

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 1022 - L2 Version 002
Chandra X-Ray Center

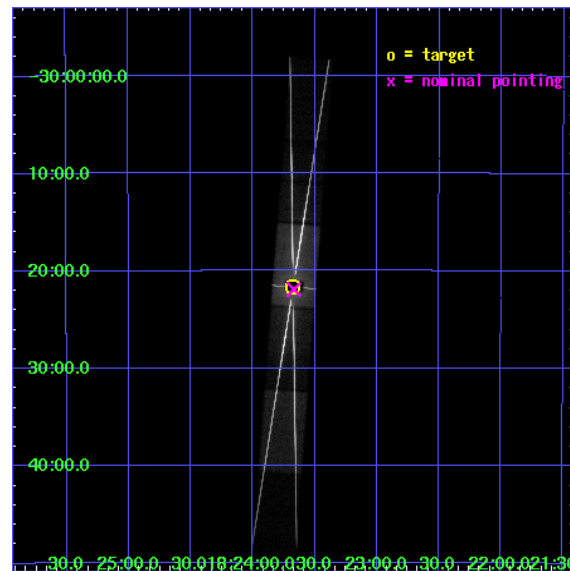
L2 Processing Date : Jan 10 2007

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

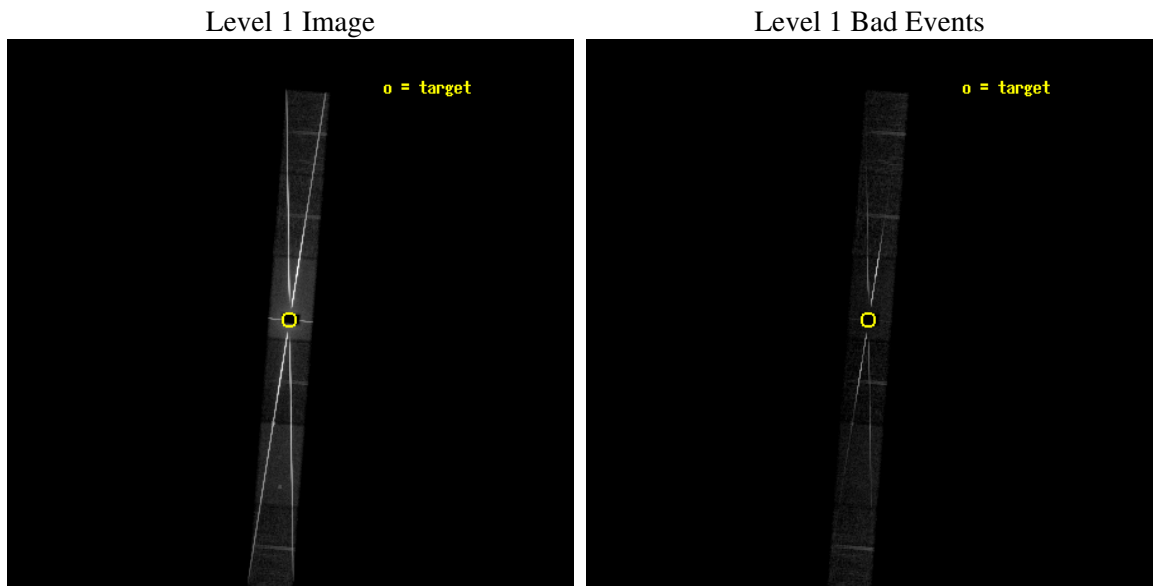
seq_num	400100
obs_id	1022
title	ACCRETION DISK LINES AND CONTINUUM IN 4U 1820-30
observer	Dr Stephen Murray
object	NGC6624
dtcycle	0
cycle	P
ra_targ	275.91875
dec_targ	-30.361111
ra_nom	275.91718840682
dec_nom	-30.365316227103
roll_nom	274.41501375837
revision	4
ontime	10888.199981973
livetime	10645.482970251
ontime4	9262.5965909511
ontime5	10888.199981973
ontime6	6712.9960778207
ontime7	10888.199981973
ontime8	8649.5454682559
ontime9	10731.714541957
l2events	1512358



2 OBI

2.1 OBI

2.1.1 Images

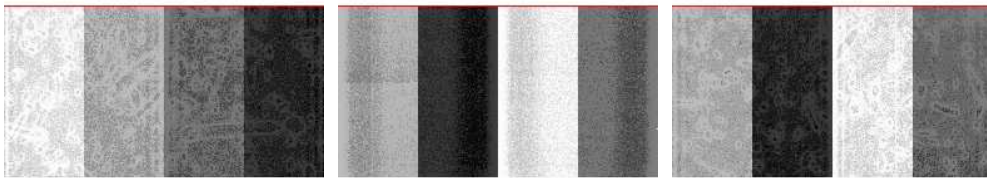


2.1.2 Bias

Chip 4

Chip 5

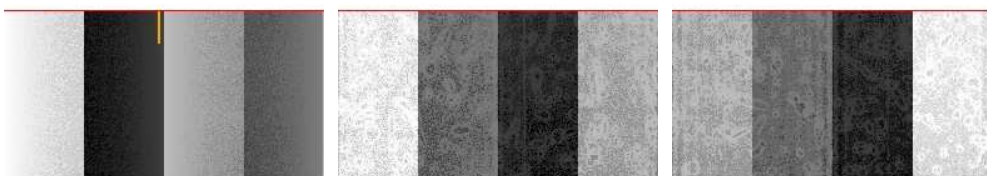
Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.4
date	2006-12-31T10:05:04
revision	2

sched_exp_time	10742.536000
ontime	10888.199981973
ontime4	9262.5965909511
ontime5	10888.199981973
ontime6	6712.9960778207
ontime7	10888.199981973
ontime8	8649.5454682559
ontime9	10731.714541957
l1events	1919767

2.1.4 Events

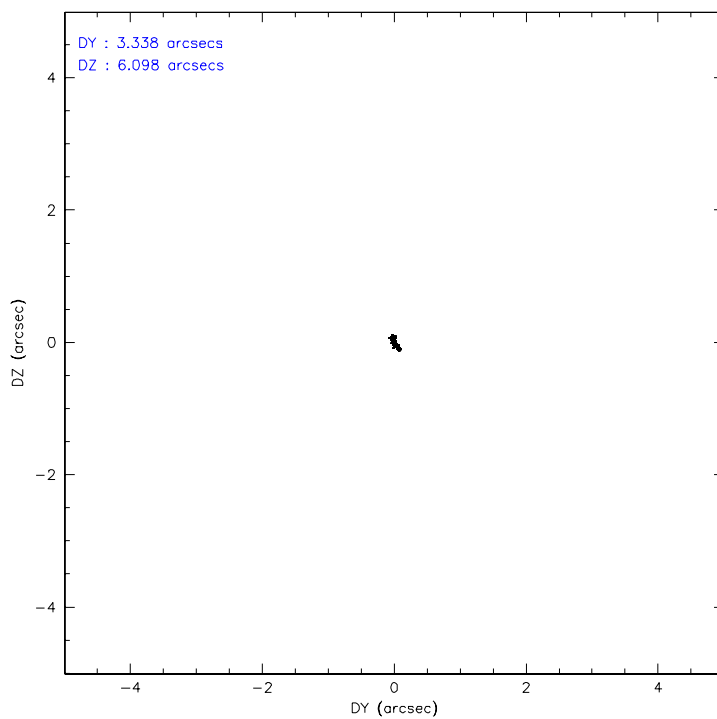
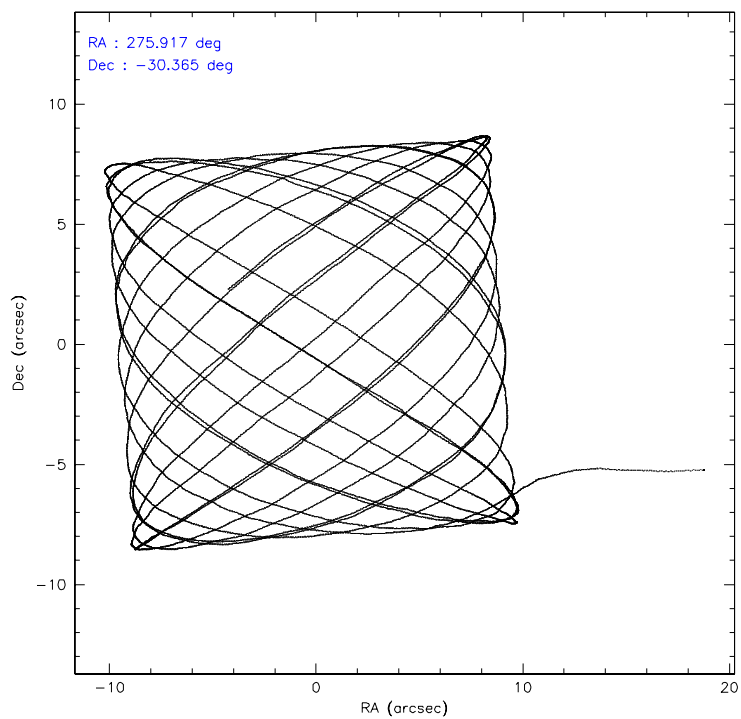
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	72966	245979	478598	691652	319290	111282
rejected events	38127	41707	60589	104286	51204	39690
rejected %	52%	16%	12%	15%	16%	35%

