

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16501 - L2 Version 4
Chandra X-Ray Center

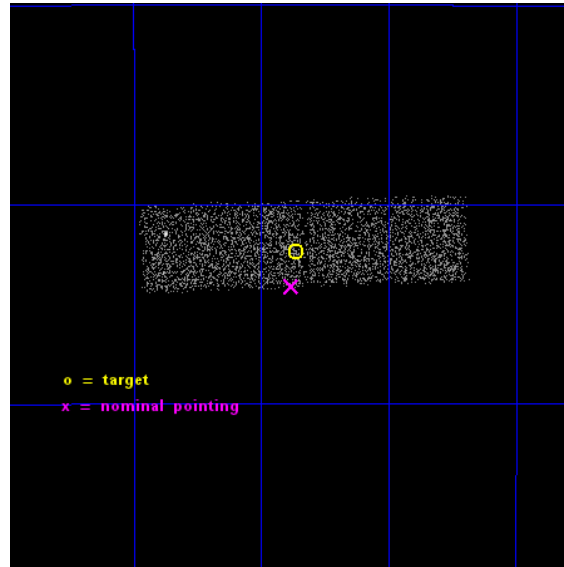
L2 Processing Date : Dec 8 2014

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1 Front

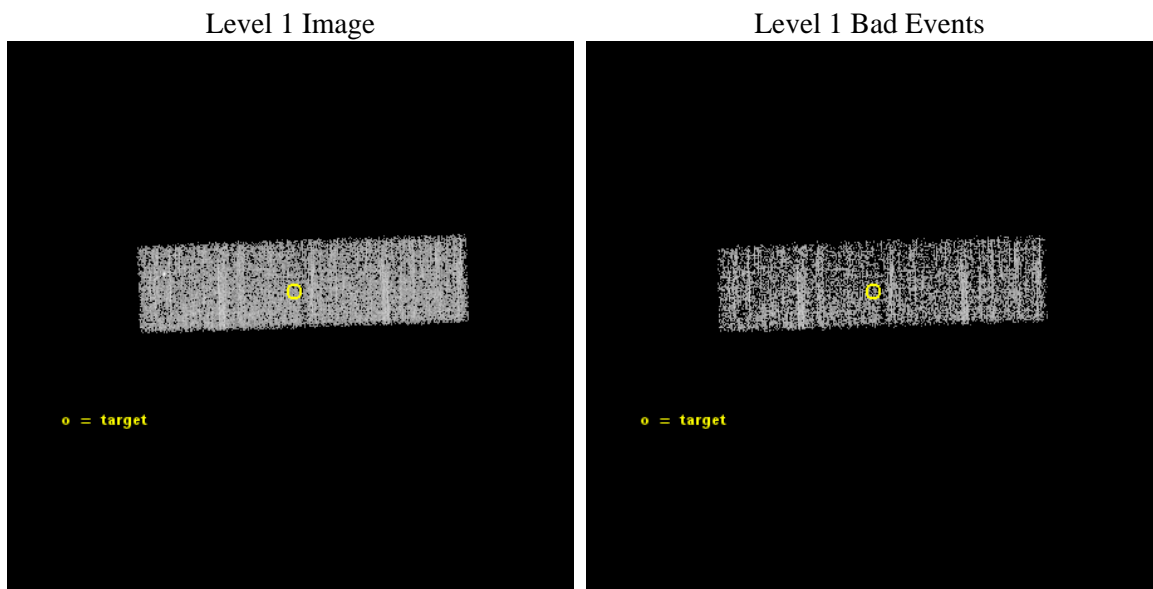
seq_num	100092	Sequence number
obs_id	16501	Observation id
title	Venus at Solar Maximum	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.21626	Observer's specified target RA [deg]
dec_targ	-27.20616	Observer's specified target Dec [deg]
ra_nom	273.22040208932	Nominal RA [deg]
dec_nom	-27.235174847173	Nominal Dec [deg]
roll_nom	267.9689876854	Nominal Roll [deg]
revision	4	Processing version of data
ontime	8166.4001216888	Sum of GTIs [s]
livetime	7962.1704496552	Livetime [s]
ontime1	8166.4001216888	Sum of GTIs [s]
ontime3	8166.4001216888	Sum of GTIs [s]
l2events	5519	Number of level 2 events



