

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16503 - L2 Version 3
Chandra X-Ray Center

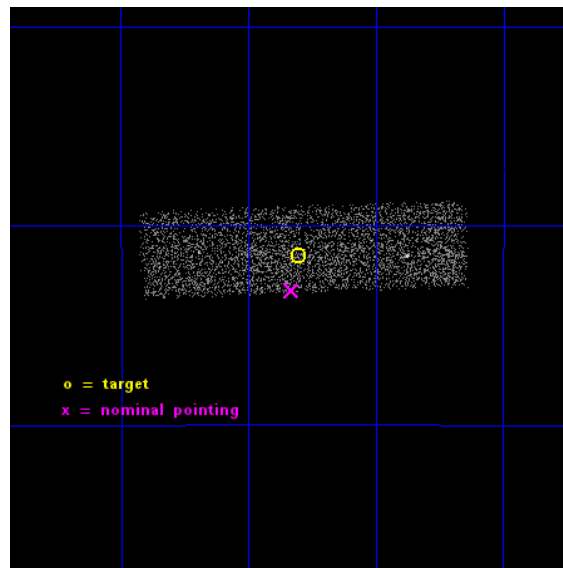
L2 Processing Date : Dec 7 2014

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1 Front

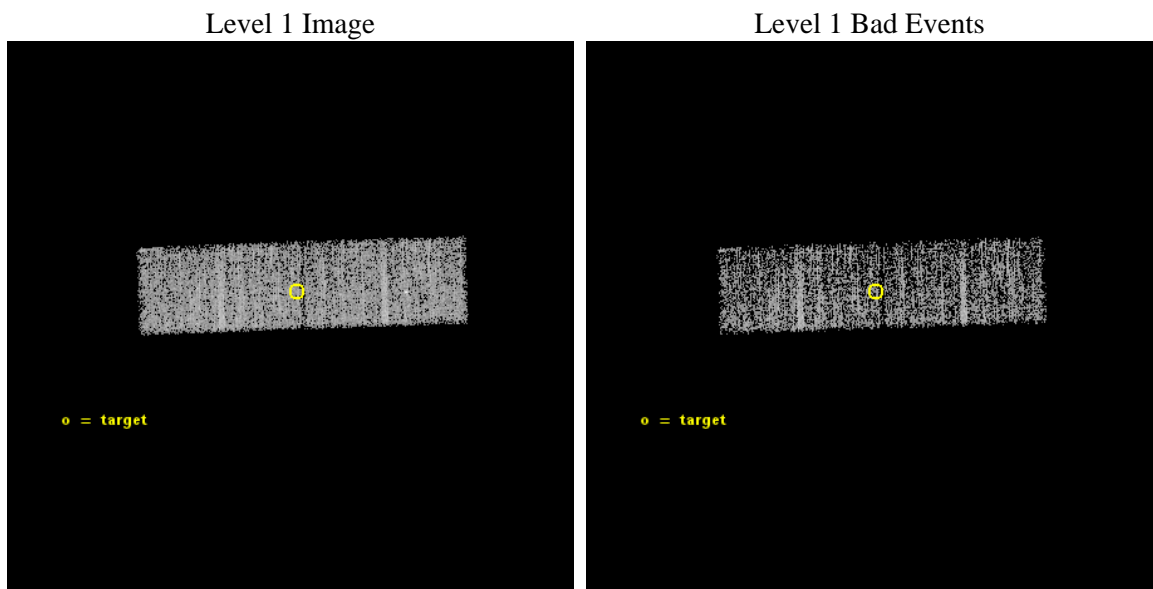
seq_num	100092	Sequence number
obs_id	16503	Observation id
title	Venus at Solar Maximum	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.45104	Observer's specified target RA [deg]
dec_targ	-27.19193	Observer's specified target Dec [deg]
ra_nom	273.45779702998	Nominal RA [deg]
dec_nom	-27.220754566216	Nominal Dec [deg]
roll_nom	268.06207319981	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9086.4001353979	Sum of GTIs [s]
livetime	8859.1626143401	Livetime [s]
ontime1	9084.7591551542	Sum of GTIs [s]
ontime3	9086.4001353979	Sum of GTIs [s]
l2events	6135	Number of level 2 events



