

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8436 - L2 Version 2
Chandra X-Ray Center

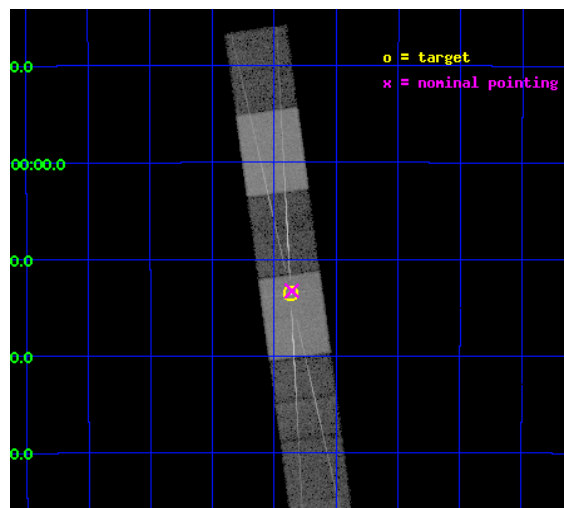
L2 Processing Date : Apr 30 2012

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1 Front

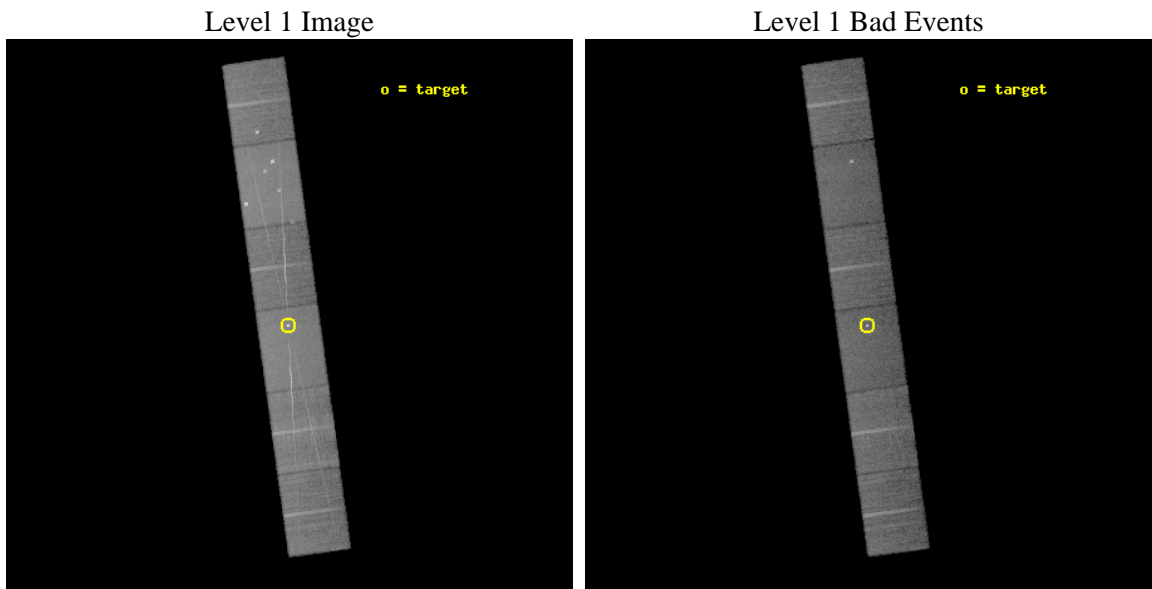
seq_num	790172	Sequence number
obs_id	8436	Observation id
title	AO8 Calibration Observations of Mkn 421 and PKS2155-304	Proposal t
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.71437792137	Nominal RA [deg]
dec_nom	-30.221104940548	Nominal Dec [deg]
roll_nom	82.155479386189	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15537.5	Sum of GTIs [s]
livetime	15286.555898372	Livetime [s]
ontime4	15537.5	Sum of GTIs [s]
ontime5	15537.5	Sum of GTIs [s]
ontime6	15537.5	Sum of GTIs [s]
ontime7	15537.5	Sum of GTIs [s]
ontime8	15537.5	Sum of GTIs [s]
ontime9	15537.5	Sum of GTIs [s]
l2events	224813	Number of level 2 events



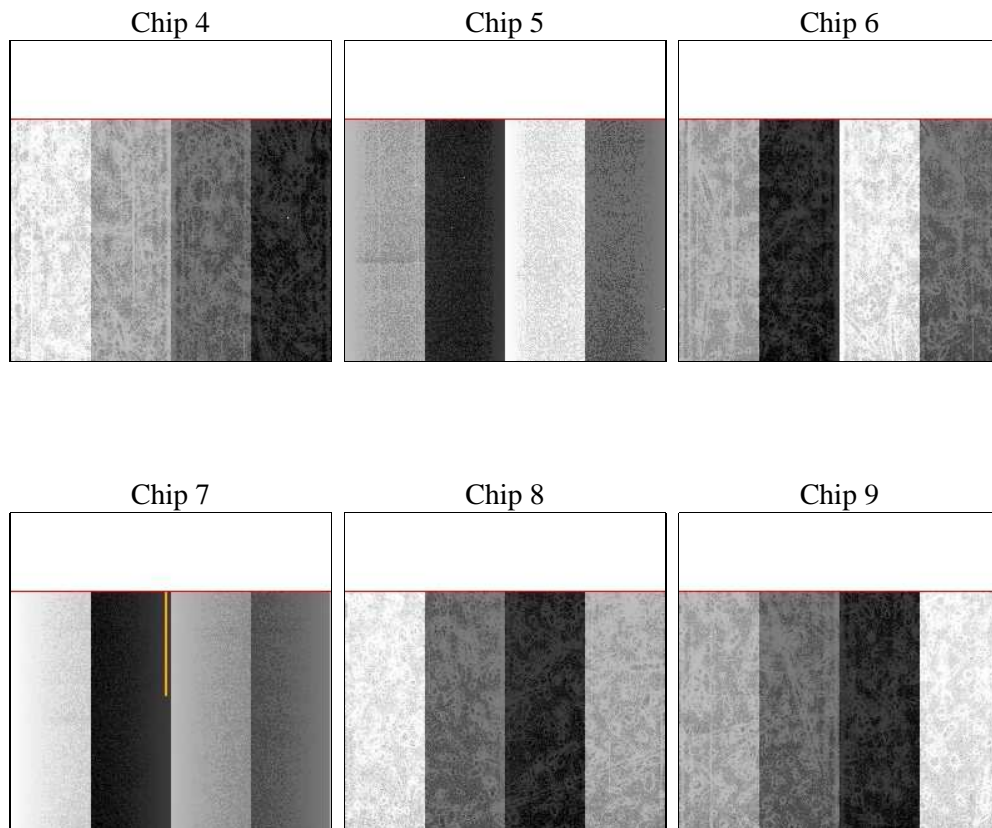
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	15537.5	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	15537.5	Sum of GTIs [s]
date	2012-04-28T01:04:33	Date and time of file creation	ontime5	15537.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15537.5	Sum of GTIs [s]
			ontime7	15537.5	Sum of GTIs [s]
			ontime8	15537.5	Sum of GTIs [s]
			ontime9	15537.5	Sum of GTIs [s]
			l1events	876434	Number of level 1 events

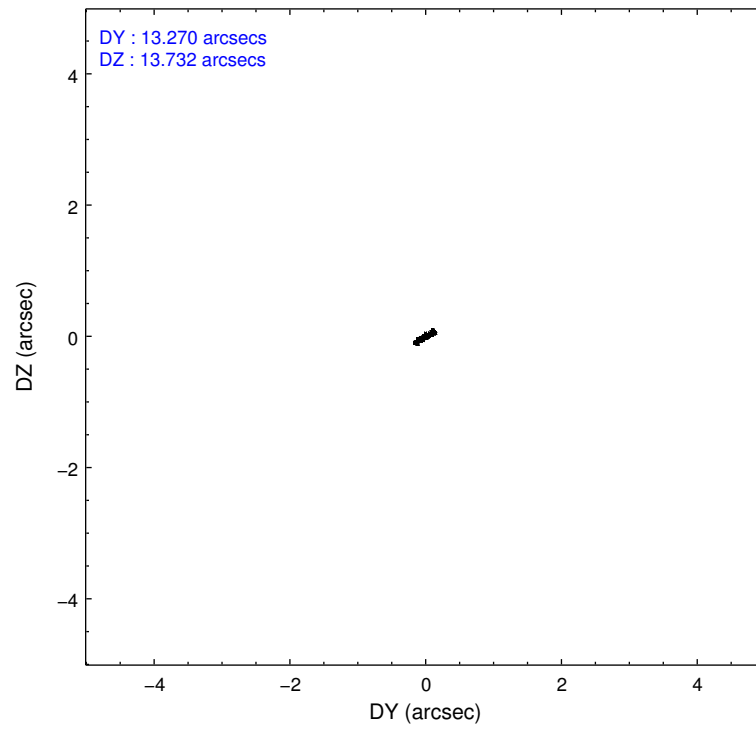
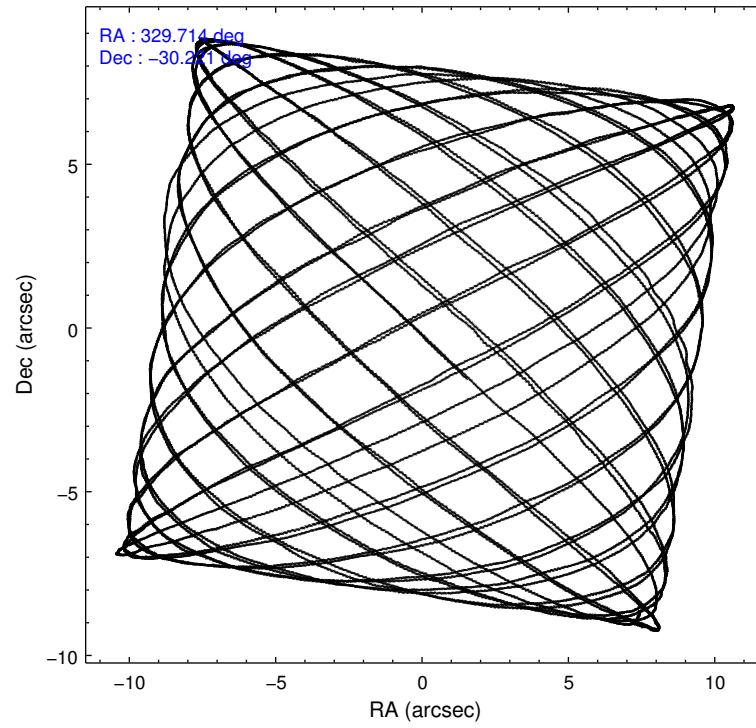
2.1.4 Events

