

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14413 - L2 Version 1
Chandra X-Ray Center

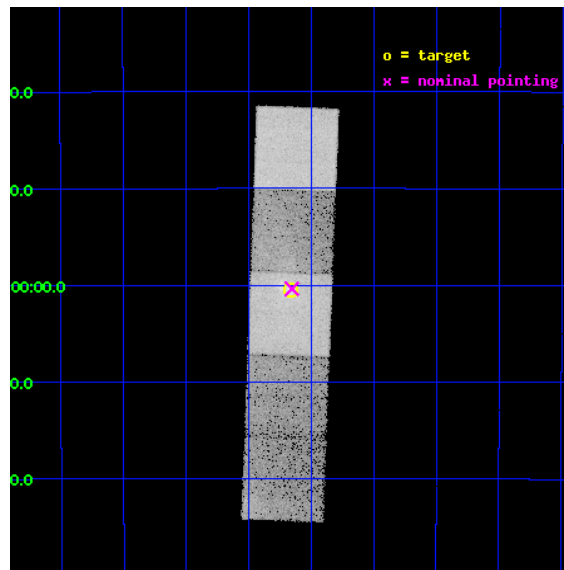
L2 Processing Date : Mar 21 2012

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1 Front

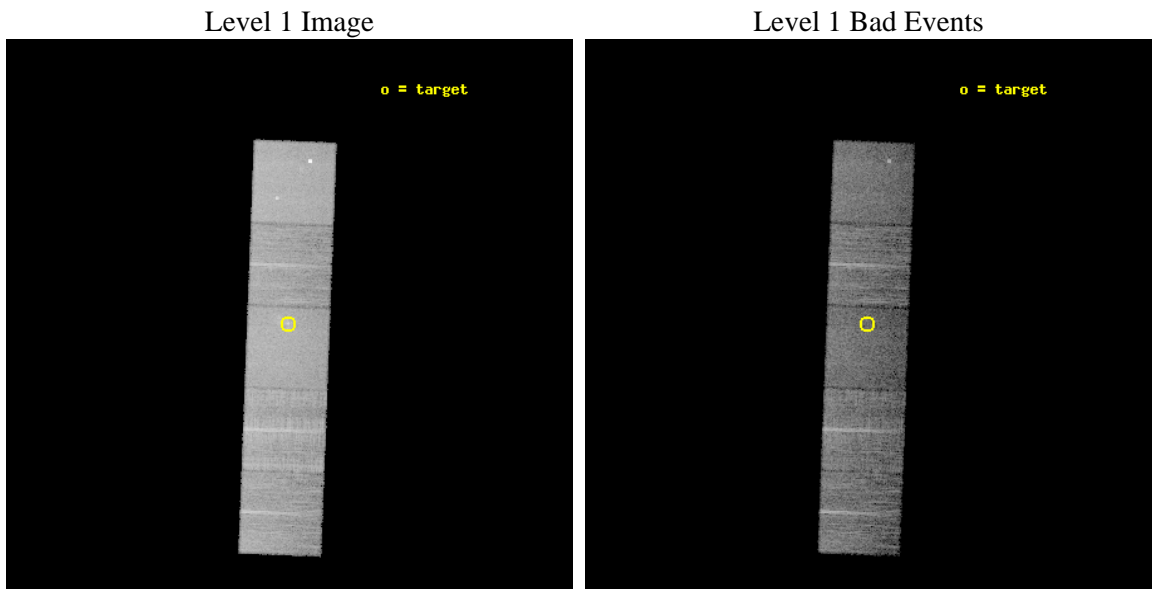
seq_num	601014	Sequence number
obs_id	14413	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41367402367	Nominal RA [deg]
dec_nom	-29.006299113732	Nominal Dec [deg]
roll_nom	92.155179365159	Nominal Roll [deg]
revision	1	Processing version of data
ontime	14721.900113225	Sum of GTIs [s]
livetime	14529.547650141	Livetime [s]
ontime5	14721.900113225	Sum of GTIs [s]
ontime6	14718.759112954	Sum of GTIs [s]
ontime7	14721.900113225	Sum of GTIs [s]
ontime8	14721.900113225	Sum of GTIs [s]
ontime9	14721.900113225	Sum of GTIs [s]
l2events	162493	Number of level 2 events



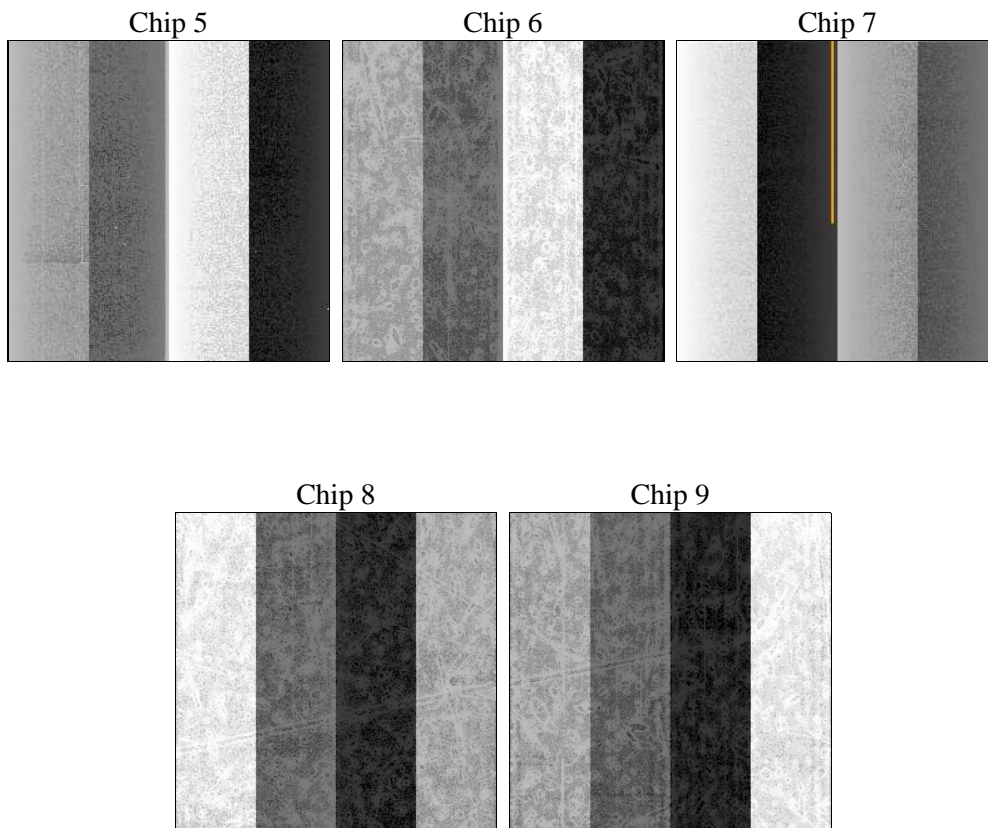
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14660.109000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14721.900113225	Sum of GTIs [s]
caldbver	4.4.8	 	ontime5	14721.900113225	Sum of GTIs [s]
date	2012-03-21T19:42:32	Date and time of file creation	ontime6	14718.759112954	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	14721.900113225	Sum of GTIs [s]
			ontime8	14721.900113225	Sum of GTIs [s]
			ontime9	14721.900113225	Sum of GTIs [s]
			l1events	539456	Number of level 1 events

2.1.4 Events

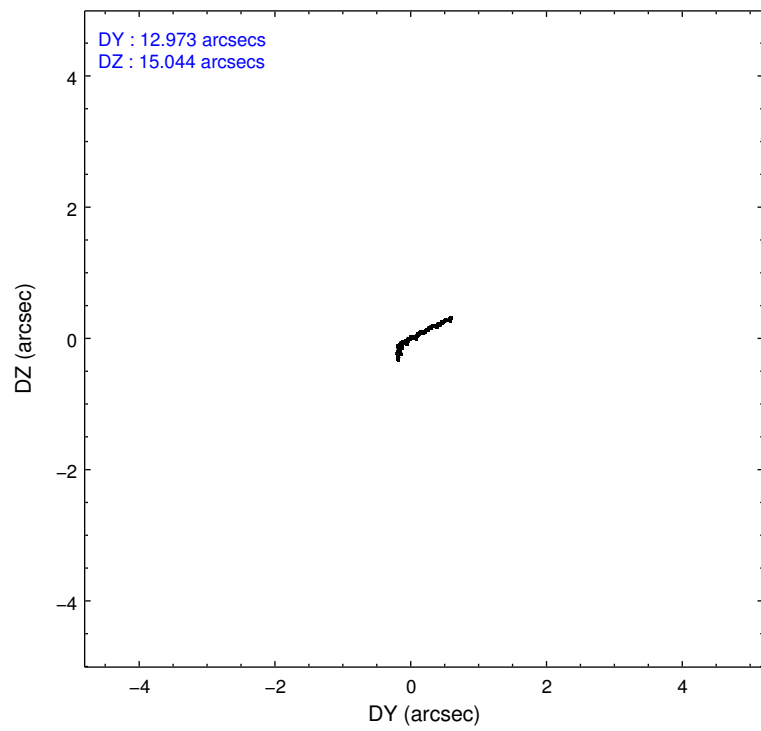
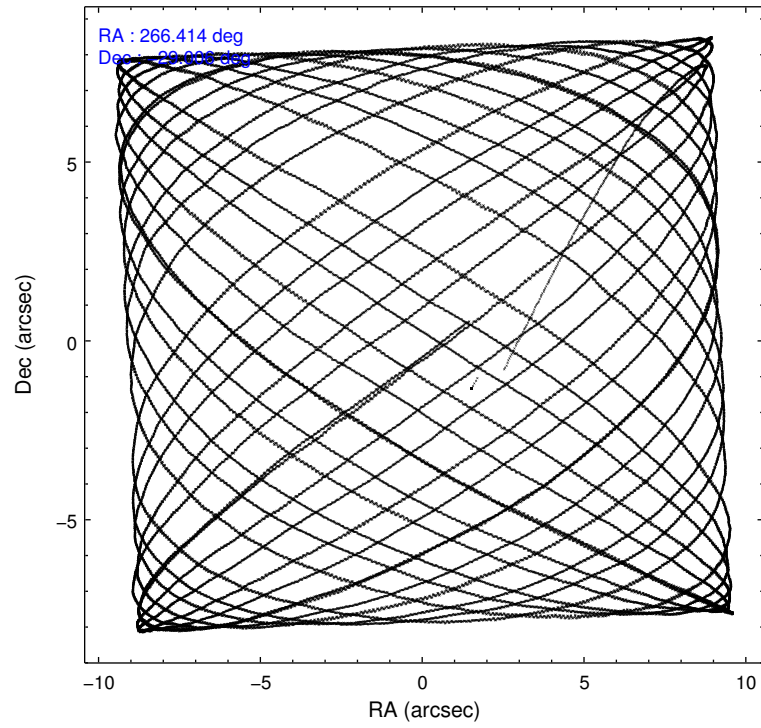
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	134152	91573	118244	111931	83556
rejected events	67614	73684	58810	78800	69714
rejected %	50%	80%	49%	70%	83%

