

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 3015 - L2 Version 002
Chandra X-Ray Center

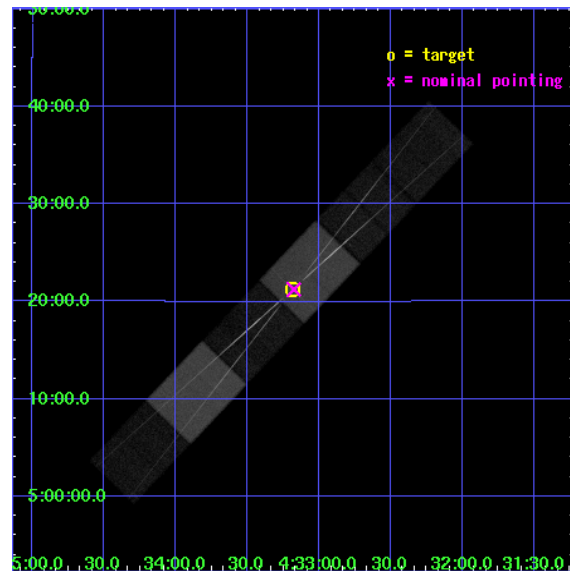
L2 Processing Date : Feb 8 2007

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

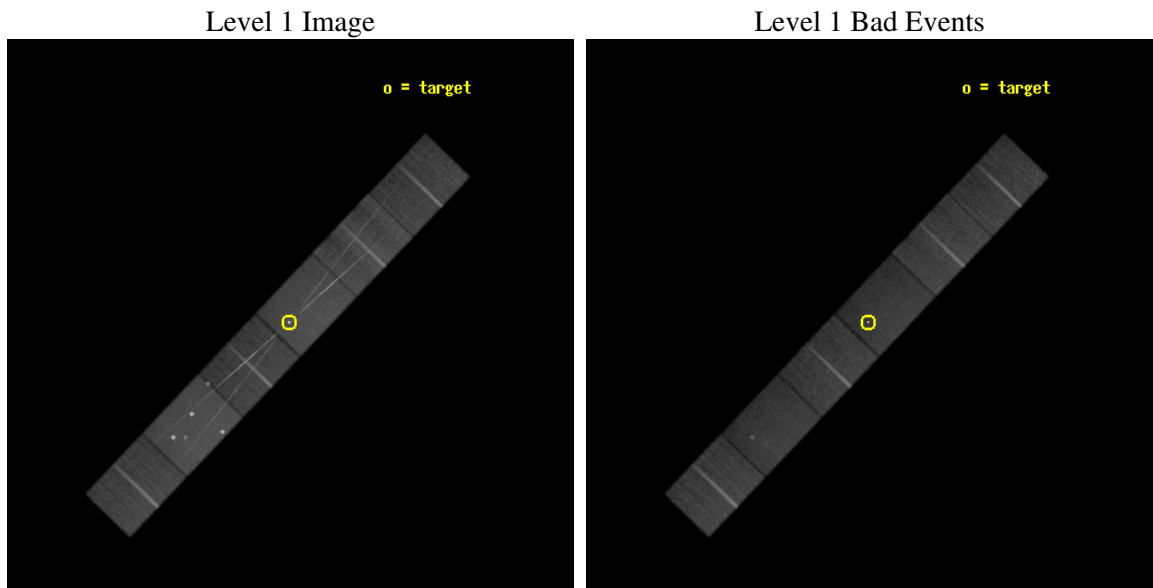
seq_num	700454
obs_id	3015
title	DECONVOLUTION OF THE RELATIVISTIC FE-K LINES IN ACTIVE GALAXIES AND PHYSICS FROM THE NARROW EMISSION COMPONENT
observer	Dr. Tahir Yaqoob
object	3C 120
dtcycle	0
cycle	P
ra_targ	68.29625
dec_targ	5.354194
ra_nom	68.294028613572
dec_nom	5.3540701210757
roll_nom	313.6959049126
revision	3
ontime	58154.876989603
livetime	57215.625284925
ontime4	58149.795009211
ontime5	58149.795009211
ontime6	58152.336009383
ontime7	58154.876989603
ontime8	58149.794989318
ontime9	58147.253999144
l2events	549647



2 OBI

2.1 OBI

2.1.1 Images

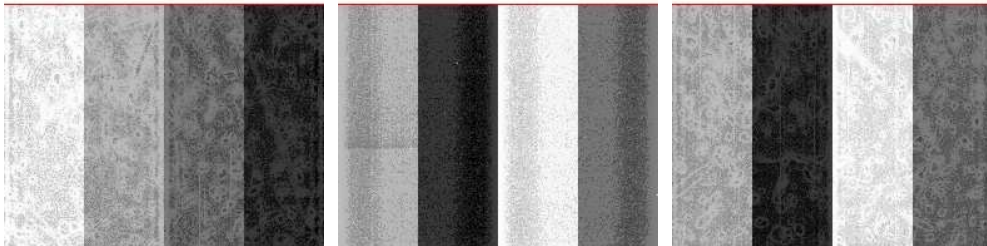


2.1.2 Bias

Chip 4

Chip 5

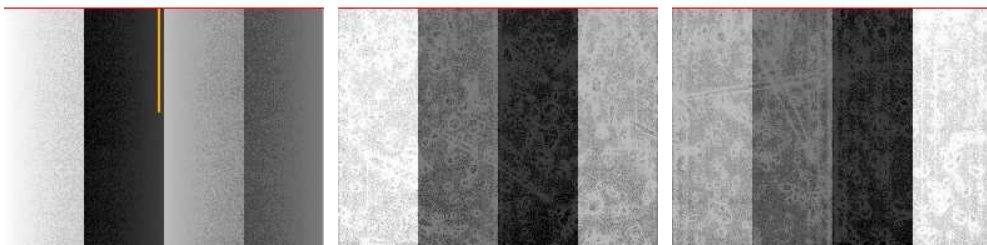
Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.3.0
date	2007-01-18T08:59:05
revision	2

sched_exp_time	58000.000000
ontime	58154.876989603
ontime4	58149.795009211
ontime5	58149.795009211
ontime6	58152.336009383
ontime7	58154.876989603
ontime8	58149.794989318
ontime9	58147.253999144
l1events	2231638

2.1.4 Events

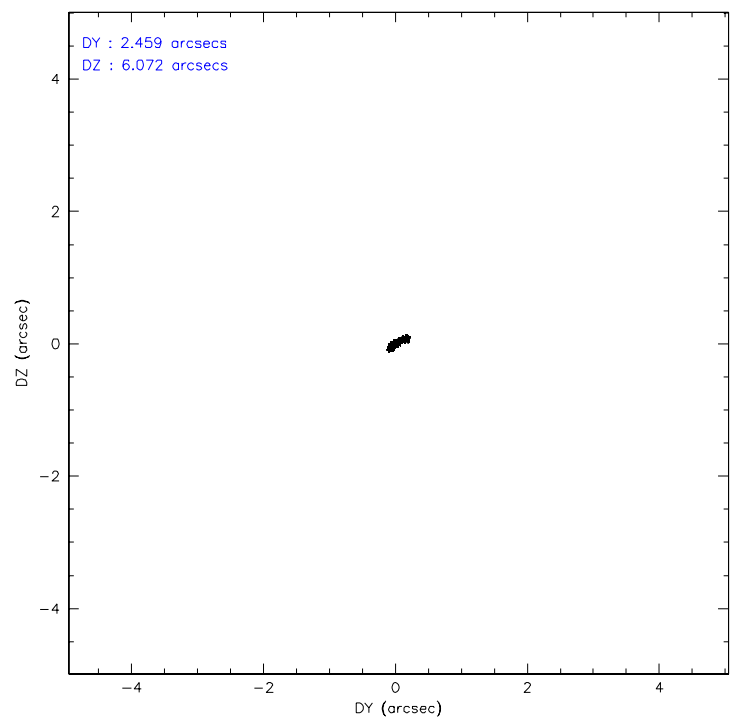
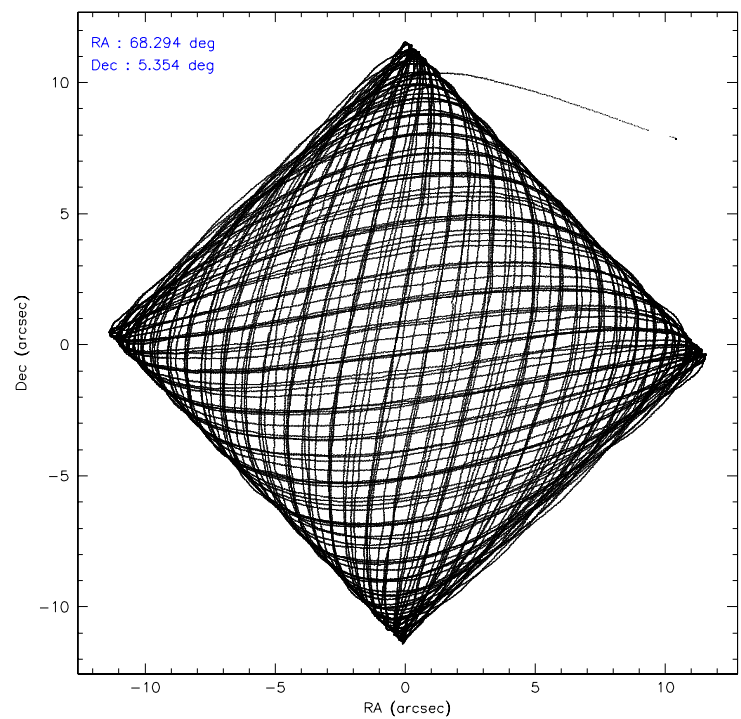
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	327859	464522	328817	427314	386795	296331
rejected events	290148	223366	264843	227746	296234	258812
rejected %	88%	48%	80%	53%	76%	87%

