

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 374 - L2 Version 4
Chandra X-Ray Center

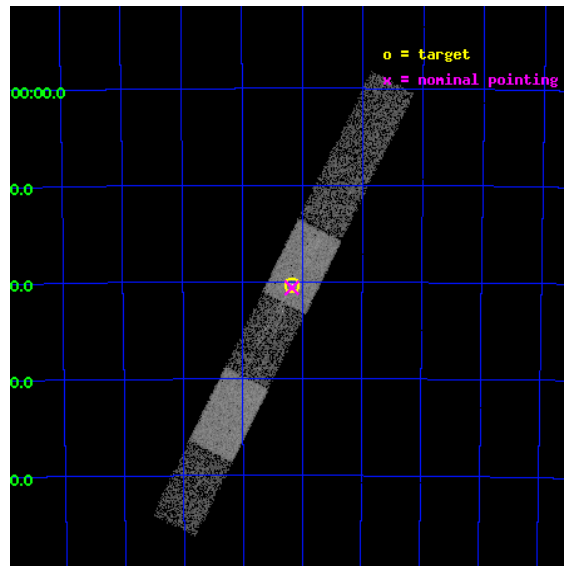
L2 Processing Date : Aug 31 2012

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1 Front

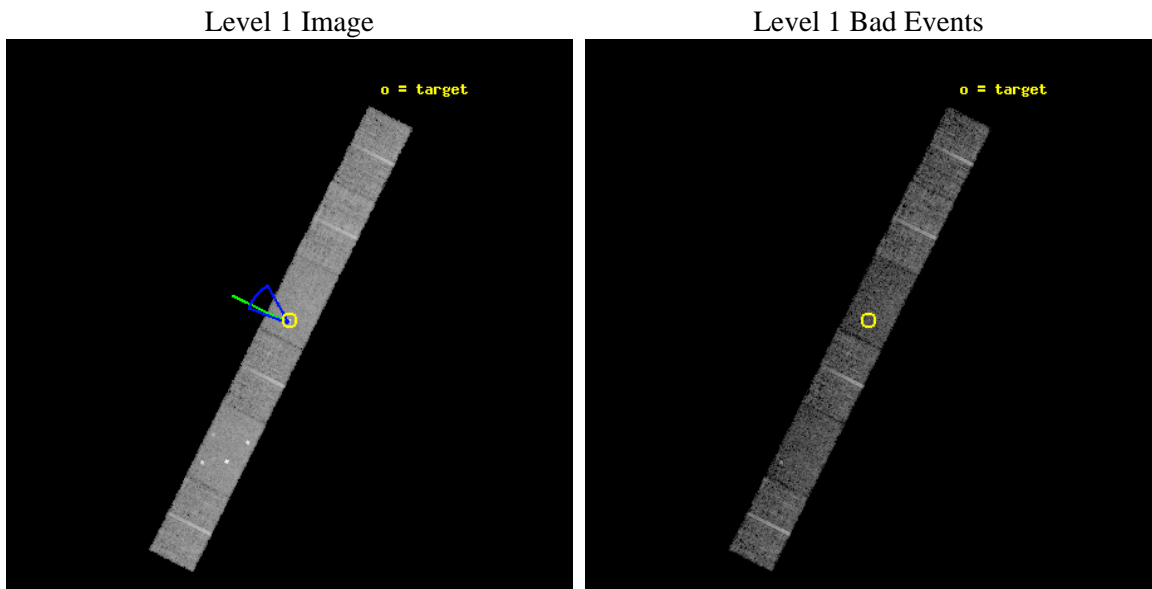
seq_num	700046	Sequence number
obs_id	374	Observation id
title	ACIS GRATING SPECTROSCOPY OF SEYFERT GALAXIES	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	CIRCINUS GALAXY	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	213.2925	Observer's specified target RA [deg]
dec_targ	-65.339056	Observer's specified target Dec [deg]
ra_nom	213.29333846279	Nominal RA [deg]
dec_nom	-65.343695841228	Nominal Dec [deg]
roll_nom	296.56496074759	Nominal Roll [deg]
revision	4	Processing version of data
ontime	7257.1579235494	Sum of GTIs [s]
livetime	7118.0508722181	Livetime [s]
ontime4	7257.1989635527	Sum of GTIs [s]
ontime5	7257.1168835461	Sum of GTIs [s]
ontime6	7257.0758435577	Sum of GTIs [s]
ontime7	7257.1579235494	Sum of GTIs [s]
ontime8	7257.0348035544	Sum of GTIs [s]
ontime9	7256.9937635511	Sum of GTIs [s]
l2events	42214	Number of level 2 events



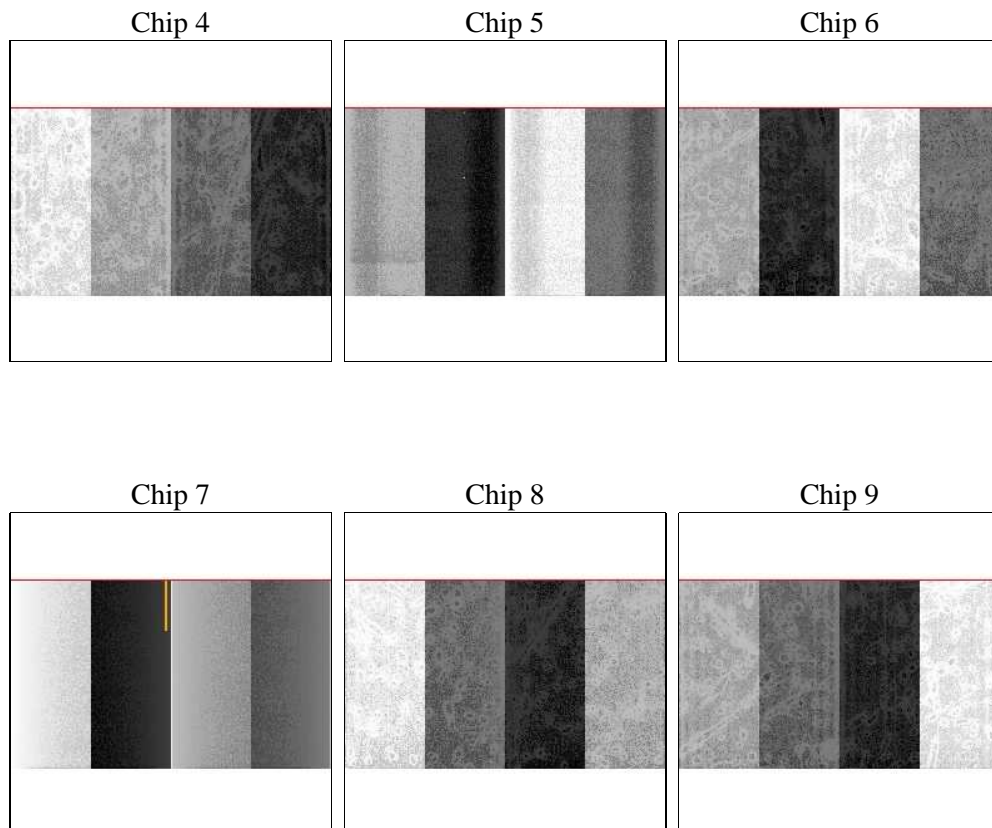
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	70000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	7257.1579235494	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	7257.1989635527	Sum of GTIs [s]
date	2012-08-29T07:27:12	Date and time of file creation	ontime5	7257.1168835461	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	7257.0758435577	Sum of GTIs [s]
			ontime7	7257.1579235494	Sum of GTIs [s]
			ontime8	7257.0348035544	Sum of GTIs [s]
			ontime9	7256.9937635511	Sum of GTIs [s]
			l1events	204482	Number of level 1 events

2.1.4 Events

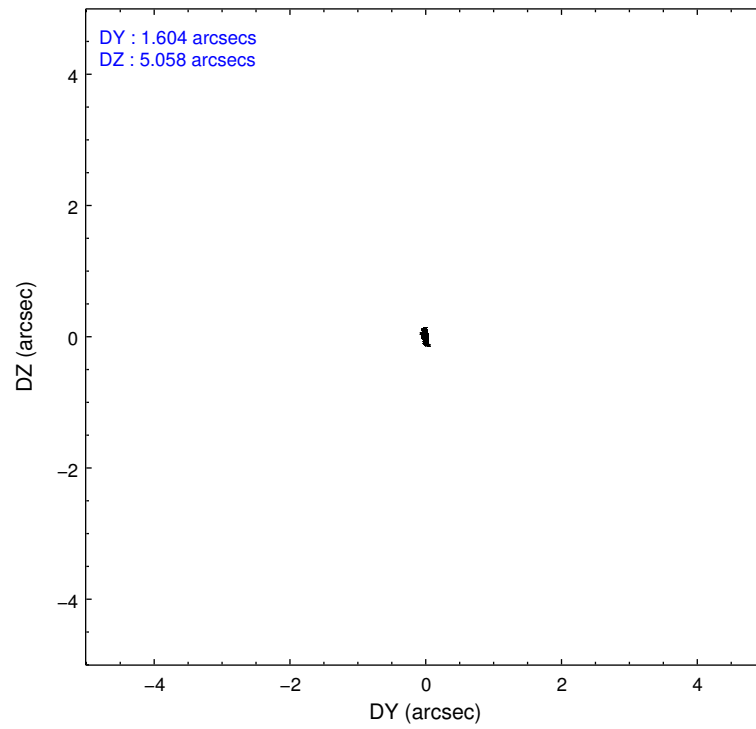
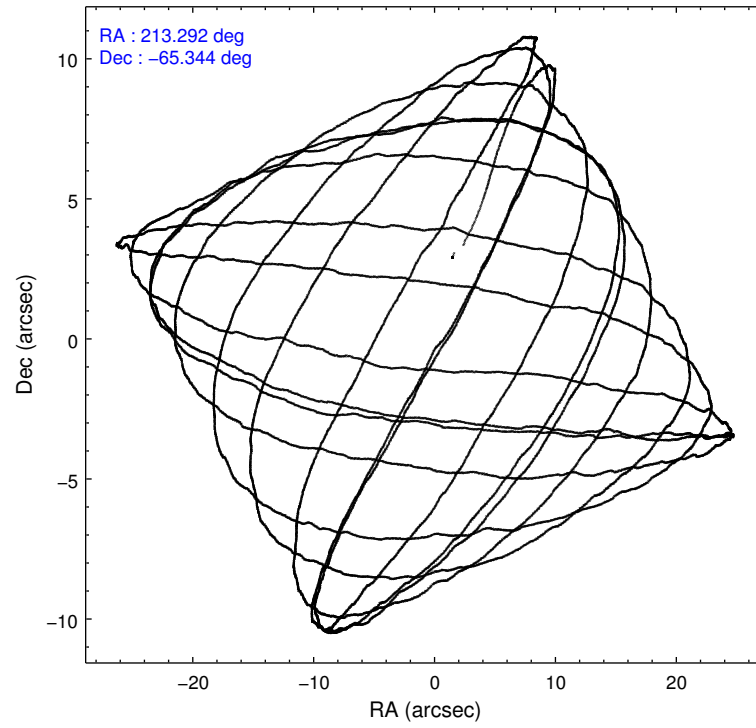
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	31510	40928	29707	34927	38528	28882	grade 0 events	1261	6388	1524	1919	2252	1307
rejected events	28235	19267	26162	18890	31322	25739		4%	15%	5%	5%	5%	4%
rejected %	89%	47%	88%	54%	81%	89%	grade 1 events	13	48	7	42	16	7
								0%	0%	0%	0%	0%	0%
							grade 2 events	733	5462	622	3304	1490	586
								2%	13%	2%	9%	3%	2%
							grade 3 events	394	884	376	1595	793	347
								1%	2%	1%	4%	2%	1%
							grade 4 events	361	794	386	1571	763	339
								1%	1%	1%	4%	1%	1%
							grade 5 events	947	2860	1075	3191	1393	1044
								3%	6%	3%	9%	3%	3%
							grade 6 events	529	8181	645	7683	1920	570
								1%	19%	2%	21%	4%	1%
							grade 7 events	27272	16311	25072	15622	29901	24682
								86%	39%	84%	44%	77%	85%

