

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14461 - L2 Version 3
Chandra X-Ray Center

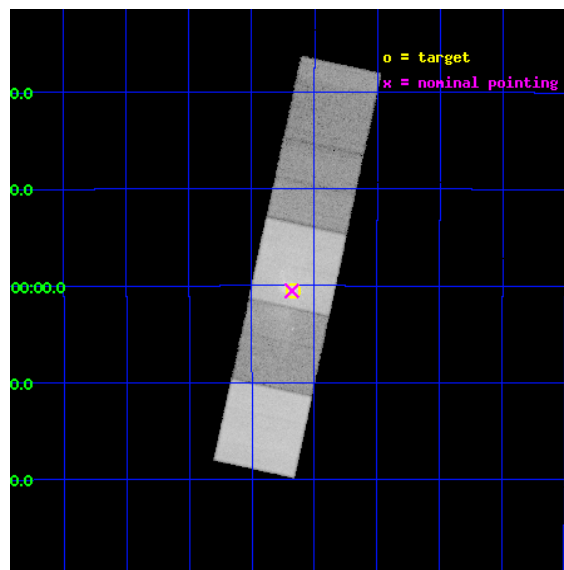
L2 Processing Date : Jul 18 2012

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1 Front

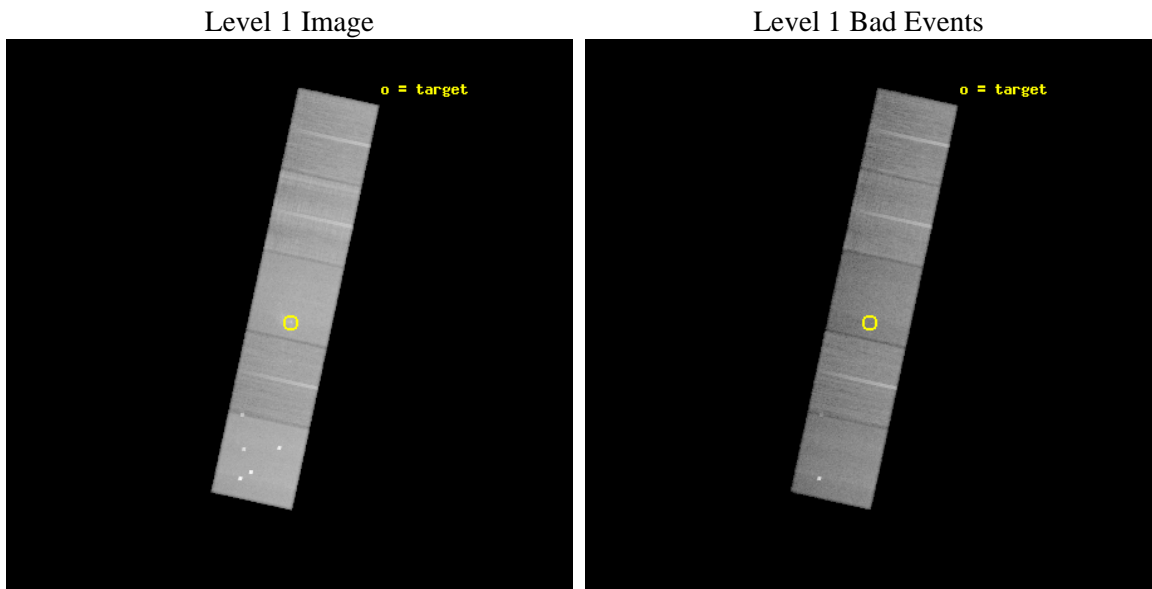
seq_num	601012	Sequence number
obs_id	14461	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41991118145	Nominal RA [deg]
dec_nom	-29.008846003844	Nominal Dec [deg]
roll_nom	282.28320708008	Nominal Roll [deg]
revision	3	Processing version of data
ontime	50970.200392008	Sum of GTIs [s]
liveltime	50304.237200171	Livetime [s]
ontime5	50970.200392008	Sum of GTIs [s]
ontime6	50970.200392008	Sum of GTIs [s]
ontime7	50970.200392008	Sum of GTIs [s]
ontime8	50970.200392008	Sum of GTIs [s]
ontime9	50970.200392008	Sum of GTIs [s]
l2events	588162	Number of level 2 events



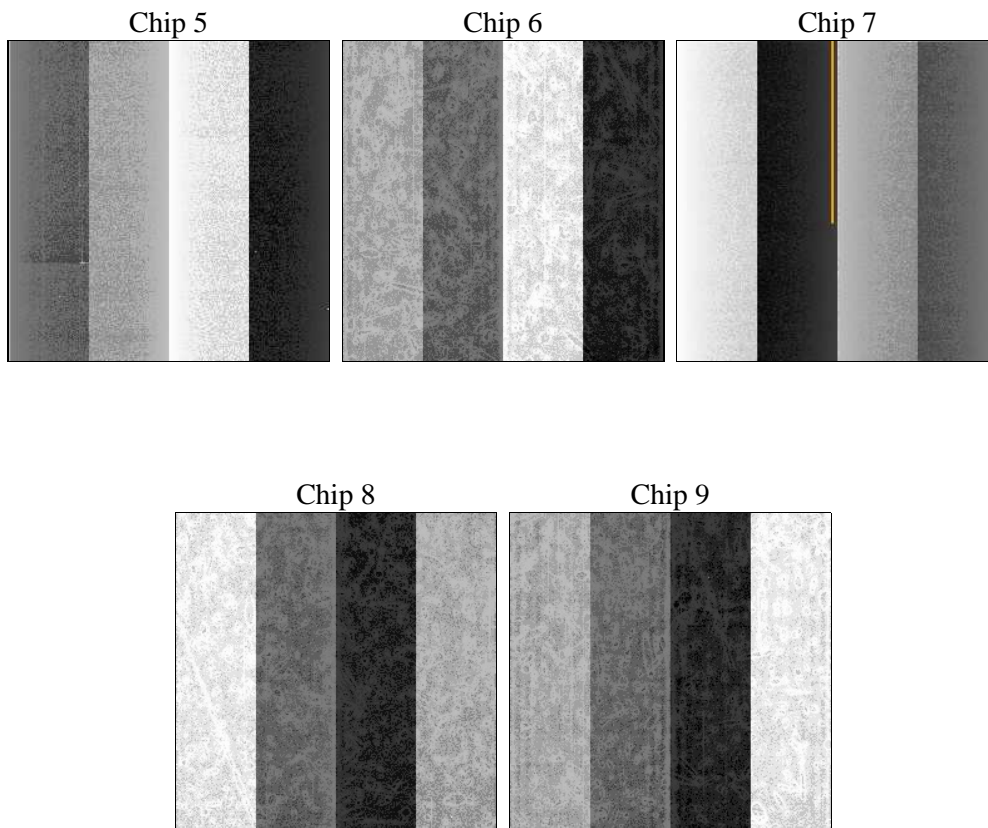
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	76295.729000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	50970.200392008	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	50970.200392008	Sum of GTIs [s]
date	2012-07-18T20:35:54	Date and time of file creation	ontime6	50970.200392008	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	50970.200392008	Sum of GTIs [s]
			ontime8	50970.200392008	Sum of GTIs [s]
			ontime9	50970.200392008	Sum of GTIs [s]
			l1events	1986816	Number of level 1 events

2.1.4 Events

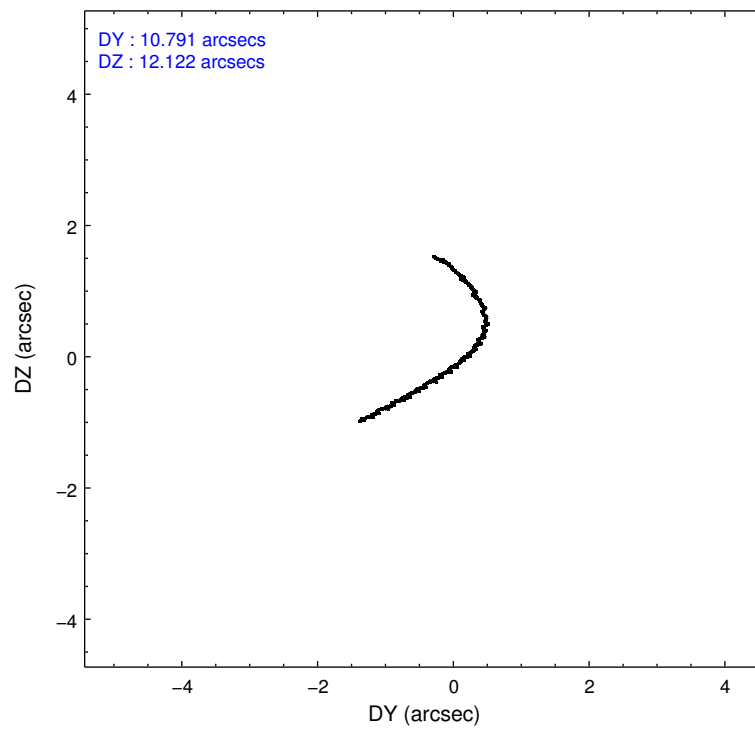
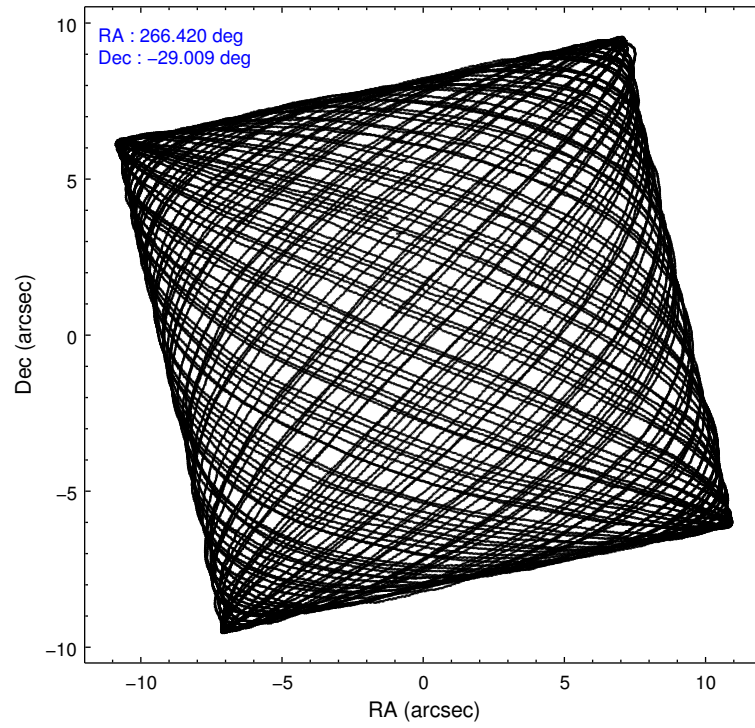
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	514162	324117	434126	411175	303236
rejected events	244801	261717	214634	285736	258826
rejected %	47%	80%	49%	69%	85%

