

V&V Reference Report

L2 ASCDS Version : 10.4.3.1

Observation 17448 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Jun 11 2016

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1 Front

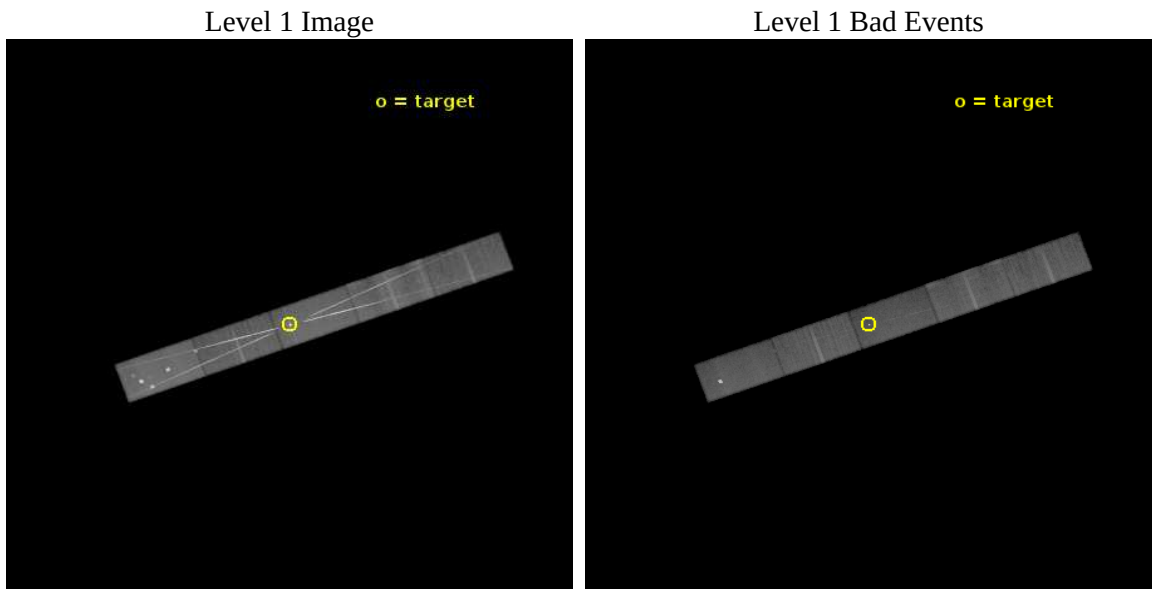
seq_num	401681	Sequence number
obs_id	17448	Observation id
title	The Narrow Fe K Line in 4U 1626-67	Proposal title
observer	Claude Canizares	Principal investigator
object	4U 1626-67	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	248.069583	Observer's specified target RA [deg]
dec_targ	-67.461667	Observer's specified target Dec [deg]
ra_nom	248.07399262081	Nominal RA [deg]
dec_nom	-67.459613901182	Nominal Dec [deg]
roll_nom	340.16070172908	Nominal Roll [deg]
revision	1	Processing version of data
ontime	50080.301404715	Sum of GTIs [s]
livetime	48899.80263981	Livetime [s]
ontime5	50080.301404715	Sum of GTIs [s]
ontime6	50080.301404715	Sum of GTIs [s]
ontime7	50080.301404715	Sum of GTIs [s]
ontime8	50080.301404715	Sum of GTIs [s]
ontime9	50080.301404715	Sum of GTIs [s]
l2events	600141	Number of level 2 events



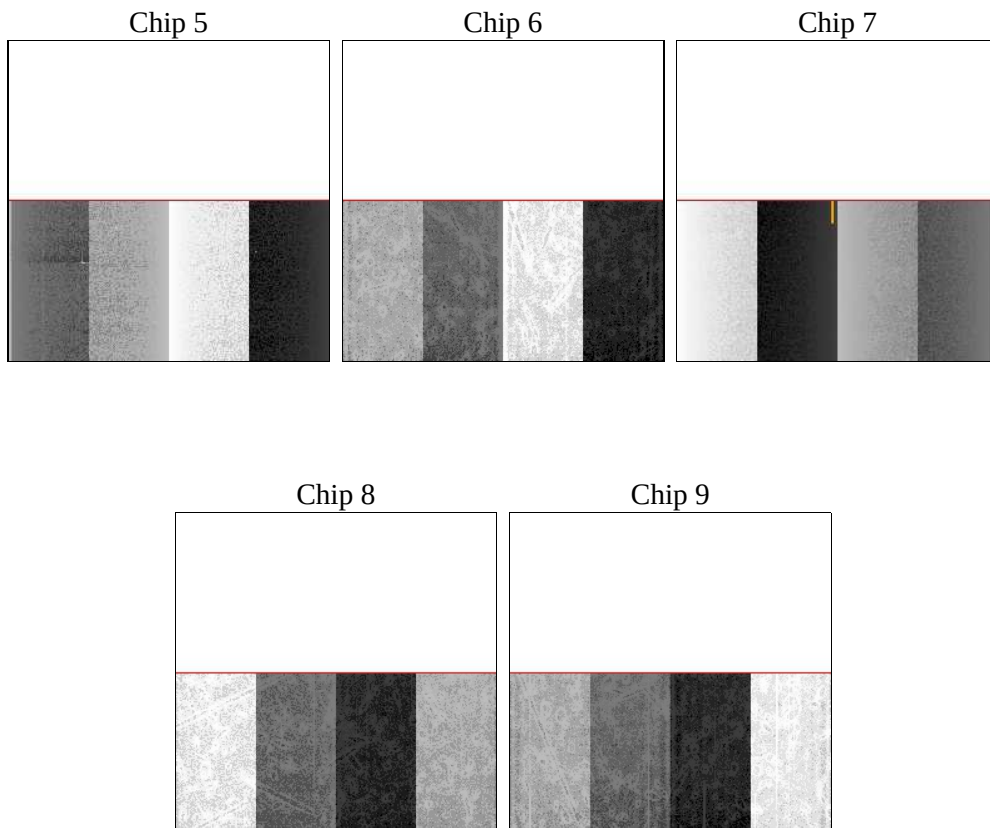
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3.1	Processing system revision	ontime	50080.301404715	Sum of GTIs [s]
caldsver	4.7.2	 	ontime5	50080.301404715	Sum of GTIs [s]
date	2016-06-12T03:09:58	Date and time of file creation	ontime6	50080.301404715	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	50080.301404715	Sum of GTIs [s]
			ontime8	50080.301404715	Sum of GTIs [s]
			ontime9	50080.301404715	Sum of GTIs [s]
			l1events	1483901	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4109.40, 4085.67)	src1a sky pixel position
					src1a sky pixel position via

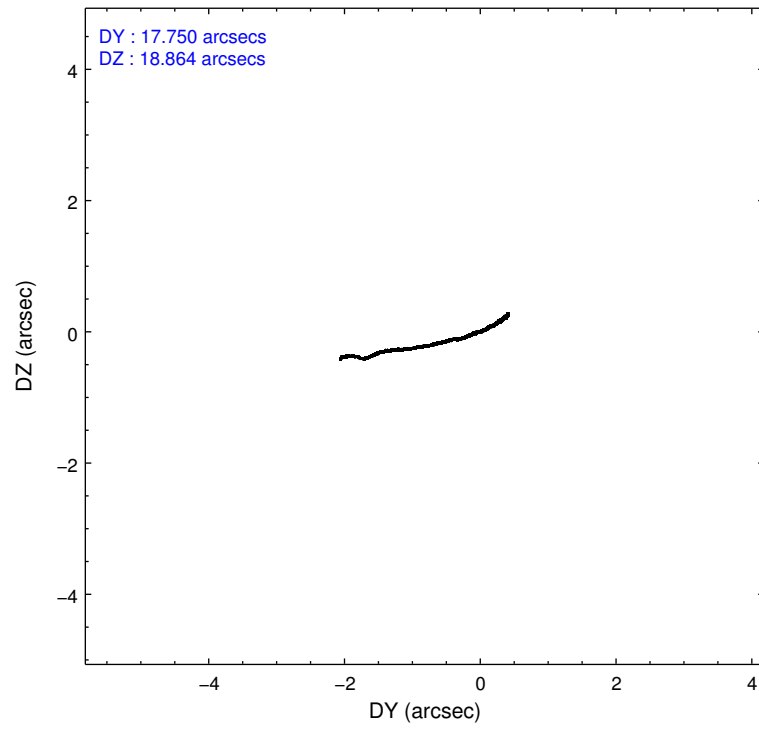
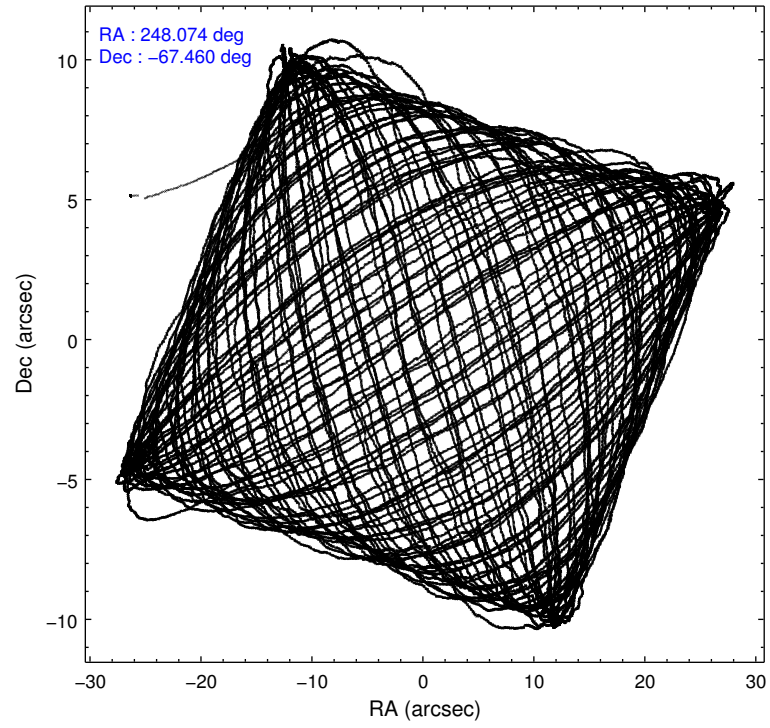
2.1.4 Events

