

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14336 - L2 Version 2
Chandra X-Ray Center

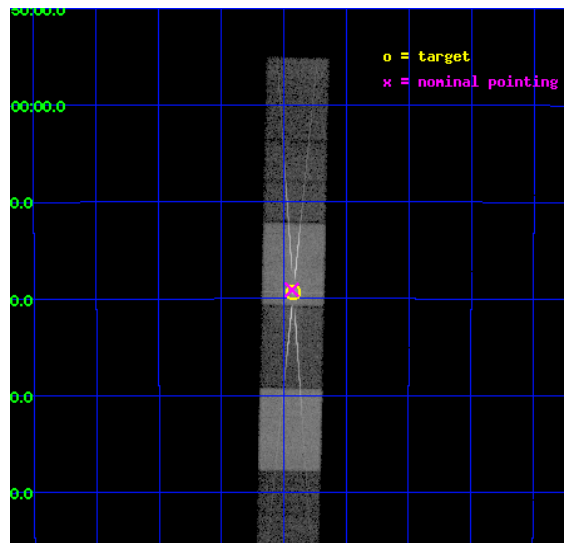
L2 Processing Date : Feb 20 2012

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

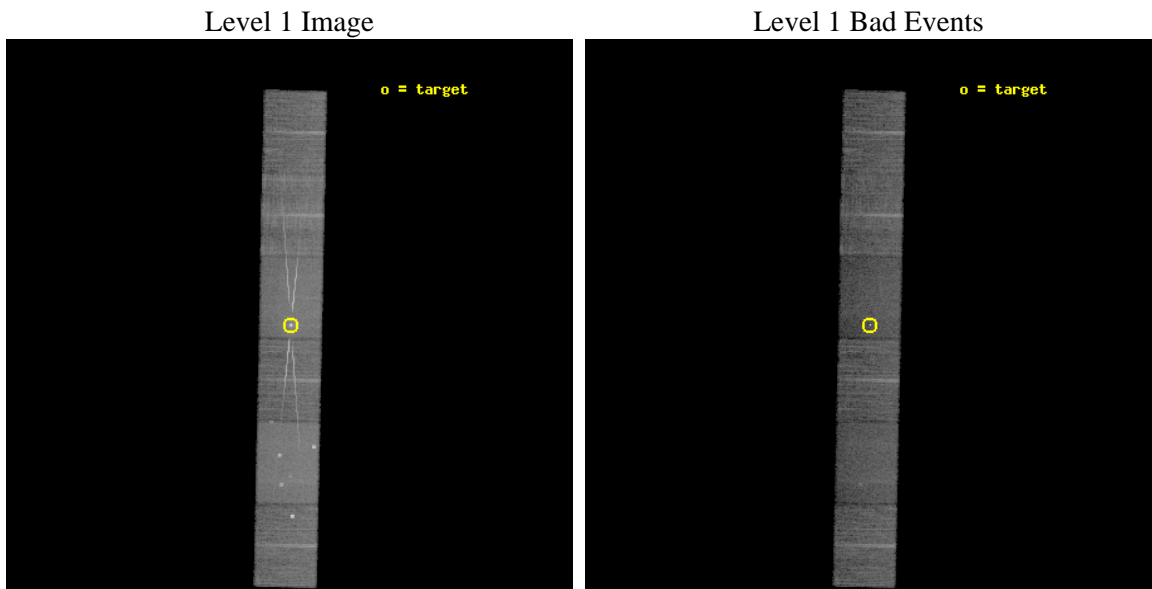
seq_num	401425	Sequence number
obs_id	14336	Observation id
title	Chandra spectroscopy of the X-ray spectrum of the newly discovered accreting millisecond pulsar IGR J17498-2921	Proposal title
observer	Dr. Tiziana Di Salvo	Principal investigator
object	IGR J17498-2921	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.480833	Observer's specified target RA [deg]
dec_targ	-29.322139	Observer's specified target Dec [deg]
ra_nom	267.48366839955	Nominal RA [deg]
dec_nom	-29.318219107135	Nominal Dec [deg]
roll_nom	271.15799671013	Nominal Roll [deg]
revision	2	Processing version of data
ontime	16345.0	Sum of GTIs [s]
livetime	16081.014072978	Livetime [s]
ontime4	16345.0	Sum of GTIs [s]
ontime5	16345.0	Sum of GTIs [s]
ontime6	16345.0	Sum of GTIs [s]
ontime7	16345.0	Sum of GTIs [s]
ontime8	16344.995419502	Sum of GTIs [s]
ontime9	16344.954379499	Sum of GTIs [s]
l2events	195372	Number of level 2 events



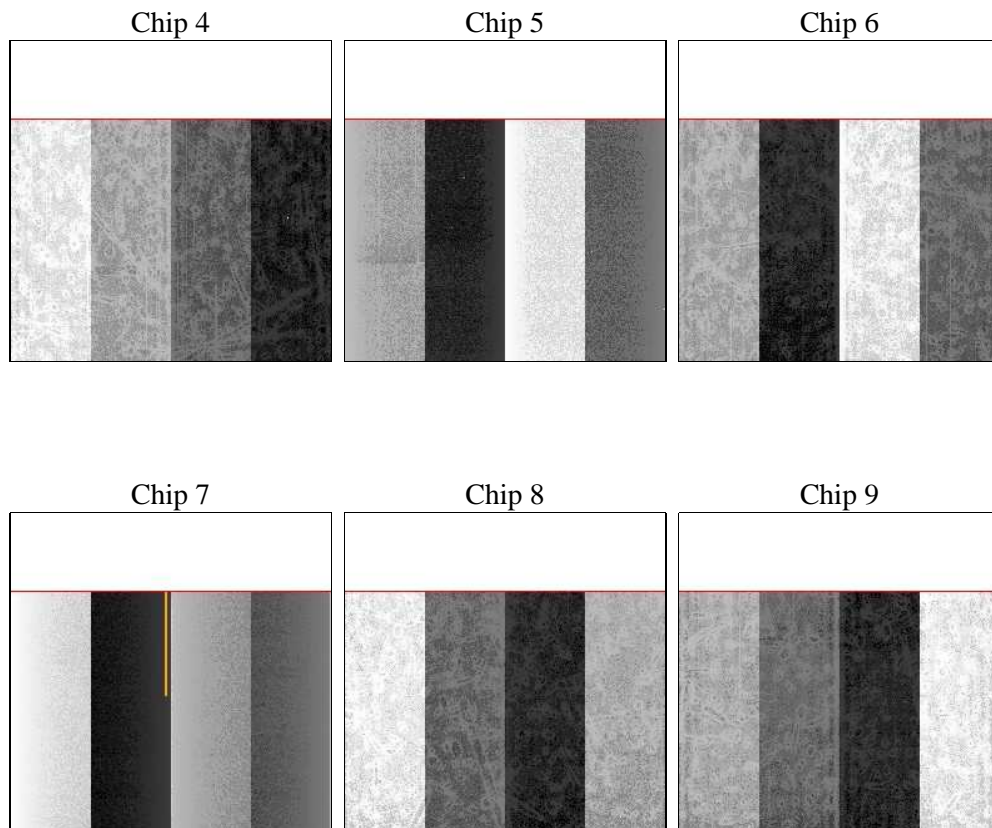
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16298.331000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	16345.0	Sum of GTIs [s]
caldsver	4.4.8	 	ontime4	16345.0	Sum of GTIs [s]
date	2012-02-21T00:13:34	Date and time of file creation	ontime5	16345.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	16345.0	Sum of GTIs [s]
			ontime7	16345.0	Sum of GTIs [s]
			ontime8	16344.995419502	Sum of GTIs [s]
			ontime9	16344.954379499	Sum of GTIs [s]
			l1events	644122	Number of level 1 events

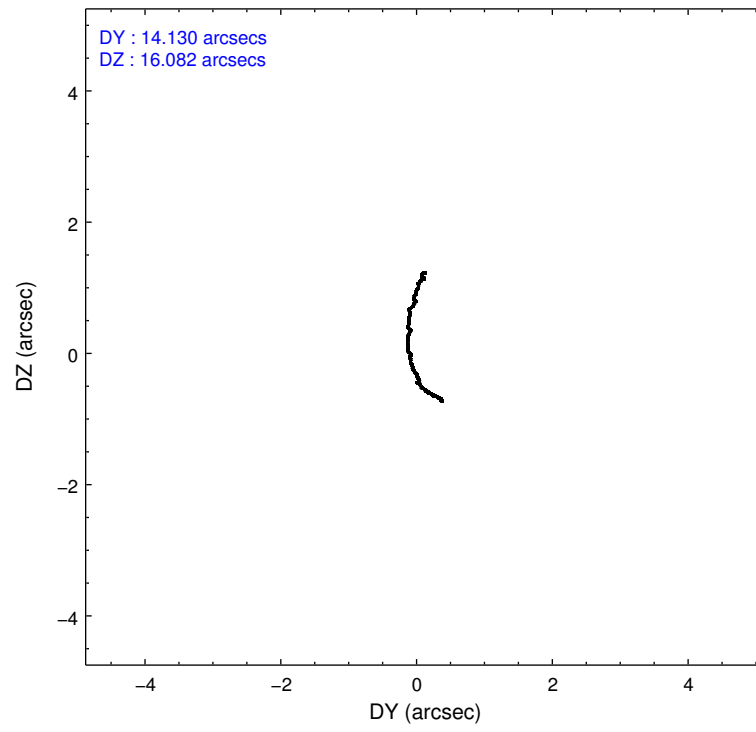
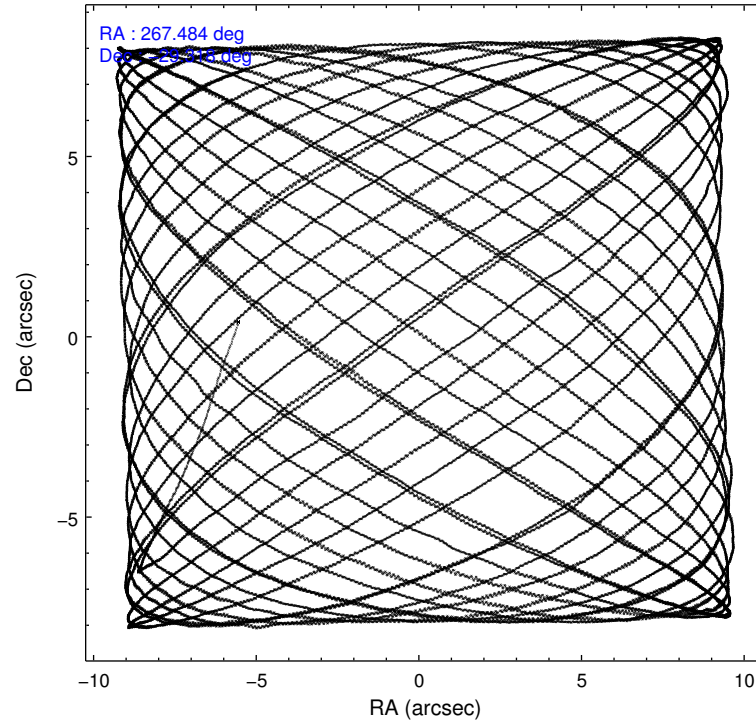
2.1.4 Events