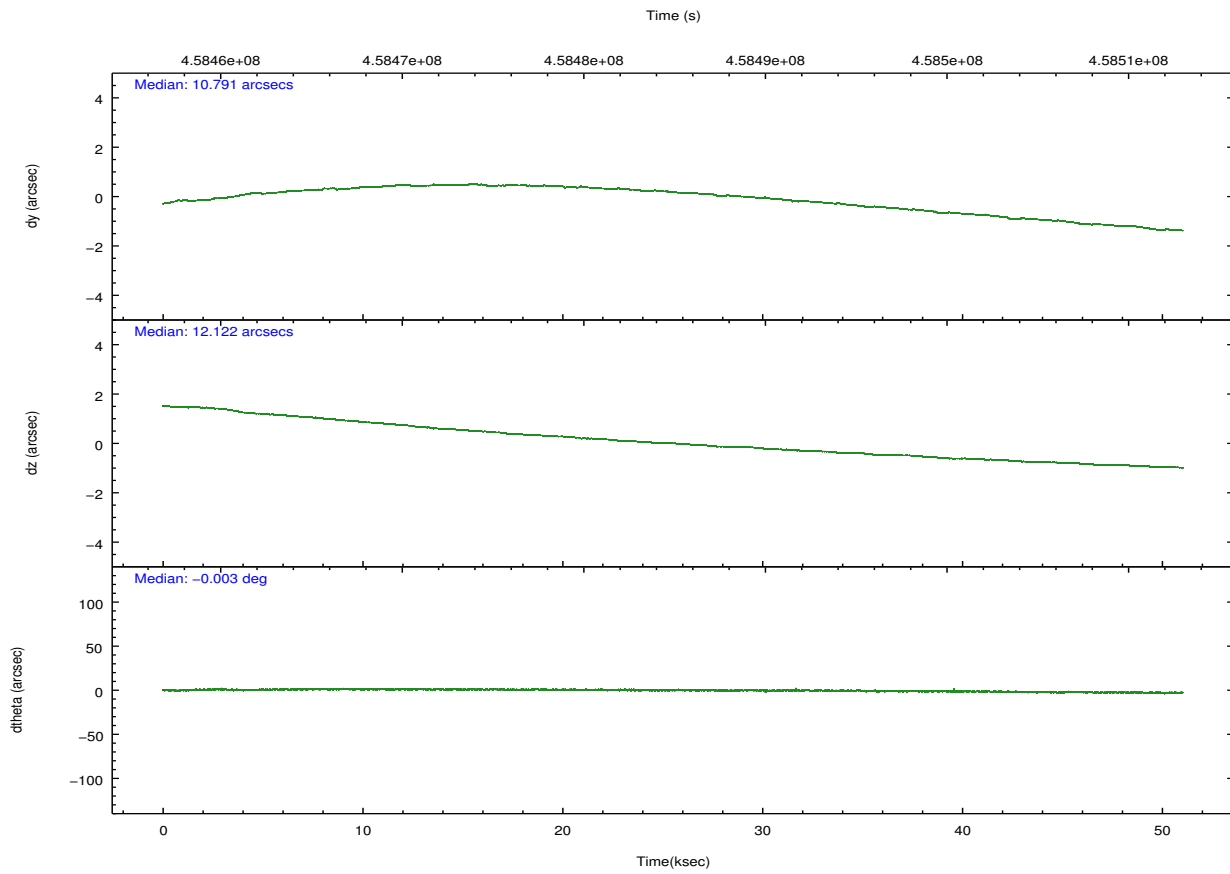
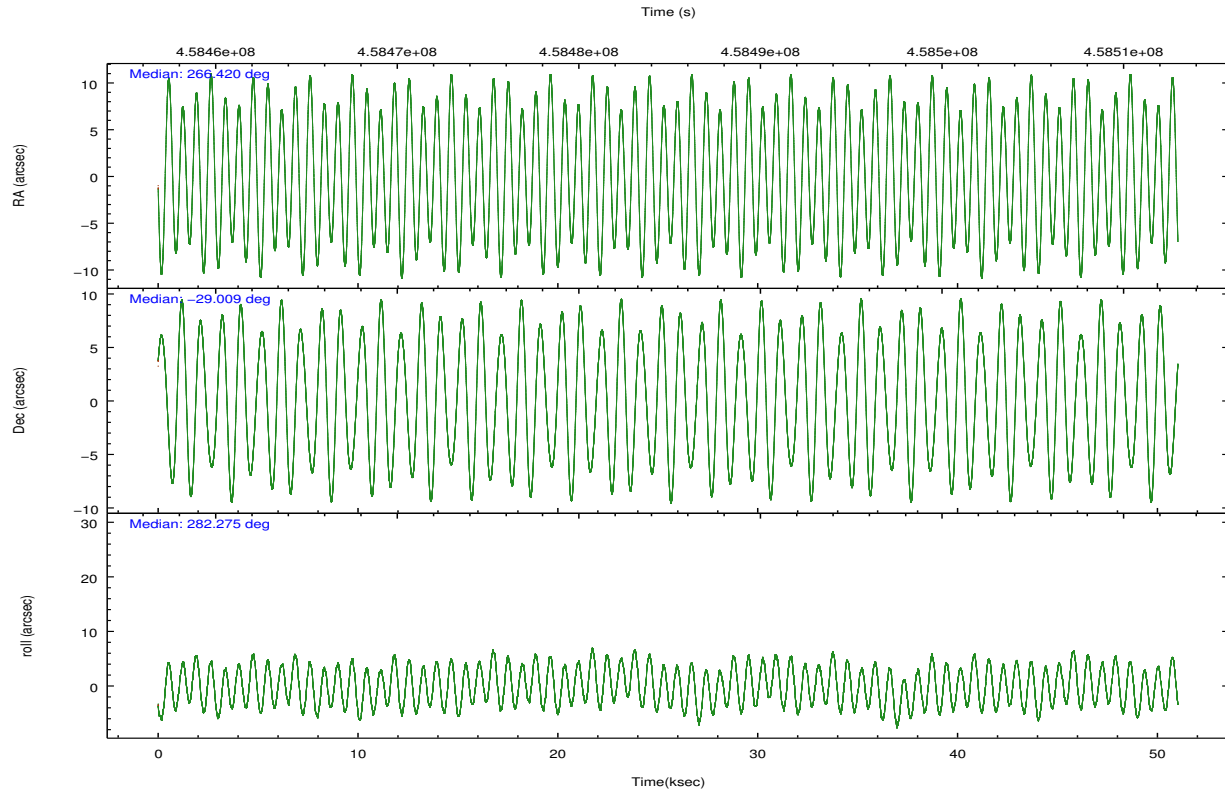
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	45798	29714	25462	41554	17960
	8%	9%	5%	10%	5%
grade 1 events	919	216	491	361	208
	0%	0%	0%	0%	0%
grade 2 events	79379	11878	46773	27448	9037
	15%	3%	10%	6%	2%
grade 3 events	9650	4978	19944	13225	4251
	1%	1%	4%	3%	1%
grade 4 events	9049	4847	19850	12572	4079
	1%	1%	4%	3%	1%
grade 5 events	35362	14354	40086	21011	16051
	6%	4%	9%	5%	5%
grade 6 events	125845	11067	107723	30922	9152
	24%	3%	24%	7%	3%
grade 7 events	208160	247063	173797	264082	242498
	40%	76%	40%	64%	79%

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	266.398566	266.4199111814464	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988871	-29.00884600384358	Alternating exposures requested	N	N
[deg] Pointing Roll	282.116233	282.2832070800804	[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)	458459392.184000	458459392.184			
Observation start date	2012-07-12T05:48:45	2012-07-12T05:49:52			
[s] Observation end time (MET)	458510418.230000	458510418.23			
Observation end date	2012-07-12T20:00:18	2012-07-12T20:00:18			
Read mode	TIMED	TIMED			

2.3 Aspect



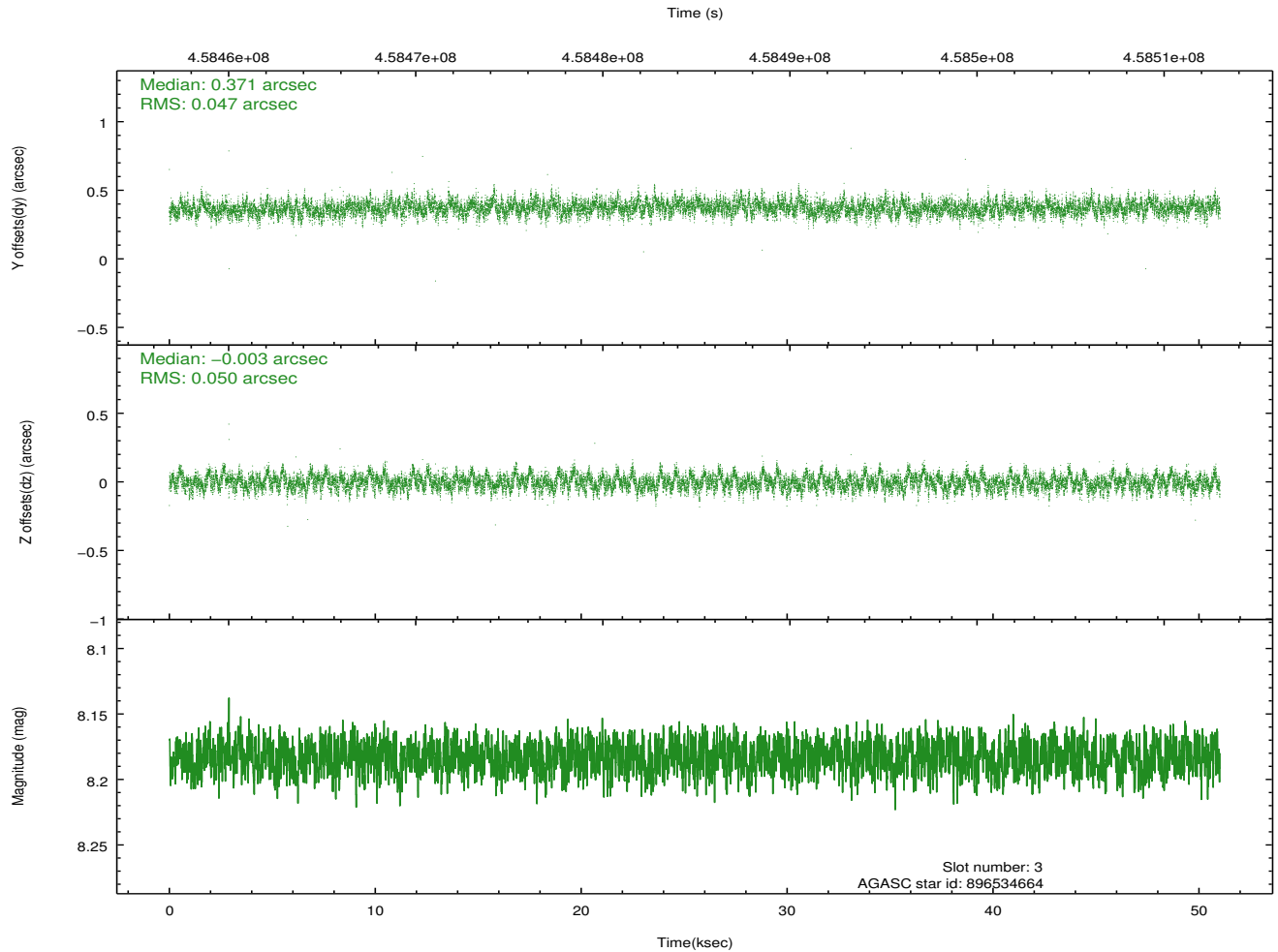
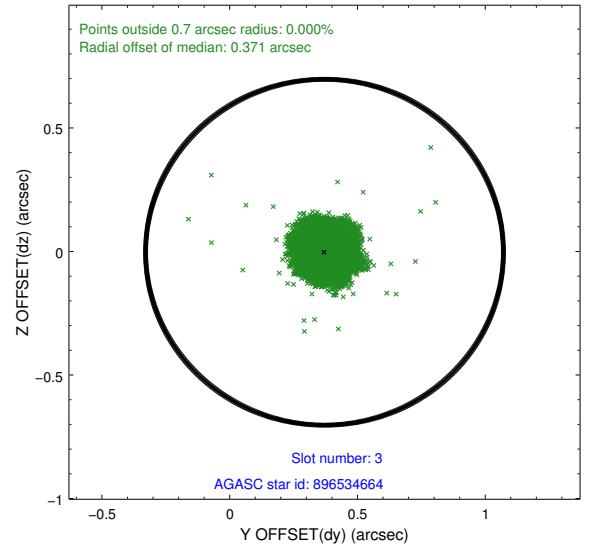
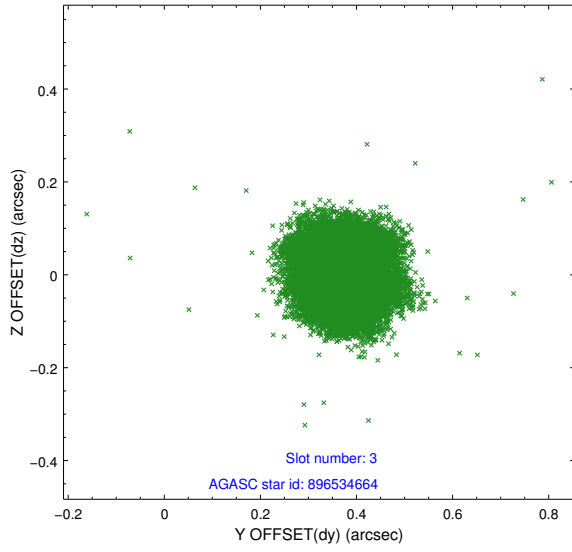


