

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1524 - L2 Version 5
Chandra X-Ray Center

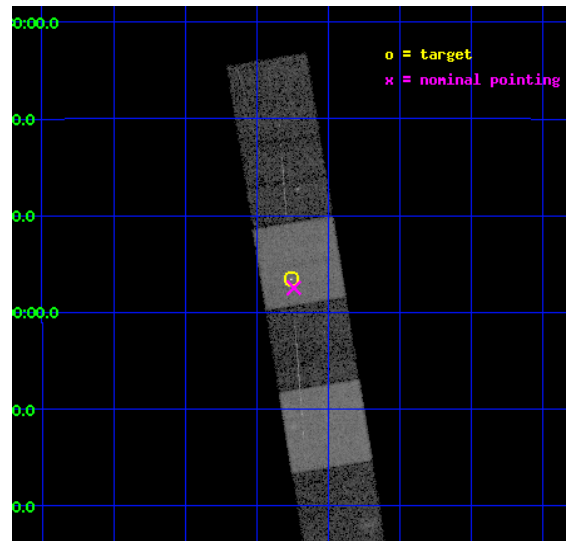
L2 Processing Date : Sep 11 2012

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1 Front

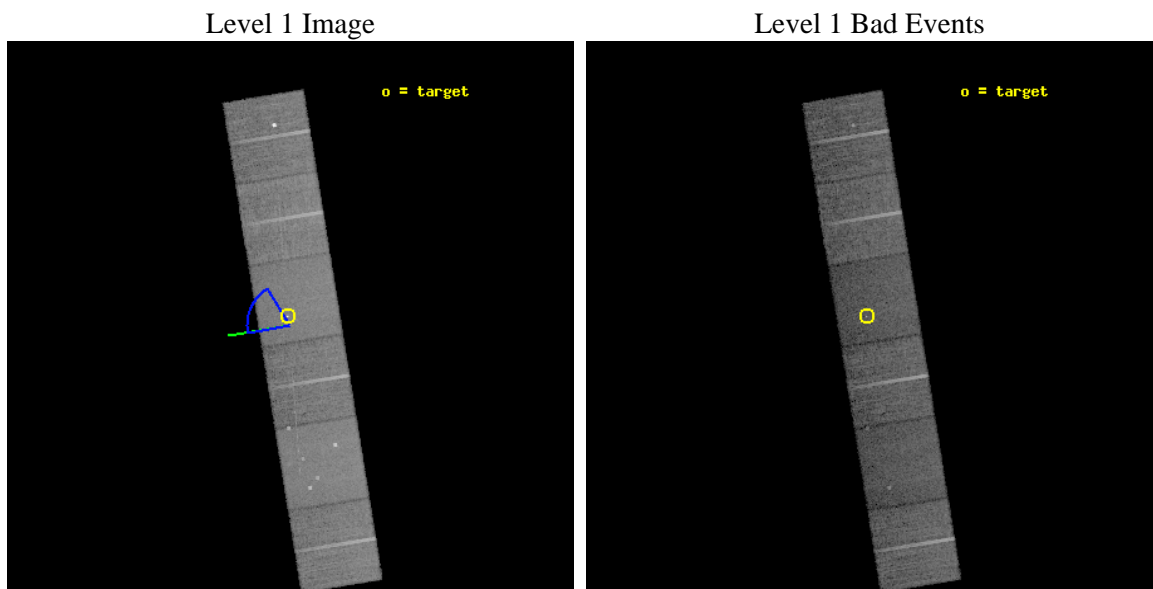
seq_num	200035	Sequence number
obs_id	1524	Observation id
title	MEASURING DOPPLER SHIFTS OF X-RAY LINES TO DETERMINE THE STELLAR WIND X-RAY LOCATIONS IN OB STARS	Proposal title
observer	Dr Wayne Waldron	Principal investigator
object	ZETA ORI	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	85.189583	Observer's specified target RA [deg]
dec_targ	-1.942778	Observer's specified target Dec [deg]
ra_nom	85.185272402457	Nominal RA [deg]
dec_nom	-1.9575938212722	Nominal Dec [deg]
roll_nom	260.71350144544	Nominal Roll [deg]
revision	5	Processing version of data
ontime	13960.916101754	Sum of GTIs [s]
livetime	13784.134575819	Livetime [s]
ontime4	13957.716181517	Sum of GTIs [s]
ontime5	13960.87506175	Sum of GTIs [s]
ontime6	13960.834021762	Sum of GTIs [s]
ontime7	13960.916101754	Sum of GTIs [s]
ontime8	13957.552001595	Sum of GTIs [s]
ontime9	13957.510981515	Sum of GTIs [s]
l2events	141205	Number of level 2 events



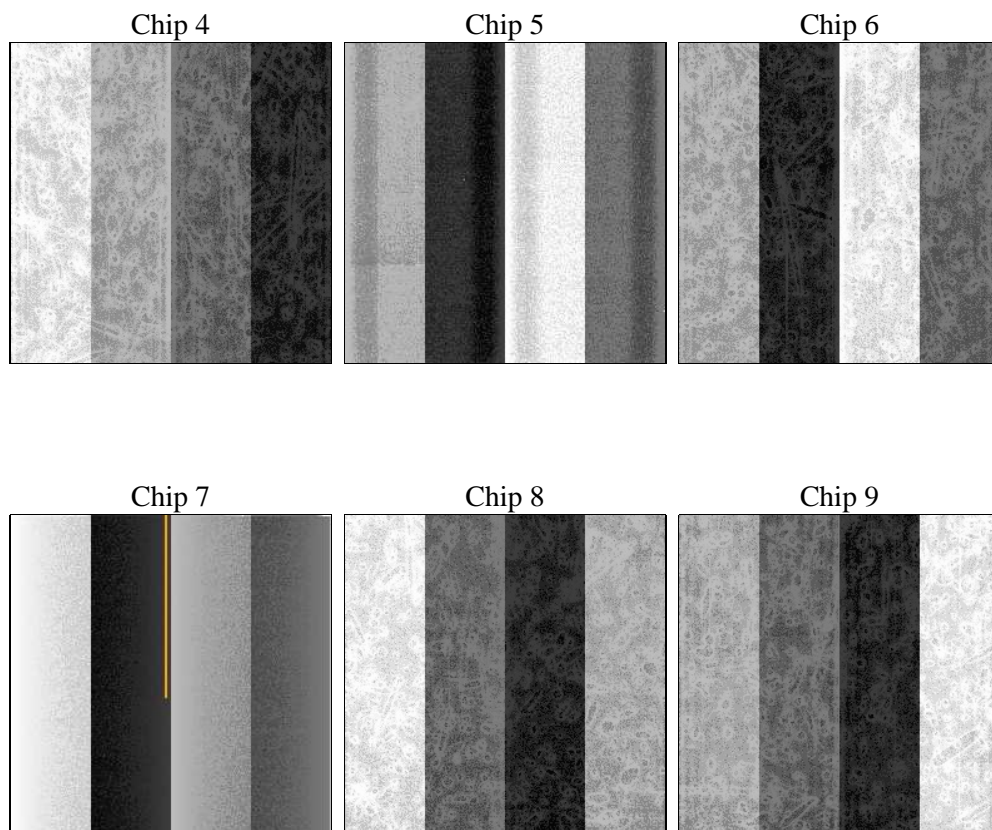
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	13960.916101754	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	13957.716181517	Sum of GTIs [s]
date	2012-08-25T15:16:45	Date and time of file creation	ontime5	13960.87506175	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	13960.834021762	Sum of GTIs [s]
			ontime7	13960.916101754	Sum of GTIs [s]
			ontime8	13957.552001595	Sum of GTIs [s]
			ontime9	13957.510981515	Sum of GTIs [s]
			l1events	676088	Number of level 1 events

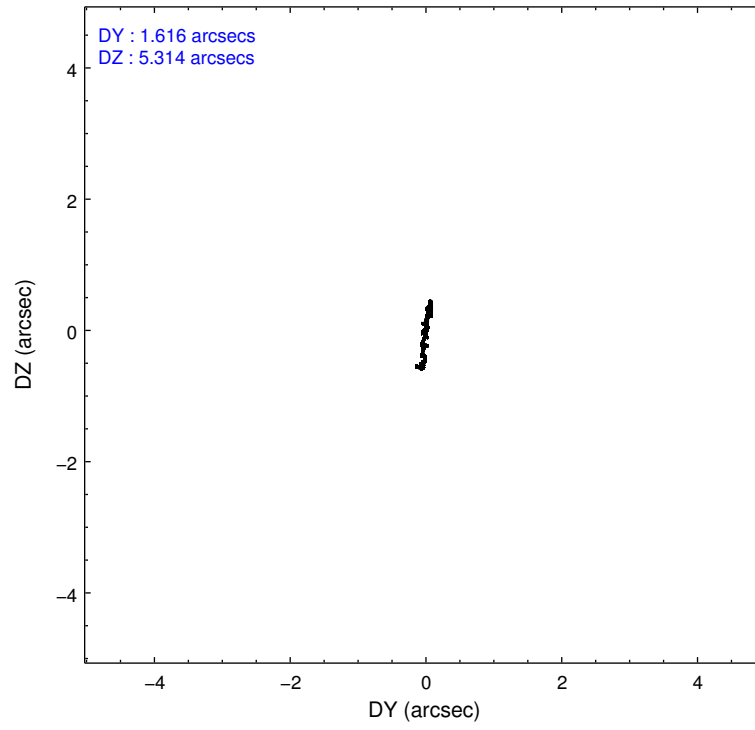
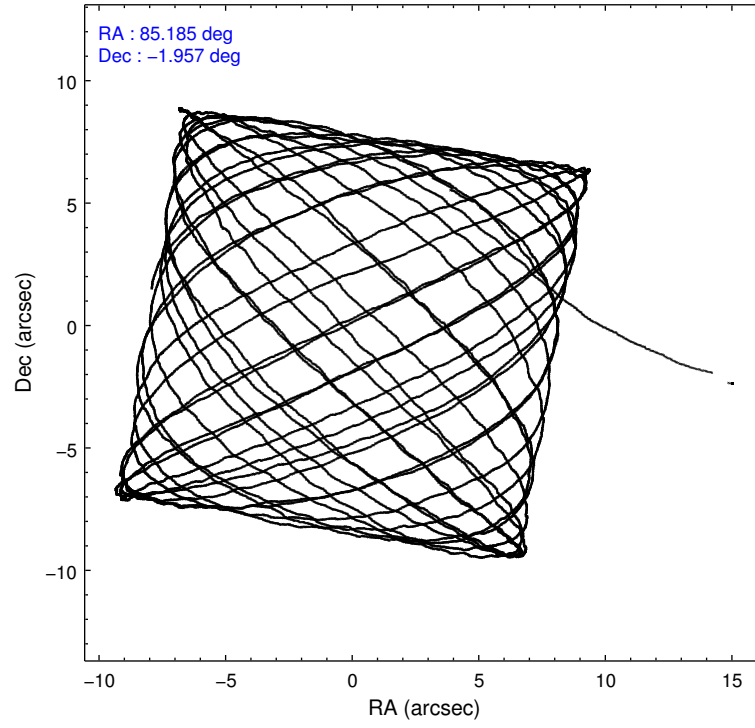
2.1.4 Events

