

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 3837 - L2 Version 001  
Chandra X-Ray Center

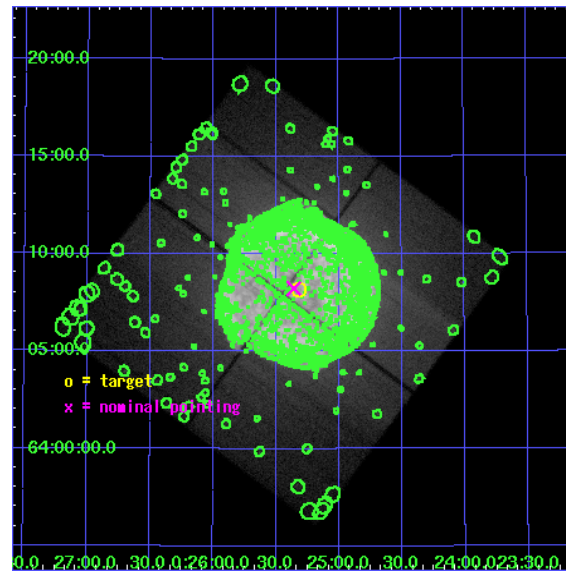
L2 Processing Date : Aug 1 2006

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# 1 Front

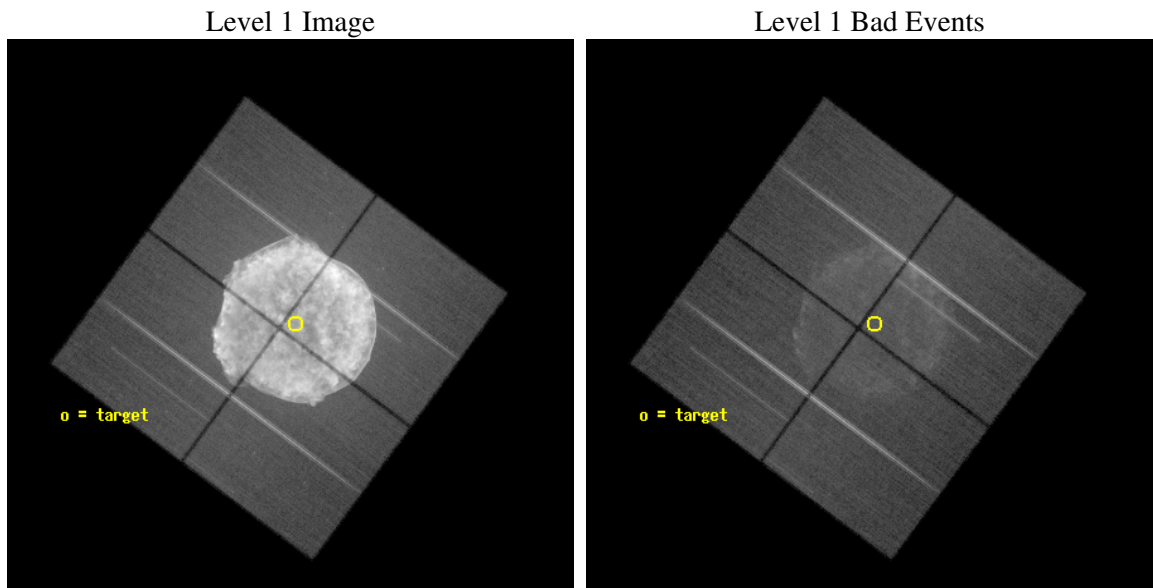
seq_num	500316
obs_id	3837
title	STUDYING HIGH MACH NUMBER SHOCKS IN YOUNG SUPERNOVA REMNANTS WITH CHANDRA
observer	Prof. John Hughes
object	TYCHO'S SNR
dtcycle	0
cycle	P
ra_targ	6.329167
dec_targ	64.136111
ra_nom	6.3394815067921
dec_nom	64.137192967782
roll_nom	36.549136376527
revision	2
ontime	147528.91774601
livetime	145601.34382645
ontime0	147532.05875608
ontime1	147532.05875608
ontime2	147535.19971633
ontime3	147528.91774601
l2events	10468833



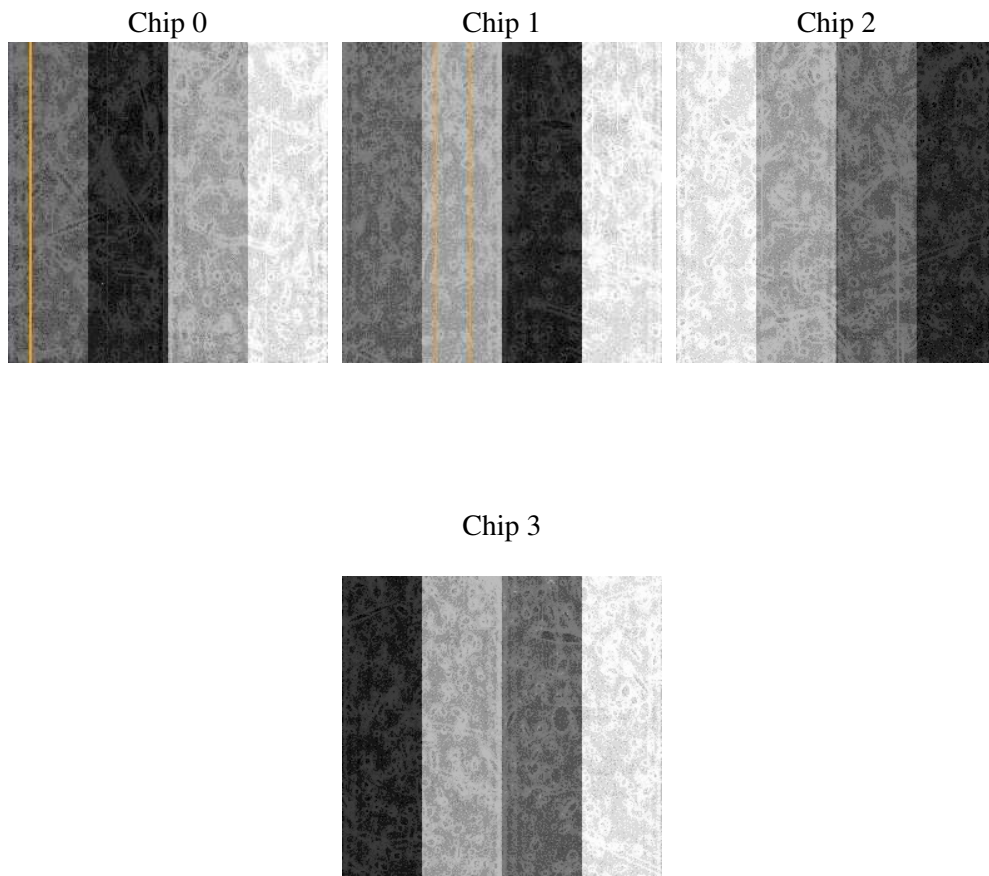
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-08-01T14:02:30
revision	2

sched_exp_time	147363.000000
ontime	147608.17481267
ontime0	147611.31582275
ontime1	147611.31582275
ontime2	147614.456783
ontime3	147608.17481267
l1events	13858107