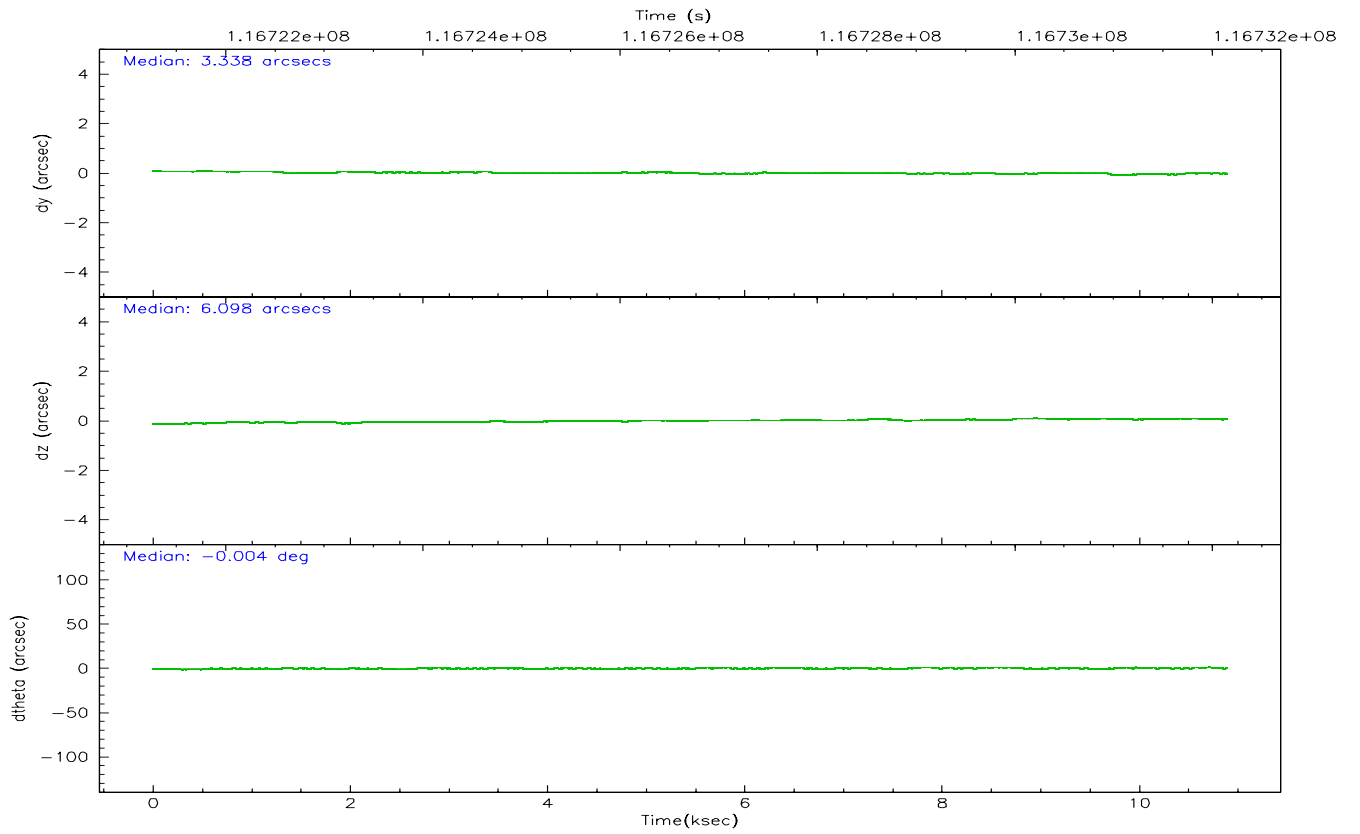
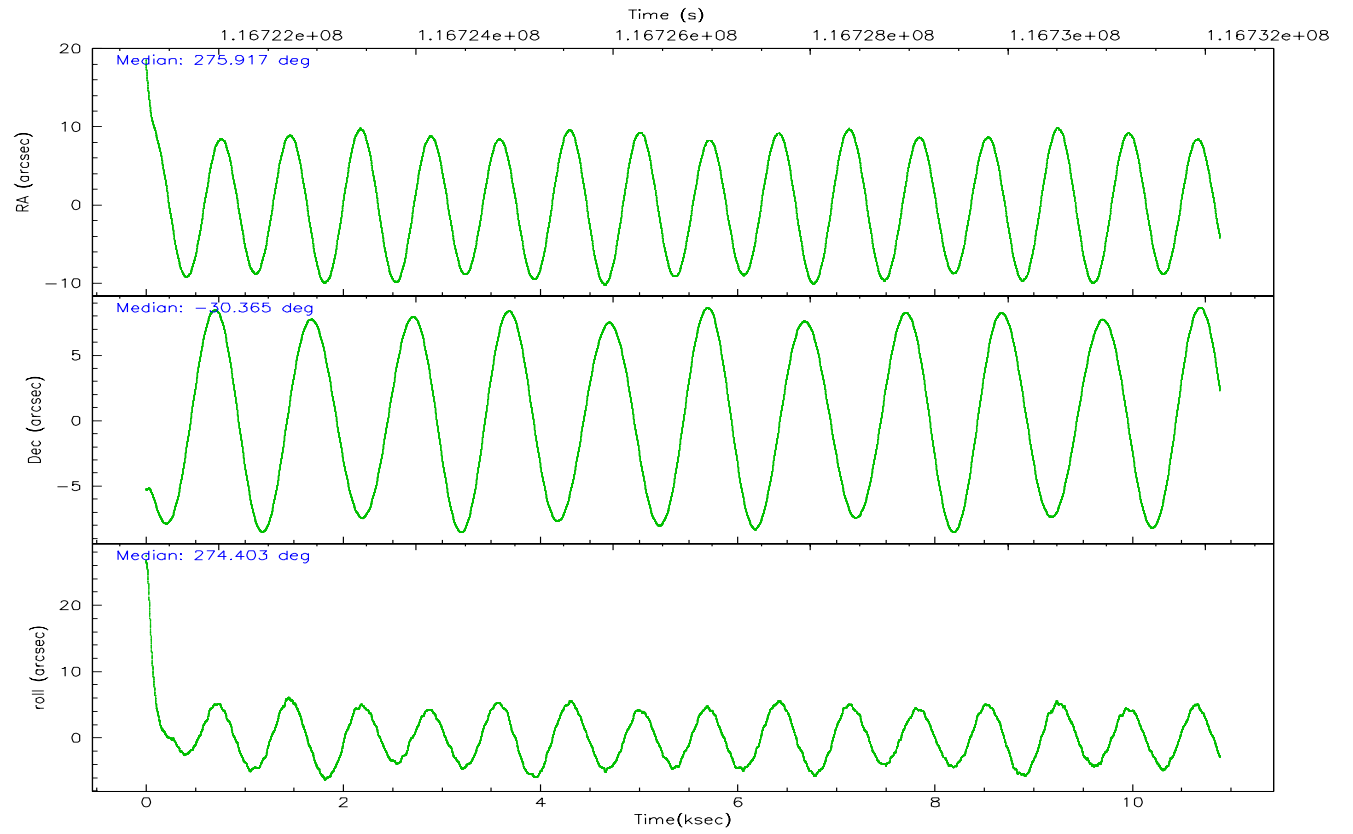
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	27315	60906	314093	107791	217301	57570
	37%	24%	65%	15%	68%	51%
grade 1 events	119	666	13254	5569	4571	249
	0%	0%	2%	0%	1%	0%
grade 2 events	4171	68986	54970	156963	29036	7979
	5%	28%	11%	22%	9%	7%
grade 3 events	1361	16538	20643	59090	10373	2712
	1%	6%	4%	8%	3%	2%
grade 4 events	1337	16726	20043	59289	10129	2700
	1%	6%	4%	8%	3%	2%
grade 5 events	1337	5950	9724	27415	3886	1759
	1%	2%	2%	3%	1%	1%
grade 6 events	1306	44923	18754	215346	7732	2303
	1%	18%	3%	31%	2%	2%
grade 7 events	36020	31284	27117	60189	36262	36010
	49%	12%	5%	8%	11%	32%

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	275.898979	275.9171884068194	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-30.342991	-30.36531622710302	Subarray start row	15	15
Pointing Roll	274.249160	274.4150137583736	Subarray row count	542	542
Window start time	116380864.184000	116380864.184000	Alternating exposures requested	N	N
Window stop time	117244864.184000	117244864.184000	Primary exposure time	0.000000	1.8
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-184.532523	-184.5306286120915			
SIM translation stage offset (mm)	-5.6	-5.601893970916279			
Observation start time	116721411.184000	116720300.12038			
Observation start date	2001-09-12T22:35:47	2001-09-12T22:18:20			
Observation end time	116732154.184000	116732468.40836			
Observation end date	2001-09-13T01:34:50	2001-09-13T01:41:08			
Read mode	TIMED	TIMED			

