

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13854 - L2 Version 1
Chandra X-Ray Center

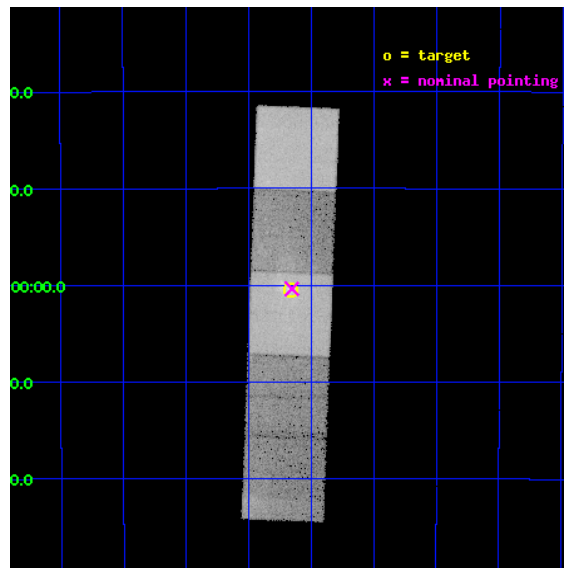
L2 Processing Date : Mar 21 2012

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

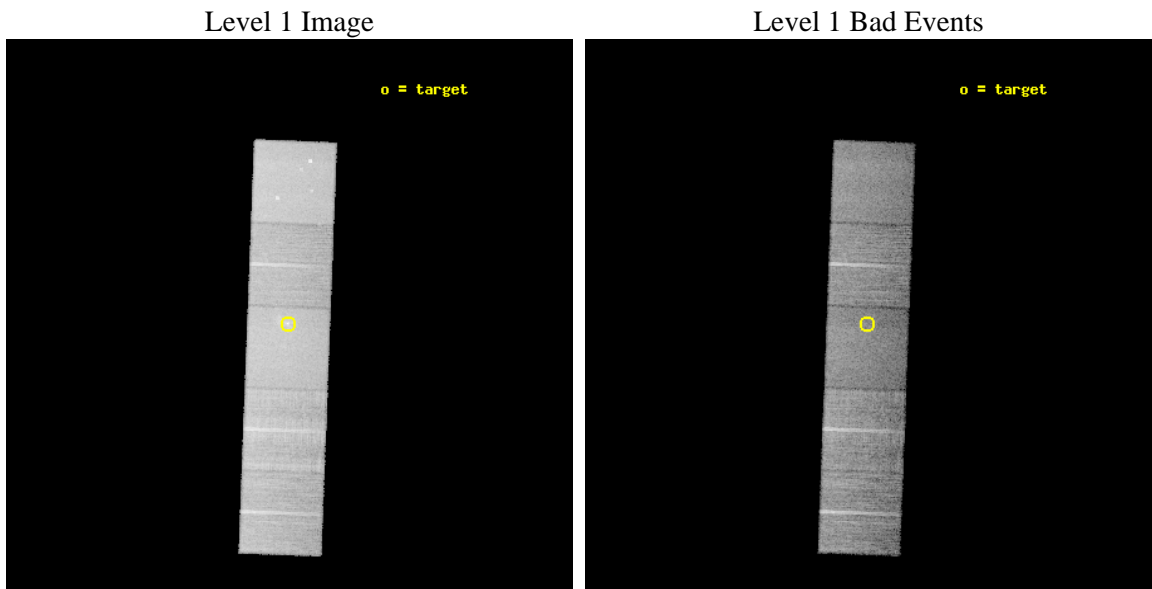
seq_num	601014	Sequence number
obs_id	13854	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41367722539	Nominal RA [deg]
dec_nom	-29.006293155511	Nominal Dec [deg]
roll_nom	92.1551794981	Nominal Roll [deg]
revision	1	Processing version of data
ontime	23062.875448167	Sum of GTIs [s]
livetime	22761.542001795	Livetime [s]
ontime5	23062.834408164	Sum of GTIs [s]
ontime6	23062.793368161	Sum of GTIs [s]
ontime7	23062.875448167	Sum of GTIs [s]
ontime8	23062.752328157	Sum of GTIs [s]
ontime9	23062.711288154	Sum of GTIs [s]
l2events	253173	Number of level 2 events



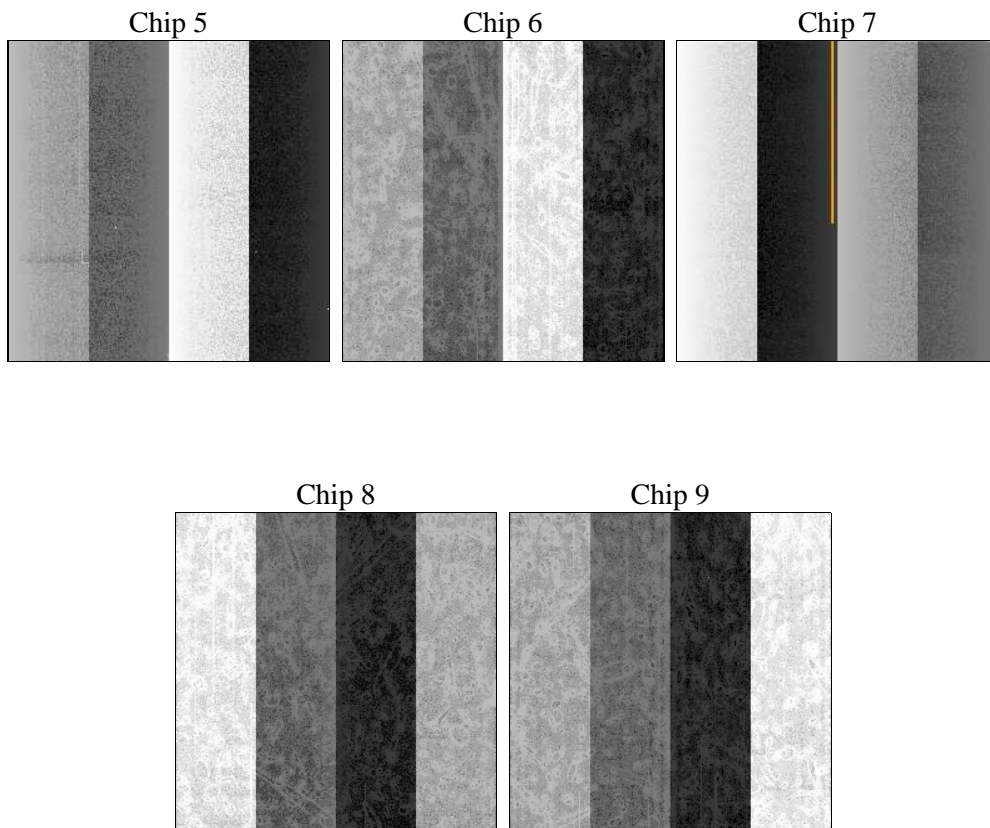
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	23062.875448167	Sum of GTIs [s]
caldsver	4.4.8	 	ontime5	23062.834408164	Sum of GTIs [s]
date	2012-03-21T03:22:37	Date and time of file creation	ontime6	23062.793368161	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	23062.875448167	Sum of GTIs [s]
			ontime8	23062.752328157	Sum of GTIs [s]
			ontime9	23062.711288154	Sum of GTIs [s]
			l1events	834732	Number of level 1 events

2.1.4 Events

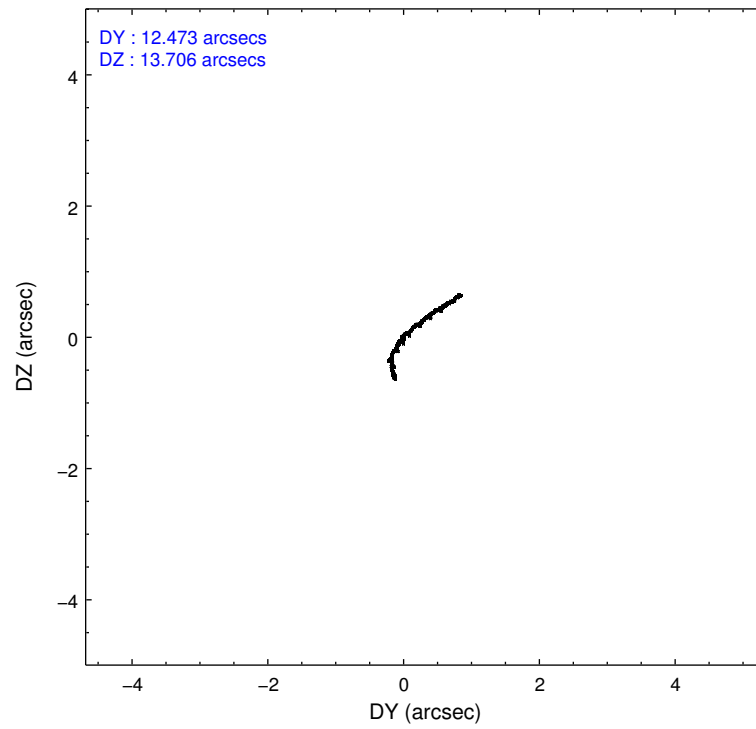
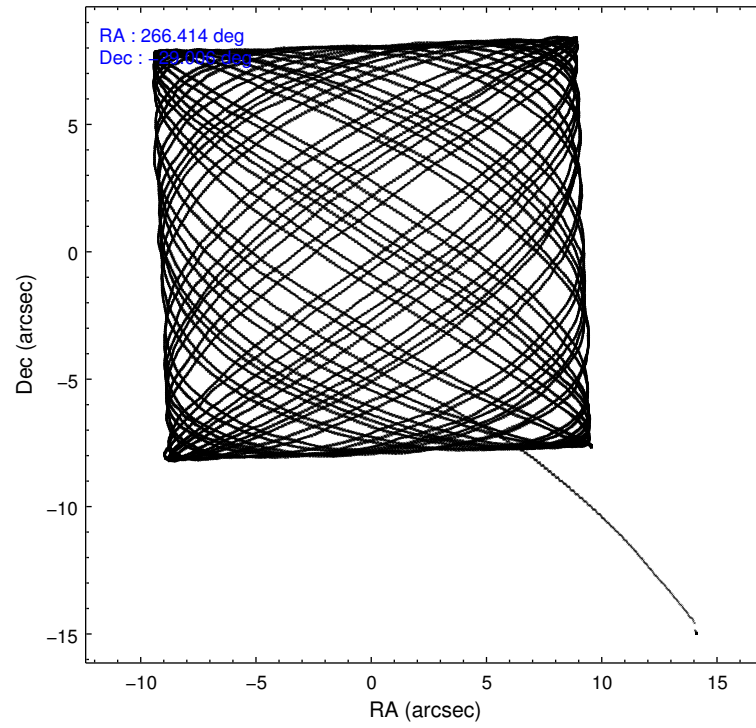
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	203337	140718	186019	172928	131730
rejected events	103044	112446	93357	122437	109614
rejected %	50%	79%	50%	70%	83%