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	2129587	2637917	3969494	5121109
rejected events	650001	653163	773183	767191
rejected %	30%	24%	19%	14%

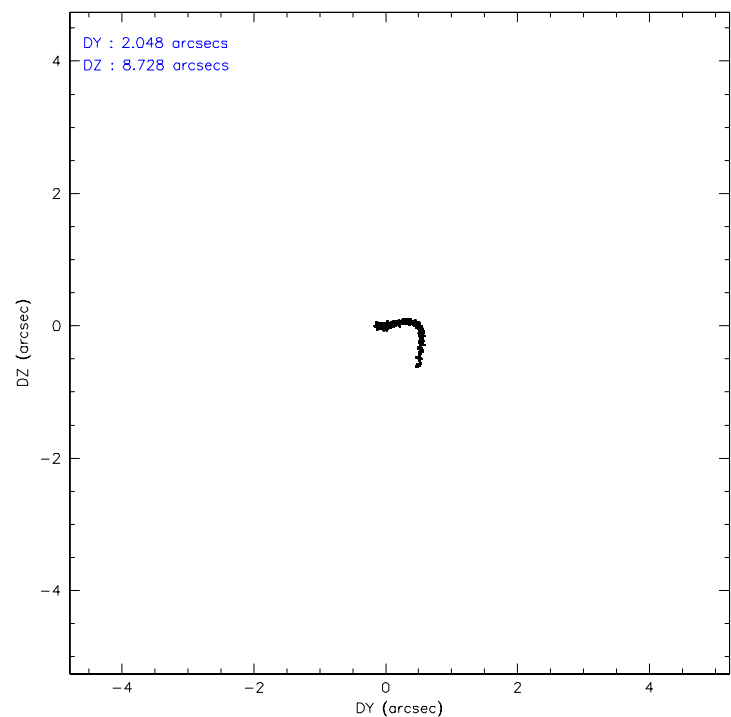
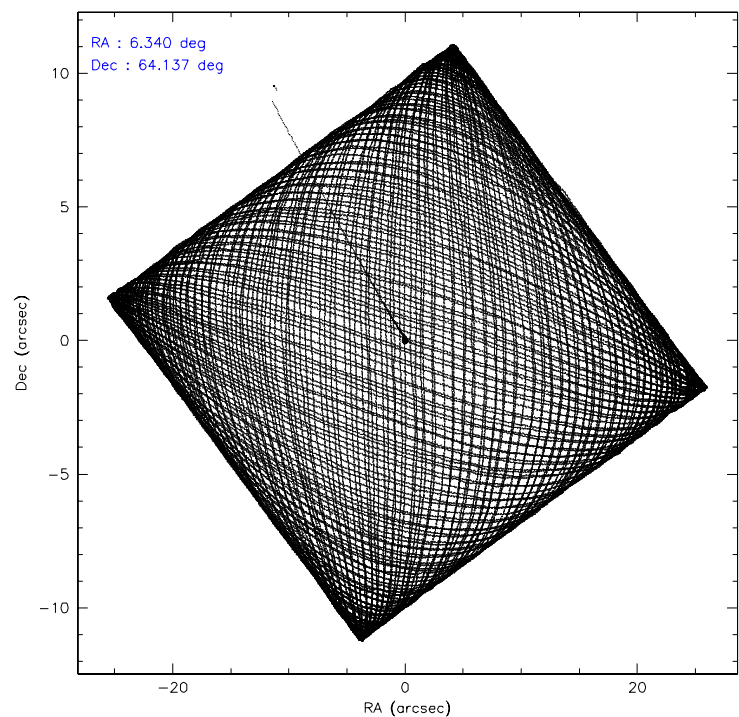
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	1214217	1624277	2692573	3662598
	57%	61%	67%	71%
grade 1 events	6508	7573	16849	22291
	0%	0%	0%	0%
grade 2 events	143258	195708	281440	389564
	6%	7%	7%	7%
grade 3 events	43718	59418	84925	115063
	2%	2%	2%	2%
grade 4 events	43346	58908	84264	115293
	2%	2%	2%	2%
grade 5 events	26819	30366	31557	39012
	1%	1%	0%	0%
grade 6 events	35899	47619	54693	73609
	1%	1%	1%	1%
grade 7 events	615822	614048	723193	703679
	28%	23%	18%	13%

