

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14466 - L2 Version 1
Chandra X-Ray Center

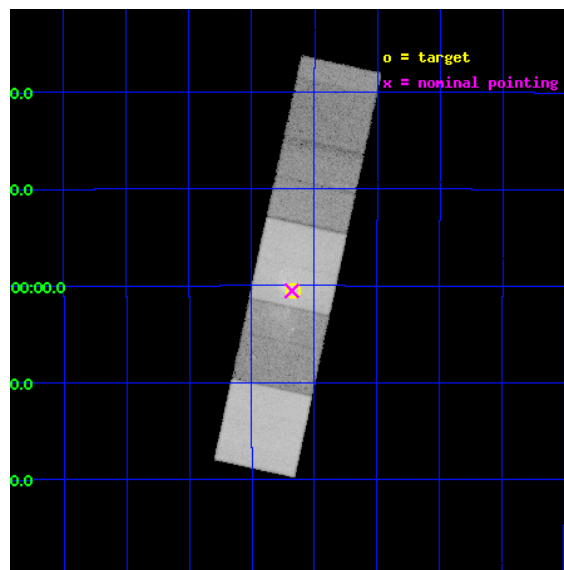
L2 Processing Date : Jul 21 2012

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

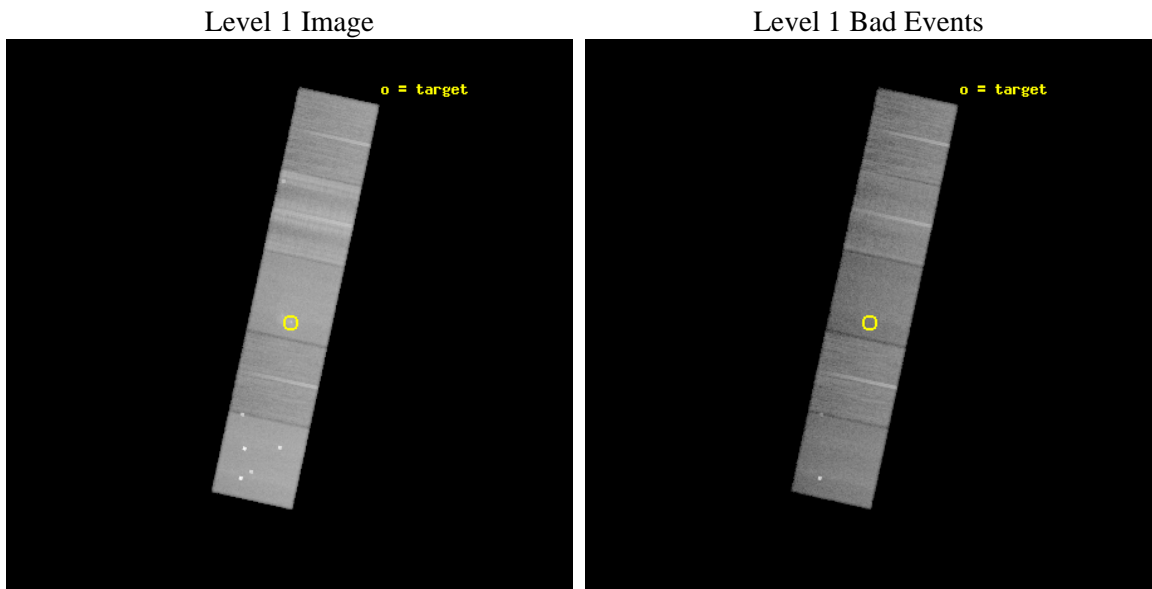
seq_num	601012	Sequence number
obs_id	14466	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41990690213	Nominal RA [deg]
dec_nom	-29.008843601336	Nominal Dec [deg]
roll_nom	282.27820432409	Nominal Roll [deg]
revision	1	Processing version of data
ontime	45083.300346732	Sum of GTIs [s]
livetime	44494.253837859	Livetime [s]
ontime5	45083.300346732	Sum of GTIs [s]
ontime6	45080.159306347	Sum of GTIs [s]
ontime7	45083.300346732	Sum of GTIs [s]
ontime8	45083.300346732	Sum of GTIs [s]
ontime9	45083.300346732	Sum of GTIs [s]
l2events	484925	Number of level 2 events



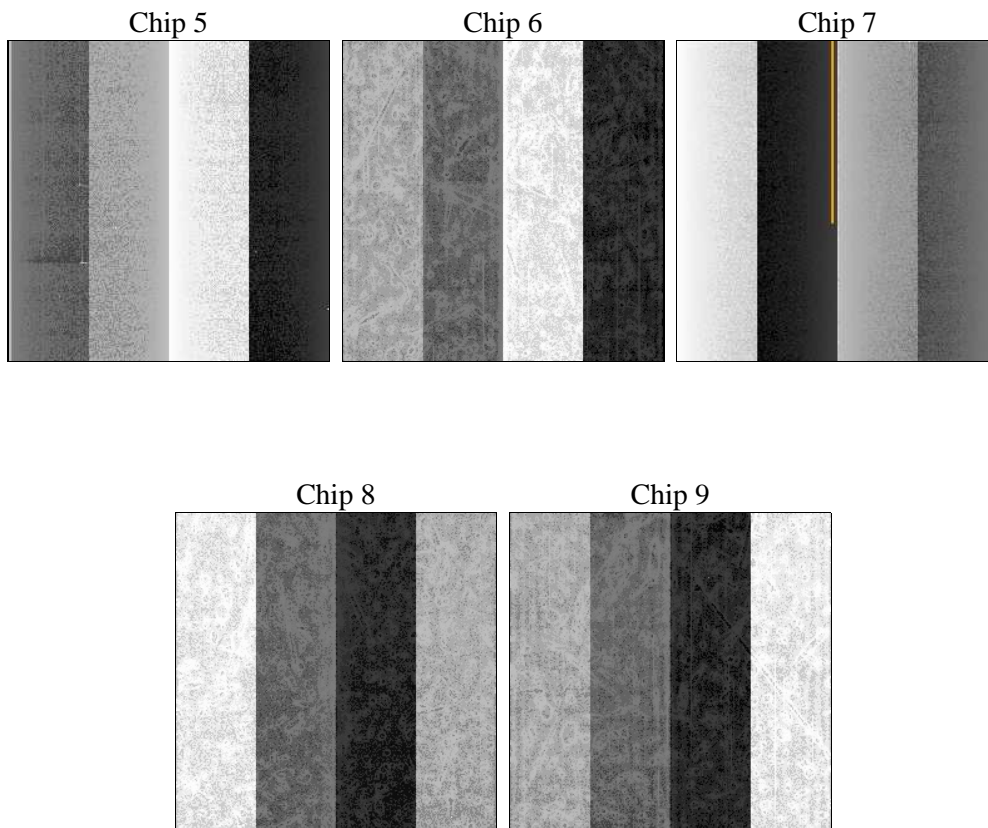
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	45018.893000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	45083.300346732	Sum of GTIs [s]
caldbver	4.5.0	 	ontime5	45083.300346732	Sum of GTIs [s]
date	2012-07-21T13:15:41	Date and time of file creation	ontime6	45080.159306347	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	45083.300346732	Sum of GTIs [s]
			ontime8	45083.300346732	Sum of GTIs [s]
			ontime9	45083.300346732	Sum of GTIs [s]
			l1events	1716585	Number of level 1 events

2.1.4 Events

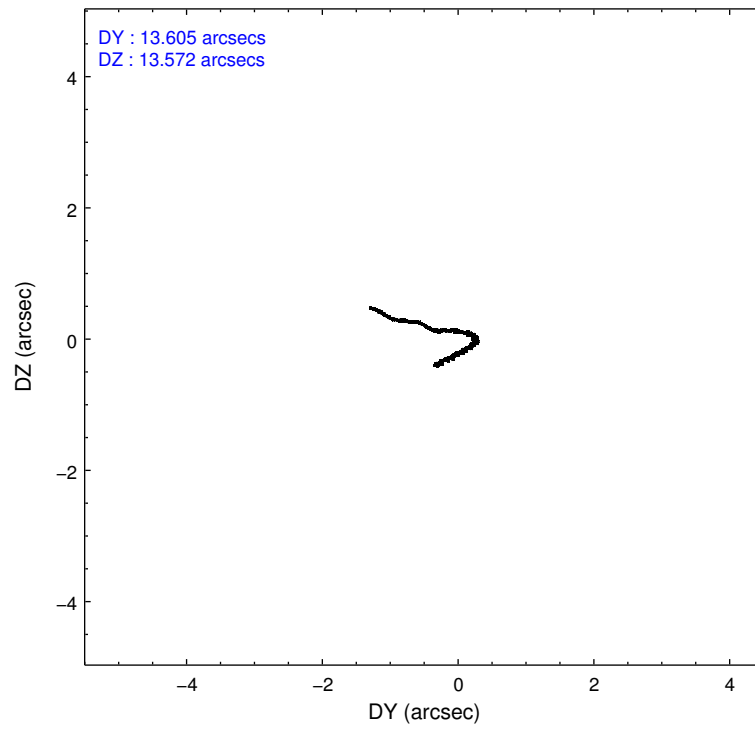
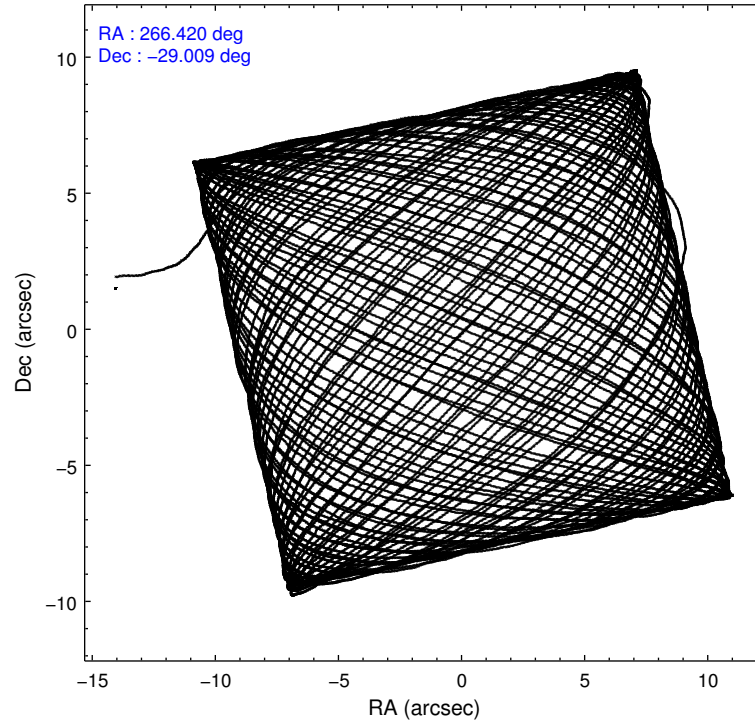
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	425157	272097	355249	412450	251632
rejected events	200031	218963	173890	242484	215228
rejected %	47%	80%	48%	58%	85%