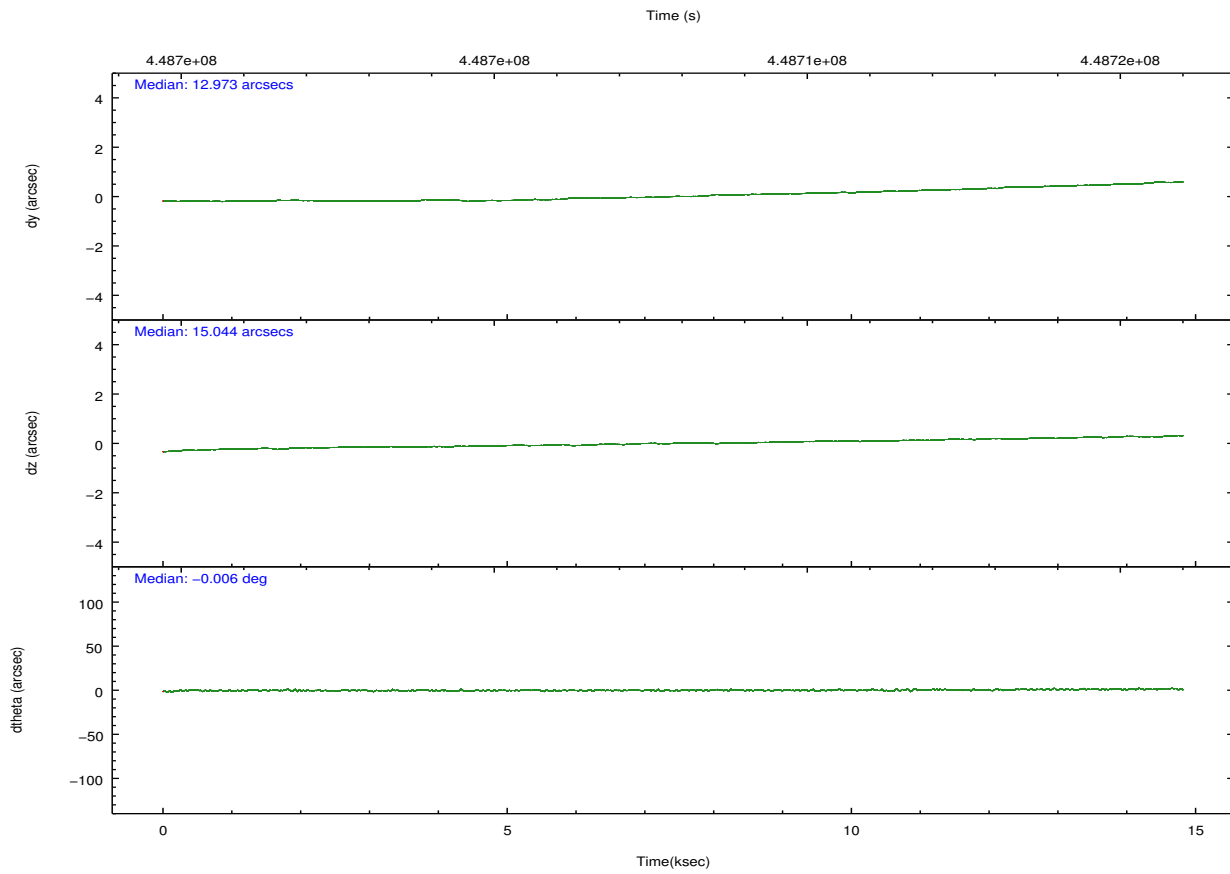
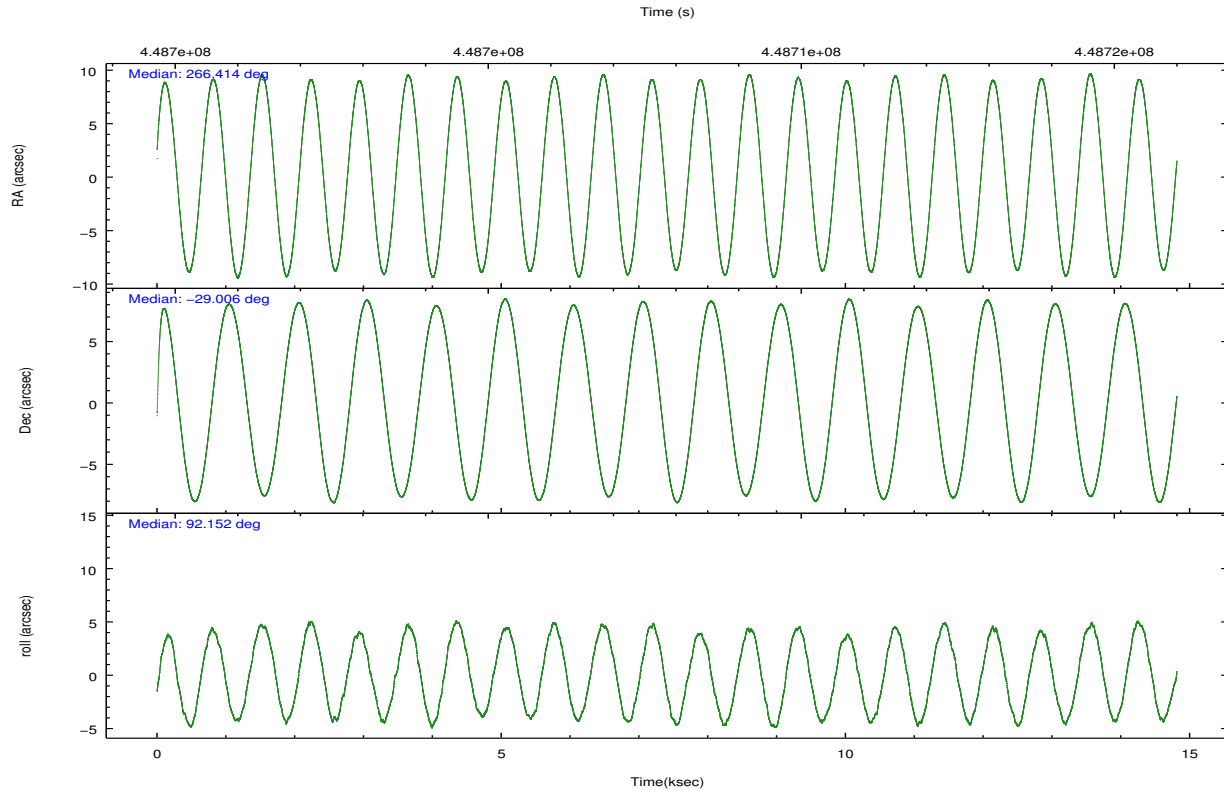
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6313	8609	6775	11318	6498
	4%	9%	5%	10%	7%
grade 1 events	665	75	127	81	68
	0%	0%	0%	0%	0%
grade 2 events	20711	3360	12509	7335	2701
	15%	3%	10%	6%	3%
grade 3 events	2456	1449	5336	3234	1205
	1%	1%	4%	2%	1%
grade 4 events	2359	1400	5379	3002	1133
	1%	1%	4%	2%	1%
grade 5 events	9713	4141	10963	5810	4529
	7%	4%	9%	5%	5%
grade 6 events	34728	3082	29465	8246	2310
	25%	3%	24%	7%	2%
grade 7 events	57207	69457	47690	72905	65112
	42%	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	266.4136740236711	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.029222	-29.00629911373151	Alternating exposures requested	N	N
[deg] Pointing Roll	92.006803	92.15517936515937	[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	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	448700605.184000	448699556.06296			
Observation start date	2012-03-21T07:02:19	2012-03-21T06:45:56			
[s] Observation end time (MET)	448715265.184000	448715490.7138			
Observation end date	2012-03-21T11:06:39	2012-03-21T11:11:30			
Read mode	TIMED	TIMED			

2.3 Aspect



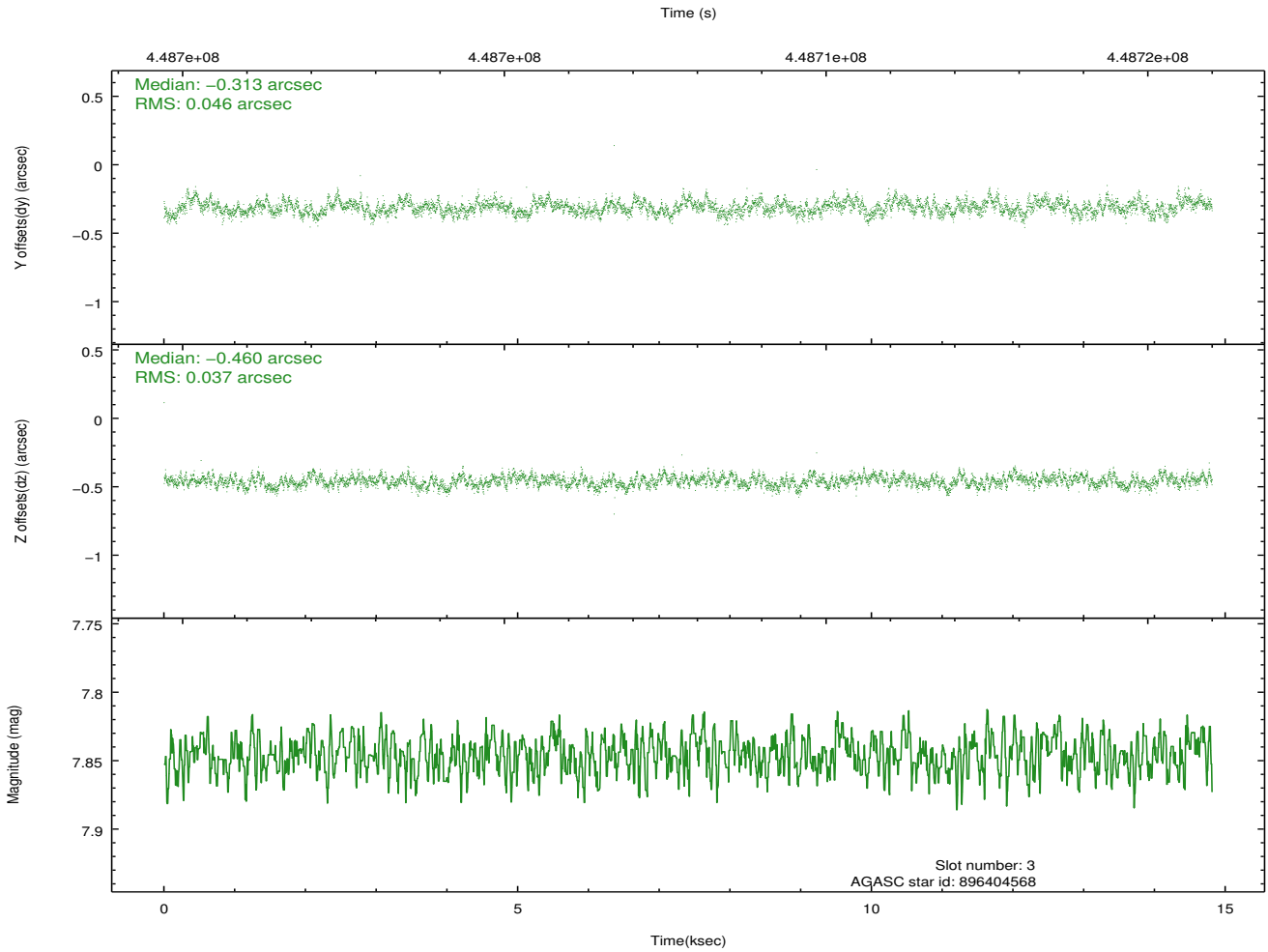
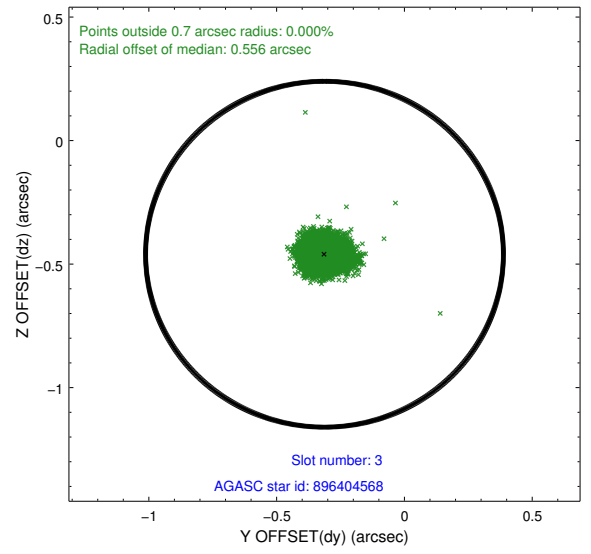
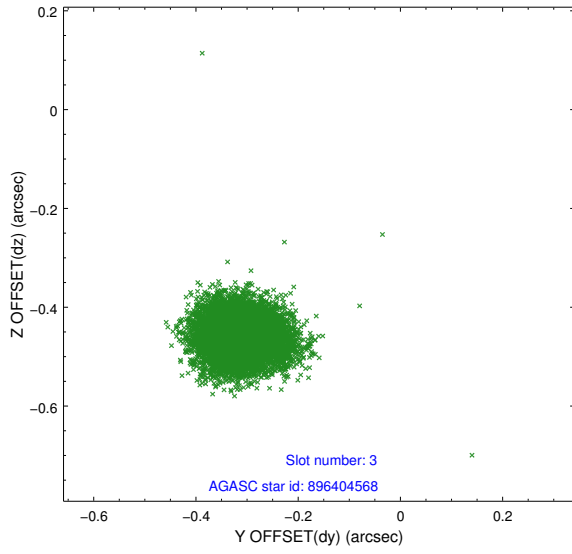


