

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2429 - L2 Version 3
Chandra X-Ray Center

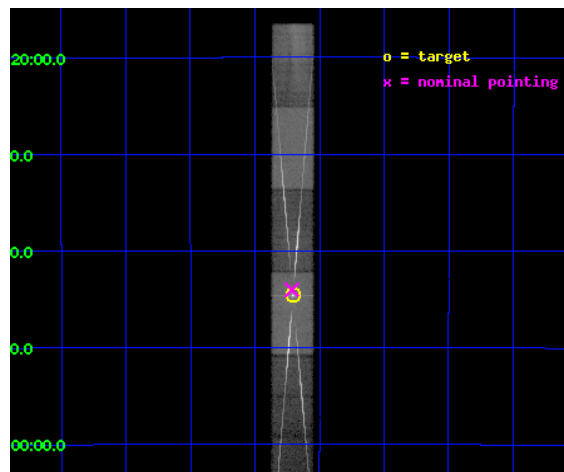
L2 Processing Date : Sep 14 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

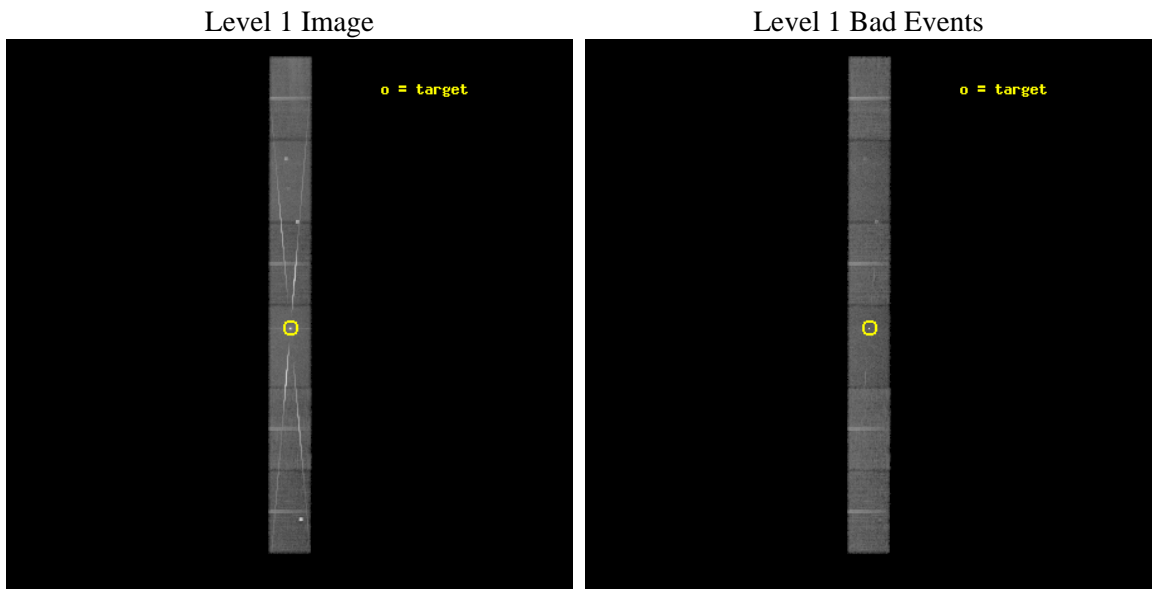
seq_num	400163	Sequence number
obs_id	2429	Observation id
title	HIGH RESOLUTION SPECTROSCOPY OF THE POSSIBLE JETS IN GRS 1758-258	
observer	Dr. William Heindl	Principal investigator
object	GRS 1758-258	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	270.301667	Observer's specified target RA [deg]
dec_targ	-25.743306	Observer's specified target Dec [deg]
ra_nom	270.30359651971	Nominal RA [deg]
dec_nom	-25.733671211223	Nominal Dec [deg]
roll_nom	90.091759218992	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30317.759072974	Sum of GTIs [s]
livetime	29603.10528423	Livetime [s]
ontime4	30319.500053138	Sum of GTIs [s]
ontime5	30317.759072974	Sum of GTIs [s]
ontime6	30317.759072974	Sum of GTIs [s]
ontime7	30317.759072974	Sum of GTIs [s]
ontime8	30319.500053138	Sum of GTIs [s]
ontime9	30317.759072974	Sum of GTIs [s]
l2events	510563	Number of level 2 events



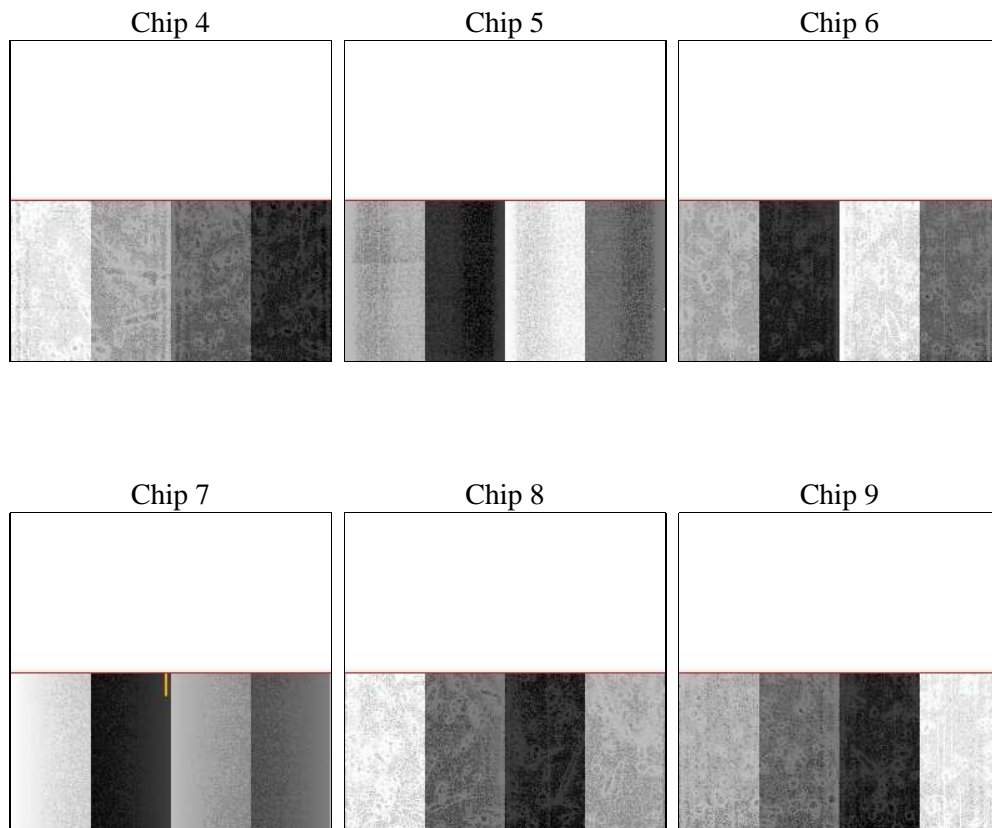
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30317.759072974	Sum of GTIs [s]
caldbver	4.5.1.1	 	ontime4	30319.500053138	Sum of GTIs [s]
date	2012-09-14T06:48:25	Date and time of file creation	ontime5	30317.759072974	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	30317.759072974	Sum of GTIs [s]
			ontime7	30317.759072974	Sum of GTIs [s]
			ontime8	30319.500053138	Sum of GTIs [s]
			ontime9	30317.759072974	Sum of GTIs [s]
			l1events	1165385	Number of level 1 events

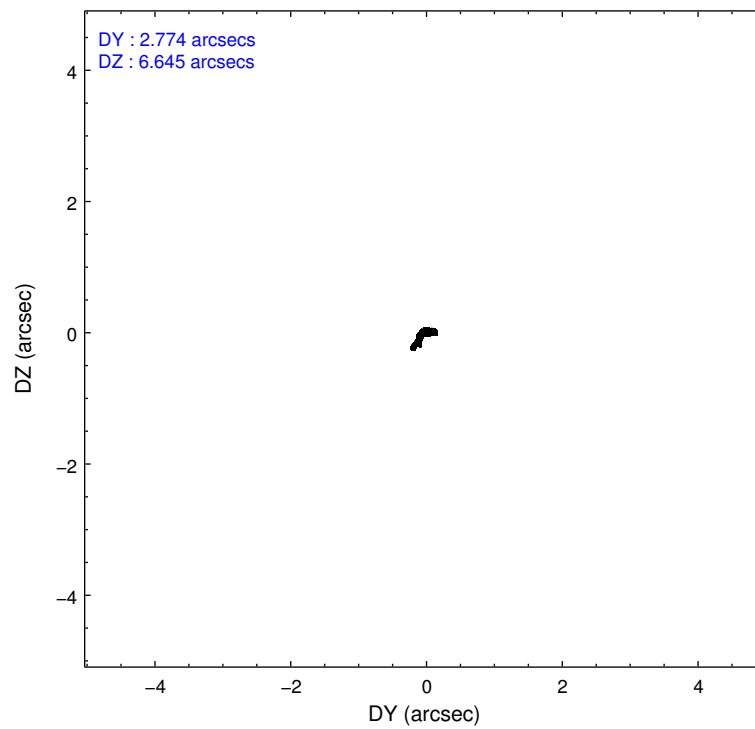
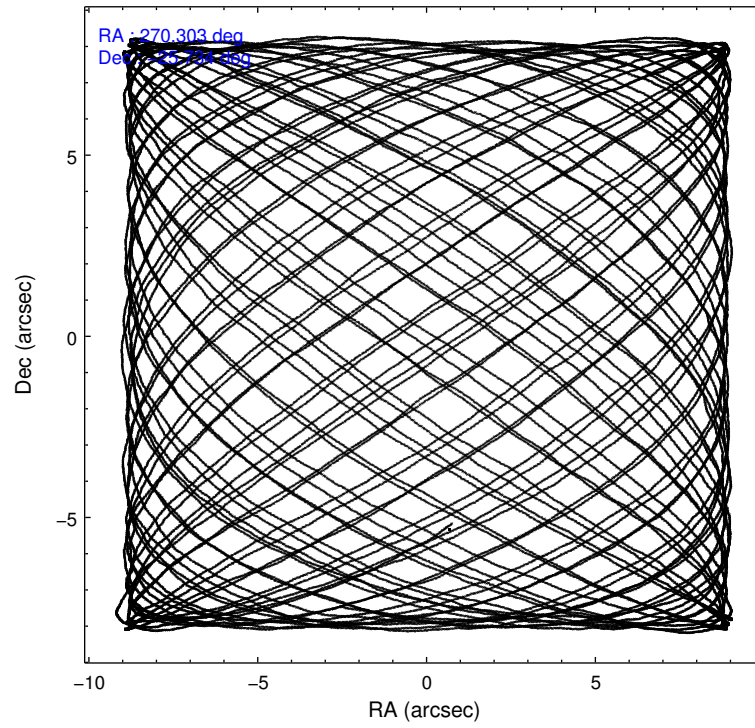
2.1.4 Events