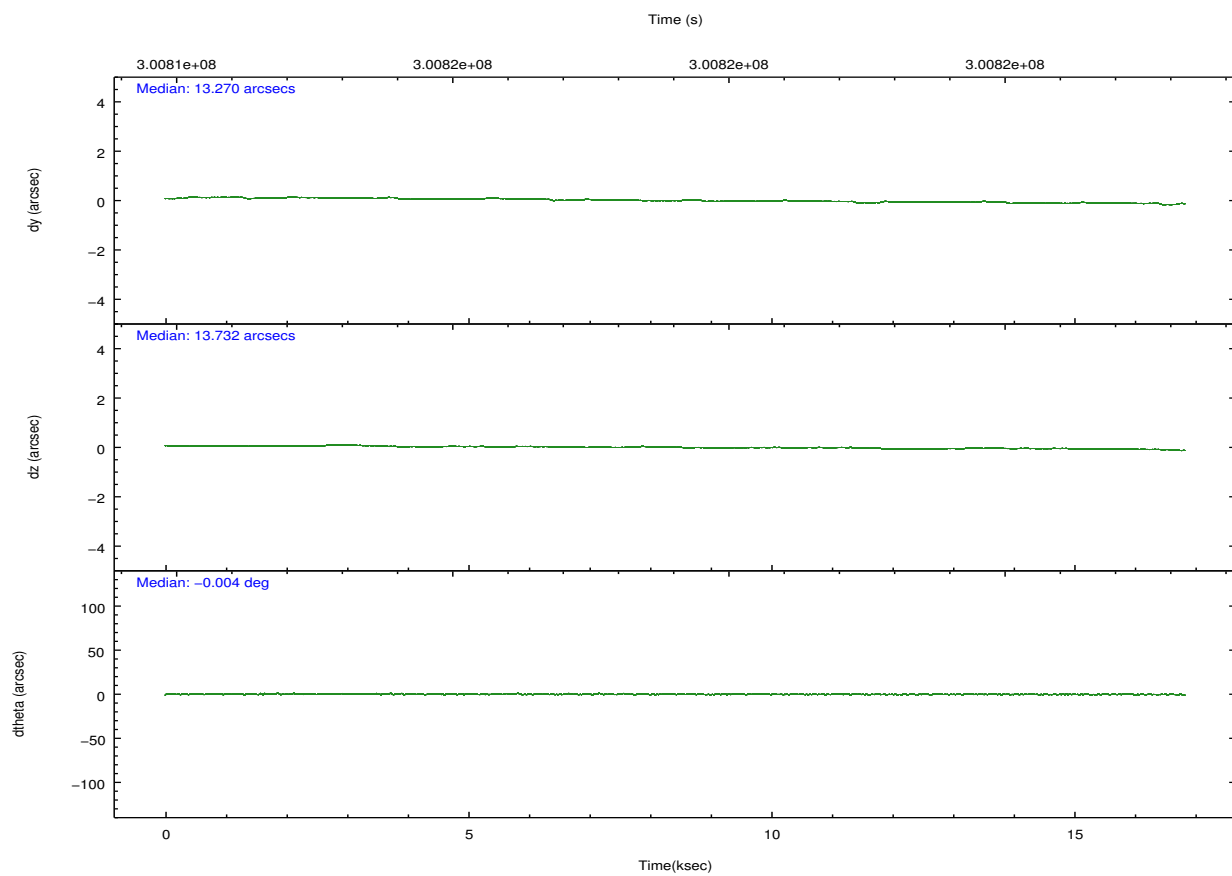
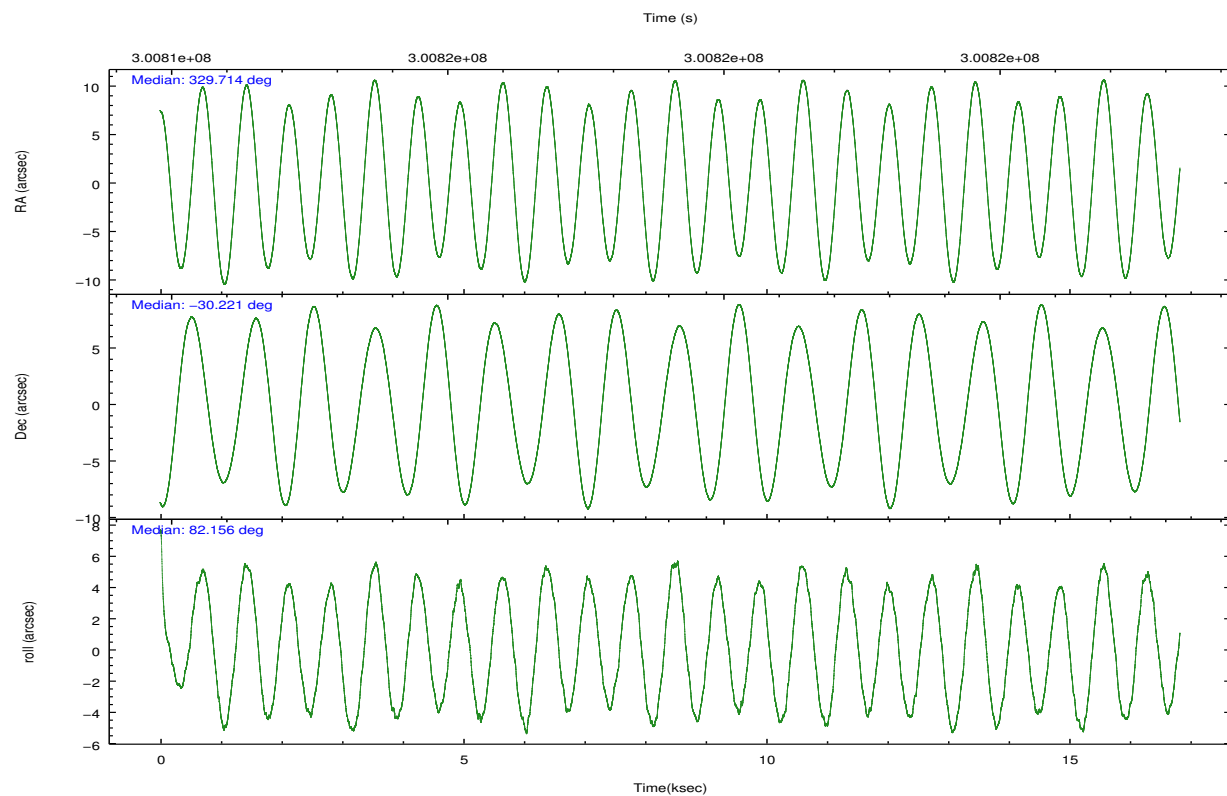
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	127757	186424	123285	171648	153659	113661	grade 0 events	9970	17847	14272	8584	16427	7160
rejected events	109364	93469	98559	94123	112876	97933		7%	9%	11%	5%	10%	6%
rejected %	85%	50%	79%	54%	73%	86%	grade 1 events	140	1703	86	290	135	73
								0%	0%	0%	0%	0%	0%
							grade 2 events	3132	25492	4107	16116	8135	2922
								2%	13%	3%	9%	5%	2%
							grade 3 events	1461	3823	1687	6918	3716	1579
								1%	2%	1%	4%	2%	1%
							grade 4 events	1451	3692	1673	6939	3427	1421
								1%	1%	1%	4%	2%	1%
							grade 5 events	5074	12526	5244	15477	7019	5451
								3%	6%	4%	9%	4%	4%
							grade 6 events	2380	42140	2995	39000	9105	2653
								1%	22%	2%	22%	5%	2%
							grade 7 events	104149	79201	93221	78324	105695	92402
								81%	42%	75%	45%	68%	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	329.726733	329.714377921371	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-30.246300	-30.22110494054839	Subarray start row	1	1
[deg] Pointing Roll	82.005073	82.15547938618928	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)	300811940.184000	300810294.93108			
Observation start date	2007-07-14T14:51:15	2007-07-14T14:24:54			
[s] Observation end time (MET)	300827440.184000	300828271.89444			
Observation end date	2007-07-14T19:09:35	2007-07-14T19:24:31			
Read mode	TIMED	TIMED			

