

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 1601 - L2 Version 001
Chandra X-Ray Center

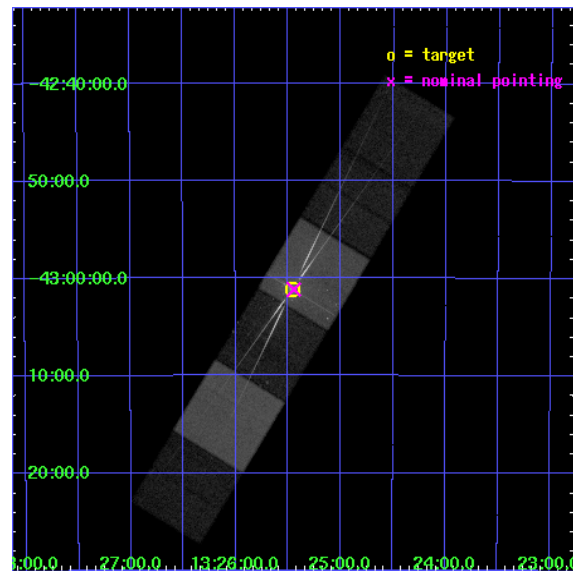
L2 Processing Date : Dec 8 2006

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

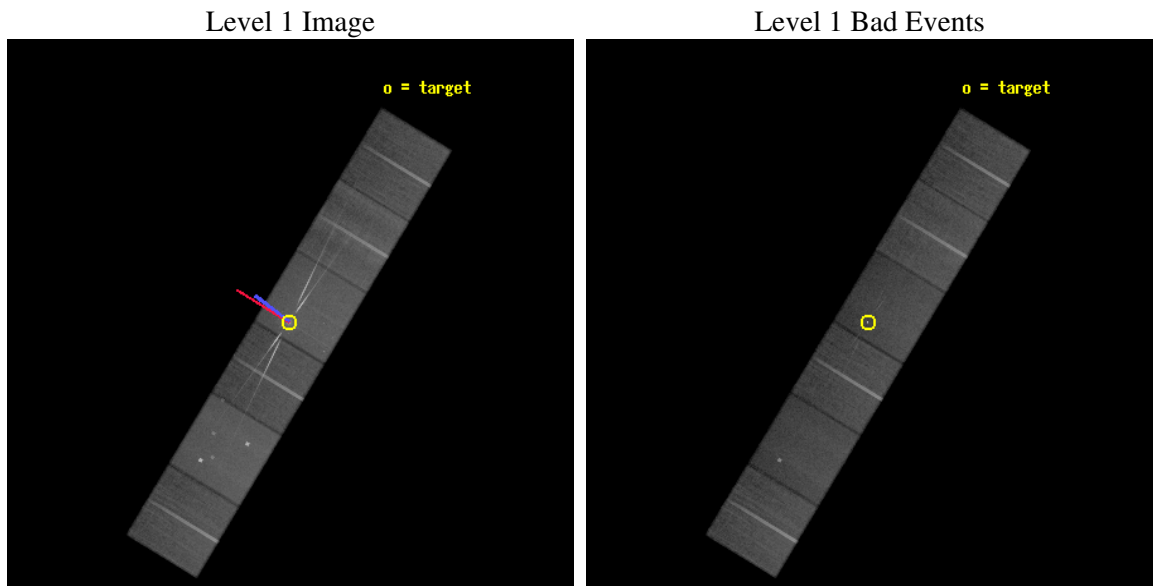
seq_num	700217
obs_id	1601
title	A HIGH RESOLUTION X-RAY SPECTRUM OF THE NUCLEUS OF CENTAURUS A
observer	Dr. Stephen Murray
object	CENTAURUS A
dtcycle	0
cycle	P
ra_targ	201.364167
dec_targ	-43.019722
ra_nom	201.36119967747
dec_nom	-43.019430370276
roll_nom	301.15360321865
revision	2
ontime	52172.80004859
livetime	51512.156639686
ontime4	52172.80004859
ontime5	52172.80004859
ontime6	52172.80004859
ontime7	52172.80004859
ontime8	52169.559058413
ontime9	52172.80004859
l2events	646715



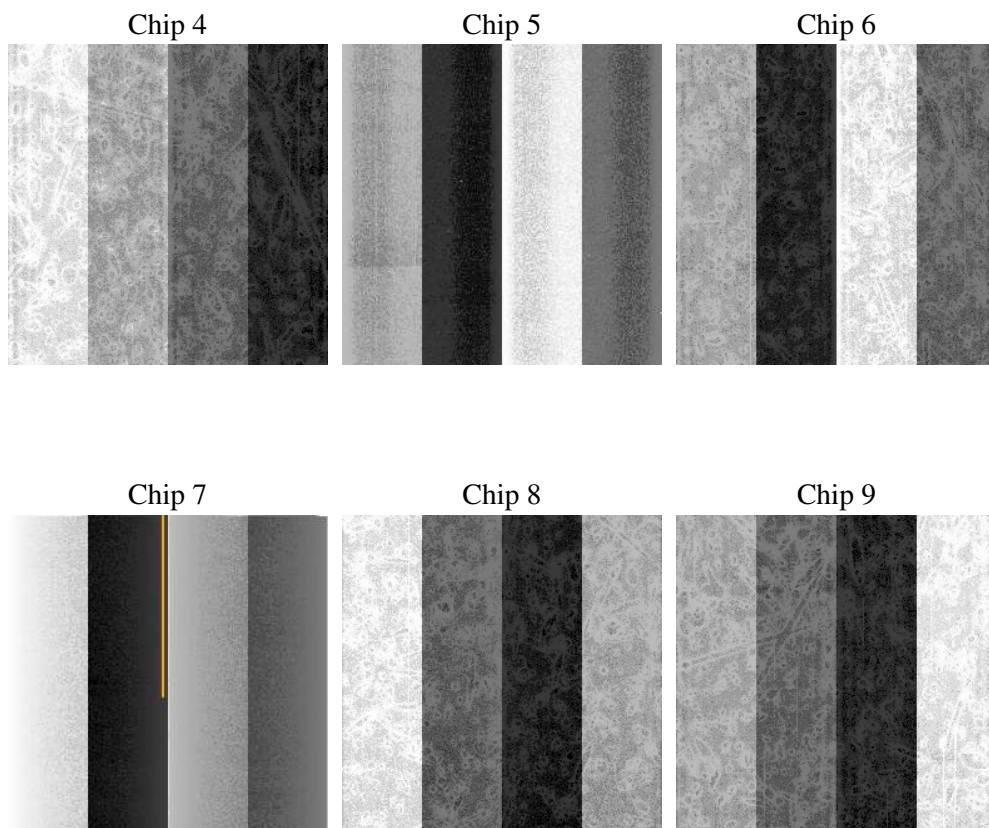
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.4
date	2006-11-21T22:21:30
revision	2

sched_exp_time	52000.000000
ontime	52582.087945864
ontime4	52488.100596935
ontime5	52582.087945864
ontime6	52507.546886787
ontime7	52582.087945864
ontime8	52507.544055775
ontime9	52501.061925948
l1events	2600262

2.1.4 Events

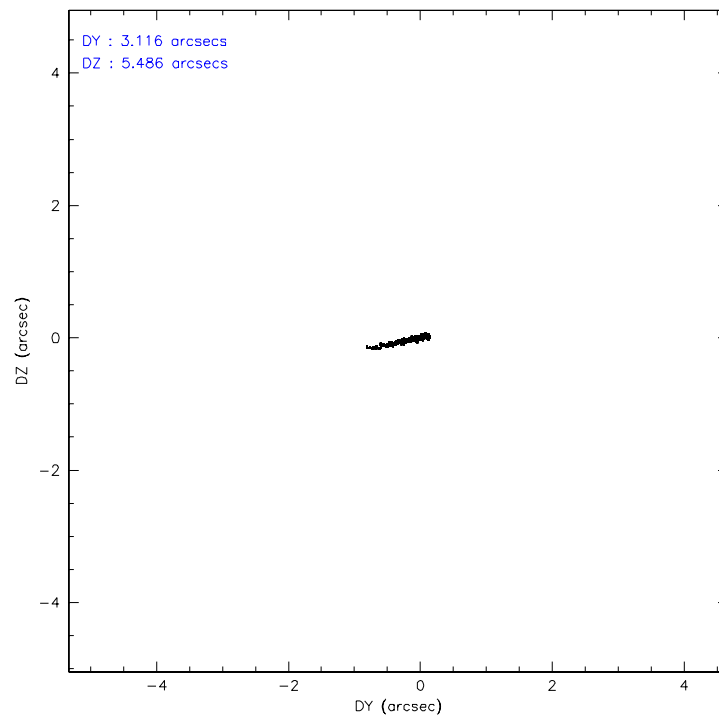
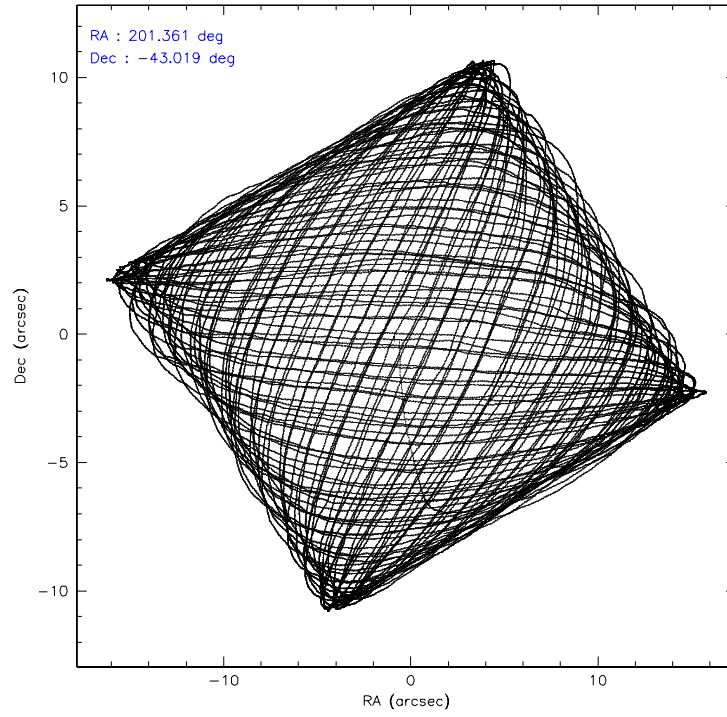
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	385228	491950	403878	532563	444764	341879
rejected events	343313	272213	311983	276929	350554	300943
rejected %	89%	55%	77%	51%	78%	88%