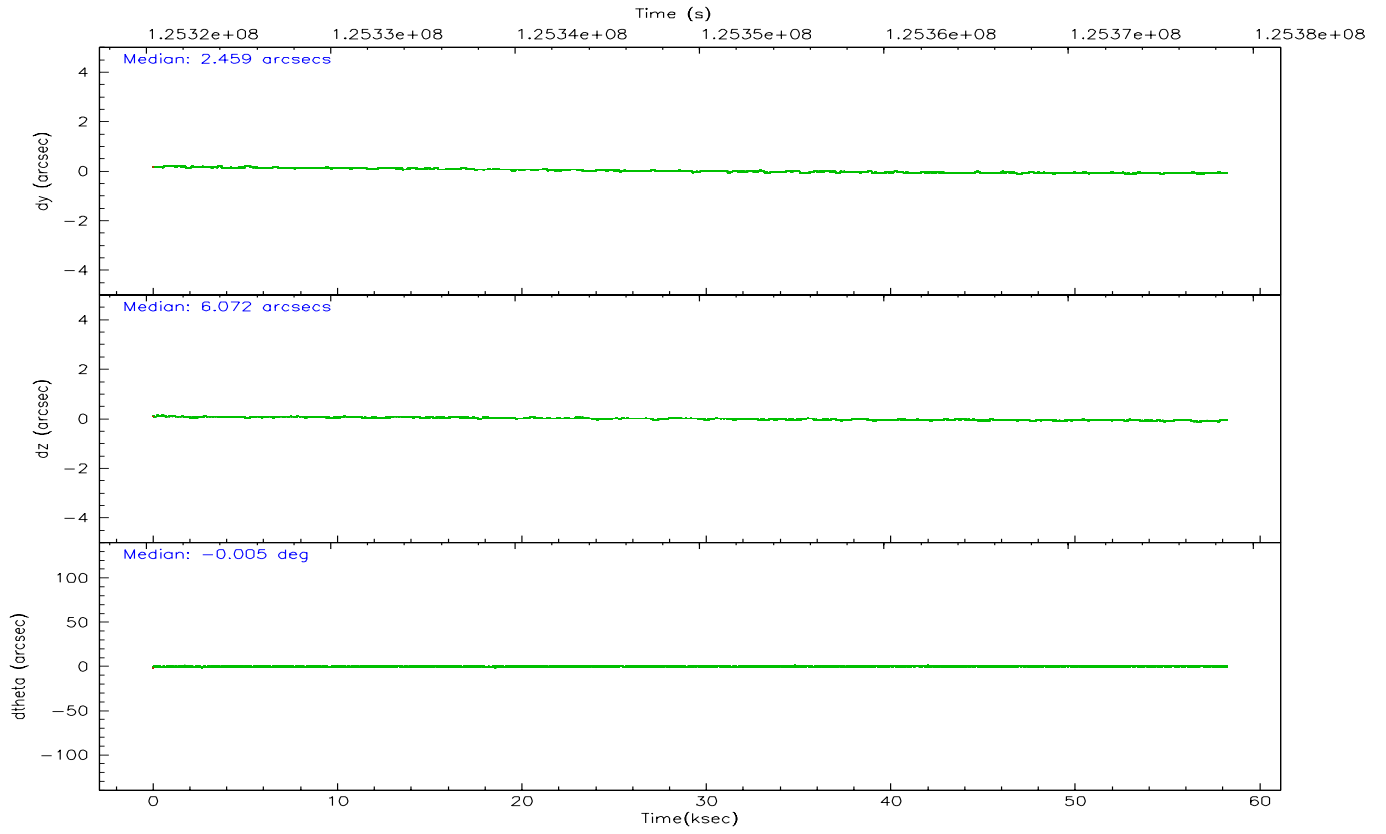
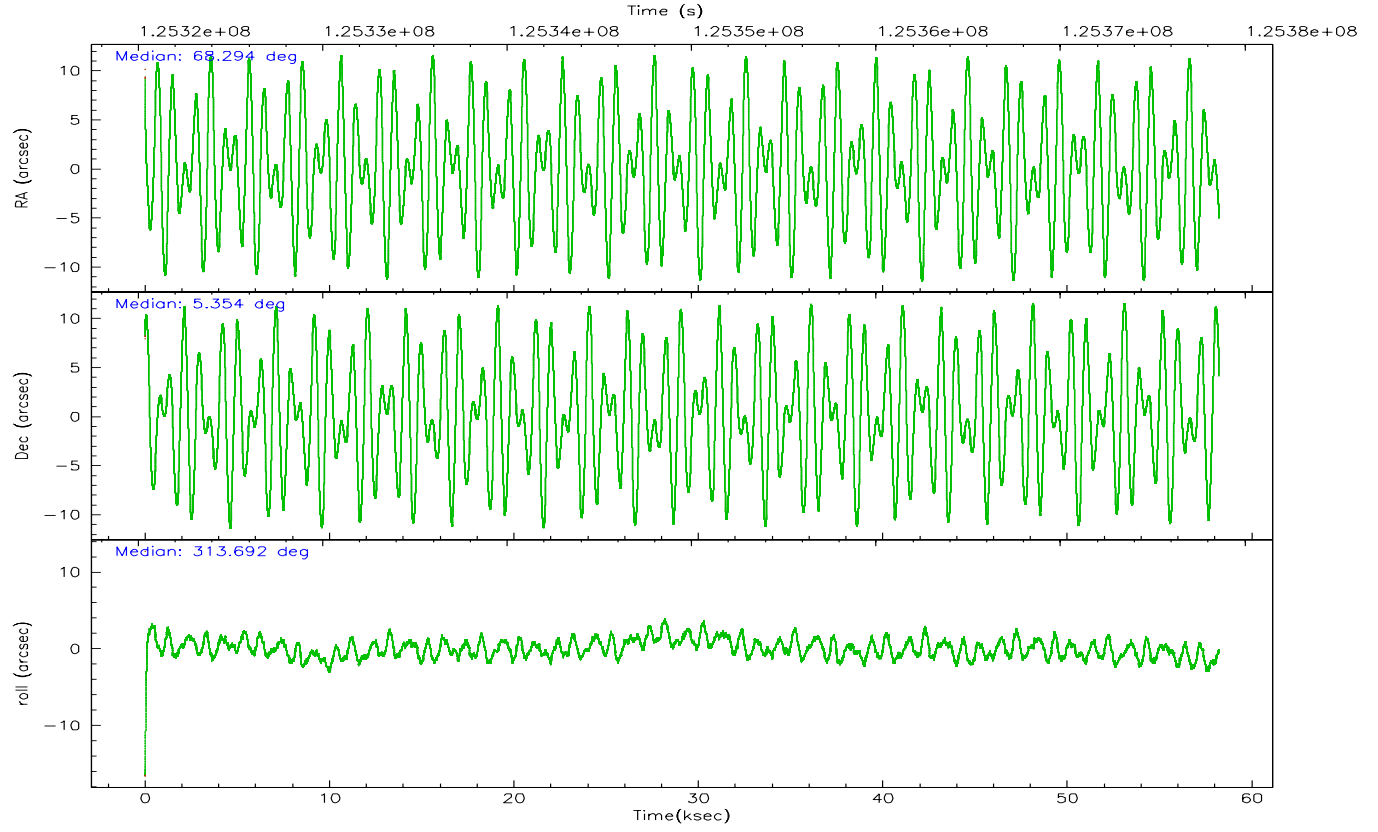
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	15758	61682	36675	23013	35602	16159
	4%	13%	11%	5%	9%	5%
grade 1 events	147	1713	210	779	216	123
	0%	0%	0%	0%	0%	0%
grade 2 events	8564	60443	10247	40911	17504	7204
	2%	13%	3%	9%	4%	2%
grade 3 events	3679	10299	4786	18853	8889	3685
	1%	2%	1%	4%	2%	1%
grade 4 events	3453	9856	4603	18855	8314	3593
	1%	2%	1%	4%	2%	1%
grade 5 events	10724	32546	12391	38595	16027	12828
	3%	7%	3%	9%	4%	4%
grade 6 events	6259	98898	7666	97954	20261	6881
	1%	21%	2%	22%	5%	2%
grade 7 events	279275	189085	252239	188354	279982	245858
	85%	40%	76%	44%	72%	82%

