

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2389 - L2 Version 3
Chandra X-Ray Center

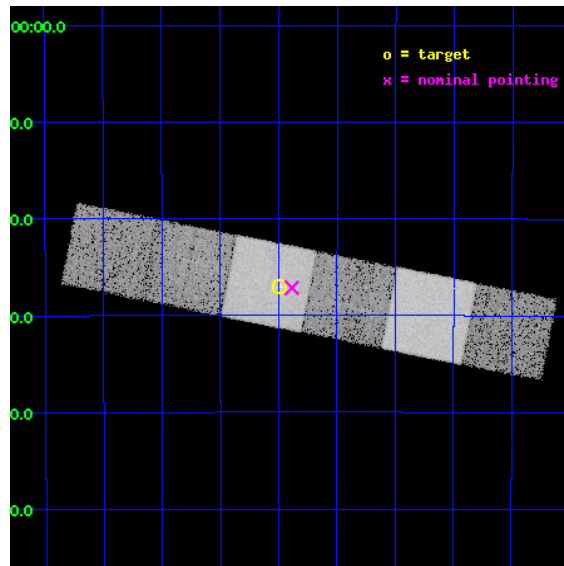
L2 Processing Date : Oct 11 2012

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

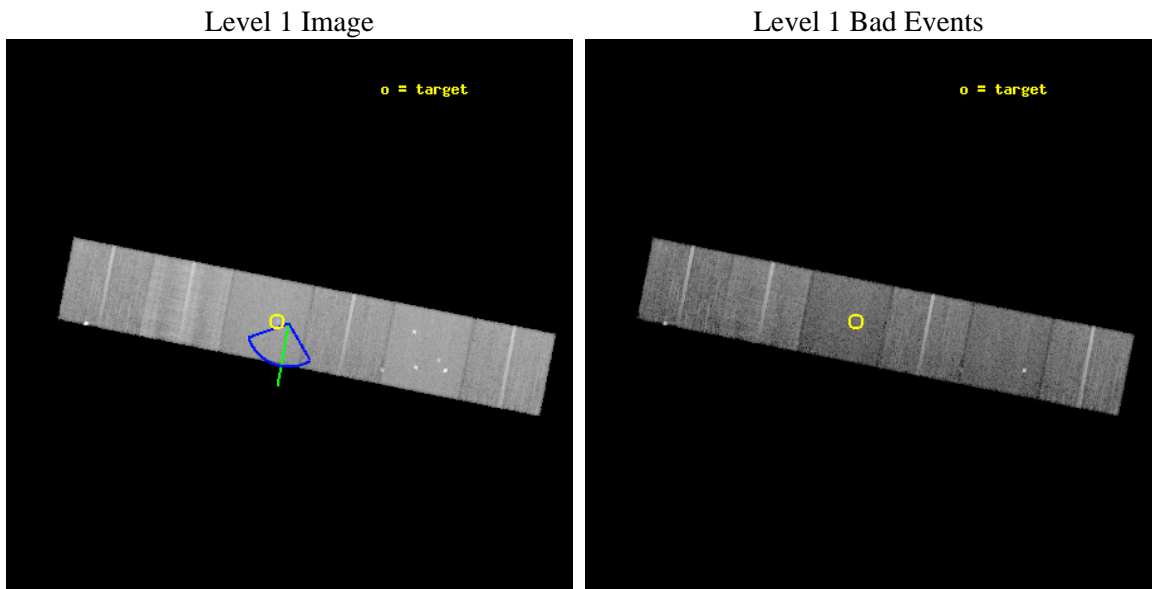
seq_num	600000	Sequence number
obs_id	2389	Observation id
title	THE DETAILED X-RAY SPECTRA OF ELLIPTICAL GALAXIES	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	NGC 1399	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	54.622083	Observer's specified target RA [deg]
dec_targ	-35.450278	Observer's specified target Dec [deg]
ra_nom	54.596652418299	Nominal RA [deg]
dec_nom	-35.452580524263	Nominal Dec [deg]
roll_nom	191.1996433084	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14853.859068111	Sum of GTIs [s]
livetime	14665.77056067	Livetime [s]
ontime4	14853.900108114	Sum of GTIs [s]
ontime5	14853.818028107	Sum of GTIs [s]
ontime6	14853.776988119	Sum of GTIs [s]
ontime7	14853.859068111	Sum of GTIs [s]
ontime8	14853.735818505	Sum of GTIs [s]
ontime9	14853.694908112	Sum of GTIs [s]
l2events	157722	Number of level 2 events



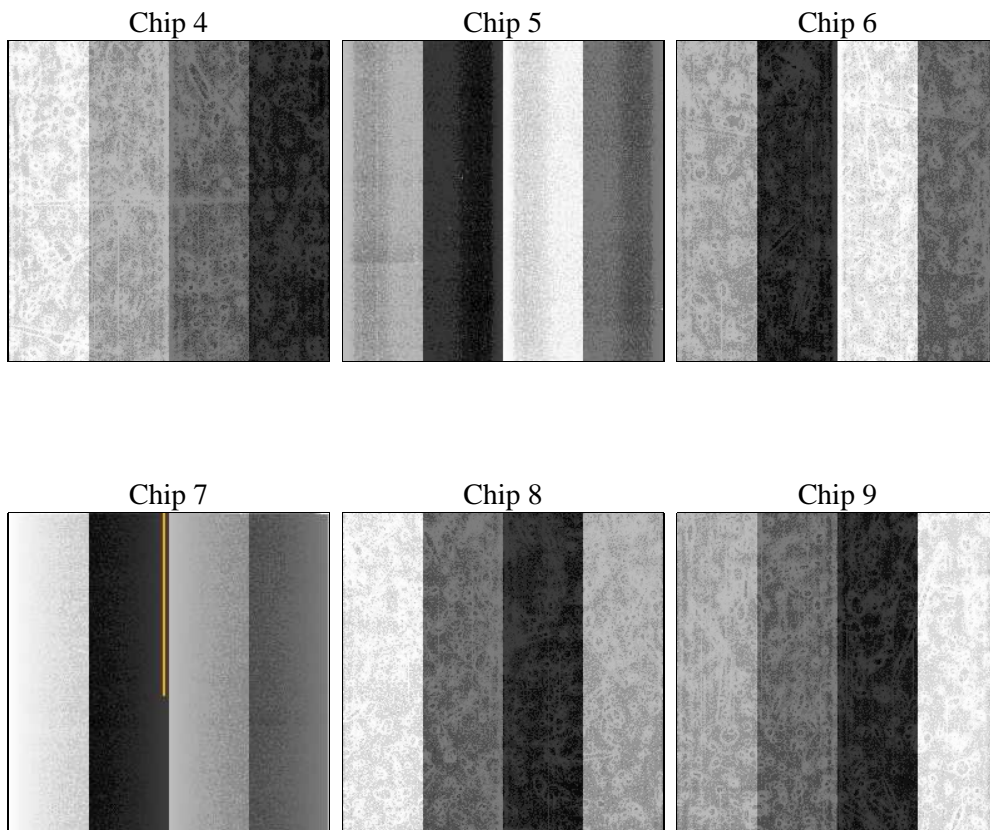
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15100.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	14853.859068111	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	14853.900108114	Sum of GTIs [s]
date	2012-09-18T23:02:13	Date and time of file creation	ontime5	14853.818028107	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	14853.776988119	Sum of GTIs [s]
			ontime7	14853.859068111	Sum of GTIs [s]
			ontime8	14853.735818505	Sum of GTIs [s]
			ontime9	14853.694908112	Sum of GTIs [s]
			l1events	773691	Number of level 1 events

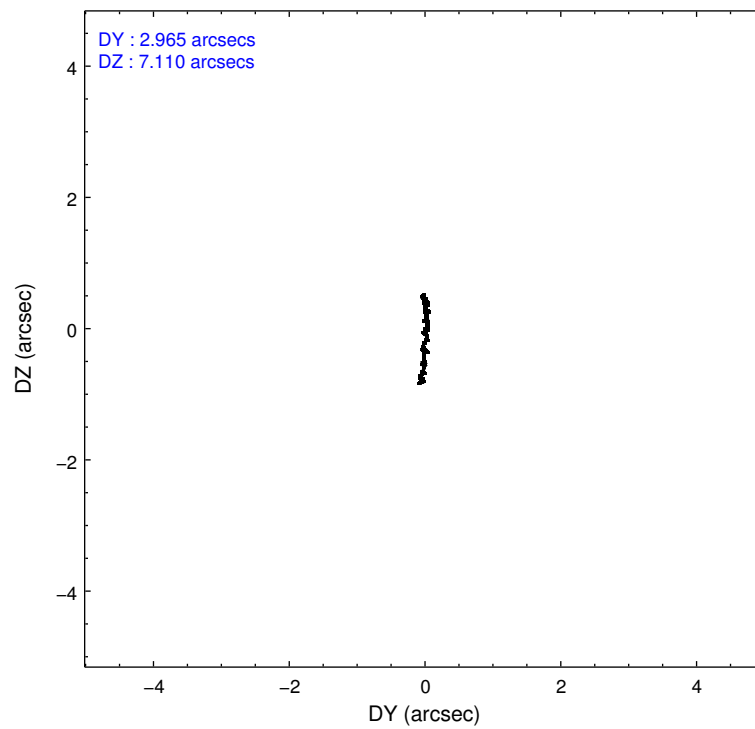
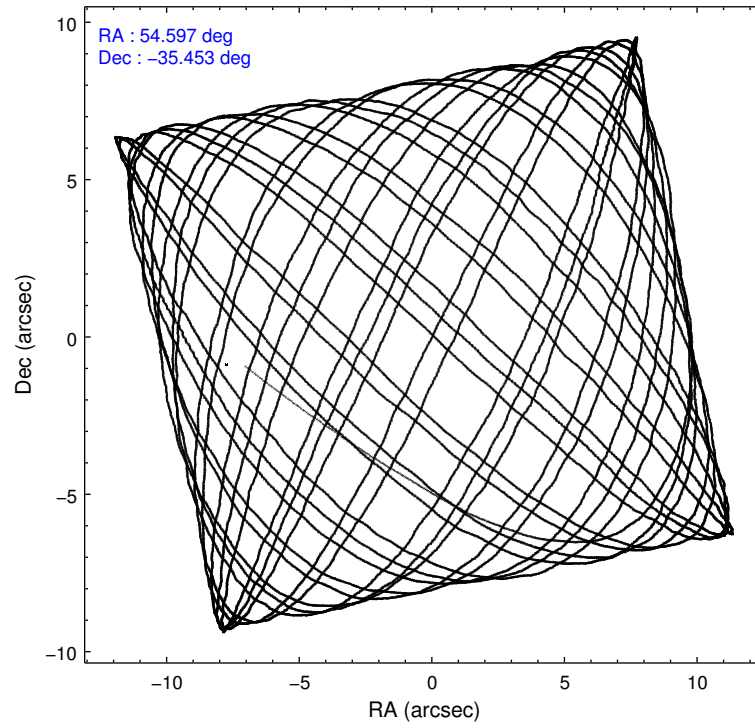
2.1.4 Events