Slot Statistics

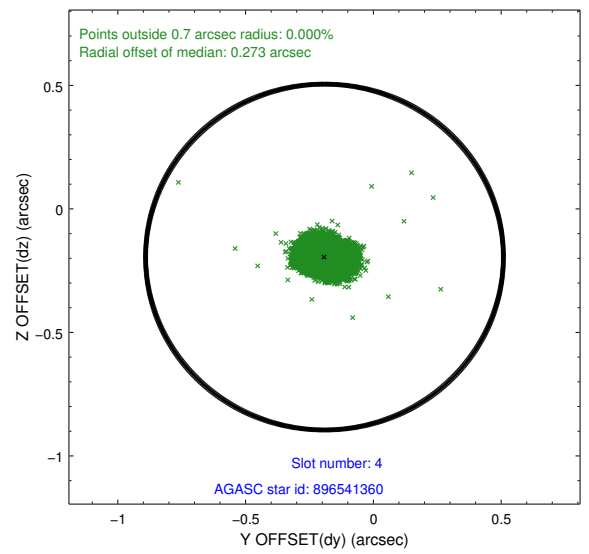
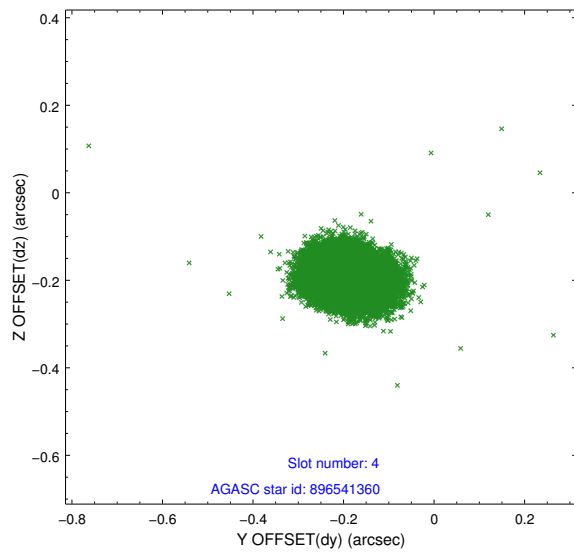
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.95	12446	-0.060	-0.028	0.018	0.032	0.000000	0.000000	-763.57	-1733.54
1	FID	ACIS-S-4	7.04	12446	0.195	0.038	0.022	0.032	0.000000	0.000000	2149.99	175.00
2	FID	ACIS-S-5	7.08	12444	-0.165	0.000	0.020	0.028	0.000000	0.000000	-1816.52	168.65
3	GUIDE	896534664	8.18	24883	0.371	-0.003	0.073	0.118	266.405570	-28.407461	-2041.01	460.82
4	GUIDE	896541360	7.73	24885	-0.191	-0.195	0.060	0.097	266.684478	-29.453744	1825.58	525.01
5	GUIDE	896541576	8.20	24885	-0.163	0.008	0.060	0.097	267.051055	-28.762912	-357.53	2182.90
6	GUIDE	896403520	9.02	24882	0.265	0.103	0.092	0.151	265.626481	-28.748780	-1347.80	-2202.78
7	GUIDE	896540808	7.45	24886	-0.285	0.080	0.046	0.074	265.985401	-29.308604	855.77	-1509.97

2.4 Star Slots

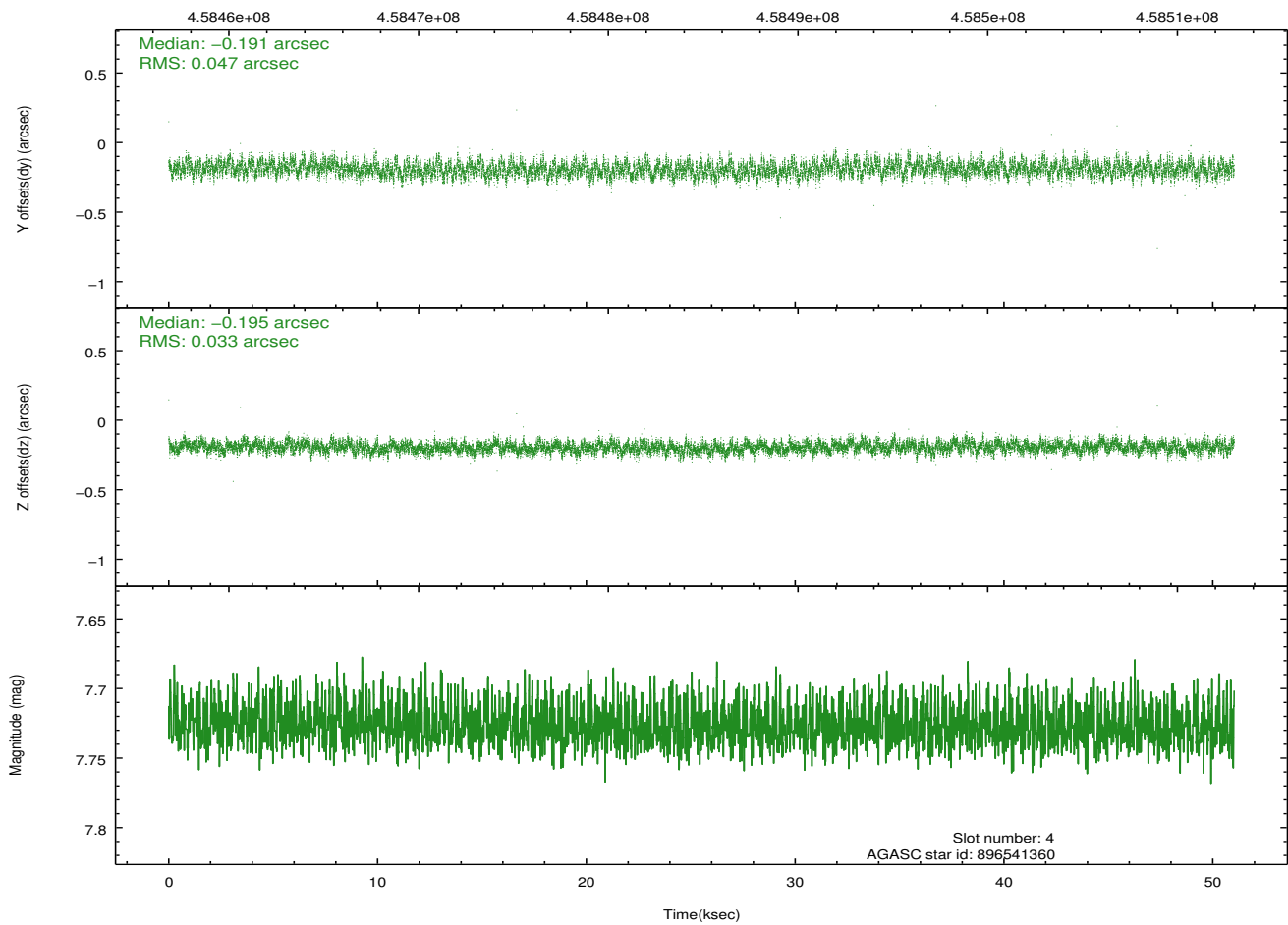
2.4.1 Slot 3



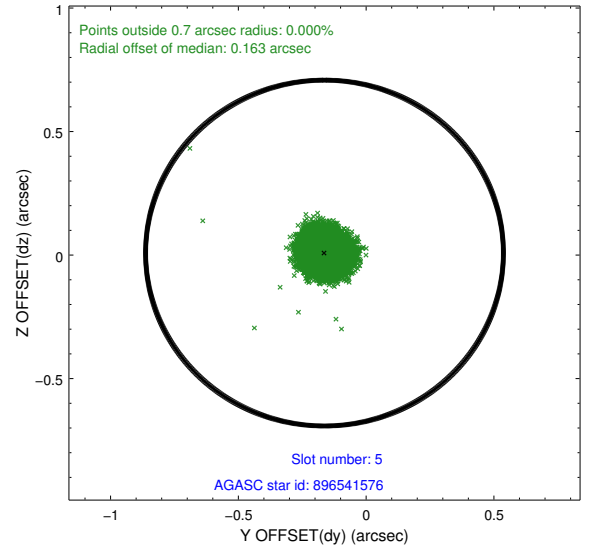
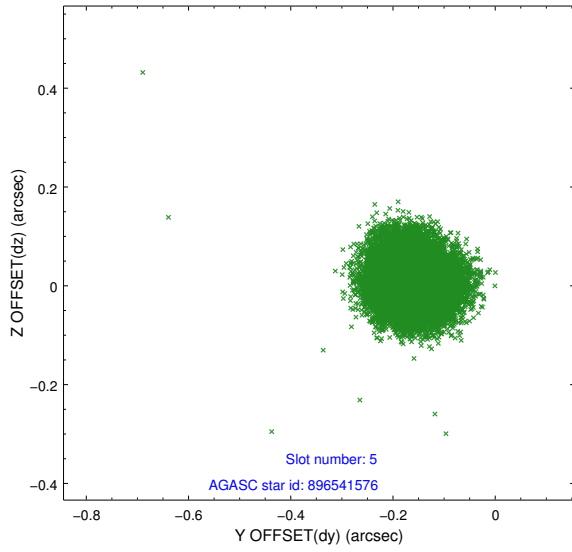
2.4.2 Slot 4



