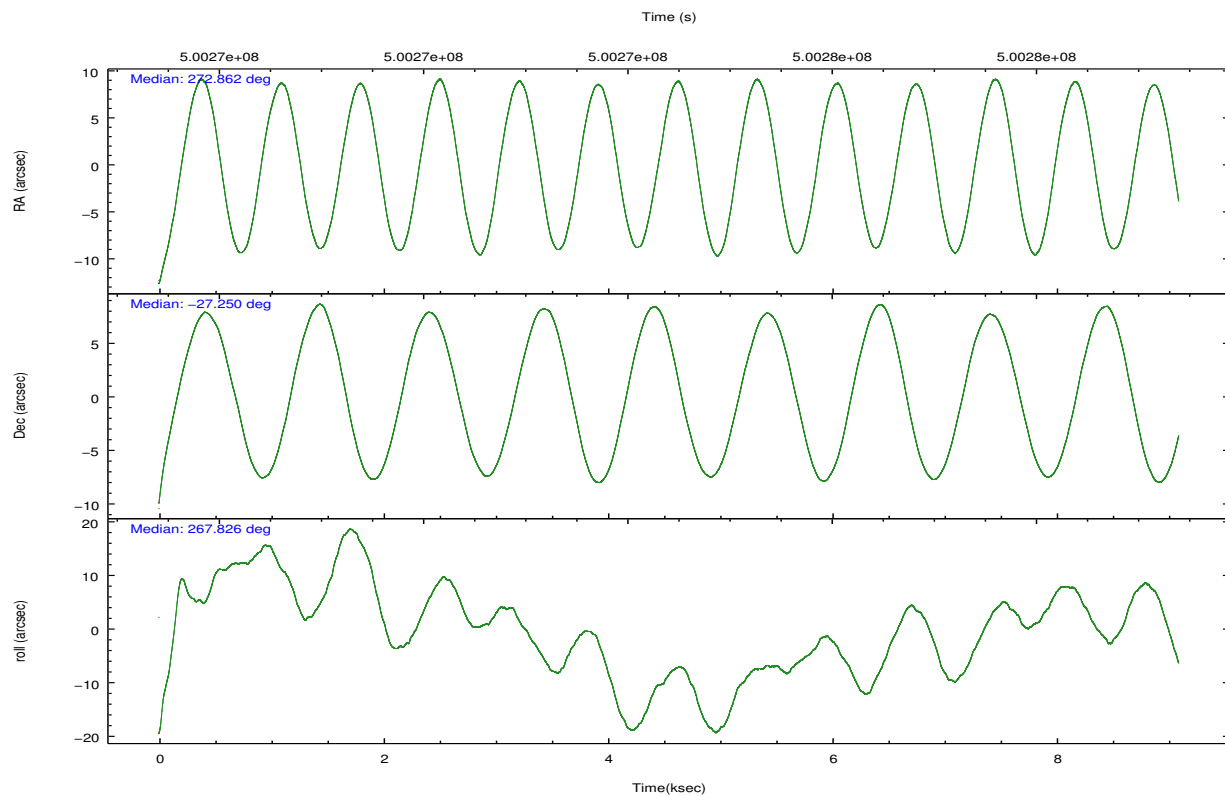
	ccd 1	ccd 3
grade 0 events	1510	1452
	6%	5%
grade 1 events	8	17
	0%	0%
grade 2 events	797	649
	3%	2%
grade 3 events	445	387
	1%	1%
grade 4 events	399	370
	1%	1%
grade 5 events	1151	1330
	4%	5%
grade 6 events	784	619
	3%	2%
grade 7 events	19207	21125
	79%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-13	ACIS-13	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	272.847245	272.8618070307645	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-27.225658	-27.24994804282257	Subarray start row	512	512
[deg] Pointing Roll	267.613161	267.8285046432612	Subarray row count	512	512
[s] Window start time (MET)	498009667.184000	498009667.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	501120067.184000	501120067.184000	[s] Primary exposure time	0.000000	1.6
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	500270036.184000	500268664.40131			
Observation start date	2013-11-08T03:52:49	2013-11-08T03:31:04			
[s] Observation end time (MET)	500278936.184000	500279070.20188			
Observation end date	2013-11-08T06:21:09	2013-11-08T06:24:30			
Read mode	TIMED	TIMED			