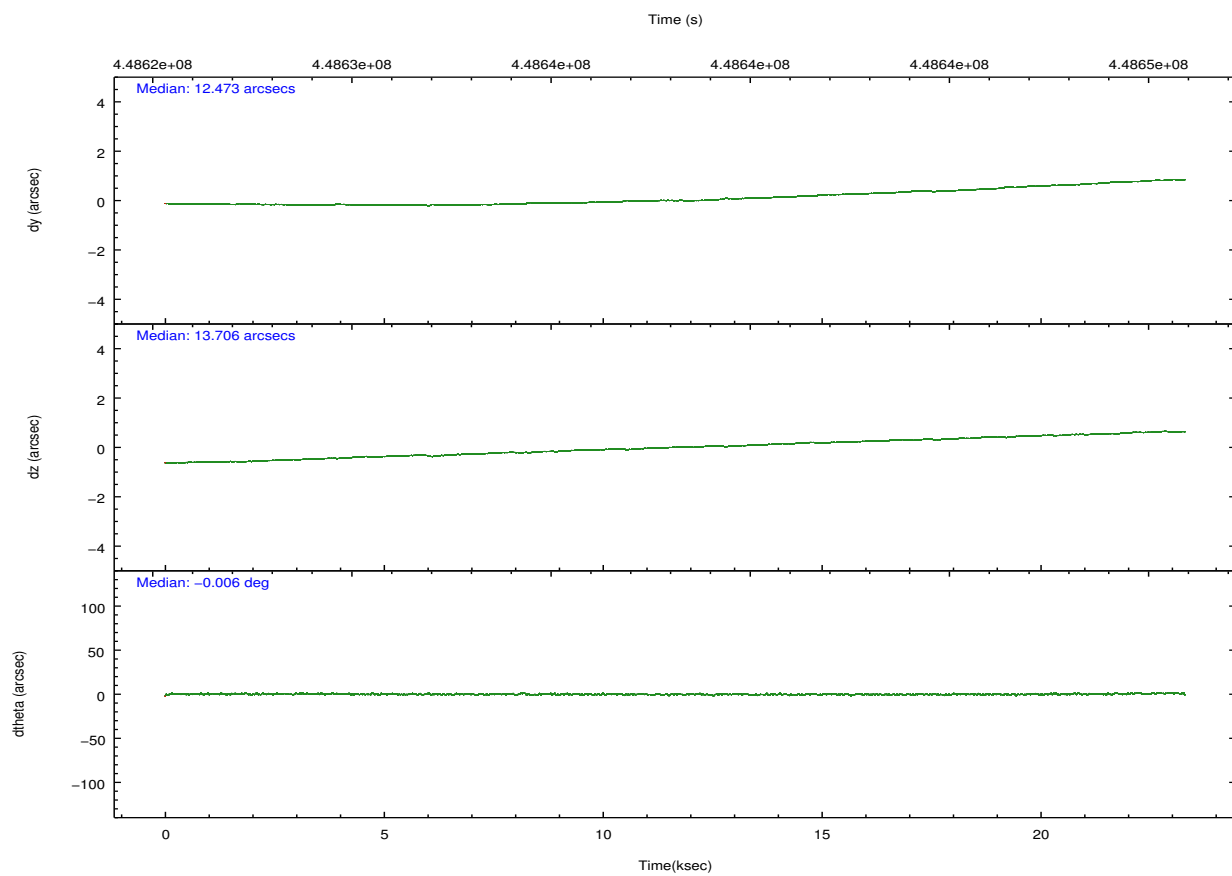
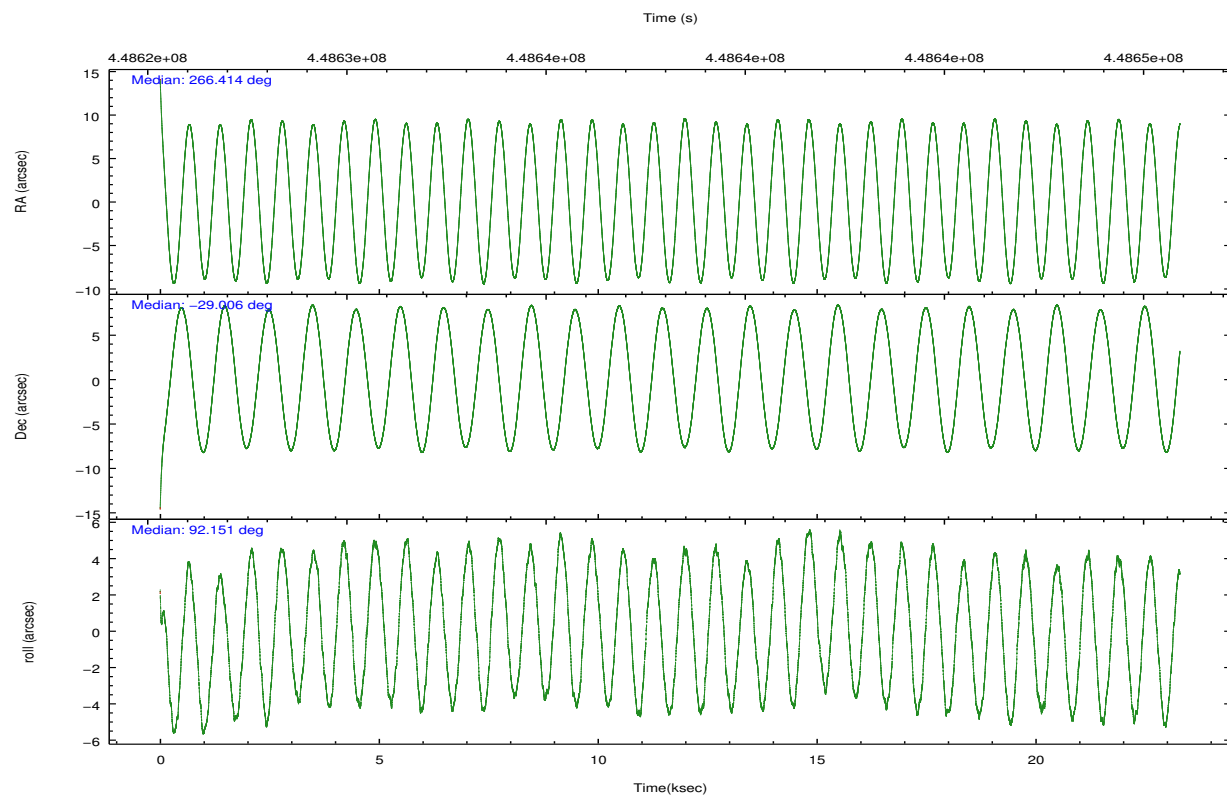
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	8443	13615	10299	17400	10195
	4%	9%	5%	10%	7%
grade 1 events	384	89	226	148	111
	0%	0%	0%	0%	0%
grade 2 events	30978	5425	19584	11126	4233
	15%	3%	10%	6%	3%
grade 3 events	3643	2281	8301	5059	1988
	1%	1%	4%	2%	1%
grade 4 events	3518	2188	8157	4718	1885
	1%	1%	4%	2%	1%
grade 5 events	14937	6403	17247	8863	6931
	7%	4%	9%	5%	5%
grade 6 events	53737	4770	46344	12197	3820
	26%	3%	24%	7%	2%
grade 7 events	87697	105947	75861	113417	102567
	43%	75%	40%	65%	77%

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	266.41367722539	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.029222	-29.0062931555112	Alternating exposures requested	N	N
[deg] Pointing Roll	92.006803	92.15517949810017	[s] Primary exposure time	0.000000	3.1
[s] Window start time (MET)	448502466.184000	448502466.184000			
[s] Window stop time (MET)	450057666.184000	450057666.184000			
[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)	448626751.184000	448625599.23406			
Observation start date	2012-03-20T10:31:25	2012-03-20T10:13:19			
[s] Observation end time (MET)	448649751.184000	448650490.33538			
Observation end date	2012-03-20T16:54:45	2012-03-20T17:08:10			
Read mode	TIMED	TIMED			

