

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10661 - L2 Version 4
Chandra X-Ray Center

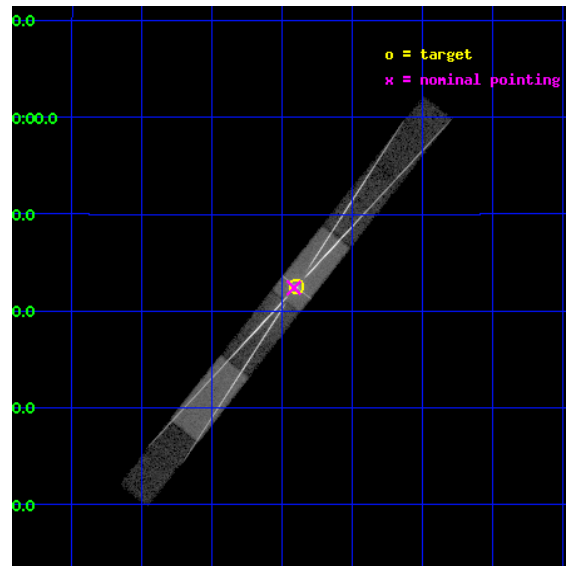
L2 Processing Date : May 29 2012

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1 Front

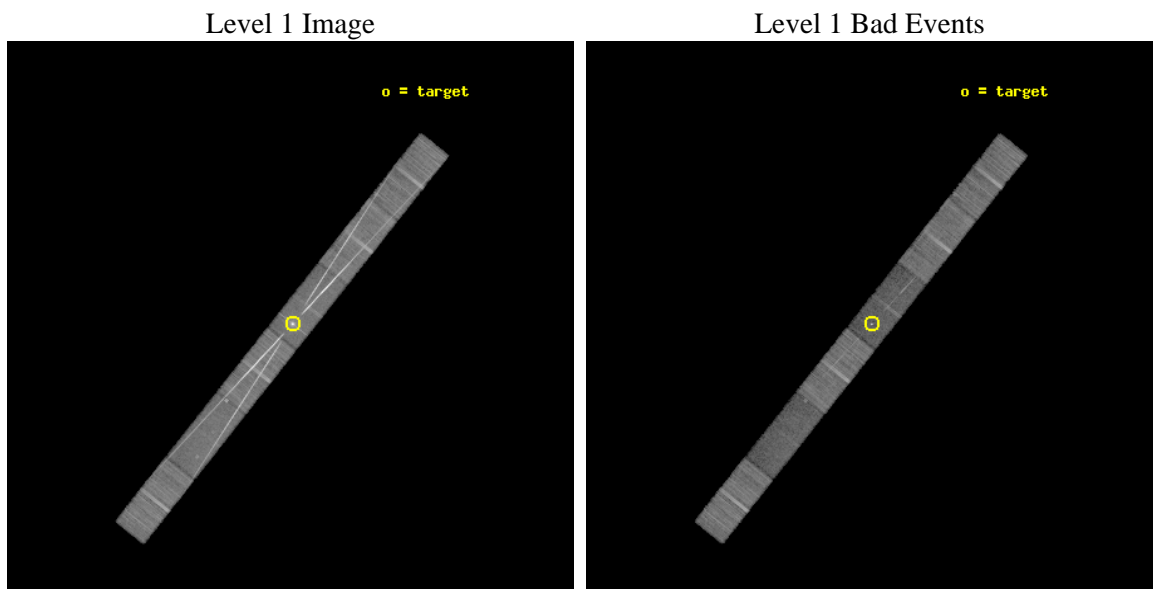
seq_num	790198	Sequence number
obs_id	10661	Observation id
title	AO-10 Calibration Observations of 4U 1957+11	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	4U 1957+11	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.849583	Observer's specified target RA [deg]
dec_targ	11.708333	Observer's specified target Dec [deg]
ra_nom	299.85421533939	Nominal RA [deg]
dec_nom	11.706672596144	Nominal Dec [deg]
roll_nom	308.42456514684	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10093.476613939	Sum of GTIs [s]
livetime	9824.6735457277	Livetime [s]
ontime4	10093.5	Sum of GTIs [s]
ontime5	10093.435573936	Sum of GTIs [s]
ontime6	10093.394533932	Sum of GTIs [s]
ontime7	10093.476613939	Sum of GTIs [s]
ontime8	10093.353493929	Sum of GTIs [s]
ontime9	10093.312453926	Sum of GTIs [s]
l2events	413079	Number of level 2 events



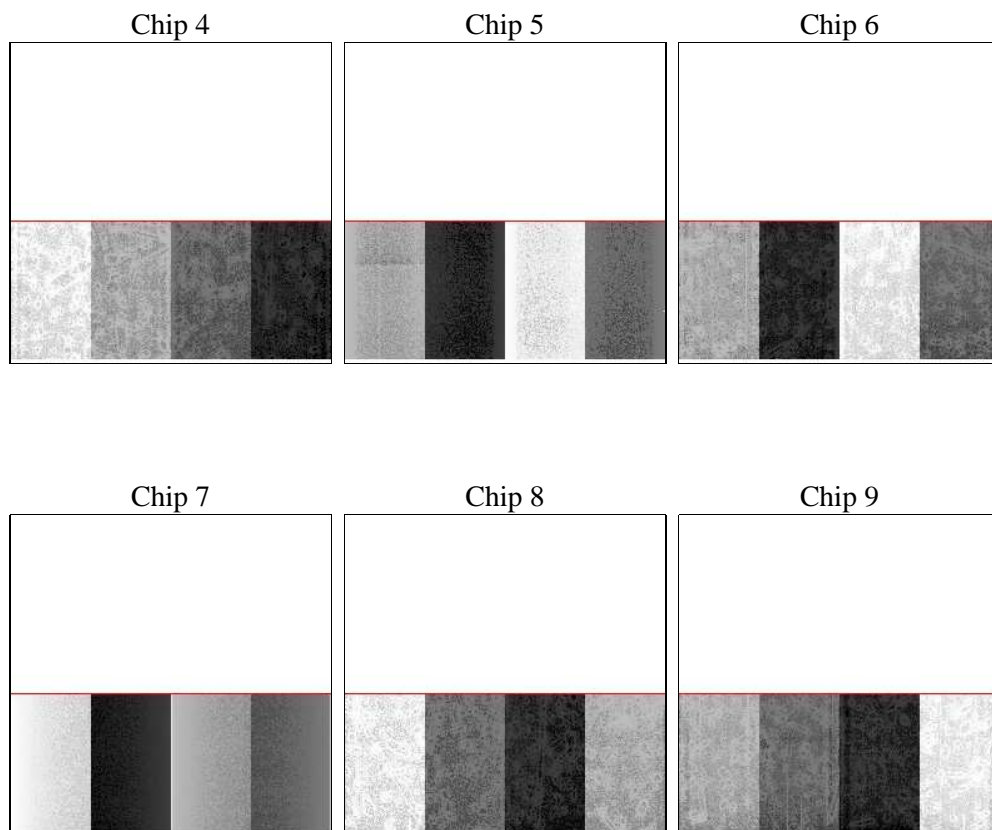
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	10093.476613939	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	10093.5	Sum of GTIs [s]
date	2012-05-25T19:12:23	Date and time of file creation	ontime5	10093.435573936	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10093.394533932	Sum of GTIs [s]
			ontime7	10093.476613939	Sum of GTIs [s]
			ontime8	10093.353493929	Sum of GTIs [s]
			ontime9	10093.312453926	Sum of GTIs [s]
			l1events	1000301	Number of level 1 events

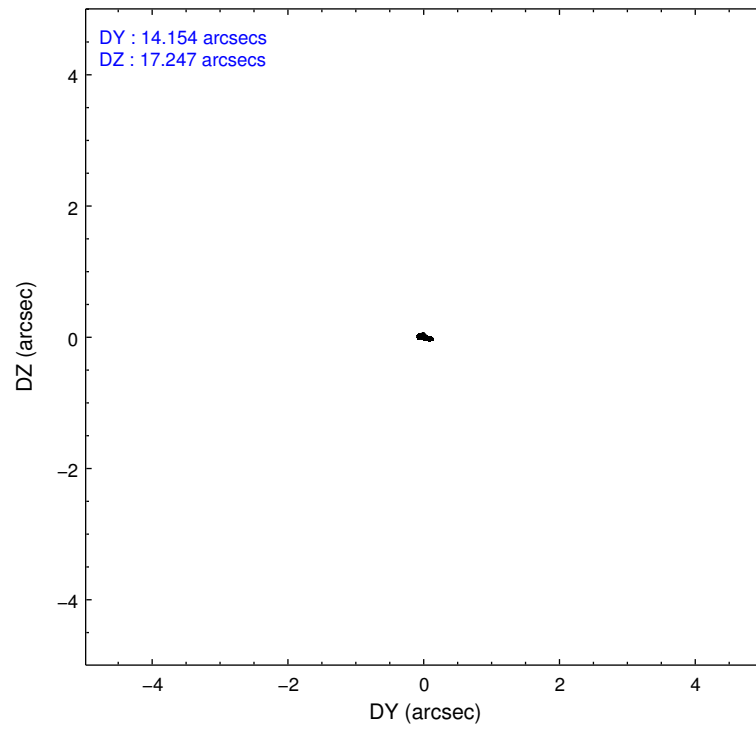
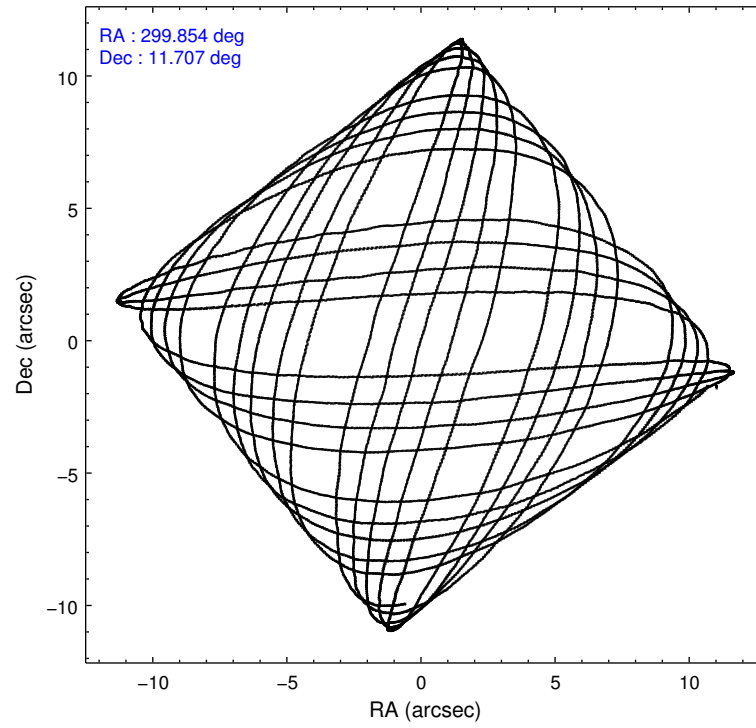
2.1.4 Events

