

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 14438 - L2 Version 1
Chandra X-Ray Center

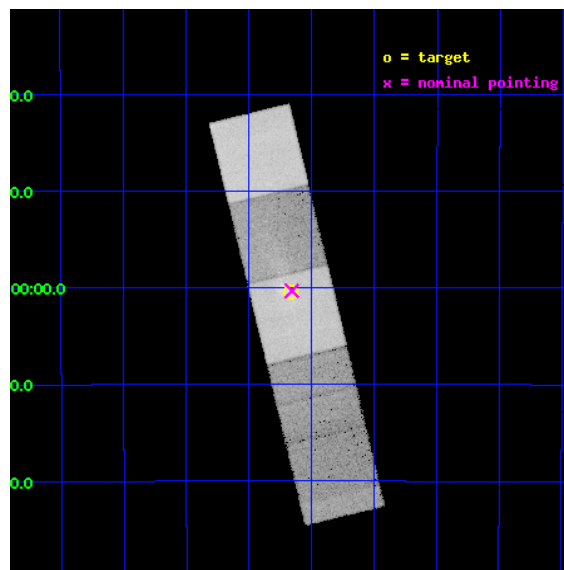
L2 Processing Date : May 18 2012

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1 Front

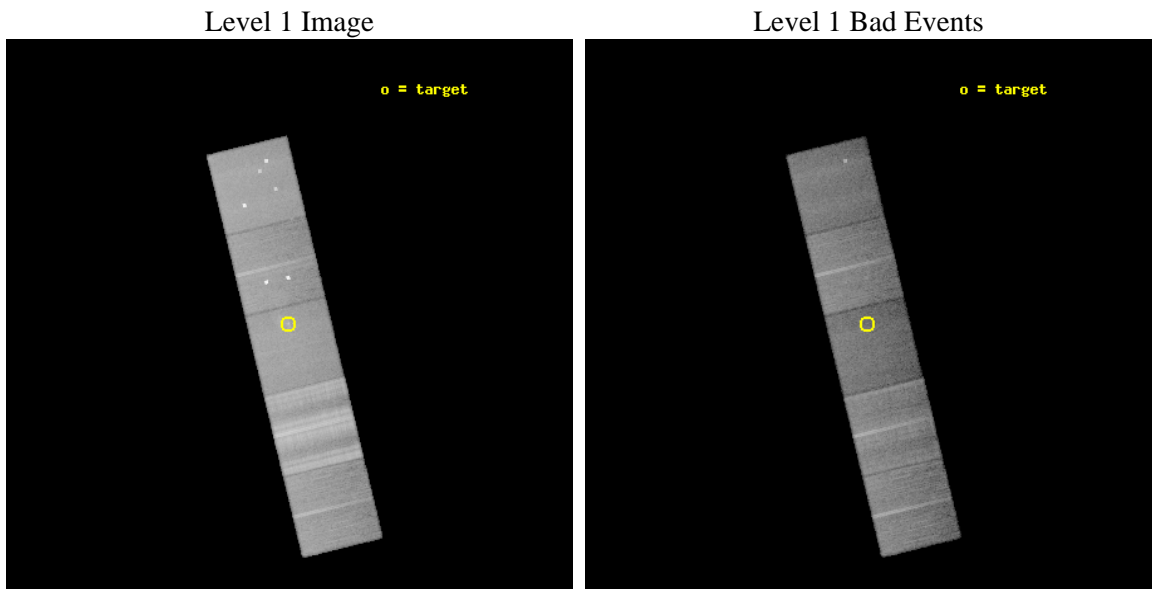
seq_num	601012	Sequence number
obs_id	14438	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41426653291	Nominal RA [deg]
dec_nom	-29.00561509732	Nominal Dec [deg]
roll_nom	76.405467776869	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25792.000198364	Sum of GTIs [s]
livetime	25455.008727978	Livetime [s]
ontime5	25792.000198364	Sum of GTIs [s]
ontime6	25792.000198364	Sum of GTIs [s]
ontime7	25792.000198364	Sum of GTIs [s]
ontime8	25792.000198364	Sum of GTIs [s]
ontime9	25792.000198364	Sum of GTIs [s]
l2events	335423	Number of level 2 events



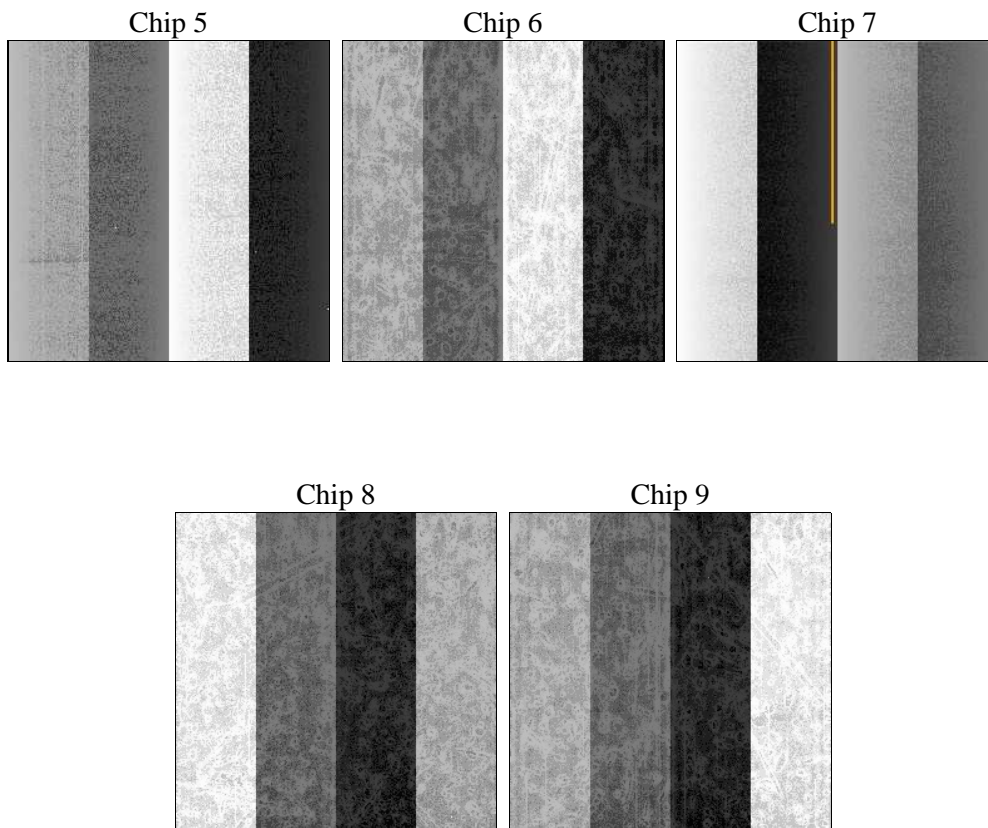
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25734.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	25792.000198364	Sum of GTIs [s]
caldsver	4.4.9	 	ontime5	25792.000198364	Sum of GTIs [s]
date	2012-05-18T22:09:47	Date and time of file creation	ontime6	25792.000198364	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25792.000198364	Sum of GTIs [s]
			ontime8	25792.000198364	Sum of GTIs [s]
			ontime9	25792.000198364	Sum of GTIs [s]
			l1events	1382941	Number of level 1 events

2.1.4 Events

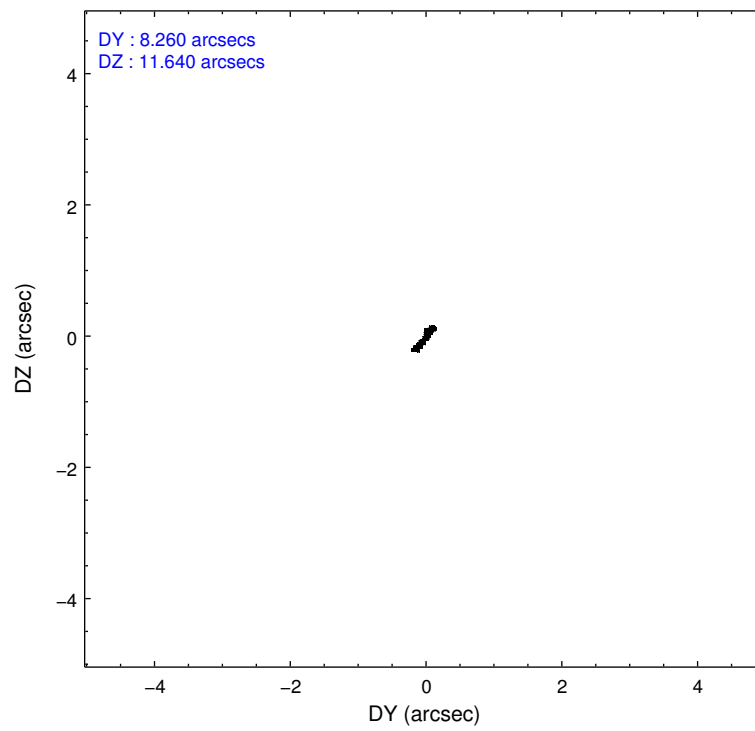
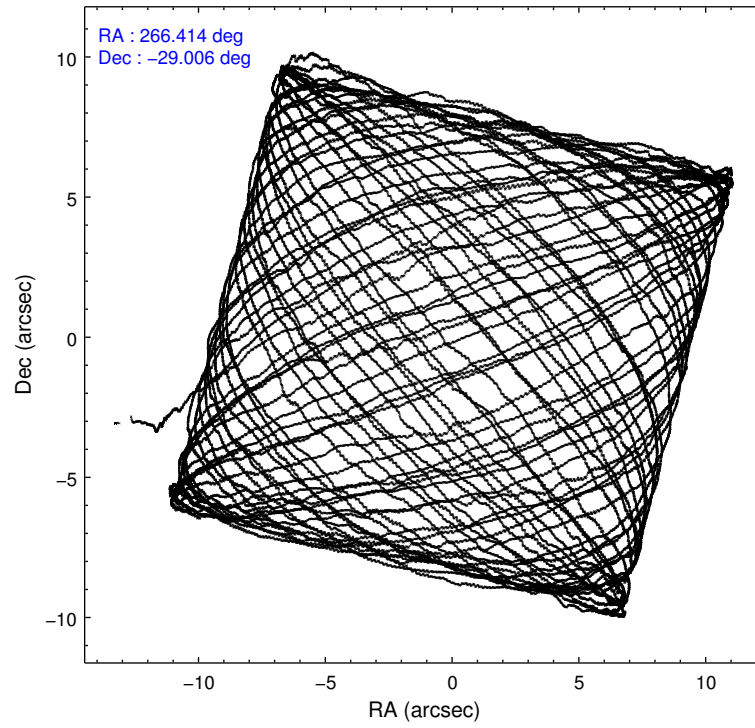
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	288627	241907	242125	406192	204090
rejected events	137567	186589	119197	201437	177257
rejected %	47%	77%	49%	49%	86%