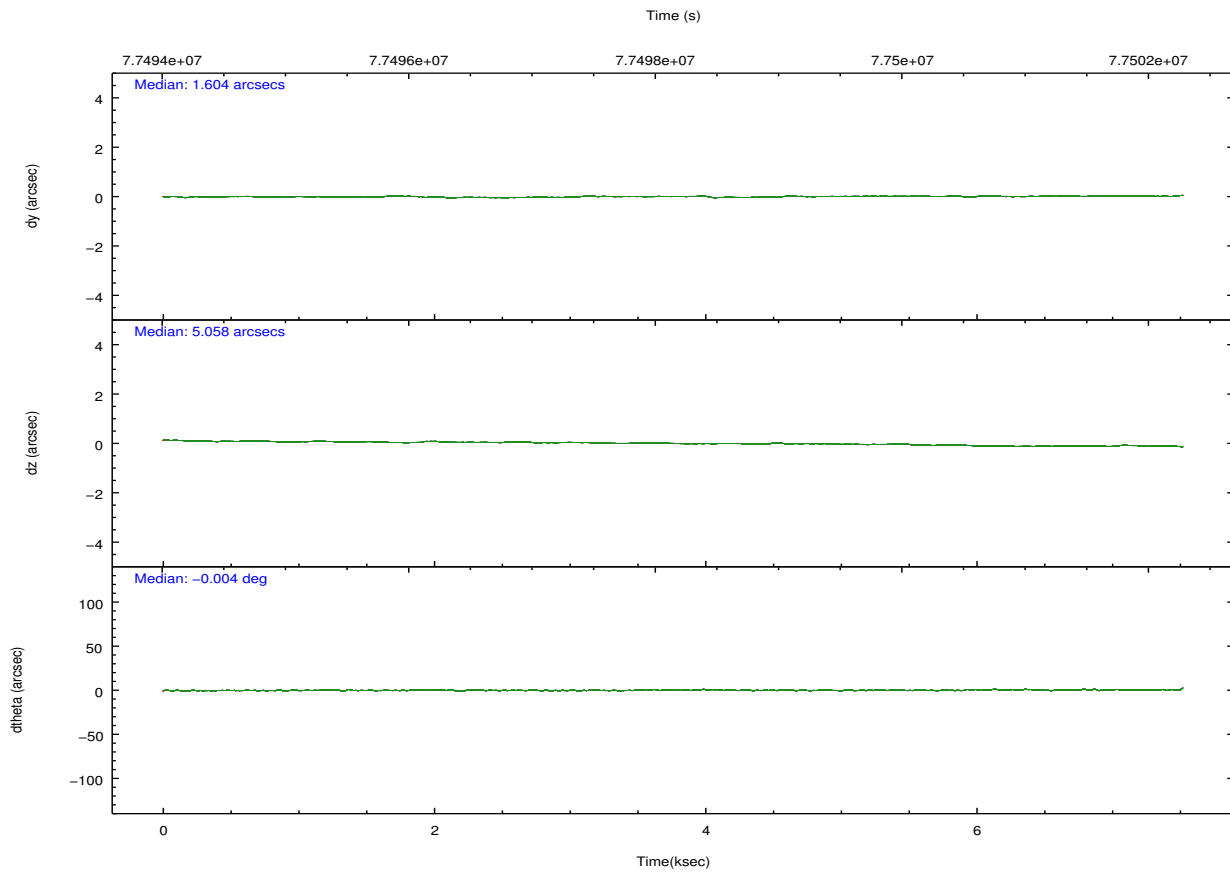
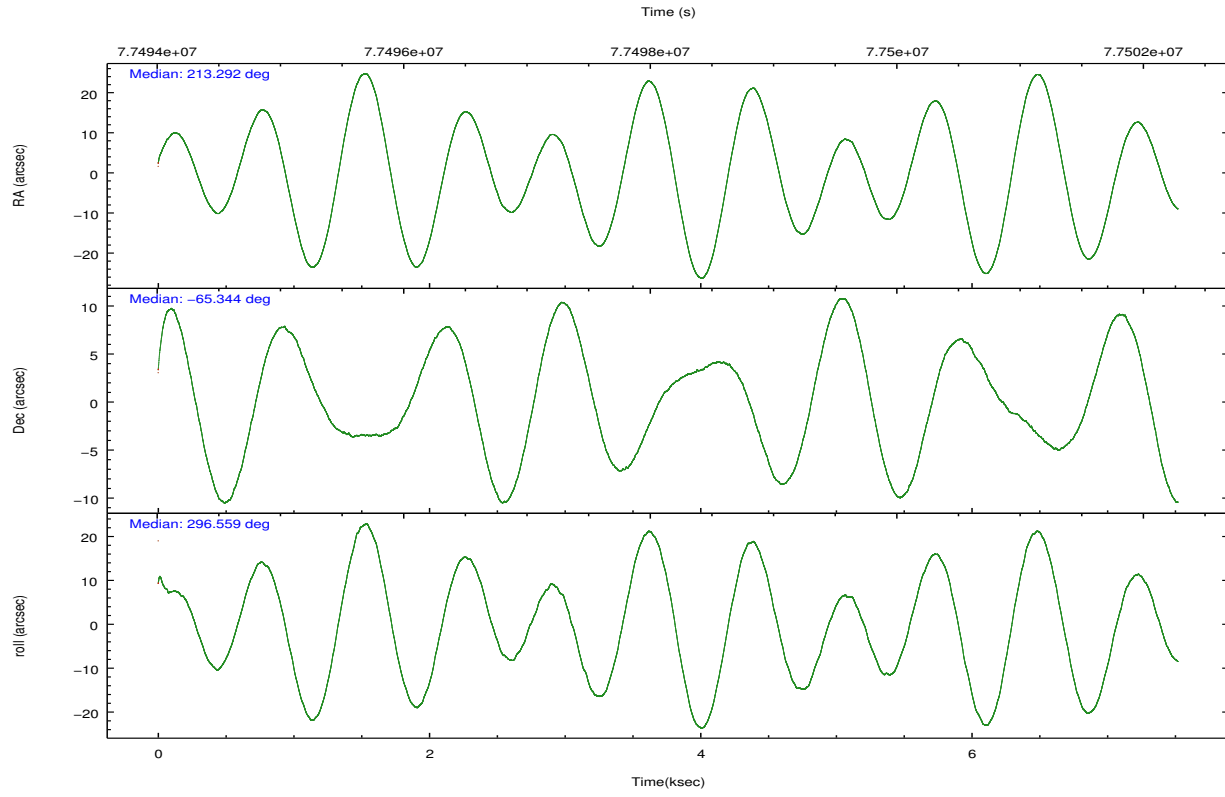
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	213.238284	213.2933384627899
[deg] Pointing Dec	-65.328696	-65.34369584122837
[deg] Pointing Roll	296.358279	296.5649607475934
[deg] Roll angle	310.000000	310.000000
[deg] Roll tolerance	20.000000	20.000000
Roll constraint allows 180D rotation	N	N
[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)	77494804.184000	77493733.116712
Observation start date	2000-06-15T22:19:00	2000-06-15T22:02:13
[s] Observation end time (MET)	77564804.184000	77501903.392013
Observation end date	2000-06-16T17:45:40	2000-06-16T00:18:23
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	CUSTOM
Subarray start row	212	212
Subarray row count	600	600
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	2.1

