

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13844 - L2 Version 1
Chandra X-Ray Center

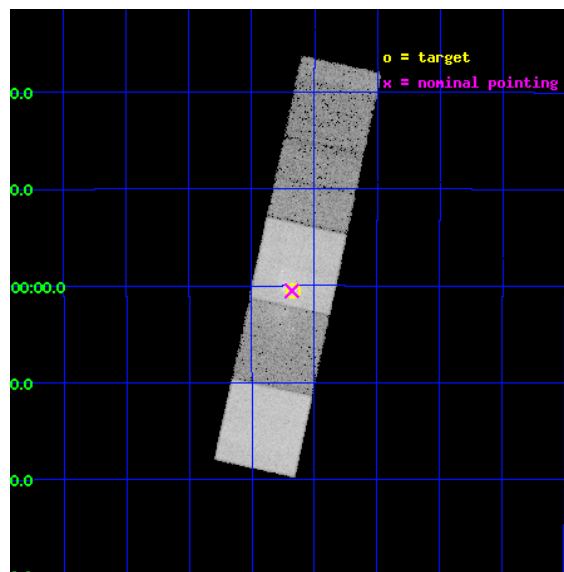
L2 Processing Date : Jul 11 2012

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1 Front

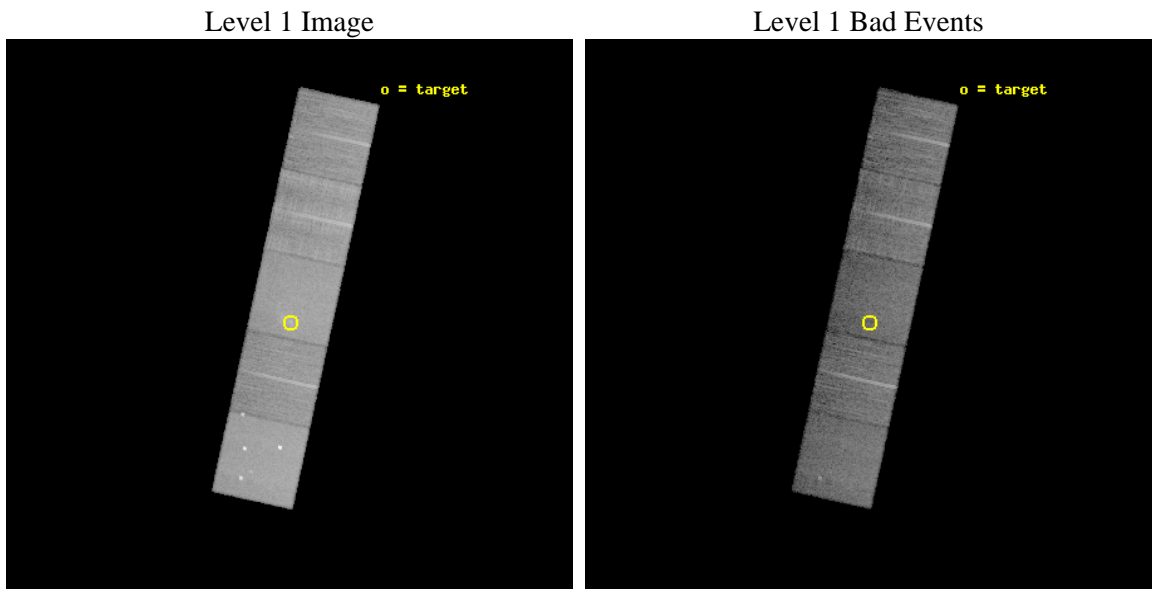
seq_num	601012	Sequence number
obs_id	13844	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41991224	Nominal RA [deg]
dec_nom	-29.008837156928	Nominal Dec [deg]
roll_nom	282.28320744586	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20063.200154305	Sum of GTIs [s]
livetime	19801.059673975	Livetime [s]
ontime5	20063.200154305	Sum of GTIs [s]
ontime6	20063.200154305	Sum of GTIs [s]
ontime7	20063.200154305	Sum of GTIs [s]
ontime8	20063.200154305	Sum of GTIs [s]
ontime9	20060.05914402	Sum of GTIs [s]
l2events	223096	Number of level 2 events



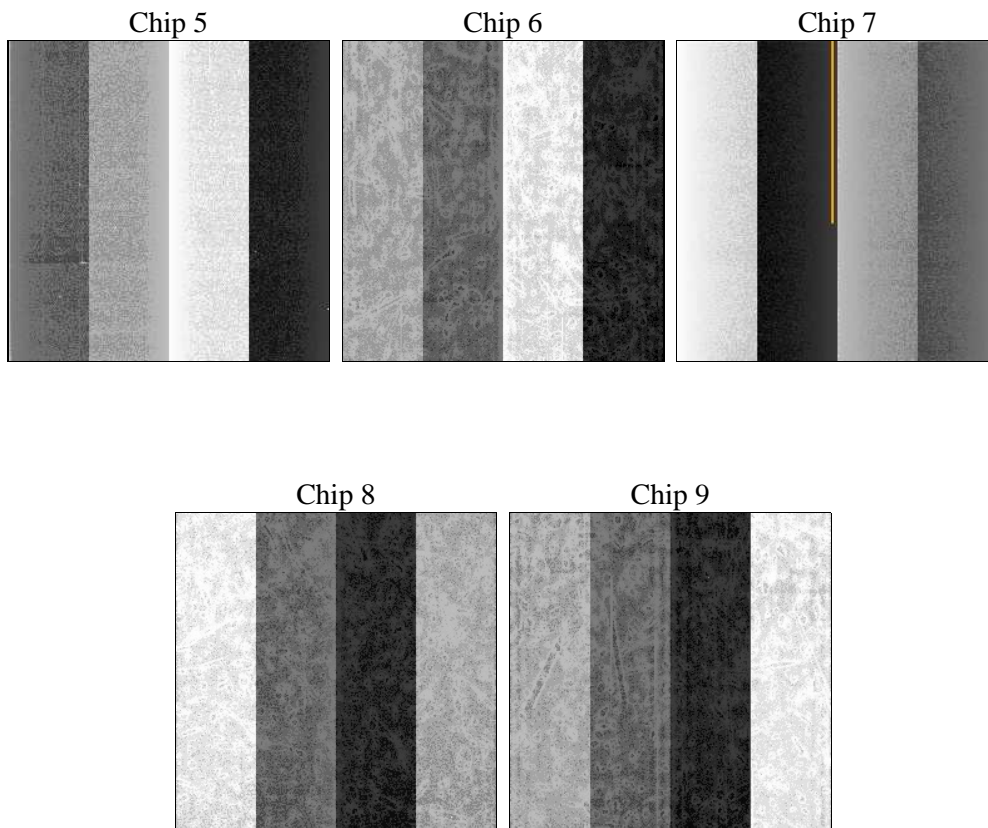
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20063.200154305	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	20063.200154305	Sum of GTIs [s]
date	2012-07-11T17:57:02	Date and time of file creation	ontime6	20063.200154305	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	20063.200154305	Sum of GTIs [s]
			ontime8	20063.200154305	Sum of GTIs [s]
			ontime9	20060.05914402	Sum of GTIs [s]
			l1events	759831	Number of level 1 events

2.1.4 Events

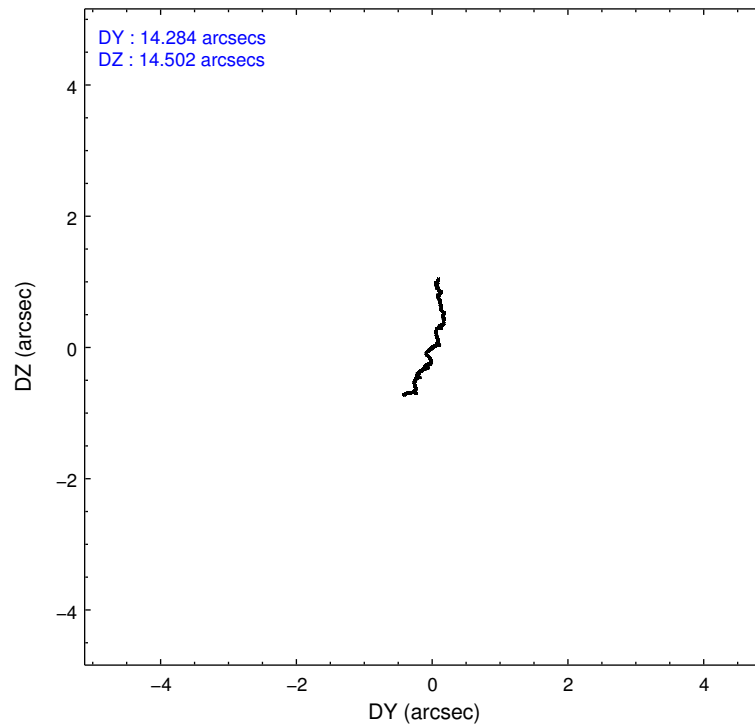
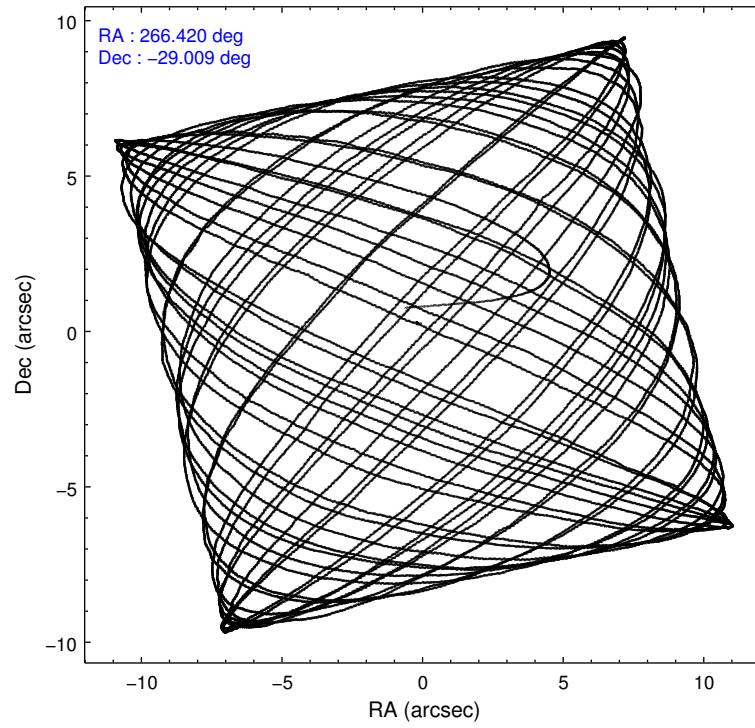
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	195865	123528	166835	156410	117193
rejected events	93951	100252	83121	110844	100938
rejected %	47%	81%	49%	70%	86%

