

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2311 - L2 Version 001  
Chandra X-Ray Center

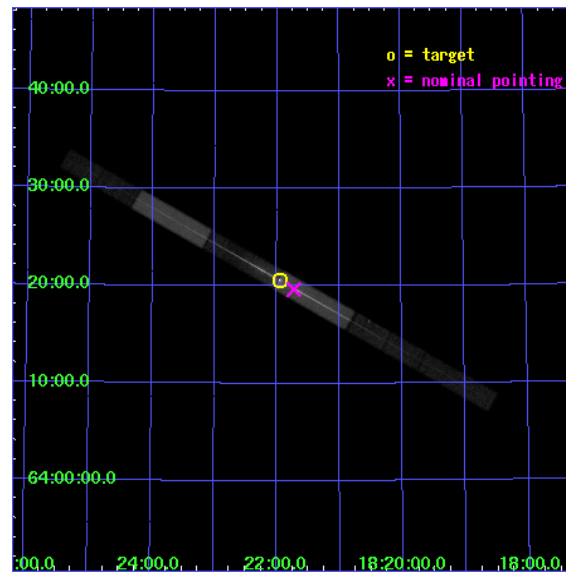
L2 Processing Date : Nov 6 2006

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# 1 Front

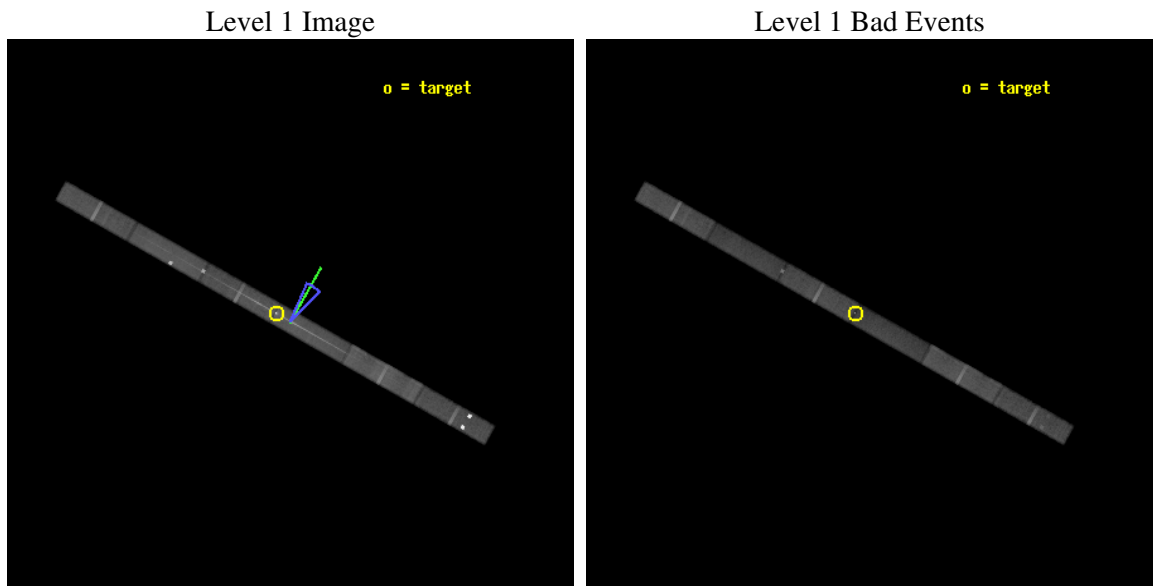
seq_num	700376
obs_id	2311
title	FINDING THE BARYONS IN THE LOW REDSHIFT UNIVERSE.
observer	Prof. Smita Mathur
object	H1821+643
dtcycle	0
cycle	P
ra_targ	275.48875
dec_targ	64.343444
ra_nom	275.43189581447
dec_nom	64.32772596139
roll_nom	29.32532221105
revision	3
ontime	93842.958960012
livetime	90143.470913713
ontime4	93842.95897992
ontime5	93842.958960012
ontime6	93844.0
ontime7	93842.958960012
ontime8	93842.958960012
ontime9	93842.958960012
l2events	326194



## 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	3.2.3
date	2006-11-04T11:57:44
revision	3

sched_exp_time	93700.000000
ontime	94259.714115441
ontime4	94259.714135349
ontime5	94259.714115441
ontime6	94260.755155429
ontime7	94259.714115441
ontime8	94260.755155444
ontime9	94260.755155444
l1events	1455771

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	191627	231397	202742	247166	241991	340848
rejected events	170211	110839	151511	107556	186453	142679
rejected %	88%	47%	74%	43%	77%	41%

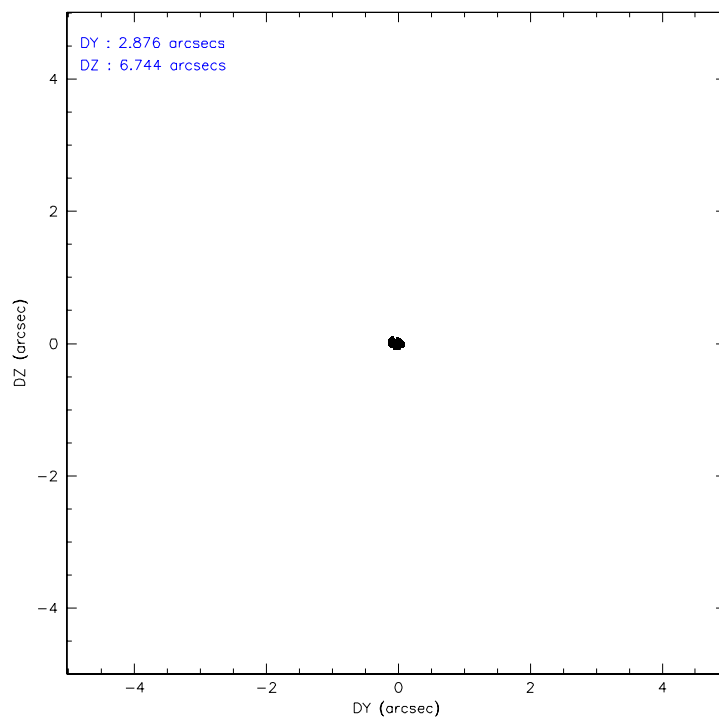
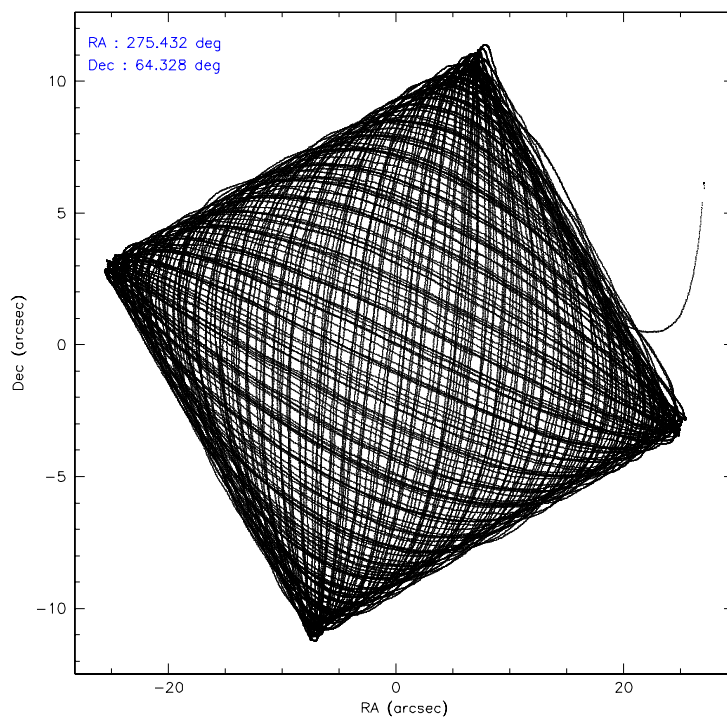
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	8432	36932	32695	22327	18076	186243
	4%	15%	16%	9%	7%	54%
grade 1 events	62	2410	78	335	95	864
	0%	1%	0%	0%	0%	0%
grade 2 events	4479	26450	6638	33905	9024	3662
	2%	11%	3%	13%	3%	1%
grade 3 events	2761	4960	3785	13993	8403	2984
	1%	2%	1%	5%	3%	0%
grade 4 events	2553	4980	3722	13627	7577	2643
	1%	2%	1%	5%	3%	0%
grade 5 events	4735	11978	5586	14717	6878	5529
	2%	5%	2%	5%	2%	1%
grade 6 events	3318	48007	4537	56297	12825	3554
	1%	20%	2%	22%	5%	1%
grade 7 events	165287	95680	145701	91965	179113	135369
	86%	41%	71%	37%	74%	39%

