

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2702 - L2 Version 001  
Chandra X-Ray Center

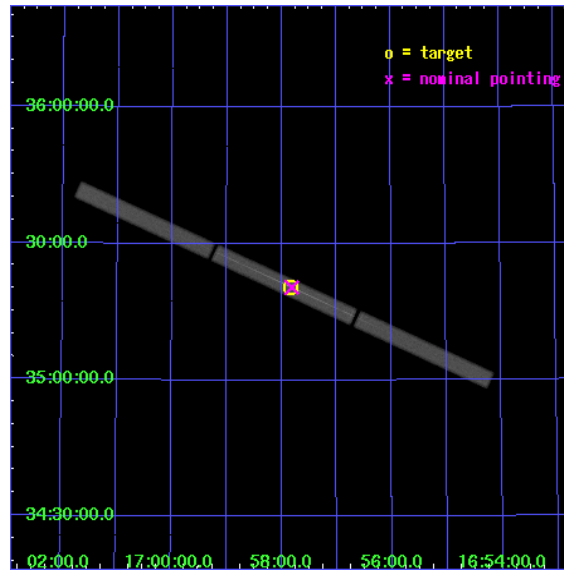
L2 Processing Date : Sep 21 2006

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Parameters . . . . .	4
2.1.3	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	LETG Arm . . . . .	17
<b>A</b>	<b>Summary</b>	<b>19</b>
A.1	Status . . . . .	19
A.2	Comments . . . . .	19

# 1 Front

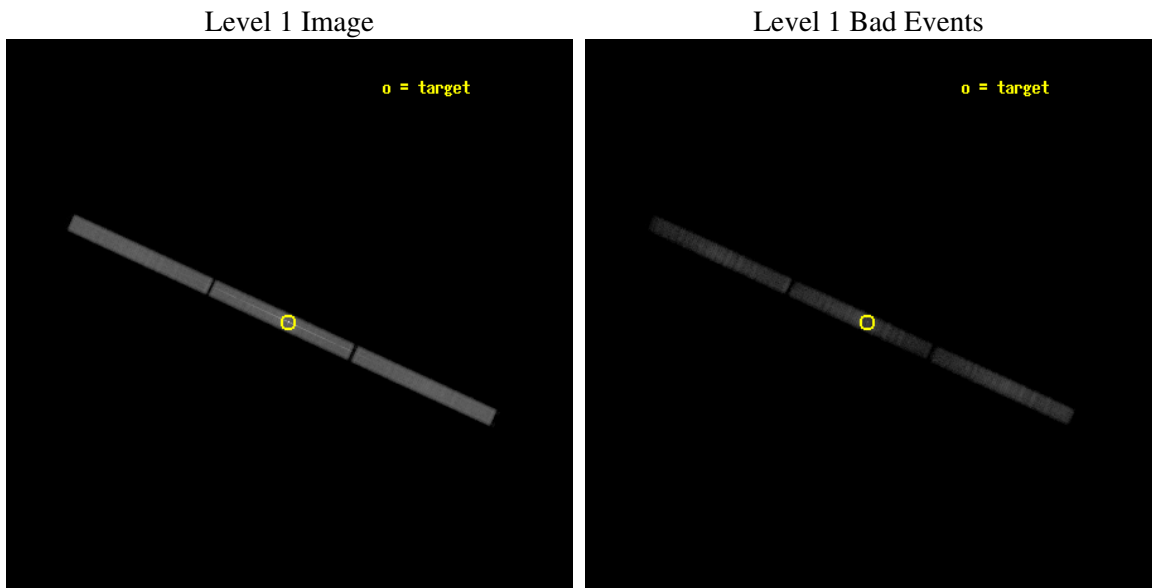
seq_num	400182
obs_id	2702
title	HIGH RESOLUTION SPECTROSCOPY OF HERCULES X-1
observer	Dr. Daniel Scott
object	HER X-1 MAIN HI PEAK
ra_targ	254.4575
dec_targ	35.342472
ra_nom	254.45238102066
dec_nom	35.340685205233
roll_nom	204.49355939031
revision	2
ontime	8855.2316129506
livetime	8801.422230381
l2events	403057



