

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14460 - L2 Version 1
Chandra X-Ray Center

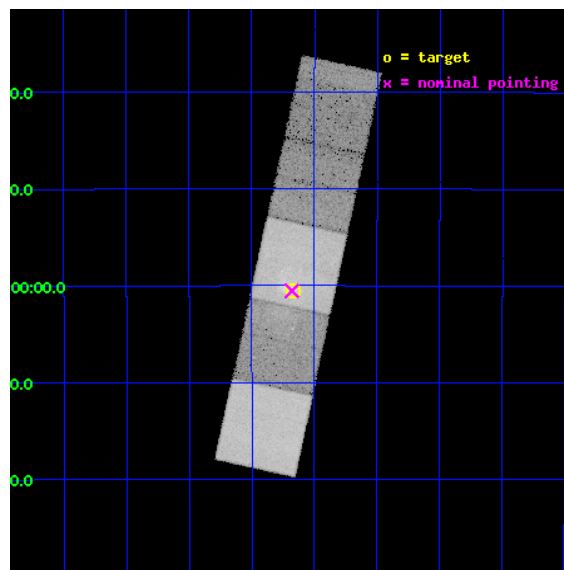
L2 Processing Date : Jul 11 2012

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1 Front

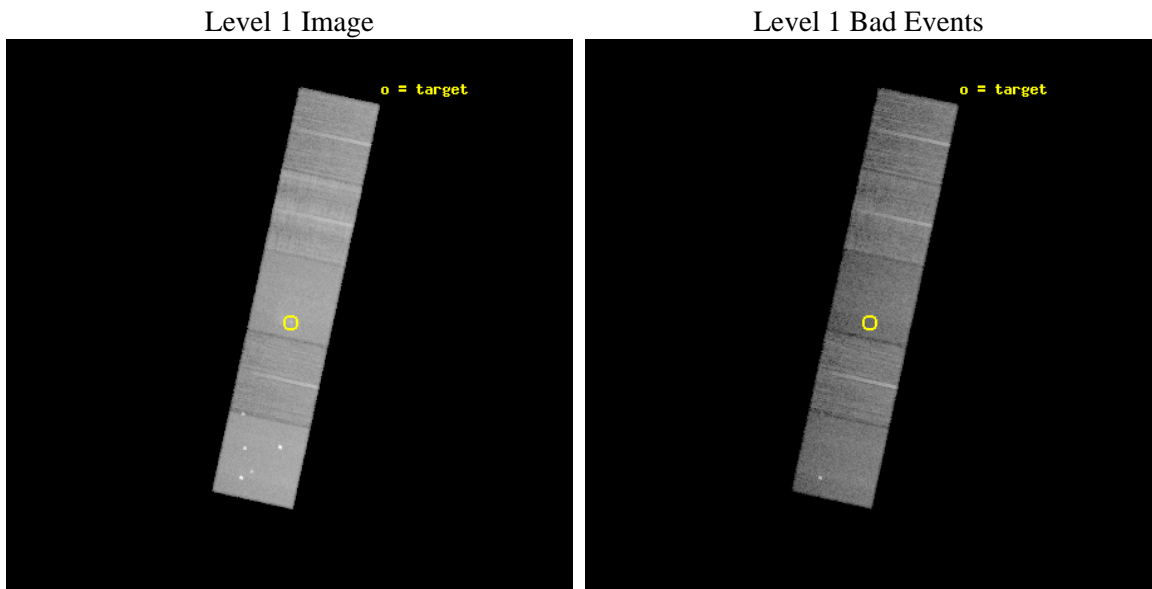
seq_num	601012	Sequence number
obs_id	14460	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41991053661	Nominal RA [deg]
dec_nom	-29.008842583882	Nominal Dec [deg]
roll_nom	282.28320321983	Nominal Roll [deg]
revision	1	Processing version of data
ontime	24061.618991017	Sum of GTIs [s]
livetime	23747.236224993	Livetime [s]
ontime5	24061.577951014	Sum of GTIs [s]
ontime6	24061.536911011	Sum of GTIs [s]
ontime7	24061.618991017	Sum of GTIs [s]
ontime8	24061.495871007	Sum of GTIs [s]
ontime9	24061.454831004	Sum of GTIs [s]
l2events	272161	Number of level 2 events



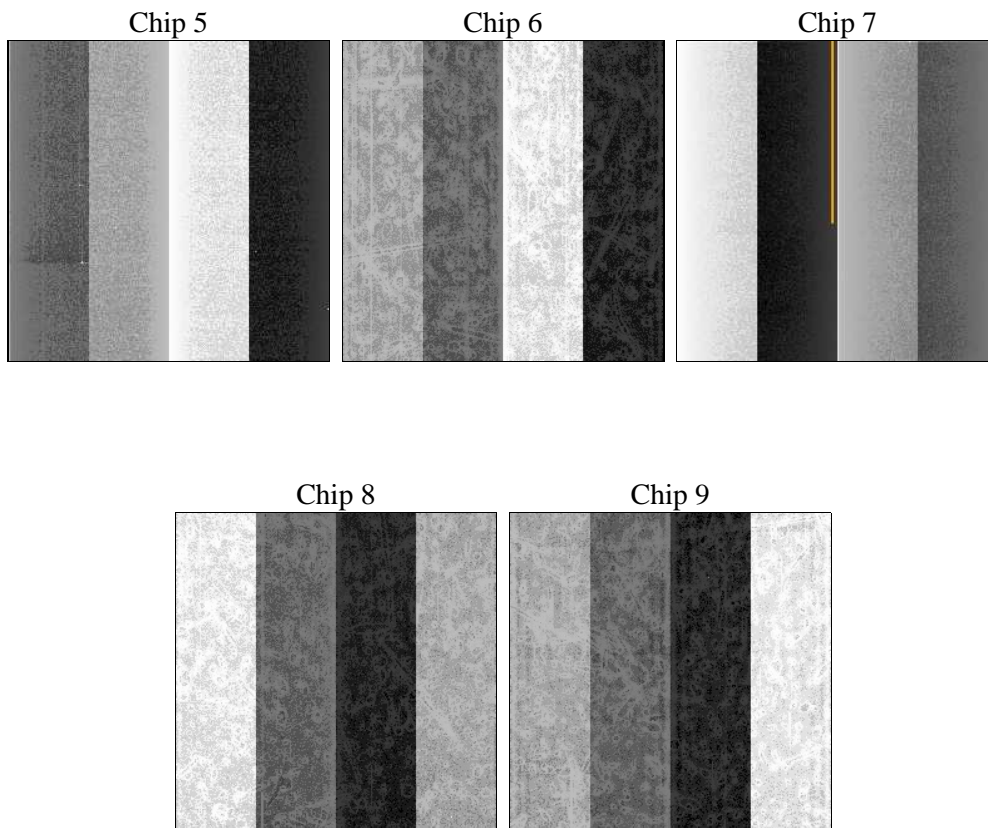
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	24061.618991017	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	24061.577951014	Sum of GTIs [s]
date	2012-07-11T07:02:40	Date and time of file creation	ontime6	24061.536911011	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	24061.618991017	Sum of GTIs [s]
			ontime8	24061.495871007	Sum of GTIs [s]
			ontime9	24061.454831004	Sum of GTIs [s]
			l1events	934387	Number of level 1 events

2.1.4 Events

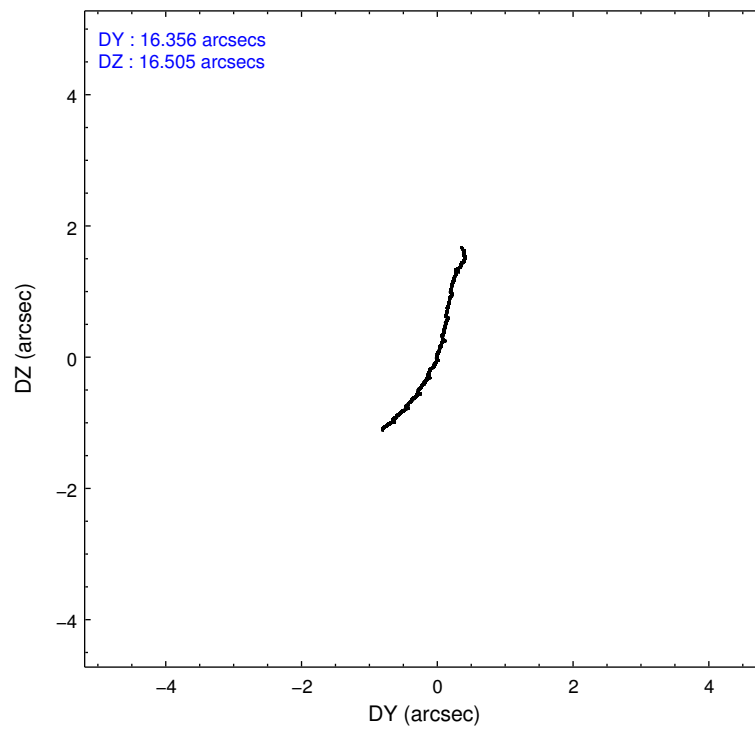
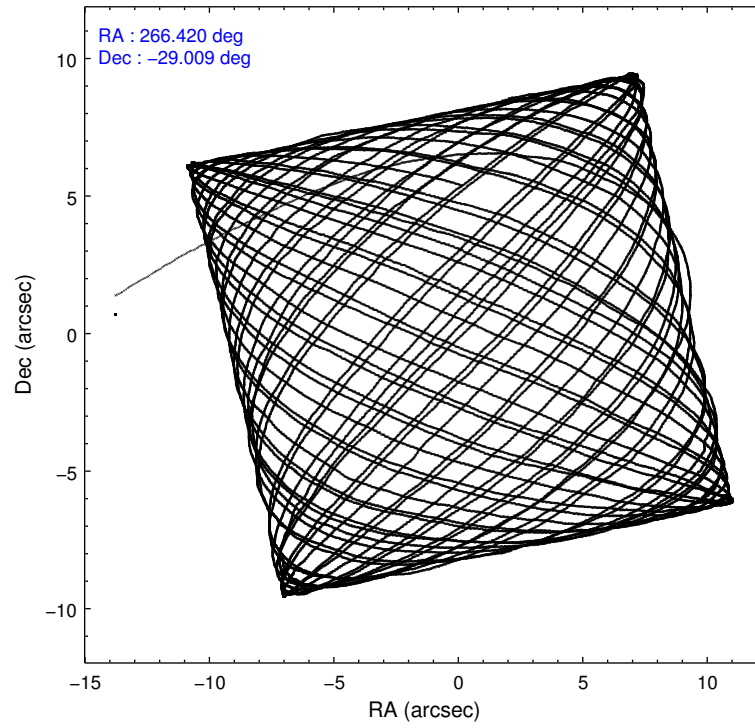
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	237164	154337	200539	202600	139747
rejected events	113922	125281	98931	135818	119738
rejected %	48%	81%	49%	67%	85%