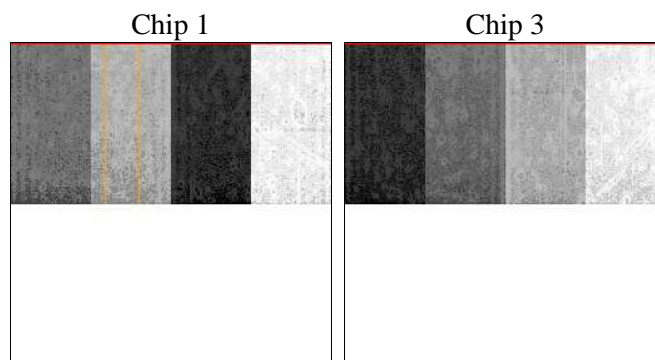
2 OBI

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	9086.4001353979	Sum of GTIs [s]
caldsver	4.6.4	 	ontime1	9084.7591551542	Sum of GTIs [s]
date	2014-12-07T21:08:03	Date and time of file creation	ontime3	9086.4001353979	Sum of GTIs [s]
revision	3	Processing version of data	l1events	48362	Number of level 1 events

2.1.4 Events

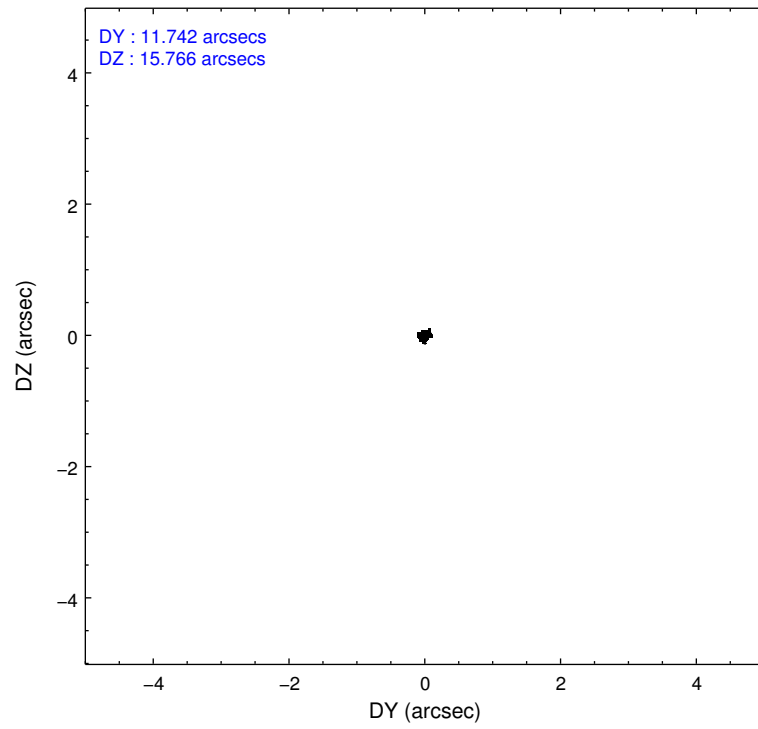
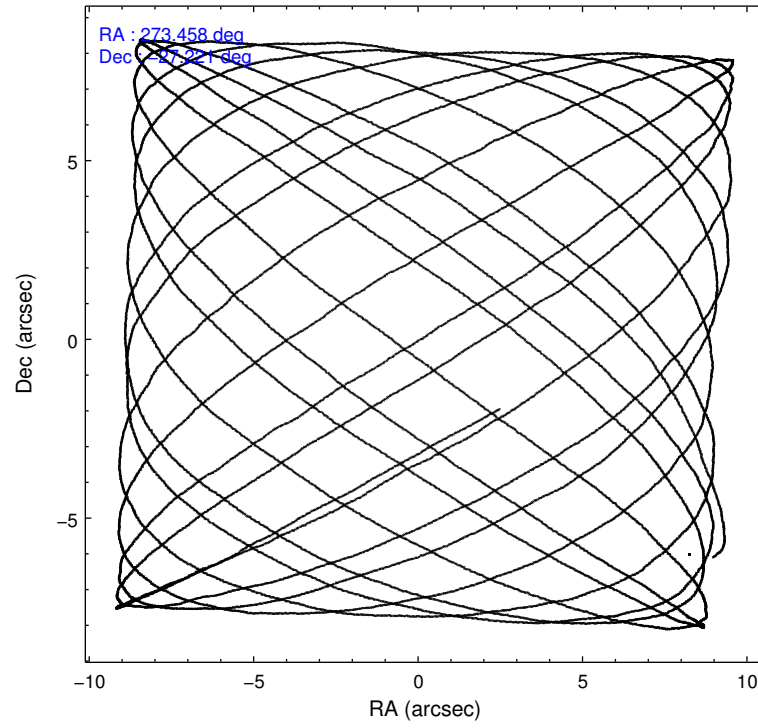
	ccd 1	ccd 3
level 1 events	23690	24672
rejected events	19797	21475
rejected %	83%	87%

