

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 3749 - L2 Version 001  
Chandra X-Ray Center

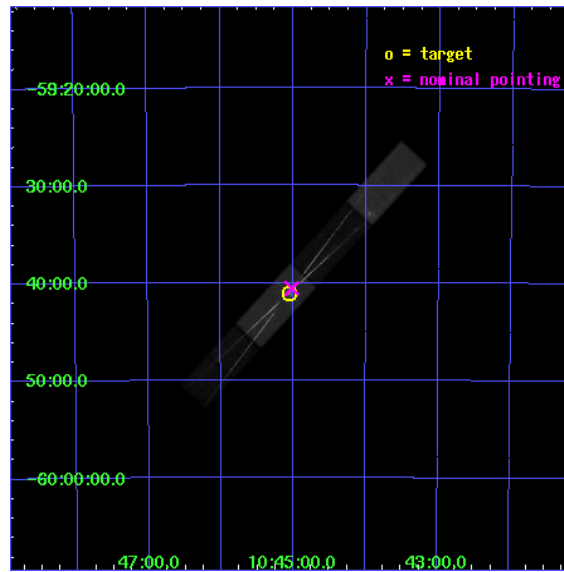
L2 Processing Date : Oct 13 2006

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# 1 Front

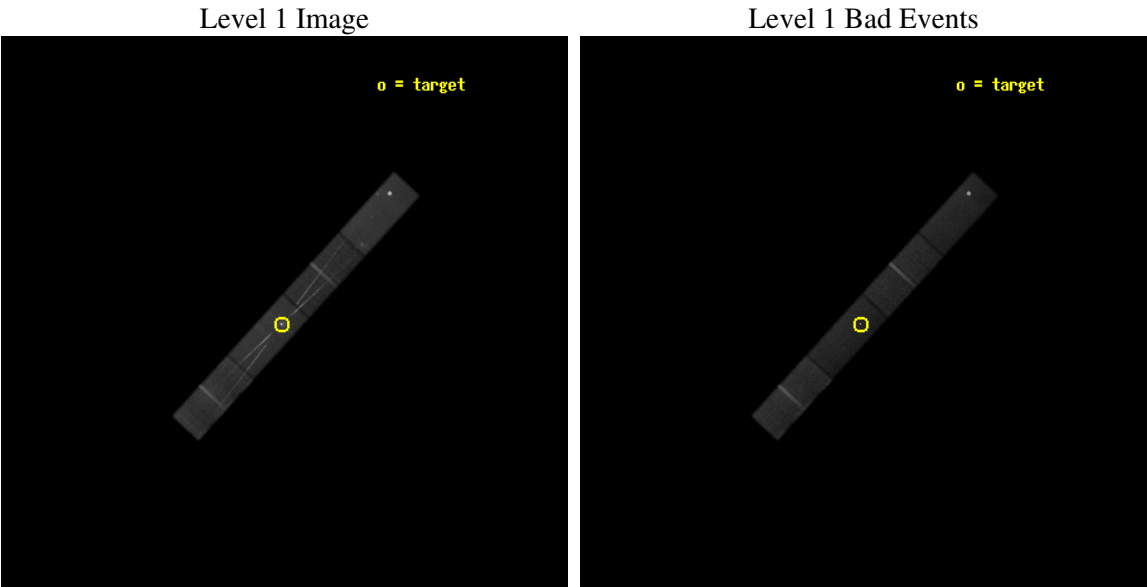
seq_num	200219
obs_id	3749
title	UNVEILING ETA CAR: CHANDRA OBSERVATIONS DURING THE 2003.5 EVENT
observer	Dr Michael Corcoran
object	ETA CARINAE
dtcycle	0
cycle	P
ra_targ	161.265
dec_targ	-59.684528
ra_nom	161.25470442198
dec_nom	-59.676360943163
roll_nom	132.60446266001
revision	2
ontime	93956.759389907
livetime	91280.924294863
ontime5	93956.759389907
ontime6	93955.31837979
ontime7	93956.759389907
ontime8	93955.318399727
l2events	590189



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 5

Chip 6

Chip 7



Chip 8



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.3
date	2006-10-07T09:35:52
revision	2

sched_exp_time	93390.621000
ontime	93970.478408962
ontime5	93970.478408962
ontime6	93969.037398845
ontime7	93970.478408962
ontime8	93969.037418783
l1events	1736552

### 2.1.4 Events

	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	465747	359756	509362	401687
rejected events	247746	268400	232175	307138
rejected %	53%	74%	45%	76%

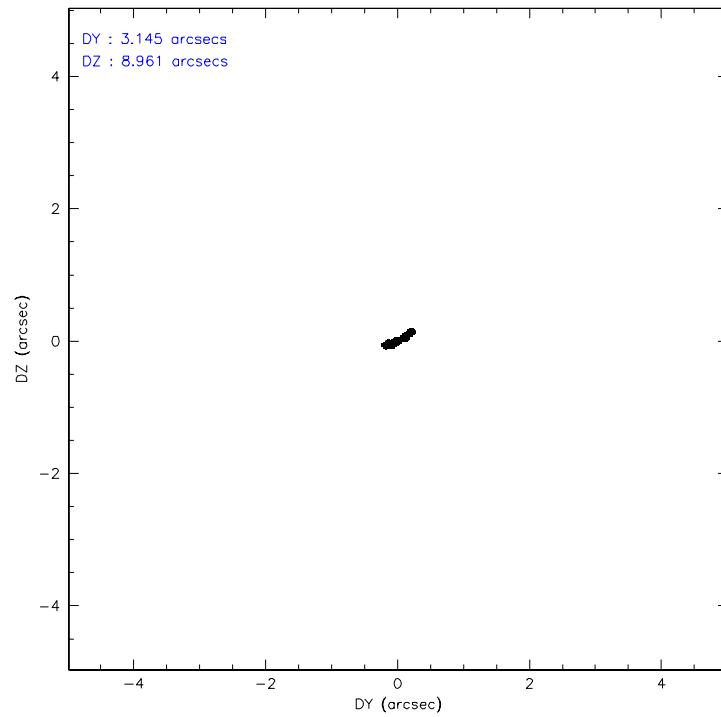
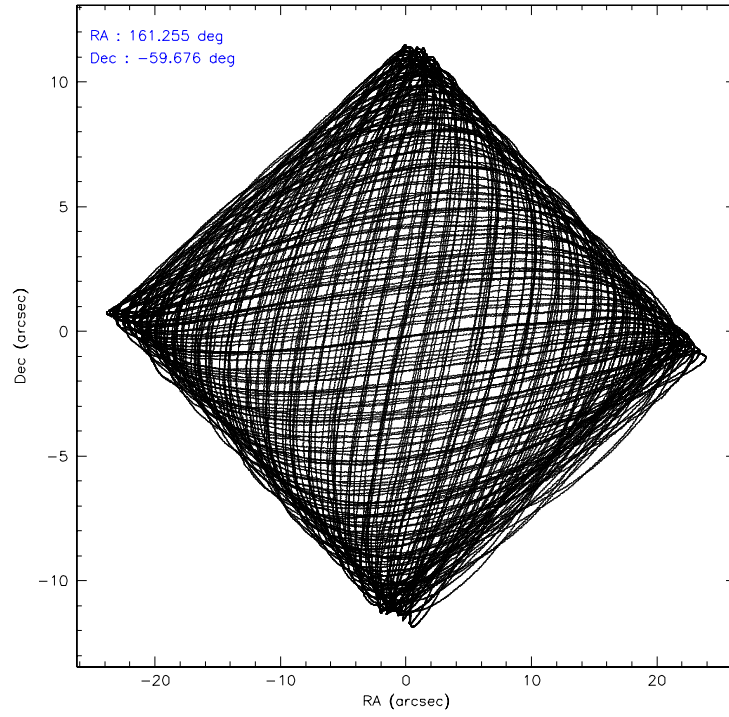
	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	17106	54930	32738	37962
	3%	15%	6%	9%
grade 1 events	334	203	1151	200
	0%	0%	0%	0%
grade 2 events	83937	13550	64648	17200
	18%	3%	12%	4%
grade 3 events	8373	6769	24013	10042
	1%	1%	4%	2%
grade 4 events	7978	6712	22873	9247
	1%	1%	4%	2%
grade 5 events	38578	11532	33244	14598
	8%	3%	6%	3%
grade 6 events	100644	9406	132956	20104
	21%	2%	26%	5%
grade 7 events	208797	256654	197739	292334
	44%	71%	38%	72%

