

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13856 - L2 Version 1
Chandra X-Ray Center

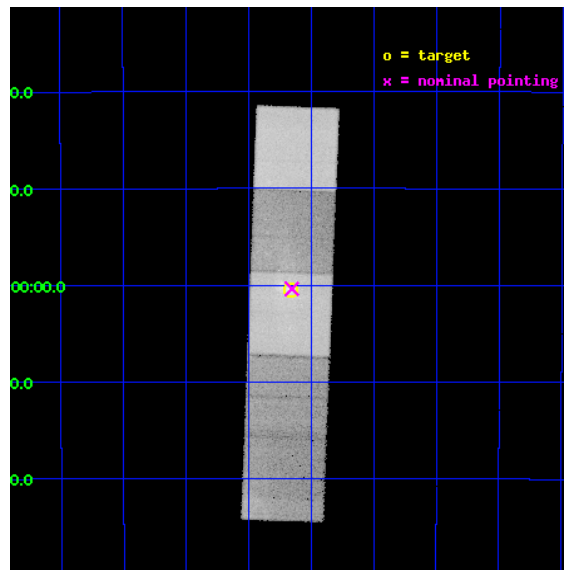
L2 Processing Date : Mar 16 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

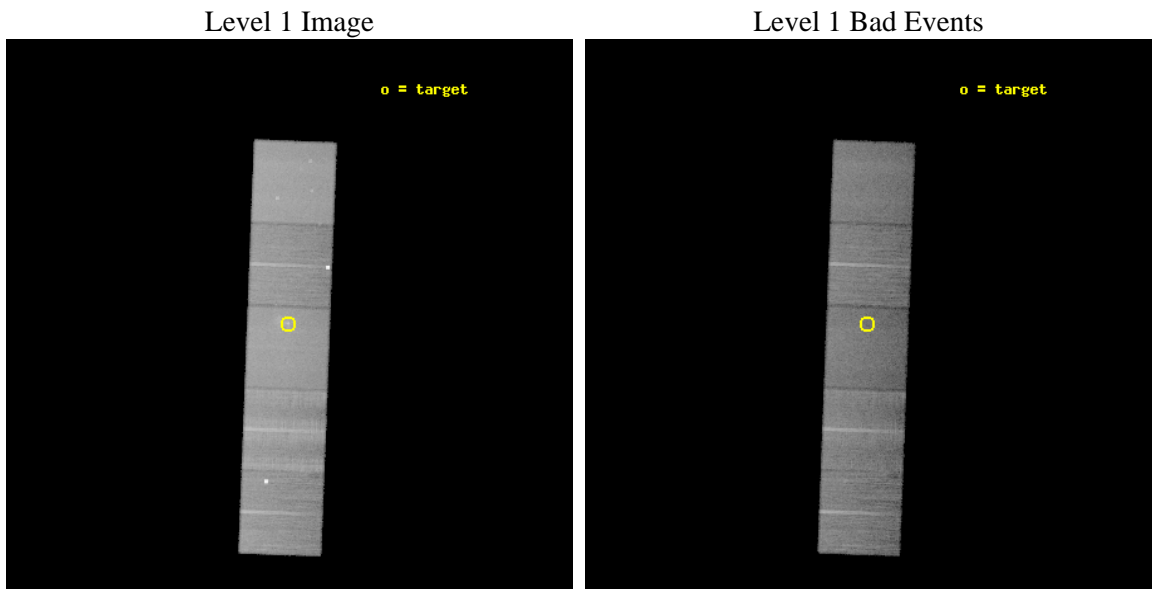
seq_num	601016	Sequence number
obs_id	13856	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41367690821	Nominal RA [deg]
dec_nom	-29.006295166096	Nominal Dec [deg]
roll_nom	92.155179495056	Nominal Roll [deg]
revision	1	Processing version of data
ontime	40061.300308108	Sum of GTIs [s]
livetime	39537.869926883	Livetime [s]
ontime5	40061.300308108	Sum of GTIs [s]
ontime6	40058.159317911	Sum of GTIs [s]
ontime7	40061.300308108	Sum of GTIs [s]
ontime8	40058.159337759	Sum of GTIs [s]
ontime9	40058.159307837	Sum of GTIs [s]
l2events	430938	Number of level 2 events



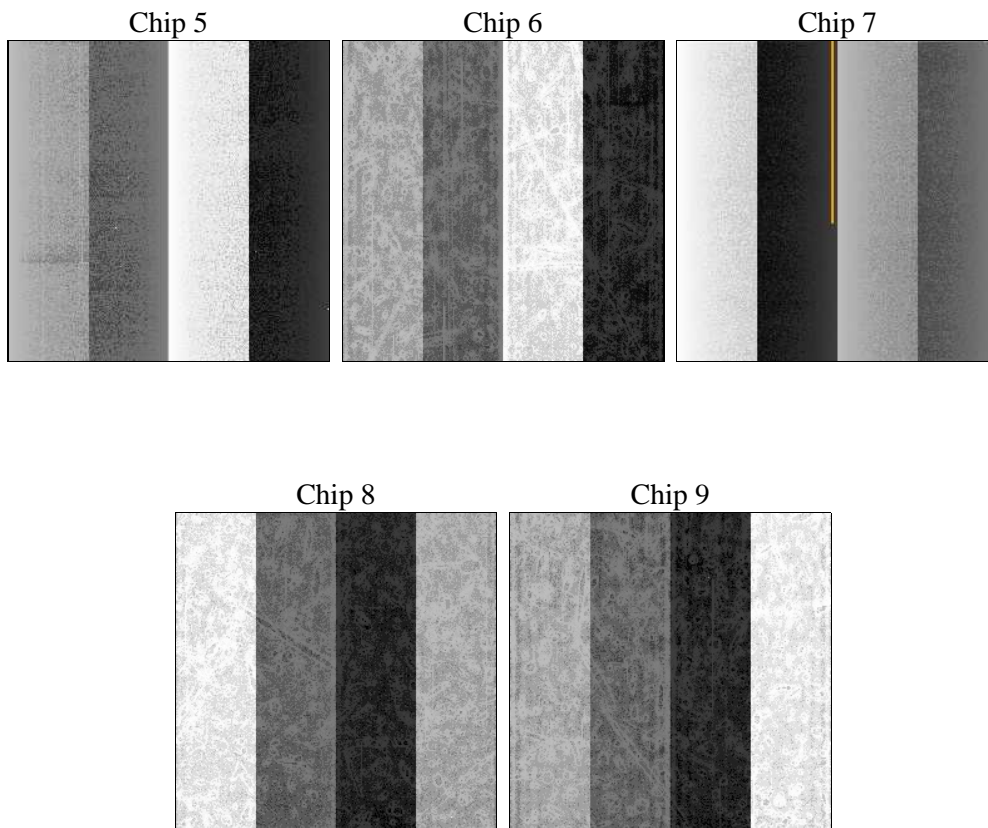
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	40061.300308108	Sum of GTIs [s]
caldbver	4.4.8	 	ontime5	40061.300308108	Sum of GTIs [s]
date	2012-03-16T07:44:38	Date and time of file creation	ontime6	40058.159317911	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	40061.300308108	Sum of GTIs [s]
			ontime8	40058.159337759	Sum of GTIs [s]
			ontime9	40058.159307837	Sum of GTIs [s]
			l1events	1421977	Number of level 1 events

2.1.4 Events

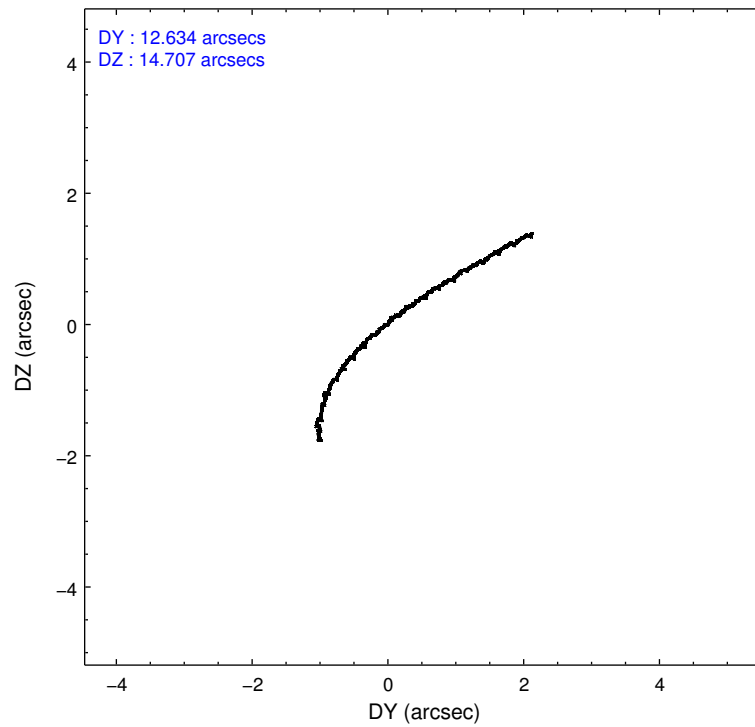
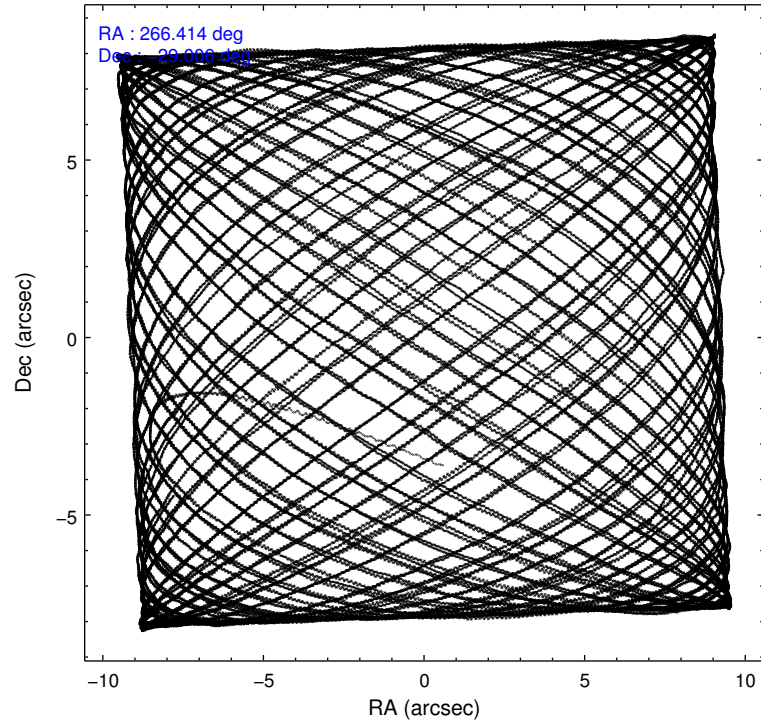
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	334961	245750	307061	301311	232894
rejected events	169171	185006	150204	199970	182828
rejected %	50%	75%	48%	66%	78%