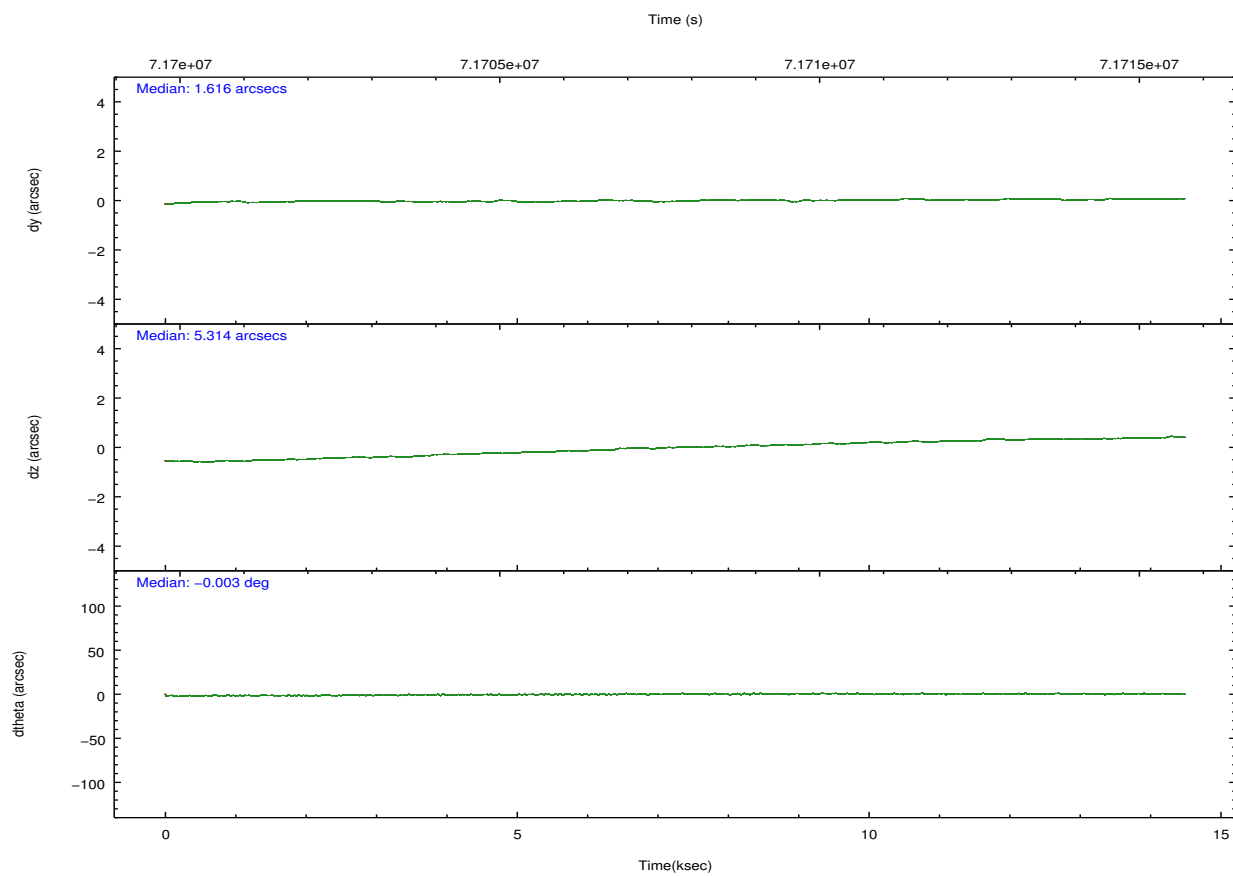
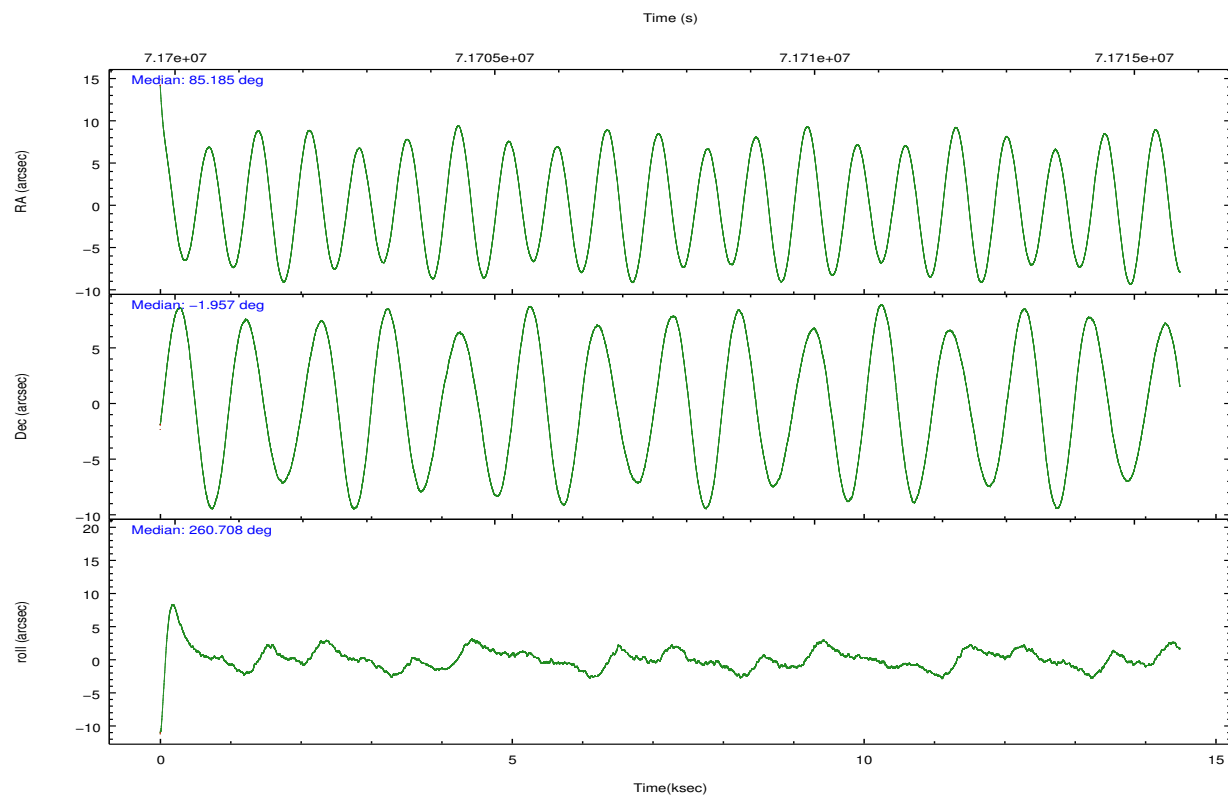
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	109911	127256	98365	115960	121688	102908	grade 0 events	5127	8501	4796	5204	7701	11165
rejected events	98328	66181	87258	66278	98669	84361		4%	6%	4%	4%	6%	10%
rejected %	89%	52%	88%	57%	81%	81%	grade 1 events	44	259	41	163	72	275
								0%	0%	0%	0%	0%	0%
							grade 2 events	2591	17285	2052	9829	4731	2153
								2%	13%	2%	8%	3%	2%
							grade 3 events	1043	2718	1124	4673	2542	1016
								0%	2%	1%	4%	2%	0%
							grade 4 events	1024	2659	1081	4604	2256	2080
								0%	2%	1%	3%	1%	2%
							grade 5 events	3045	9861	3576	11164	4496	3704
								2%	7%	3%	9%	3%	3%
							grade 6 events	1801	29922	2057	25385	5791	2137
								1%	23%	2%	21%	4%	2%
							grade 7 events	95236	56051	83638	54938	94099	80378
								86%	44%	85%	47%	77%	78%

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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	85.175485	85.18527240245722	Subarray requested	NONE	NONE
[deg] Pointing Dec	-1.931991	-1.957593821272235	Alternating exposures requested	N	N
[deg] Pointing Roll	260.556554	260.7135014454406	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	293.000000	293.000000			
[deg] Roll tolerance	34.000000	34.000000			
Roll constraint allows 180D rotation	N	N			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-187.1228876879999			
[mm] SIM translation stage offset	0	-3.009634895007935			
[s] Observation start time (MET)	71700984.184000	71699867.61635			
Observation start date	2000-04-09T20:55:20	2000-04-09T20:37:47			
[s] Observation end time (MET)	71714984.184000	71715905.79193801			
Observation end date	2000-04-10T00:48:40	2000-04-10T01:05:05			
Read mode	TIMED	TIMED			

