

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9909 - L2 Version 2
Chandra X-Ray Center

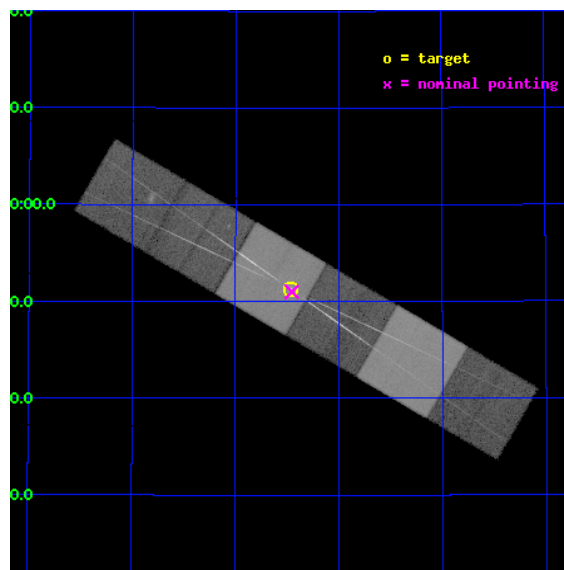
L2 Processing Date : May 21 2012

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1 Front

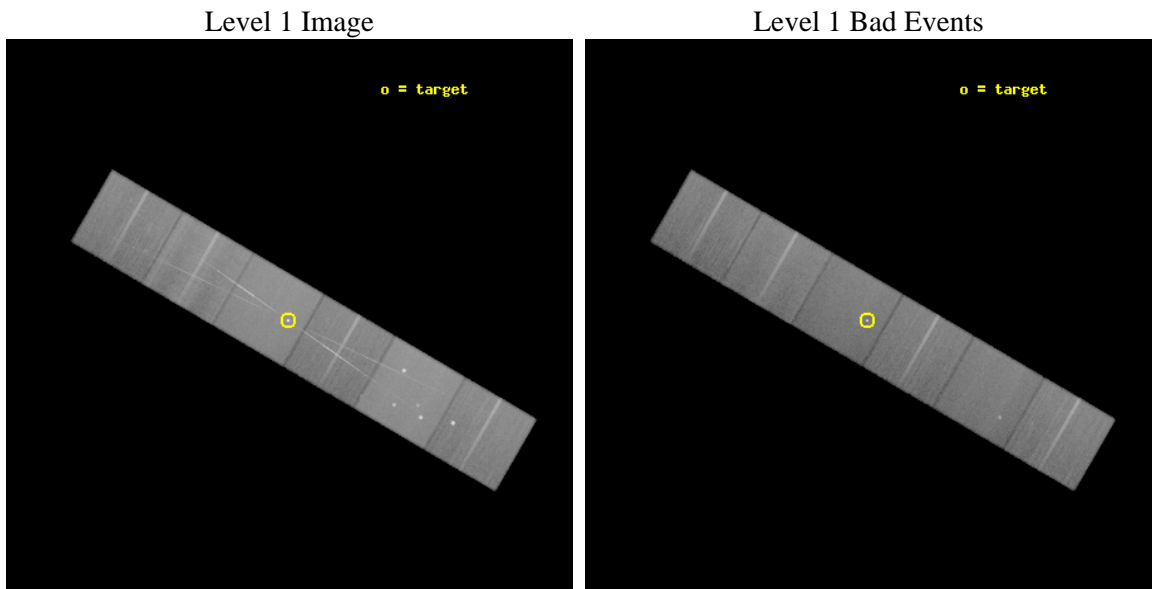
seq_num	200492	Sequence number
obs_id	9909	Observation id
title	The clear view of WR140's collisionless shocks through the companion O-star wind	Proposal title
observer	Dr Andrew Pollock	Principal investigator
object	WR 140	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	305.116667	Observer's specified target RA [deg]
dec_targ	43.8545	Observer's specified target Dec [deg]
ra_nom	305.11348415016	Nominal RA [deg]
dec_nom	43.850235627252	Nominal Dec [deg]
roll_nom	210.15883121068	Nominal Roll [deg]
revision	2	Processing version of data
ontime	36447.314372003	Sum of GTIs [s]
livetime	35985.796531487	Livetime [s]
ontime4	36447.355412006	Sum of GTIs [s]
ontime5	36447.273332	Sum of GTIs [s]
ontime6	36447.232291996	Sum of GTIs [s]
ontime7	36447.314372003	Sum of GTIs [s]
ontime8	36447.191251993	Sum of GTIs [s]
ontime9	36447.15021199	Sum of GTIs [s]
l2events	686282	Number of level 2 events



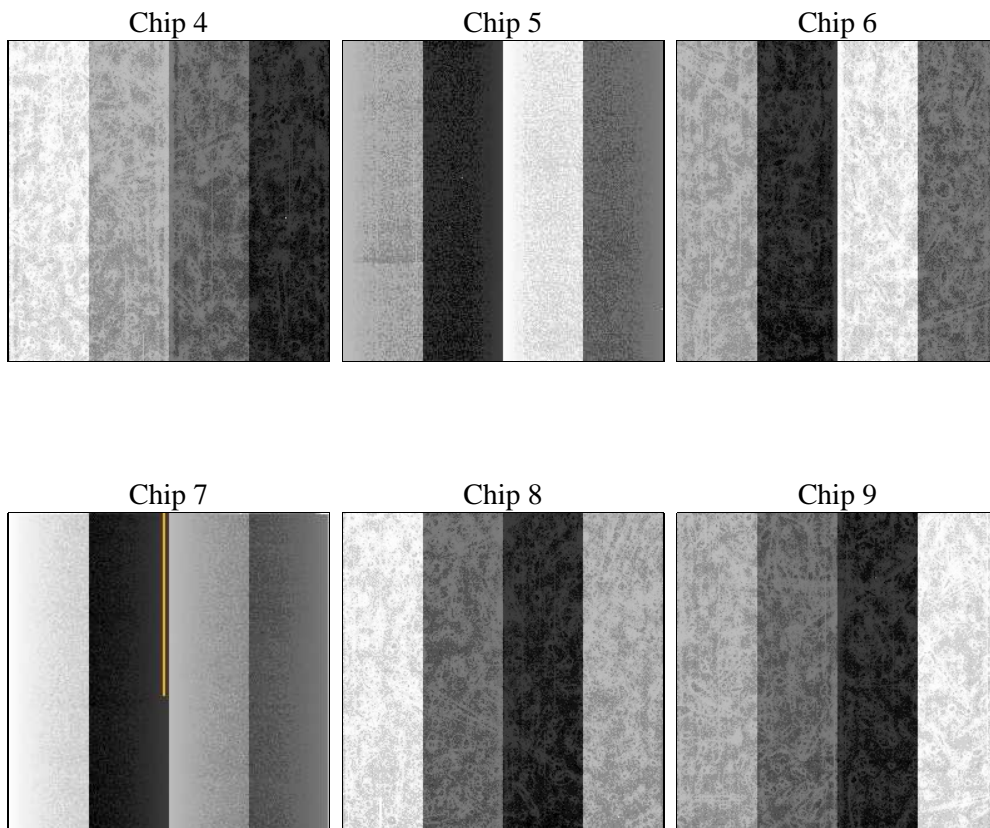
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	36447.314372003	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	36447.355412006	Sum of GTIs [s]
date	2012-05-19T22:06:03	Date and time of file creation	ontime5	36447.273332	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	36447.232291996	Sum of GTIs [s]
			ontime7	36447.314372003	Sum of GTIs [s]
			ontime8	36447.191251993	Sum of GTIs [s]
			ontime9	36447.15021199	Sum of GTIs [s]
			l1events	2770180	Number of level 1 events

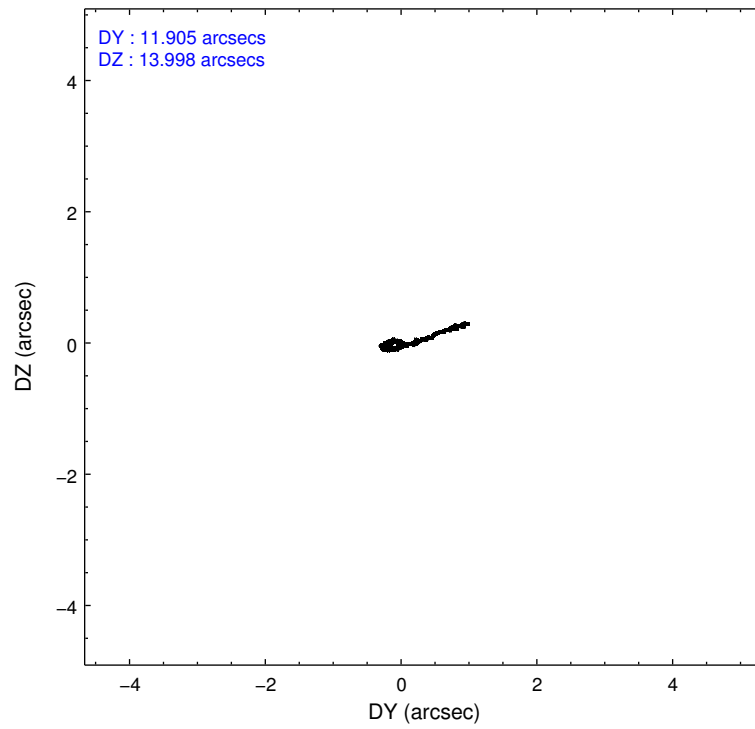
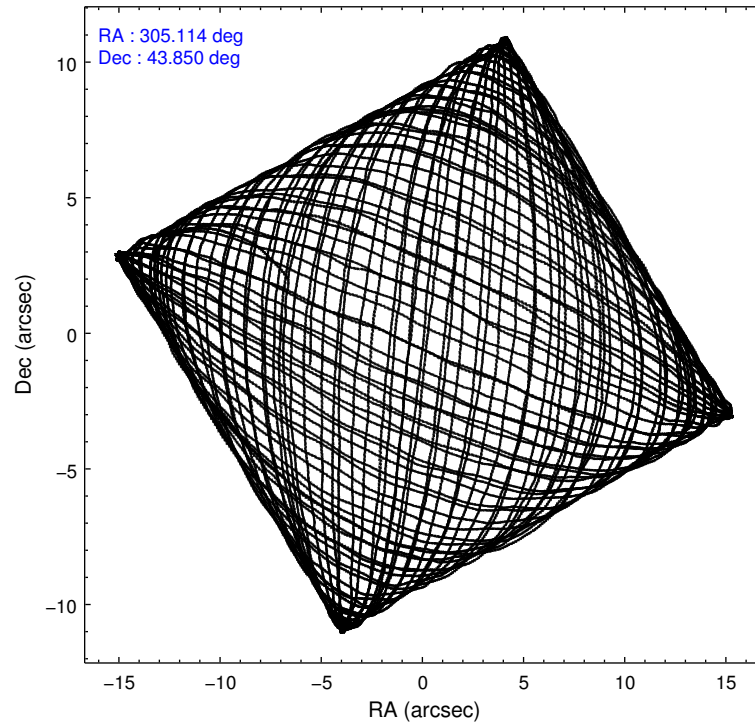
2.1.4 Events

