

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16500 - L2 Version 3
Chandra X-Ray Center

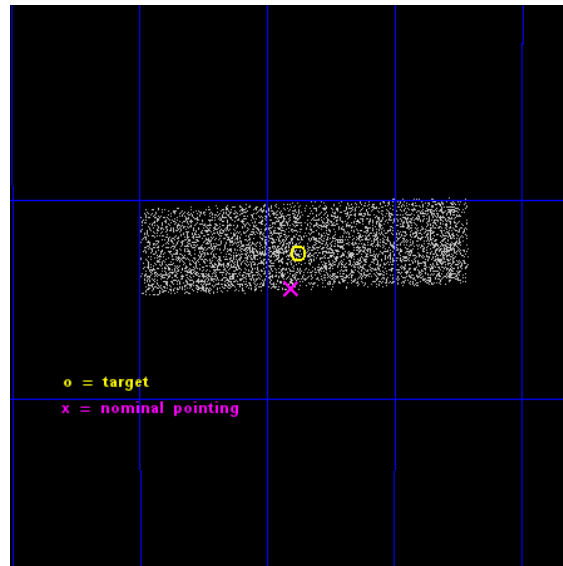
L2 Processing Date : Dec 7 2014

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1 Front

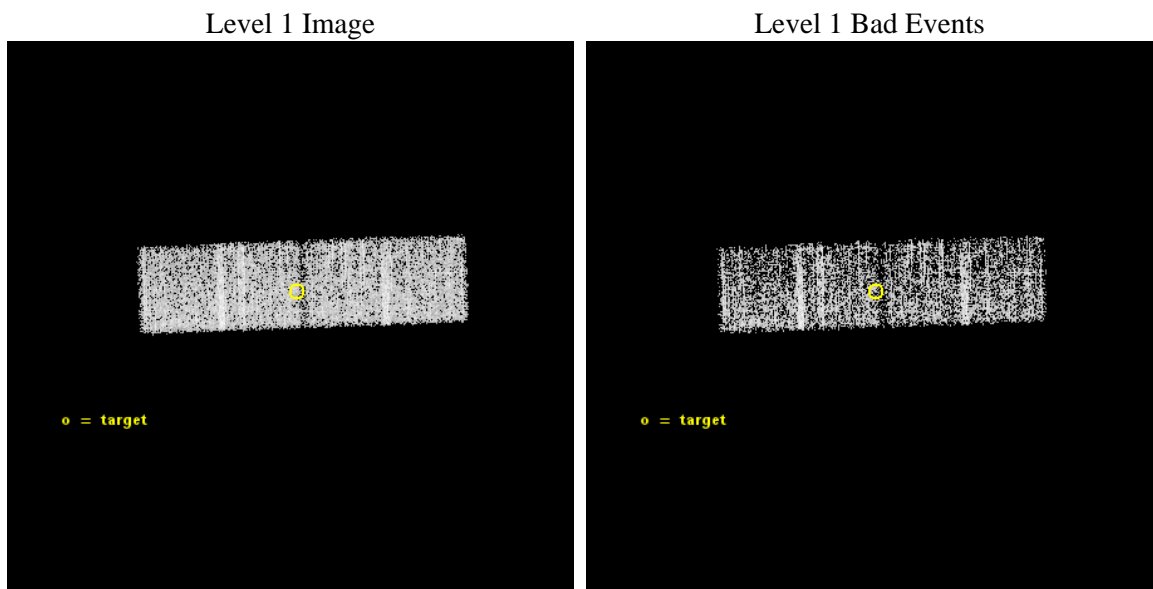
seq_num	100092	Sequence number
obs_id	16500	Observation id
title	Venus at Solar Maximum	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.0946	Observer's specified target RA [deg]
dec_targ	-27.21204	Observer's specified target Dec [deg]
ra_nom	273.10096921609	Nominal RA [deg]
dec_nom	-27.241003072312	Nominal Dec [deg]
roll_nom	267.92237305896	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9081.5591152906	Sum of GTIs [s]
livetime	8854.4426610351	Livetime [s]
ontime1	9083.2001353502	Sum of GTIs [s]
ontime3	9081.5591152906	Sum of GTIs [s]
l2events	5987	Number of level 2 events