2.3 Aspect



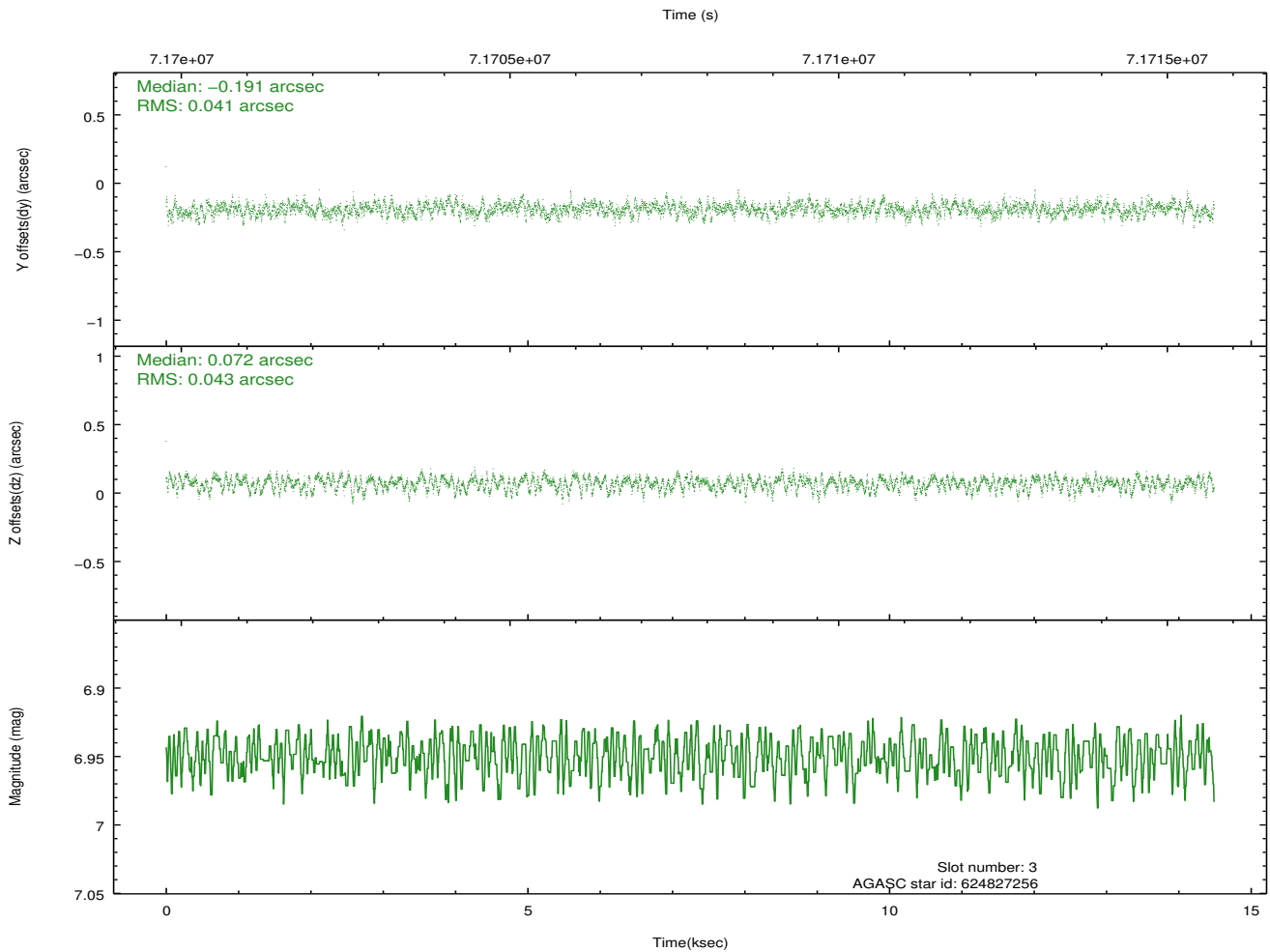
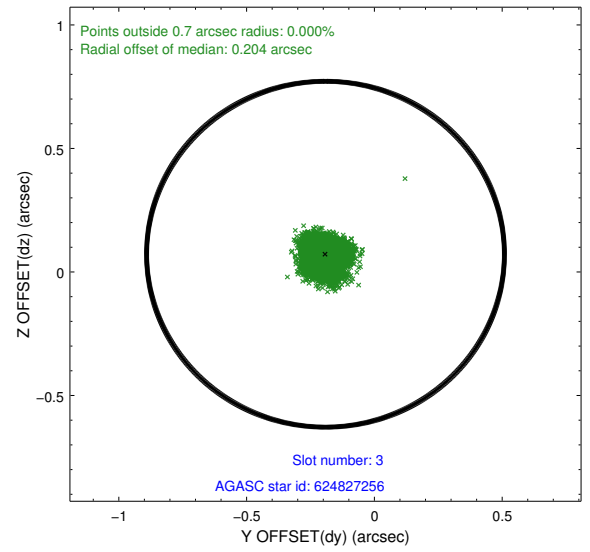
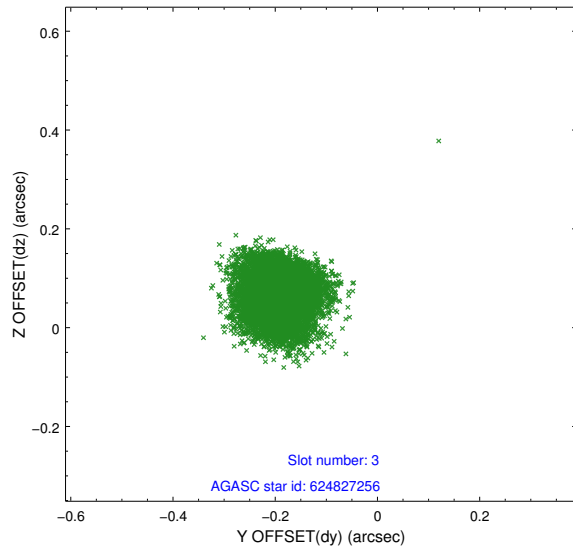


Slot Statistics

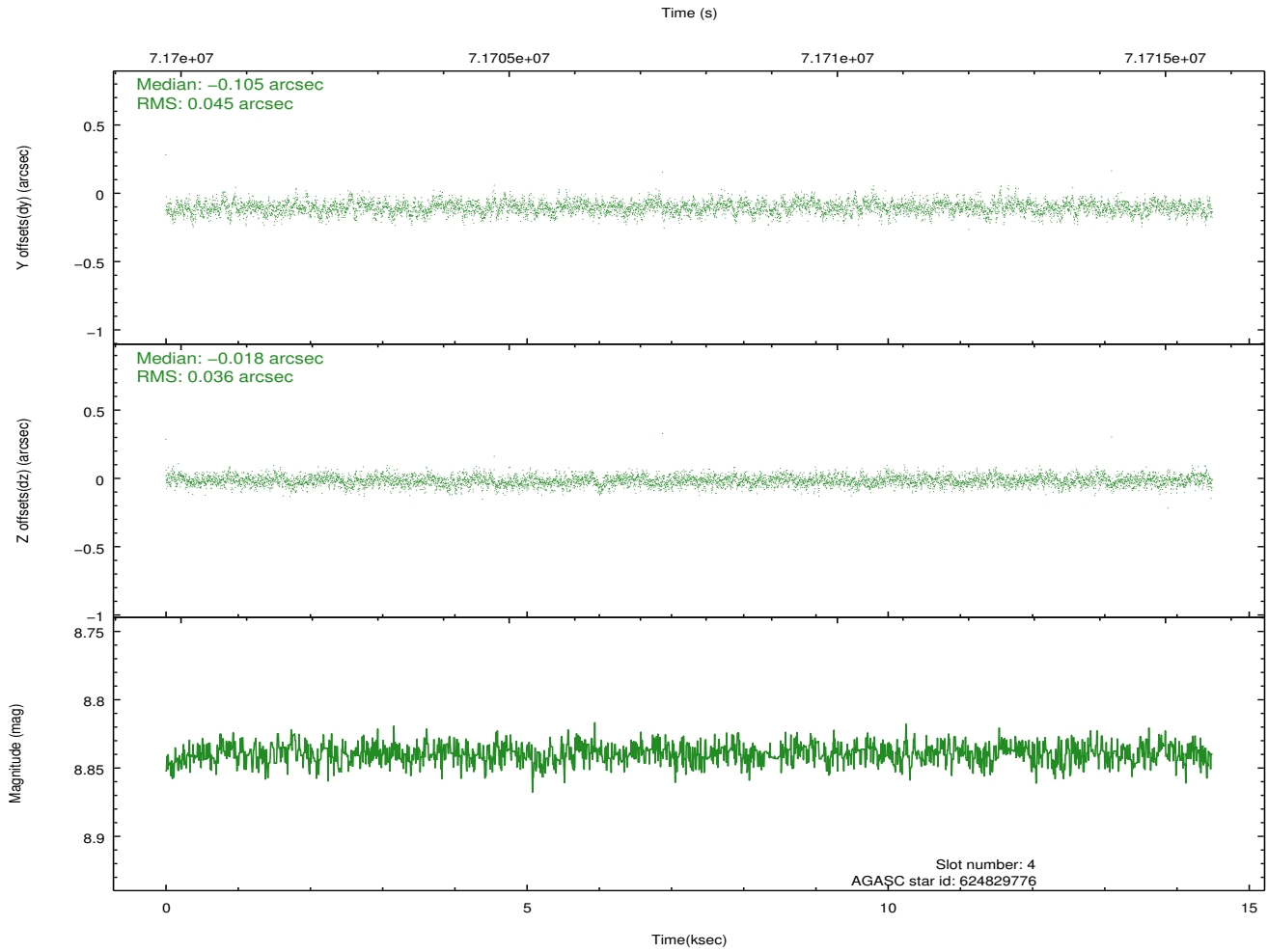
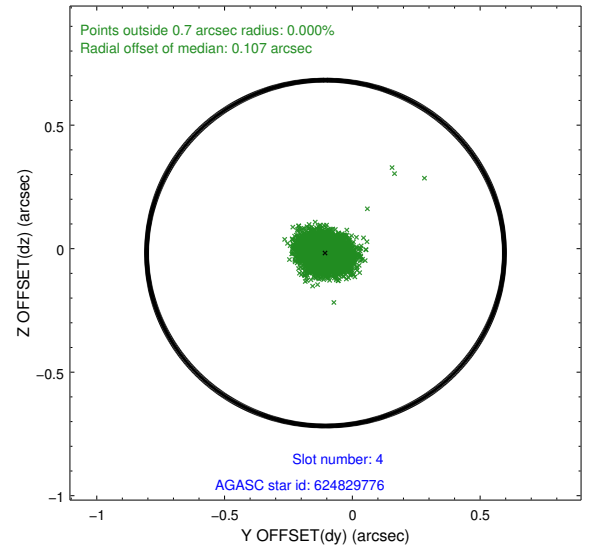
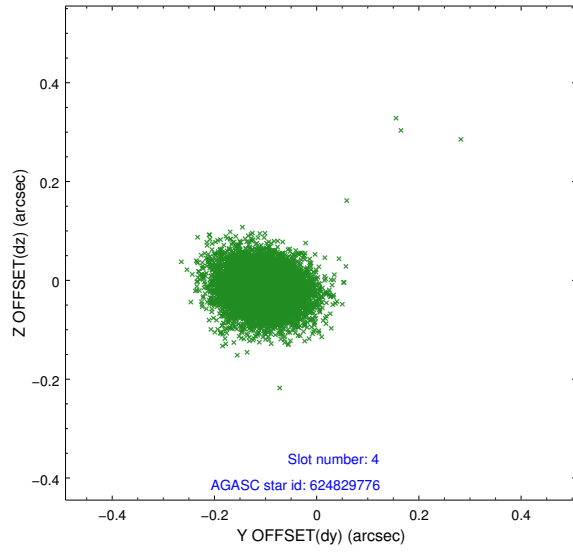
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	3532	-0.031	-0.052	0.011	0.019	0.000000	0.000000	-754.08	-1788.55
1	FID	ACIS-S-4	7.20	3532	-0.005	0.029	0.006	0.012	0.000000	0.000000	2159.12	119.60
2	FID	ACIS-S-5	7.24	3532	0.004	0.032	0.010	0.017	0.000000	0.000000	-1806.44	113.72
3	GUIDE	624827256	6.95	7065	-0.191	0.072	0.063	0.100	85.016618	-1.425471	-1704.12	-862.89
4	GUIDE	624829776	8.84	7063	-0.105	-0.018	0.060	0.101	84.830774	-1.274621	-2130.09	-1612.13
5	GUIDE	625352160	8.96	7063	0.475	-0.187	0.112	0.182	84.418648	-2.443564	2265.43	-2382.86
6	GUIDE	624828488	9.20	7062	-0.108	0.070	0.076	0.125	85.333320	-1.326548	-2242.13	202.69
7	GUIDE	624820368	9.50	7057	-0.072	0.064	0.106	0.165	84.520771	-1.858956	128.38	-2366.34