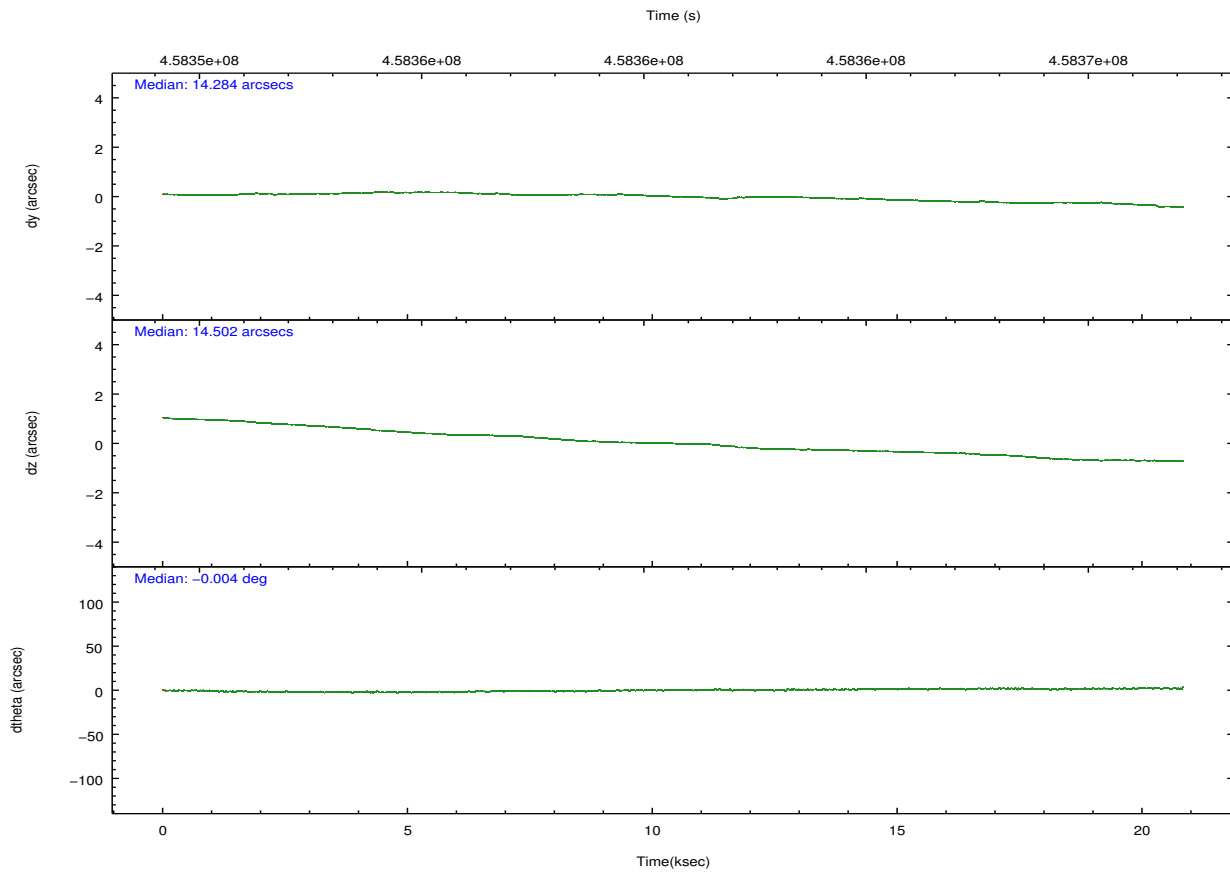
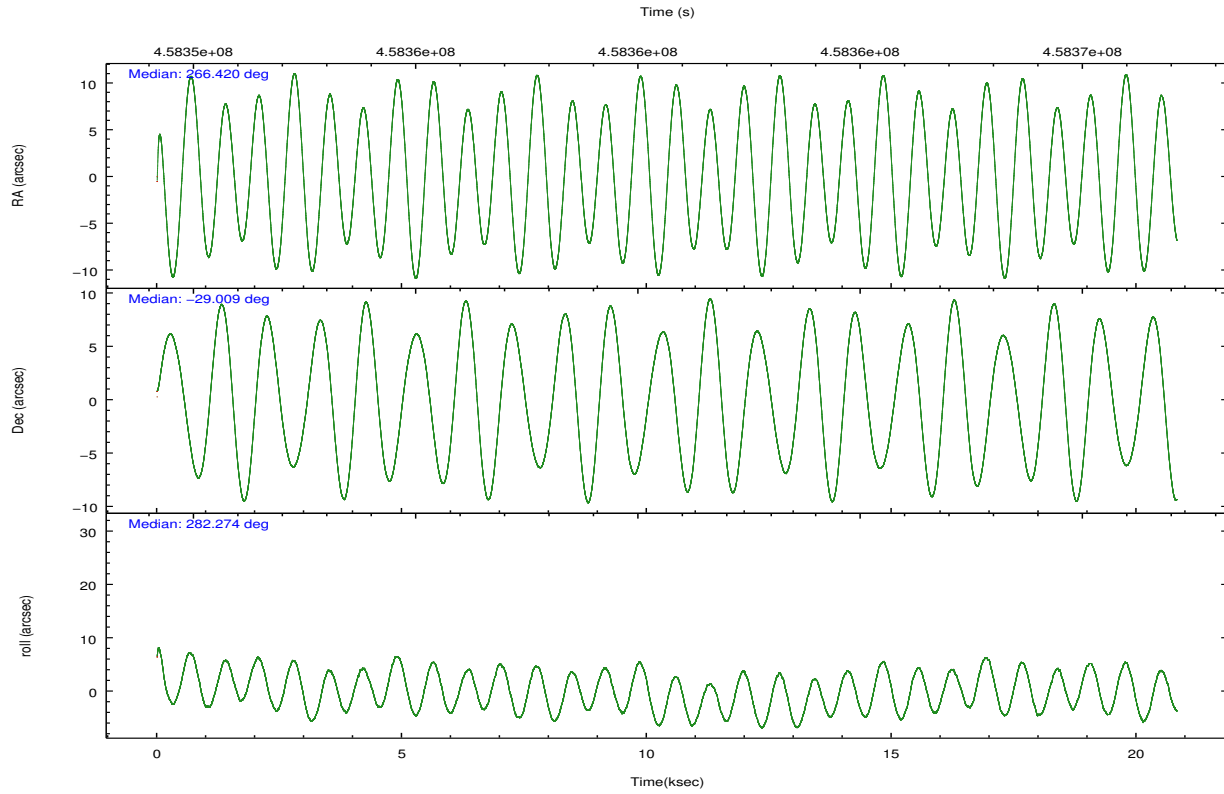
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	16763	11132	9646	14744	6552
	8%	9%	5%	9%	5%
grade 1 events	371	83	200	122	64
	0%	0%	0%	0%	0%
grade 2 events	29233	4526	17692	10479	3368
	14%	3%	10%	6%	2%
grade 3 events	3767	1874	7600	4504	1589
	1%	1%	4%	2%	1%
grade 4 events	3588	1828	7494	4169	1574
	1%	1%	4%	2%	1%
grade 5 events	14053	5694	15521	8259	6172
	7%	4%	9%	5%	5%
grade 6 events	48587	3920	41293	11673	3173
	24%	3%	24%	7%	2%
grade 7 events	79503	94471	67389	102460	94701
	40%	76%	40%	65%	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	266.4199122400023	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988871	-29.00883715692797	Alternating exposures requested	N	N
[deg] Pointing Roll	282.116233	282.2832074458565	[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)	458351079.184000	458349124.38479			
Observation start date	2012-07-10T23:43:32	2012-07-10T23:12:04			
[s] Observation end time (MET)	458371079.184000	458371335.11097			
Observation end date	2012-07-11T05:16:52	2012-07-11T05:22:15			
Read mode	TIMED	TIMED			

2.3 Aspect



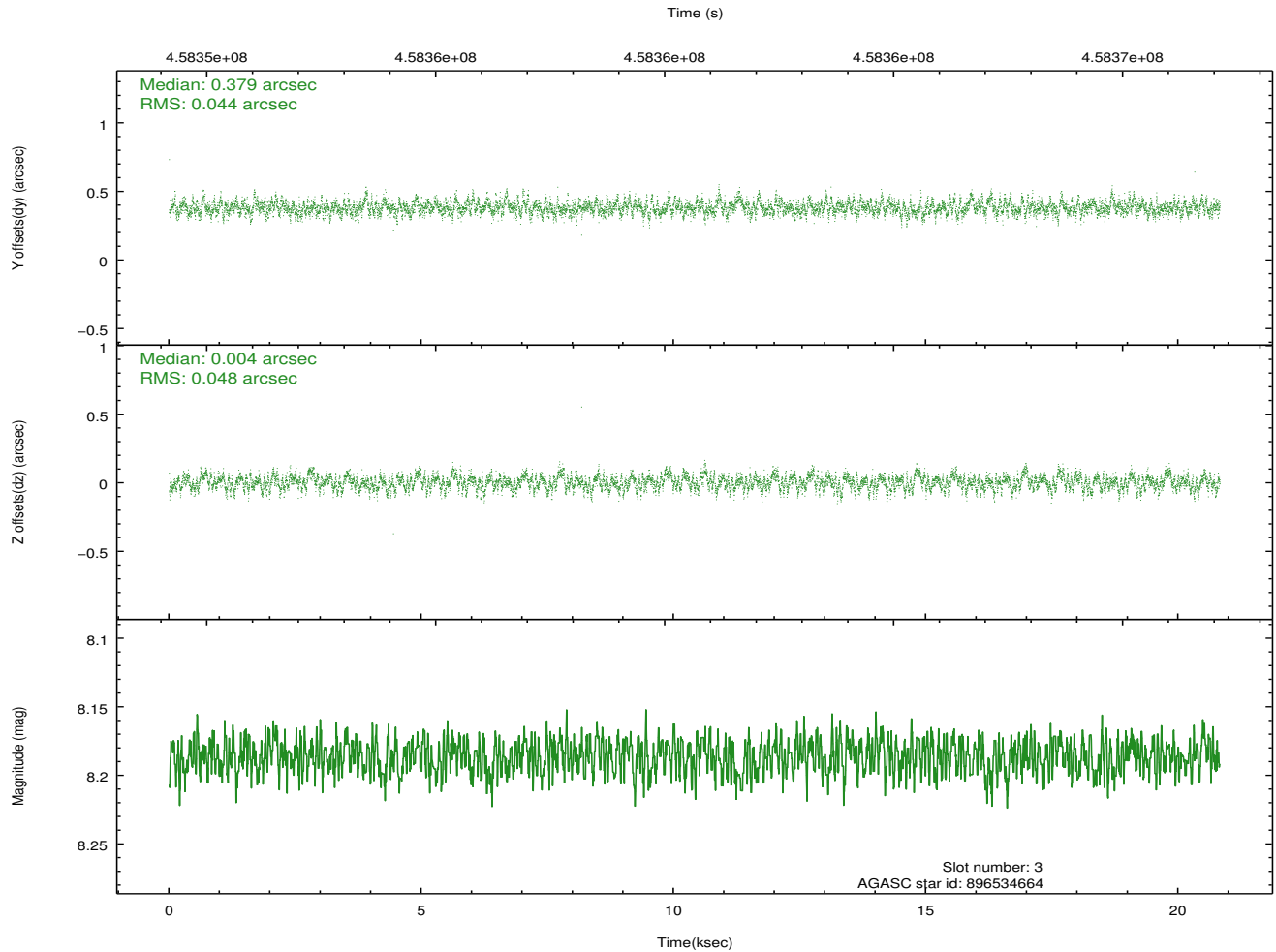
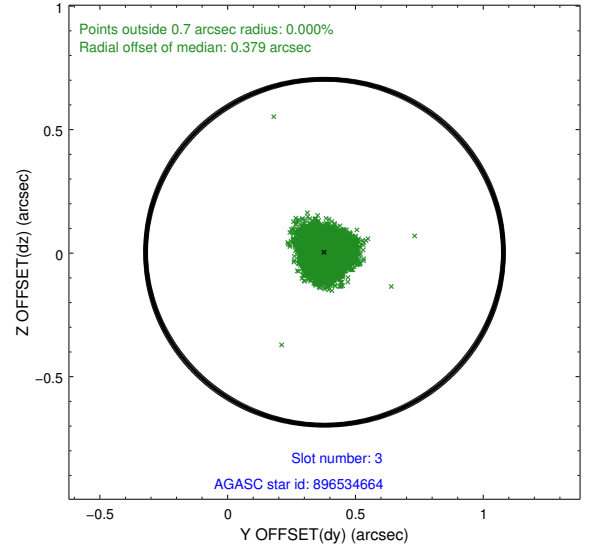
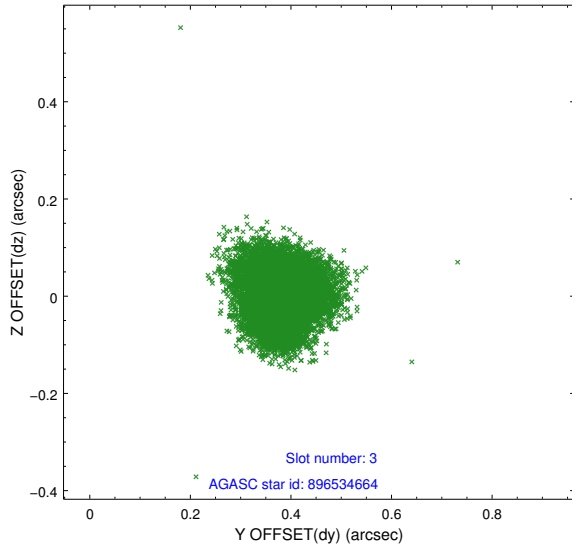