Slot Statistics

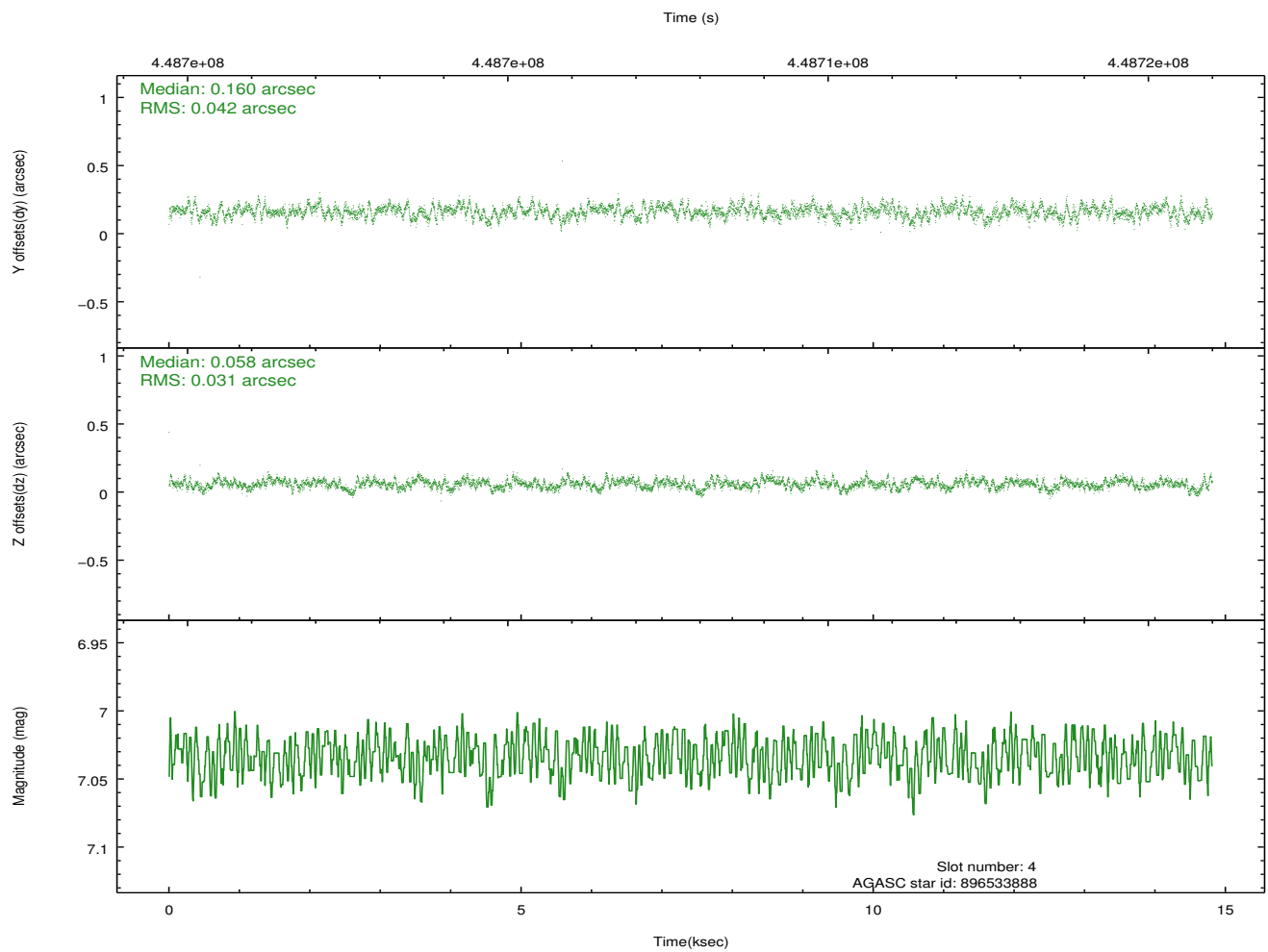
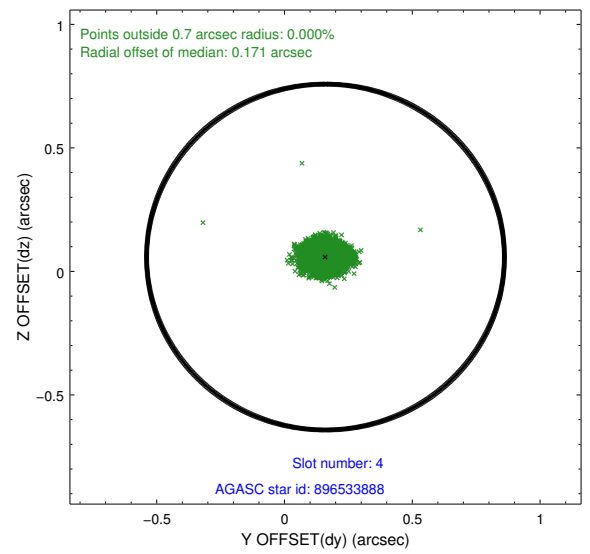
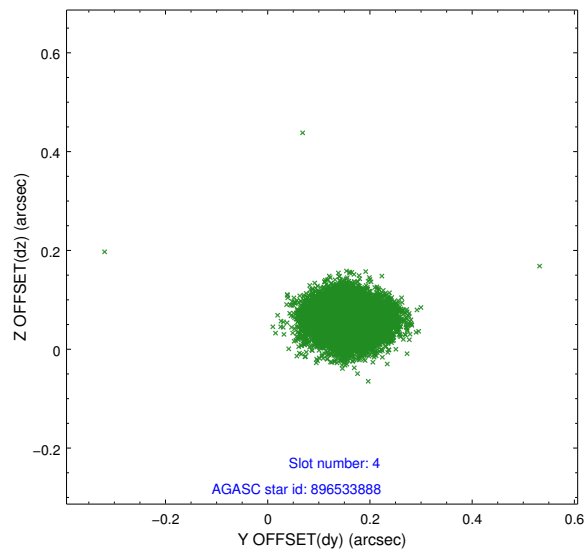
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.06	3614	-0.021	-0.058	0.014	0.025	0.000000	0.000000	930.07	-1732.11
1	FID	ACIS-S-4	7.06	3614	0.104	0.005	0.009	0.014	0.000000	0.000000	2147.75	171.81
2	FID	ACIS-S-6	7.18	3614	-0.106	0.065	0.010	0.016	0.000000	0.000000	396.29	809.56
3	GUIDE	896404568	7.85	7227	-0.313	-0.460	0.063	0.100	265.687293	-28.431080	2226.89	2276.74
4	GUIDE	896533888	7.03	7227	0.160	0.058	0.056	0.090	266.666434	-29.392757	-1333.84	-692.77
5	GUIDE	896537176	8.02	7227	-0.159	-0.008	0.080	0.128	266.498272	-28.678259	1255.04	-257.50
6	GUIDE	896537776	7.52	7227	0.369	0.070	0.048	0.079	266.655684	-29.665673	-2314.35	-623.20
7	GUIDE	896538208	7.96	7223	-0.059	0.339	0.061	0.100	267.176969	-28.671626	1196.64	-2400.17

2.4 Star Slots

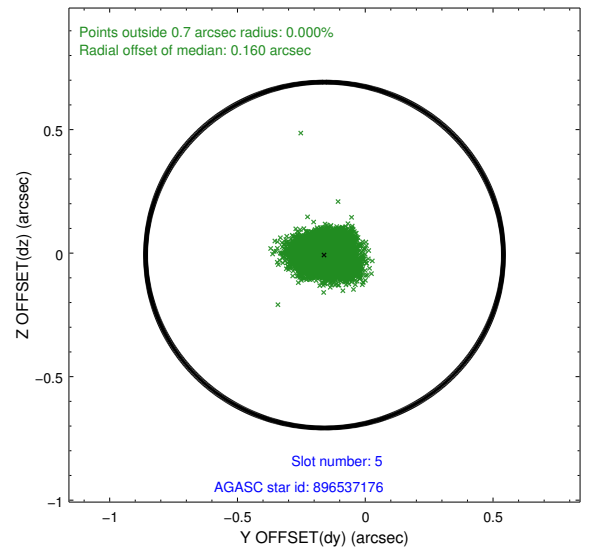
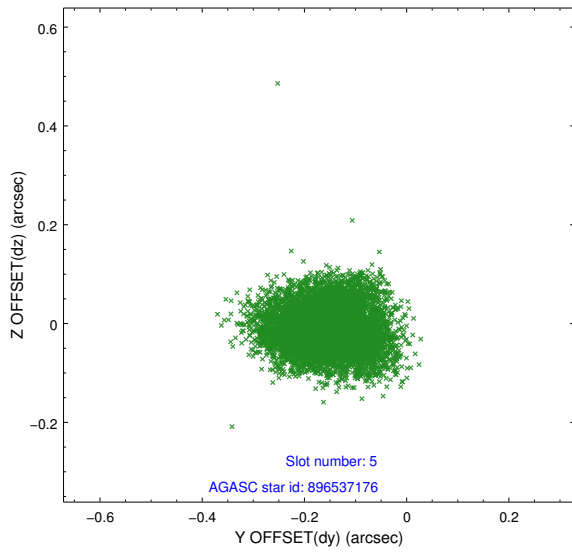
2.4.1 Slot 3