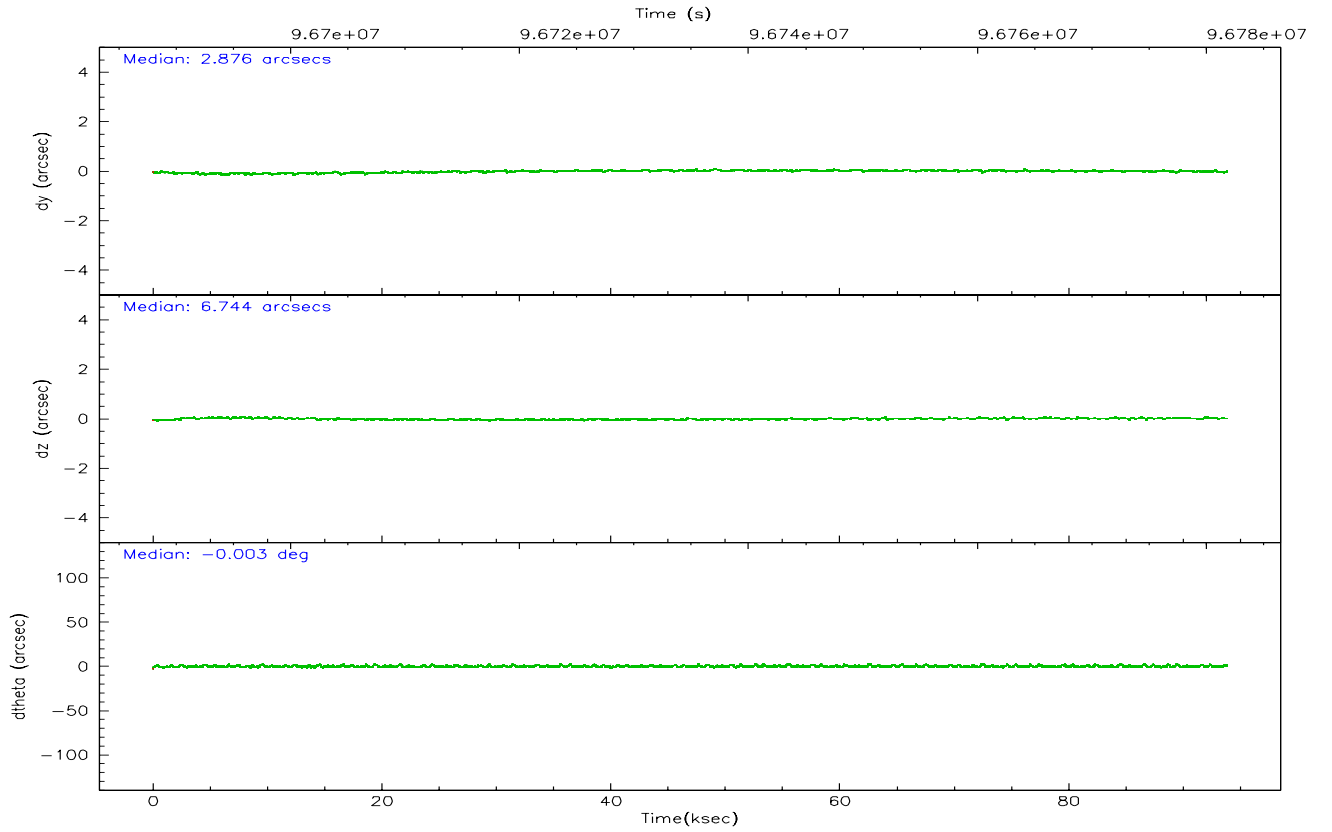
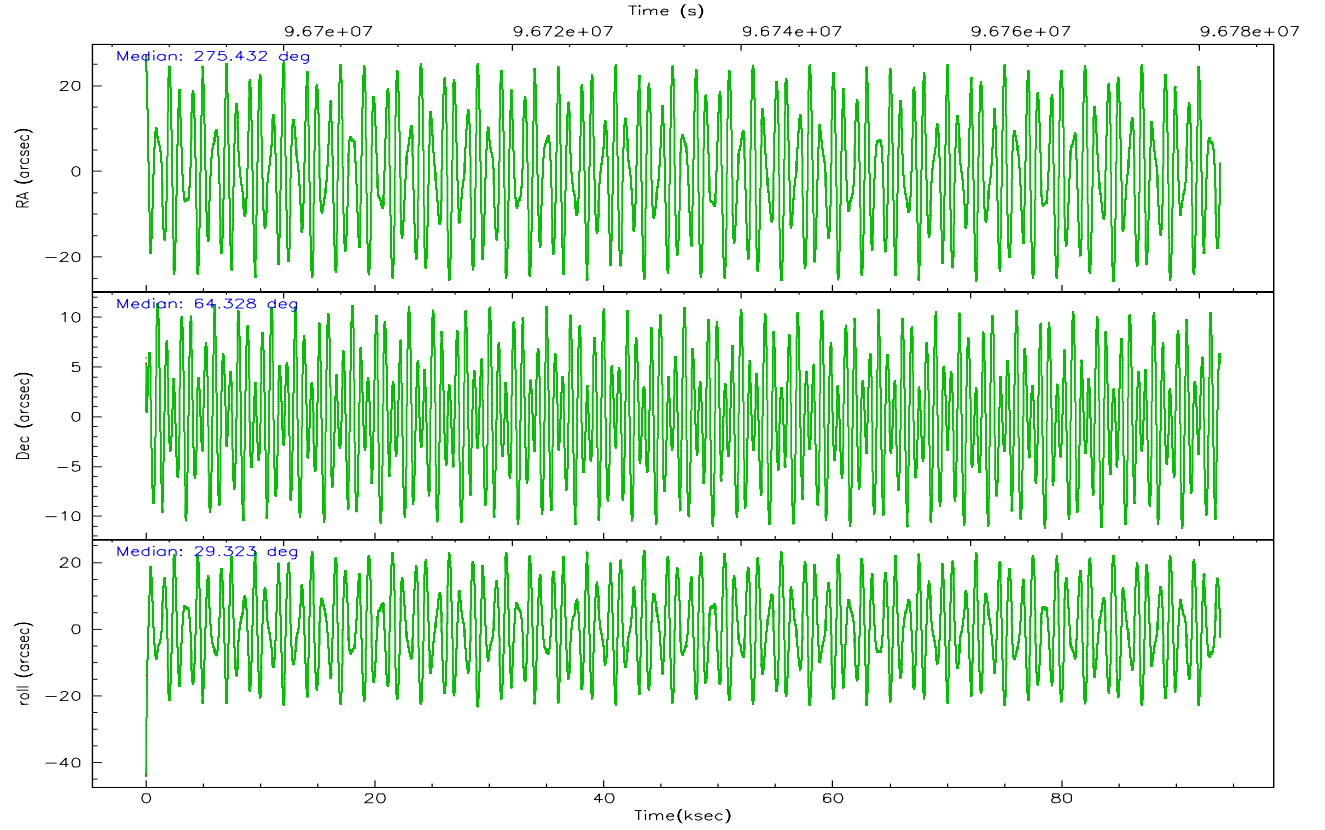


