

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 1020 - L2 Version 001  
Chandra X-Ray Center

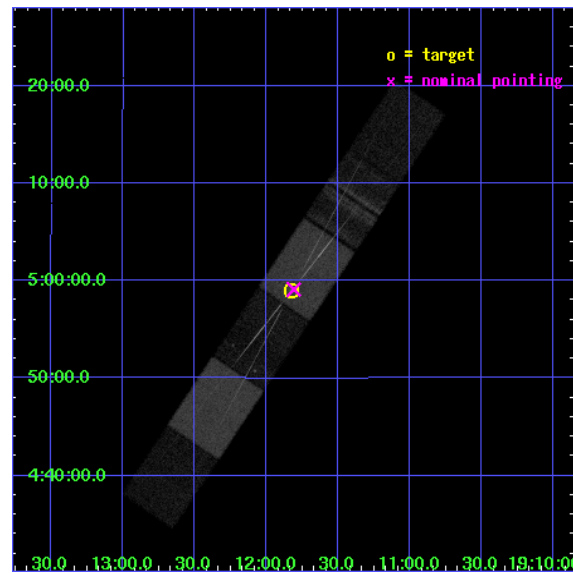
L2 Processing Date : Jun 18 2007

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# 1 Front

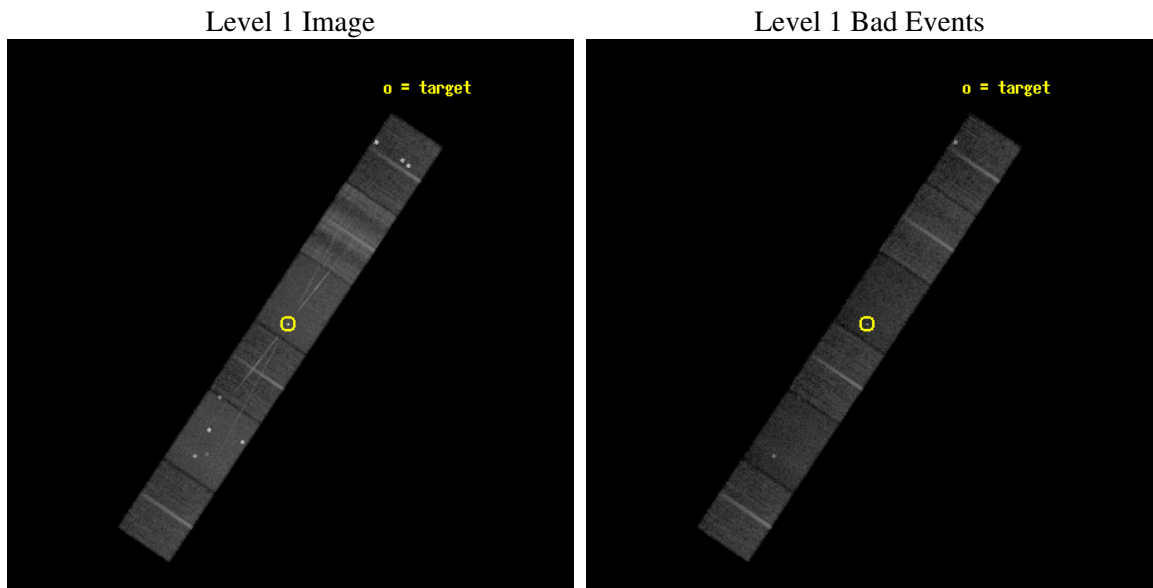
seq_num	400098
obs_id	1020
title	HIGH RESOLUTION X-RAY SPECTROSCOPY OF THE PRECESSING JET IN SS 433 (PART II)
observer	Prof. Claude Canizares
object	SS 433
dtcycle	0
cycle	P
ra_targ	287.95625
dec_targ	4.982778
ra_nom	287.952488401
dec_nom	4.9852437893123
roll_nom	303.74329696179
revision	2
ontime	23050.0
livetime	22677.72250732
ontime4	23047.459009841
ontime5	23050.0
ontime6	23050.0
ontime7	23050.0
ontime8	23050.0
ontime9	23050.0
l2events	233087



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

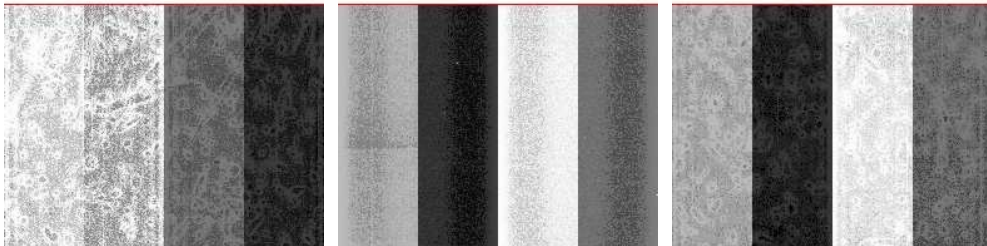


#### 2.1.2 Bias

Chip 4

Chip 5

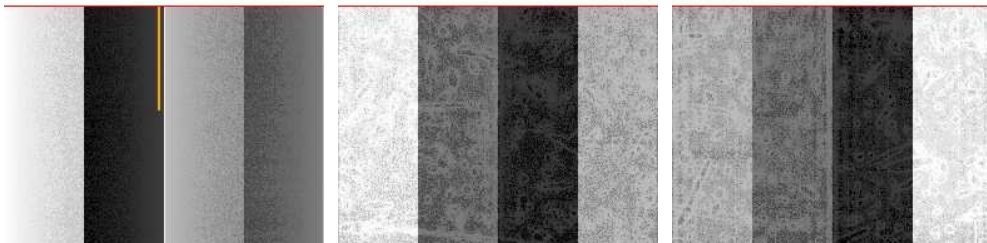
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-18T10:04:25
revision	2

sched_exp_time	22896.262000
ontime	23050.0
ontime4	23047.459009841
ontime5	23050.0
ontime6	23050.0
ontime7	23050.0
ontime8	23050.0
ontime9	23050.0
l1events	882157

### 2.1.4 Events

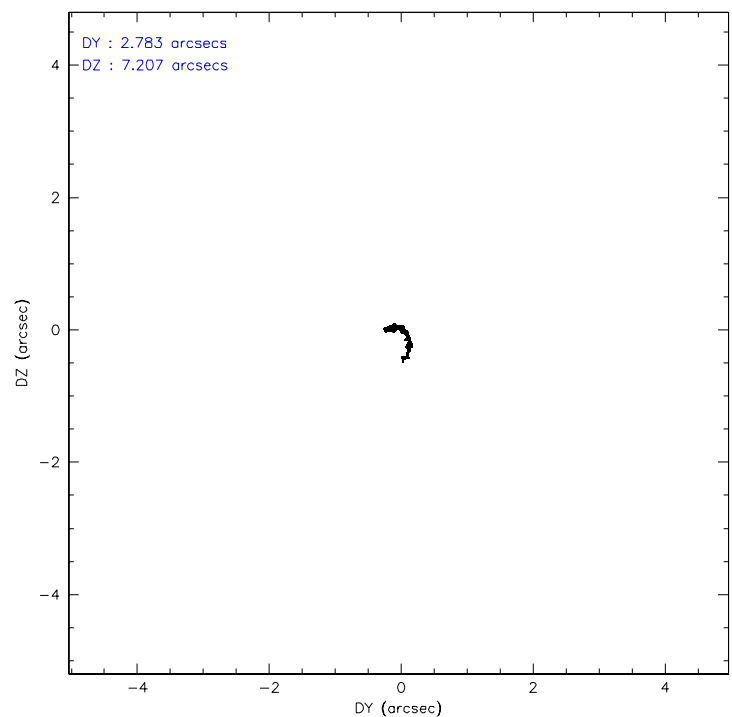
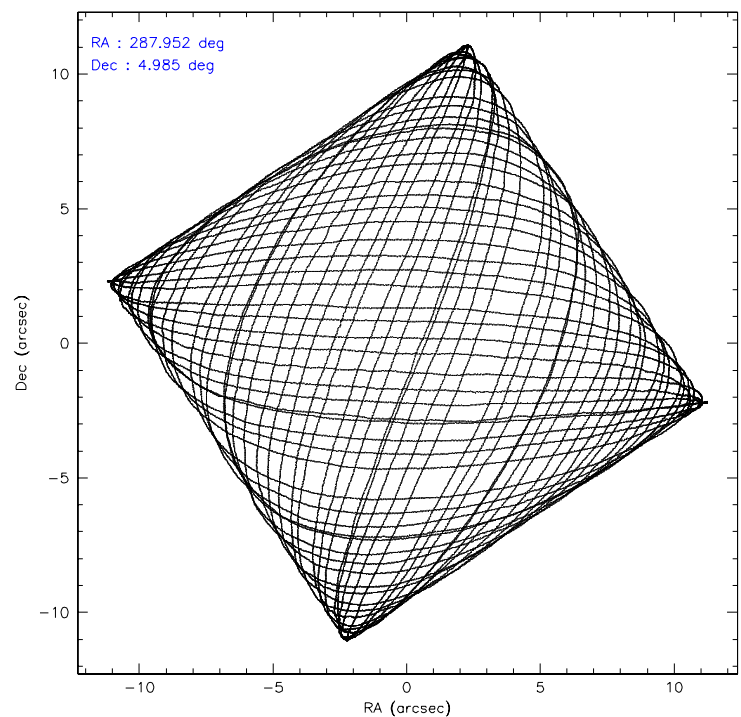
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	120772	167777	122143	153759	188751	128955
rejected events	100340	73715	96683	72877	109734	89820
rejected %	83%	43%	79%	47%	58%	69%