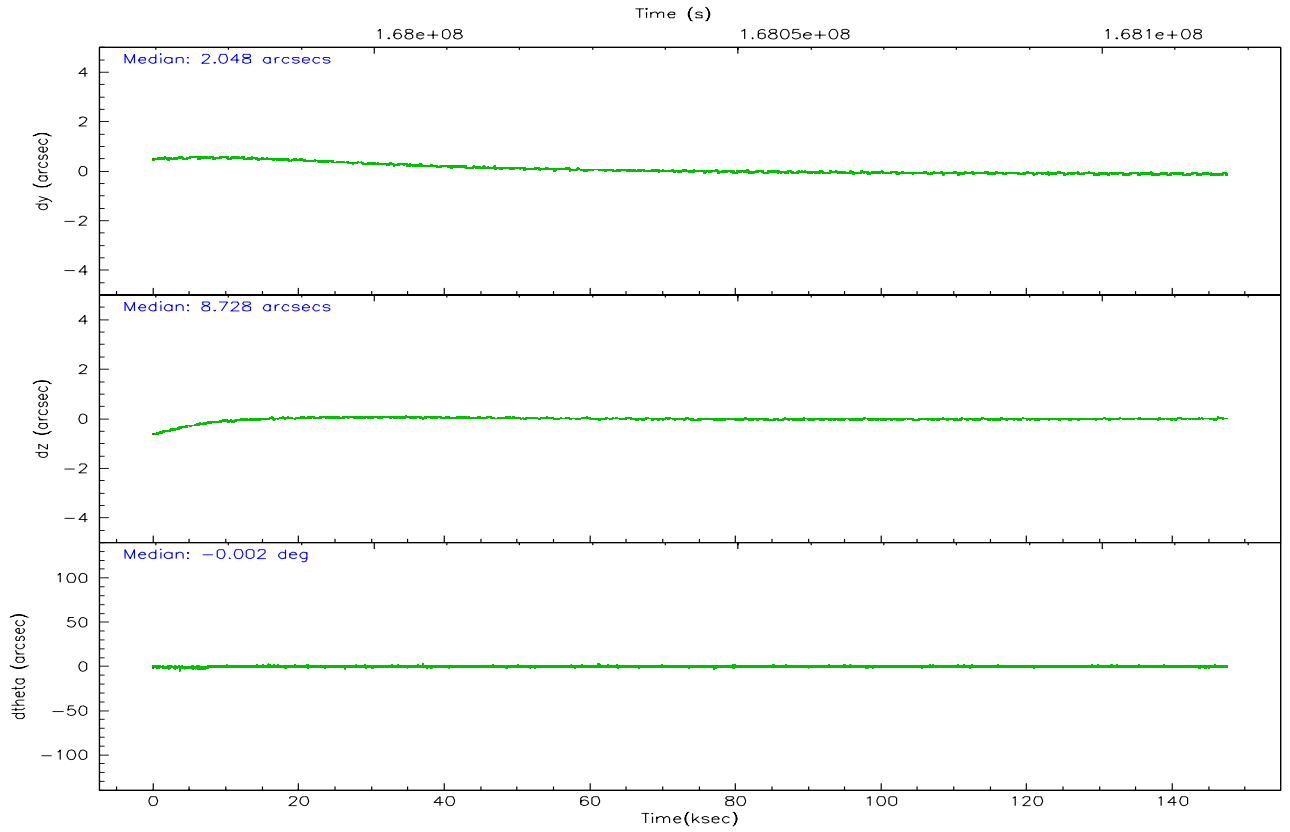
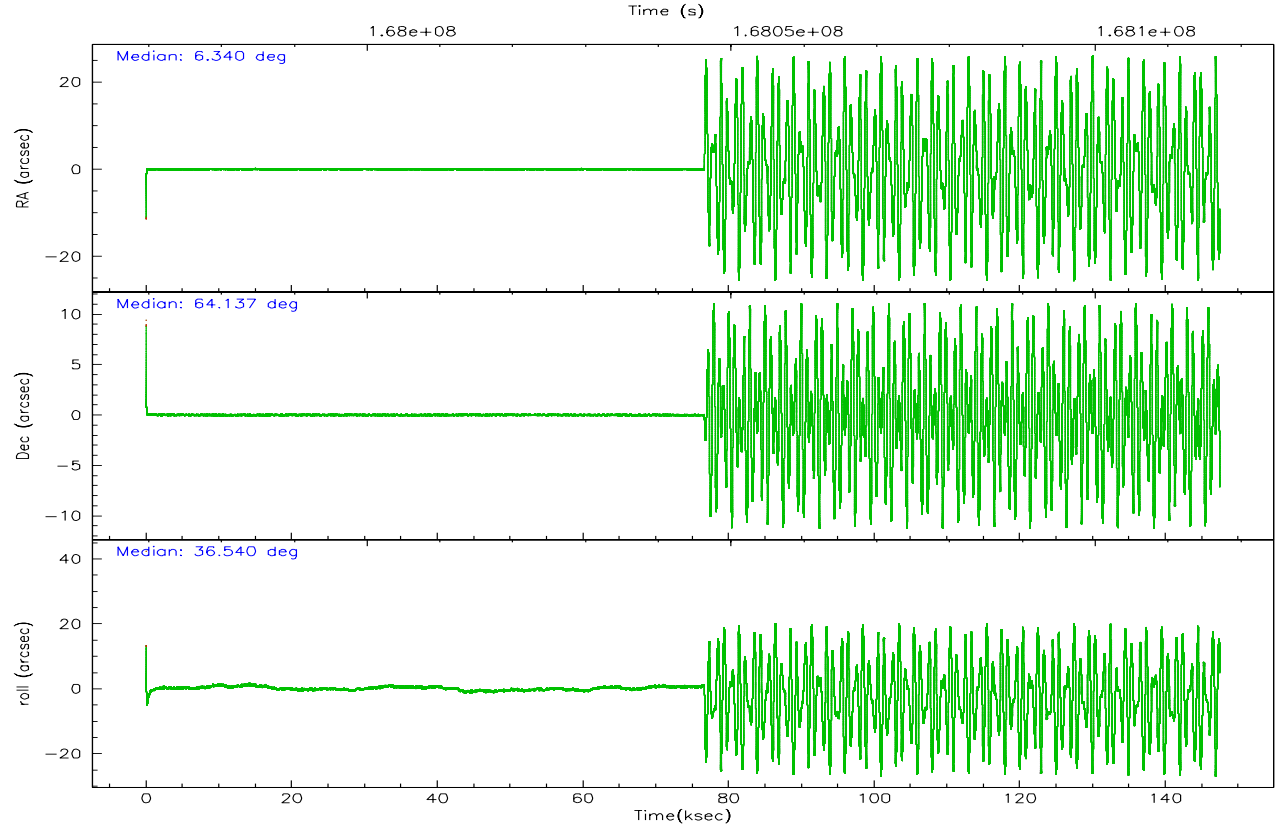


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	NONE	NONE
Pointing RA	6.314776	6.339481506792139	Alternating exposures requested	N	N
Pointing Dec	64.112026	64.13719296778223	Primary exposure time	0.000000	3.1
Pointing Roll	36.362685	36.54913637652719			
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	167969812.184000	167968850.82137			
Observation start date	2003-04-29T02:15:48	2003-04-29T02:00:50			
Observation end time	168117175.184000	168117941.69018			
Observation end date	2003-04-30T19:11:51	2003-04-30T19:25:41			
Read mode	TIMED	TIMED			

