

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2411 - L2 Version 3
Chandra X-Ray Center

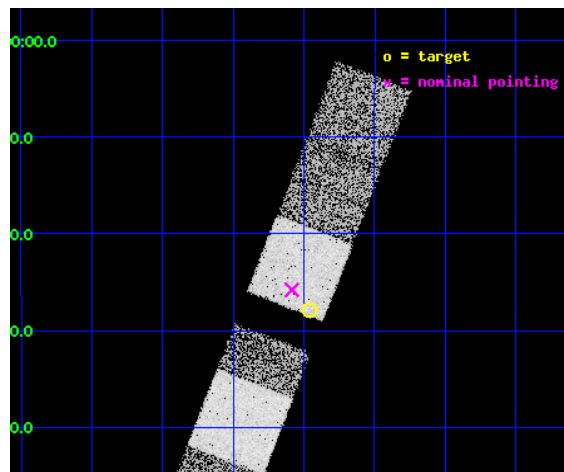
L2 Processing Date : Sep 6 2012

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1 Front

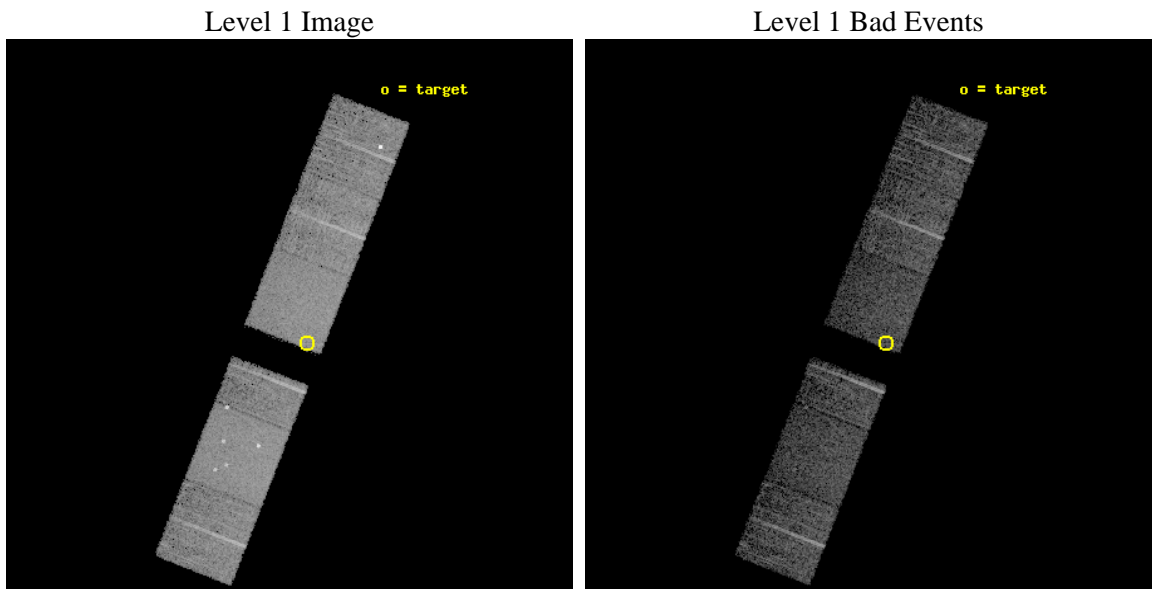
seq_num	100026	Sequence number
obs_id	2411	Observation id
title	VENUS AND MARS: THE CLOSEST PLANETARY ANALOGUES TO COMETS	Proposal
observer	Dr. Konrad Dennerl	Principal investigator
object	VENUS	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	339.61476	Observer's specified target RA [deg]
dec_targ	-9.46425	Observer's specified target Dec [deg]
ra_nom	339.6462146585	Nominal RA [deg]
dec_nom	-9.4300735617655	Nominal Dec [deg]
roll_nom	291.37073579696	Nominal Roll [deg]
revision	3	Processing version of data
ontime	5939.1590253413	Sum of GTIs [s]
livetime	5863.9538176302	Livetime [s]
ontime4	5942.4000055194	Sum of GTIs [s]
ontime5	5939.1590452641	Sum of GTIs [s]
ontime6	5939.1590452641	Sum of GTIs [s]
ontime7	5939.1590253413	Sum of GTIs [s]
ontime8	5942.4000055194	Sum of GTIs [s]
ontime9	5942.4000055194	Sum of GTIs [s]
l2events	56689	Number of level 2 events



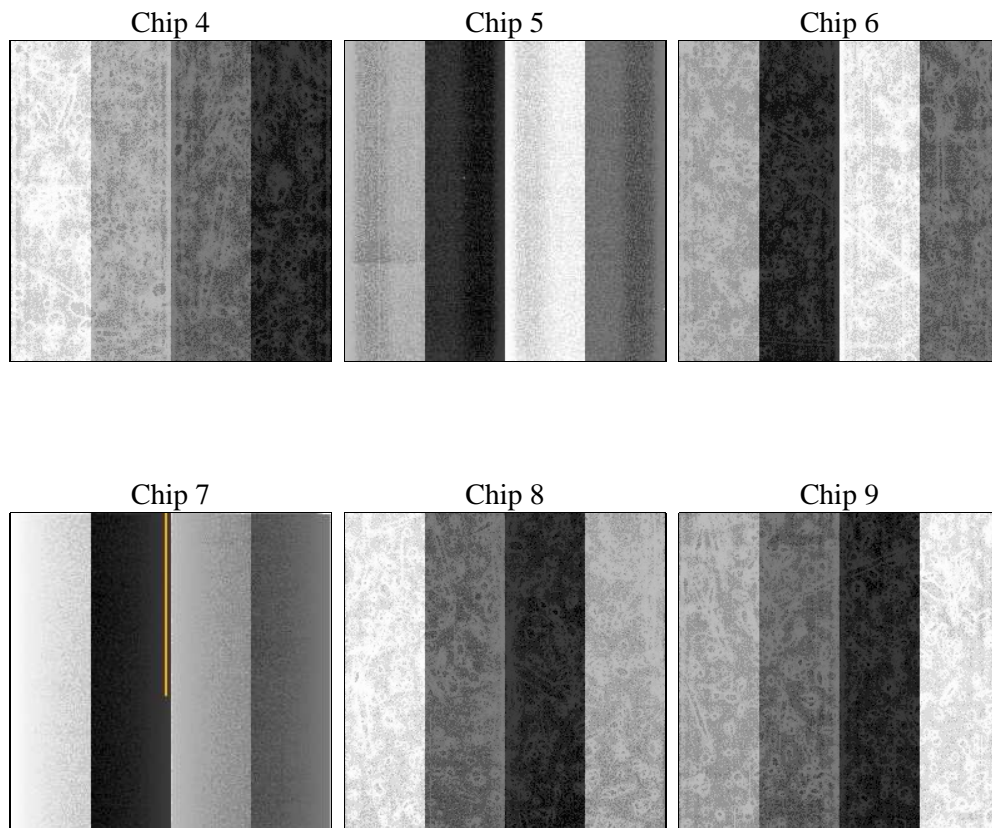
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	5939.1590253413	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	5942.4000055194	Sum of GTIs [s]
date	2012-09-06T11:17:33	Date and time of file creation	ontime5	5939.1590452641	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	5939.1590452641	Sum of GTIs [s]
			ontime7	5939.1590253413	Sum of GTIs [s]
			ontime8	5942.4000055194	Sum of GTIs [s]
			ontime9	5942.4000055194	Sum of GTIs [s]
			l1events	247544	Number of level 1 events

