

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9712 - L2 Version 3
Chandra X-Ray Center

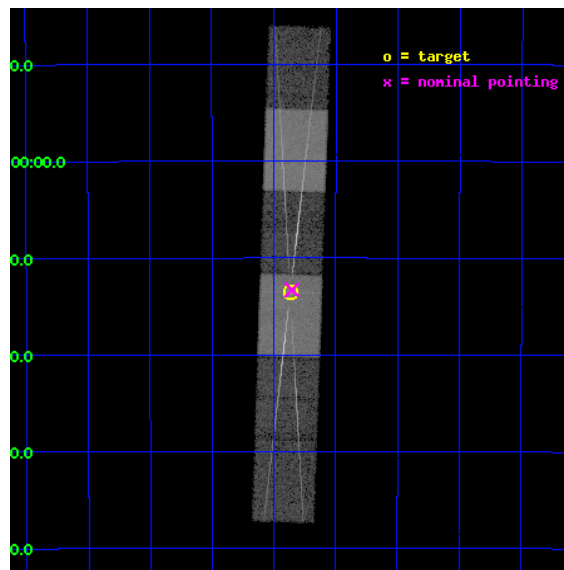
L2 Processing Date : May 17 2012

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1 Front

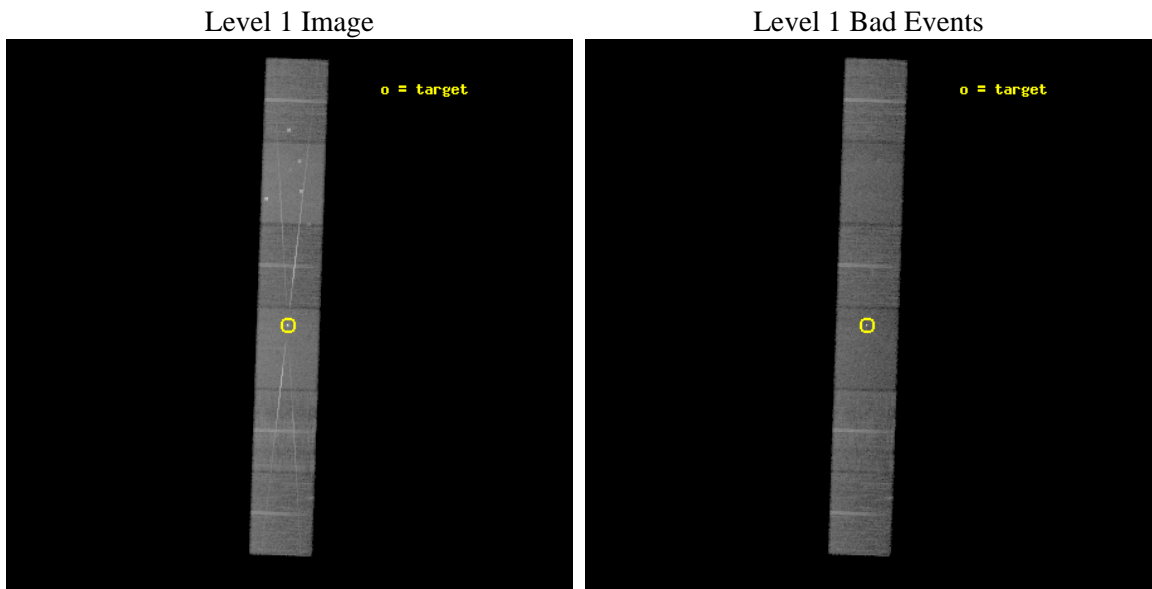
seq_num	790189	Sequence number
obs_id	9712	Observation id
title	AO9 Calibration Observations of PKS2155-304	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.7135477661	Nominal RA [deg]
dec_nom	-30.221493529512	Nominal Dec [deg]
roll_nom	91.921331114524	Nominal Roll [deg]
revision	3	Processing version of data
ontime	15038.996352911	Sum of GTIs [s]
livetime	14796.103517567	Livetime [s]
ontime4	15036.496382713	Sum of GTIs [s]
ontime5	15038.955312908	Sum of GTIs [s]
ontime6	15038.914272904	Sum of GTIs [s]
ontime7	15038.996352911	Sum of GTIs [s]
ontime8	15038.873232901	Sum of GTIs [s]
ontime9	15038.832192898	Sum of GTIs [s]
l2events	235820	Number of level 2 events



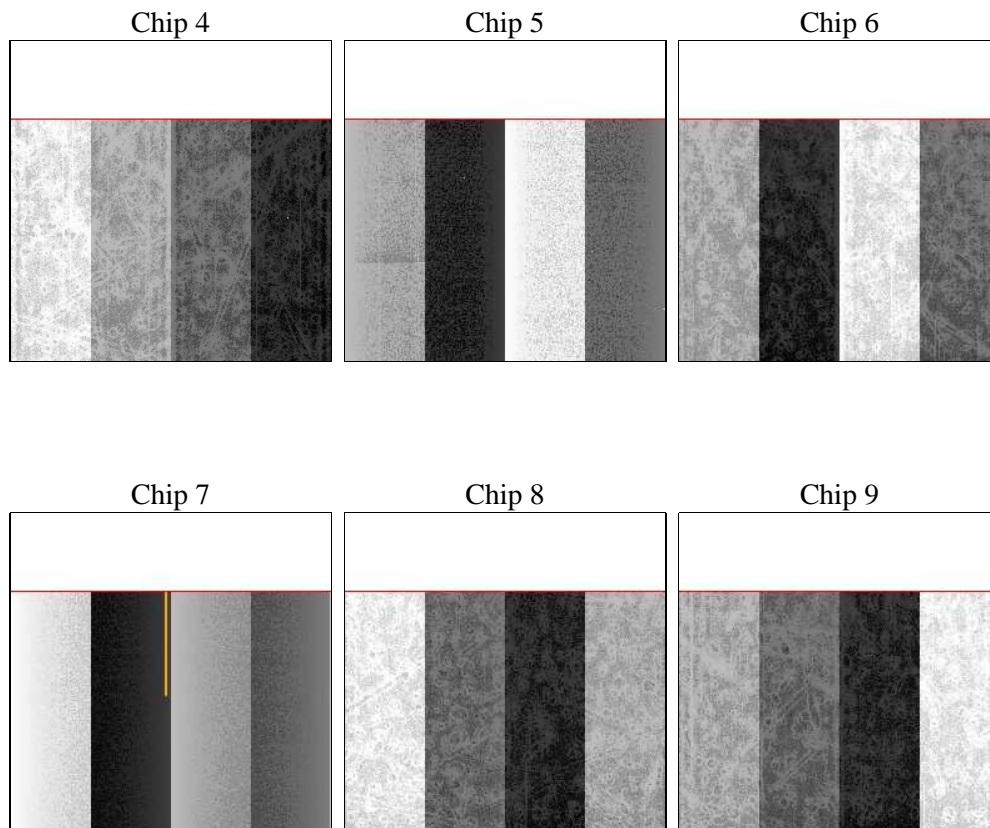
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	15038.996352911	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	15036.496382713	Sum of GTIs [s]
date	2012-05-17T15:47:00	Date and time of file creation	ontime5	15038.955312908	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15038.914272904	Sum of GTIs [s]
			ontime7	15038.996352911	Sum of GTIs [s]
			ontime8	15038.873232901	Sum of GTIs [s]
			ontime9	15038.832192898	Sum of GTIs [s]
			l1events	868405	Number of level 1 events

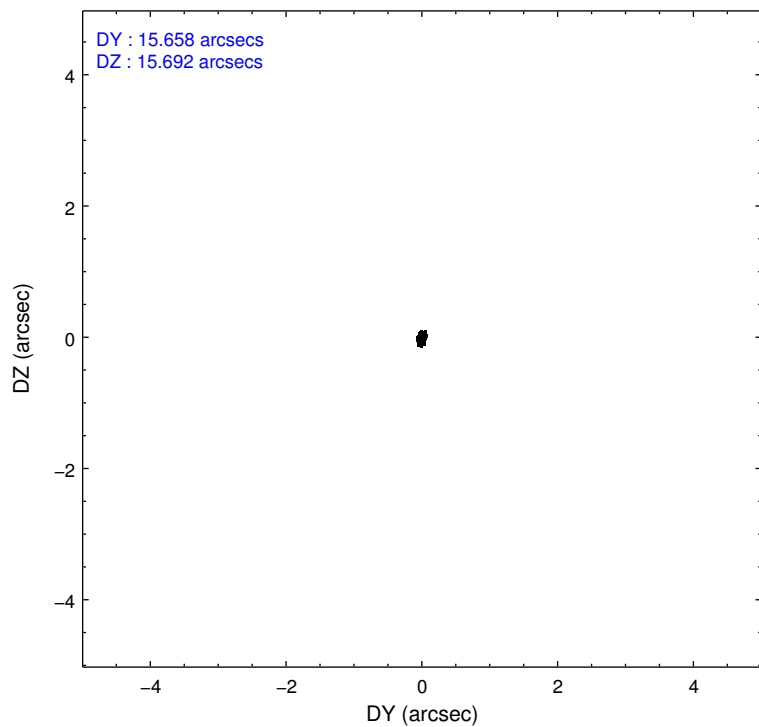
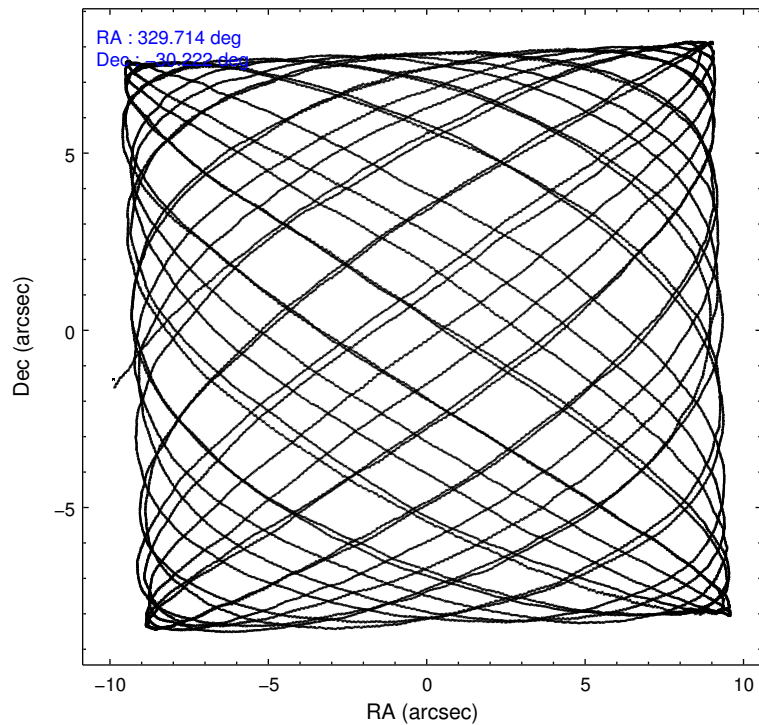
2.1.4 Events