2.3 Aspect



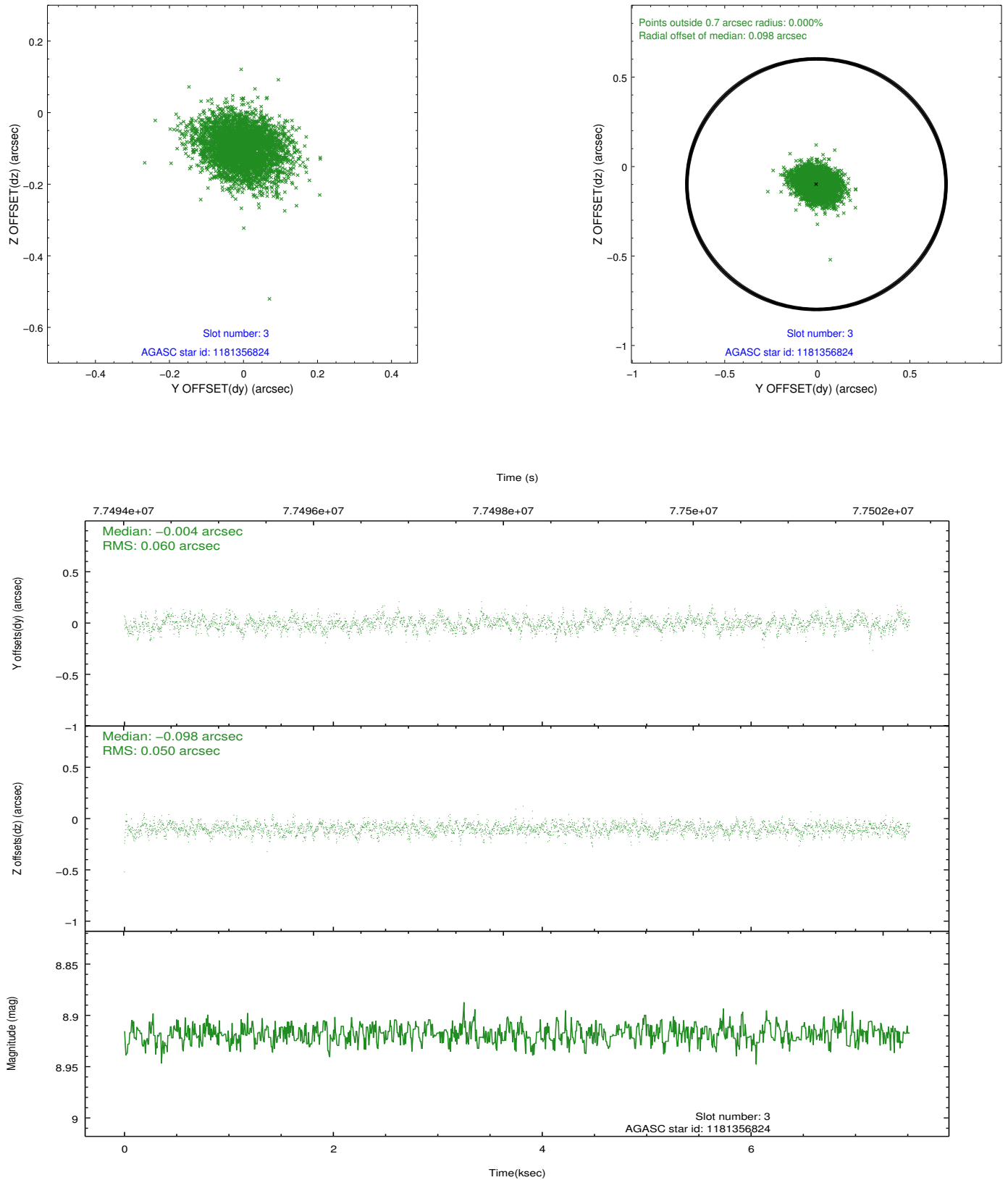


Slot Statistics

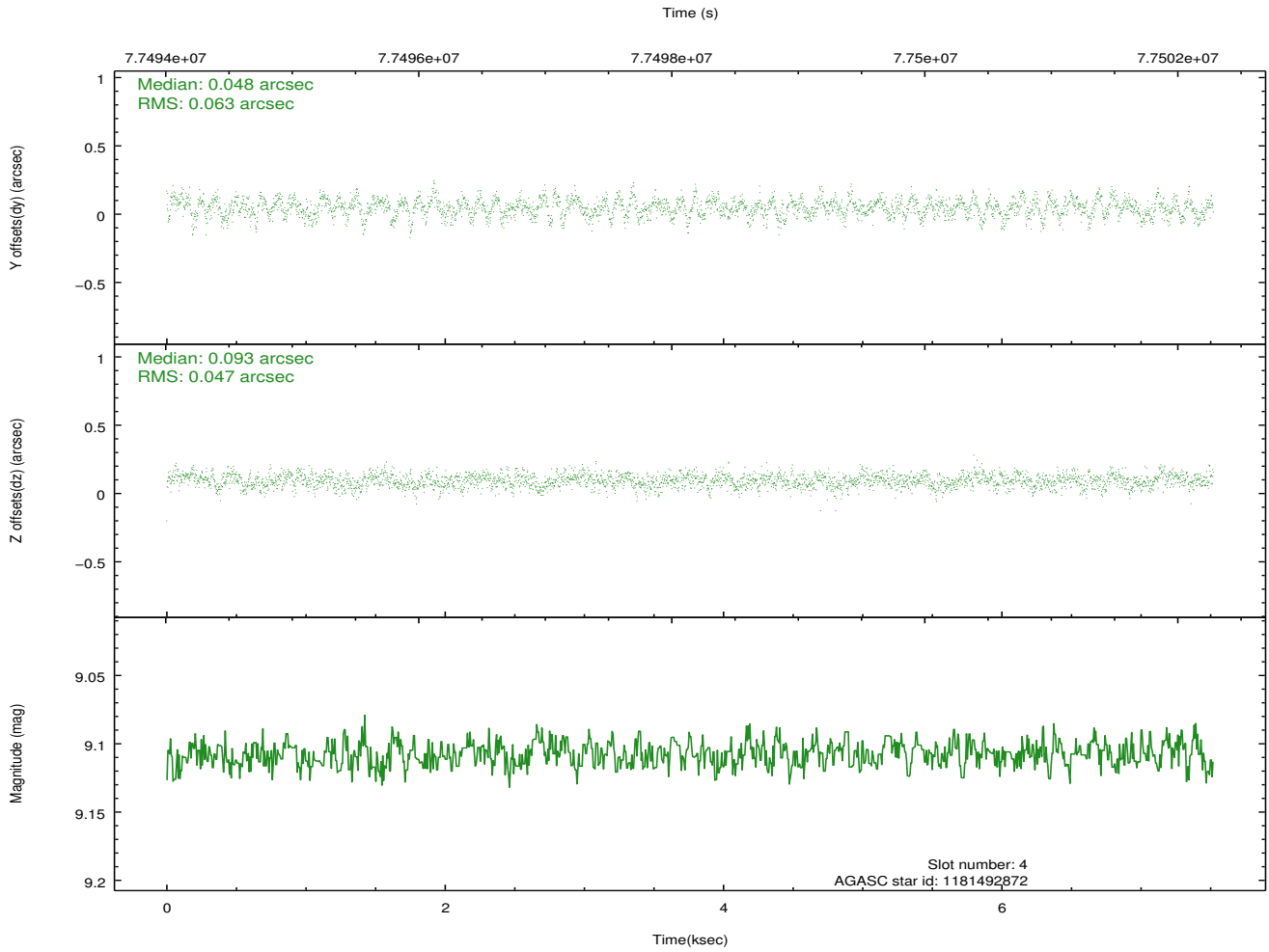
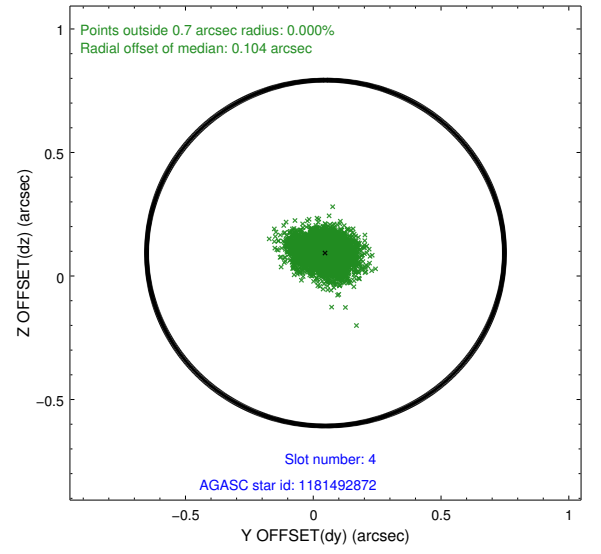
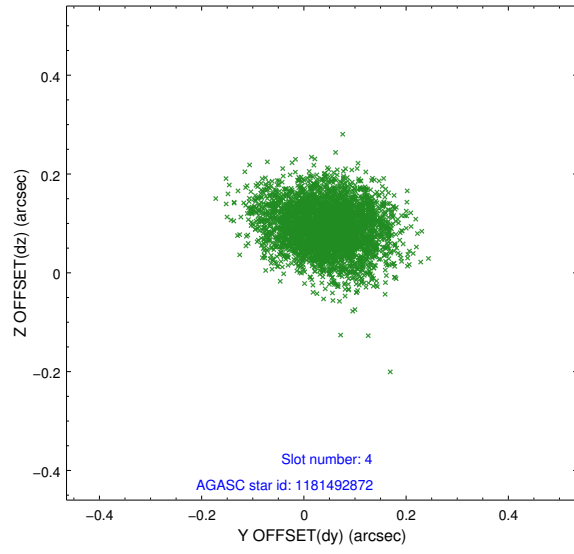
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1834	-0.033	0.001	0.007	0.011	0.000000	0.000000	-754.23	-1726.17
1	FID	ACIS-S-4	7.21	1835	-0.006	0.016	0.005	0.009	0.000000	0.000000	2158.73	181.56
2	FID	ACIS-S-5	7.23	1835	0.008	-0.008	0.006	0.011	0.000000	0.000000	-1806.06	176.05
3	GUIDE	1181356824	8.92	3668	-0.004	-0.098	0.083	0.135	213.100076	-64.682630	-2178.20	842.99
4	GUIDE	1181492872	9.11	3663	0.048	0.093	0.084	0.136	214.965330	-65.517798	1784.96	1992.35
5	GUIDE	1181356256	9.36	3668	-0.087	-0.032	0.093	0.147	211.557959	-65.462249	-653.66	-2477.25
6	GUIDE	1181493248	9.60	3668	0.116	0.081	0.094	0.156	214.599761	-65.623973	1870.16	1331.75
7	GUIDE	1181352864	9.60	3595	-0.070	-0.044	0.110	0.177	211.568687	-65.298573	-1181.60	-2215.45