2.3 Aspect



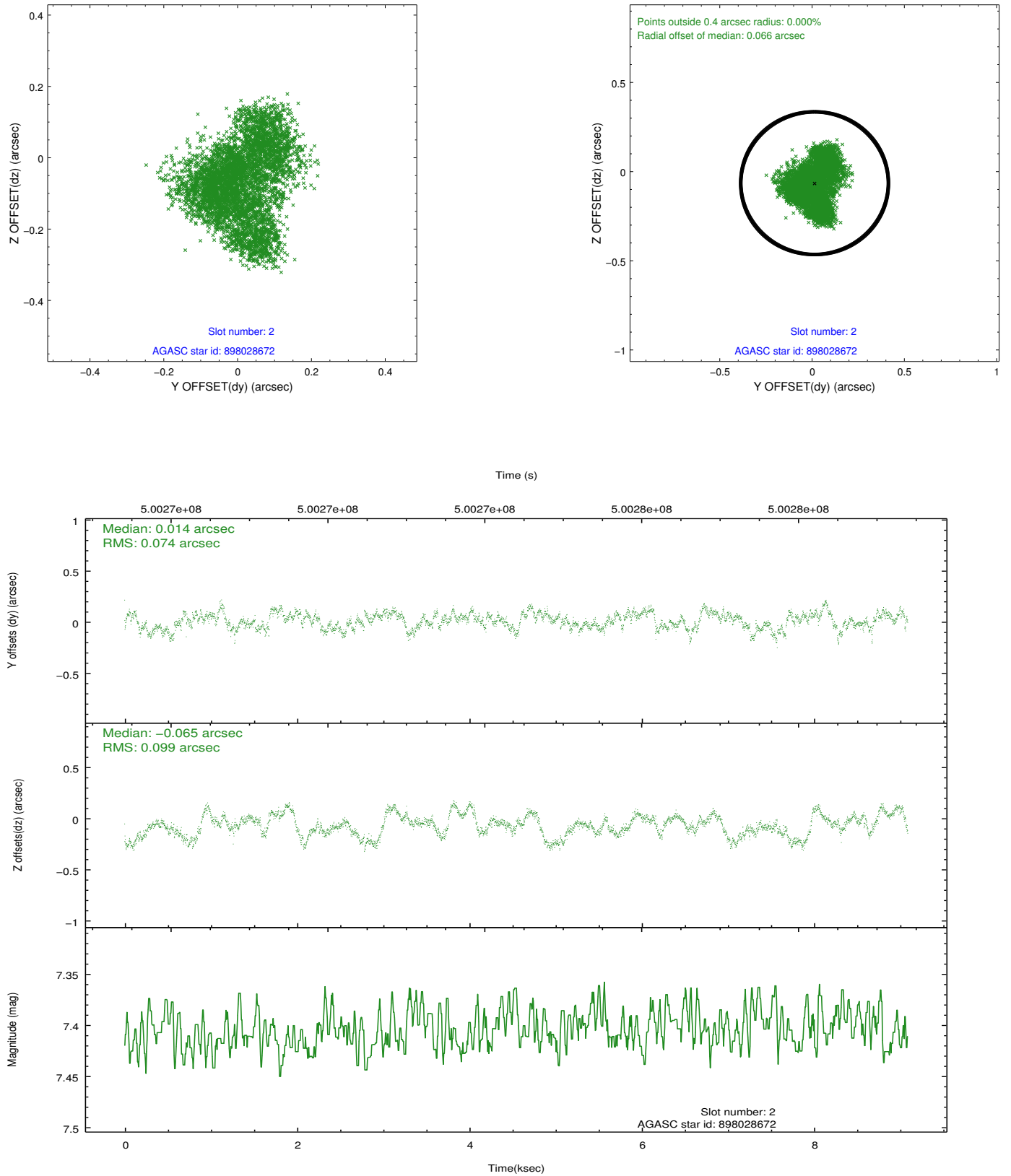


Slot Statistics

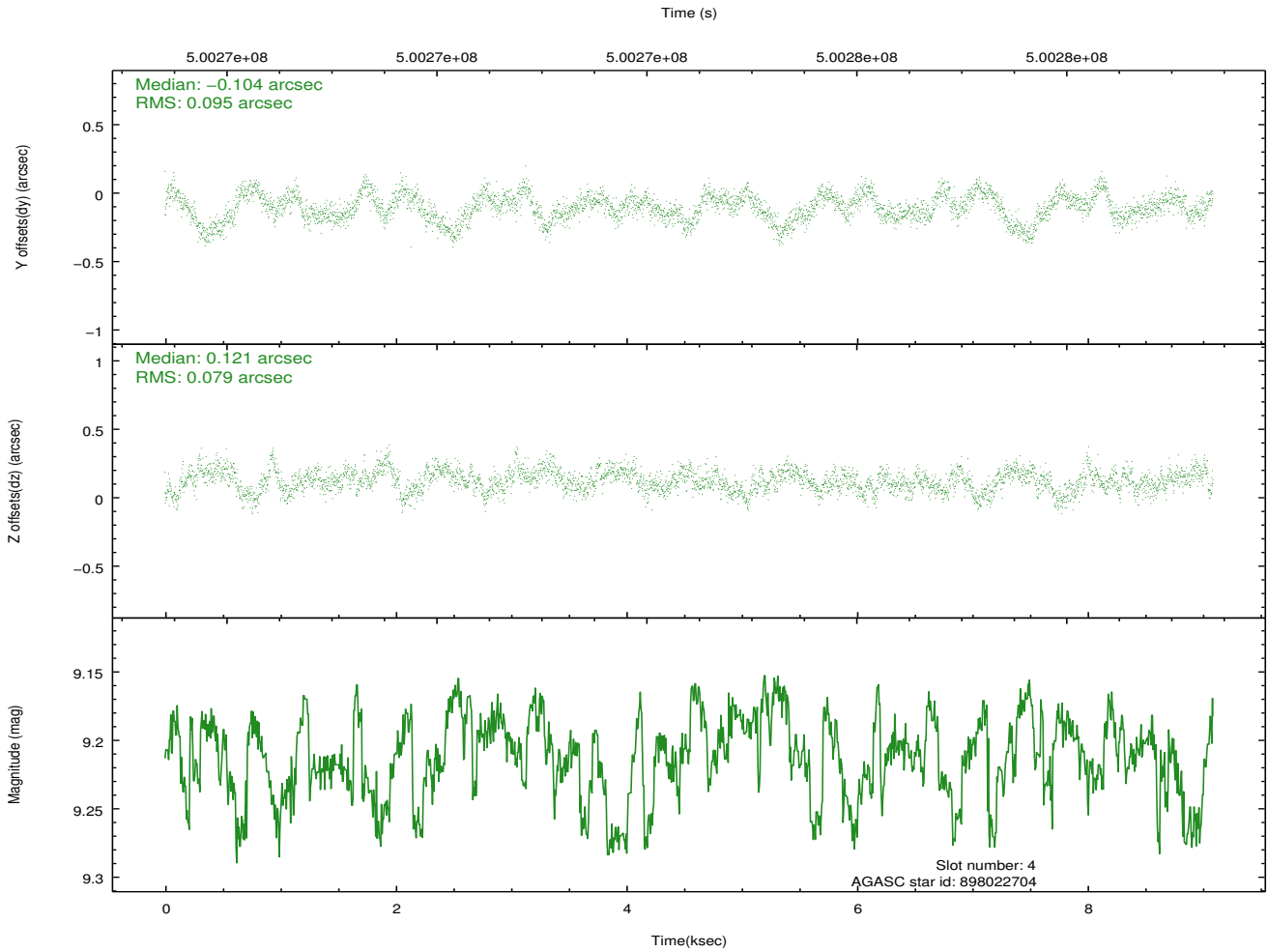
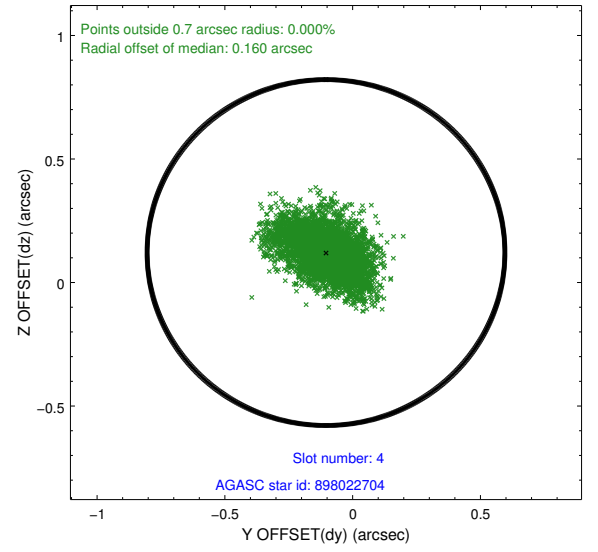
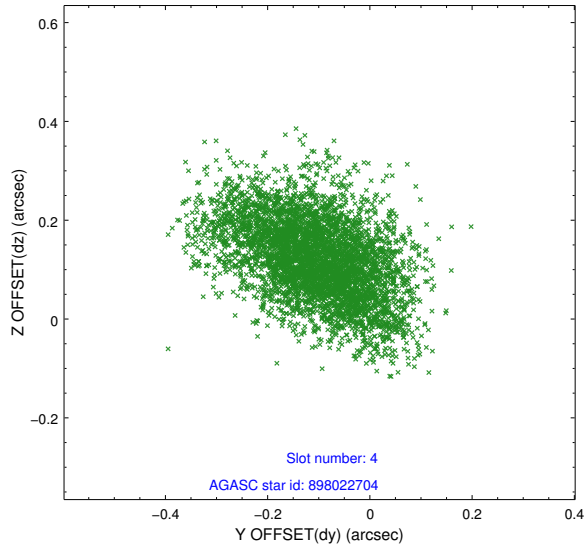
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.16	2218	-0.029	0.024	0.000	0.000	0.000000	0.000000	925.29	-839.48
1	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	GUIDE	used	898028672	7.40	4435	0.014	-0.065	0.137	0.203	272.225727	-27.783637	2095.02	-1893.72
3	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
4	GUIDE	used	898022704	9.21	4432	-0.104	0.121	0.131	0.216	272.620512	-27.413417	707.21	-695.92
5	GUIDE	used	898028352	10.17	4239	0.096	-0.065	0.278	0.428	272.103149	-27.759928	2028.66	-2288.09
6	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

