

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13841 - L2 Version 1
Chandra X-Ray Center

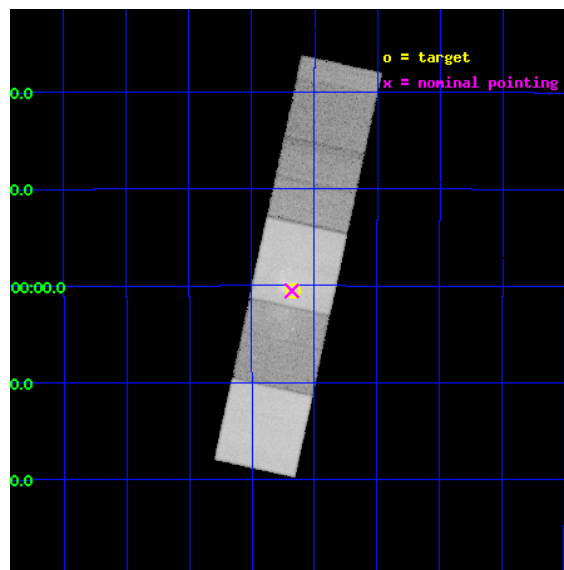
L2 Processing Date : Jul 19 2012

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1 Front

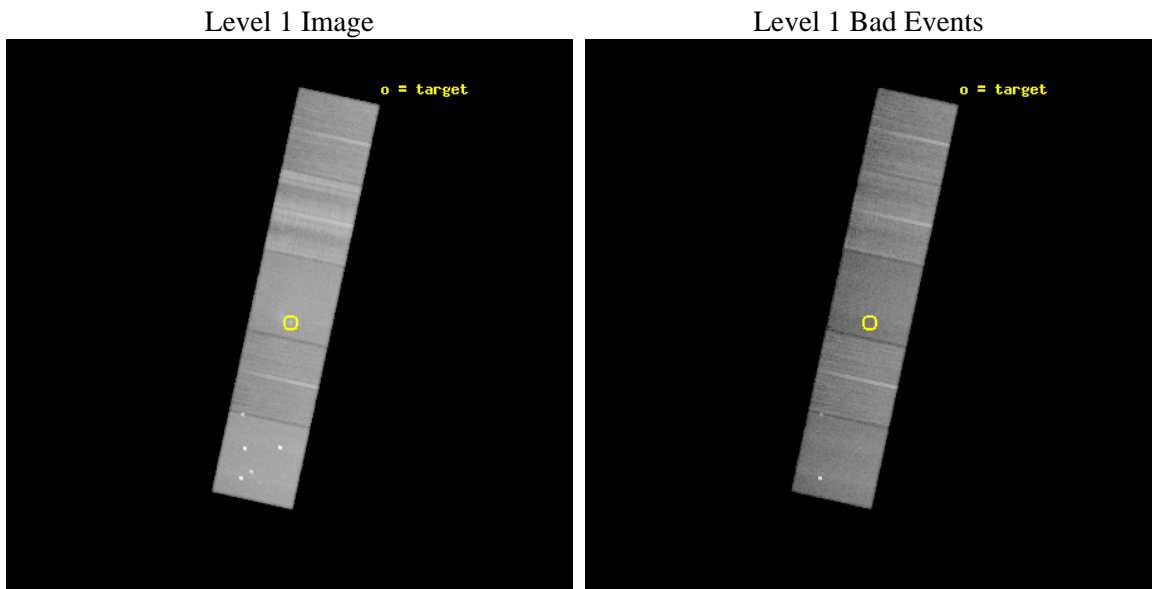
seq_num	601012	Sequence number
obs_id	13841	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41991814862	Nominal RA [deg]
dec_nom	-29.008845551893	Nominal Dec [deg]
roll_nom	282.27821133782	Nominal Roll [deg]
revision	1	Processing version of data
ontime	45070.900346637	Sum of GTIs [s]
livetime	44482.015852894	Livetime [s]
ontime5	45070.900346637	Sum of GTIs [s]
ontime6	45070.900346637	Sum of GTIs [s]
ontime7	45070.900346637	Sum of GTIs [s]
ontime8	45070.900346637	Sum of GTIs [s]
ontime9	45067.759356439	Sum of GTIs [s]
l2events	533425	Number of level 2 events



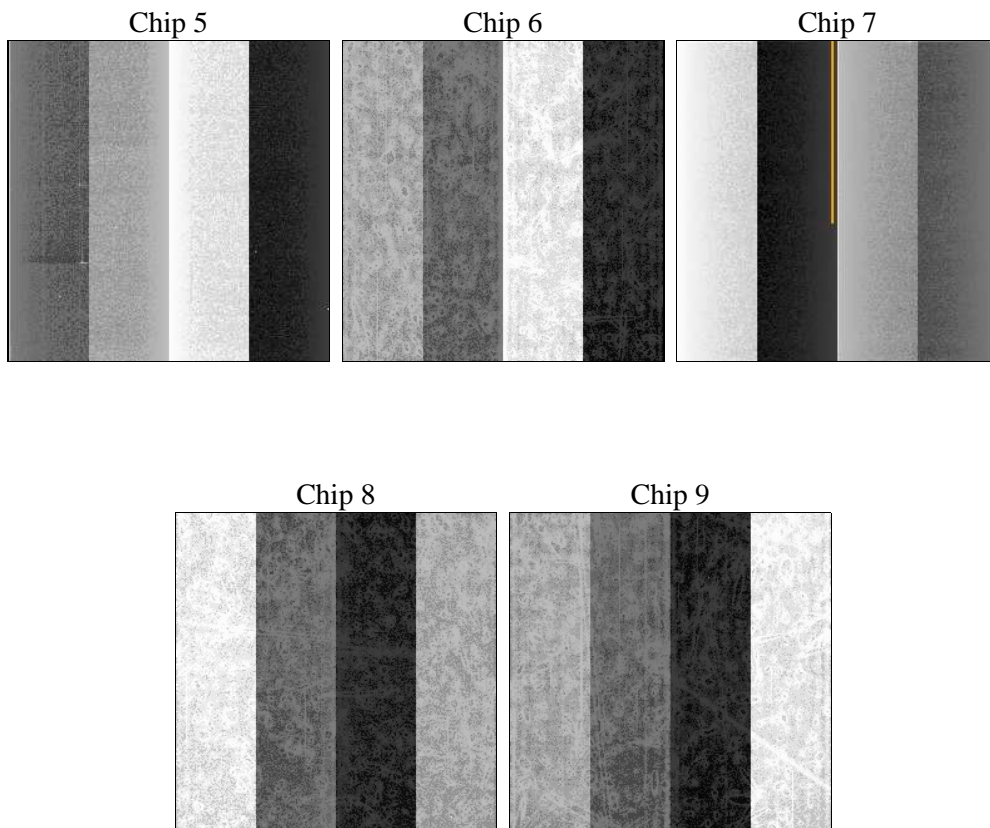
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	45010.093000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	45070.900346637	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	45070.900346637	Sum of GTIs [s]
date	2012-07-19T05:01:24	Date and time of file creation	ontime6	45070.900346637	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	45070.900346637	Sum of GTIs [s]
			ontime8	45070.900346637	Sum of GTIs [s]
			ontime9	45067.759356439	Sum of GTIs [s]
			l1events	1919497	Number of level 1 events

2.1.4 Events

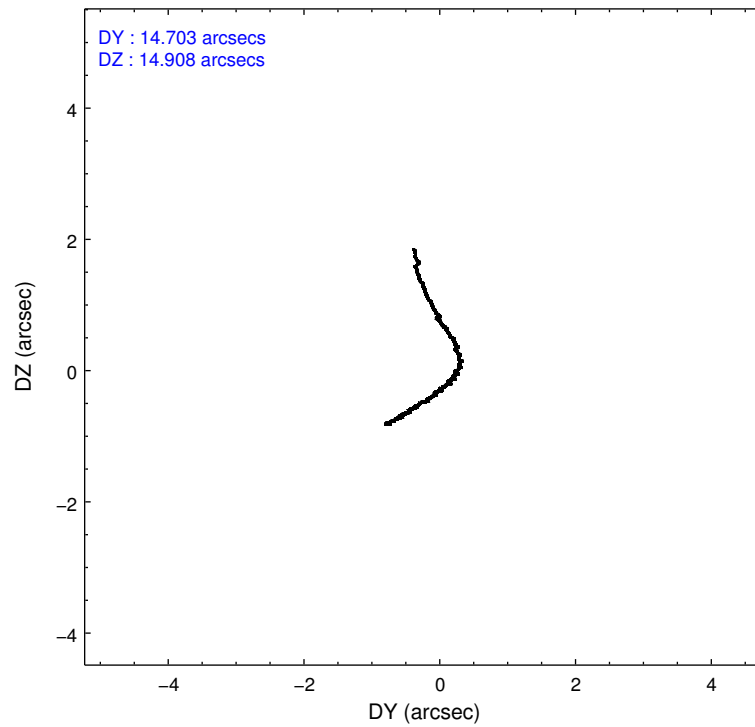
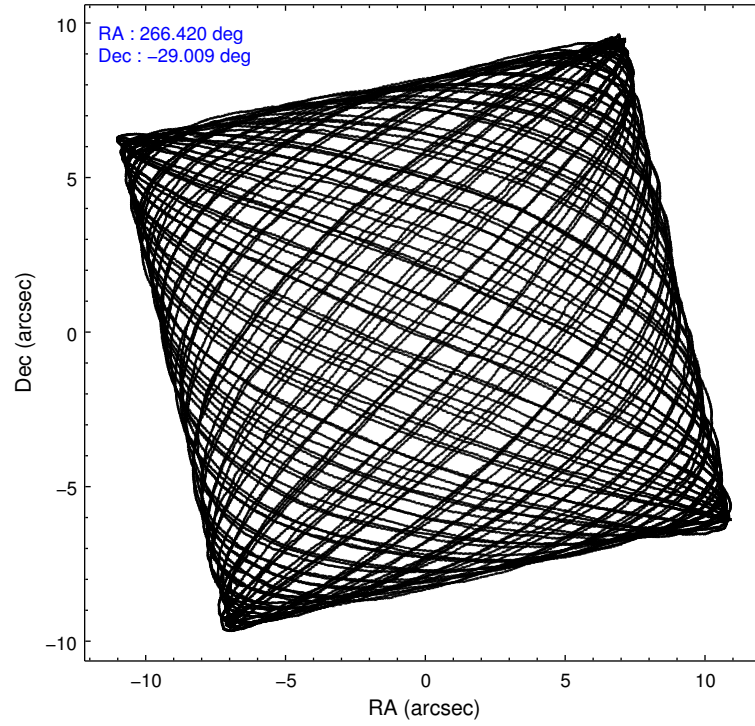
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	470204	310150	385542	471906	281695
rejected events	219791	251838	186572	273286	240728
rejected %	46%	81%	48%	57%	85%