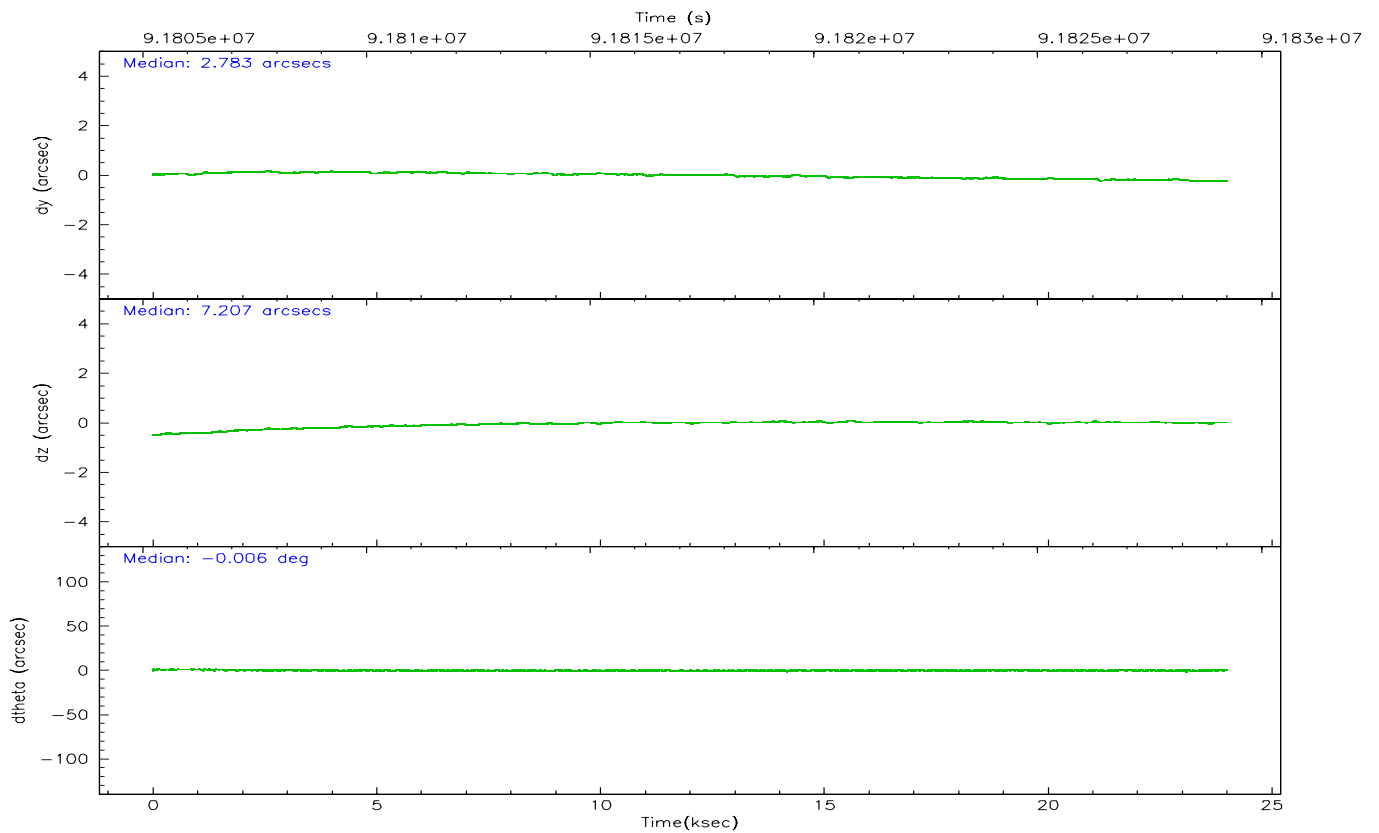
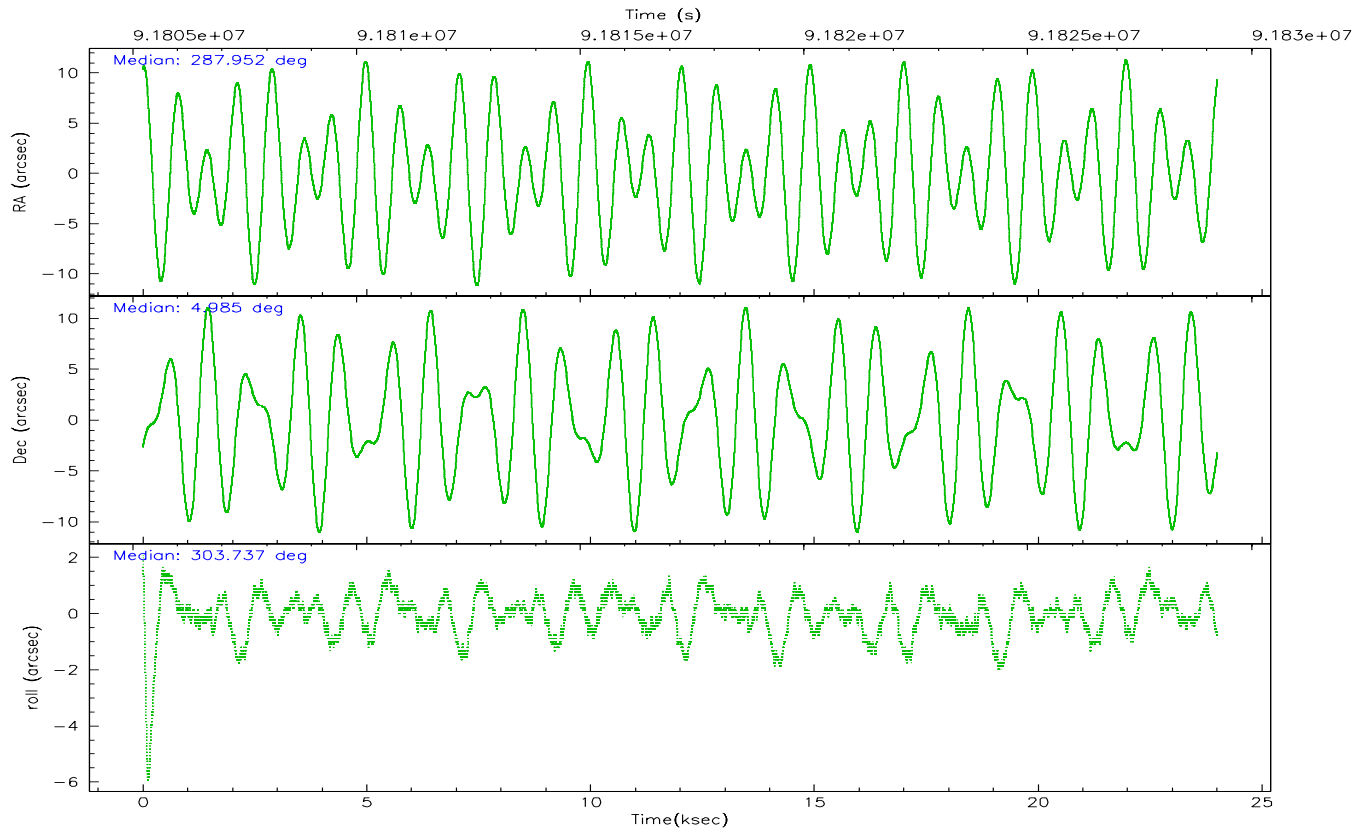
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	9254	23464	13750	9792	23683	29027
	7%	13%	11%	6%	12%	22%
grade 1 events	74	220	83	268	152	2073
	0%	0%	0%	0%	0%	1%
grade 2 events	5324	25137	4737	17357	12842	3686
	4%	14%	3%	11%	6%	2%
grade 3 events	1459	4480	1726	8224	12098	1448
	1%	2%	1%	5%	6%	1%
grade 4 events	1363	4039	1685	7786	10644	1761
	1%	2%	1%	5%	5%	1%
grade 5 events	3268	11198	3822	12649	5663	3957
	2%	6%	3%	8%	3%	3%
grade 6 events	3035	36966	3569	37737	19757	3222
	2%	22%	2%	24%	10%	2%
grade 7 events	96995	62273	92771	59946	103912	83781
	80%	37%	75%	38%	55%	64%

