

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14394 - L2 Version 2
Chandra X-Ray Center

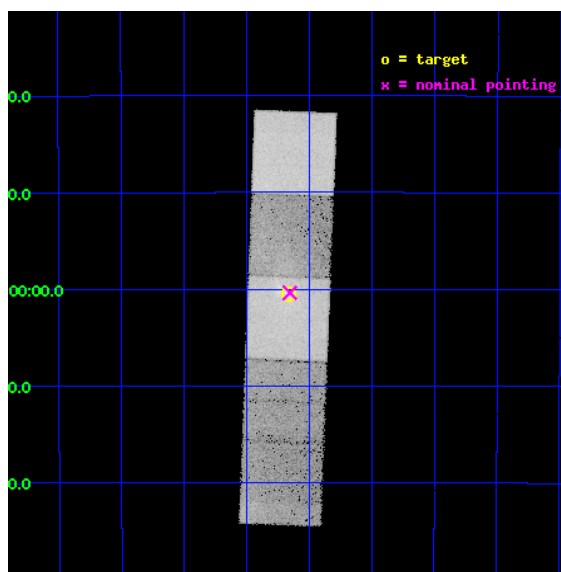
L2 Processing Date : Feb 14 2012

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1 Front

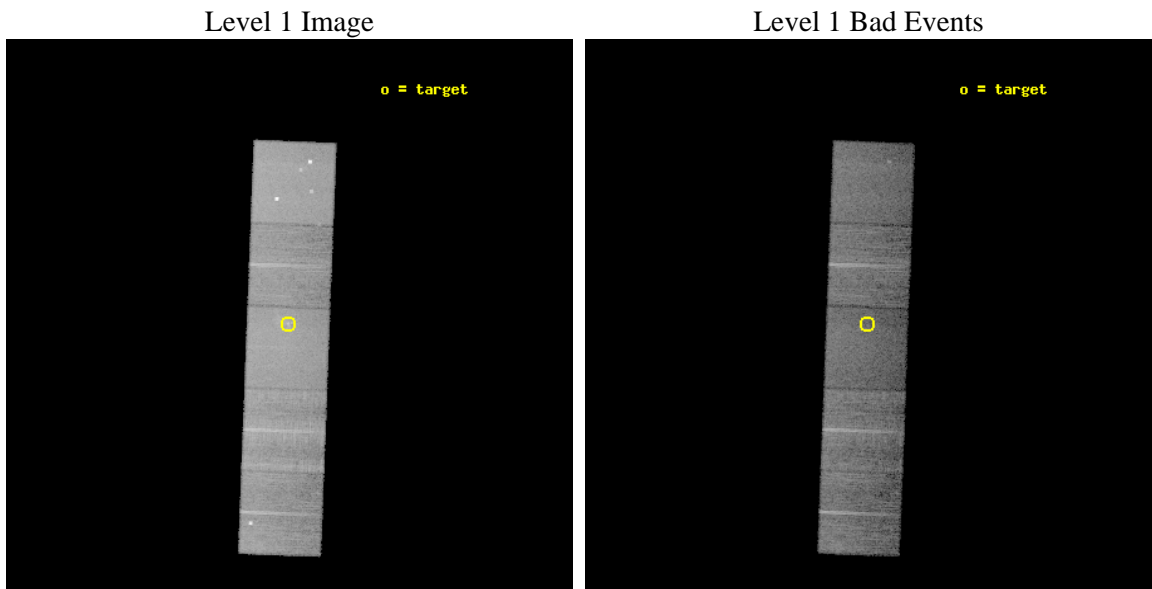
seq_num	601012	Sequence number
obs_id	14394	Observation id
title	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS)	P
observer	Dr. Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007806	Observer's specified target Dec [deg]
ra_nom	266.41366933252	Nominal RA [deg]
dec_nom	-29.006281351179	Nominal Dec [deg]
roll_nom	92.155174596449	Nominal Roll [deg]
revision	2	Processing version of data
ontime	18063.213427365	Sum of GTIs [s]
livetime	17827.204245992	Livetime [s]
ontime5	18063.172387362	Sum of GTIs [s]
ontime6	18063.131347358	Sum of GTIs [s]
ontime7	18063.213427365	Sum of GTIs [s]
ontime8	18059.949337006	Sum of GTIs [s]
ontime9	18063.049267352	Sum of GTIs [s]
l2events	218994	Number of level 2 events



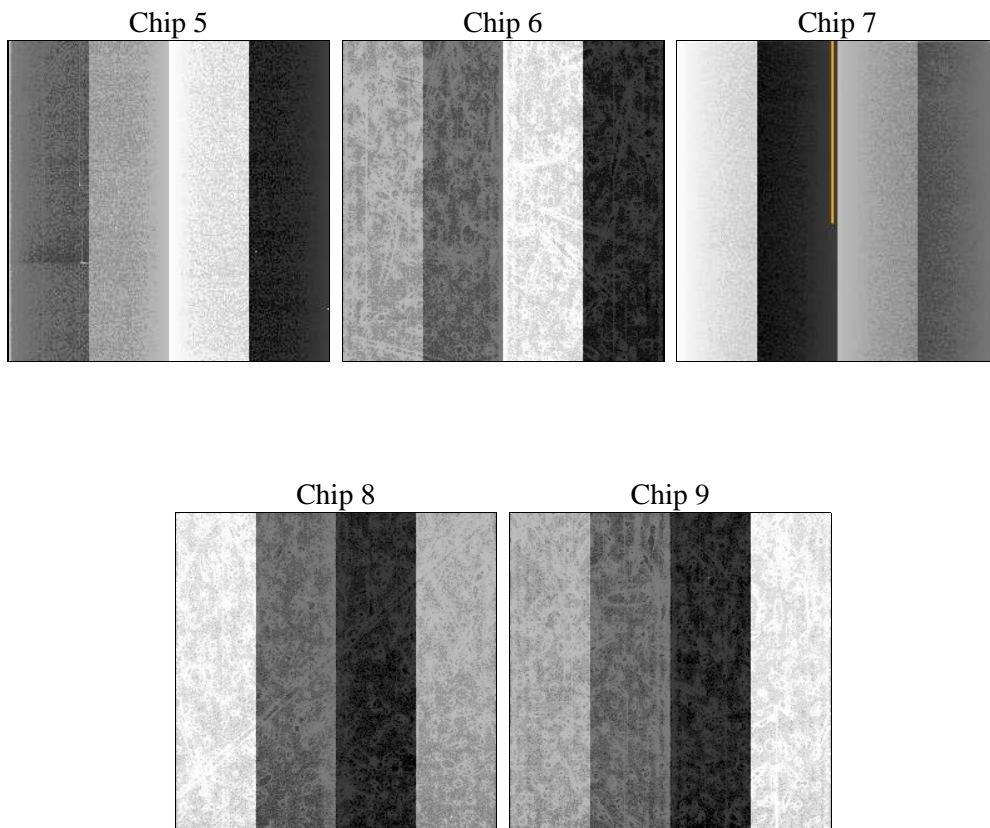
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	18063.213427365	Sum of GTIs [s]
caldbver	4.4.7	 	ontime5	18063.172387362	Sum of GTIs [s]
date	2012-02-10T21:11:57	Date and time of file creation	ontime6	18063.131347358	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	18063.213427365	Sum of GTIs [s]
			ontime8	18059.949337006	Sum of GTIs [s]
			ontime9	18063.049267352	Sum of GTIs [s]
			l1events	738651	Number of level 1 events

2.1.4 Events

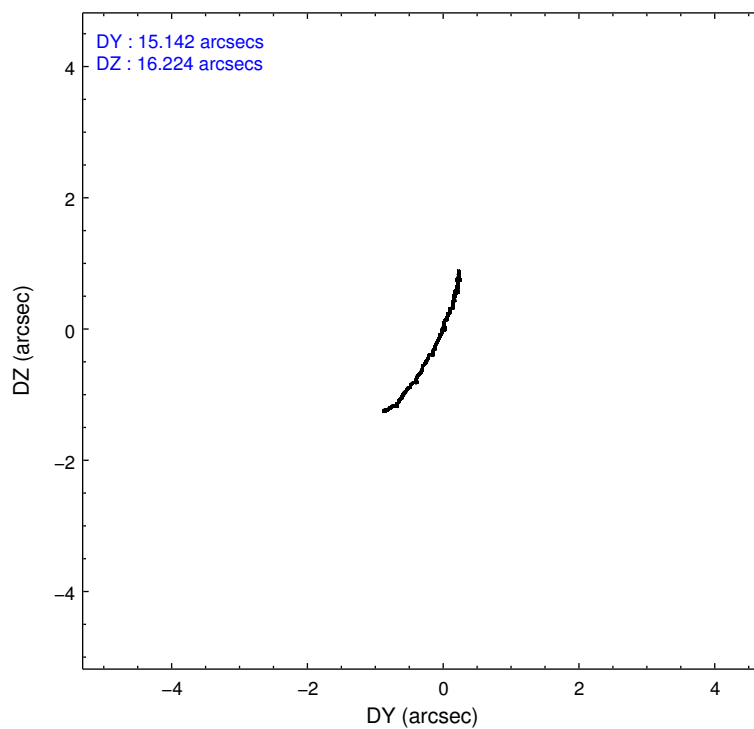
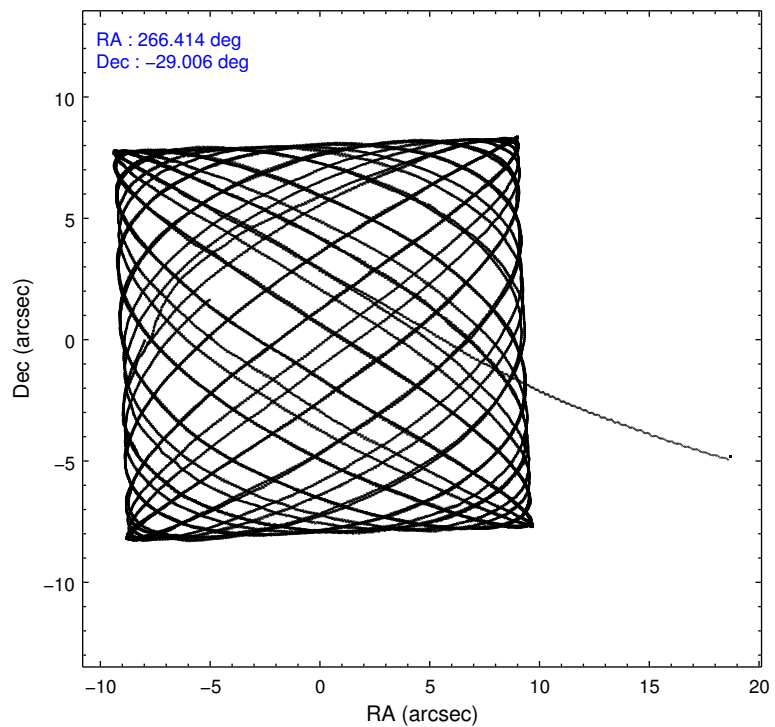
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	186431	125053	159526	151406	116235
rejected events	90234	101596	79637	107550	94672
rejected %	48%	81%	49%	71%	81%