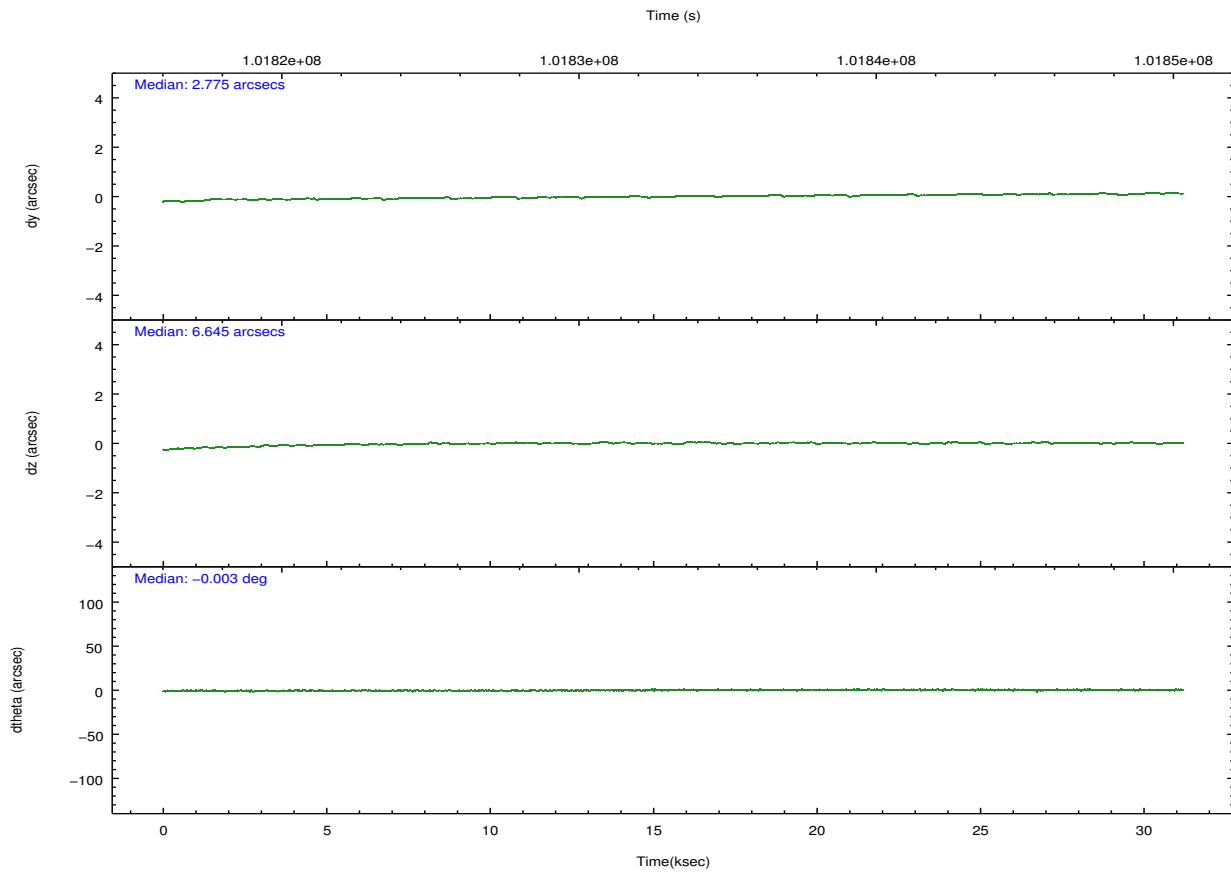
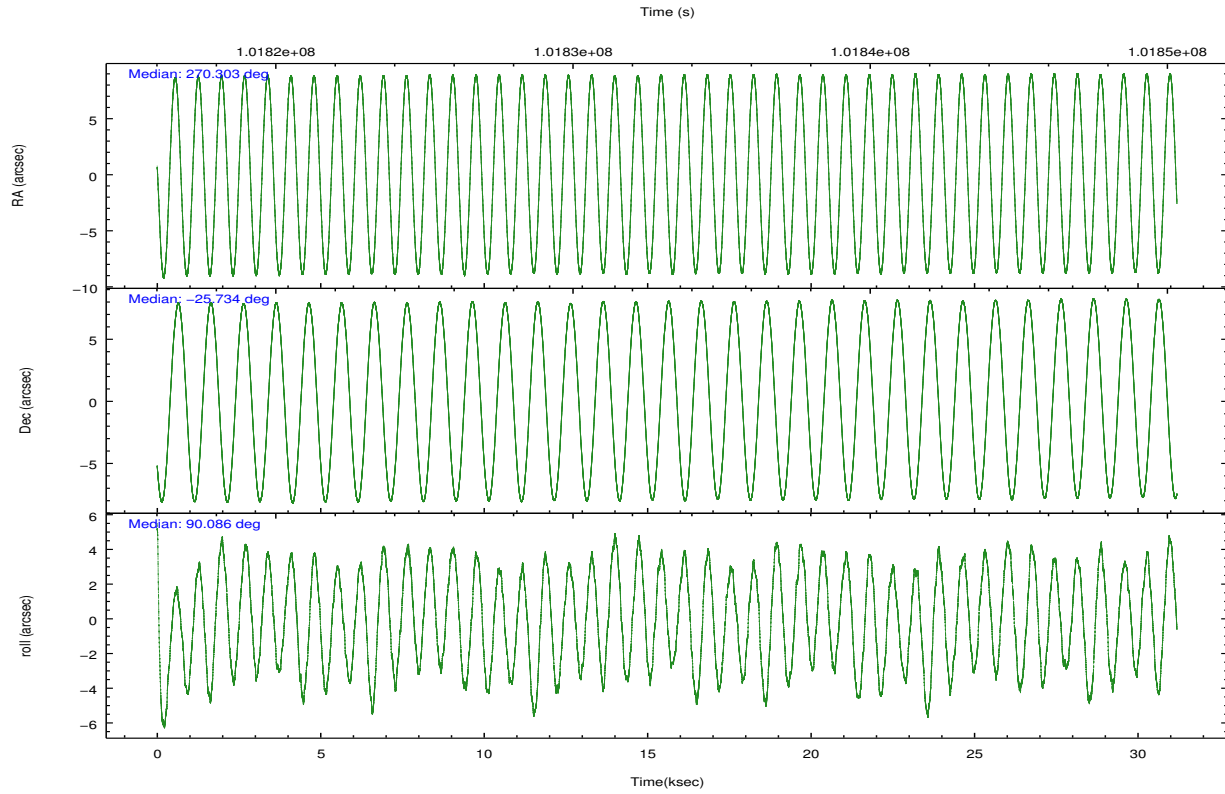
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	177814	188395	221631	248077	197750	131718	grade 0 events	47332	22982	91624	28579	53388	28520
rejected events	110569	77649	100071	87935	114302	92275		26%	12%	41%	11%	26%	21%
rejected %	62%	41%	45%	35%	57%	70%	grade 1 events	184	430	468	501	206	69
								0%	0%	0%	0%	0%	0%
							grade 2 events	9182	31725	14422	37794	11597	3453
								5%	16%	6%	15%	5%	2%
							grade 3 events	3481	8173	5374	17423	5076	1869
								1%	4%	2%	7%	2%	1%
							grade 4 events	3486	7736	5480	17333	4860	3127
								1%	4%	2%	6%	2%	2%
							grade 5 events	3675	12742	4426	14373	5185	4197
								2%	6%	1%	5%	2%	3%
							grade 6 events	3776	40140	4674	59025	8532	2478
								2%	21%	2%	23%	4%	1%
							grade 7 events	106698	64467	95163	73049	108906	88005
								60%	34%	42%	29%	55%	66%

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	270.319049	270.3035965197083	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-25.757159	-25.73367121122324	Subarray start row	1	1
[deg] Pointing Roll	89.941844	90.09175921899191	Subarray row count	512	512
[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	1.7
[mm] SIM translation stage pos	-184.032523	-184.025251236478			
[mm] SIM translation stage offset	-6.1	-6.107271346529842			
[s] Observation start time (MET)	101818759.184000	101817291.53821			
Observation start date	2001-03-24T10:58:15	2001-03-24T10:34:51			
[s] Observation end time (MET)	101848759.184000	101849376.60195			
Observation end date	2001-03-24T19:18:15	2001-03-24T19:29:36			
Read mode	TIMED	TIMED			

2.3 Aspect



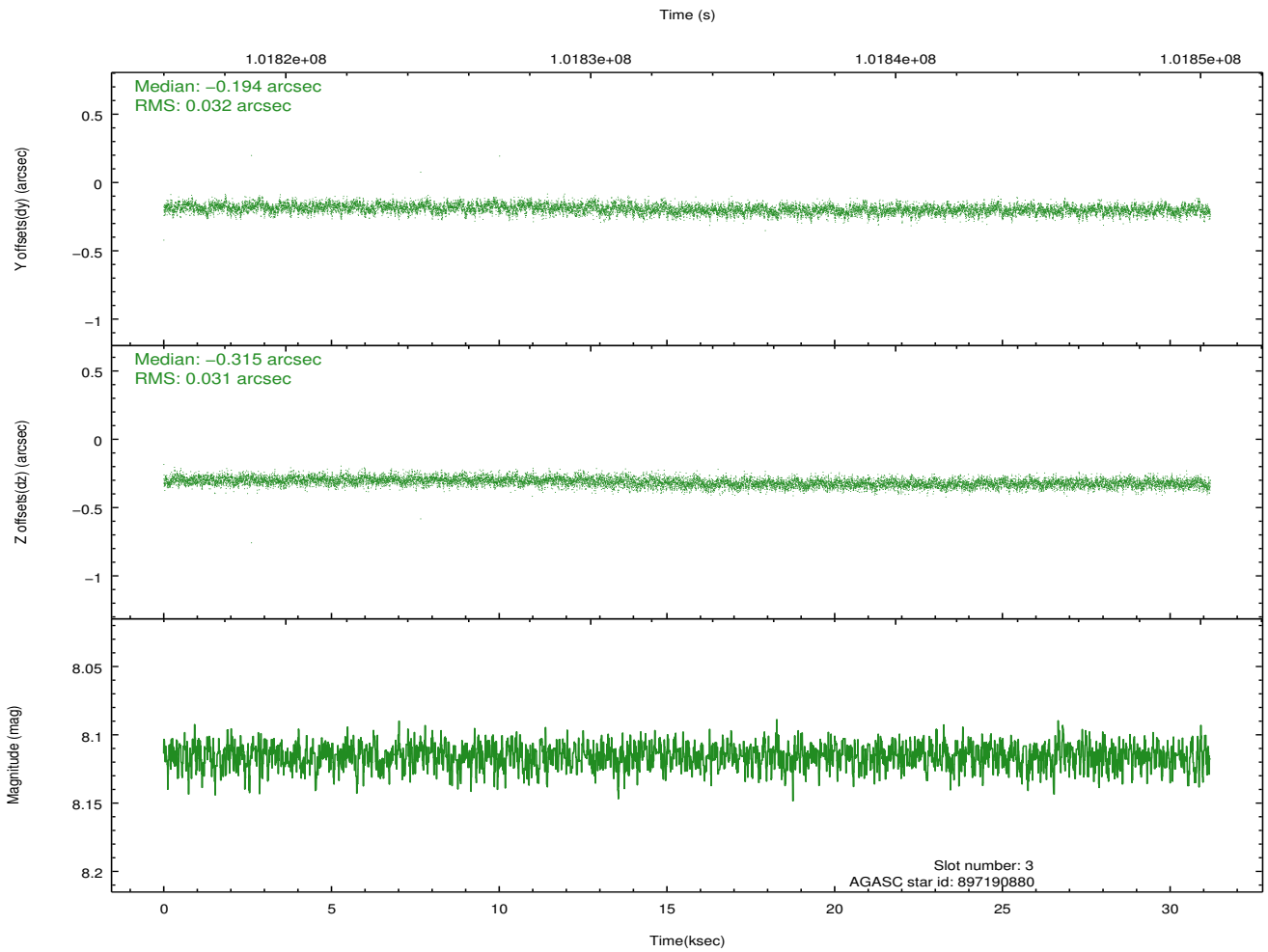
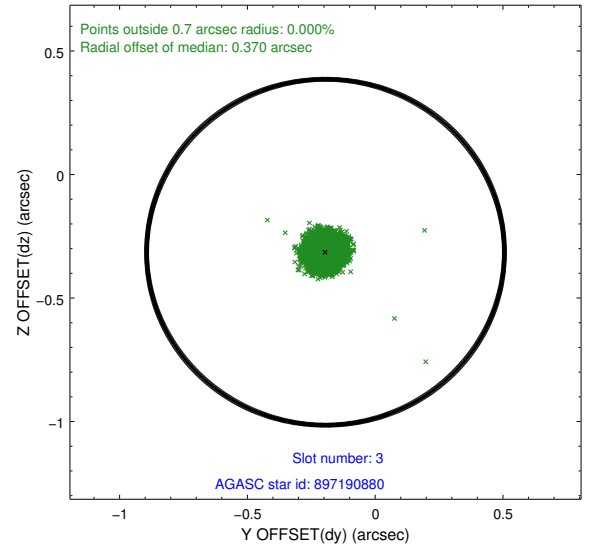
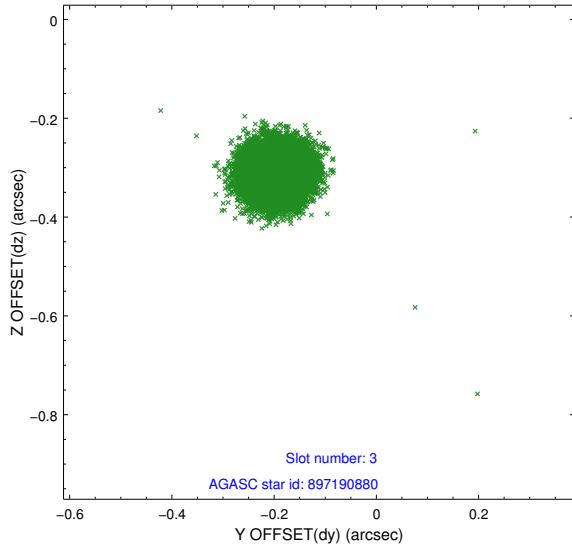