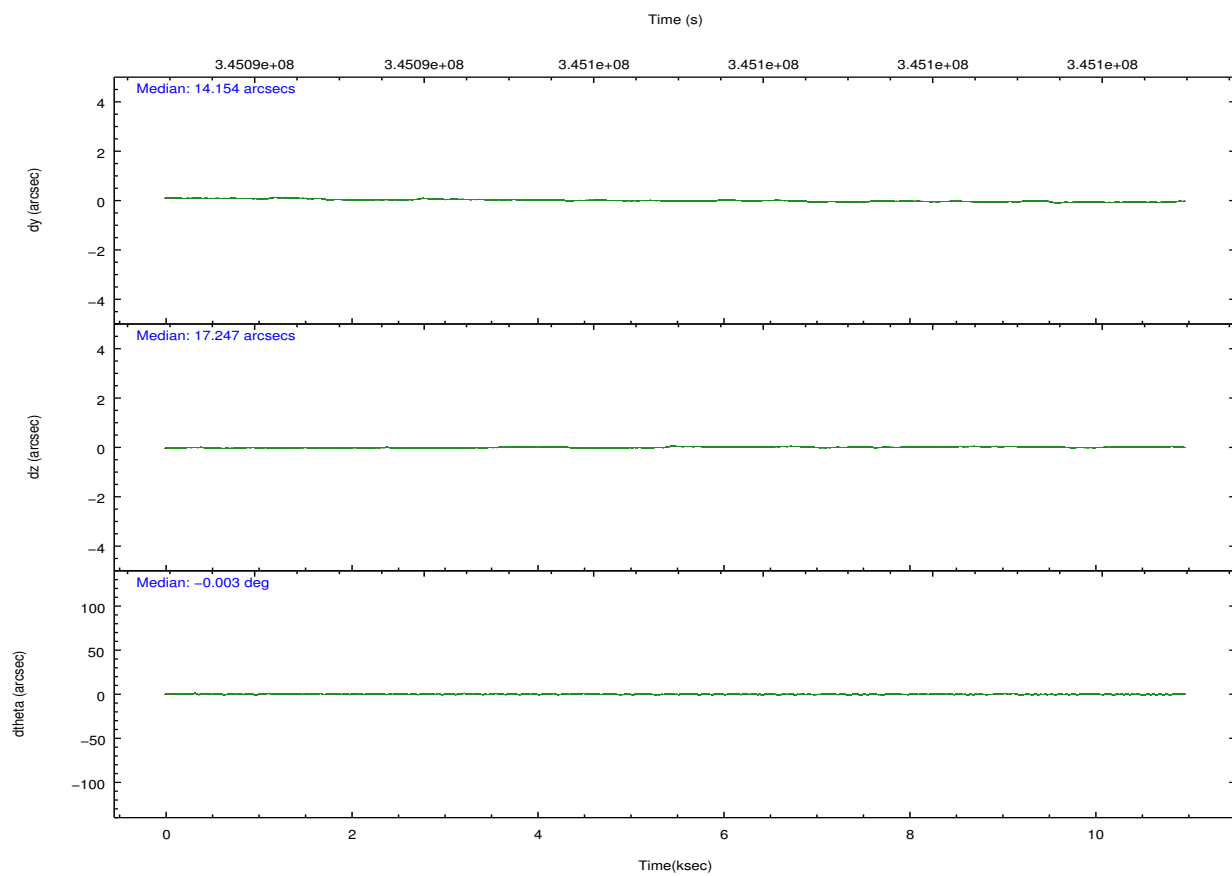
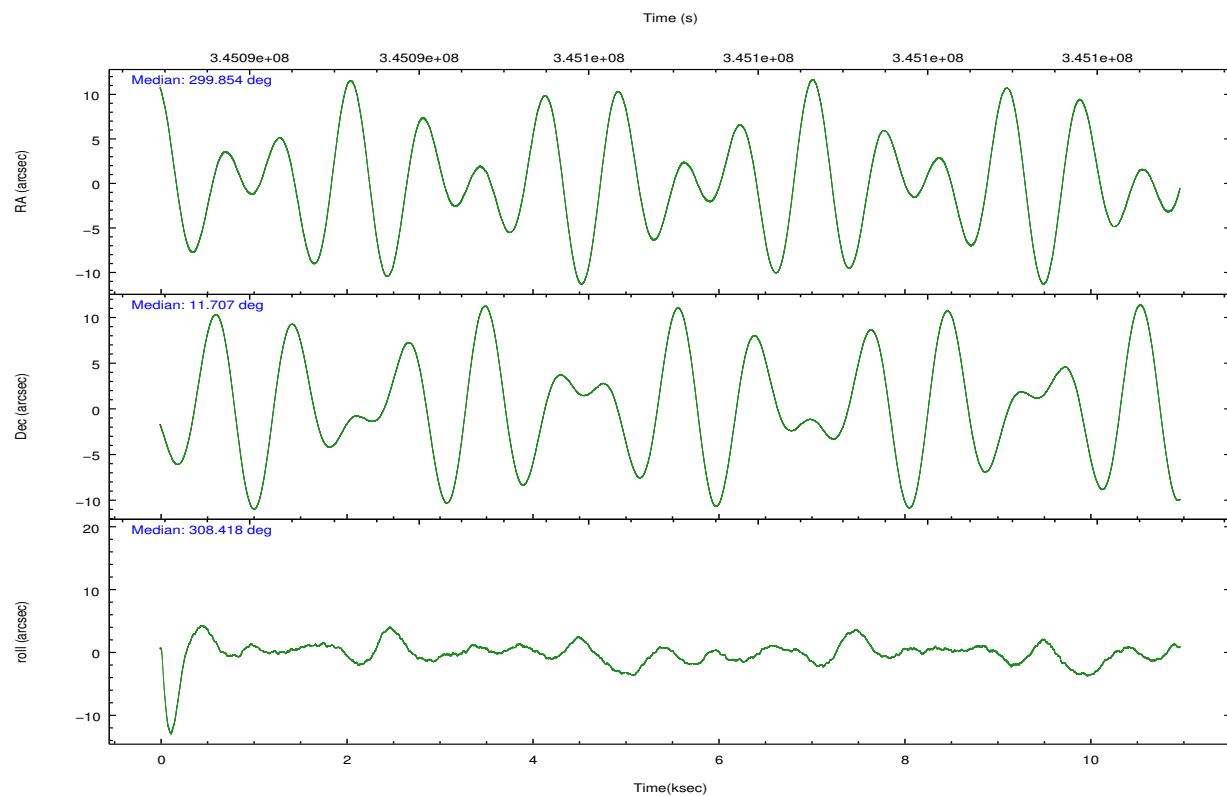
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	125499	120168	246222	214479	175154	118779	grade 0 events	4289	15077	97795	30457	48269	8808
rejected events	117102	55444	116044	57626	107764	105022		3%	12%	39%	14%	27%	7%
rejected %	93%	46%	47%	26%	61%	88%	grade 1 events	27	457	976	536	279	41
								0%	0%	0%	0%	0%	0%
							grade 2 events	1619	19154	15864	38895	8282	1981
								1%	15%	6%	18%	4%	1%
							grade 3 events	775	4767	5577	16965	3309	910
								0%	3%	2%	7%	1%	0%
							grade 4 events	687	4718	5423	16871	3050	844
								0%	3%	2%	7%	1%	0%
							grade 5 events	1954	5905	2715	7799	2865	2232
								1%	4%	1%	3%	1%	1%
							grade 6 events	1030	21018	5570	53688	4505	1220
								0%	17%	2%	25%	2%	1%
							grade 7 events	115118	49072	112302	49268	104595	102743
								91%	40%	45%	22%	59%	86%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	299.828129	299.8542153393931	CCD I2 on	N	N
[deg] Pointing Dec	11.716393	11.70667259614421	CCD I3 on	N	N
[deg] Pointing Roll	308.273225	308.4245651468402	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-183.332523	-183.3237572673427	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.8	-6.808765315665084	CCD S4 on	Y	Y
[s] Observation start time (MET)	345092446.184000	345091289.05812	CCD S5 on	O2	Y
Observation start date	2008-12-08T02:59:41	2008-12-08T02:41:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	345102446.184000	345103514.23373	On-chip summing requested	N	N
Observation end date	2008-12-08T05:46:21	2008-12-08T06:05:14	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	15	15
			Subarray row count	440	440
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.5