2.4 Star Slots

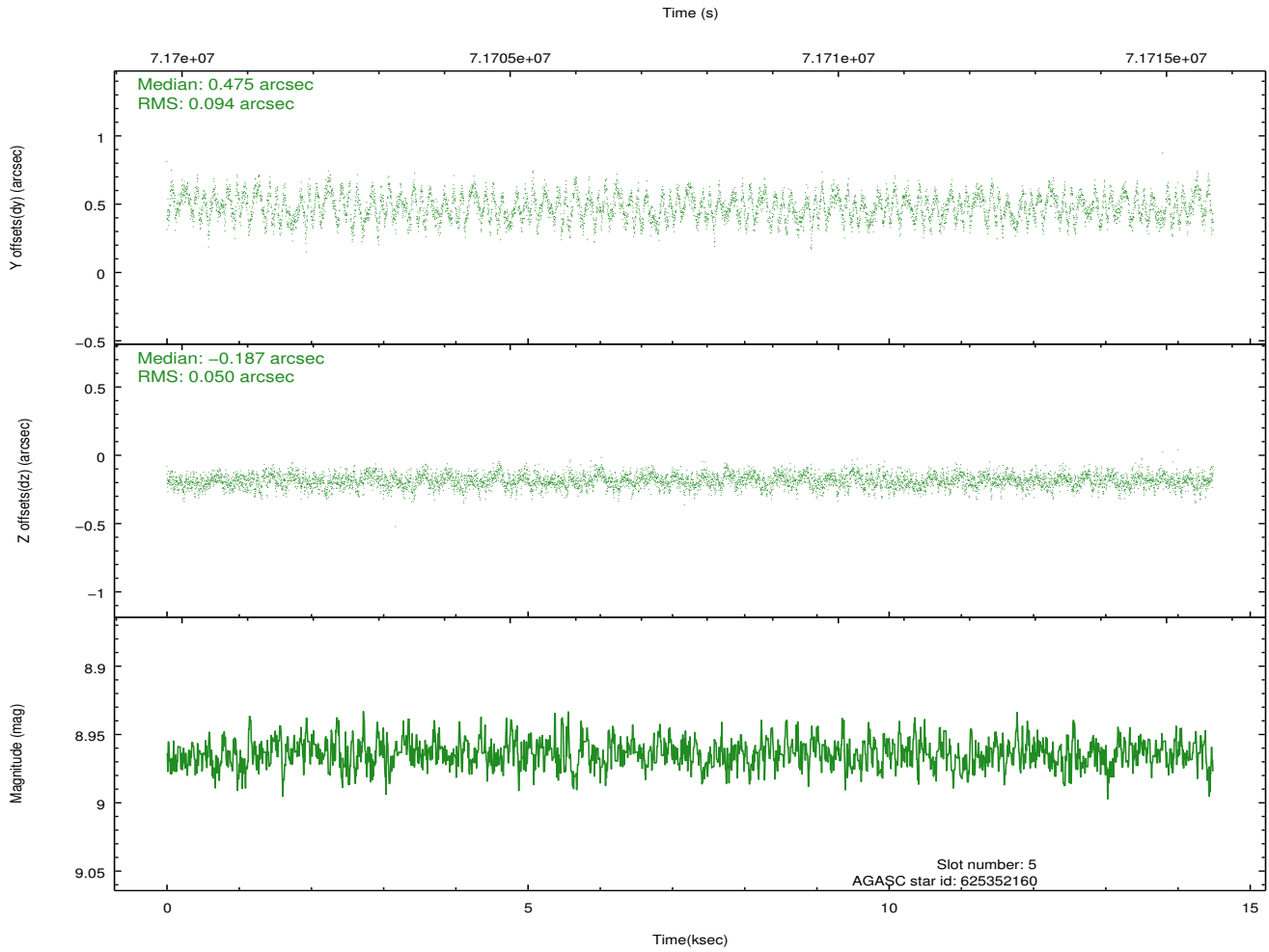
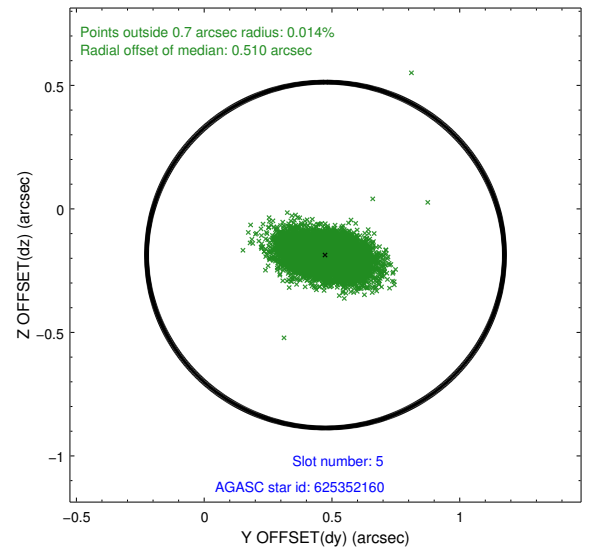
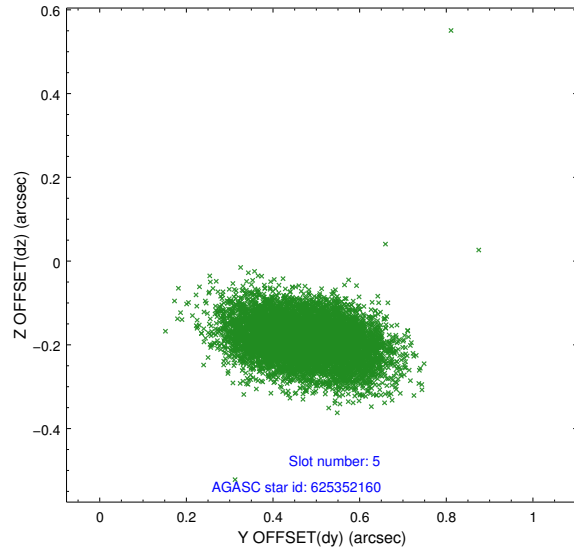
2.4.1 Slot 3



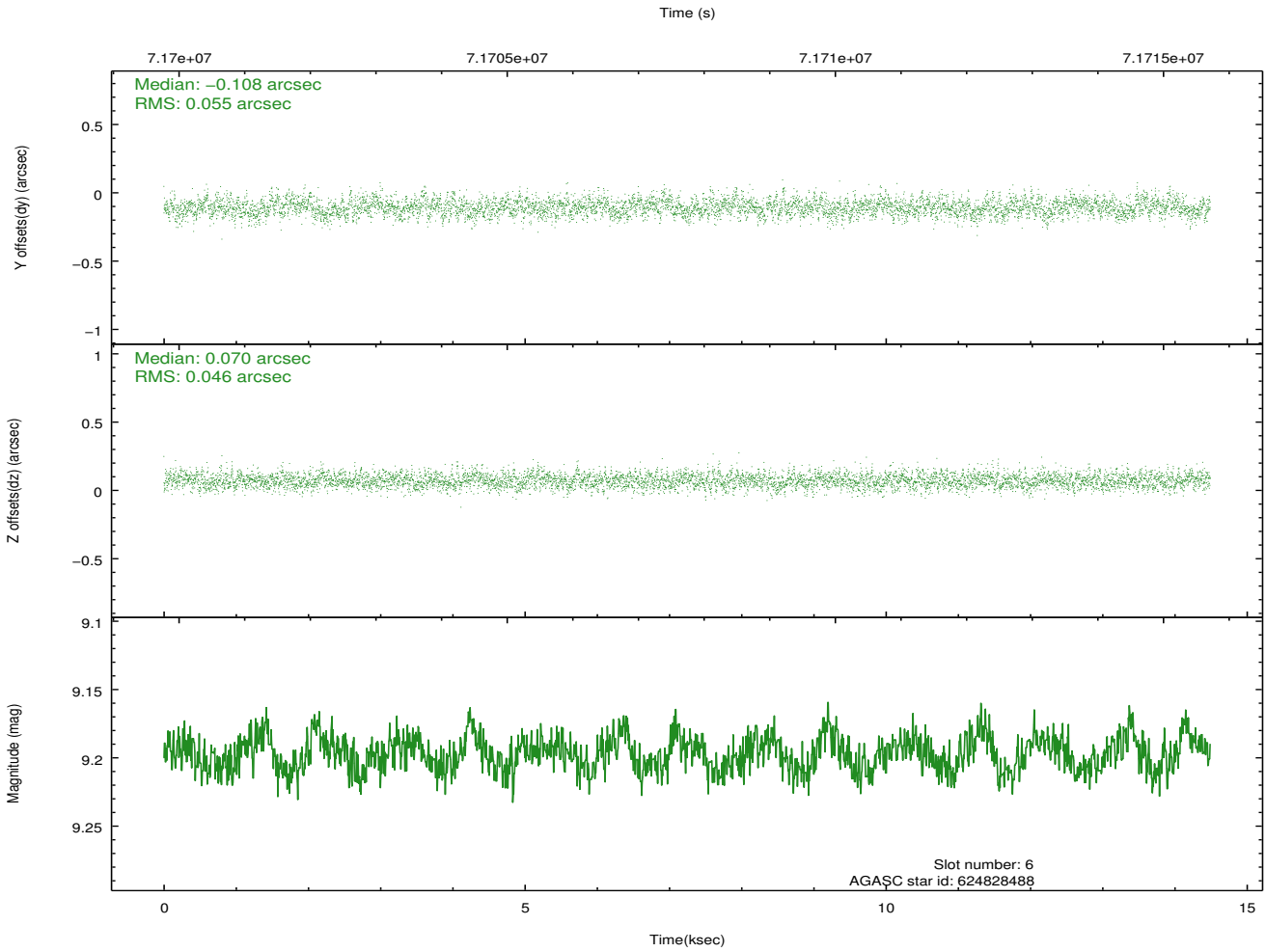
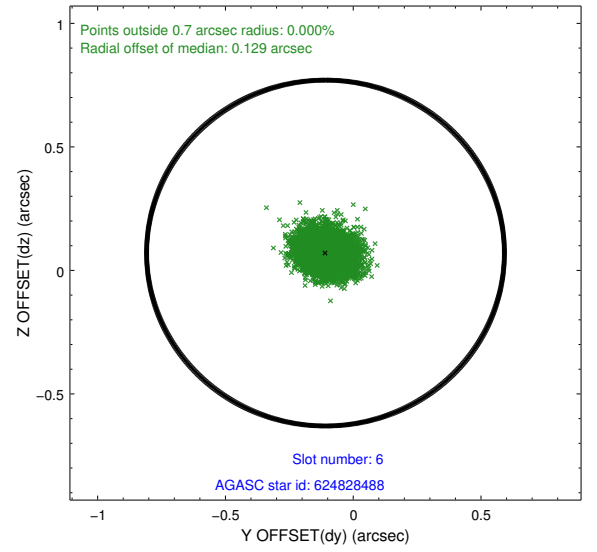
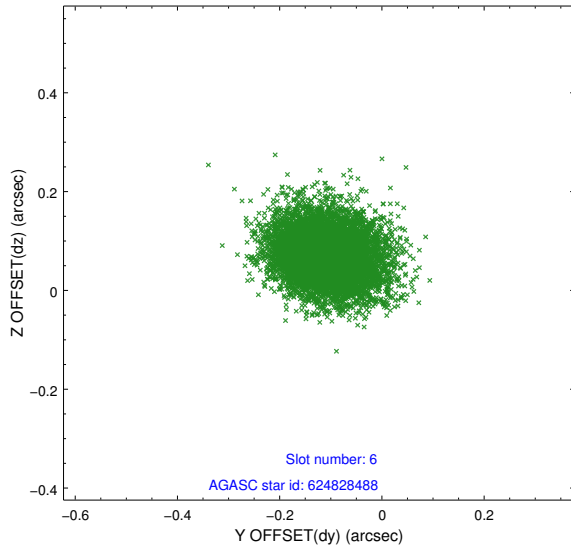
2.4.2 Slot 4