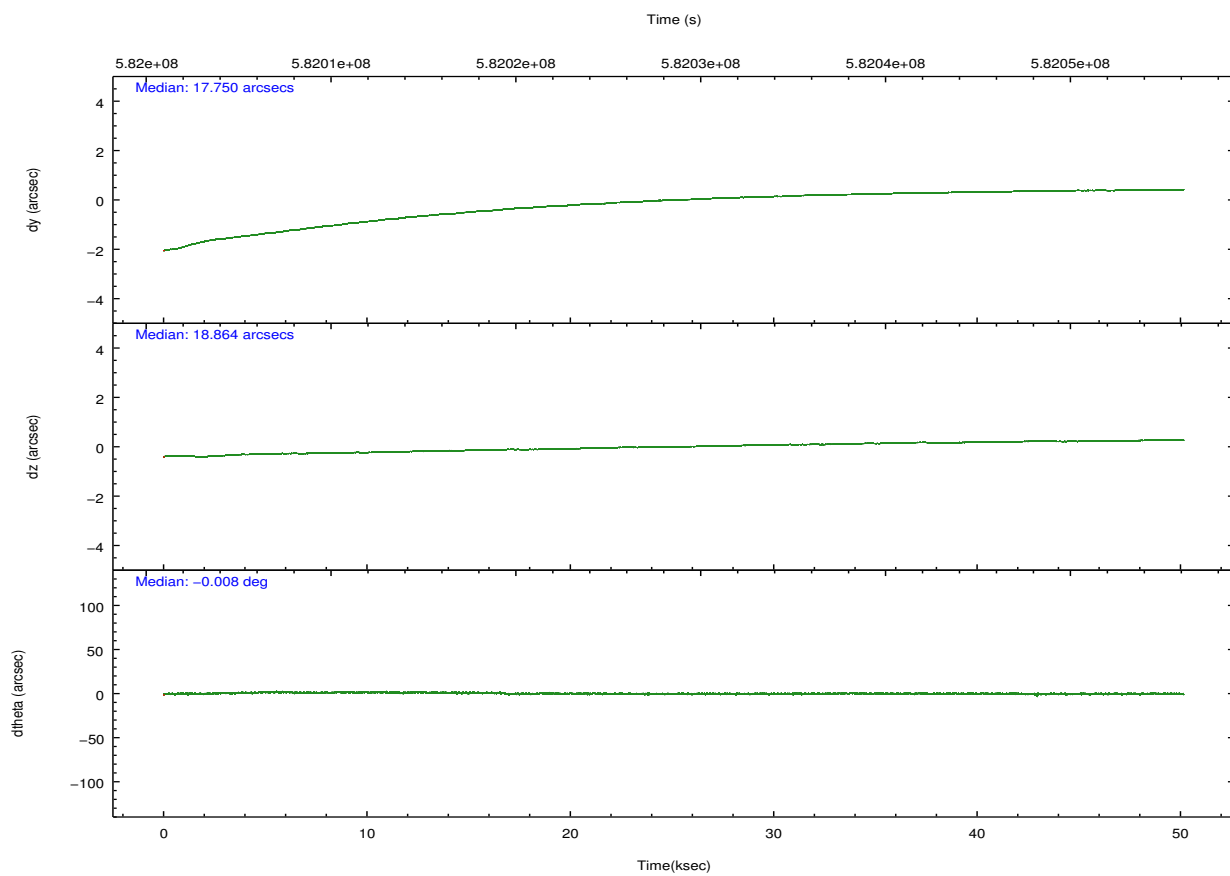
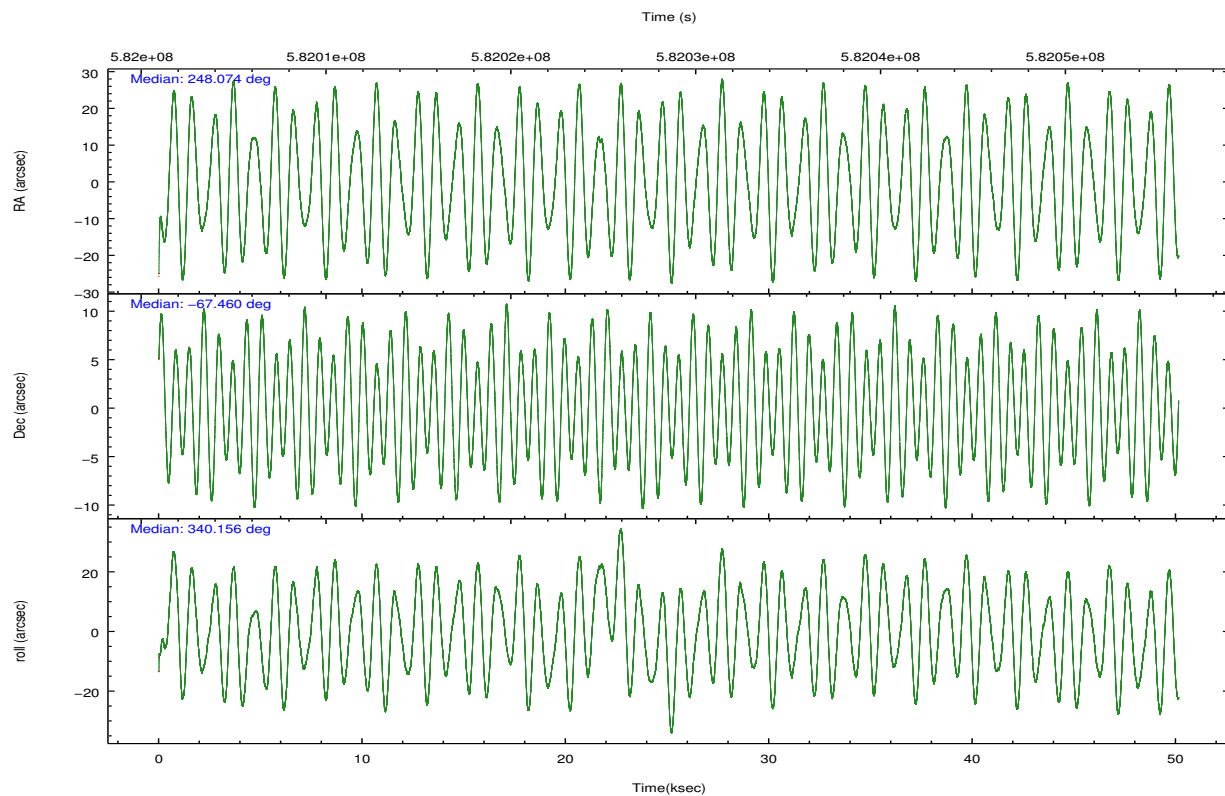
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	366951	298498	371502	270120	176830	grade 0 events	64613	95691	38910	52392	13677
rejected events	157302	159155	132004	164815	147294		17%	32%	10%	19%	7%
rejected %	42%	53%	35%	61%	83%	grade 1 events	611	472	993	242	87
							0%	0%	0%	0%	0%
						grade 2 events	49945	19520	55460	19143	5778
							13%	6%	14%	7%	3%
						grade 3 events	13580	7038	24120	8054	2725
							3%	2%	6%	2%	1%
						grade 4 events	9041	7082	23829	7704	2700
							2%	2%	6%	2%	1%
						grade 5 events	27733	8135	25764	11483	8612
							7%	2%	6%	4%	4%
						grade 6 events	72478	10014	97185	18013	4658
							19%	3%	26%	6%	2%
						grade 7 events	128950	150546	105241	153089	138593
							35%	50%	28%	56%	78%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	248.003703	248.073992620808	CCD I2 on	N	N
[deg] Pointing Dec	-67.464806	-67.45961390118217	CCD I3 on	N	N
[deg] Pointing Roll	339.939153	340.1607017290798	CCD S0 on	O1	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-183.992523	-183.9875365069546	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.144986076053243	CCD S4 on	Y	Y
[s] Observation start time (MET)	582003614.184000	582001992.88688	CCD S5 on	O2	Y
Observation start date	2016-06-11T03:39:06	2016-06-11T03:13:12	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	582053614.184000	582054883.91491	On-chip summing requested	N	N
Observation end date	2016-06-11T17:32:26	2016-06-11T17:54:43	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



