

# V&V Reference Report

## L2 ASCDS Version : 7.6.8.1

Observation 4398 - L2 Version 001  
Chandra X-Ray Center

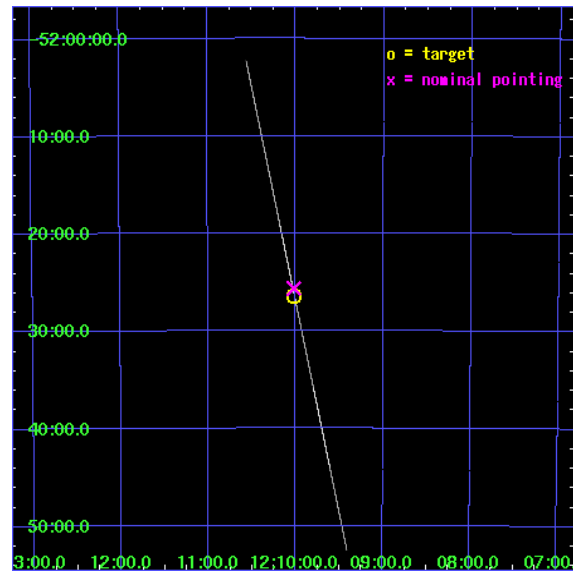
L2 Processing Date : Aug 9 2006

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# 1 Front

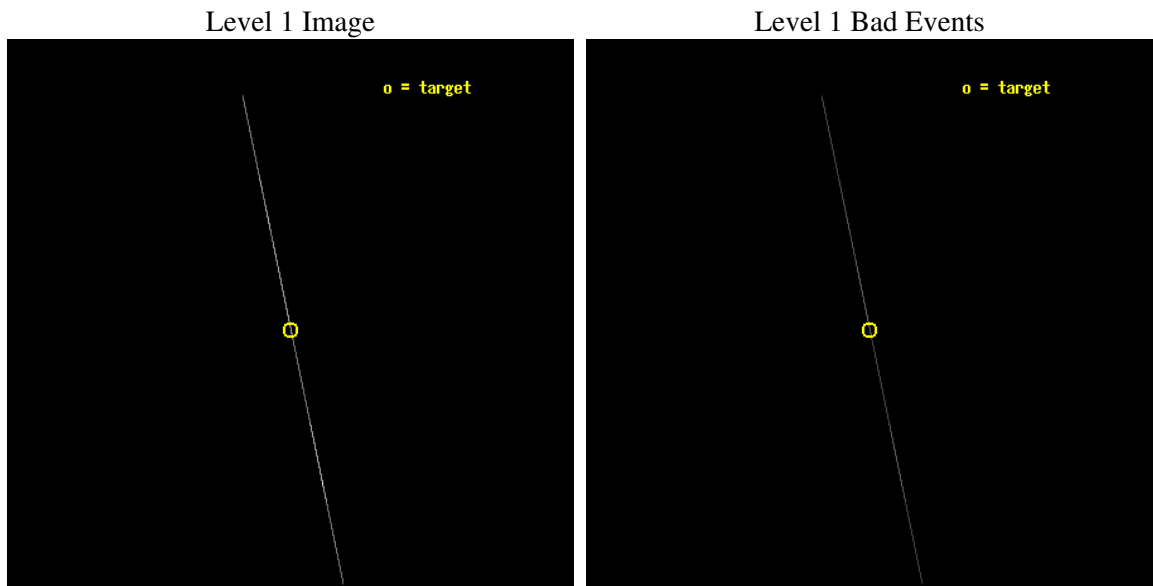
seq_num	500394
obs_id	4398
title	FIRST MEASUREMENT OF THE GRAVITATIONAL REDSHIFT AT THE SURFACE OF A NEUTRON STAR
observer	Dr. George Pavlov
object	1E 1207.4-5209
ra_targ	182.503333
dec_targ	-52.440306
ra_nom	182.50497218257
dec_nom	-52.42757162727
roll_nom	258.15792853241
revision	3
ontime	115197.75
livetime	114747.75878906
ontime4	115197.75
ontime5	115197.75
ontime6	115197.75
ontime7	115197.75
ontime8	115197.75
ontime9	115197.75
l2events	1302154



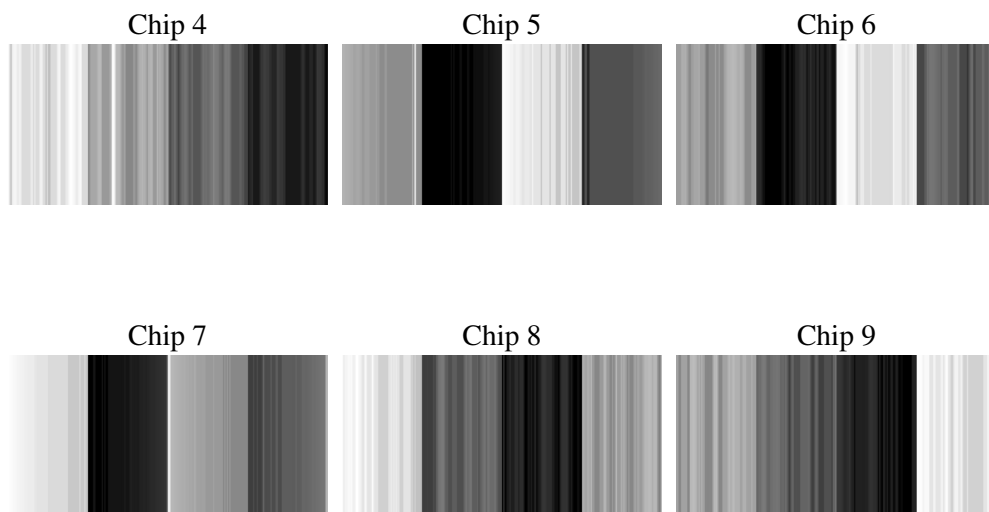
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8.1
caldsver	3.2.2
date	2006-08-09T00:59:37
revision	2

sched_exp_time	115000.000000
ontime	115964.14281905
ontime4	115666.46824828
ontime5	115974.35772884
ontime6	115689.81431603
ontime7	115964.14281905
ontime8	115685.43645826
ontime9	115692.73201203
l1events	2207381

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	163305	734372	169423	488330	479991	171960
rejected events	35148	69928	40627	84673	54644	42015
rejected %	21%	9%	23%	17%	11%	24%