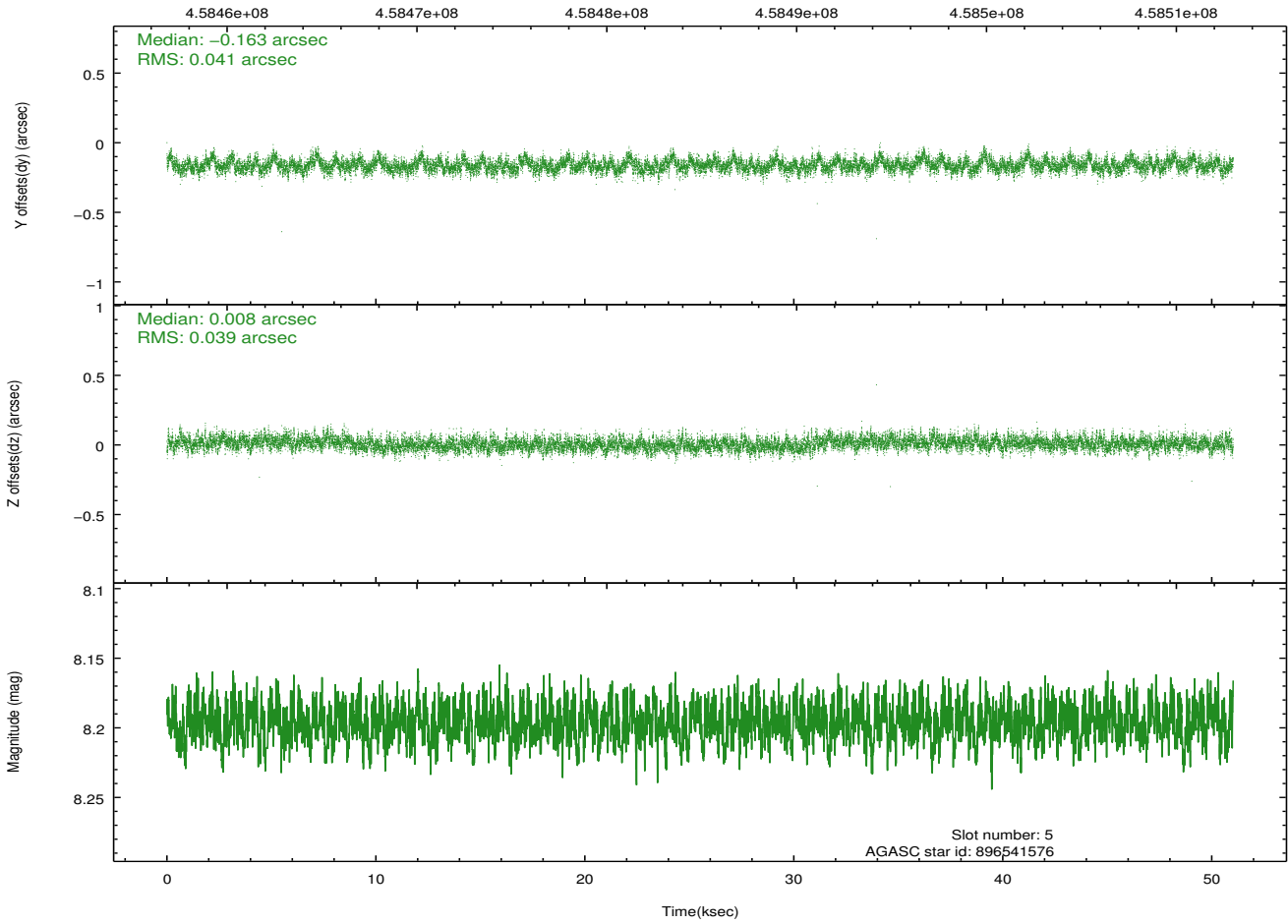
Time (s)



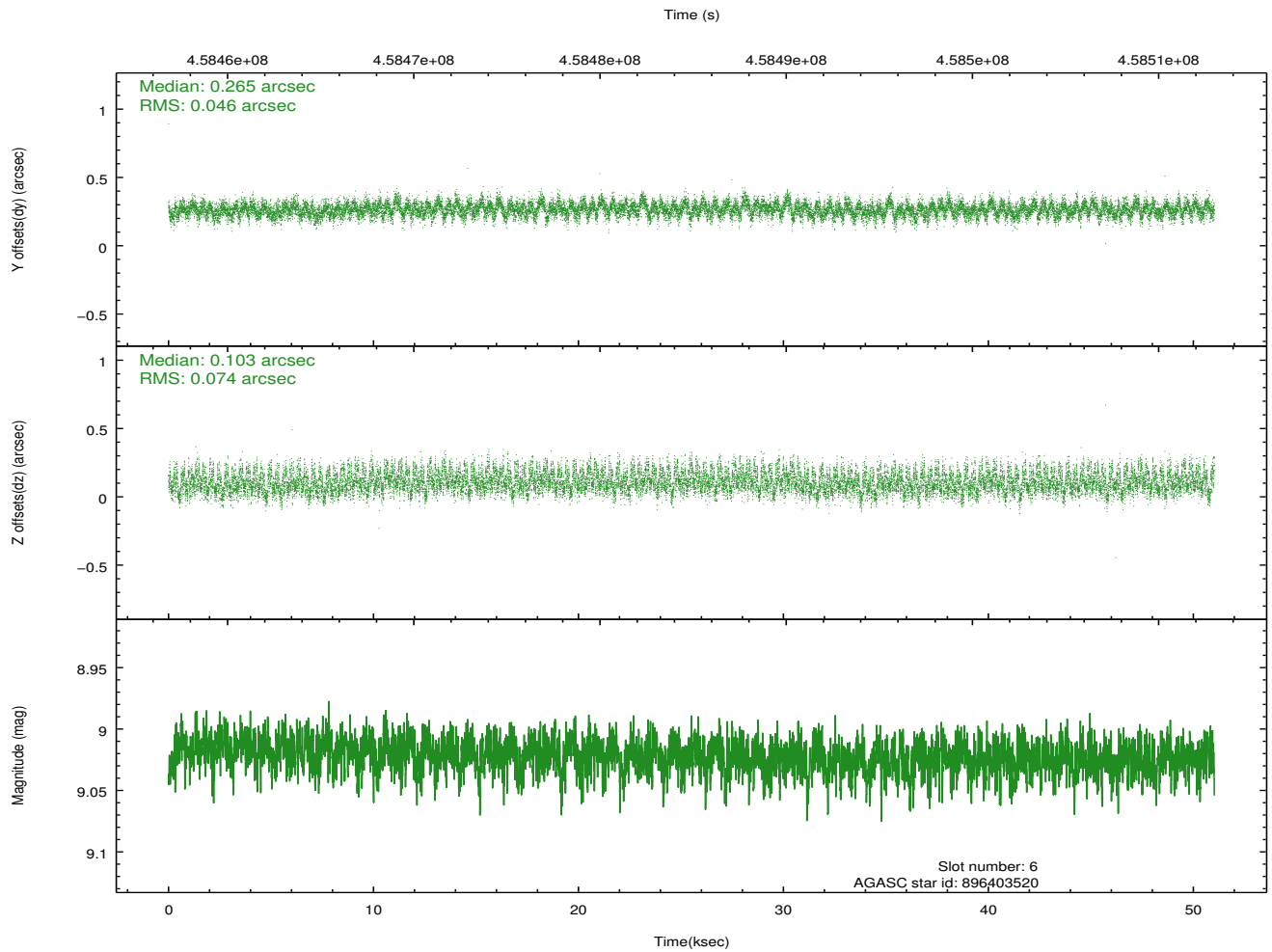
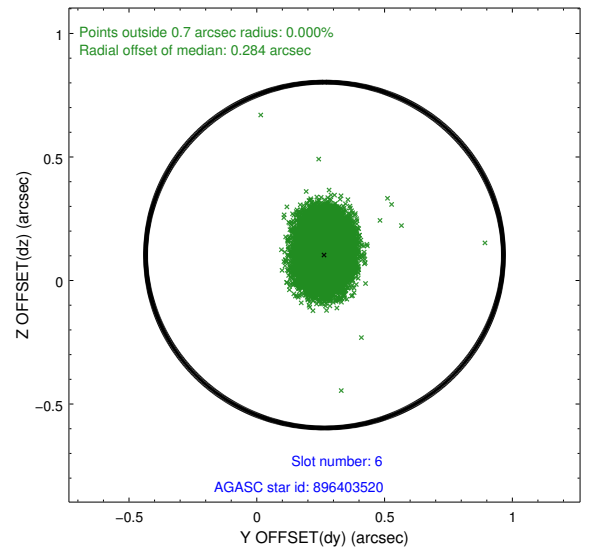
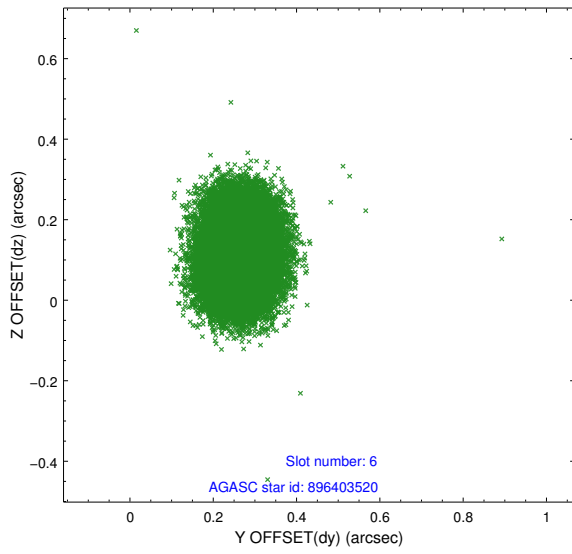
2.4.3 Slot 5