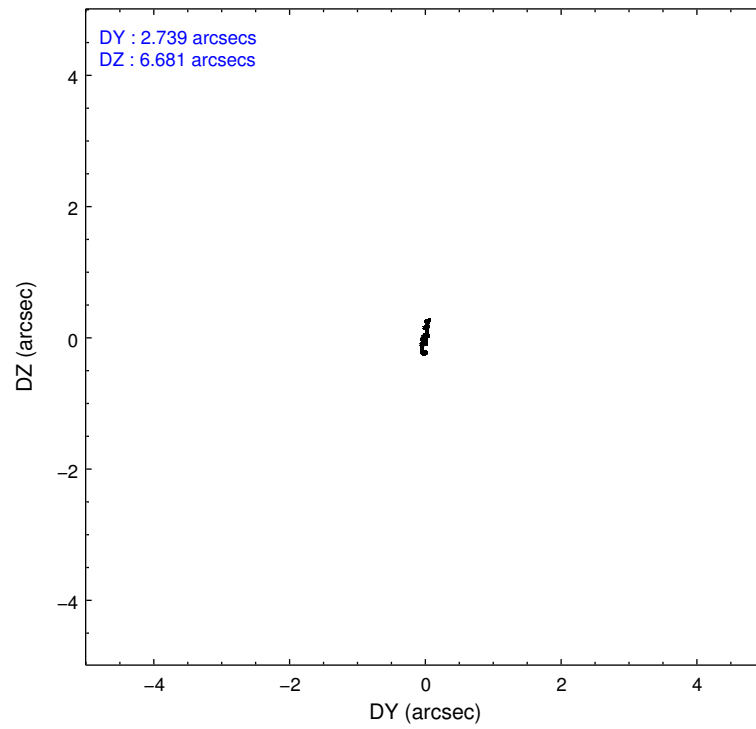
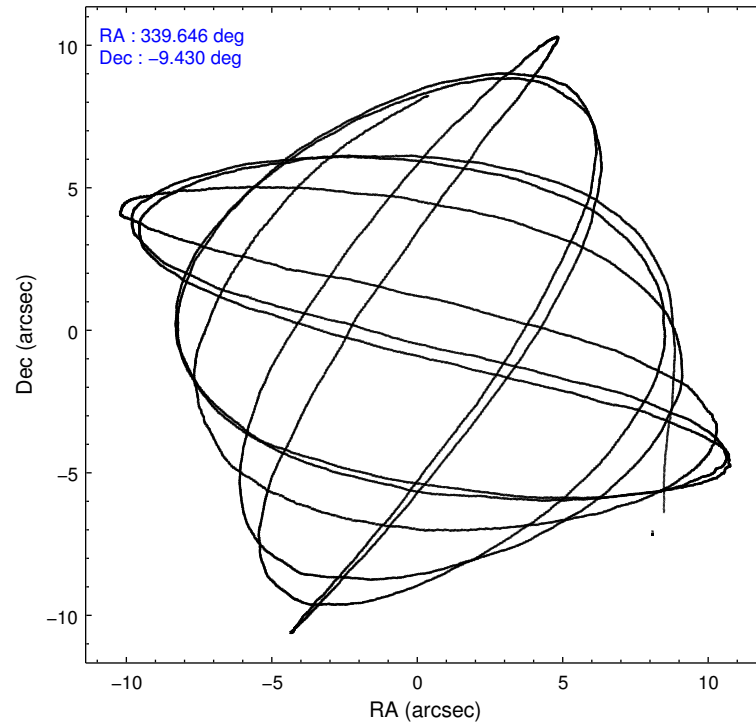
2.1.4 Events

