

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14337 - 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

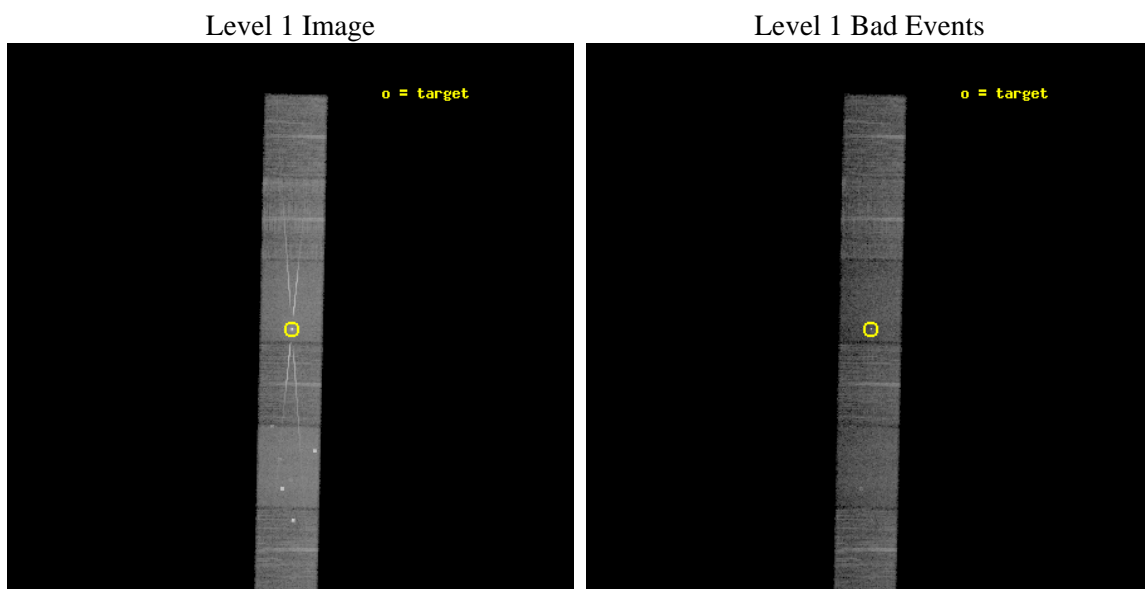
seq_num	401425	Sequence number
obs_id	14337	Observation id
title	Chandra spectroscopy of the X-ray spectrum of the newly discovered accreting millisecond pulsar IGR J17498-2921	Proposal title
observer	Dr. Tiziana Di Salvo	Principal investigator
object	IGR J17498-2921	Source name
dtcycle	0	
cycle	P	events 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	267.48370528414	Nominal RA [deg]
dec_nom	-29.318216740265	Nominal Dec [deg]
roll_nom	271.15803760073	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14047.270066381	Sum of GTIs [s]
livetime	13820.394470749	Livetime [s]
ontime4	14047.311106384	Sum of GTIs [s]
ontime5	14047.229026377	Sum of GTIs [s]
ontime6	14047.187986374	Sum of GTIs [s]
ontime7	14047.270066381	Sum of GTIs [s]
ontime8	14047.146946371	Sum of GTIs [s]
ontime9	14044.564916074	Sum of GTIs [s]
l2events	167297	Number of level 2 events



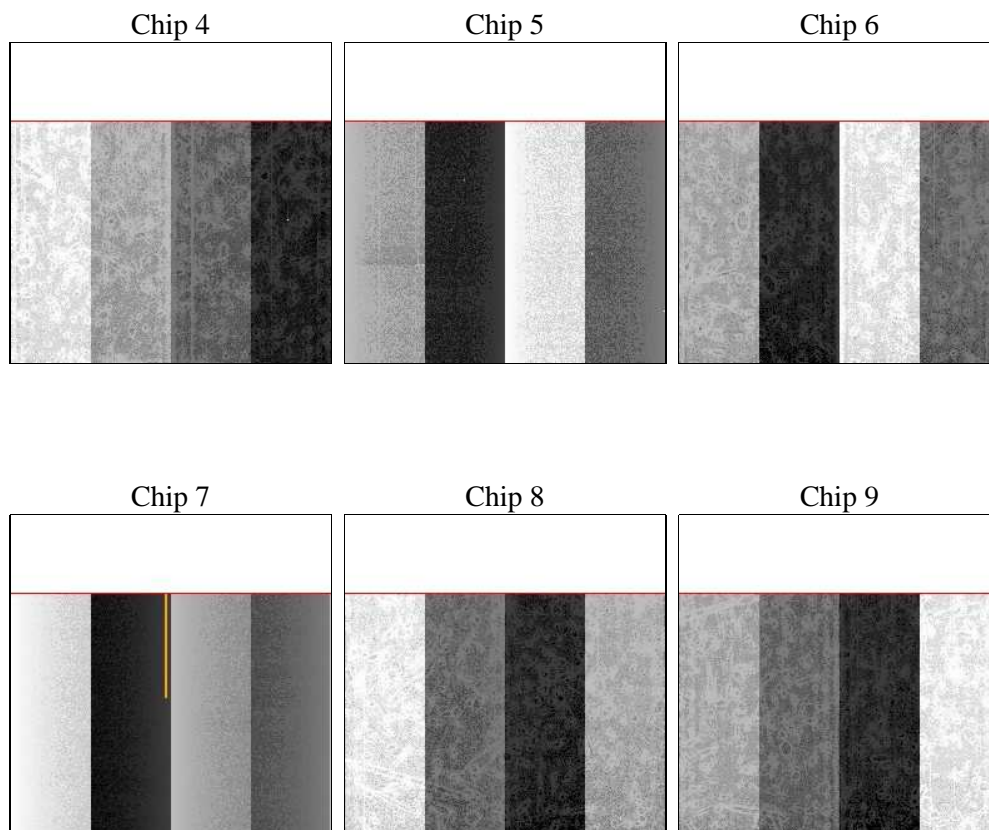
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14047.270066381	Sum of GTIs [s]
caldsver	4.4.8	 	ontime4	14047.311106384	Sum of GTIs [s]
date	2012-02-20T23:57:20	Date and time of file creation	ontime5	14047.229026377	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14047.187986374	Sum of GTIs [s]
			ontime7	14047.270066381	Sum of GTIs [s]
			ontime8	14047.146946371	Sum of GTIs [s]
			ontime9	14044.564916074	Sum of GTIs [s]
			l1events	548900	Number of level 1 events

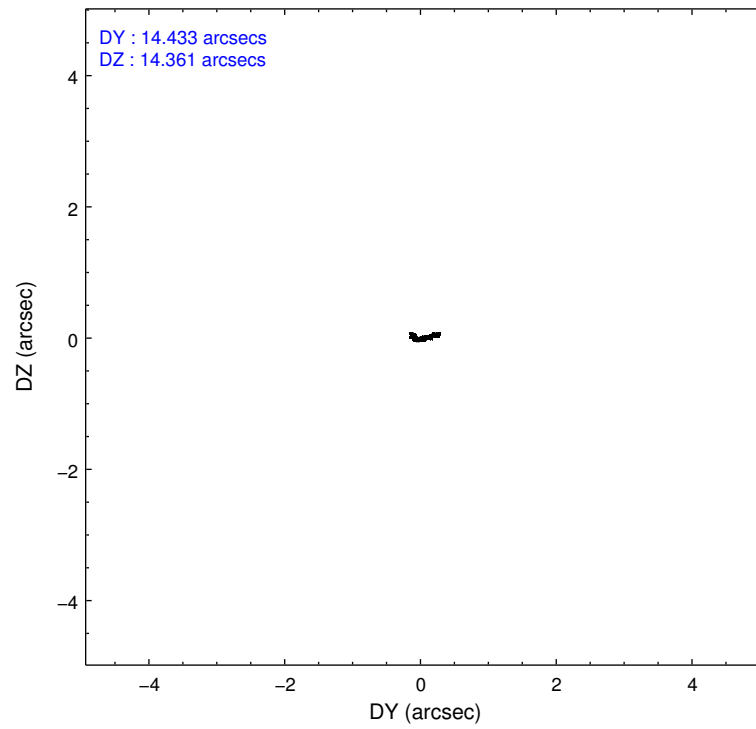
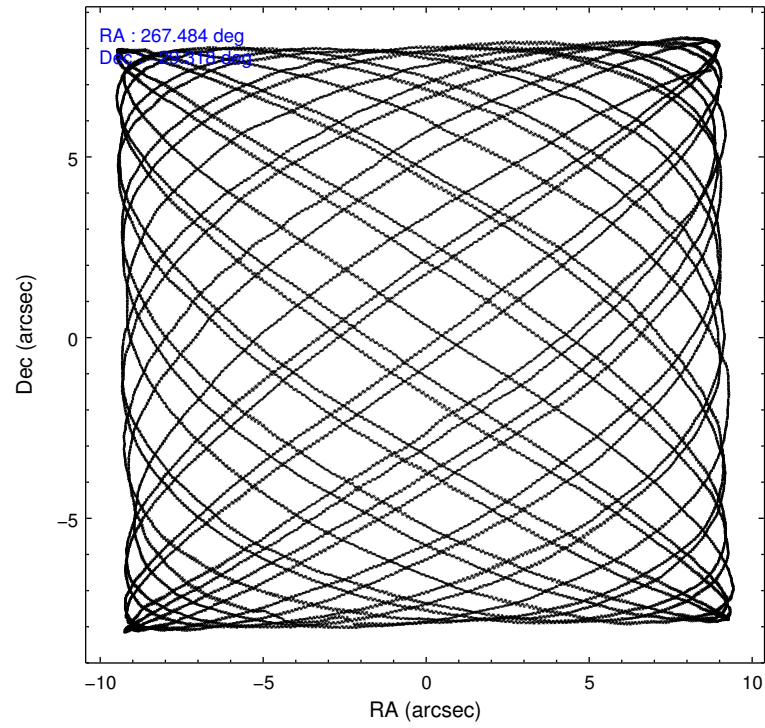
2.1.4 Events