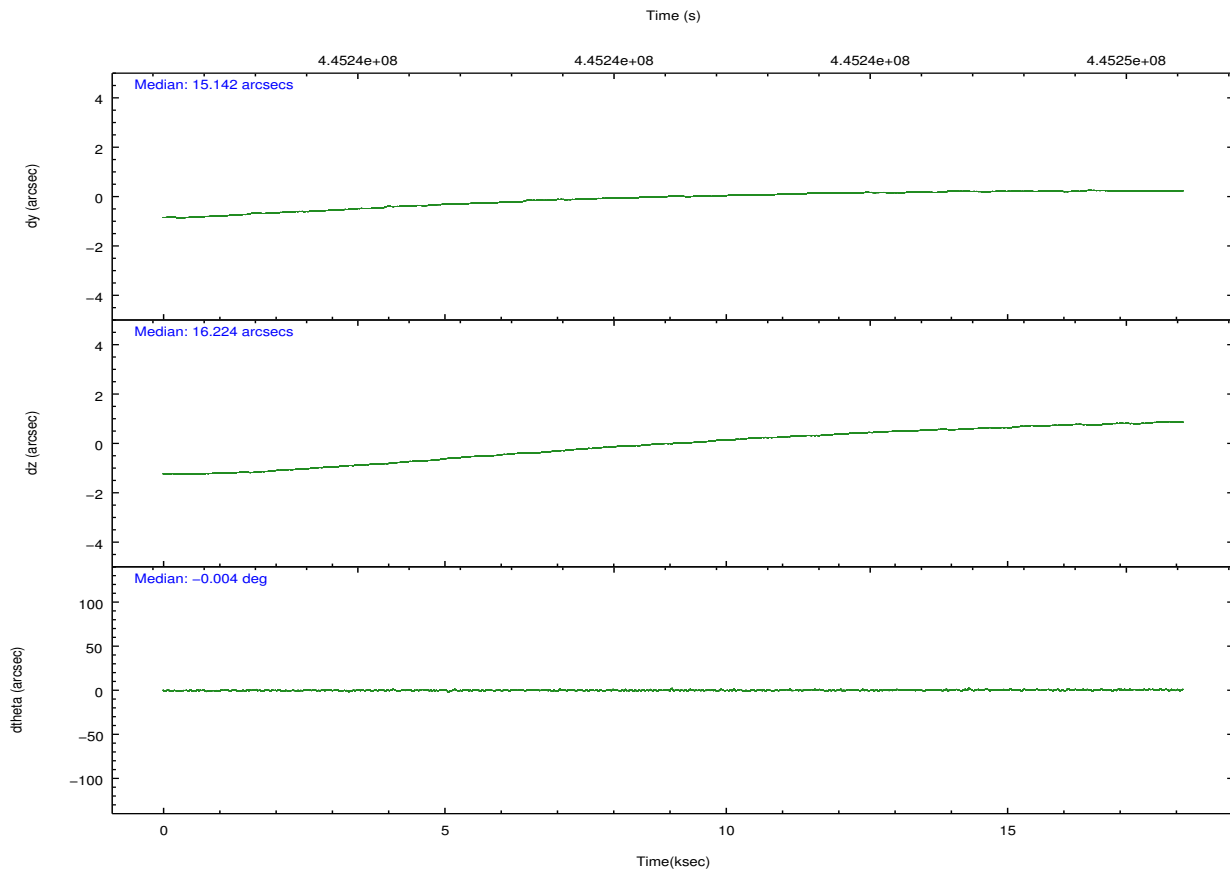
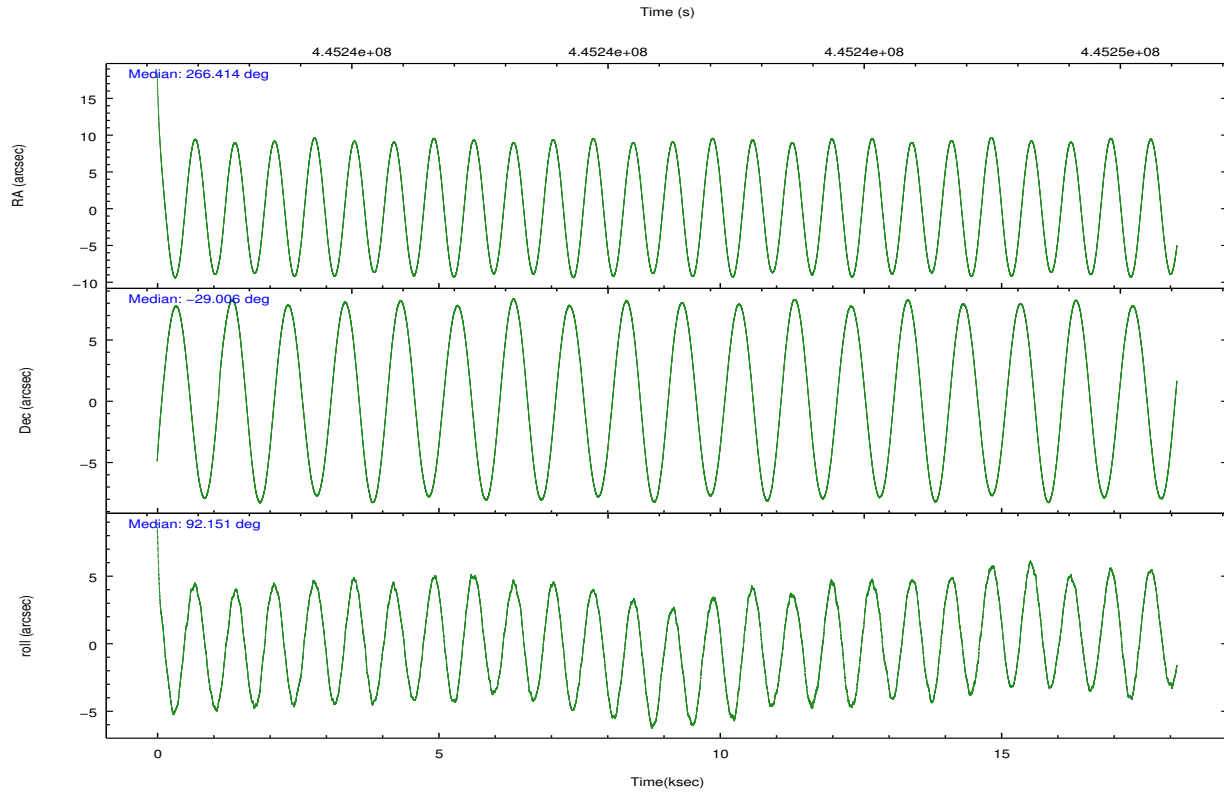
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	13887	11340	9065	15320	11190
	7%	9%	5%	10%	9%
grade 1 events	386	90	178	158	120
	0%	0%	0%	0%	0%
grade 2 events	29082	4481	16750	9812	3664
	15%	3%	10%	6%	3%
grade 3 events	3348	1876	7378	4265	1720
	1%	1%	4%	2%	1%
grade 4 events	3252	1815	7092	4015	1643
	1%	1%	4%	2%	1%
grade 5 events	13266	5545	15032	7778	6049
	7%	4%	9%	5%	5%
grade 6 events	46639	3949	39611	10468	3353
	25%	3%	24%	6%	2%
grade 7 events	76571	95957	64420	99590	88496
	41%	76%	40%	65%	76%

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	266.4136693325181	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.029222	-29.00628135117909	Alternating exposures requested	N	N
[deg] Pointing Roll	92.006803	92.15517459644909	[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)	445232211.184000	445231044.54166			
Observation start date	2012-02-10T03:35:45	2012-02-10T03:17:24			
[s] Observation end time (MET)	445250211.184000	445251160.16773			
Observation end date	2012-02-10T08:35:45	2012-02-10T08:52:40			
Read mode	TIMED	TIMED			

2.3 Aspect



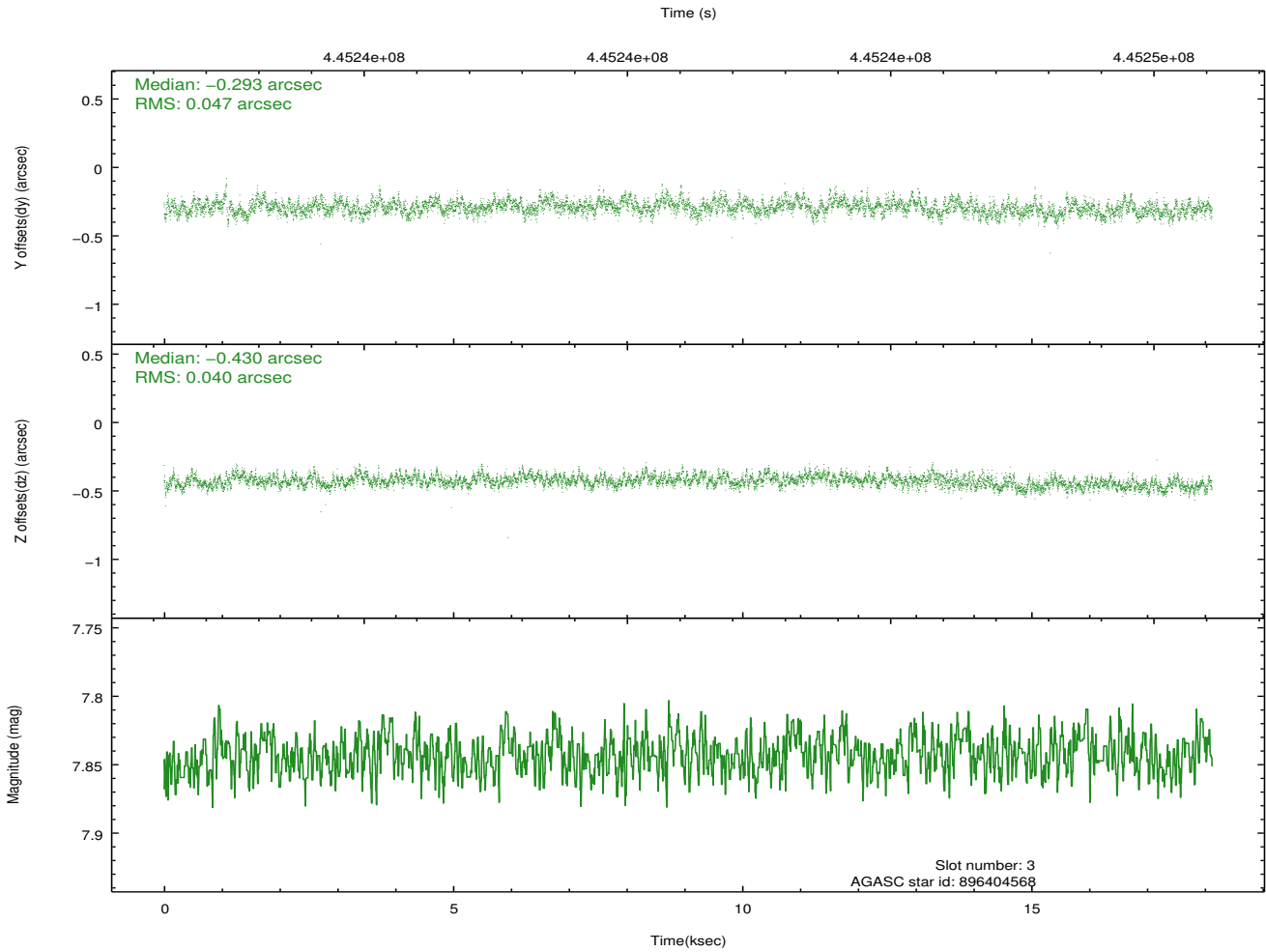
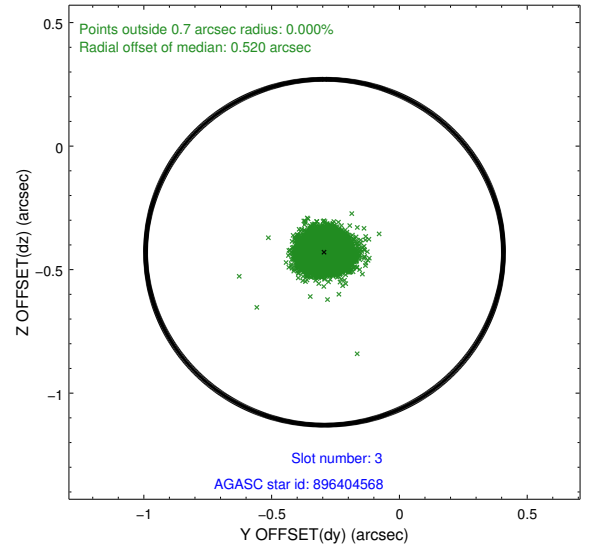
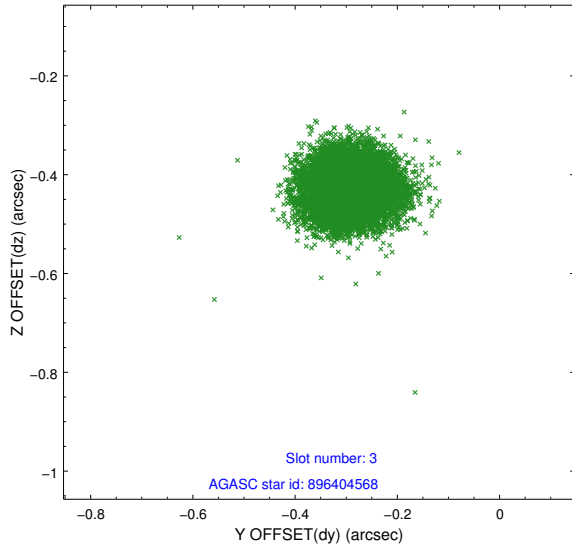