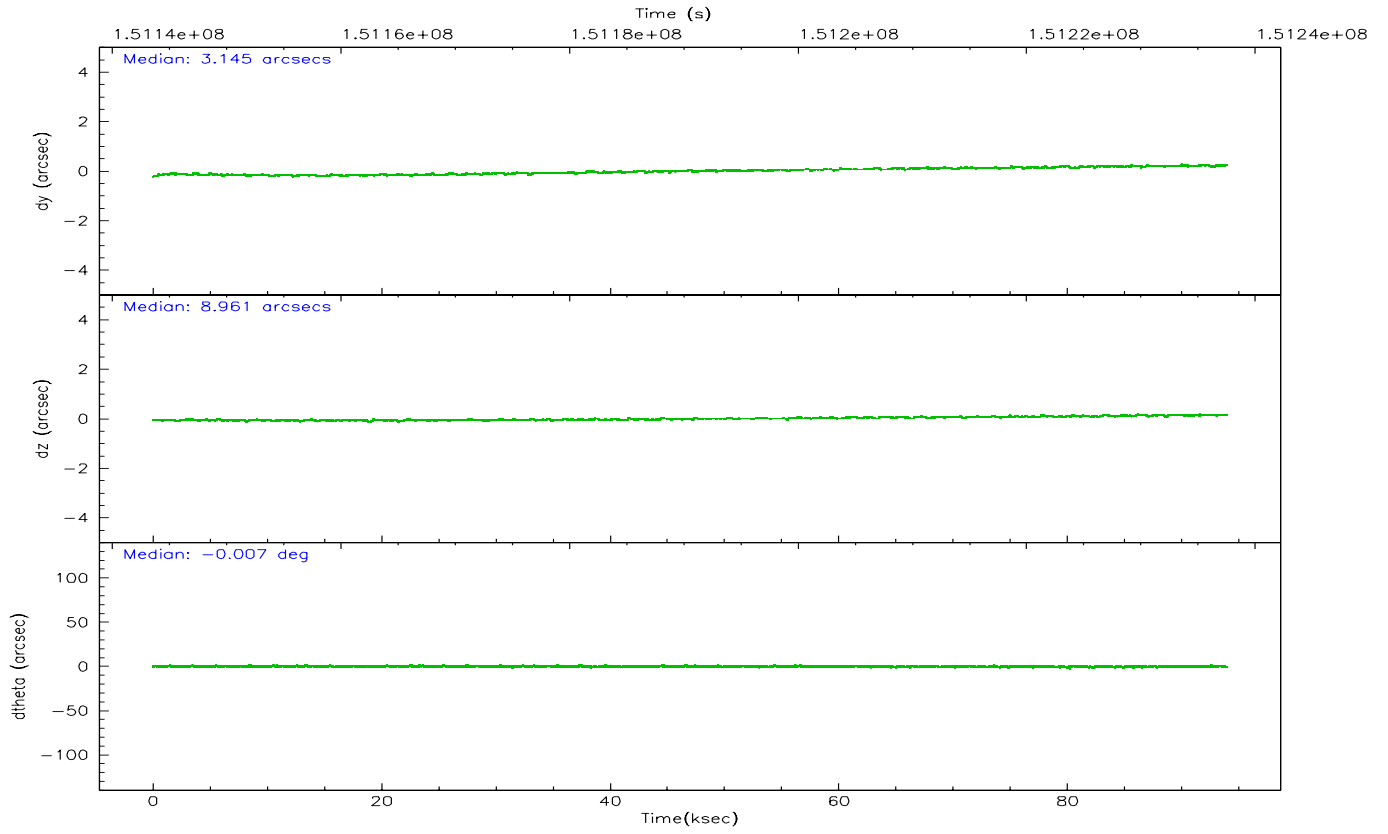
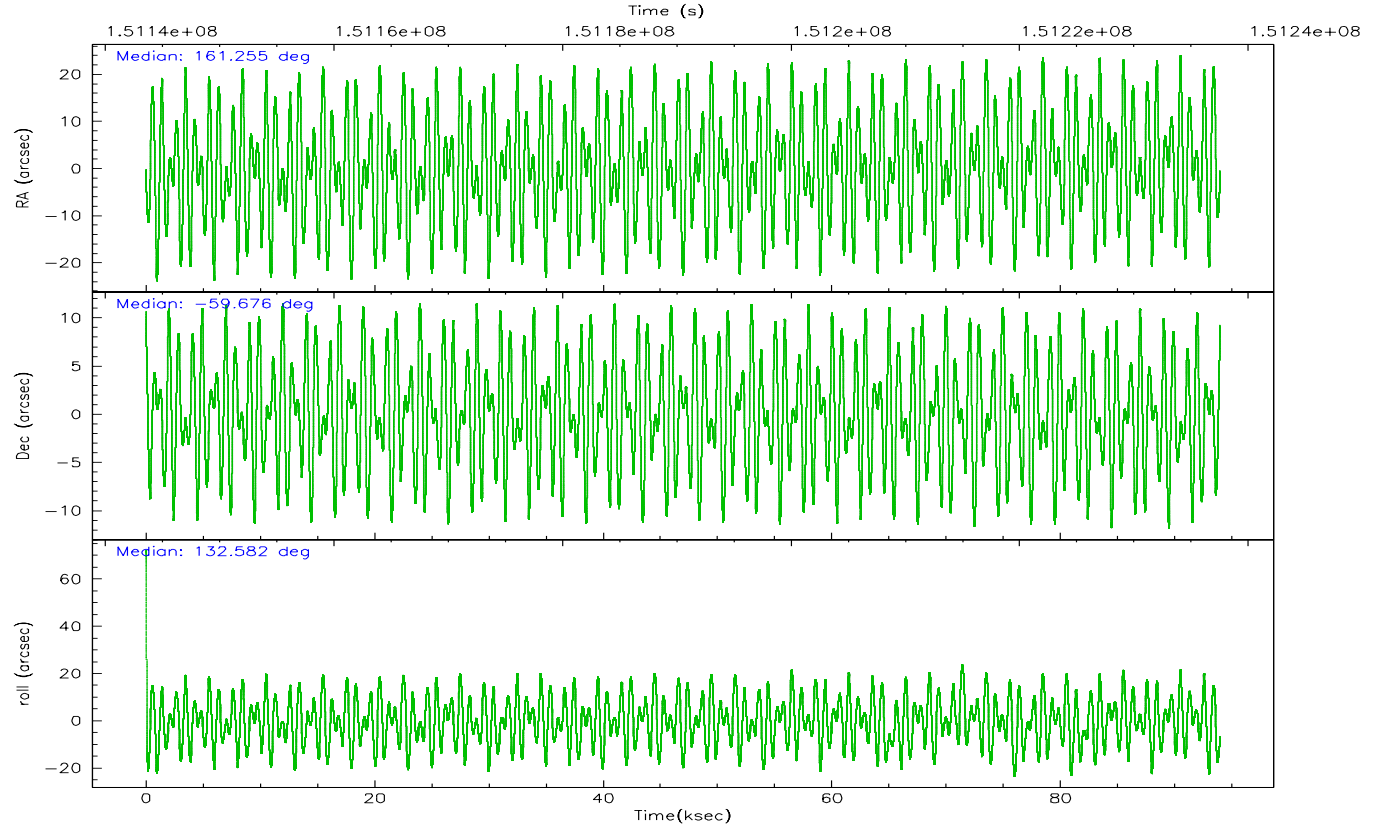


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-5678	ACIS-5678	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	161.306394	161.2547044219766	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-59.684150	-59.67636094316325	Subarray start row	15	15
Pointing Roll	132.492459	132.604462660014	Subarray row count	440	440
Window start time	148939840.184000	148939840.184000	Alternating exposures requested	N	N
Window stop time	155907136.184000	155907136.184000	Primary exposure time	0.000000	1.4
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-183.332523	-183.3237572673427			
SIM translation stage offset (mm)	-6.8	-6.808765315665084			
Phase constraints	Y	Y			
Phase period	2016.000000	2016.000000			
Phase epoch	50794.000000	50794.000000			
Phase start	0.870000	0.870000			
Phase end	0.900000	0.900000			
Phase start error	0.005000	0.005000			
Phase end error	0.005000	0.005000			
Observation start time	151144144.184000	151142993.36642			
Observation start date	2002-10-16T08:28:00	2002-10-16T08:09:53			
Observation end time	151237535.184000	151237849.43286			
Observation end date	2002-10-17T10:24:31	2002-10-17T10:30:49			

