

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 3089 - L2 Version 001  
Chandra X-Ray Center

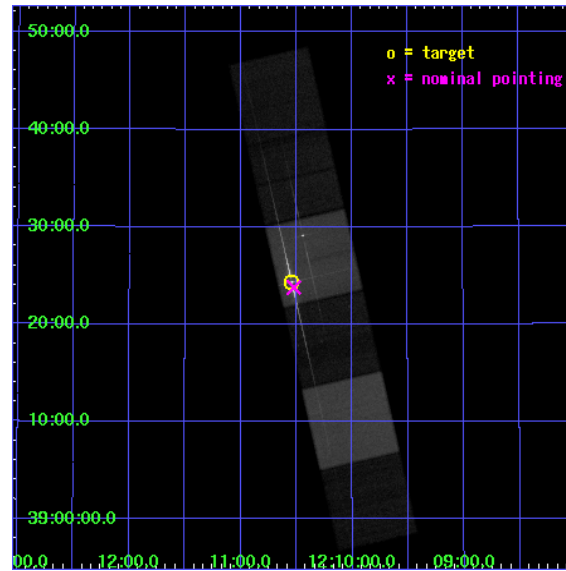
L2 Processing Date : Sep 21 2006

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# 1 Front

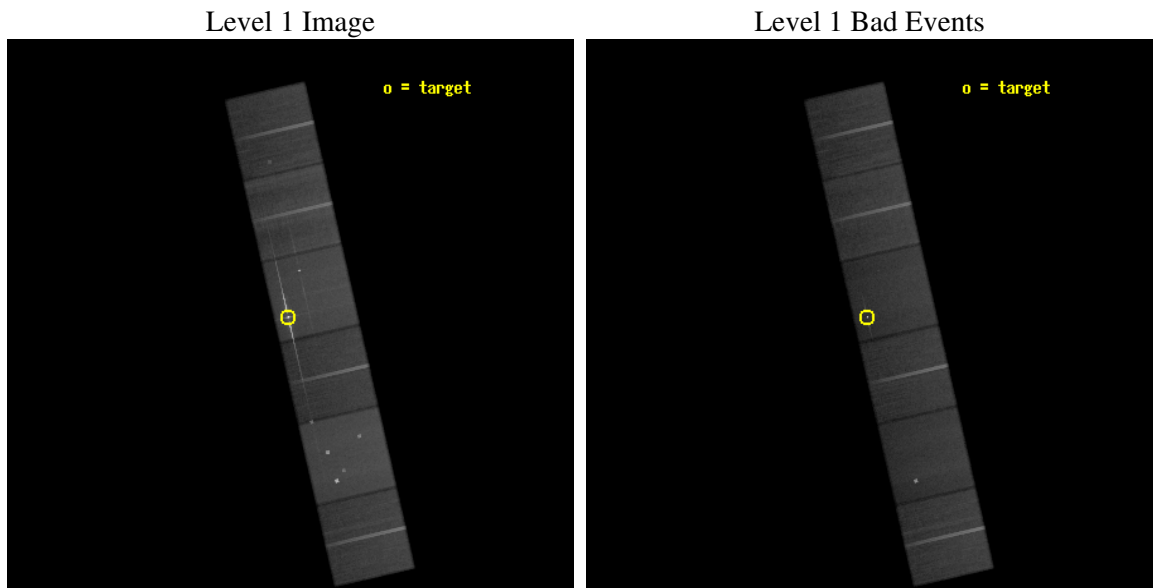
seq_num	700528
obs_id	3089
title	PROBING THE HOT AGN OUTFLOW IN NGC 4151
observer	Dr. Patrick Ogle
object	NGC 4151
dtcycle	0
cycle	P
ra_targ	182.635833
dec_targ	39.405722
ra_nom	182.63091295877
dec_nom	39.396802827924
roll_nom	257.05619537026
revision	2
ontime	84662.317783982
livetime	83590.272538673
ontime4	84659.076803774
ontime5	84668.799684584
ontime6	84659.076773882
ontime7	84662.317783982
ontime8	84668.799684584
ontime9	84668.799684584
l2events	1049019



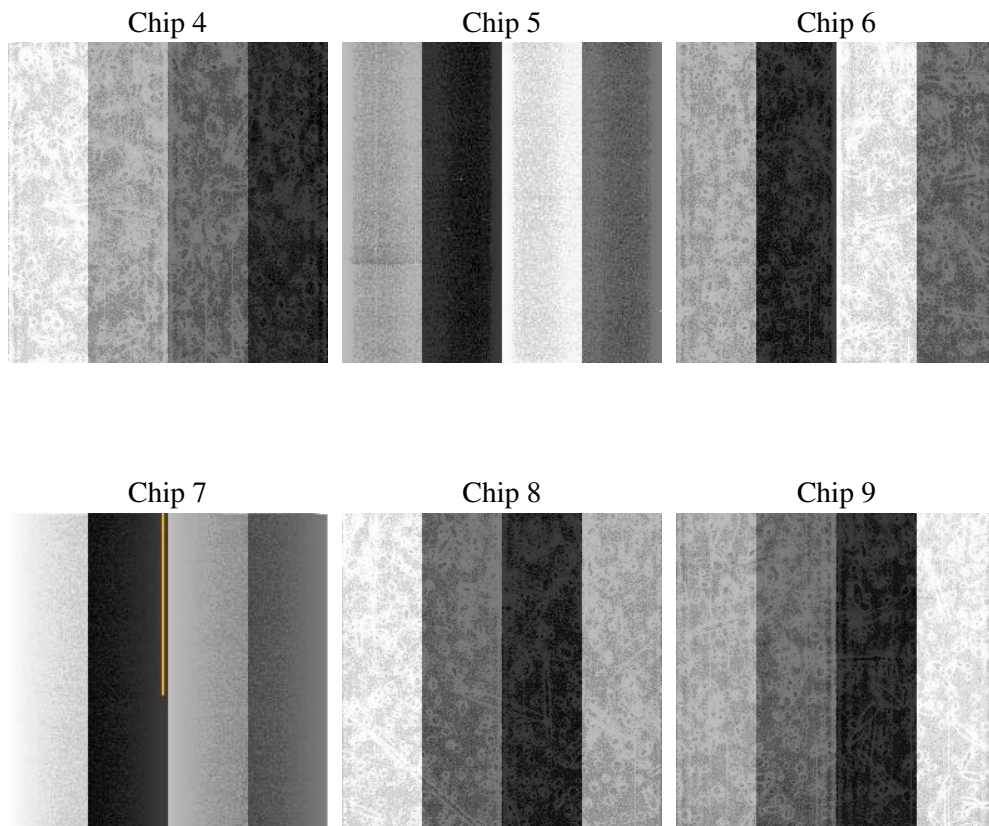
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.3
date	2006-09-21T10:19:16
revision	2

sched_exp_time	84924.712000
ontime	84667.865572065
ontime4	84664.624591857
ontime5	84674.347472668
ontime6	84664.624561965
ontime7	84667.865572065
ontime8	84674.347472668
ontime9	84674.347472668
l1events	4286634

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	632333	842913	588459	931787	722301	568841
rejected events	561790	460941	508144	472699	568993	498062
rejected %	88%	54%	86%	50%	78%	87%

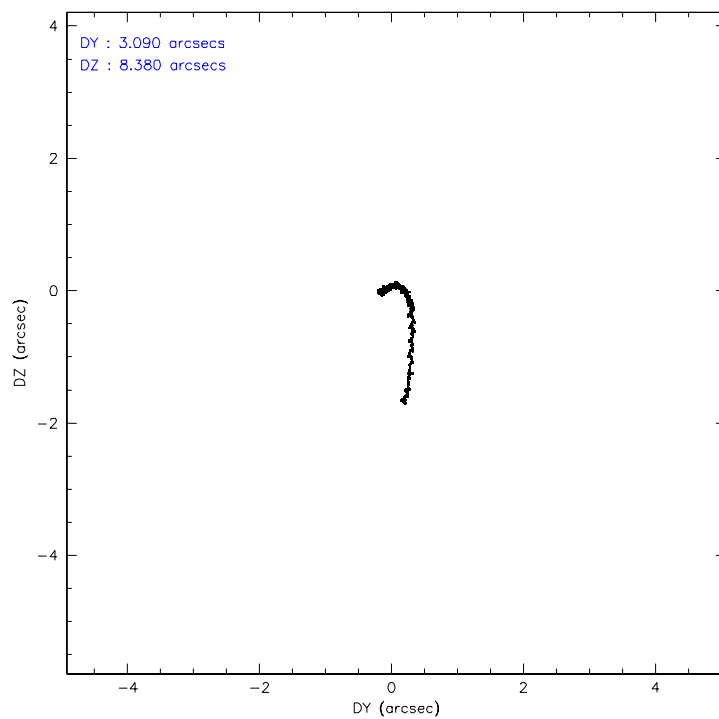
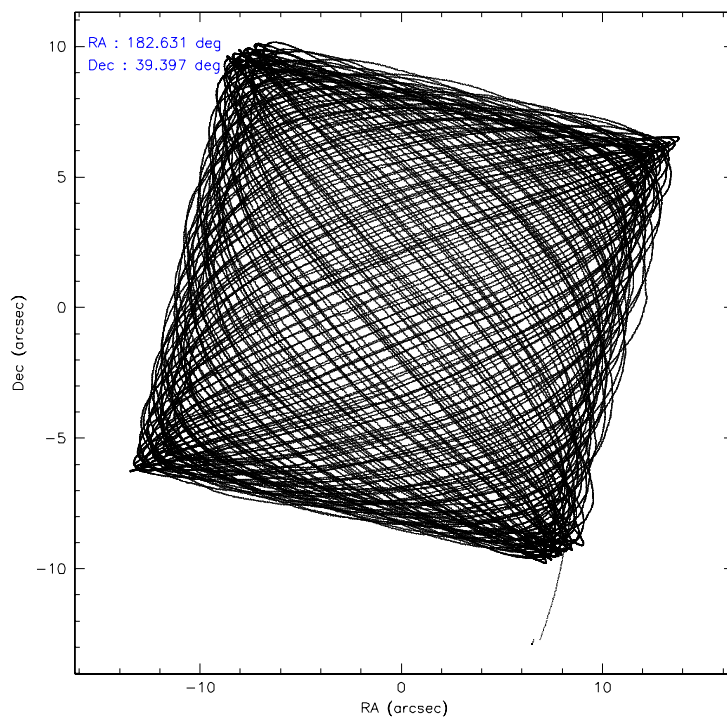
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	28260	45077	36673	48098	51036	29465
	4%	5%	6%	5%	7%	5%
grade 1 events	291	8339	313	1167	475	265
	0%	0%	0%	0%	0%	0%
grade 2 events	17180	115482	15457	113613	32800	14312
	2%	13%	2%	12%	4%	2%
grade 3 events	6455	8376	7112	32140	15914	6691
	1%	0%	1%	3%	2%	1%
grade 4 events	6031	8048	7058	30812	14699	6345
	0%	0%	1%	3%	2%	1%
grade 5 events	21009	39734	24780	53765	32245	25183
	3%	4%	4%	5%	4%	4%
grade 6 events	12620	205019	14022	234475	38870	13977
	1%	24%	2%	25%	5%	2%
grade 7 events	540487	412838	483044	417717	536262	472603
	85%	48%	82%	44%	74%	83%

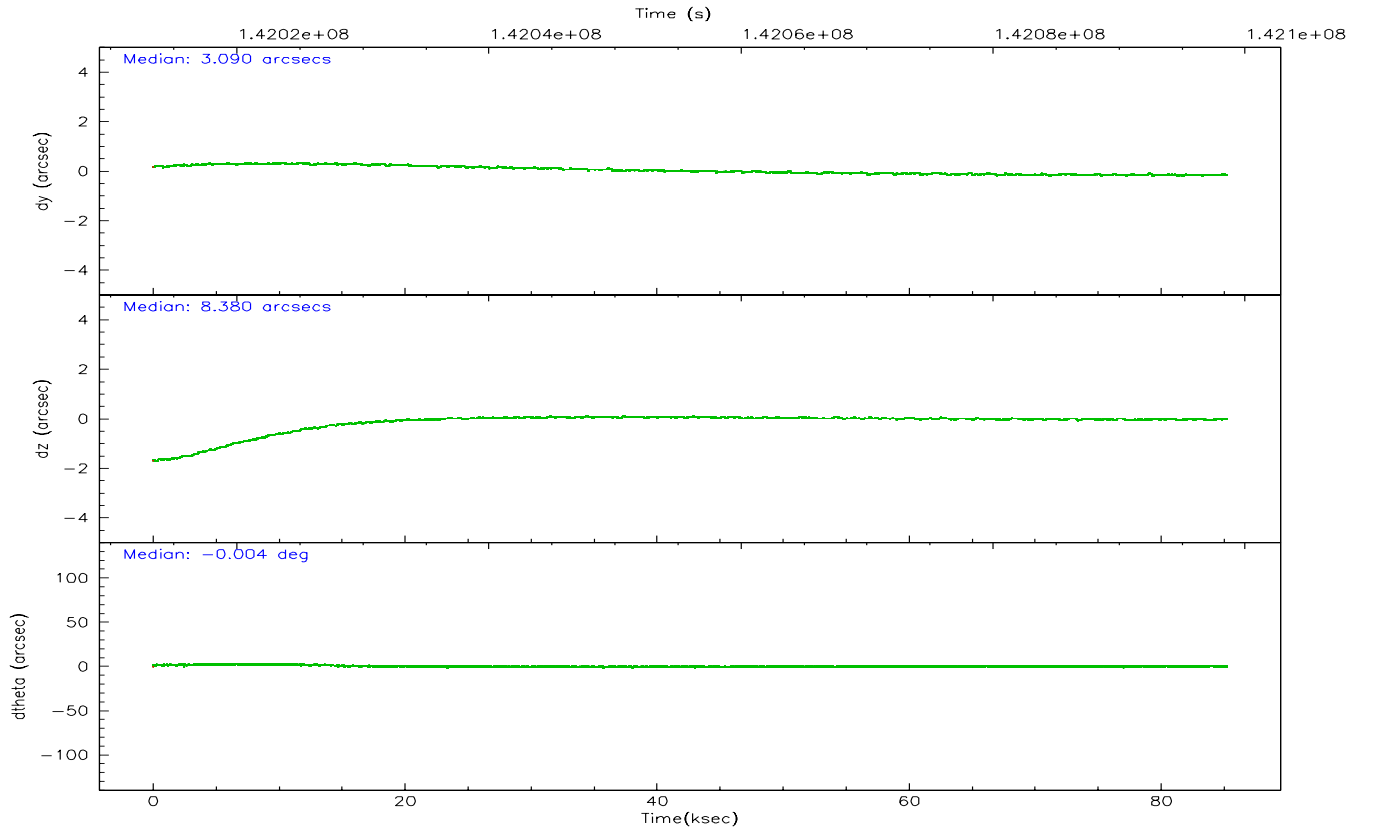
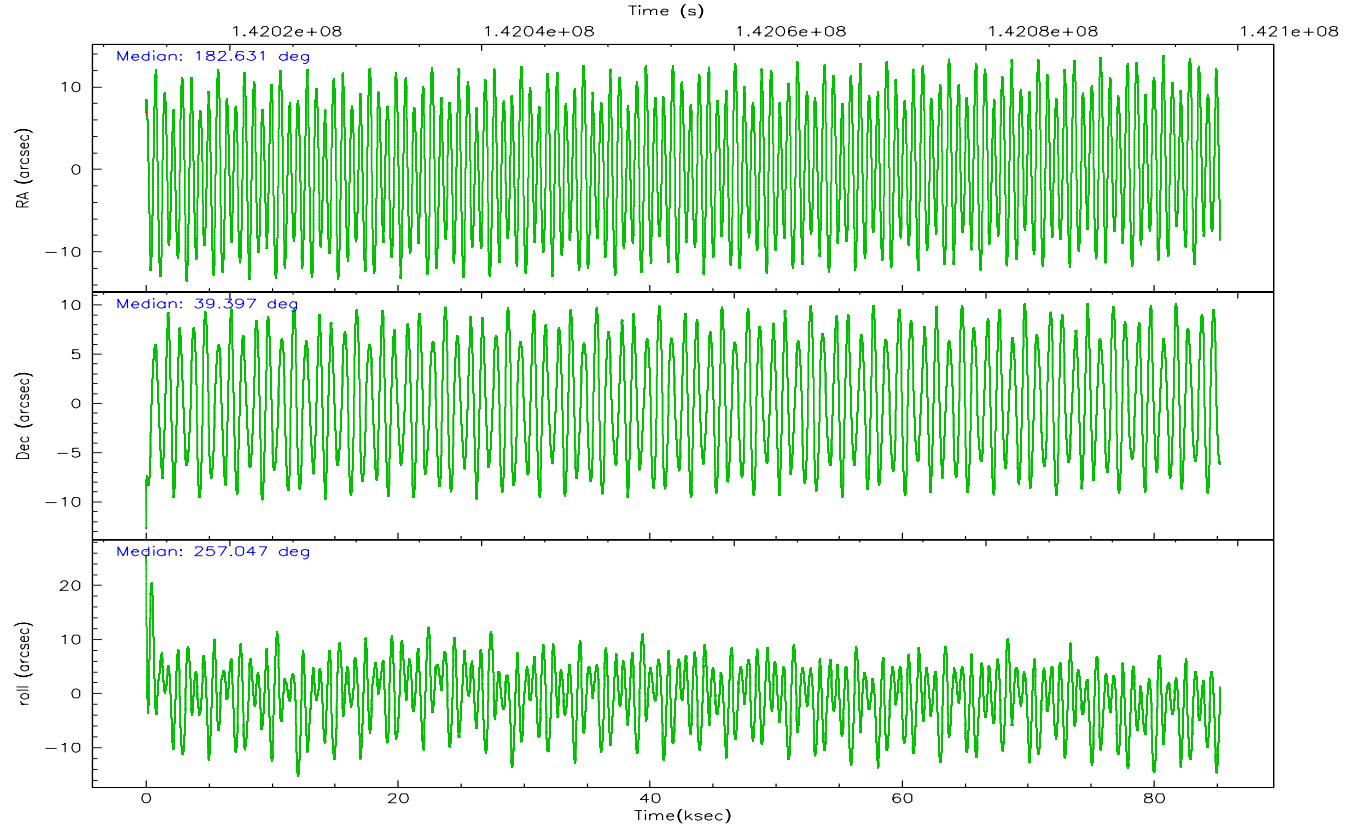


## 2.2 Compared Parameters

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	182.620142	182.6309129587726	Subarray requested	NONE	NONE
Pointing Dec	39.422754	39.39680282792366	Alternating exposures requested	N	N
Pointing Roll	256.906404	257.0561953702638	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-182.132523	-182.1370004450064			
SIM translation stage offset (mm)	-8	-7.995522138001405			
Observation start time	142013652.184000	142012616.37736			
Observation start date	2002-07-02T16:13:08	2002-07-02T15:56:56			
Observation end time	142098577.184000	142098891.6559			
Observation end date	2002-07-03T15:48:33	2002-07-03T15:54:51			
Read mode	TIMED	TIMED			

## 2.3 Aspect



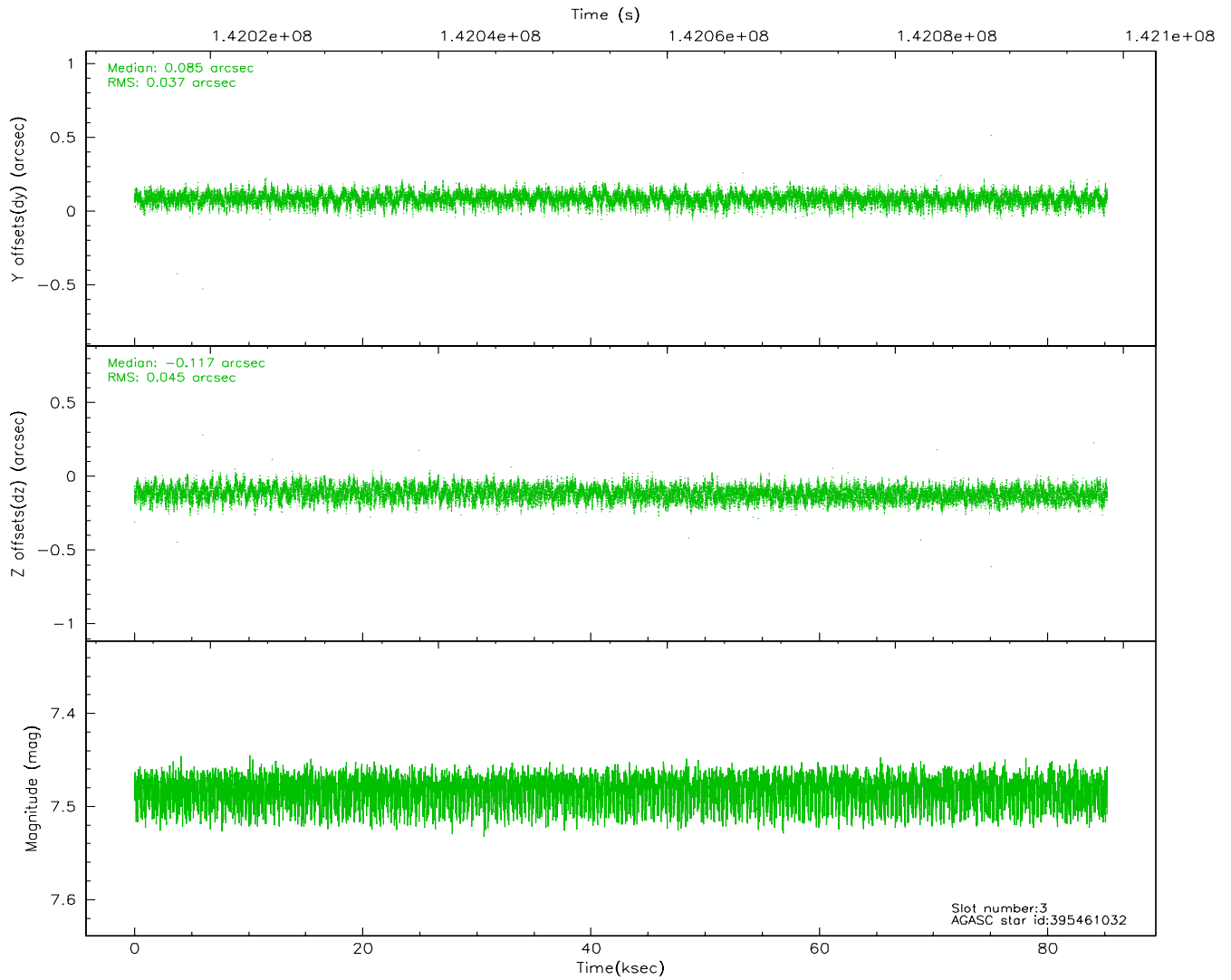
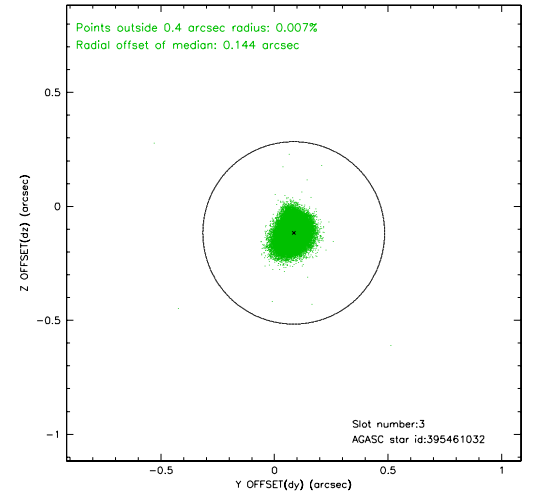
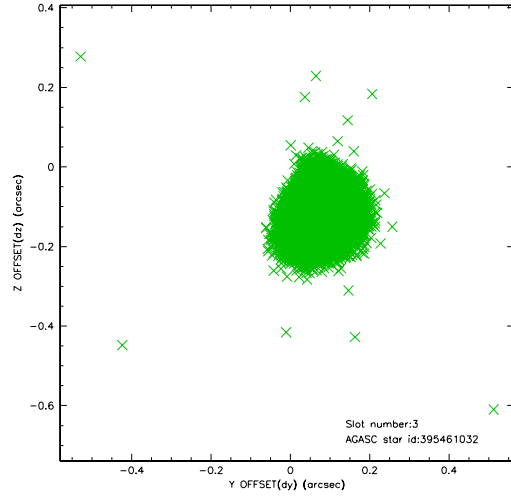


### Slot Statistics

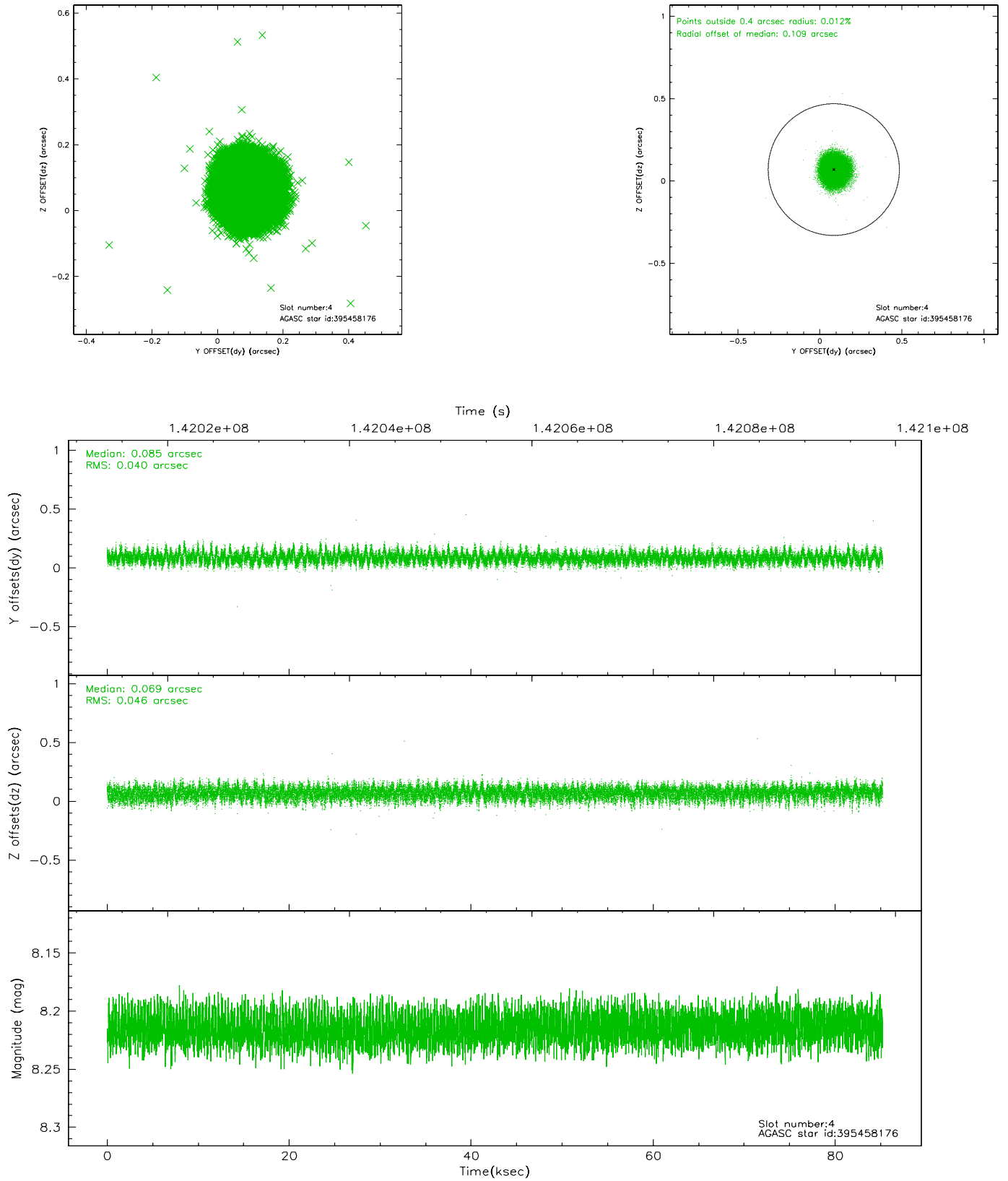
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	20790	-0.020	-0.089	0.008	0.026	0.000000	0.000000	-755.23	-1894.22
1	FID	ACIS-S-4	7.17	20787	0.003	0.034	0.008	0.015	0.000000	0.000000	2158.11	14.43
2	FID	ACIS-S-5	7.23	20787	-0.013	0.063	0.010	0.027	0.000000	0.000000	-1808.16	8.06
3	GUIDE	395461032	7.48	41577	0.085	-0.117	0.062	0.101	182.028999	39.655498	-449.24	-1787.54
4	GUIDE	395458176	8.21	41575	0.085	0.069	0.065	0.103	182.790485	39.130199	918.06	701.86
5	GUIDE	395460552	8.97	41556	0.014	0.219	0.086	0.138	183.182835	39.403608	-291.95	1539.10
6	GUIDE	395449512	9.13	41560	-0.029	-0.084	0.106	0.174	181.991274	39.988650	-1596.45	-2152.84
7	GUIDE	395456016	9.79	41551	-0.151	-0.085	0.138	0.231	181.928945	40.170419	-2197.44	-2464.12

## 2.4 Star Slots

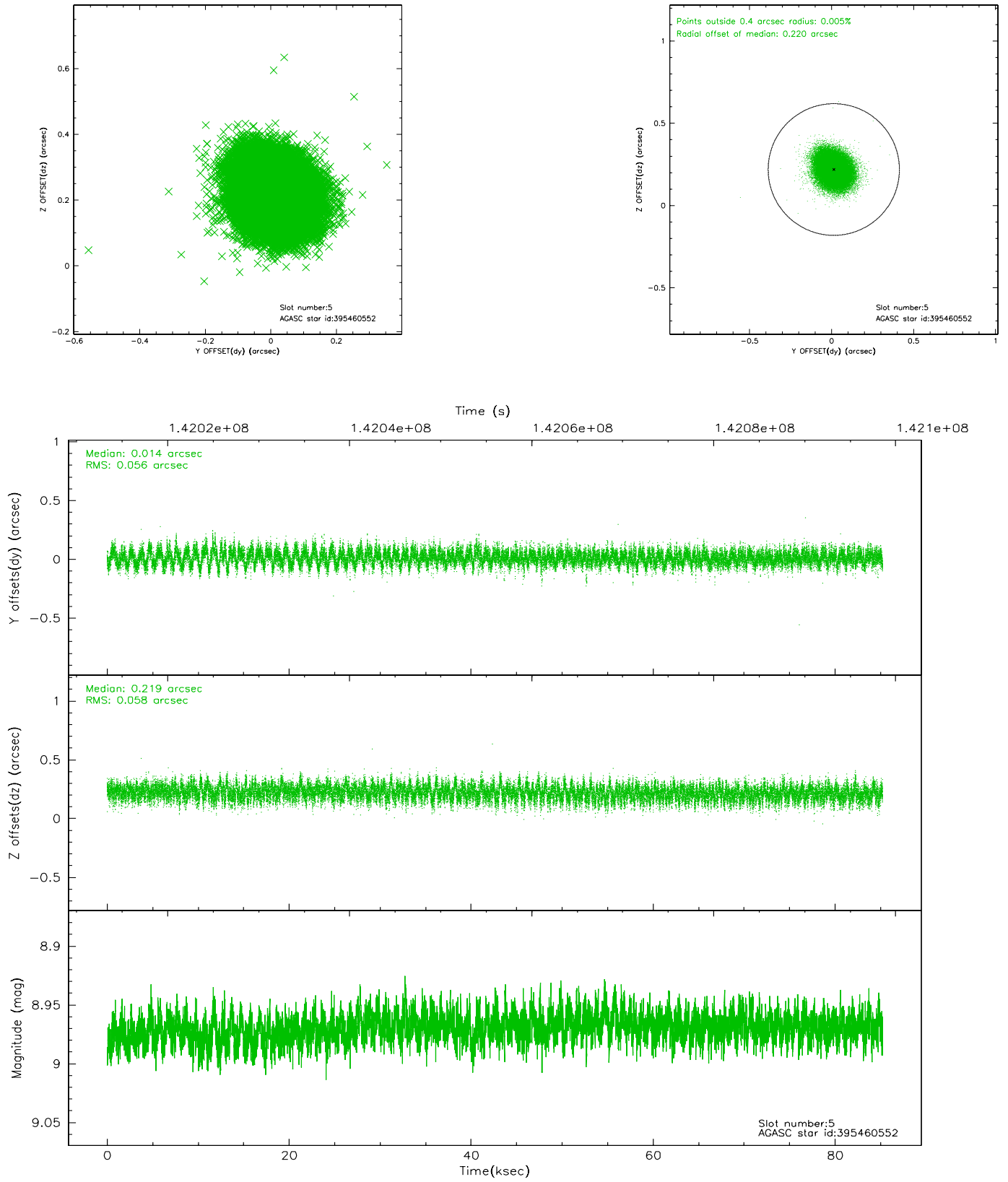
### 2.4.1 Slot 3



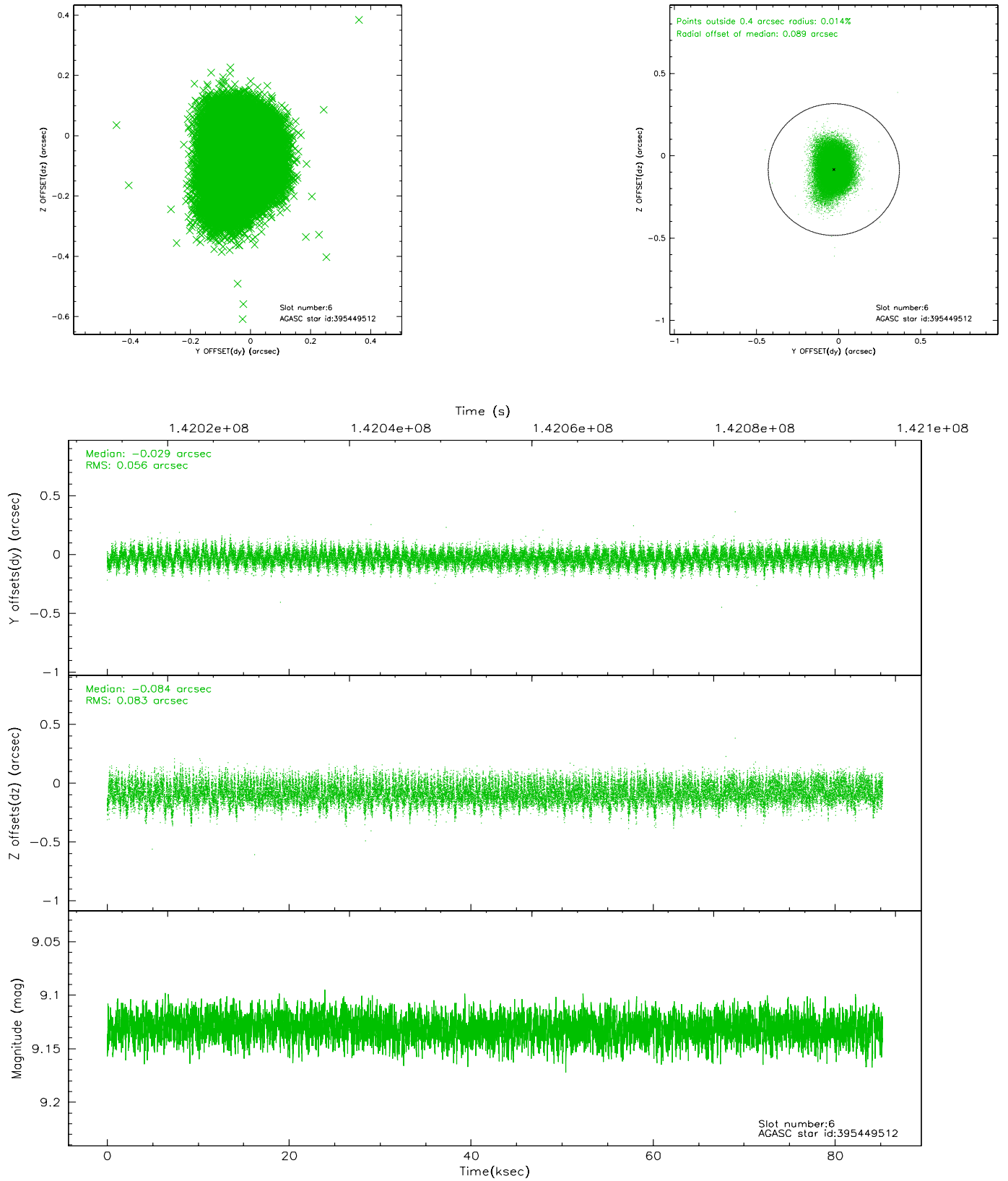
## 2.4.2 Slot 4



### 2.4.3 Slot 5

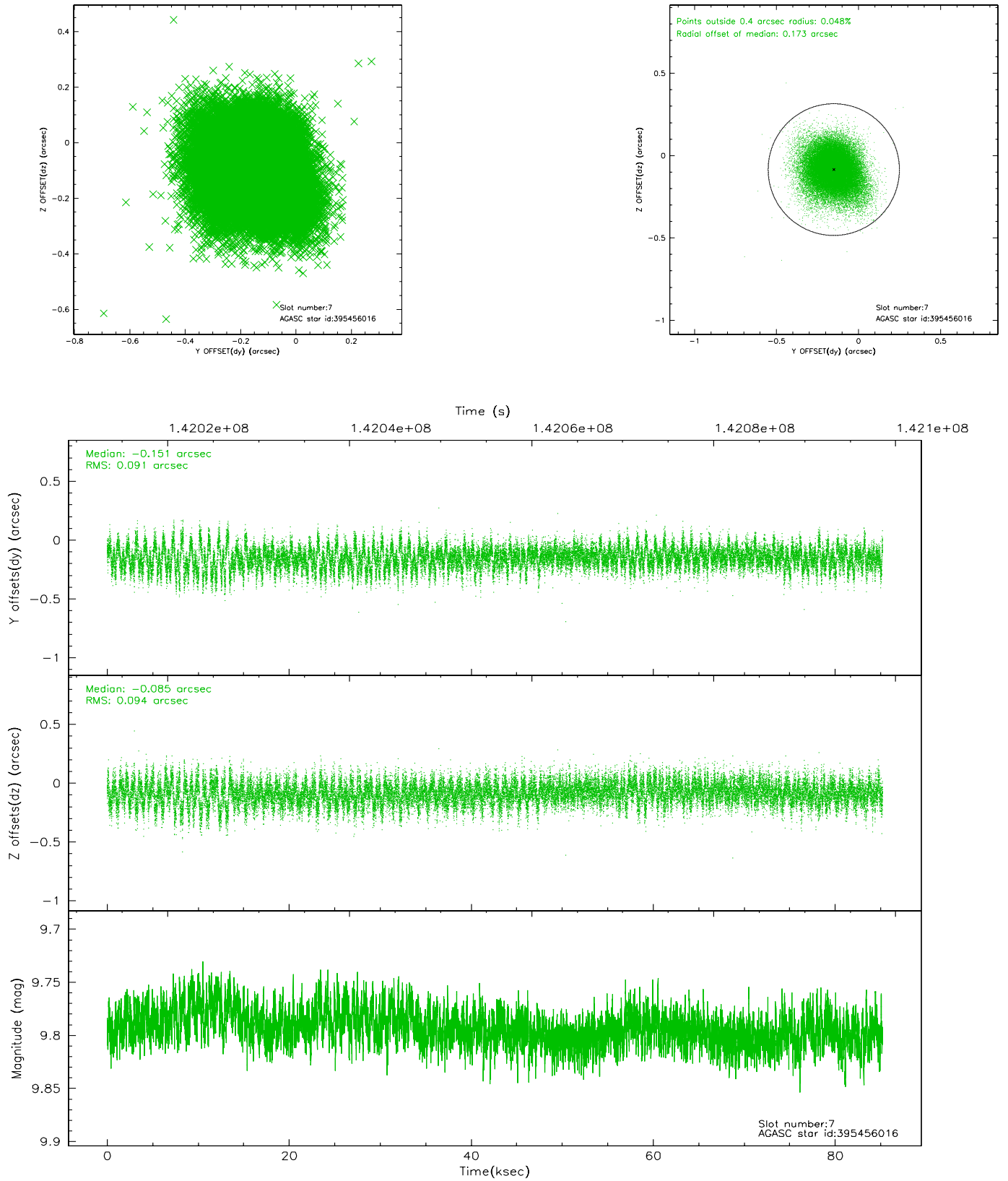


## 2.4.4 Slot 6



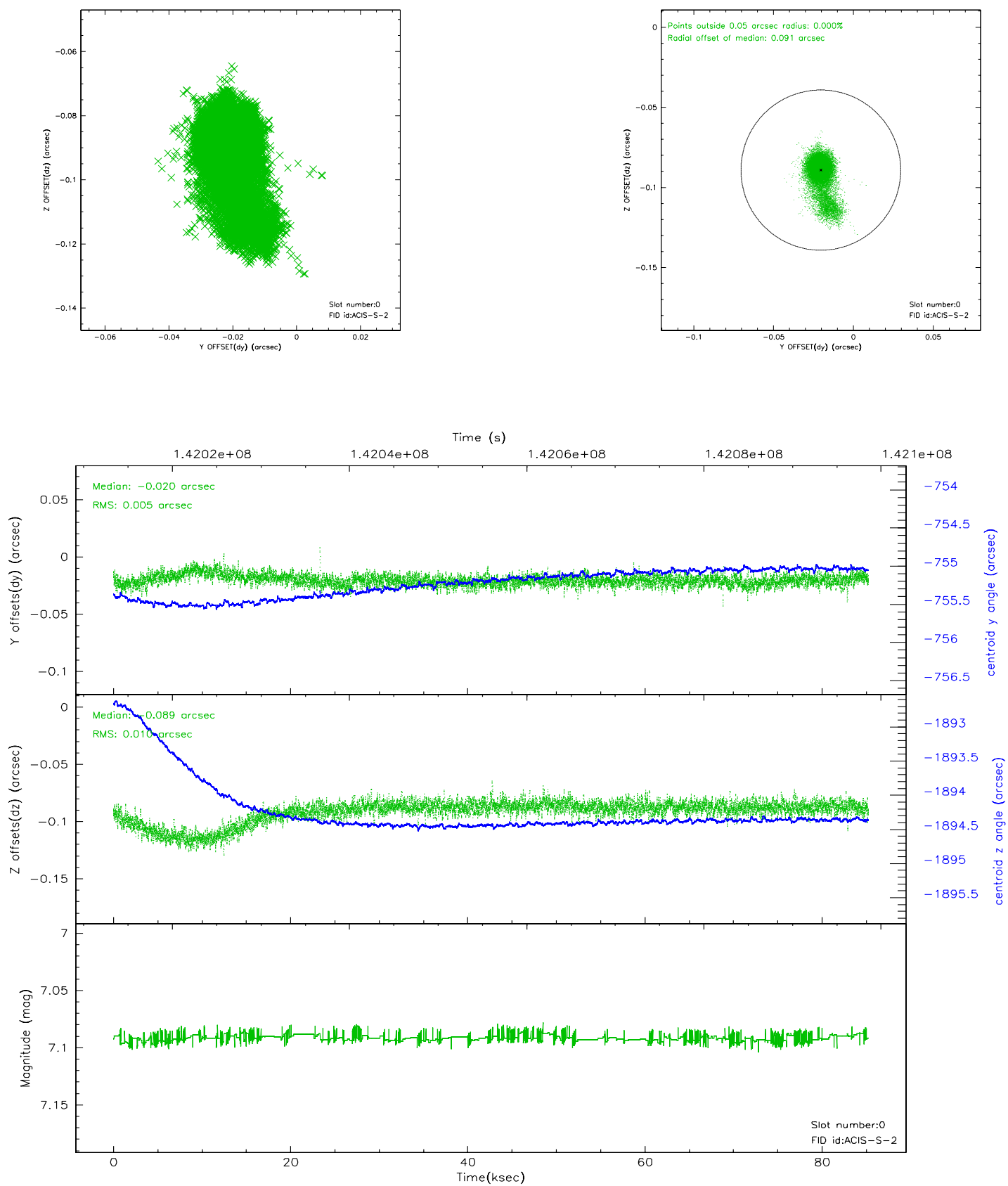


## 2.4.5 Slot 7

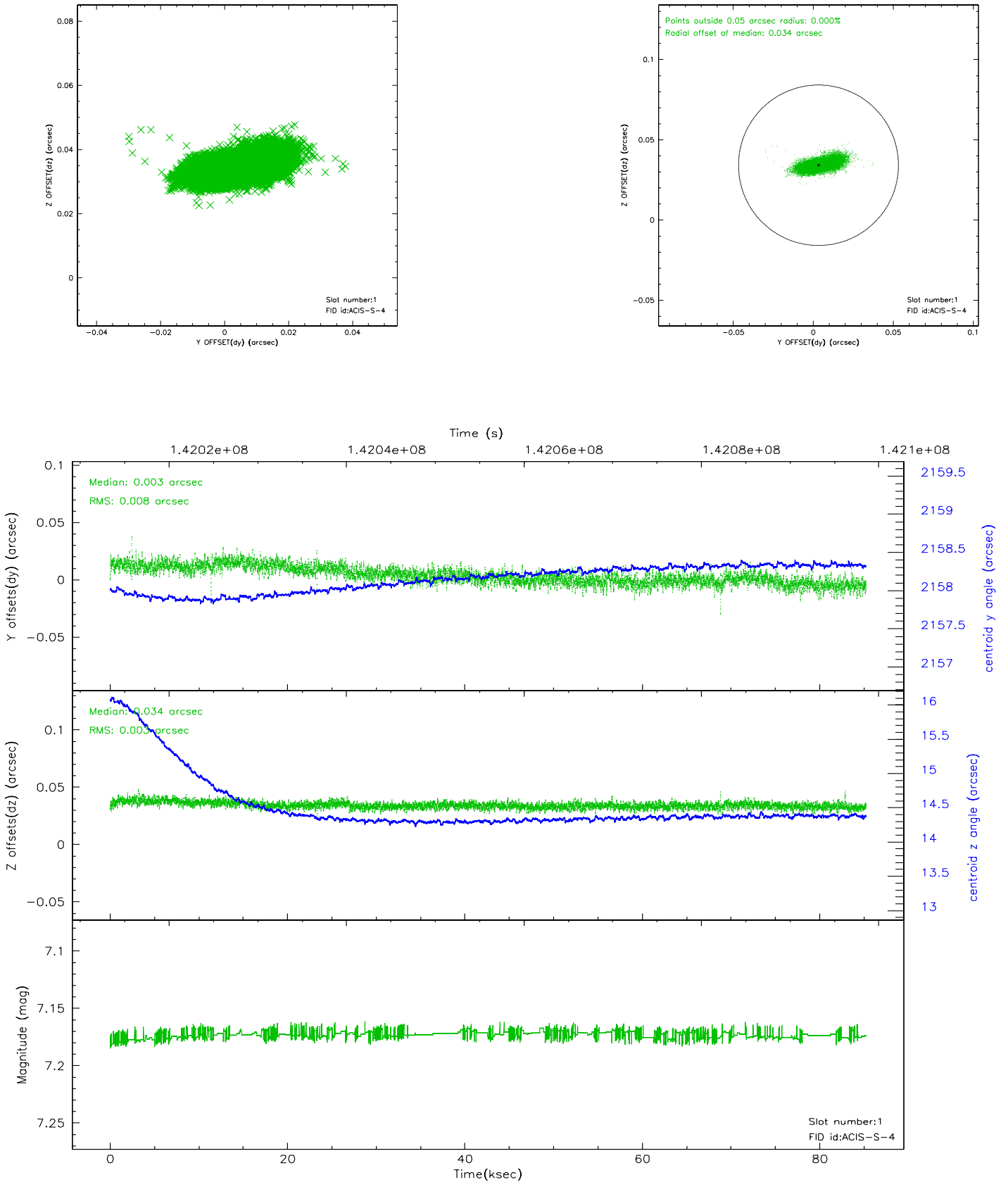


## 2.5 FID Slots

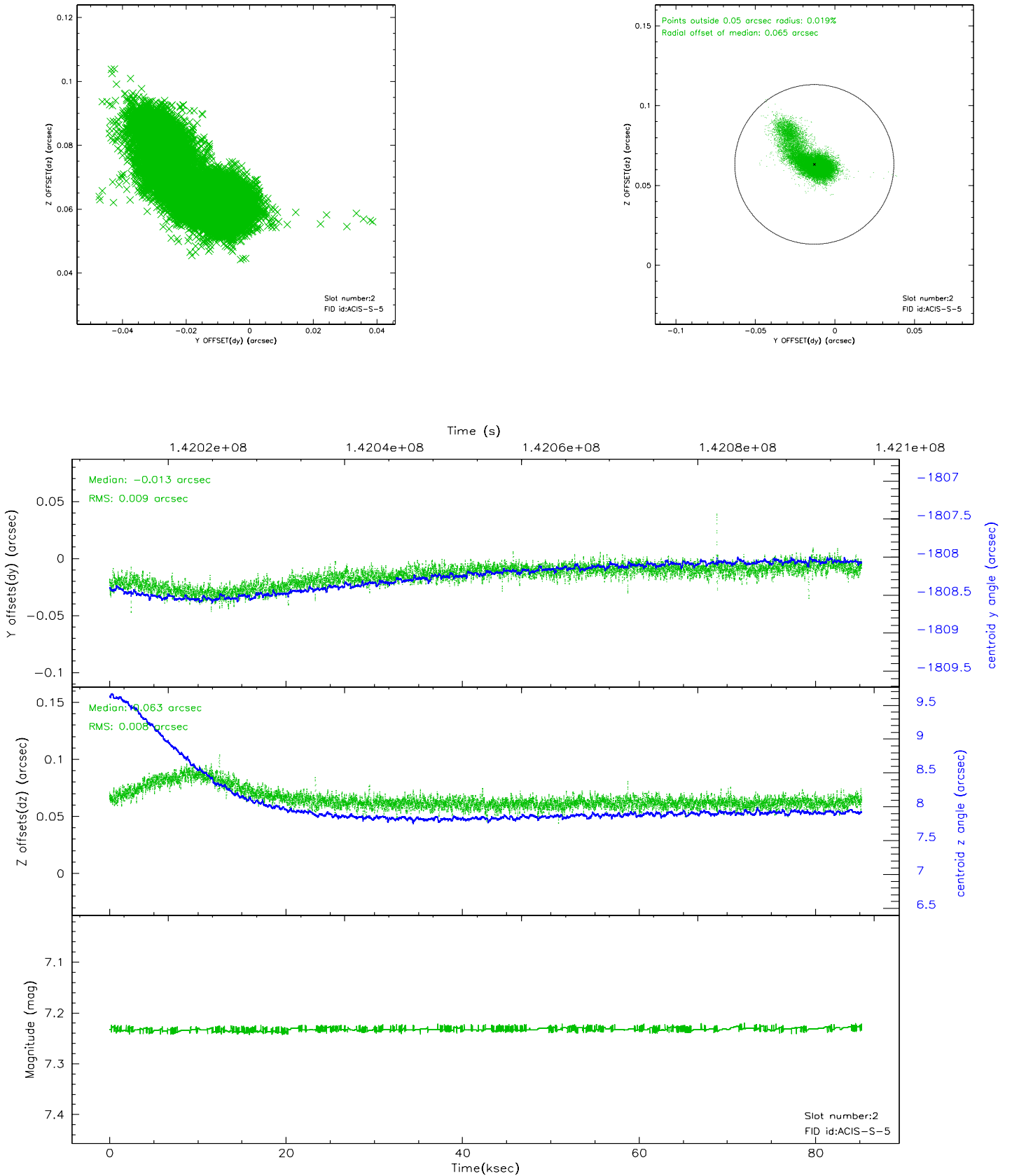
### 2.5.1 Slot 0



## 2.5.2 Slot 1

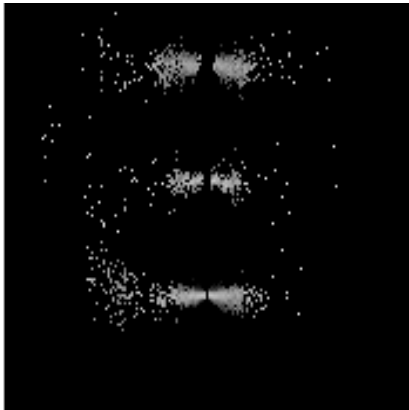


### 2.5.3 Slot 2

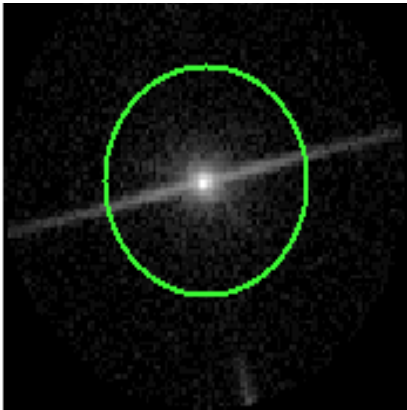


# 3 Gratings

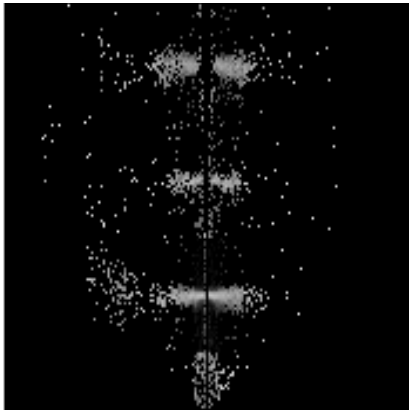
## 3.1 LETG Arm



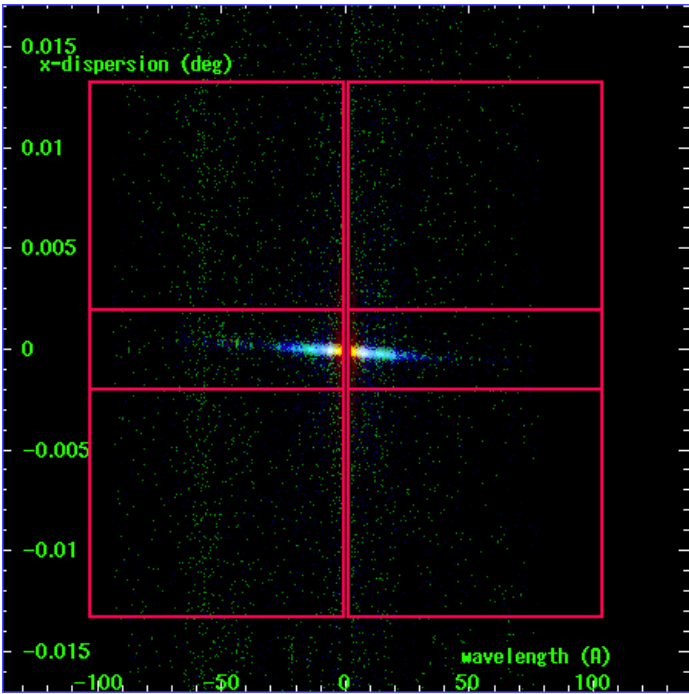
LETG Order Sort 123



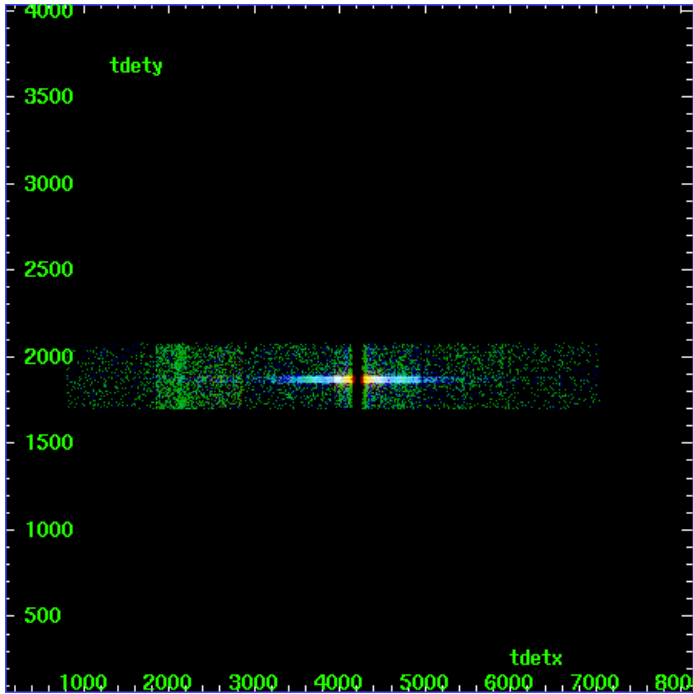
LETG Zero Order



LETG Order Sort ALL

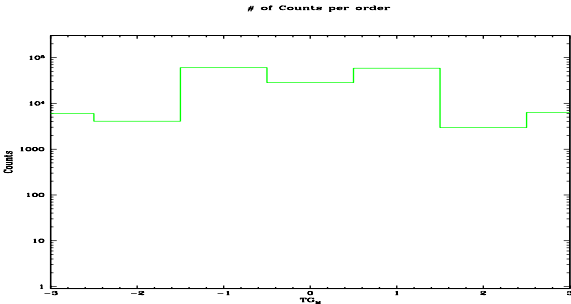


Spot Image LETG

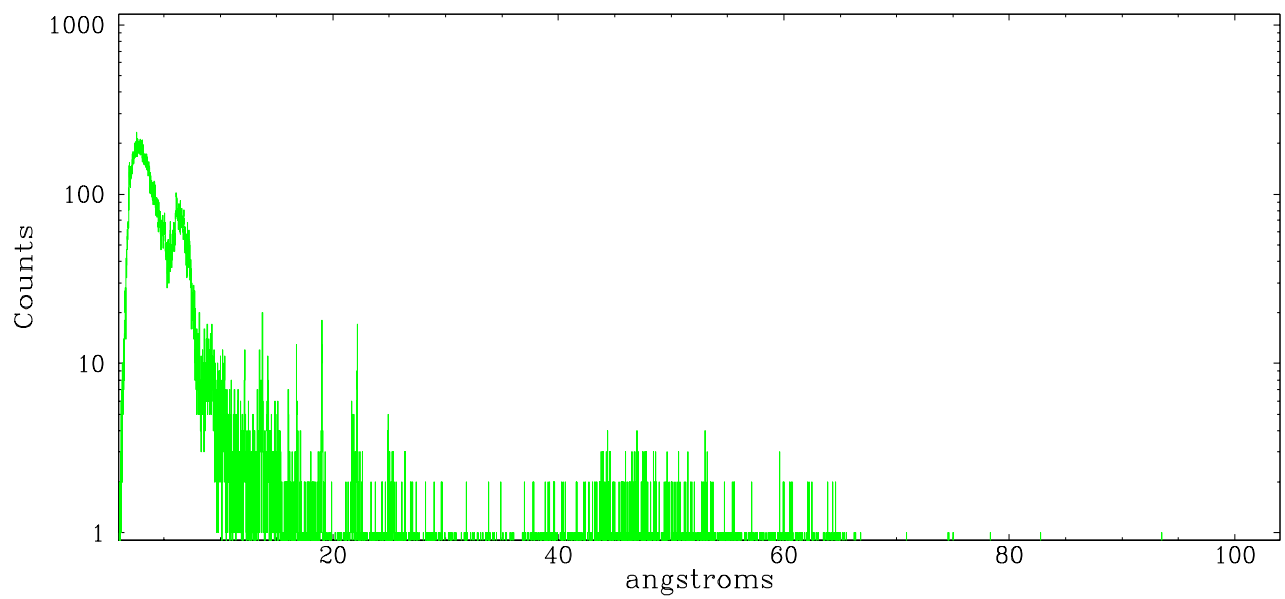


Full Detector LETG

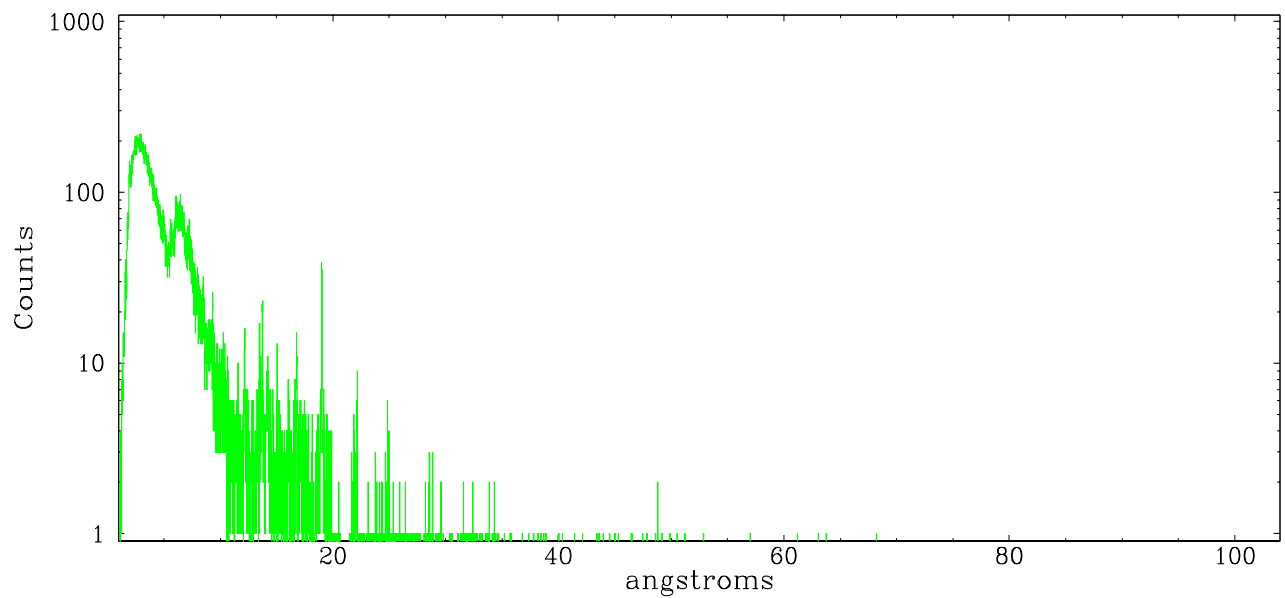
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5996	4055	60233	28526	58417	2960	6305



leg order -1



leg order +1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.09.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	84.665

### A.2 Comments