Slot Statistics

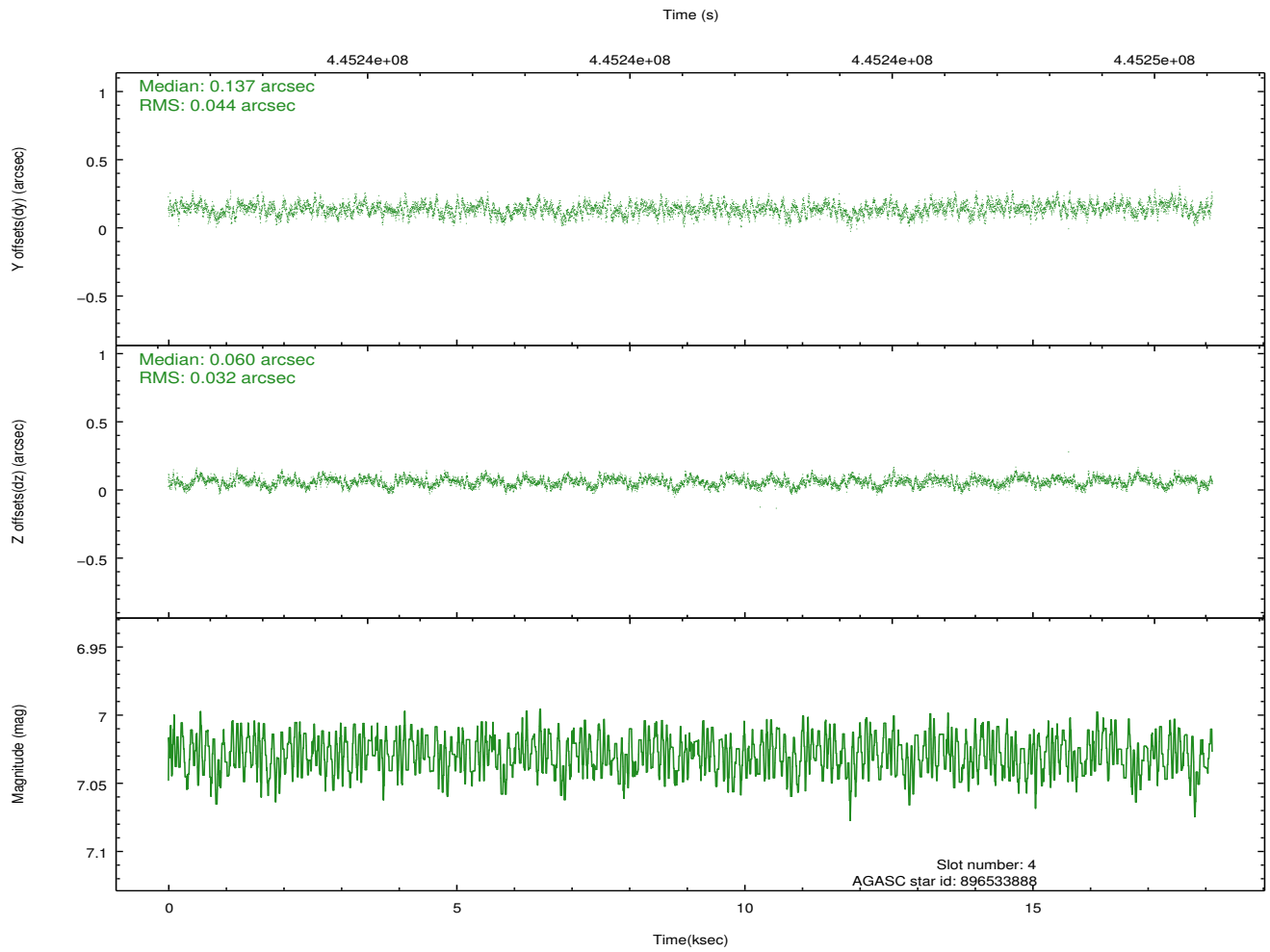
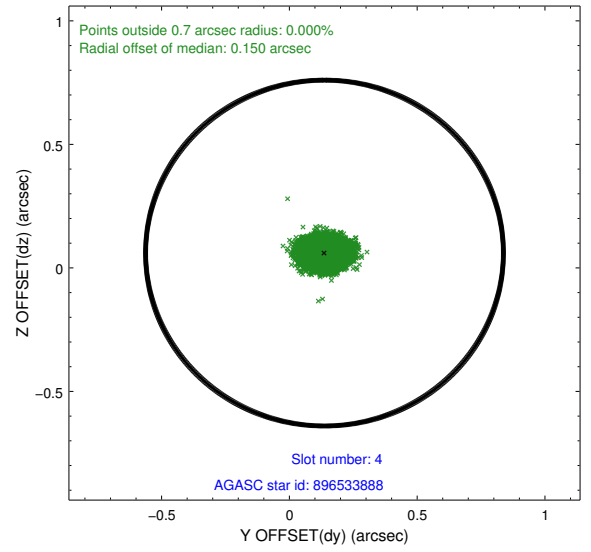
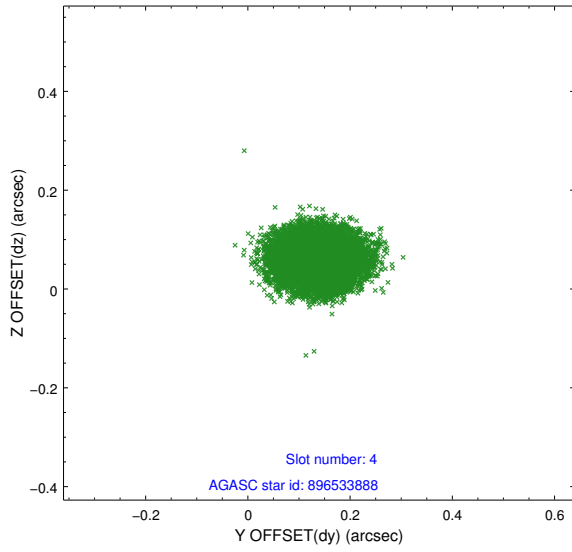
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.99	4421	-0.024	-0.074	0.022	0.046	0.000000	0.000000	927.98	-1733.21
1	FID	ACIS-S-4	7.00	4421	0.093	0.018	0.010	0.016	0.000000	0.000000	2145.66	170.79
2	FID	ACIS-S-6	7.13	4420	-0.092	0.070	0.017	0.040	0.000000	0.000000	394.18	808.48
3	GUIDE	896404568	7.84	8842	-0.293	-0.430	0.066	0.105	265.687293	-28.431080	2226.85	2276.76
4	GUIDE	896533888	7.03	8840	0.137	0.060	0.058	0.093	266.666434	-29.392757	-1333.97	-692.83
5	GUIDE	896537176	8.02	8842	-0.139	-0.006	0.084	0.135	266.498272	-28.678259	1255.04	-257.50
6	GUIDE	896537776	7.53	8839	0.325	0.074	0.051	0.086	266.655684	-29.665673	-2314.48	-623.20
7	GUIDE	896538208	7.96	8840	-0.031	0.302	0.064	0.104	267.176969	-28.671626	1196.67	-2400.20