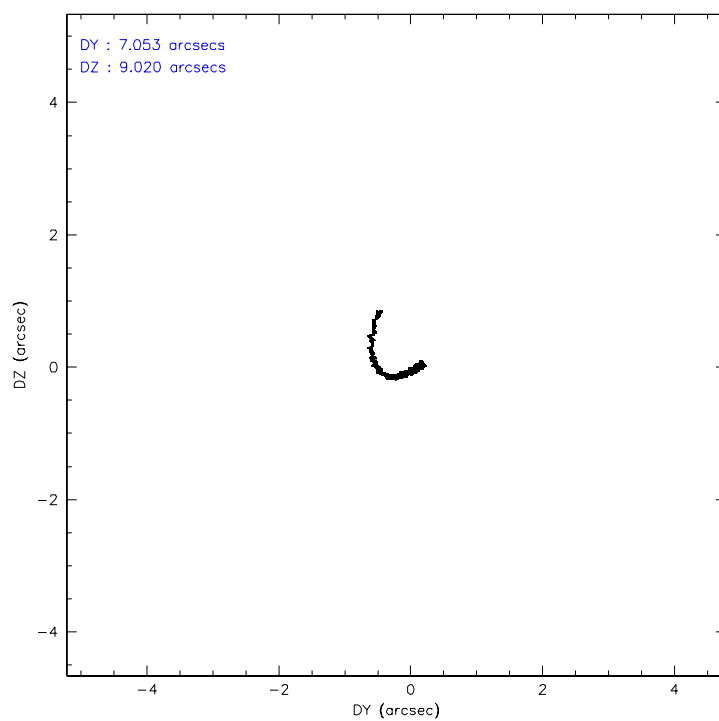
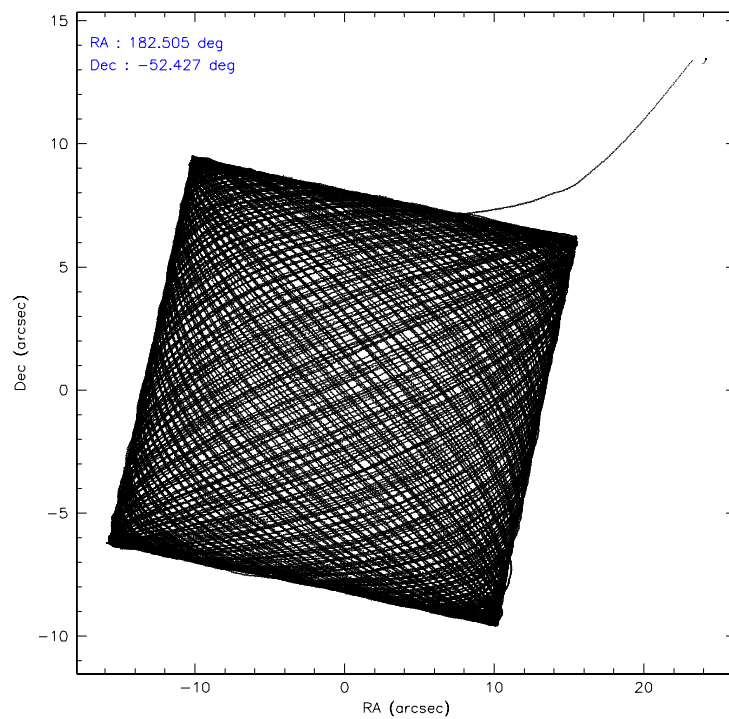
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	15983	175627	17969	27174	104774	17467
	9%	23%	10%	5%	21%	10%
grade 1 events	520	680	434	896	1298	549
	0%	0%	0%	0%	0%	0%
grade 2 events	58532	179658	56971	111984	103471	57259
	35%	24%	33%	22%	21%	33%
grade 3 events	16856	11685	15971	18781	68366	15041