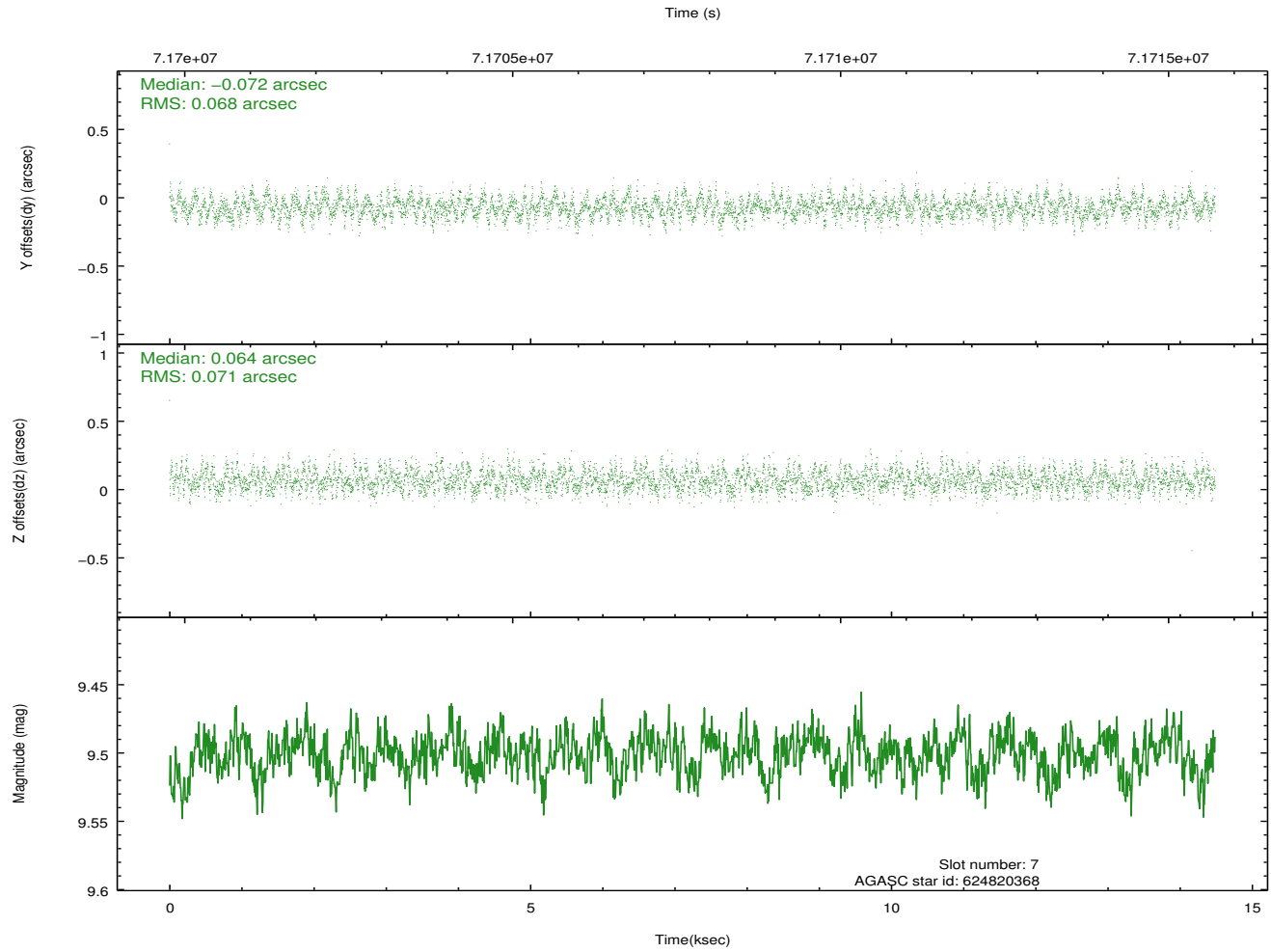
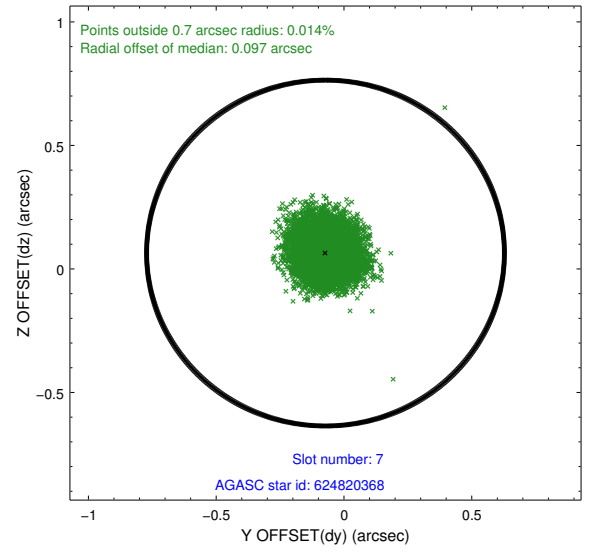
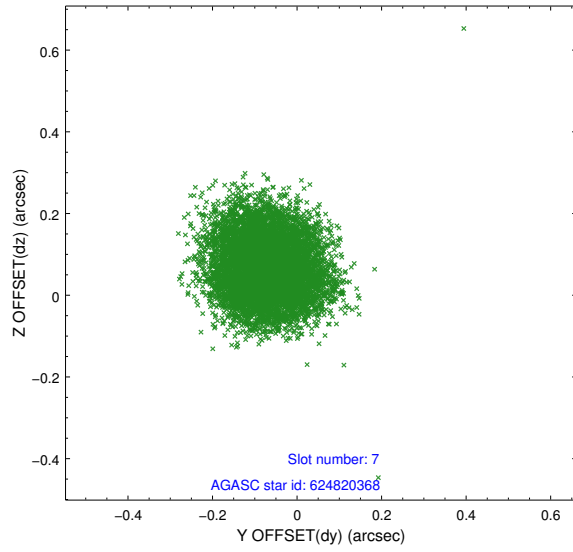
2.4.3 Slot 5