2.3 Aspect



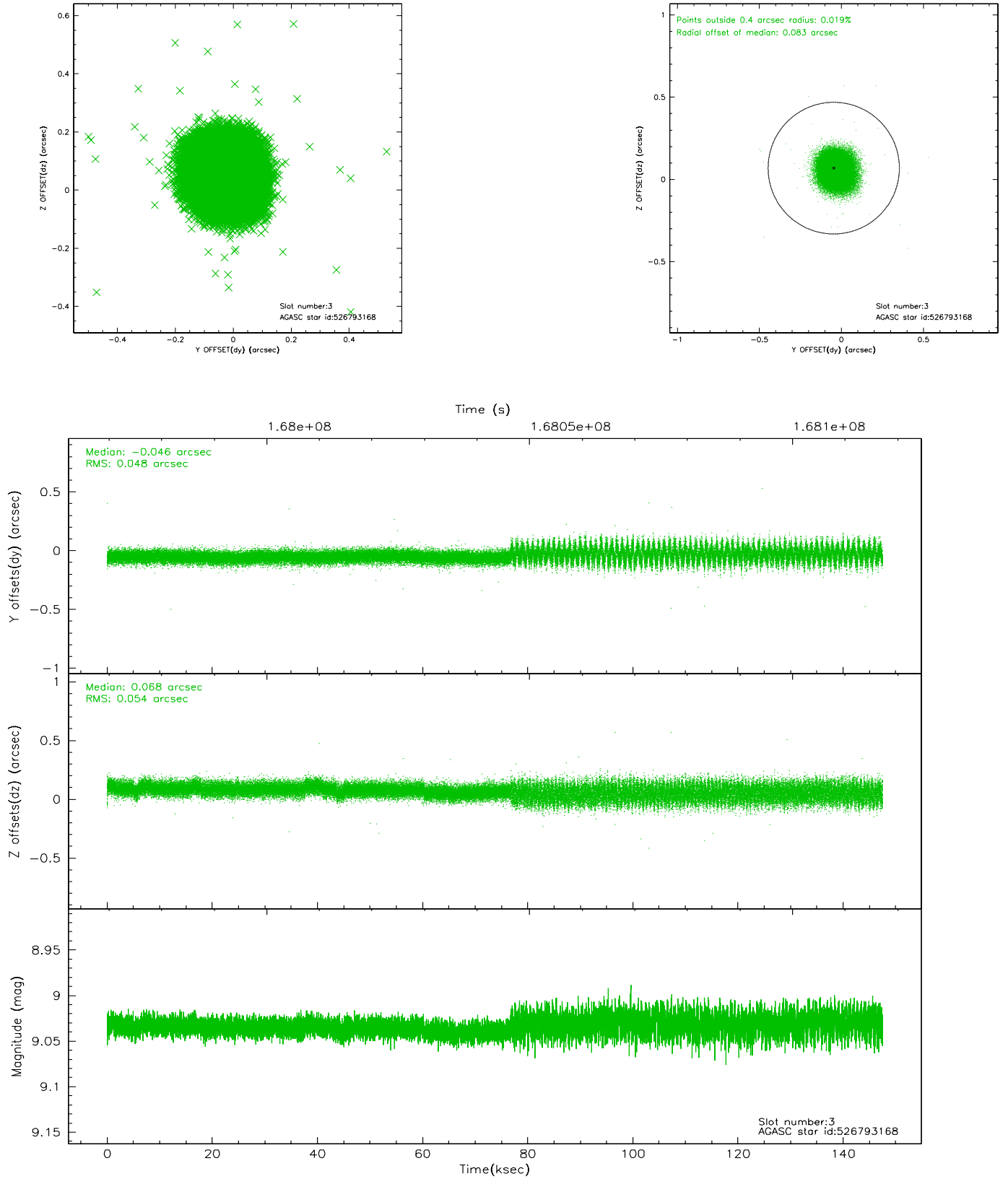


### Slot Statistics

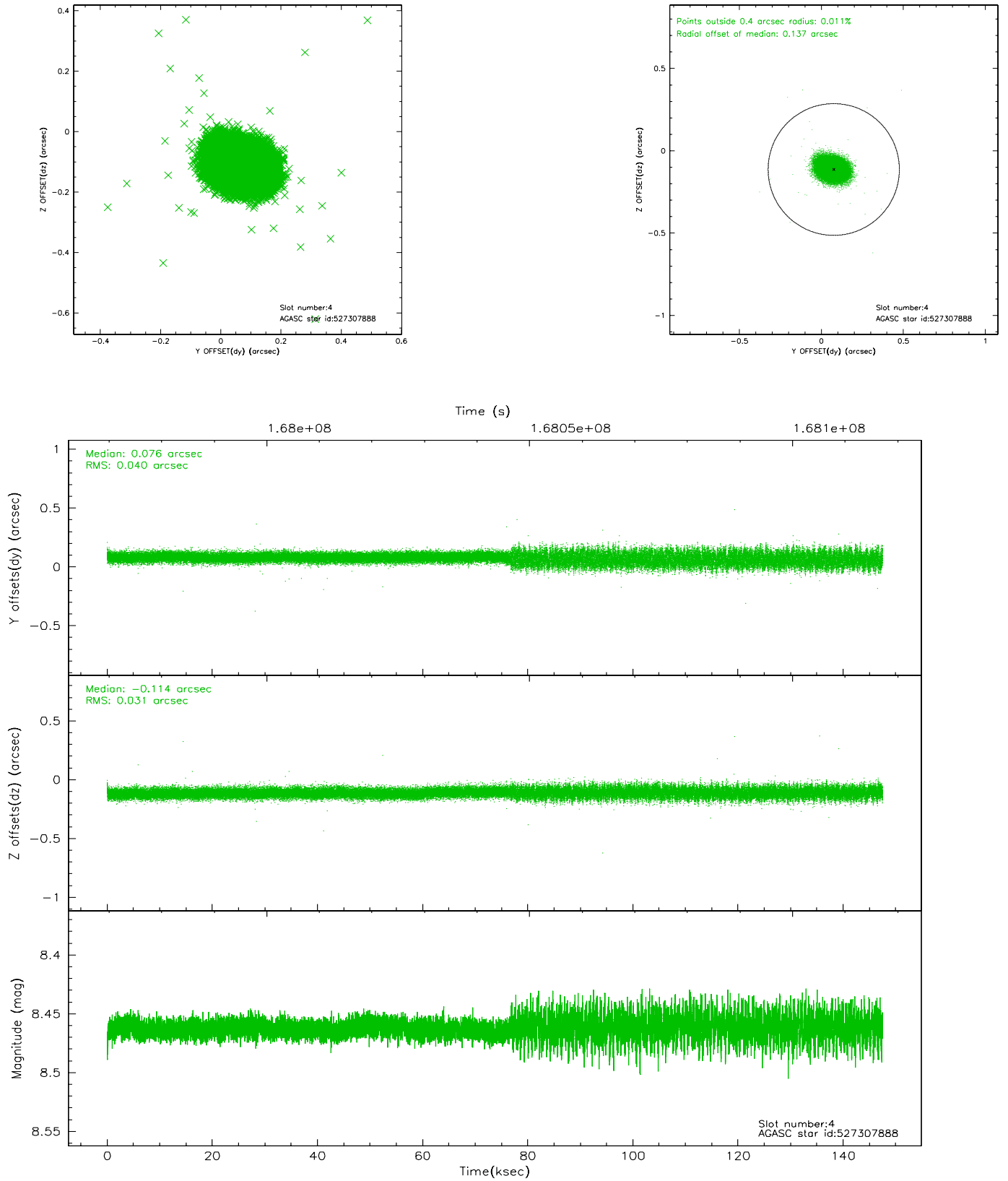
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	35987	-0.063	0.071	0.008	0.023	0.000000	0.000000	937.61	-832.08
1	FID	ACIS-I-4	7.18	35984	-0.021	0.005	0.011	0.031	0.000000	0.000000	2157.63	1067.72
2	FID	ACIS-I-5	7.23	35984	-0.014	-0.005	0.010	0.025	0.000000	0.000000	-1810.49	1065.43
3	GUIDE	526793168	9.03	71939	-0.046	0.068	0.073	0.133	6.530824	63.419623	-1196.80	-2212.94
4	GUIDE	527307888	8.46	71961	0.076	-0.114	0.051	0.093	4.965121	64.287990	-1308.61	1777.85
5	GUIDE	527309096	8.30	71961	0.004	0.045	0.051	0.090	7.726277	64.064373	1702.85	-1435.19
6	GUIDE	526791328	8.62	71938	-0.106	0.134	0.062	0.106	7.600207	63.681314	745.57	-2447.76
7	GUIDE	527306552	8.73	71958	0.074	-0.133	0.057	0.100	4.766895	63.925622	-2352.24	935.33

