

V&V Reference Report

L2 ASCDS Version : 8.1.1

Observation 457 - L2 Version 4

Chandra X-Ray Center

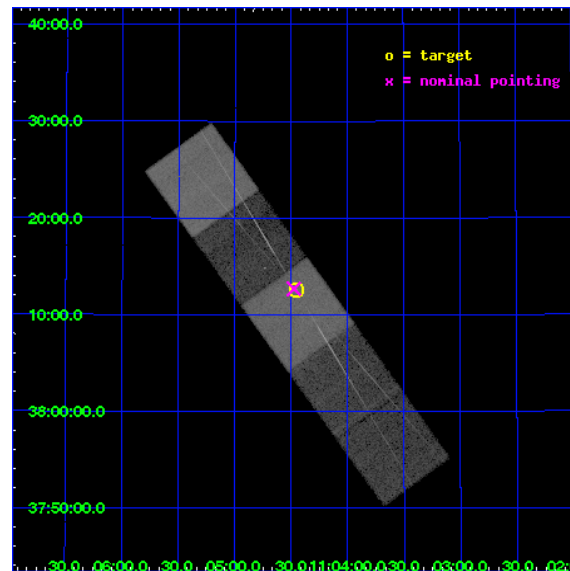
L2 Processing Date : Nov 21 2009

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1 Front

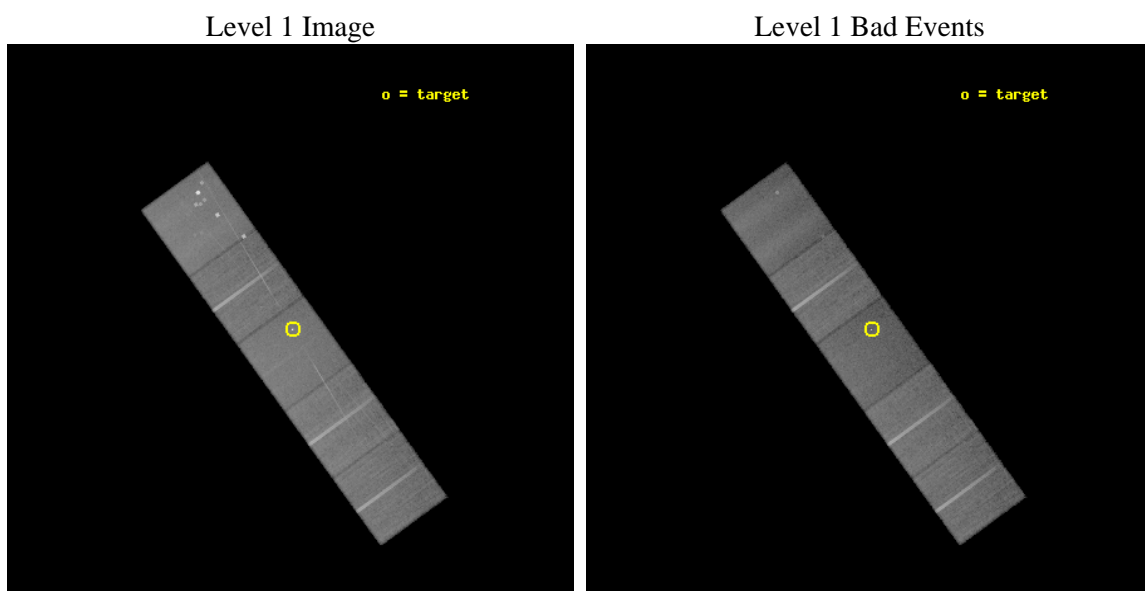
seq_num	790018	Sequence number
obs_id	457	Observation id
title	GRATINGS OBSERVATIONS OF A FEATURELESS CONTINUUM: MKN 421	Proposal
observer	Dr. CXC Calibration	Principal investigator
object	MKN 421	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA
dec_targ	38.208806	Observer's specified target Dec
ra_nom	166.11877075815	Nominal RA
dec_nom	38.211407515543	Nominal Dec
roll_nom	54.118128089177	Nominal Roll
revision	4	Processing version of data
ontime	26159.959074147	Sum of GTIs [s]
livetime	25828.705920714	Livetime [s]
ontime5	26159.959094085	Sum of GTIs [s]
ontime6	26156.718133874	Sum of GTIs [s]
ontime7	26159.959074147	Sum of GTIs [s]
ontime8	26159.959094085	Sum of GTIs [s]
ontime9	26153.477123789	Sum of GTIs [s]
l2events	283605	Number of level 2 events



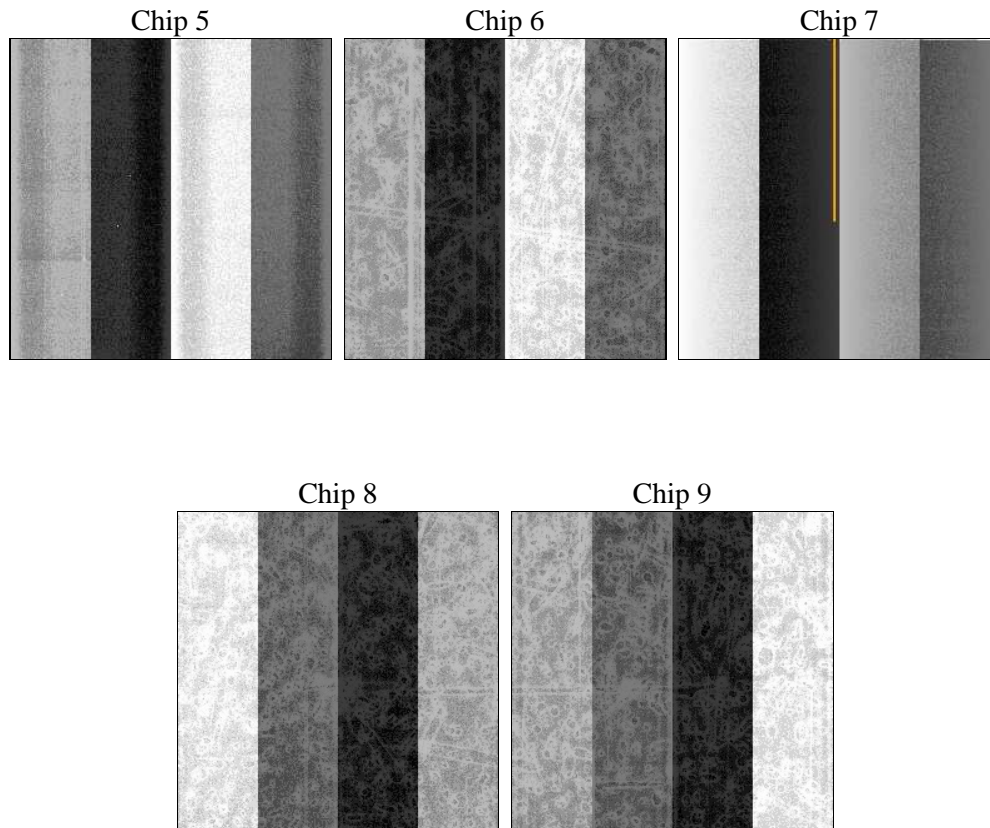
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	27000.000000	Scheduled observation exposure time
ascdsver	8.1.1	ASCDS version number	ontime	26159.959074147	Sum of GTIs [s]
caldsver	4.1.4	 	ontime5	26159.959094085	Sum of GTIs [s]
date	2009-11-21T11:03:09	Date and time of file creation	ontime6	26156.718133874	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	26159.959074147	Sum of GTIs [s]
			ontime8	26159.959094085	Sum of GTIs [s]
			ontime9	26153.477123789	Sum of GTIs [s]
			l1events	1354048	Number of level 1 events

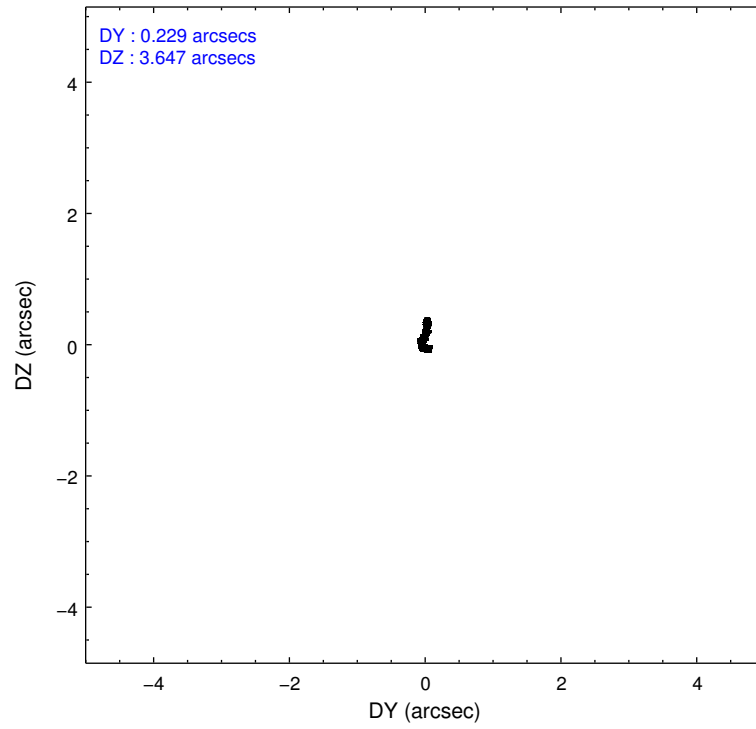
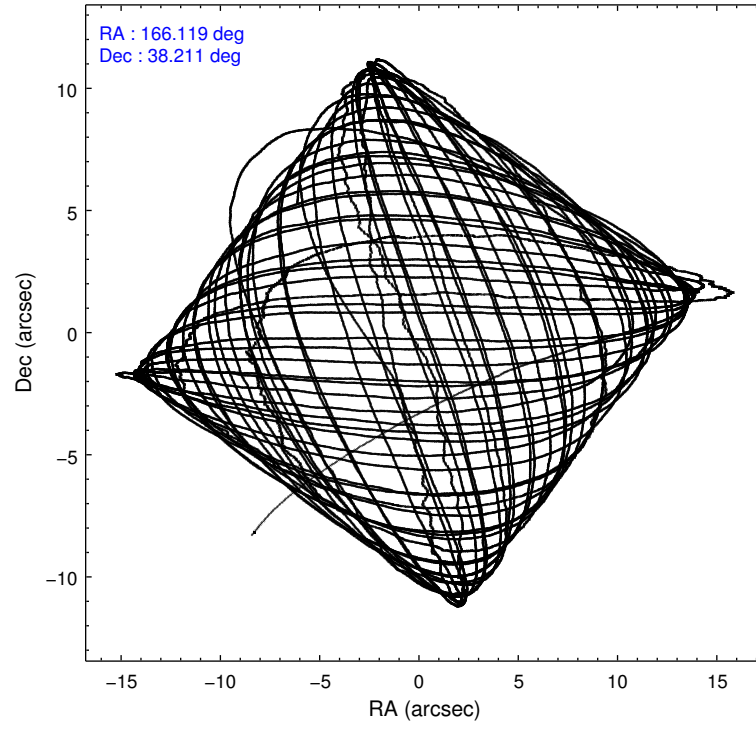
2.1.4 Events

