

V&V Reference Report

L2 ASCDS Version : 10.3.3

Observation 17600 - L2 Version 2
Chandra X-Ray Center

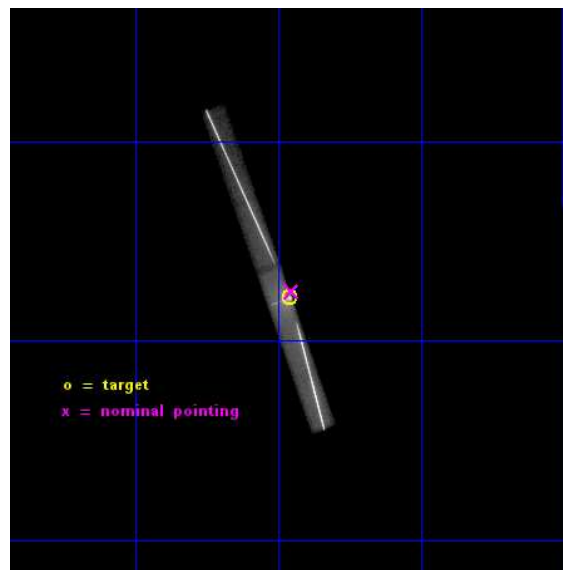
L2 Processing Date : Feb 25 2015

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

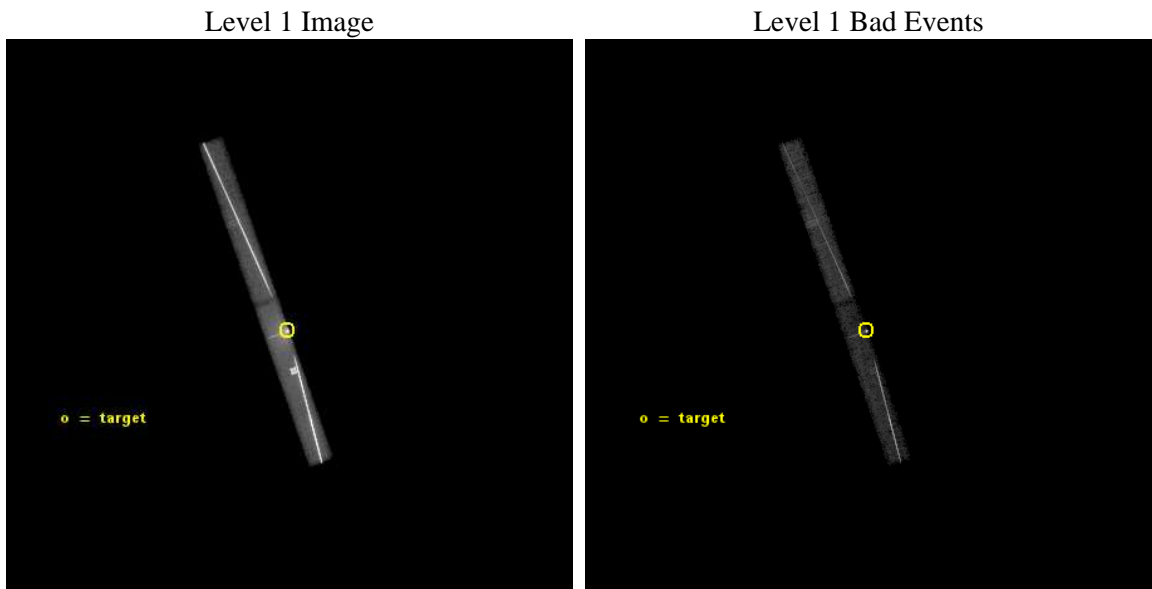
seq_num	901186	Sequence number
obs_id	17600	Observation id
title	Measure an unbiased Si K edge optical depth in Ser X-1	Proposal ti
observer	Prof. Claude Canizares	Principal investigator
object	Ser X-1	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	279.99	Observer's specified target RA [deg]
dec_targ	5.036	Observer's specified target Dec [deg]
ra_nom	279.98820366421	Nominal RA [deg]
dec_nom	5.0411387515936	Nominal Dec [deg]
roll_nom	70.156780010979	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40092.905404329	Sum of GTIs [s]
livetime	37051.701726609	Livetime [s]
ontime6	40092.864364386	Sum of GTIs [s]
ontime7	40092.905404329	Sum of GTIs [s]
l2events	1472582	Number of level 2 events



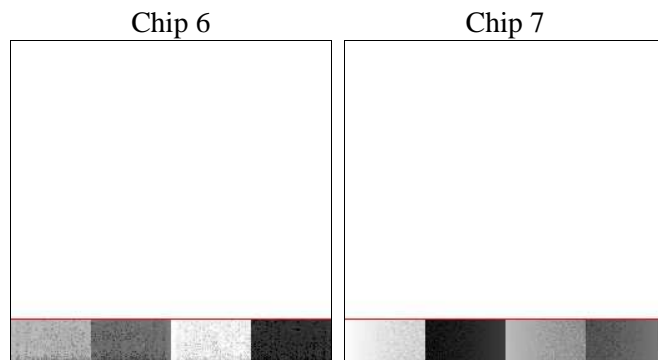
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	40092.905404329	Sum of GTIs [s]
caldsver	4.6.7	 	ontime6	40092.864364386	Sum of GTIs [s]
date	2015-02-25T17:44:11	Date and time of file creation	ontime7	40092.905404329	Sum of GTIs [s]
revision	2	Processing version of data	l1events	1676228	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4083.30, 4058.90)	src1a sky pixel position
			zo_pos_tgd	(4083.35, 4057.50)	src1a sky pixel position via tgdetect

2.1.4 Events

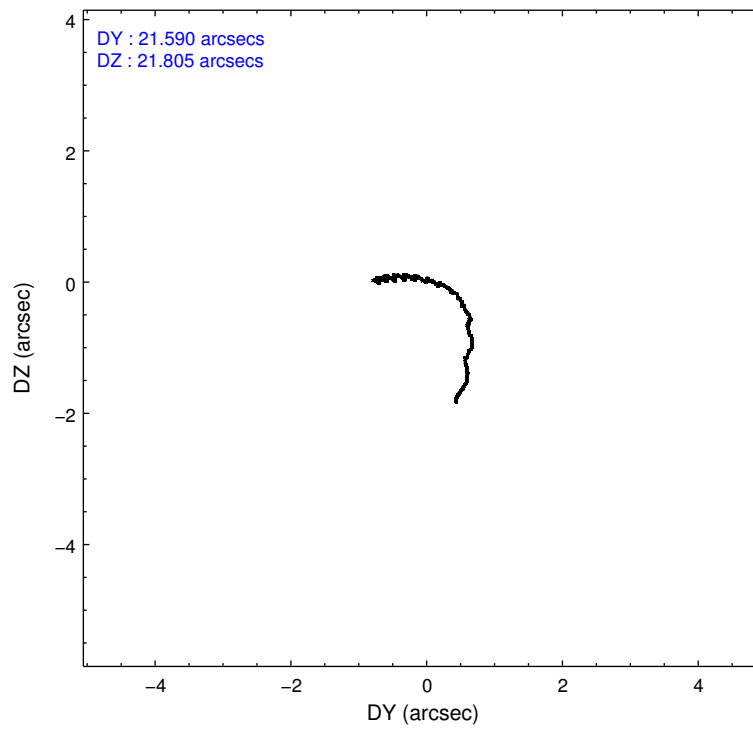
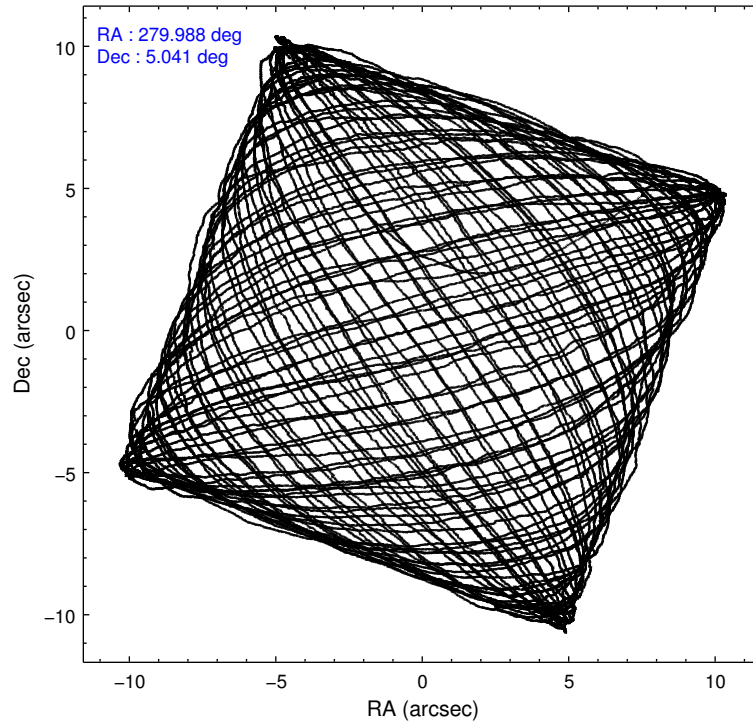
	ccd 6	ccd 7
level 1 events	513197	1163031
rejected events	37934	53391
rejected %	7%	4%