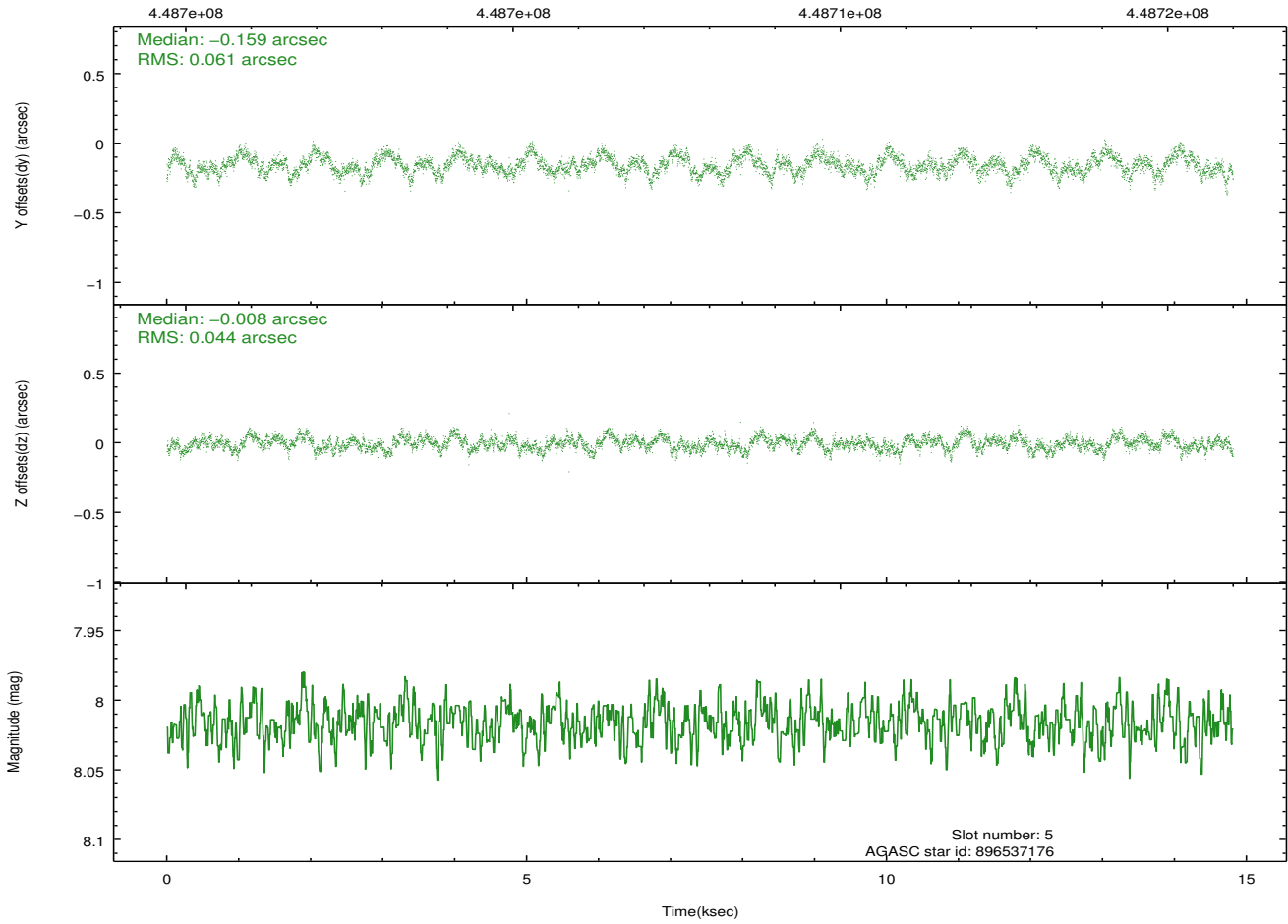
2.4.2 Slot 4



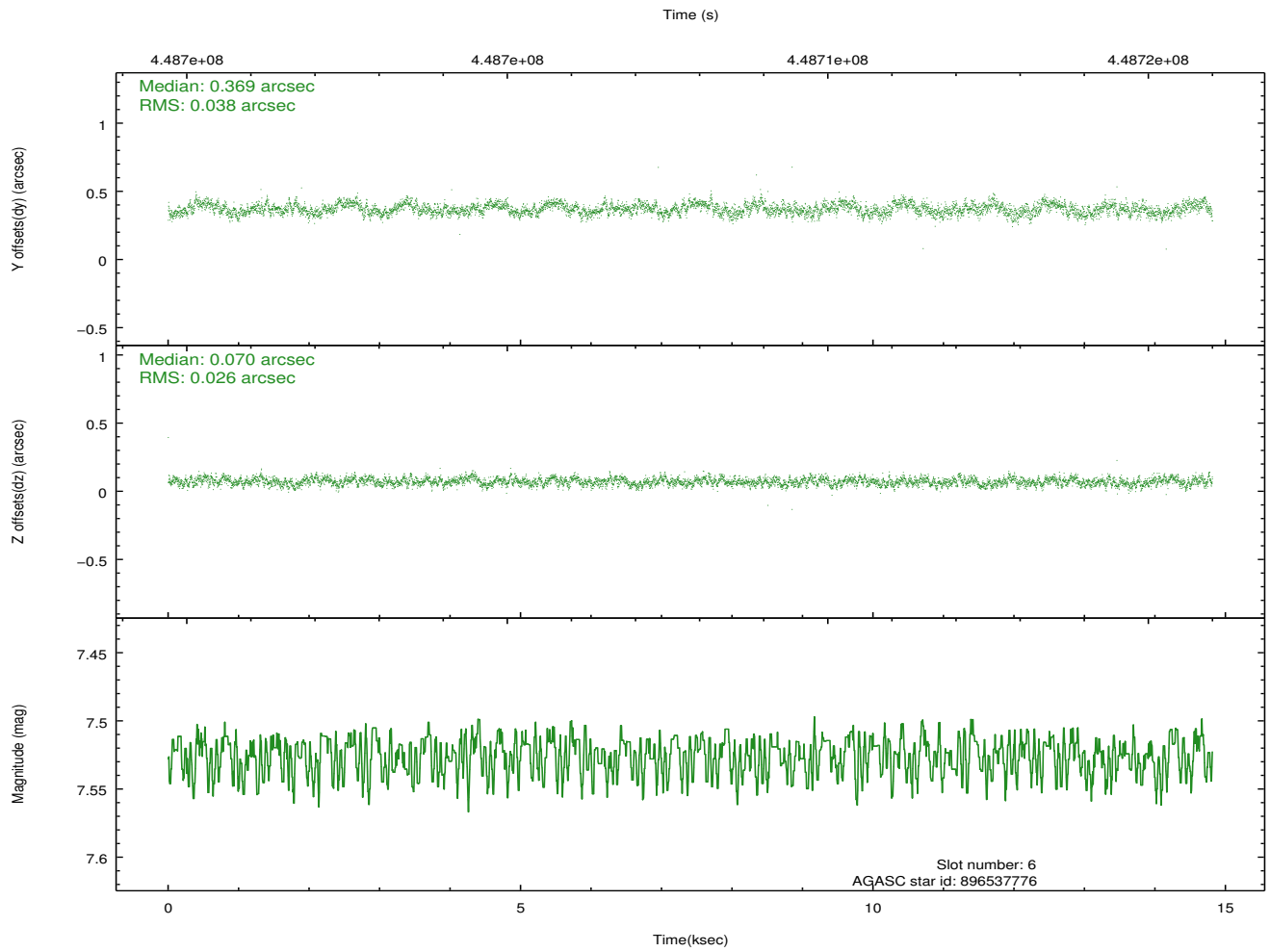
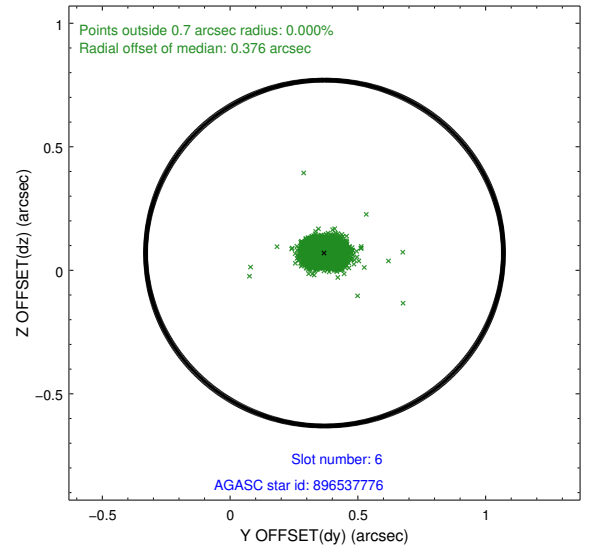
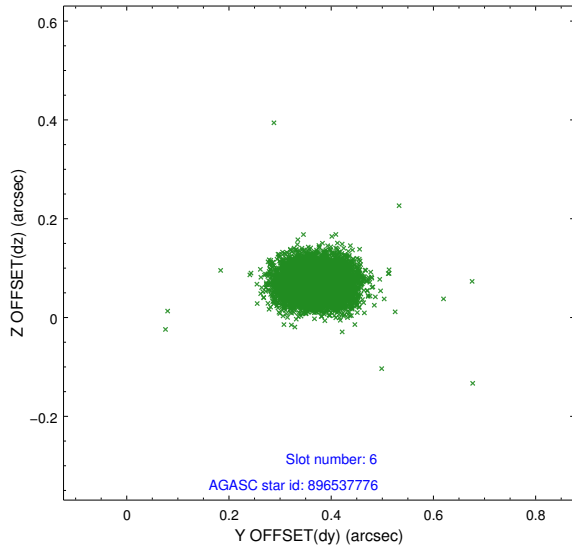
2.4.3 Slot 5