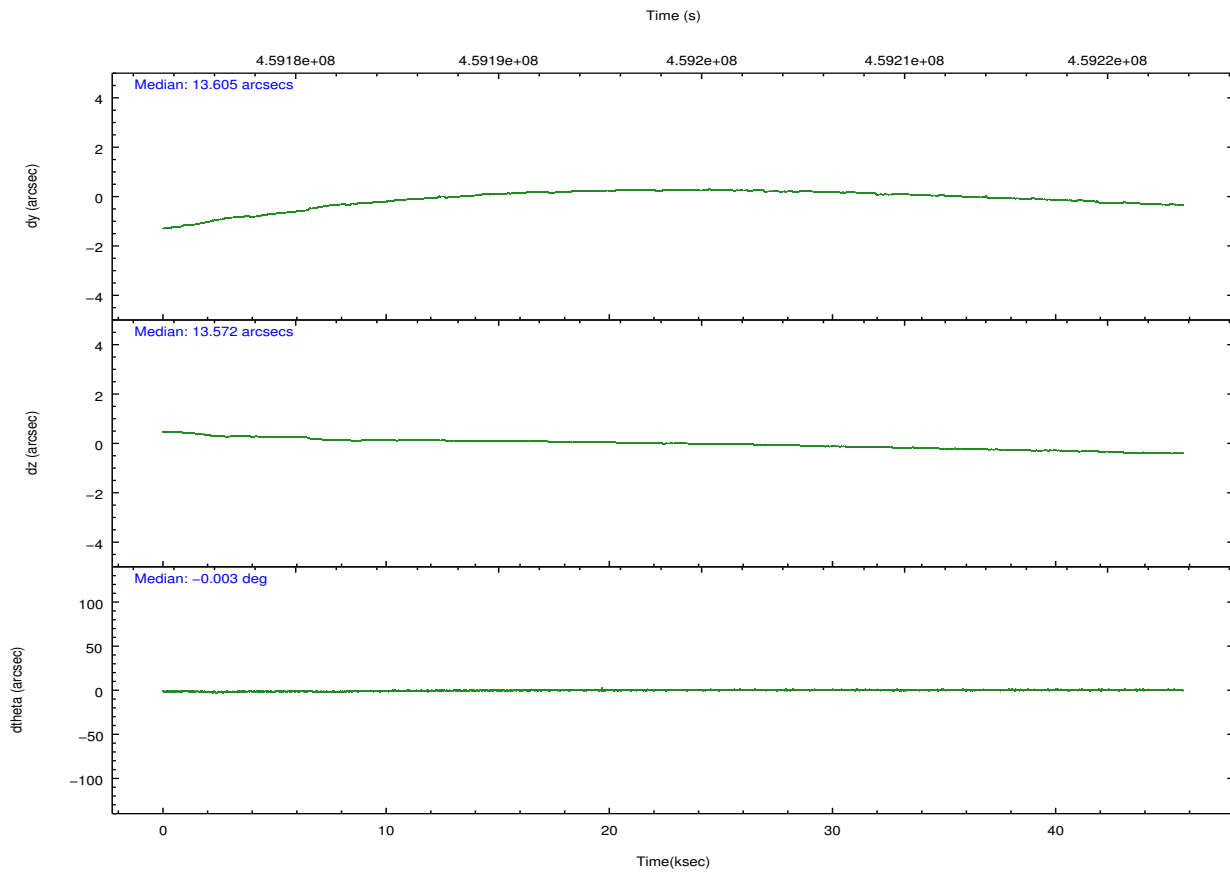
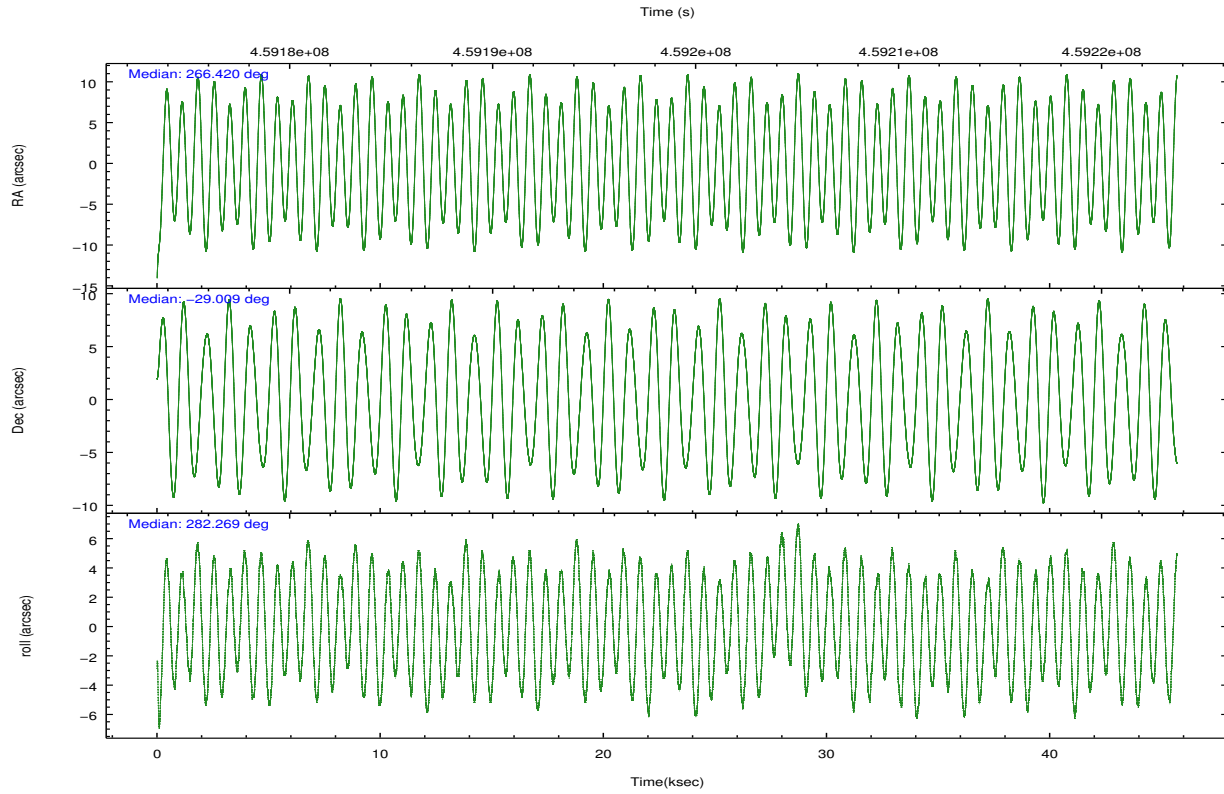
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	39152	26165	21393	54250	15137
	9%	9%	6%	13%	6%
grade 1 events	796	183	425	440	148
	0%	0%	0%	0%	0%
grade 2 events	67565	10543	39107	31375	7723
	15%	3%	11%	7%	3%
grade 3 events	8502	3987	16394	23272	3392
	1%	1%	4%	5%	1%
grade 4 events	7829	3917	16292	21275	3250
	1%	1%	4%	5%	1%
grade 5 events	29377	11696	32182	17976	12858
	6%	4%	9%	4%	5%
grade 6 events	102116	8532	88195	39806	6906
	24%	3%	24%	9%	2%
grade 7 events	169820	207074	141261	224056	202218
	39%	76%	39%	54%	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	266.398572	266.4199069021316	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.988882	-29.00884360133599	Alternating exposures requested	N	N
[deg] Pointing Roll	282.111233	282.2782043240857	[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)	459176429.184000	459175096.59135			
Observation start date	2012-07-20T12:59:22	2012-07-20T12:38:16			
[s] Observation end time (MET)	459221448.184000	459221673.61884			
Observation end date	2012-07-21T01:29:41	2012-07-21T01:34:33			
Read mode	TIMED	TIMED			

