

V&V Reference Report

L2 ASCDS Version : 7.6.11.10

Observation 62877 - L2 Version 4
Chandra X-Ray Center

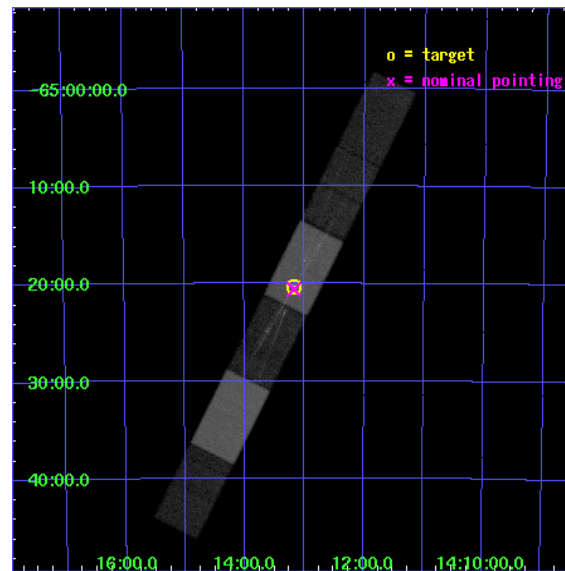
L2 Processing Date : Feb 5 2009

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

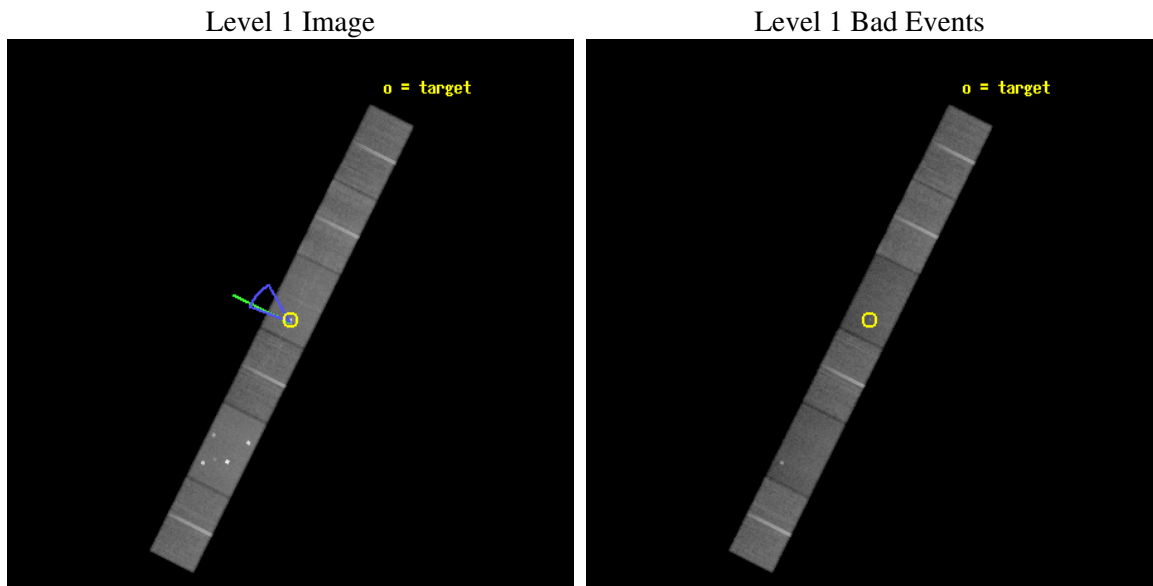
seq_num	700268
obs_id	62877
title	ACIS GRATING SPECTROSCOPY OF SEYFERT GALAXIES
observer	PROFESSOR GORDON GARMIRE
object	CIRCINUS GALAXY
dtcycle	0
cycle	P
ra_targ	213.2925
dec_targ	-65.339056
ra_nom	213.29322488548
dec_nom	-65.34371065638
roll_nom	296.56484233337
revision	4
ontime	61397.699825734
livetime	60220.81307871
ontime4	61397.699825734
ontime5	61397.699825734
ontime6	61396.3976648
ontime7	61397.699825734
ontime8	61395.558855504
ontime9	61397.699825734
l2events	356095



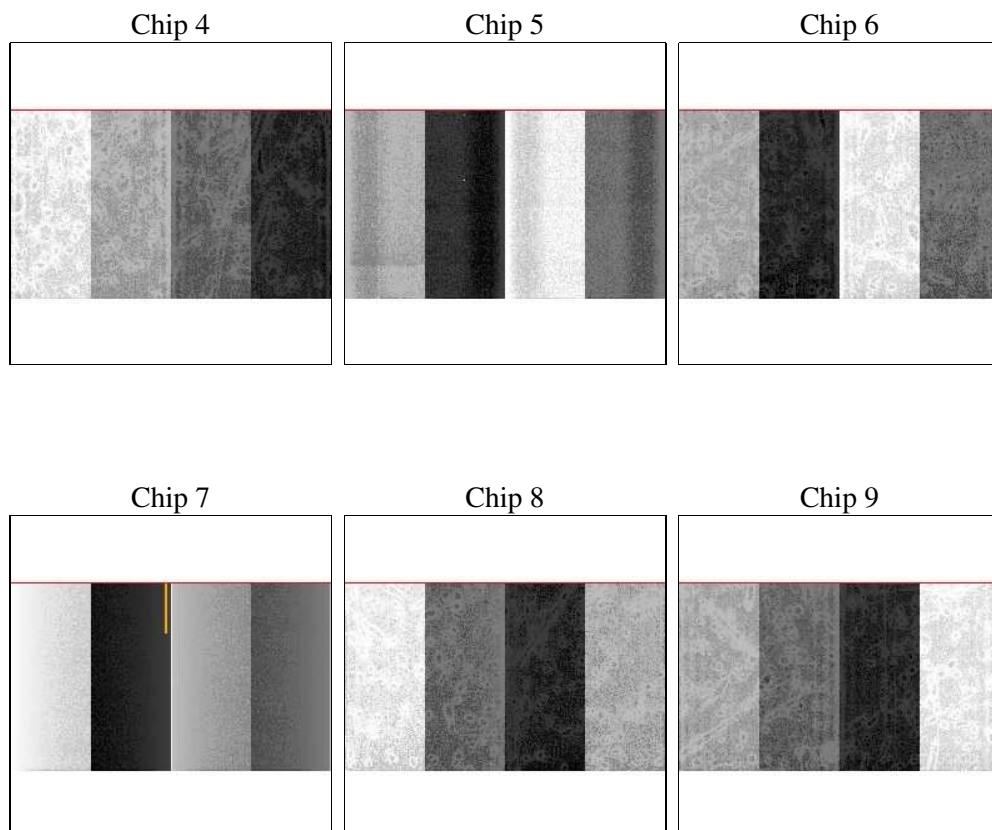
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.11.10
caldsver	3.5.1
date	2009-02-05T15:51:09
revision	4

sched_exp_time	70000.000000
ontime	61397.699825734
ontime4	61397.699825734
ontime5	61397.699825734
ontime6	61396.3976648
ontime7	61397.699825734
ontime8	61395.558855504
ontime9	61397.699825734
l1events	1720321

2.1.4 Events

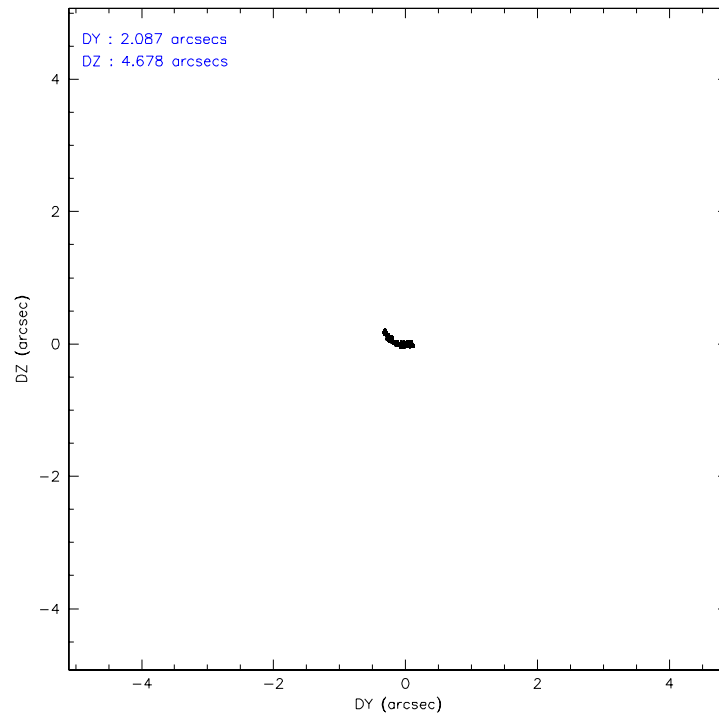
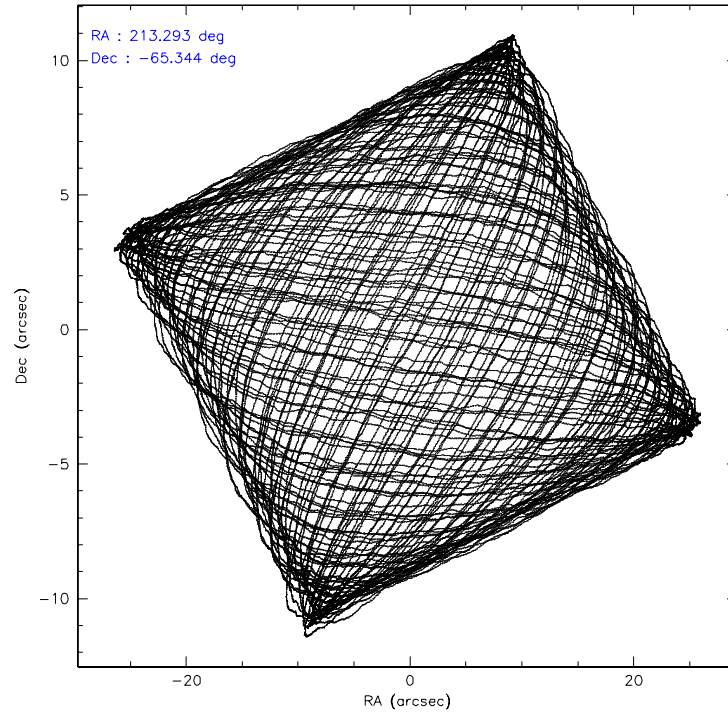
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	274776	350192	248709	289950	310882	245812
rejected events	247289	162334	218035	157240	251702	218850
rejected %	89%	46%	87%	54%	80%	89%