2.3 Aspect



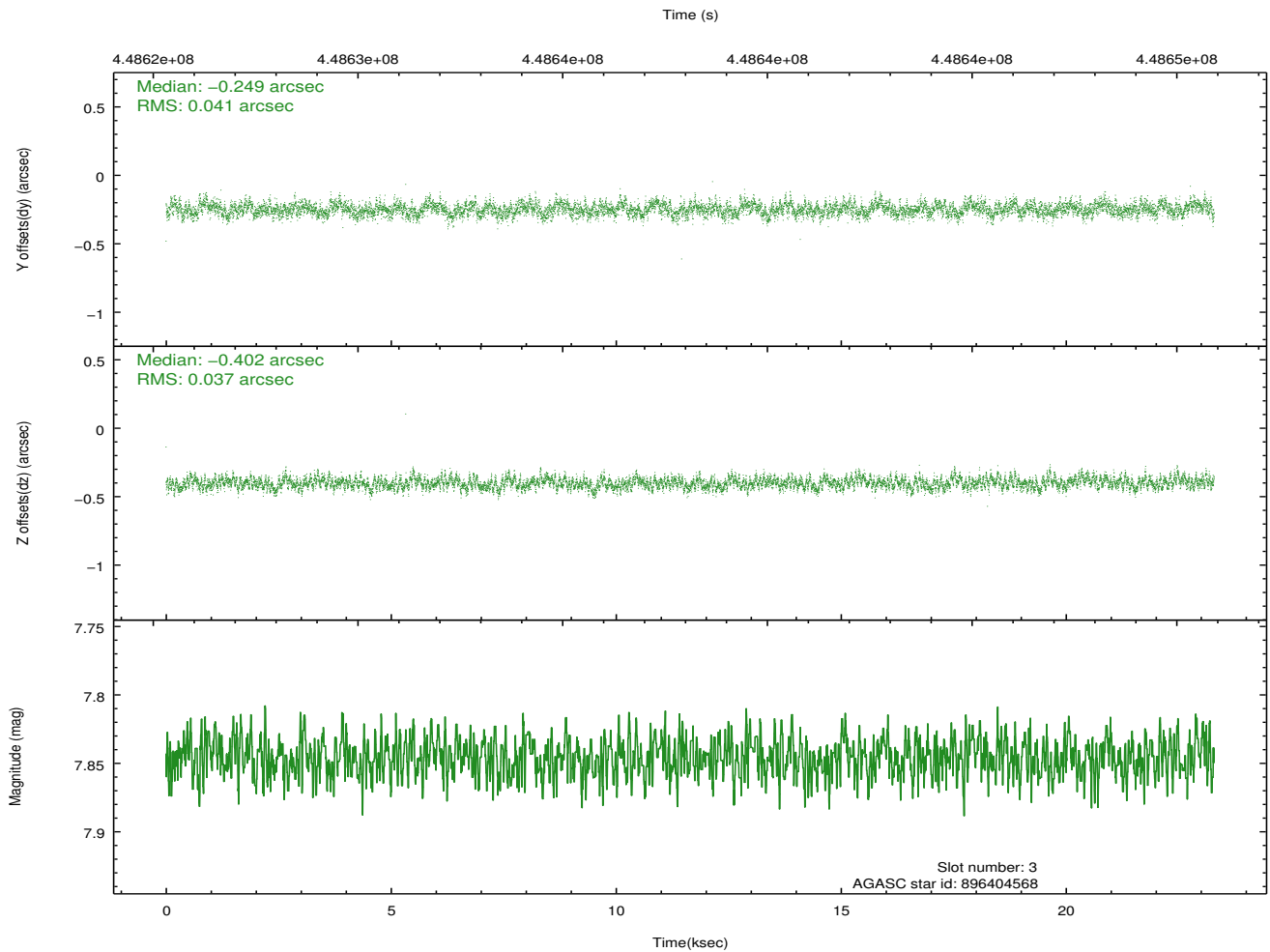
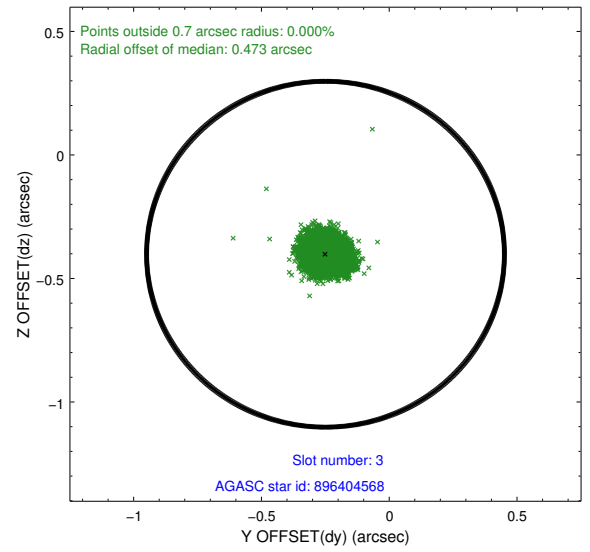
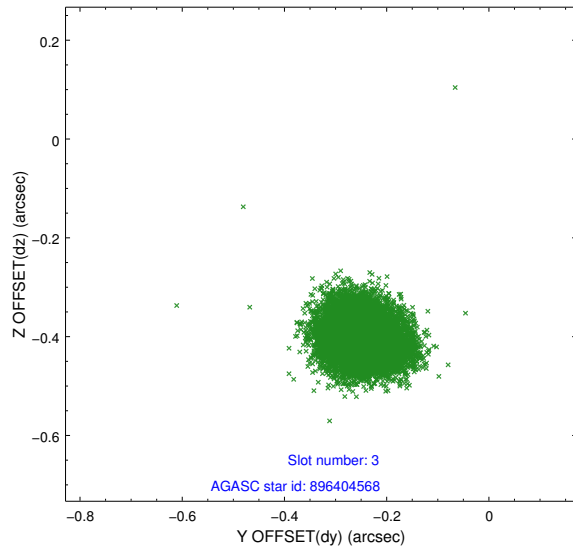


Slot Statistics

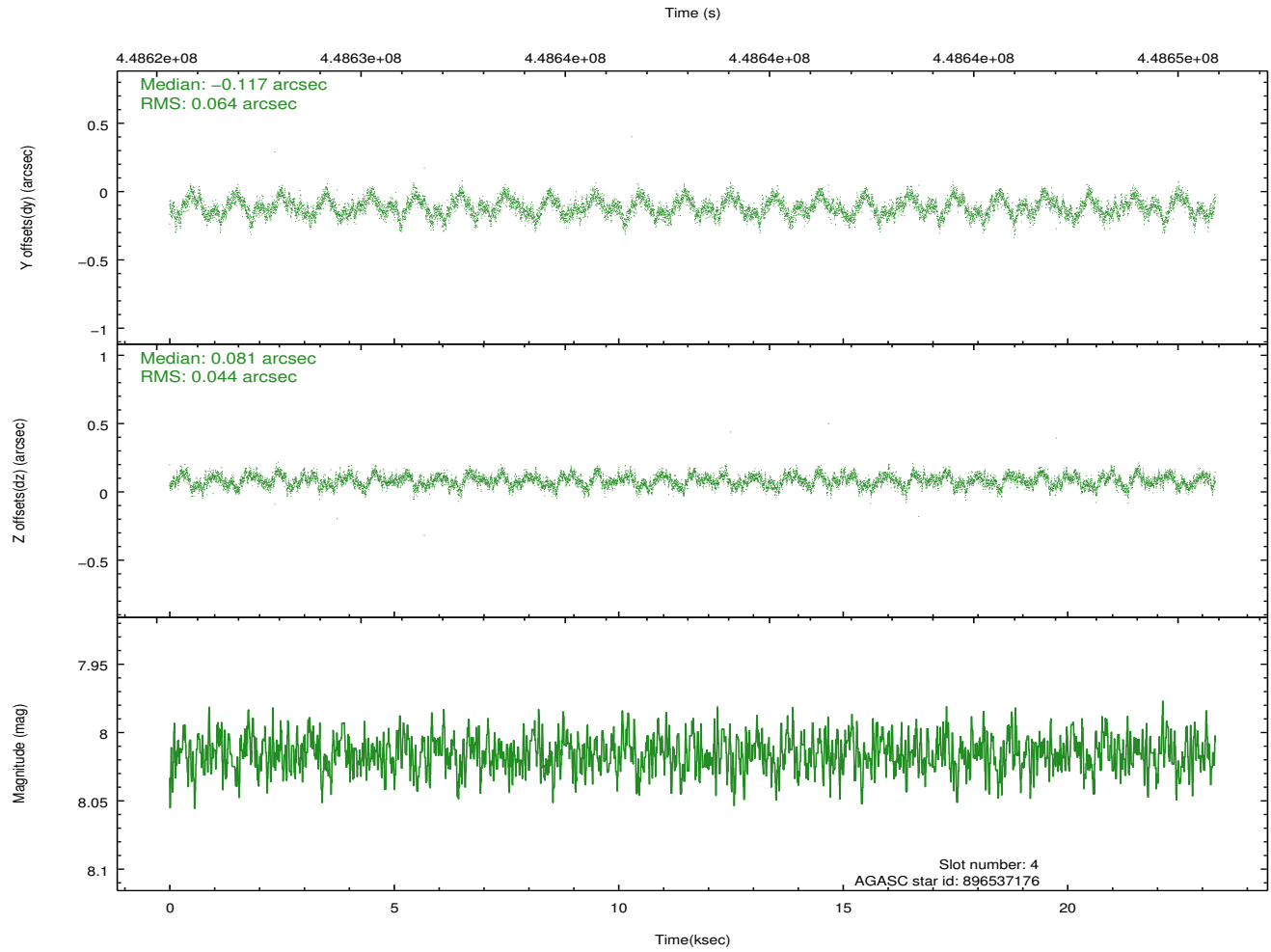
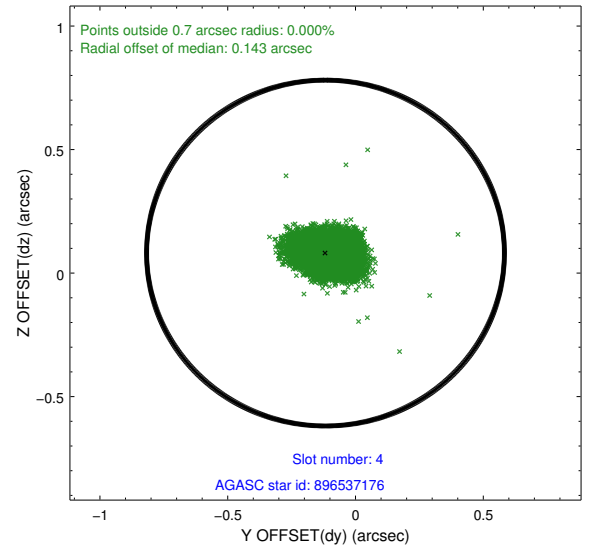
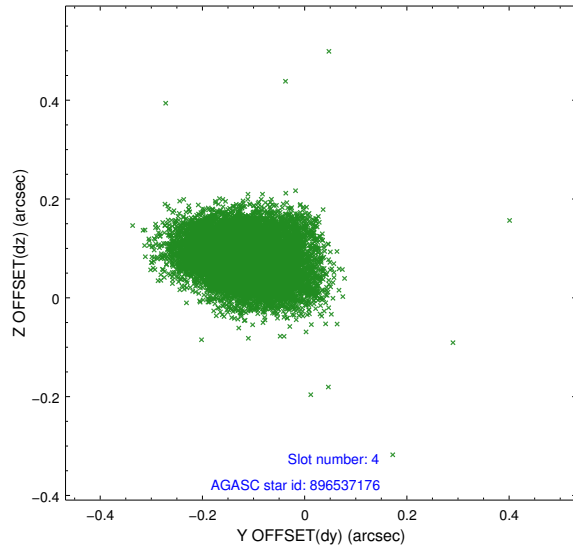
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.11	5681	-0.007	-0.005	0.011	0.019	0.000000	0.000000	930.53	-1730.57
1	FID	ACIS-S-4	7.10	5682	0.087	-0.025	0.009	0.018	0.000000	0.000000	2148.08	173.44
2	FID	ACIS-S-6	7.24	5682	-0.103	0.039	0.010	0.019	0.000000	0.000000	396.52	811.00
3	GUIDE	896404568	7.85	11363	-0.249	-0.402	0.058	0.094	265.687293	-28.431080	2226.87	2276.82
4	GUIDE	896537176	8.02	11361	-0.117	0.081	0.082	0.134	266.498272	-28.678259	1255.42	-257.12
5	GUIDE	896540808	7.50	11362	0.059	-0.318	0.046	0.074	265.985401	-29.308604	-958.65	1431.96
6	GUIDE	896537776	7.52	11363	0.383	0.221	0.050	0.083	266.655684	-29.665673	-2314.63	-622.94
7	GUIDE	896538208	7.96	11358	-0.079	0.417	0.062	0.102	267.176969	-28.671626	1196.73	-2400.06