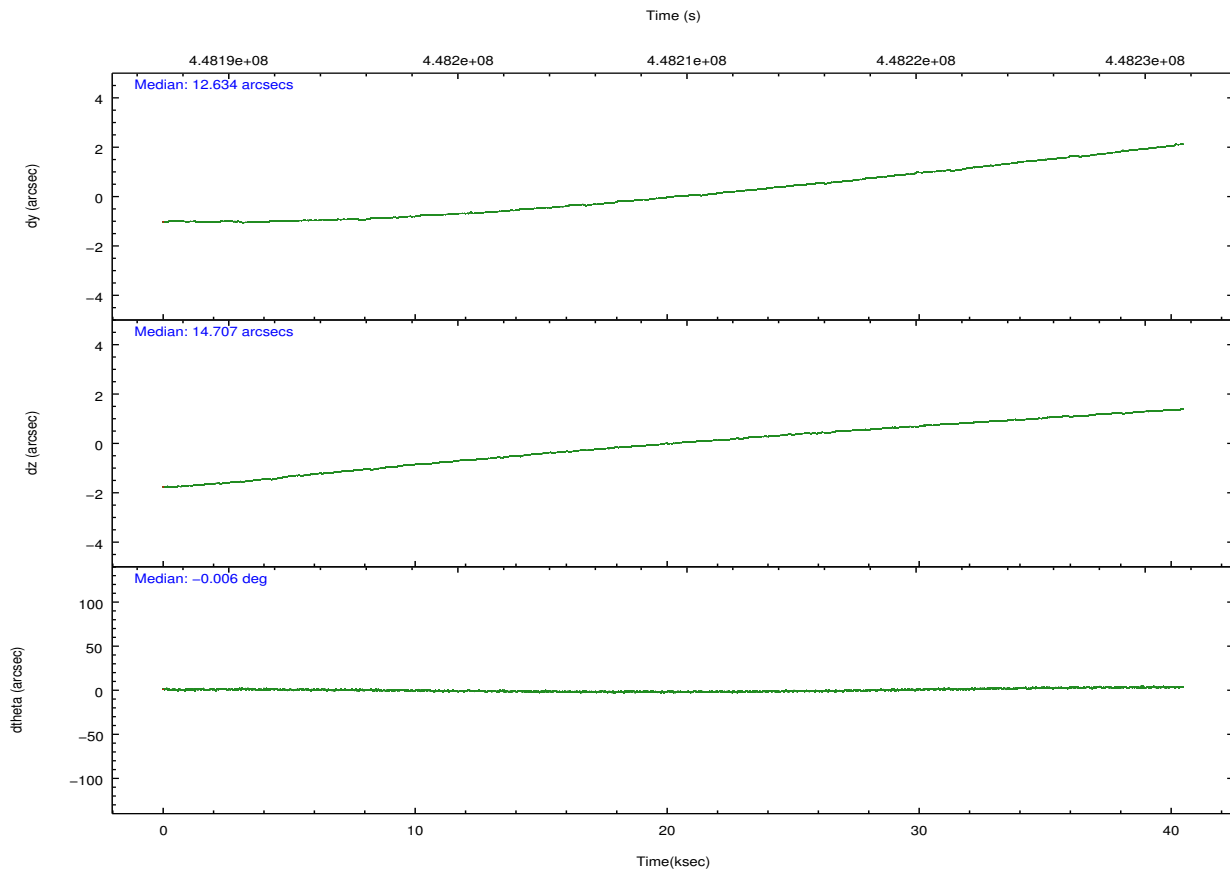
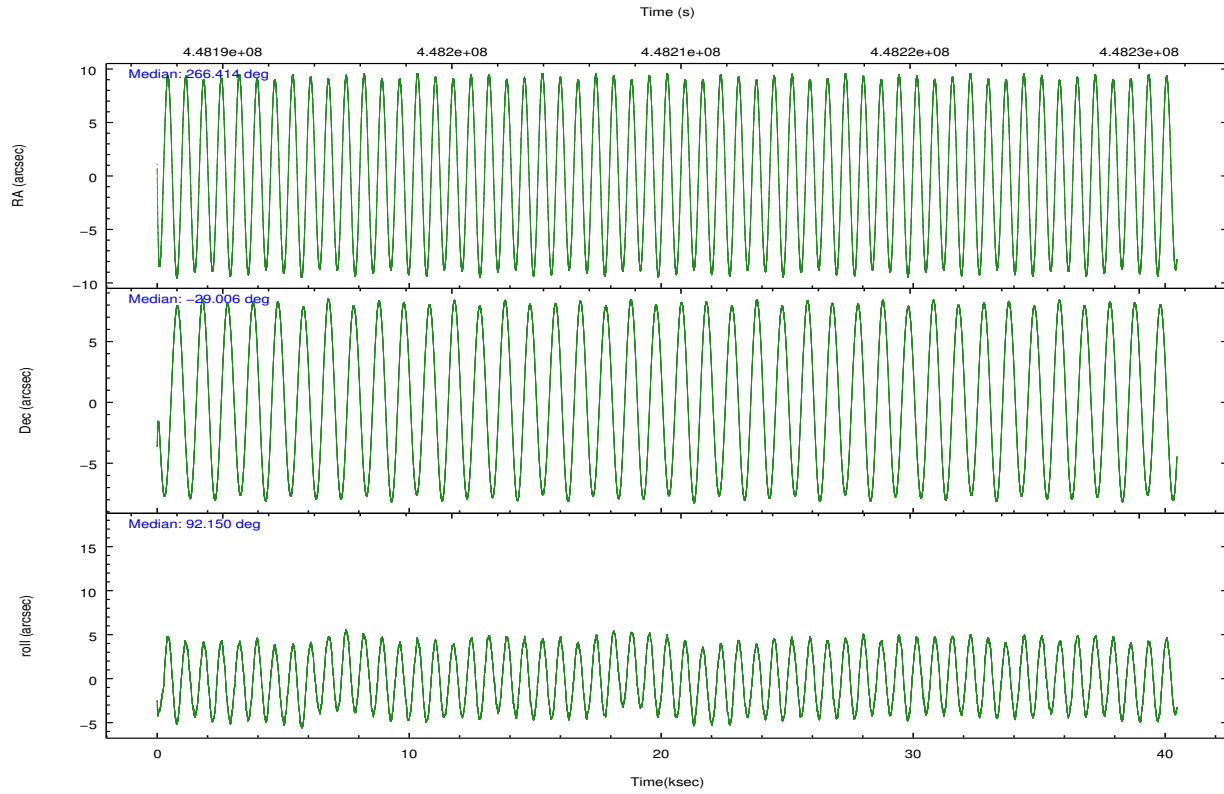
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	12718	23768	18168	35811	29939
	3%	9%	5%	11%	12%
grade 1 events	577	168	334	260	190
	0%	0%	0%	0%	0%
grade 2 events	51830	21713	33330	20346	7291
	15%	8%	10%	6%	3%
grade 3 events	6316	3638	14248	11339	3213
	1%	1%	4%	3%	1%
grade 4 events	6189	3667	14142	10653	3129
	1%	1%	4%	3%	1%
grade 5 events	24706	10451	27714	14986	11464
	7%	4%	9%	4%	4%
grade 6 events	88745	7967	76983	23196	6499
	26%	3%	25%	7%	2%
grade 7 events	143880	174378	122142	184720	171169
	42%	70%	39%	61%	73%

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	266.4136769082093	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.029222	-29.00629516609604	Alternating exposures requested	N	N
[deg] Pointing Roll	92.006803	92.15517949505616	[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	-190.145094680475			
[mm] SIM translation stage offset	0	0.01257209746719923			
[s] Observation start time (MET)	448189620.184000	448188388.02333			
Observation start date	2012-03-15T09:05:54	2012-03-15T08:46:28			
[s] Observation end time (MET)	448229620.184000	448230404.31305			
Observation end date	2012-03-15T20:12:34	2012-03-15T20:26:44			
Read mode	TIMED	TIMED			

2.3 Aspect



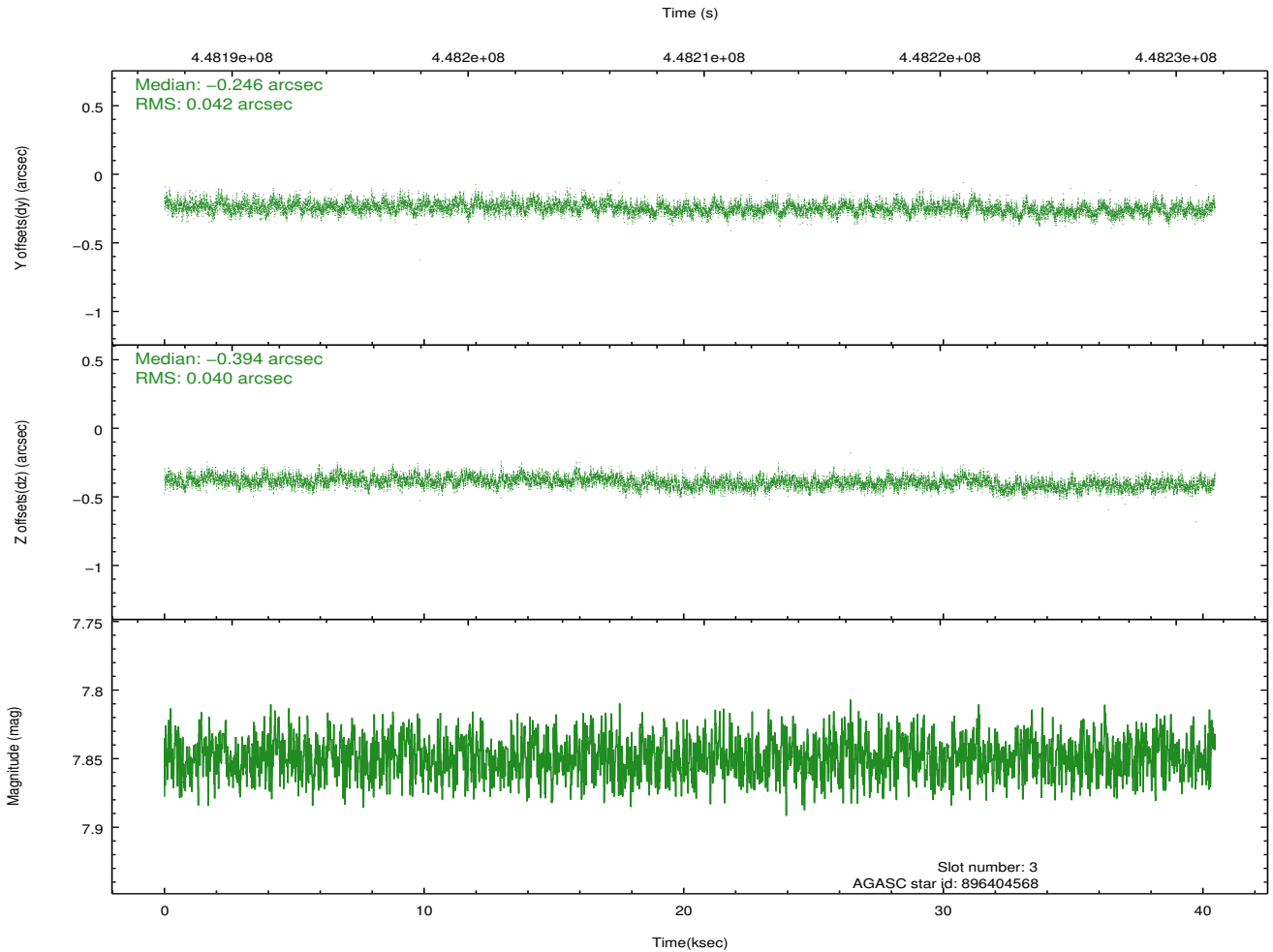
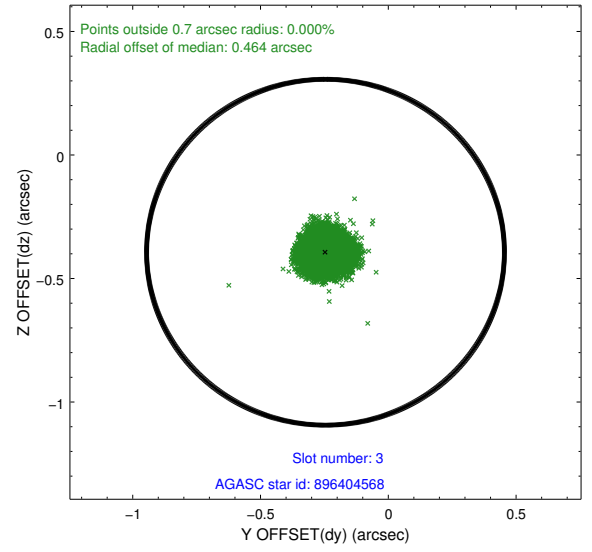
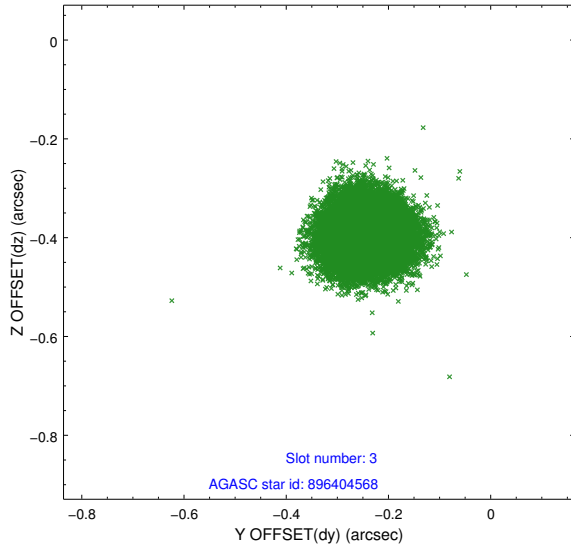


