

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14465 - L2 Version 2
Chandra X-Ray Center

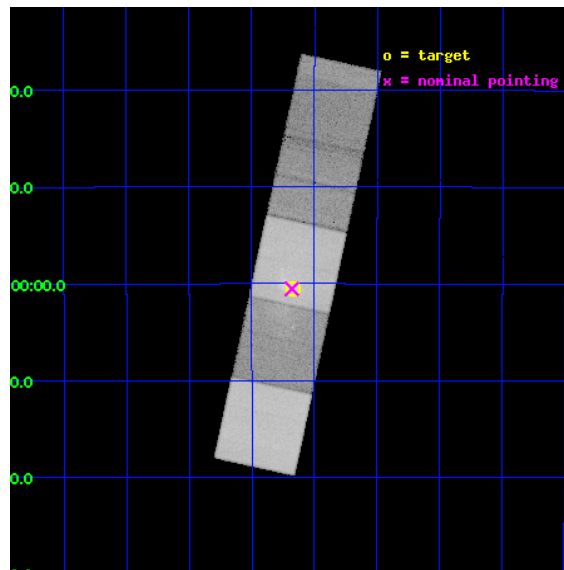
L2 Processing Date : Jul 24 2012

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1 Front

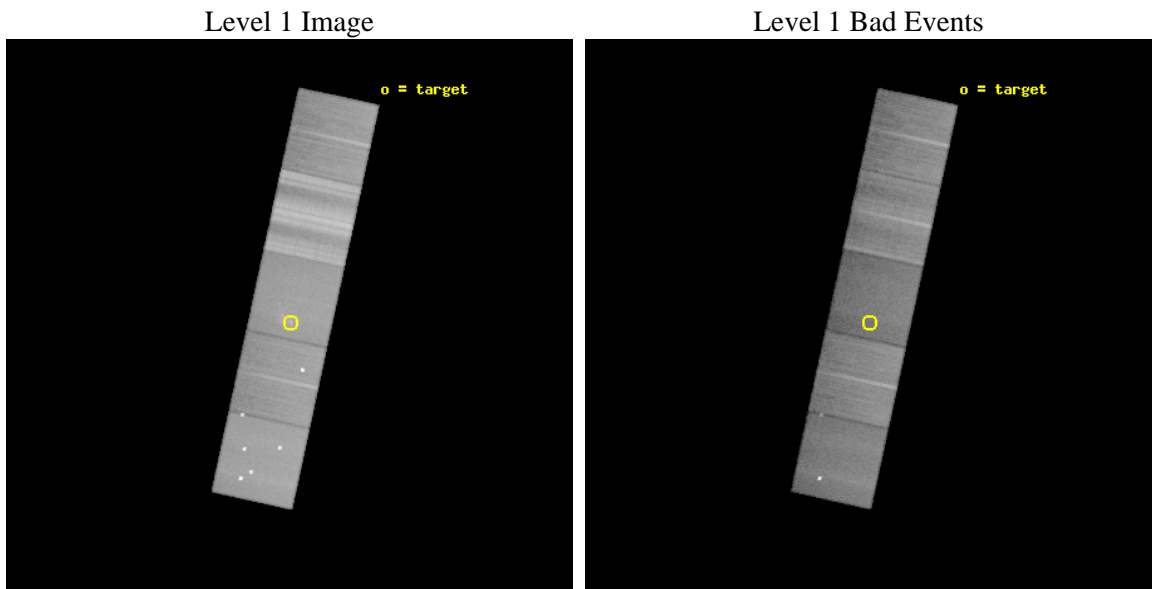
seq_num	601012	Sequence number
obs_id	14465	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41992428636	Nominal RA [deg]
dec_nom	-29.00886383222	Nominal Dec [deg]
roll_nom	282.27821252681	Nominal Roll [deg]
revision	2	Processing version of data
ontime	44345.500341058	Sum of GTIs [s]
livetime	43766.093732419	Livetime [s]
ontime5	44345.500341058	Sum of GTIs [s]
ontime6	44342.359290719	Sum of GTIs [s]
ontime7	44345.500341058	Sum of GTIs [s]
ontime8	44345.500341058	Sum of GTIs [s]
ontime9	44342.359290659	Sum of GTIs [s]
l2events	548215	Number of level 2 events



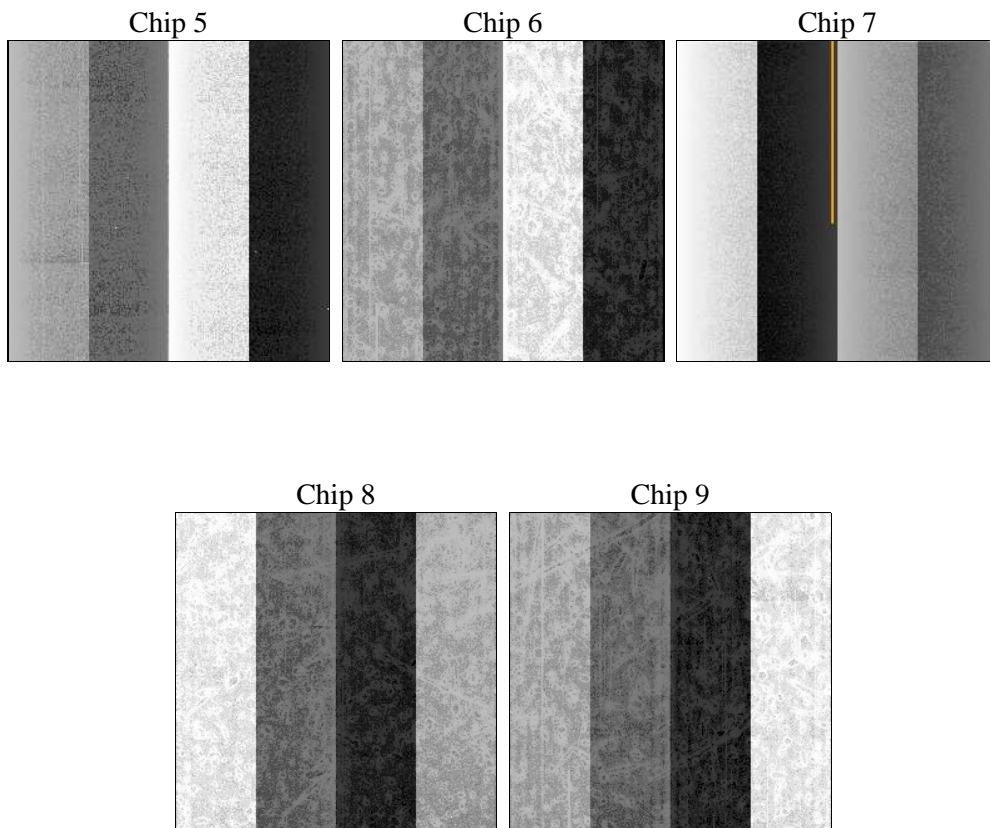
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	62500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	44345.500341058	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	44345.500341058	Sum of GTIs [s]
date	2012-07-24T18:07:30	Date and time of file creation	ontime6	44342.359290719	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	44345.500341058	Sum of GTIs [s]
			ontime8	44345.500341058	Sum of GTIs [s]
			ontime9	44342.359290659	Sum of GTIs [s]
			l1events	2231418	Number of level 1 events

2.1.4 Events

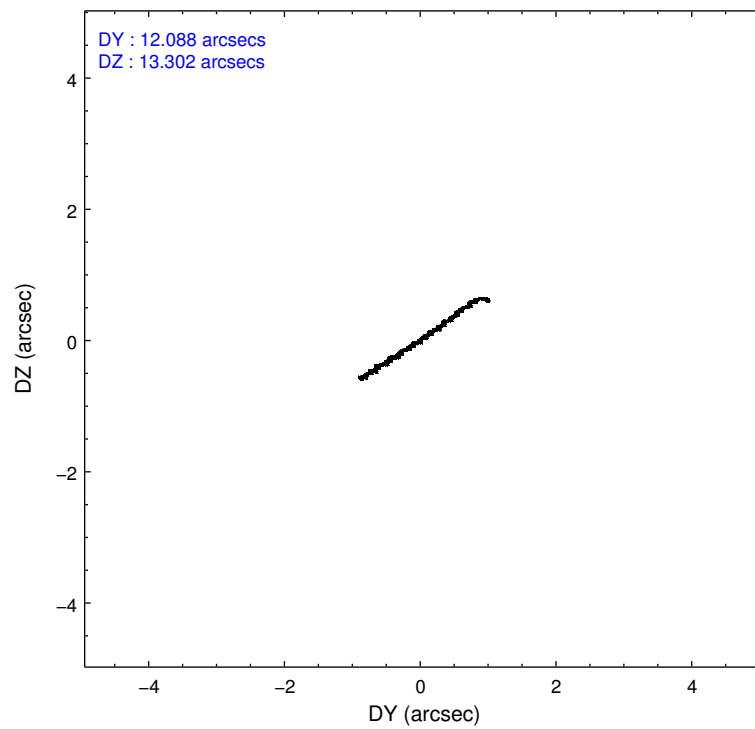
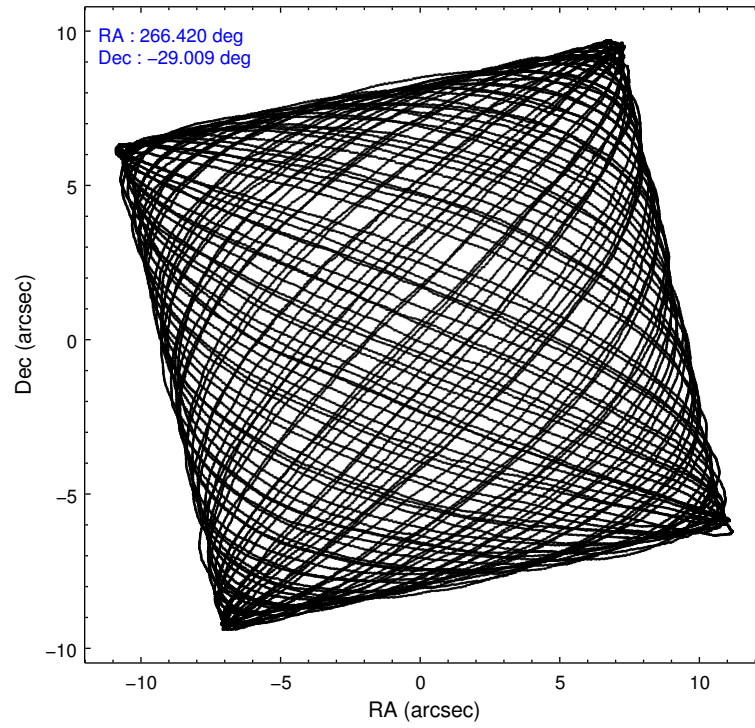
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	485219	368464	388285	669174	320276
rejected events	224800	292472	185191	312724	275993
rejected %	46%	79%	47%	46%	86%