2.3 Aspect



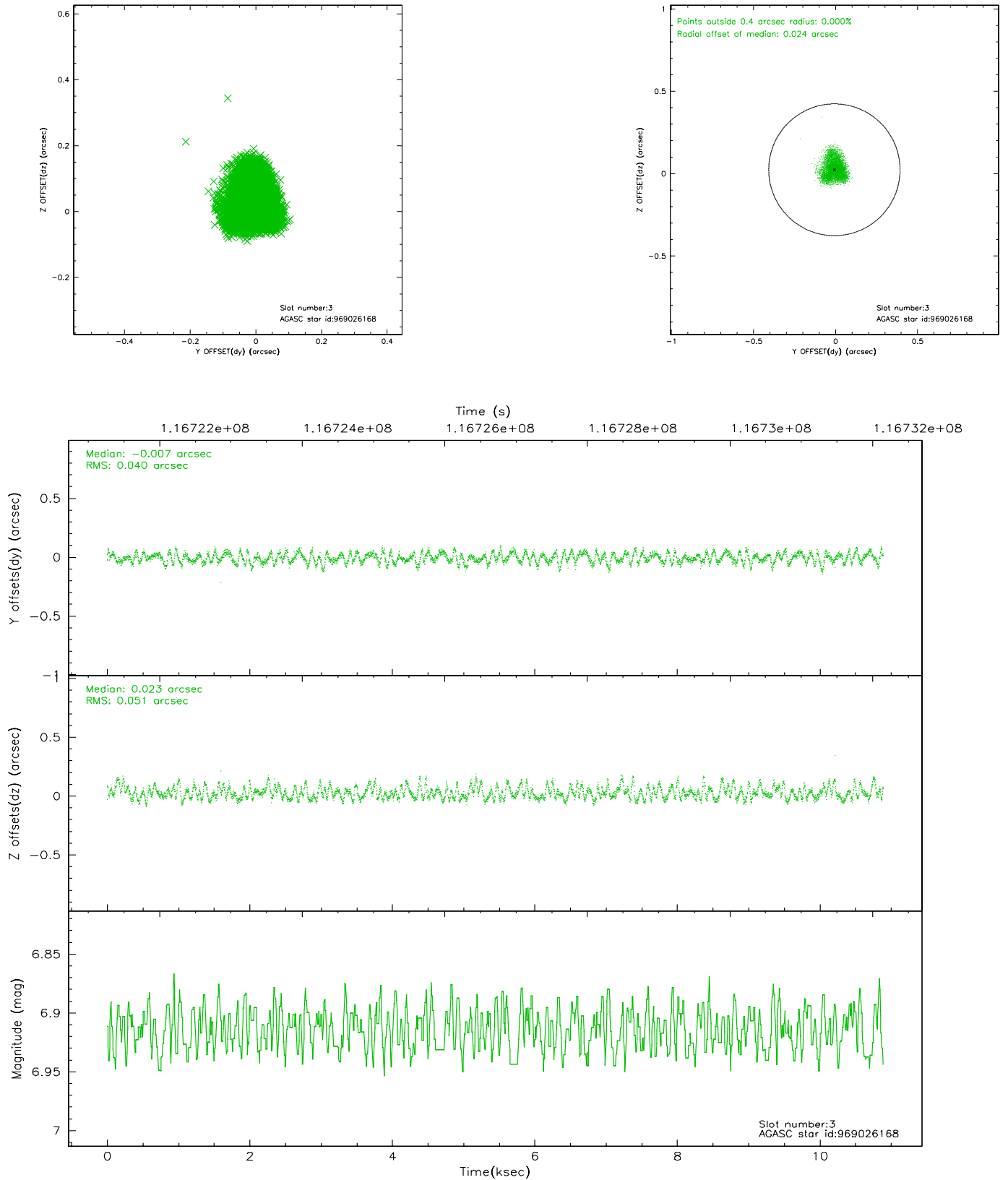


Slot Statistics

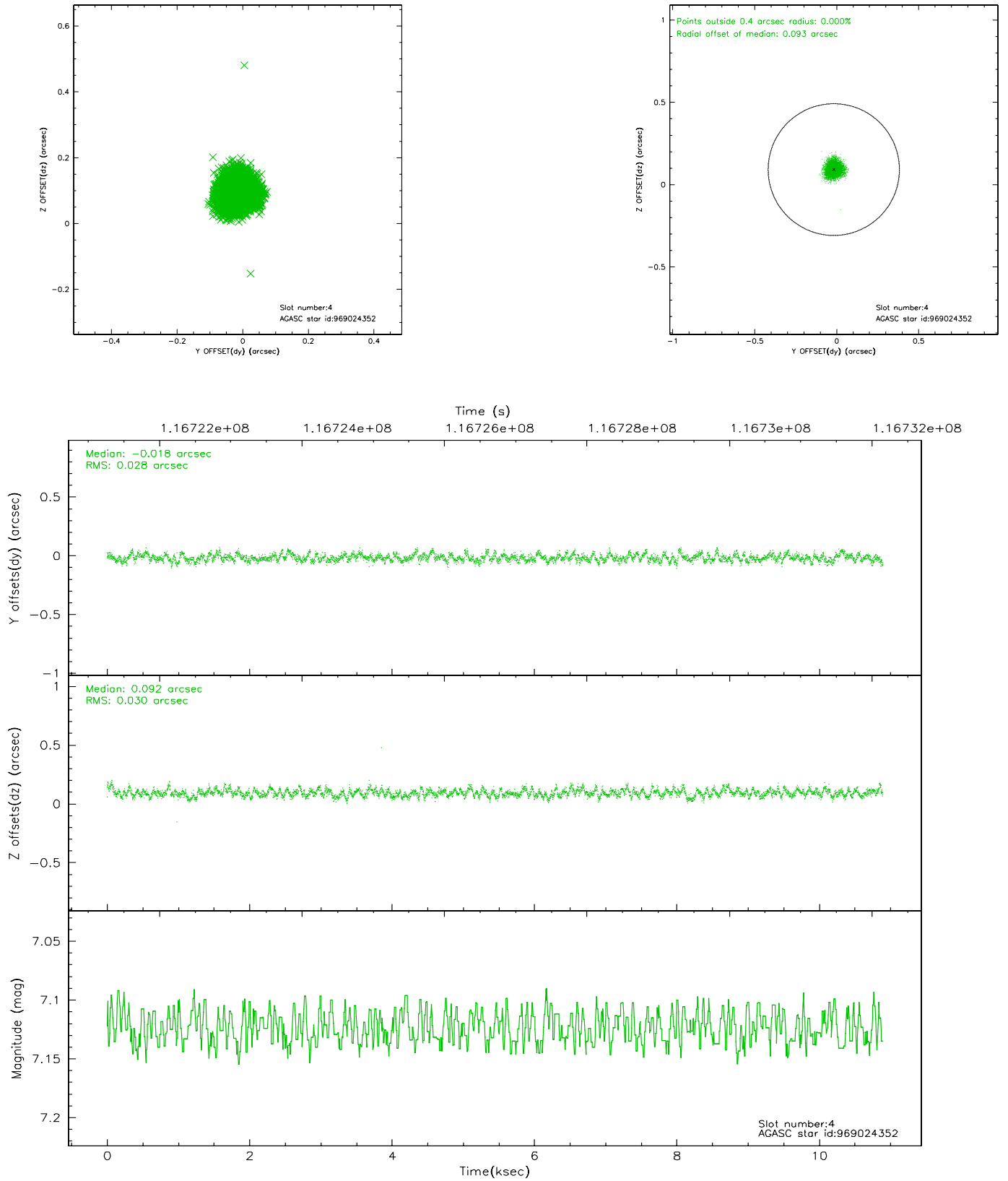
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.20	2656	0.044	0.071	0.008	0.013	0.000000	0.000000	940.44	-1838.30
1	FID	ACIS-S-4	7.19	2657	-0.084	-0.067	0.007	0.012	0.000000	0.000000	2158.02	65.17
2	FID	ACIS-S-5	7.23	2657	0.013	0.007	0.005	0.010	0.000000	0.000000	-1807.82	59.43
3	GUIDE	969026168	6.91	5314	-0.007	0.023	0.070	0.109	276.670048	-30.393325	367.31	2373.74
4	GUIDE	969024352	7.12	5314	-0.018	0.092	0.044	0.070	276.375278	-30.253432	-207.48	1501.10
5	GUIDE	969019728	8.27	5310	-0.120	-0.092	0.062	0.100	275.177360	-30.122339	-949.80	-2182.65
6	GUIDE	969018704	8.74	5313	0.090	0.072	0.061	0.097	275.831054	-30.613541	957.22	-282.31
7	GUIDE	969021496	9.05	5311	0.053	-0.097	0.068	0.111	275.310242	-30.546513	602.27	-1875.08

