

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2750 - L2 Version 3
Chandra X-Ray Center

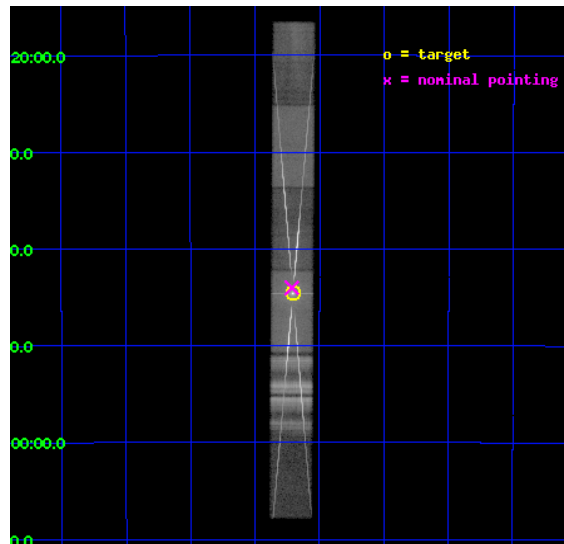
L2 Processing Date : Oct 4 2012

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

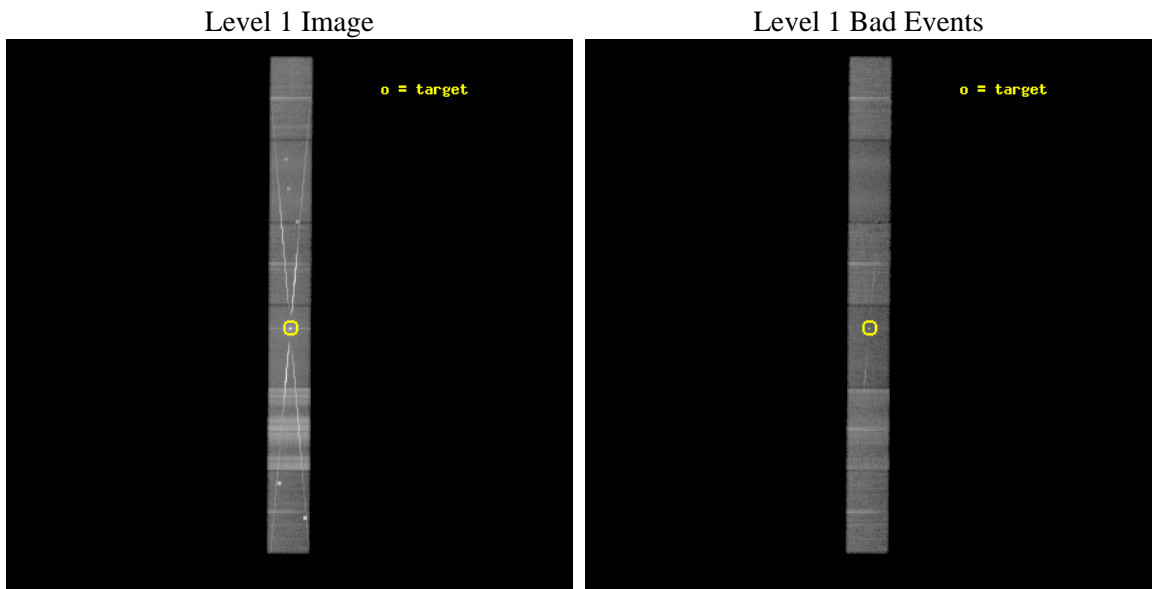
seq_num	400230	Sequence number
obs_id	2750	Observation id
title	A SEARCH FO EMISSION LINES IN THE MICRO-QUASAR GRS 1758-258	Propos
observer	Dr. William Heindl	Principal investigator
object	GRS 1758-258	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	270.301667	Observer's specified target RA [deg]
dec_targ	-25.743306	Observer's specified target Dec [deg]
ra_nom	270.30349059276	Nominal RA [deg]
dec_nom	-25.733746298963	Nominal Dec [deg]
roll_nom	90.362674789541	Nominal Roll [deg]
revision	3	Processing version of data
ontime	27108.159007505	Sum of GTIs [s]
livetime	26469.162289642	Livetime [s]
ontime4	27108.159057334	Sum of GTIs [s]
ontime5	27108.159007505	Sum of GTIs [s]
ontime6	27108.159007505	Sum of GTIs [s]
ontime7	27108.159007505	Sum of GTIs [s]
ontime8	27108.159057334	Sum of GTIs [s]
ontime9	27108.159007505	Sum of GTIs [s]
l2events	800902	Number of level 2 events



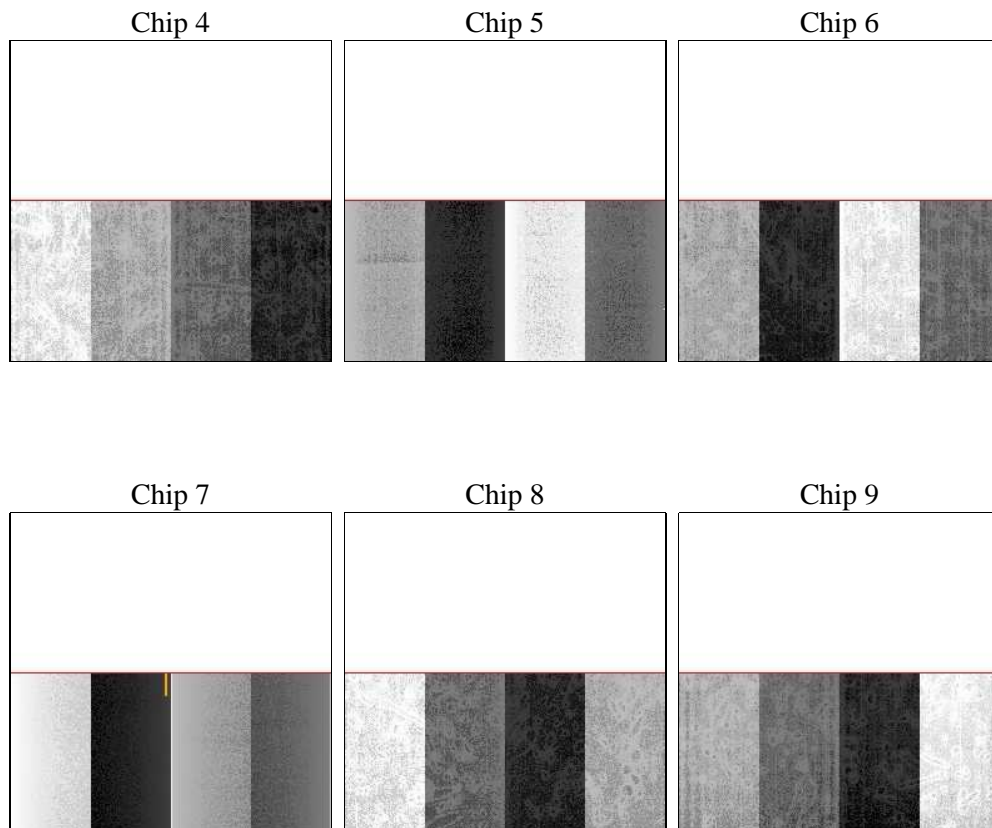
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	27108.159007505	Sum of GTIs [s]
caldbver	4.5.2	 	ontime4	27108.159057334	Sum of GTIs [s]
date	2012-10-04T12:28:25	Date and time of file creation	ontime5	27108.159007505	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	27108.159007505	Sum of GTIs [s]
			ontime7	27108.159007505	Sum of GTIs [s]
			ontime8	27108.159057334	Sum of GTIs [s]
			ontime9	27108.159007505	Sum of GTIs [s]
			l1events	1761962	Number of level 1 events

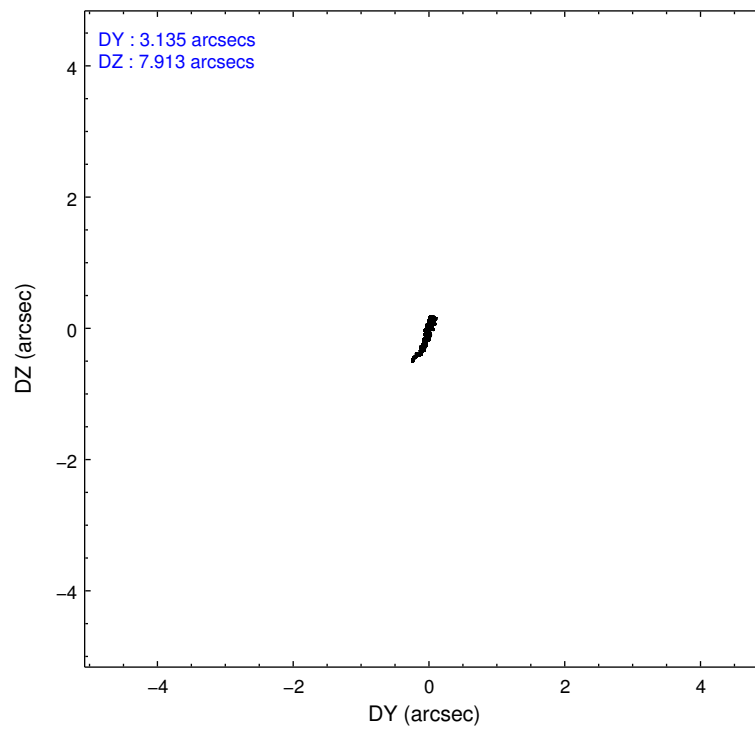
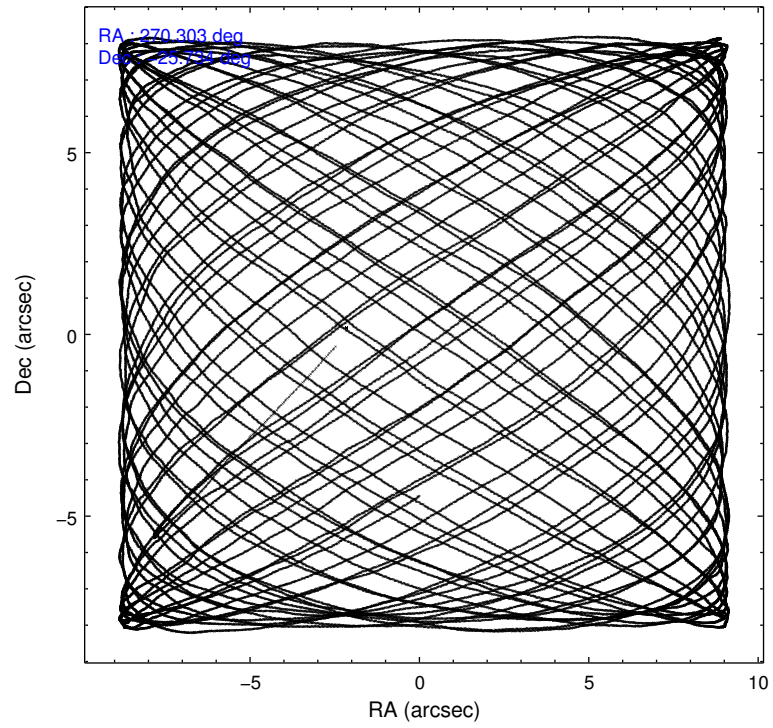
2.1.4 Events

