

V&V Reference Report

L2 ASCDS Version : 10.5

Observation 18086 - L2 Version 2
Chandra X-Ray Center

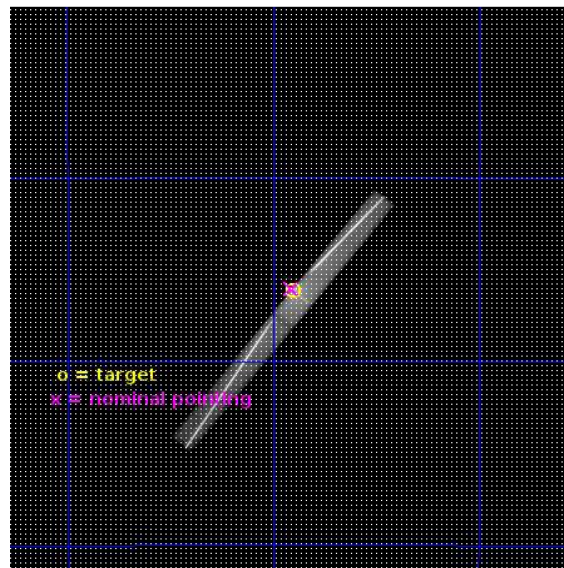
L2 Processing Date : Jul 6 2016

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1 Front

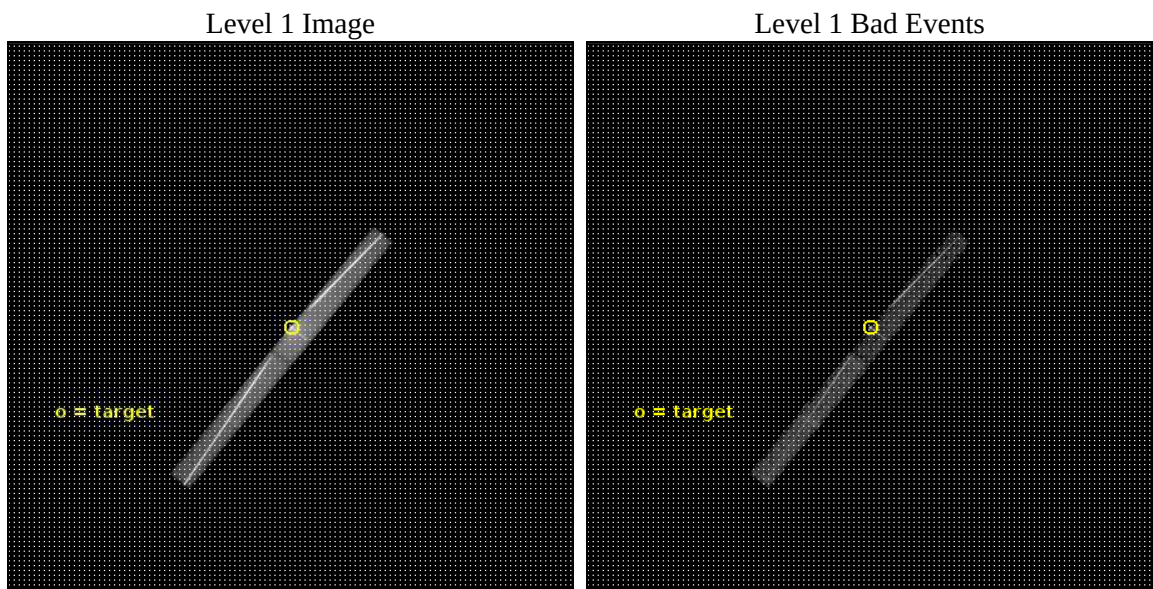
seq_num	901200	Sequence number
obs_id	18086	Observation id
title	Optical Depth of Si K in Bright Low-Mass X-Ray Binaries	Proposal t
observer	Norbert Schulz	Principal investigator
object	4U 1705-44	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.225	Observer's specified target RA [deg]
dec_targ	-44.102028	Observer's specified target Dec [deg]
ra_nom	257.22799252944	Nominal RA [deg]
dec_nom	-44.100738501309	Nominal Dec [deg]
roll_nom	308.36780337472	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25912.869224429	Sum of GTIs [s]
livetime	23947.276748881	Livetime [s]
ontime6	25912.828184485	Sum of GTIs [s]
ontime7	25912.869224429	Sum of GTIs [s]
l2events	982231	Number of level 2 events



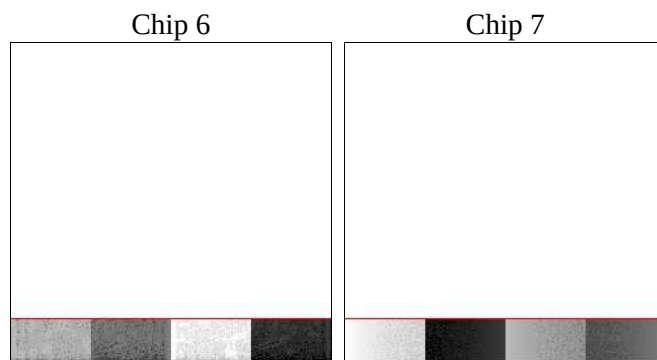
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.5	Processing system revision	ontime	25912.869224429	Sum of GTIs [s]
caldsver	4.7.2	 	ontime6	25912.828184485	Sum of GTIs [s]
date	2016-07-03T06:09:34	Date and time of file creation	ontime7	25912.869224429	Sum of GTIs [s]
revision	1	Processing version of data	l1events	1081424	Number of level 1 events
			tgmetho	MANUAL	Method used to create src1a file
			zo_pos	(4101.66, 4087.07)	src1a sky pixel position
			zo_pos_tgd	(4103.10, 4085.95)	src1a sky pixel position via tgdetect

2.1.4 Events

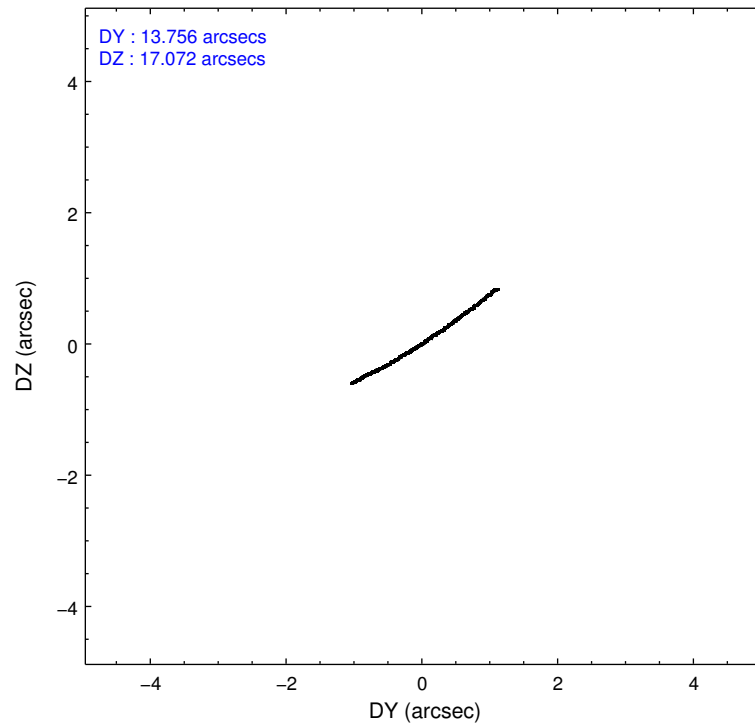
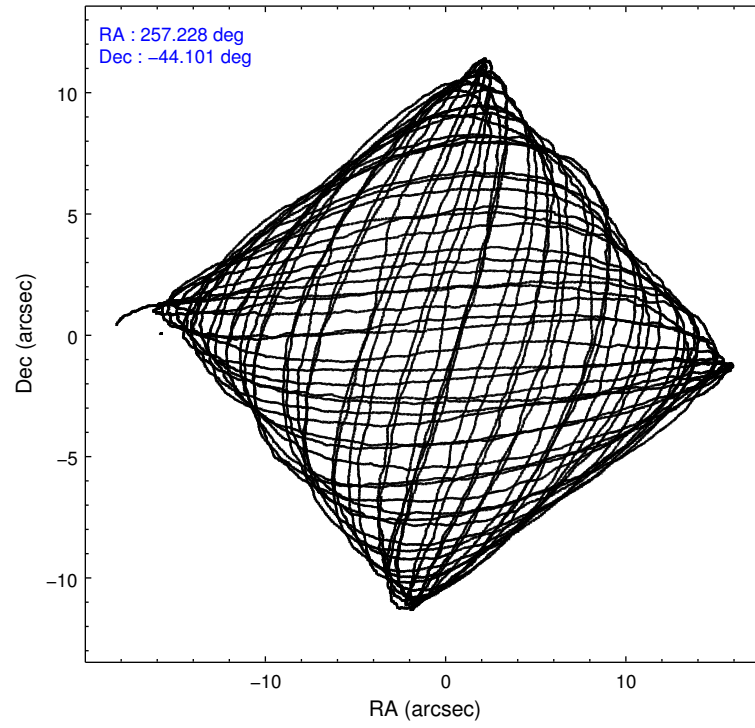
	ccd 6	ccd 7
level 1 events	423476	657948
rejected events	34129	35467
rejected %	8%	5%