Slot Statistics

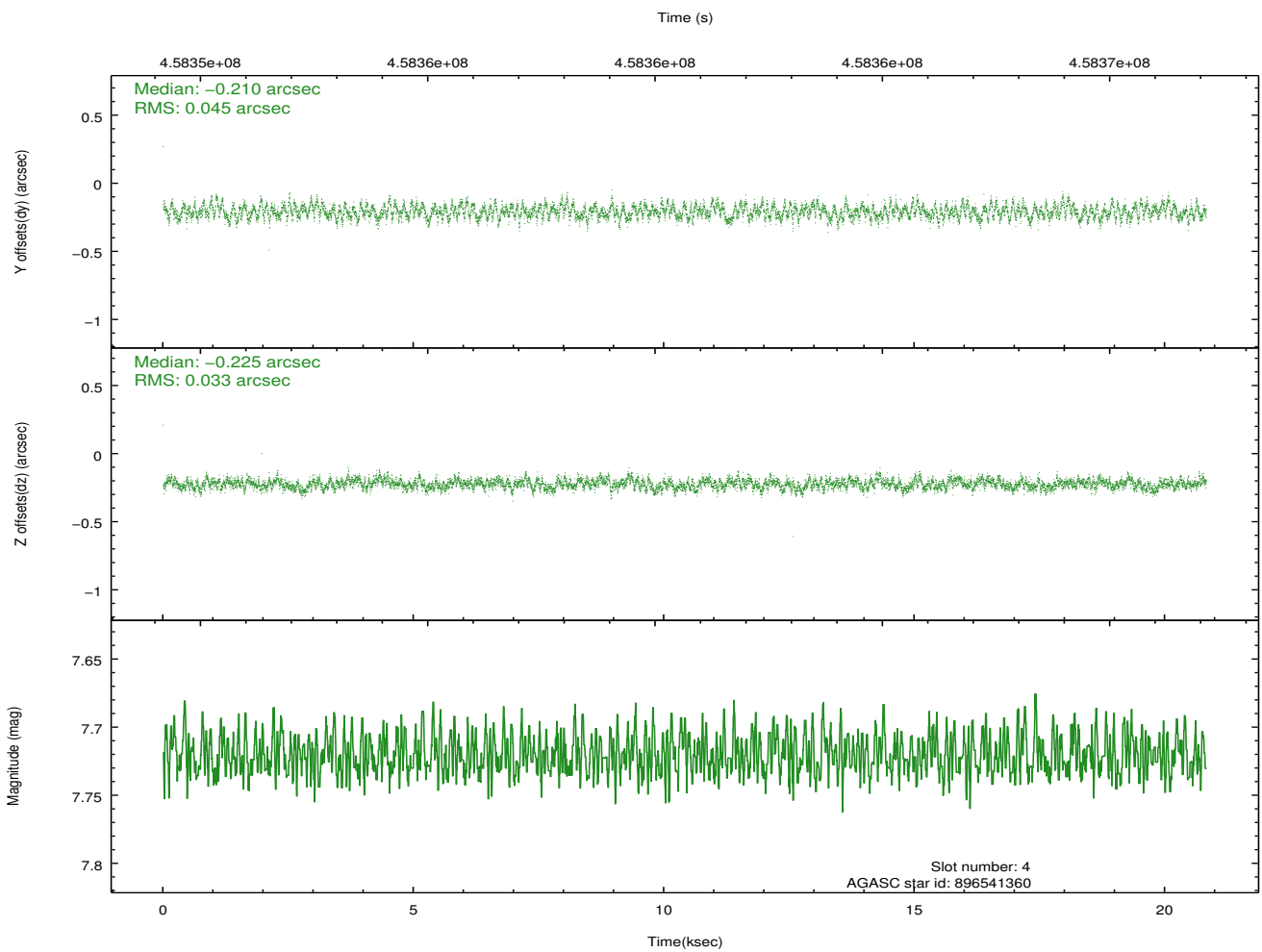
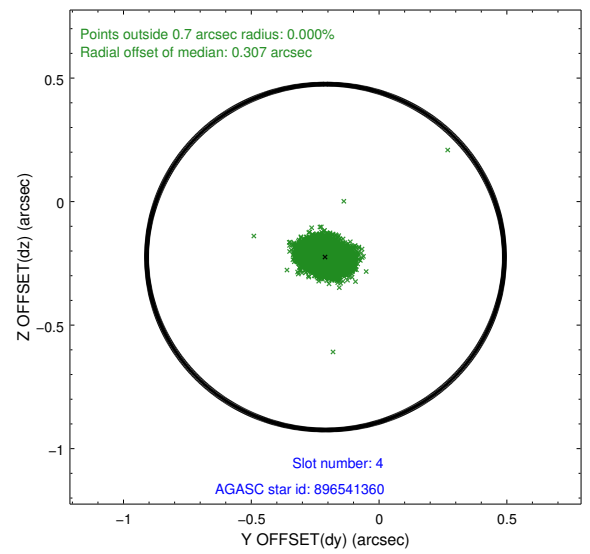
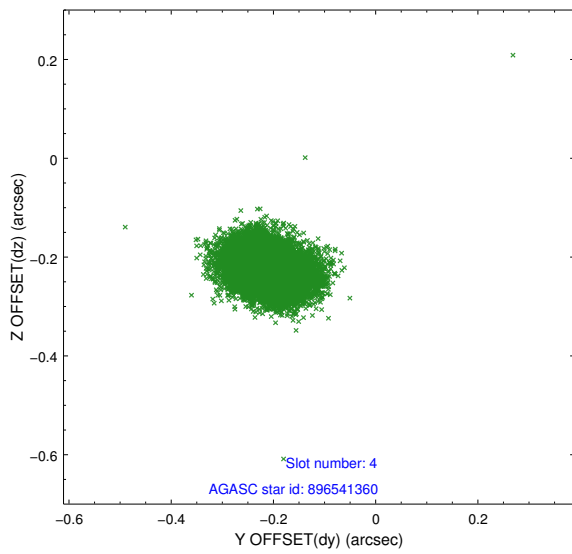
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.86	5080	-0.096	-0.029	0.017	0.026	0.000000	0.000000	-767.29	-1735.94
1	FID	ACIS-S-4	6.94	5080	0.249	0.053	0.013	0.028	0.000000	0.000000	2146.24	172.45
2	FID	ACIS-S-5	6.97	5080	-0.184	-0.015	0.014	0.021	0.000000	0.000000	-1820.00	166.24
3	GUIDE	896534664	8.19	10160	0.379	0.004	0.069	0.109	266.405570	-28.407461	-2040.94	460.81
4	GUIDE	896541360	7.72	10158	-0.210	-0.225	0.059	0.094	266.684478	-29.453744	1825.50	525.01
5	GUIDE	896541576	8.20	10158	-0.183	-0.021	0.059	0.094	267.051055	-28.762912	-357.39	2182.89
6	GUIDE	896403520	9.01	10153	0.298	0.152	0.094	0.151	265.626481	-28.748780	-1347.72	-2202.61
7	GUIDE	896540808	7.45	10158	-0.288	0.085	0.049	0.080	265.985401	-29.308604	855.76	-1510.10