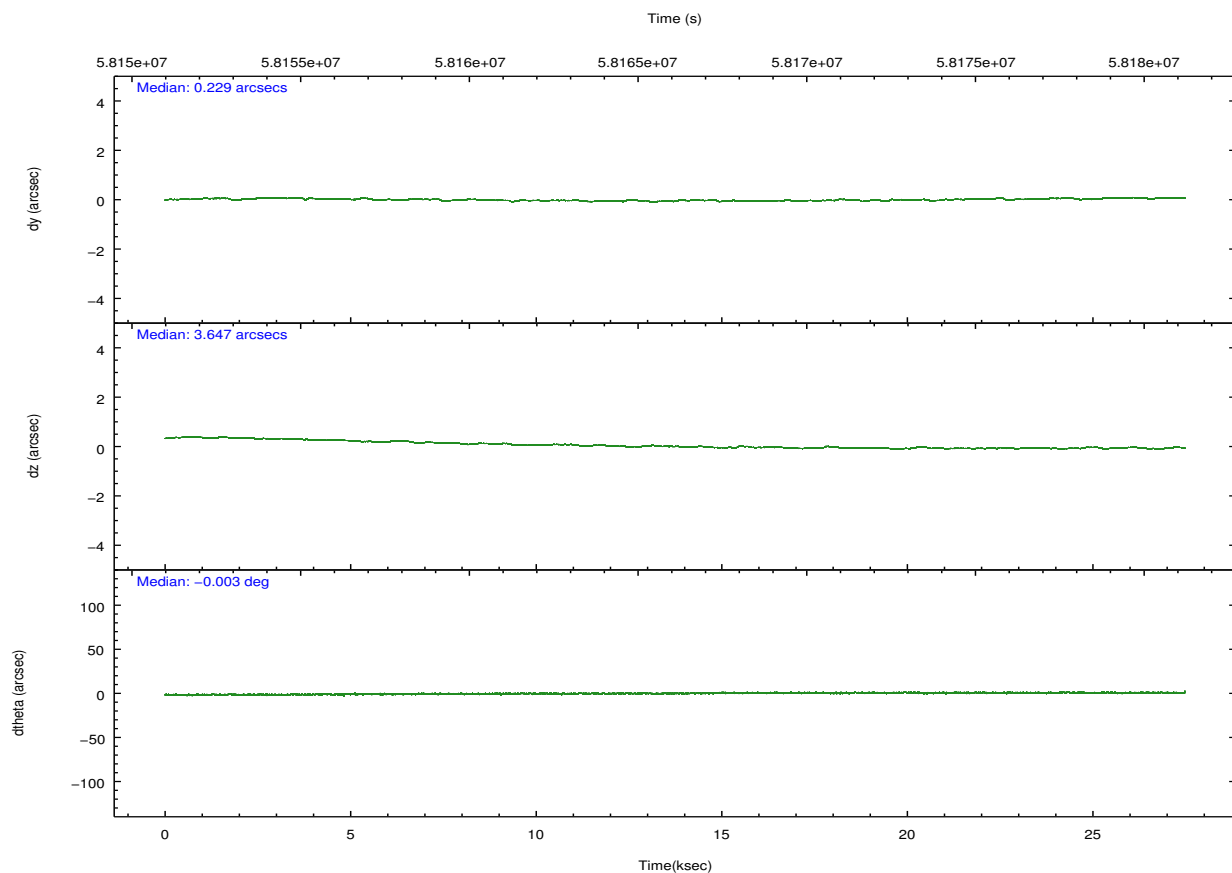
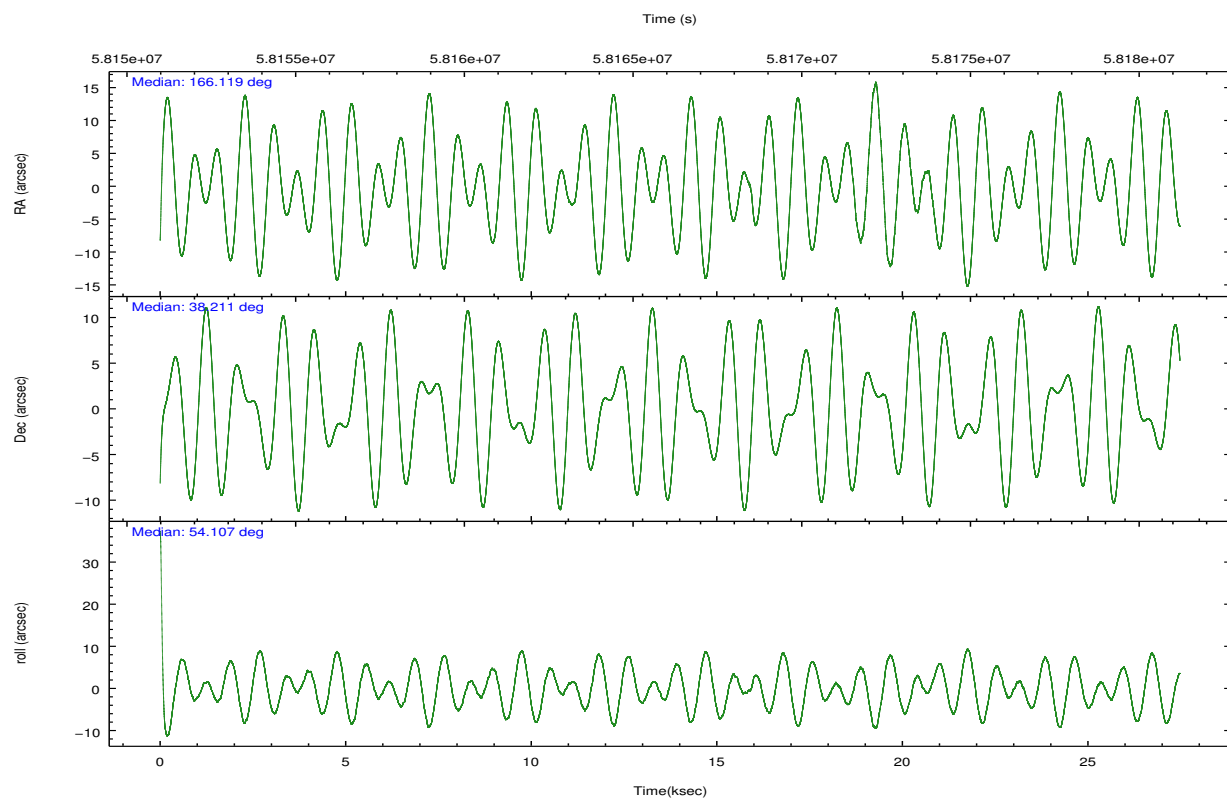
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	318769	250624	262299	286910	235446	grade 0 events	32335	7453	7152	13217	4824
rejected events	170766	223943	158261	237644	212087		10%	2%	2%	4%	2%
rejected %	53%	89%	60%	82%	90%	grade 1 events	1153	41	277	84	31
							0%	0%	0%	0%	0%
						grade 2 events	31747	9679	22512	15169	9244
							9%	3%	8%	5%	3%
						grade 3 events	4993	1574	6709	3762	1494
							1%	0%	2%	1%	0%
						grade 4 events	4529	1608	5874	3603	1486
							1%	0%	2%	1%	0%
						grade 5 events	11116	4813	16524	6767	4915
							3%	1%	6%	2%	2%
						grade 6 events	74428	6374	61822	13523	6317
							23%	2%	23%	4%	2%
						grade 7 events	158468	219082	141429	230785	207135
							49%	87%	53%	80%	87%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
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
Pointing RA	166.114975	166.1187707581524	Subarray requested	NONE	NONE
Pointing Dec	38.183955	38.21140751554274	Alternating exposures requested	N	N
Pointing Roll	53.963826	54.11812808917675	Primary exposure time	0.000000	3.2
Window start time	57974464.184000	57974464.184000			
Window stop time	58665664.184000	58665664.184000			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-186.2428773324539			
SIM translation stage offset (mm)	0	-3.889645250553912			
Observation start time	58152835.184000	58151795.294914			
Observation start date	1999-11-05T01:32:51	1999-11-05T01:16:35			
Observation end time	58179835.184000	58180418.420948			
Observation end date	1999-11-05T09:02:51	1999-11-05T09:13:38			
Read mode	TIMED	TIMED			