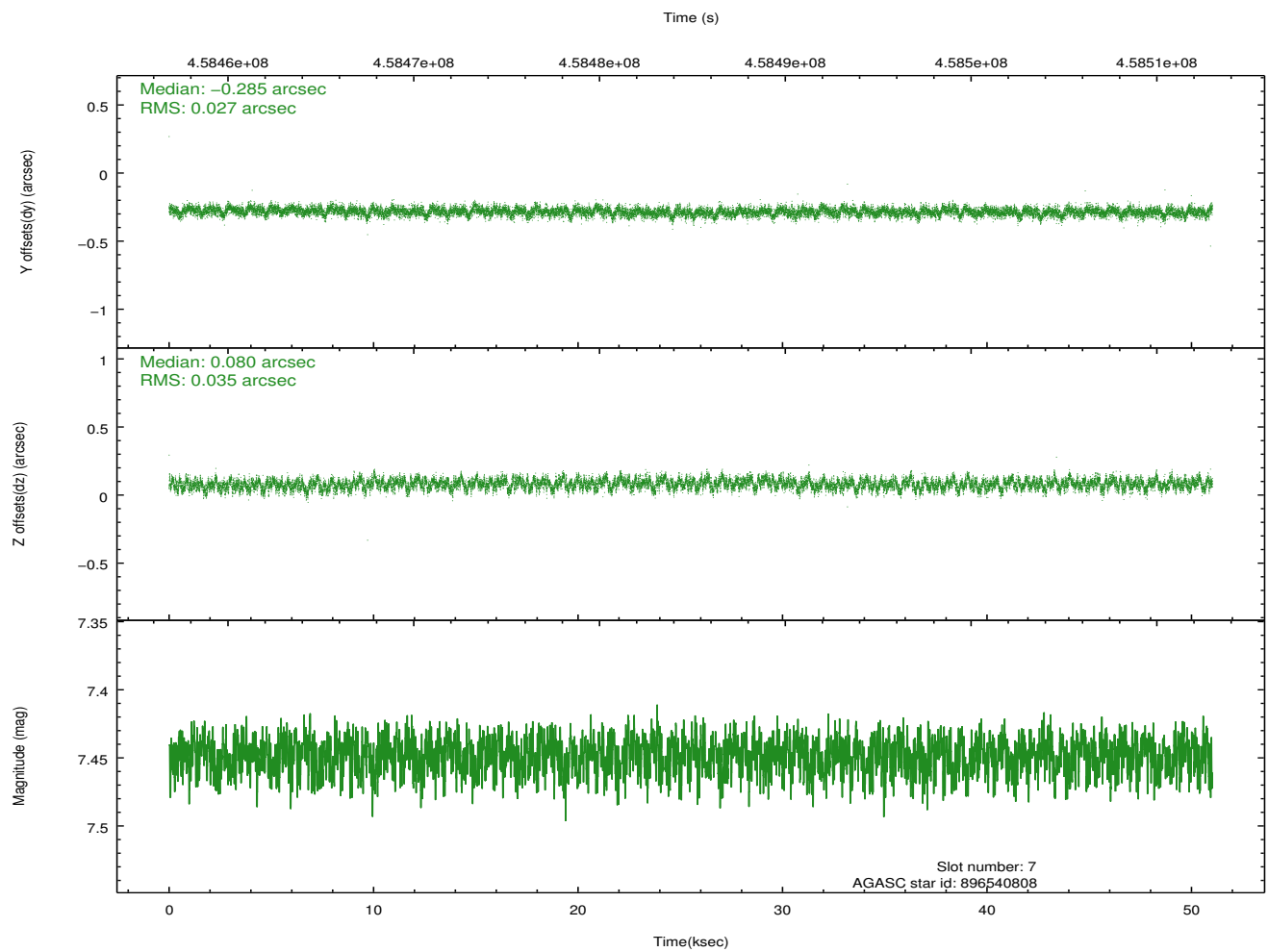
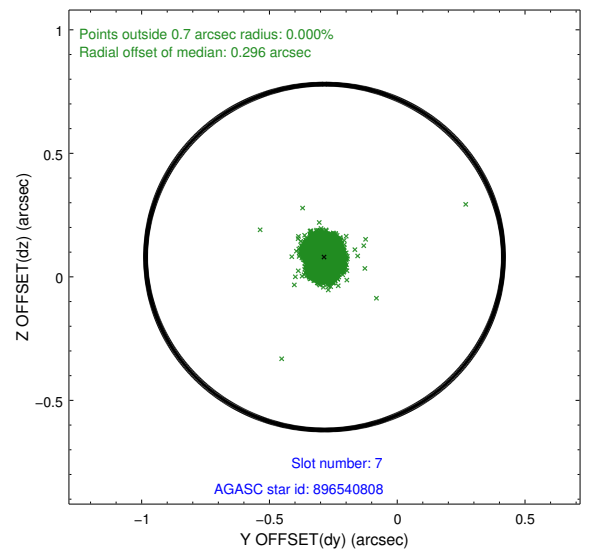
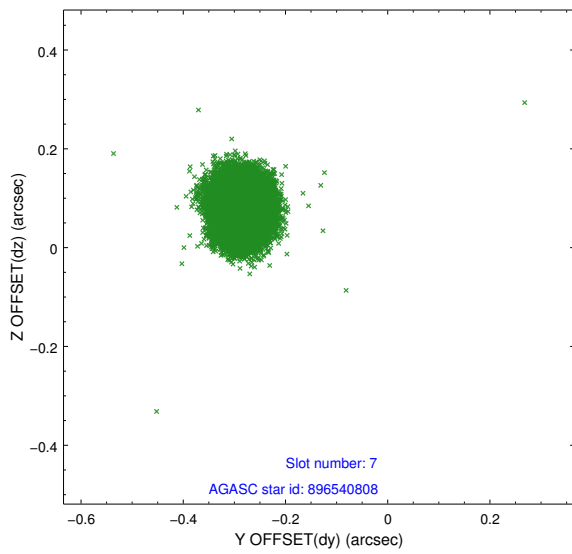
Time (s)