2.3 Aspect



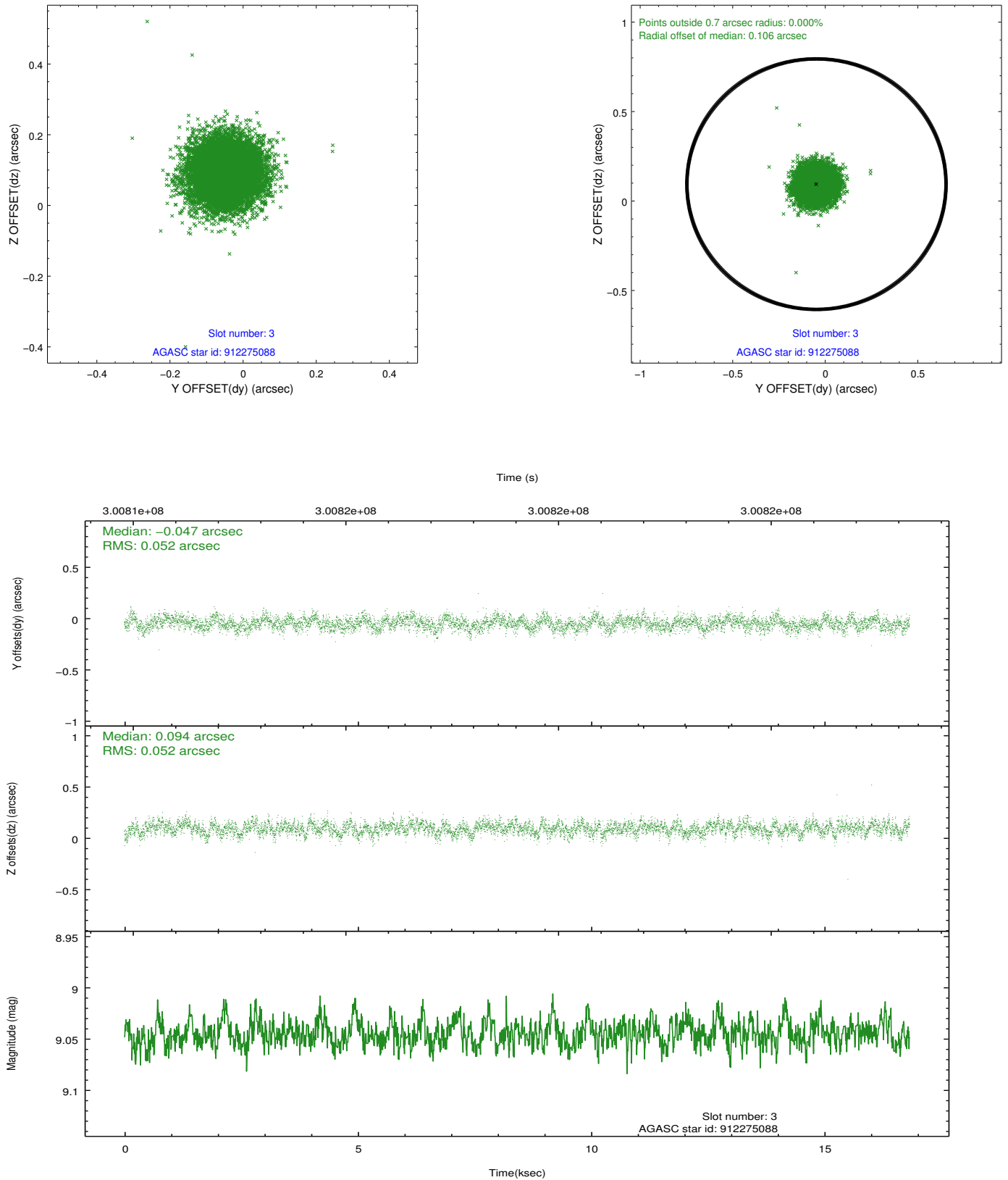


Slot Statistics

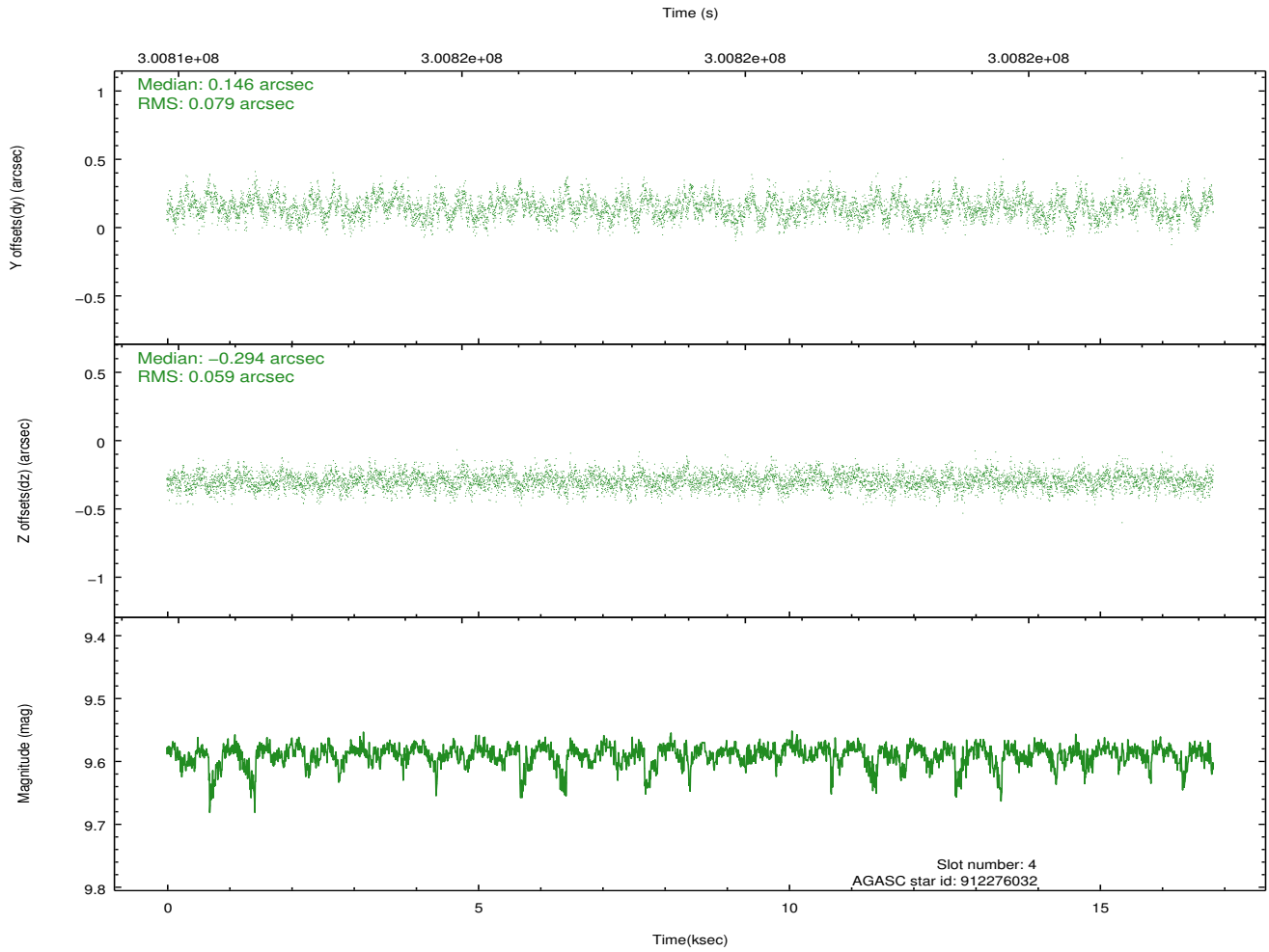
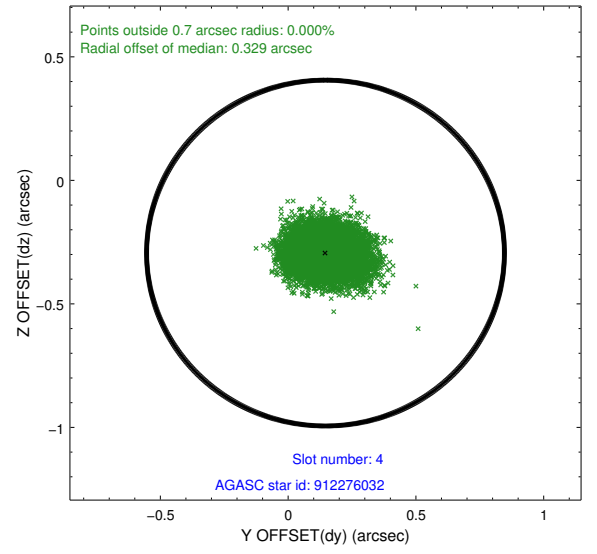
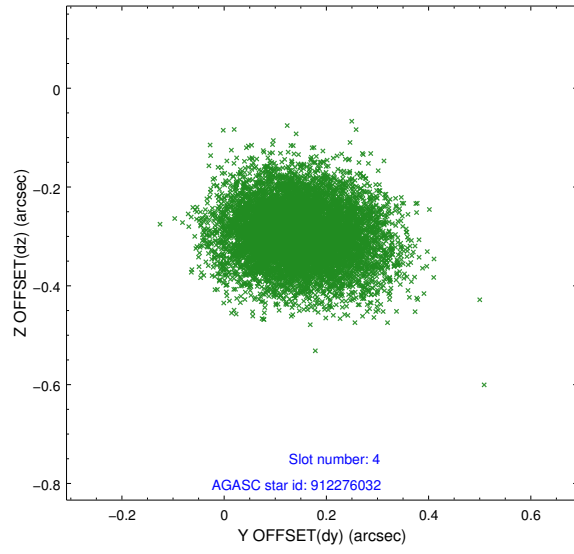
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	4105	-0.100	-0.083	0.007	0.011	0.000000	0.000000	-766.09	-1797.30
1	FID	ACIS-S-4	7.18	4104	0.234	0.070	0.007	0.013	0.000000	0.000000	2147.41	111.06
2	FID	ACIS-S-5	7.23	4105	-0.166	0.021	0.008	0.014	0.000000	0.000000	-1818.67	104.97
3	GUIDE	912275088	9.04	8205	-0.047	0.094	0.079	0.125	329.619228	-29.738698	1762.66	587.06
4	GUIDE	912276032	9.59	8198	0.146	-0.294	0.105	0.172	329.395967	-29.803466	1433.89	1244.57
5	GUIDE	981469488	9.57	8199	-0.134	0.104	0.119	0.195	329.261199	-30.045155	512.42	1537.23
6	GUIDE	981471664	6.34	8209	0.026	-0.078	0.077	0.129	328.981826	-30.605916	-1610.62	2104.31
7	GUIDE	981478152	9.39	8205	0.005	0.171	0.103	0.161	329.415589	-30.057192	537.82	1055.03