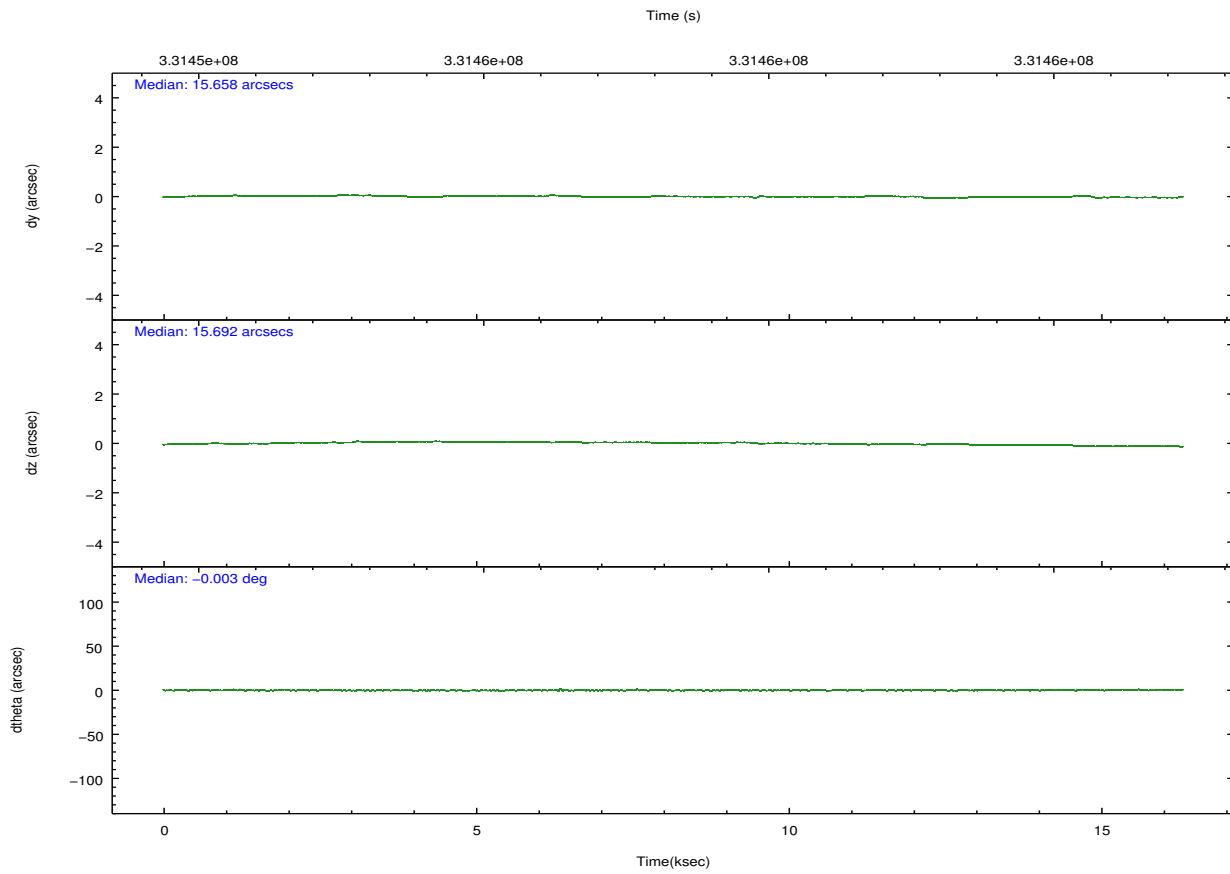
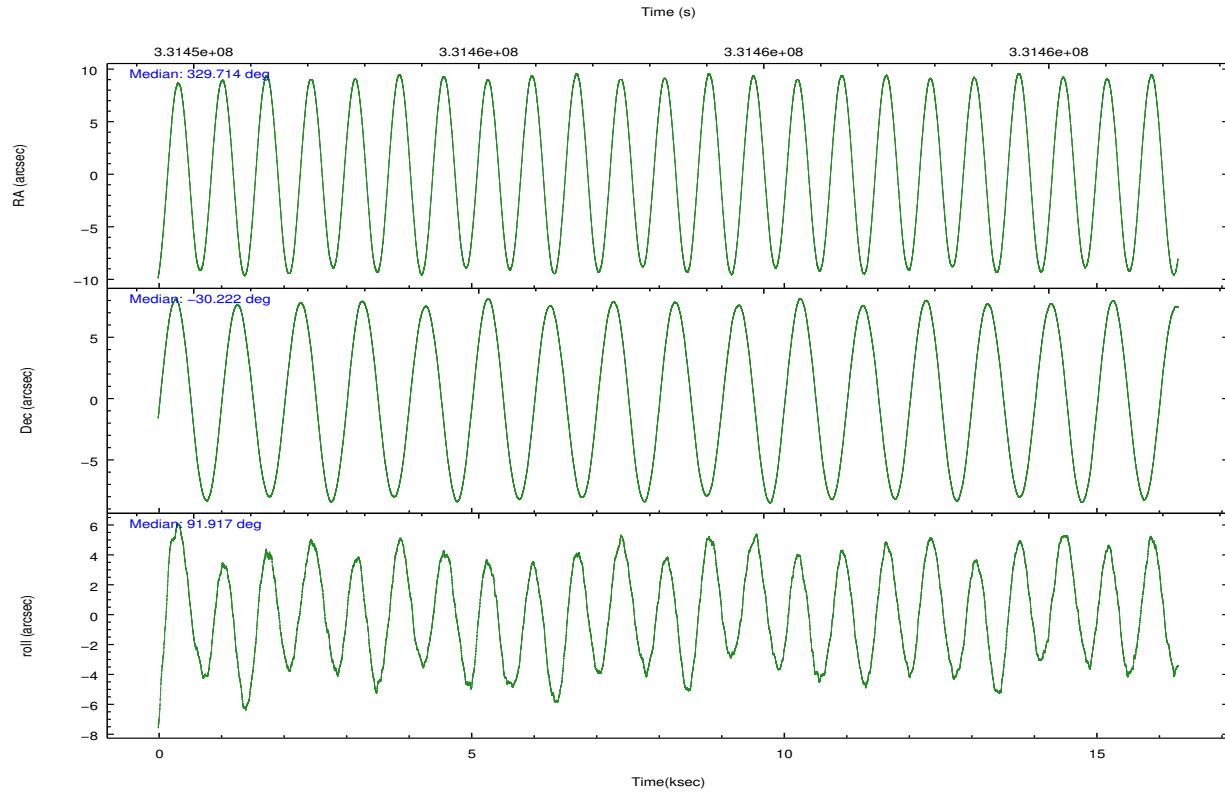
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	125814	183006	124998	172571	150779	111237	grade 0 events	9535	15107	17596	9373	18391	7630
rejected events	107782	92004	96298	93318	108349	94964		7%	8%	14%	5%	12%	6%
rejected %	85%	50%	77%	54%	71%	85%	grade 1 events	110	331	113	328	115	82
								0%	0%	0%	0%	0%	0%
							grade 2 events	3181	25485	4408	16605	8314	3012
								2%	13%	3%	9%	5%	2%
							grade 3 events	1482	4062	1814	7275	3747	1495
								1%	2%	1%	4%	2%	1%
							grade 4 events	1467	4040	1846	7104	3453	1380
								1%	2%	1%	4%	2%	1%
							grade 5 events	4978	12647	5258	15192	6958	5771
								3%	6%	4%	8%	4%	5%
							grade 6 events	2375	42337	3045	38922	8536	2767
								1%	23%	2%	22%	5%	2%
							grade 7 events	102686	78997	90918	77772	101265	89100
								81%	43%	72%	45%	67%	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	329.730656	329.713547766099	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-30.244527	-30.2214935295116	Subarray start row	1	1
[deg] Pointing Roll	91.773312	91.92133111452397	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	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	331451473.184000	331449836.77749			
Observation start date	2008-07-03T05:50:08	2008-07-03T05:23:56			
[s] Observation end time (MET)	331466473.184000	331467731.74087			
Observation end date	2008-07-03T10:00:08	2008-07-03T10:22:11			
Read mode	TIMED	TIMED			

2.3 Aspect



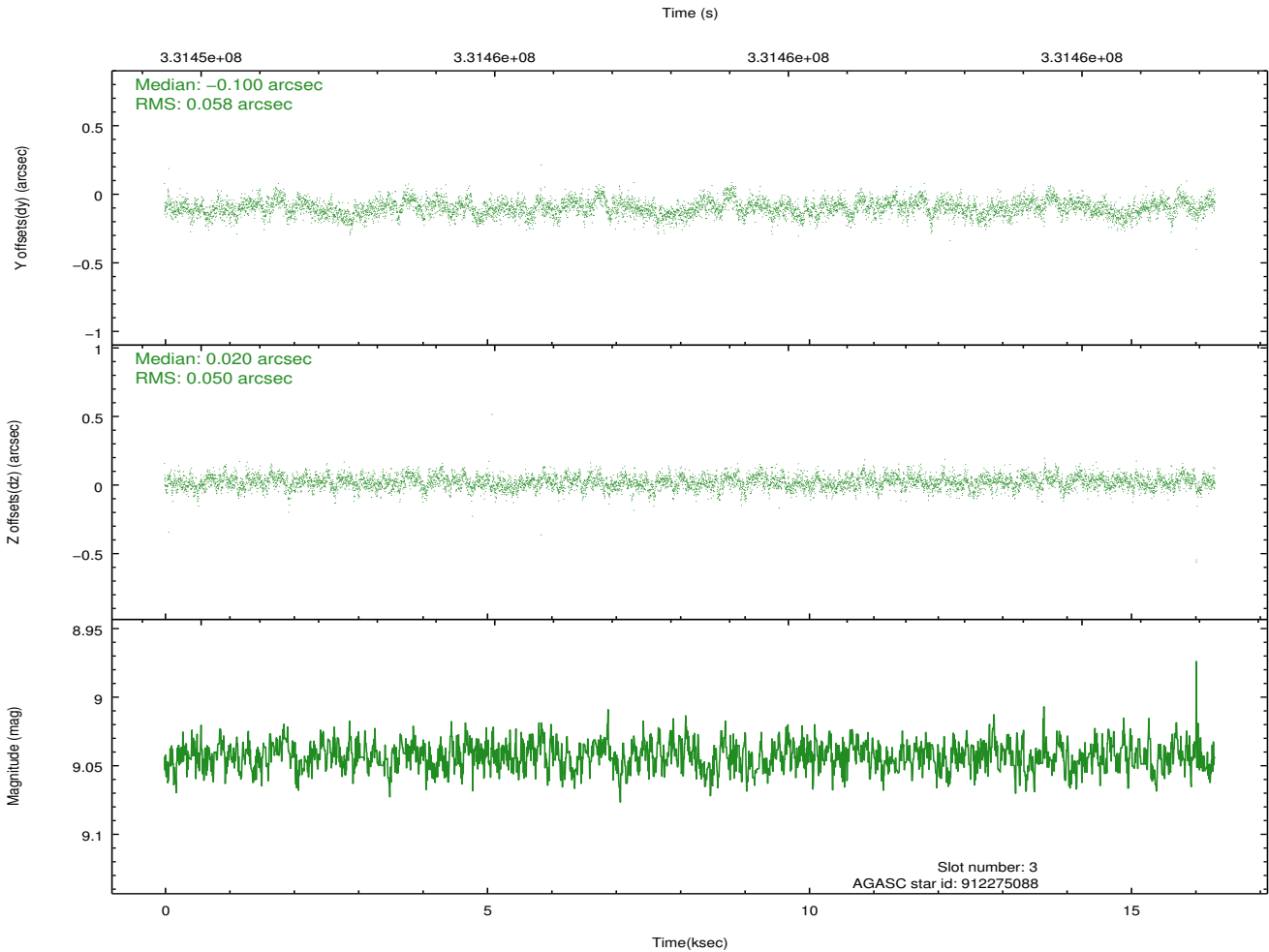
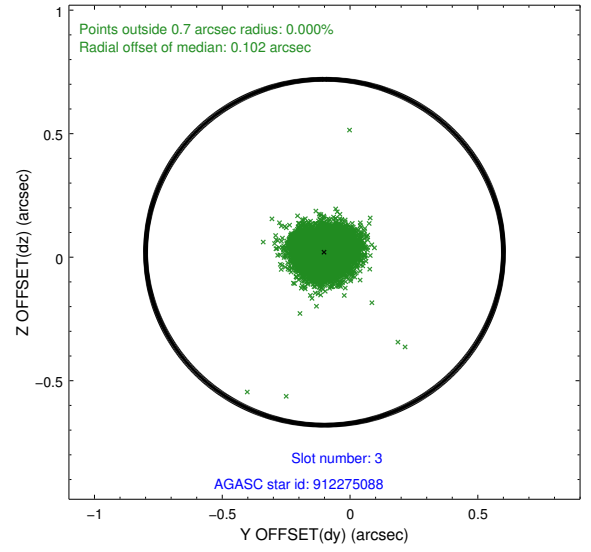
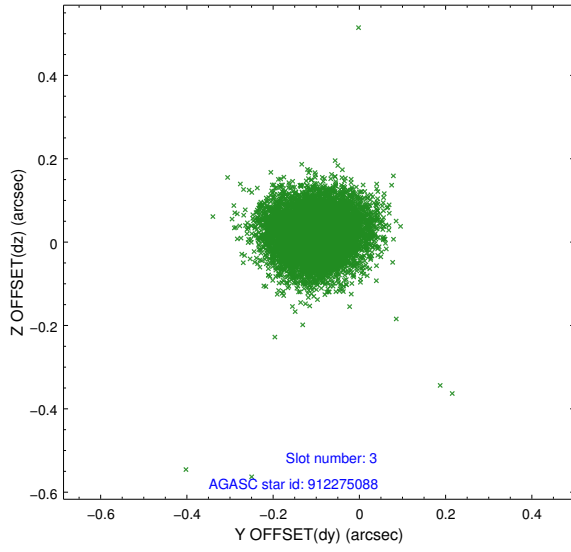