2.4 Star Slots

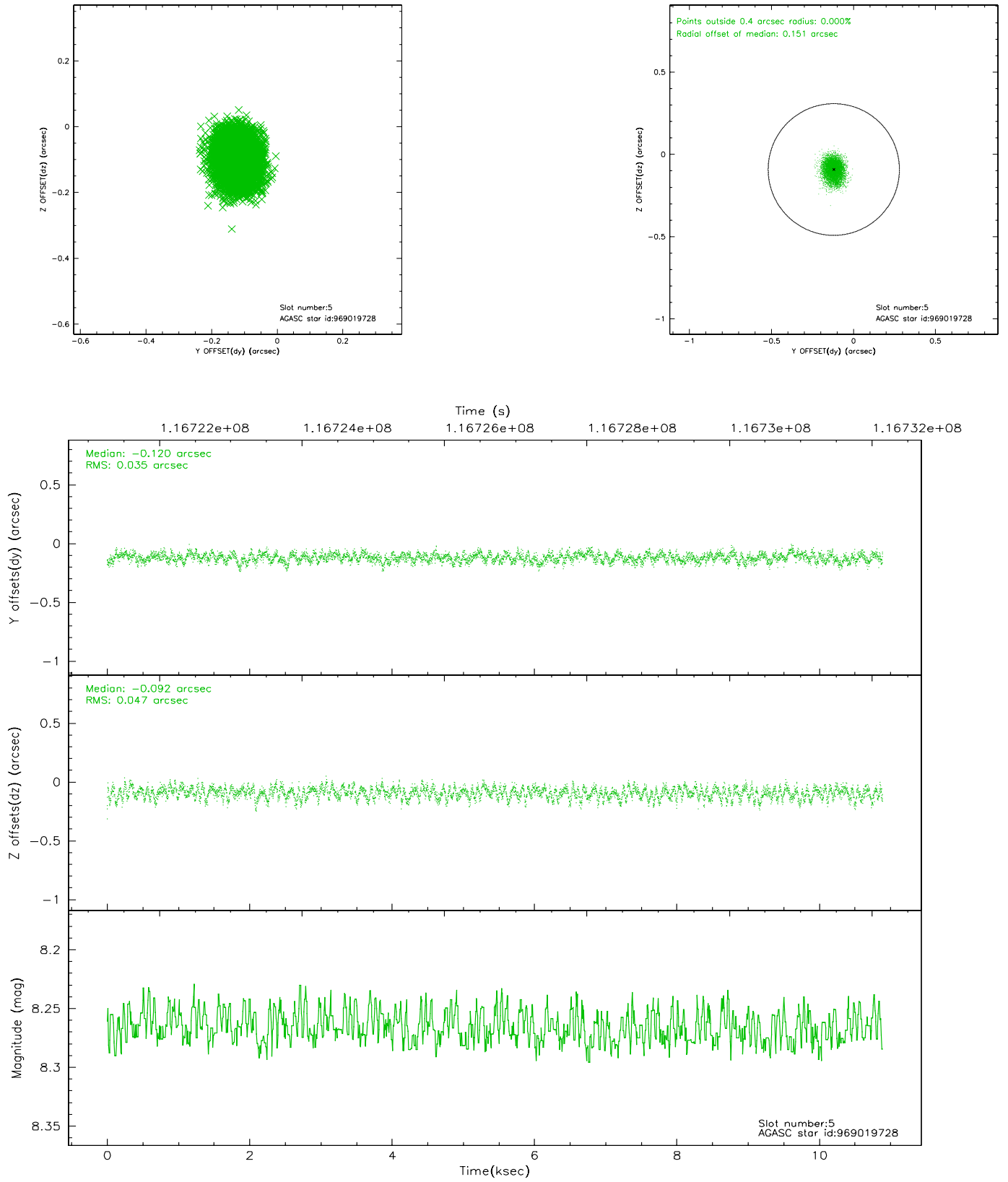
2.4.1 Slot 3



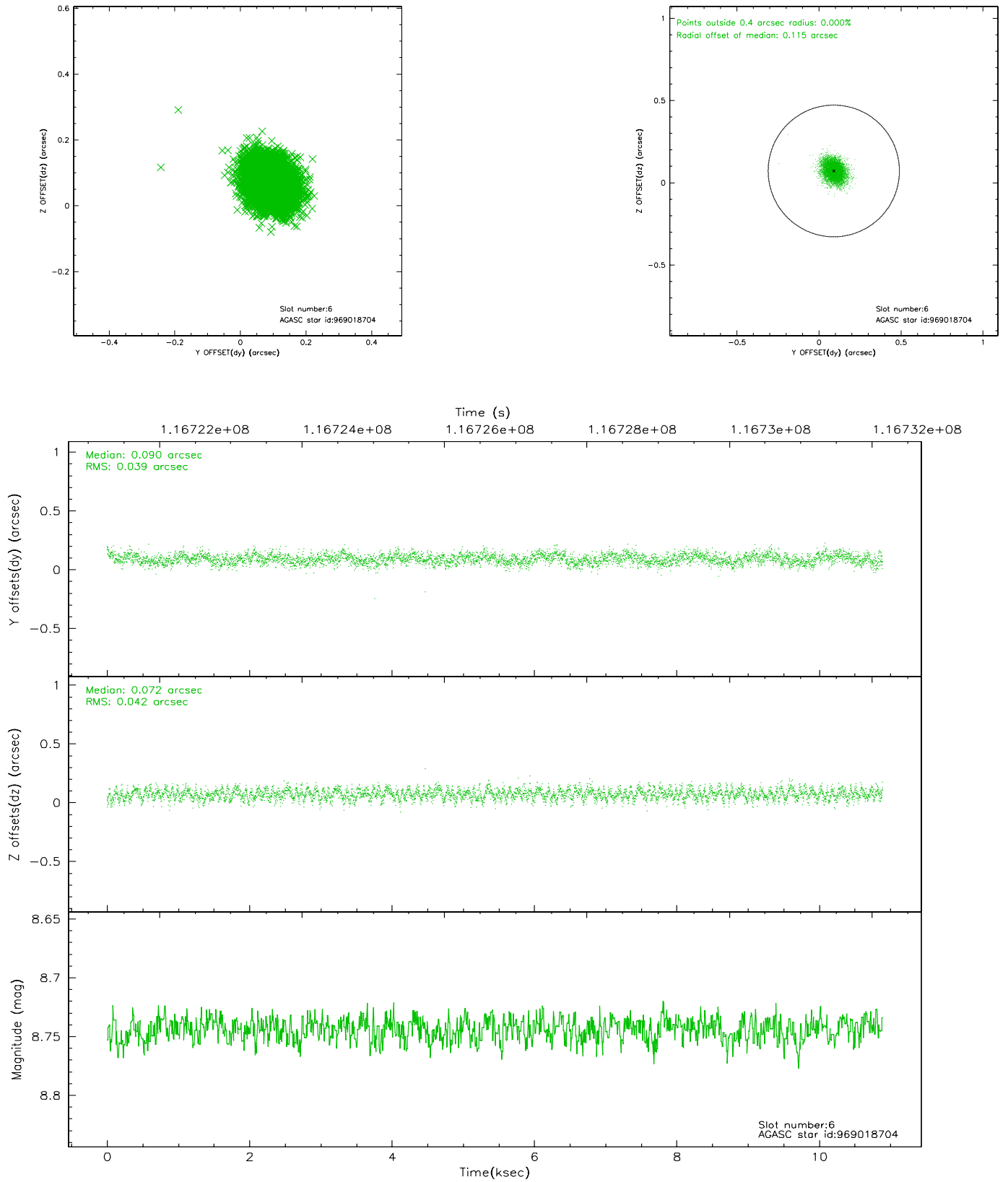
2.4.2 Slot 4



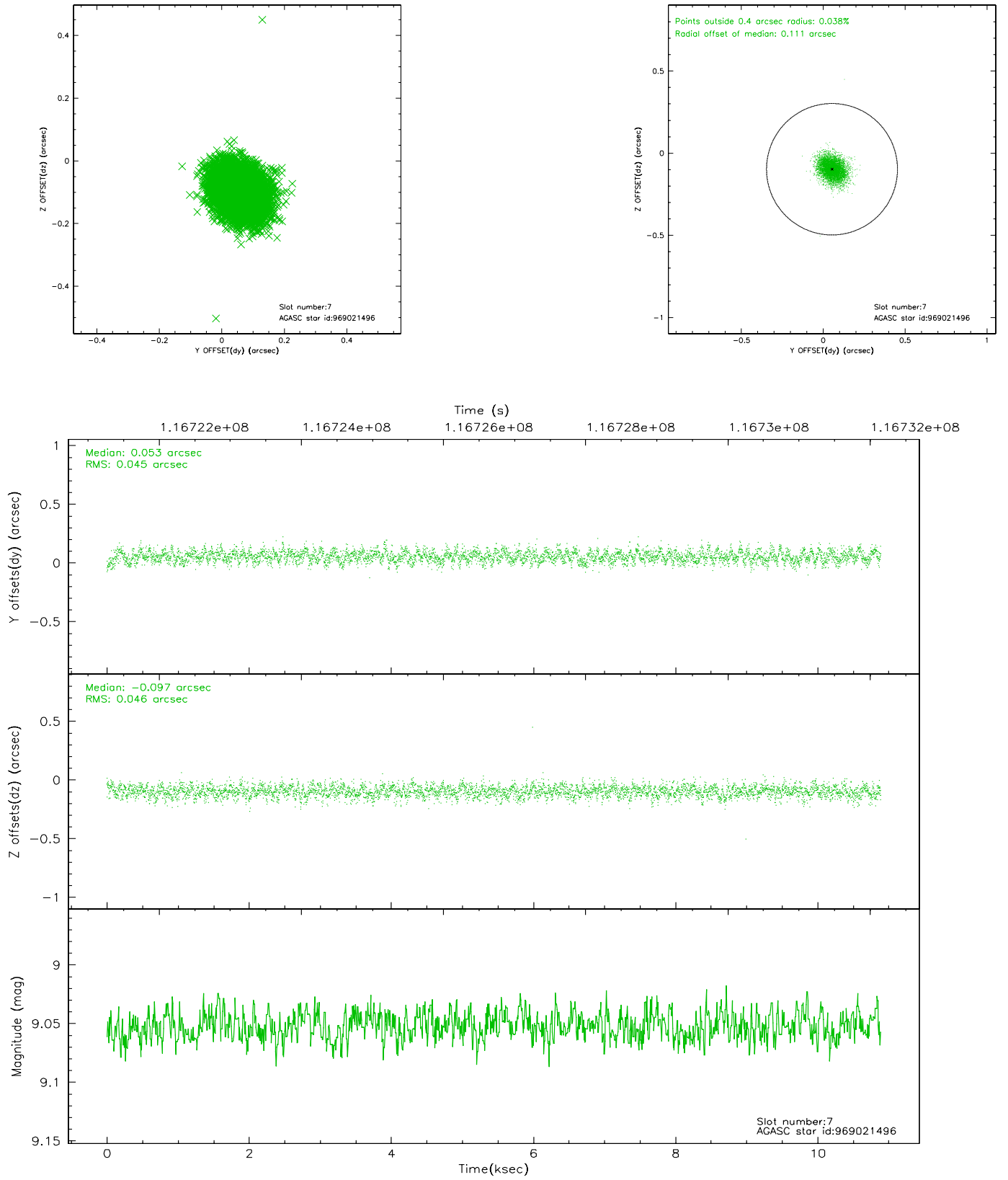
2.4.3 Slot 5



2.4.4 Slot 6

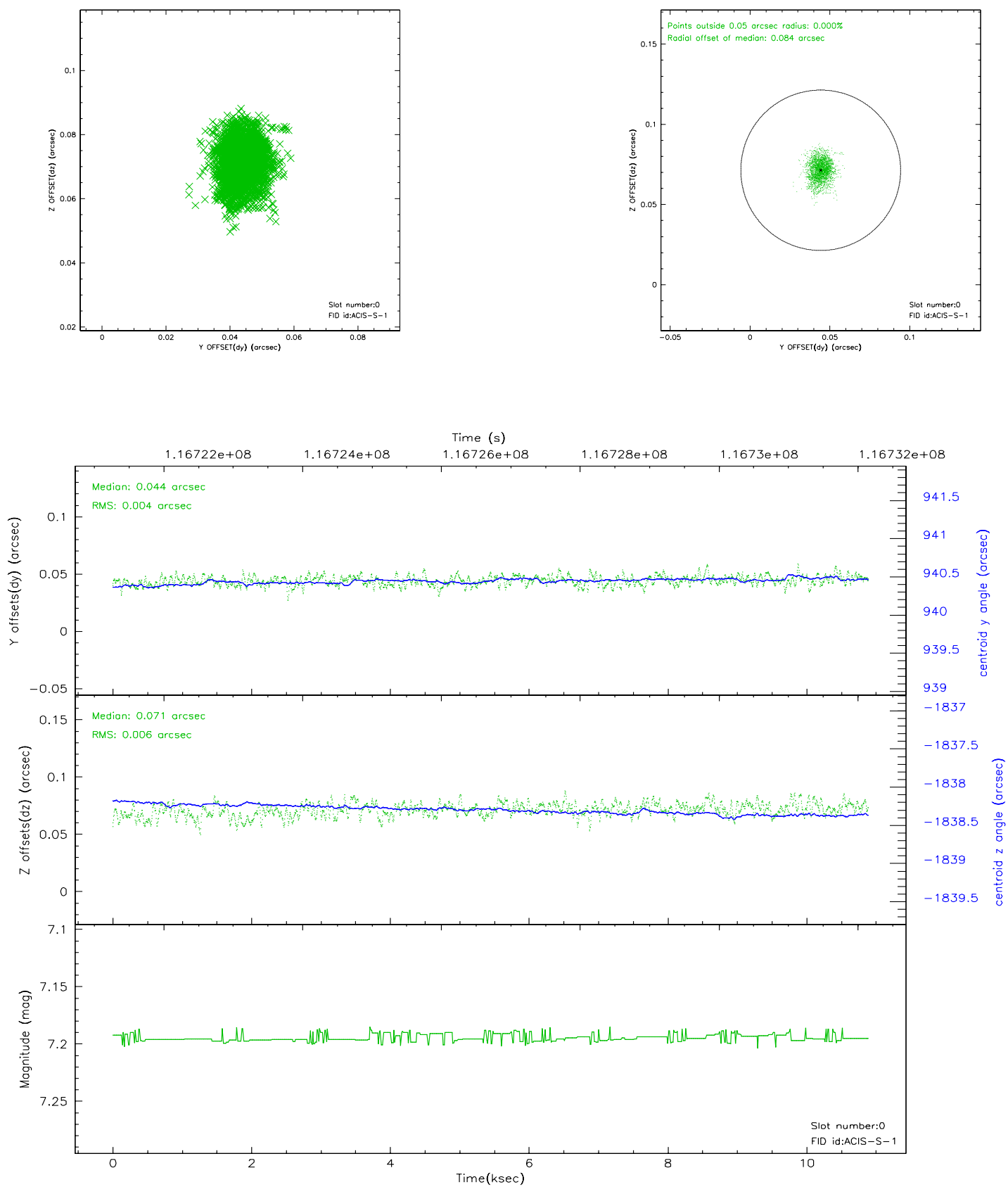


