

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 6099 - L2 Version 001  
Chandra X-Ray Center

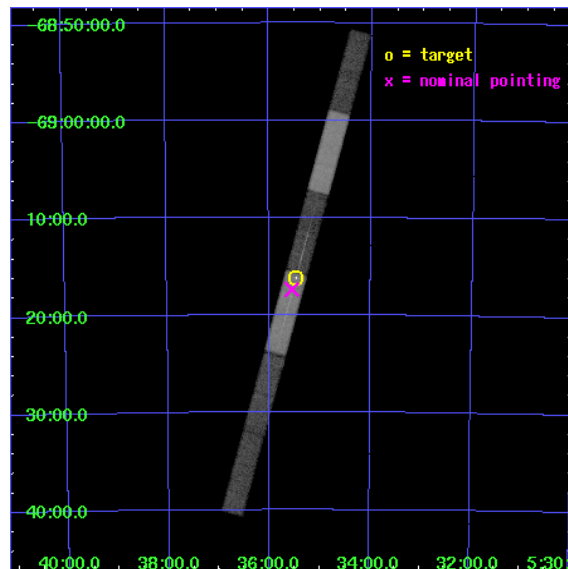
L2 Processing Date : Apr 19 2006

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# 1 Front

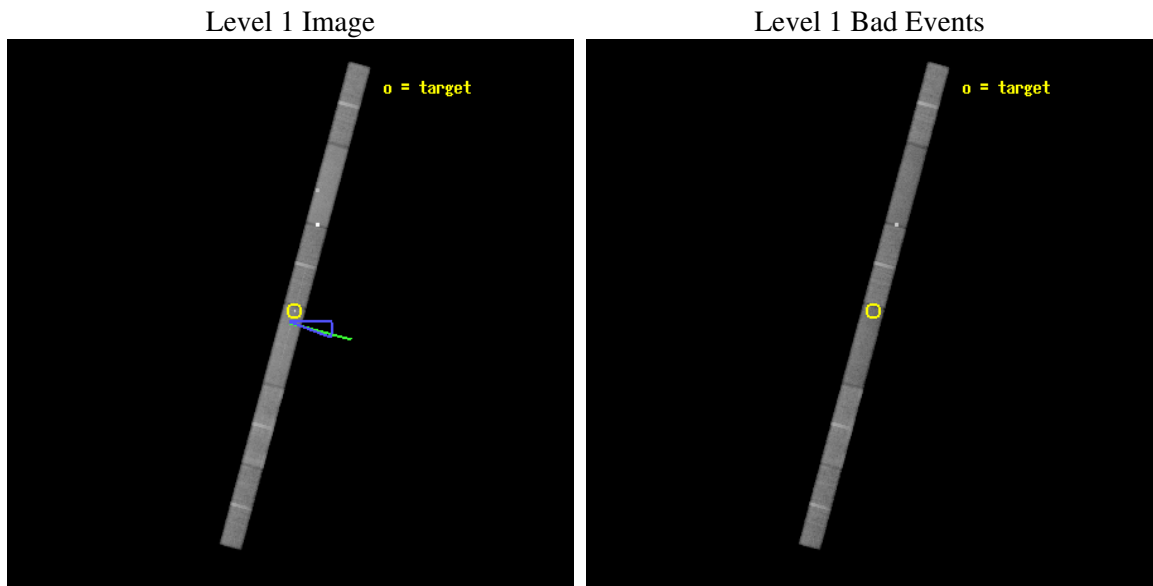
seq_num	500460
obs_id	6099
title	Spatially resolved grating spectrometry of the newborn supernova remnant SNR1987A
observer	Dr. Richard McCray
object	SNR1987A
dtcycle	0
cycle	P
ra_targ	83.866667
dec_targ	-69.26975
ra_nom	83.886615068857
dec_nom	-69.289606225449
roll_nom	105.17528230748
revision	2
ontime	50606.0
livetime	48611.004380235
ontime4	50606.0
ontime5	50606.0
ontime6	50606.0
ontime7	50606.0
ontime8	50606.0
ontime9	50606.0
l2events	167104



## 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
caldsver	3.2.1
date	2006-04-19T08:19:10
revision	2

sched_exp_time	50468.000000
ontime	51103.024247259
ontime4	51103.024247259
ontime5	51104.065287262
ontime6	51104.065287262
ontime7	51103.024247259
ontime8	51104.065287262
ontime9	51104.065287262
l1events	816705

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	128116	175231	116624	138077	149826	108831
rejected events	113718	87805	101744	79186	119409	95492
rejected %	88%	50%	87%	57%	79%	87%

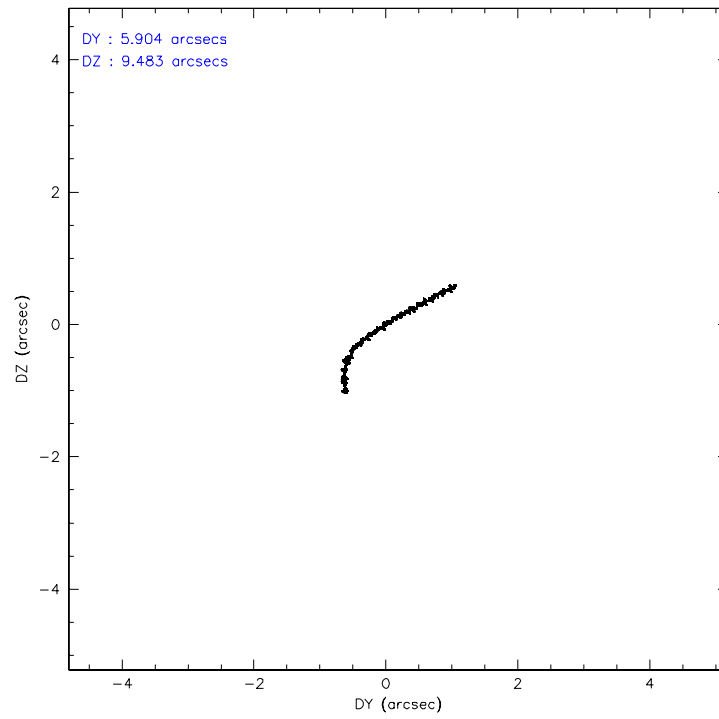
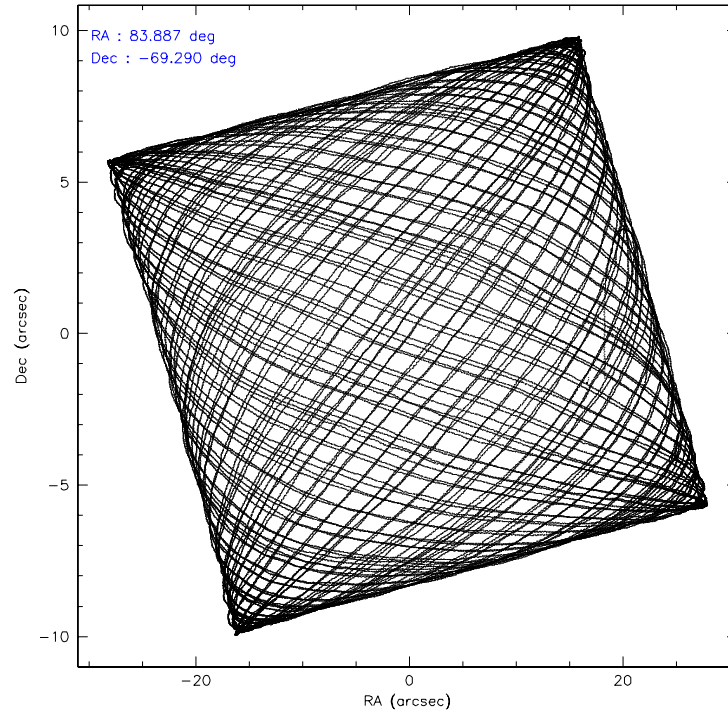
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	5420	11162	6110	5447	8980	5069
	4%	6%	5%	3%	5%	4%
grade 1 events	60	1570	40	117	70	30
	0%	0%	0%	0%	0%	0%
grade 2 events	3035	22802	2597	13588	6126	2372
	2%	13%	2%	9%	4%	2%
grade 3 events	1942	3712	1945	5186	3753	1882
	1%	2%	1%	3%	2%	1%
grade 4 events	1876	4657	1947	5132	3580	1804
	1%	2%	1%	3%	2%	1%
grade 5 events	3921	13433	4265	10247	5537	4490
	3%	7%	3%	7%	3%	4%
grade 6 events	2274	46053	2433	30159	8312	2370
	1%	26%	2%	21%	5%	2%
grade 7 events	109588	71842	97287	68201	113468	90814
	85%	40%	83%	49%	75%	83%