2.4 Star Slots

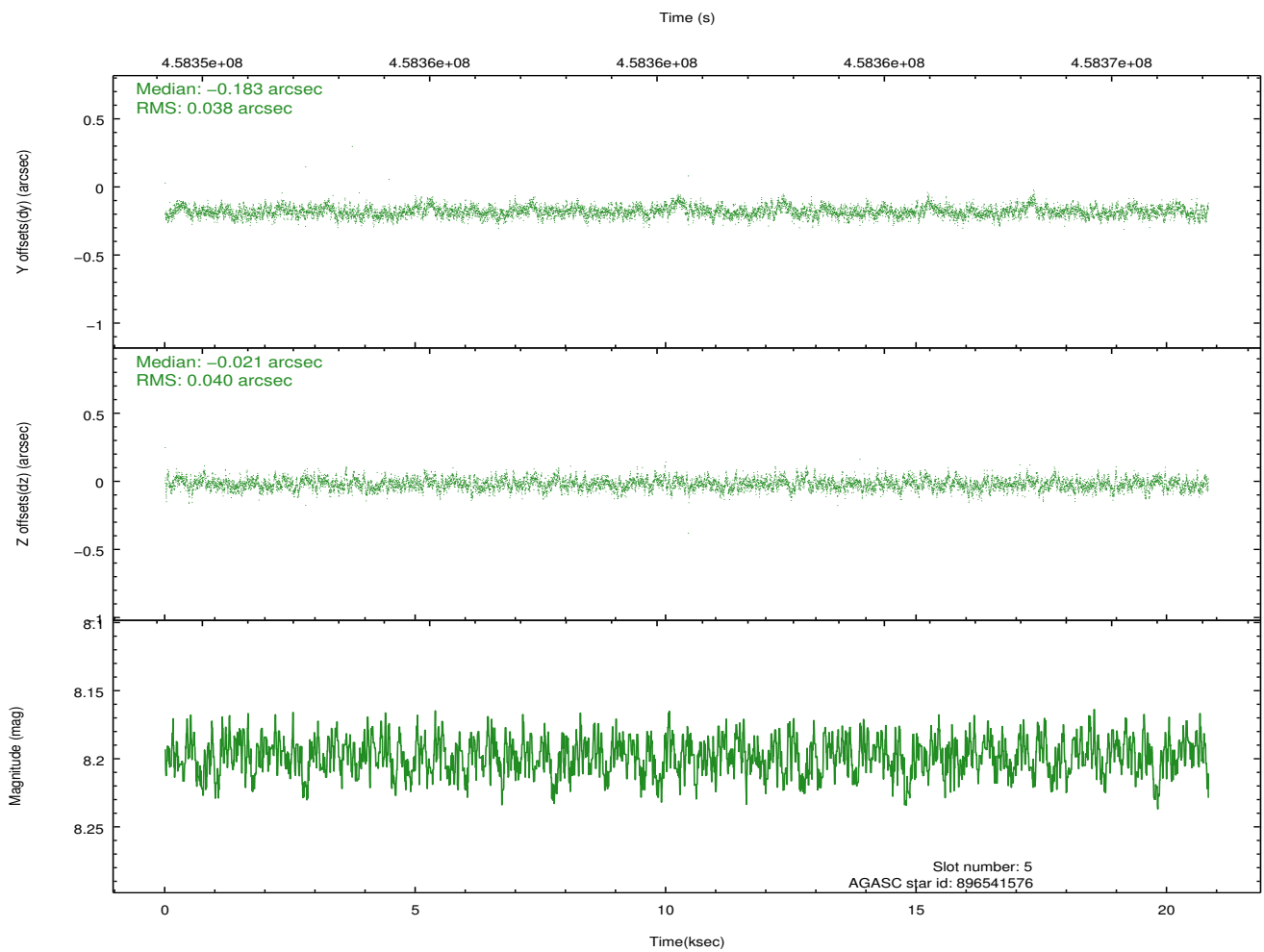
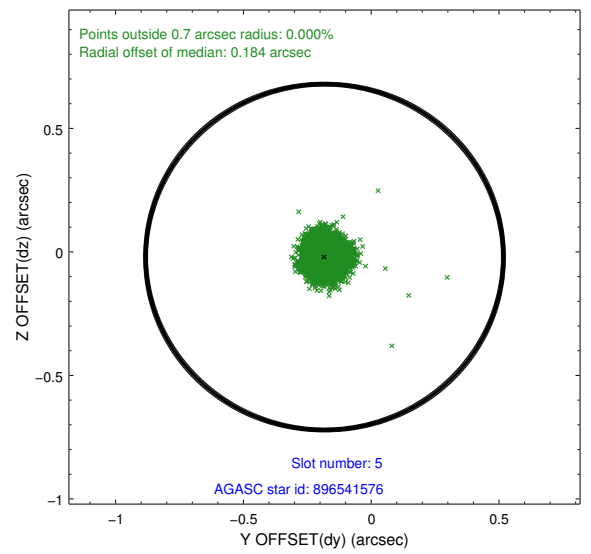
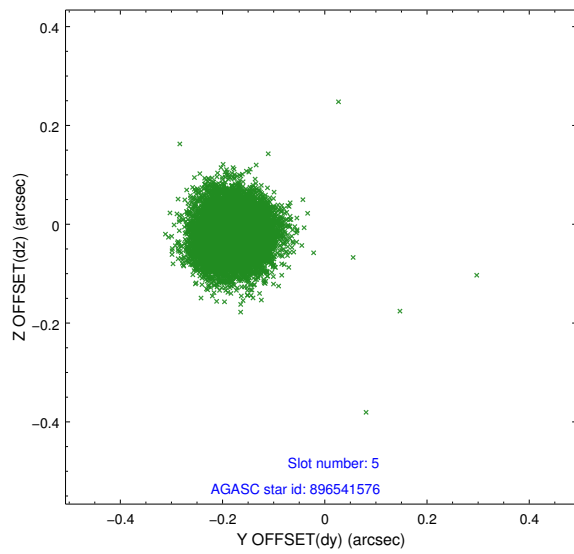
2.4.1 Slot 3



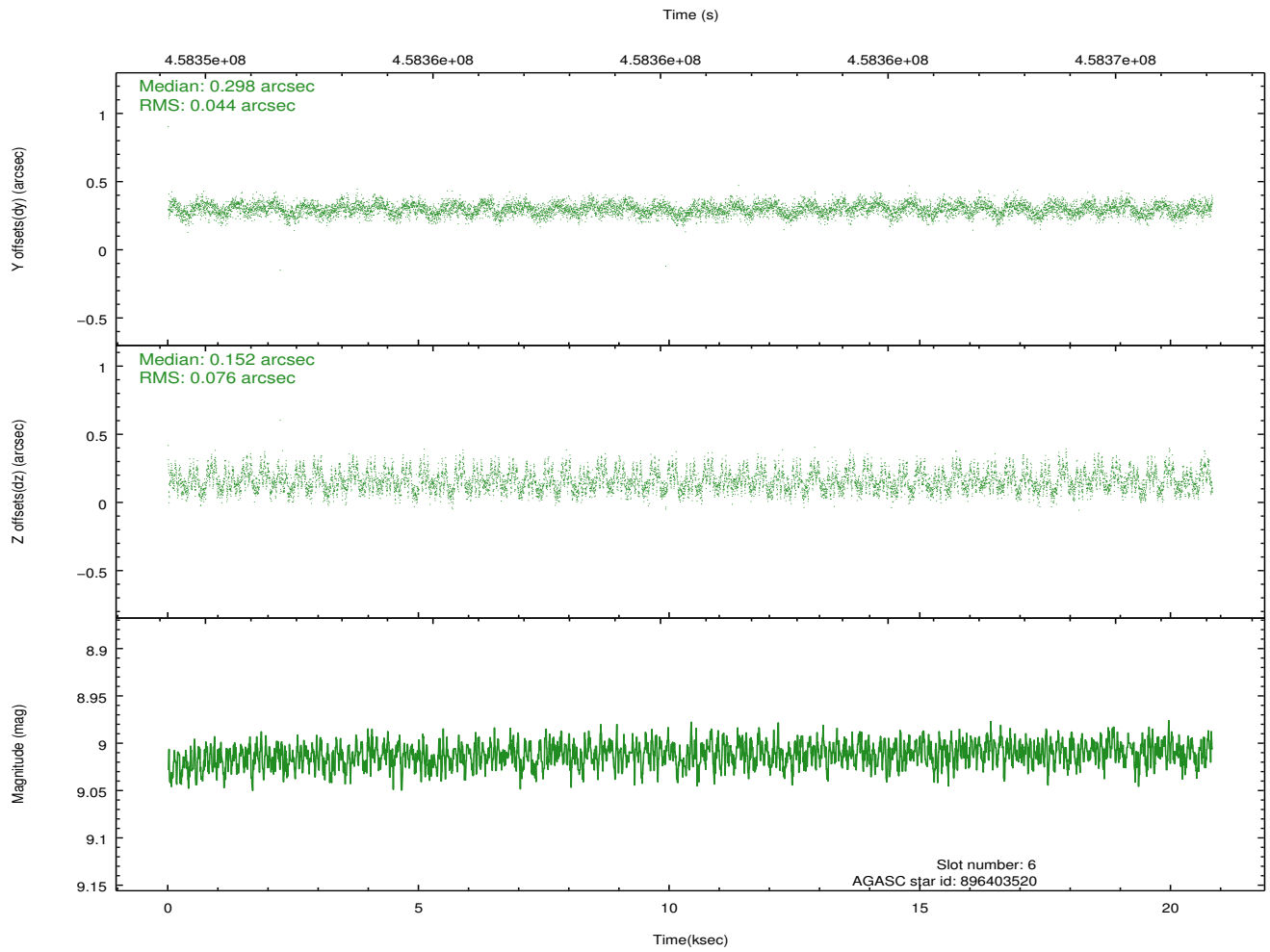
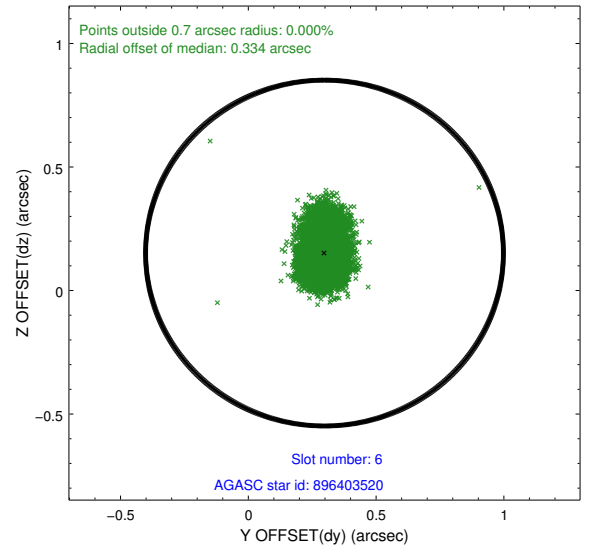
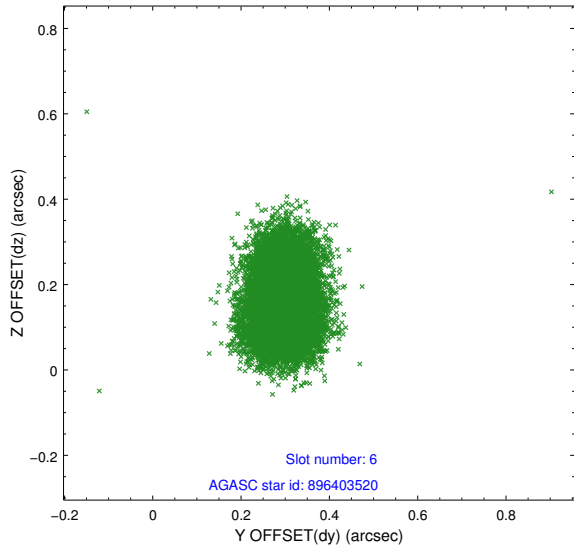
2.4.2 Slot 4