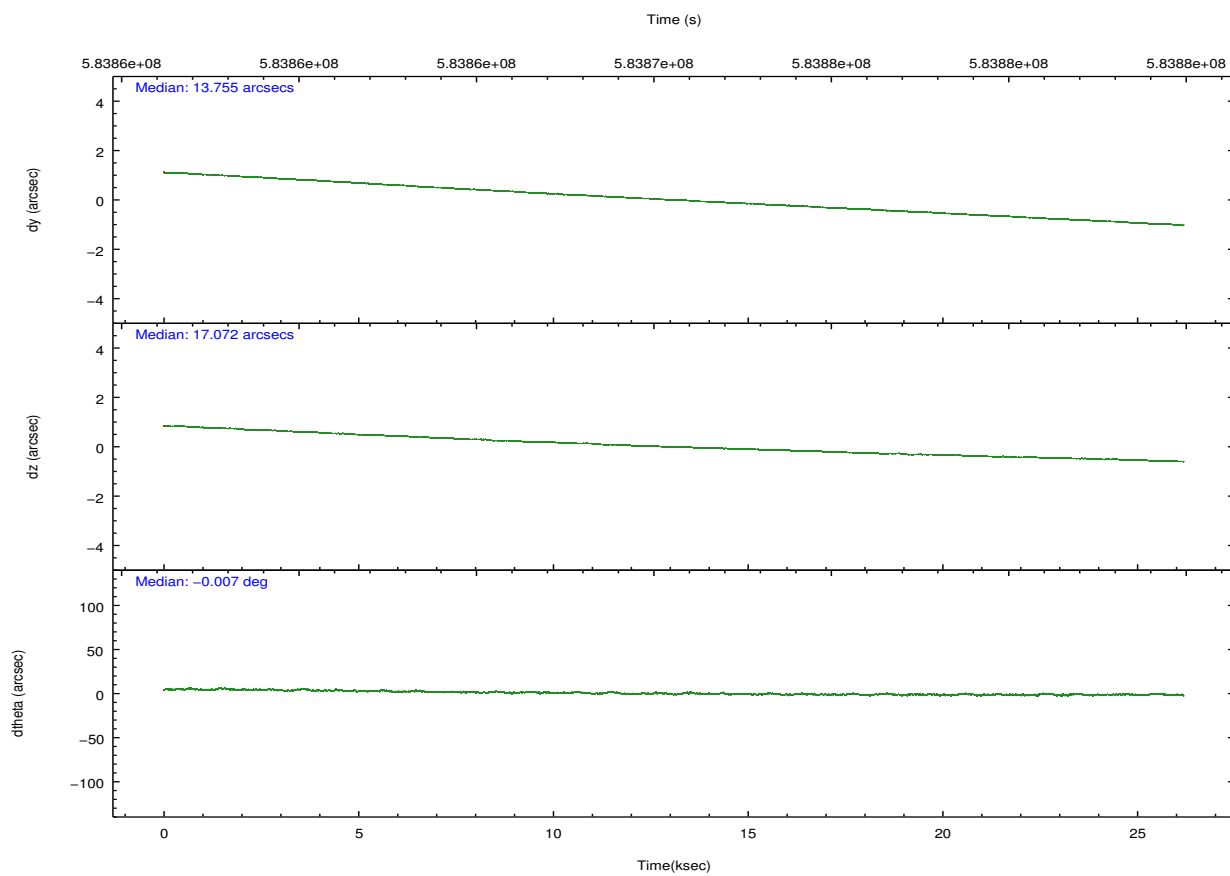
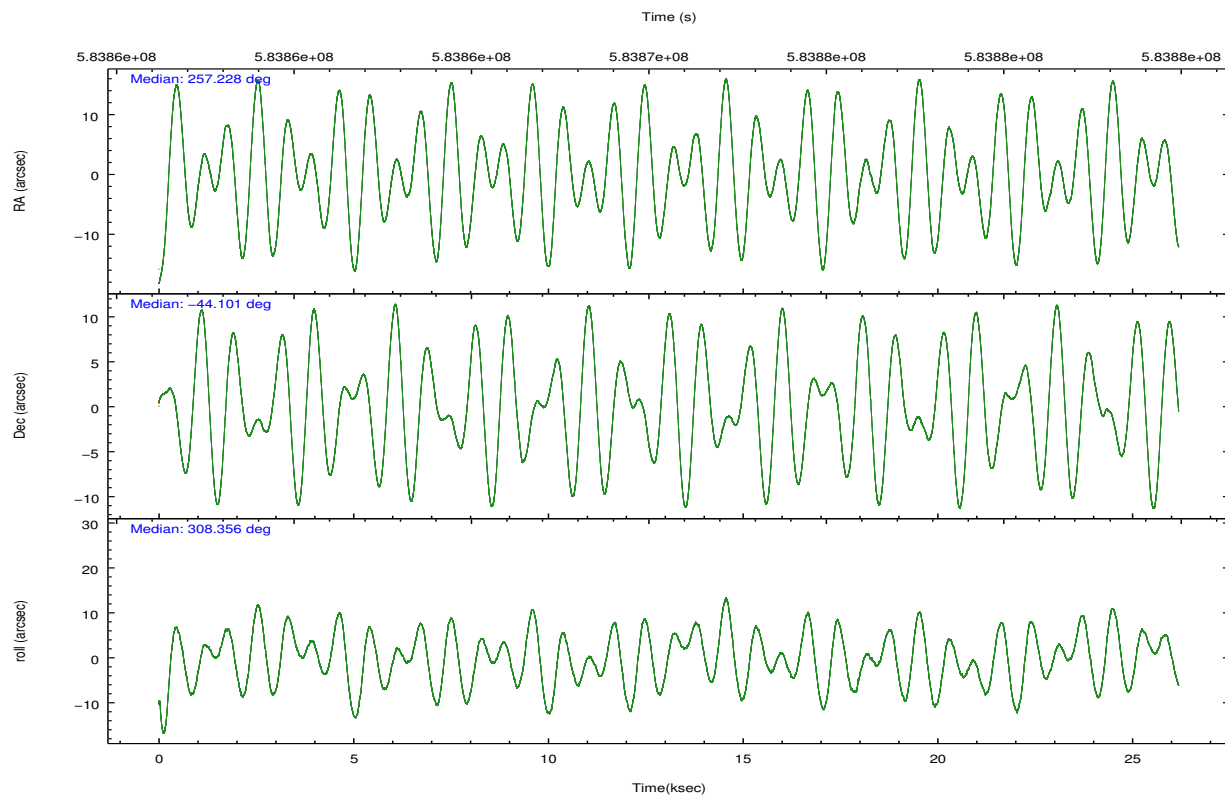
	ccd 6	ccd 7
grade 0 events	260543	111641
	61%	16%
grade 1 events	1618	1479
	0%	0%
grade 2 events	54990	151816
	12%	23%
grade 3 events	19628	68303
	4%	10%
grade 4 events	19935	68310
	4%	10%
grade 5 events	2937	11412
	0%	1%
grade 6 events	34265	222437
	8%	33%
grade 7 events	29560	22550
	6%	3%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-67	ACIS-67	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	257.192294	257.2279925294401	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-44.090964	-44.10073850130856	Subarray start row	10	10
[deg] Pointing Roll	308.186329	308.3678033747215	Subarray row count	134	134
[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	0.5
[mm] SIM translation stage pos	-178.032523	-178.0336378728605			
[mm] SIM translation stage offset	-12.1	-12.09888471014733			
[s] Observation start time (MET)	583857655.184000	583856808.90566			
Observation start date	2016-07-02T14:39:47	2016-07-02T14:26:48			
[s] Observation end time (MET)	583883655.184000	583885197.81979			
Observation end date	2016-07-02T21:53:07	2016-07-02T22:19:57			
Read mode	TIMED	TIMED			

