

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 3505 - L2 Version 6
Chandra X-Ray Center

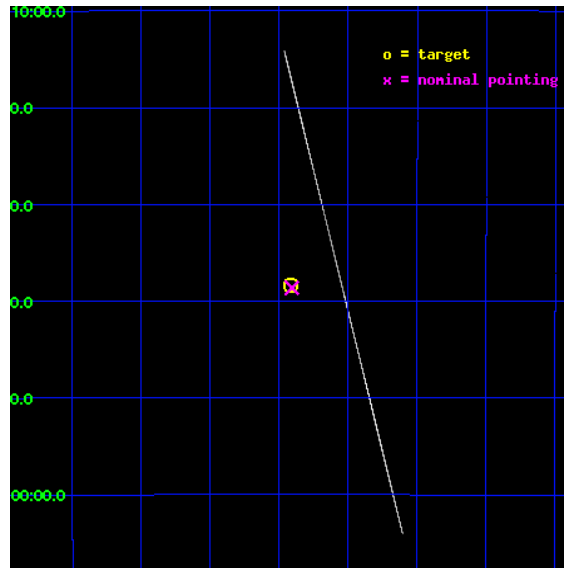
L2 Processing Date : Apr 11 2013

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1 Front

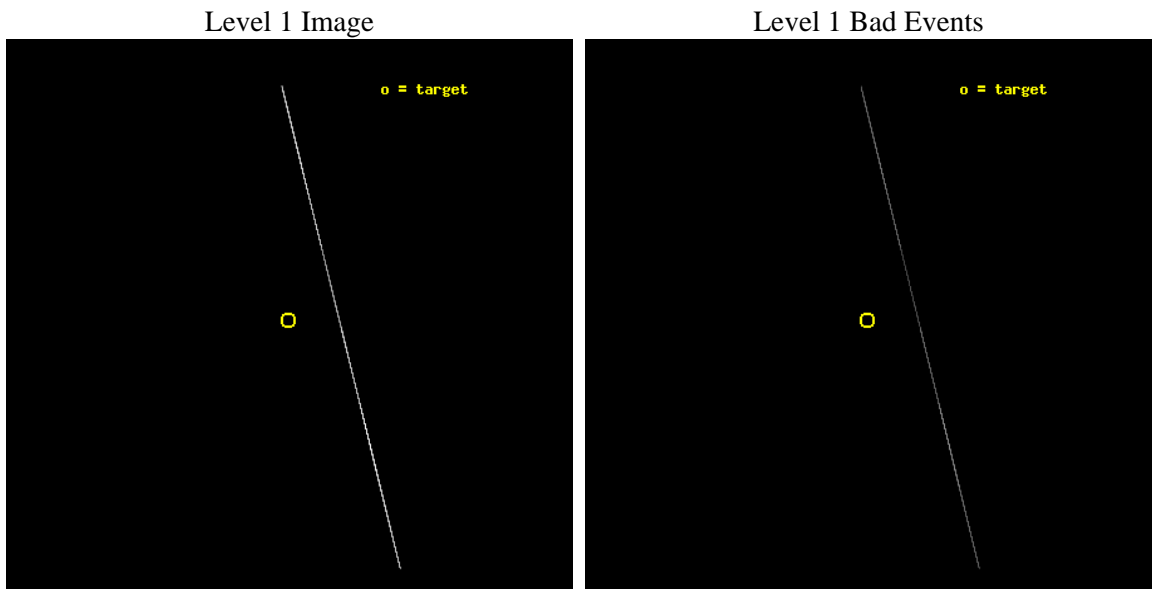
seq_num	400258	Sequence number
obs_id	3505	Observation id
title	HIGH RESOLUTION SPECTROSCOPY OF THE LMXB SCO X-1	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	SCO X-1	Source name
ra_targ	244.979583	Observer's specified target RA [deg]
dec_targ	-15.640278	Observer's specified target Dec [deg]
ra_nom	244.9768840936	Nominal RA [deg]
dec_nom	-15.643803355428	Nominal Dec [deg]
roll_nom	256.02287104839	Nominal Roll [deg]
revision	6	Processing version of data
ontime	16055.5	Sum of GTIs [s]
livetime	15992.783203125	Livetime [s]
ontime4	9729.08693102	Sum of GTIs [s]
ontime5	8039.4635965228	Sum of GTIs [s]
ontime6	11355.158042073	Sum of GTIs [s]
ontime7	16055.5	Sum of GTIs [s]
ontime8	11417.231468409	Sum of GTIs [s]
ontime9	8715.0229333043	Sum of GTIs [s]
l2events	5564961	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	16055.5	Sum of GTIs [s]
caldsver	4.5.2	 	ontime4	9729.08693102	Sum of GTIs [s]
date	2012-11-01T05:32:56	Date and time of file creation	ontime5	8039.4635965228	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	11355.158042073	Sum of GTIs [s]
			ontime7	16055.5	Sum of GTIs [s]
			ontime8	11417.231468409	Sum of GTIs [s]
			ontime9	8715.0229333043	Sum of GTIs [s]
			l1events	6093582	Number of level 1 events

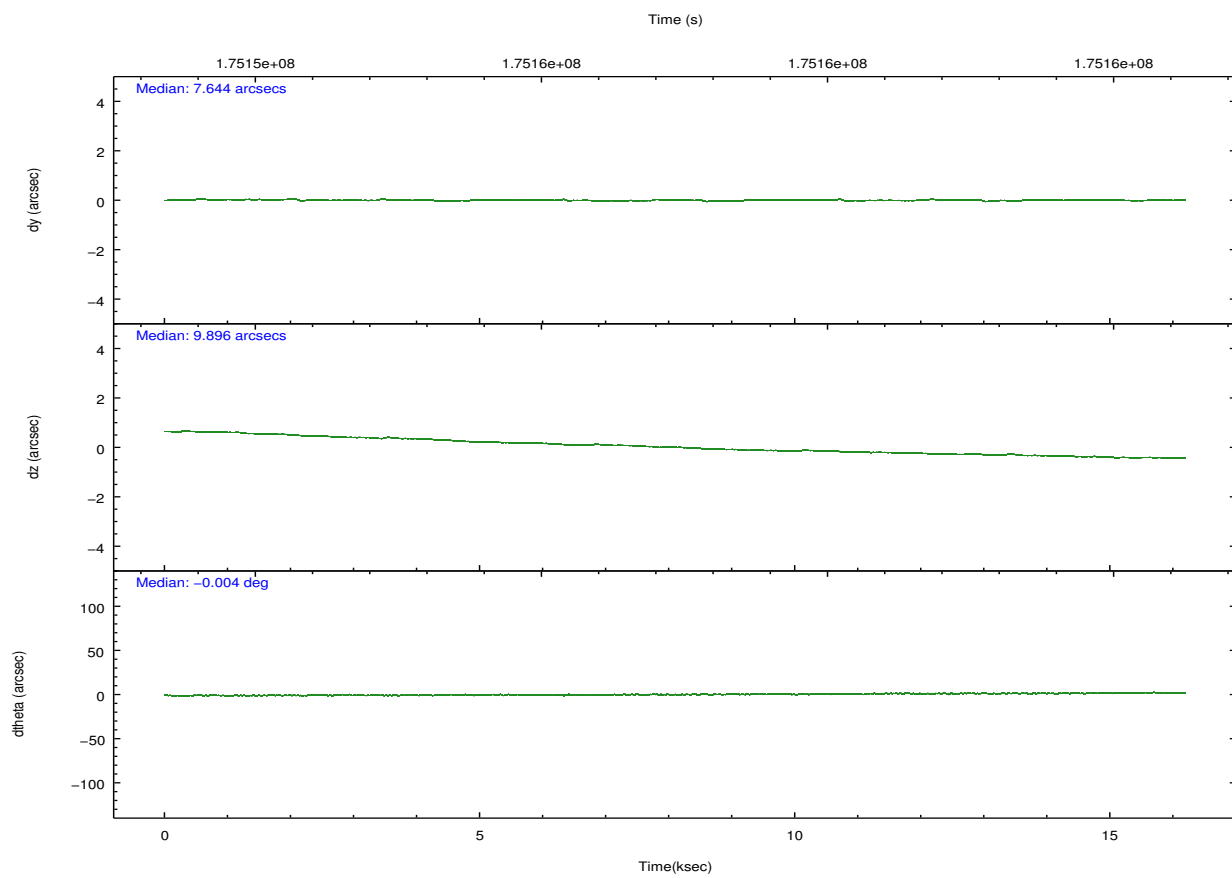
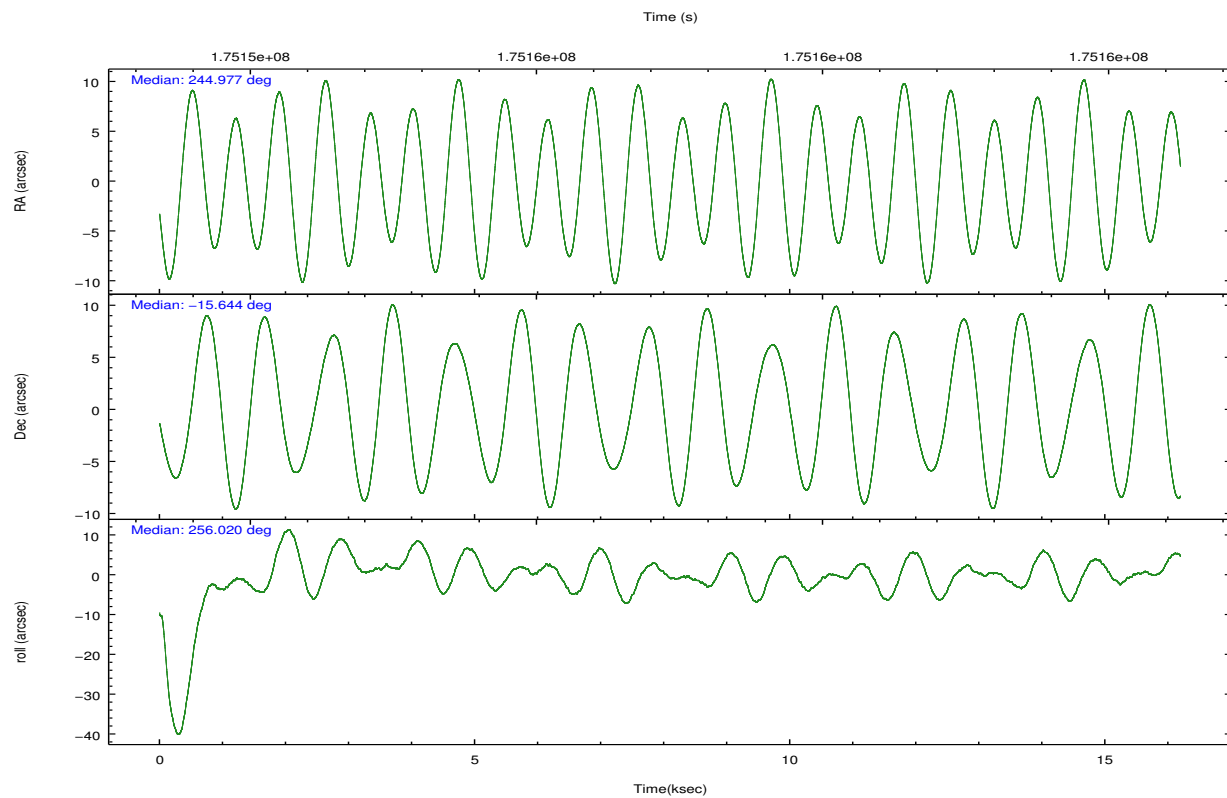
2.1.3 Events