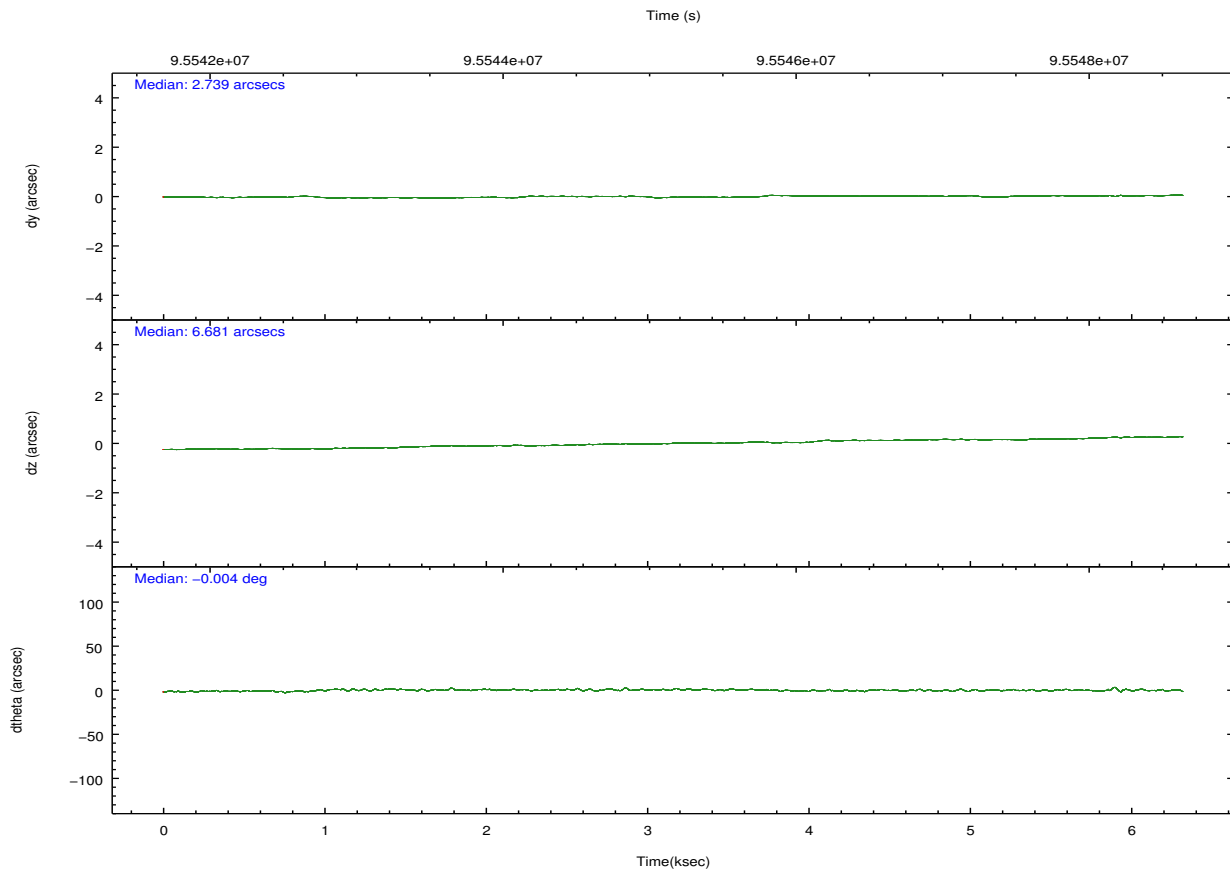
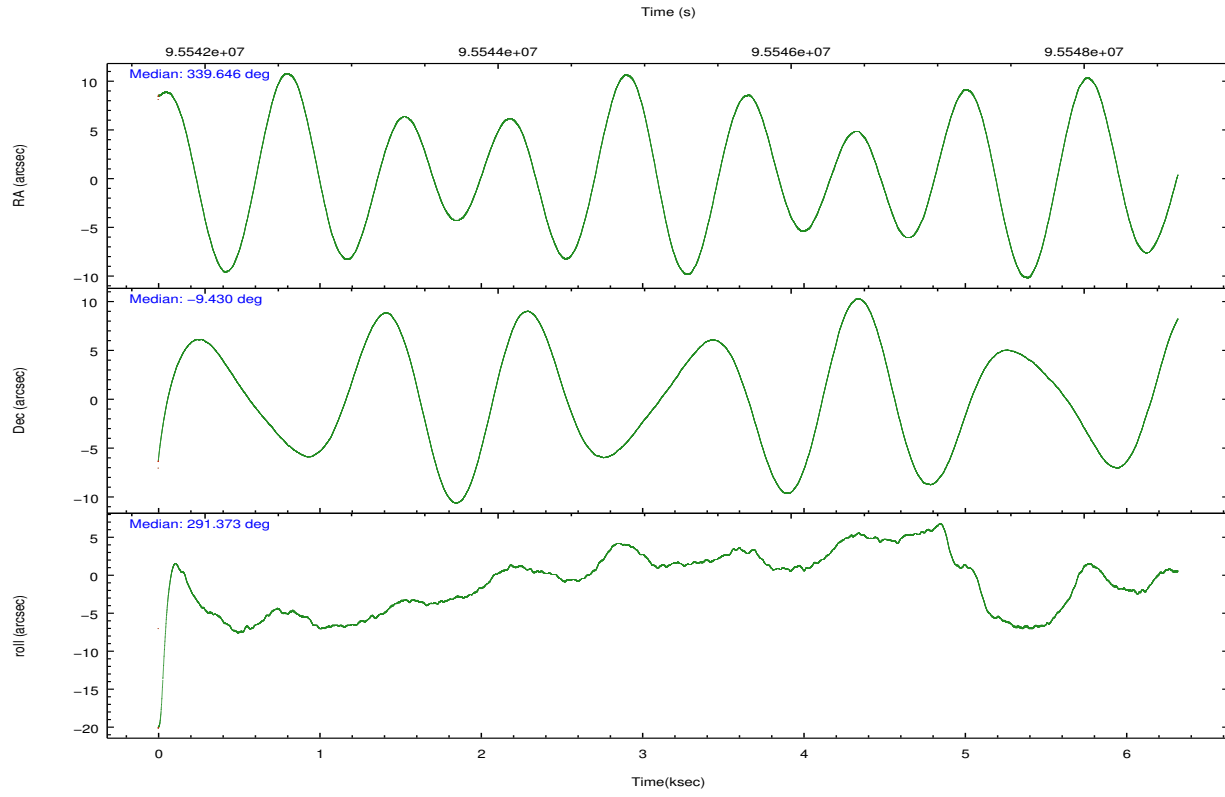
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	38367	53397	23126	47705	45342	39607	grade 0 events	1993	4927	995	2043	2922	1939
rejected events	33767	27049	20531	27091	36277	31532		5%	9%	4%	4%	6%	4%
rejected %	88%	50%	88%	56%	80%	79%	grade 1 events	15	181	8	44	24	16
								0%	0%	0%	0%	0%	0%
							grade 2 events	1051	6957	530	4016	1966	4136
								2%	13%	2%	8%	4%	10%
							grade 3 events	414	1164	262	1845	937	440
								1%	2%	1%	3%	2%	1%
							grade 4 events	409	1099	274	1864	905	410
								1%	2%	1%	3%	1%	1%
							grade 5 events	1277	3775	889	4384	1917	1540
								3%	7%	3%	9%	4%	3%
							grade 6 events	741	12227	539	10877	2346	1156
								1%	22%	2%	22%	5%	2%
							grade 7 events	32467	23067	19629	22632	34325	29970
								84%	43%	84%	47%	75%	75%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	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	339.624447	339.6462146584986	Subarray requested	NONE	NONE
[deg] Pointing Dec	-9.413220	-9.430073561765523	Alternating exposures requested	N	N
[deg] Pointing Roll	291.210595	291.3707357969585	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	95299264.184000	95299264.184000			
[s] Window stop time (MET)	95990464.184000	95990464.184000			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	95542318.184000	95541293.68374			
Observation start date	2001-01-10T19:30:54	2001-01-10T19:14:53			
[s] Observation end time (MET)	95548318.184000	95548452.284015			
Observation end date	2001-01-10T21:10:54	2001-01-10T21:14:12			
Read mode	TIMED	TIMED			