2.3 Aspect



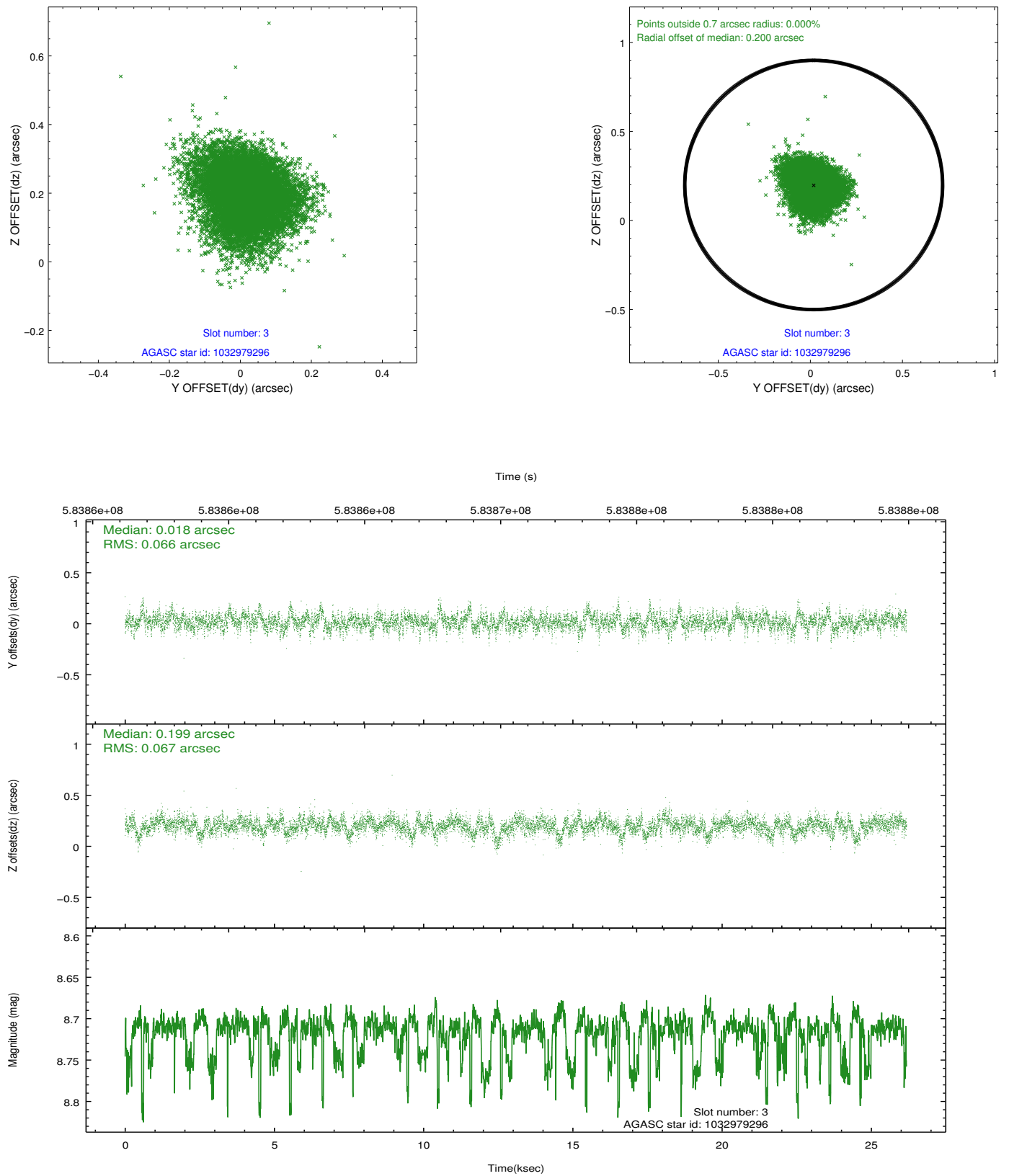


Slot Statistics

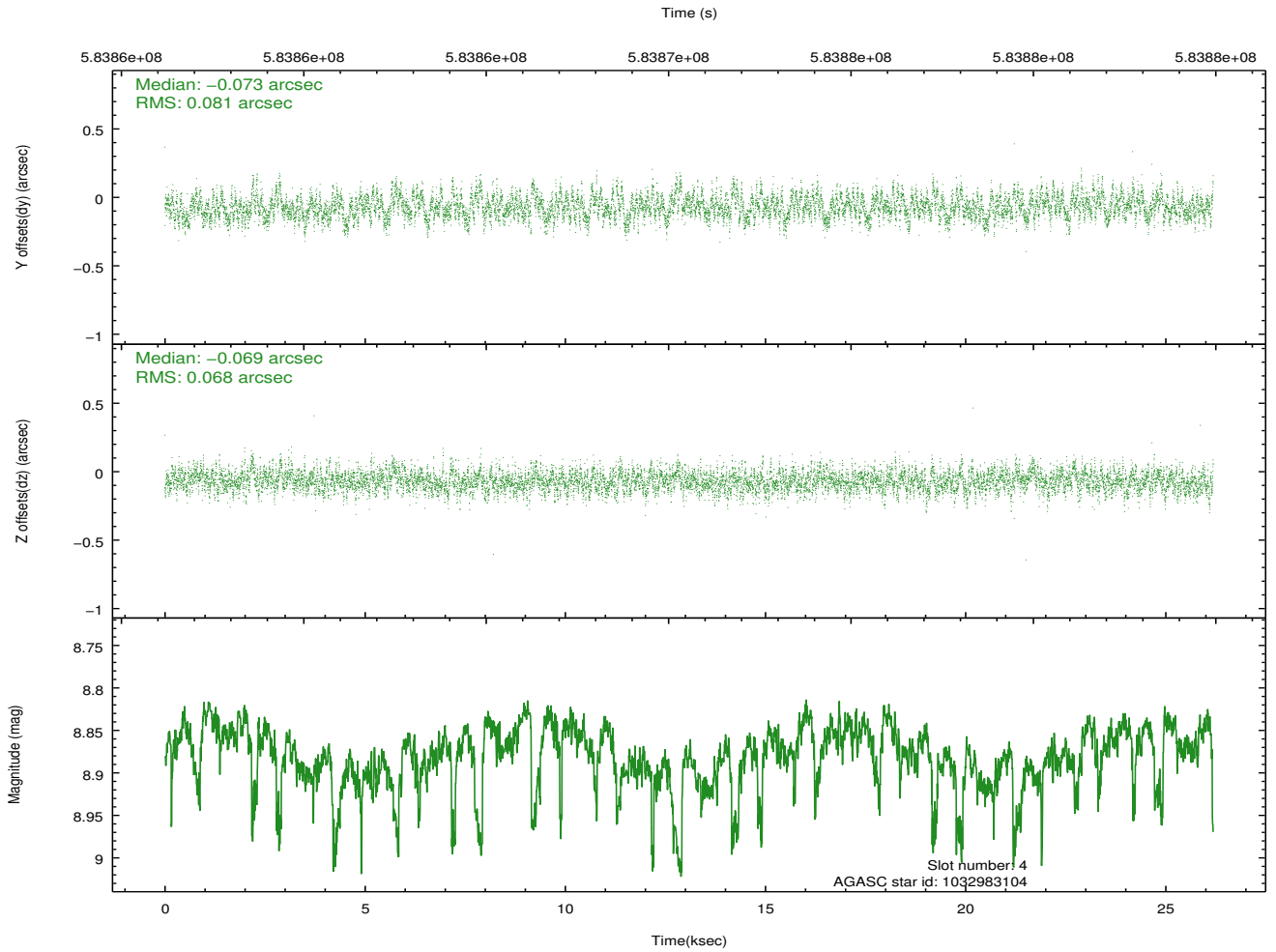
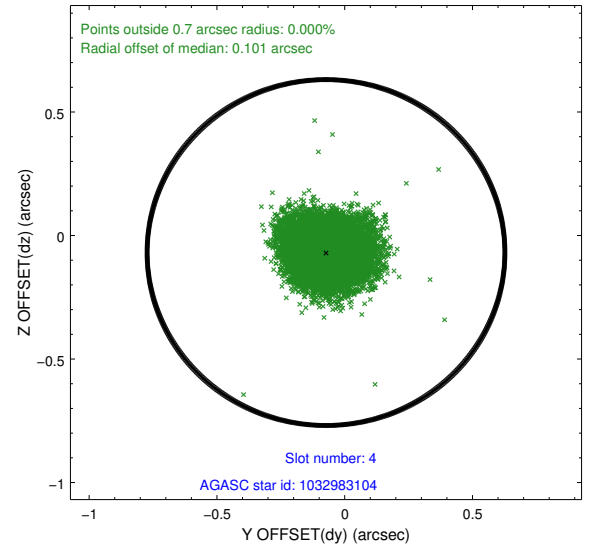
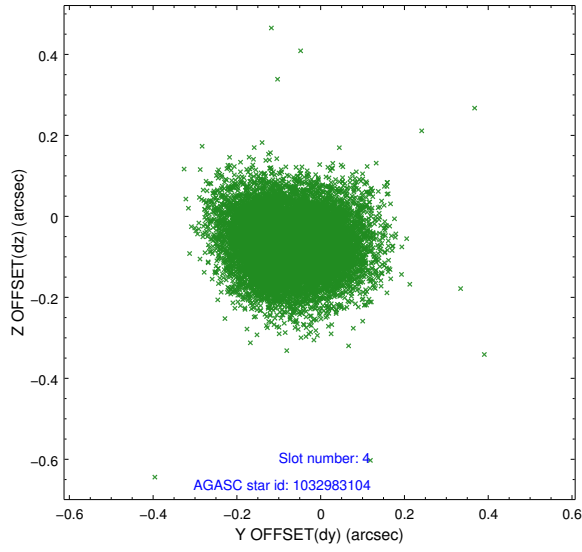
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.10	6388	-0.408	-0.288	0.012	0.024	0.000000	0.000000	-766.12	-1987.91
1	FID		ACIS-S-4	7.17	6388	0.346	0.267	0.011	0.023	0.000000	0.000000	2147.77	-78.91
2	FID		ACIS-S-6	7.44	6388	0.035	0.029	0.014	0.043	0.000000	0.000000	396.32	558.28
3	GUIDE	used	1032979296	8.71	12770	0.018	0.199	0.099	0.167	257.257446	-43.353483	-1981.35	1775.62
4	GUIDE	used	1032983104	8.88	12765	-0.073	-0.069	0.112	0.183	256.914293	-44.699956	1285.12	-1914.90
5	GUIDE	used	1033000208	7.78	12772	0.112	0.250	0.110	0.173	256.502750	-44.372681	-293.03	-2025.81
6	GUIDE	used	1033109664	7.88	12772	0.007	-0.374	0.104	0.162	257.645718	-43.523560	-871.19	2190.14
7	GUIDE	used	1032980152	8.59	12764	-0.068	-0.004	0.101	0.167	257.470572	-43.265322	-1884.24	2409.96