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.3
date	2006-09-21T04:53:20
revision	2

sched_exp_time	9000.000000
ontime	8951.3253668845
l1events	604911

### 2.1.3 Events

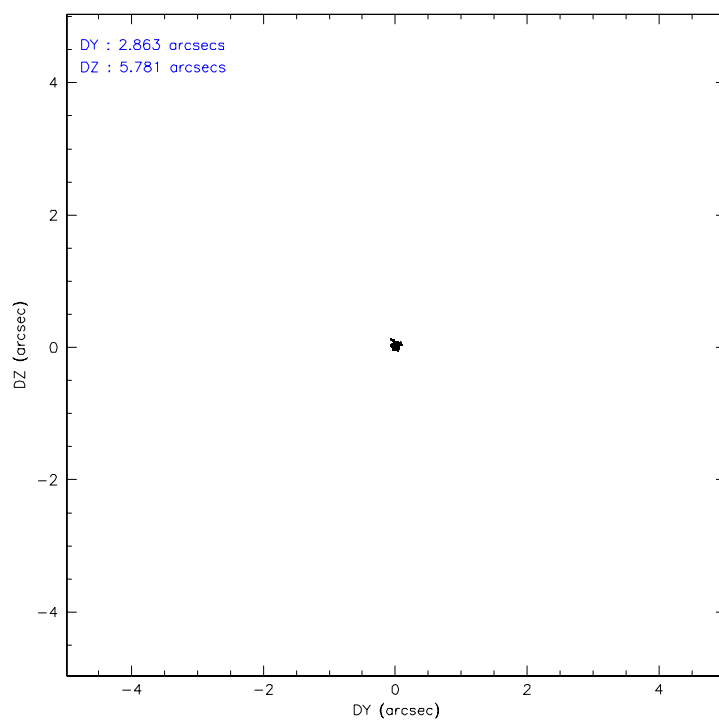
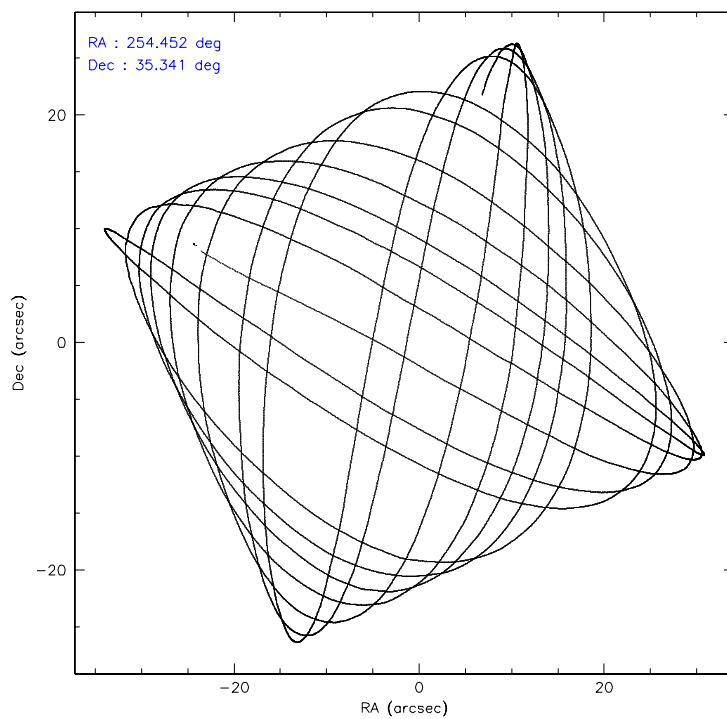
Level 1 Events