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	68.267666	68.29402861357214	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	5.361403	5.354070121075653	Subarray start row	1	1
Pointing Roll	313.541742	313.6959049125994	Subarray row count	774	774
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	0.000000	2.5
SIM translation stage pos (mm)	-187.132523	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	125320599.184000	125319599.9753			
Observation start date	2001-12-21T11:15:35	2001-12-21T10:59:59			
Observation end time	125378599.184000	125379280.09019			
Observation end date	2001-12-22T03:22:15	2001-12-22T03:34:40			
Read mode	TIMED	TIMED			

2.3 Aspect



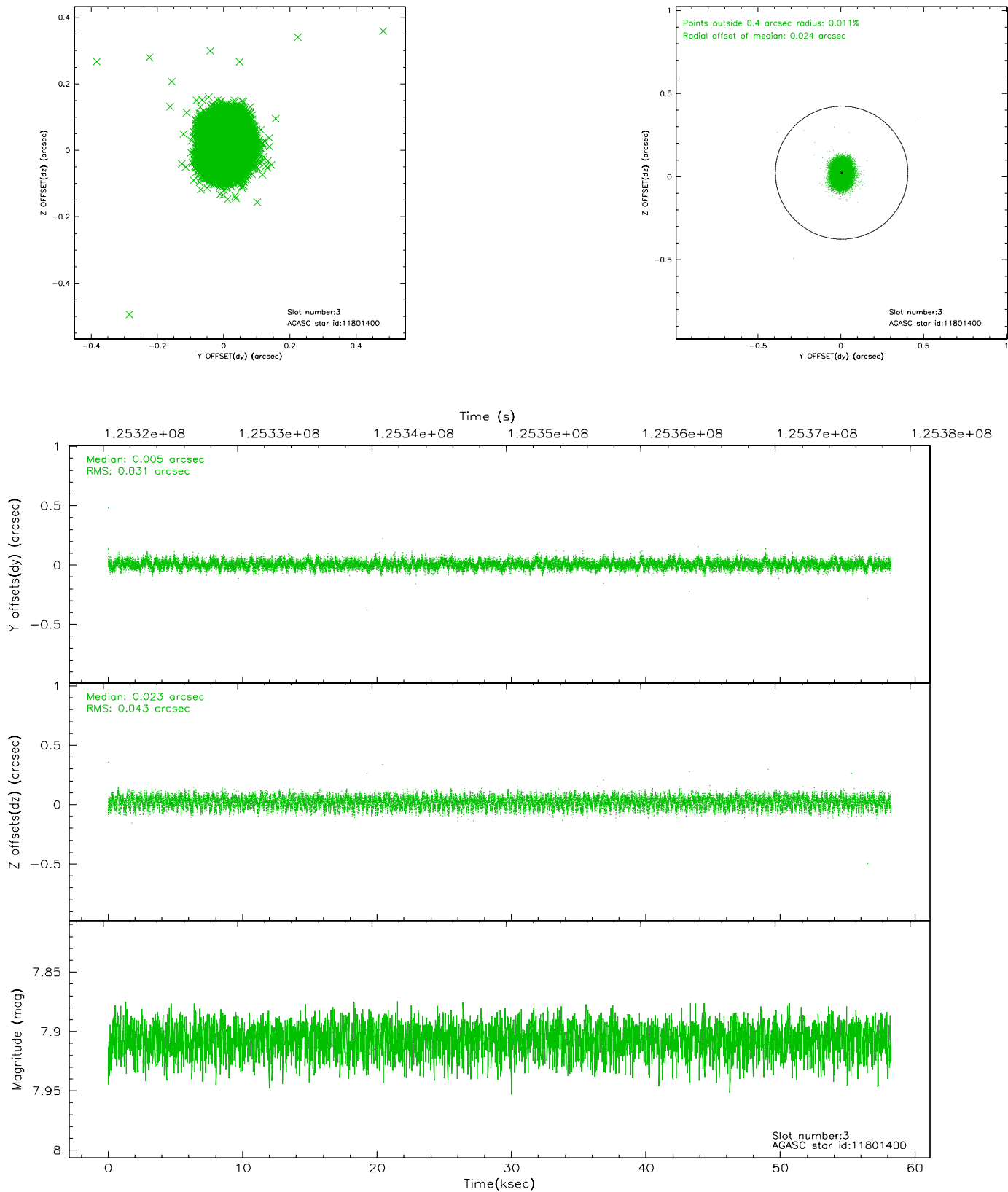


Slot Statistics

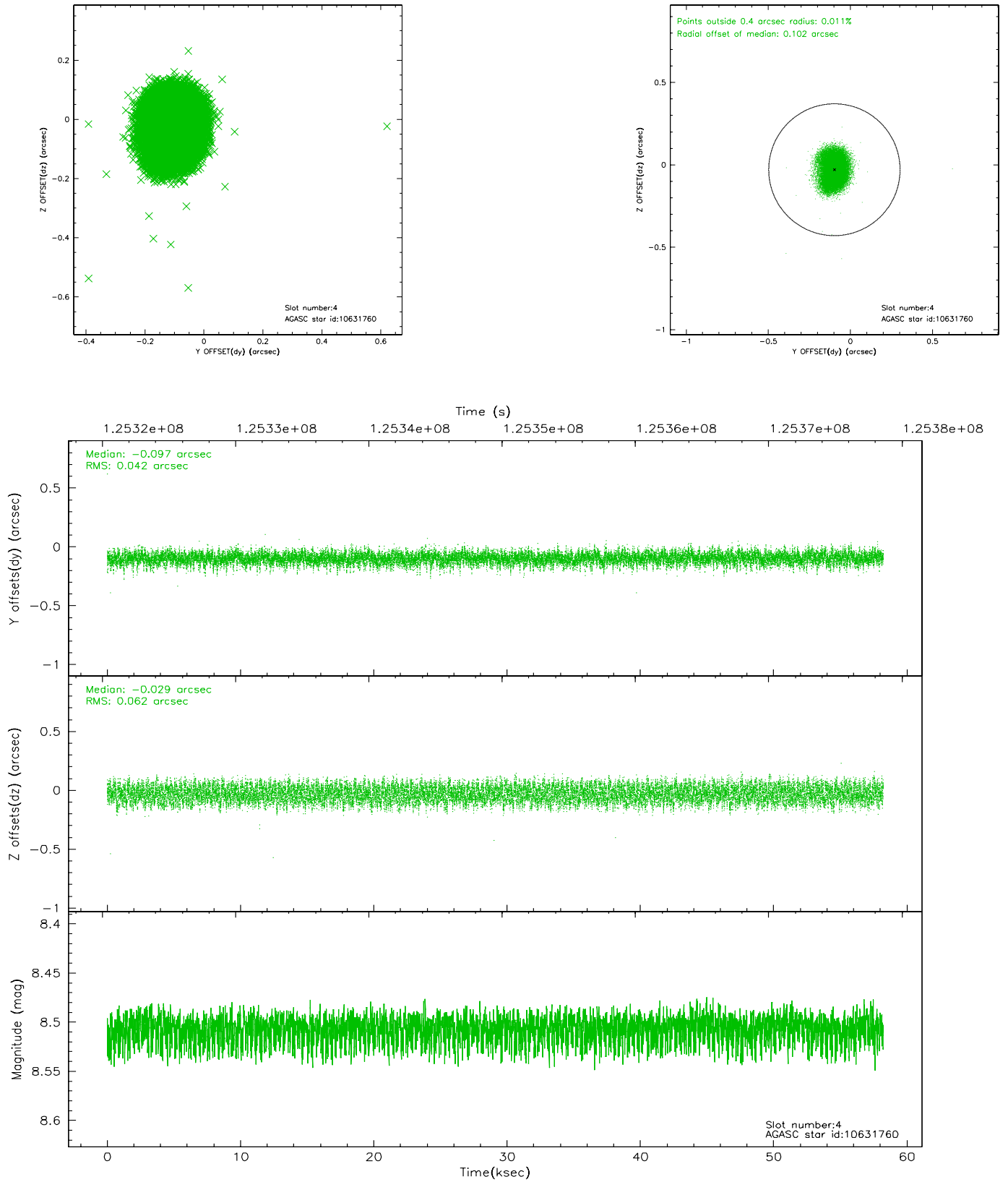
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	14195	-0.023	-0.002	0.006	0.010	0.000000	0.000000	-754.91	-1789.36
1	FID	ACIS-S-4	7.20	14193	-0.012	0.026	0.006	0.010	0.000000	0.000000	2158.38	119.21
2	FID	ACIS-S-6	7.39	14196	0.008	-0.017	0.007	0.011	0.000000	0.000000	407.03	756.50
3	GUIDE	11801400	7.91	28379	0.005	0.023	0.056	0.090	68.459989	5.385023	413.60	557.67
4	GUIDE	10631760	8.51	28383	-0.097	-0.029	0.081	0.128	67.476814	5.257049	-1681.79	-2312.98
5	GUIDE	12327088	8.59	28374	-0.007	-0.026	0.055	0.090	67.823561	5.844308	-2356.10	44.67
6	GUIDE	11798168	8.75	28387	0.007	-0.013	0.055	0.090	68.723067	4.993277	2085.50	271.31
7	GUIDE	11805784	8.87	28383	0.092	0.051	0.065	0.108	68.291152	4.970127	1079.71	-909.37