2.4 Star Slots

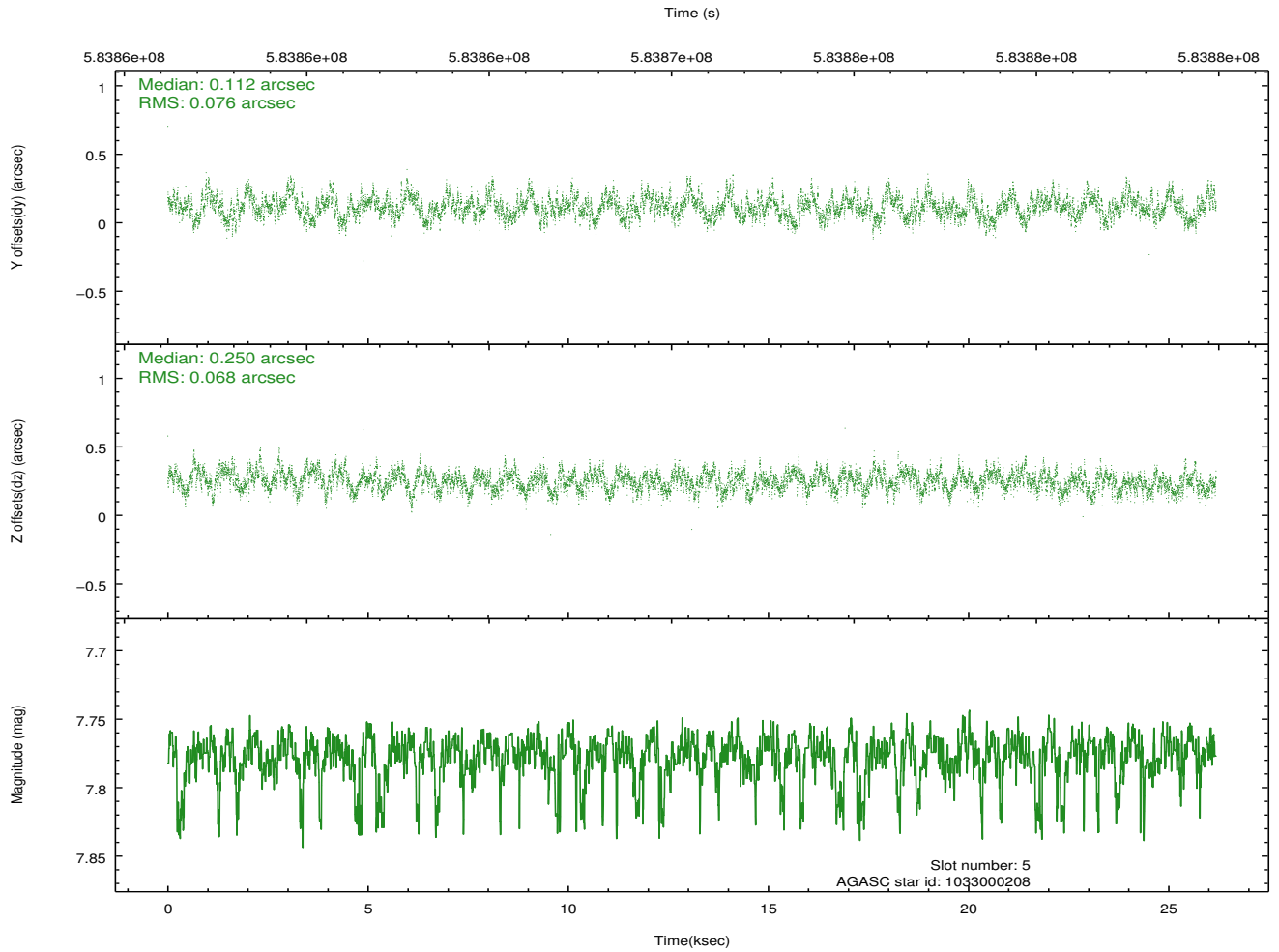
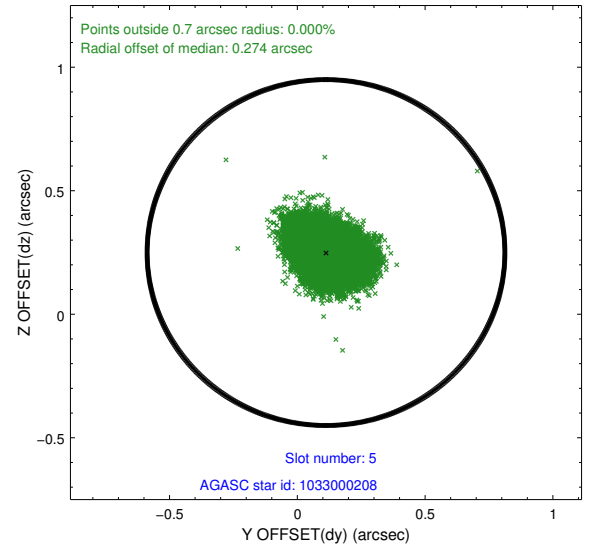
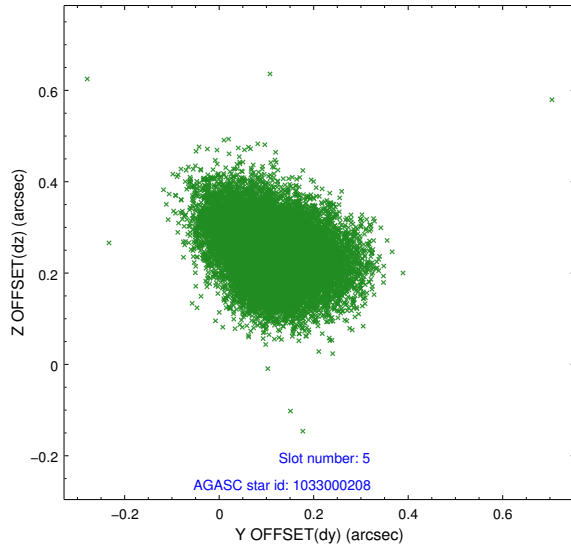
2.4.1 Slot 3



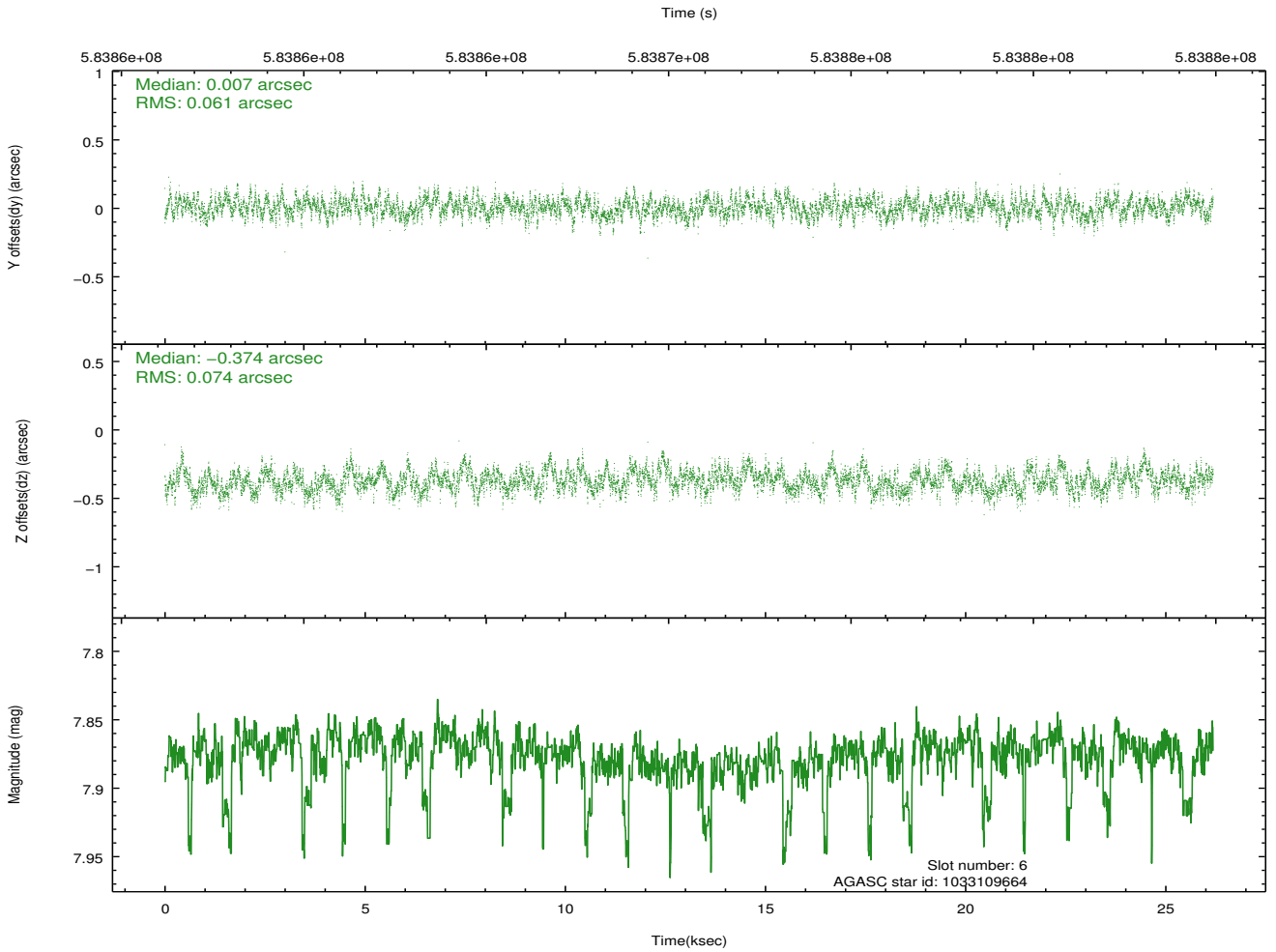
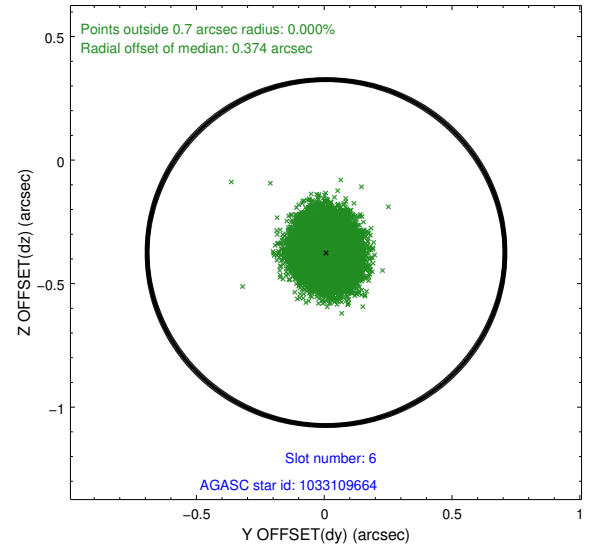
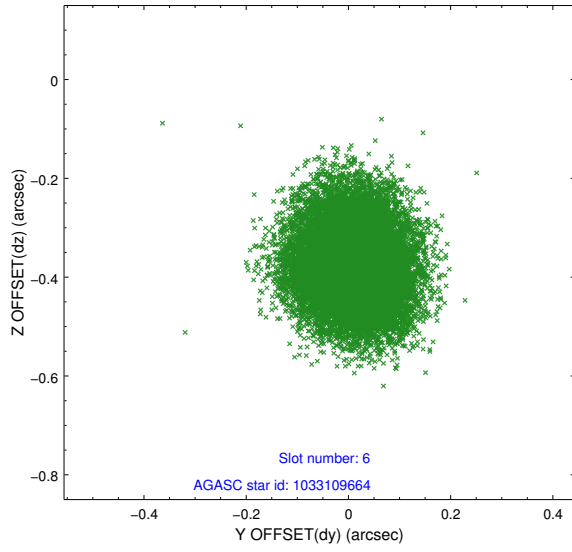
2.4.2 Slot 4