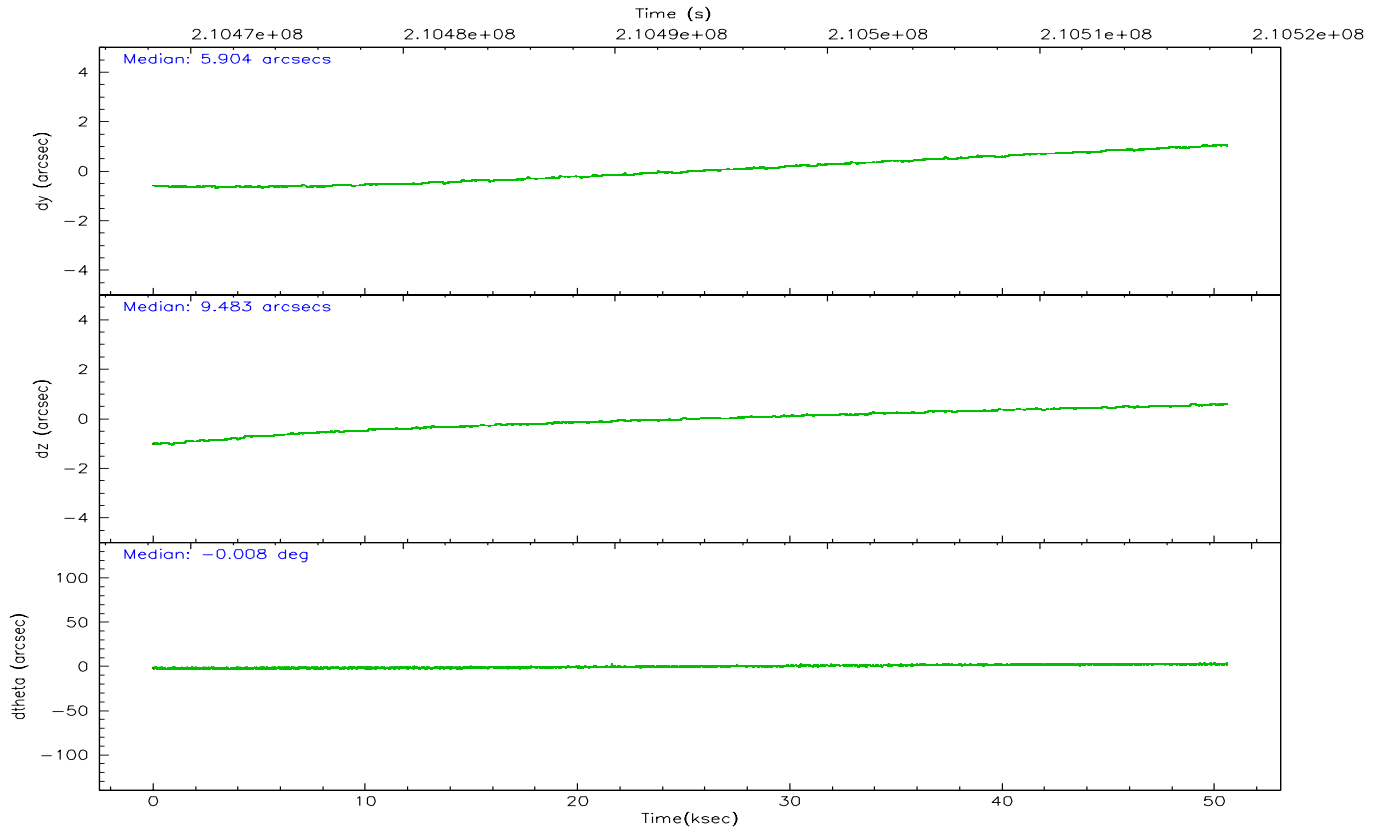
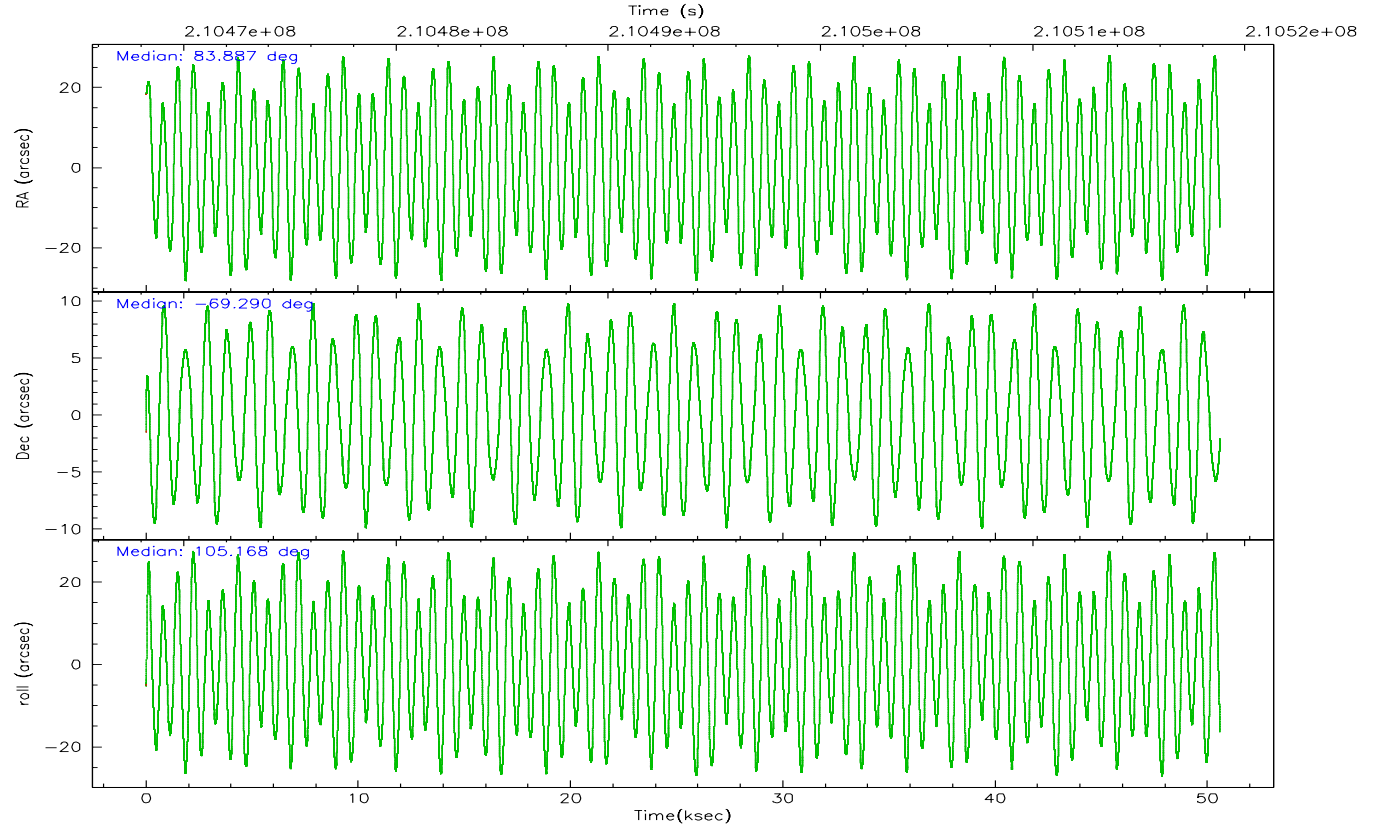