2.4 Star Slots

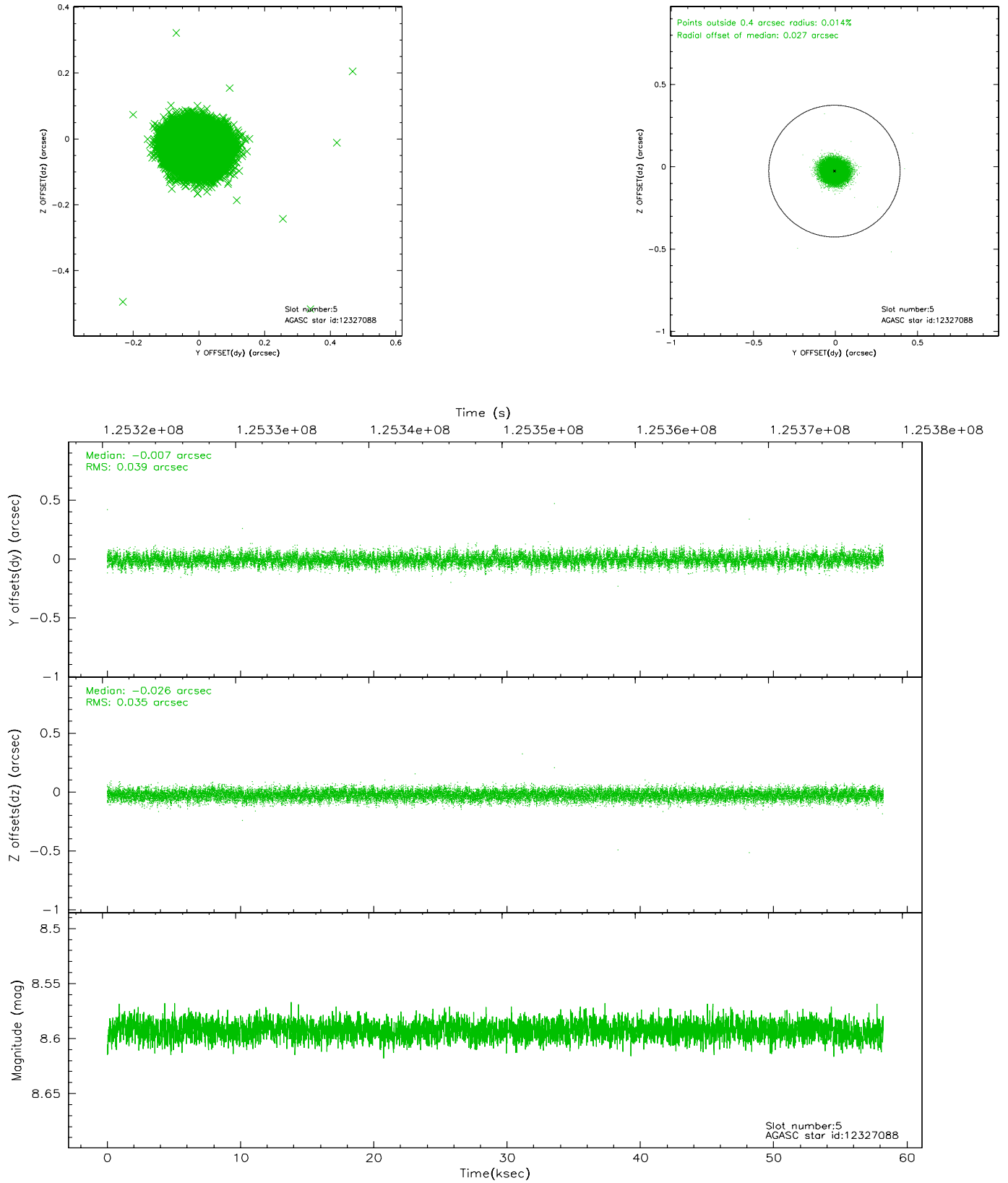
2.4.1 Slot 3



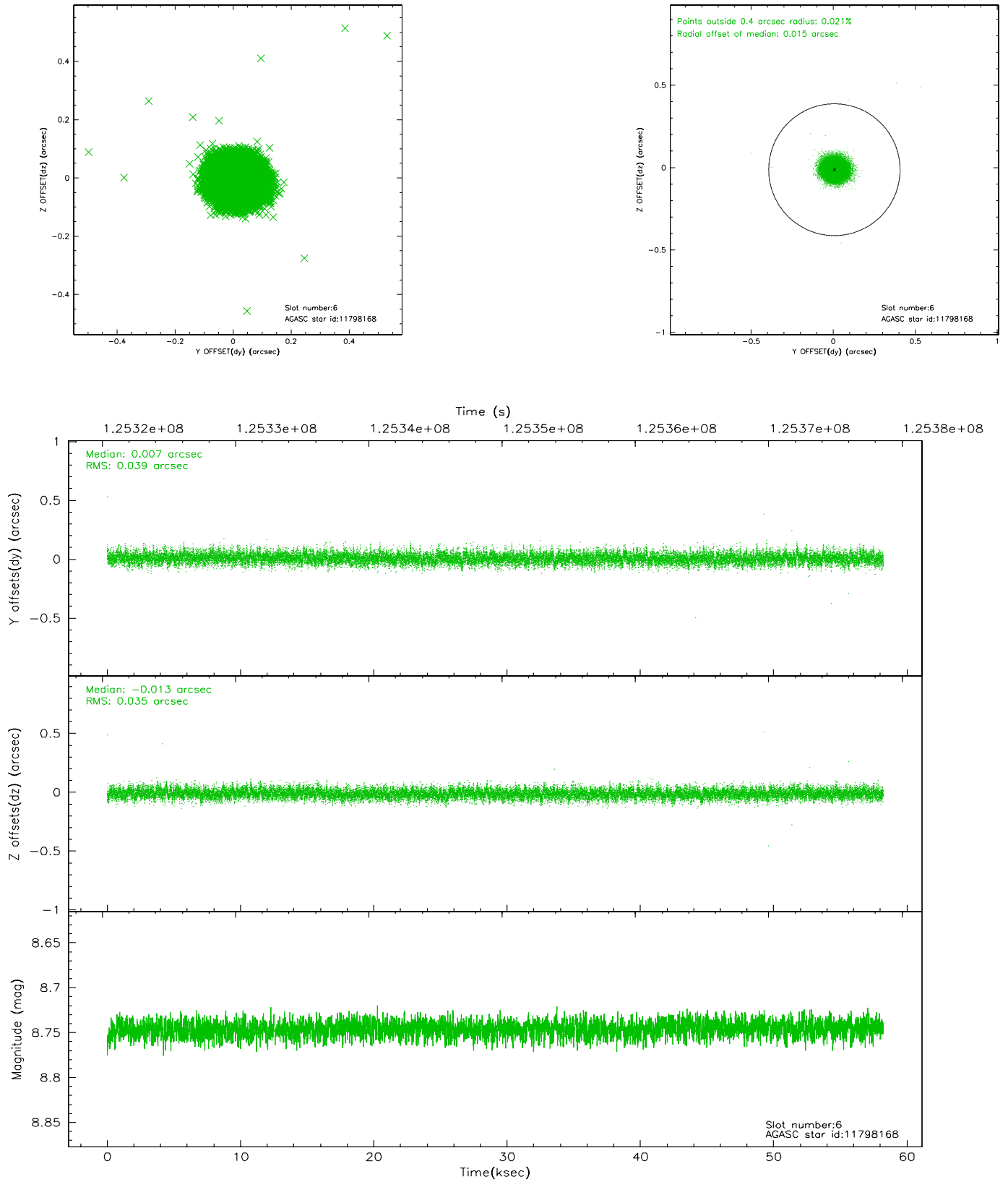
2.4.2 Slot 4



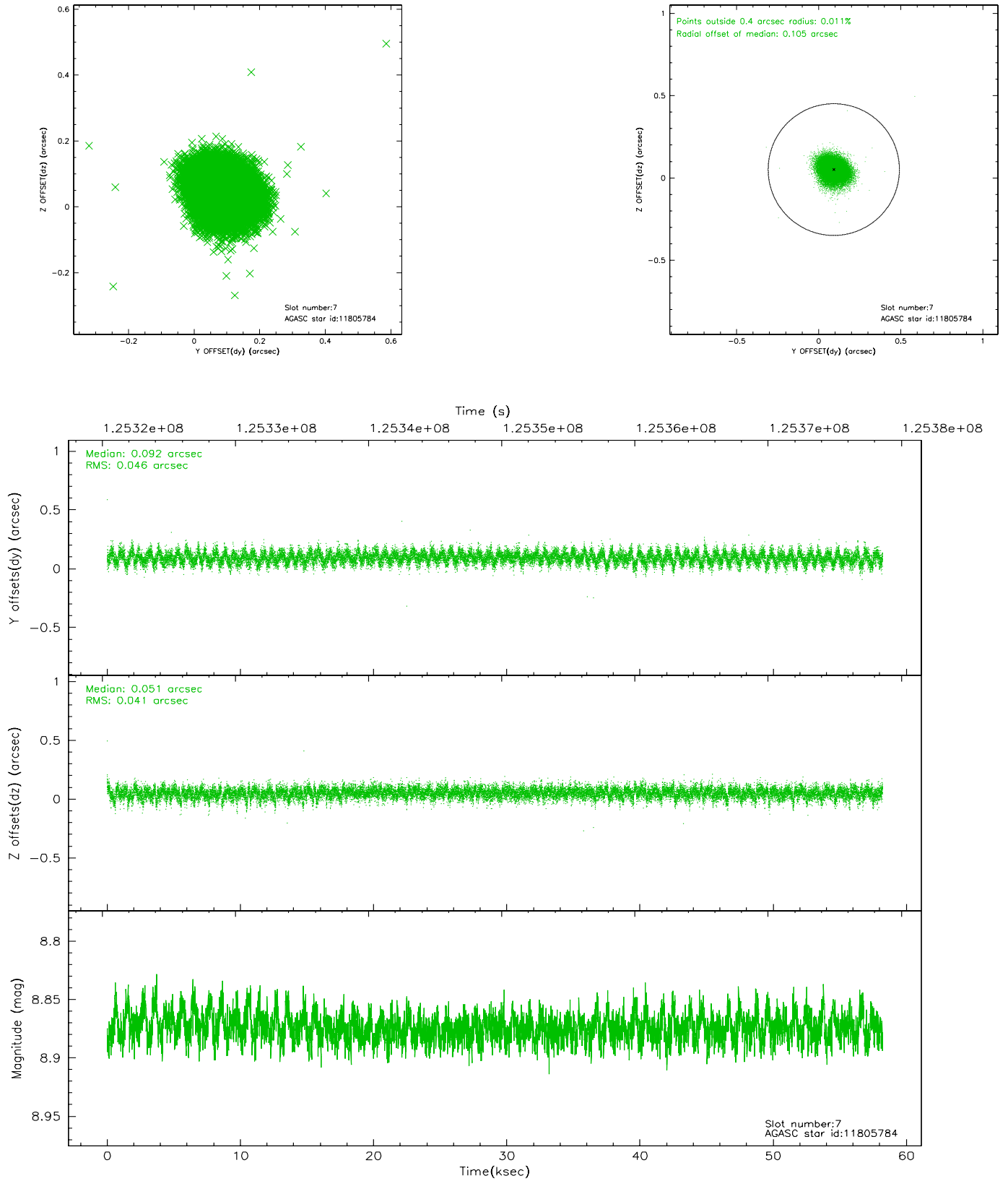
2.4.3 Slot 5



2.4.4 Slot 6

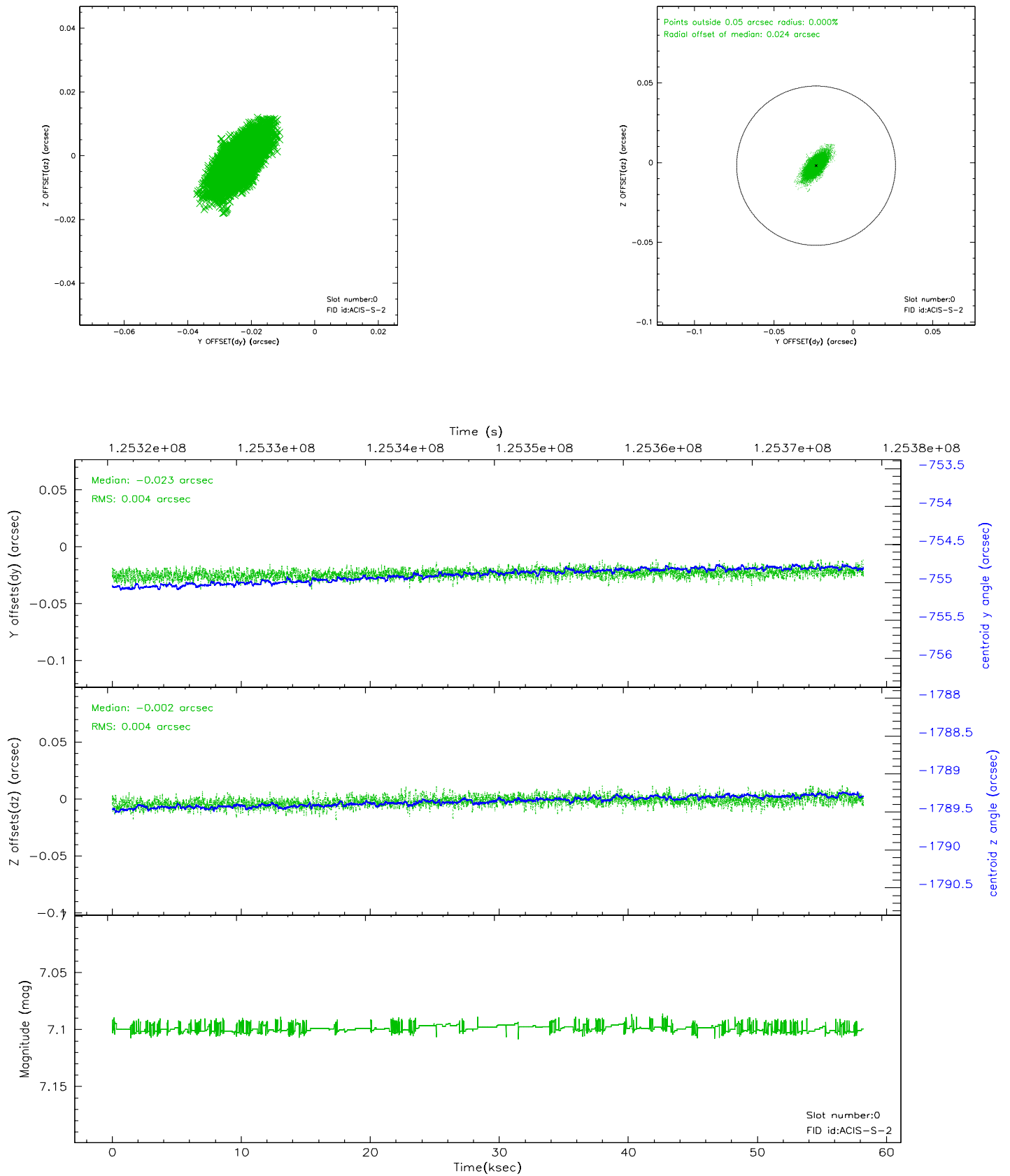