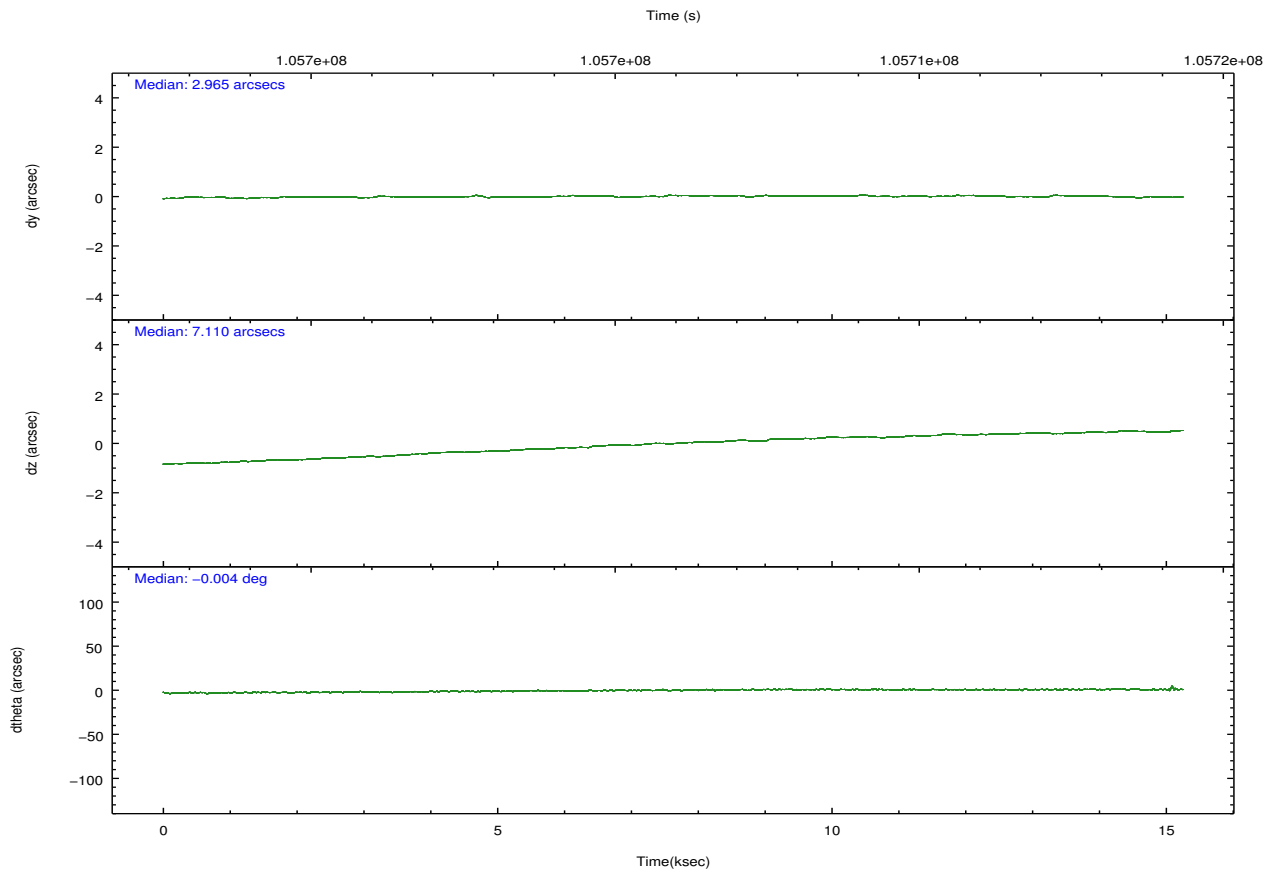
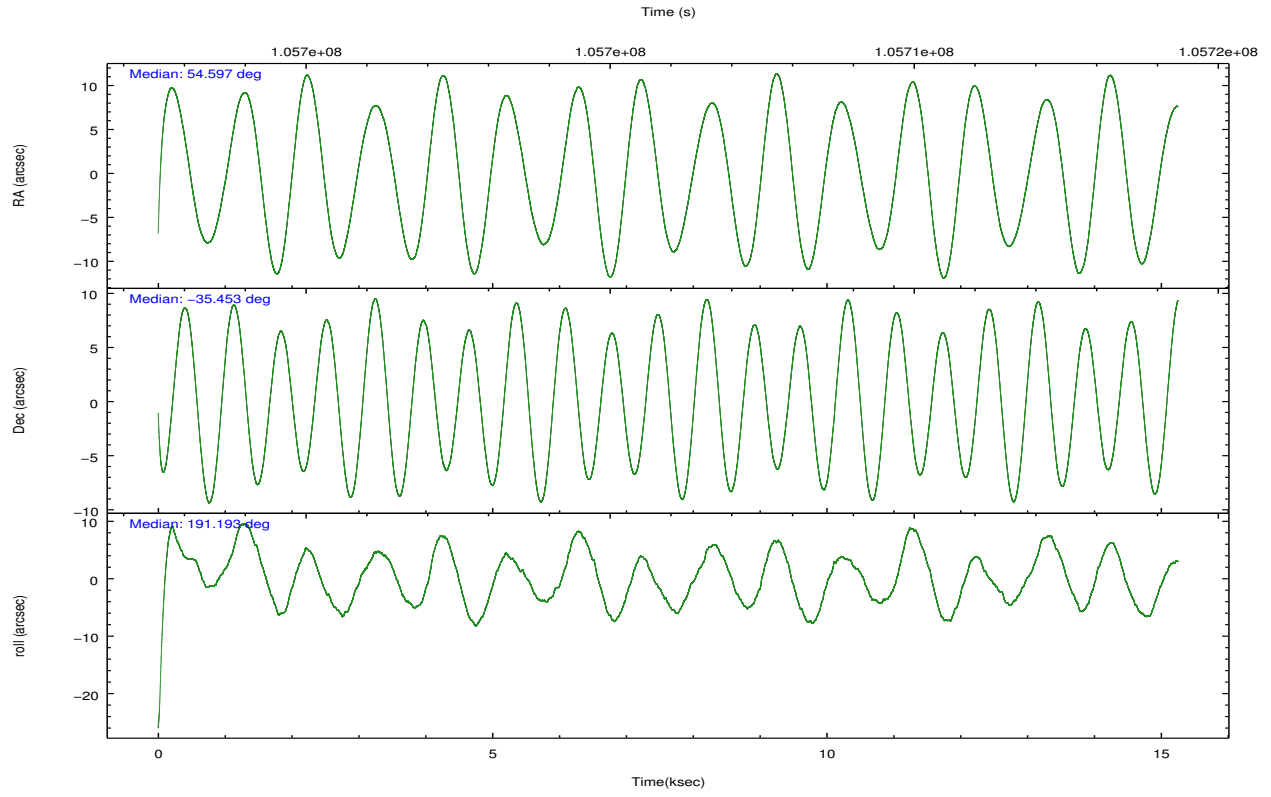
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	117125	141155	109092	126663	167232	112424	grade 0 events	5674	10625	6688	5990	14584	9006
rejected events	103266	74337	94894	71469	113739	96210		4%	7%	6%	4%	8%	8%
rejected %	88%	52%	86%	56%	68%	85%	grade 1 events	55	1489	64	119	127	802
								0%	1%	0%	0%	0%	0%
							grade 2 events	3855	18274	2889	11480	10520	2674
								3%	12%	2%	9%	6%	2%
							grade 3 events	1116	3034	1199	5179	6703	1135
								0%	2%	1%	4%	4%	1%
							grade 4 events	1094	3000	1193	5089	6139	1100
								0%	2%	1%	4%	3%	0%
							grade 5 events	3453	10269	3889	11565	5834	4239
								2%	7%	3%	9%	3%	3%
							grade 6 events	2123	31917	2238	27478	15616	2305
								1%	22%	2%	21%	9%	2%
							grade 7 events	99755	62547	90932	59763	107709	91163
								85%	44%	83%	47%	64%	81%

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	54.621607	54.59665241829876	Subarray requested	NONE	NONE
[deg] Pointing Dec	-35.434400	-35.45258052426326	Alternating exposures requested	N	N
[deg] Pointing Roll	191.057499	191.1996433084035	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	200.000000	200.000000			
[deg] Roll tolerance	50.000000	50.000000			
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)	105698477.184000	105697348.21364			
Observation start date	2001-05-08T08:40:13	2001-05-08T08:22:28			
[s] Observation end time (MET)	105713577.184000	105714671.22682			
Observation end date	2001-05-08T12:51:53	2001-05-08T13:11:11			
Read mode	TIMED	TIMED			