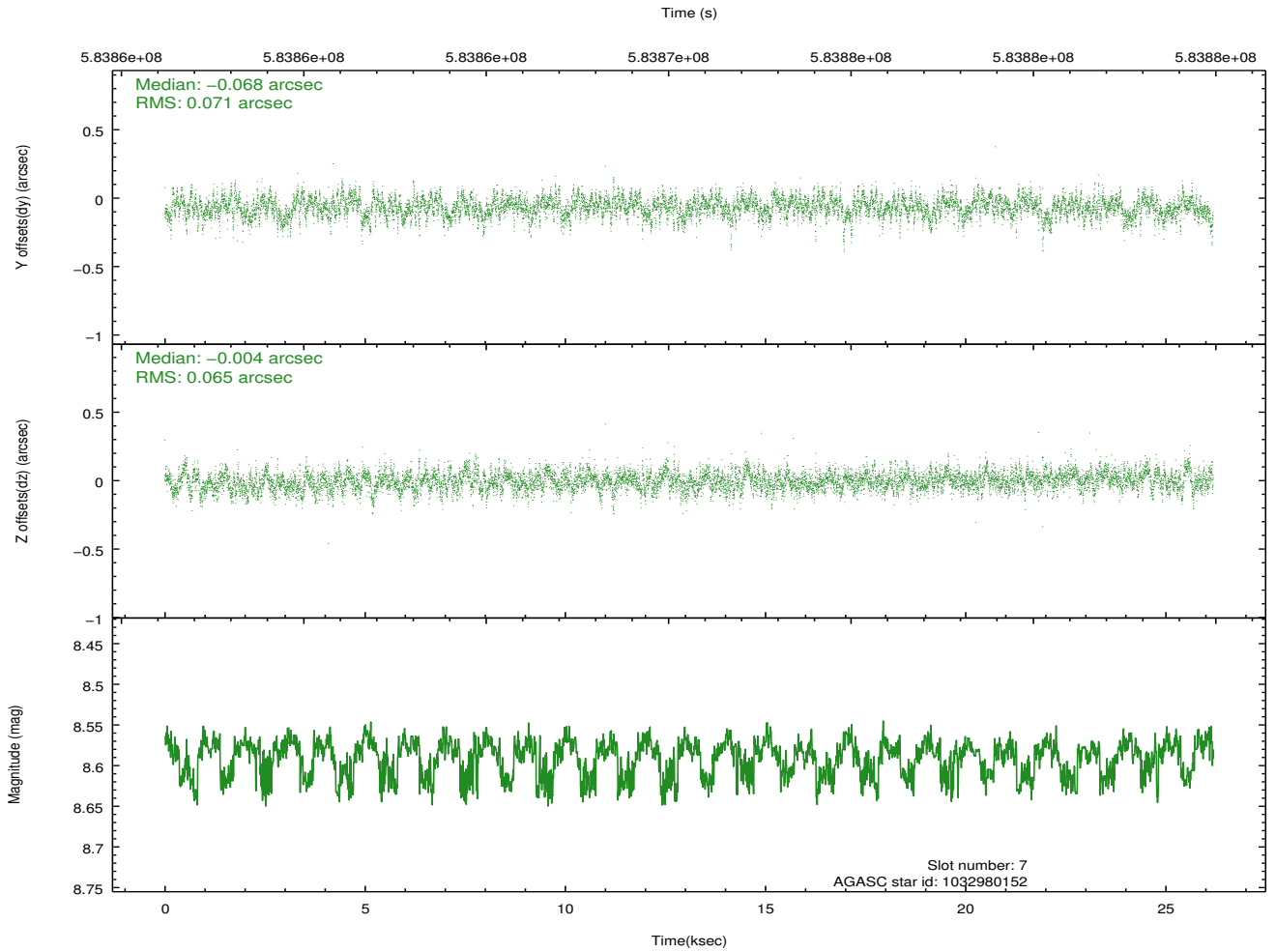
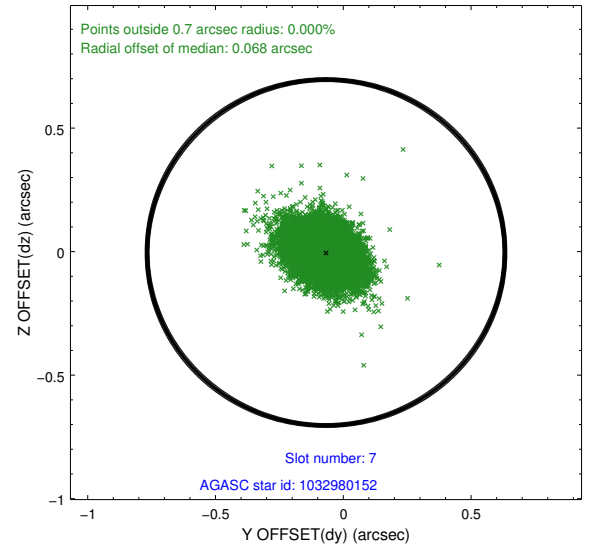
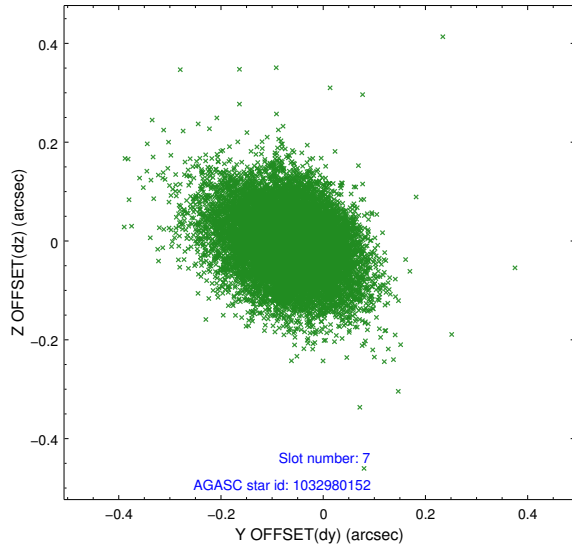
2.4.3 Slot 5