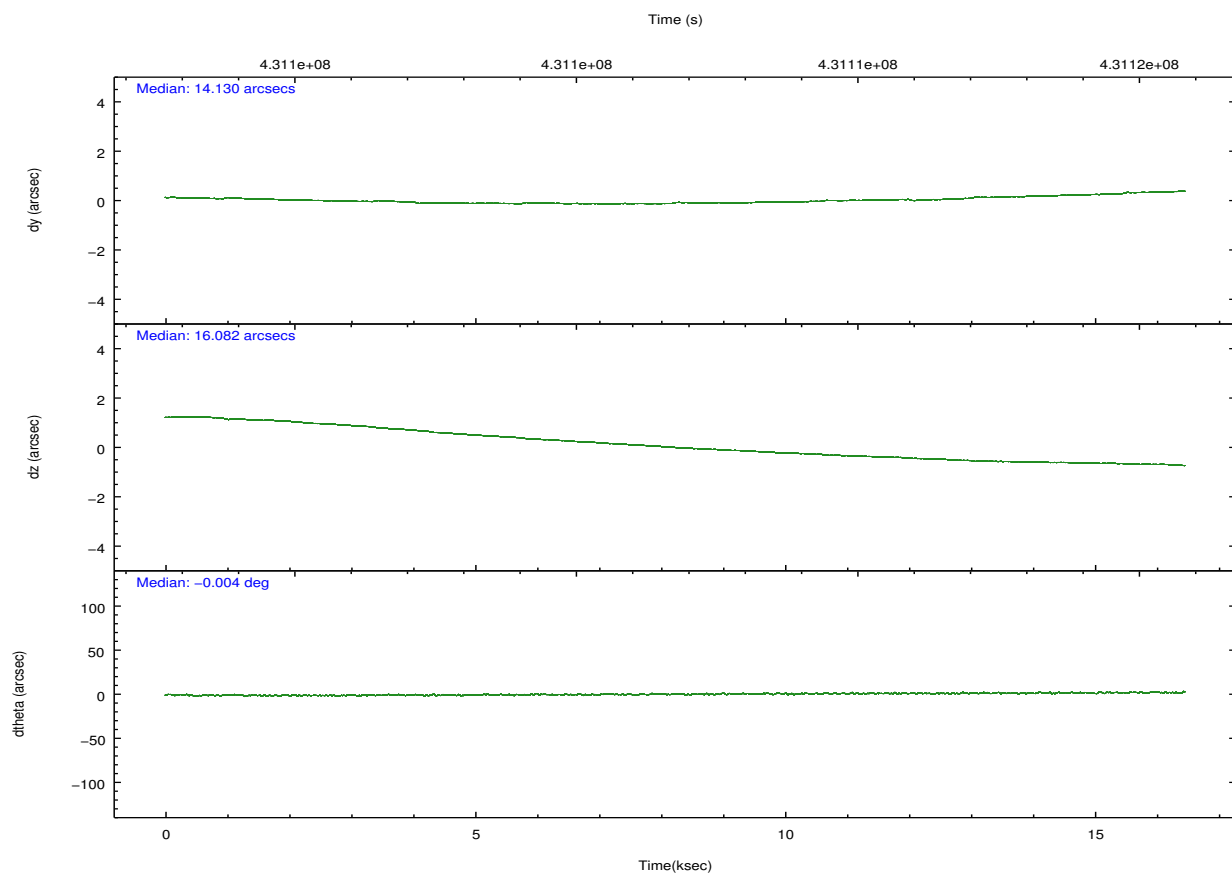
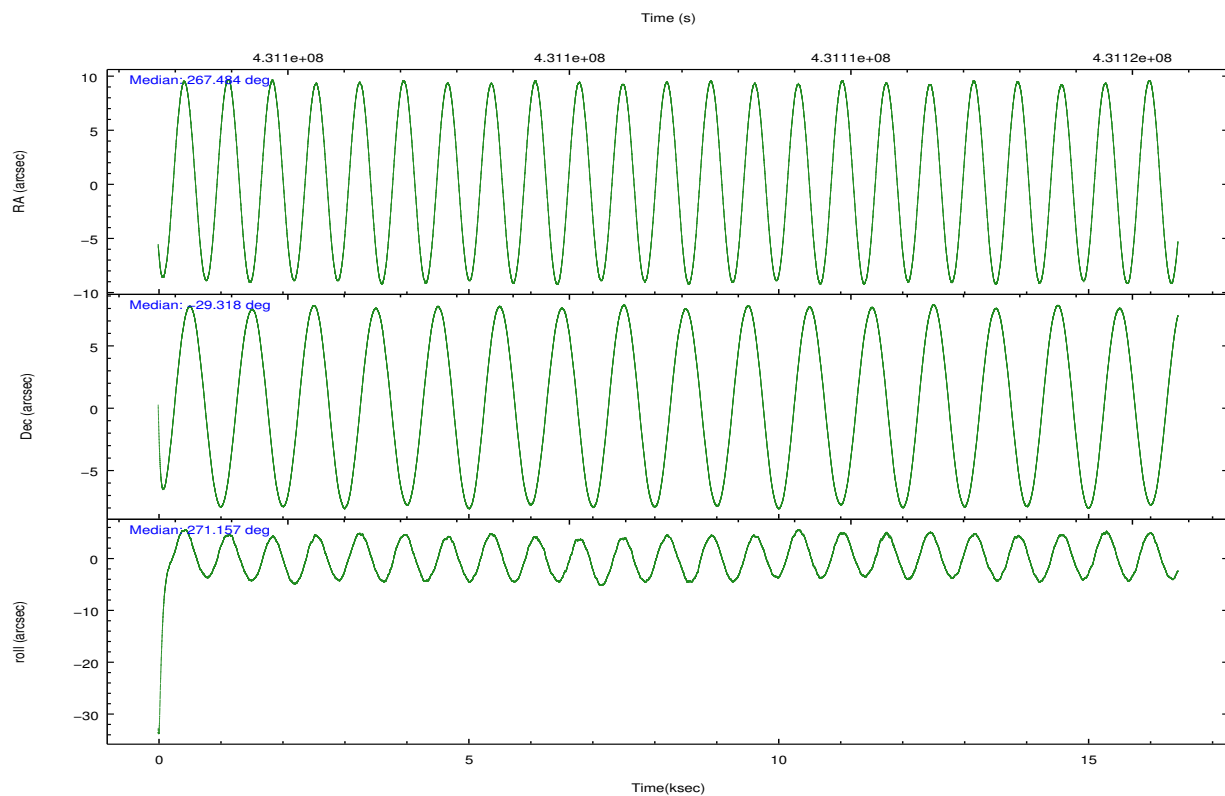
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	94640	130737	99671	131578	107782	79714	grade 0 events	9580	11078	18152	10411	11670	4649
rejected events	78551	61991	69669	56156	75541	68517		10%	8%	18%	7%	10%	5%
rejected %	82%	47%	69%	42%	70%	85%	grade 1 events	82	192	112	272	89	43
								0%	0%	0%	0%	0%	0%
							grade 2 events	2549	19480	4870	16692	6897	2330
								2%	14%	4%	12%	6%	2%
							grade 3 events	1111	3109	1873	7332	3163	1121
								1%	2%	1%	5%	2%	1%
							grade 4 events	1112	2857	1872	7298	3002	1069
								1%	2%	1%	5%	2%	1%
							grade 5 events	3491	9741	3806	11192	5492	3911
								3%	7%	3%	8%	5%	4%
							grade 6 events	1738	32246	3244	33697	7514	2033
								1%	24%	3%	25%	6%	2%
							grade 7 events	74977	52034	65742	44684	69955	64558
								79%	39%	65%	33%	64%	80%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	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	267.467092	267.4836683995521	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-29.295010	-29.31821910713528	Subarray start row	1	1
[deg] Pointing Roll	270.993281	271.1579967101308	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	431098670.184000	431097412.28497			
Observation start date	2011-08-30T13:36:44	2011-08-30T13:16:52			
[s] Observation end time (MET)	431114969.184000	431115193.4734			
Observation end date	2011-08-30T18:08:23	2011-08-30T18:13:13			
Read mode	TIMED	TIMED			