2.4 Star Slots

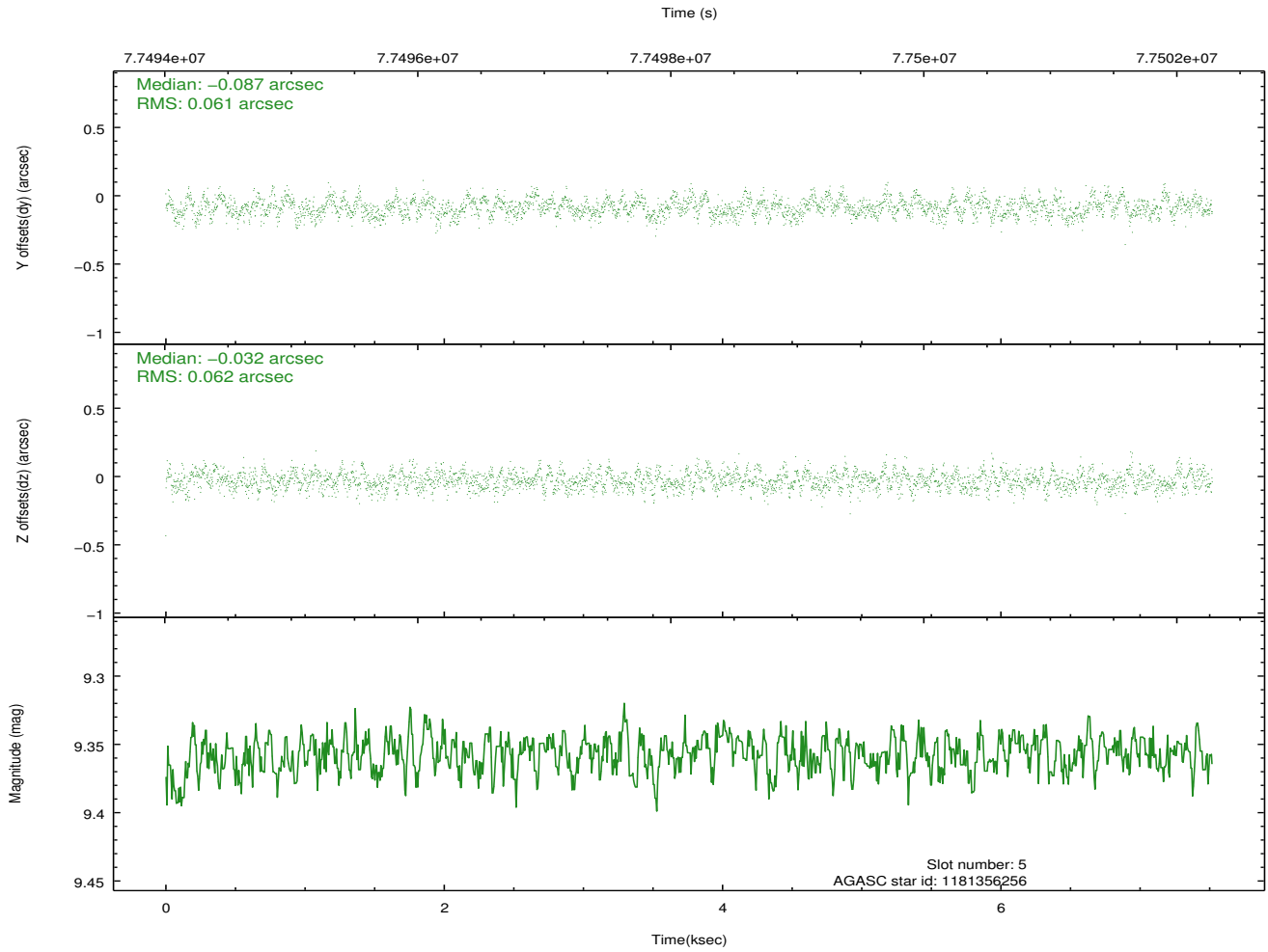
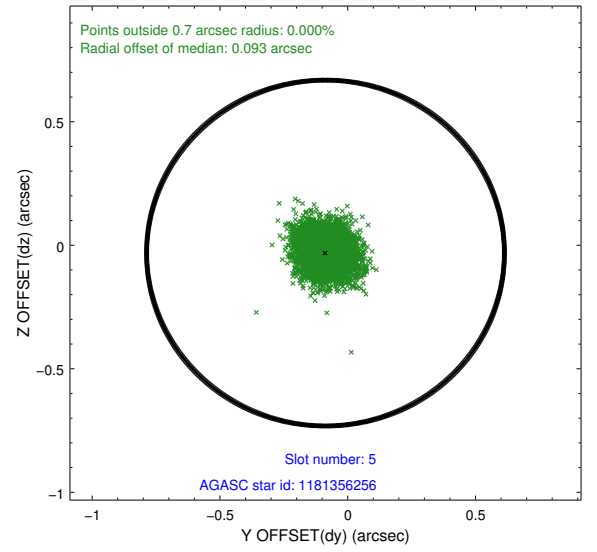
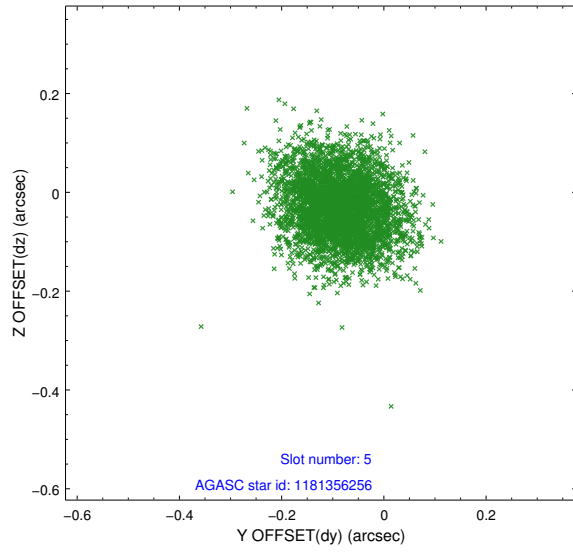
2.4.1 Slot 3



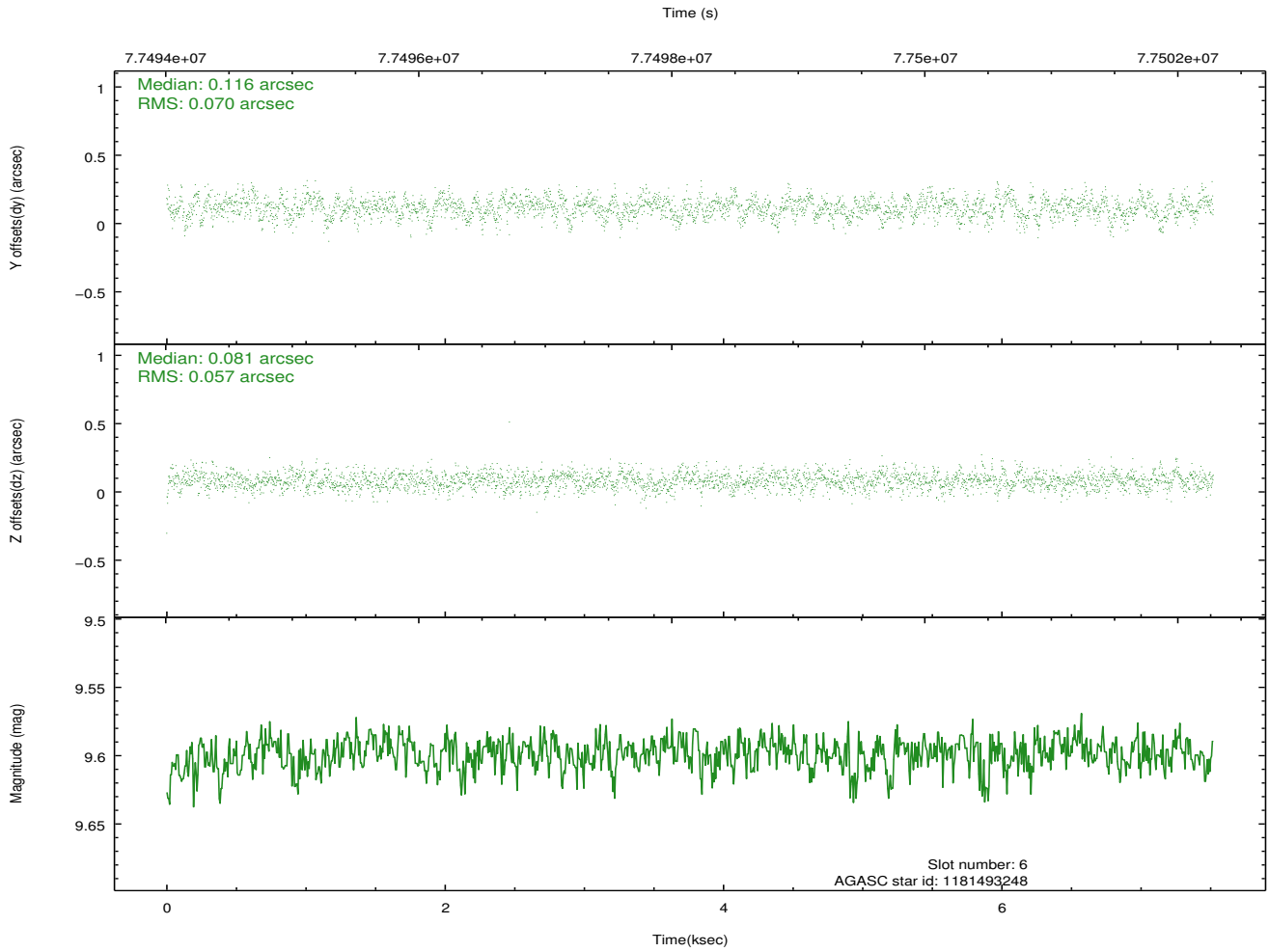
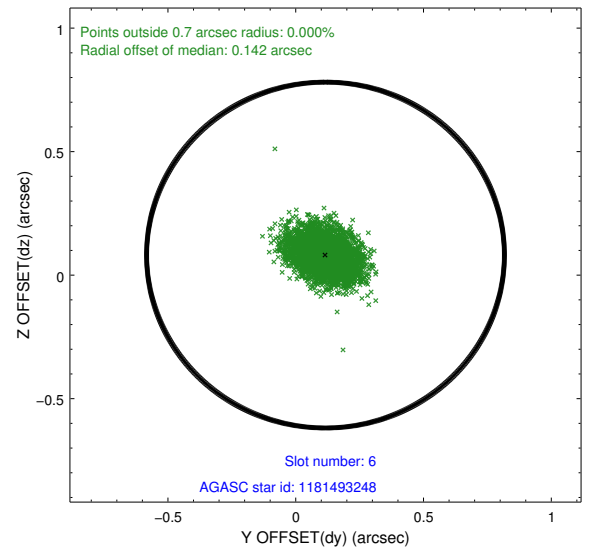
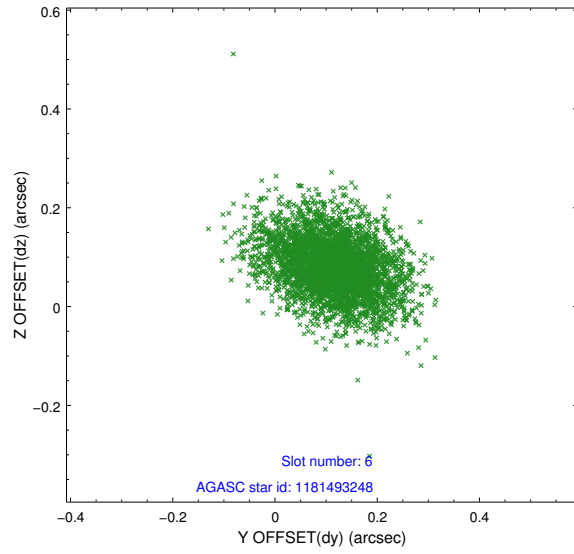
2.4.2 Slot 4