## 2.3 Aspect



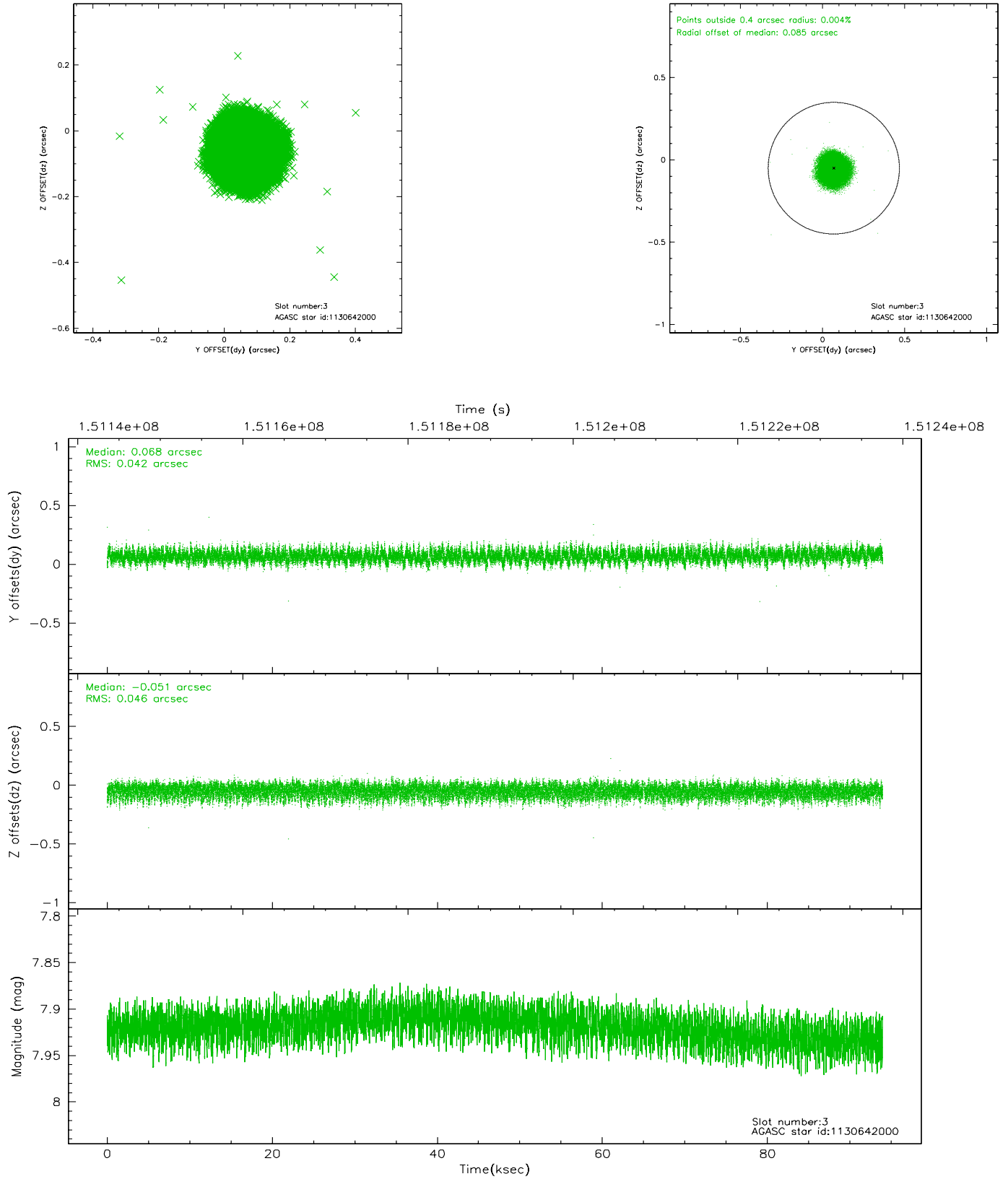


### Slot Statistics

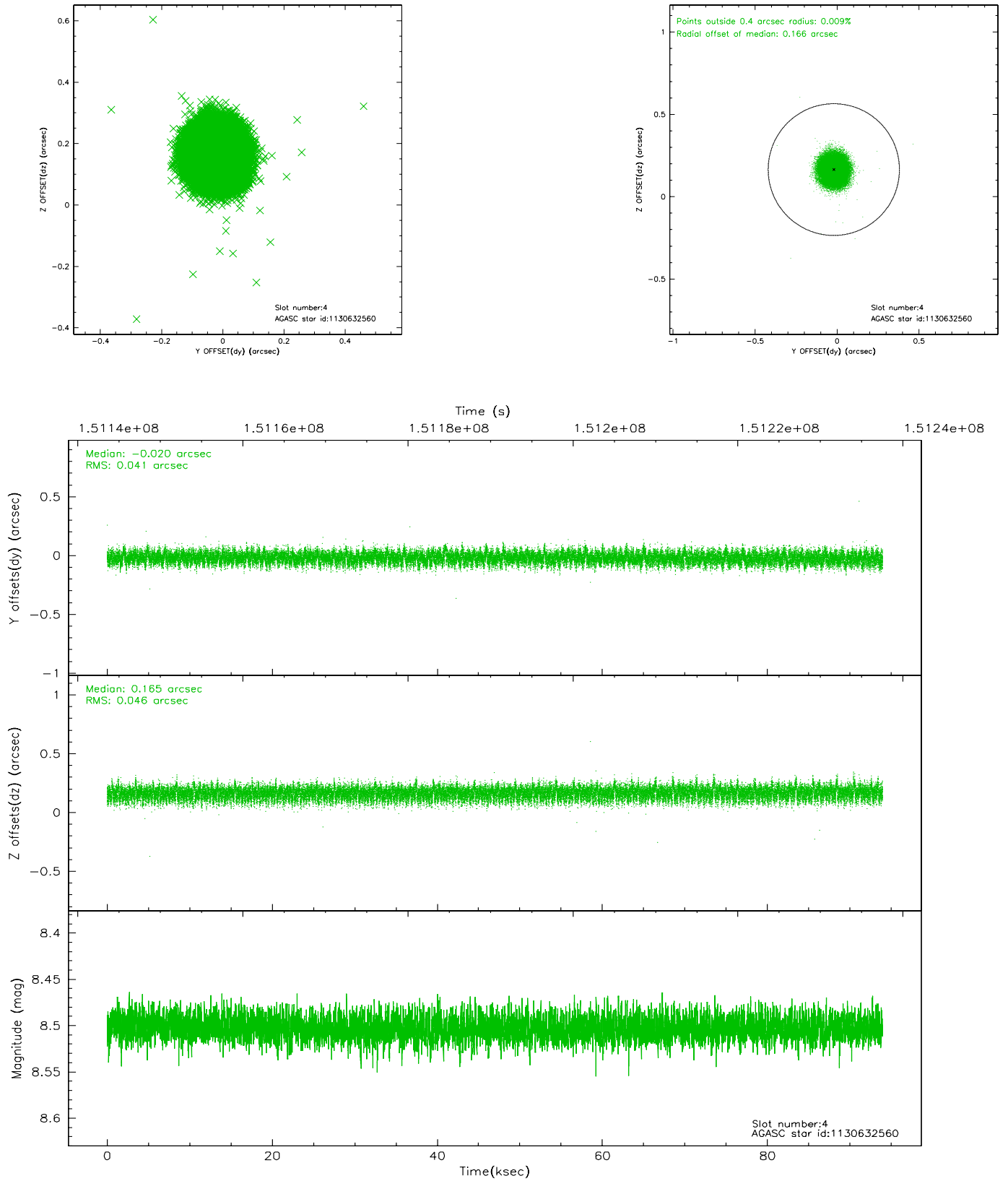
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	22916	-0.036	0.135	0.011	0.019	0.000000	0.000000	940.73	-1865.98
1	FID	ACIS-S-5	7.24	22910	0.015	0.008	0.007	0.012	0.000000	0.000000	-1808.30	31.47
2	FID	ACIS-S-6	7.40	22910	-0.000	-0.132	0.012	0.024	0.000000	0.000000	406.36	675.23
3	GUIDE	1130642000	7.92	45762	0.068	-0.051	0.068	0.105	162.836255	-59.743891	-2056.47	-1879.61
4	GUIDE	1130632560	8.50	45807	-0.020	0.165	0.067	0.105	162.097550	-59.214101	256.89	-2211.37
5	GUIDE	1174021424	8.65	45752	0.151	0.013	0.069	0.111	160.697036	-60.044183	-219.72	1687.23
6	GUIDE	1130637512	8.33	45824	-0.205	0.000	0.062	0.100	160.260704	-59.344159	2186.76	600.08
7	GUIDE	1130628248	8.82	45791	0.005	-0.125	0.093	0.141	160.092155	-59.960260	728.85	2299.09