2.4 Star Slots

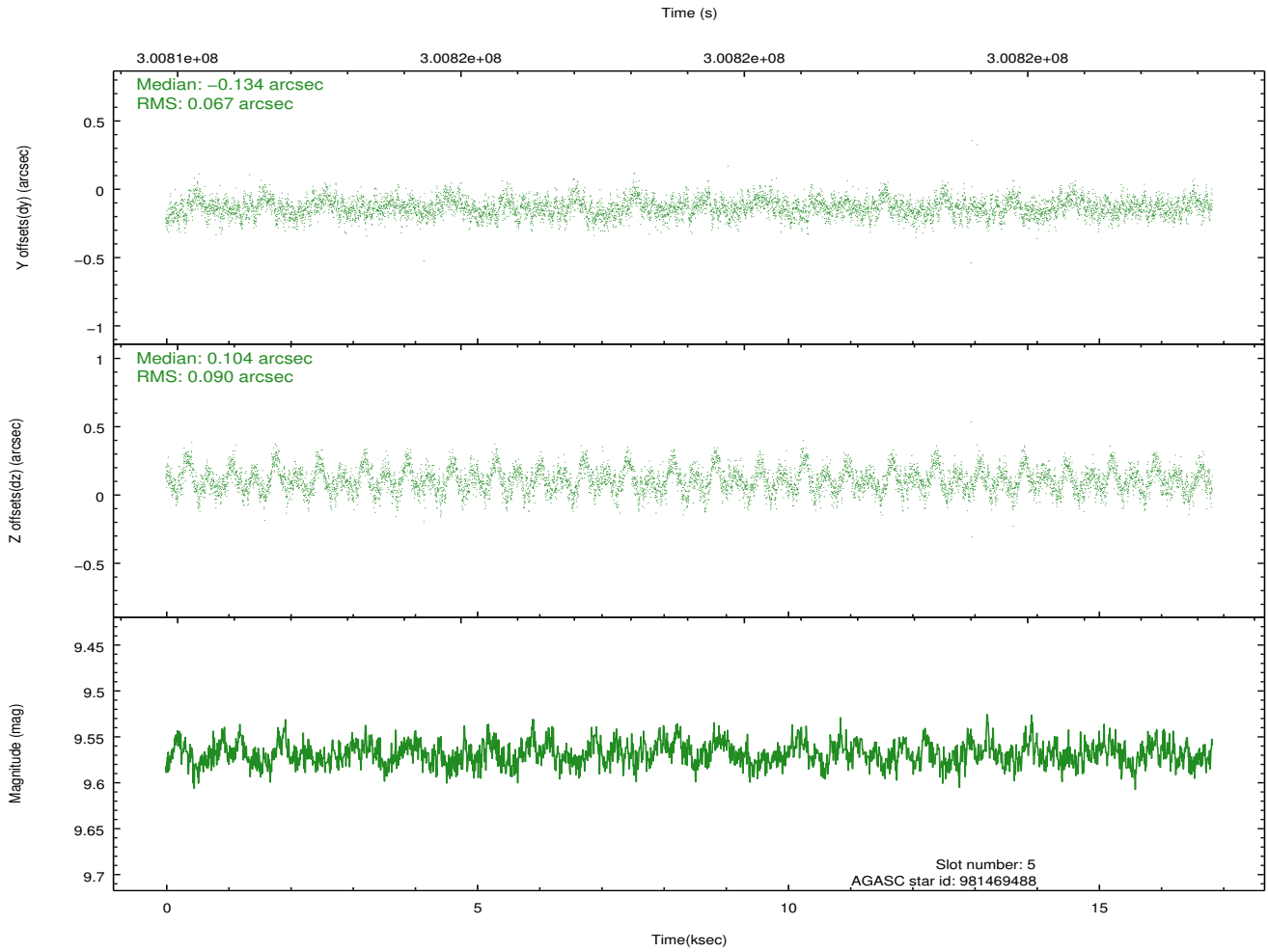
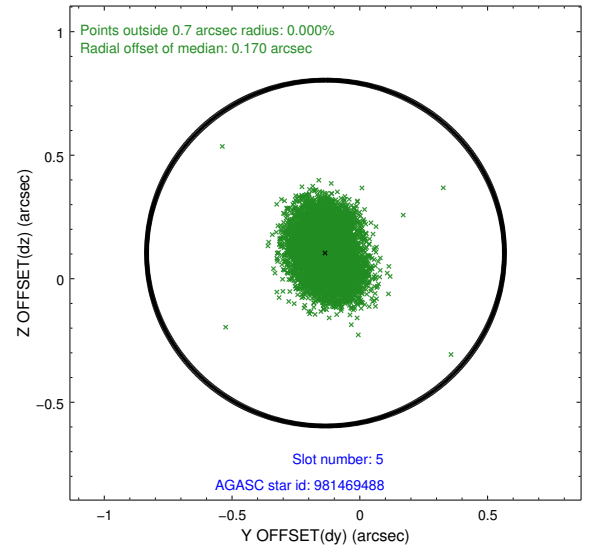
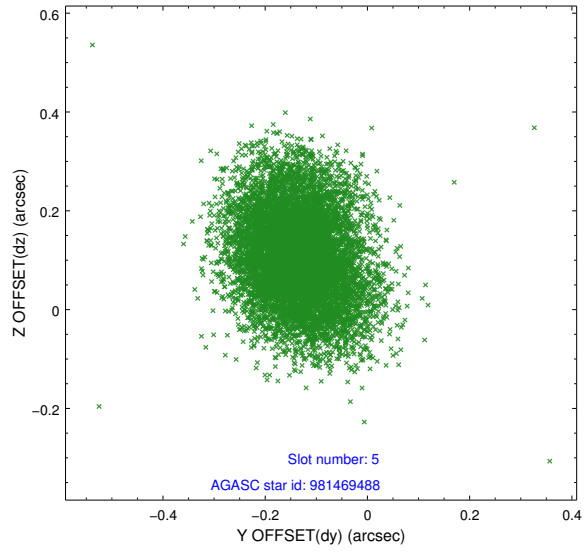
2.4.1 Slot 3



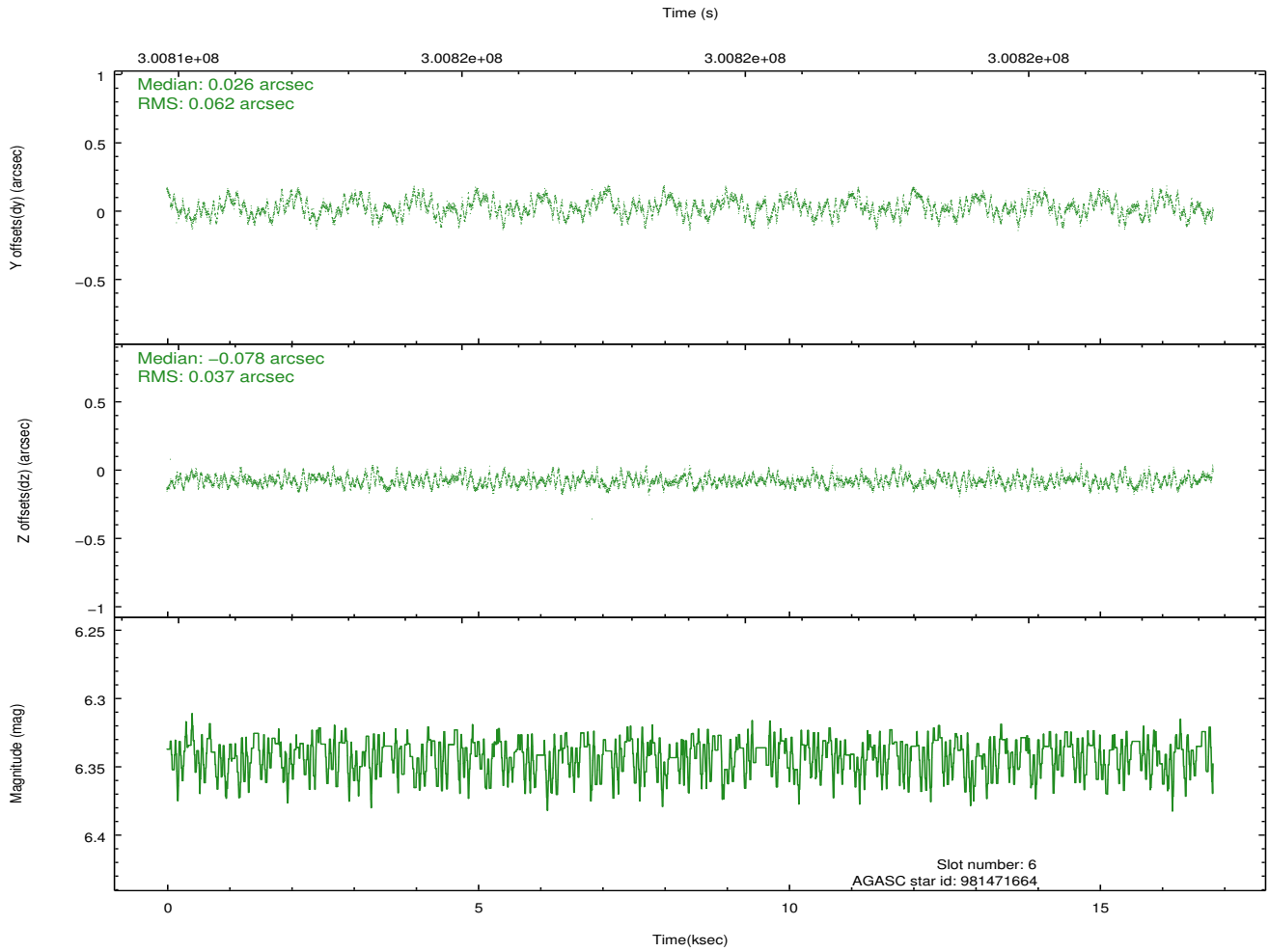
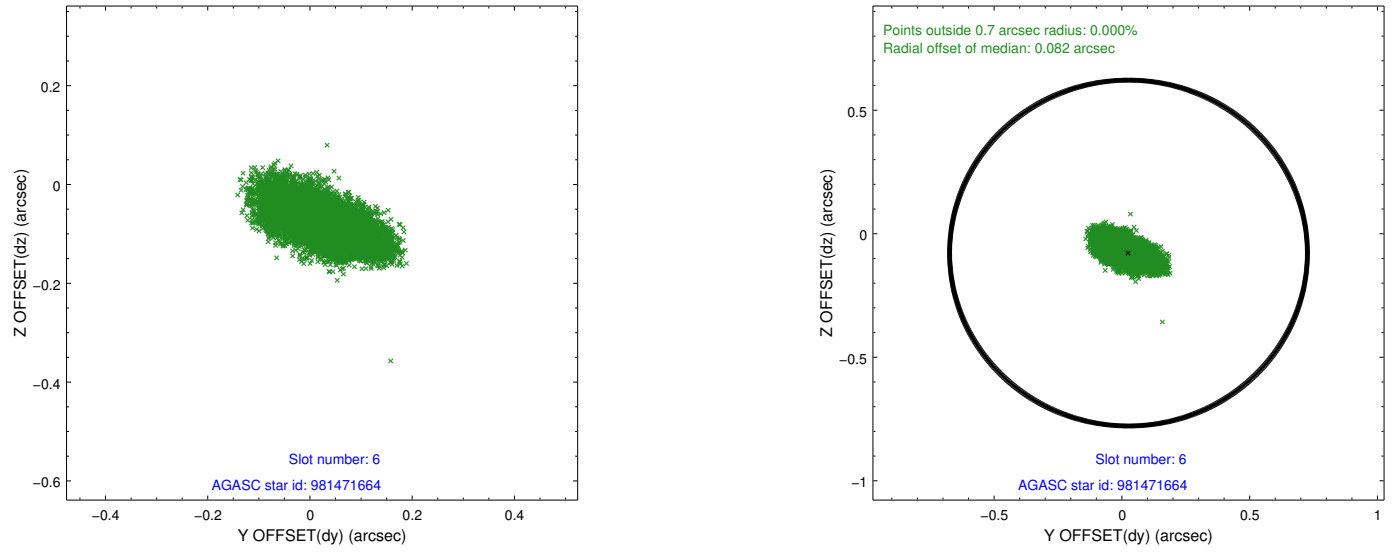
2.4.2 Slot 4