## 2.4 Star Slots

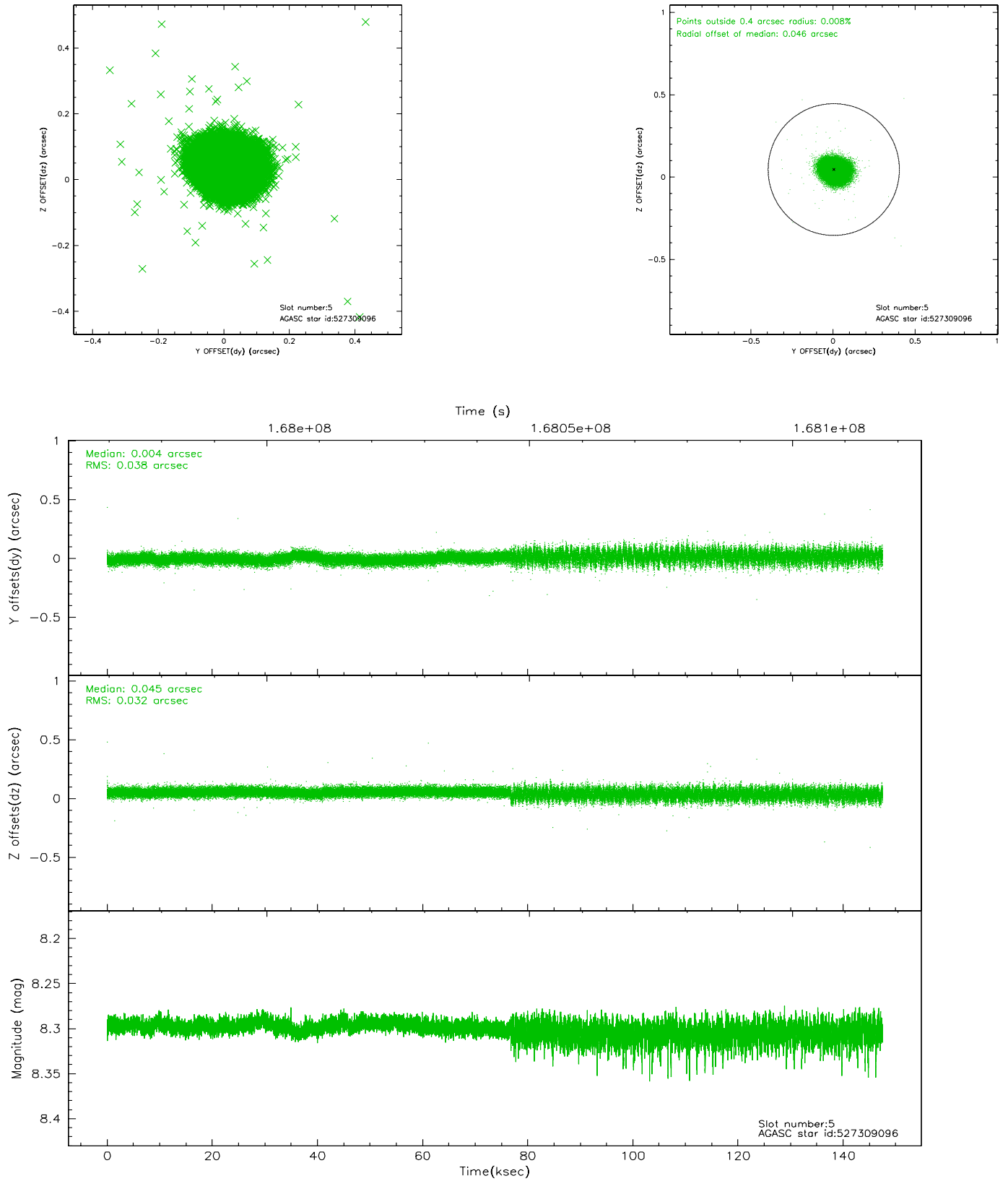
### 2.4.1 Slot 3



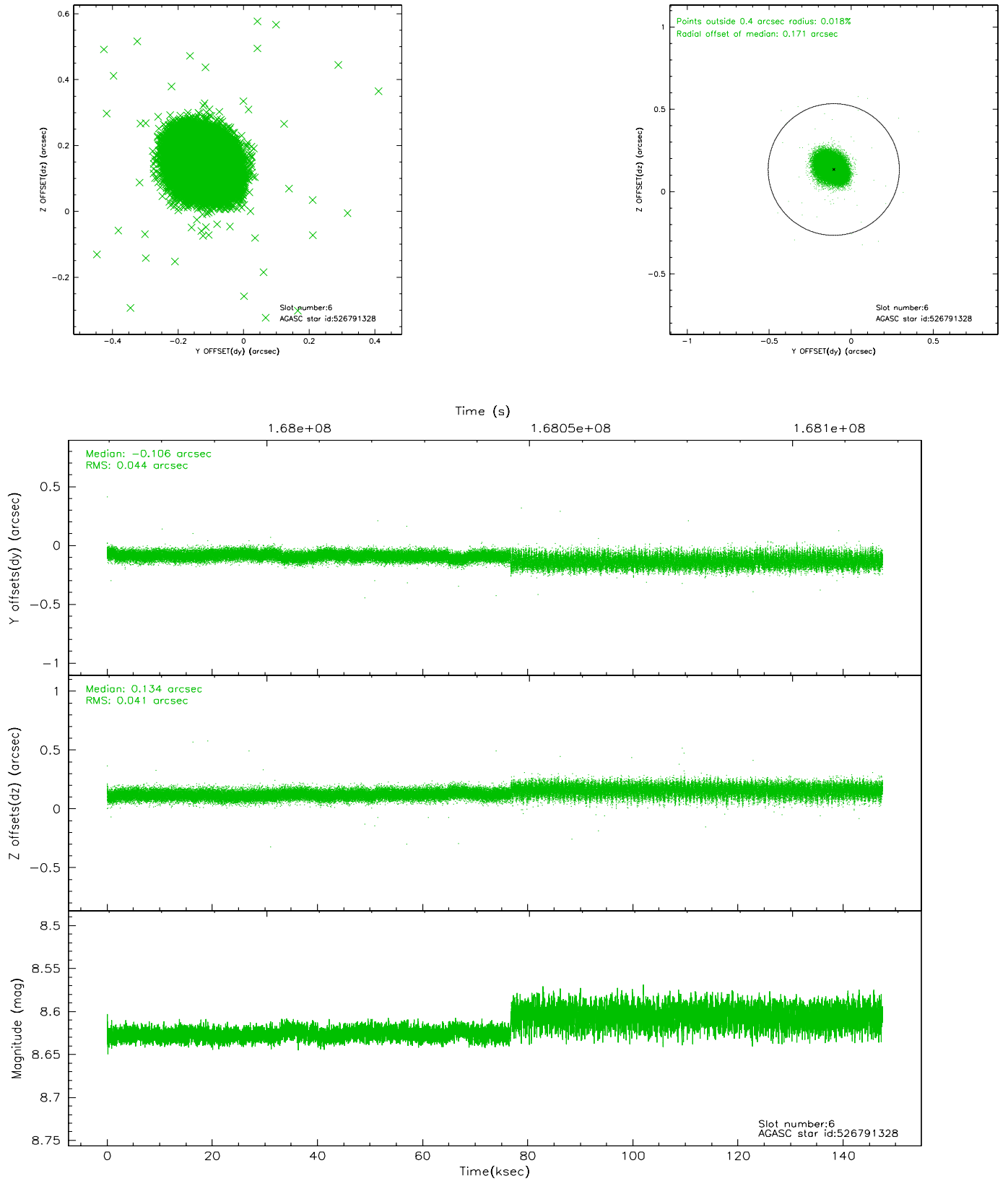