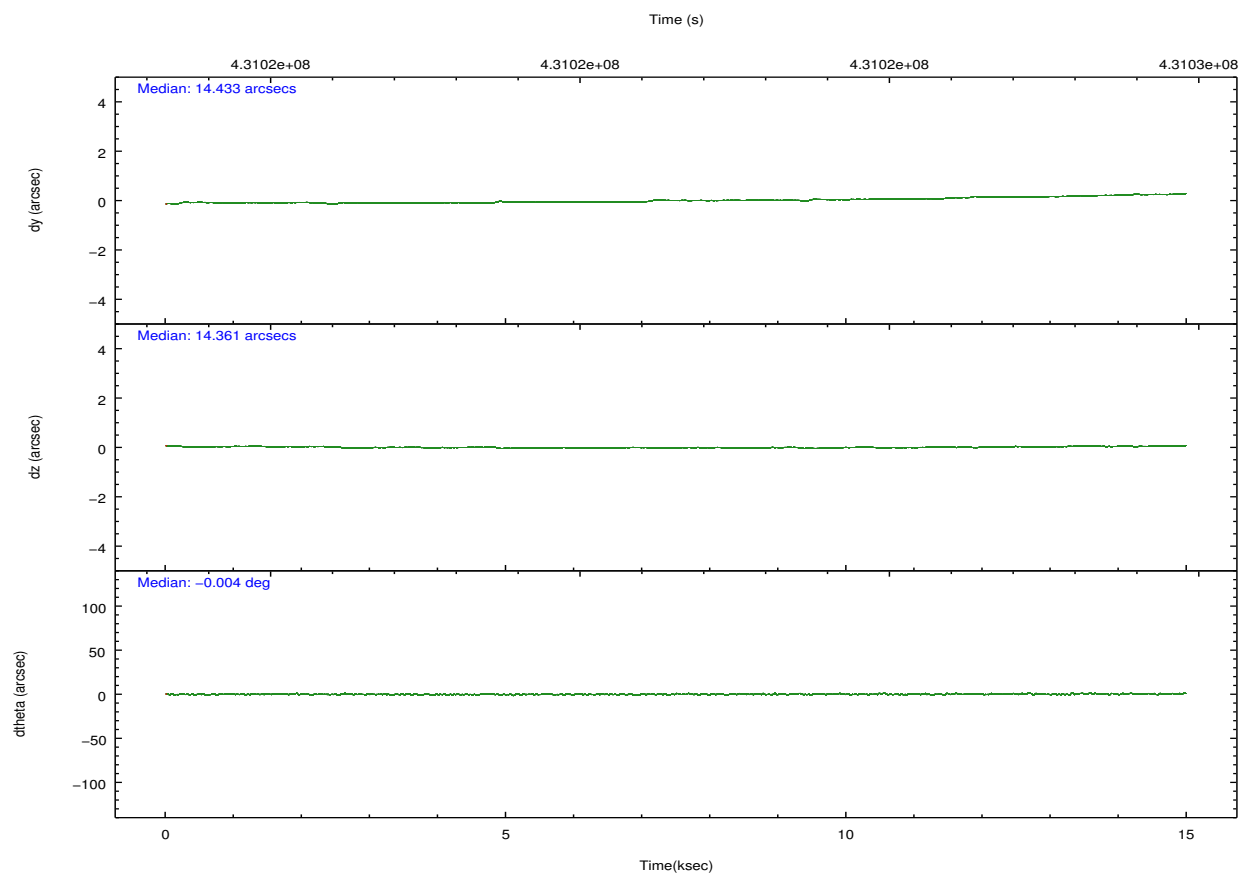
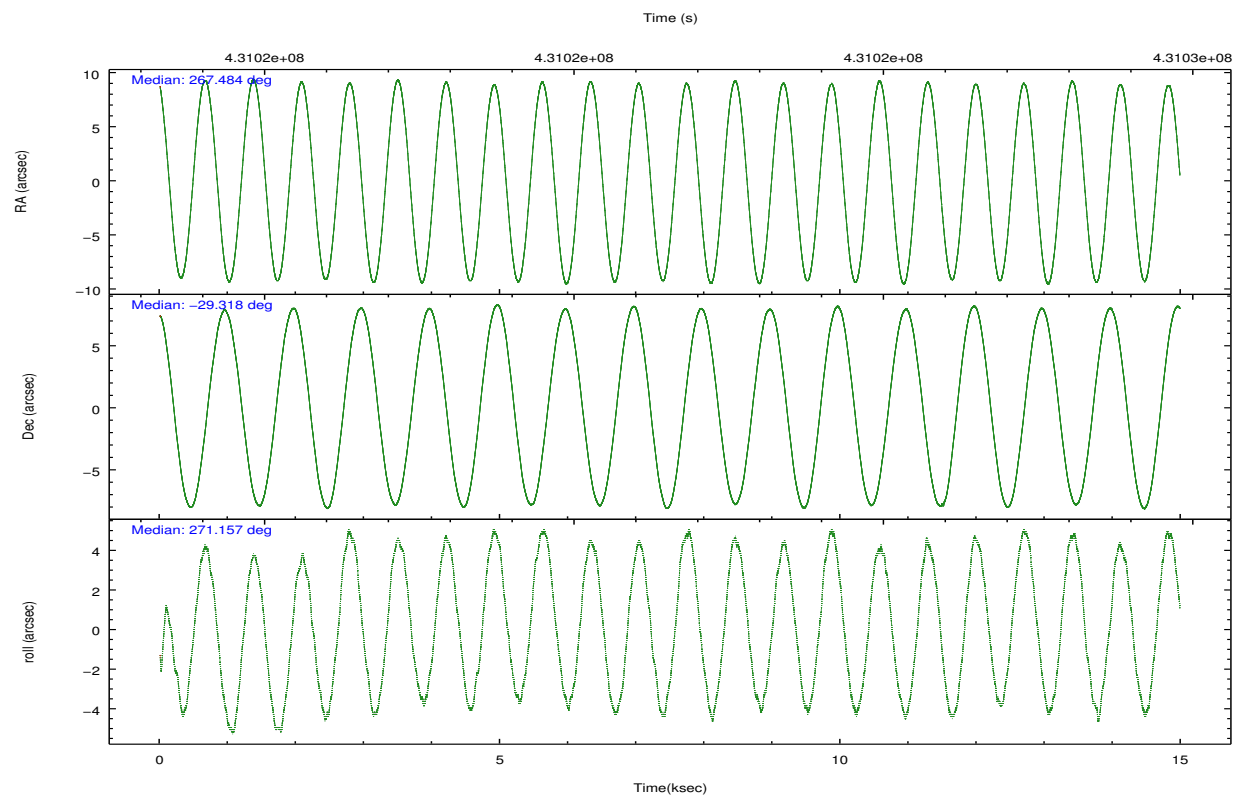
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	77819	114682	84069	112869	93401	66060	grade 0 events	7002	11571	15787	8862	10270	3893
rejected events	65373	53717	58078	48123	65178	56445		8%	10%	18%	7%	10%	5%
rejected %	84%	46%	69%	42%	69%	85%	grade 1 events	67	376	101	248	83	41
								0%	0%	0%	0%	0%	0%
							grade 2 events	2162	16985	4159	14351	5986	2016
								2%	14%	4%	12%	6%	3%
							grade 3 events	948	2499	1620	6336	2824	1024
								1%	2%	1%	5%	3%	1%
							grade 4 events	847	2394	1593	6311	2561	917
								1%	2%	1%	5%	2%	1%
							grade 5 events	3120	8333	3138	9464	4588	3393
								4%	7%	3%	8%	4%	5%
							grade 6 events	1493	27532	2840	28910	6592	1770
								1%	24%	3%	25%	7%	2%
							grade 7 events	62180	44992	54831	38387	60497	53006
								79%	39%	65%	34%	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	267.4837052841438	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-29.295010	-29.31821674026498	Subarray start row	1	1
[deg] Pointing Roll	270.993281	271.1580376007303	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)	431015044.184000	431013599.56807			
Observation start date	2011-08-29T14:22:58	2011-08-29T13:59:59			
[s] Observation end time (MET)	431029044.184000	431029749.98142			
Observation end date	2011-08-29T18:16:18	2011-08-29T18:29:09			
Read mode	TIMED	TIMED			

