

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14393 - L2 Version 2
Chandra X-Ray Center

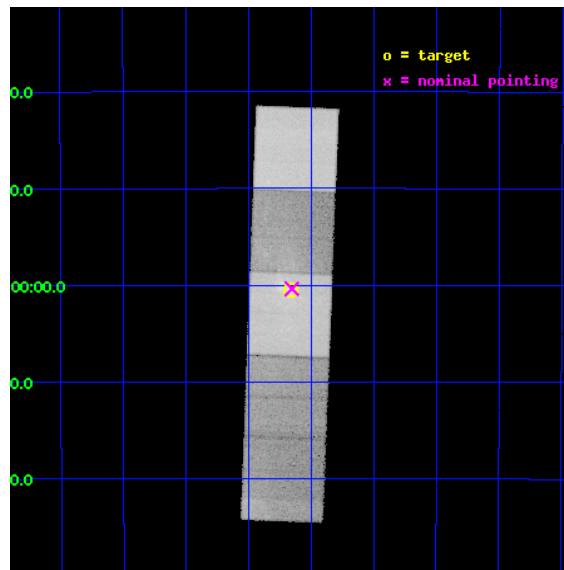
L2 Processing Date : Feb 14 2012

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1 Front

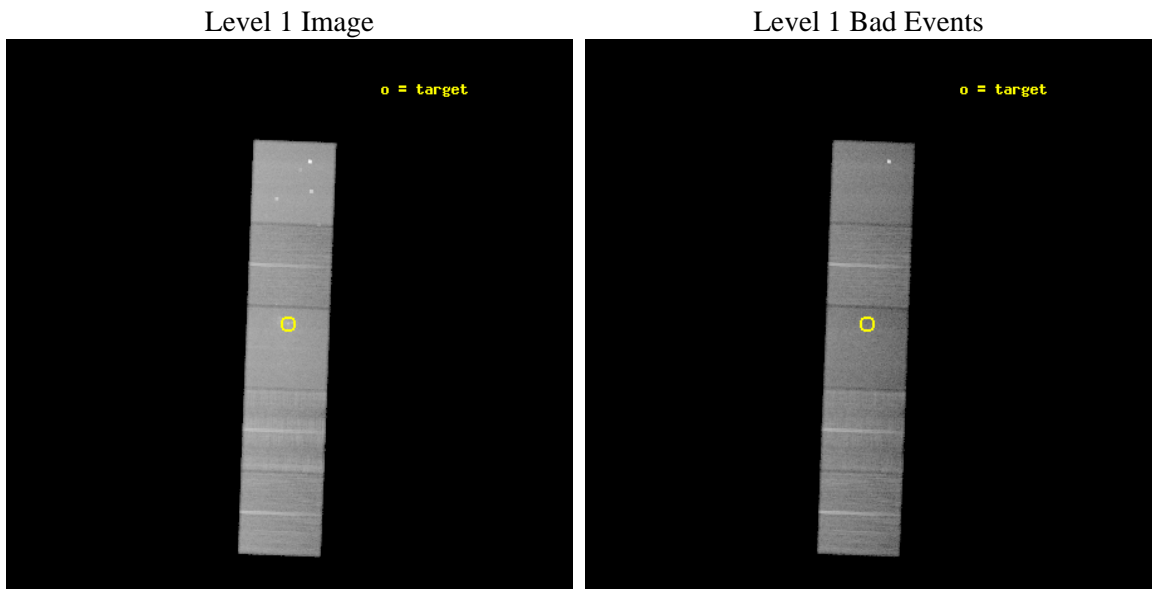
seq_num	601012	Sequence number
obs_id	14393	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41369309085	Nominal RA [deg]
dec_nom	-29.006290695871	Nominal Dec [deg]
roll_nom	92.155192937612	Nominal Roll [deg]
revision	2	Processing version of data
ontime	41544.766594887	Sum of GTIs [s]
livetime	41001.953634512	Livetime [s]
ontime5	41544.725554883	Sum of GTIs [s]
ontime6	41544.68451488	Sum of GTIs [s]
ontime7	41544.766594887	Sum of GTIs [s]
ontime8	41544.643474877	Sum of GTIs [s]
ontime9	41544.602434874	Sum of GTIs [s]
l2events	508430	Number of level 2 events



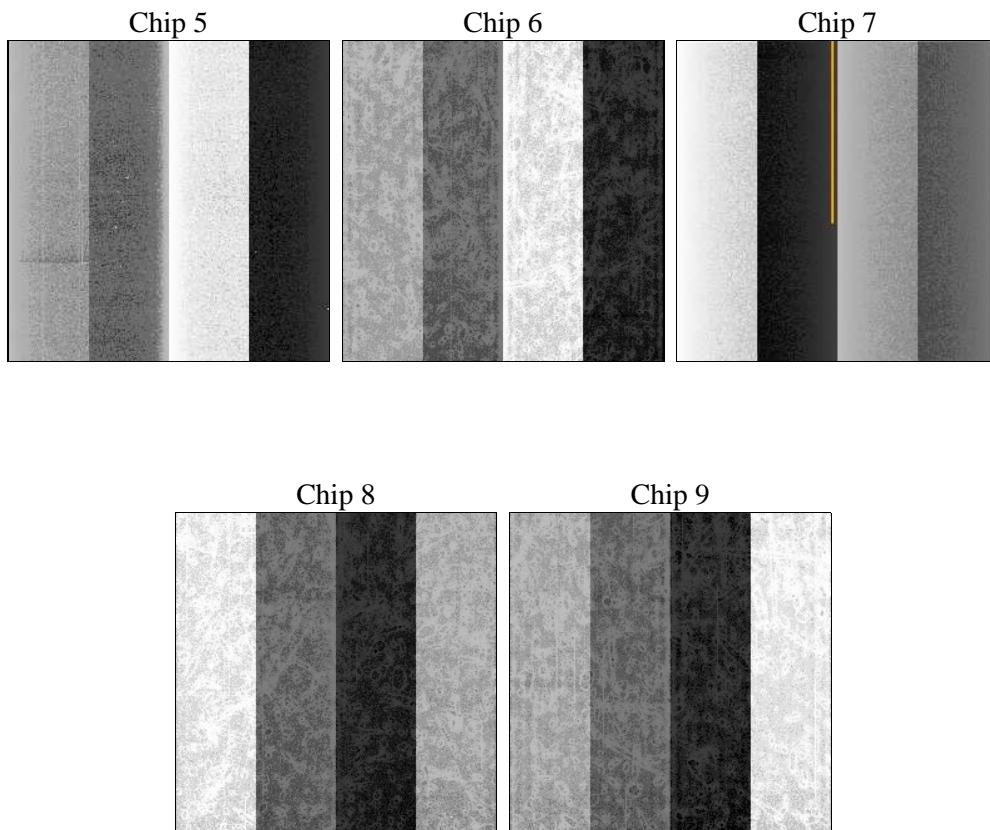
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	41481.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	41544.766594887	Sum of GTIs [s]
caldbver	4.4.7	 	ontime5	41544.725554883	Sum of GTIs [s]
date	2012-02-12T17:37:25	Date and time of file creation	ontime6	41544.68451488	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	41544.766594887	Sum of GTIs [s]
			ontime8	41544.643474877	Sum of GTIs [s]
			ontime9	41544.602434874	Sum of GTIs [s]
			l1events	1706369	Number of level 1 events

2.1.4 Events

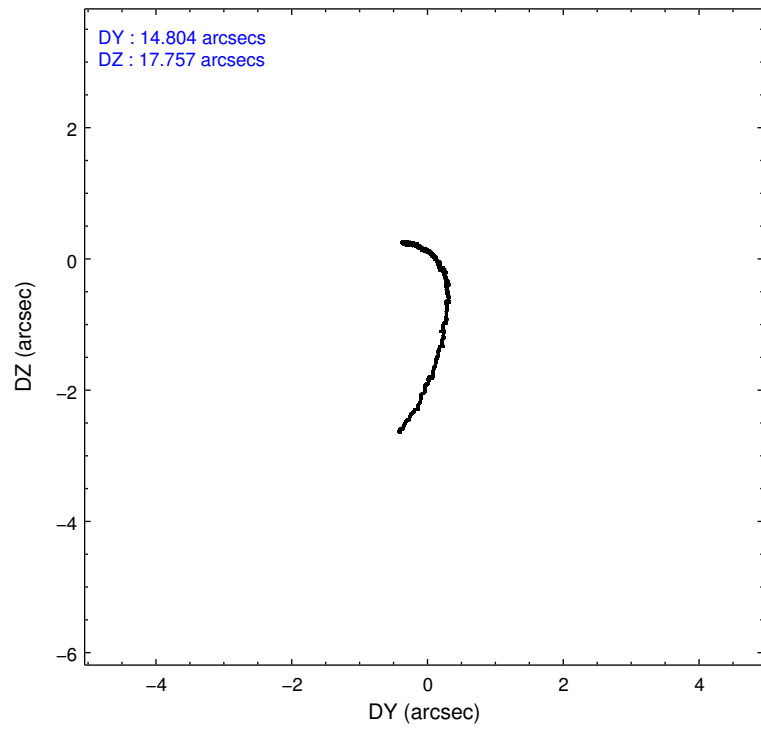
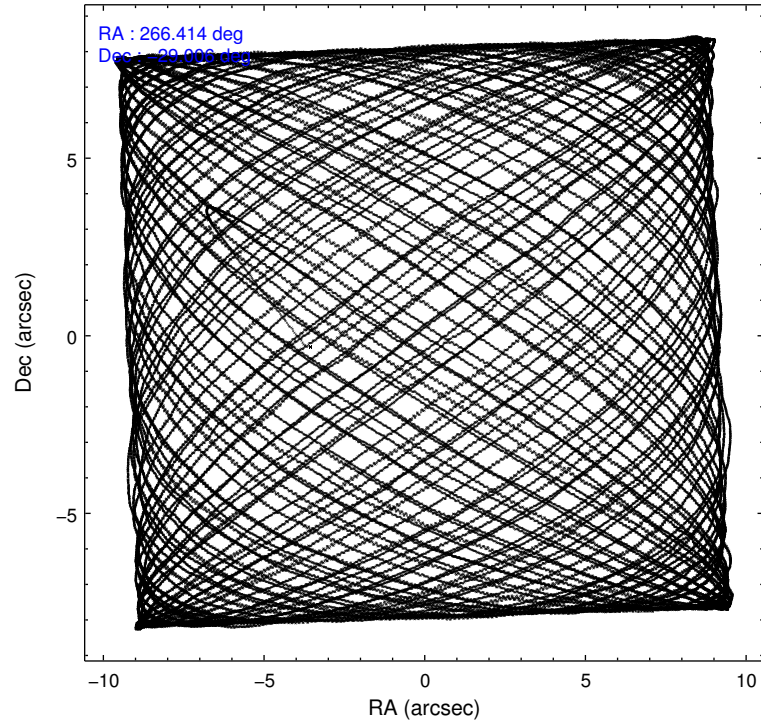
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	427096	285326	368646	351275	274026
rejected events	214103	231241	184483	248411	230660
rejected %	50%	81%	50%	70%	84%