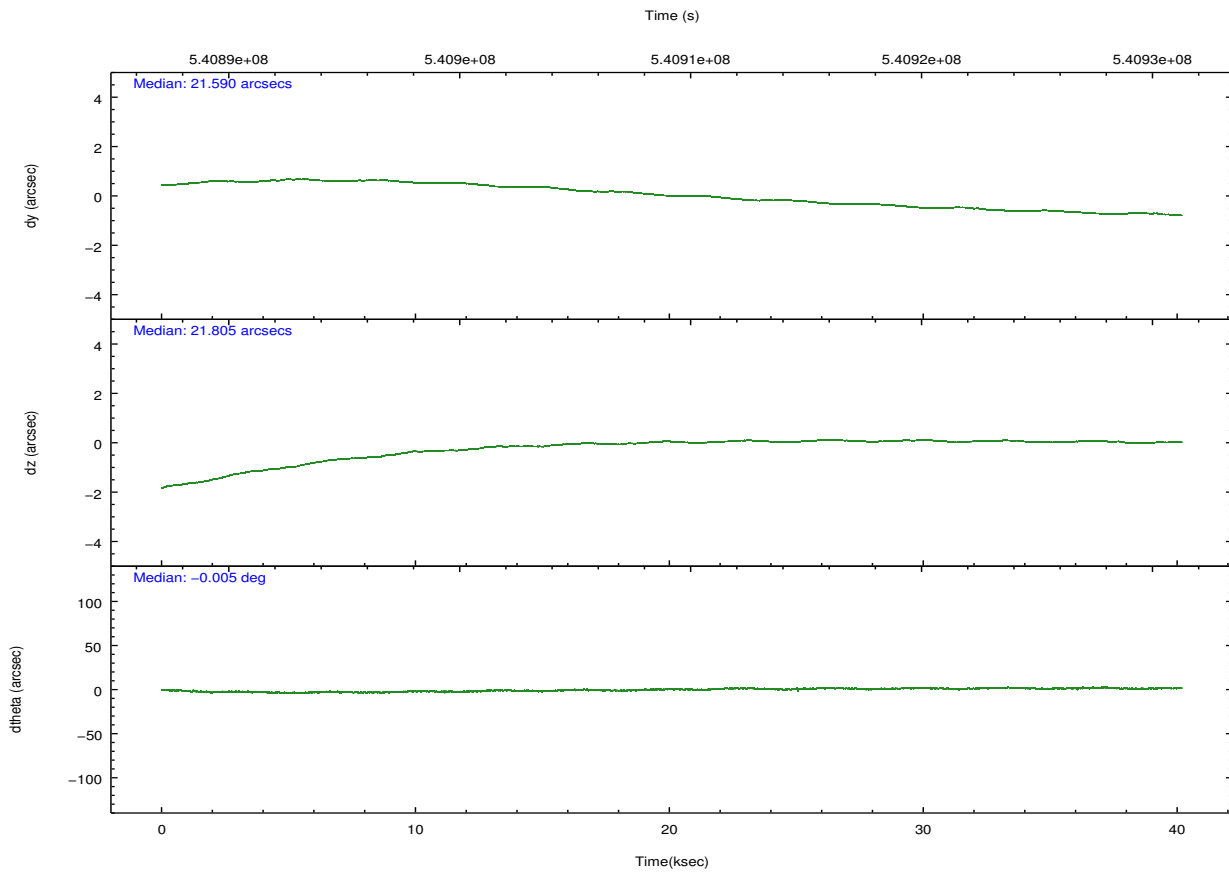
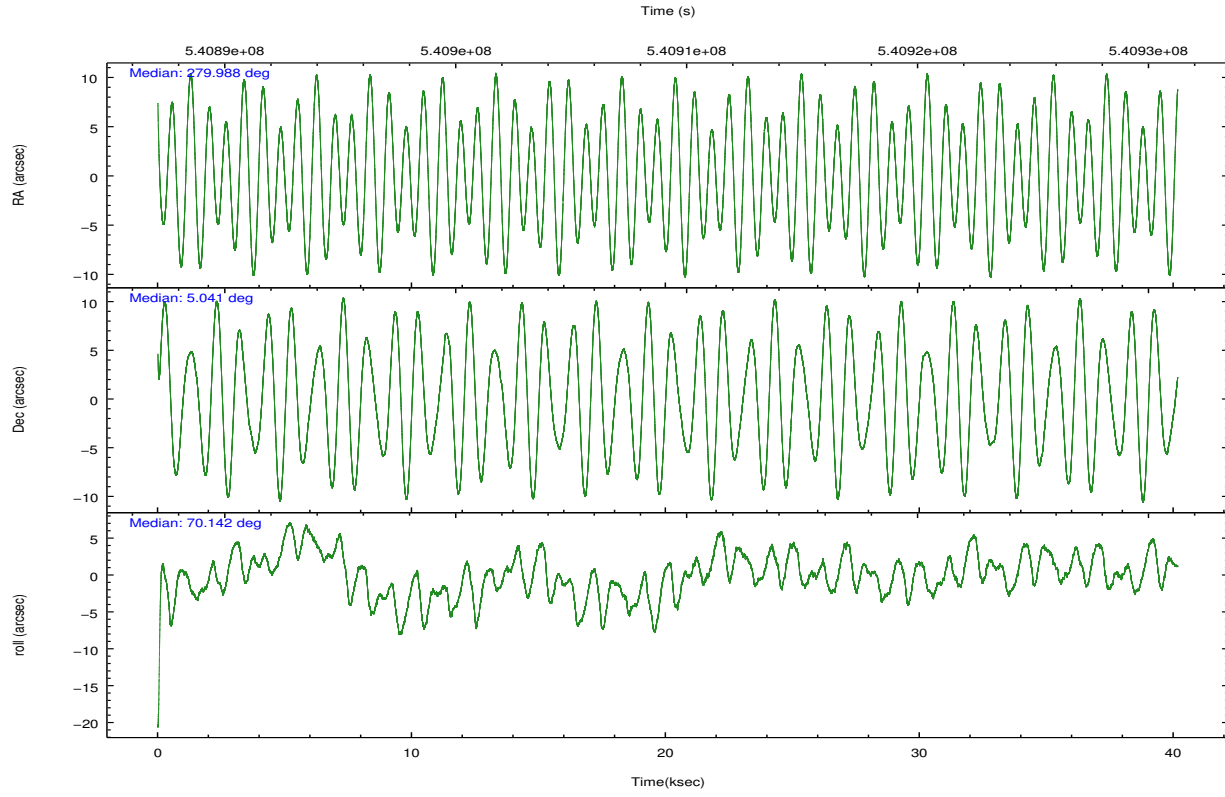
	ccd 6	ccd 7
grade 0 events	334433	281193
	65%	24%
grade 1 events	1679	3139
	0%	0%
grade 2 events	63132	258819
	12%	22%
grade 3 events	22302	119057
	4%	10%
grade 4 events	21989	119424
	4%	10%
grade 5 events	2983	19015
	0%	1%
grade 6 events	33416	331173
	6%	28%
grade 7 events	33263	31211
	6%	2%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-67	ACIS-67	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	279.993428	279.988203664206	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	5.014181	5.041138751593632	Subarray start row	1	1
[deg] Pointing Roll	69.999698	70.15678001097925	Subarray row count	134	134
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.5
[mm] SIM translation stage pos	-177.832523	-177.8324926487357			
[mm] SIM translation stage offset	-12.3	-12.30002993427212			
[s] Observation start time (MET)	540889267.184000	540887877.09936			
Observation start date	2015-02-21T07:00:00	2015-02-21T06:37:57			
[s] Observation end time (MET)	540929267.184000	540930286.98923			
Observation end date	2015-02-21T18:06:40	2015-02-21T18:24:46			
Read mode	TIMED	TIMED			

2.3 Aspect



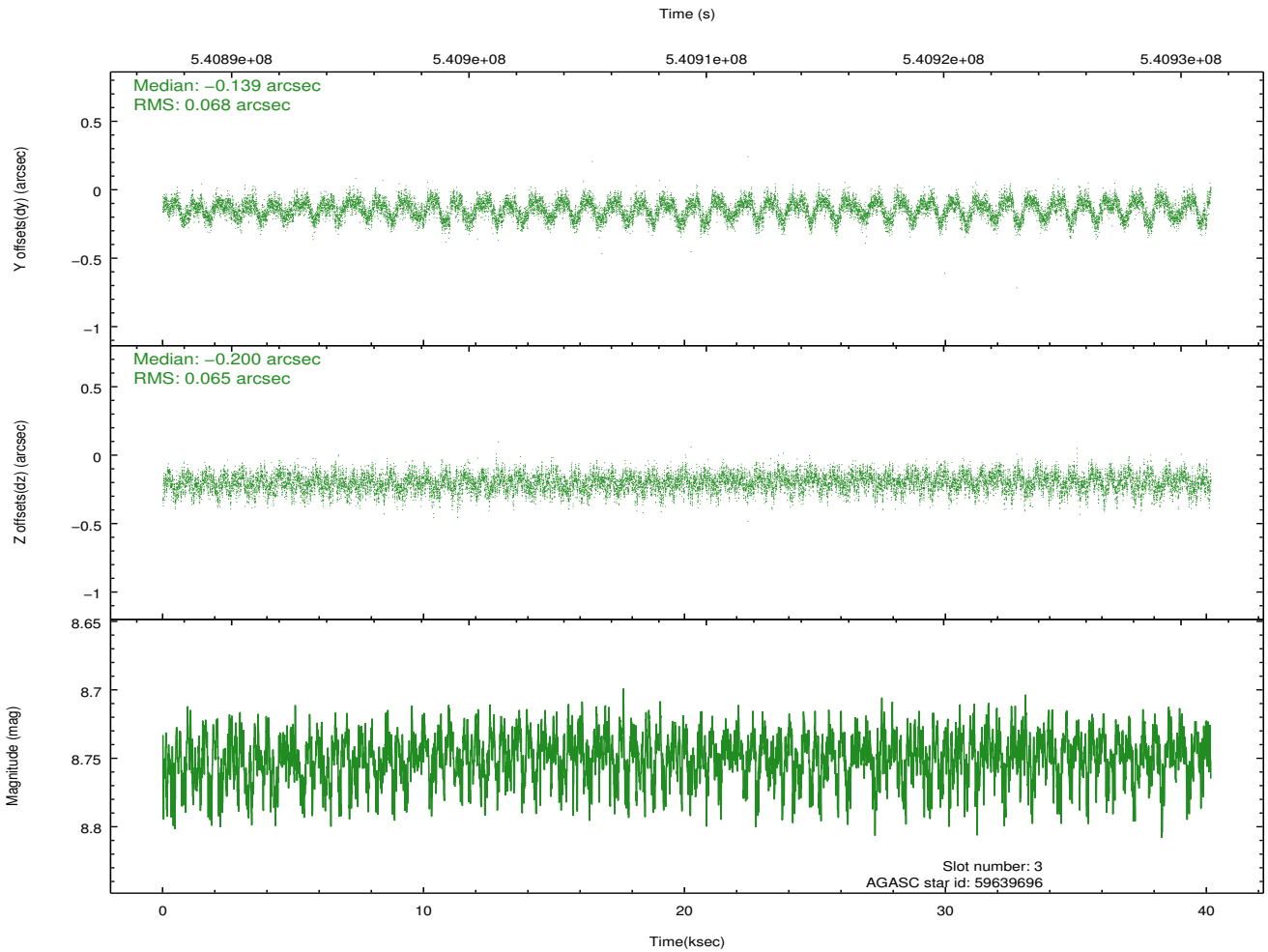
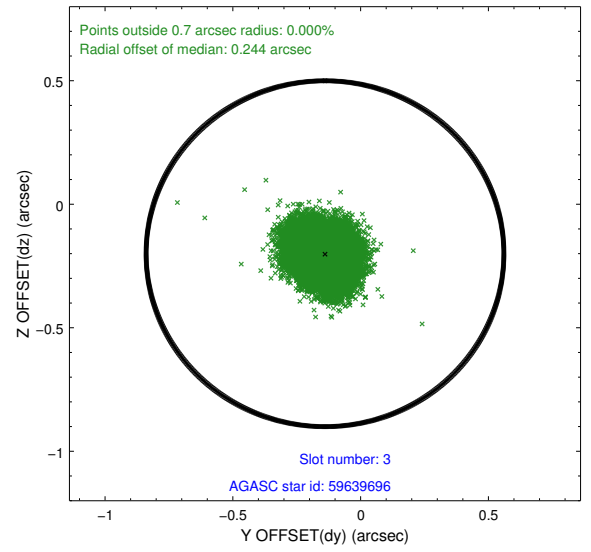
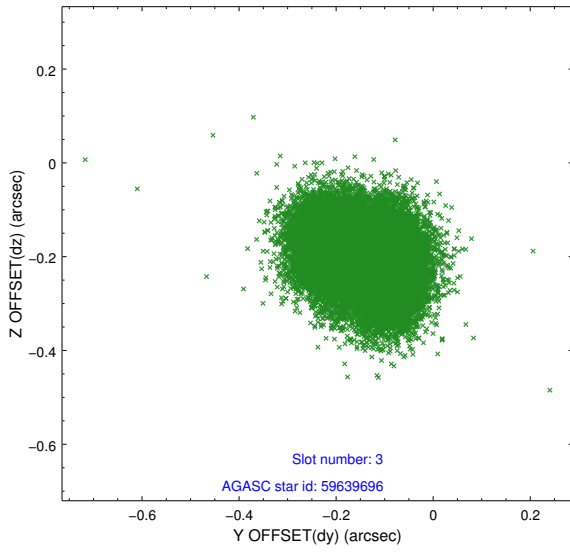