2.3 Aspect



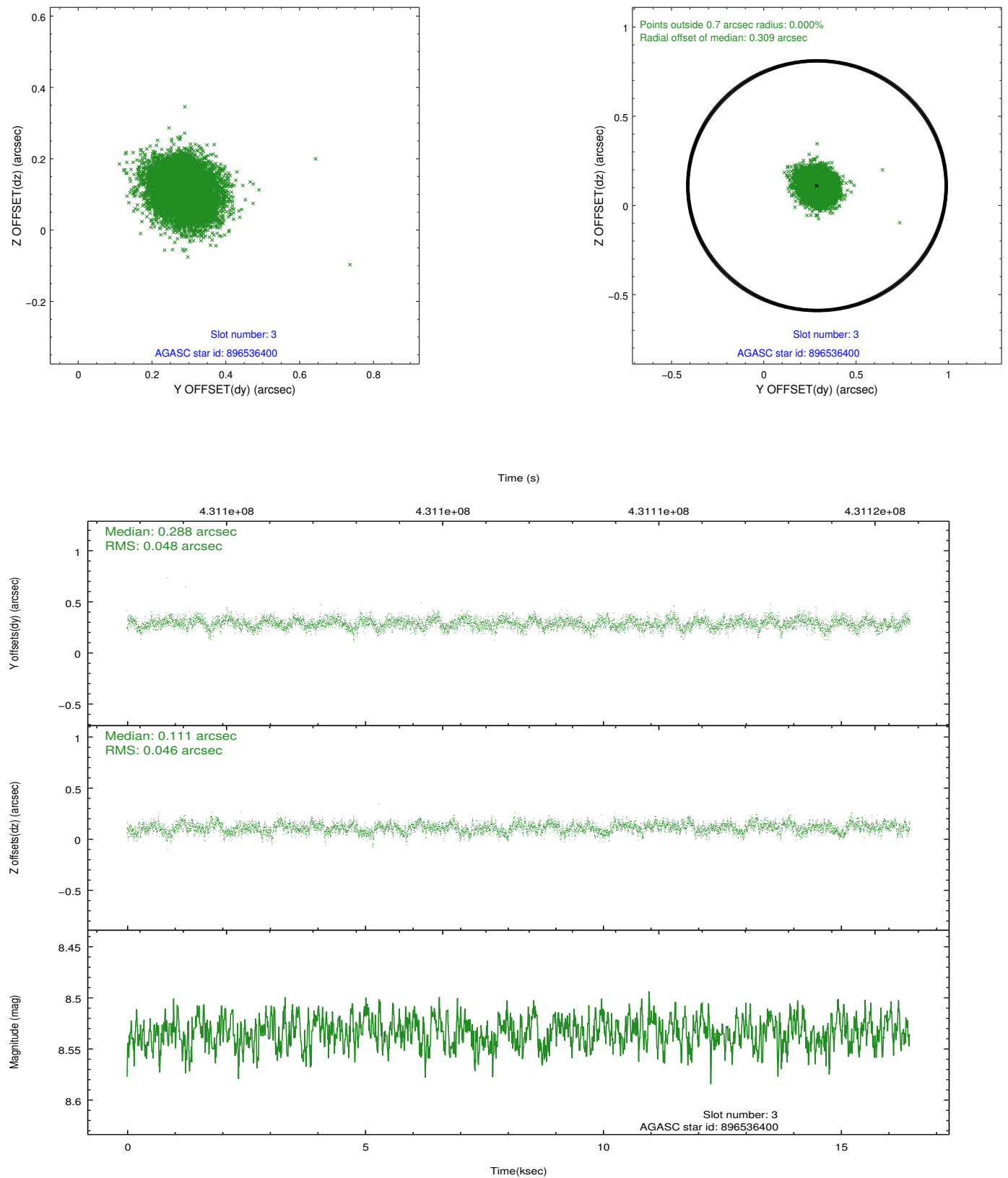


Slot Statistics

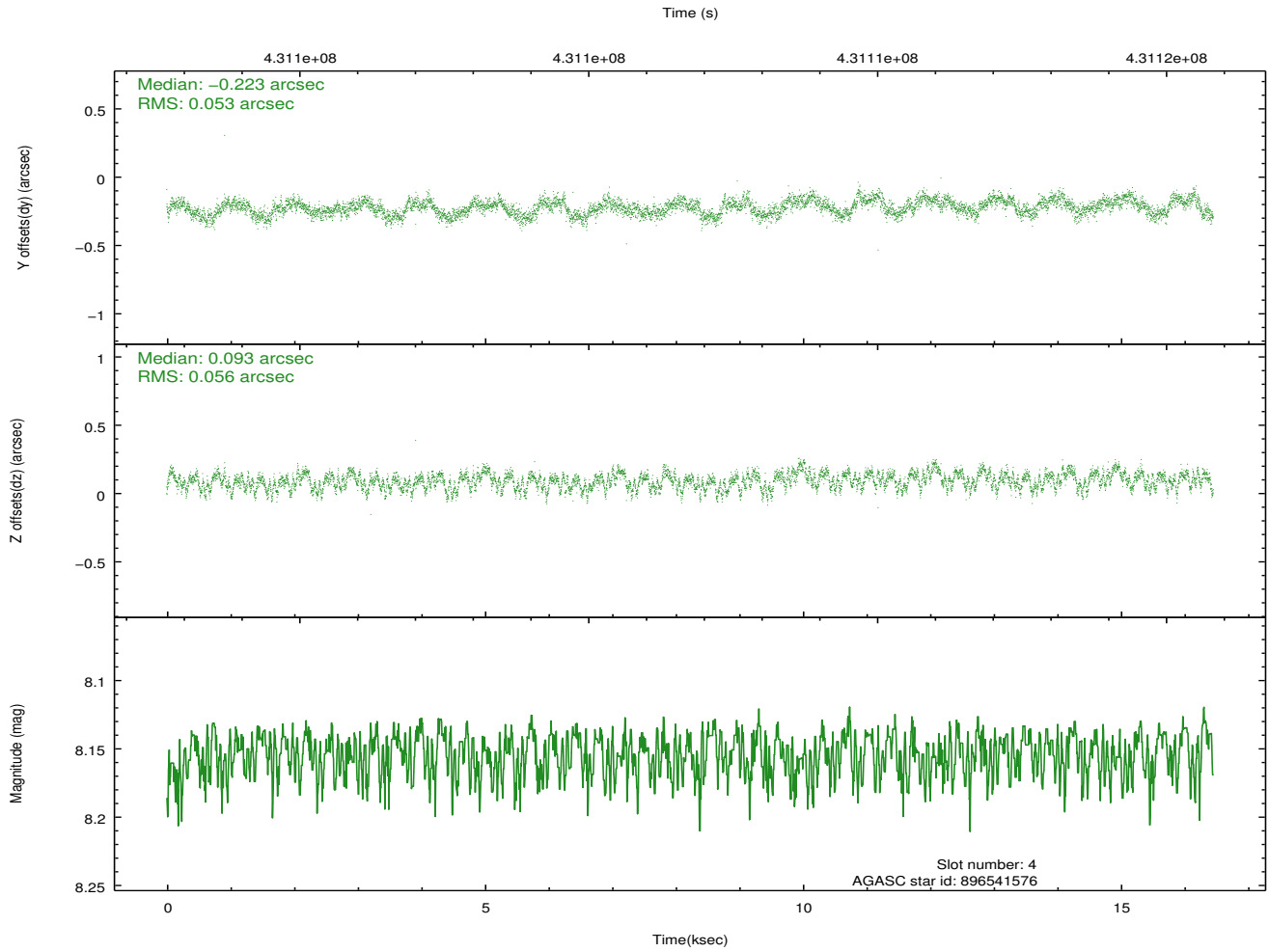
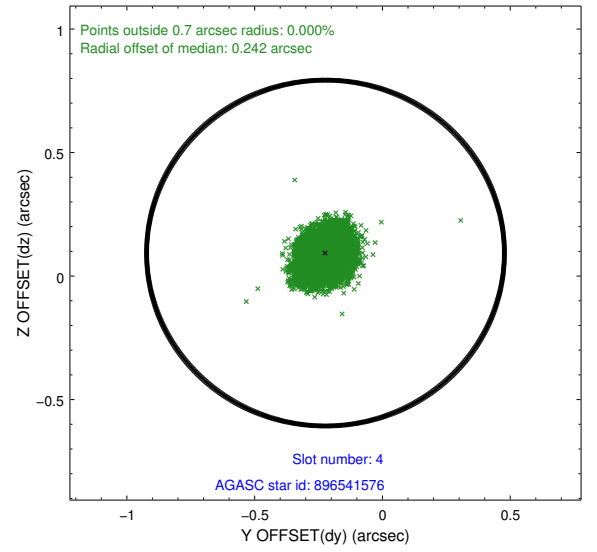
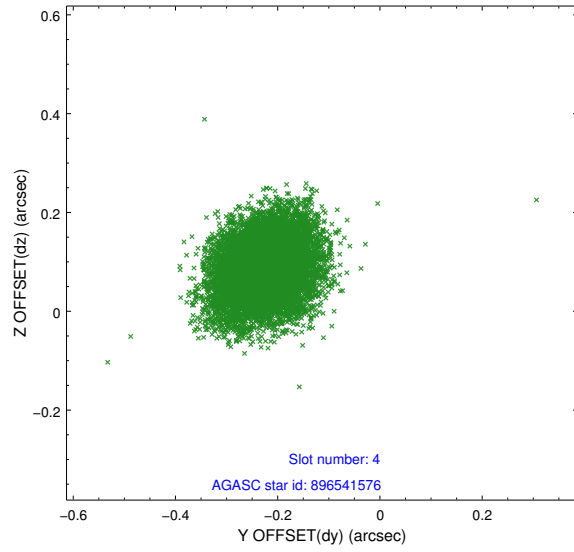
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.97	4014	-0.024	0.035	0.014	0.041	0.000000	0.000000	929.07	-1795.32
1	FID	ACIS-S-4	6.96	4014	0.094	-0.016	0.011	0.027	0.000000	0.000000	2146.78	108.48
2	FID	ACIS-S-6	7.14	4014	-0.092	-0.008	0.008	0.017	0.000000	0.000000	395.33	746.18
3	GUIDE	896536400	8.53	8024	0.288	0.111	0.071	0.113	267.359146	-29.438655	511.97	-347.13
4	GUIDE	896541576	8.15	8026	-0.223	0.093	0.083	0.130	267.051055	-28.762912	-1935.53	-1279.51
5	GUIDE	898250872	7.13	8028	-0.234	-0.164	0.107	0.143	268.026303	-29.632040	1247.53	1728.32
6	GUIDE	896543712	8.22	8025	0.289	-0.063	0.082	0.128	267.764551	-28.659720	-2268.47	979.42
7	GUIDE	898248800	8.25	8026	-0.115	0.031	0.072	0.112	267.977609	-29.931731	2322.92	1553.07