2.3 Aspect





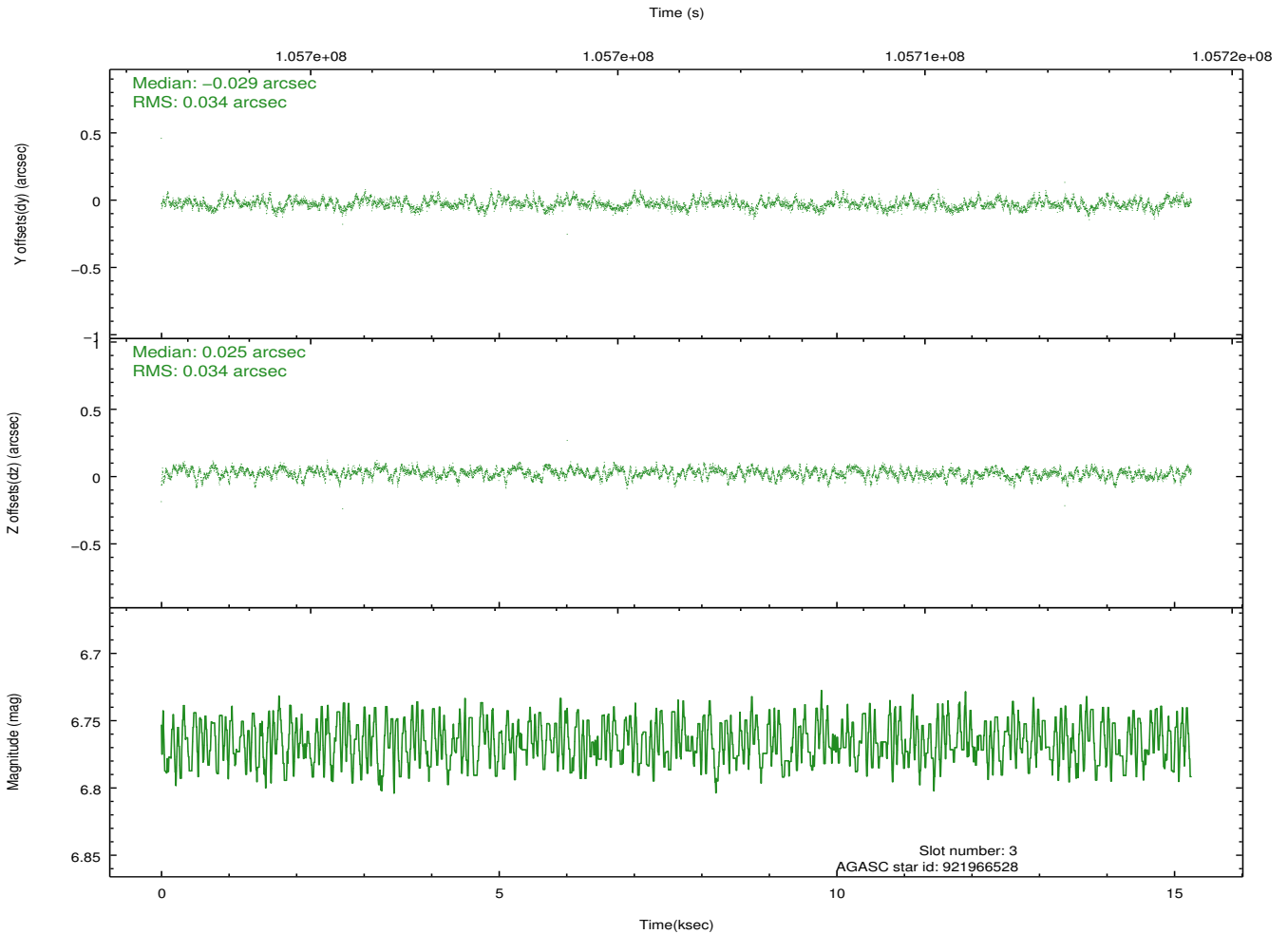
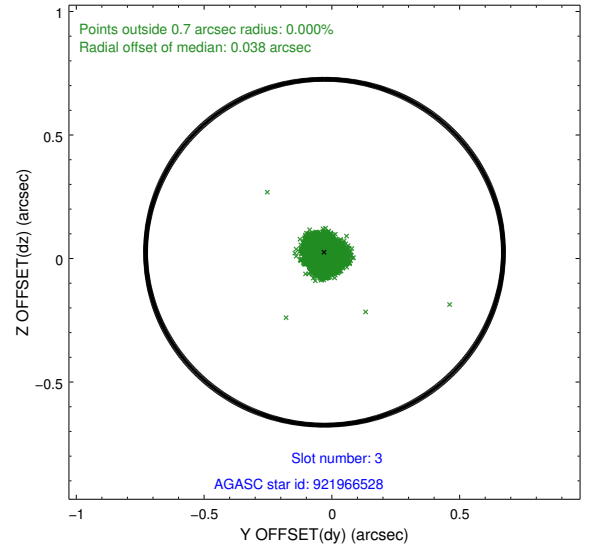
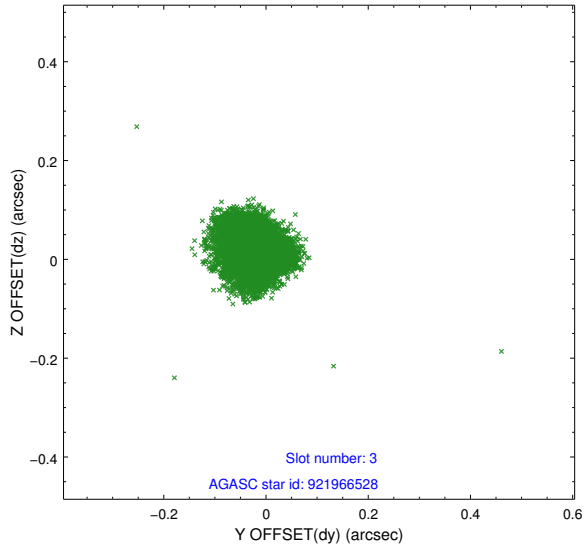
Slot Statistics

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	3720	-0.005	0.009	0.016	0.026	0.000000	0.000000	-755.61	-1728.20
1	FID	ACIS-S-4	7.20	3720	-0.056	0.002	0.014	0.023	0.000000	0.000000	2157.49	179.98
2	FID	ACIS-S-5	7.24	3720	0.032	0.001	0.018	0.031	0.000000	0.000000	-1808.04	173.98
3	GUIDE	921966528	6.77	7441	-0.029	0.025	0.051	0.082	54.675841	-35.204254	-314.89	-782.49
4	GUIDE	921966544	7.91	7441	0.045	-0.081	0.053	0.083	54.743508	-35.636012	-210.30	780.82
5	GUIDE	921575736	8.54	7439	-0.013	0.103	0.063	0.101	54.586331	-34.827401	-316.05	-2164.40
6	GUIDE	921965624	8.64	7437	0.039	-0.089	0.075	0.118	54.900706	-35.940077	-448.74	1943.41
7	GUIDE	921048648	9.07	7436	-0.042	0.042	0.082	0.130	53.884610	-35.870023	2412.69	1135.31

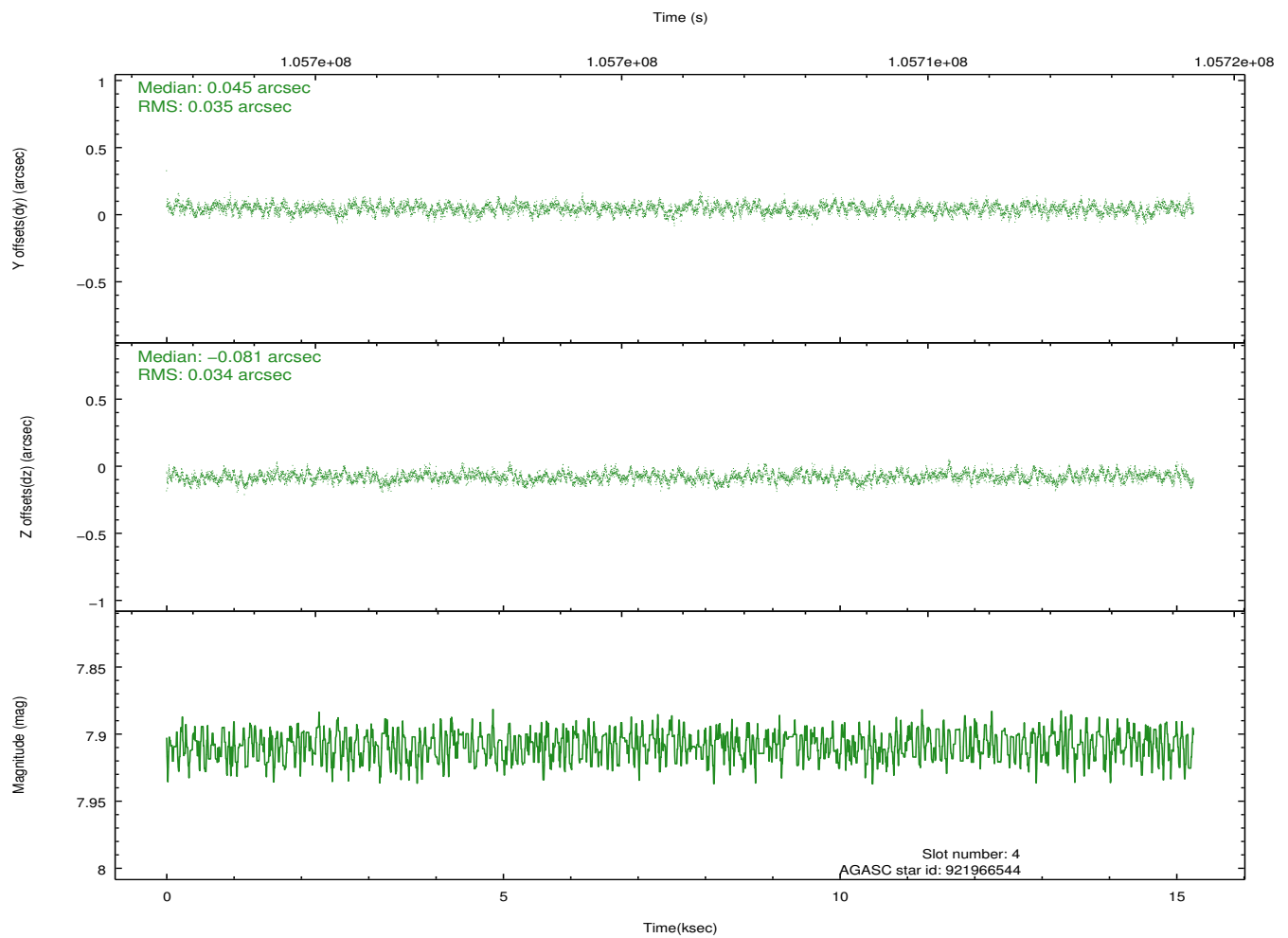
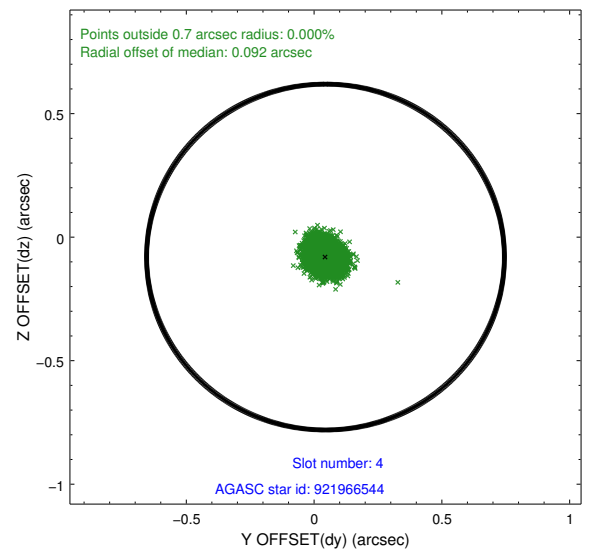
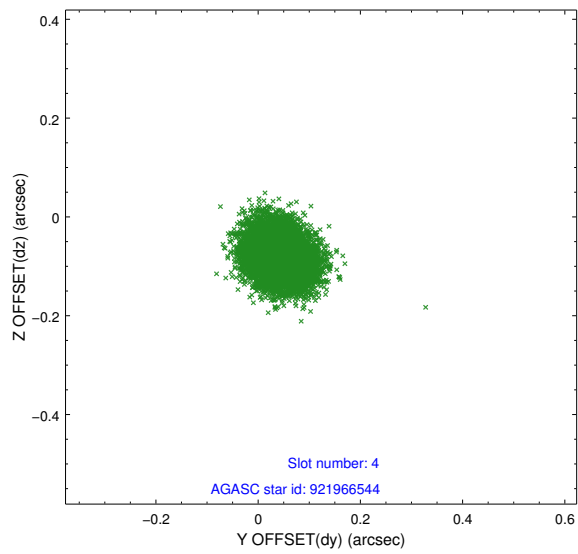
∞