2.4.4 Slot 6

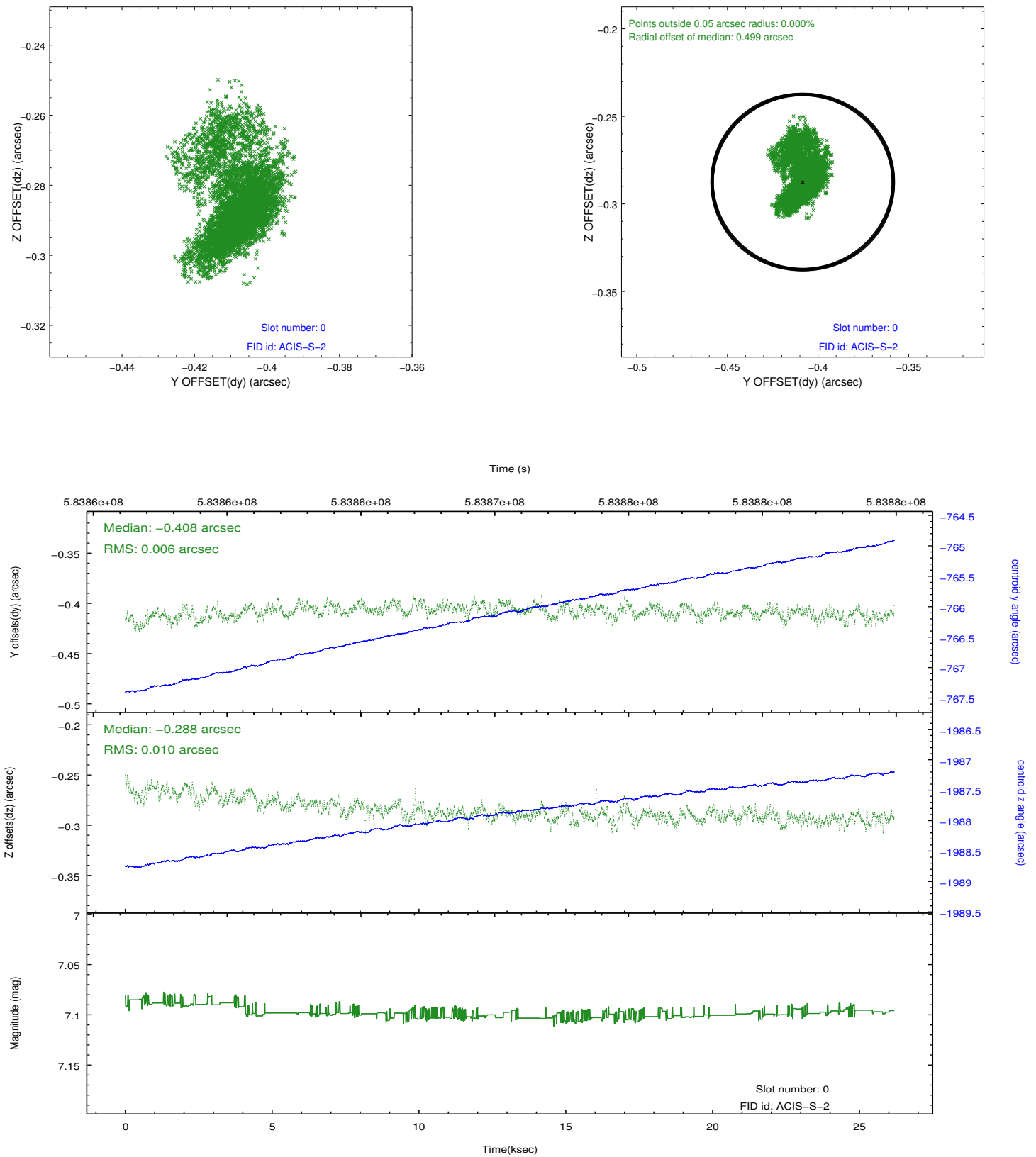


2.4.5 Slot 7

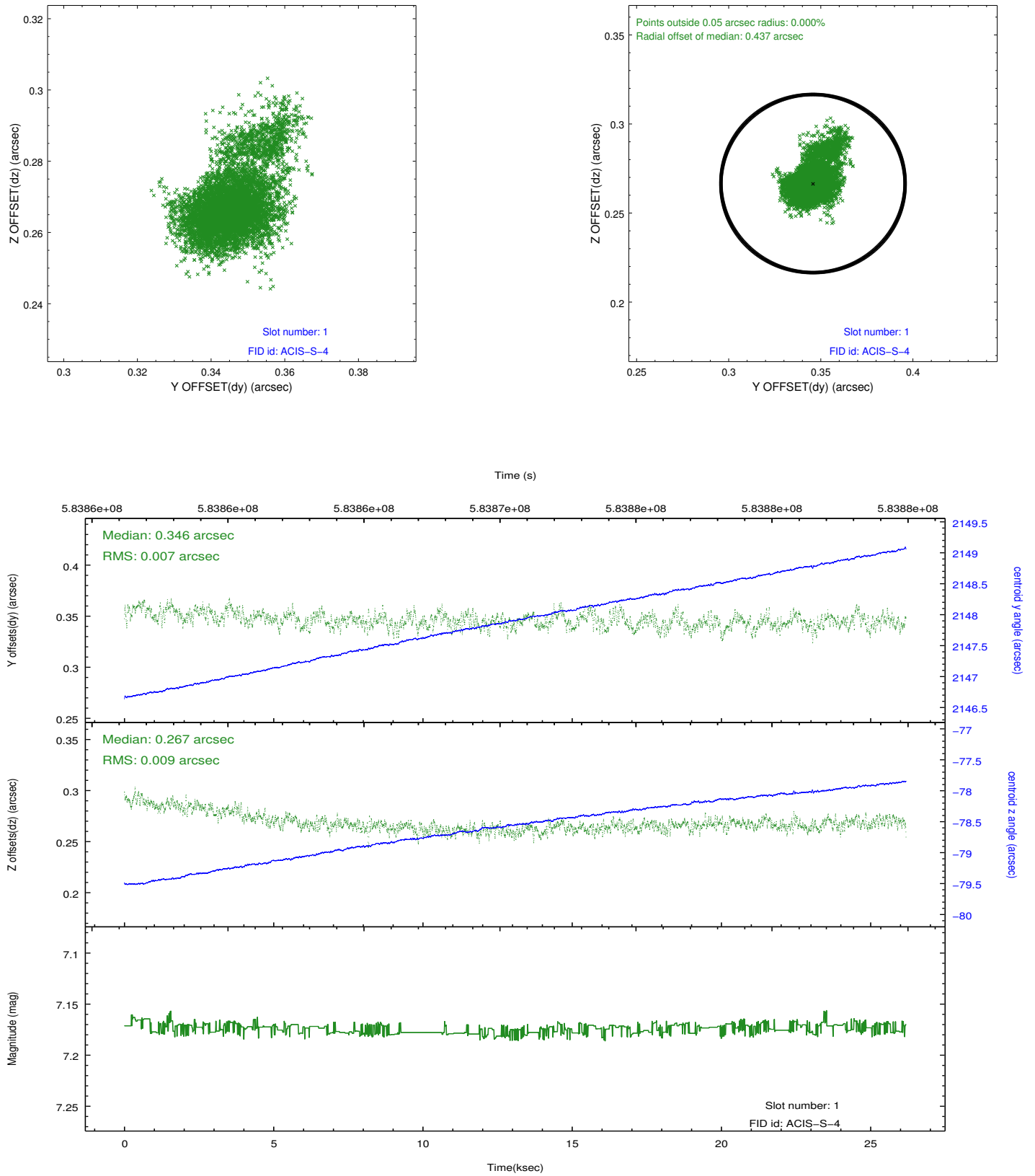


2.5 FID Slots

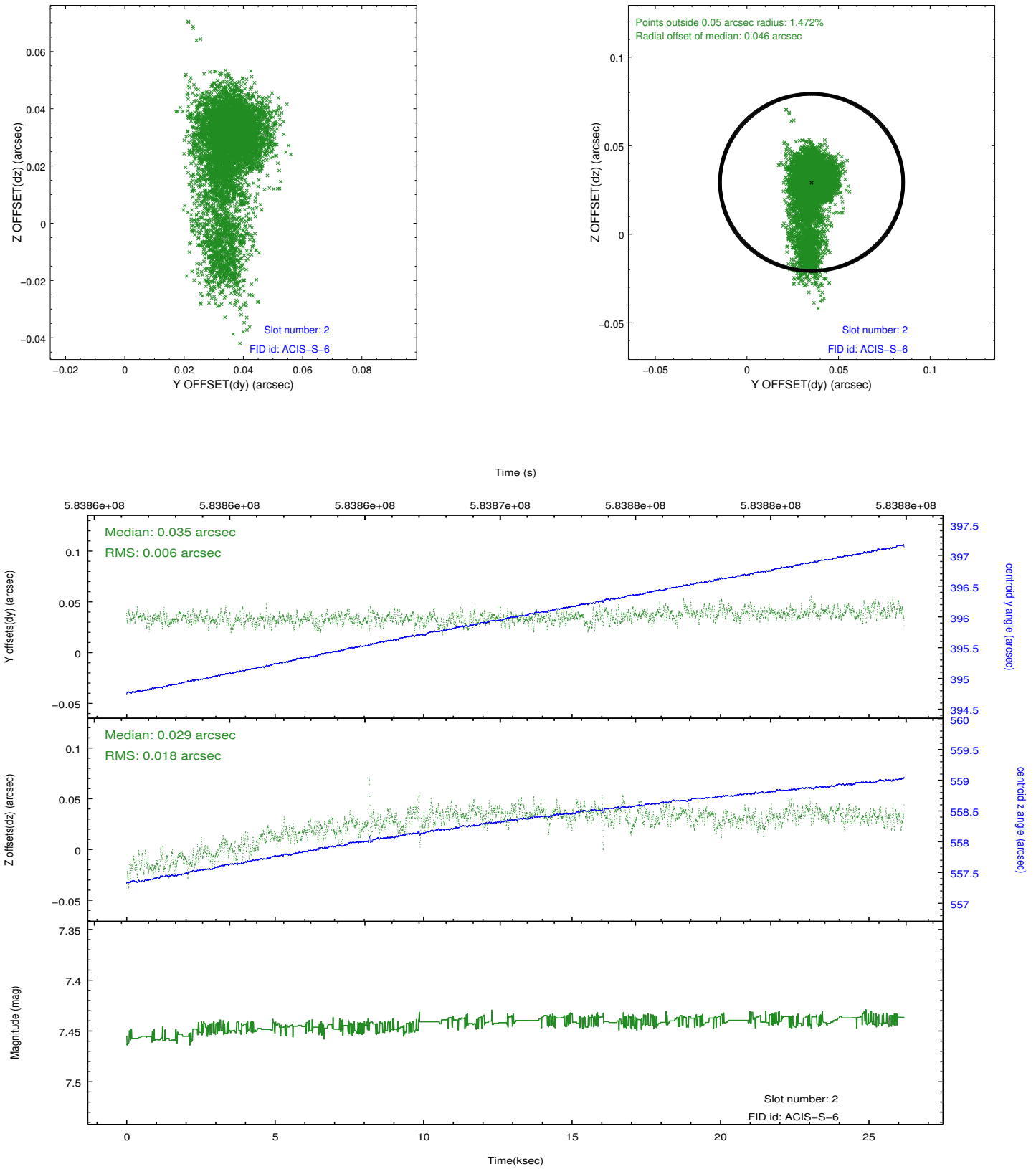
2.5.1 Slot 0



2.5.2 Slot 1

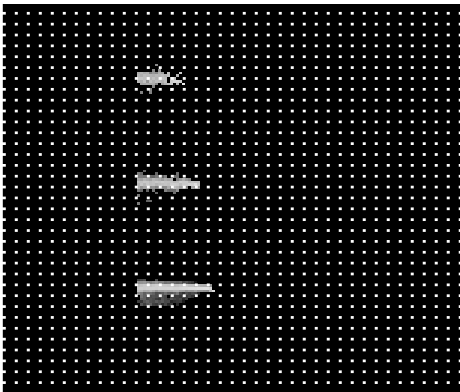


2.5.3 Slot 2

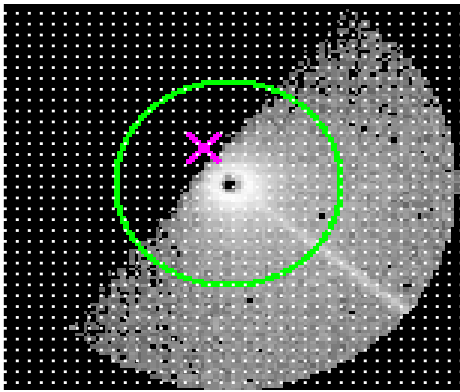


3 Gratings

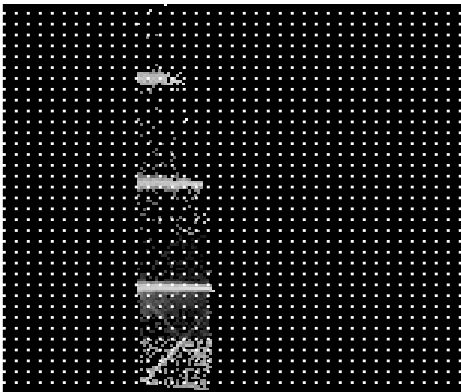
3.1 HEG Arm



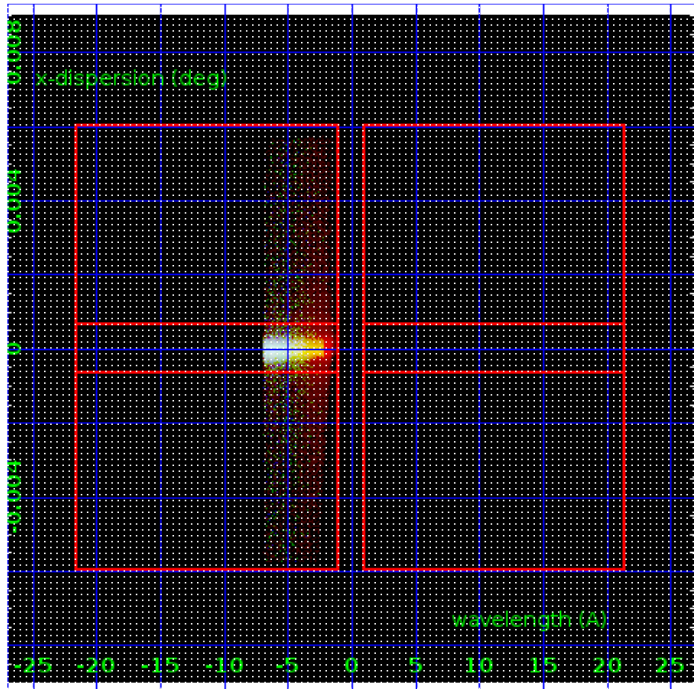