## 2.4.2 Slot 4



### 2.4.3 Slot 5

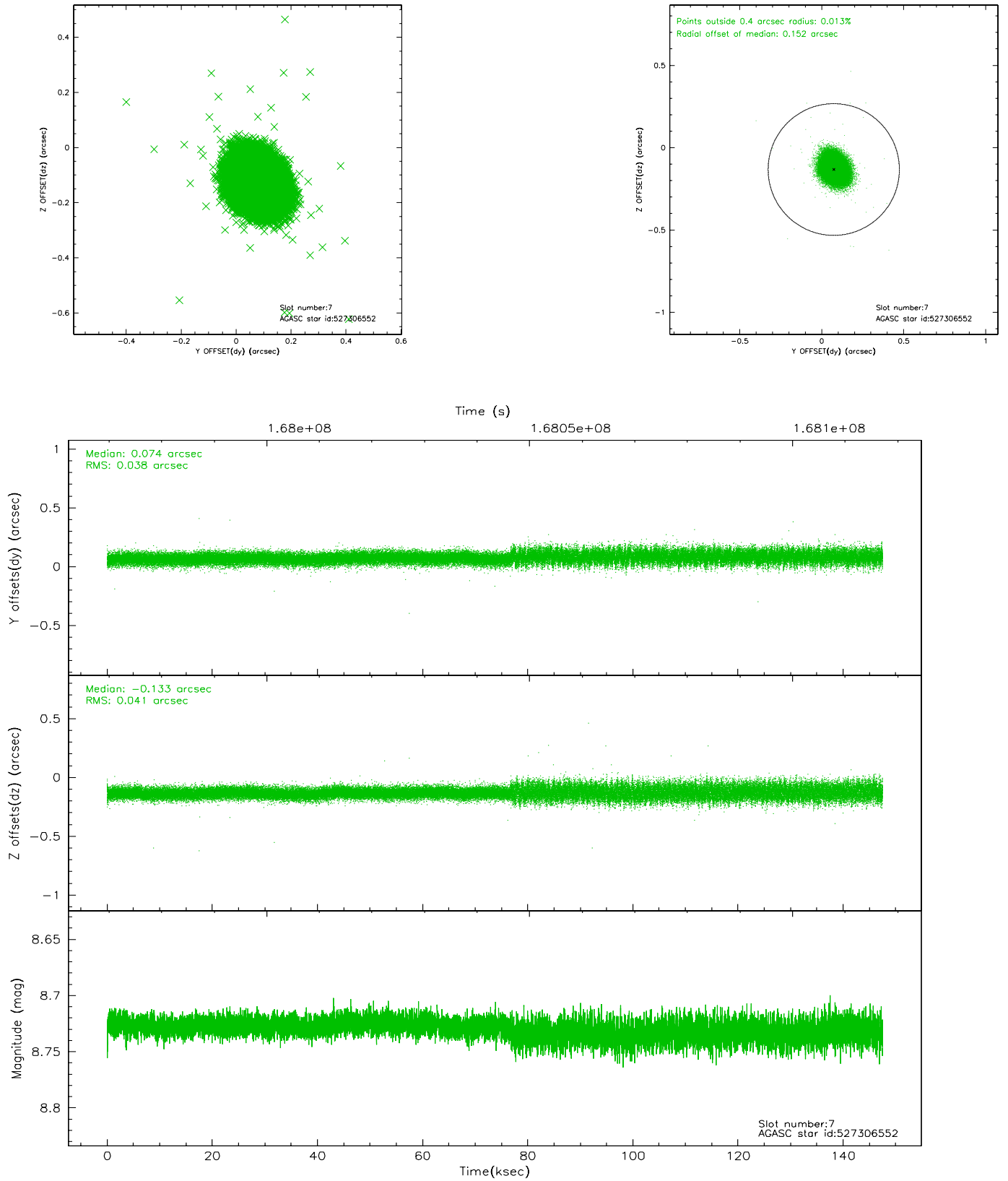


## 2.4.4 Slot 6