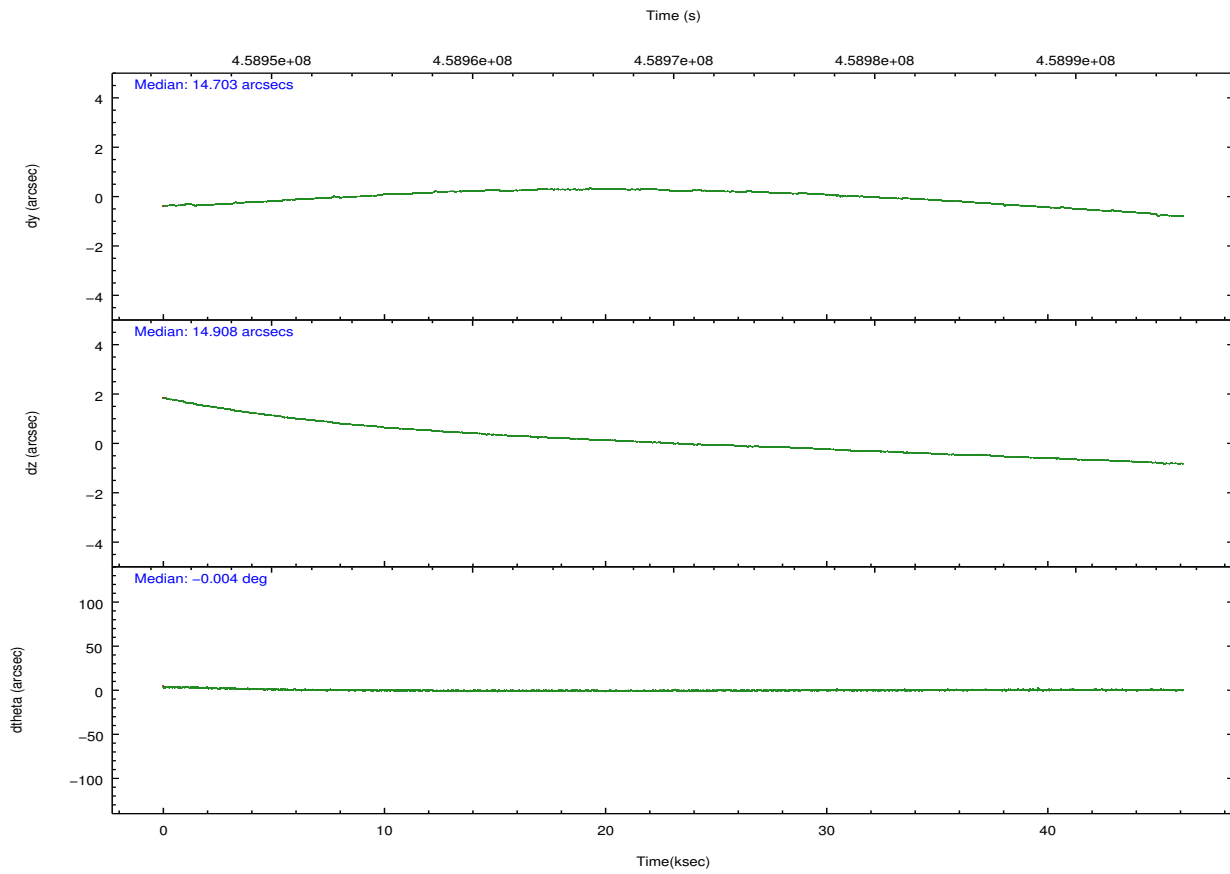
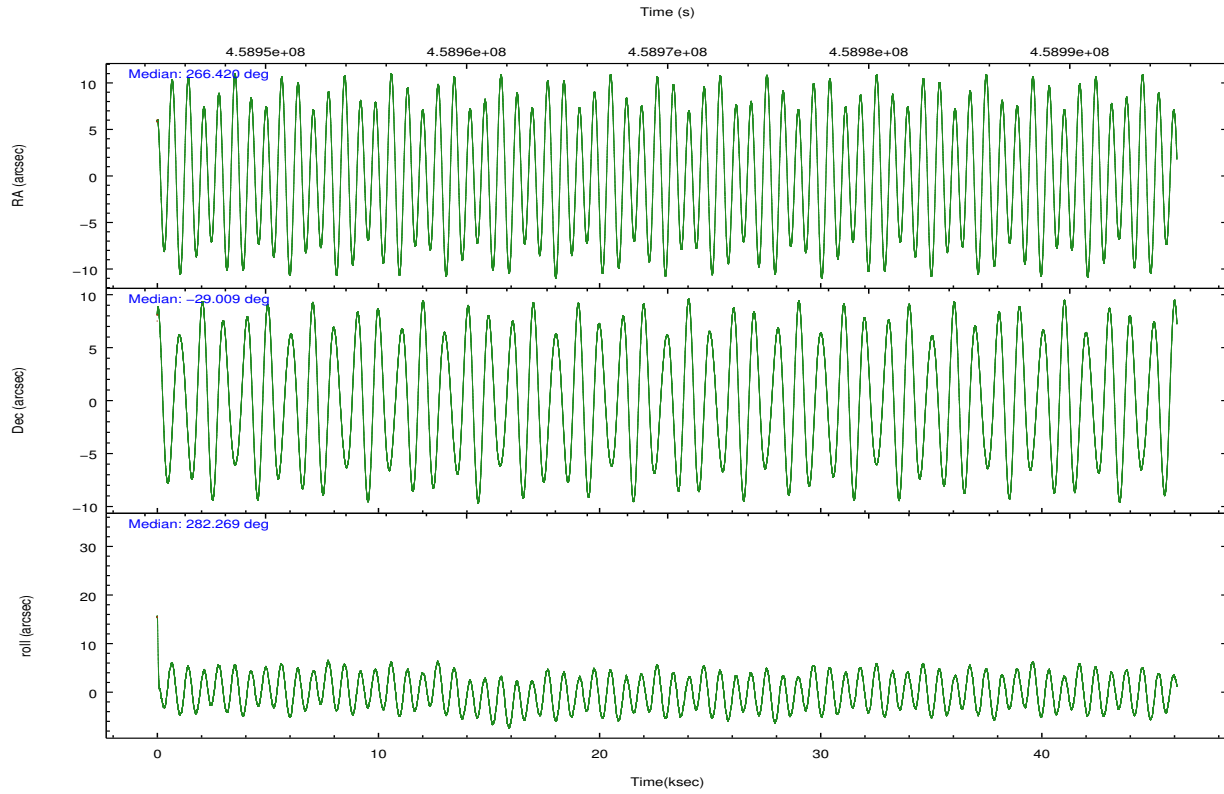
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	47190	27844	23155	57648	16854
	10%	8%	6%	12%	5%
grade 1 events	902	215	453	461	195
	0%	0%	0%	0%	0%
grade 2 events	73914	12113	42747	38130	8814
	15%	3%	11%	8%	3%
grade 3 events	8852	4462	18068	26718	3683
	1%	1%	4%	5%	1%
grade 4 events	8393	4231	18005	24419	3543
	1%	1%	4%	5%	1%
grade 5 events	31171	12415	34514	19813	13643
	6%	4%	8%	4%	4%
grade 6 events	112092	9668	97026	51778	8077
	23%	3%	25%	10%	2%
grade 7 events	187690	239202	151574	252939	226886
	39%	77%	39%	53%	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	266.398572	266.4199181486155	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988882	-29.00884555189251	Alternating exposures requested	N	N
[deg] Pointing Roll	282.111233	282.278211337824	[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)	458948012.184000	458946465.71665			
Observation start date	2012-07-17T21:32:25	2012-07-17T21:07:45			
[s] Observation end time (MET)	458993022.184000	458993246.20665			
Observation end date	2012-07-18T10:02:35	2012-07-18T10:07:26			
Read mode	TIMED	TIMED			

2.3 Aspect



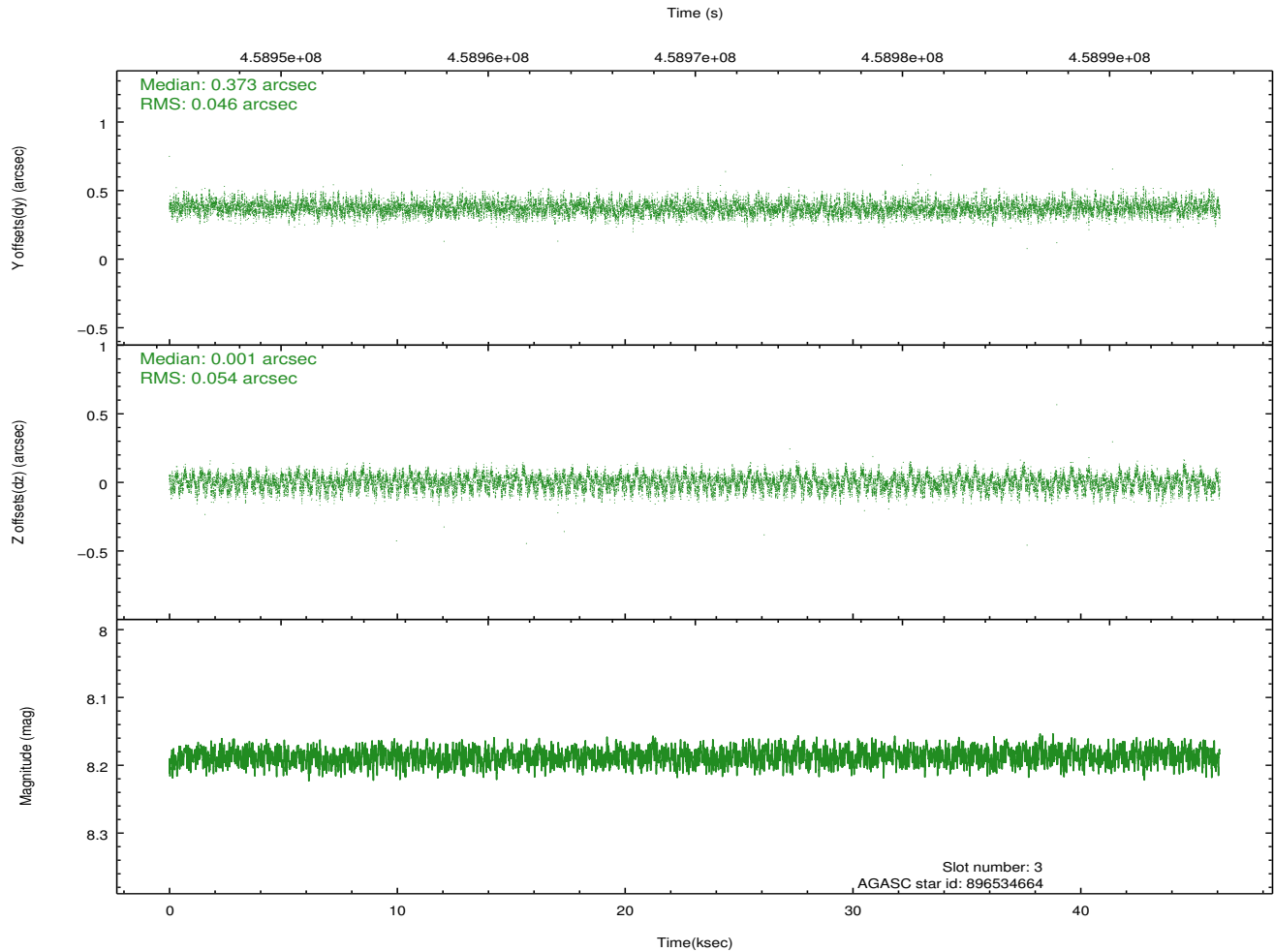
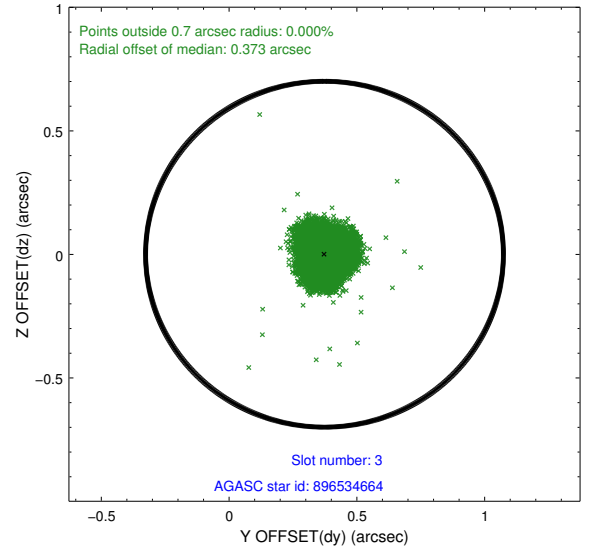
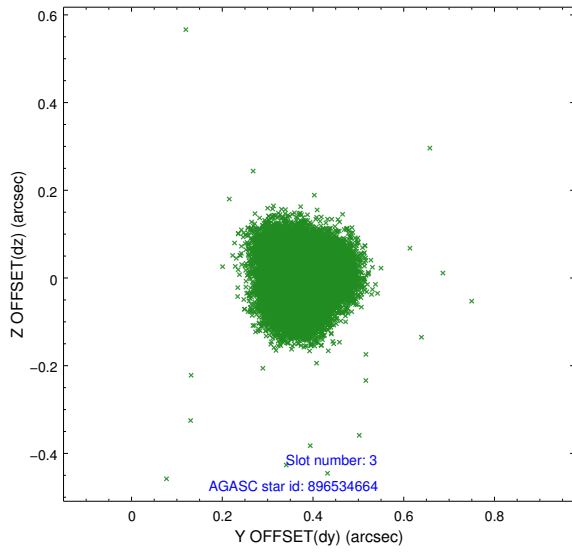