	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	822462	2399922	717339	195599	795870	1162390	grade 0 events	316137	726287	201351	33979	462513	840010
rejected events	6359	26441	6654	2039	8364	8457		38%	30%	28%	17%	58%	72%
rejected %	0%	1%	0%	1%	1%	0%	grade 1 events	536	2720	743	95	2005	2631
								0%	0%	0%	0%	0%	0%
							grade 2 events	431741	773945	417464	57534	249679	205513
								52%	32%	58%	29%	31%	17%
							grade 3 events	13843	214898	12876	17602	19100	37329
								1%	8%	1%	8%	2%	3%
							grade 4 events	13850	215407	12787	17647	19246	36901
								1%	8%	1%	9%	2%	3%
							grade 5 events	5784	23630	5842	1911	6345	5762
								0%	0%	0%	0%	0%	0%
							grade 6 events	40571	443035	66276	66831	36982	34244
								4%	18%	9%	34%	4%	2%
							grade 7 events	0	0	0	0	0	0
								0%	0%	0%	0%	0%	0%

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	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	244.968704	244.9768840936046	Subarray requested	NONE	NONE
[deg] Pointing Dec	-15.617700	-15.64380335542752	Alternating exposures requested	N	N
[deg] Pointing Roll	255.864041	256.0228710483918	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-175.132523	-175.1371466454634			
[mm] SIM translation stage offset	-15	-14.99537593754445			
[s] Observation start time (MET)	175150433.184000	175148965.87616			
Observation start date	2003-07-21T04:52:49	2003-07-21T04:29:25			
[s] Observation end time (MET)	175165433.184000	175165645.70187			
Observation end date	2003-07-21T09:02:49	2003-07-21T09:07:25			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect

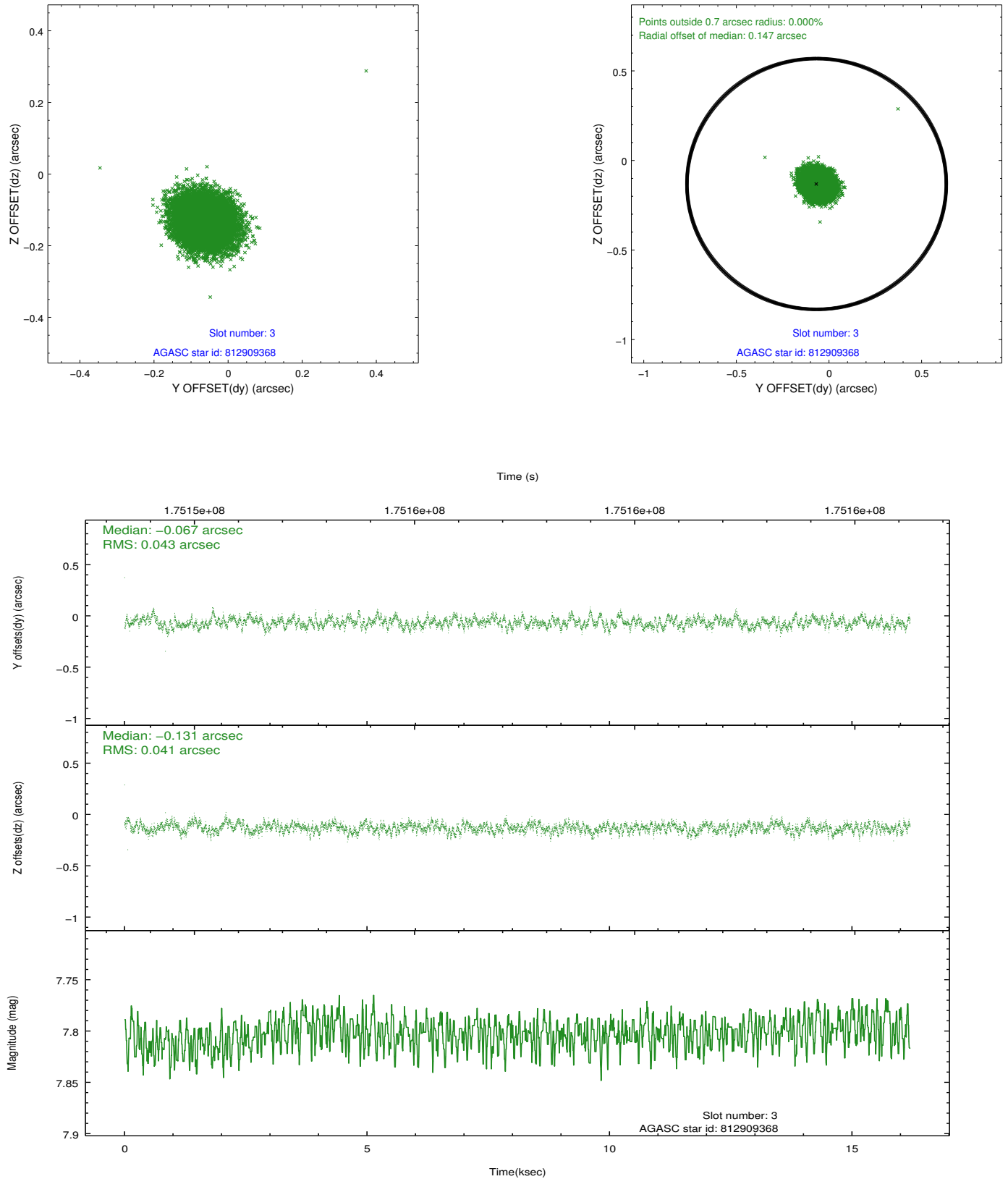


Slot Statistics

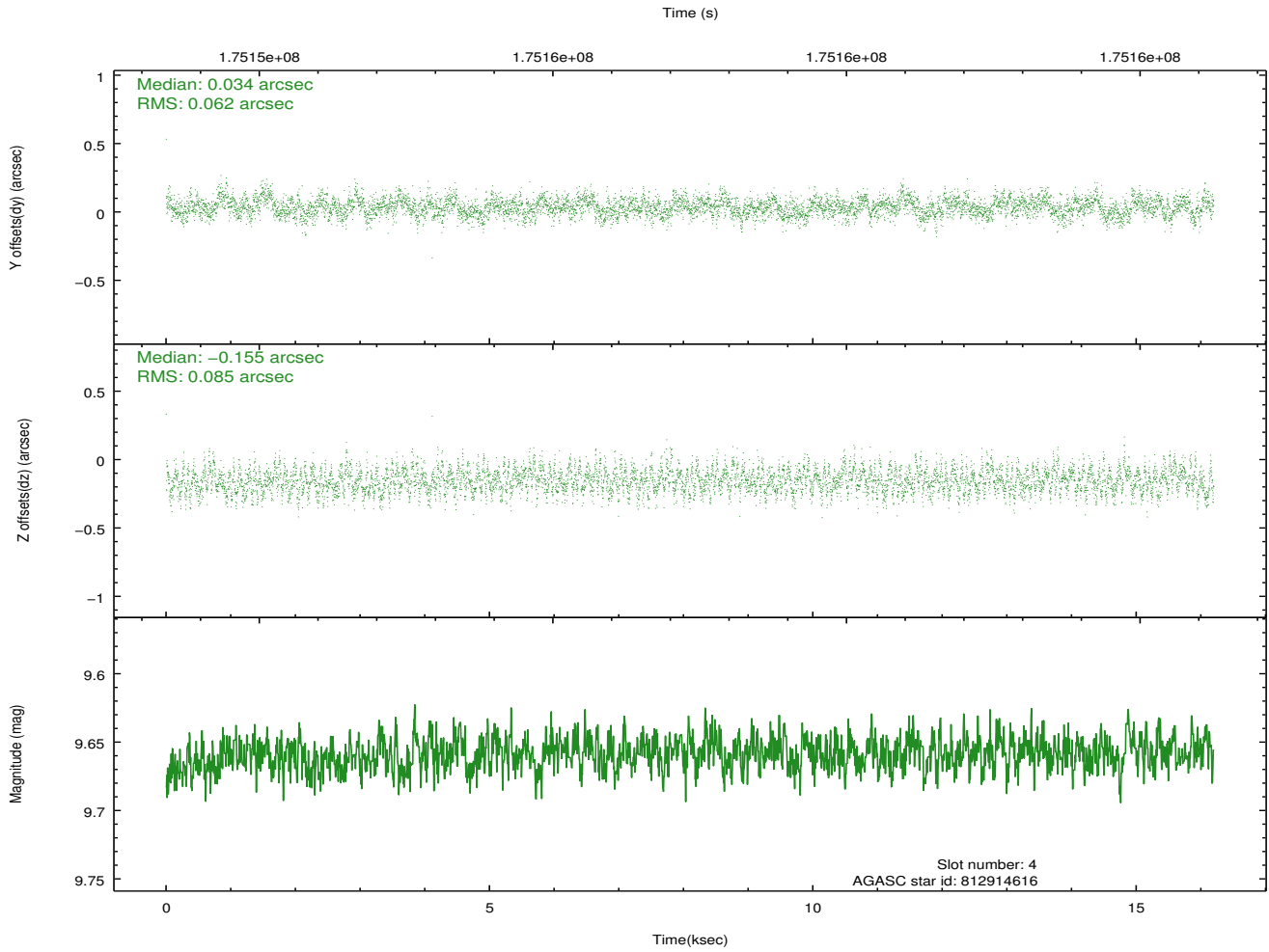
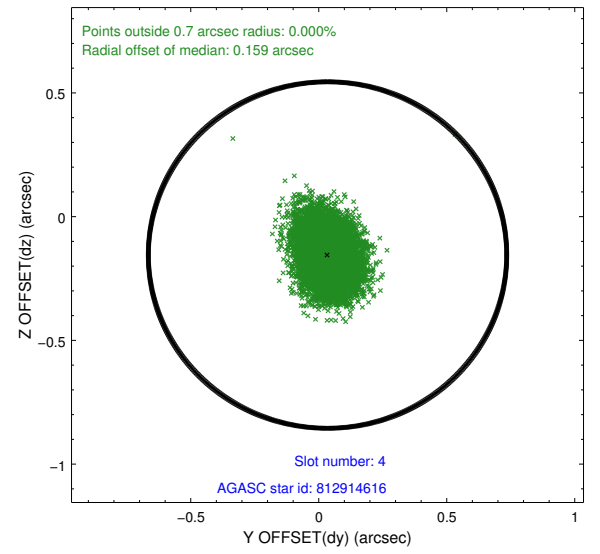
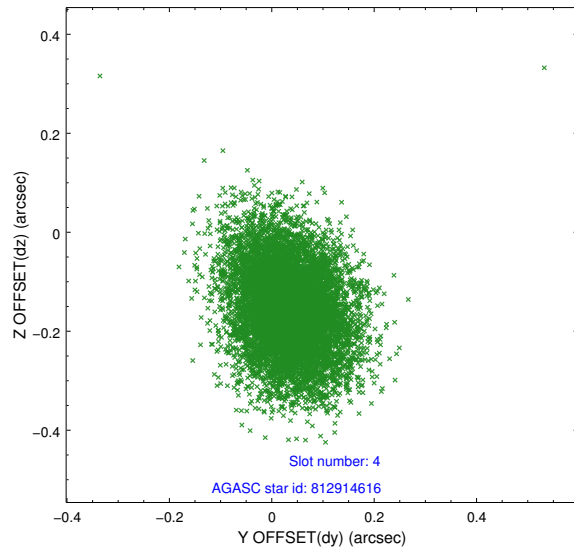
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.07	3950	-0.097	-0.361	0.012	0.025	0.000000	0.000000	-759.35	-2040.05
1	FID	ACIS-S-4	7.15	3951	0.078	0.142	0.010	0.018	0.000000	0.000000	2153.97	-131.43
2	FID	ACIS-S-5	7.22	3951	-0.012	0.226	0.008	0.013	0.000000	0.000000	-1811.77	-137.38
3	GUIDE	812909368	7.80	7902	-0.067	-0.131	0.063	0.100	244.337230	-15.327996	-472.24	-2379.85
4	GUIDE	812914616	9.66	7896	0.034	-0.155	0.111	0.182	244.358365	-15.447124	-74.76	-2203.22
5	GUIDE	812920176	9.77	7899	0.107	0.164	0.122	0.202	245.058523	-16.304322	2321.78	904.91
6	GUIDE	812920352	8.77	7900	0.058	0.077	0.073	0.116	244.854466	-15.546040	-152.46	-446.81
7	GUIDE	812918096	8.58	7900	-0.135	0.045	0.083	0.130	244.220820	-15.671419	825.59	-2465.26

2.4 Star Slots

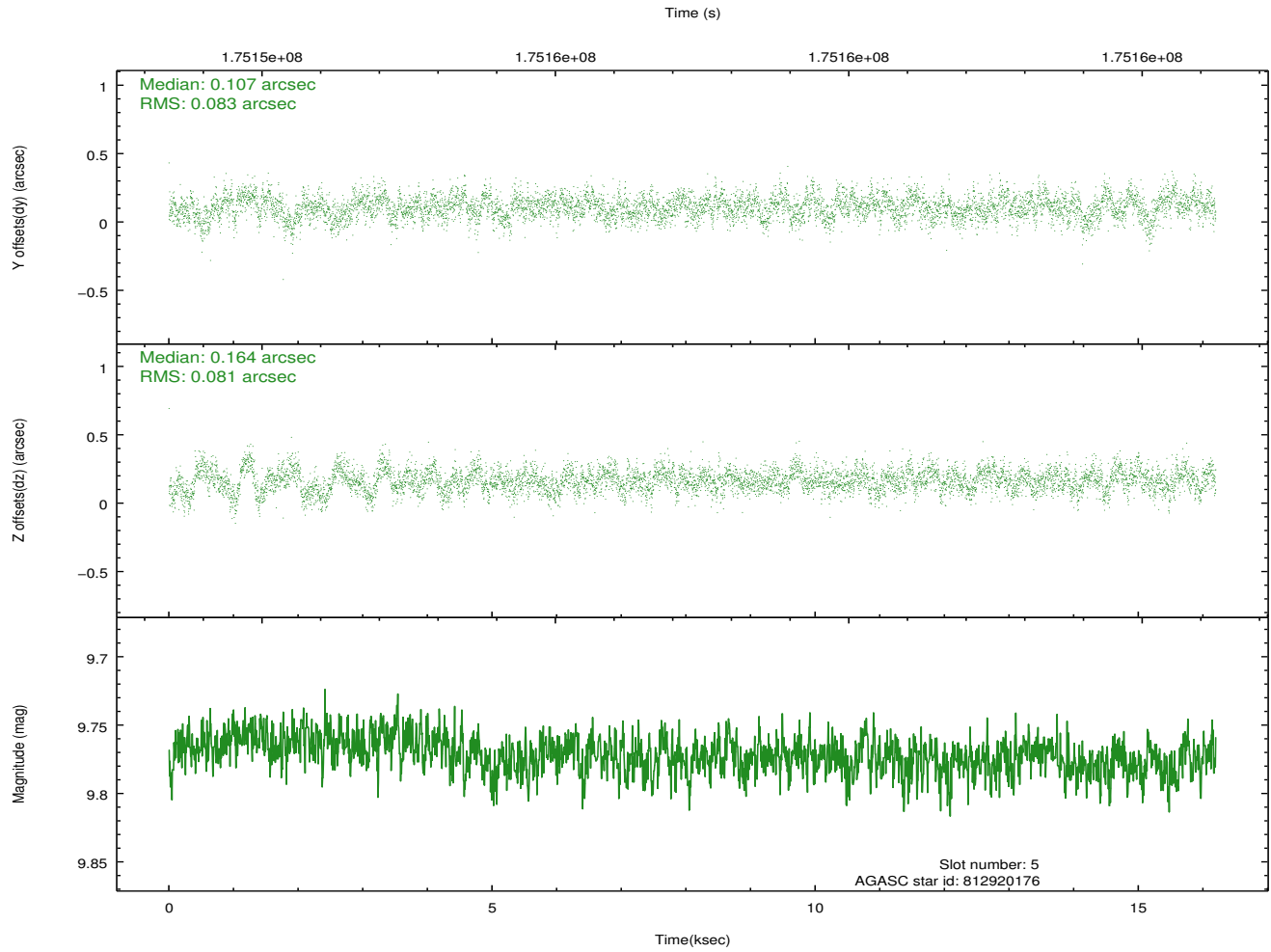
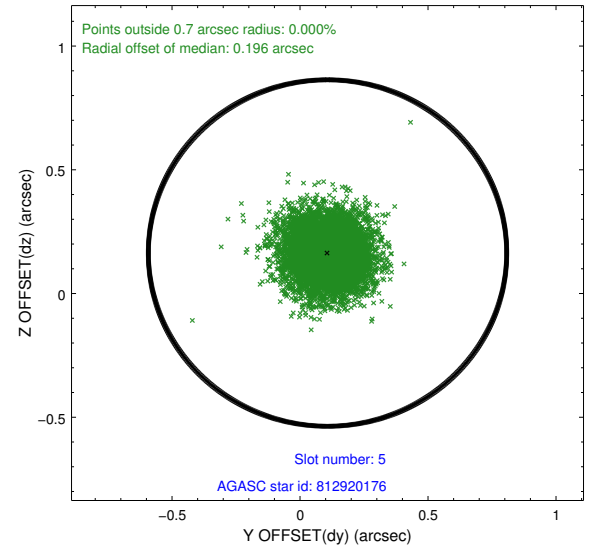
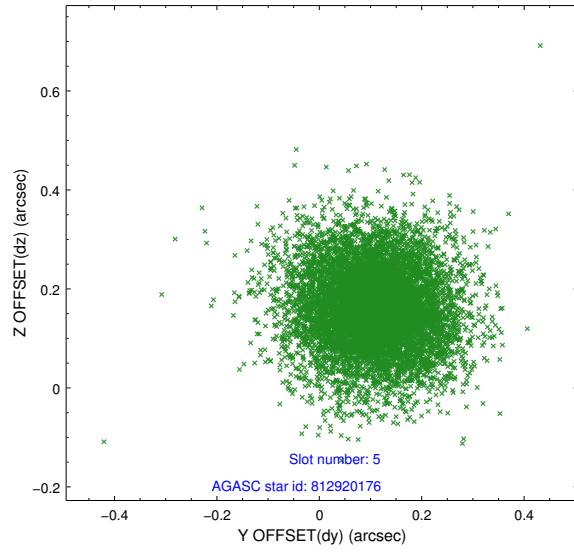
2.4.1 Slot 3