## 2.2 Compared Parameters

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	LETG	LETG	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	275.400221	275.4318958144662	Subarray requested	CUSTOM	1/4
Pointing Dec	64.304107	64.32772596139039	Subarray start row	49	49
Pointing Roll	29.197251	29.32532221104956	Subarray row count	256	256
Roll angle	35.000000	35.000000	Alternating exposures requested	N	N
Roll tolerance	10.000000	10.000000	Primary exposure time	0.000000	1
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)	-182.132523	-182.1344861297048			
SIM translation stage offset (mm)	-8	-7.998036453302973			
Observation start time	96688123.184000	96687153.01526301			
Observation start date	2001-01-24T01:47:39	2001-01-24T01:32:33			
Observation end time	96781823.184000	96782379.61892501			
Observation end date	2001-01-25T03:49:19	2001-01-25T03:59:39			
Read mode	TIMED	TIMED			

## 2.3 Aspect



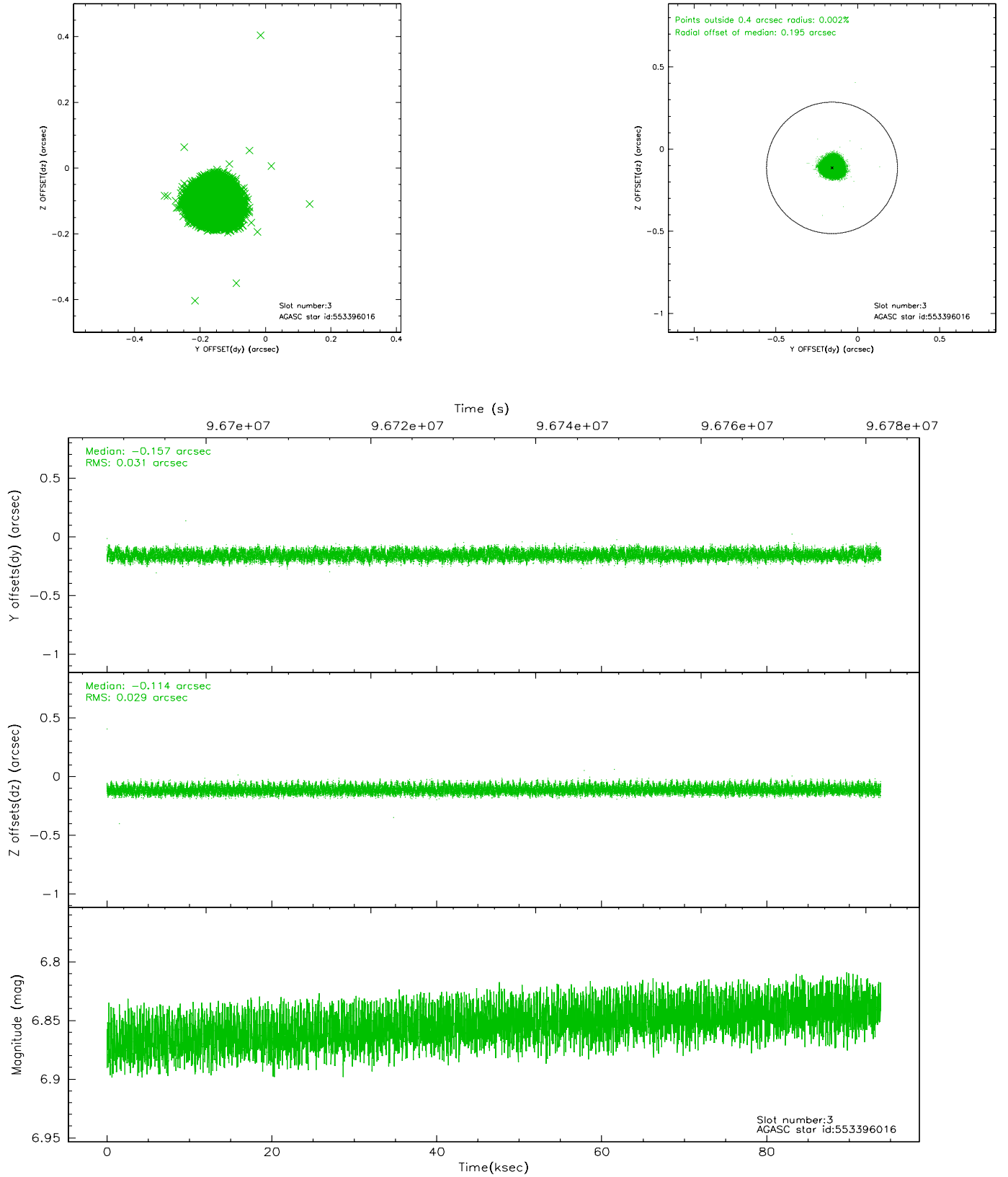


### Slot Statistics

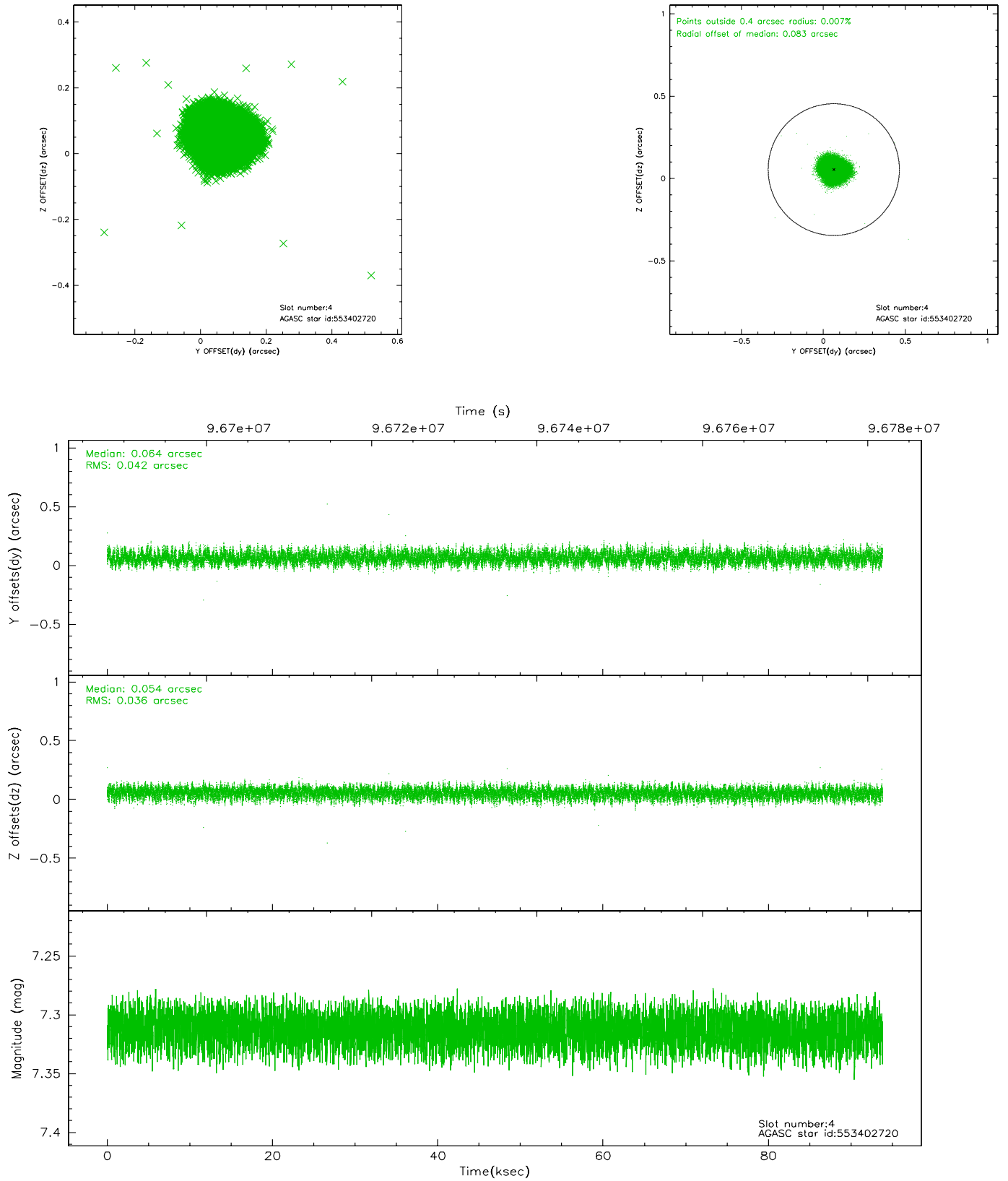
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	22885	-0.002	-0.088	0.013	0.022	0.000000	0.000000	-754.97	-1892.74
1	FID	ACIS-S-4	7.18	22885	-0.049	0.025	0.008	0.016	0.000000	0.000000	2158.34	15.87
2	FID	ACIS-S-5	7.22	22888	0.021	0.072	0.015	0.028	0.000000	0.000000	-1807.86	9.57
3	GUIDE	553396016	6.85	45776	-0.157	-0.114	0.046	0.071	276.292154	64.838422	2134.89	1020.98
4	GUIDE	553402720	7.31	45776	0.064	0.054	0.060	0.092	275.081751	64.202988	-612.07	-73.93
5	GUIDE	551697744	8.57	45763	0.118	0.026	0.055	0.092	274.060389	64.071591	-2238.02	316.67
6	GUIDE	553388208	8.49	45769	-0.087	-0.038	0.051	0.083	276.332157	64.911426	2313.61	1223.21
7	GUIDE	553404184	8.64	45773	0.059	0.071	0.063	0.105	276.556964	64.060570	1170.96	-1639.95