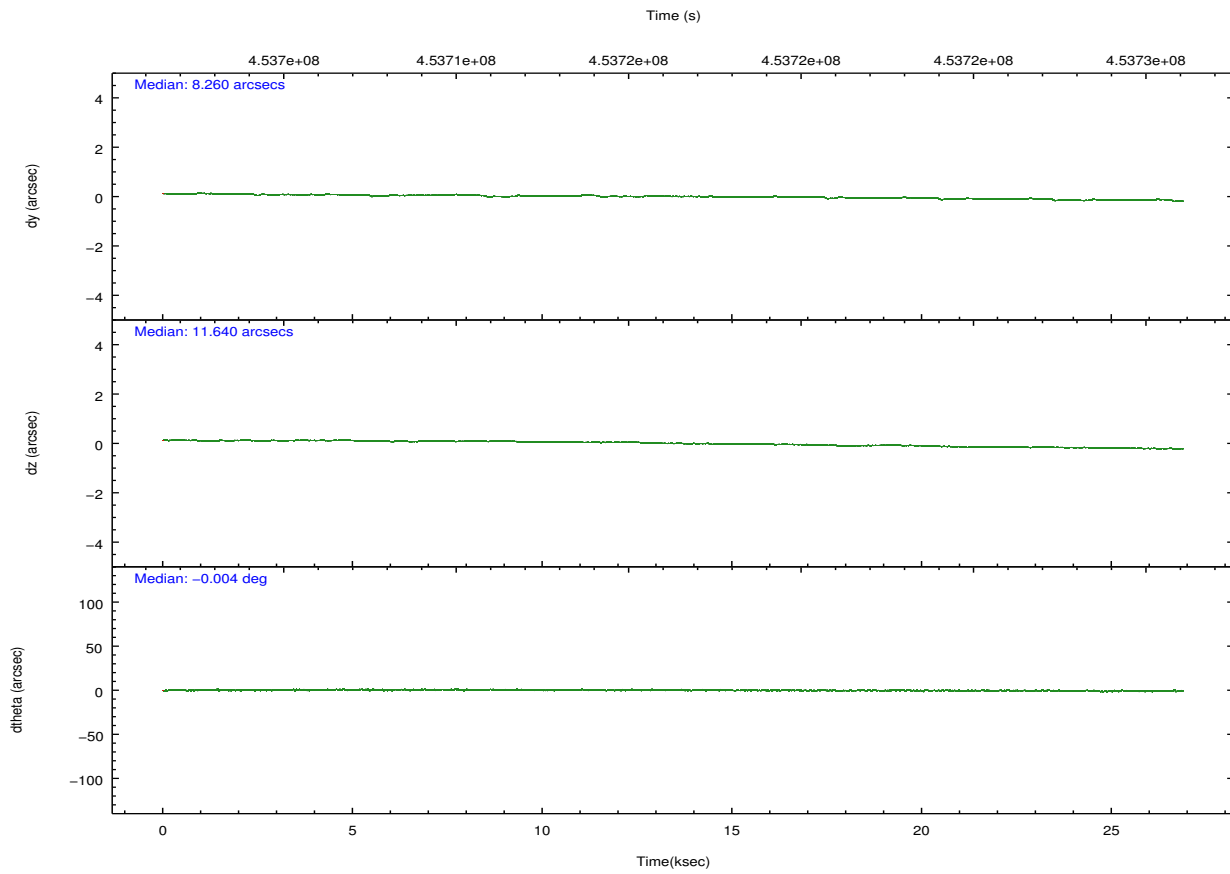
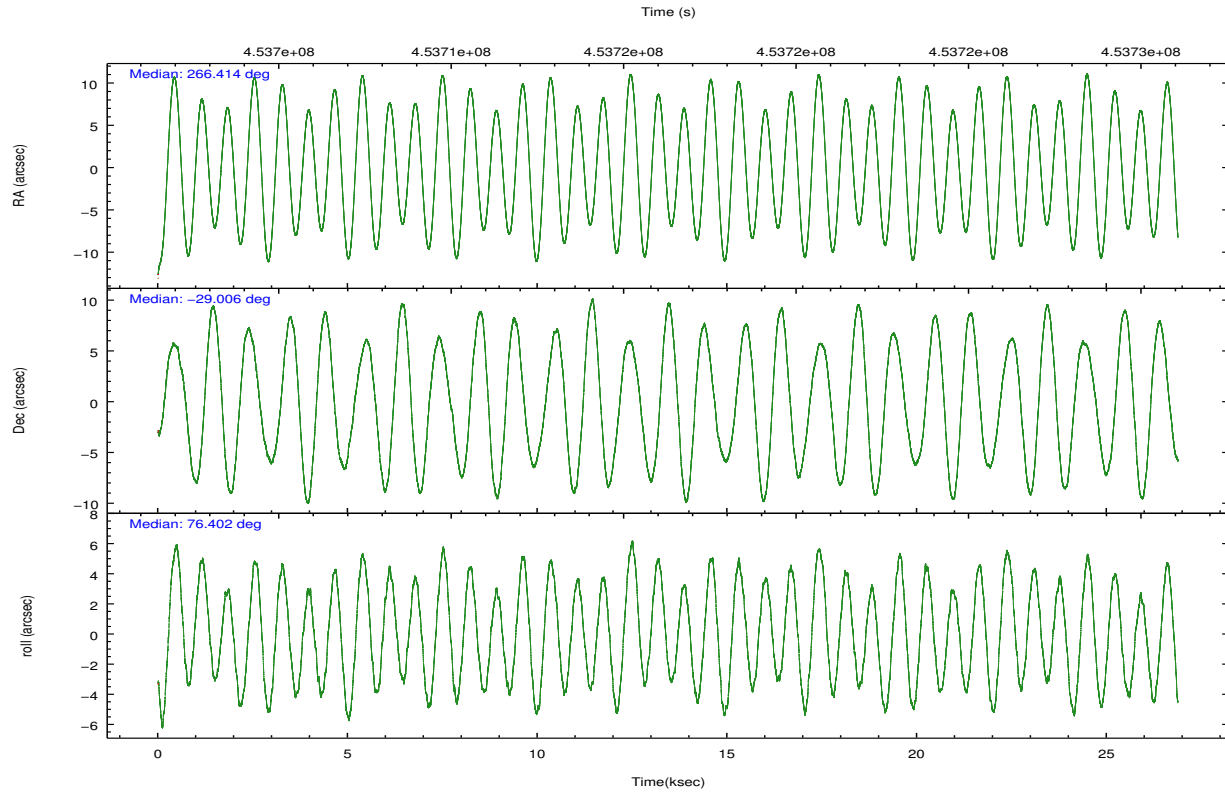
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	22981	35017	14287	62300	11246
	7%	14%	5%	15%	5%
grade 1 events	762	275	383	533	105
	0%	0%	0%	0%	0%
grade 2 events	47223	8444	27678	34494	6058
	16%	3%	11%	8%	2%
grade 3 events	6017	2956	11011	32457	2304
	2%	1%	4%	7%	1%
grade 4 events	5829	2950	11192	28833	2314
	2%	1%	4%	7%	1%
grade 5 events	19706	7737	21927	13341	8312
	6%	3%	9%	3%	4%
grade 6 events	69049	5962	58796	46710	4916
	23%	2%	24%	11%	2%
grade 7 events	117060	178566	96851	187524	168835
	40%	73%	40%	46%	82%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	266.423512	266.4142665329099	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.031744	-29.00561509732011	Alternating exposures requested	N	N
[deg] Pointing Roll	76.253326	76.40546777686875	[s] Primary exposure time	0.000000	3.1
[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)	453704003.184000	453702585.94096			
Observation start date	2012-05-18T04:52:17	2012-05-18T04:29:45			
[s] Observation end time (MET)	453729737.184000	453730342.94244			
Observation end date	2012-05-18T12:01:11	2012-05-18T12:12:22			
Read mode	TIMED	TIMED			

2.3 Aspect



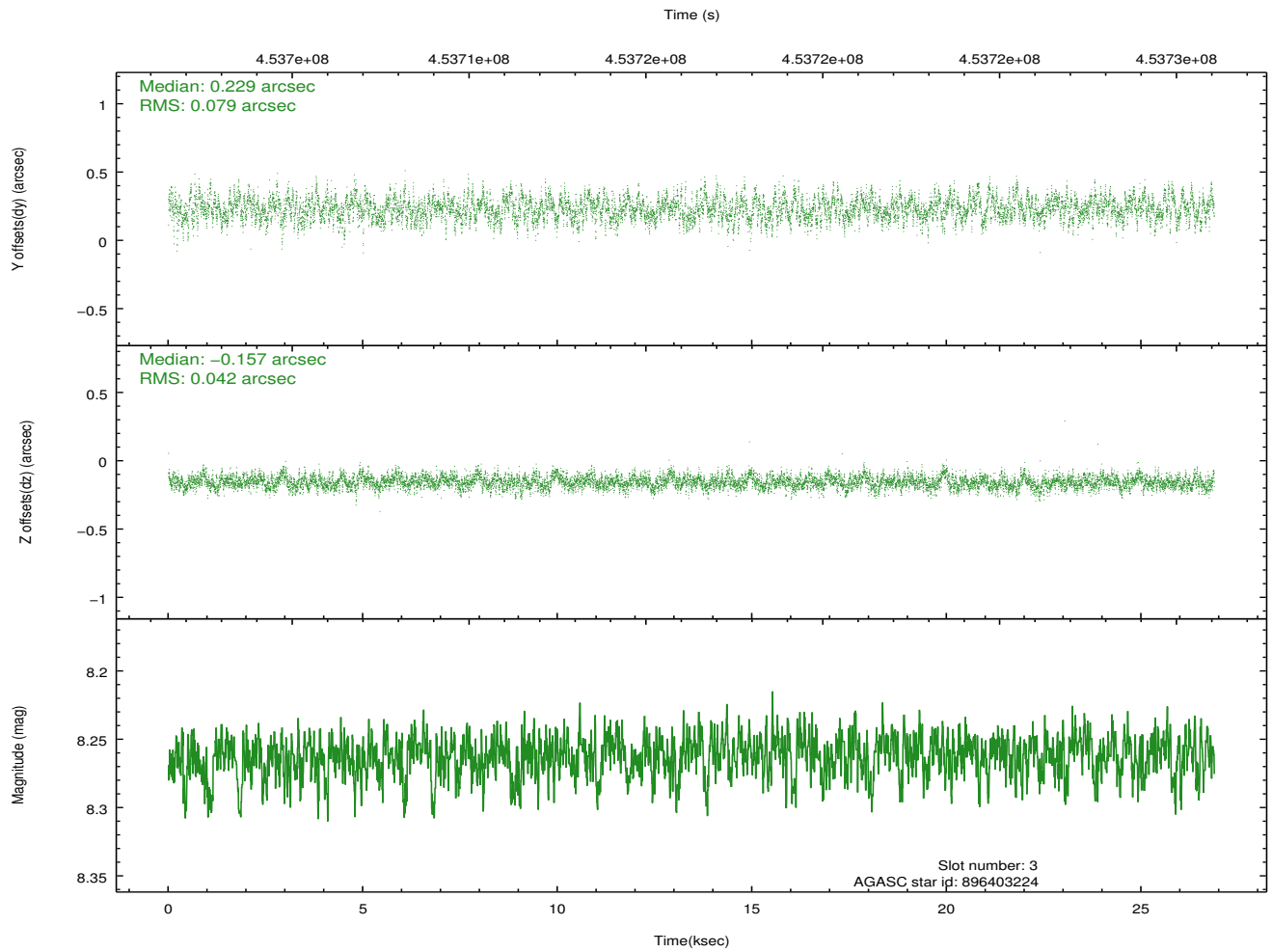
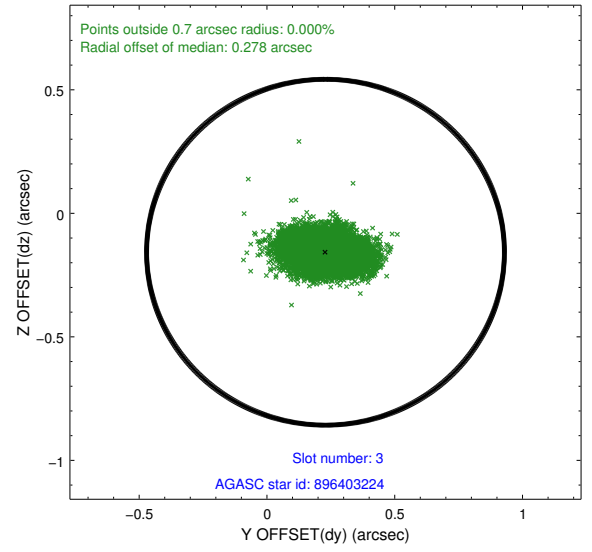
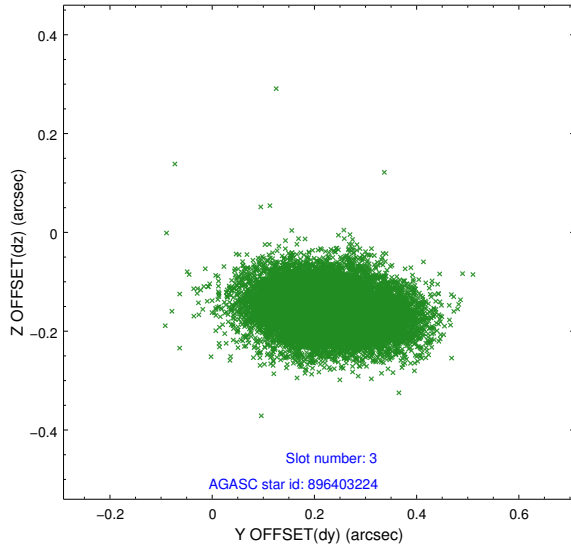