2.4.5 Slot 7

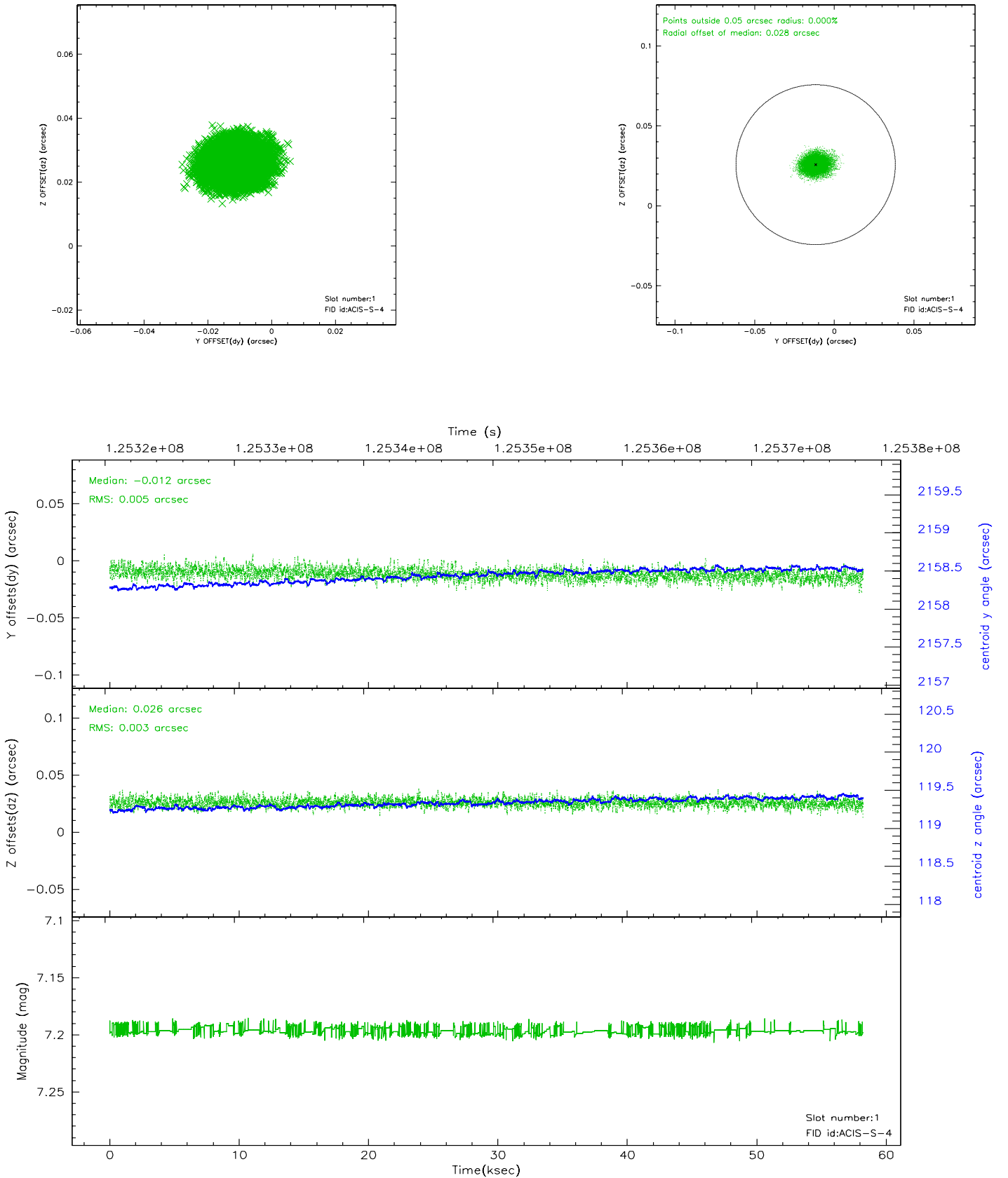


2.5 FID Slots

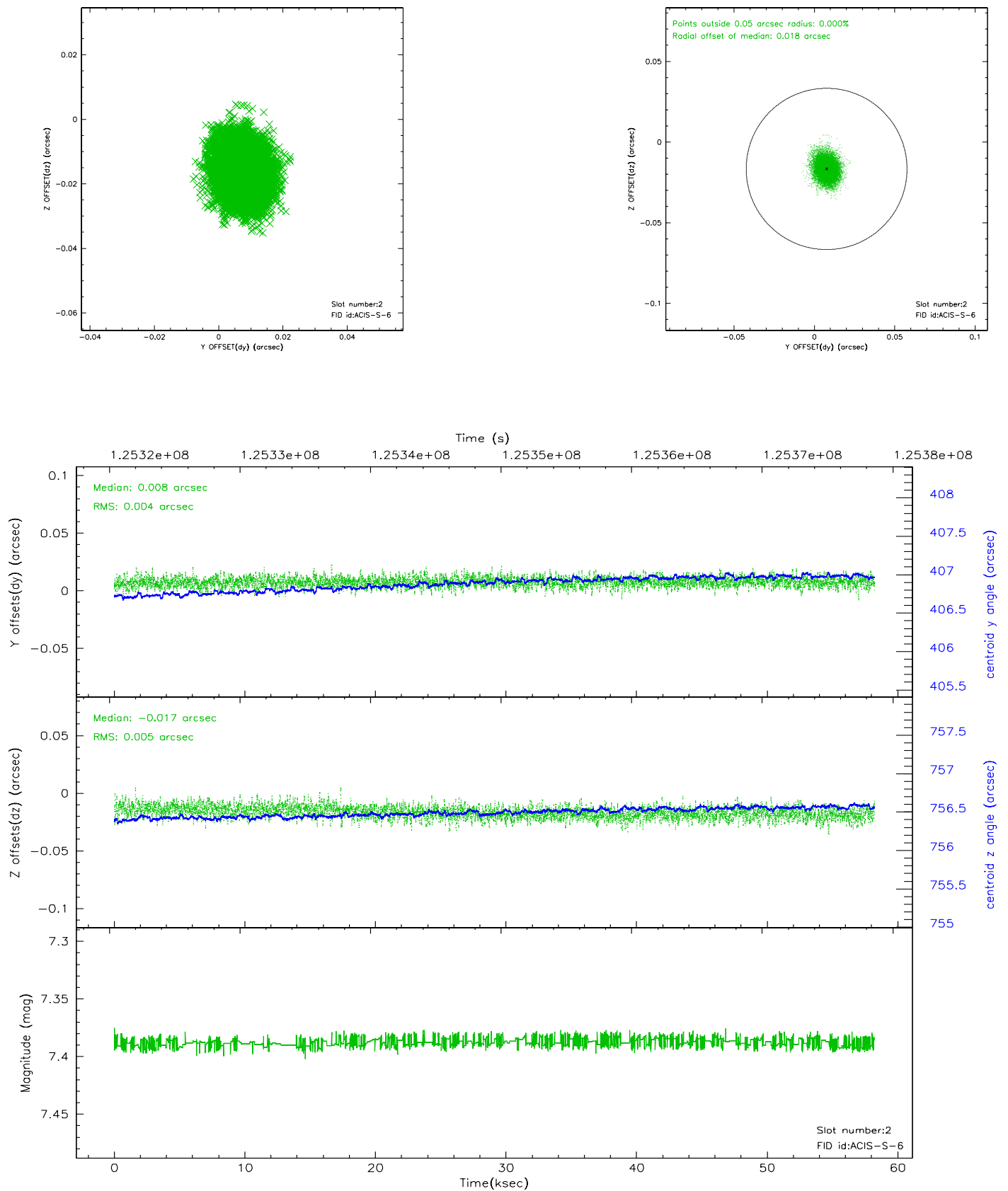
2.5.1 Slot 0



2.5.2 Slot 1

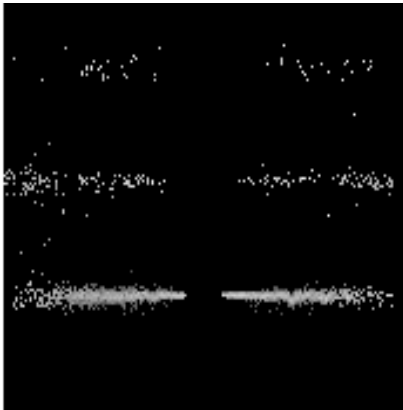


2.5.3 Slot 2

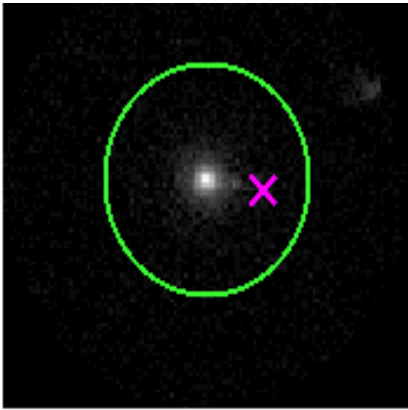


