

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 4473 - L2 Version 4
Chandra X-Ray Center

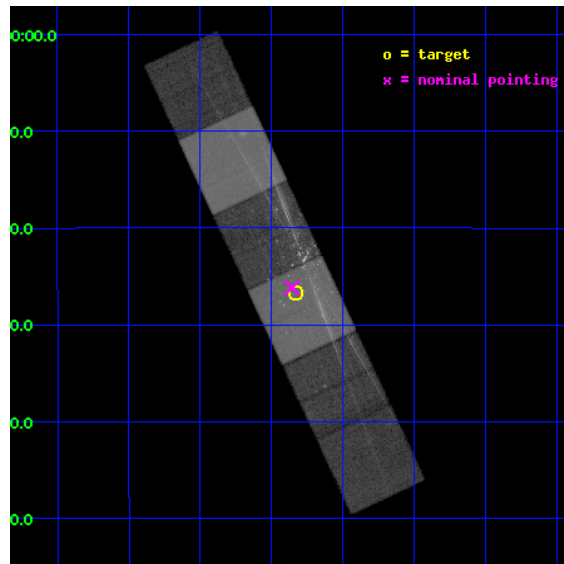
L2 Processing Date : Apr 9 2013

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

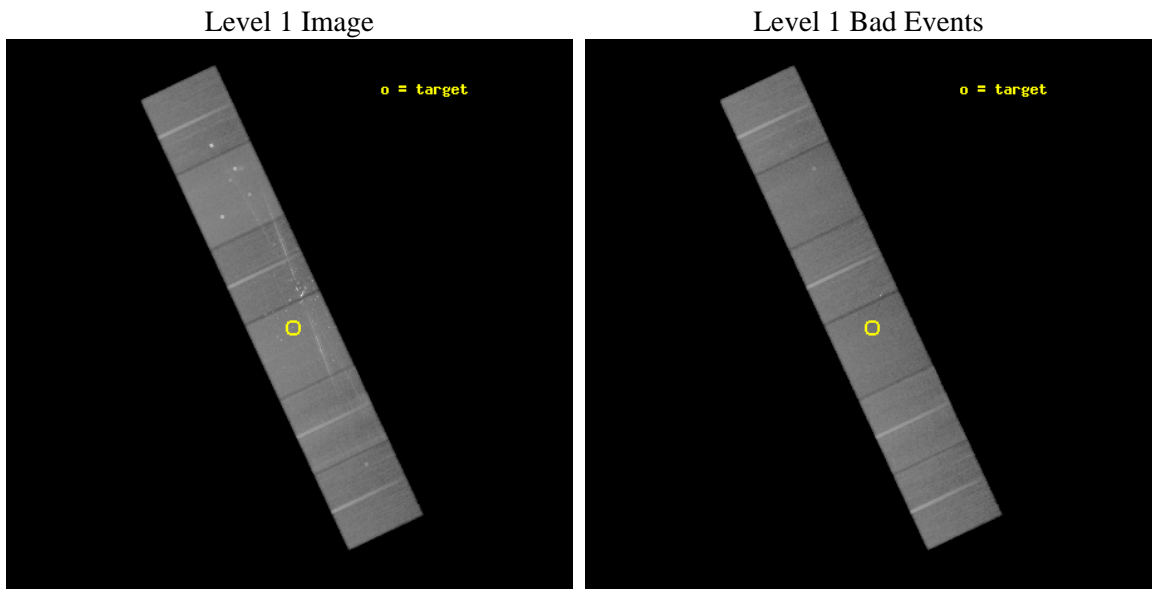
seq_num	200242	Sequence number
obs_id	4473	Observation id
title	Study of Pre-Main Sequence Stars Near the Beginning of their Accretion Phase	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	Orion Nebula Cluster	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.83375	Observer's specified target RA [deg]
dec_targ	-5.444194	Observer's specified target Dec [deg]
ra_nom	83.839352037768	Nominal RA [deg]
dec_nom	-5.4362875561152	Nominal Dec [deg]
roll_nom	64.881947023605	Nominal Roll [deg]
revision	4	Processing version of data
ontime	49750.399814665	Sum of GTIs [s]
livetime	49120.430296118	Livetime [s]
ontime4	49747.158824384	Sum of GTIs [s]
ontime5	49750.399814665	Sum of GTIs [s]
ontime6	49750.36819455	Sum of GTIs [s]
ontime7	49750.399814665	Sum of GTIs [s]
ontime8	49750.327154547	Sum of GTIs [s]
ontime9	49743.804163903	Sum of GTIs [s]
l2events	798634	Number of level 2 events



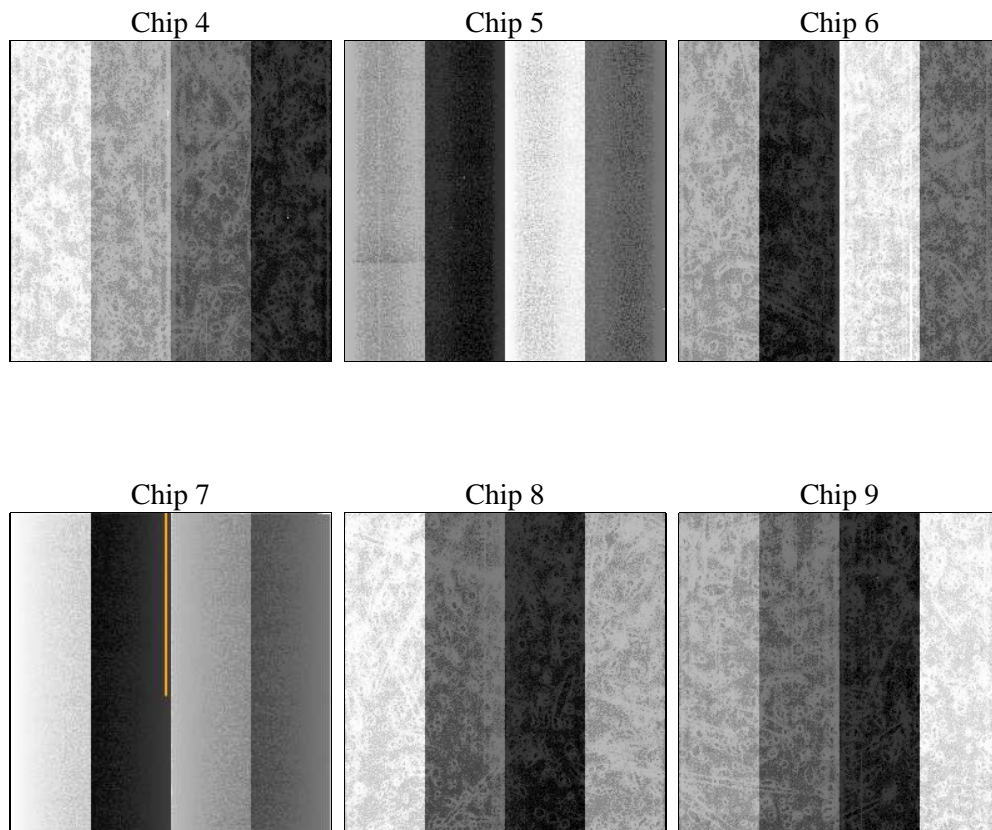
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49726.373000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	49750.399814665	Sum of GTIs [s]
caldbver	4.5.6	 	ontime4	49747.158824384	Sum of GTIs [s]
date	2013-04-09T00:33:45	Date and time of file creation	ontime5	49750.399814665	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	49750.36819455	Sum of GTIs [s]
			ontime7	49750.399814665	Sum of GTIs [s]
			ontime8	49750.327154547	Sum of GTIs [s]
			ontime9	49743.804163903	Sum of GTIs [s]
			l1events	3065724	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	462637	612062	472329	586759	524849	407088	grade 0 events	36655	35596	70794	32447	46771	25156
rejected events	397284	317201	355780	312500	400599	352667		7%	5%	14%	5%	8%	6%
rejected %	85%	51%	75%	53%	76%	86%	grade 1 events	519	709	1077	553	405	244
								0%	0%	0%	0%	0%	0%
							grade 2 events	10799	88654	18172	57901	25675	9860
								2%	14%	3%	9%	4%	2%
							grade 3 events	5086	13160	7378	26140	12067	5066
								1%	2%	1%	4%	2%	1%
							grade 4 events	5057	12678	7256	25996	11352	4879
								1%	2%	1%	4%	2%	1%
							grade 5 events	17225	44272	18878	51667	24295	19430
								3%	7%	3%	8%	4%	4%
							grade 6 events	7762	144810	12960	131826	28398	9464
								1%	23%	2%	22%	5%	2%
							grade 7 events	379534	272183	335814	260229	375886	332989
								82%	44%	71%	44%	71%	81%

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	83.842050	83.83935203776829	Subarray requested	NONE	NONE
[deg] Pointing Dec	-5.463388	-5.436287556115211	Alternating exposures requested	N	N
[deg] Pointing Roll	64.725575	64.88194702360504	[s] Primary exposure time	0.000000	3.2
[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)	215834826.184000	215833684.32066			
Observation start date	2004-11-03T02:06:02	2004-11-03T01:48:04			
[s] Observation end time (MET)	215884552.184000	215884769.81045			
Observation end date	2004-11-03T15:54:48	2004-11-03T15:59:29			
Read mode	TIMED	TIMED			