2.3 Aspect



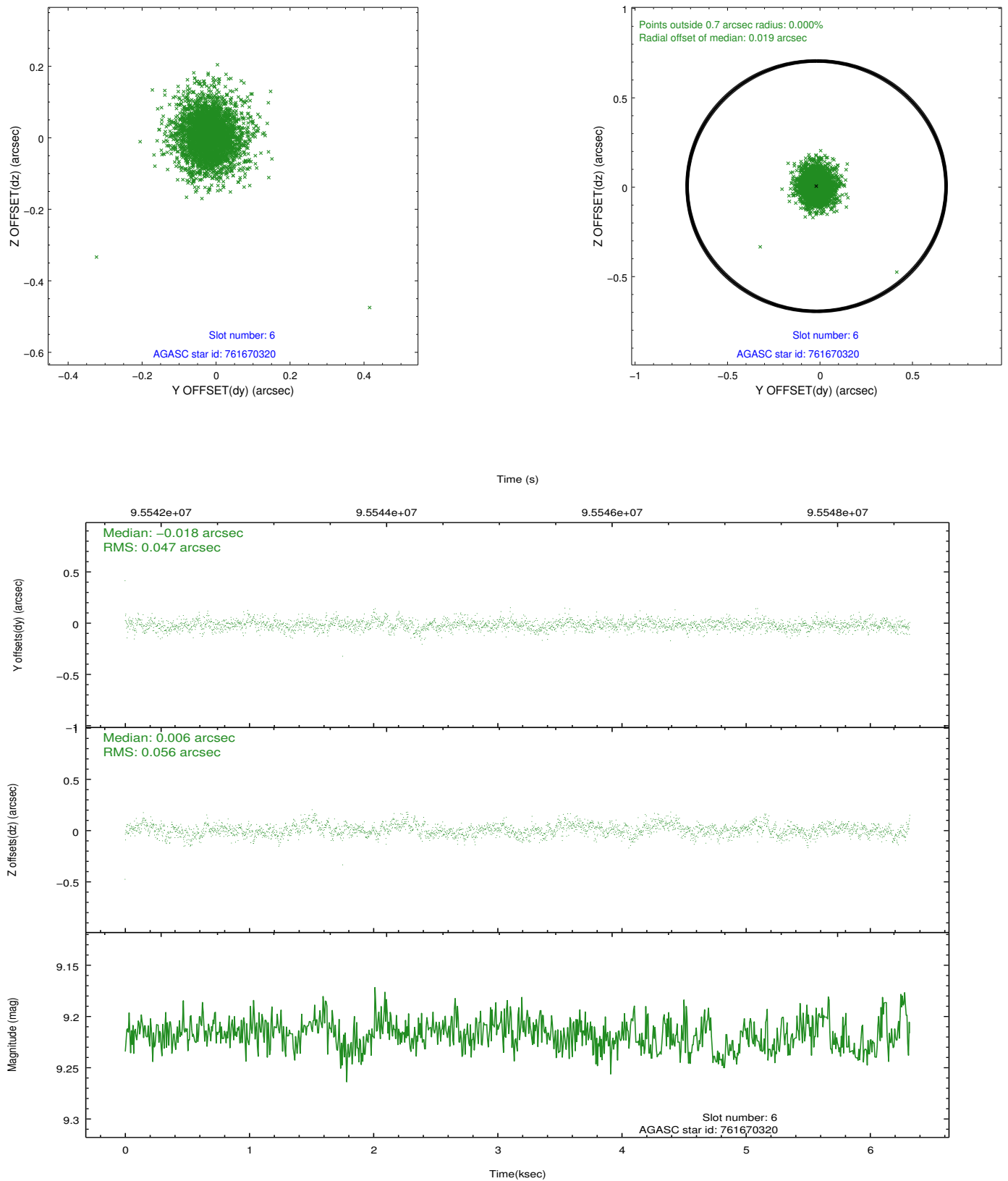


Slot Statistics

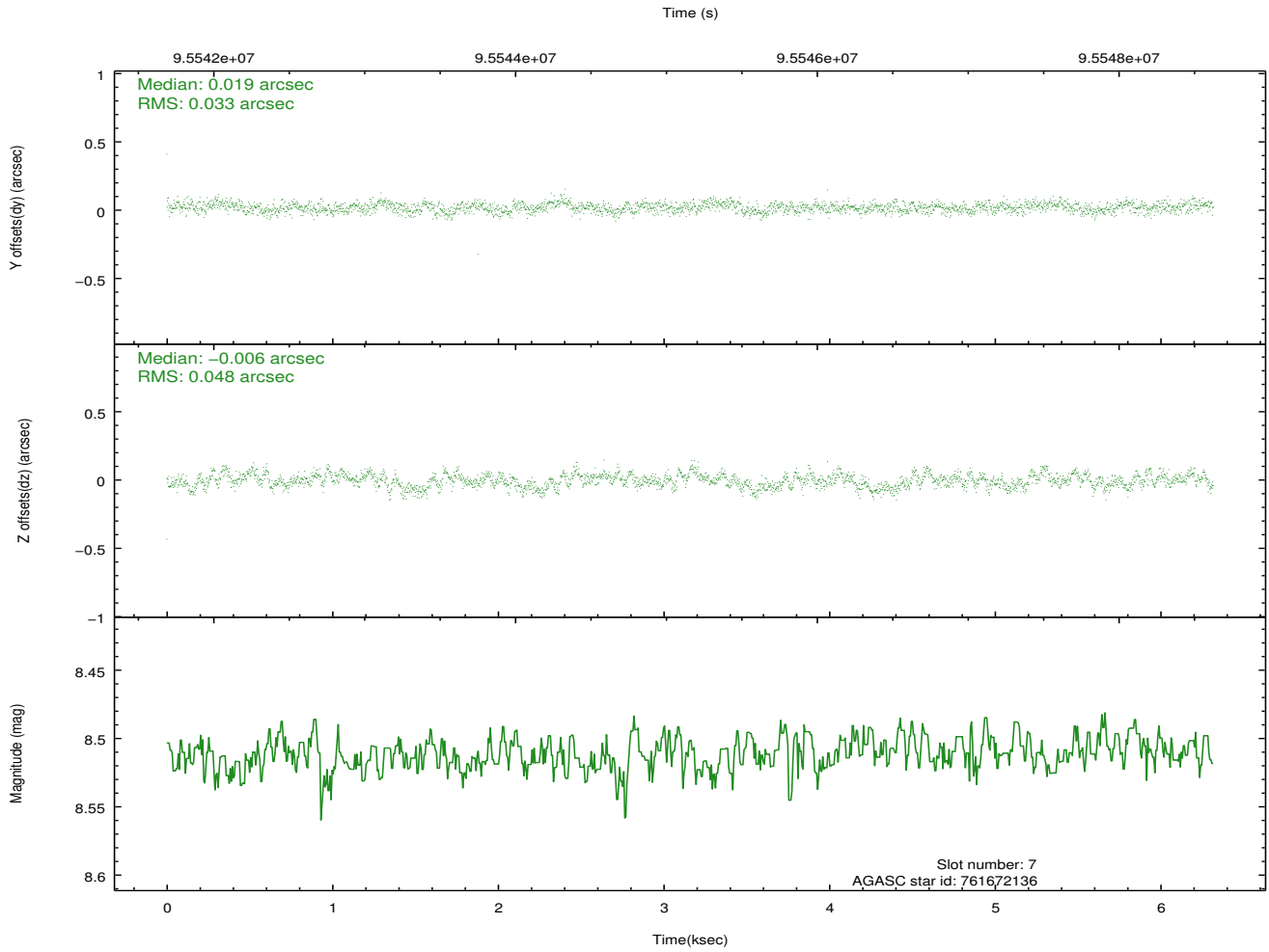
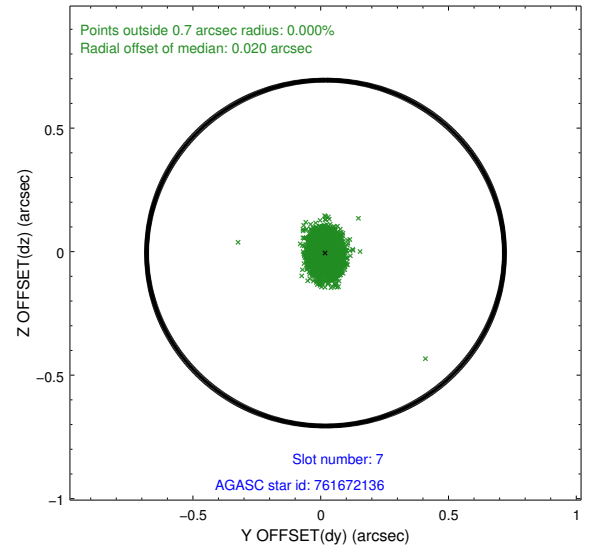
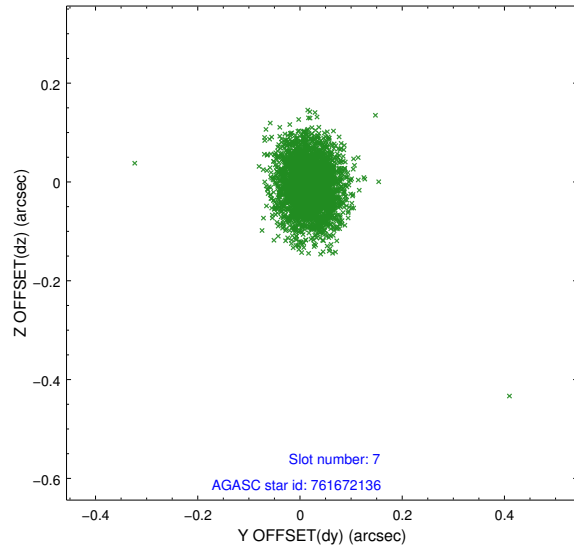
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	1542	-0.021	0.020	0.005	0.010	0.000000	0.000000	-755.40	-1727.81
1	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
2	FID	ACIS-S-5	7.23	1542	0.002	-0.016	0.005	0.010	0.000000	0.000000	-1808.90	173.18
3	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
4	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	761670320	9.22	3082	-0.018	0.006	0.074	0.129	339.180611	-8.948429	-2130.70	-867.04
7	GUIDE	761672136	8.51	3081	0.019	-0.006	0.060	0.099	339.196147	-9.393141	-618.22	-1393.25