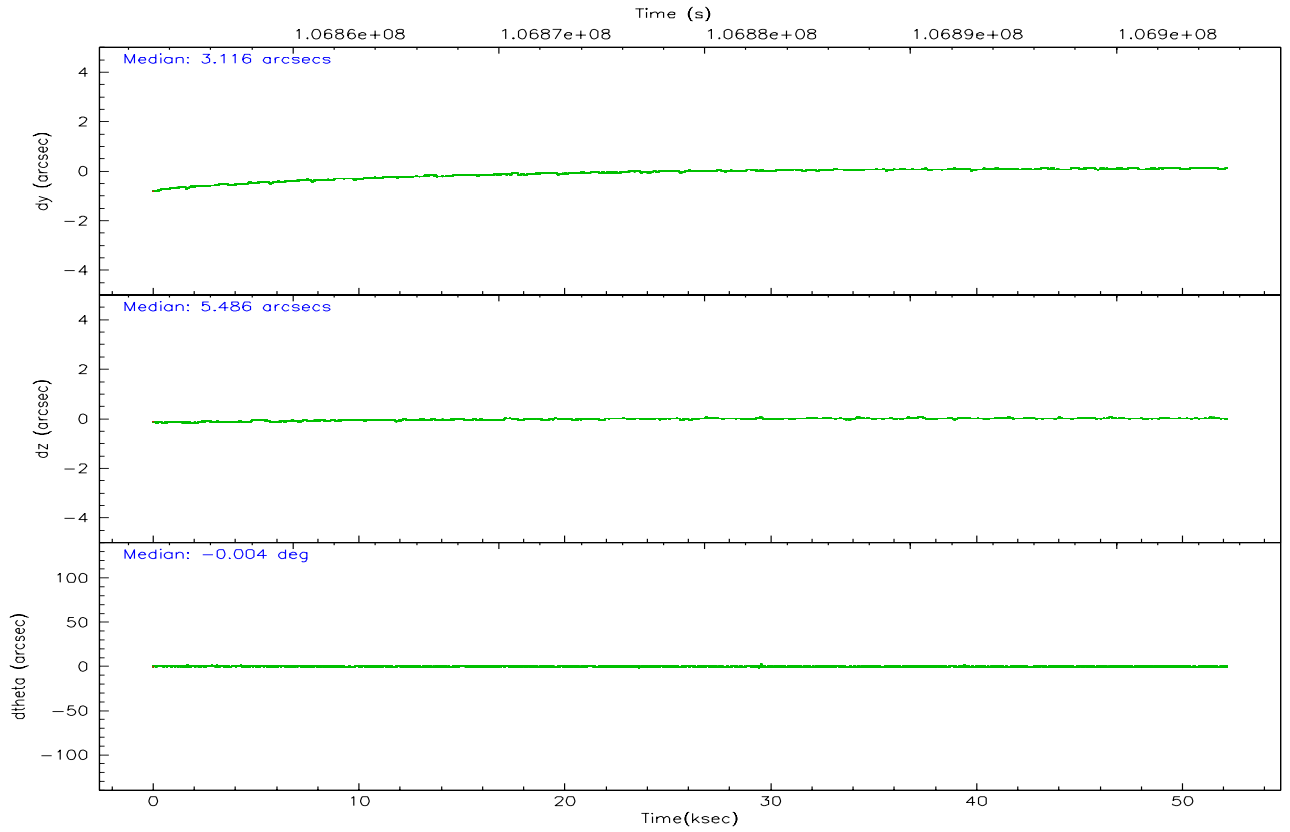
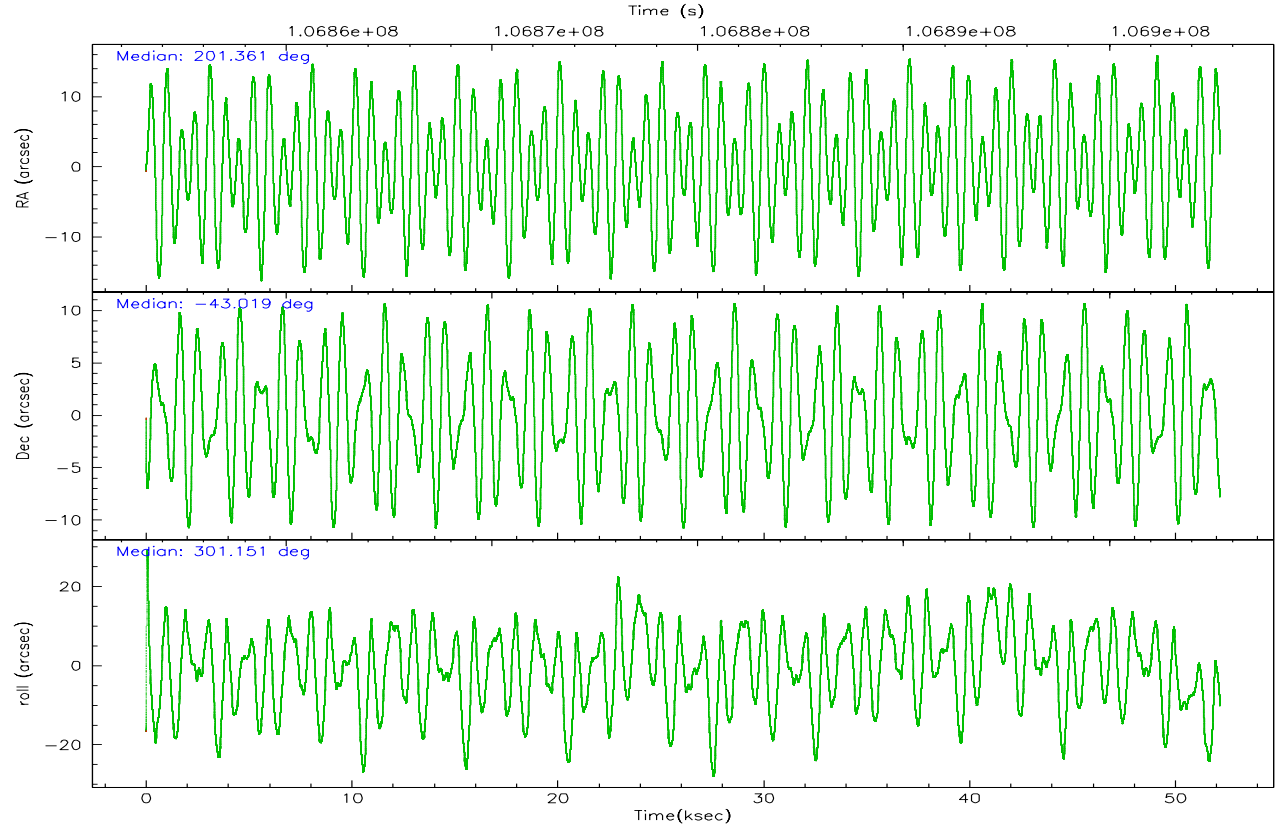
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	17159	19815	50041	26168	32947	16864
	4%	4%	12%	4%	7%	4%
grade 1 events	201	369	334	583	292	147
	0%	0%	0%	0%	0%	0%
grade 2 events	10278	71245	16110	65166	19413	8290
	2%	14%	3%	12%	4%	2%
grade 3 events	3921	5057	6739	17280	10000	4139
	1%	1%	1%	3%	2%	1%
grade 4 events	3767	4739	6655	16938	9192	3901
	0%	0%	1%	3%	2%	1%
grade 5 events	11907	24210	14636	32417	18319	14608
	3%	4%	3%	6%	4%	4%
grade 6 events	7089	120644	12767	131741	23130	8015
	1%	24%	3%	24%	5%	2%
grade 7 events	330906	245871	296596	242270	331471	285915
	85%	49%	73%	45%	74%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
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
Pointing RA	201.328316	201.3611996774687	Subarray requested	NONE	NONE
Pointing Dec	-43.006505	-43.01943037027637	Alternating exposures requested	N	N
Pointing Roll	300.974542	301.1536032186536	Primary exposure time	0.000000	3.2
Roll angle	307.000000	307.000000			
Roll tolerance	1.000000	1.000000			
Roll constraint allows 180D rotation	N	N			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.127916318603			
SIM translation stage offset (mm)	-3	-3.004606264404799			
Observation start time	106853374.184000	106852100.44601			
Observation start date	2001-05-21T17:28:30	2001-05-21T17:08:20			
Observation end time	106905374.184000	106906054.91061			
Observation end date	2001-05-22T07:55:10	2001-05-22T08:07:34			
Read mode	TIMED	TIMED			