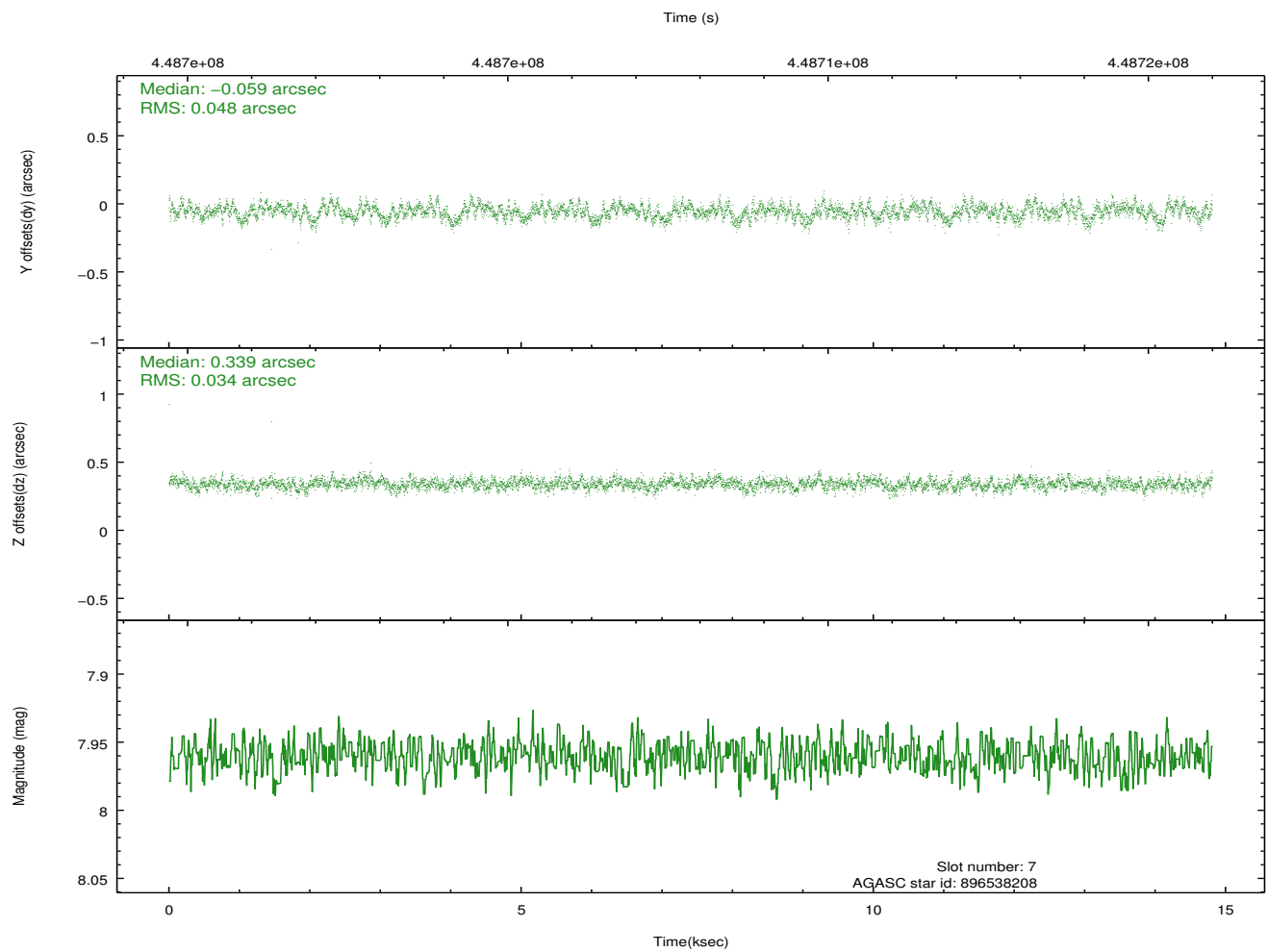
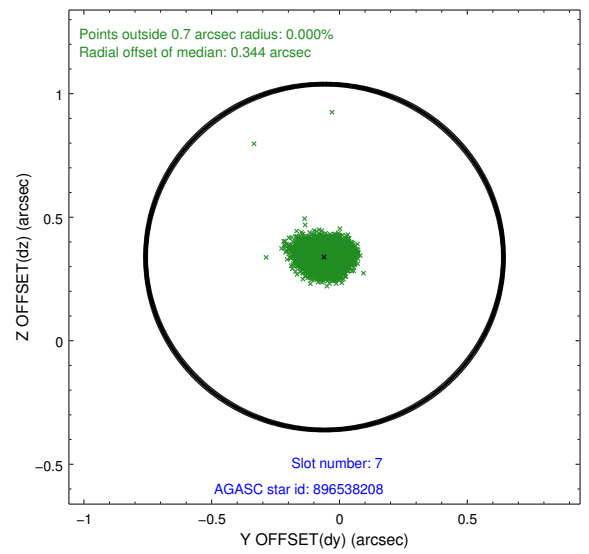
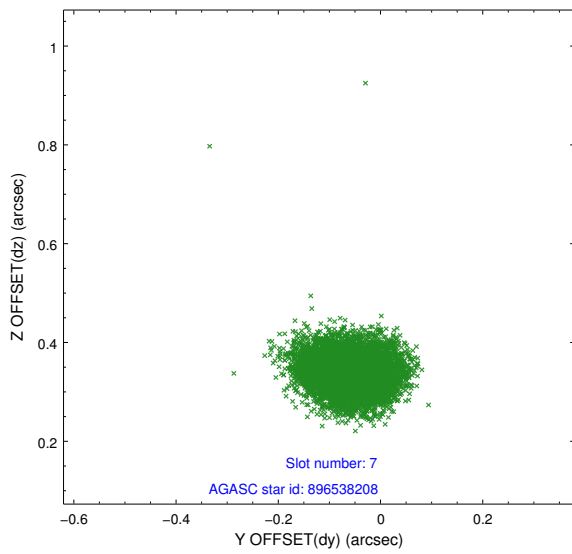
Time (s)



2.4.4 Slot 6

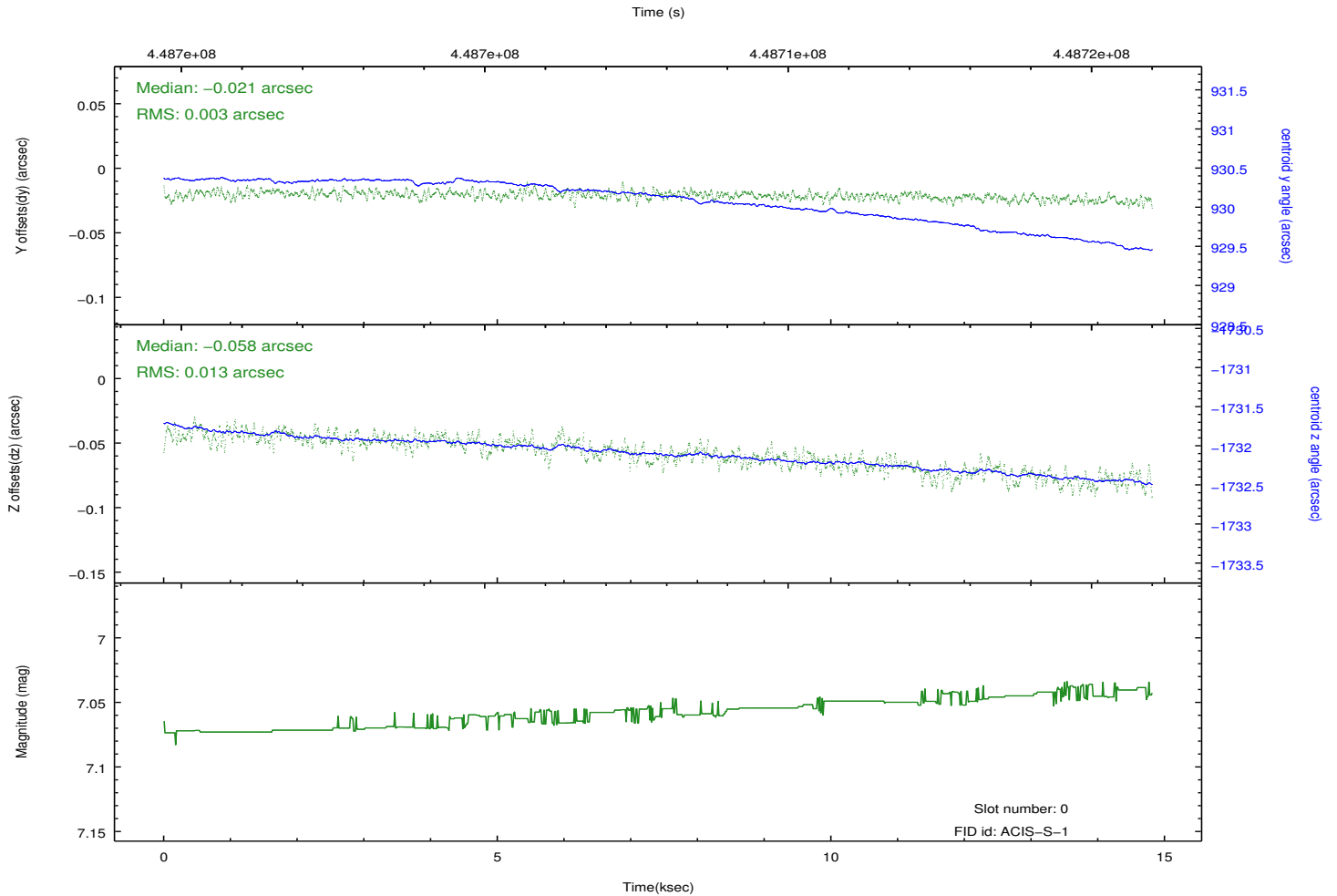
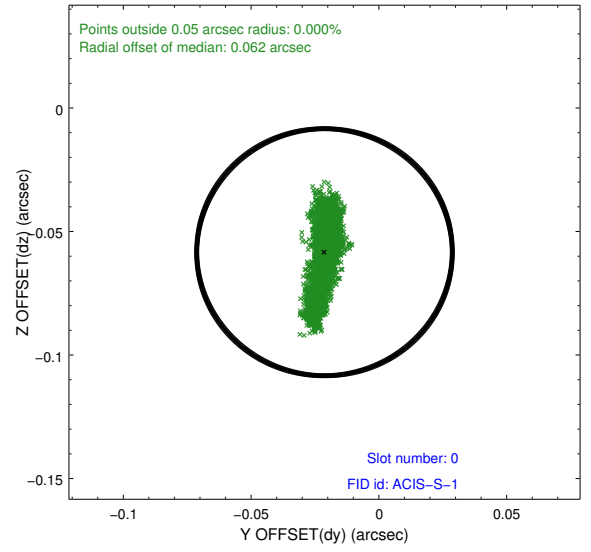
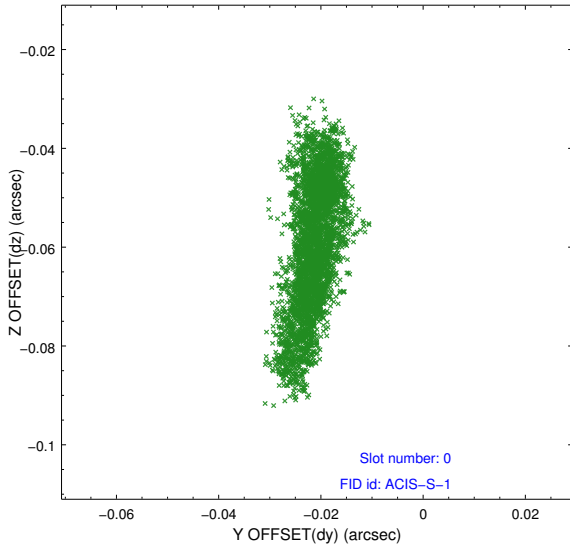