2.4 Star Slots

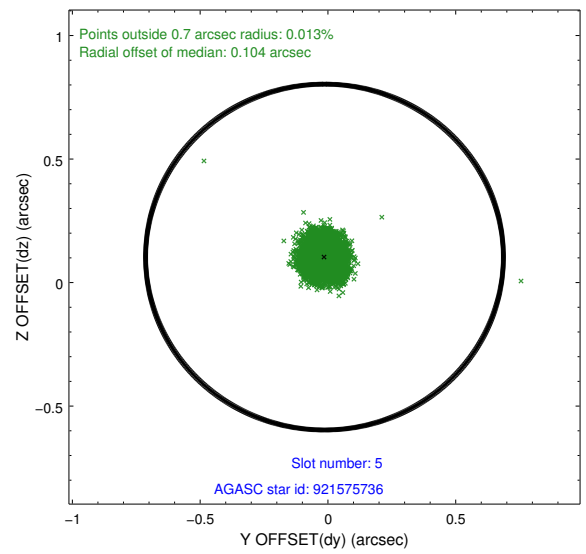
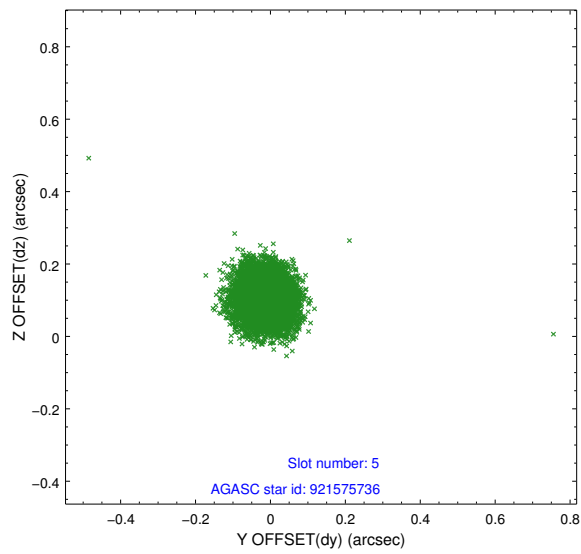
2.4.1 Slot 3



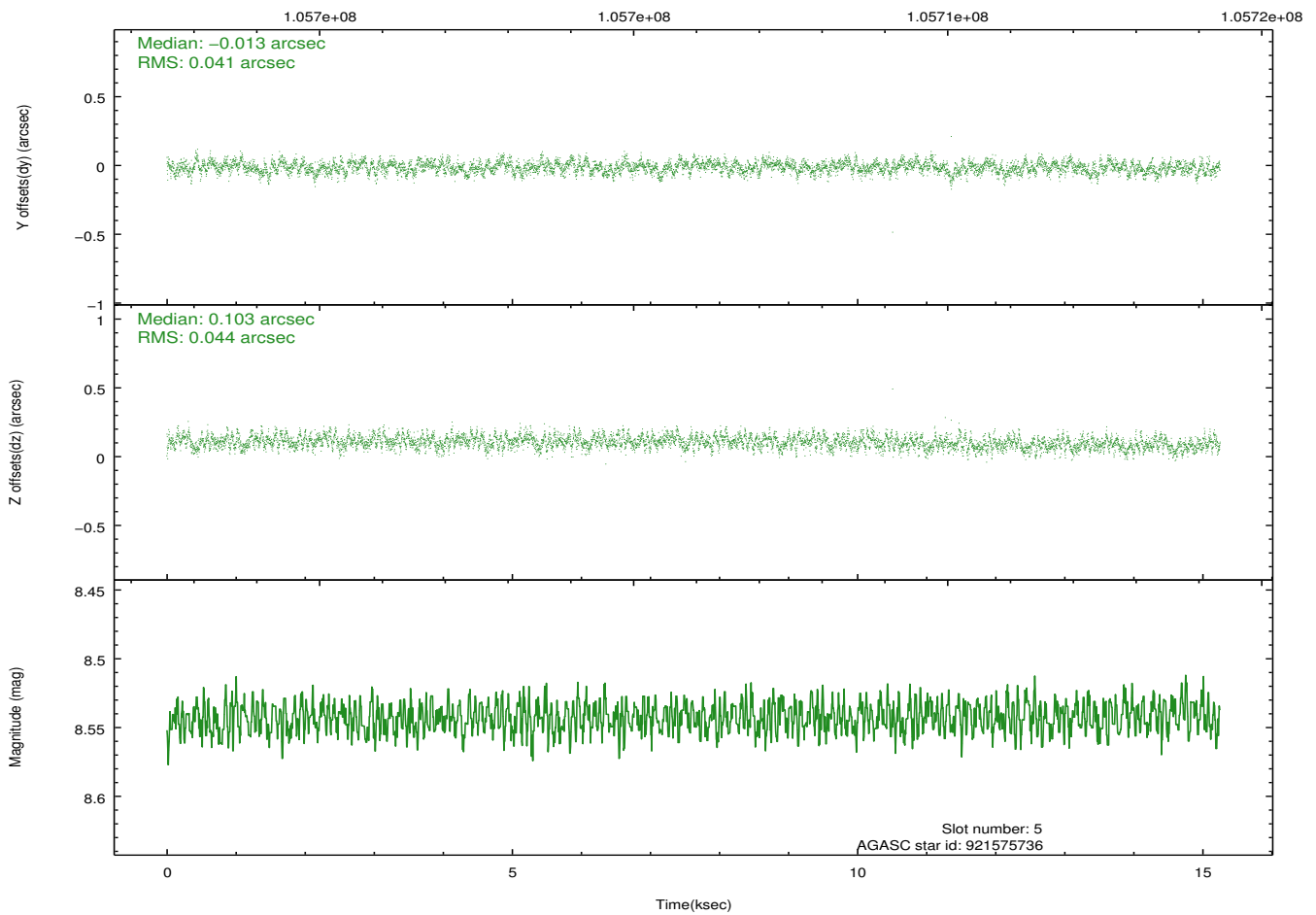
2.4.2 Slot 4



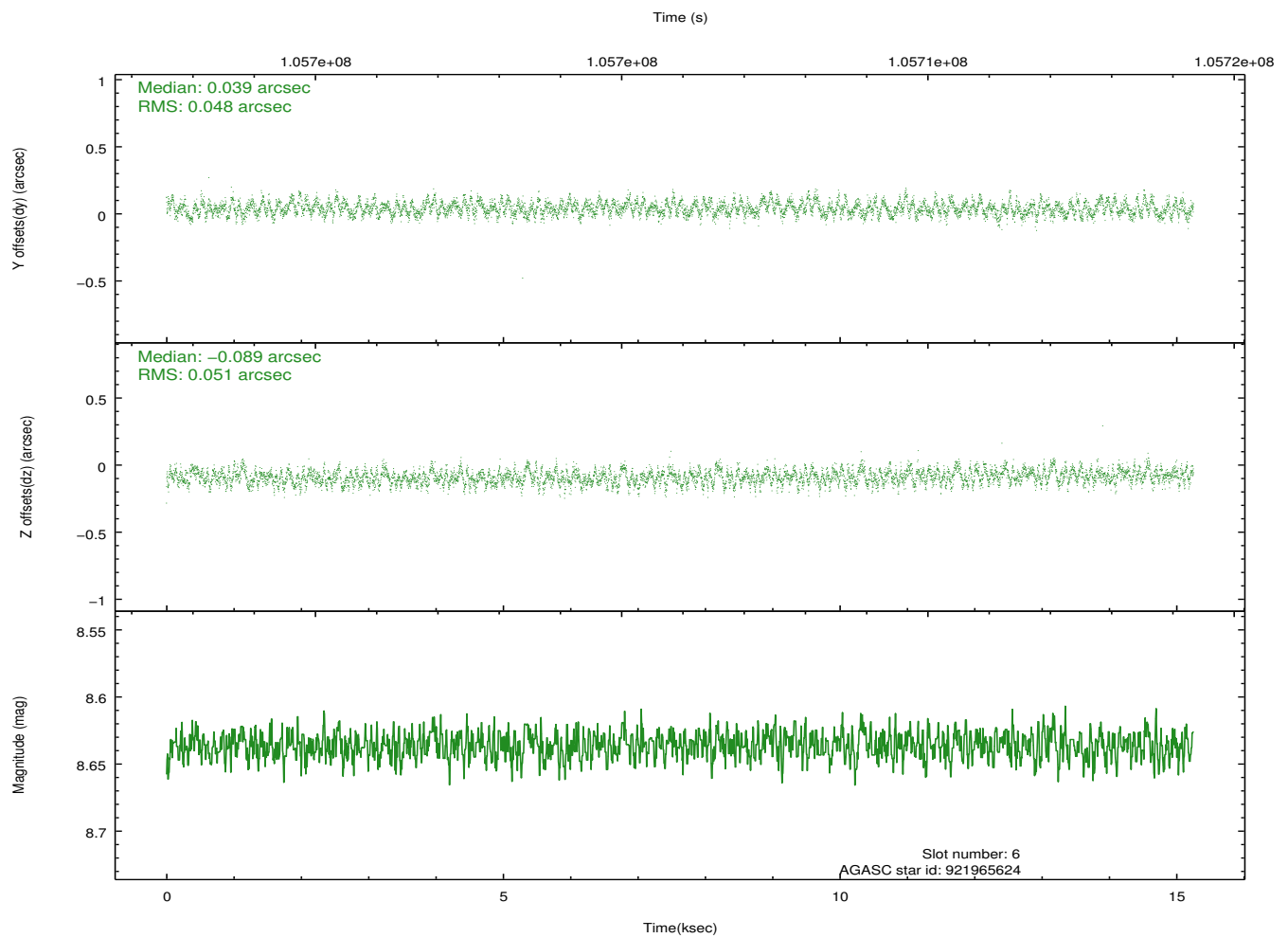
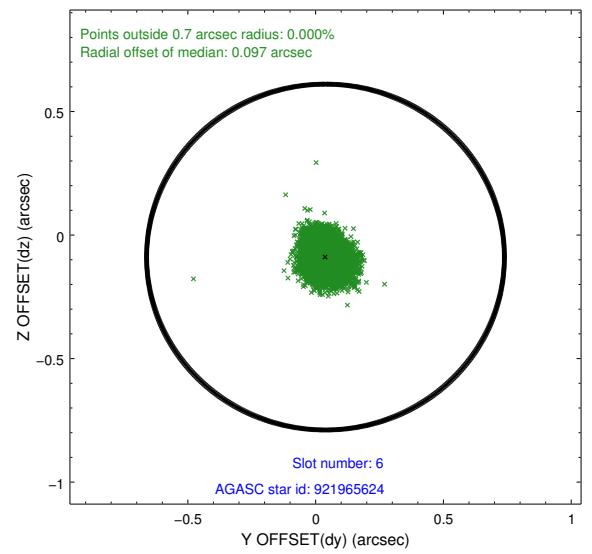
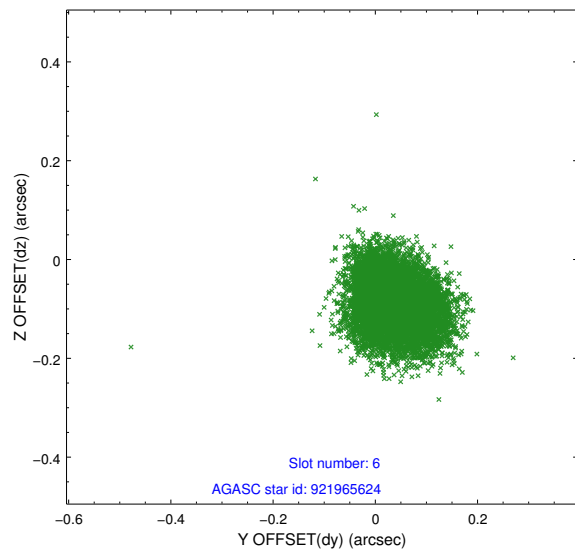
2.4.3 Slot 5