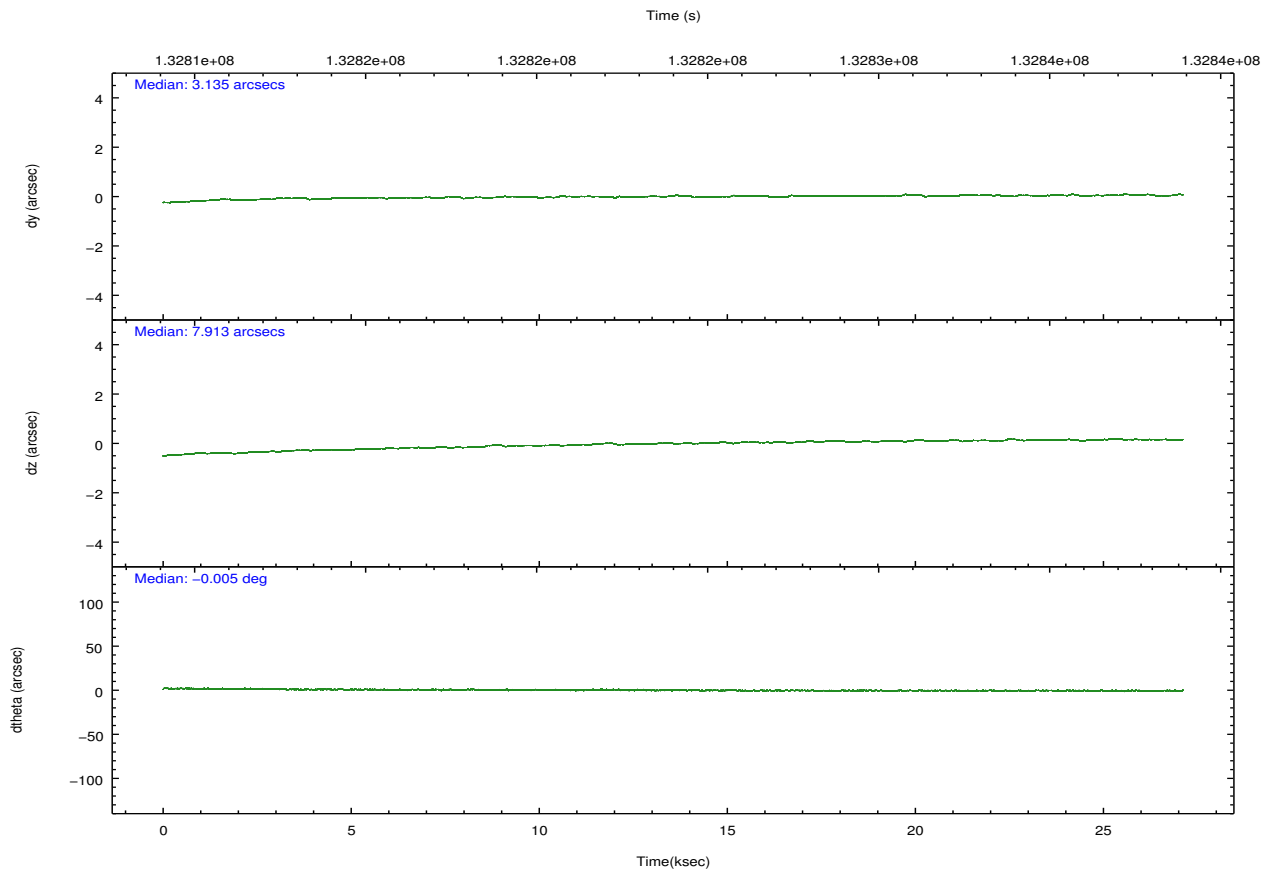
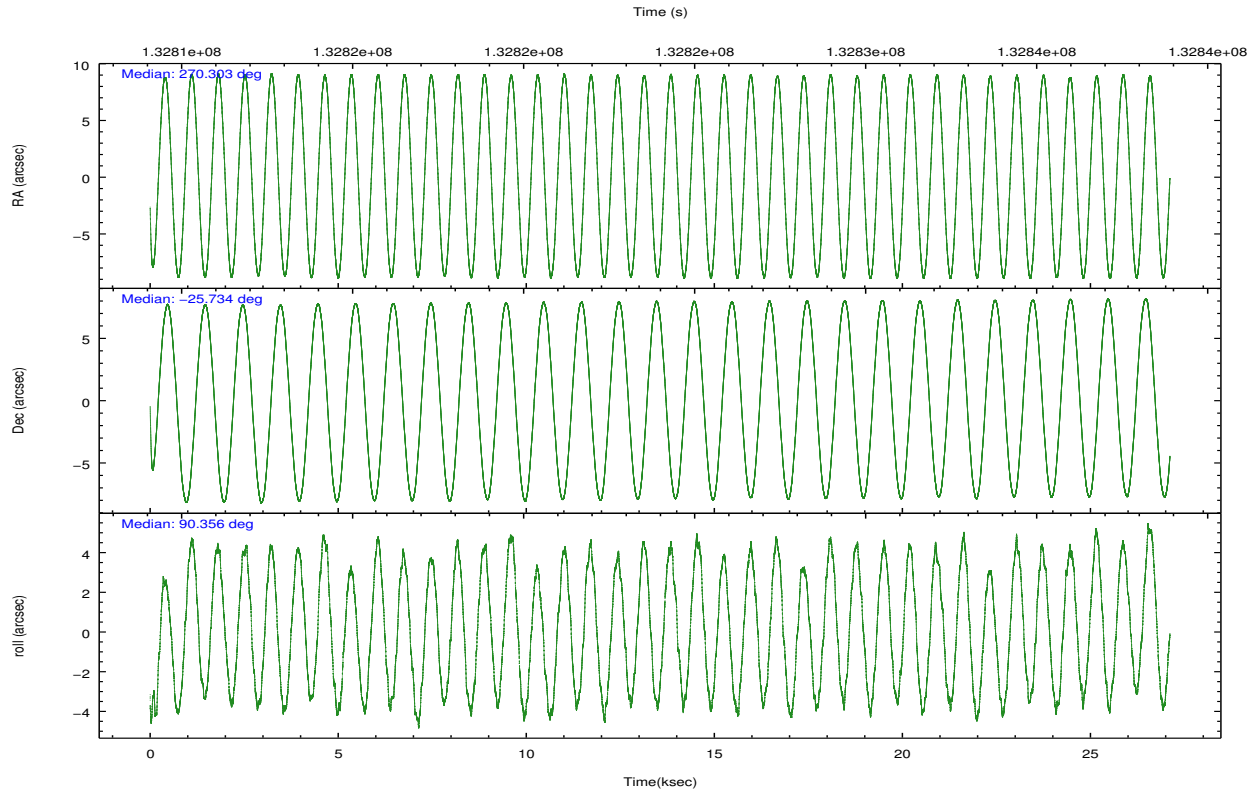
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	197155	209877	316877	336313	526861	174879	grade 0 events	43836	27079	145321	47112	152709	47671
rejected events	128332	92391	121869	87532	174513	113170		22%	12%	45%	14%	28%	27%
rejected %	65%	44%	38%	26%	33%	64%	grade 1 events	251	388	1068	802	993	135
								0%	0%	0%	0%	0%	0%
							grade 2 events	14458	34873	26354	62183	38353	6923
								7%	16%	8%	18%	7%	3%
							grade 3 events	3170	9731	8185	28017	66203	2230
								1%	4%	2%	8%	12%	1%
							grade 4 events	3388	9440	8179	27663	57287	2066
								1%	4%	2%	8%	10%	1%
							grade 5 events	3734	12738	4582	15189	8002	3992
								1%	6%	1%	4%	1%	2%
							grade 6 events	5854	40598	9230	87852	53389	5095
								2%	19%	2%	26%	10%	2%
							grade 7 events	122464	75030	113958	67495	149925	106767
								62%	35%	35%	20%	28%	61%

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	270.319113	270.3034905927638	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-25.757087	-25.733746298963	Subarray start row	1	1
[deg] Pointing Roll	90.212838	90.36267478954086	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	-183.992523	-183.9875365069546			
[mm] SIM translation stage offset	-6.14	-6.144986076053243			
[s] Observation start time (MET)	132810545.184000	132809196.86473			
Observation start date	2002-03-18T03:48:01	2002-03-18T03:26:36			
[s] Observation end time (MET)	132837545.184000	132837895.32839			
Observation end date	2002-03-18T11:18:01	2002-03-18T11:24:55			
Read mode	TIMED	TIMED			