2.3 Aspect



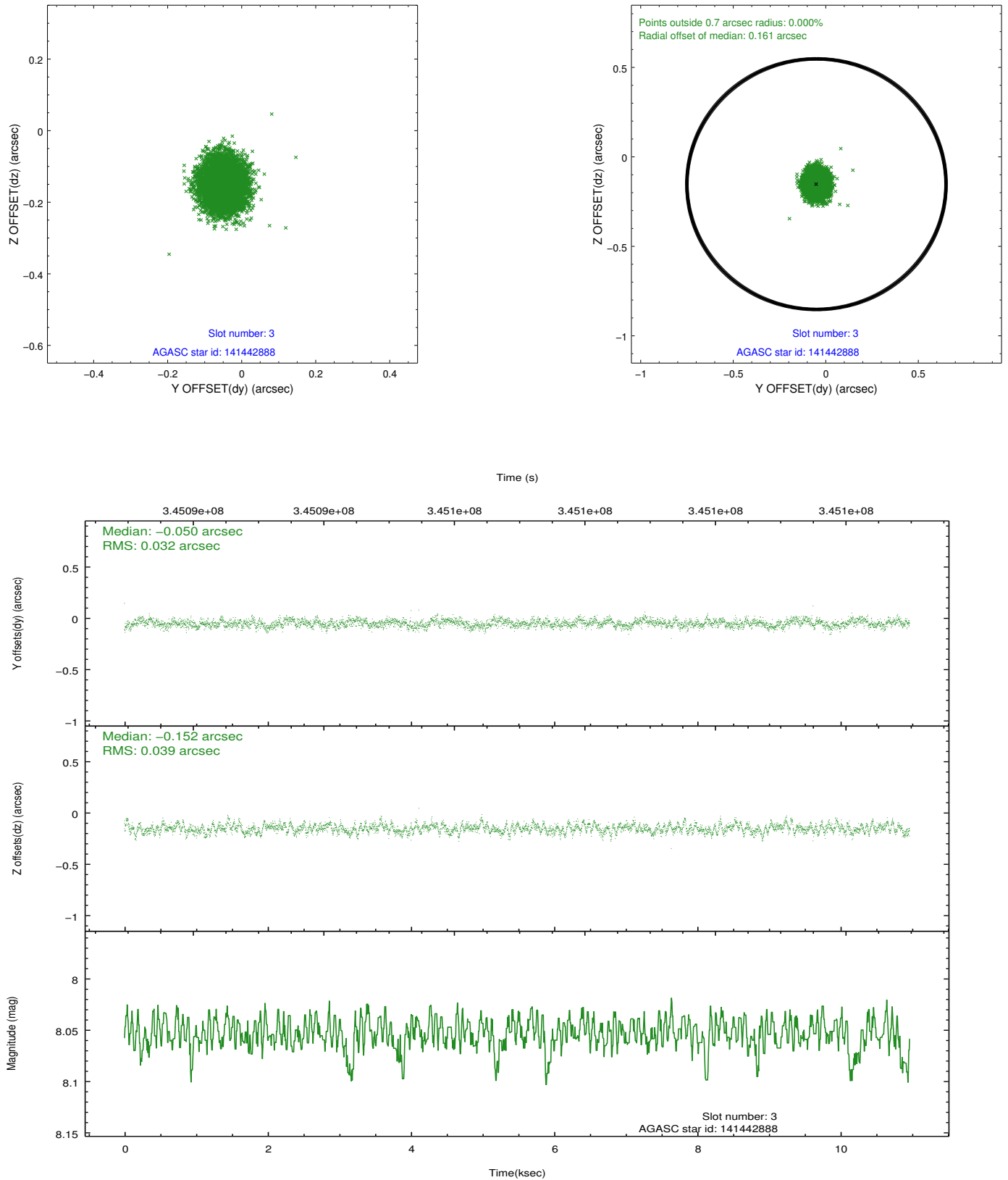


Slot Statistics

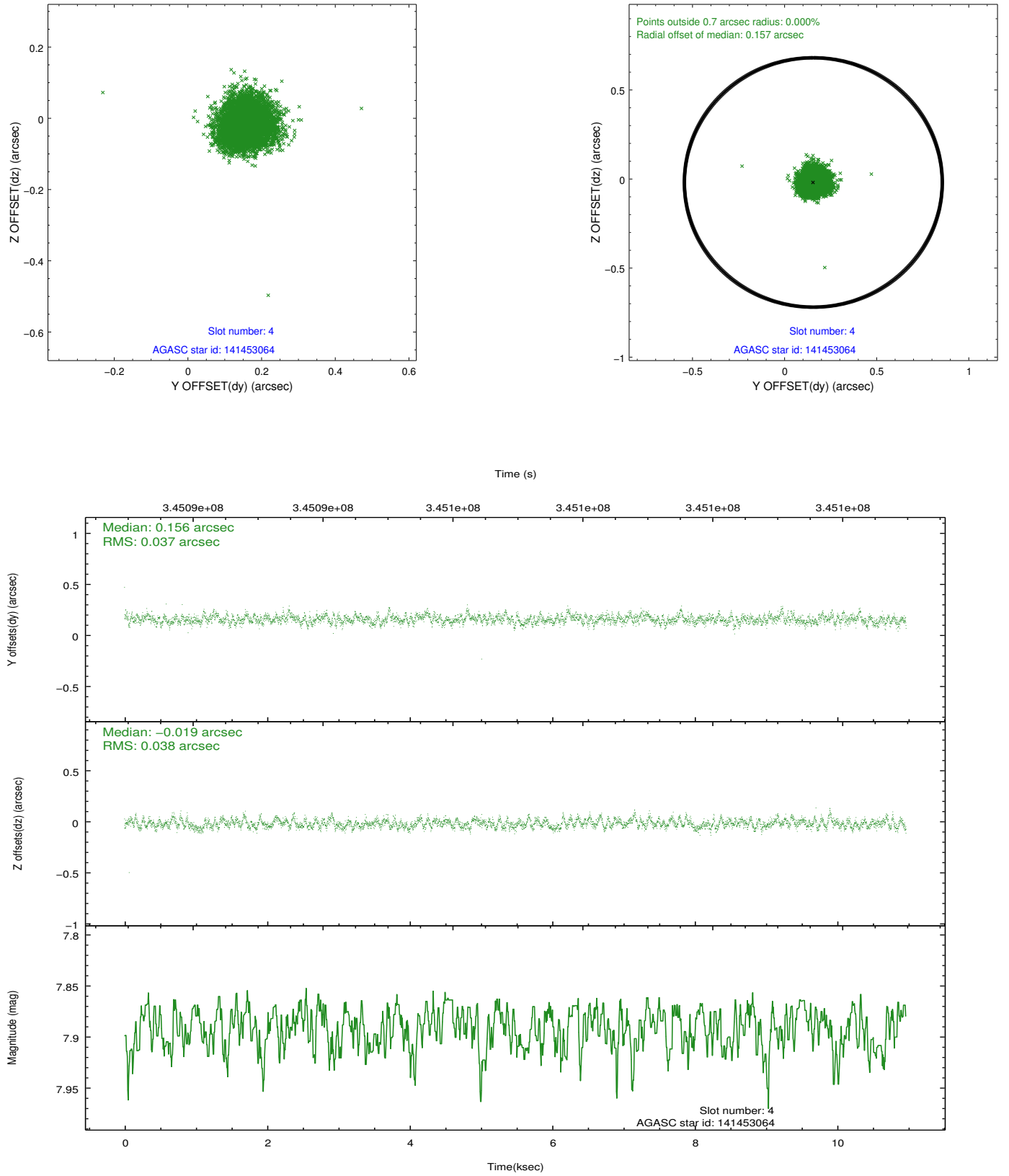
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.86	2676	-0.074	-0.132	0.007	0.011	0.000000	0.000000	-766.72	-1879.12
1	FID	ACIS-S-4	6.93	2675	0.192	0.071	0.006	0.011	0.000000	0.000000	2146.63	28.98
2	FID	ACIS-S-5	7.00	2675	-0.149	0.069	0.006	0.011	0.000000	0.000000	-1819.01	23.23
3	GUIDE	141442888	8.05	5351	-0.050	-0.152	0.054	0.086	299.399699	11.590250	-579.88	-1466.67
4	GUIDE	141453064	7.89	5351	0.156	-0.019	0.056	0.091	299.483987	11.414705	100.35	-1625.66
5	GUIDE	141453280	8.53	5347	-0.144	0.084	0.059	0.095	299.888387	12.264129	-1416.76	1387.75
6	GUIDE	141453016	8.07	5349	-0.137	0.088	0.051	0.082	299.897092	12.218121	-1267.71	1309.74
7	GUIDE	141563816	9.15	5347	0.174	-0.002	0.088	0.138	300.647752	11.777144	1614.23	2406.50