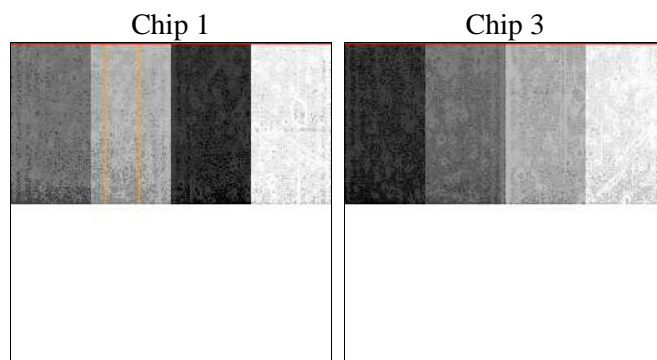
2 OBI

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	9081.5591152906	Sum of GTIs [s]
caldsver	4.6.4	 	ontime1	9083.2001353502	Sum of GTIs [s]
date	2014-12-07T21:17:57	Date and time of file creation	ontime3	9081.5591152906	Sum of GTIs [s]
revision	3	Processing version of data	l1events	49603	Number of level 1 events

2.1.4 Events

	ccd 1	ccd 3
level 1 events	24380	25223
rejected events	20689	21913
rejected %	84%	86%

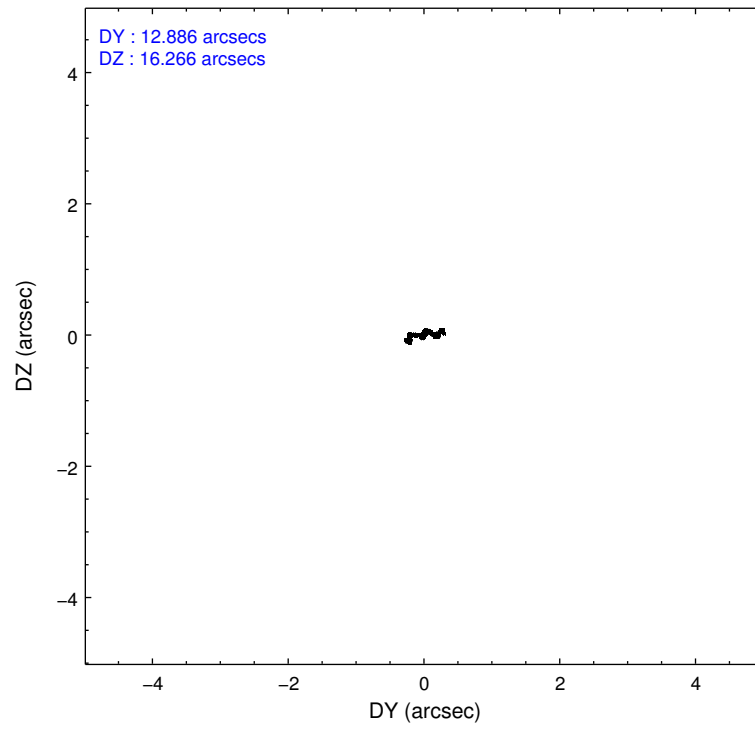
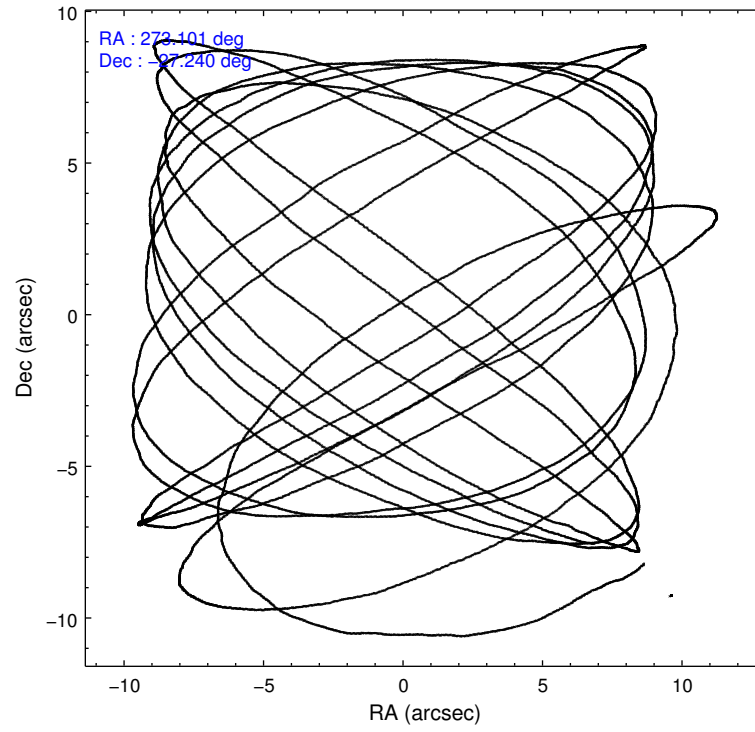
	ccd 1	ccd 3
grade 0 events	1526	1490
	6%	5%
grade 1 events	7	21
	0%	0%
grade 2 events	778	655
	3%	2%
grade 3 events	386	347
	1%	1%
grade 4 events	439	360
	1%	1%
grade 5 events	1233	1293
	5%	5%
grade 6 events	704	578
	2%	2%
grade 7 events	19307	20479
	79%	81%