2.3 Aspect



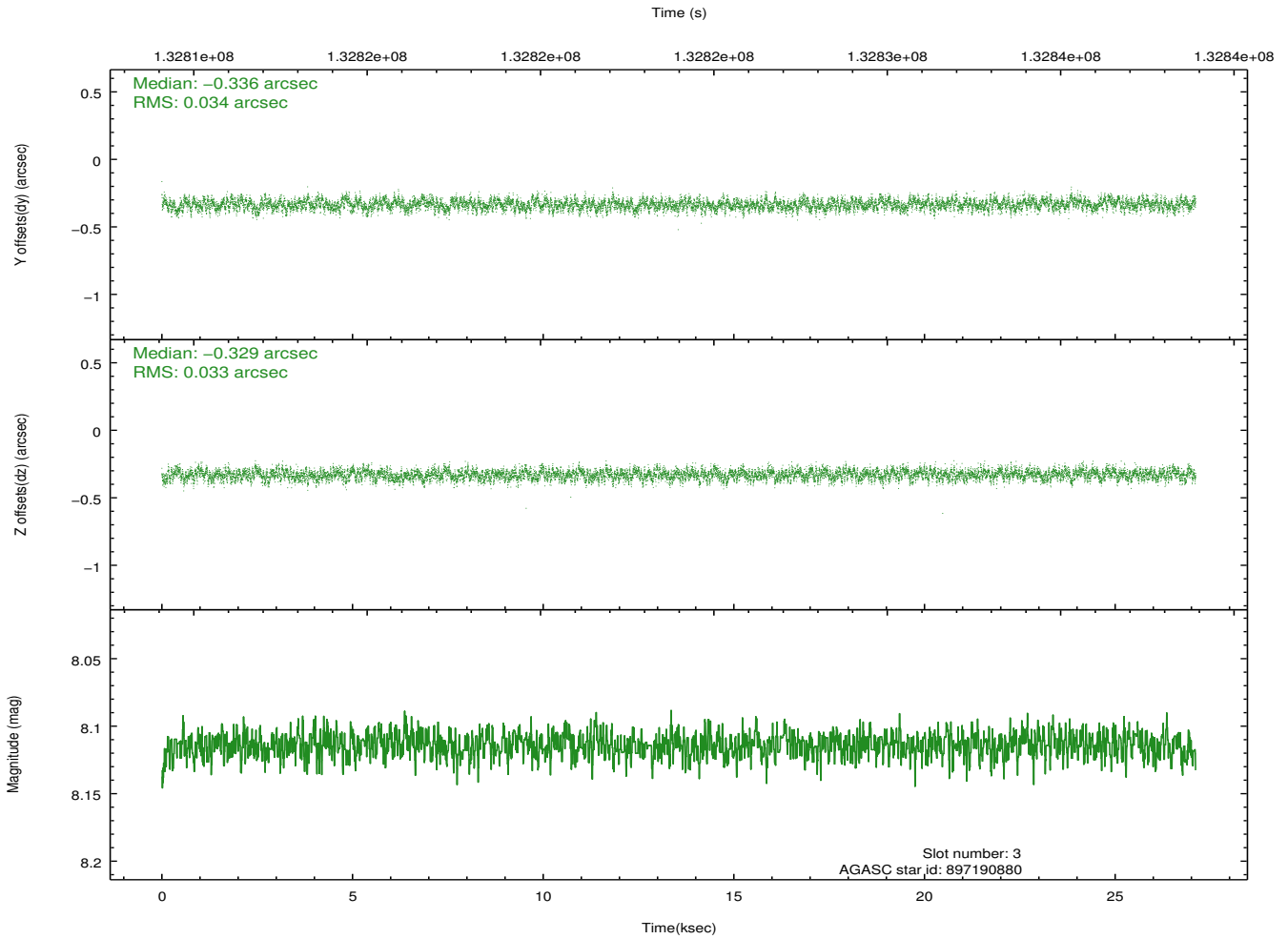
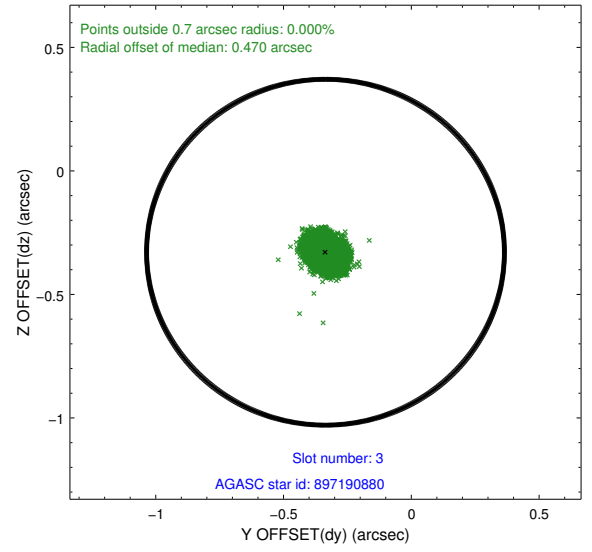
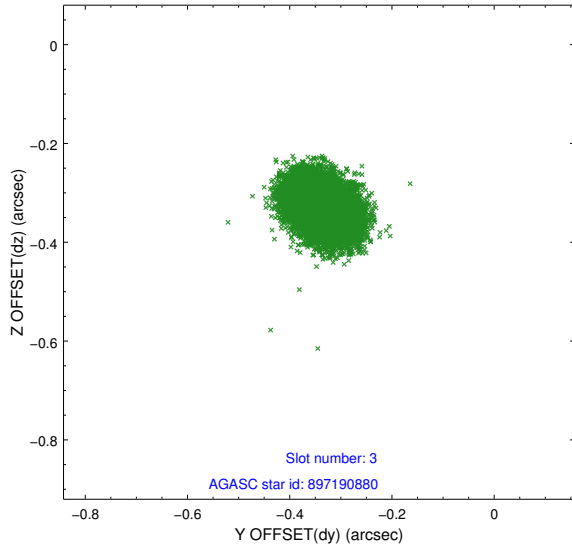


Slot Statistics

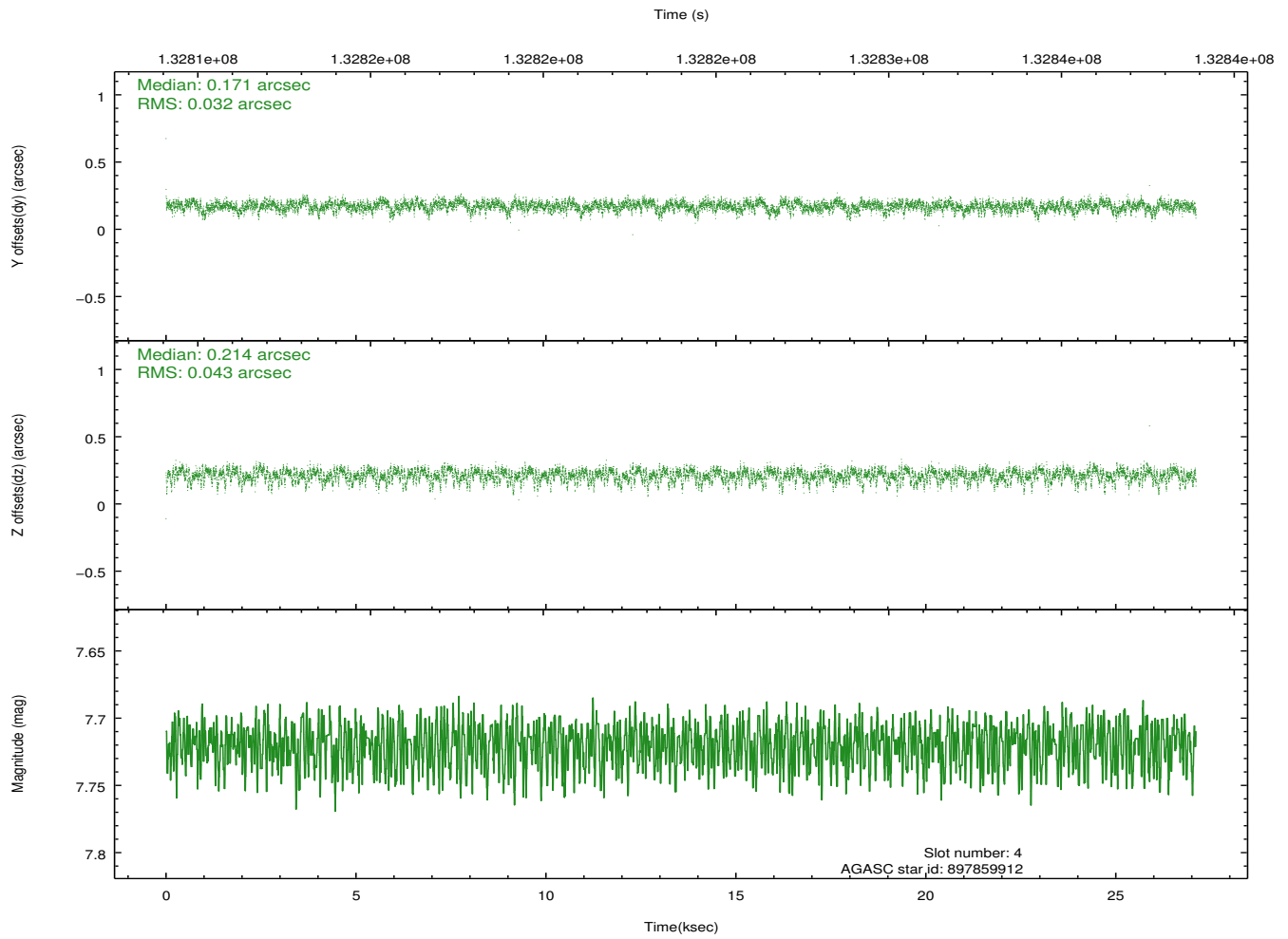
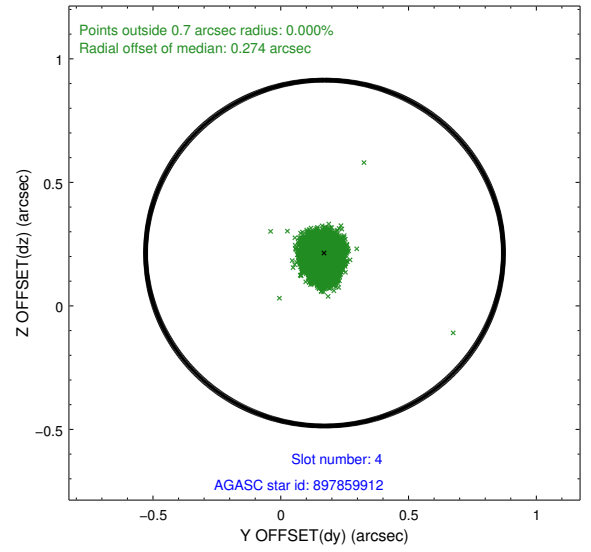
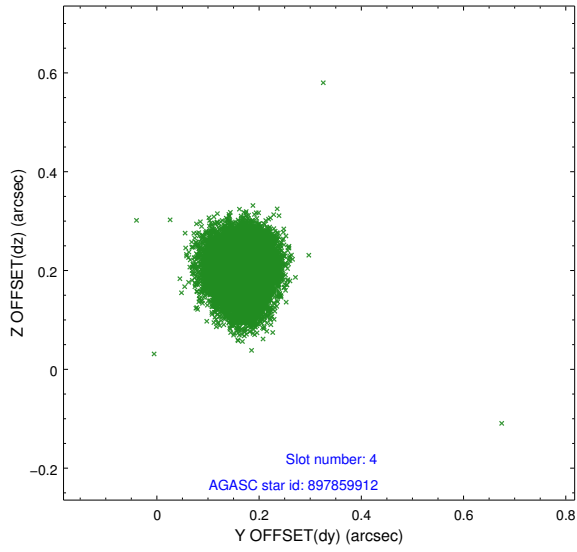
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	6612	-0.053	-0.048	0.009	0.015	0.000000	0.000000	-755.35	-1855.77
1	FID	ACIS-S-4	7.18	6611	-0.001	0.038	0.006	0.011	0.000000	0.000000	2157.90	52.72
2	FID	ACIS-S-5	7.23	6612	0.022	0.018	0.008	0.013	0.000000	0.000000	-1808.03	46.41
3	GUIDE	897190880	8.11	13219	-0.336	-0.329	0.050	0.081	269.584058	-25.142408	2215.22	2386.81
4	GUIDE	897859912	7.72	13225	0.171	0.214	0.056	0.094	270.849161	-26.319822	-2034.56	-1703.21
5	GUIDE	897326672	8.22	13222	0.122	-0.094	0.052	0.085	270.237029	-26.222744	-1674.90	270.43
6	GUIDE	897193352	8.39	13218	0.080	-0.167	0.074	0.119	269.817437	-25.818839	-218.98	1625.91
7	GUIDE	897322760	8.55	13221	-0.035	0.377	0.067	0.104	270.988015	-25.669699	301.57	-2171.36