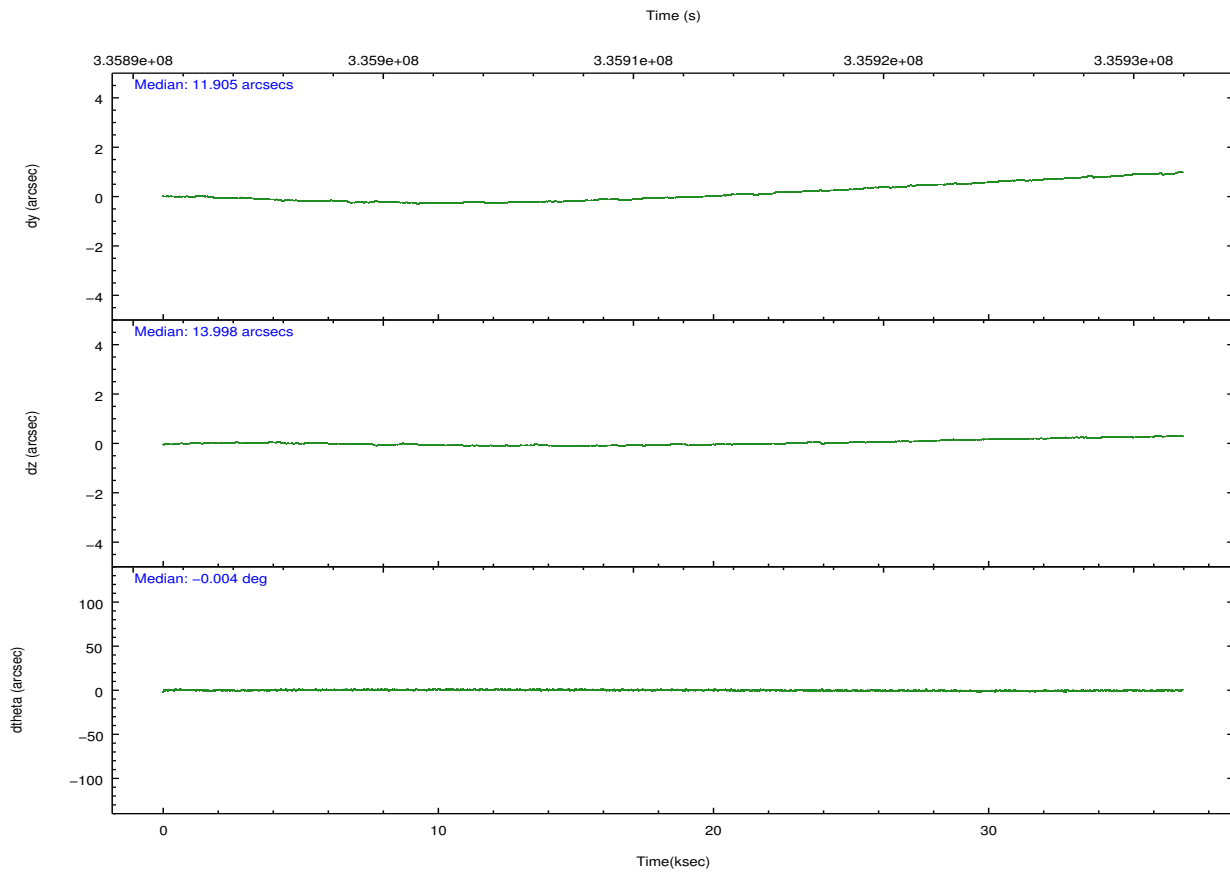
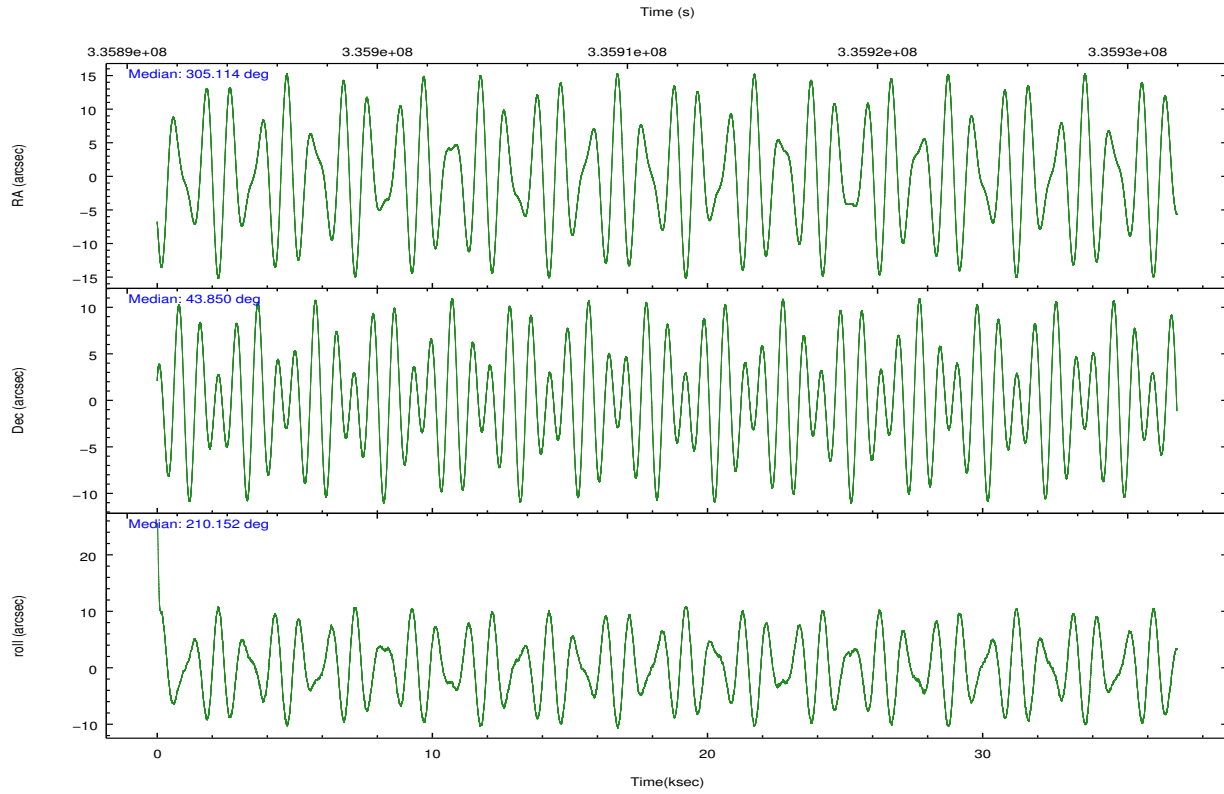
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	412787	576989	388871	540024	480910	370599	grade 0 events	32108	33023	37658	24801	44886	22380
rejected events	354488	304049	319419	299942	360031	320490		7%	5%	9%	4%	9%	6%
rejected %	85%	52%	82%	55%	74%	86%	grade 1 events	429	2222	319	782	452	279
								0%	0%	0%	0%	0%	0%
							grade 2 events	9973	81990	12676	50088	25445	9695
								2%	14%	3%	9%	5%	2%
							grade 3 events	4585	10020	4891	20723	11517	4476
								1%	1%	1%	3%	2%	1%
							grade 4 events	4436	9619	4765	20700	10641	4421
								1%	1%	1%	3%	2%	1%
							grade 5 events	17081	40197	17470	48885	23817	18625
								4%	6%	4%	9%	4%	5%
							grade 6 events	7207	138334	9475	123800	28407	9147
								1%	23%	2%	22%	5%	2%
							grade 7 events	336968	261584	301617	250245	335745	301576
								81%	45%	77%	46%	69%	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	305.131913	305.1134841501561	Subarray requested	NONE	NONE
[deg] Pointing Dec	43.874128	43.85023562725154	Alternating exposures requested	N	N
[deg] Pointing Roll	209.989434	210.1588312106792	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	333590465.184000	333590465.184000			
[s] Window stop time (MET)	336096065.184000	336096065.184000			
[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)	335893617.184000	335892409.70497			
Observation start date	2008-08-23T15:45:52	2008-08-23T15:26:49			
[s] Observation end time (MET)	335930117.184000	335930895.89436			
Observation end date	2008-08-24T01:54:12	2008-08-24T02:08:15			
Read mode	TIMED	TIMED			

2.3 Aspect



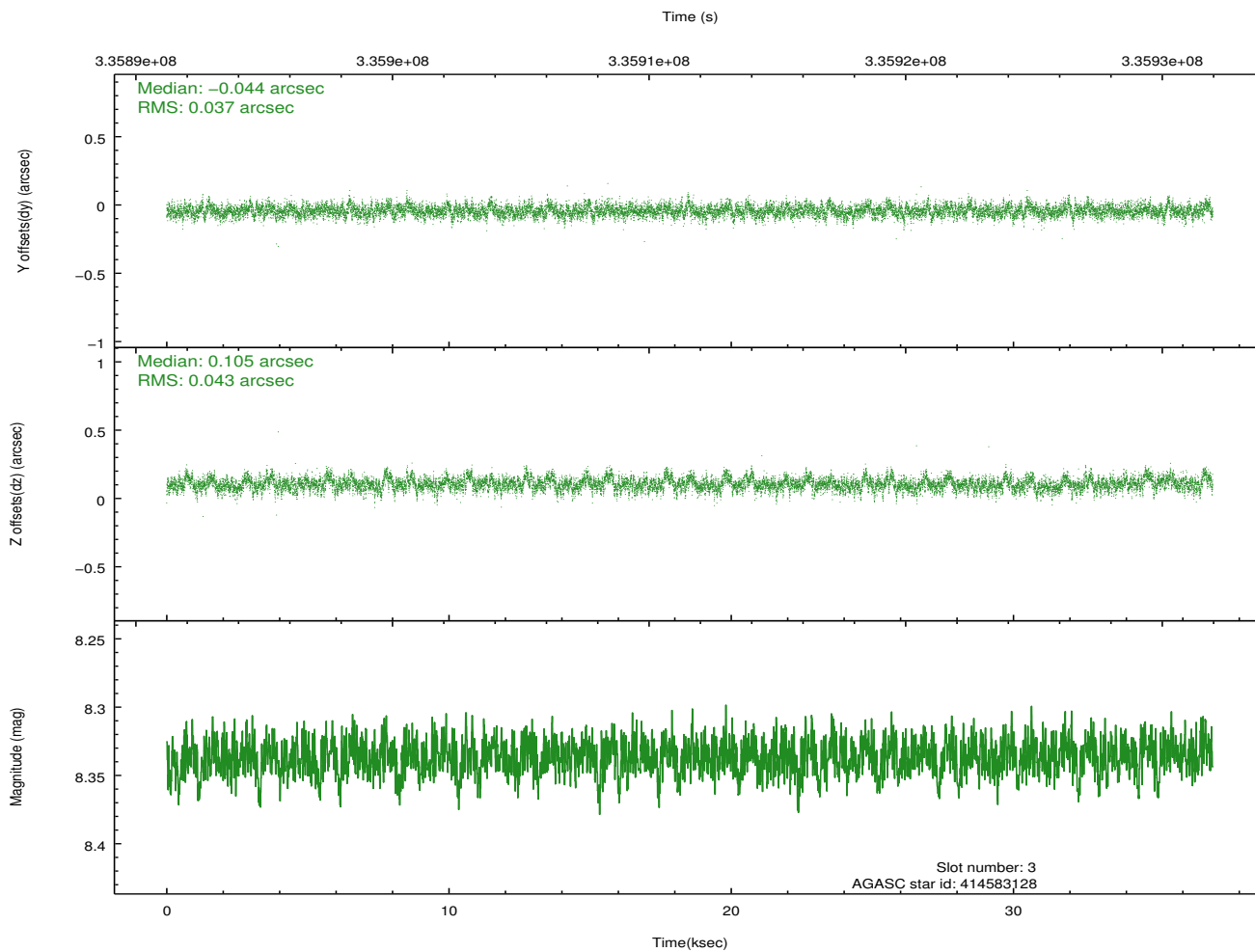
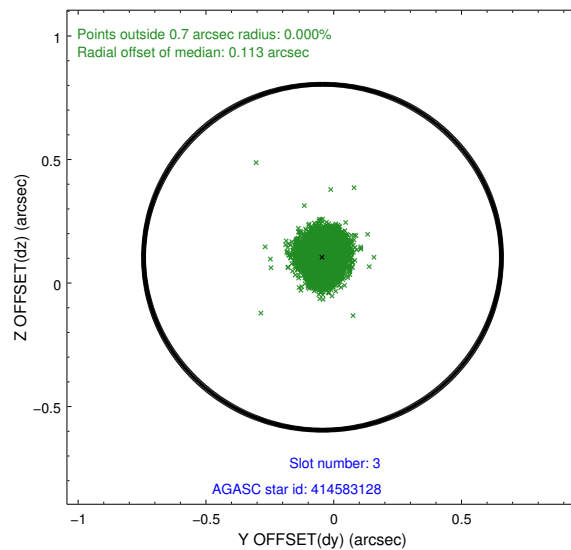
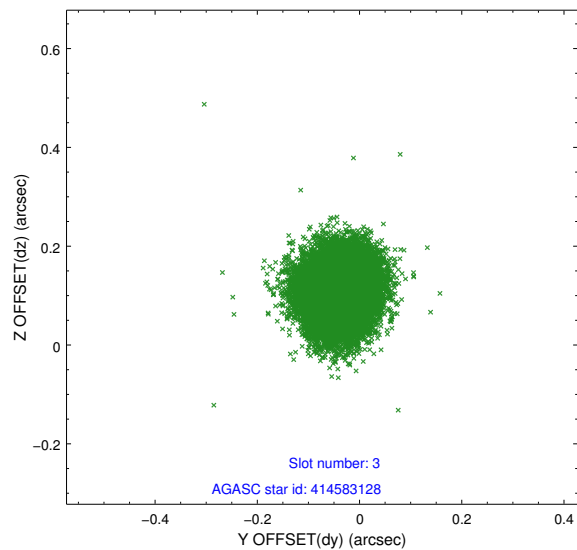