2.3 Aspect



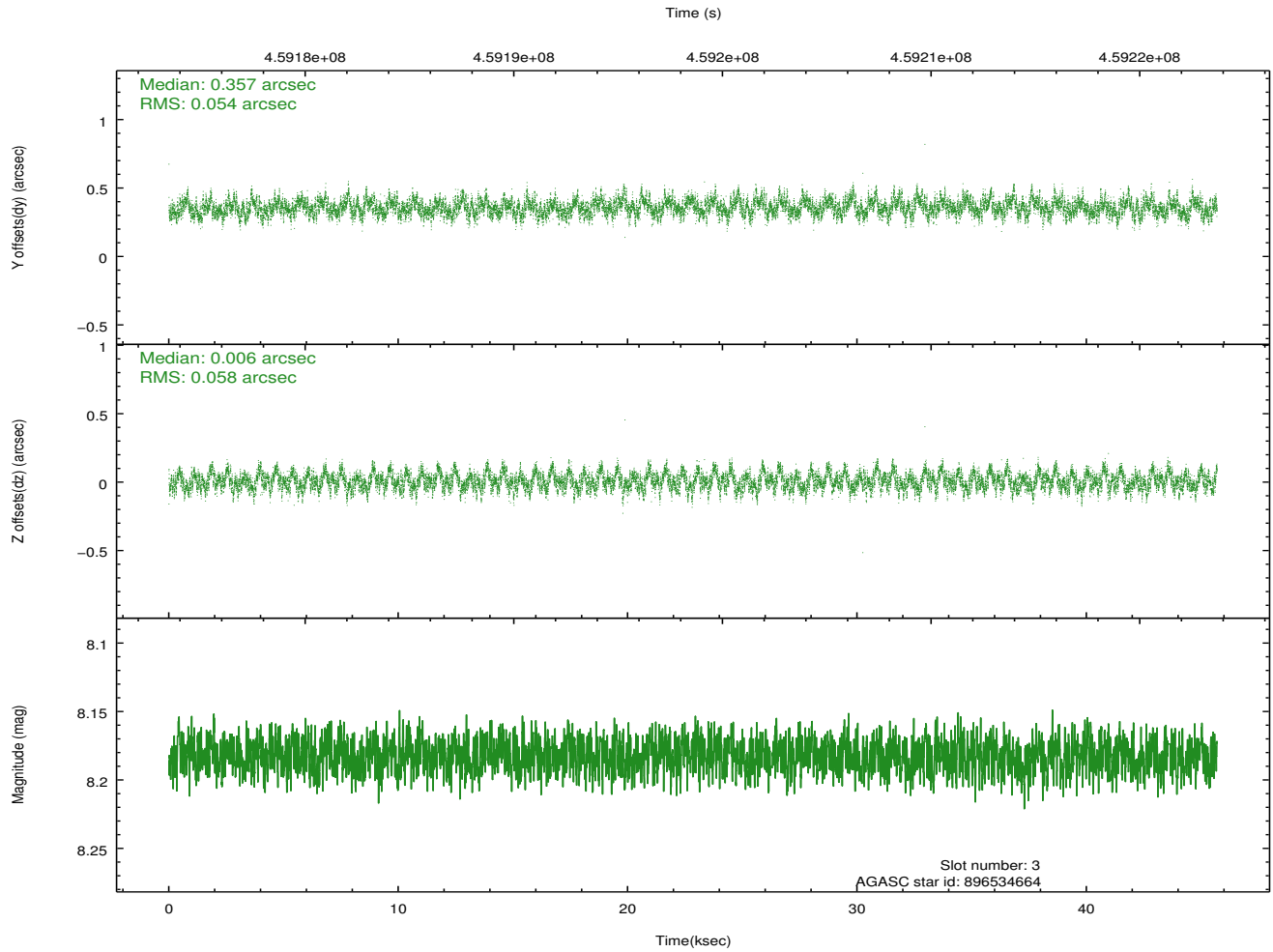
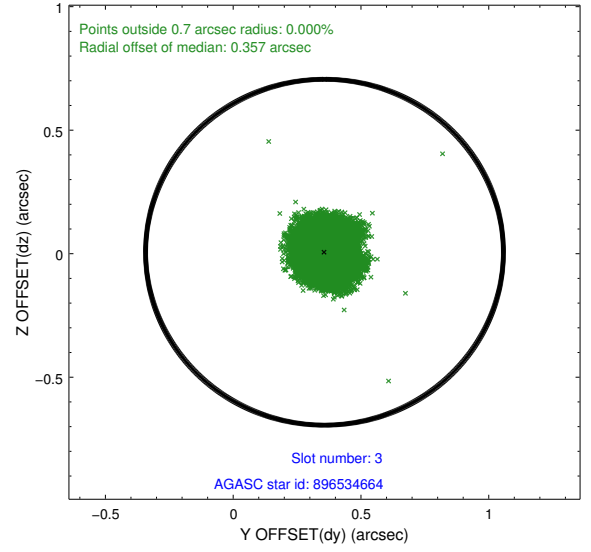
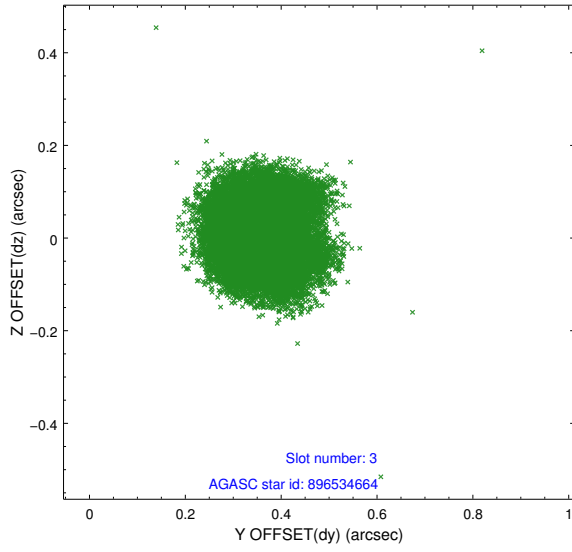


Slot Statistics

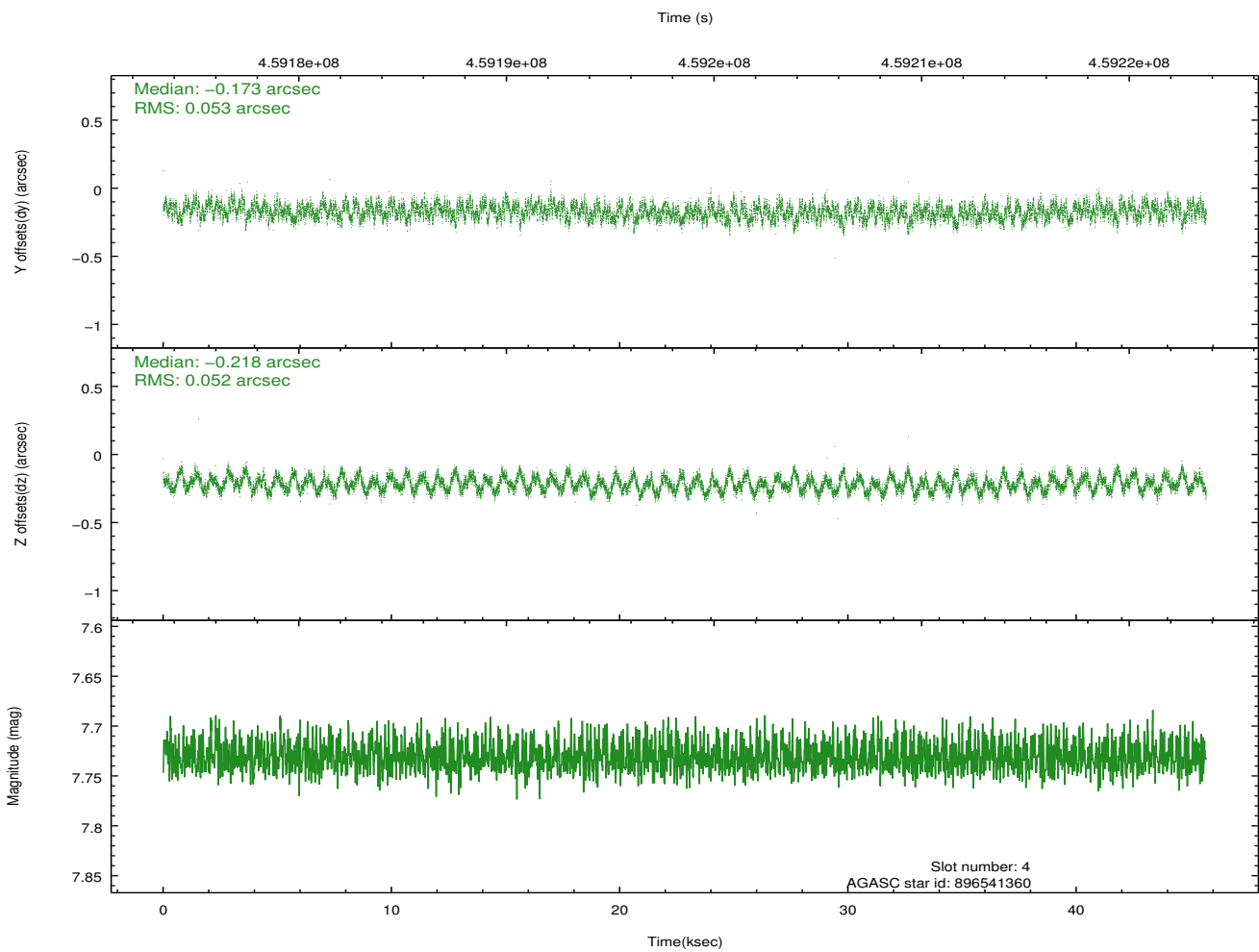
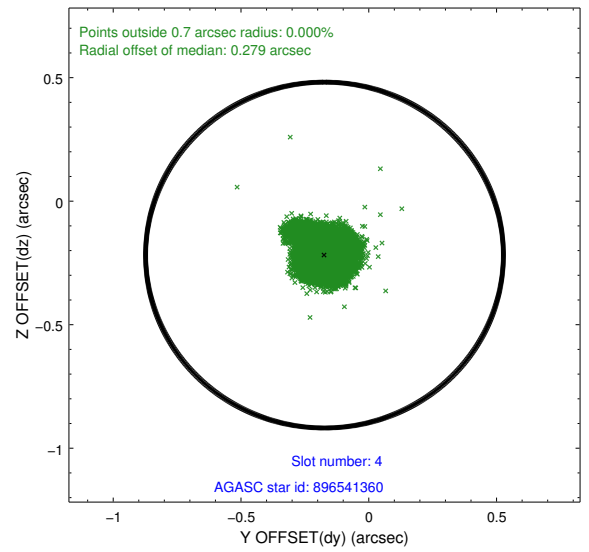
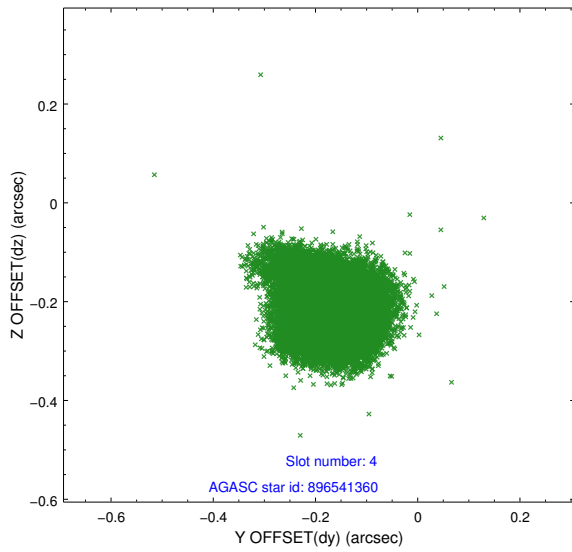
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.94	11144	-0.059	-0.050	0.012	0.017	0.000000	0.000000	-766.50	-1734.89
1	FID	ACIS-S-4	7.02	11144	0.222	0.042	0.014	0.026	0.000000	0.000000	2147.08	173.67
2	FID	ACIS-S-5	7.06	11145	-0.194	0.017	0.011	0.018	0.000000	0.000000	-1819.47	167.34
3	GUIDE	896534664	8.18	22289	0.357	0.006	0.086	0.136	266.405570	-28.407461	-2041.05	460.66
4	GUIDE	896541360	7.73	22281	-0.173	-0.218	0.081	0.123	266.684478	-29.453744	1825.56	525.18
5	GUIDE	896541576	8.19	22287	-0.184	0.018	0.068	0.110	267.051055	-28.762912	-357.72	2182.90
6	GUIDE	896403520	9.03	22269	0.274	0.110	0.094	0.154	265.626481	-28.748780	-1347.56	-2202.88
7	GUIDE	896540808	7.47	22288	-0.278	0.074	0.047	0.078	265.985401	-29.308604	855.93	-1509.89