2.4 Star Slots

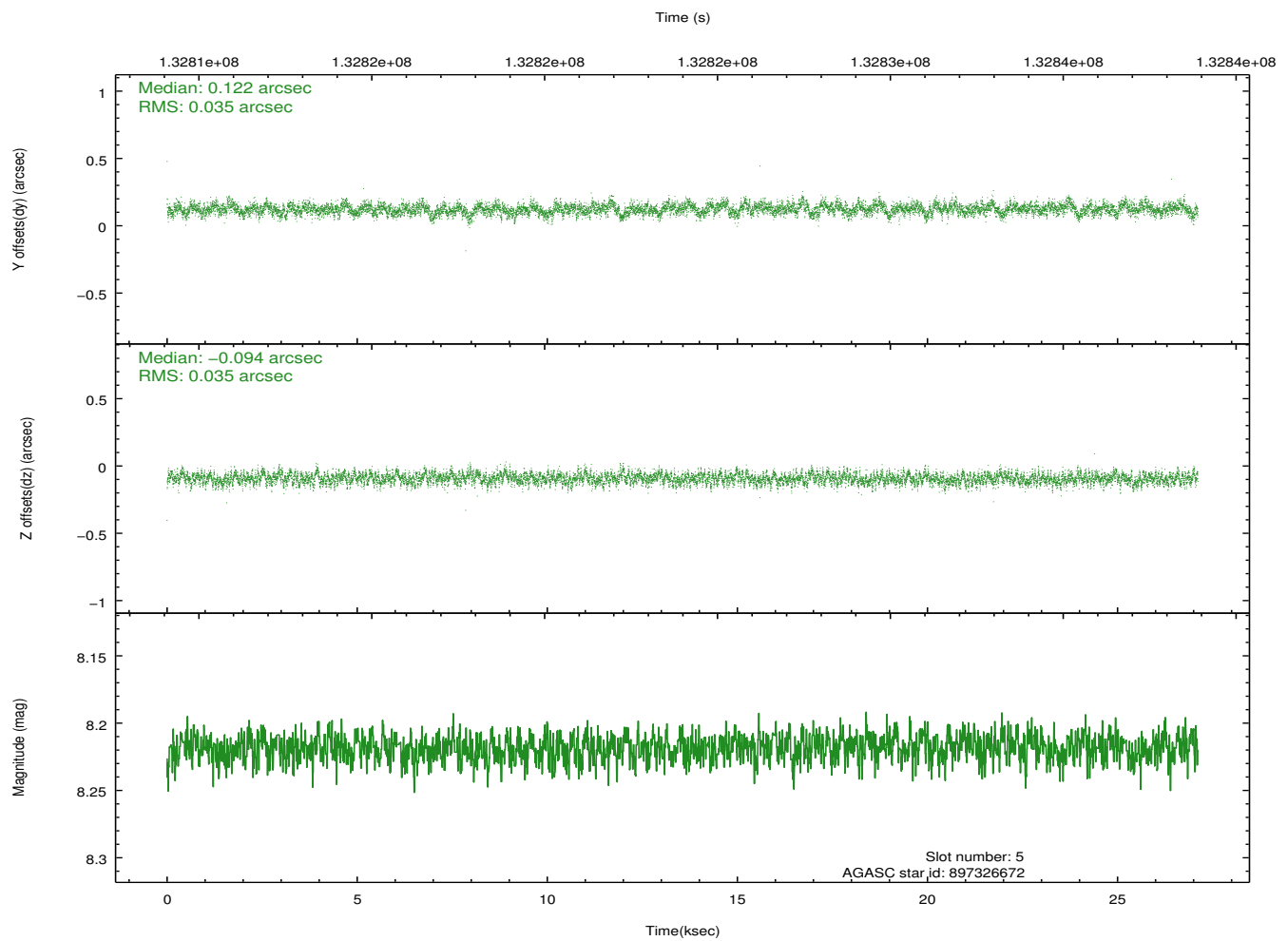
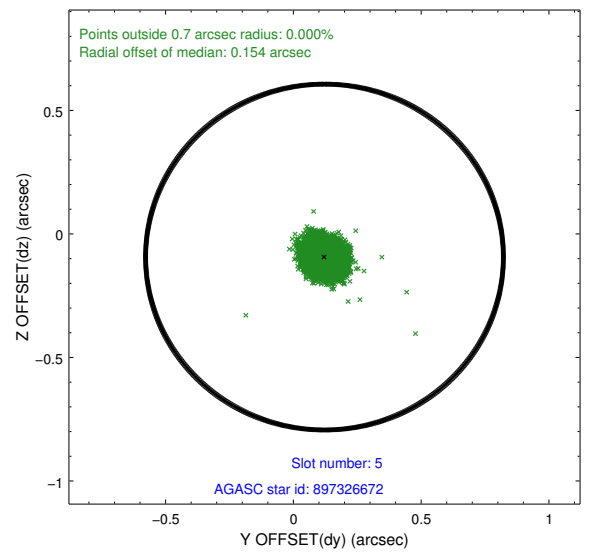
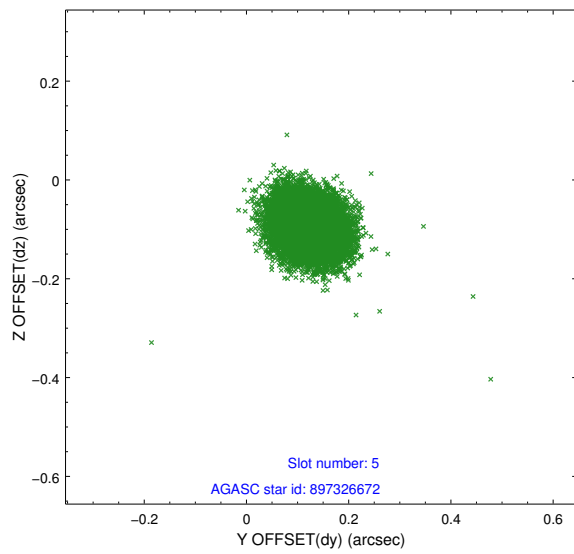
2.4.1 Slot 3



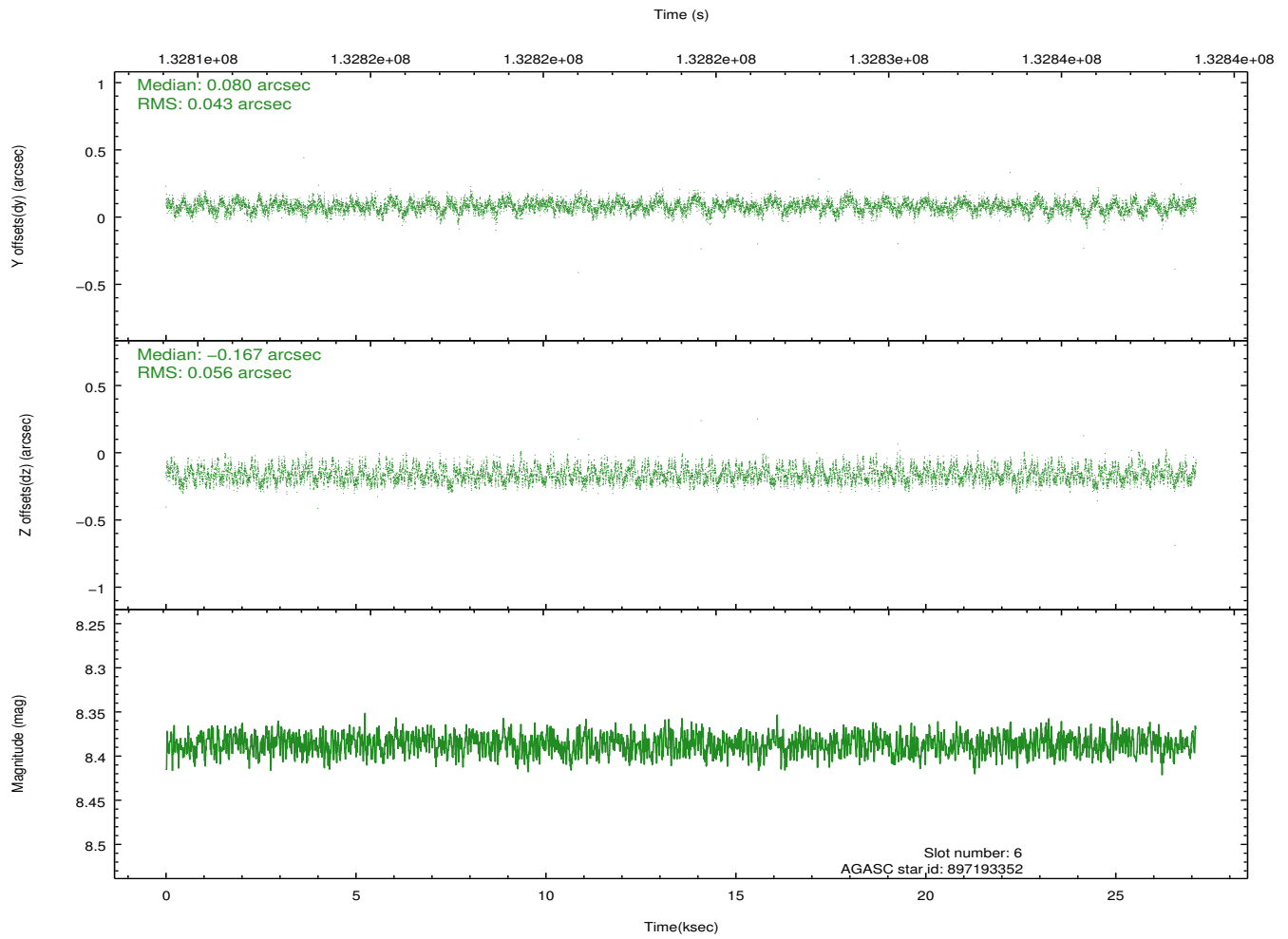
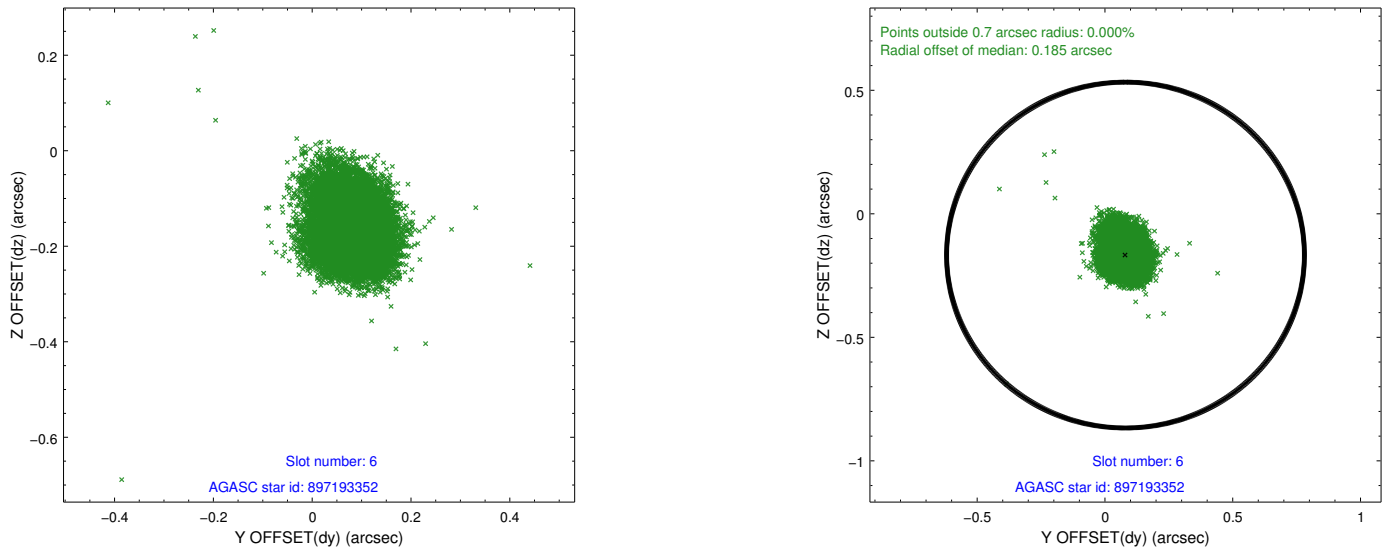
2.4.2 Slot 4