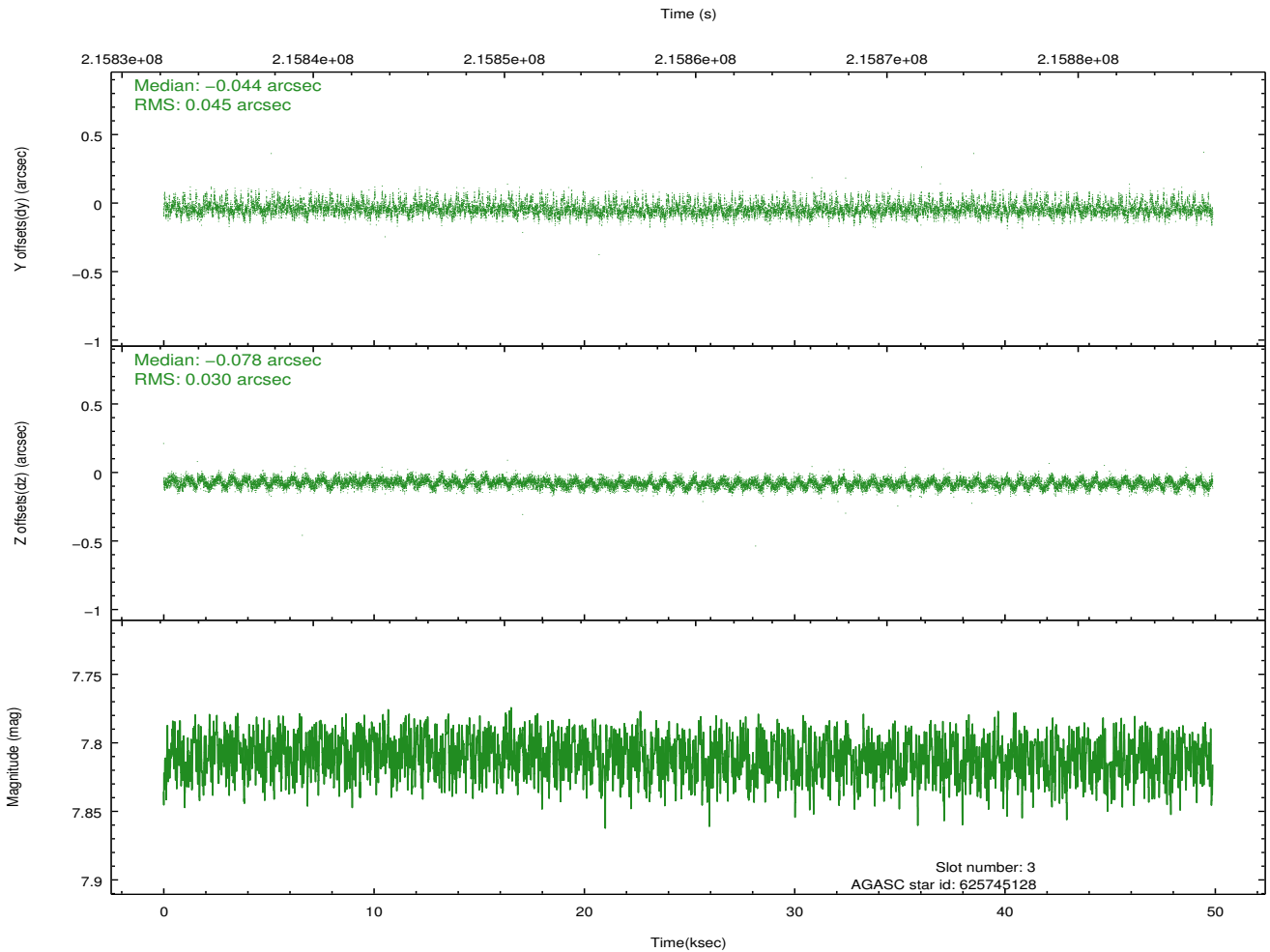
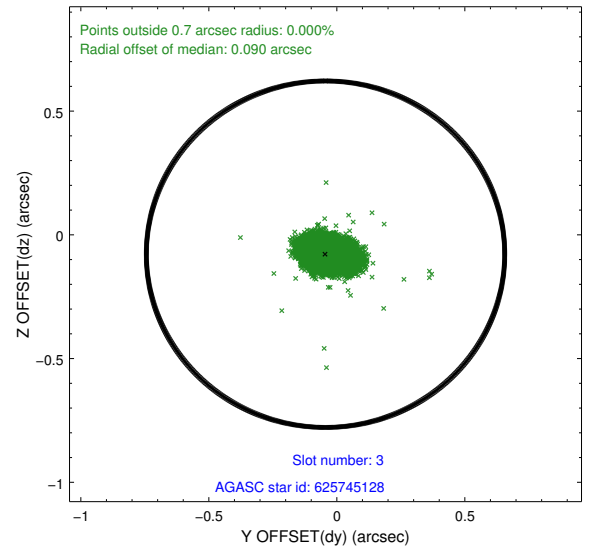
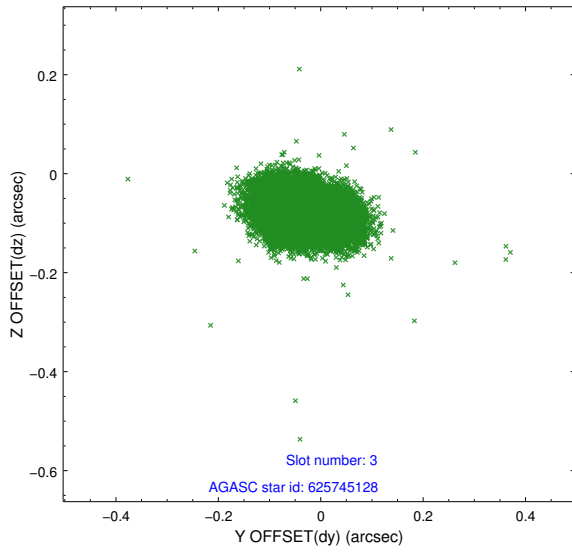
2.3 Aspect

Slot Statistics

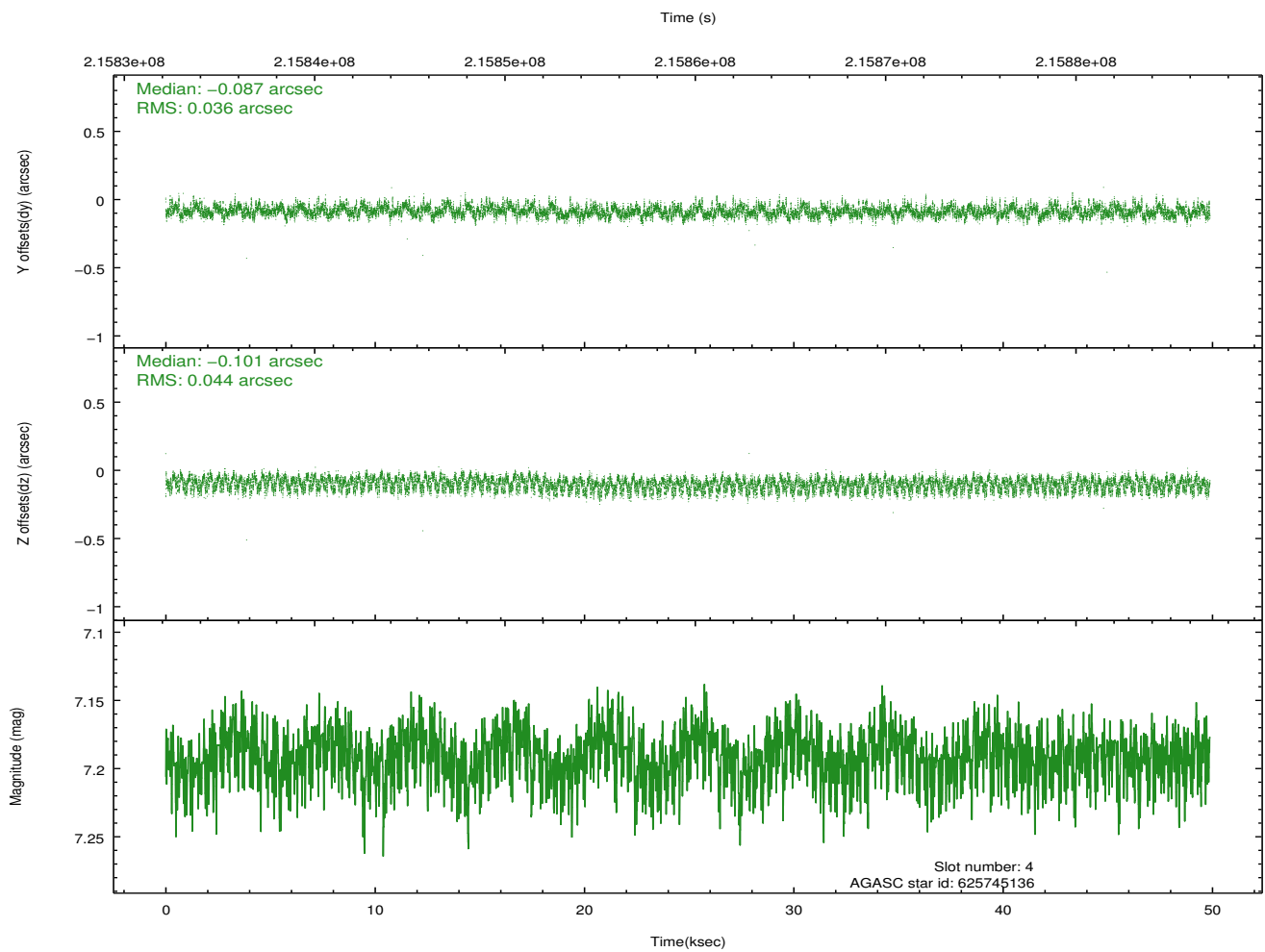
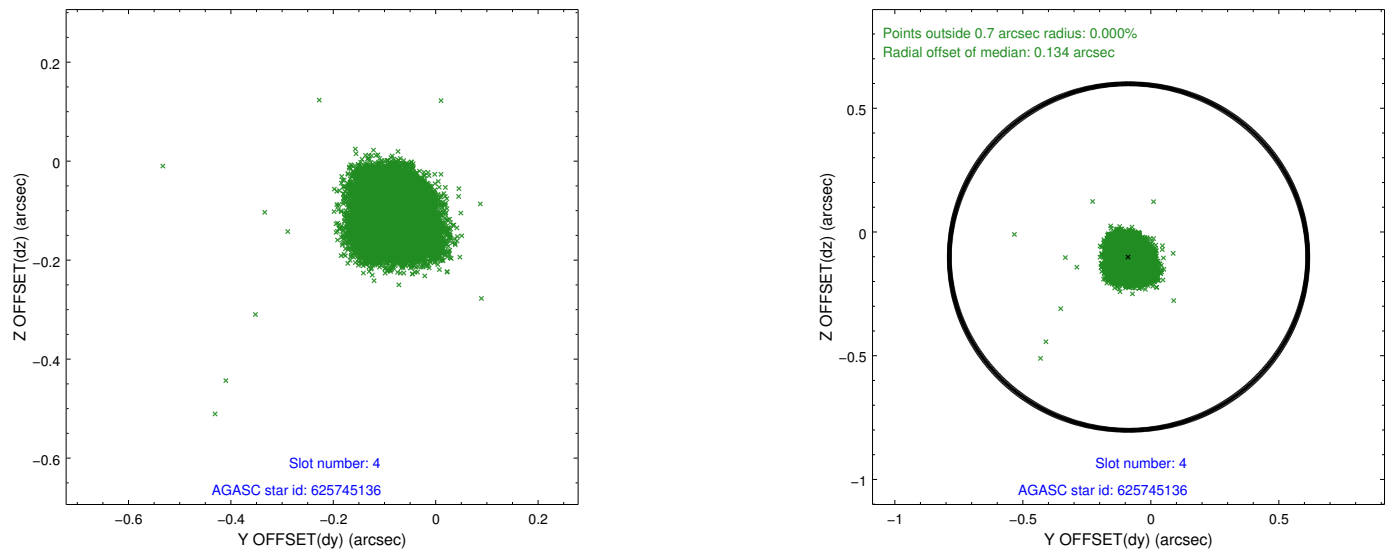
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	12166	-0.034	-0.016	0.011	0.033	0.000000	0.000000	-761.00	-1732.41
1	FID	ACIS-S-4	7.21	12166	0.104	0.020	0.021	0.030	0.000000	0.000000	2152.38	176.18
2	FID	ACIS-S-5	7.23	12167	-0.102	0.003	0.018	0.030	0.000000	0.000000	-1813.97	169.74
3	GUIDE	625745128	7.81	24332	-0.044	-0.078	0.055	0.099	83.769930	-4.731835	2271.14	1358.46
4	GUIDE	625745136	7.19	24332	-0.087	-0.101	0.061	0.095	83.600341	-4.804339	1775.33	1797.04
5	GUIDE	625745144	7.84	24332	-0.077	0.008	0.056	0.090	83.888985	-4.837539	2109.43	809.89
6	GUIDE	626272976	7.92	24334	0.142	0.015	0.062	0.102	83.795875	-5.926912	-1579.10	-562.97
7	GUIDE	626272760	6.60	24334	0.058	0.159	0.066	0.103	84.363987	-5.938389	-748.87	-2420.36