2.4 Star Slots

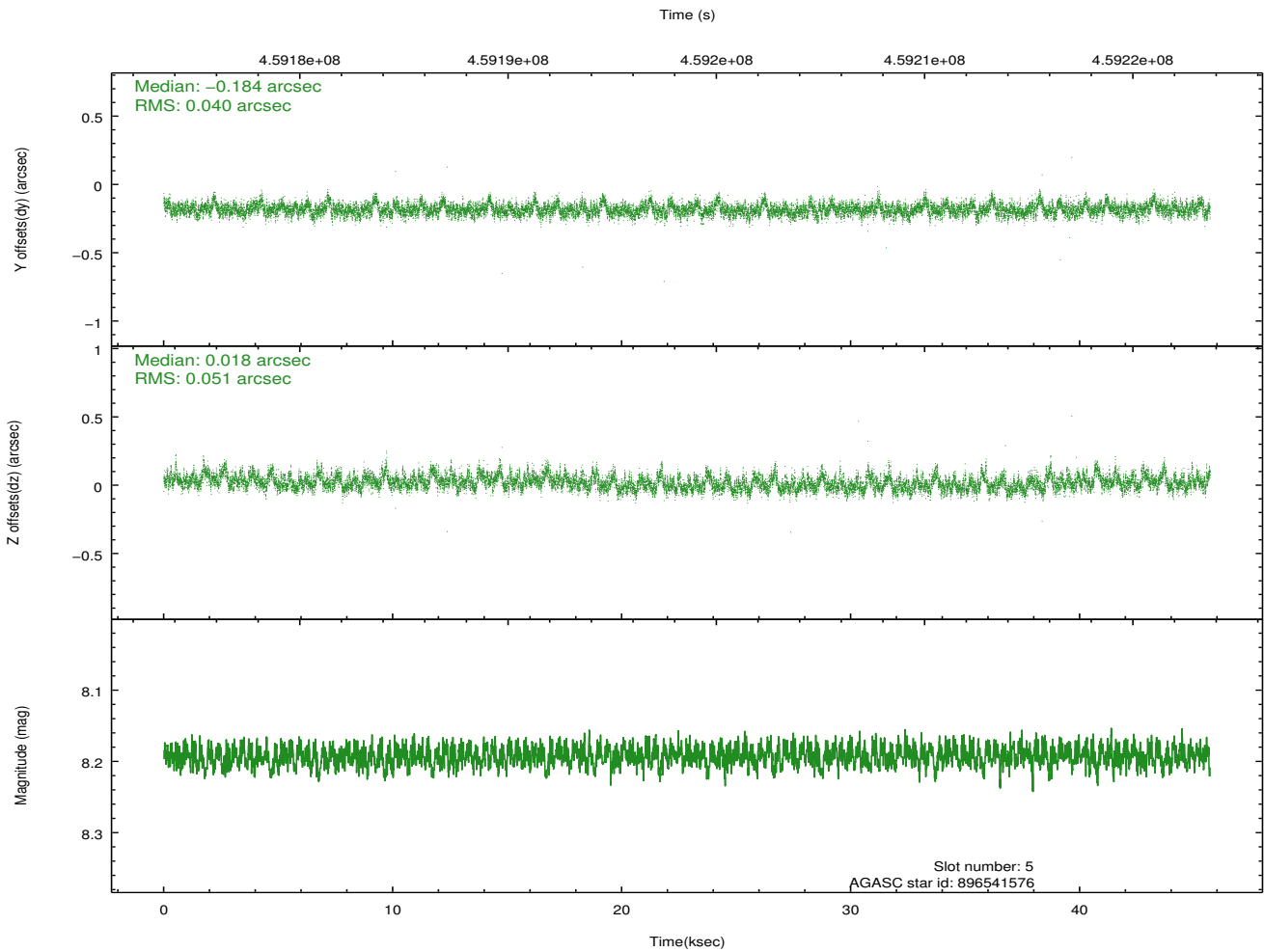
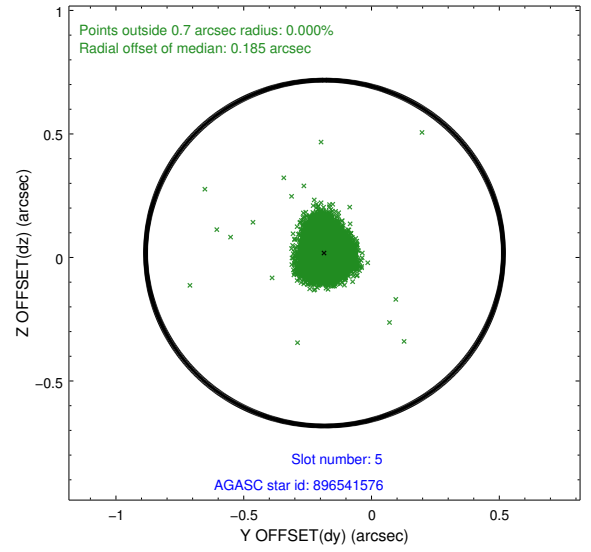
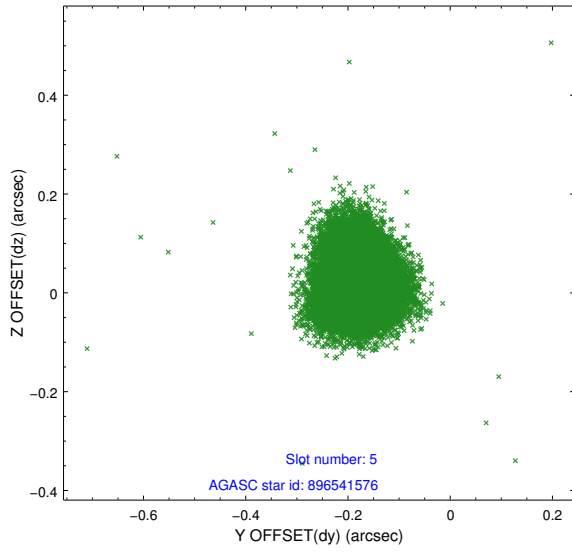
2.4.1 Slot 3



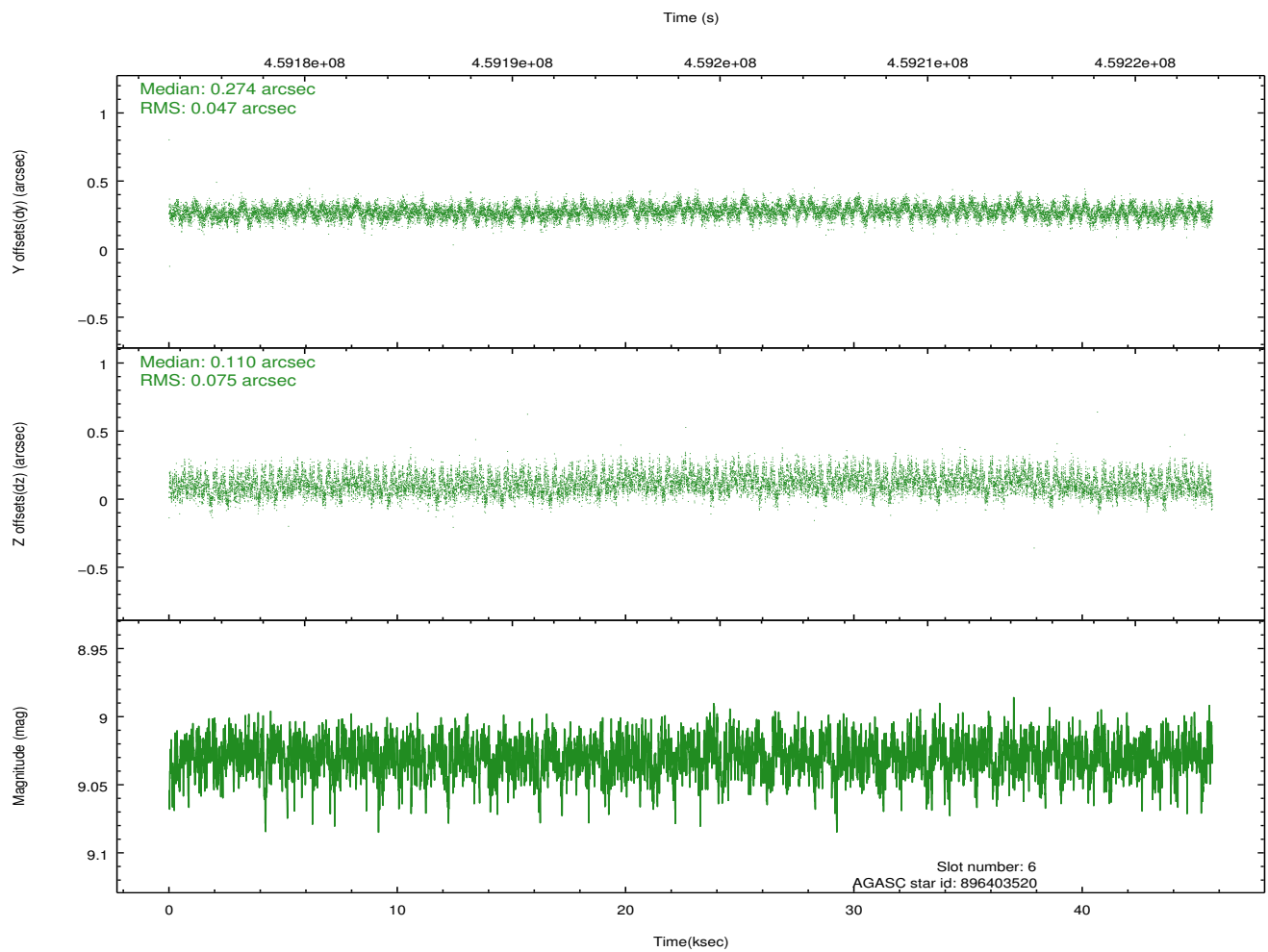
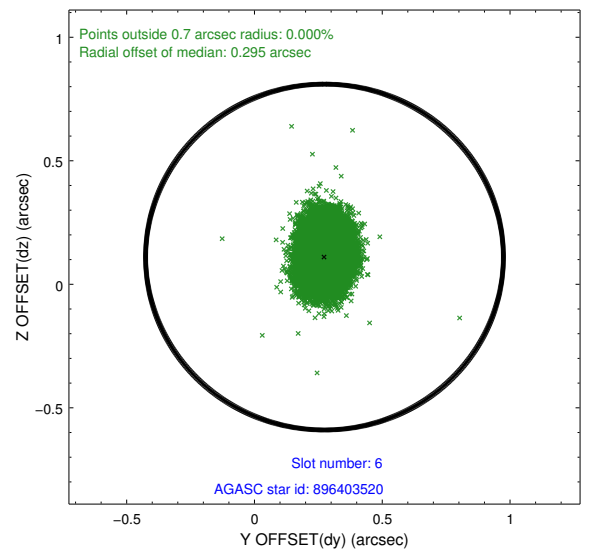
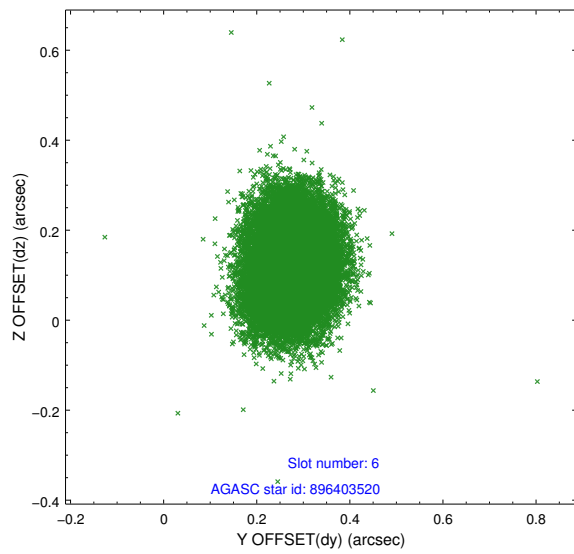
2.4.2 Slot 4