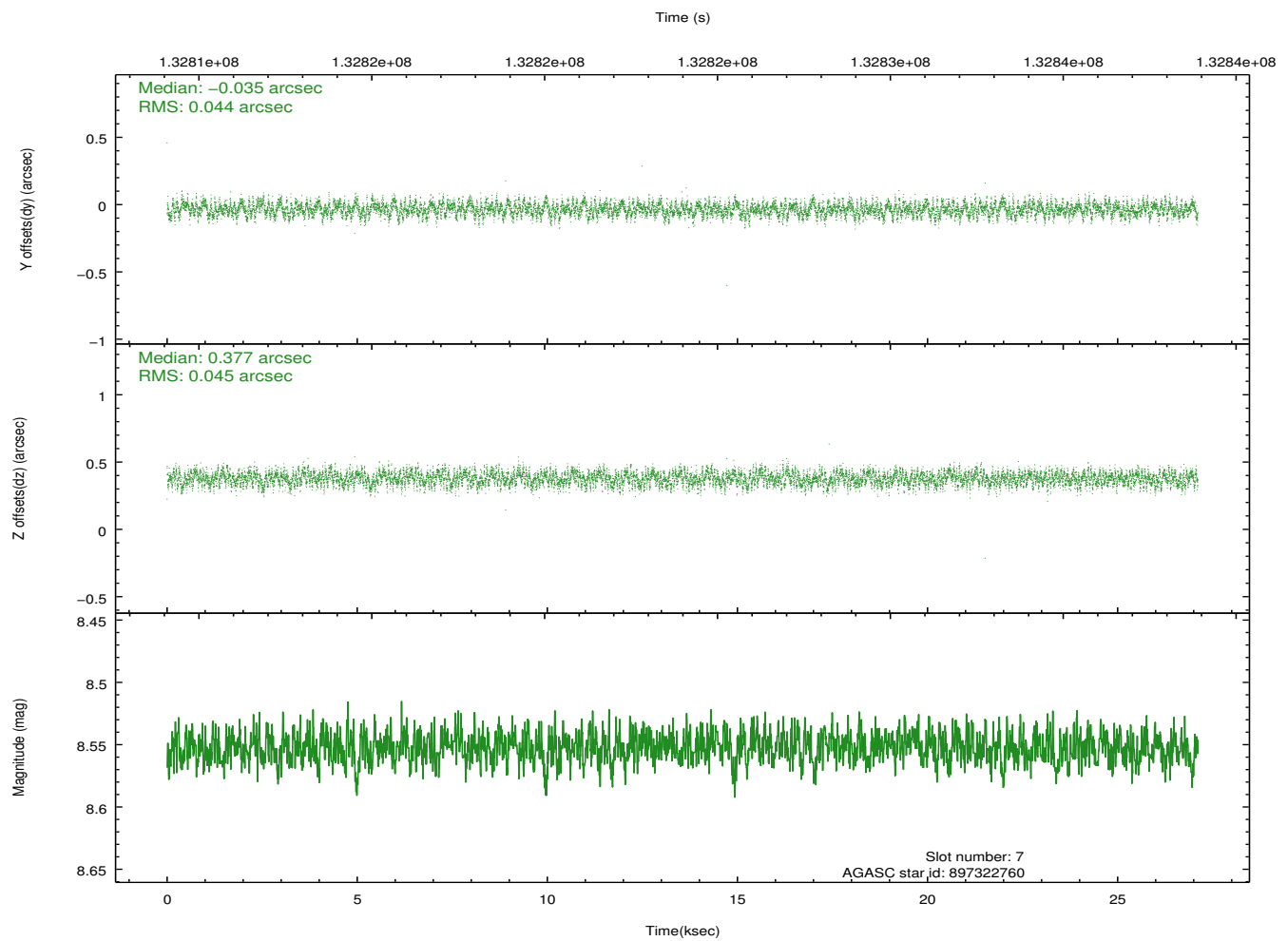
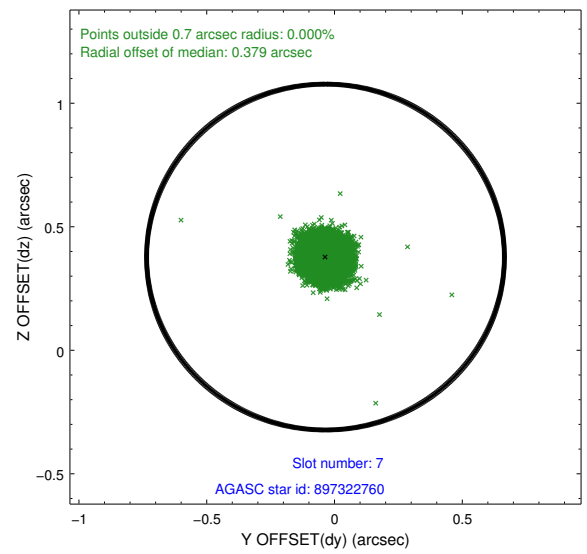
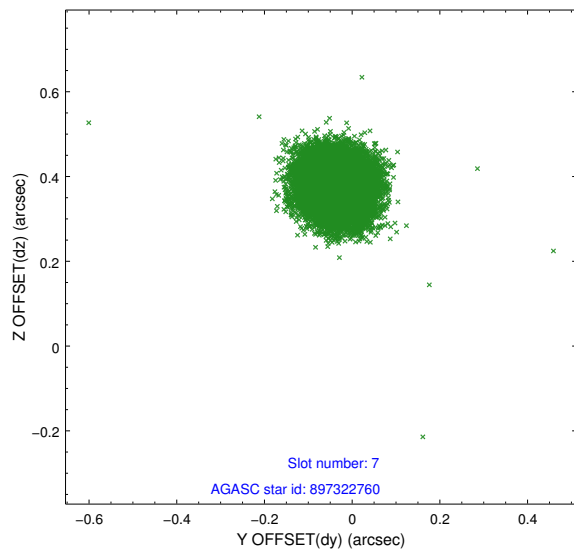
2.4.3 Slot 5



2.4.4 Slot 6

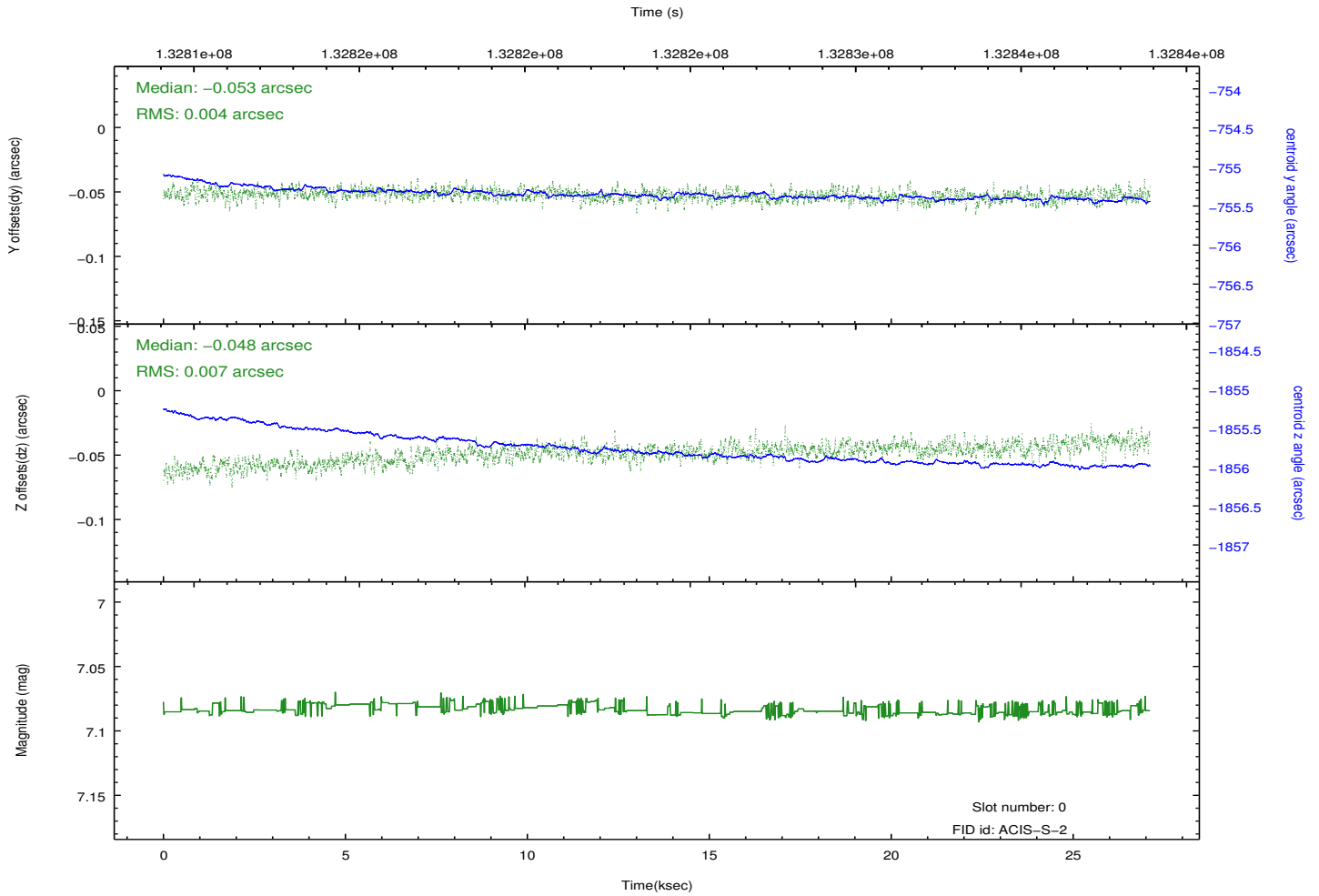
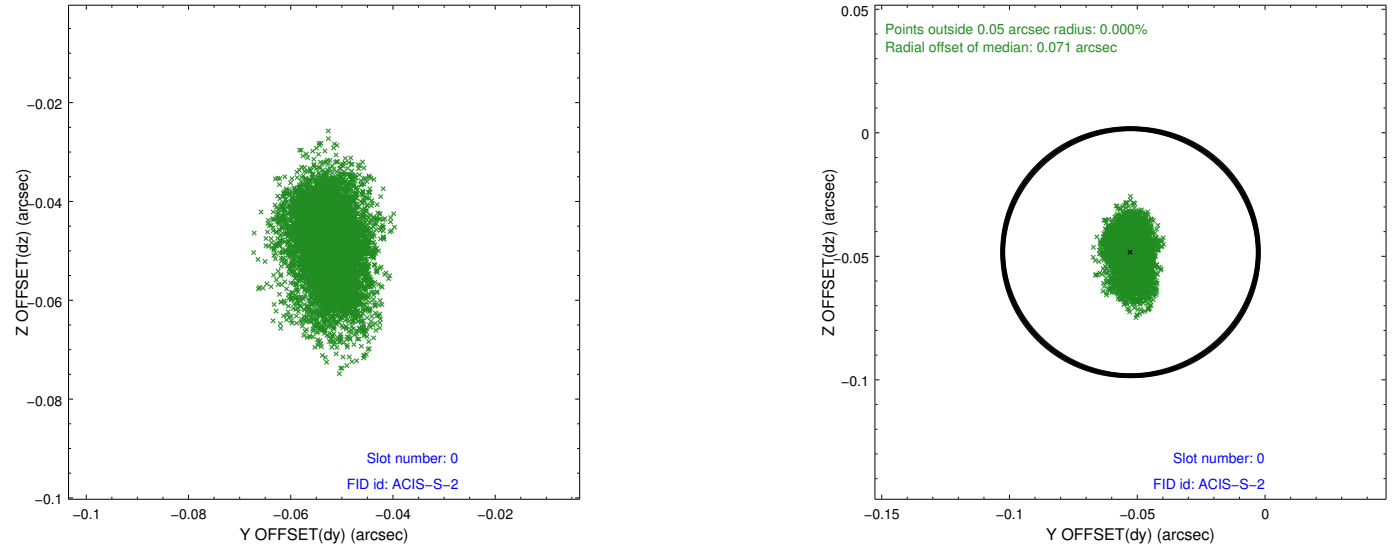