2.3 Aspect



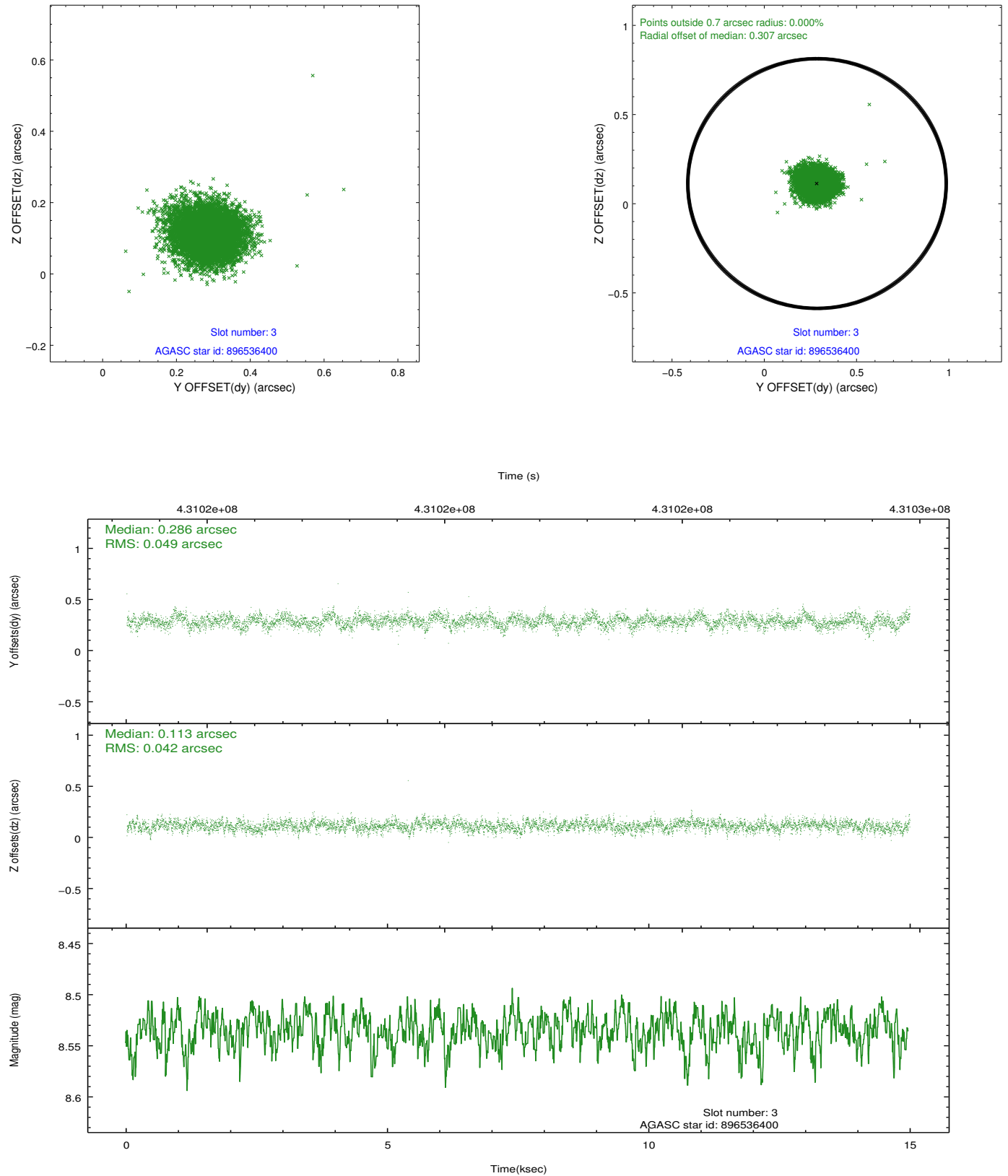


Slot Statistics

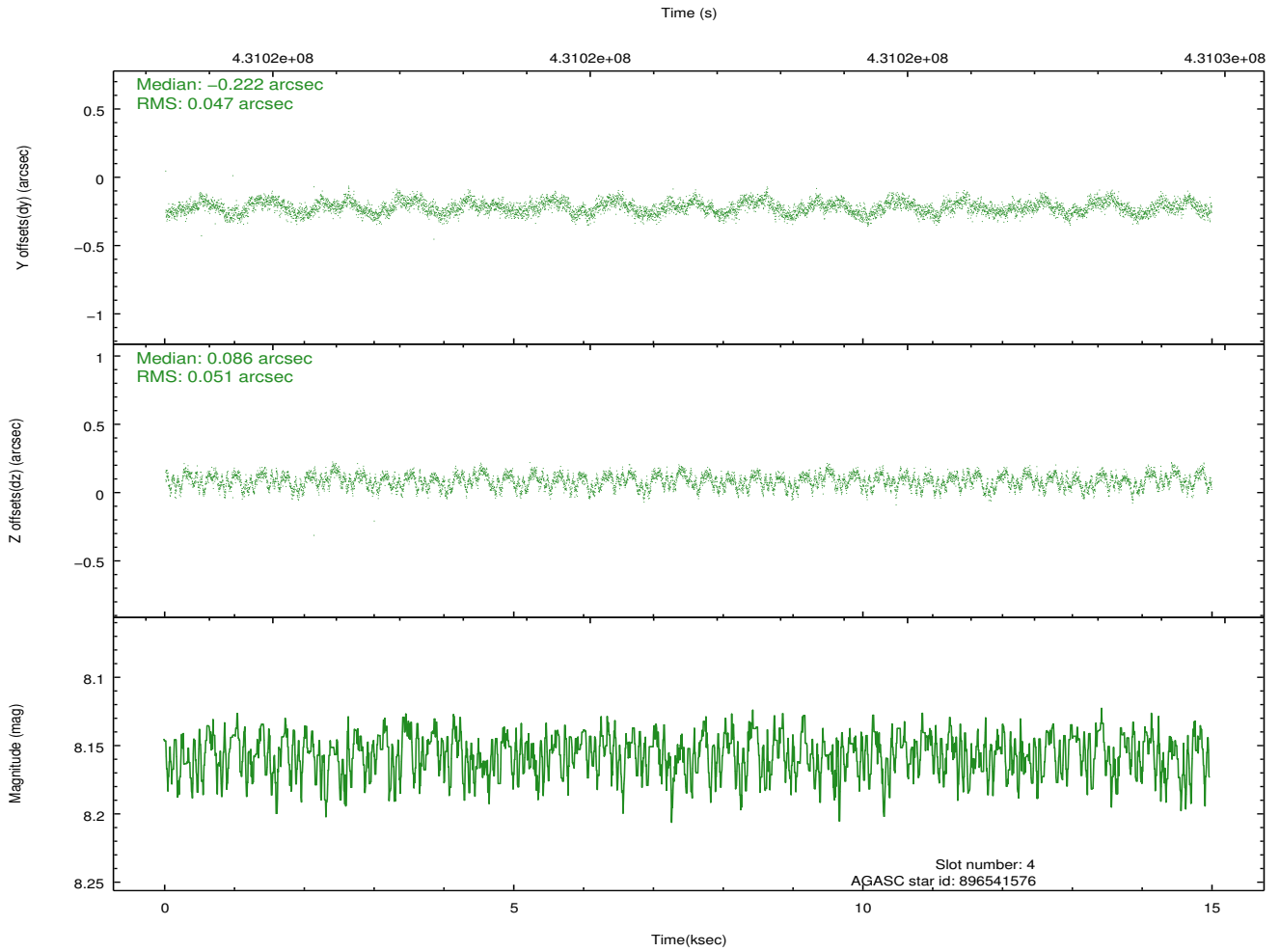
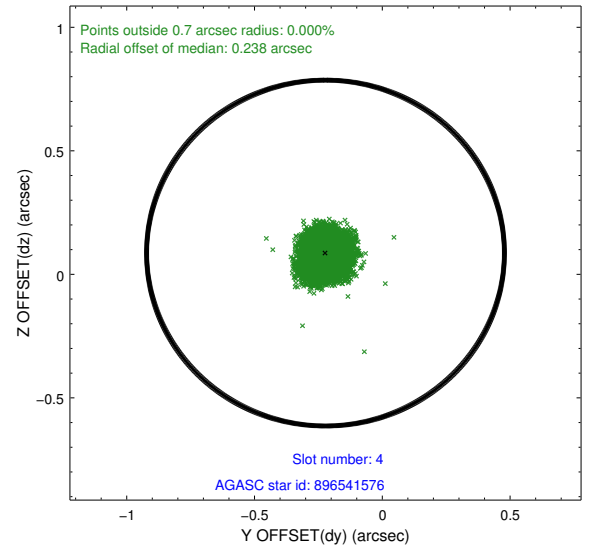
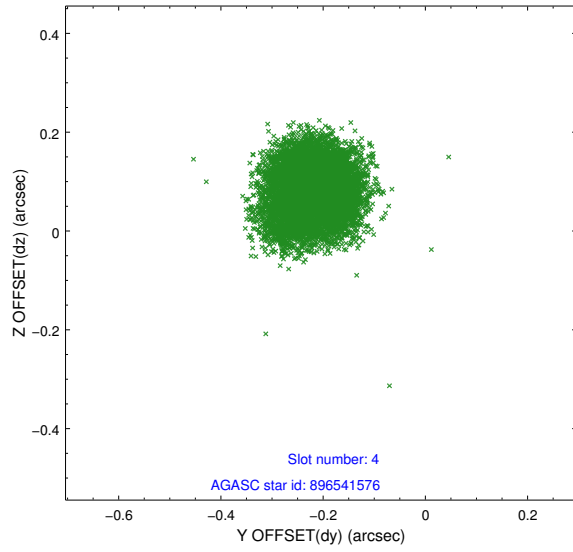
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.02	3655	-0.031	-0.037	0.006	0.010	0.000000	0.000000	928.76	-1793.51
1	FID	ACIS-S-4	7.02	3655	0.108	0.012	0.006	0.010	0.000000	0.000000	2146.52	110.34
2	FID	ACIS-S-6	7.20	3655	-0.099	0.036	0.006	0.010	0.000000	0.000000	395.08	748.11
3	GUIDE	896536400	8.53	7307	0.286	0.113	0.068	0.111	267.359146	-29.438655	511.98	-347.25
4	GUIDE	896541576	8.16	7308	-0.222	0.086	0.076	0.115	267.051055	-28.762912	-1935.50	-1279.65
5	GUIDE	898248800	8.25	7307	-0.108	0.027	0.073	0.113	267.977609	-29.931731	2322.96	1552.65
6	GUIDE	898250872	7.12	7309	-0.237	-0.165	0.067	0.098	268.026303	-29.632040	1248.09	1728.58
7	GUIDE	896543712	8.22	7308	0.284	-0.055	0.071	0.114	267.764551	-28.659720	-2268.44	979.32