## 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	287.927783	287.952488401004	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	4.997163	4.985243789312268	Subarray start row	1	1
Pointing Roll	303.588824	303.7432969617905	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	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Phase constraints	Y	Y			
Phase period	13.082000	13.082000			
Phase epoch	49595.700000	49595.700000			
Phase start	0.200000	0.200000			
Phase end	0.800000	0.800000			
Phase start error	0.050000	0.050000			
Phase end error	0.050000	0.050000			
Observation start time	91806337.184000	91804914.85328899			
Observation start date	2000-11-28T13:44:33	2000-11-28T13:21:54			
Observation end time	91829234.184000	91829548.16673			
Observation end date	2000-11-28T20:06:10	2000-11-28T20:12:28			
Read mode	TIMED	TIMED			

## 2.3 Aspect





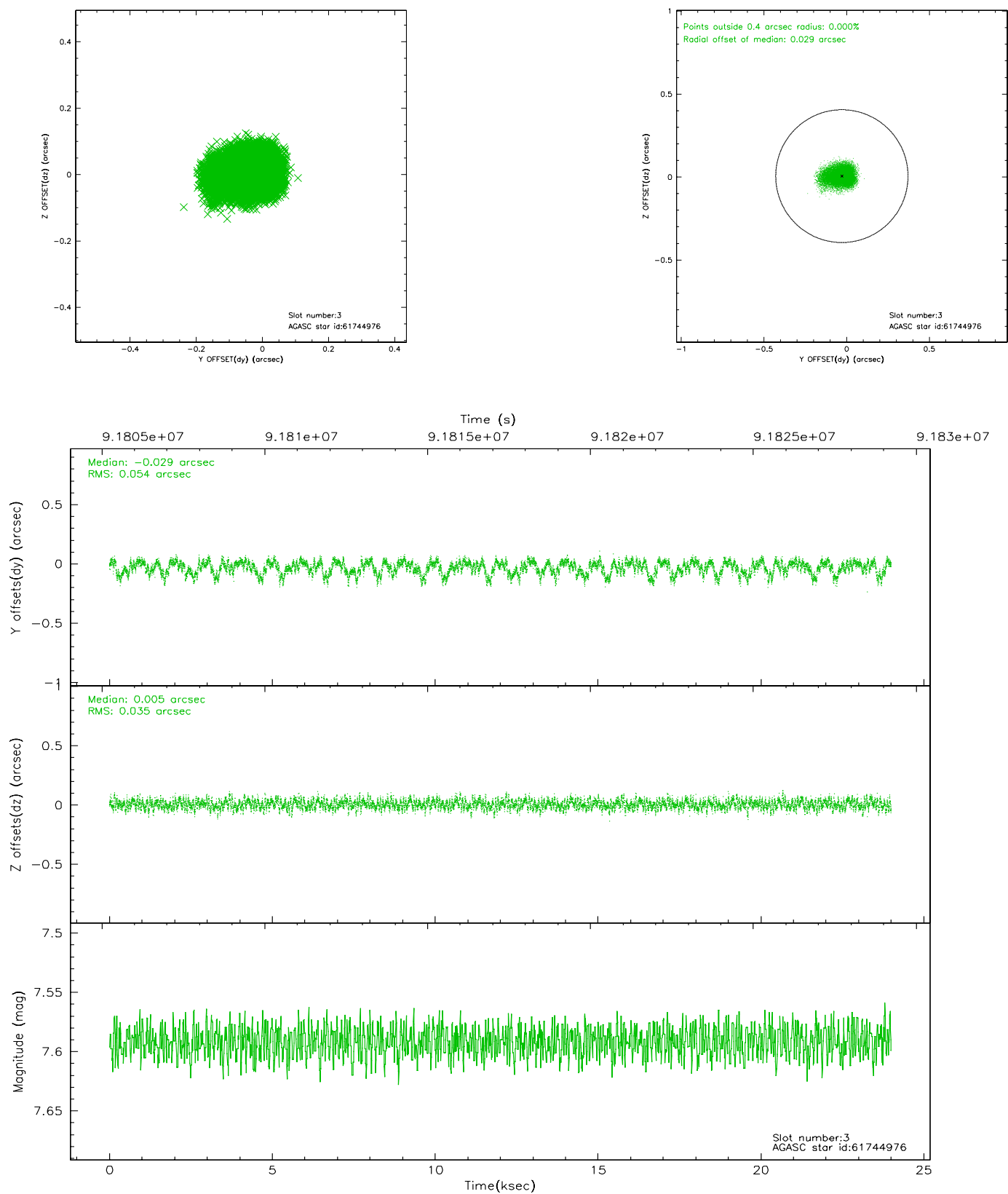
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	5854	-0.028	0.064	0.008	0.014	0.000000	0.000000	940.83	-1785.96
1	FID	ACIS-S-5	7.24	5855	0.034	0.007	0.010	0.017	0.000000	0.000000	-1808.04	111.38
2	FID	ACIS-S-6	7.37	5854	-0.028	-0.059	0.009	0.015	0.000000	0.000000	406.23	755.43
3	GUIDE	61744976	7.59	11709	-0.029	0.005	0.067	0.113	288.430364	5.306675	68.50	2117.71
4	GUIDE	61742032	7.78	11709	-0.120	-0.023	0.058	0.090	287.149645	5.118464	-1907.77	-2081.75
5	GUIDE	61743800	7.47	11708	-0.002	-0.106	0.058	0.092	287.776811	5.274666	-1130.95	101.61
6	GUIDE	61738240	7.25	11708	0.112	0.002	0.055	0.088	287.996556	4.354861	2063.82	-1073.21
7	GUIDE	61745024	7.59	11708	0.046	0.125	0.050	0.080	288.156168	5.297362	-446.51	1280.07