2.4 Star Slots

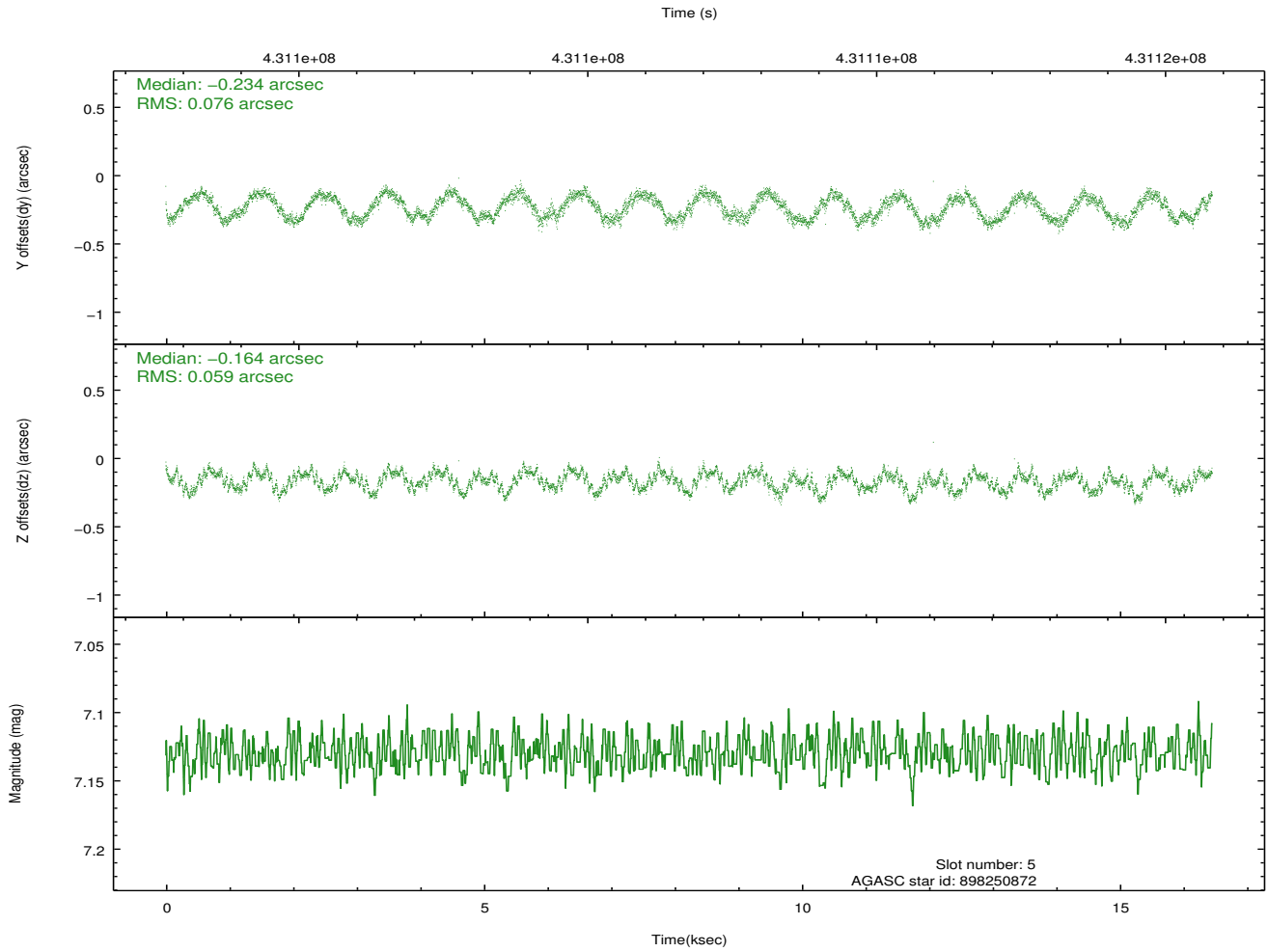
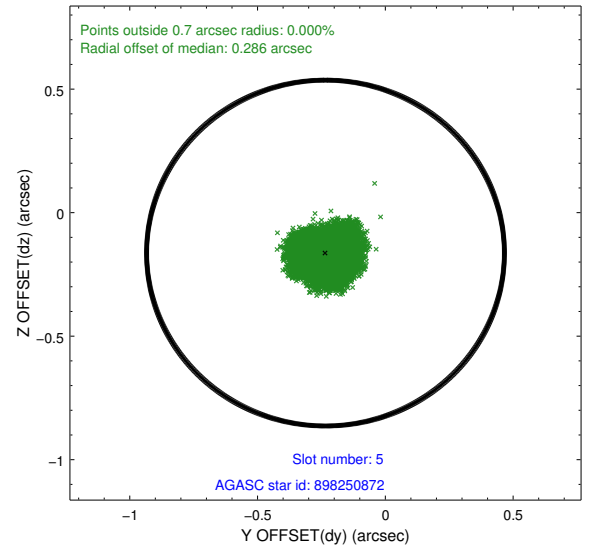
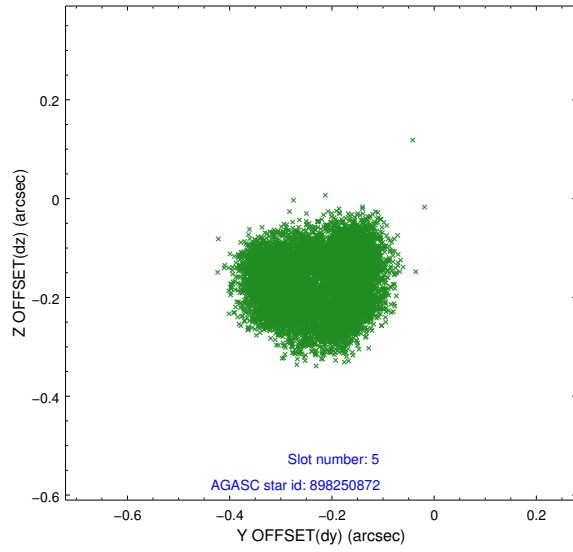
2.4.1 Slot 3



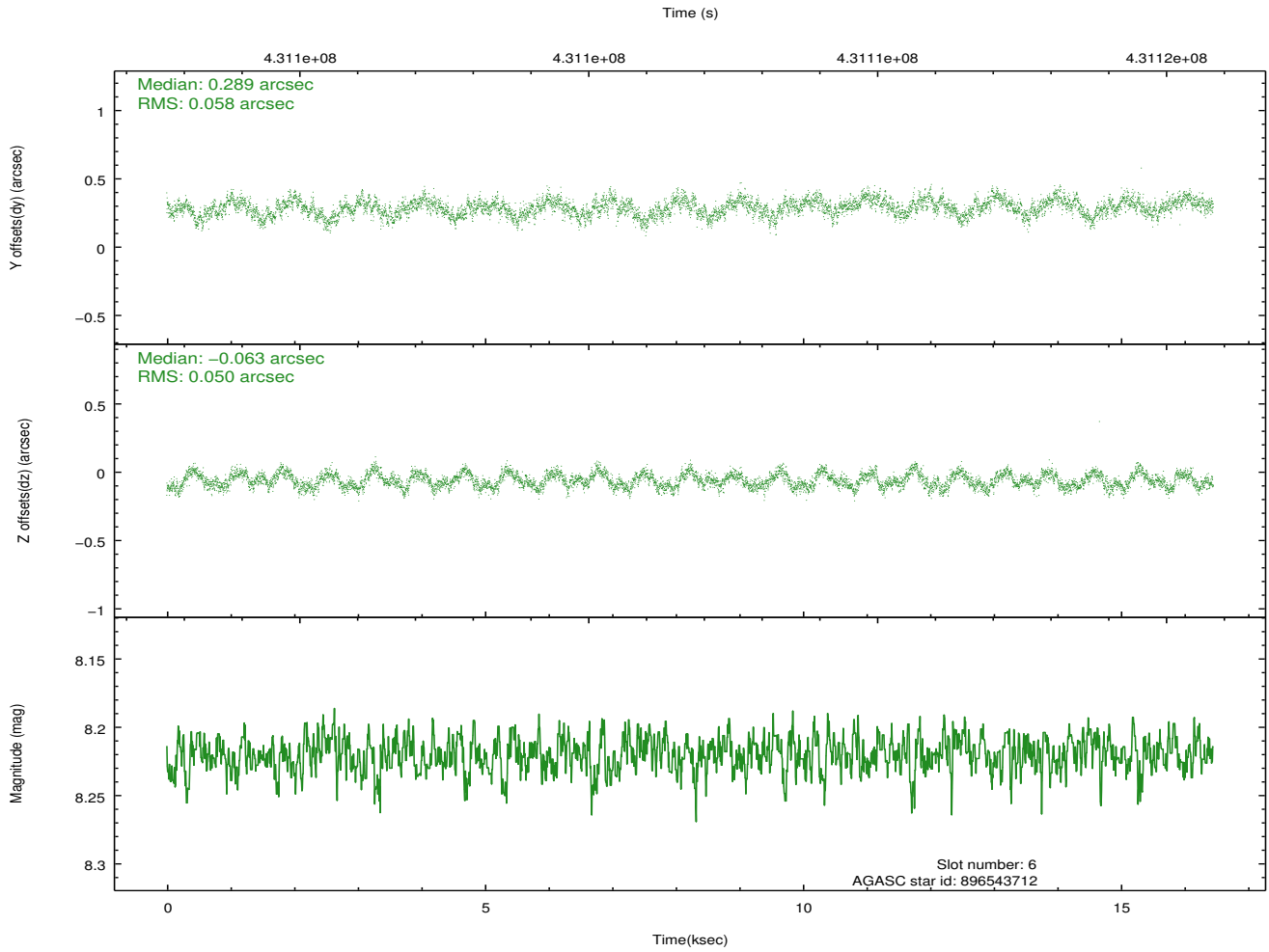
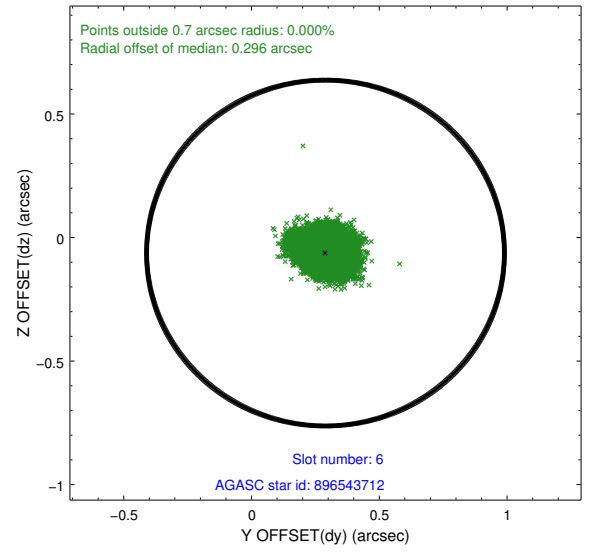
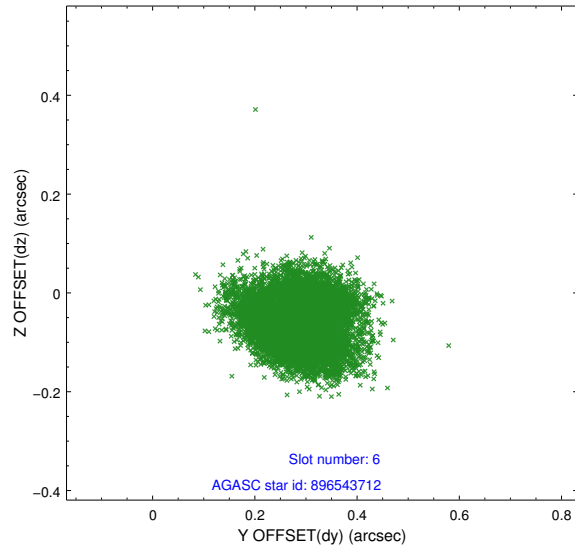
2.4.2 Slot 4