	10%	1%	9%	3%	14%	8%
grade 4 events	17406	11289	15626	18501	64474	16536
	10%	1%	9%	3%	13%	9%
grade 5 events	24791	55177	28558	70034	41471	30501
	15%	7%	16%	14%	8%	17%
grade 6 events	29217	300256	33894	240960	96137	34607
	17%	40%	20%	49%	20%	20%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

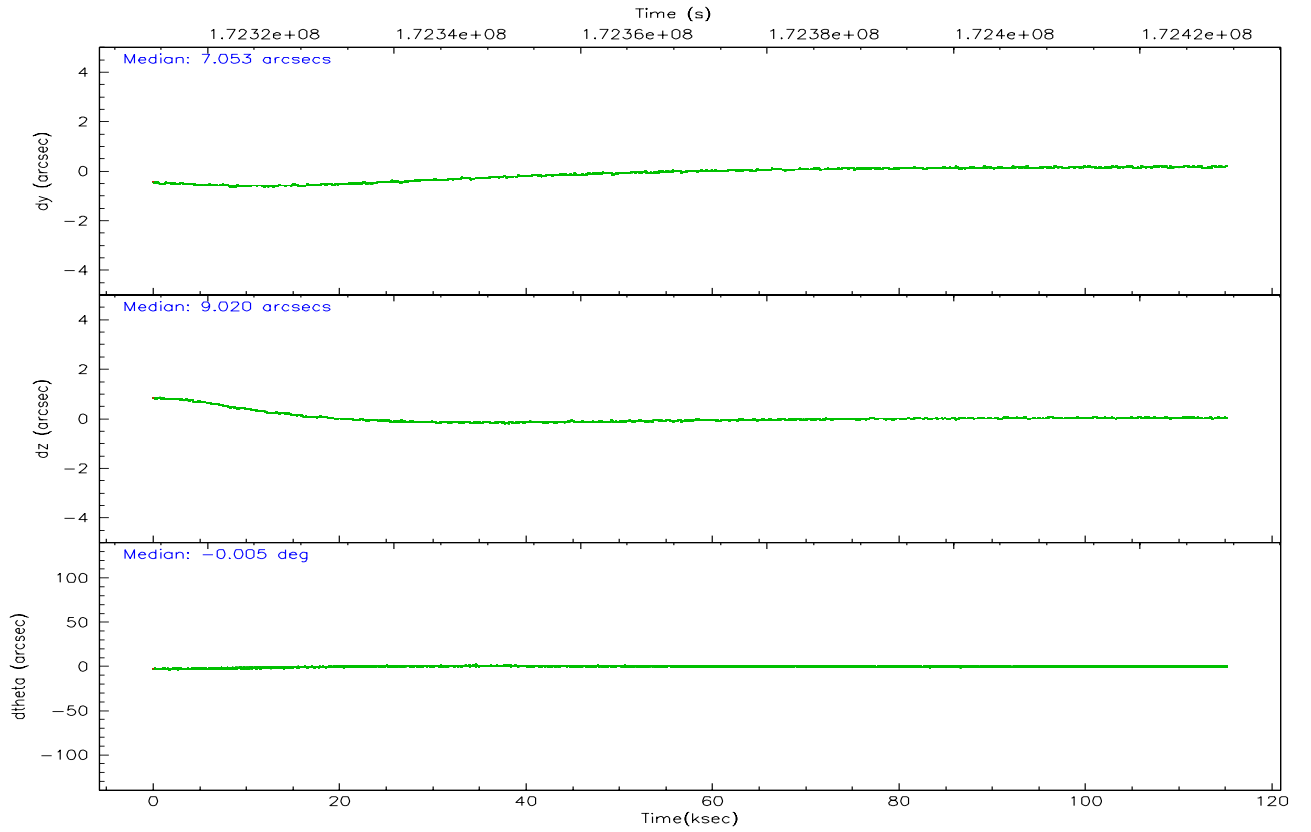
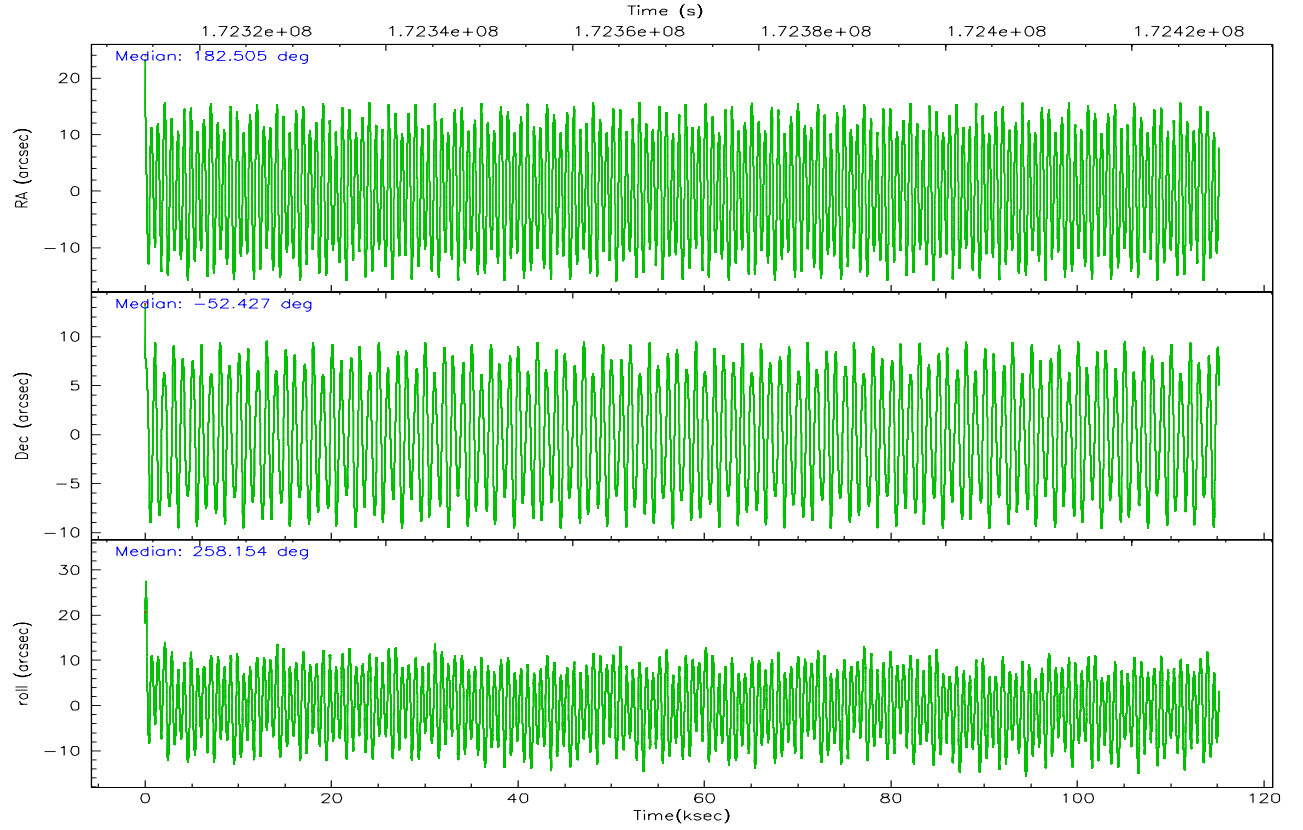