2.4 Star Slots

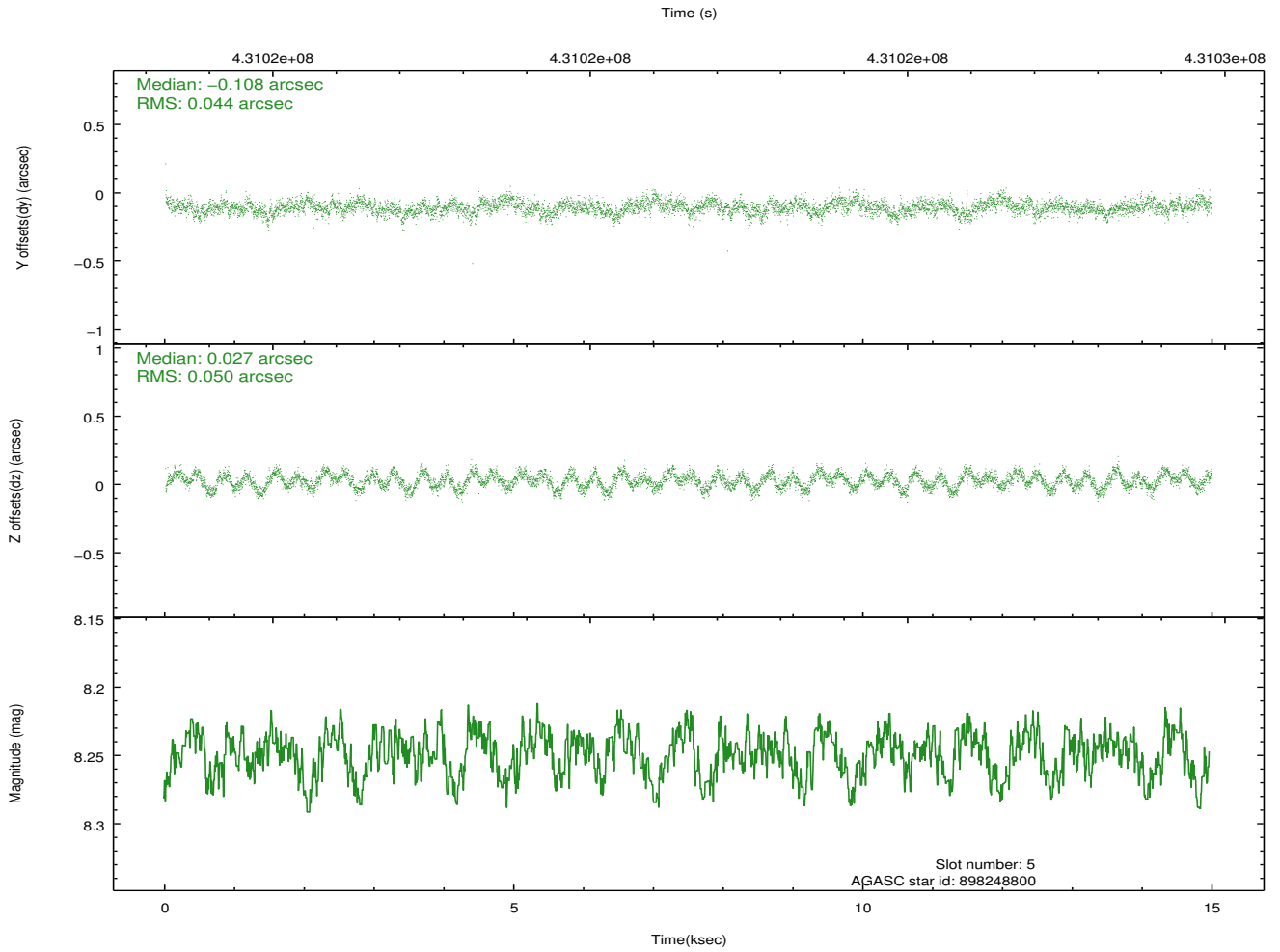
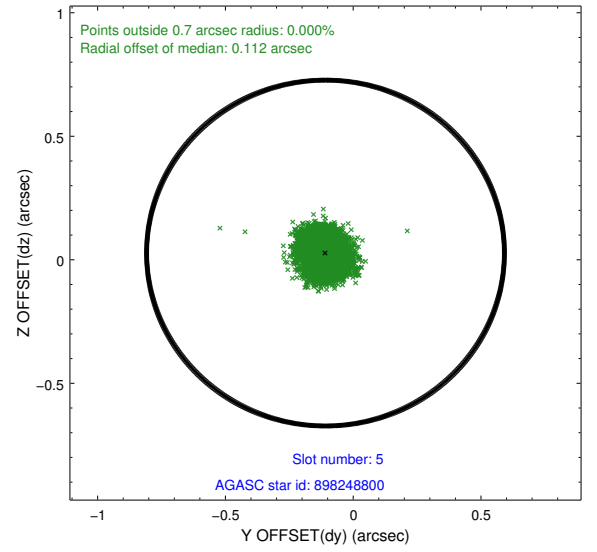
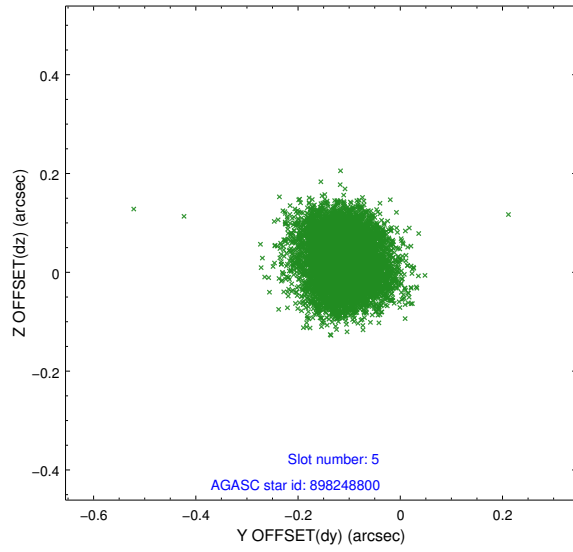
2.4.1 Slot 3



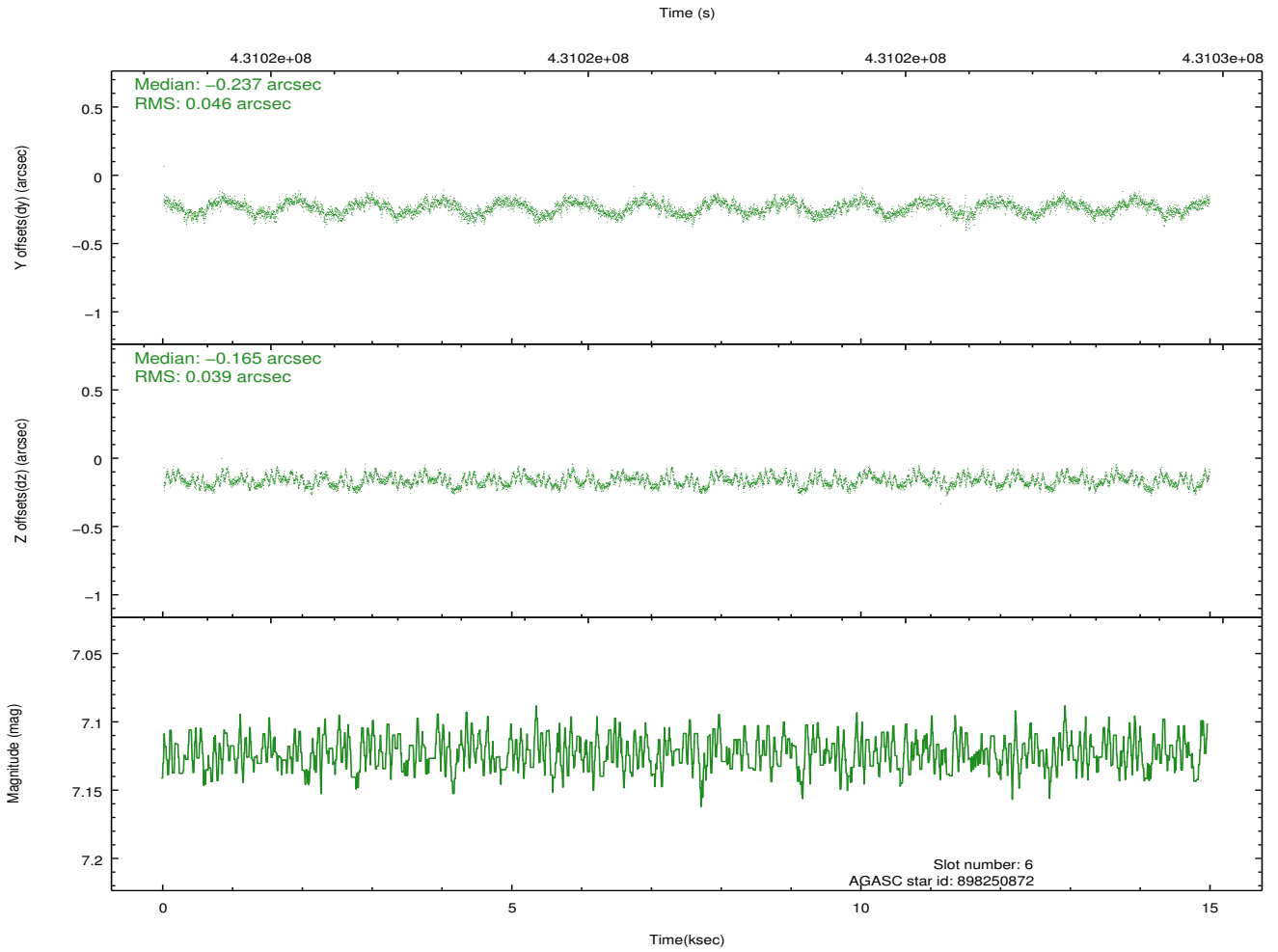
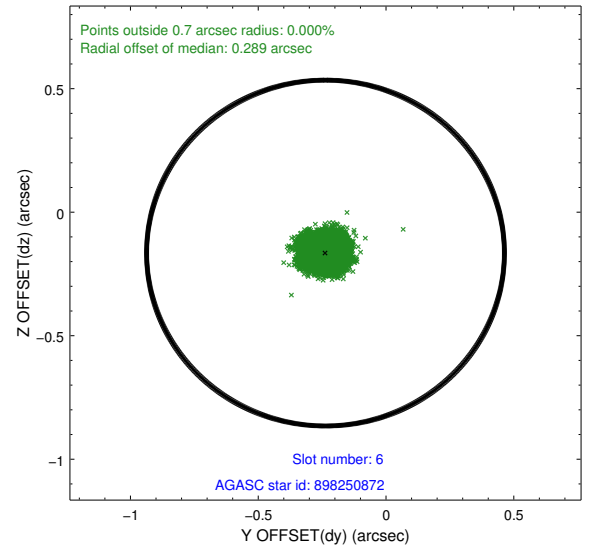
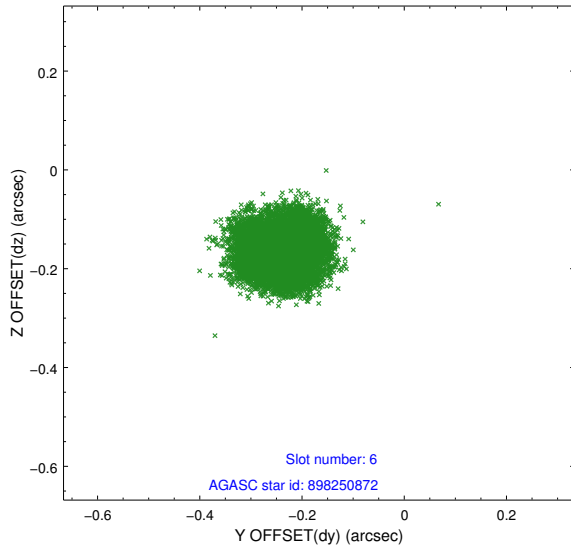
2.4.2 Slot 4