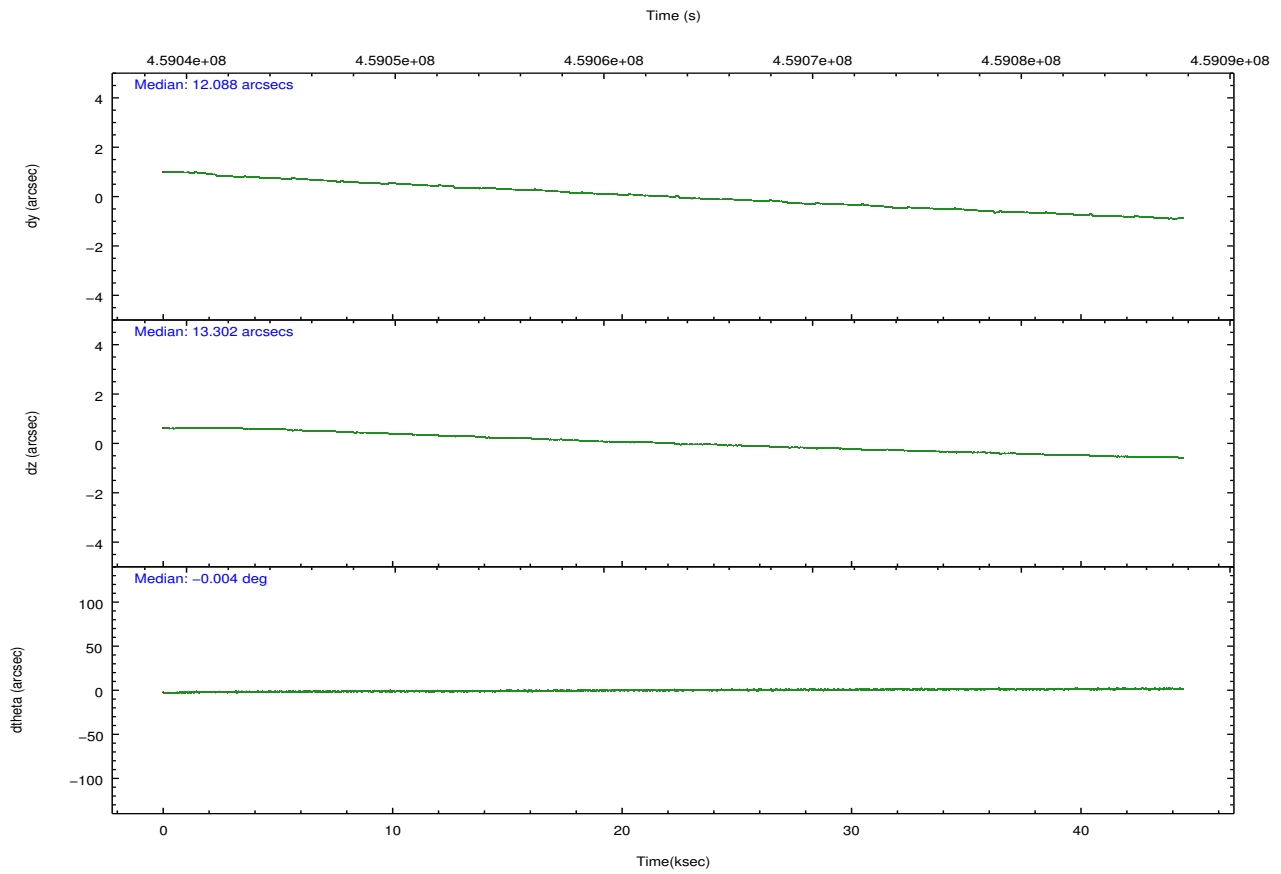
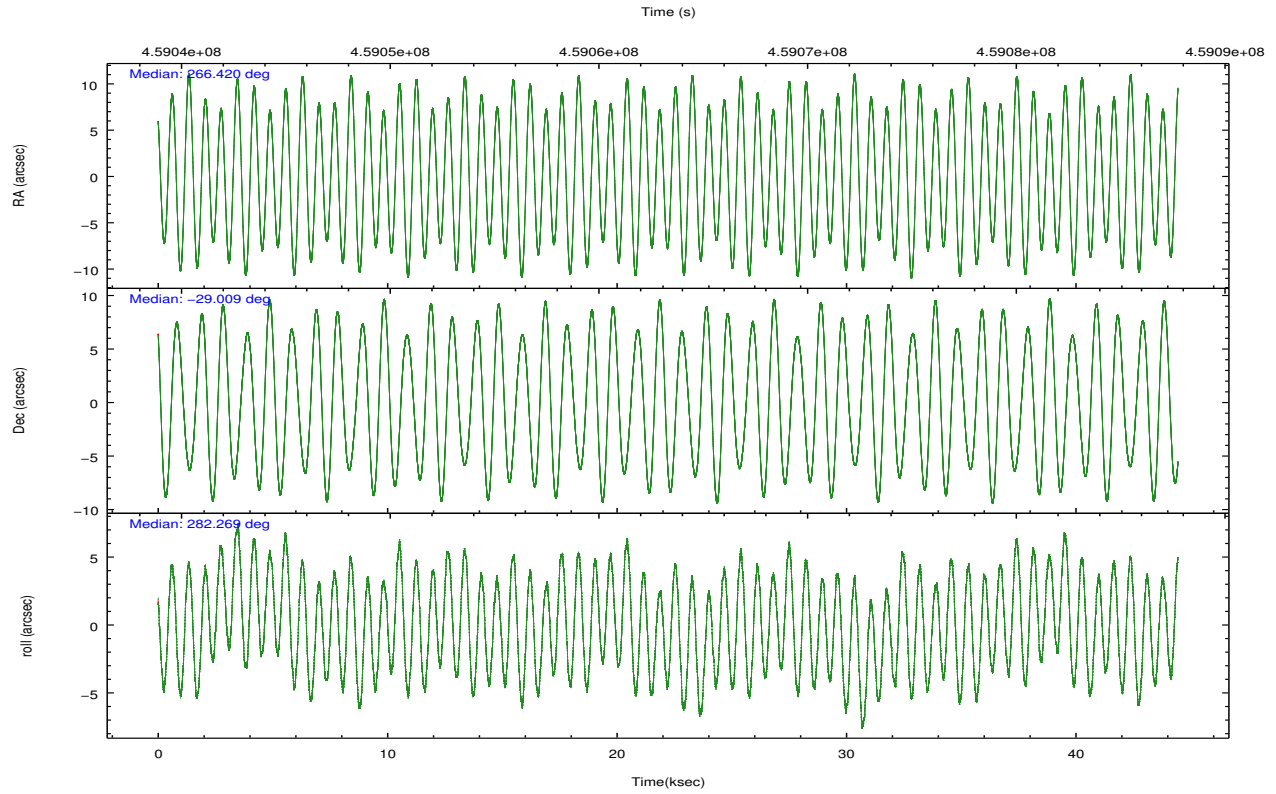
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	51747	30152	24468	110747	18370
	10%	8%	6%	16%	5%
grade 1 events	1418	268	565	932	176
	0%	0%	0%	0%	0%
grade 2 events	76896	27141	45795	59066	10149
	15%	7%	11%	8%	3%
grade 3 events	10810	4473	18686	56478	3911
	2%	1%	4%	8%	1%
grade 4 events	10057	4371	18435	50925	3603
	2%	1%	4%	7%	1%
grade 5 events	30917	11912	33648	21190	13221
	6%	3%	8%	3%	4%
grade 6 events	111512	10039	96195	80004	8366
	22%	2%	24%	11%	2%
grade 7 events	191862	280108	150493	289832	262480
	39%	76%	38%	43%	81%

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	OVERRIDE	OVERRIDE
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	266.398572	266.4199242863585	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988882	-29.00886383221968	Alternating exposures requested	N	N
[deg] Pointing Roll	282.111233	282.2782125268138	[s] Primary exposure time	3.1	3.1
[mm] SIM focus pos	-0.6828225247311905	-0.6828225247311905			
[mm] SIM defocus	0.001444942264670179	0.001444942264670179			
[mm] SIM translation stage pos	-190.1400660498719	-190.1400660498719			
[mm] SIM translation stage offset	0.007542945904702947	0.007542945904702947			
[s] Observation start time (MET)	459041085.184000	459041085.184			
Observation start date	2012-07-18T23:23:38	2012-07-18T23:24:45			
[s] Observation end time (MET)	459085530.600000	459085530.6			
Observation end date	2012-07-19T11:45:31	2012-07-19T11:45:30			
Read mode	TIMED	TIMED			