## 2.4 Star Slots

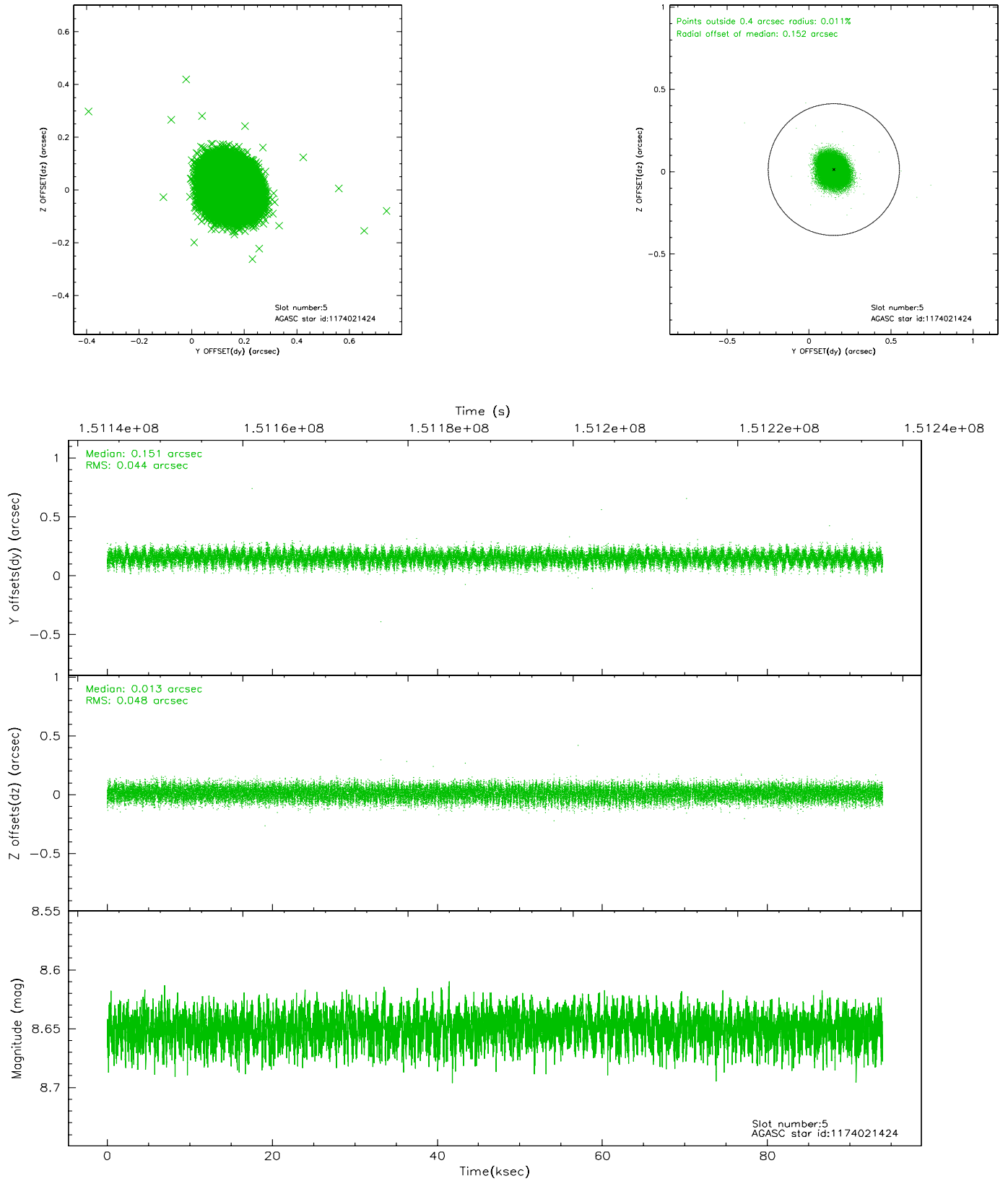
### 2.4.1 Slot 3



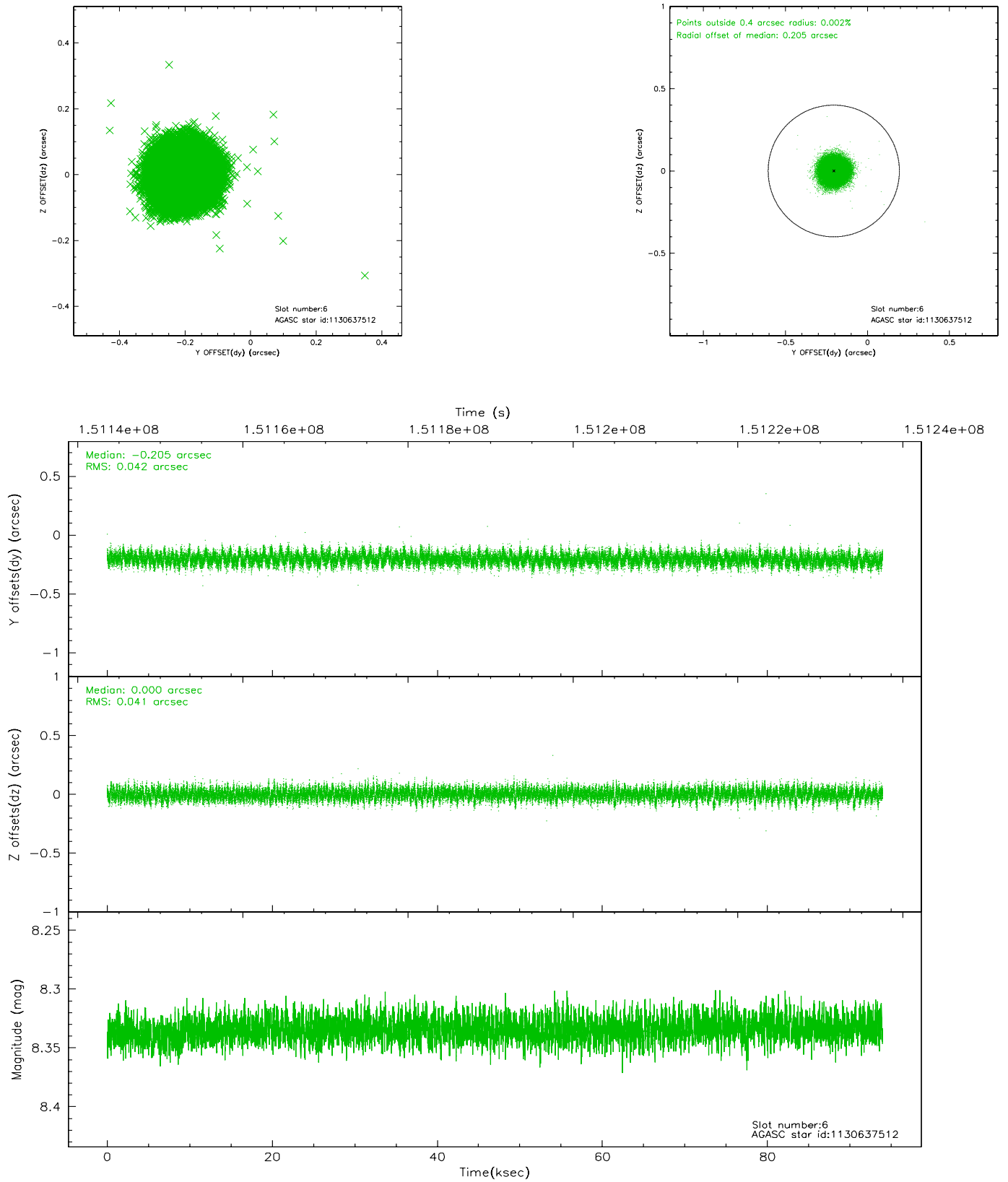
## 2.4.2 Slot 4



### 2.4.3 Slot 5