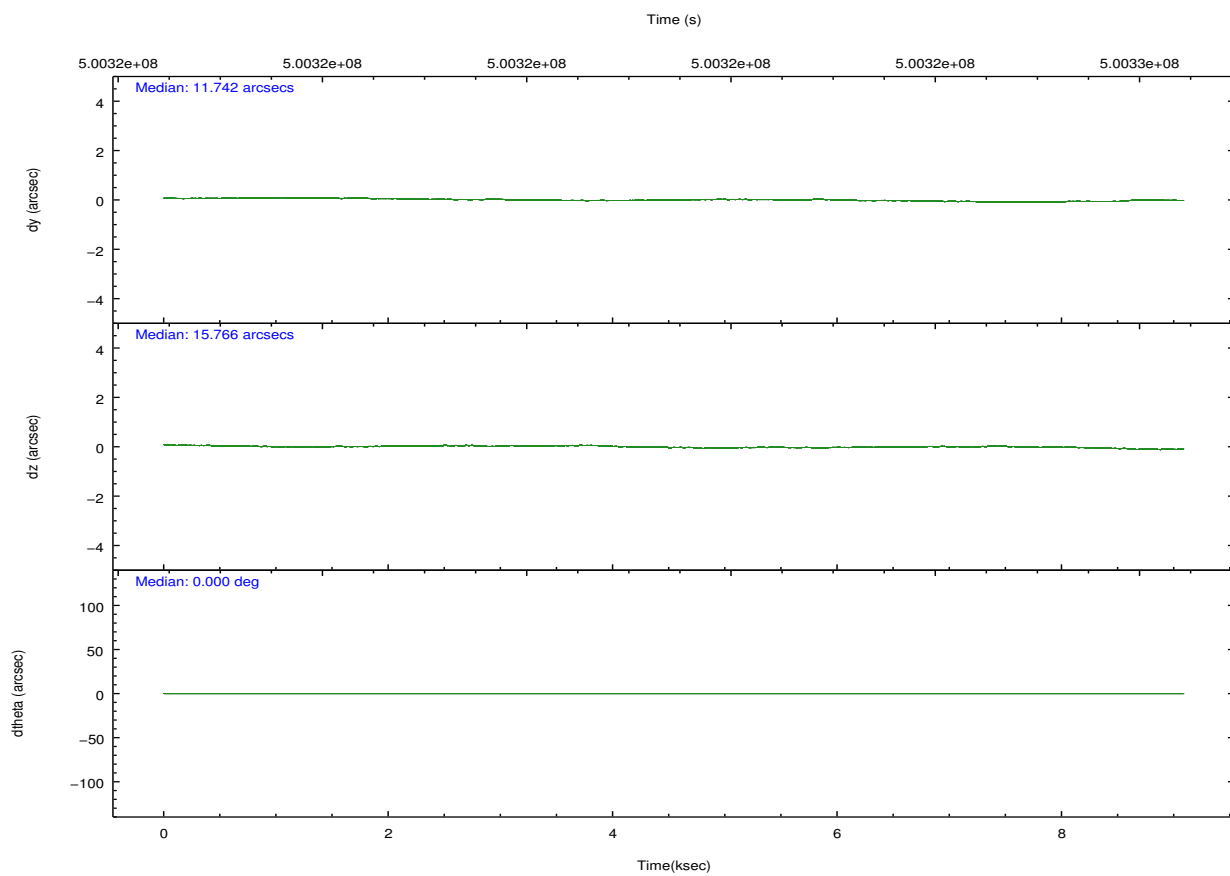
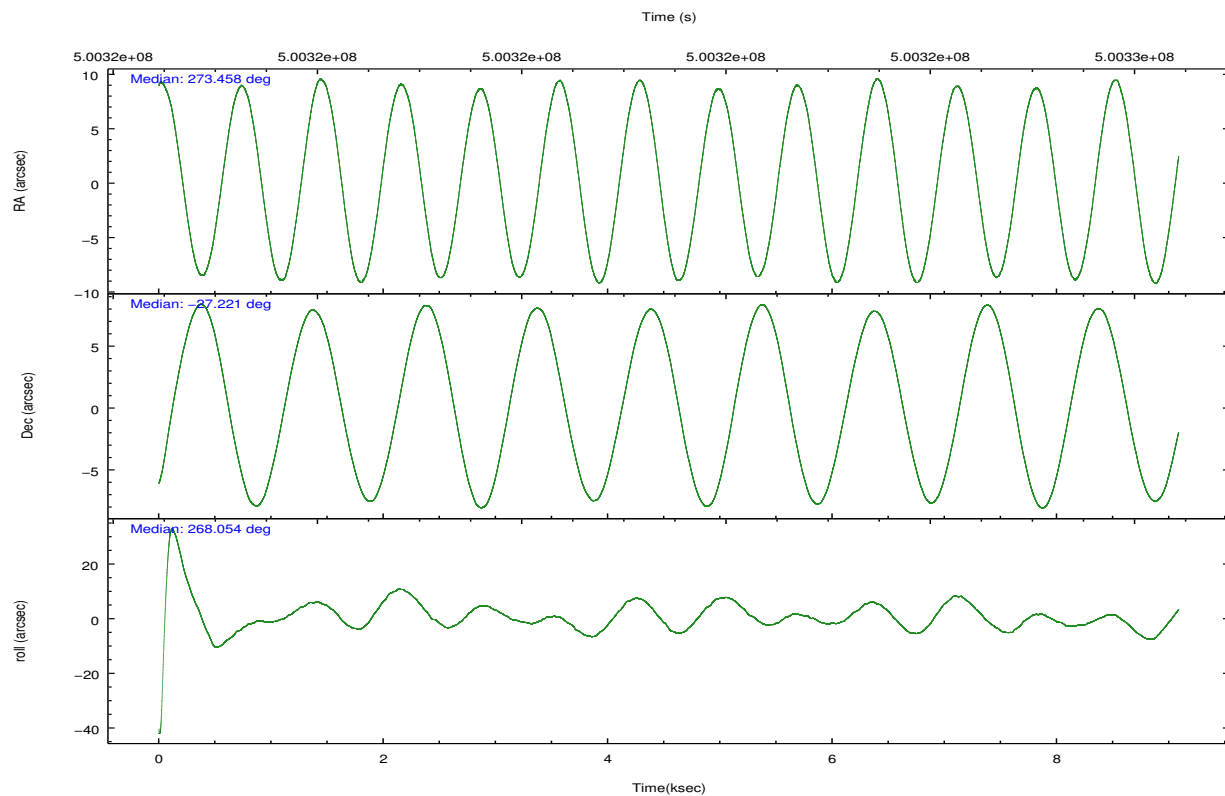
	ccd 1	ccd 3
grade 0 events	1693	1432
	7%	5%
grade 1 events	12	23
	0%	0%
grade 2 events	778	595
	3%	2%
grade 3 events	413	365
	1%	1%
grade 4 events	437	361
	1%	1%
grade 5 events	1190	1302
	5%	5%
grade 6 events	713	557
	3%	2%
grade 7 events	18454	20037
	77%	81%