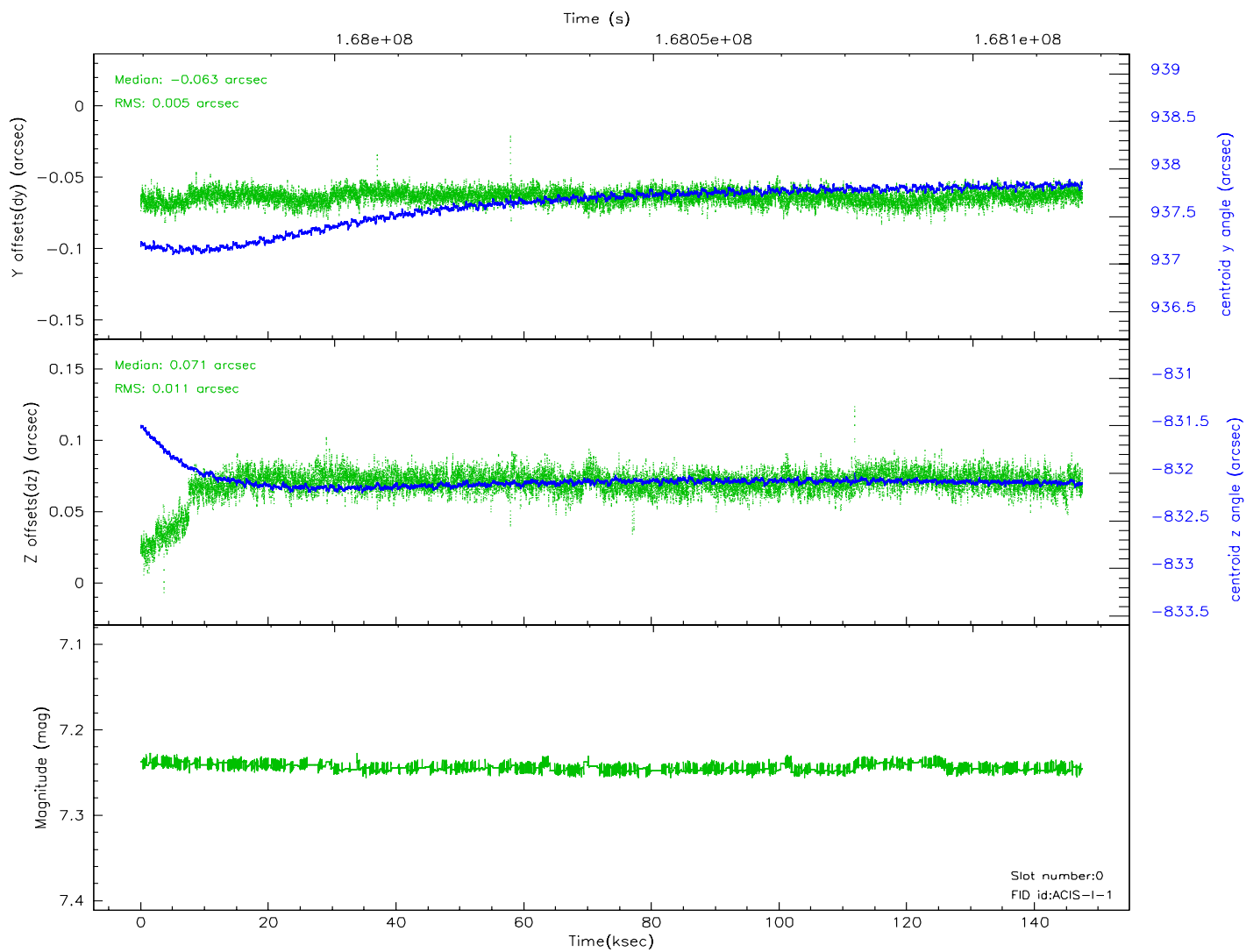
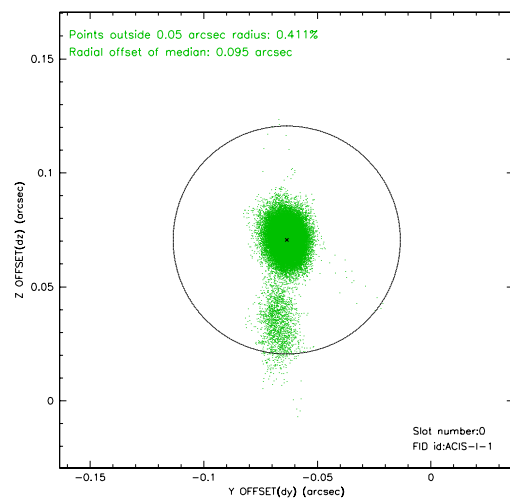
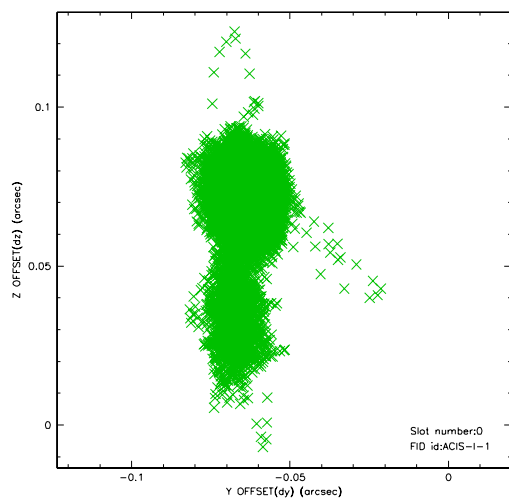