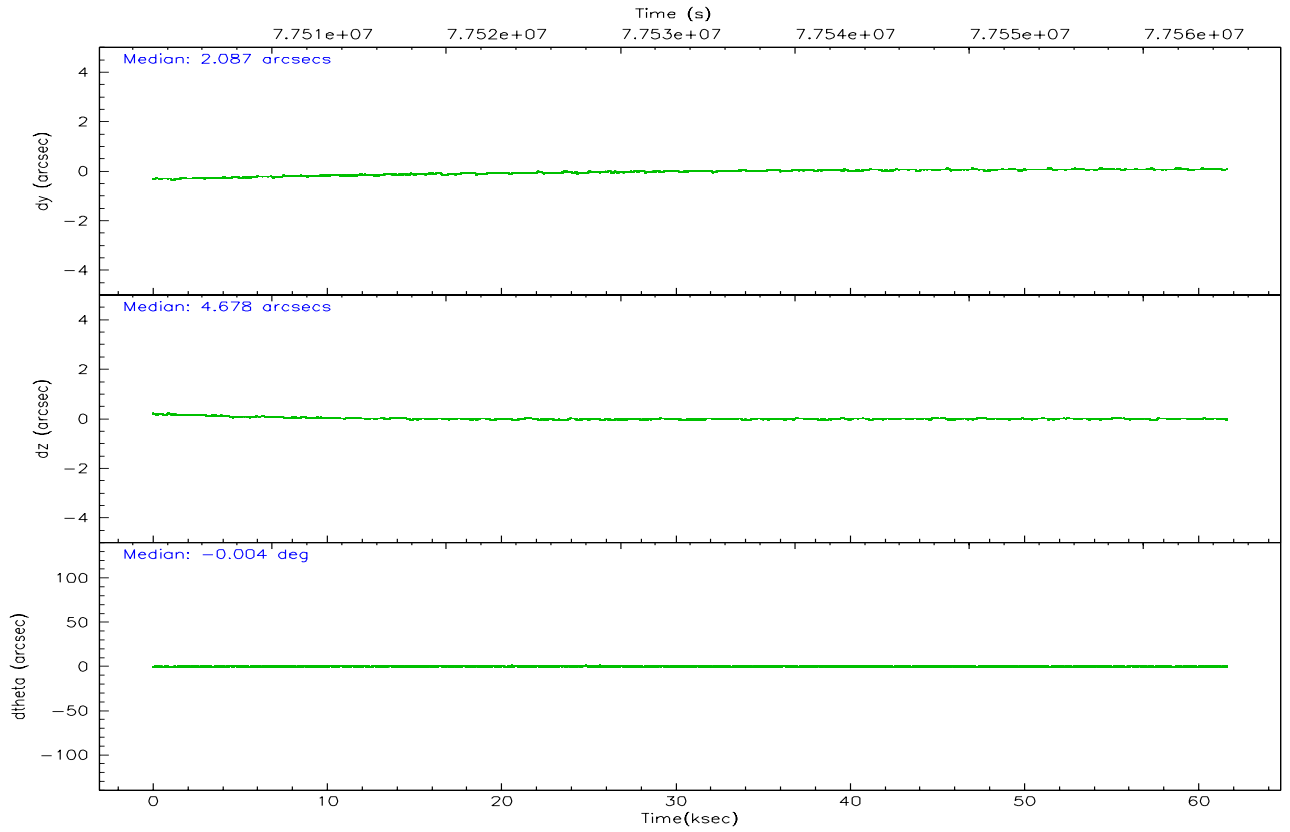
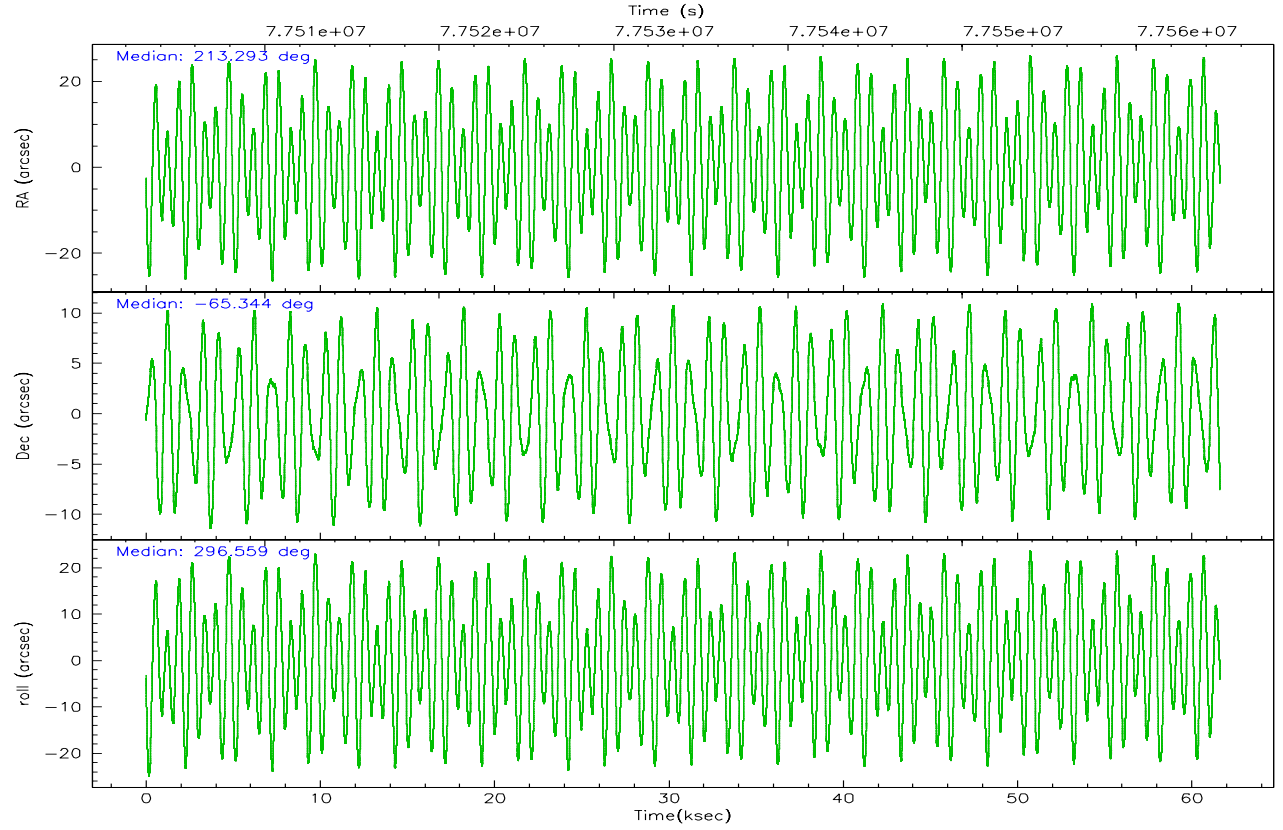
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	10904	56840	13362	14832	18723	10725
	3%	16%	5%	5%	6%	4%
grade 1 events	82	391	77	293	126	71
	0%	0%	0%	0%	0%	0%
grade 2 events	6110	46845	5493	27388	12055	5002
	2%	13%	2%	9%	3%	2%
grade 3 events	2902	7231	3262	13390	6770	3100
	1%	2%	1%	4%	2%	1%
grade 4 events	2909	6849	3286	13045	6385	3105
	1%	1%	1%	4%	2%	1%
grade 5 events	7528	24830	8571	26766	11091	9070
	2%	7%	3%	9%	3%	3%
grade 6 events	4675	70200	5289	64145	15302	5044
	1%	20%	2%	22%	4%	2%
grade 7 events	239666	137006	209369	130091	240430	209695
	87%	39%	84%	44%	77%	85%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	OVERRIDE	OVERRIDE
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	213.293224885475	213.293224885475	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-65.34371065637998	-65.34371065637998	Subarray start row	212	212
Pointing Roll	296.564842333373	296.564842333373	Subarray row count	600	600
Roll angle	310	310	Alternating exposures requested	N	N
Roll tolerance	20.000000	20.000000	Primary exposure time	2.1	2.1
Roll constraint allows 180D rotation	N	N			
SIM focus pos (mm)	-0.68282252473119	-0.68282252473119			
SIM defocus (mm)	0.001444942264670734	0.001444942264670734			
SIM translation stage pos (mm)	-190.1400660499	-190.1400660499			
SIM translation stage offset (mm)	0.007542945932812017	0.007542945932812017			
Observation start time	77503172.341777	77503172.341777			
Observation start date	2000-06-15T22:19:00	2000-06-16T00:39:32			
Observation end time	77564805.594046	77564805.594046			
Observation end date	2000-06-16T17:45:40	2000-06-16T17:46:45			
Read mode	TIMED	TIMED			