2.4 Star Slots

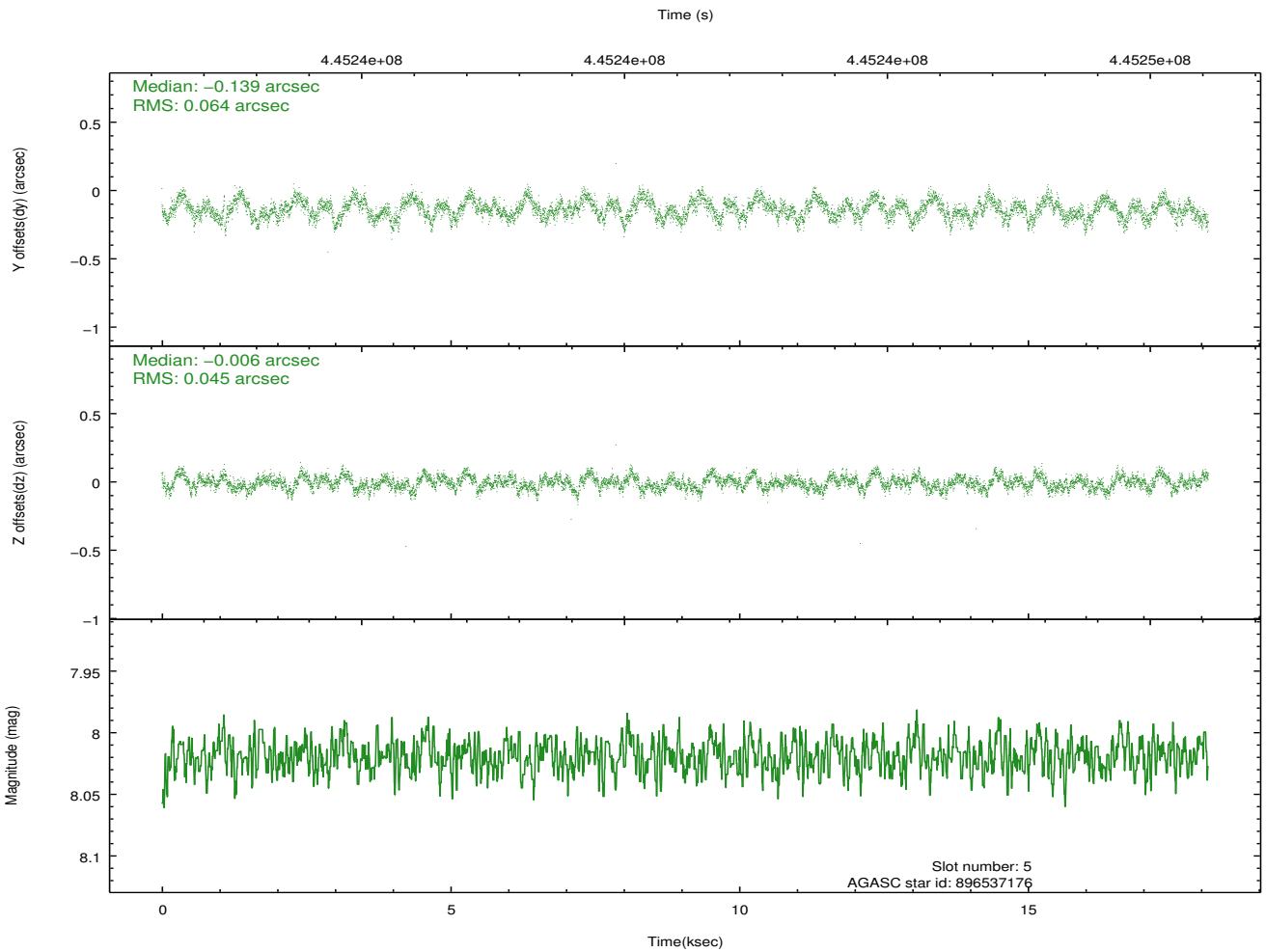
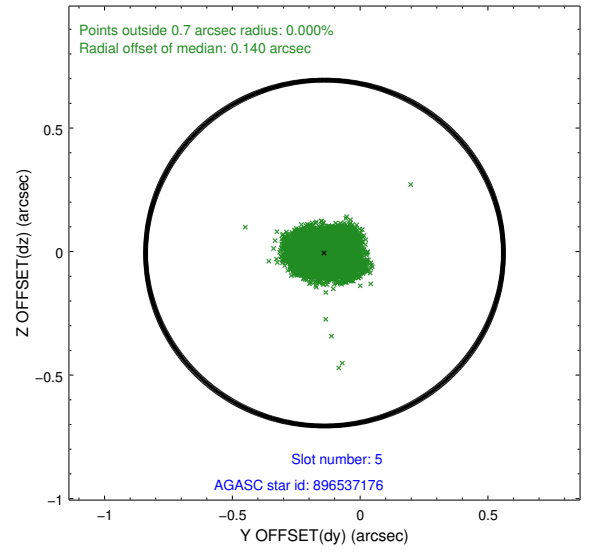
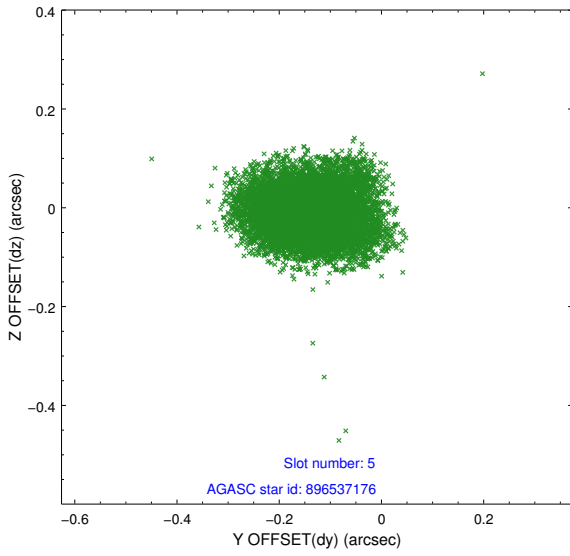
2.4.1 Slot 3



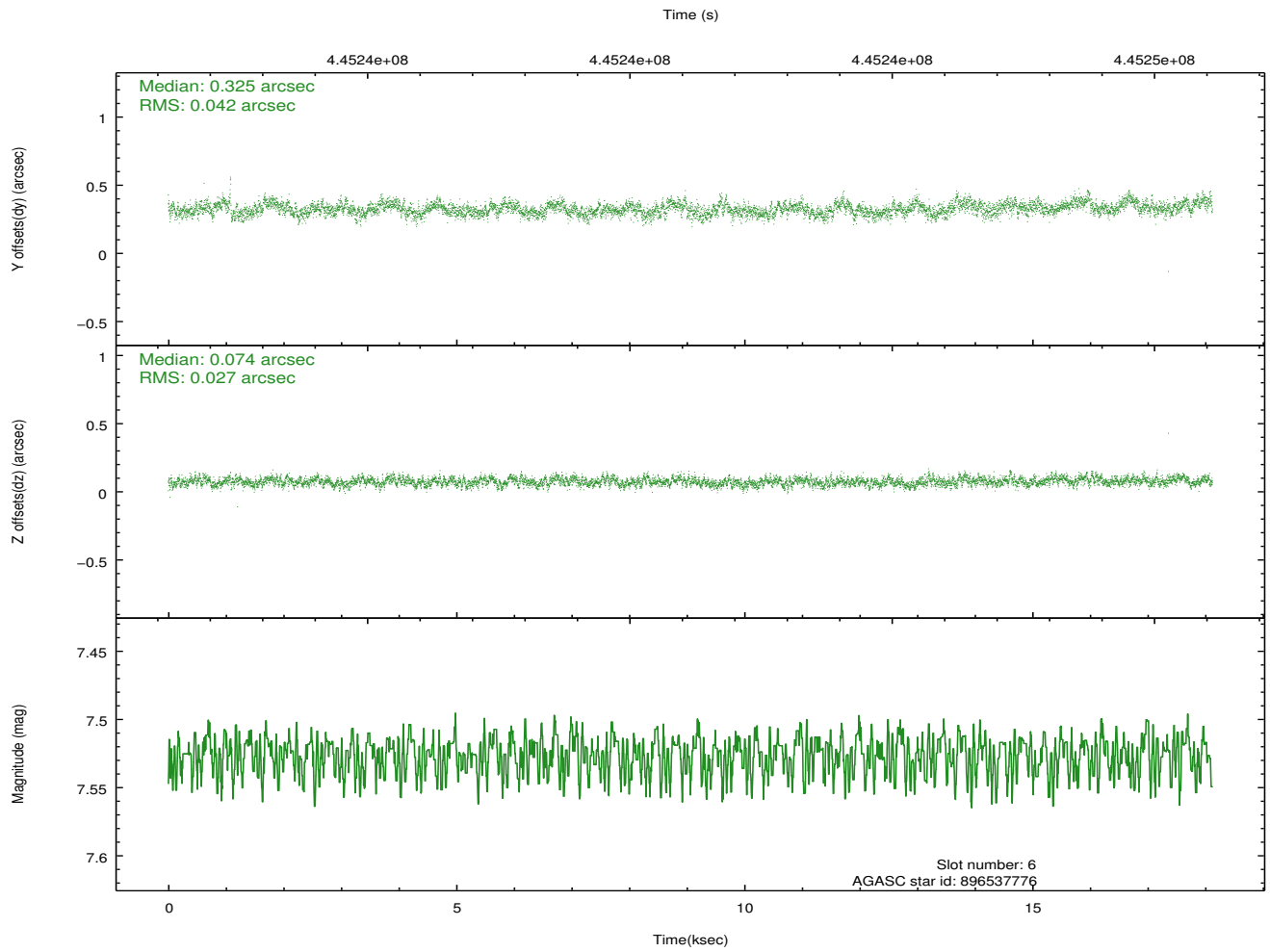
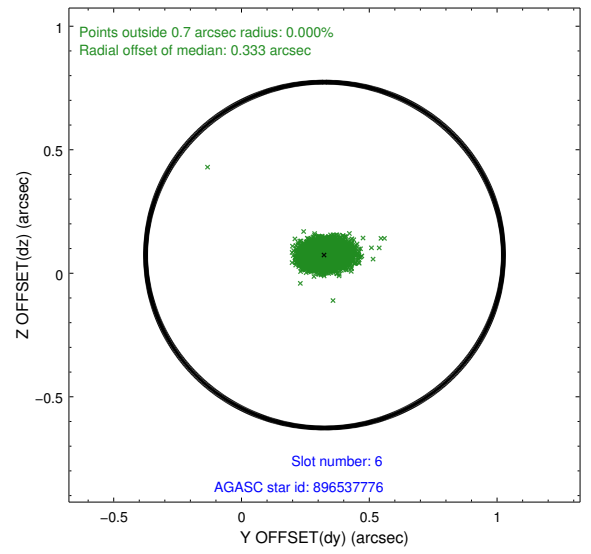
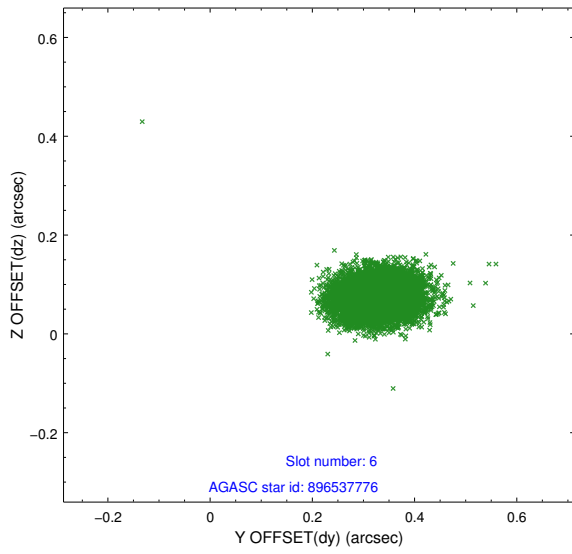
2.4.2 Slot 4



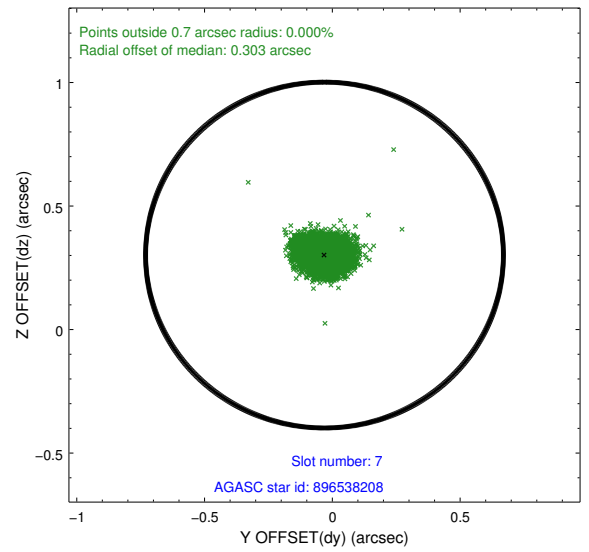
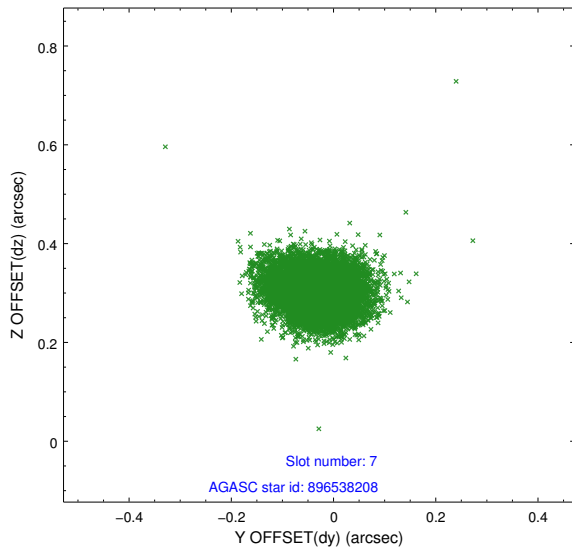
2.4.3 Slot 5