2.3 Aspect



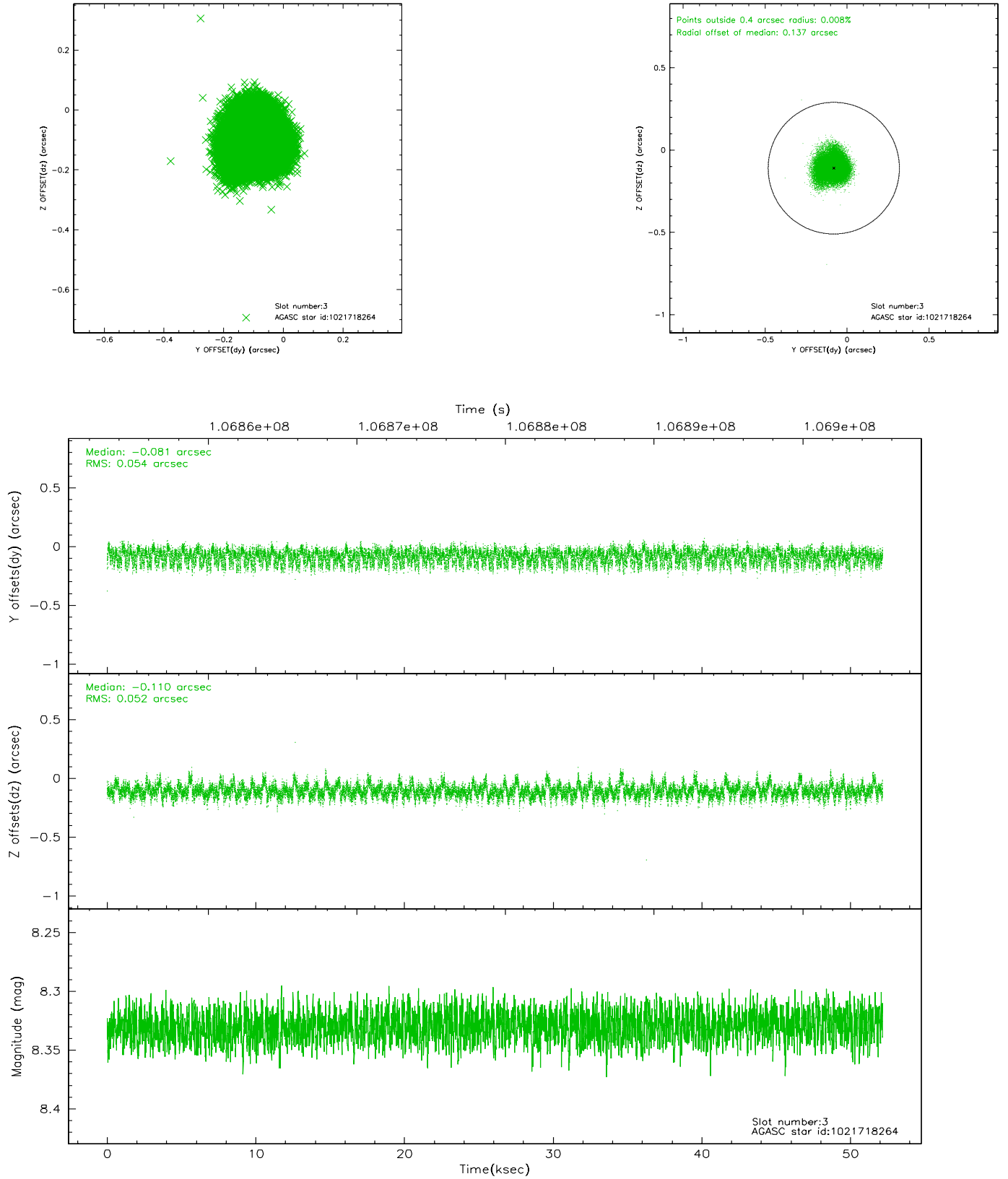


Slot Statistics

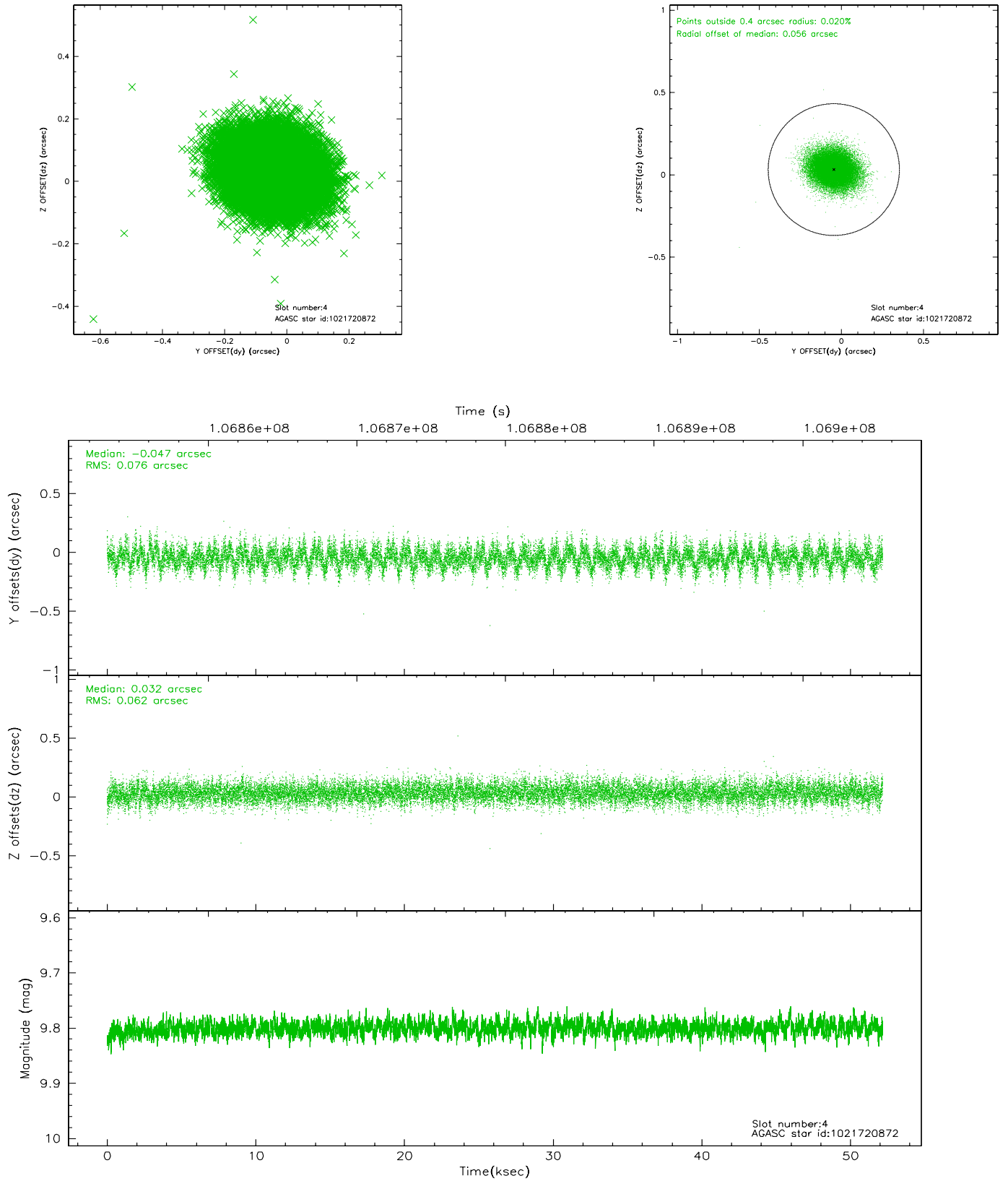
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	12724	-0.013	-0.032	0.008	0.014	0.000000	0.000000	-755.48	-1788.65
1	FID	ACIS-S-4	7.20	12724	-0.042	0.015	0.009	0.017	0.000000	0.000000	2157.79	119.88
2	FID	ACIS-S-5	7.23	12725	0.023	0.025	0.010	0.019	0.000000	0.000000	-1808.30	113.55
3	GUIDE	1021718264	8.33	25442	-0.081	-0.110	0.080	0.126	202.114846	-42.795539	426.92	2166.38
4	GUIDE	1021720872	9.80	25431	-0.047	0.032	0.103	0.169	200.668338	-42.835886	-1416.79	-1181.98
5	GUIDE	1021721504	9.56	25426	0.068	0.054	0.086	0.143	201.182768	-43.000443	-214.97	-318.31
6	GUIDE	1021721672	9.54	25443	0.090	0.069	0.113	0.191	201.740358	-43.079729	786.59	791.18
7	GUIDE	1022231952	10.50	24513	-0.017	-0.046	0.203	0.333	200.514966	-43.318830	-122.78	-2411.46

