

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14463 - L2 Version 2
Chandra X-Ray Center

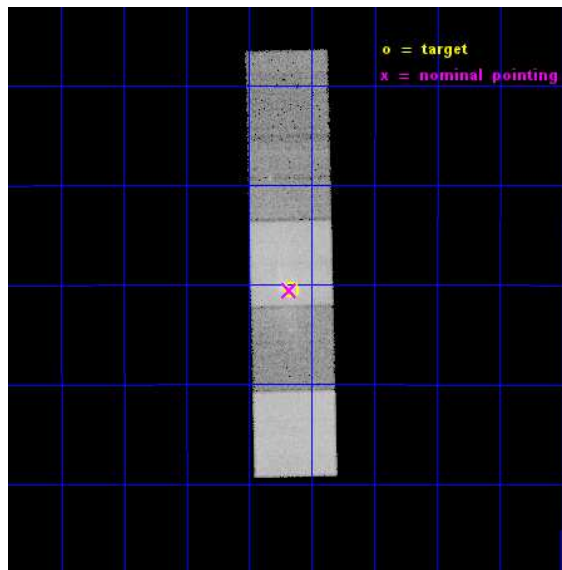
L2 Processing Date : Dec 17 2014

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1 Front

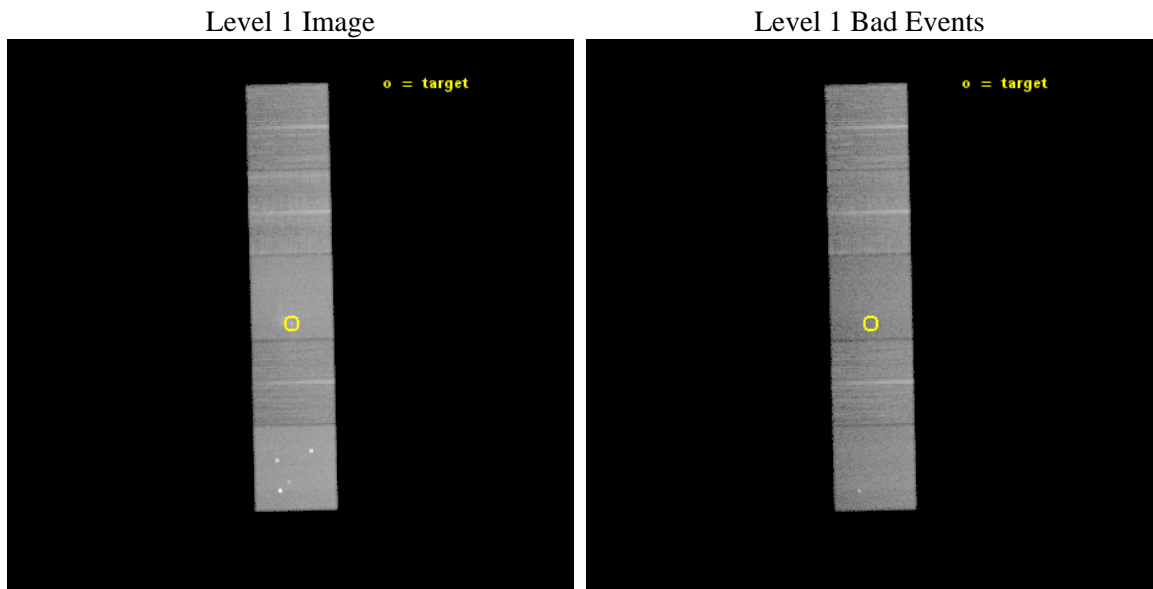
seq_num	601012	Sequence number
obs_id	14463	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41954460465	Nominal RA [deg]
dec_nom	-29.009482566172	Nominal Dec [deg]
roll_nom	268.65802223364	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30773.700236678	Sum of GTIs [s]
livetime	30371.619187817	Livetime [s]
ontime5	30773.700236678	Sum of GTIs [s]
ontime6	30773.700236678	Sum of GTIs [s]
ontime7	30773.700236678	Sum of GTIs [s]
ontime8	30773.700236678	Sum of GTIs [s]
ontime9	30773.700236678	Sum of GTIs [s]
l2events	323206	Number of level 2 events



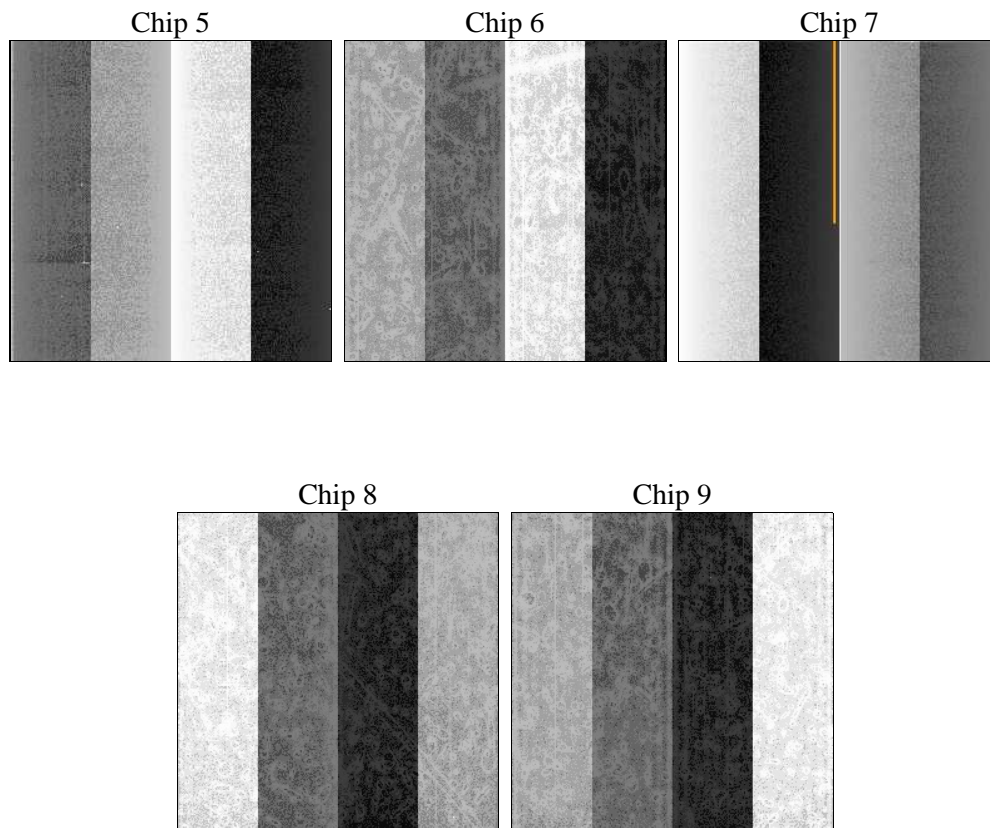
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30710.152000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	30773.700236678	Sum of GTIs [s]
caldbver	4.6.4	 	ontime5	30773.700236678	Sum of GTIs [s]
date	2014-11-28T10:19:21	Date and time of file creation	ontime6	30773.700236678	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	30773.700236678	Sum of GTIs [s]
			ontime8	30773.700236678	Sum of GTIs [s]
			ontime9	30773.700236678	Sum of GTIs [s]
			l1events	1068052	Number of level 1 events
			tgmethod	USER	Method used to create src1a file
			zo_pos	(4114.97, 4108.82)	src1a sky pixel position

2.1.4 Events

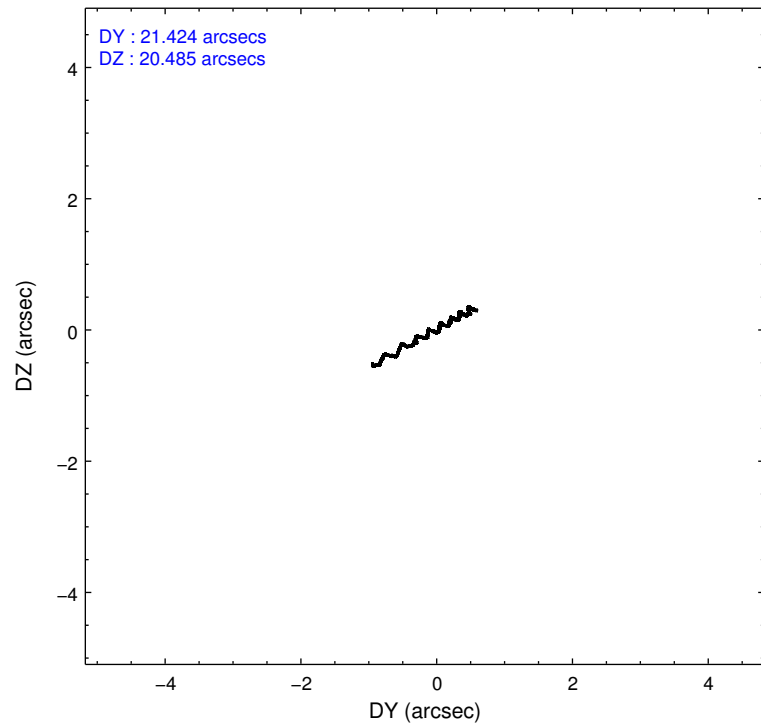
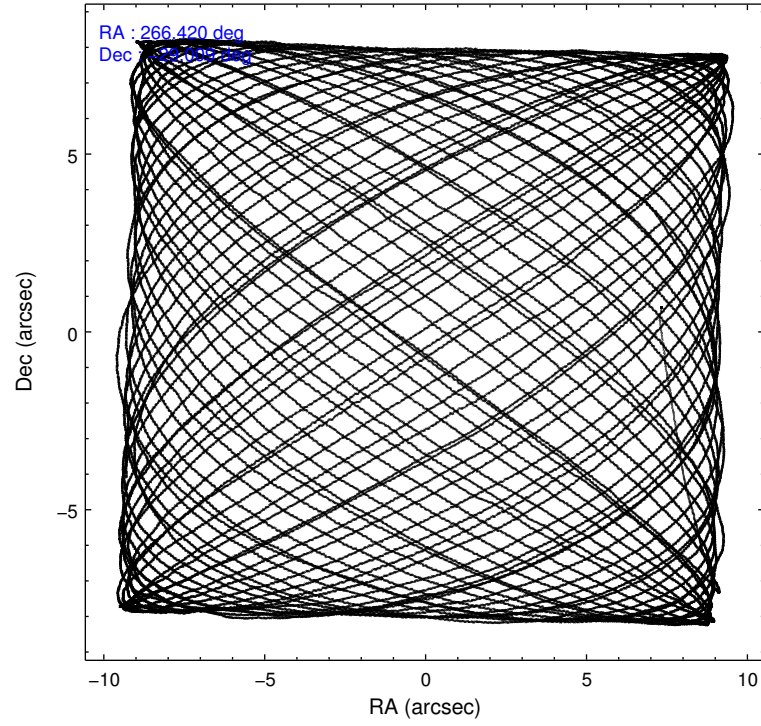
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	276526	173132	239649	217236	161509
rejected events	133312	139150	118217	152371	137453
rejected %	48%	80%	49%	70%	85%