2.3 Aspect



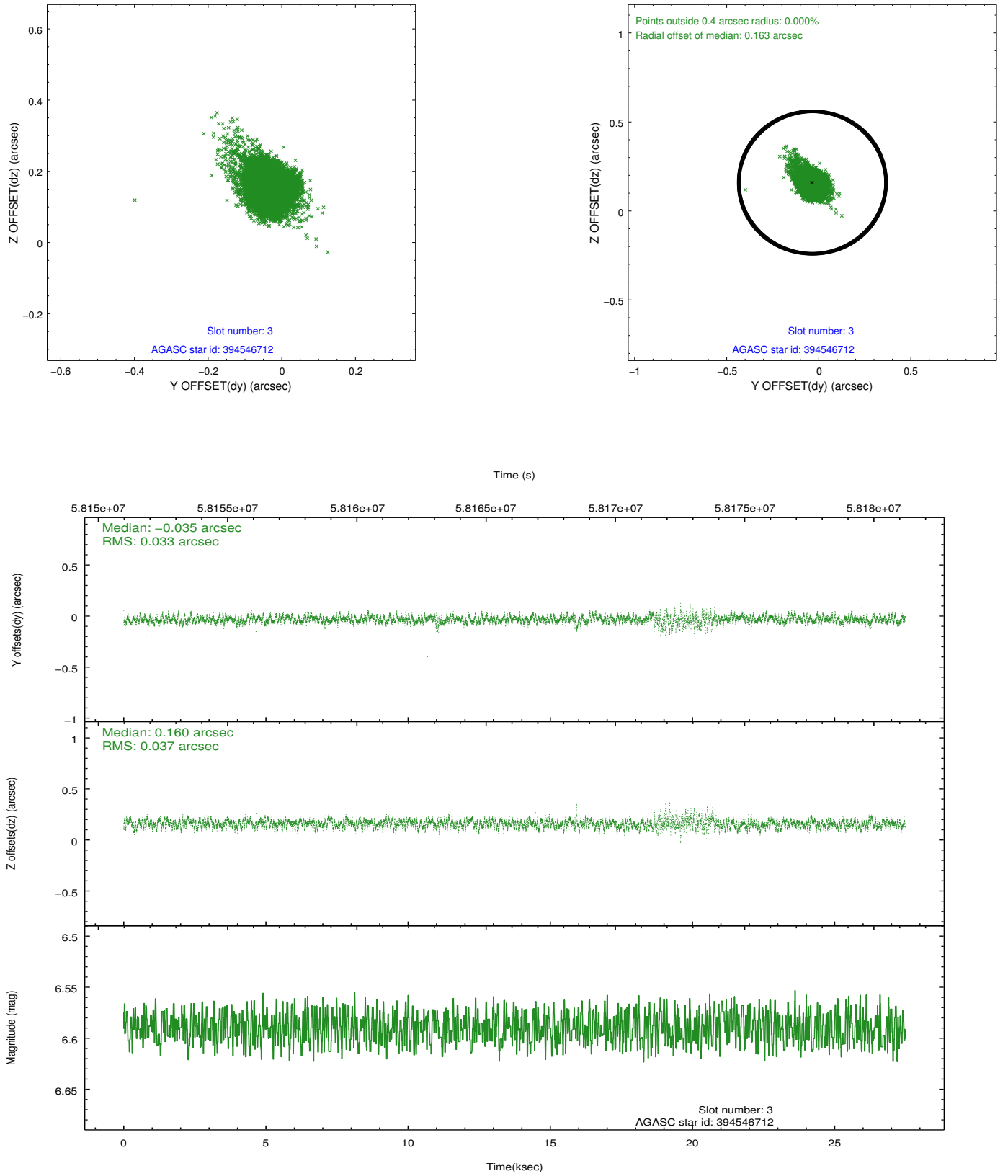


Slot Statistics

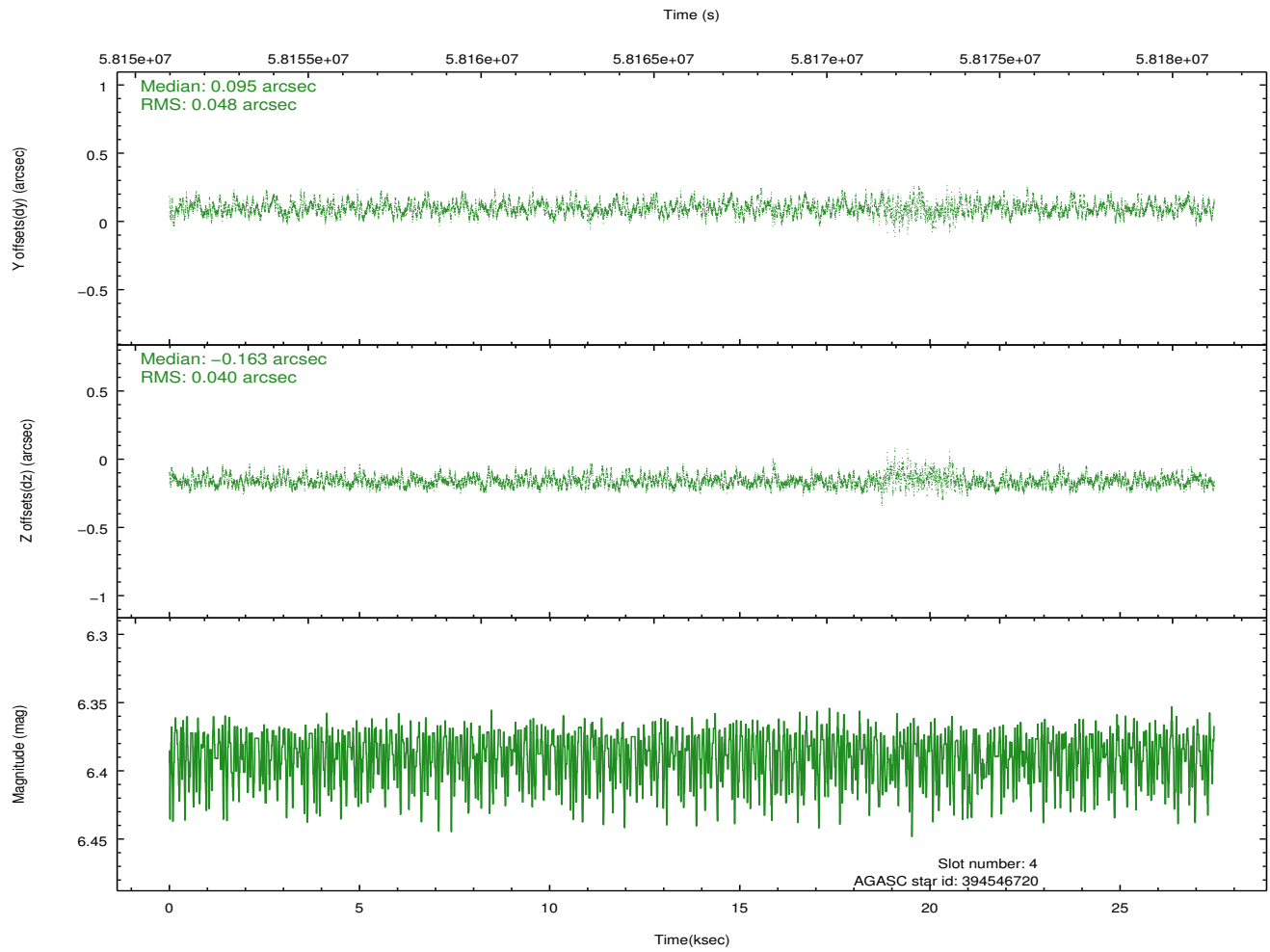
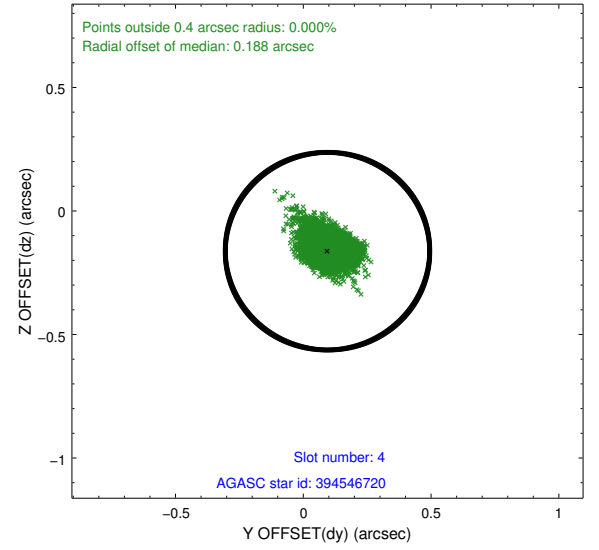
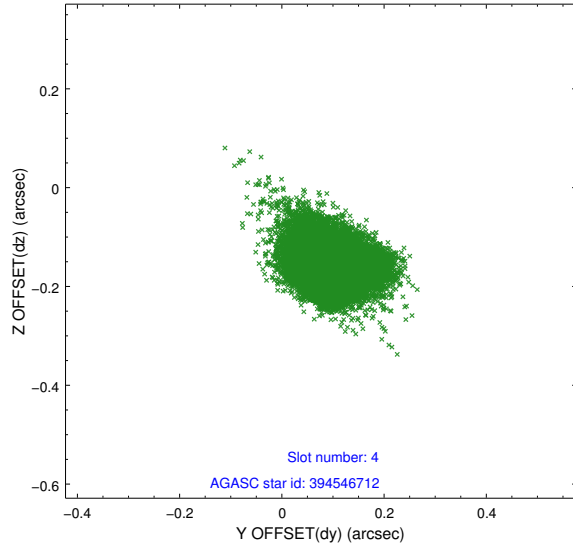
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	13394	-0.032	-0.075	0.009	0.014	0.000000	0.000000	-752.59	-1805.10
1	FID	ACIS-S-4	7.19	13395	0.062	0.036	0.006	0.011	0.000000	0.000000	2160.83	103.47
2	FID	ACIS-S-5	7.24	13396	-0.061	0.048	0.008	0.014	0.000000	0.000000	-1805.47	97.18
3	GUIDE	394546712	6.59	13395	-0.035	0.160	0.051	0.082	166.451462	38.394357	1172.50	-320.60
4	GUIDE	394546720	6.39	13396	0.095	-0.163	0.065	0.108	166.130115	38.241361	192.50	86.96
5	GUIDE	394527560	7.66	13390	-0.050	-0.161	0.051	0.085	165.970713	38.960939	2024.26	1972.73
6	GUIDE	394533848	8.71	13394	0.078	0.063	0.053	0.092	166.382906	38.276007	714.68	-416.28
7	GUIDE	394532424	9.47	13386	-0.092	0.098	0.110	0.182	167.196007	38.297687	2142.77	-2217.84