2.4 Star Slots

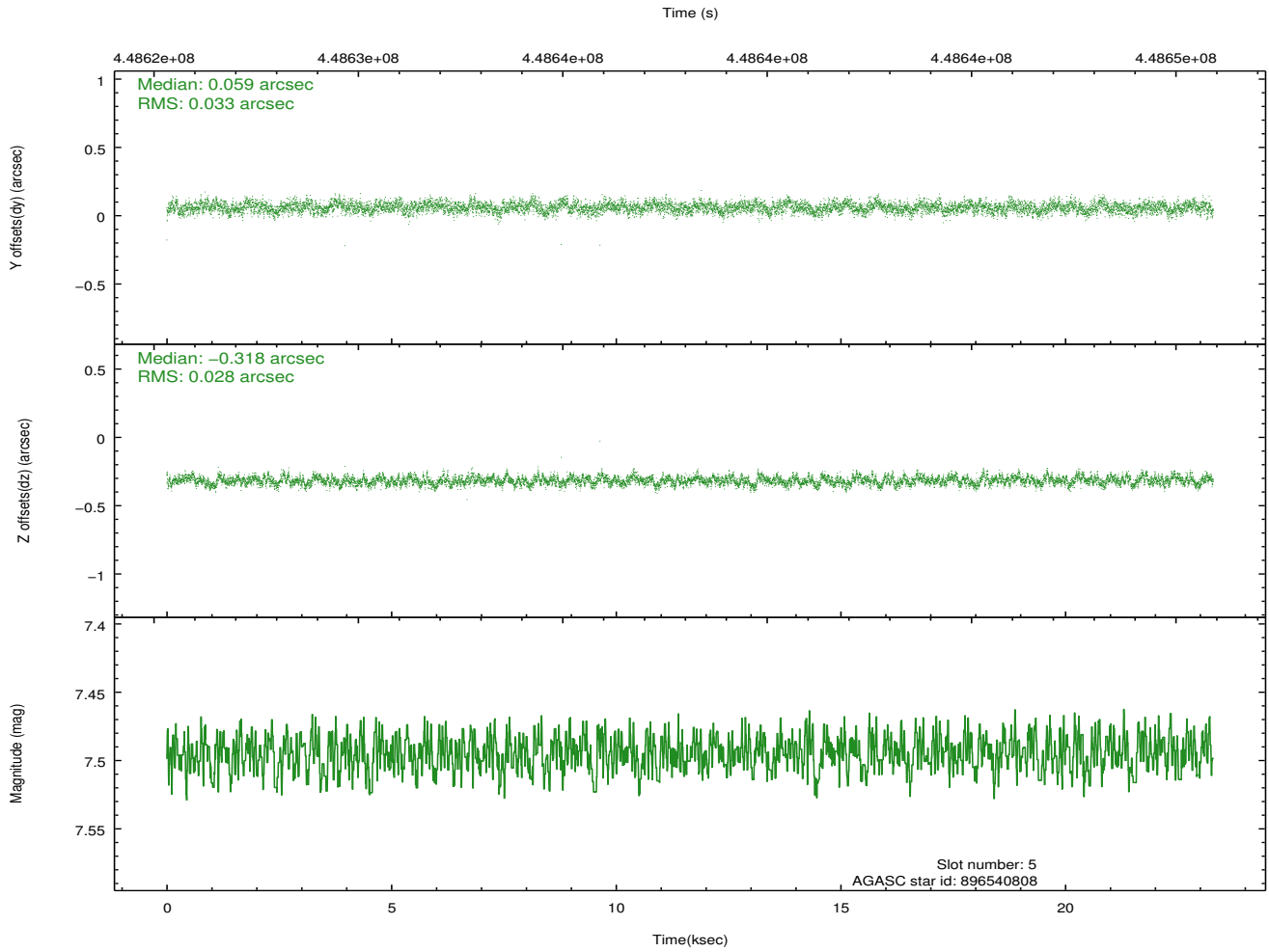
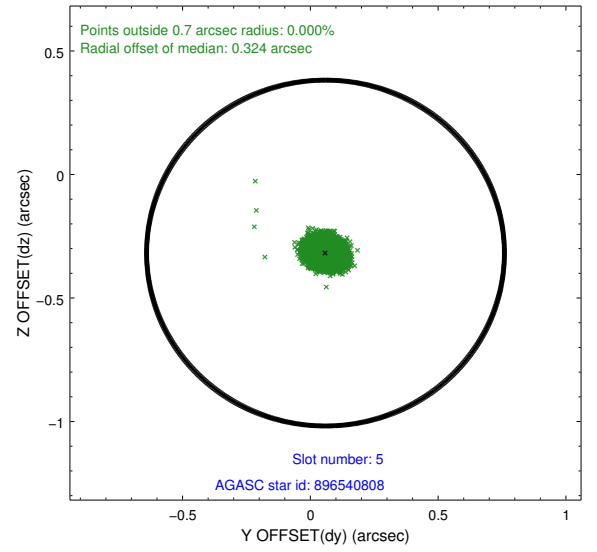
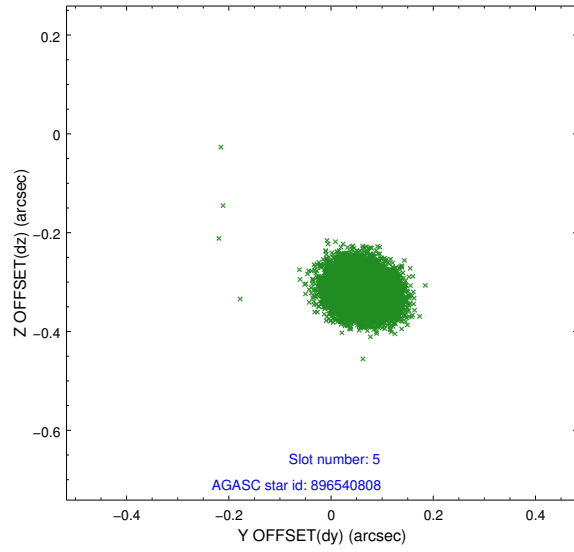
2.4.1 Slot 3



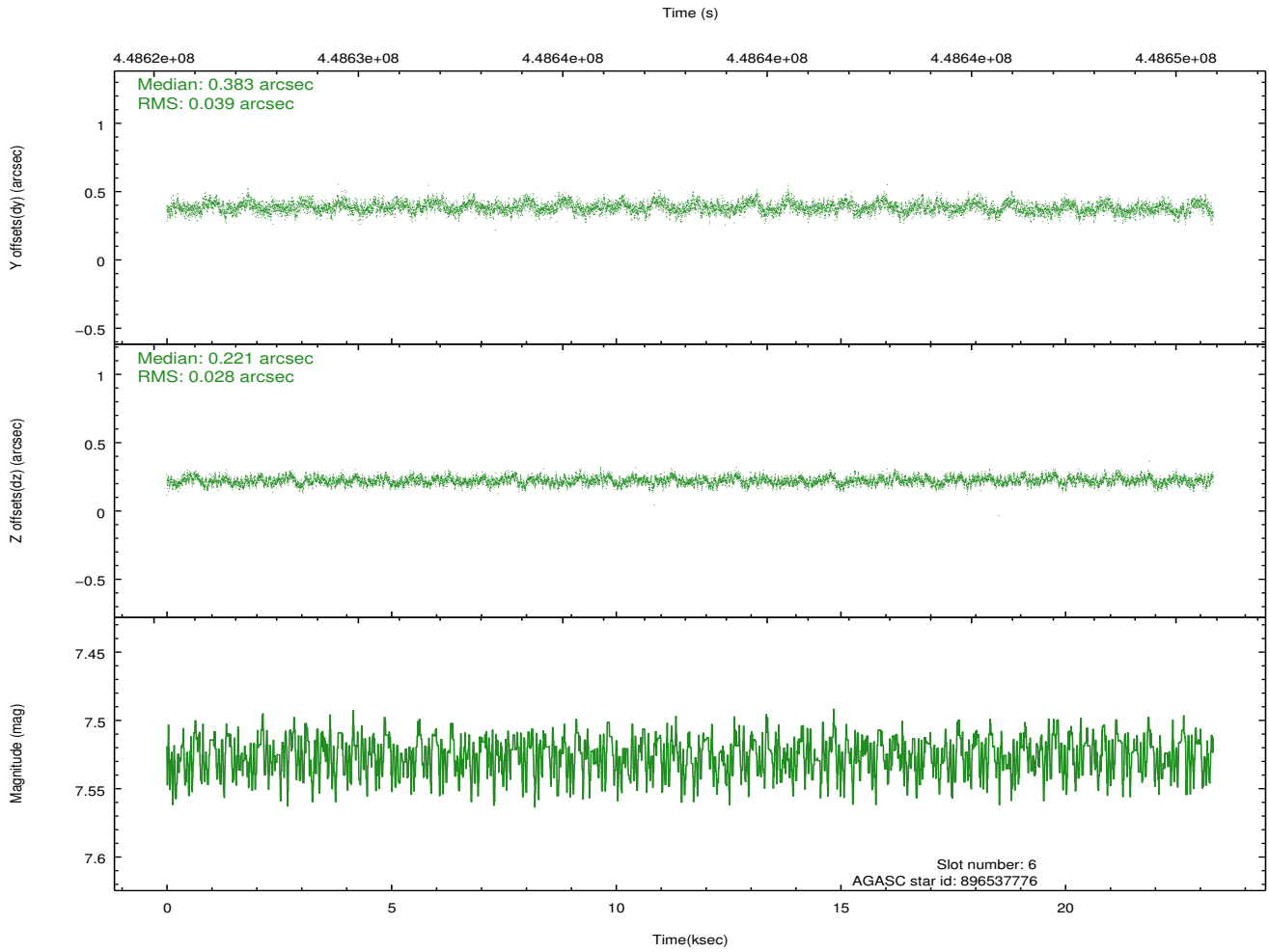
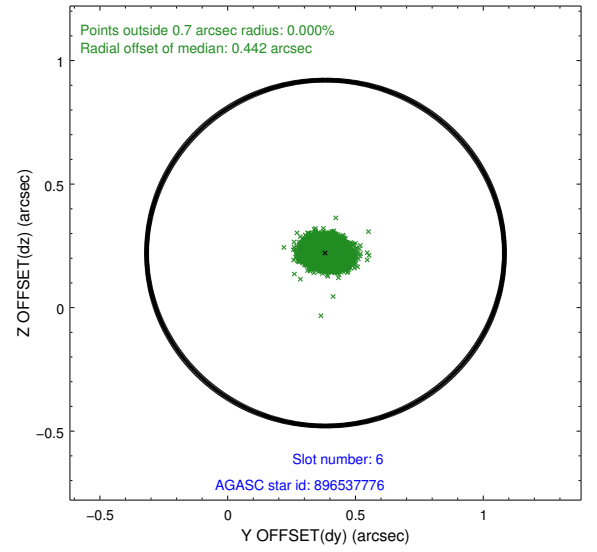
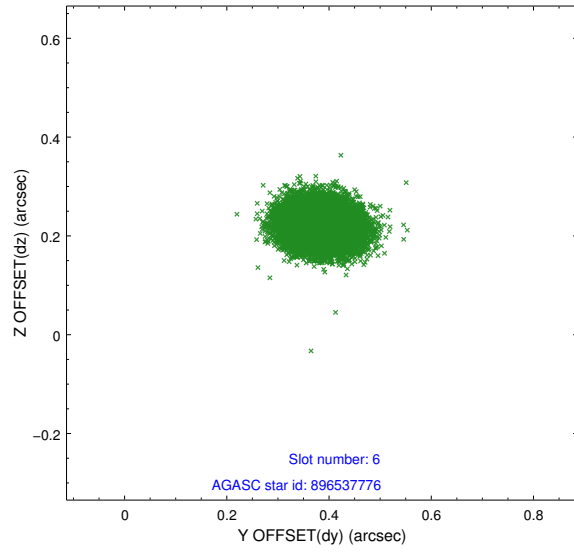
2.4.2 Slot 4