2.4.5 Slot 7

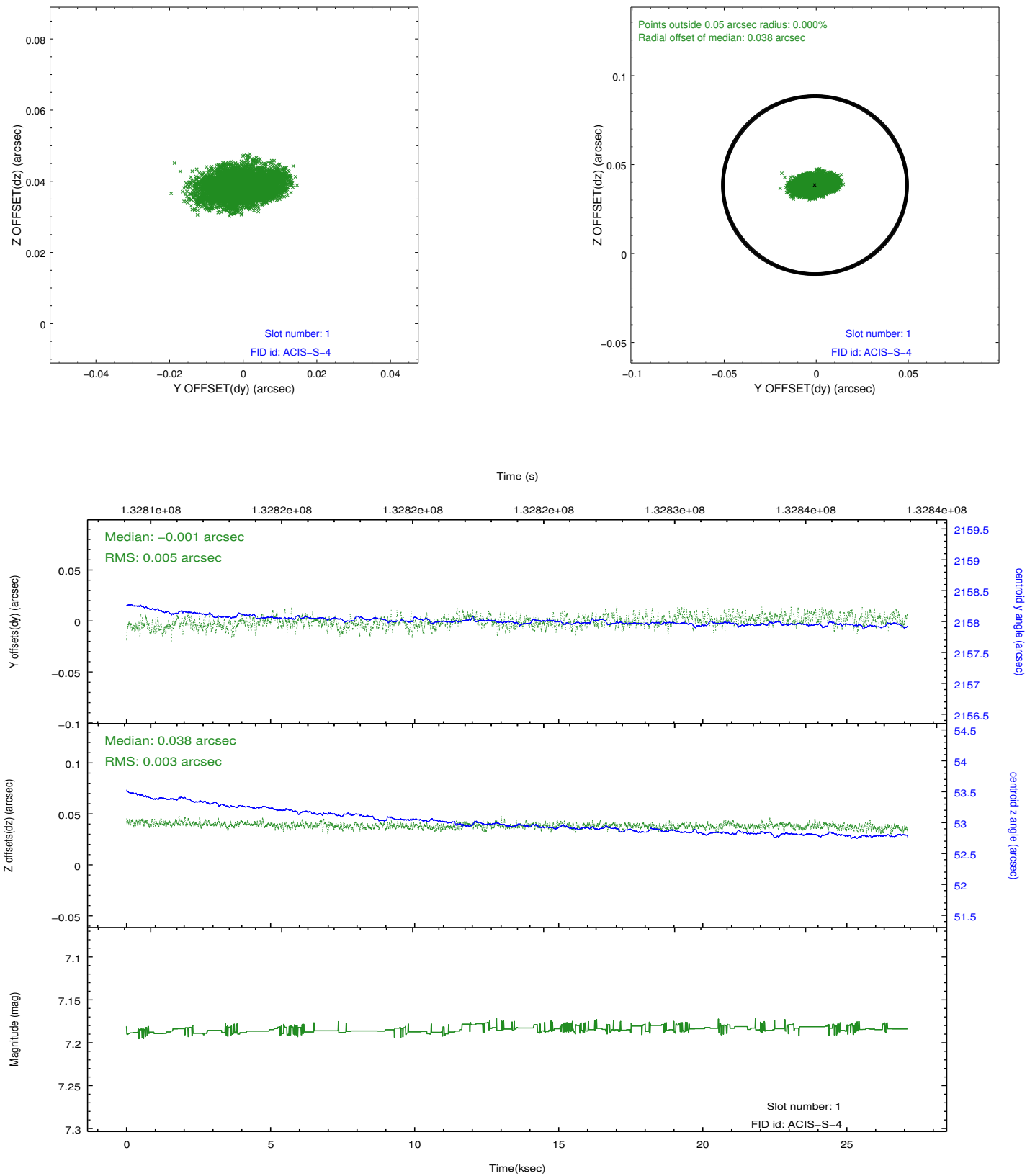


2.5 FID Slots

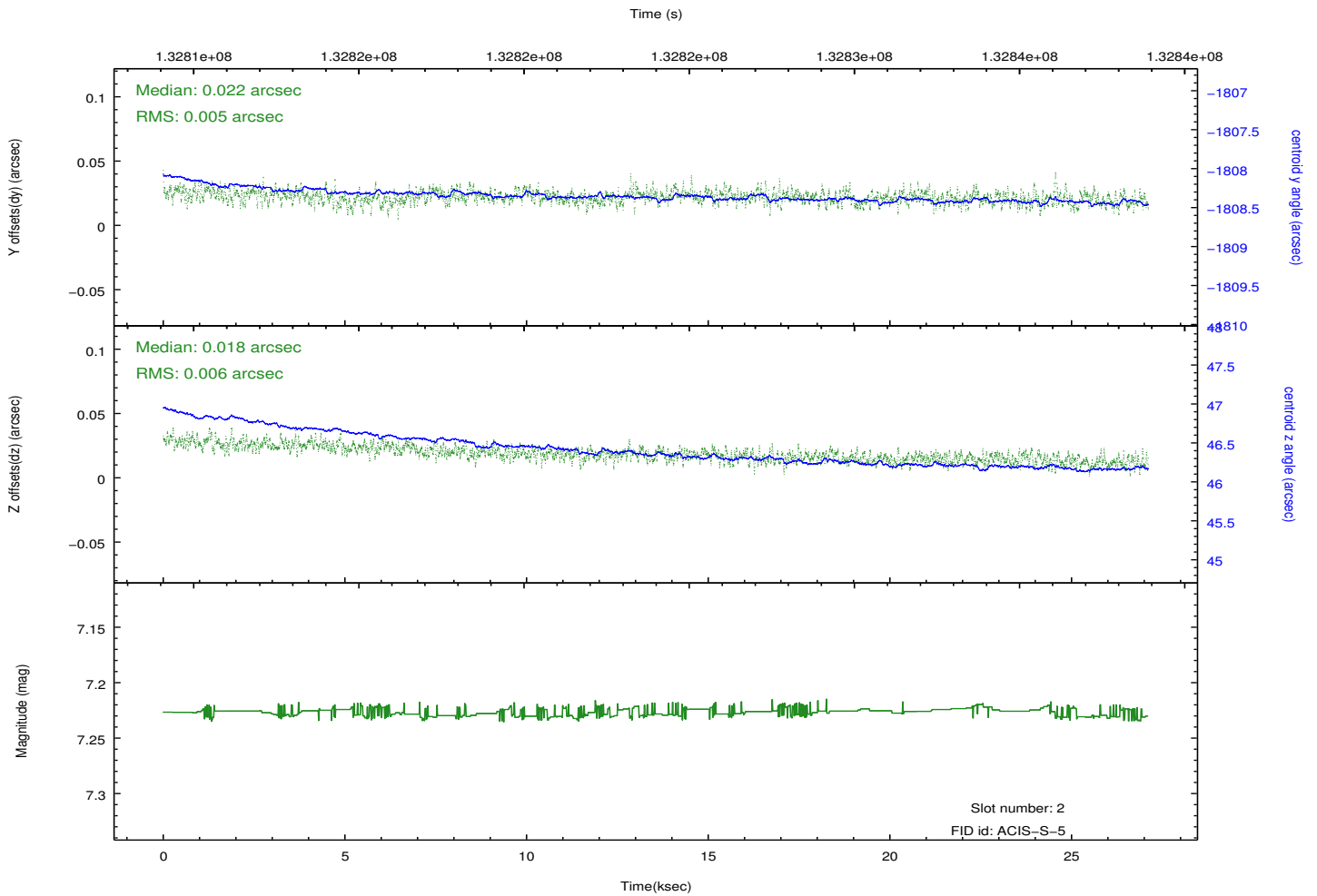
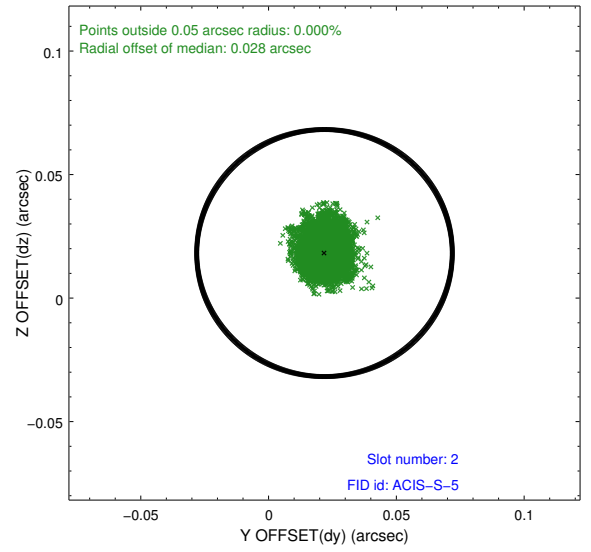
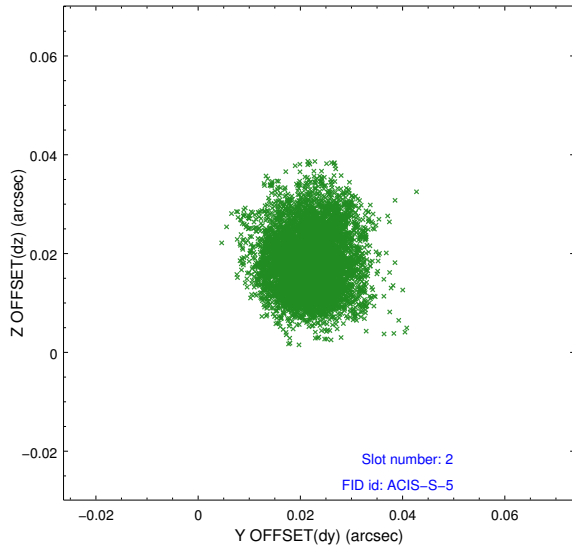
2.5.1 Slot 0