2.4.5 Slot 7

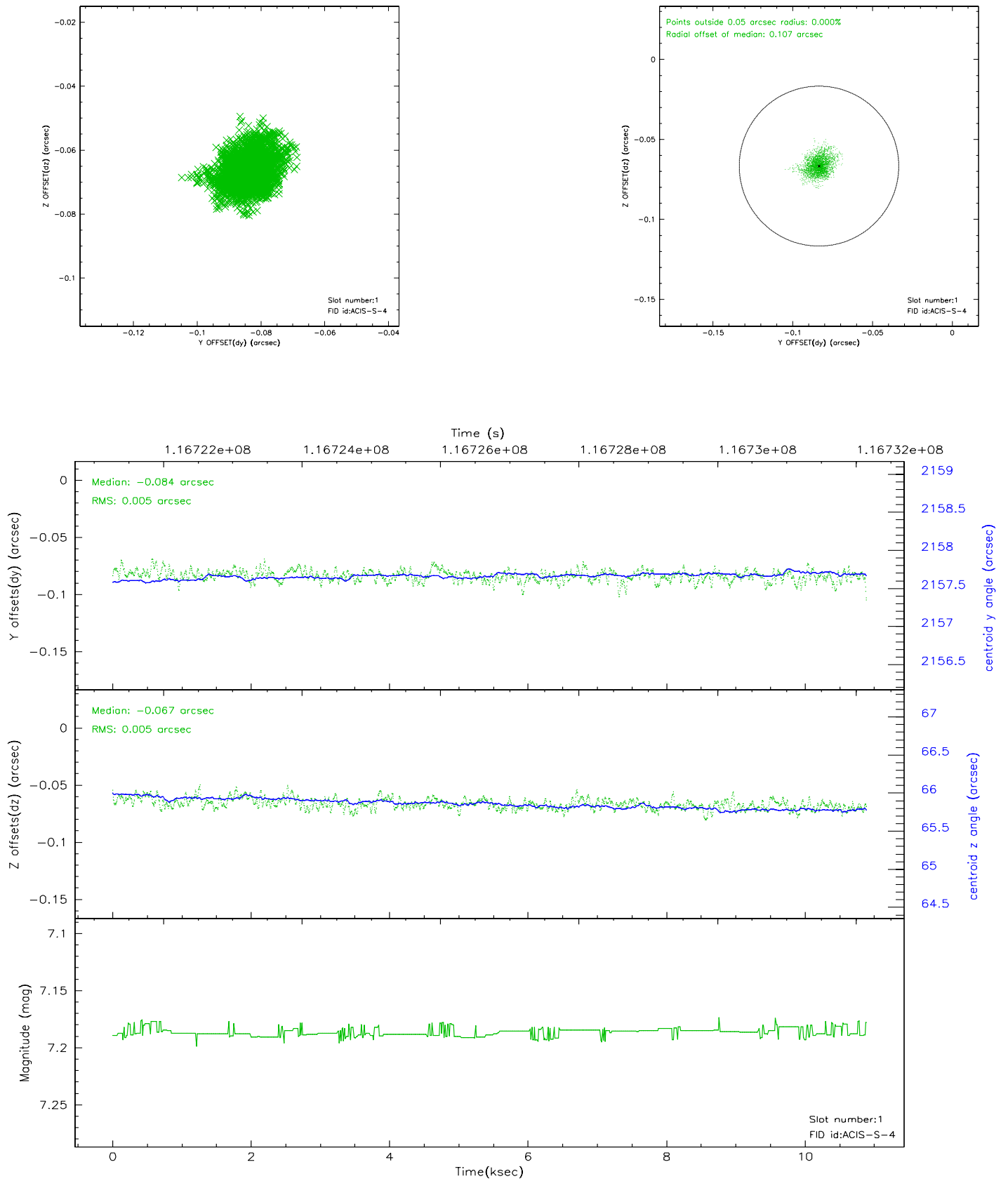


2.5 FID Slots

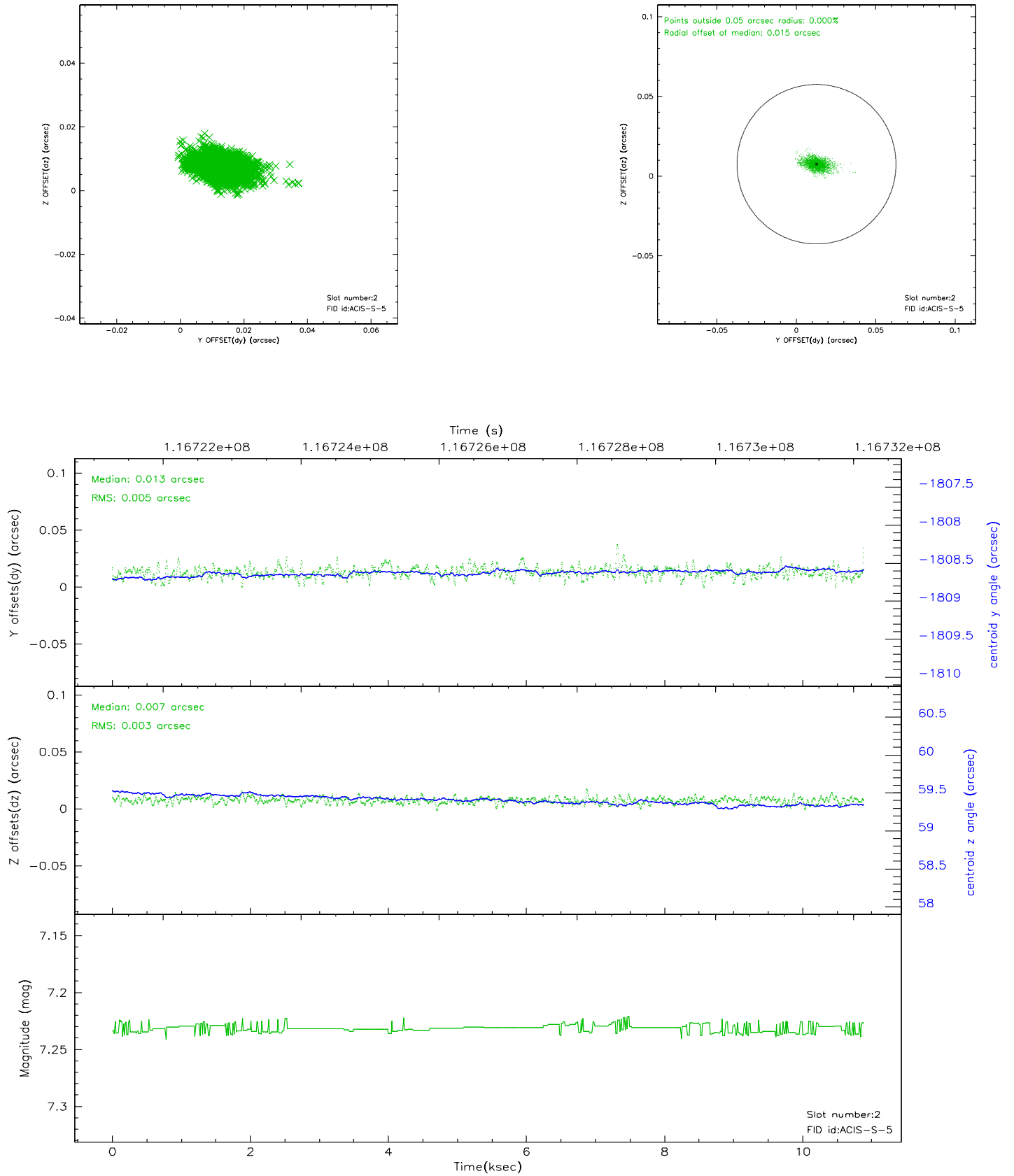
2.5.1 Slot 0



2.5.2 Slot 1

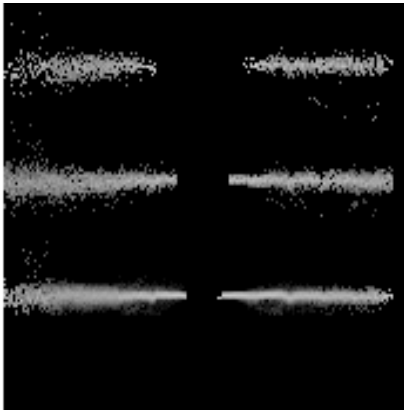


2.5.3 Slot 2

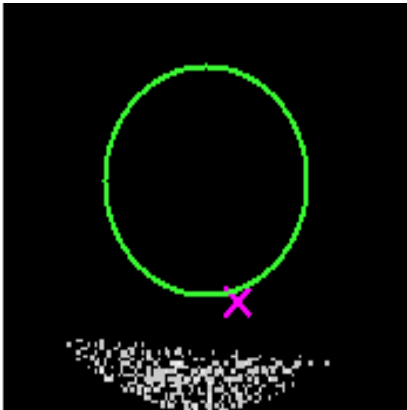