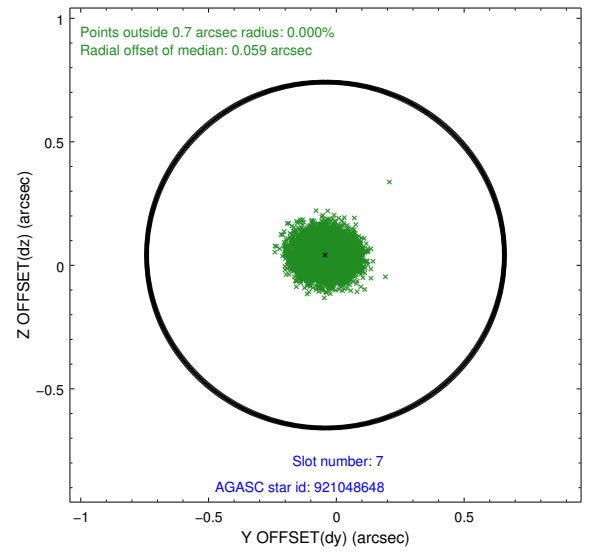
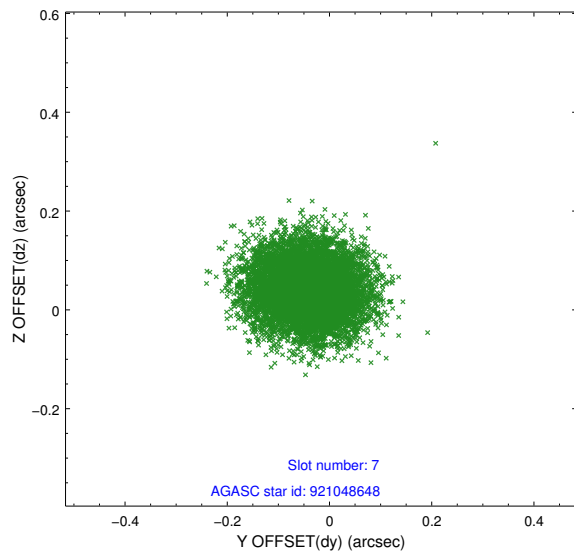
Time (s)



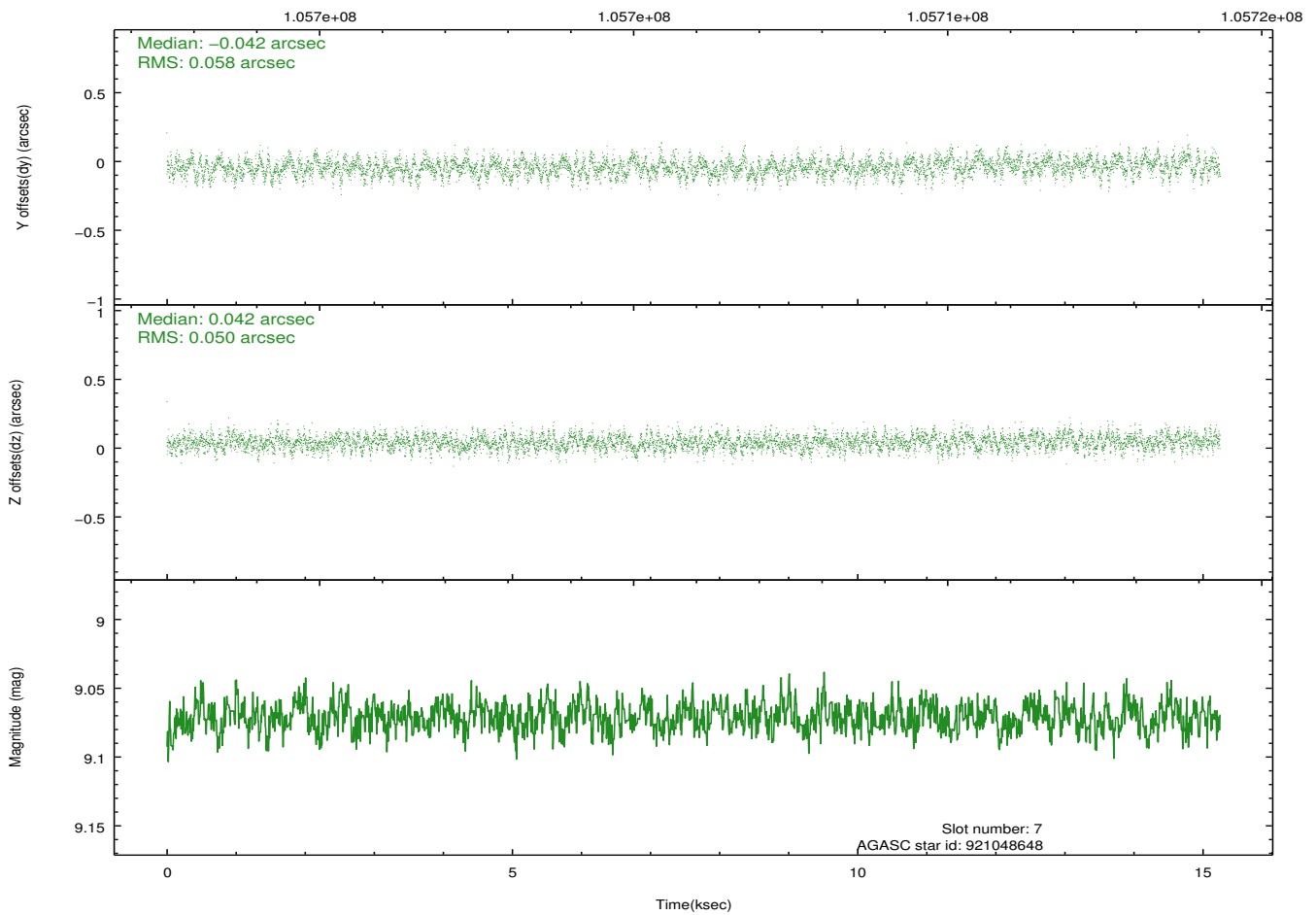
2.4.4 Slot 6



2.4.5 Slot 7

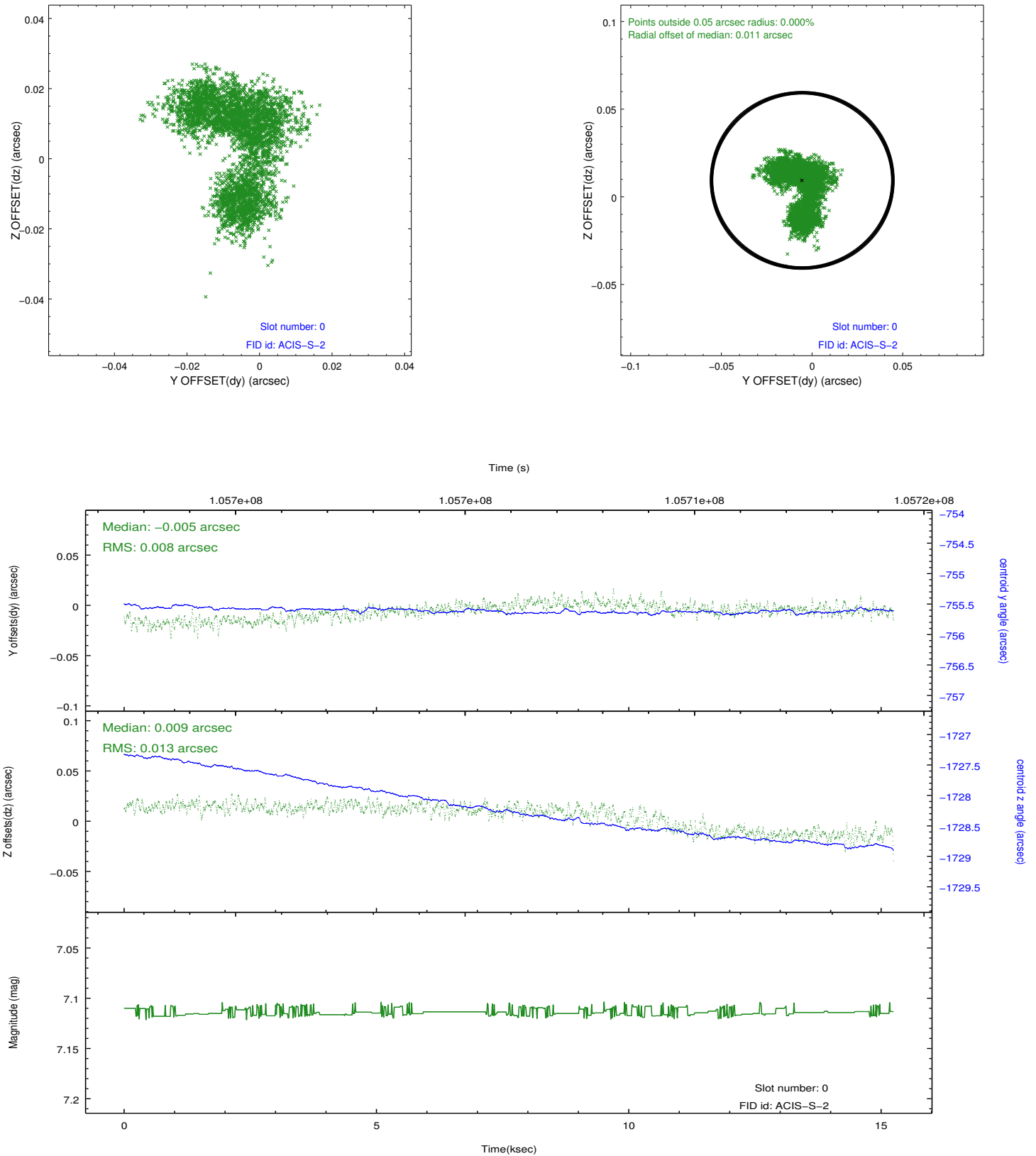


Time (s)