2.4.4 Slot 6

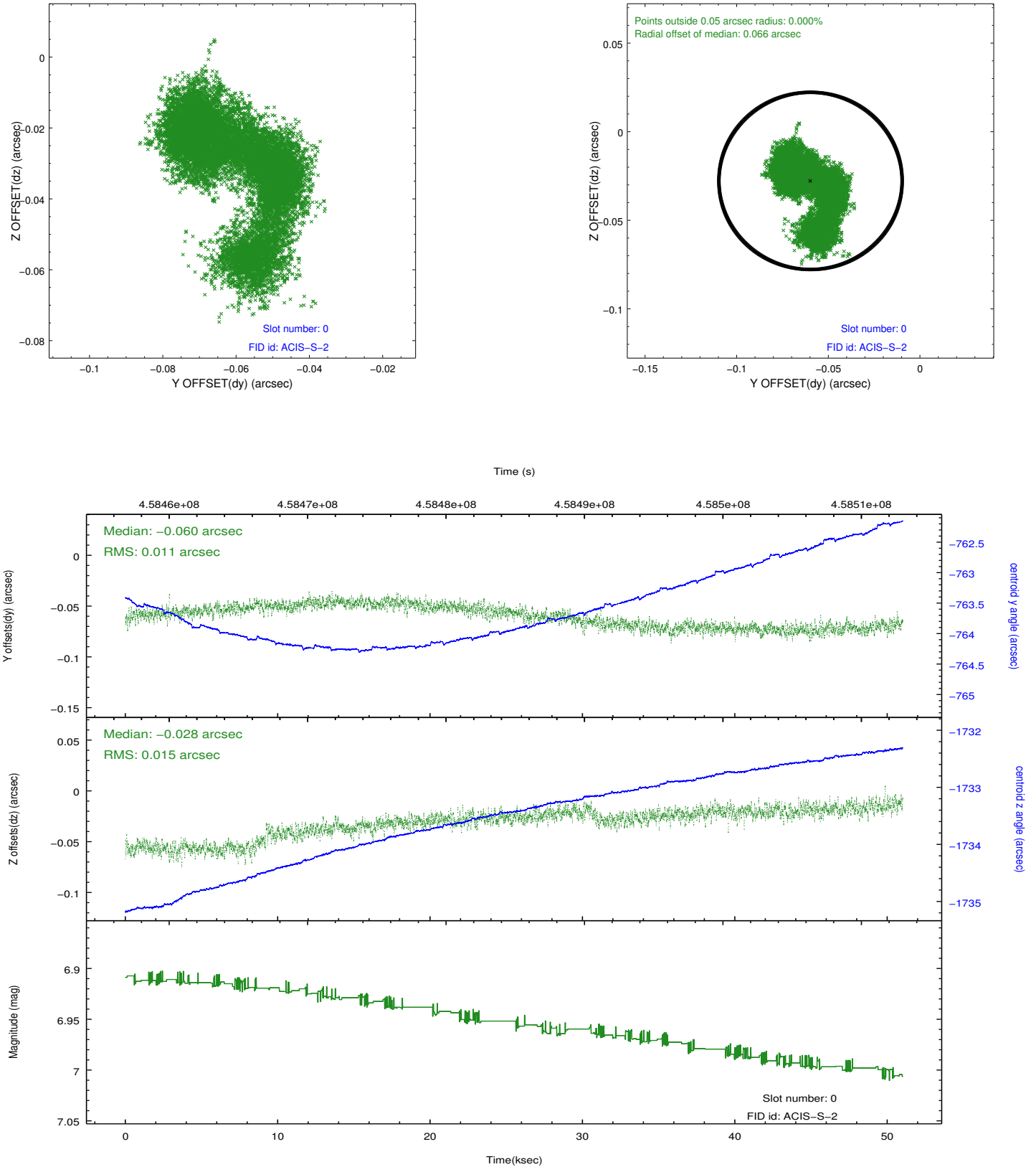


2.4.5 Slot 7

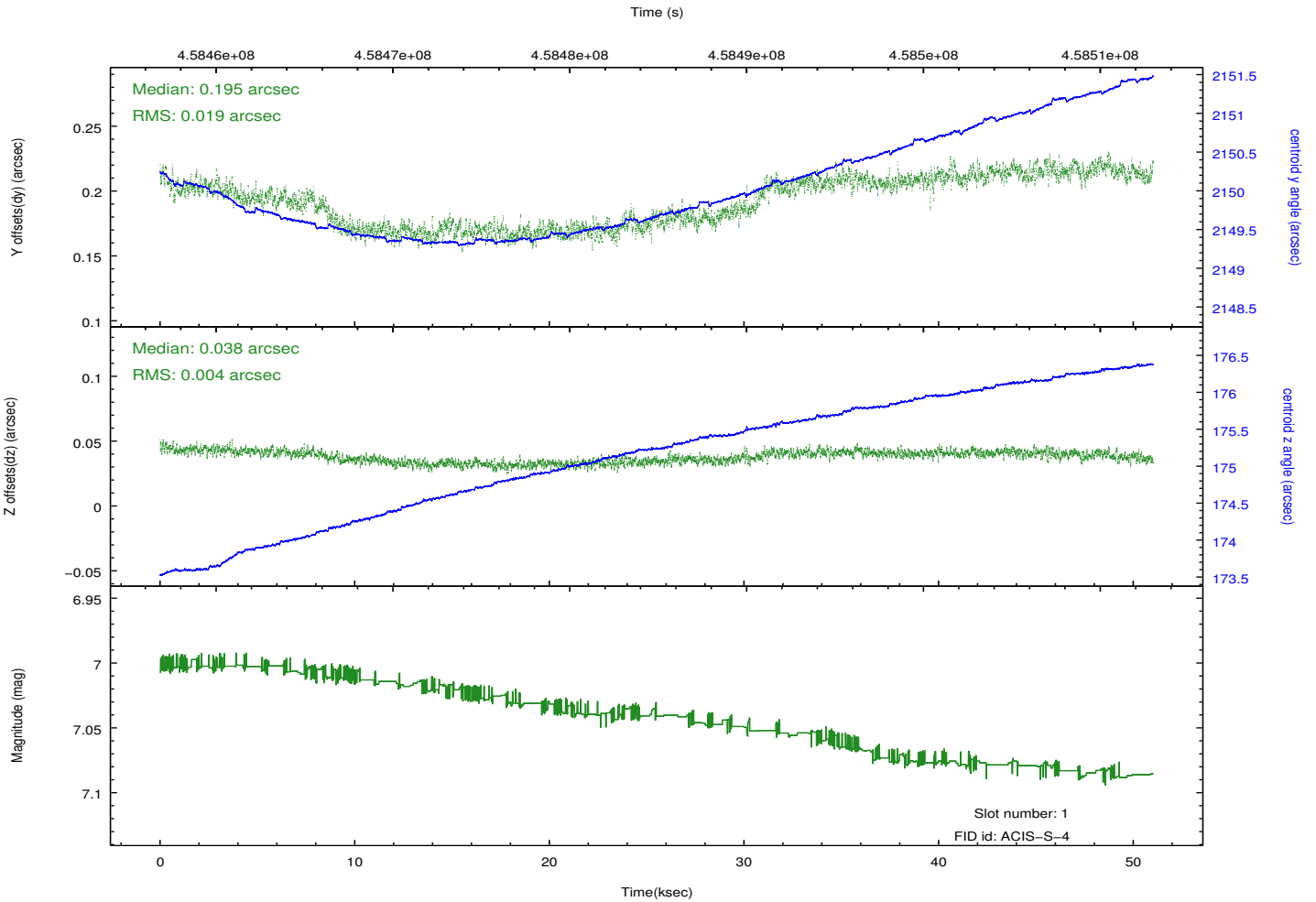
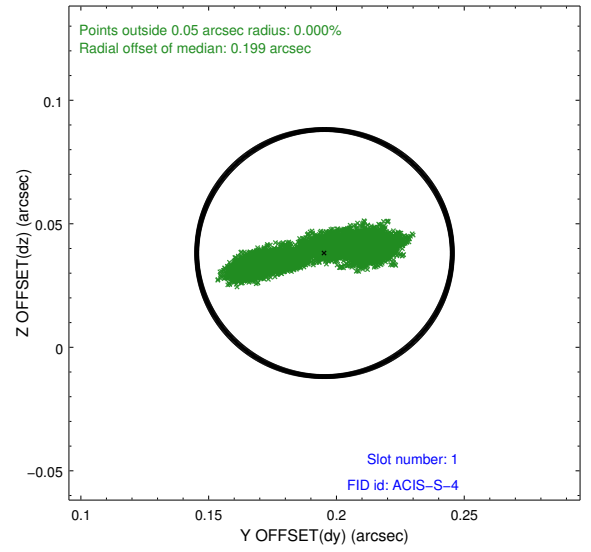
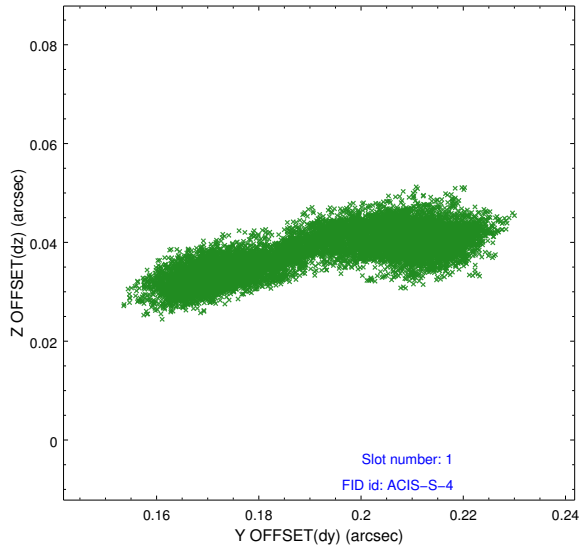


2.5 FID Slots

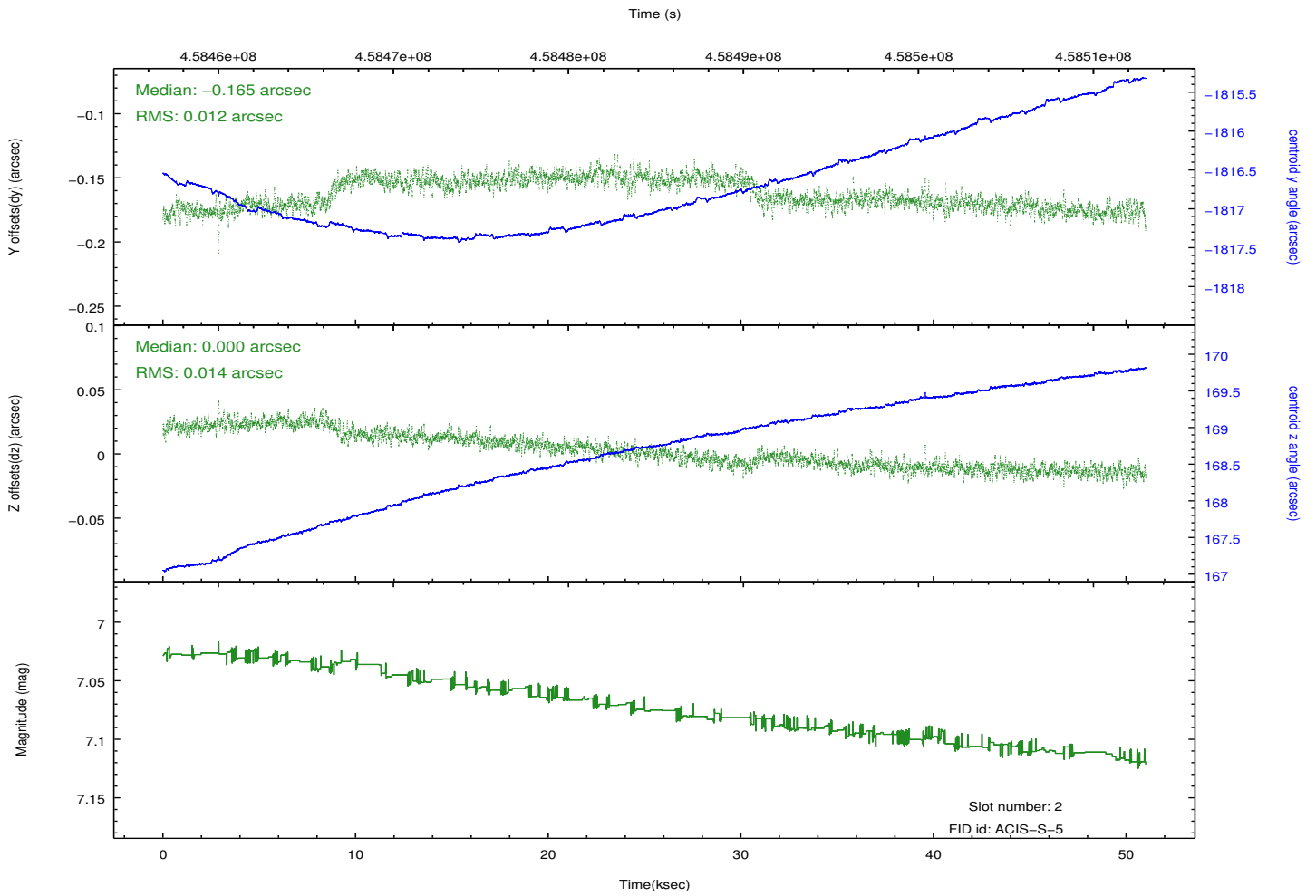
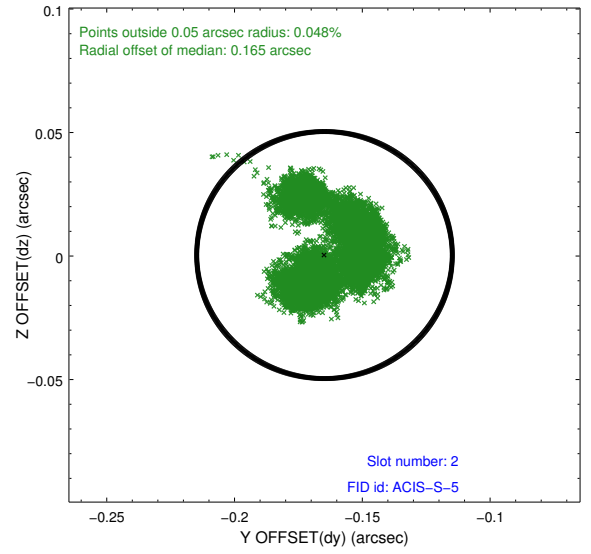
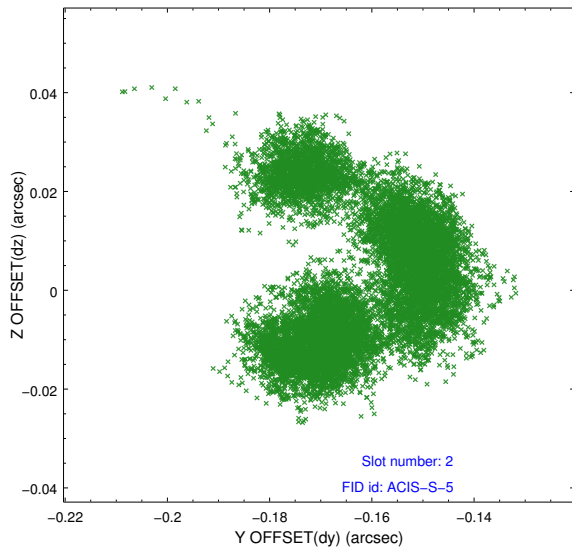
2.5.1 Slot 0