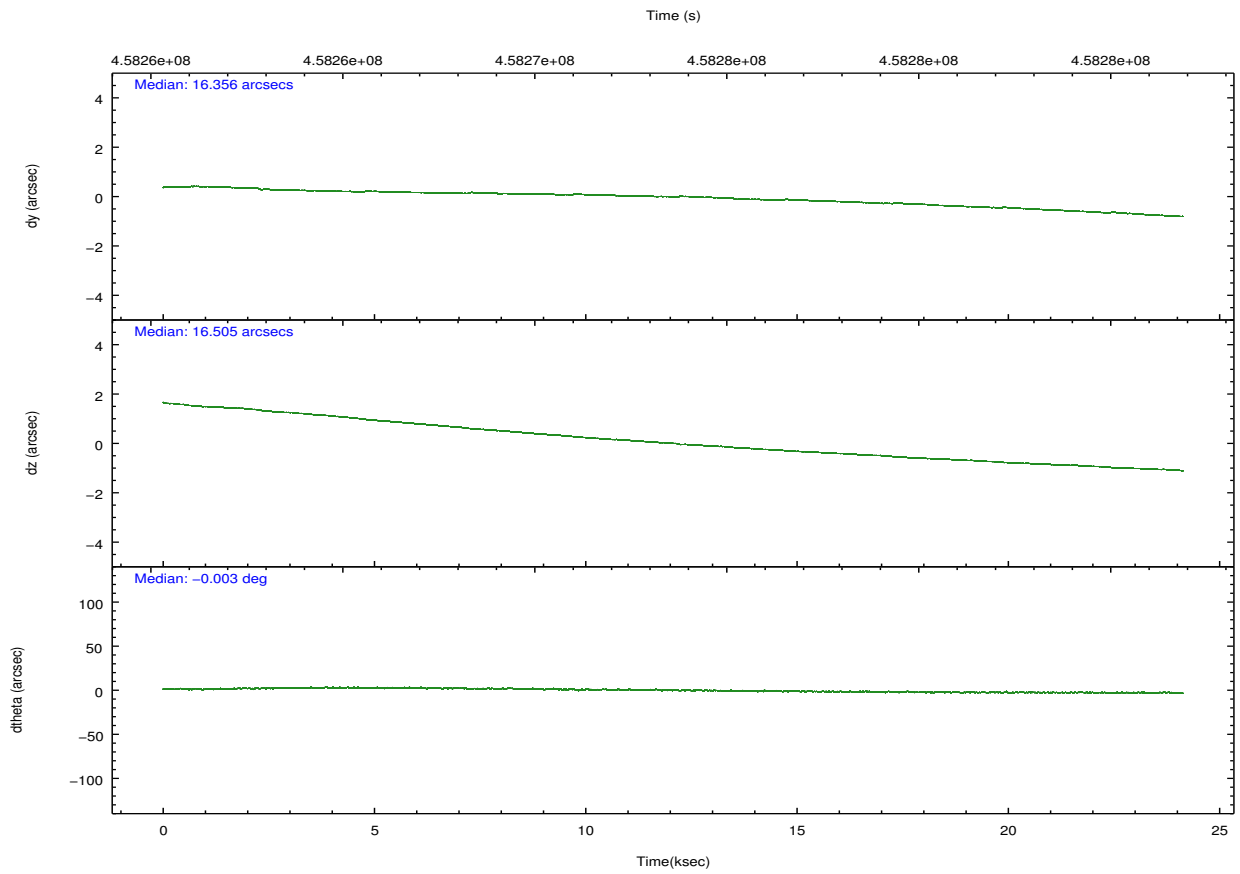
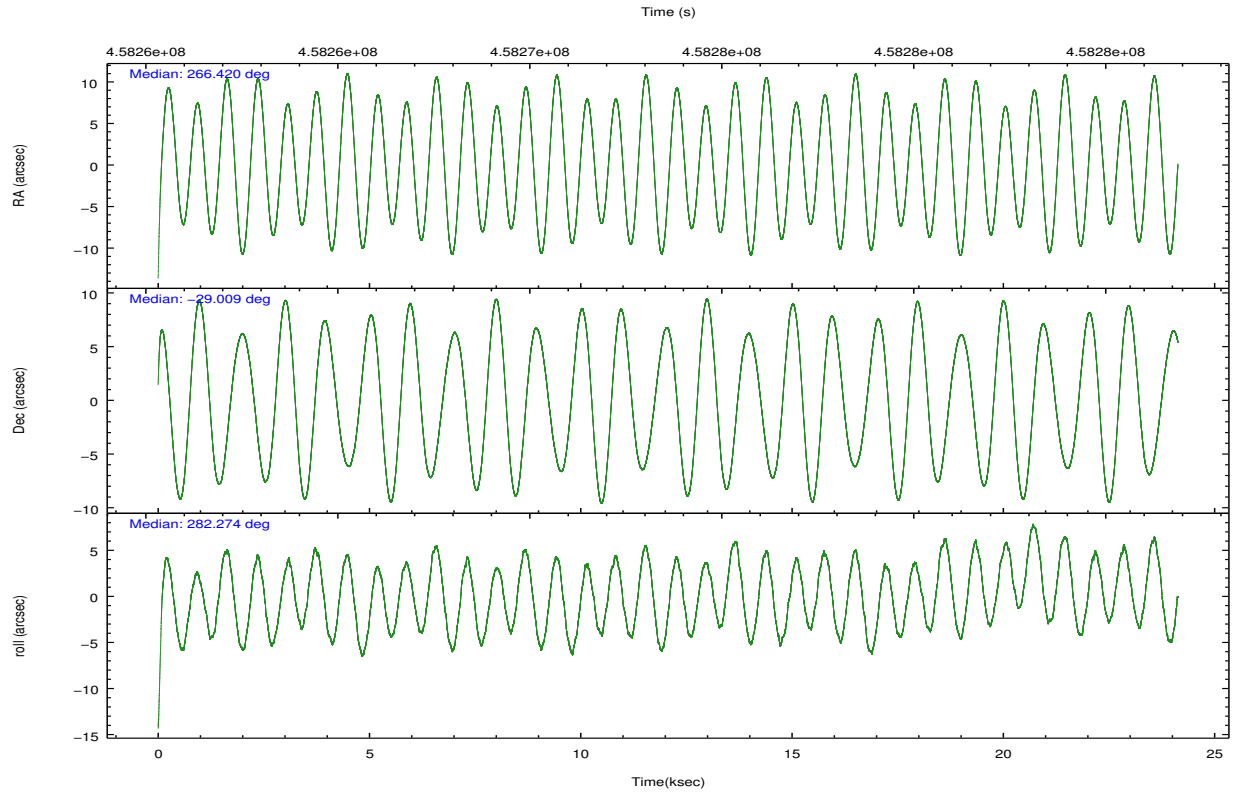
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	18508	13914	11758	21805	8199
	7%	9%	5%	10%	5%
grade 1 events	489	116	249	187	92
	0%	0%	0%	0%	0%
grade 2 events	37589	5662	21674	14355	4188
	15%	3%	10%	7%	2%
grade 3 events	4431	2323	9285	7544	1863
	1%	1%	4%	3%	1%
grade 4 events	4277	2208	9135	6971	1826
	1%	1%	4%	3%	1%
grade 5 events	17063	6851	18398	10124	7545
	7%	4%	9%	4%	5%
grade 6 events	58472	4958	49777	16141	3941
	24%	3%	24%	7%	2%
grade 7 events	96335	118305	80263	125473	112093
	40%	76%	40%	61%	80%

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	266.398566	266.4199105366088	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988871	-29.00884258388157	Alternating exposures requested	N	N
[deg] Pointing Roll	282.116233	282.2832032198257	[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)	458261669.184000	458260450.60507			
Observation start date	2012-07-09T22:53:22	2012-07-09T22:34:10			
[s] Observation end time (MET)	458285669.184000	458286533.26896			
Observation end date	2012-07-10T05:33:22	2012-07-10T05:48:53			
Read mode	TIMED	TIMED			

2.3 Aspect



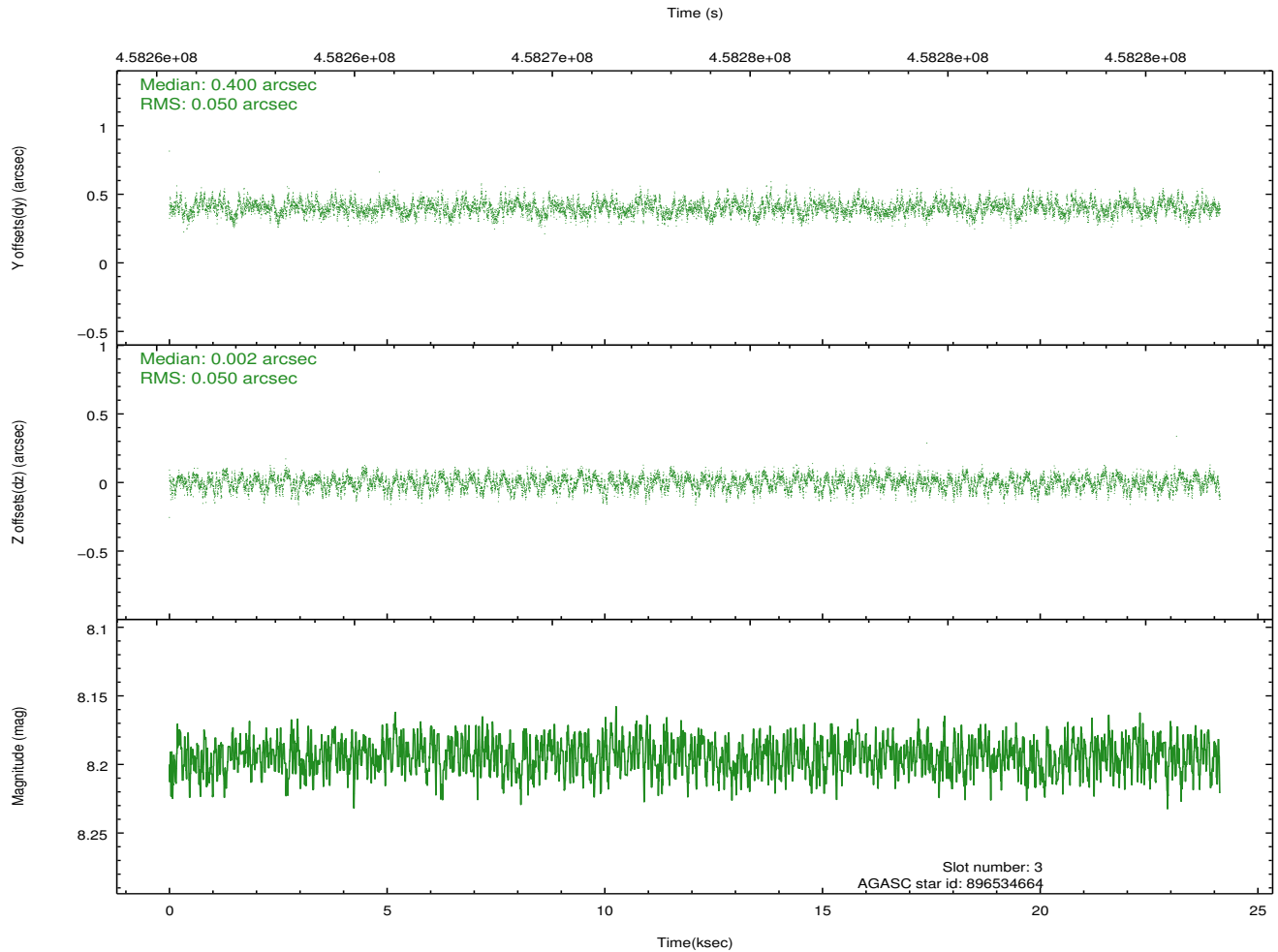
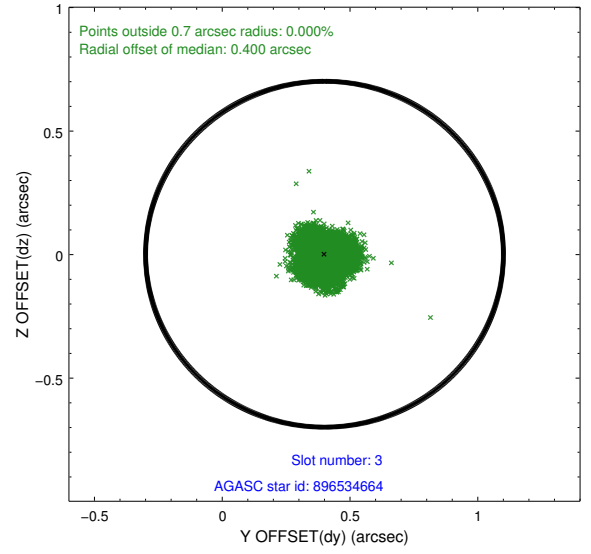
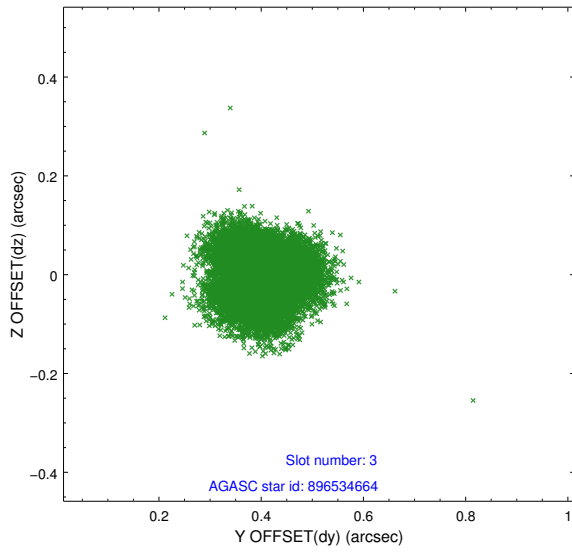