2.4.5 Slot 7

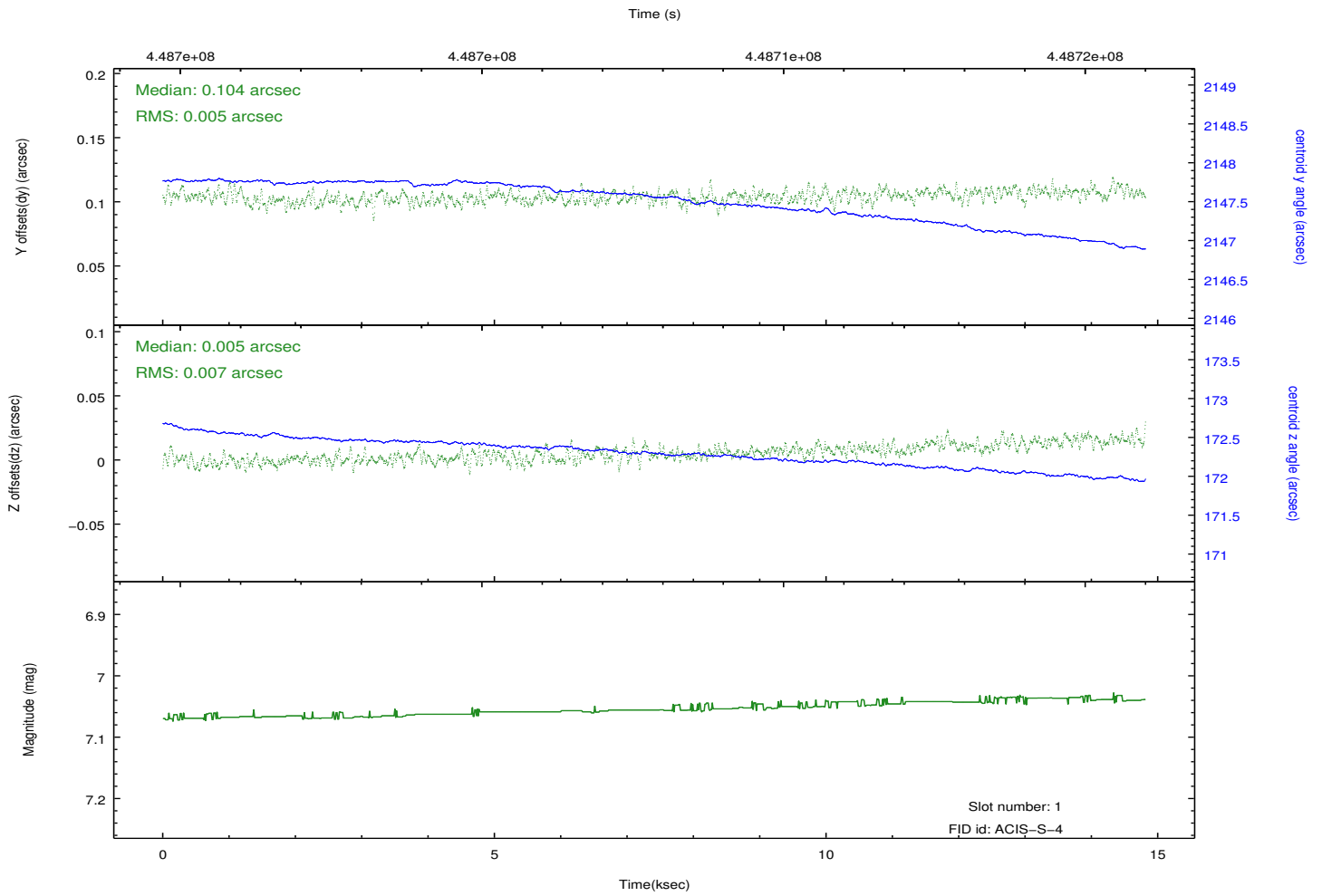
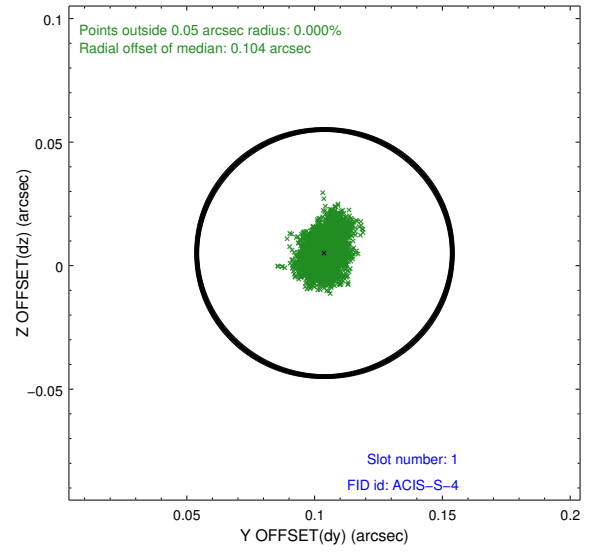
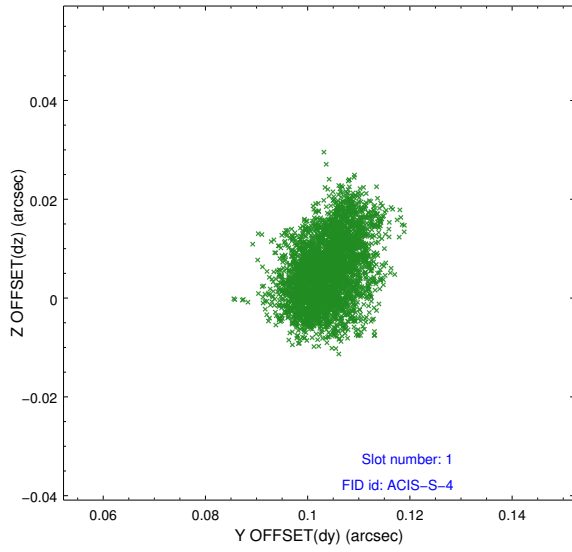


2.5 FID Slots

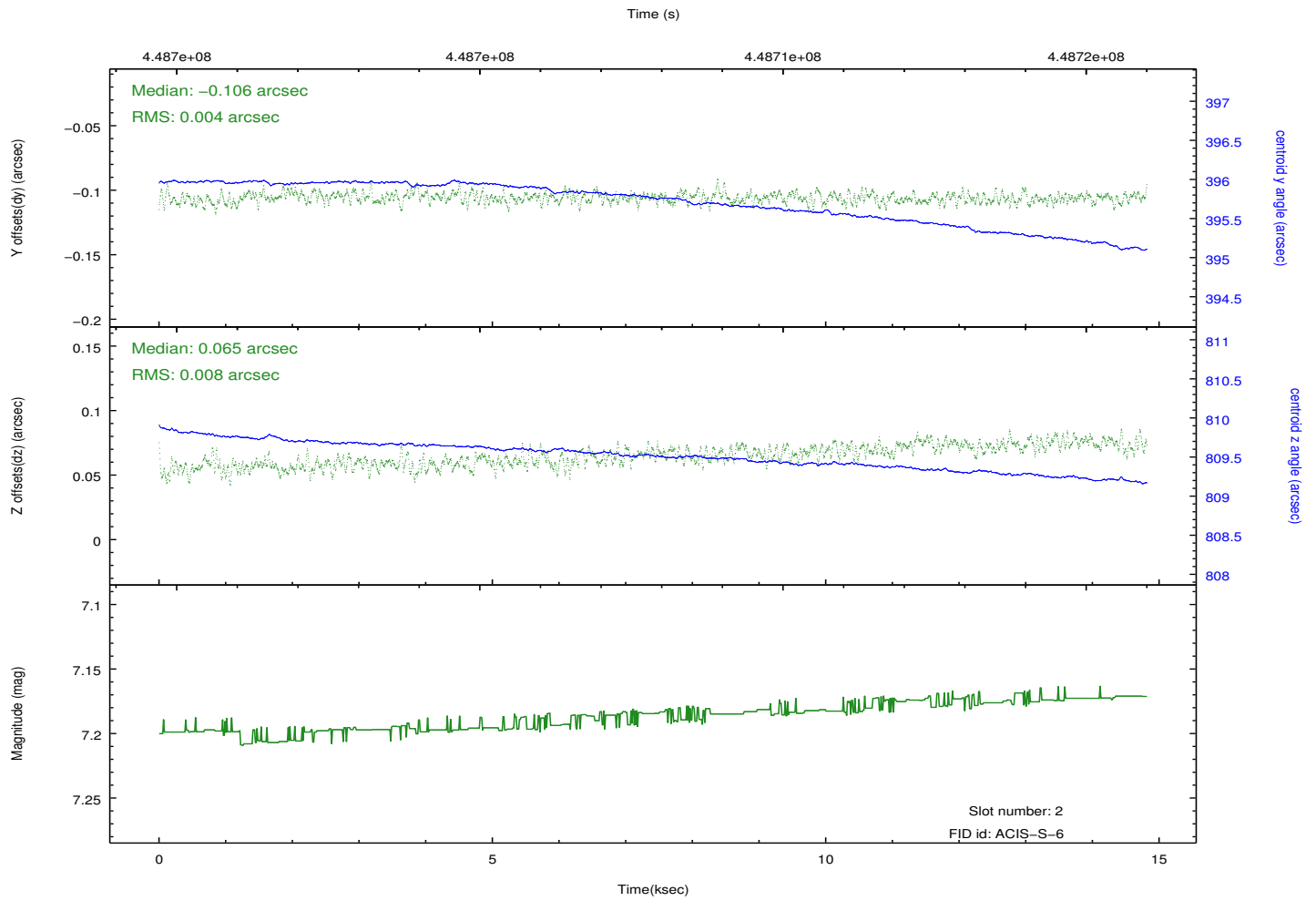
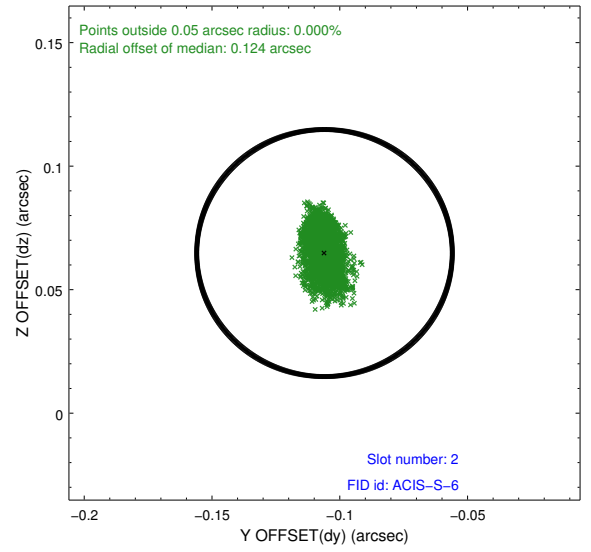
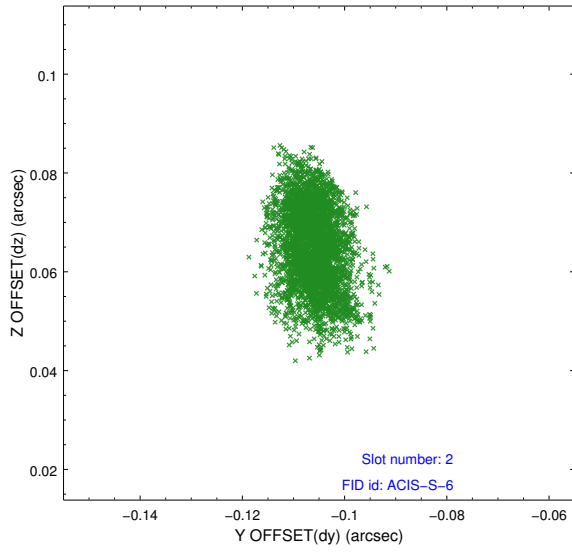
2.5.1 Slot 0