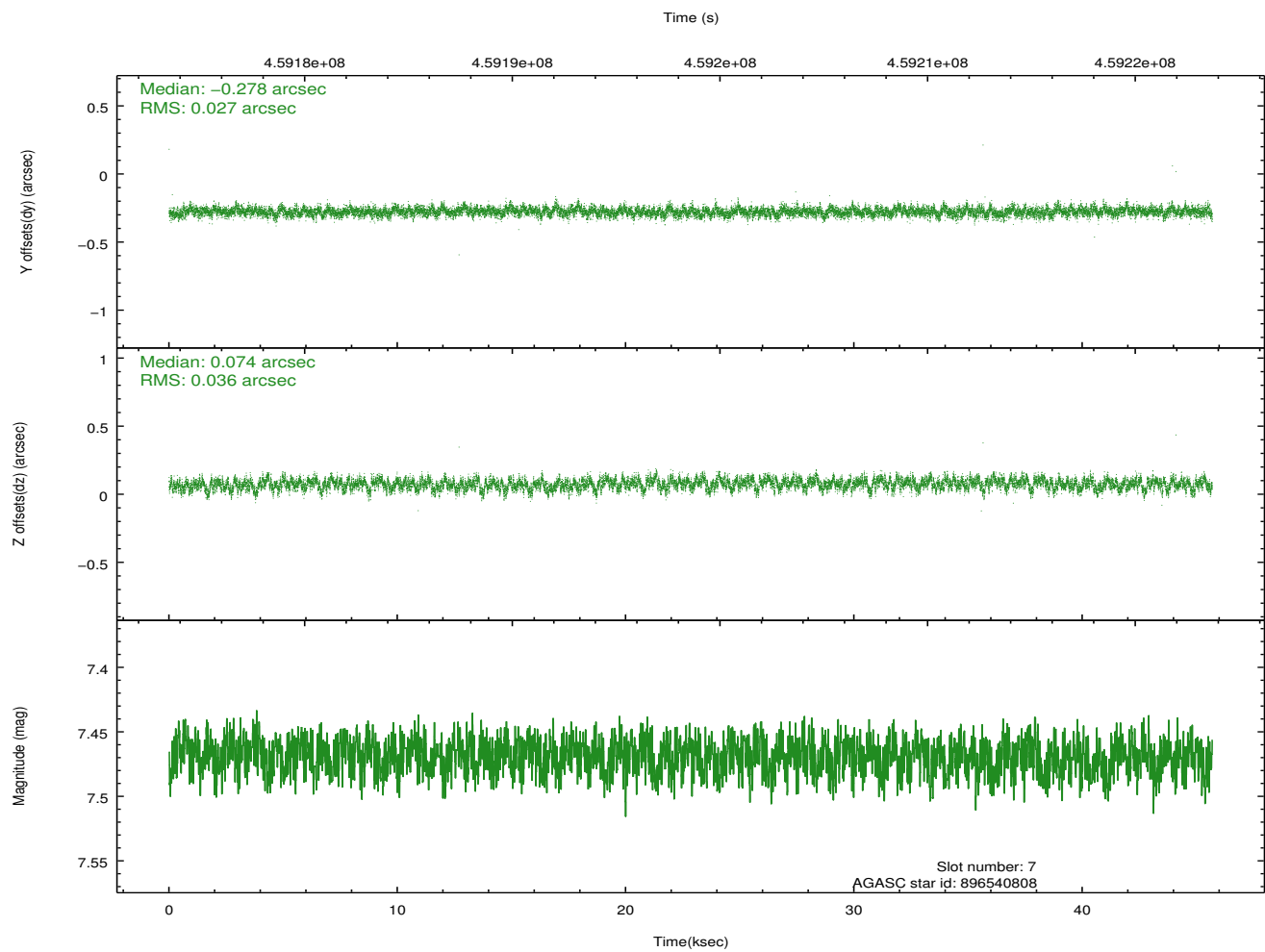
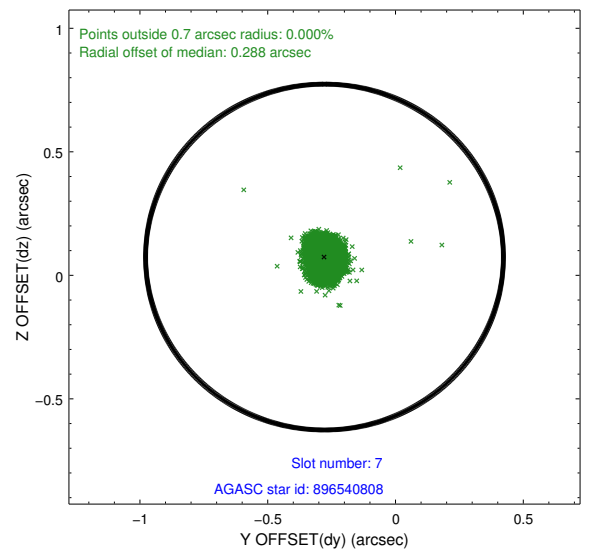
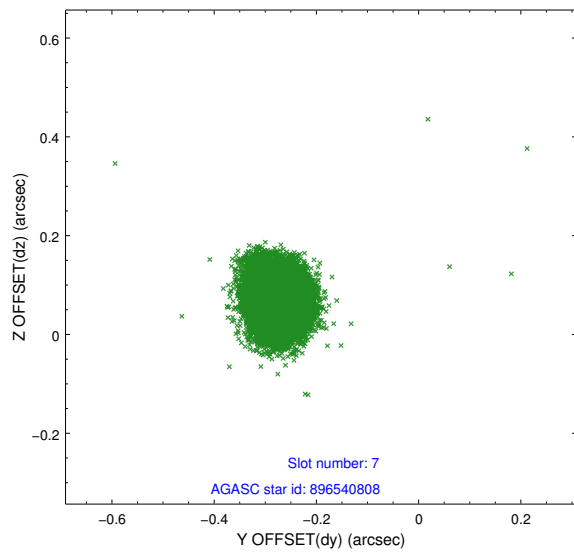
2.4.3 Slot 5