2.3 Aspect



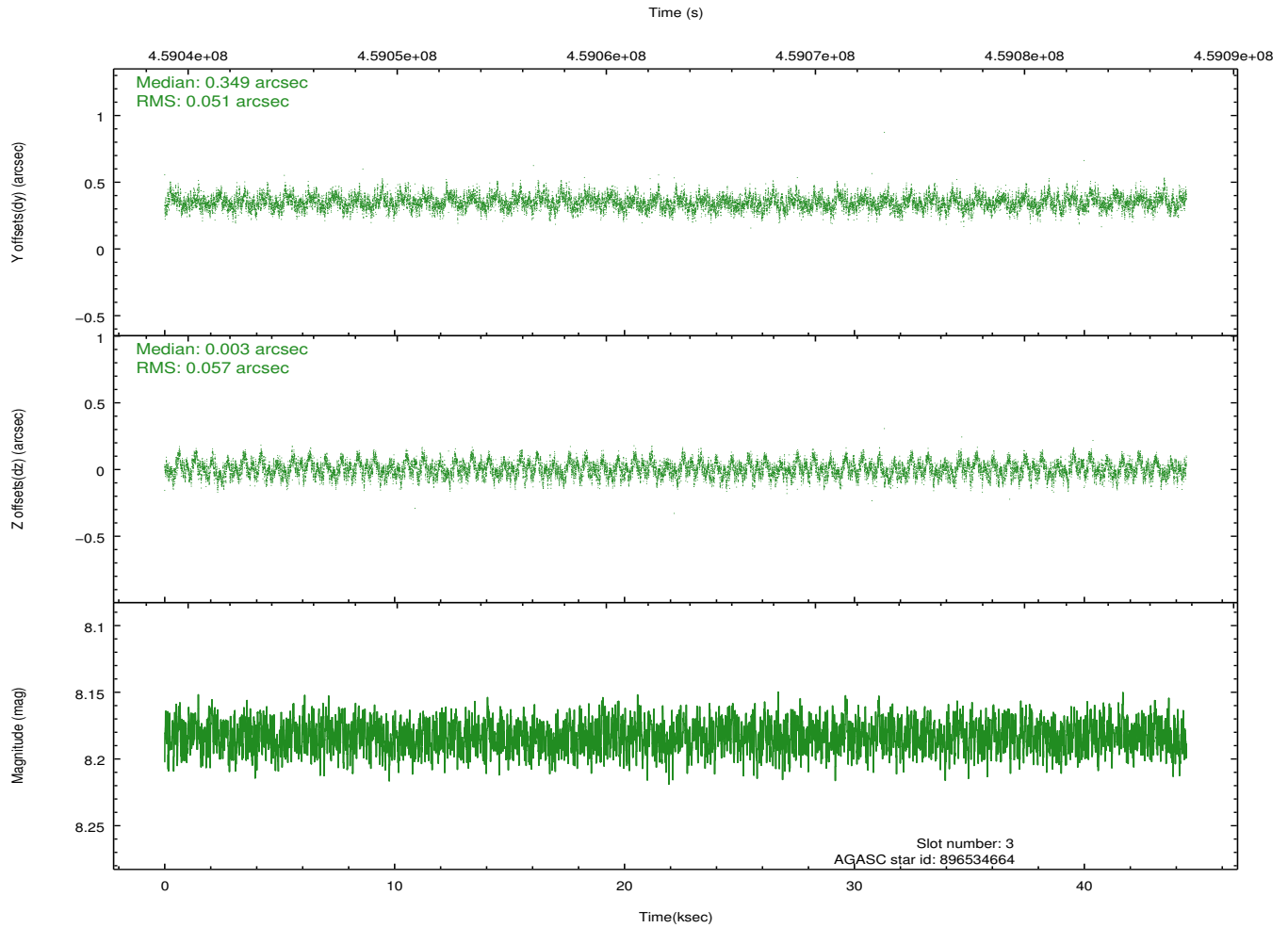
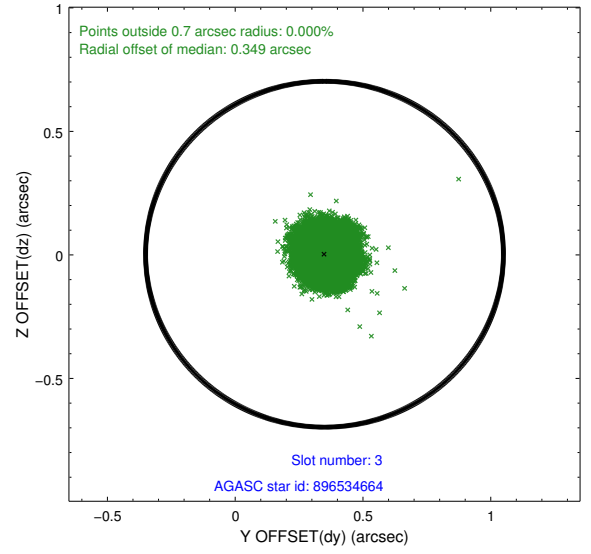
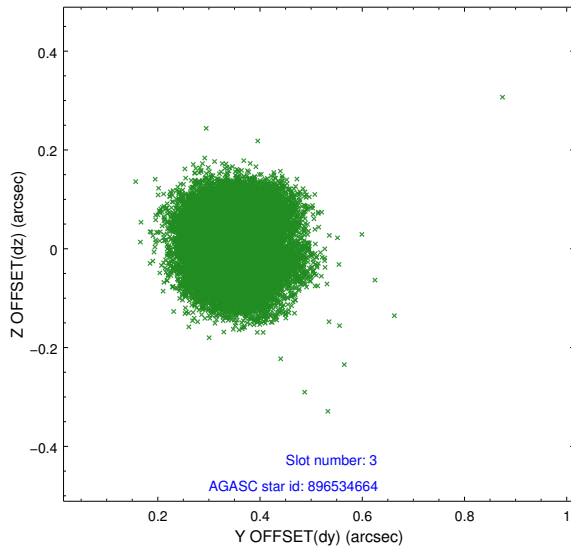


Slot Statistics

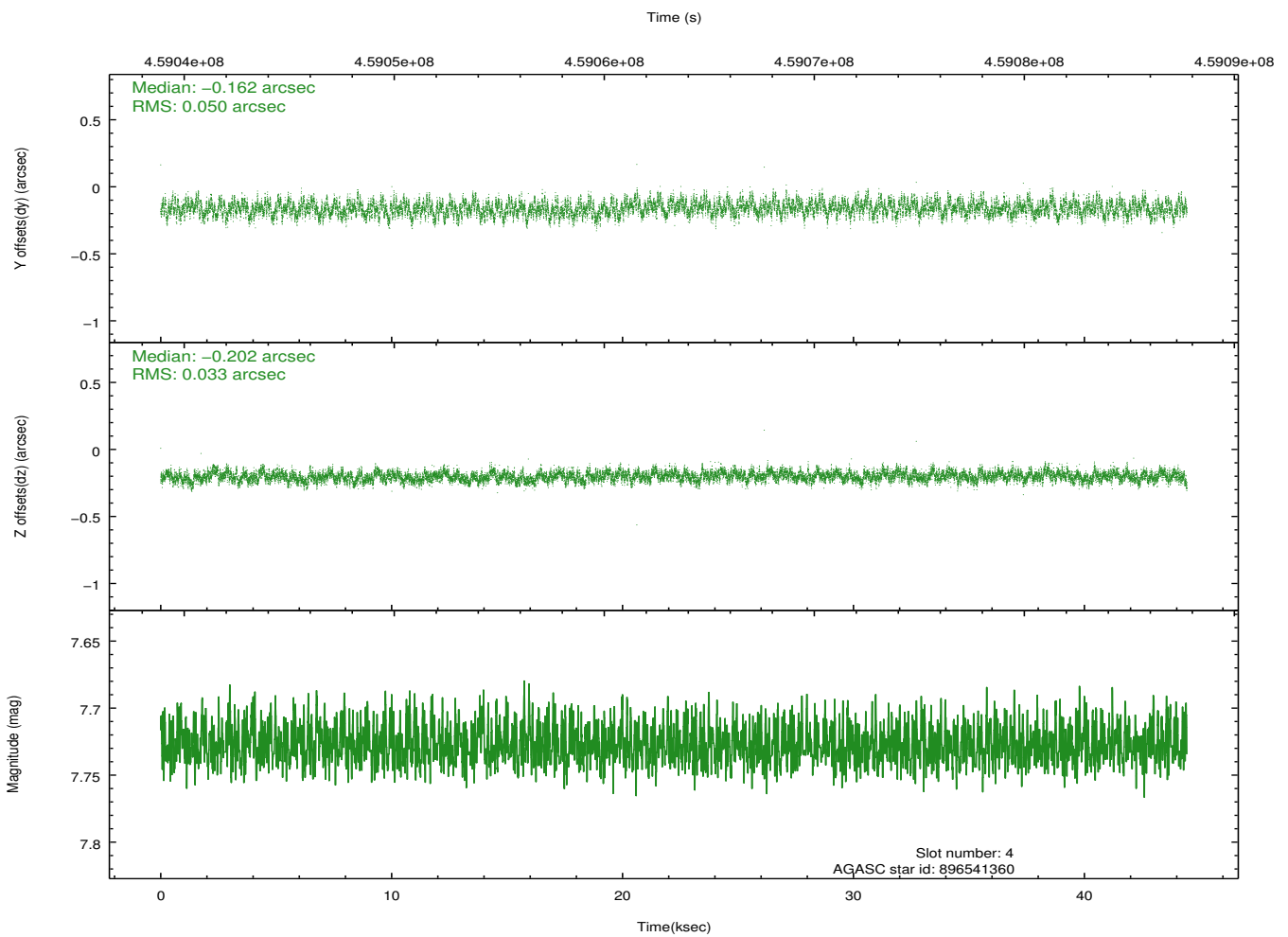
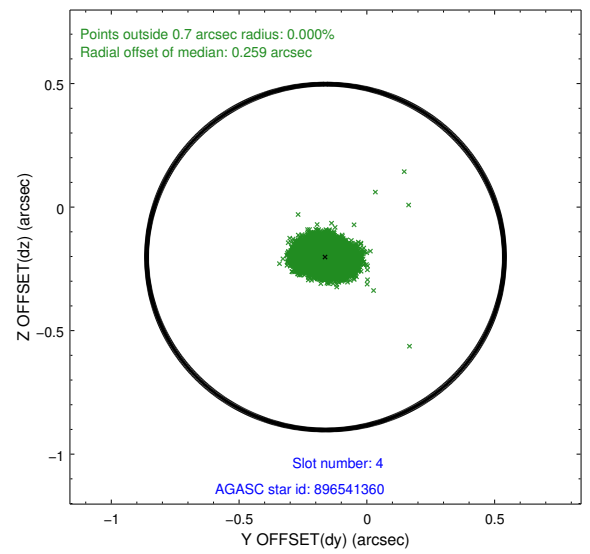
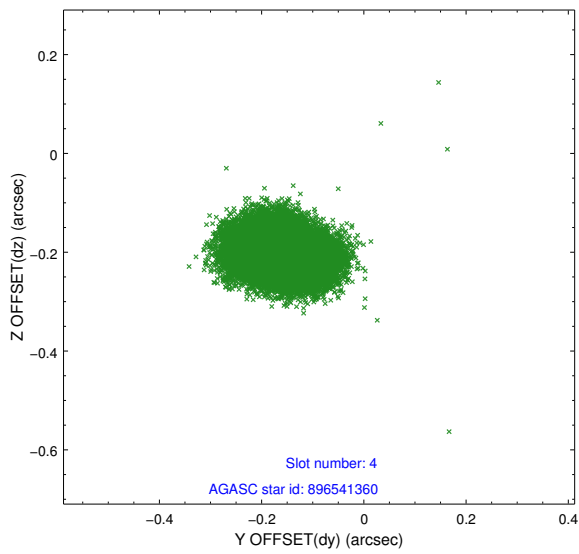
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.99	10840	-0.049	-0.050	0.009	0.015	0.000000	0.000000	-765.04	-1734.70
1	FID	ACIS-S-4	7.08	10840	0.185	0.037	0.011	0.039	0.000000	0.000000	2148.49	173.85
2	FID	ACIS-S-5	7.12	10838	-0.170	0.021	0.013	0.026	0.000000	0.000000	-1818.00	167.53
3	GUIDE	896534664	8.18	21679	0.349	0.003	0.083	0.131	266.405570	-28.407461	-2041.13	460.67
4	GUIDE	896541360	7.73	21671	-0.162	-0.202	0.063	0.102	266.684478	-29.453744	1825.50	525.21
5	GUIDE	896541576	8.19	21679	-0.177	0.034	0.068	0.110	267.051055	-28.762912	-357.79	2182.93
6	GUIDE	896403520	9.01	21671	0.258	0.089	0.092	0.149	265.626481	-28.748780	-1347.66	-2202.87
7	GUIDE	896540808	7.47	21675	-0.268	0.061	0.078	0.115	265.985401	-29.308604	855.86	-1509.89