2.3 Aspect



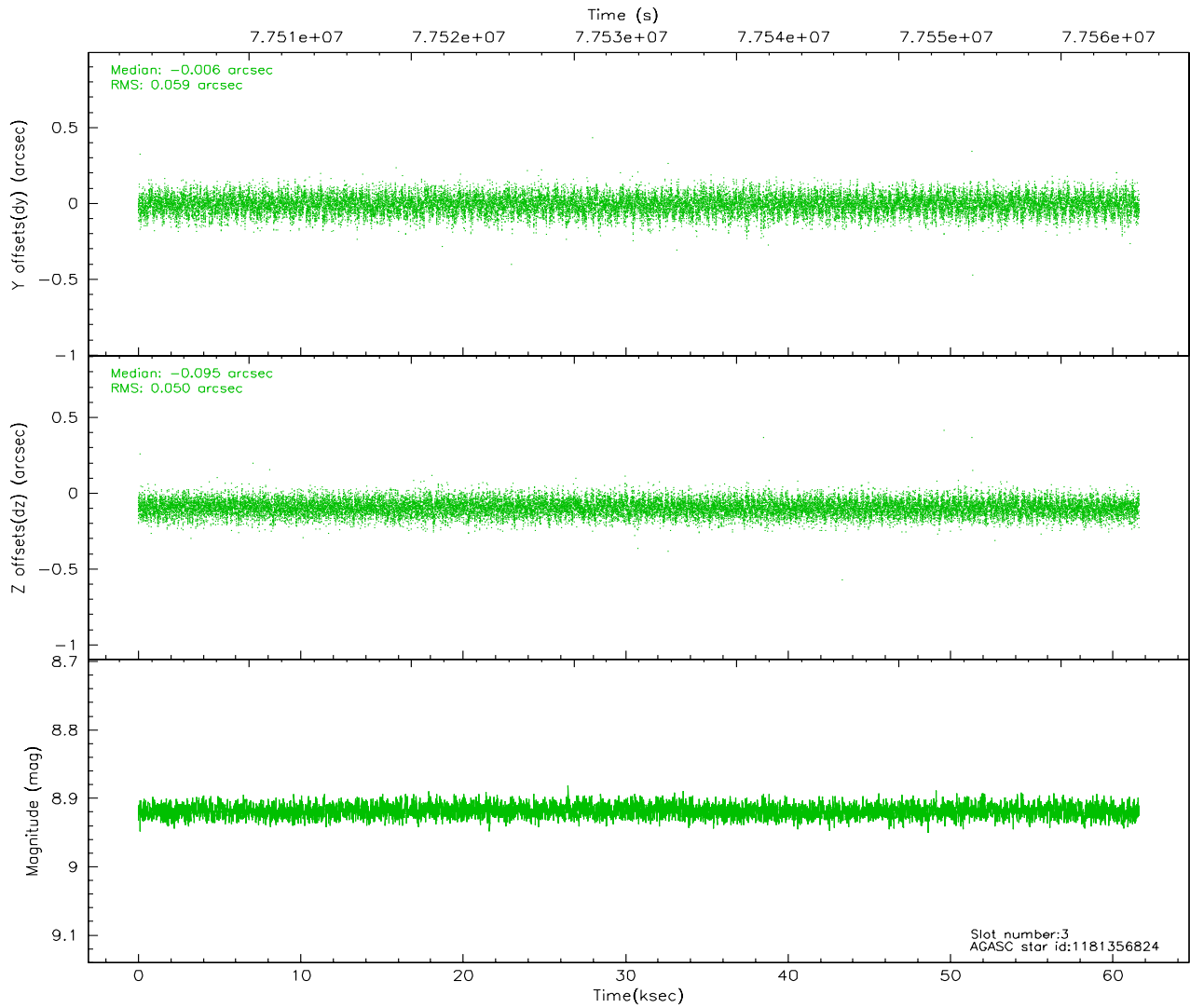
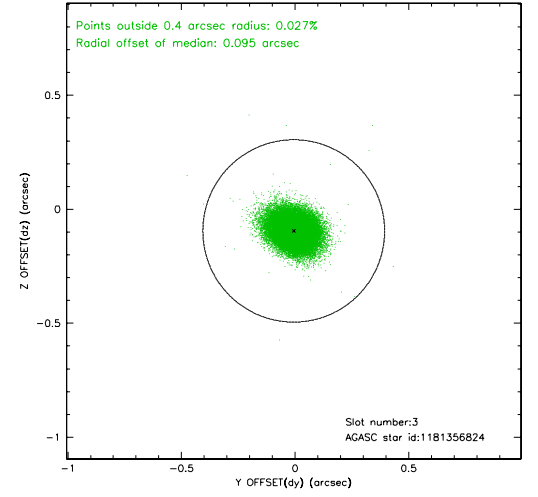
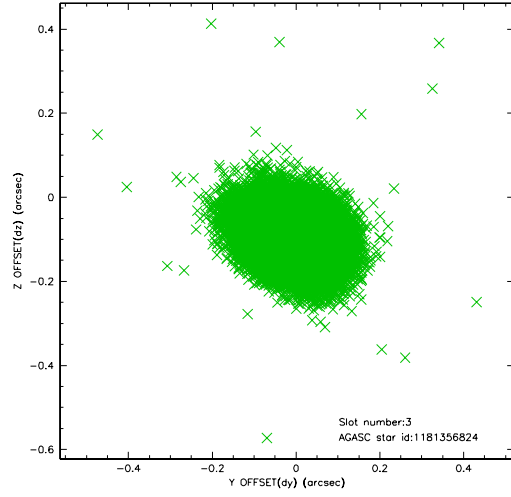


Slot Statistics

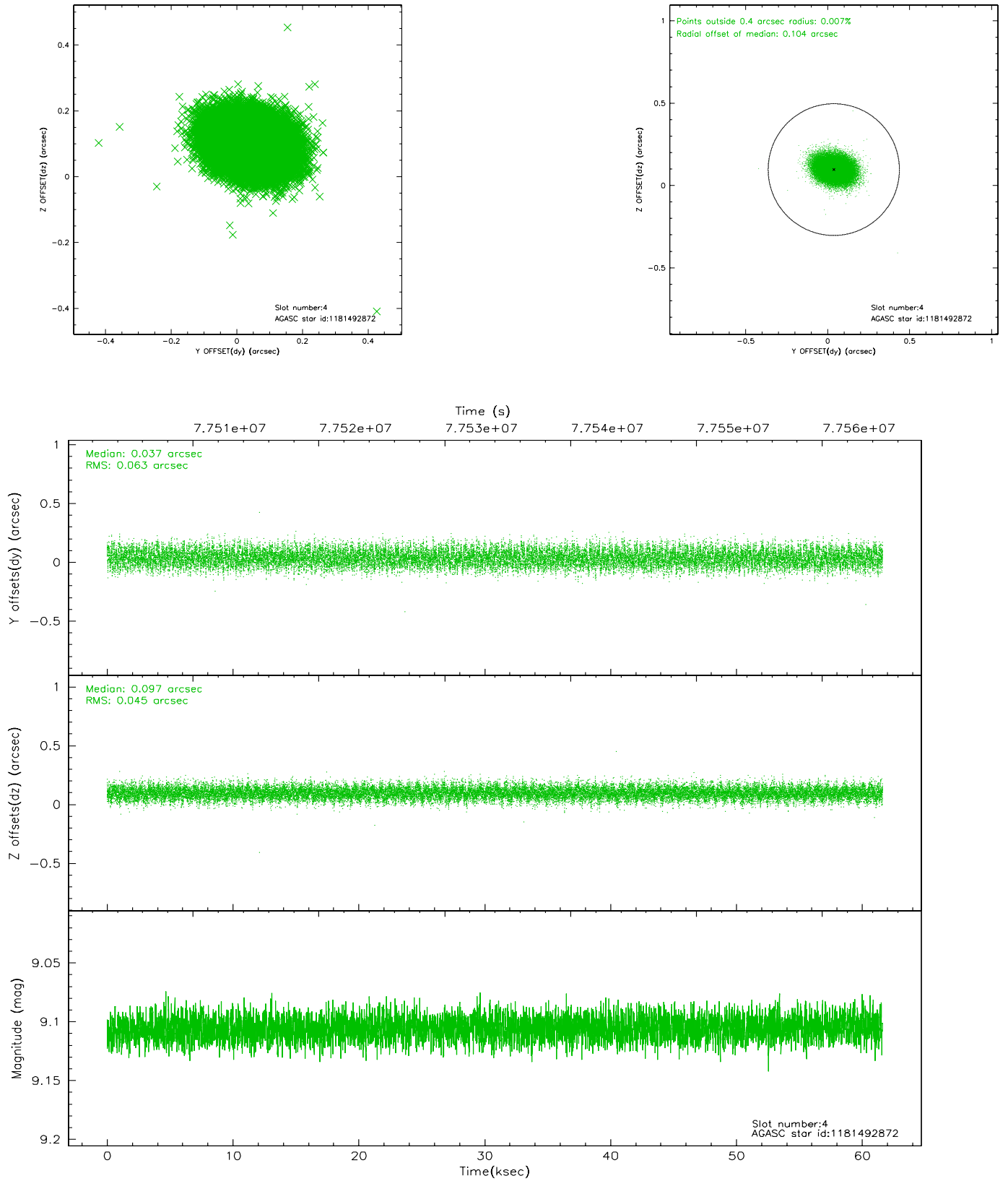
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	15030	-0.025	-0.009	0.007	0.011	0.000000	0.000000	-754.69	-1725.80
1	FID	ACIS-S-4	7.21	15030	-0.006	0.014	0.005	0.010	0.000000	0.000000	2158.63	182.75
2	FID	ACIS-S-5	7.24	15030	0.000	0.004	0.007	0.011	0.000000	0.000000	-1807.56	176.36
3	GUIDE	1181356824	8.92	30051	-0.006	-0.095	0.082	0.132	213.100076	-64.682630	-2177.78	842.46
4	GUIDE	1181492872	9.11	30045	0.037	0.097	0.083	0.133	214.965330	-65.517798	1785.88	1991.61
5	GUIDE	1181356256	9.36	30051	-0.090	-0.025	0.090	0.145	211.557959	-65.462249	-653.67	-2478.26
6	GUIDE	1181493248	9.60	30041	0.121	0.072	0.097	0.160	214.599761	-65.623973	1870.74	1331.80
7	GUIDE	1181352864	9.61	30048	-0.063	-0.044	0.105	0.171	211.568687	-65.298573	-1181.67	-2216.26