2.4.4 Slot 6

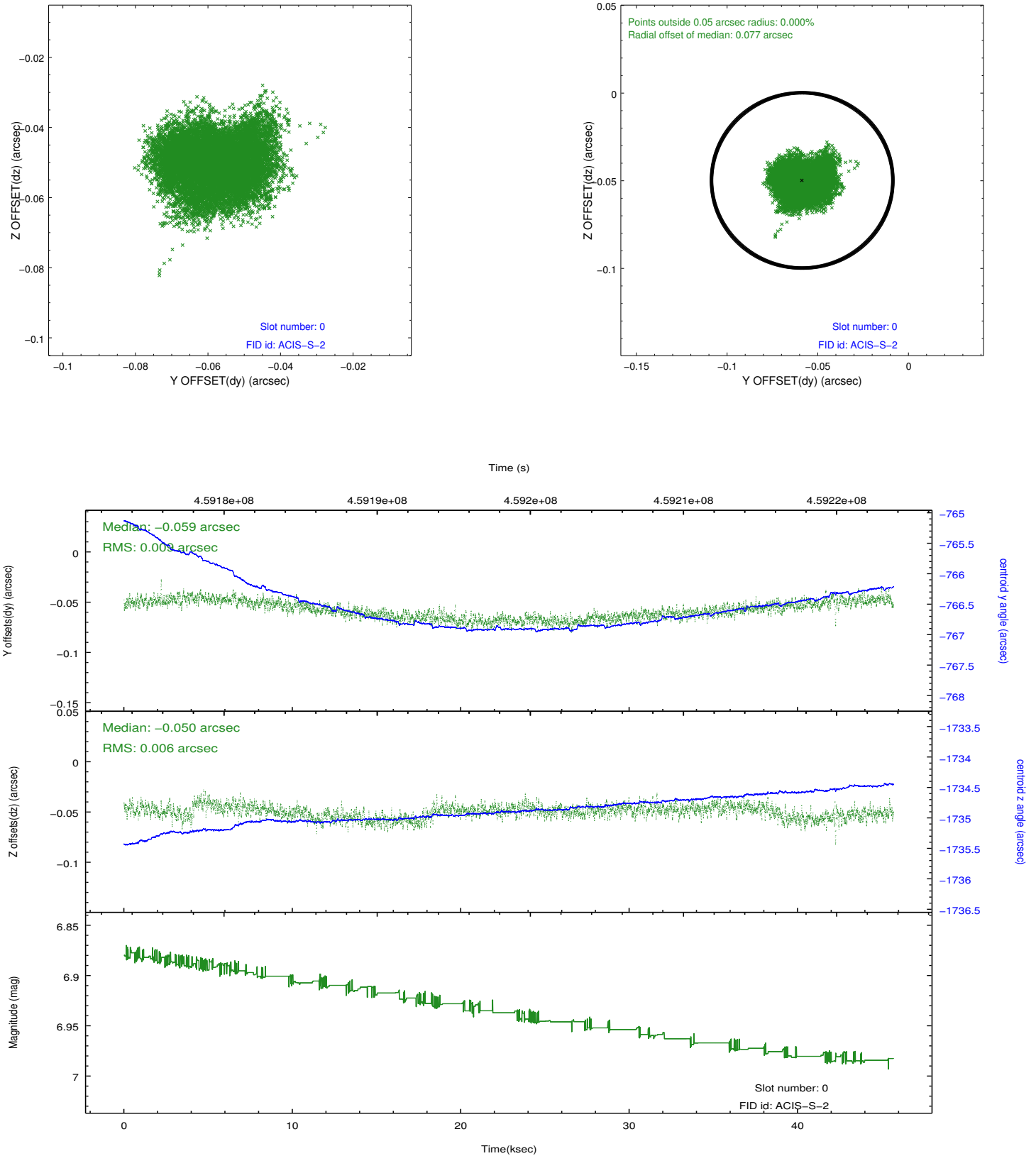


2.4.5 Slot 7

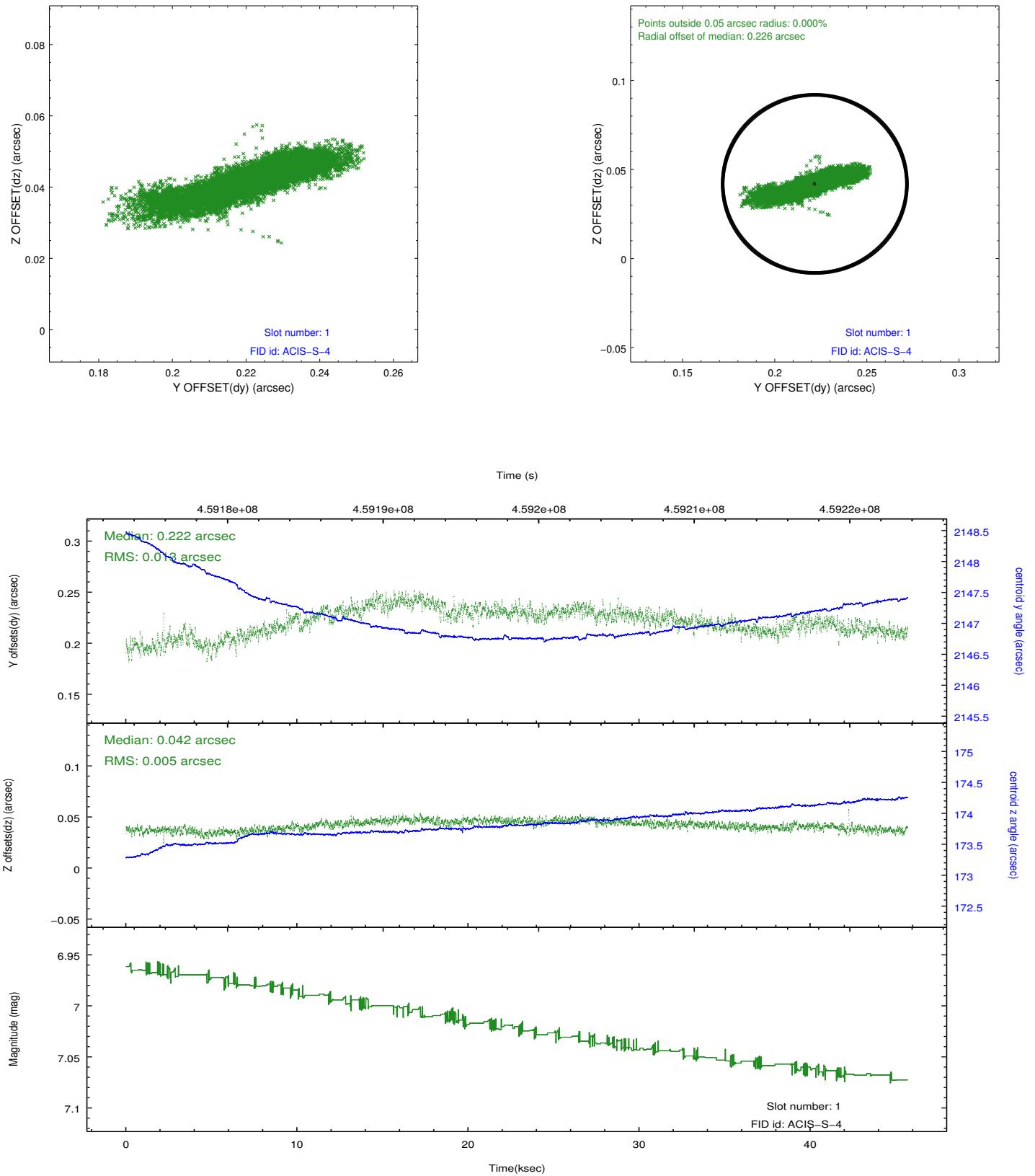


2.5 FID Slots

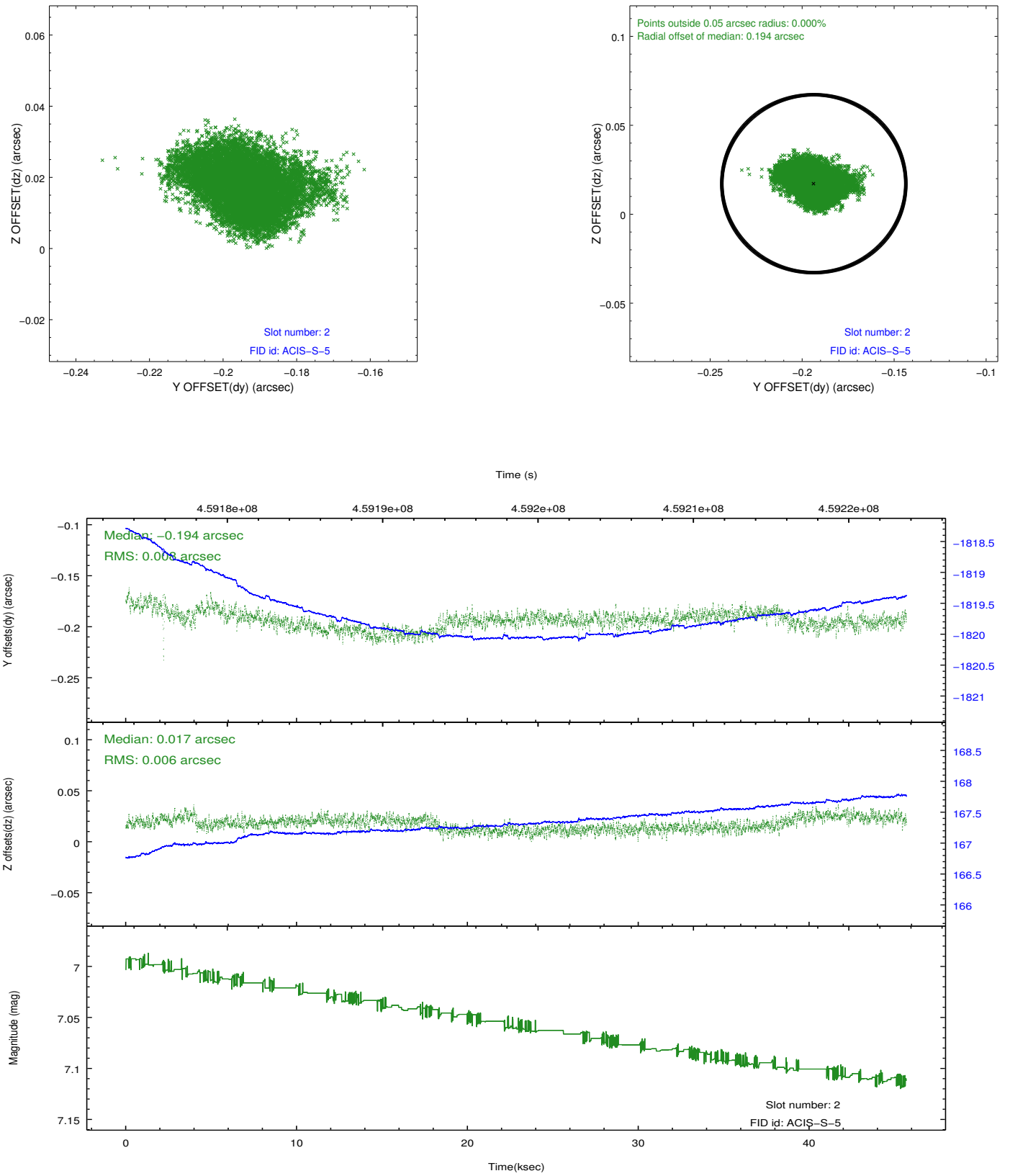
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