Slot Statistics

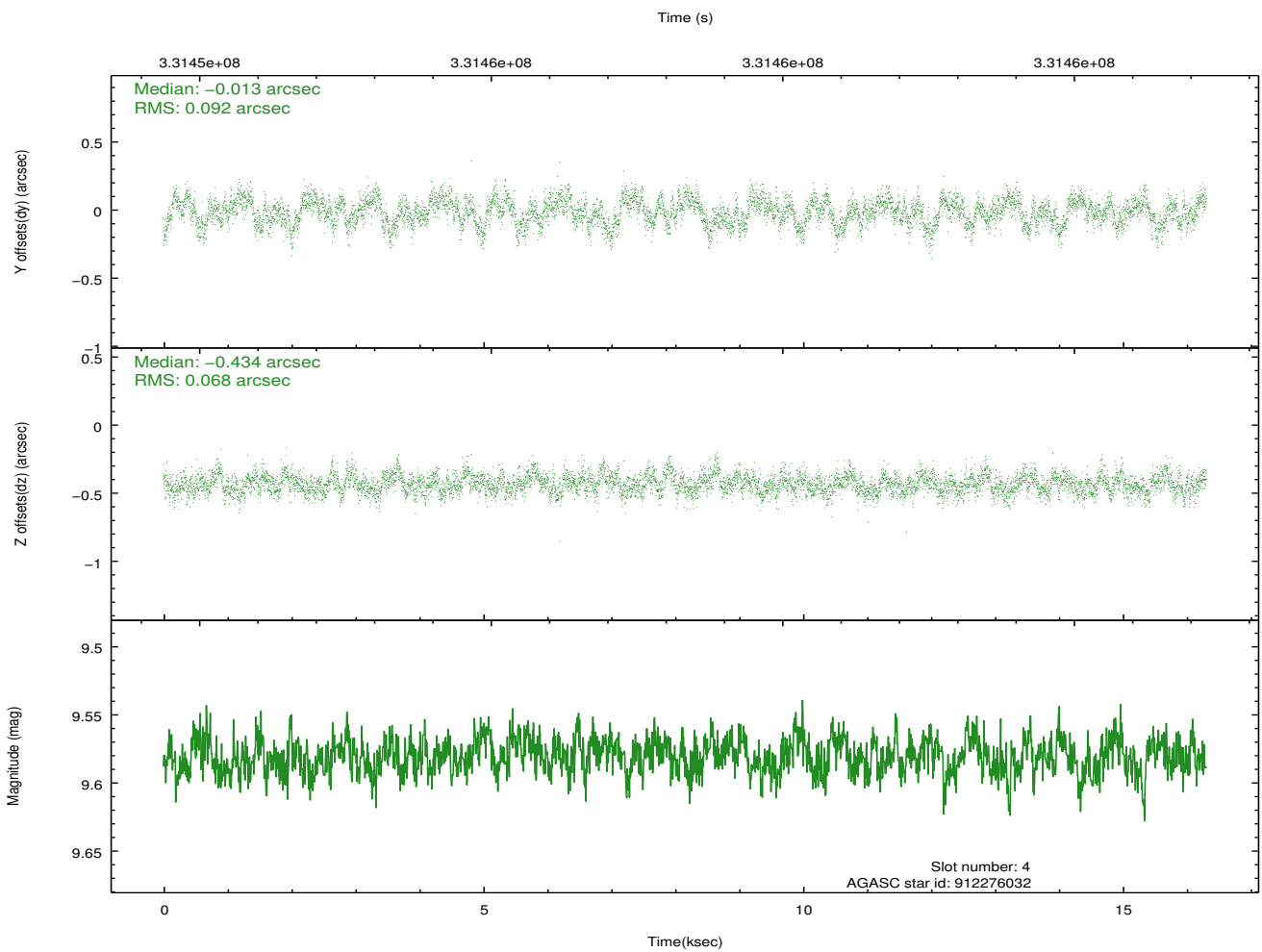
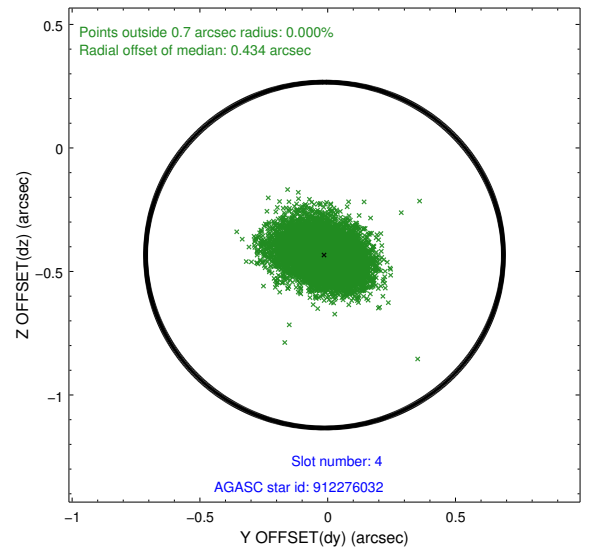
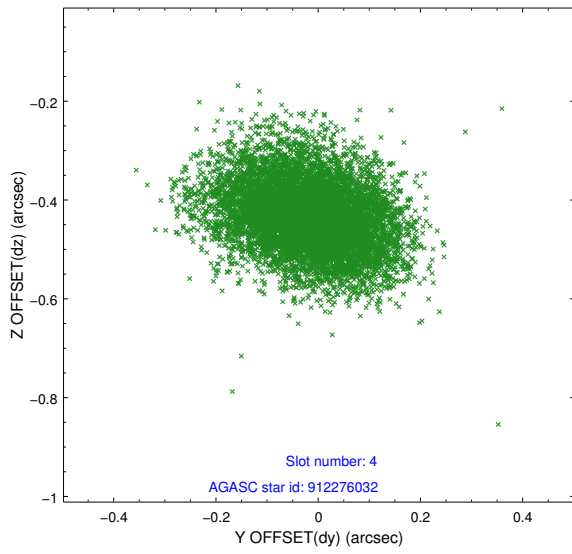
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	3979	-0.093	-0.093	0.007	0.011	0.000000	0.000000	-768.57	-1799.30
1	FID	ACIS-S-4	6.99	3979	0.185	0.070	0.006	0.012	0.000000	0.000000	2144.90	108.99
2	FID	ACIS-S-5	7.02	3979	-0.122	0.032	0.007	0.011	0.000000	0.000000	-1821.06	103.01
3	GUIDE	912275088	9.04	7952	-0.100	0.020	0.080	0.130	329.619228	-29.738698	1830.68	291.97
4	GUIDE	912276032	9.58	7948	-0.013	-0.434	0.121	0.197	329.395967	-29.803466	1618.11	995.68
5	GUIDE	981468128	9.35	7945	0.122	0.502	0.108	0.176	329.756350	-30.158334	307.94	-89.08
6	GUIDE	981471664	6.37	7958	-0.020	-0.248	0.112	0.176	328.981826	-30.605916	-1236.55	2358.83
7	GUIDE	981478152	9.39	7948	0.017	0.164	0.102	0.163	329.415589	-30.057192	702.98	960.92