Slot Statistics

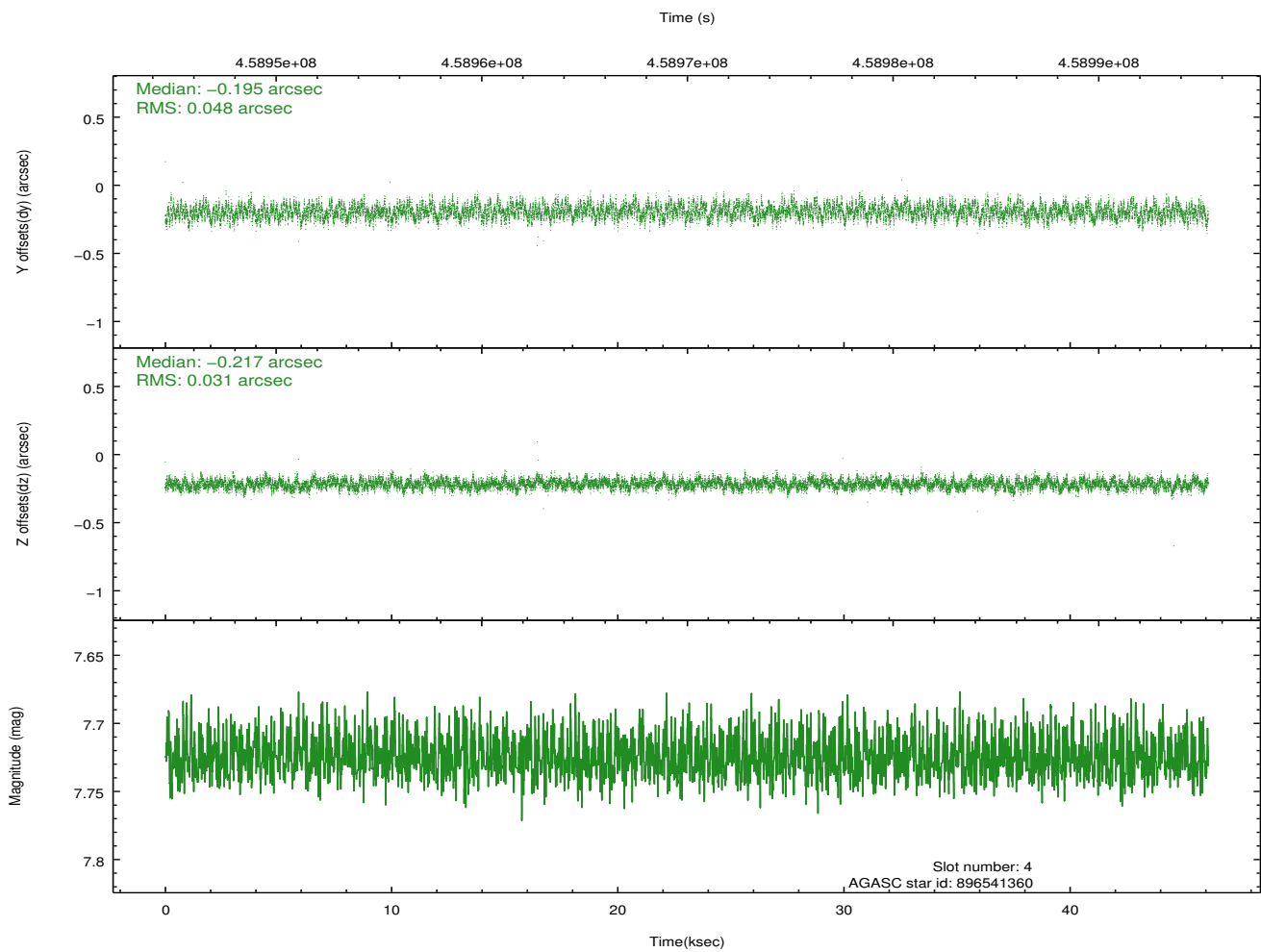
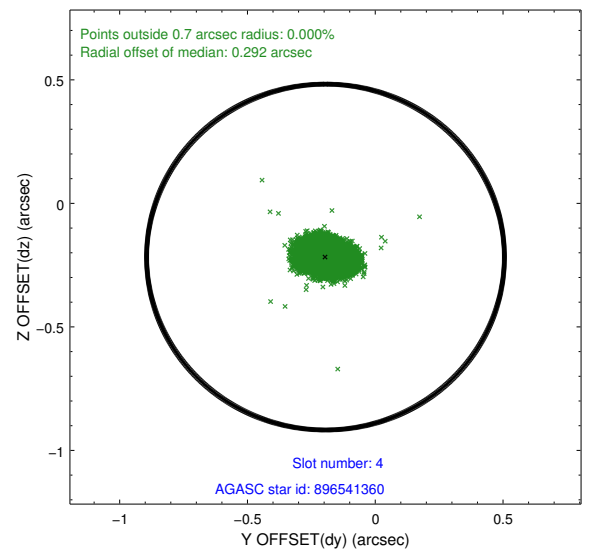
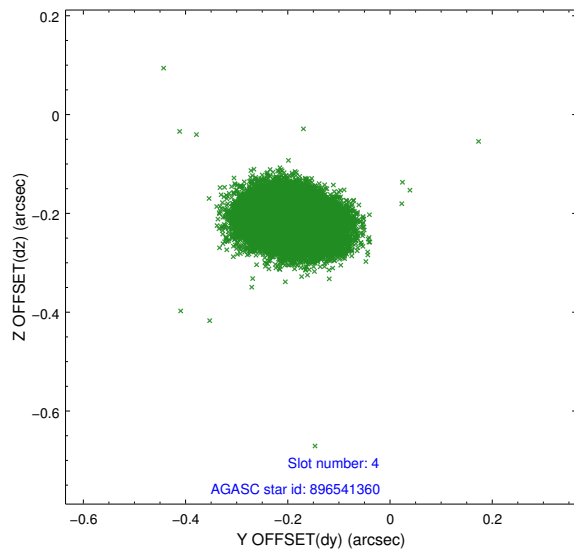
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	11249	-0.114	-0.029	0.018	0.034	0.000000	0.000000	-767.71	-1736.45
1	FID	ACIS-S-4	7.05	11247	0.261	0.063	0.010	0.022	0.000000	0.000000	2145.93	172.13
2	FID	ACIS-S-5	7.09	11248	-0.180	-0.026	0.015	0.027	0.000000	0.000000	-1820.64	165.71
3	GUIDE	896534664	8.19	22493	0.373	0.001	0.076	0.117	266.405570	-28.407461	-2041.04	460.62
4	GUIDE	896541360	7.72	22492	-0.195	-0.217	0.061	0.097	266.684478	-29.453744	1825.53	525.14
5	GUIDE	896541576	8.20	22491	-0.181	0.004	0.059	0.094	267.051055	-28.762912	-357.73	2182.85
6	GUIDE	896403520	9.01	22480	0.283	0.131	0.094	0.152	265.626481	-28.748780	-1347.57	-2202.88
7	GUIDE	896540808	7.46	22496	-0.284	0.077	0.048	0.078	265.985401	-29.308604	855.91	-1509.92