Slot Statistics

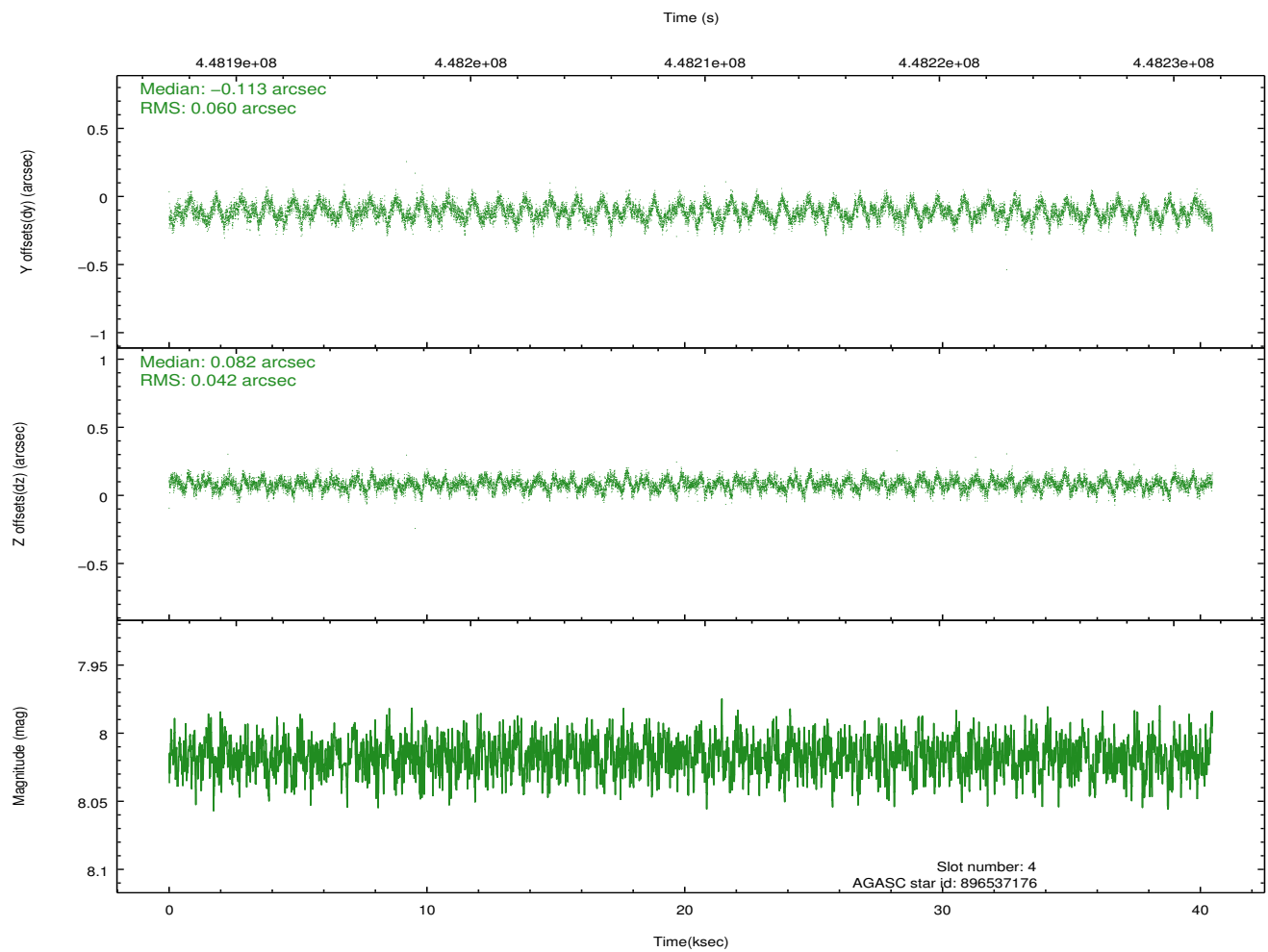
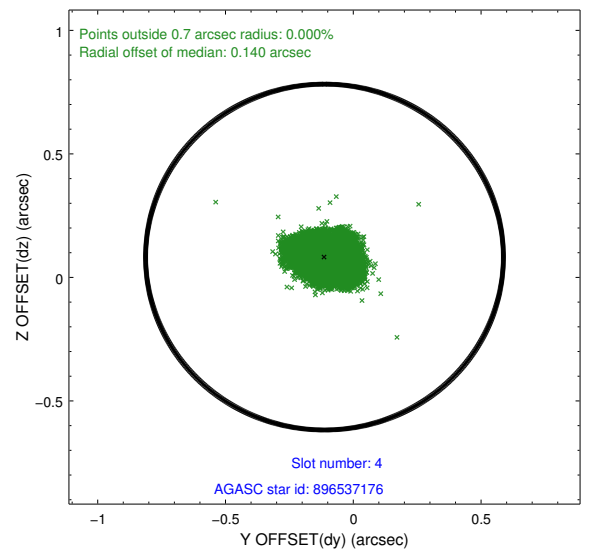
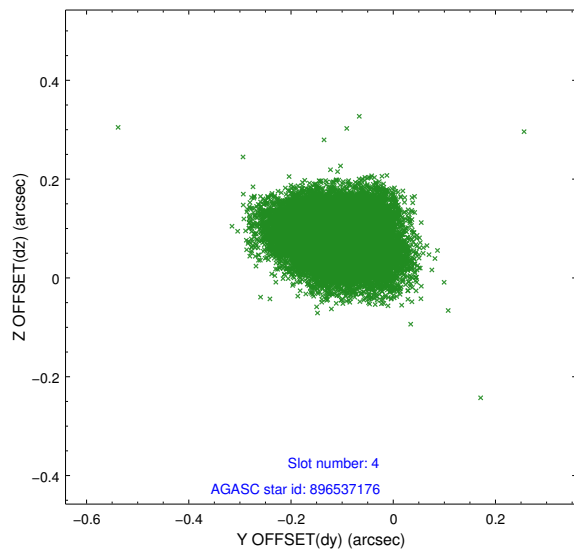
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.05	9871	-0.015	-0.020	0.034	0.070	0.000000	0.000000	930.32	-1731.55
1	FID	ACIS-S-4	7.05	9870	0.089	-0.011	0.019	0.039	0.000000	0.000000	2147.83	172.63
2	FID	ACIS-S-6	7.18	9870	-0.096	0.043	0.020	0.033	0.000000	0.000000	396.19	810.04
3	GUIDE	896404568	7.85	19736	-0.246	-0.394	0.062	0.099	265.687293	-28.431080	2226.88	2276.83
4	GUIDE	896537176	8.02	19732	-0.113	0.082	0.078	0.127	266.498272	-28.678259	1255.35	-257.20
5	GUIDE	896540808	7.52	19737	0.059	-0.315	0.046	0.075	265.985401	-29.308604	-958.69	1431.97
6	GUIDE	896537776	7.52	19741	0.375	0.218	0.052	0.084	266.655684	-29.665673	-2314.59	-623.00
7	GUIDE	896538208	7.95	19736	-0.079	0.408	0.062	0.100	267.176969	-28.671626	1196.83	-2400.05