2.4 Star Slots

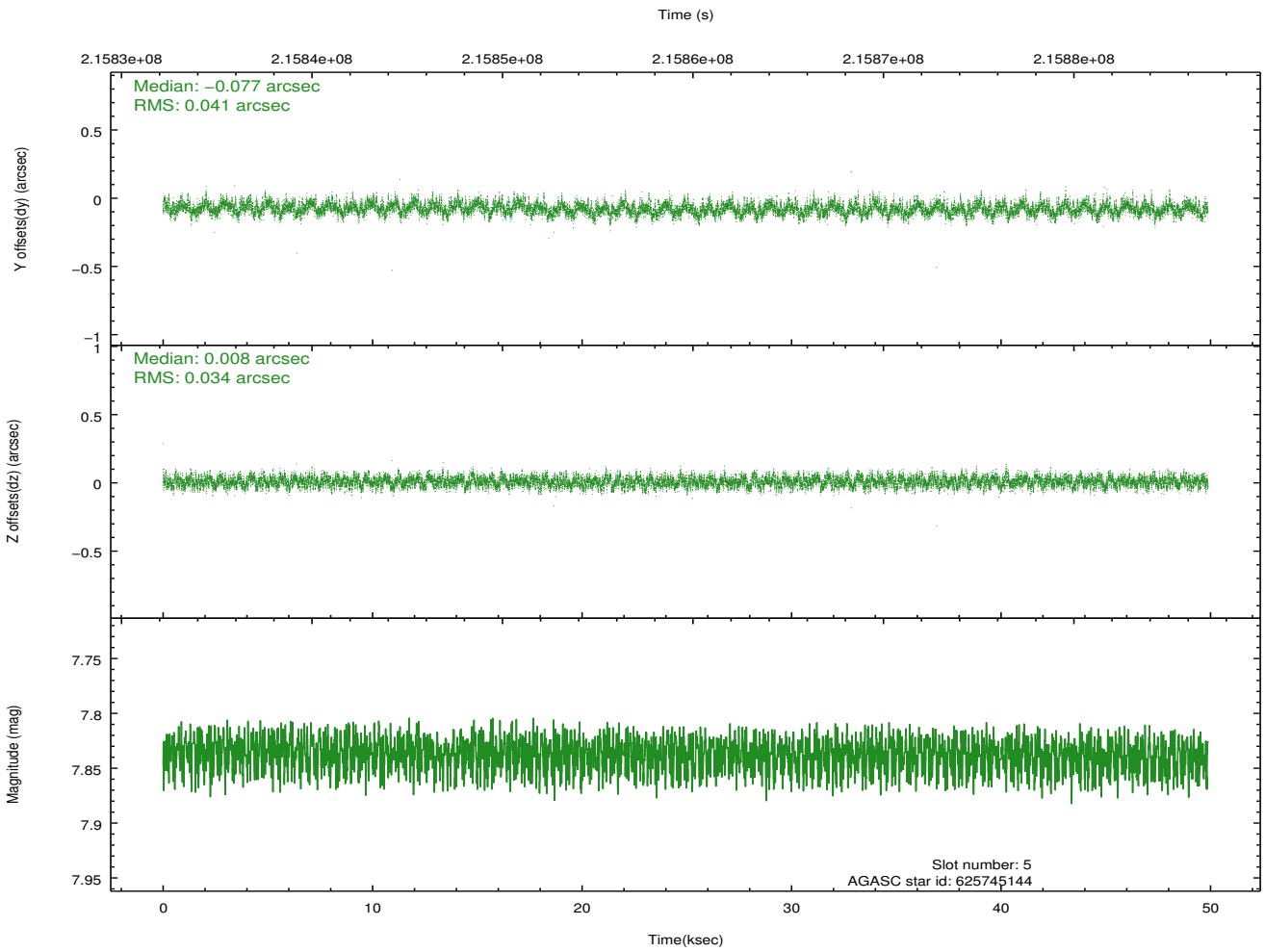
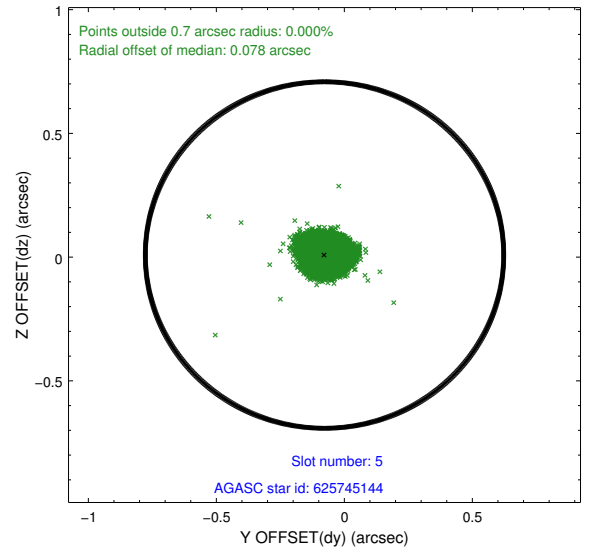
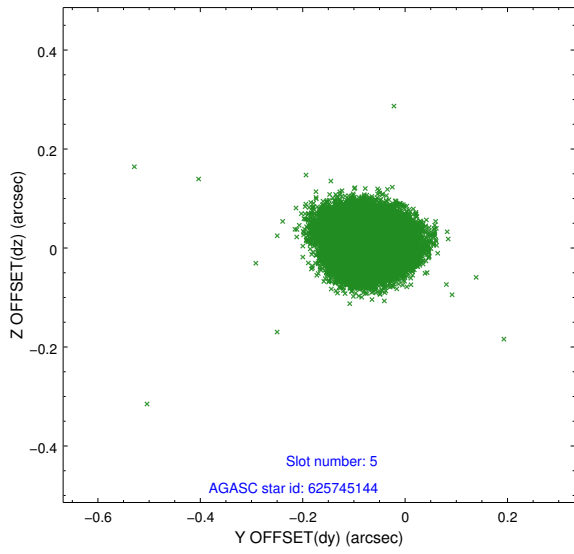
2.4.1 Slot 3