Slot Statistics

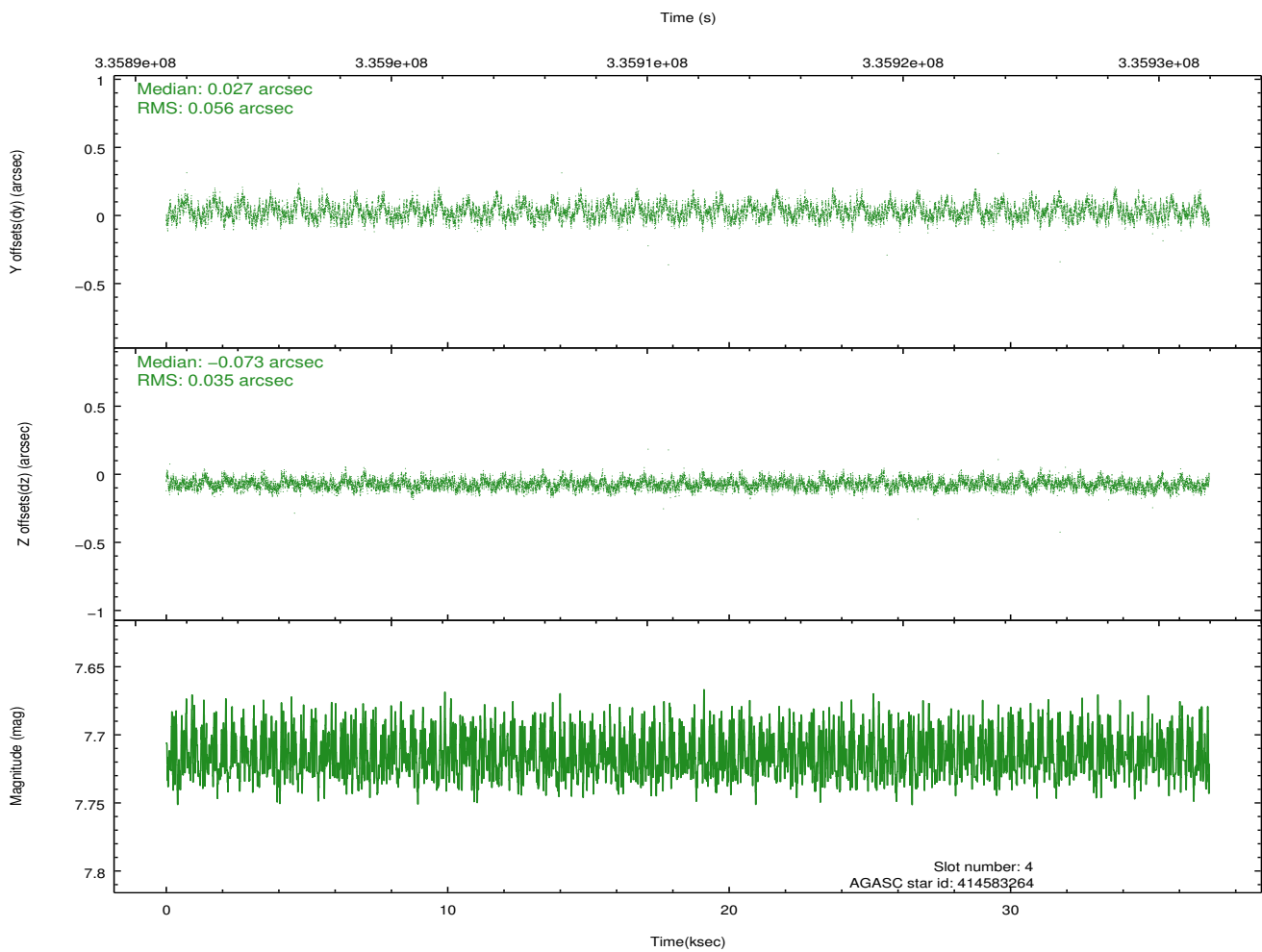
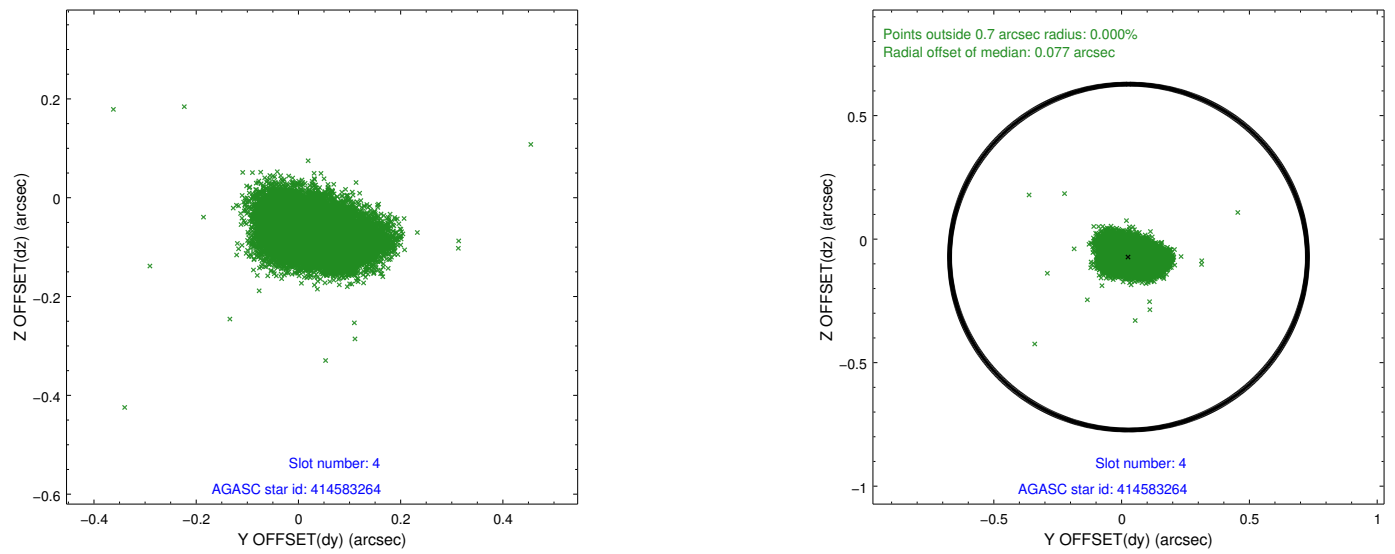
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.98	9040	0.048	0.009	0.007	0.012	0.000000	0.000000	931.08	-1731.03
1	FID	ACIS-S-2	6.89	9040	-0.119	-0.042	0.008	0.014	0.000000	0.000000	-764.97	-1735.61
2	FID	ACIS-S-4	6.97	9040	0.045	0.038	0.007	0.014	0.000000	0.000000	2148.37	173.10
3	GUIDE	414583128	8.34	18073	-0.044	0.105	0.061	0.098	304.426562	44.225700	940.17	-2012.02
4	GUIDE	414583264	7.72	18078	0.027	-0.073	0.070	0.115	304.893328	43.496153	1219.04	865.72
5	GUIDE	414718744	8.13	18071	0.026	0.039	0.063	0.098	305.210228	44.542005	-1375.52	-1982.04
6	GUIDE	414725232	6.89	9041	-0.051	-0.274	0.070	0.111	305.116565	43.854522	69.89	40.92
7	GUIDE	414057064	7.75	18074	0.010	0.065	0.060	0.097	304.852315	42.998745	2212.34	2361.01

