

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16502 - L2 Version 3
Chandra X-Ray Center

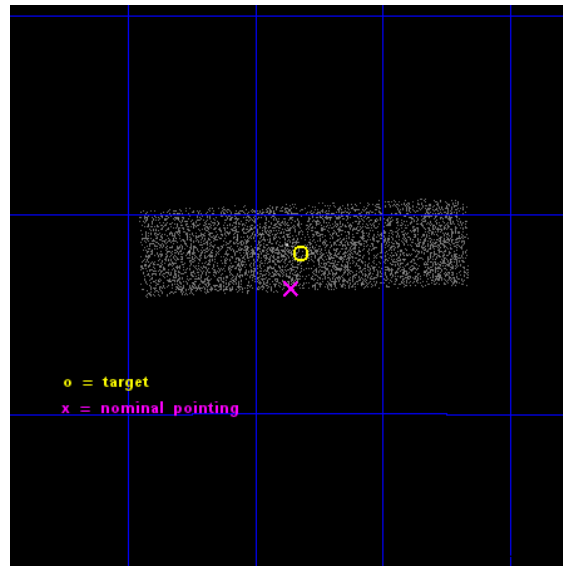
L2 Processing Date : Dec 7 2014

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1 Front

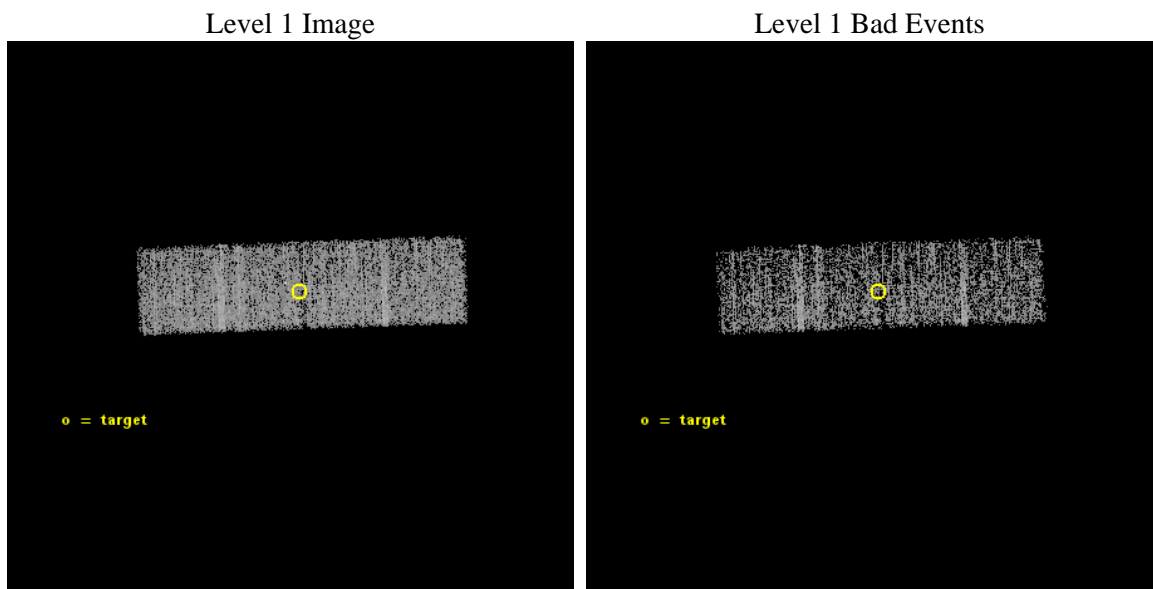
seq_num	100092	Sequence number
obs_id	16502	Observation id
title	Venus at Solar Maximum	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.33004	Observer's specified target RA [deg]
dec_targ	-27.19976	Observer's specified target Dec [deg]
ra_nom	273.33954688266	Nominal RA [deg]
dec_nom	-27.228462600195	Nominal Dec [deg]
roll_nom	268.0156645749	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9035.200134635	Sum of GTIs [s]
livetime	8809.2430503924	Livetime [s]
ontime1	9035.200134635	Sum of GTIs [s]
ontime3	9035.200134635	Sum of GTIs [s]
l2events	6172	Number of level 2 events