Slot Statistics

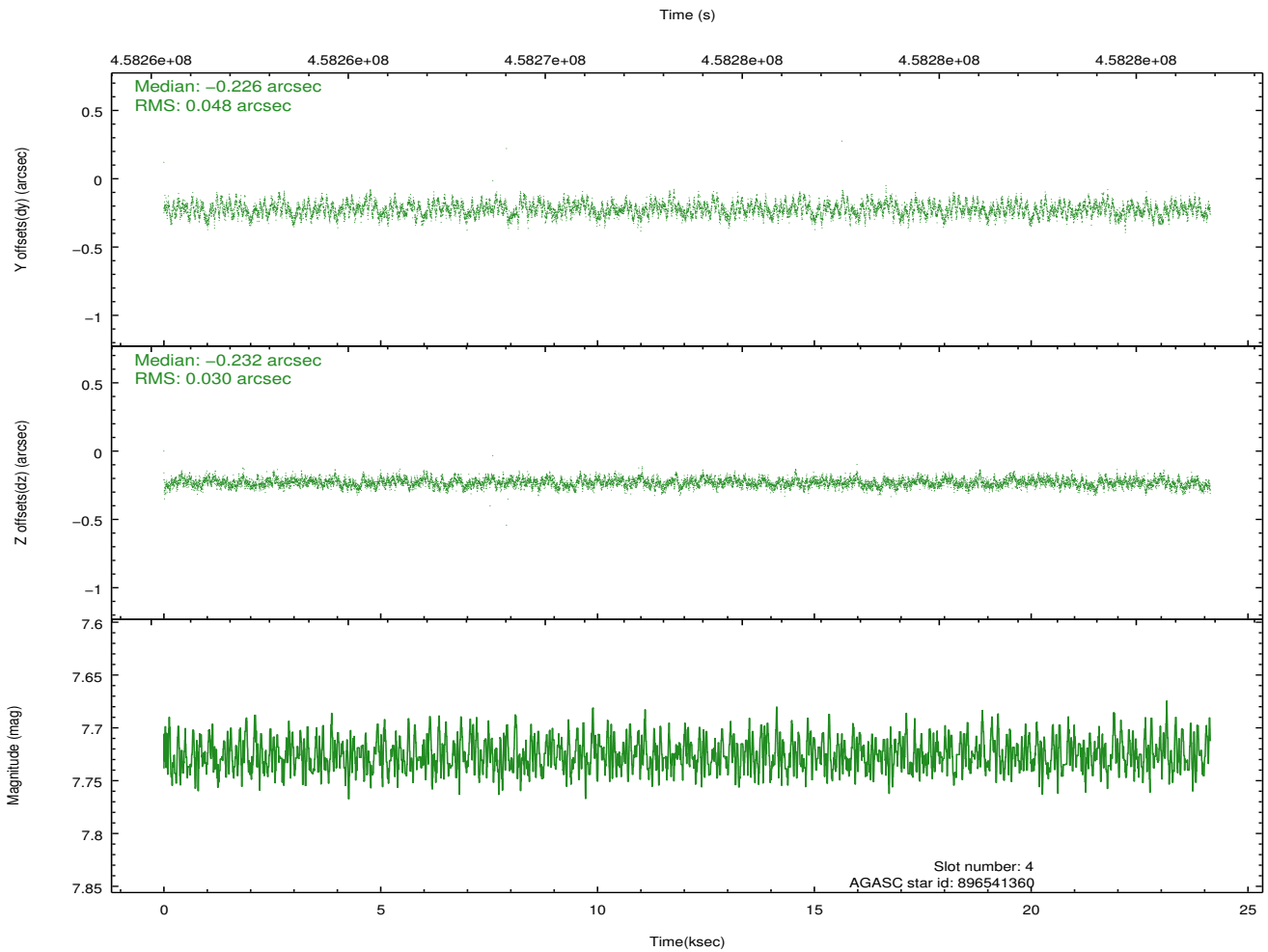
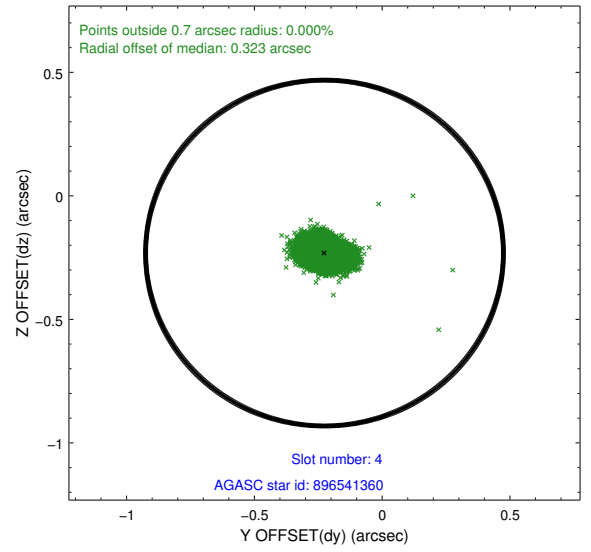
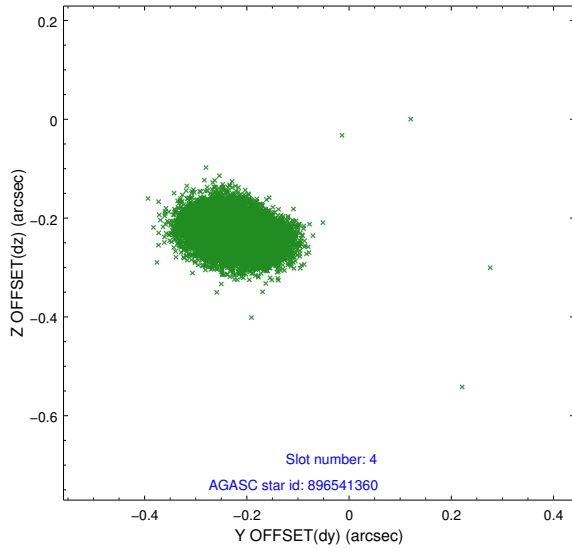
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	5886	-0.106	-0.020	0.027	0.041	0.000000	0.000000	-769.40	-1738.05
1	FID	ACIS-S-4	7.01	5886	0.220	0.058	0.012	0.021	0.000000	0.000000	2144.17	170.35
2	FID	ACIS-S-5	7.04	5885	-0.145	-0.029	0.024	0.038	0.000000	0.000000	-1822.10	164.13
3	GUIDE	896534664	8.19	11769	0.400	0.002	0.076	0.117	266.405570	-28.407461	-2040.94	460.82
4	GUIDE	896541360	7.73	11772	-0.226	-0.232	0.060	0.098	266.684478	-29.453744	1825.50	525.01
5	GUIDE	896541576	8.20	11768	-0.185	-0.037	0.058	0.095	267.051055	-28.762912	-357.43	2182.88
6	GUIDE	896403520	9.03	11763	0.301	0.167	0.093	0.150	265.626481	-28.748780	-1347.72	-2202.62
7	GUIDE	896540808	7.45	11767	-0.292	0.097	0.048	0.078	265.985401	-29.308604	855.75	-1510.05