## 2.2 Compared Parameters

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	CC33_FAINT	CC33_FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	NONE	NONE
Pointing RA	182.490479	182.5049721825728	Alternating exposures requested	N	N
Pointing Dec	-52.401836	-52.42757162726978	Primary exposure time	0.000000	0
Pointing Roll	257.989821	258.1579285324077			
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	172314341.184000	172313358.60548			
Observation start date	2003-06-18T09:04:37	2003-06-18T08:49:18			
Observation end time	172429341.184000	172430031.79793			
Observation end date	2003-06-19T17:01:17	2003-06-19T17:13:51			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



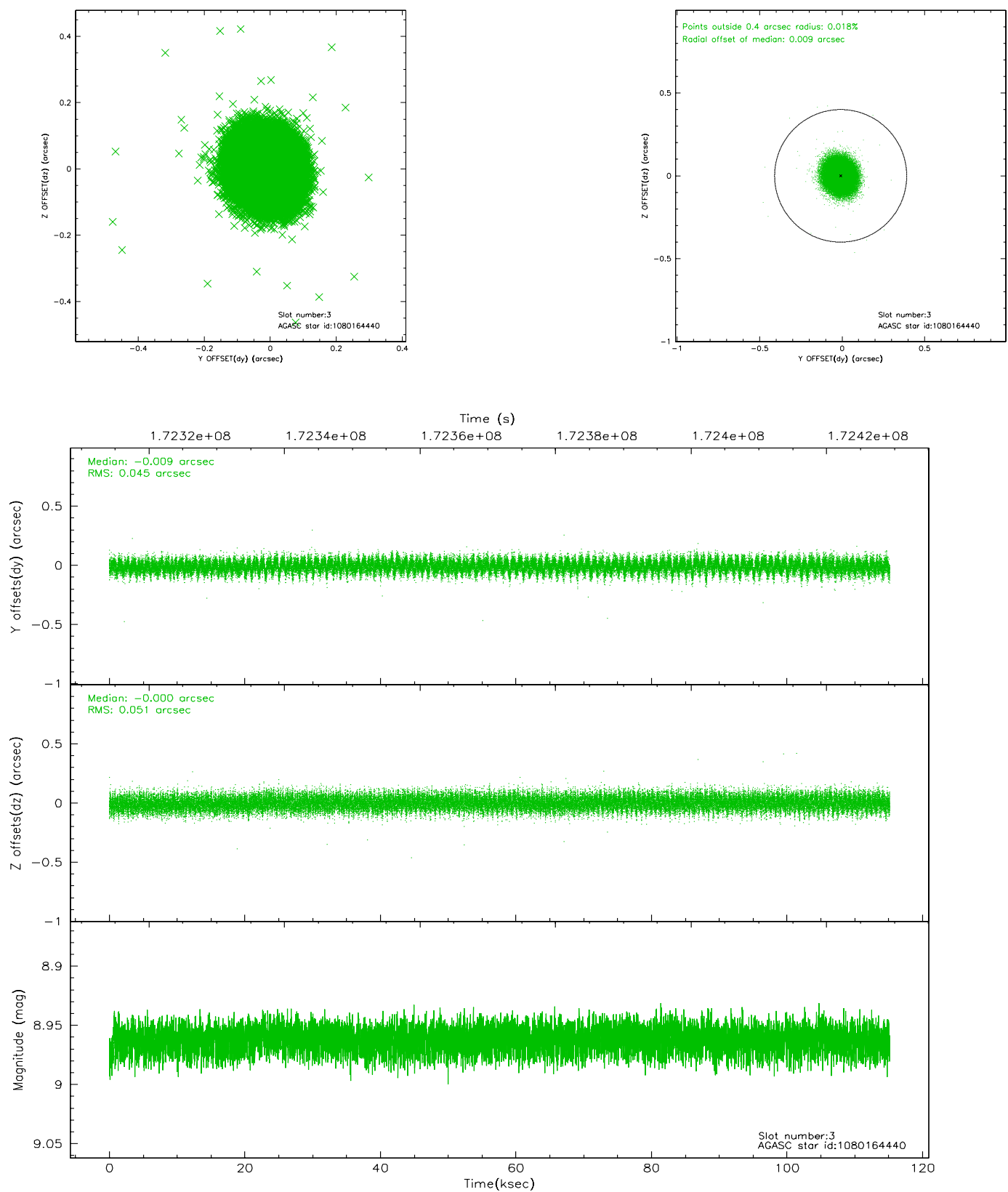


### Slot Statistics

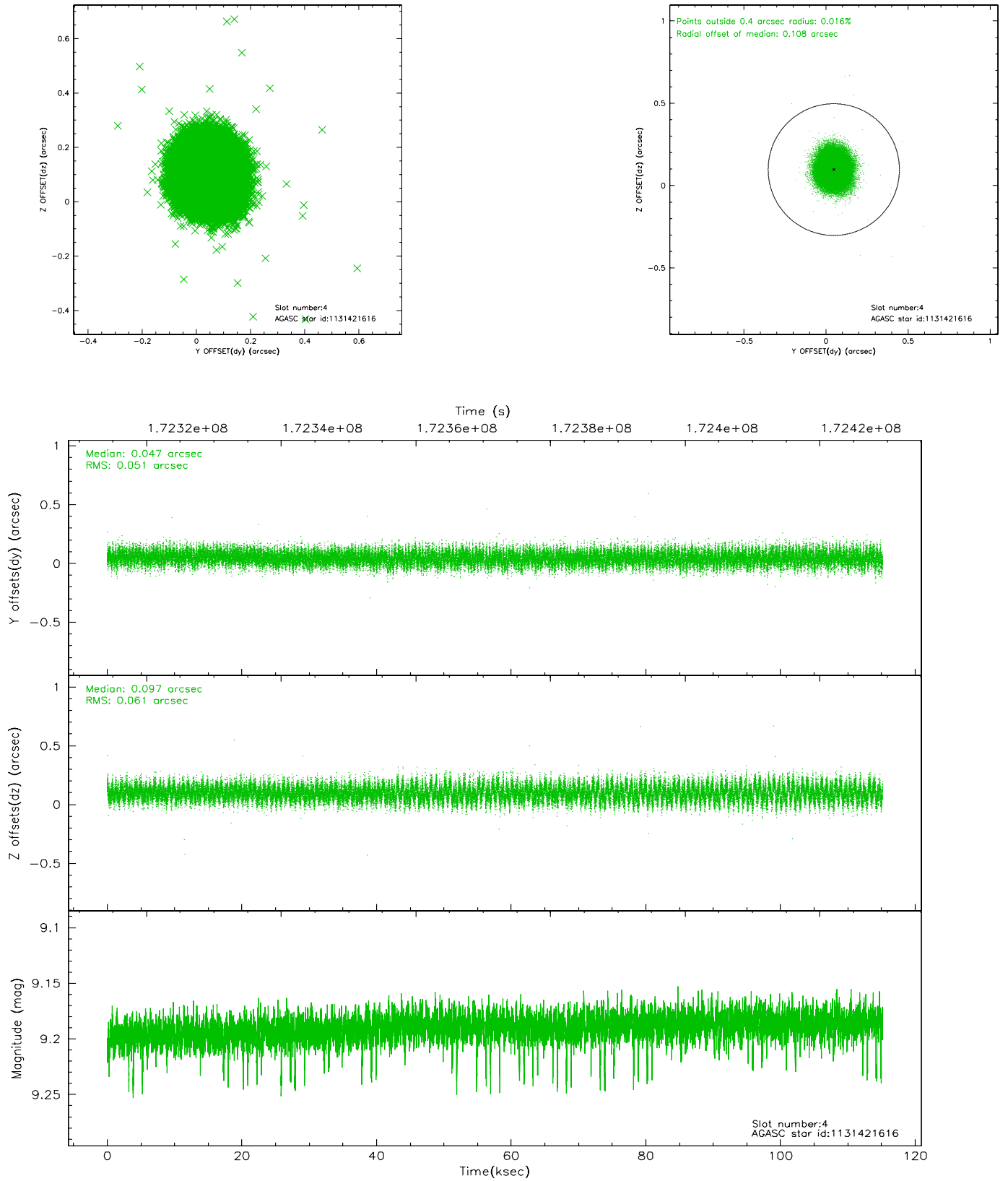
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	28098	-0.002	0.154	0.011	0.036	0.000000	0.000000	936.89	-1890.54
1	FID	ACIS-S-4	7.18	28097	0.016	-0.101	0.010	0.037	0.000000	0.000000	2154.29	13.44
2	FID	ACIS-S-5	7.23	28098	-0.041	-0.040	0.008	0.033	0.000000	0.000000	-1812.13	7.02
3	GUIDE	1080164440	8.96	56174	-0.009	-0.000	0.073	0.117	181.986340	-52.264623	-247.72	-1188.21
4	GUIDE	1131421616	9.19	56108	0.047	0.097	0.085	0.136	182.273623	-52.784412	1446.56	-174.70
5	GUIDE	1131423616	8.85	56179	0.024	-0.054	0.074	0.120	182.073492	-52.590429	856.97	-749.95
6	GUIDE	1131424824	9.24	56166	-0.055	-0.040	0.080	0.131	181.758646	-52.547110	853.38	-1456.29
7	GUIDE	1080189880	9.63	56154	-0.005	-0.001	0.098	0.159	182.794721	-51.898848	-1909.94	284.61