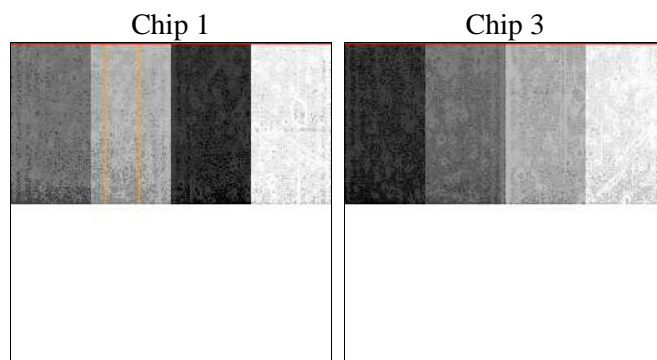
2 OBI

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	9035.200134635	Sum of GTIs [s]
caldsver	4.6.4	 	ontime1	9035.200134635	Sum of GTIs [s]
date	2014-12-07T21:14:28	Date and time of file creation	ontime3	9035.200134635	Sum of GTIs [s]
revision	3	Processing version of data	l1events	48867	Number of level 1 events

2.1.4 Events

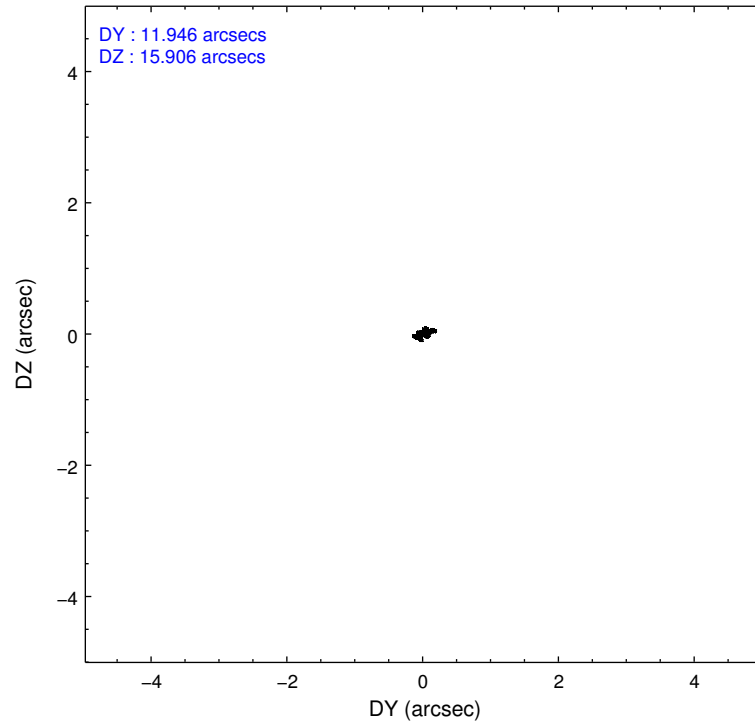
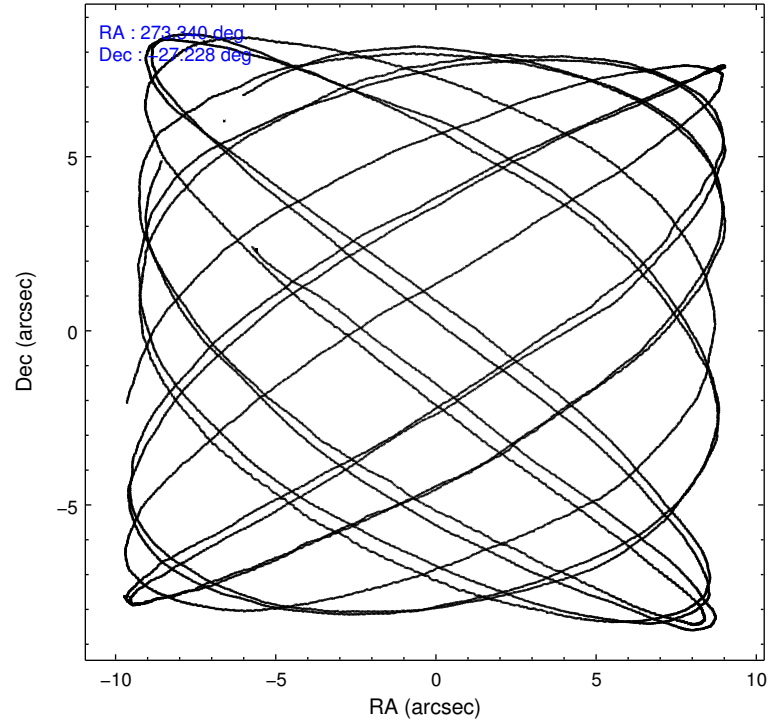
	ccd 1	ccd 3
level 1 events	24159	24708
rejected events	20496	21185
rejected %	84%	85%