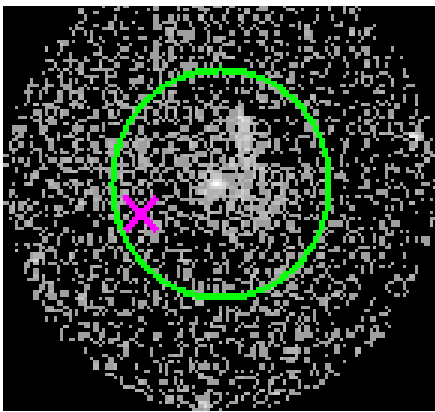


3 Gratings

3.1 HEG Arm



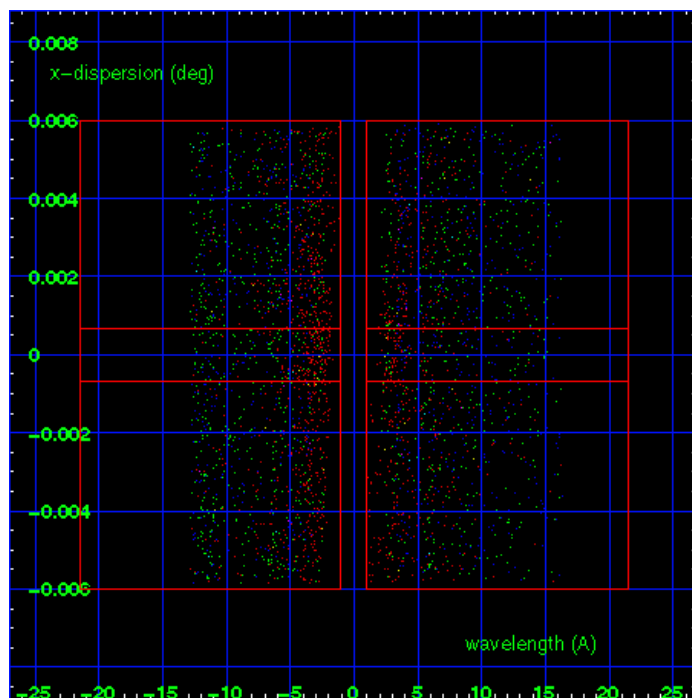
HEG Order Sort 123



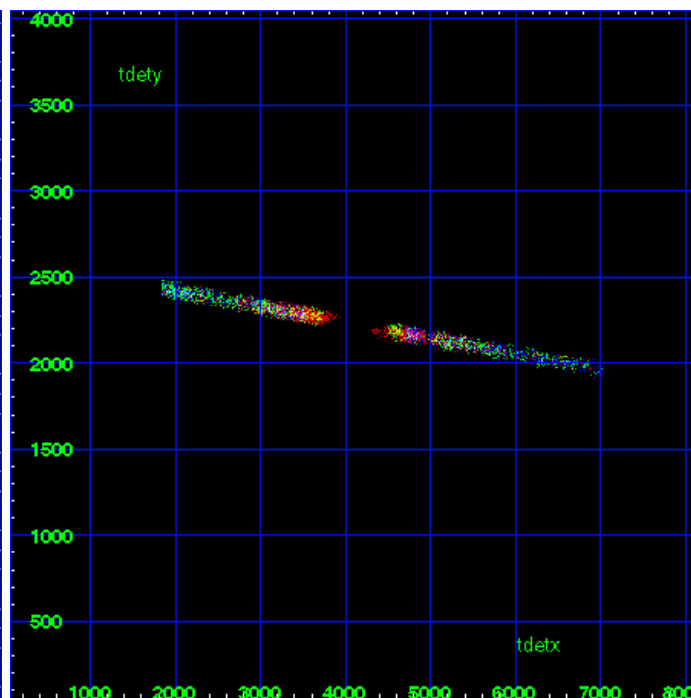
HEG Zero Order



HEG Order Sort ALL

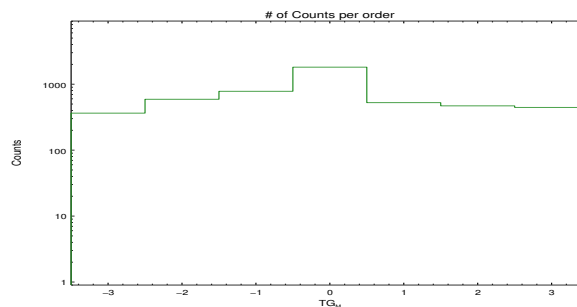


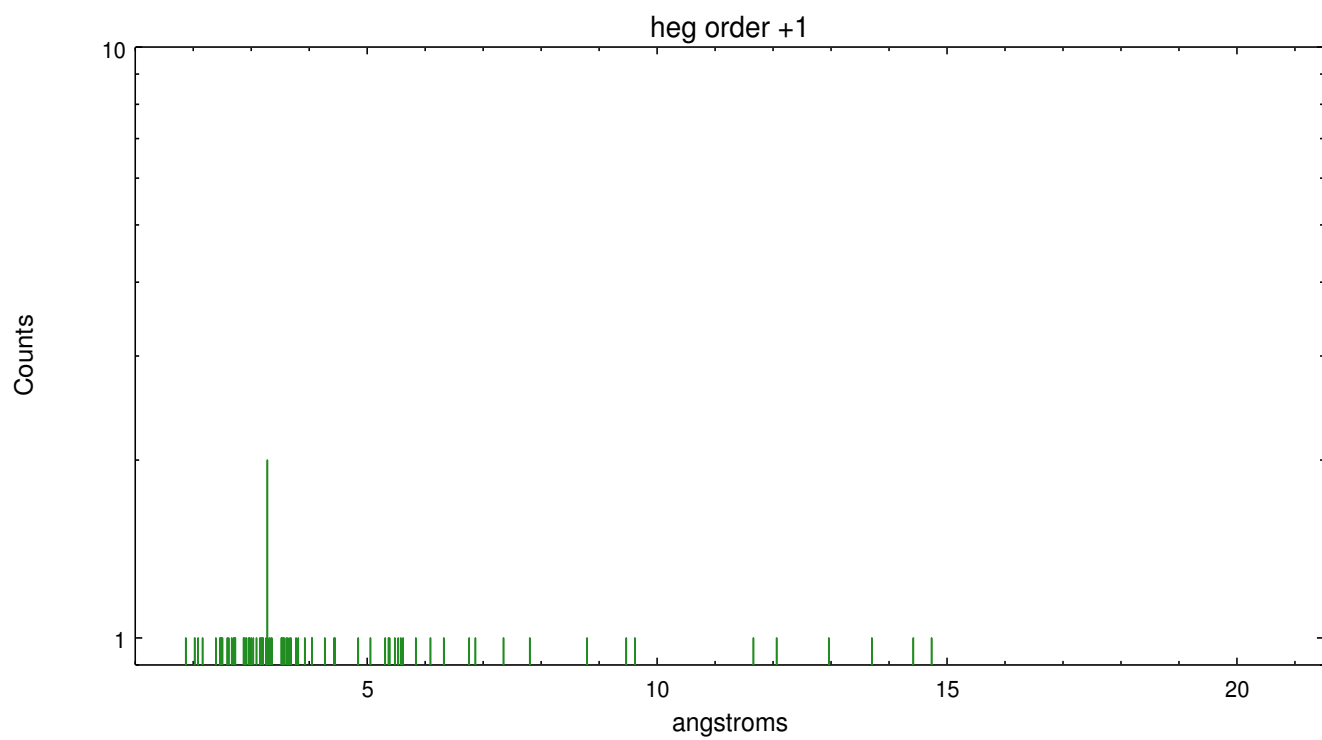
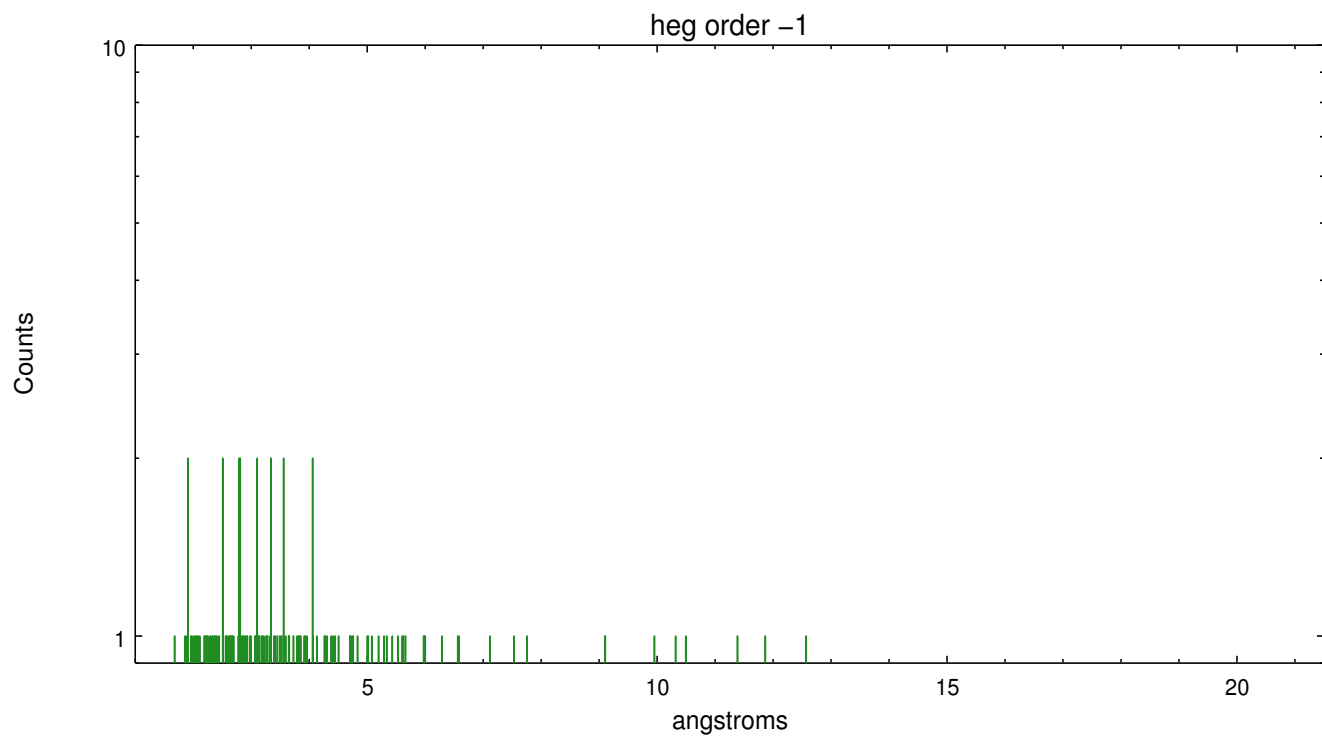
Spot Image HEG



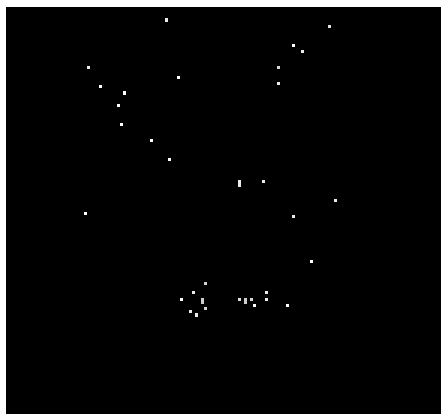
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	364	591	781	1813	524	469	445