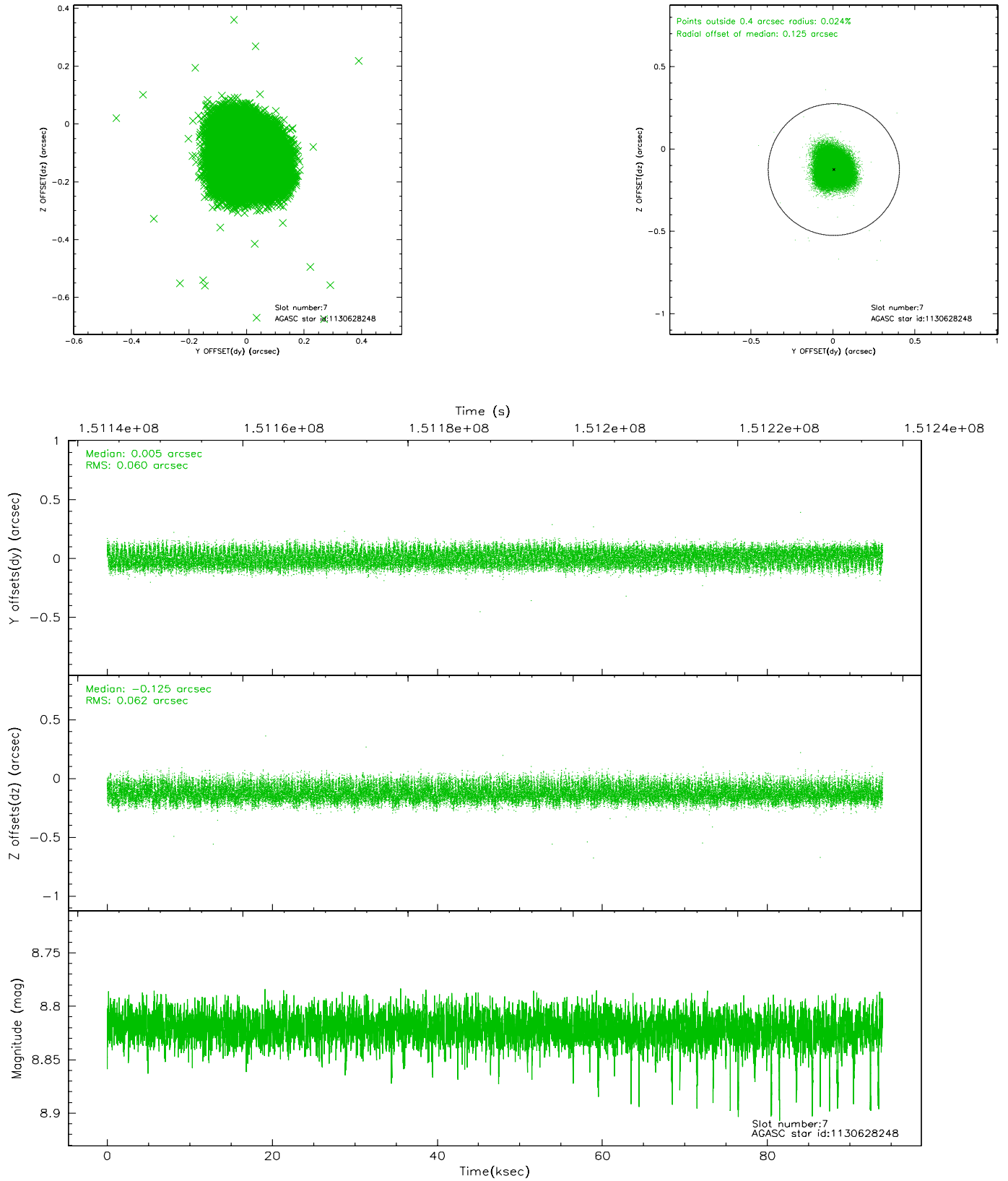


## 2.4.4 Slot 6



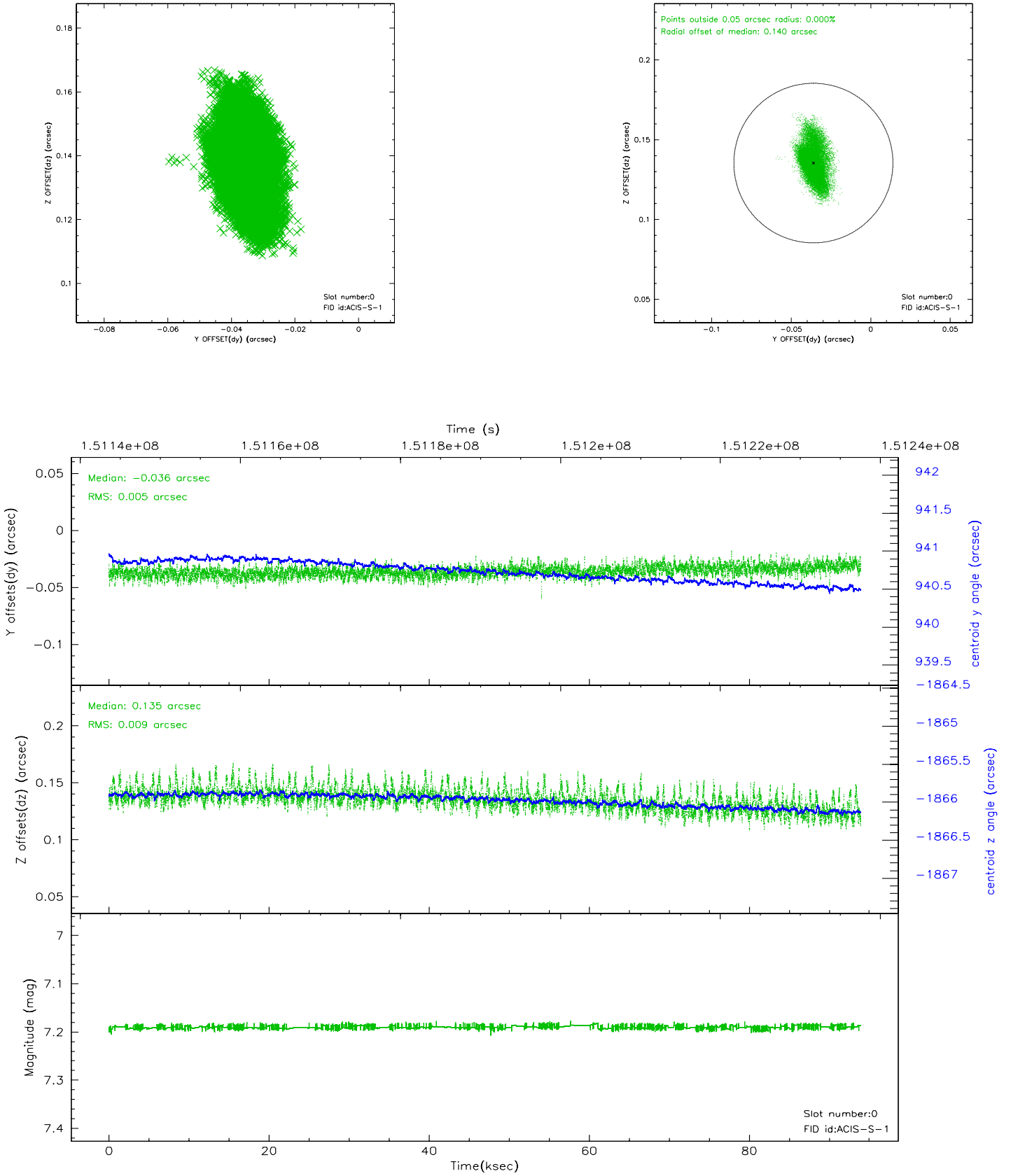


## 2.4.5 Slot 7

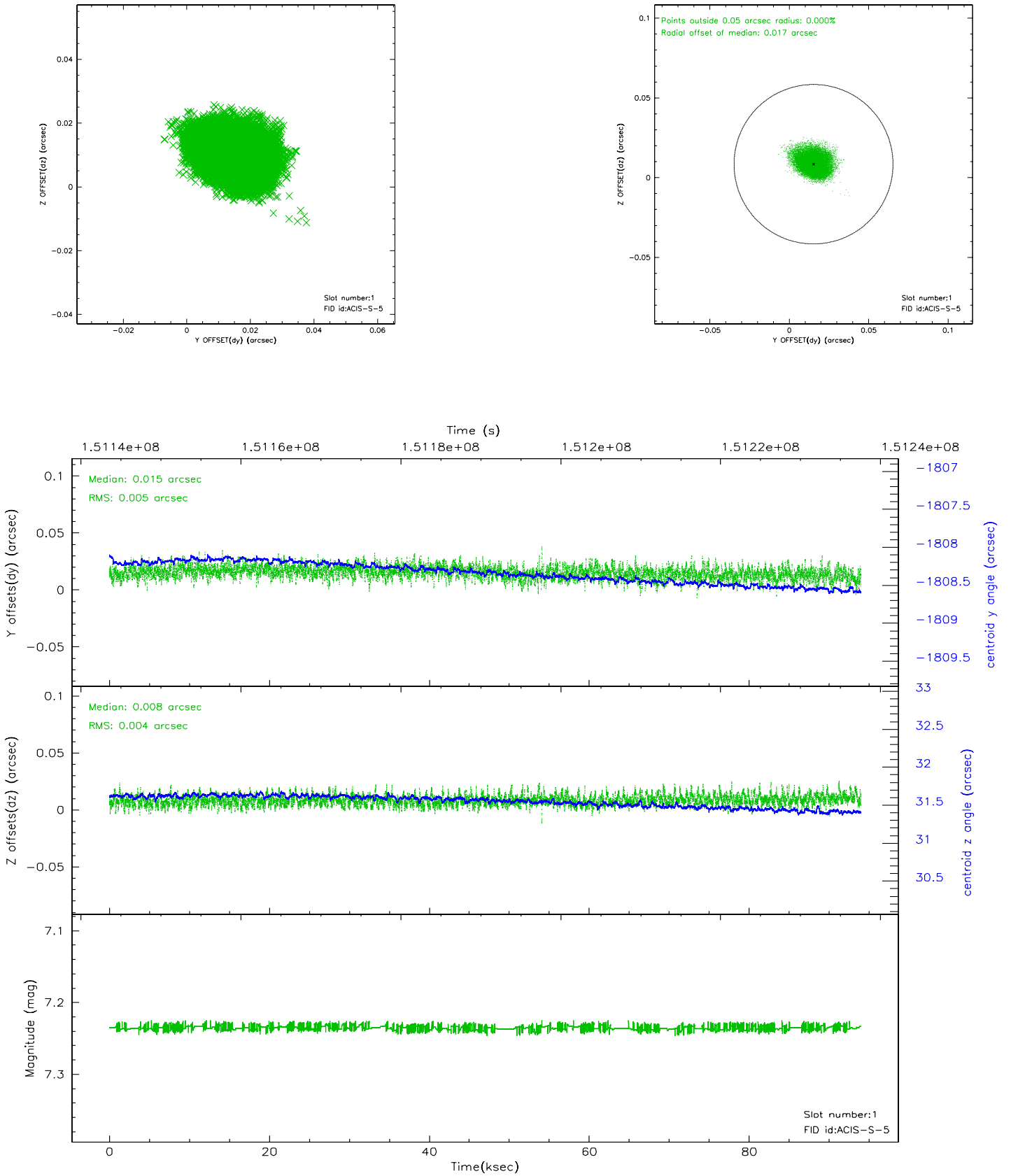