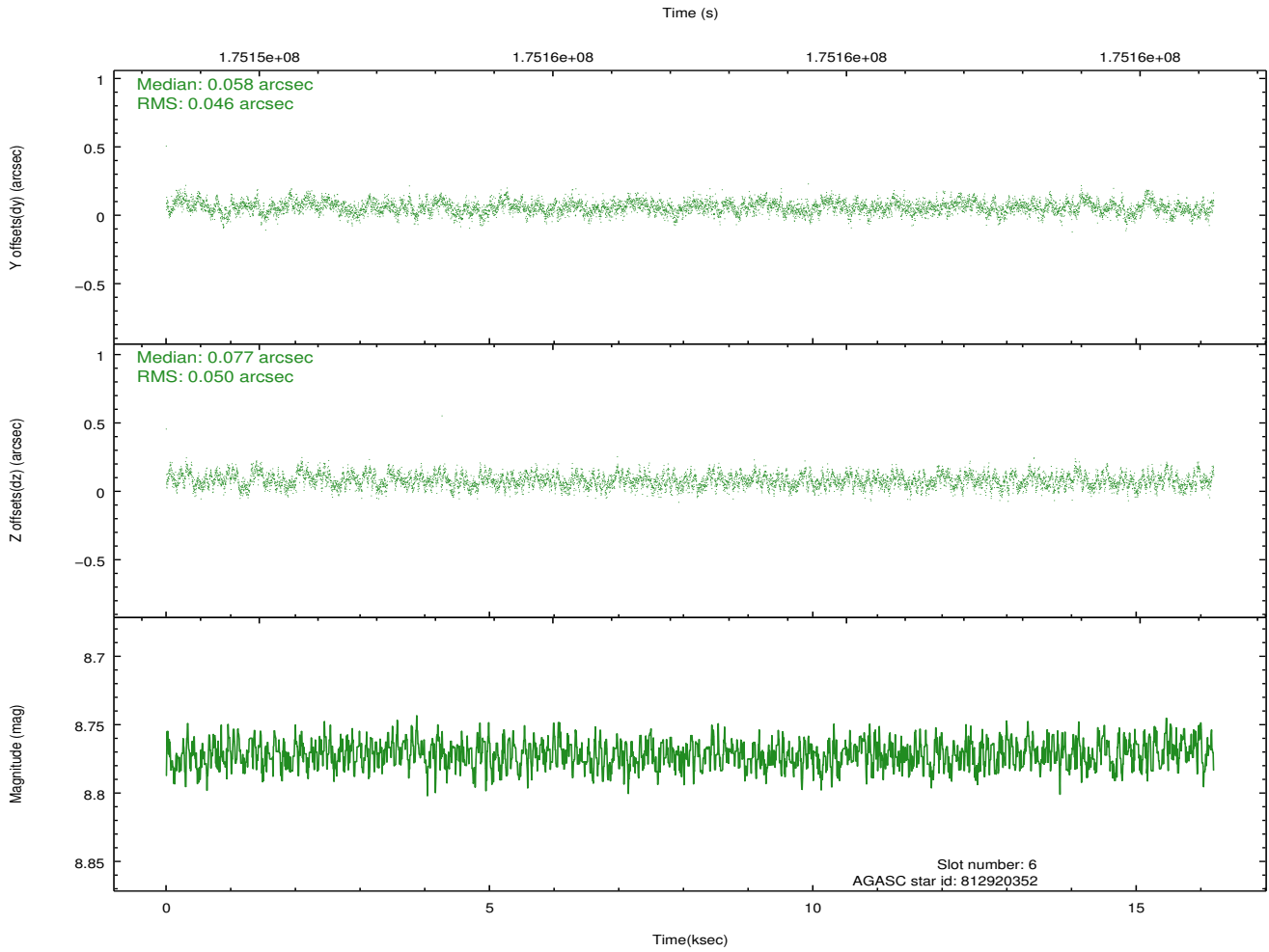
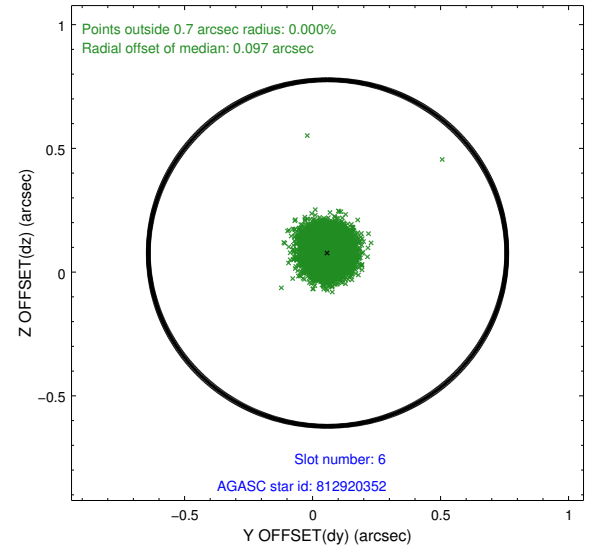
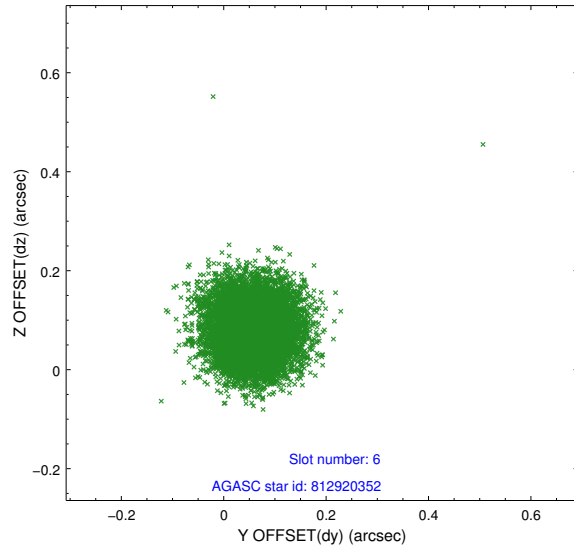
2.4.2 Slot 4