2.4 Star Slots

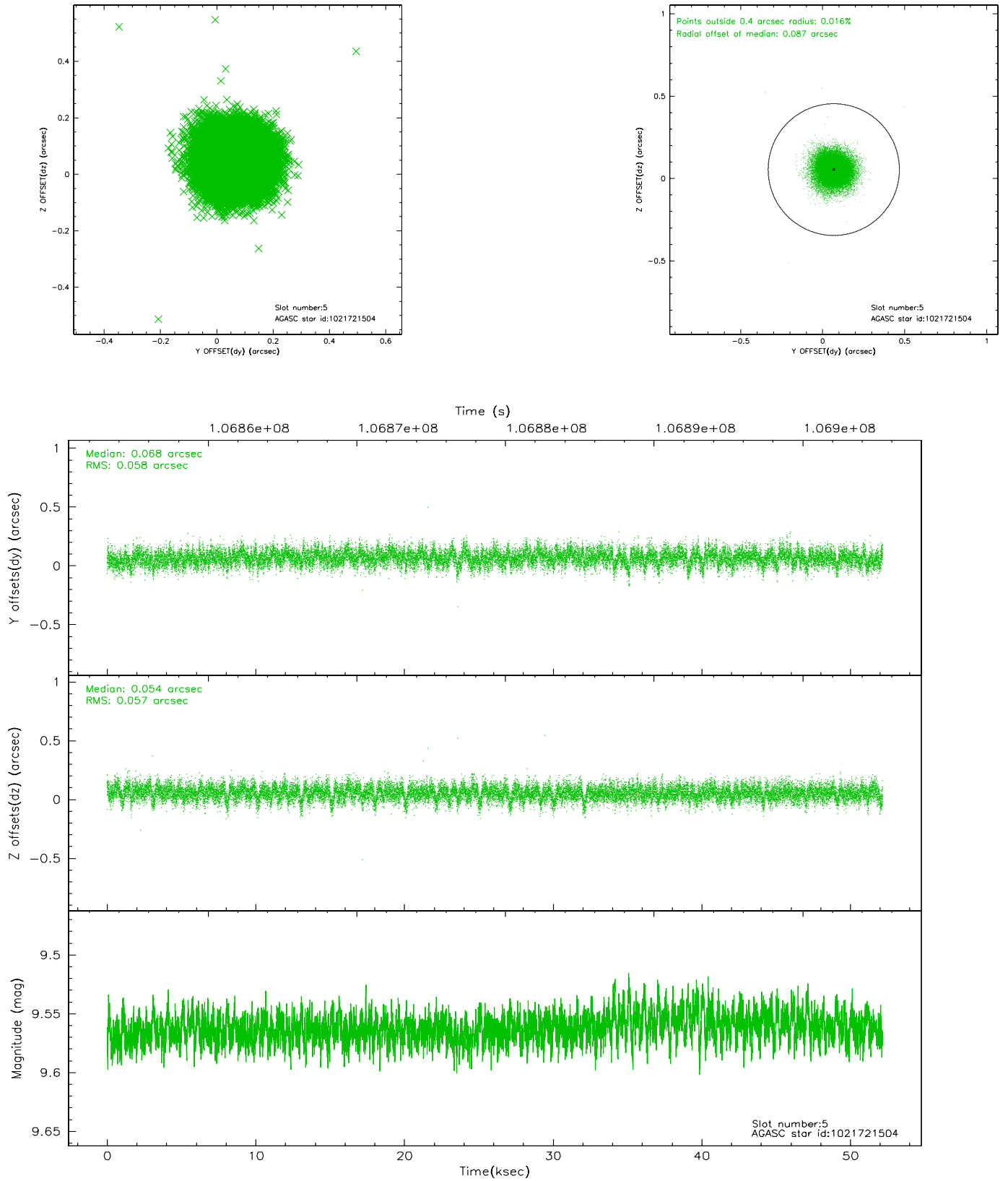
2.4.1 Slot 3



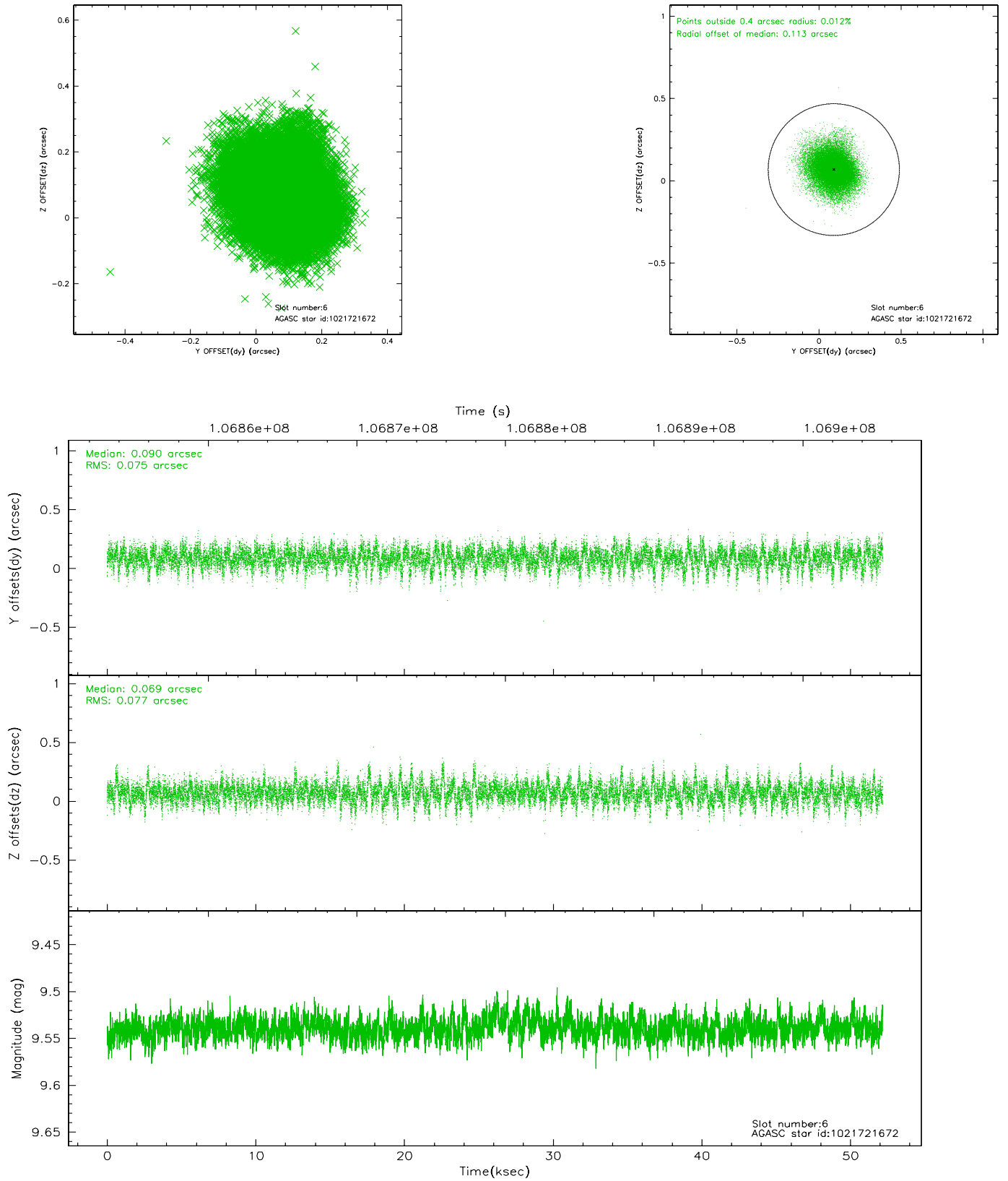
2.4.2 Slot 4