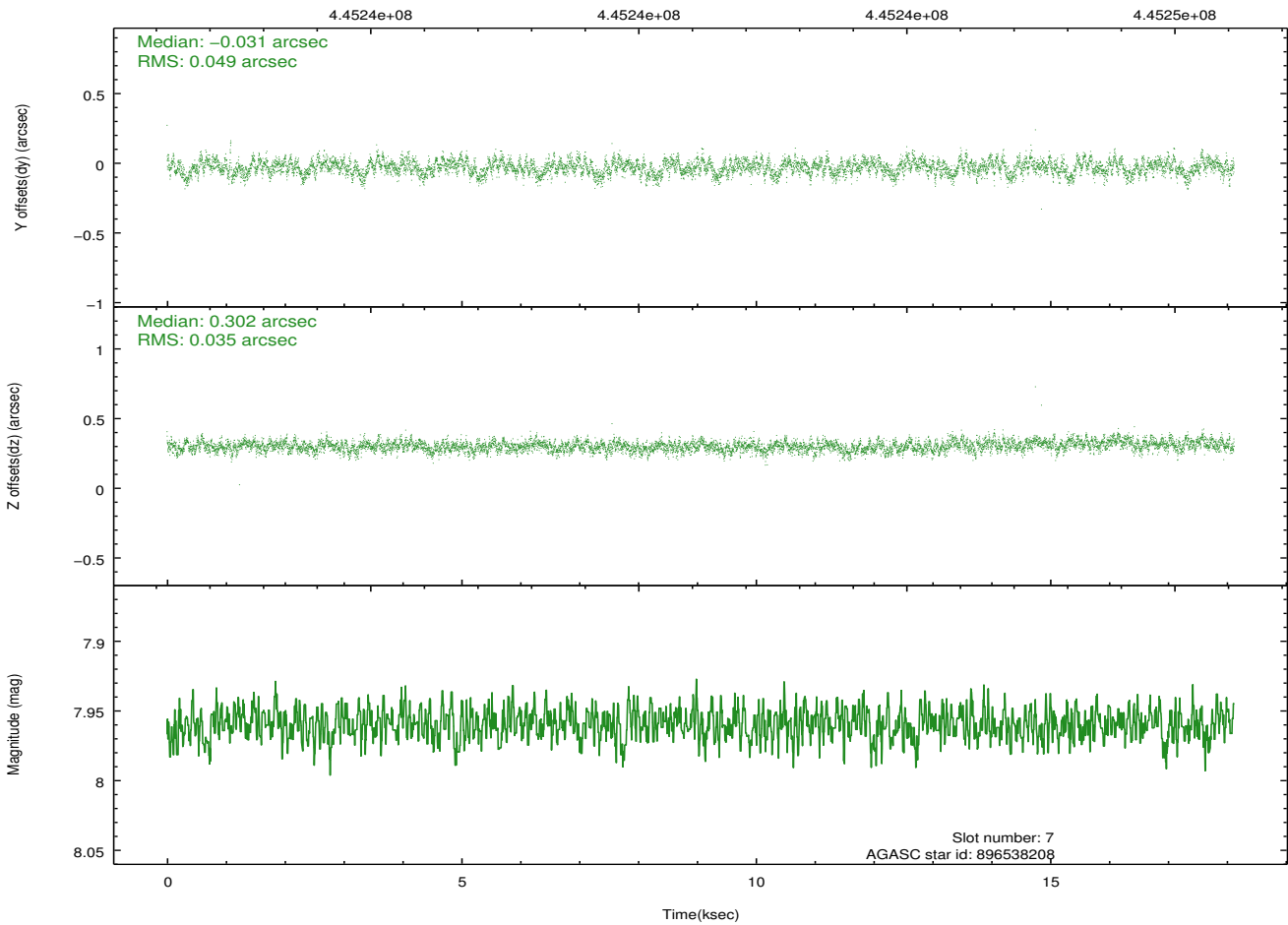
2.4.4 Slot 6



2.4.5 Slot 7

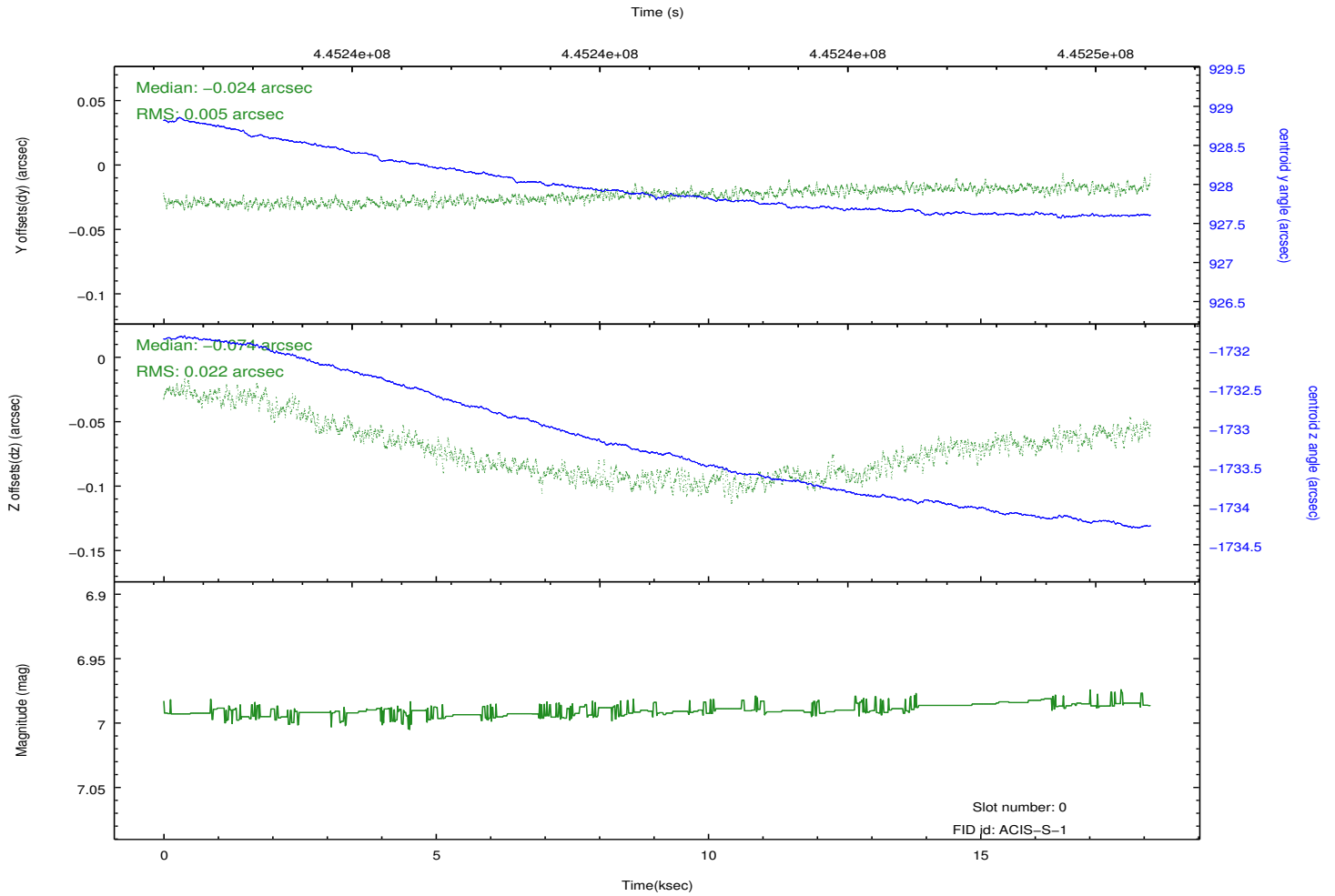
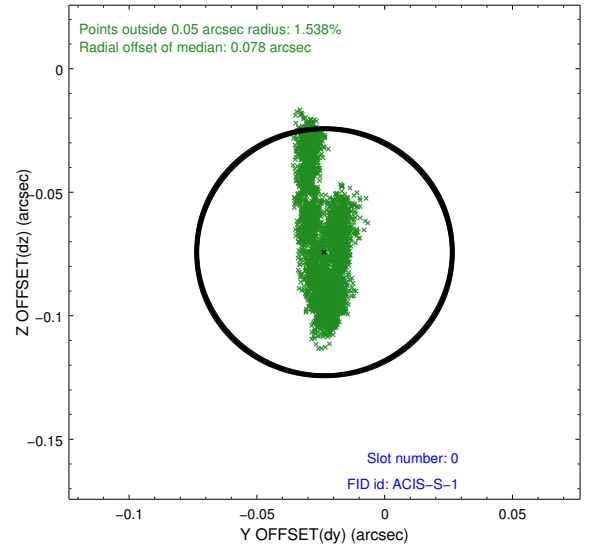
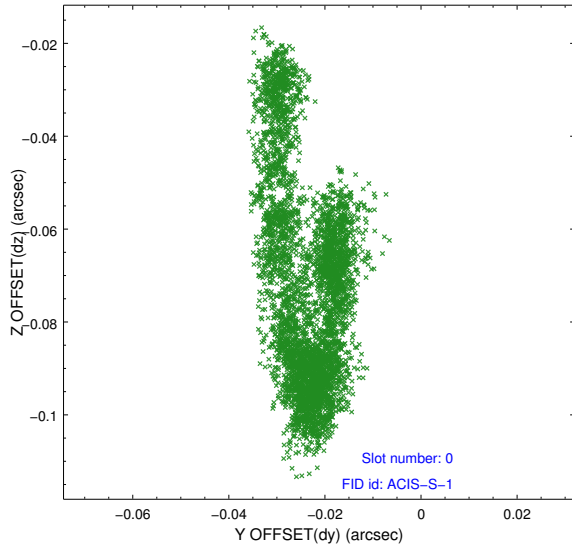


Time (s)