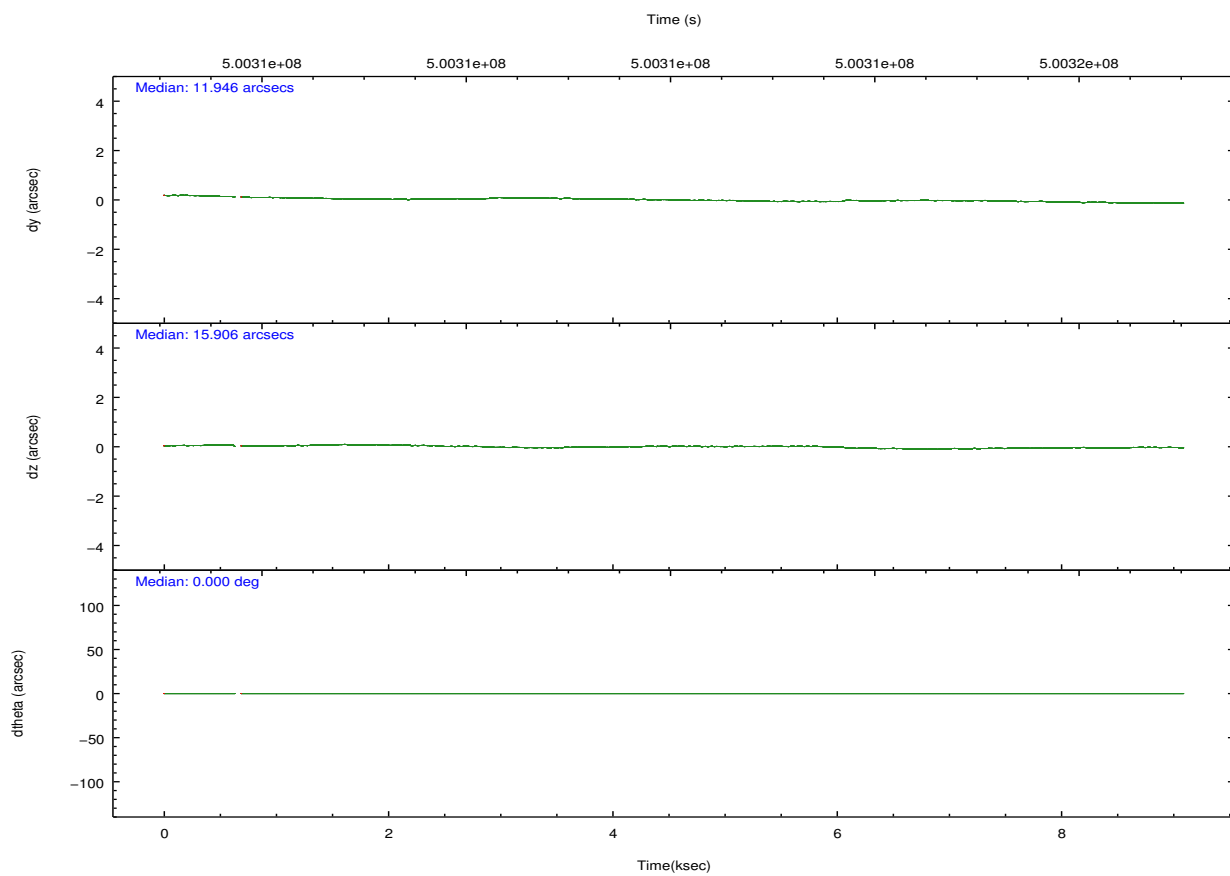
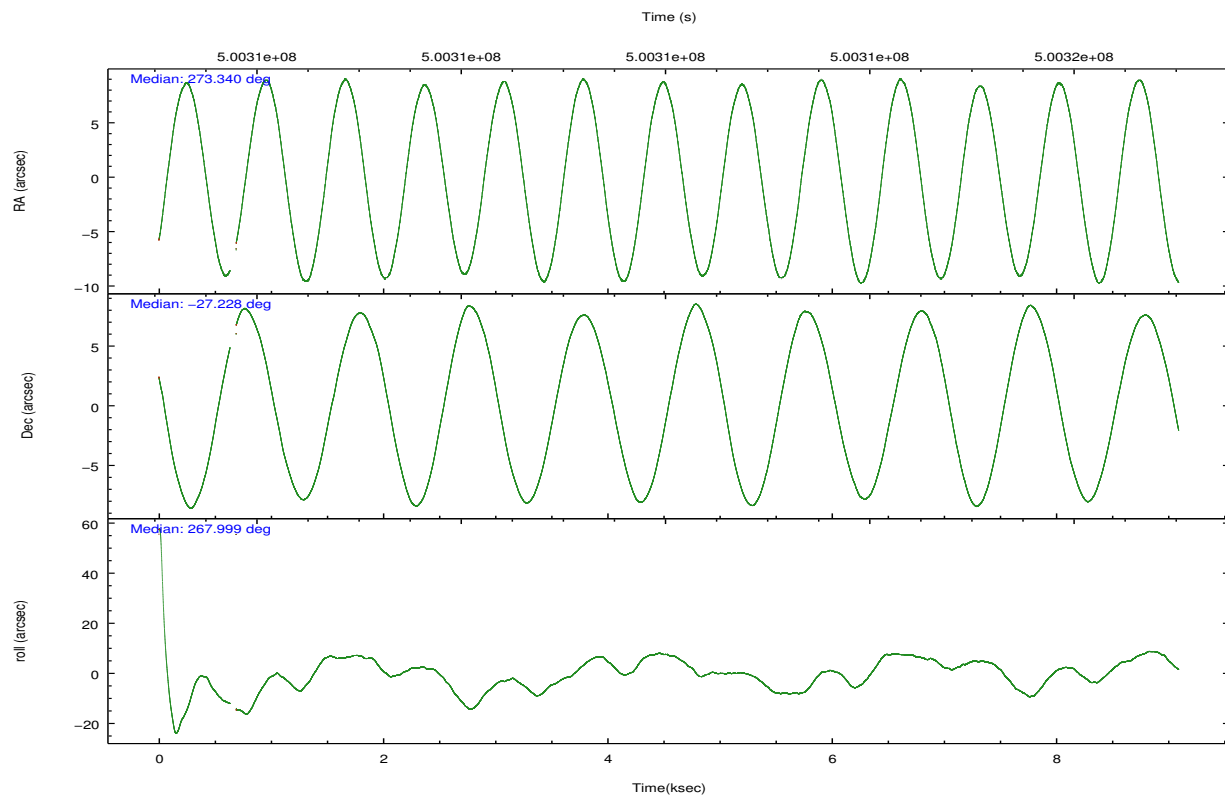
	ccd 1	ccd 3
grade 0 events	1482	1654
	6%	6%
grade 1 events	12	17
	0%	0%
grade 2 events	806	662
	3%	2%
grade 3 events	410	384
	1%	1%
grade 4 events	419	385
	1%	1%
grade 5 events	1227	1323
	5%	5%
grade 6 events	681	591
	2%	2%
grade 7 events	19122	19692
	79%	79%