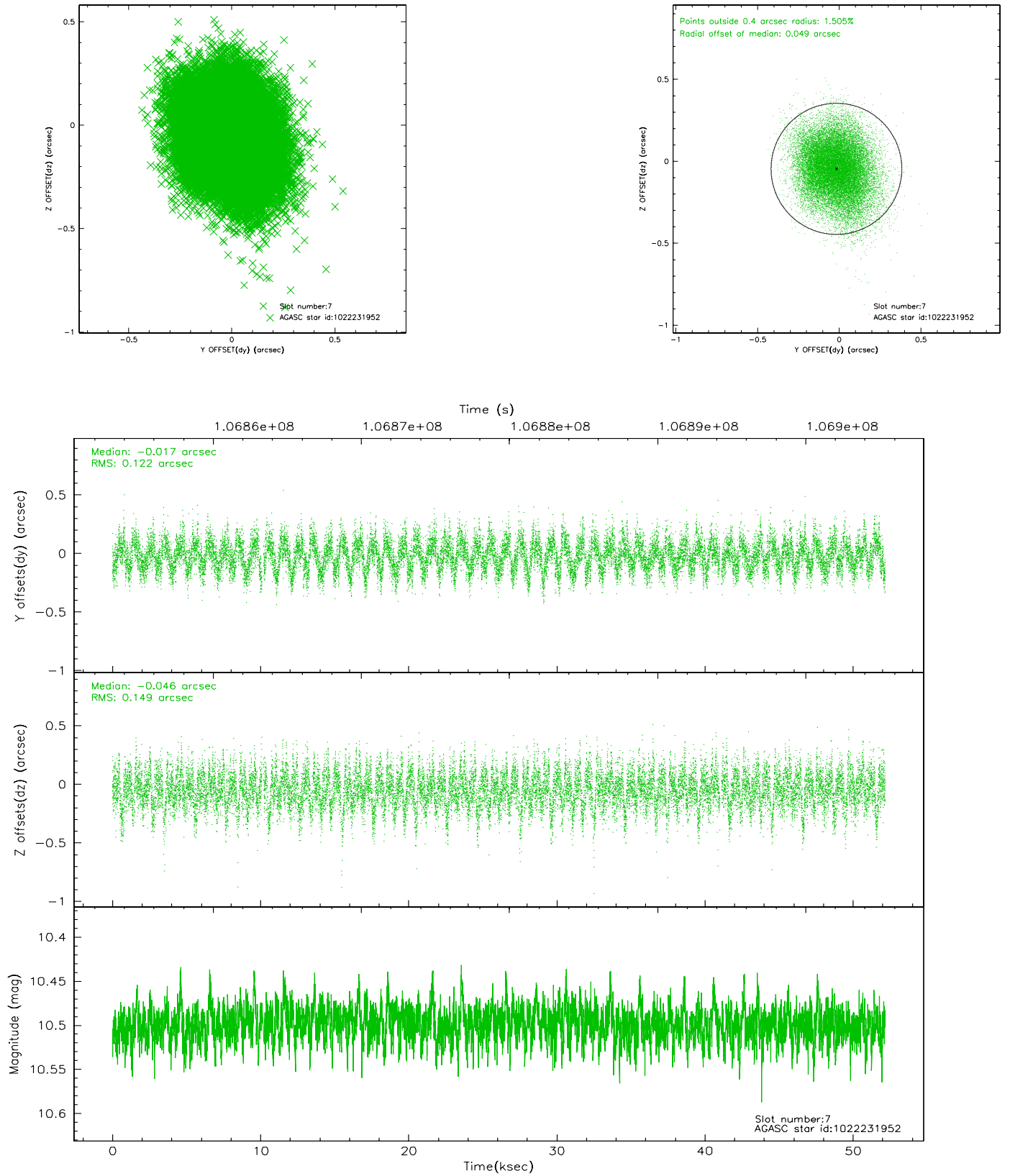
2.4.3 Slot 5



2.4.4 Slot 6

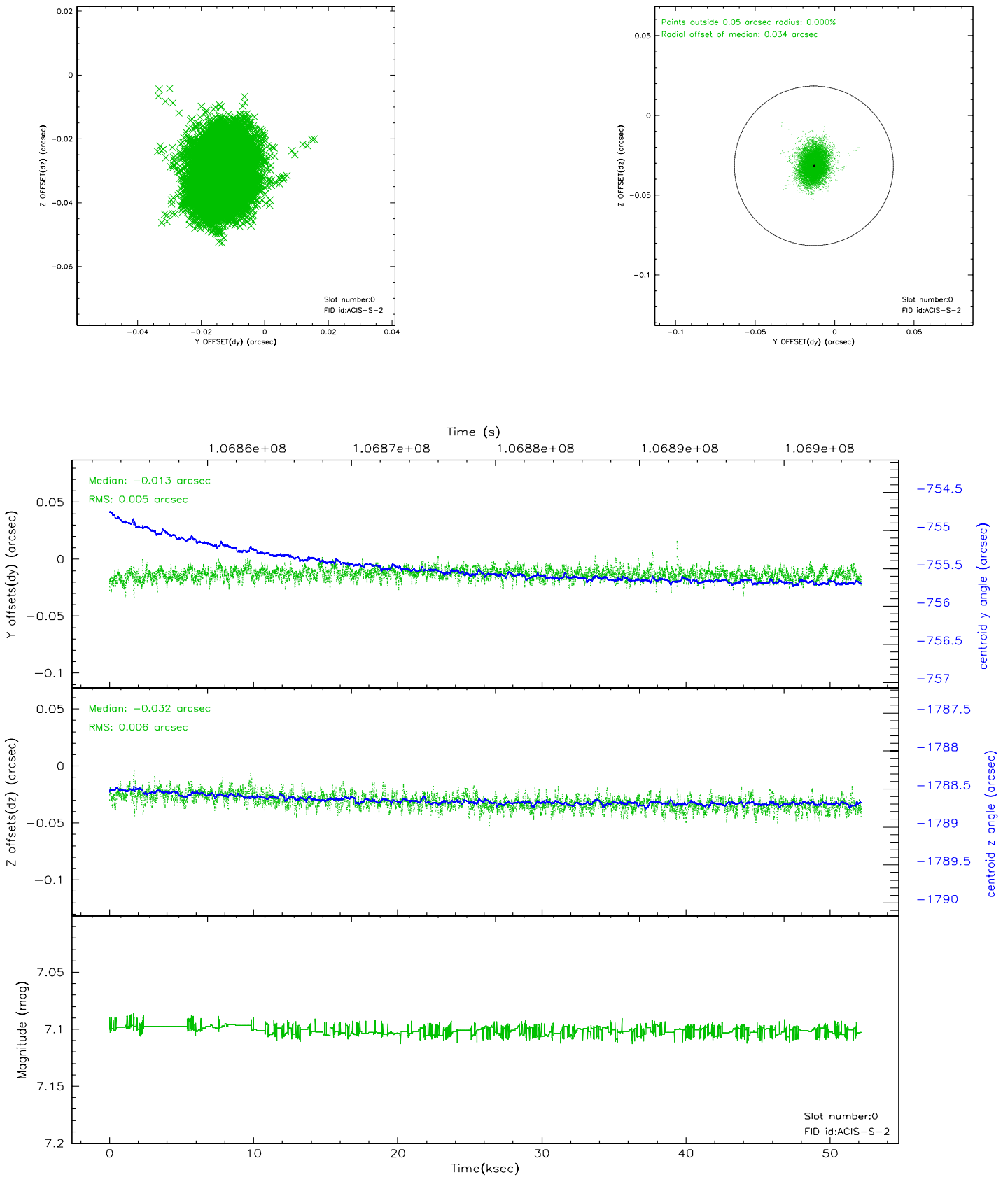


2.4.5 Slot 7