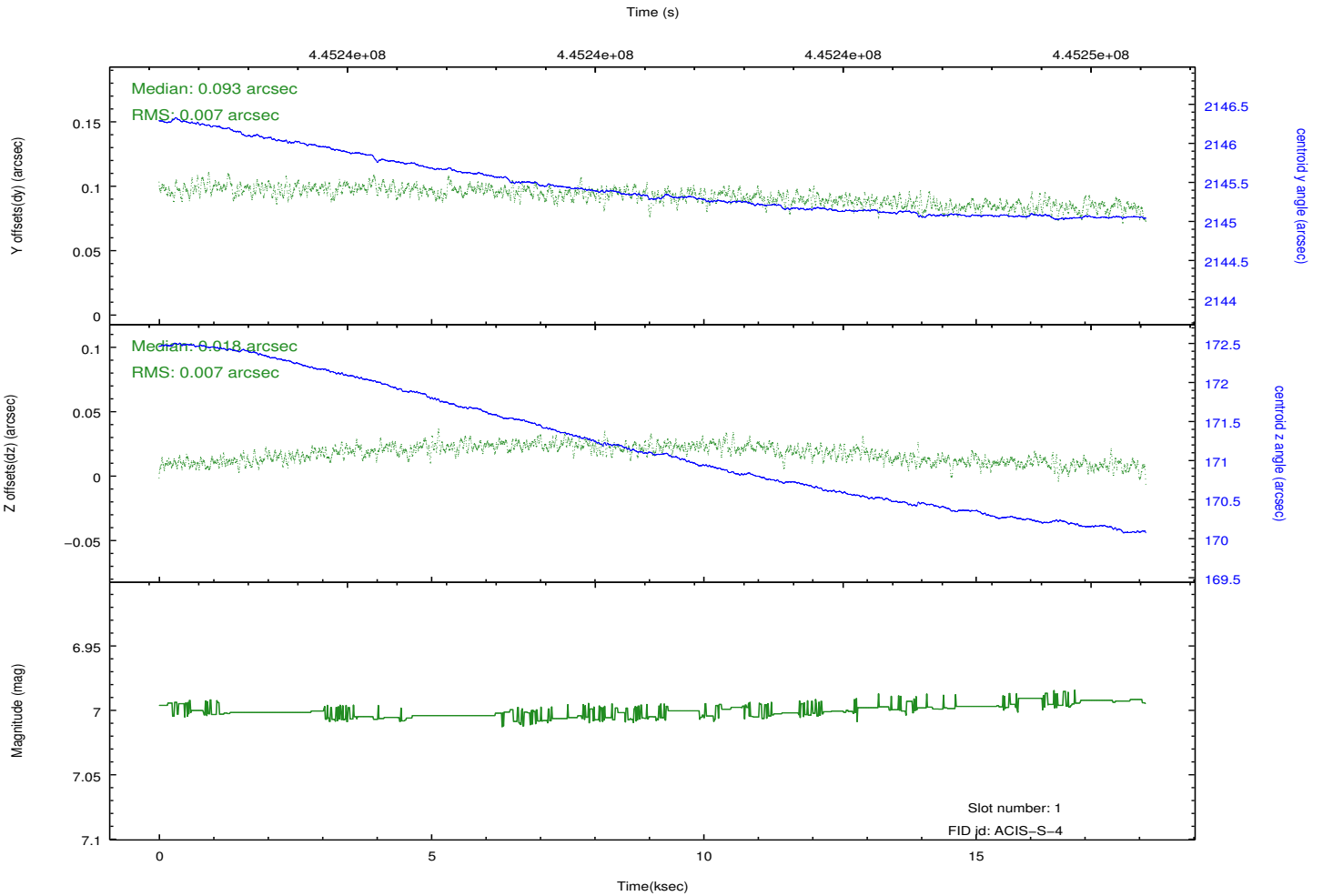
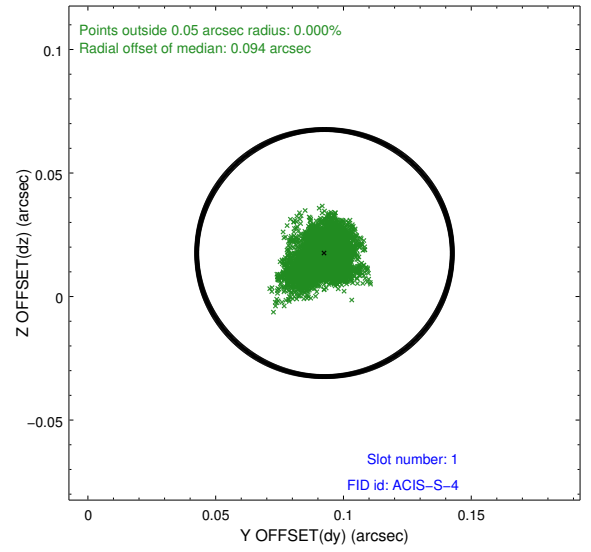
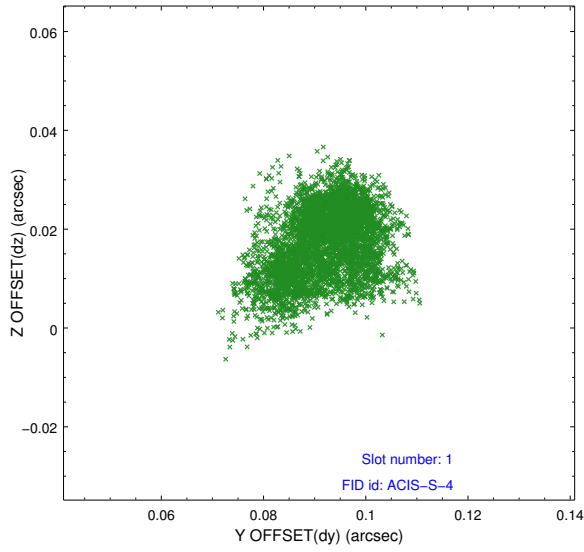


2.5 FID Slots

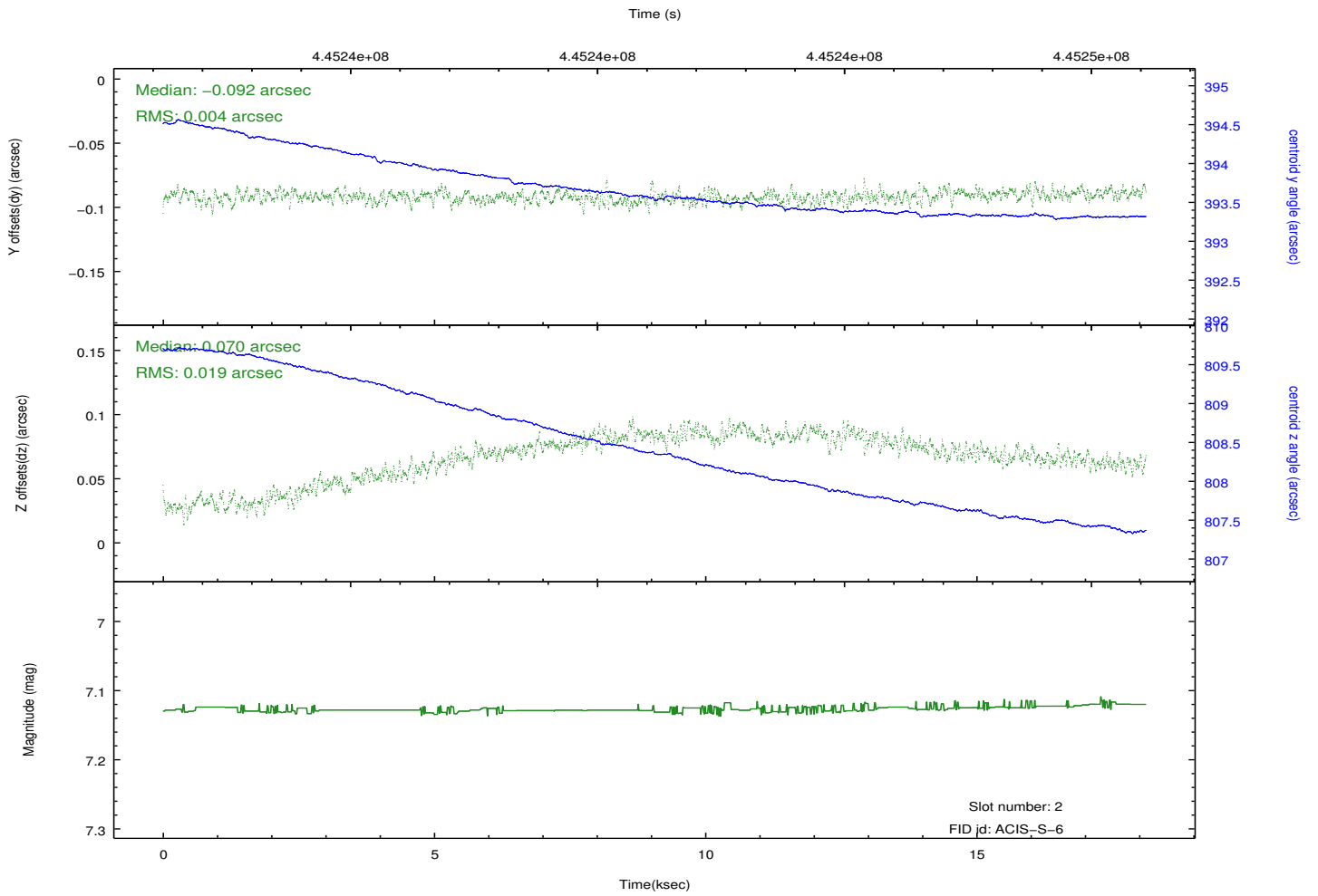
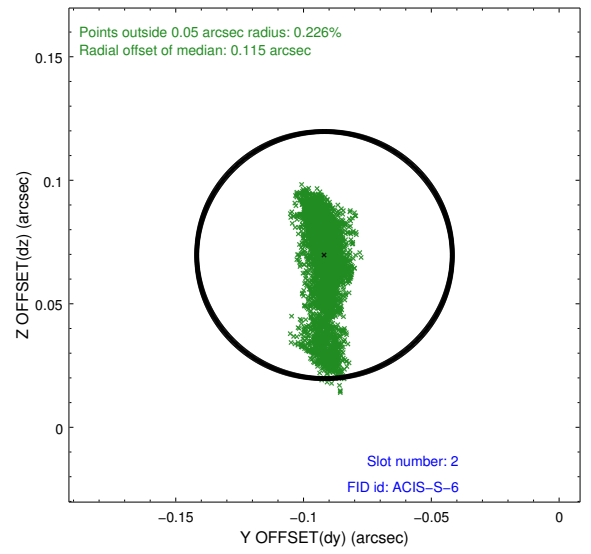
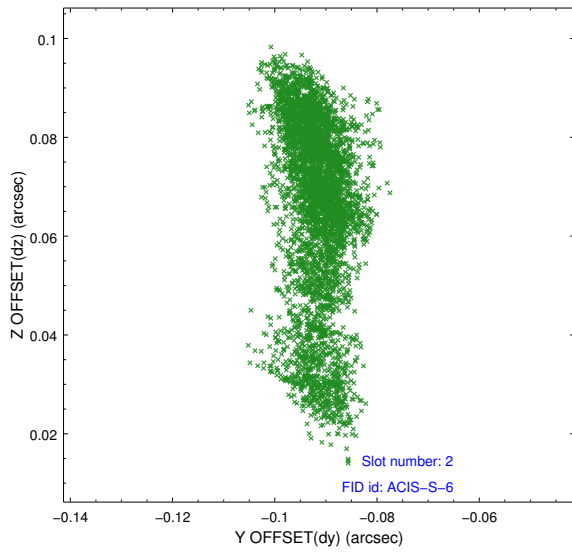
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