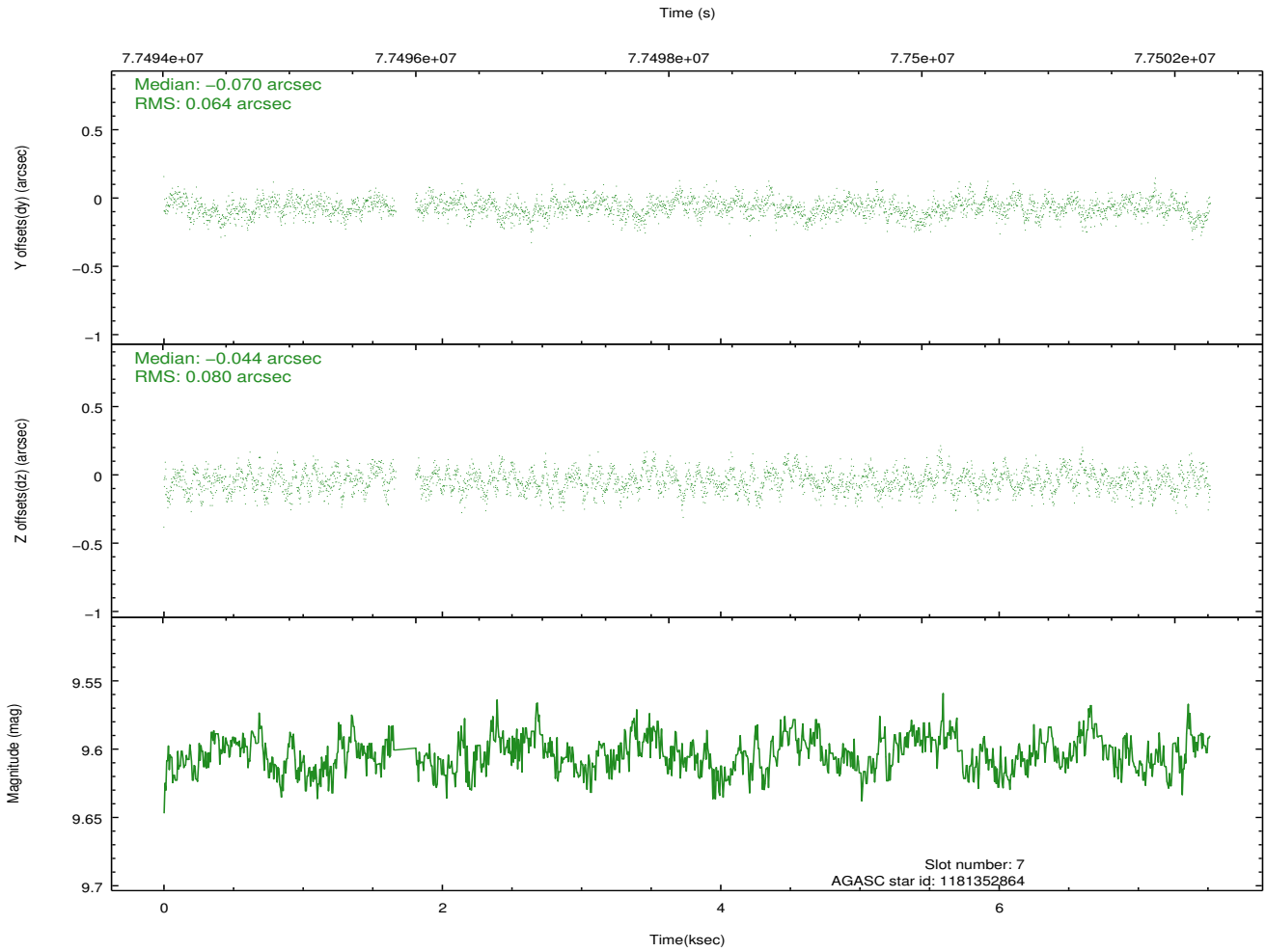
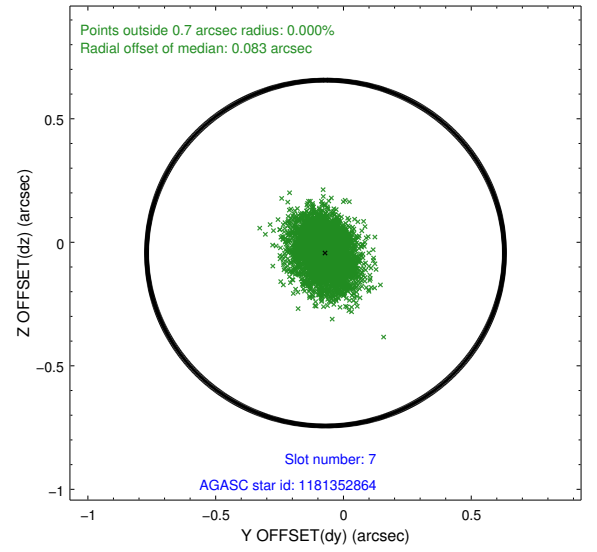
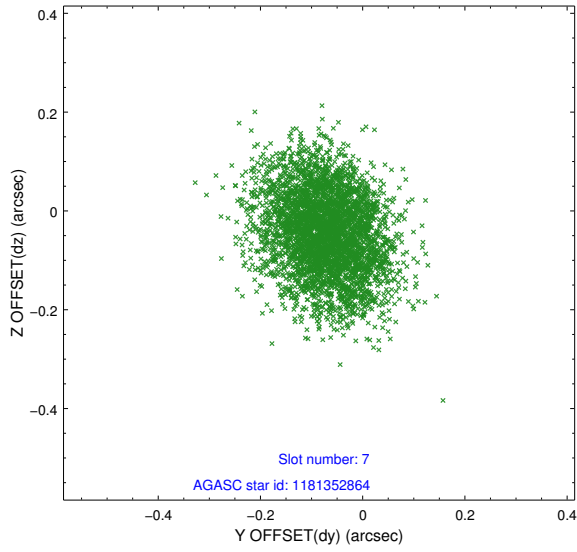
2.4.3 Slot 5