2.4 Star Slots

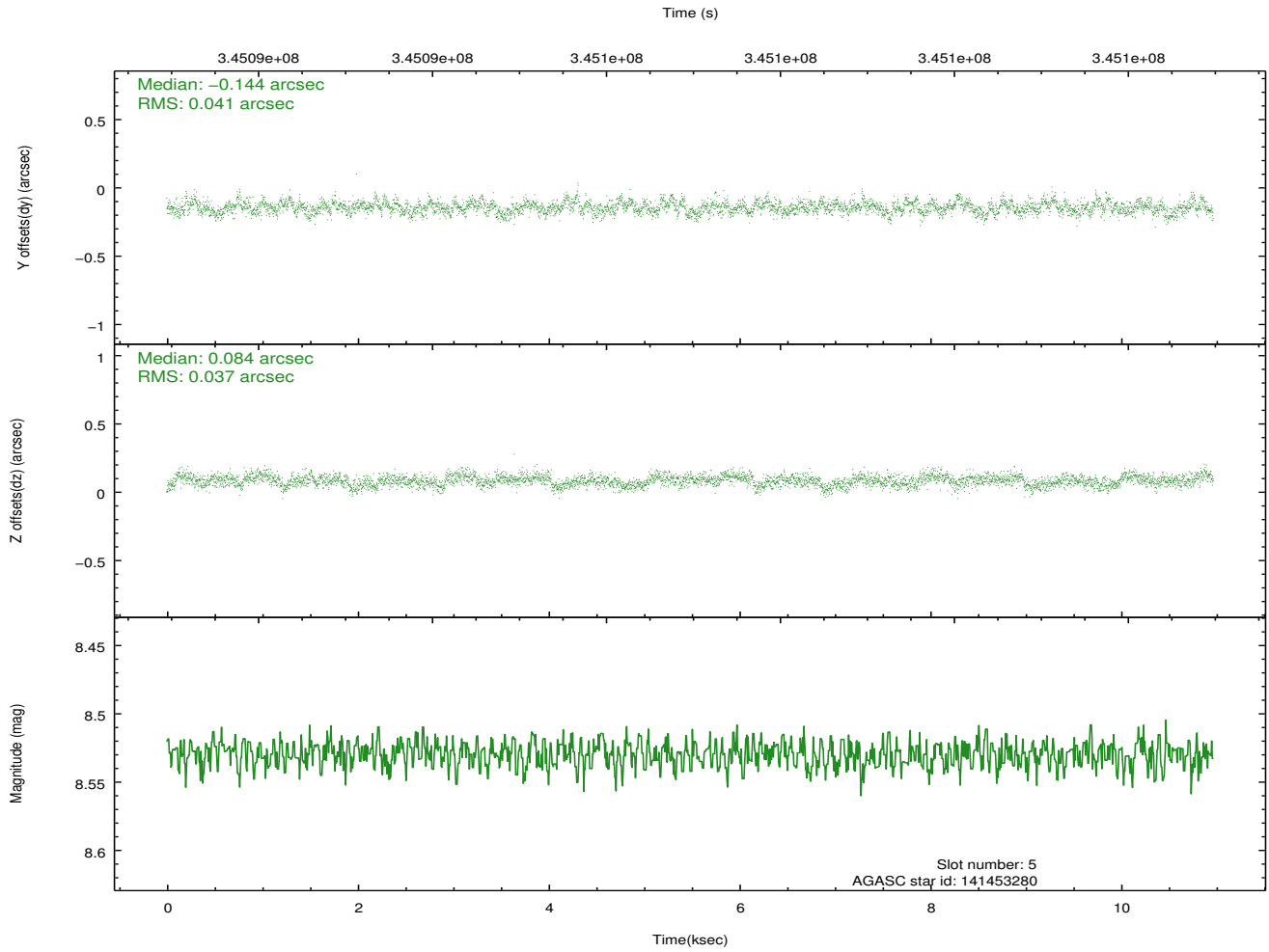
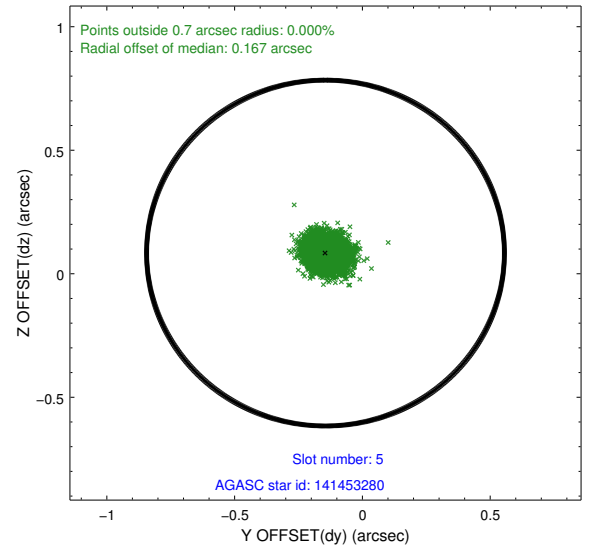
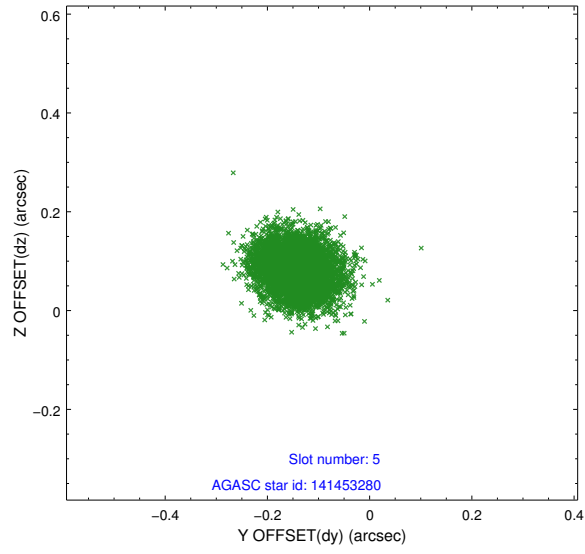
2.4.1 Slot 3



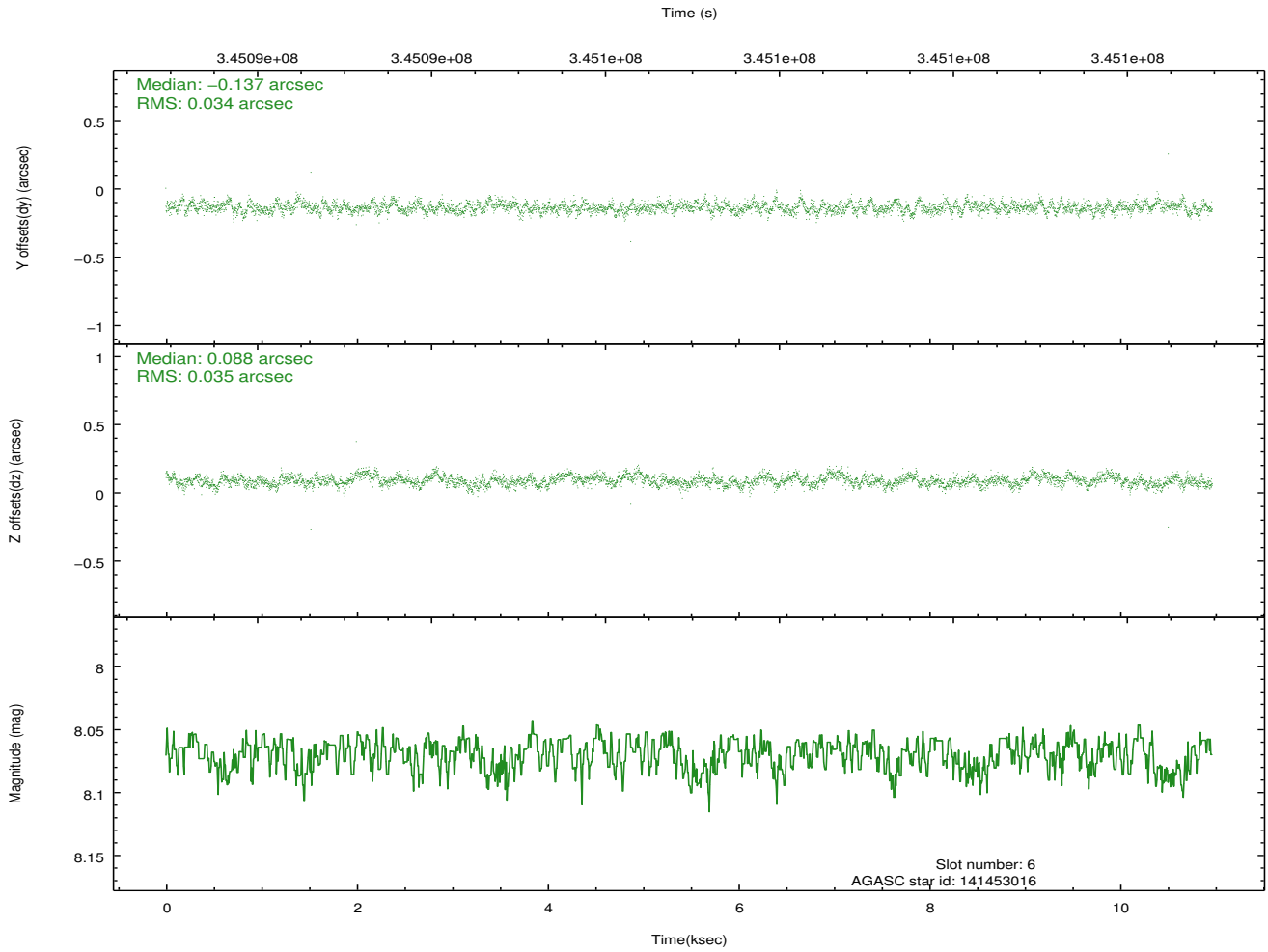
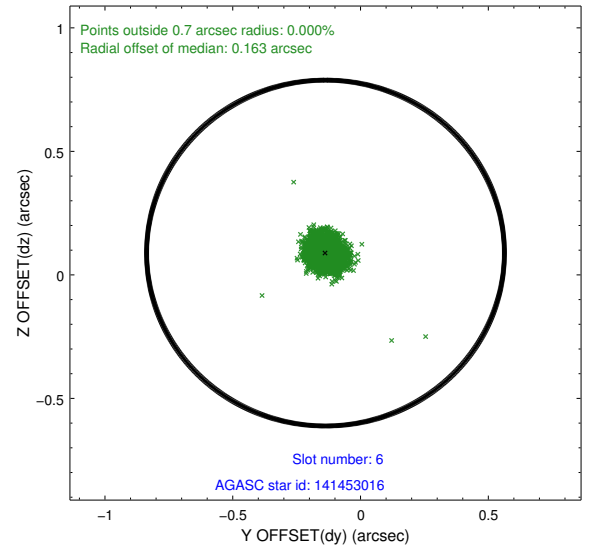
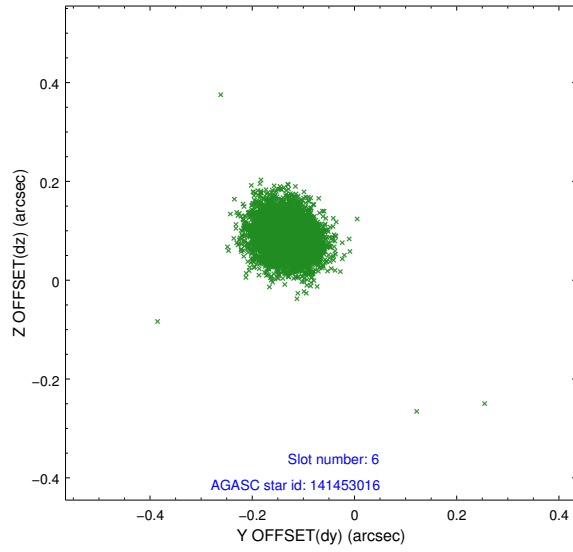
2.4.2 Slot 4