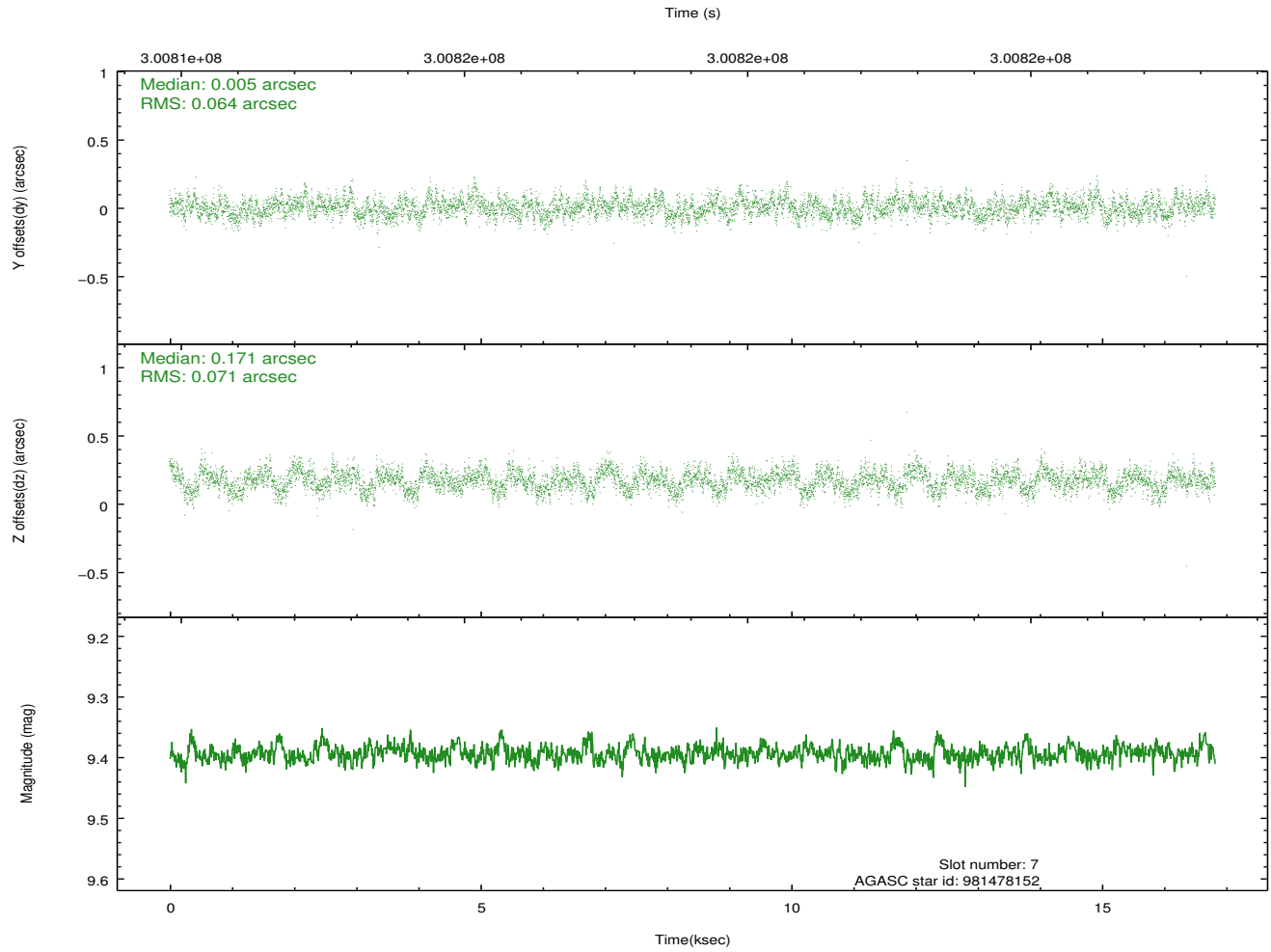
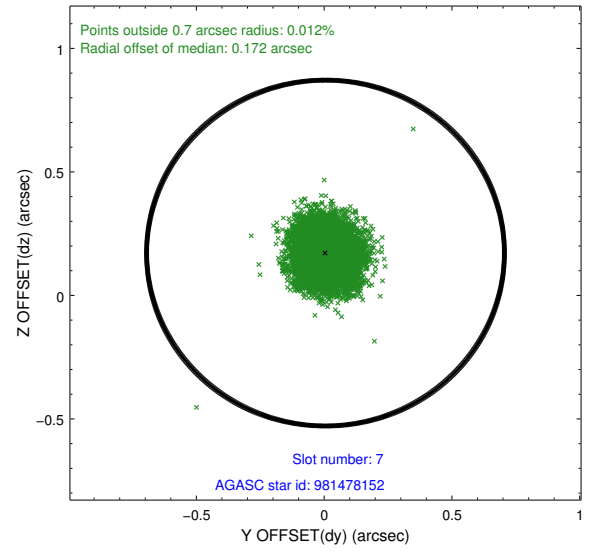
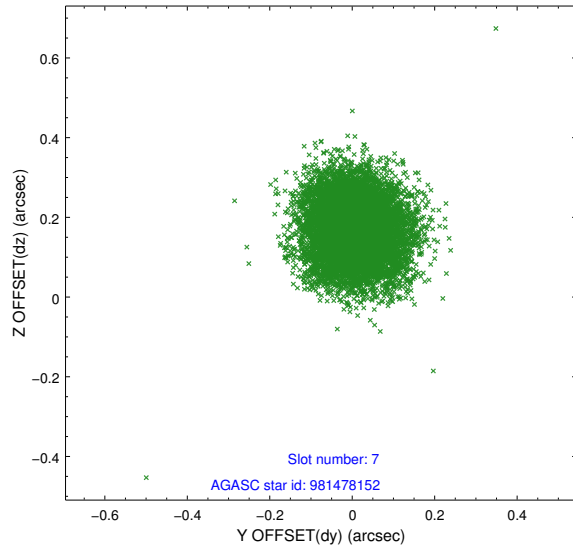
2.4.3 Slot 5