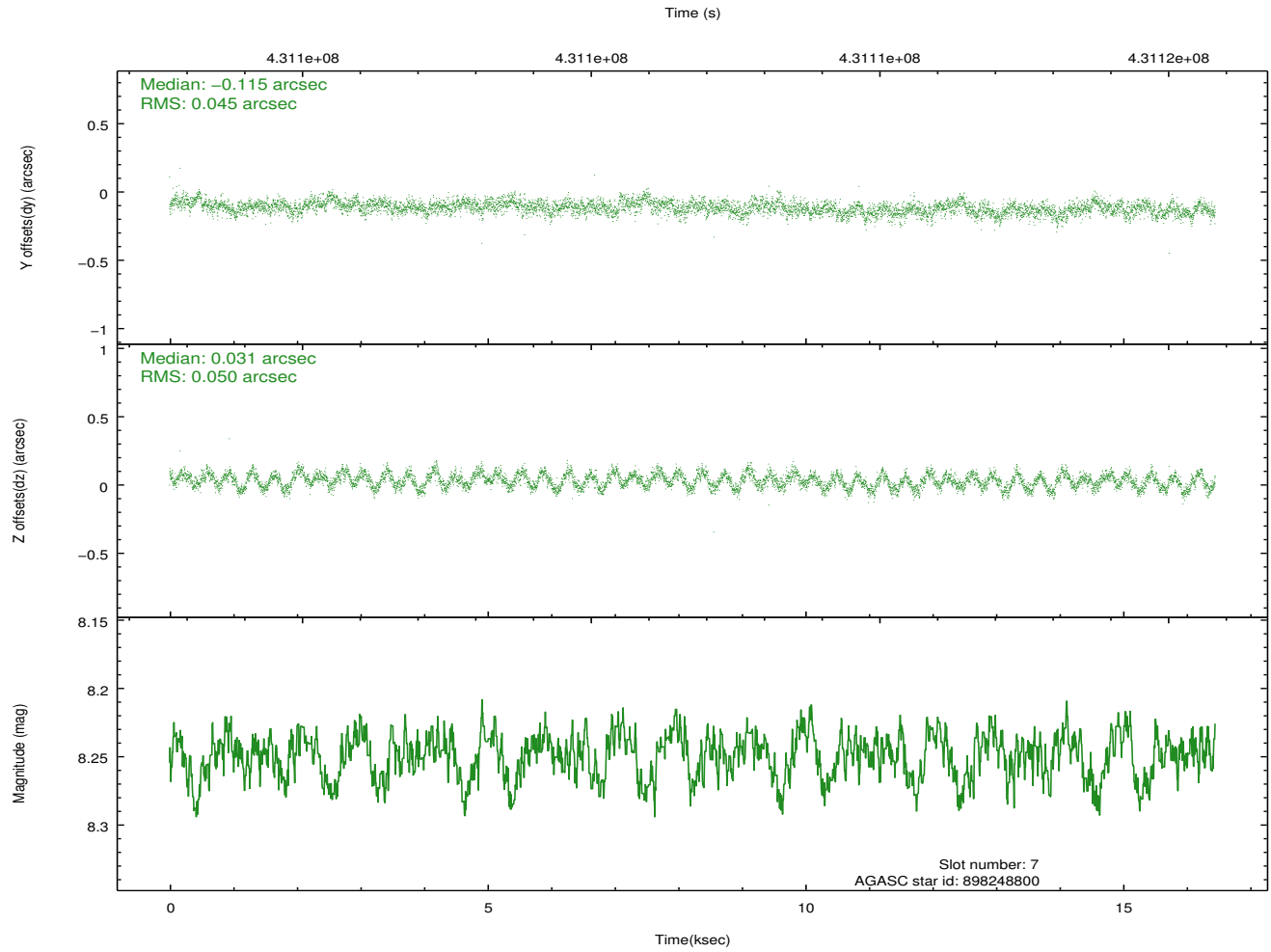
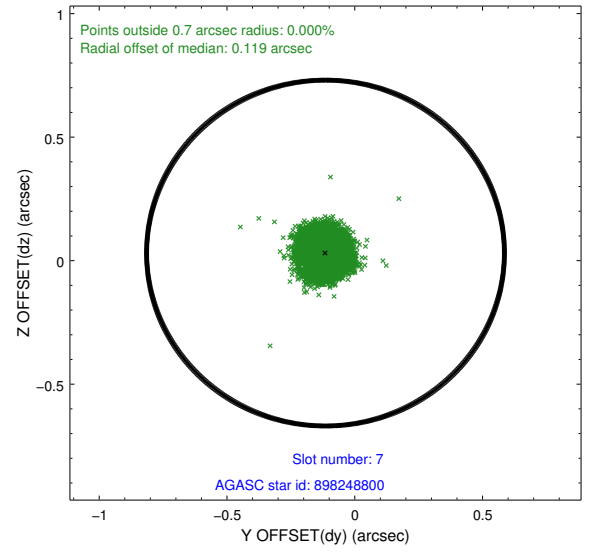
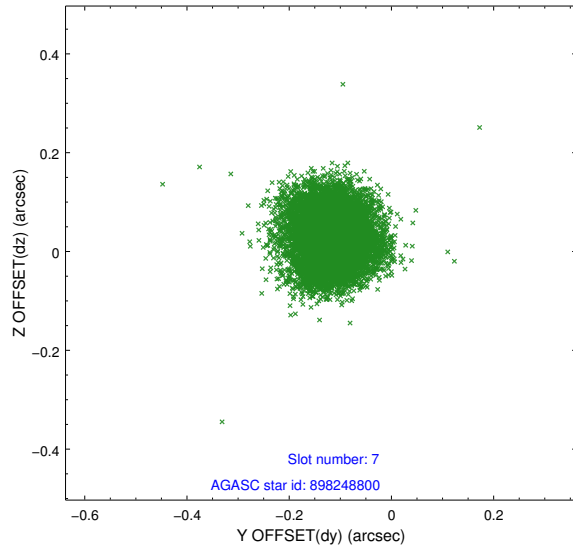
2.4.3 Slot 5