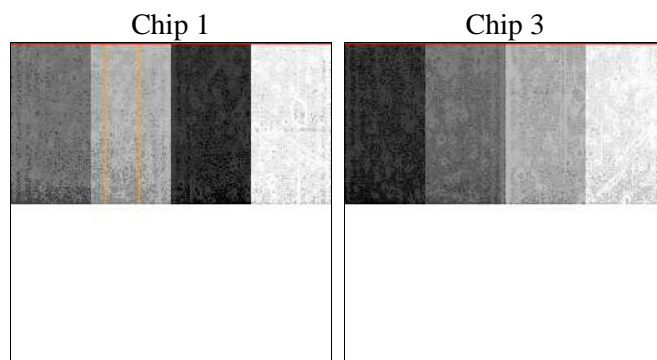
2 OBI

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	8166.4001216888	Sum of GTIs [s]
caldsver	4.6.4	 	ontime1	8166.4001216888	Sum of GTIs [s]
date	2014-12-08T14:57:41	Date and time of file creation	ontime3	8166.4001216888	Sum of GTIs [s]
revision	4	Processing version of data	l1events	50049	Number of level 1 events

2.1.4 Events

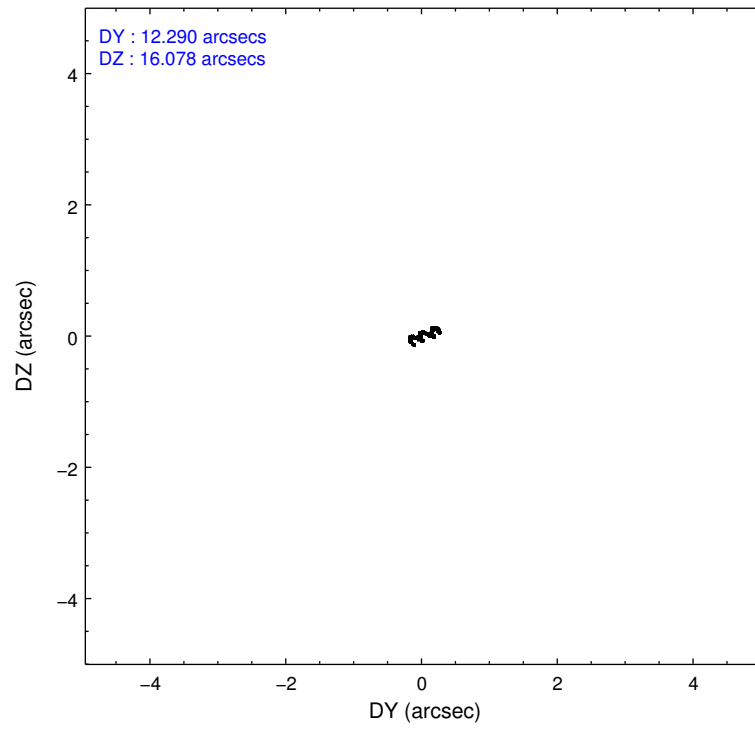
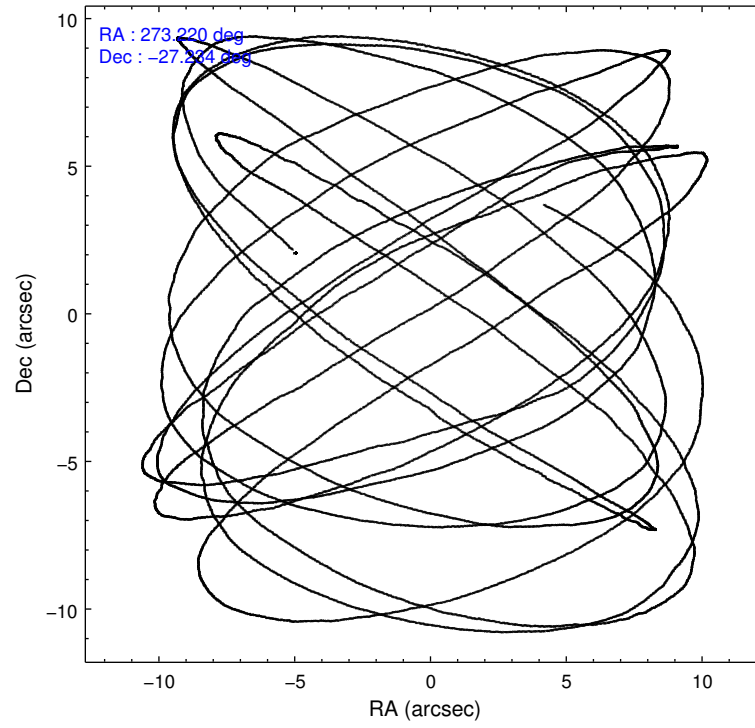
	ccd 1	ccd 3
level 1 events	24987	25062
rejected events	21722	21929
rejected %	86%	87%