HEG Order Sort 123



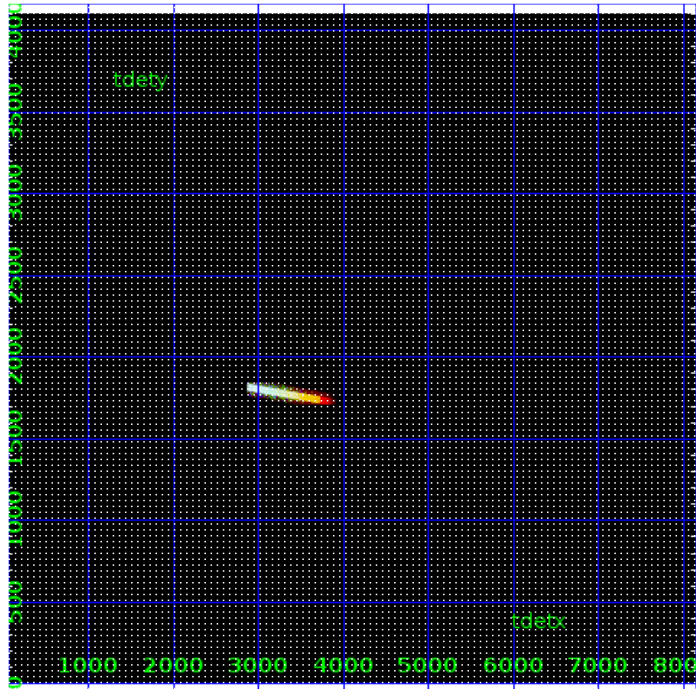
HEG Zero Order



HEG Order Sort ALL

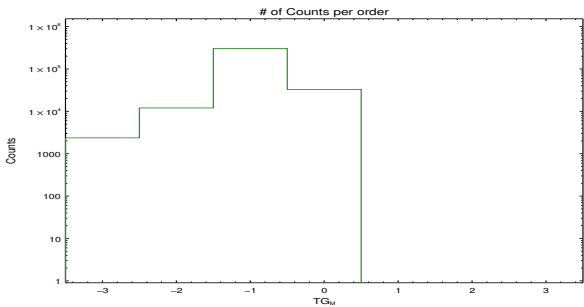


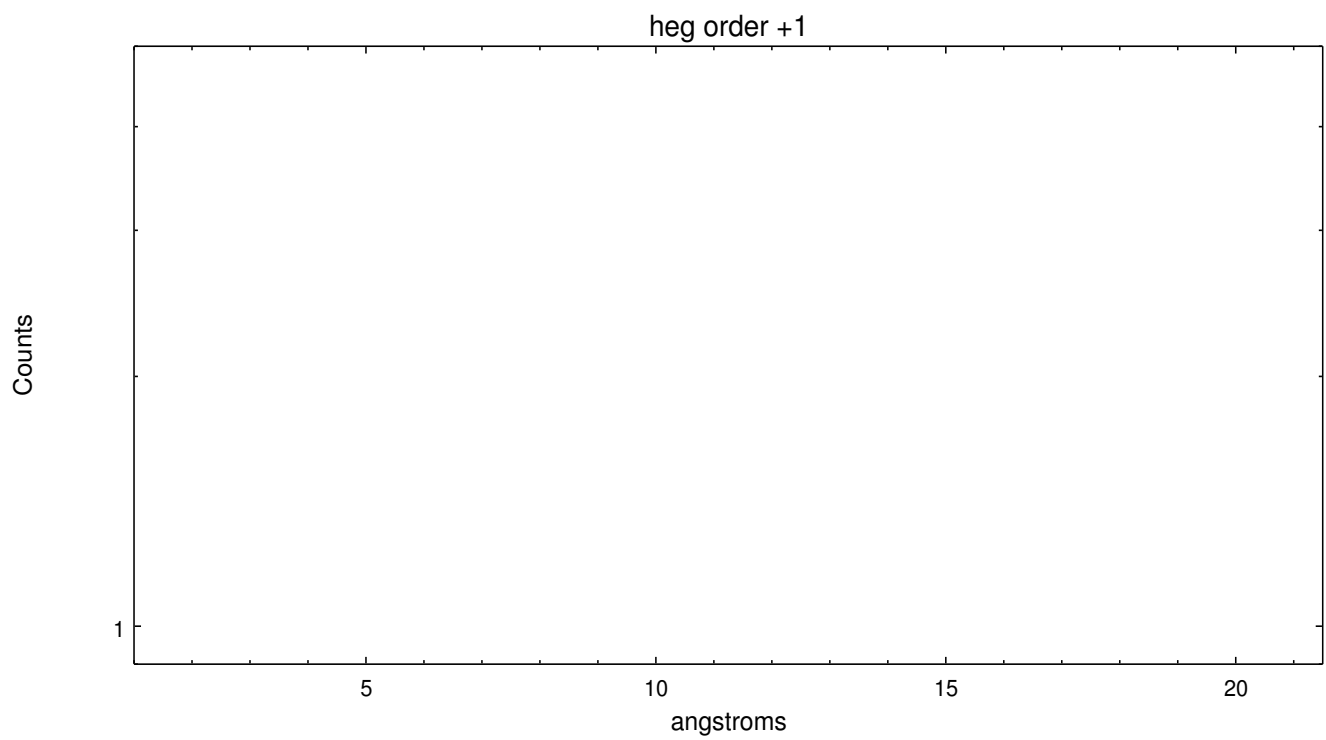
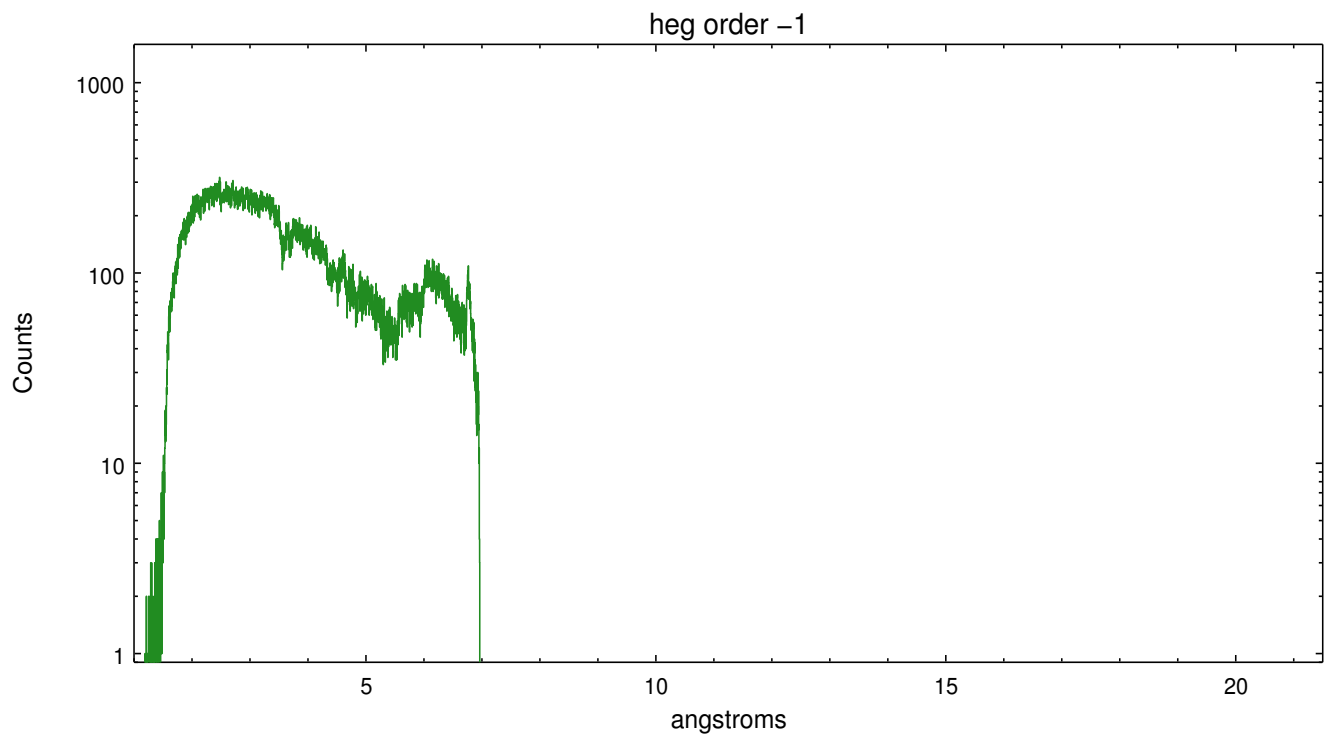
Spot Image HEG



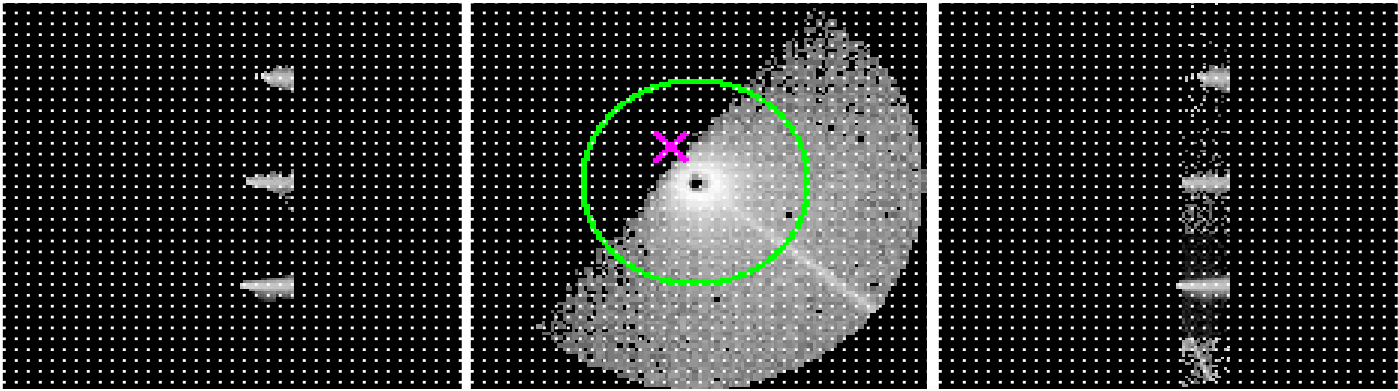
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2368	12025	305243	32887	0	0	0