2.4 Star Slots

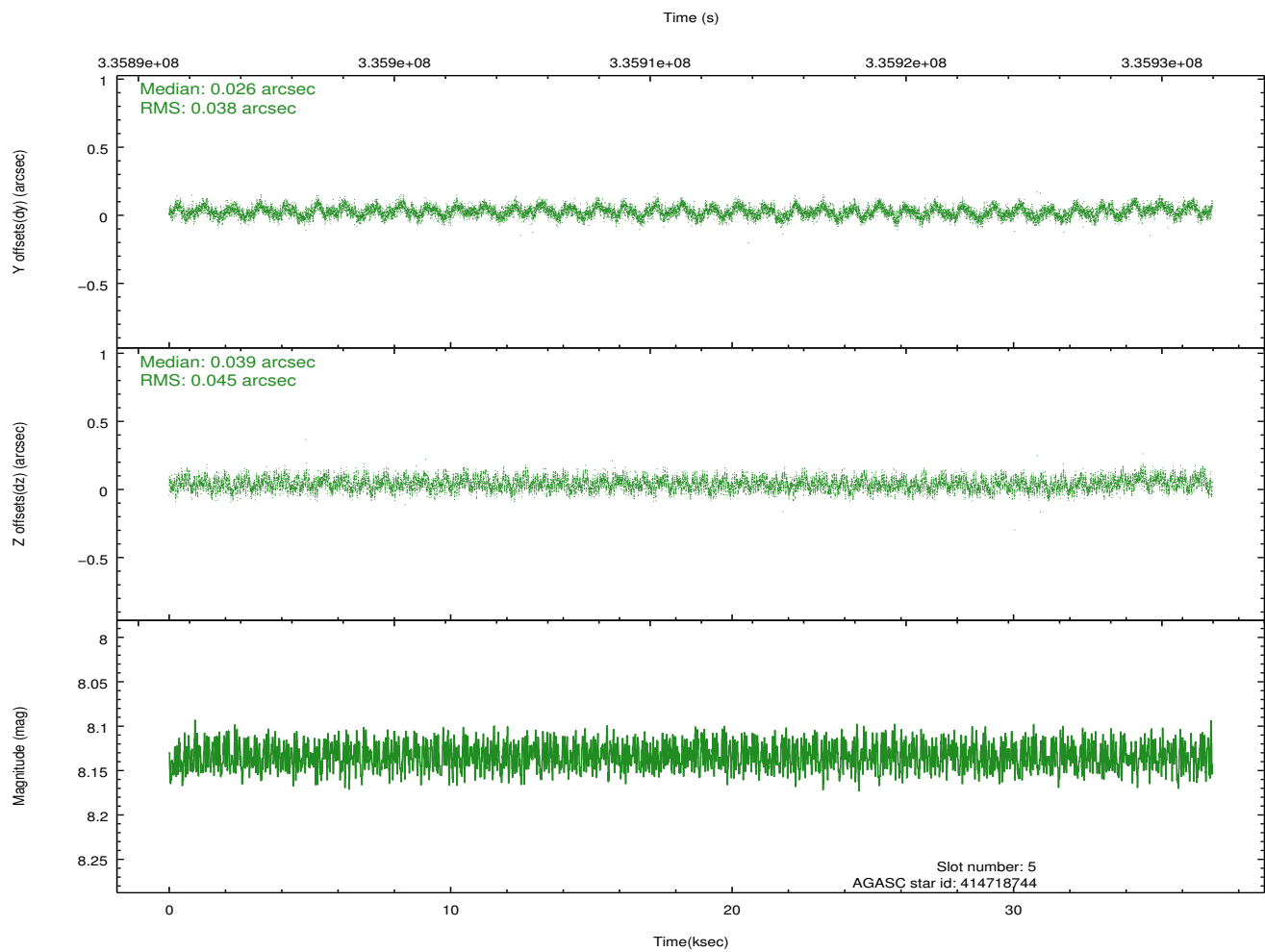
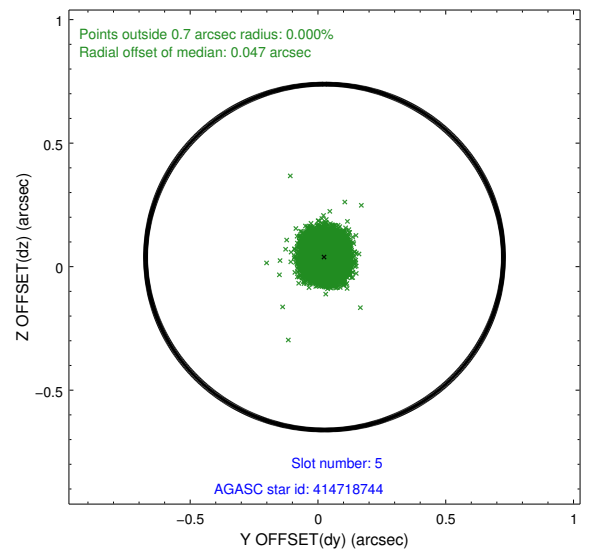
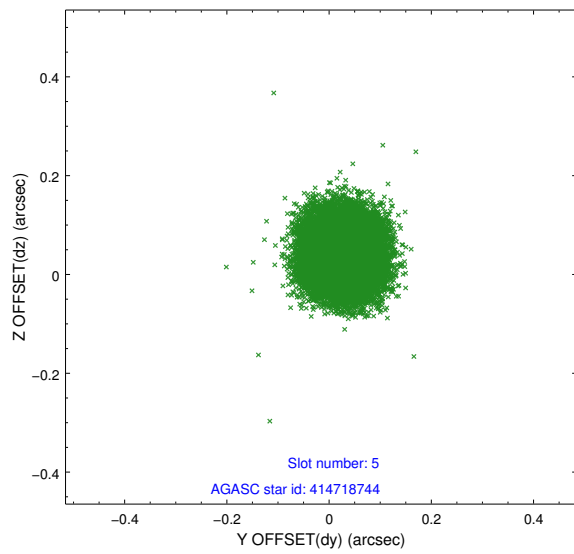
2.4.1 Slot 3



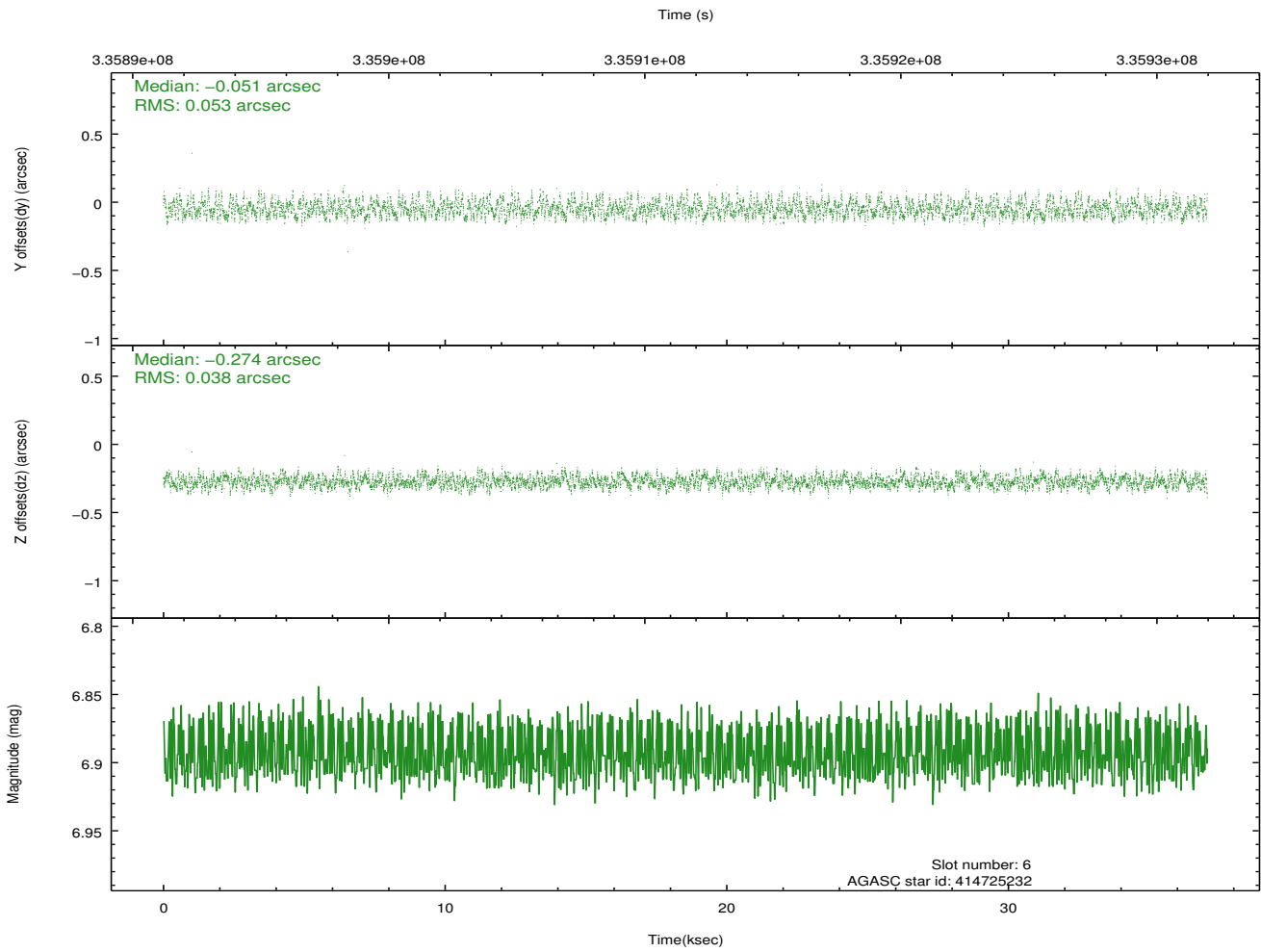
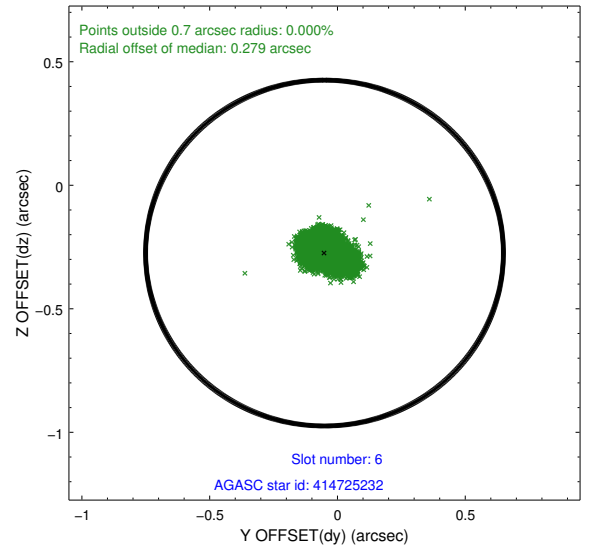
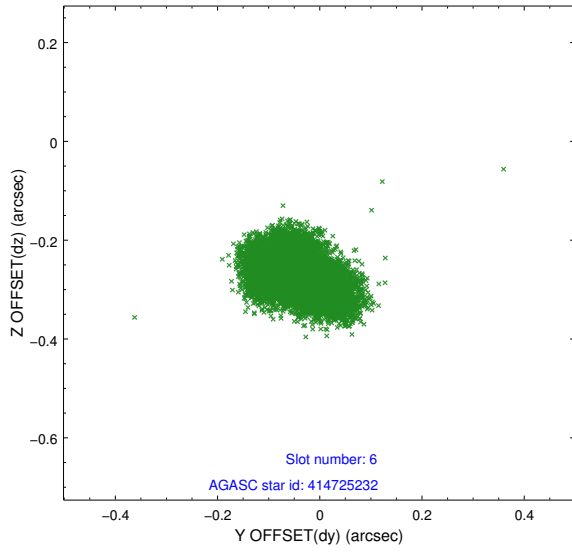
2.4.2 Slot 4