## 2.4.5 Slot 7

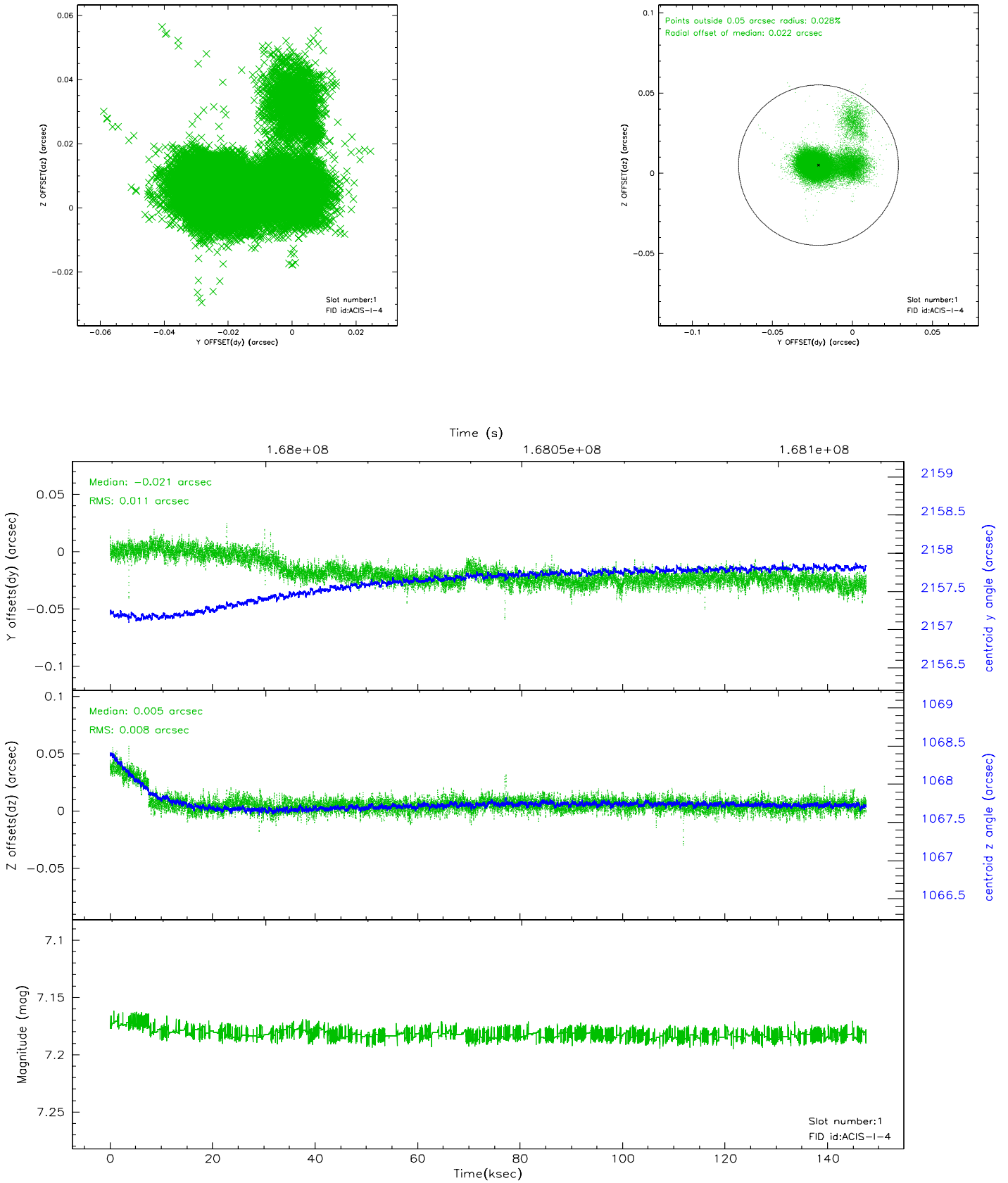


## 2.5 FID Slots

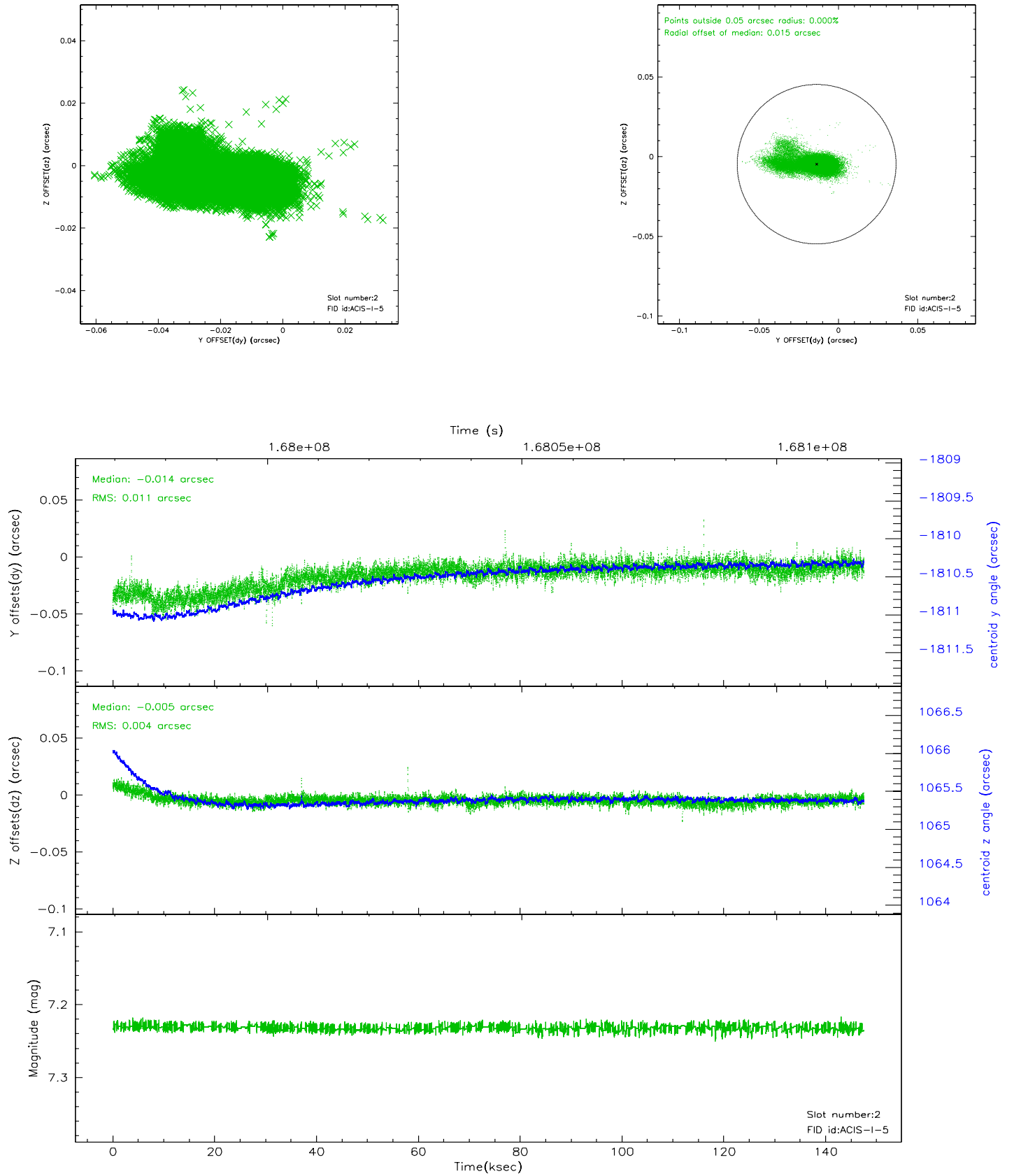
### 2.5.1 Slot 0



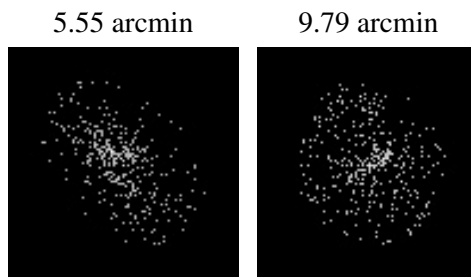
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.08.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	147.528

## A.2 Comments

Due to an error, this observation was obtained with NO dithering of the spacecraft for the first approximately 75 ksec.

Dithering is standard procedure. The error was discovered and corrected after about 75 ksec and the rest of the observation was obtained with dithering turned on. For the portioonn of the observation taken with dithering turned OFF, the chip boundaries appear sharper and the pixel-to-pixel variations are greater than if the spacecraft had obtained the data in dither mode.