2.5.2 Slot 1

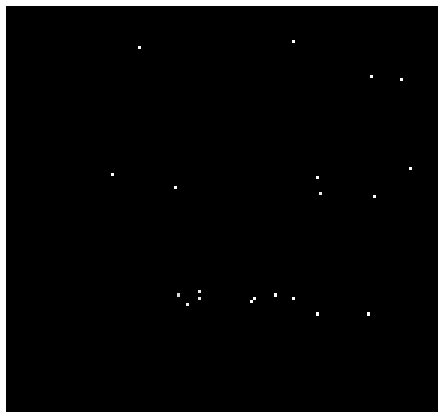


2.5.3 Slot 2

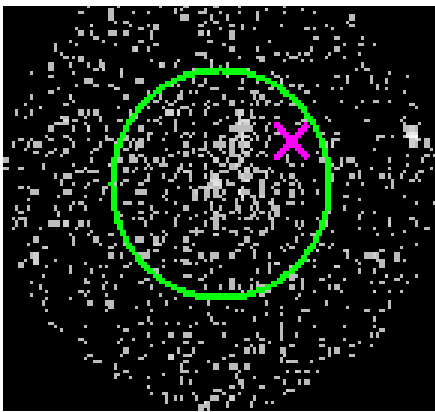


3 Gratings

3.1 HEG Arm



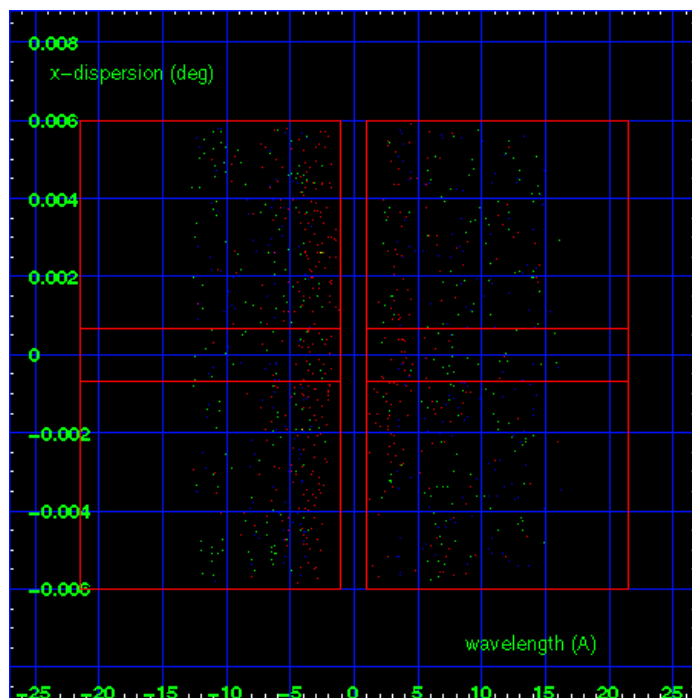
HEG Order Sort 123



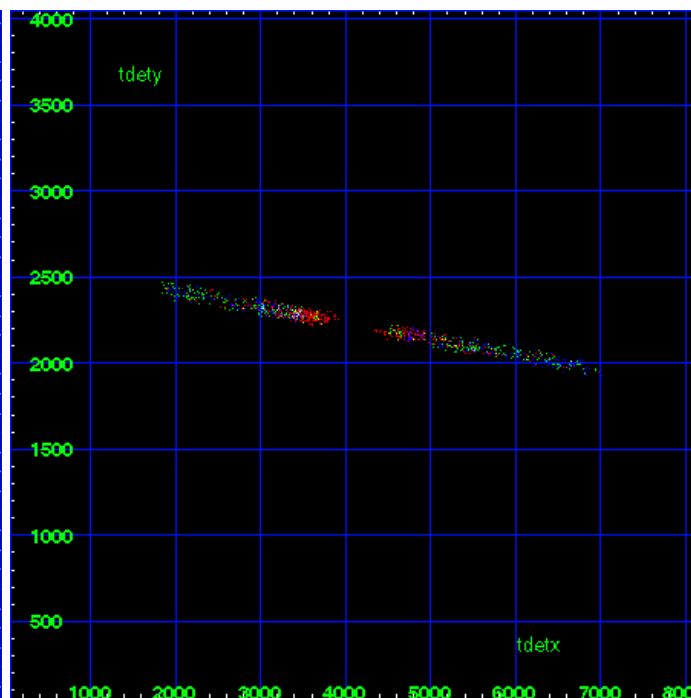
HEG Zero Order



HEG Order Sort ALL

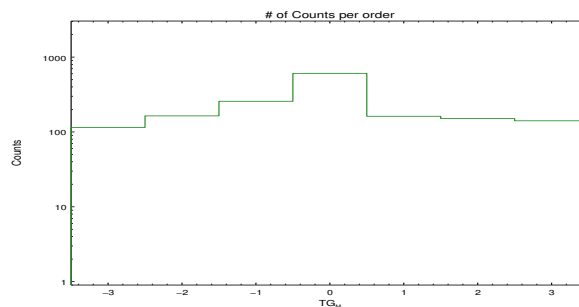


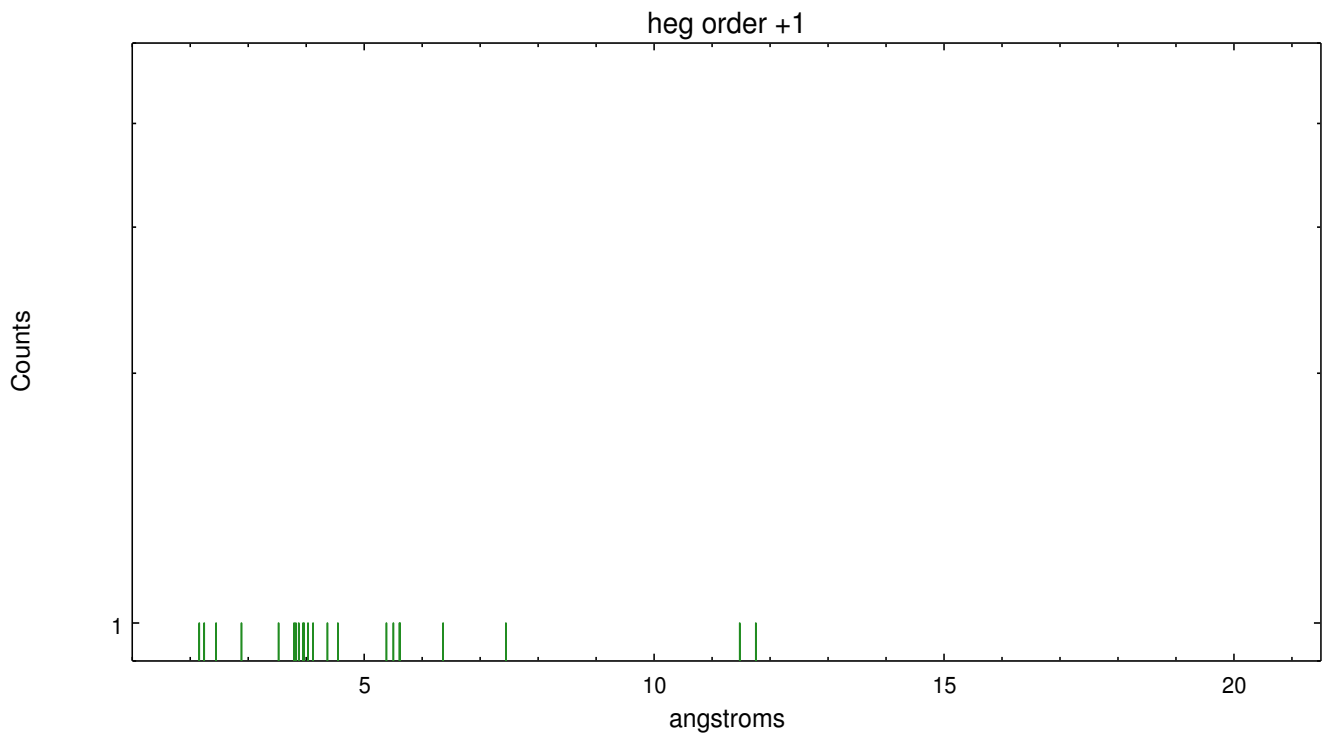
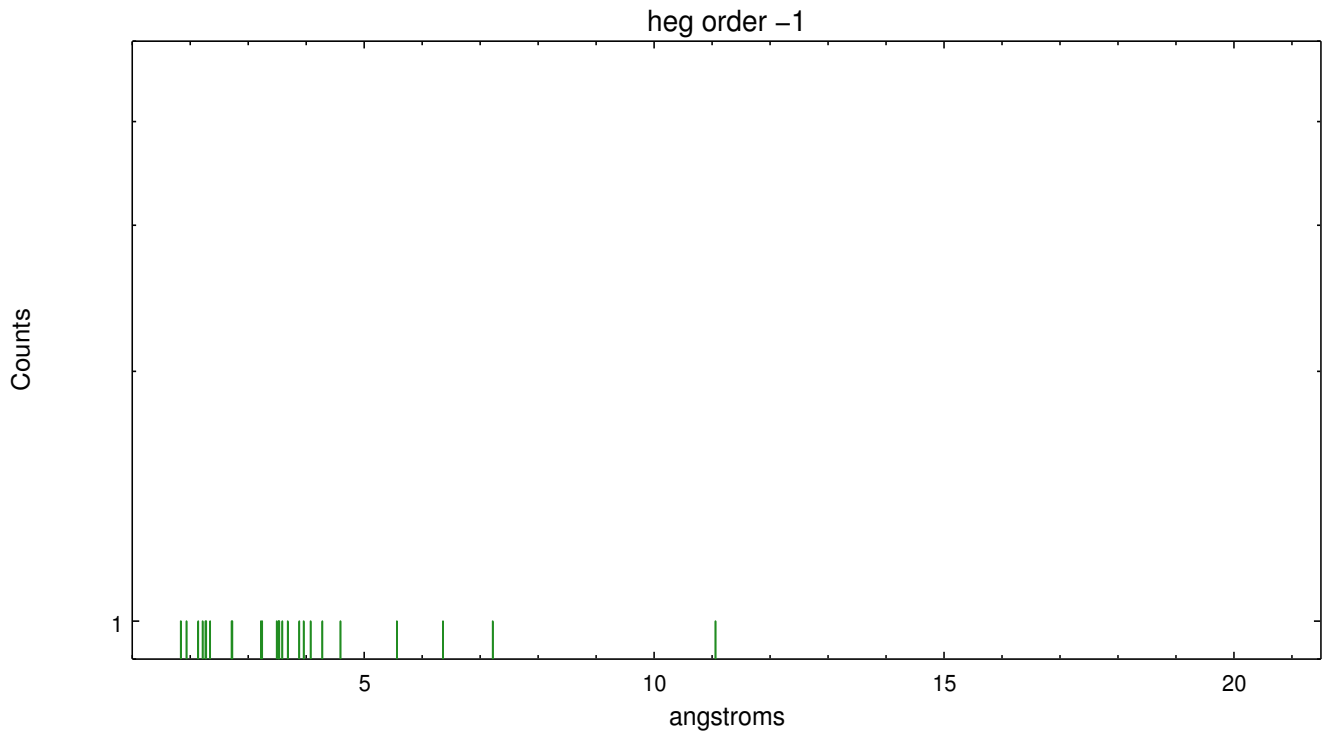
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	115	164	257	607	162	151	141