3 Gratings

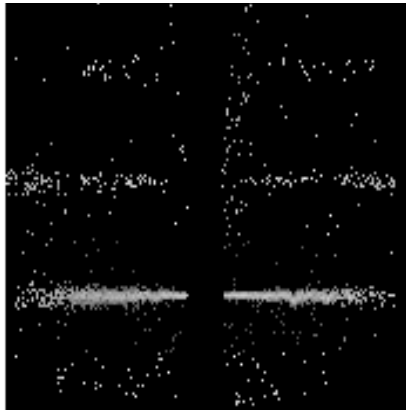
3.1 HEG Arm



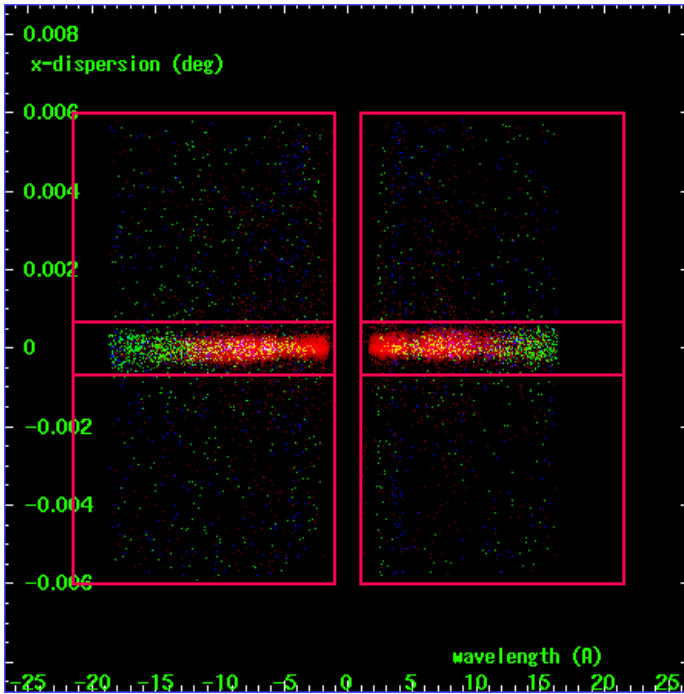
HEG Order Sort 123



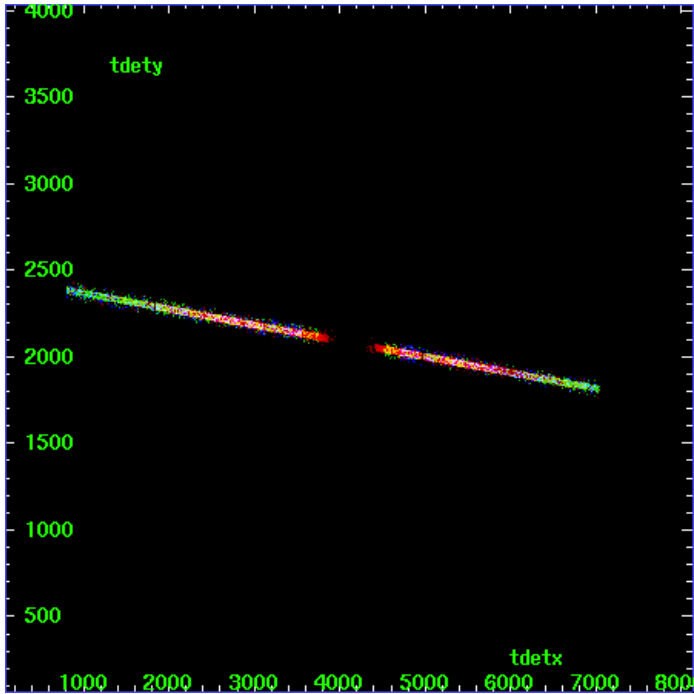
HEG Zero Order



HEG Order Sort ALL