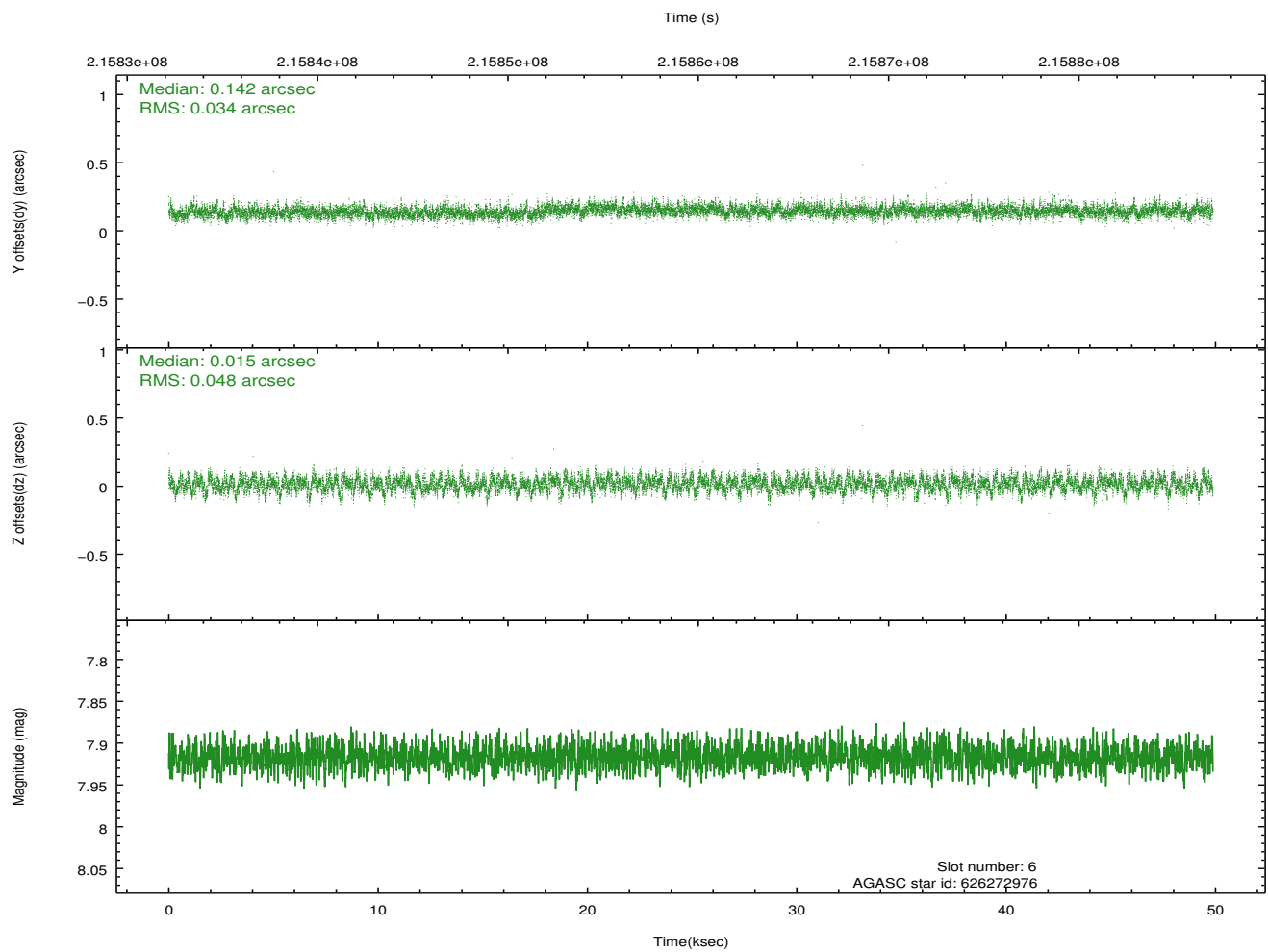
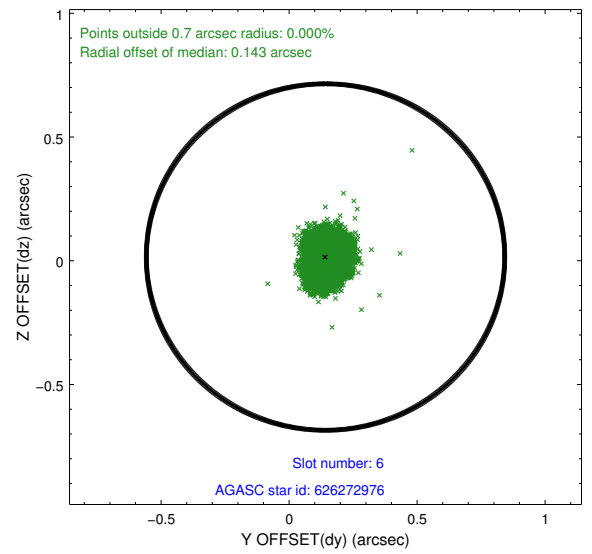
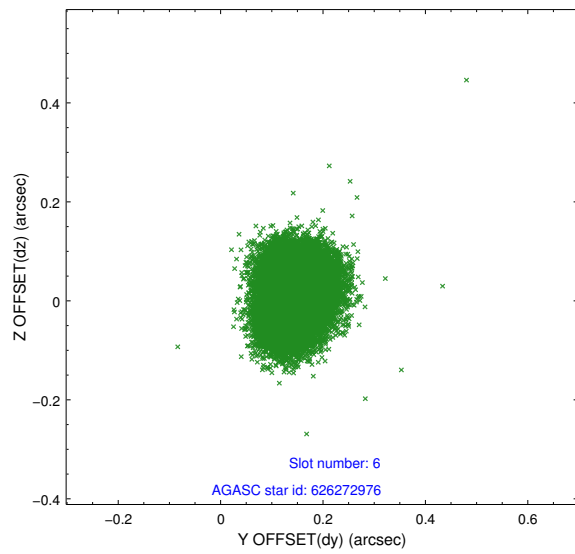
2.4.2 Slot 4



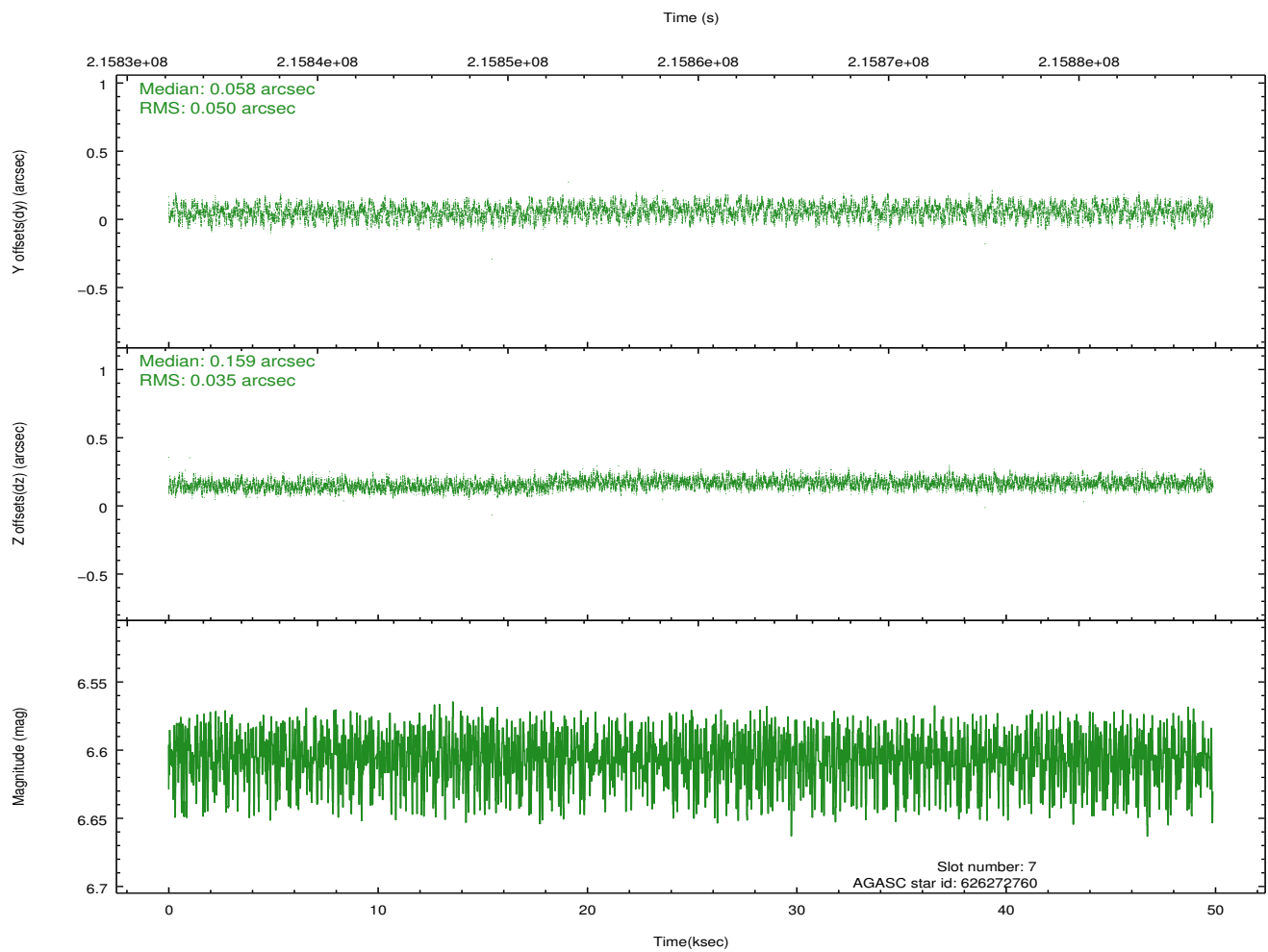
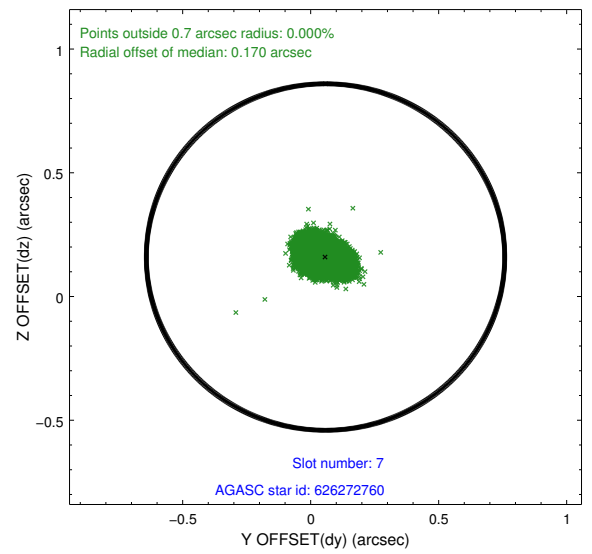
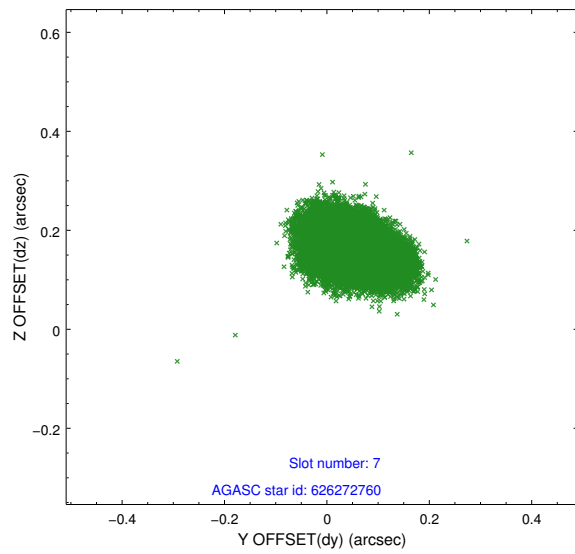
2.4.3 Slot 5