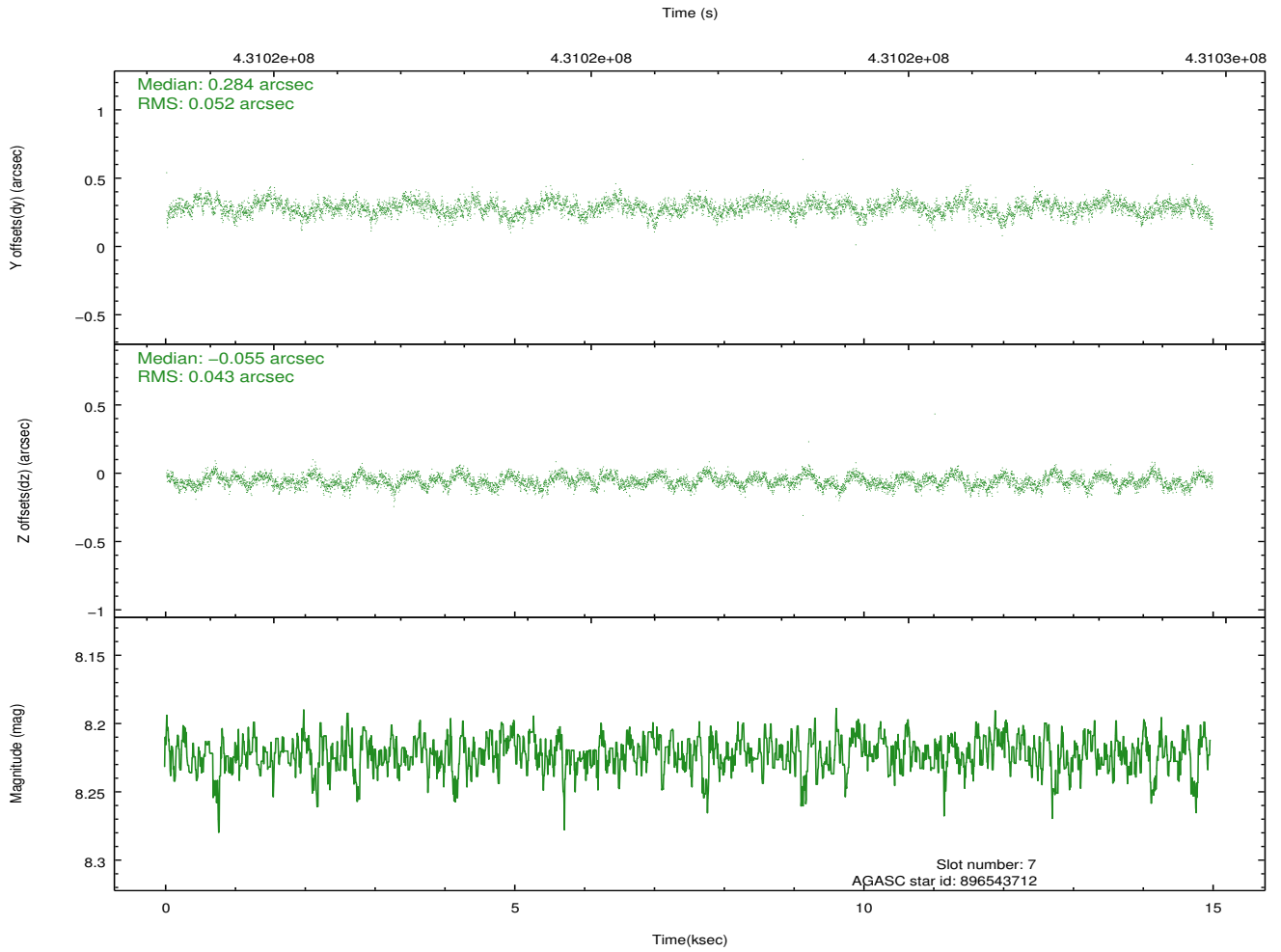
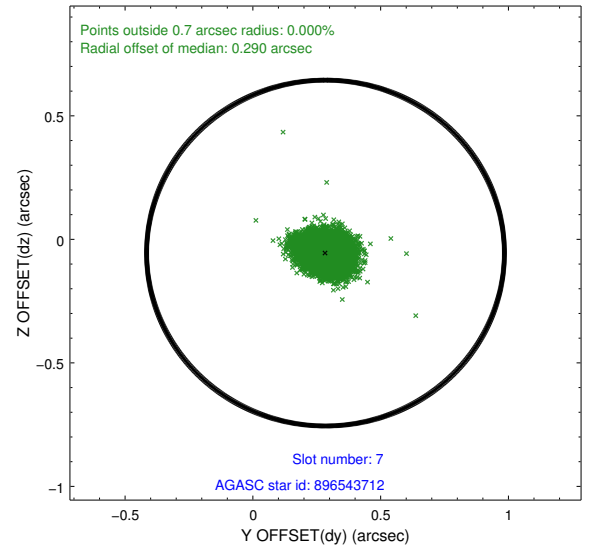
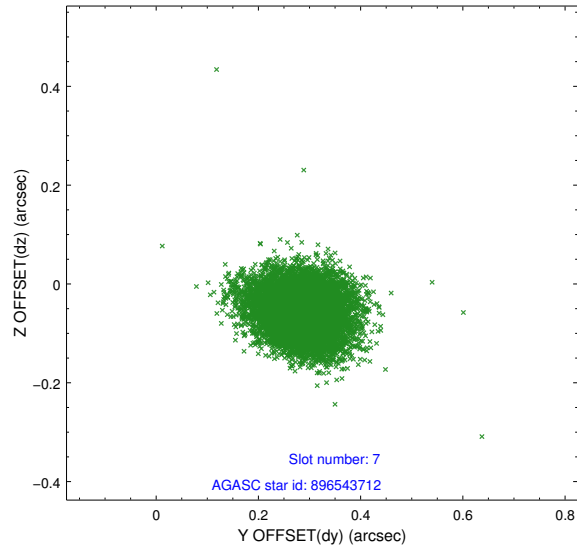
2.4.3 Slot 5