2.4 Star Slots

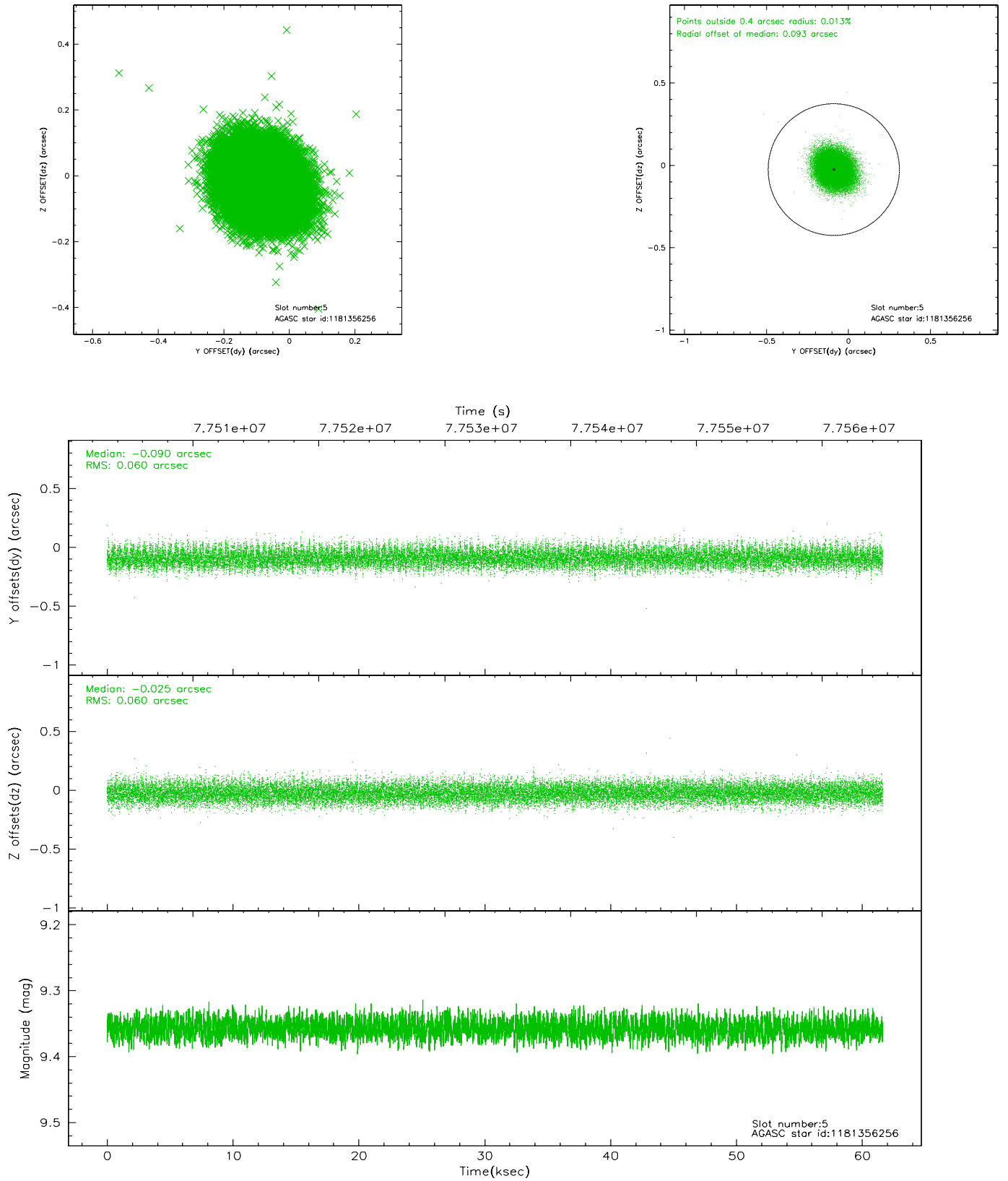
2.4.1 Slot 3



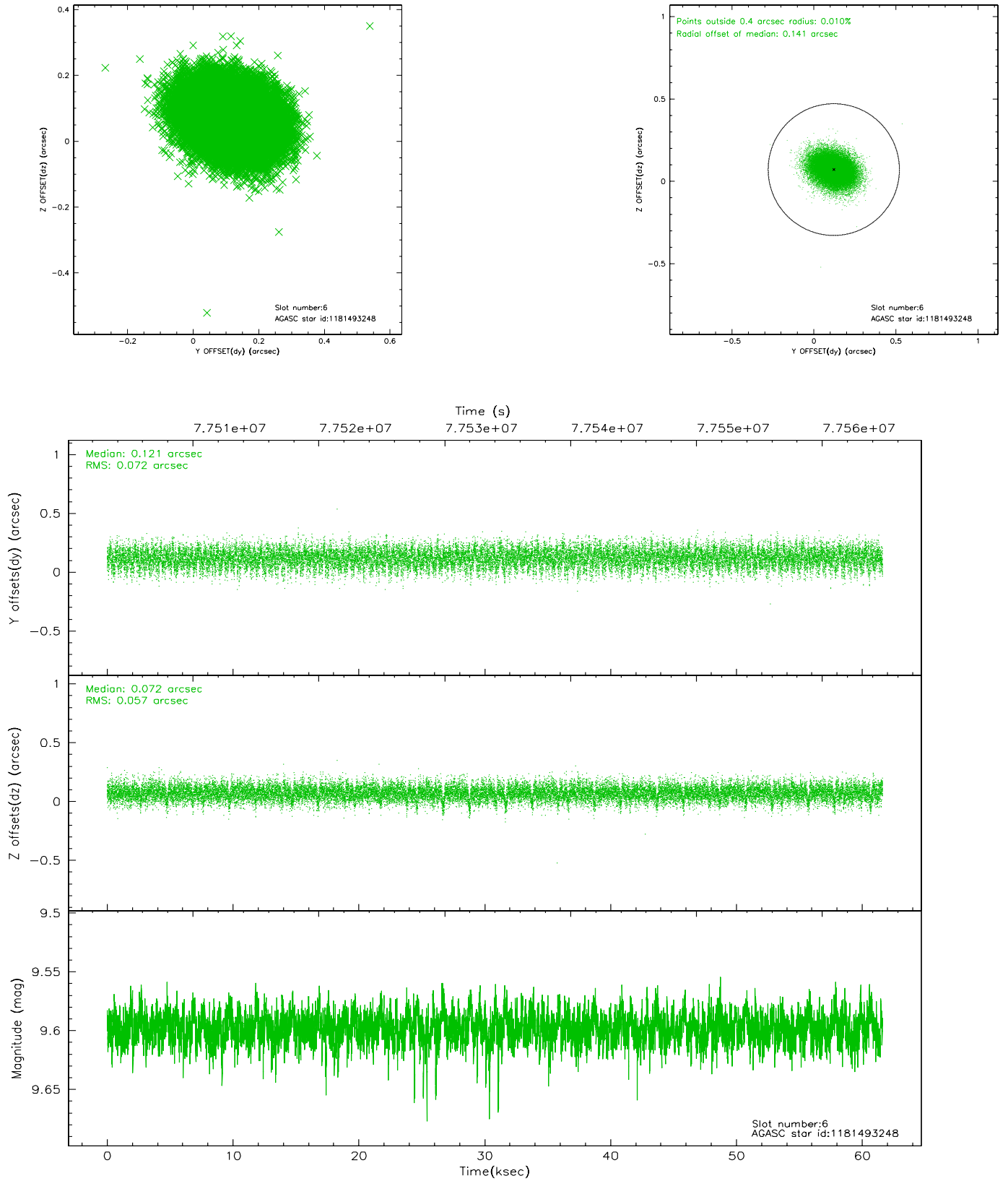
2.4.2 Slot 4



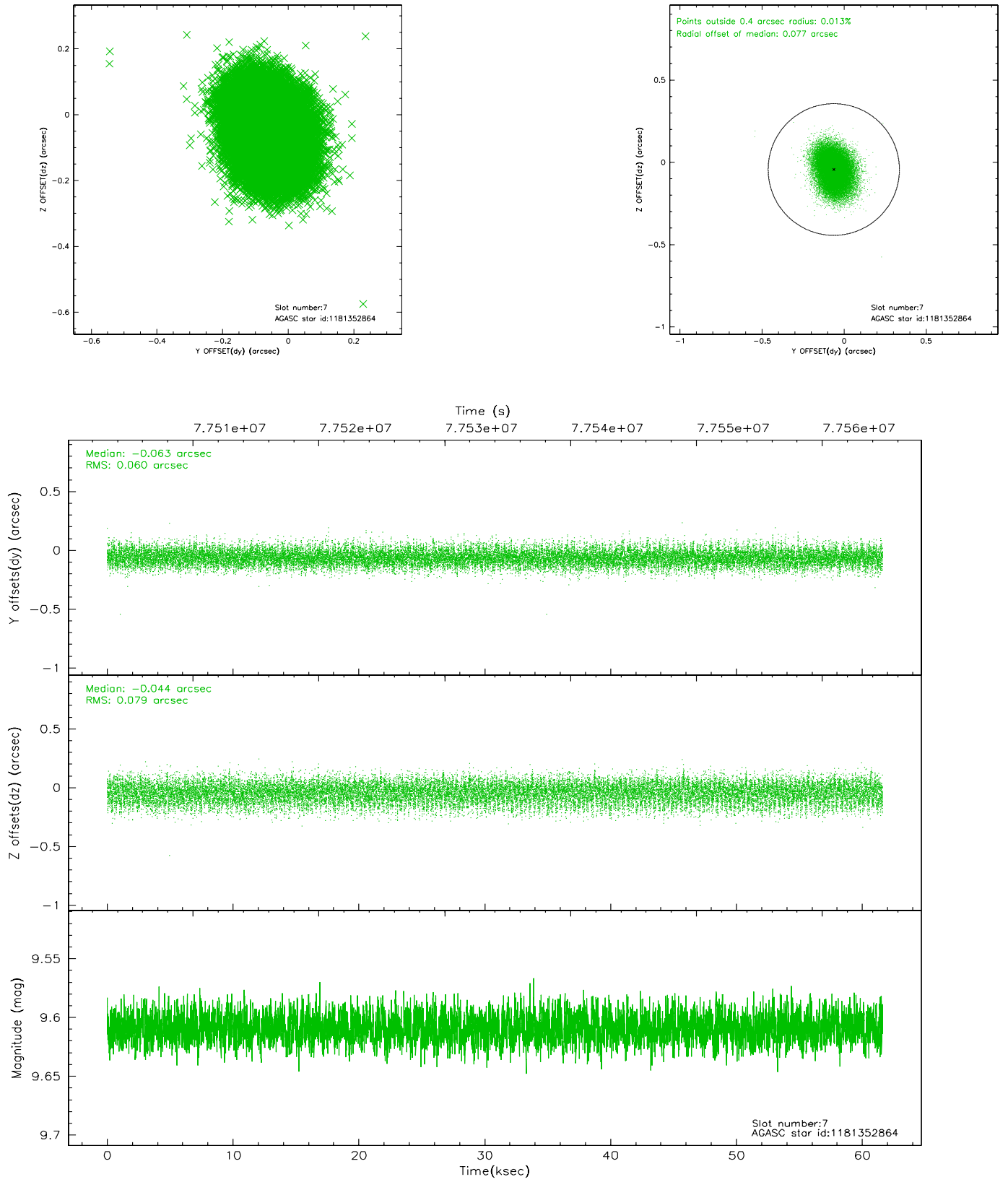