3 Gratings

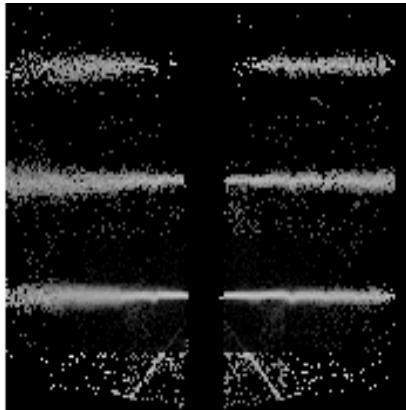
3.1 HEG Arm



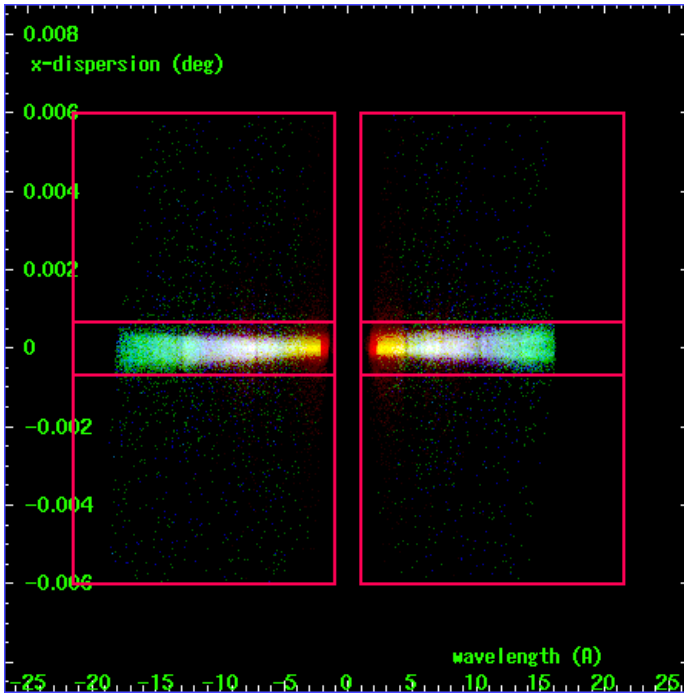
HEG Order Sort 123



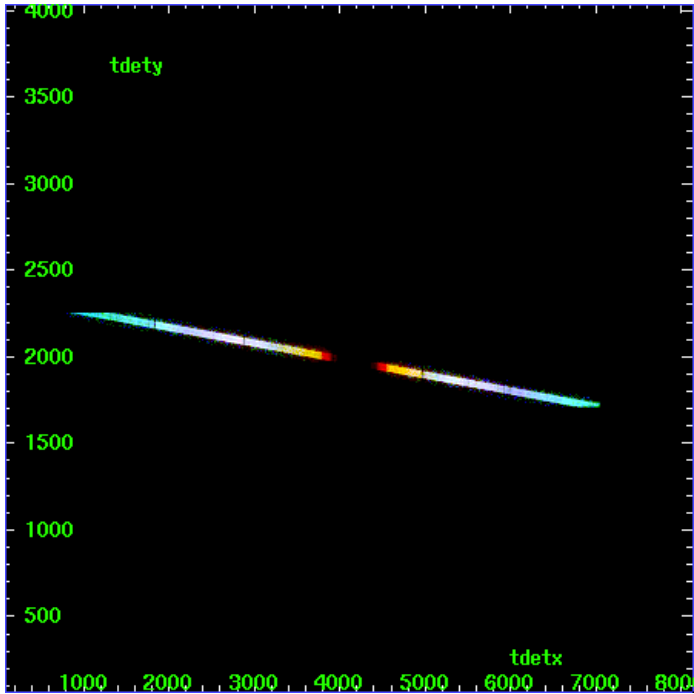
HEG Zero Order



HEG Order Sort ALL