Slot Statistics

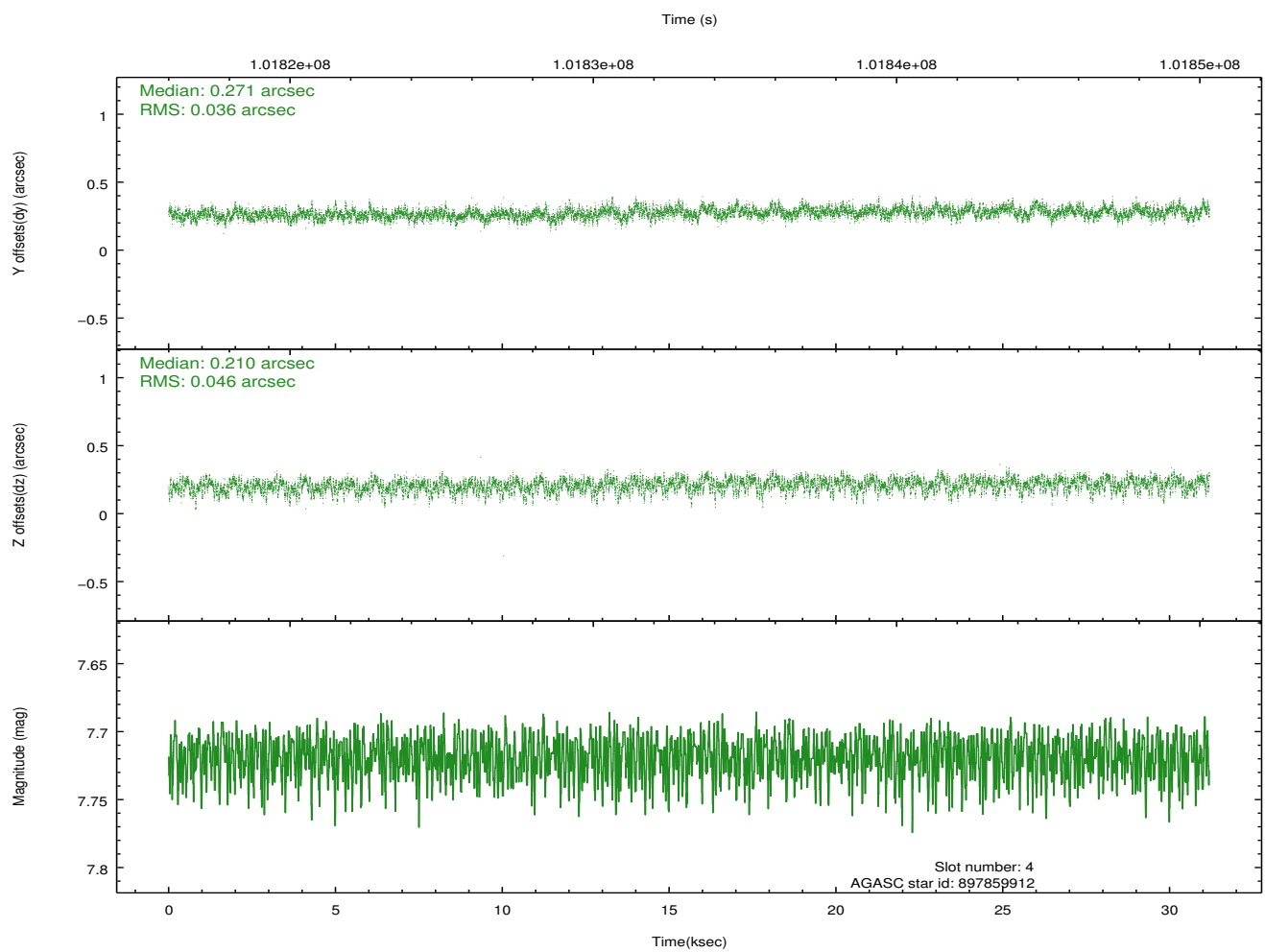
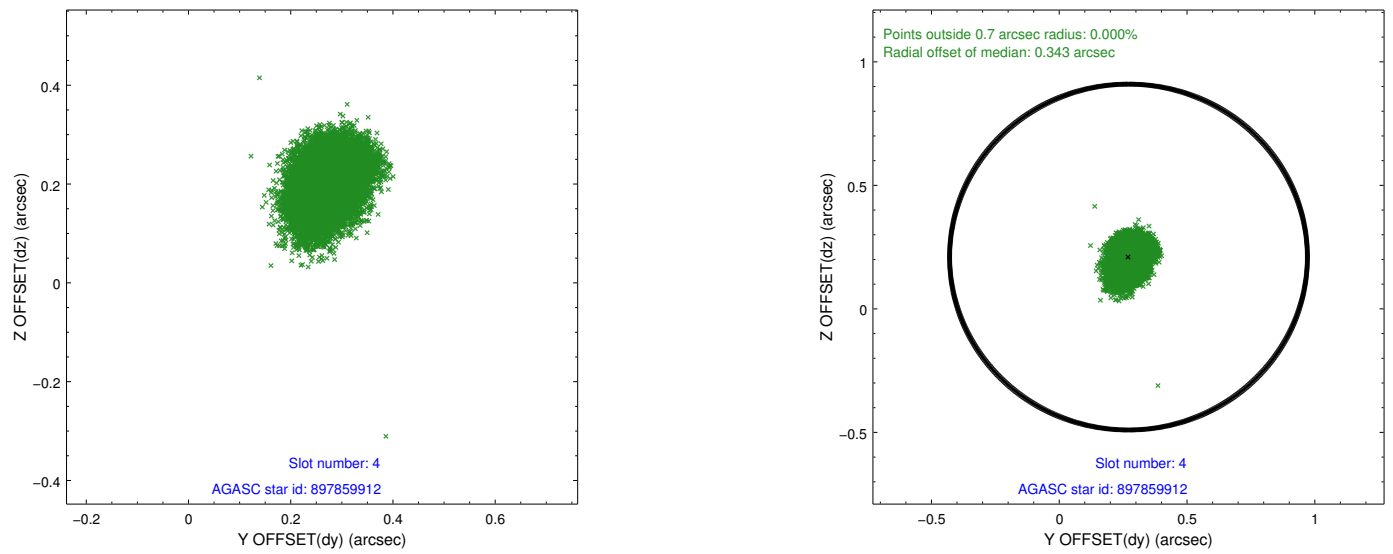
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	7608	-0.023	-0.120	0.016	0.023	0.000000	0.000000	-755.02	-1853.77
1	FID	ACIS-S-4	7.18	7608	-0.038	0.042	0.020	0.030	0.000000	0.000000	2158.24	54.74
2	FID	ACIS-S-5	7.23	7609	0.026	0.086	0.015	0.022	0.000000	0.000000	-1807.71	48.58
3	GUIDE	897190880	8.12	15213	-0.194	-0.315	0.047	0.076	269.584058	-25.142408	2203.33	2397.09
4	GUIDE	897859912	7.72	15214	0.271	0.210	0.061	0.101	270.849161	-26.319822	-2027.17	-1712.97
5	GUIDE	897326672	8.22	15211	0.222	-0.091	0.048	0.078	270.237029	-26.222744	-1676.78	262.39
6	GUIDE	897326256	8.25	15216	-0.138	0.425	0.062	0.096	271.063775	-25.425801	1188.18	-2420.04
7	GUIDE	897188632	8.64	15208	-0.162	-0.226	0.066	0.105	269.725883	-25.281908	1704.02	1931.99