2.5.2 Slot 1

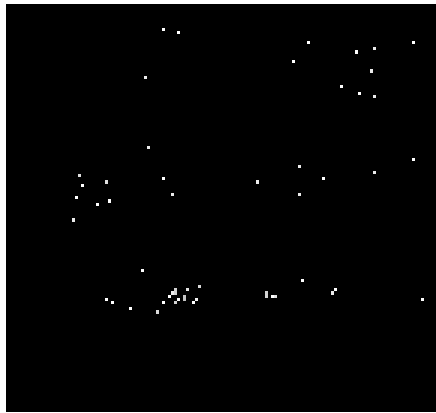


2.5.3 Slot 2

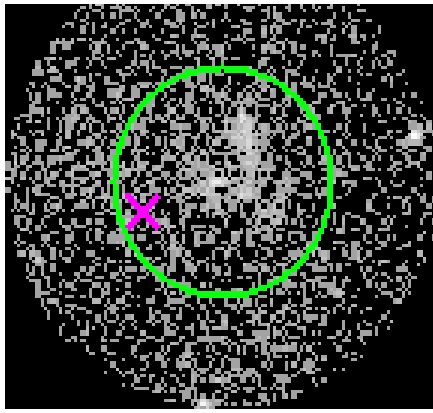


3 Gratings

3.1 HEG Arm



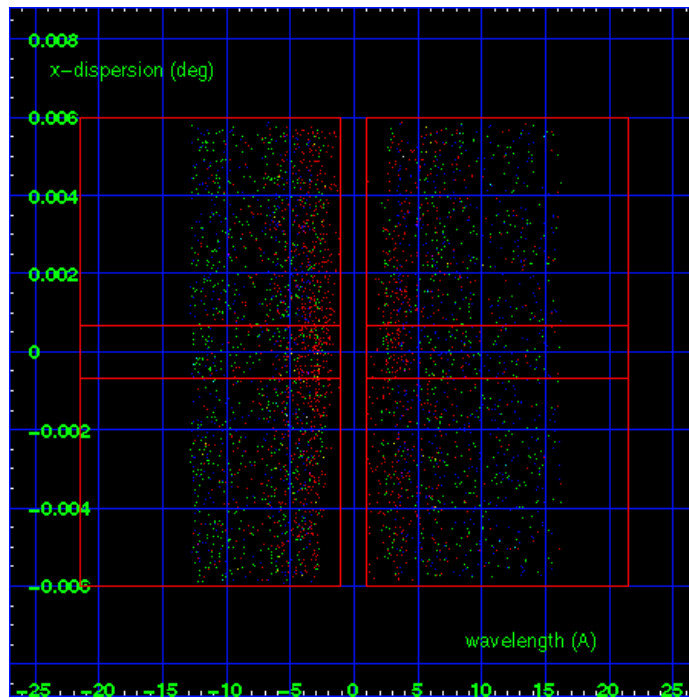
HEG Order Sort 123



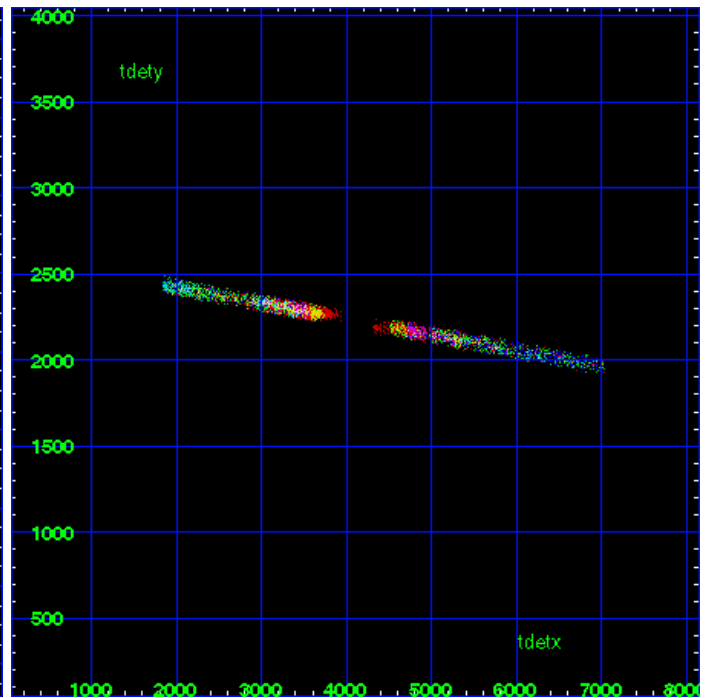
HEG Zero Order



HEG Order Sort ALL

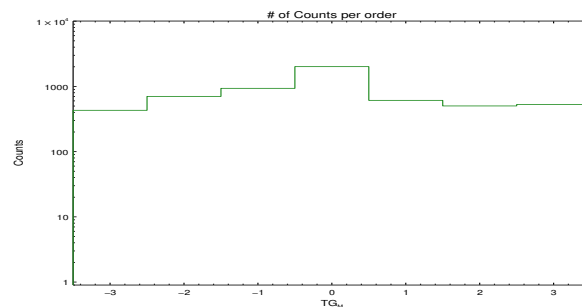


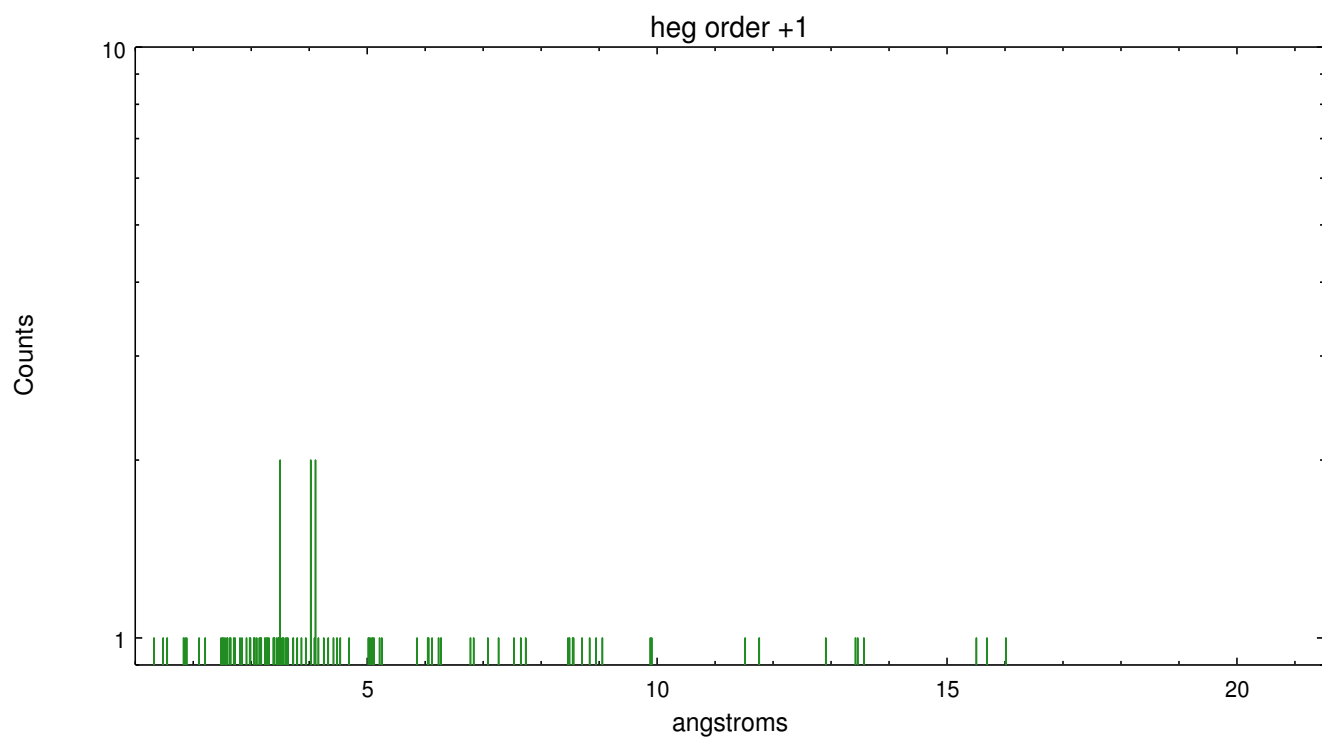
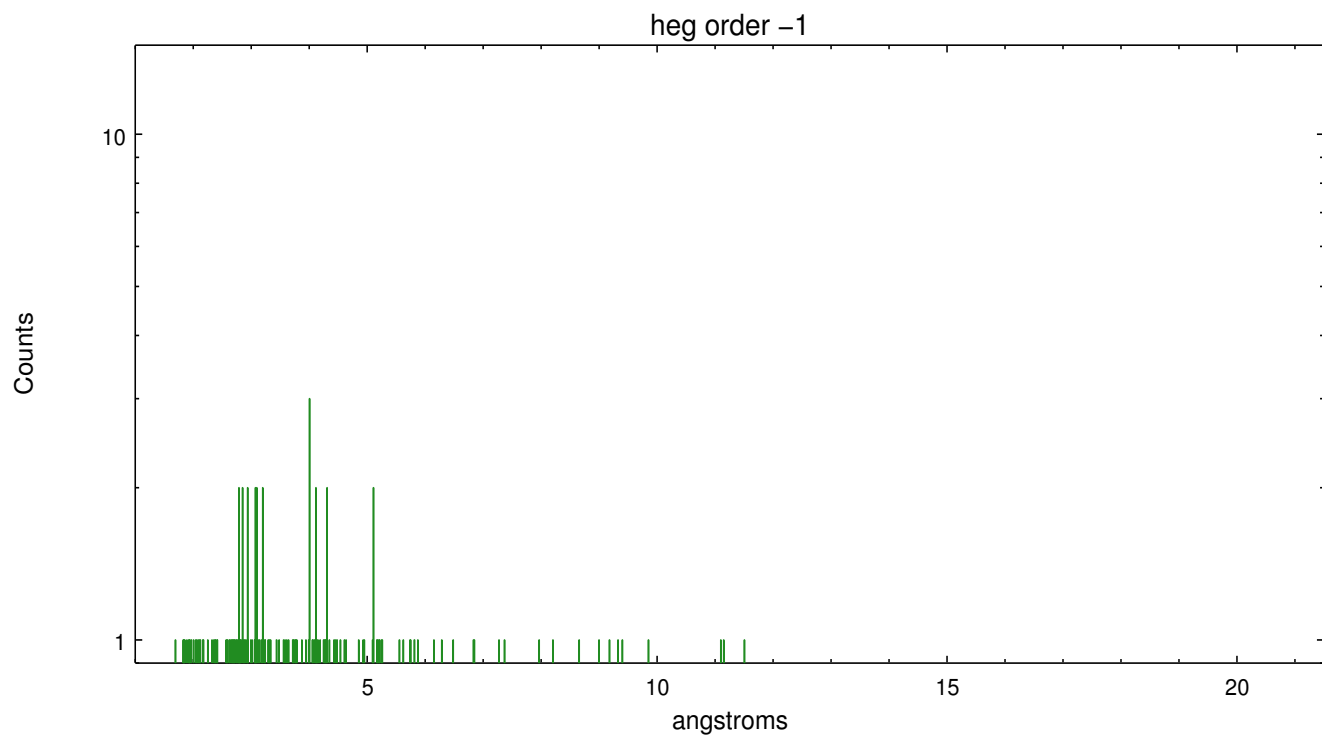
Spot Image HEG



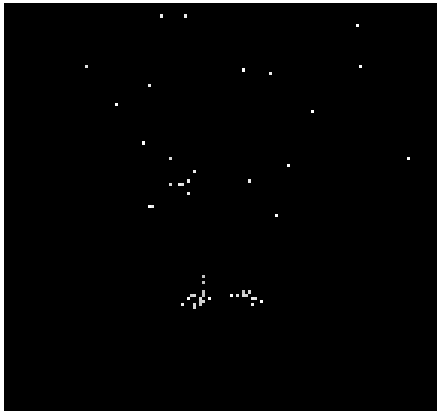
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	430	703	934	2011	611	502	527