Slot Statistics

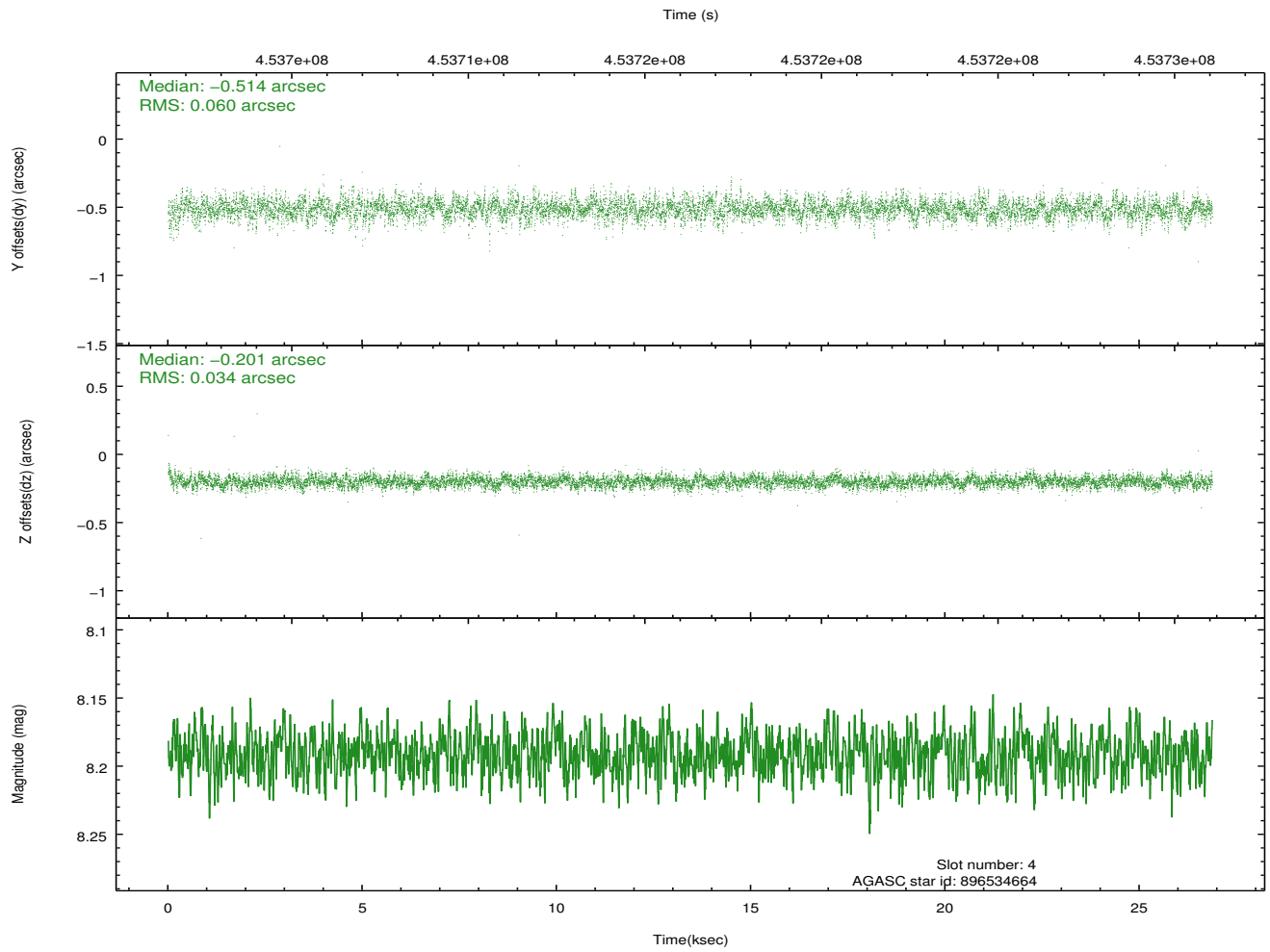
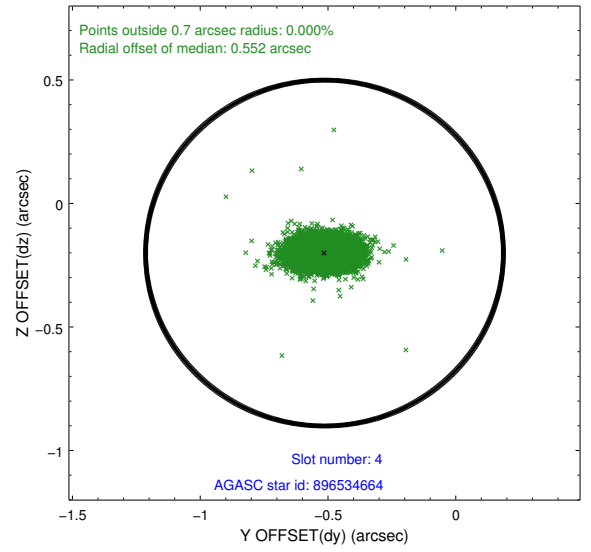
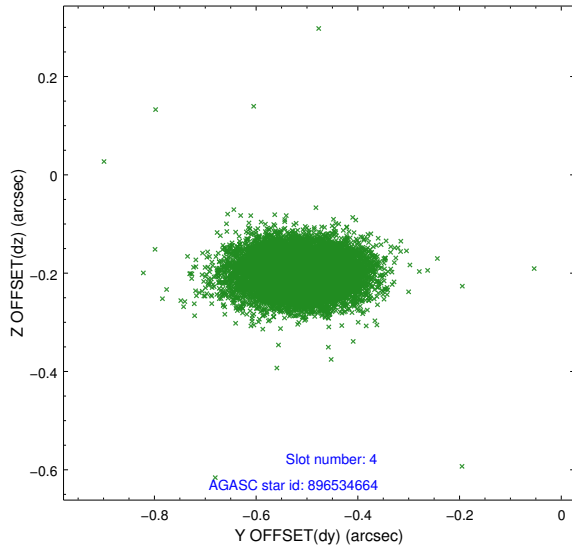
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.95	6555	-0.043	-0.012	0.008	0.013	0.000000	0.000000	-761.09	-1732.92
1	FID	ACIS-S-4	7.04	6556	0.178	0.024	0.009	0.016	0.000000	0.000000	2152.38	175.48
2	FID	ACIS-S-5	7.07	6556	-0.166	-0.004	0.011	0.018	0.000000	0.000000	-1813.91	169.25
3	GUIDE	896403224	8.26	13107	0.229	-0.157	0.093	0.160	265.612825	-29.438915	-2036.57	2118.12
4	GUIDE	896534664	8.19	13108	-0.514	-0.201	0.070	0.125	266.405570	-28.407461	2168.80	589.43
5	GUIDE	896537776	7.52	13111	0.333	0.235	0.070	0.117	266.655684	-29.665673	-2044.37	-1247.78
6	GUIDE	896538208	7.96	13110	0.041	0.329	0.077	0.140	267.176969	-28.671626	1817.50	-2005.05
7	GUIDE	896532680	8.76	13102	-0.088	-0.207	0.091	0.146	266.342632	-28.496299	1811.47	706.44