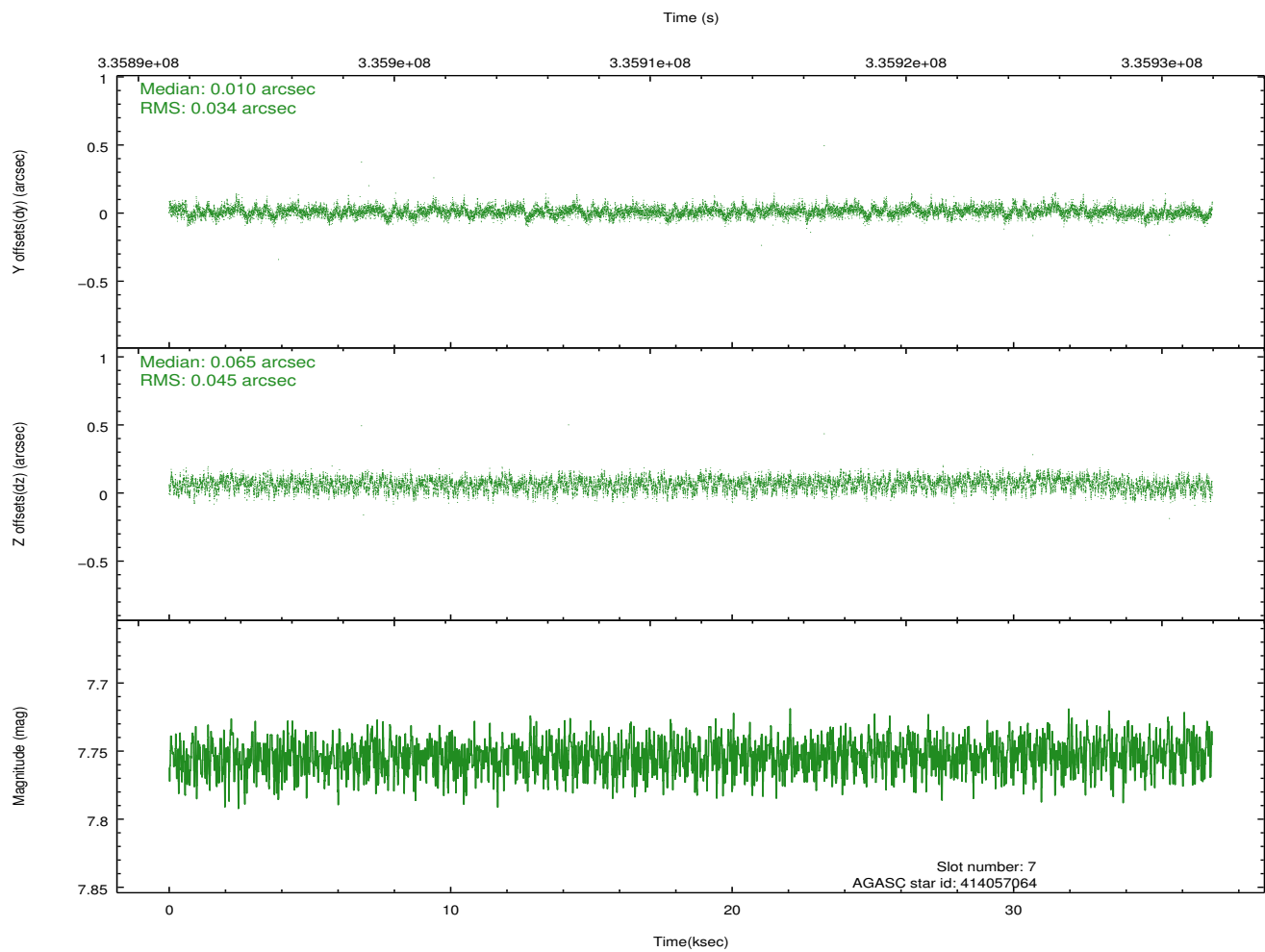
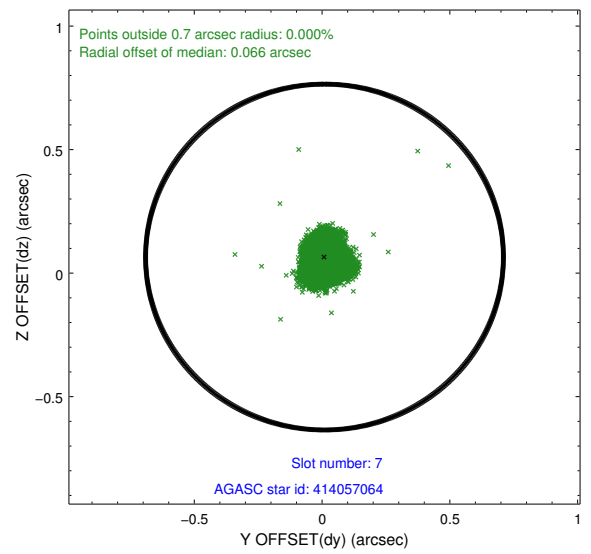
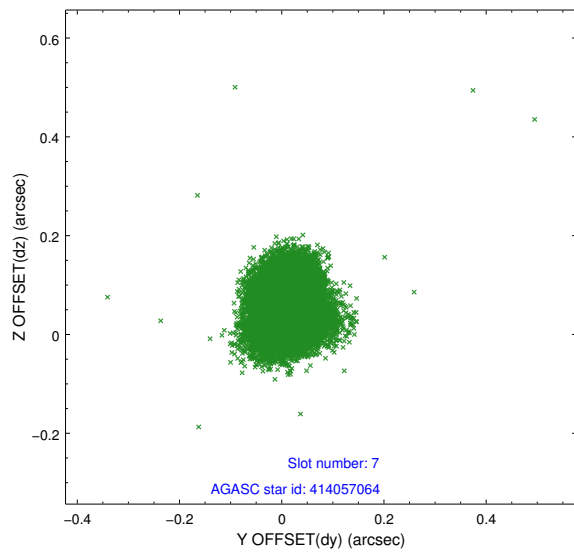
2.4.3 Slot 5