2.4.4 Slot 6

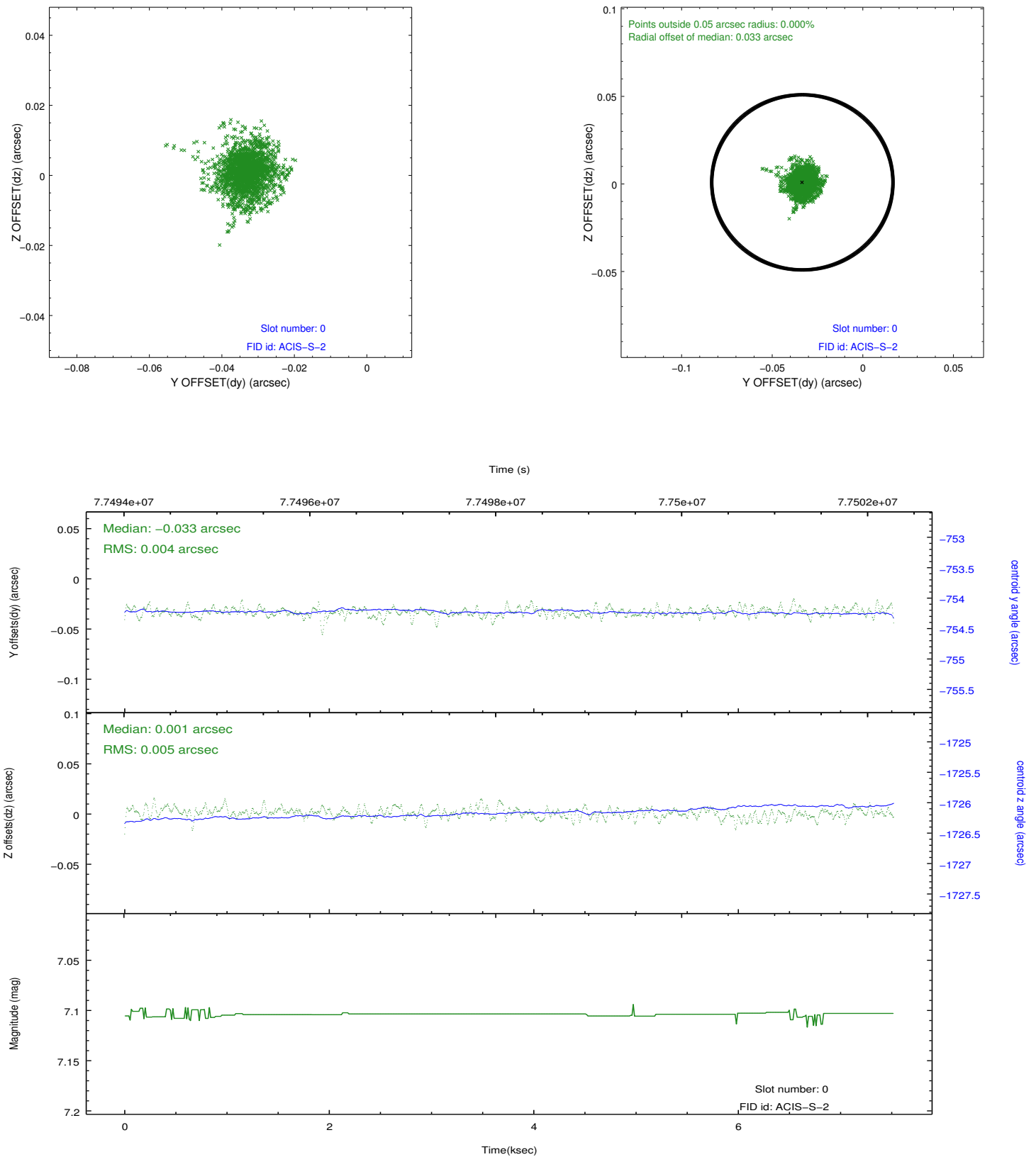


2.4.5 Slot 7

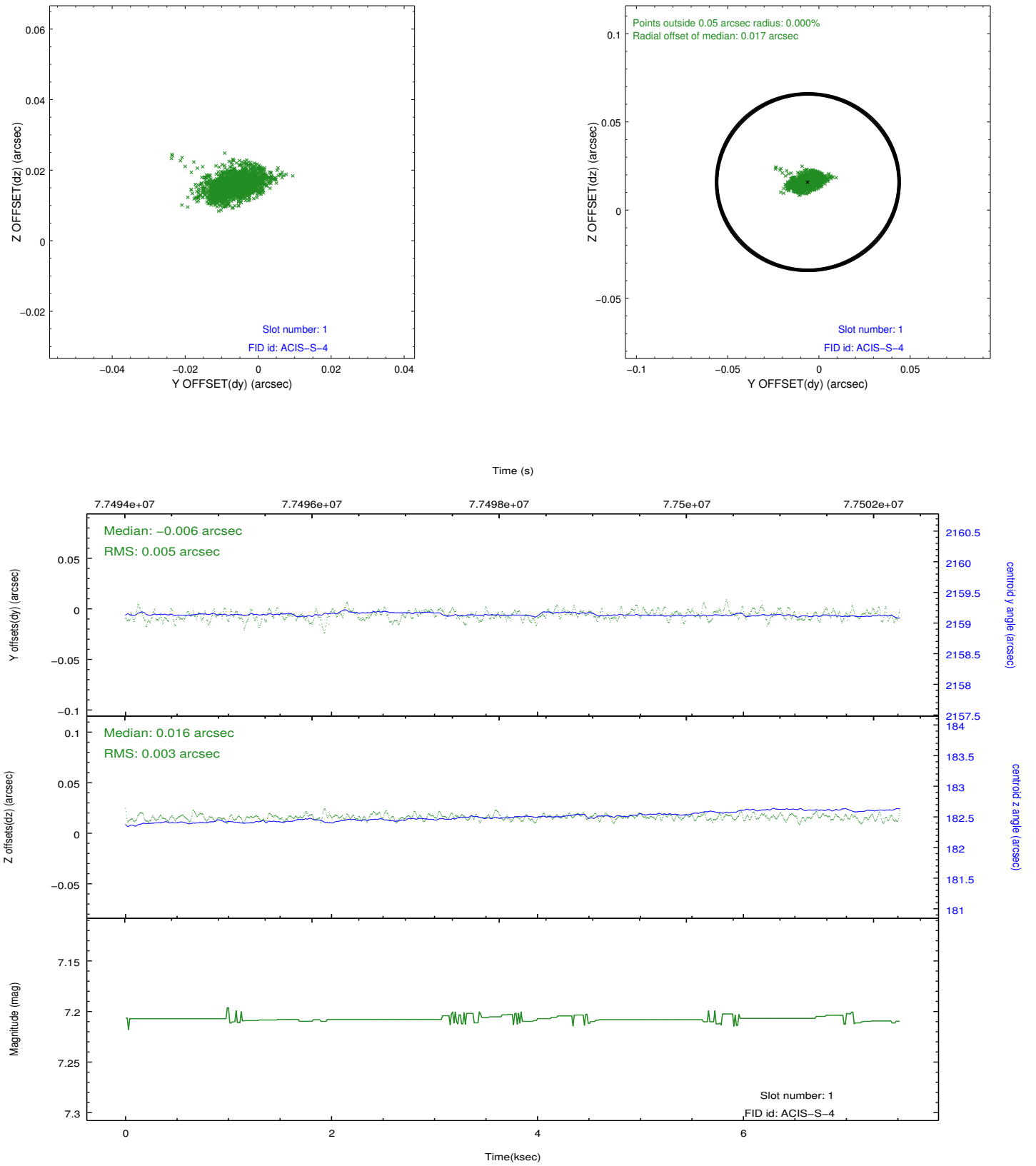


2.5 FID Slots

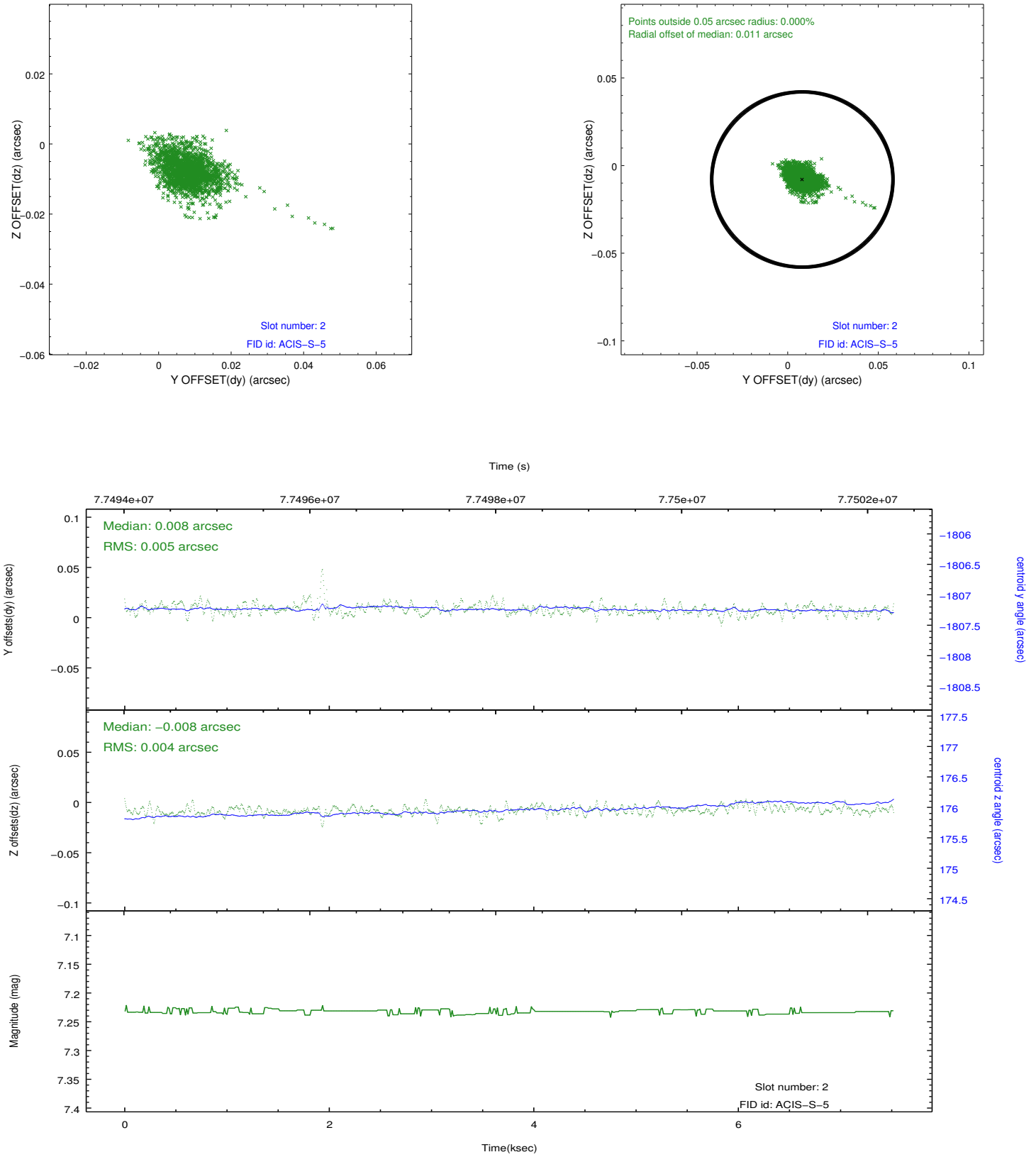
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