2.4 Star Slots

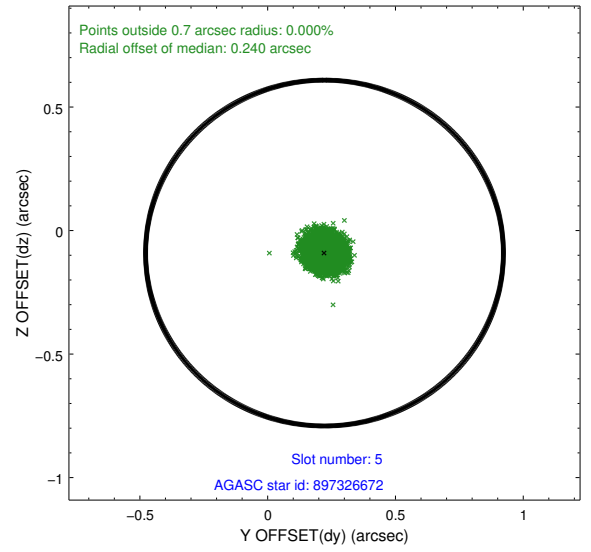
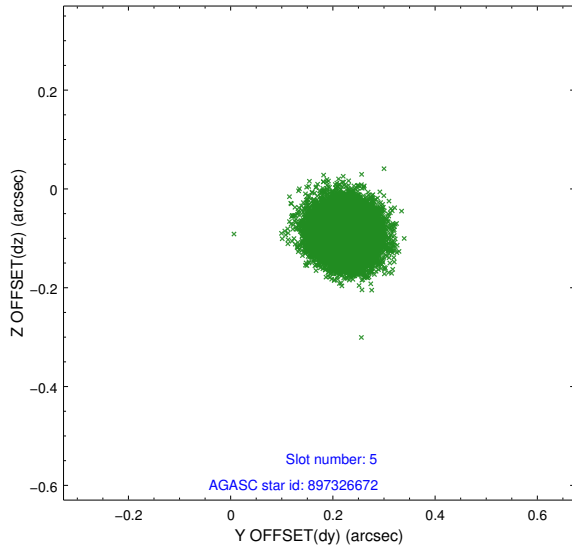
2.4.1 Slot 3



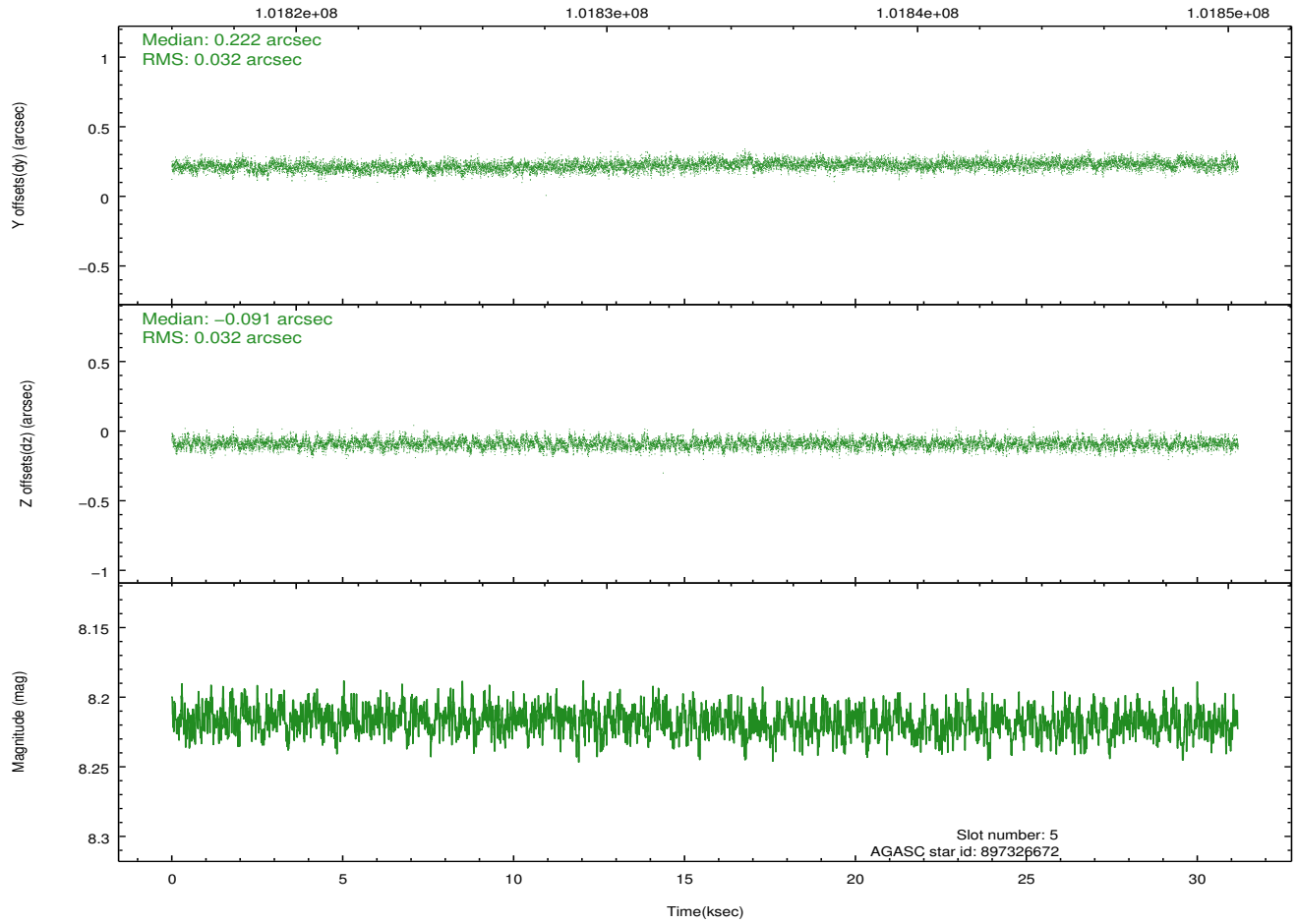
2.4.2 Slot 4



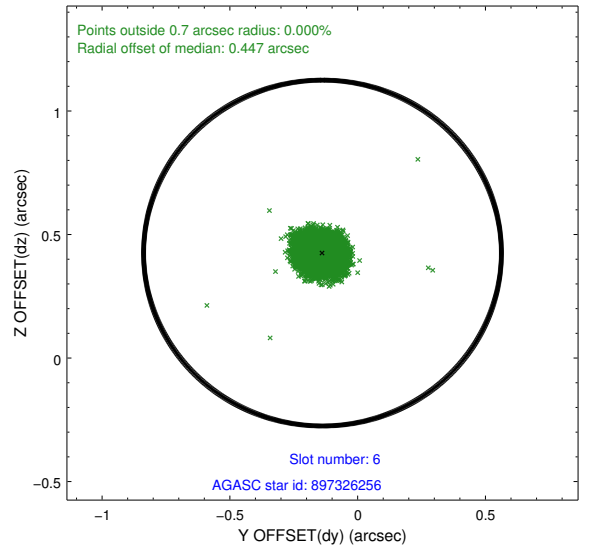
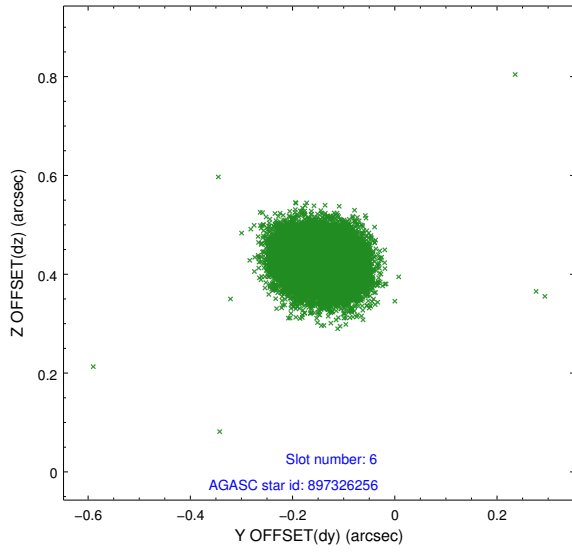
2.4.3 Slot 5



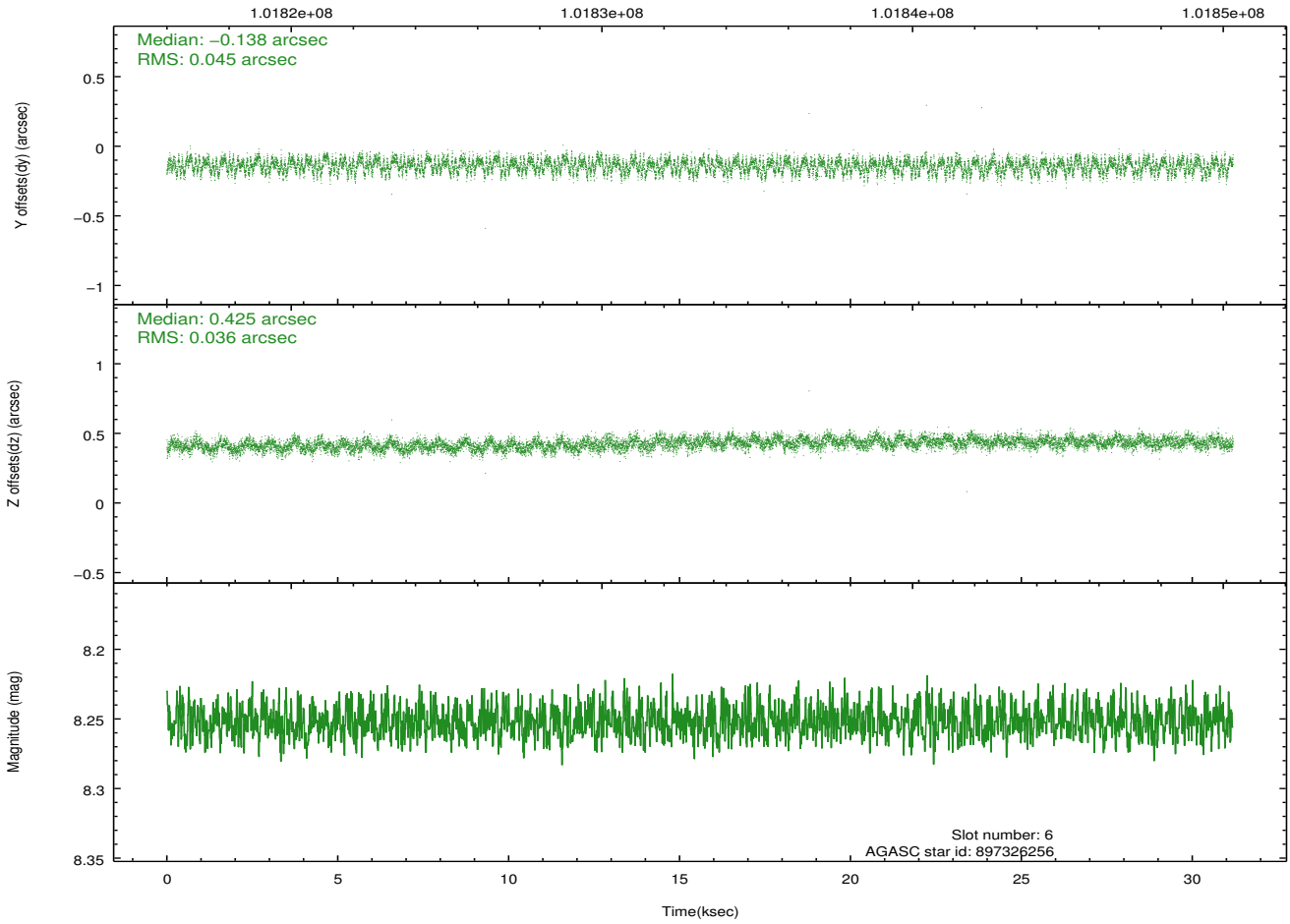
Time (s)