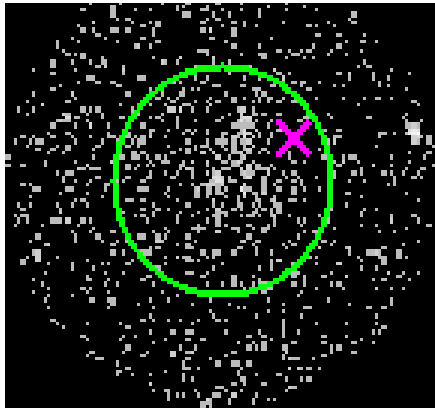




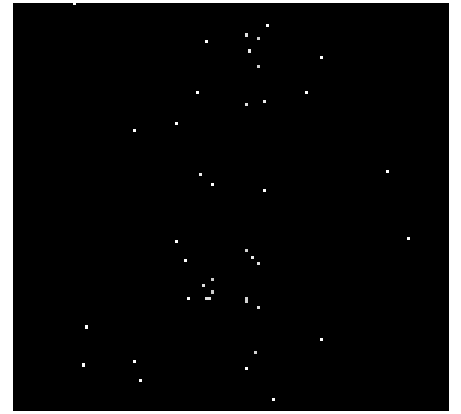
3.2 MEG Arm



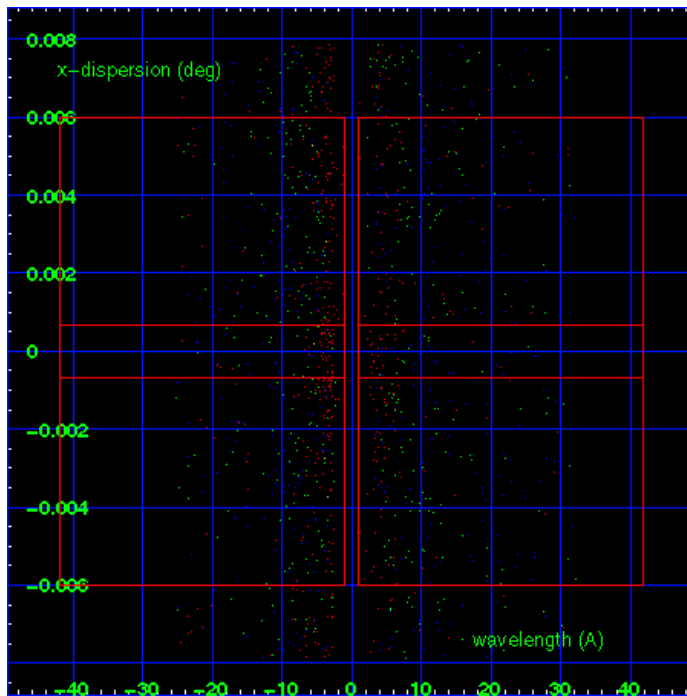
MEG Order Sort 123



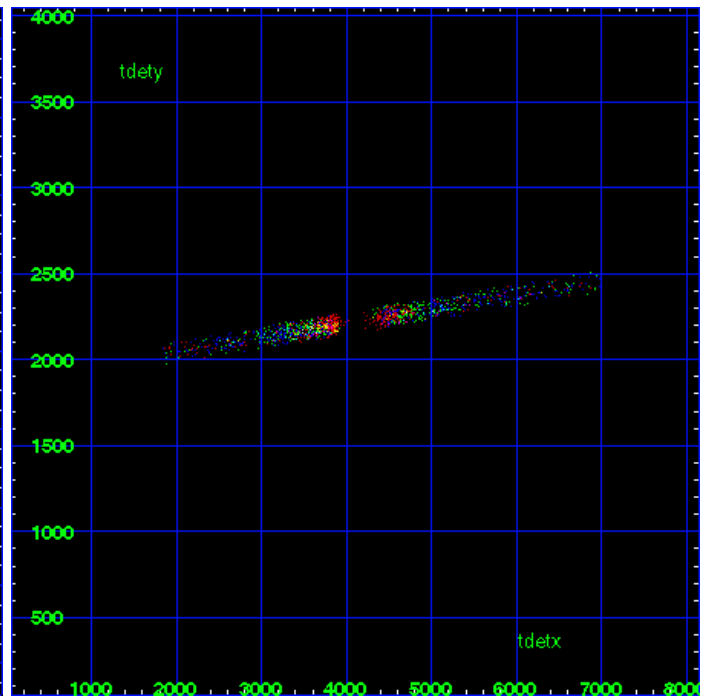
MEG Zero Order



MEG Order Sort ALL

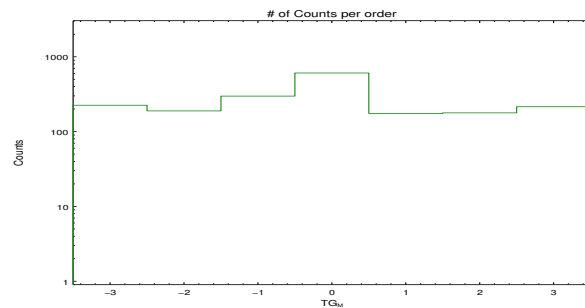


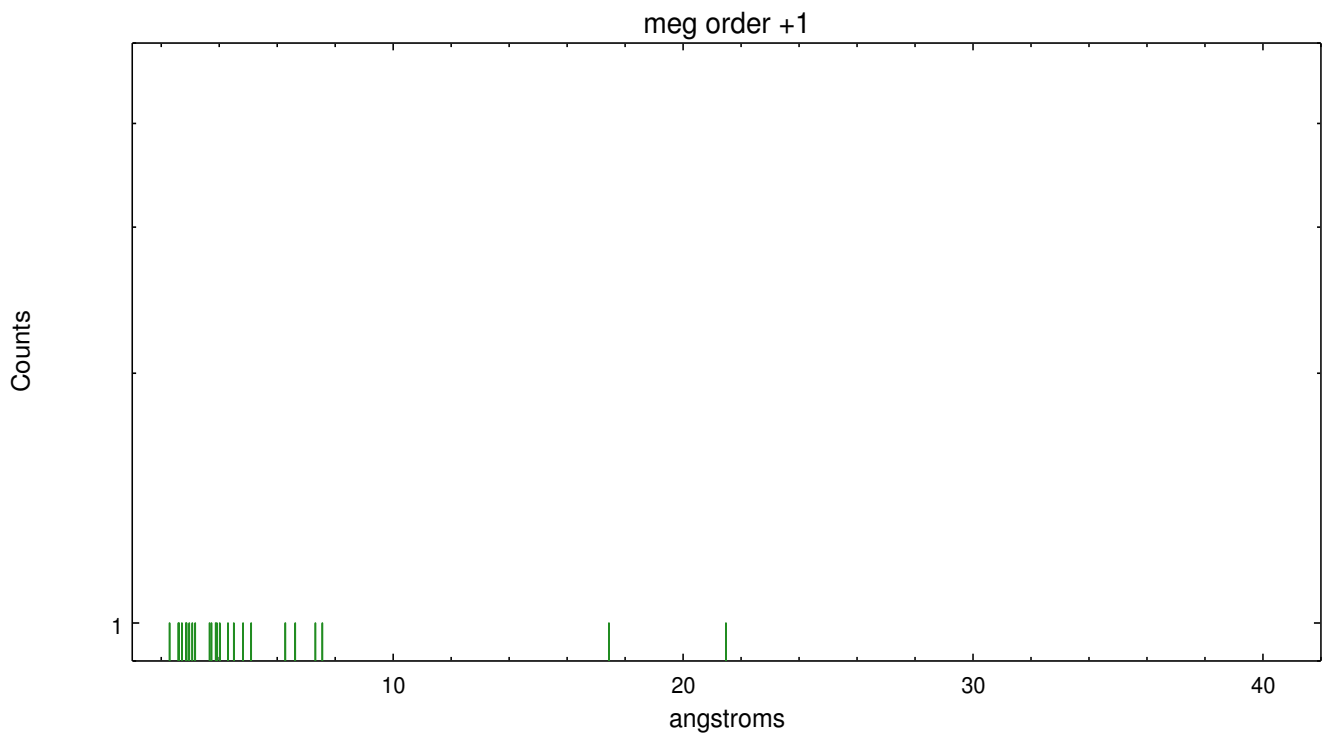
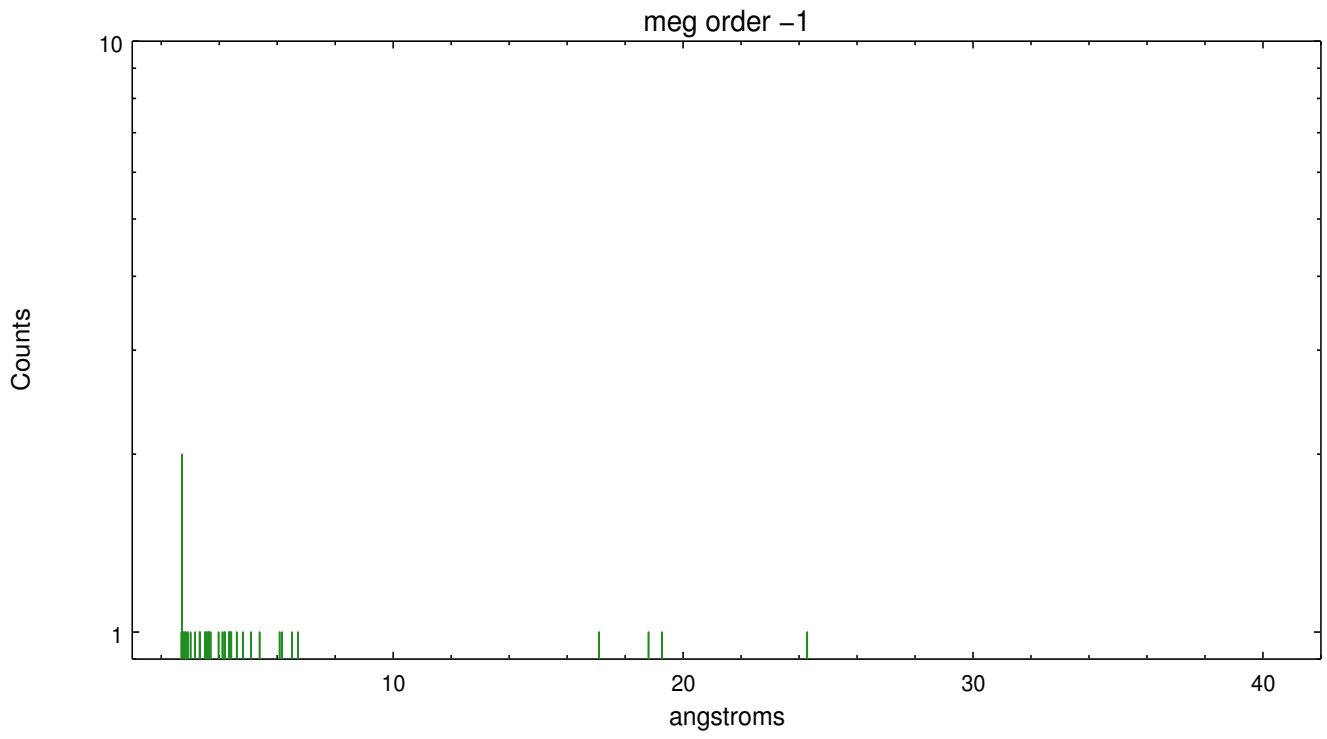
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	225	189	298	607	175	178	215





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.03.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.721900113225

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].