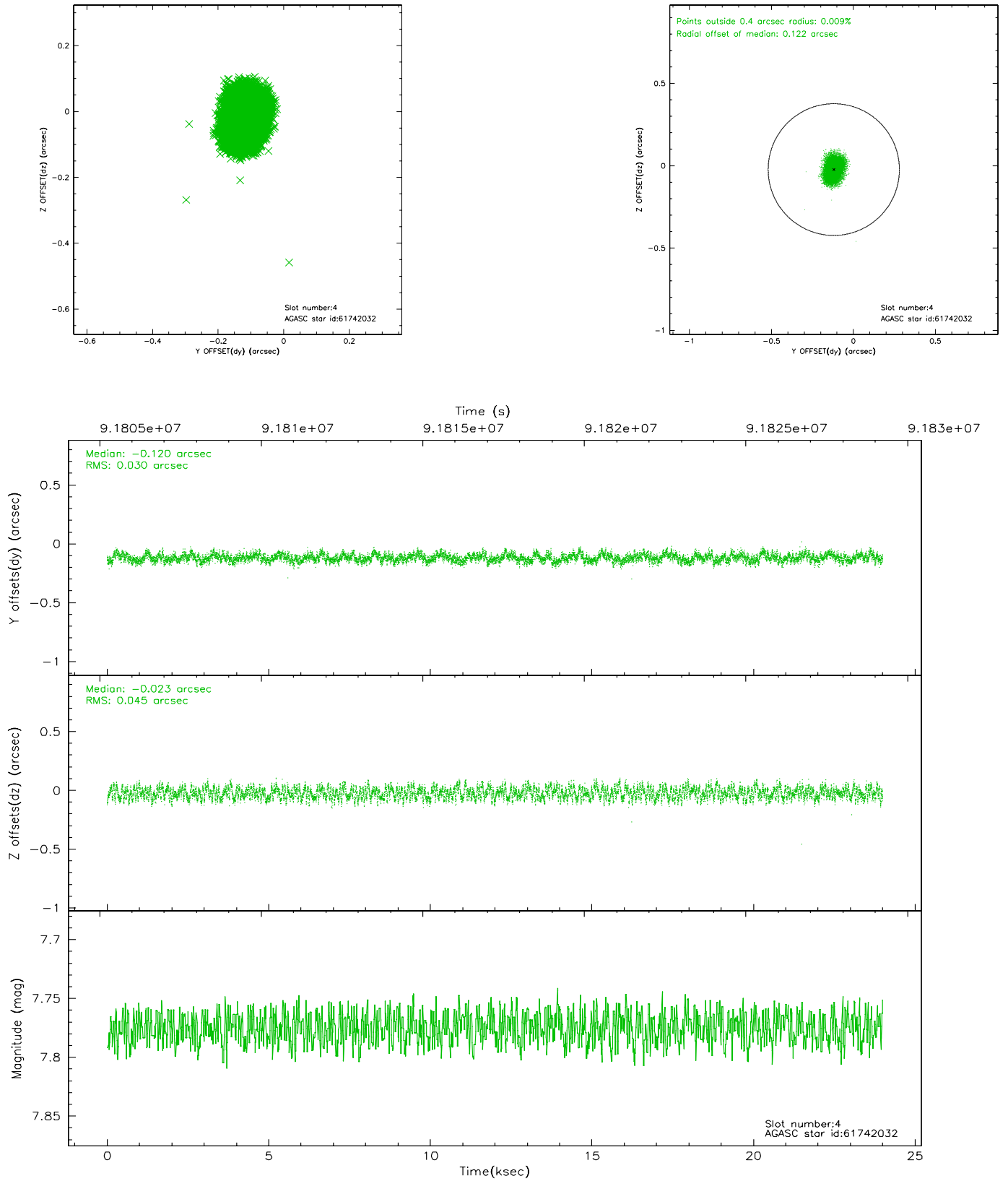


## 2.4 Star Slots

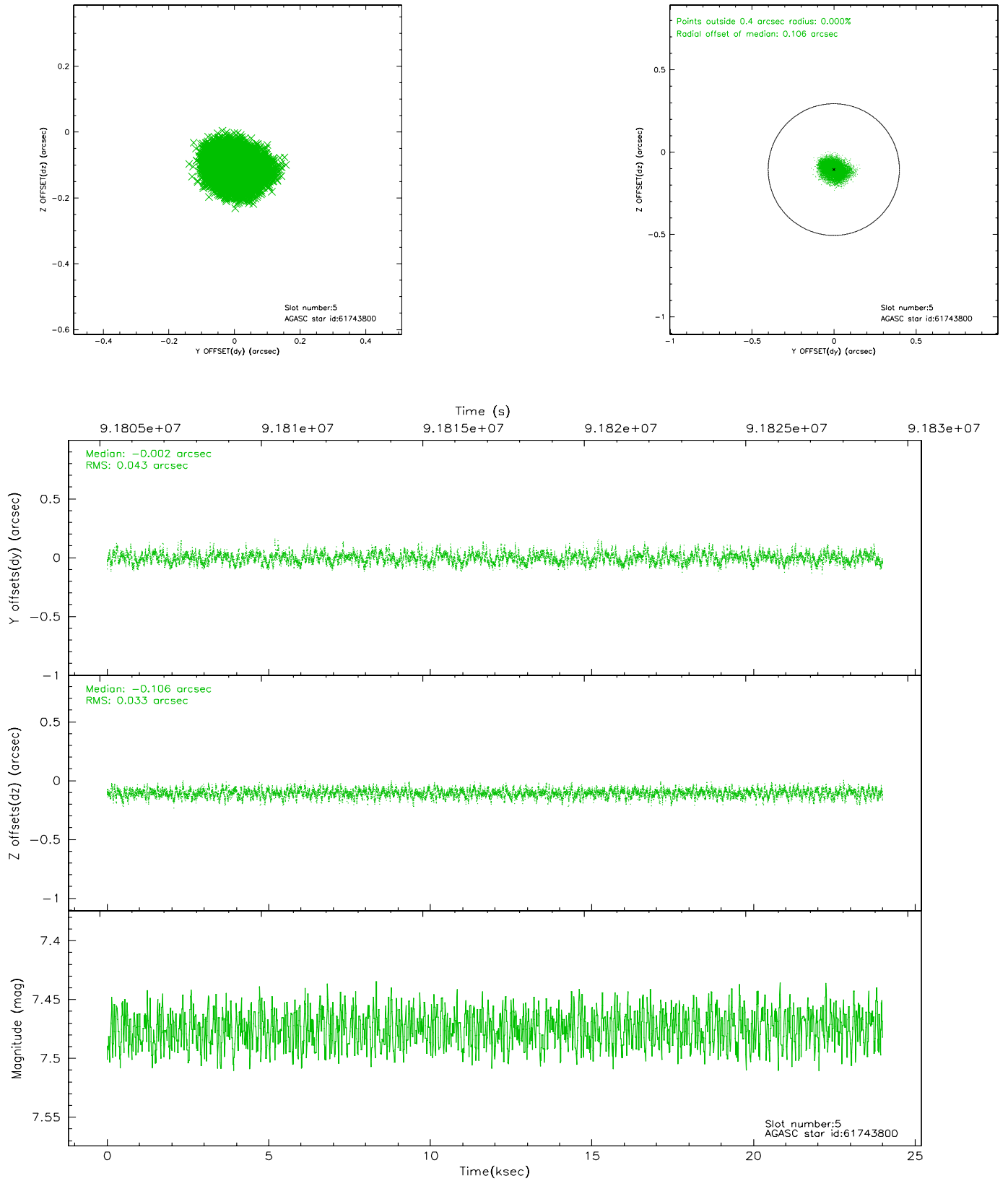
### 2.4.1 Slot 3



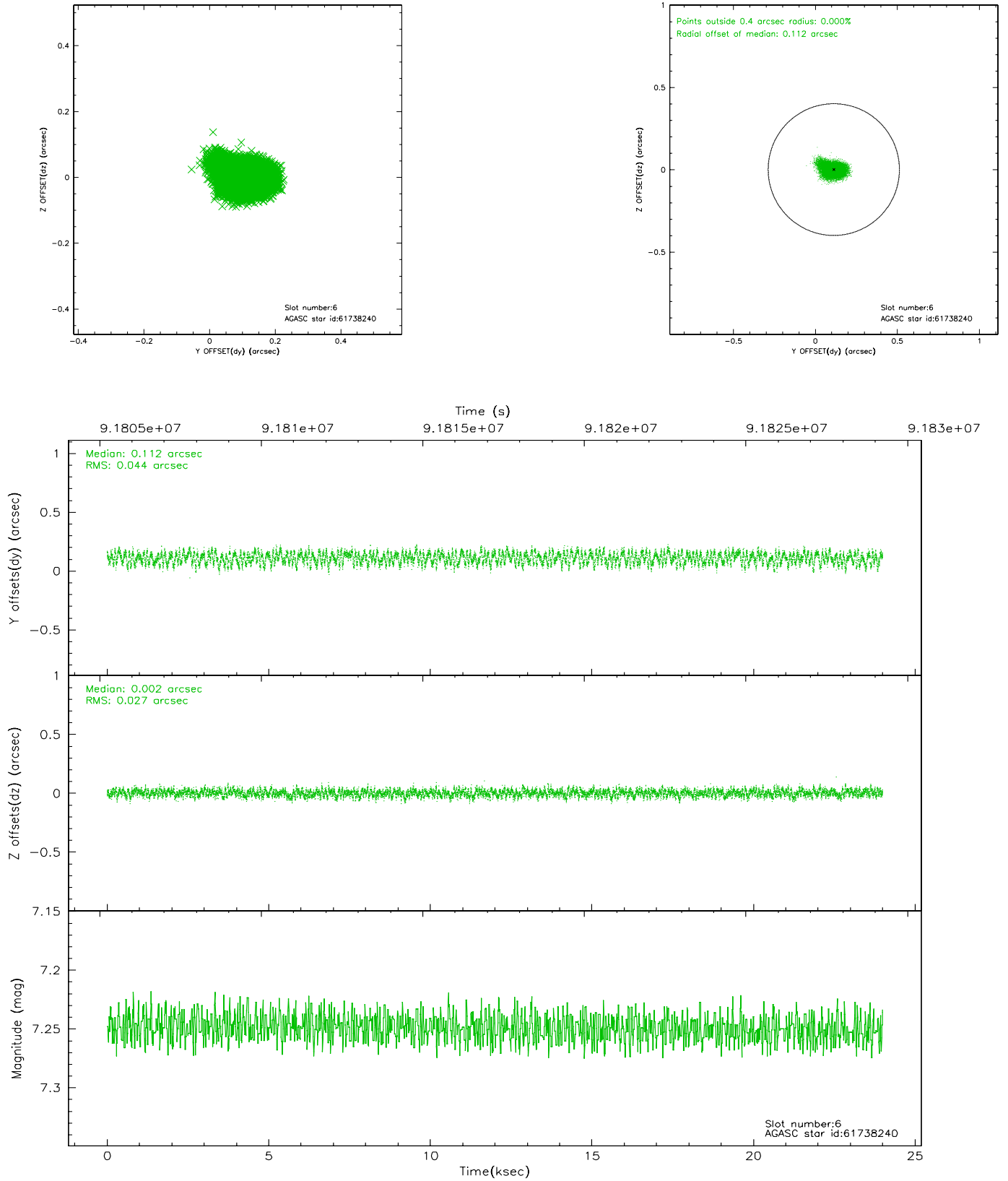
## 2.4.2 Slot 4



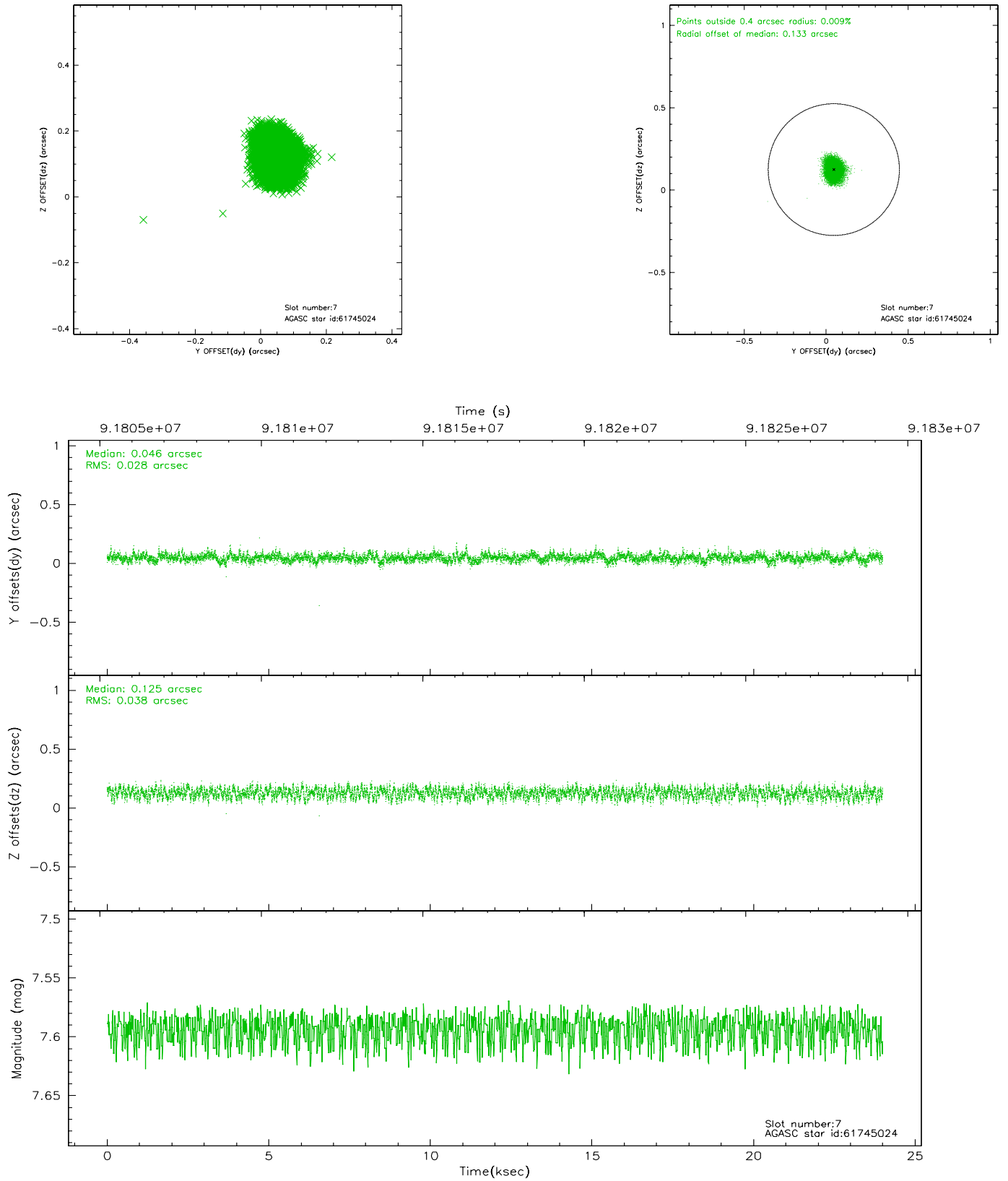