Slot Statistics

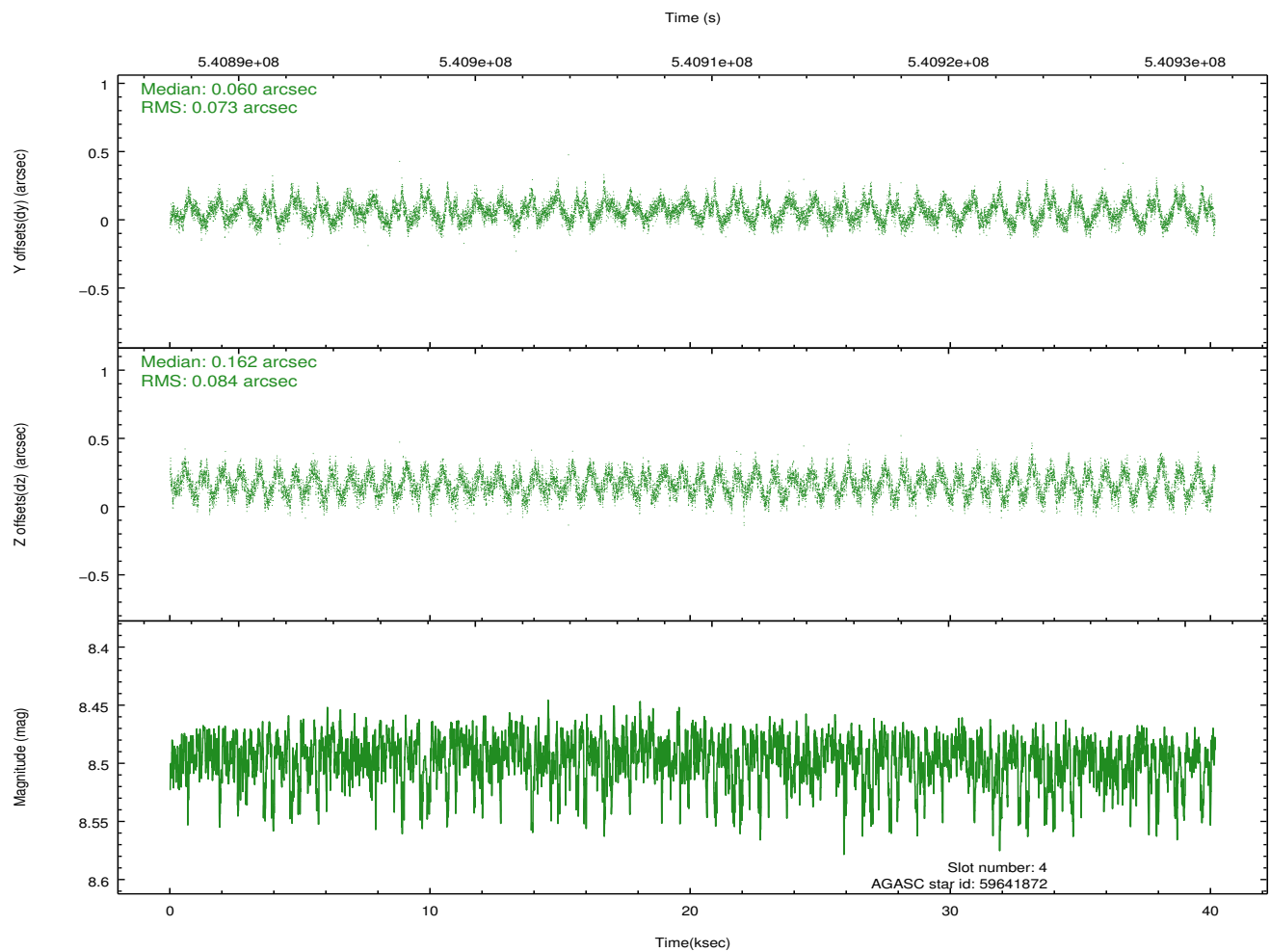
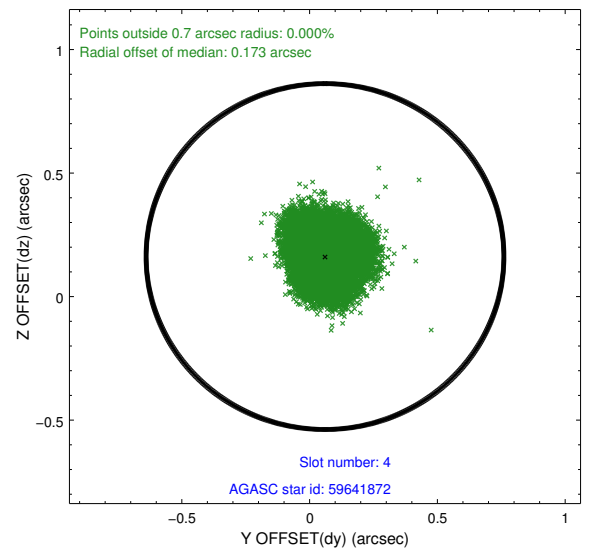
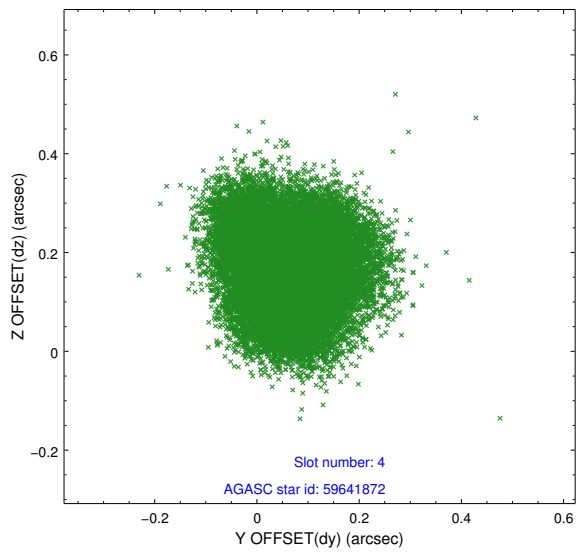
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.95	9796	-0.235	-0.462	0.015	0.066	0.000000	0.000000	-774.02	-1996.73
1	FID		ACIS-S-4	7.02	9797	0.389	0.235	0.014	0.022	0.000000	0.000000	2139.83	-87.57
2	FID		ACIS-S-5	7.10	9795	-0.187	0.233	0.020	0.050	0.000000	0.000000	-1826.84	-93.97
3	GUIDE	used	59639696	8.75	19575	-0.139	-0.200	0.101	0.157	279.720542	5.337930	760.73	1317.90
4	GUIDE	used	59641872	8.49	19589	0.060	0.162	0.122	0.181	279.855622	4.834479	-776.55	243.36
5	GUIDE	used	59642696	8.90	19580	-0.123	0.434	0.123	0.202	280.765301	5.225168	1662.62	-2339.08
6	GUIDE	used	59648496	8.08	19588	0.255	0.052	0.077	0.128	279.571897	4.964470	-684.99	1359.54
7	GUIDE	used	59638848	7.59	19591	-0.045	-0.456	0.096	0.152	279.399276	5.260505	105.39	2304.82

2.4 Star Slots

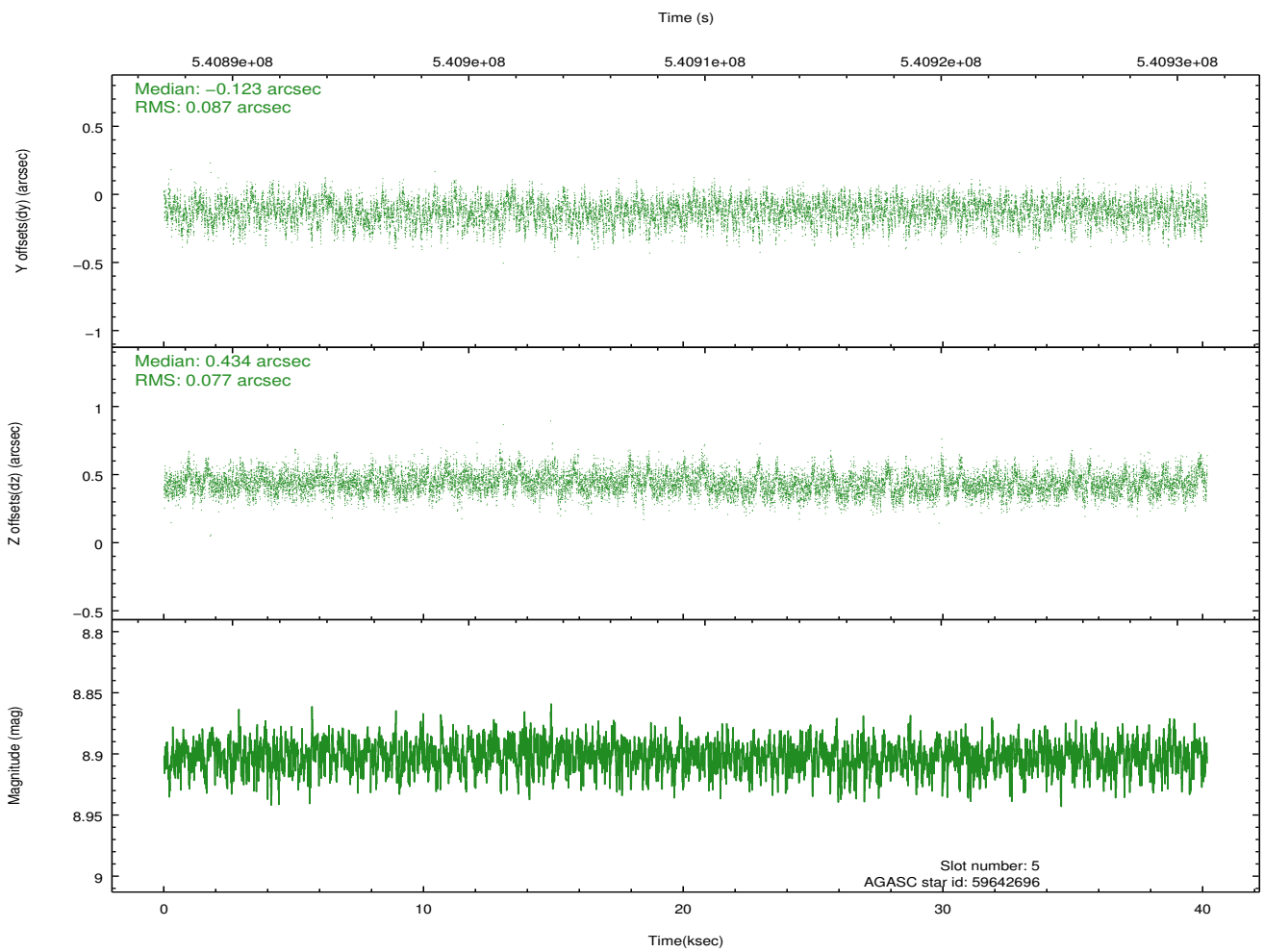
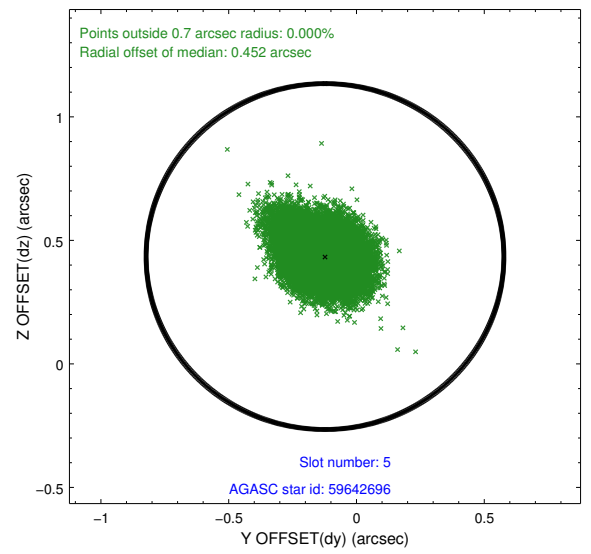
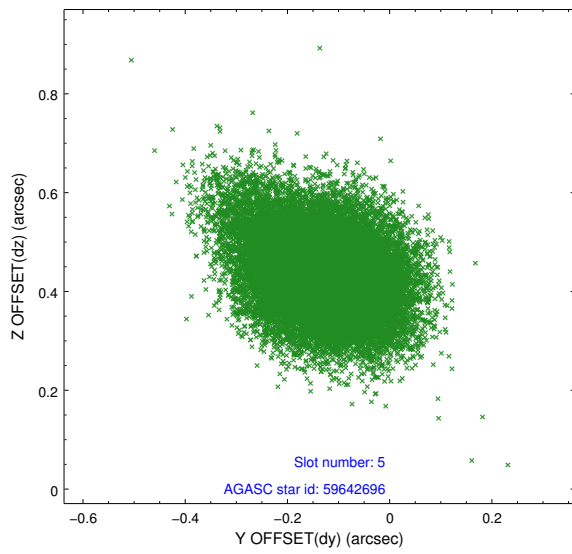
2.4.1 Slot 3