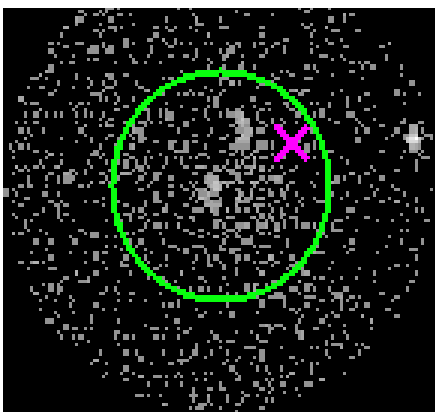


3 Gratings

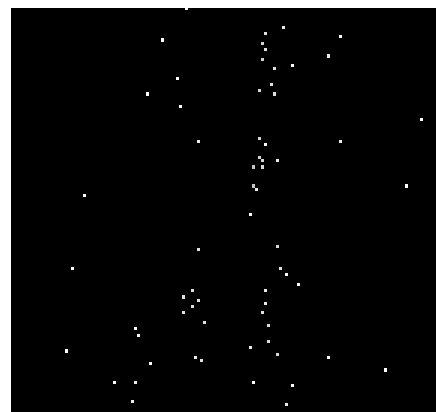
3.1 HEG Arm



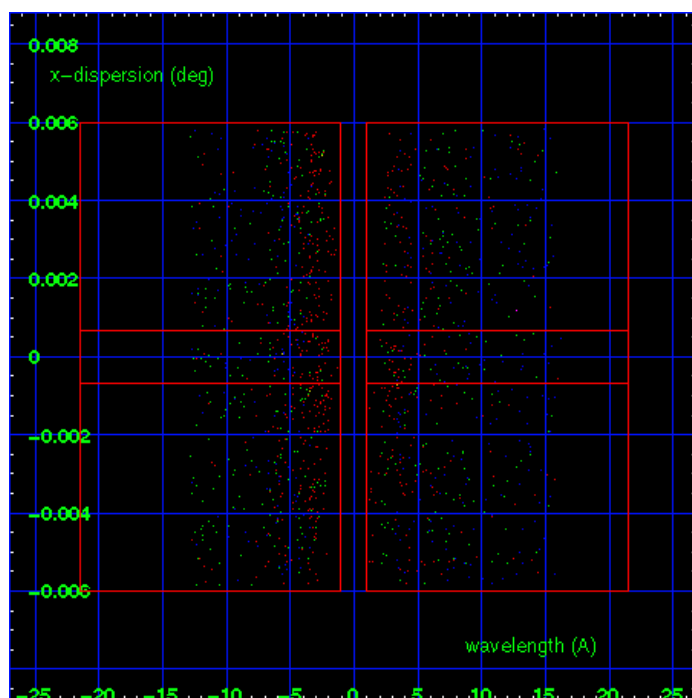
HEG Order Sort 123



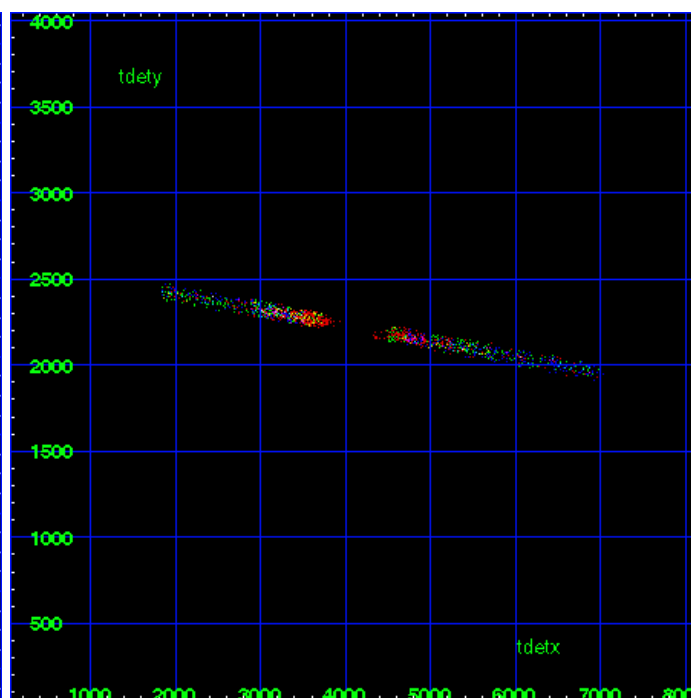
HEG Zero Order



HEG Order Sort ALL

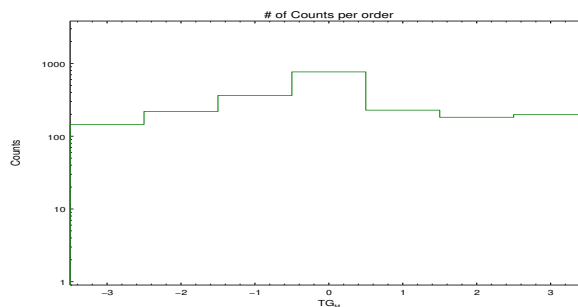


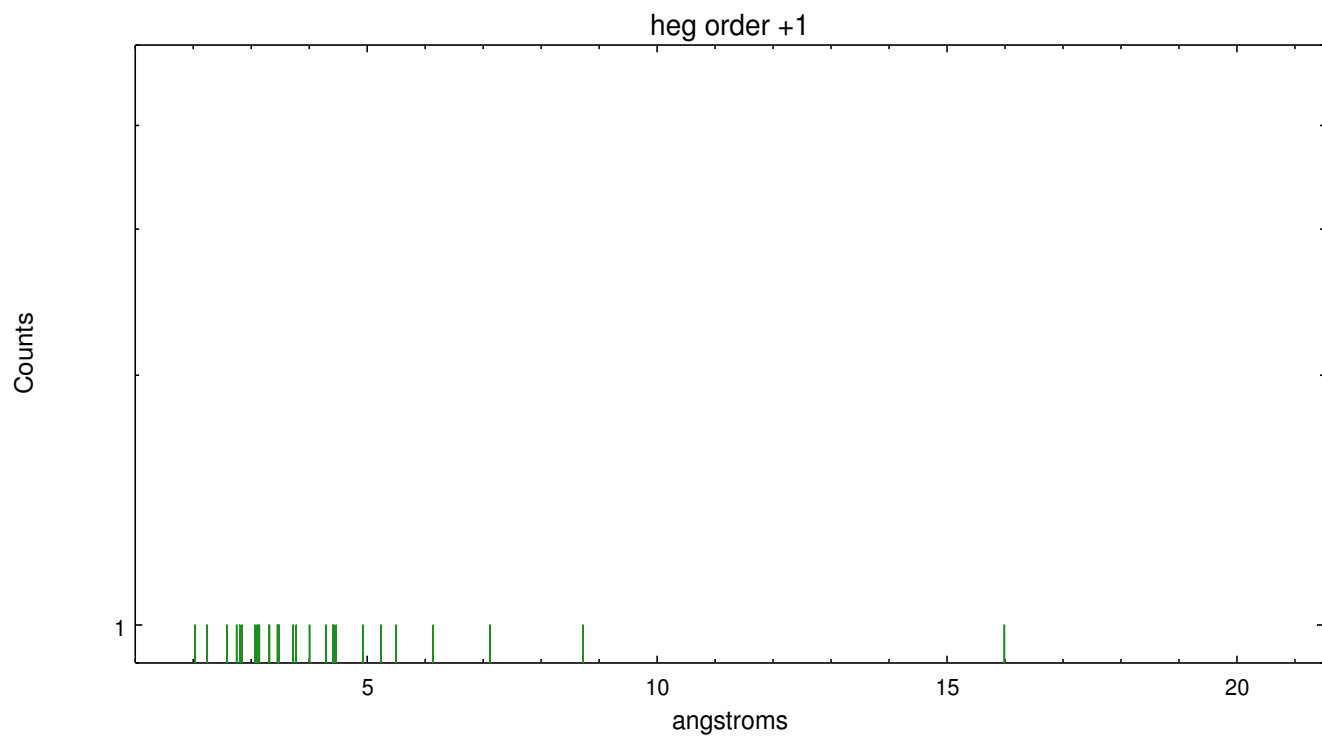
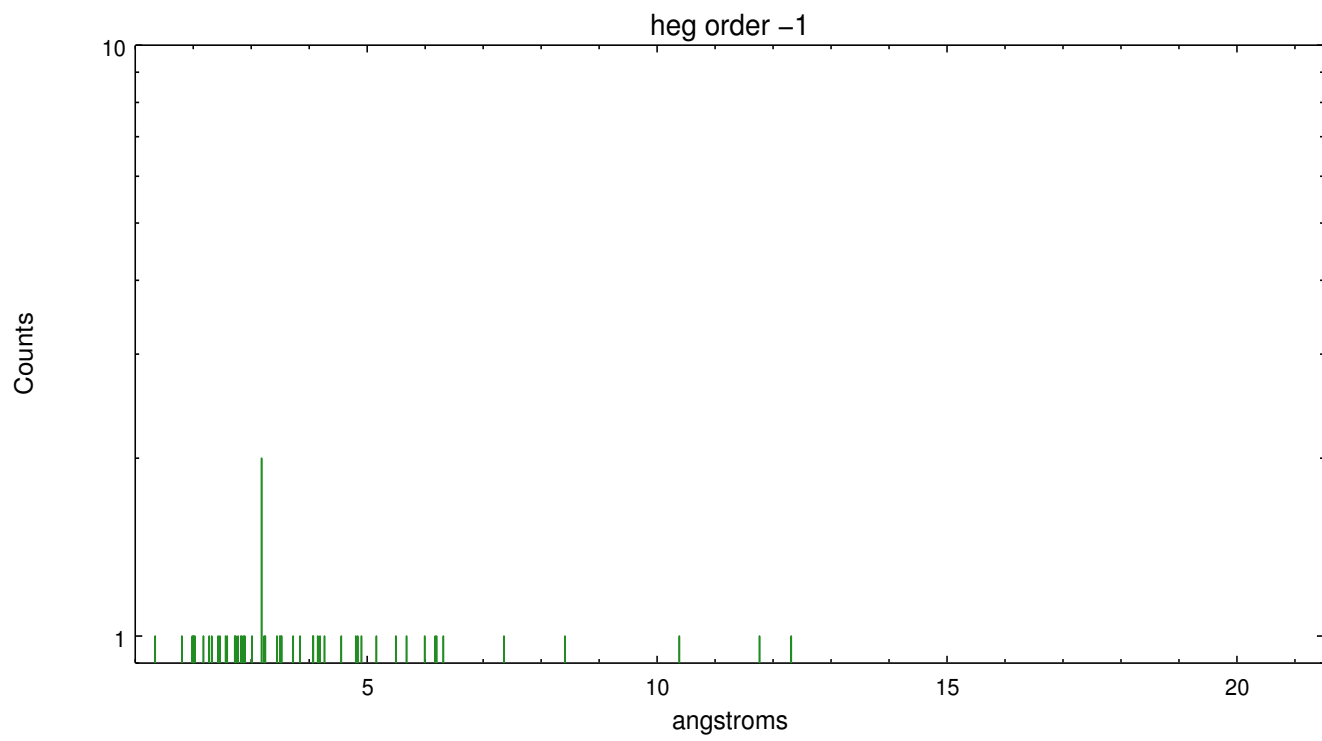
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	145	219	363	766	228	182	198