2.4 Star Slots

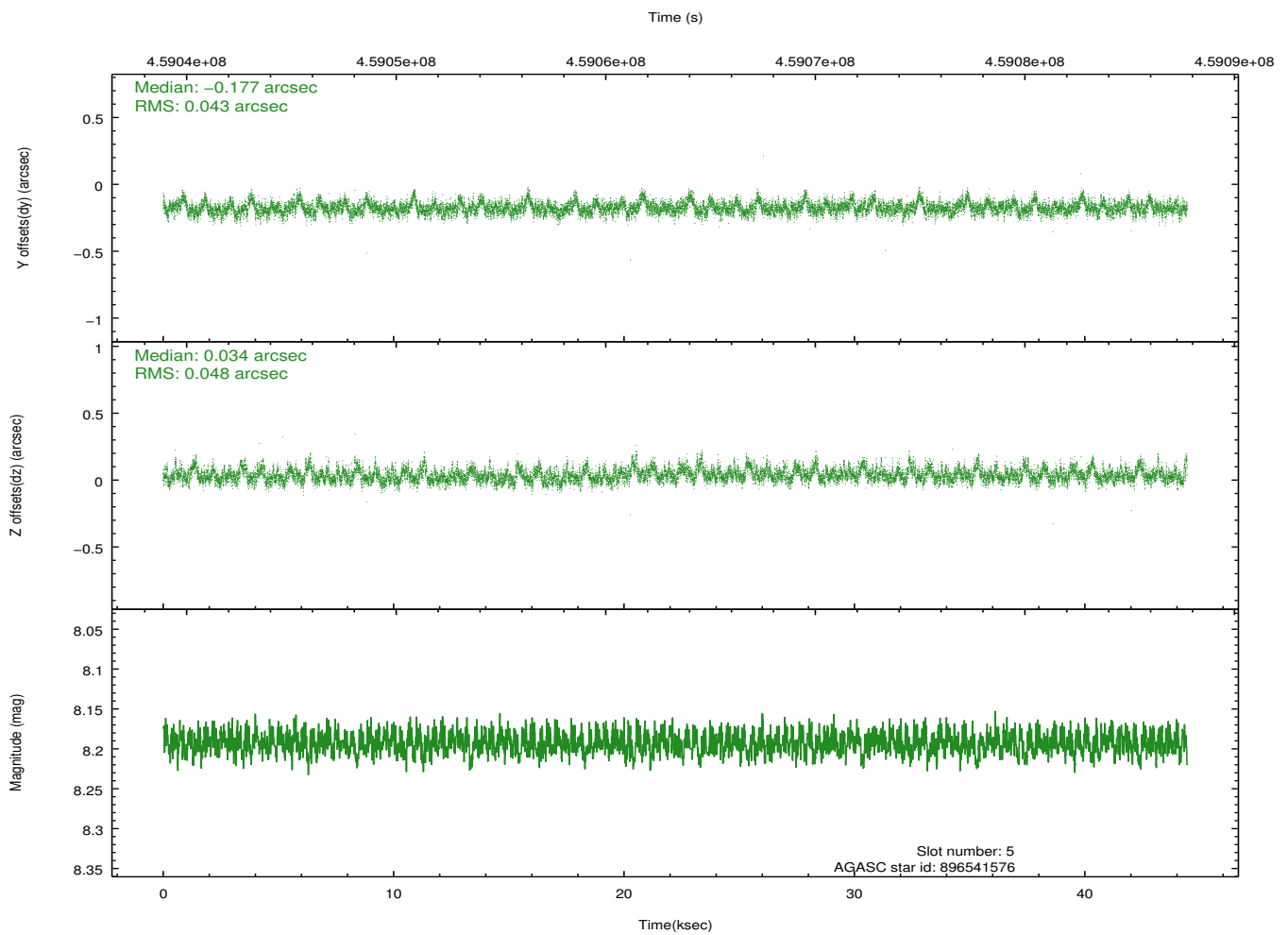
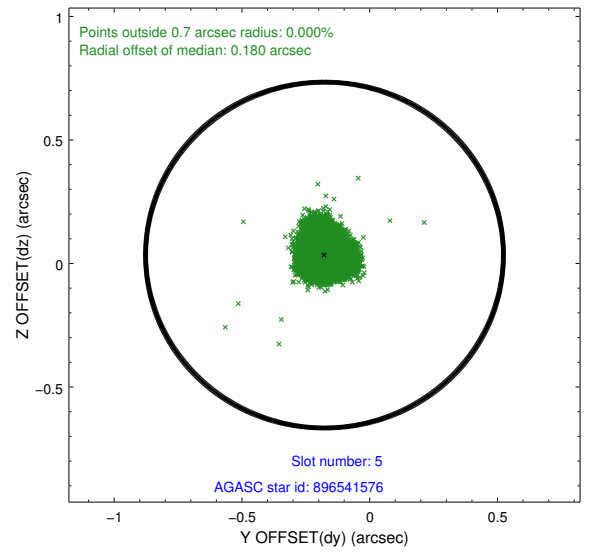
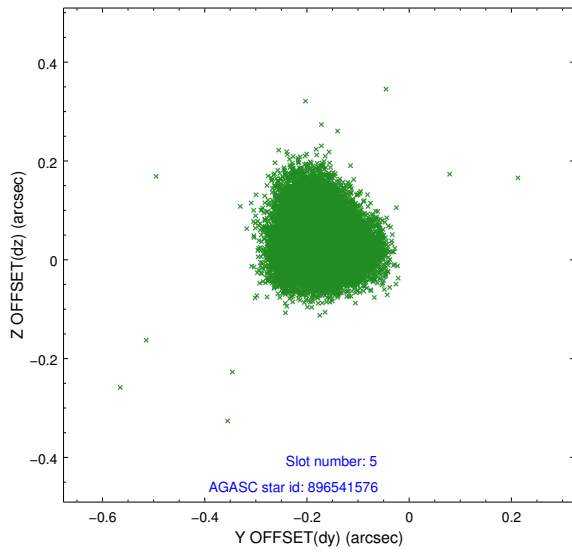
2.4.1 Slot 3



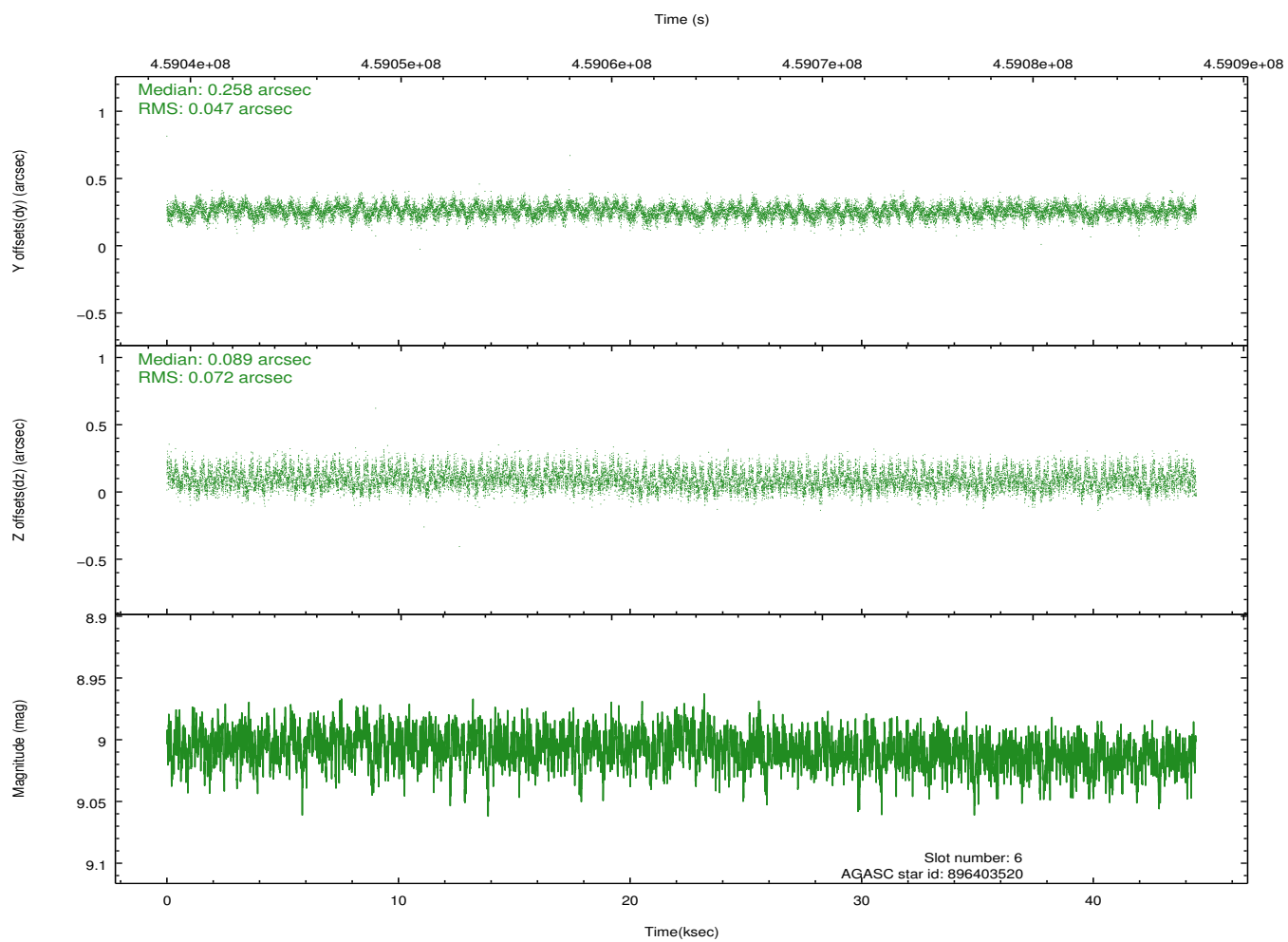
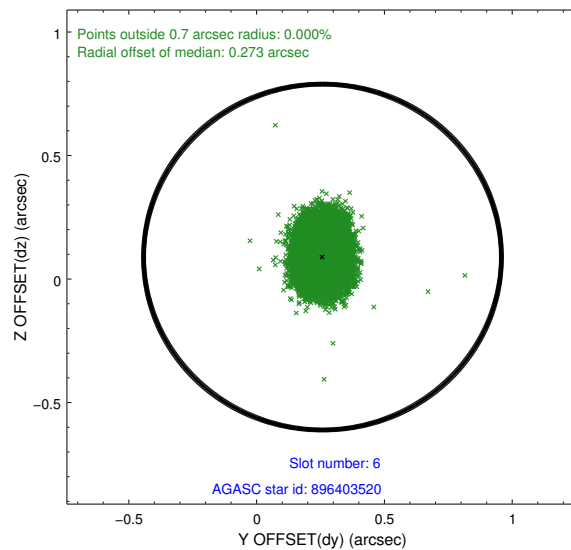
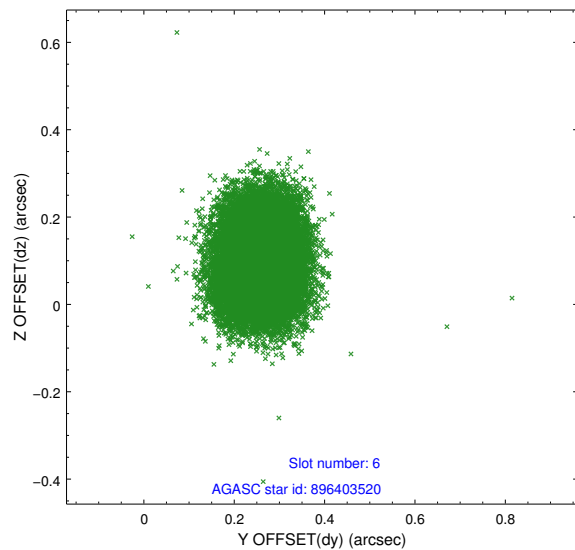
2.4.2 Slot 4