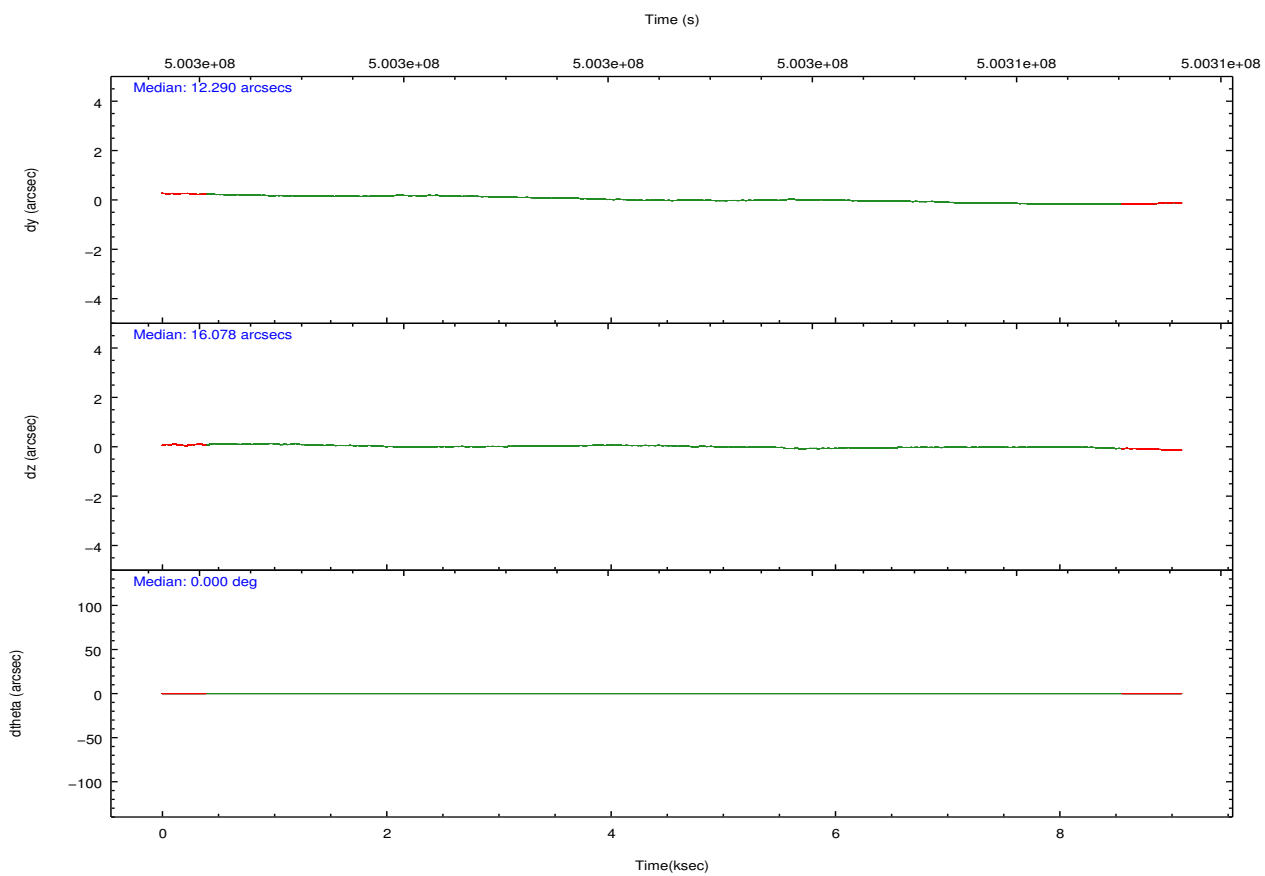
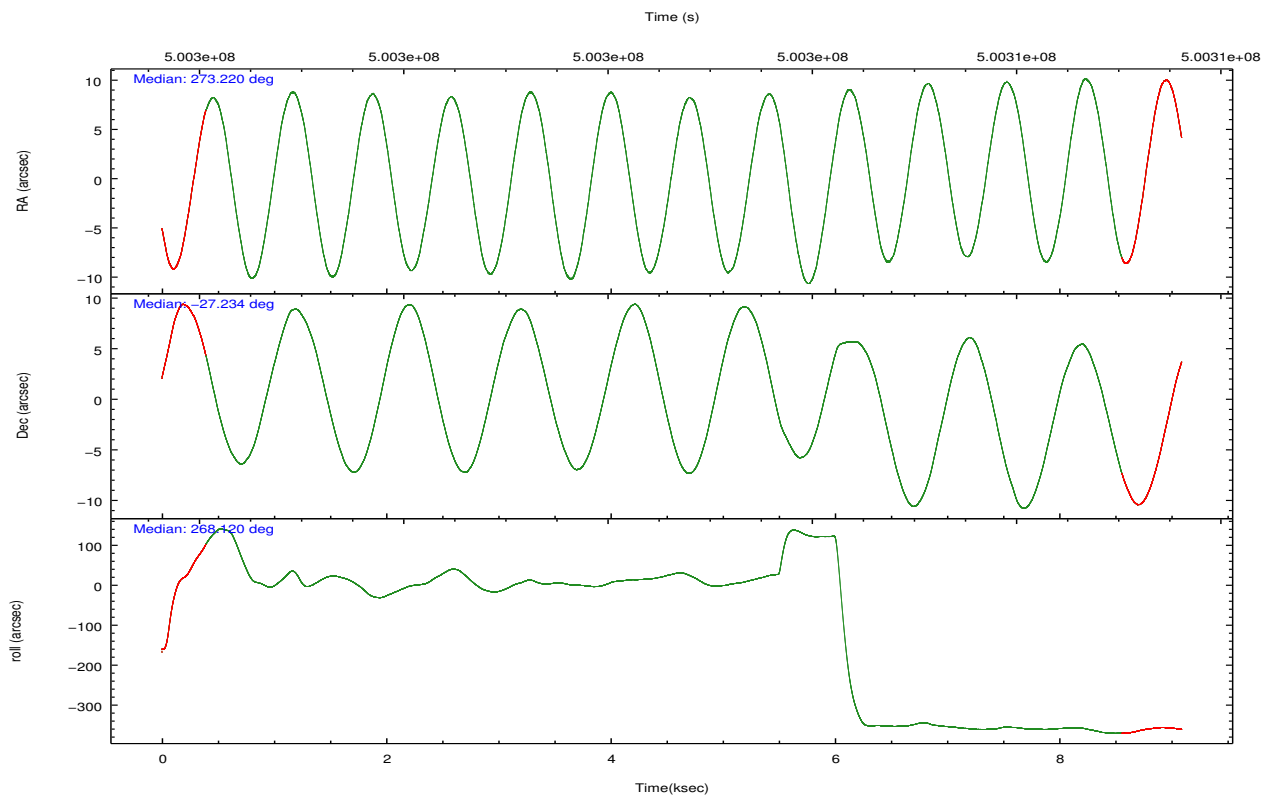
	ccd 1	ccd 3
grade 0 events	1435	1610
	5%	6%
grade 1 events	9	22
	0%	0%
grade 2 events	770	720
	3%	2%
grade 3 events	407	376
	1%	1%
grade 4 events	436	368
	1%	1%
grade 5 events	1200	1352
	4%	5%
grade 6 events	665	605
	2%	2%
grade 7 events	20065	20009
	80%	79%