### 2.4.3 Slot 5



## 2.4.4 Slot 6

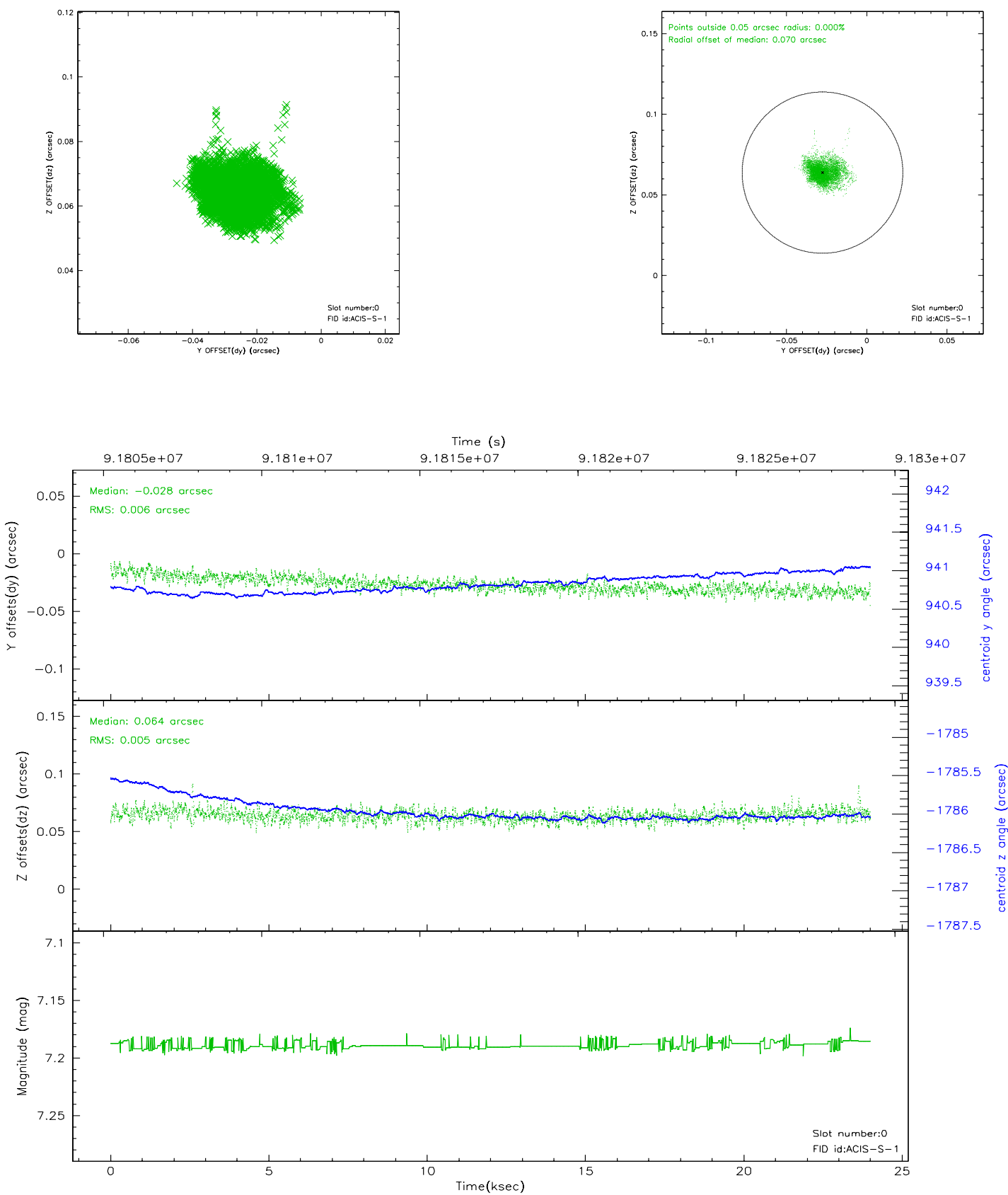


## 2.4.5 Slot 7

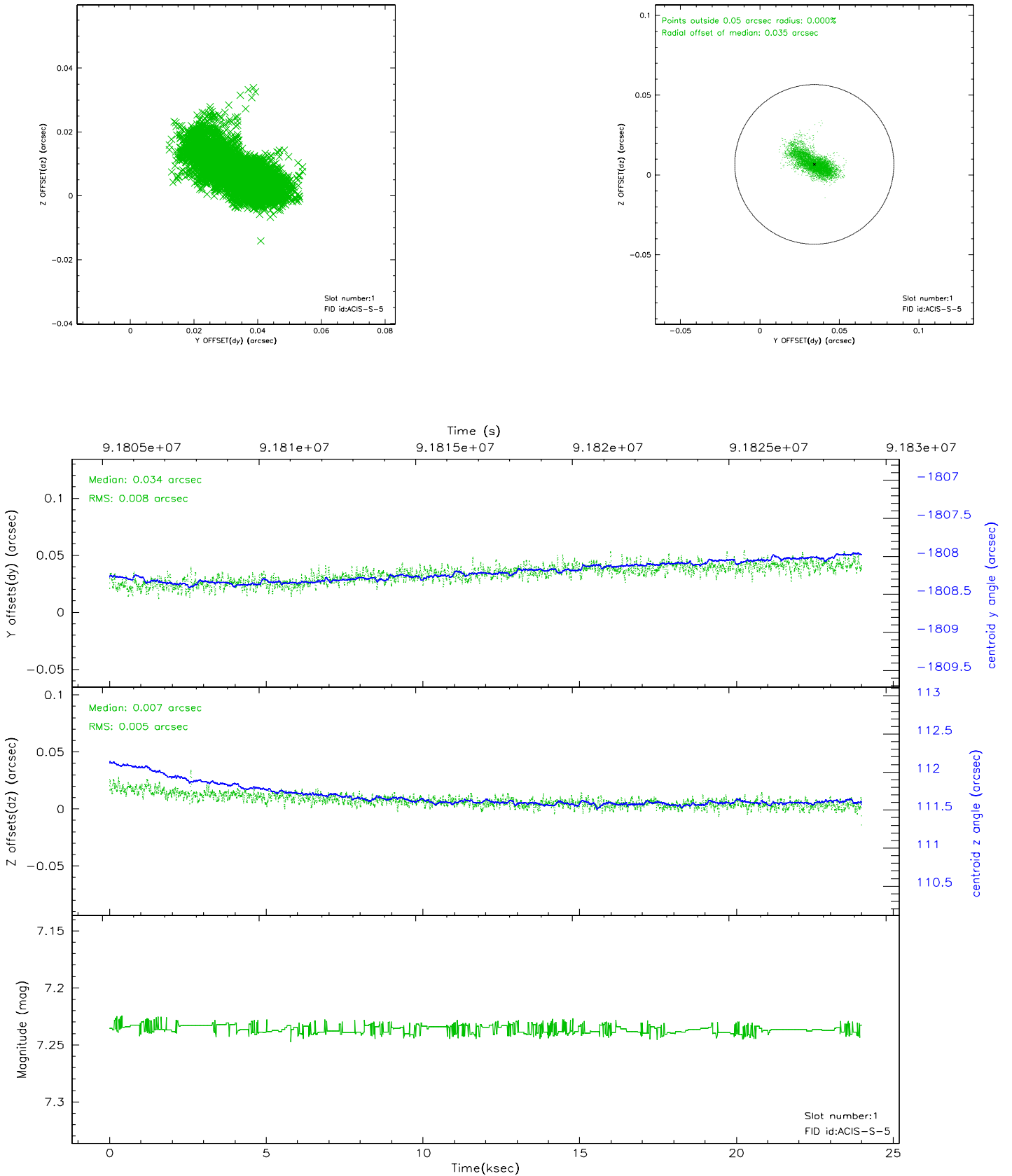


## 2.5 FID Slots

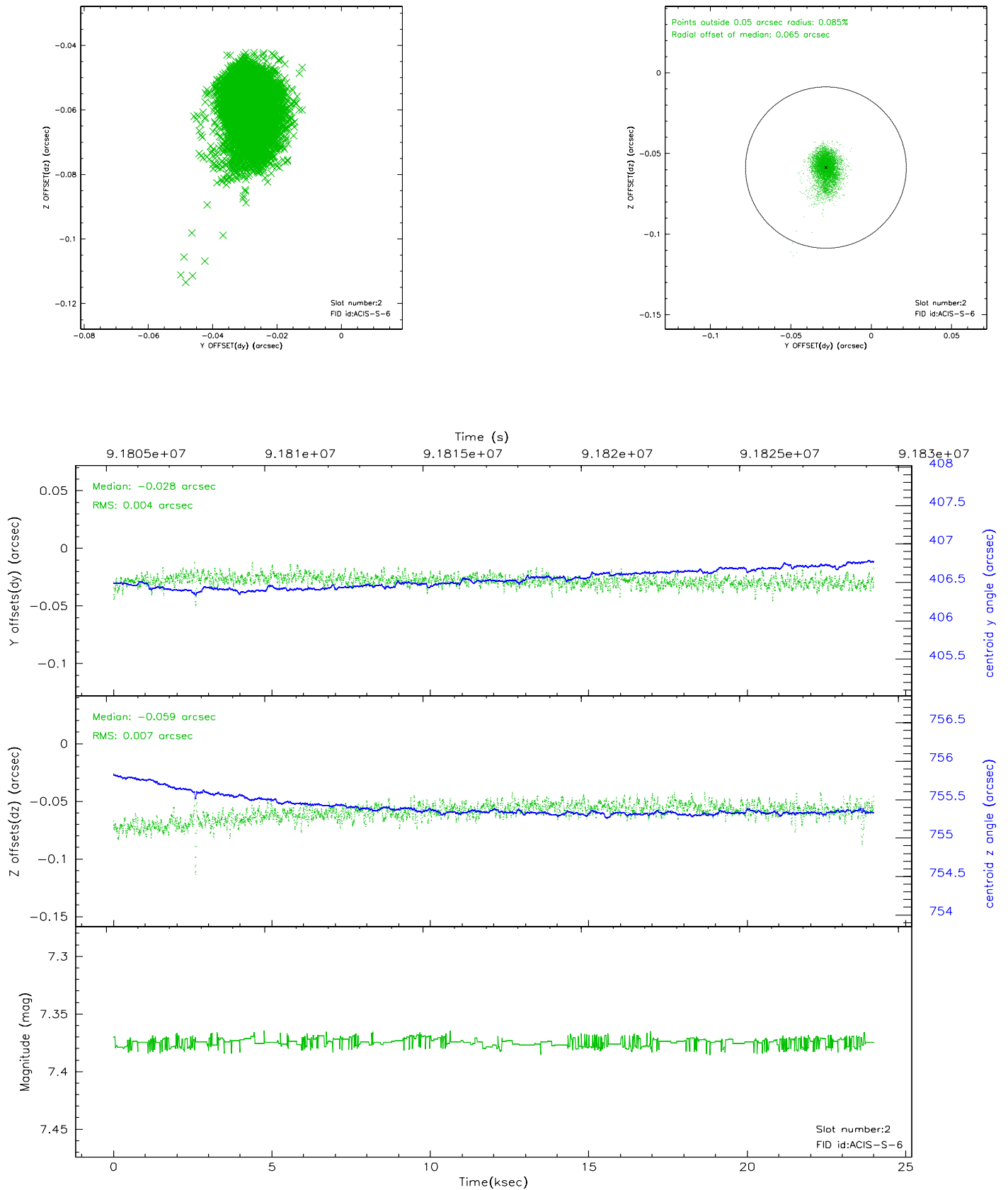
### 2.5.1 Slot 0



## 2.5.2 Slot 1



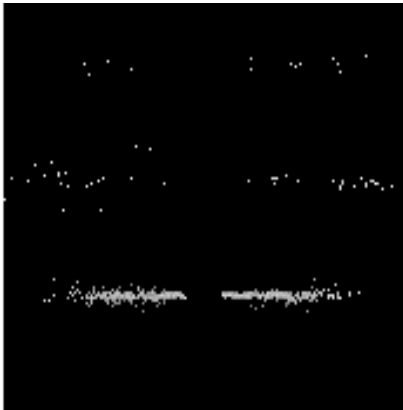