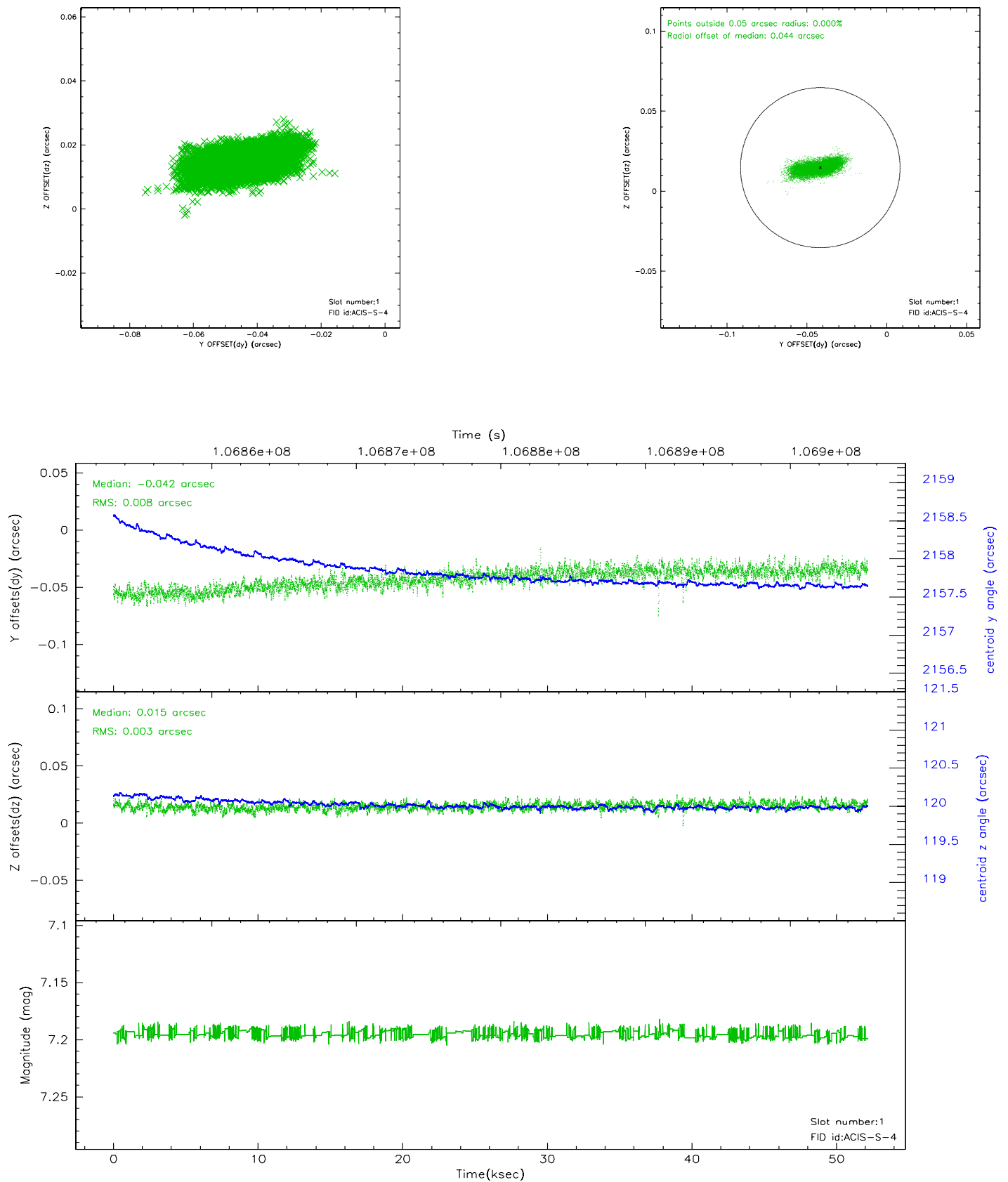


2.5 FID Slots

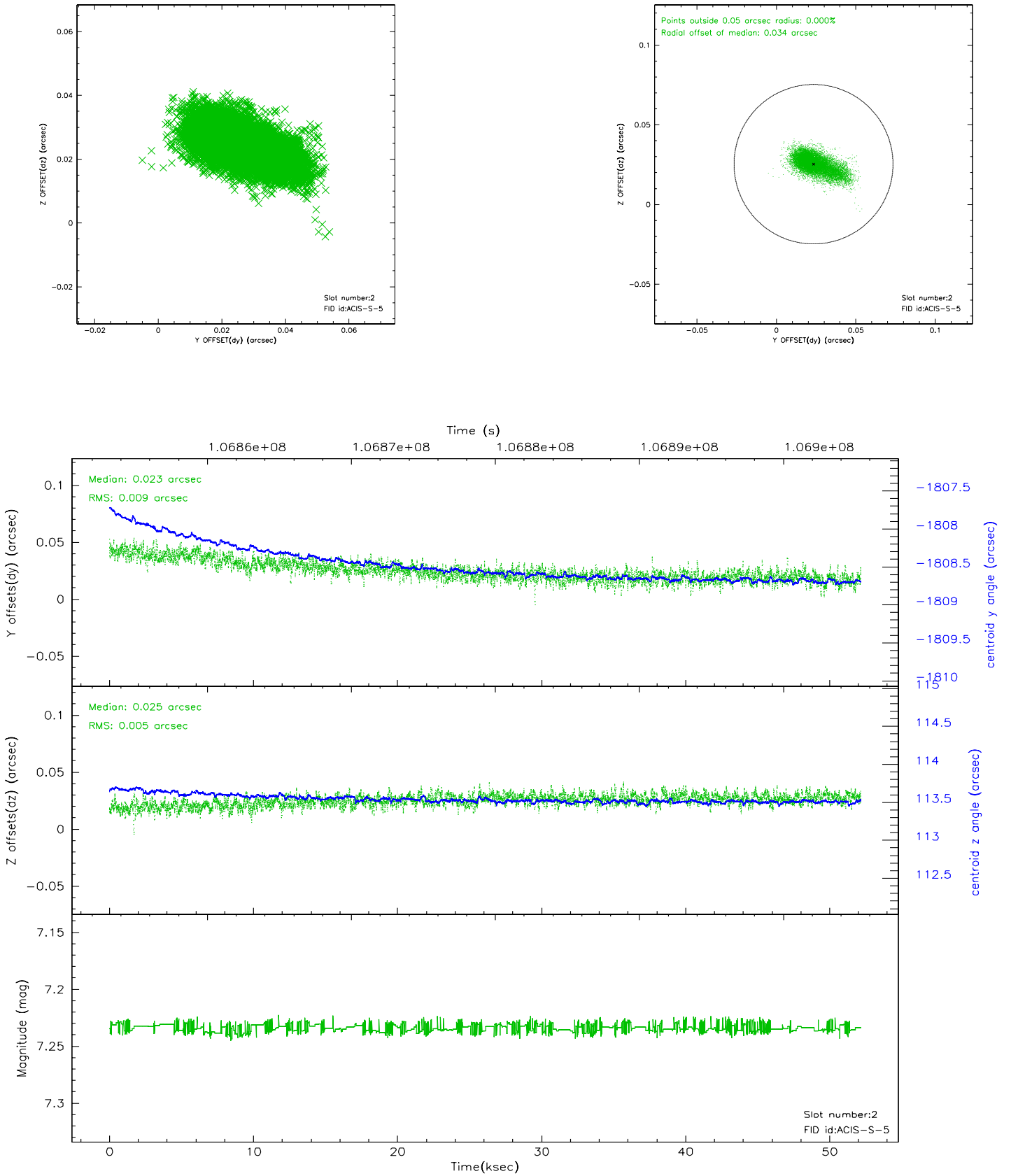
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