2.4 Star Slots

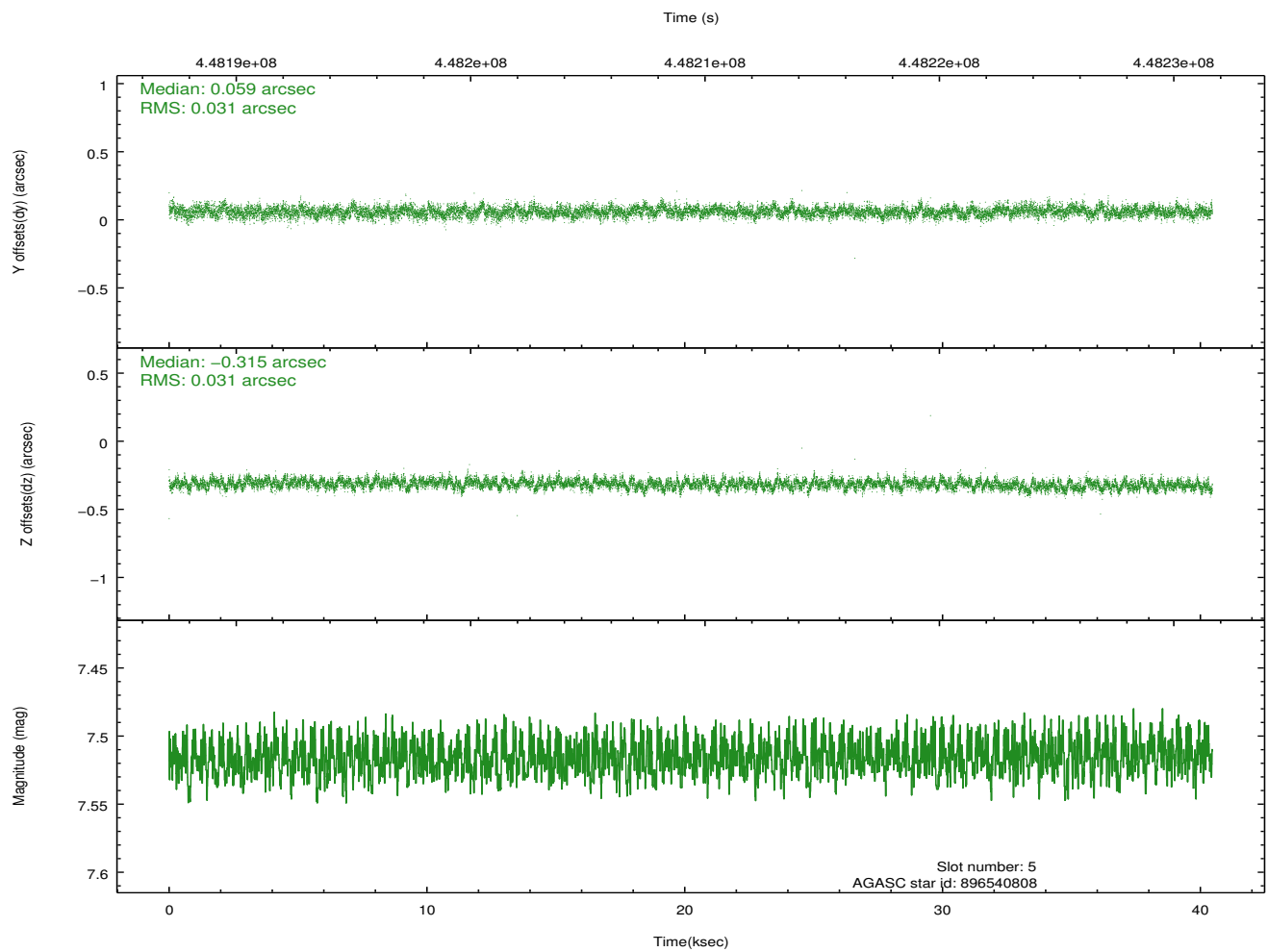
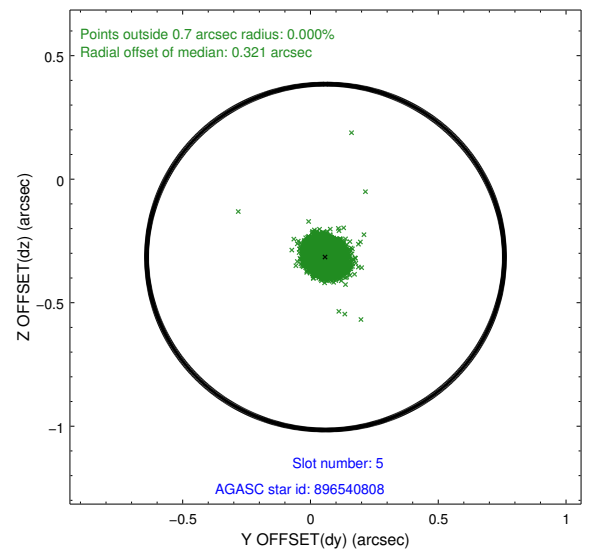
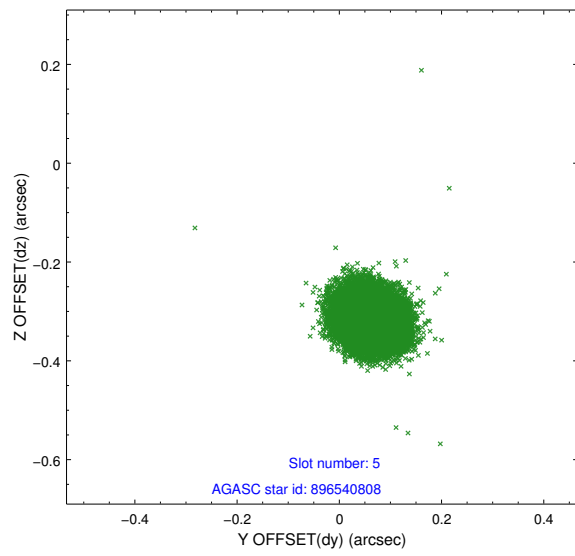
2.4.1 Slot 3



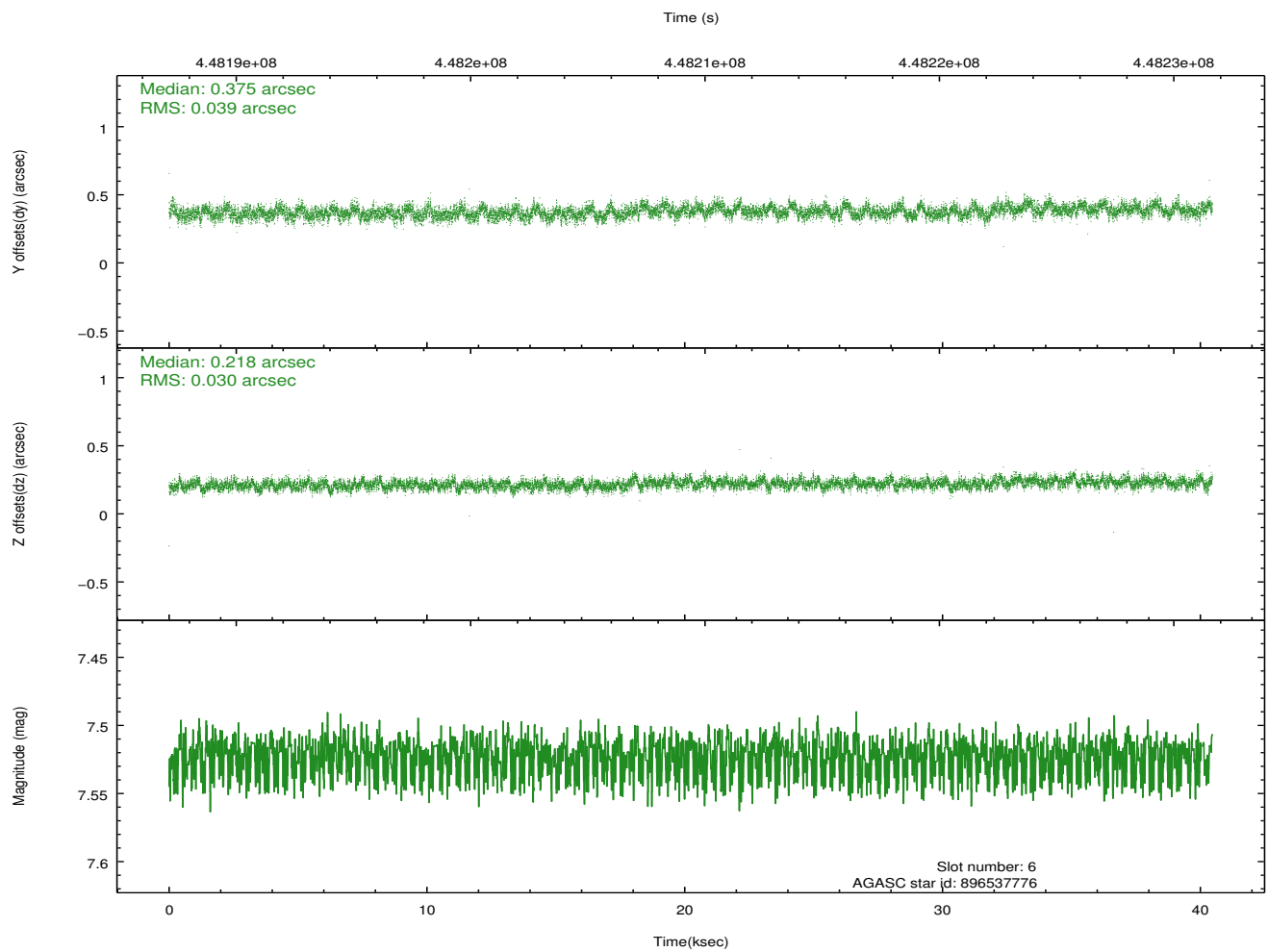
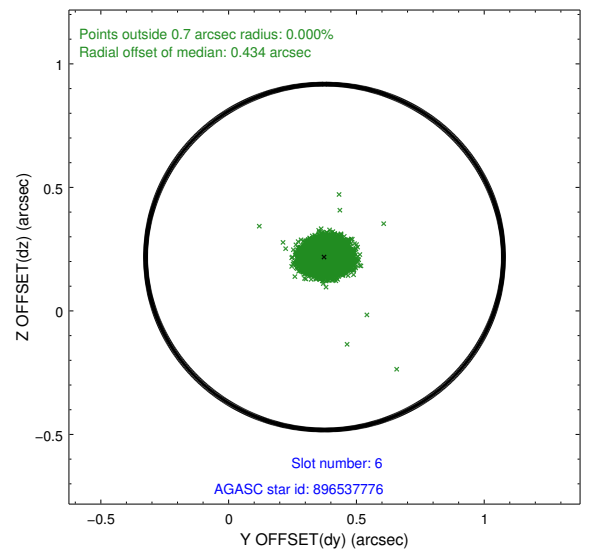
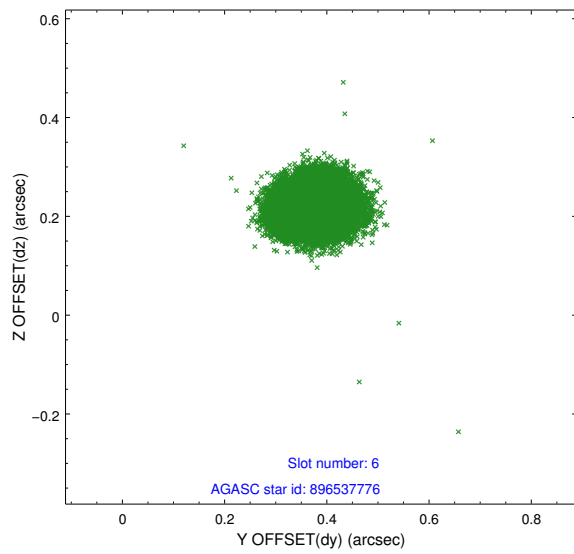
2.4.2 Slot 4