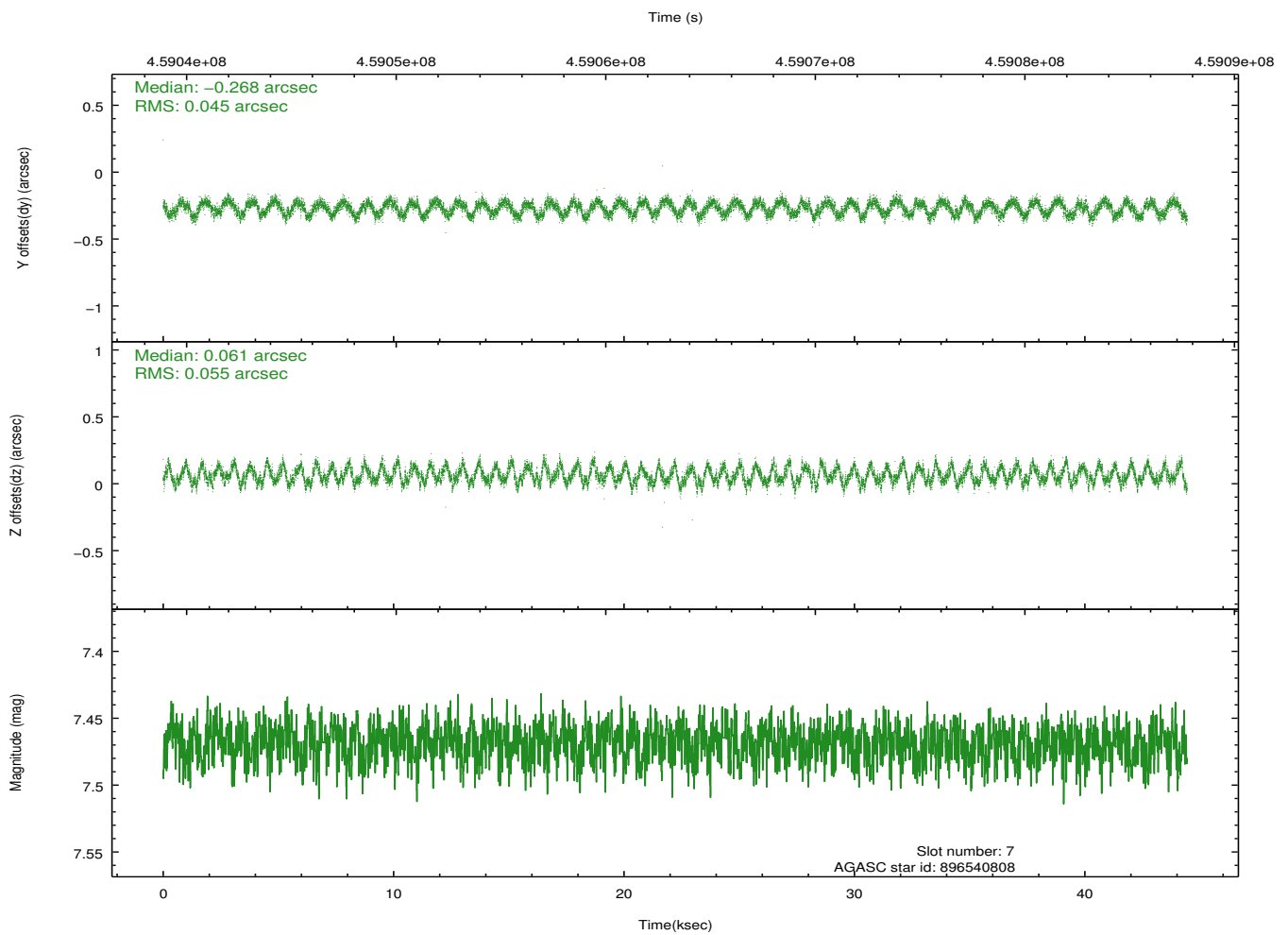
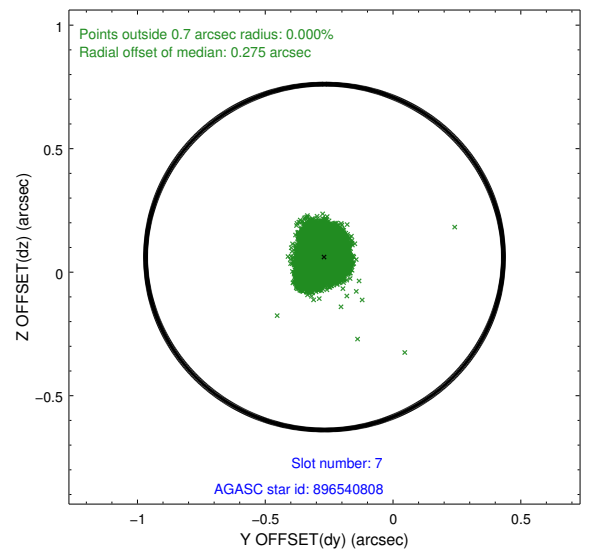
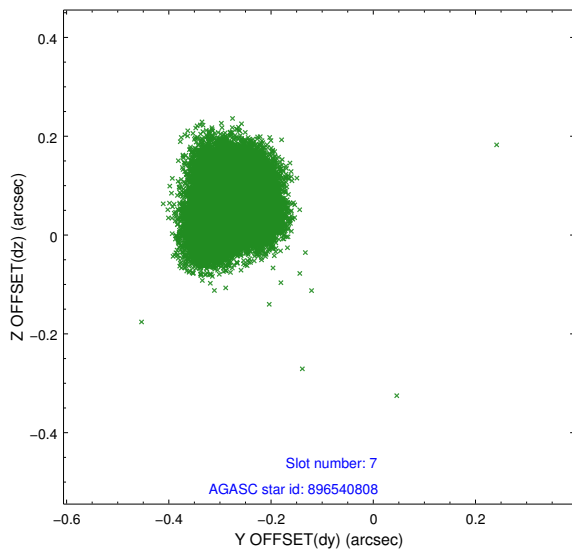
2.4.3 Slot 5



2.4.4 Slot 6

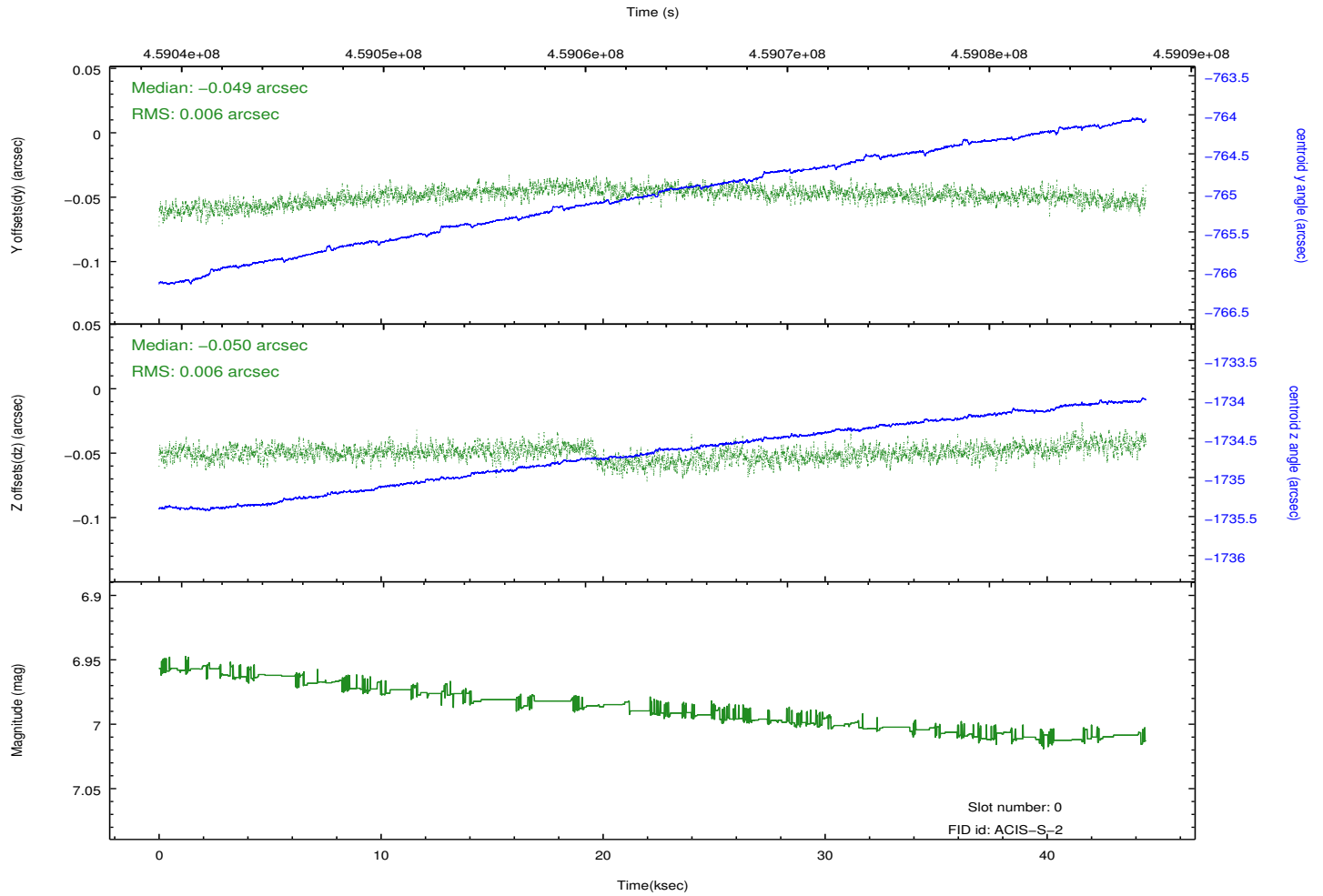
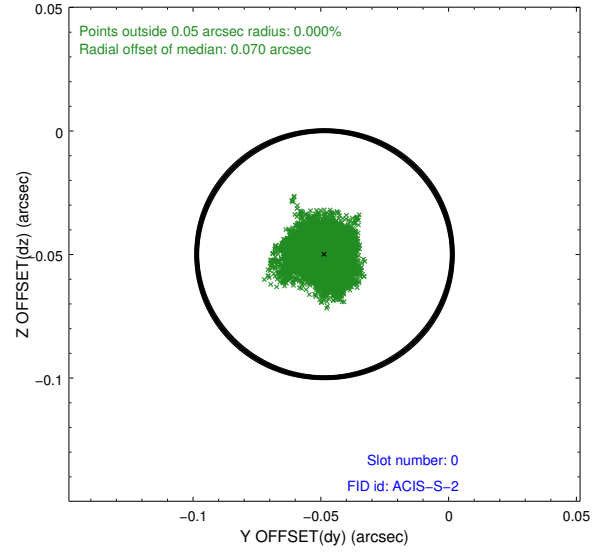
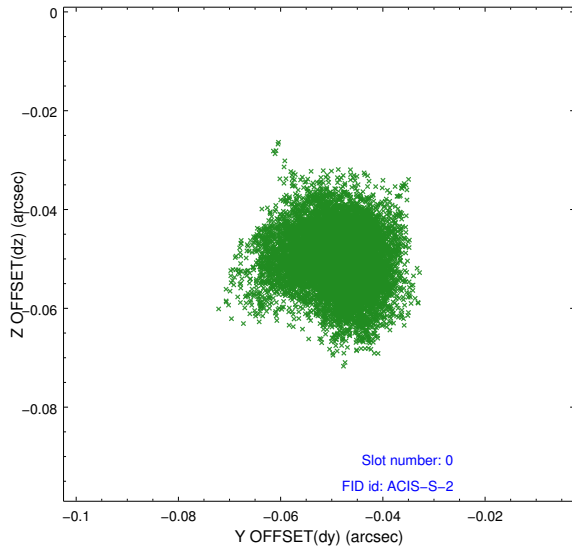