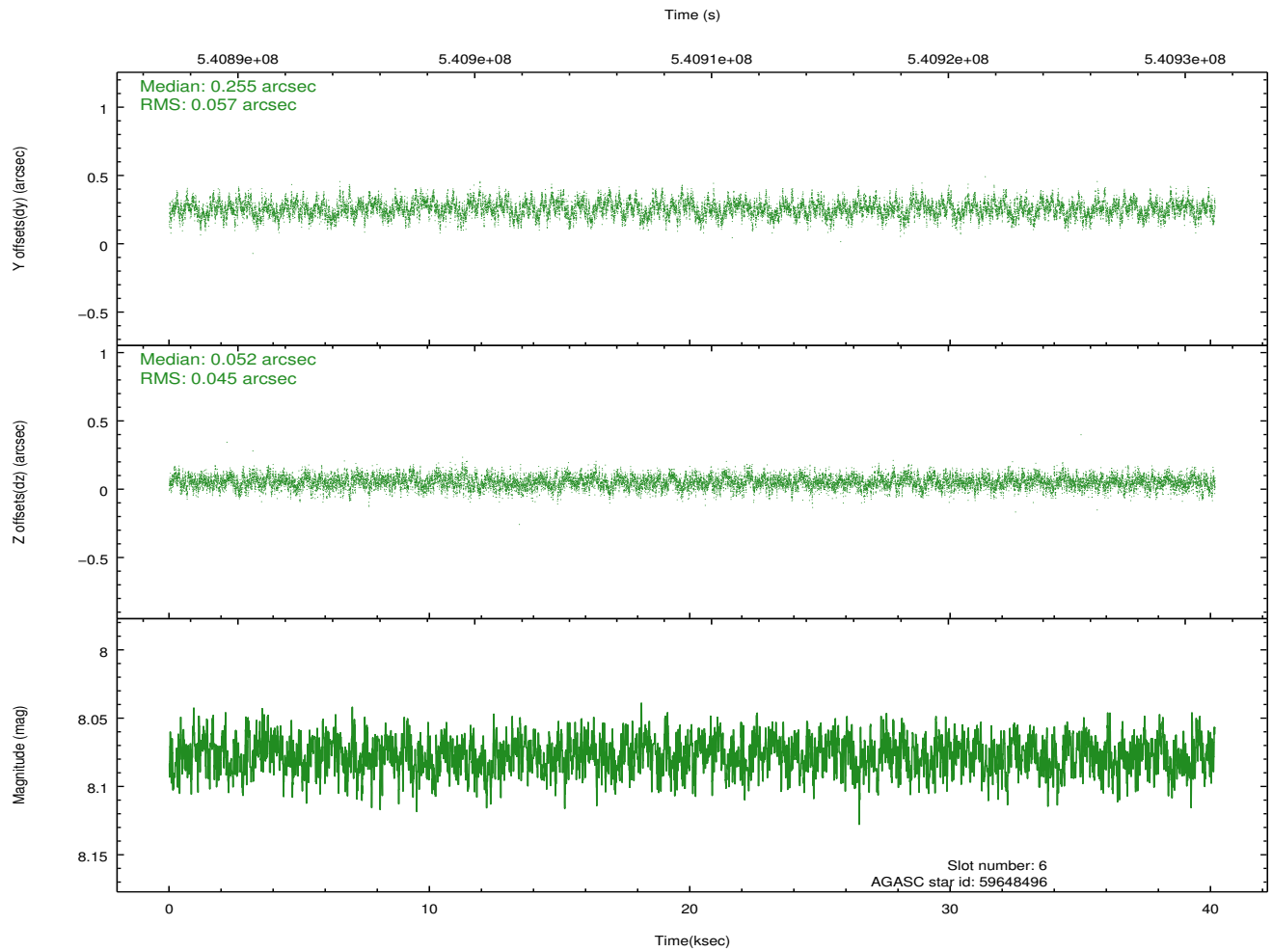
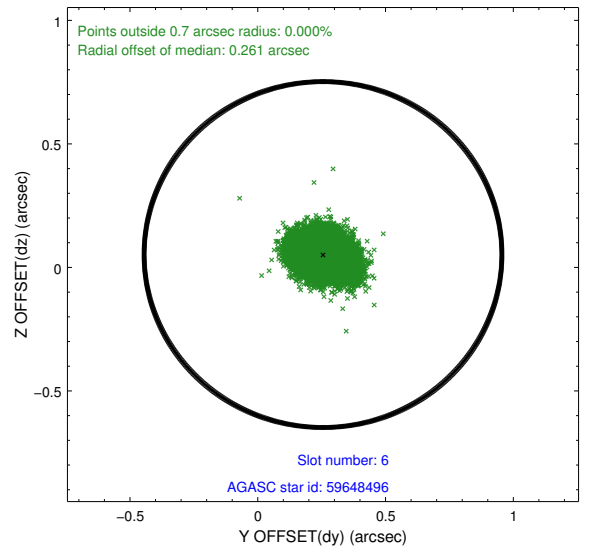
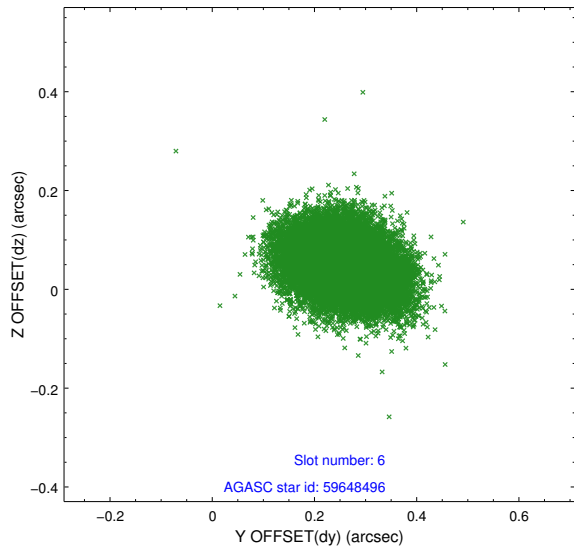
2.4.2 Slot 4



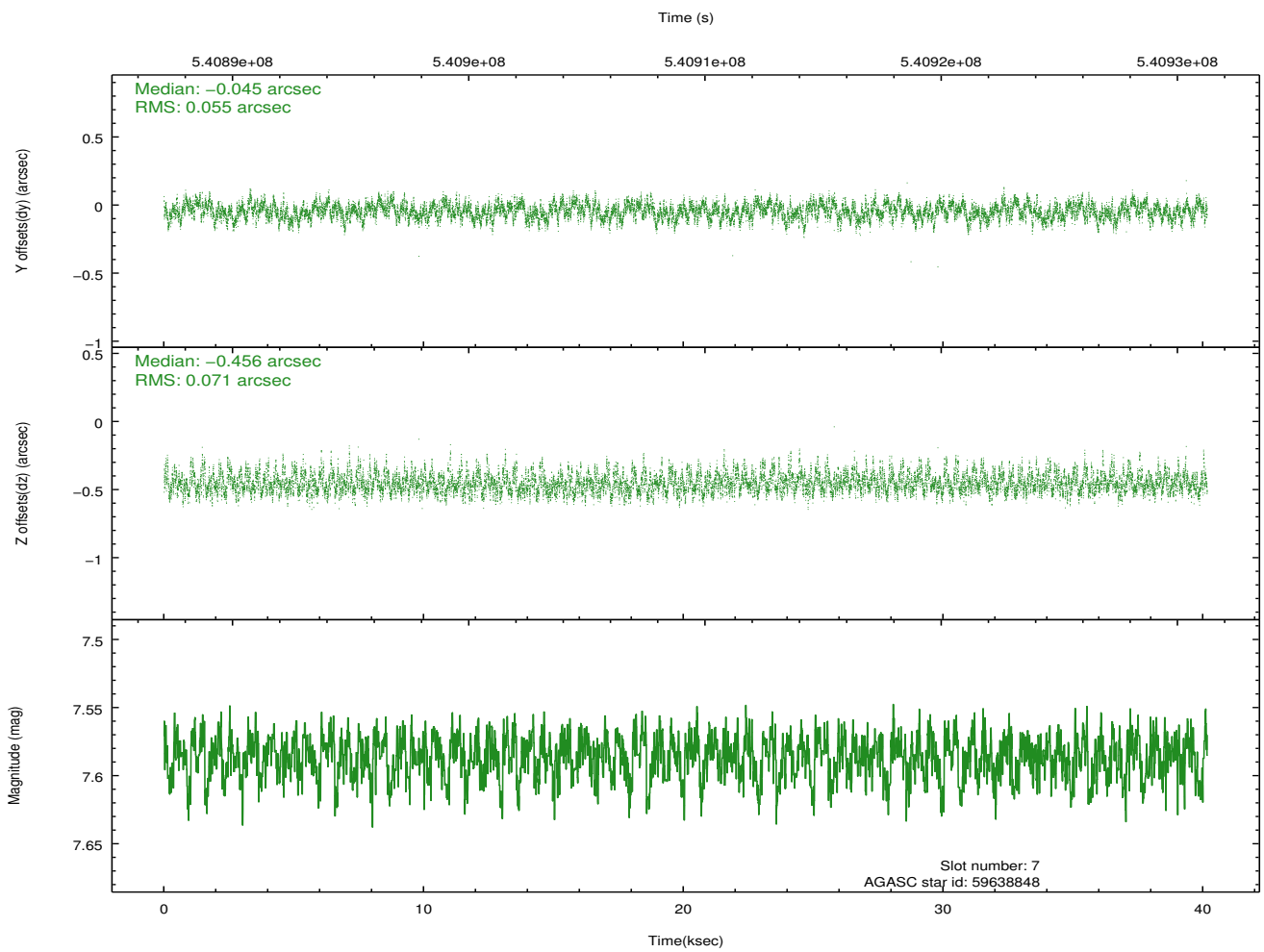
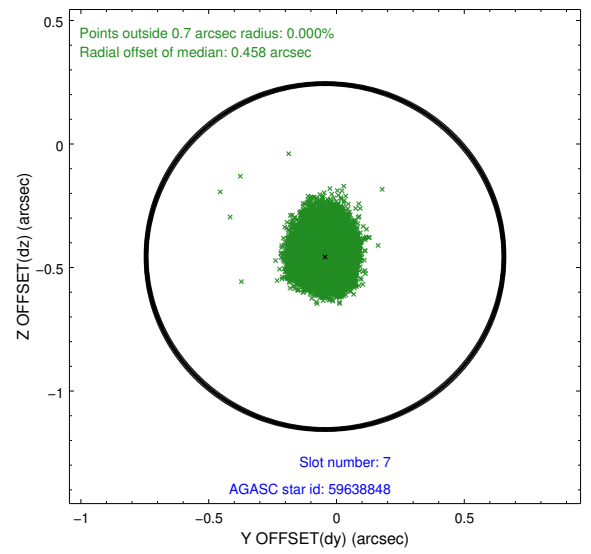
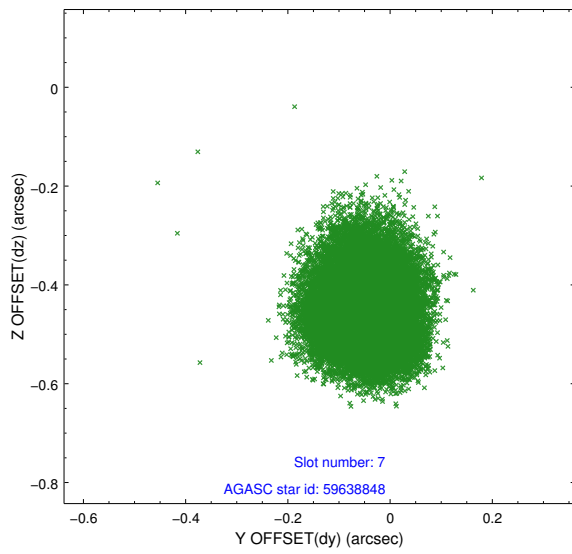
2.4.3 Slot 5