2.4.4 Slot 6

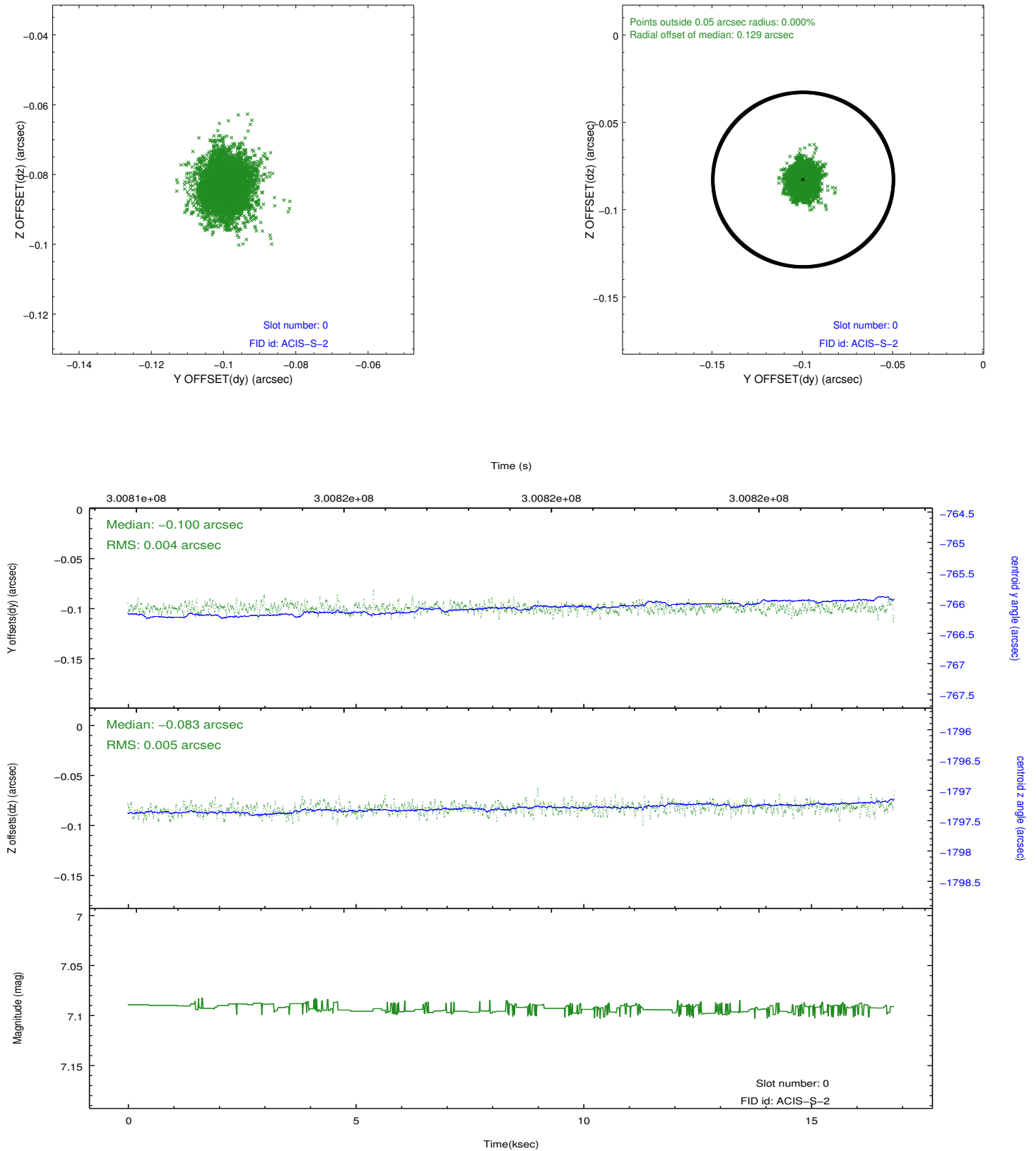


2.4.5 Slot 7

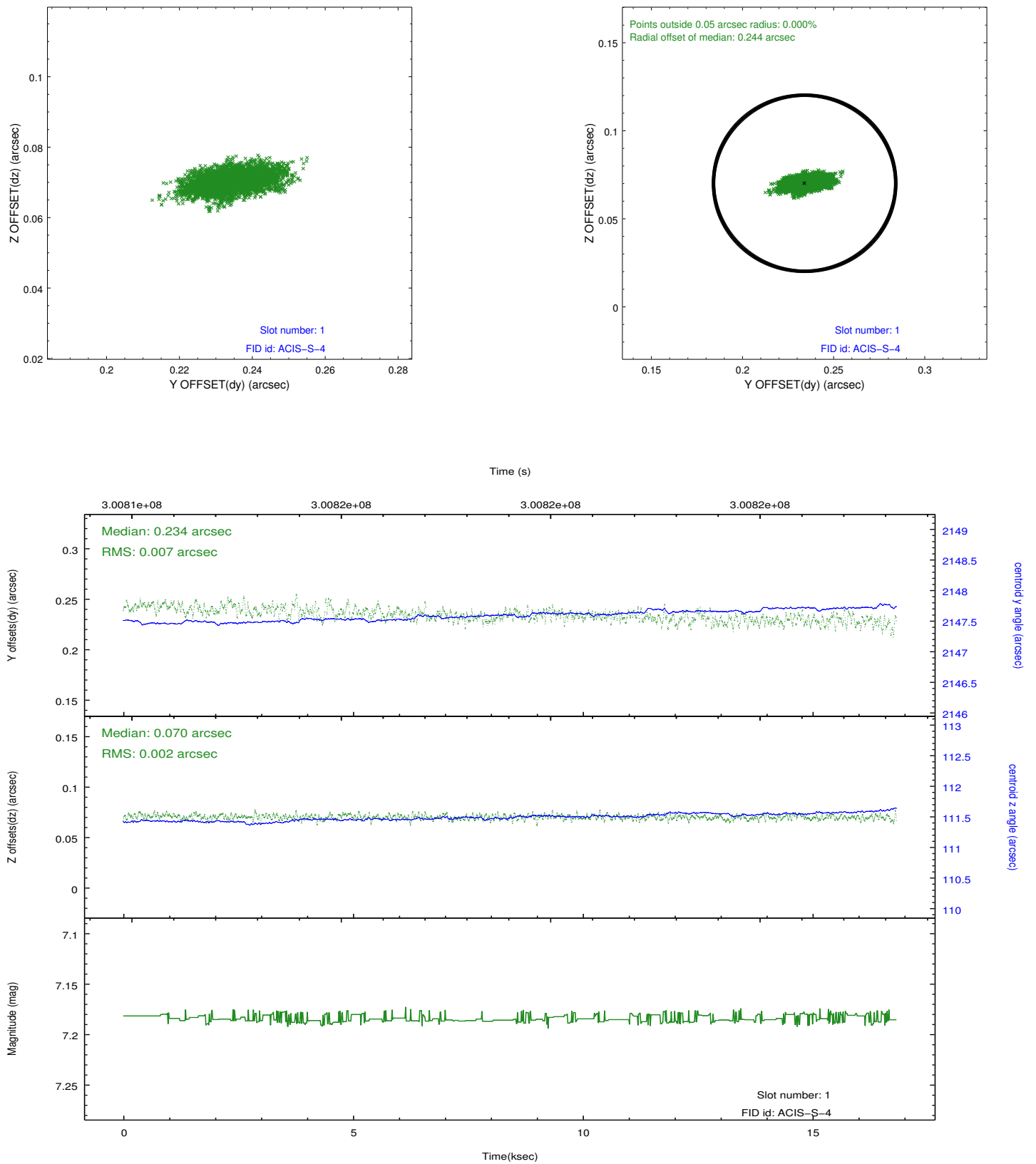


2.5 FID Slots

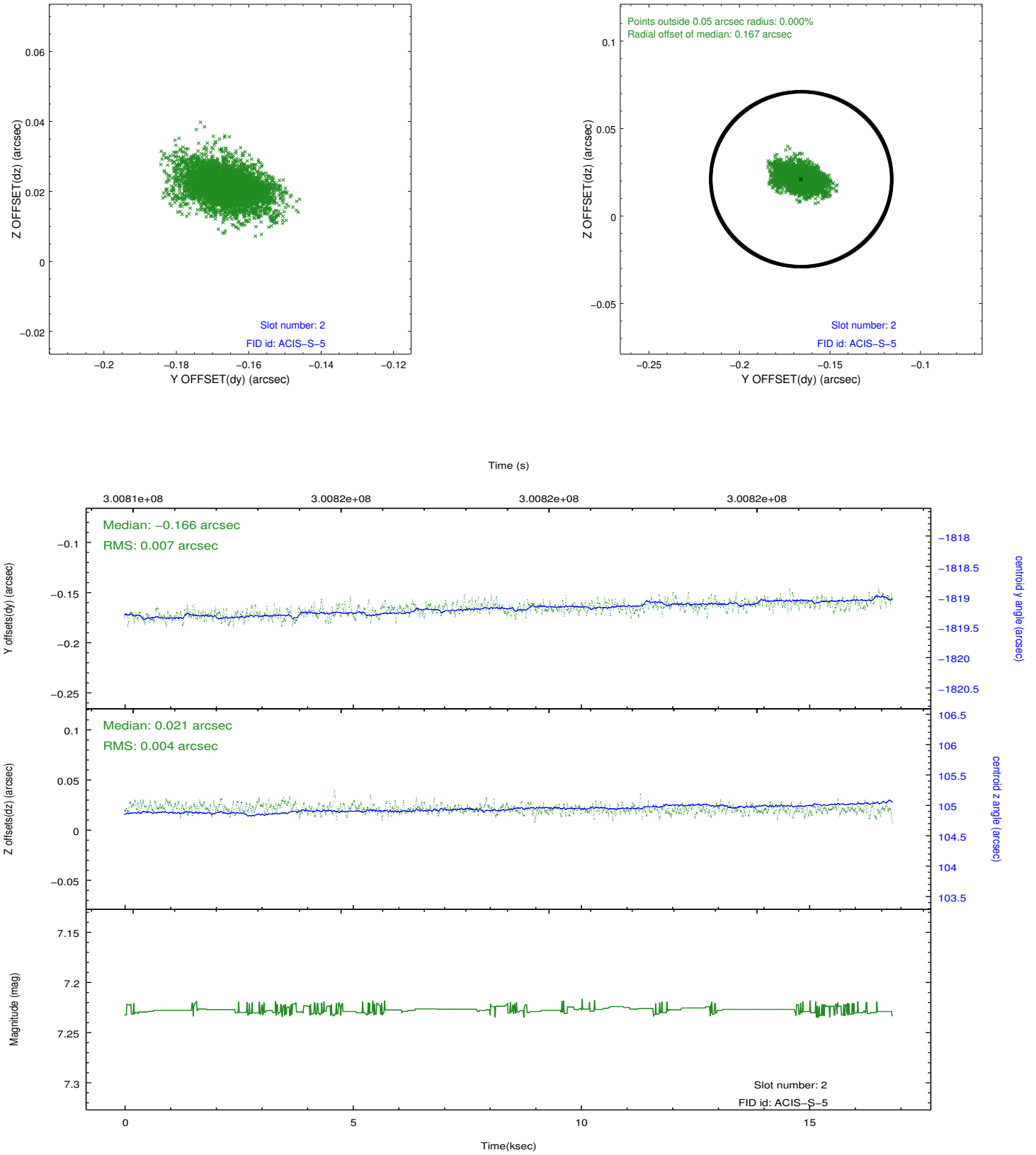
2.5.1 Slot 0



2.5.2 Slot 1

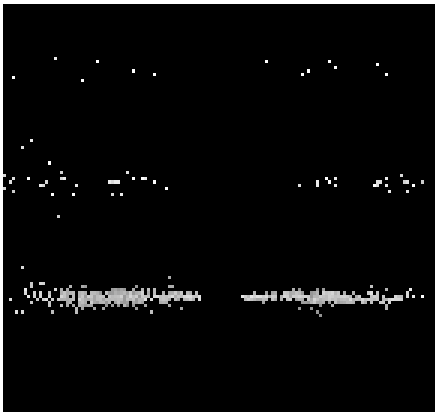


2.5.3 Slot 2

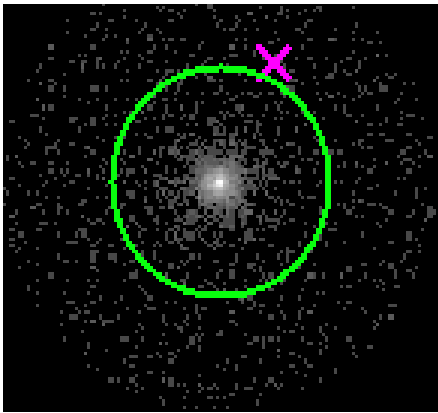


3 Gratings

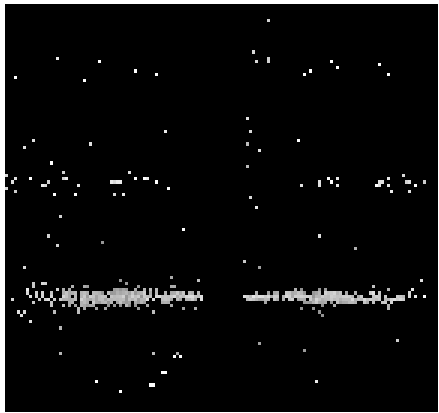
3.1 HEG Arm



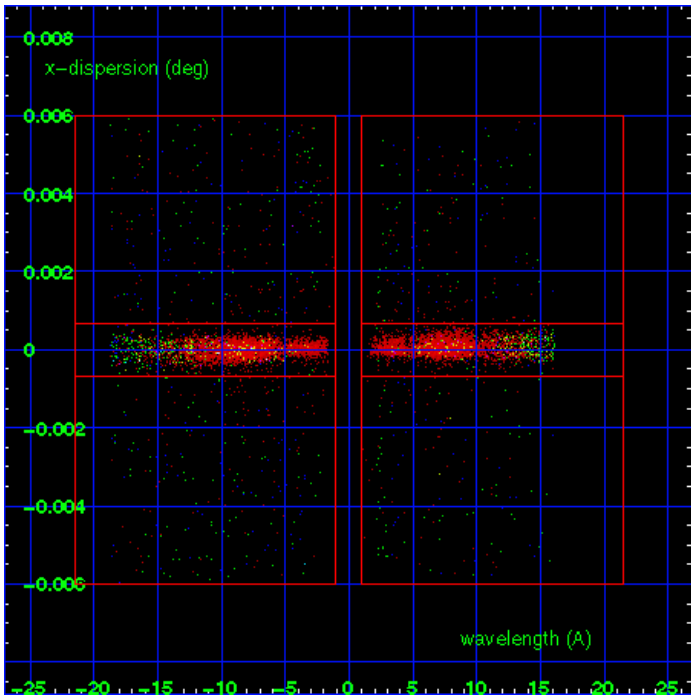