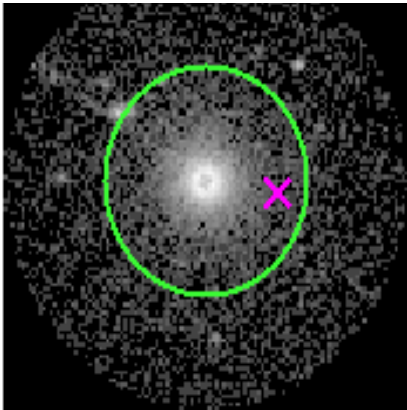


3 Gratings

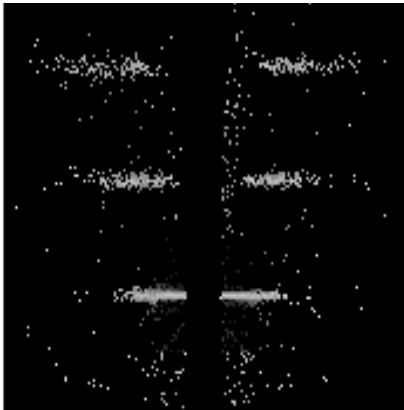
3.1 HEG Arm



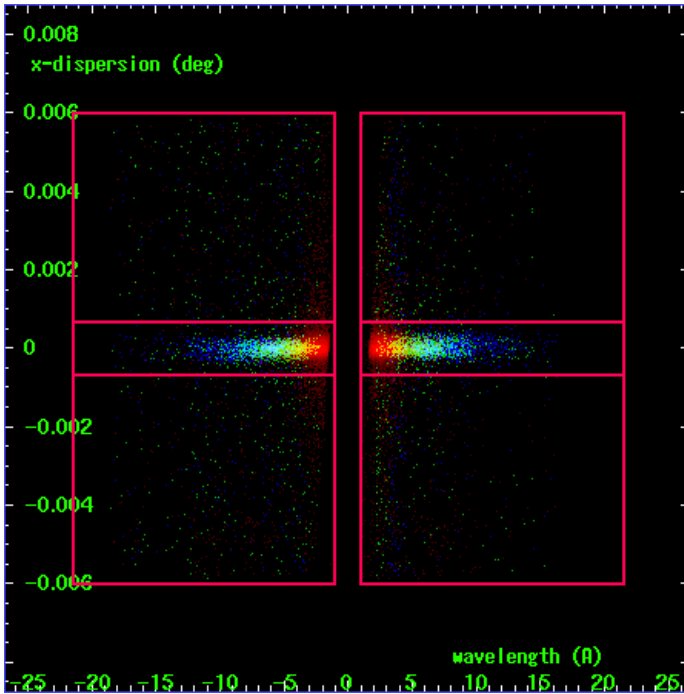
HEG Order Sort 123



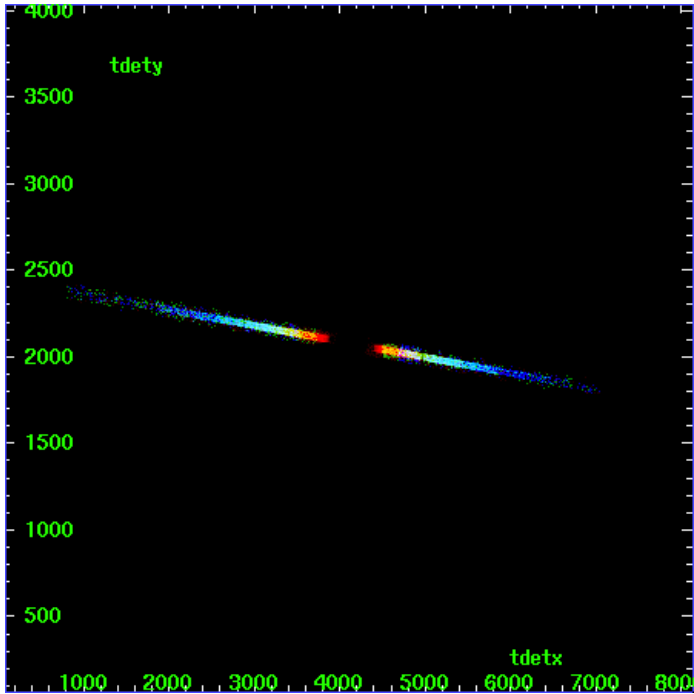
HEG Zero Order



HEG Order Sort ALL

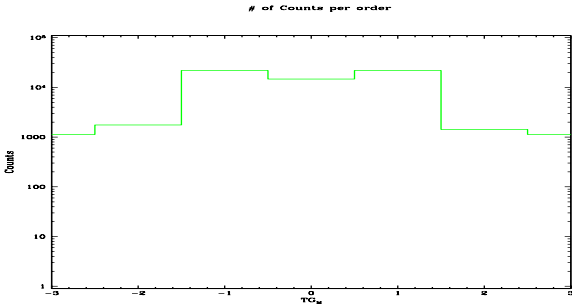


Spot Image HEG

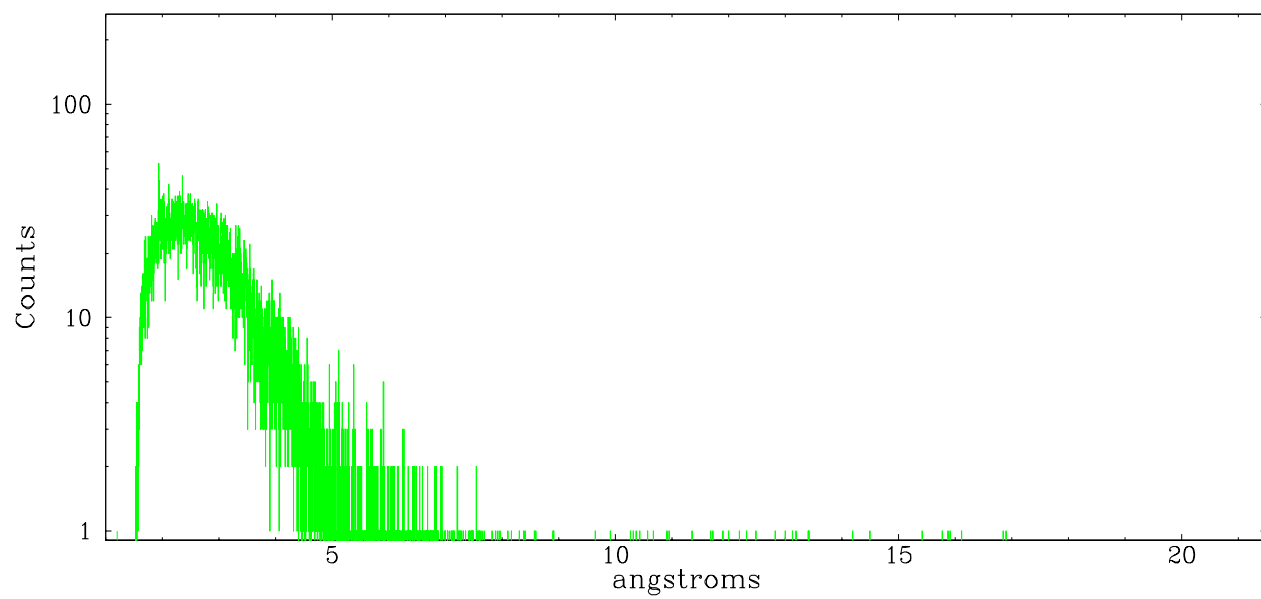


Full Detector HEG

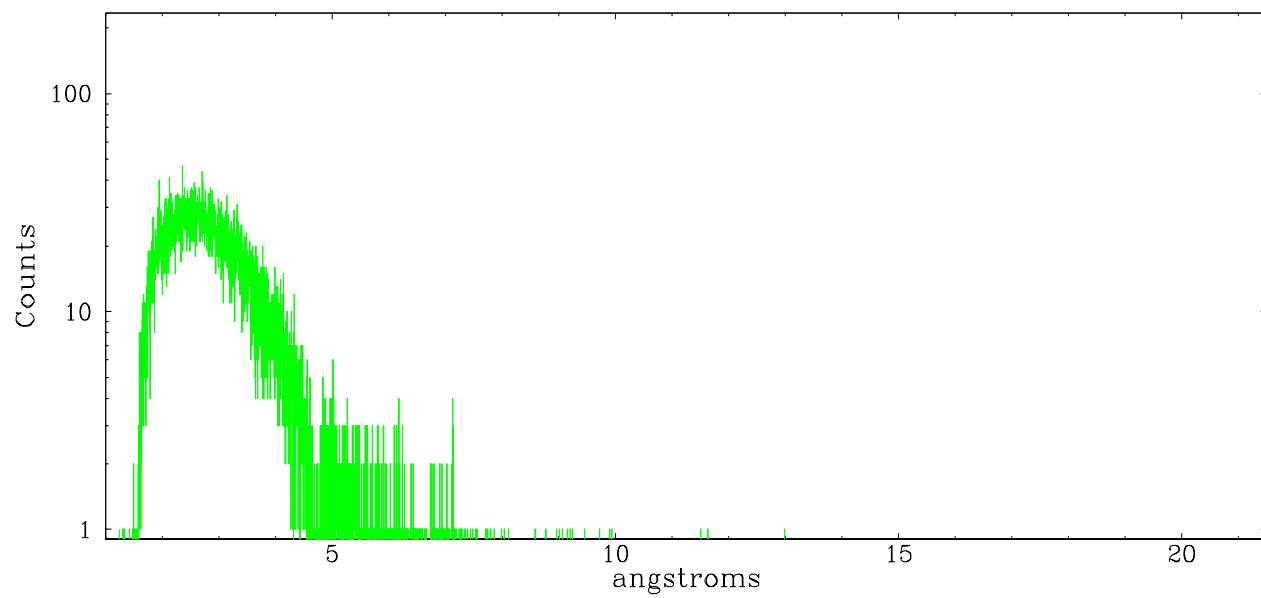
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1131	1750	21902	14688	21790	1427	1129