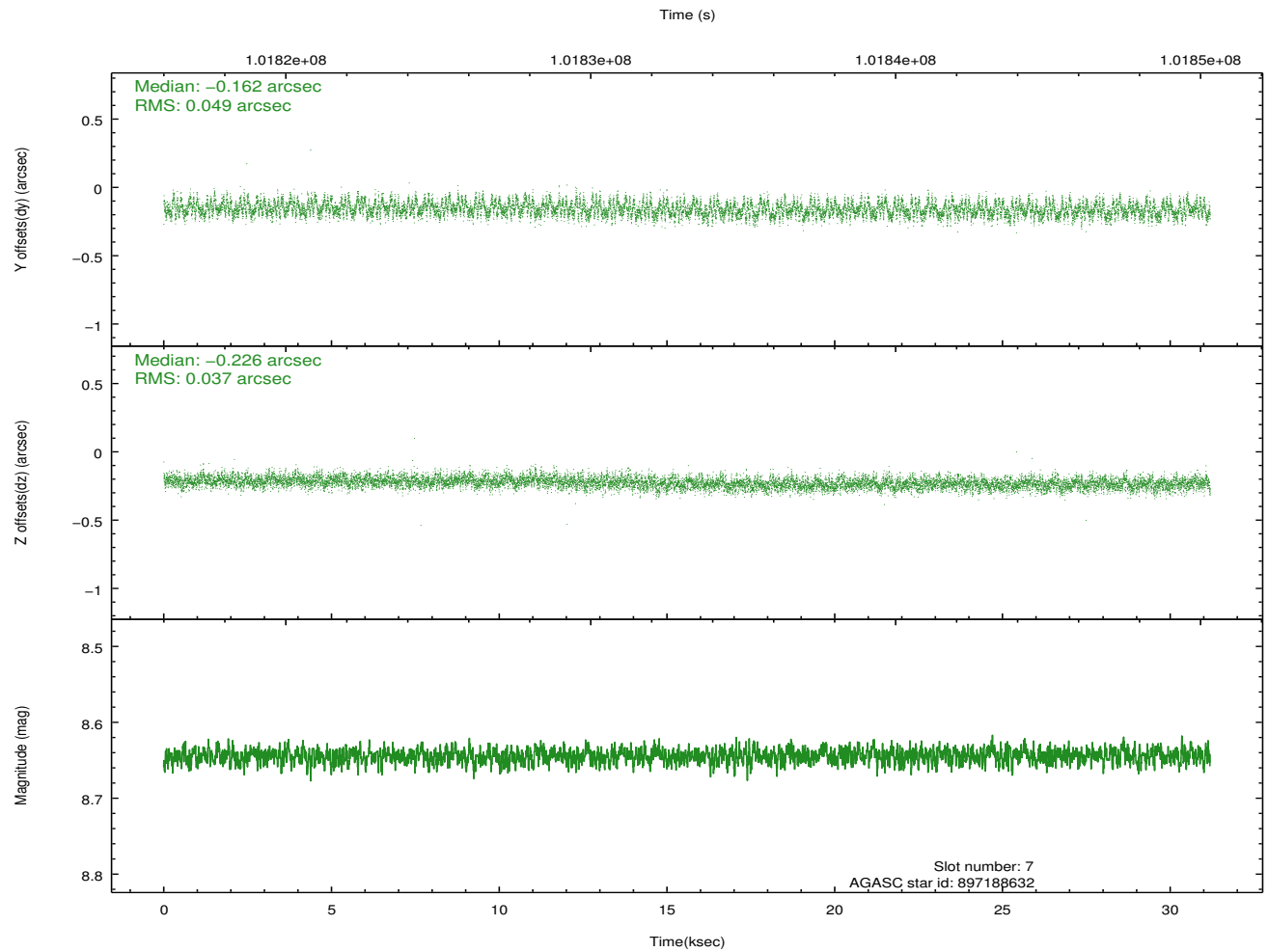
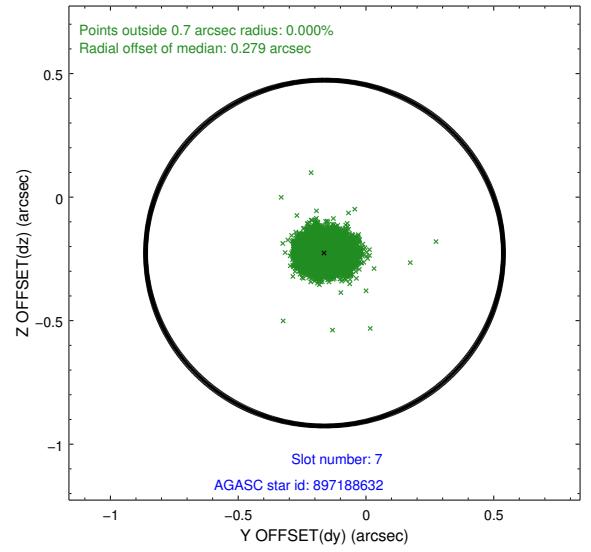
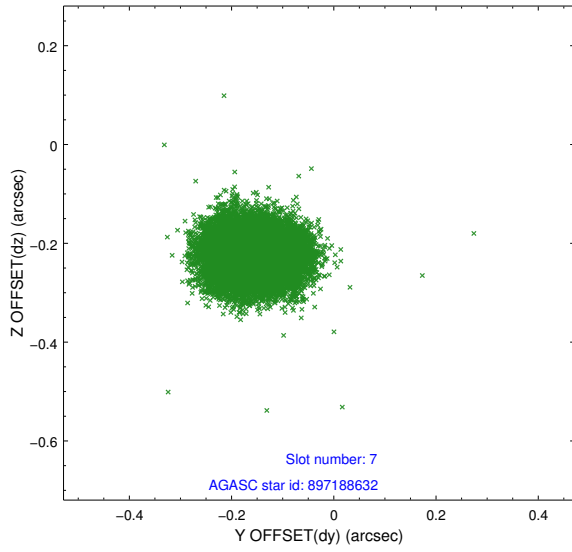
2.4.4 Slot 6



Time (s)

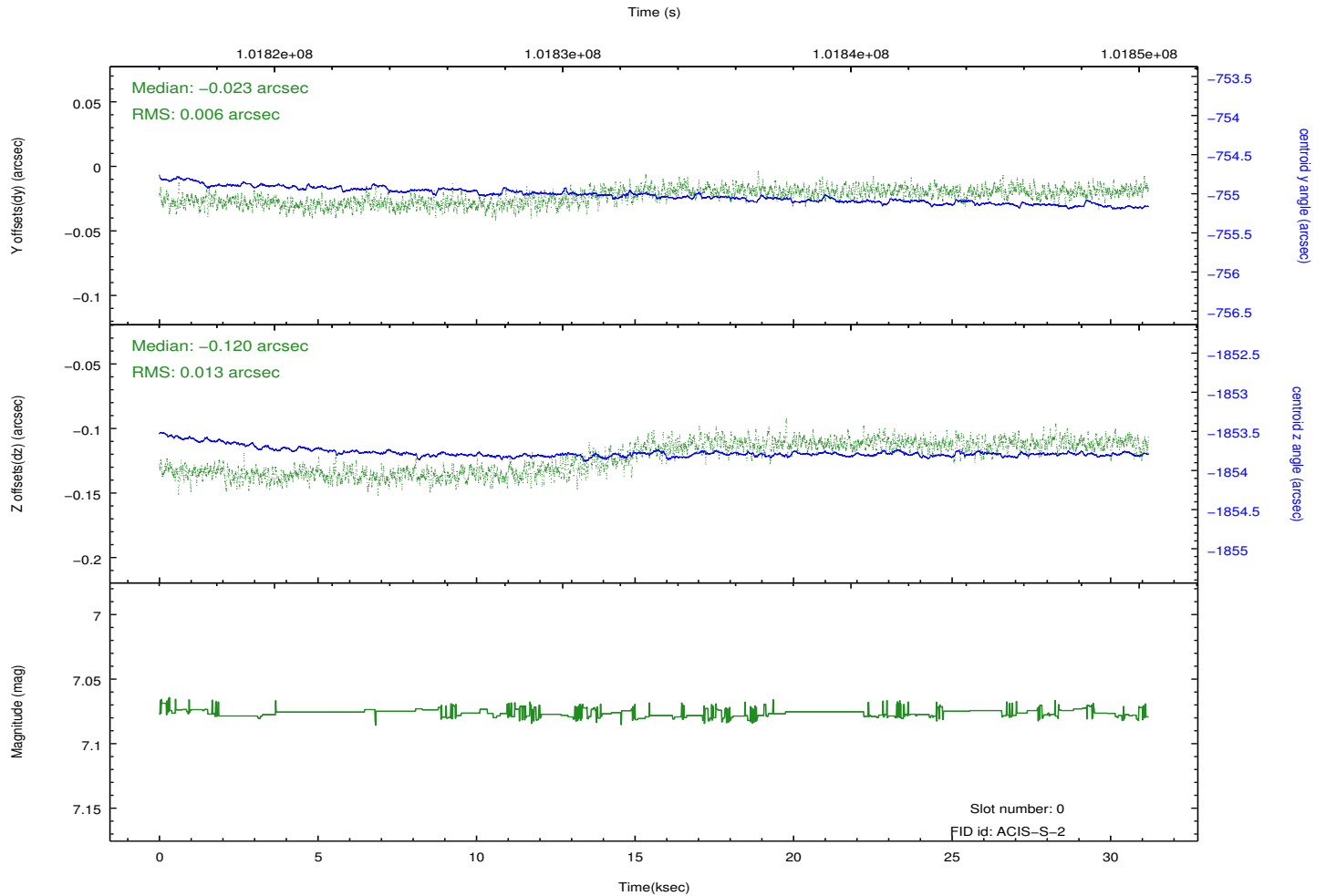
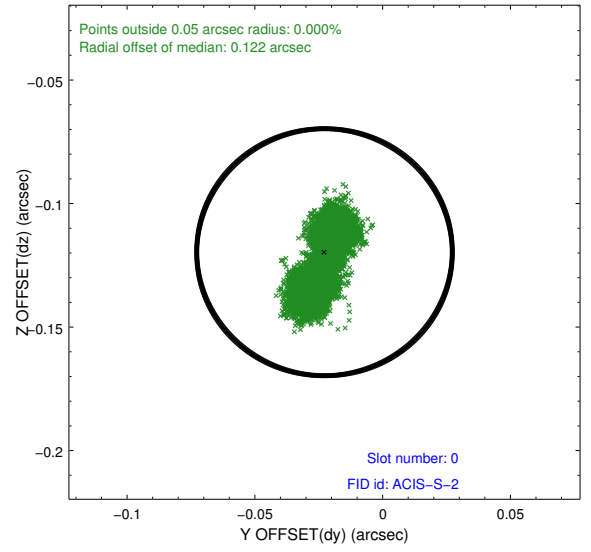
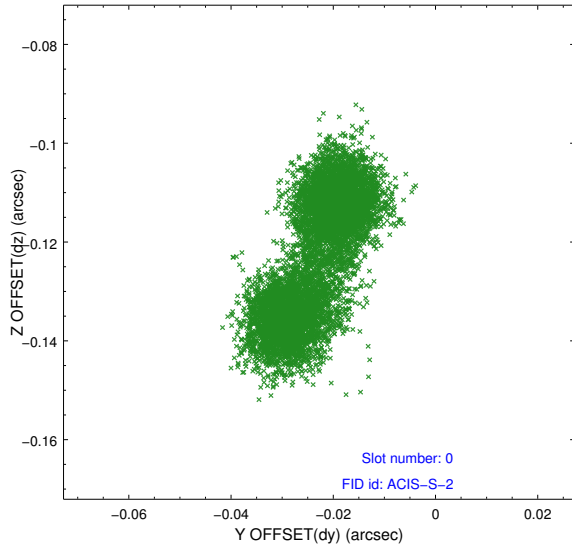