2.4.3 Slot 5



2.4.4 Slot 6

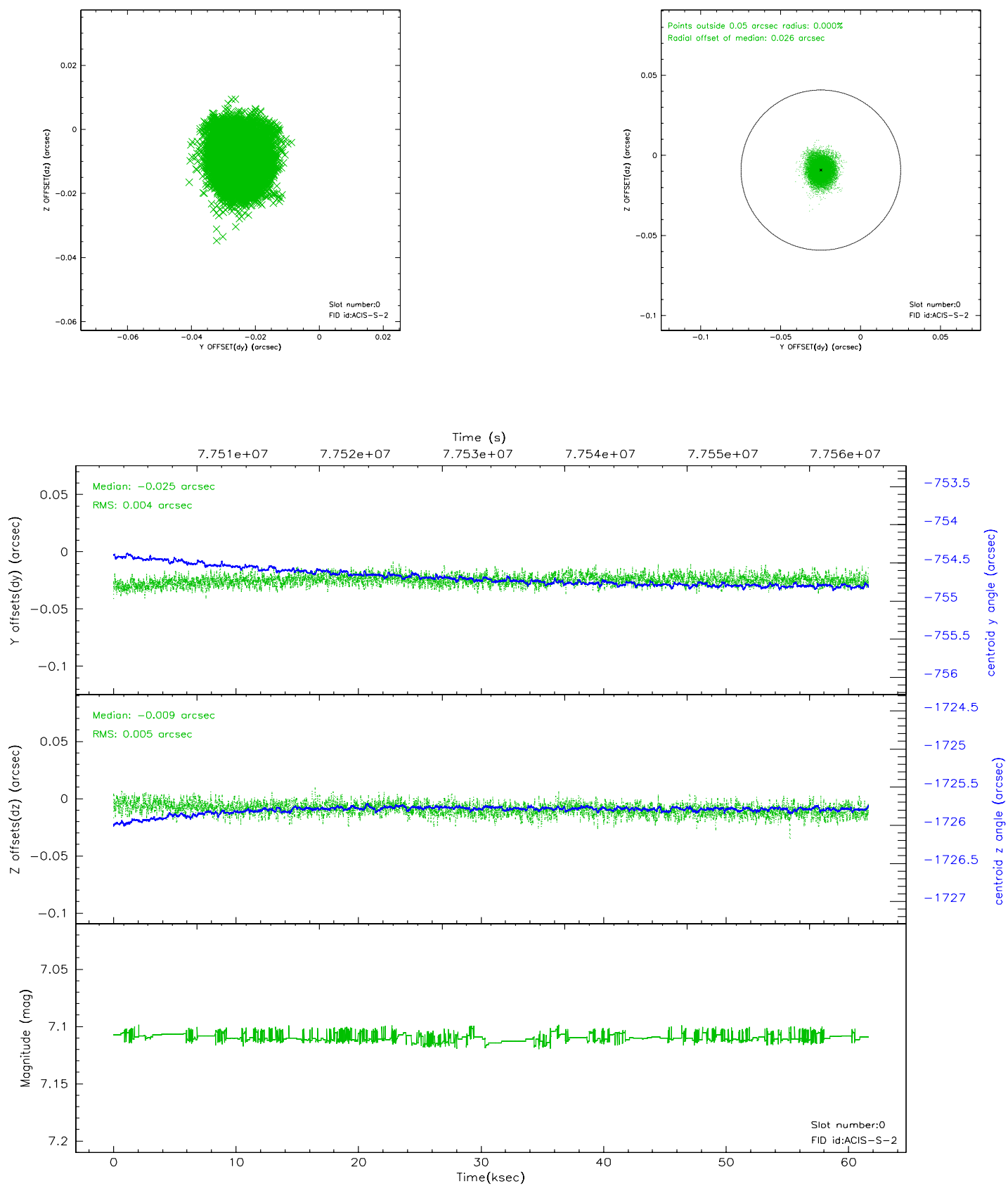


2.4.5 Slot 7

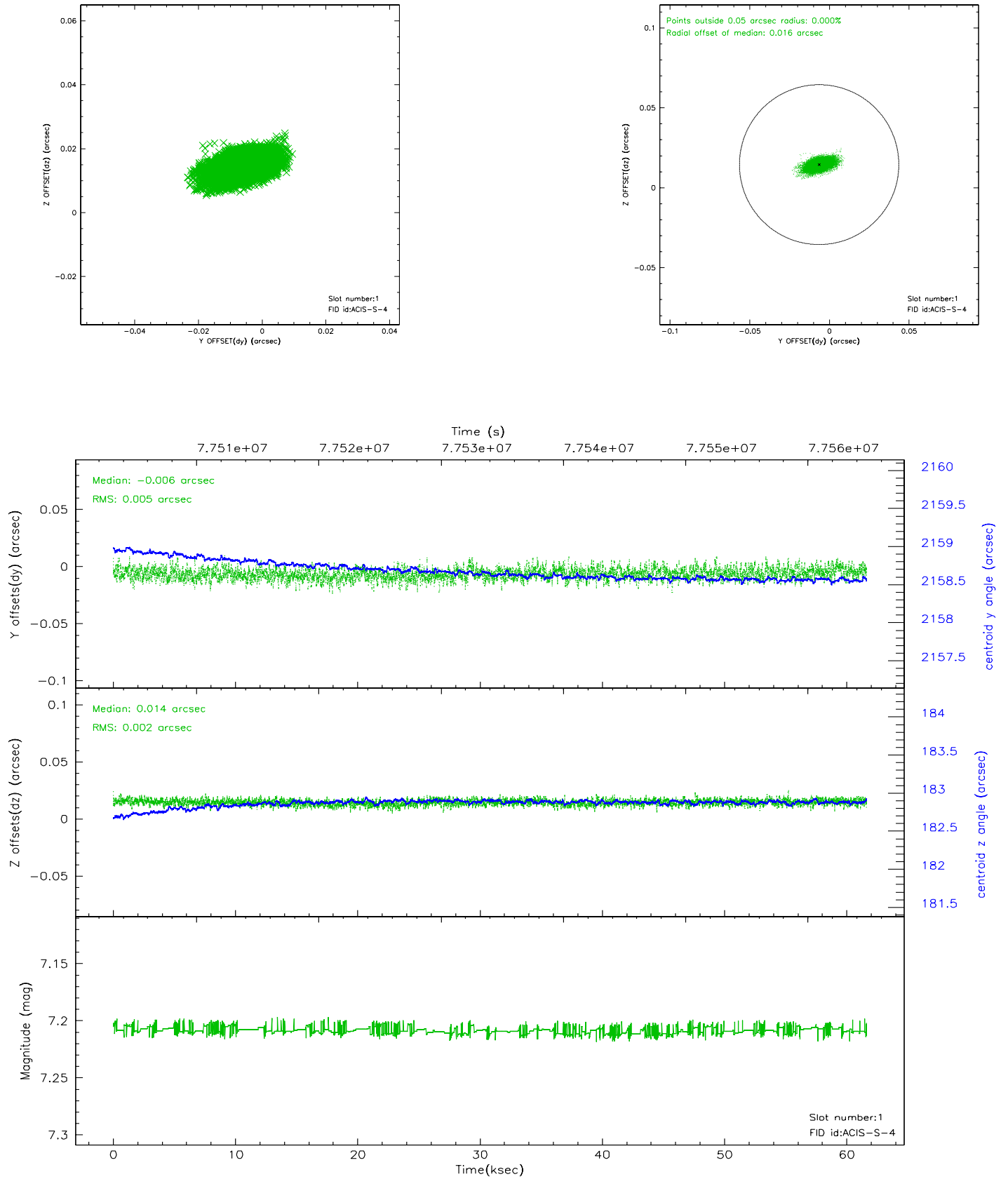


2.5 FID Slots