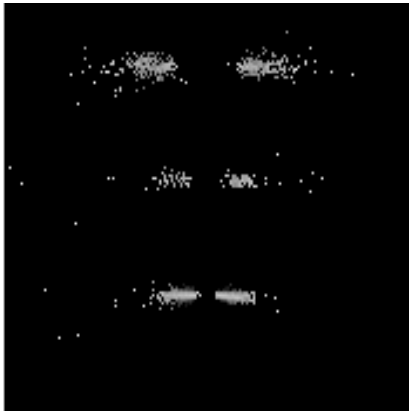
heg order -1



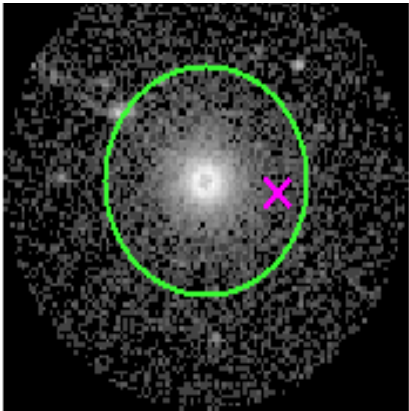
heg order +1



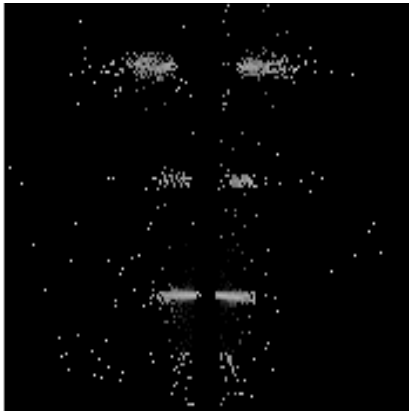
3.2 MEG Arm



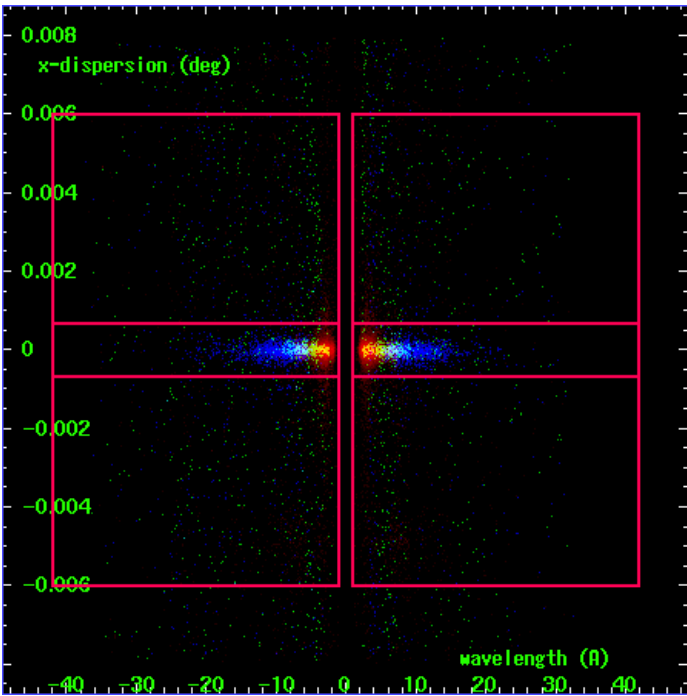
MEG Order Sort 123



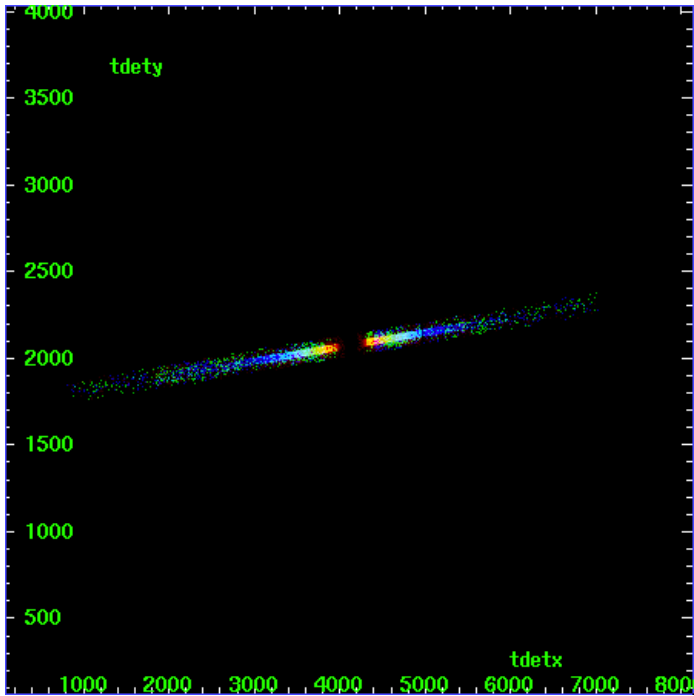
MEG Zero Order



MEG Order Sort ALL

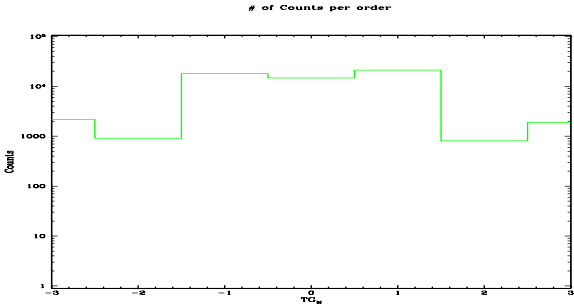


Spot Image MEG

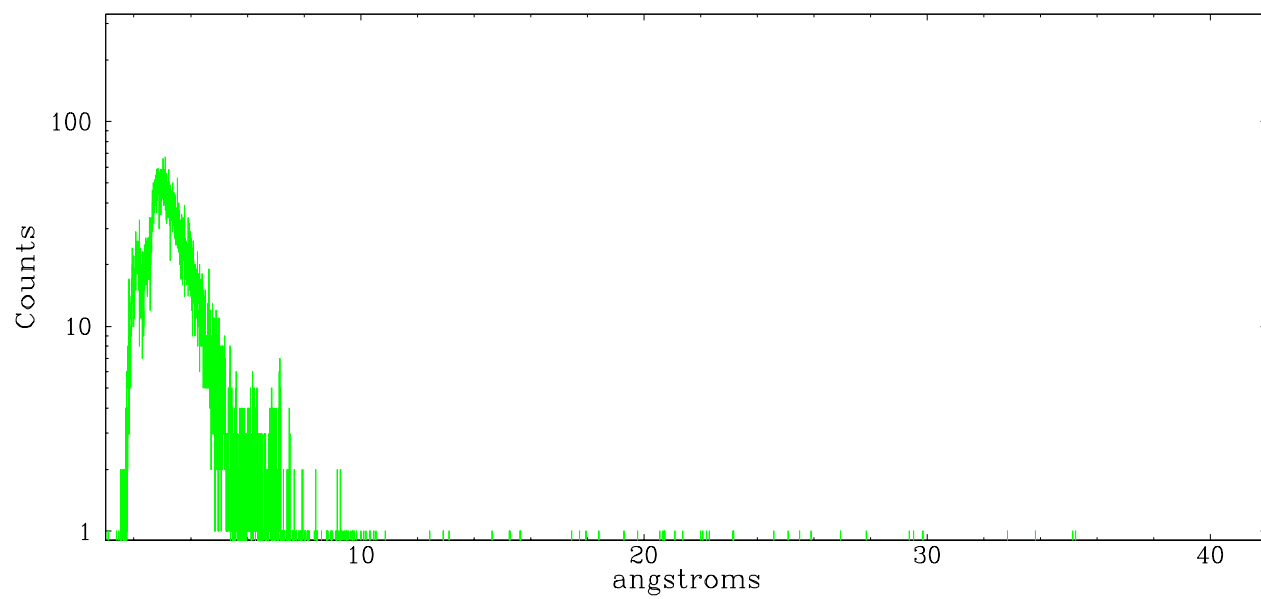


Full Detector MEG

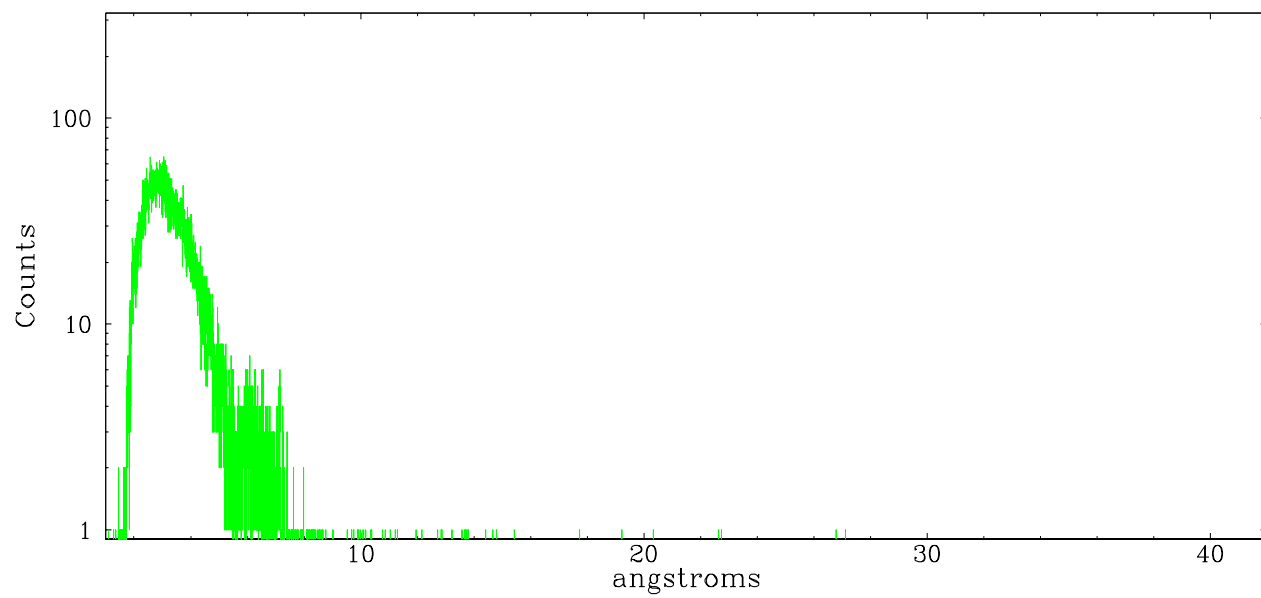
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2166	915	18022	14688	21085	806	1904



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	52.16

A.2 Comments

Source is piled up and standard software processing technique using the tool

tgdetect did not give an accurate position for the zeroth order. Zeroth order position for this observation has been determined using the known angle between the readout streak and the meg spectral arm. The newly determined

zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect.

Zeroth order sky coordinates used:

x=4075.80, y=4099.10

ra=13:25:27.618, dec=-43:01:08.68

Roll constraint of 307 +/-1 degrees not met, although observer later agreed

to a +/- 5 degree tolerance. Roll for this observation is 301 degrees.