2.4 Star Slots

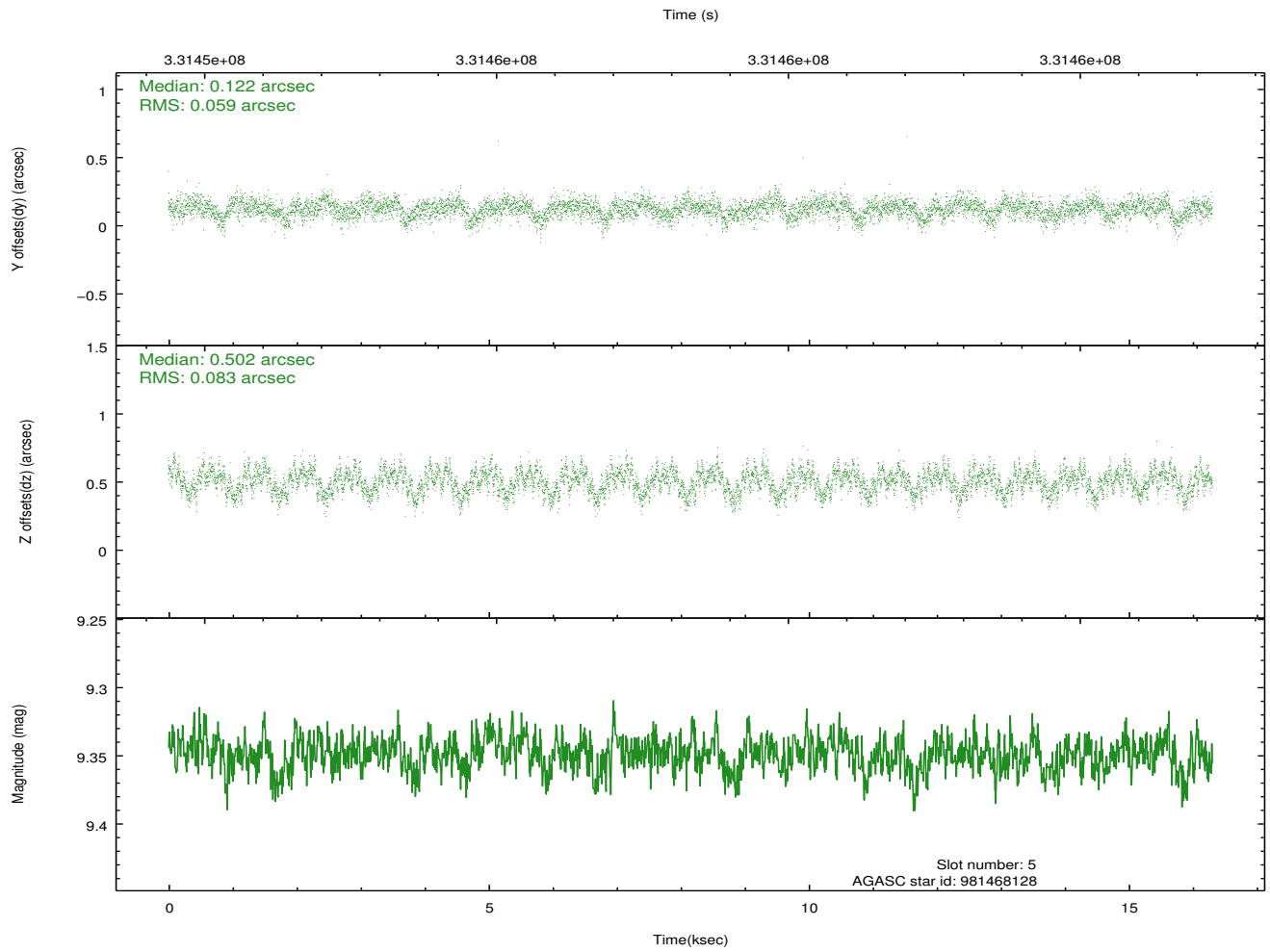
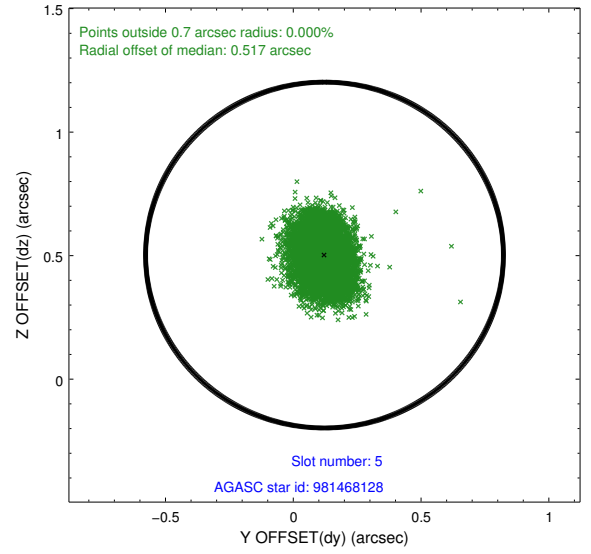
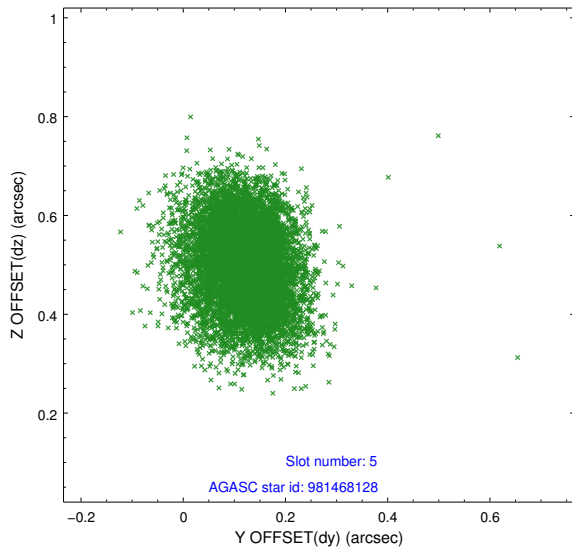
2.4.1 Slot 3



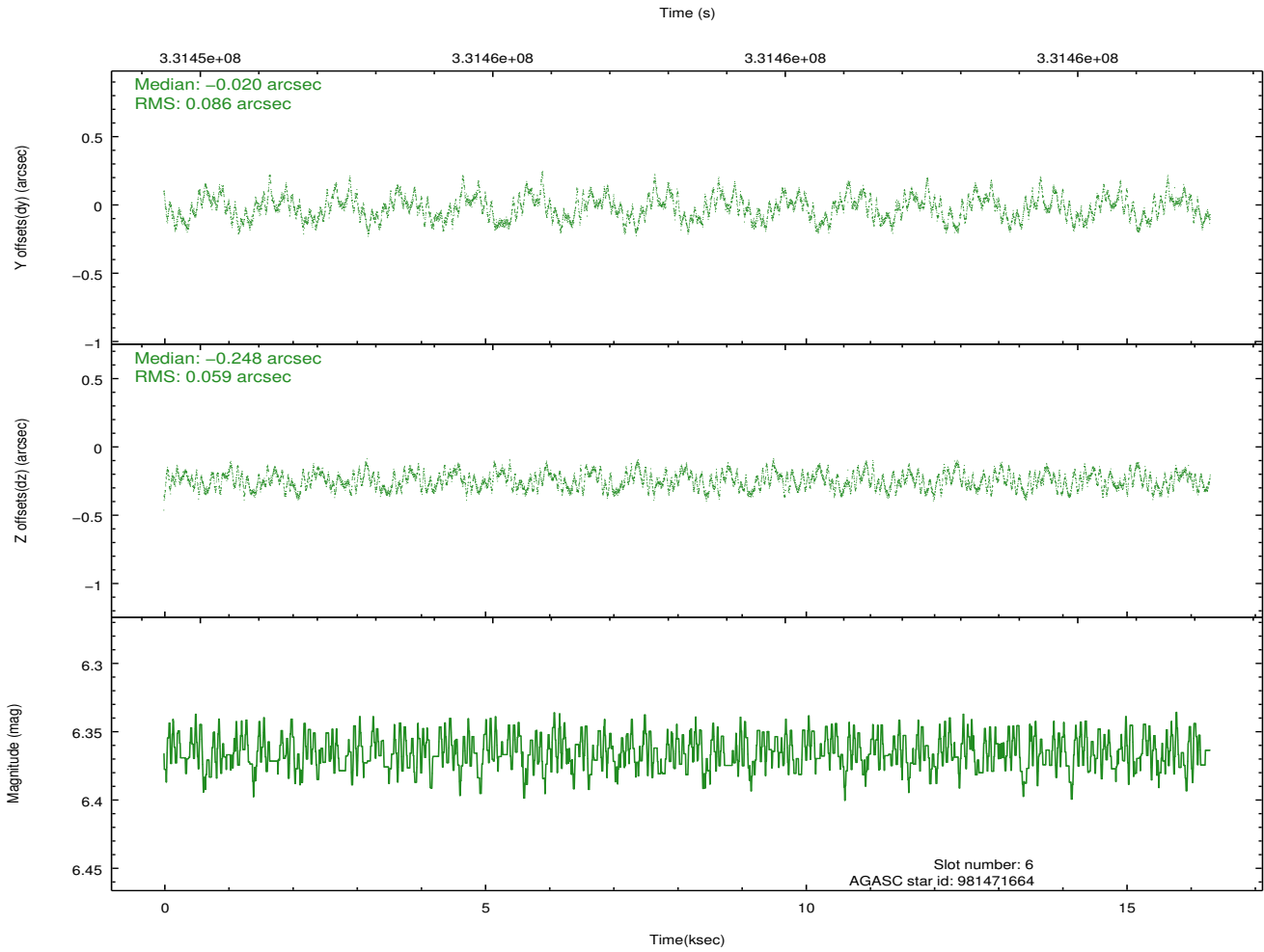
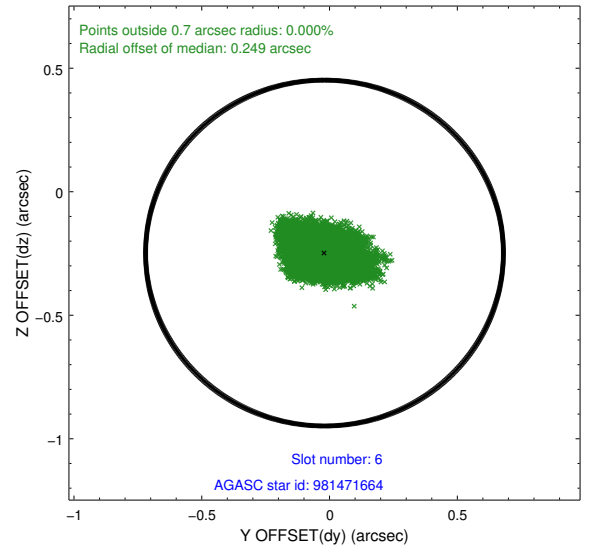
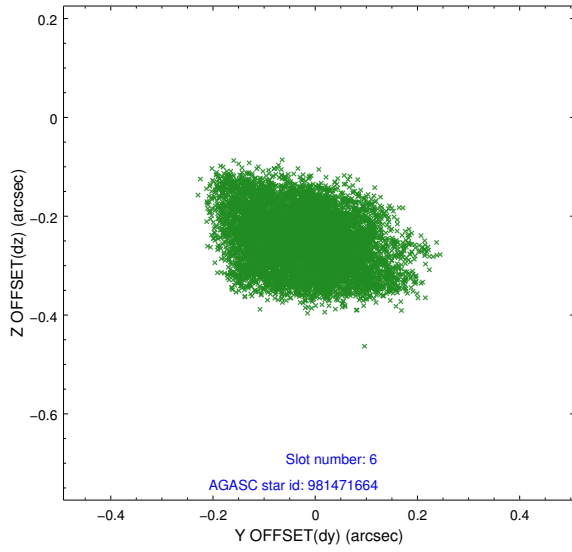
2.4.2 Slot 4