HEG Order Sort 123



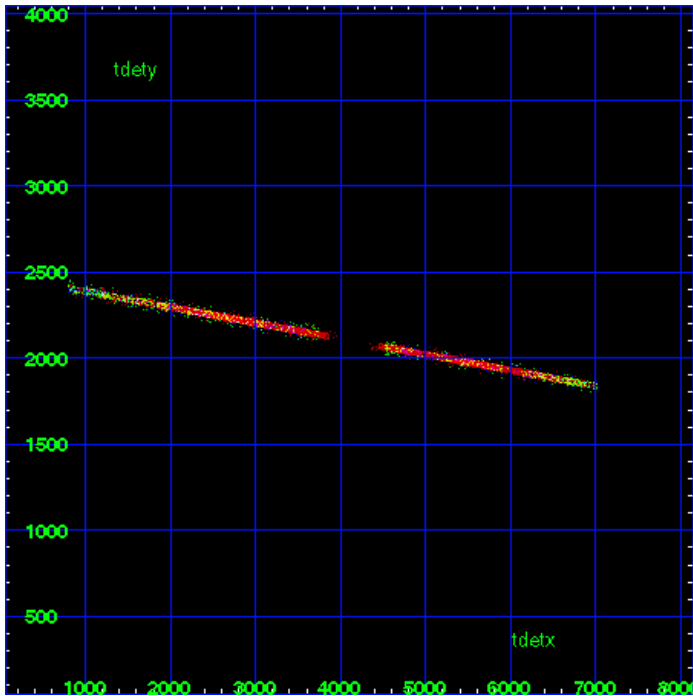
HEG Zero Order



HEG Order Sort ALL

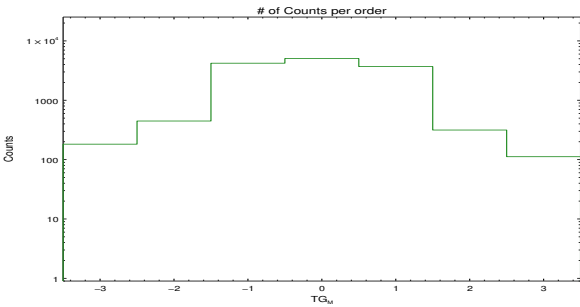


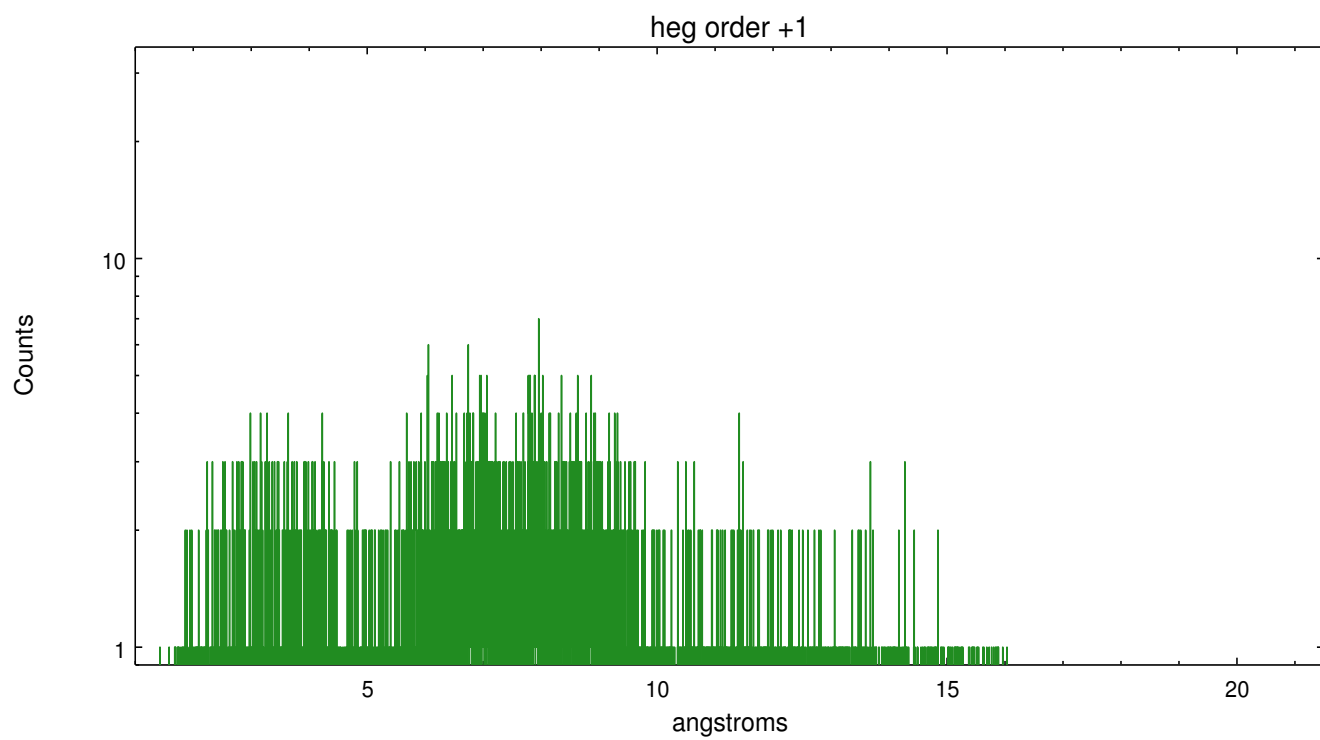
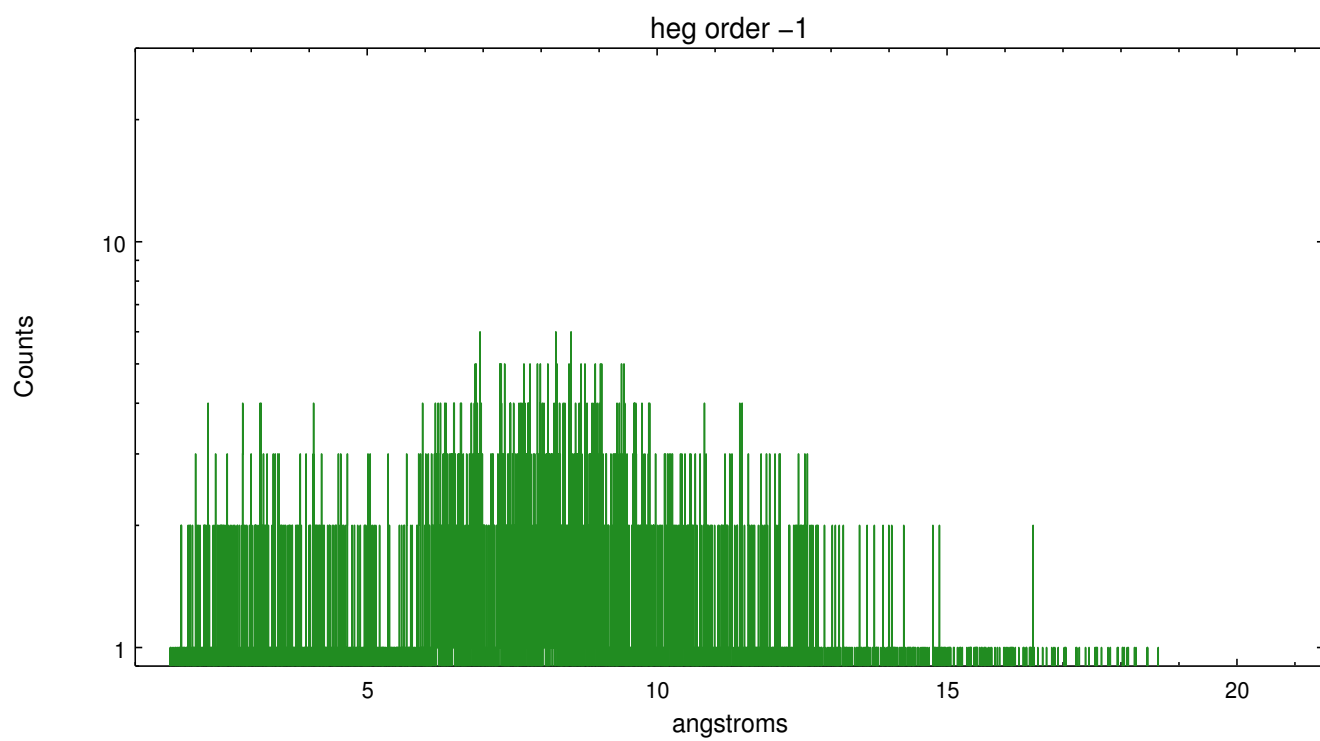
Spot Image HEG



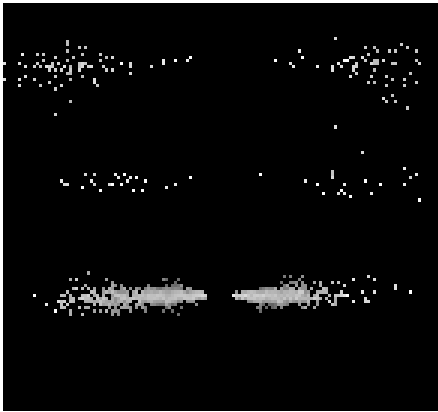
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	182	447	4209	5046	3693	315	112