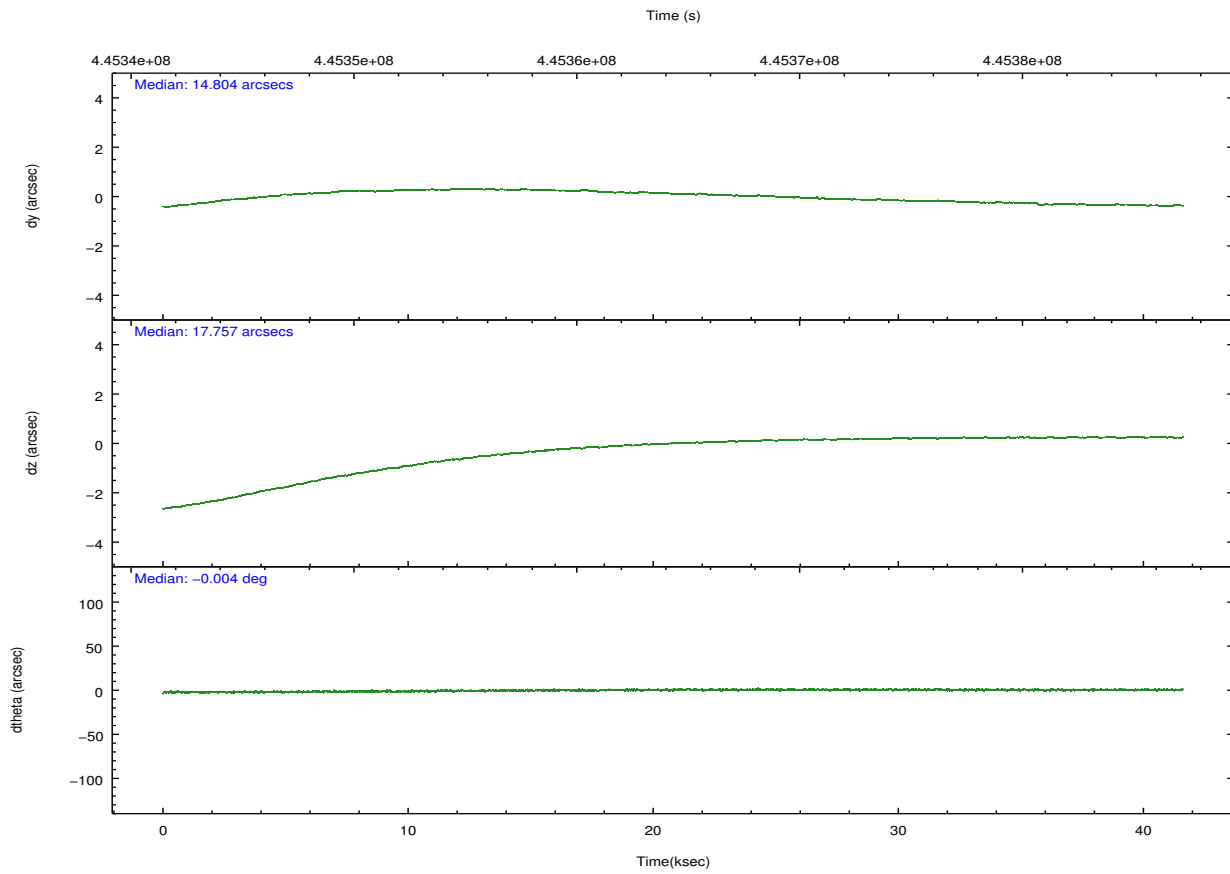
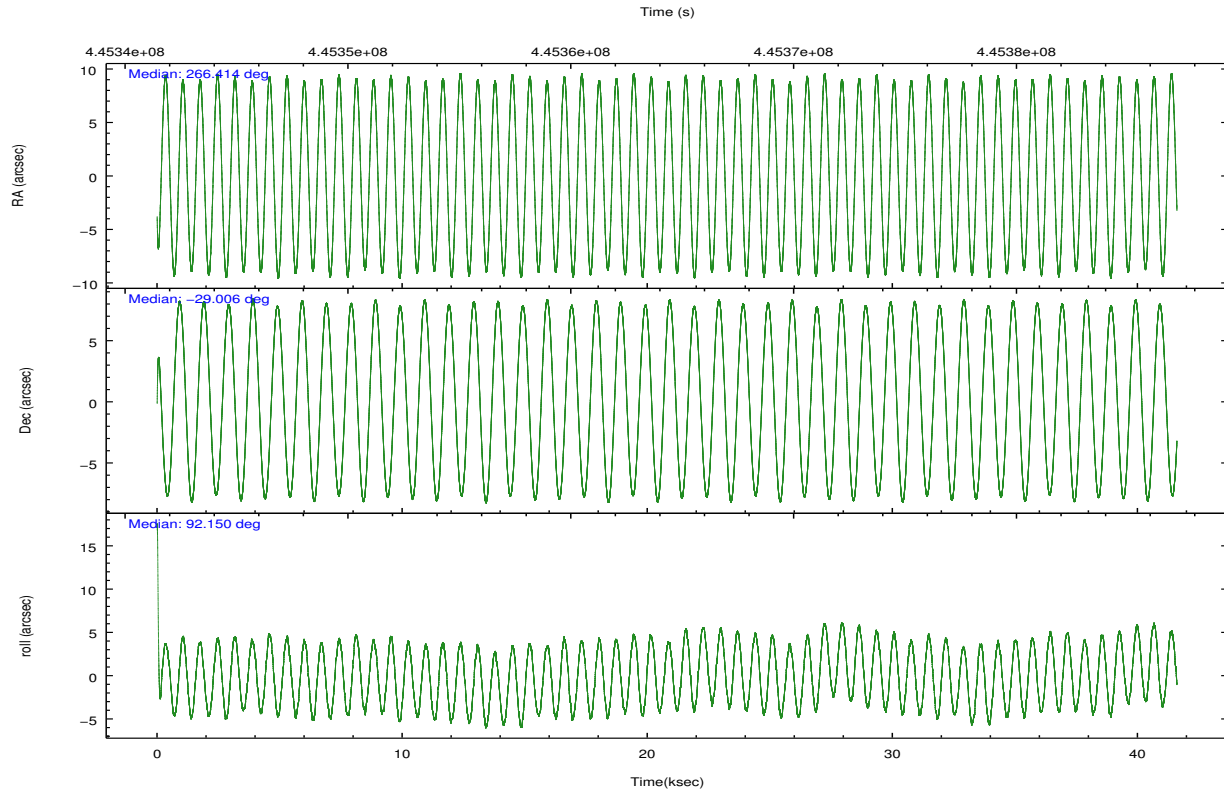
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	22419	25770	20552	36154	19842
	5%	9%	5%	10%	7%
grade 1 events	6373	217	440	314	210
	1%	0%	0%	0%	0%
grade 2 events	65688	10528	38811	22423	8546
	15%	3%	10%	6%	3%
grade 3 events	8228	4385	16727	10459	3904
	1%	1%	4%	2%	1%
grade 4 events	8180	4219	16574	9655	3658
	1%	1%	4%	2%	1%
grade 5 events	31547	12791	35078	18478	14017
	7%	4%	9%	5%	5%
grade 6 events	108500	9188	91515	24193	7419
	25%	3%	24%	6%	2%
grade 7 events	176161	218228	148949	229599	216430
	41%	76%	40%	65%	78%

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	266.430680	266.4136930908488	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.029222	-29.00629069587107	Alternating exposures requested	N	N
[deg] Pointing Roll	92.006803	92.15519293761209	[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)	445343651.184000	445342448.72256			
Observation start date	2012-02-11T10:33:05	2012-02-11T10:14:08			
[s] Observation end time (MET)	445385132.184000	445386092.19987			
Observation end date	2012-02-11T22:04:26	2012-02-11T22:21:32			
Read mode	TIMED	TIMED			

2.3 Aspect



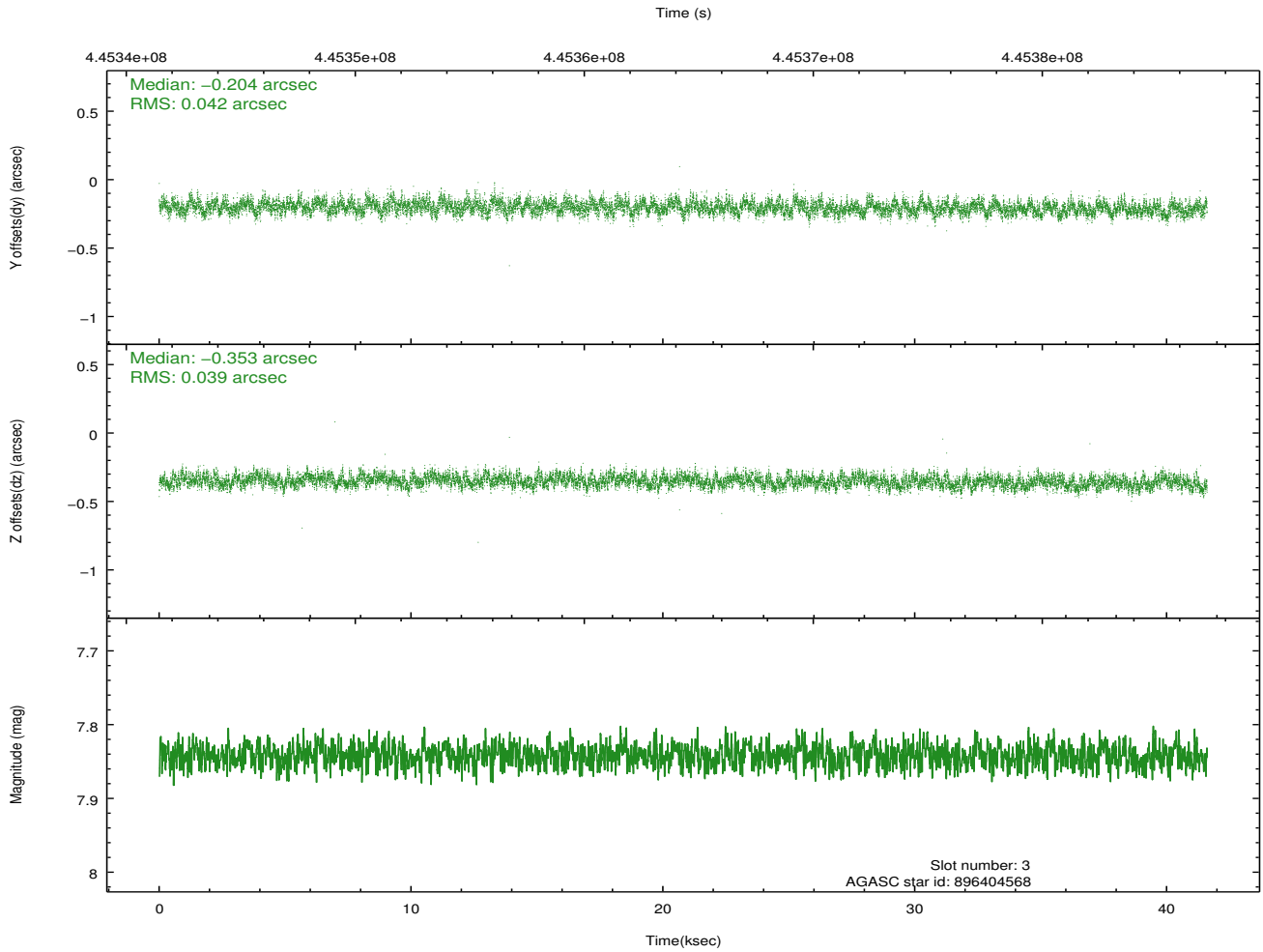
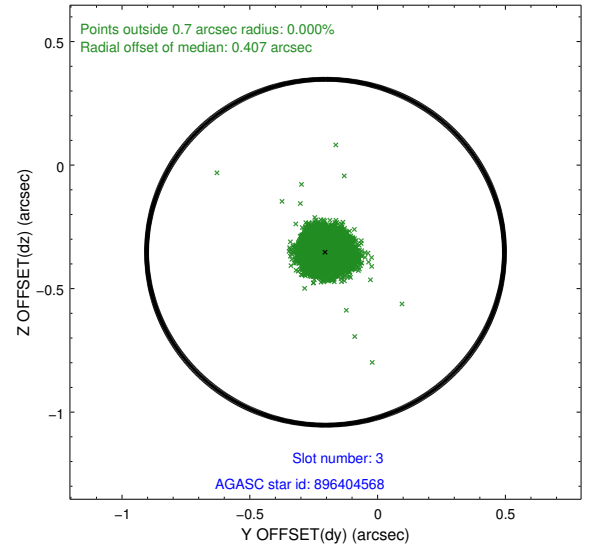
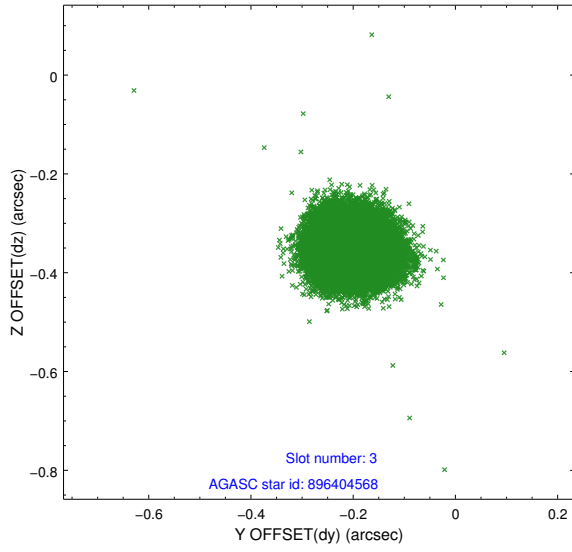