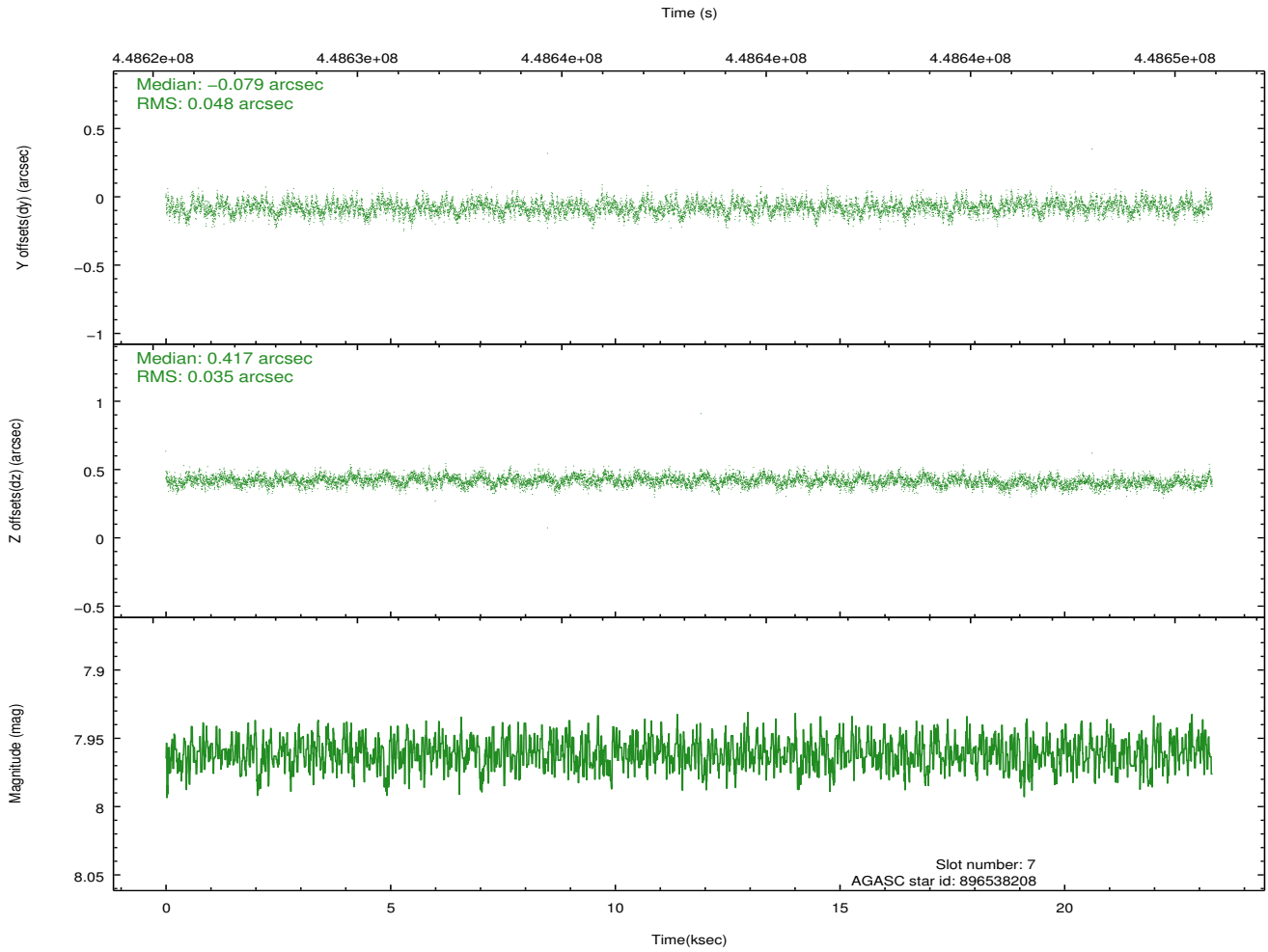
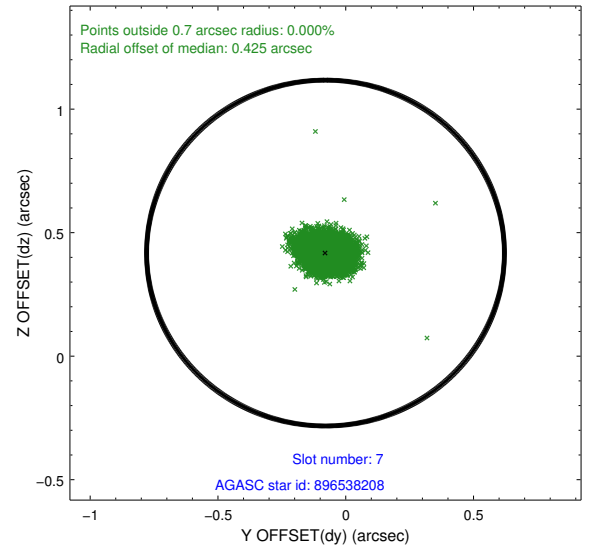
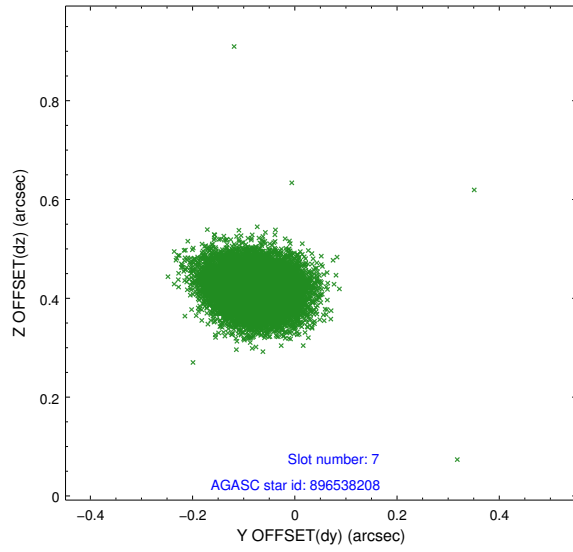
2.4.3 Slot 5