### 2.5.3 Slot 2



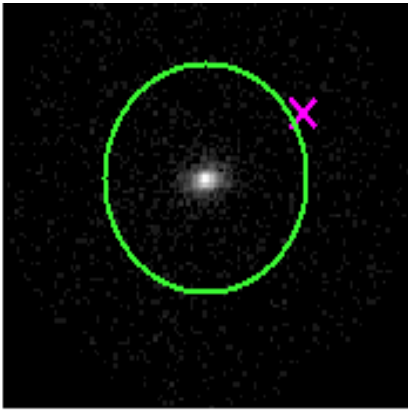


# 3 Gratings

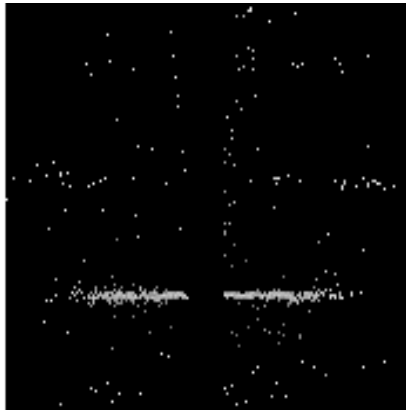
## 3.1 HEG Arm



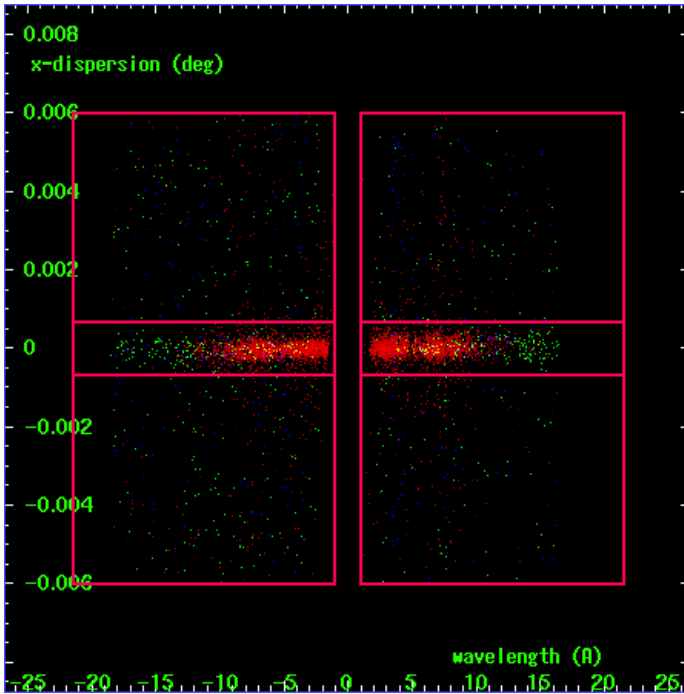
HEG Order Sort 123



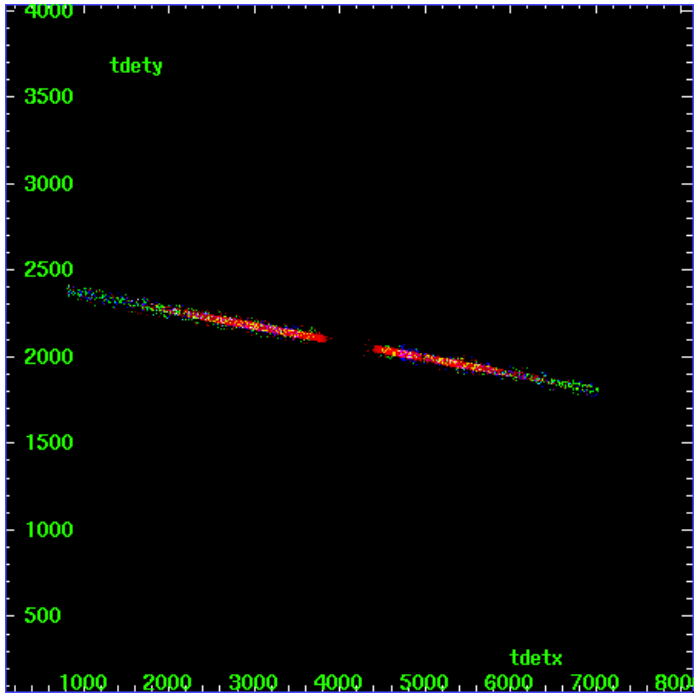
HEG Zero Order



HEG Order Sort ALL