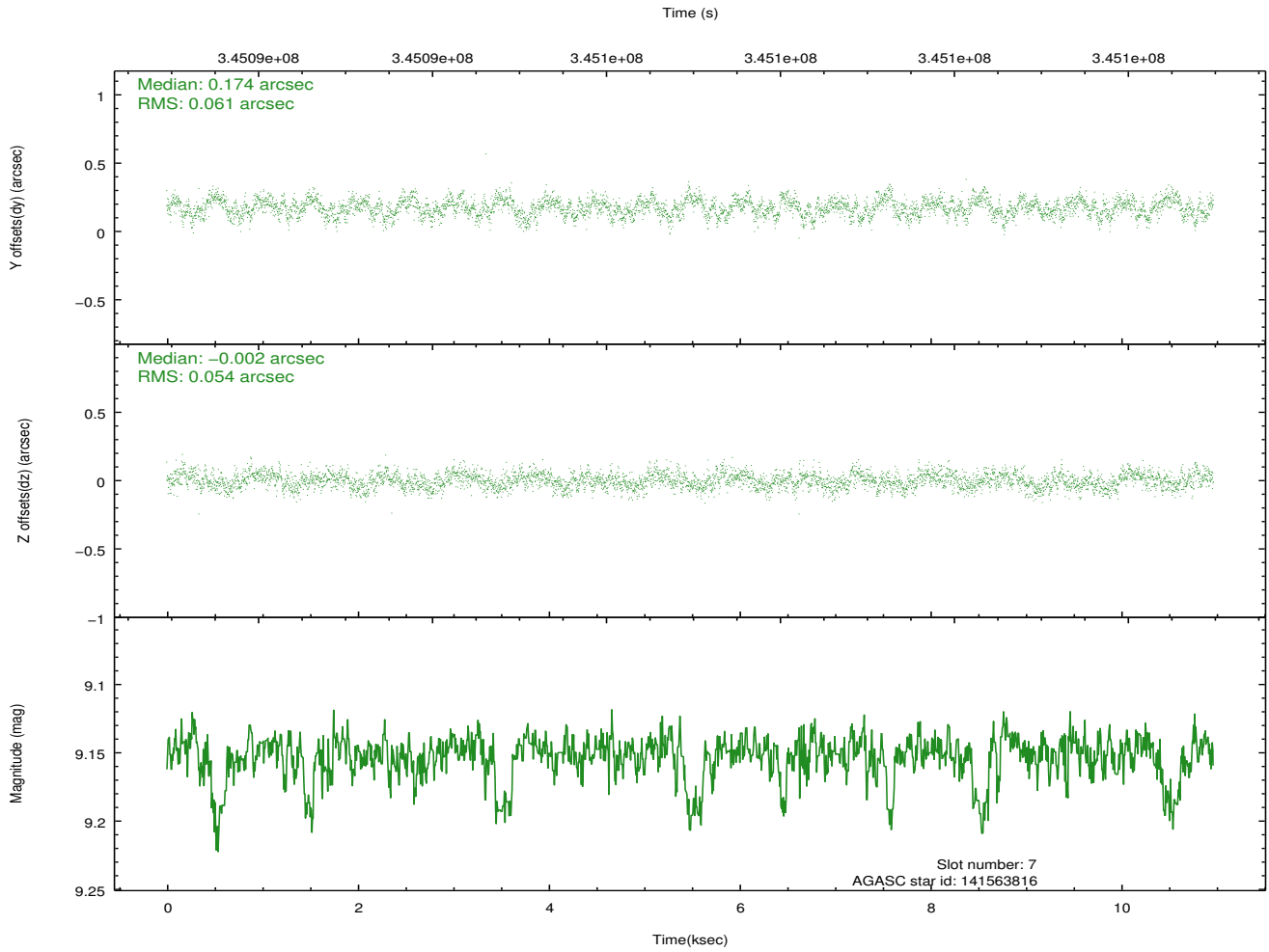
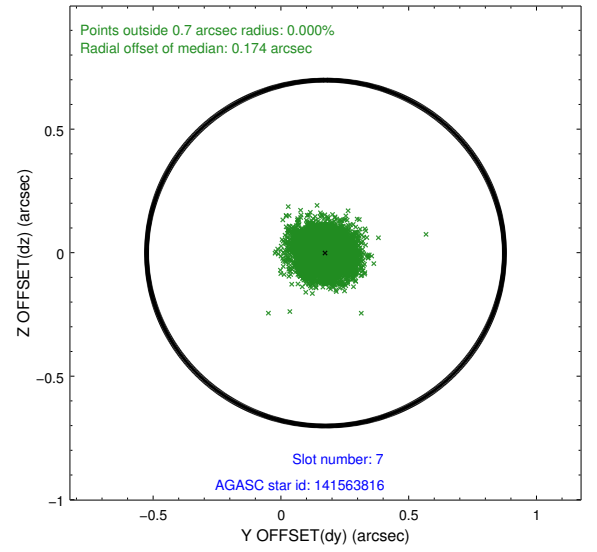
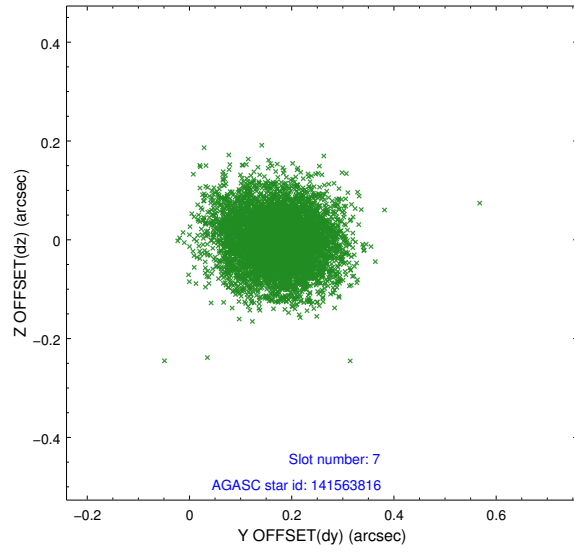
2.4.3 Slot 5