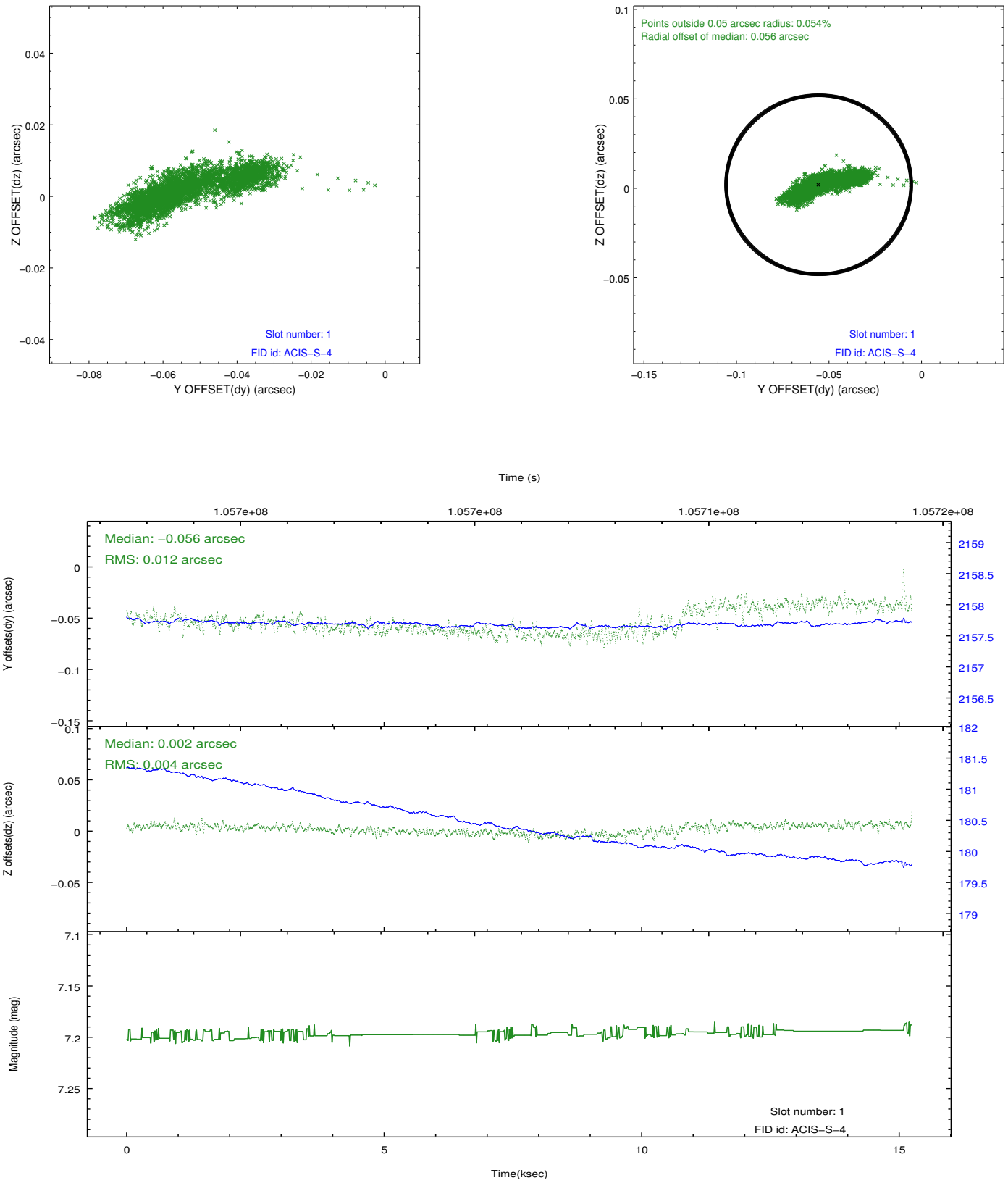


2.5 FID Slots

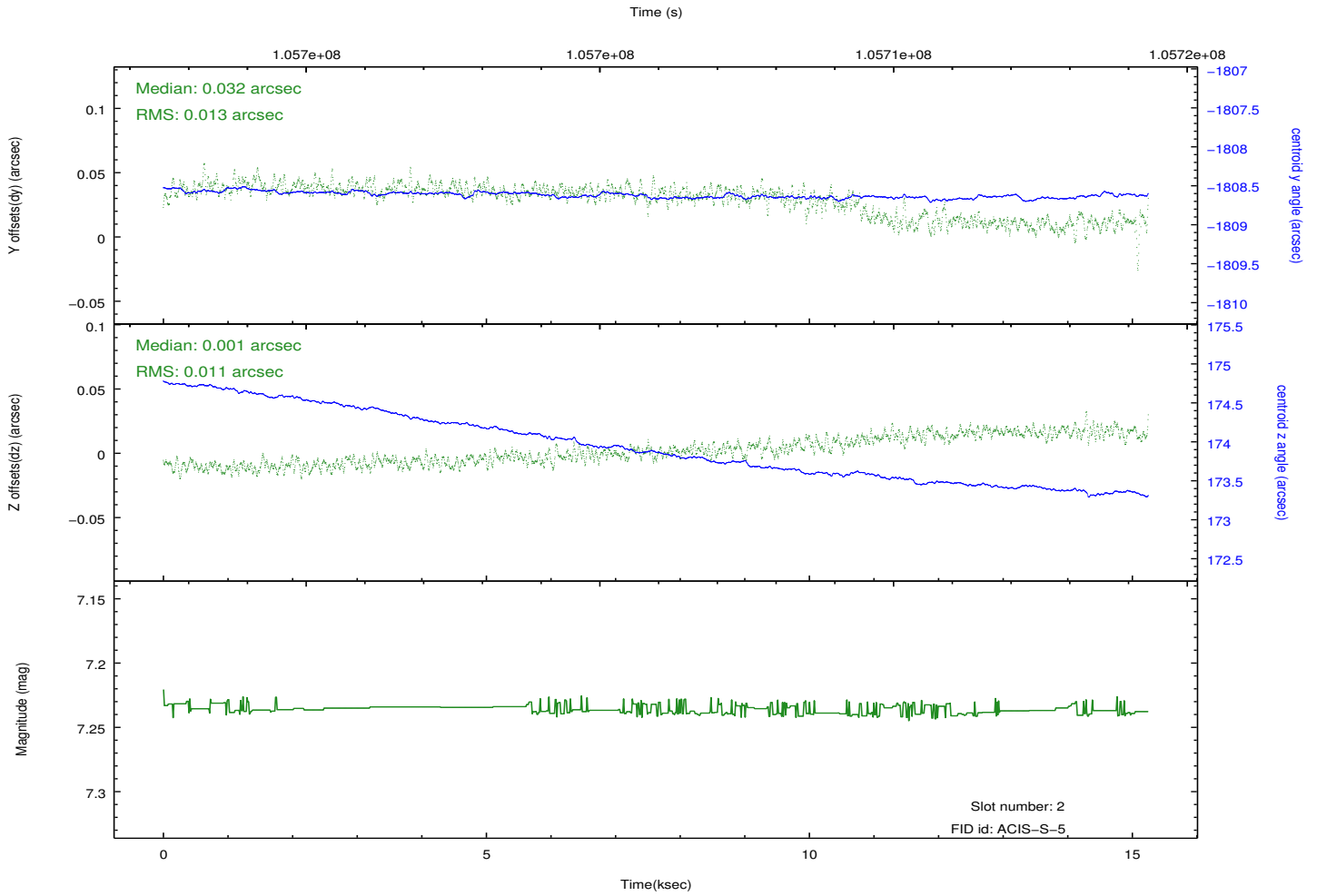
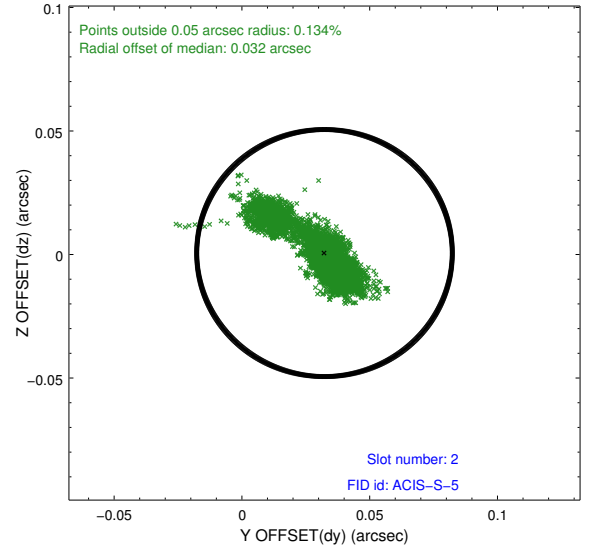
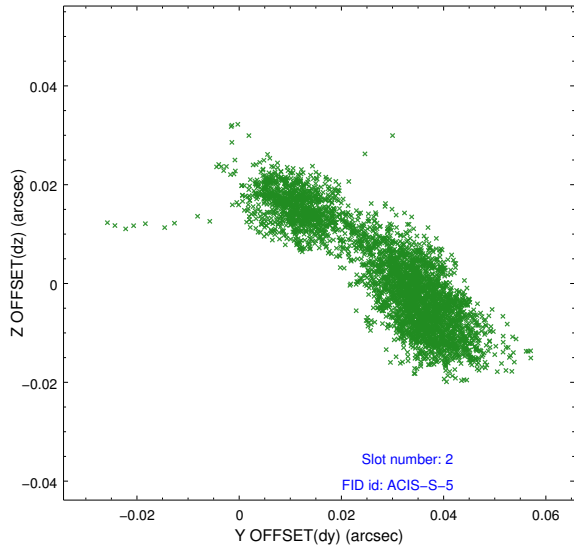
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