2.4.4 Slot 6

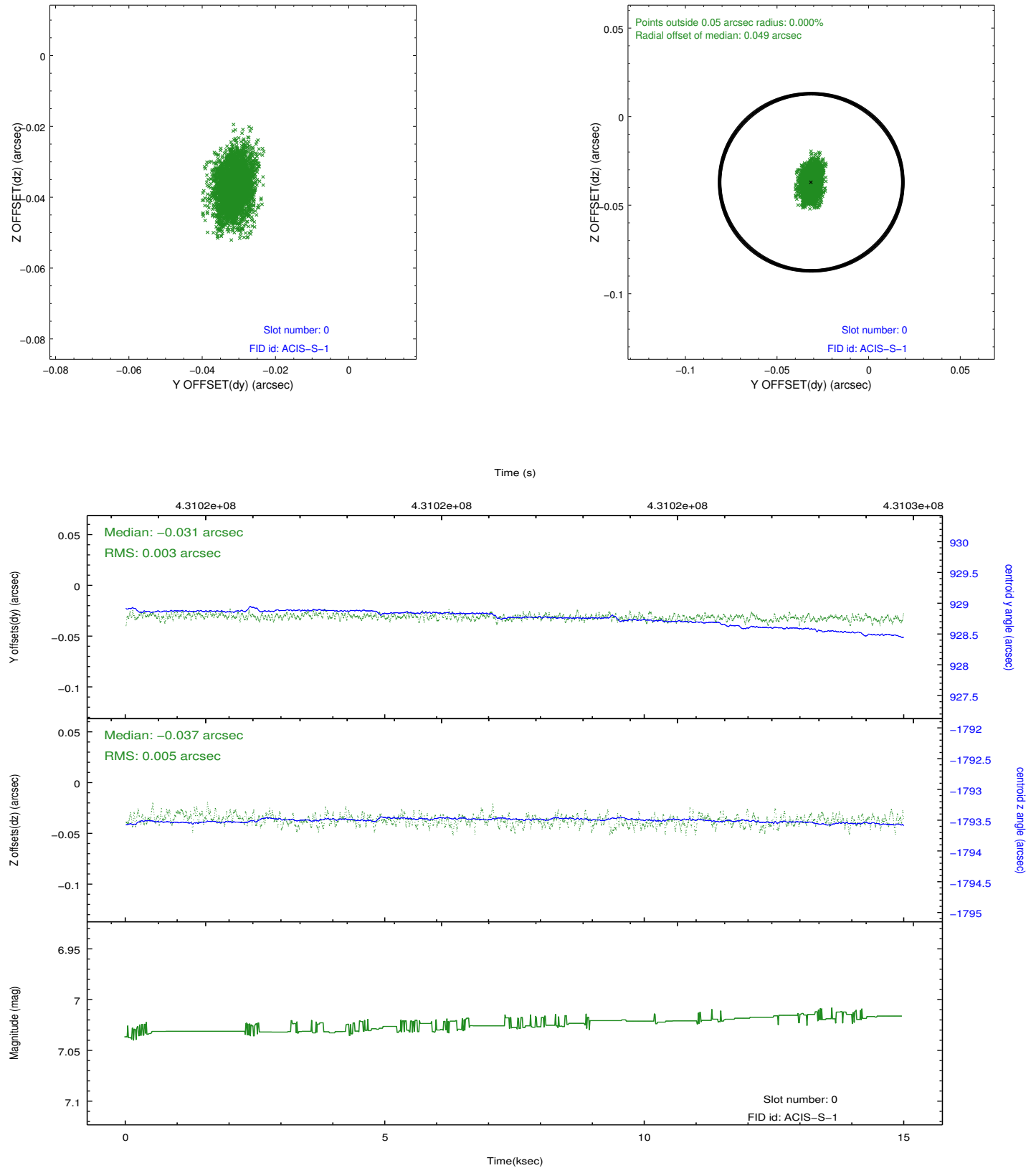


2.4.5 Slot 7

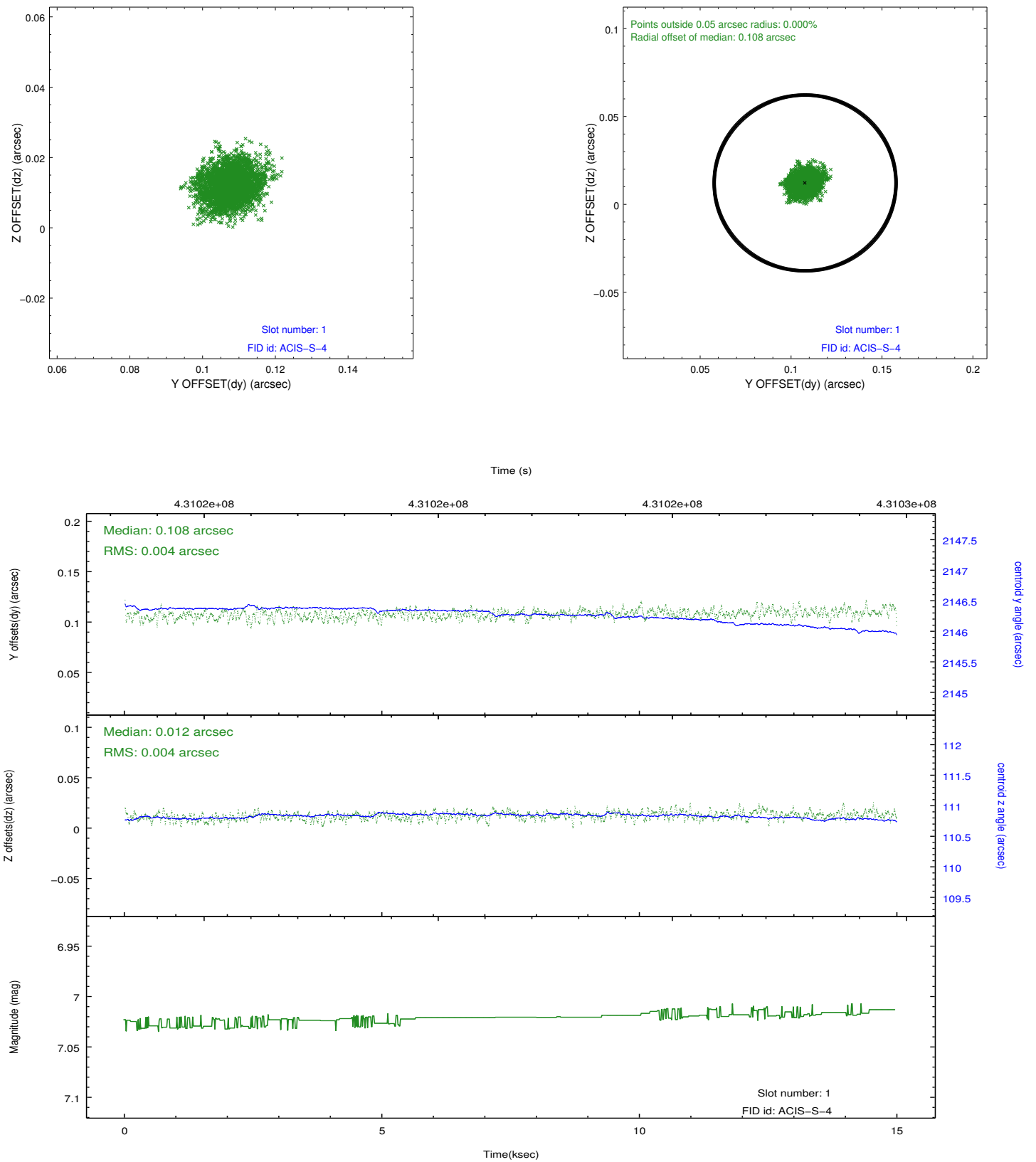


2.5 FID Slots

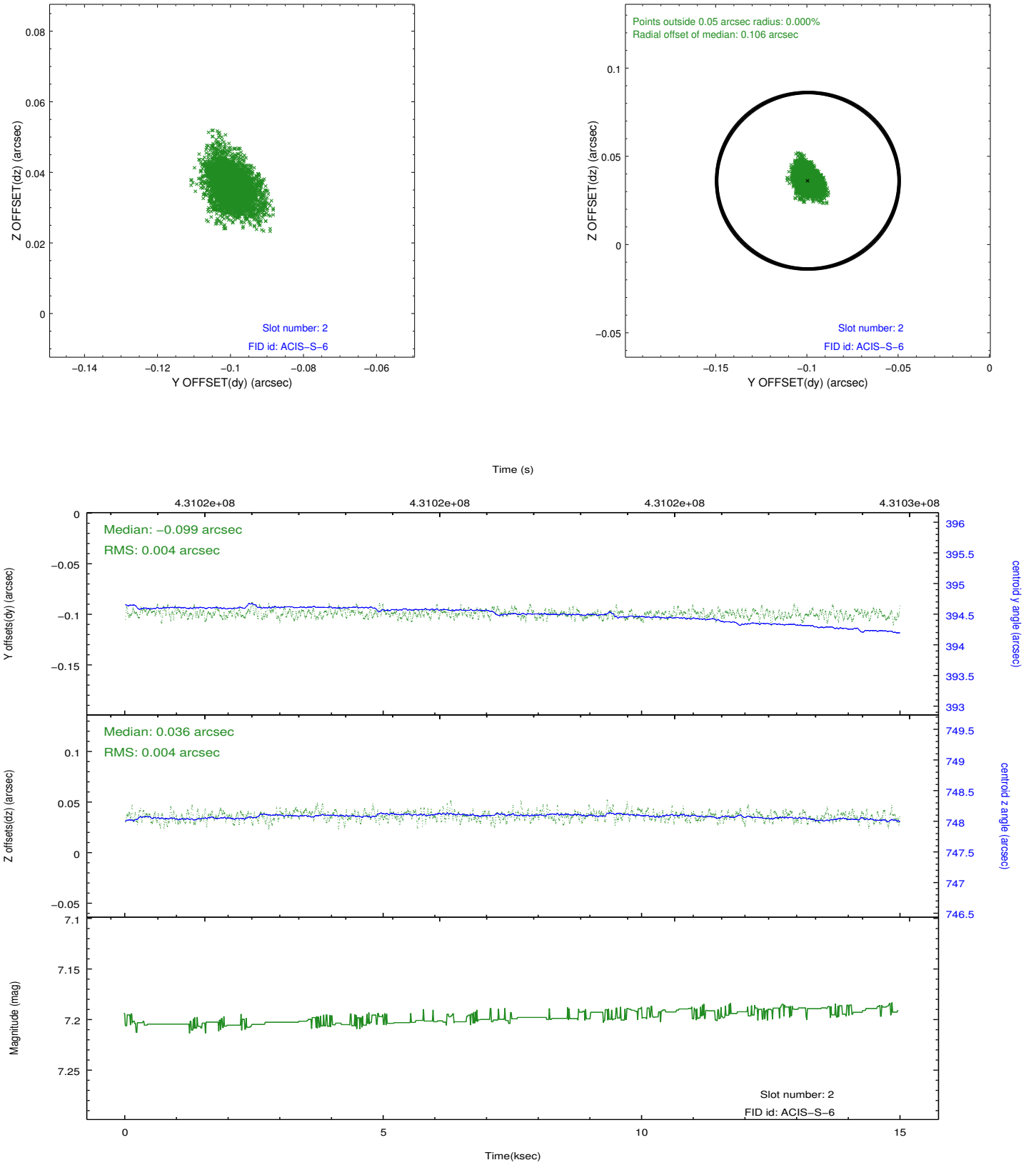
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