2.4 Star Slots

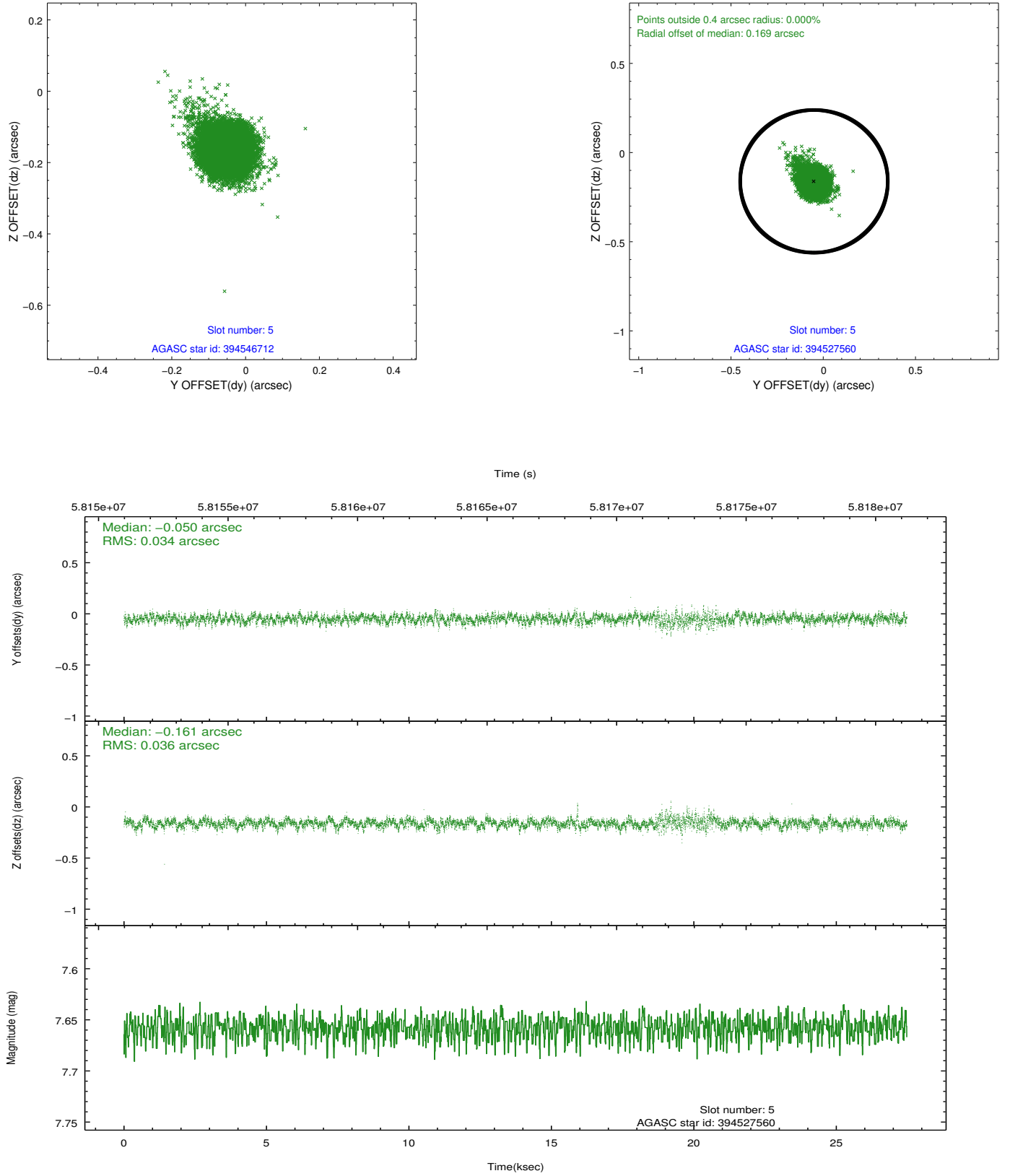
2.4.1 Slot 3



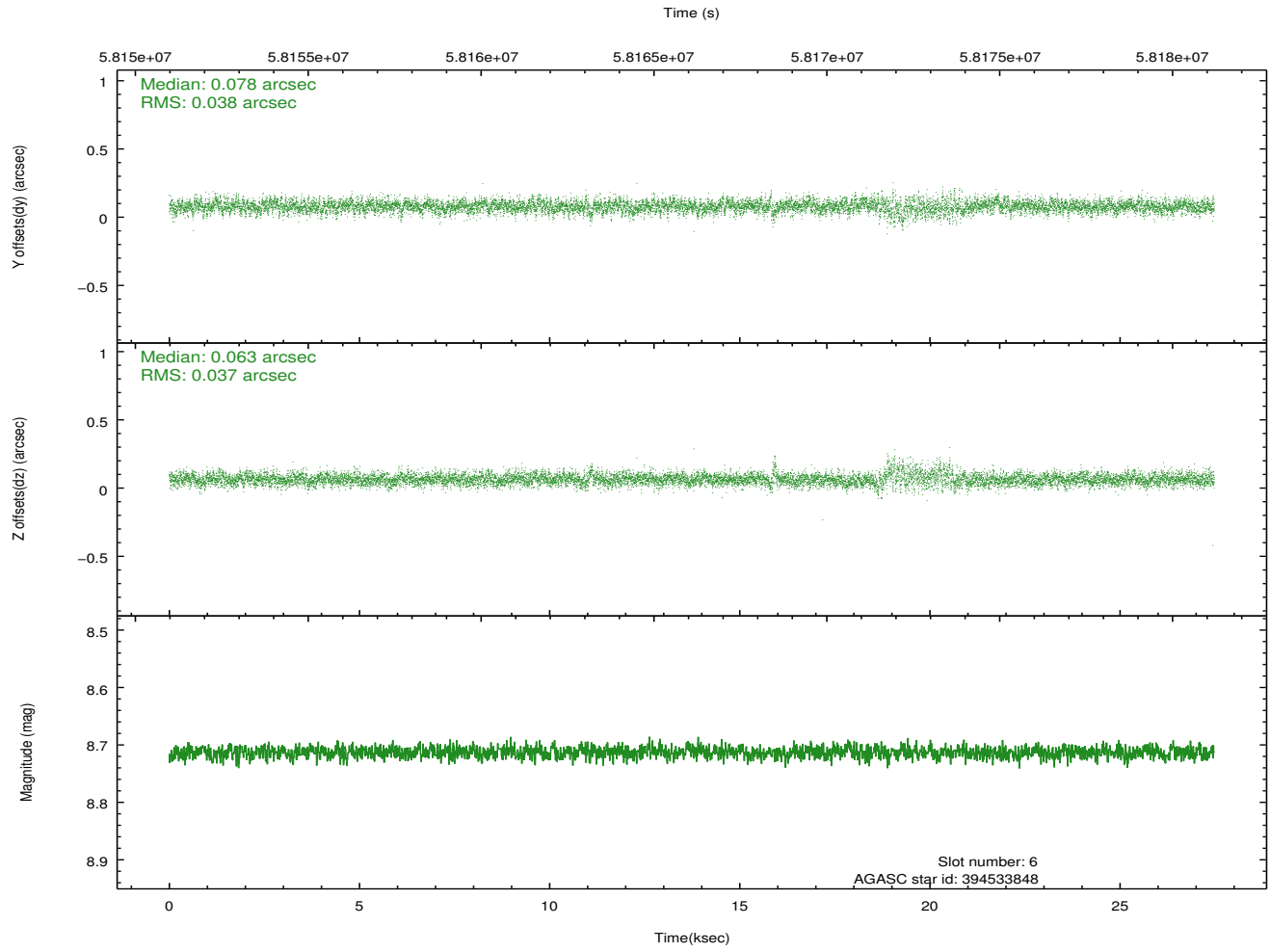
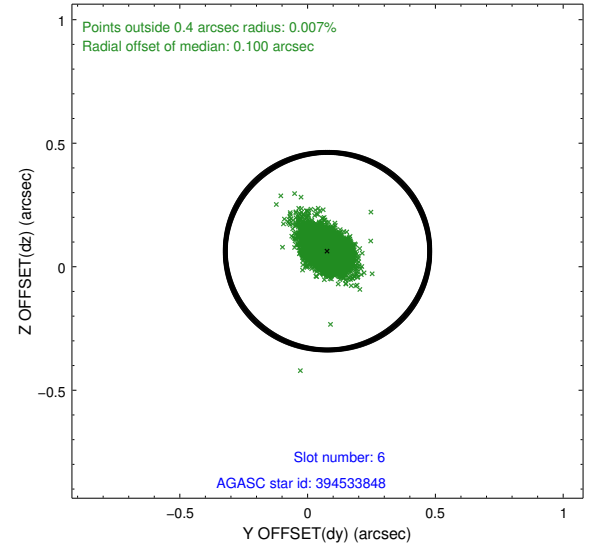
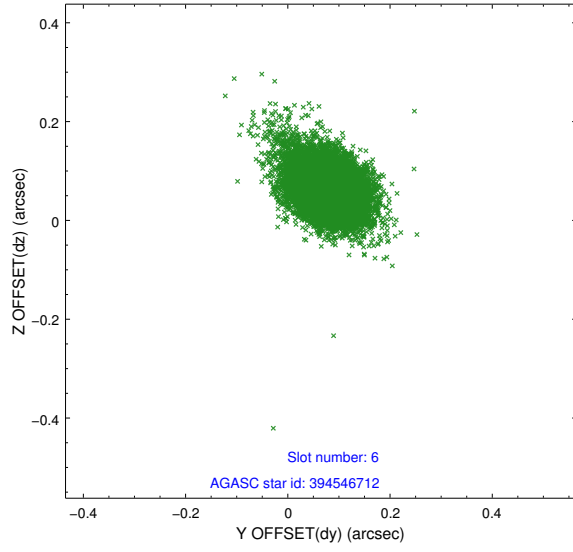
2.4.2 Slot 4