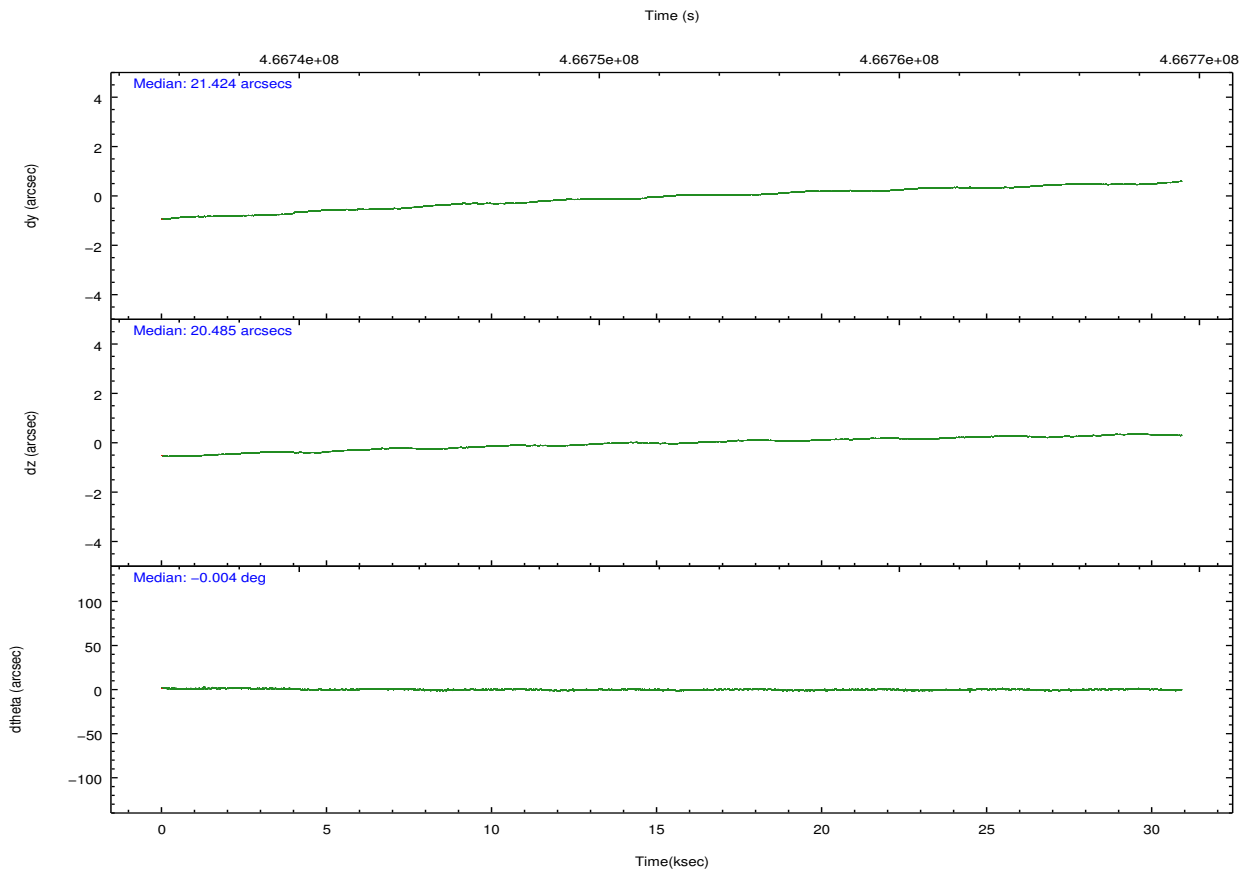
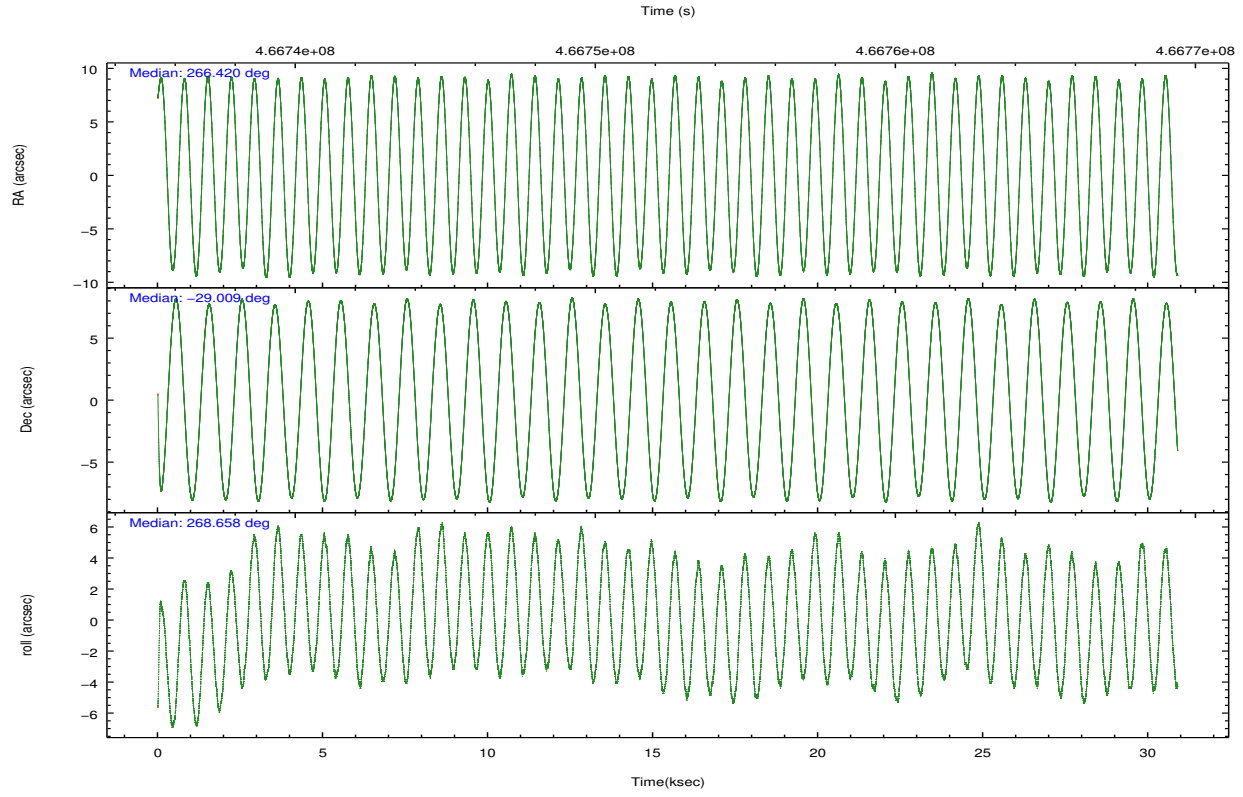
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	20008	16237	14087	23308	10018
	7%	9%	5%	10%	6%
grade 1 events	1104	131	265	182	111
	0%	0%	0%	0%	0%
grade 2 events	45154	6662	26041	14085	4885
	16%	3%	10%	6%	3%
grade 3 events	4714	2699	10905	6260	2341
	1%	1%	4%	2%	1%
grade 4 events	4756	2625	10825	5817	2179
	1%	1%	4%	2%	1%
grade 5 events	19441	8297	21882	11782	9066
	7%	4%	9%	5%	5%
grade 6 events	68597	5763	59588	15401	4643
	24%	3%	24%	7%	2%
grade 7 events	112752	130718	96056	140401	128266
	40%	75%	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	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	266.404171	266.4195446046547	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.985677	-29.00948256617216	Alternating exposures requested	N	N
[deg] Pointing Roll	268.493947	268.6580222336353	[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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	466737159.184000	466736015.13362			
Observation start date	2012-10-16T01:11:32	2012-10-16T00:53:35			
[s] Observation end time (MET)	466767869.184000	466768095.58534			
Observation end date	2012-10-16T09:43:22	2012-10-16T09:48:15			
Read mode	TIMED	TIMED			

2.3 Aspect





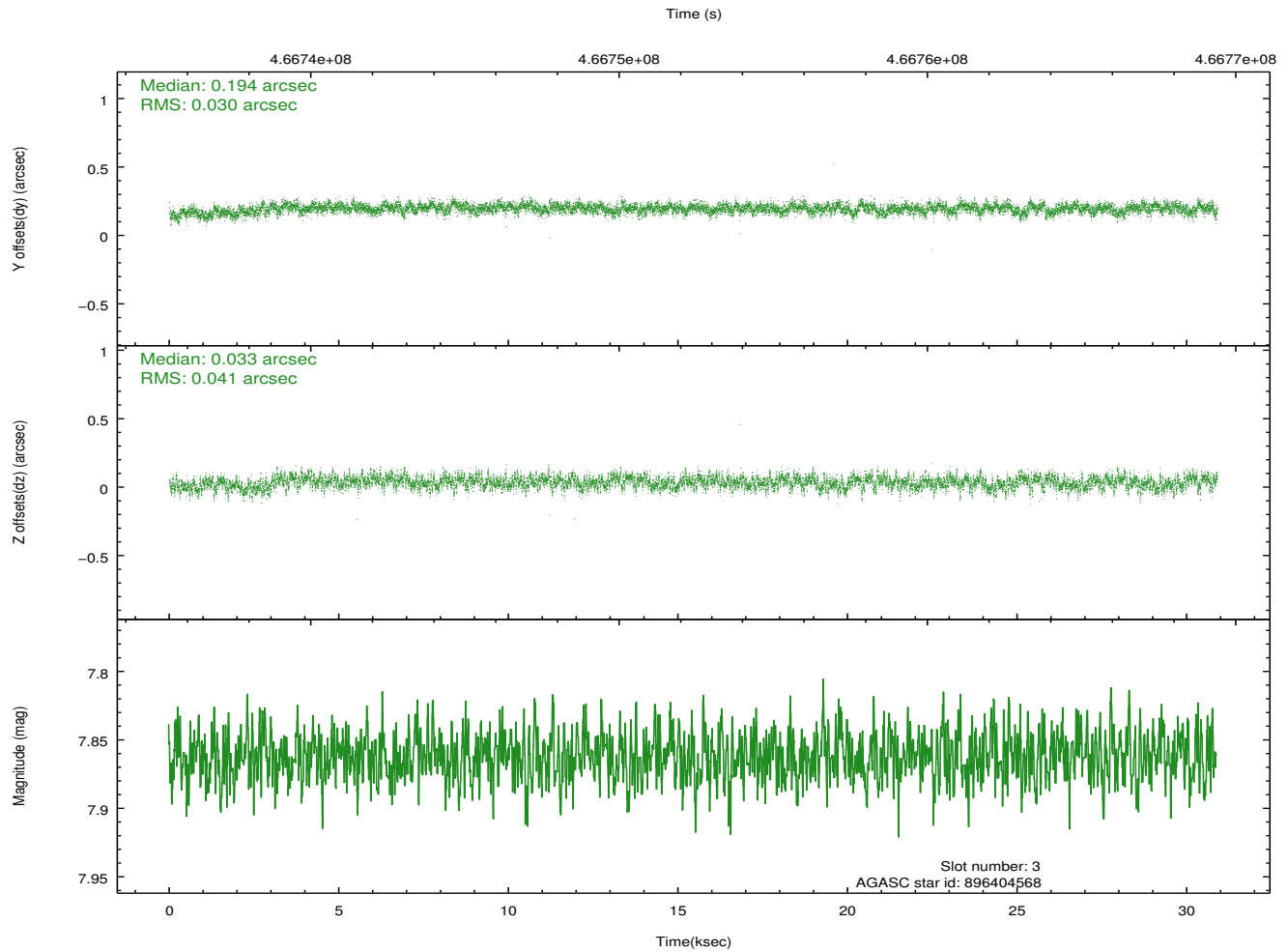
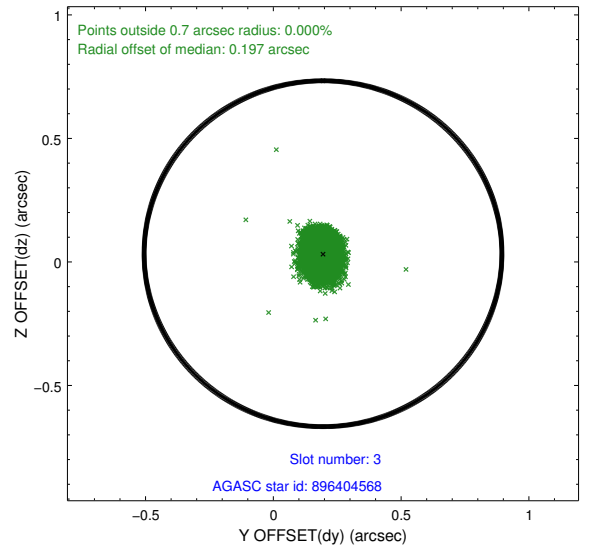
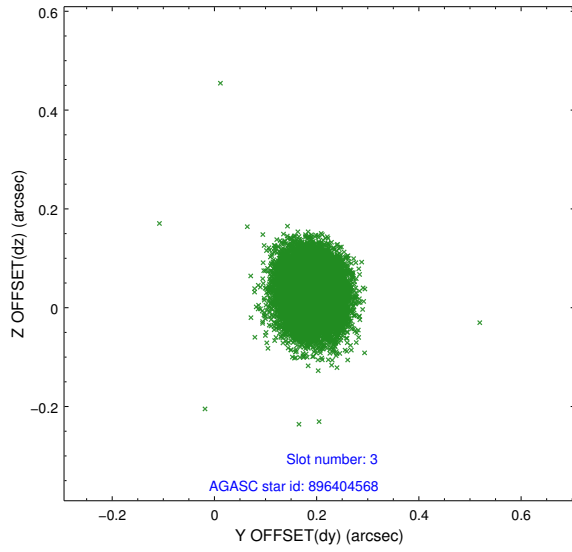
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.93	7535	-0.118	-0.014	0.011	0.018	0.000000	0.000000	-774.59	-1741.94
1	FID		ACIS-S-4	7.01	7535	0.228	0.061	0.009	0.017	0.000000	0.000000	2139.00	166.55
2	FID		ACIS-S-5	7.04	7536	-0.141	-0.038	0.014	0.023	0.000000	0.000000	-1827.38	160.19
3	GUIDE	used	896404568	7.86	15071	0.194	0.033	0.053	0.089	265.687293	-28.431080	-1929.01	-2321.05
4	GUIDE	used	896533888	7.02	15067	-0.048	-0.117	0.057	0.088	266.666434	-29.392757	1444.37	860.62
5	GUIDE	used	896541360	7.72	15070	-0.030	-0.114	0.058	0.095	266.684478	-29.453744	1662.74	922.67
6	GUIDE	used	896538696	6.83	15072	-0.022	0.135	0.043	0.068	266.298470	-28.325572	-2366.27	-397.11
7	GUIDE	used	896537776	7.54	15069	-0.092	0.066	0.056	0.091	266.655684	-29.665673	2427.33	850.96