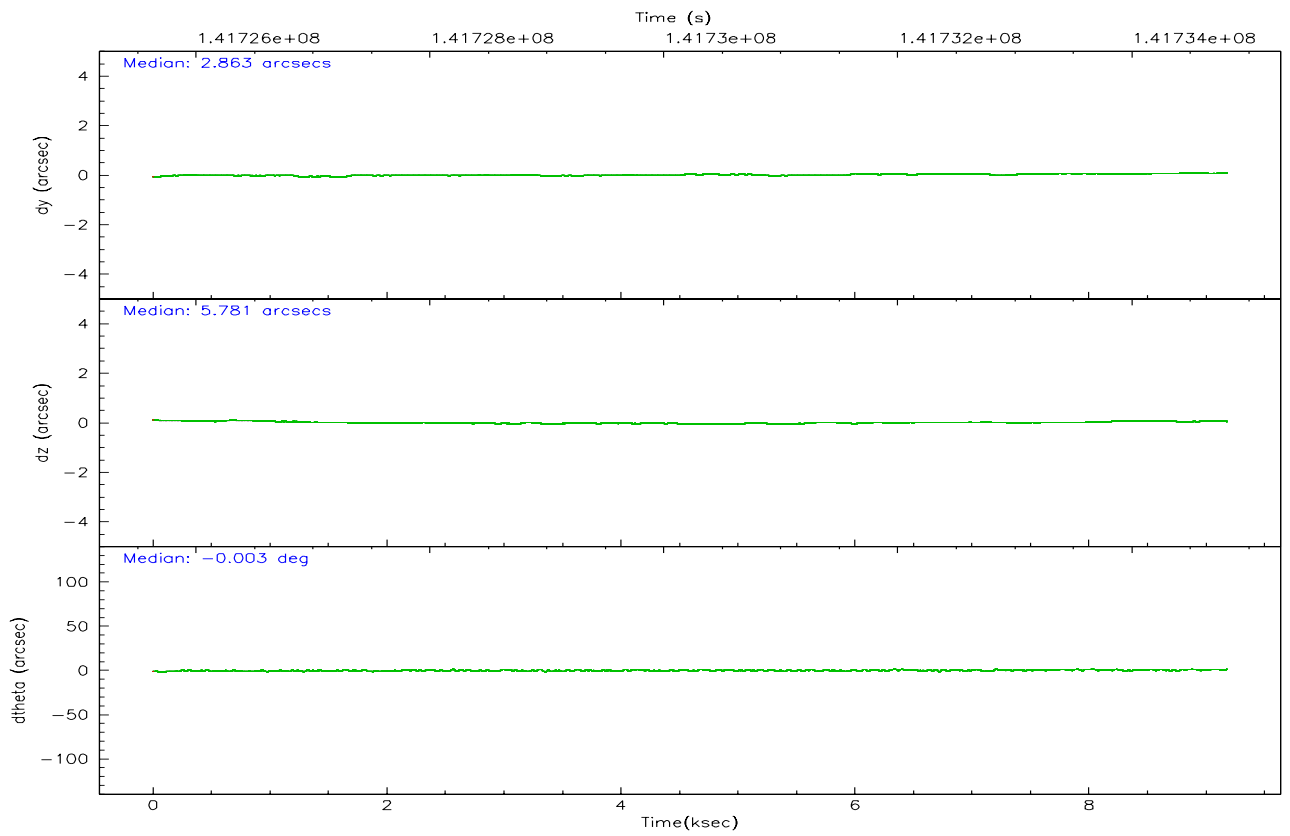
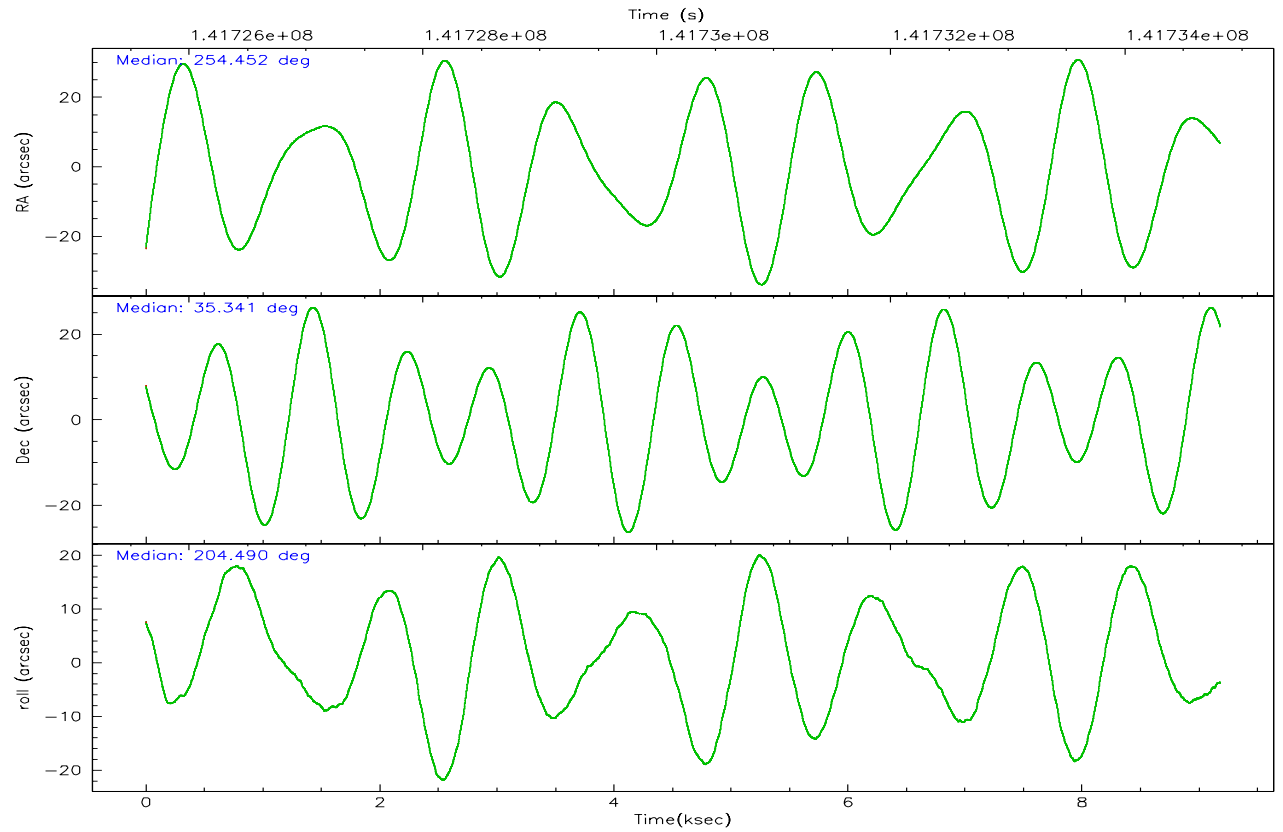
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	193142	216390	195379
rejected events	44411	48265	53912
rejected %	22%	22%	27%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar format version number	6	6
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
Pointing RA	254.471136	254.4523810206564			
Pointing Dec	35.364728	35.34068520523339			
Pointing Roll	204.415371	204.4935593903074			
Window start time	141704584.184000	141704584.184000			
Window stop time	141743344.184000	141743344.184000			
SIM focus pos (mm)	-1.429586	-1.428180813131781			
SIM defocus (mm)	0.1037507710433287	0.1051558262725154			
SIM translation stage pos (mm)	250.455976	250.466033080201			
SIM translation stage offset (mm)	0	-0.01005468664627074			
Phase constraints	Y	Y			
Phase period	34.853430	34.853430			
Phase epoch	52242.791000	52242.791000			
Phase start	0.050000	0.050000			
Phase end	0.100000	0.100000			
Phase start error	0.001000	0.001000			
Phase end error	0.001000	0.001000			
Observation start time	141725813.184000	141724982.40307			
Observation start date	2002-06-29T08:15:49	2002-06-29T08:03:02			
Observation end time	141734813.184000	141735719.79101			
Observation end date	2002-06-29T10:45:49	2002-06-29T11:01:59			