## 2.4 Star Slots

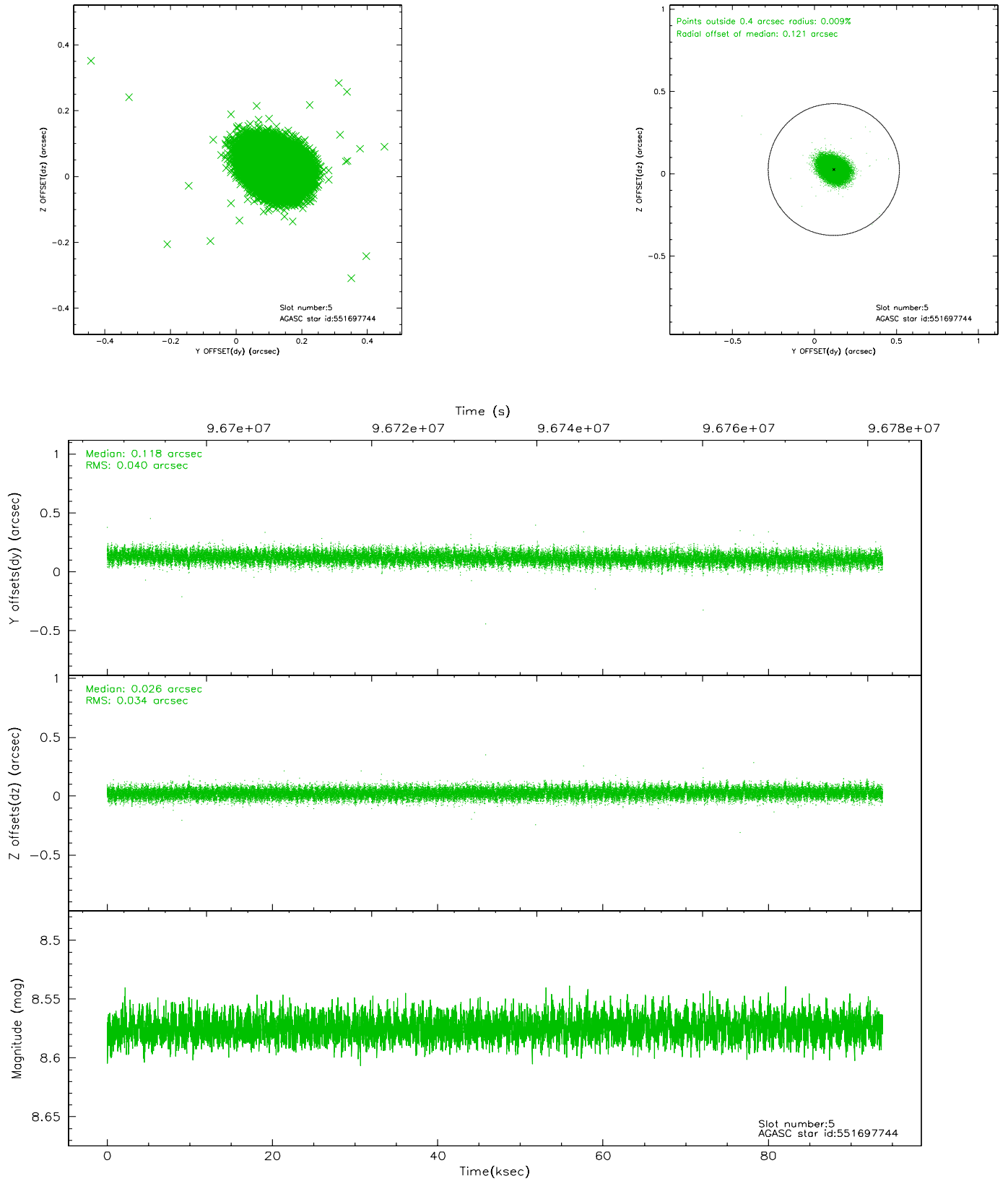
### 2.4.1 Slot 3



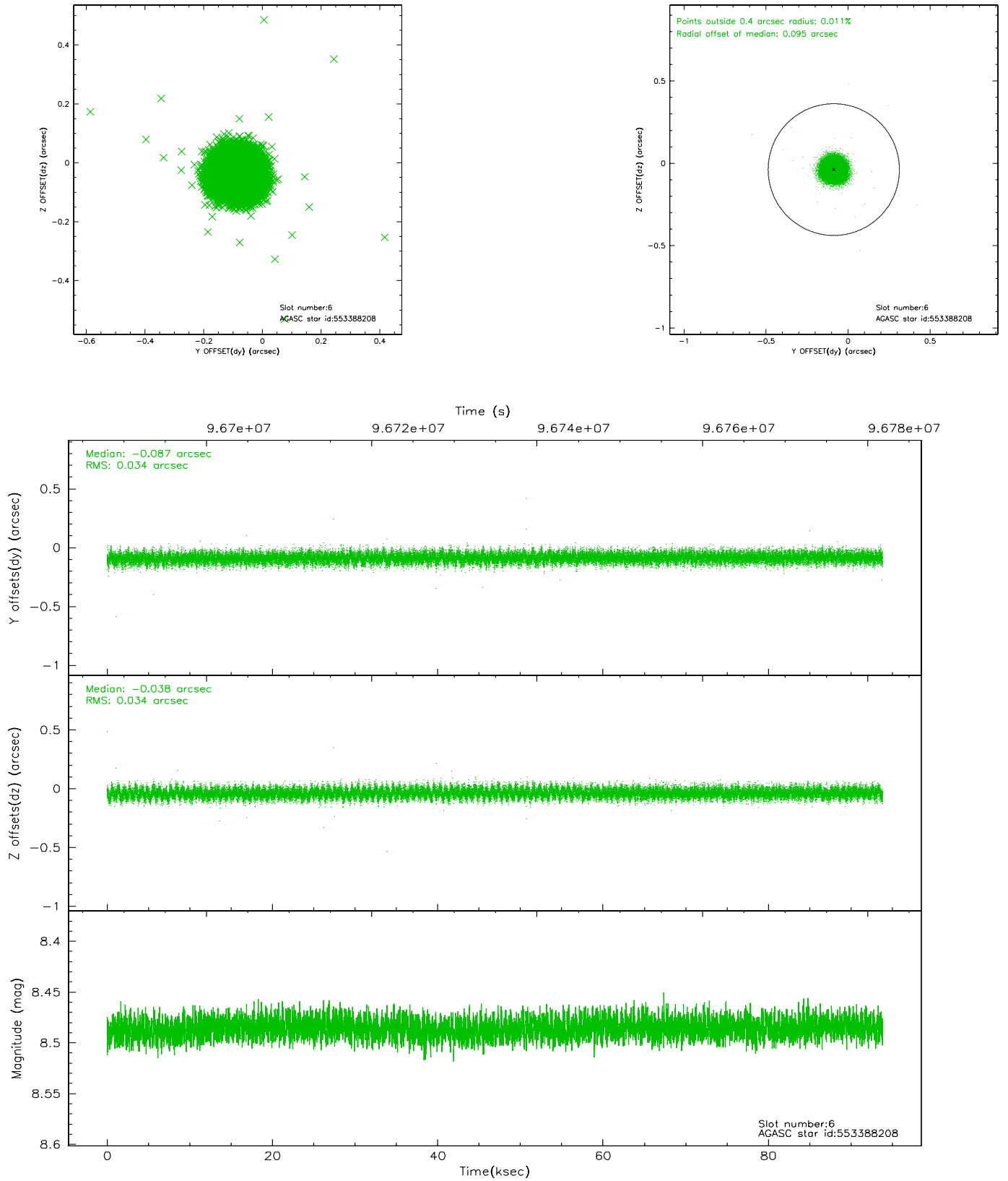
## 2.4.2 Slot 4



### 2.4.3 Slot 5

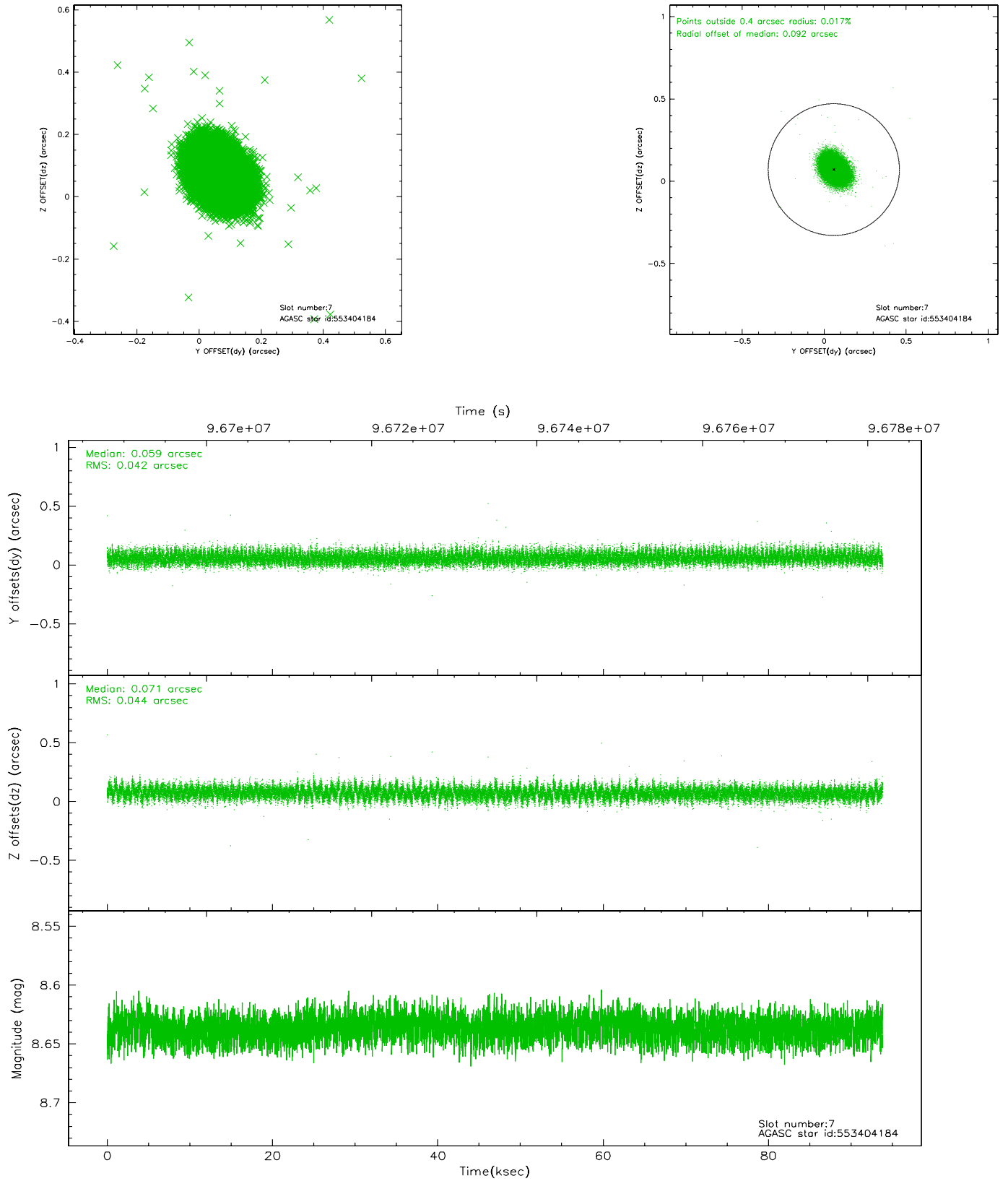


## 2.4.4 Slot 6



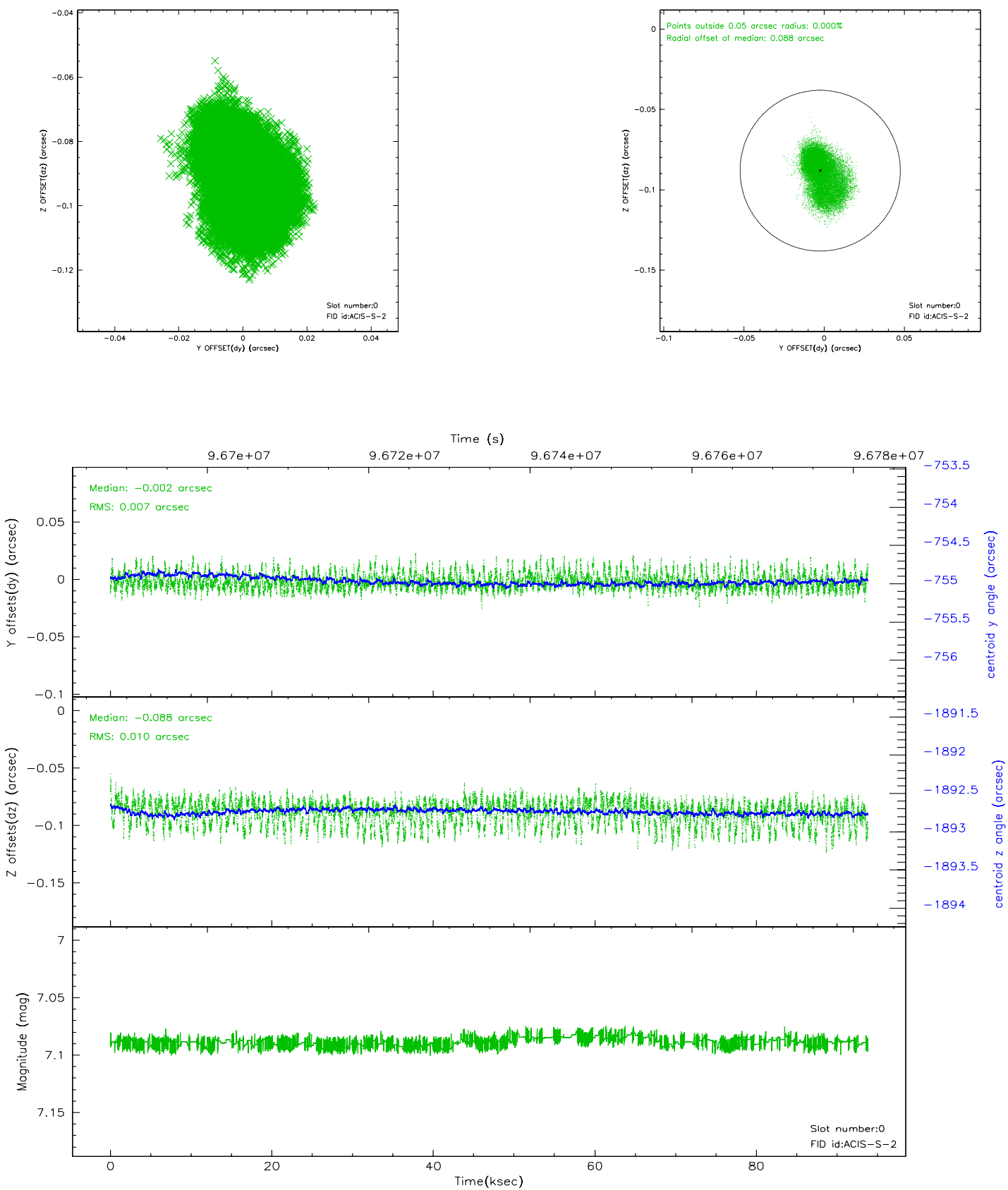