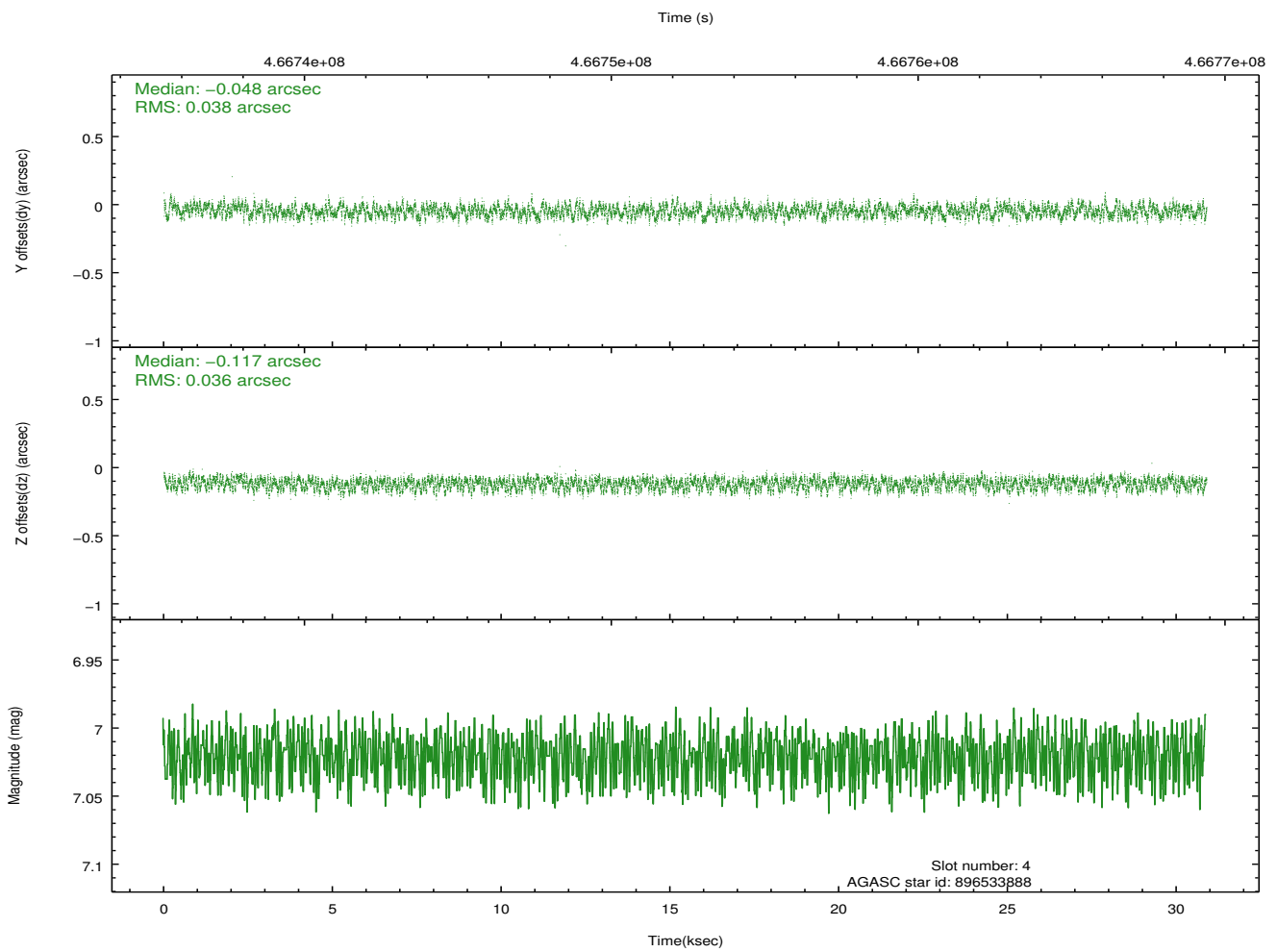
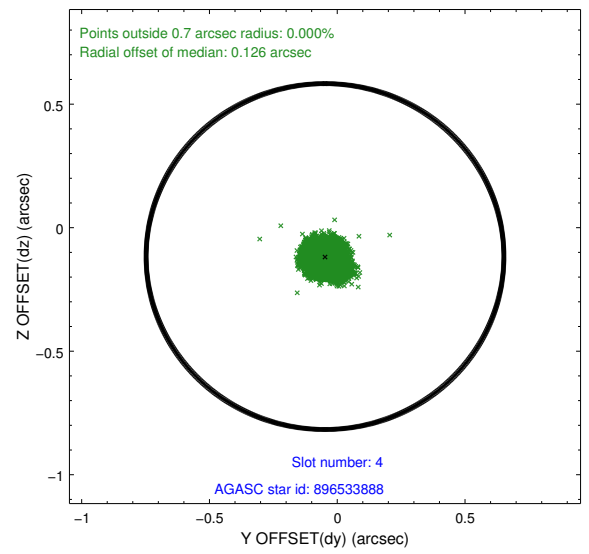
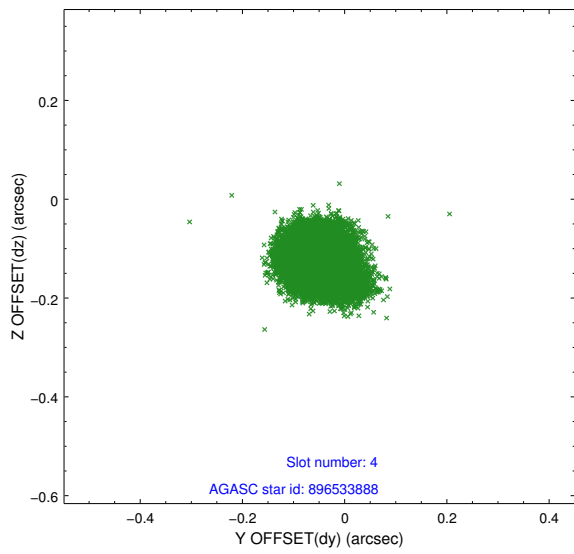
∞