2.4.4 Slot 6

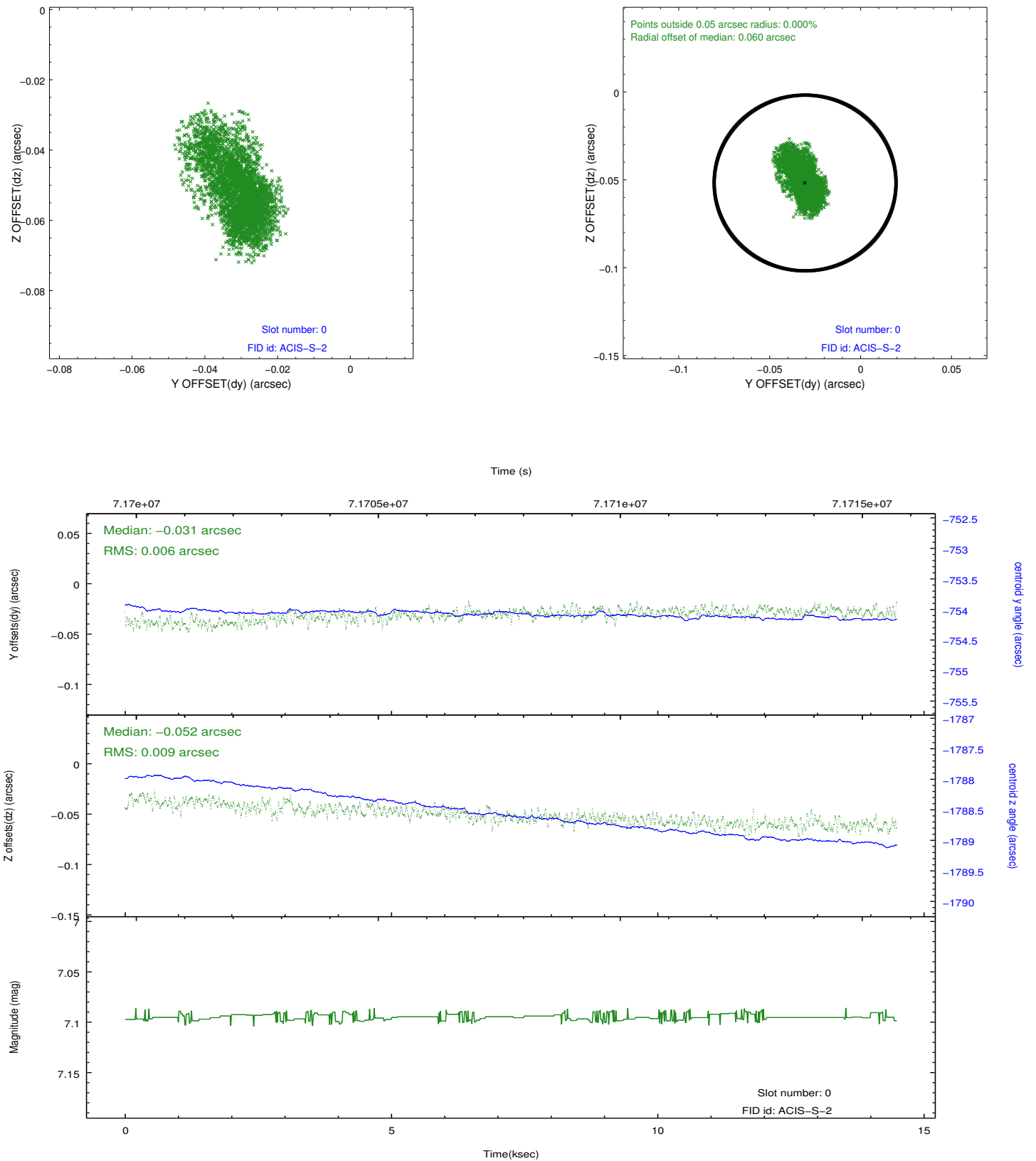


2.4.5 Slot 7

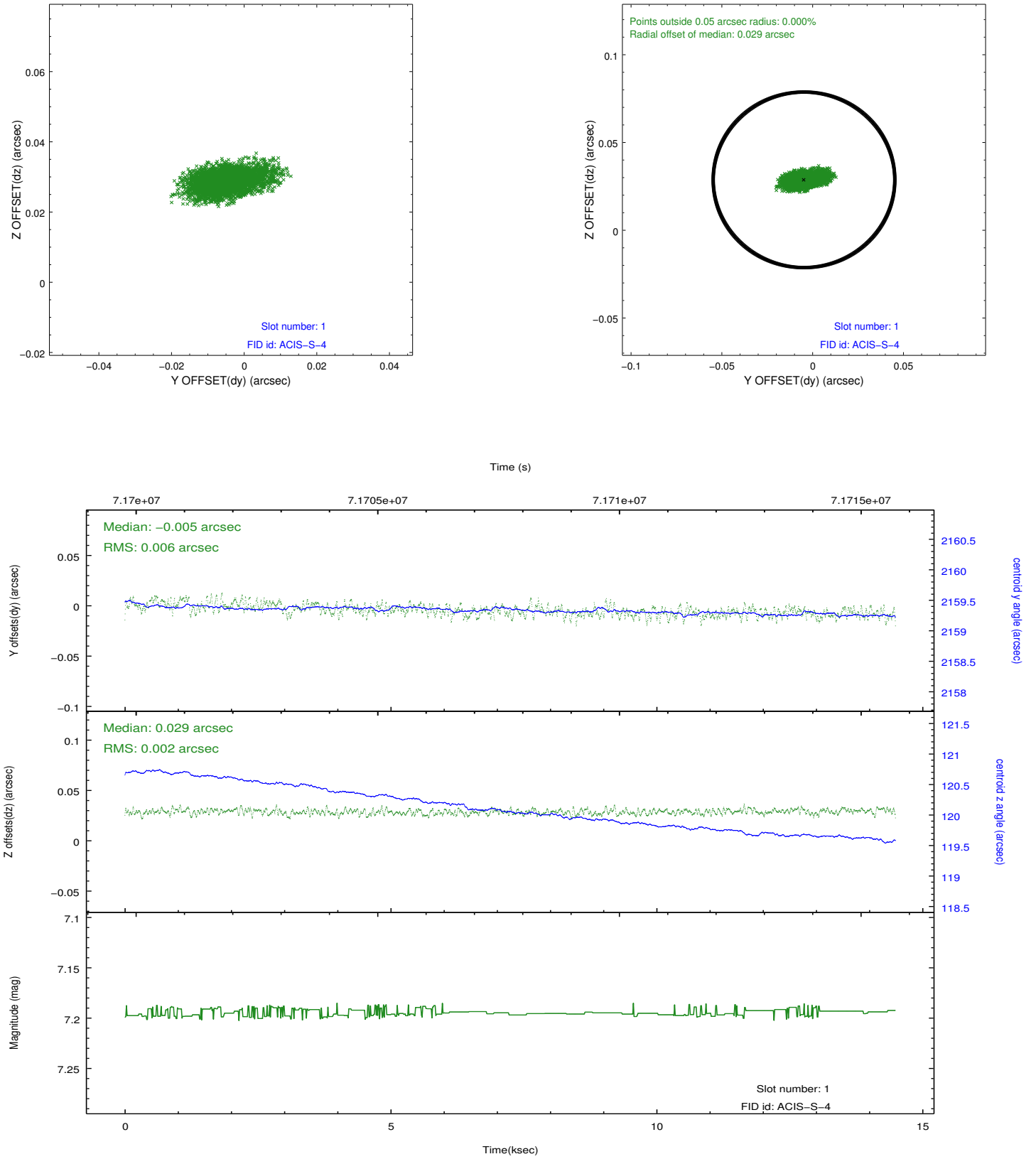


2.5 FID Slots

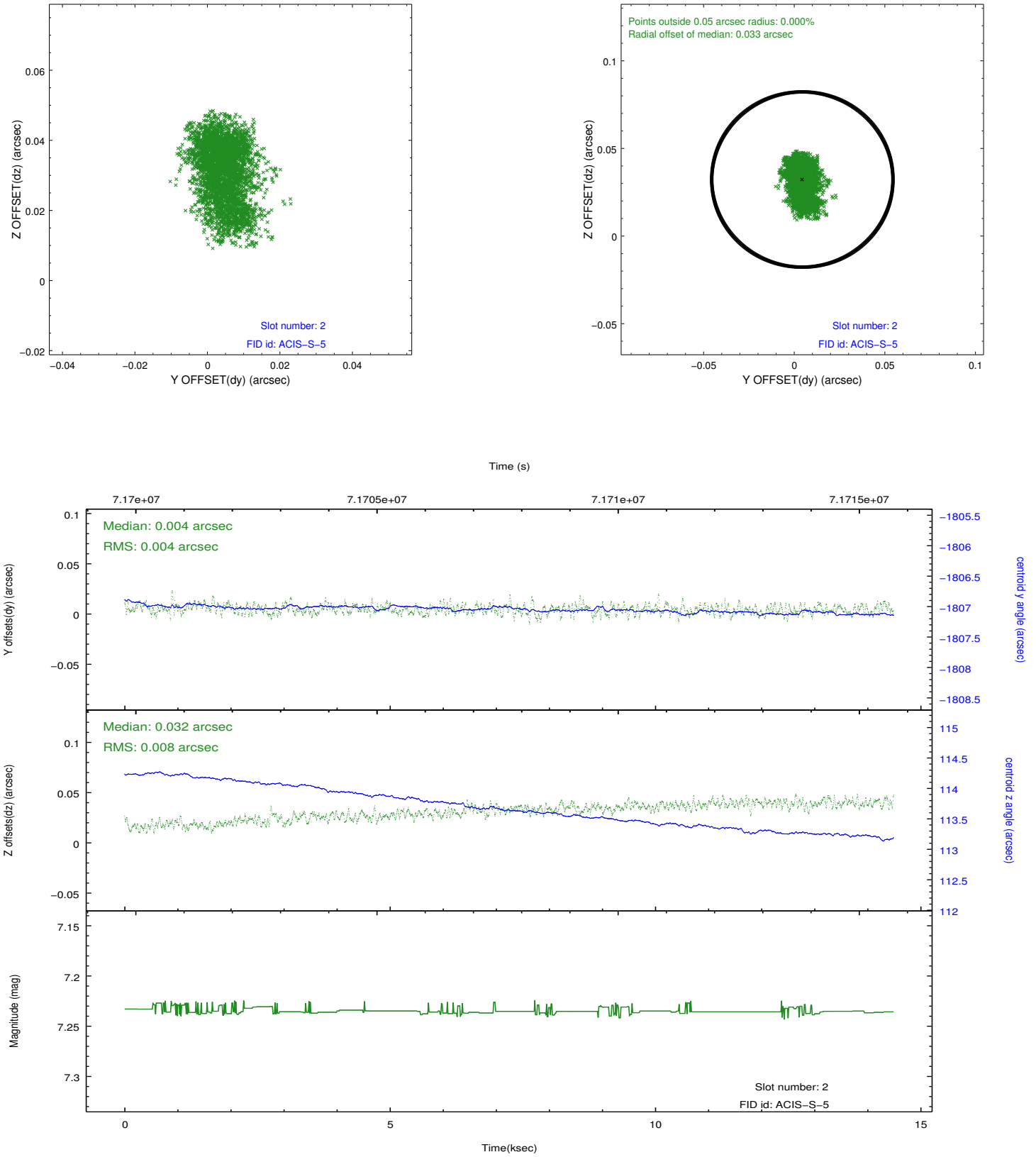
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