2.4 Star Slots

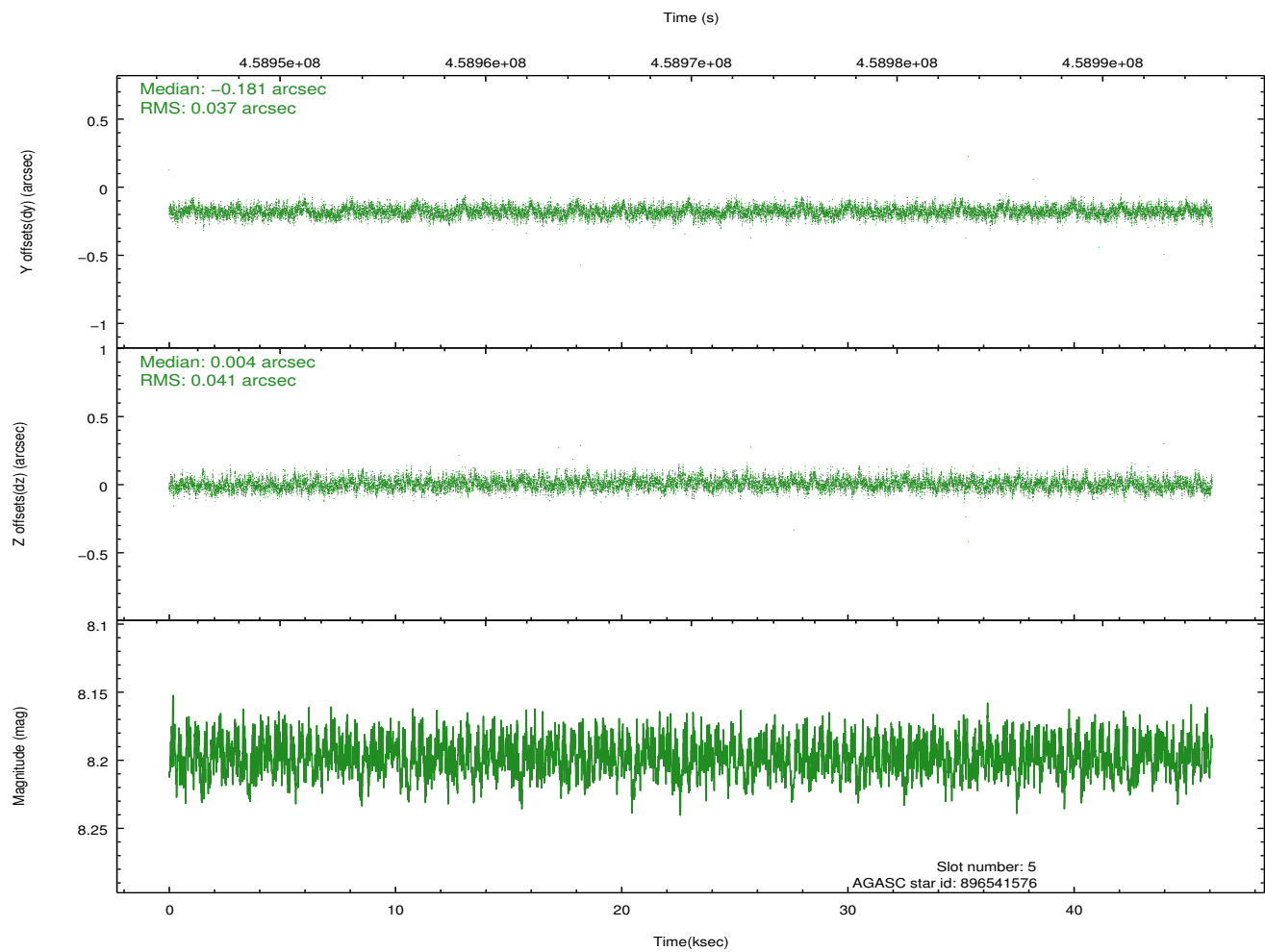
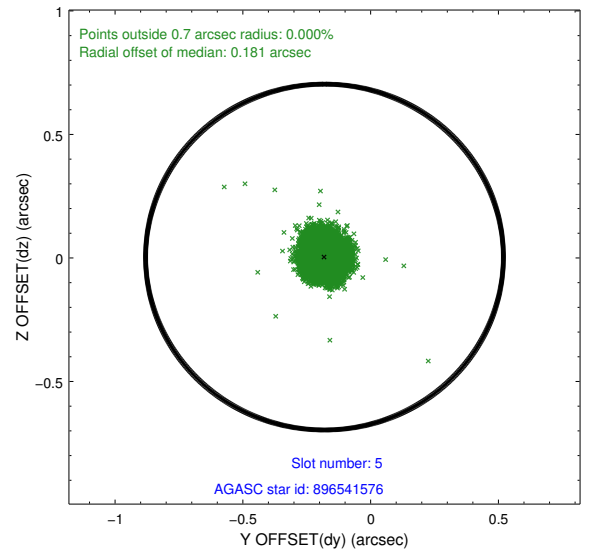
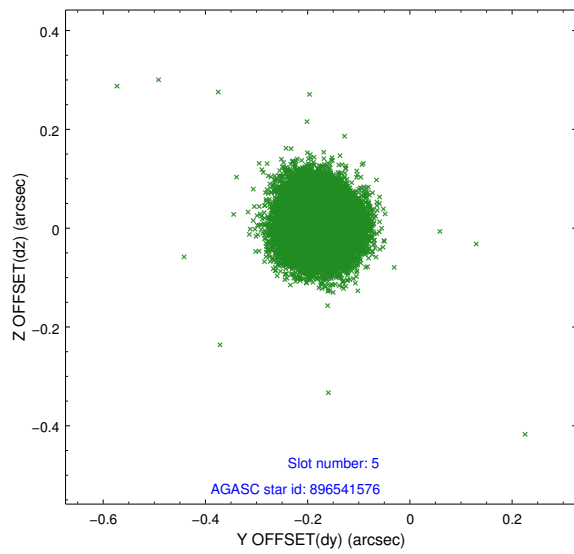
2.4.1 Slot 3



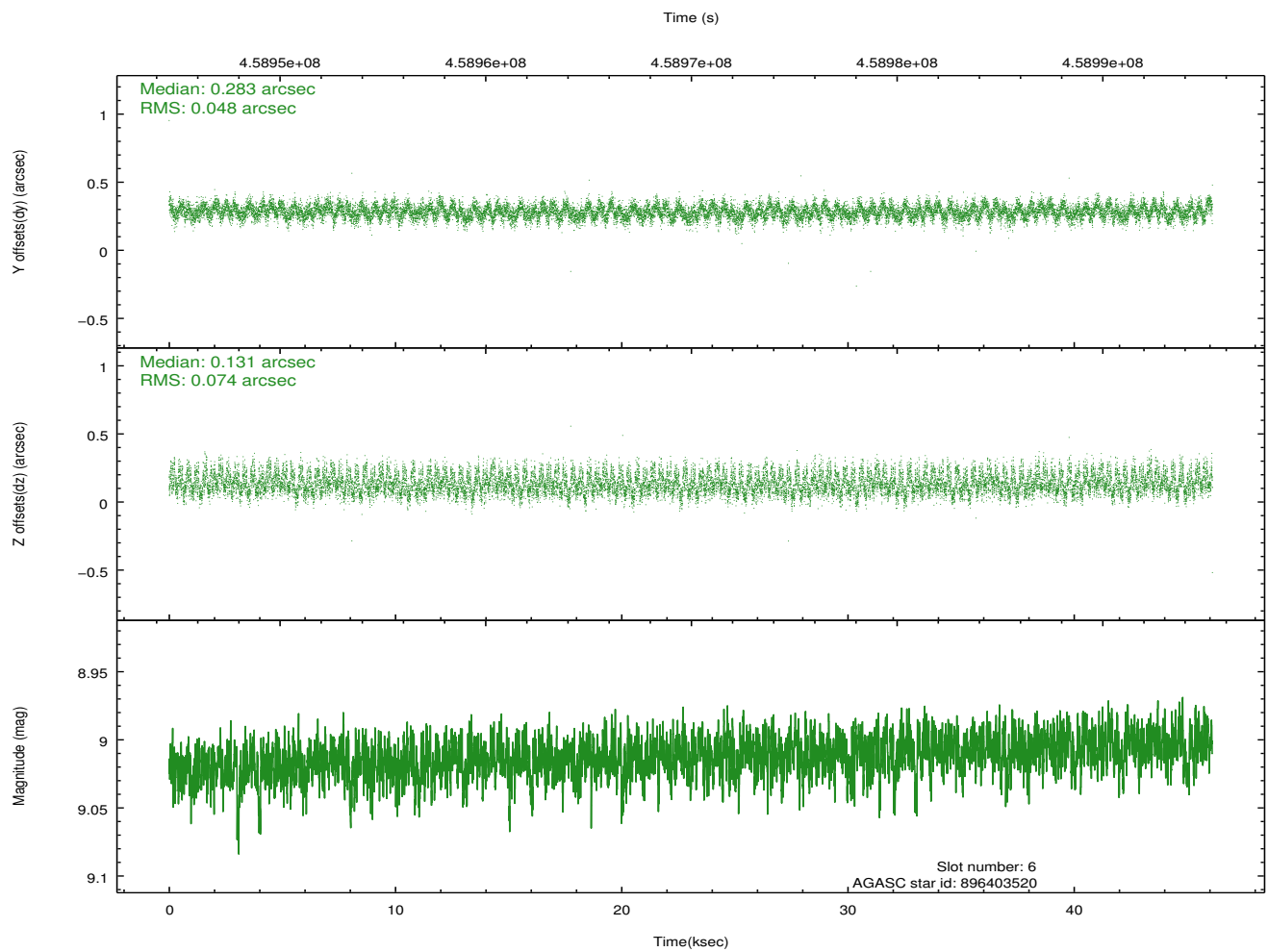
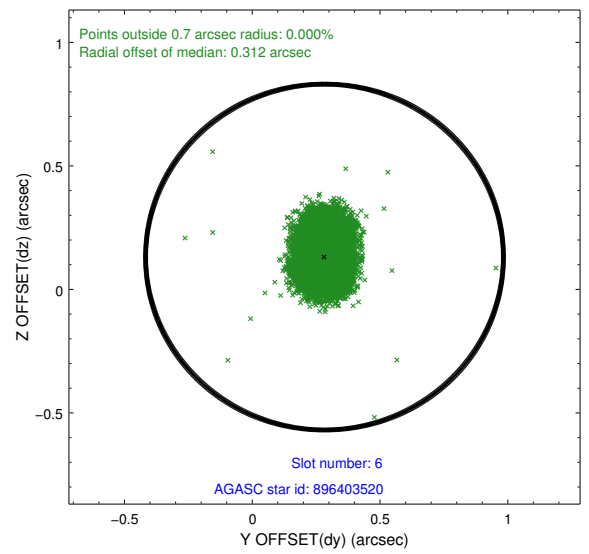
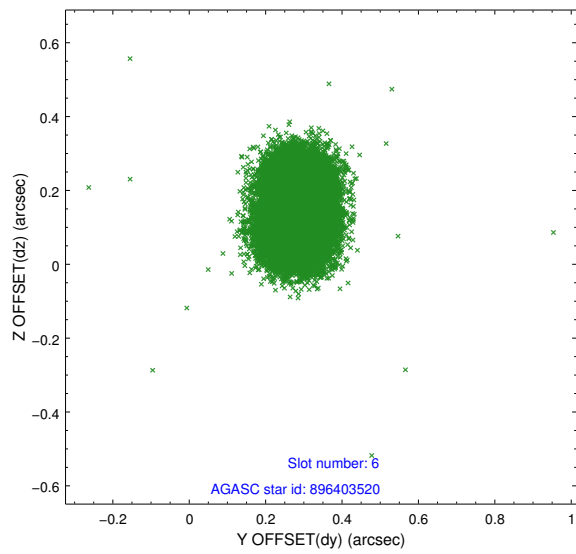
2.4.2 Slot 4