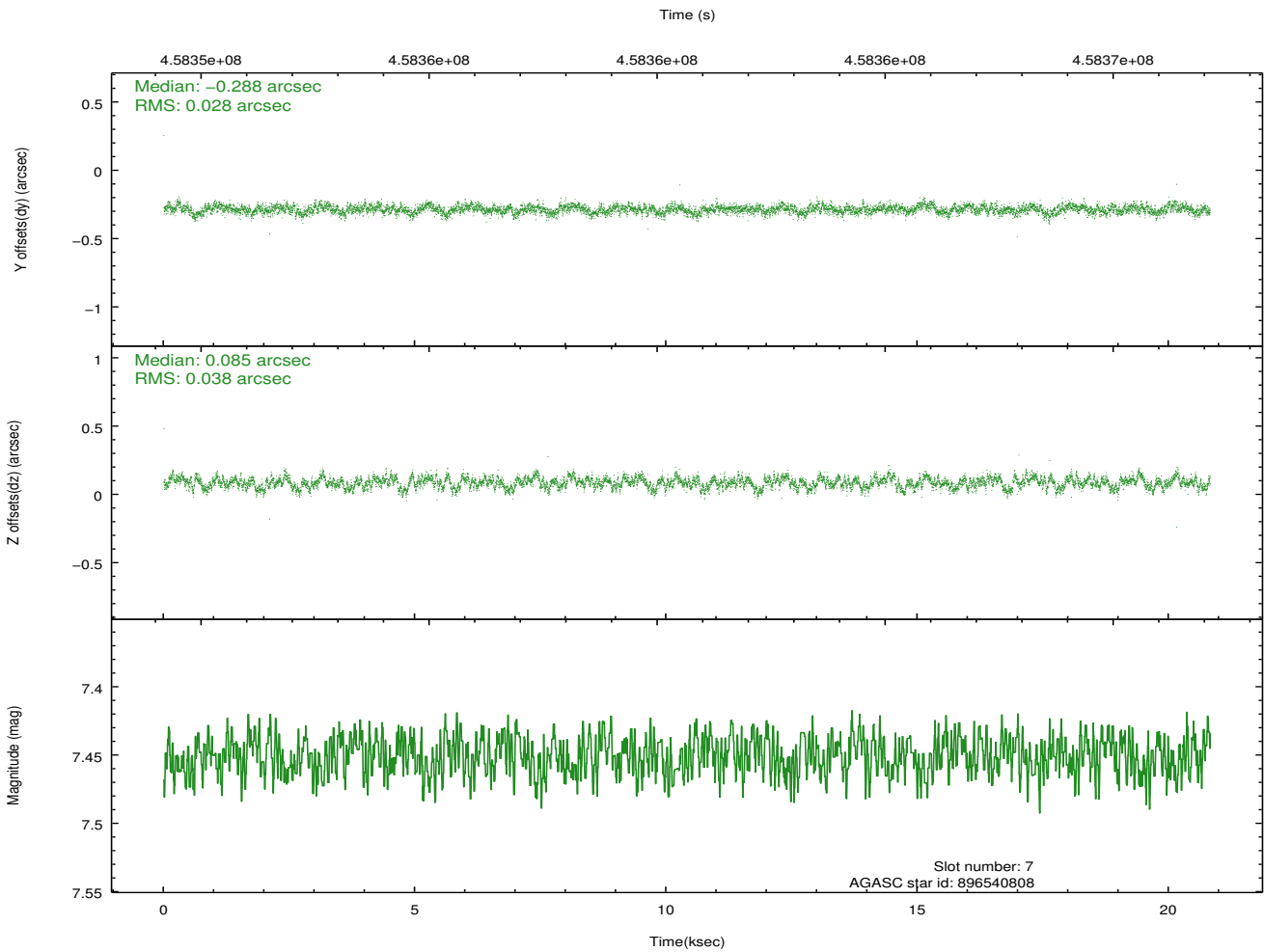
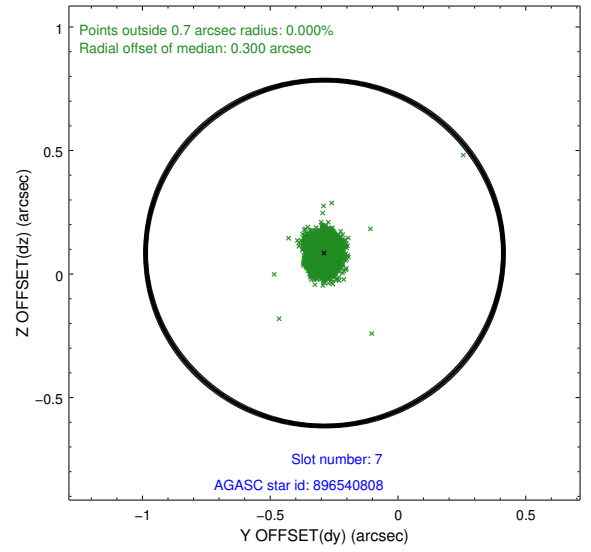
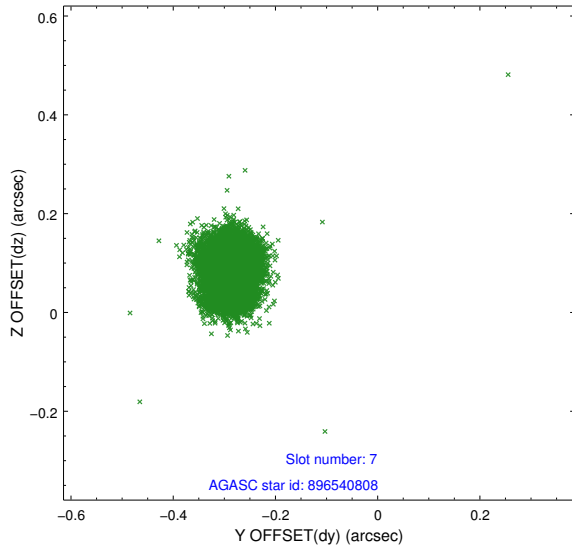
2.4.3 Slot 5