2.4.4 Slot 6

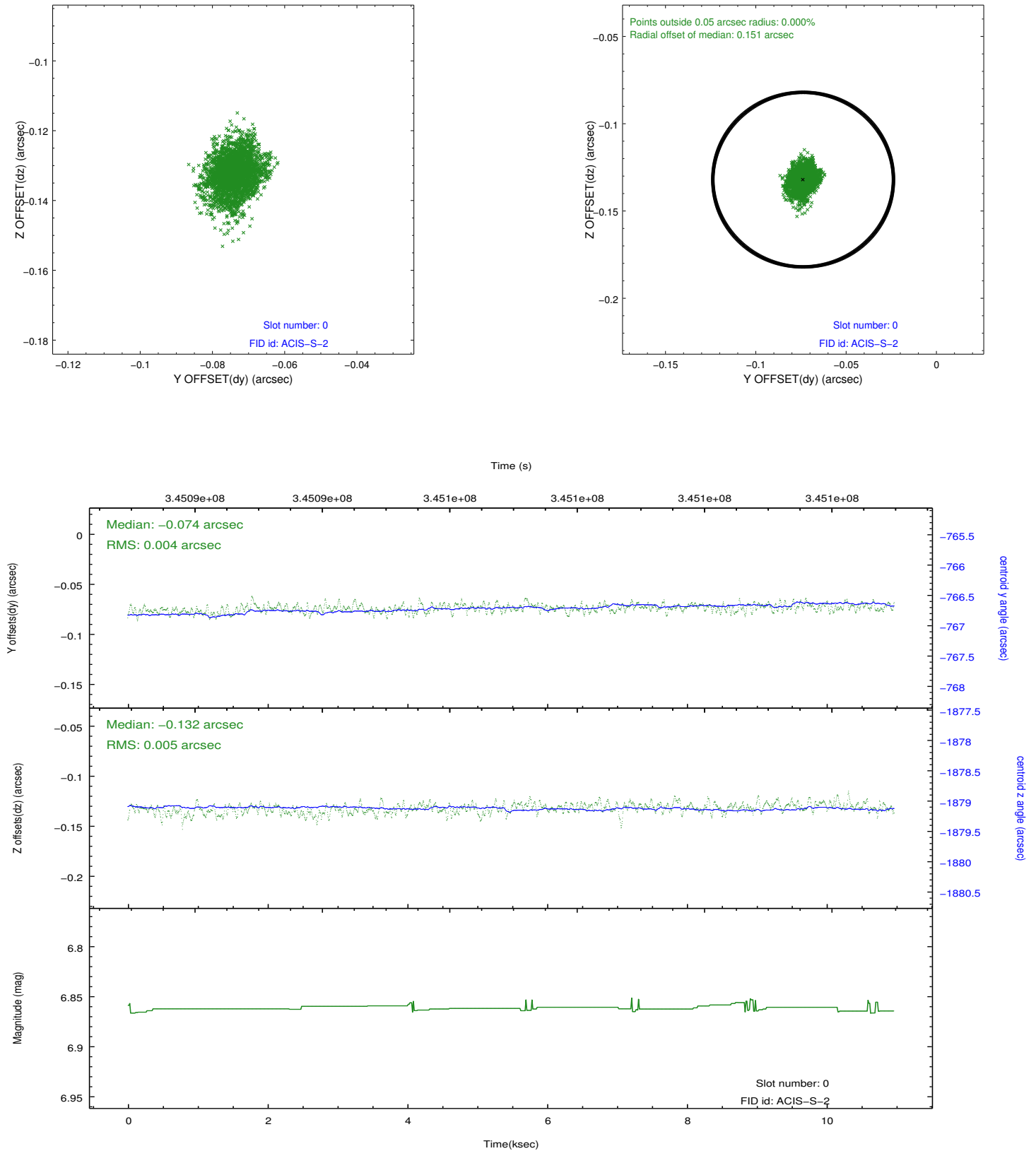


2.4.5 Slot 7

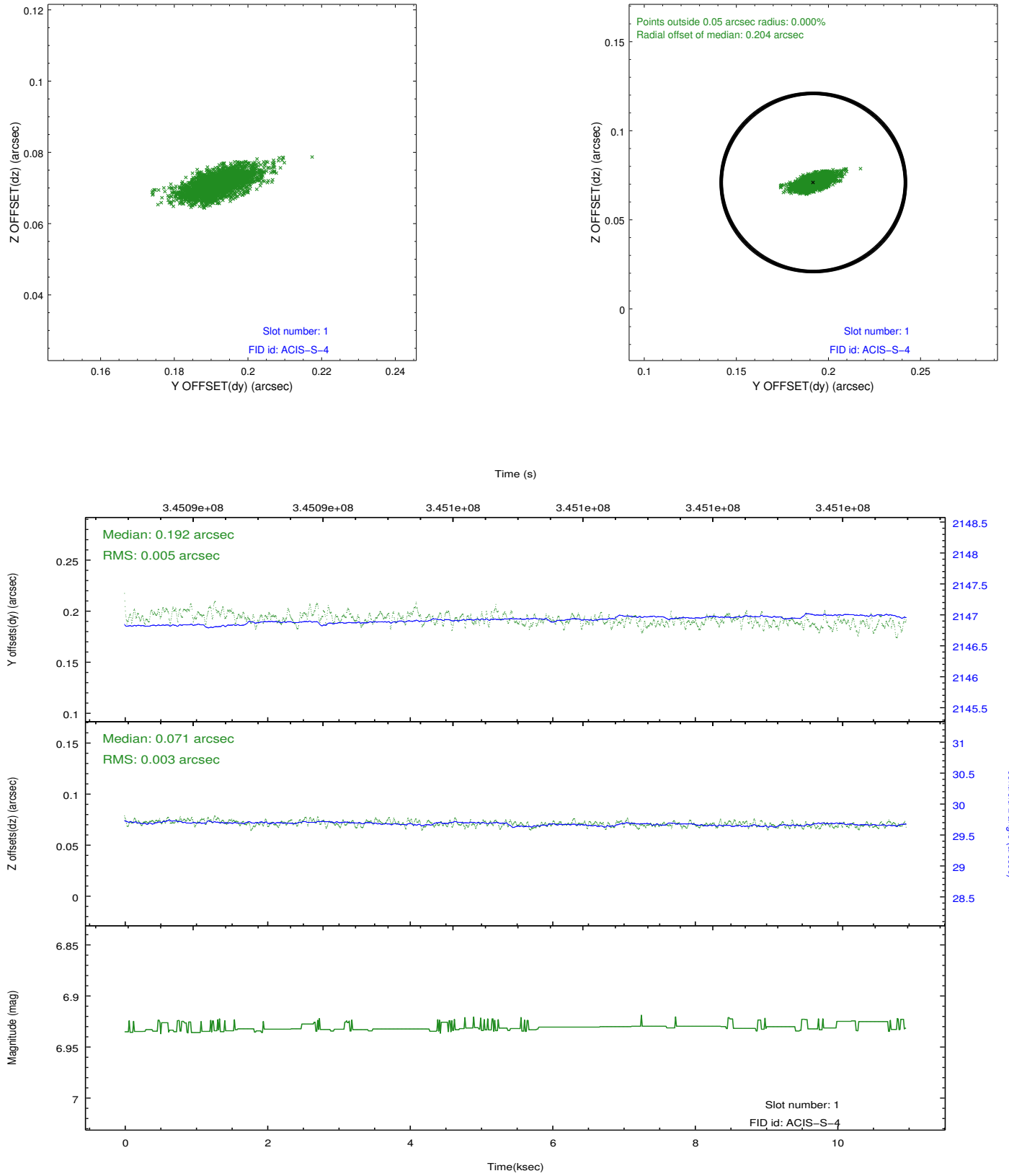


2.5 FID Slots

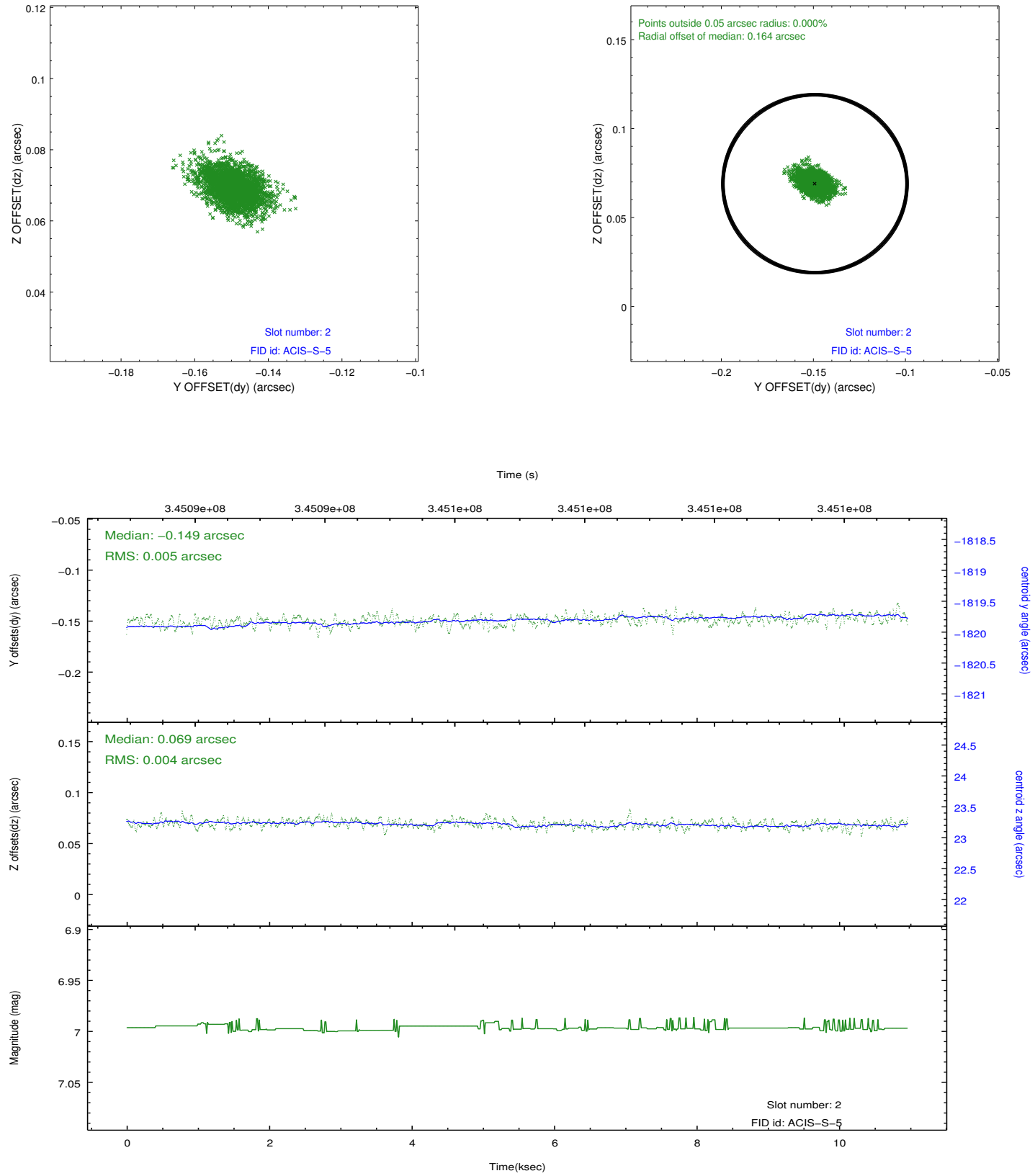
2.5.1 Slot 0



2.5.2 Slot 1

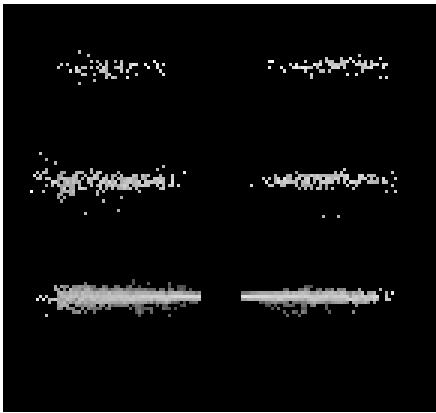


2.5.3 Slot 2

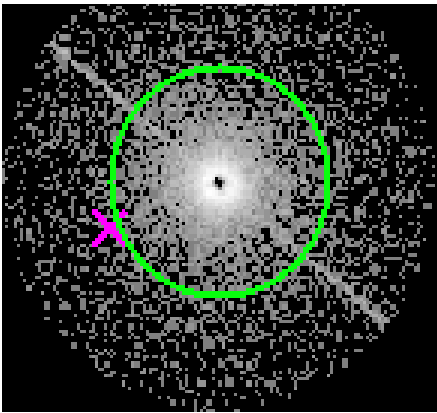


3 Gratings

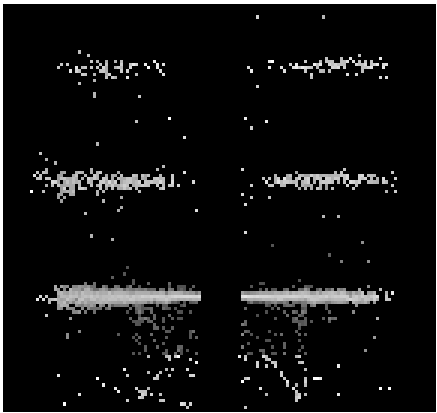
3.1 HEG Arm



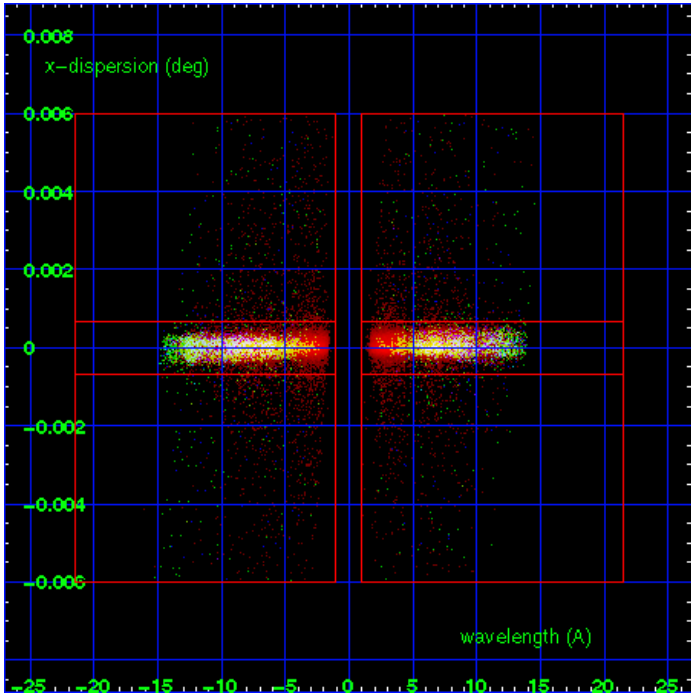