2.4 Star Slots

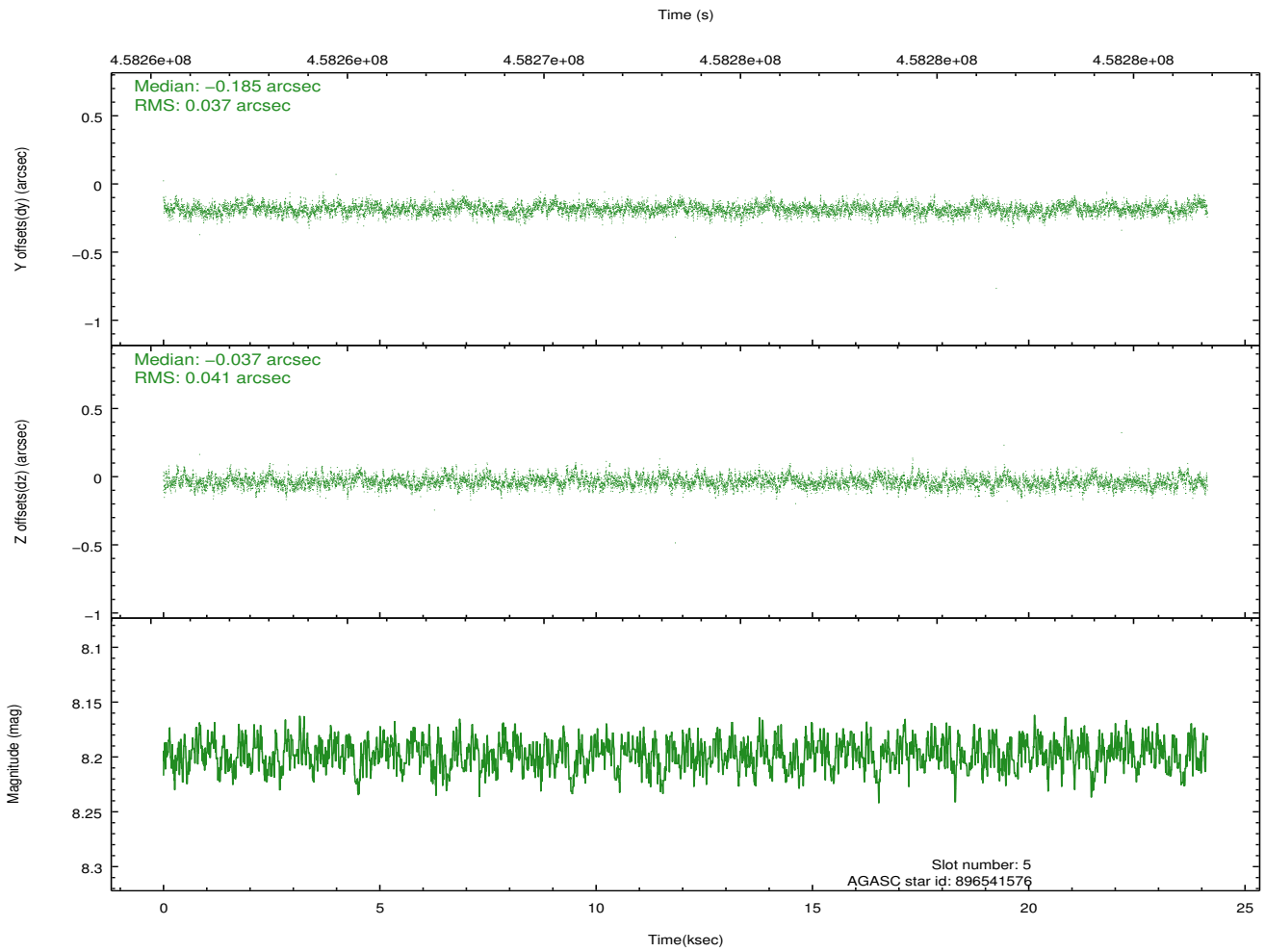
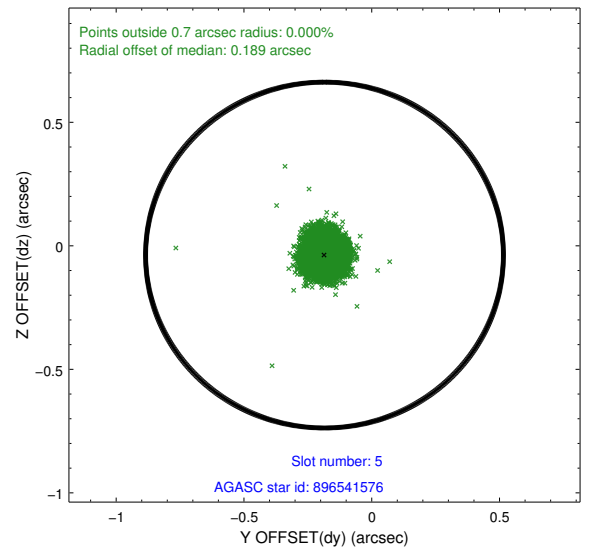
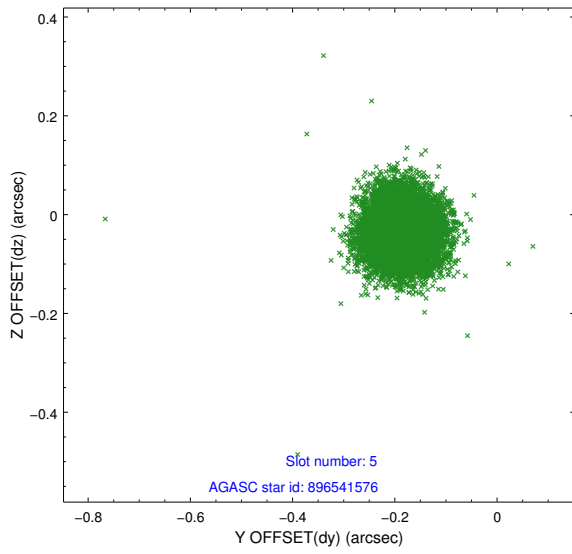
2.4.1 Slot 3



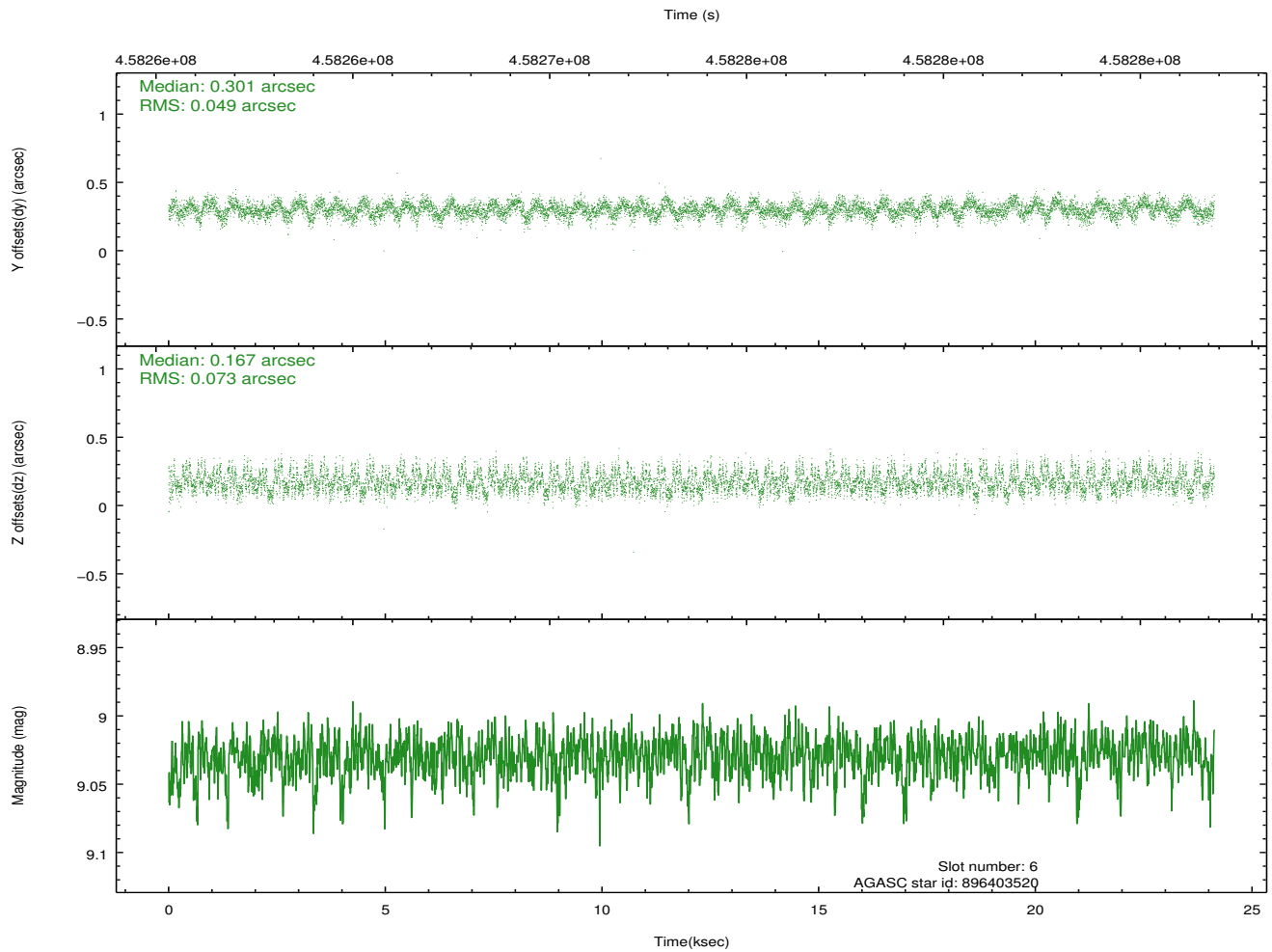
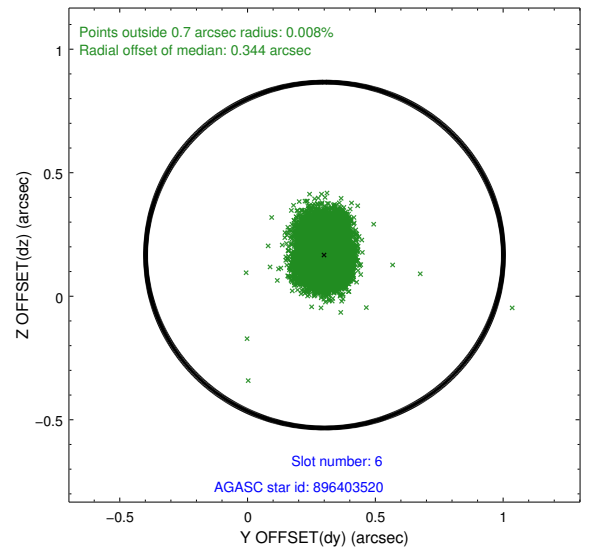
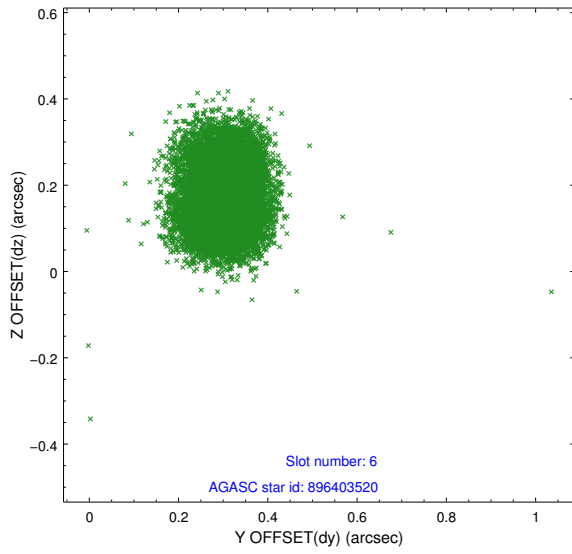
2.4.2 Slot 4