2.4 Star Slots

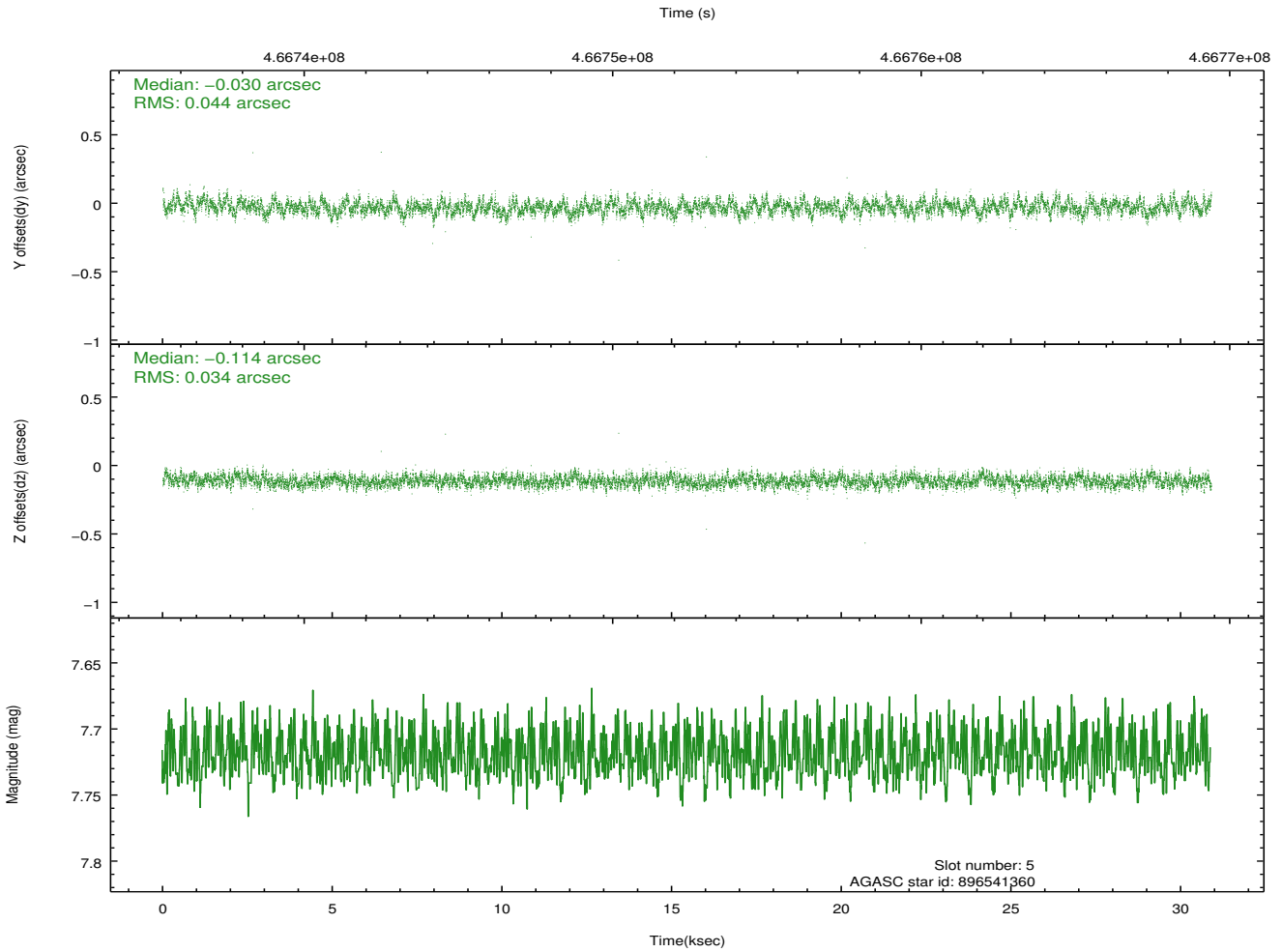
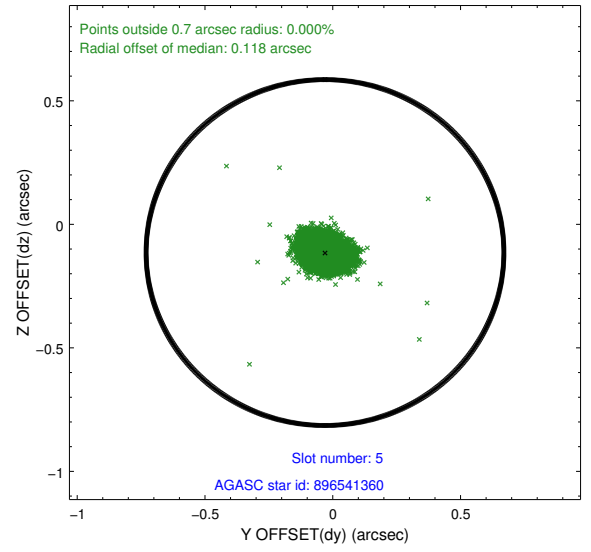
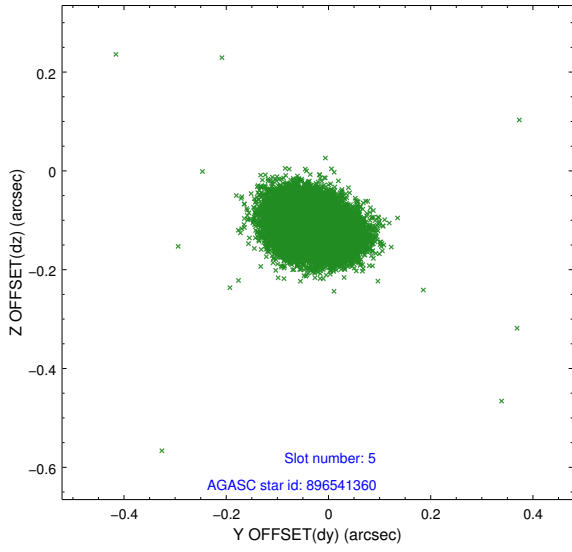
2.4.1 Slot 3



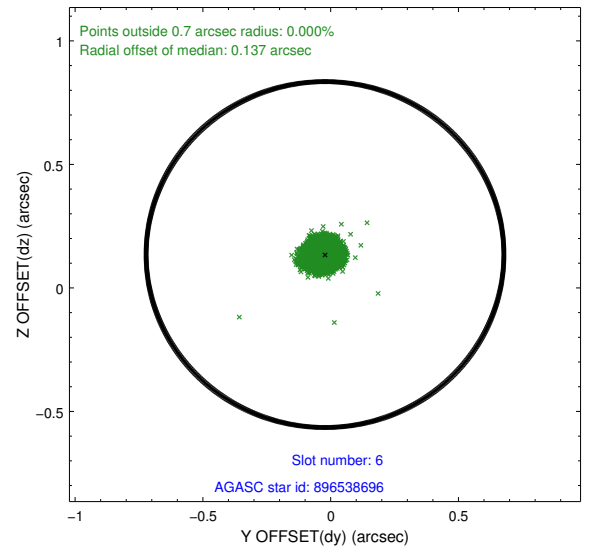
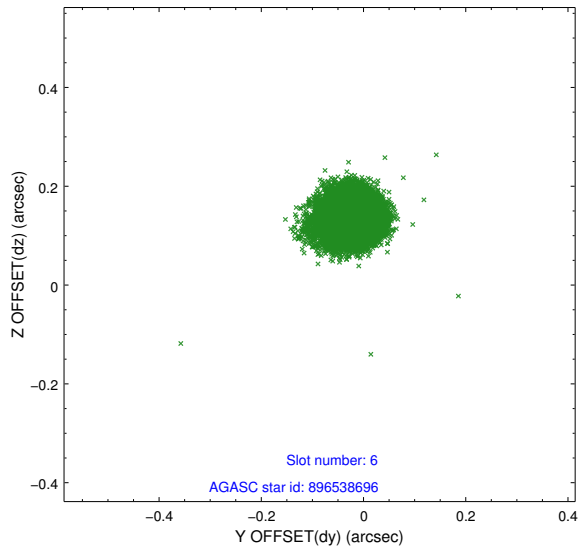
2.4.2 Slot 4