Slot Statistics

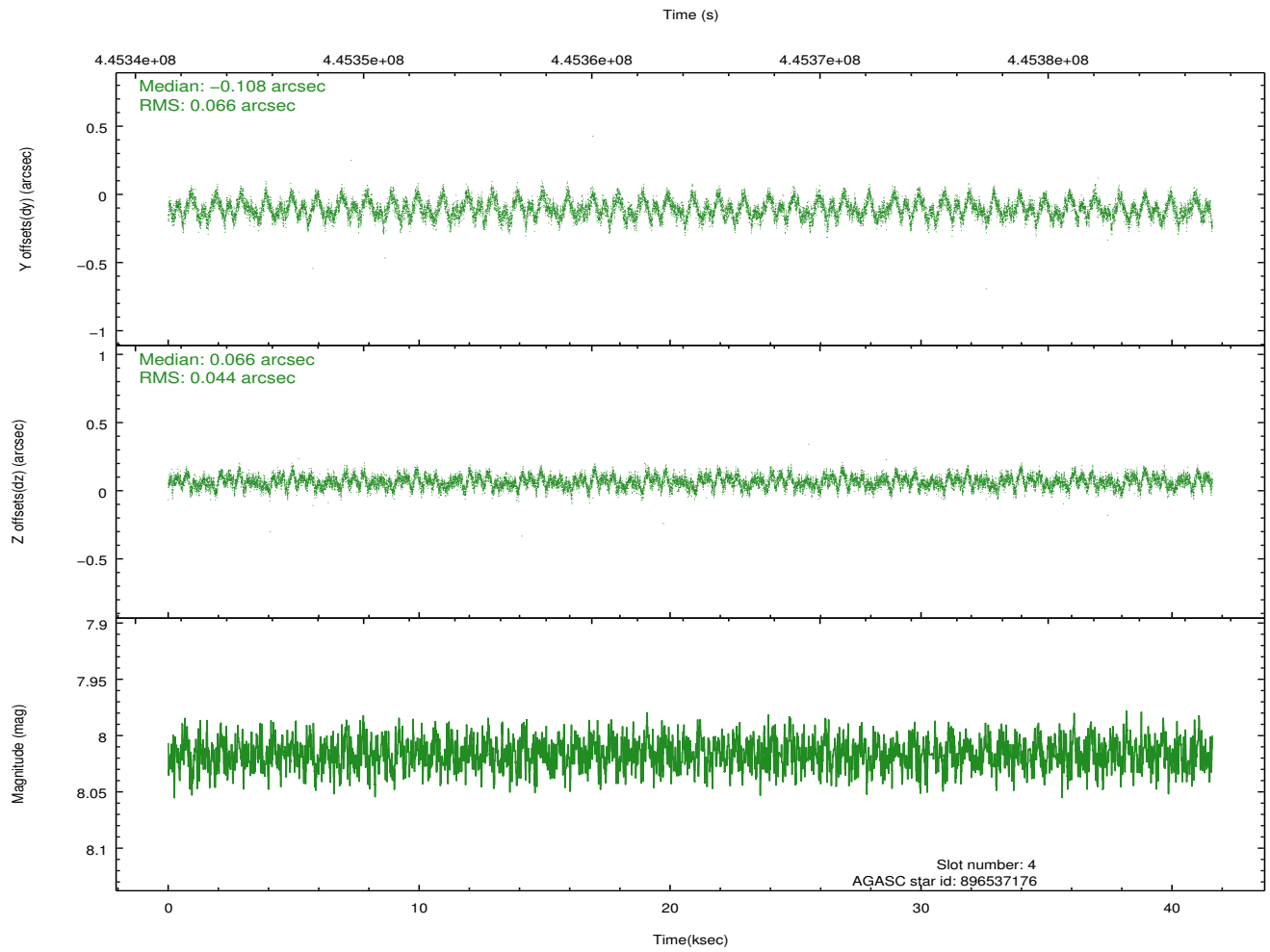
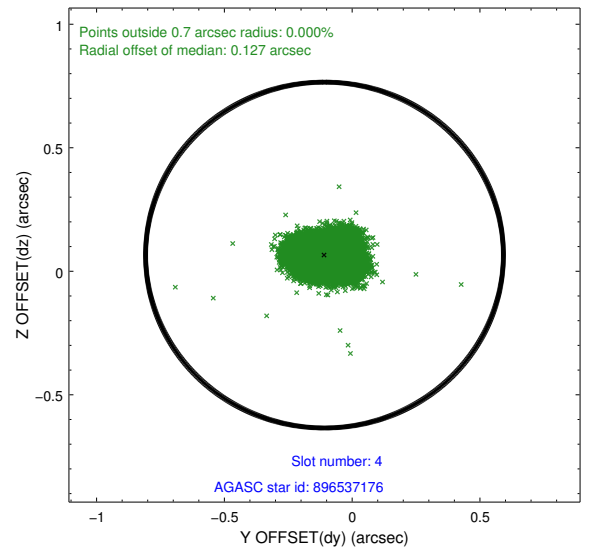
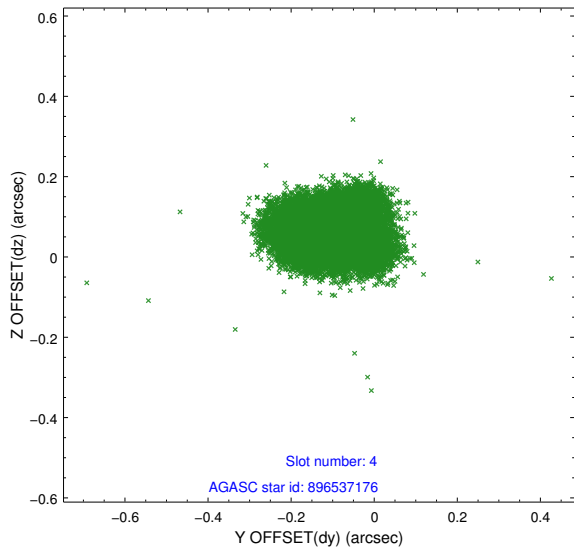
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.00	10148	-0.019	-0.021	0.030	0.068	0.000000	0.000000	928.23	-1734.46
1	FID	ACIS-S-4	7.00	10147	0.090	-0.004	0.013	0.031	0.000000	0.000000	2145.78	169.71
2	FID	ACIS-S-6	7.14	10148	-0.094	0.037	0.018	0.041	0.000000	0.000000	394.15	807.15
3	GUIDE	896404568	7.84	20296	-0.204	-0.353	0.061	0.096	265.687293	-28.431080	2226.91	2276.92
4	GUIDE	896537176	8.02	20289	-0.108	0.066	0.084	0.137	266.498272	-28.678259	1255.34	-257.17
5	GUIDE	896540808	7.48	20295	0.029	-0.291	0.045	0.073	265.985401	-29.308604	-958.73	1432.05
6	GUIDE	896537776	7.53	20294	0.326	0.215	0.048	0.079	266.655684	-29.665673	-2314.65	-622.95
7	GUIDE	896538208	7.96	20288	-0.046	0.363	0.062	0.102	267.176969	-28.671626	1196.85	-2400.04