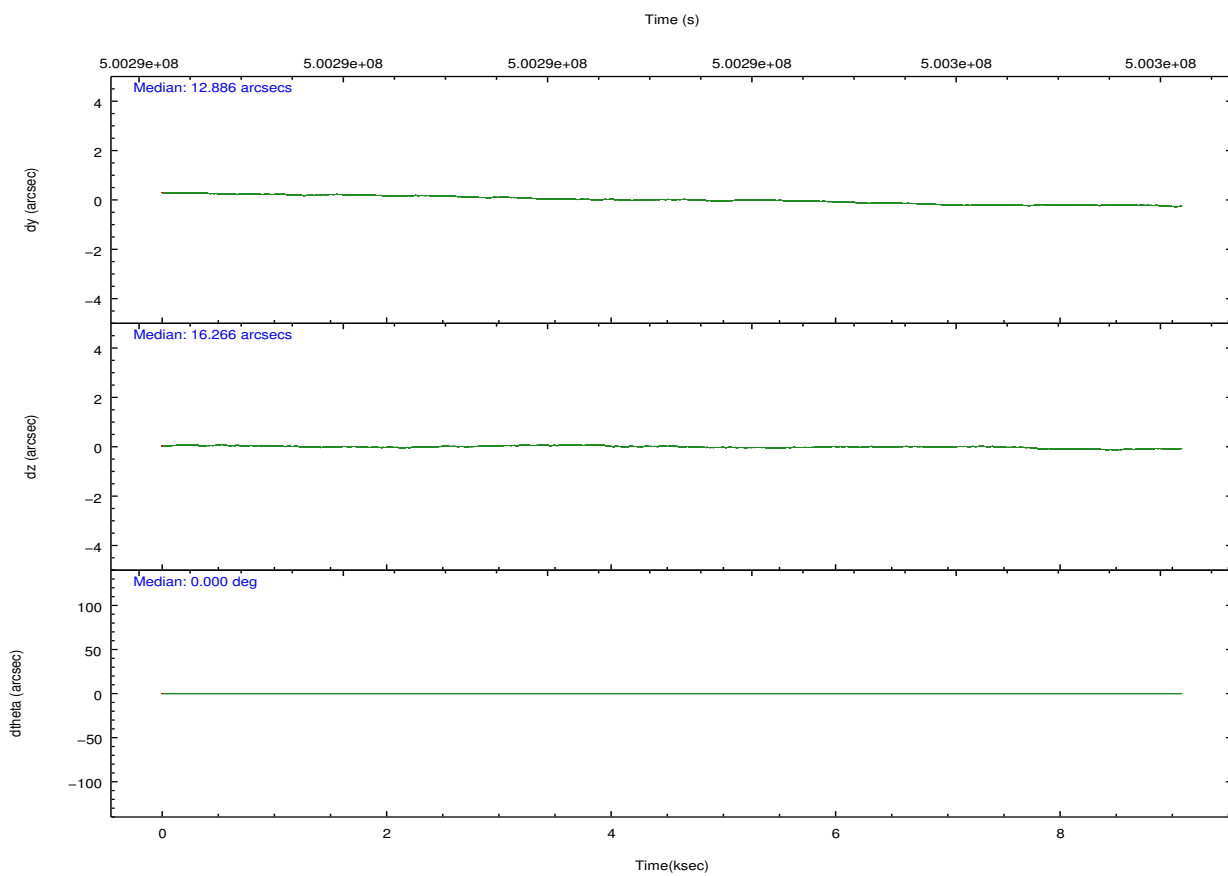
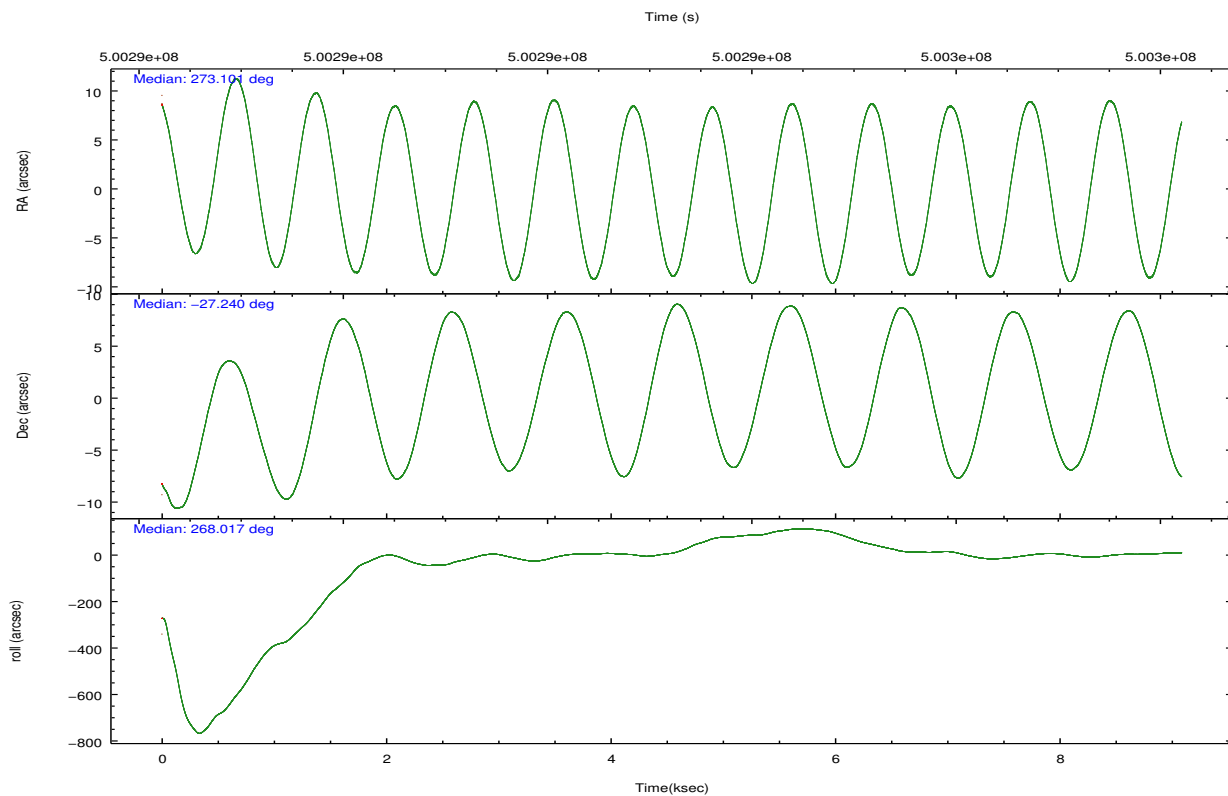
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-13	ACIS-13
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	273.086407	273.1009692160856
[deg] Pointing Dec	-27.216740	-27.24100307231217
[deg] Pointing Roll	267.706640	267.9223730589589
[s] Window start time (MET)	498009667.184000	498009667.184000
[s] Window stop time (MET)	501120067.184000	501120067.184000
[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)	500288856.184000	500288479.7024
Observation start date	2013-11-08T09:06:29	2013-11-08T09:01:19
[s] Observation end time (MET)	500297756.184000	500297889.71541
Observation end date	2013-11-08T11:34:49	2013-11-08T11:38:09
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/2
Subarray start row	512	512
Subarray row count	512	512
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	1.6