2.4.4 Slot 6

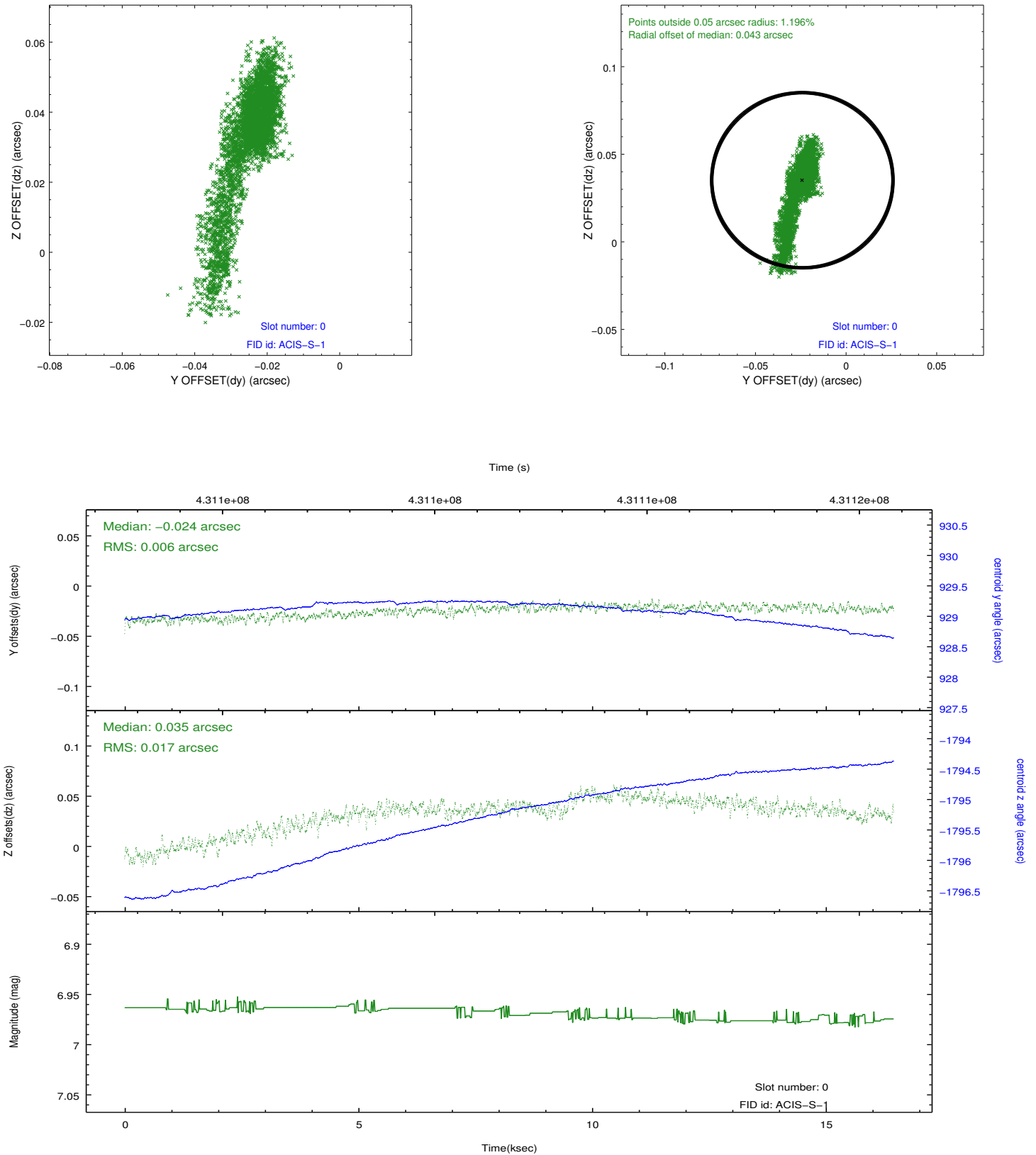


2.4.5 Slot 7

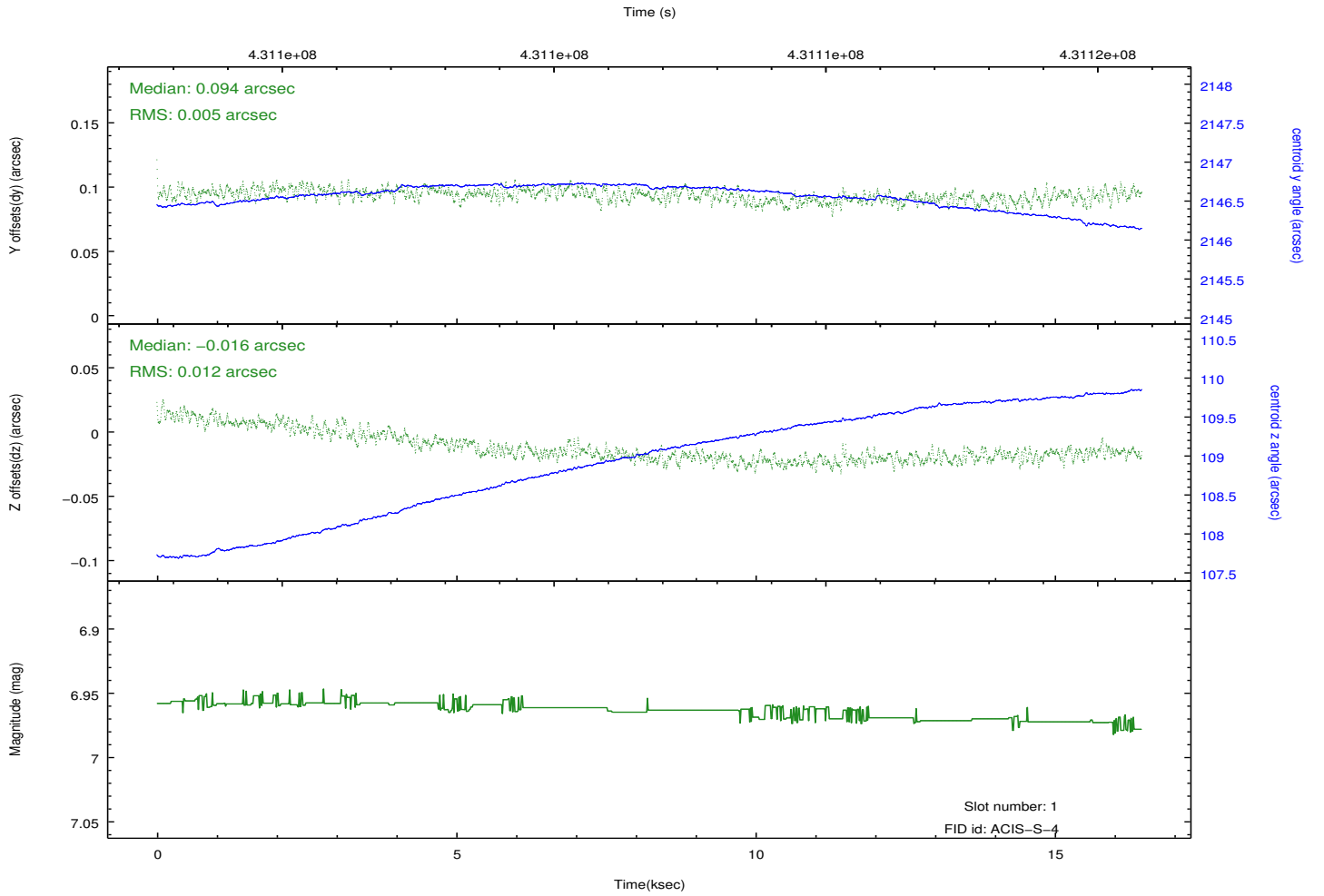
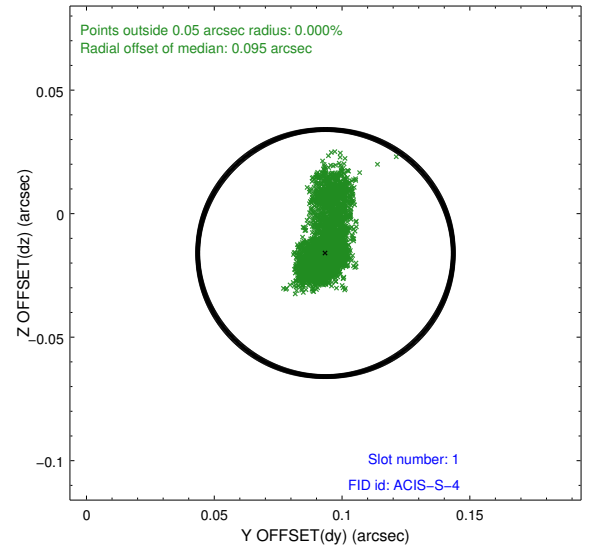
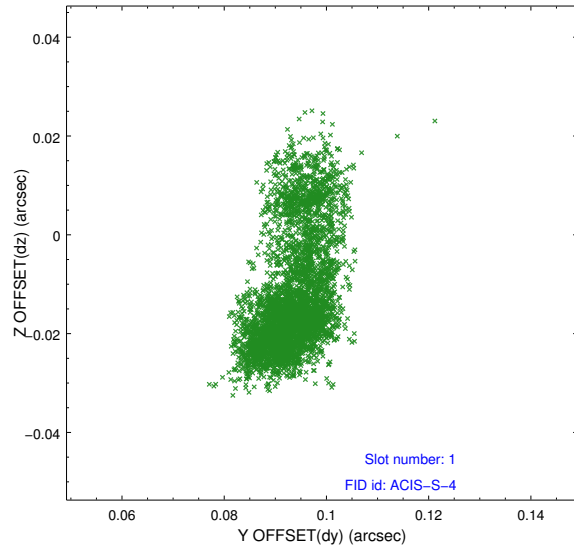


2.5 FID Slots

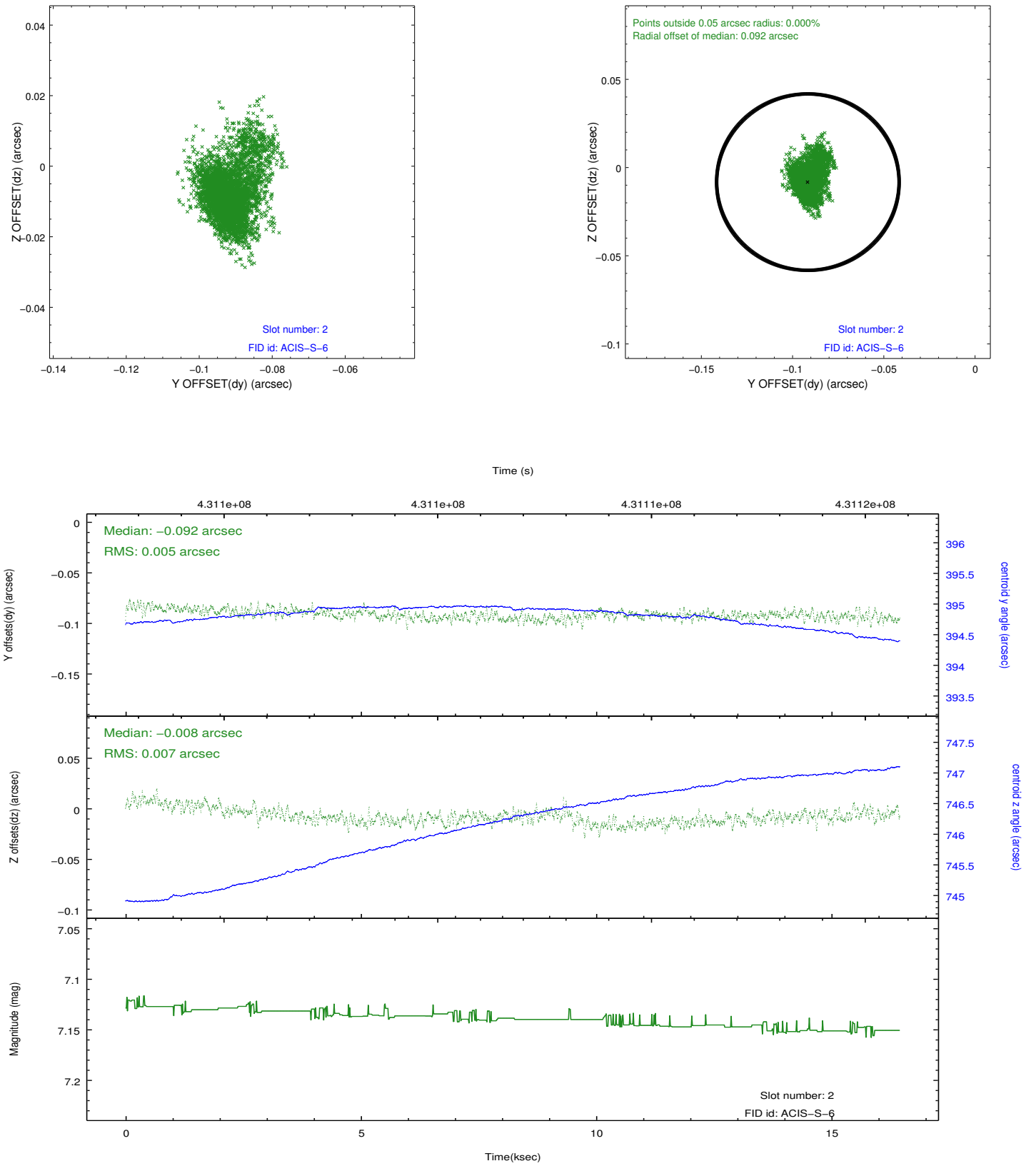
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