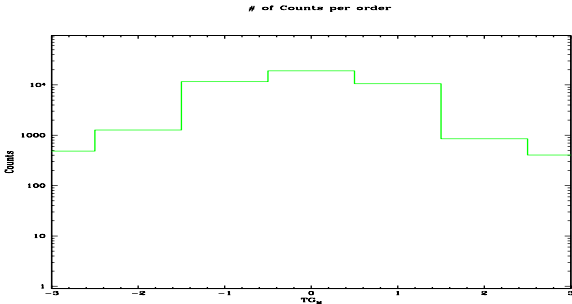


Spot Image HEG

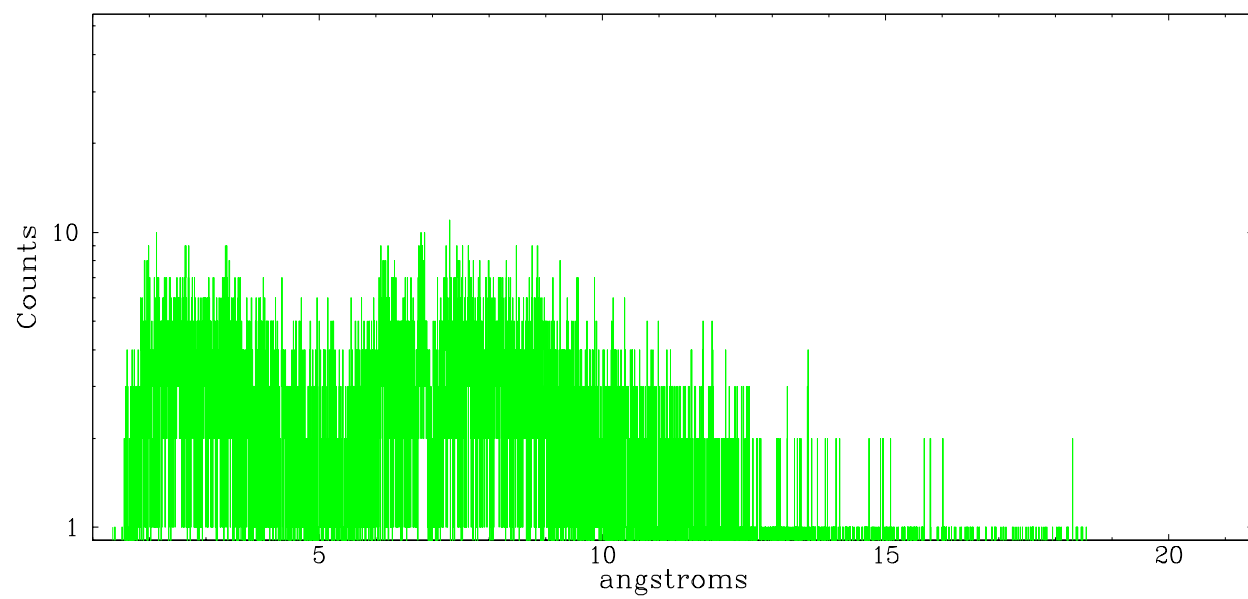


Full Detector HEG

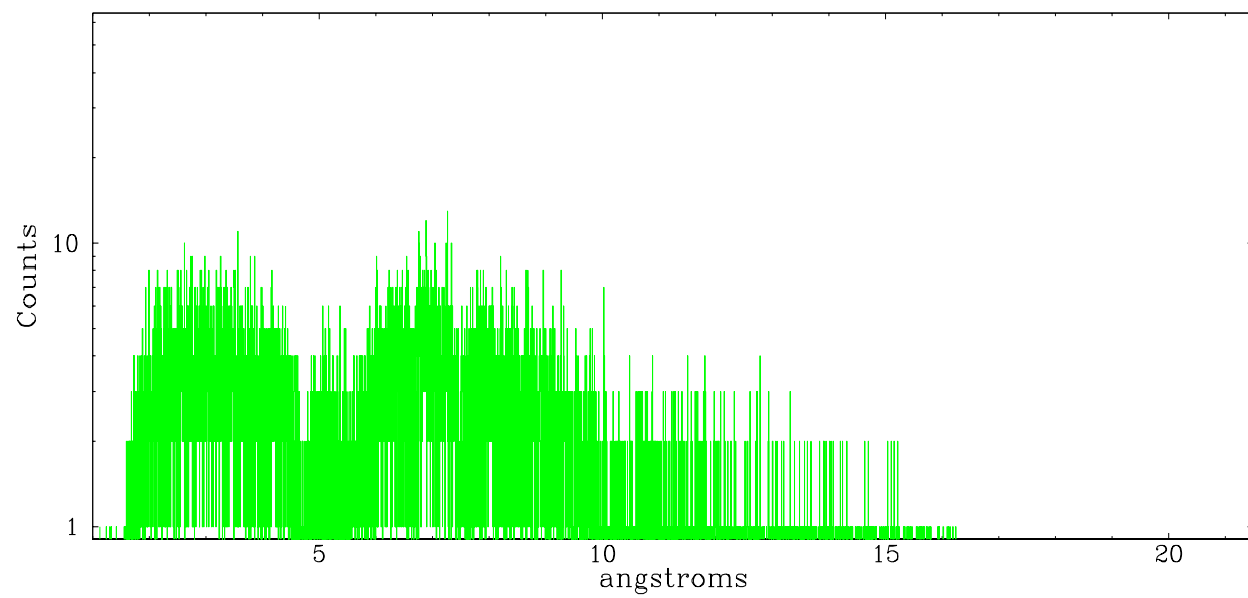
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	484	1267	11564	19024	10595	850	404