2.3 Aspect



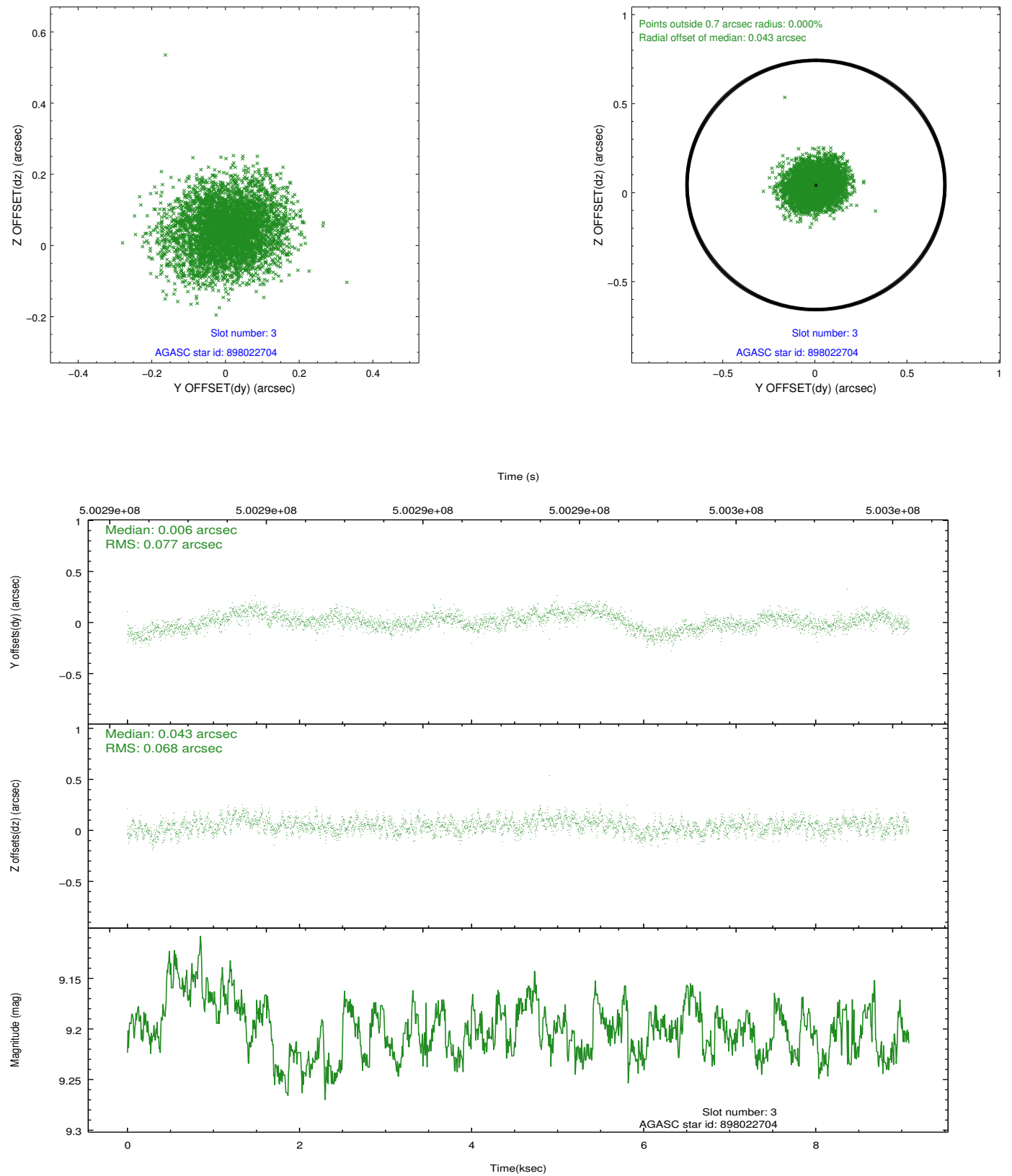


Slot Statistics

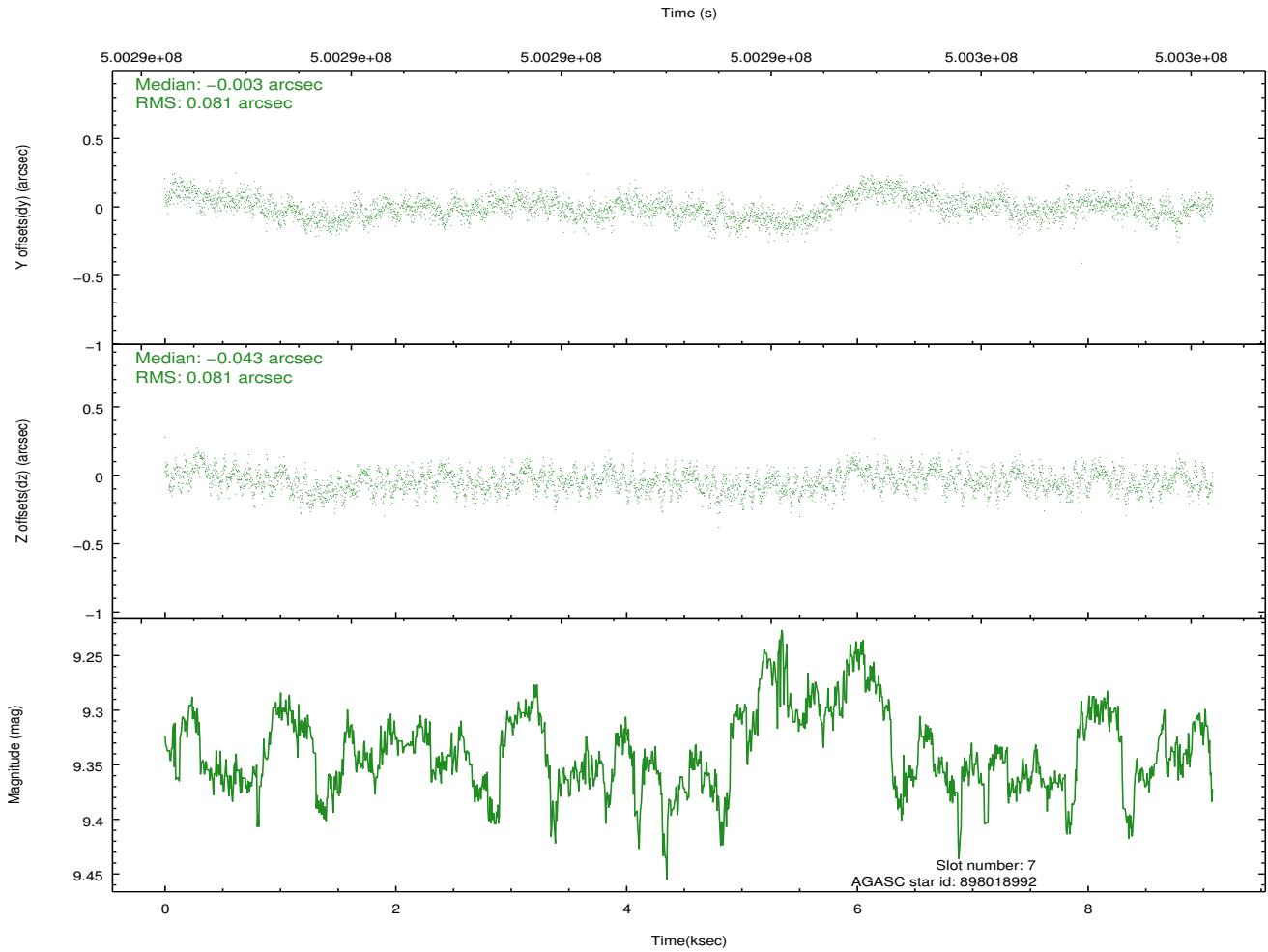
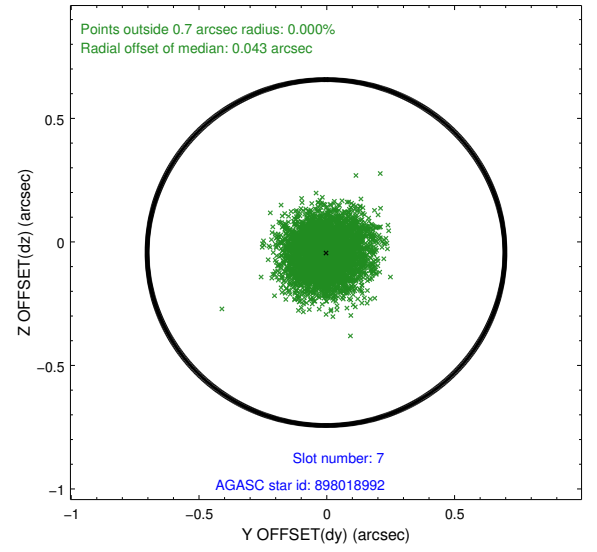
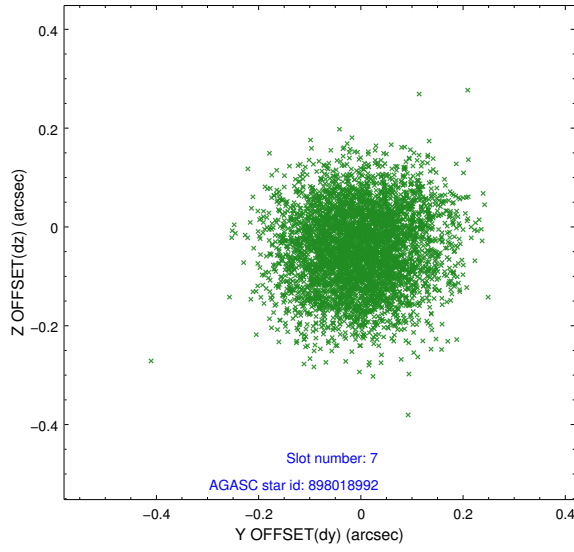
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.10	2217	-0.029	0.024	0.000	0.000	0.000000	0.000000	926.57	-839.90
1	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
3	GUIDE	used	898022704	9.20	4430	0.006	0.043	0.110	0.178	272.620512	-27.413417	770.46	-1458.78
4	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	898018992	9.34	4429	-0.003	-0.043	0.123	0.195	272.666360	-27.419314	785.64	-1311.91