2.4 Star Slots

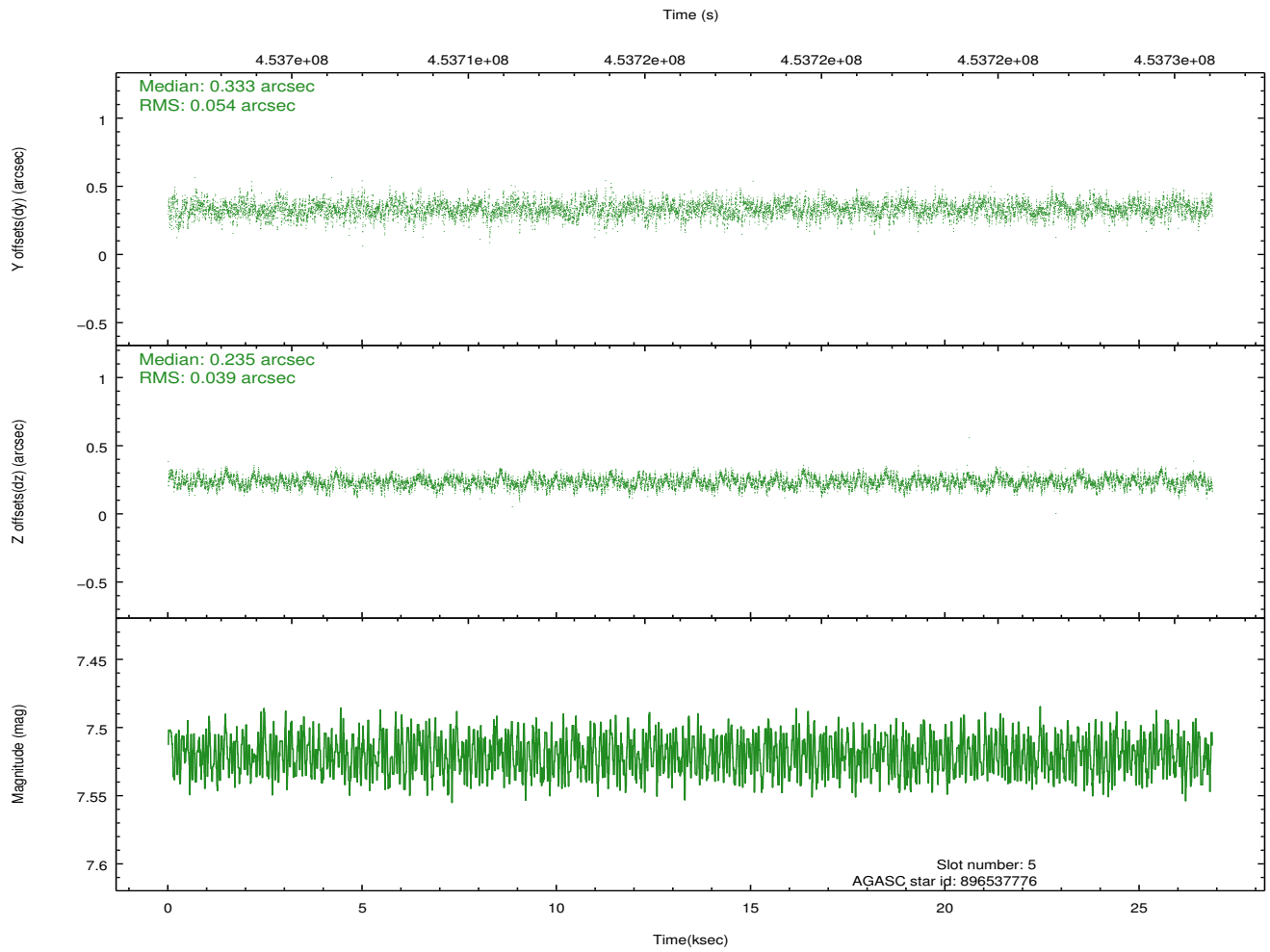
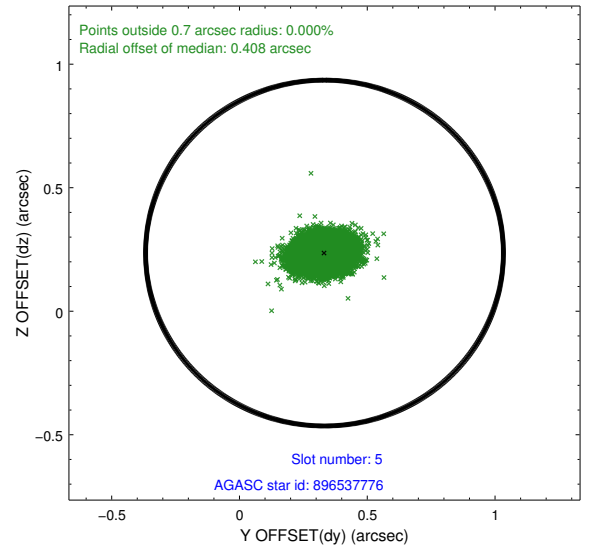
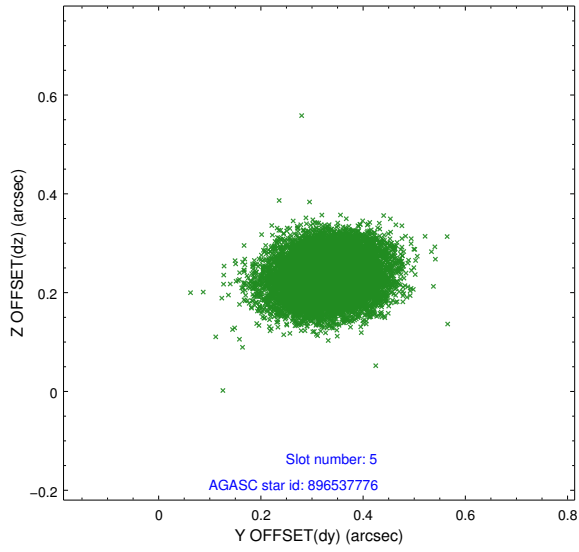
2.4.1 Slot 3



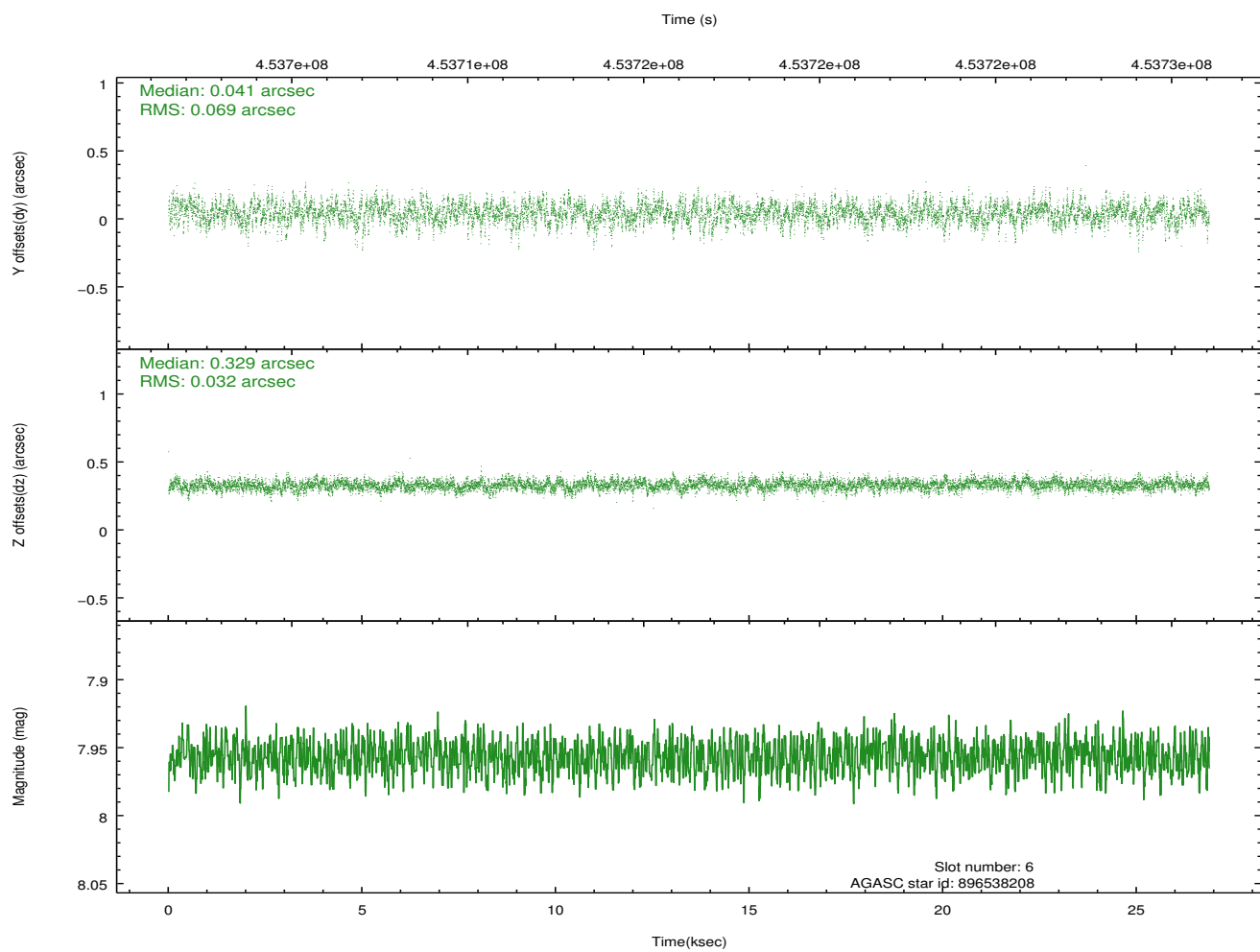
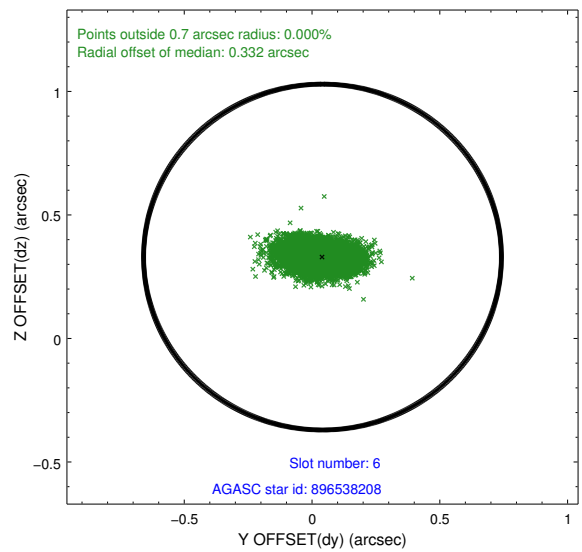
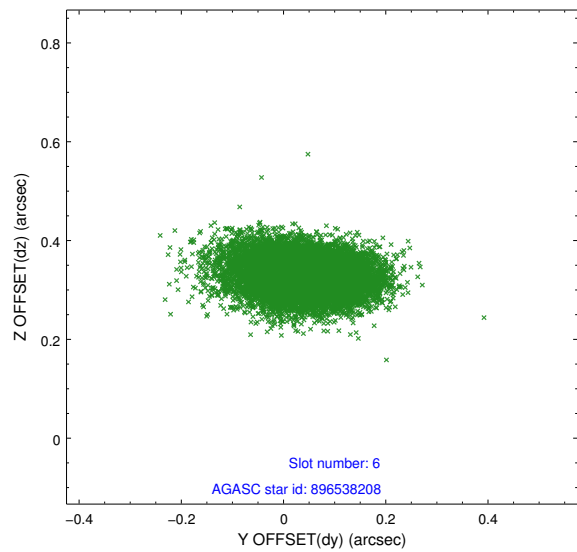
2.4.2 Slot 4