## 2.4.5 Slot 7

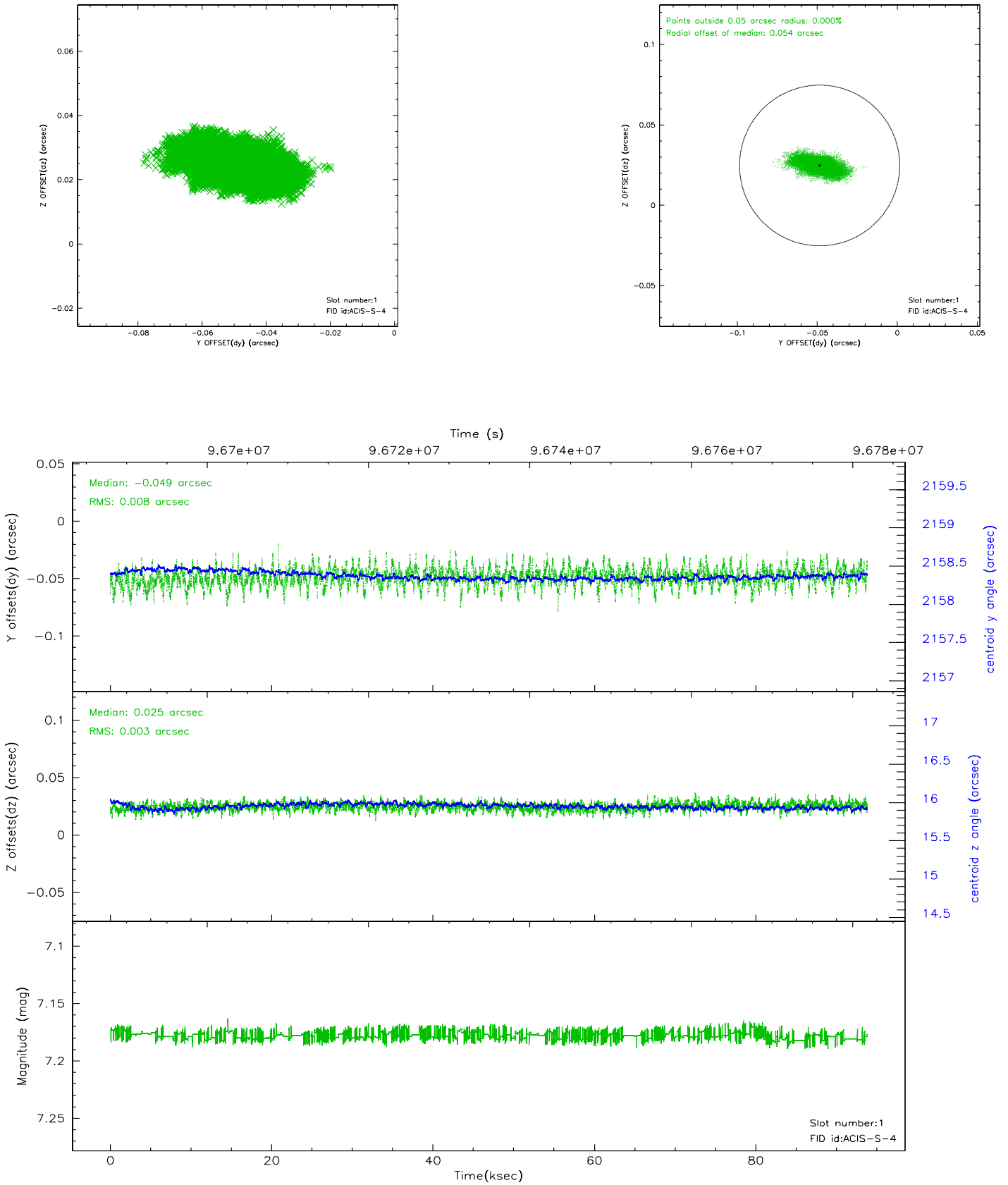


## 2.5 FID Slots

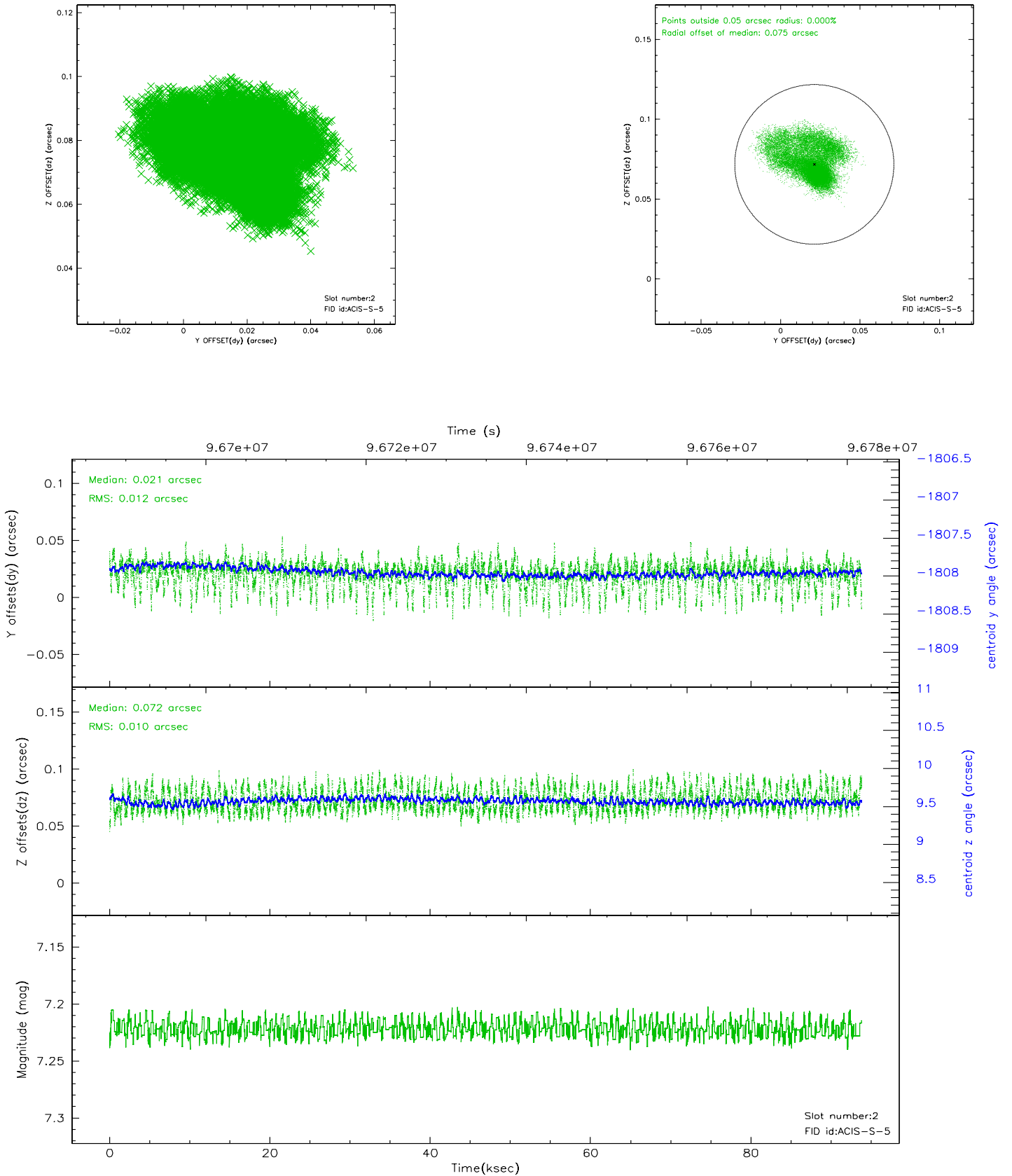
### 2.5.1 Slot 0



## 2.5.2 Slot 1

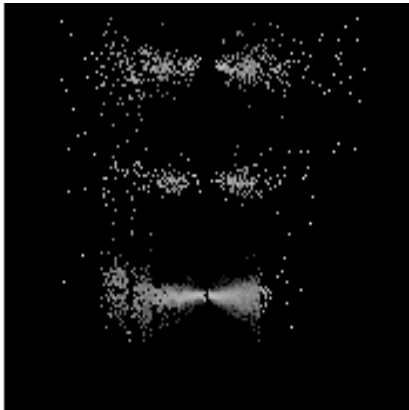


### 2.5.3 Slot 2

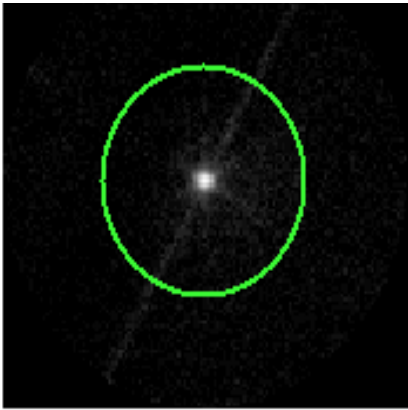


# 3 Gratings

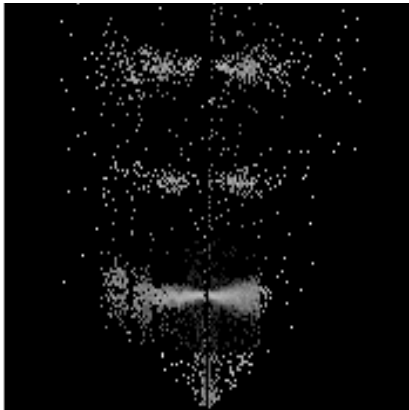
## 3.1 LETG Arm



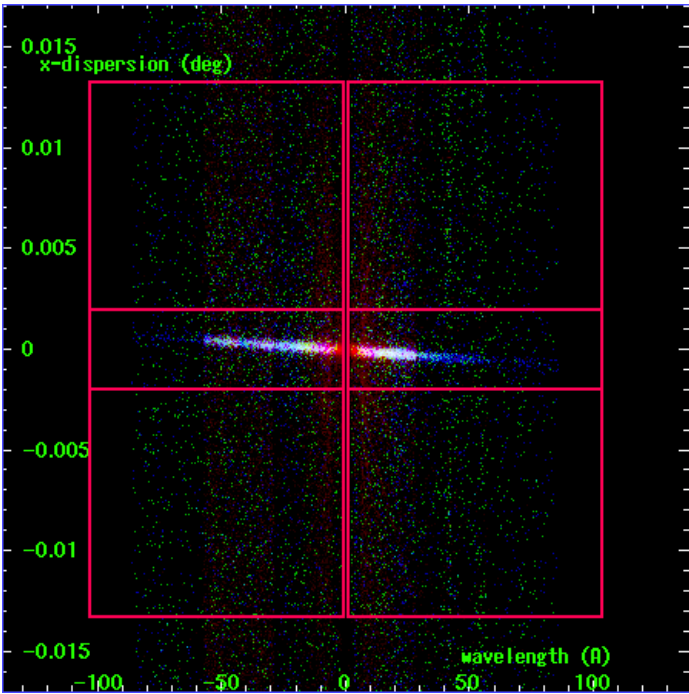
LETG Order Sort 123



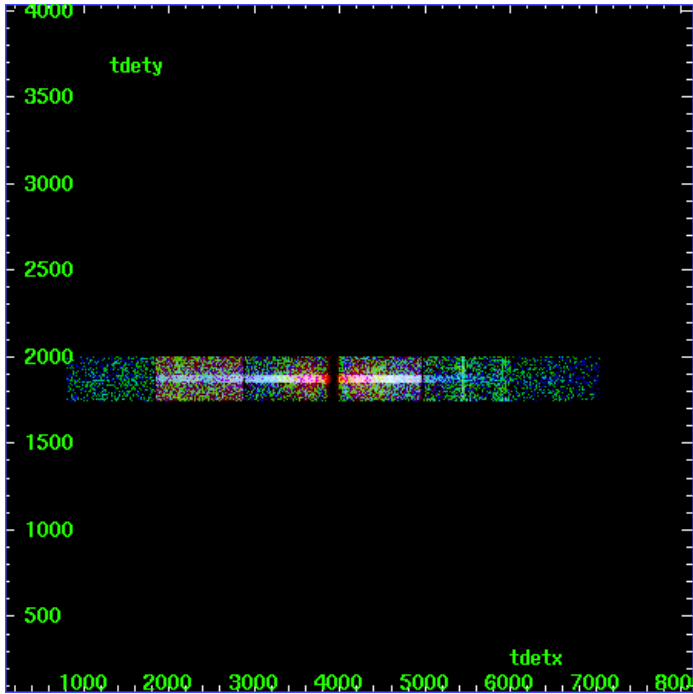