2.4 Star Slots

2.4.1 Slot 3

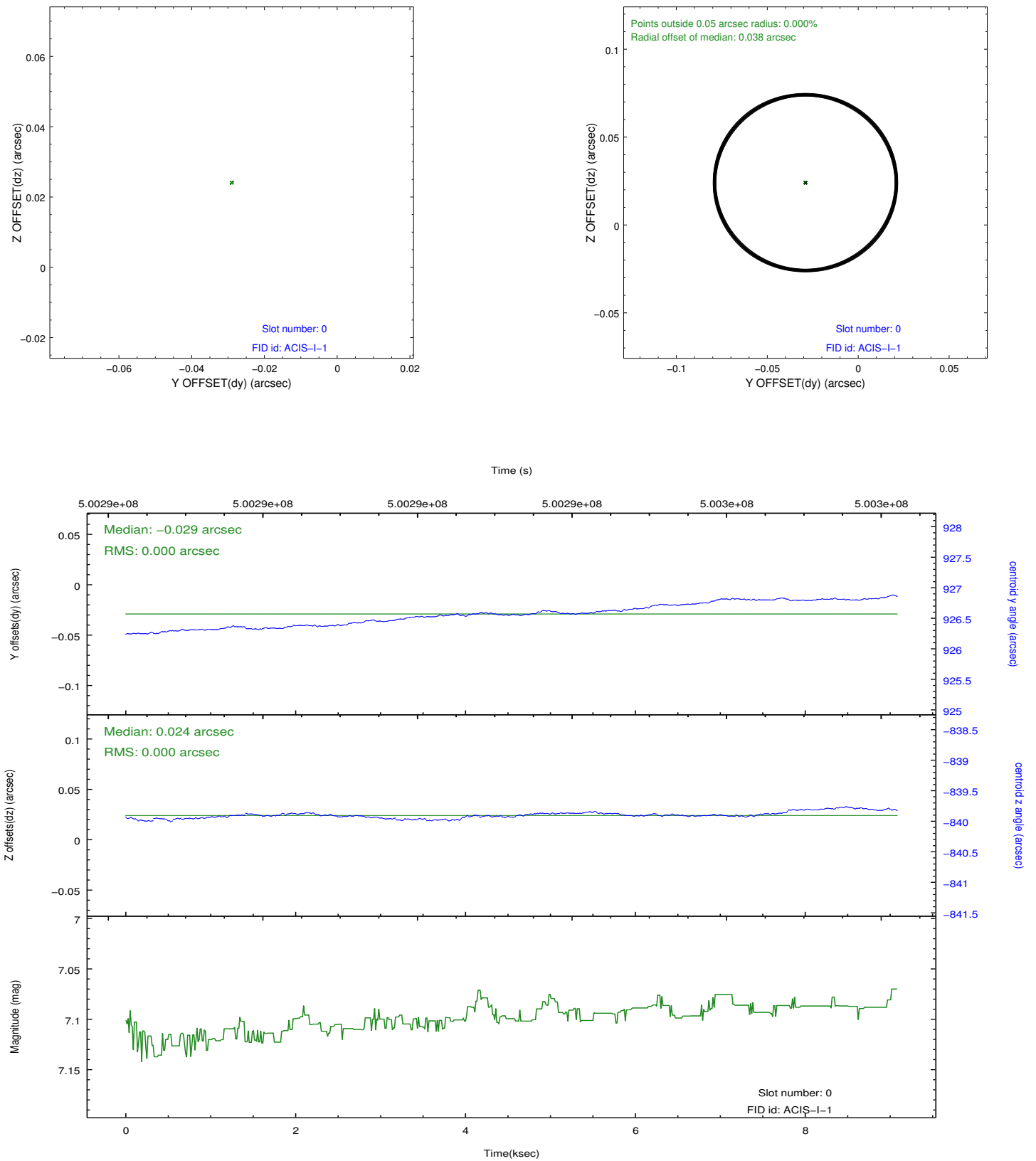


2.4.2 Slot 7



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	9.0815591152906

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.