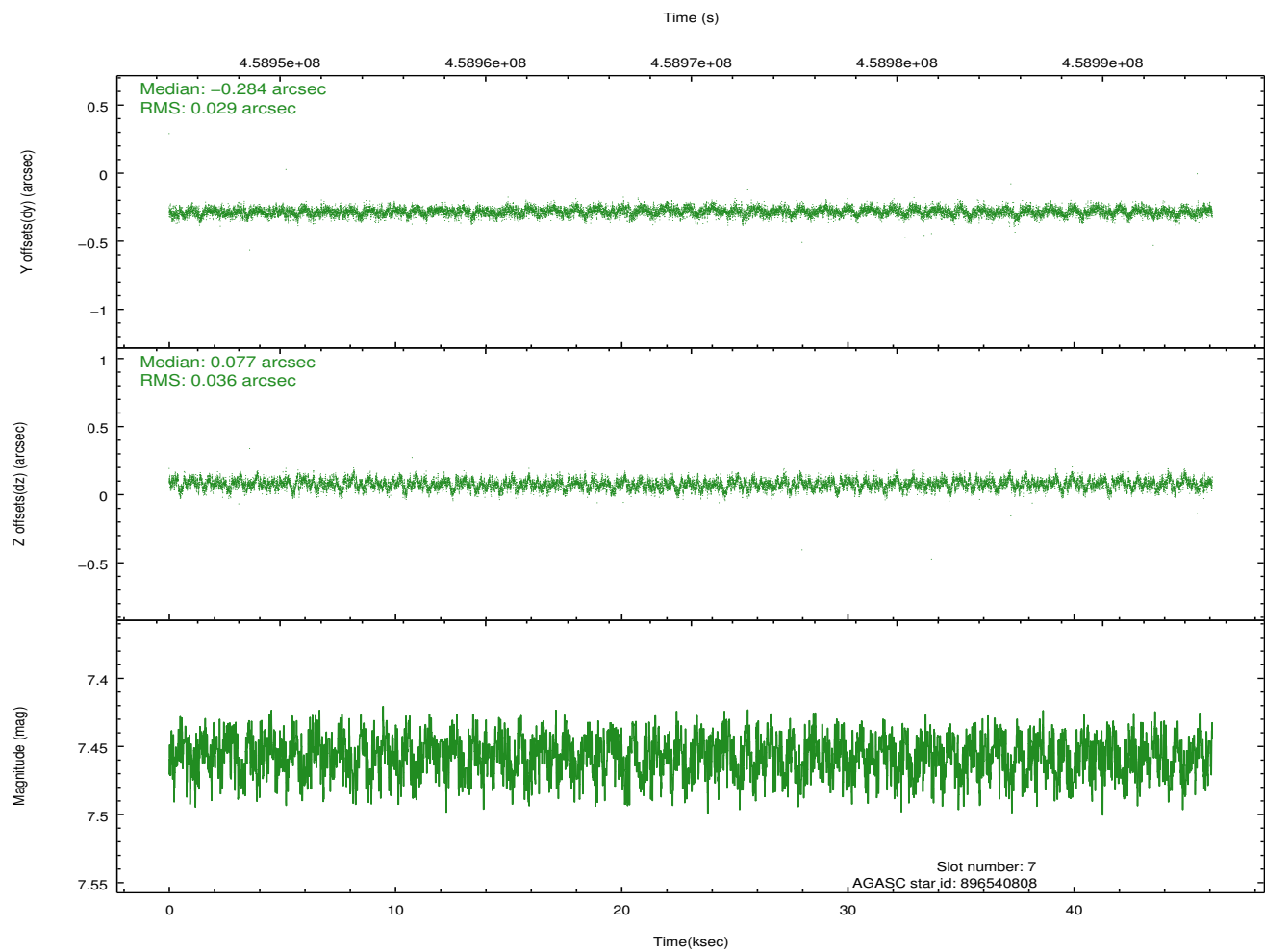
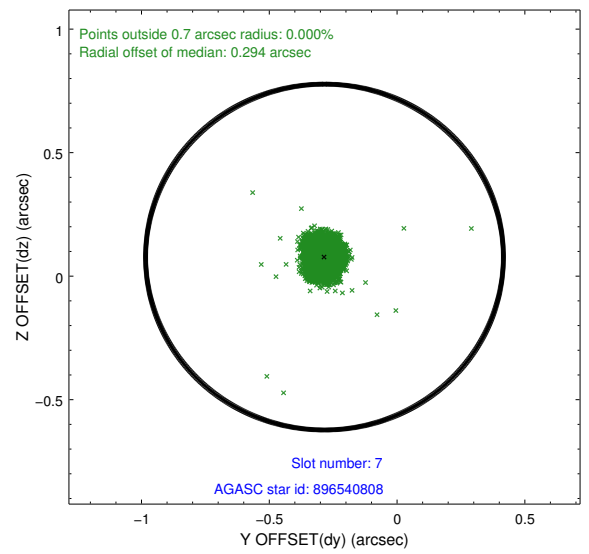
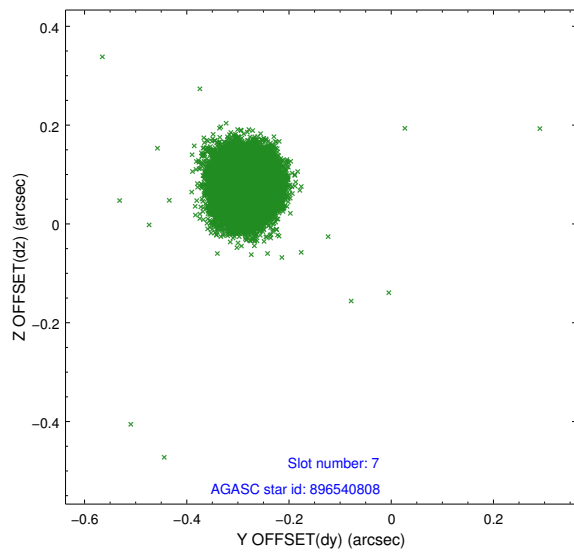
2.4.3 Slot 5



2.4.4 Slot 6

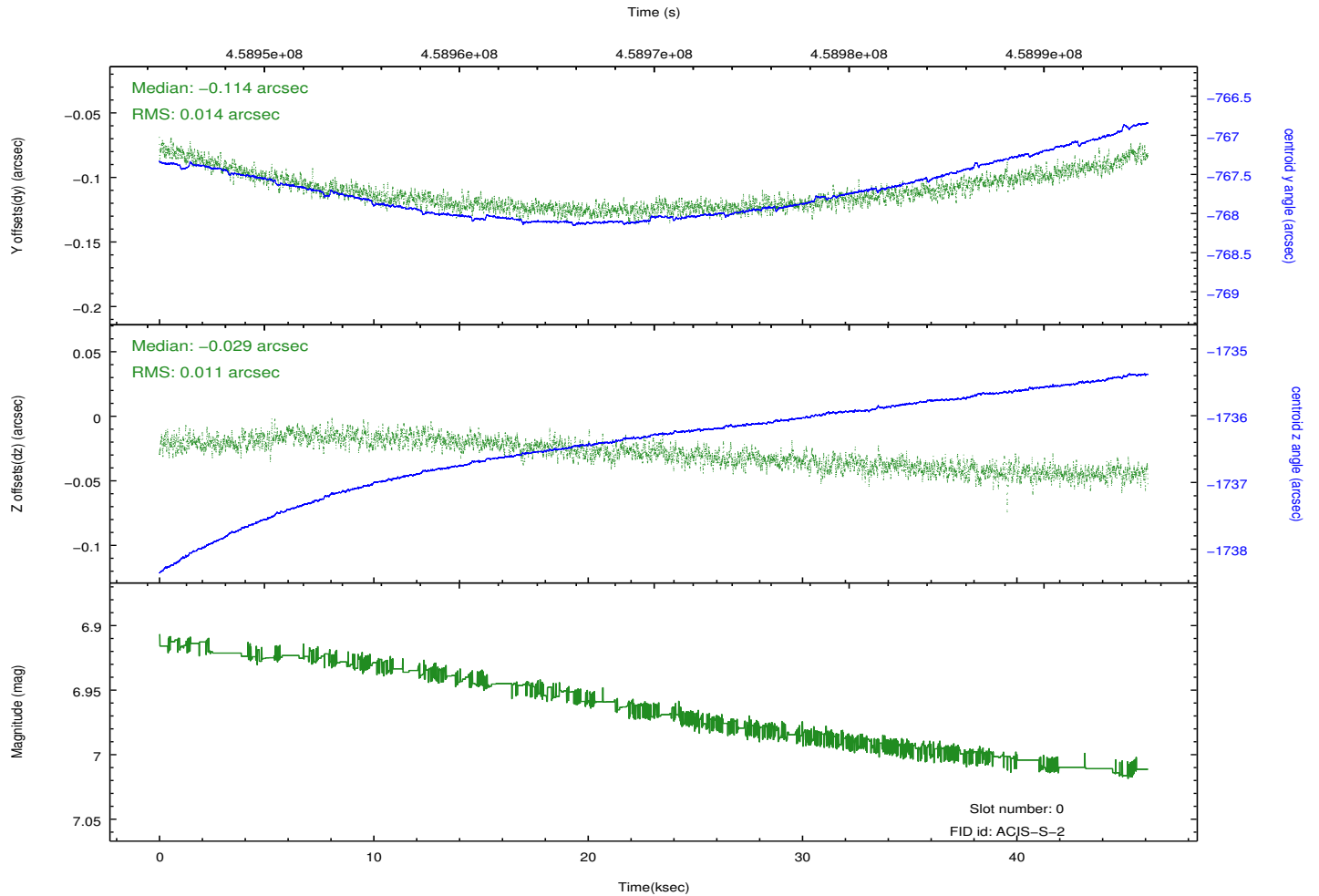
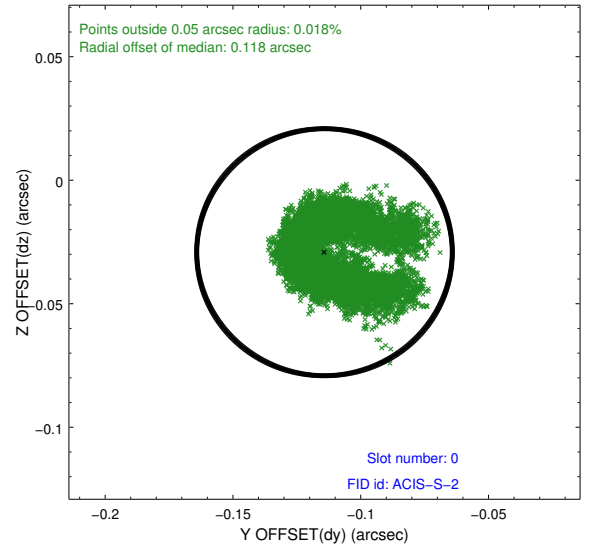
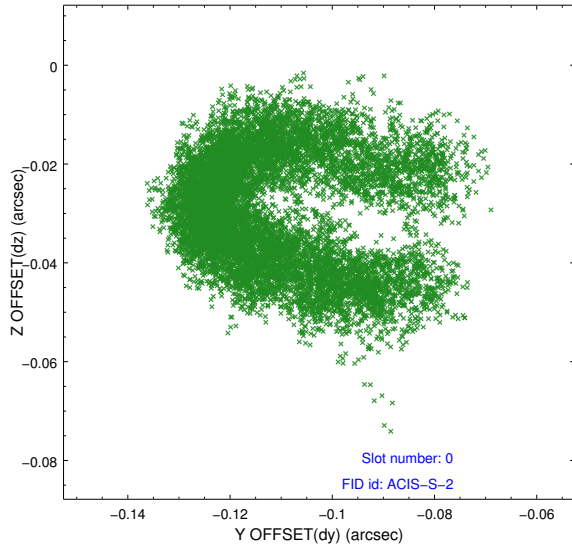