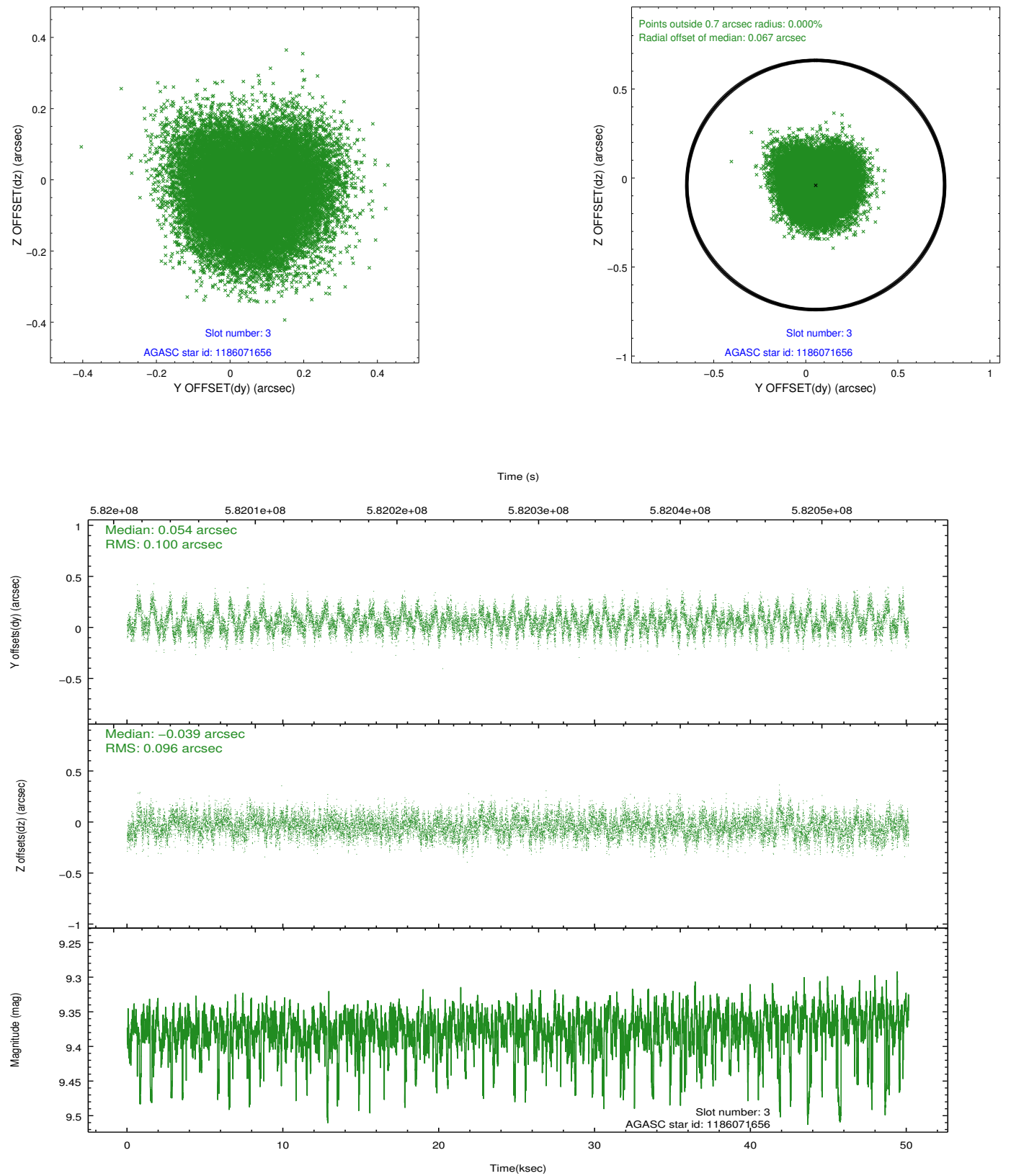


Slot Statistics

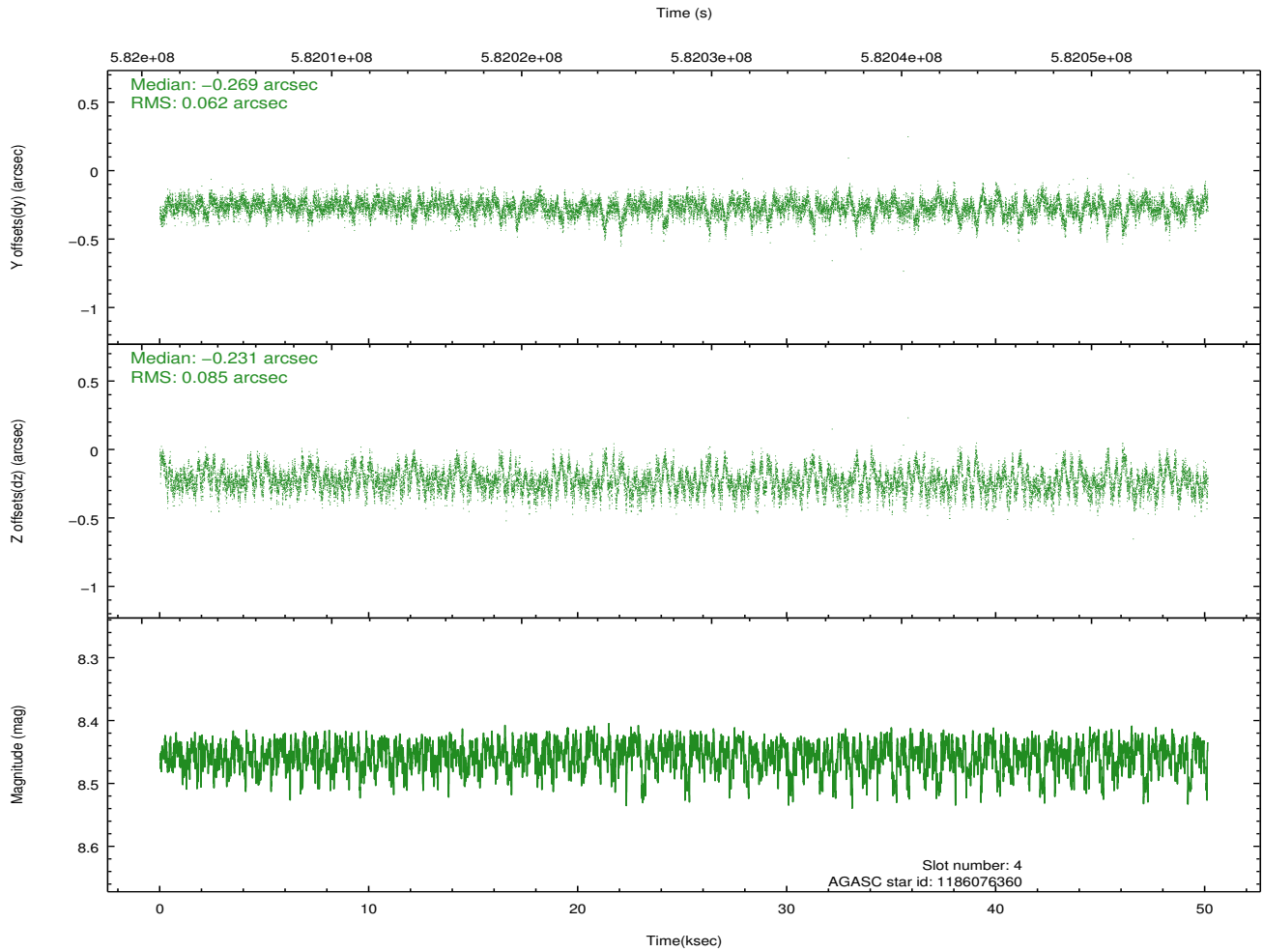
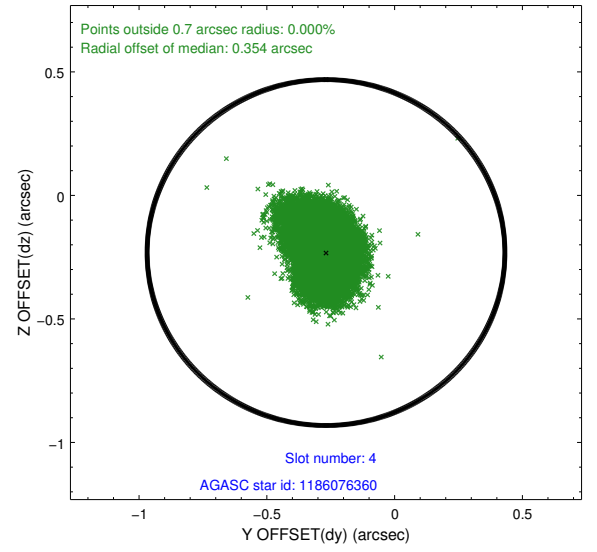
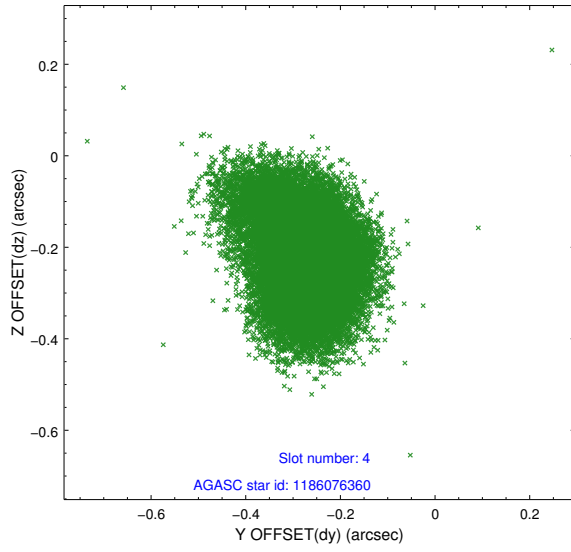
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.20	12228	0.086	0.020	0.018	0.026	0.000000	0.000000	926.11	-1862.56
1	FID		ACIS-S-5	7.24	12230	-0.298	0.031	0.027	0.036	0.000000	0.000000	-1823.36	34.90
2	FID		ACIS-S-6	7.41	12229	0.191	-0.041	0.015	0.024	0.000000	0.000000	391.68	678.85
3	GUIDE	used	1186071656	9.38	24427	0.054	-0.039	0.150	0.235	247.561655	-67.321127	-752.64	271.97
4	GUIDE	used	1186076360	8.45	24452	-0.269	-0.231	0.110	0.189	248.266100	-67.434021	302.98	227.68
5	GUIDE	used	1215569992	9.25	24430	-0.093	-0.206	0.137	0.242	249.398538	-67.627995	2004.50	83.61
6	GUIDE	used	1215570568	8.39	24448	0.363	0.369	0.105	0.182	246.859352	-67.889721	-925.60	-1982.53
7	GUIDE	used	1186072296	9.35	24434	-0.069	0.103	0.149	0.251	247.909553	-67.035246	-654.34	1406.95