2.4.4 Slot 6

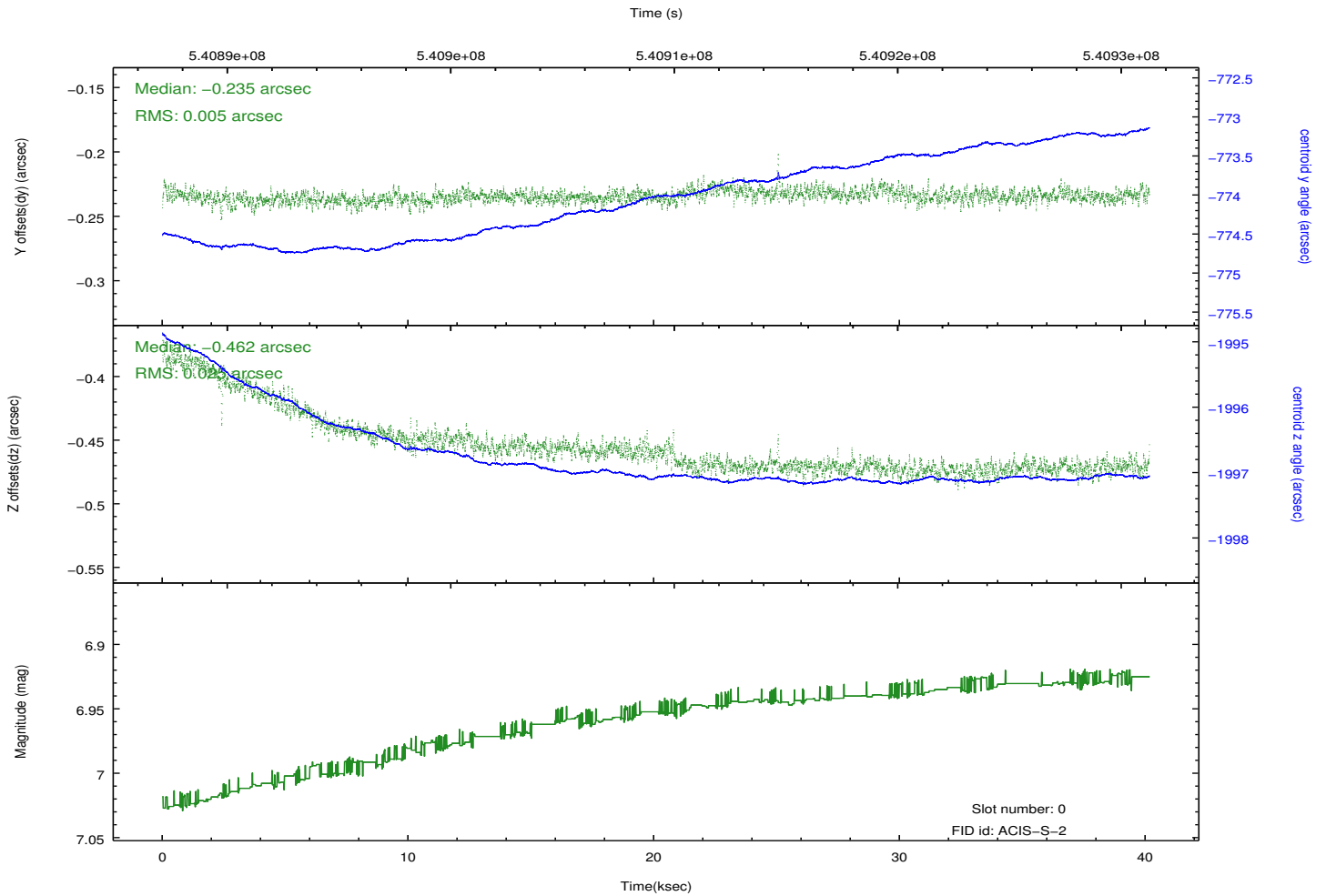
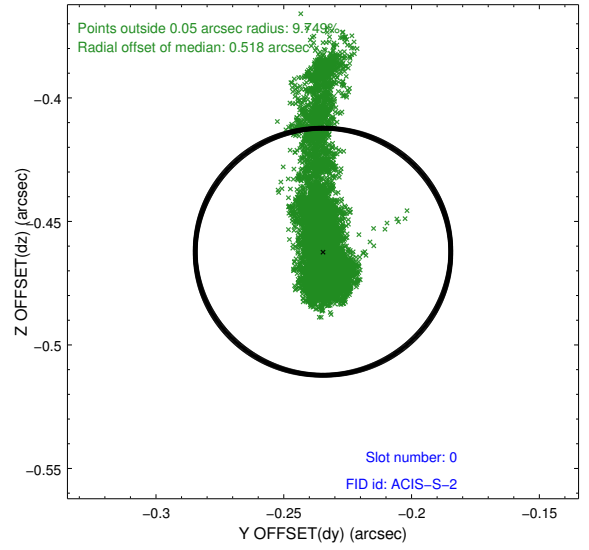
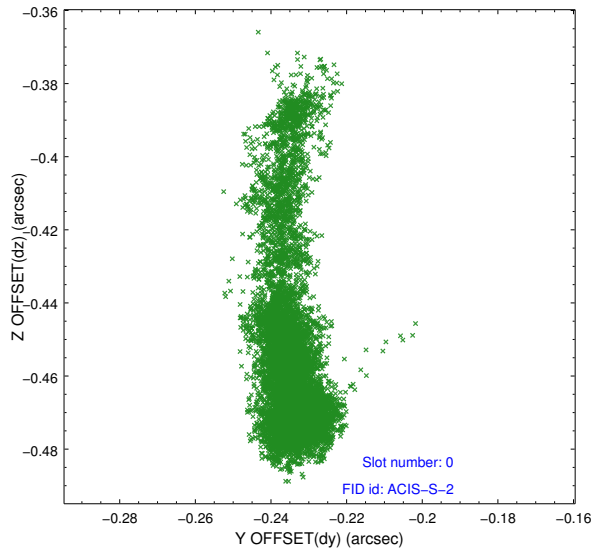