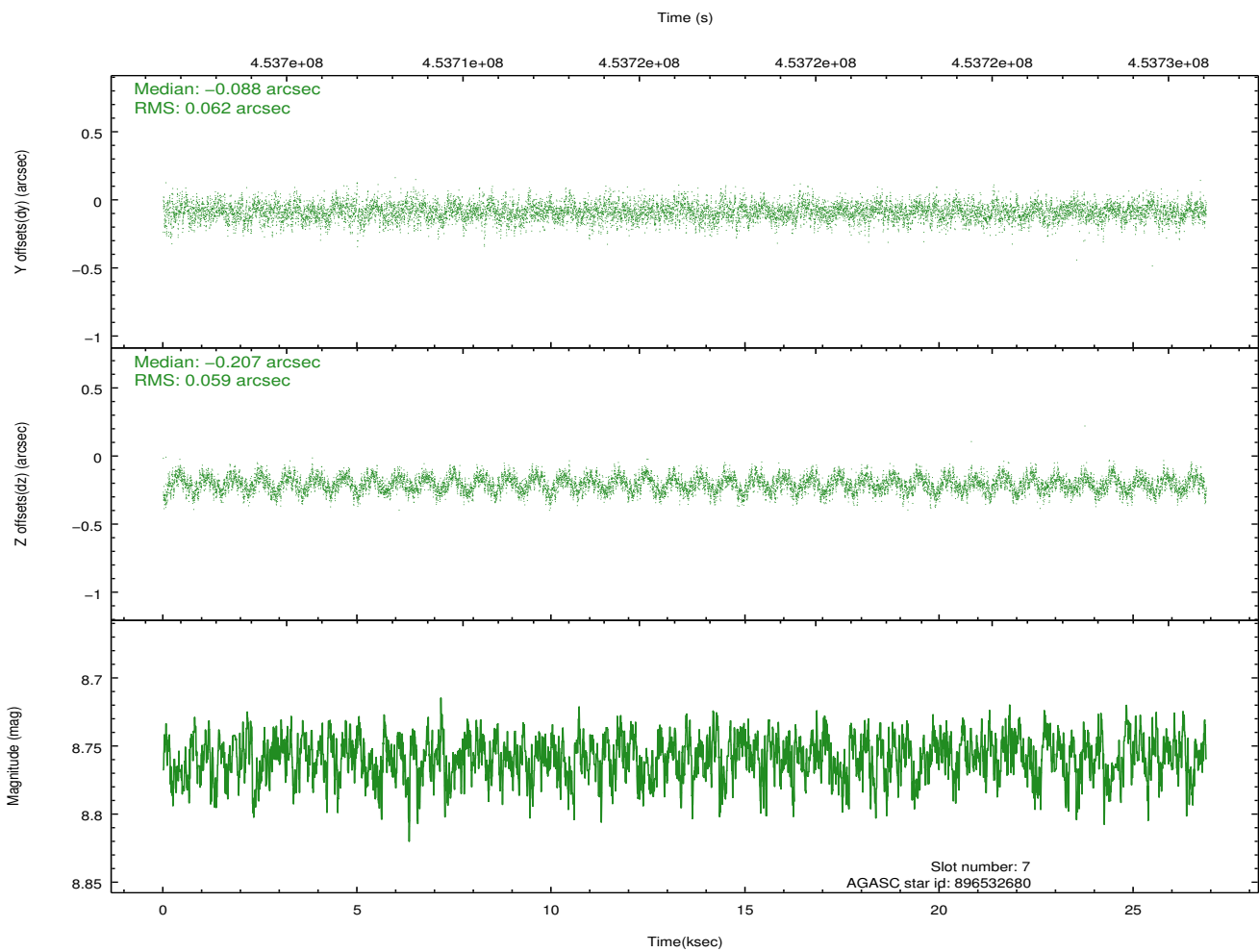
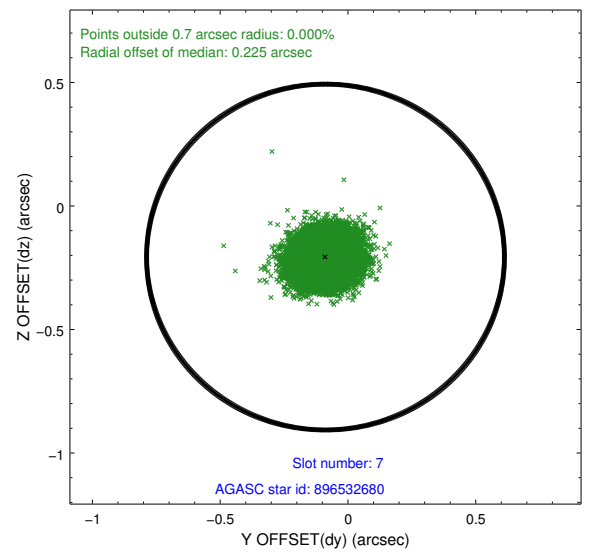
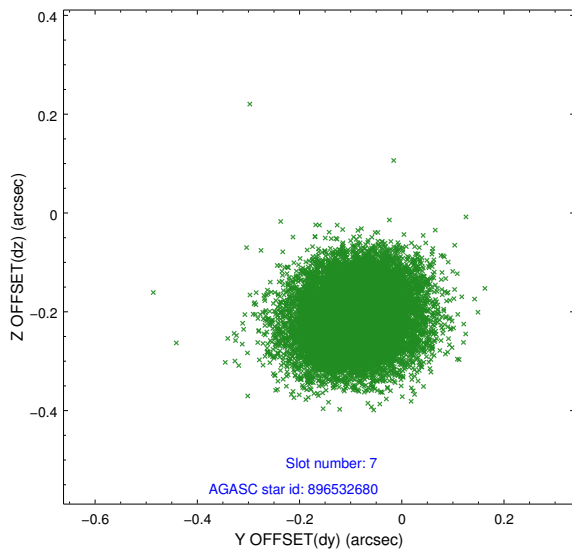
2.4.3 Slot 5



2.4.4 Slot 6

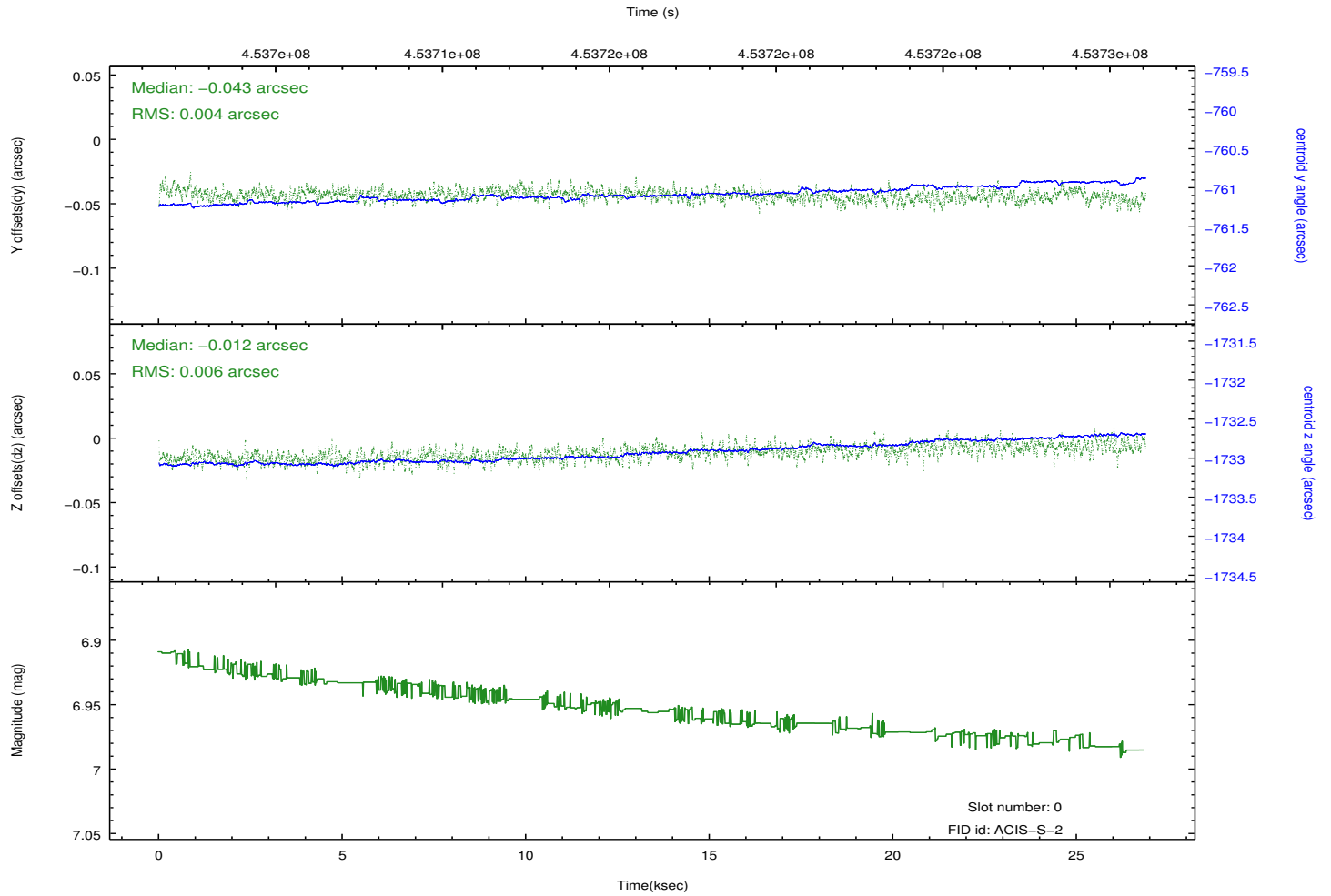
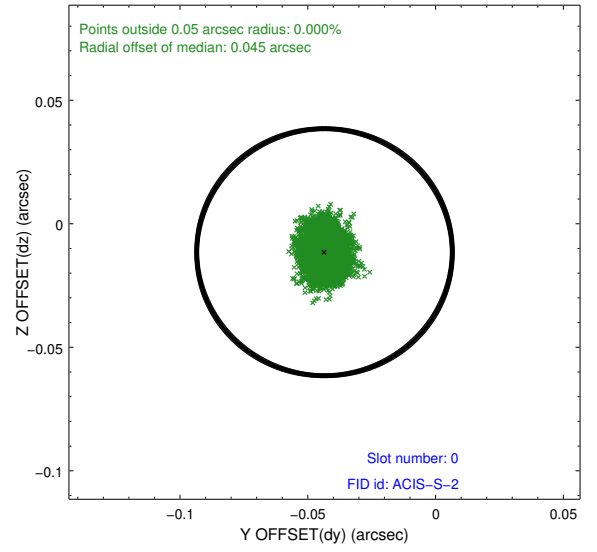
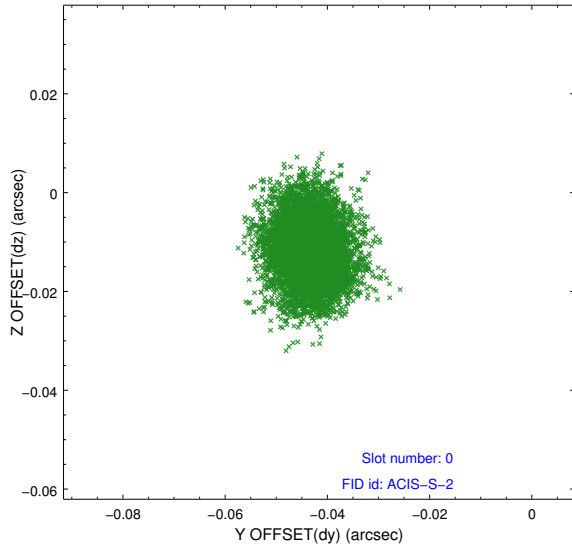