2.4 Star Slots

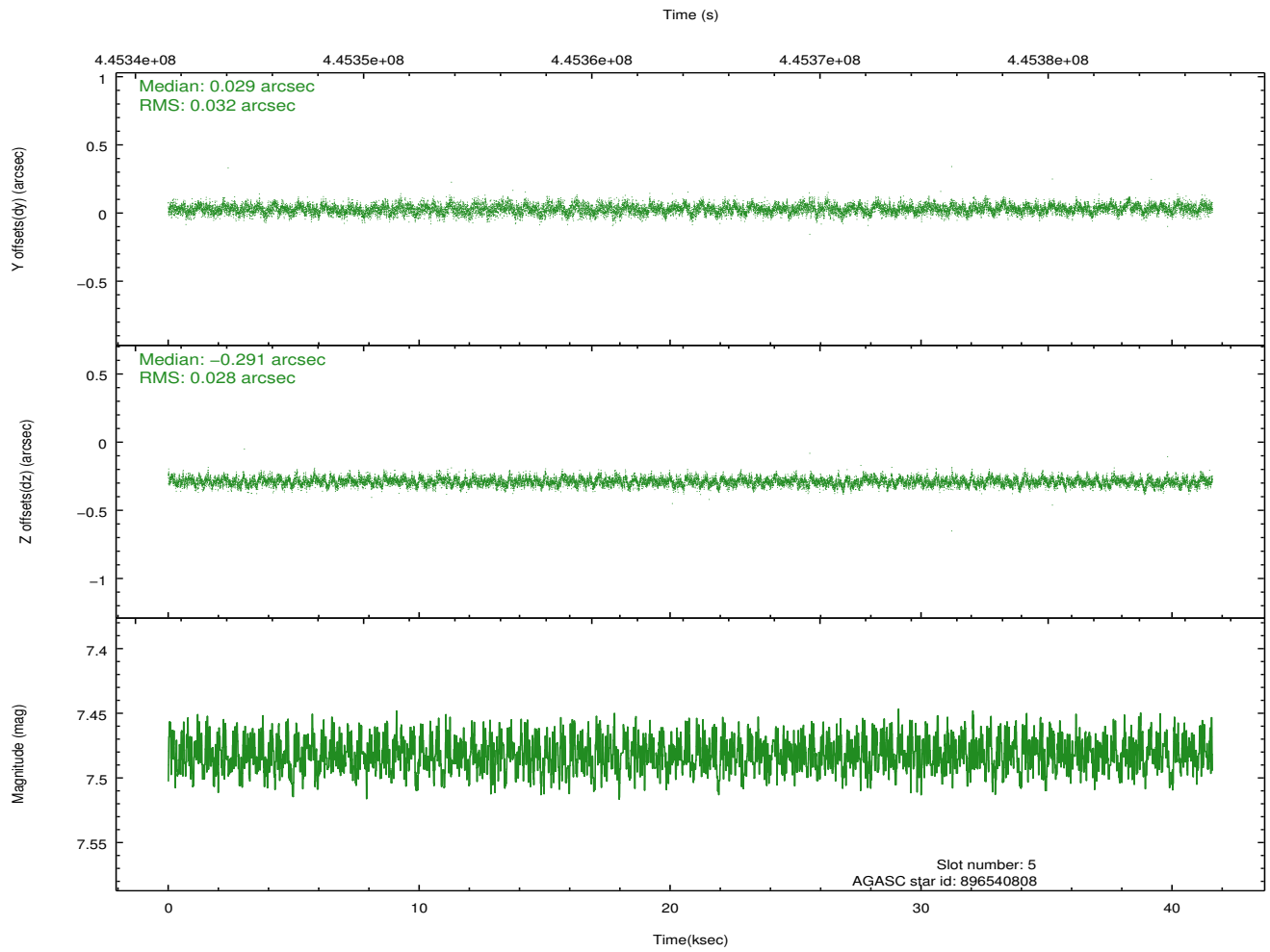
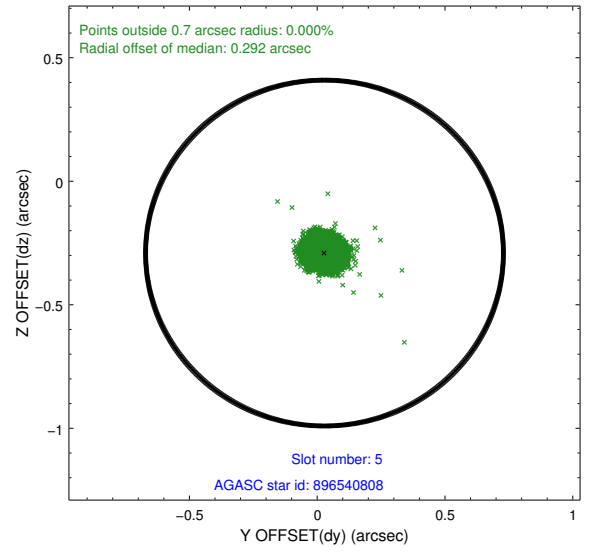
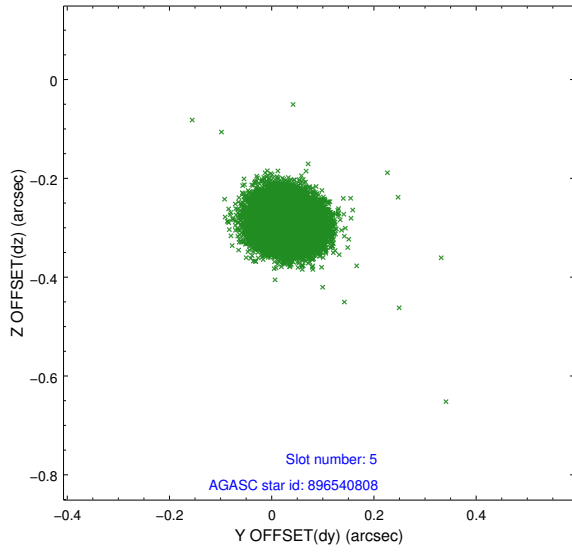
2.4.1 Slot 3



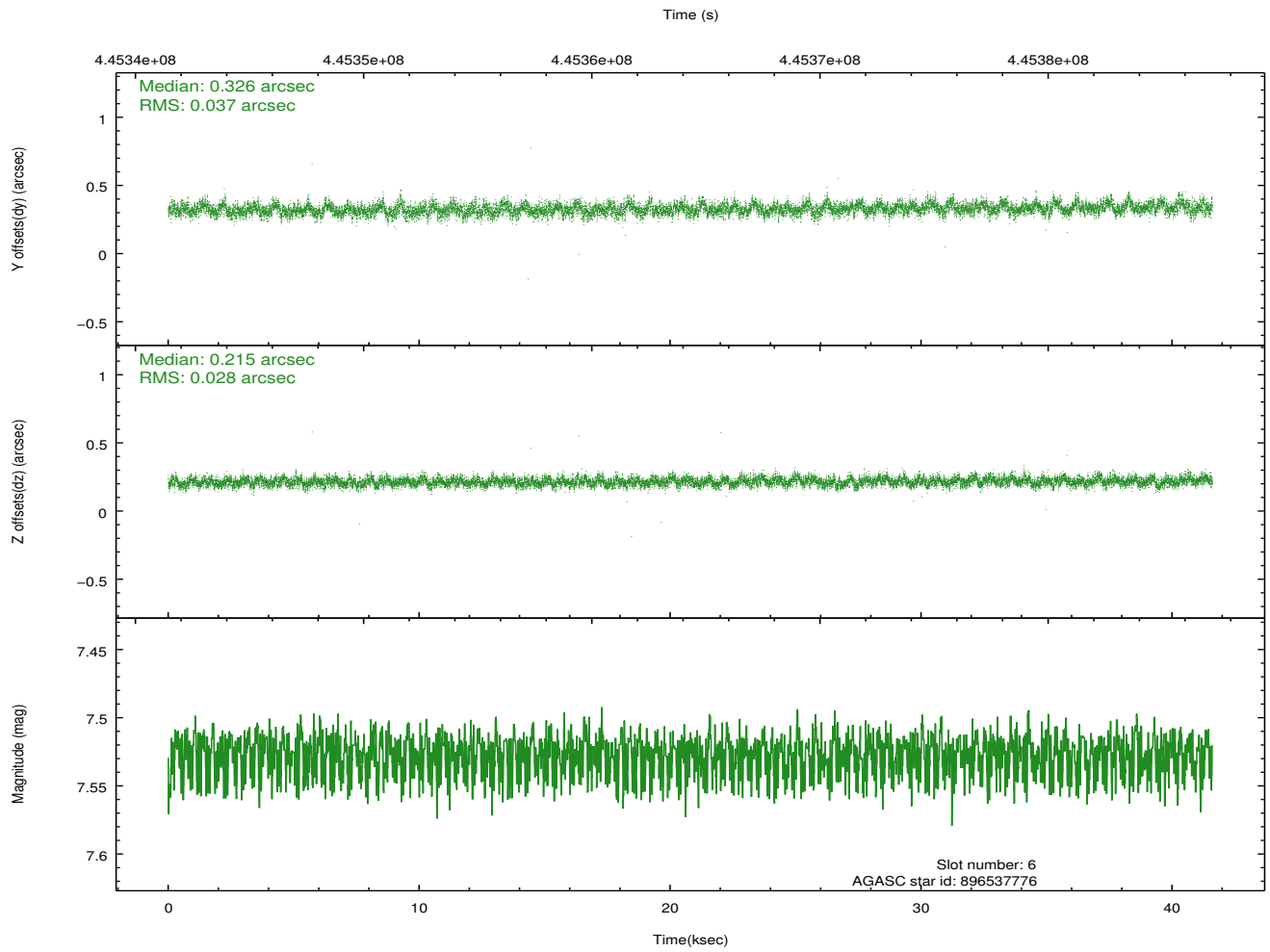
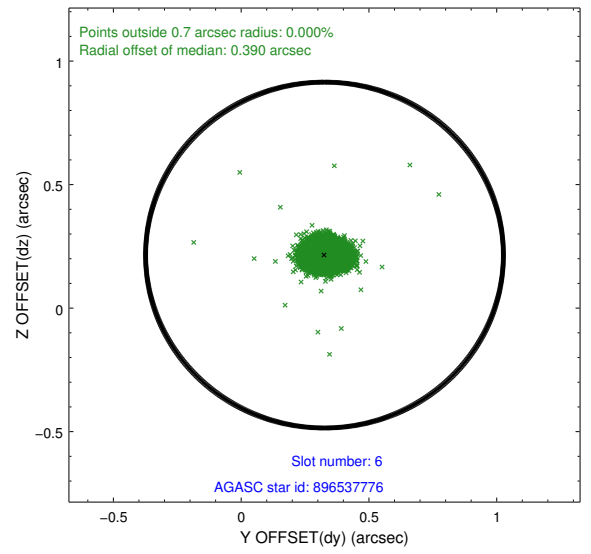
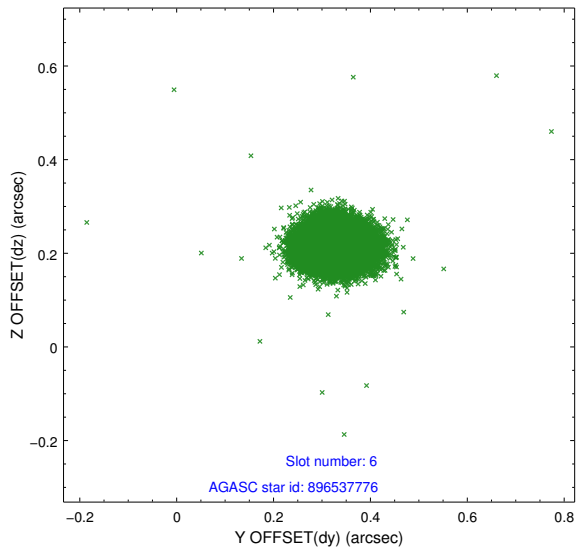
2.4.2 Slot 4