2.4.5 Slot 7

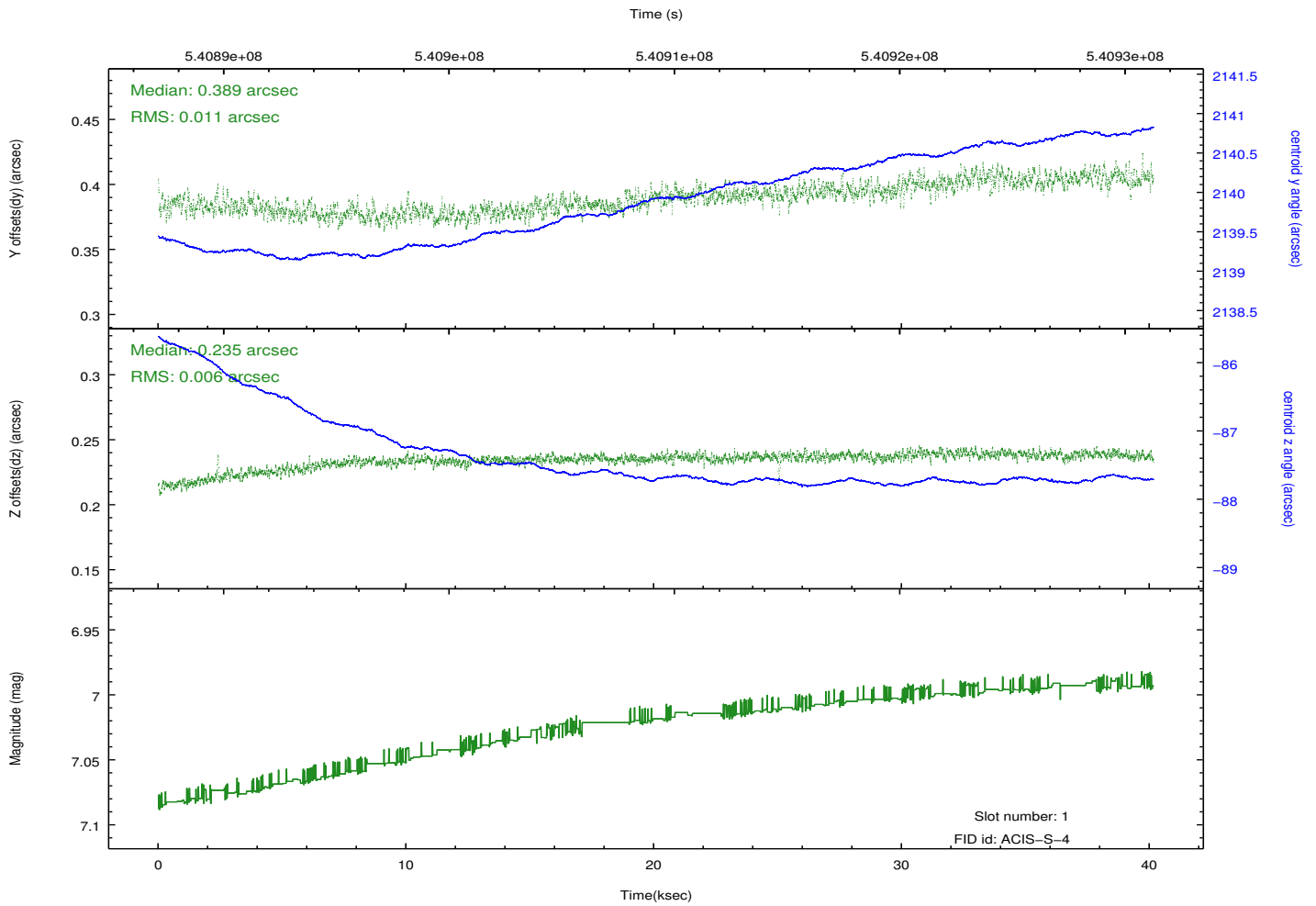
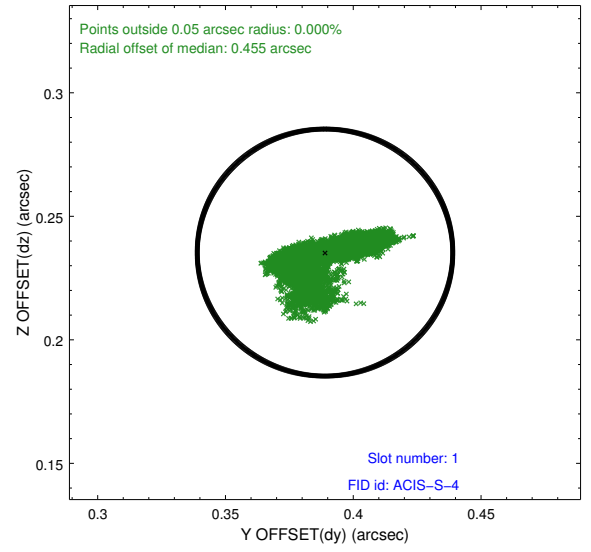
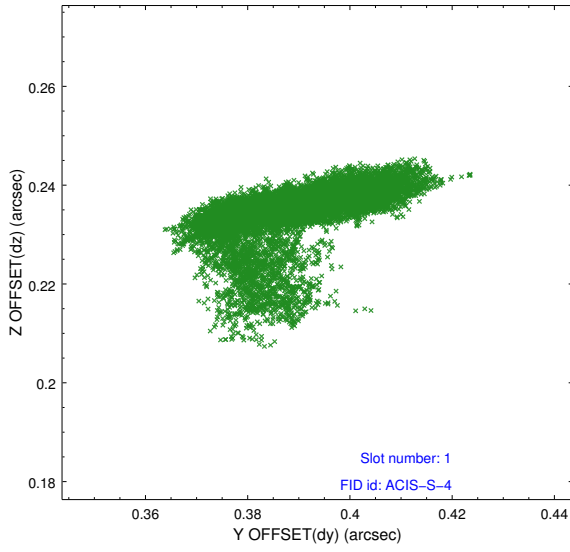


2.5 FID Slots

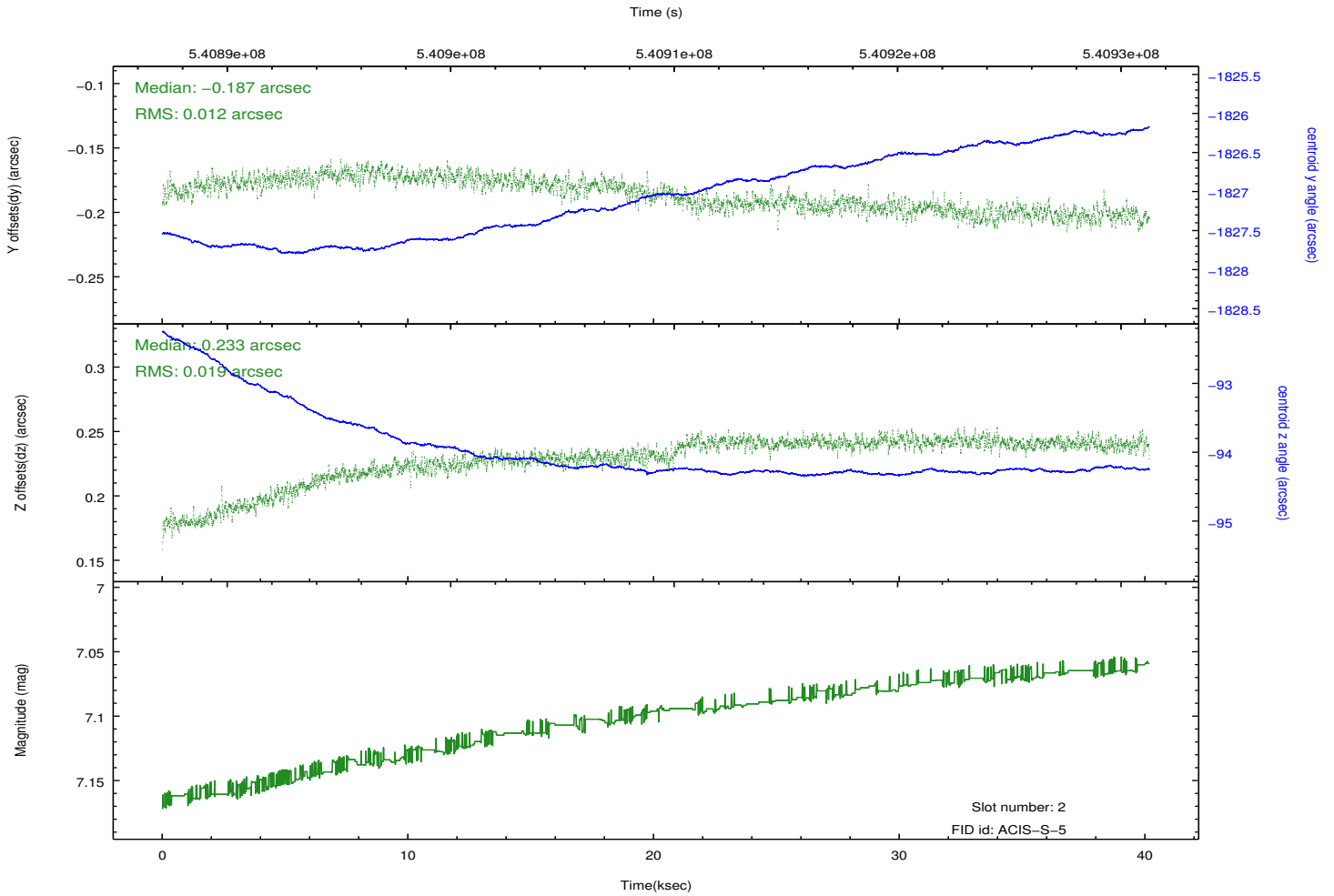
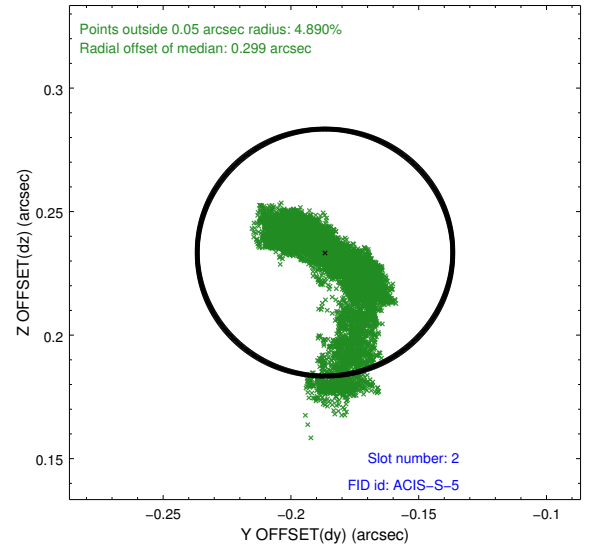
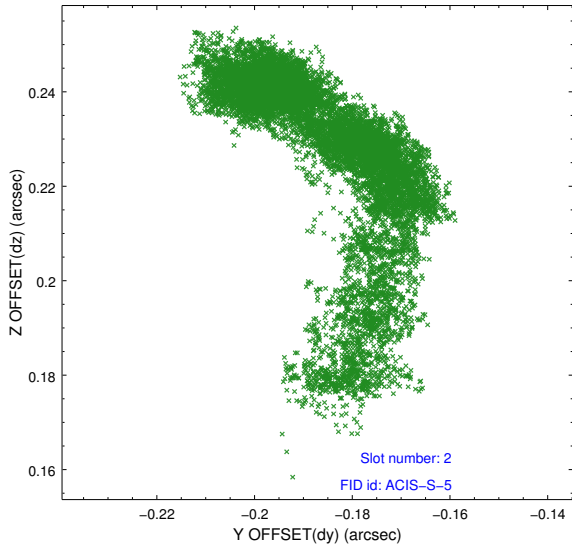
2.5.1 Slot 0