## 2.3 Aspect





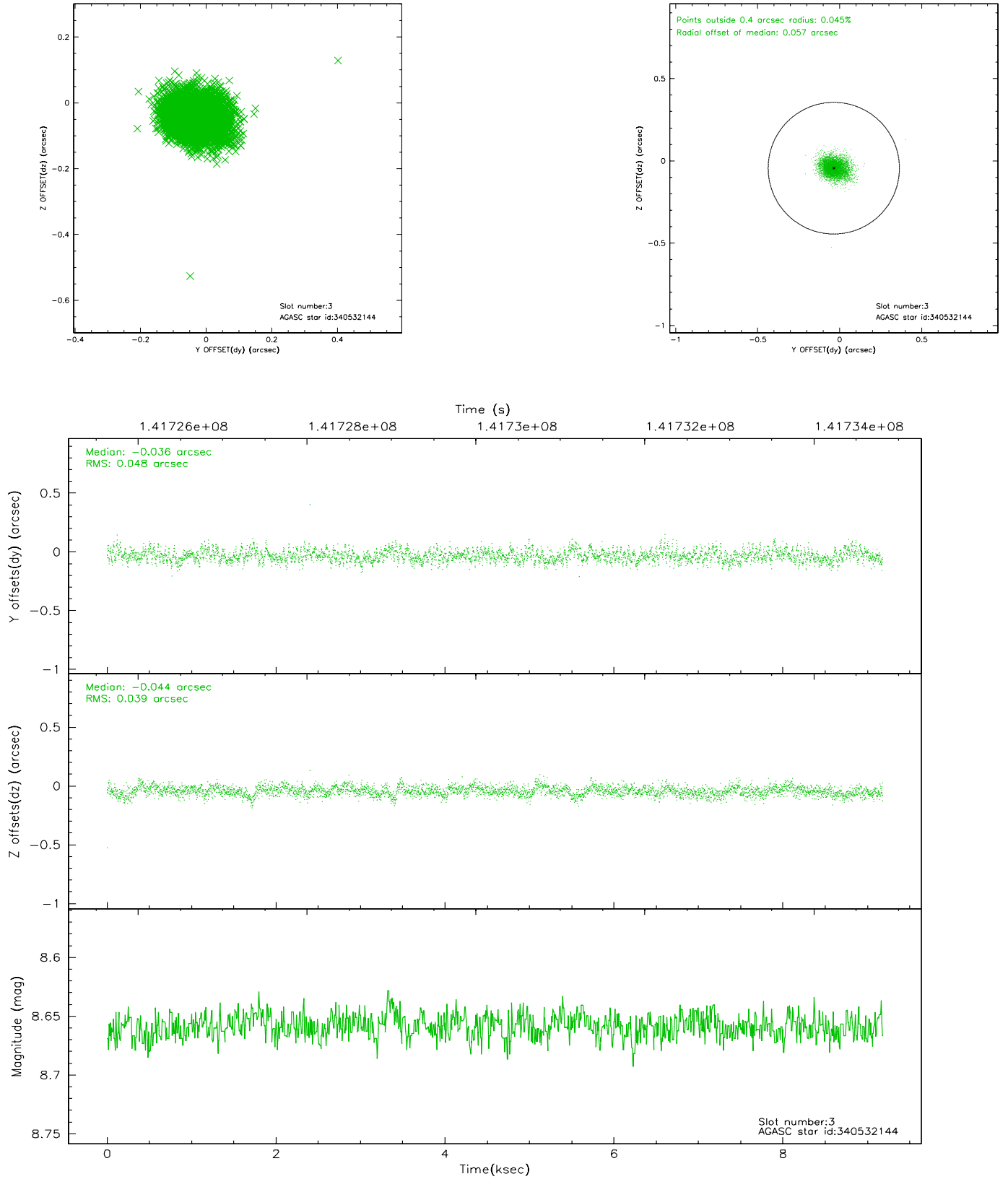
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	6.97	2240	0.143	-0.151	0.009	0.016	0.000000	0.000000	-1156.91	-454.32
1	FID	HRC-S-2	6.98	2240	0.119	-0.101	0.008	0.023	0.000000	0.000000	1242.23	-447.14
2	FID	HRC-S-3	7.00	2240	0.129	-0.050	0.008	0.014	0.000000	0.000000	-1159.08	575.11
3	GUIDE	340532144	8.66	4478	-0.036	-0.044	0.065	0.109	255.164643	35.156544	-1551.75	1520.40
4	GUIDE	340529672	8.80	4476	0.020	-0.008	0.087	0.139	254.827180	34.864332	-214.09	2074.53
5	GUIDE	340534080	8.83	4477	0.014	0.003	0.074	0.122	255.228954	35.471551	-2185.46	561.69
6	GUIDE	341060696	9.21	4475	-0.002	0.048	0.098	0.183	254.855764	35.681180	-1495.75	-574.36
7	GUIDE	341058456	9.67	4472	0.007	-0.001	0.098	0.162	254.910348	35.836463	-1870.42	-1018.55