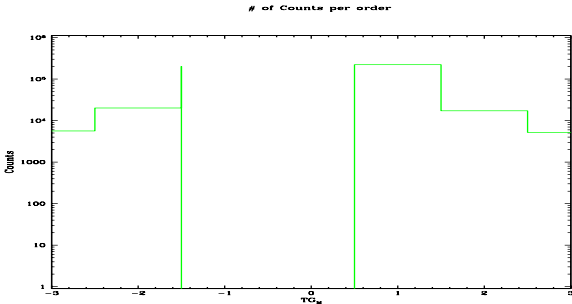


Spot Image HEG

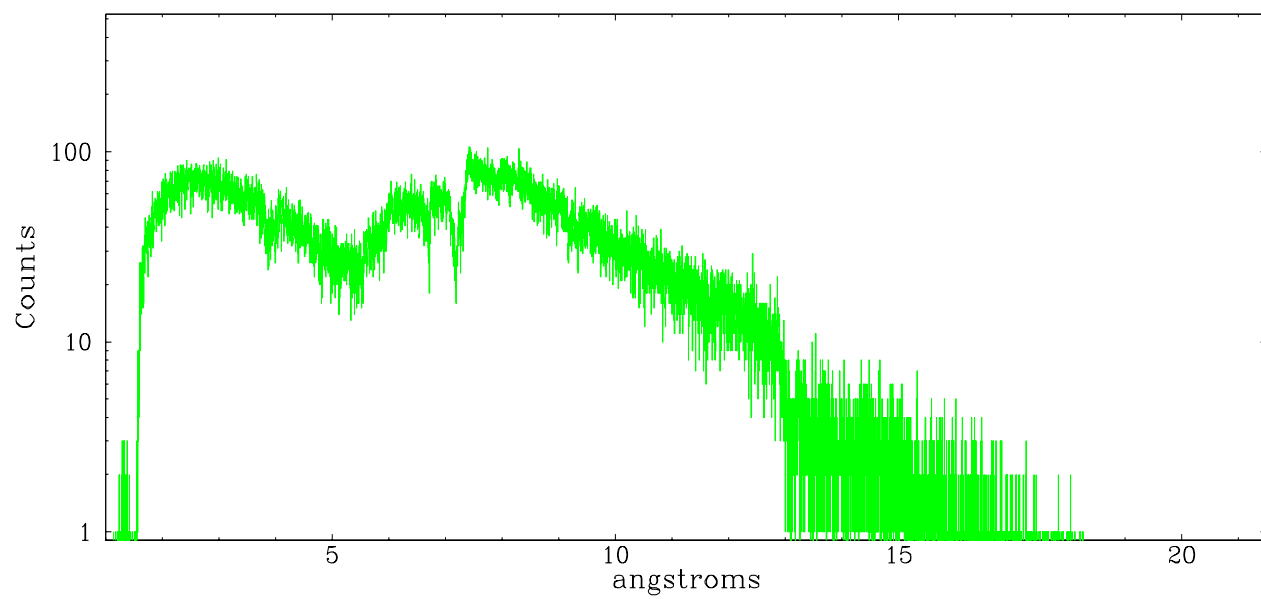


Full Detector HEG

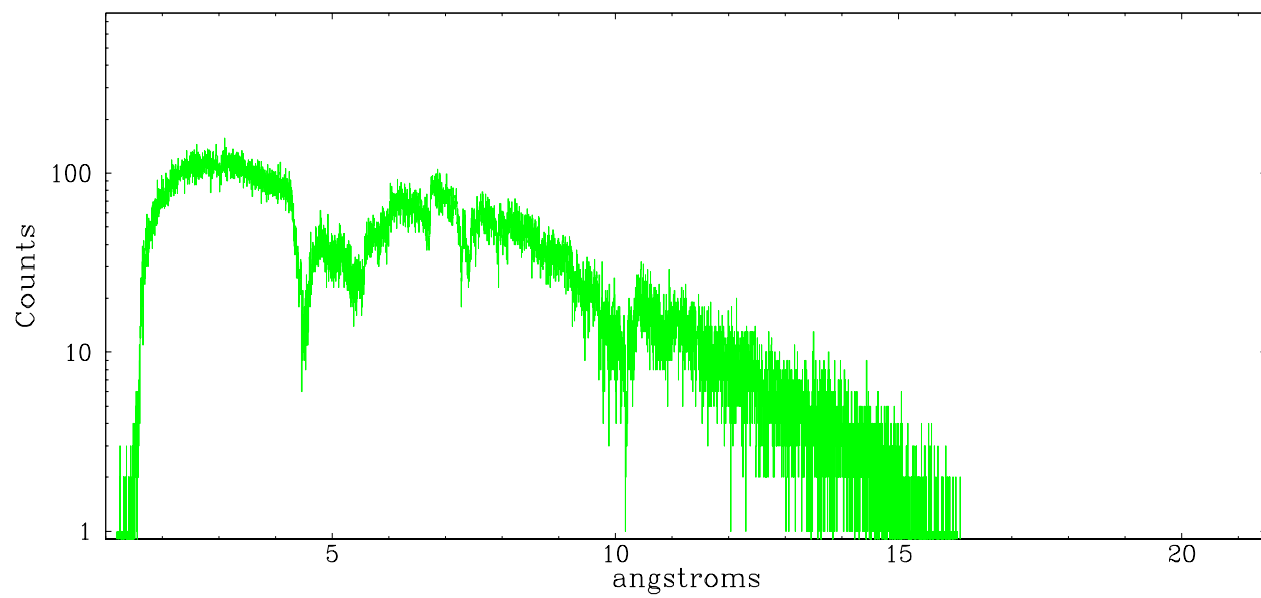
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5656	20197	202862	0	221854	17305	5181