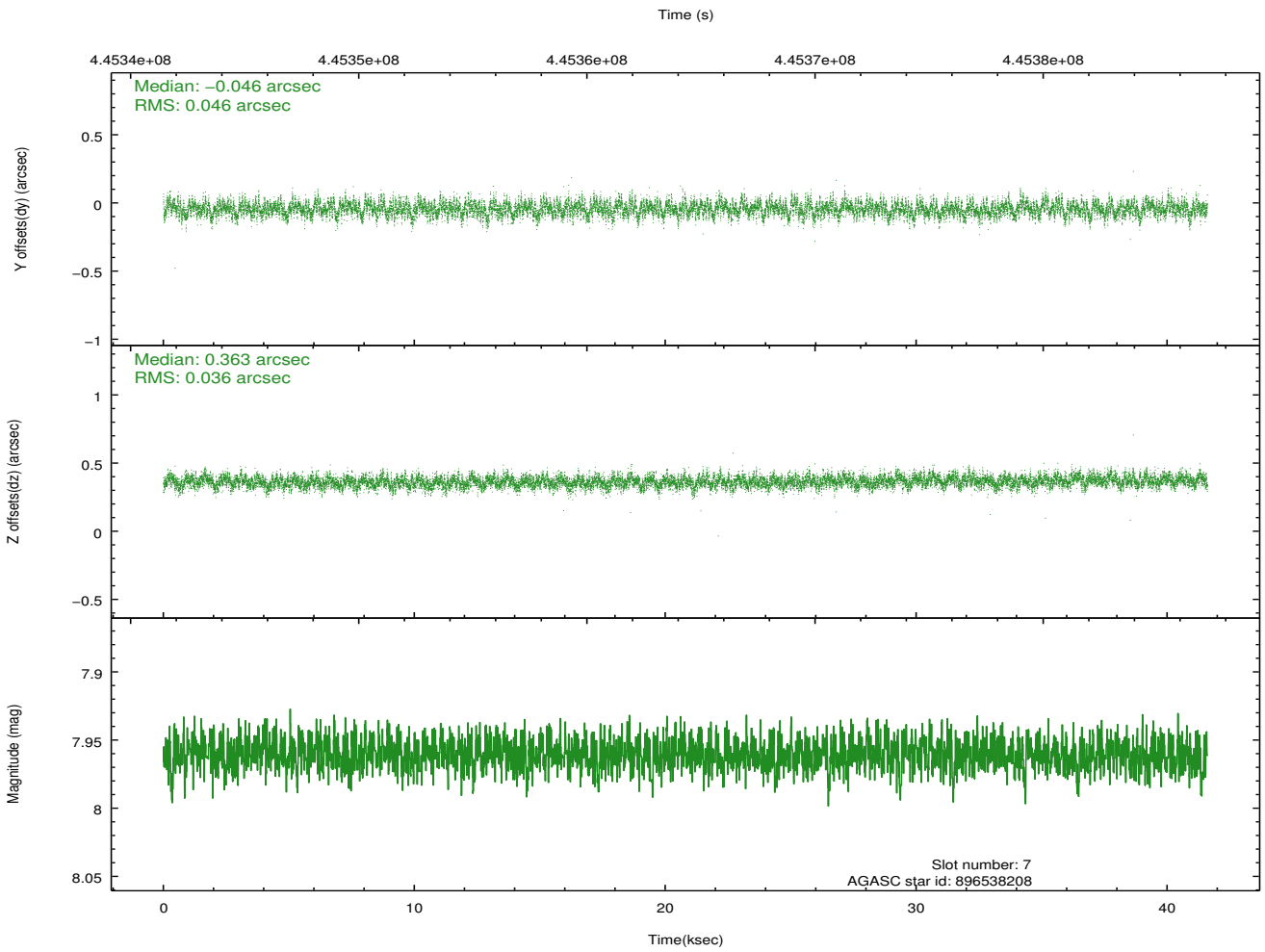
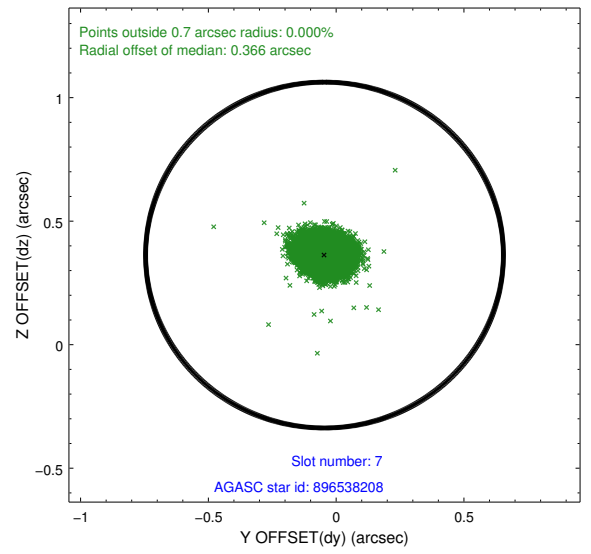
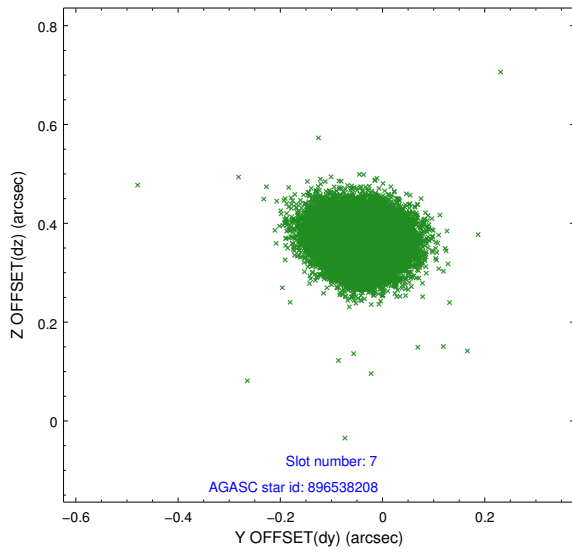
2.4.3 Slot 5



2.4.4 Slot 6

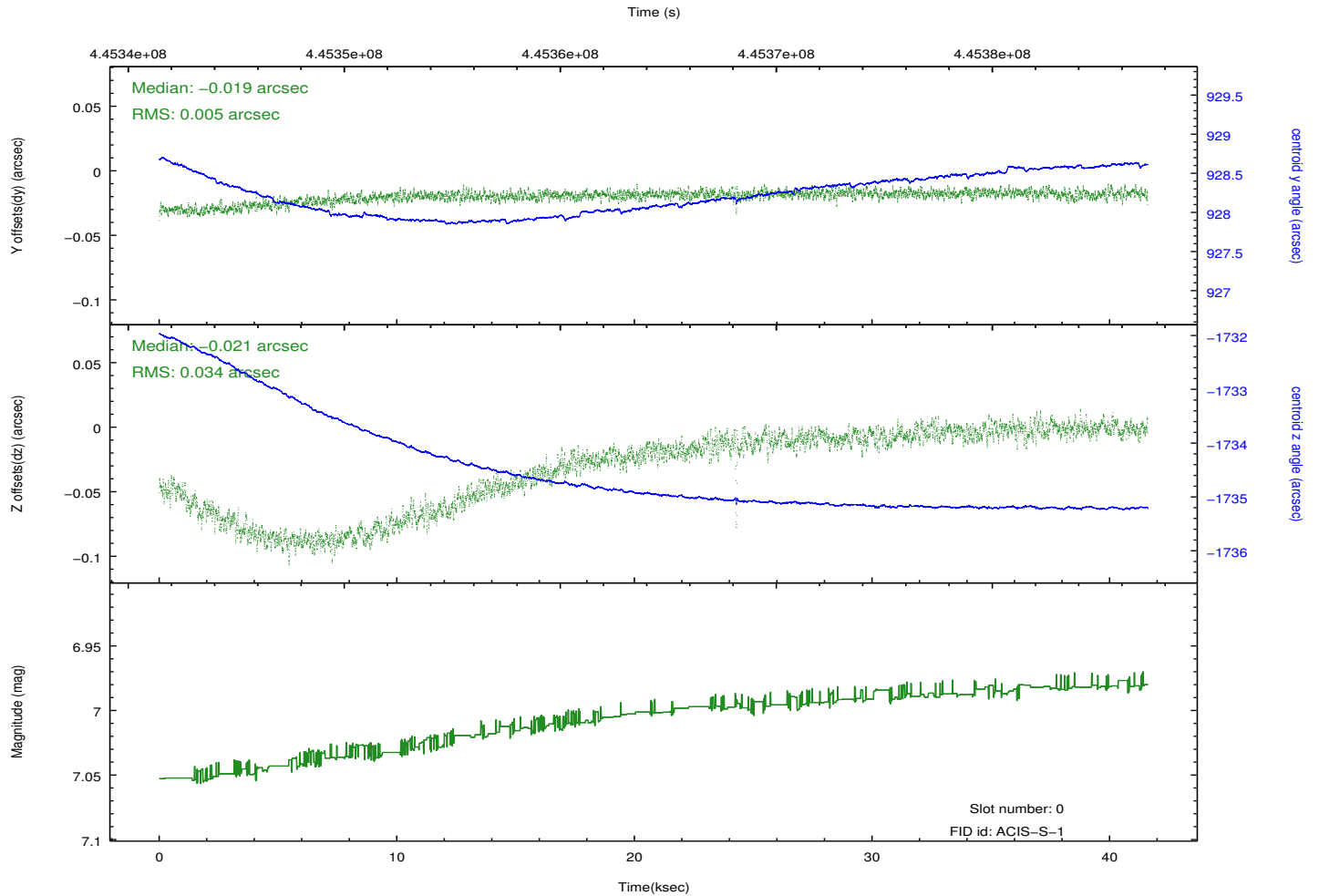
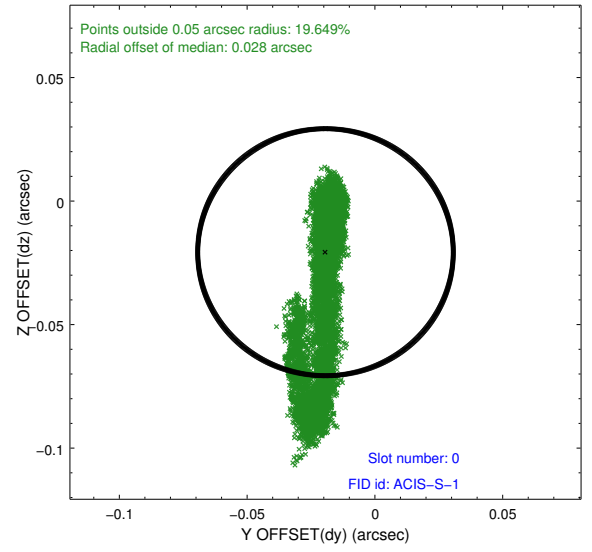
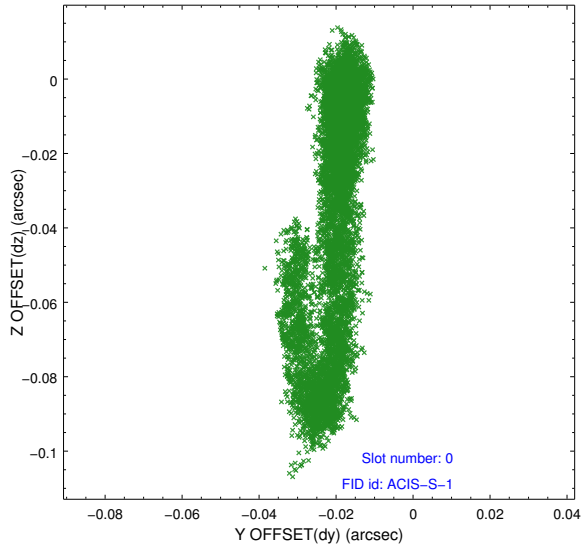