2.4.4 Slot 6

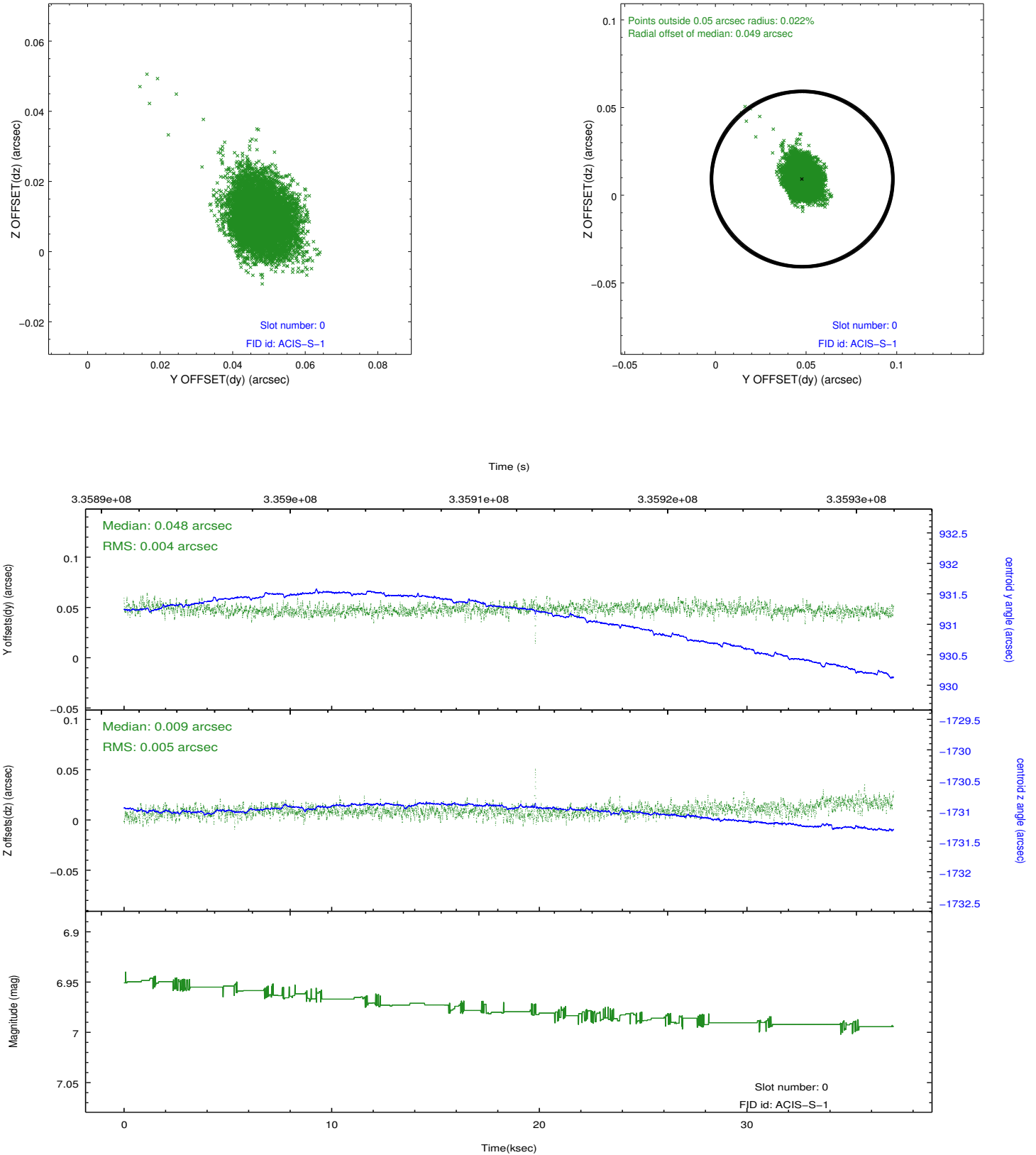


2.4.5 Slot 7

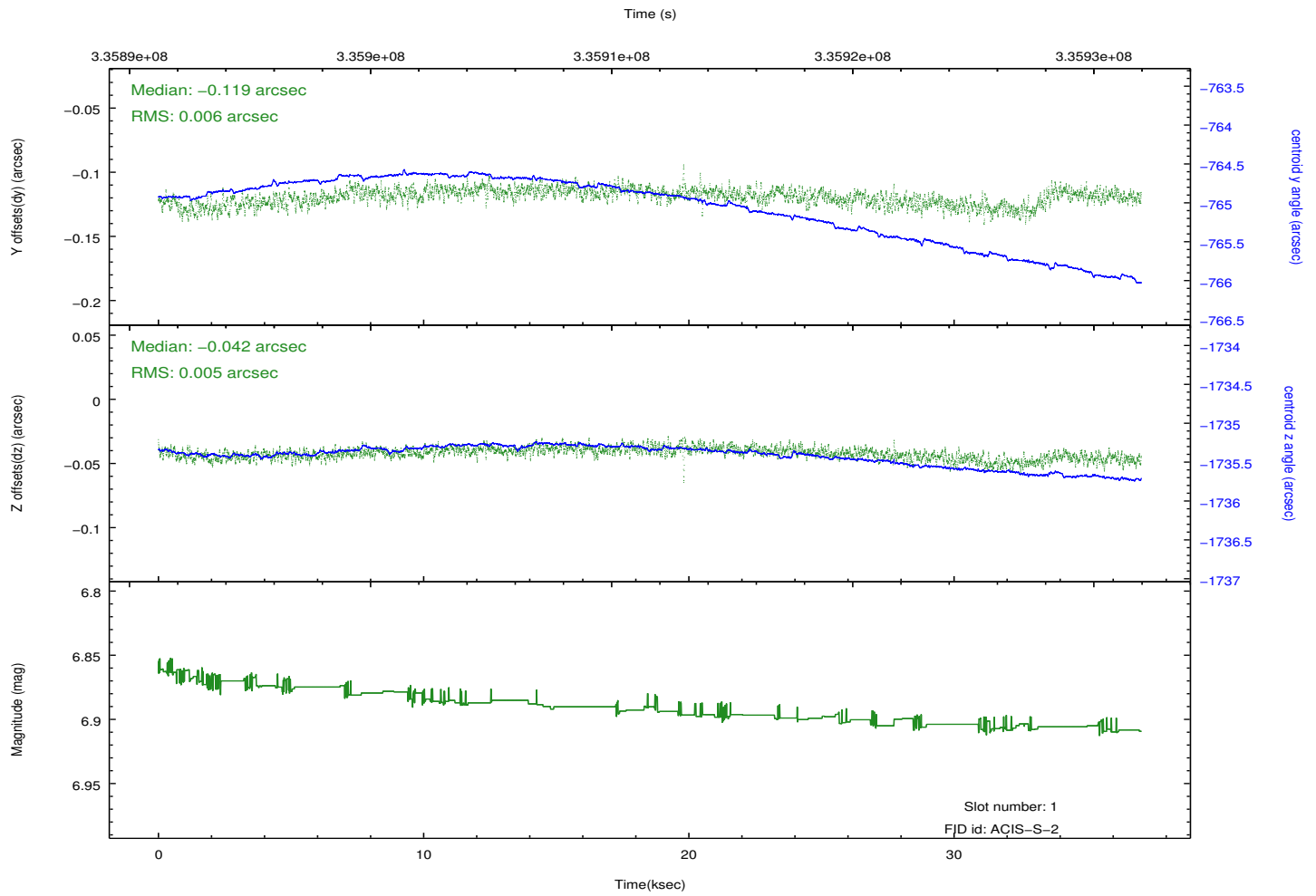
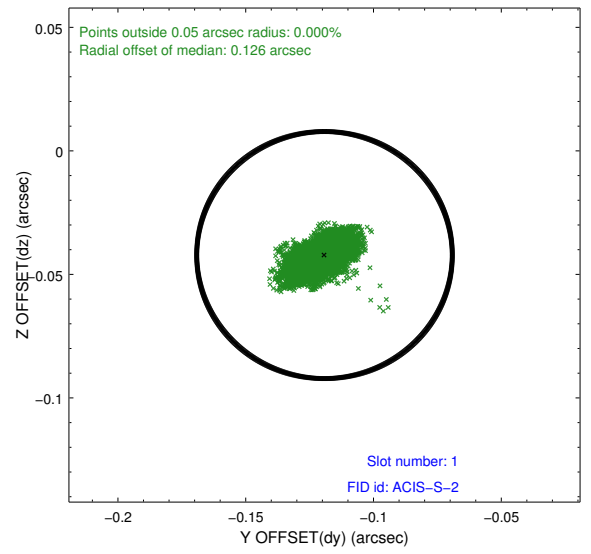
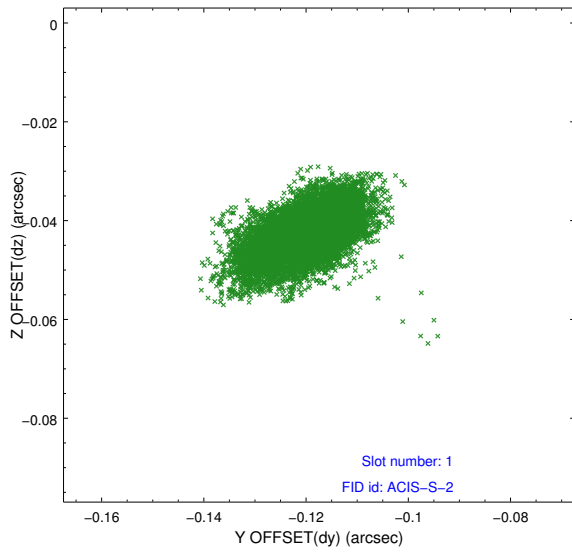


2.5 FID Slots

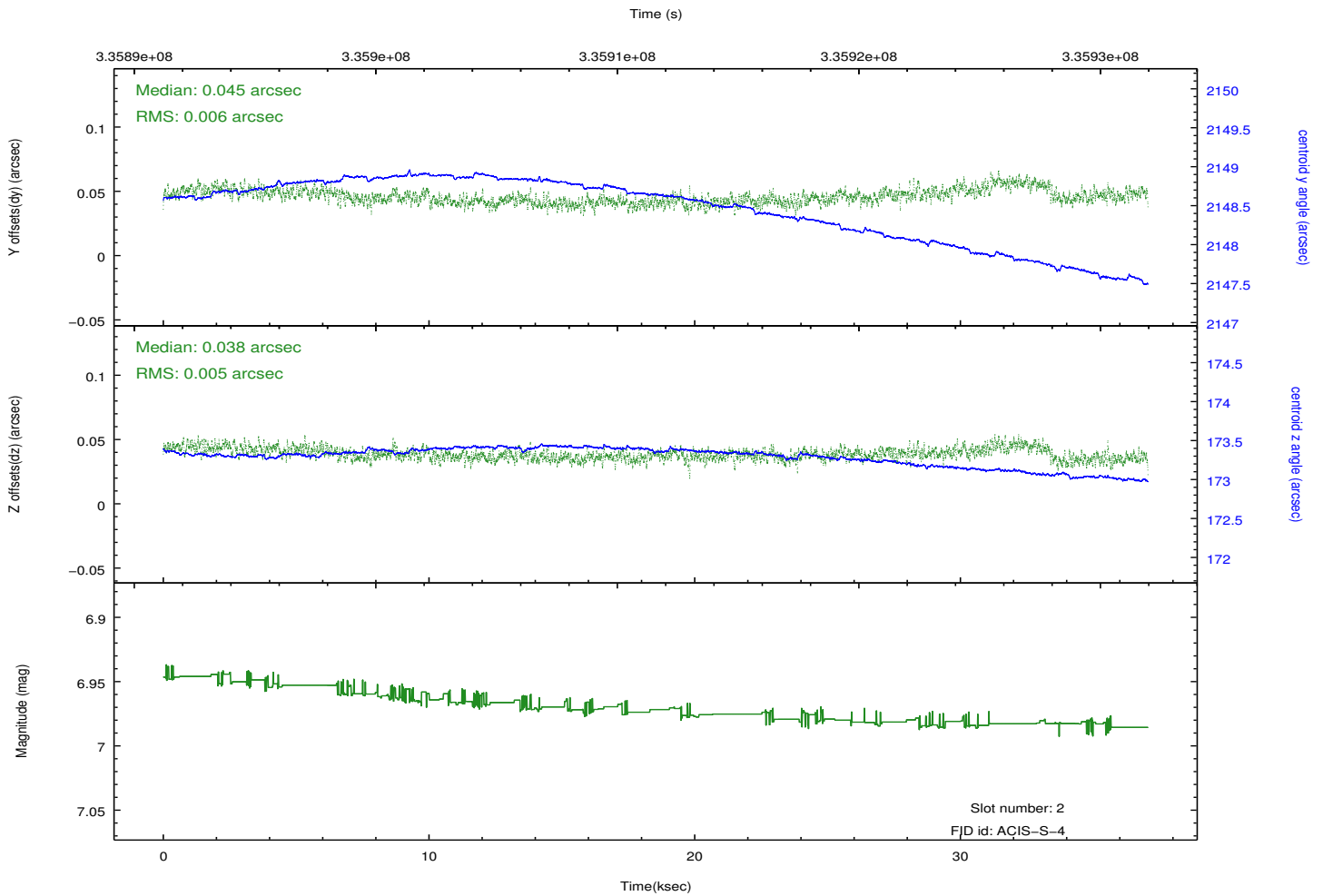
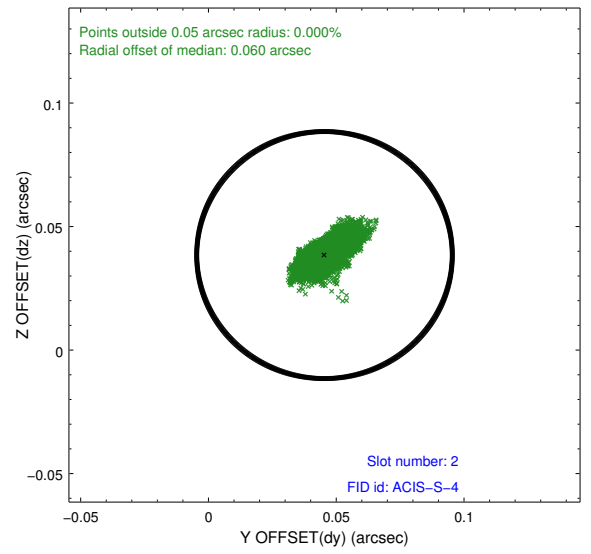
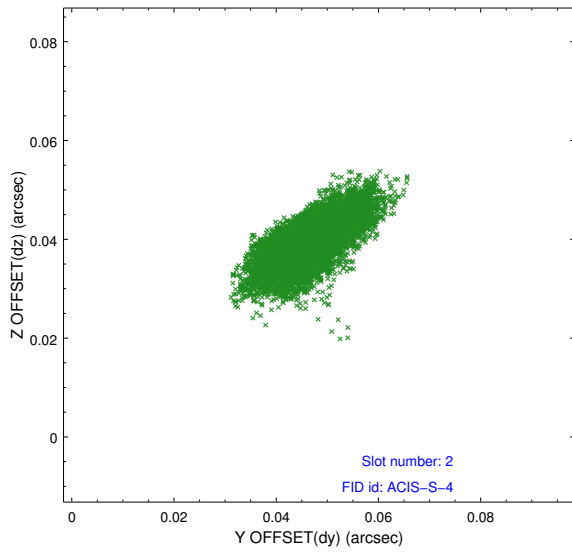
2.5.1 Slot 0