2.5.2 Slot 1

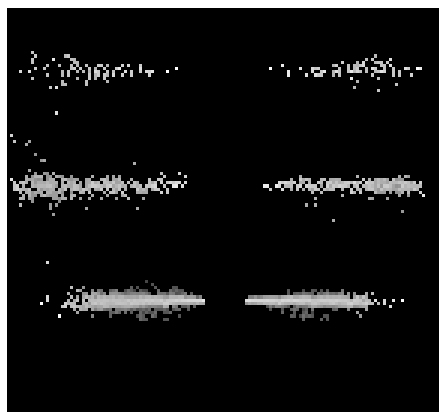


2.5.3 Slot 2

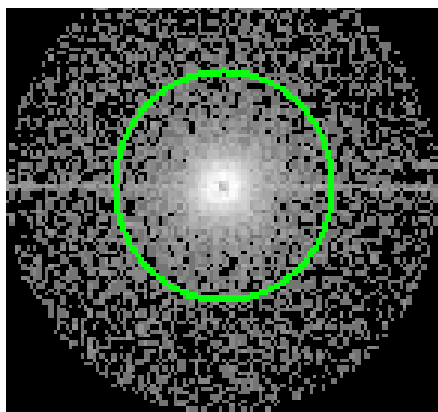


3 Gratings

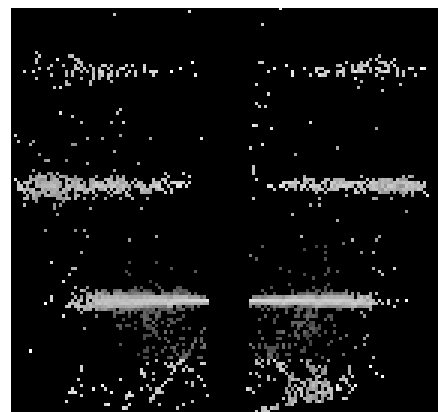
3.1 HEG Arm



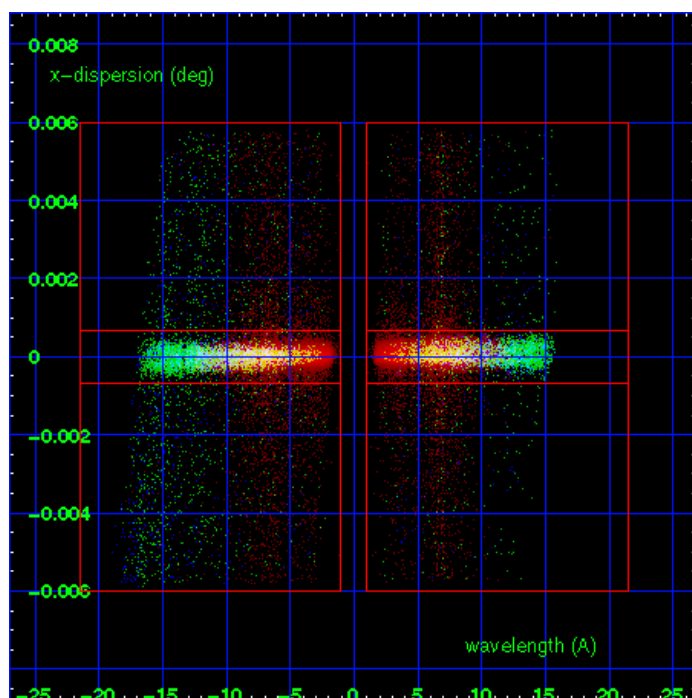
HEG Order Sort 123



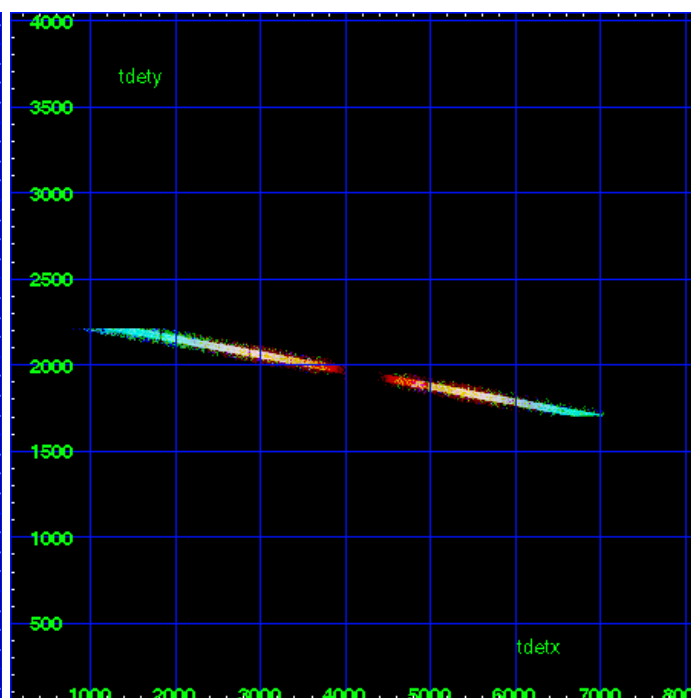
HEG Zero Order



HEG Order Sort ALL

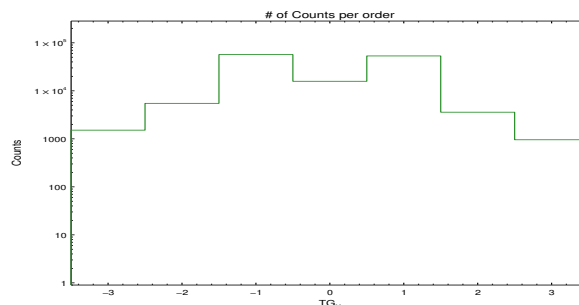


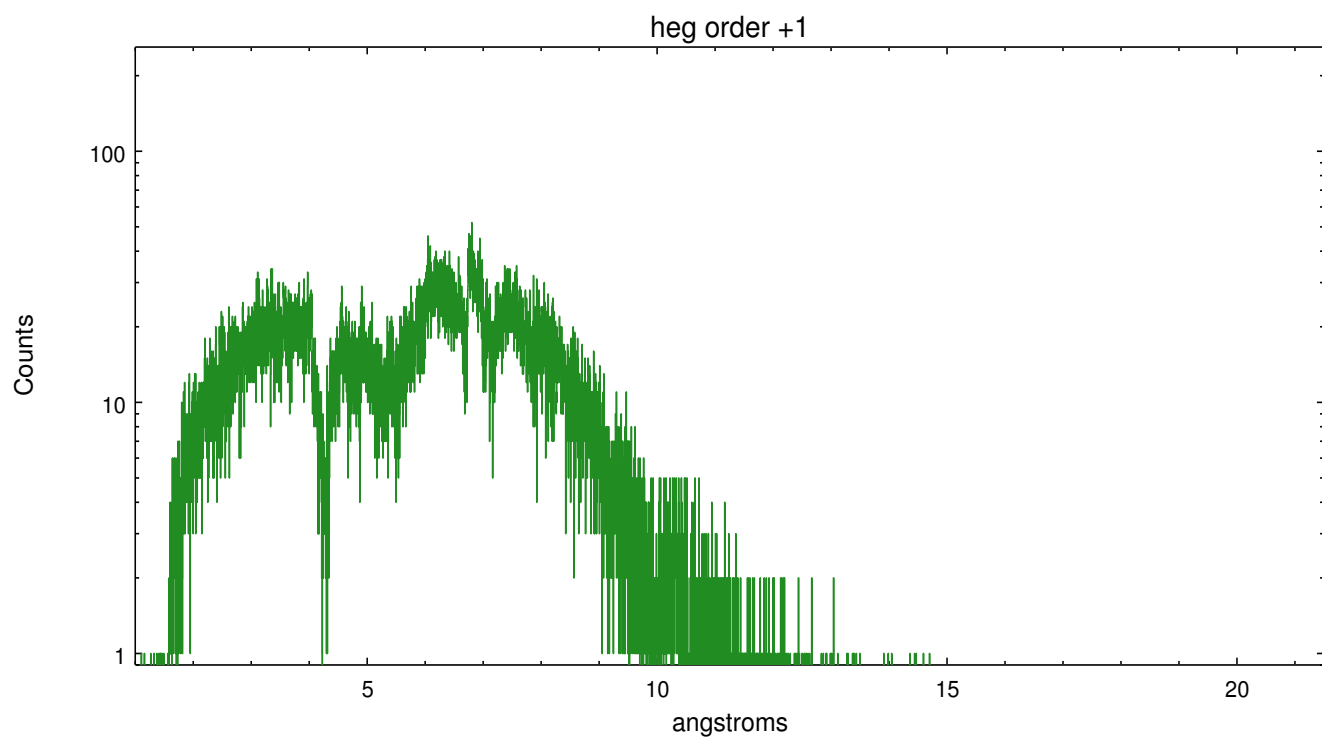
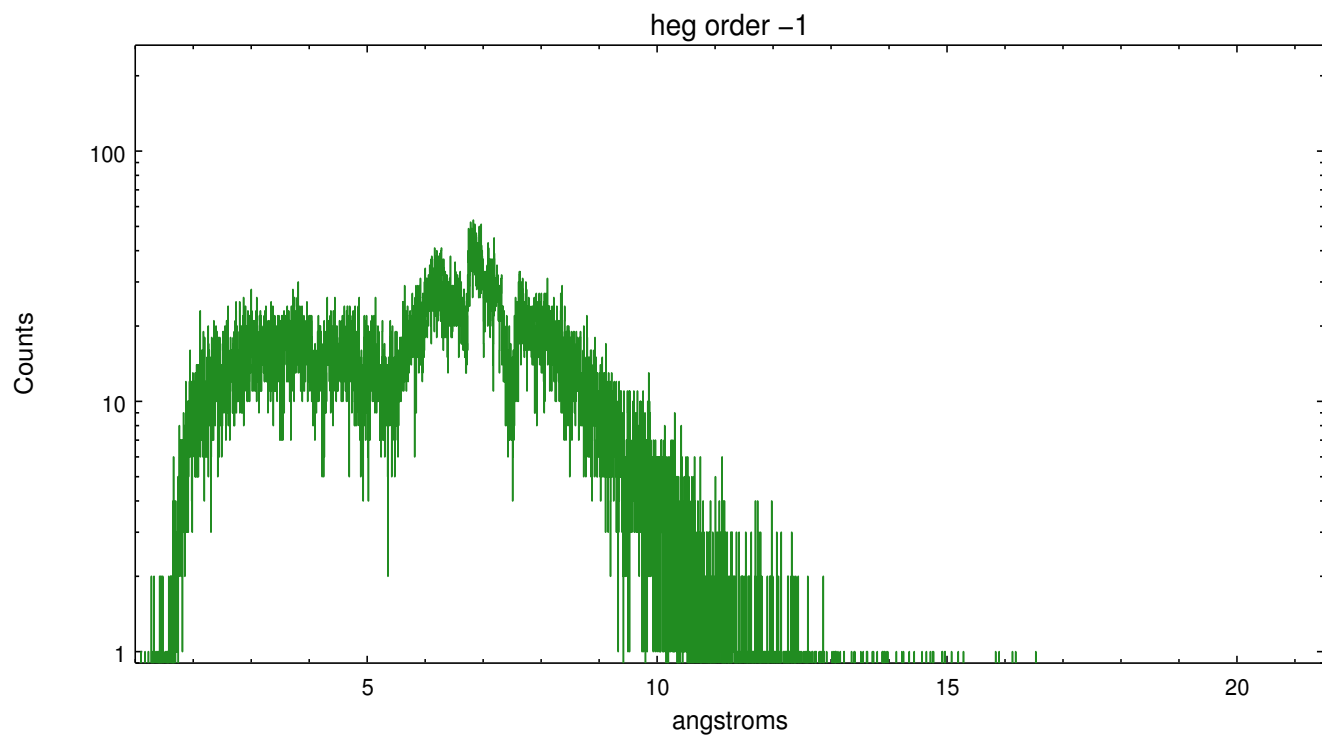
Spot Image HEG



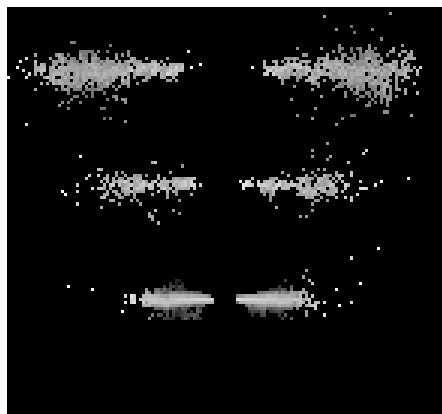
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1515	5480	56795	15789	53288	3584	956