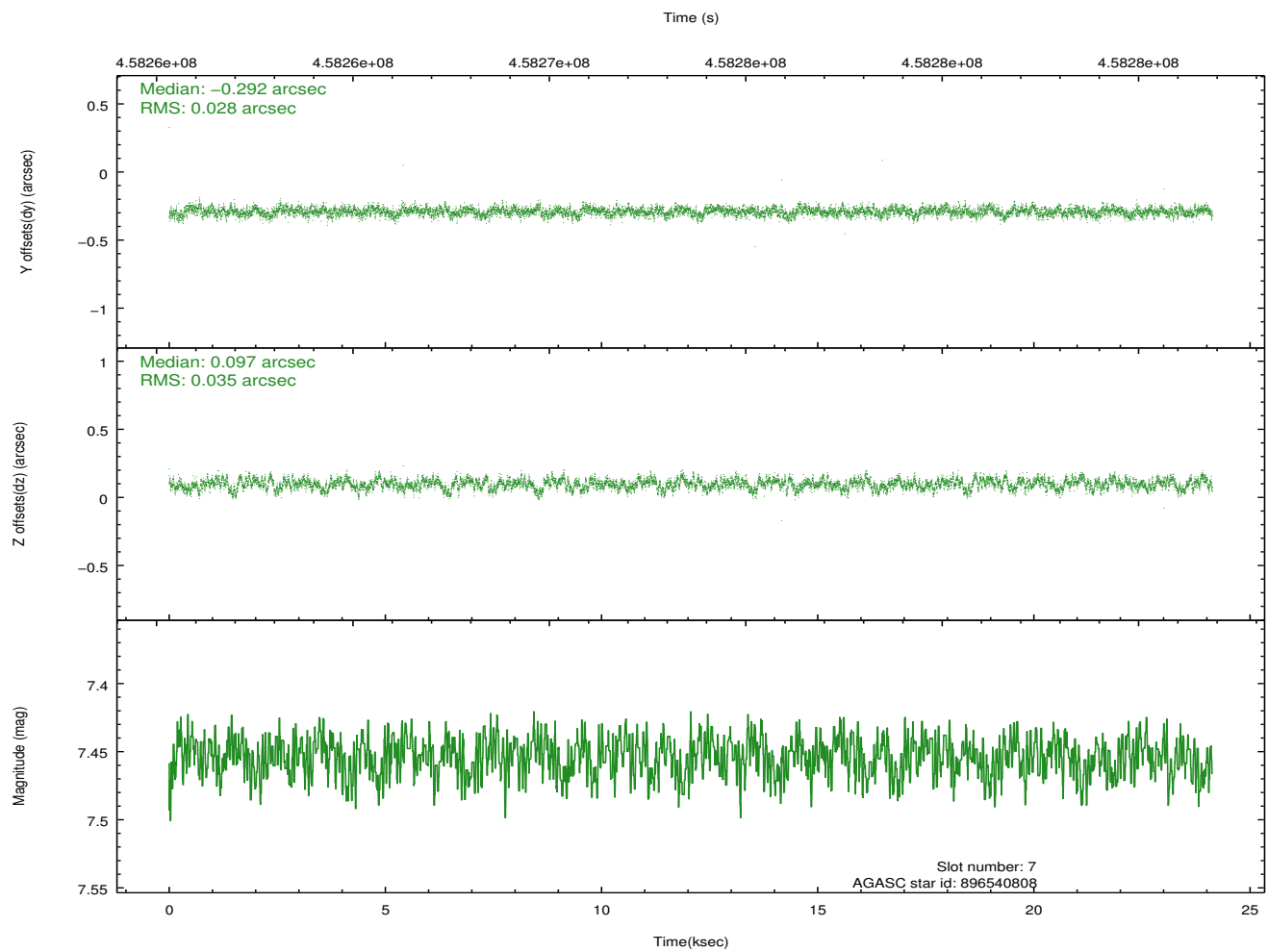
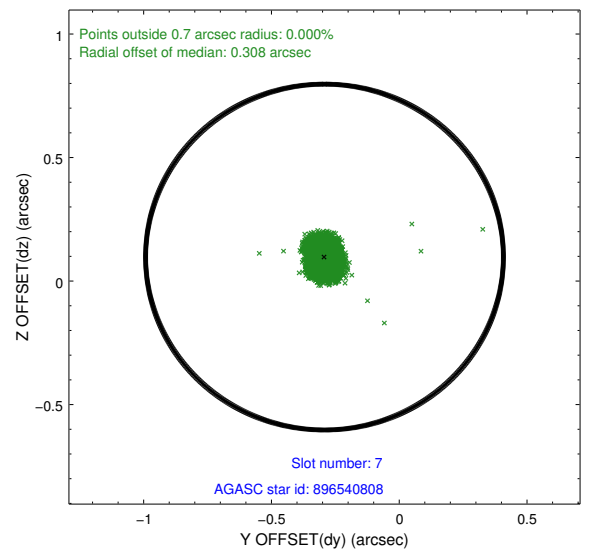
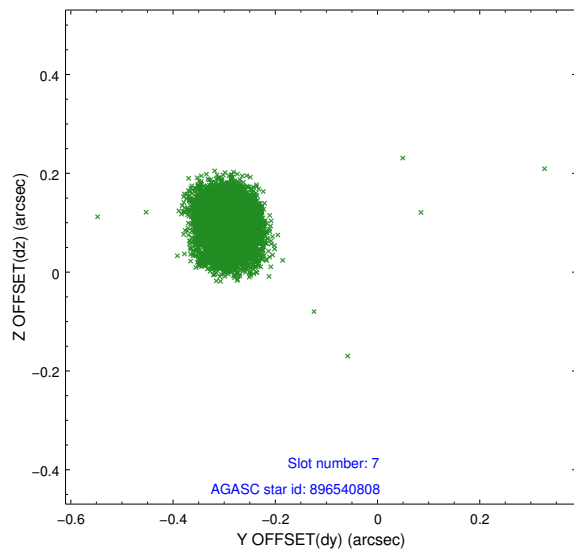
2.4.3 Slot 5



2.4.4 Slot 6

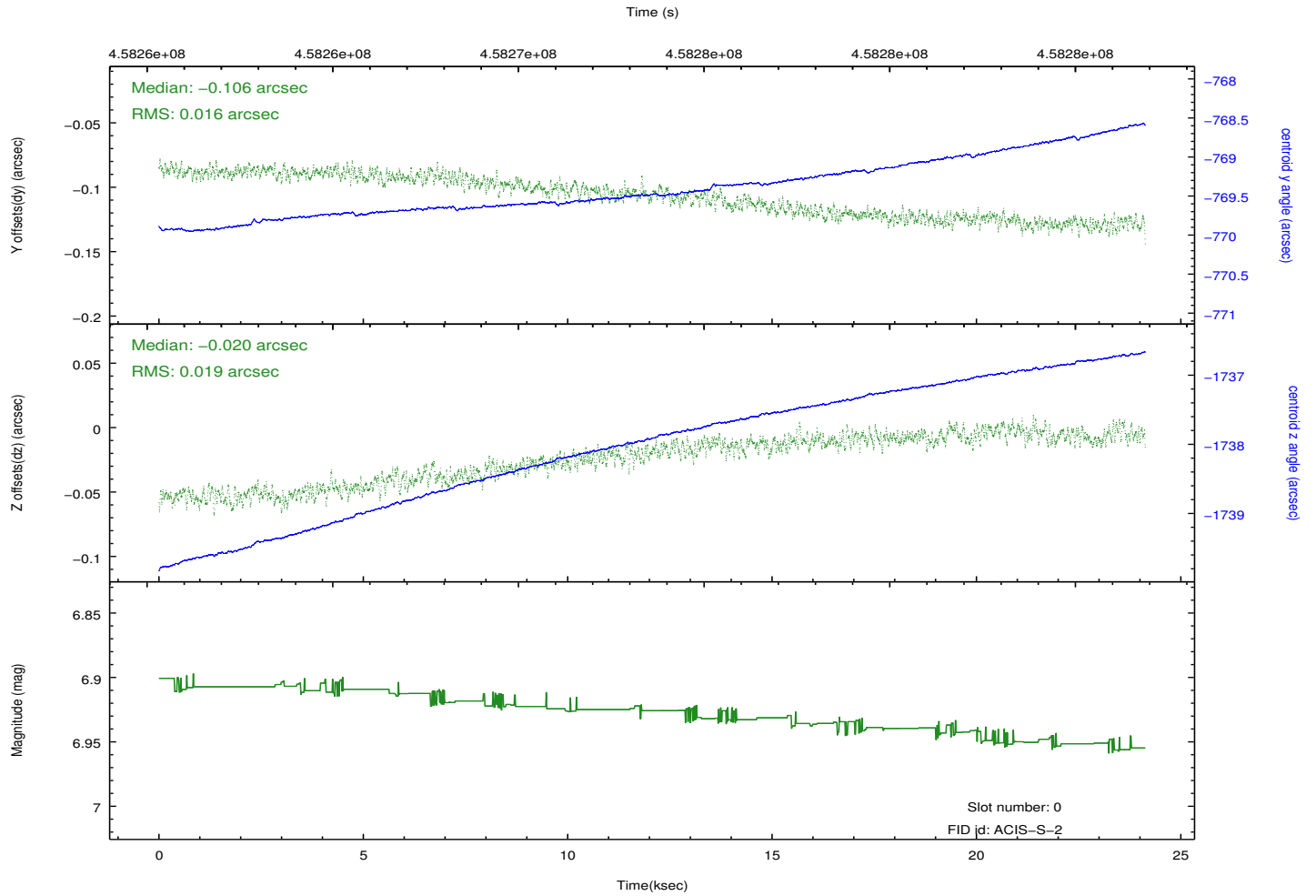
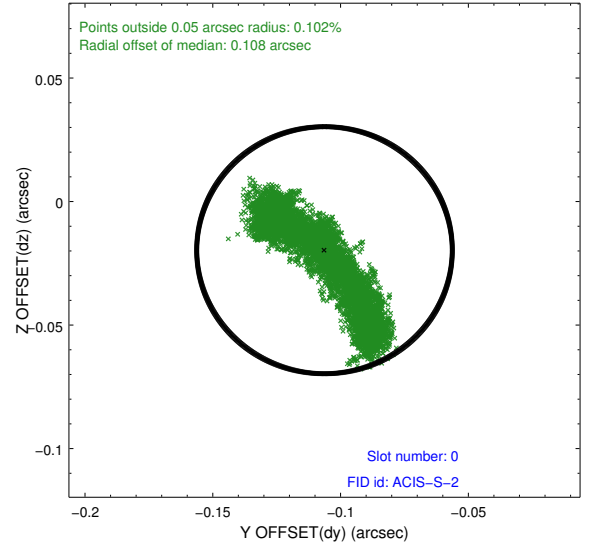
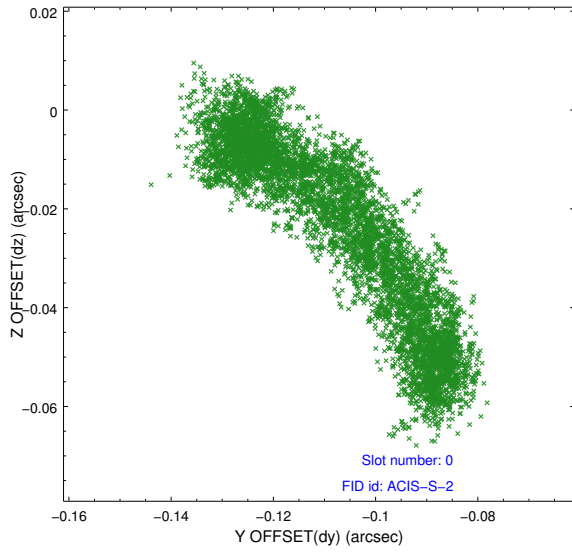