## 2.2 Compared Parameters

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	83.88661506885674	Subarray start row	49	49
Pointing Dec	-69.308481	-69.28960622544932	Subarray row count	256	256
Pointing Roll	105.070441	105.1752823074809	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	-182.1344861297048			
SIM translation stage offset (mm)	-8	-7.998036453302973			
Observation start time	210468366.184000	210467316.05577			
Observation start date	2004-09-01T23:25:02	2004-09-01T23:08:36			
Observation end time	210518834.184000	210519352.74559			
Observation end date	2004-09-02T13:26:10	2004-09-02T13:35:52			
Read mode	TIMED	TIMED			

## 2.3 Aspect



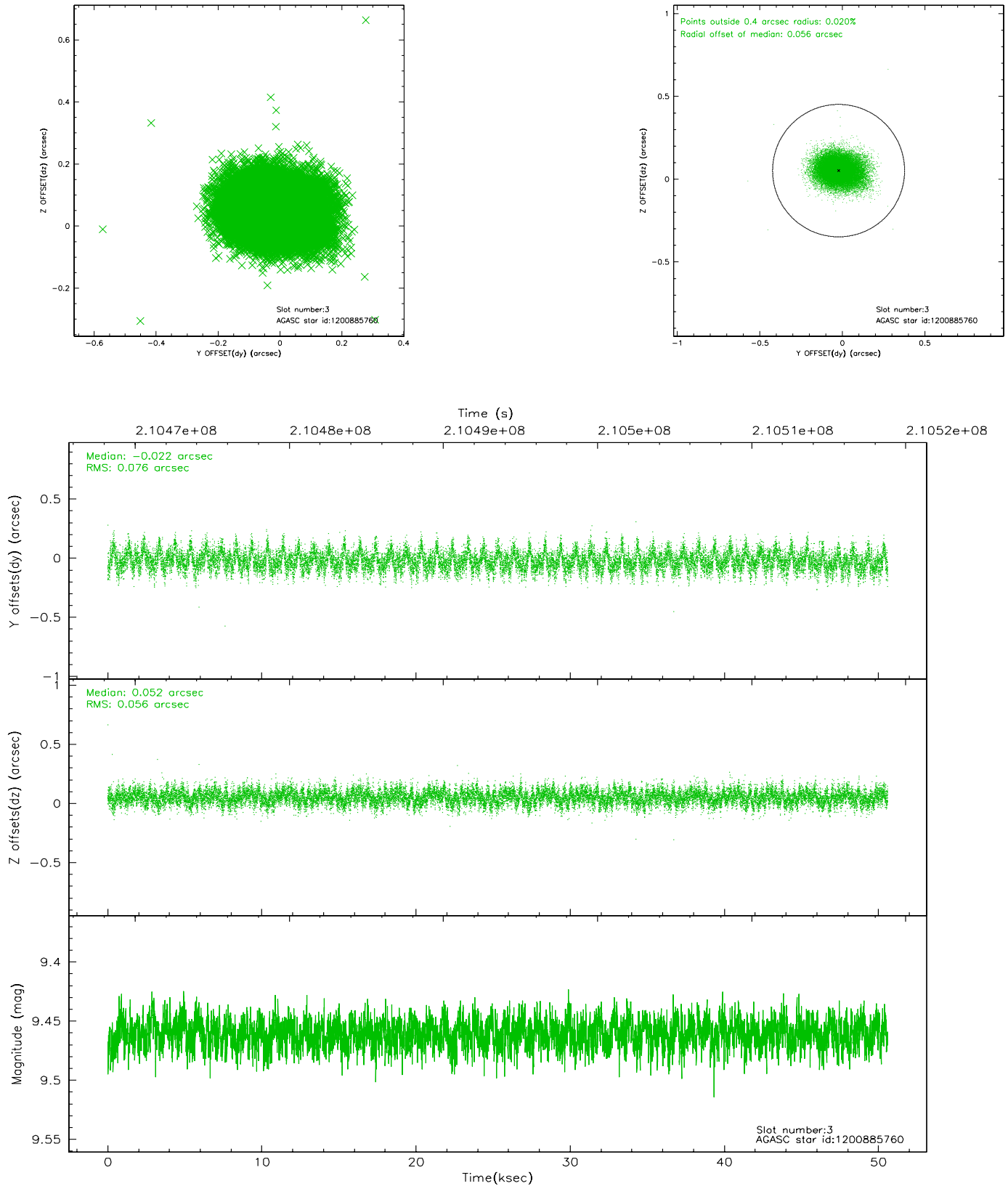


### Slot Statistics

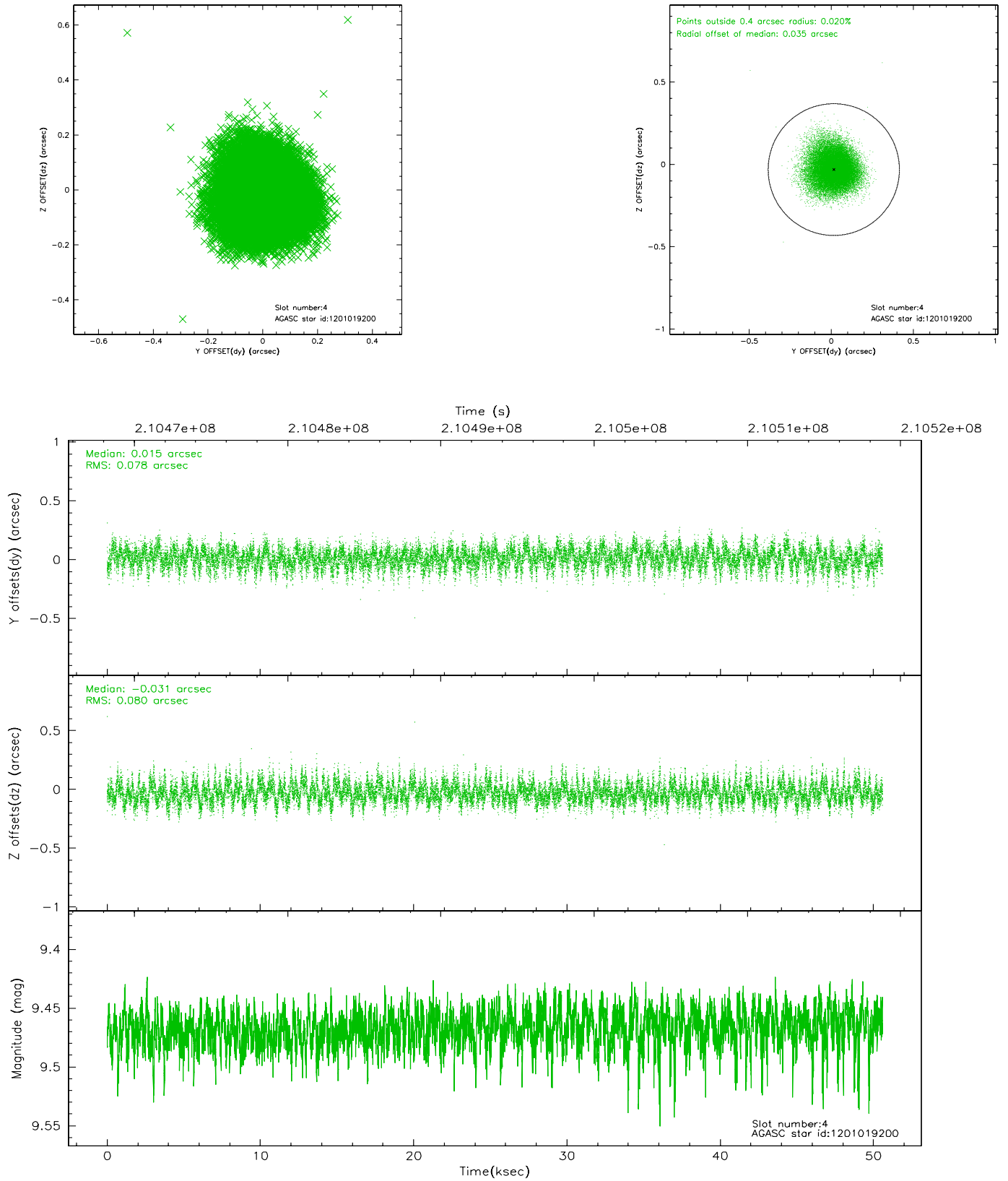
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	12344	0.064	0.068	0.015	0.038	0.000000	0.000000	938.08	-1890.94
1	FID	ACIS-S-2	7.09	12344	-0.108	-0.116	0.018	0.058	0.000000	0.000000	-758.00	-1895.75
2	FID	ACIS-S-5	7.22	12344	0.020	0.054	0.015	0.046	0.000000	0.000000	-1811.19	6.48
3	GUIDE	1200885760	9.46	24675	-0.022	0.052	0.099	0.165	83.723637	-68.777667	1918.96	-221.53
4	GUIDE	1201019200	9.47	24657	0.015	-0.031	0.119	0.191	84.213591	-68.777384	1753.94	-838.35
5	GUIDE	1201406184	7.94	24687	-0.058	-0.057	0.064	0.104	82.503234	-69.975517	-1877.79	2342.05
6	GUIDE	1201410616	9.35	24681	0.113	-0.171	0.122	0.194	82.516808	-69.784406	-1213.39	2162.58
7	GUIDE	1201017424	10.20	24663	-0.060	0.213	0.167	0.279	85.854985	-69.248506	-462.13	-2401.64