2.4 Star Slots

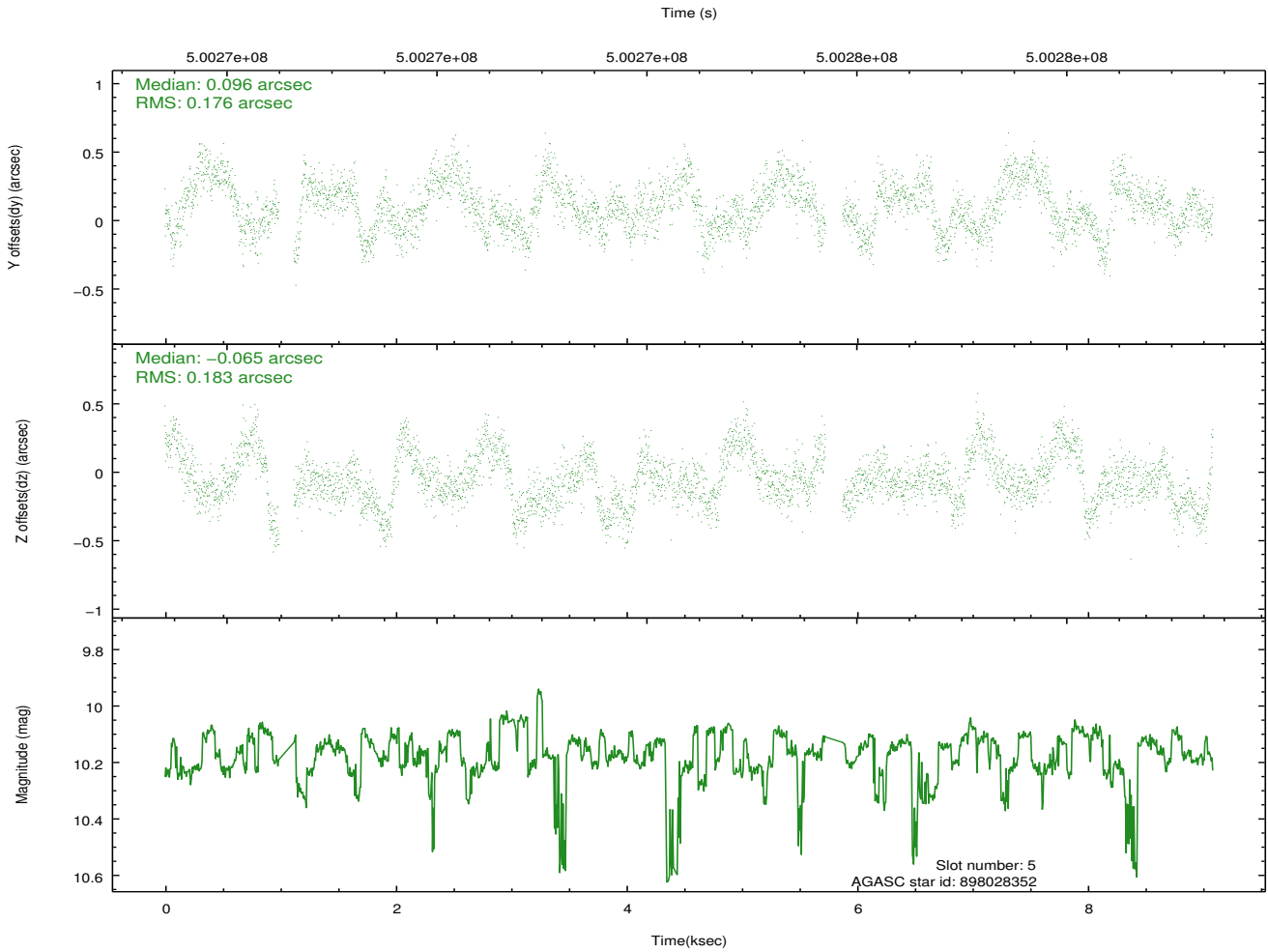
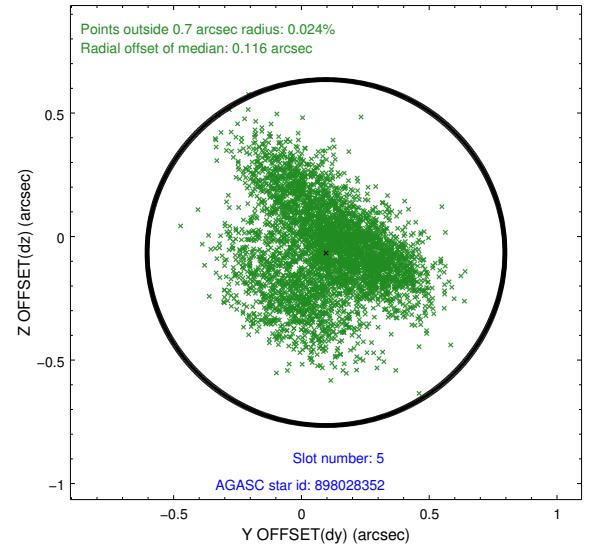
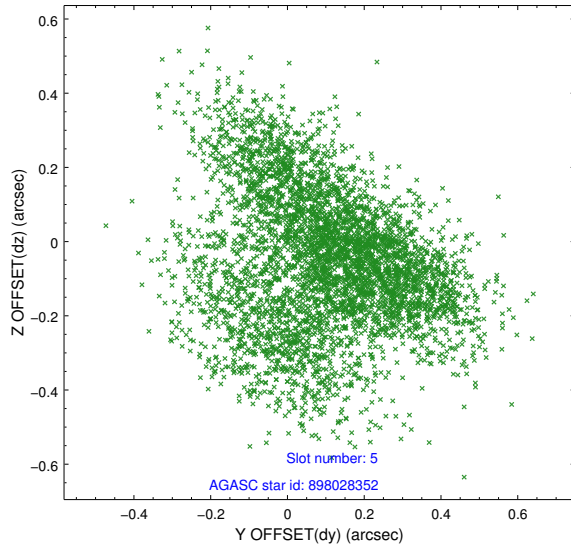
2.4.1 Slot 2