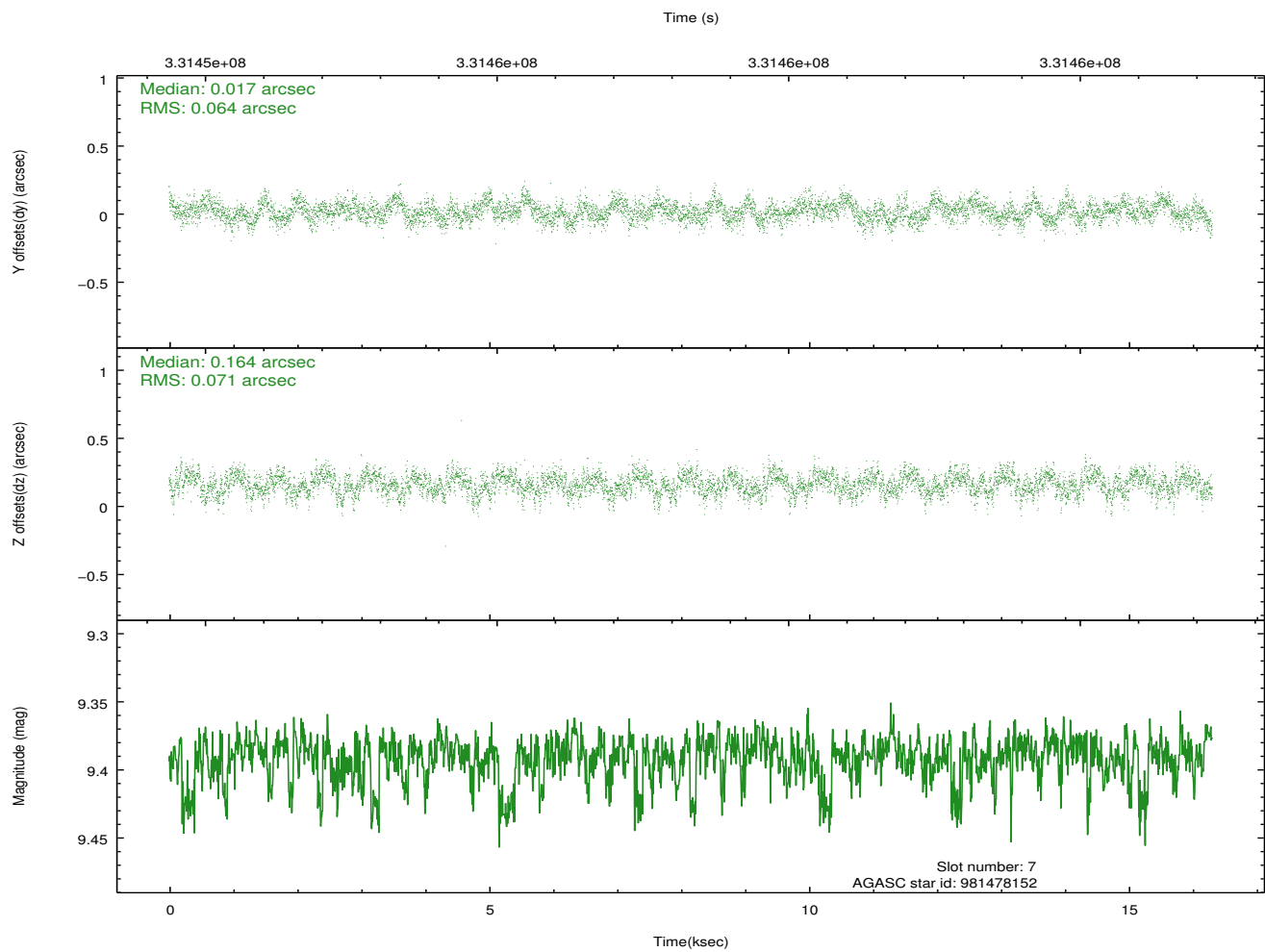
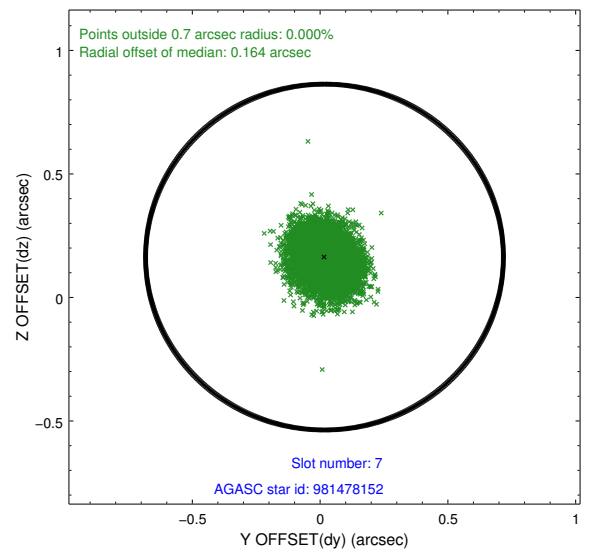
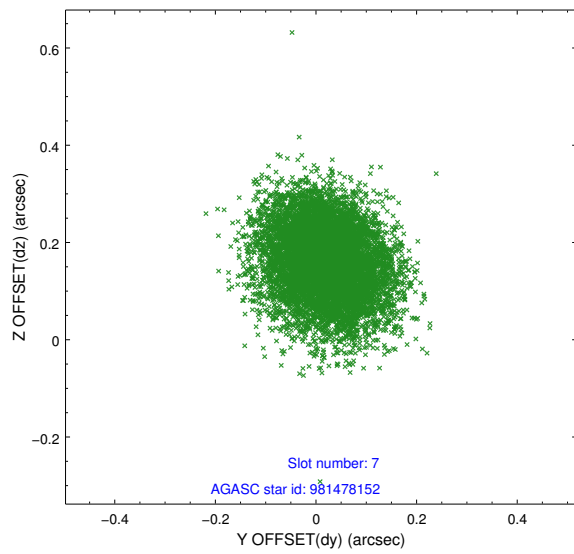
2.4.3 Slot 5



2.4.4 Slot 6

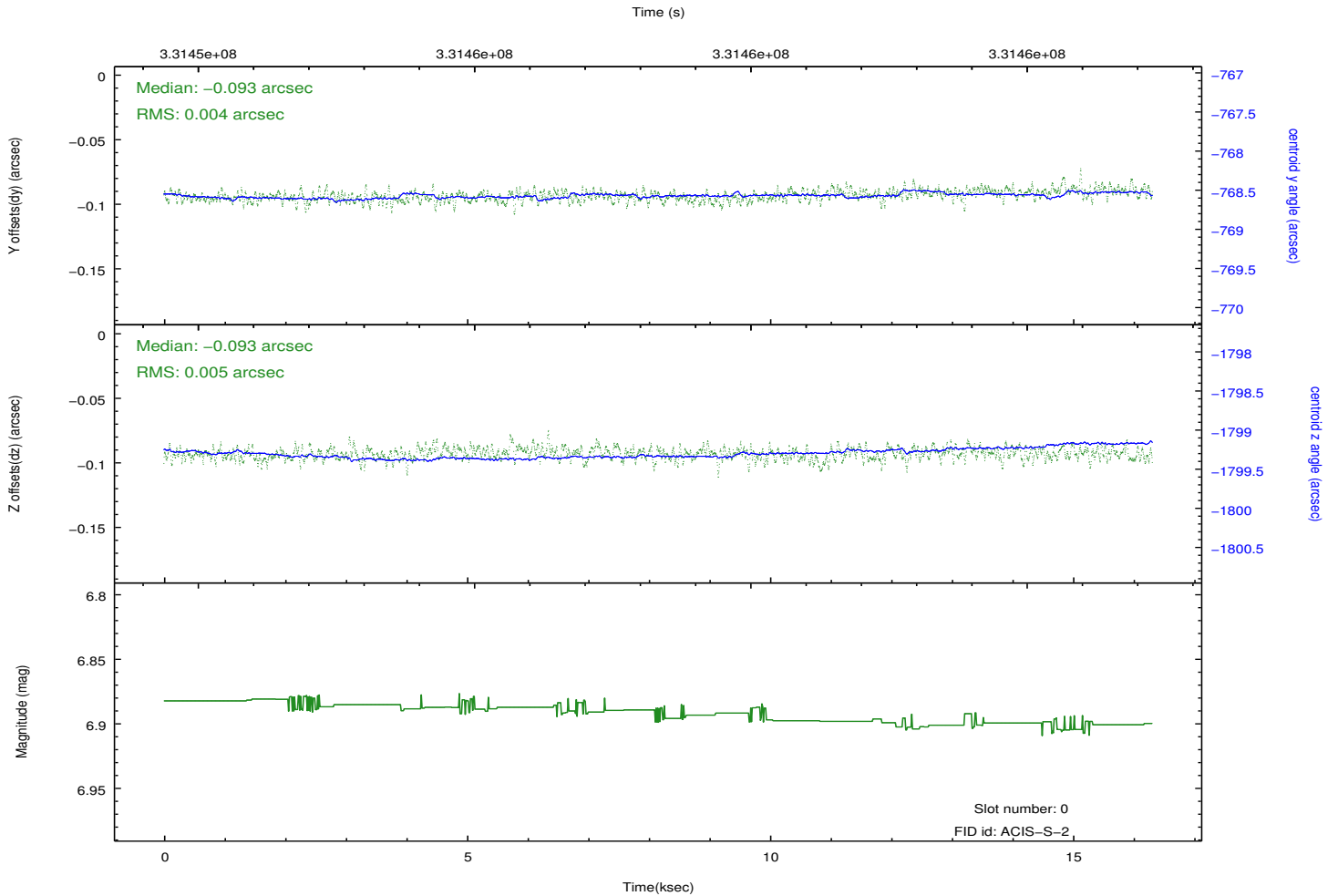
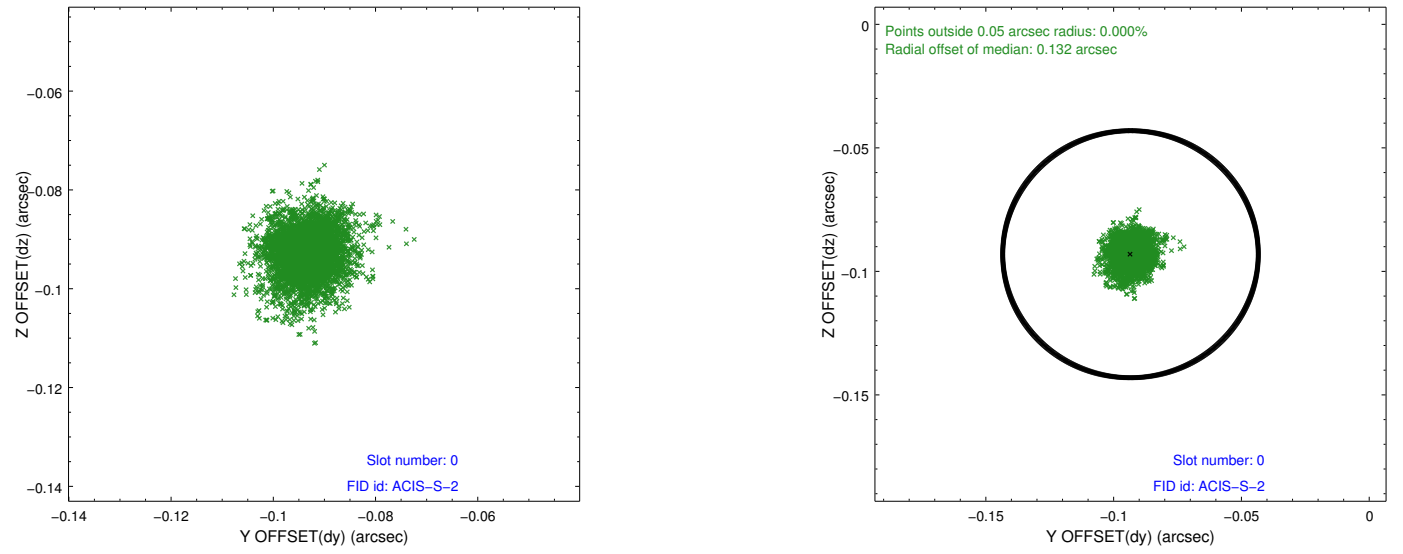