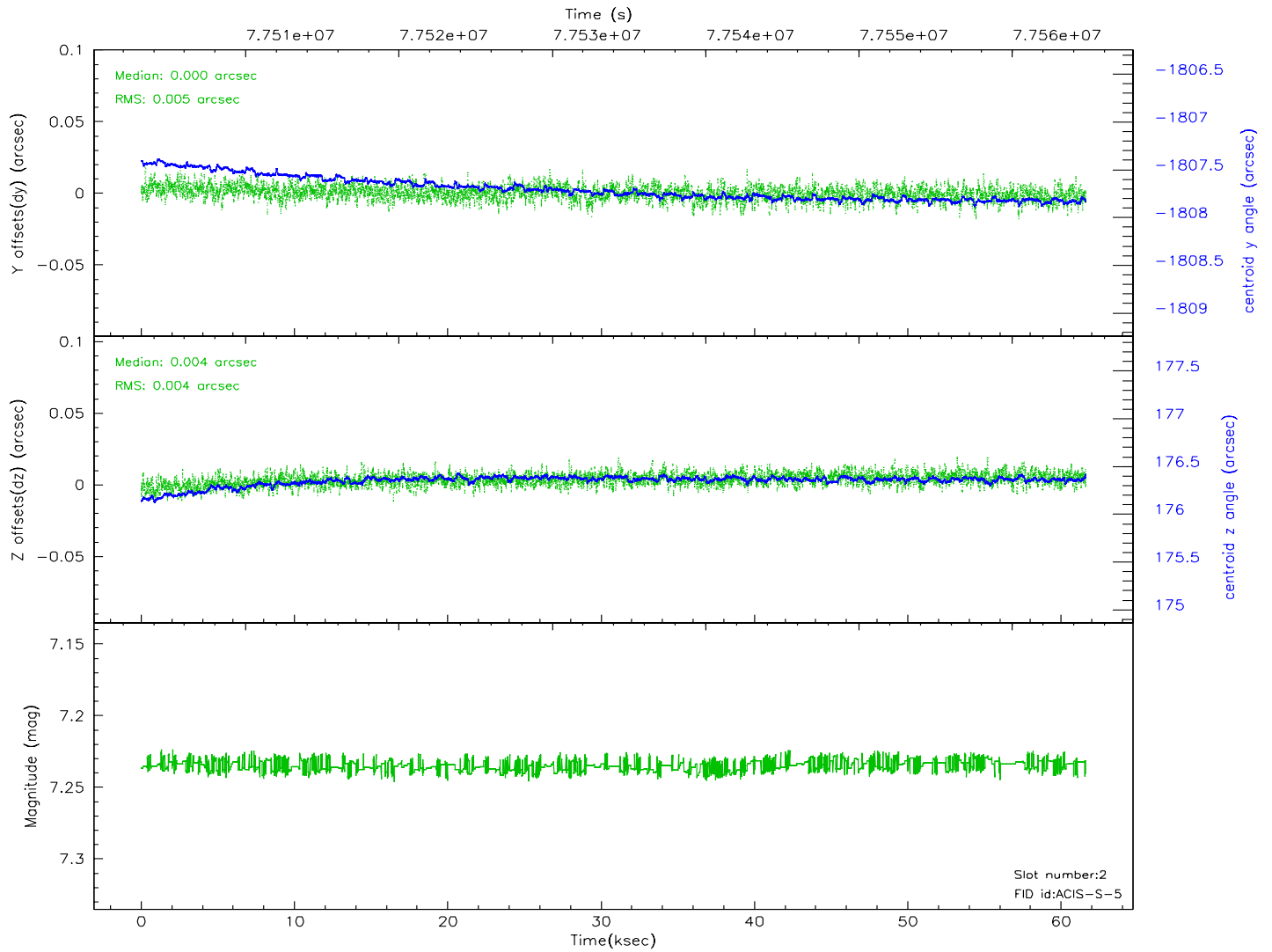
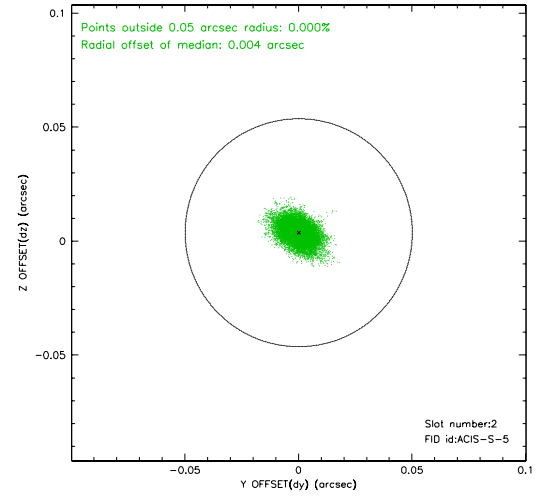
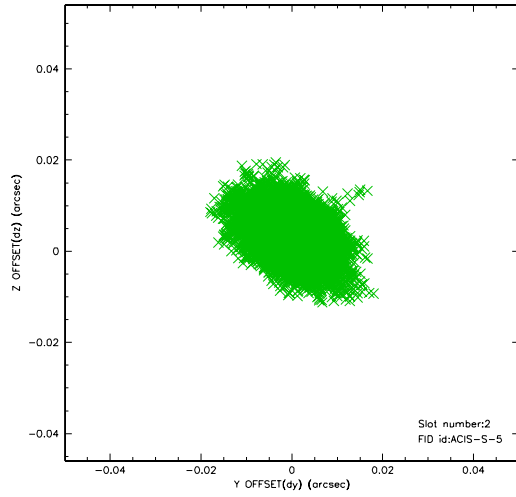
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