2.4.2 Slot 4

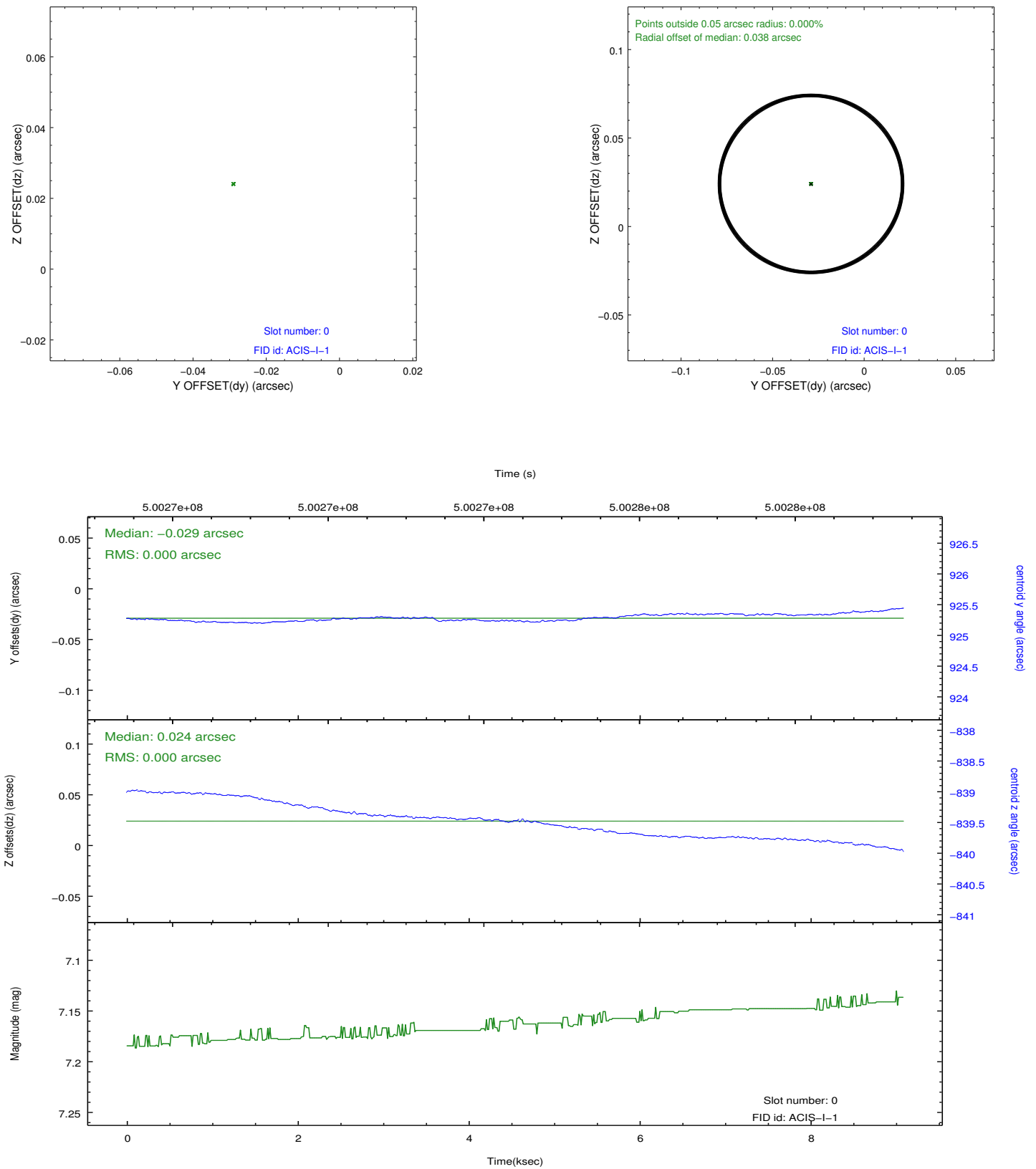


2.4.3 Slot 5



2.5 FID Slots

2.5.1 Slot 0



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.984000133872

A.2 Comments

Window constraint met.

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This is a moving target. Users will need to run sso_freeze or similar software to position the events in the reference frame of the target.

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The presence of the optically bright Venus on the aspect camera CCD significantly degraded the star tracking and fiducial light registration capabilities of the system. As only one fiducial light was successfully tracked, the aspect solution may have an uncompensated offset in roll. As a reduced number of stars were available for tracking, the image reconstruction is degraded and the astrometric accuracy may be reduced.

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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.