2.4 Star Slots

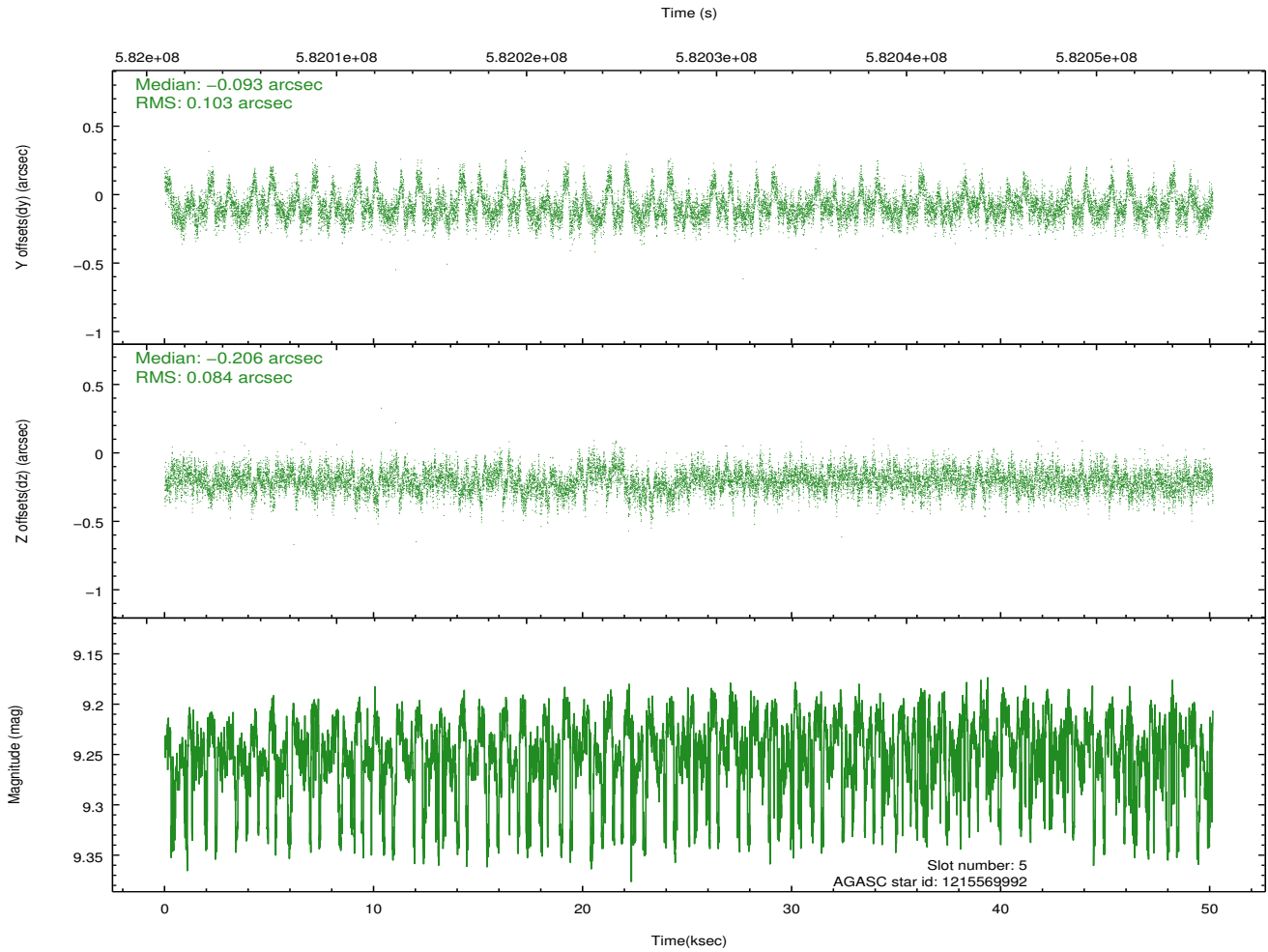
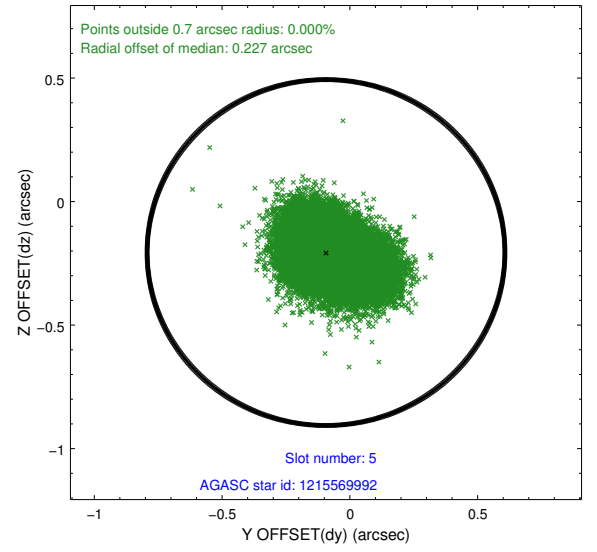
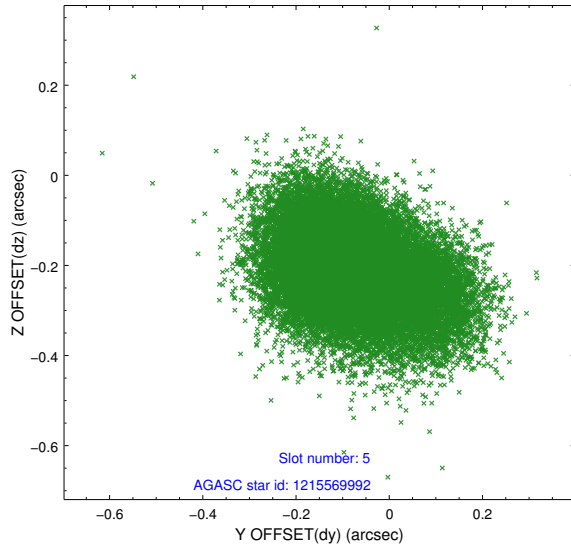
2.4.1 Slot 3



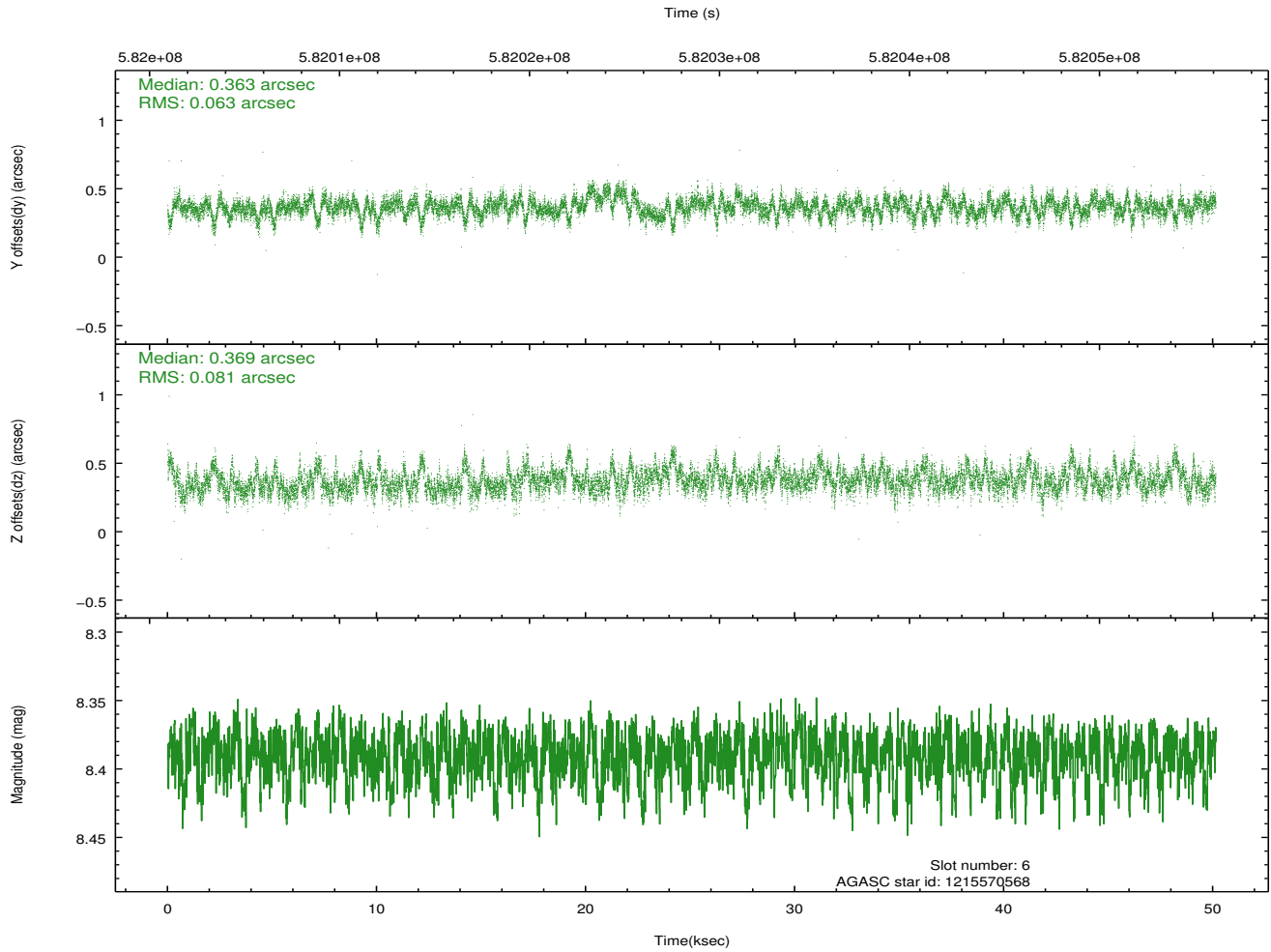
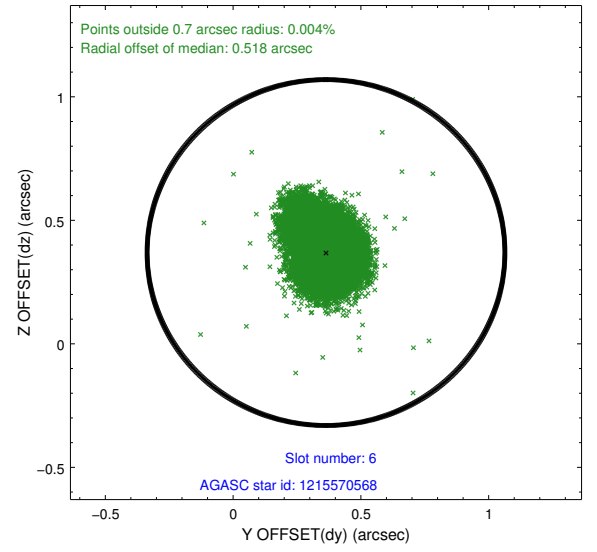
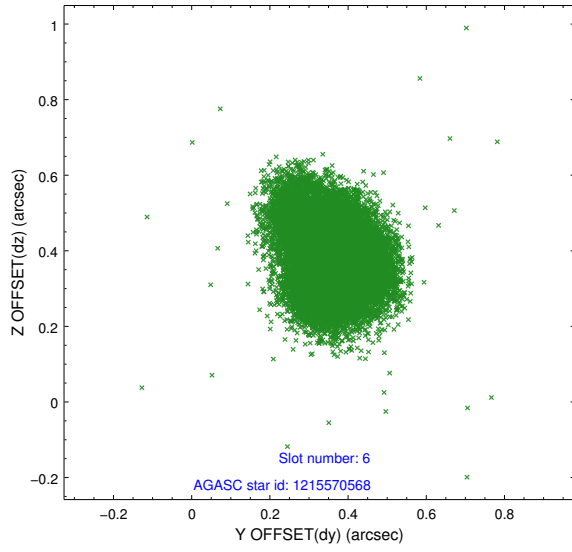
2.4.2 Slot 4