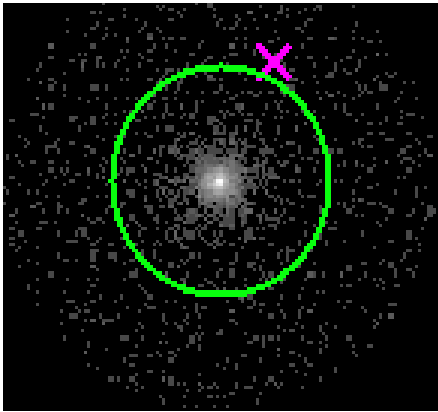




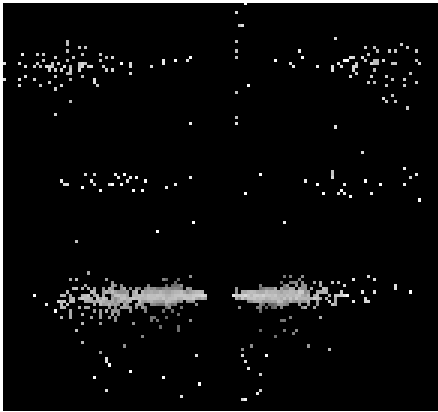
3.2 MEG Arm



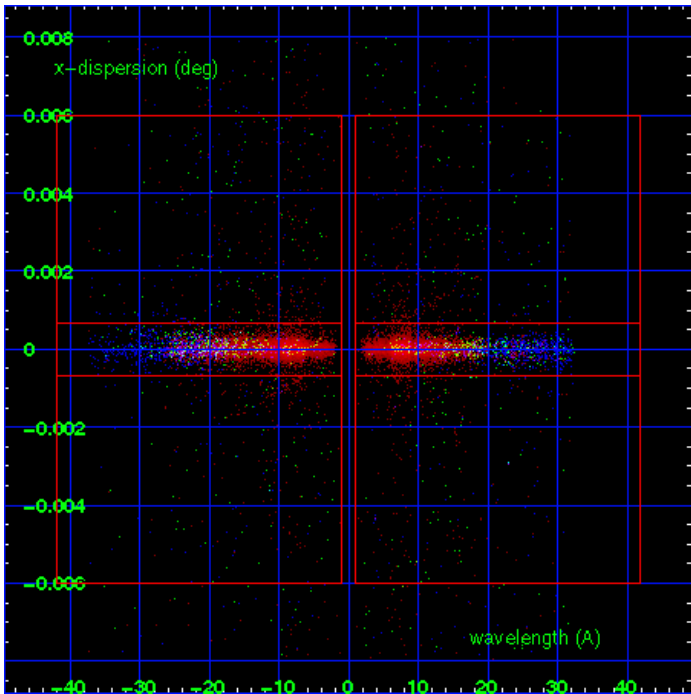
MEG Order Sort 123



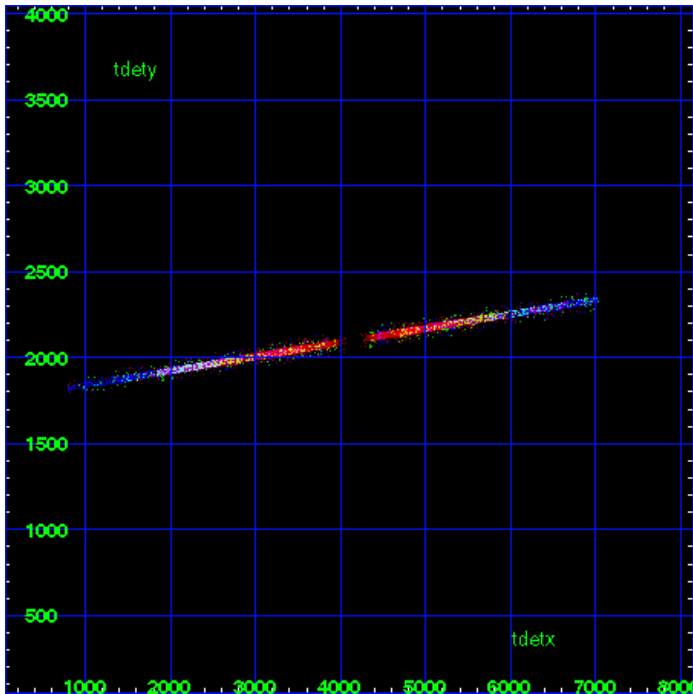
MEG Zero Order



MEG Order Sort ALL

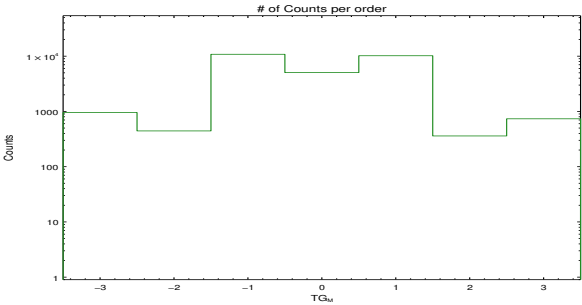


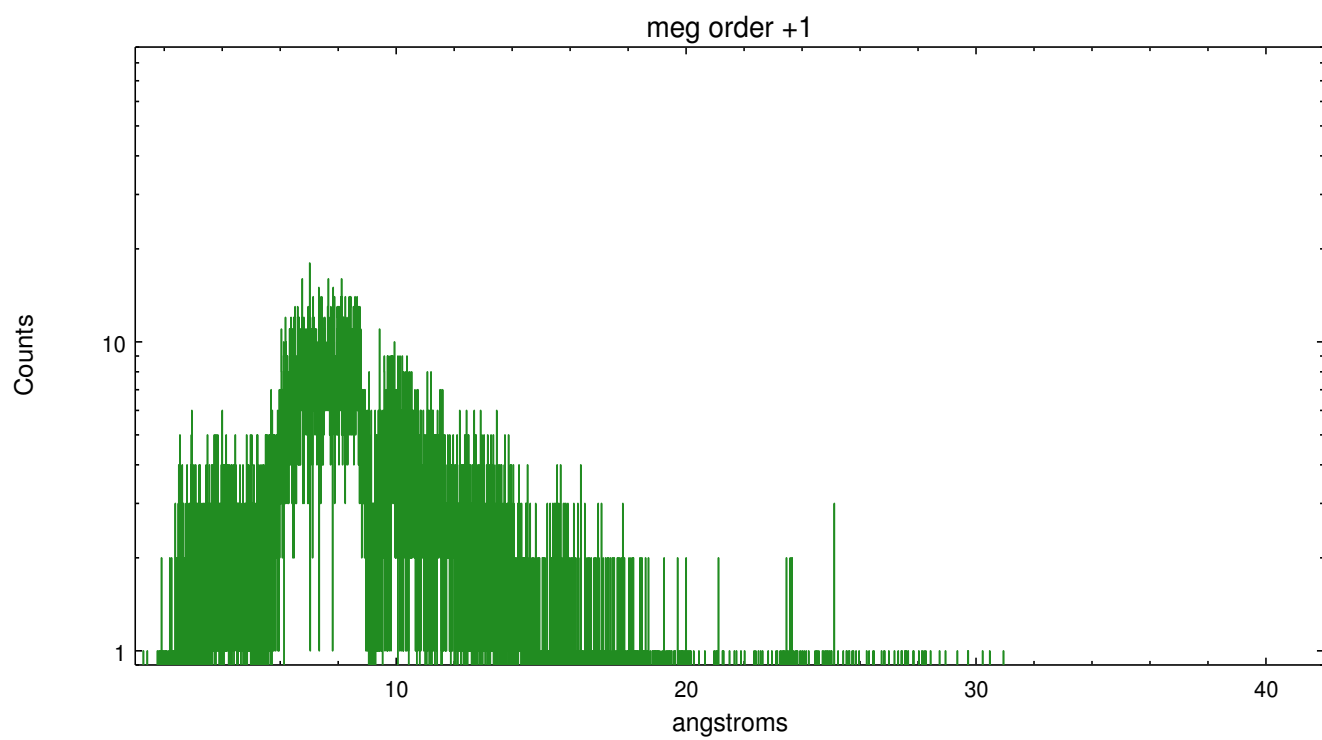
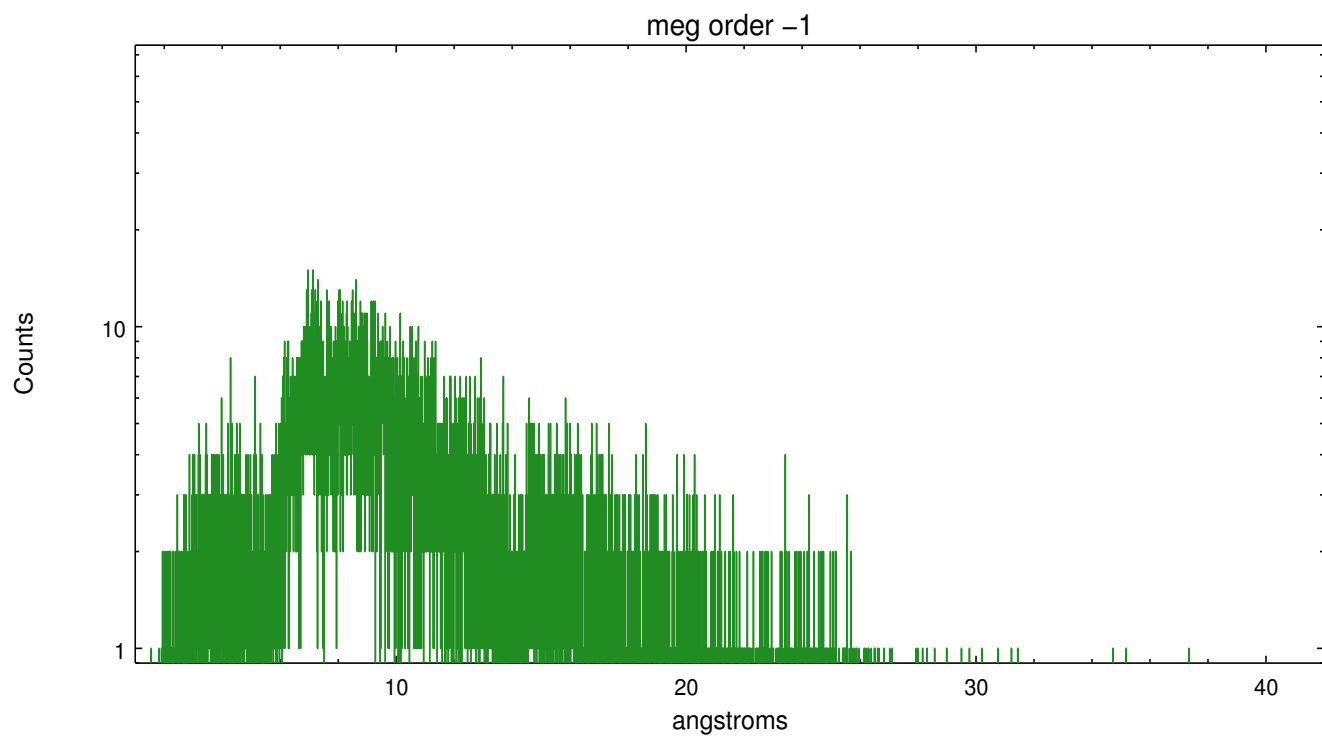
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	956	444	10820	5046	10197	360	736





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.5375

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=4080.95, y=4063.97) 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.