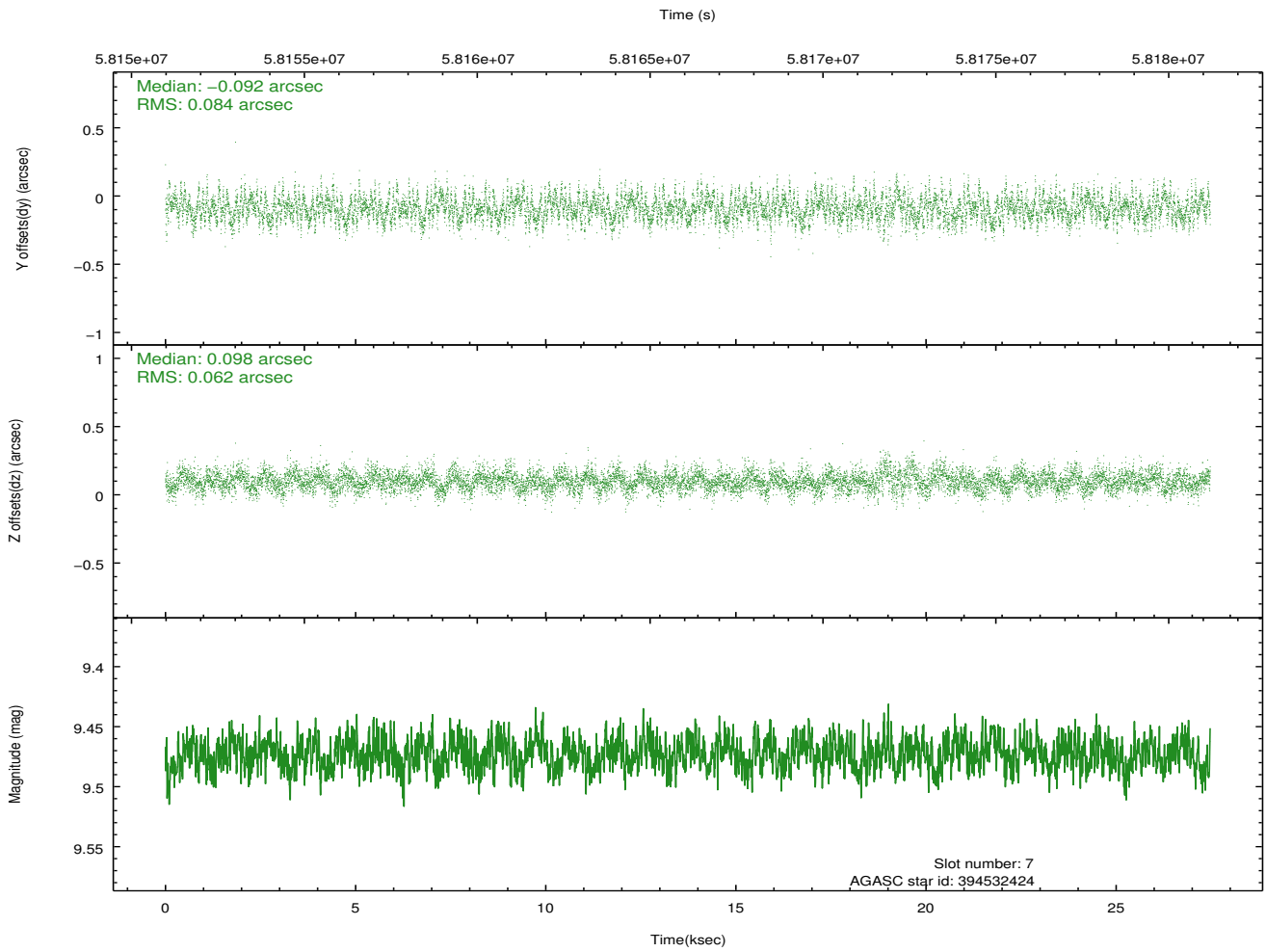
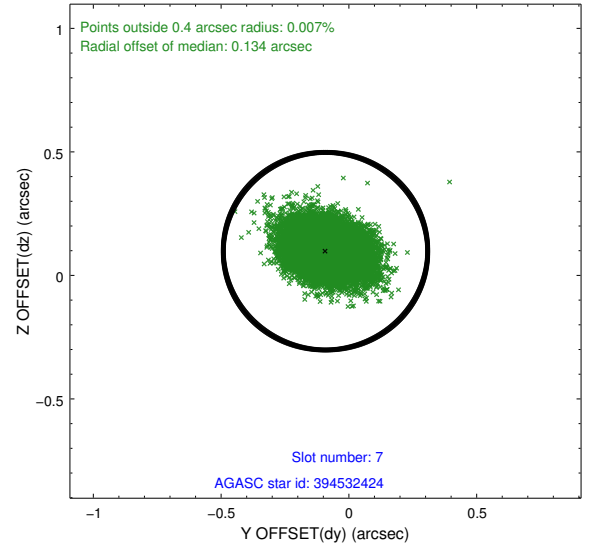
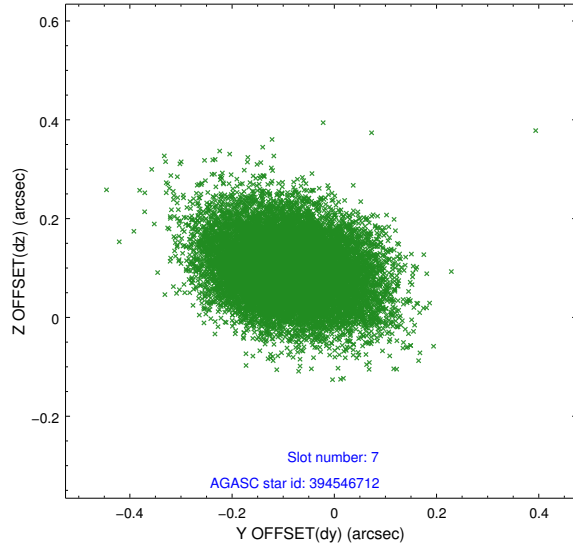
2.4.3 Slot 5