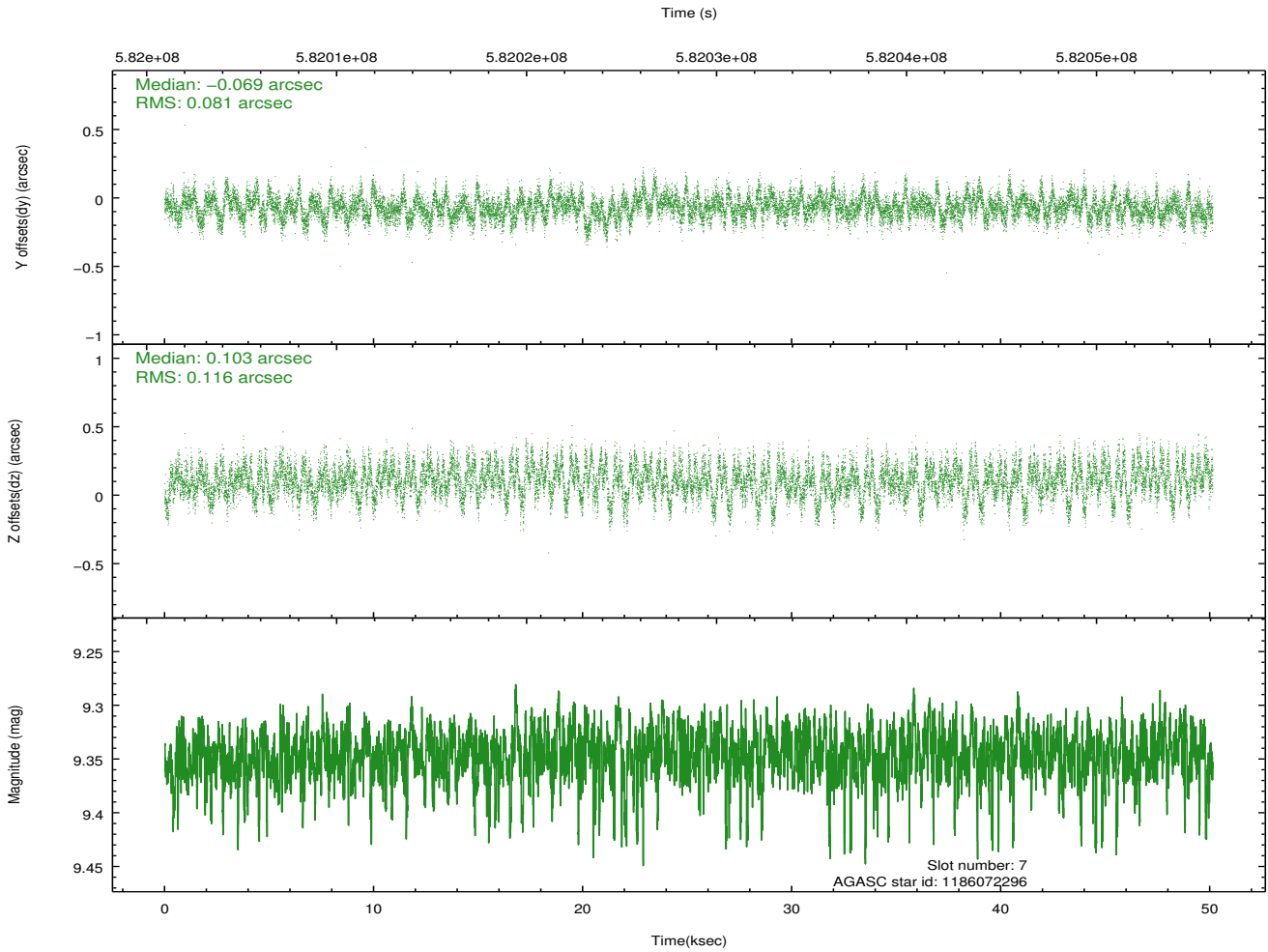
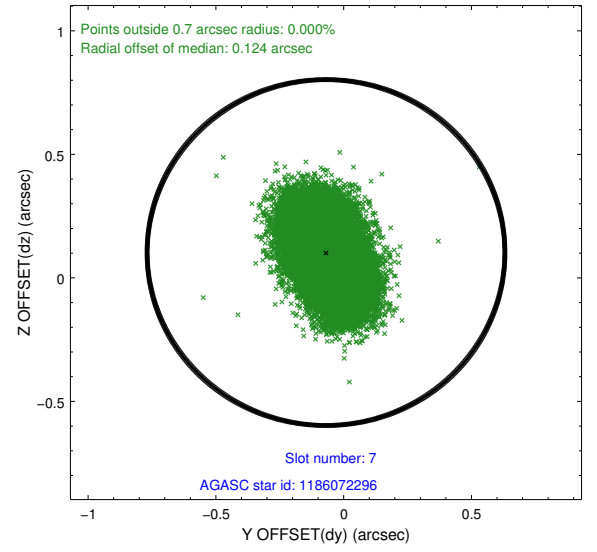
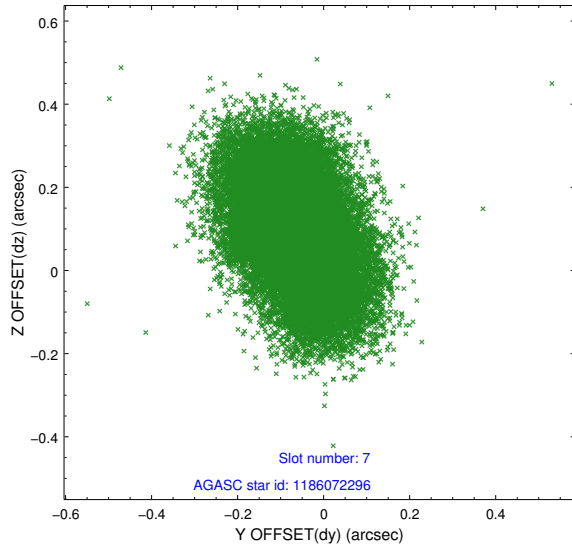
2.4.3 Slot 5