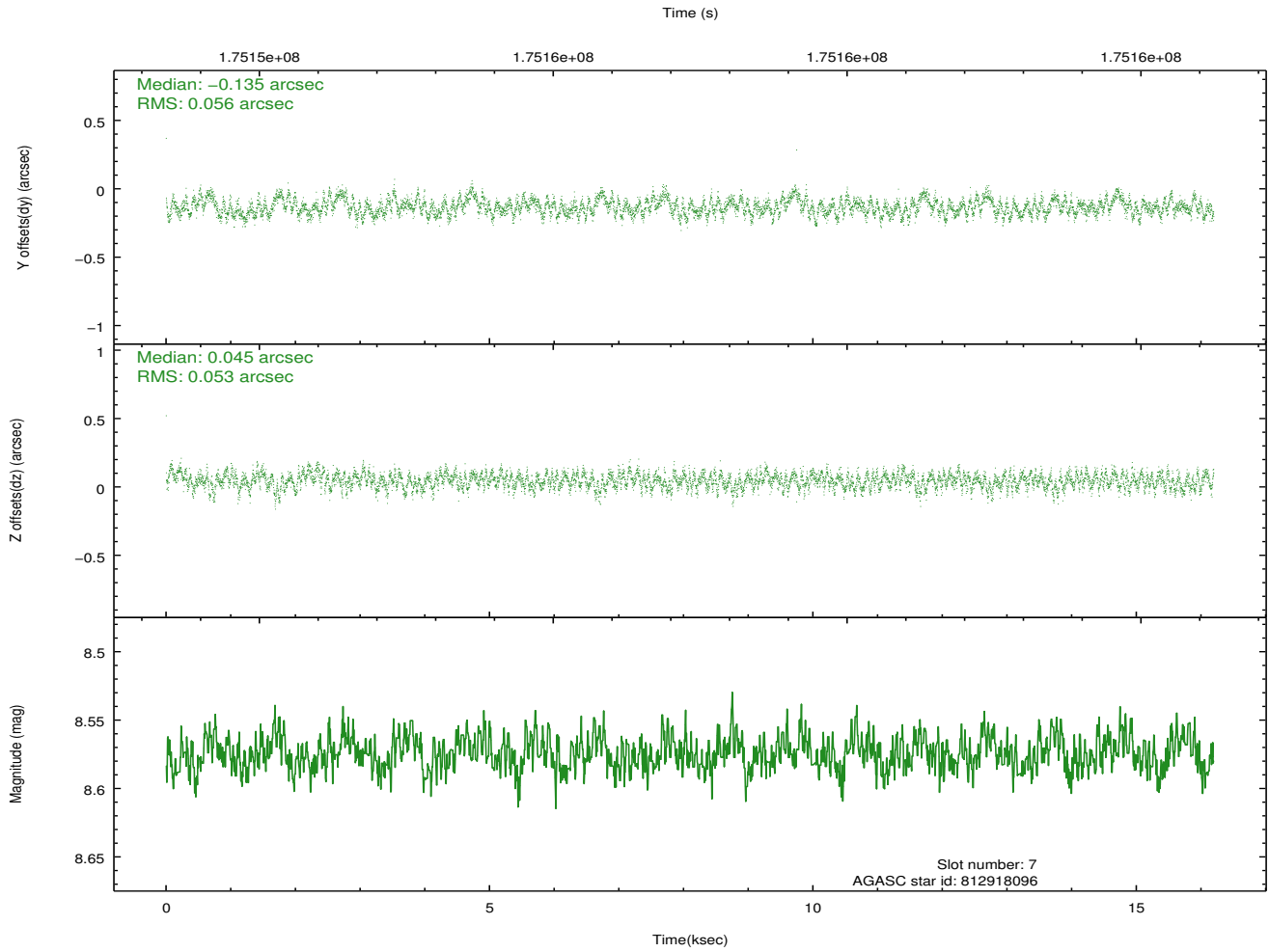
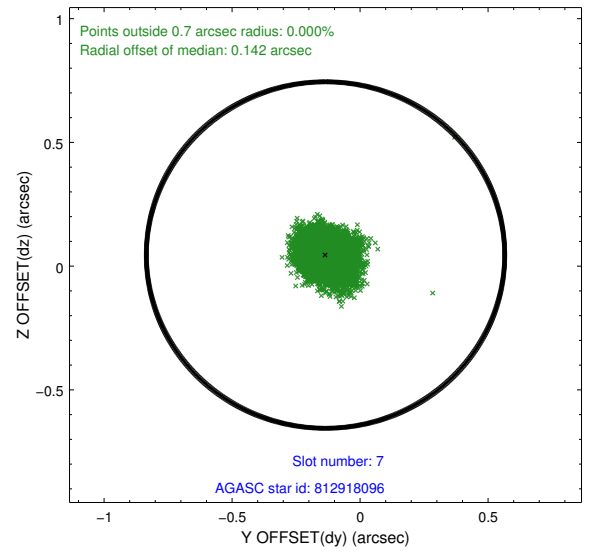
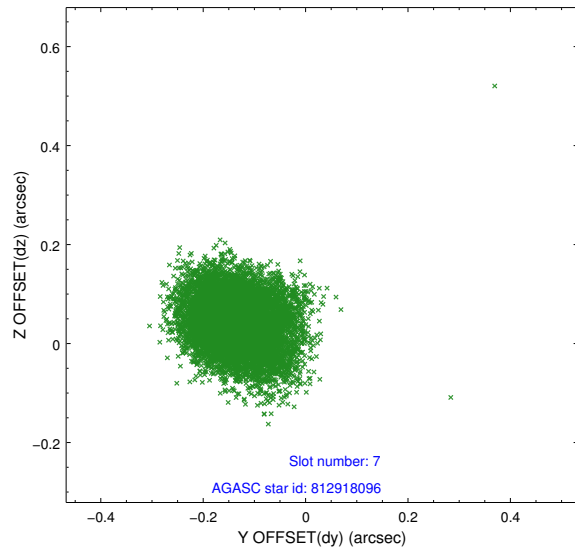
2.4.3 Slot 5