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	273.324875	273.3395468826595	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-27.204230	-27.22846260019465	Subarray start row	512	512
[deg] Pointing Roll	267.800180	268.0156645748988	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)	500307676.184000	500307299.72843			
Observation start date	2013-11-08T14:20:09	2013-11-08T14:14:59			
[s] Observation end time (MET)	500316576.184000	500316710.25394			
Observation end date	2013-11-08T16:48:29	2013-11-08T16:51:50			
Read mode	TIMED	TIMED			

2.3 Aspect



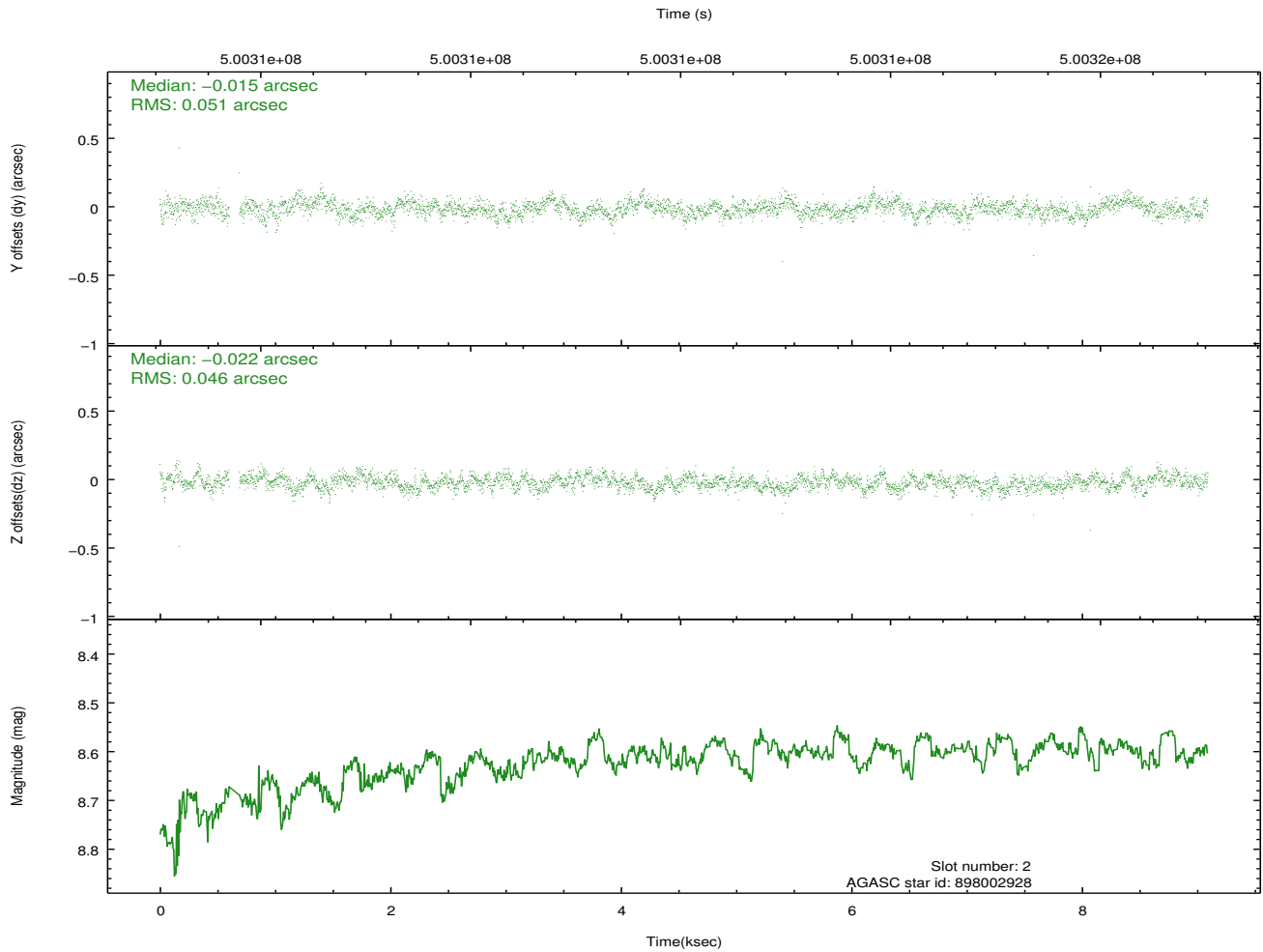
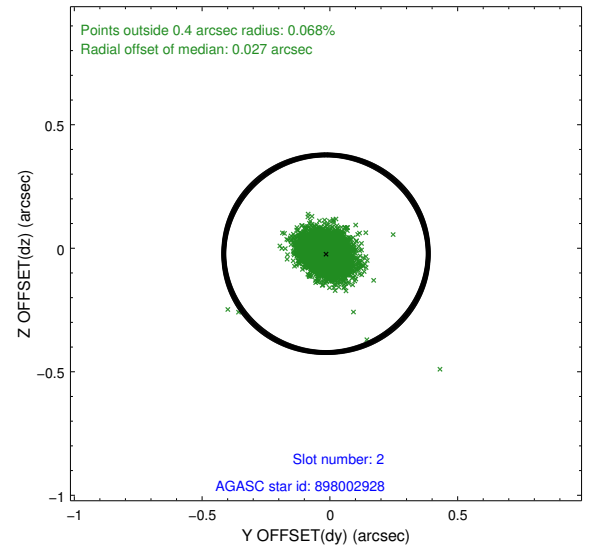
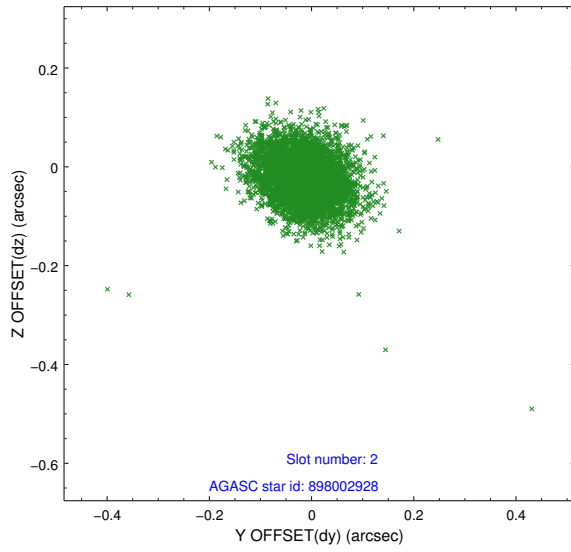