2.4.4 Slot 6

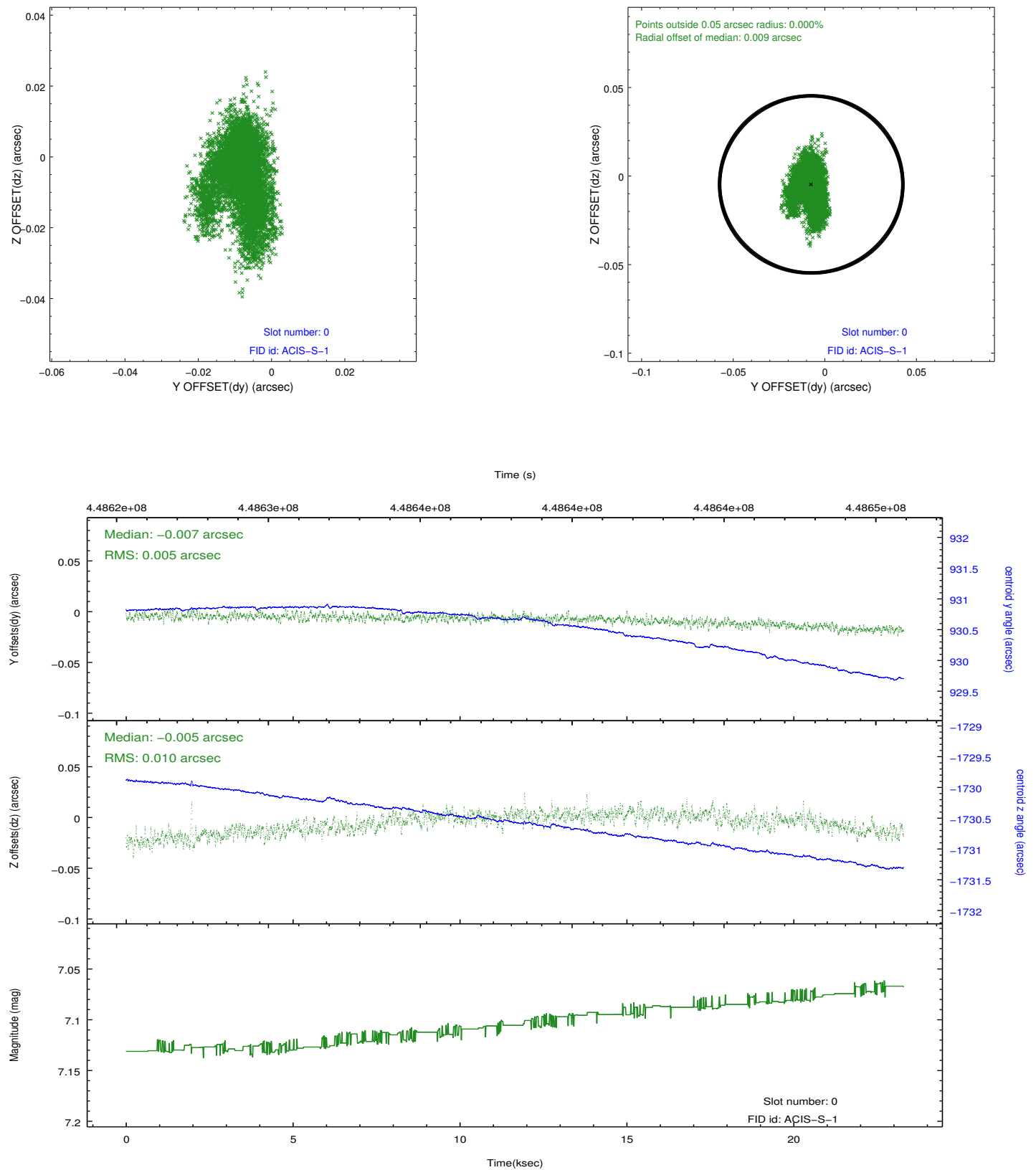


2.4.5 Slot 7

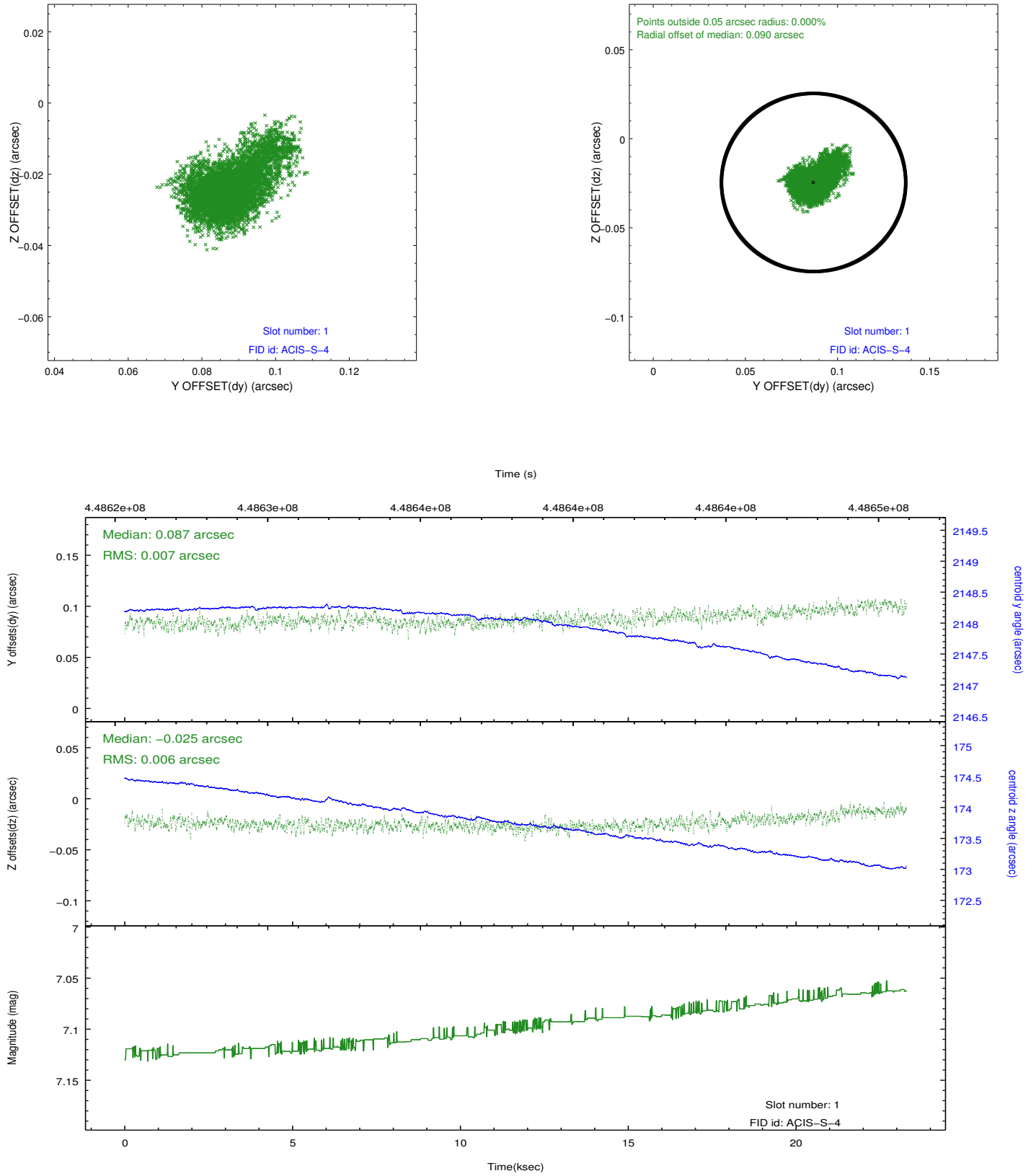


2.5 FID Slots

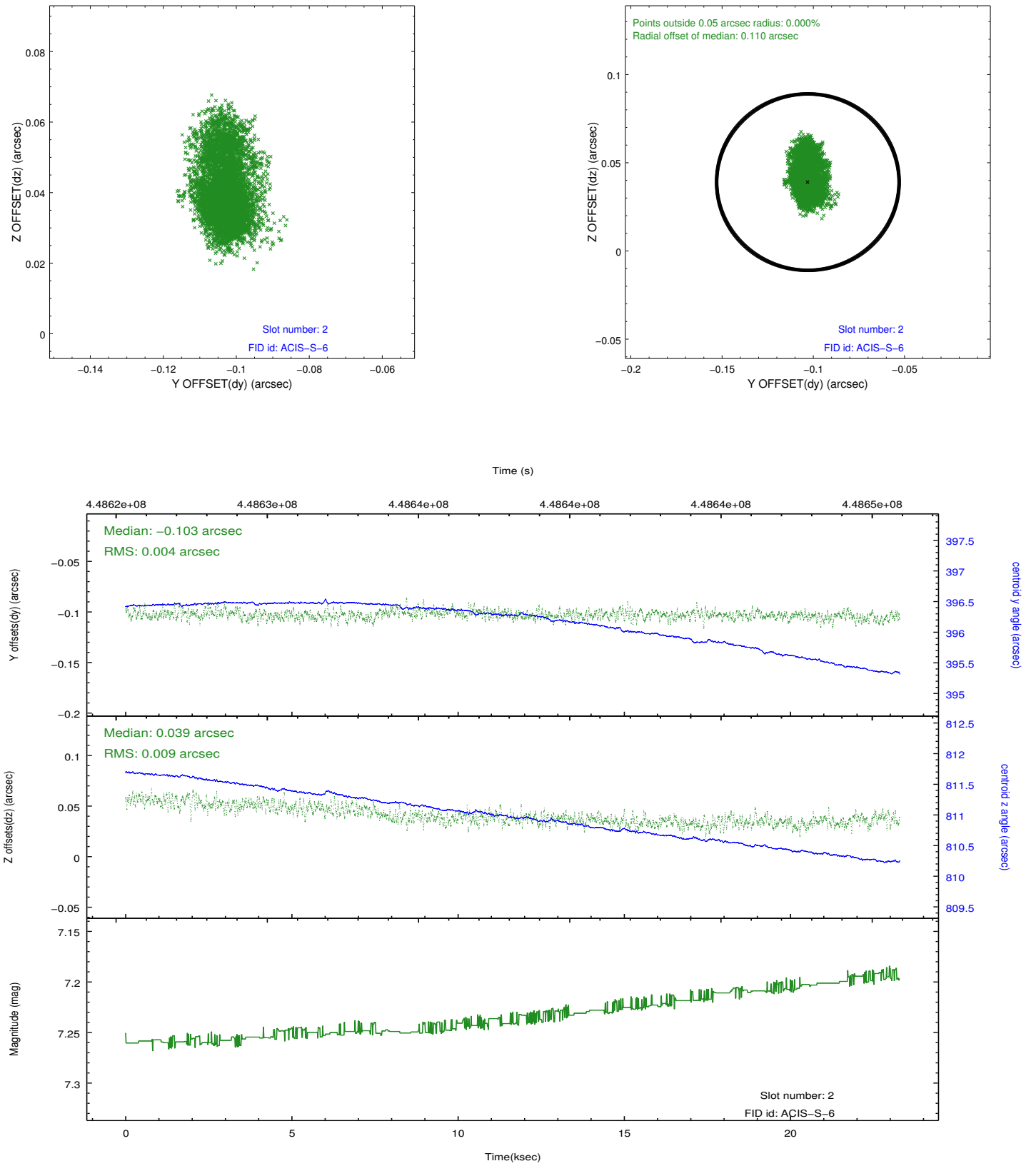
2.5.1 Slot 0



2.5.2 Slot 1

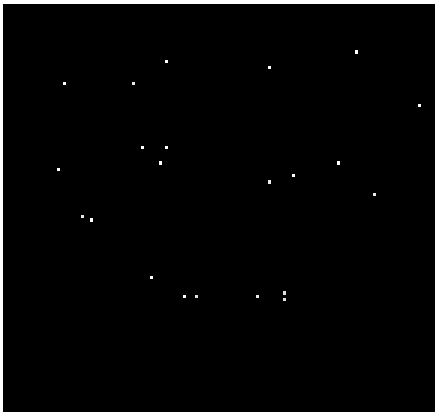


2.5.3 Slot 2

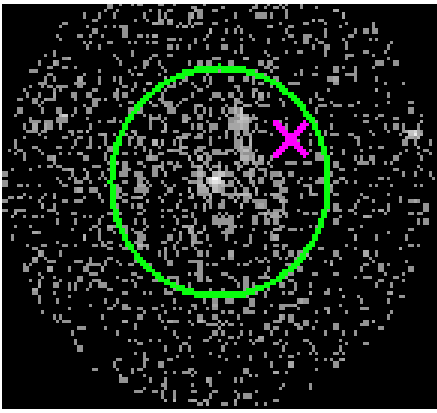


3 Gratings

3.1 HEG Arm