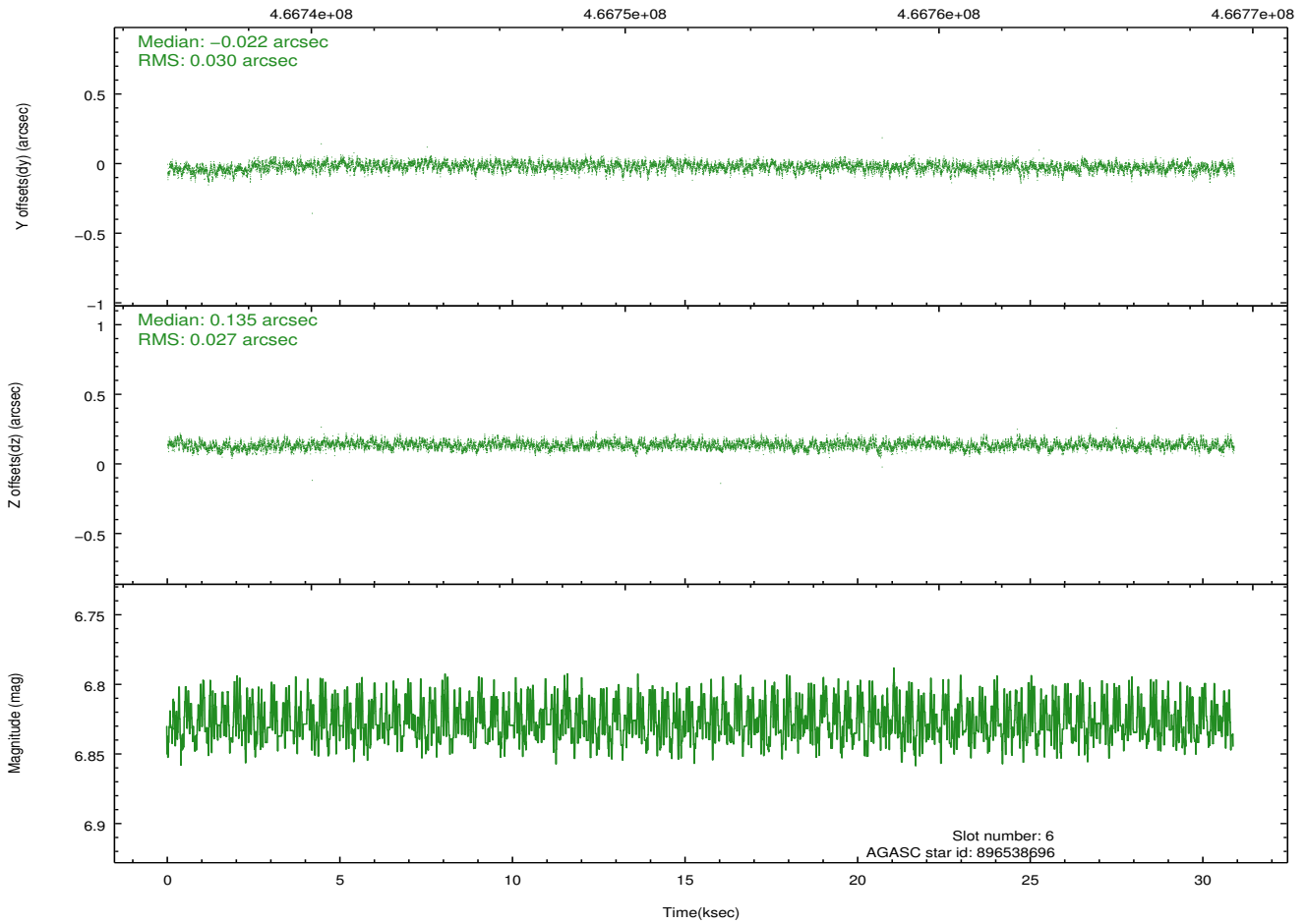
2.4.3 Slot 5



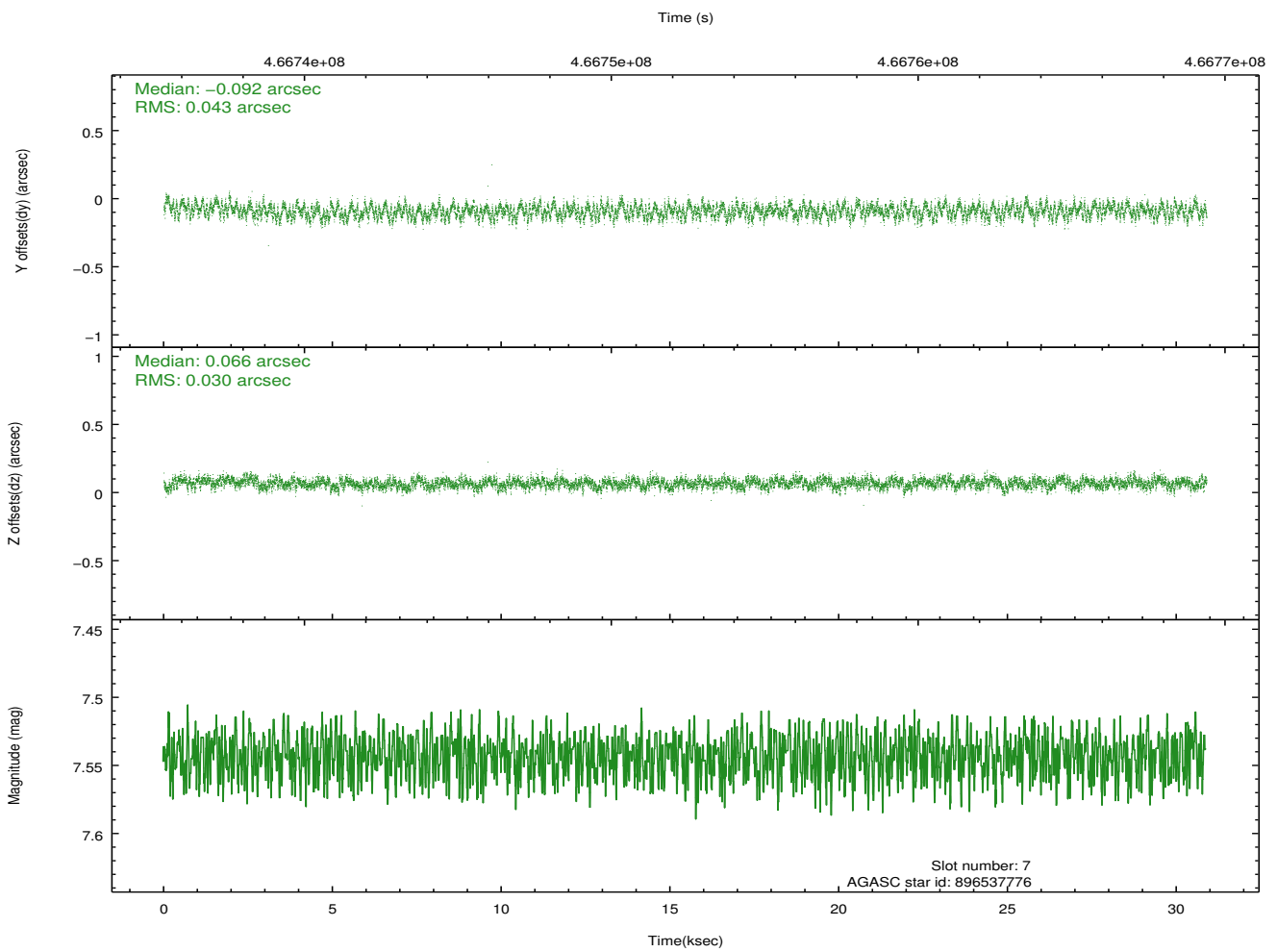
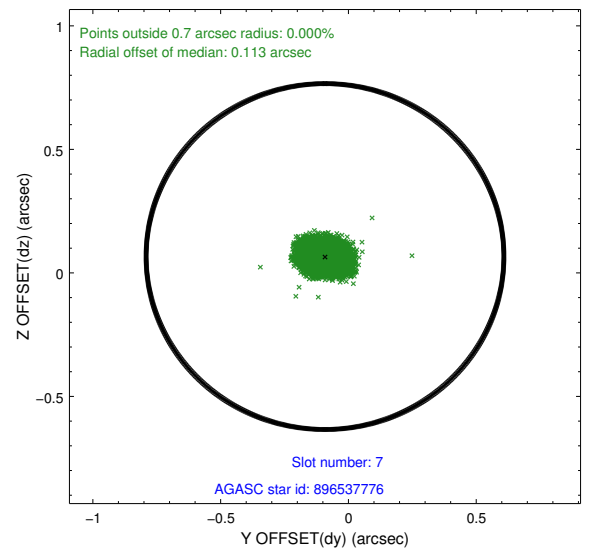
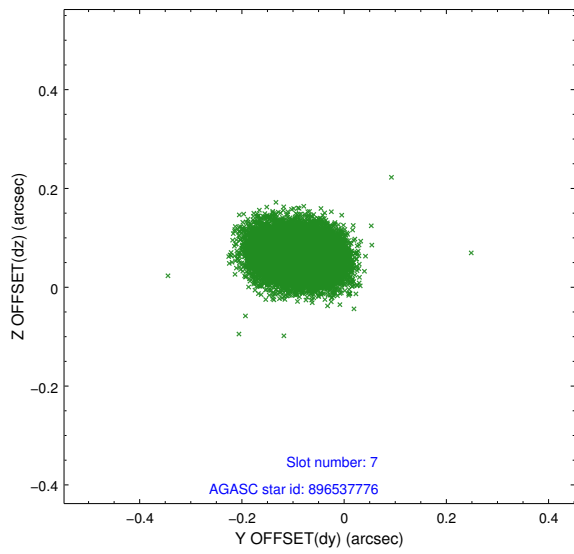
2.4.4 Slot 6



Time (s)

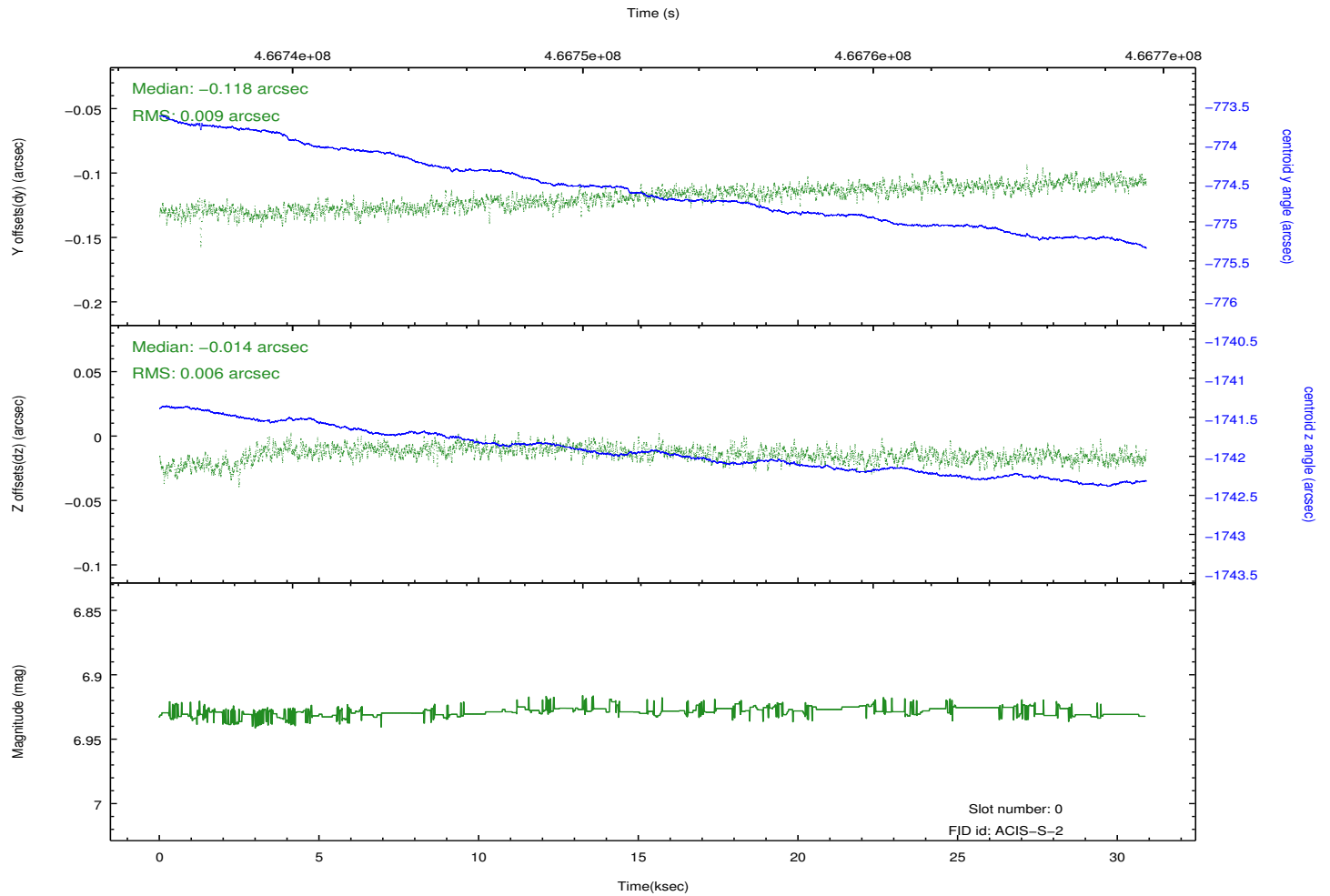
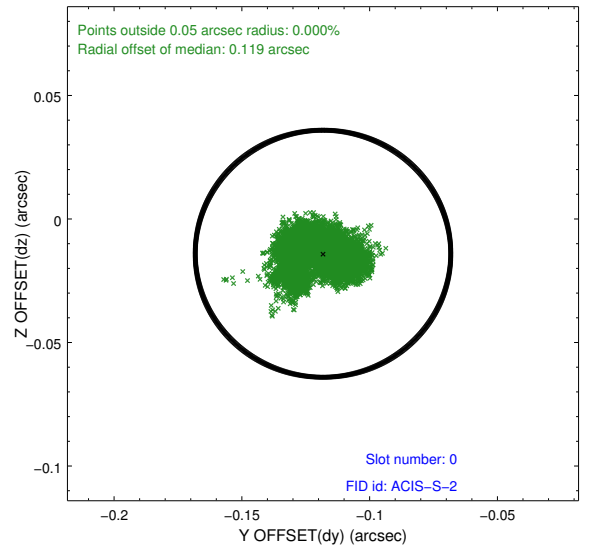
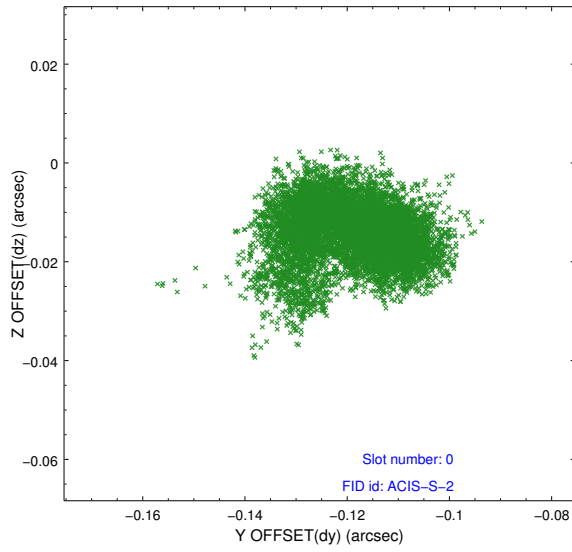