2.4.5 Slot 7

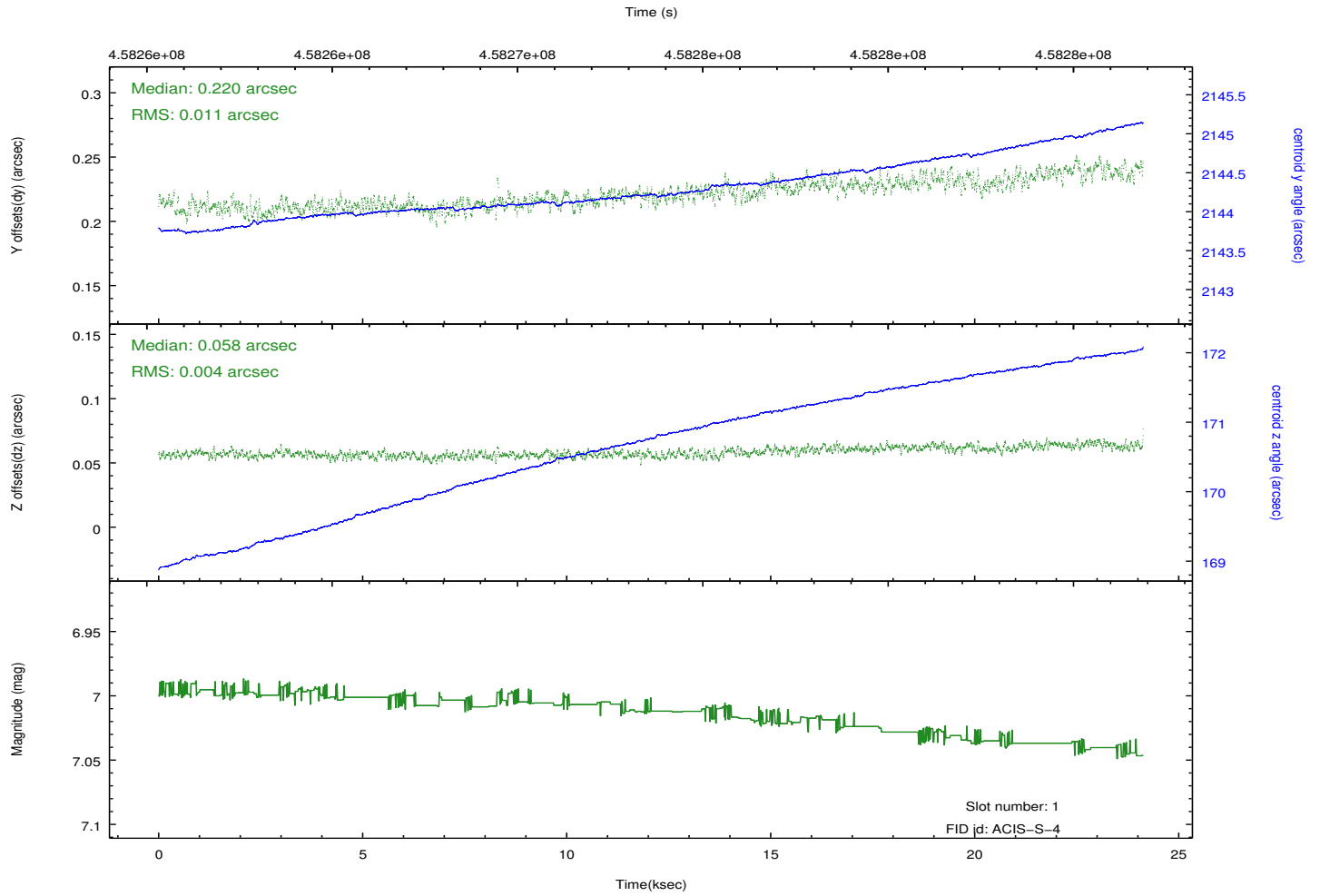
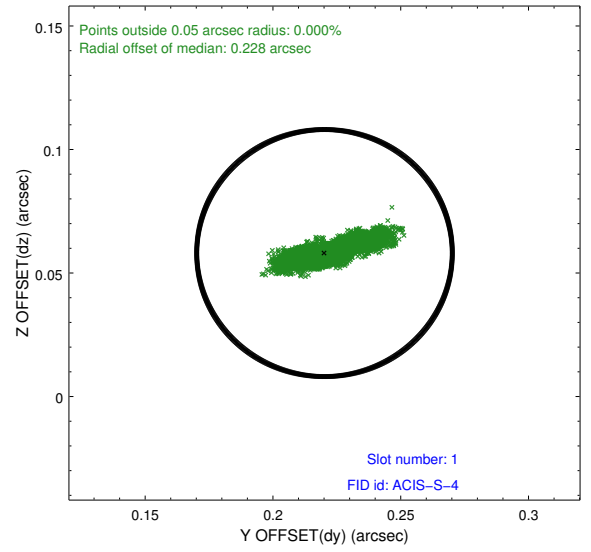
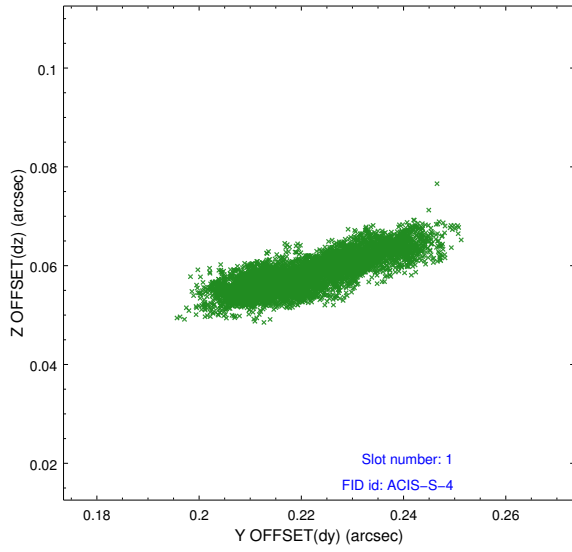


2.5 FID Slots

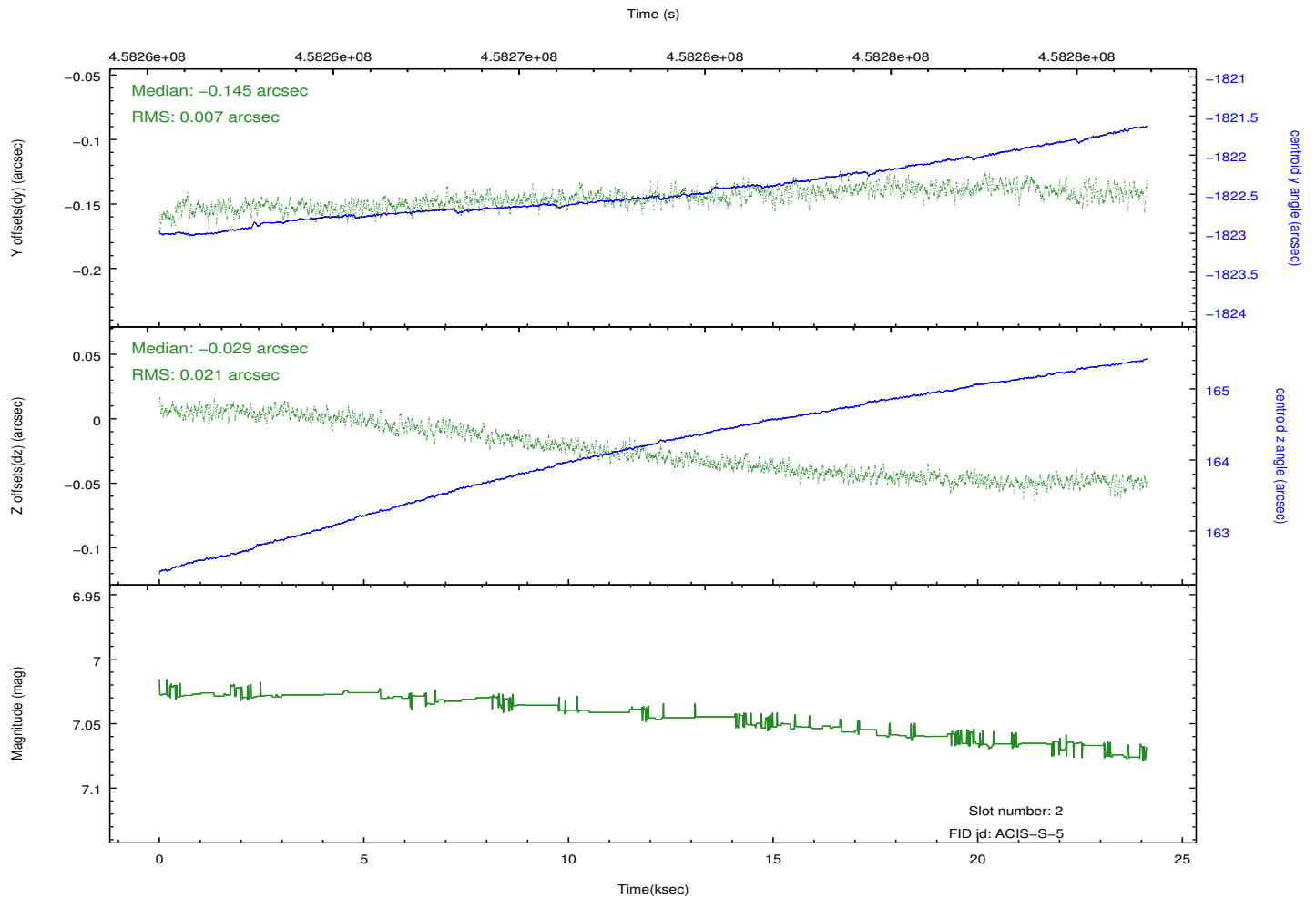
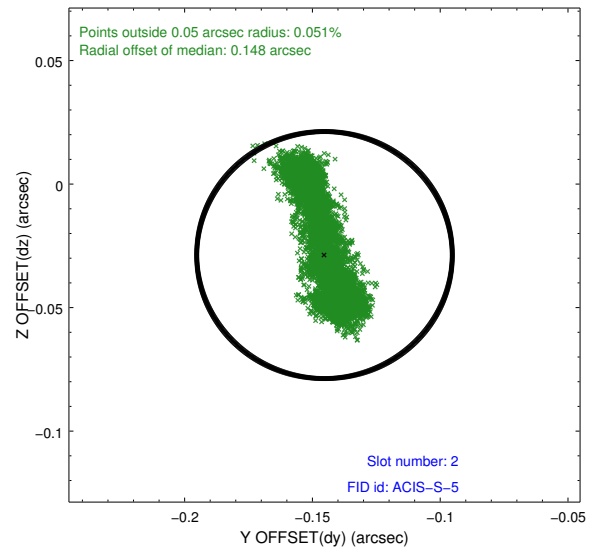
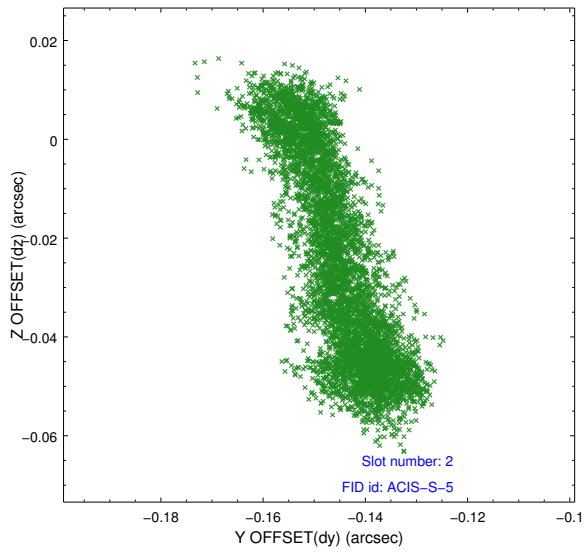
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