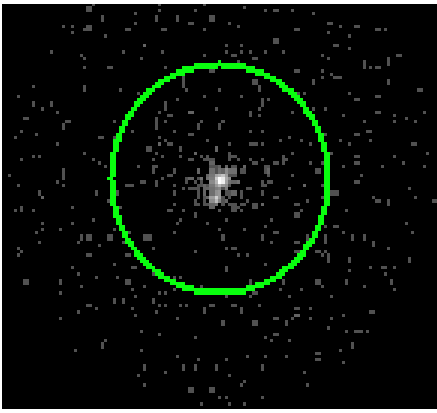


3 Gratings

3.1 HEG Arm



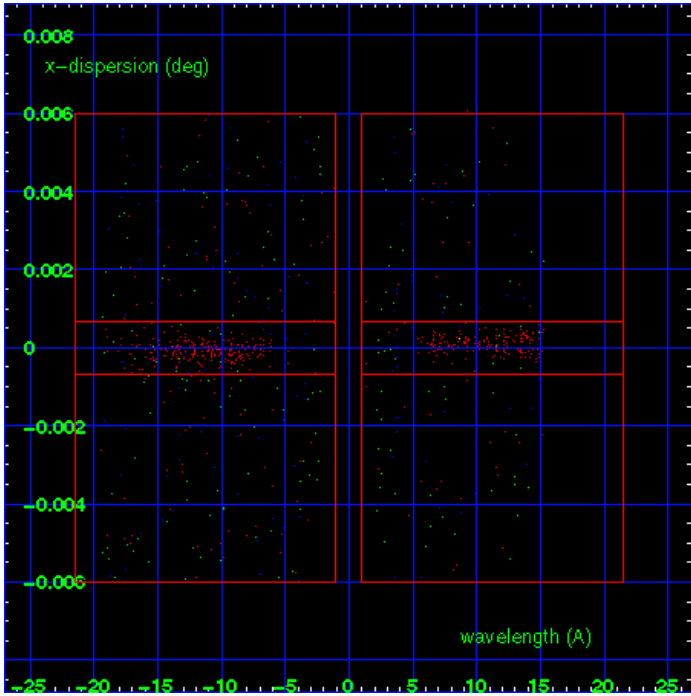
HEG Order Sort 123



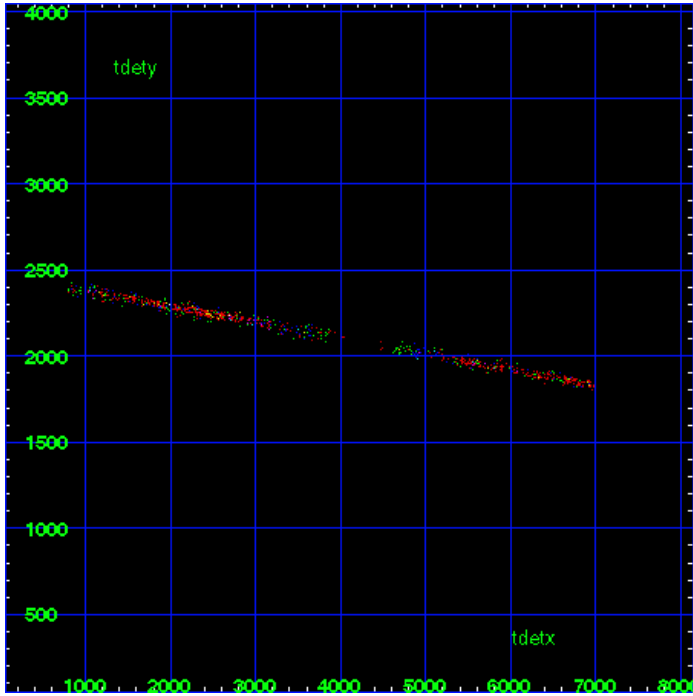
HEG Zero Order



HEG Order Sort ALL

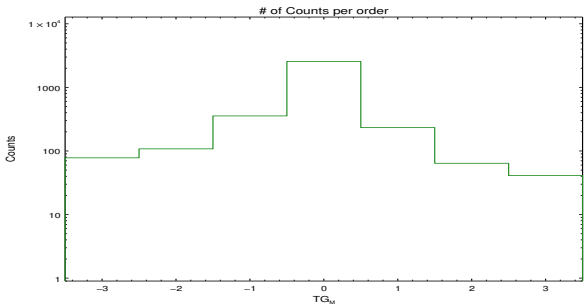


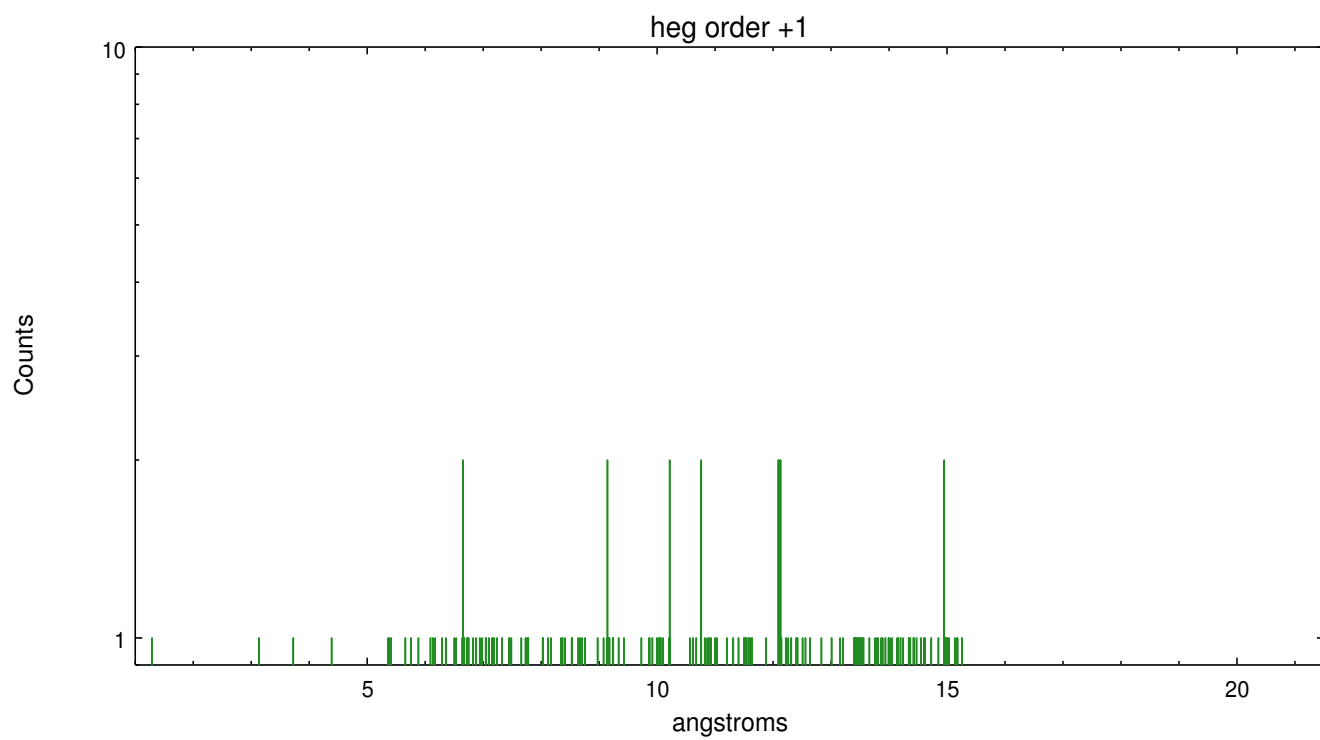
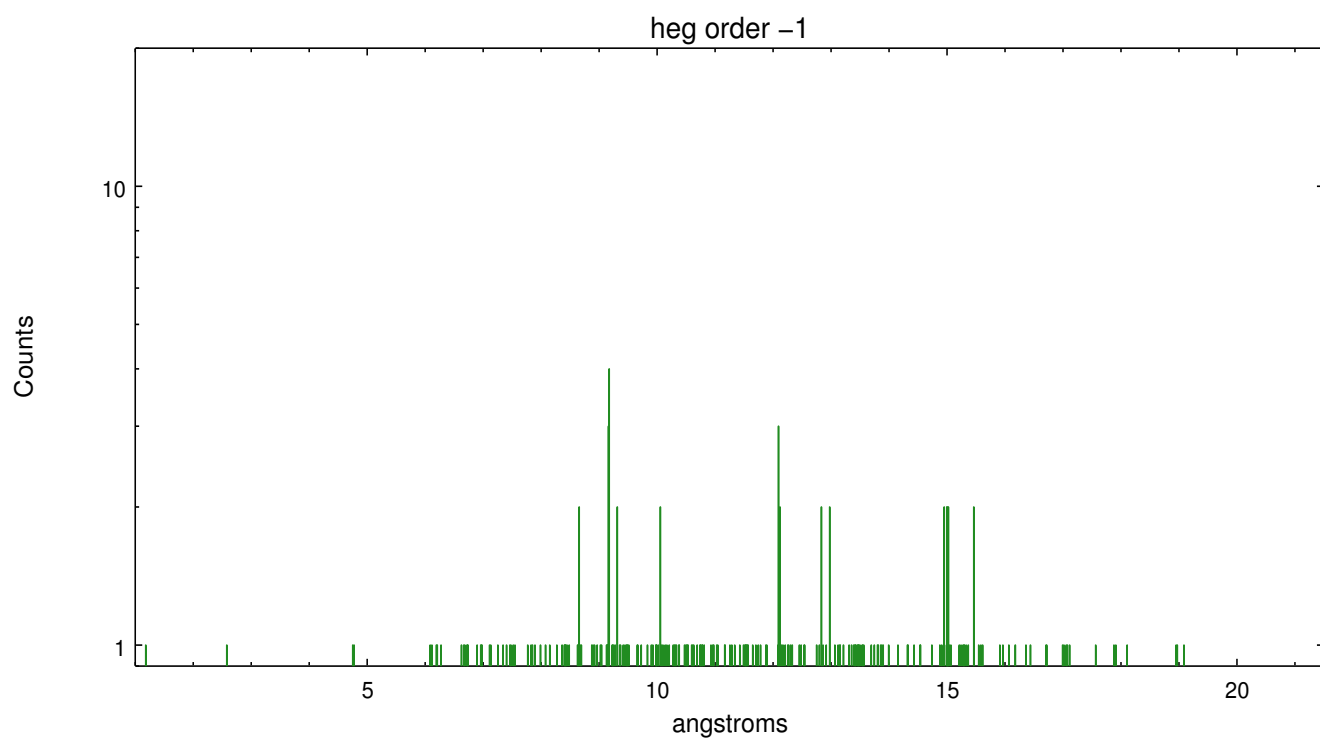
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	78	108	356	2554	233	64	41