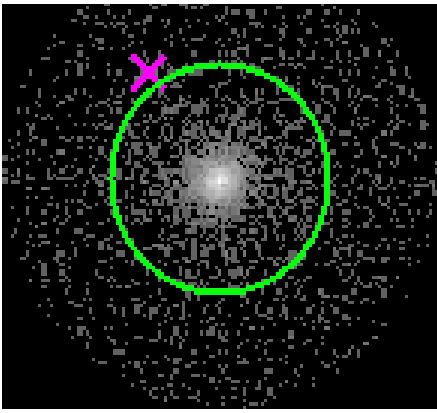


3 Gratings

3.1 HEG Arm



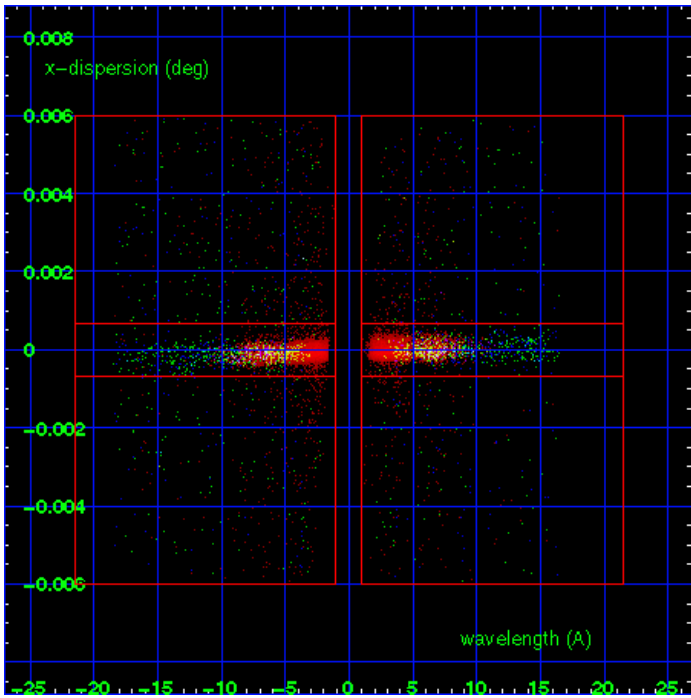
HEG Order Sort 123



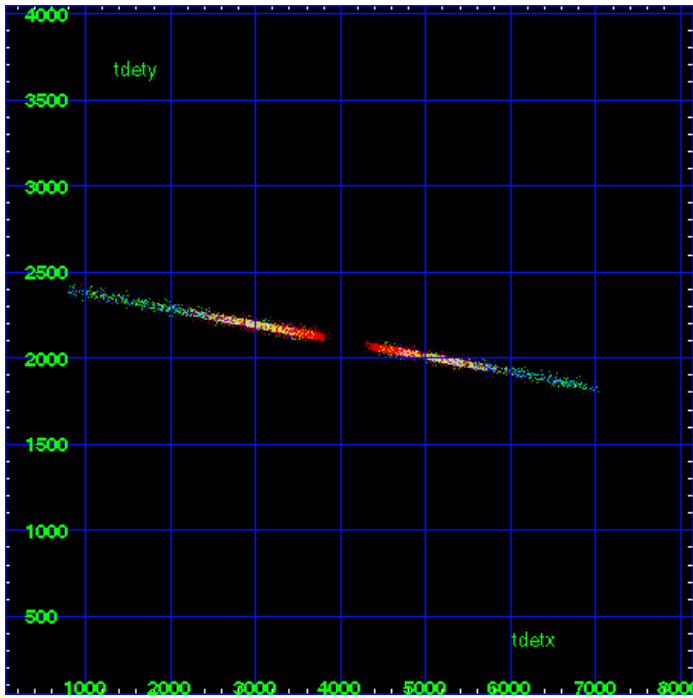
HEG Zero Order



HEG Order Sort ALL

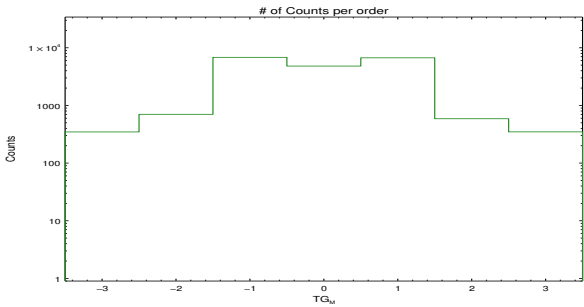


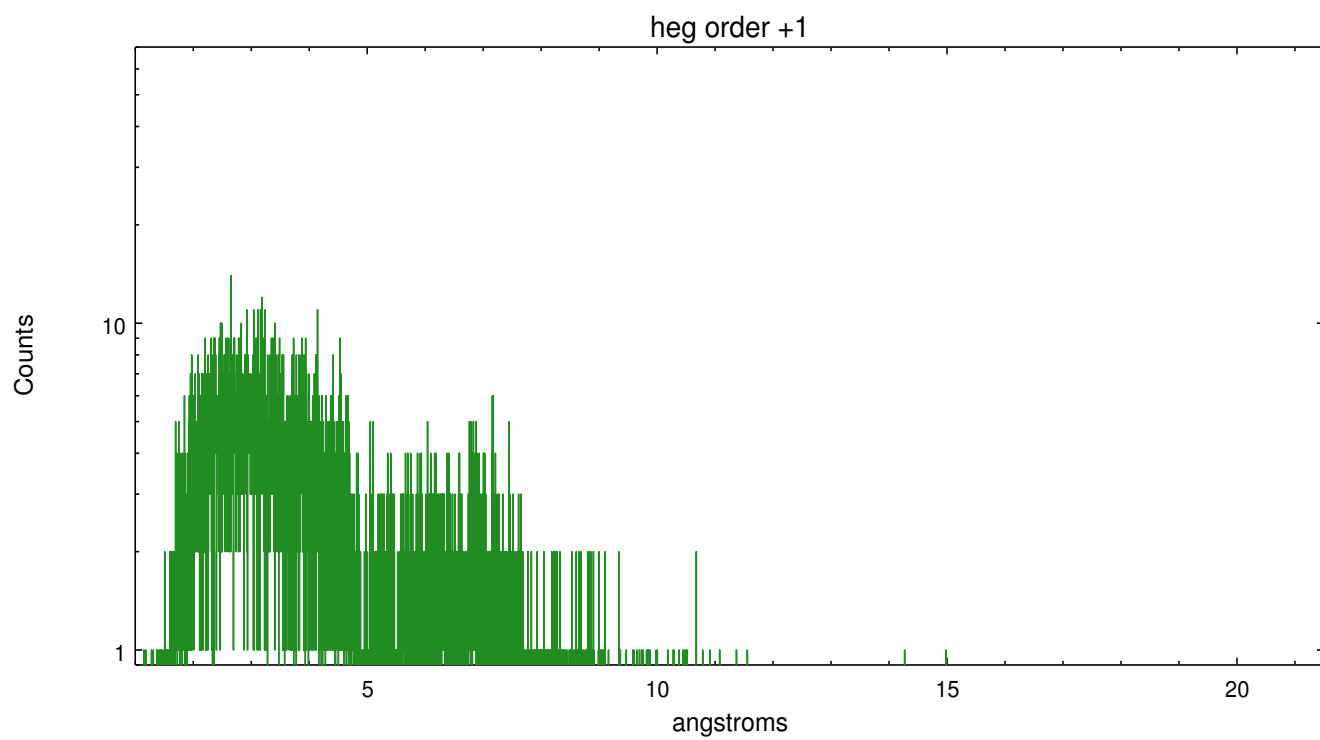
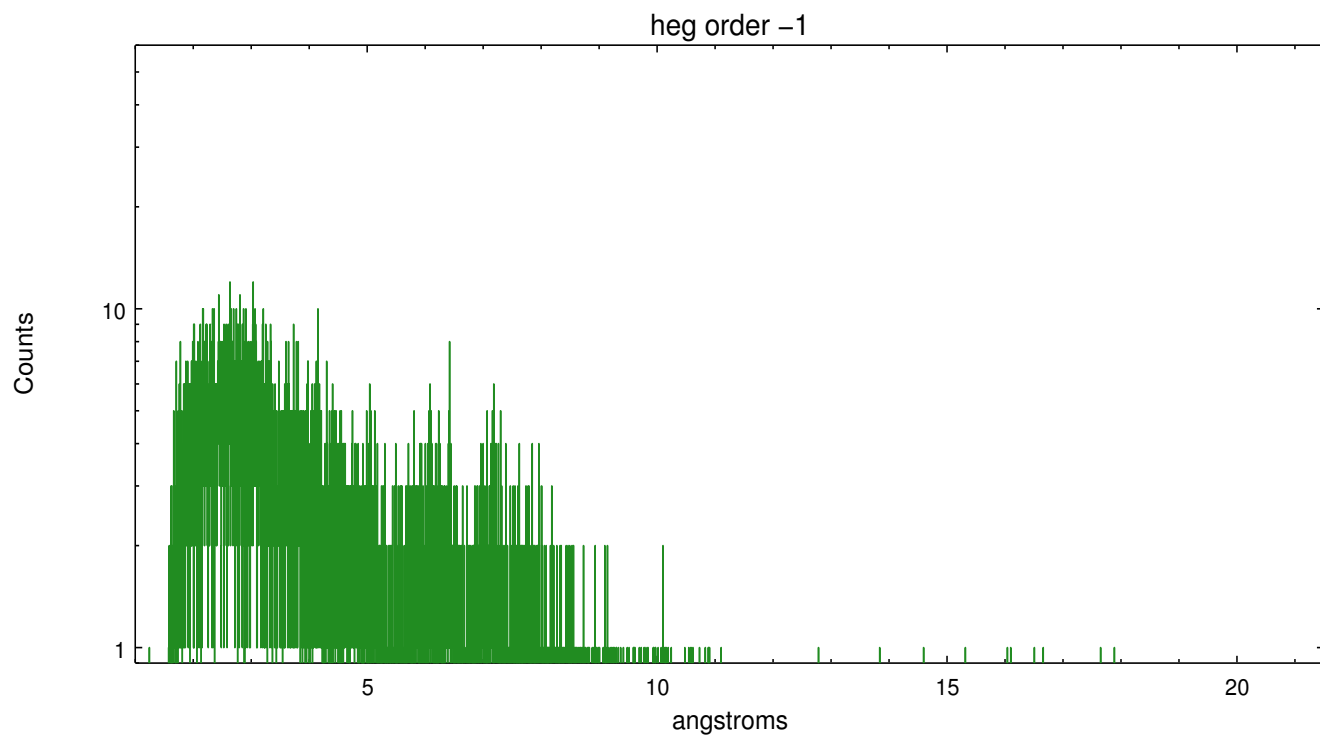
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	347	701	6822	4815	6699	588	348