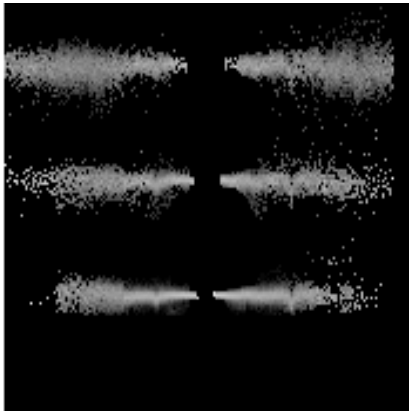
heg order -1



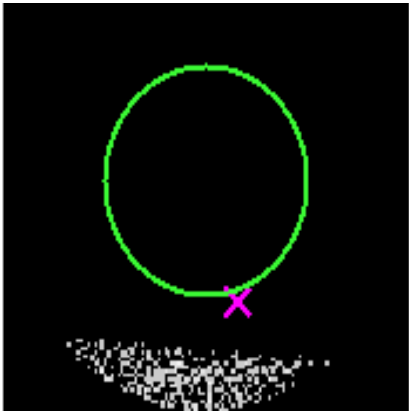
heg order +1



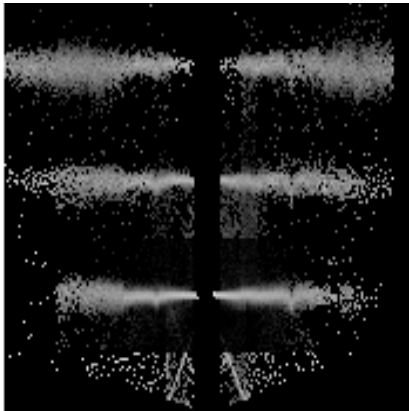
3.2 MEG Arm



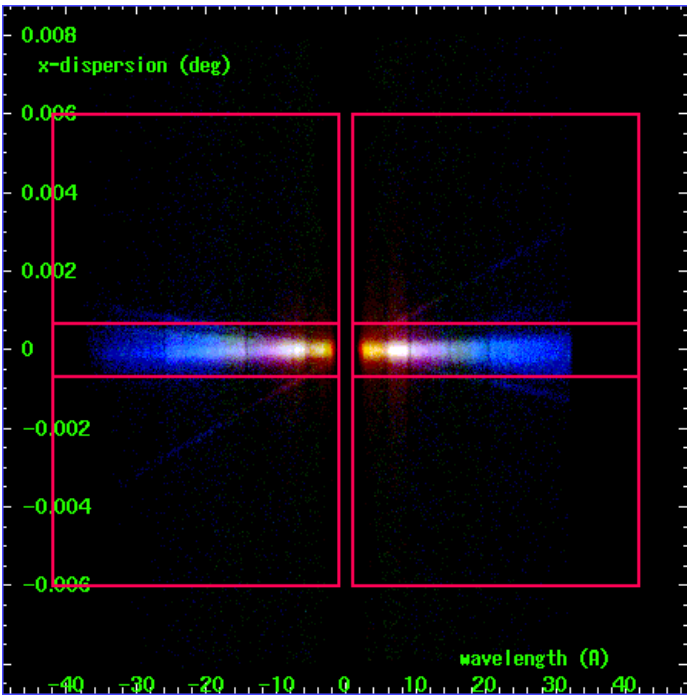
MEG Order Sort 123



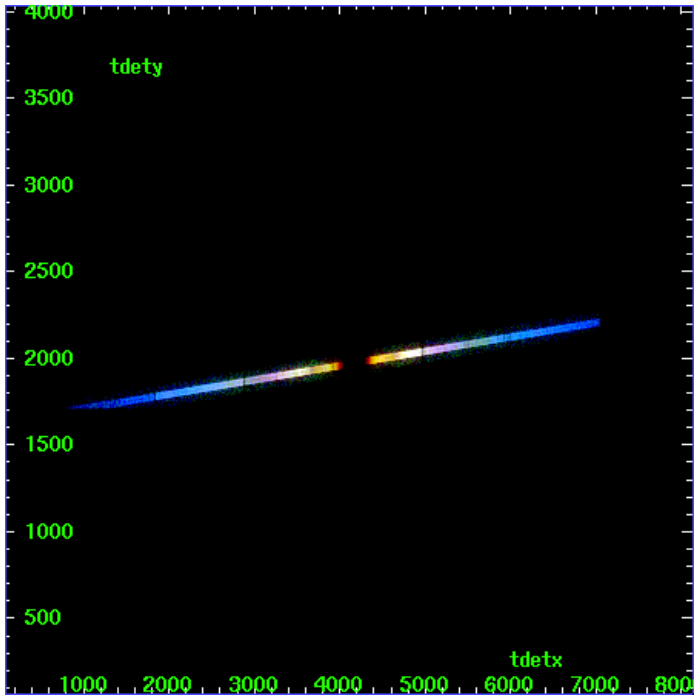
MEG Zero Order



MEG Order Sort ALL

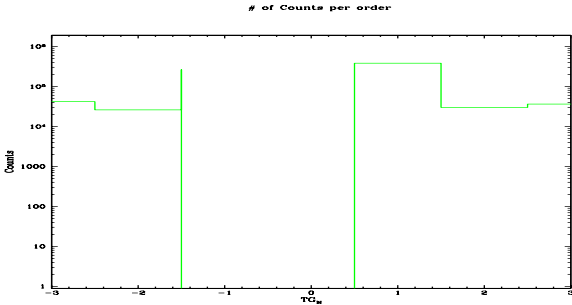


Spot Image MEG

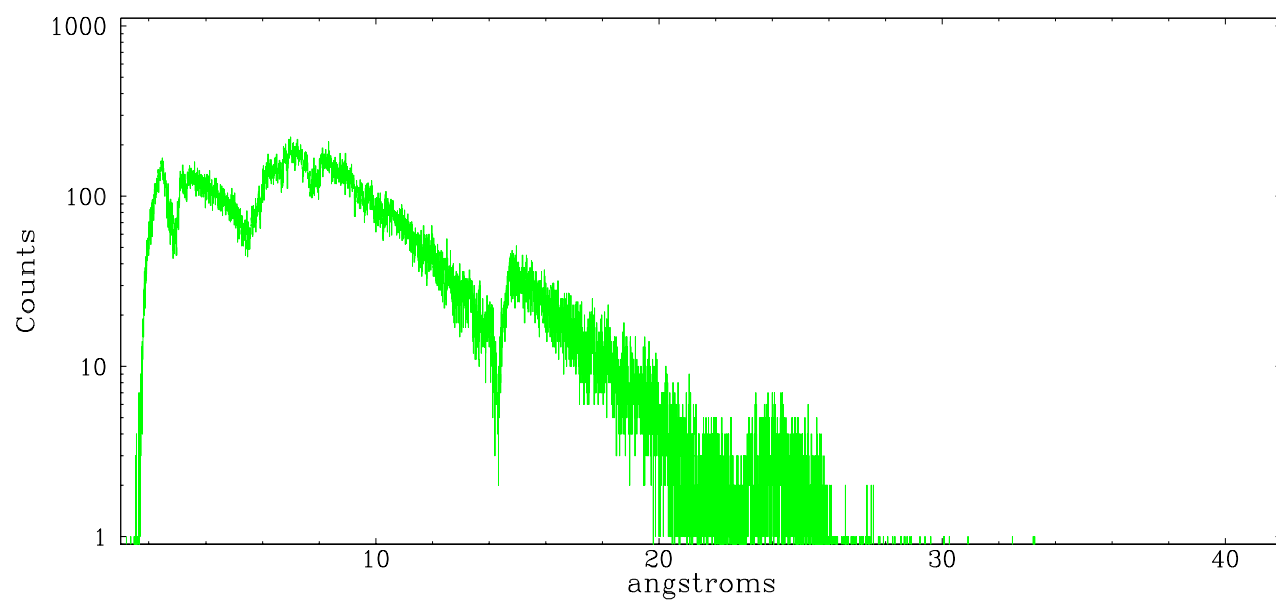


Full Detector MEG

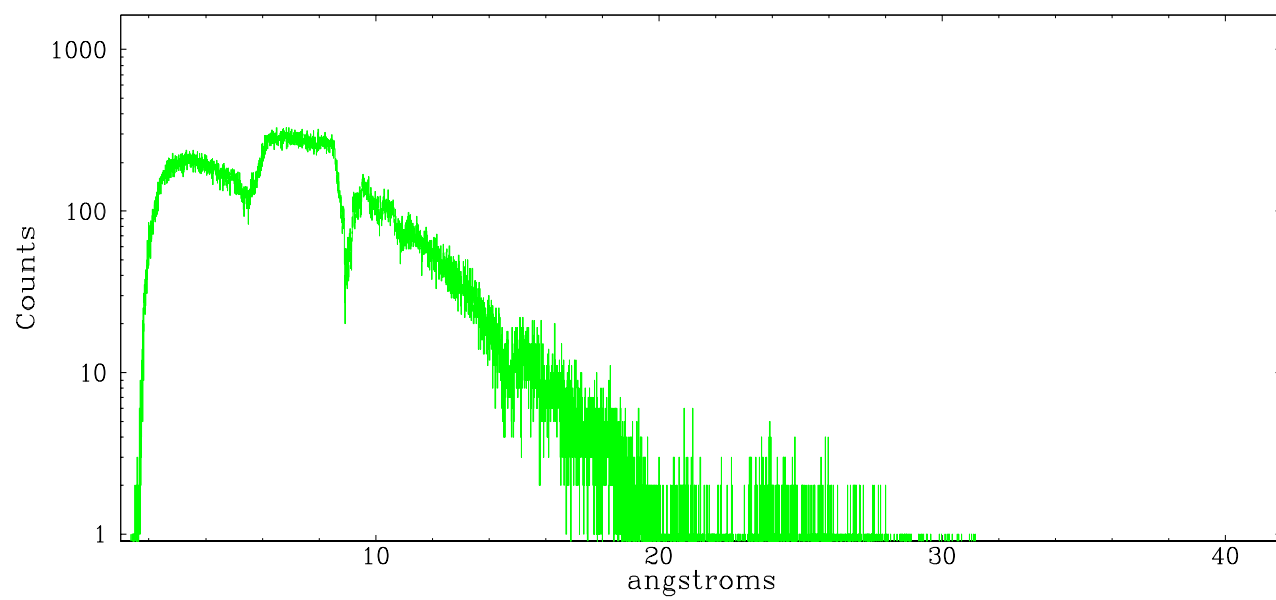
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	41511	25911	261548	0	380540	29853	36249



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2007.01.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.888

A.2 Comments

Zero-order source is blocked with exclusion window.
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 to extract dispersed spectra: `x=4086.37, y=4127.29;`
`ra=18:23:40.507, dec=-30:21:39.99`

The grating spectra show clearly in an image made from bad events. This means that the dispersed spectra are piled.