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	273.443166	273.4577970299821	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-27.196530	-27.22075456621585	Subarray start row	512	512
[deg] Pointing Roll	267.846713	268.0620731998117	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)	500317086.184000	500316710.25394			
Observation start date	2013-11-08T16:56:59	2013-11-08T16:51:50			
[s] Observation end time (MET)	500325986.184000	500326119.75446			
Observation end date	2013-11-08T19:25:19	2013-11-08T19:28:39			
Read mode	TIMED	TIMED			

2.3 Aspect



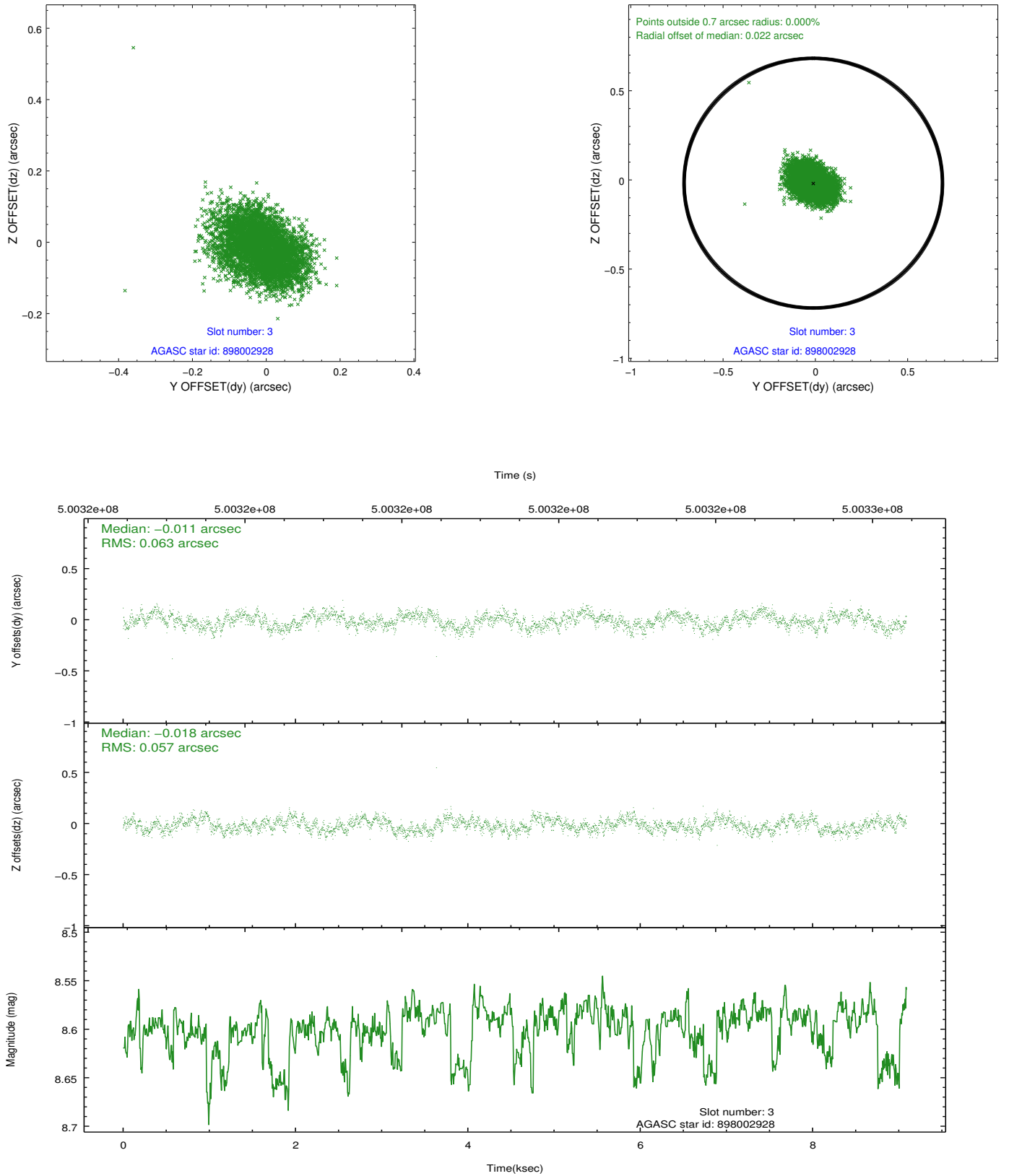


Slot Statistics

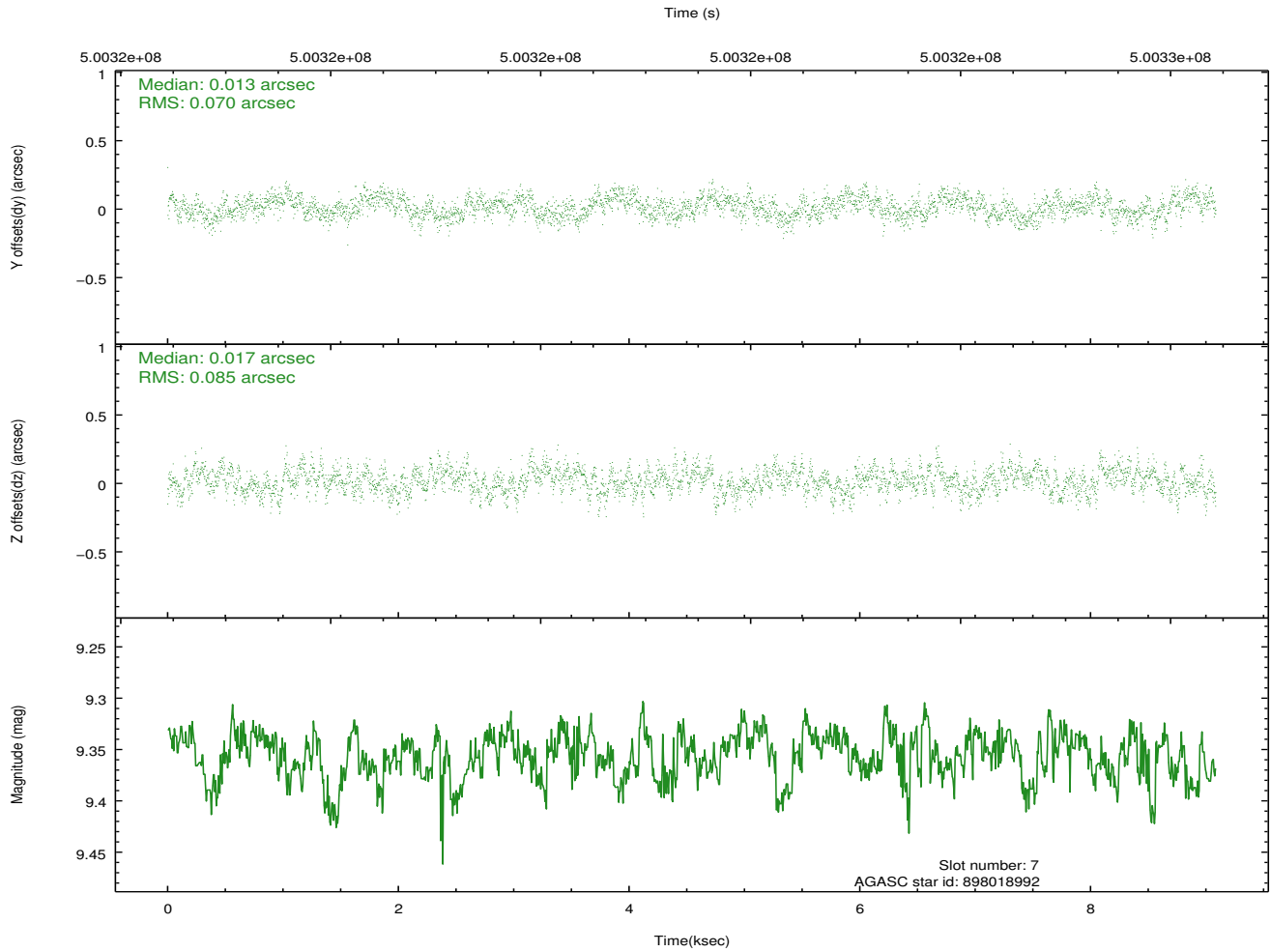
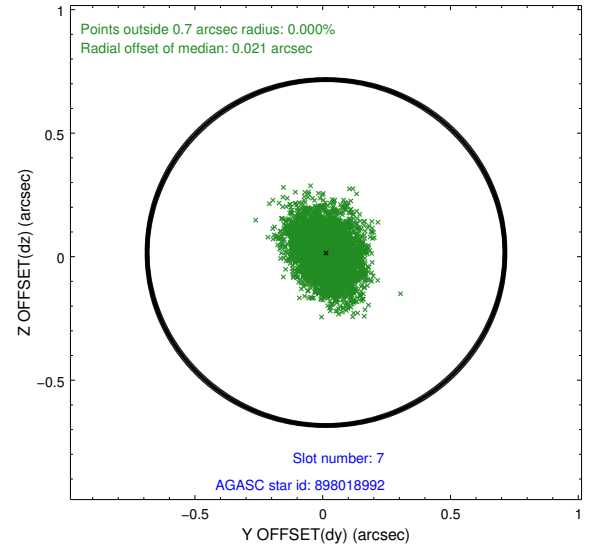
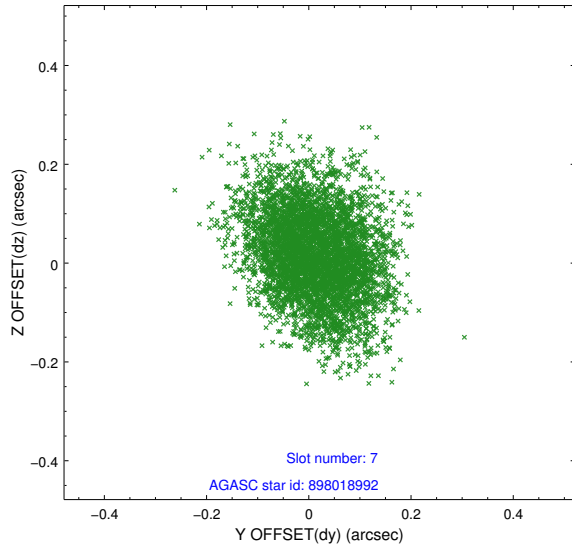
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.05	2217	-0.029	0.024	0.000	0.000	0.000000	0.000000	927.74	-839.39
1	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
3	GUIDE	used	898002928	8.60	4432	-0.011	-0.018	0.091	0.141	273.073267	-27.720977	1933.38	-1106.59
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	9.36	4432	0.013	0.017	0.116	0.190	272.666360	-27.419314	903.77	-2450.11