2.4.5 Slot 7

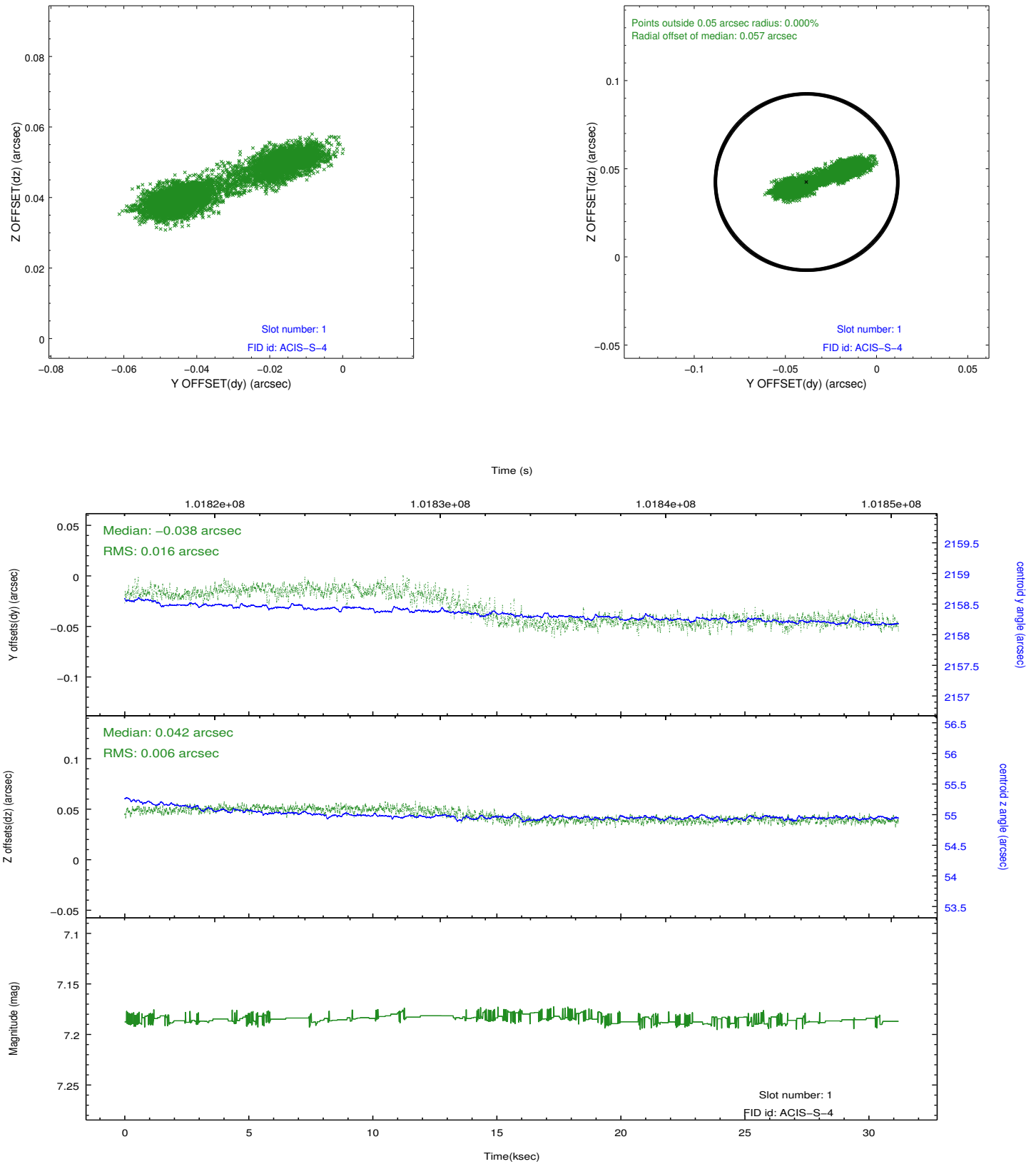


2.5 FID Slots

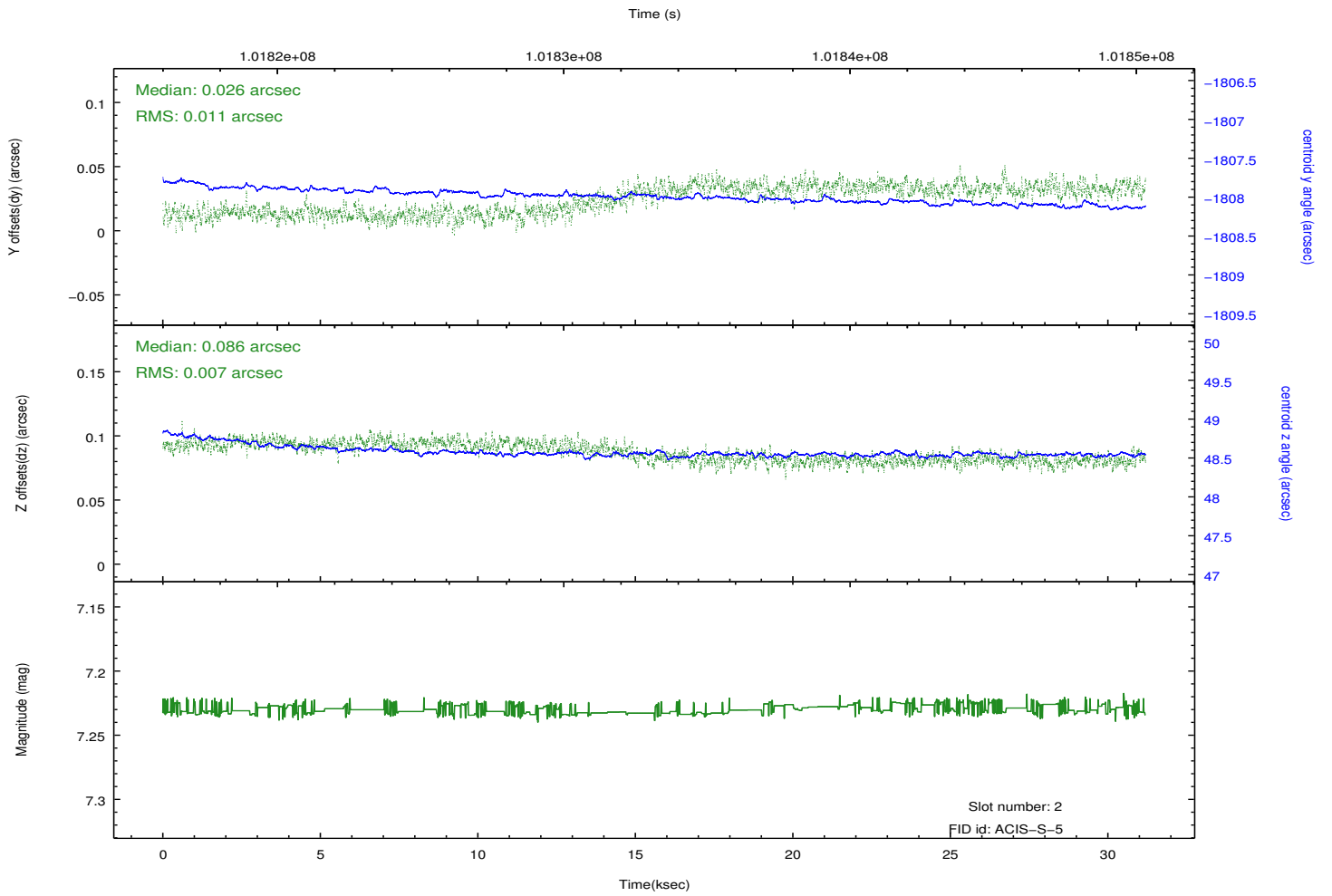
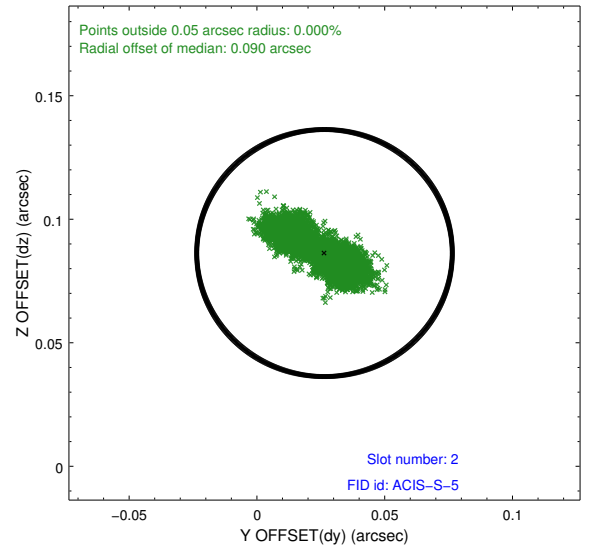
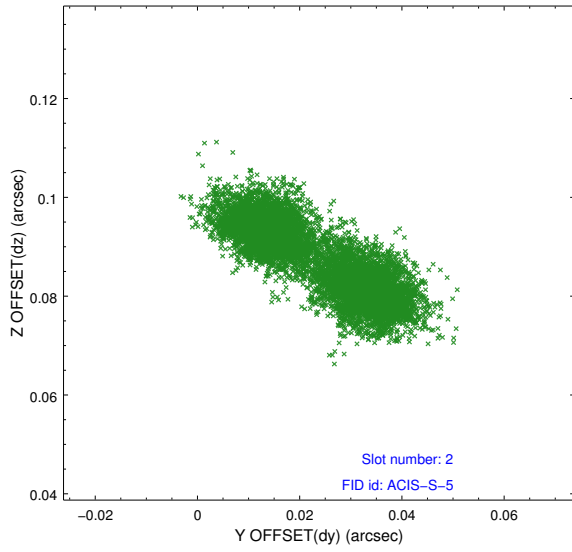
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