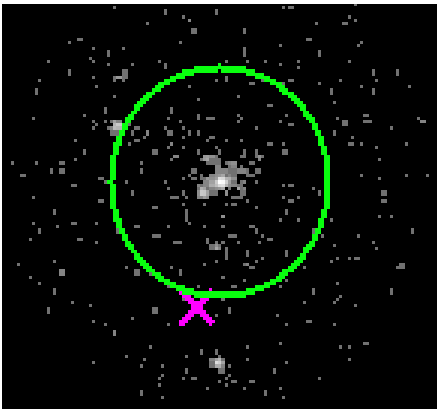


3 Gratings

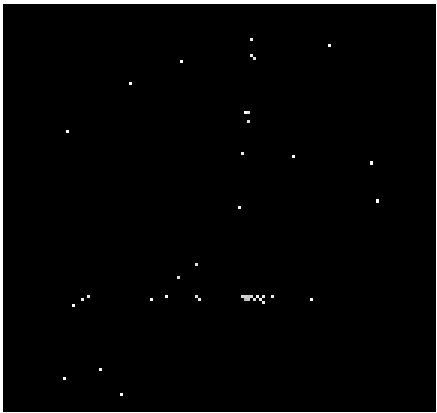
3.1 HEG Arm



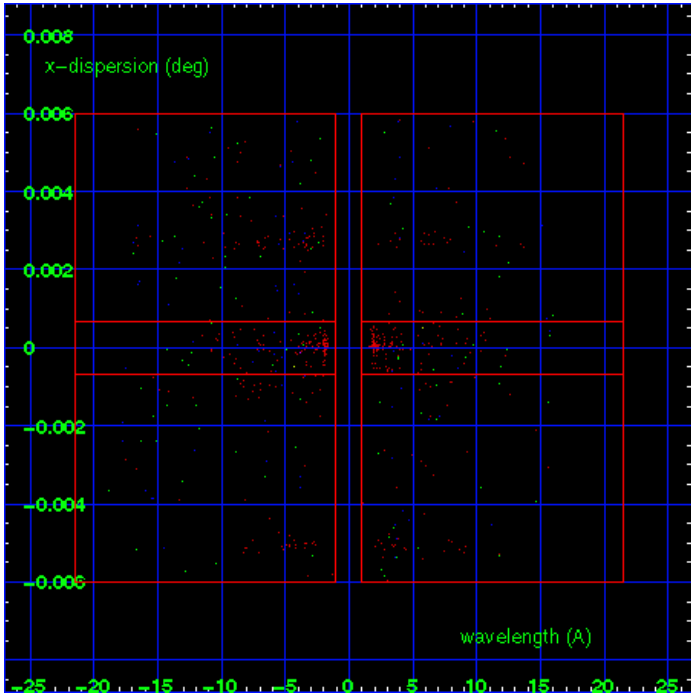
HEG Order Sort 123



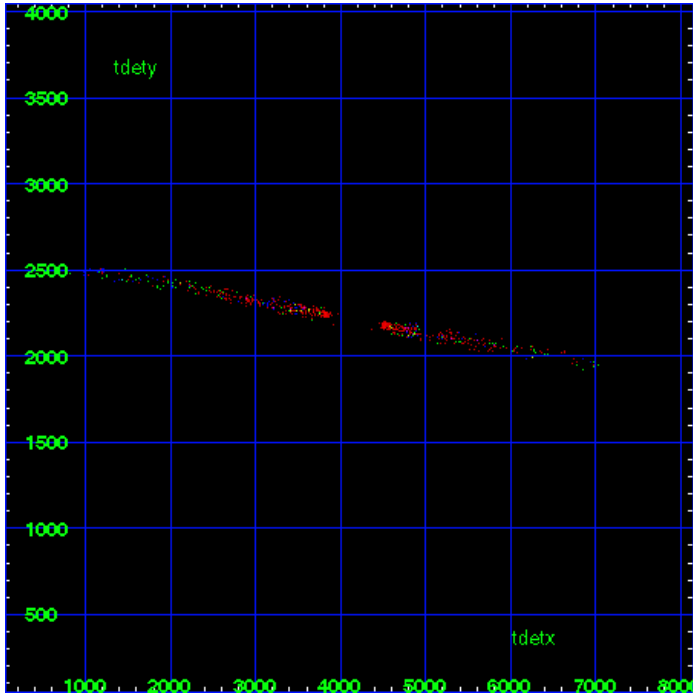
HEG Zero Order



HEG Order Sort ALL

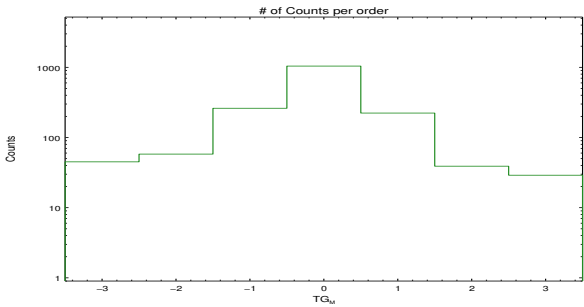


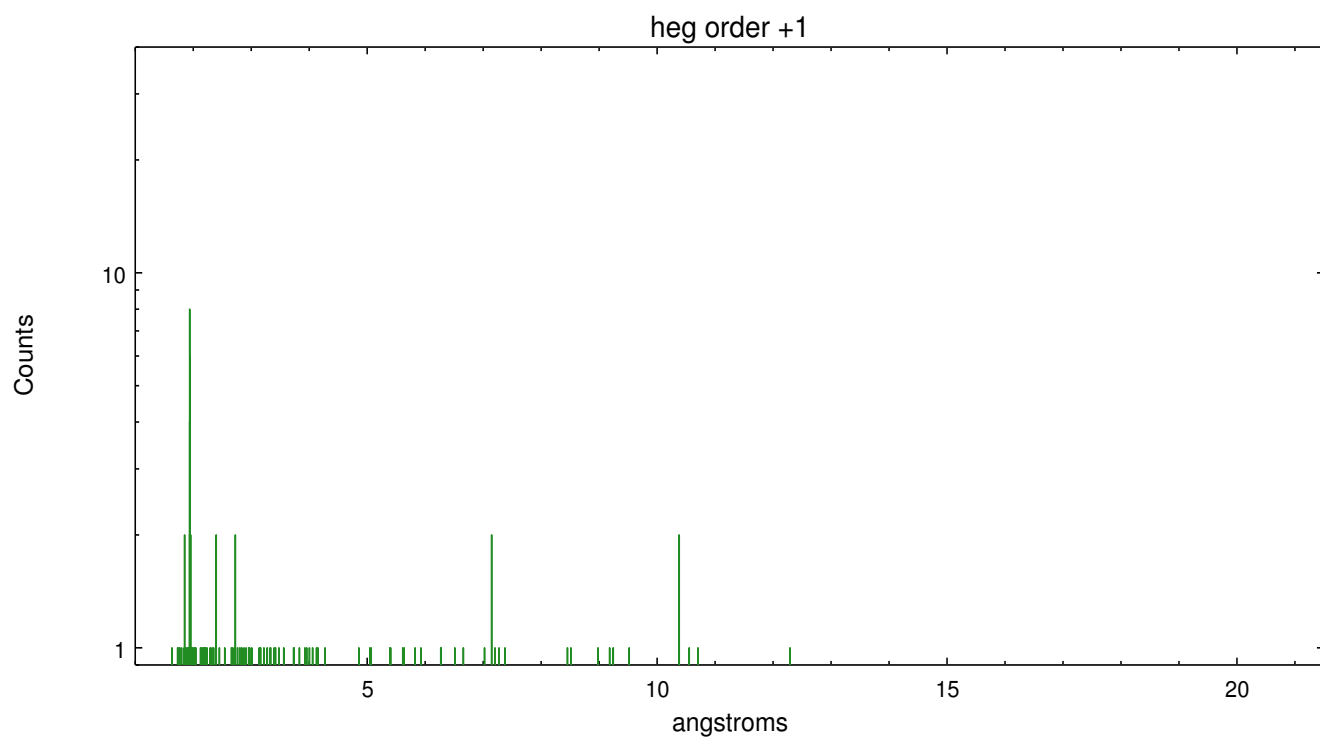
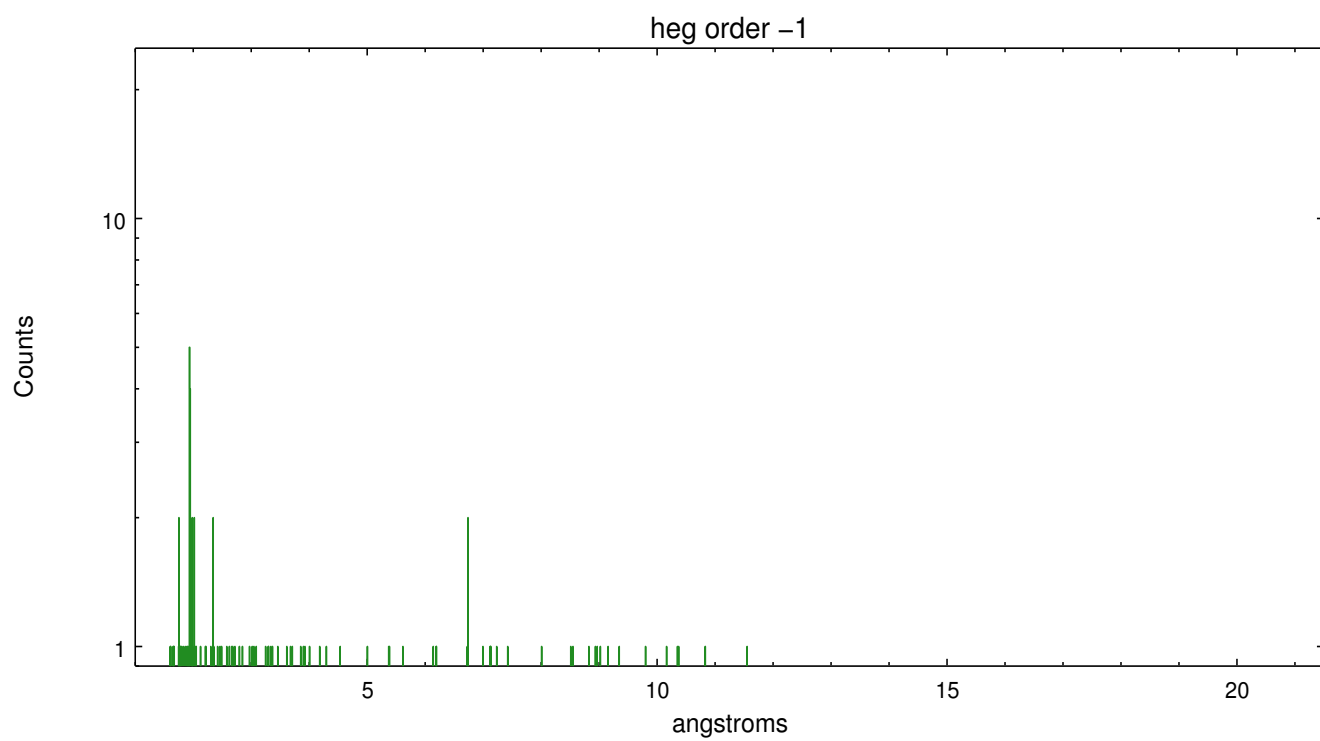
Spot Image HEG



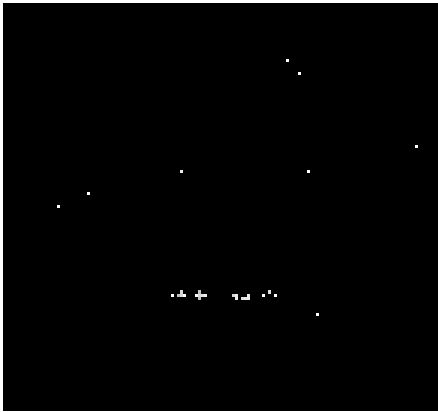
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	45	58	261	1042	223	39	29