## 2.4 Star Slots

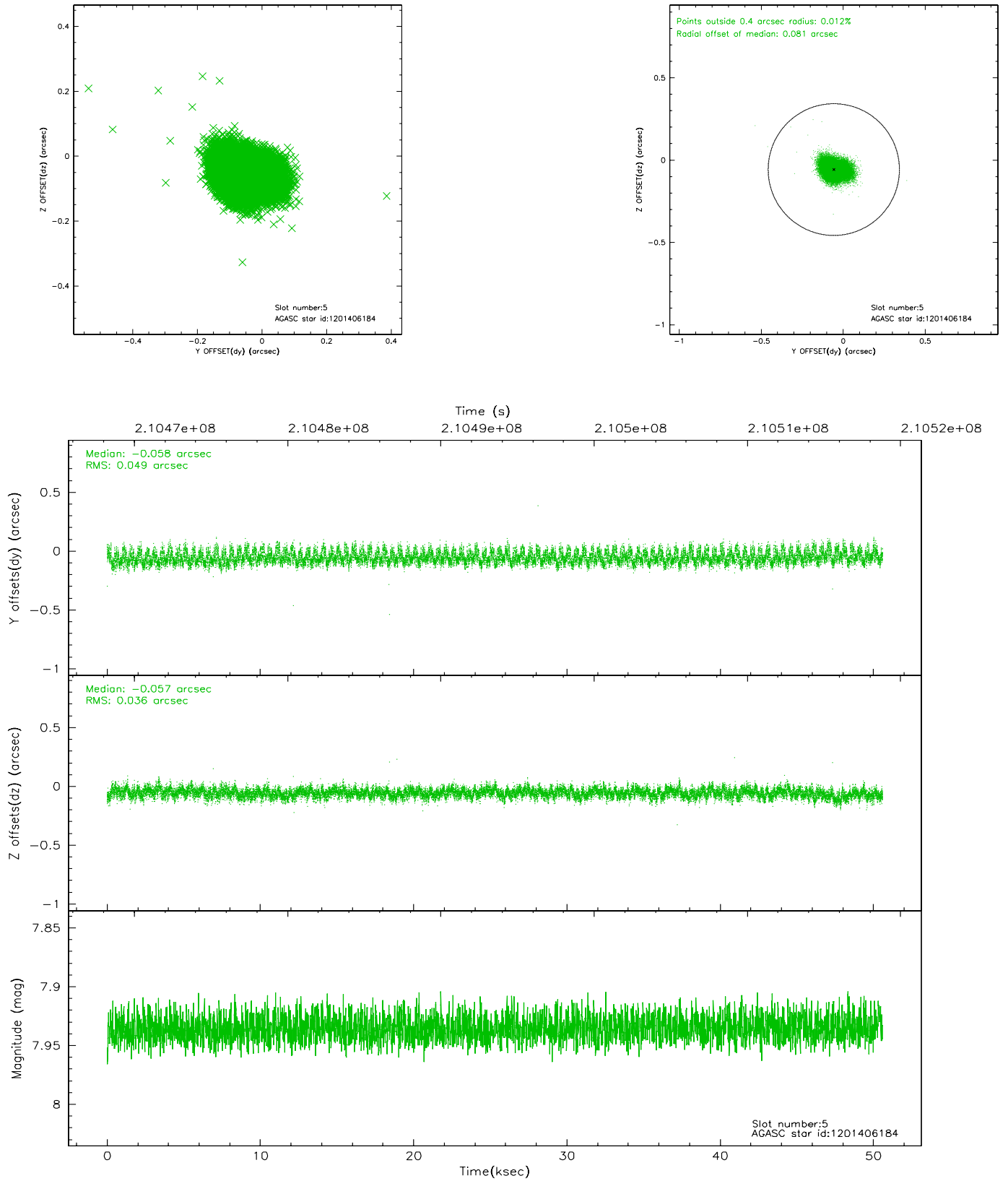
### 2.4.1 Slot 3



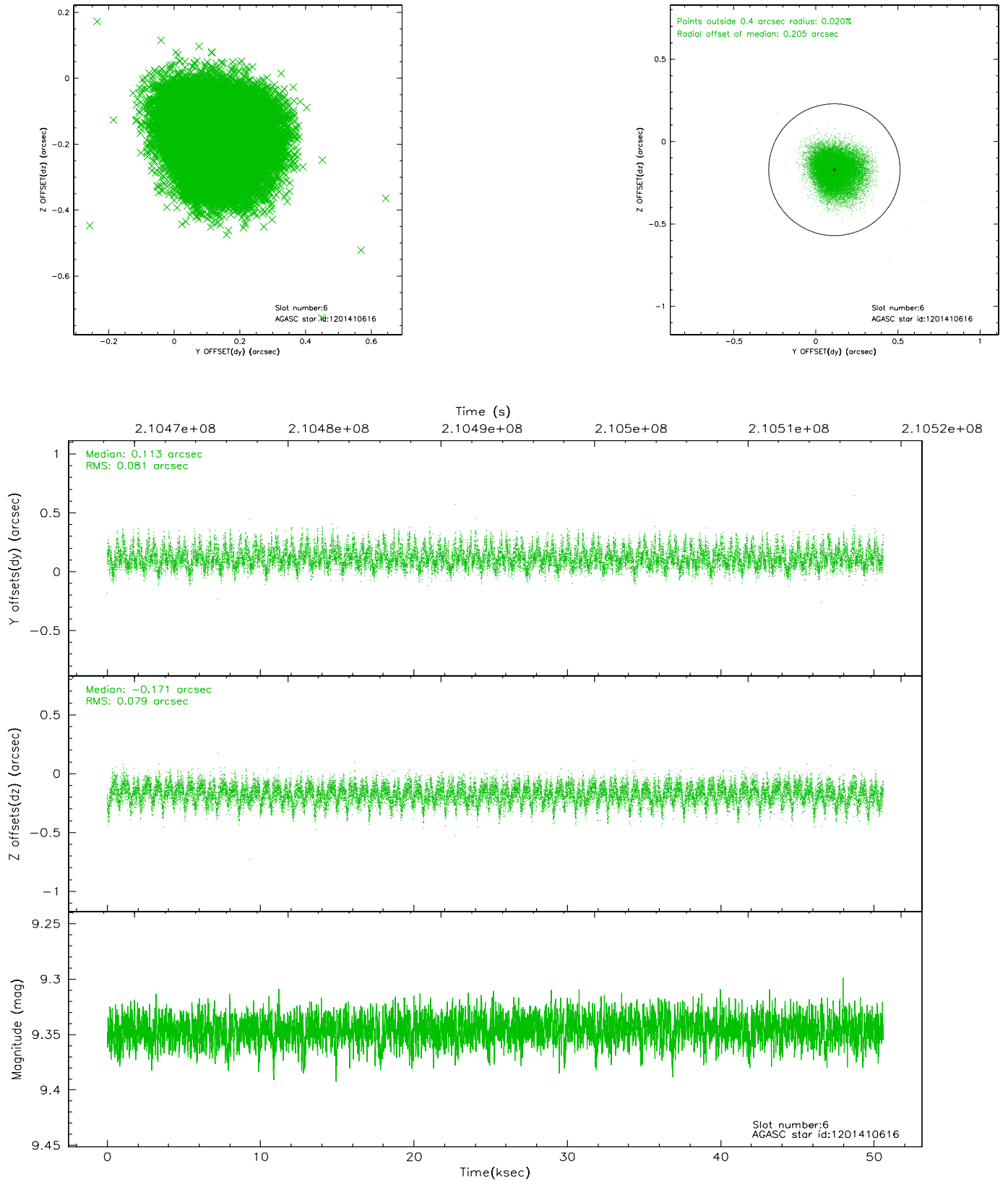