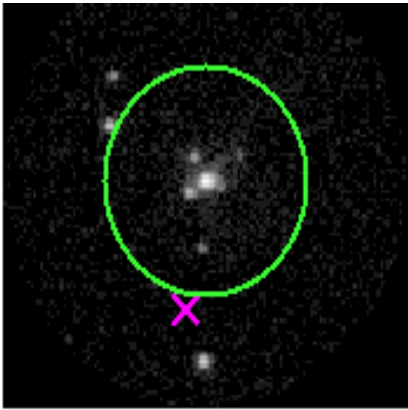


3 Gratings

3.1 HEG Arm



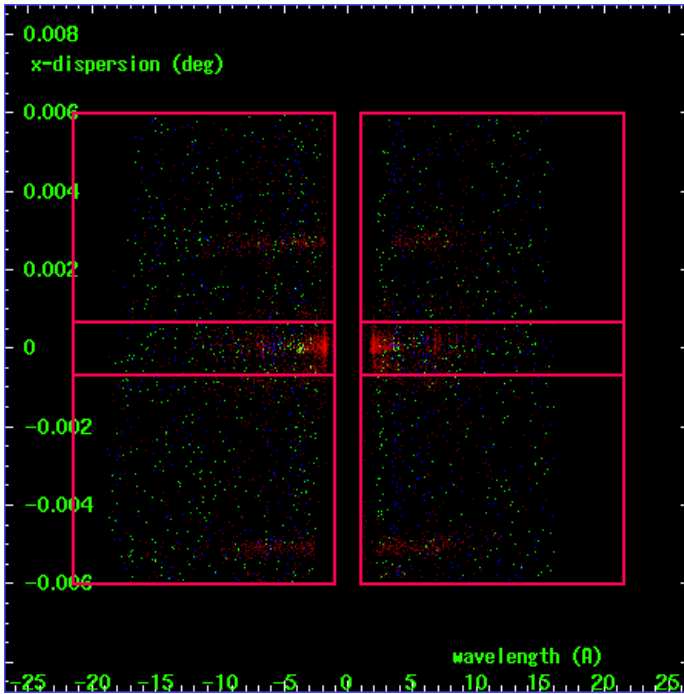
HEG Order Sort 123



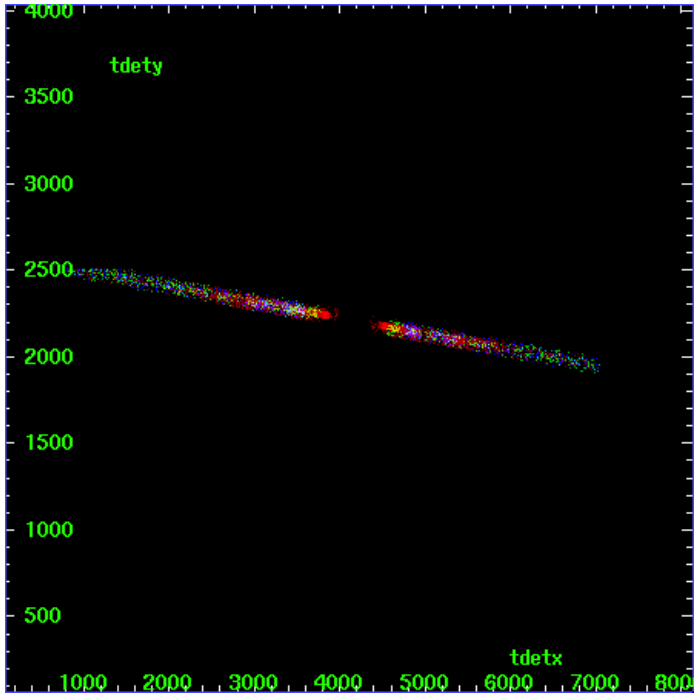
HEG Zero Order



HEG Order Sort ALL

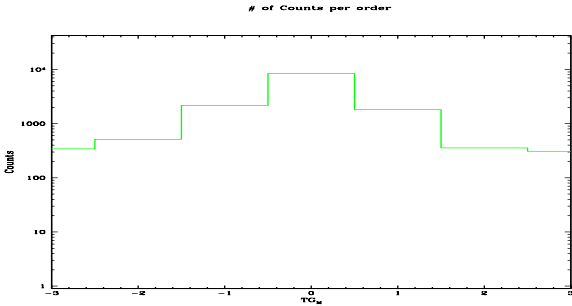


Spot Image HEG

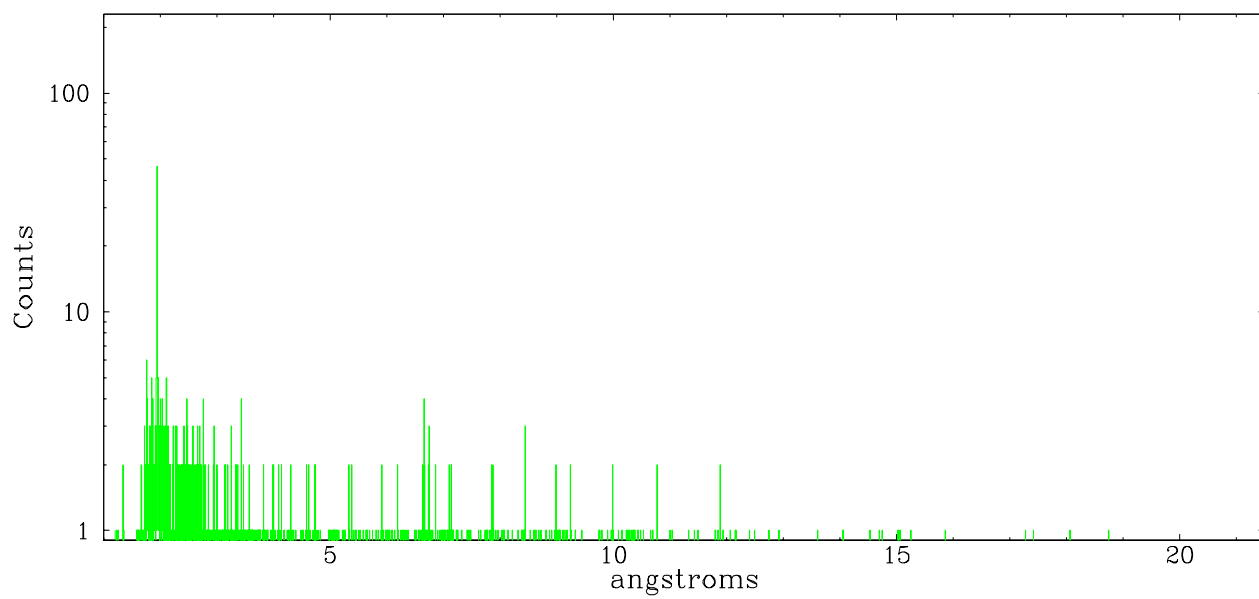


Full Detector HEG

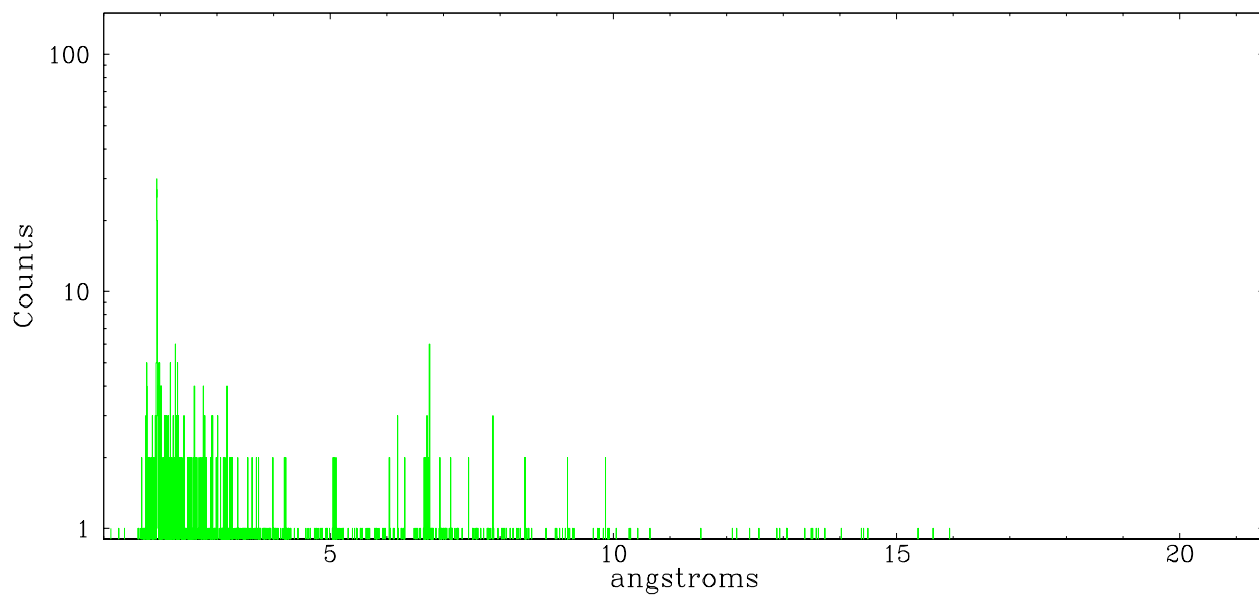
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	343	512	2173	8431	1810	355	309