2.4.5 Slot 7

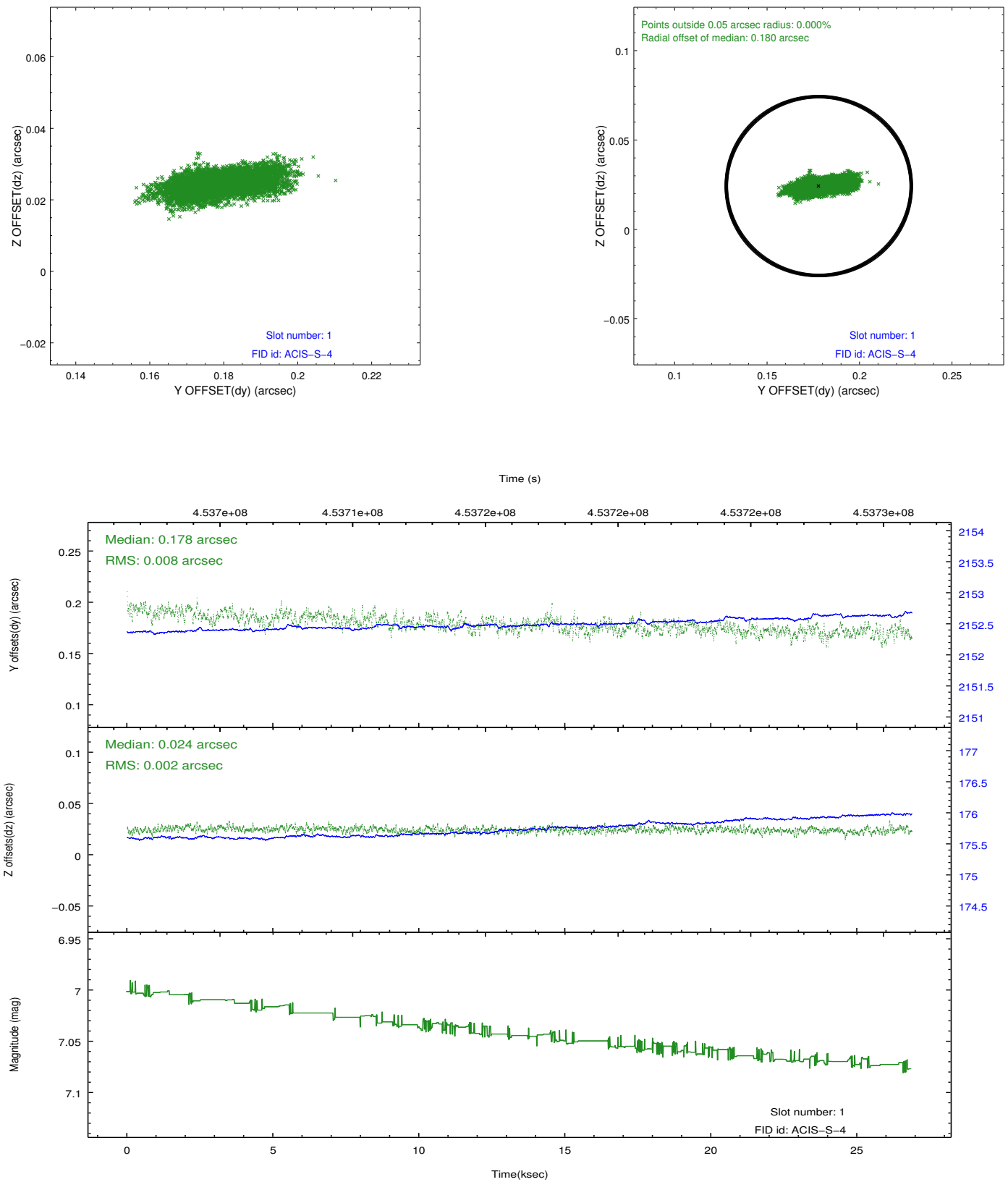


2.5 FID Slots

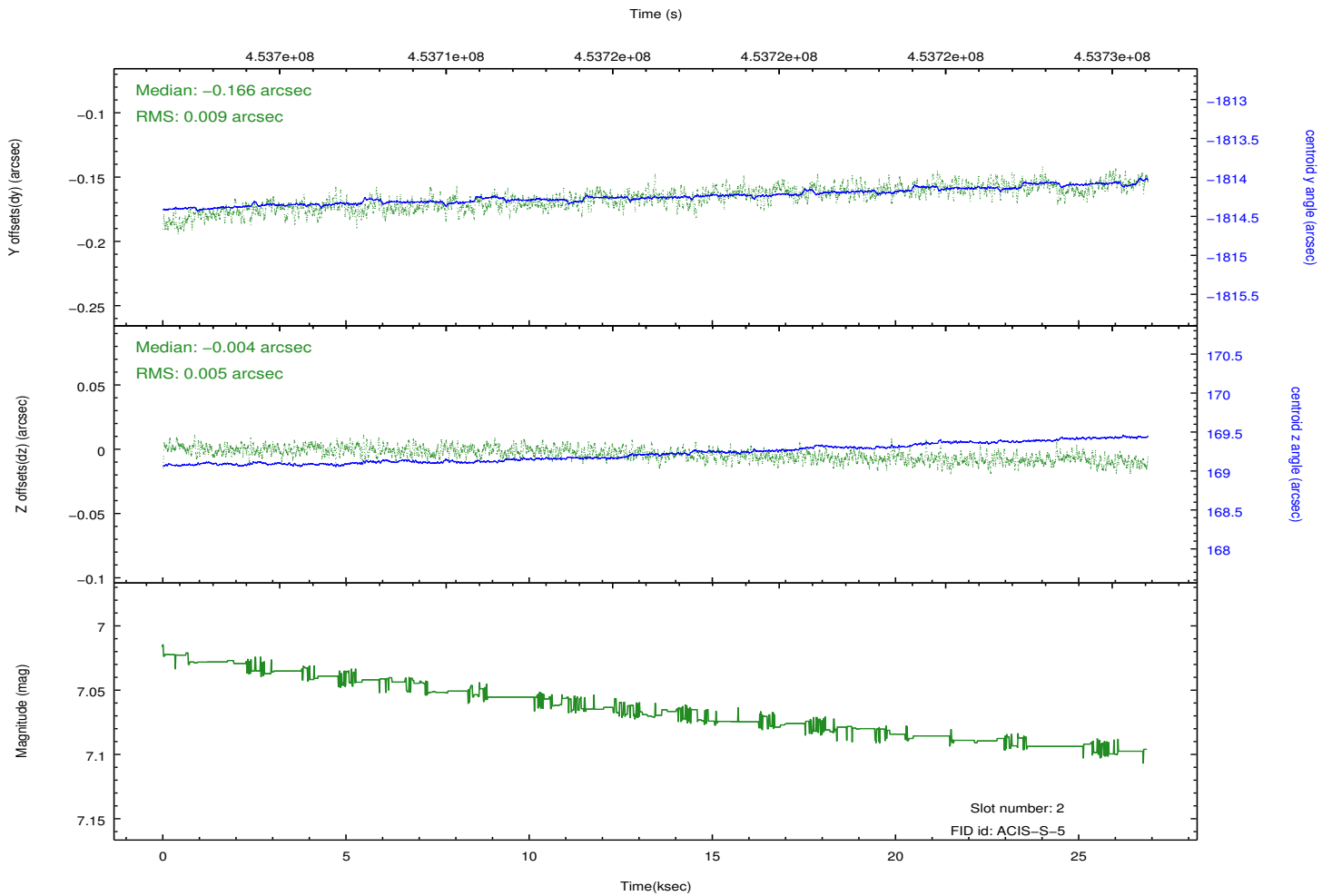
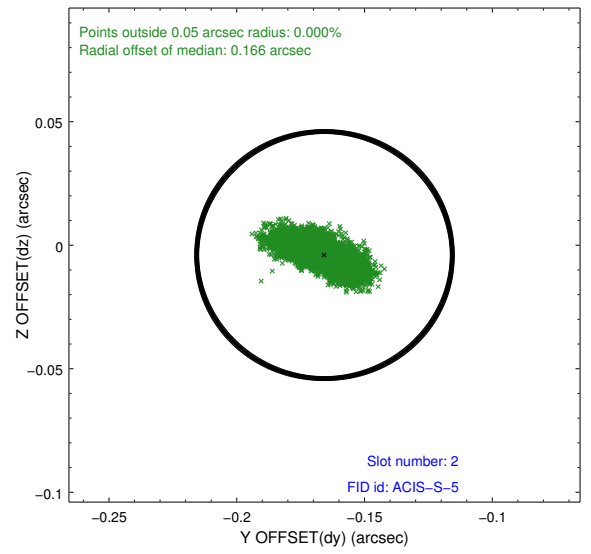
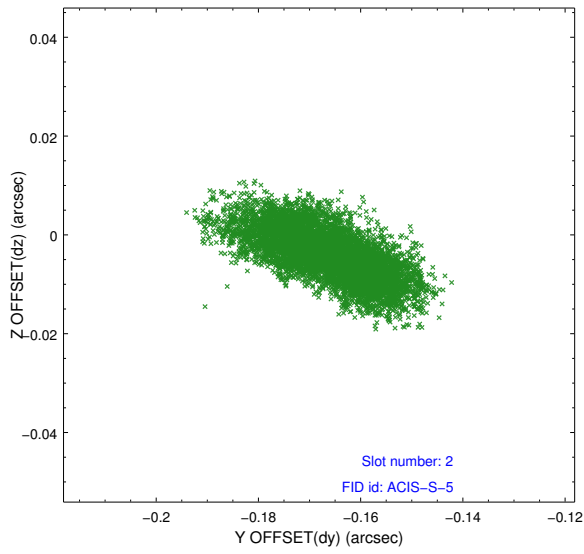
2.5.1 Slot 0