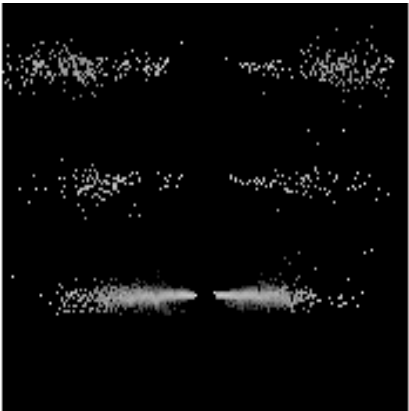
neg order -1



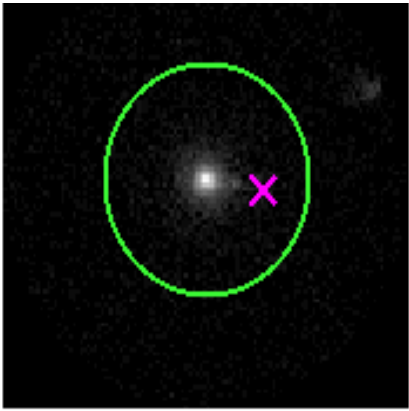
neg order +1



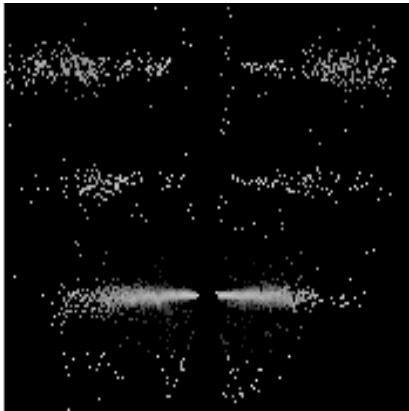
3.2 MEG Arm



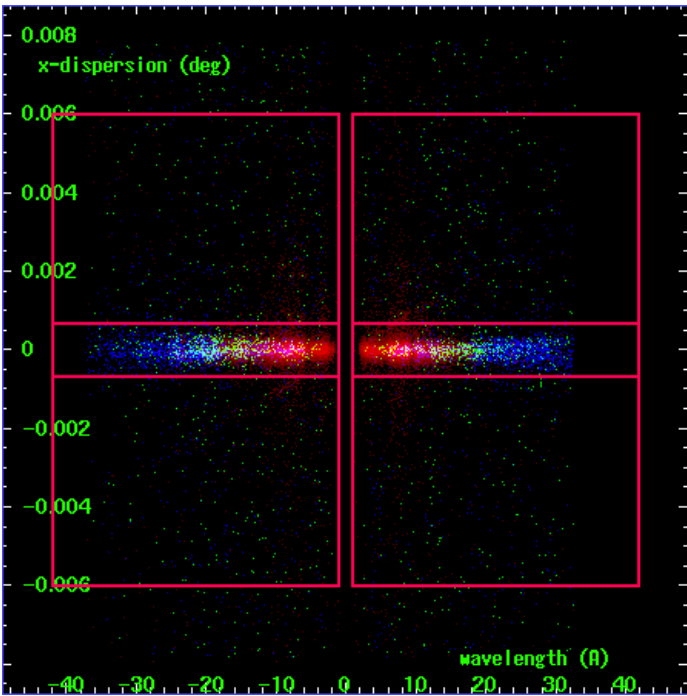
MEG Order Sort 123



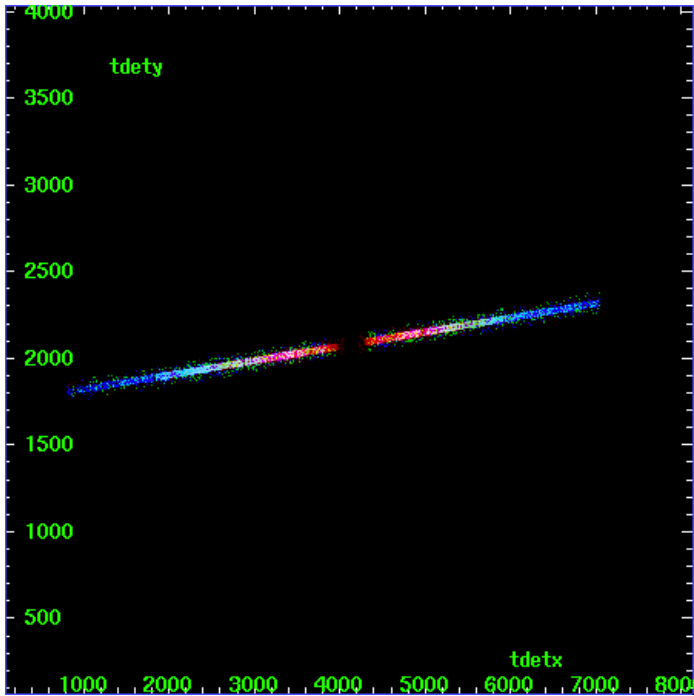
MEG Zero Order



MEG Order Sort ALL

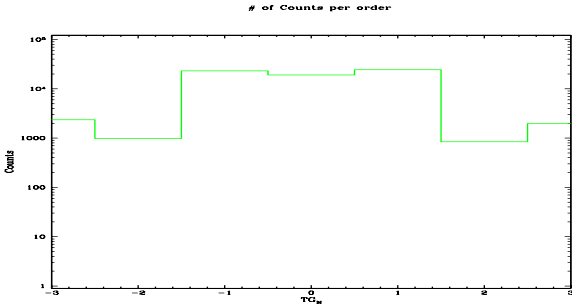


Spot Image MEG

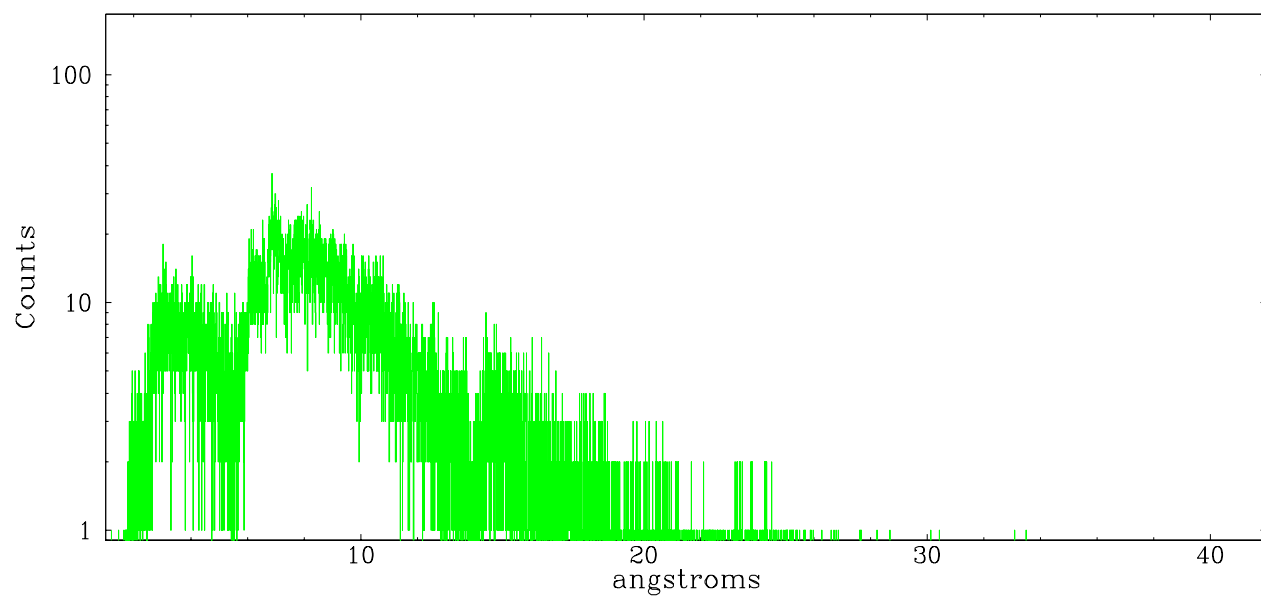


Full Detector MEG

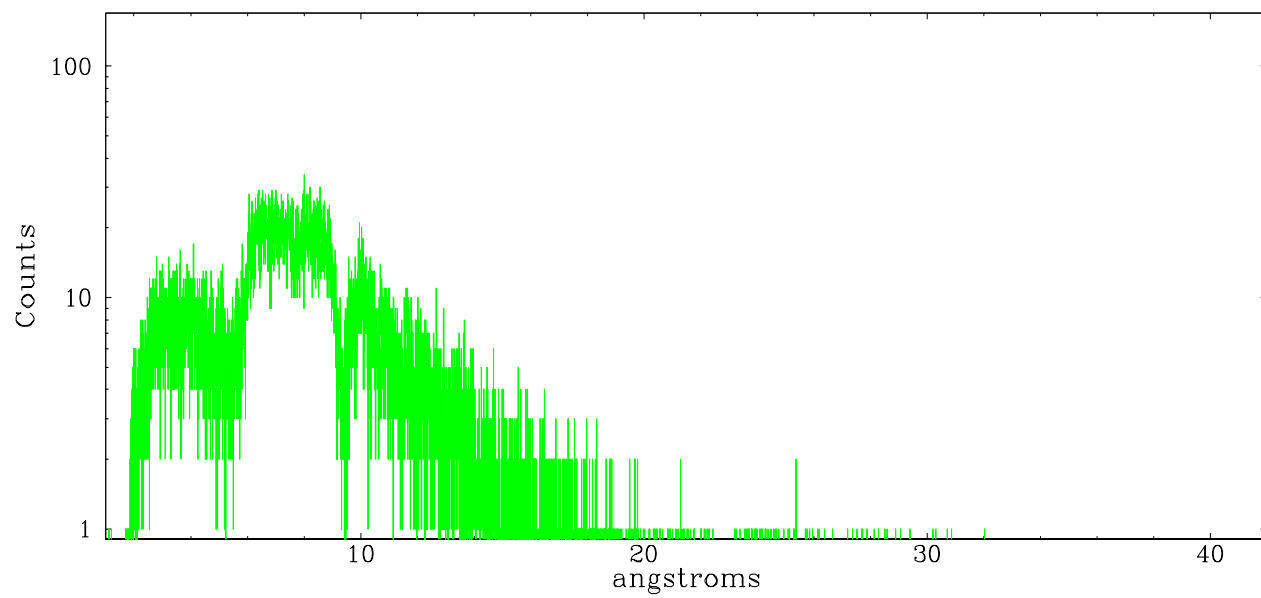
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2357	983	23188	19024	24328	841	1983



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.03.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	58.157

A.2 Comments

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. The sky coordinates used in this processing of the data are x=4080.24, y=4098.35; ra=04:33:11.103, dec=+05:21:15.56.