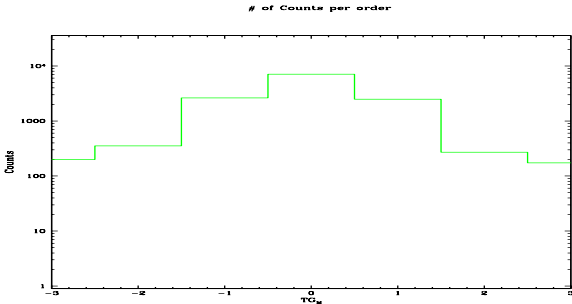


Spot Image HEG

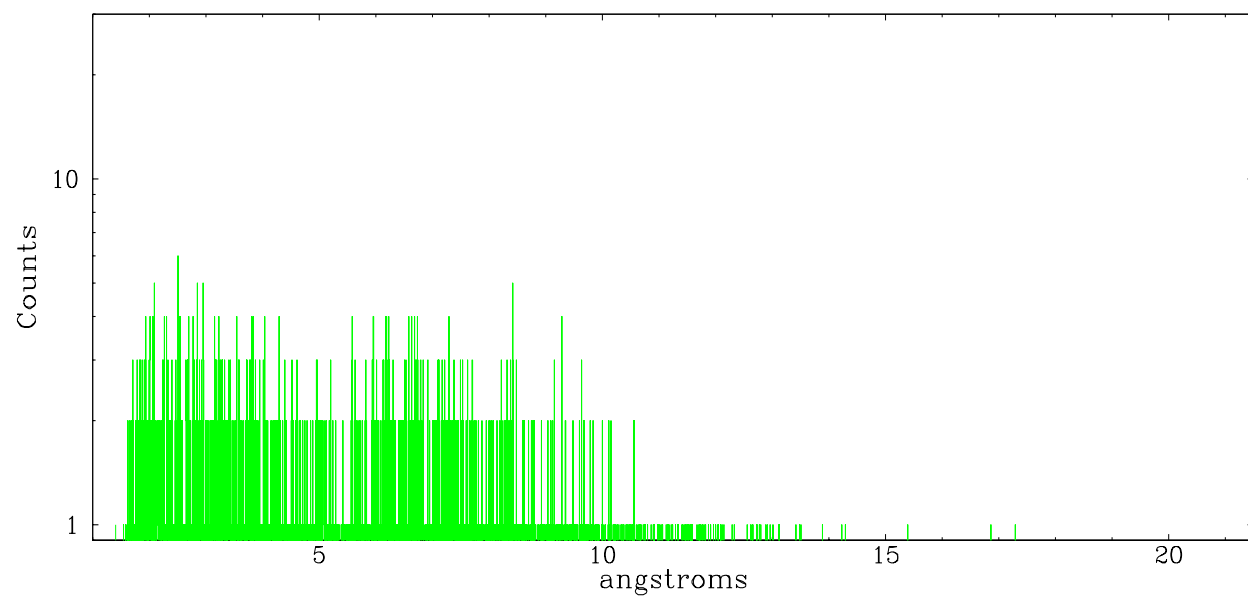


Full Detector HEG

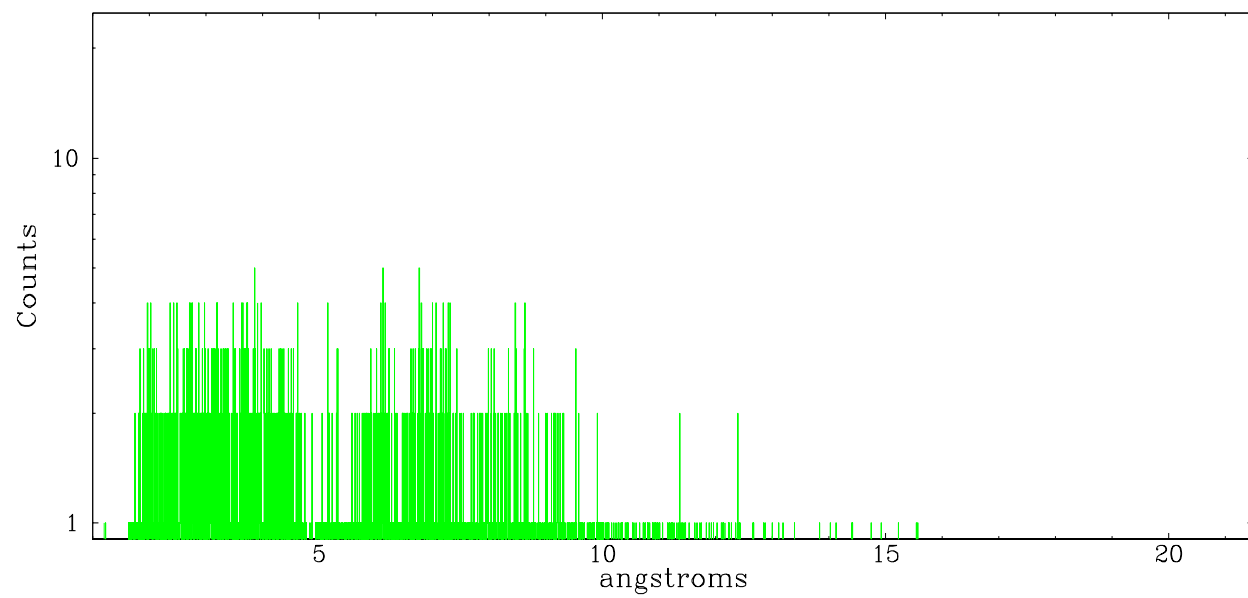
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	199	354	2630	7098	2494	271	173