2.4.4 Slot 6

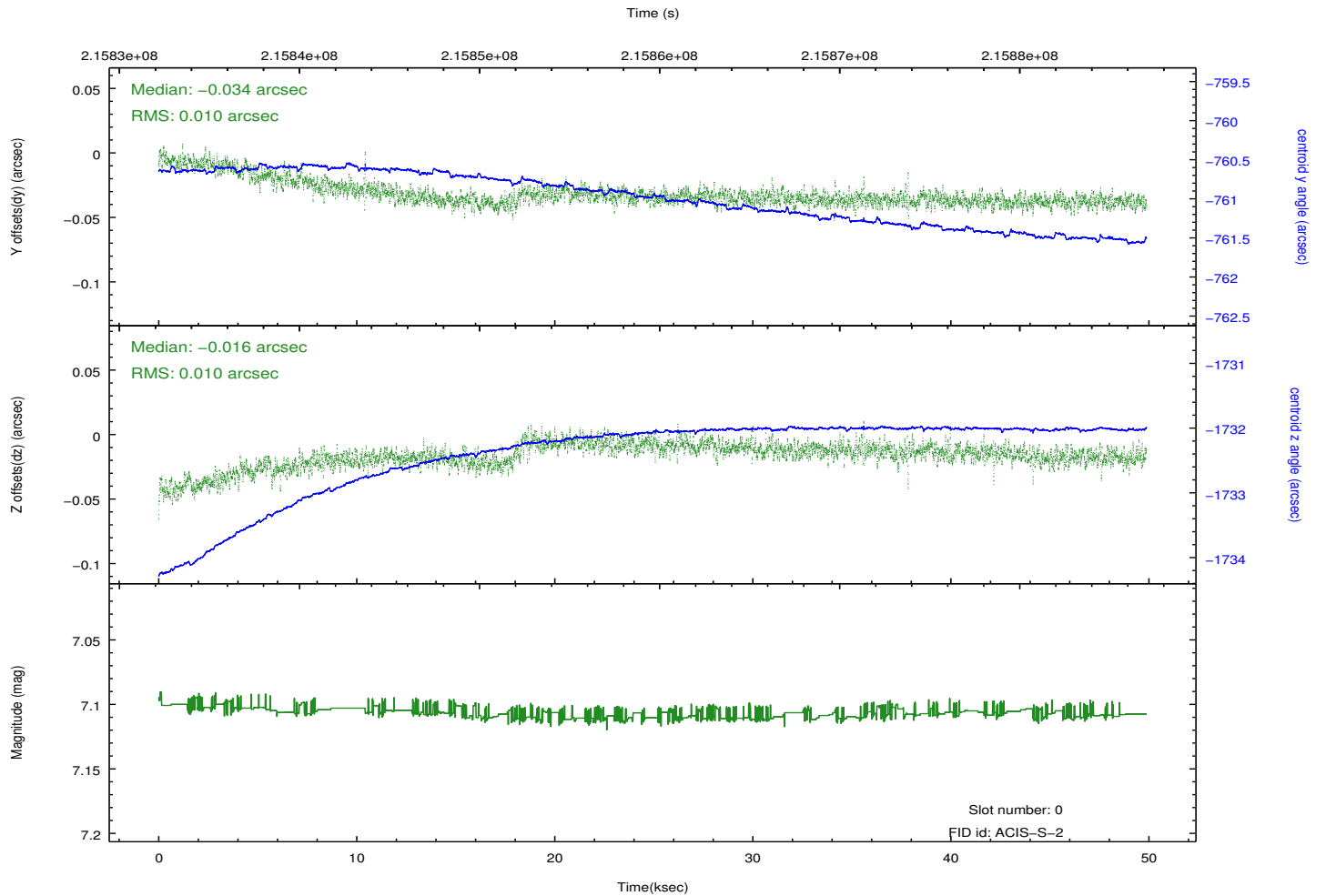
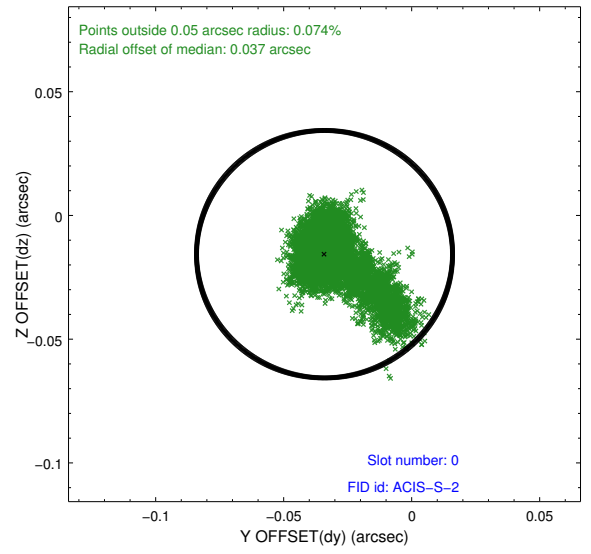
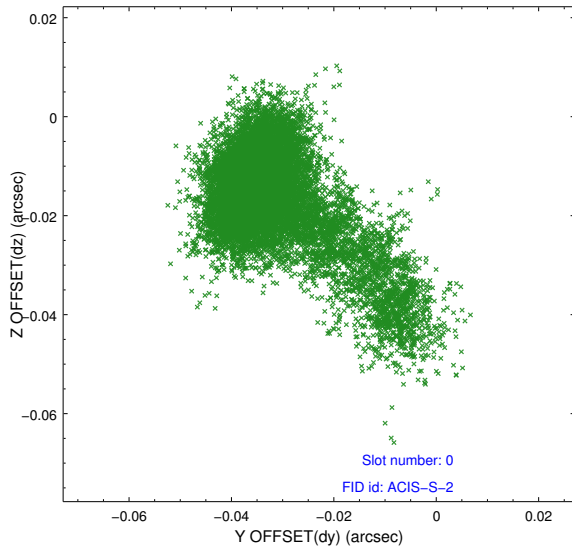