2.4.5 Slot 7

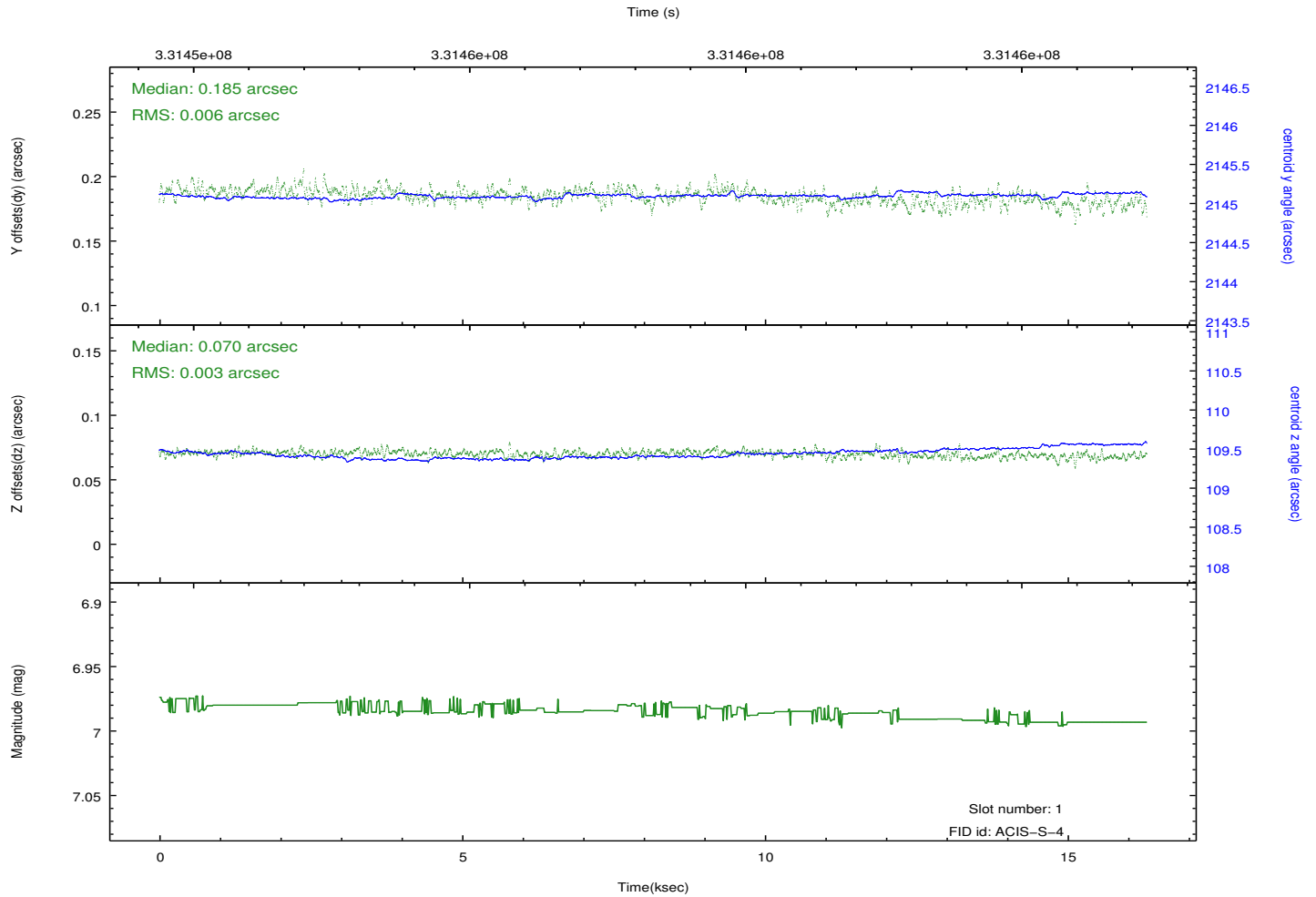
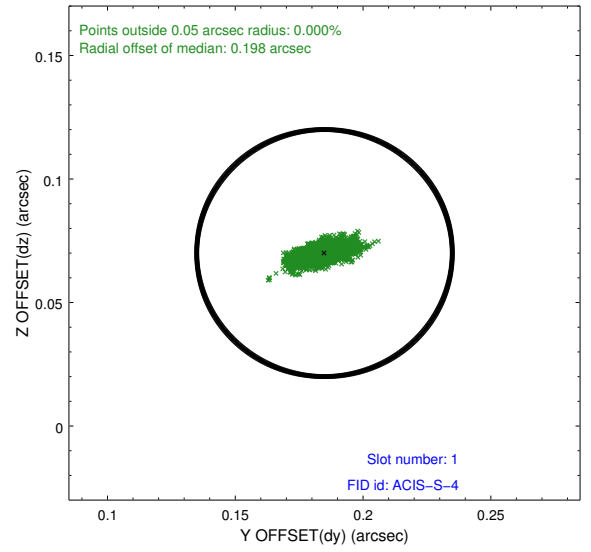
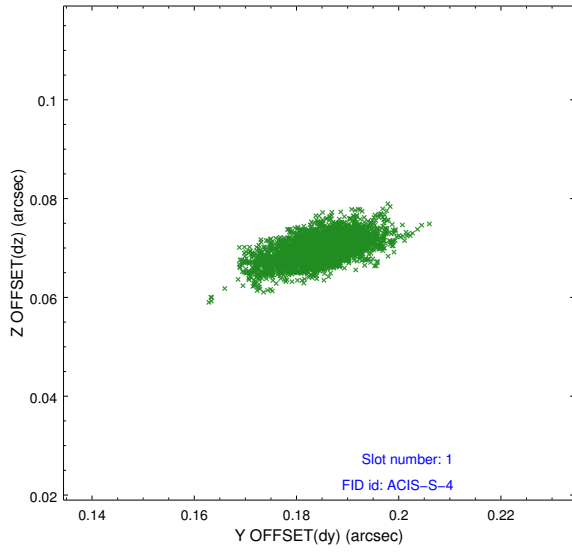


2.5 FID Slots

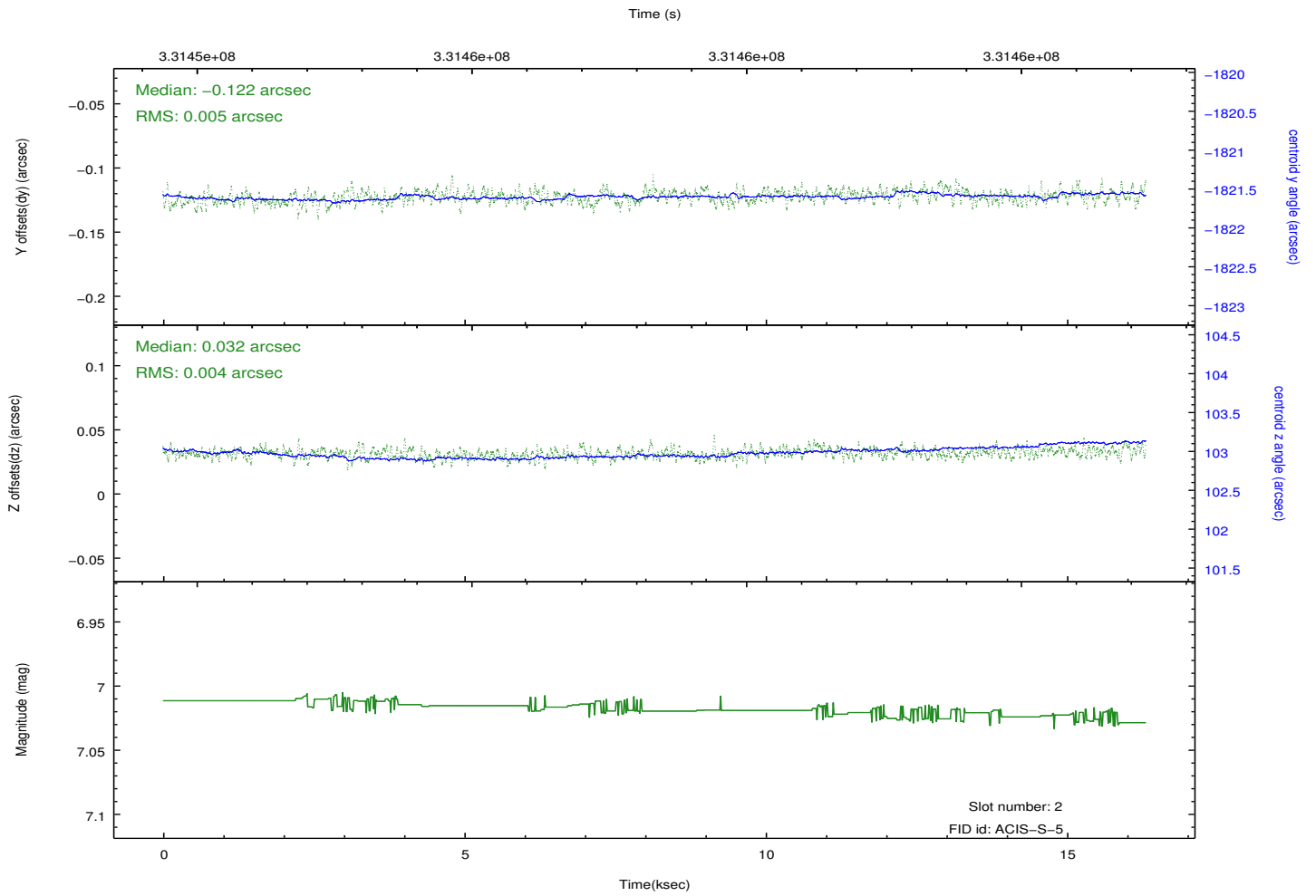
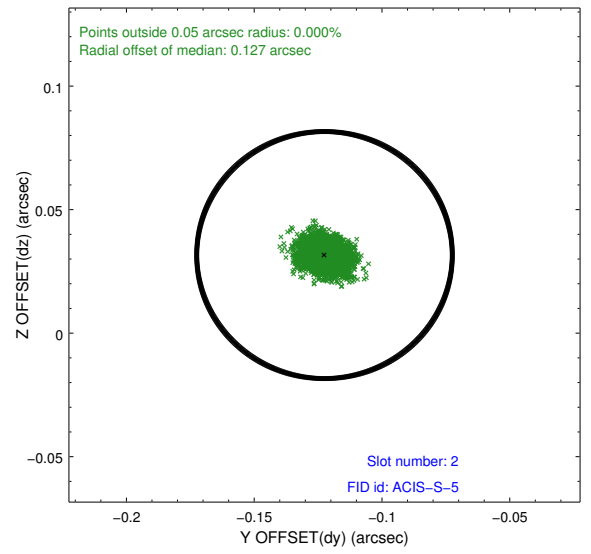
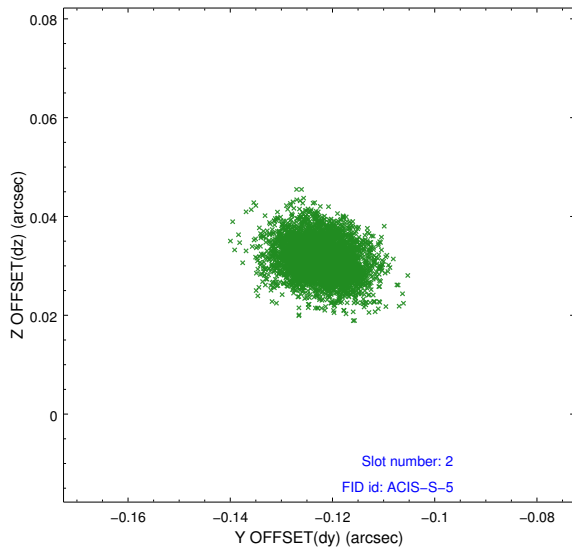
2.5.1 Slot 0