2.5.2 Slot 1

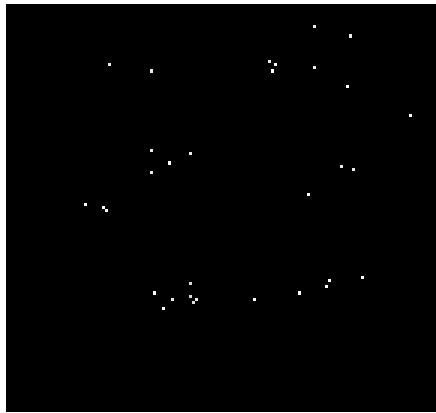


2.5.3 Slot 2

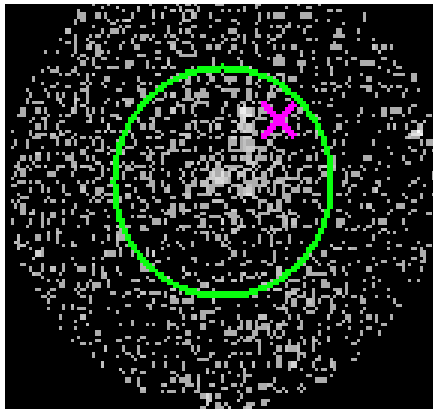


3 Gratings

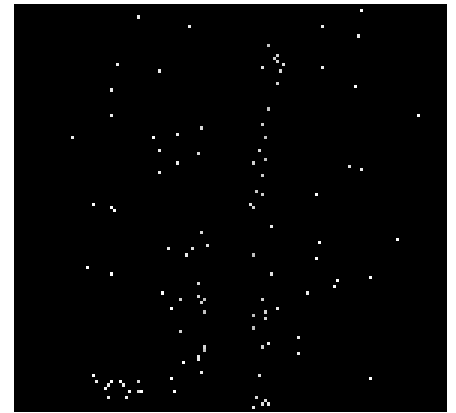
3.1 HEG Arm



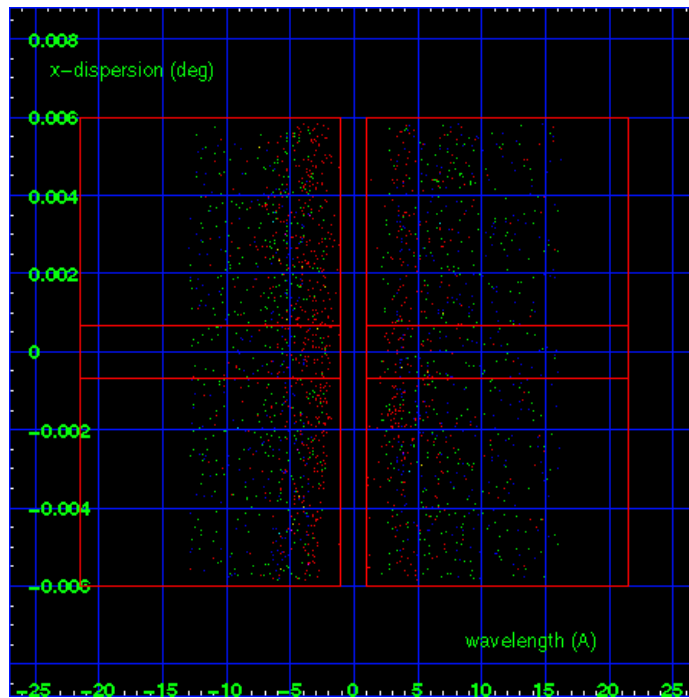
HEG Order Sort 123



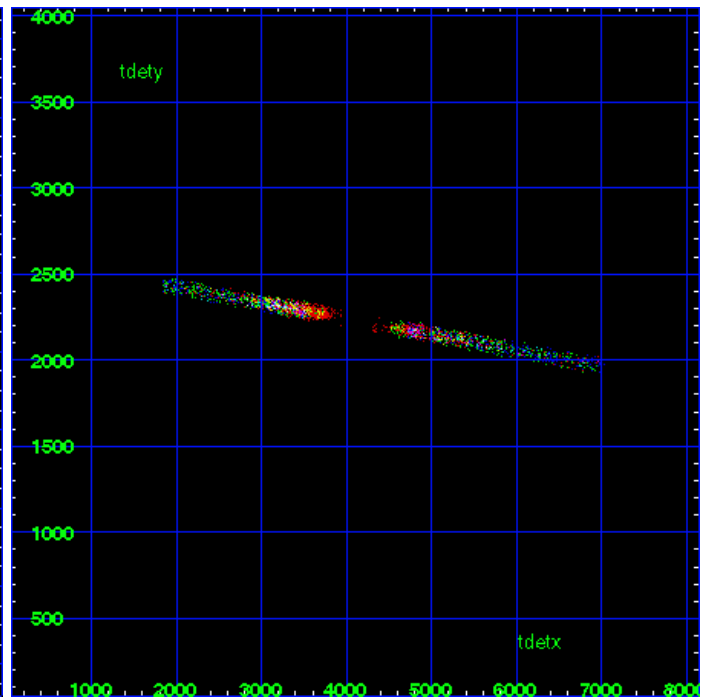
HEG Zero Order



HEG Order Sort ALL

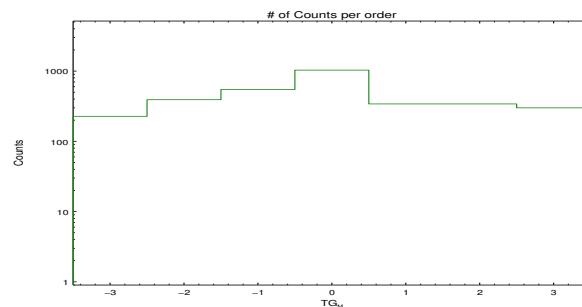


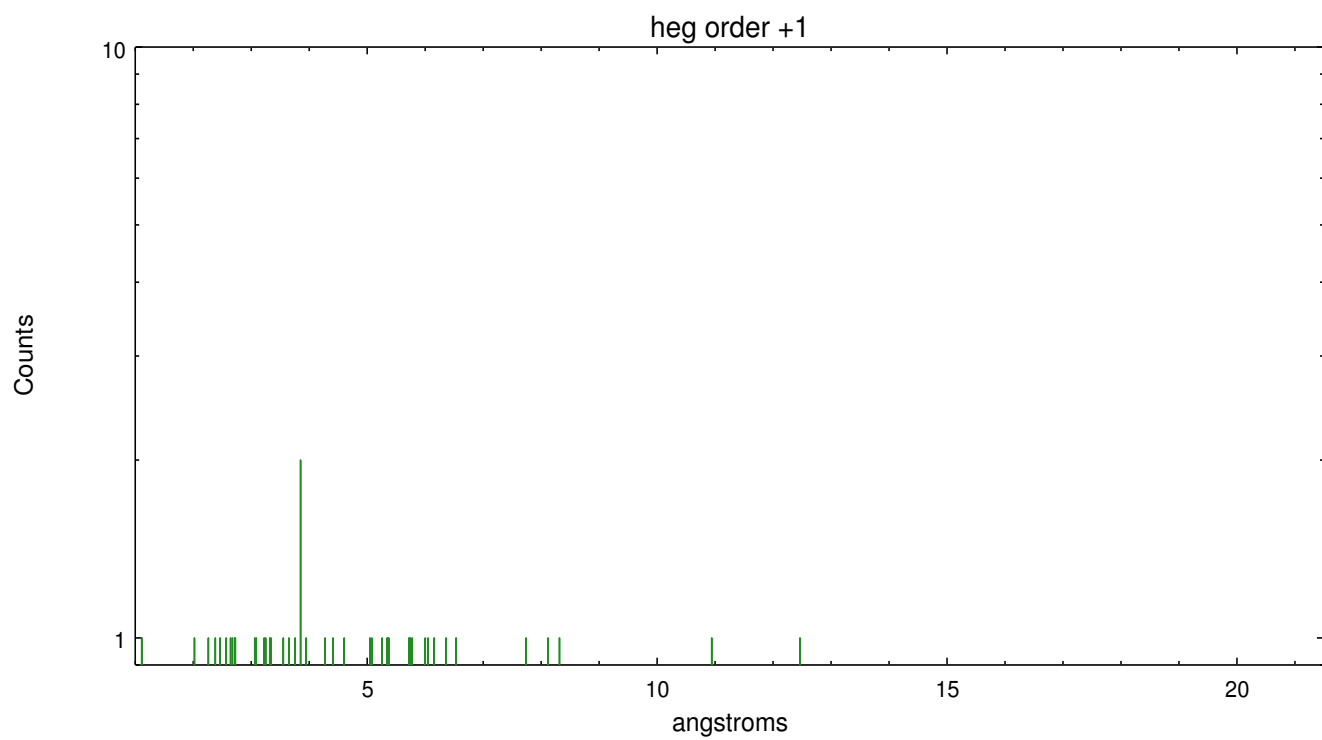
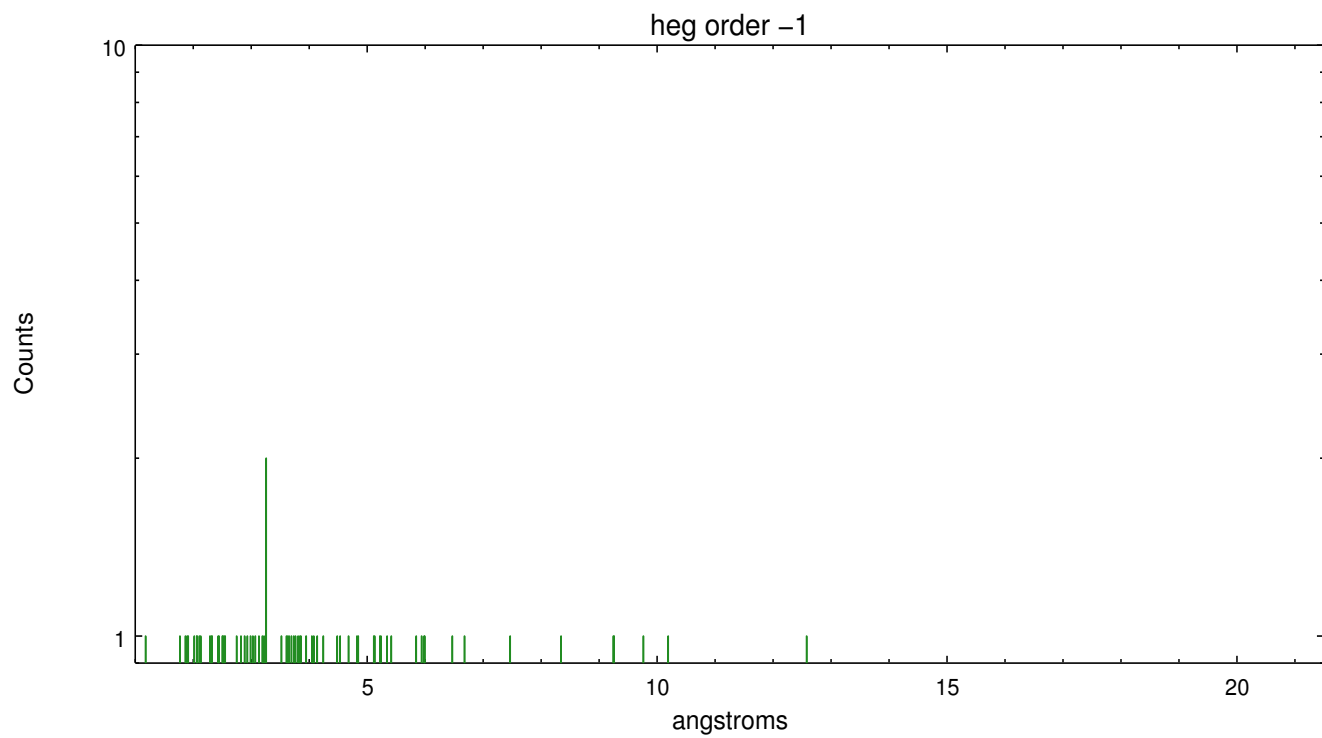
Spot Image HEG



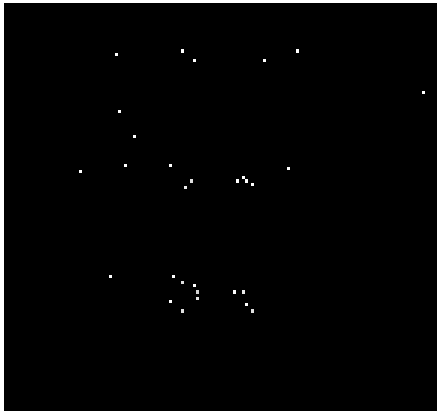
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	227	392	547	1032	341	341	300