2.4.4 Slot 6

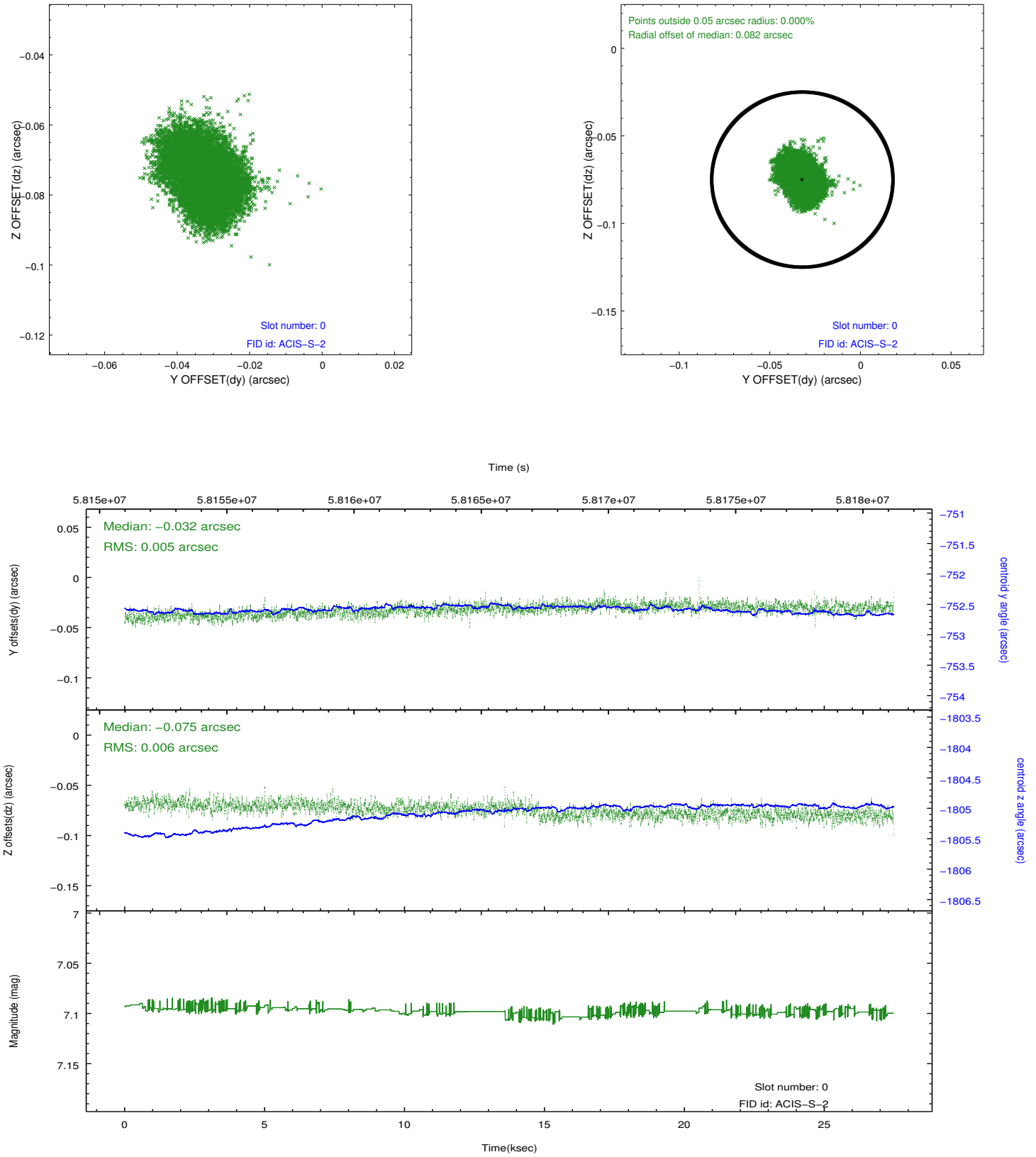


2.4.5 Slot 7

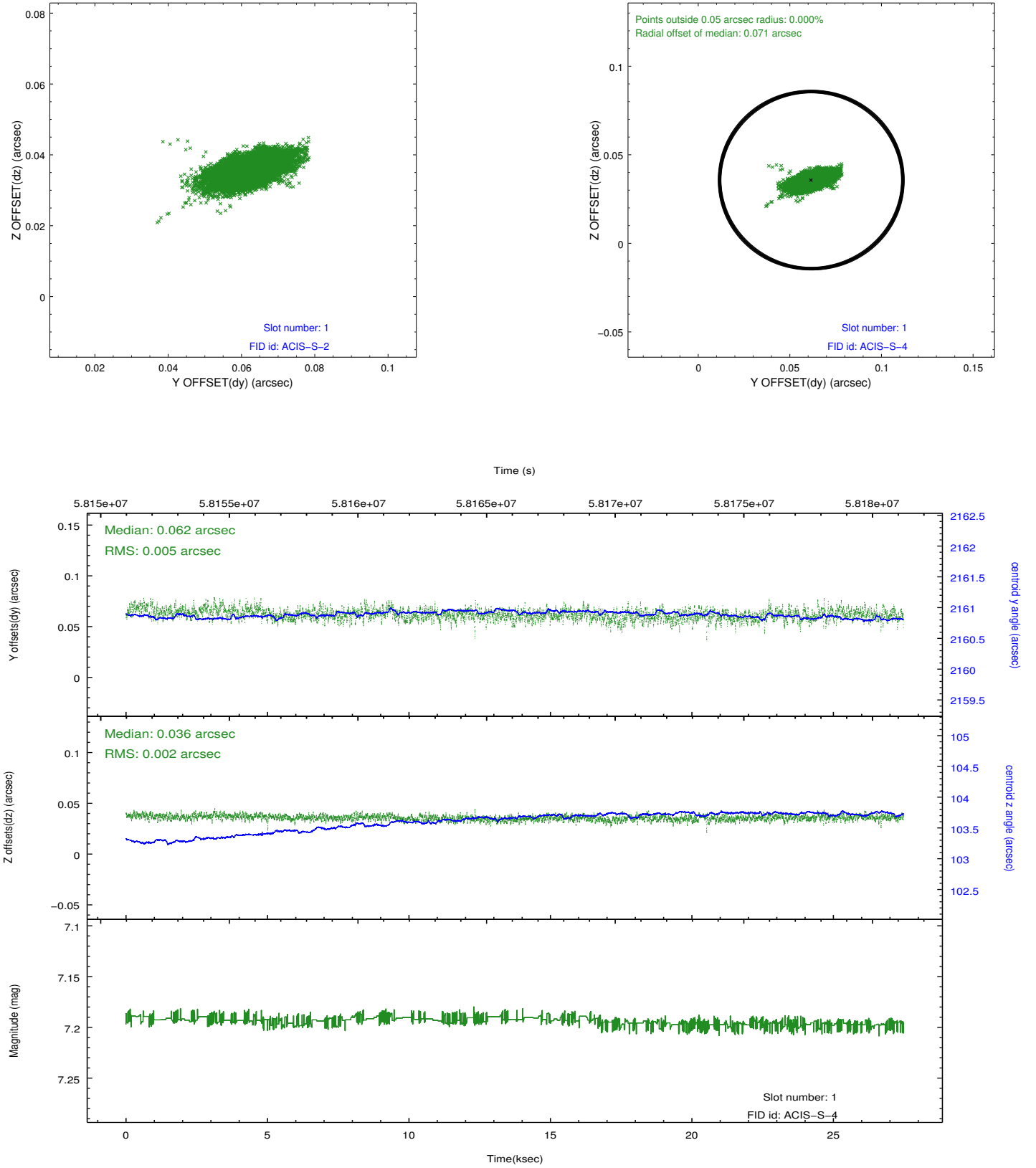


2.5 FID Slots

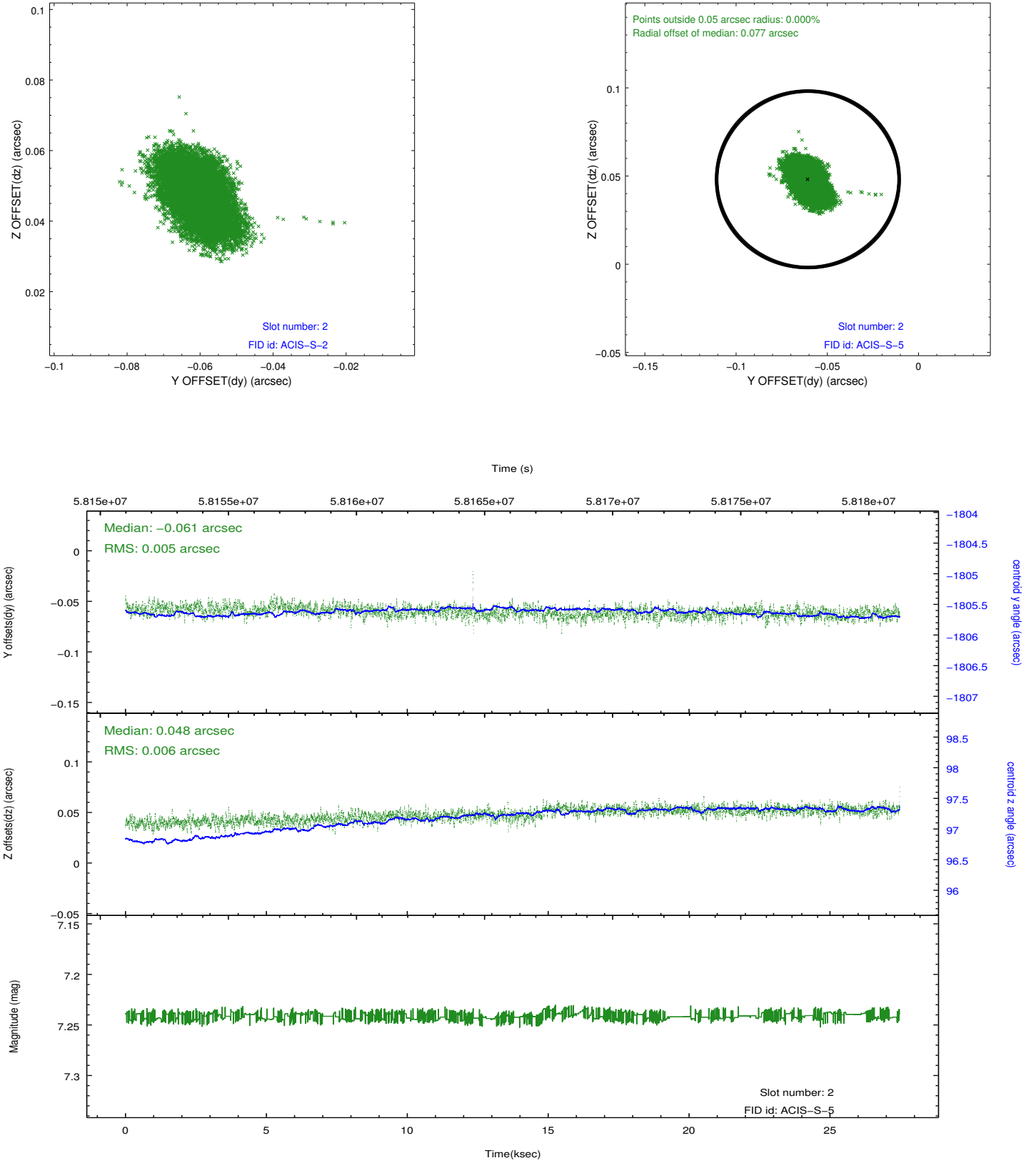
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