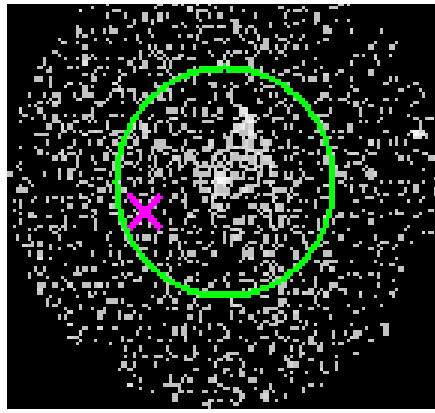


3 Gratings

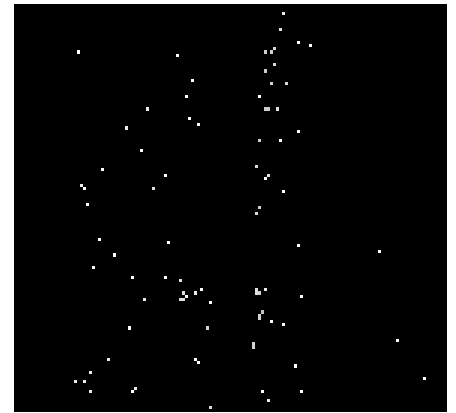
3.1 HEG Arm



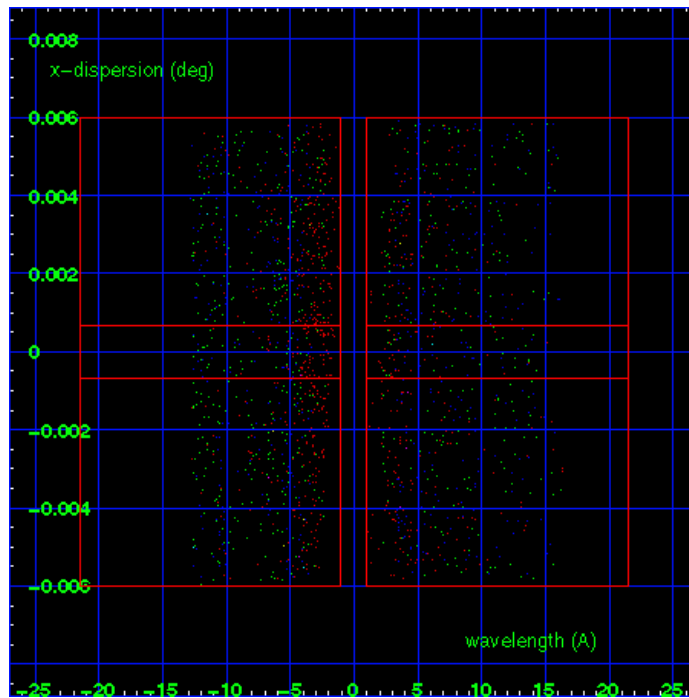
HEG Order Sort 123



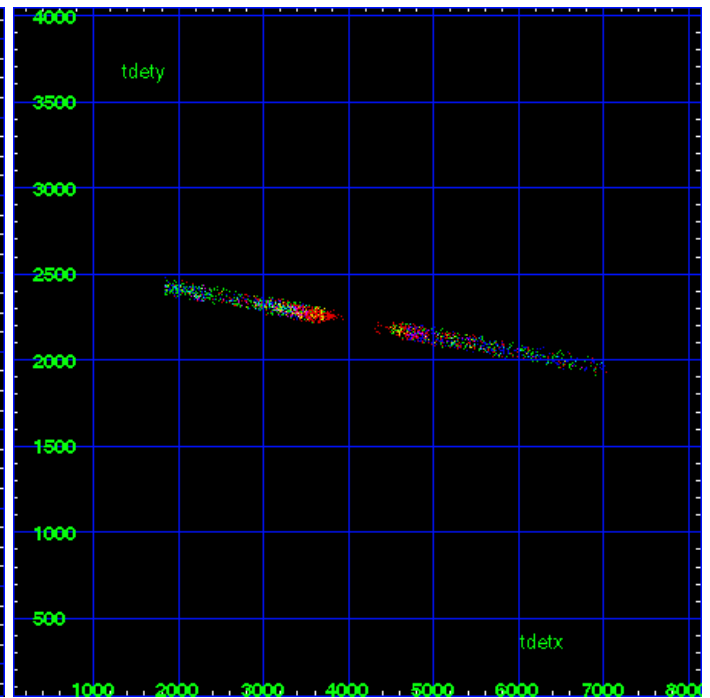
HEG Zero Order



HEG Order Sort ALL

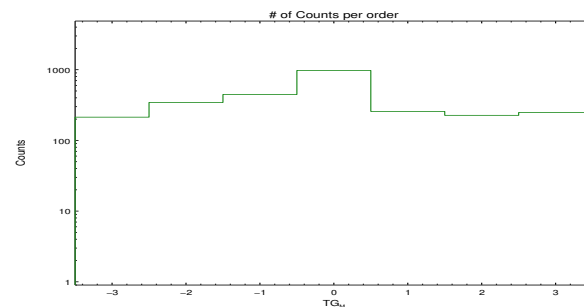


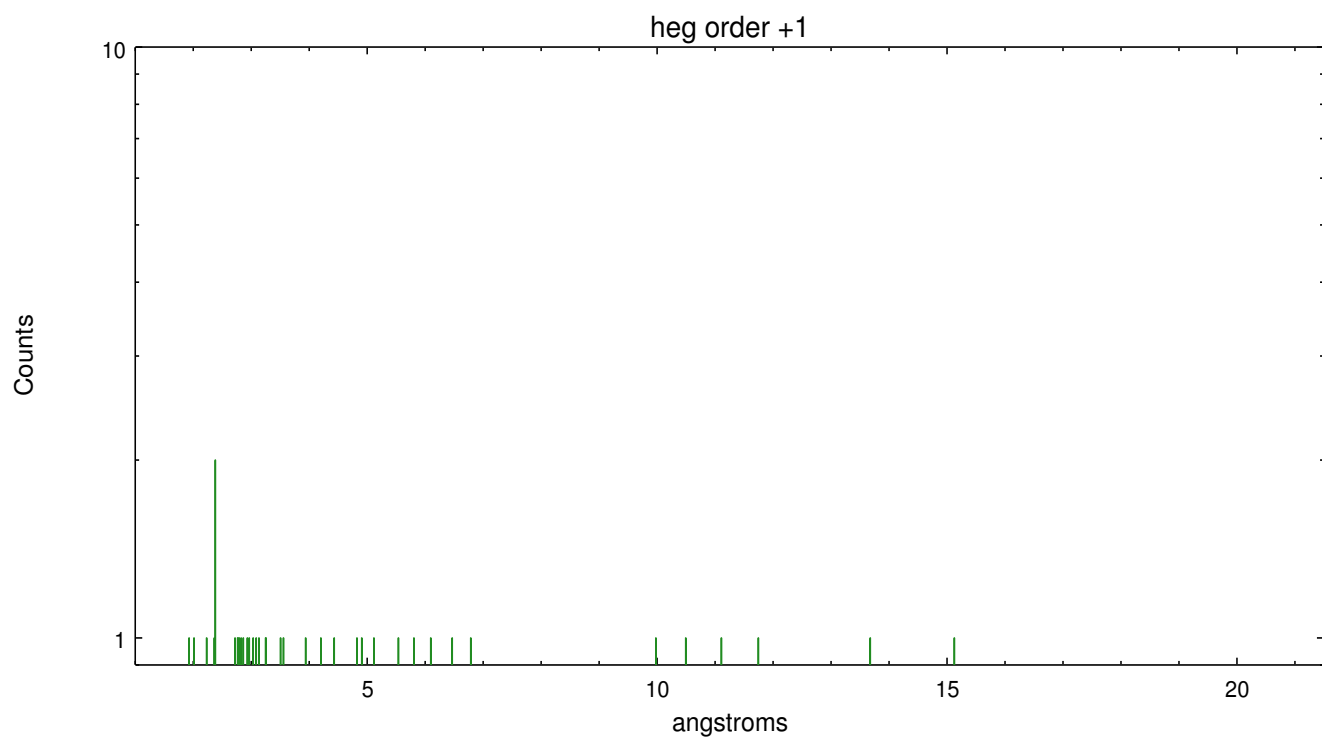
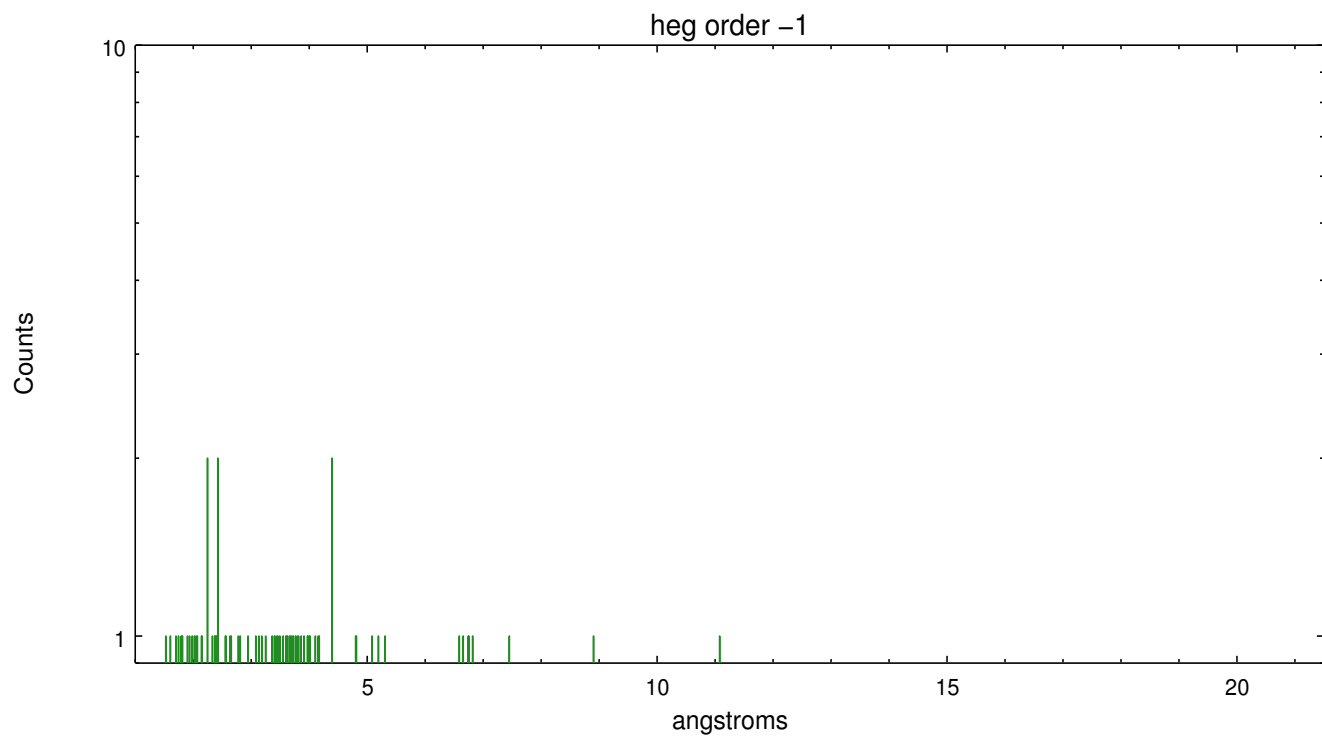
Spot Image HEG



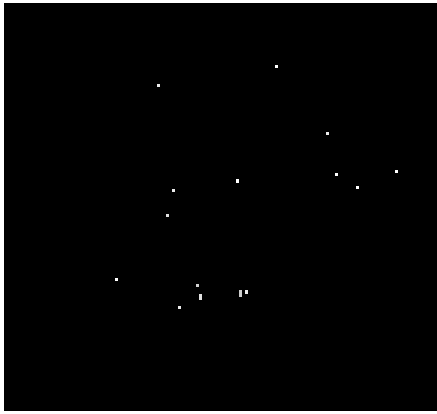
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	213	344	446	975	257	226	248