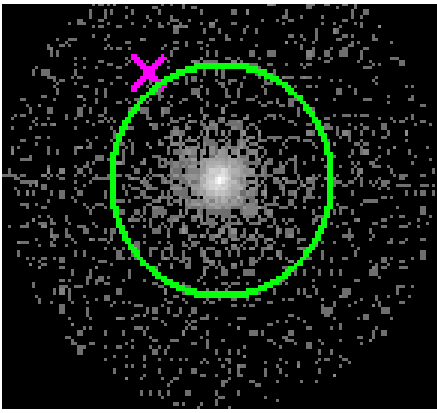


3 Gratings

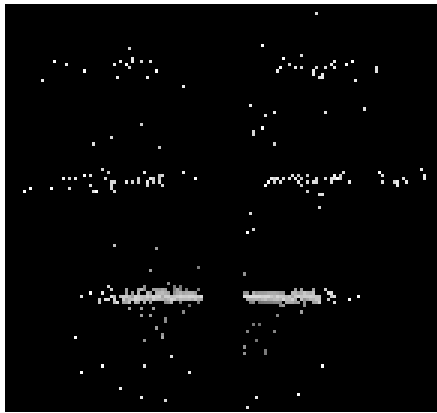
3.1 HEG Arm



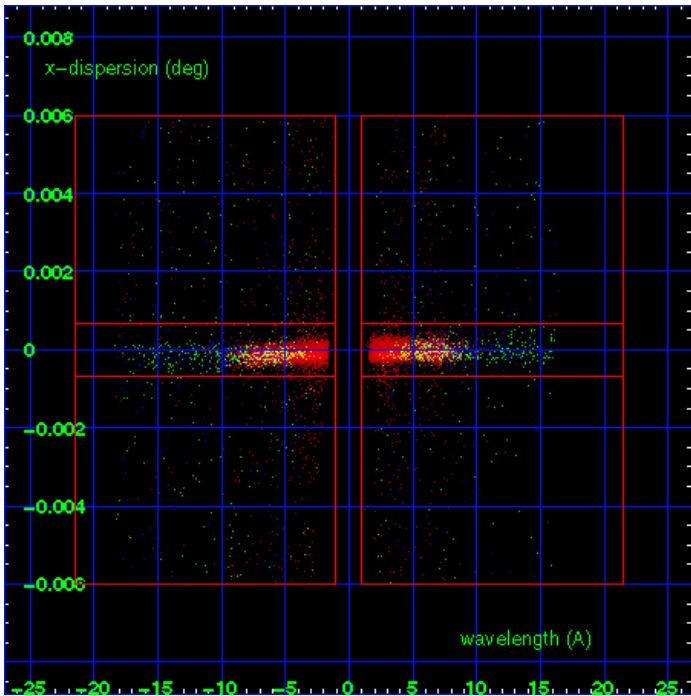
HEG Order Sort 123



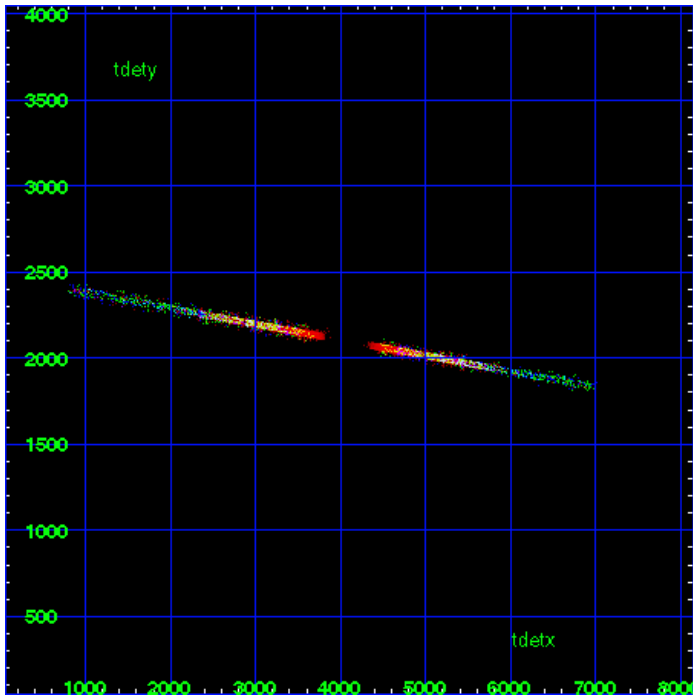
HEG Zero Order



HEG Order Sort ALL

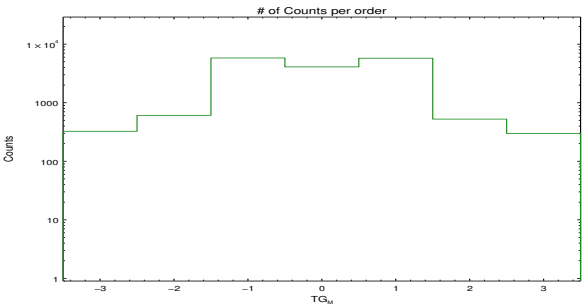


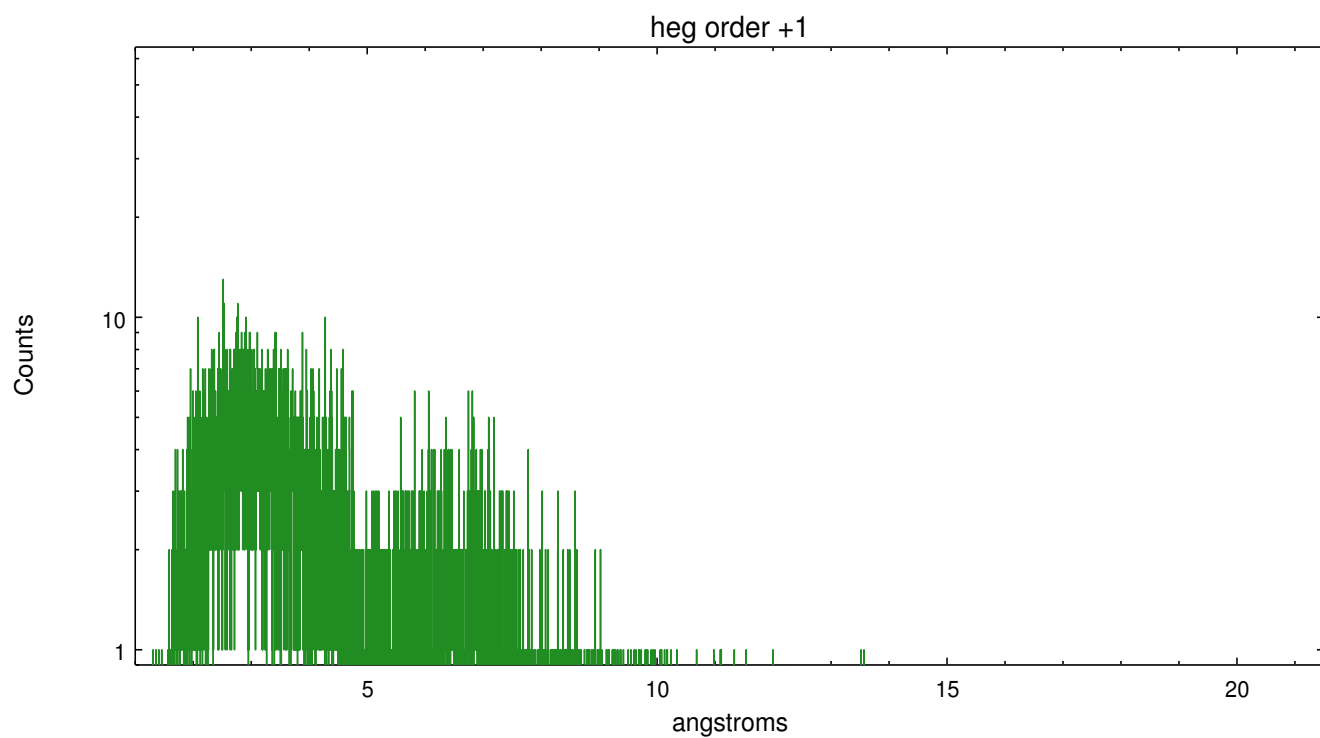
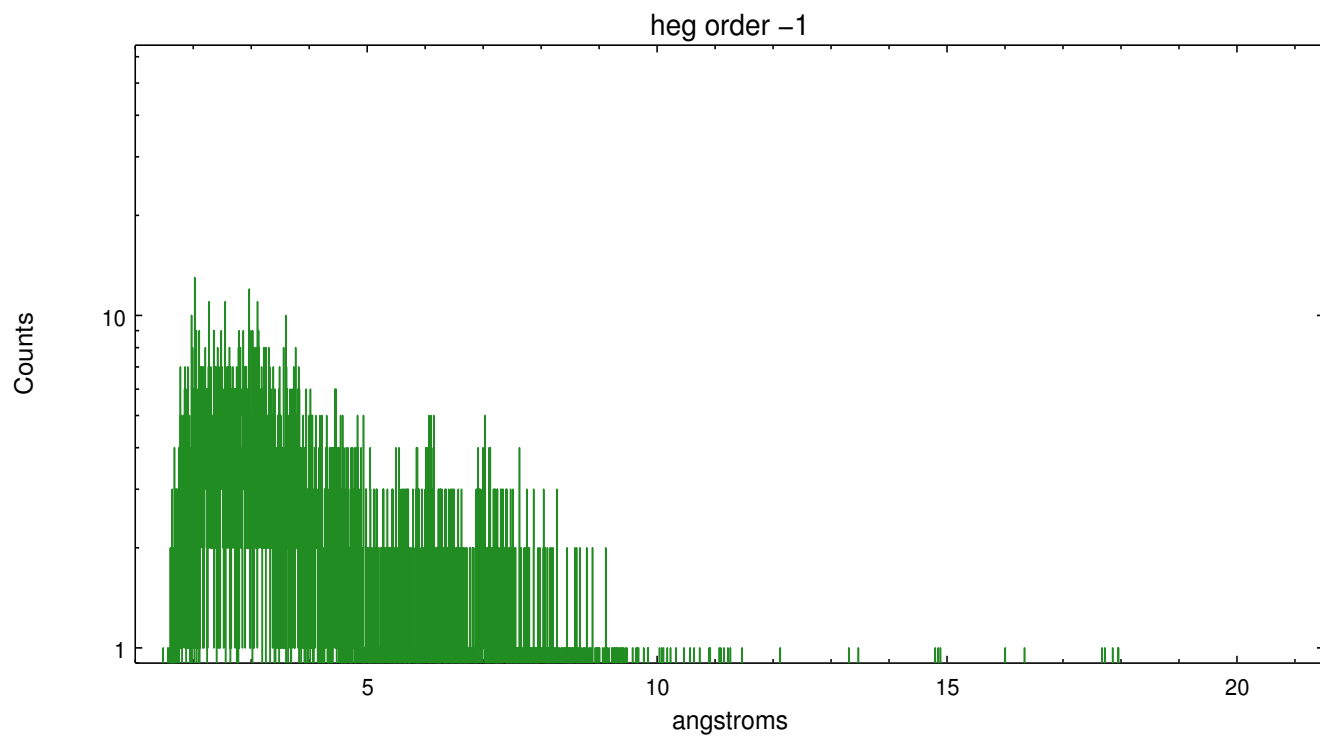
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	325	608	5811	4093	5755	525	298