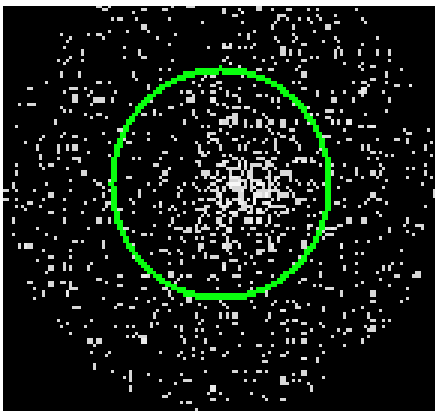


3 Gratings

3.1 HEG Arm



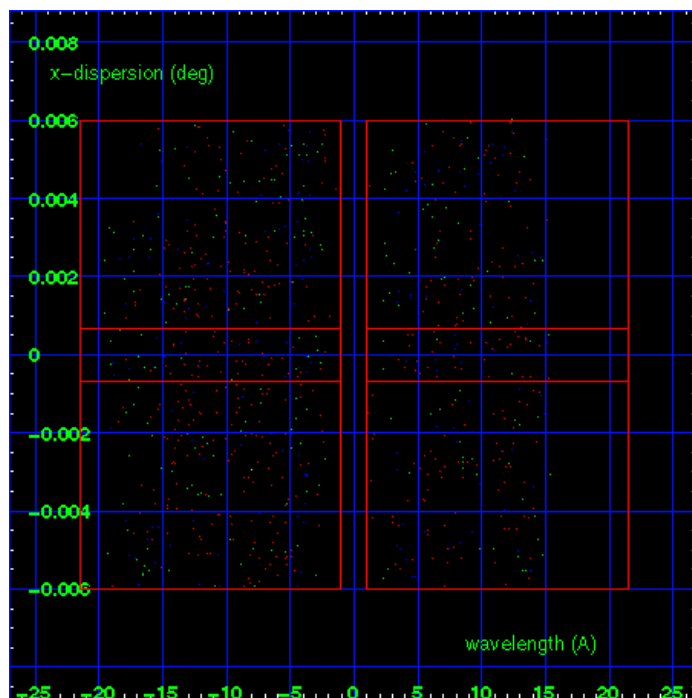
HEG Order Sort 123



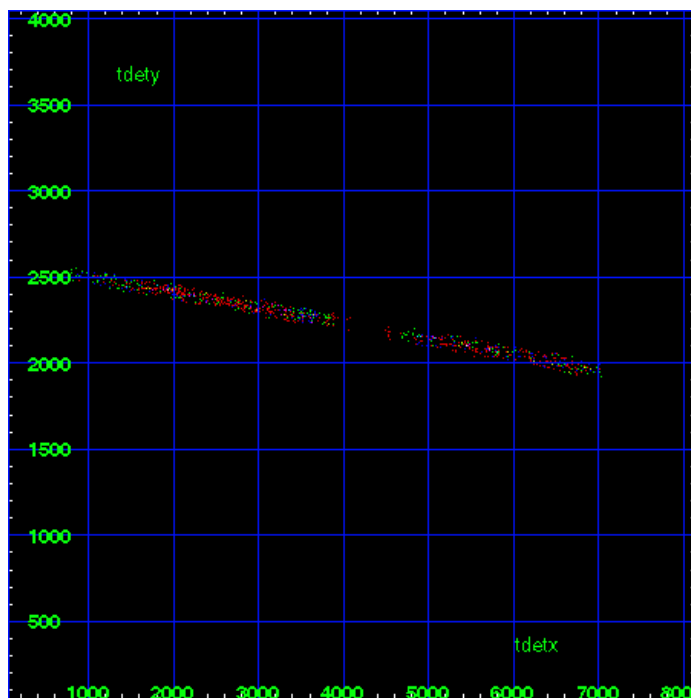
HEG Zero Order



HEG Order Sort ALL

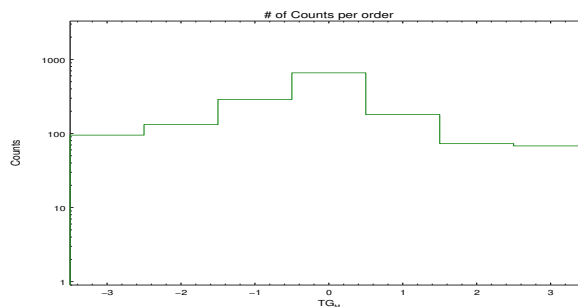


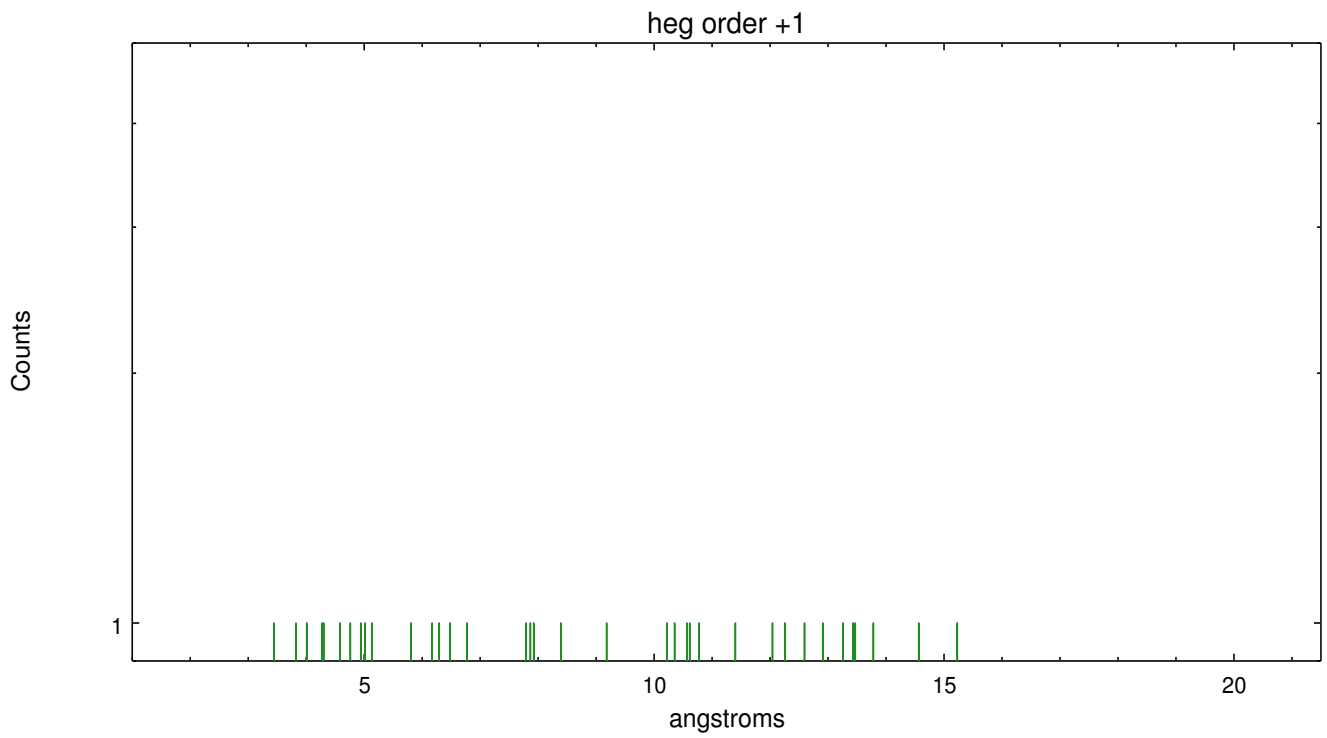
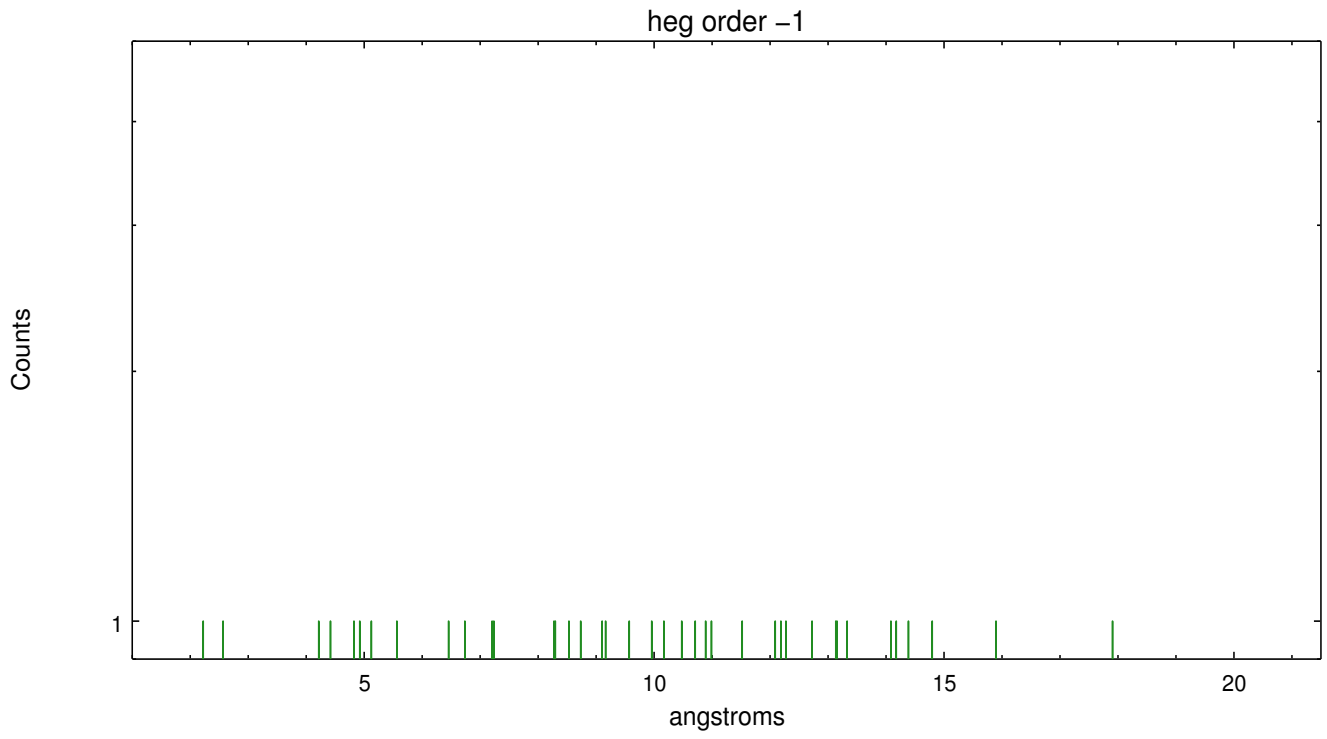
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	95	132	288	659	180	73	68