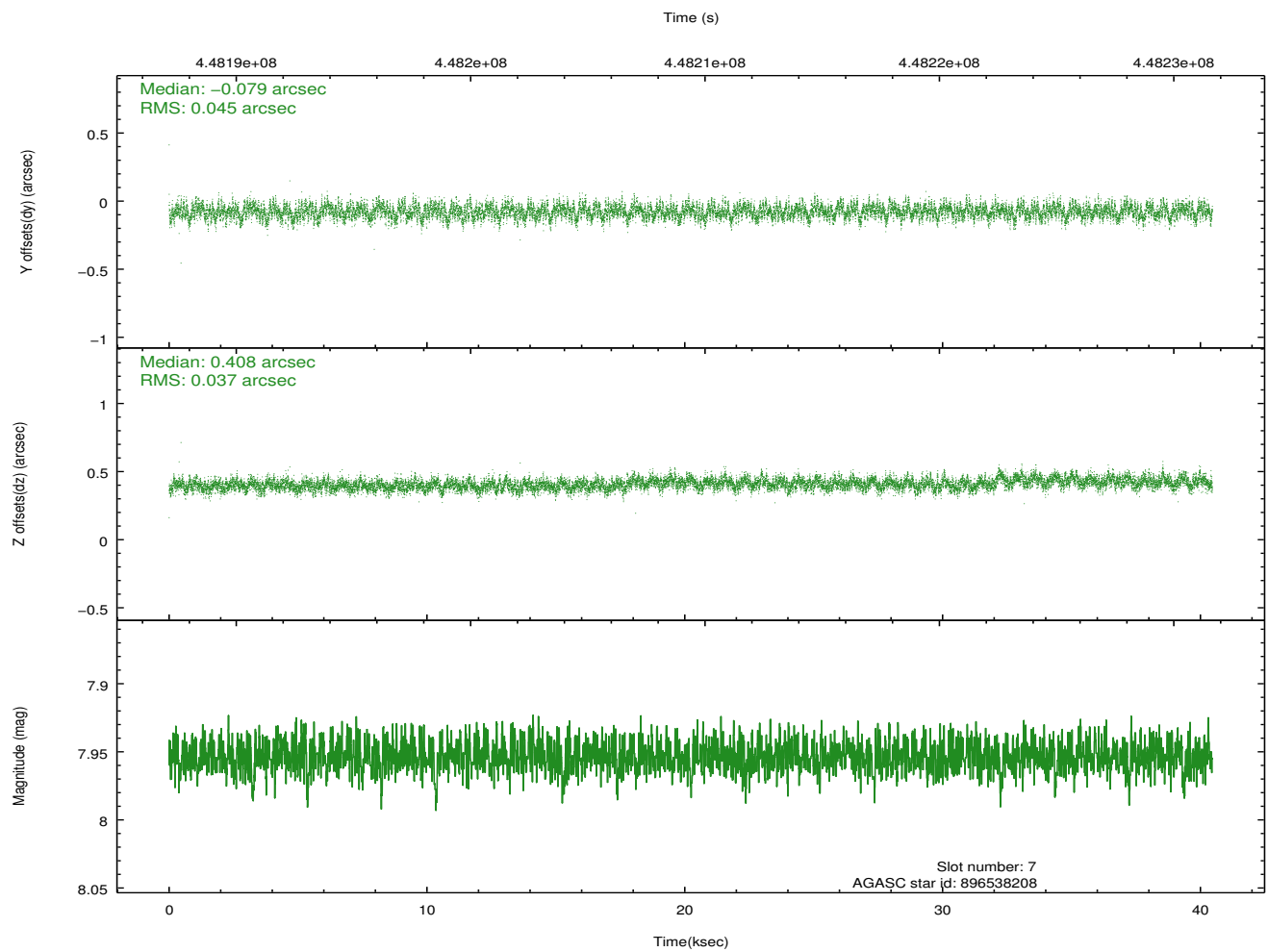
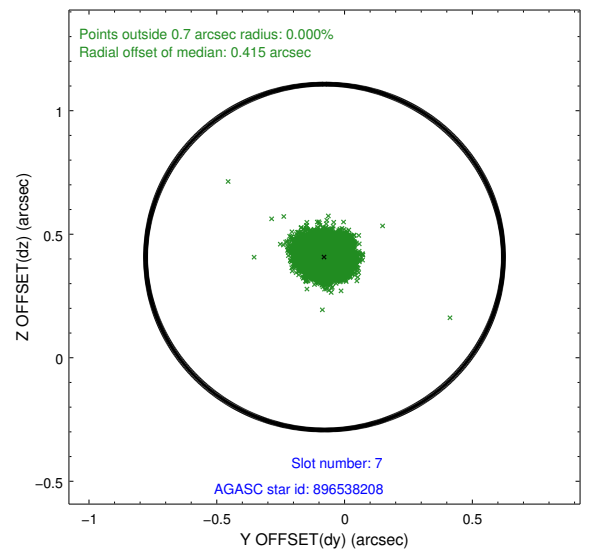
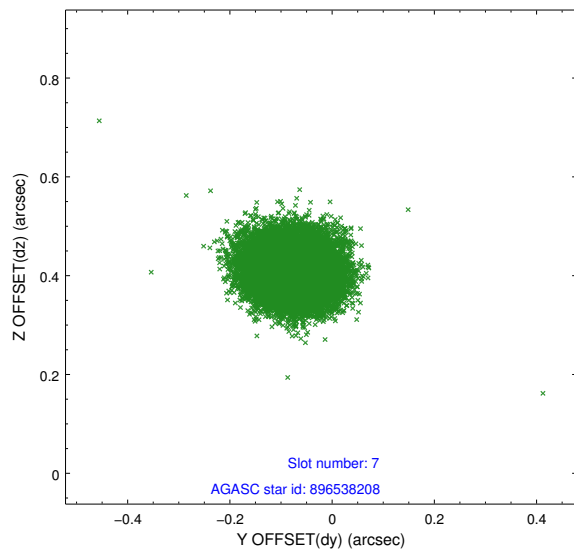
2.4.3 Slot 5



2.4.4 Slot 6

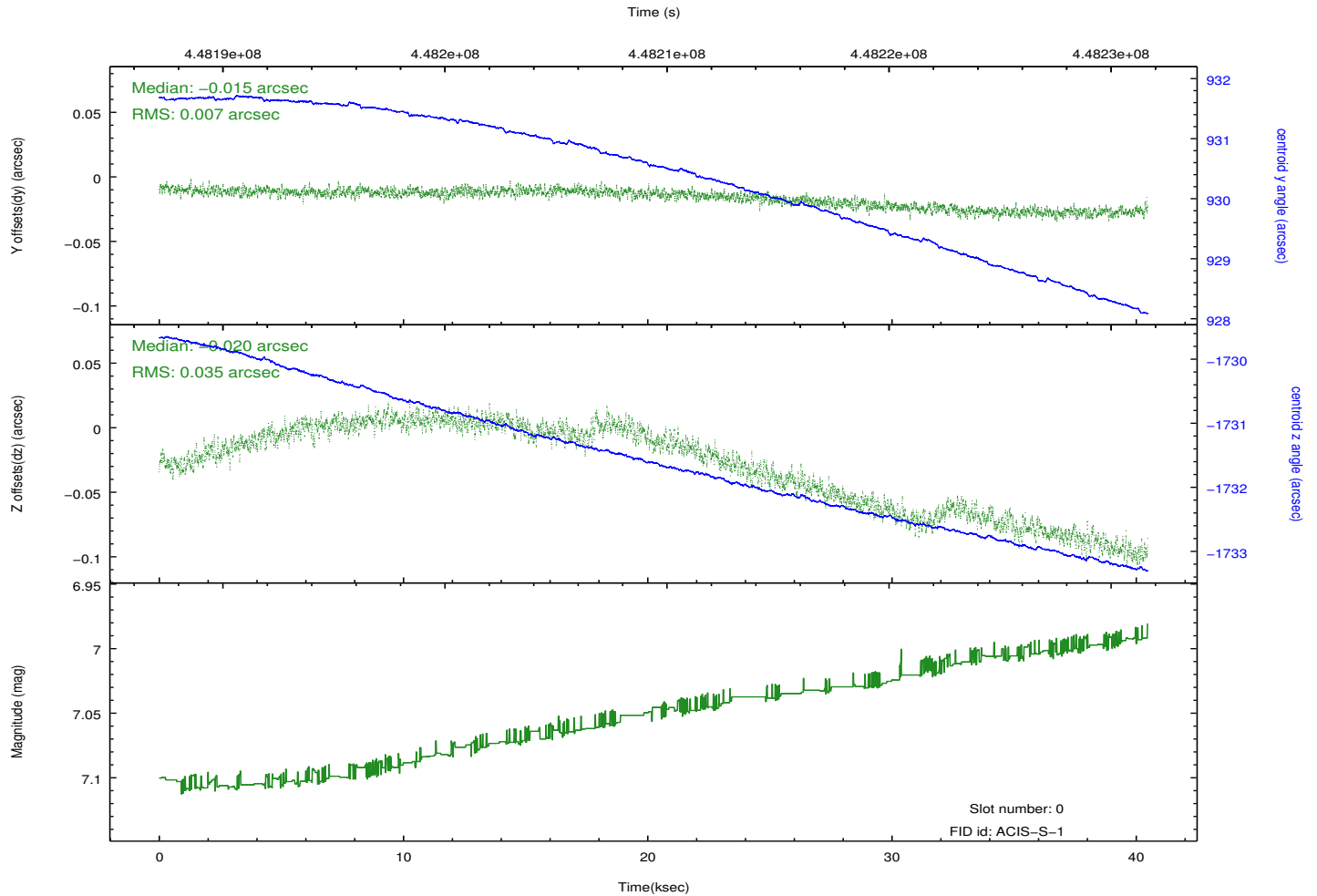
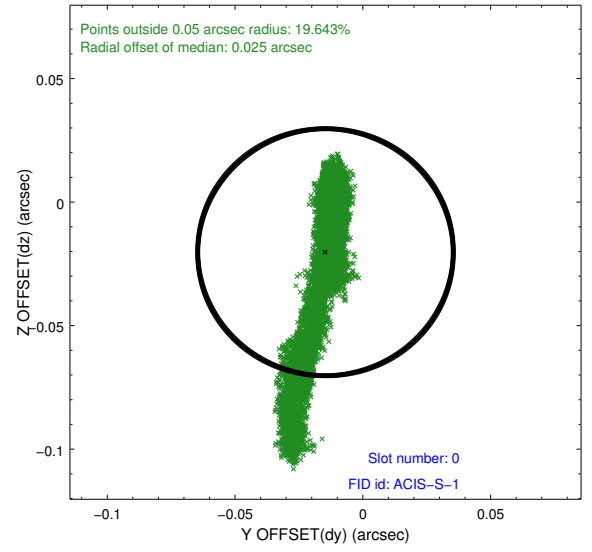
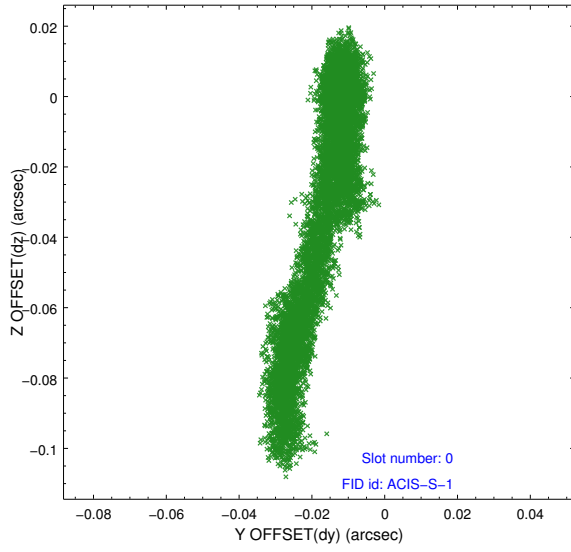