2.4 Star Slots

2.4.1 Slot 6

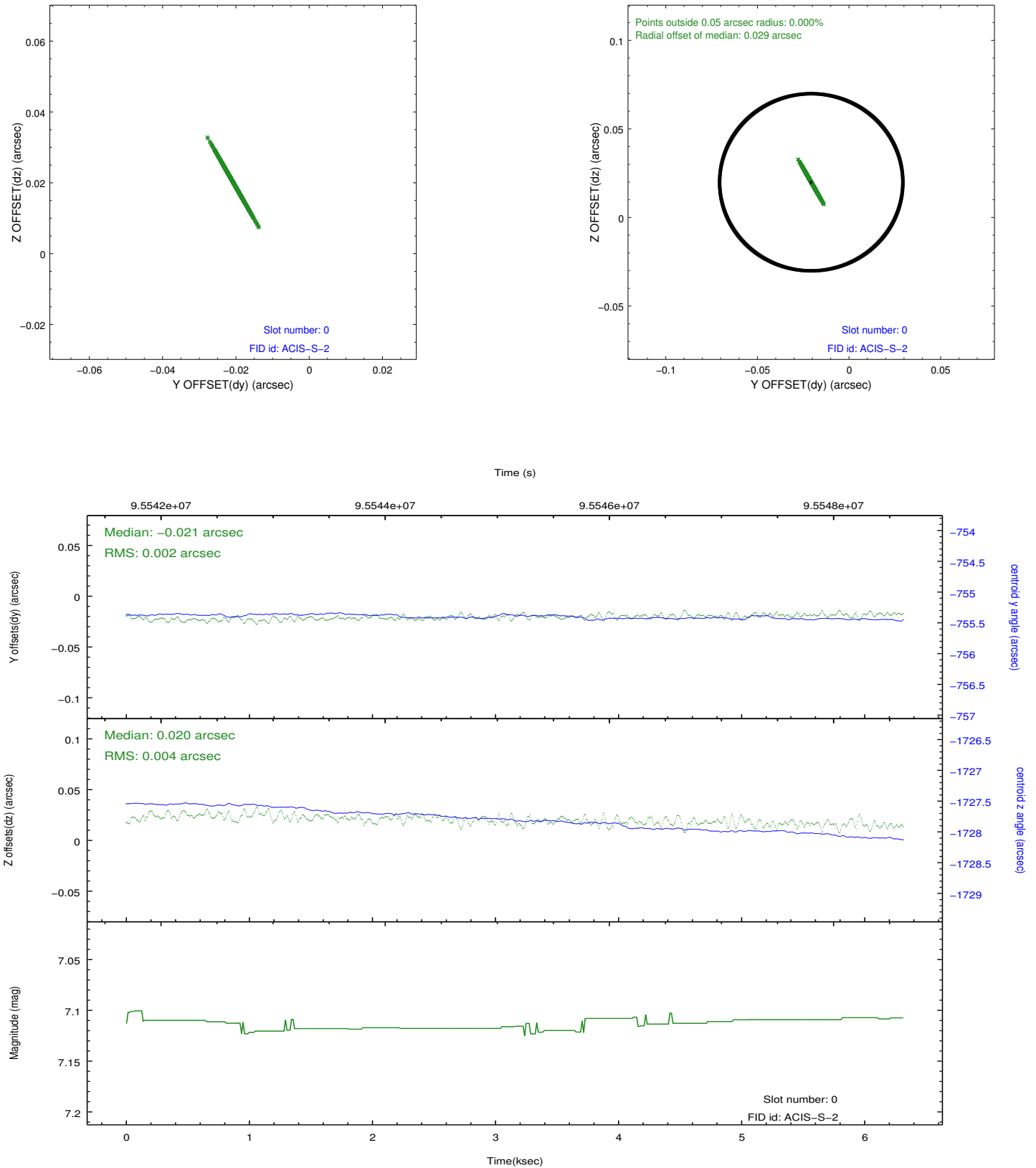


2.4.2 Slot 7

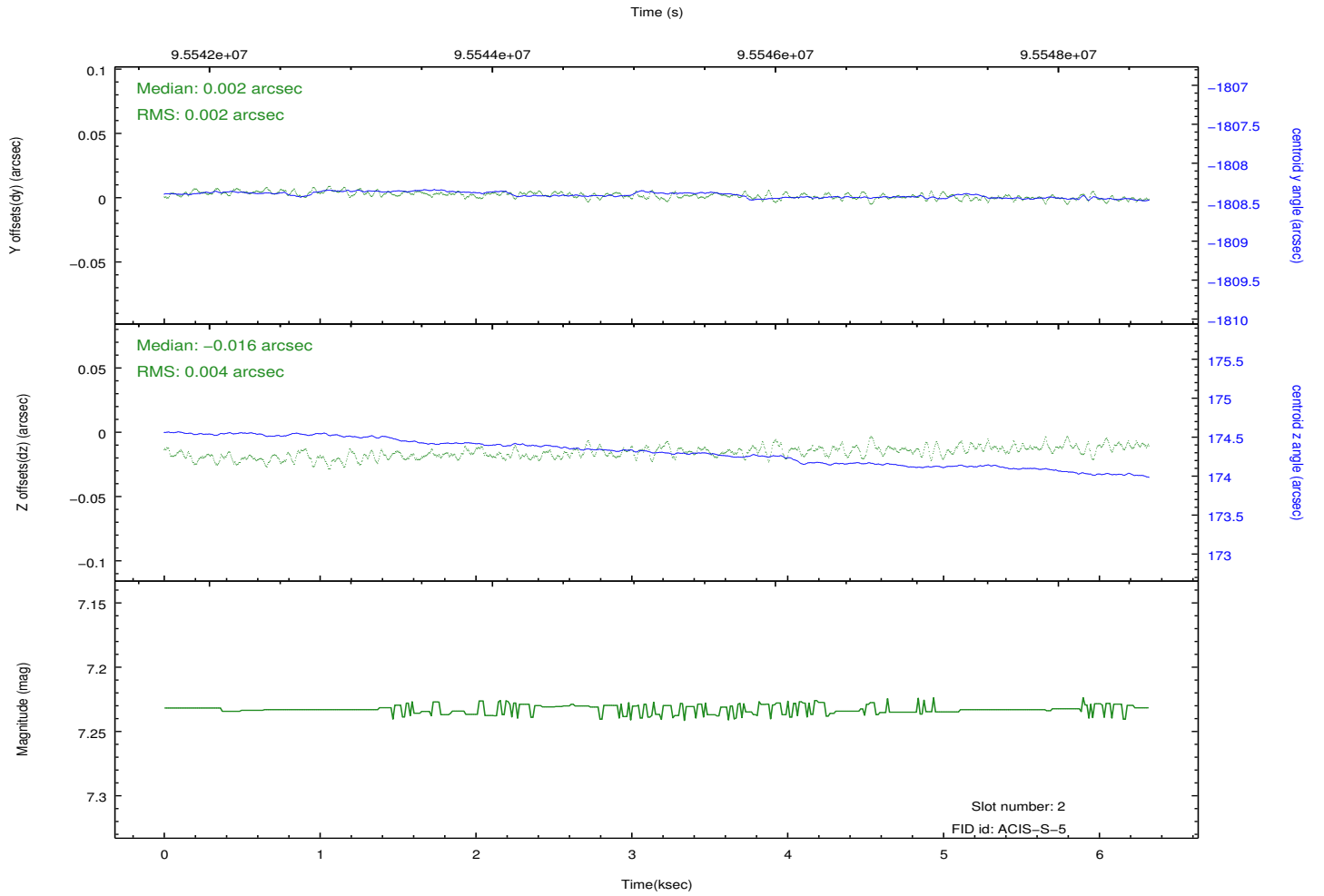
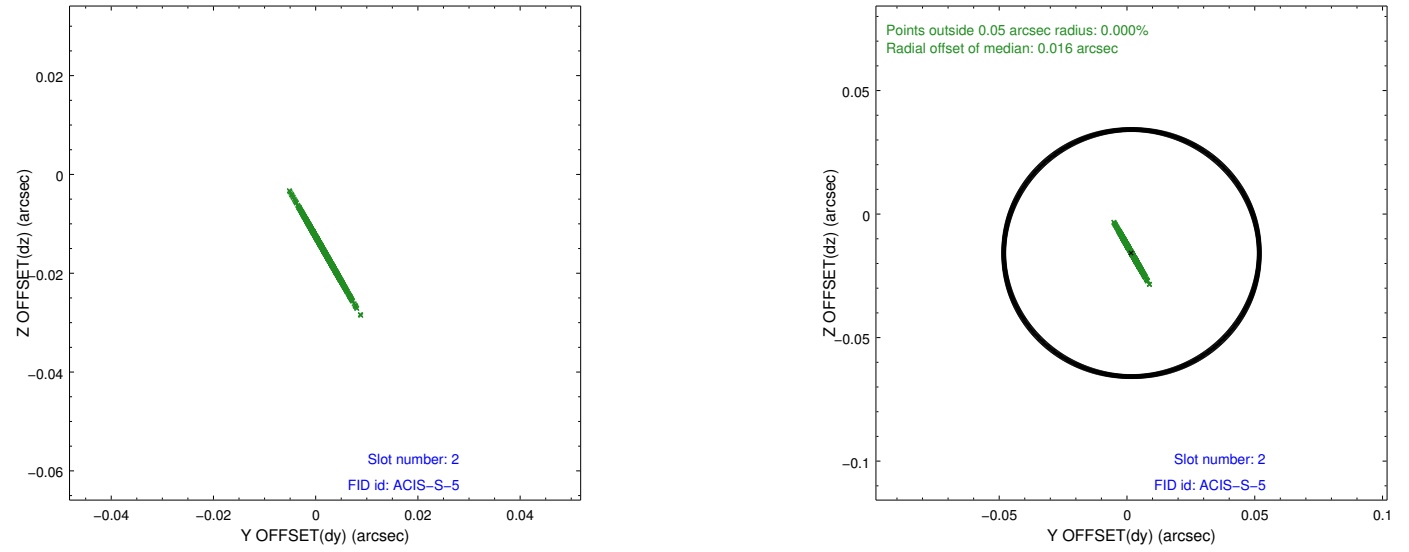