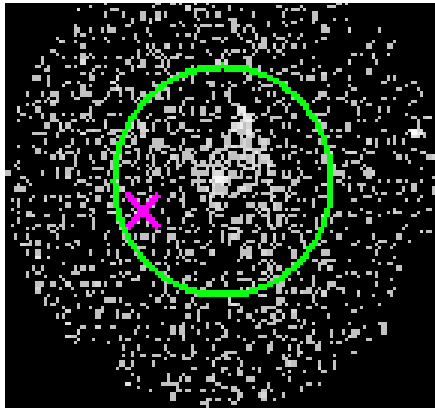




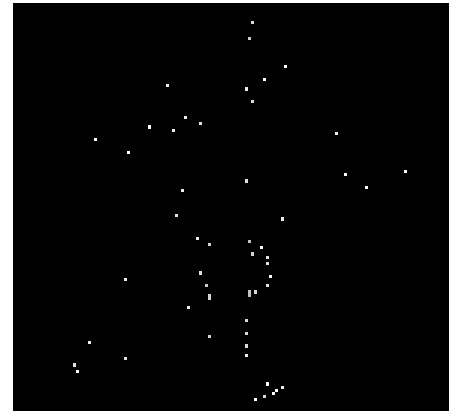
3.2 MEG Arm



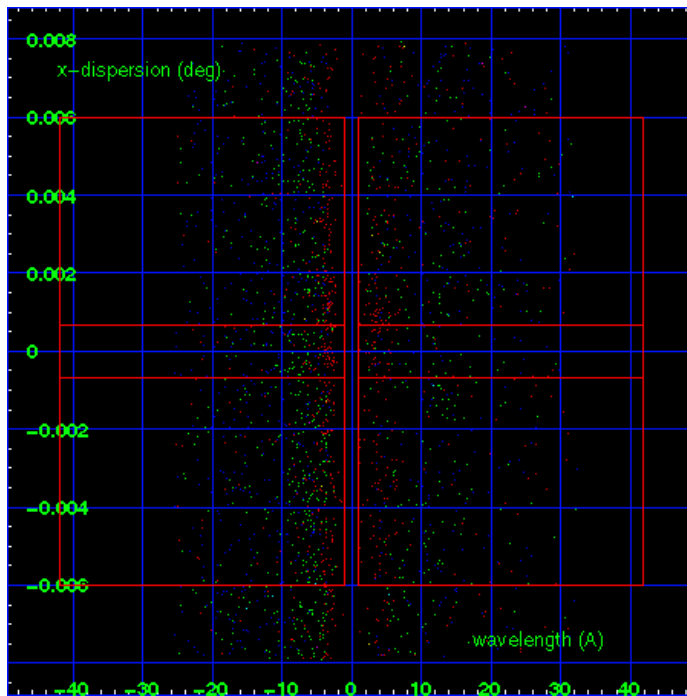
MEG Order Sort 123



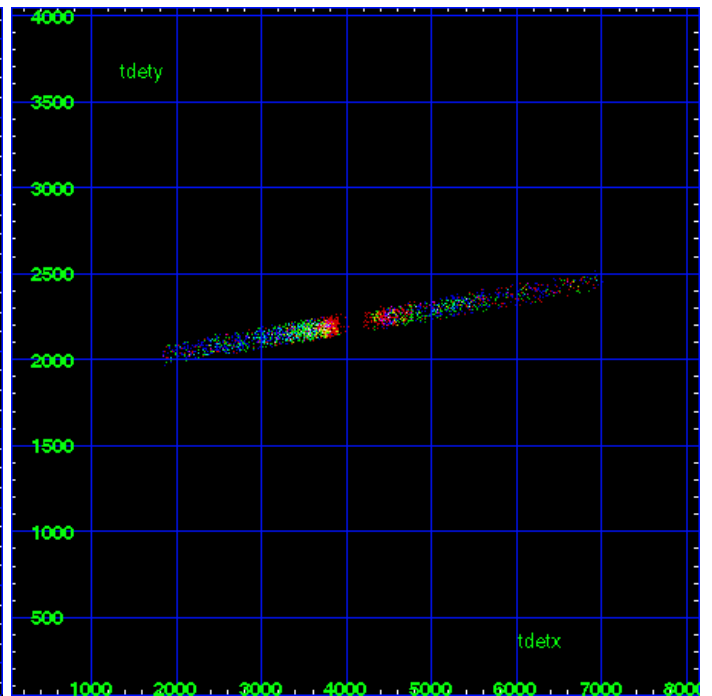
MEG Zero Order



MEG Order Sort ALL

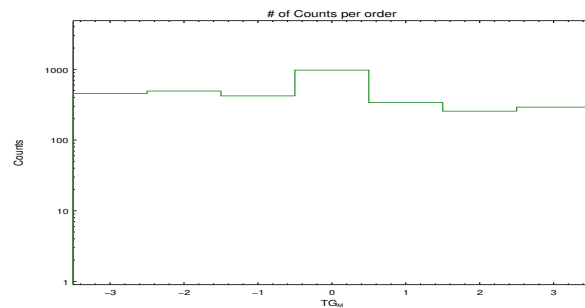


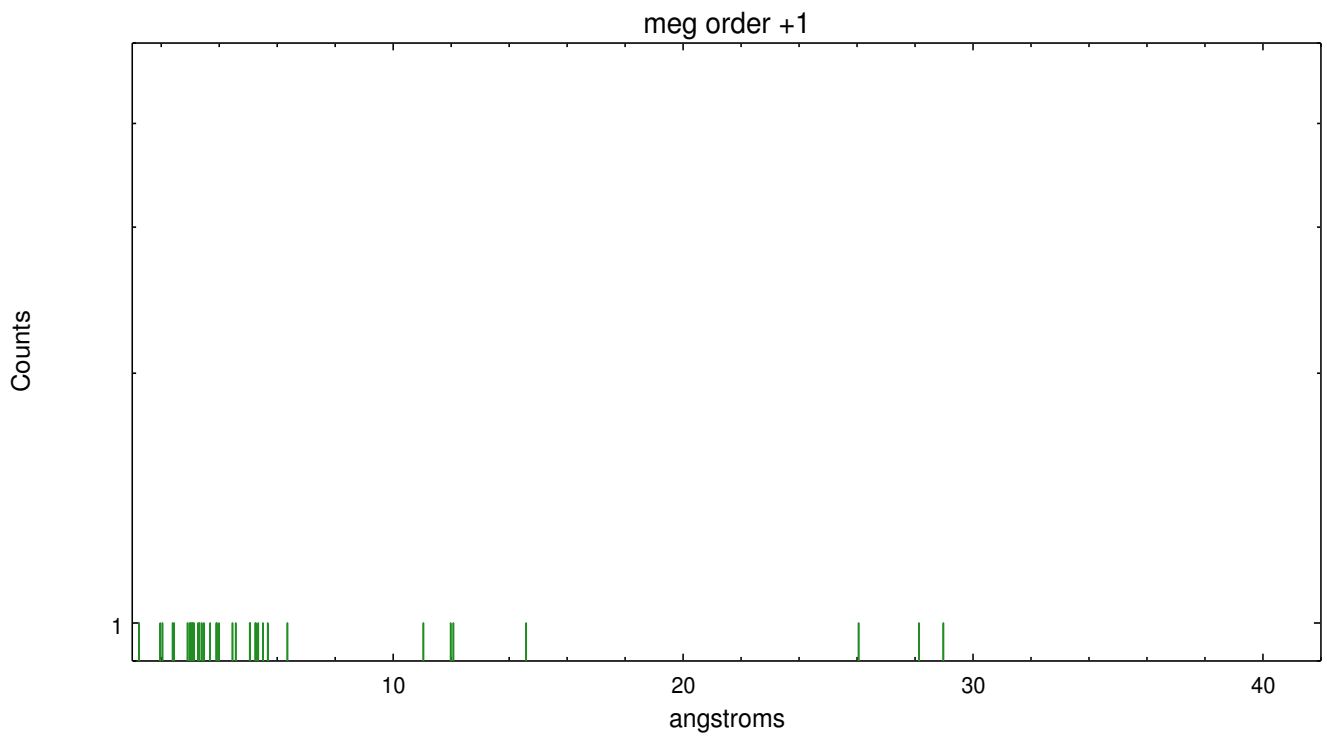
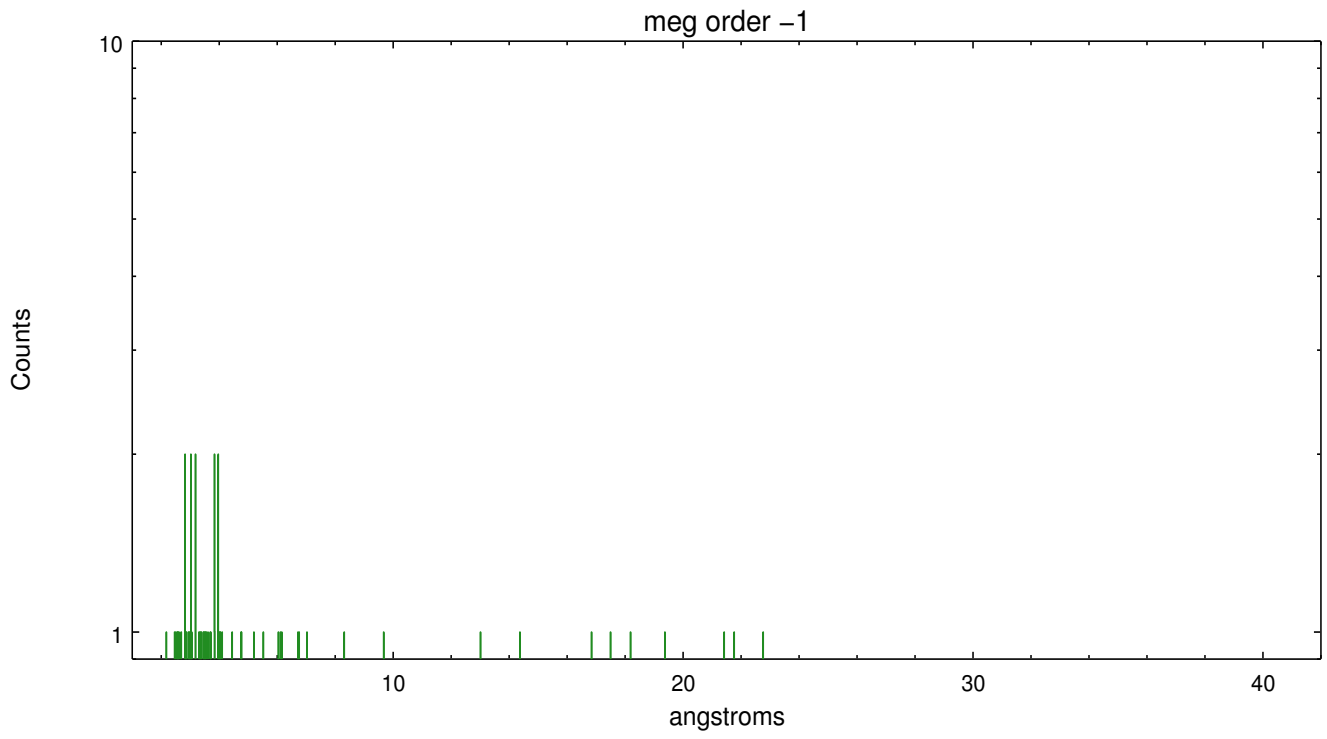
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	455	493	421	975	339	256	292





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.061618991017

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]