## 2.4 Star Slots

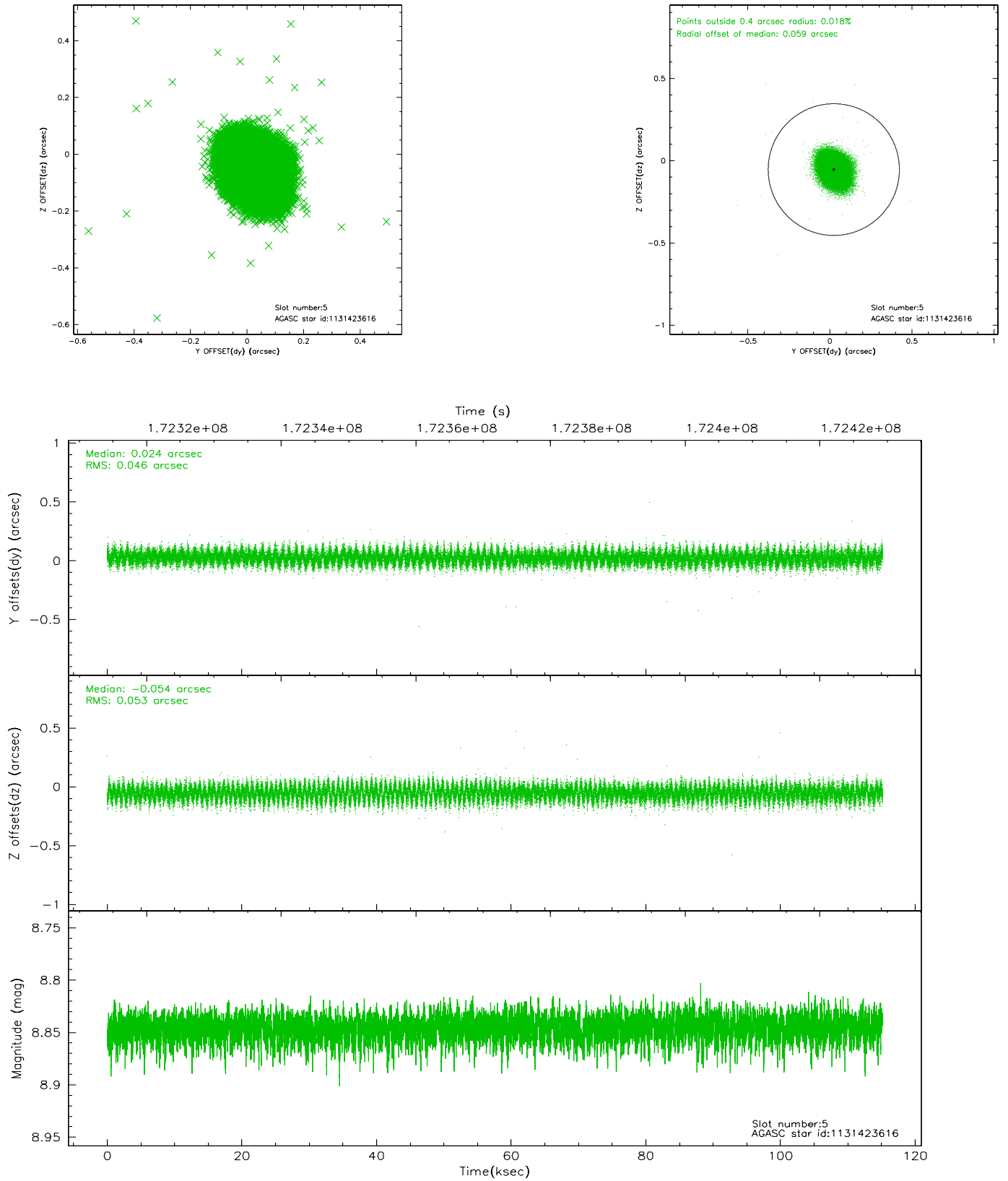
### 2.4.1 Slot 3



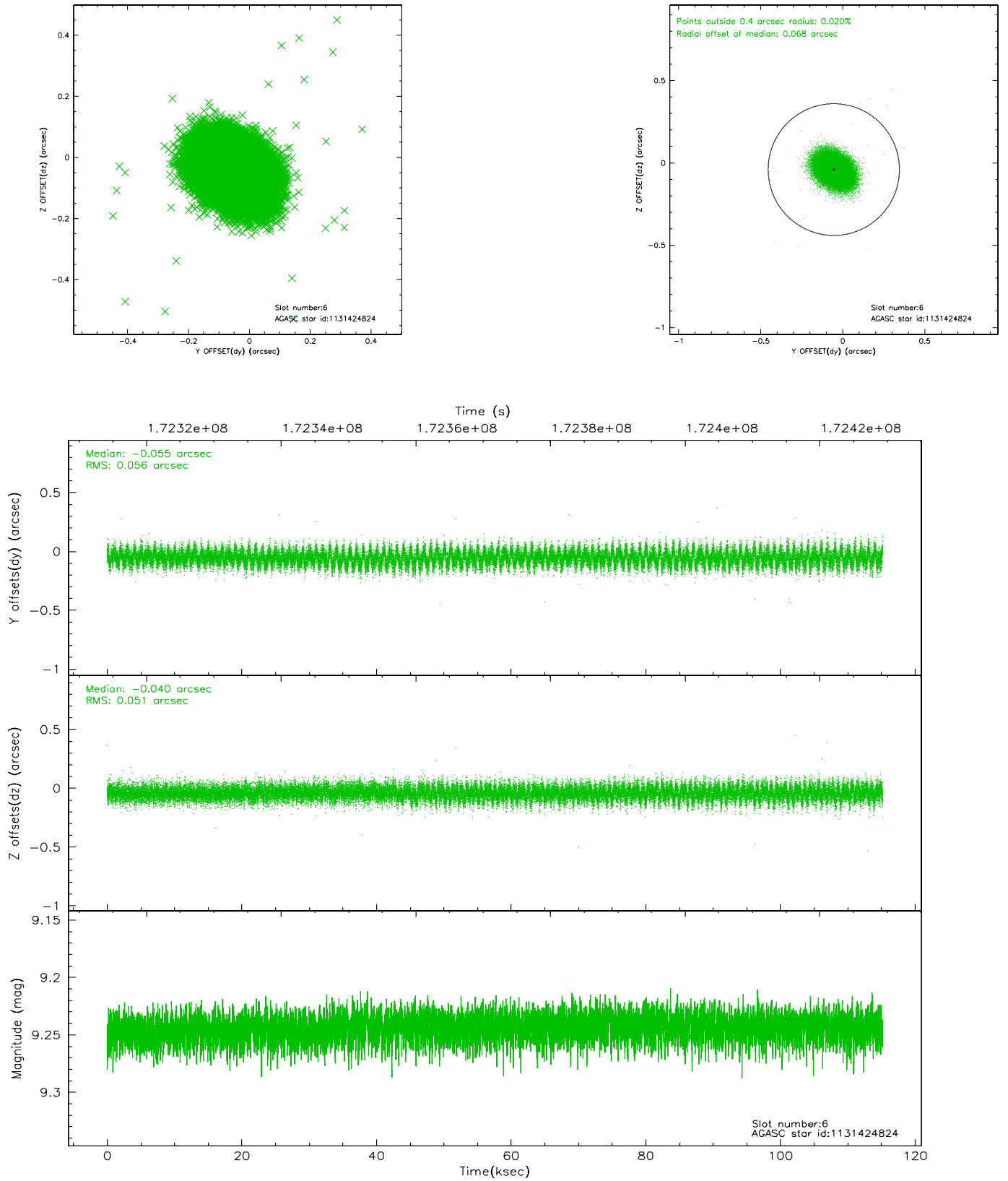
## 2.4.2 Slot 4



### 