## 2.4.2 Slot 4



### 2.4.3 Slot 5

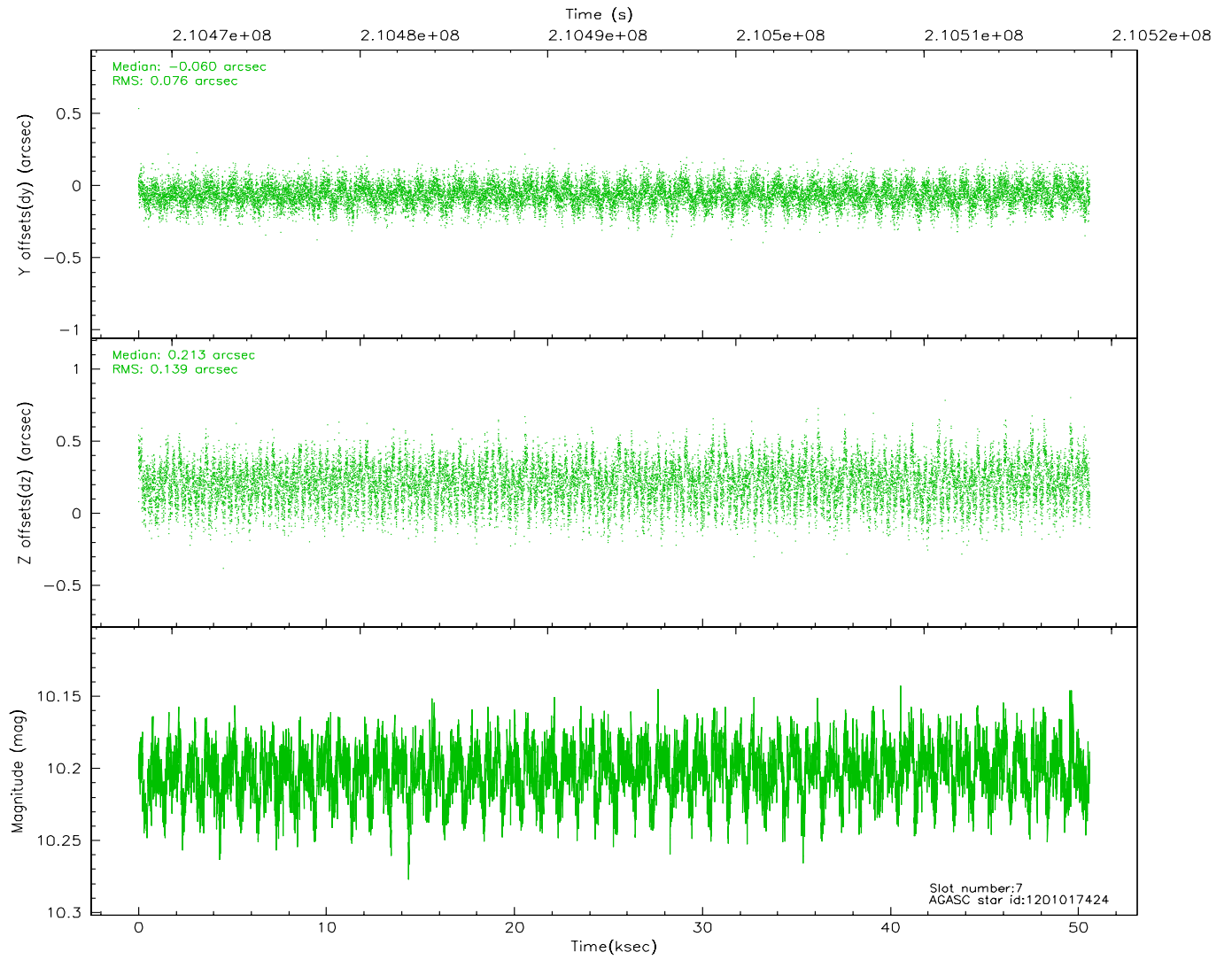
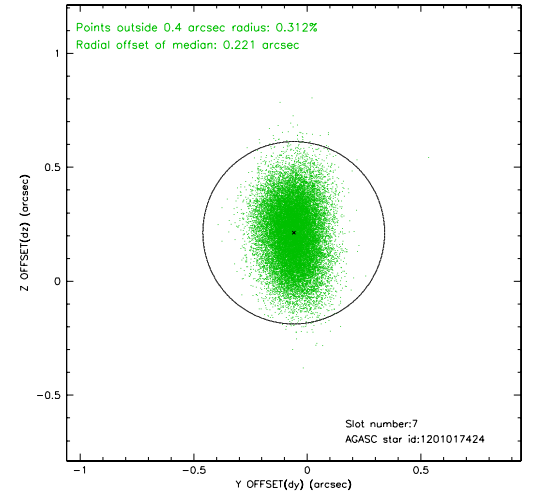
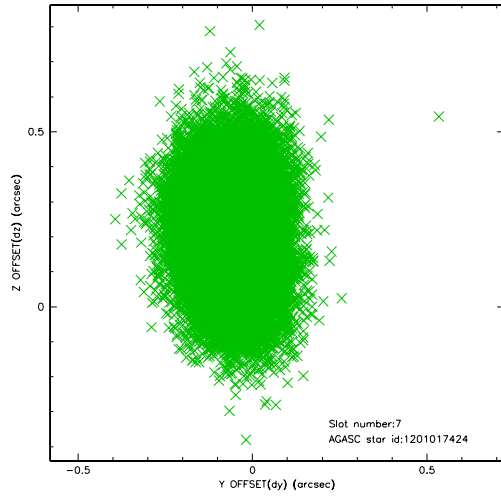