2.4.4 Slot 6

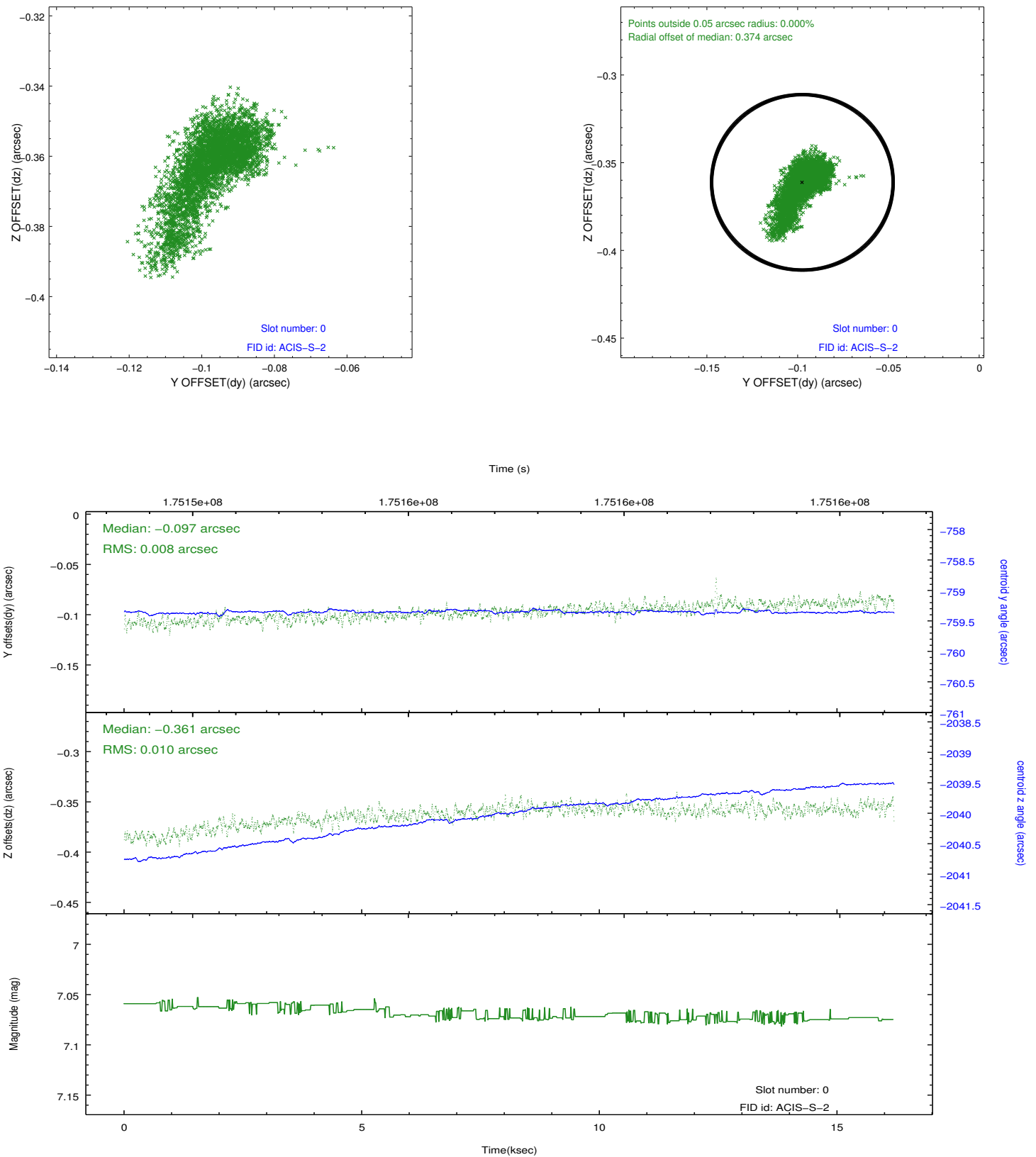


2.4.5 Slot 7

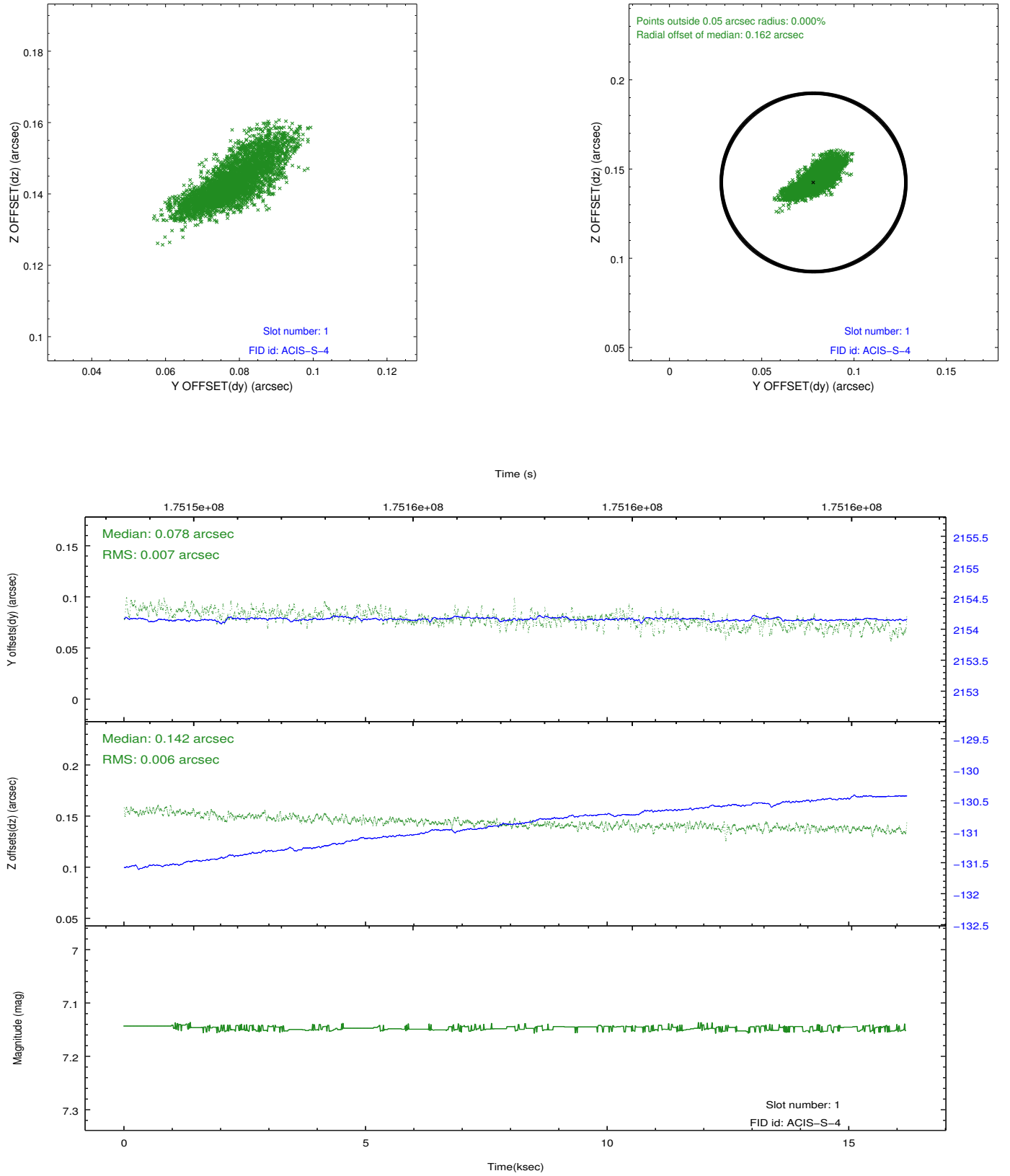


2.5 FID Slots

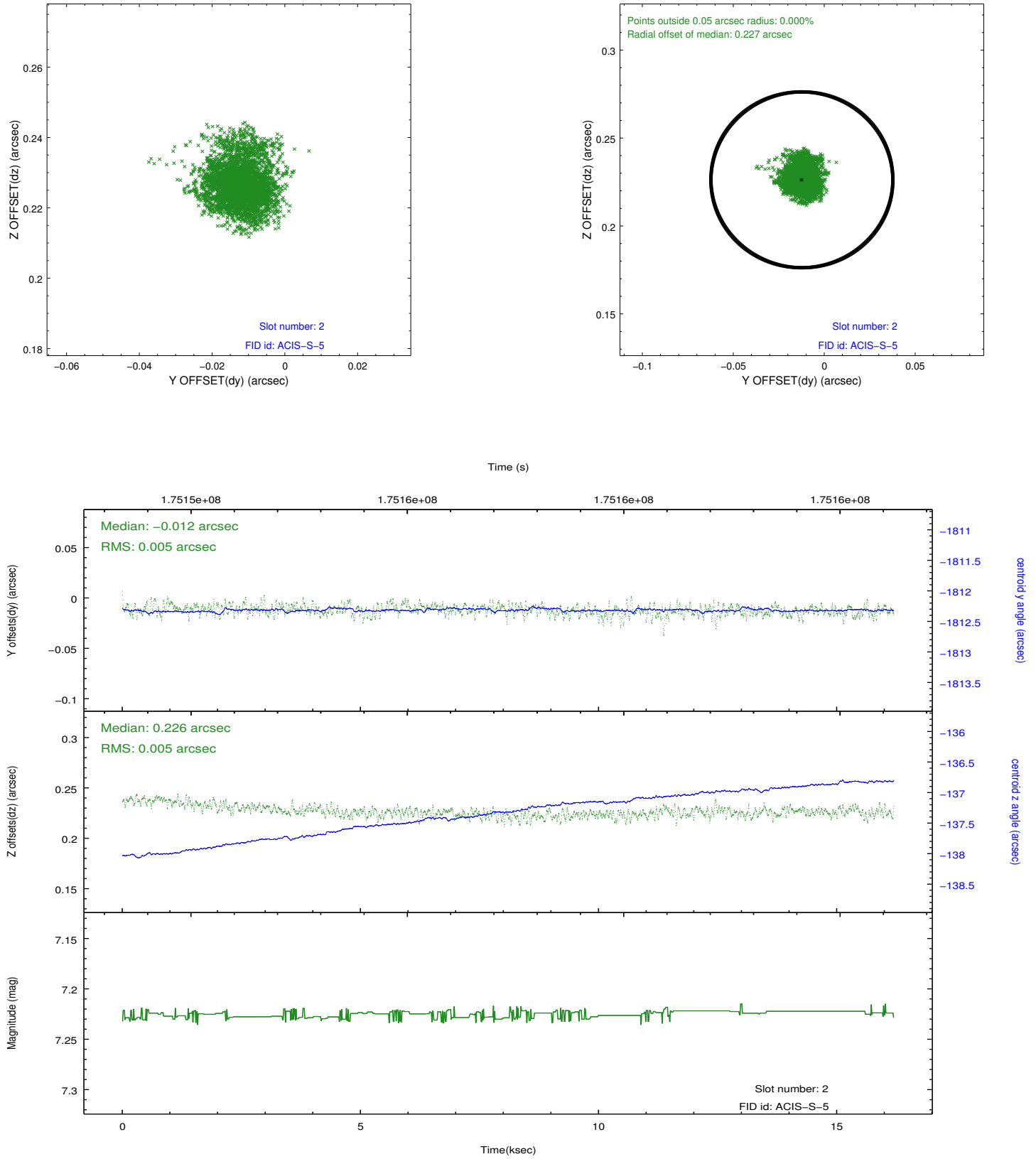
2.5.1 Slot 0



2.5.2 Slot 1

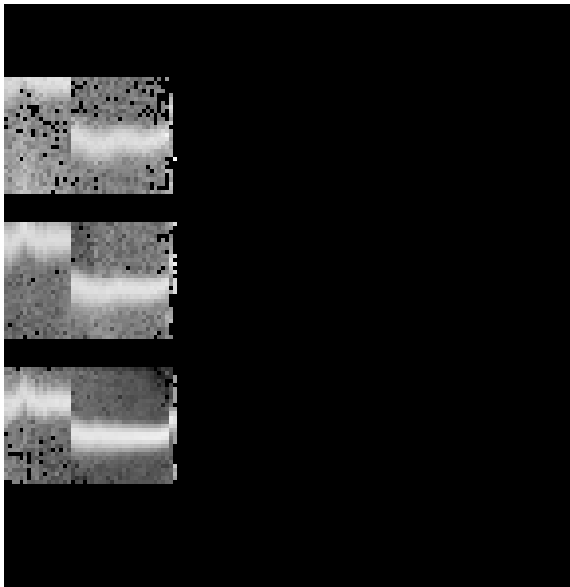


2.5.3 Slot 2



3 Gratings

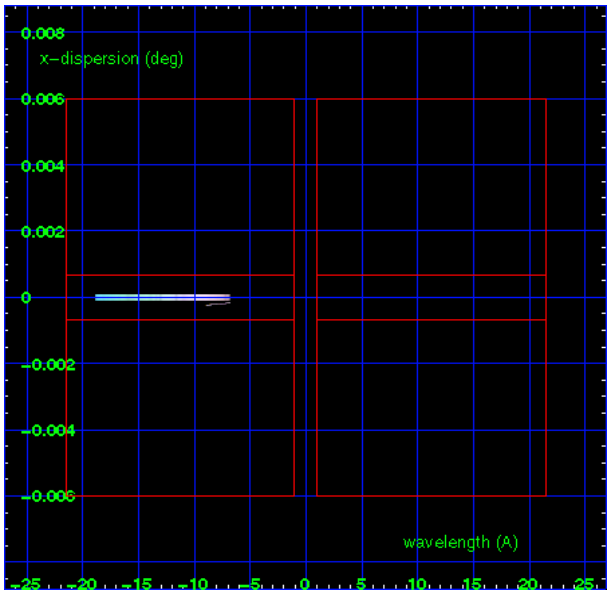
3.1 HEG Arm