2.4.3 Slot 5

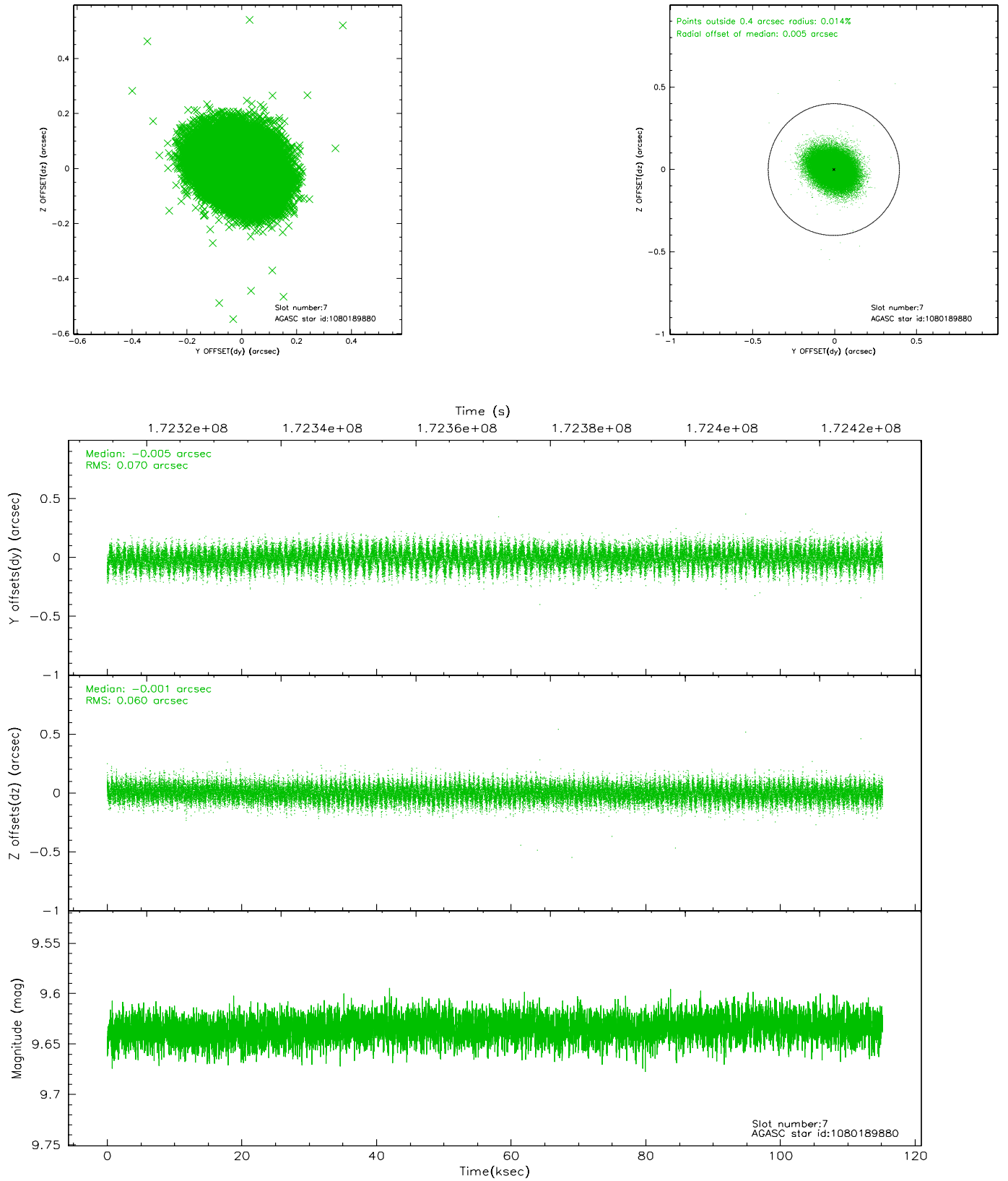


## 2.4.4 Slot 6



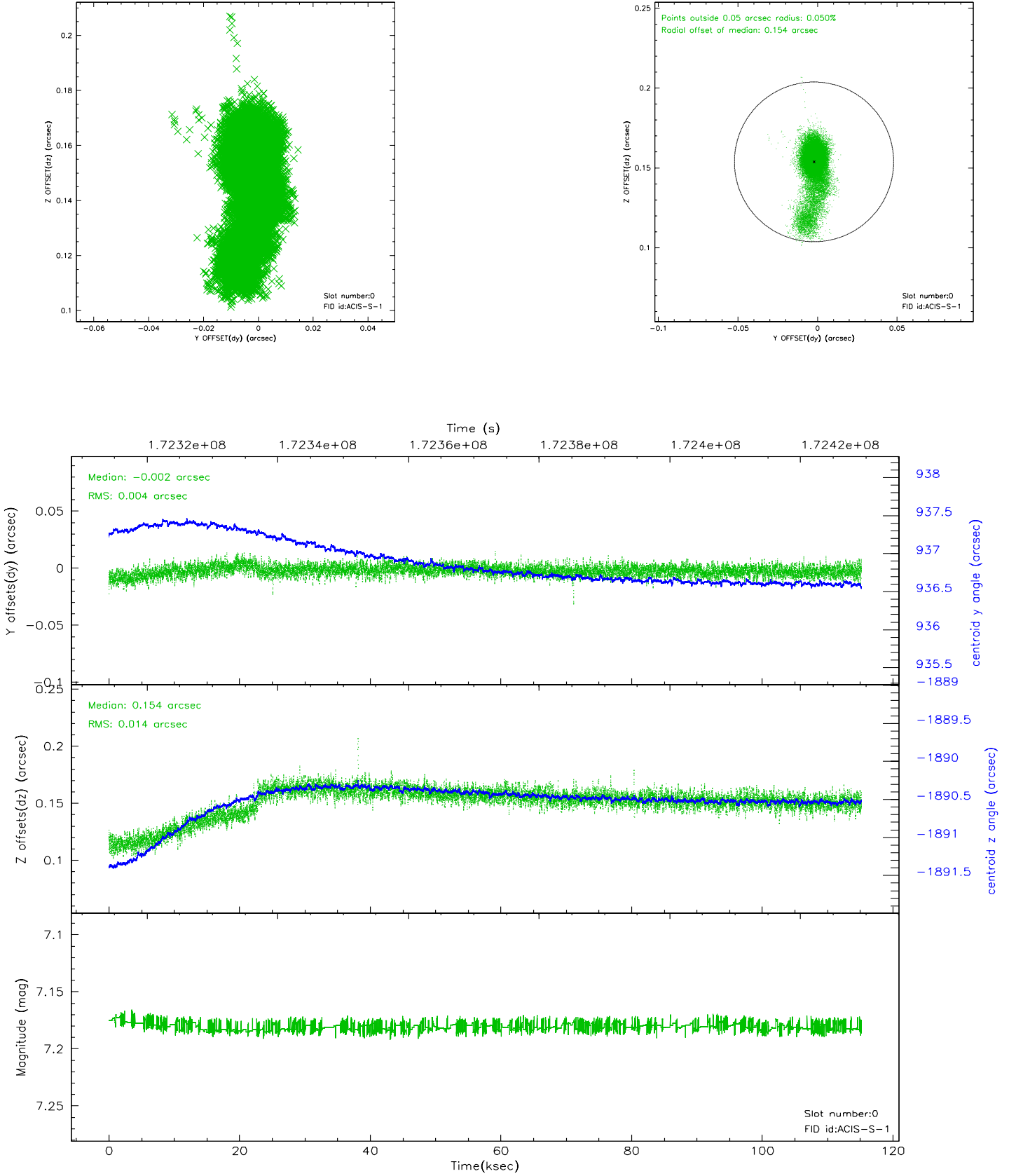


## 2.4.5 Slot 7