HEG Order Sort 123



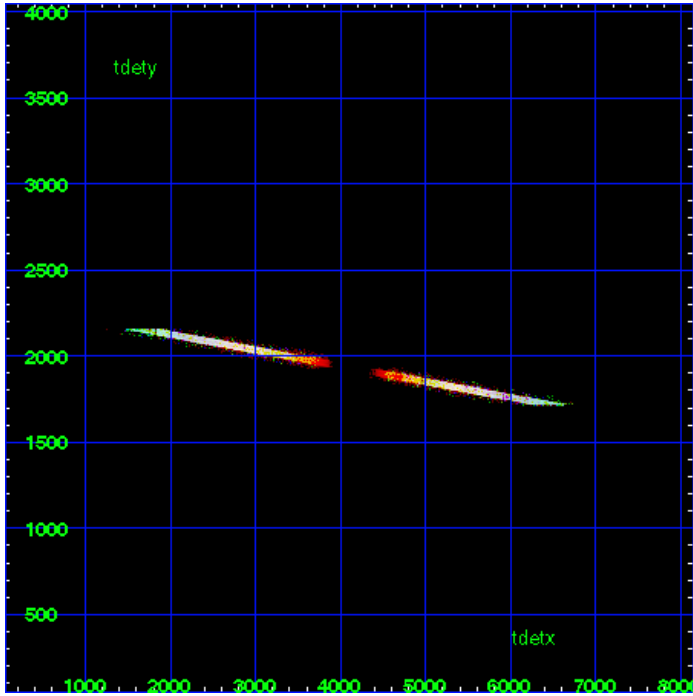
HEG Zero Order



HEG Order Sort ALL

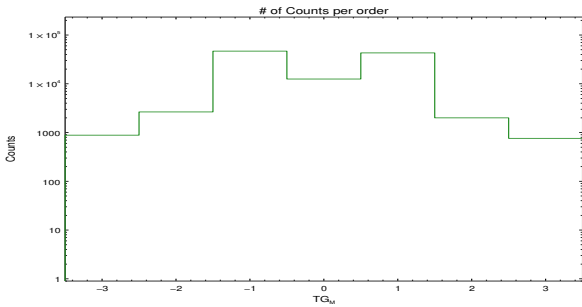


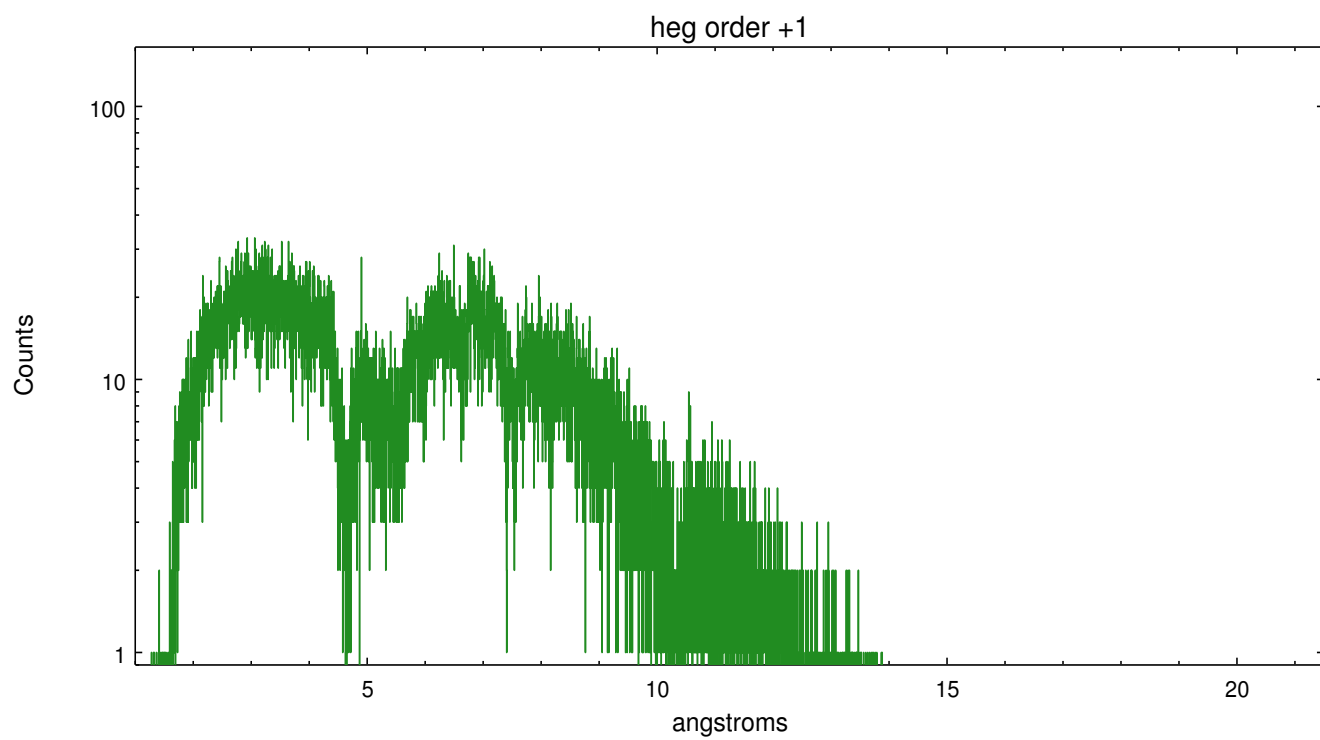
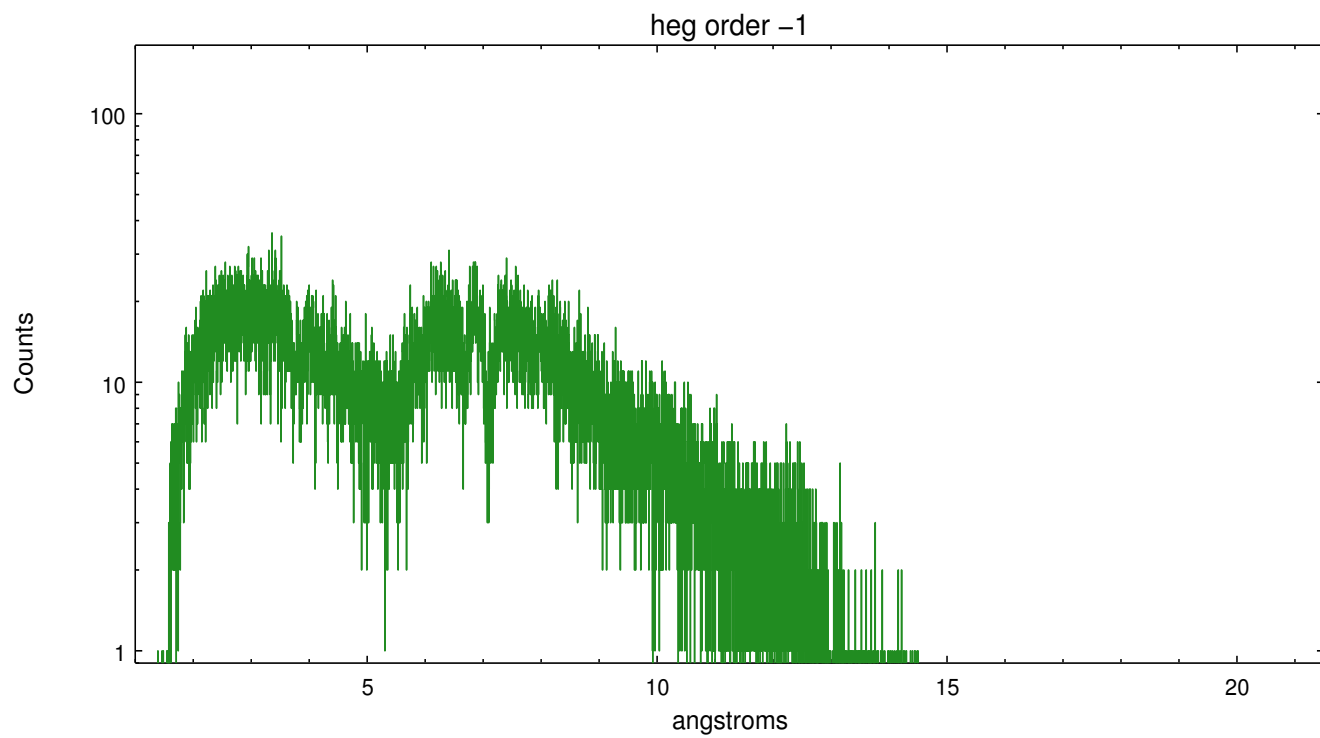
Spot Image HEG



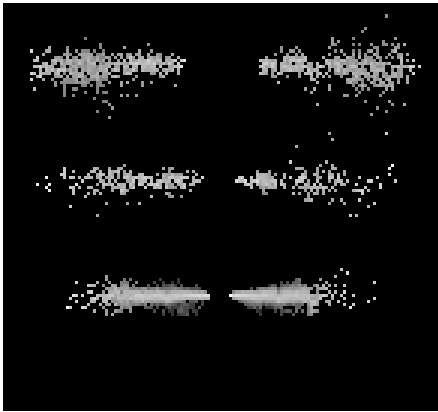
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	883	2647	46754	12518	43002	2001	760