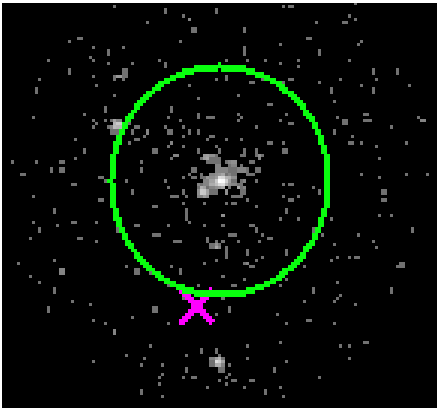




3.2 MEG Arm



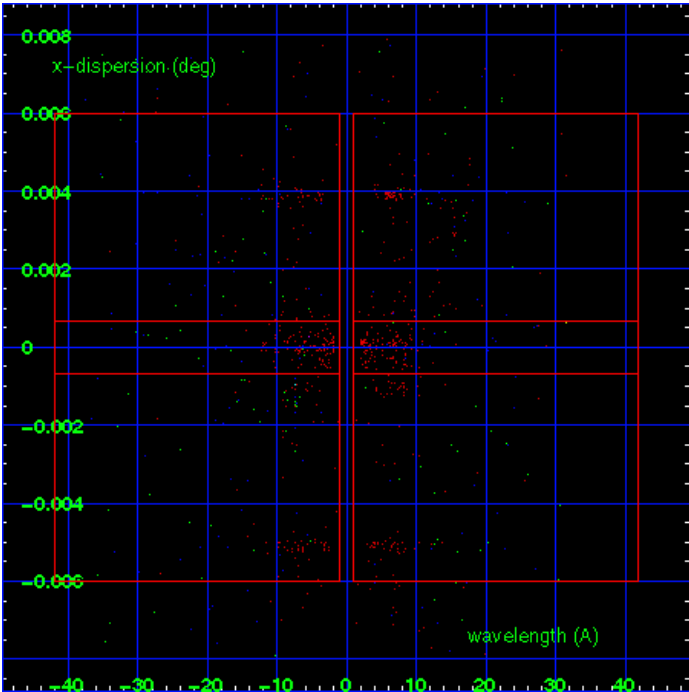
MEG Order Sort 123



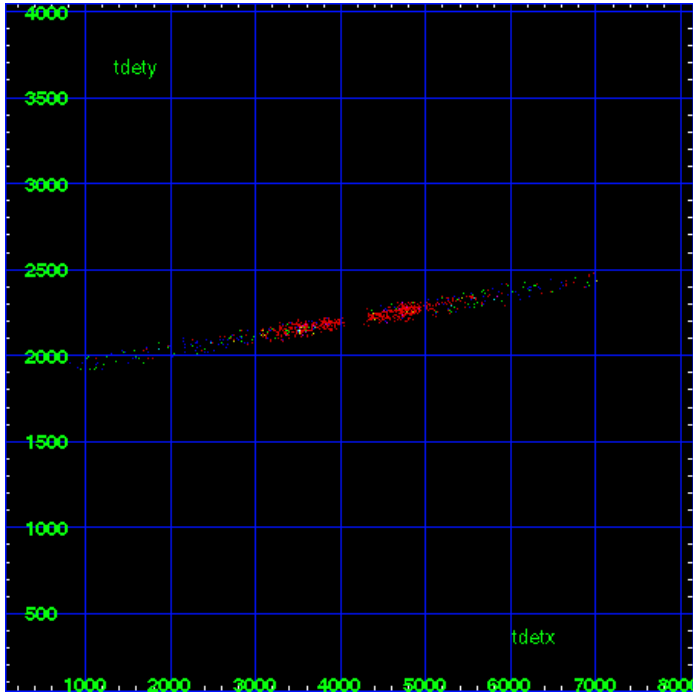
MEG Zero Order



MEG Order Sort ALL

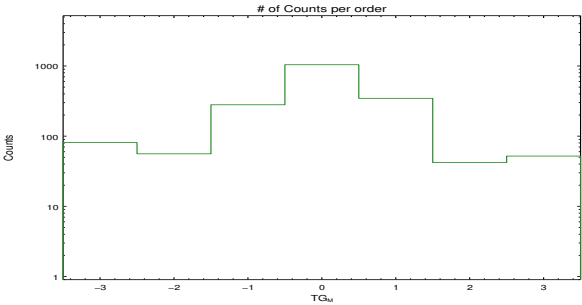


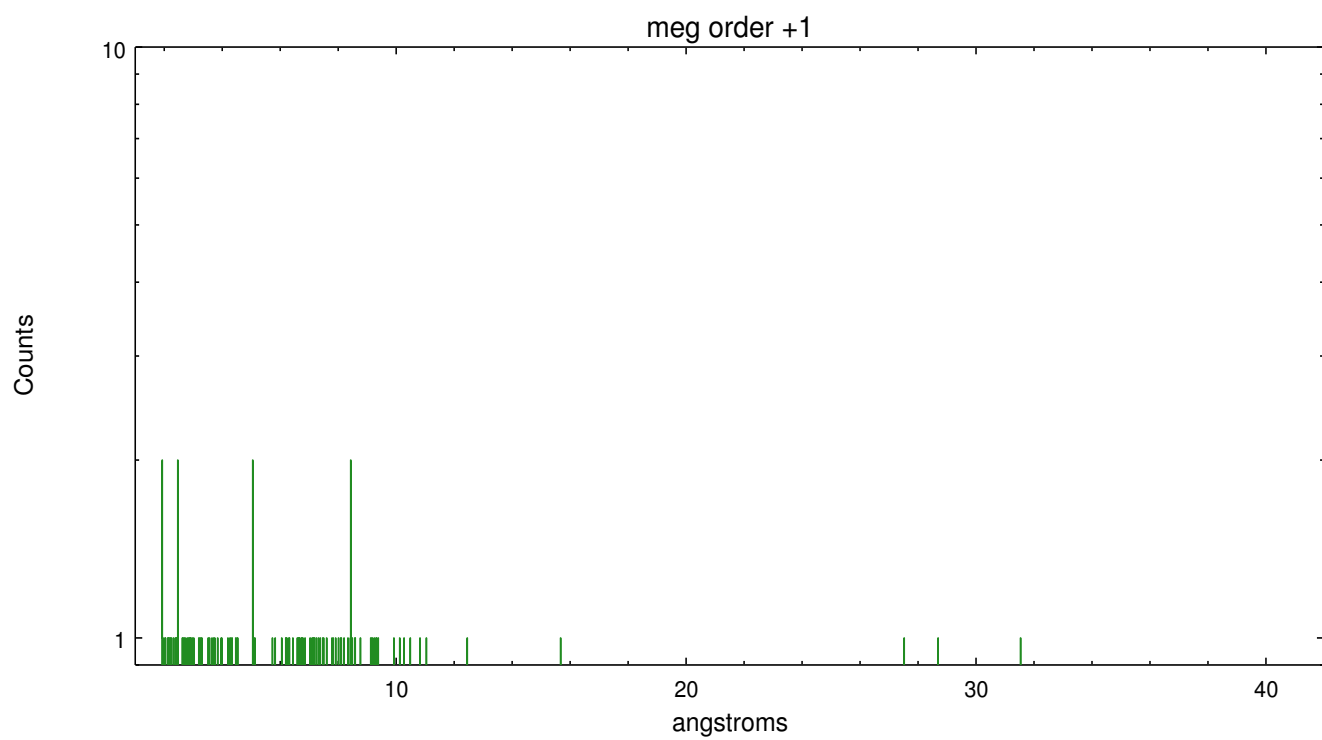
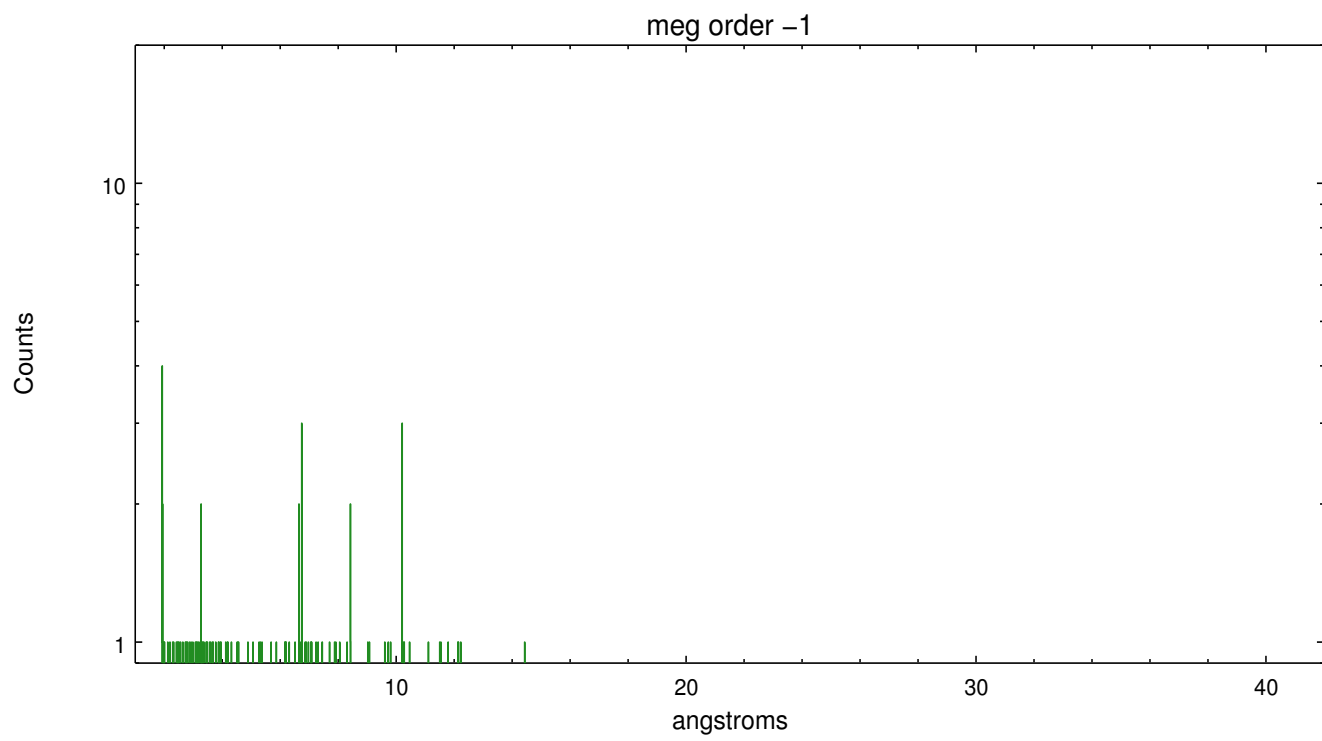
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	81	56	280	1042	346	42	52





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.261

A.2 Comments

HETG grating was not fully inserted during this observation. The obsid was changed to 62877 when an onboard procedure was executed to complete the grating insertion.

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Obsid 374 may not be useful as a gratings observation because the calibration of the dispersed spectral data would not apply to the different physical grating position. There are multiple sources within 5 arcsec of the central source. For grating analysis of X-ray emission within the individual sources, the investigator will need to extract one or more dispersed spectra using user-defined zeroth order positions for all positions of interest. Visually, at least 3 separate dispersed spectra corresponding to 3 separate sources are seen on the level 2 image. These spectra can probably be separated and extracted individually. Some sources may be too close in the cross-dispersion direction to successfully separate.