2.4.5 Slot 7

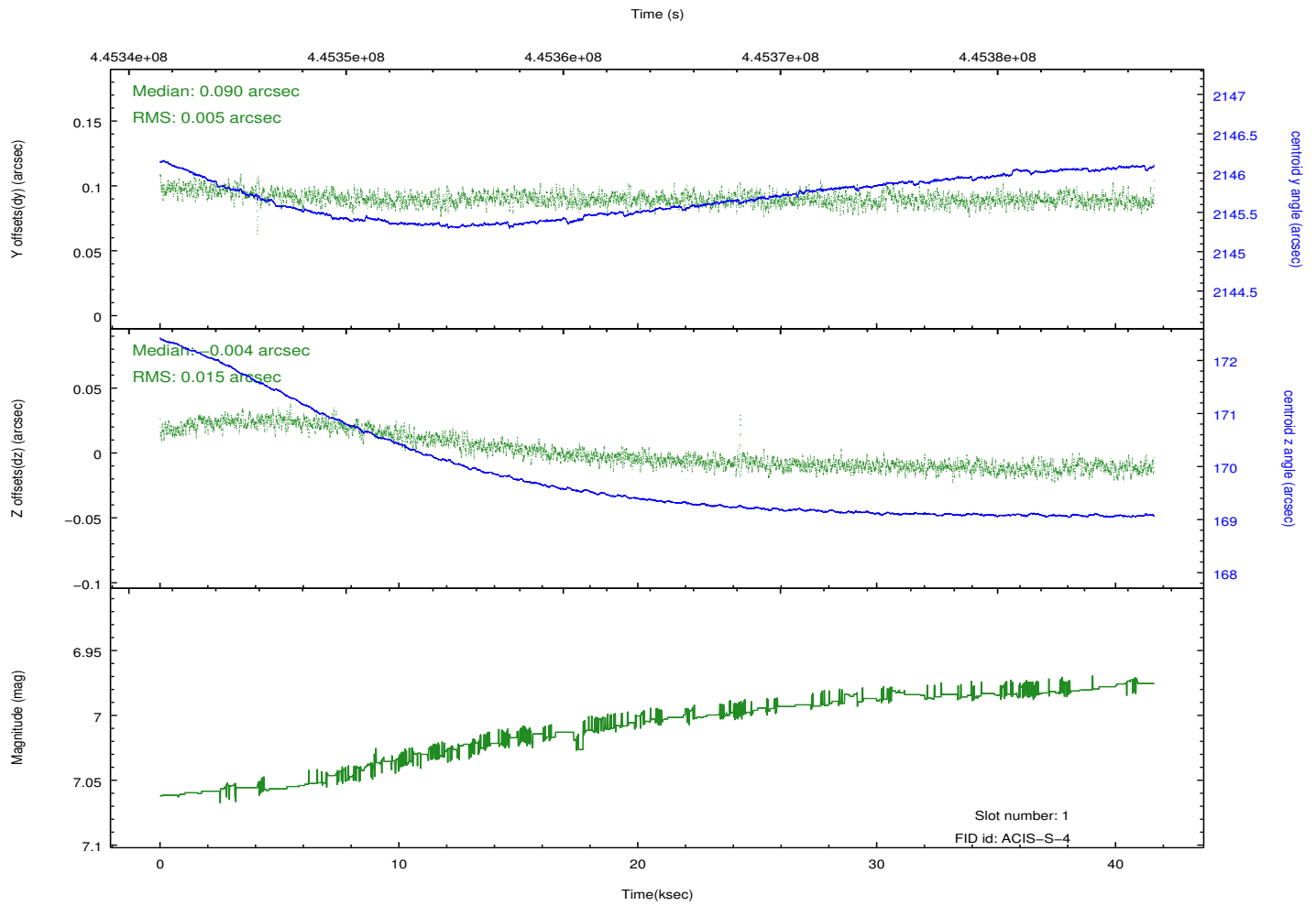
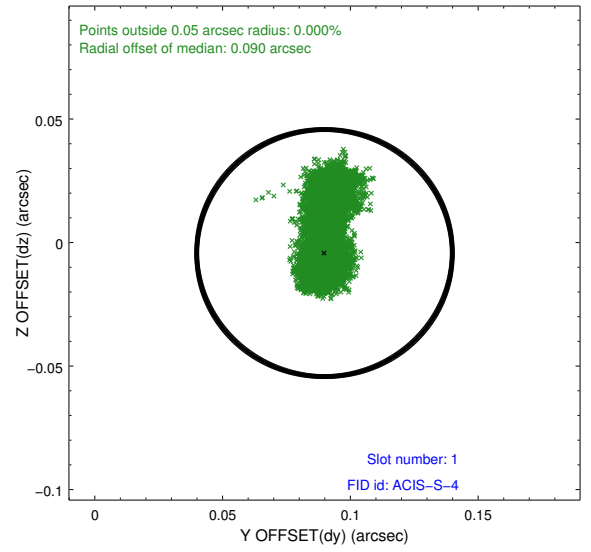
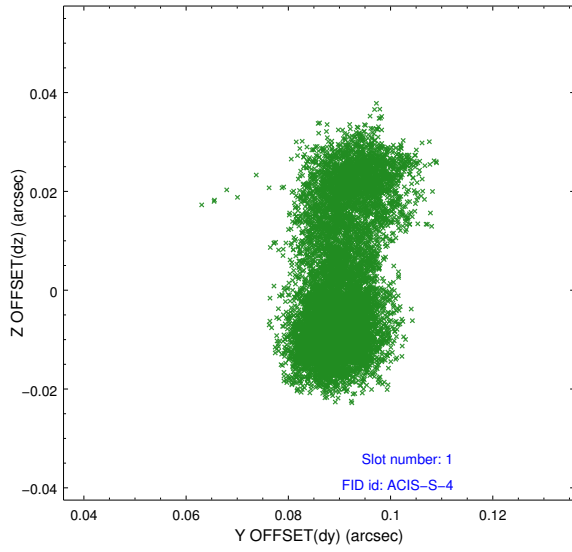


2.5 FID Slots

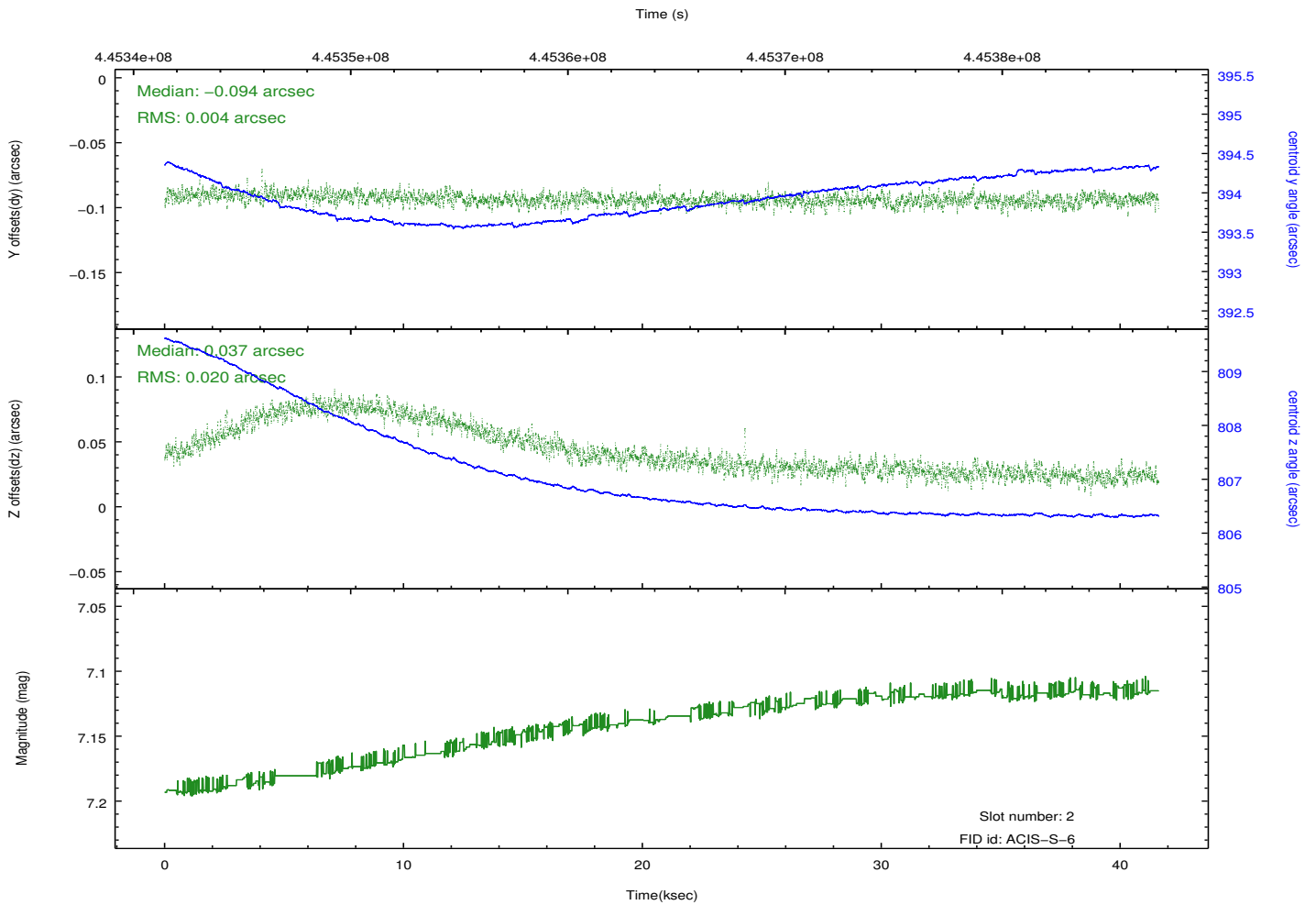
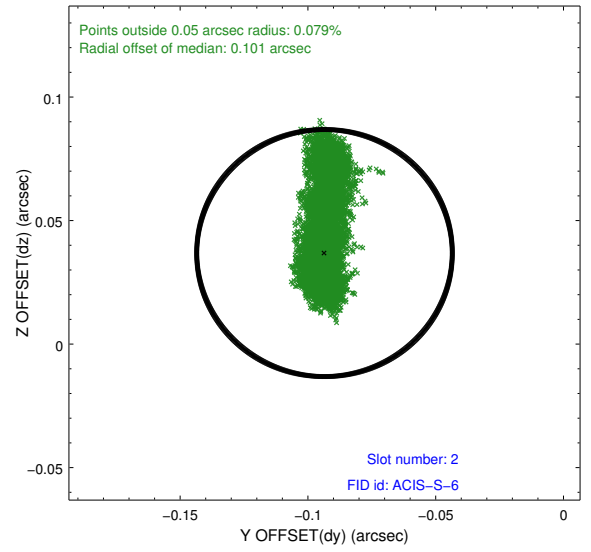
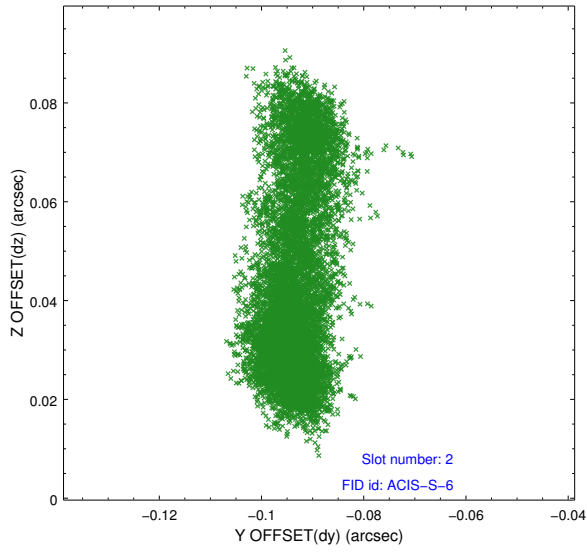
2.5.1 Slot 0