2.5.2 Slot 1

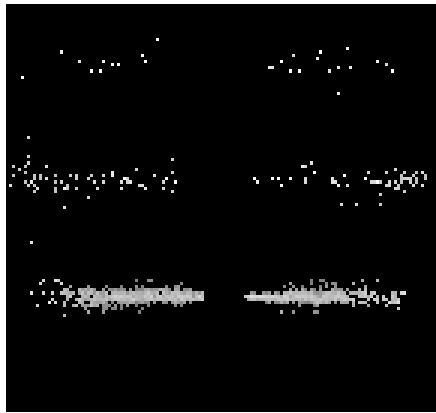


2.5.3 Slot 2

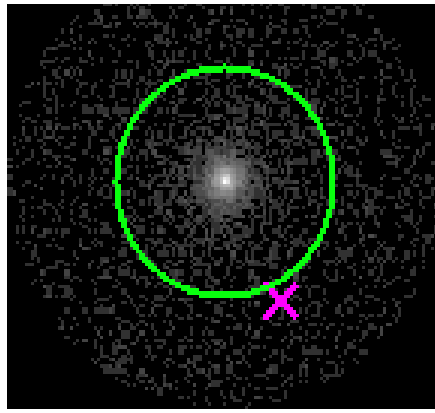


3 Gratings

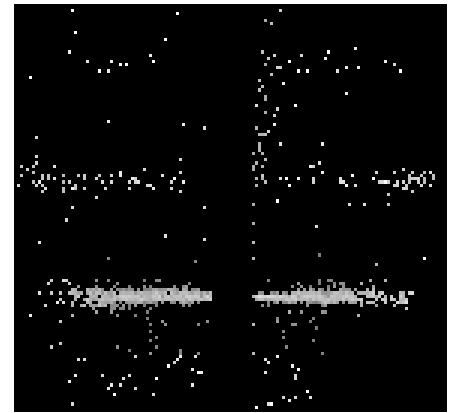
3.1 HEG Arm



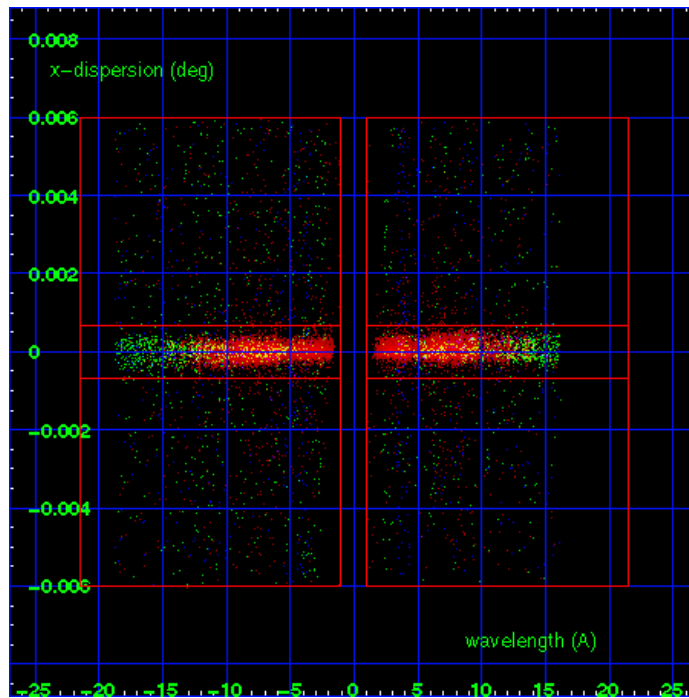
HEG Order Sort 123



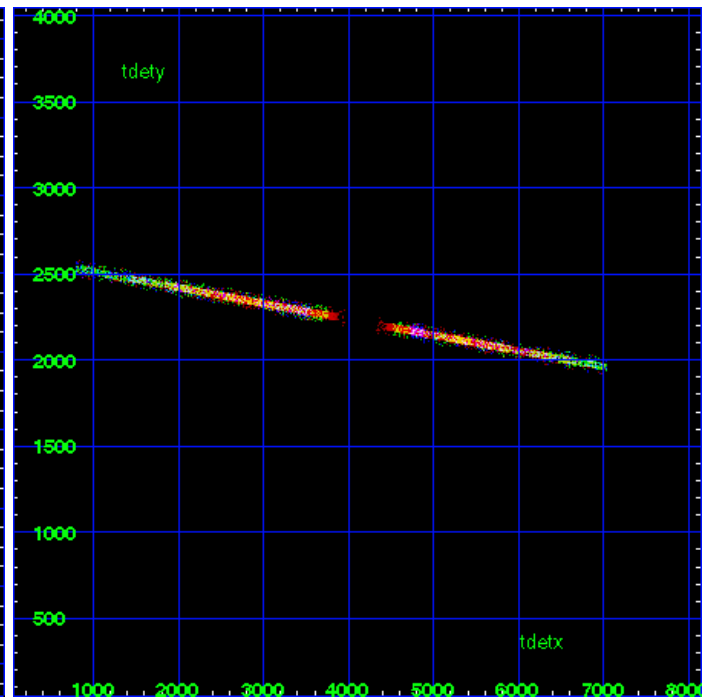
HEG Zero Order



HEG Order Sort ALL

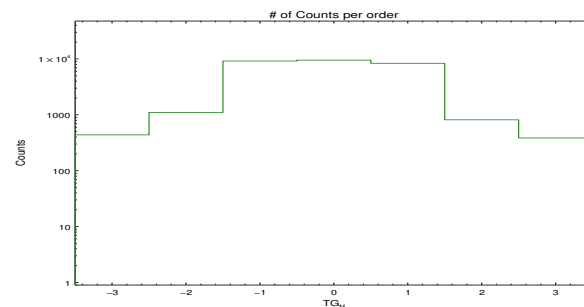


Spot Image HEG

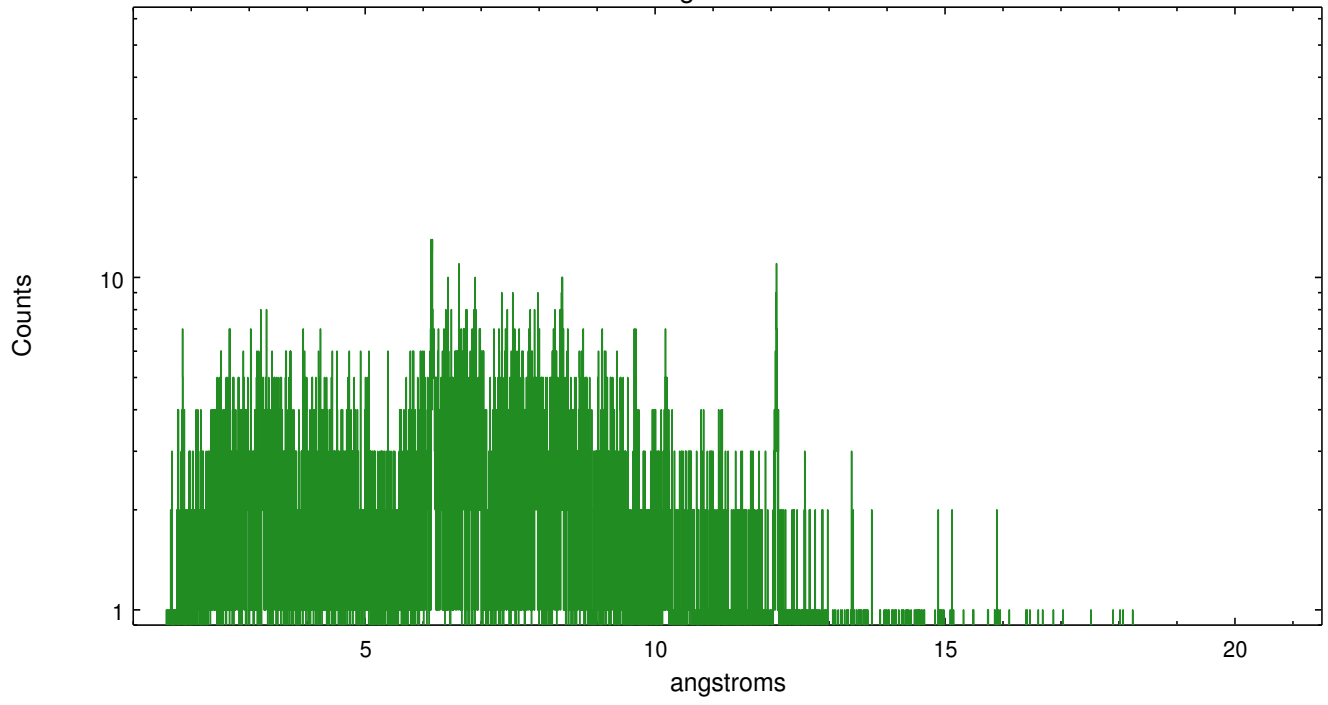


Full Detector HEG

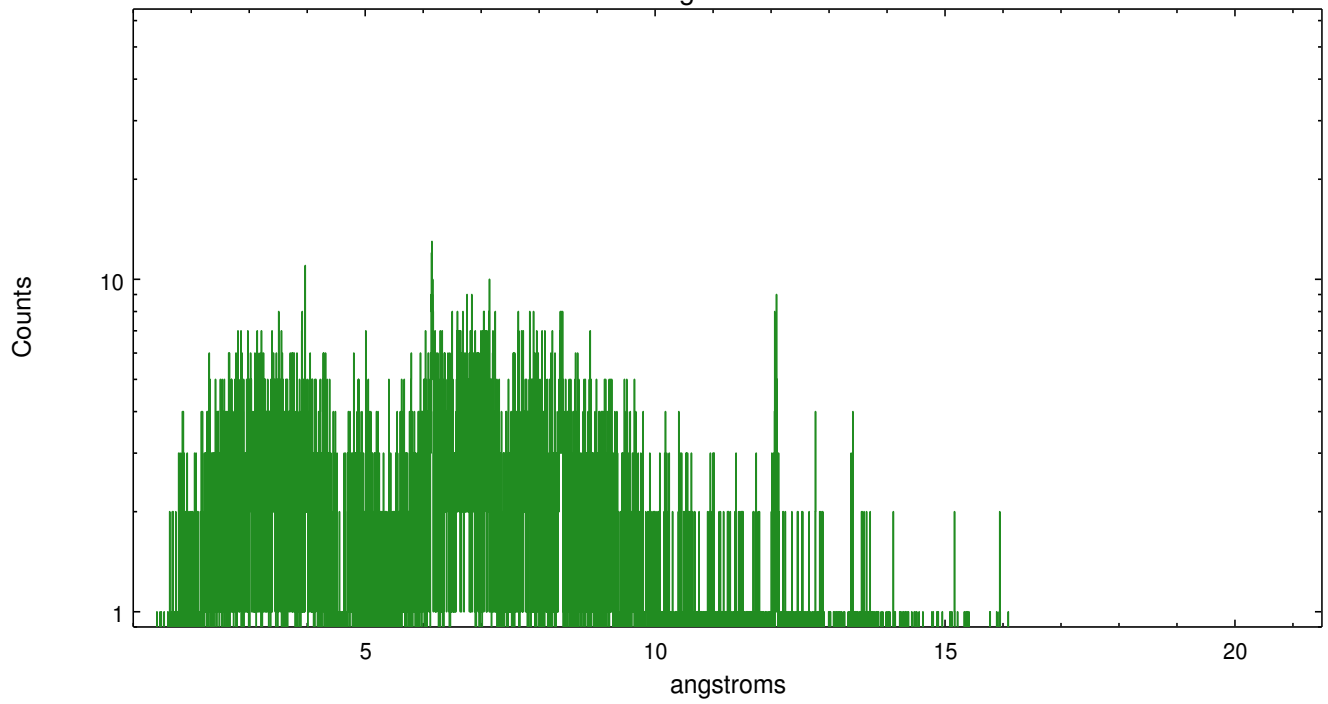
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	438	1101	9173	9525	8358	814	385