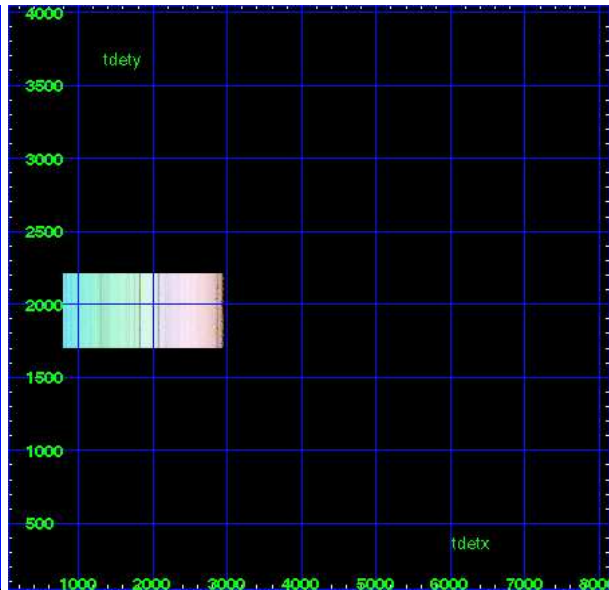
HEG Order Sort 123



HEG Order Sort ALL

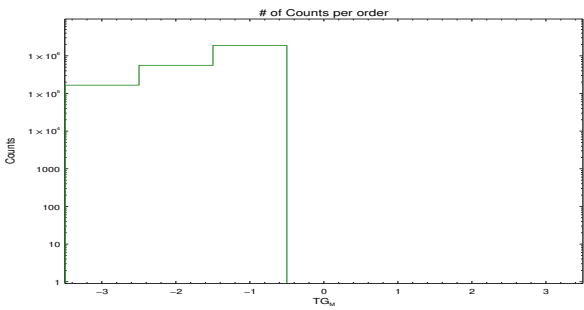


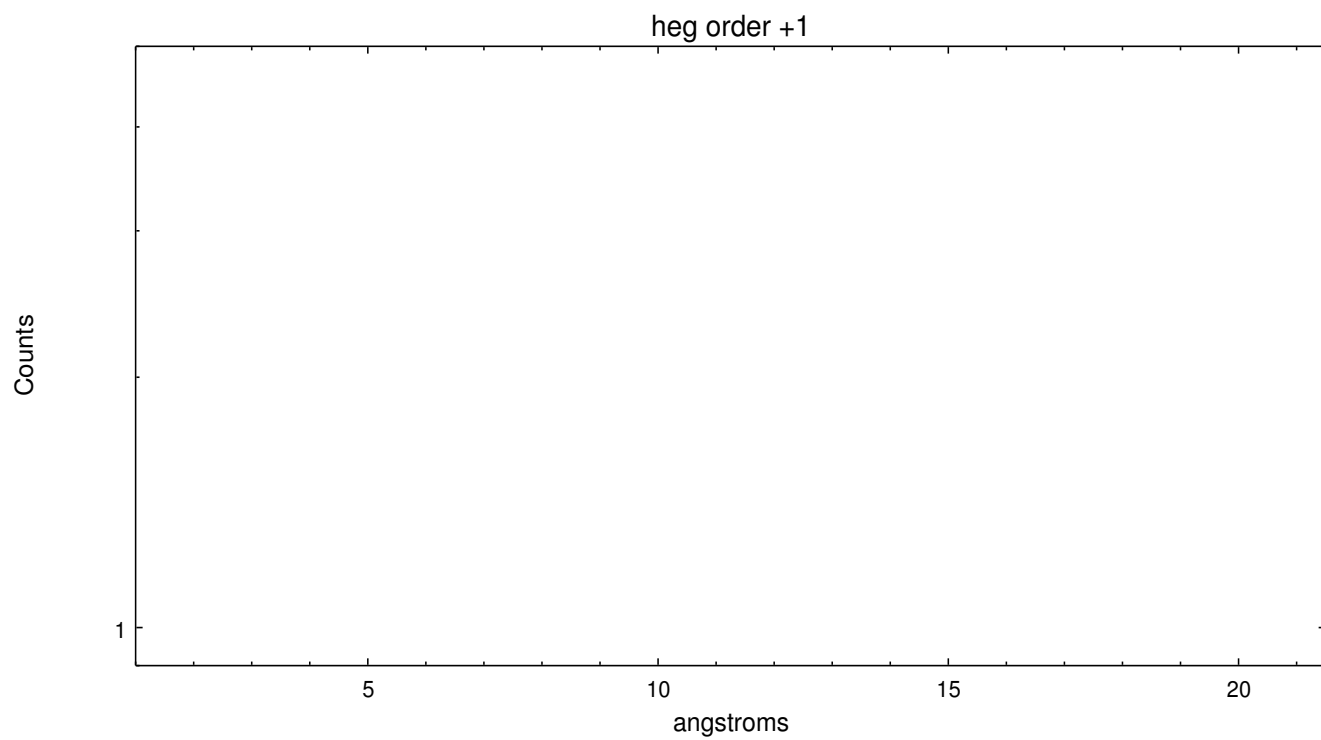
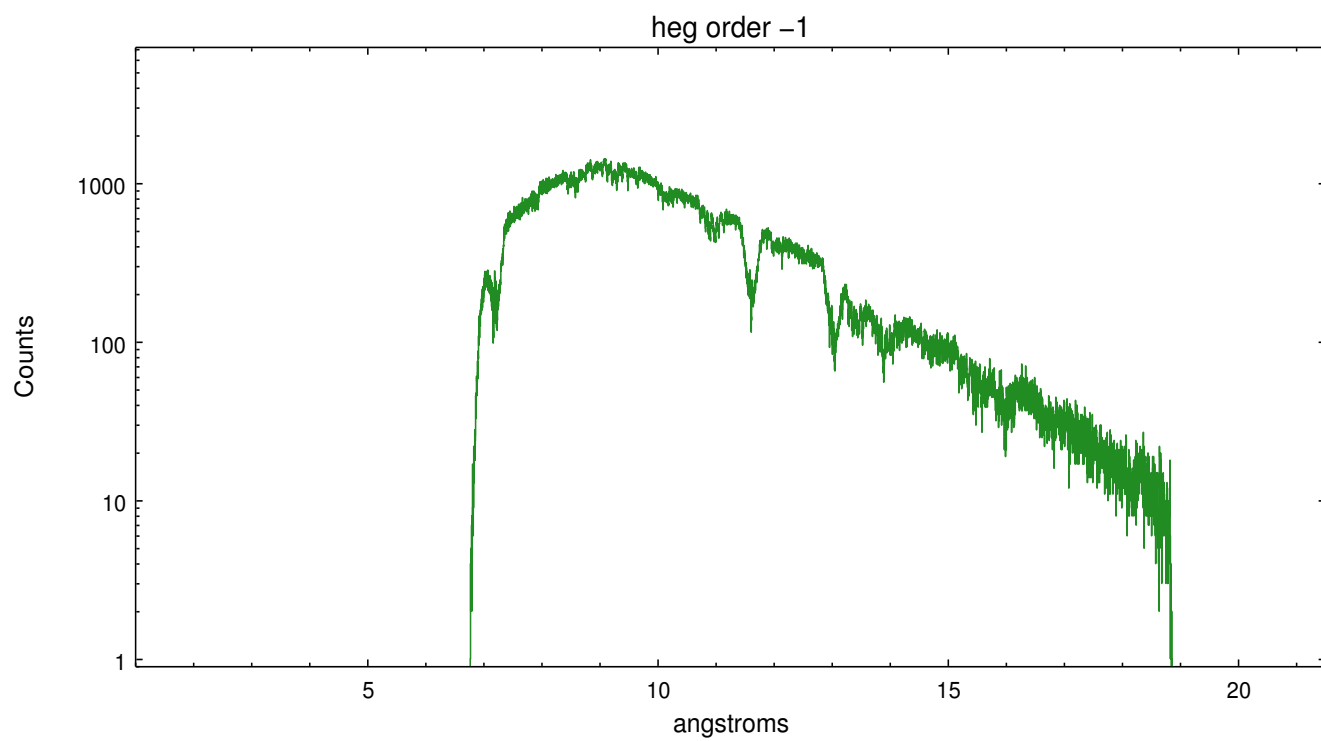
Spot Image HEG



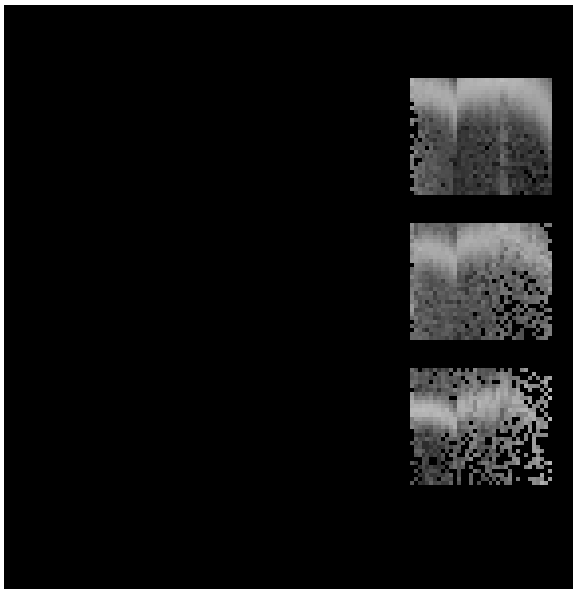
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	167215	564068	1898869	0	0	0	0