2.4.5 Slot 7

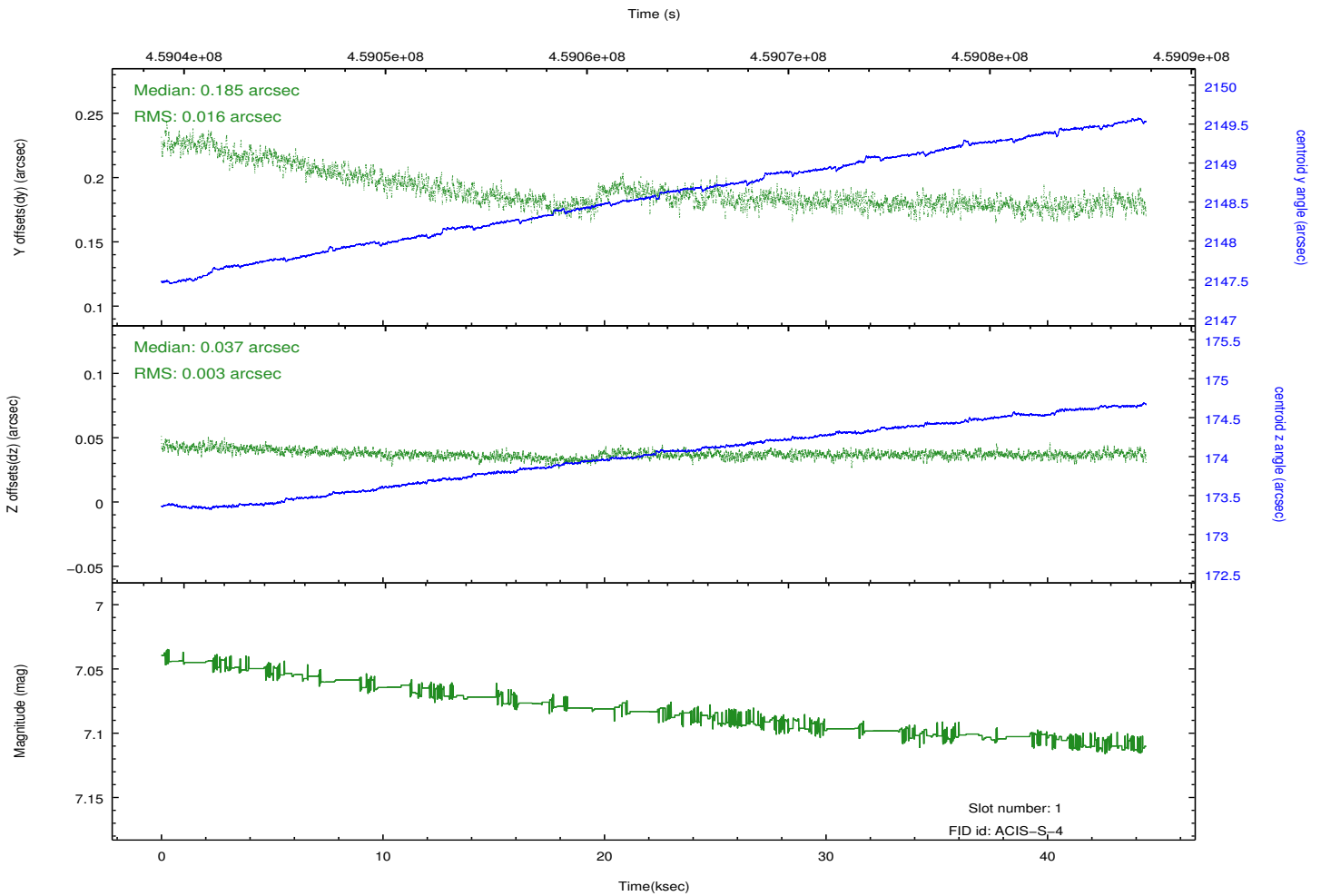
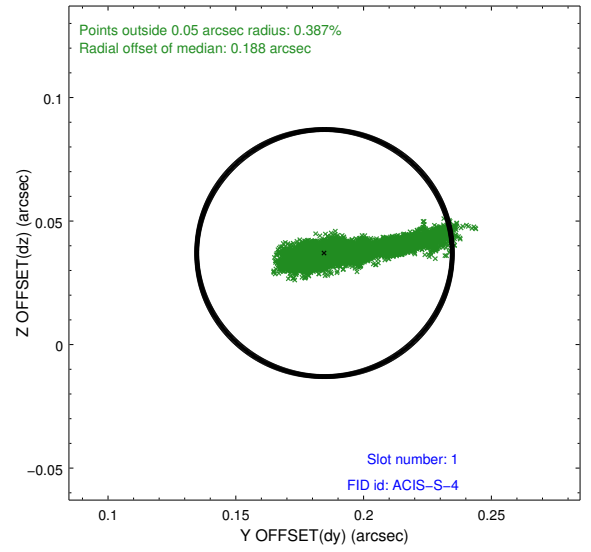
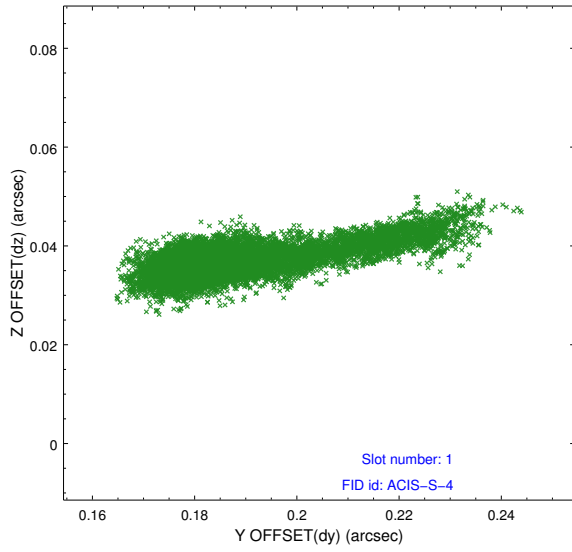


2.5 FID Slots

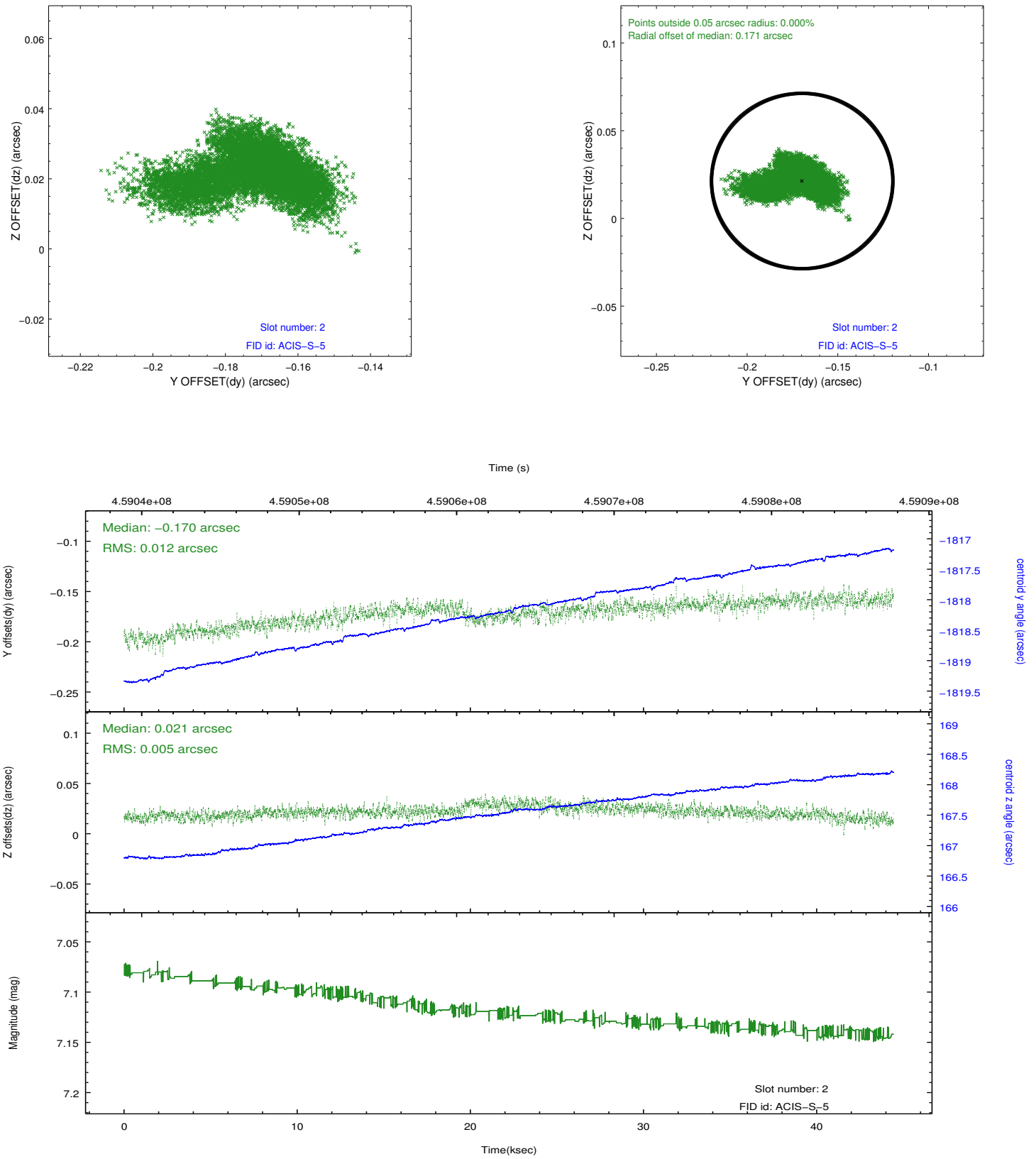
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