## 2.5 FID Slots

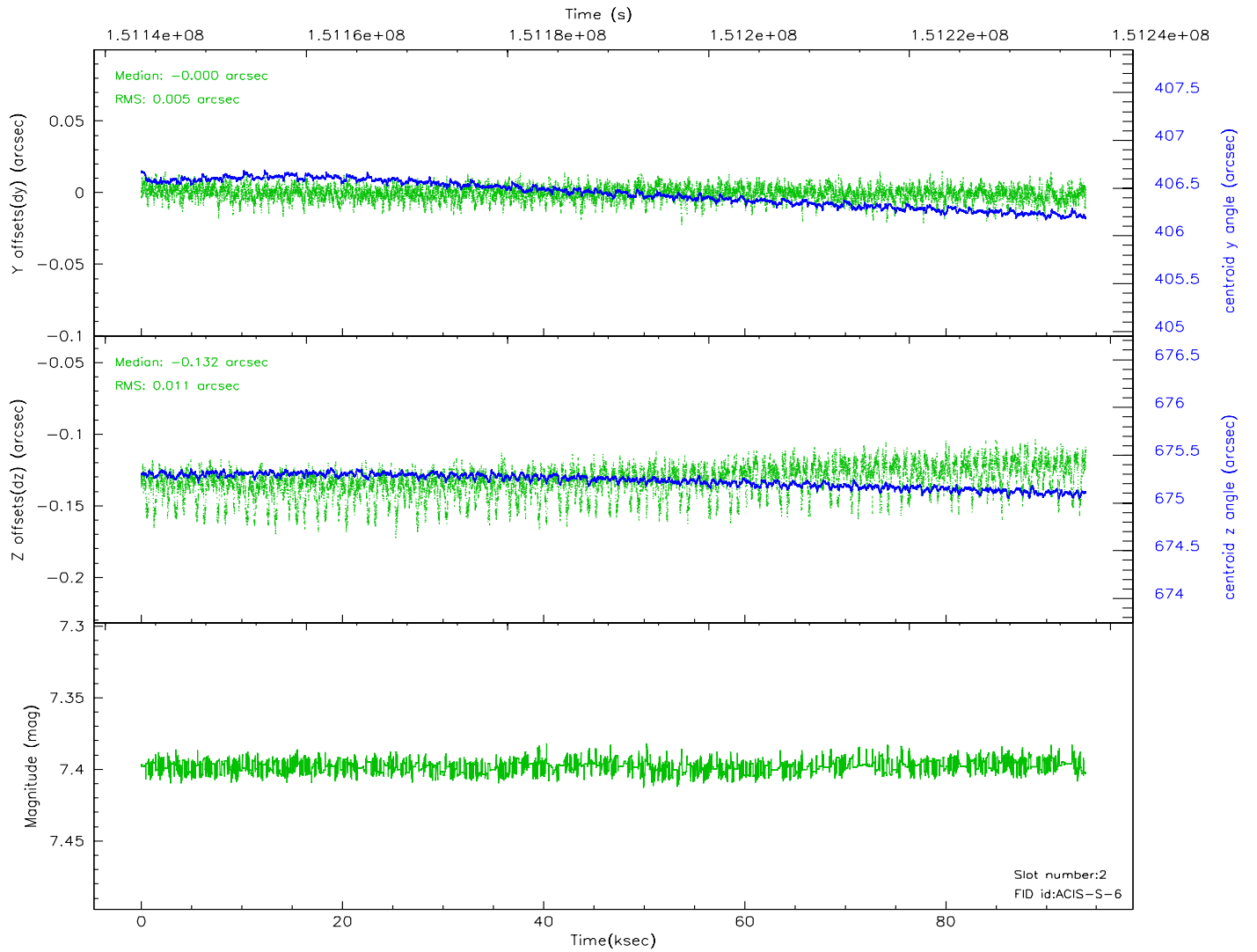
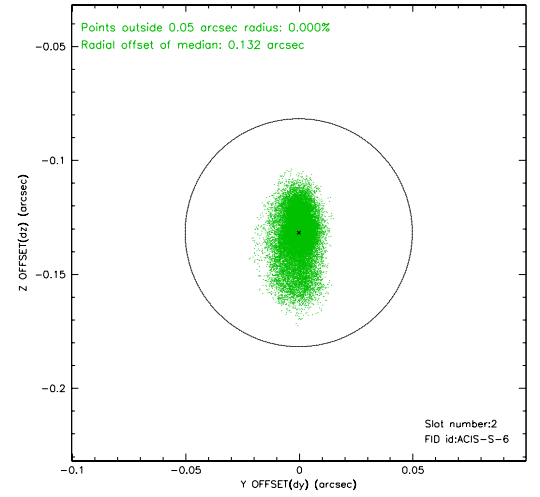
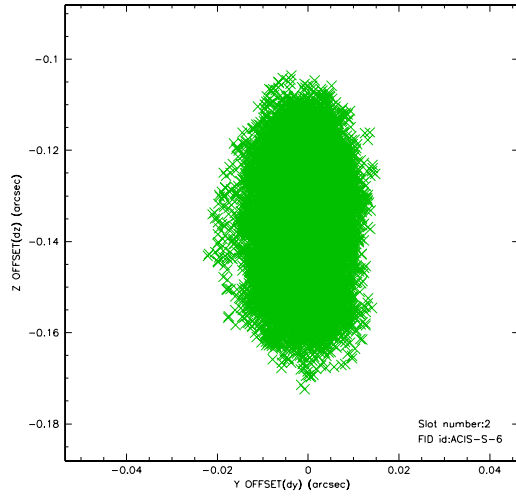
### 2.5.1 Slot 0