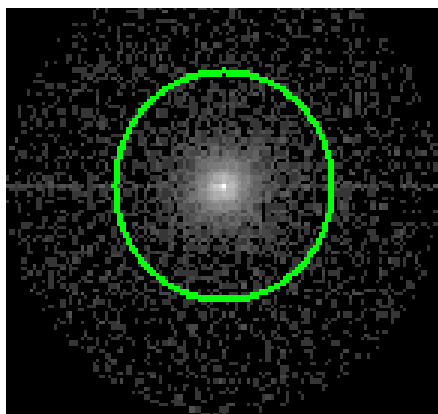


3 Gratings

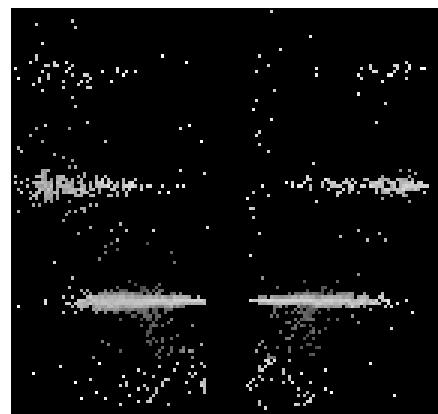
3.1 HEG Arm



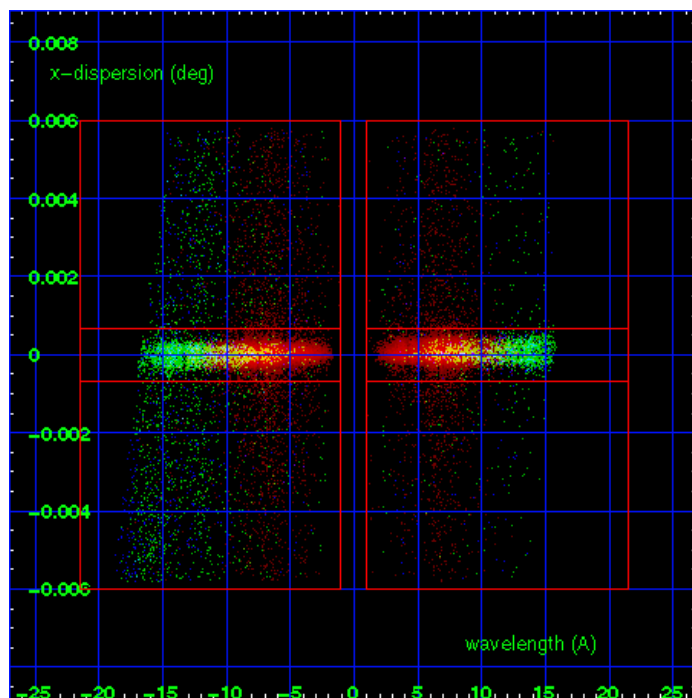
HEG Order Sort 123



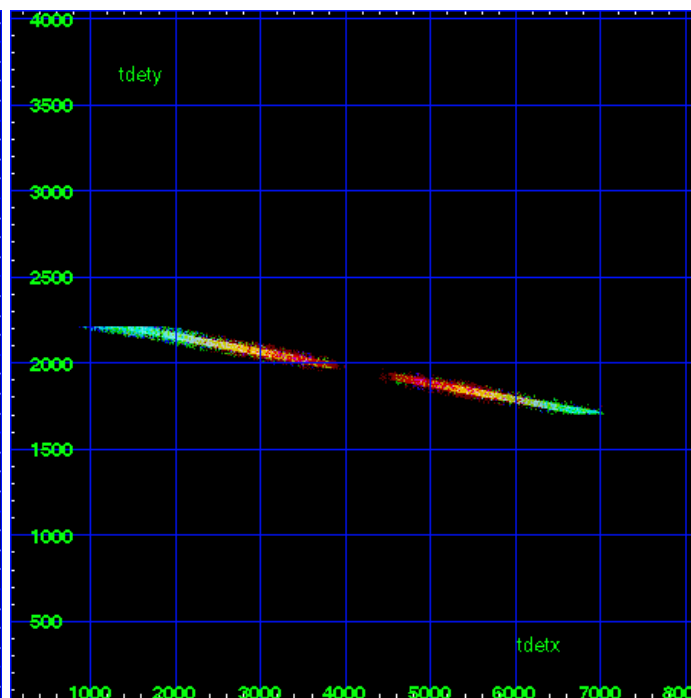
HEG Zero Order



HEG Order Sort ALL

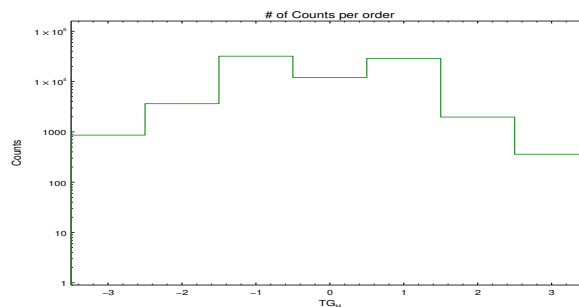


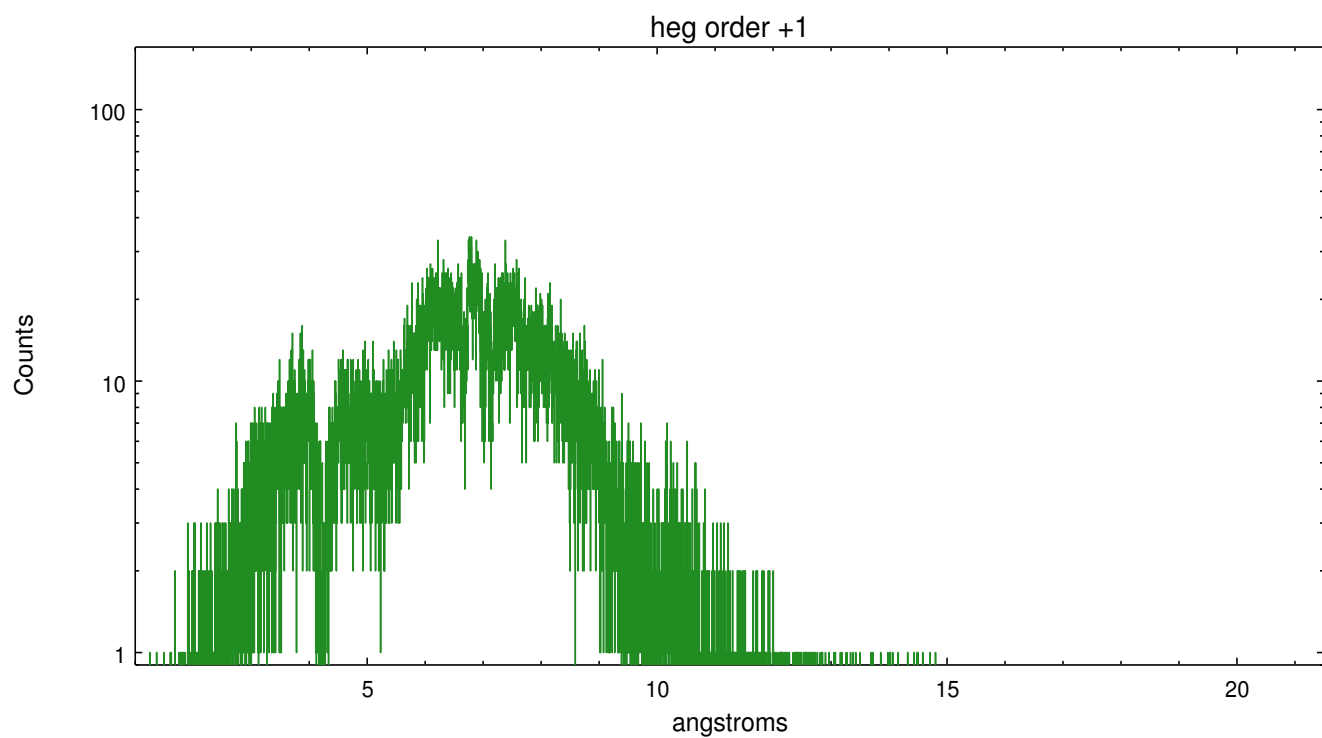
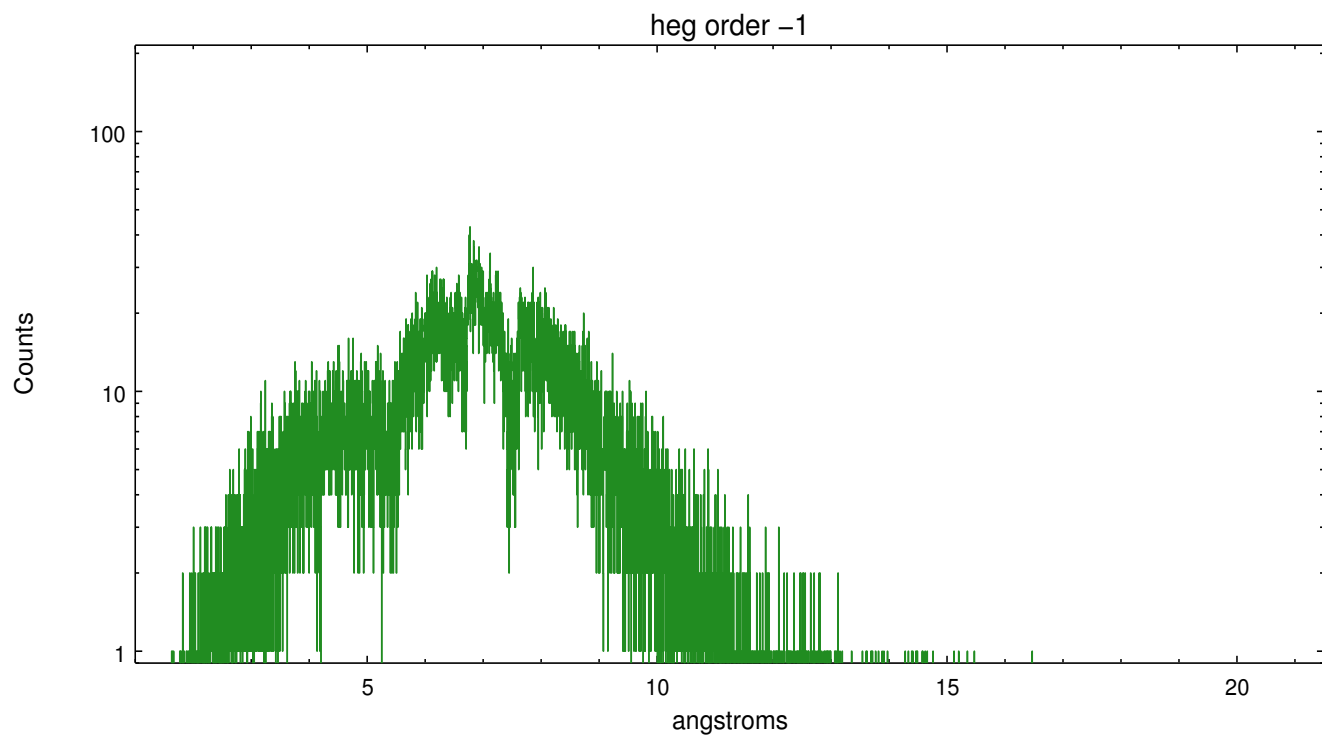
Spot Image HEG



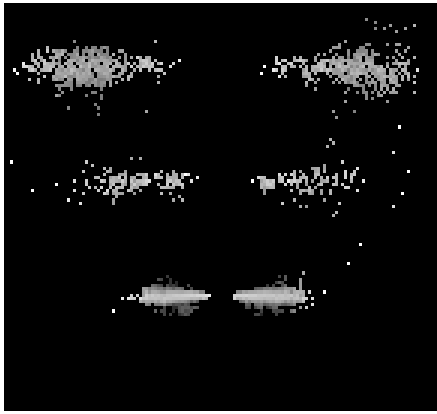
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	862	3637	31990	12103	28814	1971	359