2.4.5 Slot 7

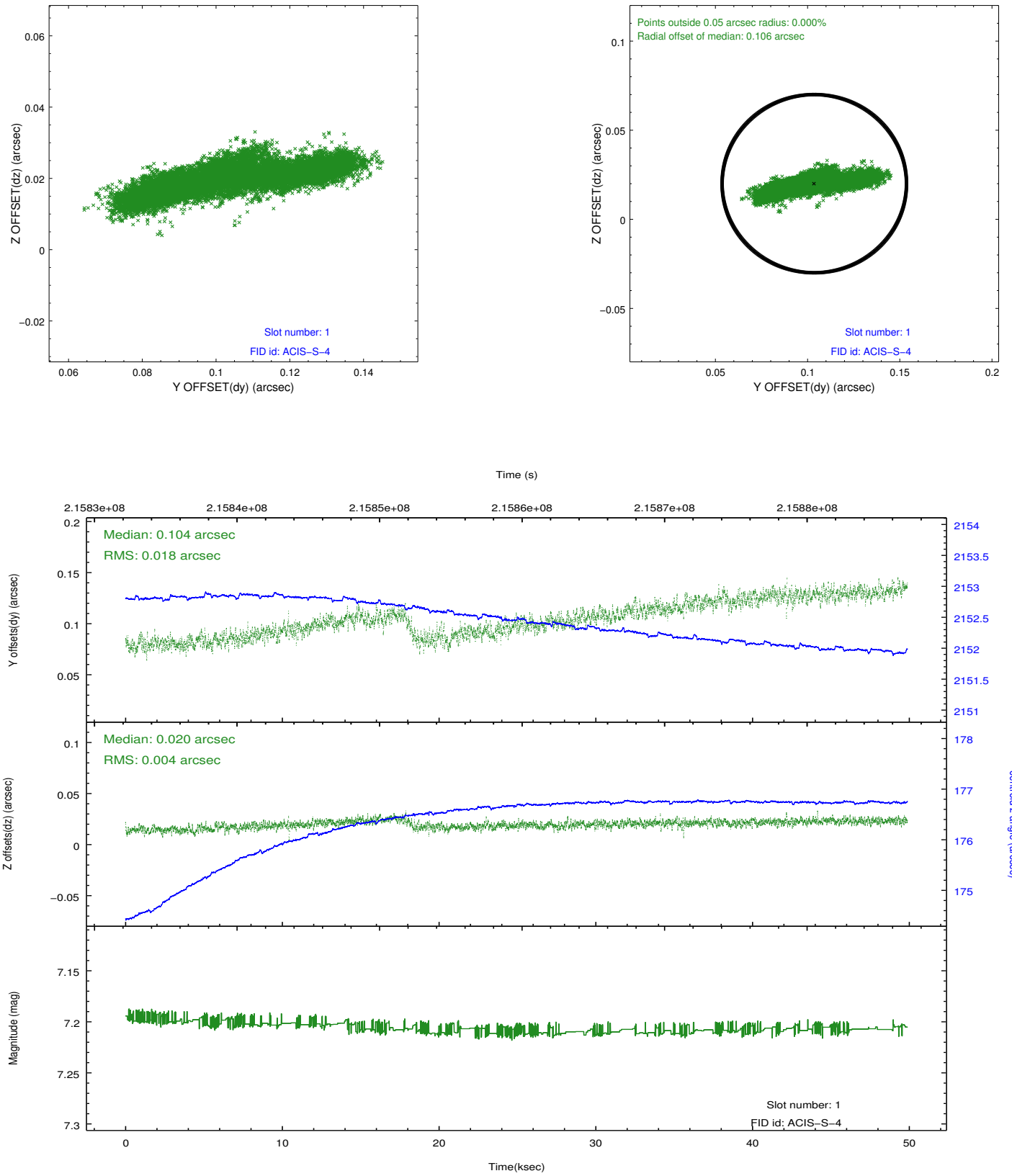


2.5 FID Slots

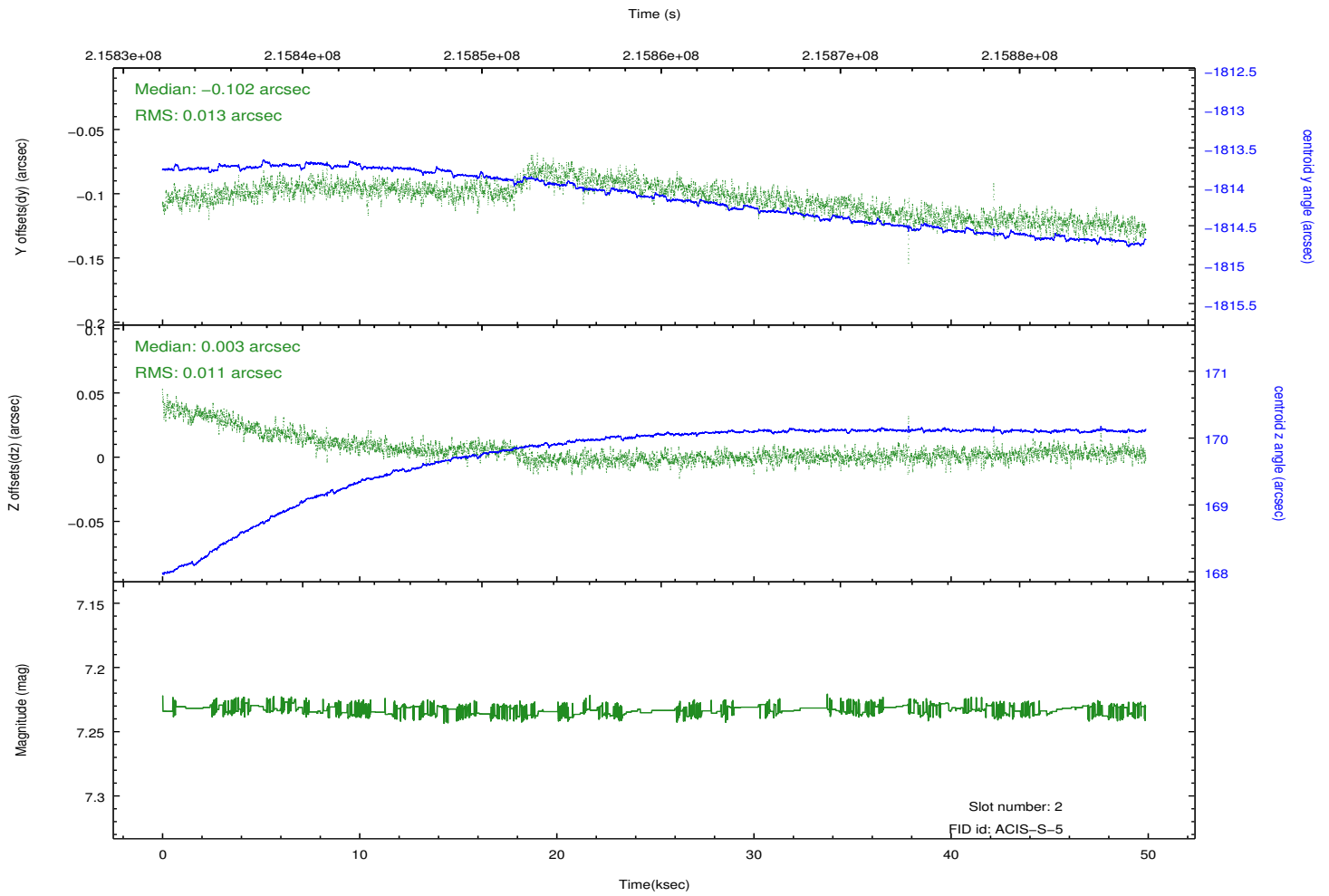
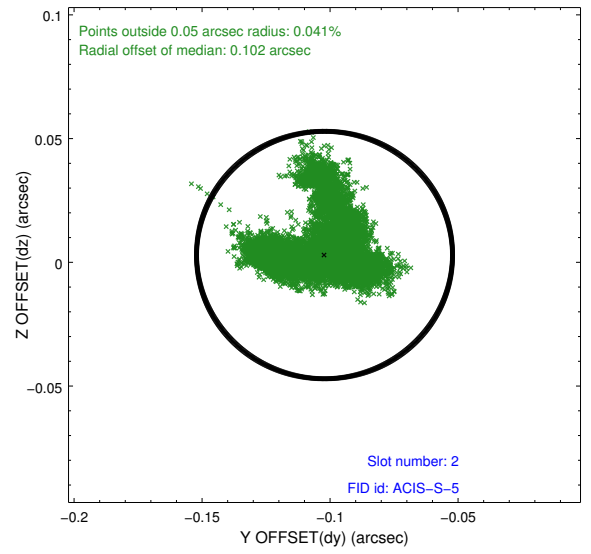
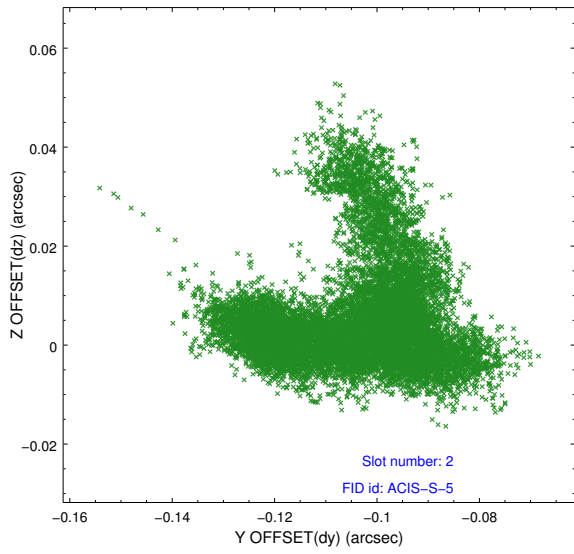
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