2.5.2 Slot 1

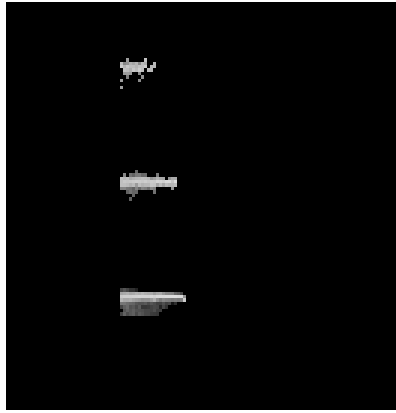


2.5.3 Slot 2

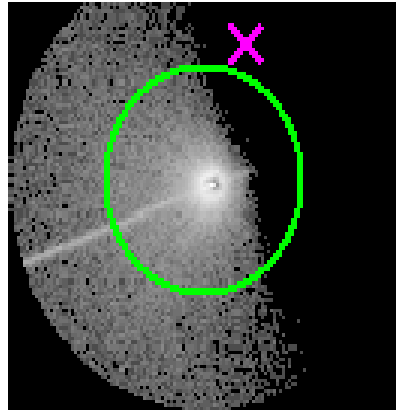


3 Gratings

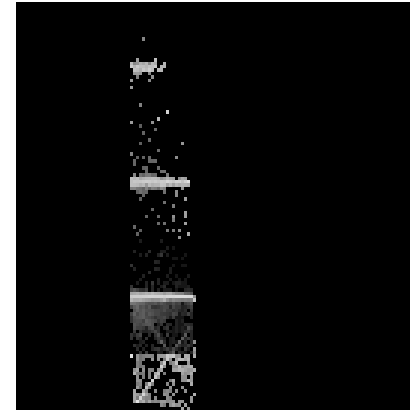
3.1 HEG Arm



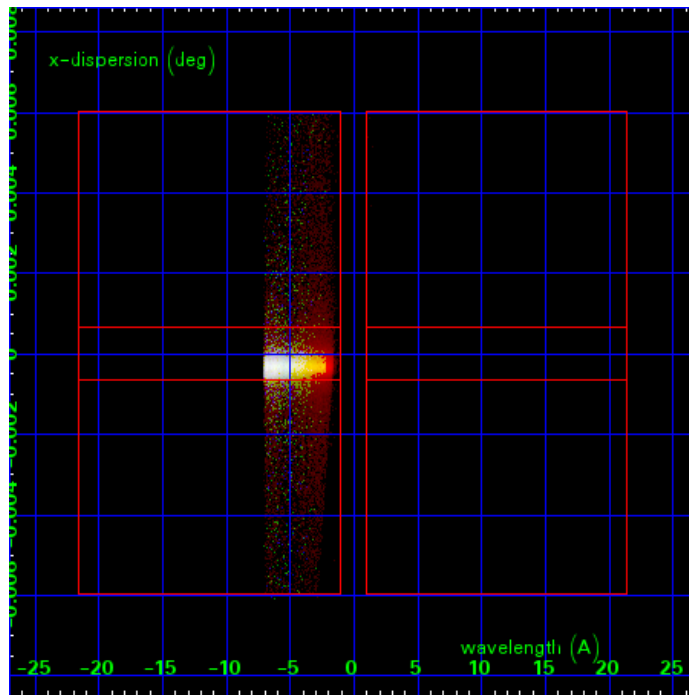
HEG Order Sort 123



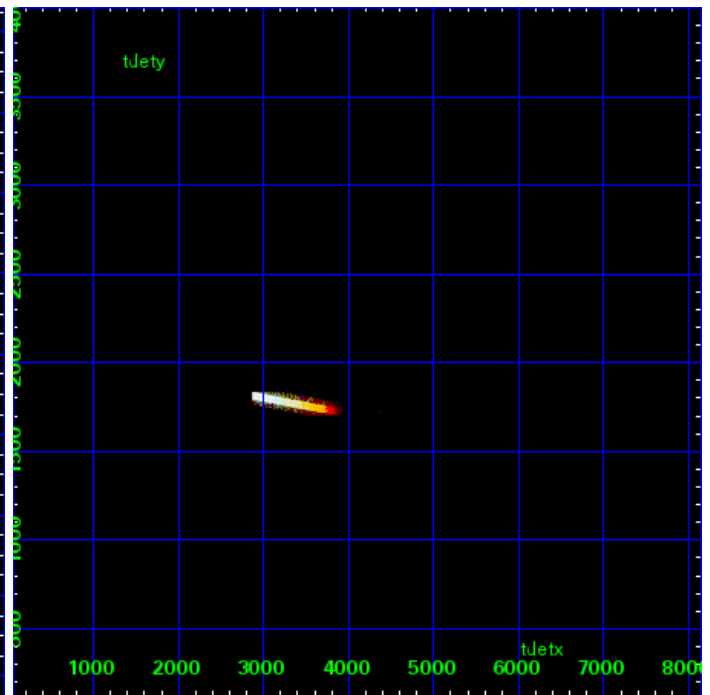
HEG Zero Order



HEG Order Sort ALL

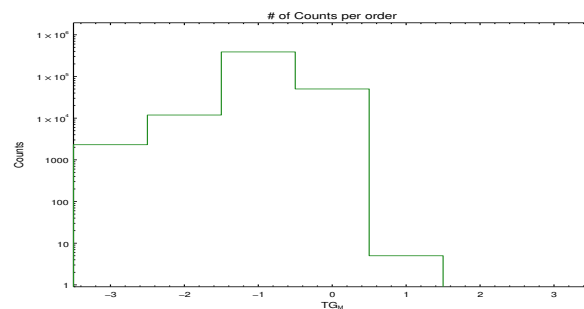


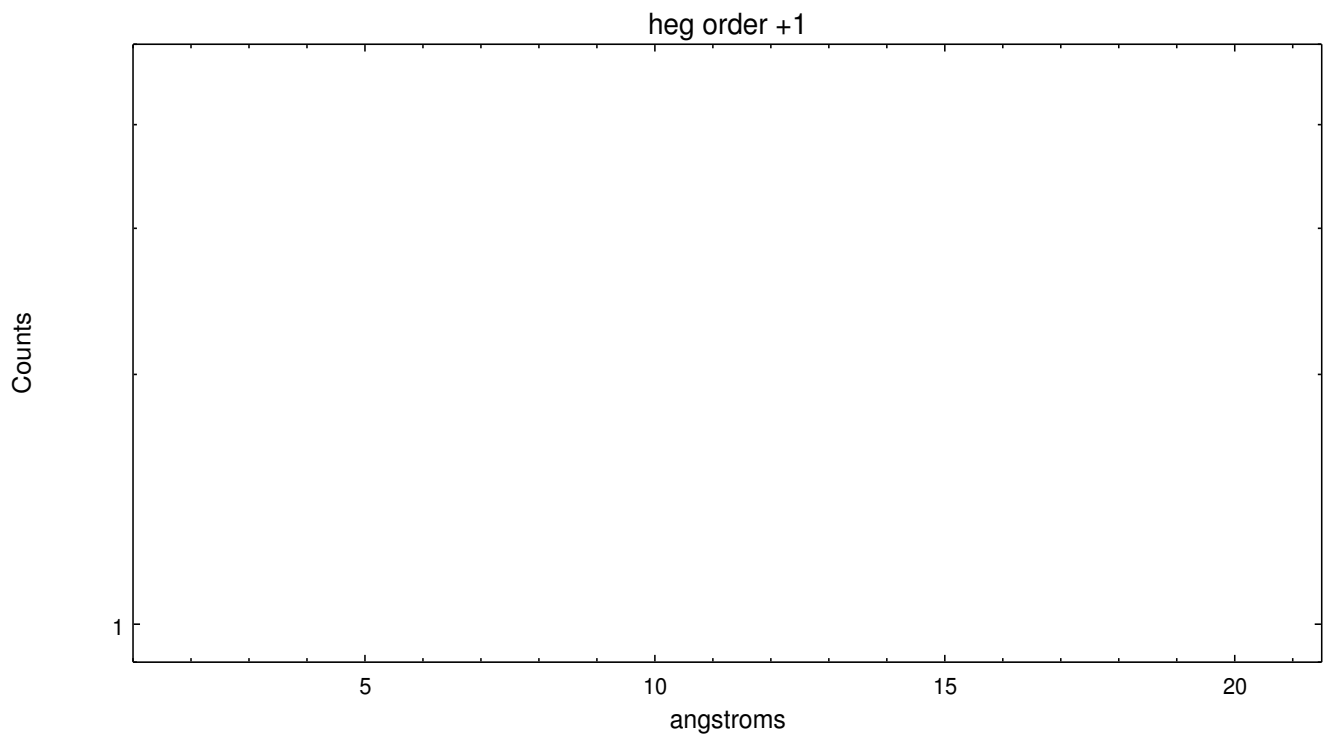
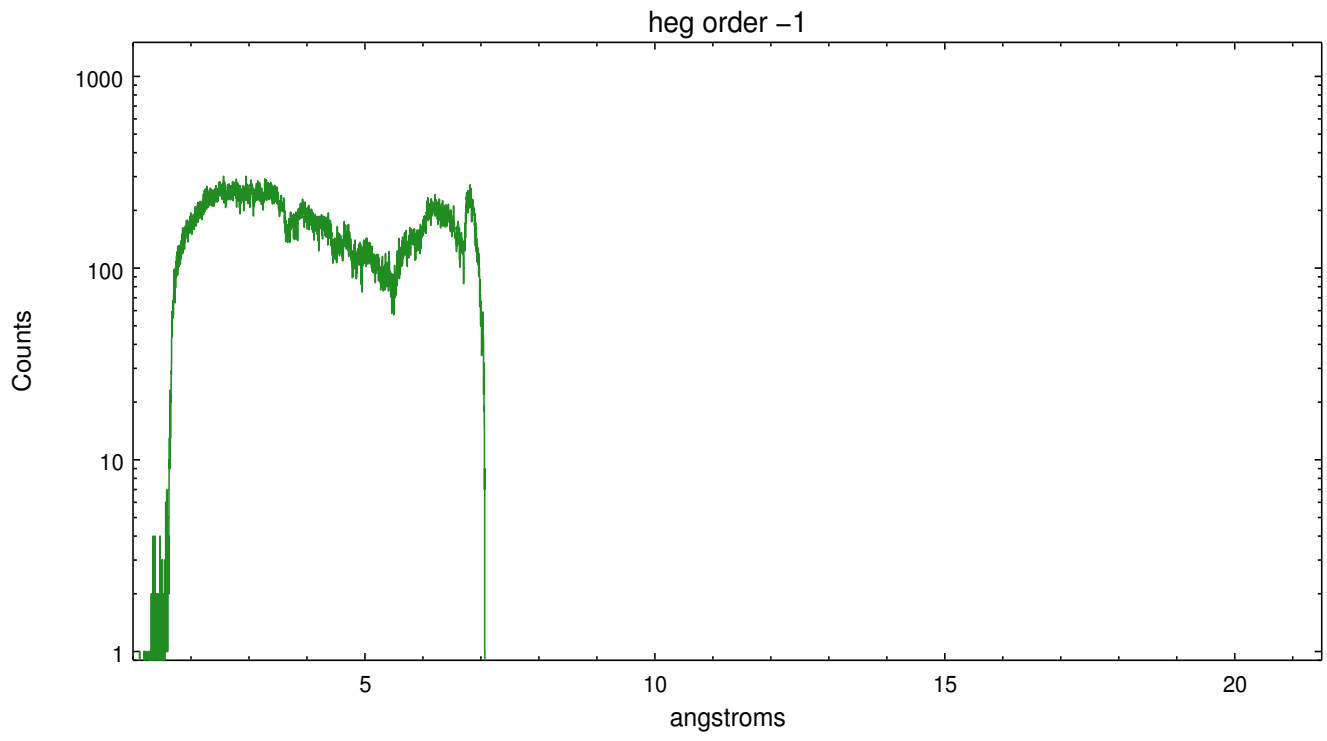
Spot Image HEG



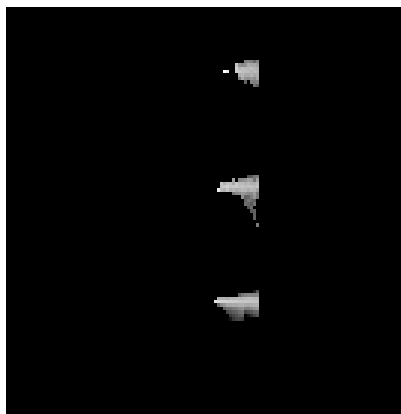
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2308	11887	388215	50167	5	0	0