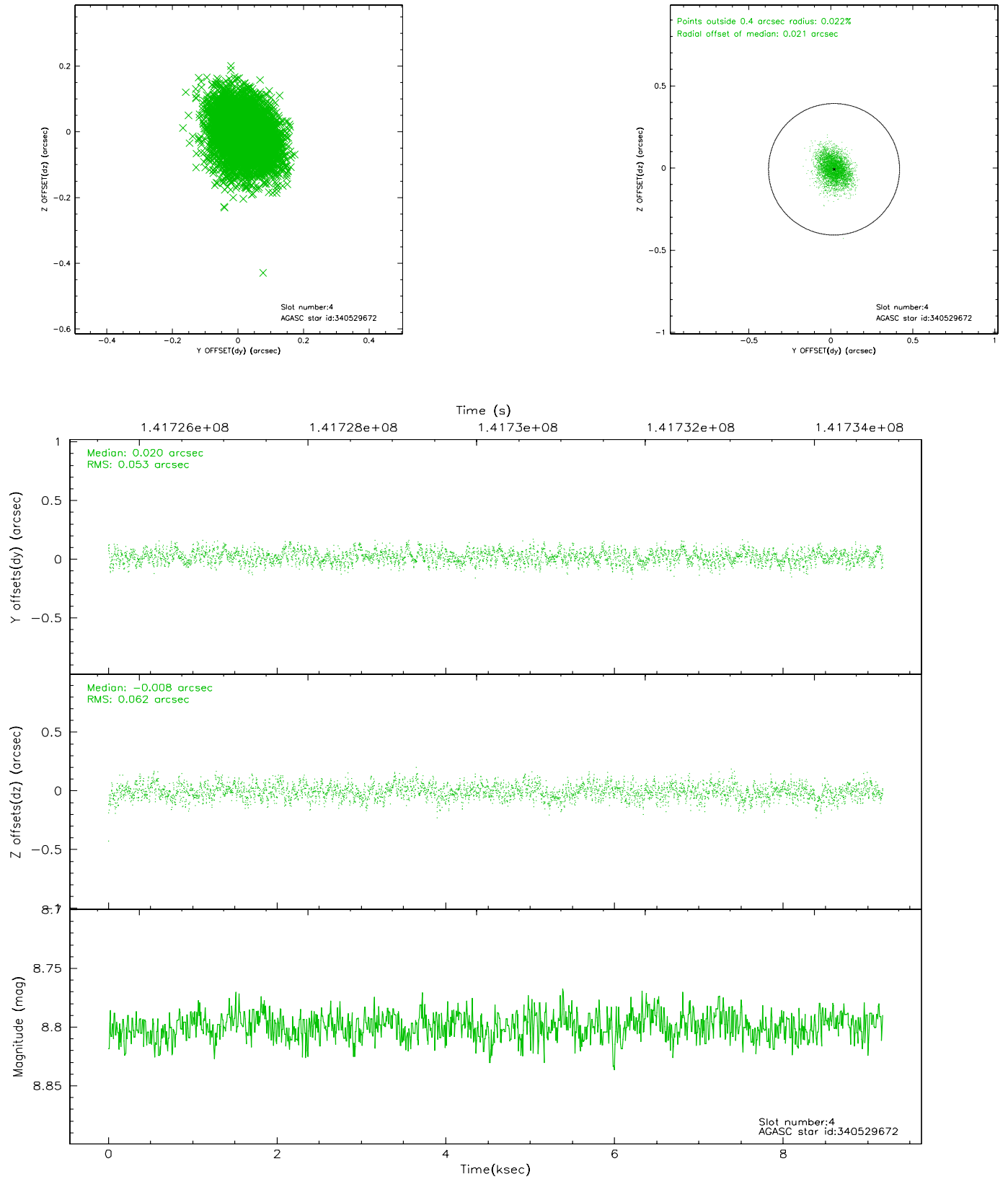


## 2.4 Star Slots

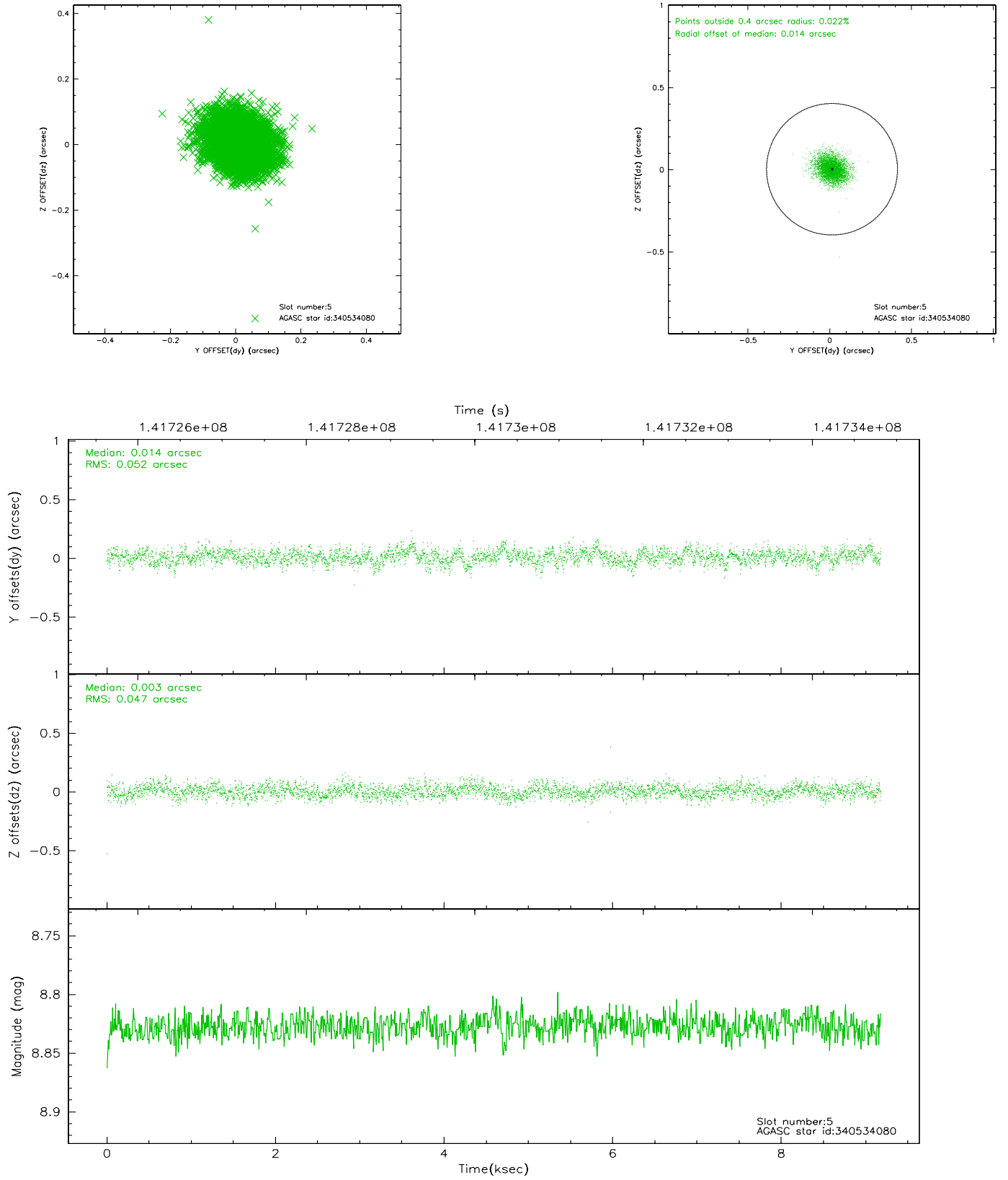