2.5.2 Slot 1

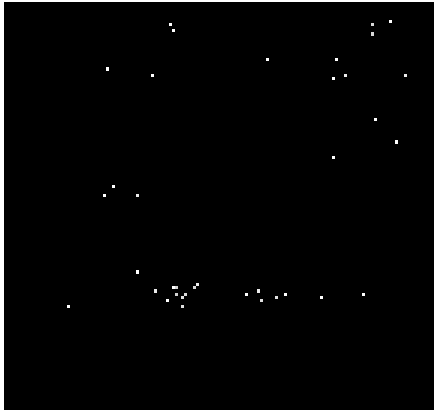


2.5.3 Slot 2

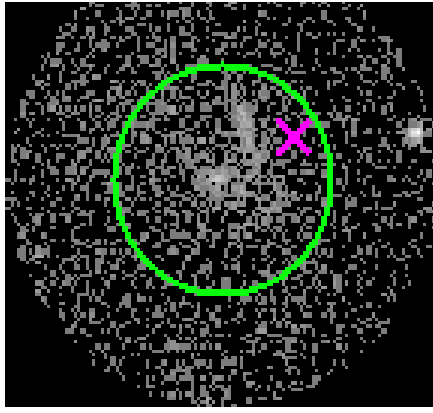


3 Gratings

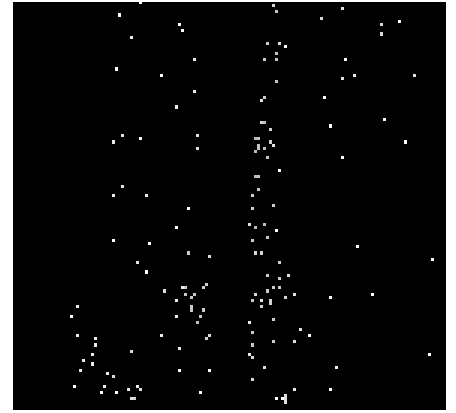
3.1 HEG Arm



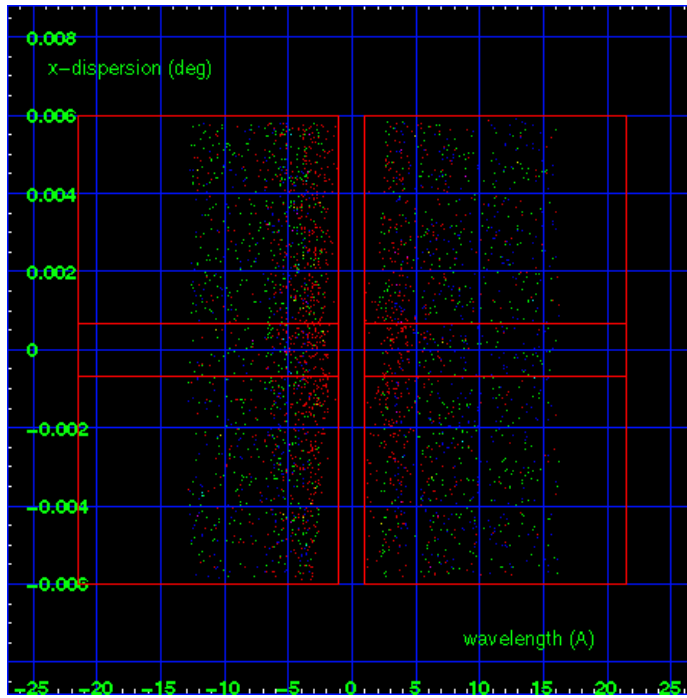
HEG Order Sort 123



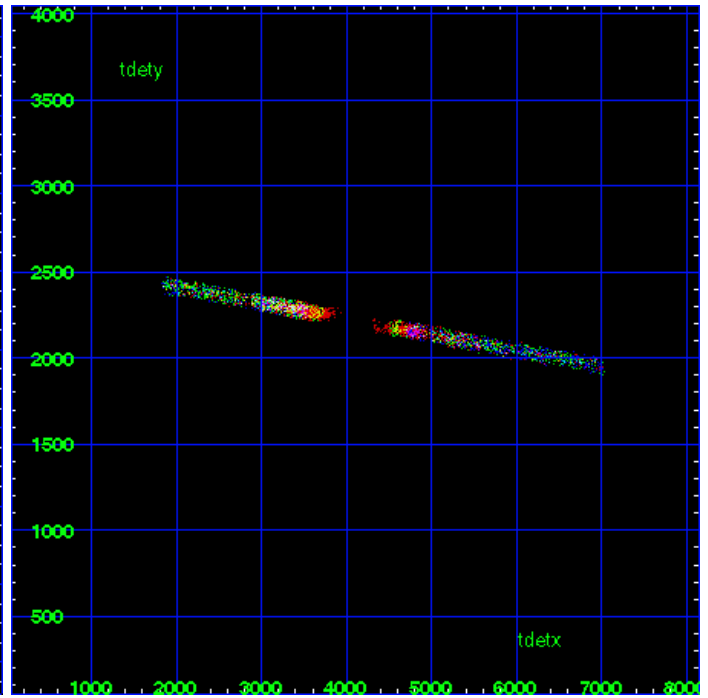
HEG Zero Order



HEG Order Sort ALL

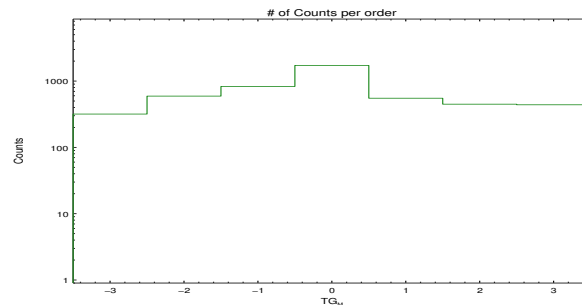


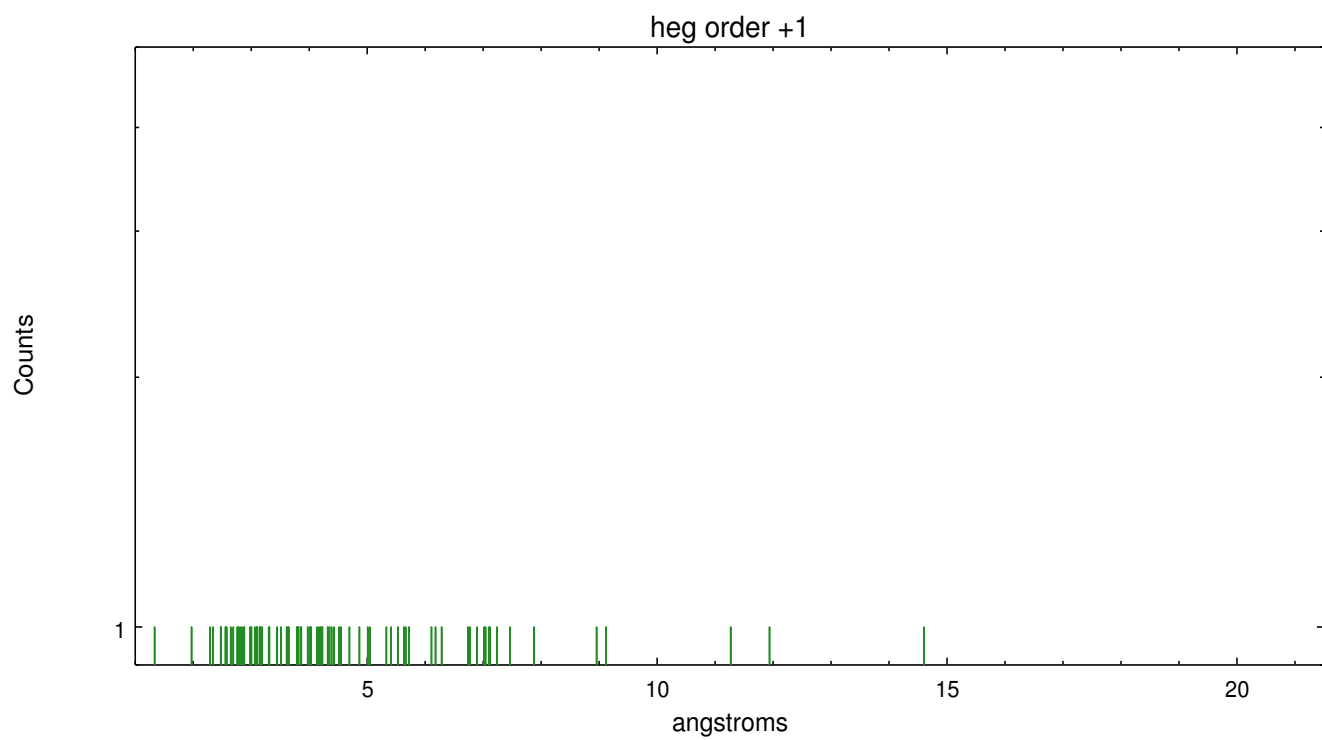
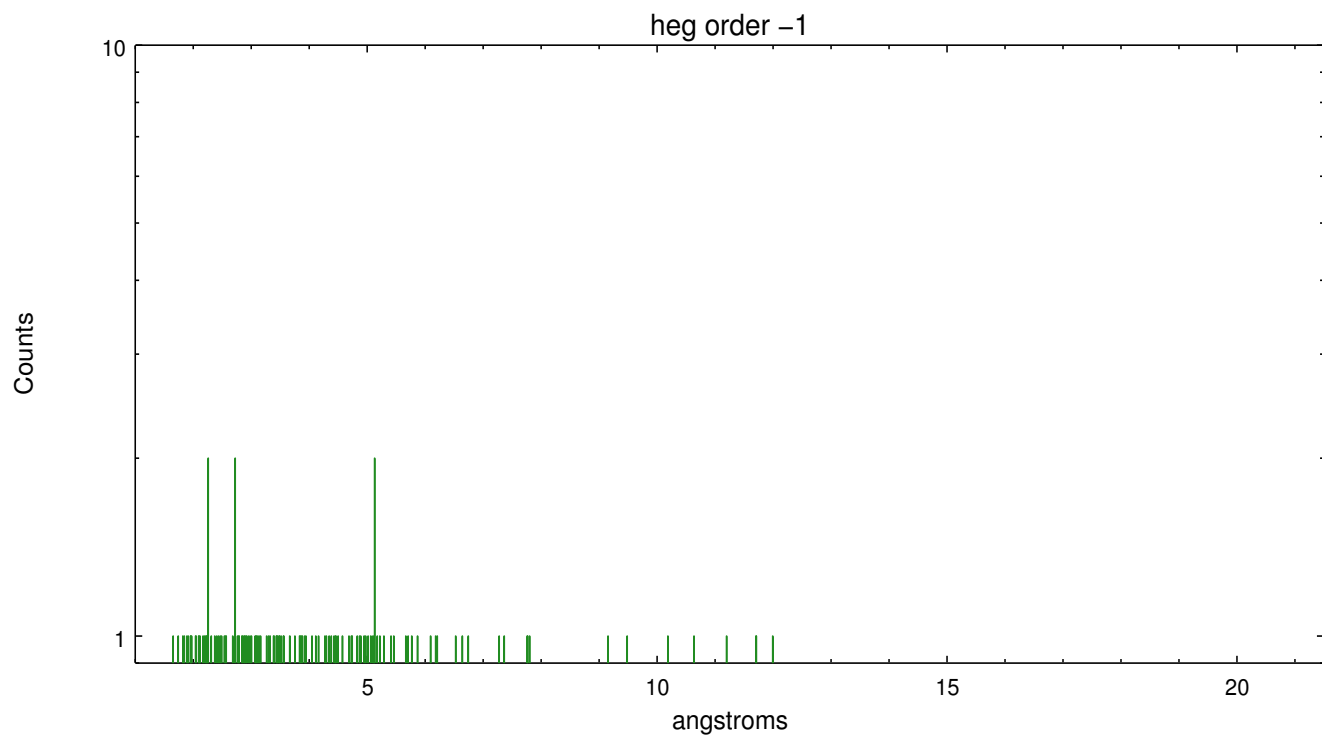
Spot Image HEG



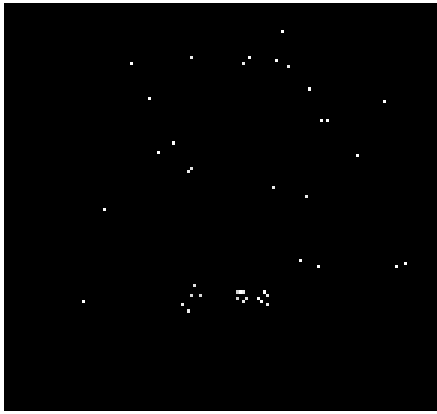
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	318	593	830	1723	551	448	439