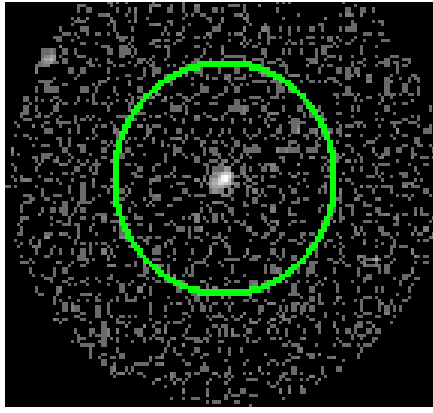


3 Gratings

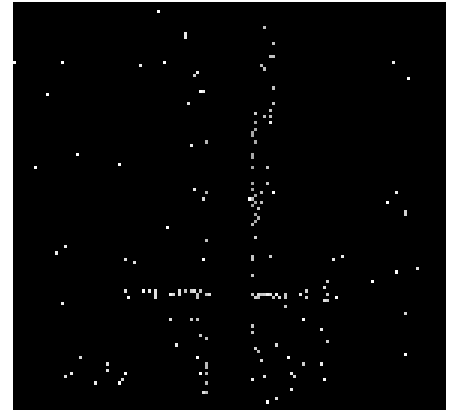
3.1 HEG Arm



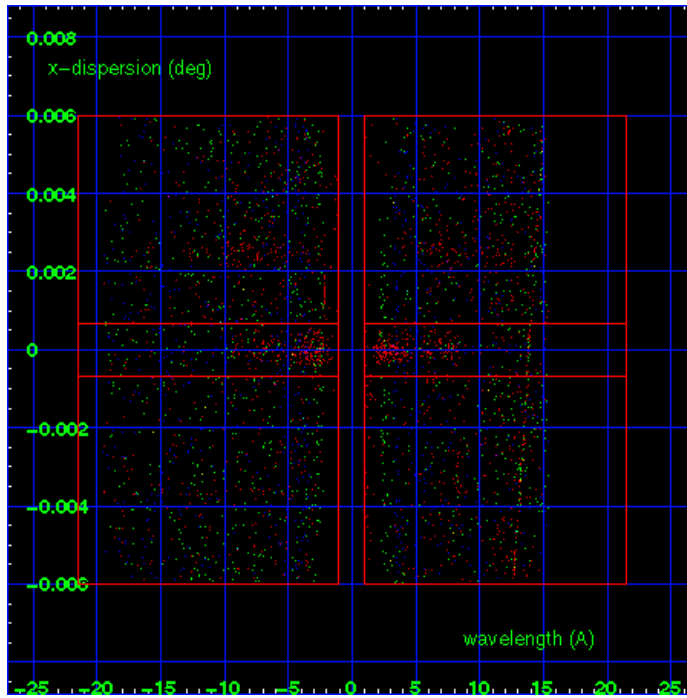
HEG Order Sort 123



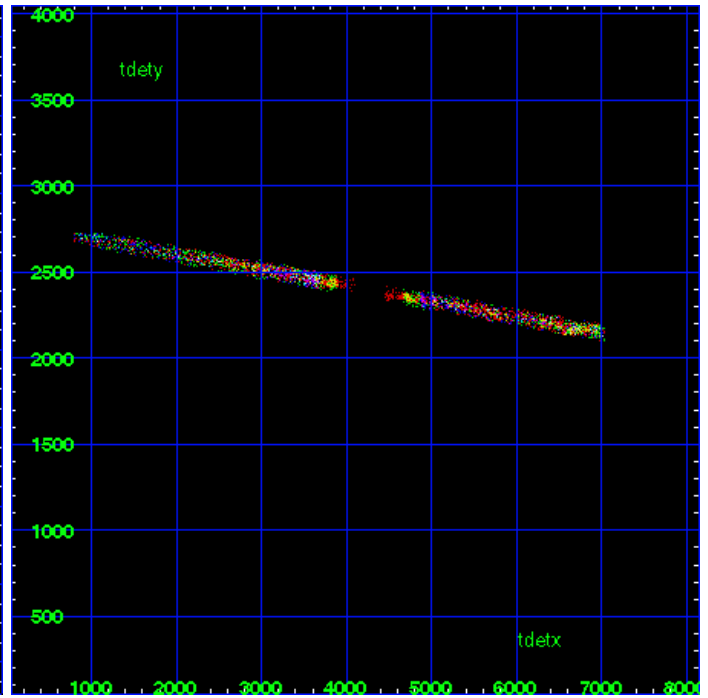
HEG Zero Order



HEG Order Sort ALL

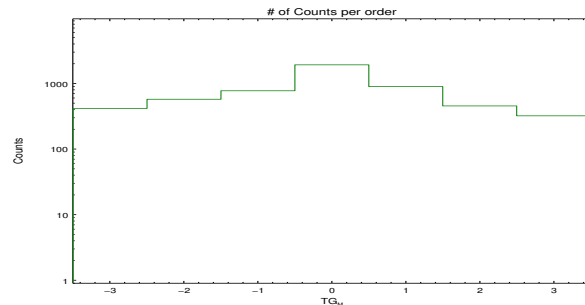


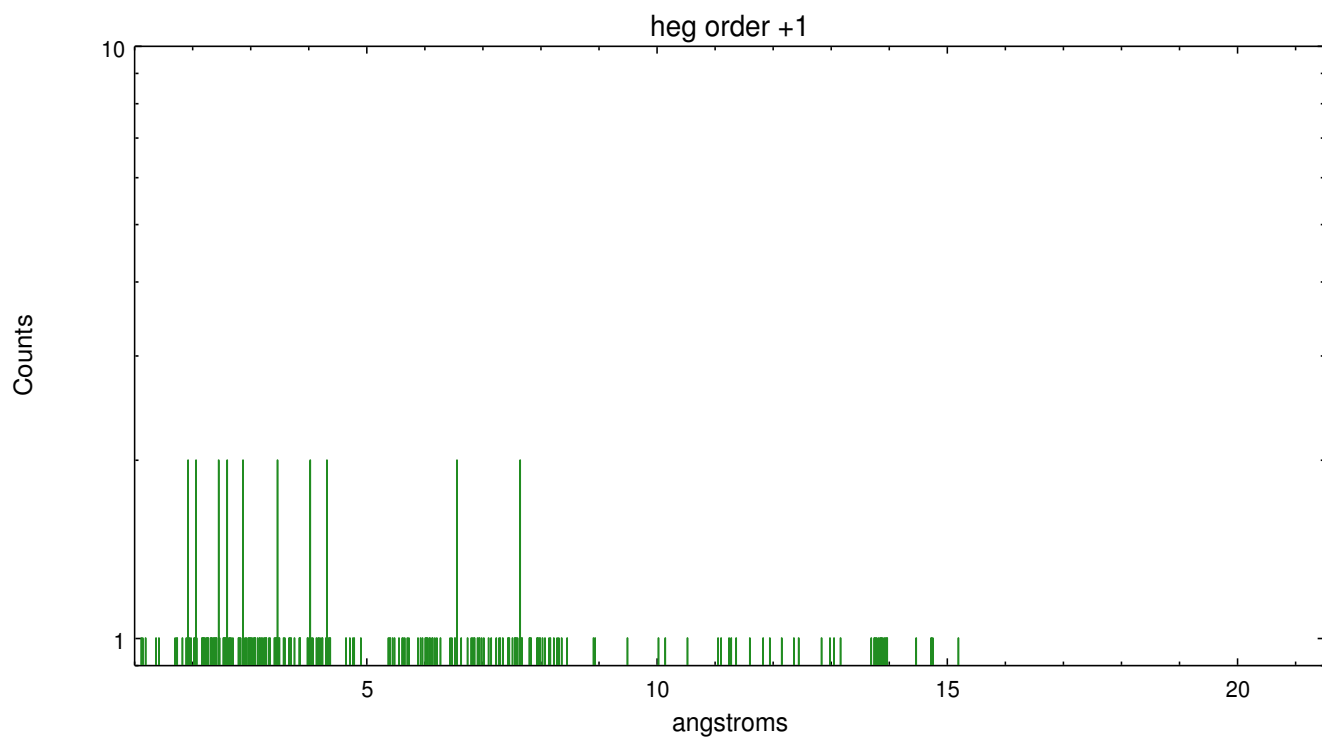
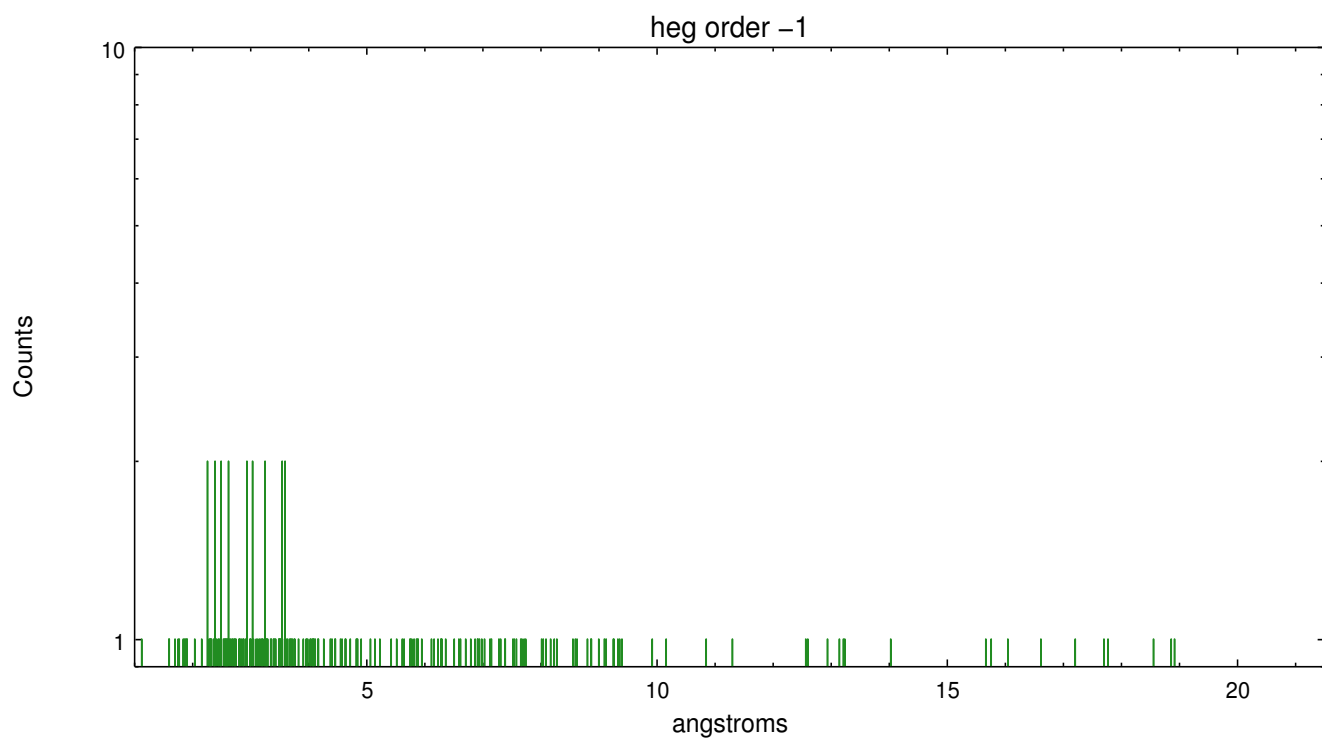
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	418	576	777	1934	900	456	322