heg order -1



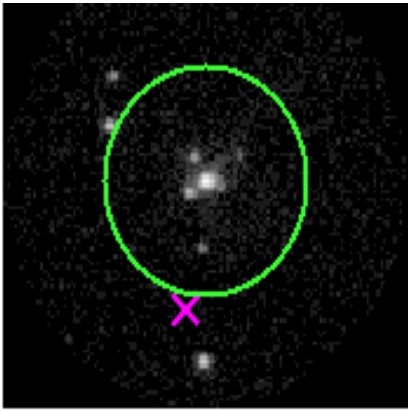
heg order +1



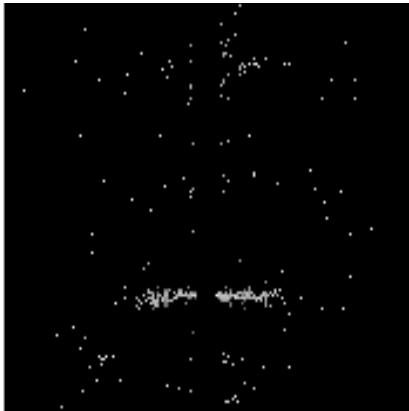
3.2 MEG Arm



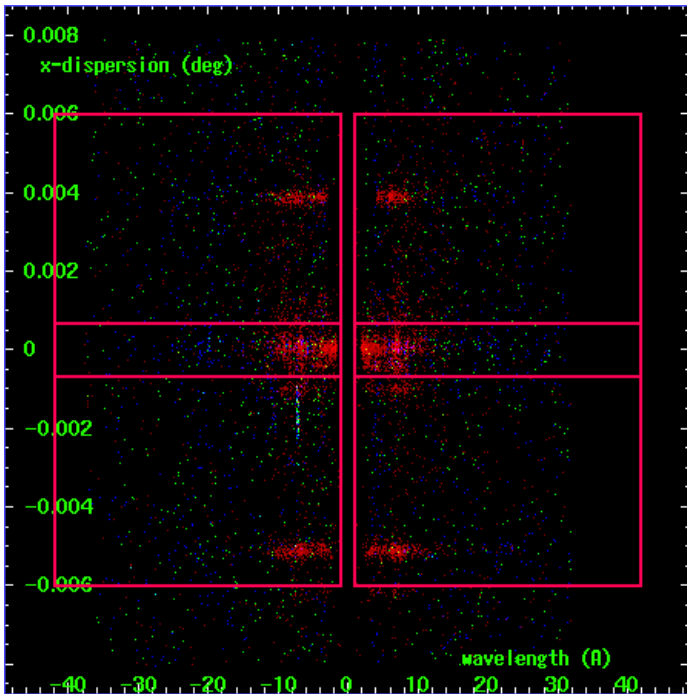
MEG Order Sort 123



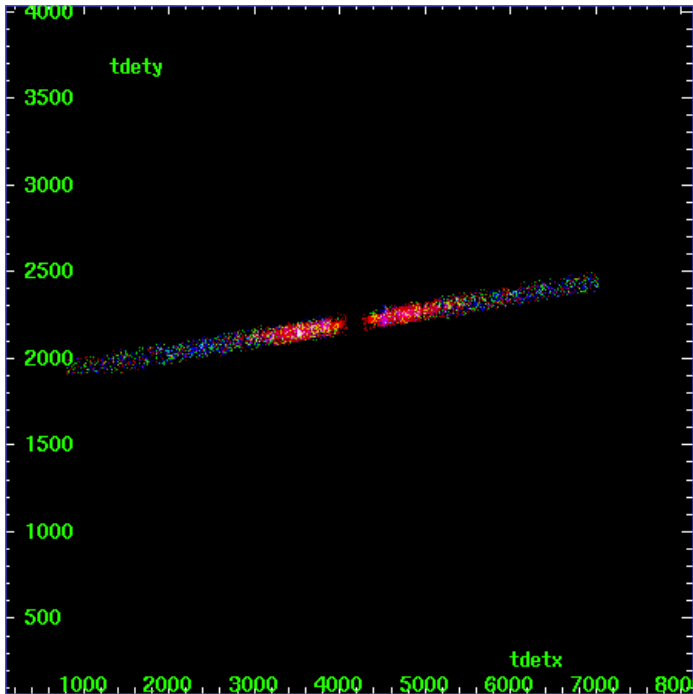
MEG Zero Order



MEG Order Sort ALL

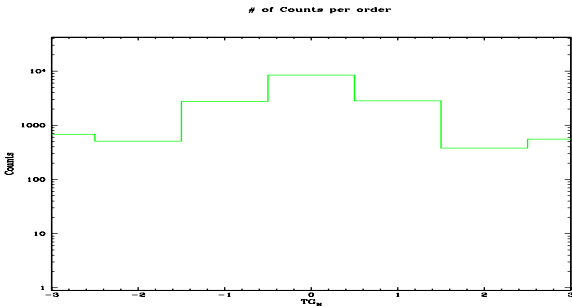


Spot Image MEG

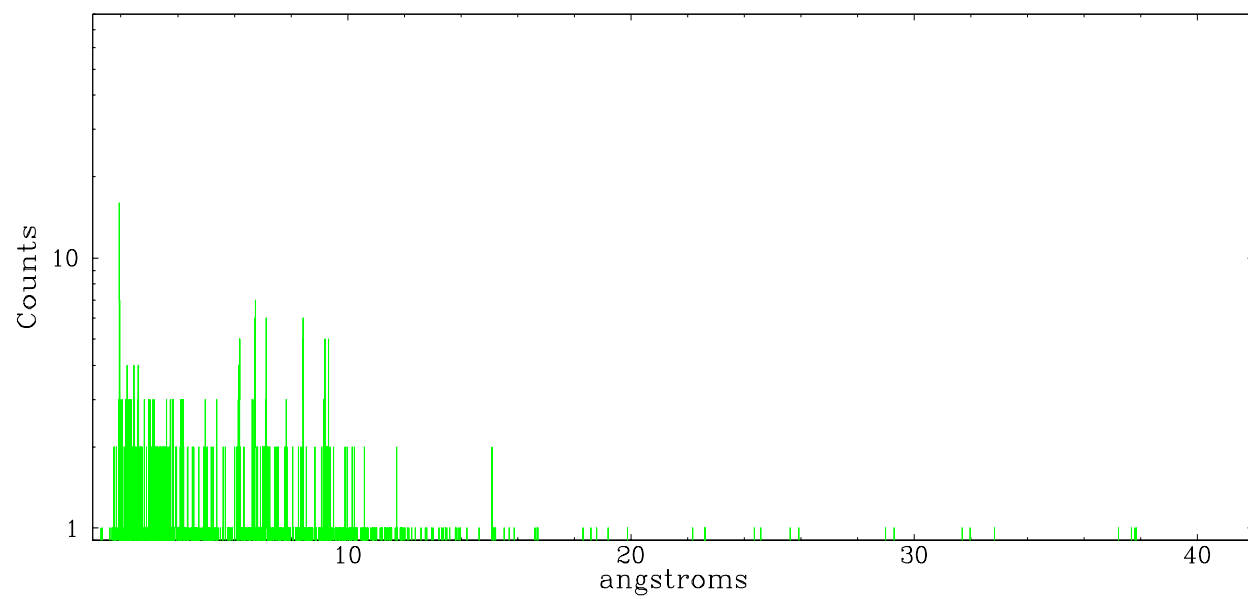


Full Detector MEG

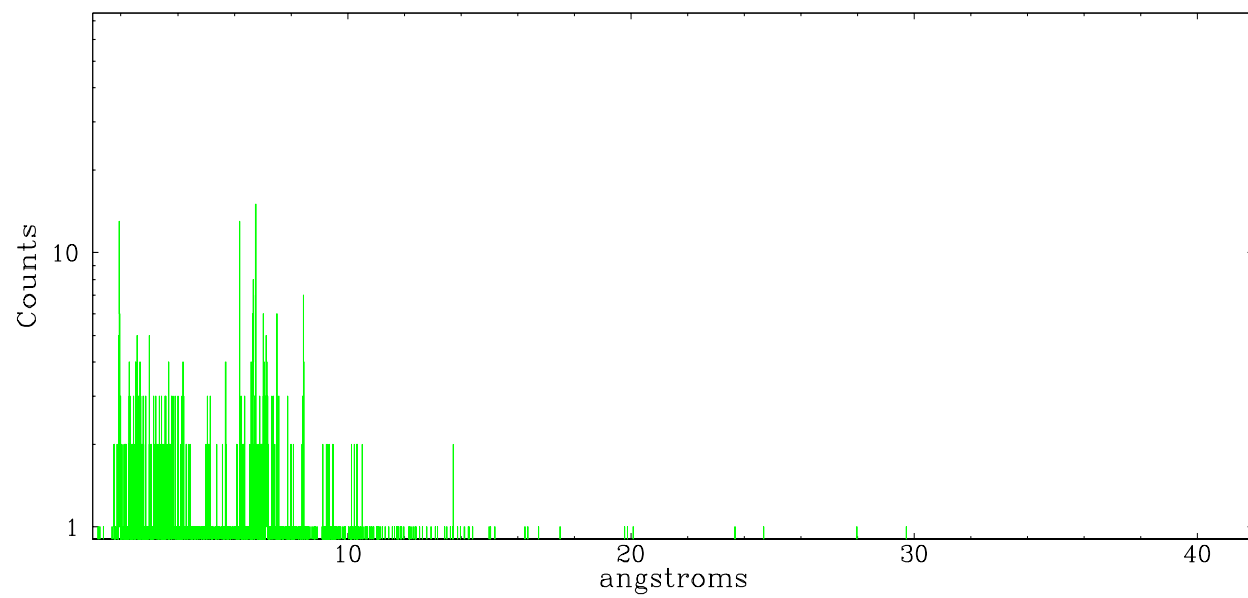
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	684	510	2753	8431	2834	379	555



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2009.02.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	61.399

A.2 Comments

This obsid interrupted obsid 374 because the HETG grating had not been fully inserted. An onboard procedure was executed to complete the insertion of the grating, and the obsid was changed from 374 to 62877. 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.