heg order -1



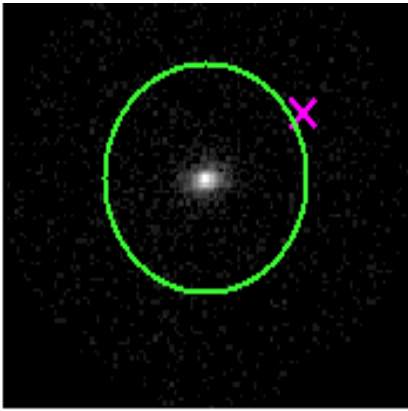
heg order +1



3.2 MEG Arm



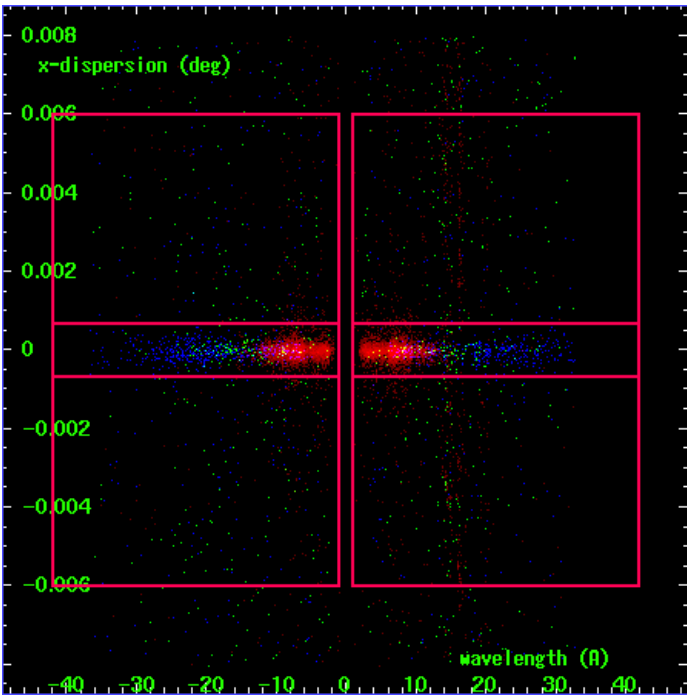
MEG Order Sort 123



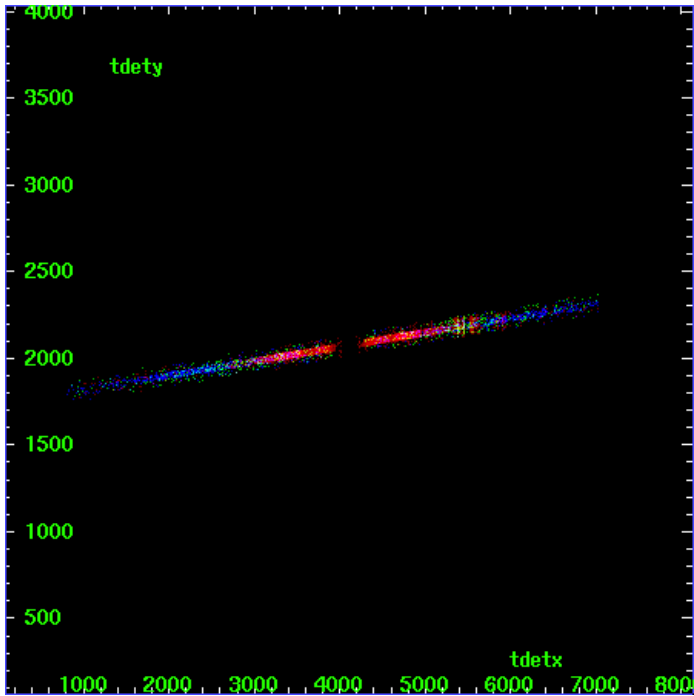
MEG Zero Order



MEG Order Sort ALL

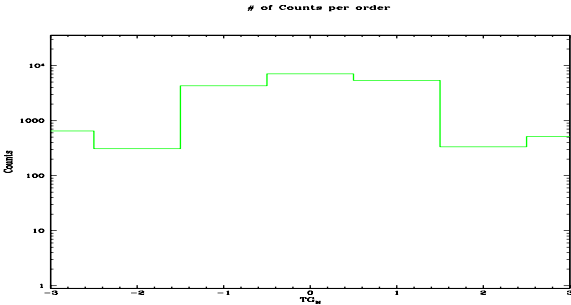


Spot Image MEG

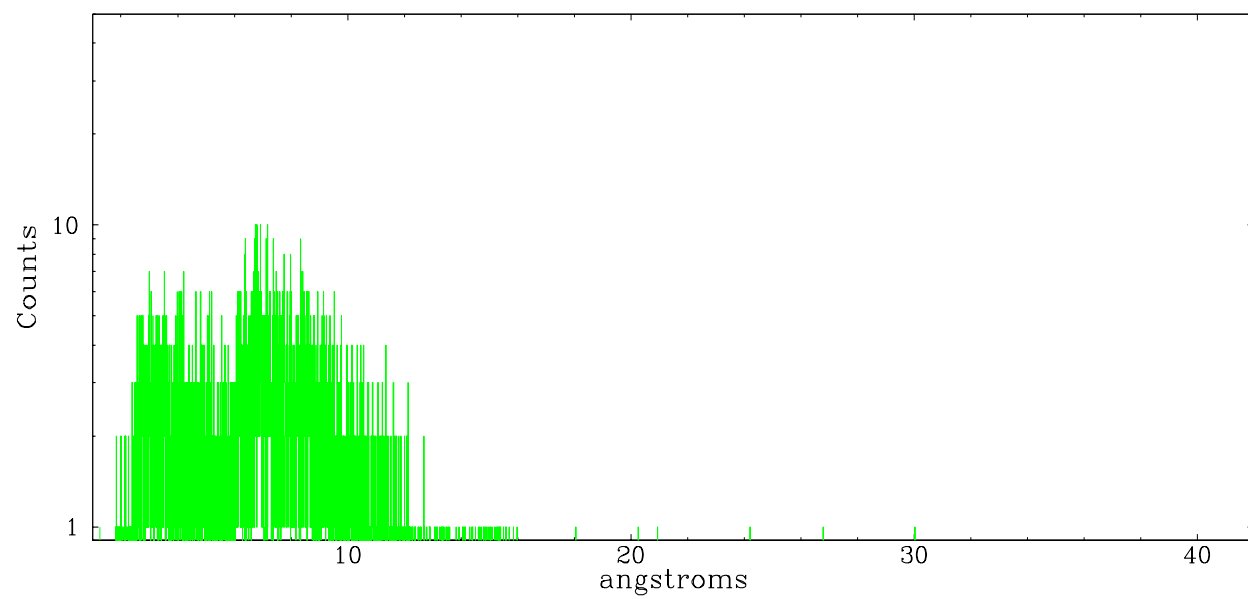


Full Detector MEG

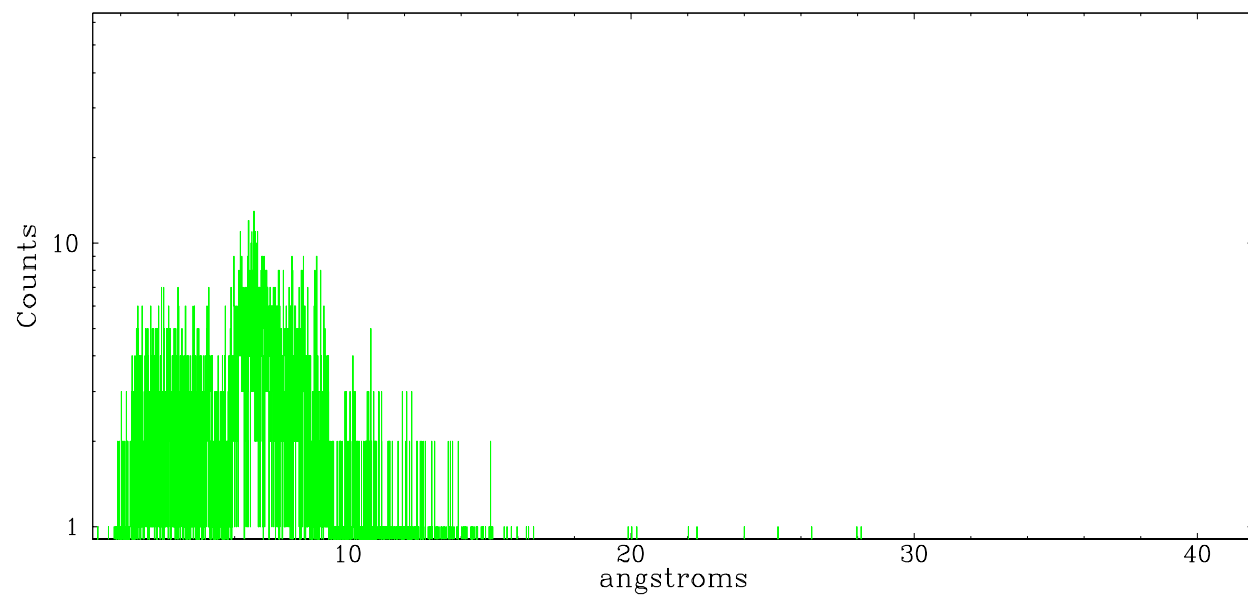
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	648	309	4303	7098	5366	335	514



meg order -1



meg order +1



## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2007.06.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.052

### A.2 Comments