## 2.4.4 Slot 6



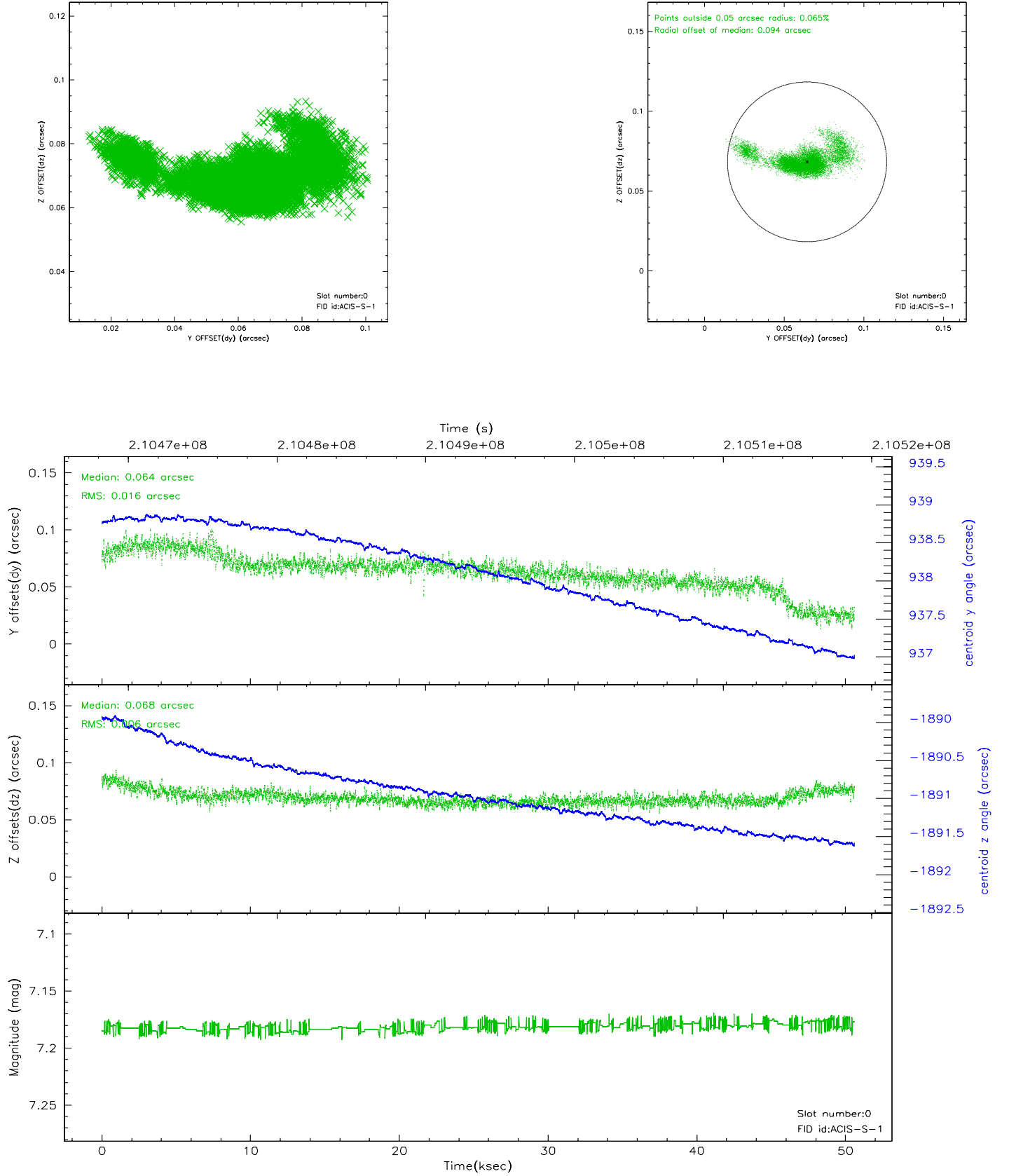


## 2.4.5 Slot 7

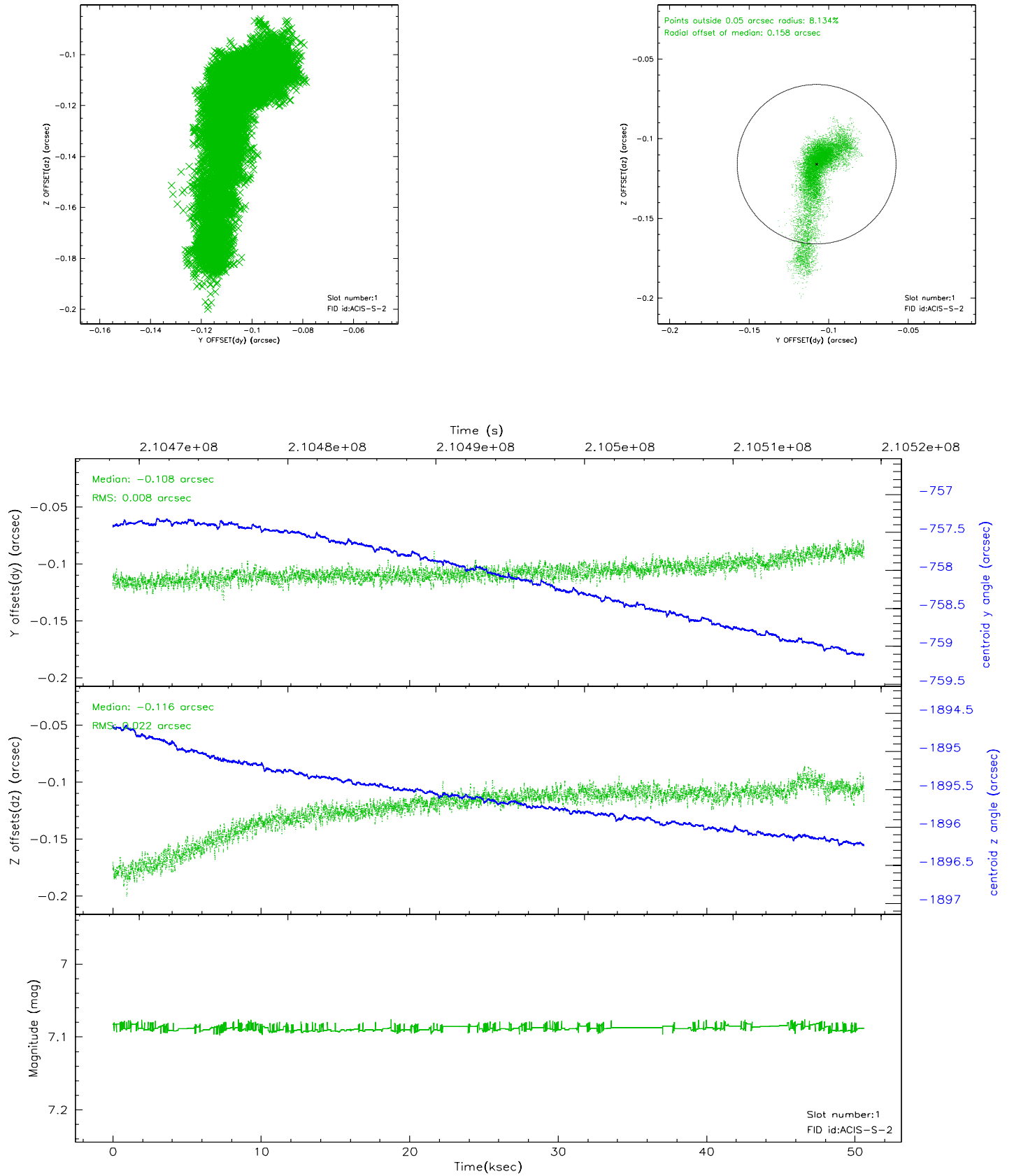


## 2.5 FID Slots

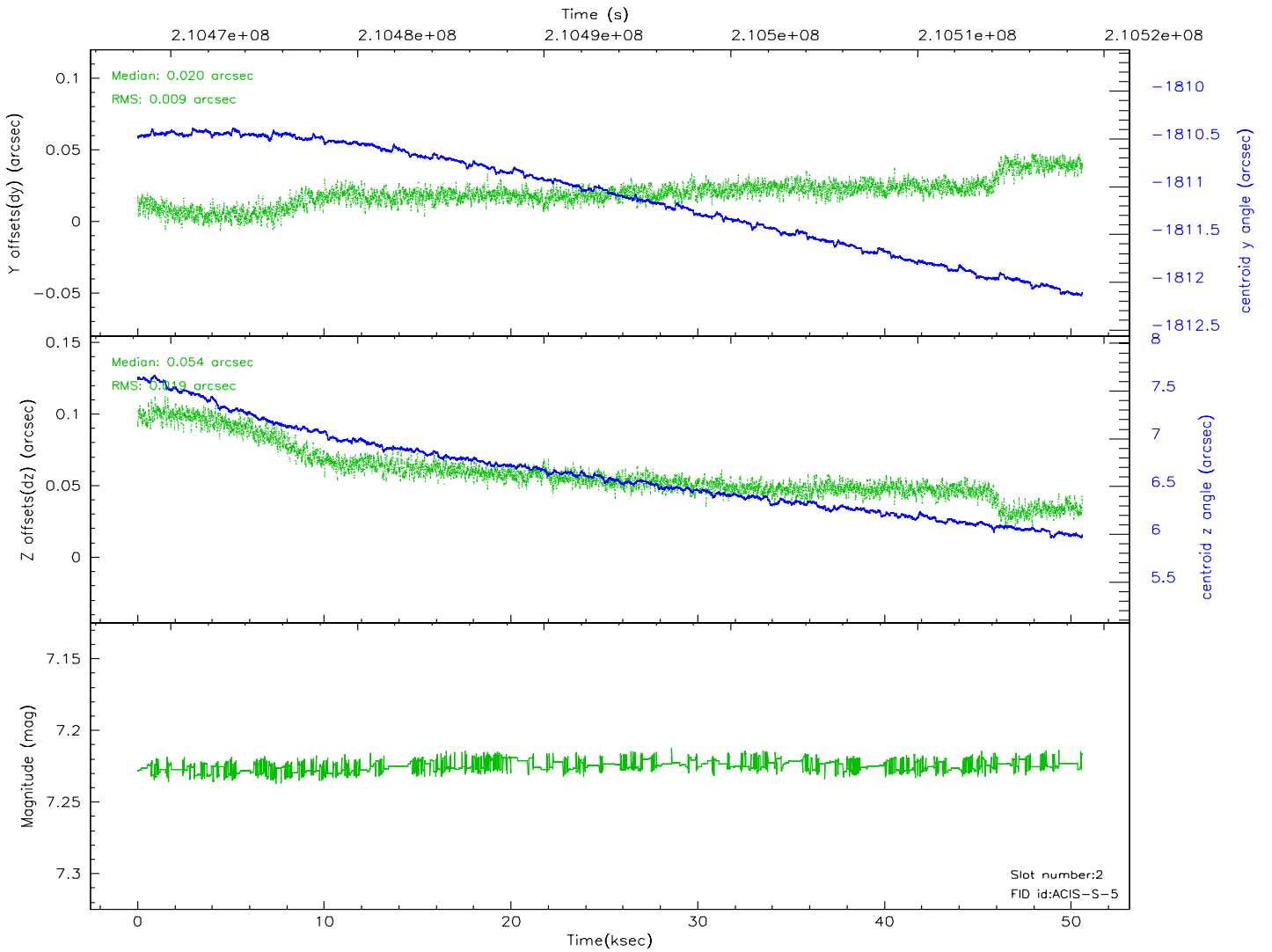