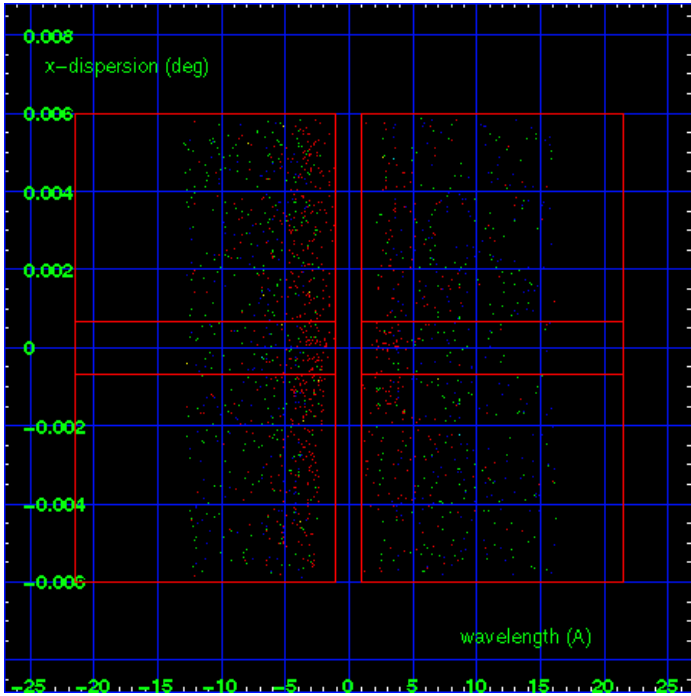
HEG Order Sort 123



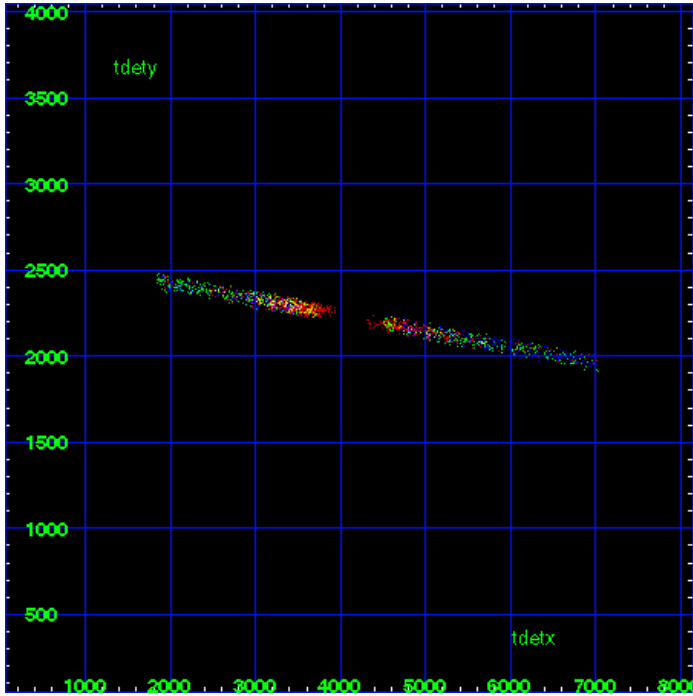
HEG Zero Order



HEG Order Sort ALL

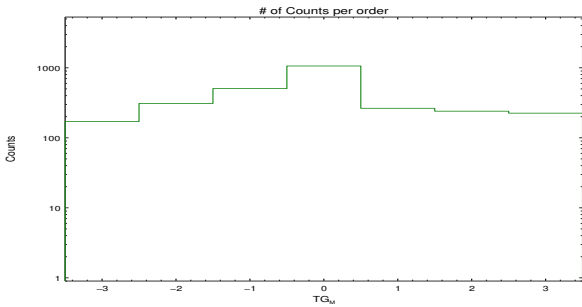


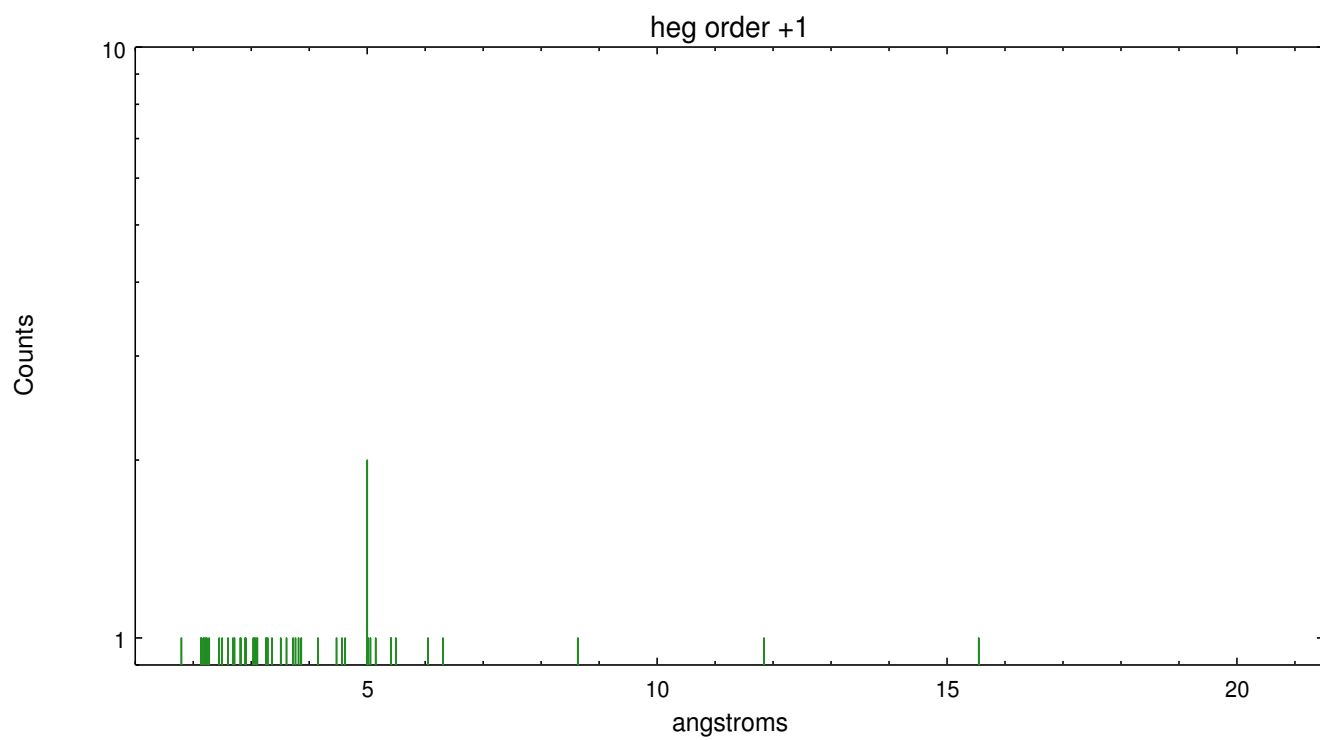
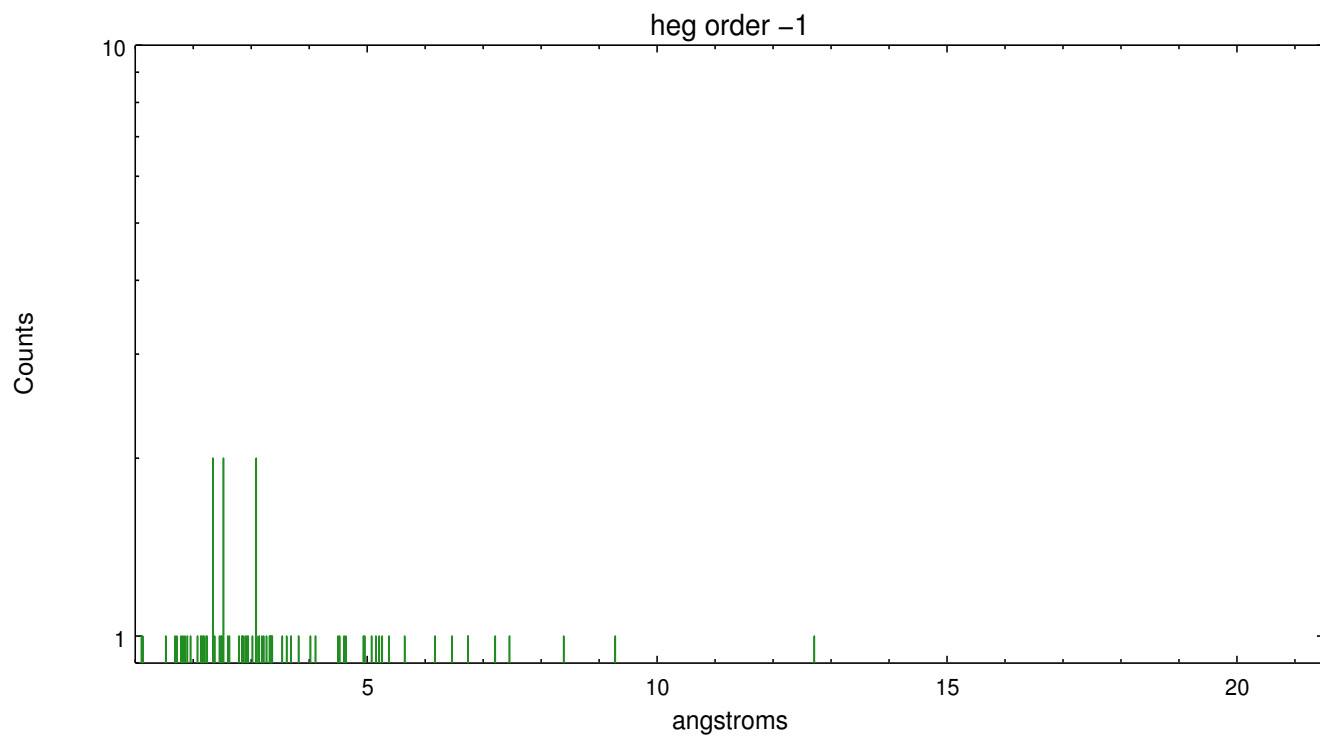
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	171	310	505	1062	264	240	225