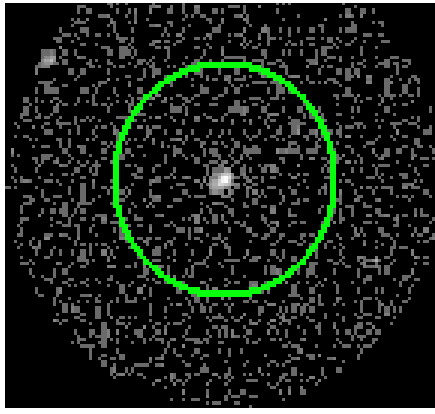




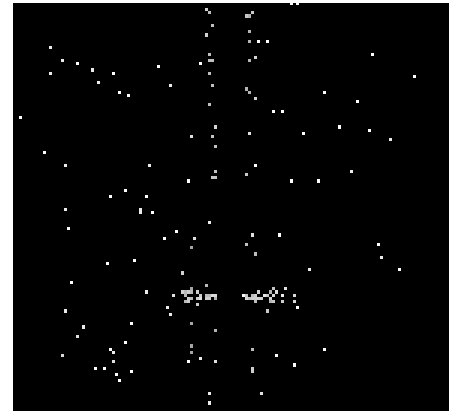
3.2 MEG Arm



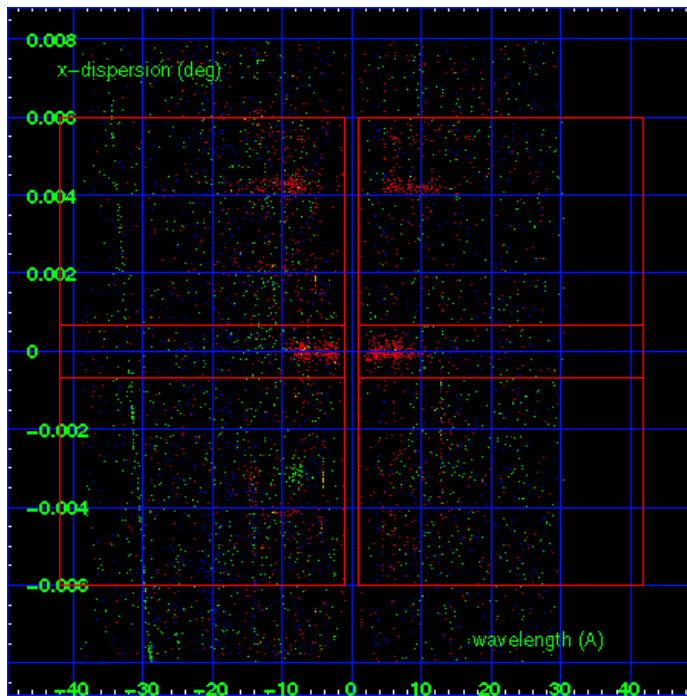
MEG Order Sort 123



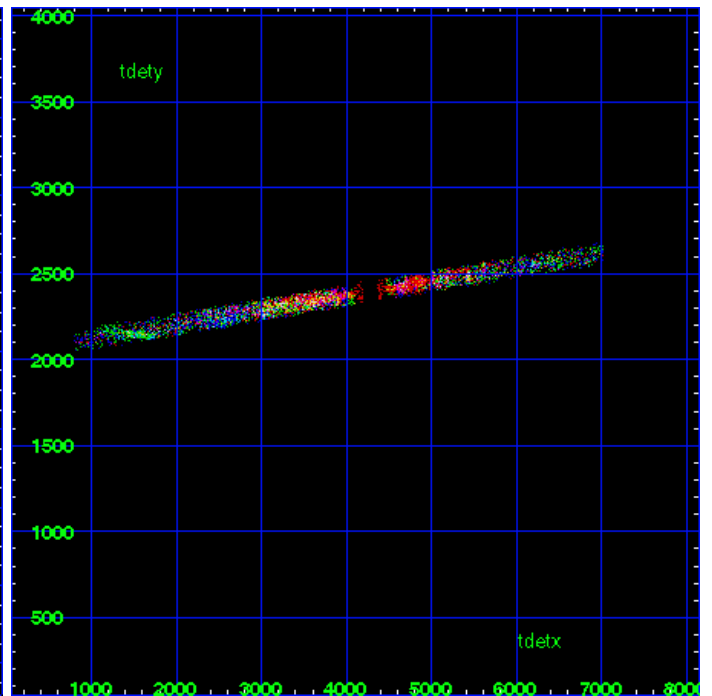
MEG Zero Order



MEG Order Sort ALL

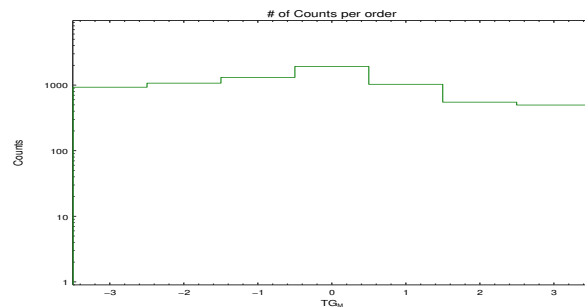


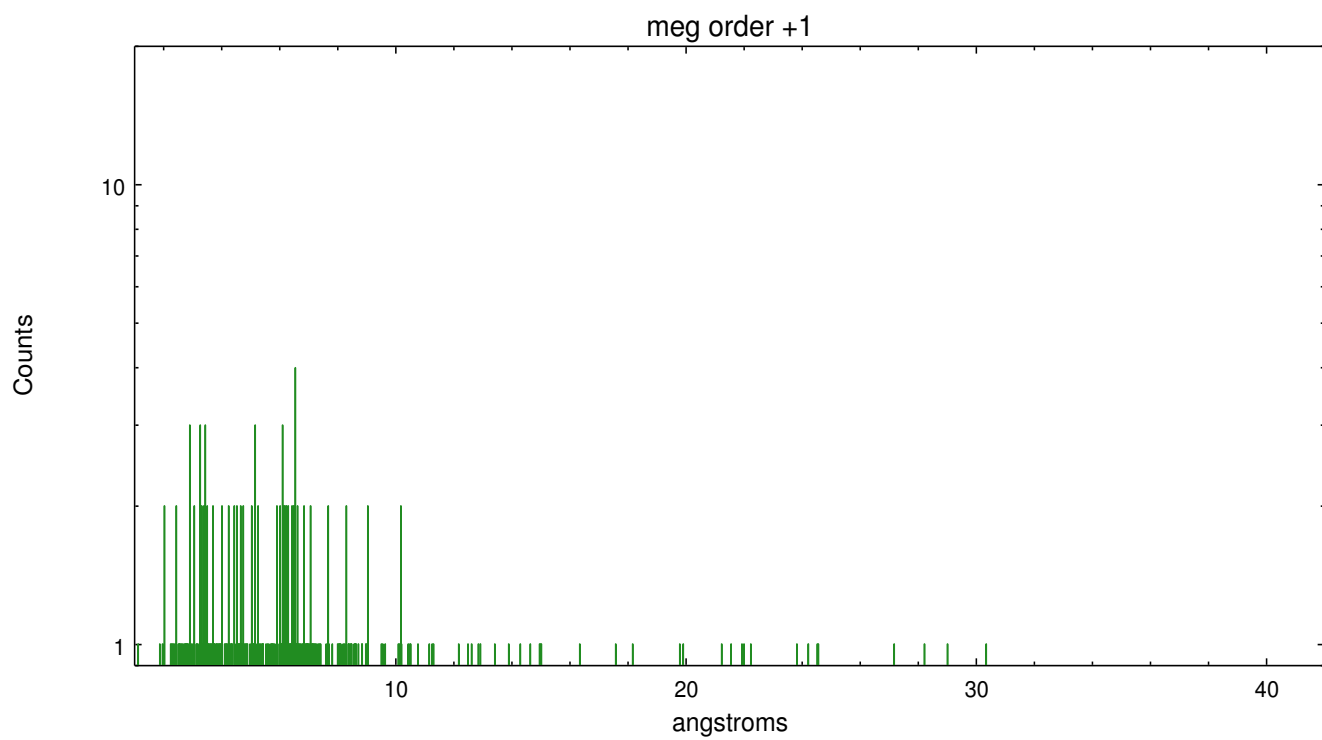
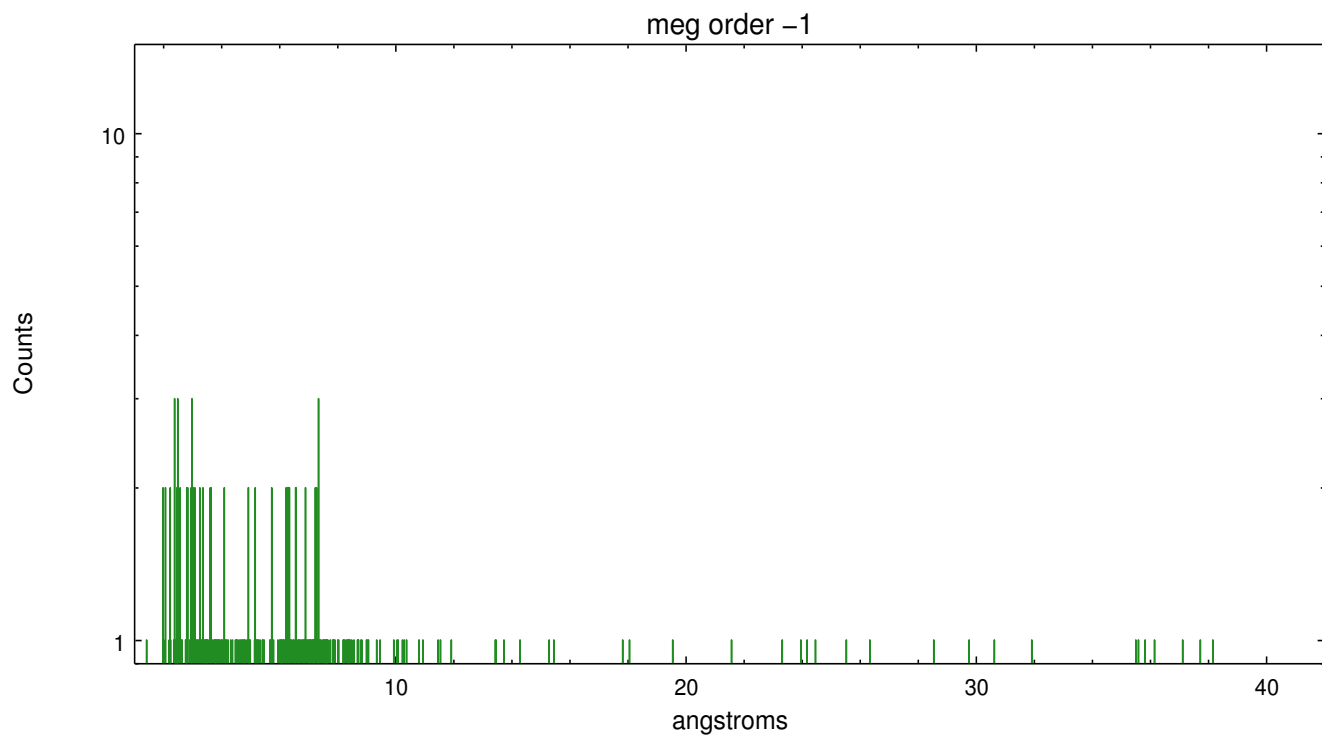
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	932	1075	1316	1934	1032	551	498





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.04.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.75

A.2 Comments

Multiple sources and dispersed spectra present. Only one spectrum is extracted in standard data processing - the source at 05:35:24.7, -05:2:59.5, CXOONC J053524.6-052759. Spectra of other sources can be extracted using CIAO threads. Many of the dispersed spectra and zeroth order images overlap so contamination will be an issue.

===

A spatial region of the original bias map for CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(83.82352,-5.30641), (83.82236,-5.30888), (83.94939,-5.36802), (83.95055,-5.36555)

=====

This region crosses the spectral arms of the source.