2.4.5 Slot 7

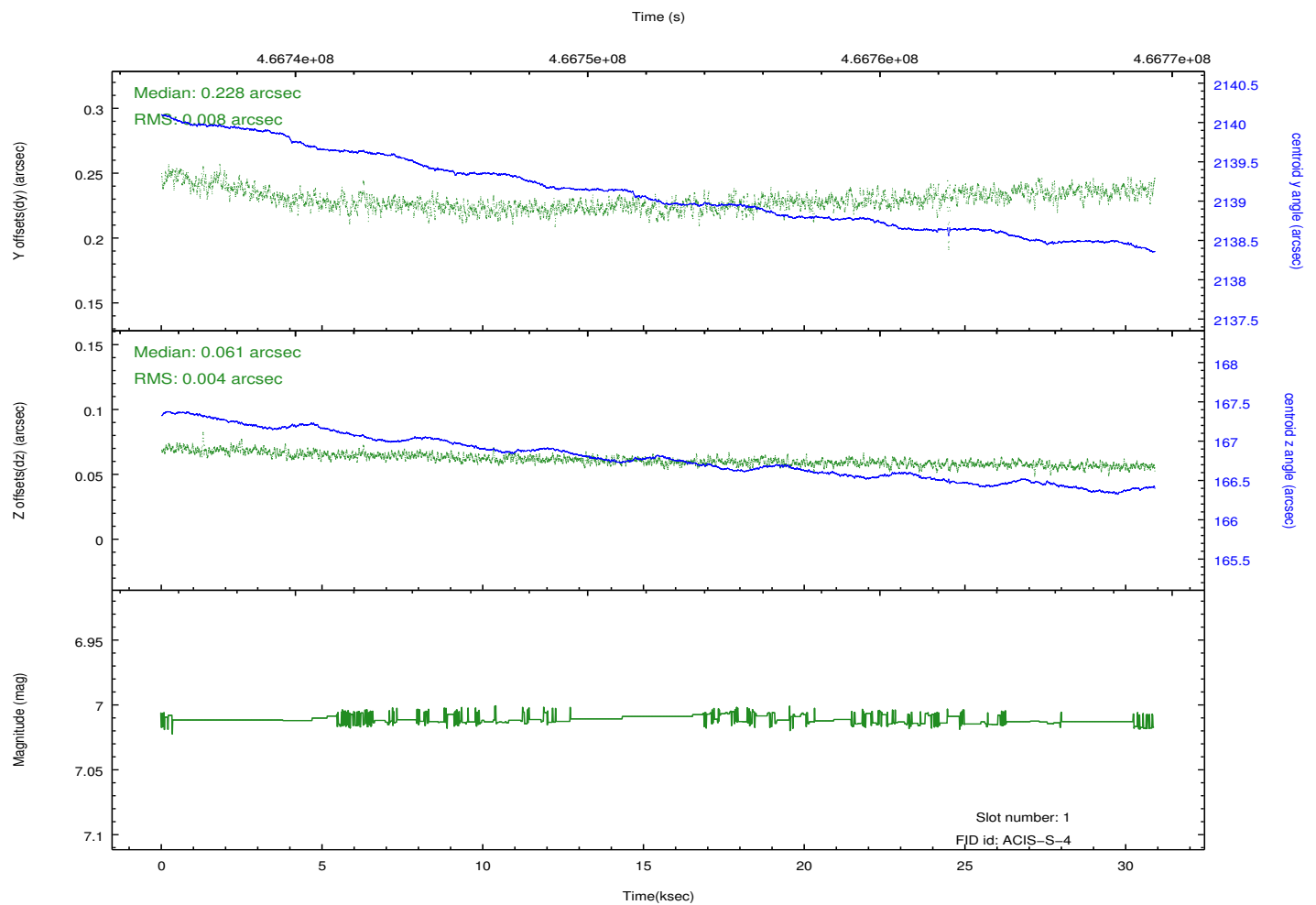
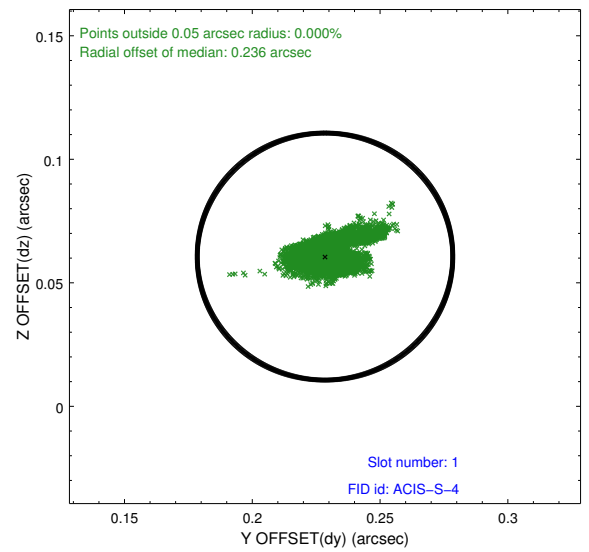
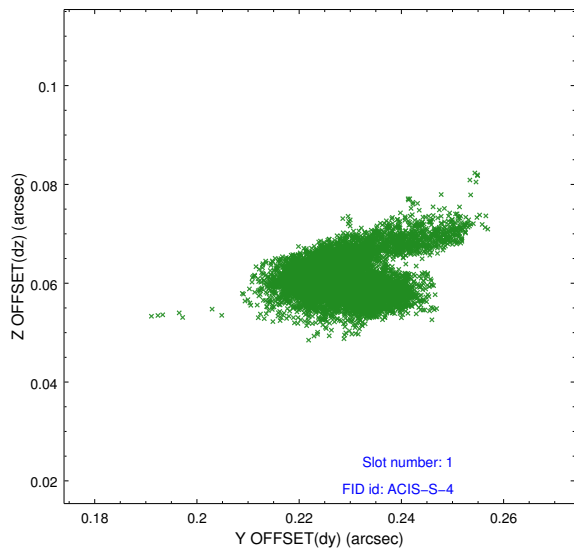


2.5 FID Slots

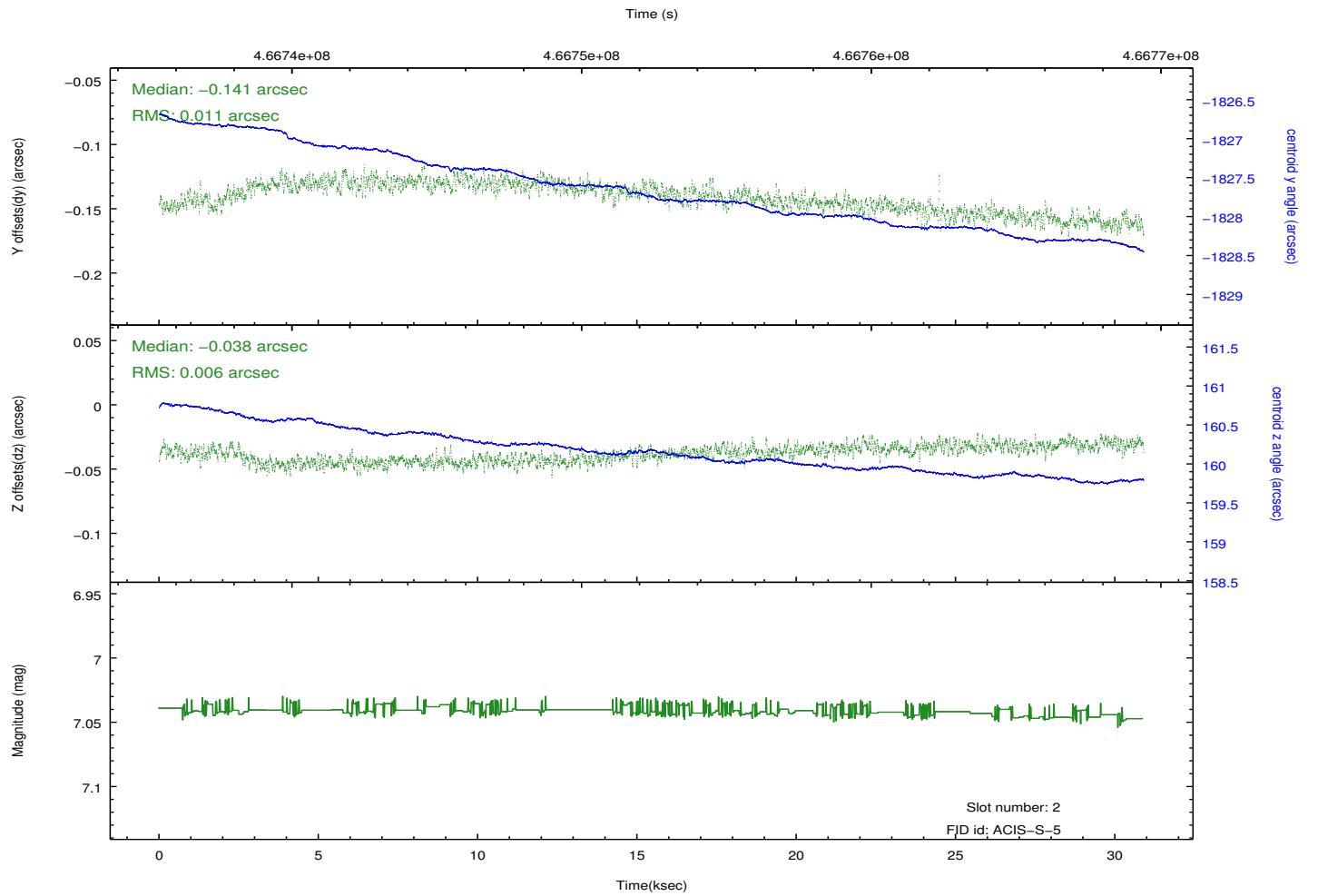
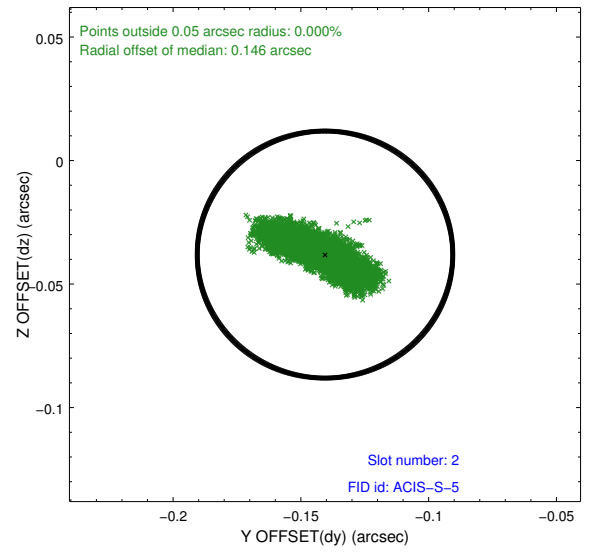
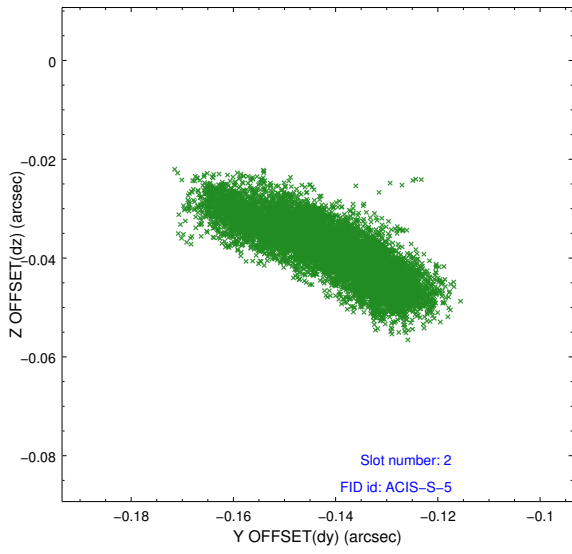
2.5.1 Slot 0