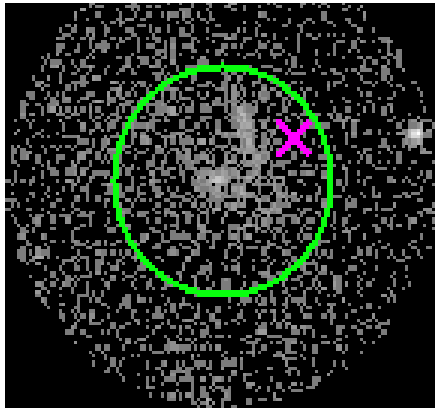




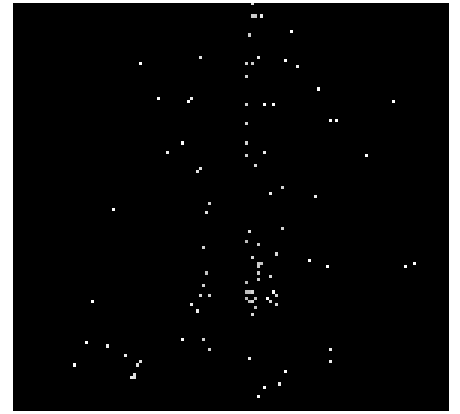
3.2 MEG Arm



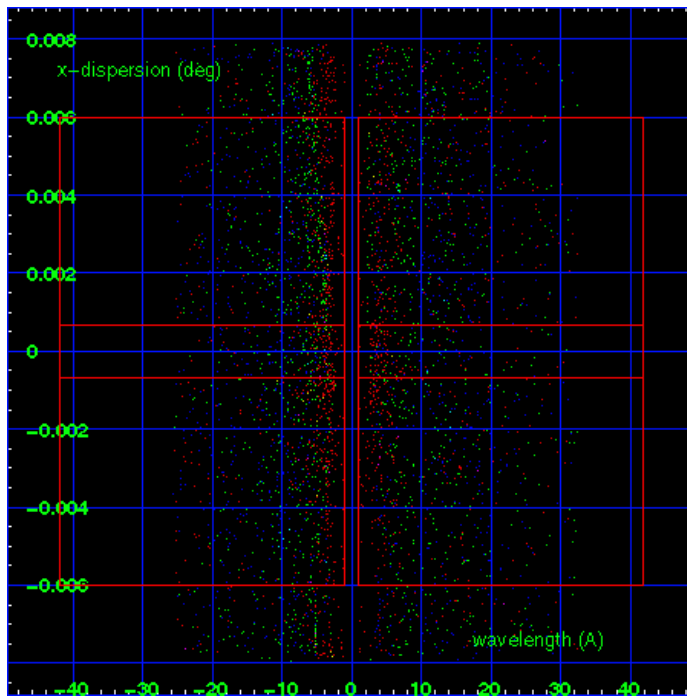
MEG Order Sort 123



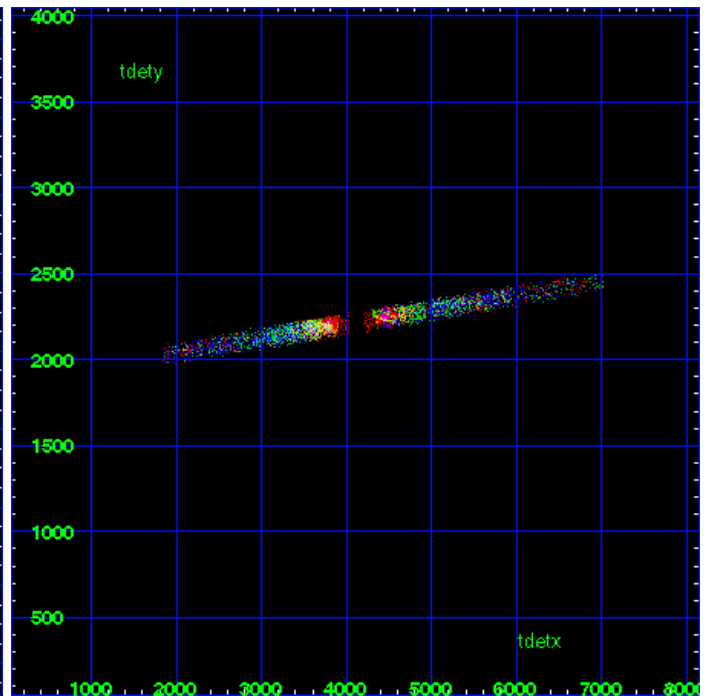
MEG Zero Order



MEG Order Sort ALL

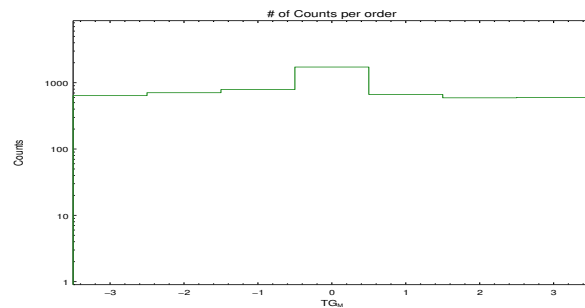


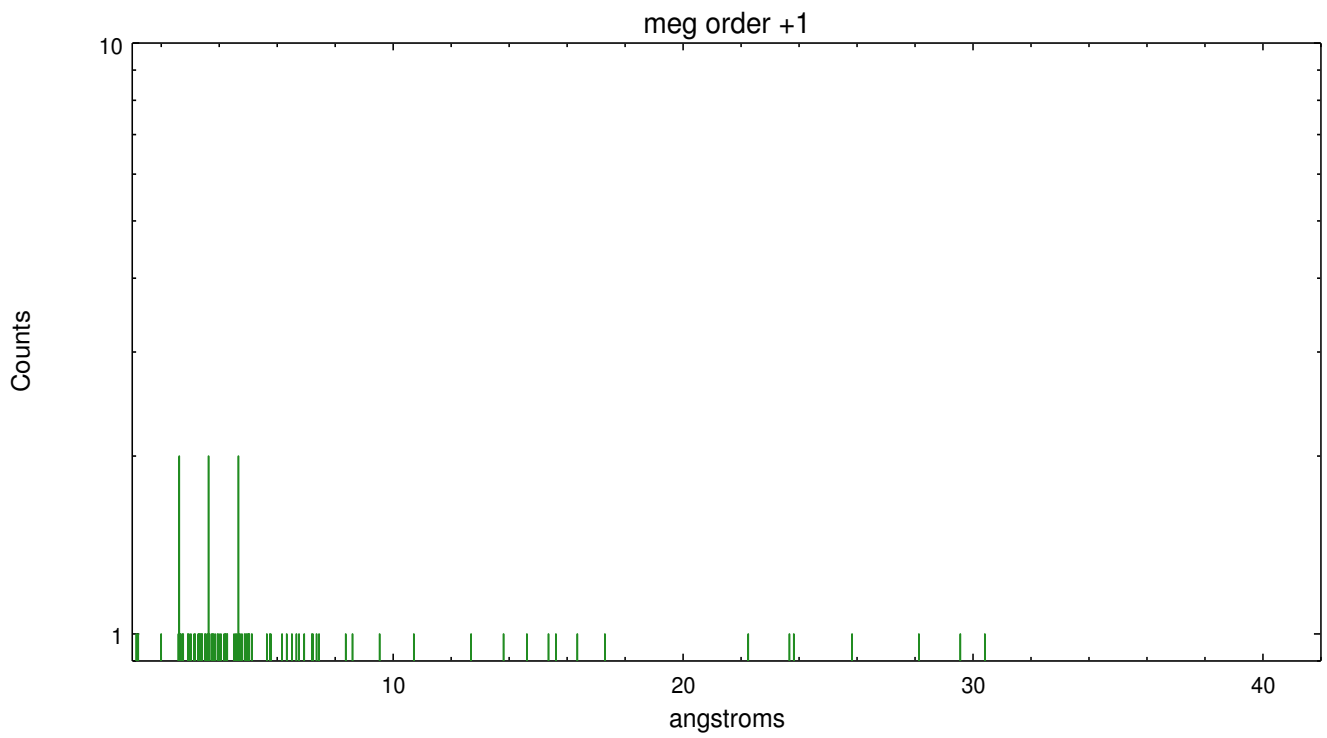
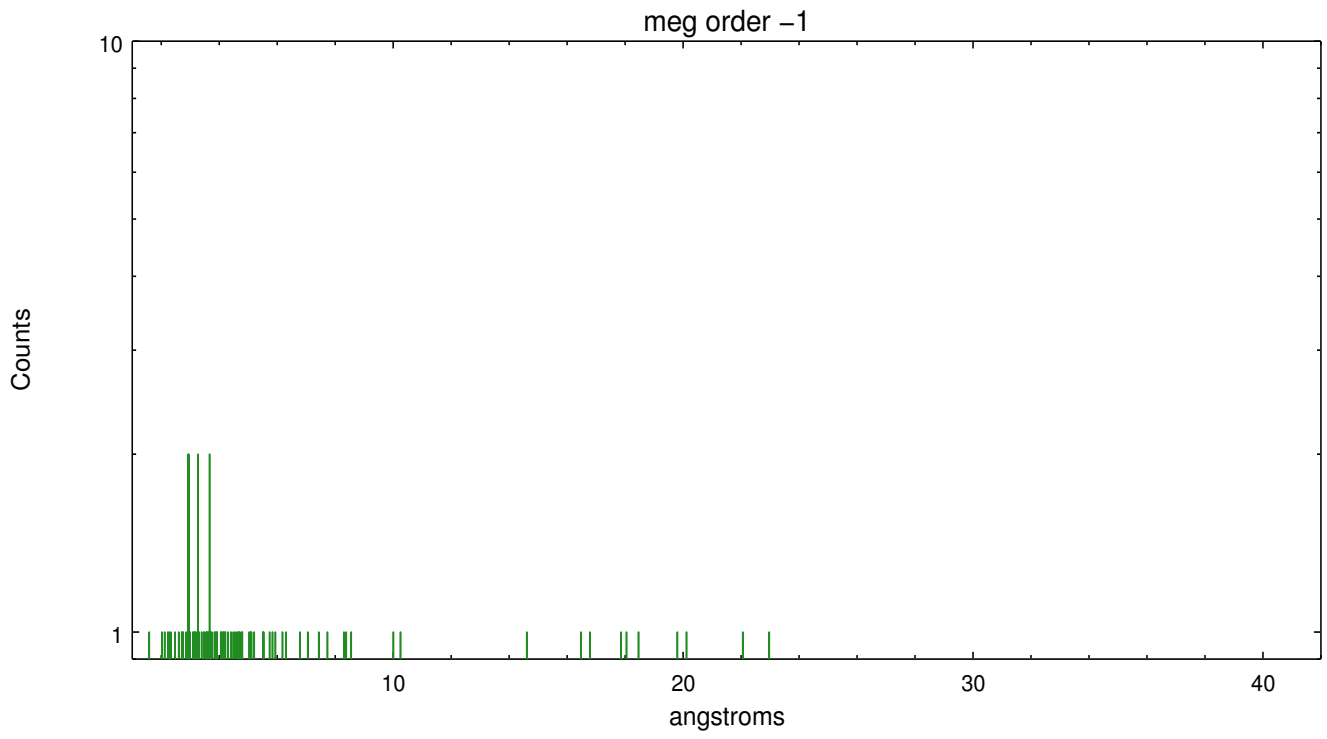
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	639	707	788	1723	665	592	599





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.02.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.544766594887

A.2 Comments

Note: geometrically complex region with multiple sources and diffuse emission.

Grating spectral extraction was centered on the as-proposed Sgr A* coordinate, (ra,dec) = (266.41667, -29.00780) [deg].