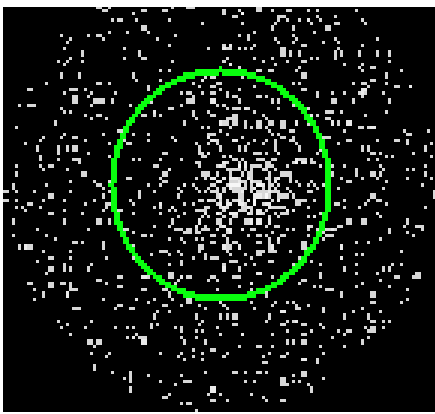




3.2 MEG Arm



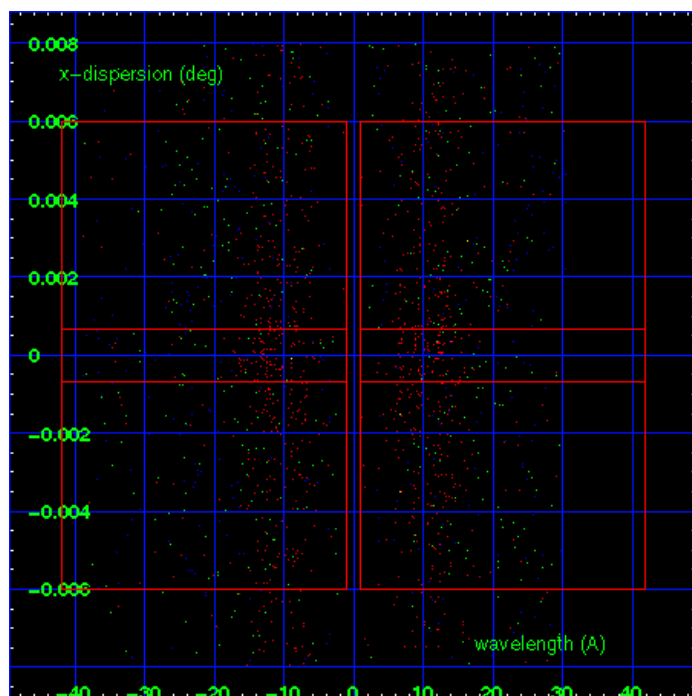
MEG Order Sort 123



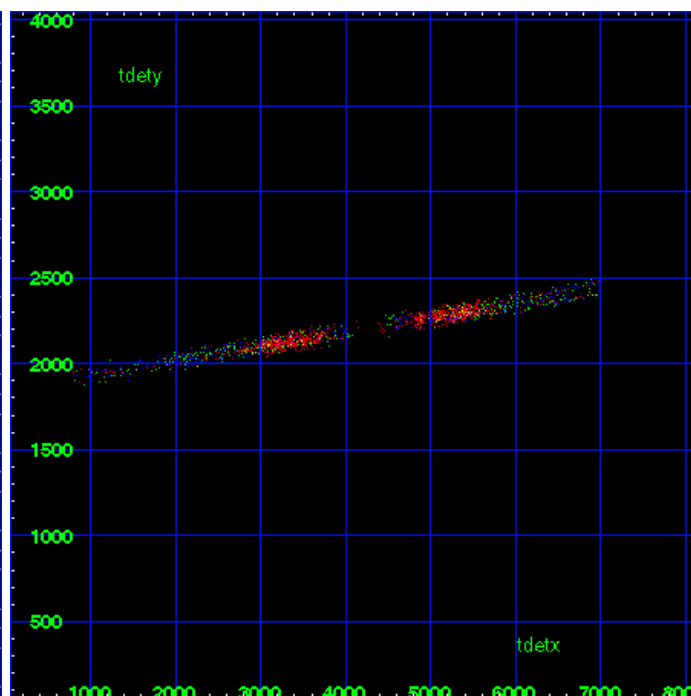
MEG Zero Order



MEG Order Sort ALL

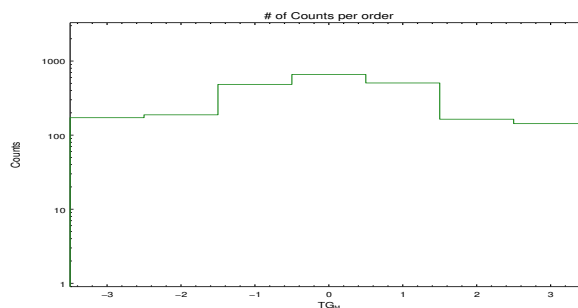


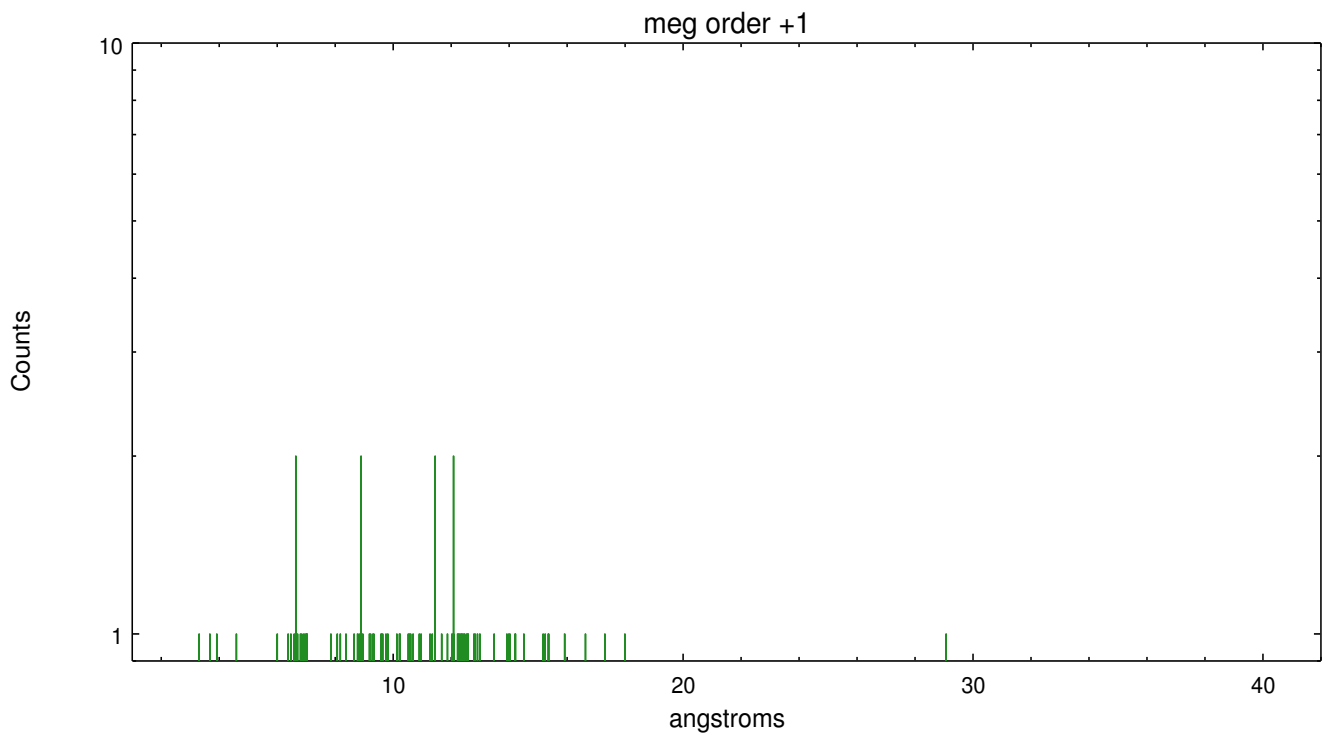
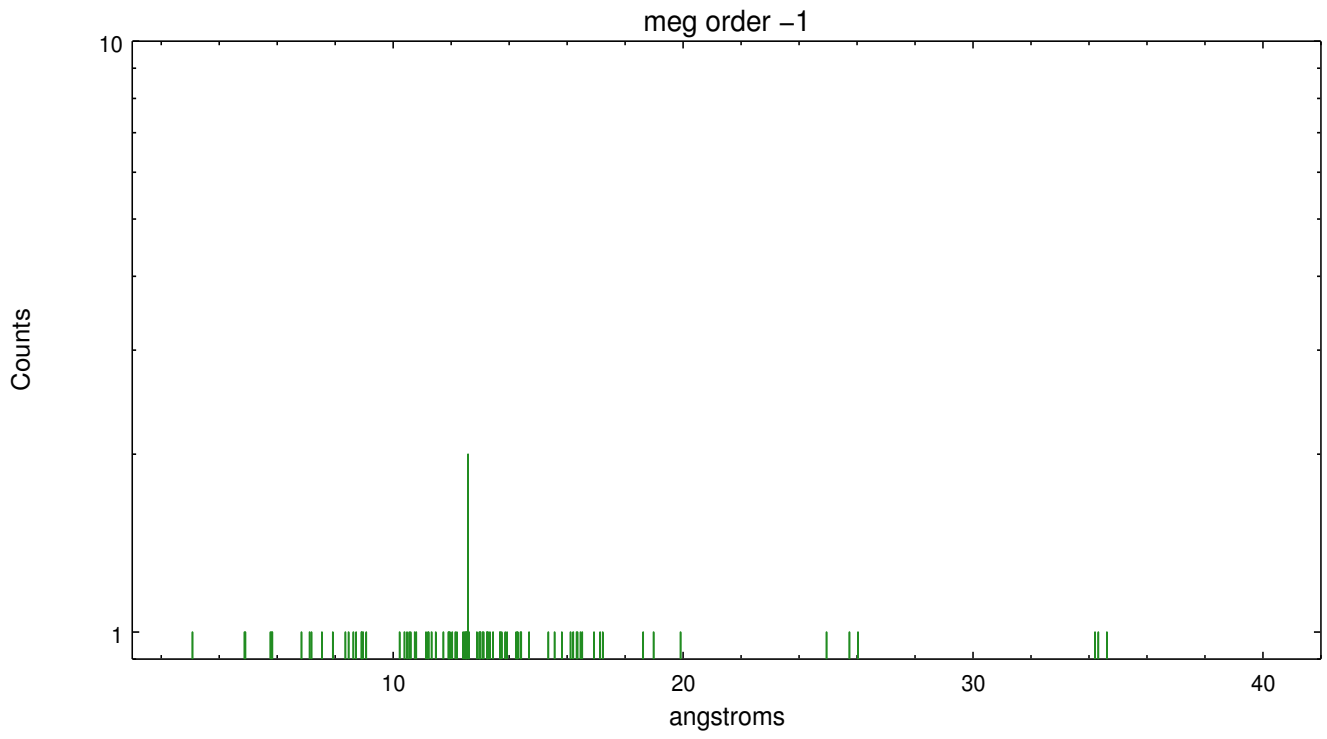
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	172	188	484	659	506	164	143





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.854

A.2 Comments

Standard software processing technique using the tool `tgdetect` failed to determine an accurate position for the zeroth order for this observation. The source is extended and asymmetric. The processing software defaulted to the coordinates supplied by the user for the position of the zeroth order for the grating spectral extraction. For grating analysis of localized X-ray emission within the extended emission, the investigator will need to extract one or more dispersed spectra using user-defined zeroth order positions for all positions of interest.