2.5.2 Slot 1

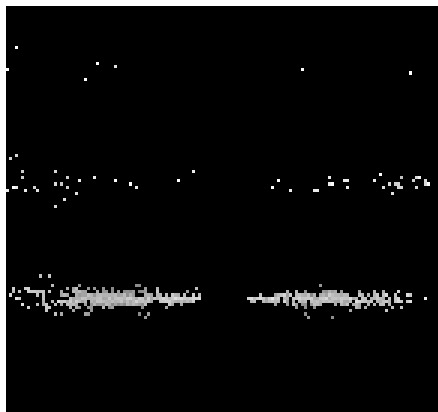


2.5.3 Slot 2

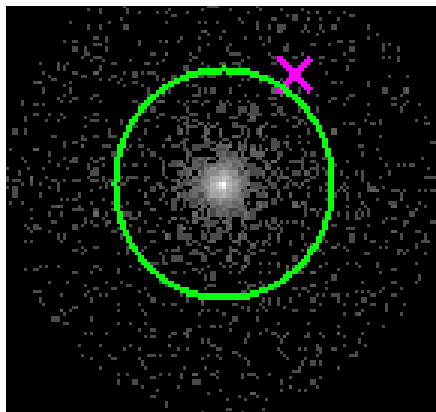


3 Gratings

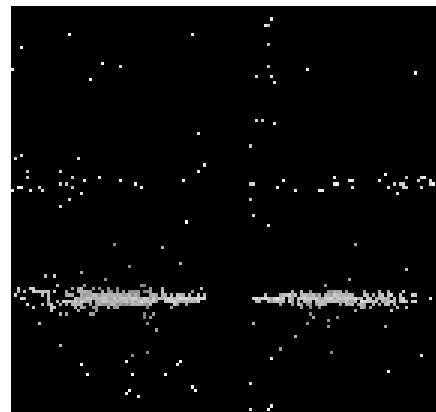
3.1 HEG Arm



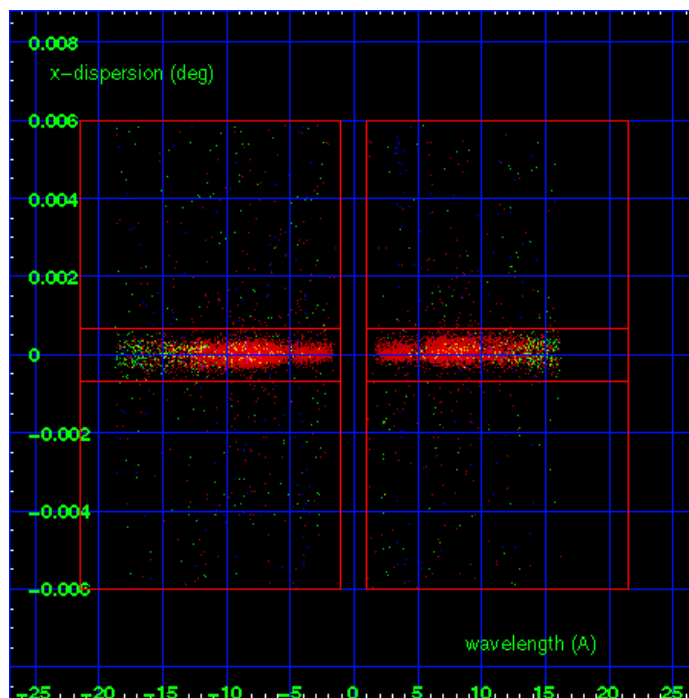
HEG Order Sort 123



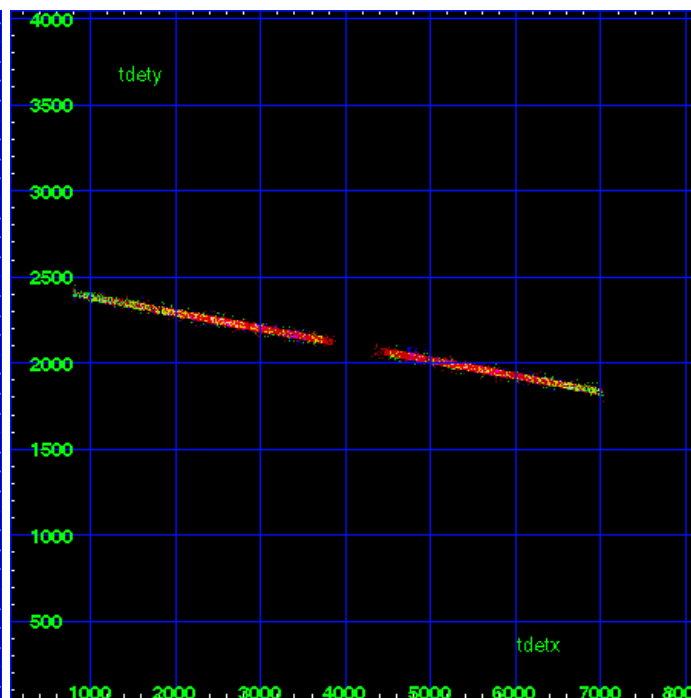
HEG Zero Order



HEG Order Sort ALL

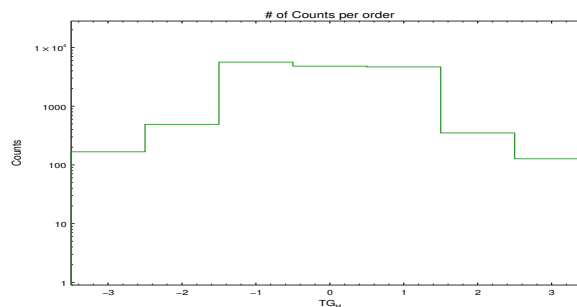


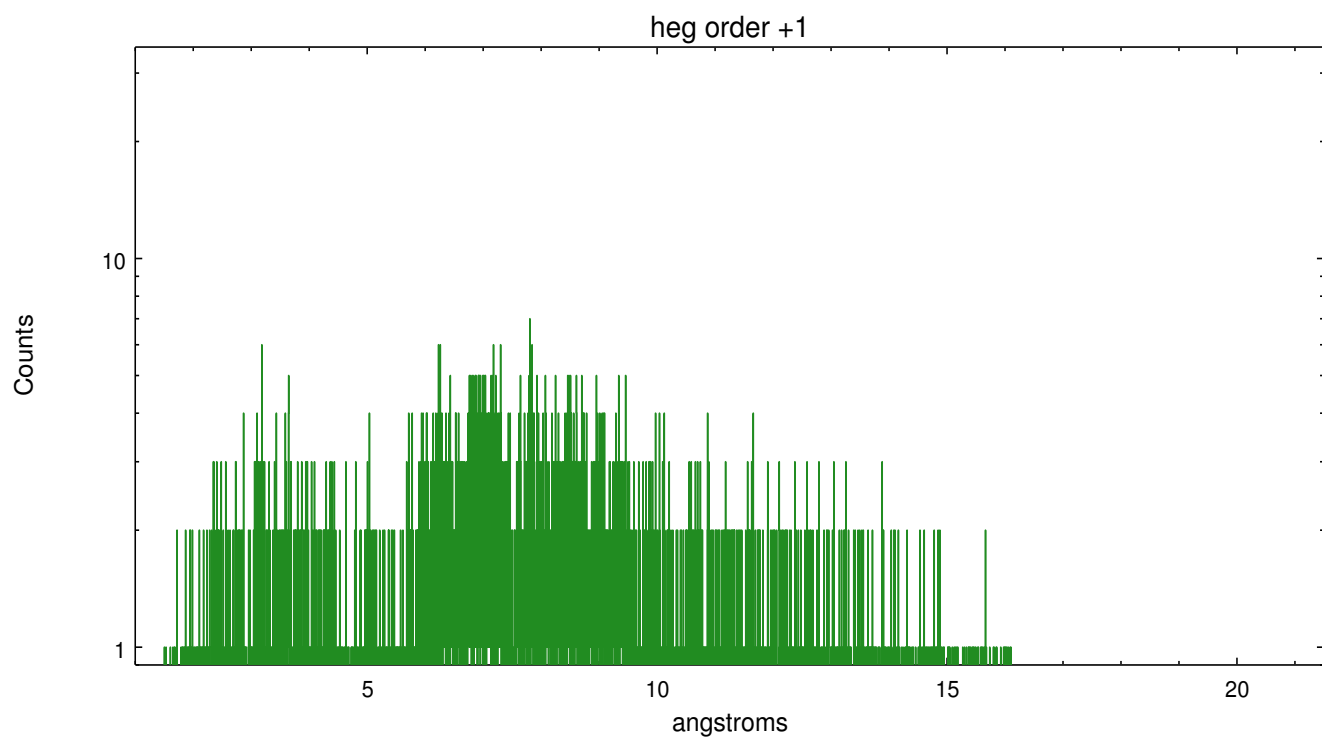
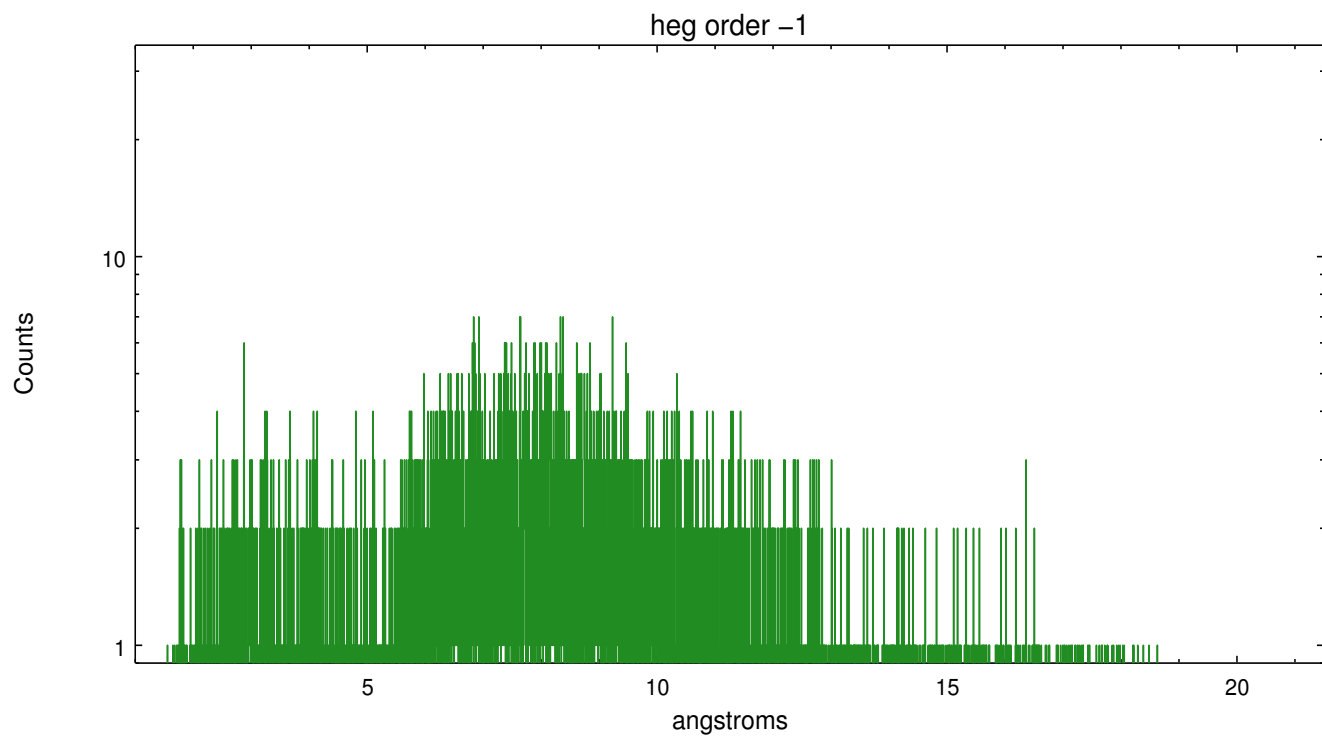
Spot Image HEG



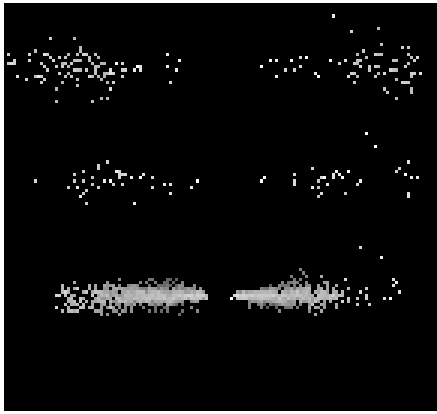
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	167	491	5632	4798	4661	350	127