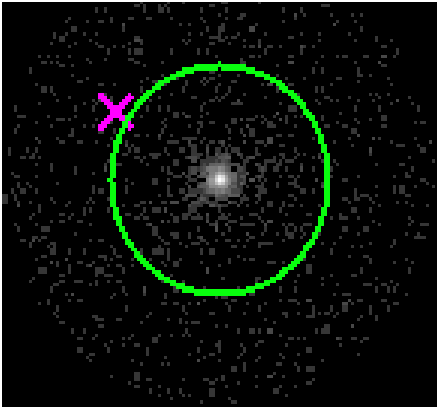


3 Gratings

3.1 HEG Arm



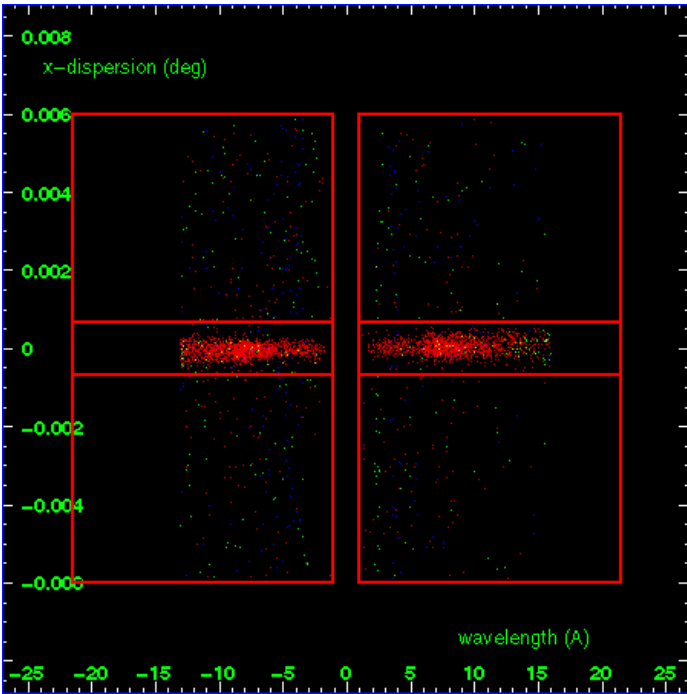
HEG Order Sort 123



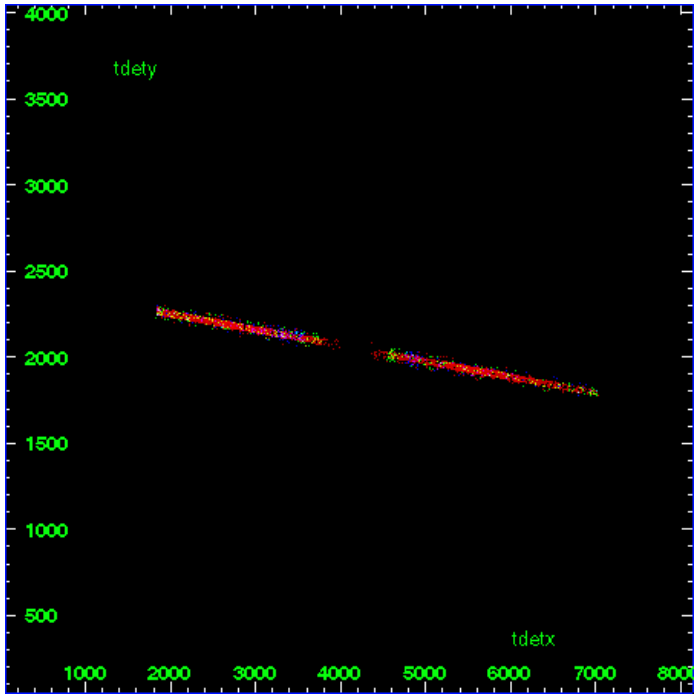
HEG Zero Order



HEG Order Sort ALL

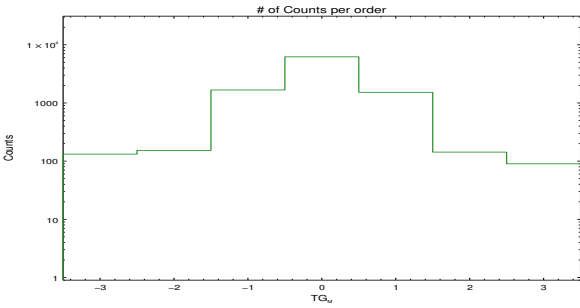


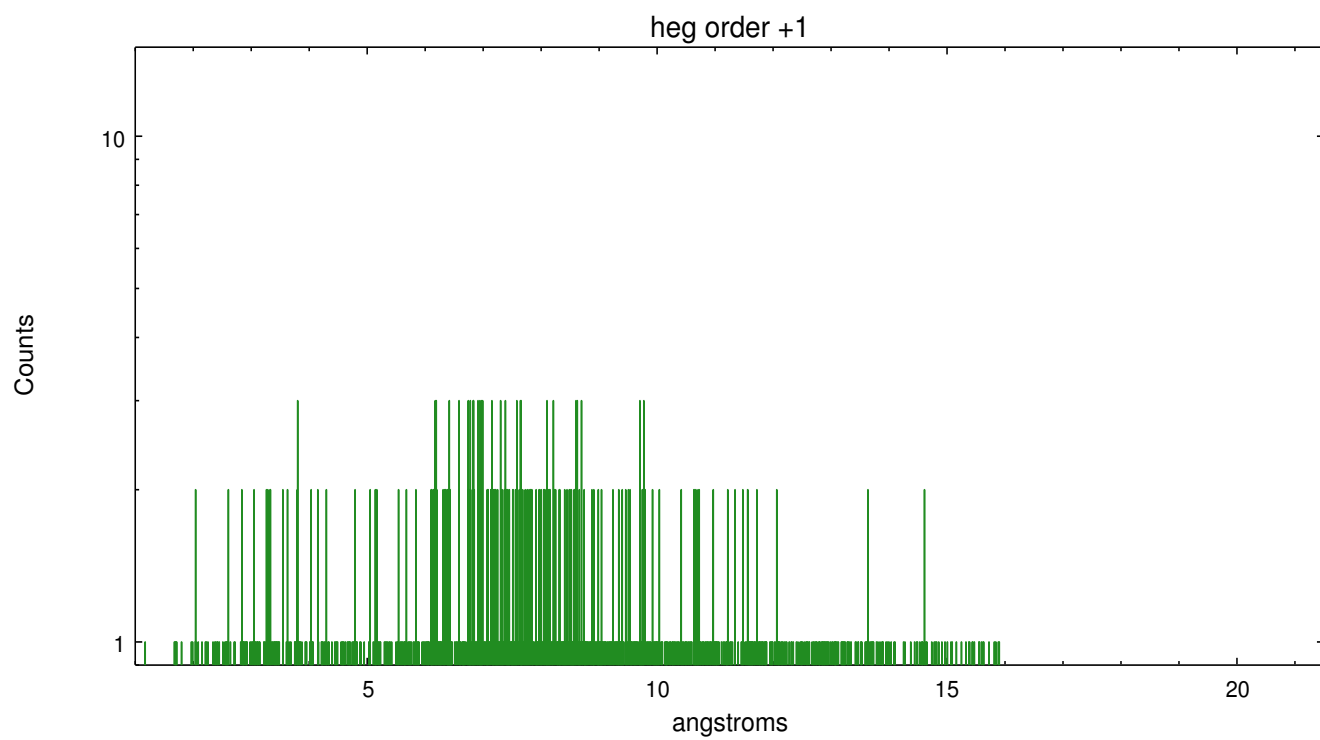
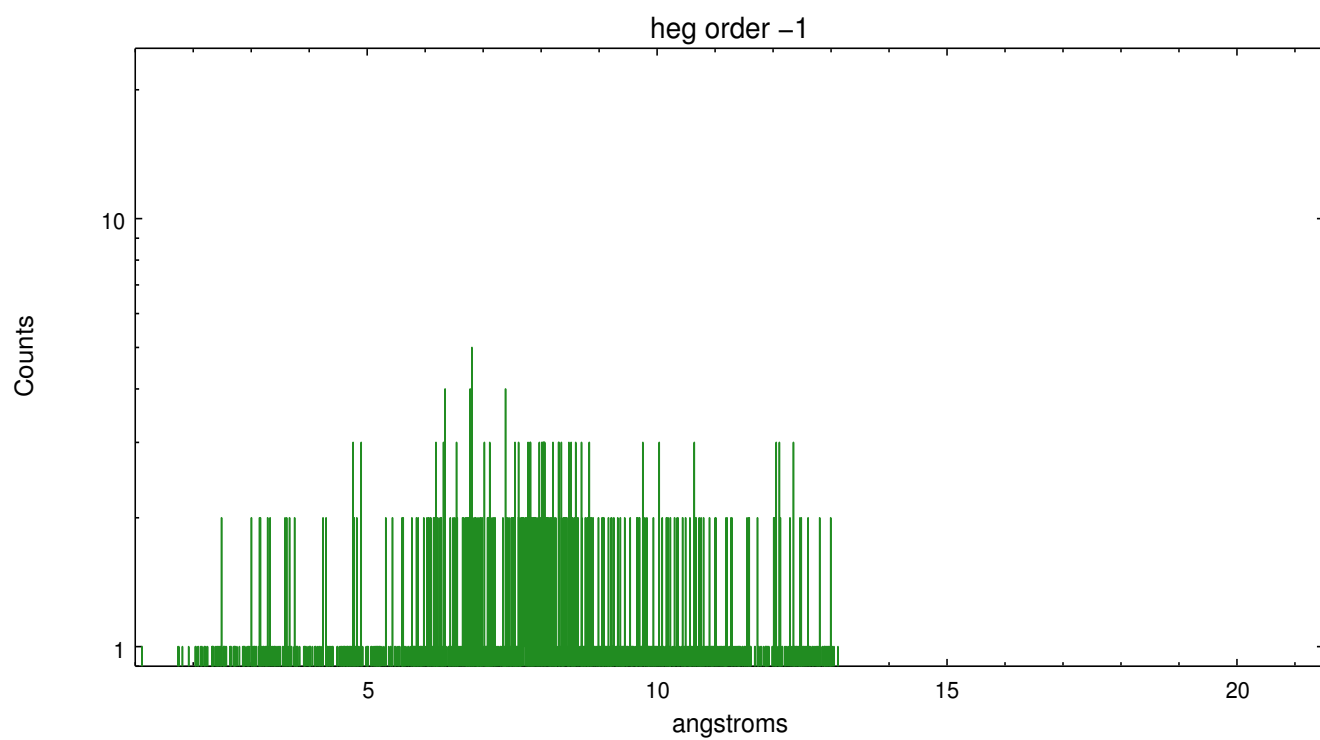
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	132	153	1672	6207	1525	143	90