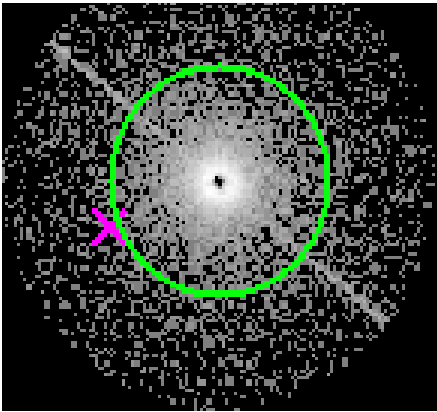




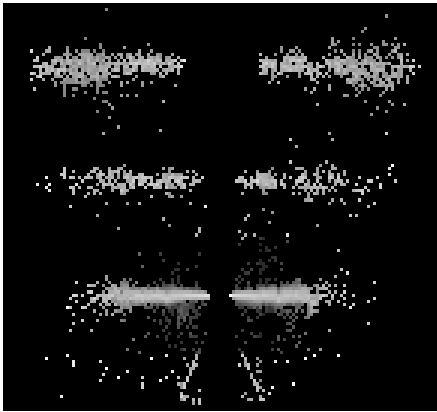
3.2 MEG Arm



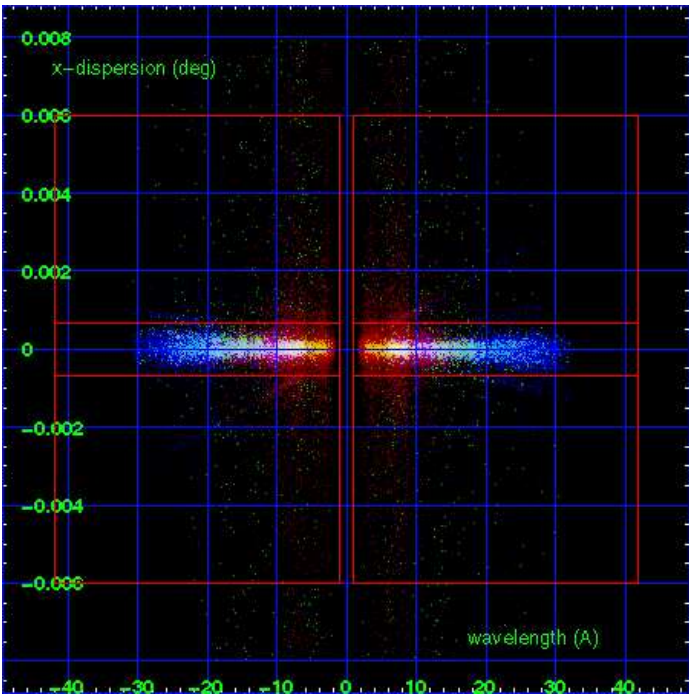
MEG Order Sort 123



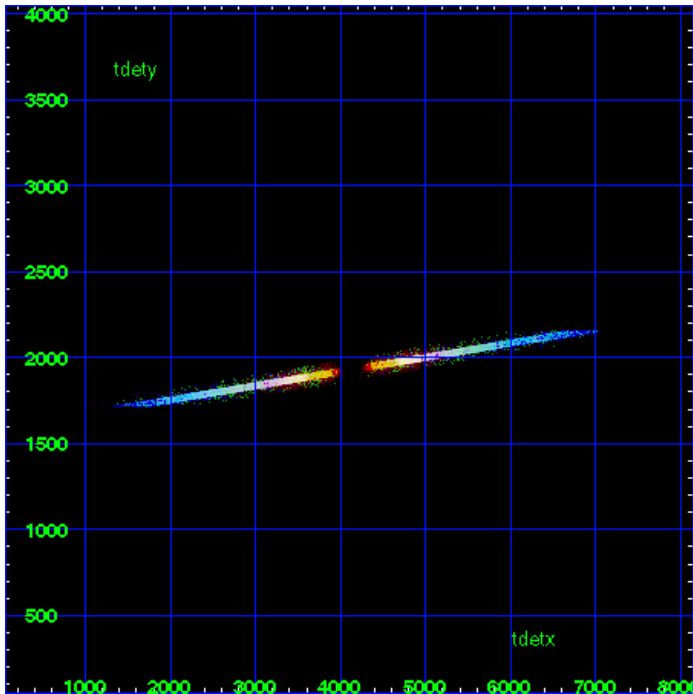
MEG Zero Order



MEG Order Sort ALL

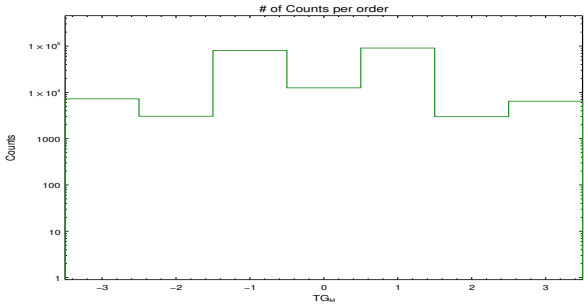


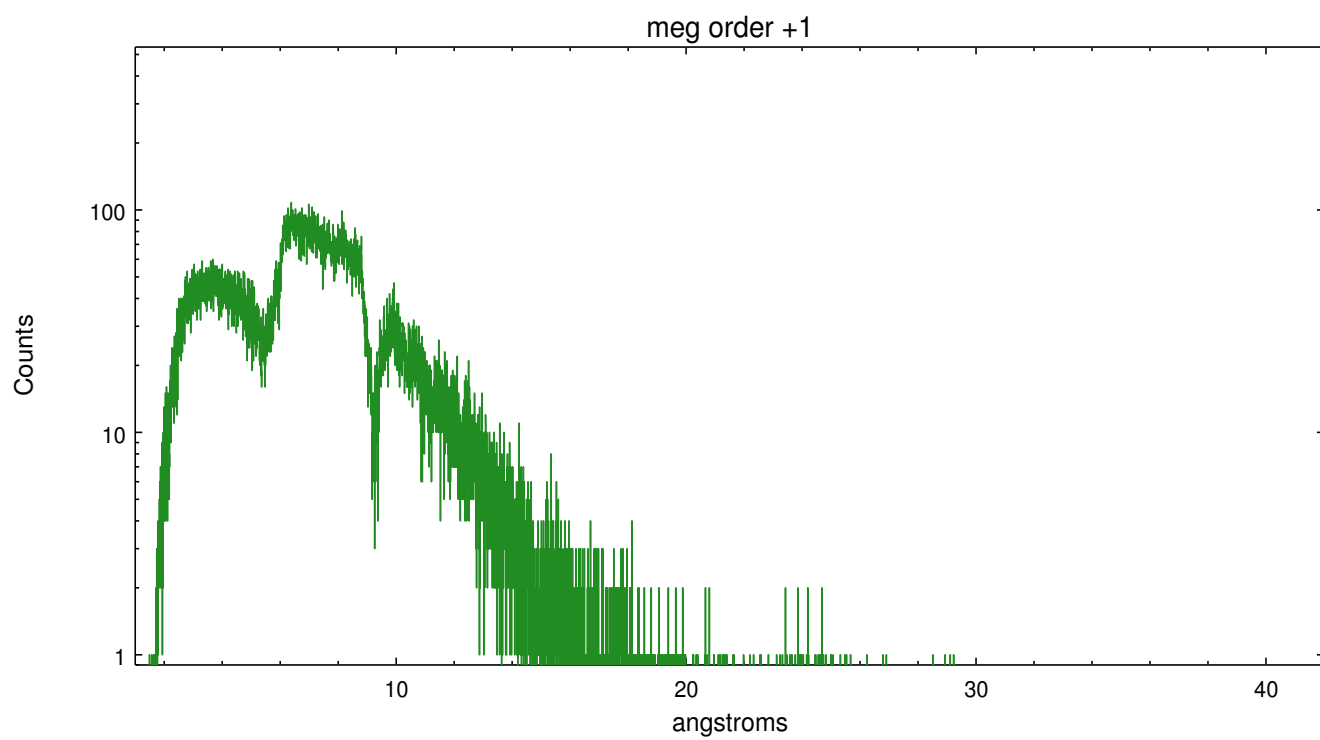
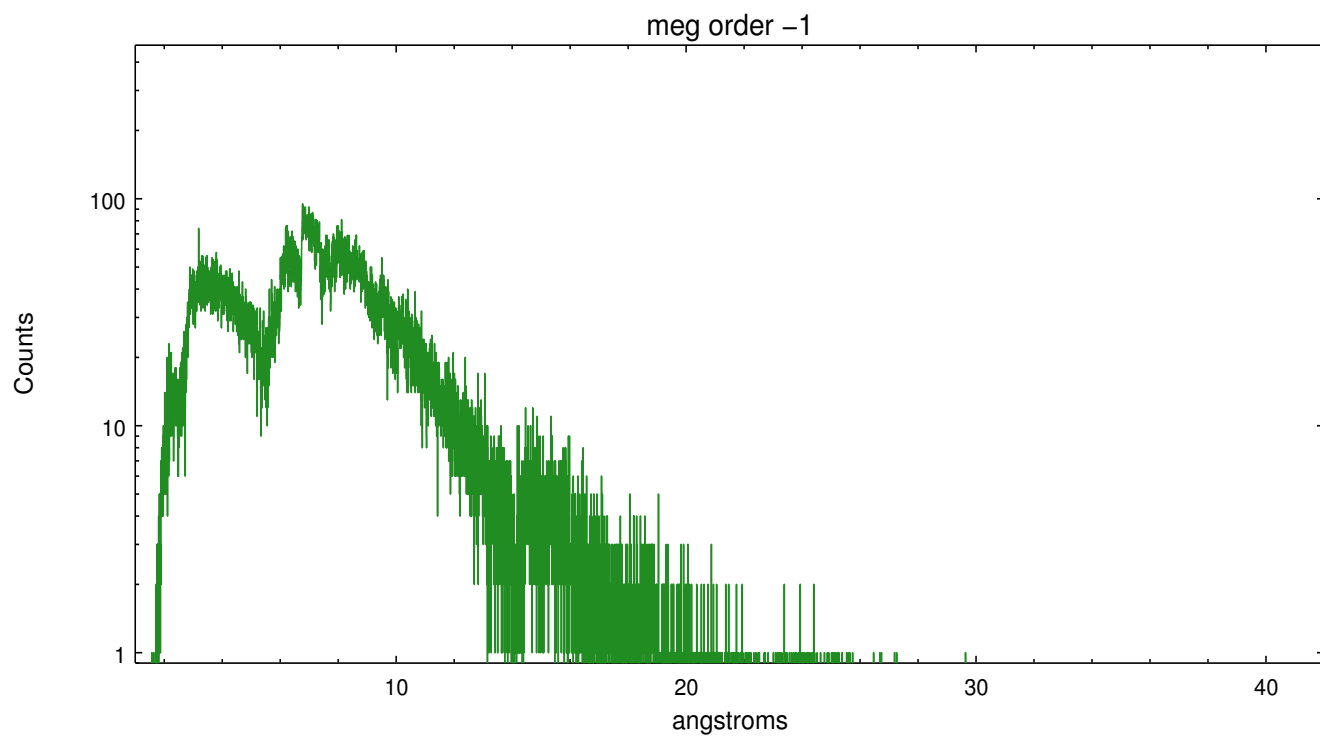
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7245	3045	80315	12518	90561	2981	6434





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.0935

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=4126.34, y=4108.03) into the *srcla.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. 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 *srcla.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.