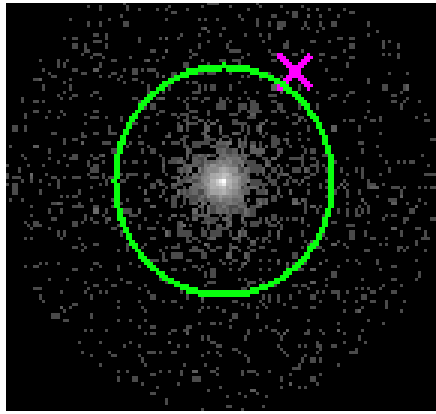




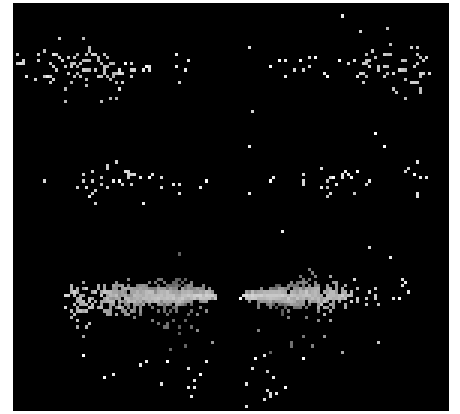
3.2 MEG Arm



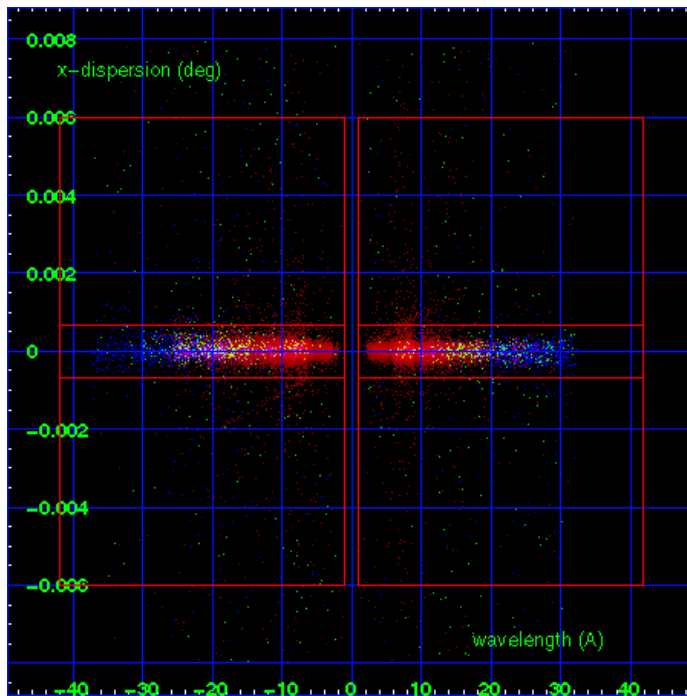
MEG Order Sort 123



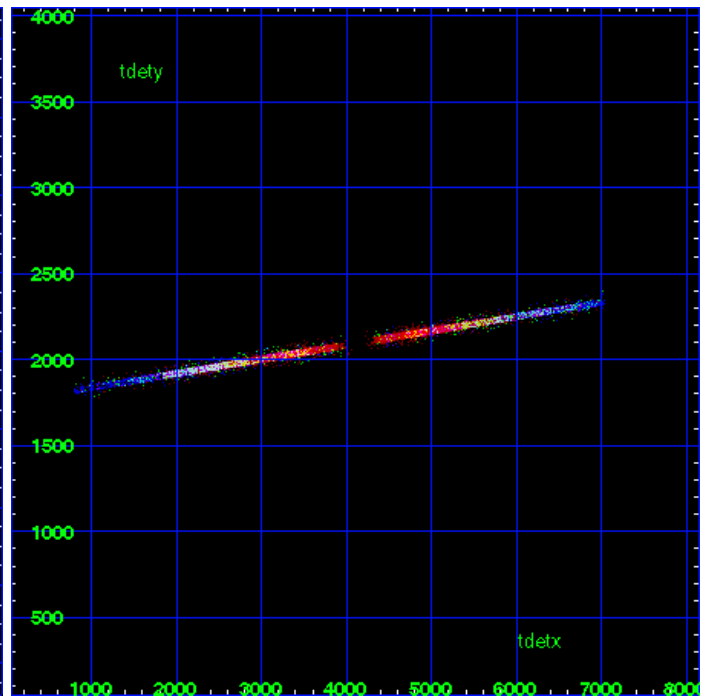
MEG Zero Order



MEG Order Sort ALL

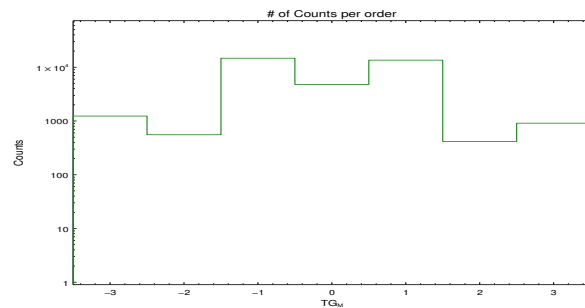


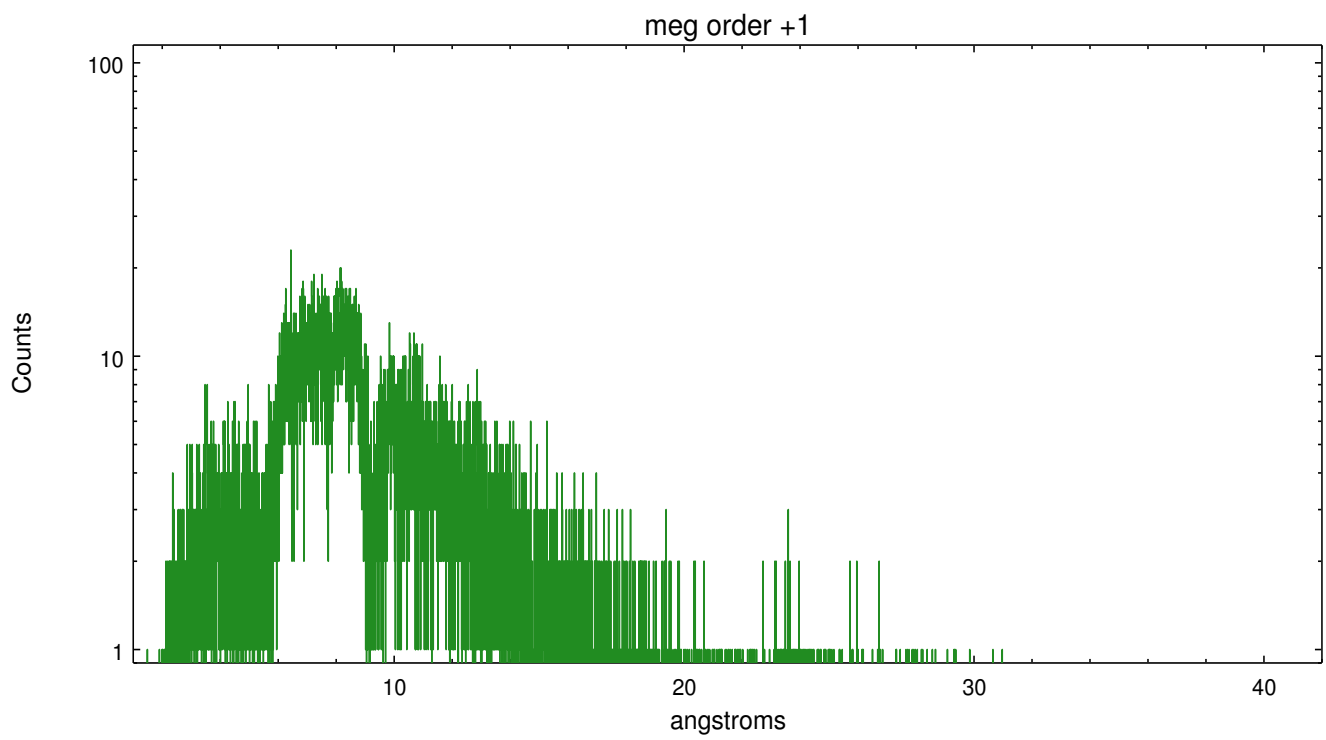
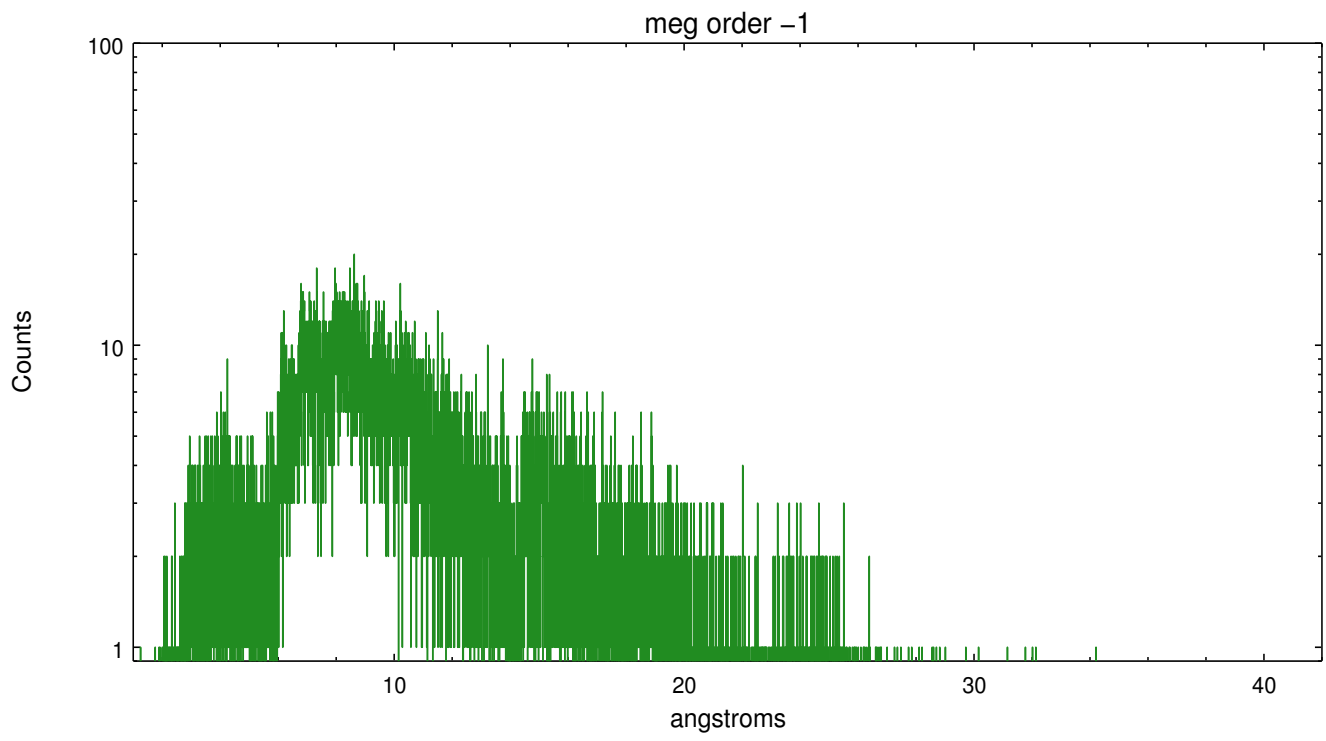
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1235	555	14706	4798	13557	416	910





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.04

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=4075.51, y=4066.44) into the *srcla.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. 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 *srcla.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.