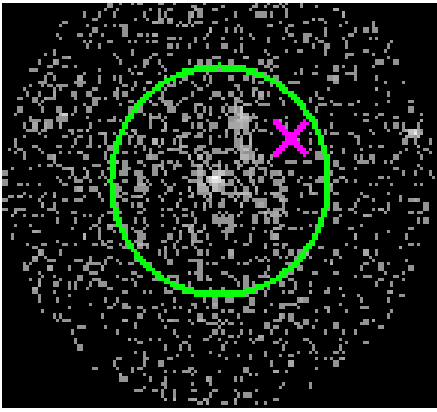




3.2 MEG Arm



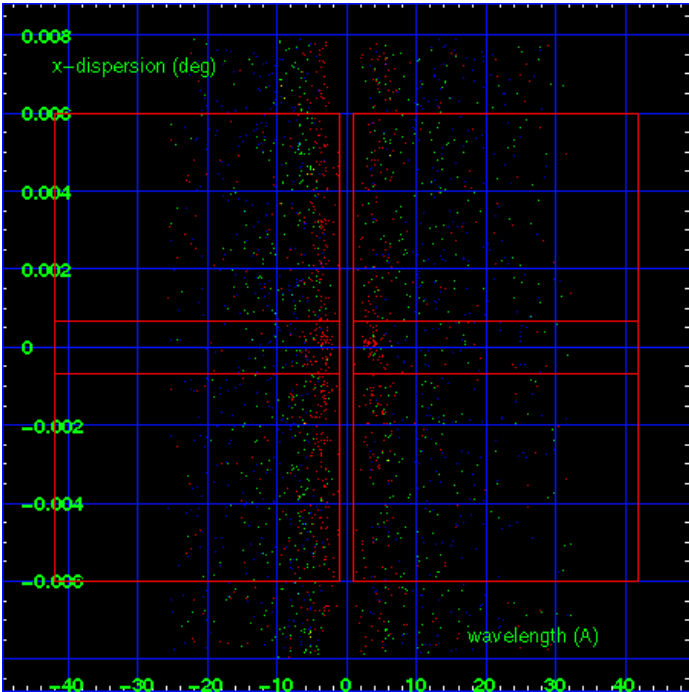
MEG Order Sort 123



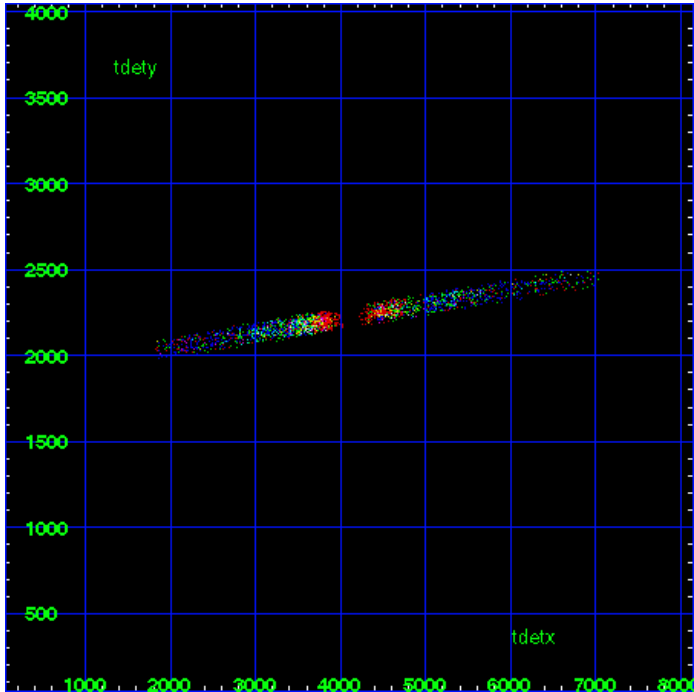
MEG Zero Order



MEG Order Sort ALL

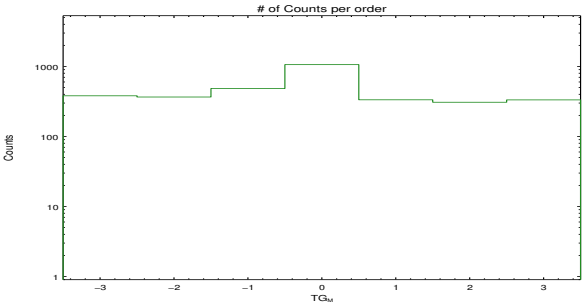


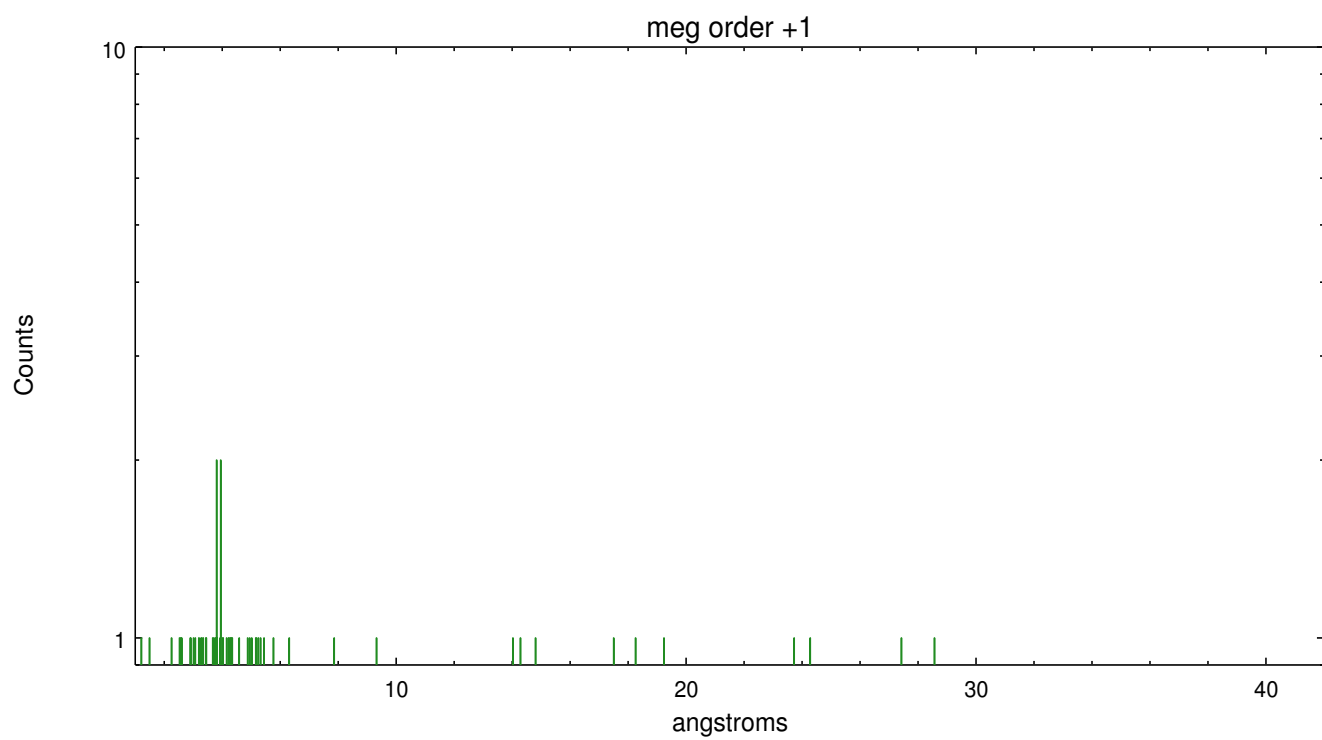
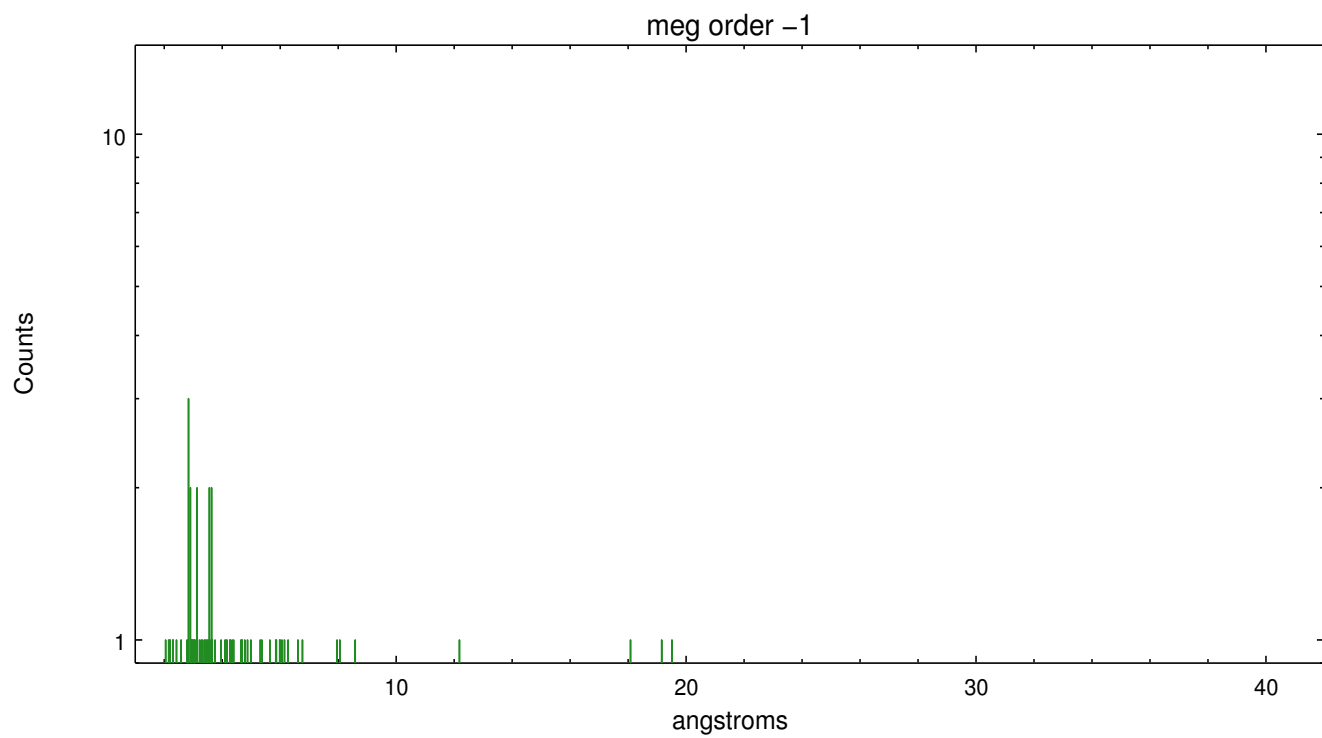
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	381	366	484	1062	334	308	333





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.03.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.062875448167

A.2 Comments

Note: spatially complex region with multiple sources and extended emission. The spectral extraction was centered on the nominal Sgr A* coordinates: (RA,DEC) = (266.416667, -29.007806)[deg].