2.5.2 Slot 1

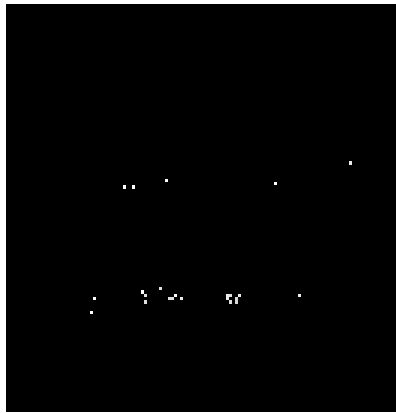


2.5.3 Slot 2

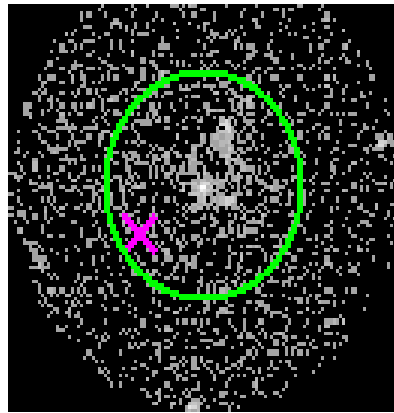


3 Gratings

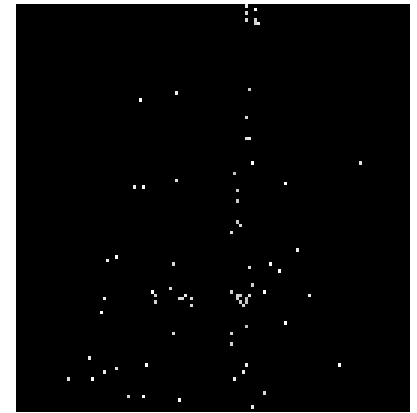
3.1 HEG Arm



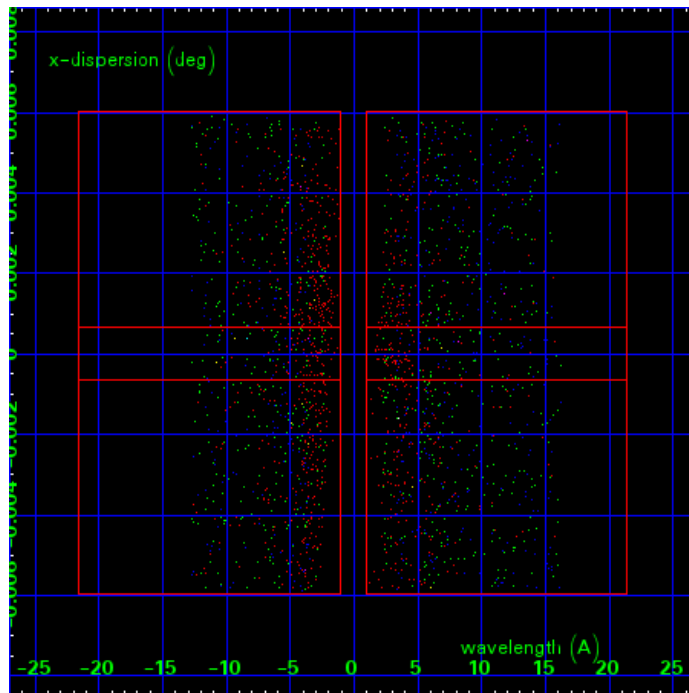
HEG Order Sort 123



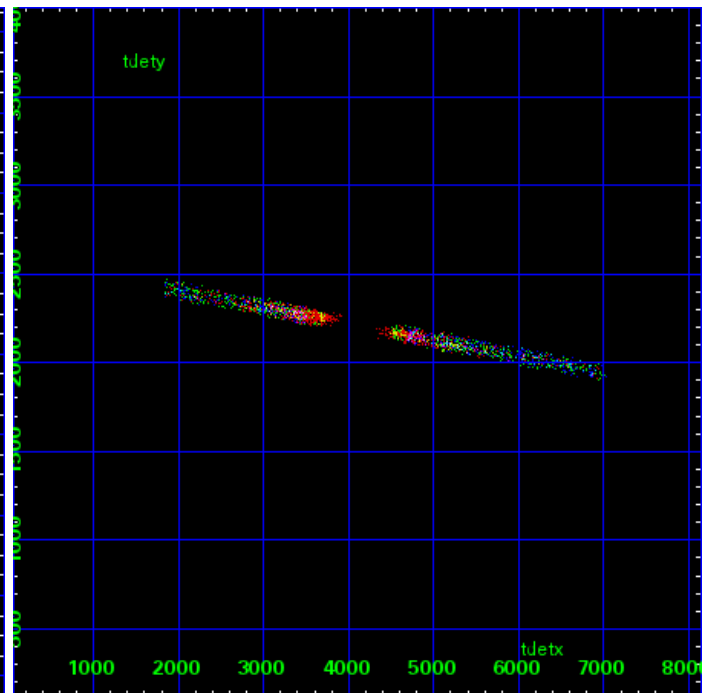
HEG Zero Order



HEG Order Sort ALL

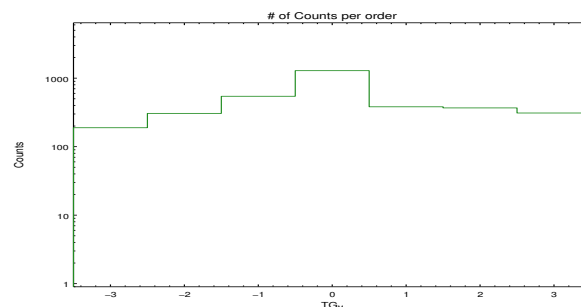


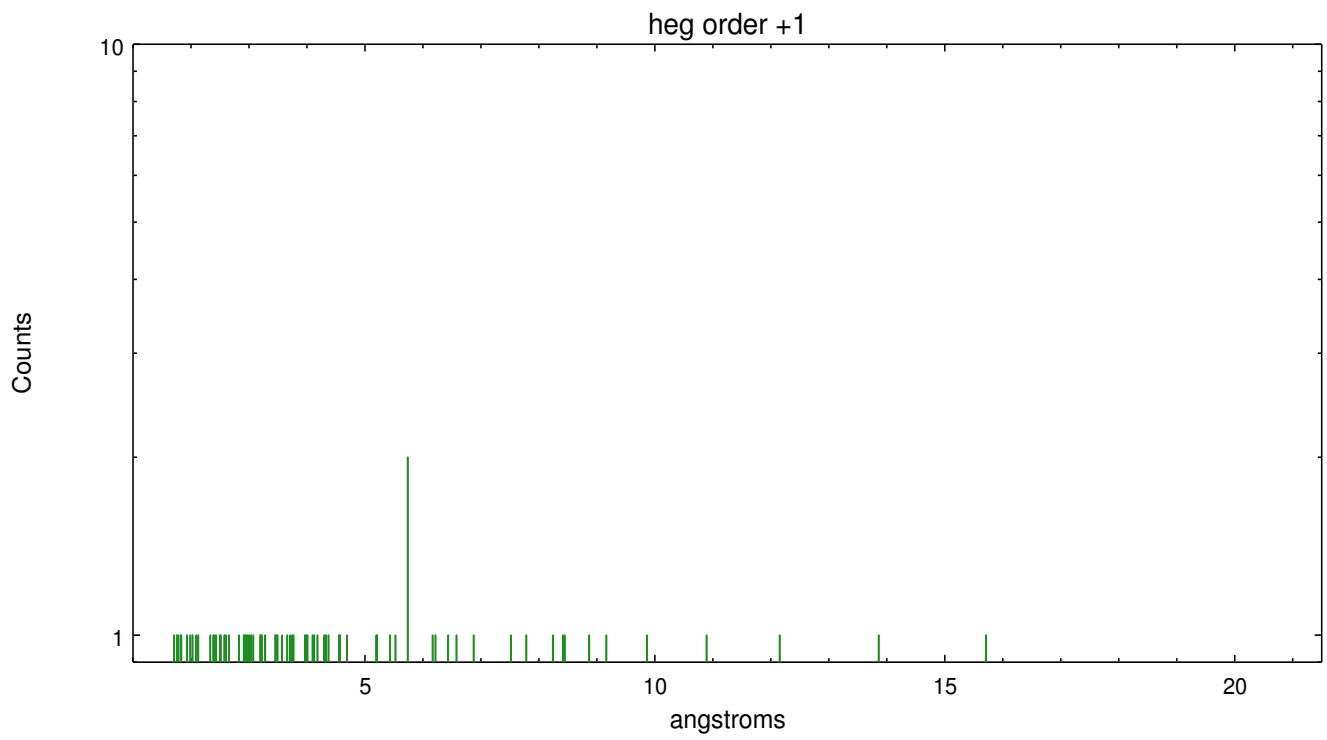
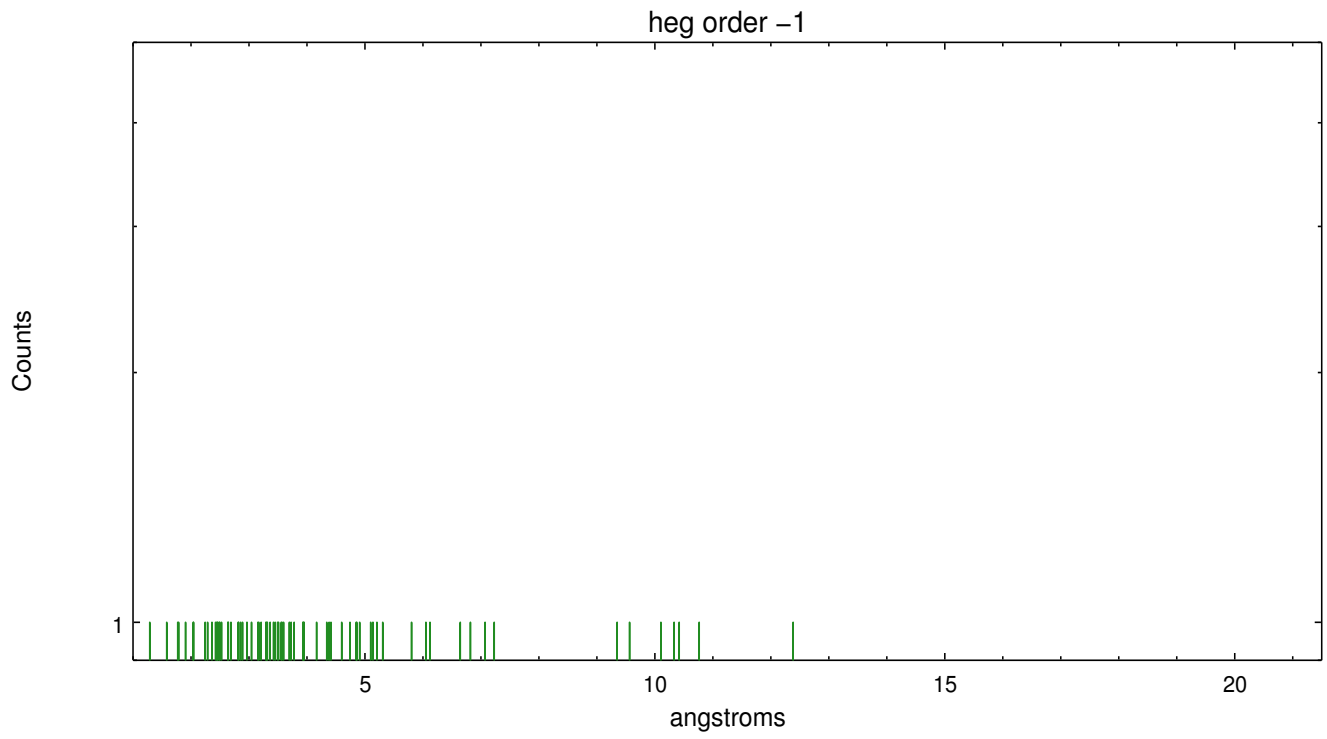
Spot Image HEG