2.4.4 Slot 6

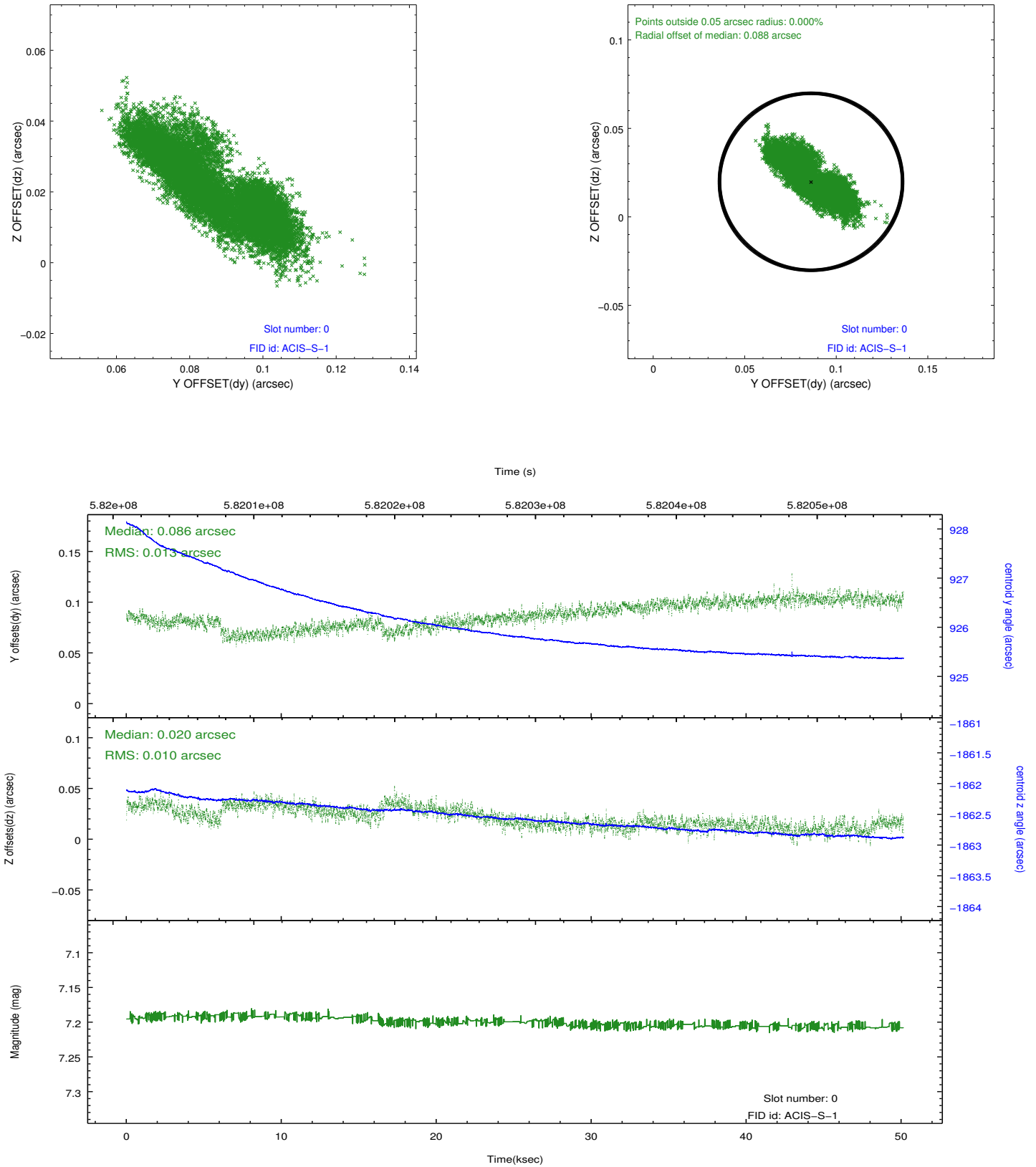


2.4.5 Slot 7

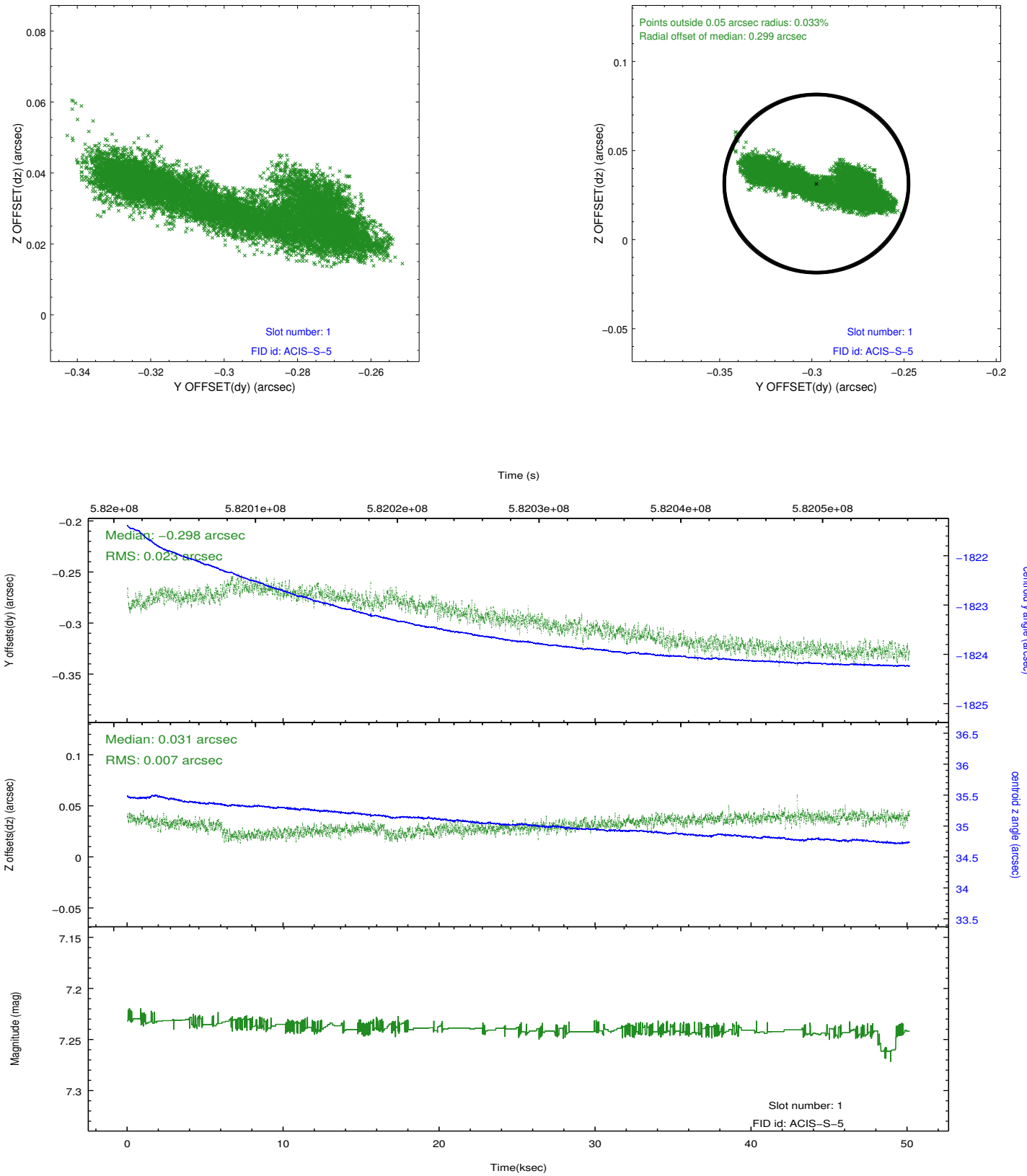


2.5 FID Slots

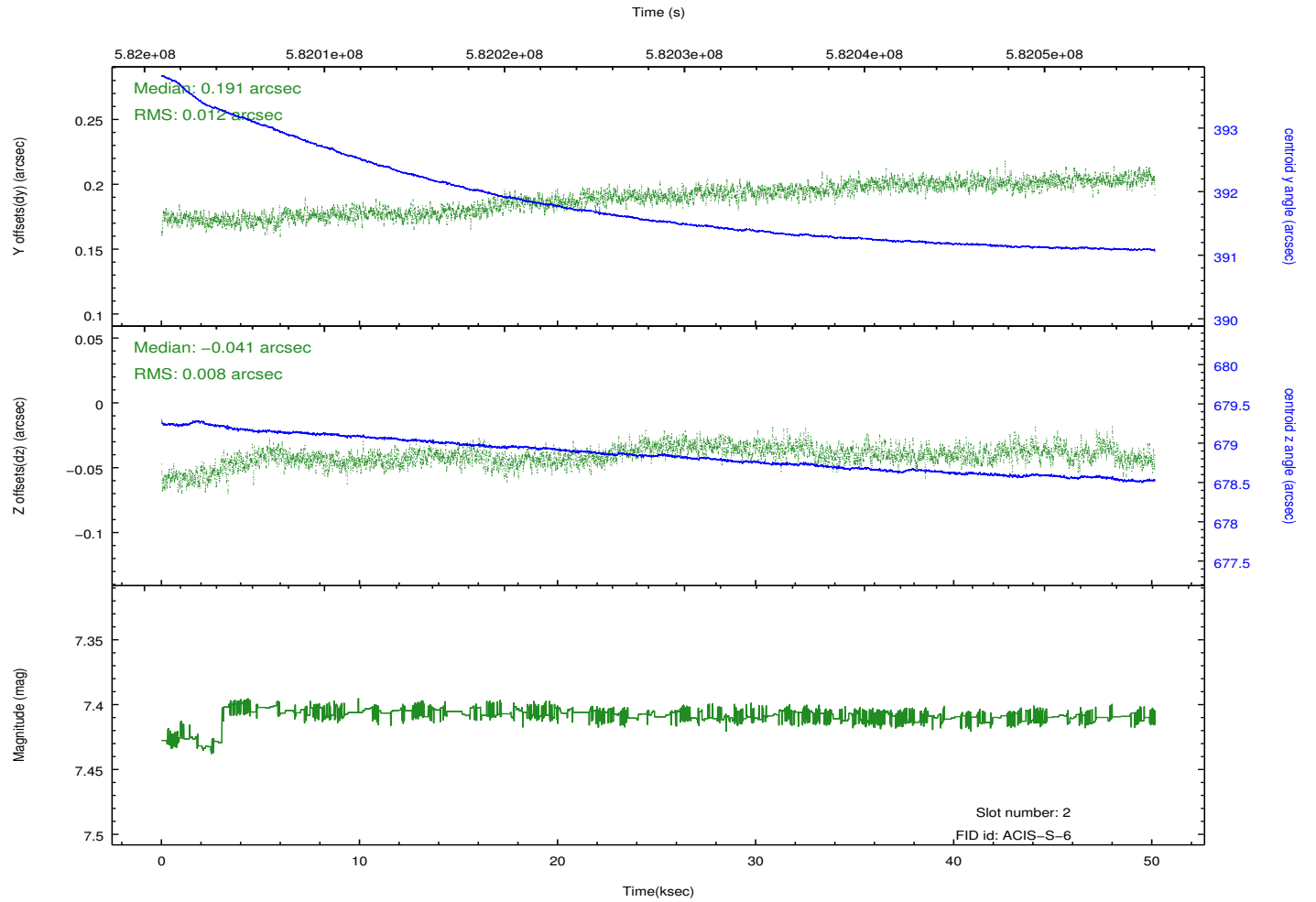
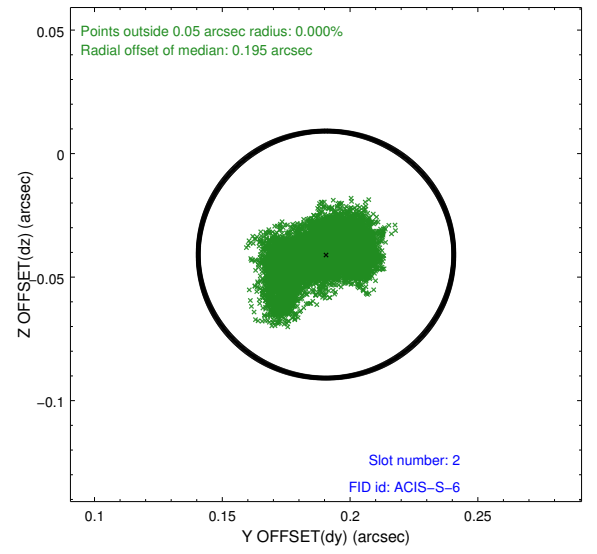
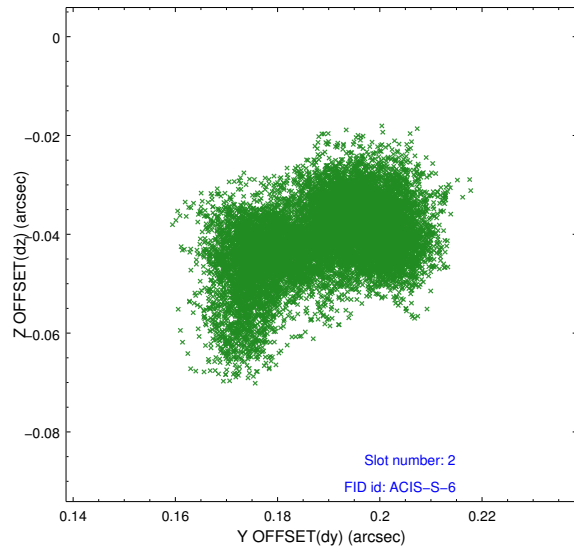
2.5.1 Slot 0