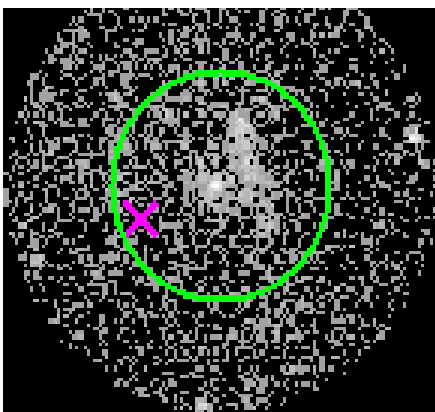


3 Gratings

3.1 HEG Arm



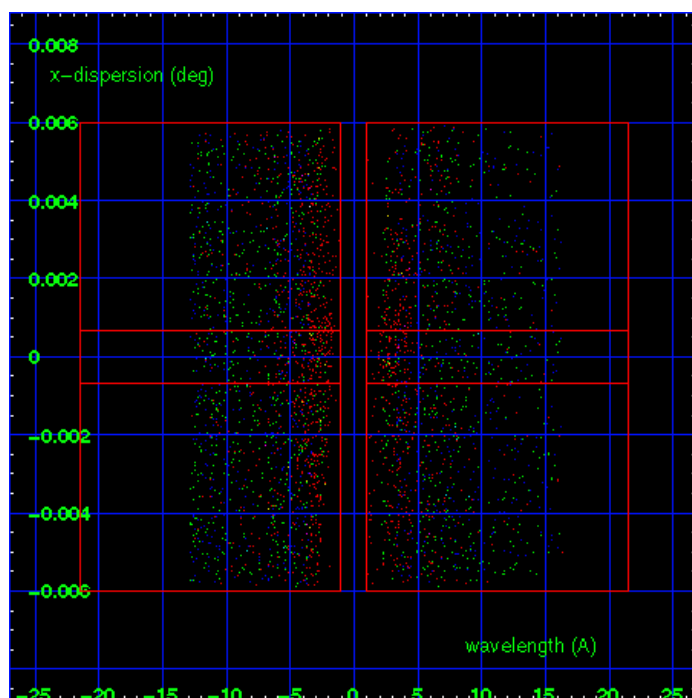
HEG Order Sort 123



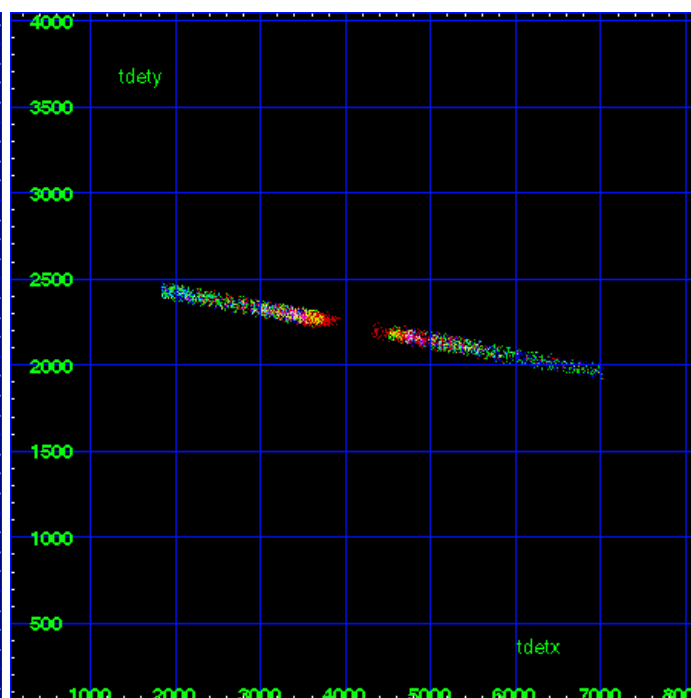
HEG Zero Order



HEG Order Sort ALL

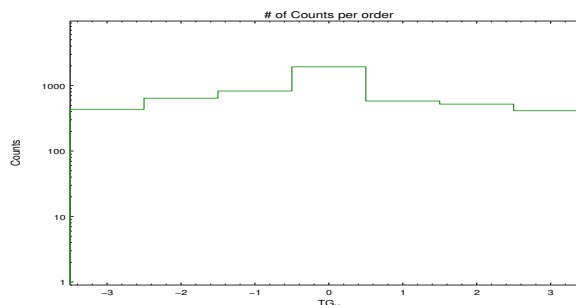


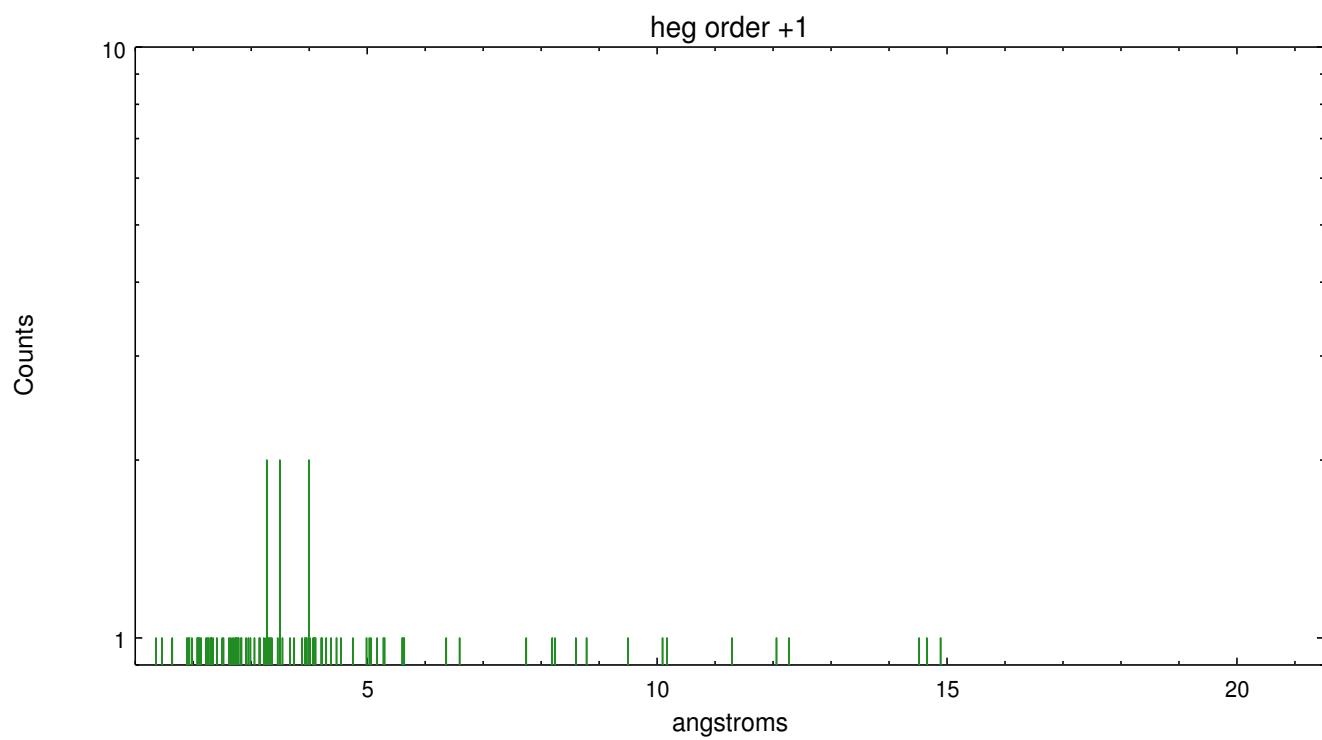
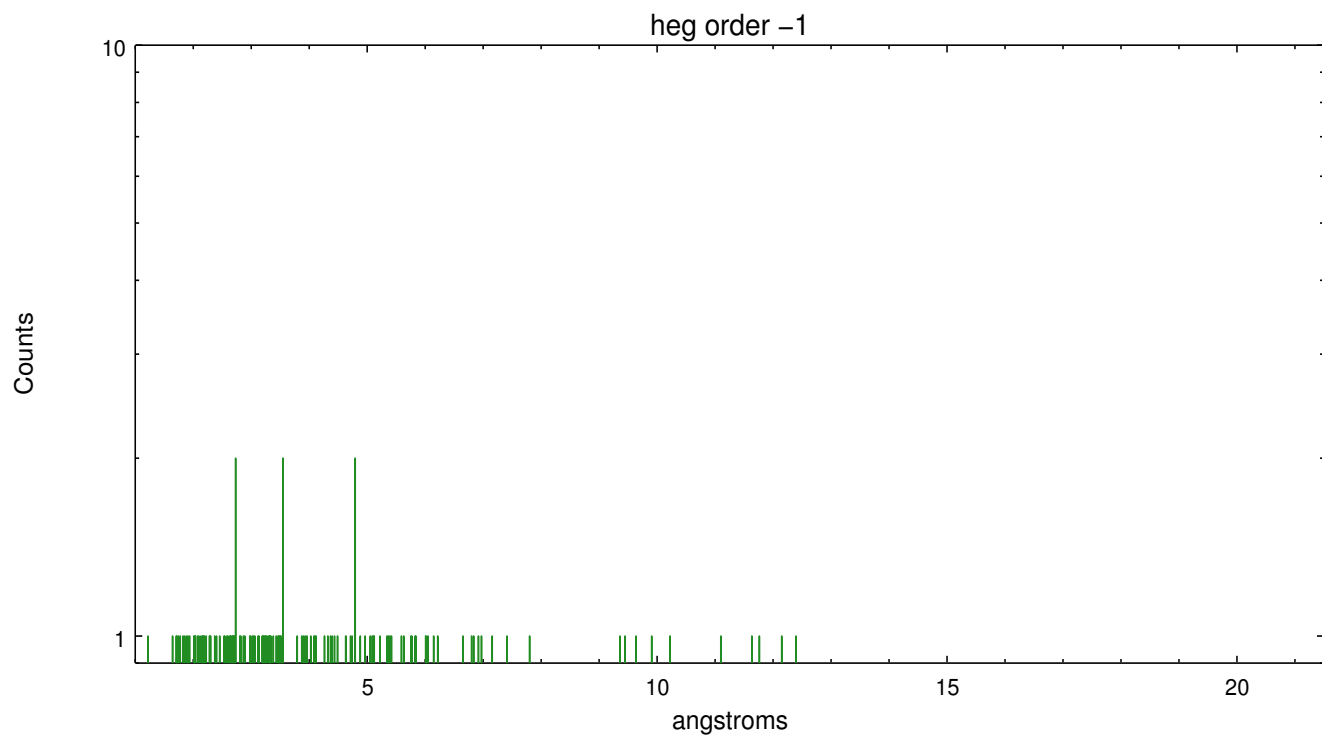
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	434	640	824	1929	580	520	412