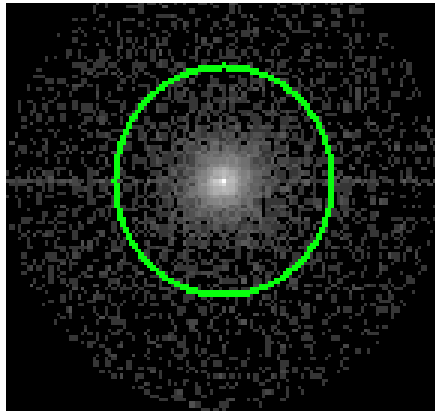




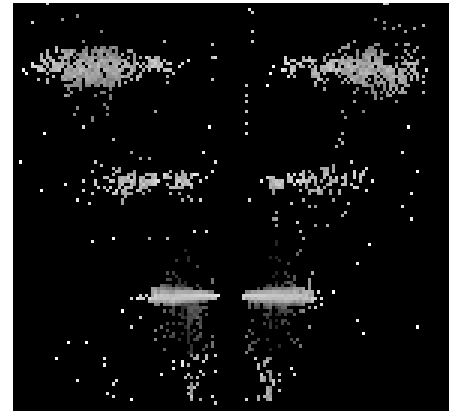
3.2 MEG Arm



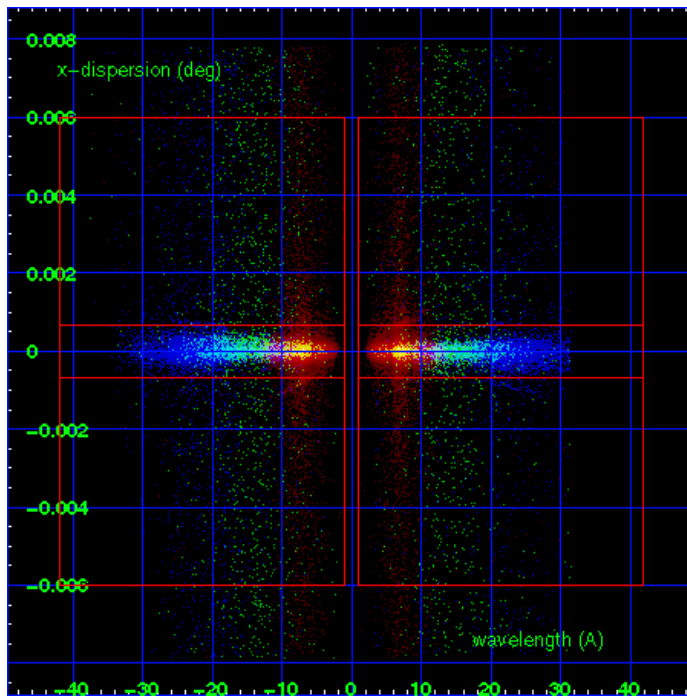
MEG Order Sort 123



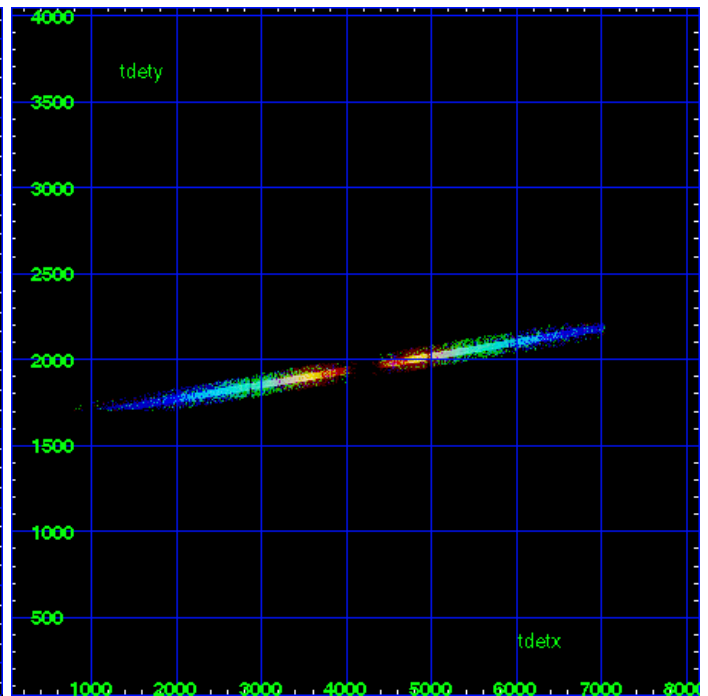
MEG Zero Order



MEG Order Sort ALL

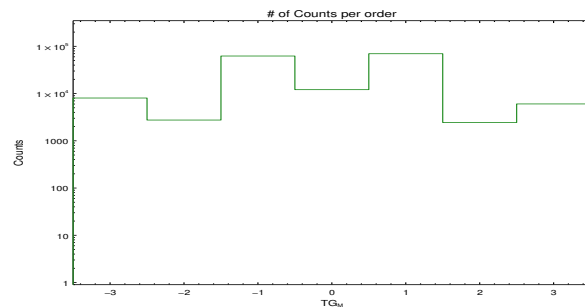


Spot Image MEG

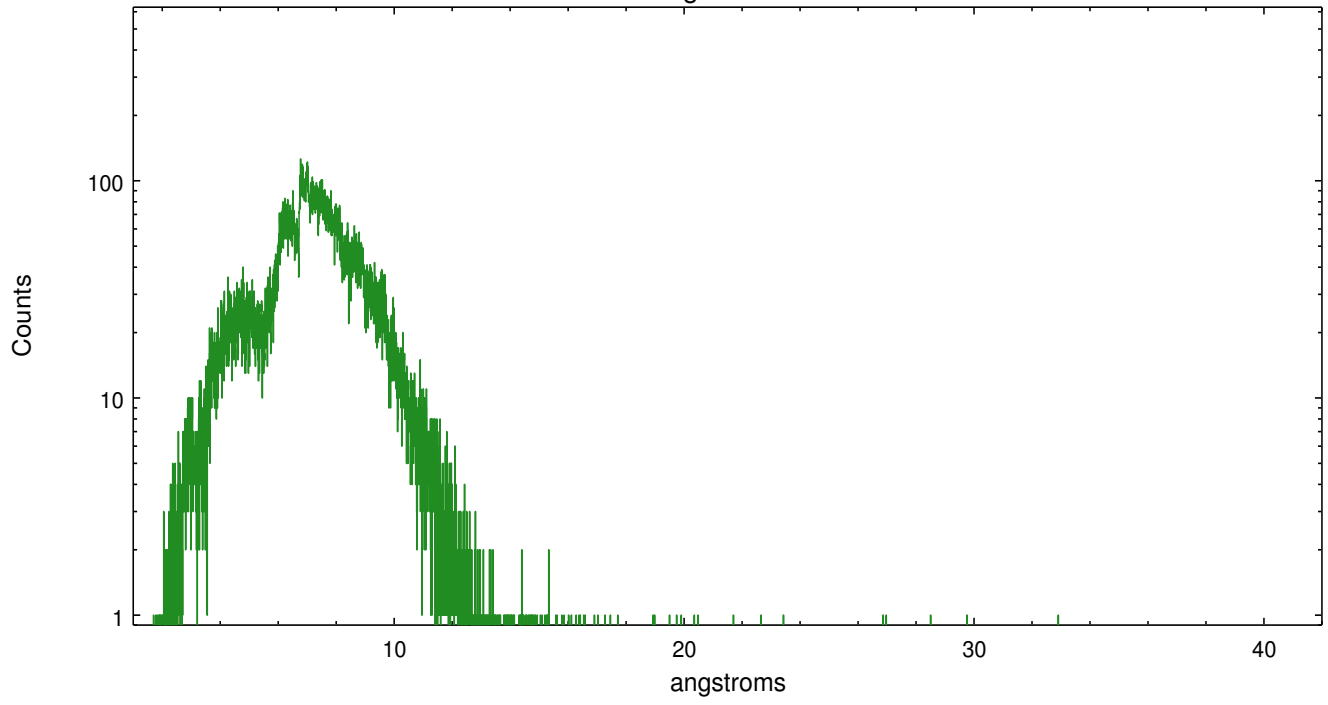


Full Detector MEG

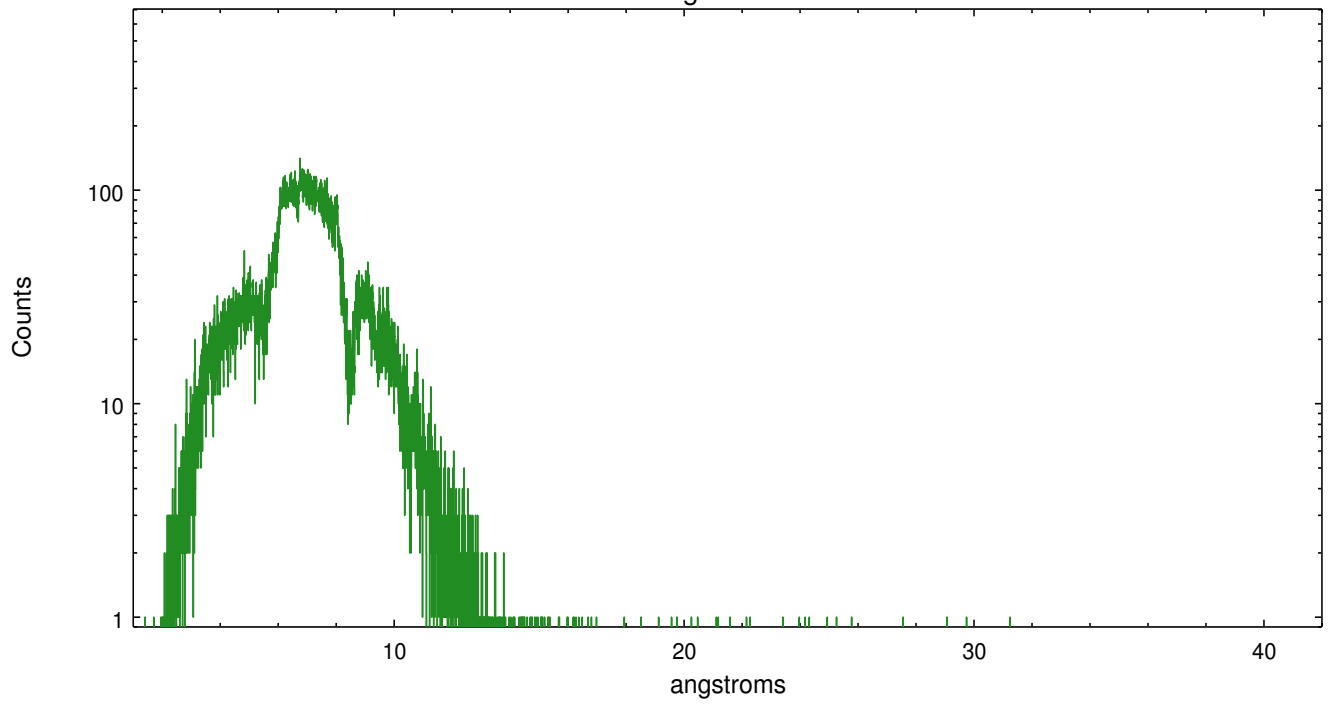
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	8048	2749	62344	12103	69773	2437	6033



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.28

A.2 Comments

Charge time for this ObsId remains at previous value of 30.28 ks, although with the current processing the charge time would have been 30.318 ks.

===

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=4109.46, y=4025.55) 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 as tg_findzo (currently in ISIS as findzo). 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 *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.