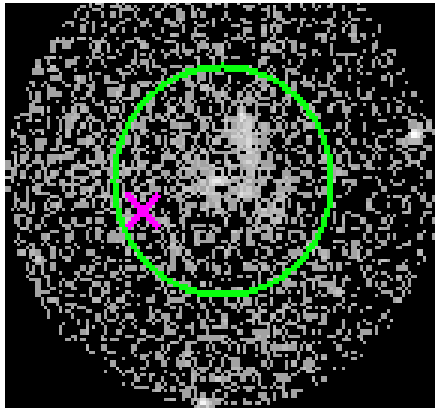




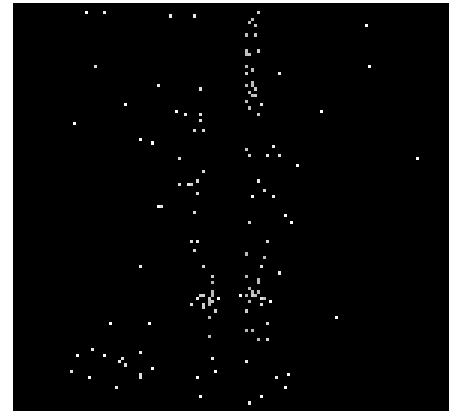
3.2 MEG Arm



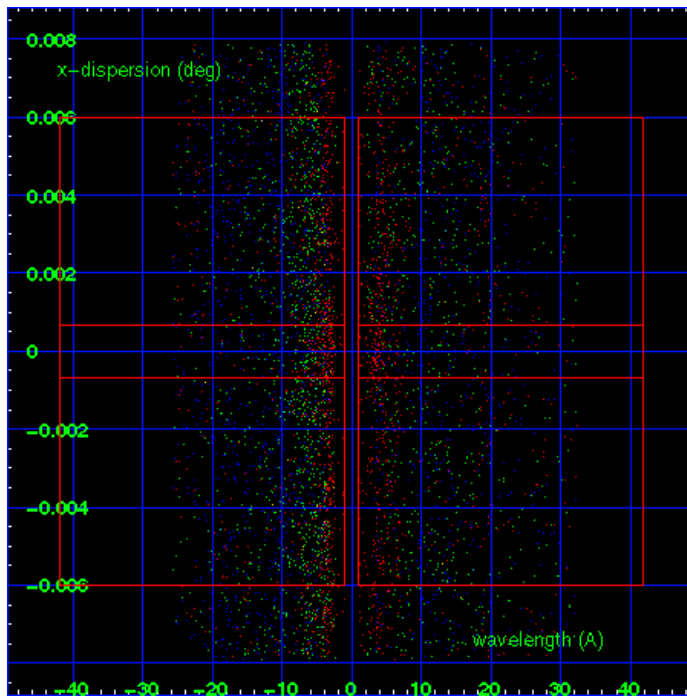
MEG Order Sort 123



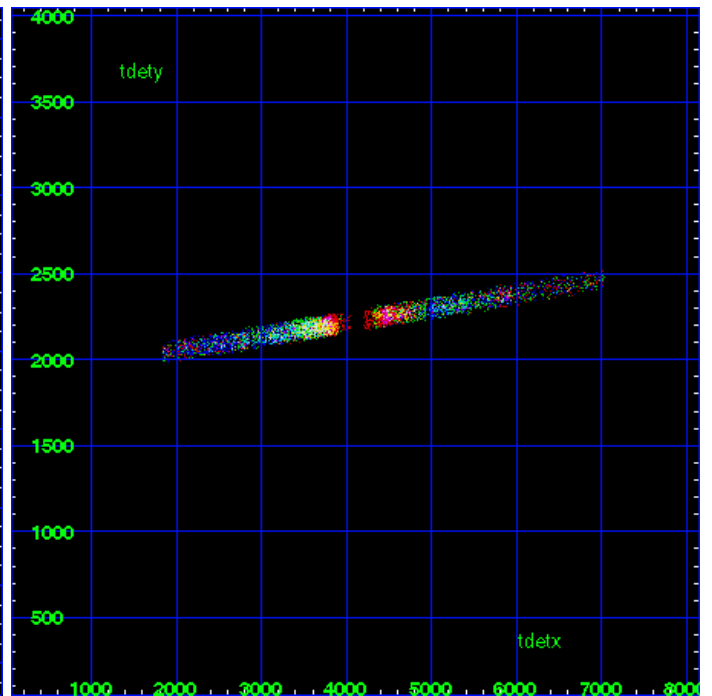
MEG Zero Order



MEG Order Sort ALL

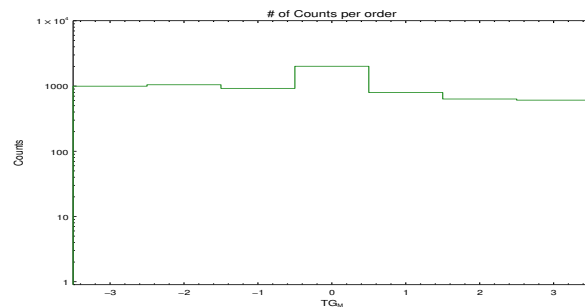


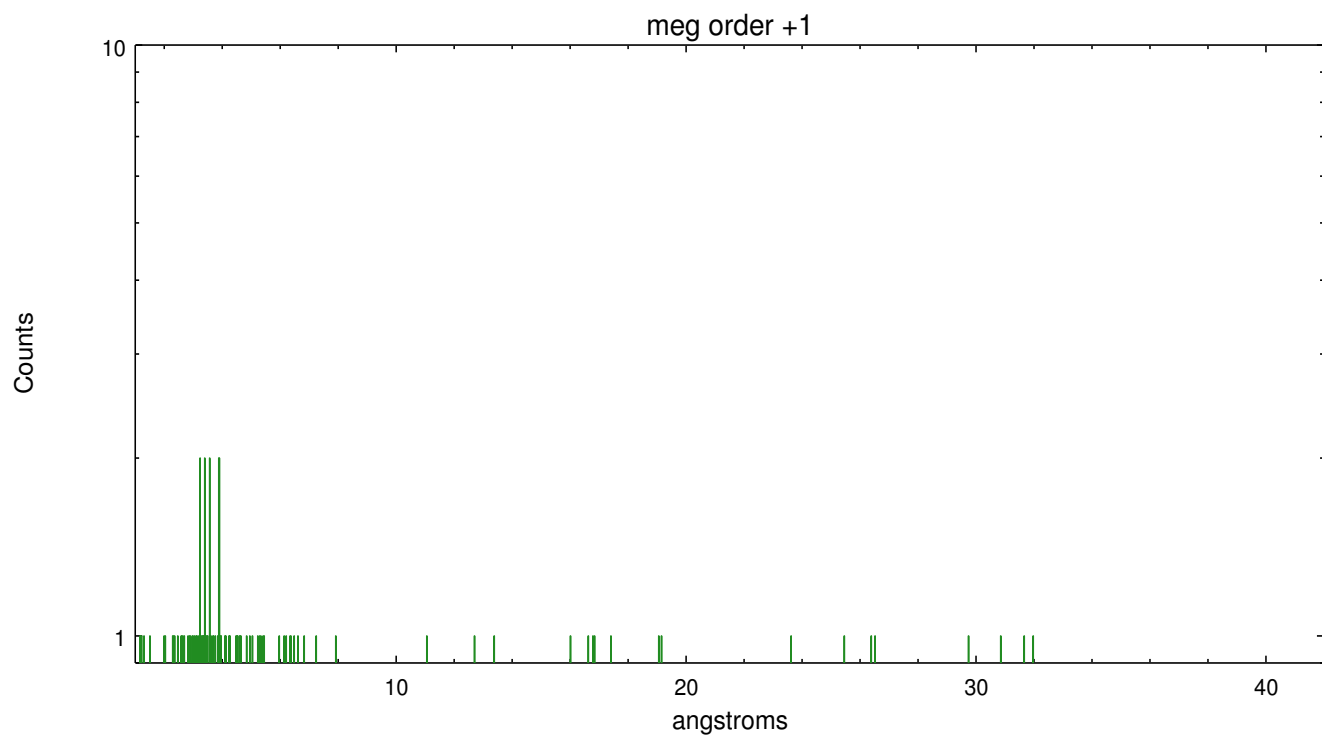
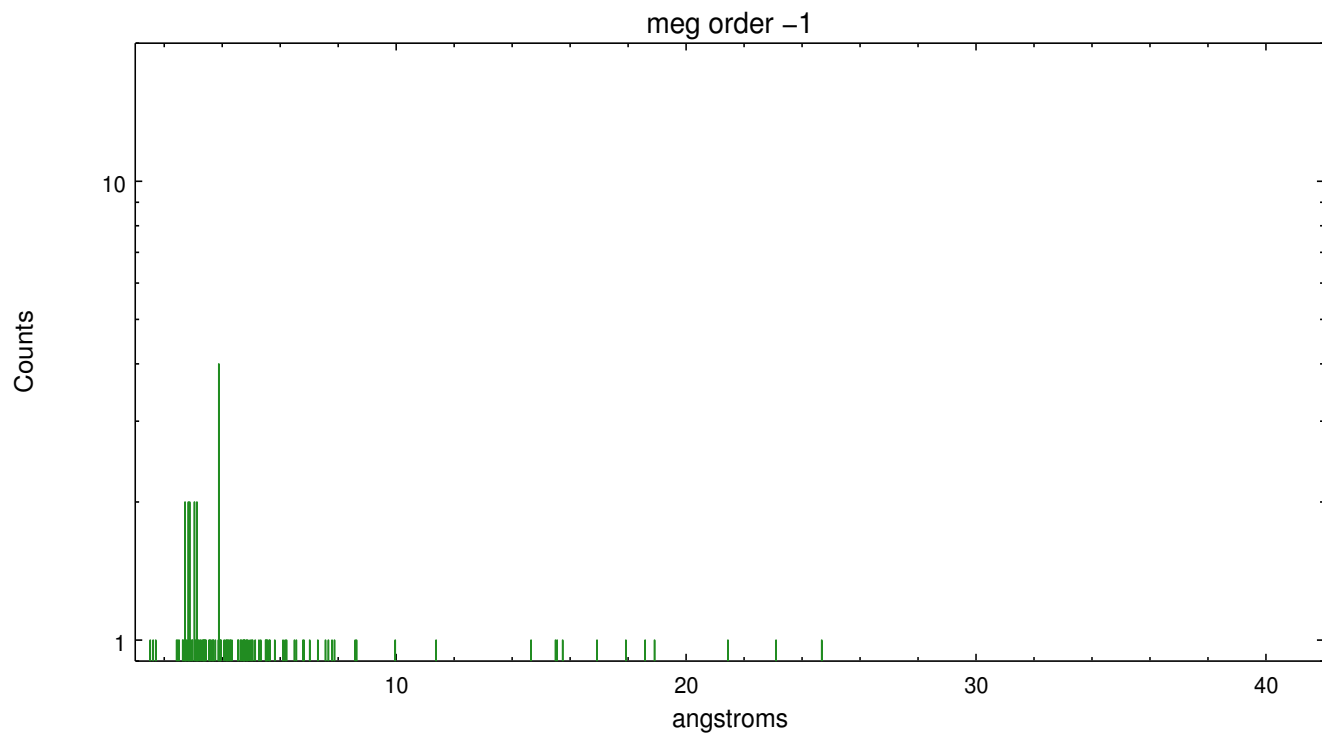
Spot Image MEG



Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	995	1047	921	2011	795	633	608





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	50.970200392008

A.2 Comments

Charge time:

ONTIME of 50970.200392008 seconds is less than 85% of expected scheduled time of 76295.72900000001 seconds

Note: observation interrupted by high radiation (SC107)

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]