2.4.5 Slot 7

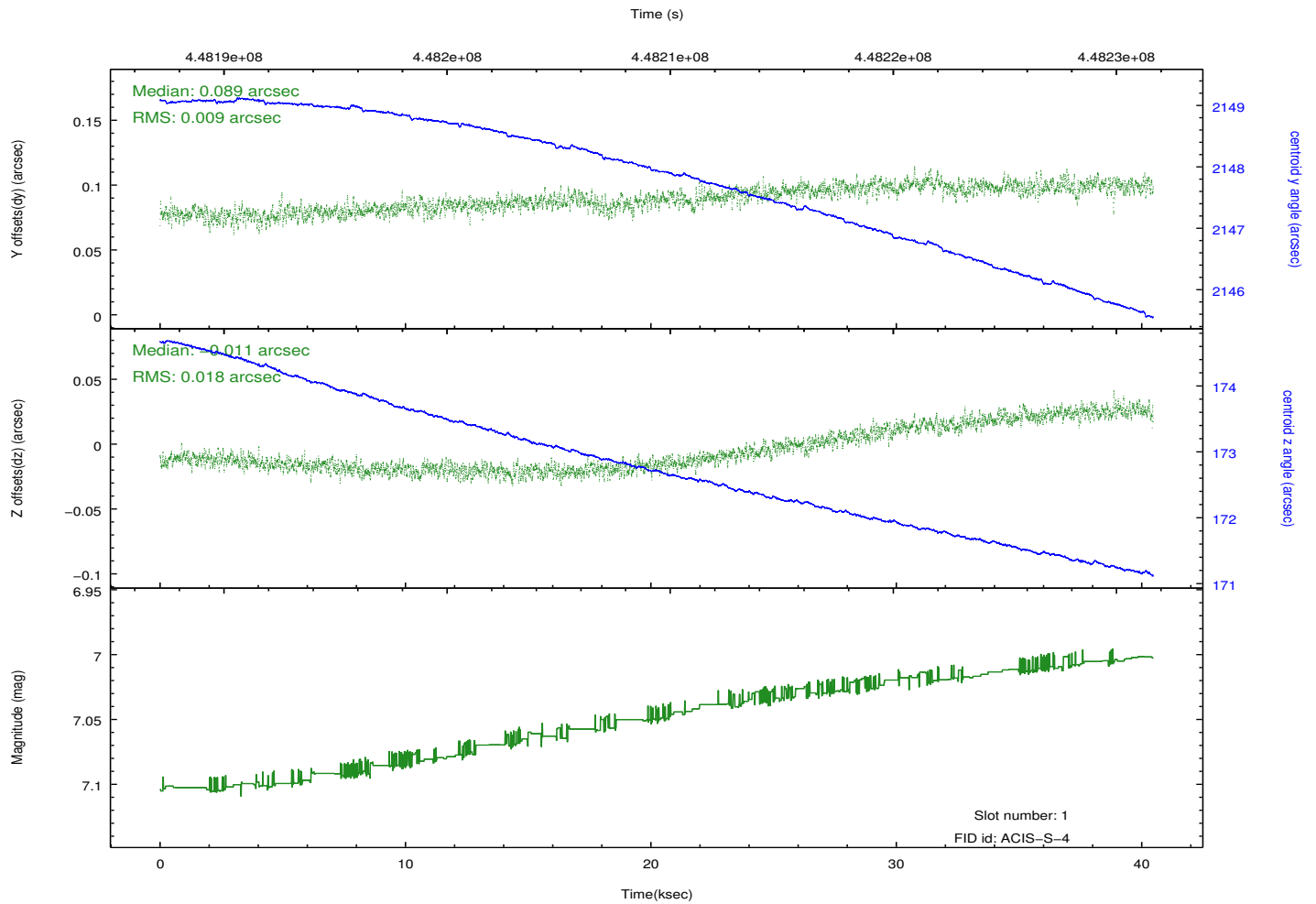
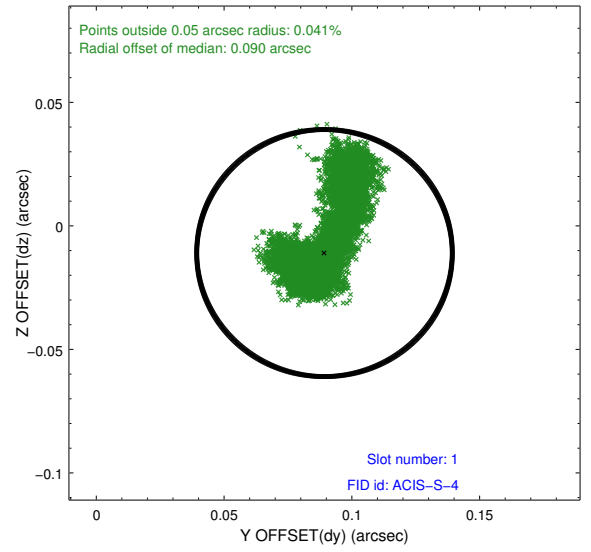
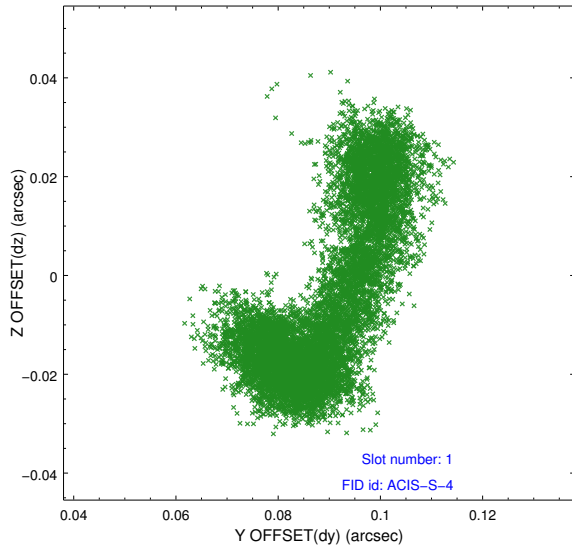


2.5 FID Slots

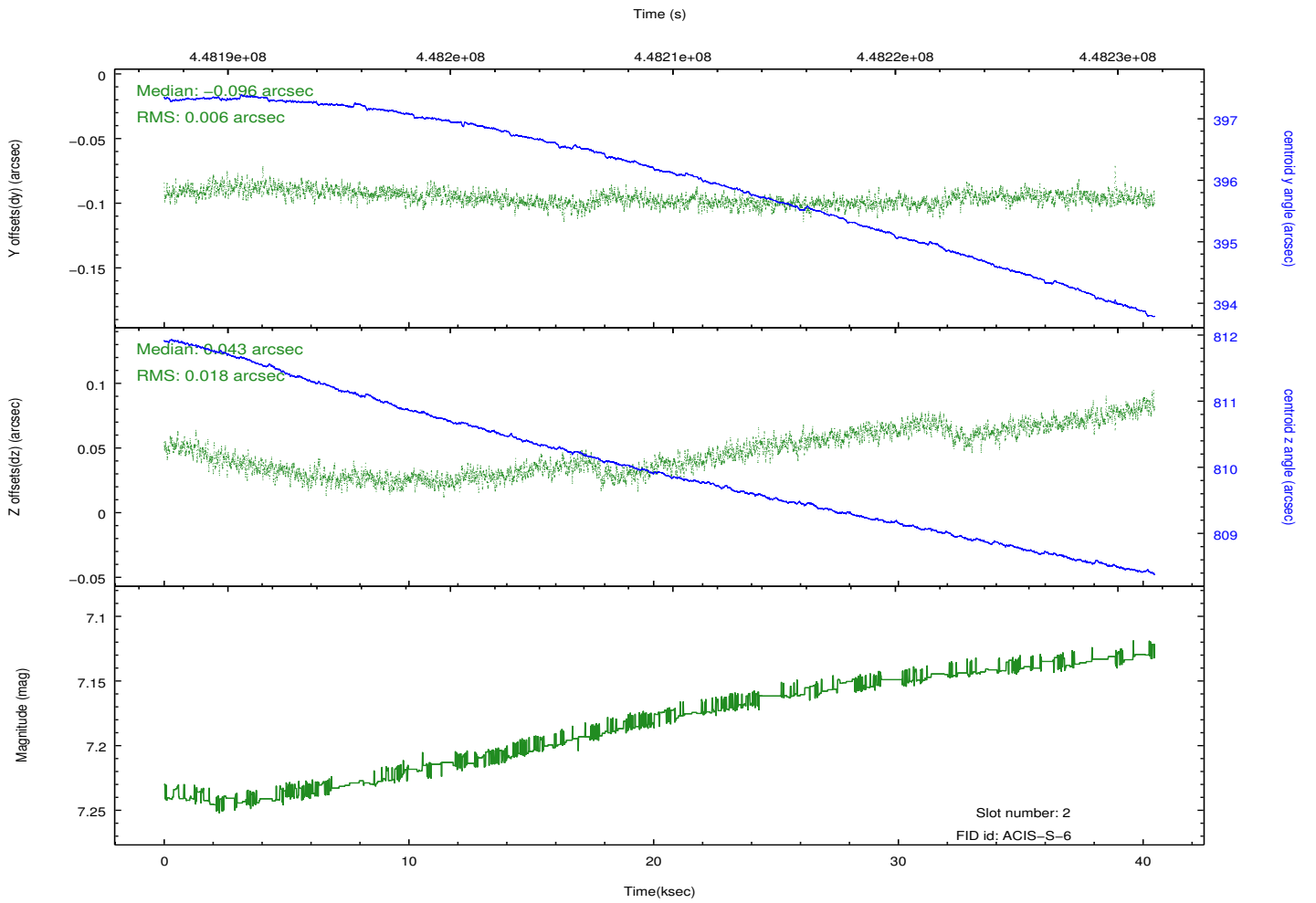
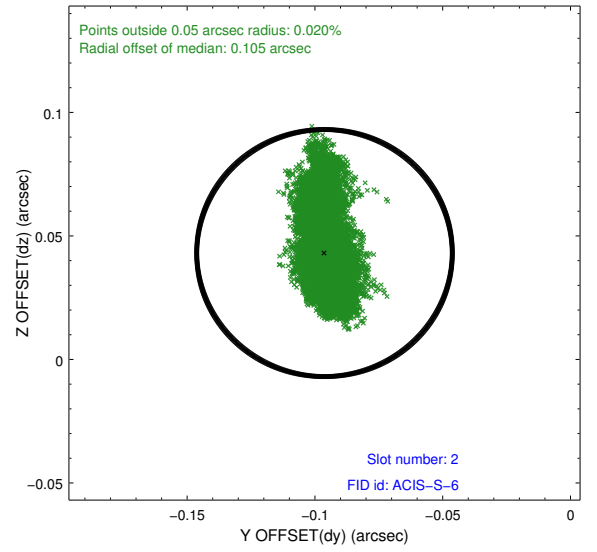
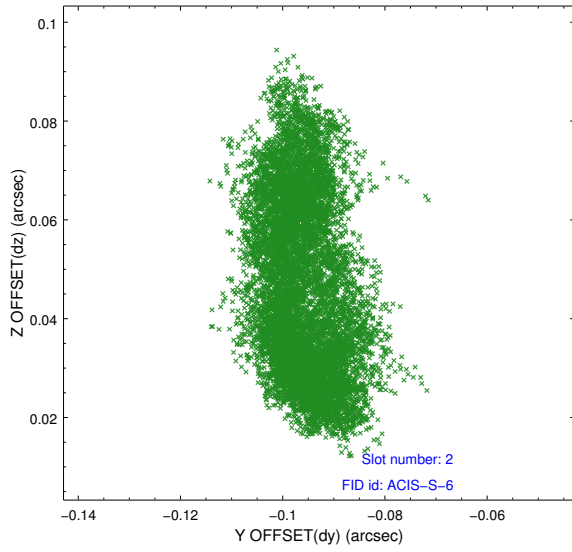
2.5.1 Slot 0