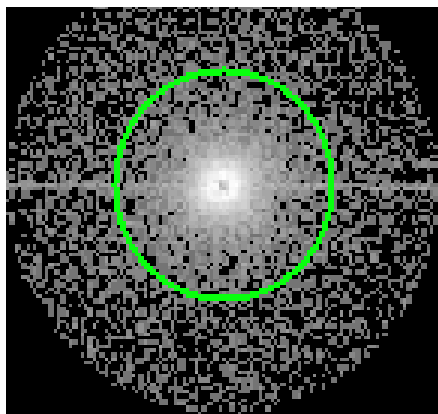




3.2 MEG Arm



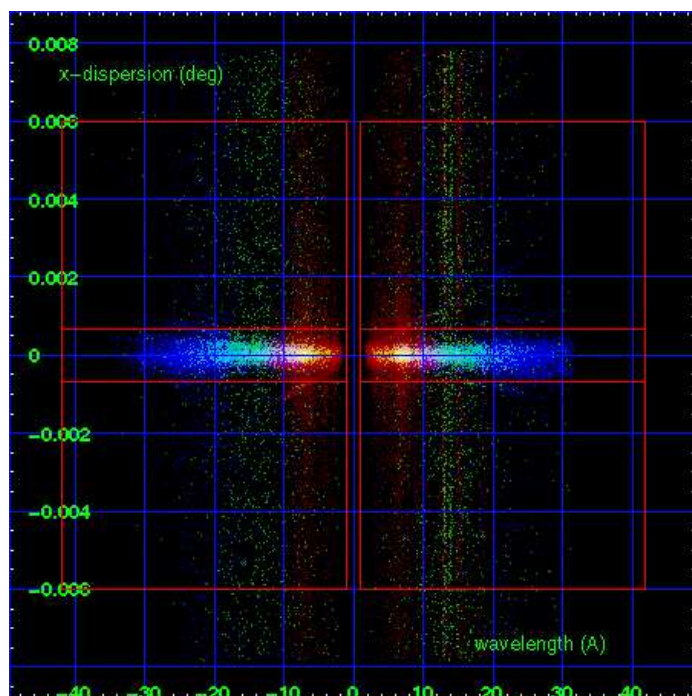
MEG Order Sort 123



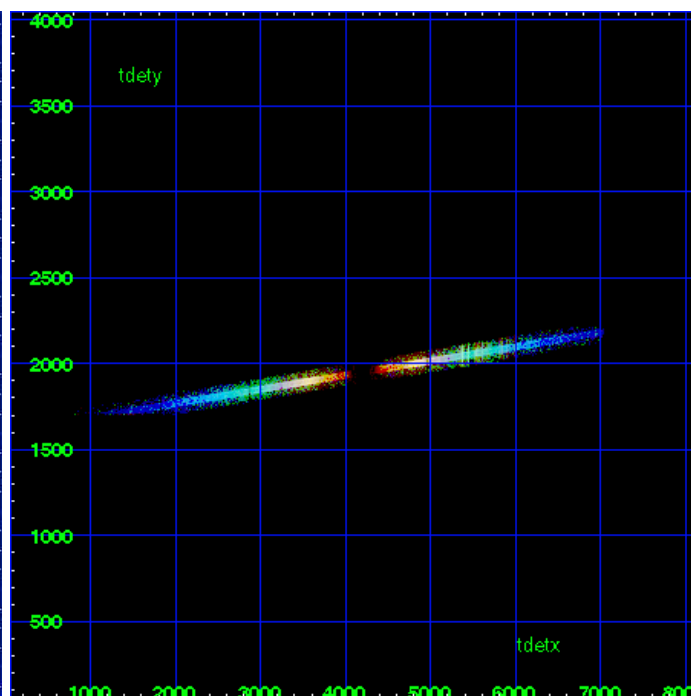
MEG Zero Order



MEG Order Sort ALL

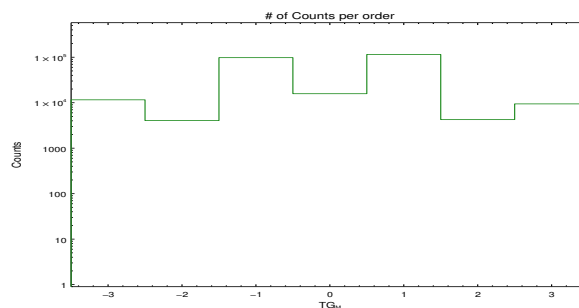


Spot Image MEG

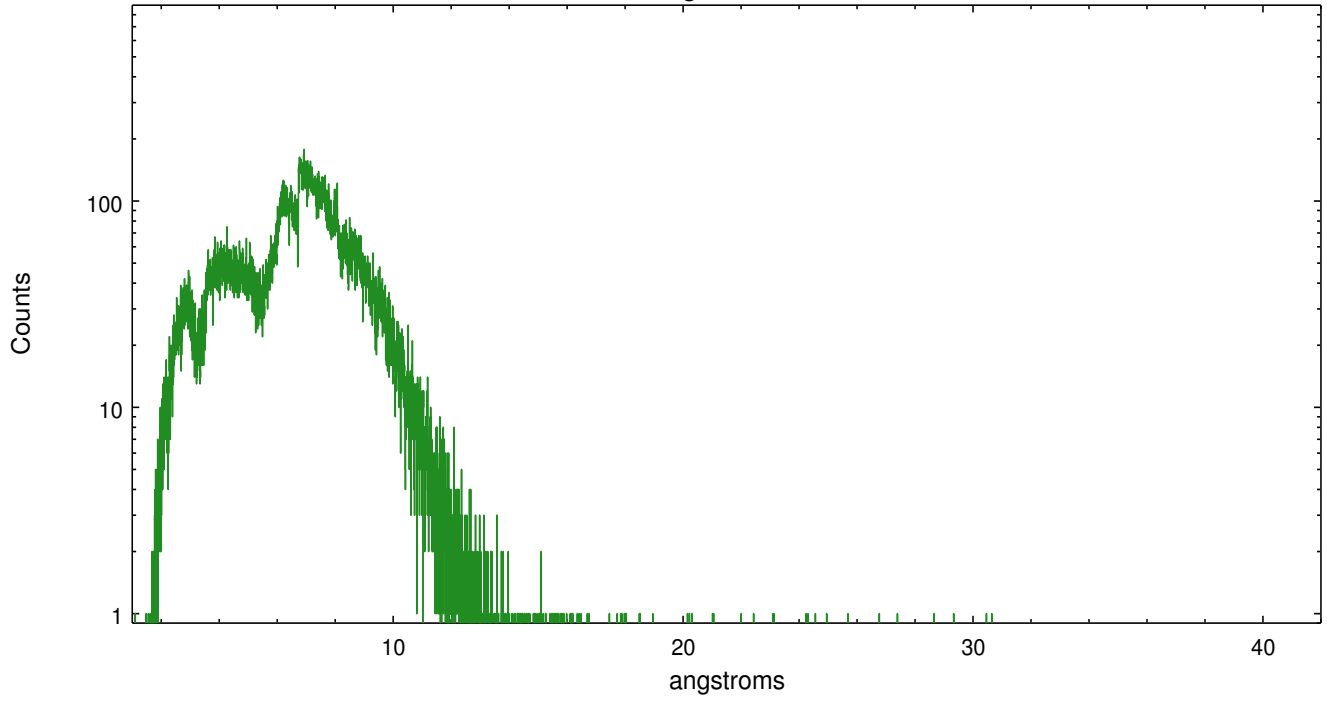


Full Detector MEG

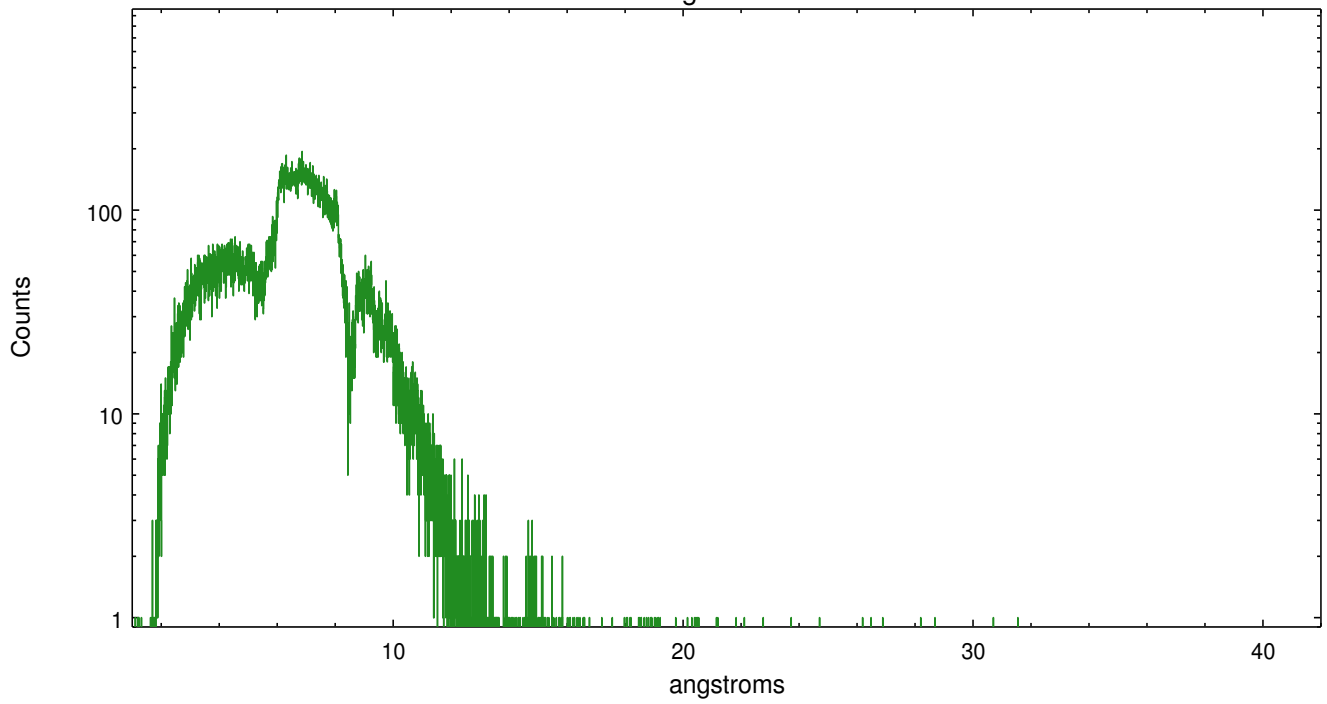
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	11585	4047	98033	15789	115084	4252	9427



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.108

A.2 Comments

Roll angle constraint met.

===

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=4108.8, y=4026.03) 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.

===

Chip ACIS-S4 suffers from an unusually large amplitude of streaks of instrumental origin. The user may want to run the CIAO tool 'destreak' on the Level 2 event data. When using destreak, note that setting 'max' to 1, especially for gratings data, may remove a large fraction of the data. Users should check the output 'timefile' to see what percent of the data was removed. See the CIAO help file for more details.