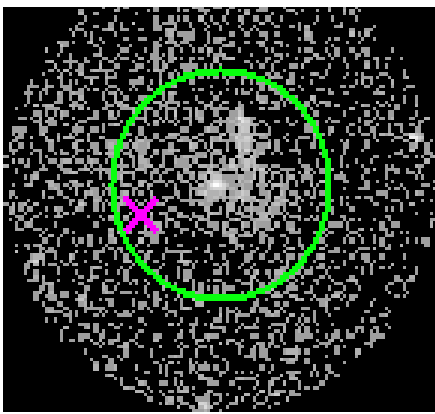




3.2 MEG Arm



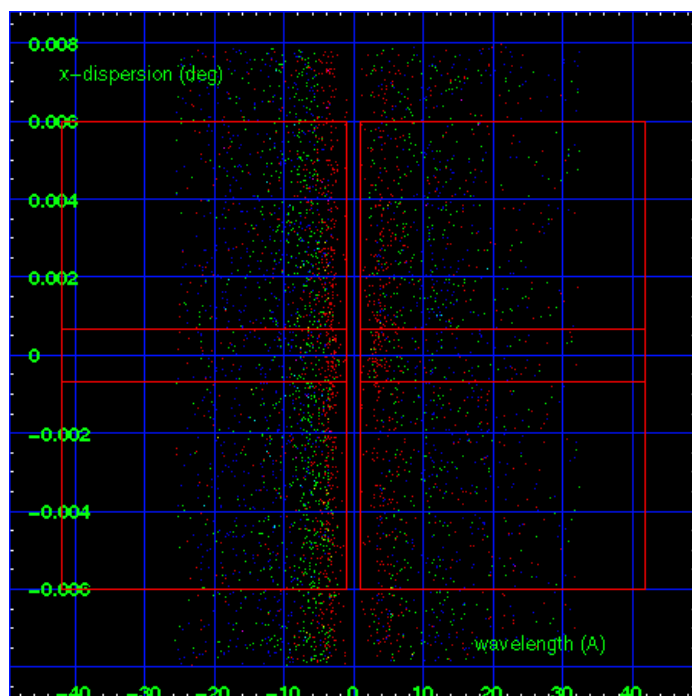
MEG Order Sort 123



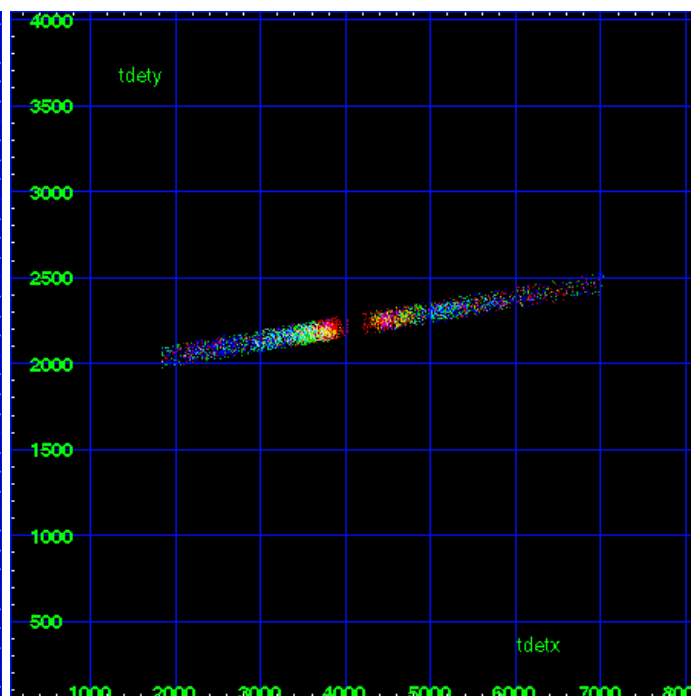
MEG Zero Order



MEG Order Sort ALL

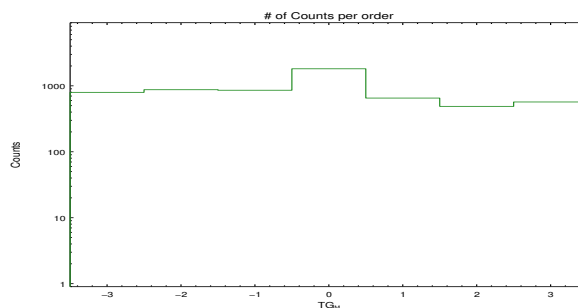


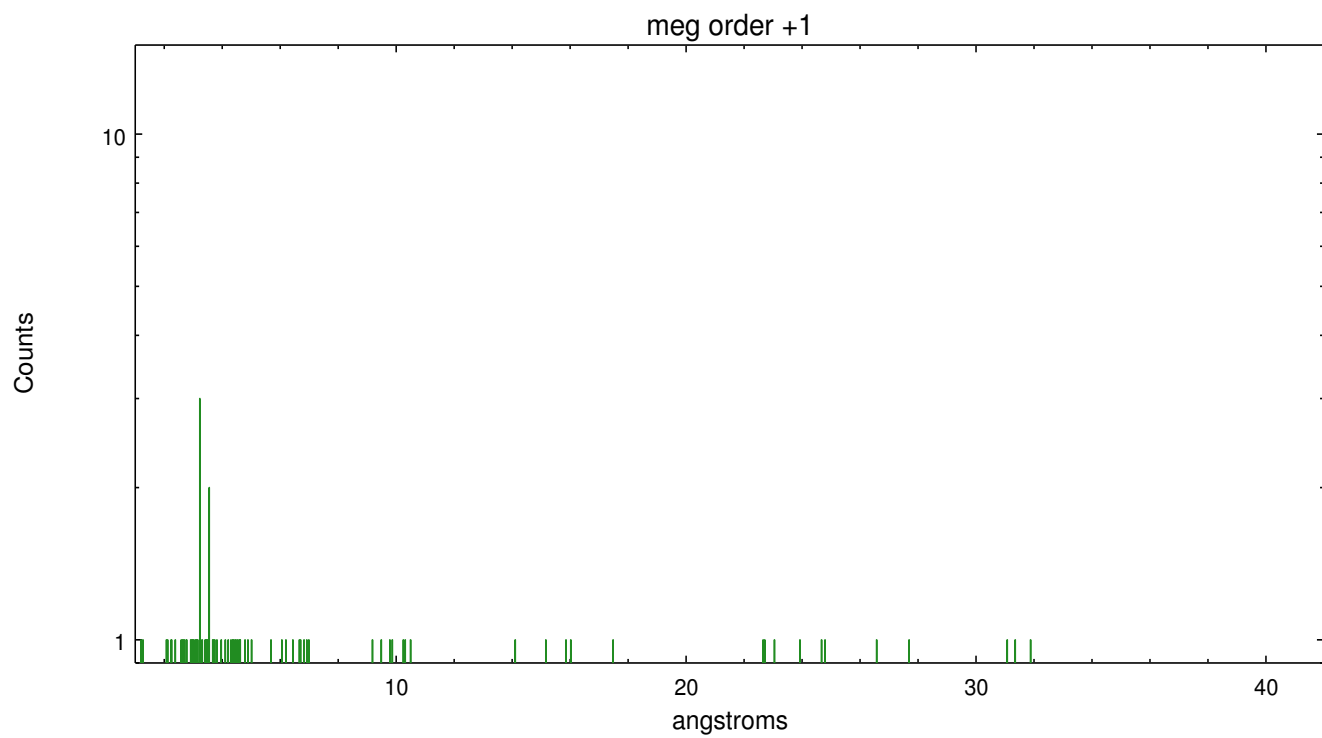
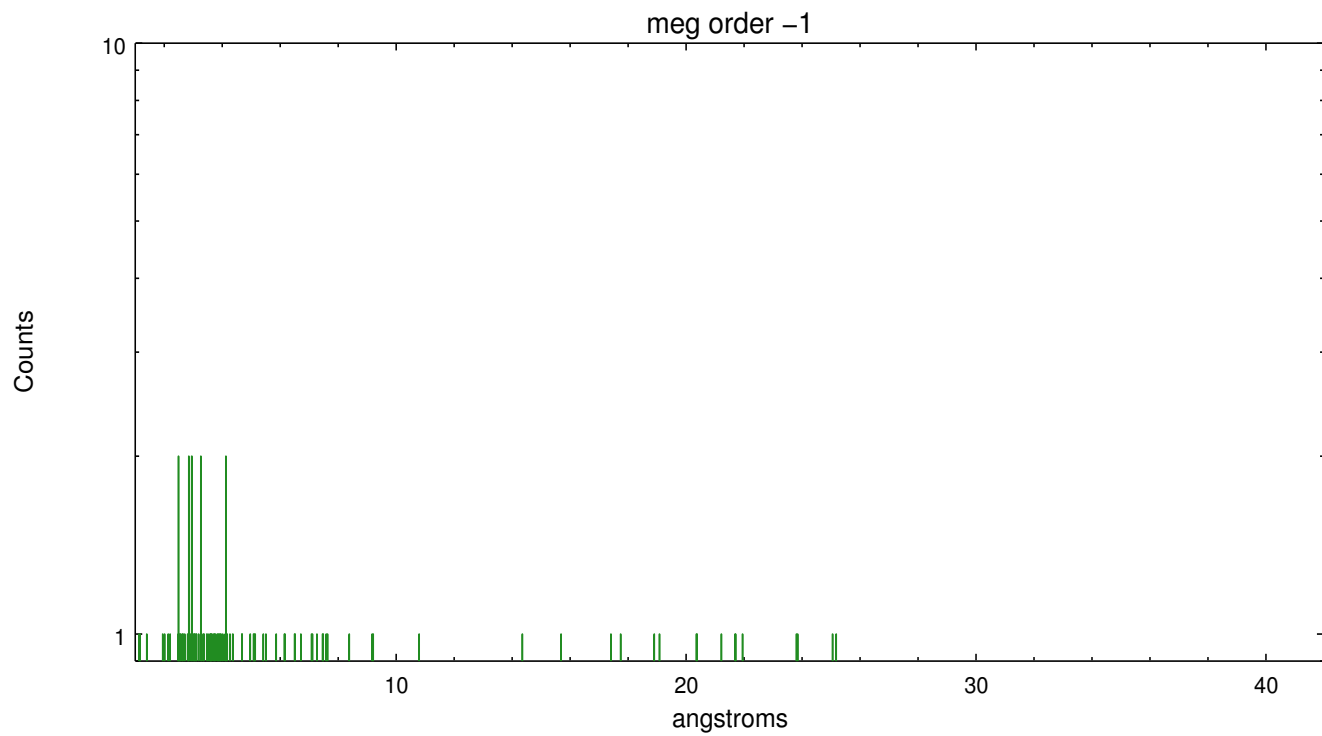
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	796	873	857	1813	652	488	569





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.083300346732

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]