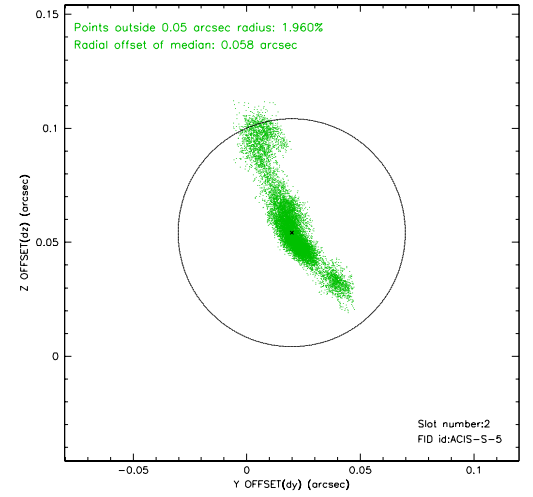
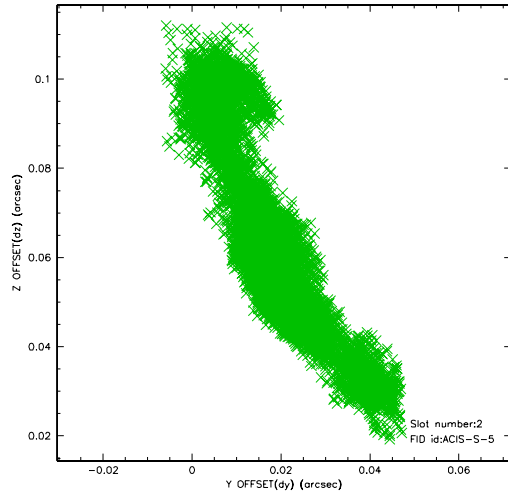
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