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	273.205793	273.2204020893207	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-27.210952	-27.23517484717274	Subarray start row	512	512
[deg] Pointing Roll	267.753426	267.9689876853967	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)	500298266.184000	500297889.71541			
Observation start date	2013-11-08T11:43:19	2013-11-08T11:38:09			
[s] Observation end time (MET)	500307166.184000	500307299.72843			
Observation end date	2013-11-08T14:11:39	2013-11-08T14:14:59			
Read mode	TIMED	TIMED			

2.3 Aspect



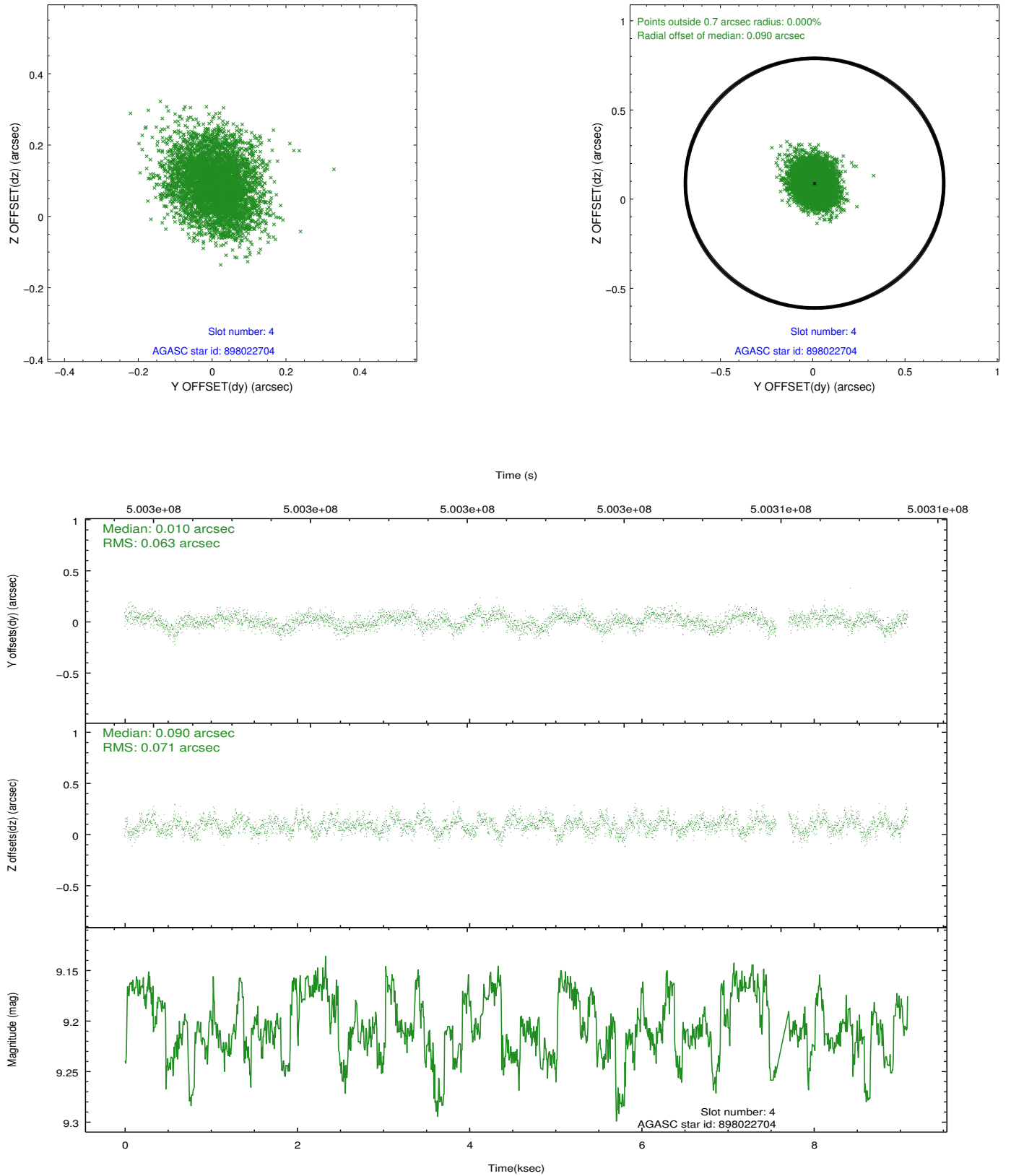


Slot Statistics

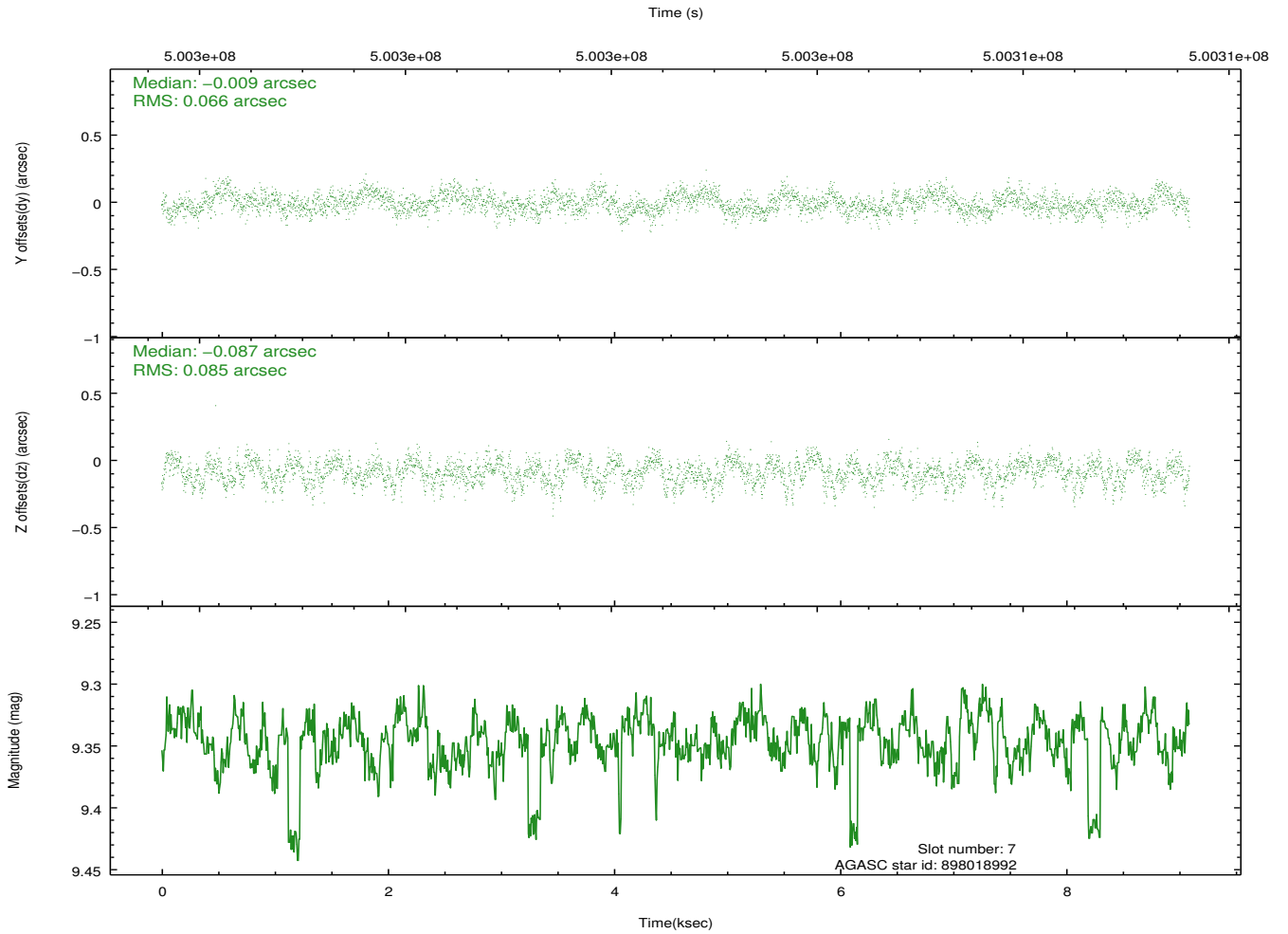
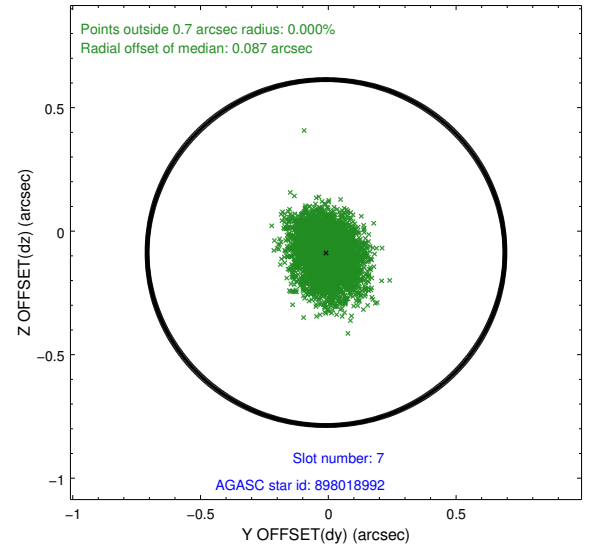
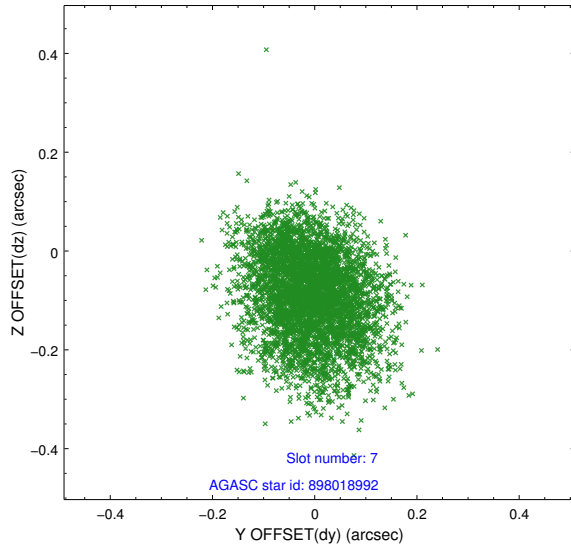
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	2218	-0.029	0.024	0.000	0.000	0.000000	0.000000	927.16	-839.72
1	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
3	OMITTED			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	4362	0.010	0.090	0.102	0.158	272.620512	-27.413417	806.97	-1839.71
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	9.35	4435	-0.009	-0.087	0.116	0.184	272.666360	-27.419314	822.13	-1693.11