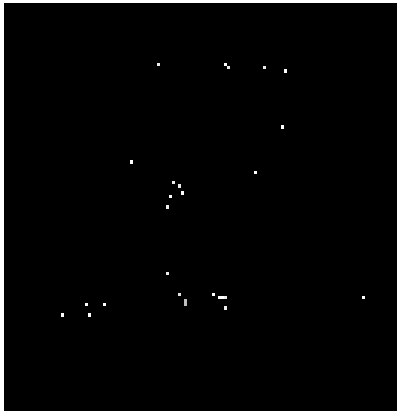
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	189	306	544	1287	382	368	310

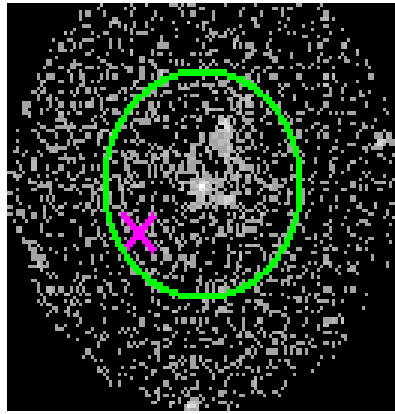




3.2 MEG Arm



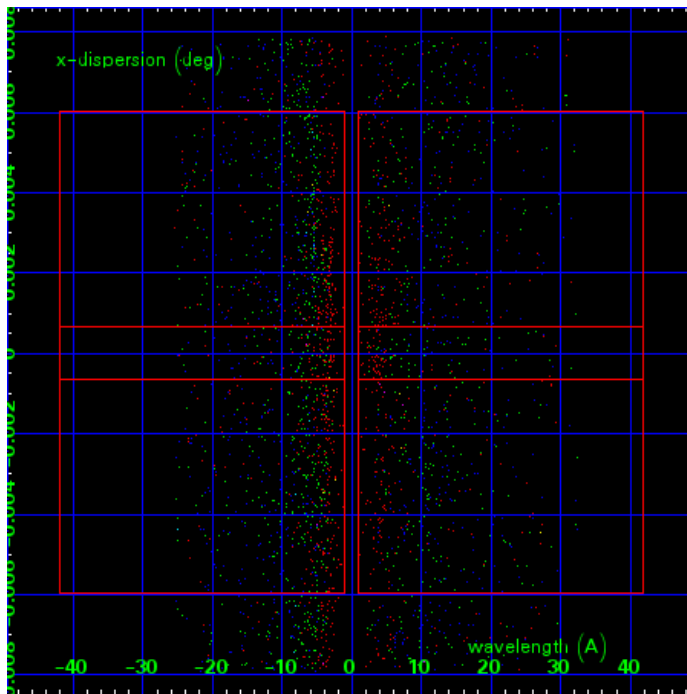
MEG Order Sort 123



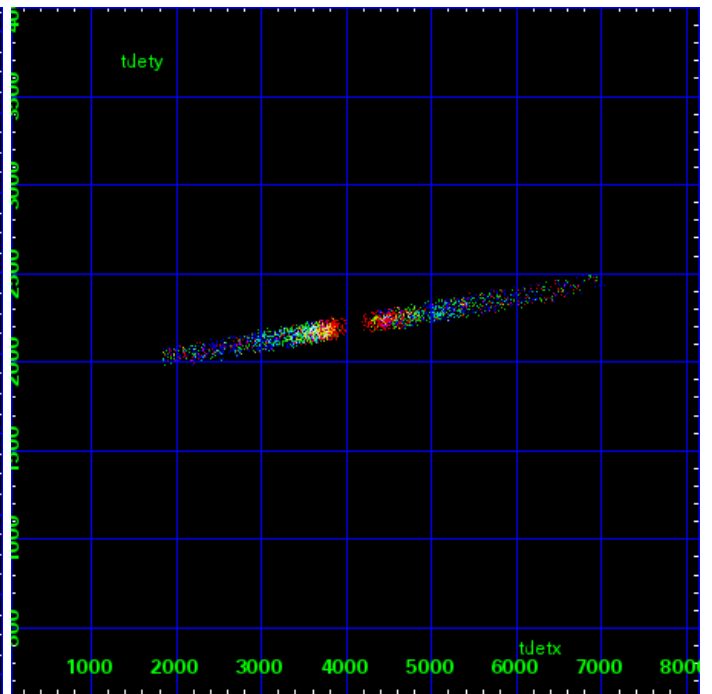
MEG Zero Order



MEG Order Sort ALL

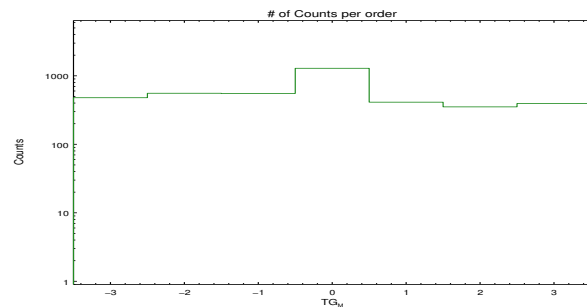


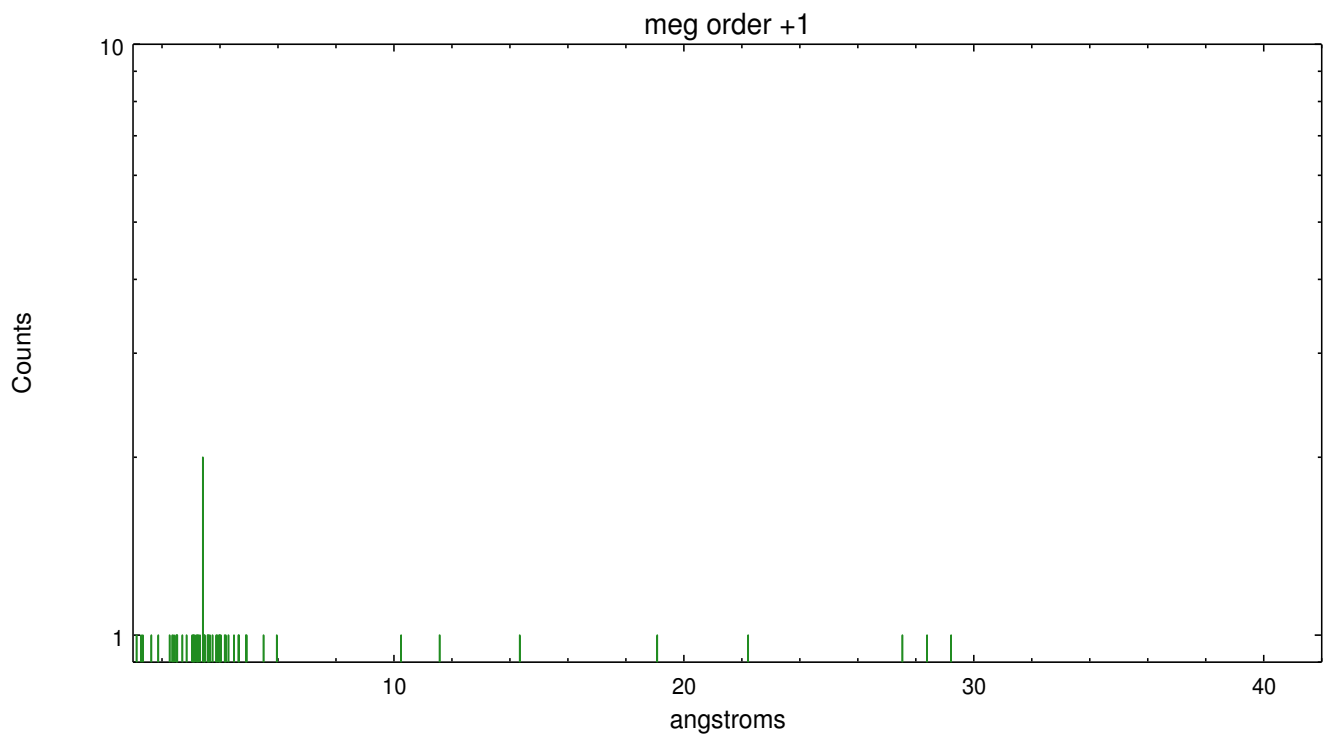
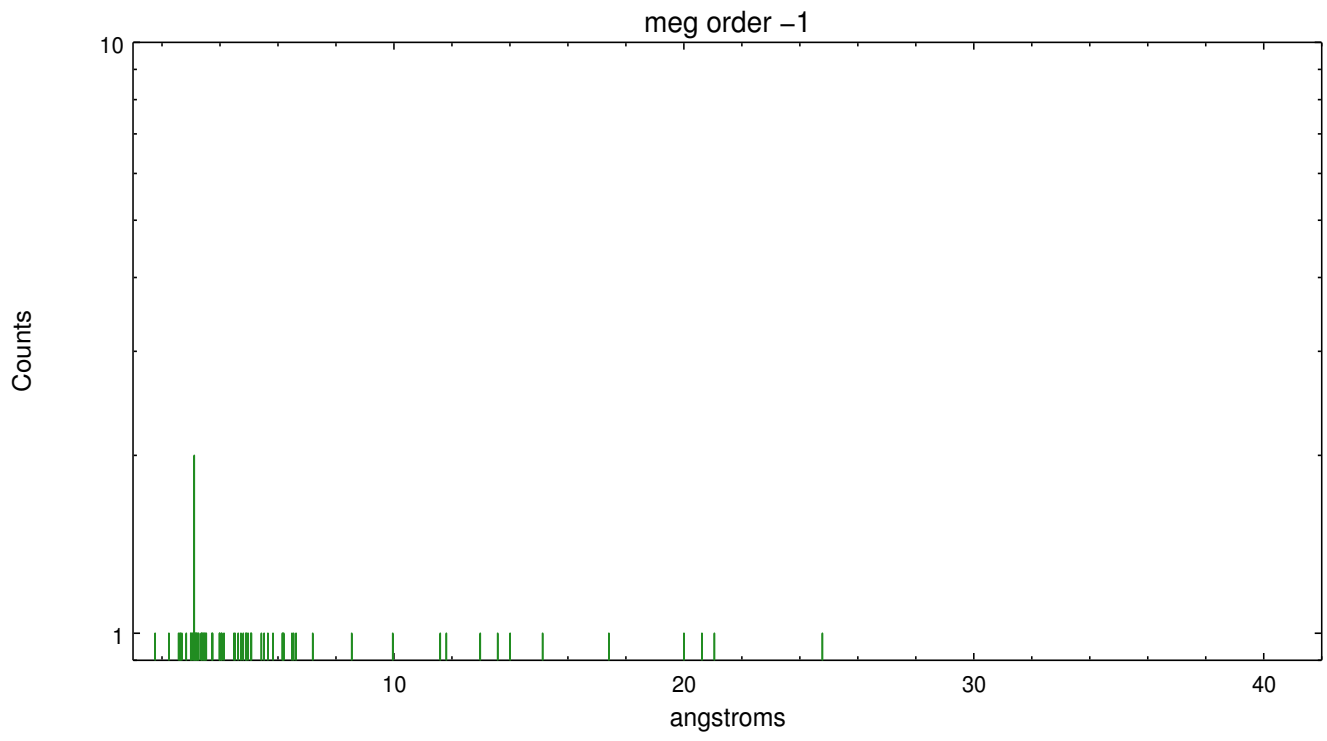
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	479	556	553	1287	412	352	394





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.02.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.773700236678

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]