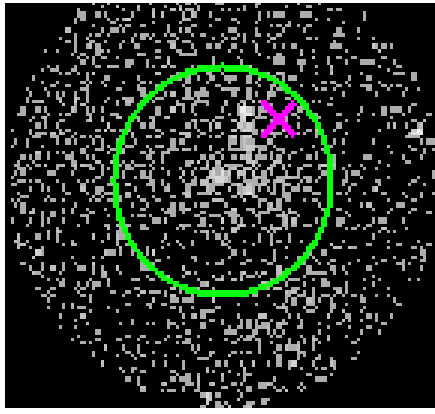




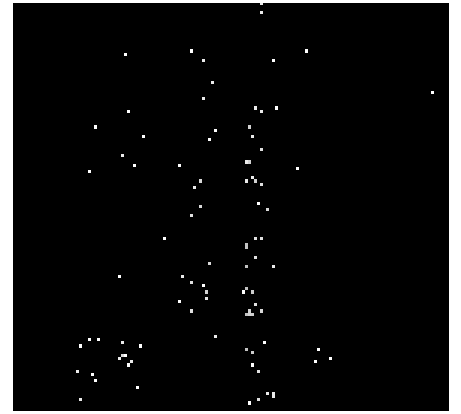
3.2 MEG Arm



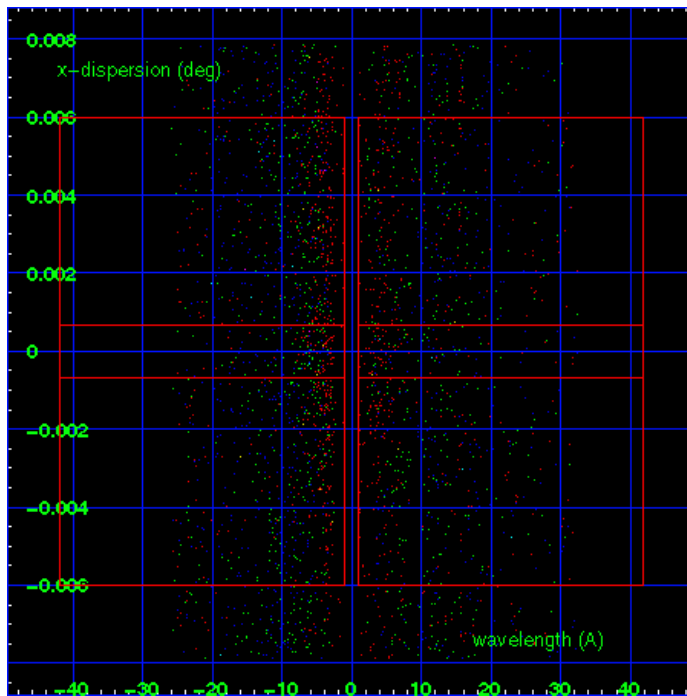
MEG Order Sort 123



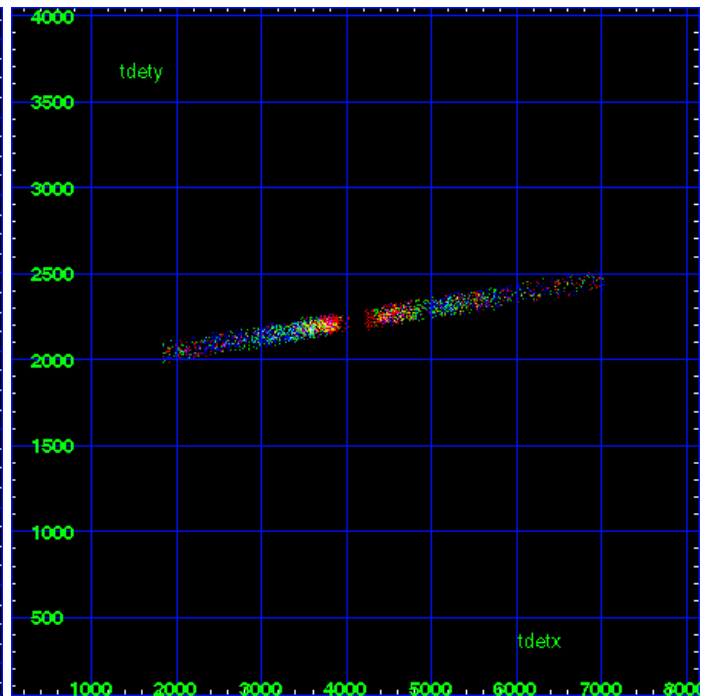
MEG Zero Order



MEG Order Sort ALL

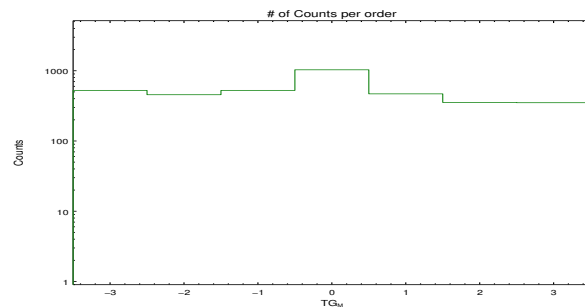


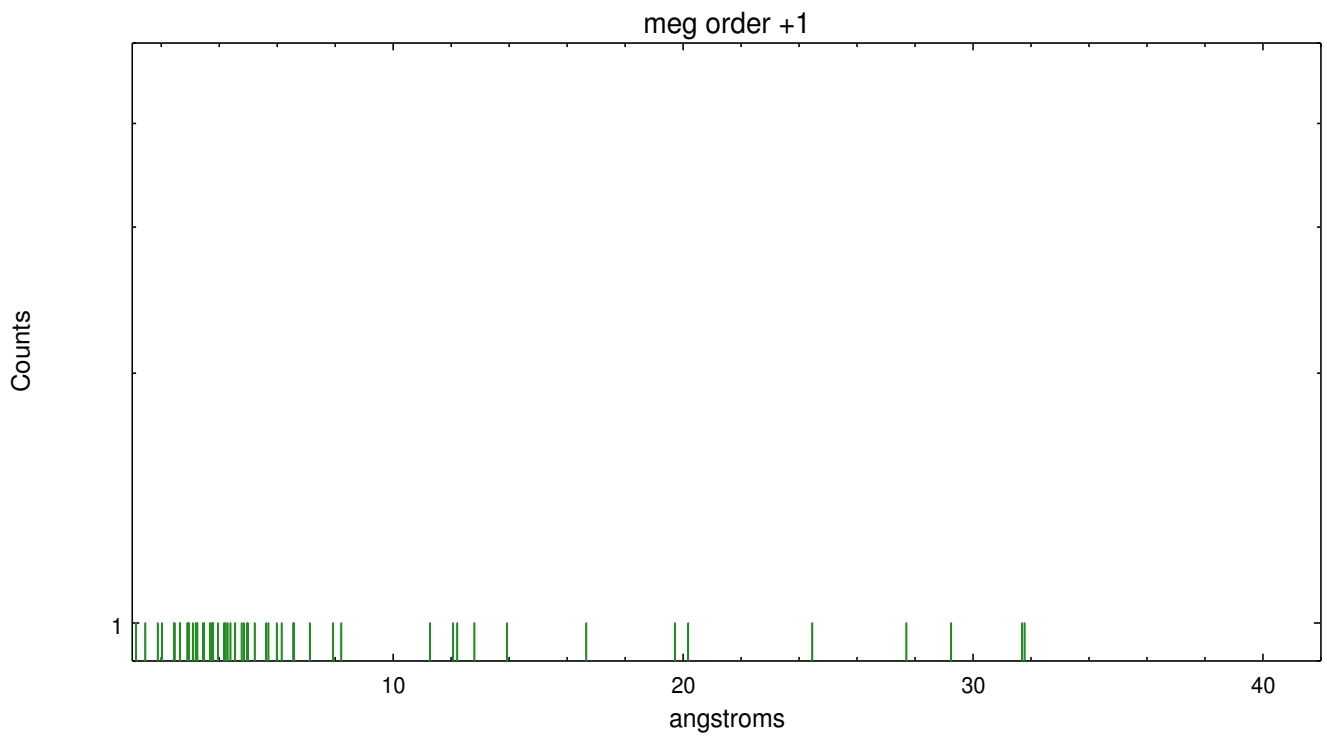
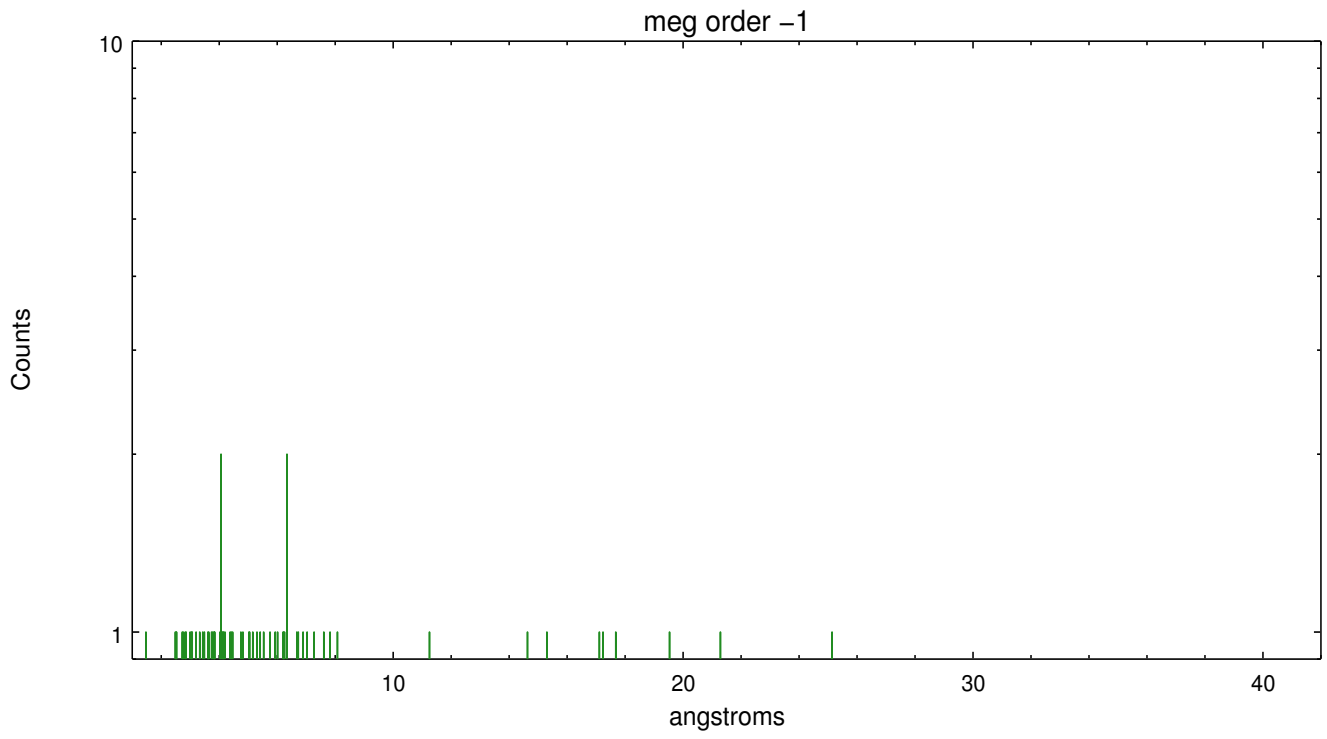
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	525	456	525	1032	469	354	351





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.792000198364

A.2 Comments

Note: spatially complex region with multiple point sources and extended emission. The spectral extraction was centered on the nominal Sgr A* coordinates: (RA, DEC) = (266.41667, -29.00780)[deg]

===

Standard software processing technique using the tool `tgdetect` failed to determine an accurate position for the zeroth order for this observation. The processing software defaulted to the coordinates supplied by the user for the position of the zeroth order for the grating spectral extraction.