2.4.5 Slot 7

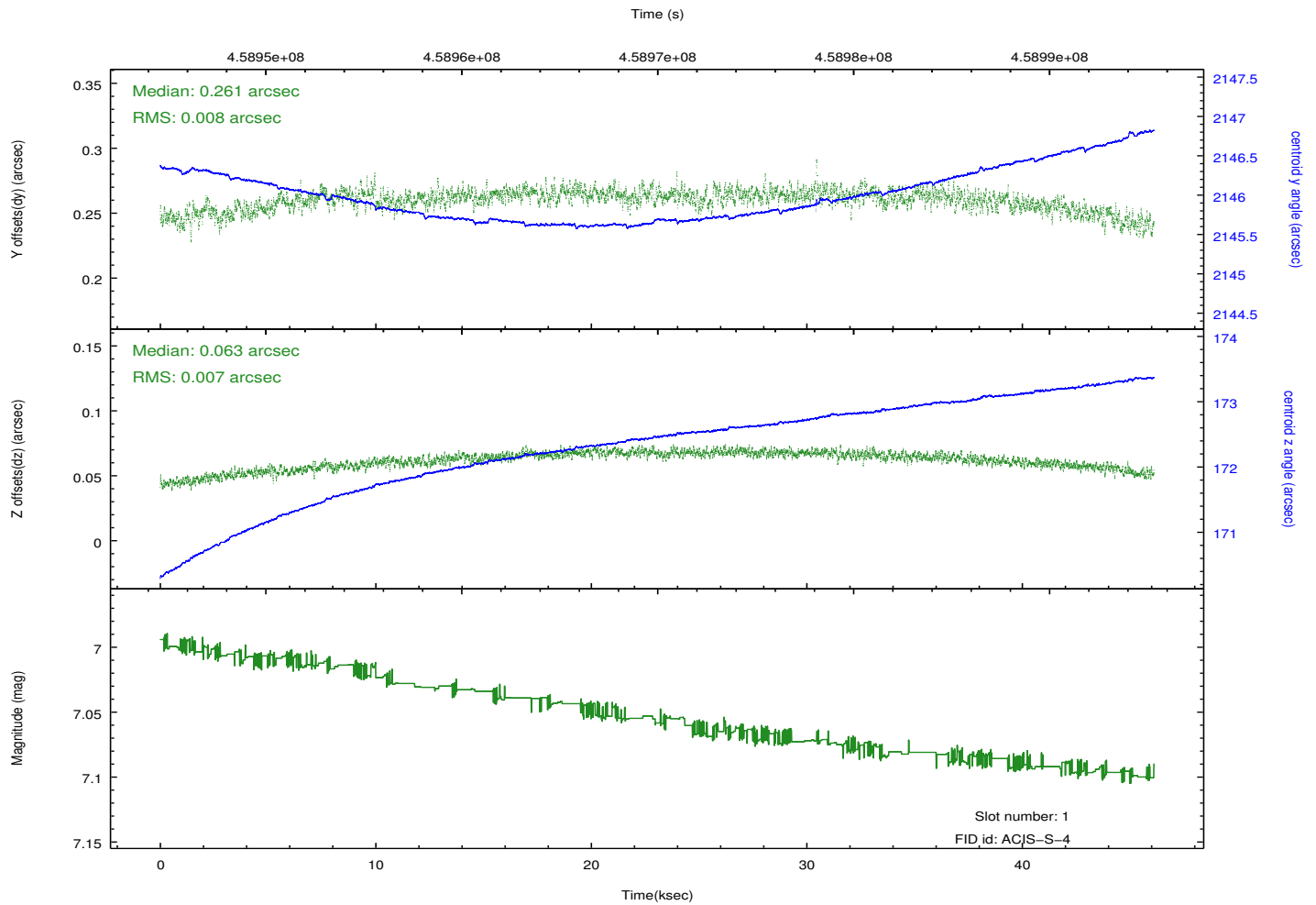
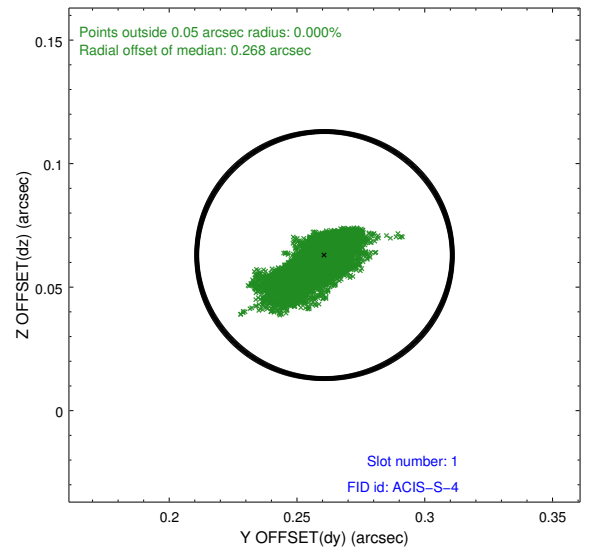
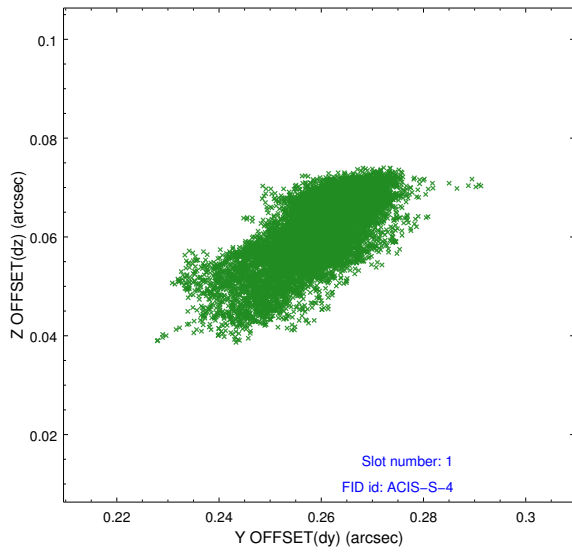


2.5 FID Slots

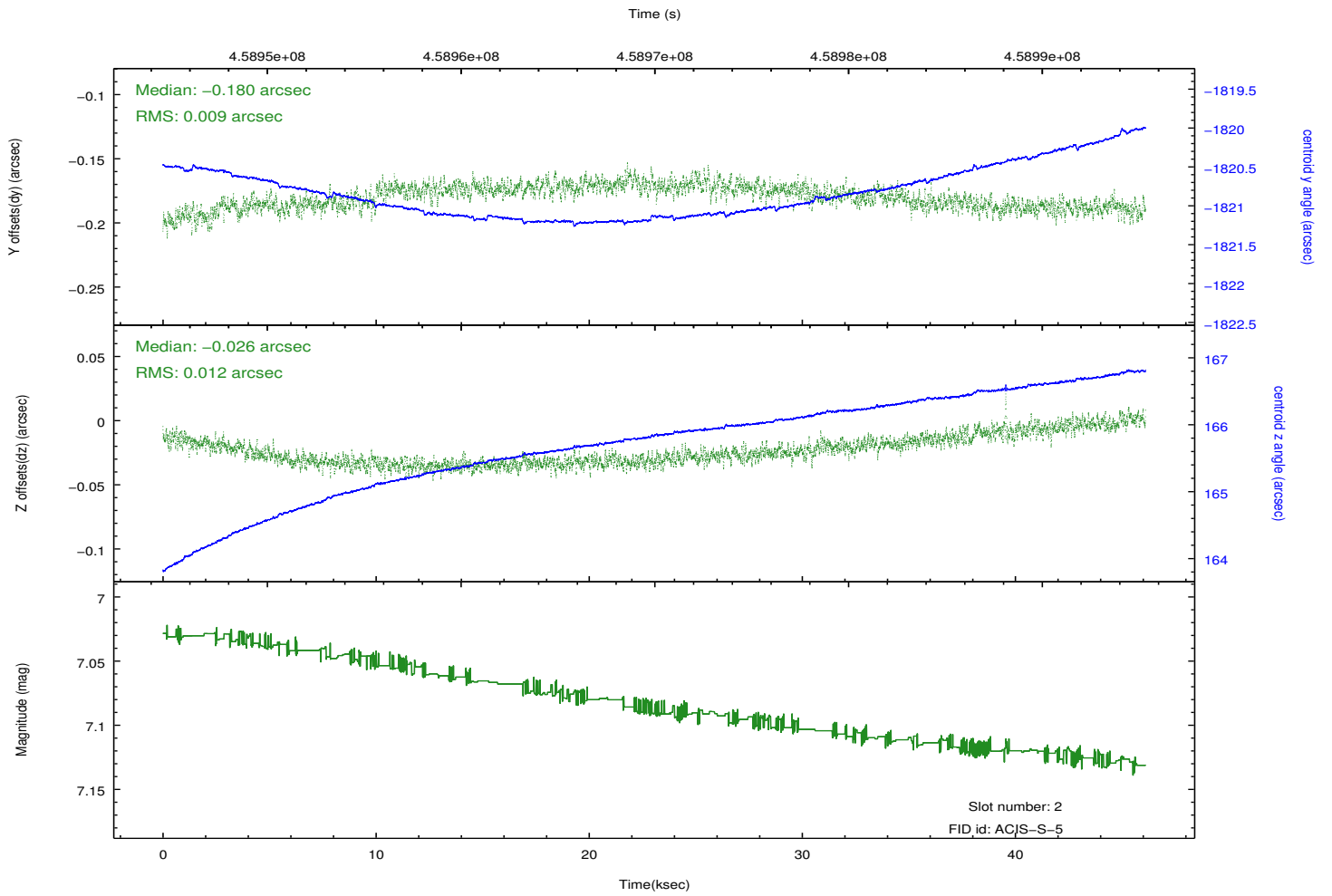
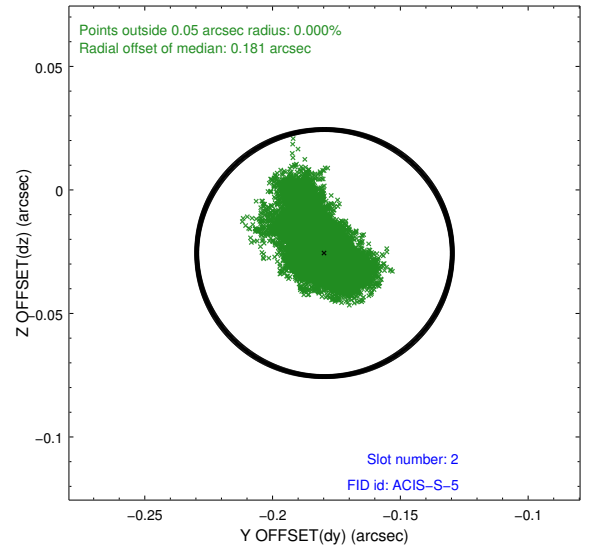
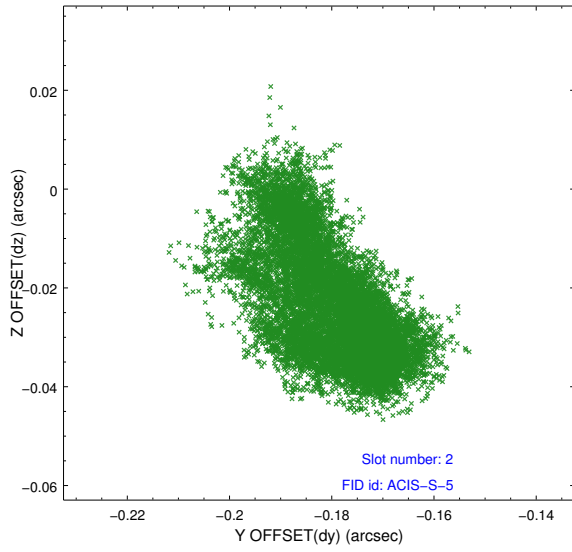
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