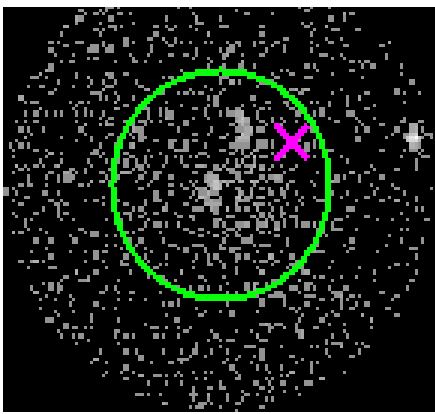




3.2 MEG Arm



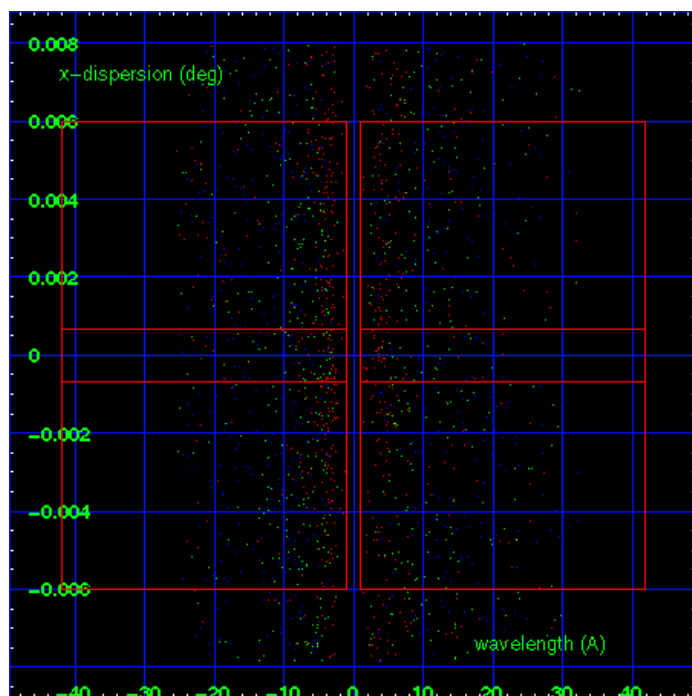
MEG Order Sort 123



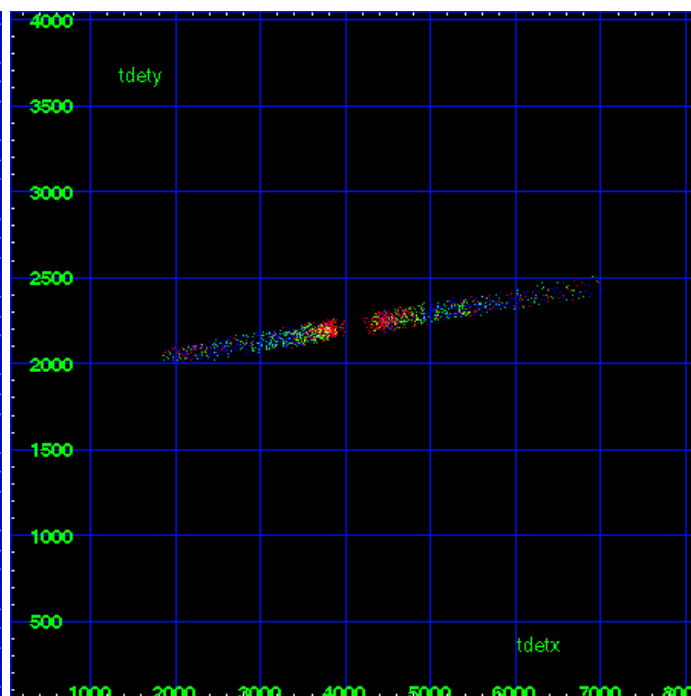
MEG Zero Order



MEG Order Sort ALL

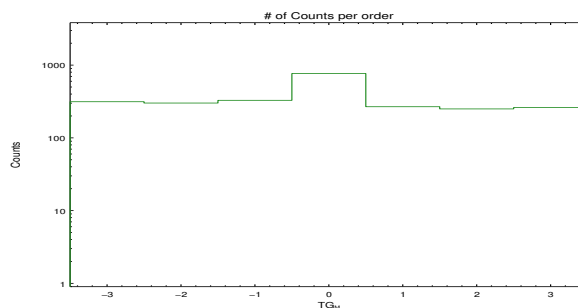


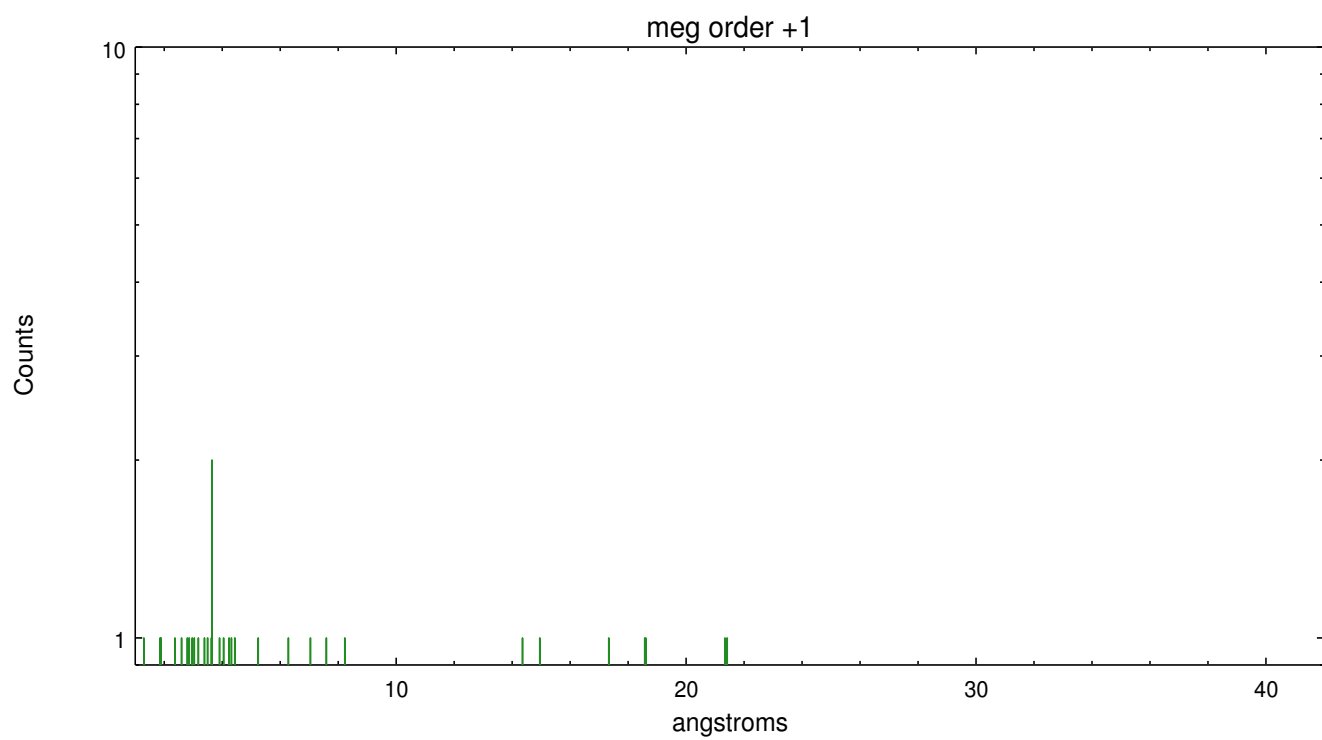
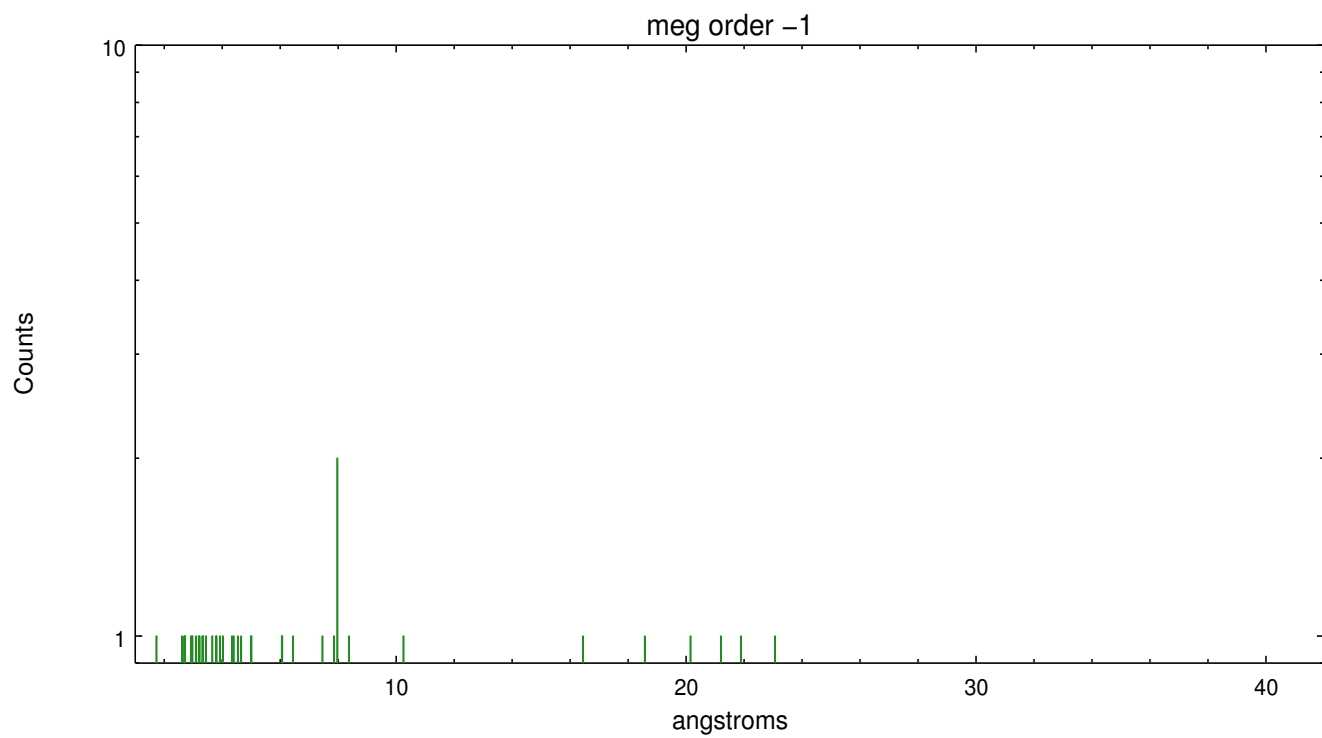
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	314	301	328	766	268	250	261





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.02.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.063213427365

A.2 Comments

Note: geometrically complex region with multiple sources and diffuse emission.

Grating spectral extraction was centered on the as-proposed Sgr A* coordinate, (ra,dec) = (266.41667, -29.00780) [deg].