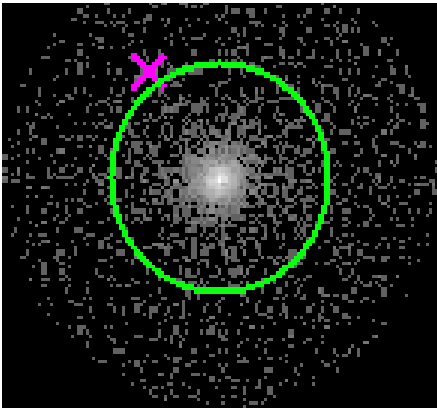




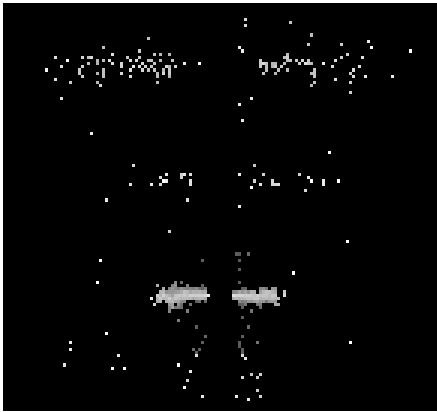
3.2 MEG Arm



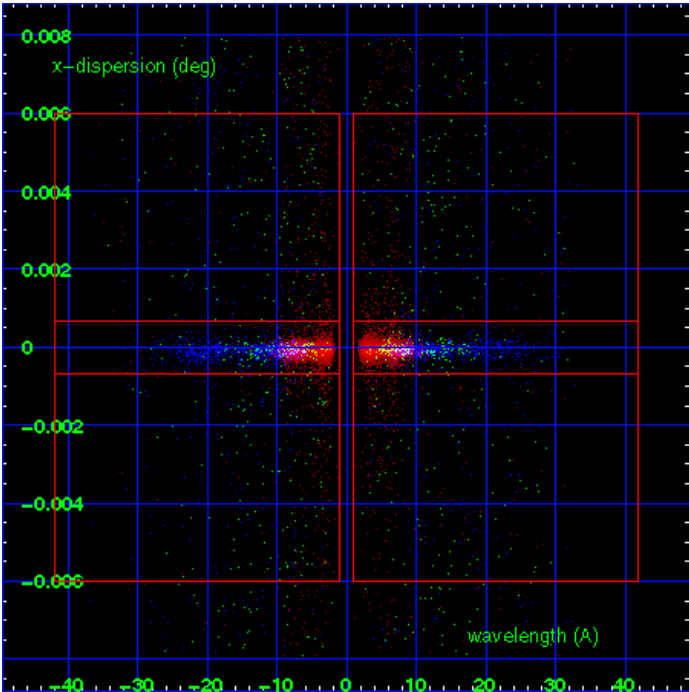
MEG Order Sort 123



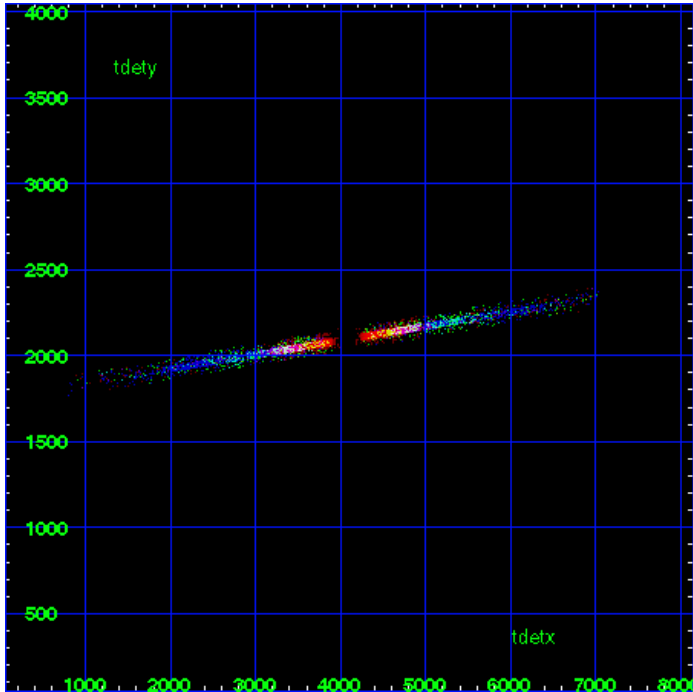
MEG Zero Order



MEG Order Sort ALL

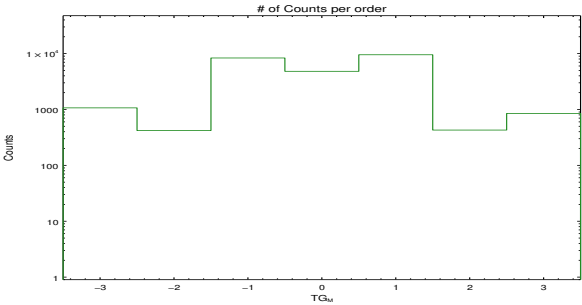


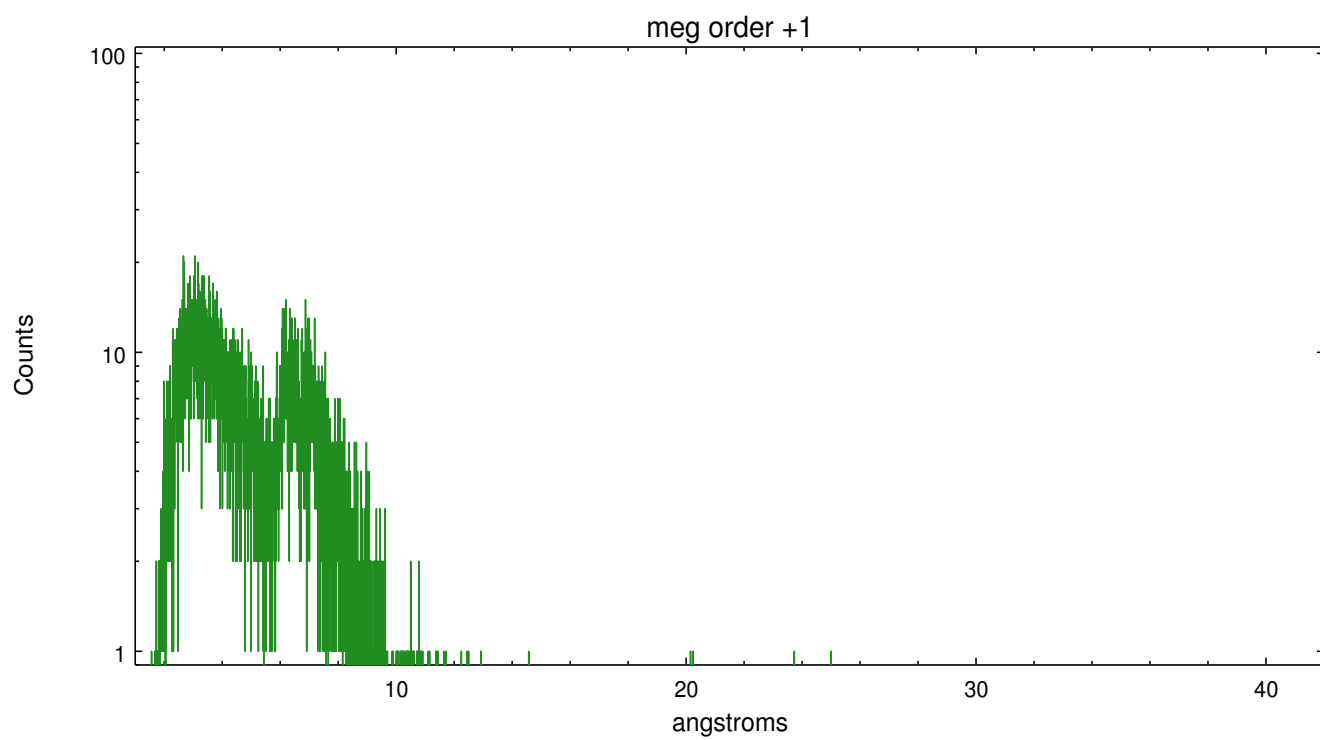
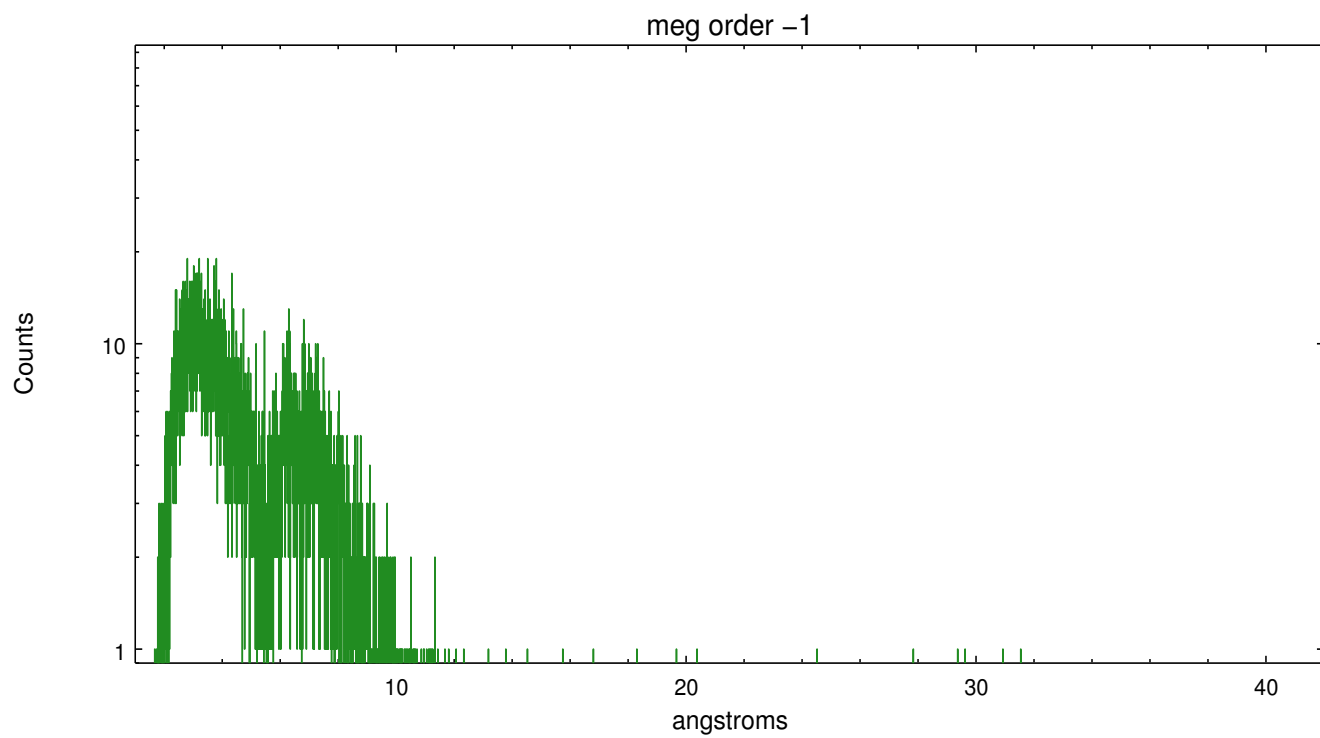
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1069	420	8348	4815	9534	428	849





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	16.345

A.2 Comments

Source is extended and asymmetric. Zeroth order is near the brightest position,
but may not be the position of interest. Users should verify that the zeroth order position is correct for their analysis.

WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle.