

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5363 - L2 Version 001  
Chandra X-Ray Center

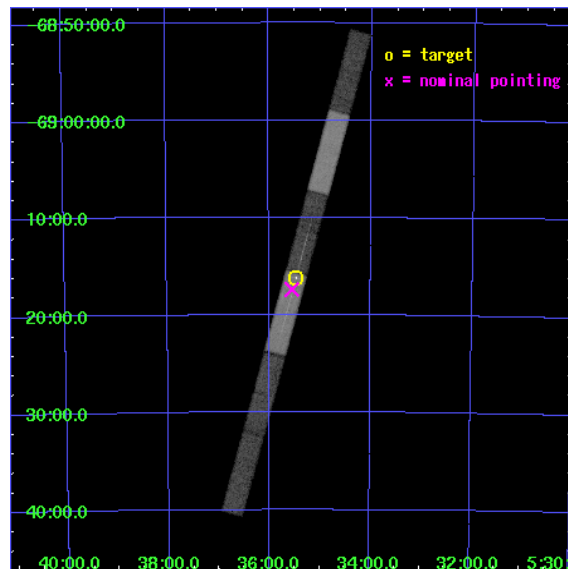
L2 Processing Date : Apr 19 2006

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# 1 Front

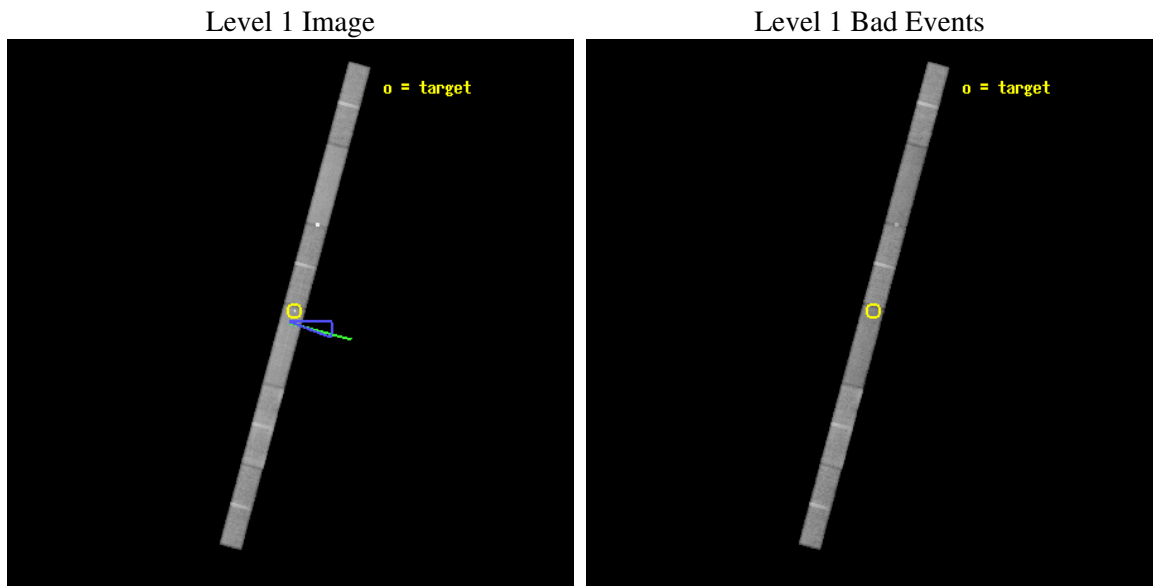
seq_num	500460
obs_id	5363
title	Spatially resolved grating spectrometry of the newborn supernova remnant SNR1987A
observer	Dr. Richard McCray
object	SNR1987A
dtcycle	0
cycle	P
ra_targ	83.866667
dec_targ	-69.26975
ra_nom	83.886586059146
dec_nom	-69.289586205557
roll_nom	105.17526506423
revision	2
ontime	45236.0
livetime	43452.701145009
ontime4	45236.0
ontime5	45236.0
ontime6	45236.0
ontime7	45236.0
ontime8	45236.0
ontime9	45236.0
l2events	151345



## 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	7.6.7.1
caldbver	3.2.1
date	2006-04-19T13:18:32
revision	2

sched_exp_time	45098.000000
ontime	45628.265613884
ontime4	45628.265593976
ontime5	45628.265613884
ontime6	45628.265613884
ontime7	45628.265613884
ontime8	45628.265613884
ontime9	45628.265593976
l1events	727424

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	117411	141483	107675	125033	136965	98857
rejected events	104449	75004	94455	71368	109924	86666
rejected %	88%	53%	87%	57%	80%	87%

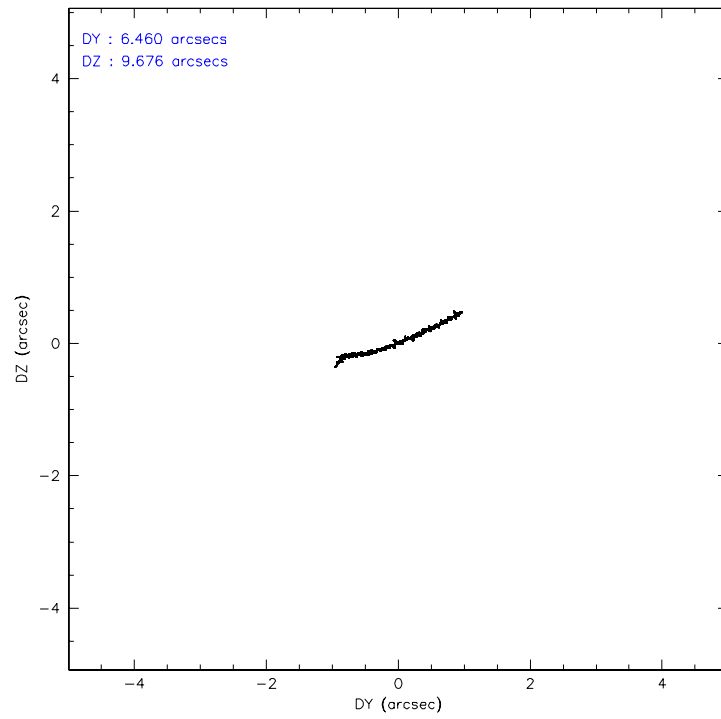
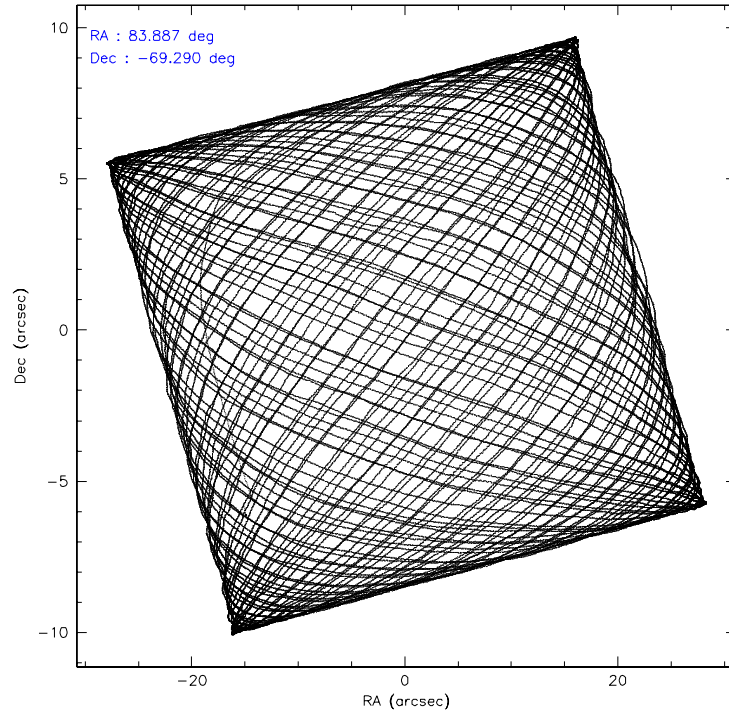
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	4881	9798	5379	4897	7804	4558
	4%	6%	4%	3%	5%	4%
grade 1 events	53	934	33	84	62	29
	0%	0%	0%	0%	0%	0%
grade 2 events	2756	18599	2302	12379	5550	2172
	2%	13%	2%	9%	4%	2%
grade 3 events	1712	3069	1751	4881	3290	1743
	1%	2%	1%	3%	2%	1%
grade 4 events	1701	2725	1743	4687	3111	1644
	1%	1%	1%	3%	2%	1%
grade 5 events	3555	7984	3874	9381	4990	3839
	3%	5%	3%	7%	3%	3%
grade 6 events	2052	33064	2157	27239	7422	2198
	1%	23%	2%	21%	5%	2%
grade 7 events	100701	65310	90436	61485	104736	82674
	85%	46%	83%	49%	76%	83%

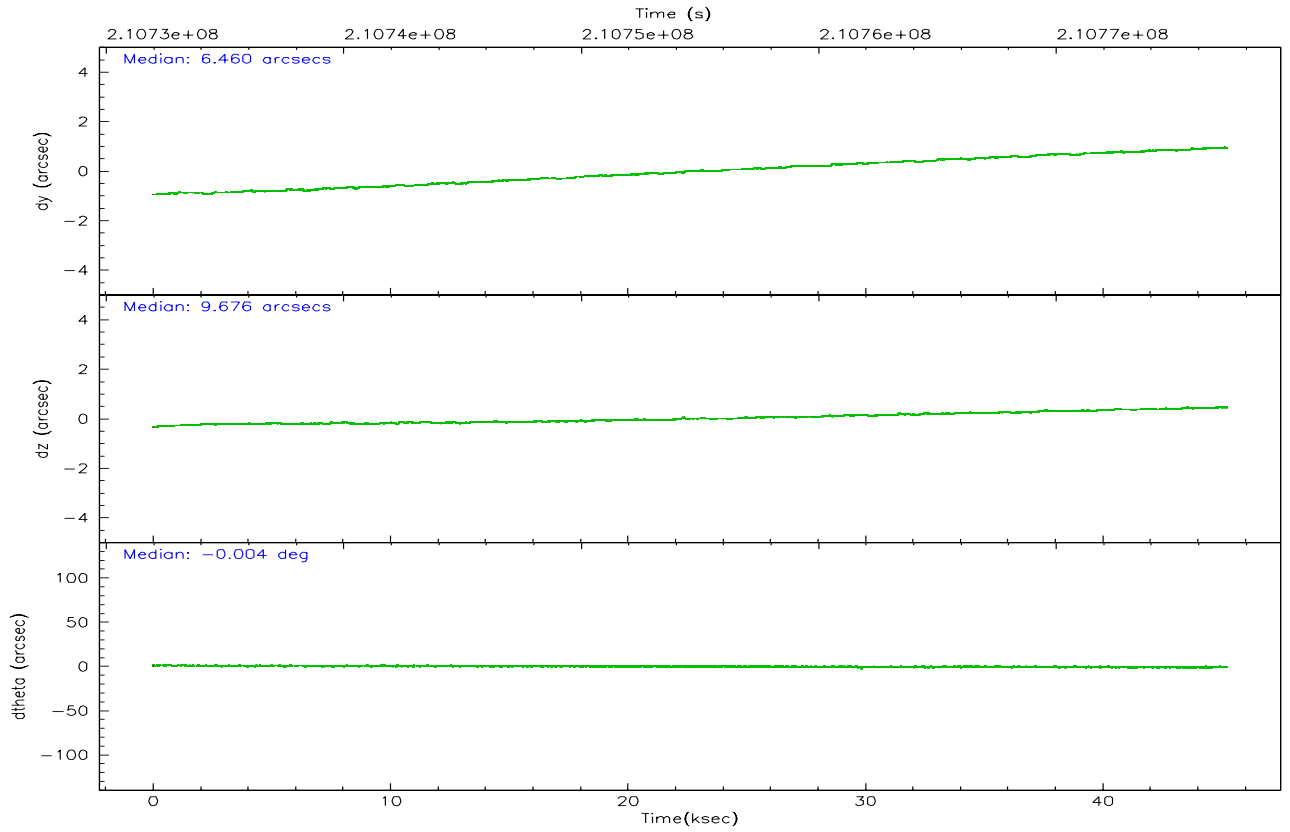
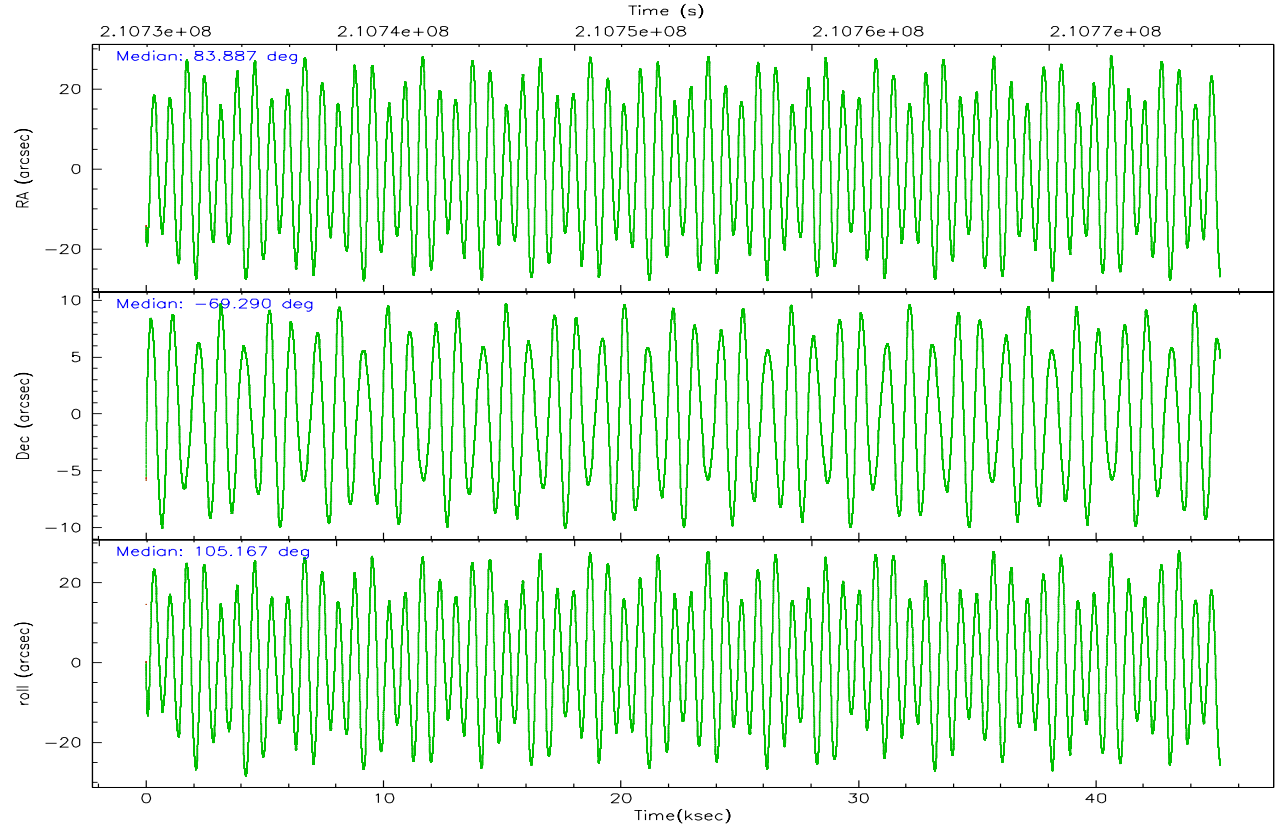


## 2.2 Compared Parameters

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	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	1/4
Pointing RA	83.941966	83.88658605914623	Subarray start row	49	49
Pointing Dec	-69.308481	-69.2895862055574	Subarray row count	256	256
Pointing Roll	105.070441	105.1752650642317	Alternating exposures requested	N	N
Roll angle	100.000000	100.000000	Primary exposure time	0.000000	1
Roll tolerance	10.000000	10.000000			
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	-182.1370004450064			
SIM translation stage offset (mm)	-8	-7.995522138001405			
Observation start time	210732106.184000	210730907.11751			
Observation start date	2004-09-05T00:40:42	2004-09-05T00:21:47			
Observation end time	210777204.184000	210778512.73213			
Observation end date	2004-09-05T13:12:20	2004-09-05T13:35:12			
Read mode	TIMED	TIMED			

## 2.3 Aspect



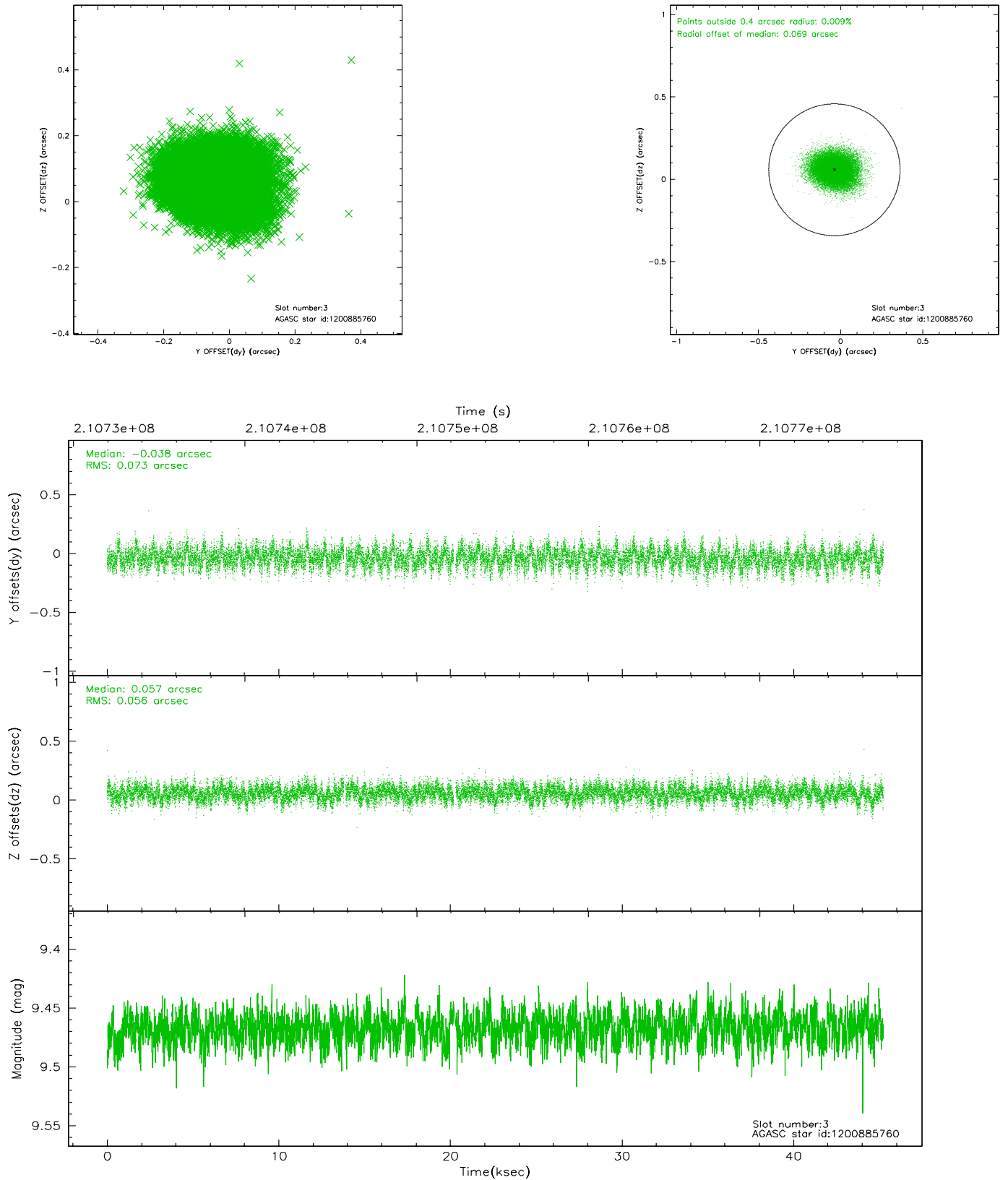


### Slot Statistics

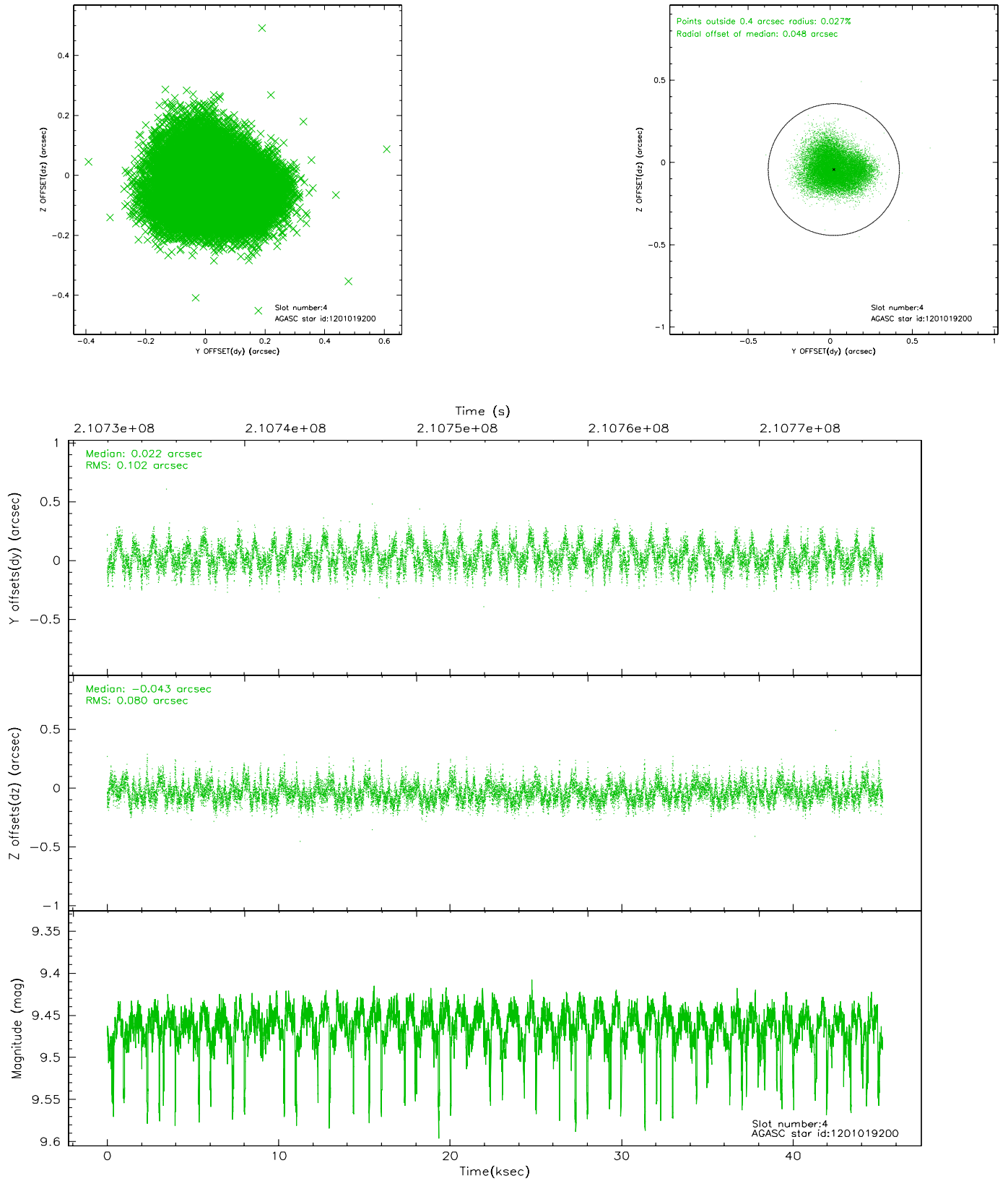
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	11034	-0.072	-0.069	0.010	0.020	0.000000	0.000000	-758.67	-1895.73
1	FID	ACIS-S-4	7.18	11034	0.102	0.053	0.017	0.048	0.000000	0.000000	2154.77	12.85
2	FID	ACIS-S-5	7.23	11032	-0.058	0.023	0.021	0.032	0.000000	0.000000	-1811.50	6.48
3	GUIDE	1200885760	9.47	21922	-0.038	0.057	0.097	0.158	83.723637	-68.777667	1918.89	-221.57
4	GUIDE	1201019200	9.46	21955	0.022	-0.043	0.141	0.219	84.213591	-68.777384	1753.90	-838.39
5	GUIDE	1201406184	7.93	21996	-0.054	-0.063	0.065	0.108	82.503234	-69.975517	-1877.85	2342.04
6	GUIDE	1201410616	9.35	22059	0.116	-0.176	0.126	0.200	82.516808	-69.784406	-1213.46	2162.56
7	GUIDE	1201017424	10.20	21973	-0.062	0.230	0.166	0.277	85.854985	-69.248506	-462.17	-2401.64

## 2.4 Star Slots

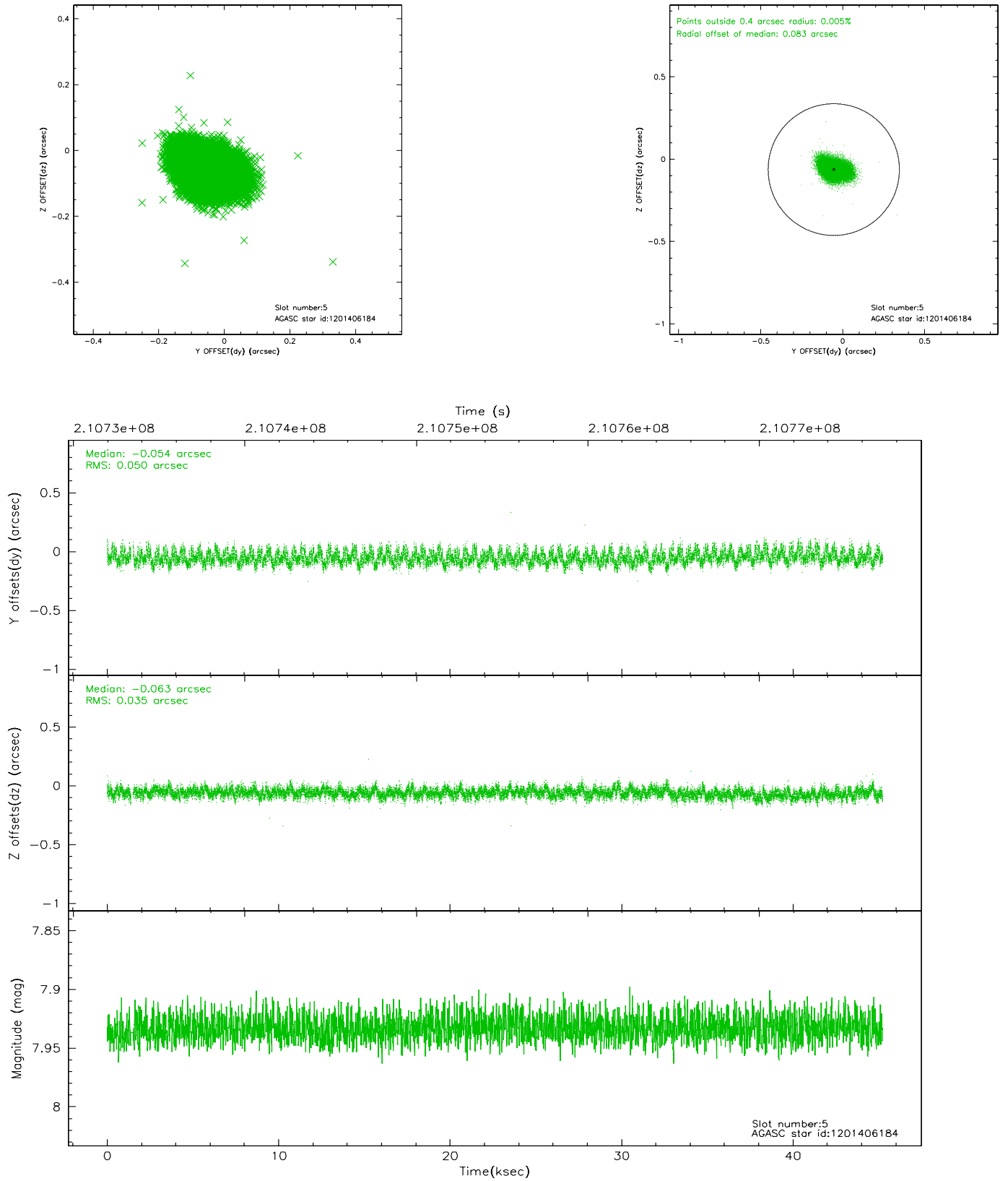
### 2.4.1 Slot 3



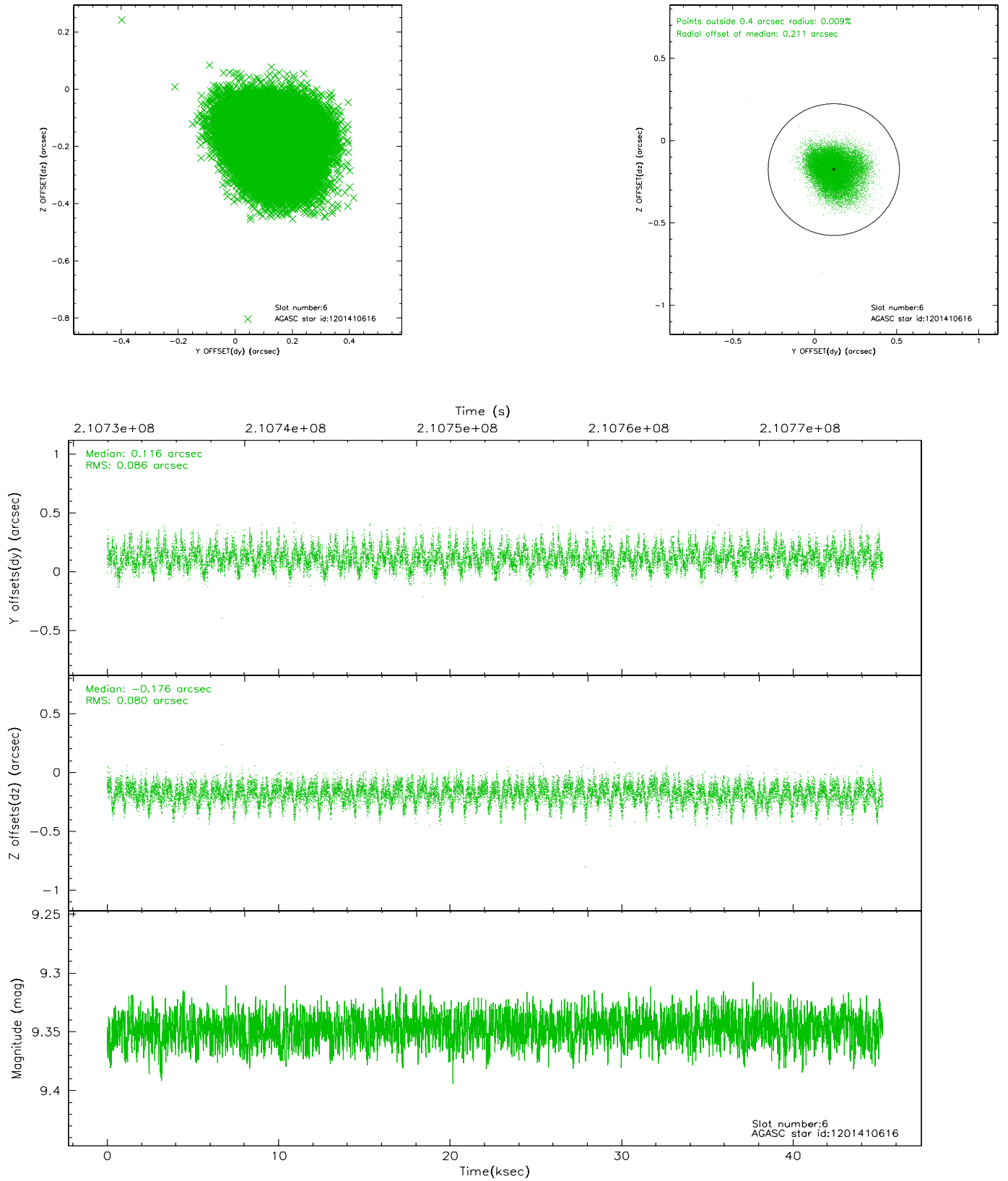
## 2.4.2 Slot 4



### 2.4.3 Slot 5

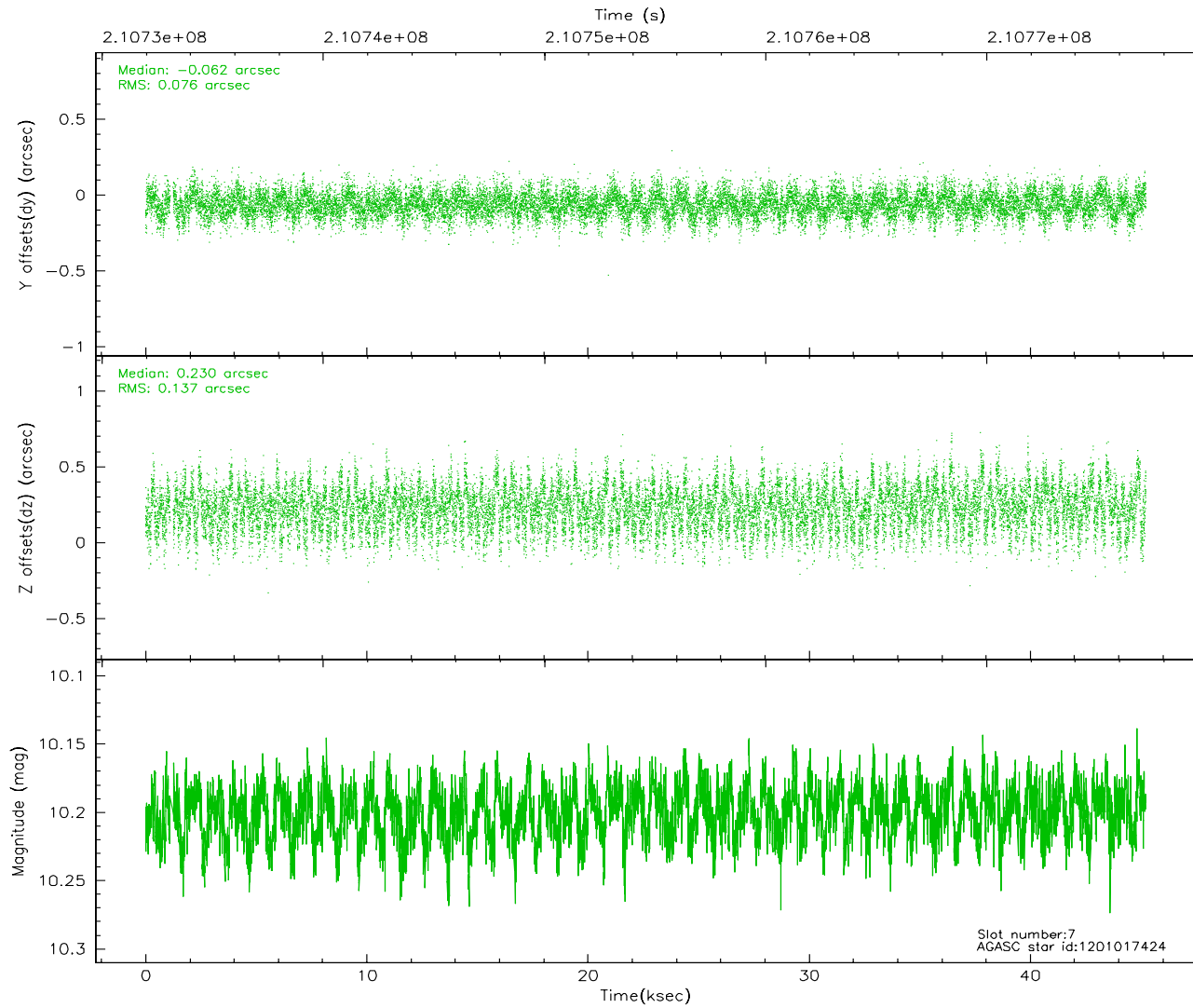
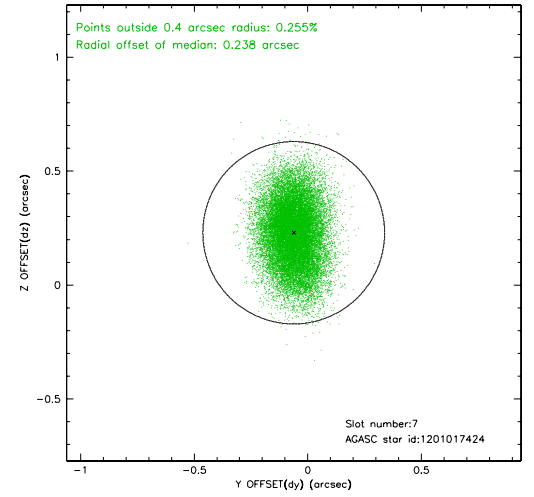
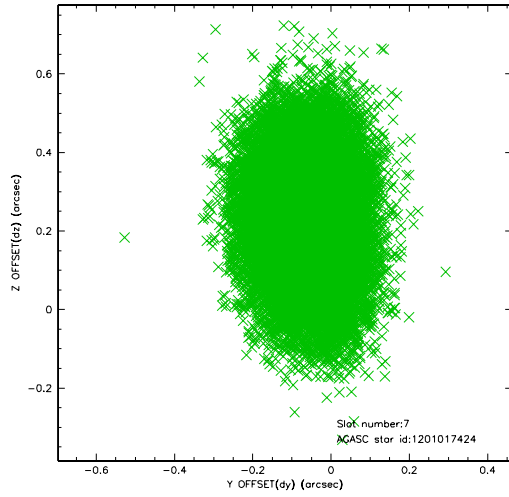


## 2.4.4 Slot 6



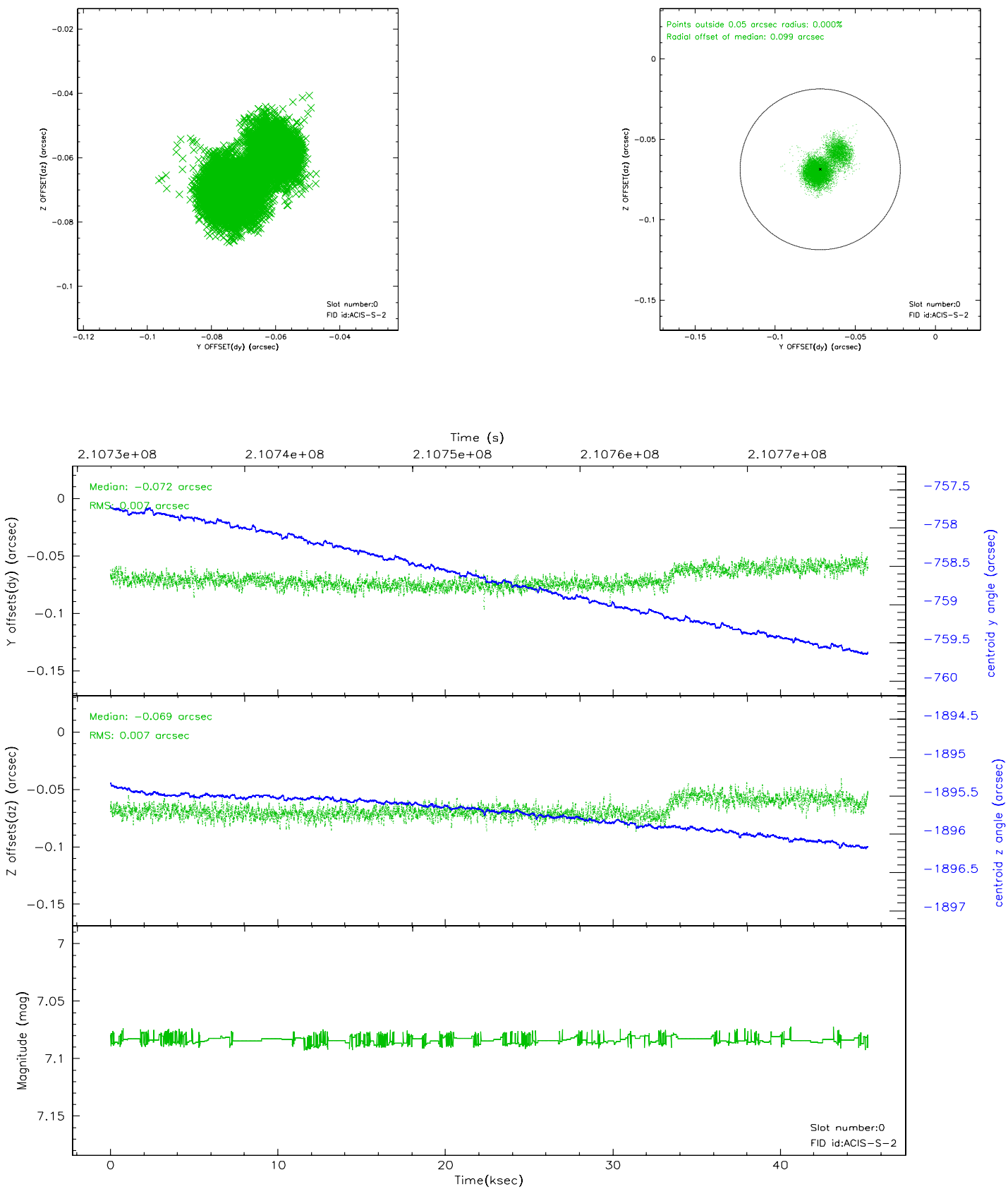


## 2.4.5 Slot 7

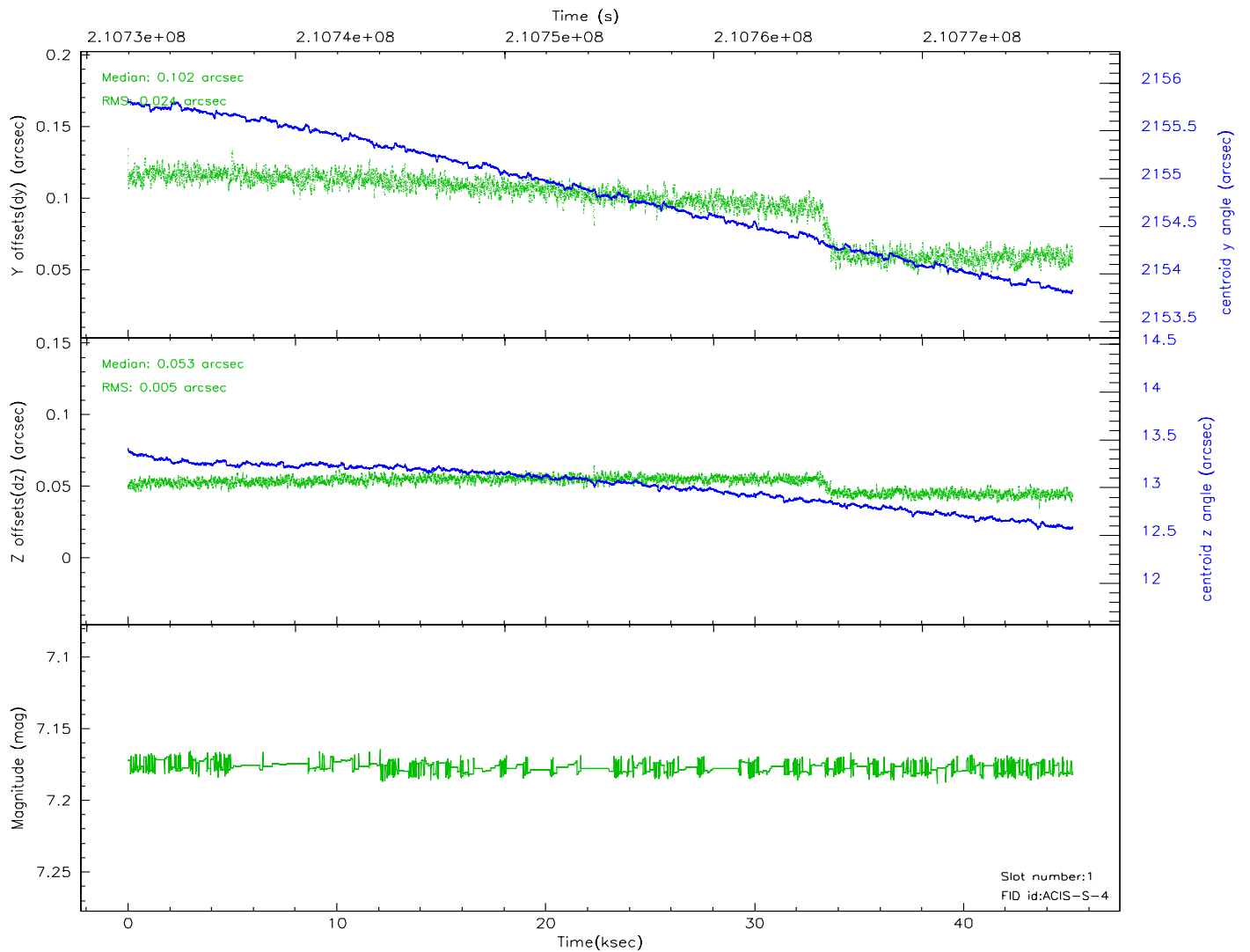
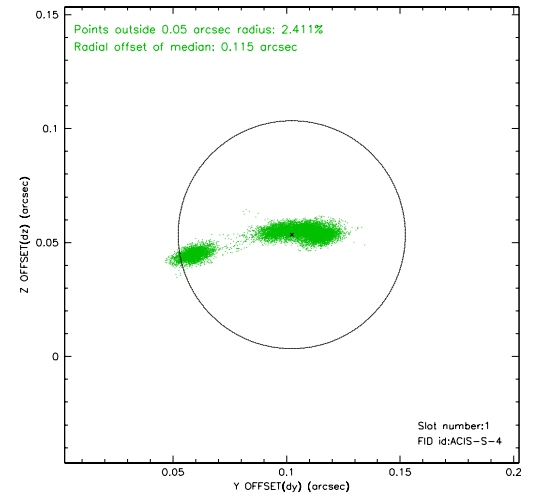
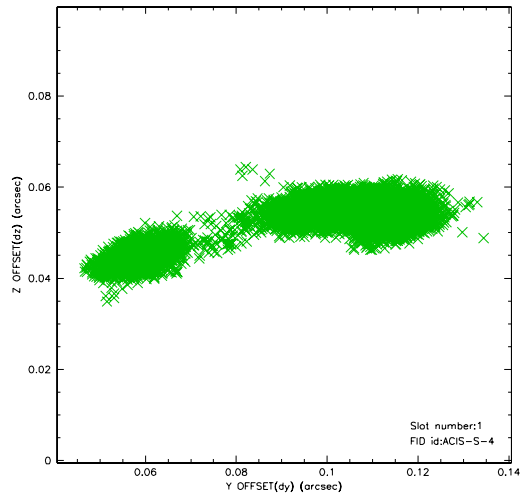


## 2.5 FID Slots

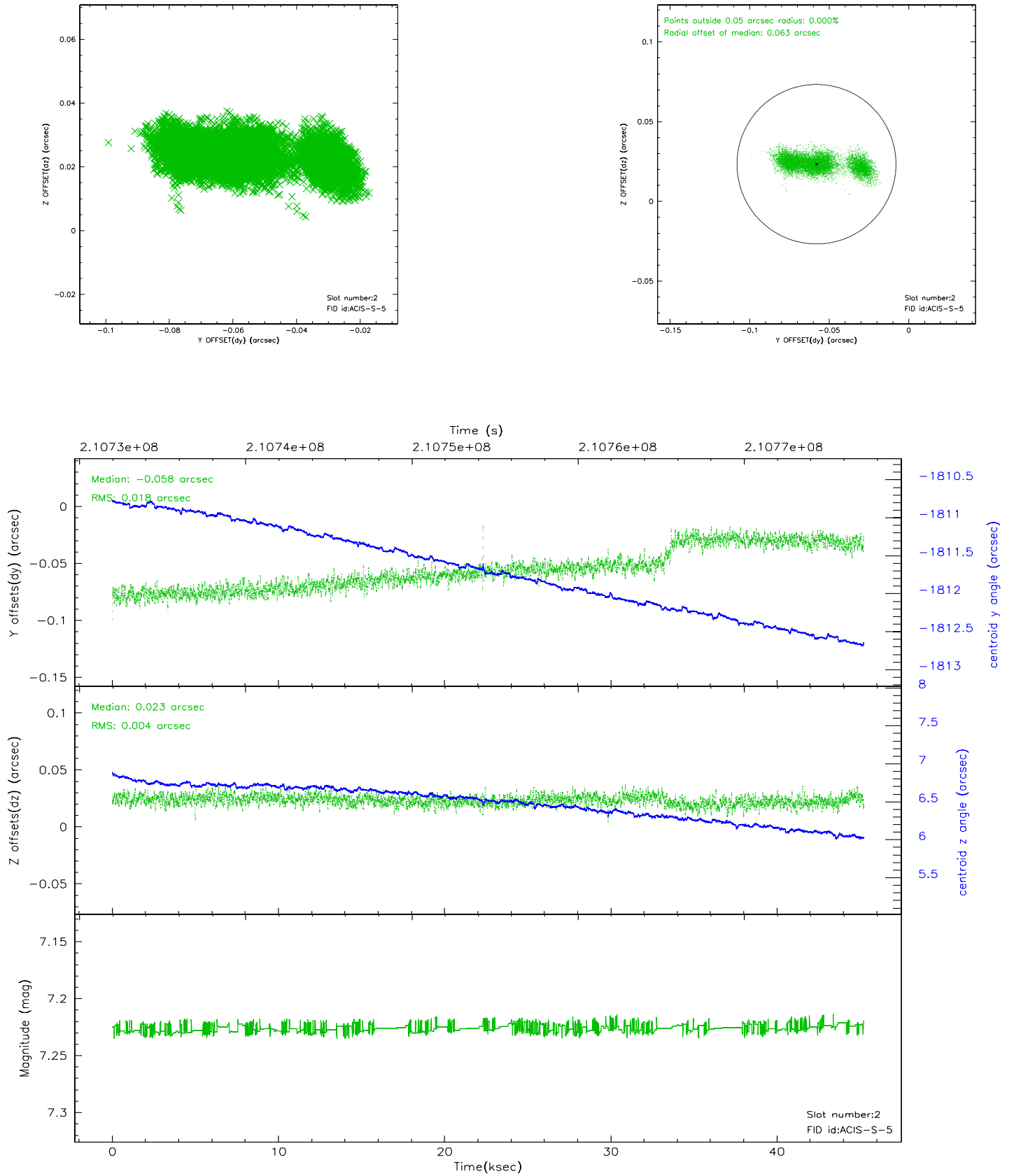
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

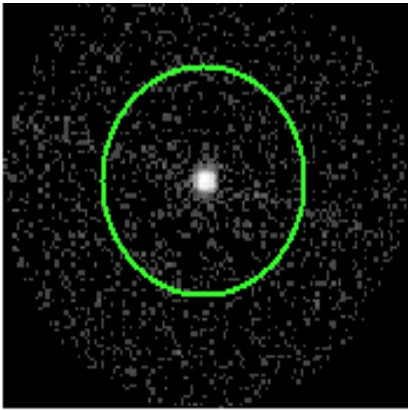


# 3 Gratings

## 3.1 LETG Arm



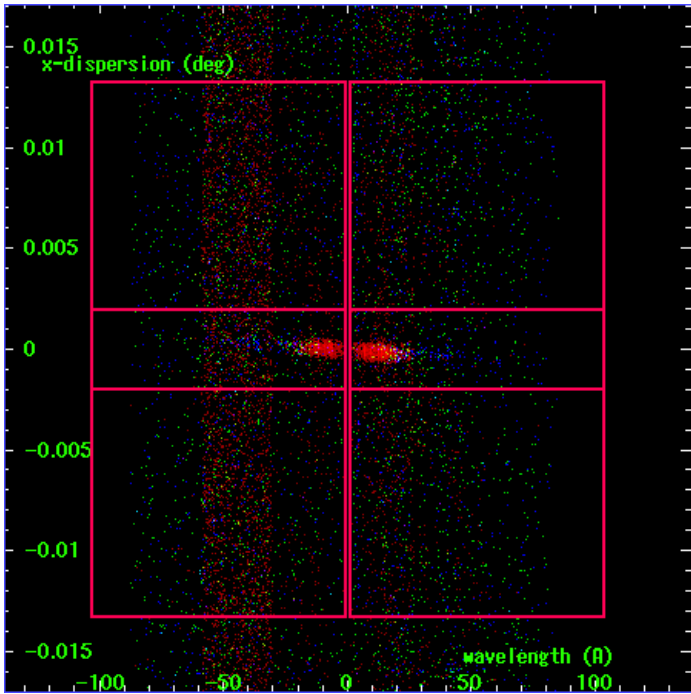
LETG Order Sort 123



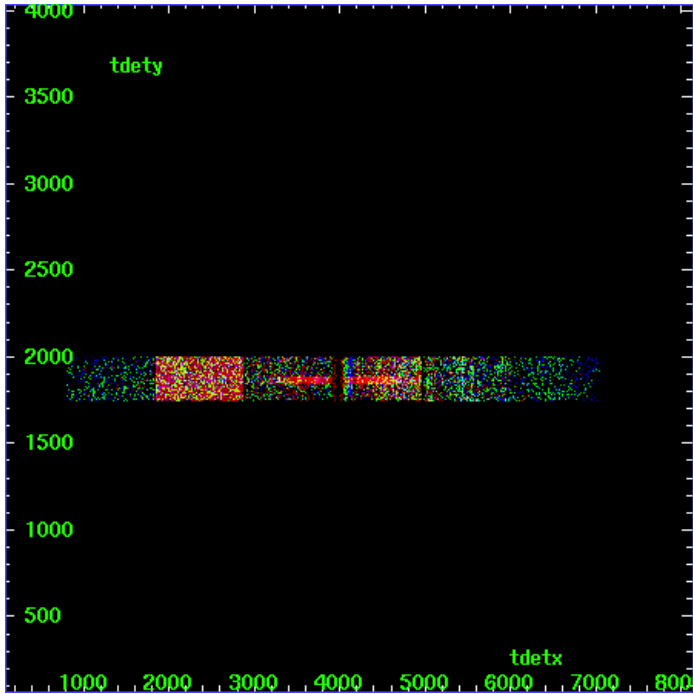
LETG Zero Order



LETG Order Sort ALL

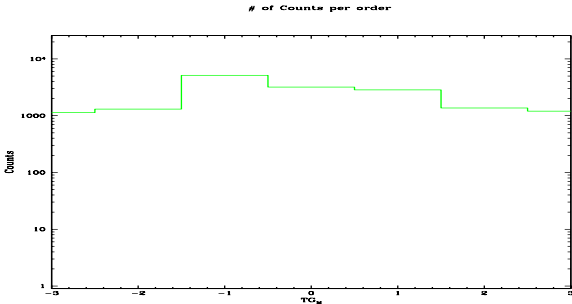


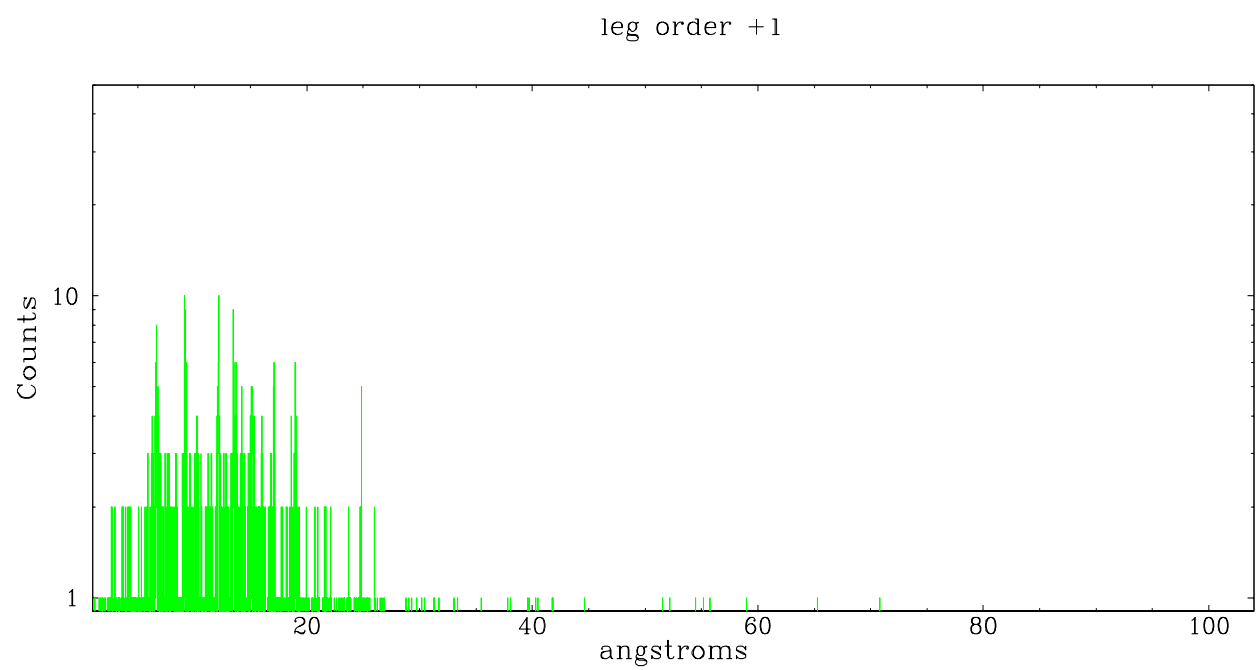
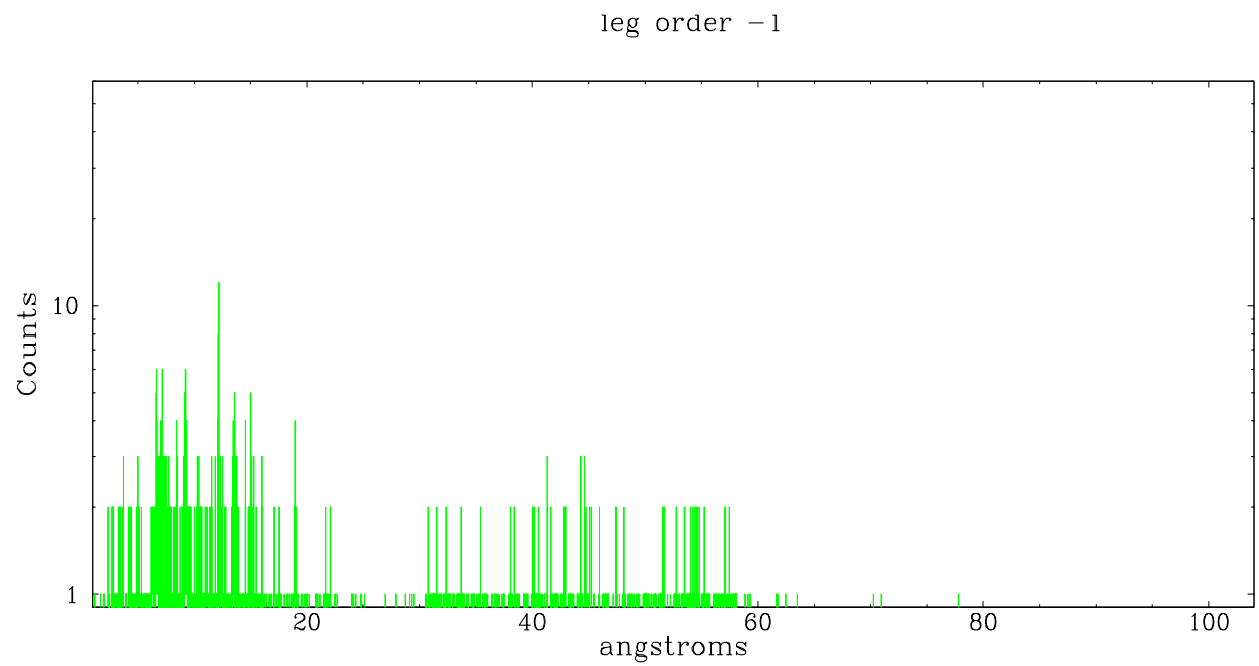
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1135	1306	5143	3197	2841	1366	1204





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.04.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.236

### A.2 Comments

Roll constraint met.