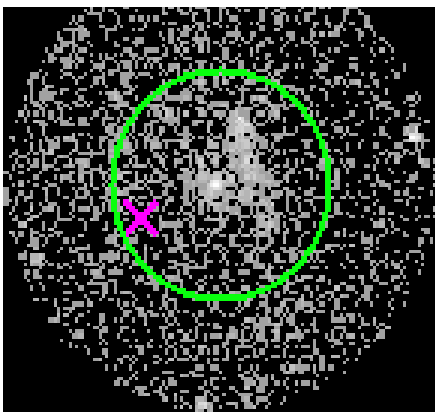




3.2 MEG Arm



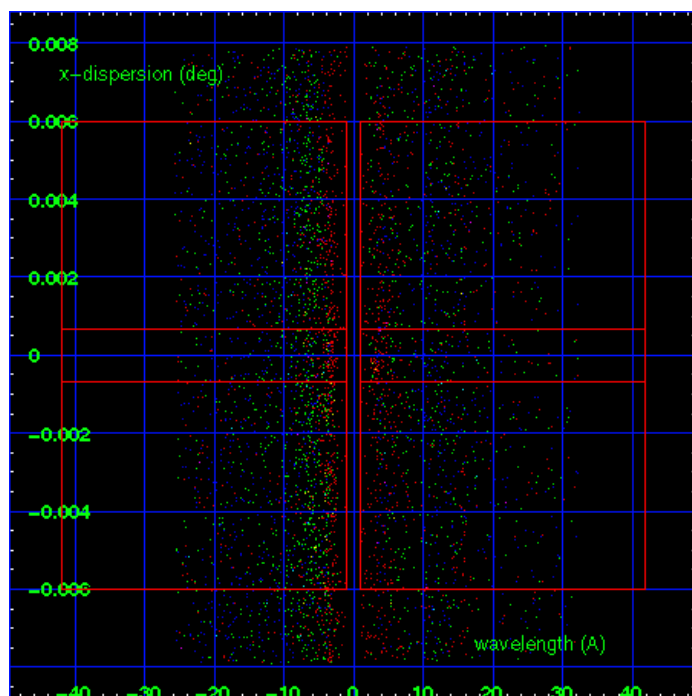
MEG Order Sort 123



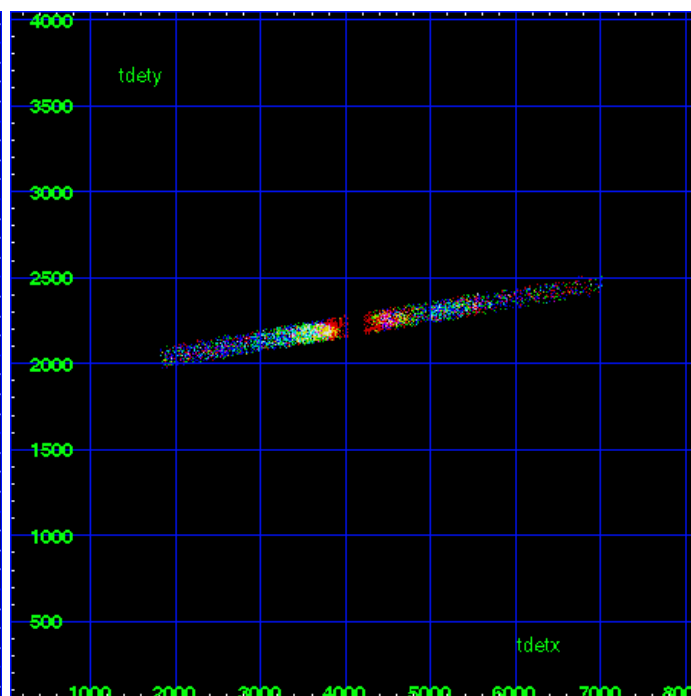
MEG Zero Order



MEG Order Sort ALL

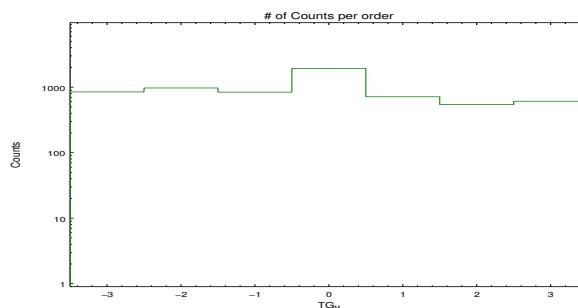


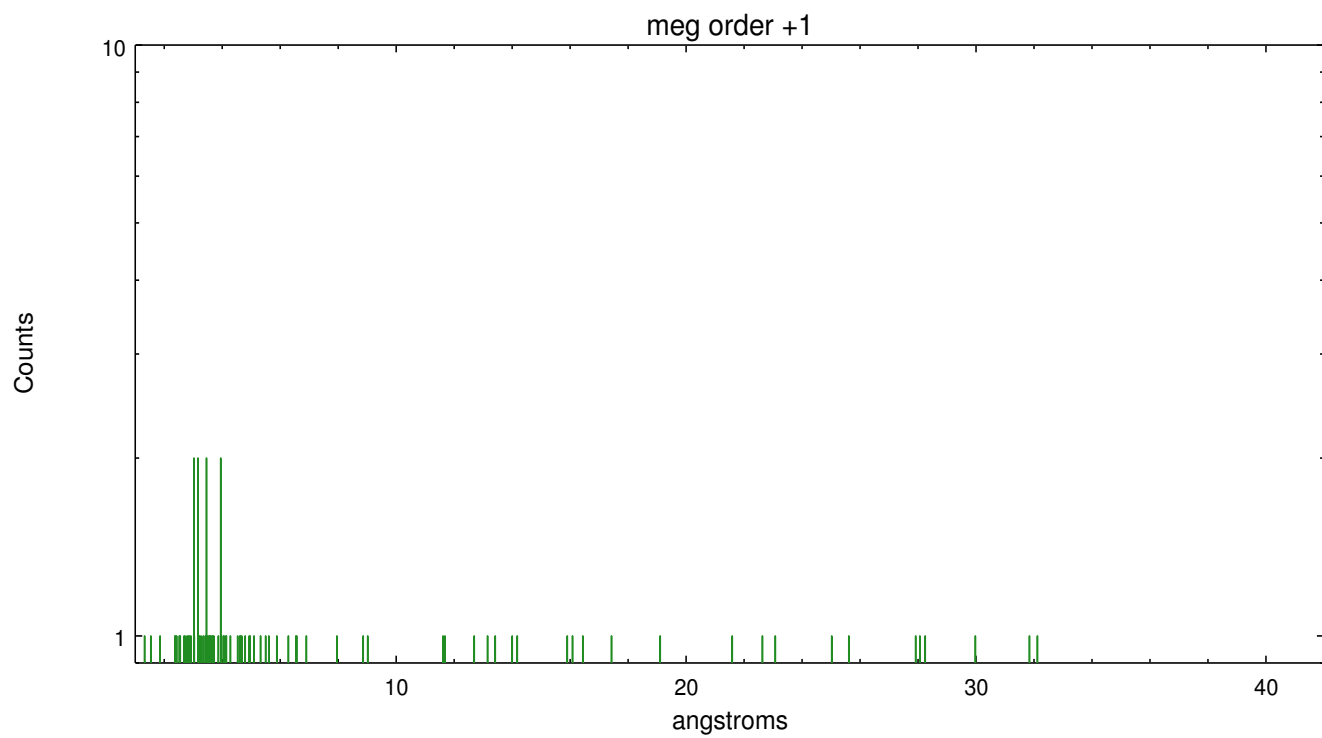
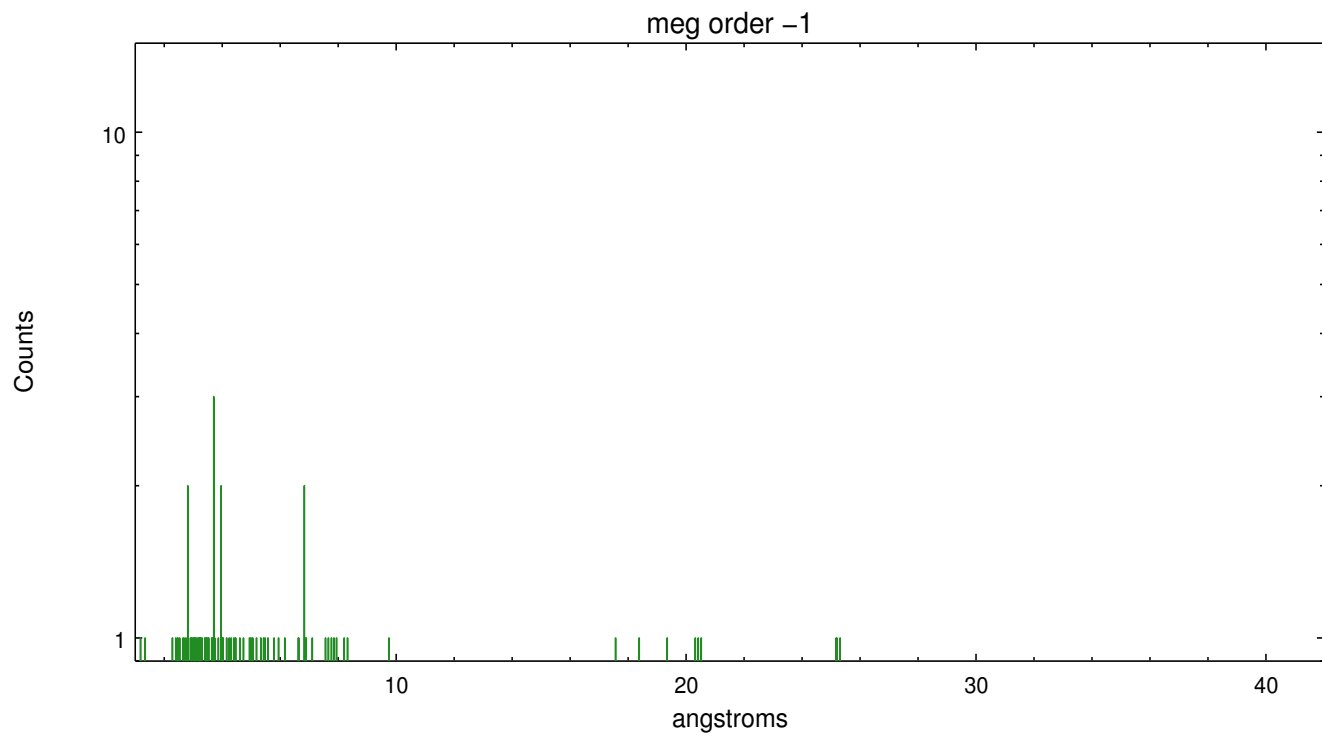
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	847	972	839	1929	714	544	609





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	44.345500341058

A.2 Comments

Charge time:

ONTIME of 44345.500341058 seconds is less than 85% of expected scheduled time of 62500 seconds

(interrupted by high radiation; SCS107)

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]