2.5.2 Slot 1

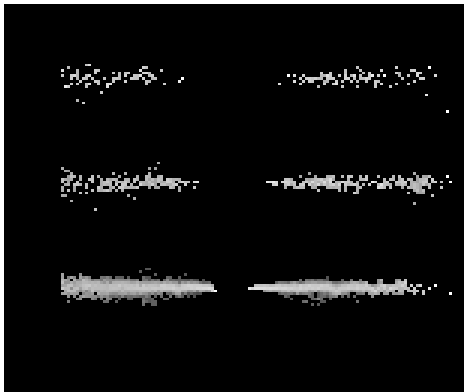


2.5.3 Slot 2

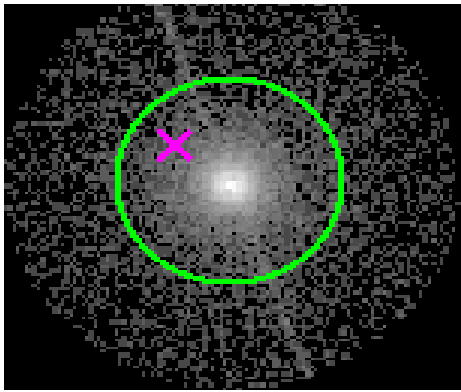


3 Gratings

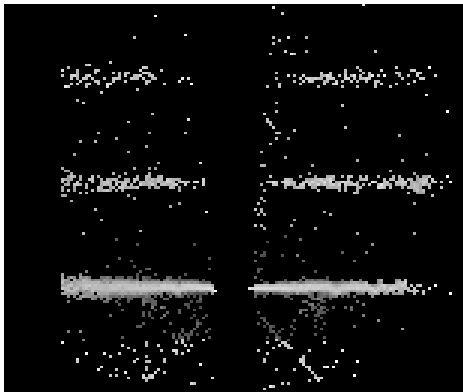
3.1 HEG Arm



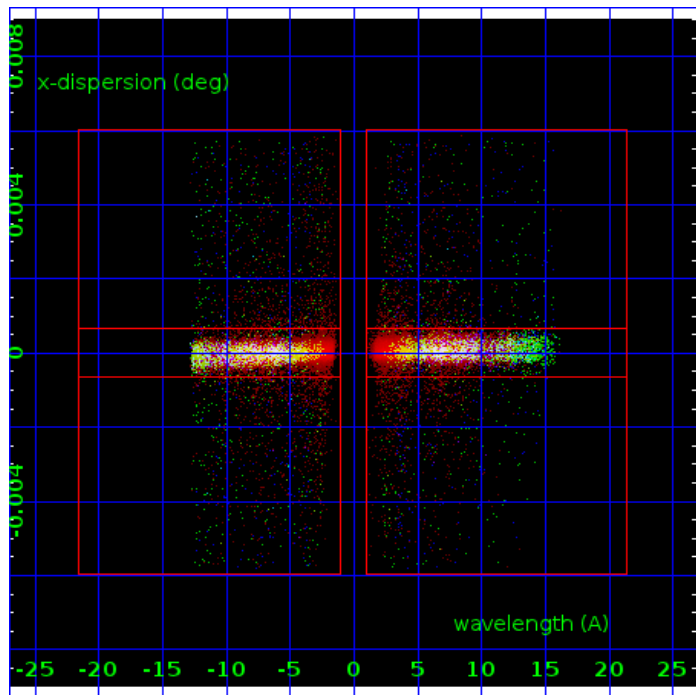
HEG Order Sort 123



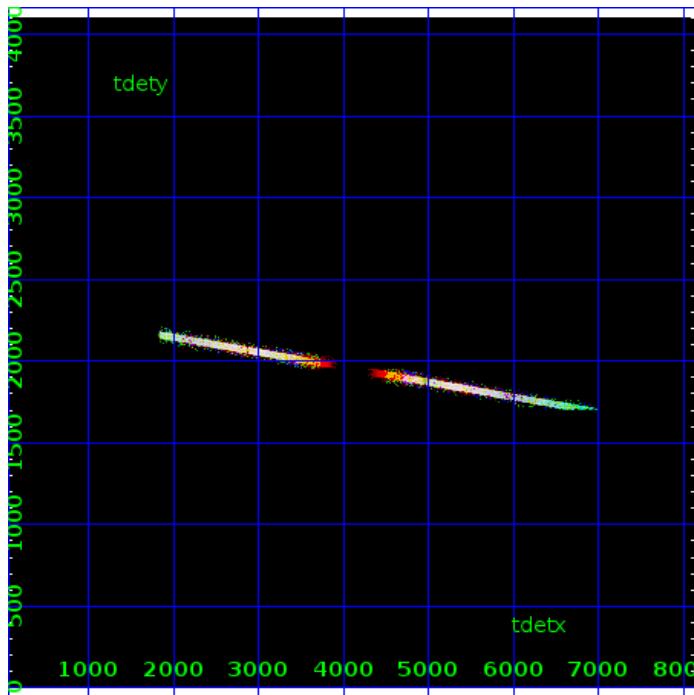
HEG Zero Order



HEG Order Sort ALL

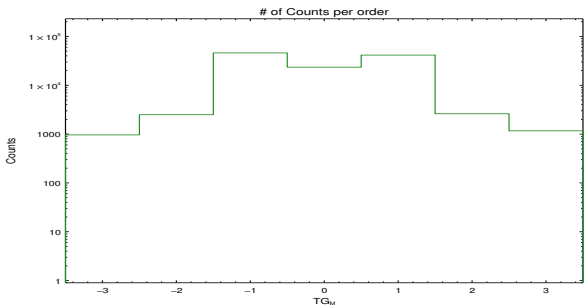


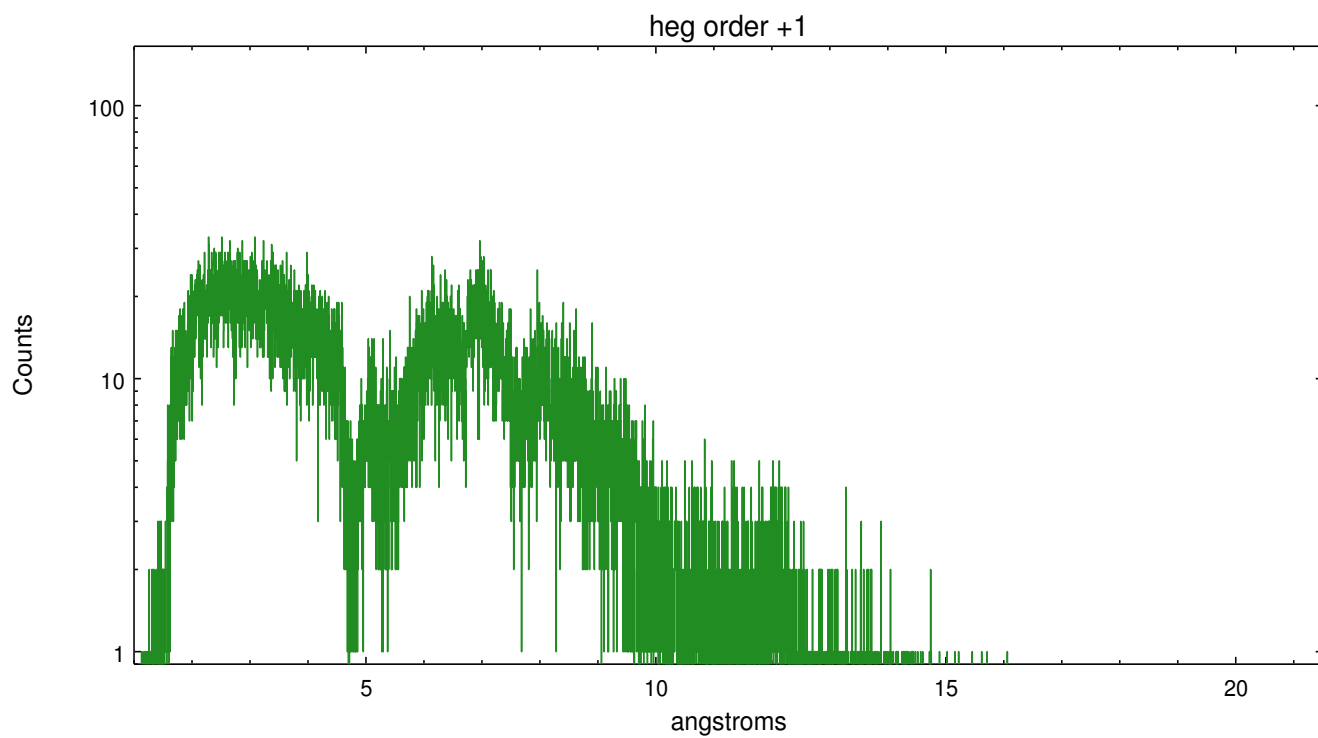
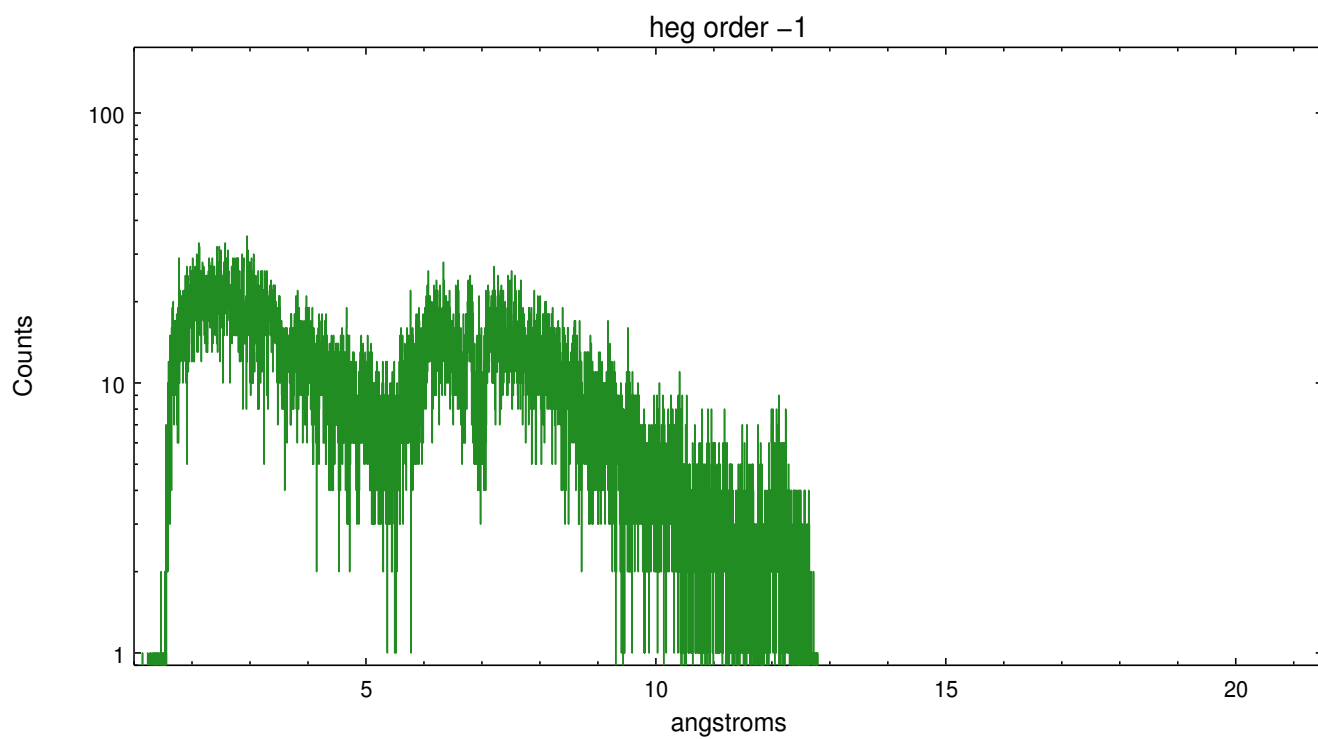
Spot Image HEG



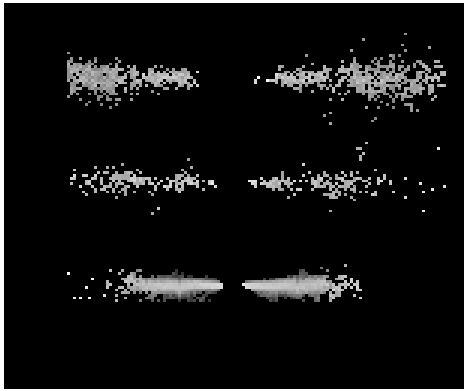
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	962	2494	46017	23468	41540	2608	1167