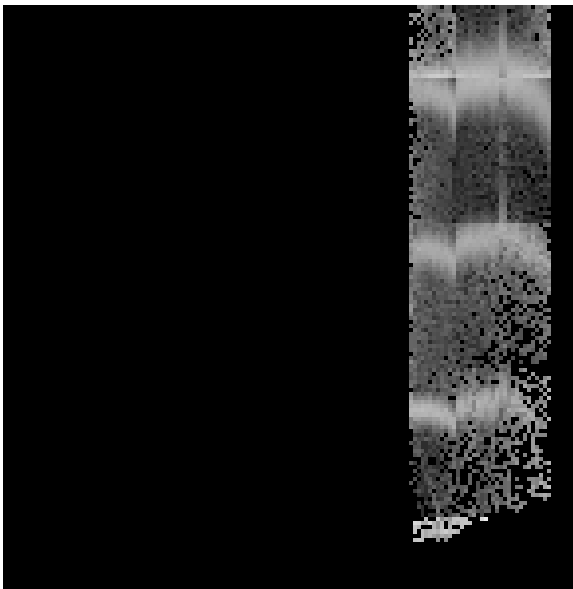




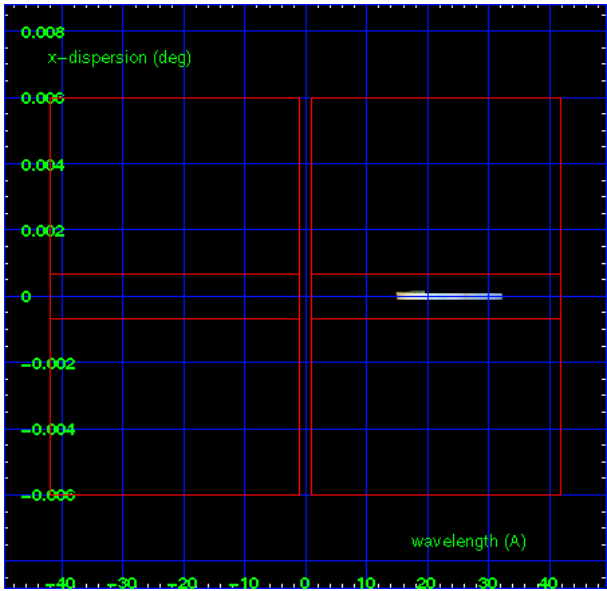
3.2 MEG Arm



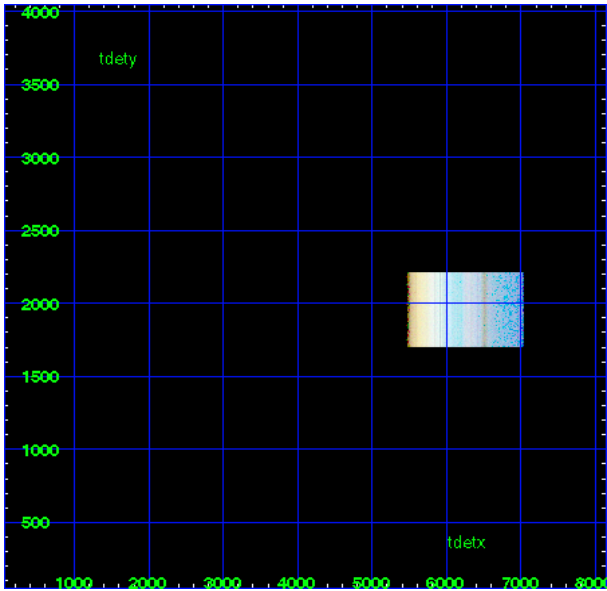
MEG Order Sort 123



MEG Order Sort ALL

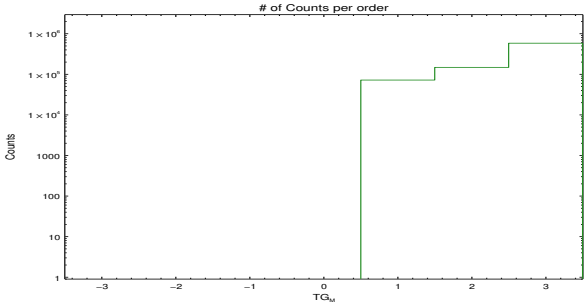


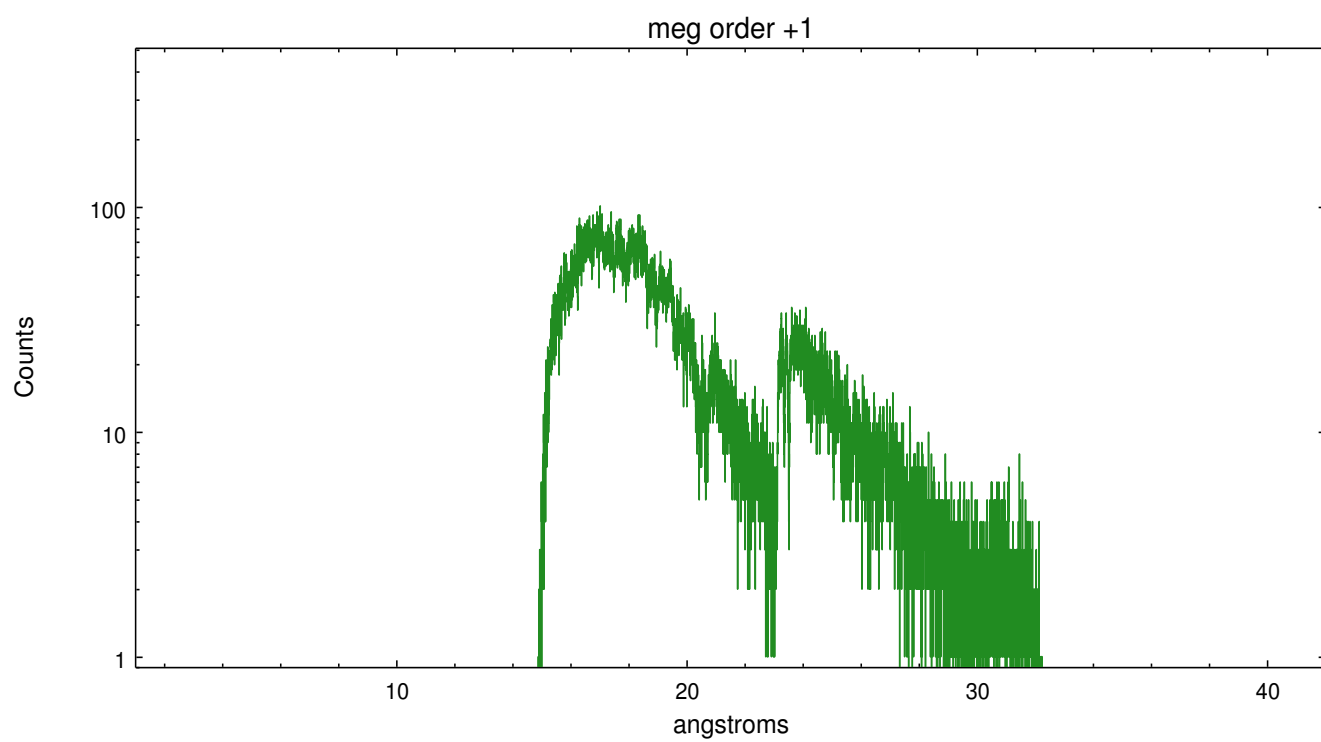
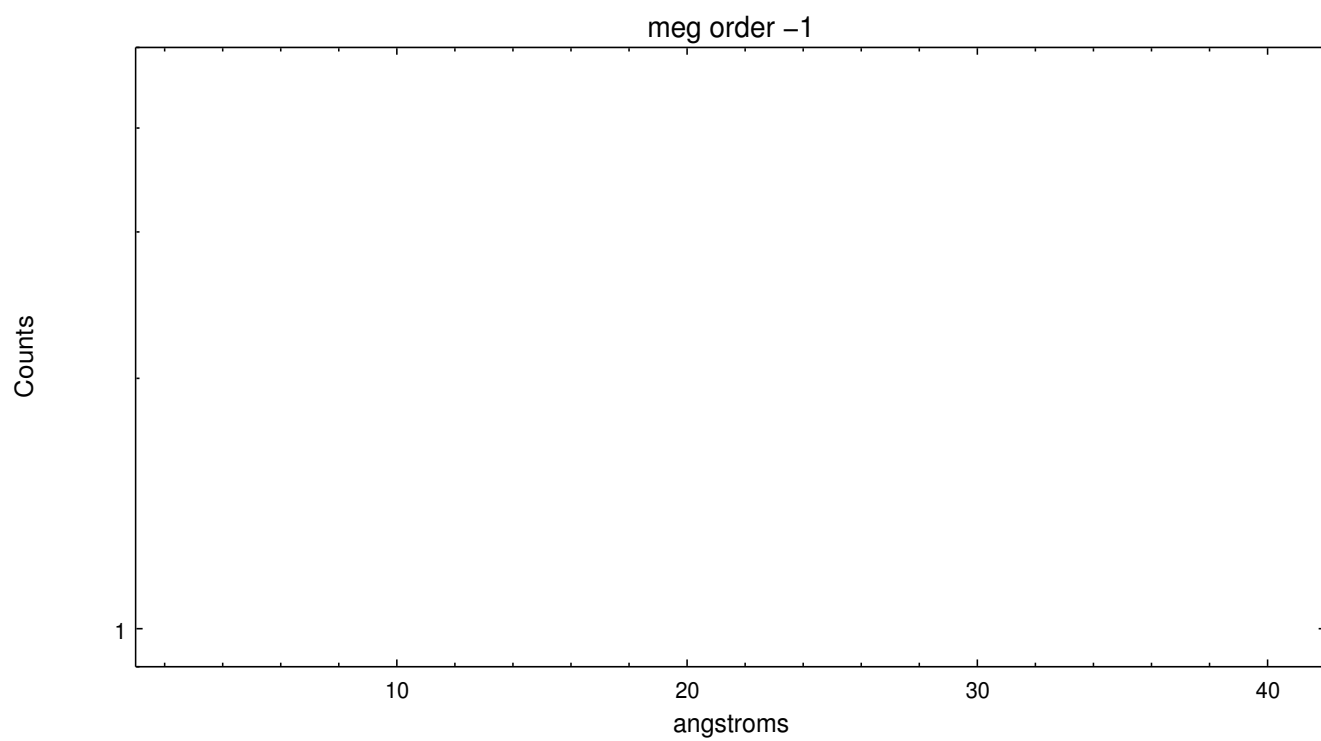
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	0	72685	149472	590501





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2013.04.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	16.058

A.2 Comments

warning: the zeroth order was off the array. used the projected celestial coordinates for the zeroth order position. Only HEG negative and MEG positive orders are on the array; used sky (x,y) = 4077.5, 4122.1).