2.5.2 Slot 1

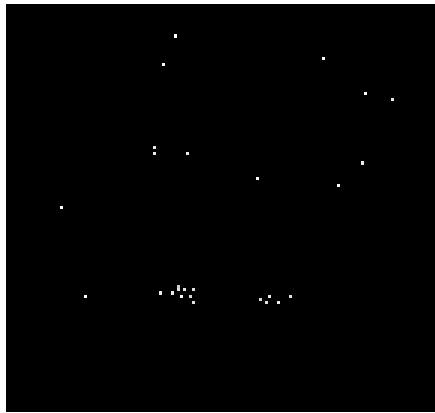


2.5.3 Slot 2

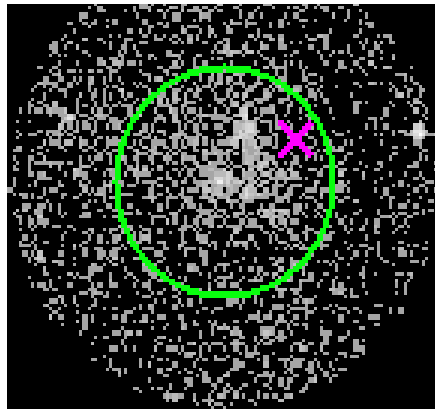


3 Gratings

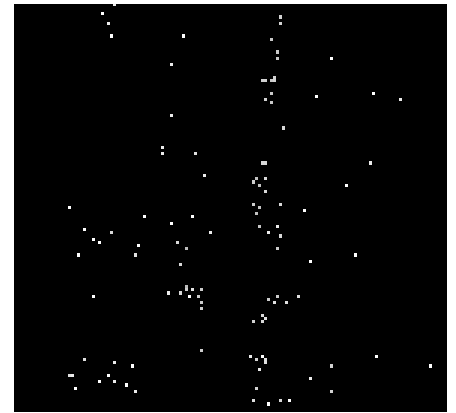
3.1 HEG Arm



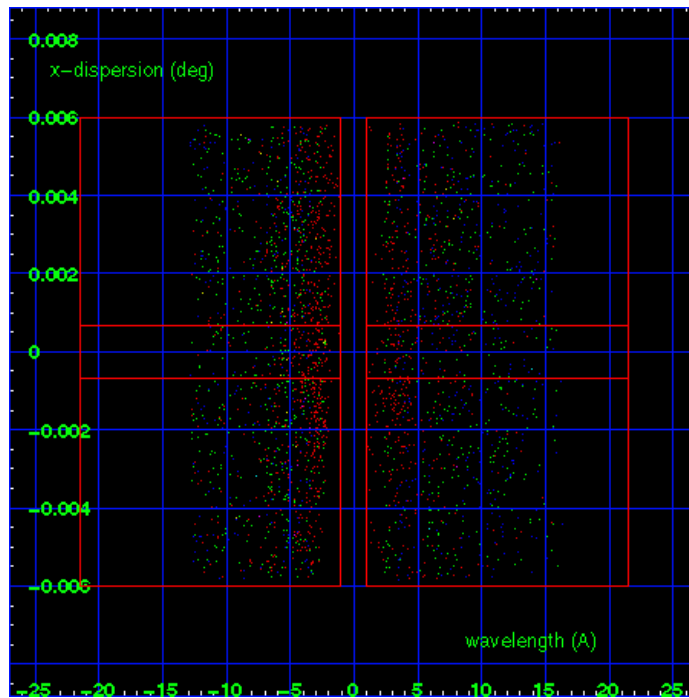
HEG Order Sort 123



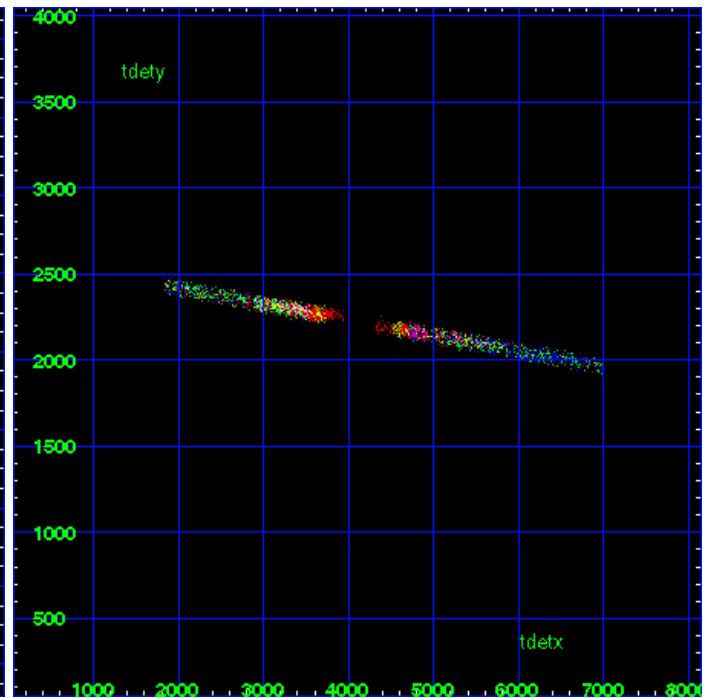
HEG Zero Order



HEG Order Sort ALL

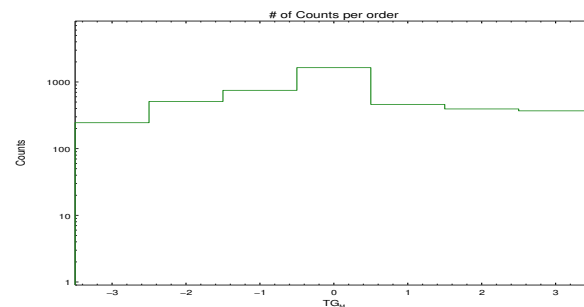


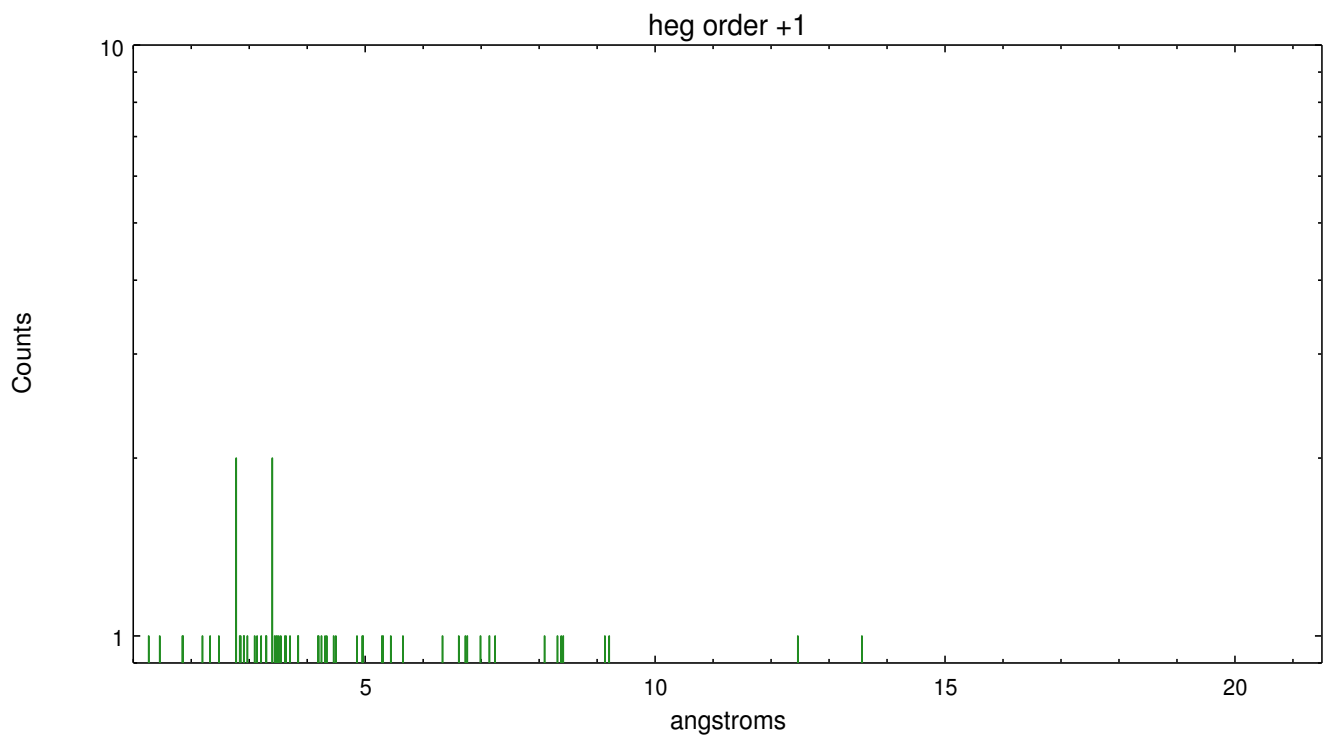
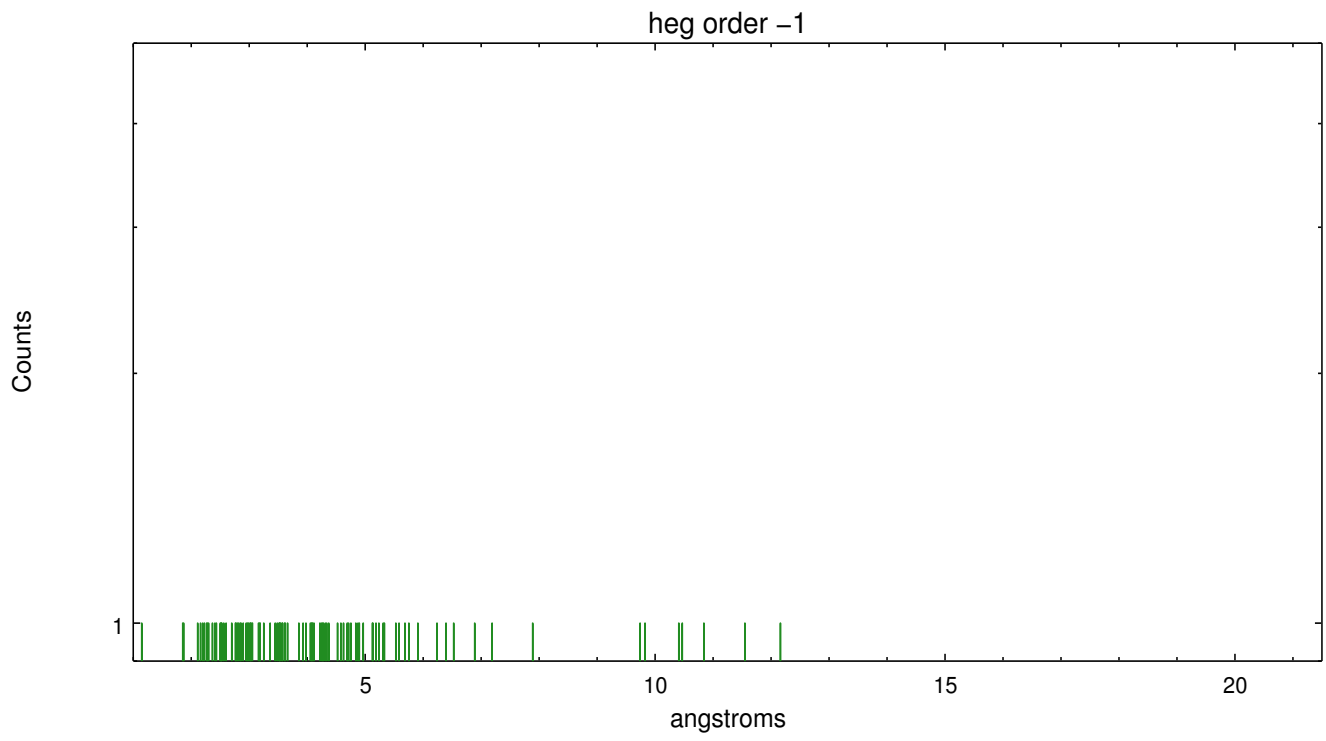
Spot Image HEG



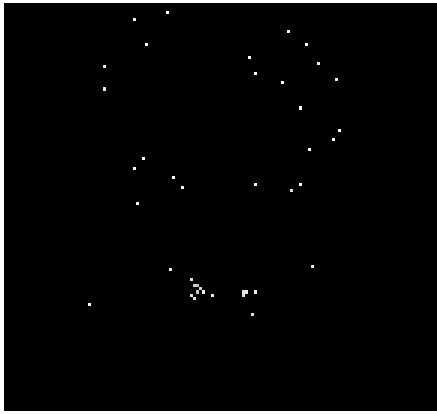
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	245	510	749	1640	461	394	369