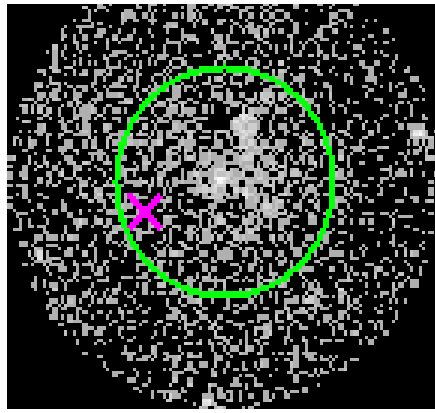


3 Gratings

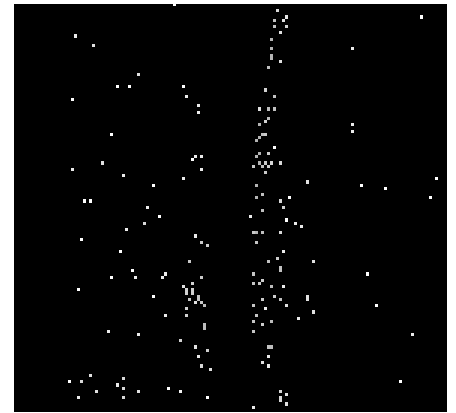
3.1 HEG Arm



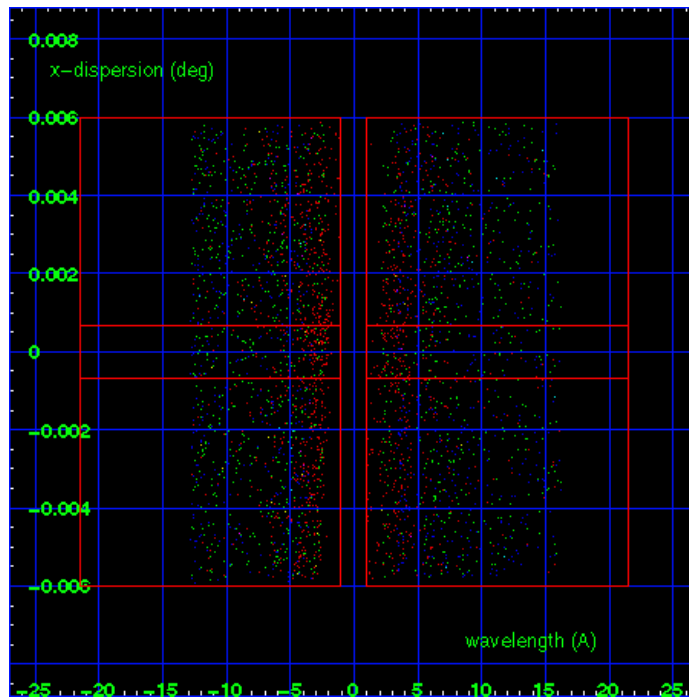
HEG Order Sort 123



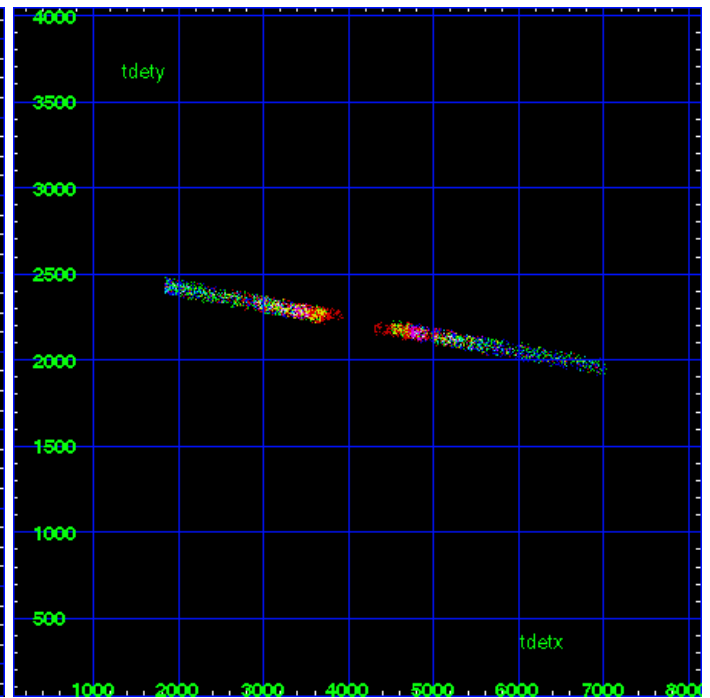
HEG Zero Order



HEG Order Sort ALL

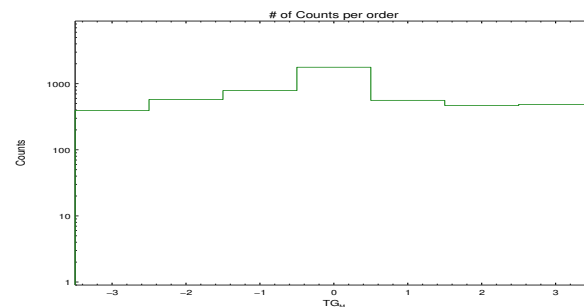


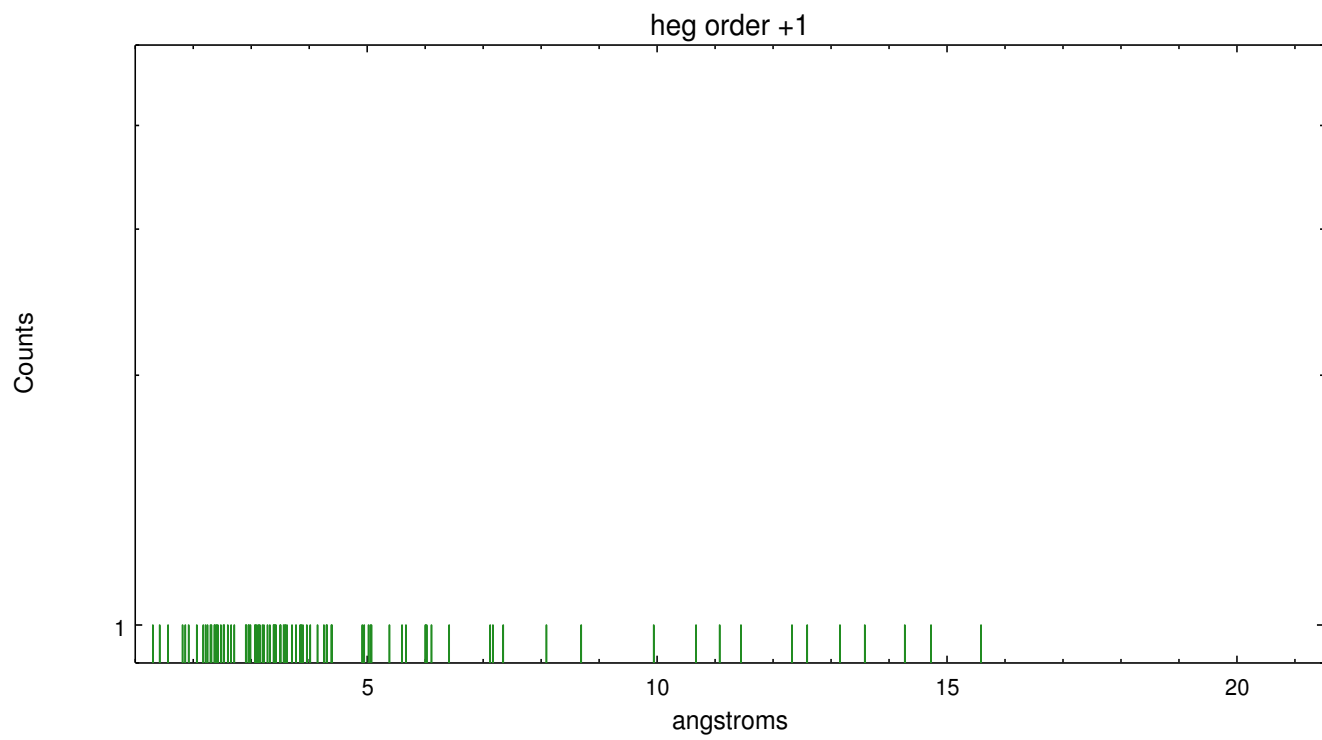
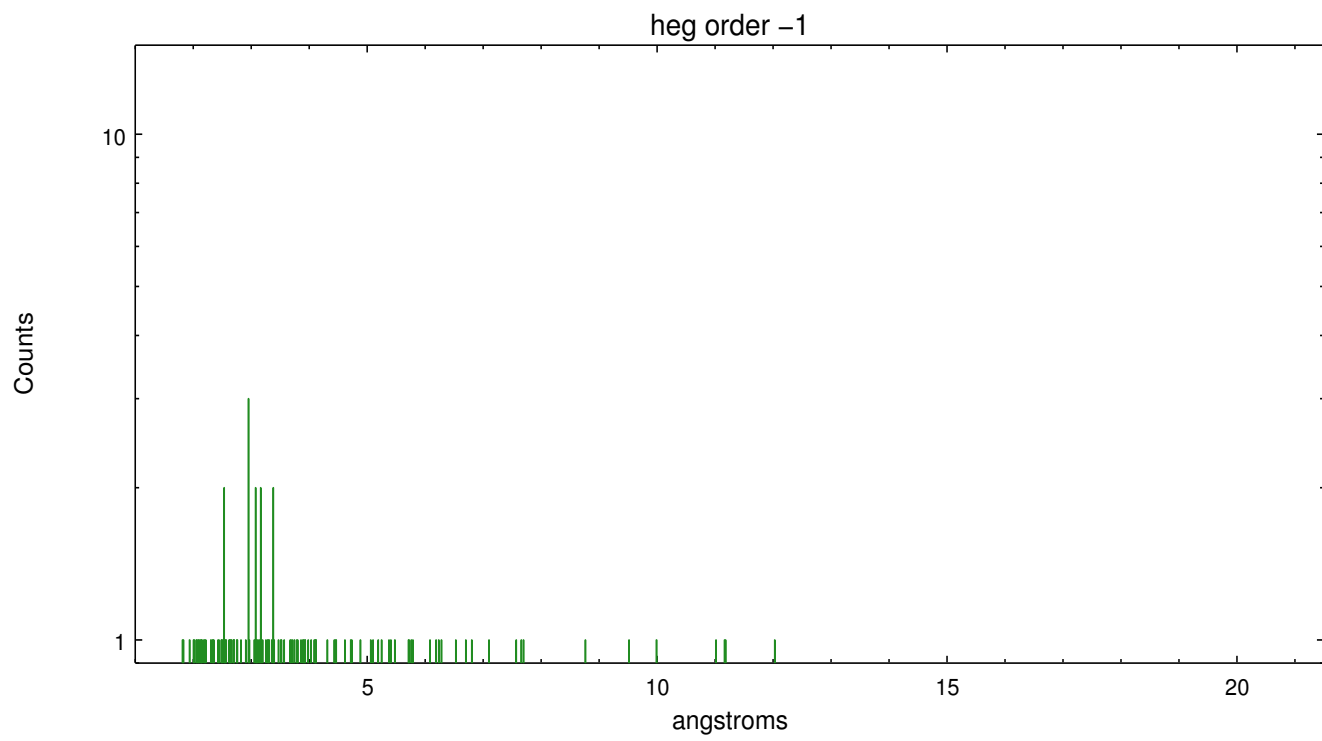
Spot Image HEG