2.4 Star Slots

2.4.1 Slot 3

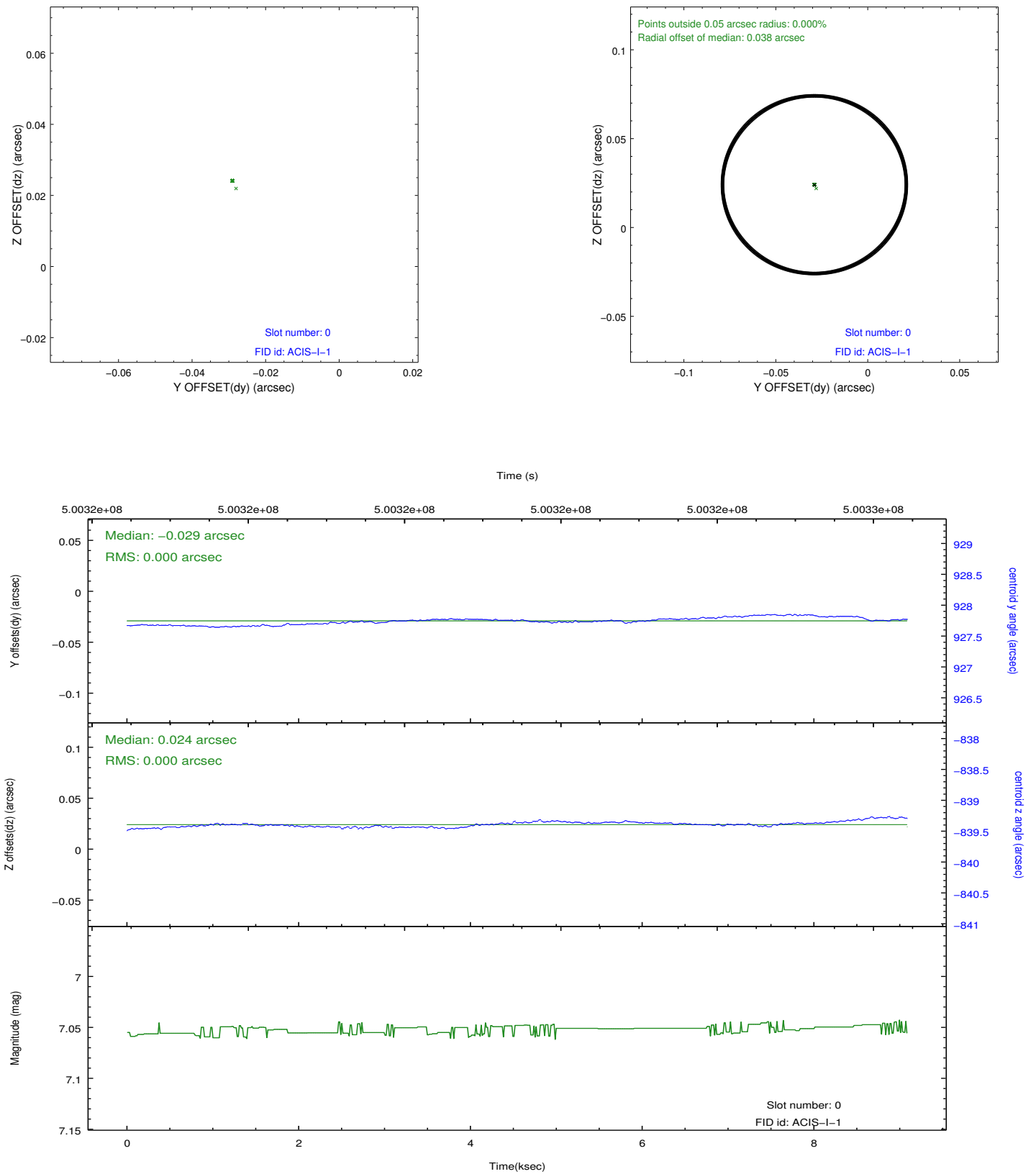


2.4.2 Slot 7



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	8.8432001317739

A.2 Comments

Charge time for this ObsId remains at previous value of 8.8432 ks although with the current processing the charge time would have been 9.086 ksec.

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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.