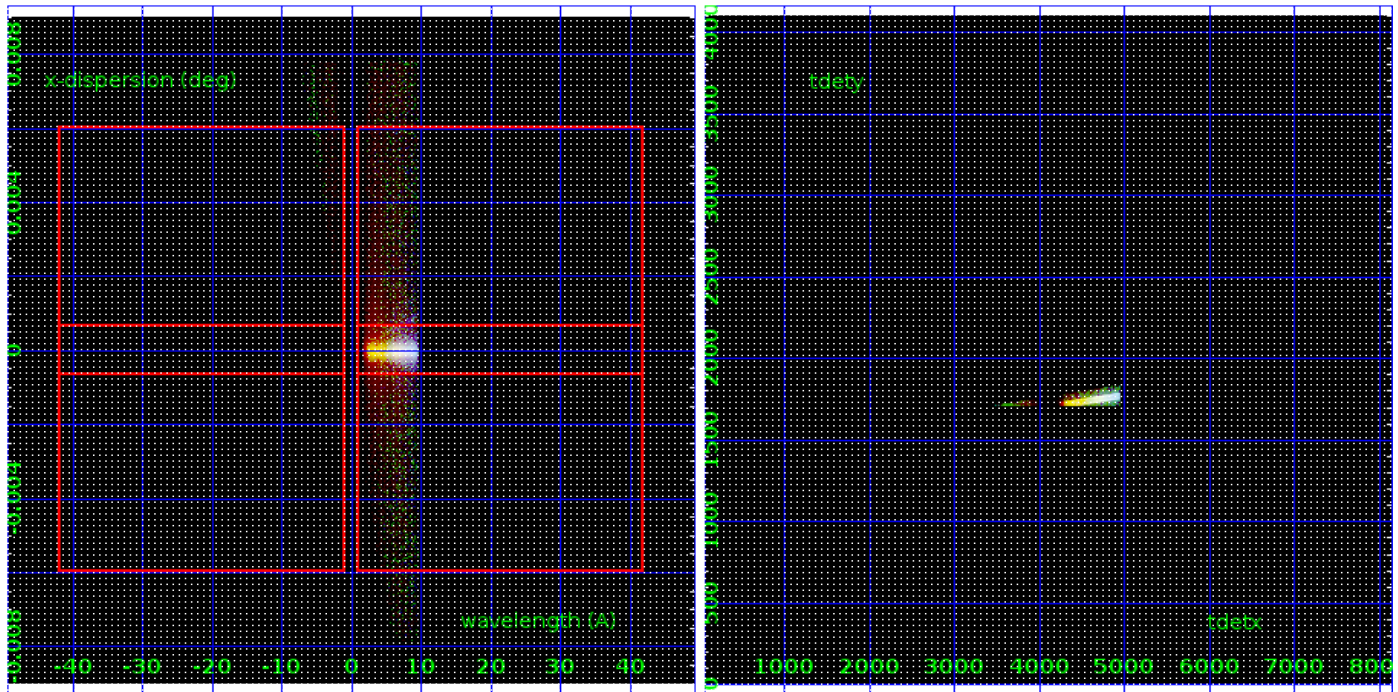
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

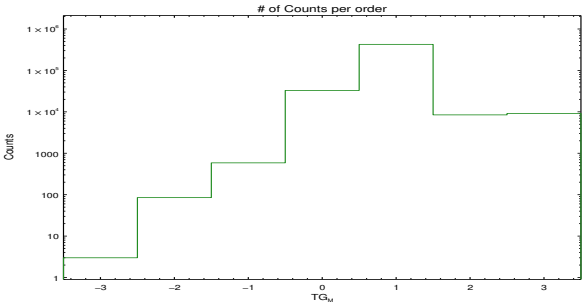
MEG Order Sort ALL

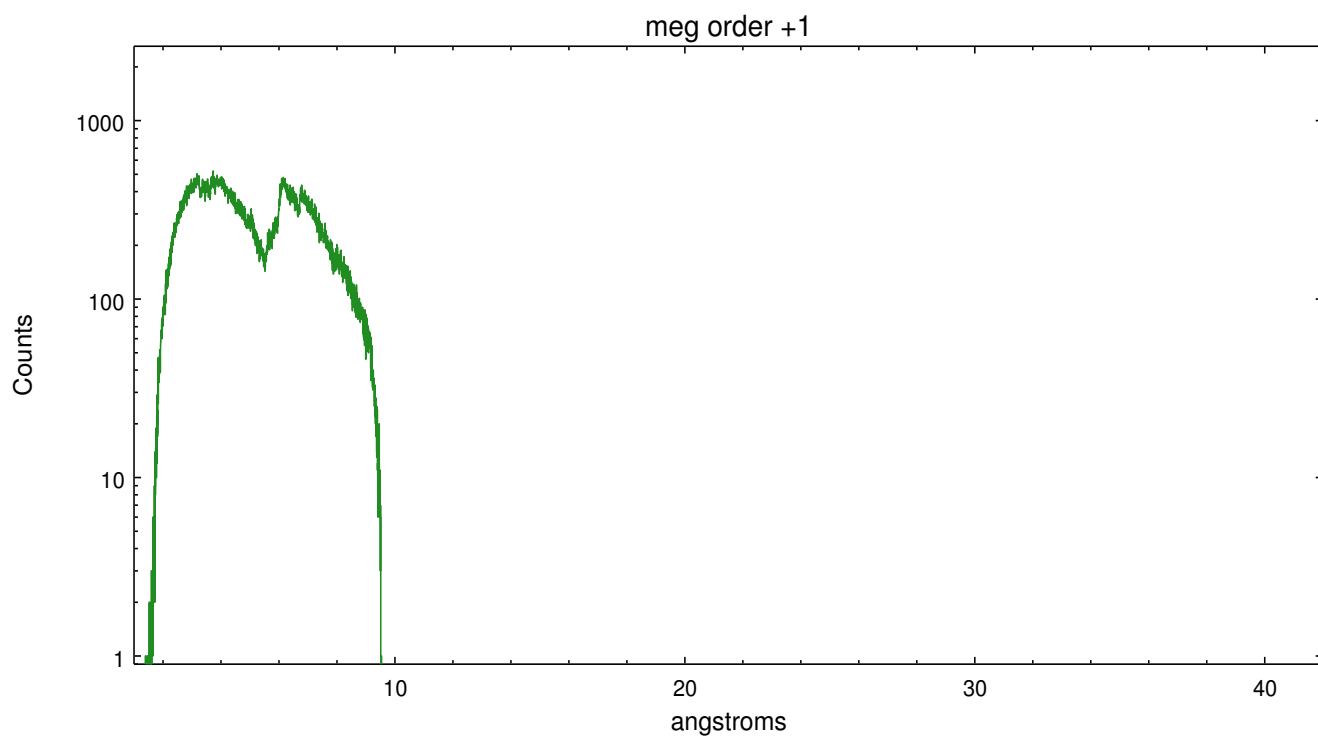
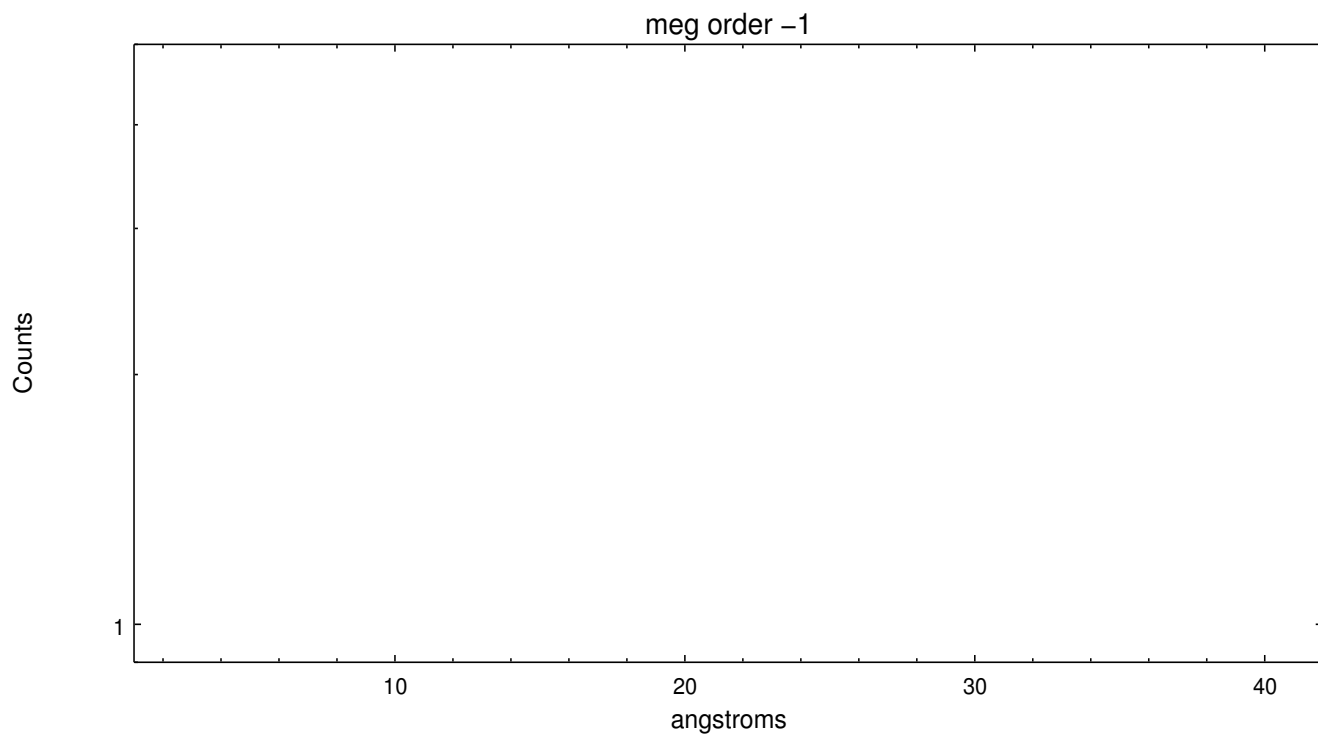


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3	85	587	32887	425013	8448	9110





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.07.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.912869224429

A.2 Comments

Note: the zeroth order was placed near the array edge, so only HEG negative and MEG positive orders are present.

Note: source detection methods failed, so a manual source position was used.

Note: the spectral arms show in the "Level 1 Bad Events" image; this means that the dispersed spectrum might have CCD event pileup.