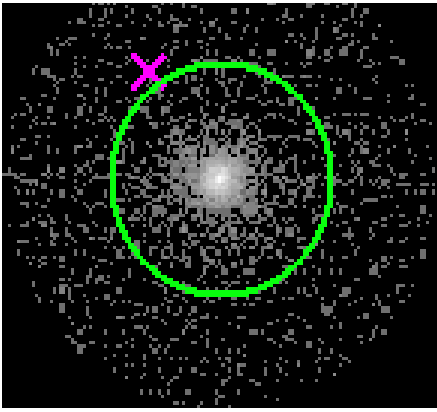




3.2 MEG Arm



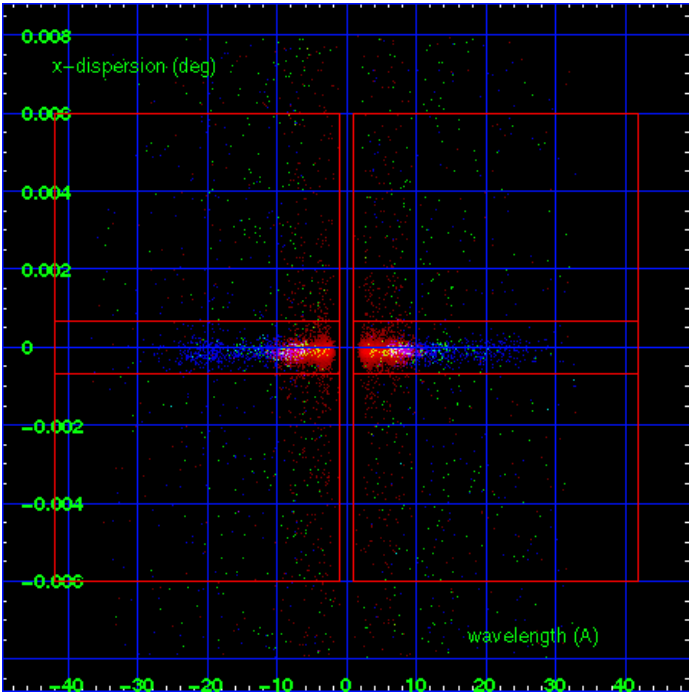
MEG Order Sort 123



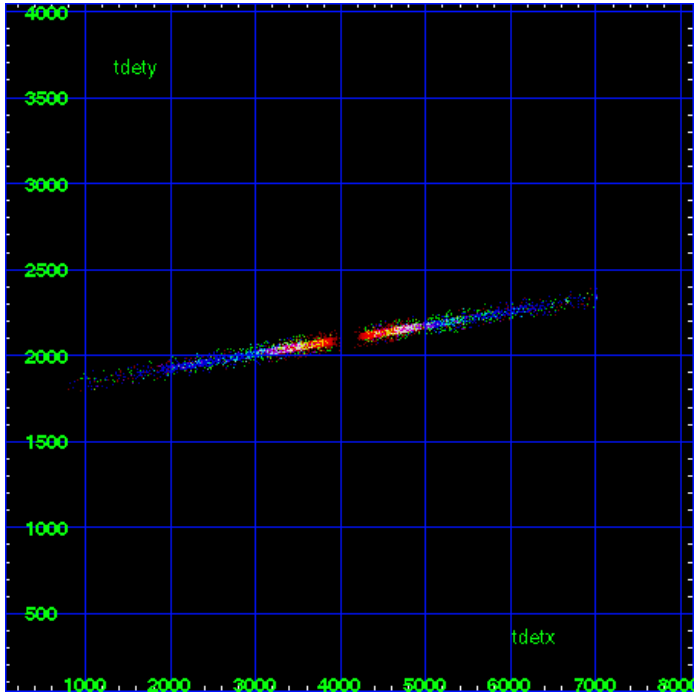
MEG Zero Order



MEG Order Sort ALL

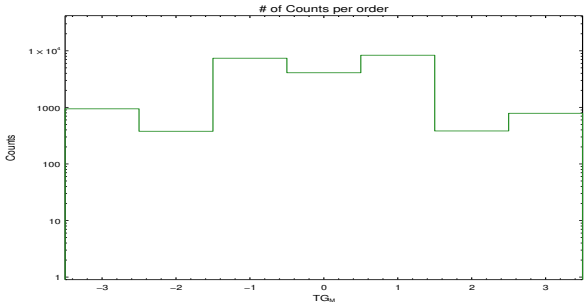


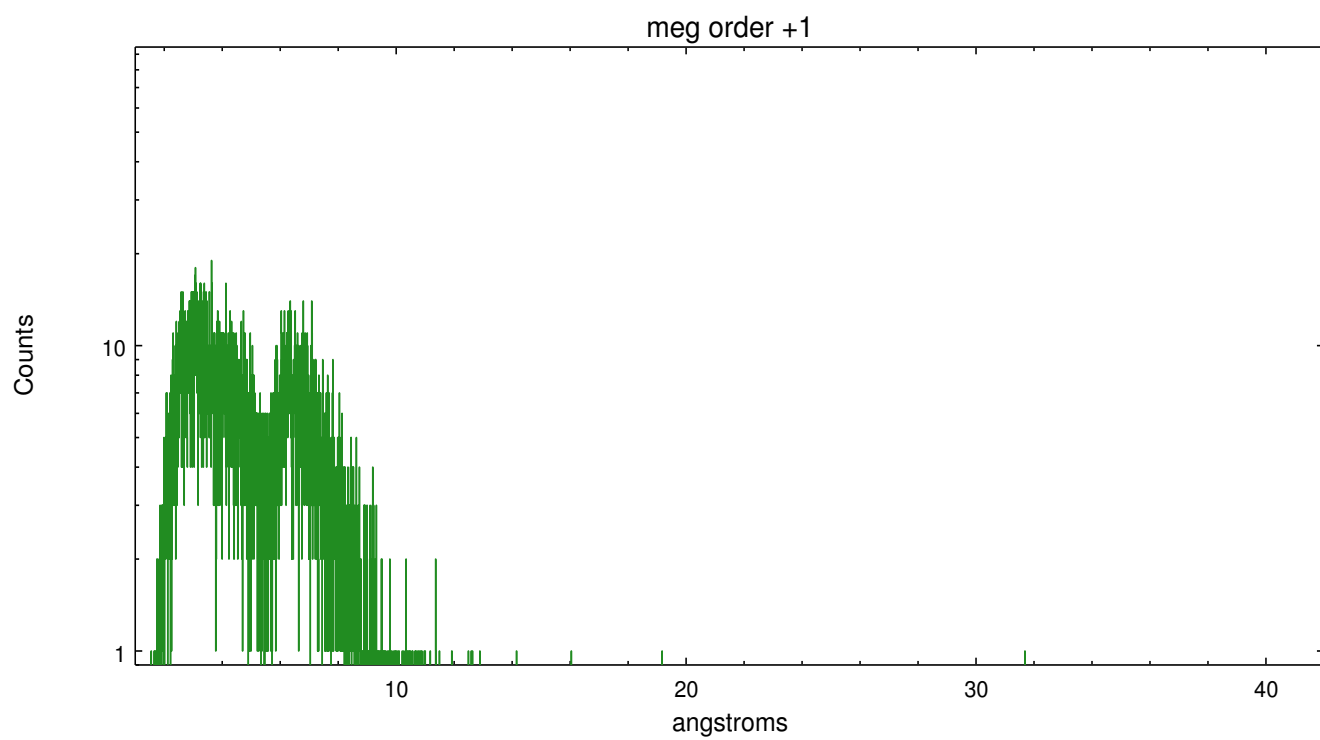
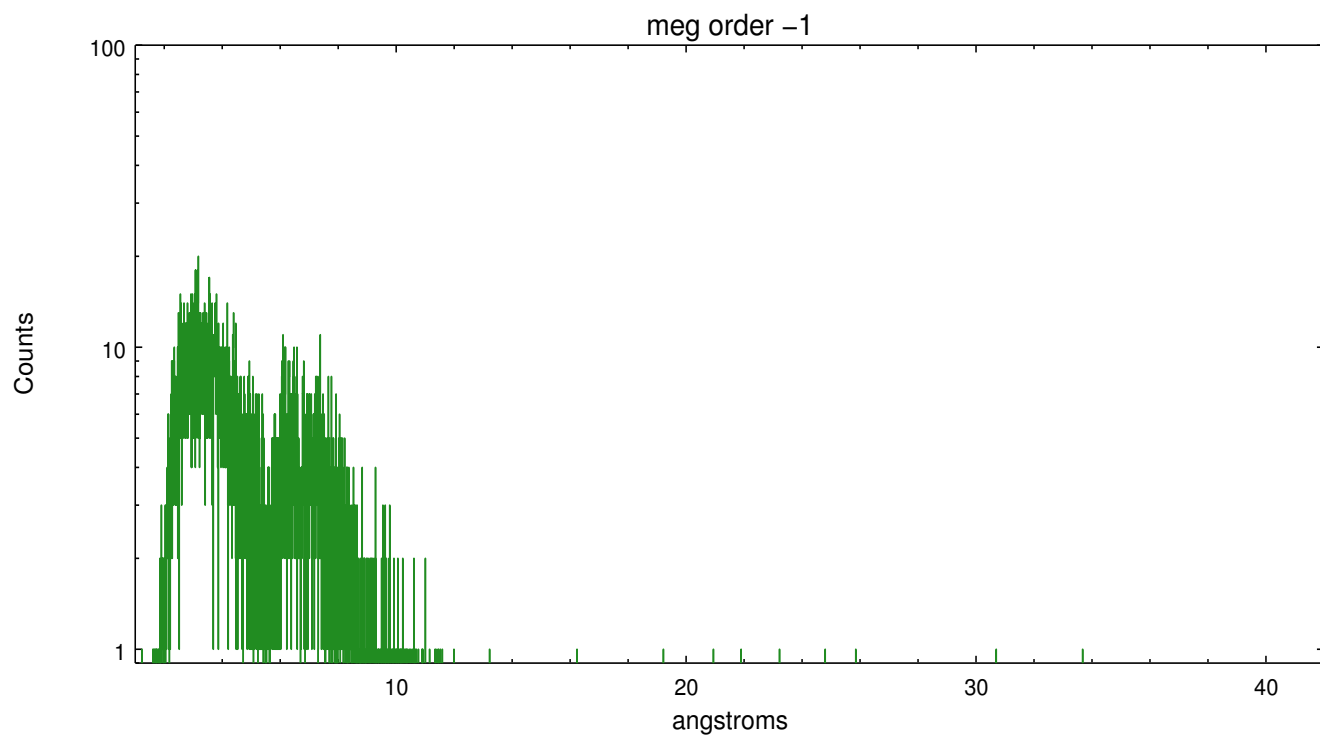
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	943	378	7395	4093	8352	383	786





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	14.04727006495

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.