2.4.4 Slot 6

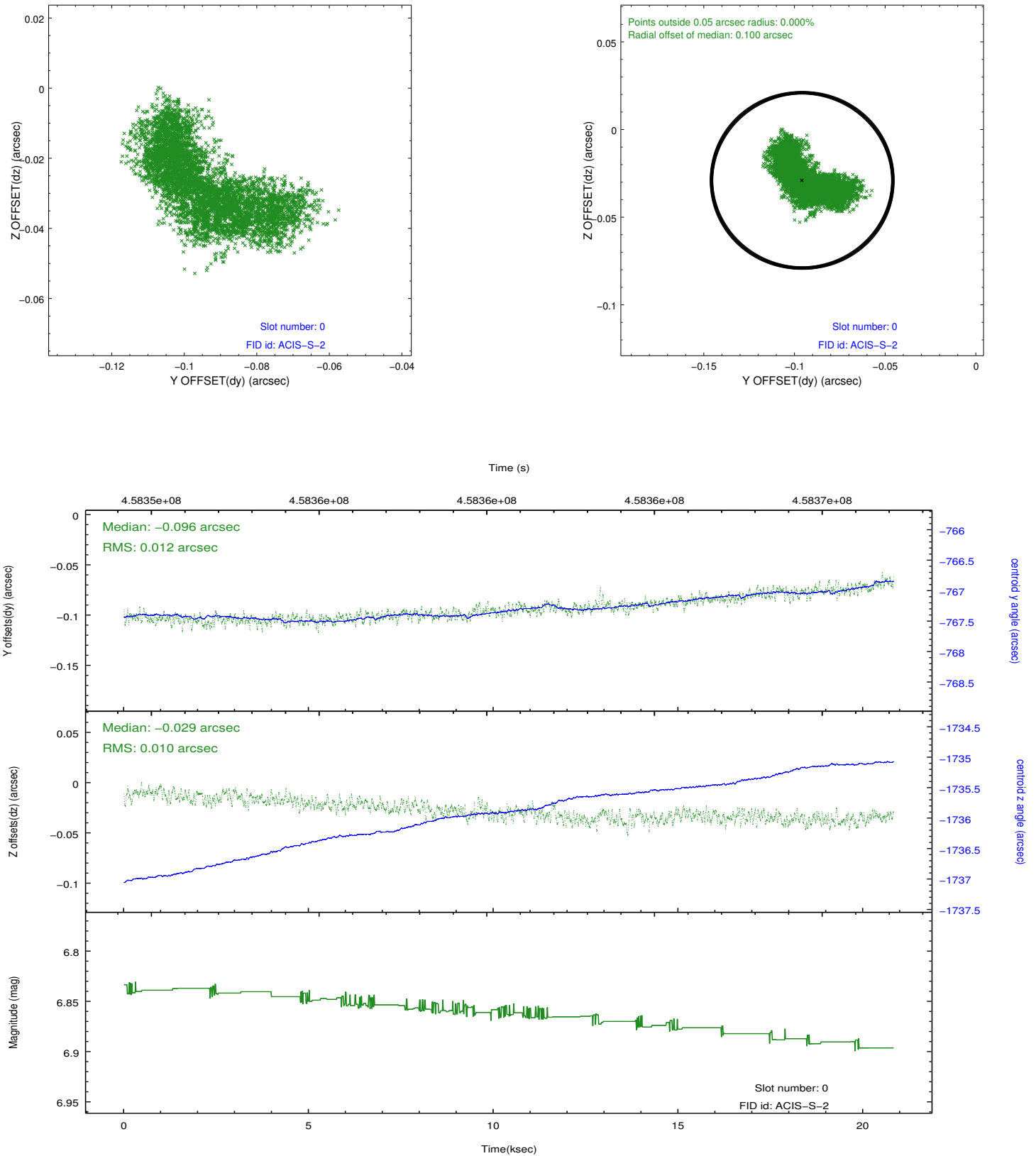


2.4.5 Slot 7

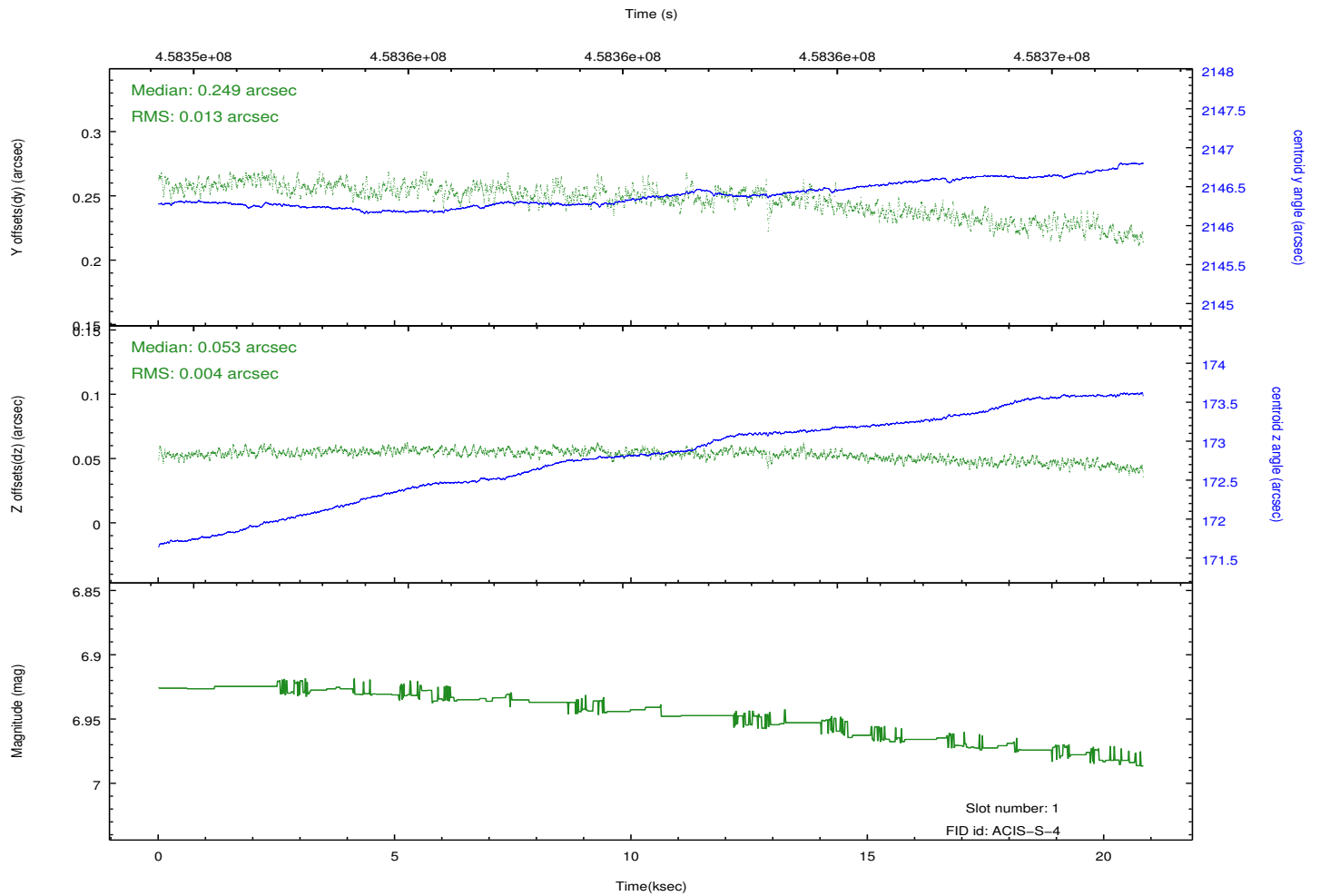
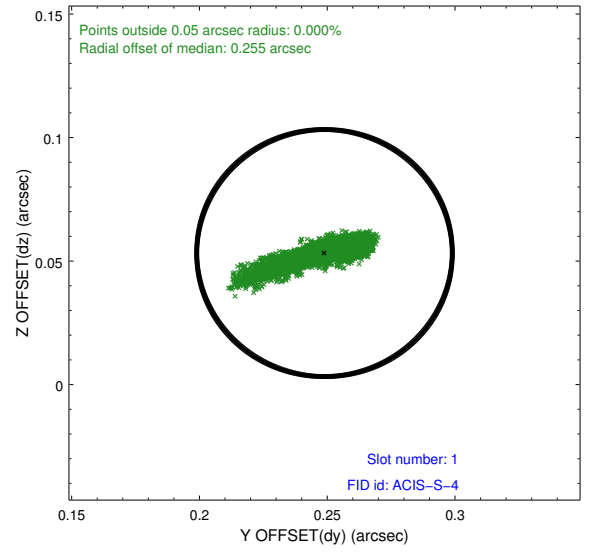
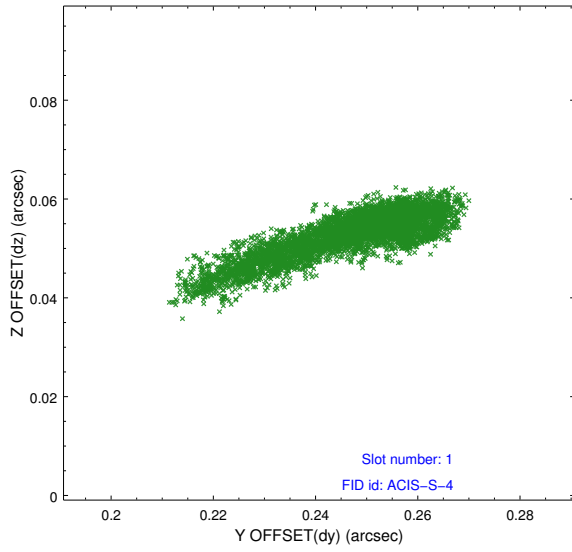


2.5 FID Slots

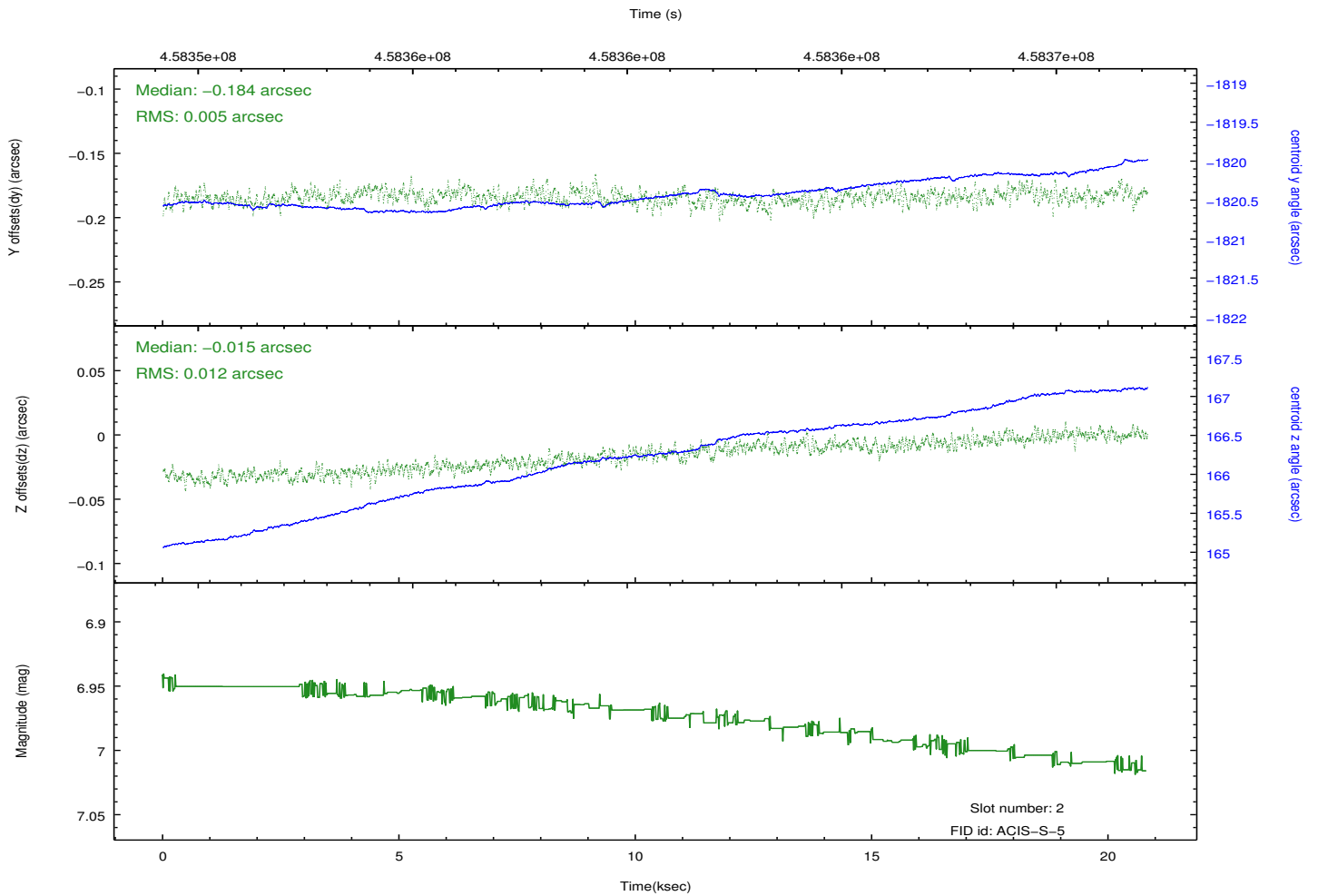
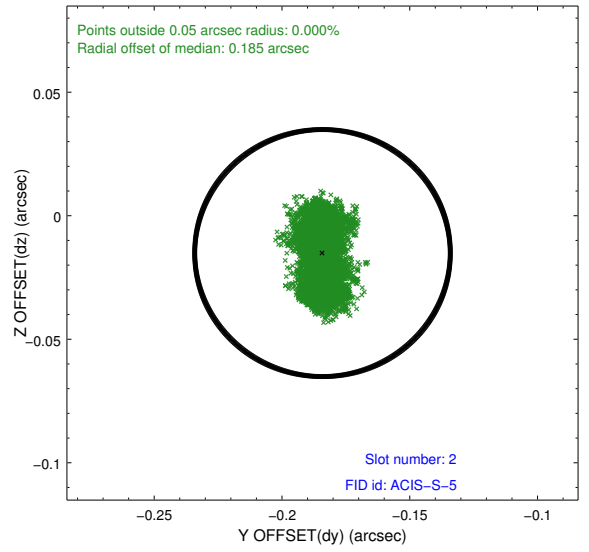
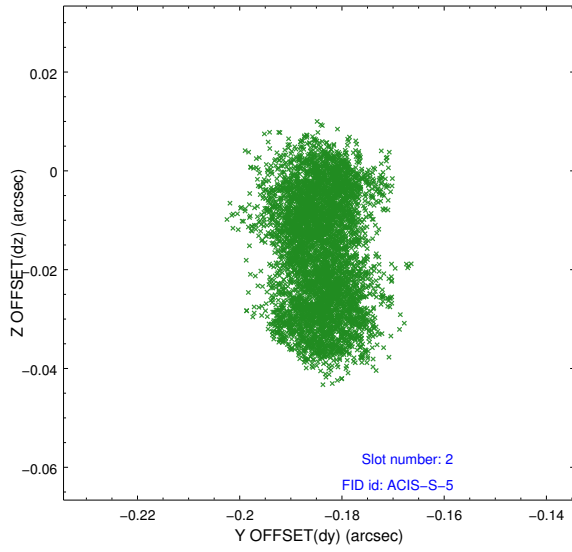
2.5.1 Slot 0