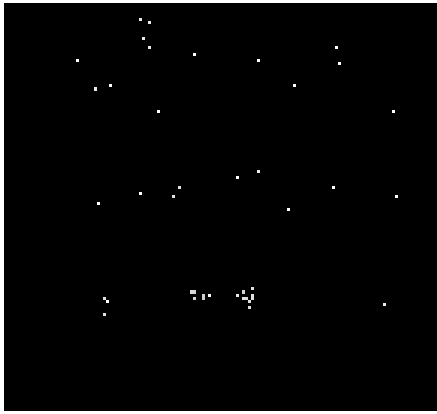
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	392	576	786	1772	559	468	485

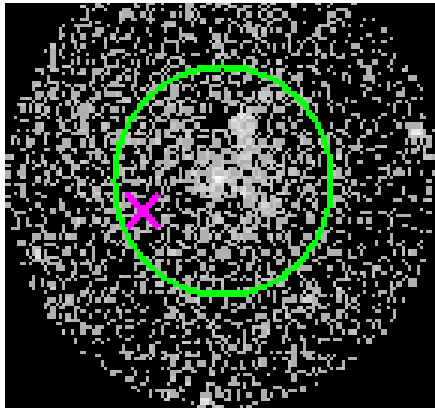




3.2 MEG Arm



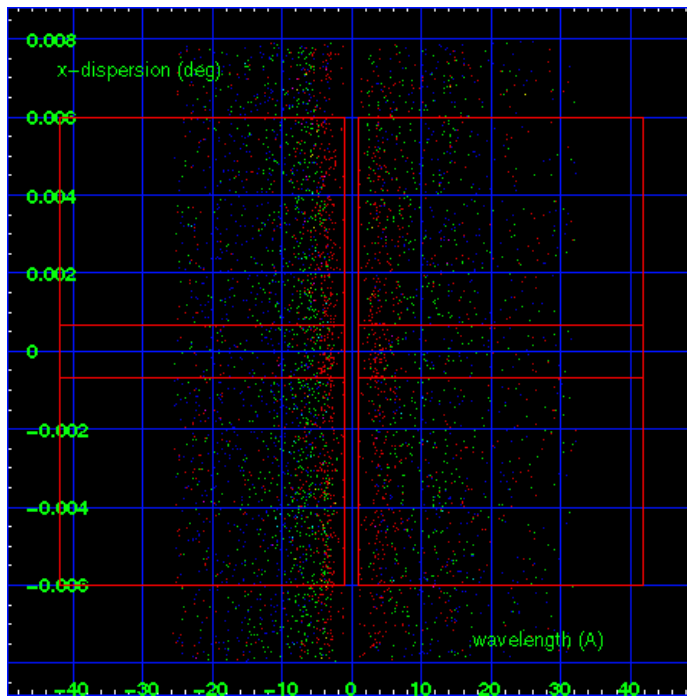
MEG Order Sort 123



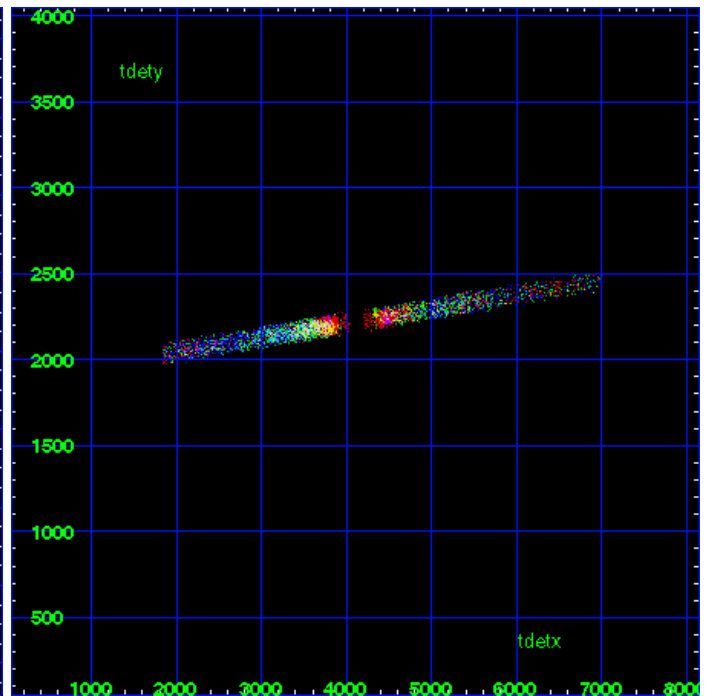
MEG Zero Order



MEG Order Sort ALL

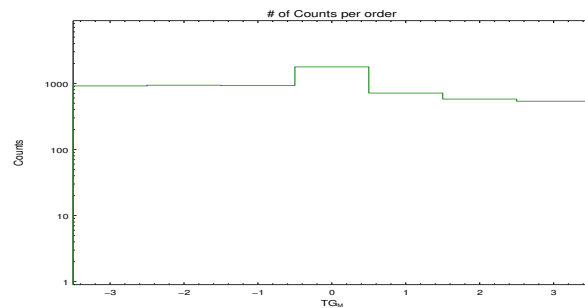


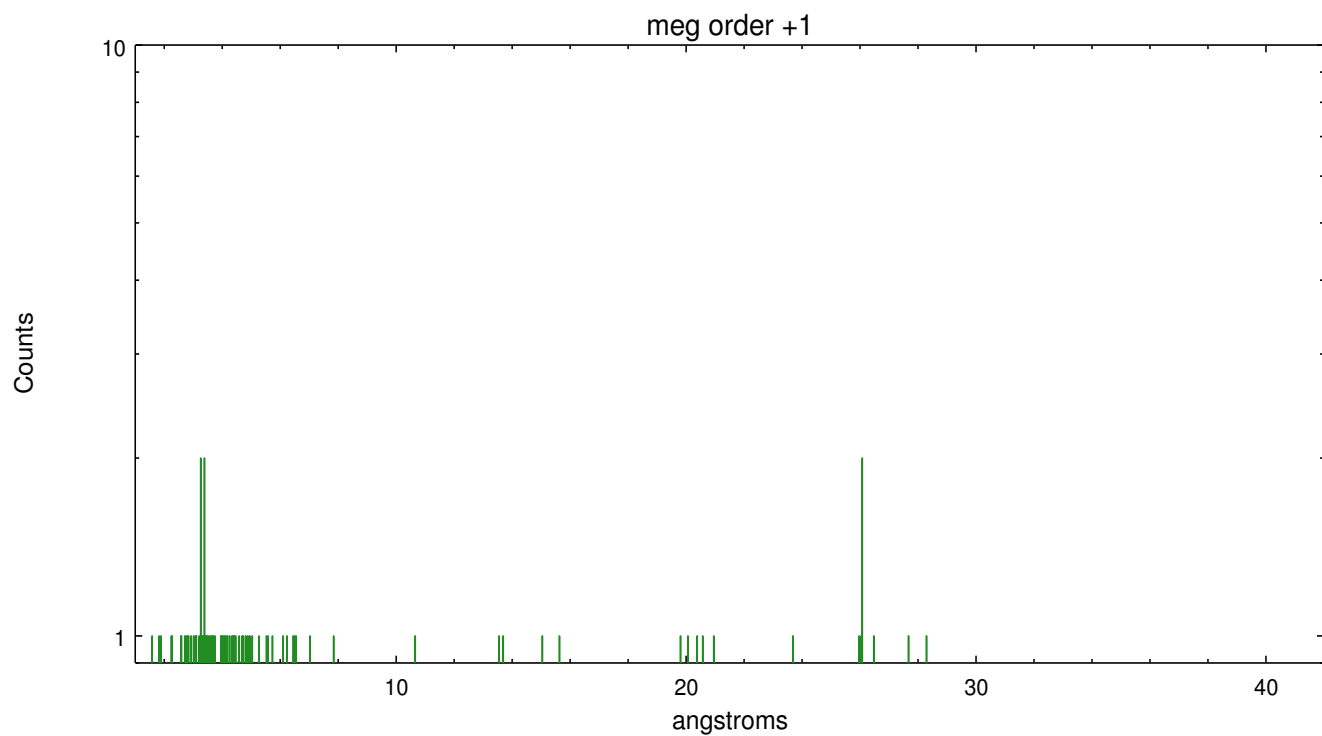
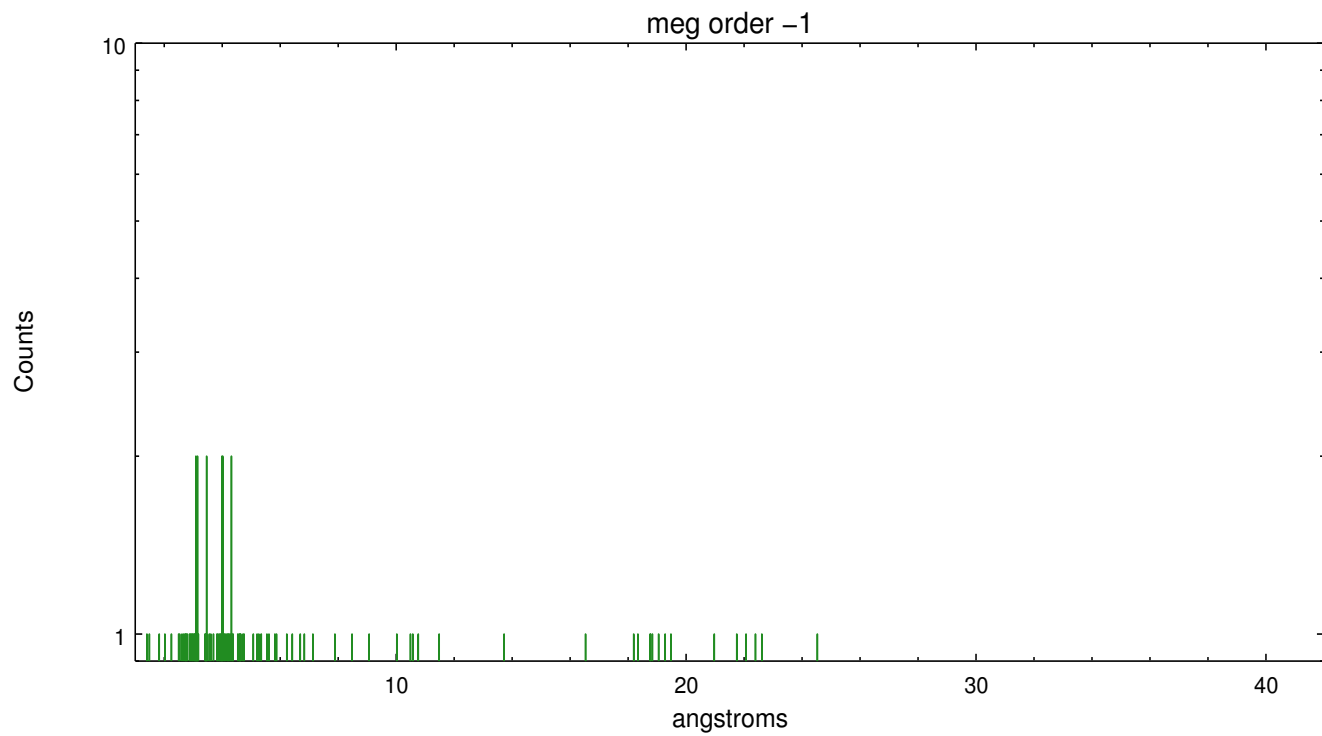
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	914	937	923	1772	712	578	536





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.070900346637

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]