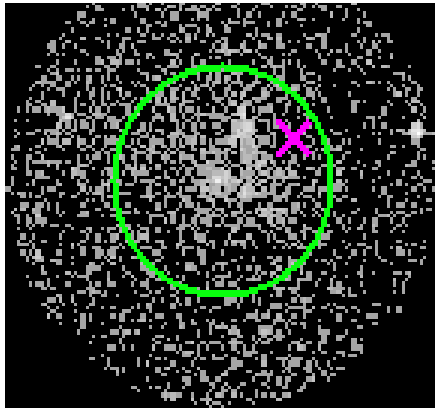




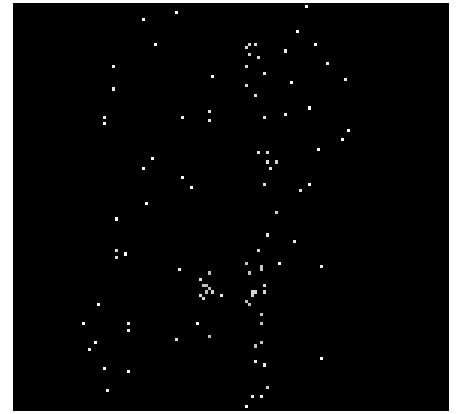
3.2 MEG Arm



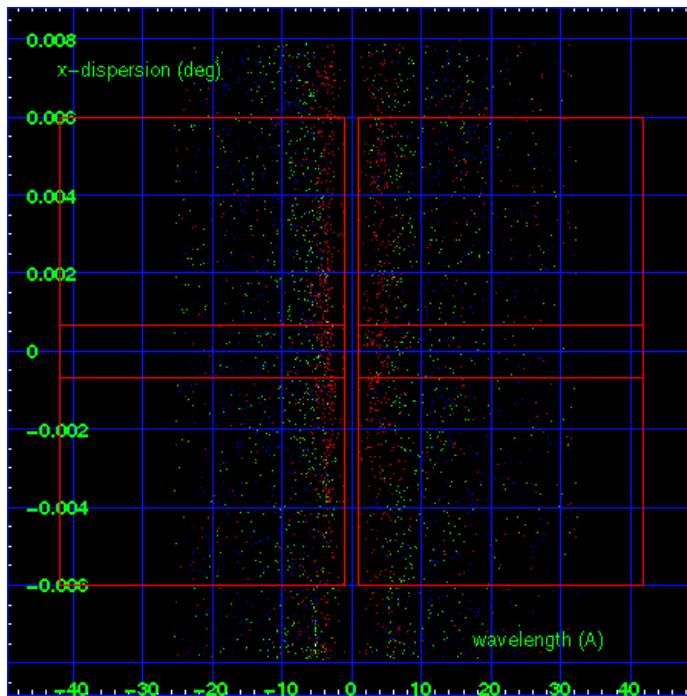
MEG Order Sort 123



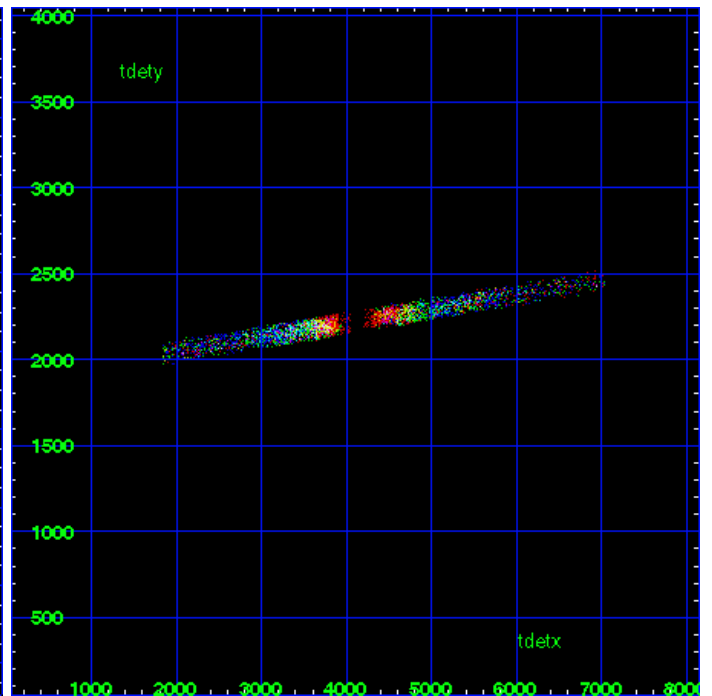
MEG Zero Order



MEG Order Sort ALL

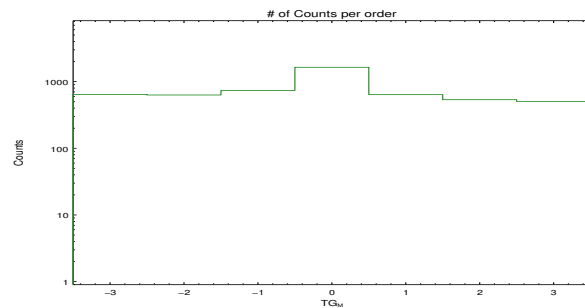


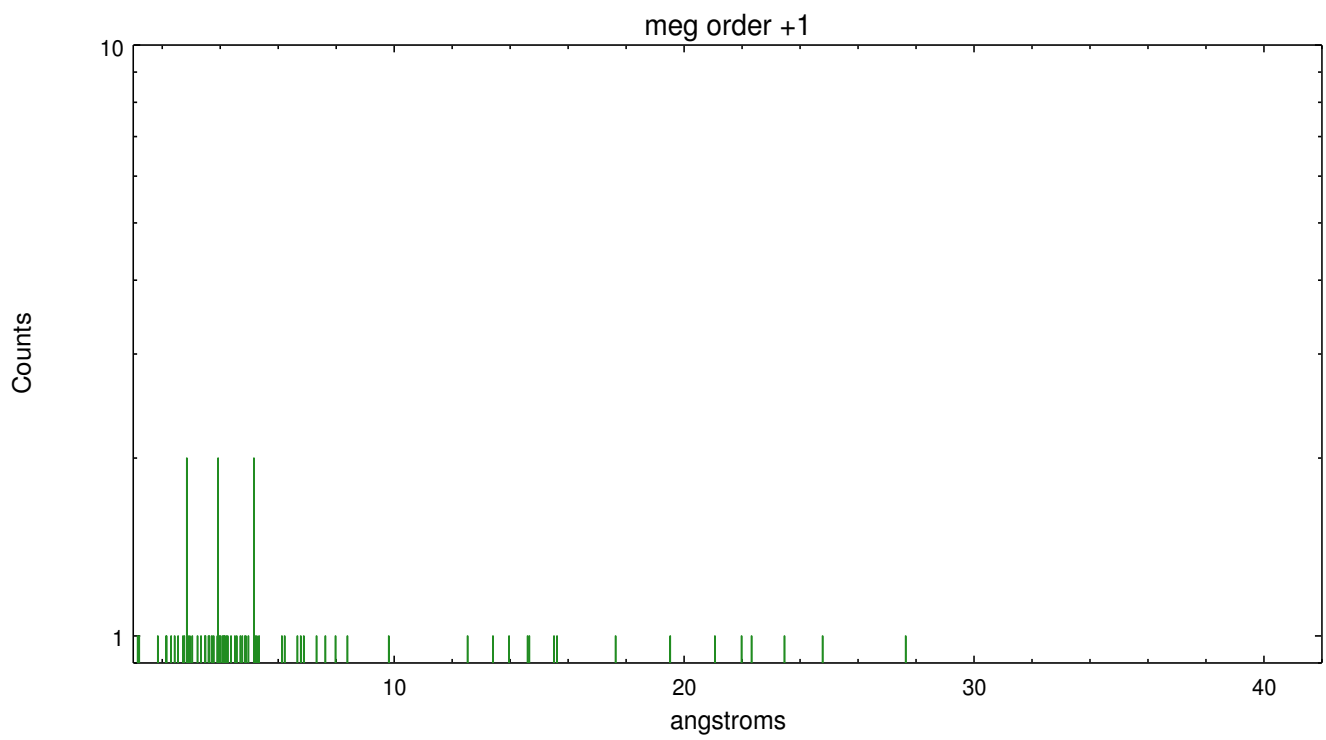
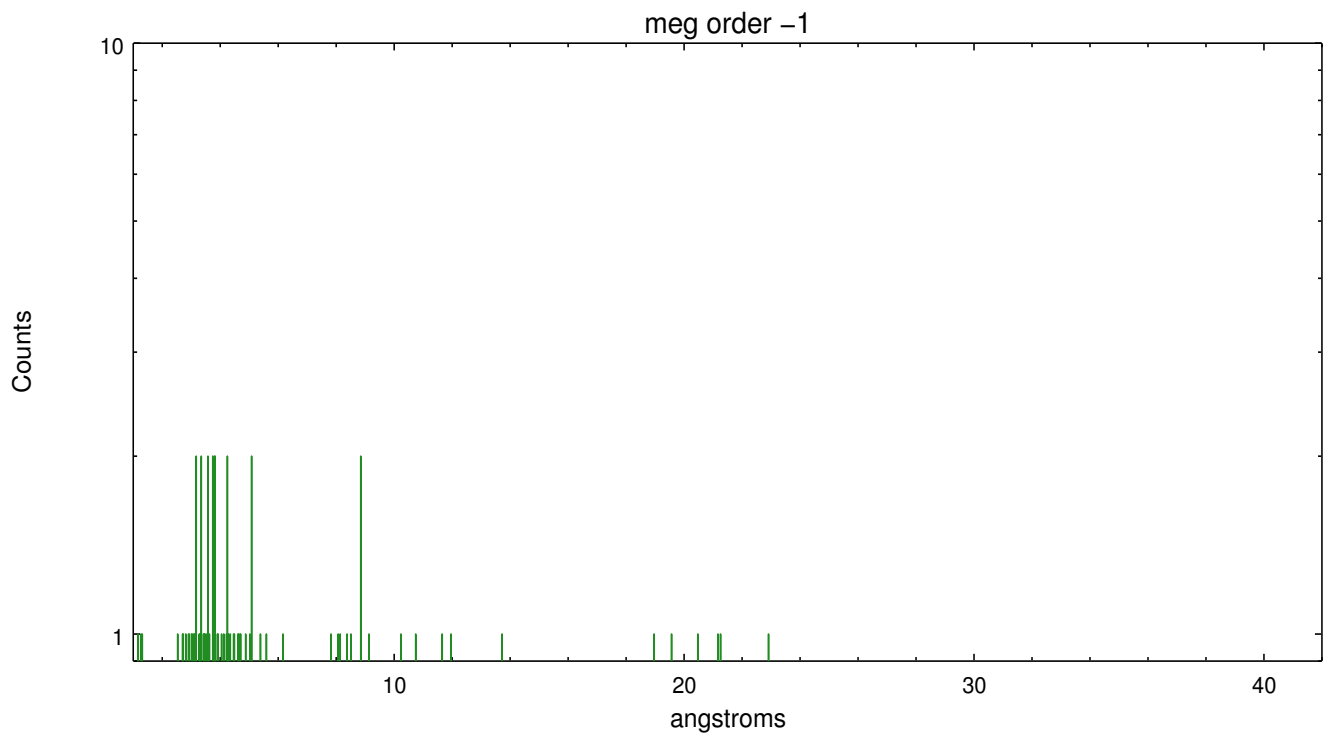
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	643	630	738	1640	638	536	505





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.03.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.061300308108

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]