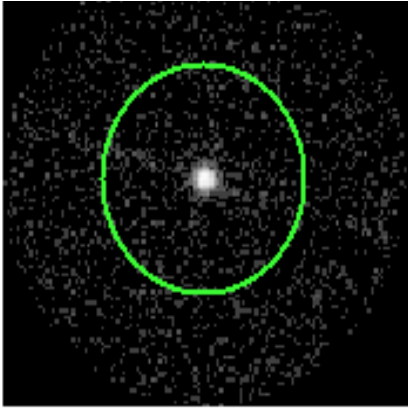


# 3 Gratings

## 3.1 LETG Arm



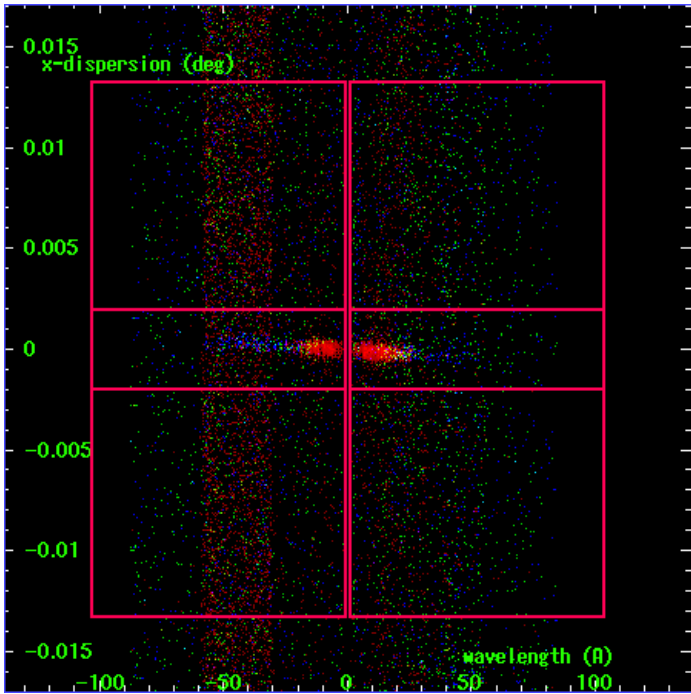
LETG Order Sort 123



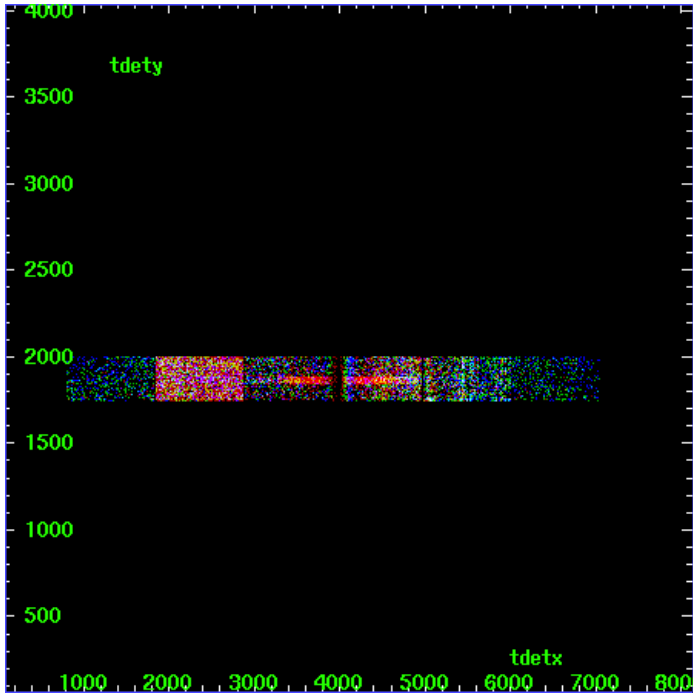
LETG Zero Order



LETG Order Sort ALL

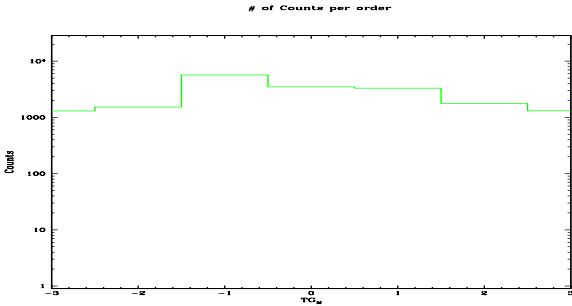


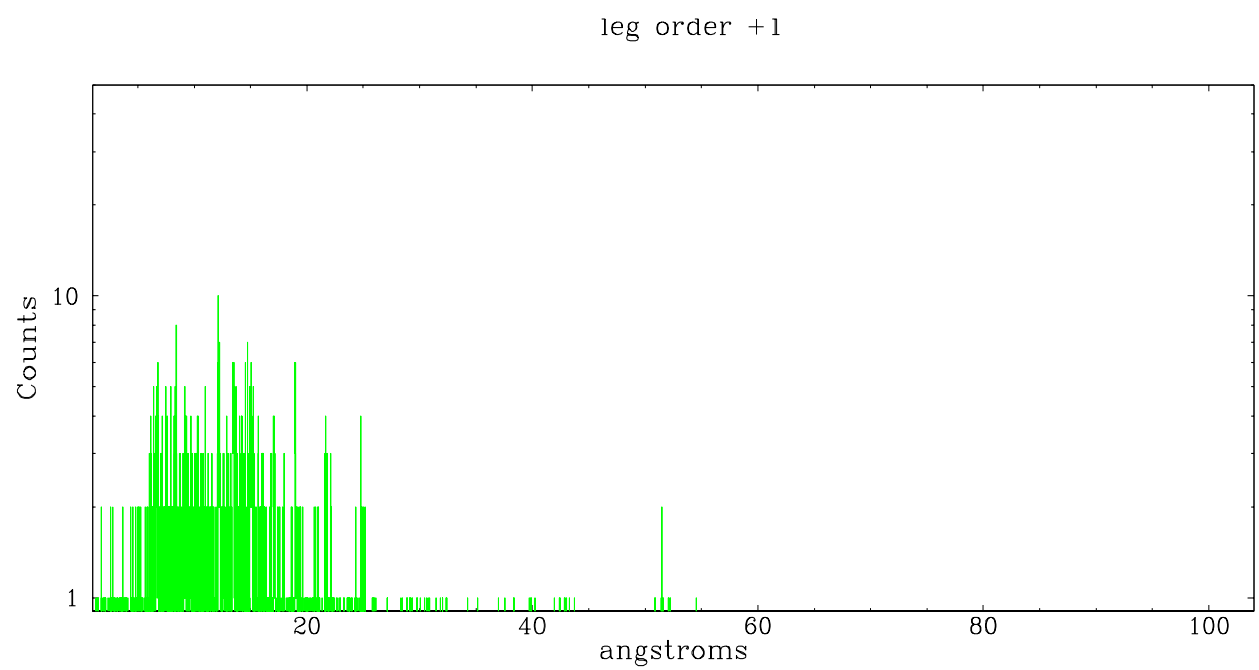
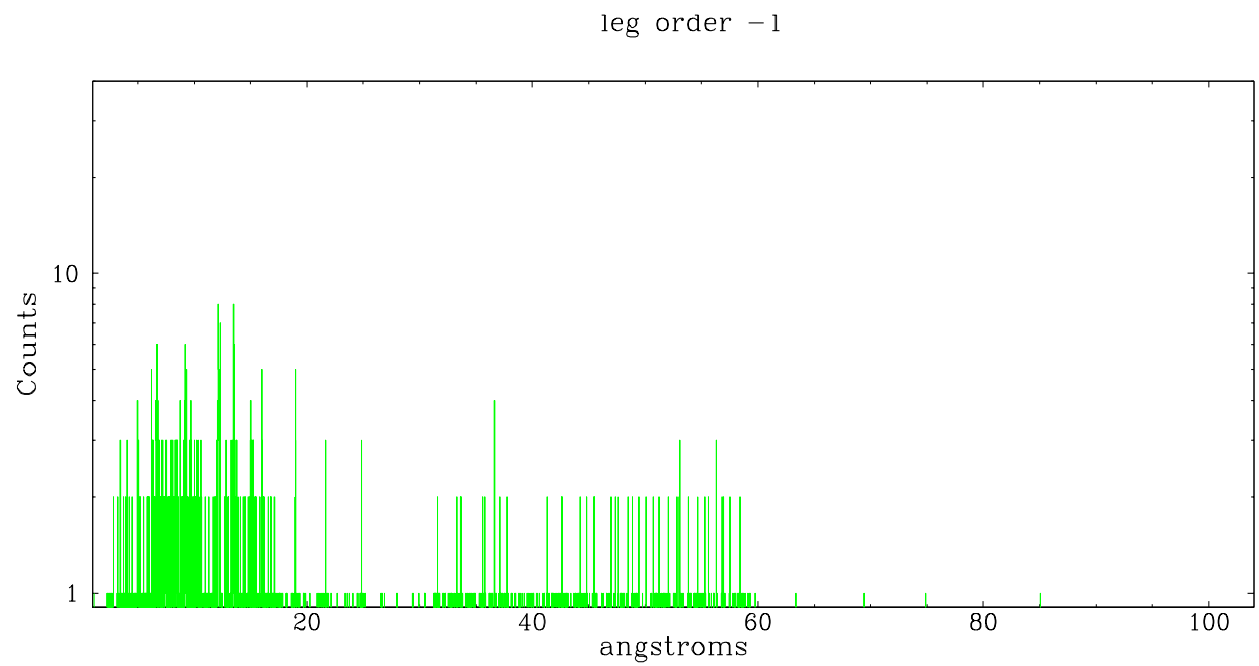
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1304	1526	5698	3483	3320	1773	1309





## 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	50.606

### A.2 Comments

Roll constraint met.