## 2.5.2 Slot 1

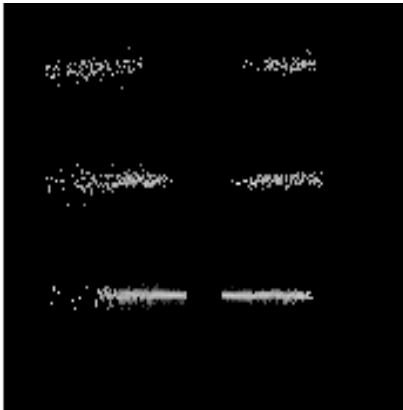


### 2.5.3 Slot 2

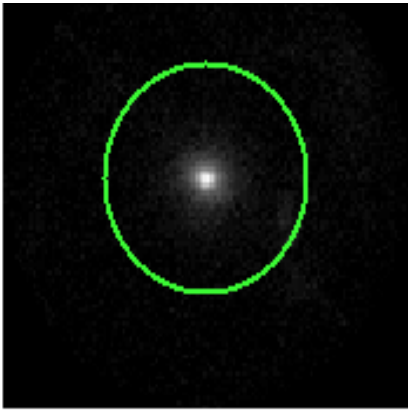


# 3 Gratings

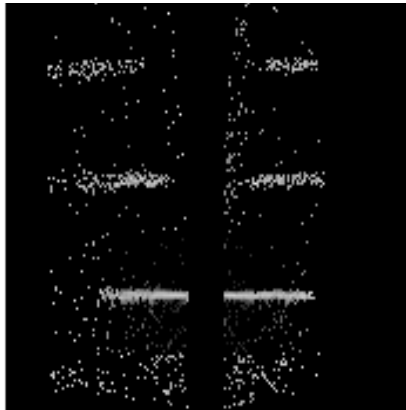
## 3.1 HEG Arm



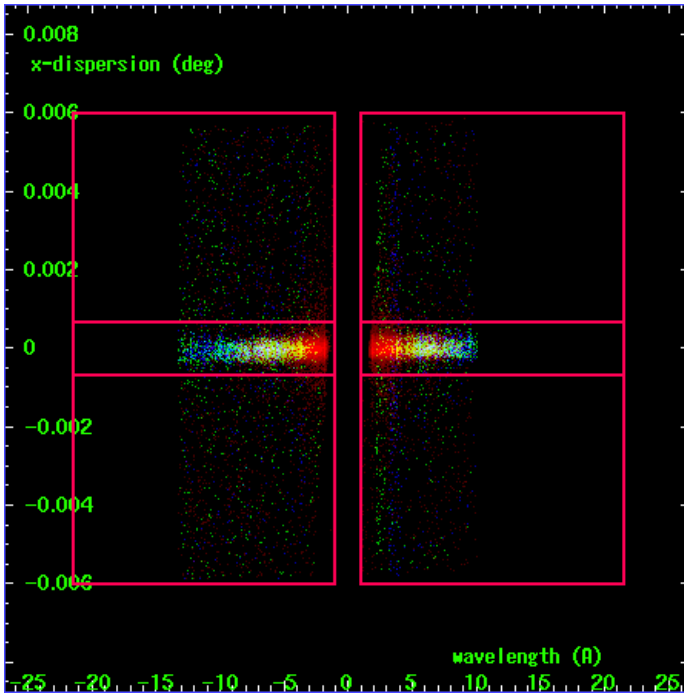
HEG Order Sort 123



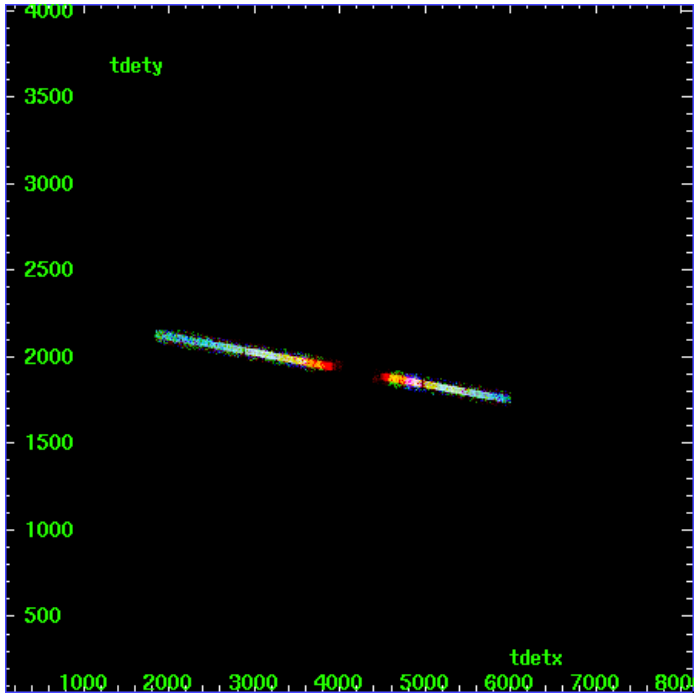
HEG Zero Order



HEG Order Sort ALL

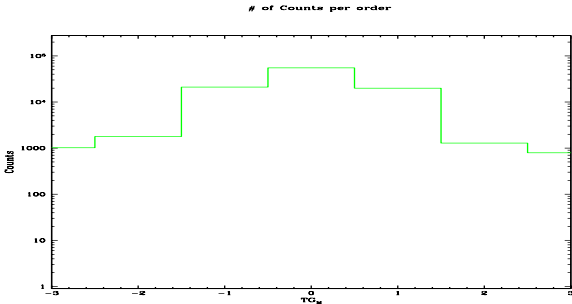


Spot Image HEG

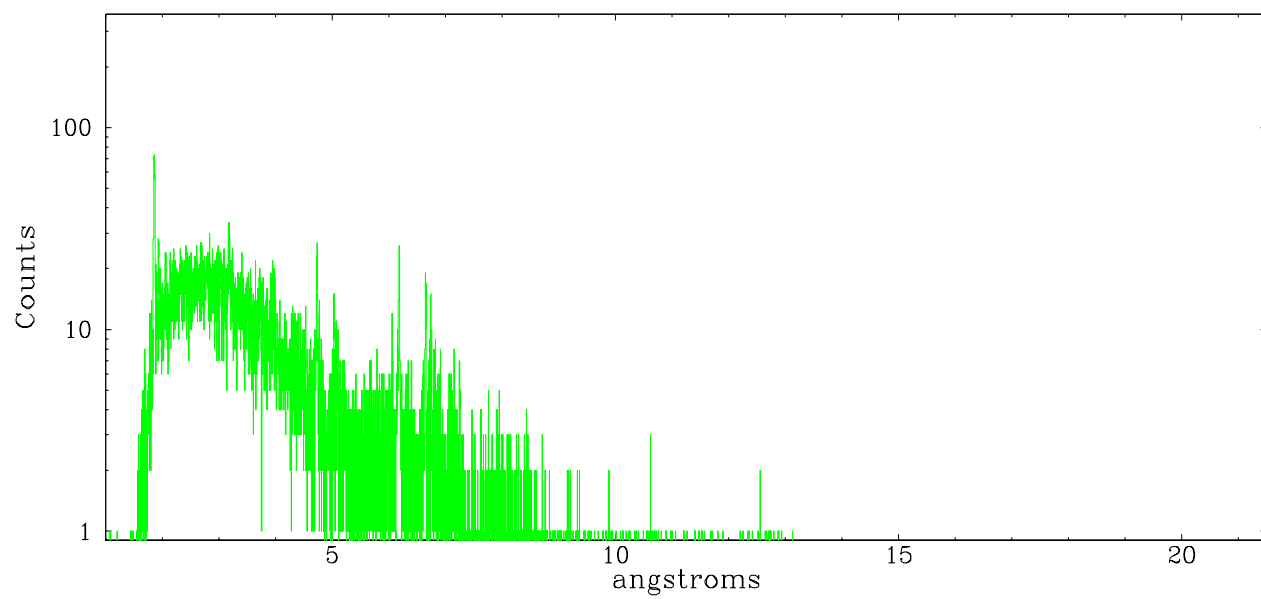


Full Detector HEG

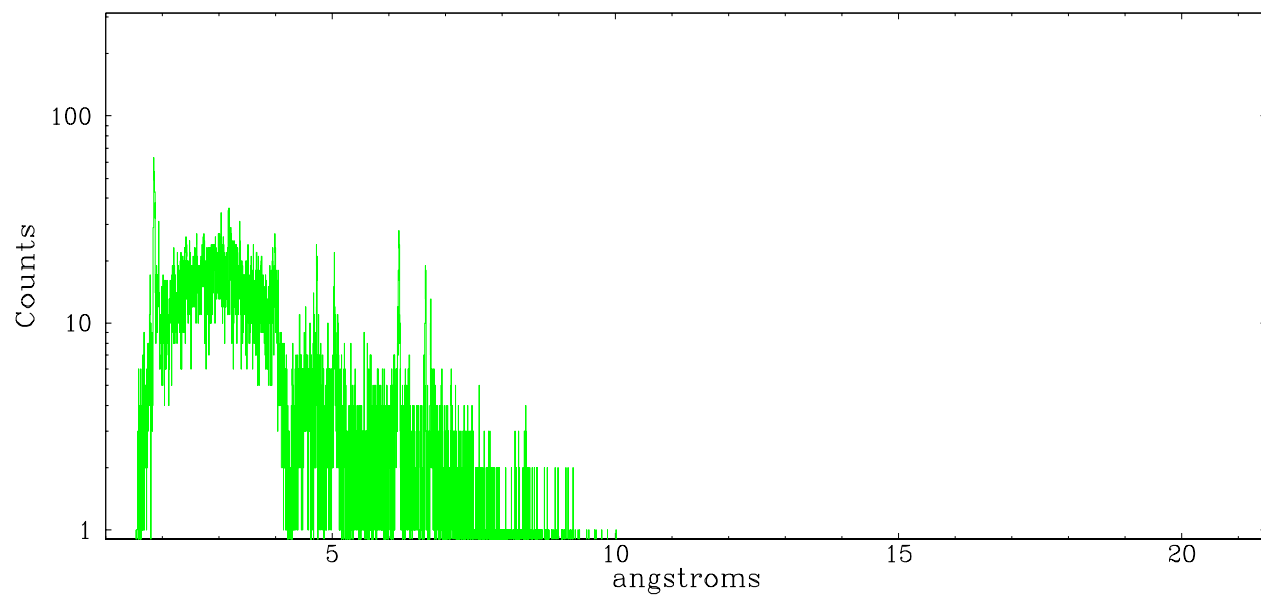
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1023	1792	21022	54970	19965	1288	793