Slot Statistics

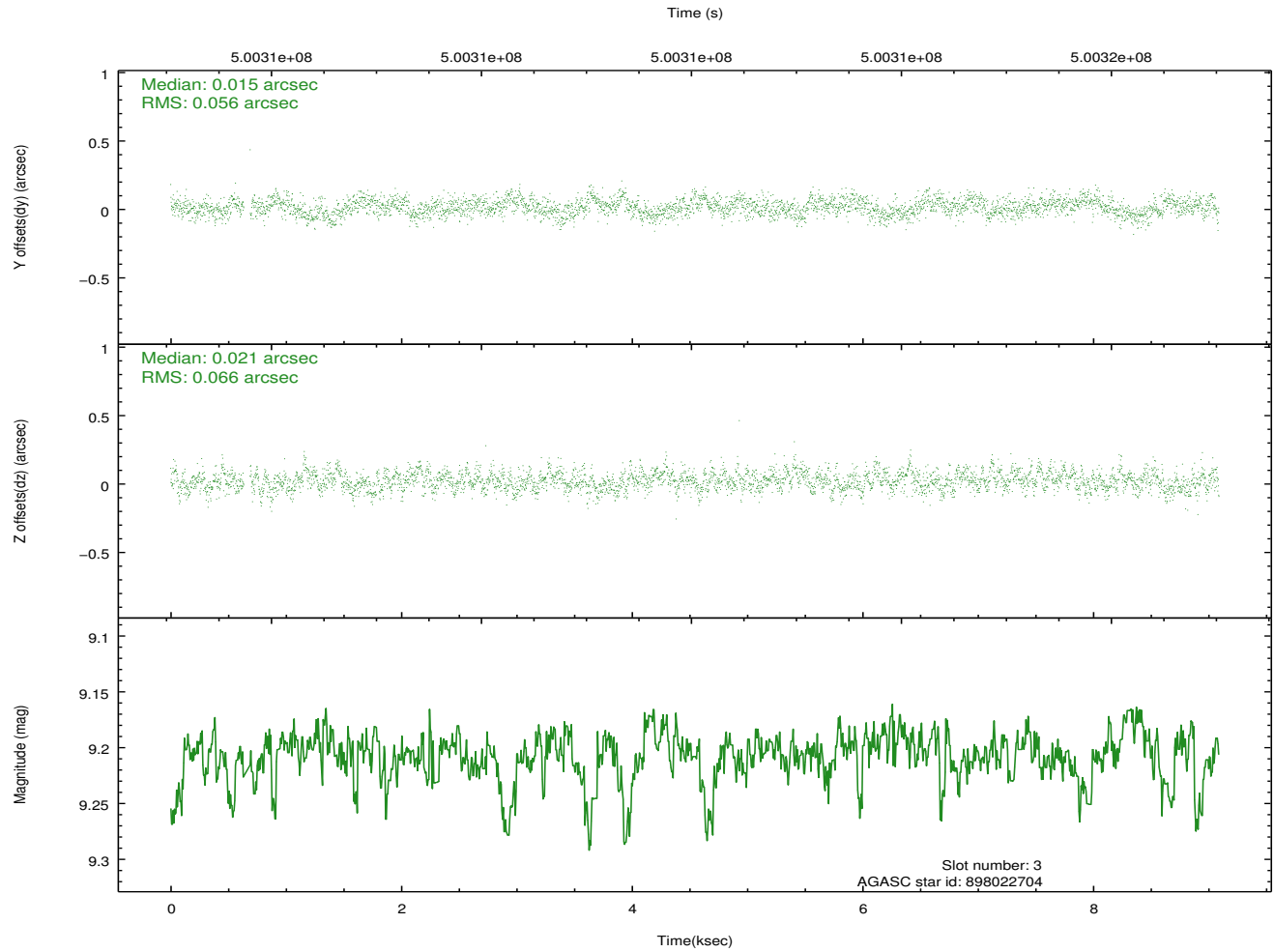
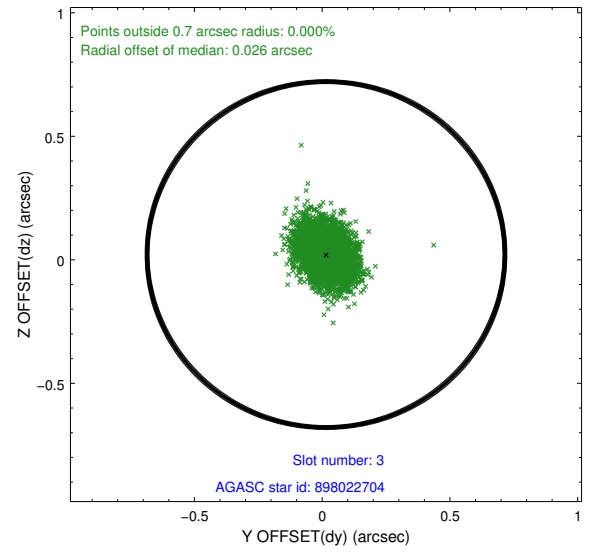
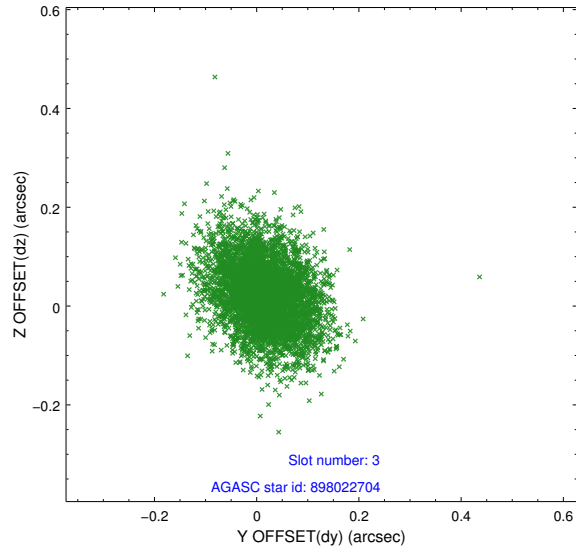
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.06	2205	-0.029	0.024	0.000	0.000	0.000000	0.000000	927.53	-839.53
1	UNUSED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	GUIDE	used	898002928	8.61	4394	-0.015	-0.022	0.071	0.116	273.073267	-27.720977	1891.03	-729.67
3	GUIDE	used	898022704	9.21	4404	0.015	0.021	0.091	0.149	272.620512	-27.413417	846.70	-2220.40
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	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