### 2.4.1 Slot 3



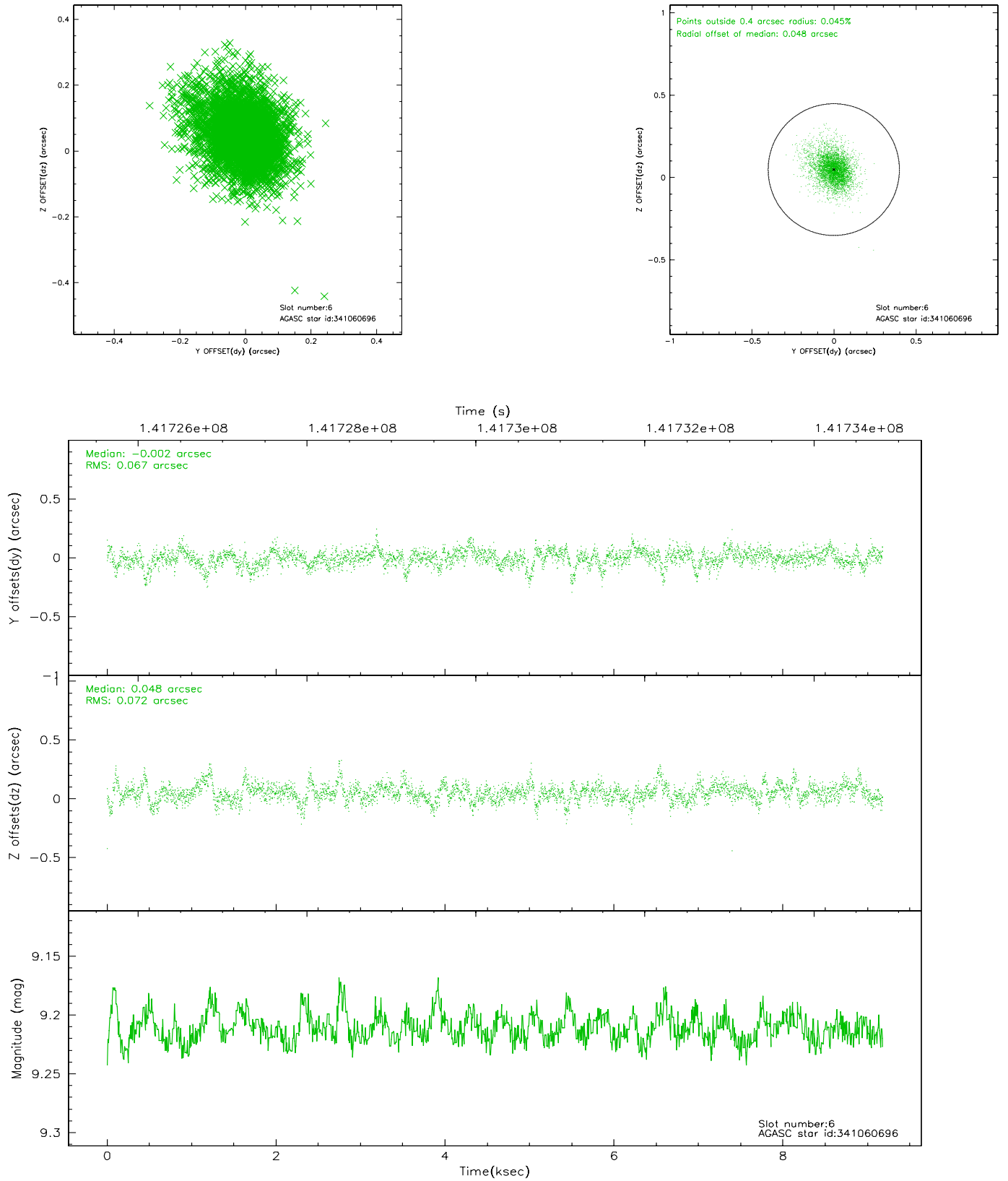