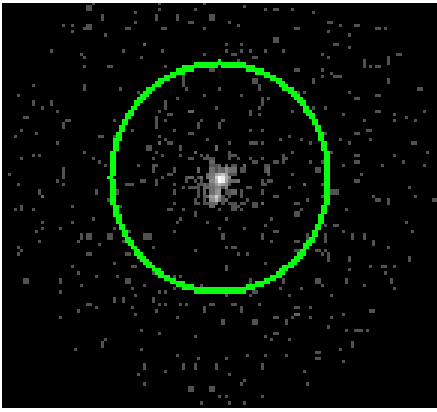




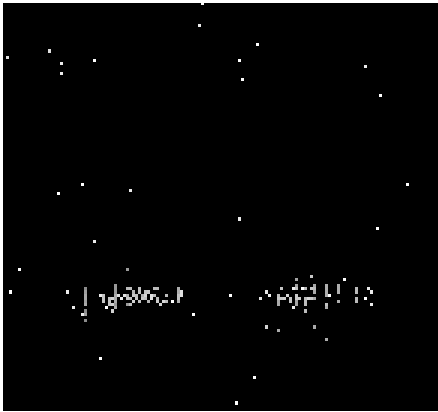
3.2 MEG Arm



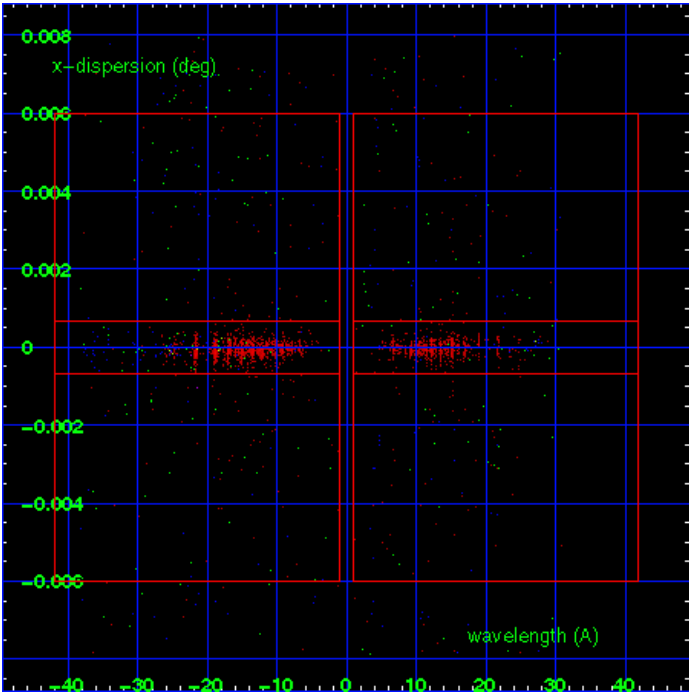
MEG Order Sort 123



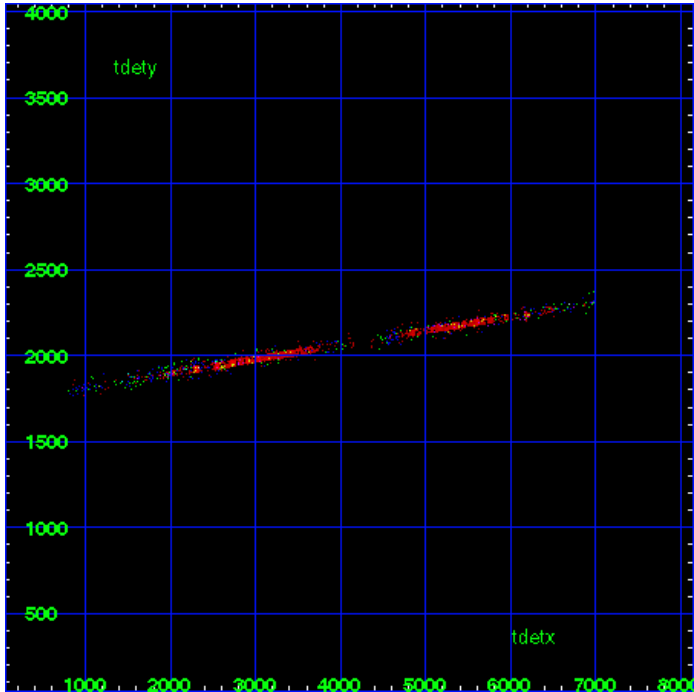
MEG Zero Order



MEG Order Sort ALL

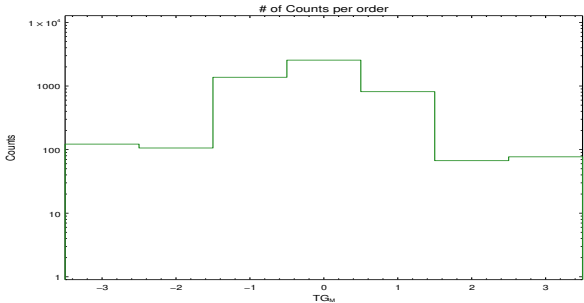


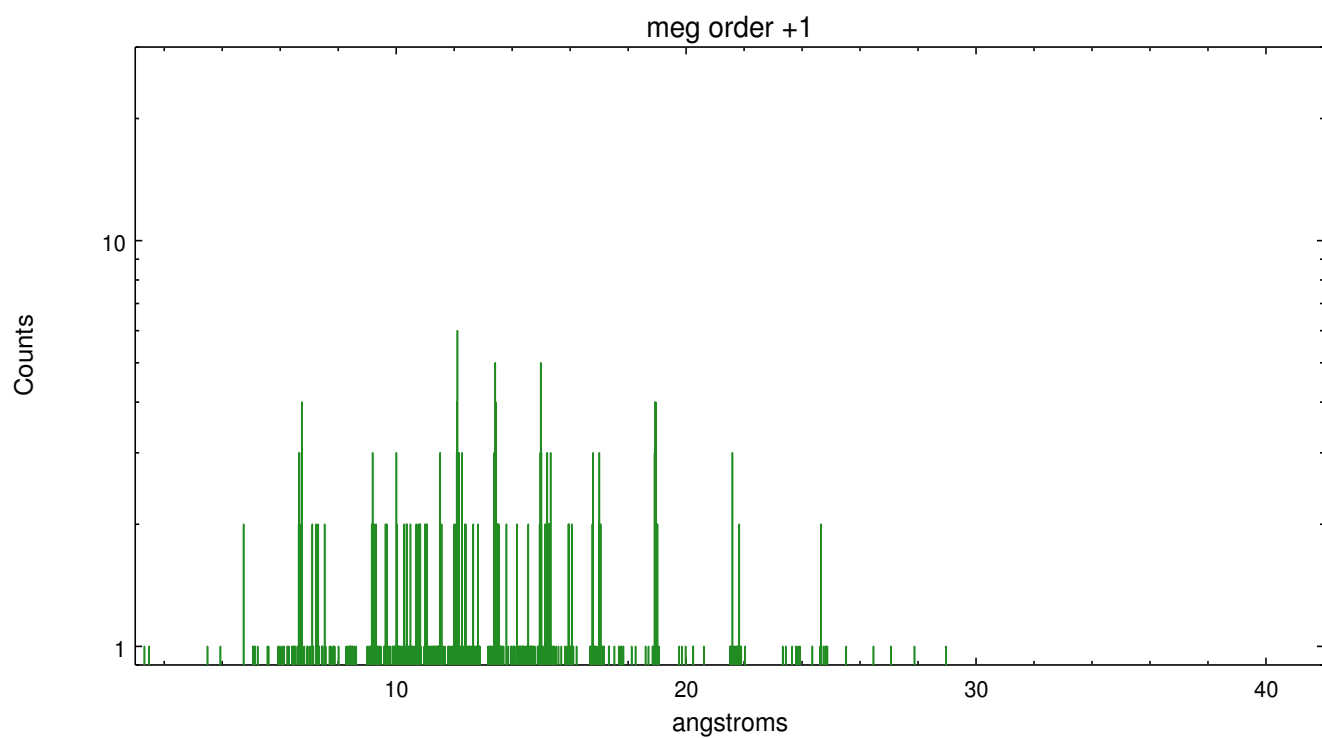
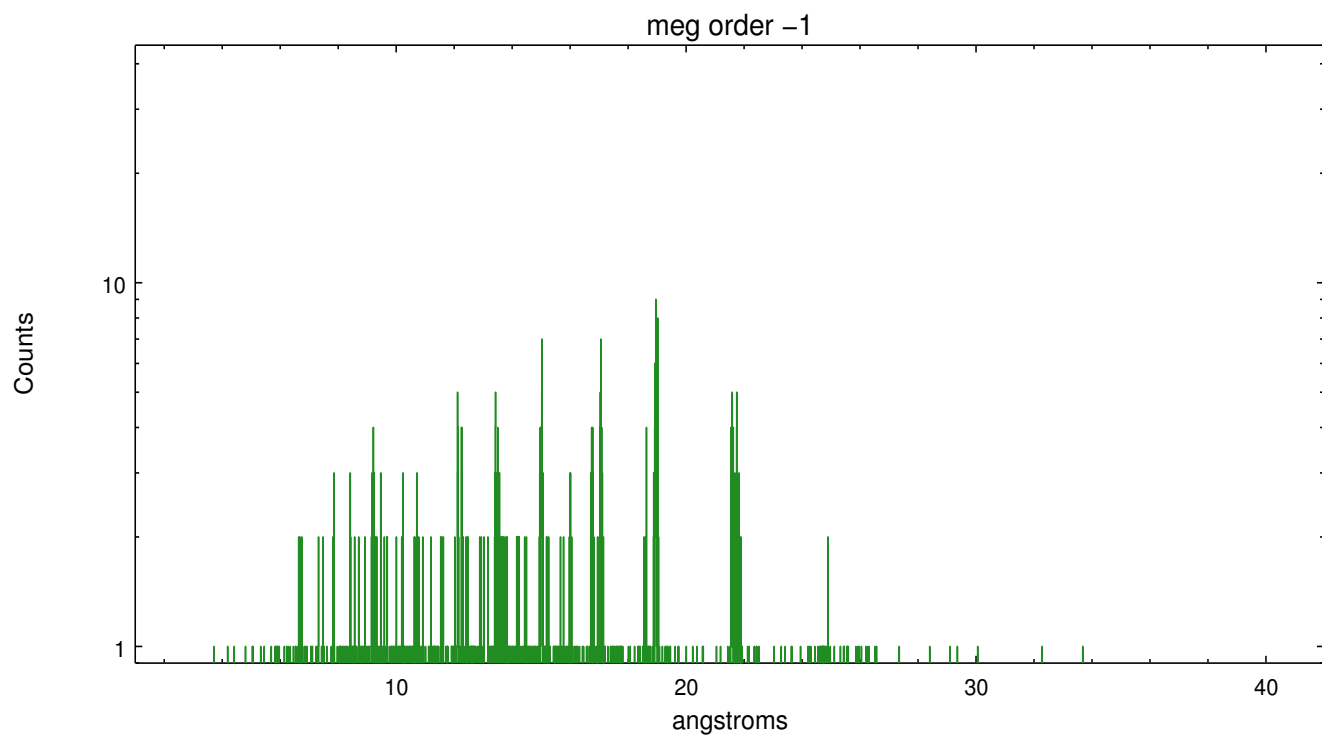
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	122	106	1373	2554	815	67	77





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.961

A.2 Comments

Roll constraint met.

===

Warning: double source with about 5 arcsec separation. Extraction is centered on the brighter component, but there could be some contamination in the dispersed spectra, especially in MEG.

===

Standard data processing software did not correctly locate the zeroth order because of the nearby source. Manual intervention was used to input the sky coordinates (x=4064.0, y=4206.25), which were determined by eye, into the *src1a.fits file table. 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.