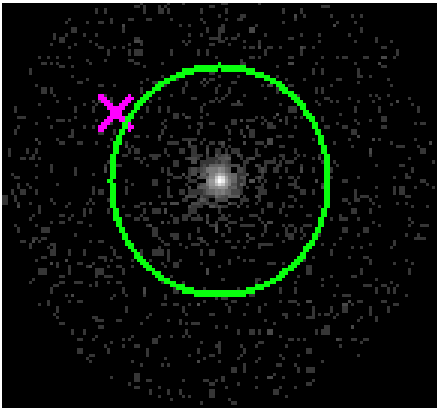




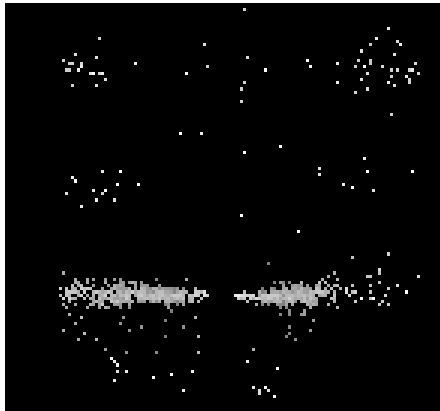
3.2 MEG Arm



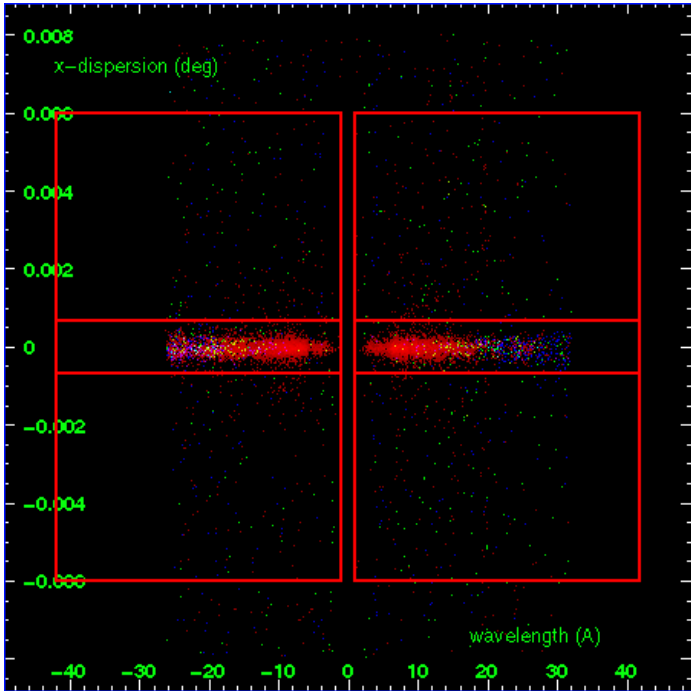
MEG Order Sort 123



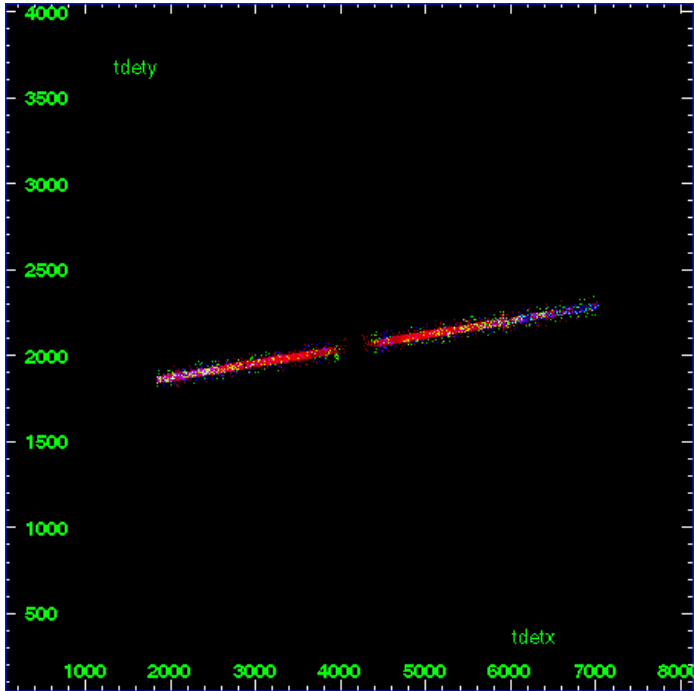
MEG Zero Order



MEG Order Sort ALL

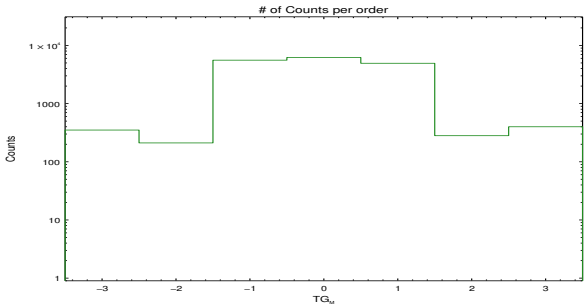


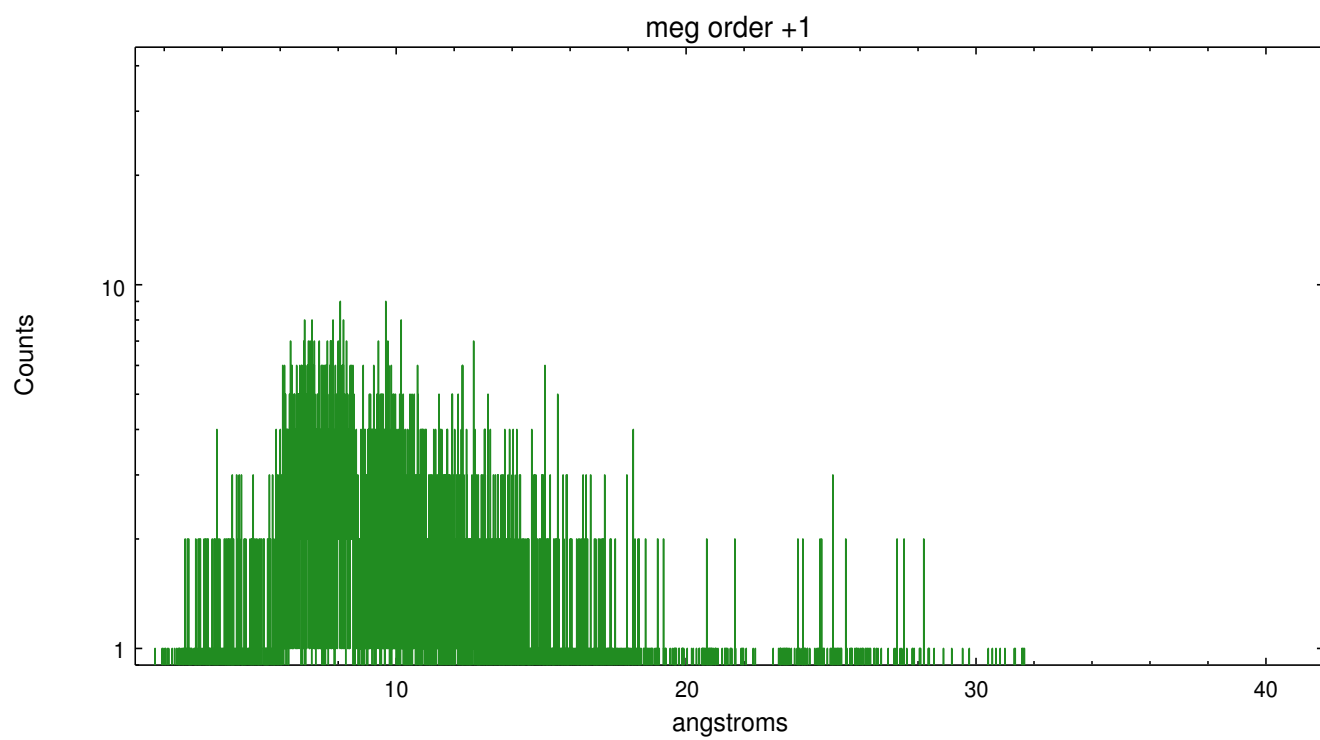
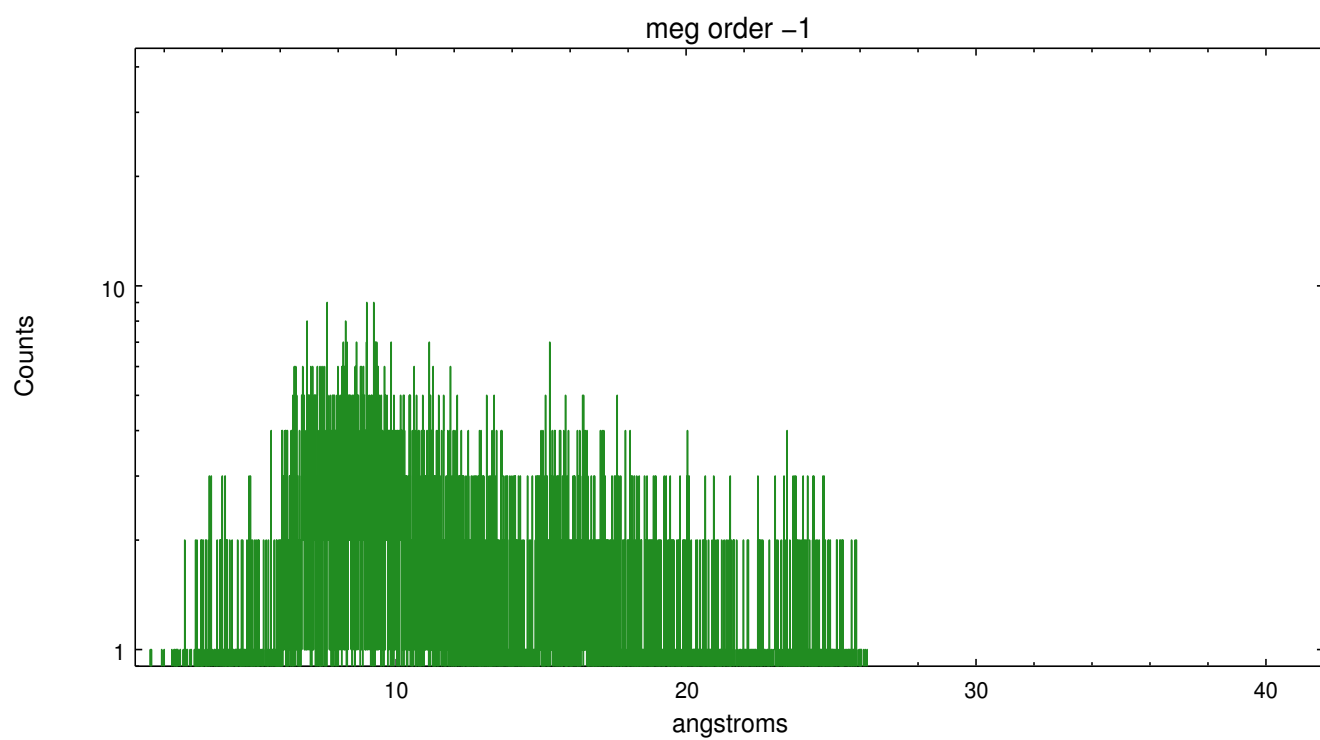
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	351	211	5576	6207	4931	281	400





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2009.11.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.163

A.2 Comments

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This observation was acquired with the focal plane temperature raised from -120C to -110C, for attempted recalibration of ACIS for the 1999-09-16 through 2000-01-28 period.

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This reprocessing of the data applies no CTI correction because none is available for that temperature.

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