2.4 Star Slots

2.4.1 Slot 4

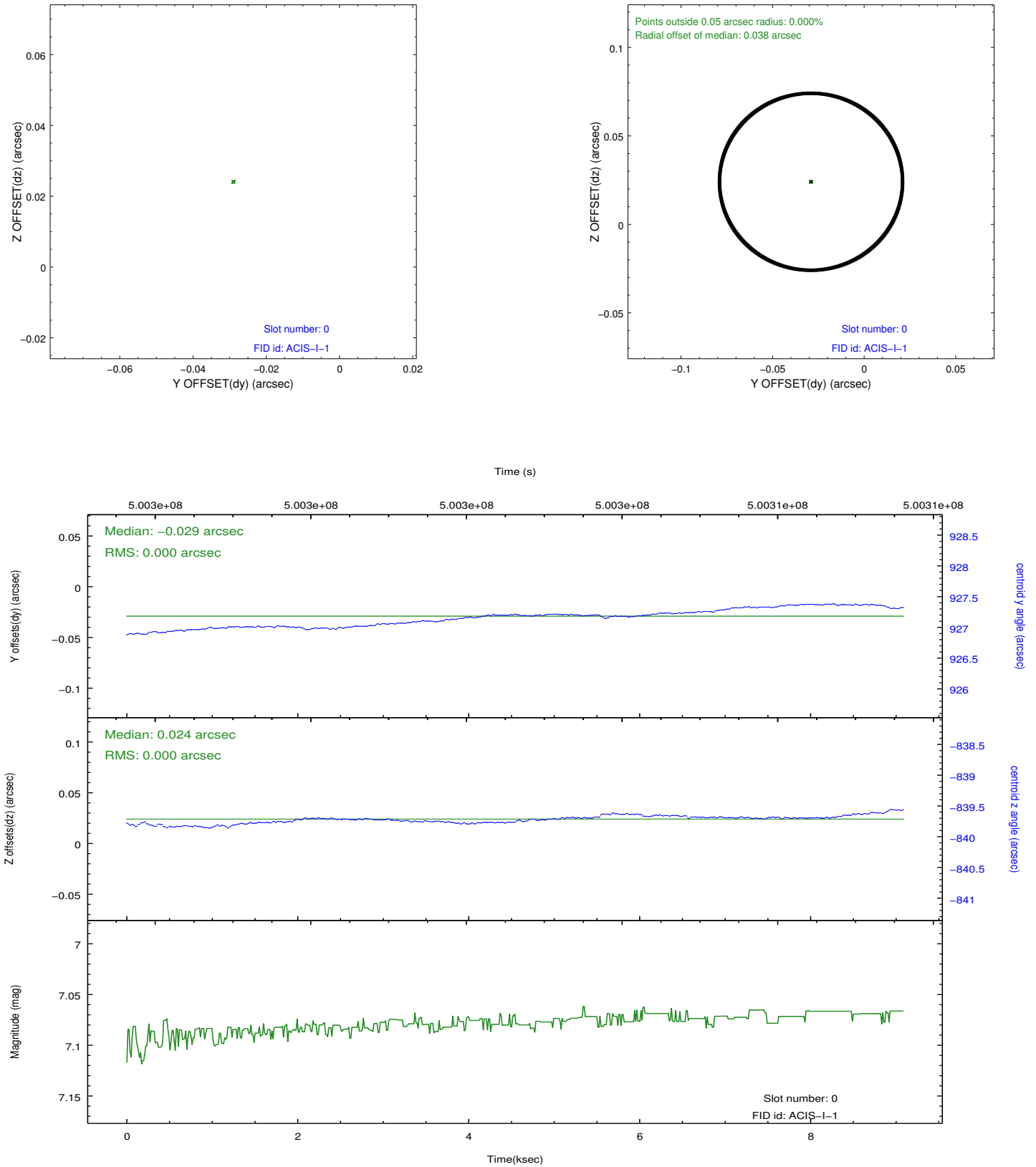


2.4.2 Slot 7



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)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.1664001216888

A.2 Comments

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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The guide star in slot 3 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.

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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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Window preference met.

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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.