heg order -1



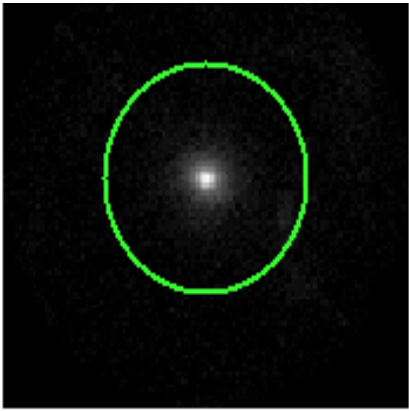
heg order +1



3.2 MEG Arm



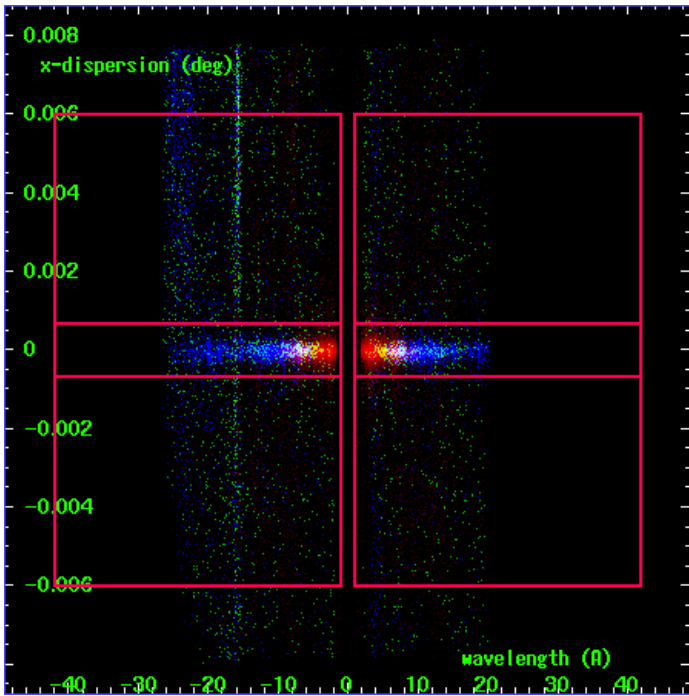
MEG Order Sort 123



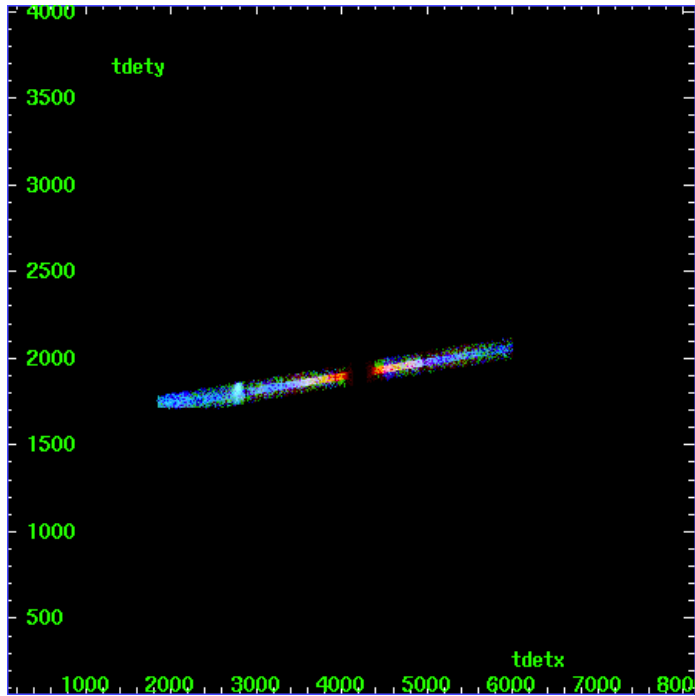
MEG Zero Order



MEG Order Sort ALL

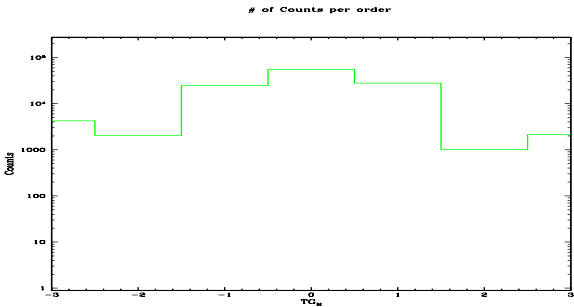


Spot Image MEG

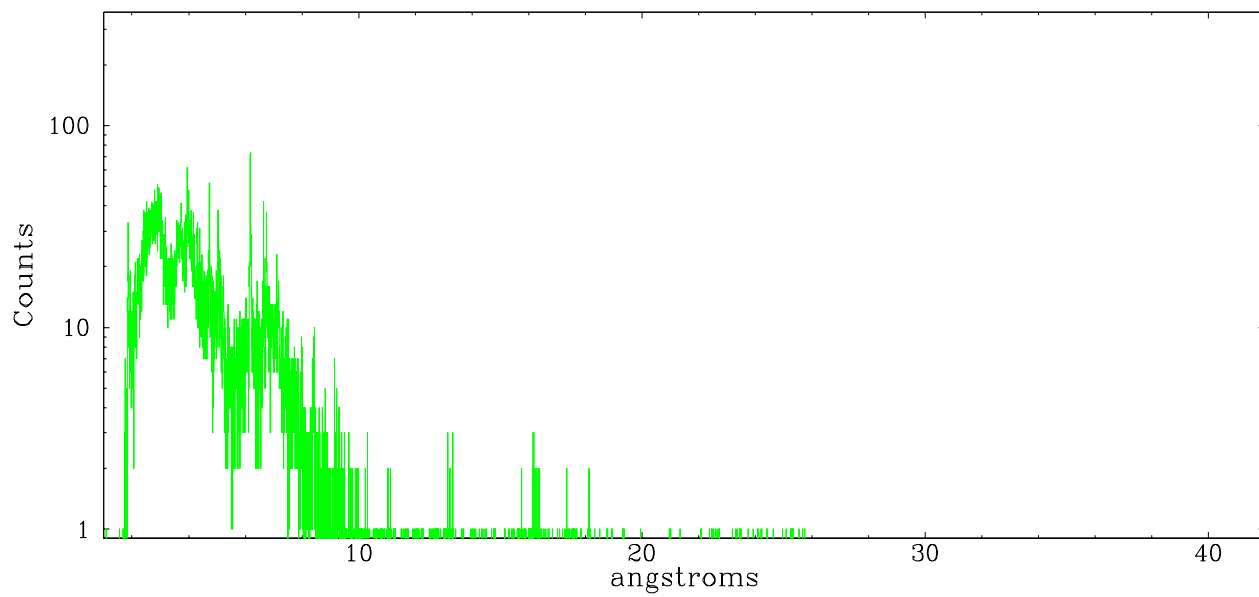


Full Detector MEG

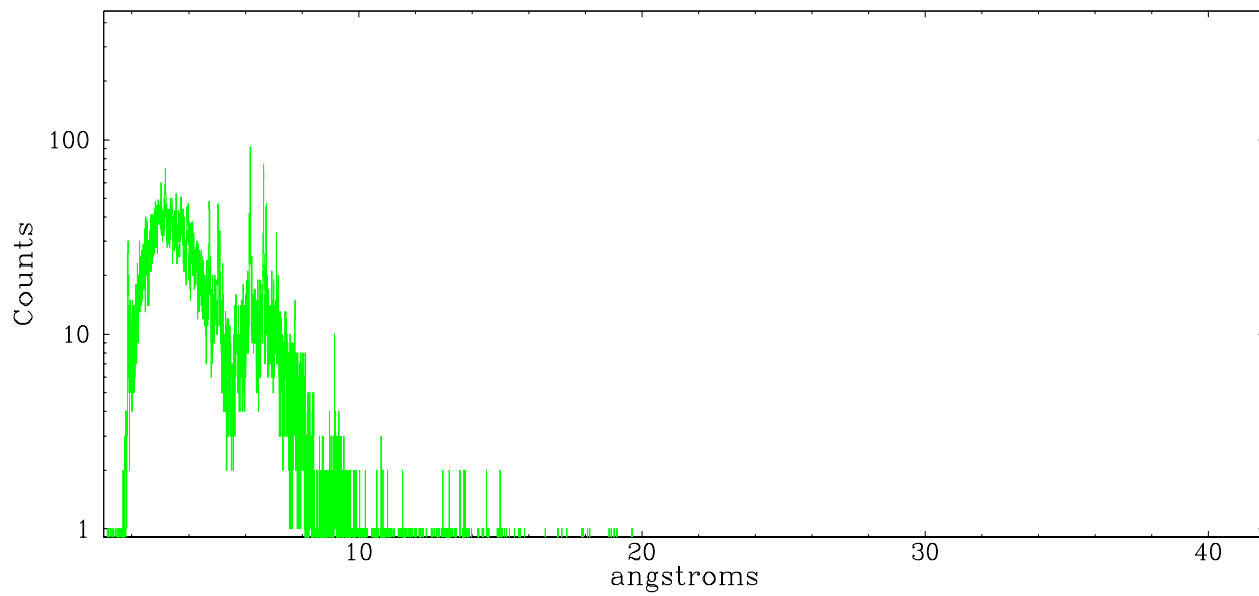
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4260	2060	24664	54970	27797	1016	2140



meg order -1



meg order +1





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.10.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	93.956

## A.2 Comments

A cluster of stars from Tr14 fall near the negative MEG spectral arm.  
The background spectrum in this region will probably be affected.

Phase constraint met.