2.5 FID Slots

2.5.1 Slot 0

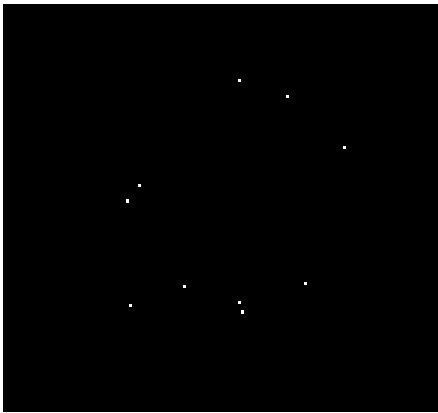


2.5.2 Slot 2

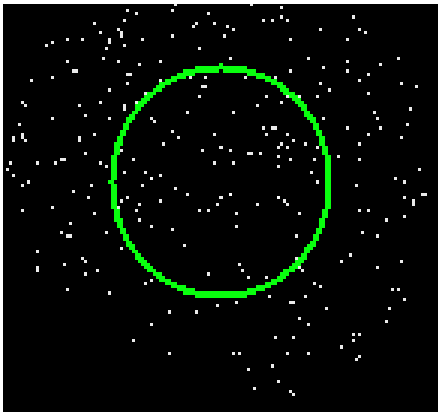


3 Gratings

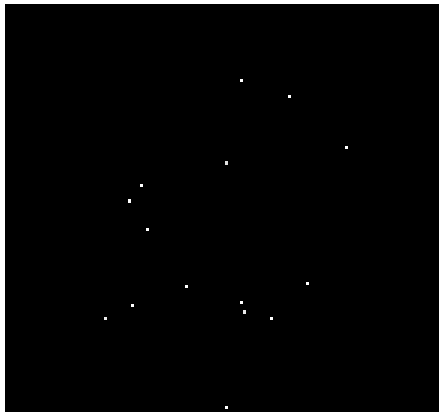
3.1 LETG Arm



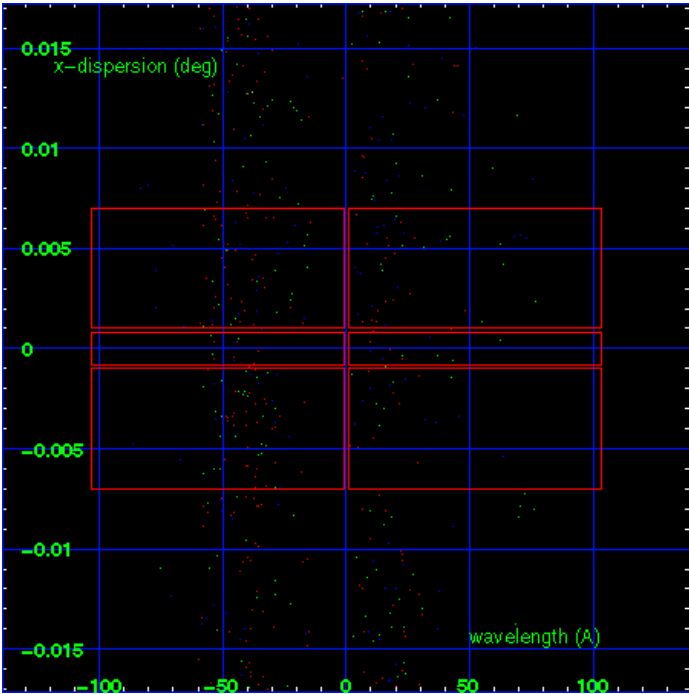
LETG Order Sort 123



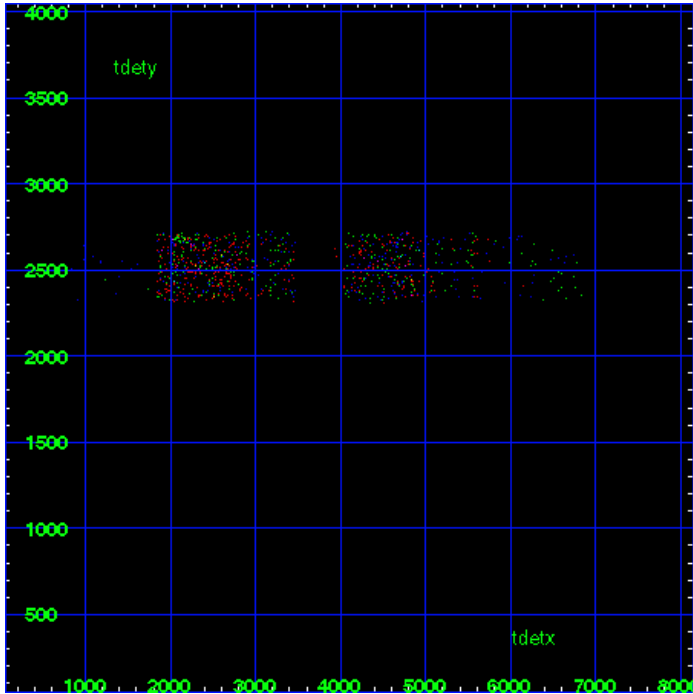
LETG Zero Order



LETG Order Sort ALL

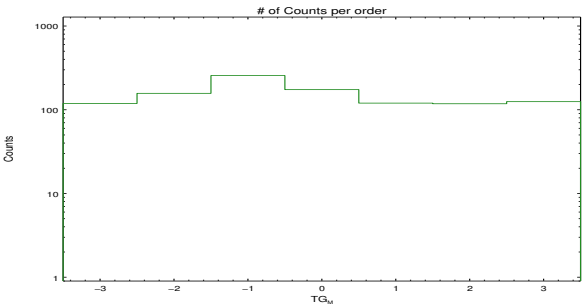


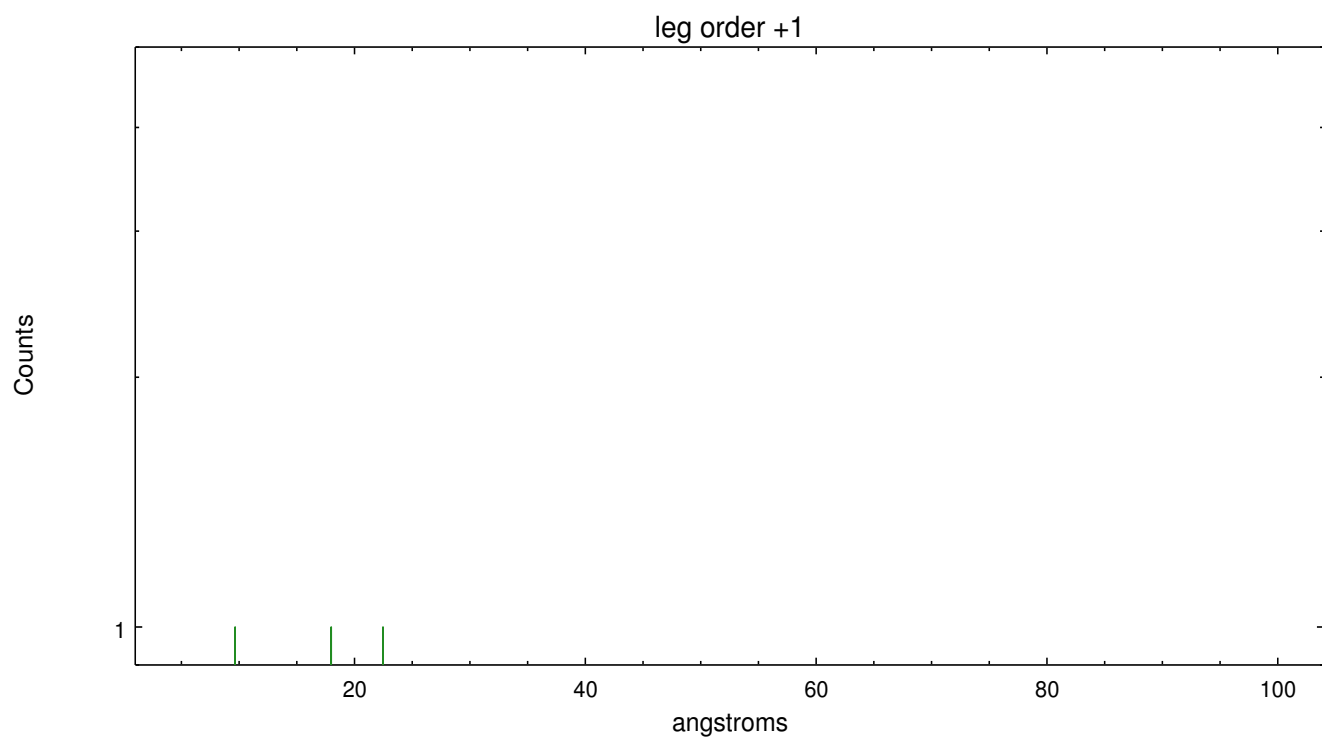
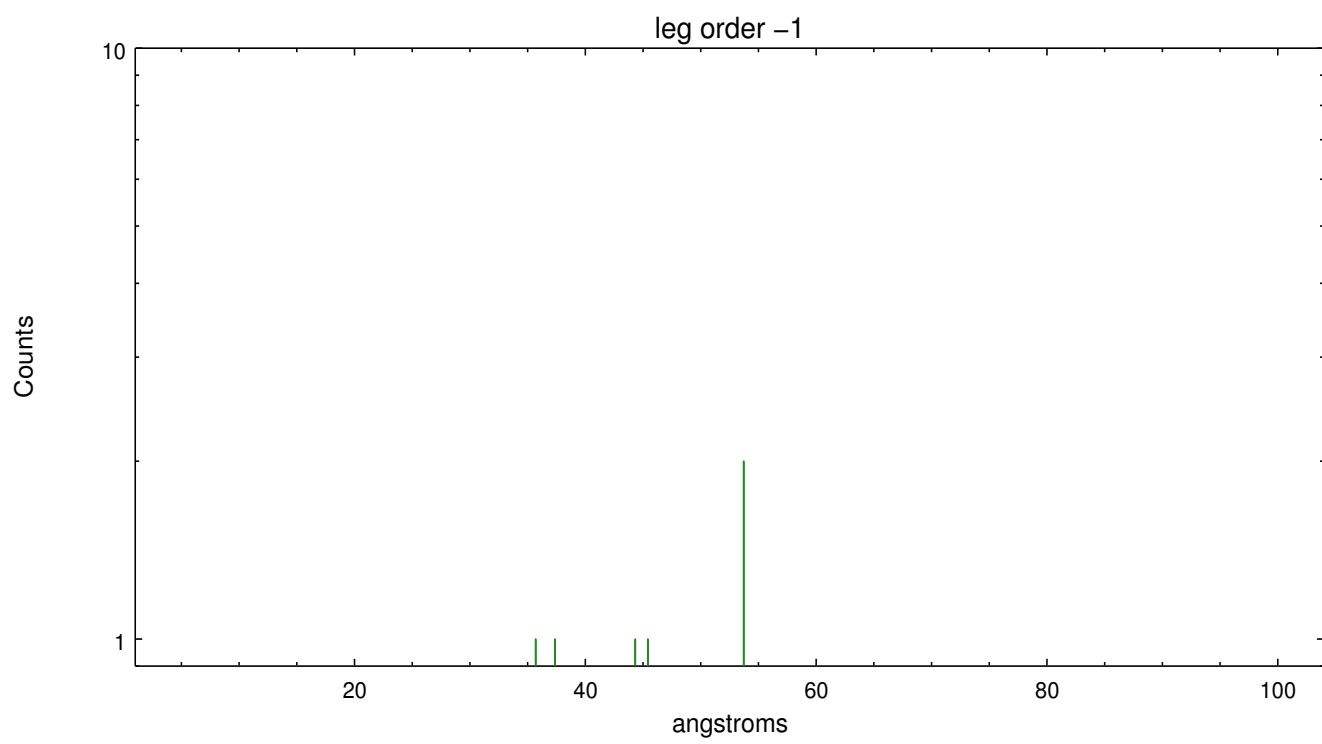
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	119	157	256	174	120	118	125





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.939

A.2 Comments

This is a solar system object. X-ray events will be in the reference frame of the Earth. The user will need to run sso_freeze or similar software to redistribute the events spatially the reference frame of Venus.

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A spatial exclusion window was specified for this observation on chip S2.

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The observations of Venus caused the aspect camera to not track some guide stars and fid lights. This is thought to be because of excessive light from Venus on the aspect camera focal plane, even though the star catalogs had been constructed to minimize such problems. One of 3 fiducial lights and 3 of 5 guide stars were excluded from the pointing solution due to poor data quality and insufficient tracking accuracy. The 2 remaining fid lights should be adequate for bore sight alignment, but the aspect solution is probably affected to some degree by the use of only 2 guide stars. The investigator is advised to work with Level 1 data and evaluate whether events with bad grades should be eliminated. It appears that some source events were removed in the Level 2 version of the event data.