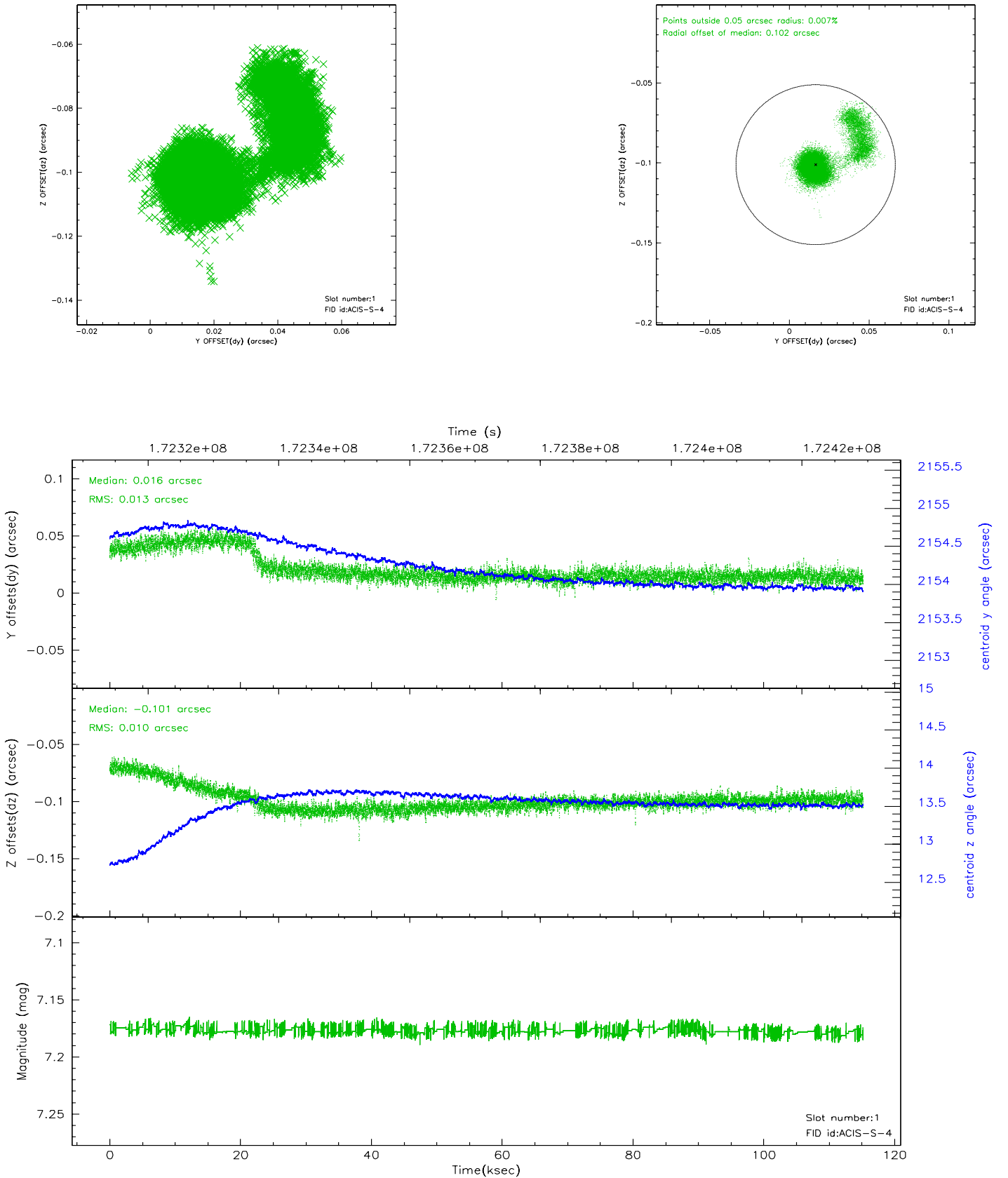


## 2.5 FID Slots

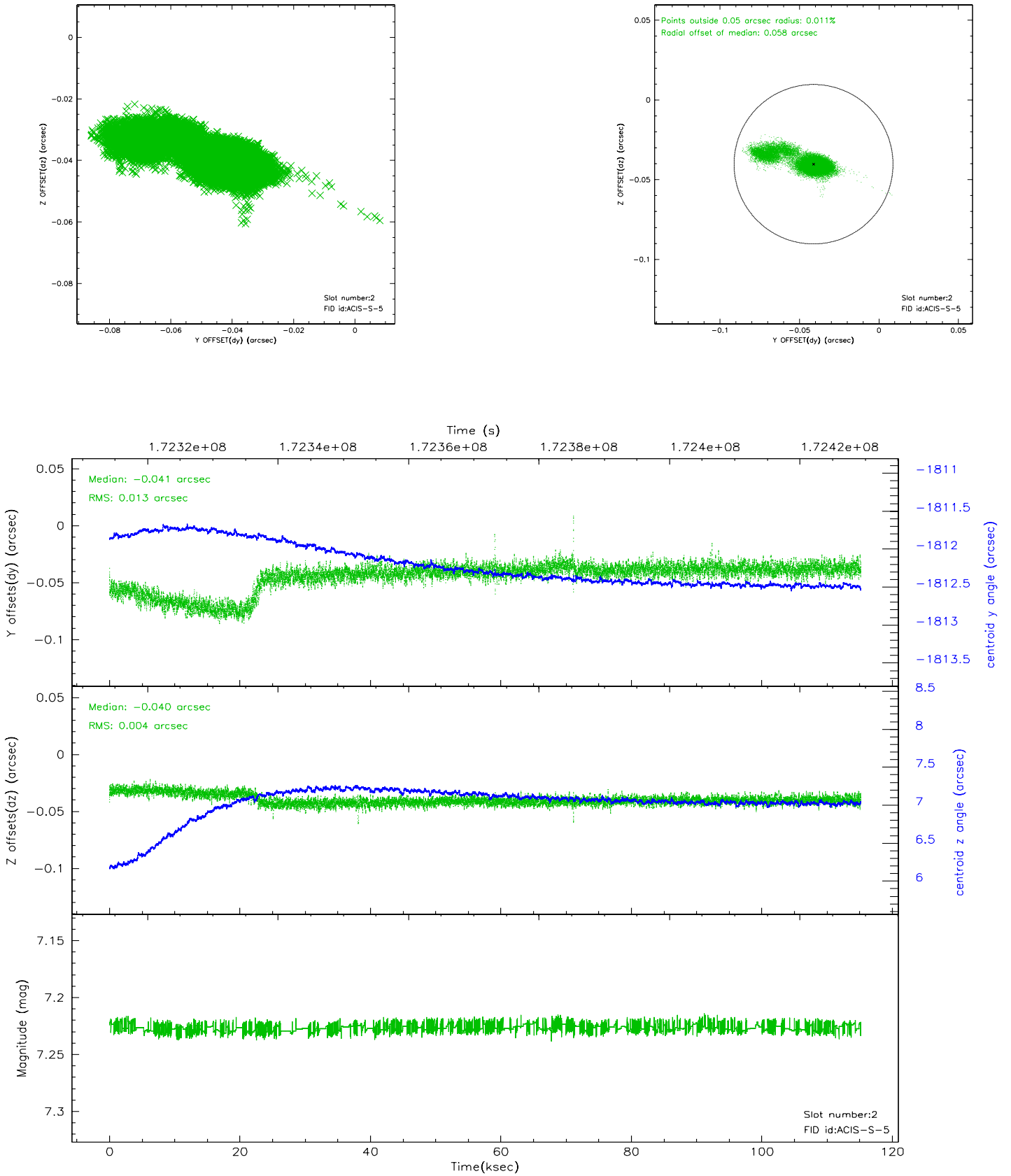
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