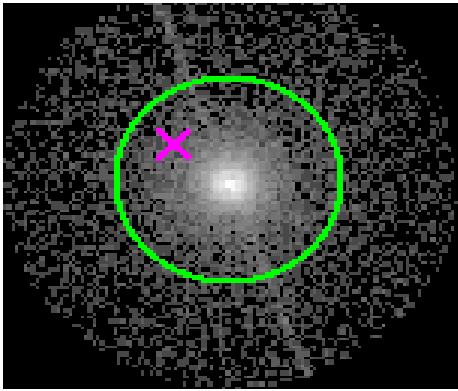




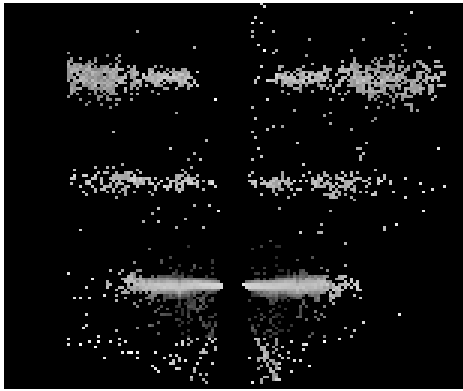
3.2 MEG Arm



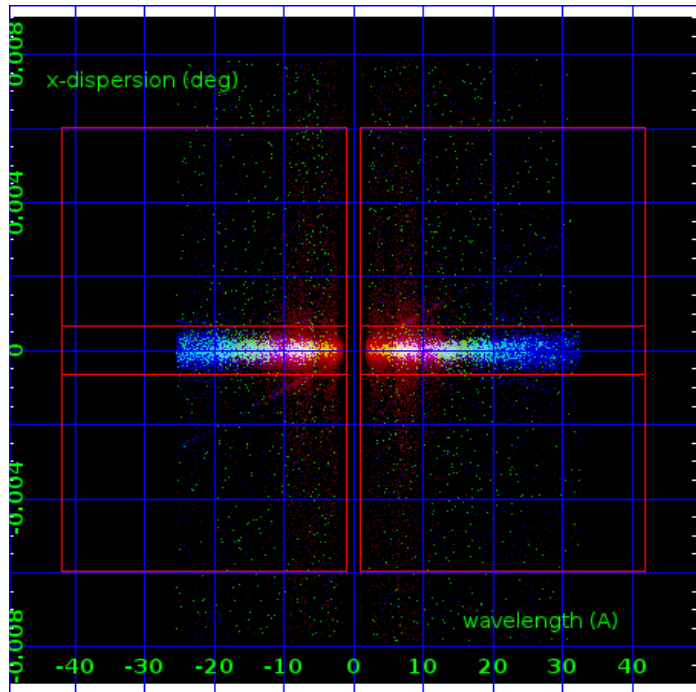
MEG Order Sort 123



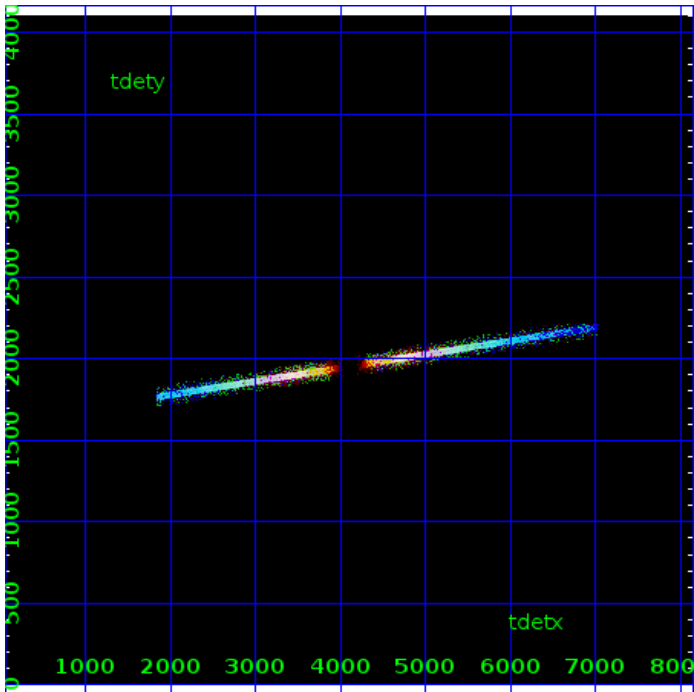
MEG Zero Order



MEG Order Sort ALL

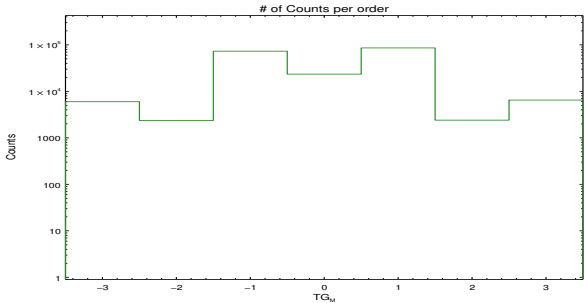


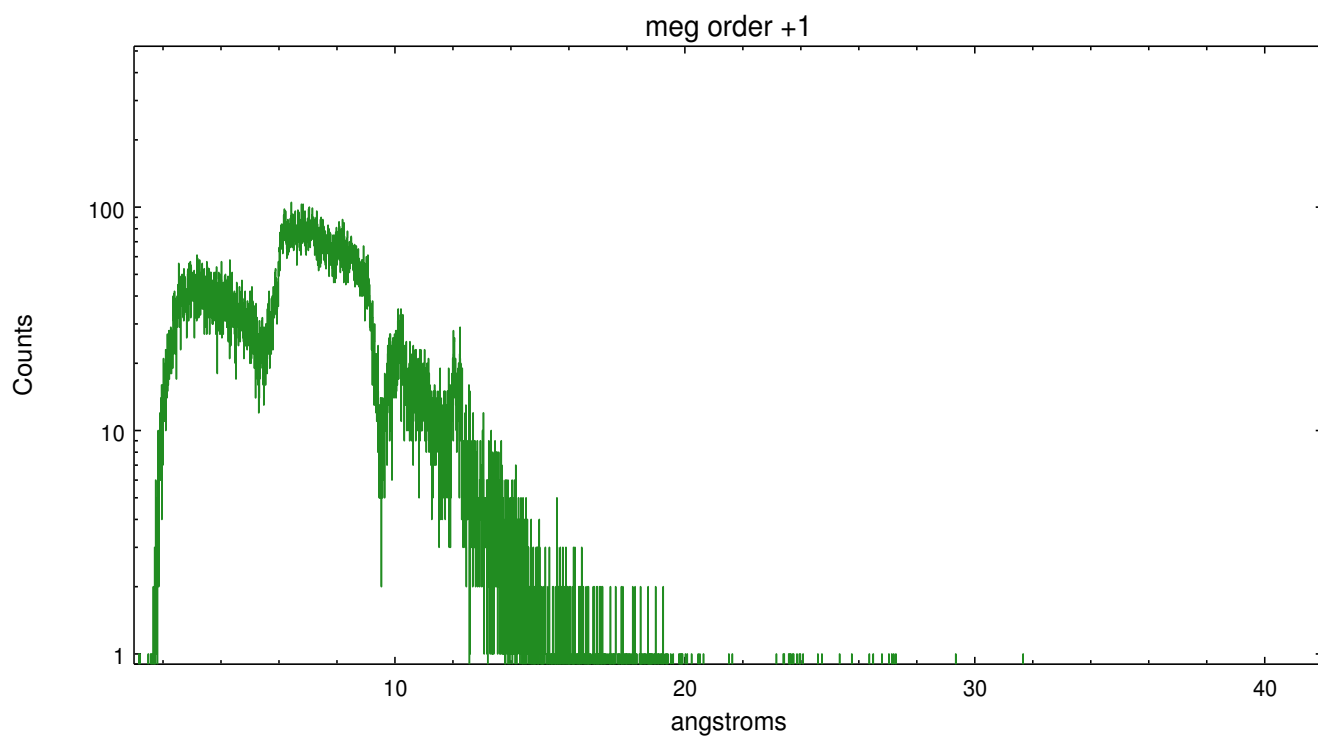
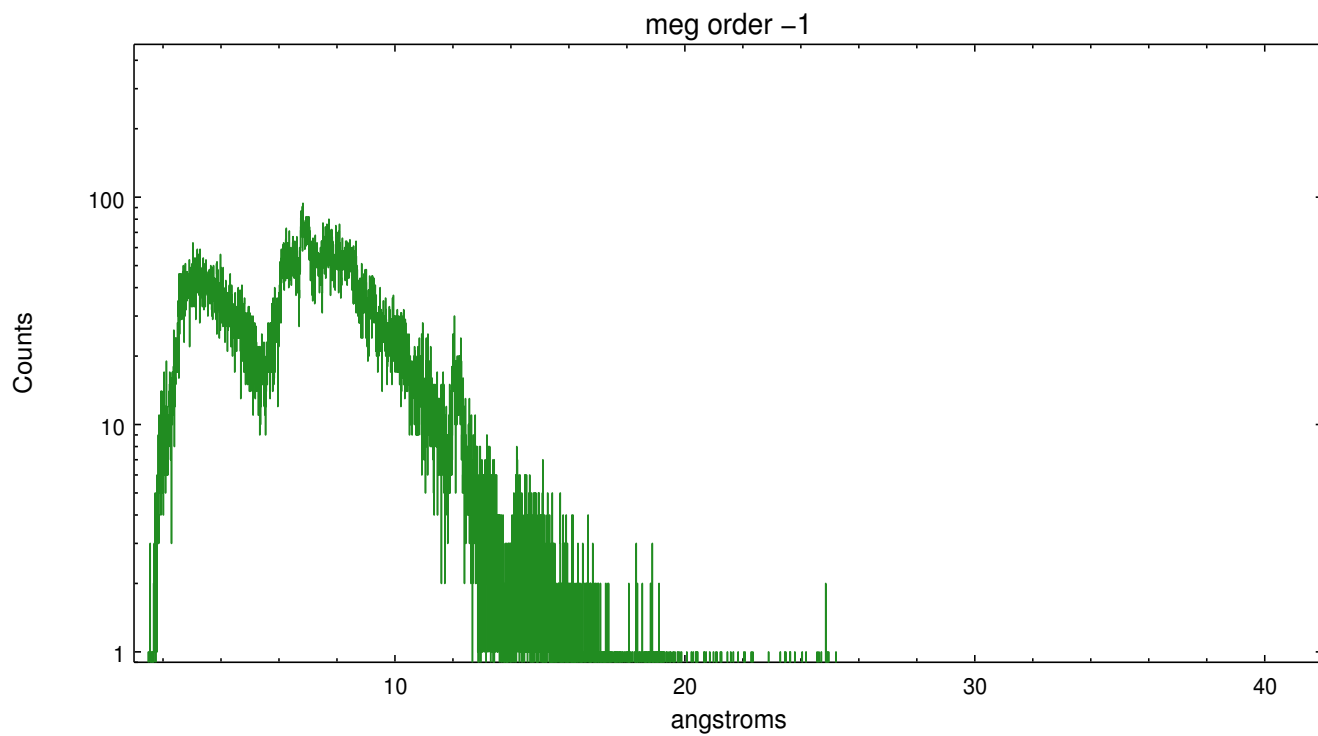
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5987	2370	73156	23468	85940	2401	6491





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.06.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.080301404715

A.2 Comments

Zeroth order piled up. The zeroth order sky position was determined using a software tool developed by CXC called findzero, which is available in CIAO as part of the tgdetect2 tool. The tool calculates the point of intersection of the readout streak on the ACIS CCD and the meg or leg dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case.