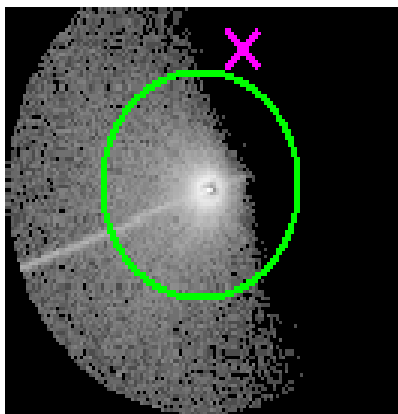




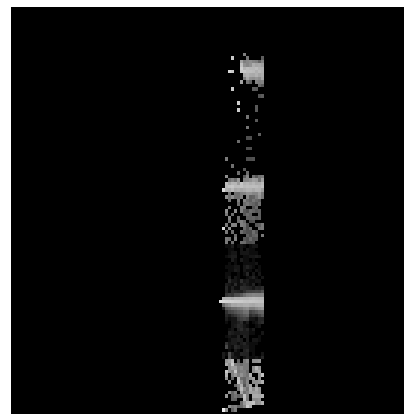
3.2 MEG Arm



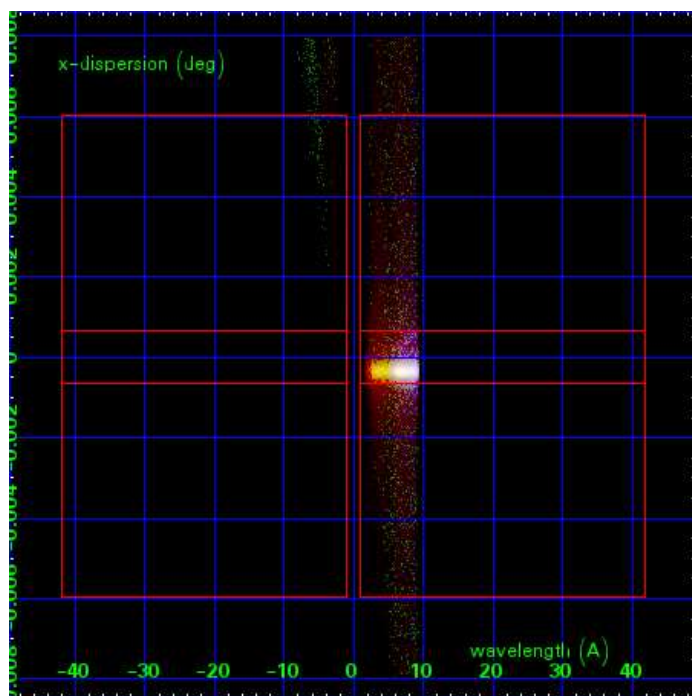
MEG Order Sort 123



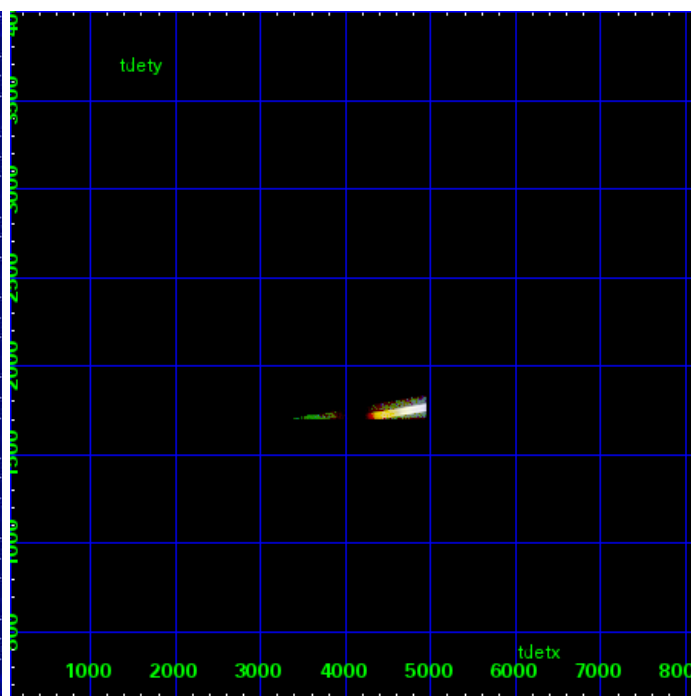
MEG Zero Order



MEG Order Sort ALL

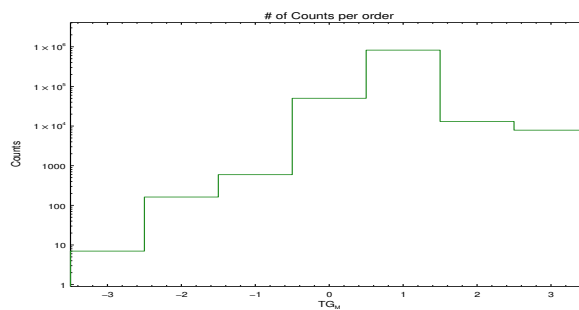


Spot Image MEG

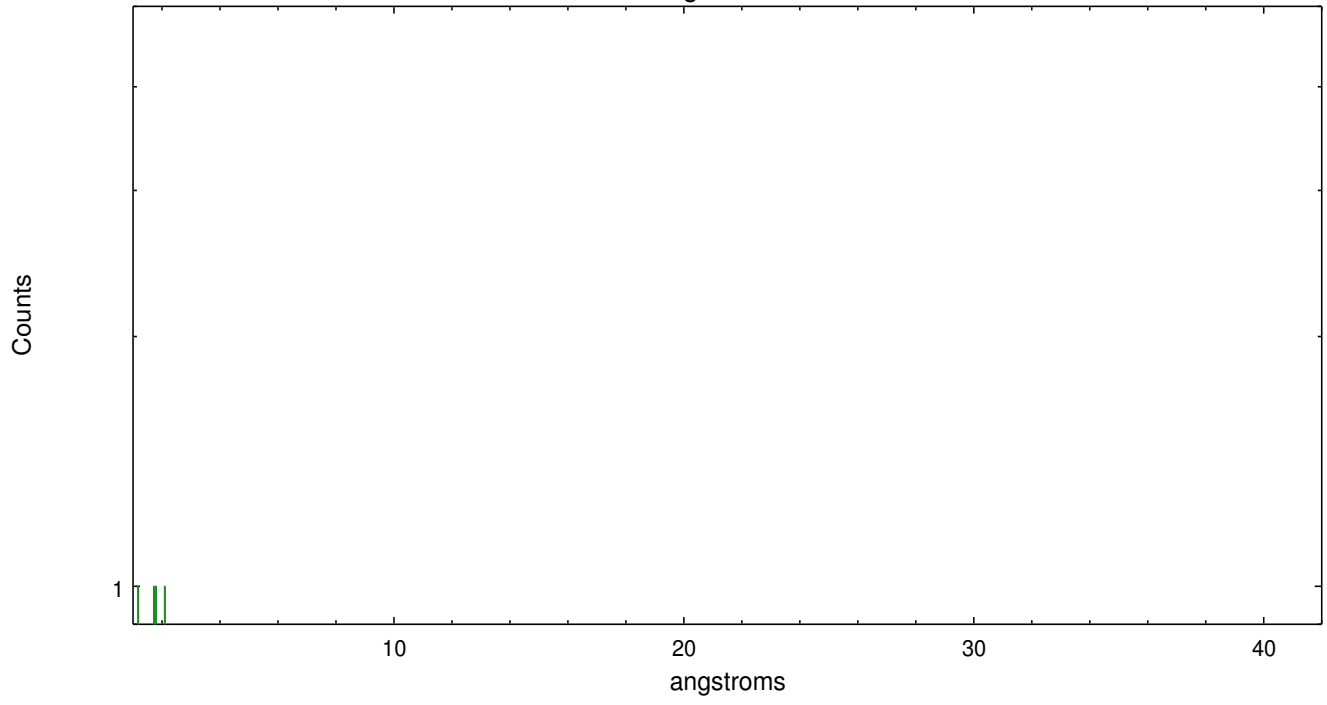


Full Detector MEG

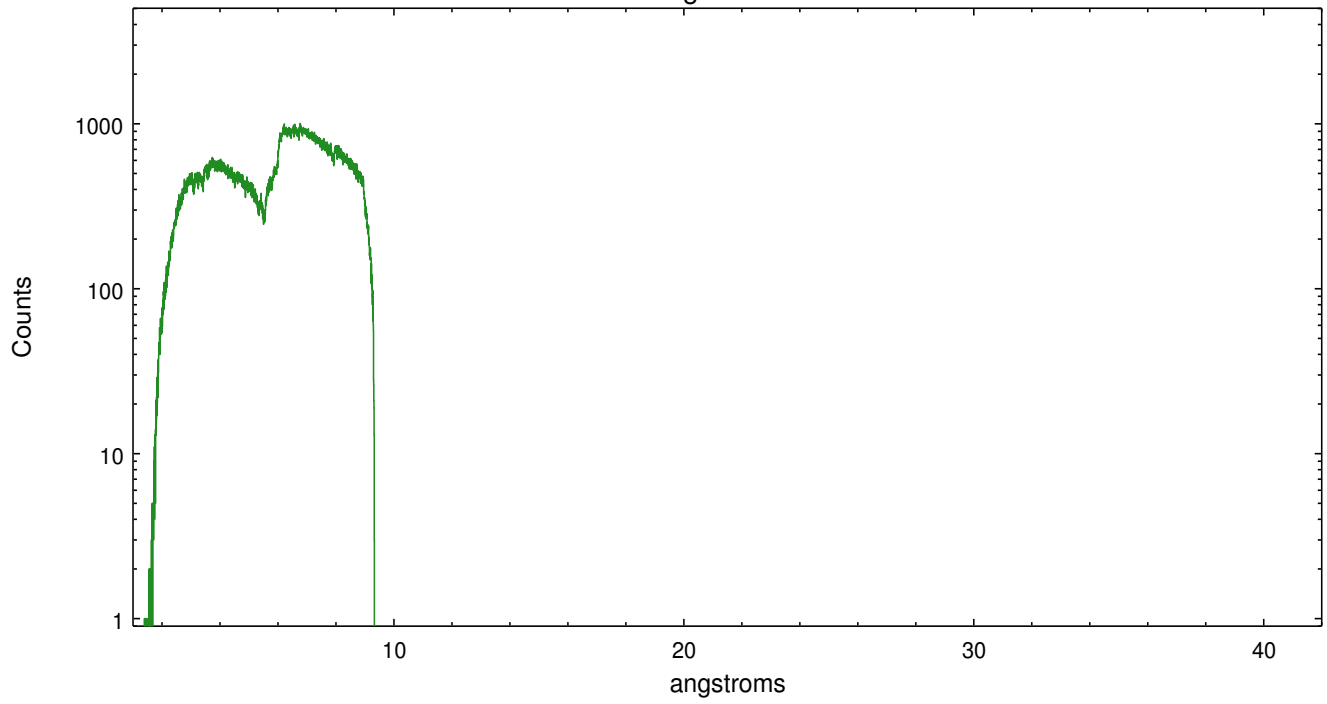
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7	162	594	50167	822705	13055	7871



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.03.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.092905404329

A.2 Comments

Zeroth order piled up. Both findzo and tgdetect failed. Source very near the edge of 134-column subarray. Only one arm of both meg and heg falls on the detector and both are piled up. The coordinates used for the zeroth order position are those specified by the user. ===== The slot 0 radial offset of 0.518 arcsec and the slot 1 radial offset of 0.455 arcsec are acceptable for this observation with a SIM Z offset of -12.3mm.