2.5.2 Slot 1

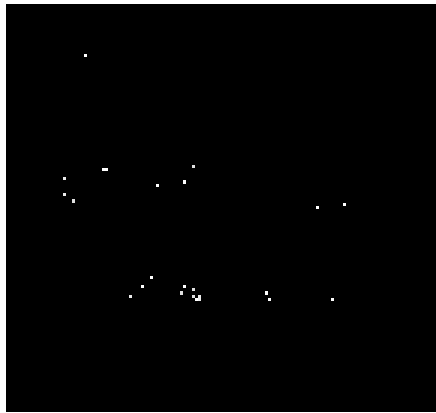


2.5.3 Slot 2

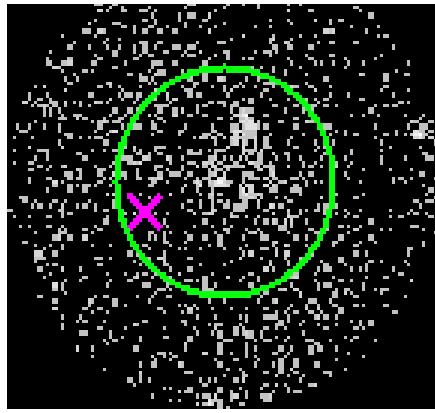


3 Gratings

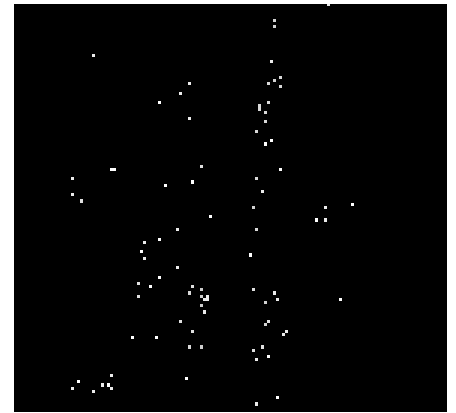
3.1 HEG Arm



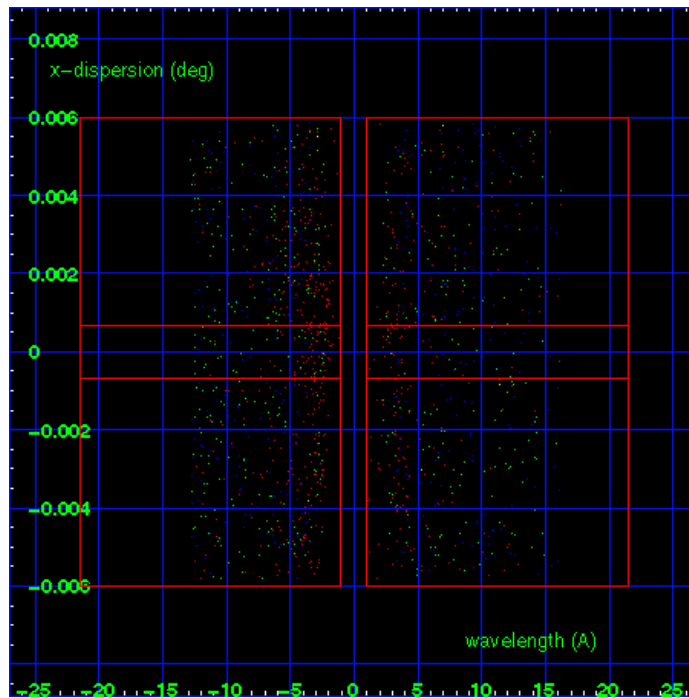
HEG Order Sort 123



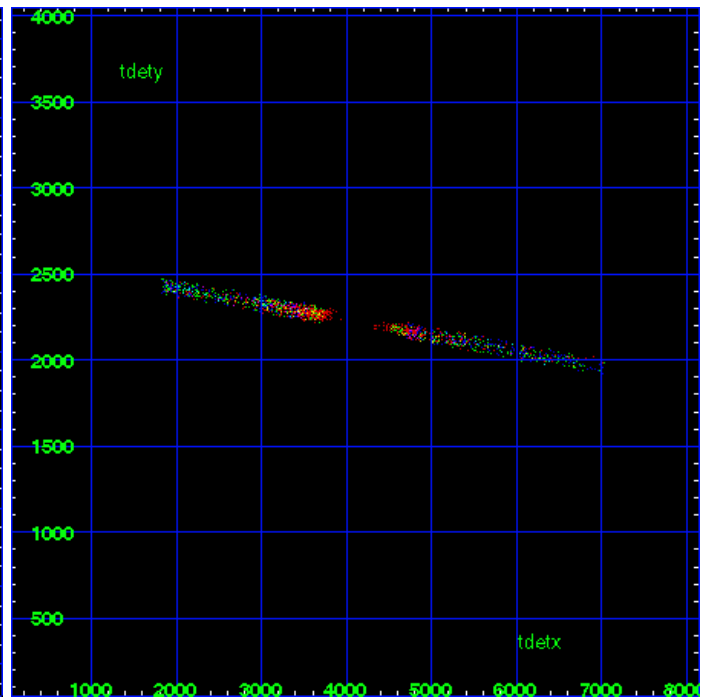
HEG Zero Order



HEG Order Sort ALL

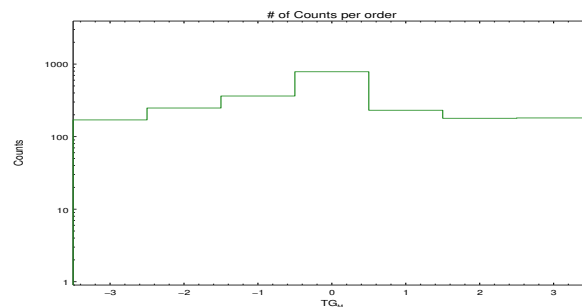


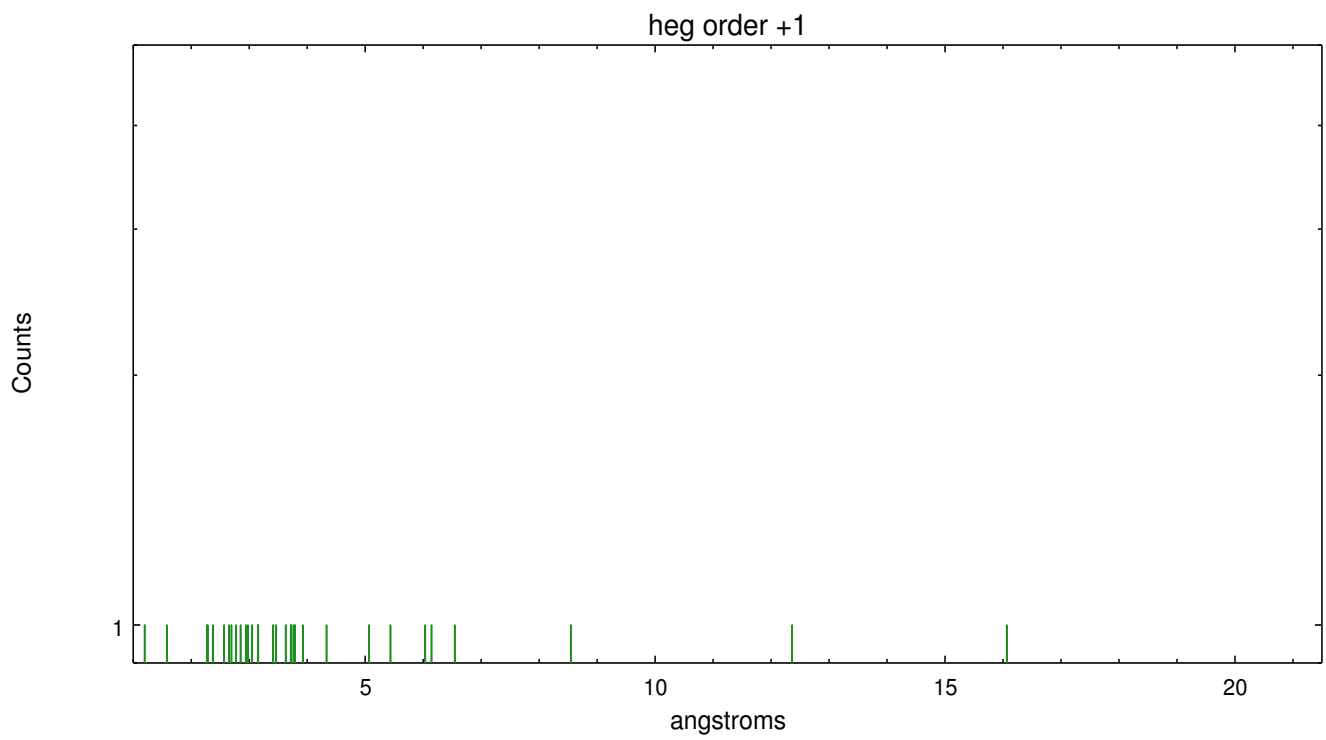
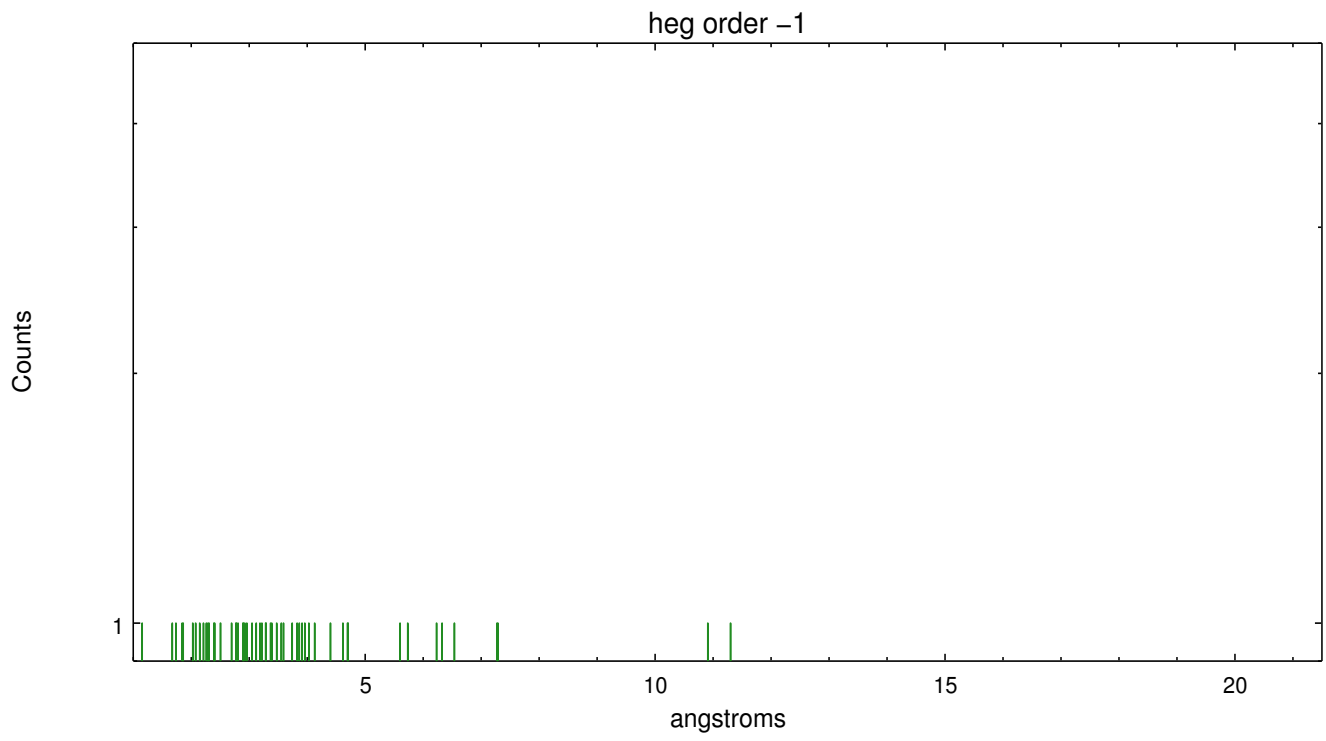
Spot Image HEG



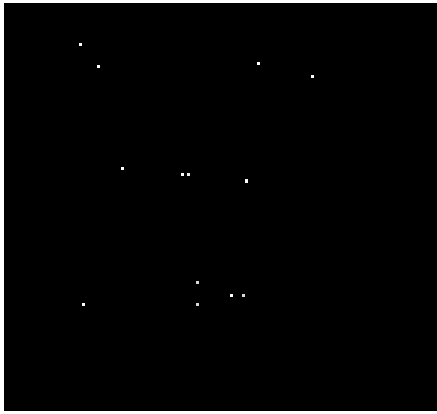
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	170	248	363	784	231	179	181