heg order -1



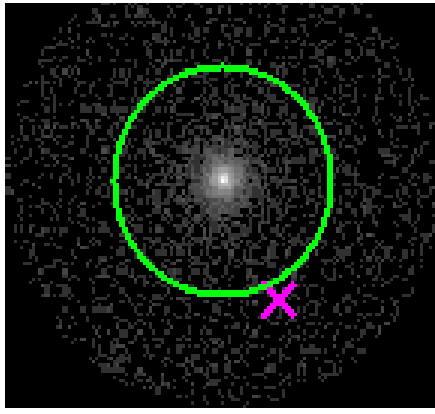
heg order +1



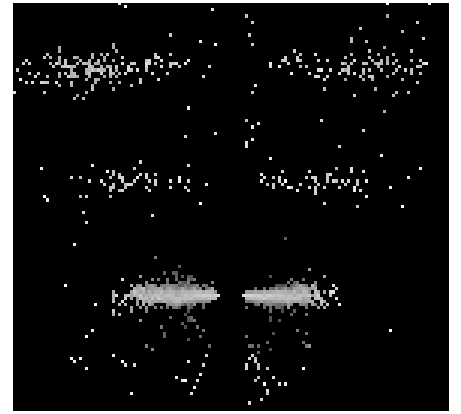
3.2 MEG Arm



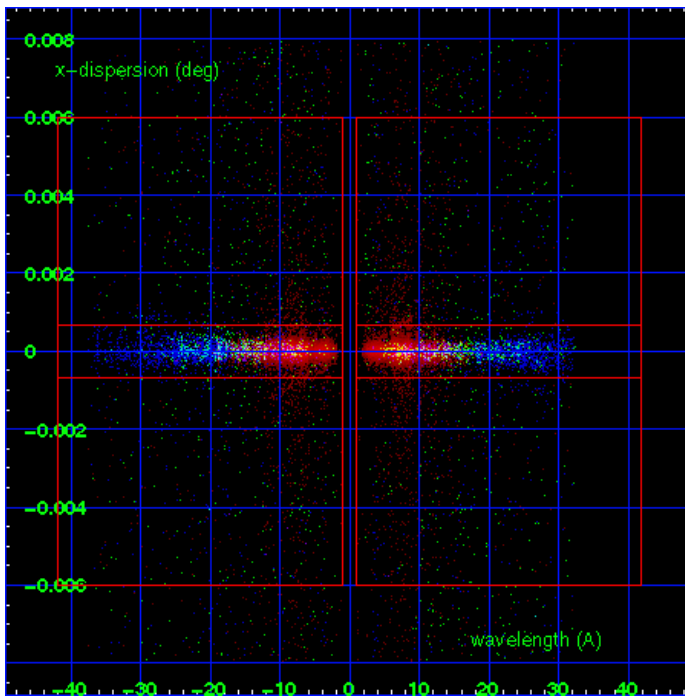
MEG Order Sort 123



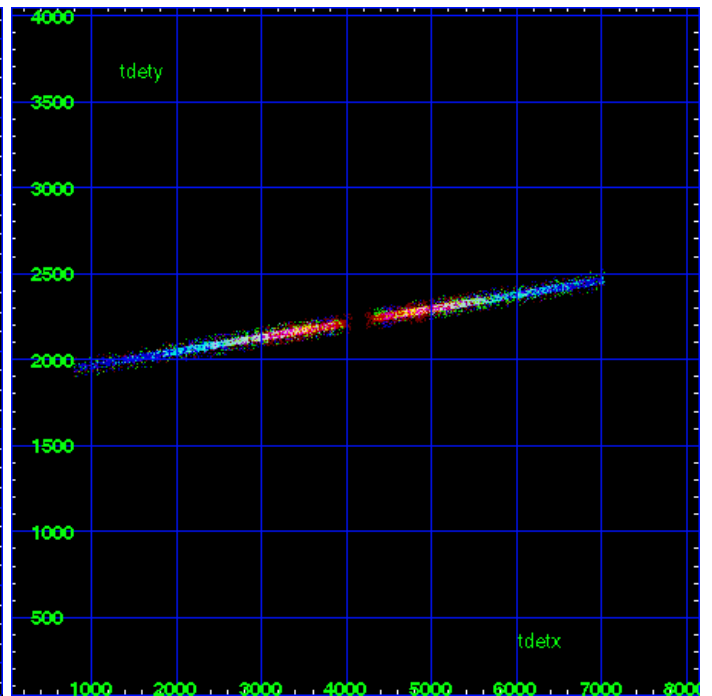
MEG Zero Order



MEG Order Sort ALL

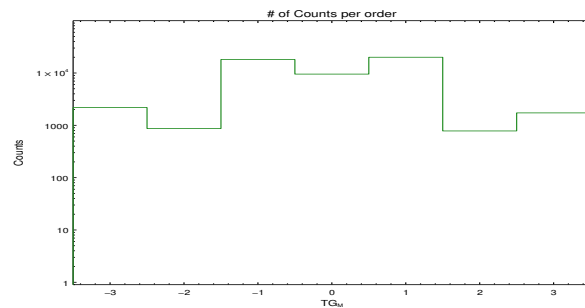


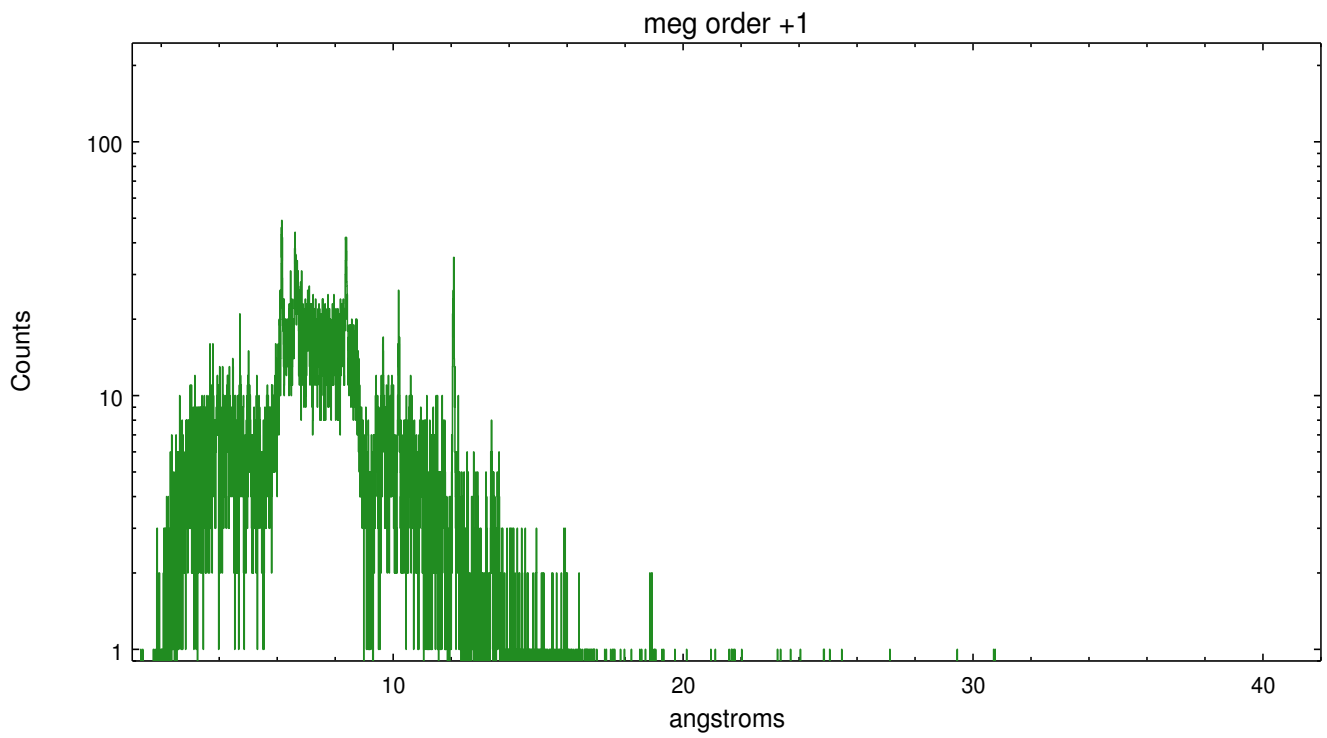
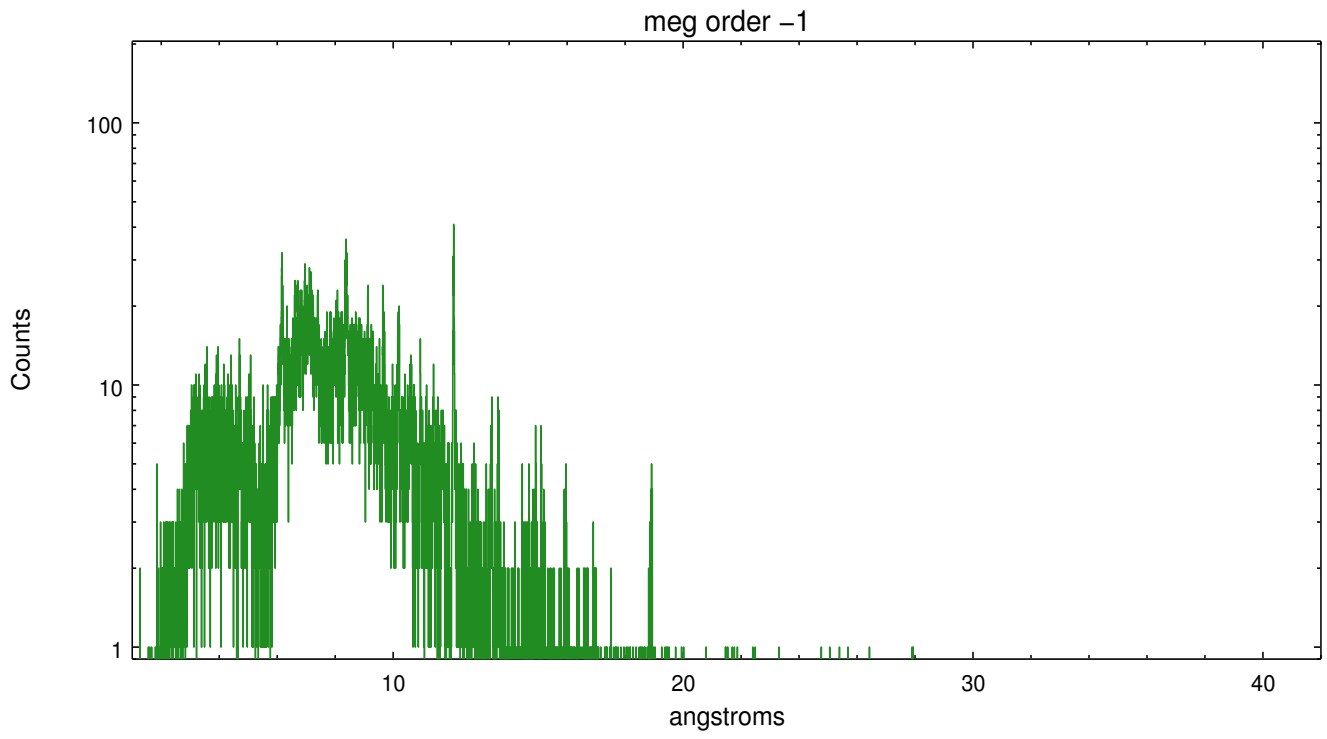
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2185	869	18080	9525	19996	781	1729





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.4479998

A.2 Comments

Zeroth order piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used to input the correct sky coordinates (x=4080.98, y=4127.61) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called findzero, which is expected to be released in CIAO (currently in ISIS). The tool calculates the point of intersection of the readout streak and the meg arm (preferred position), or the readout streak and the heg arm. The zeroth order source position determined by the standard pipeline processing using the tool tgdetect was not used in this processing. The newly determined zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect. Note that these corrected coordinates of the zeroth order cannot be reproduced by running tgdetect on the data.