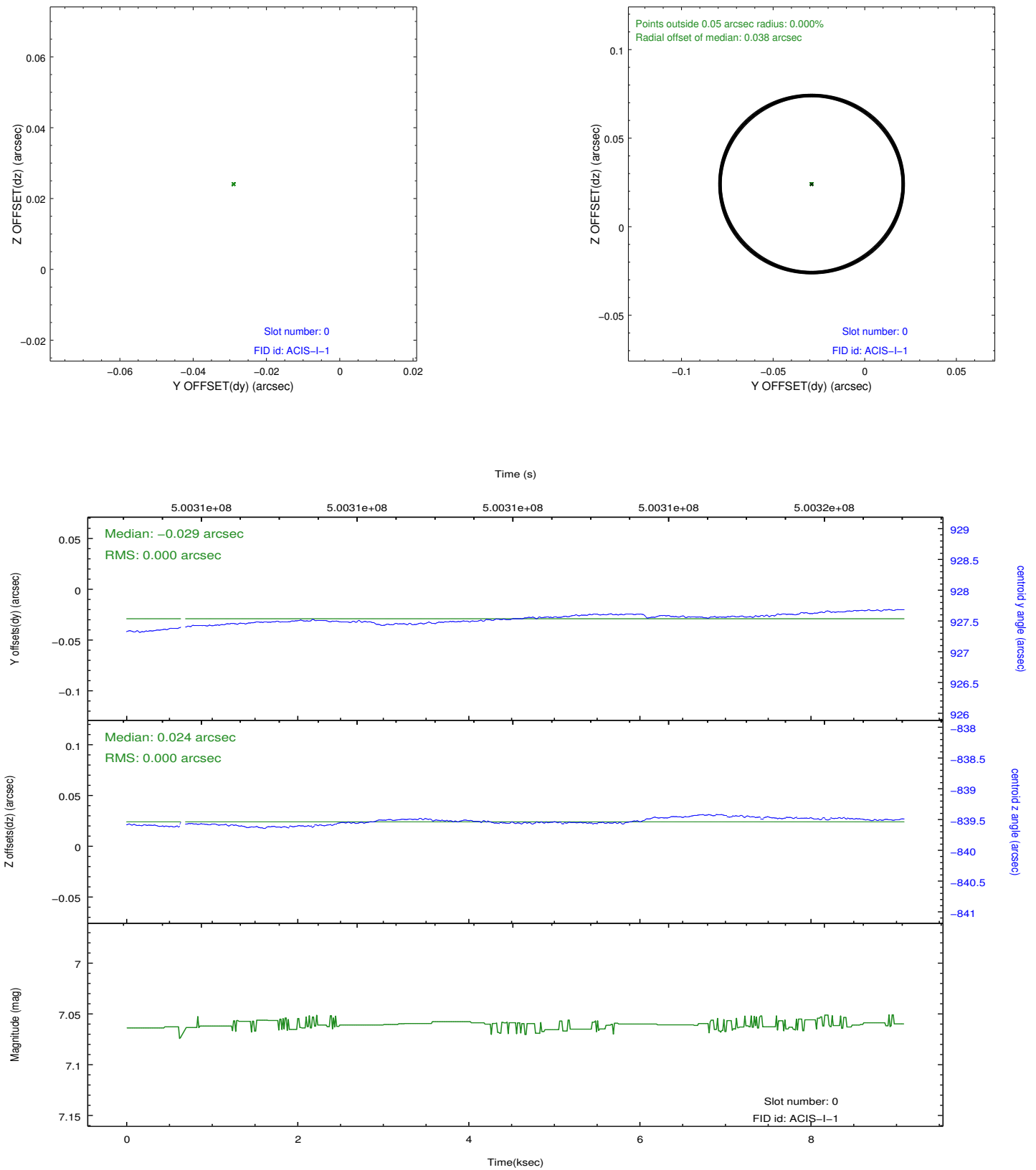


2.4.2 Slot 3



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	8.7344001301527

A.2 Comments

Charge time for this ObsId remains at previous value of 8.734 ks, although with the current processing the charge time would have been 9.035 ksec.

=====

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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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.