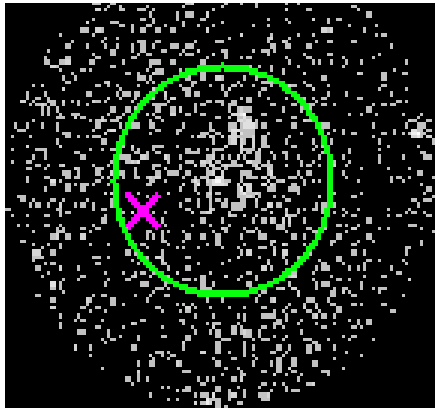




3.2 MEG Arm



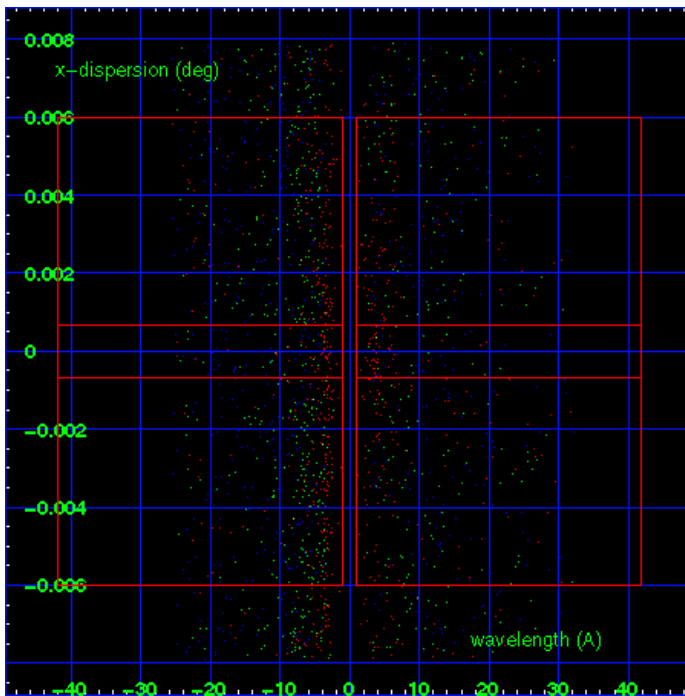
MEG Order Sort 123



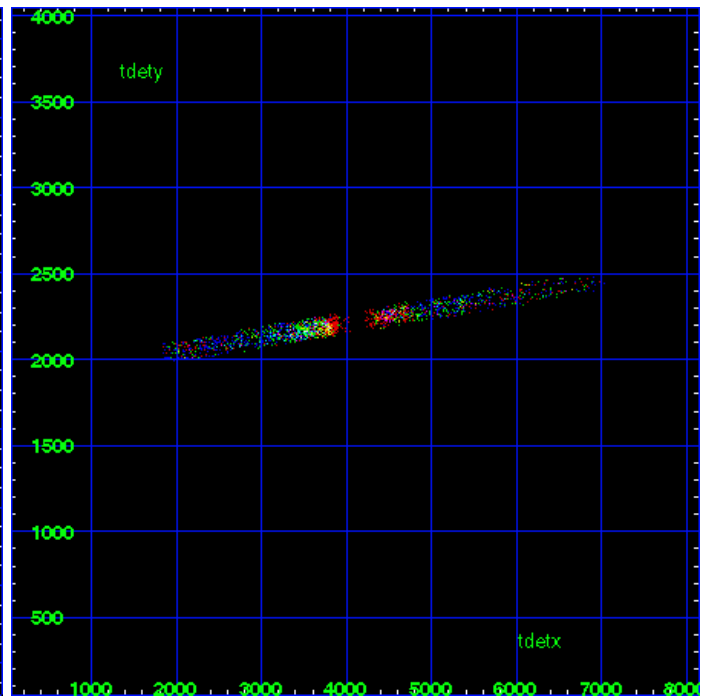
MEG Zero Order



MEG Order Sort ALL

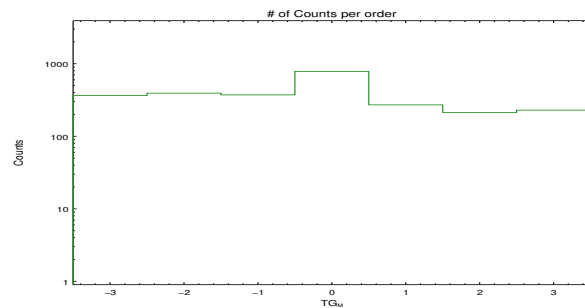


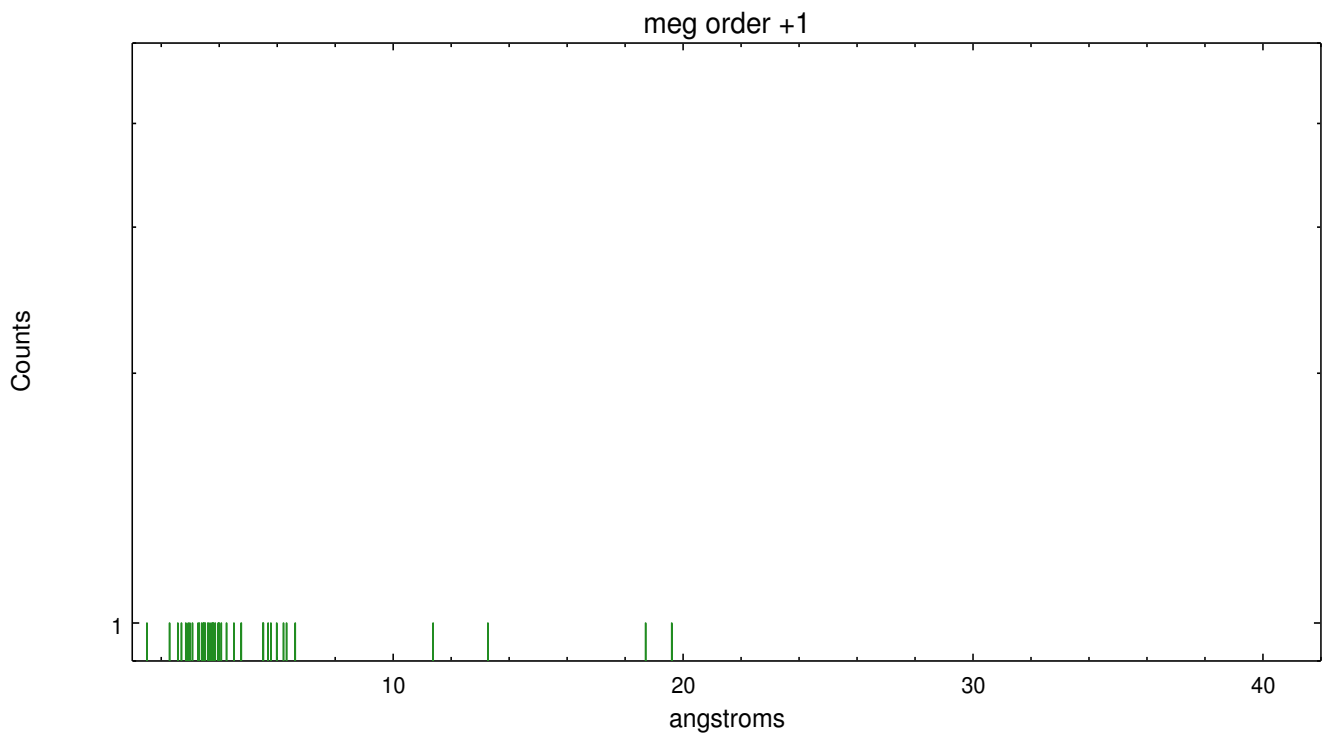
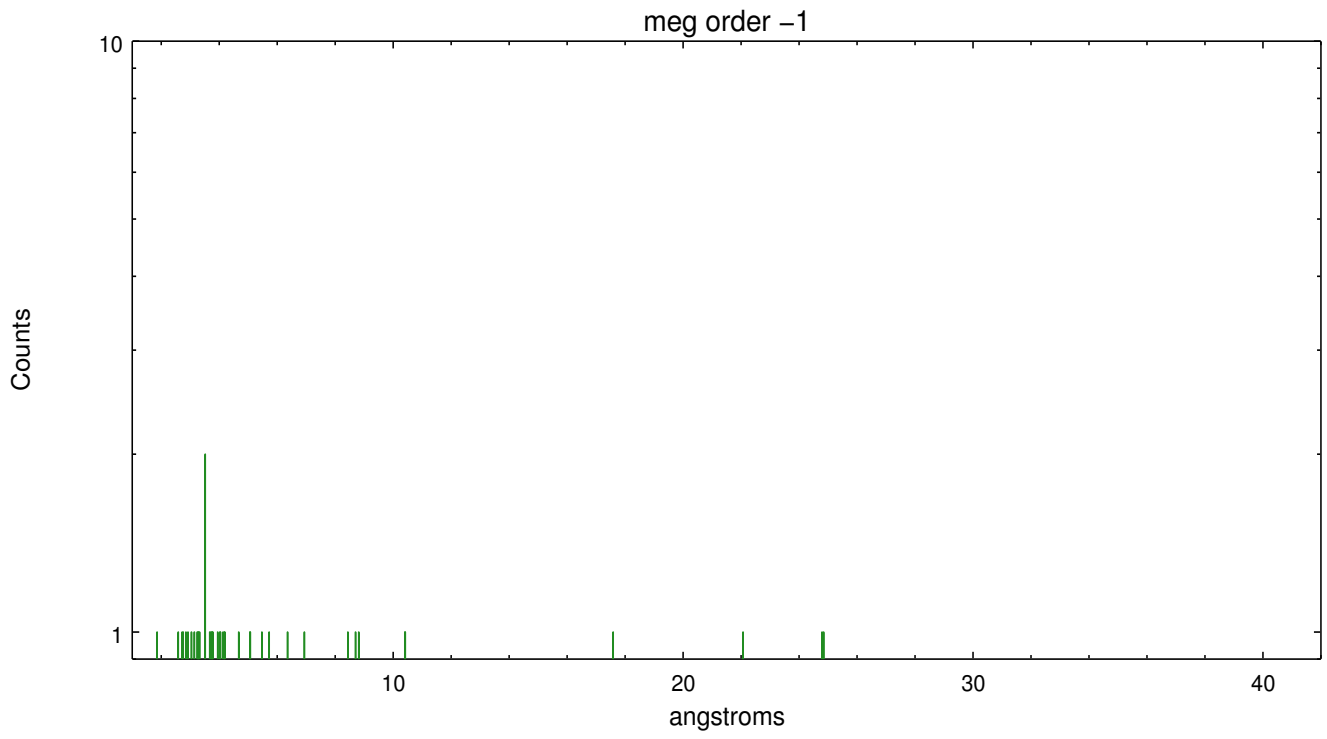
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	365	393	372	784	271	213	229





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	20.063200154305

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]