LETG Zero Order



LETG Order Sort ALL

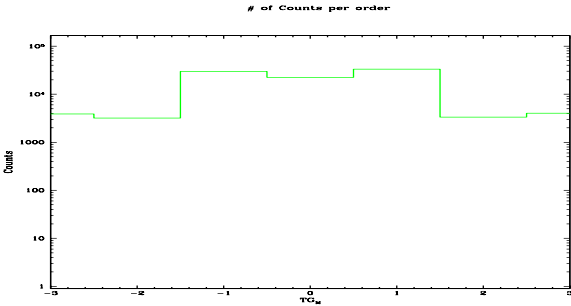


Spot Image LETG

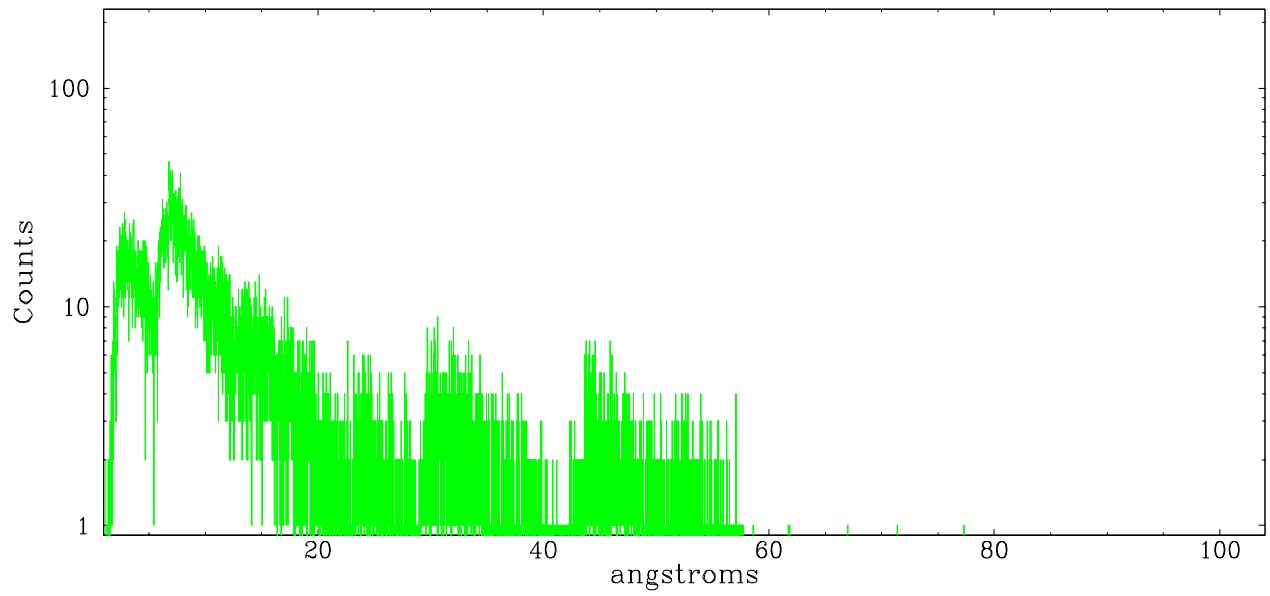


Full Detector LETG

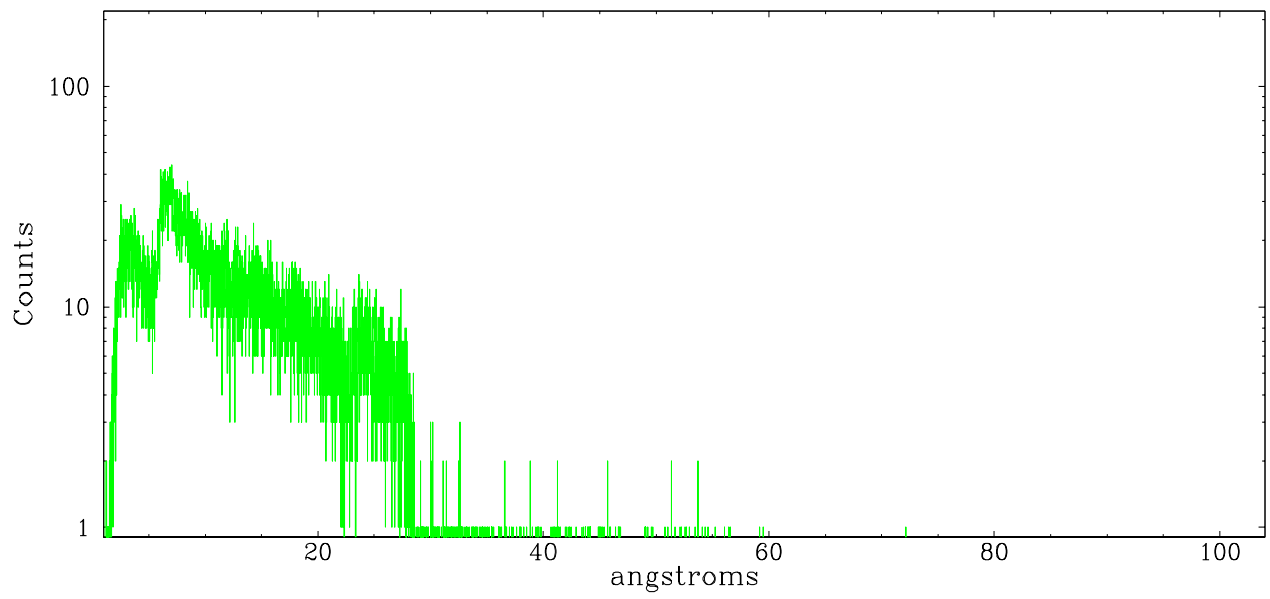
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3887	3186	29853	22442	33075	3323	4030



leg order -1



leg order +1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.11.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	93.843

### A.2 Comments

Roll constraint OK.