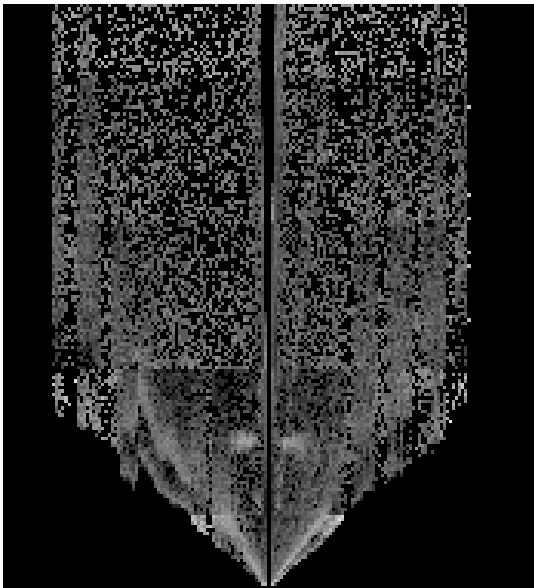


# 3 Gratings

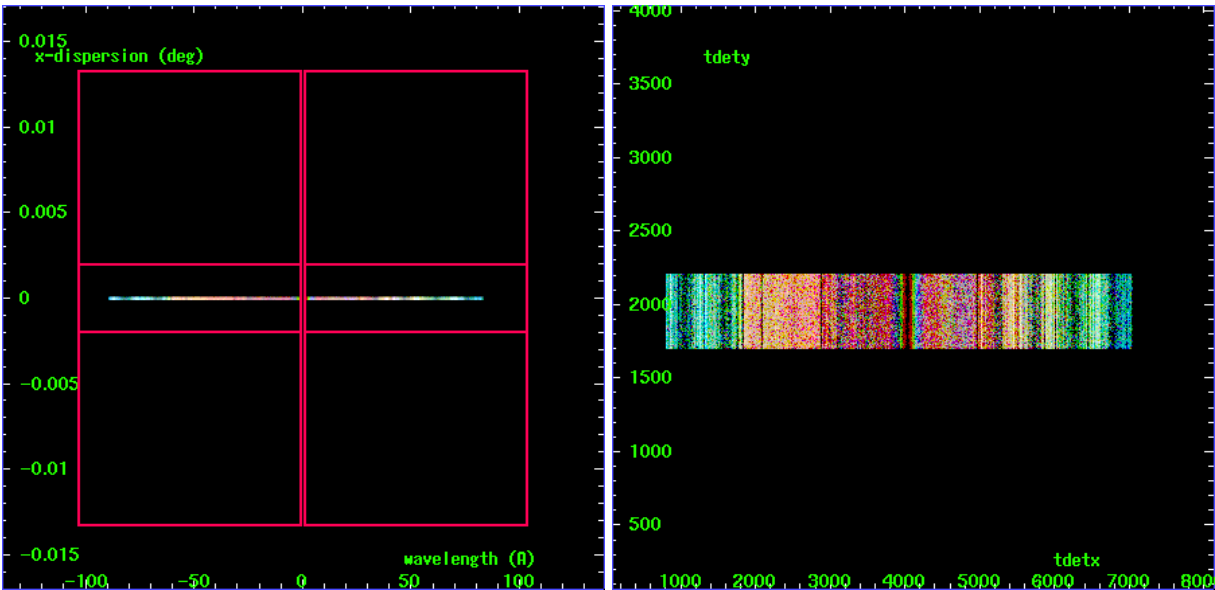
## 3.1 LETG Arm



LETG Order Sort 123



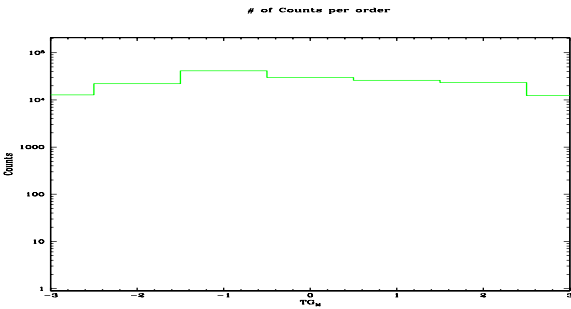
LETG Order Sort ALL



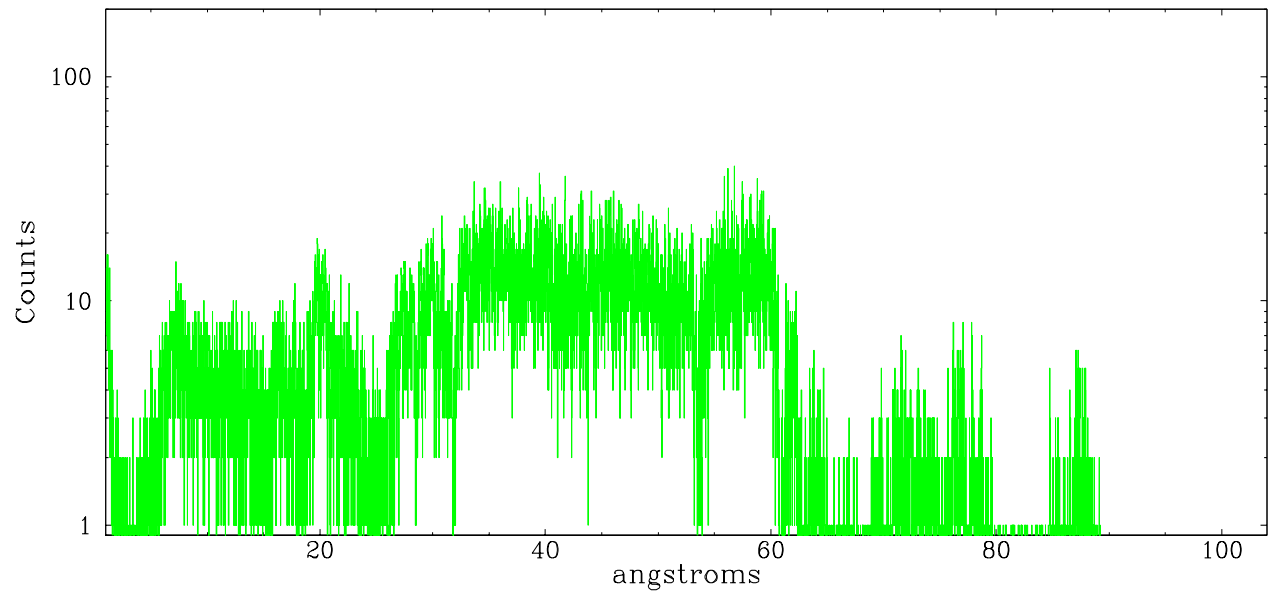
Spot Image LETG

Full Detector LETG

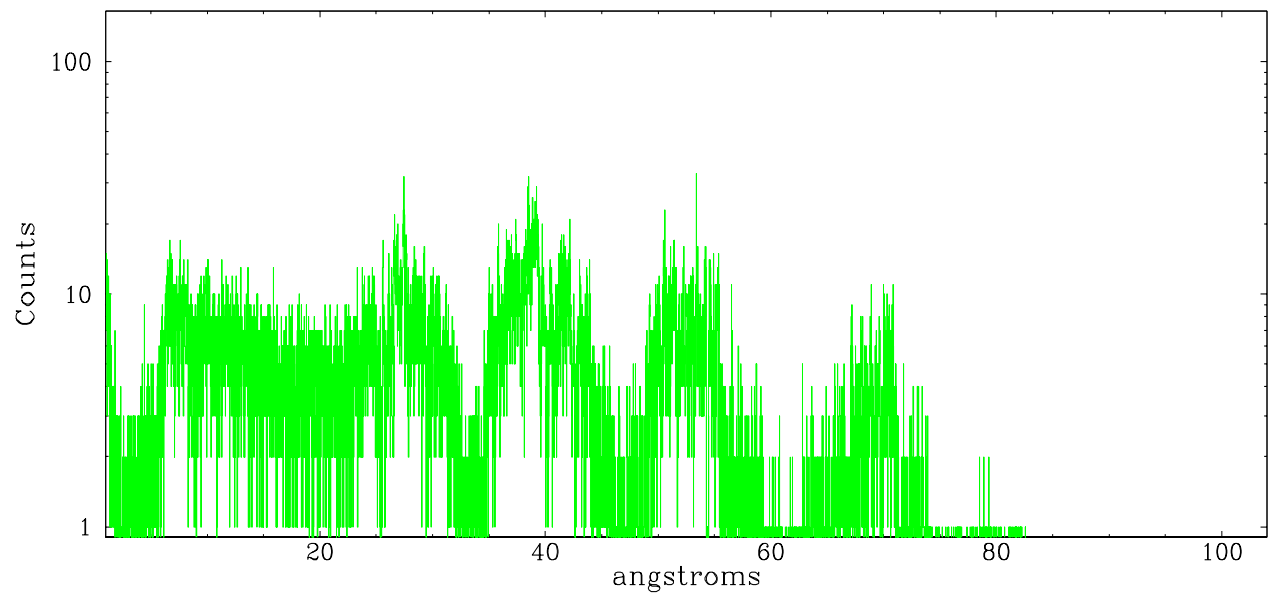
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	12705	22101	41183	29804	26026	23352	12318



leg order -1



leg order +1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.08.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	115.2

### A.2 Comments