## 2.4.2 Slot 4



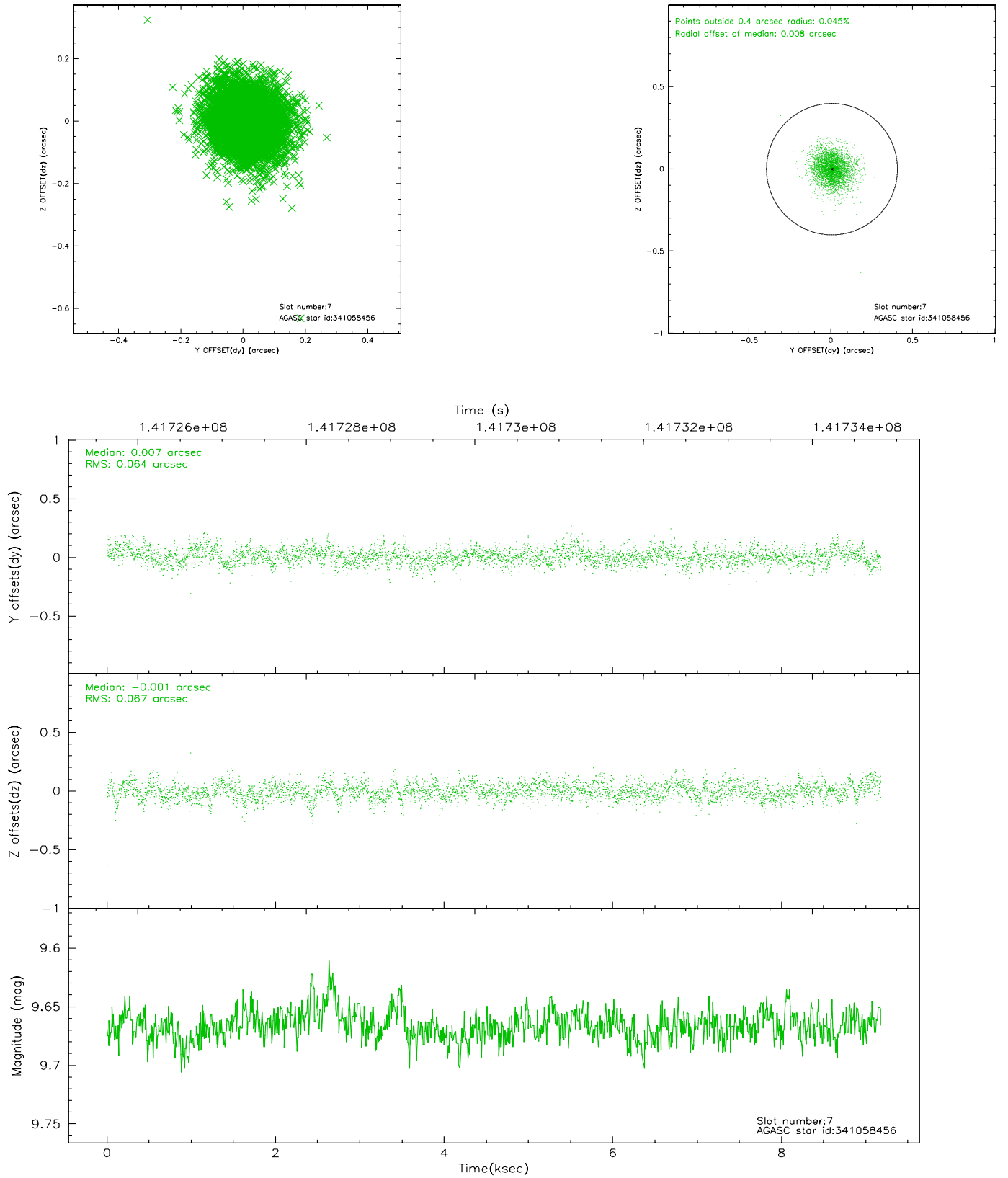
### 2.4.3 Slot 5



## 2.4.4 Slot 6

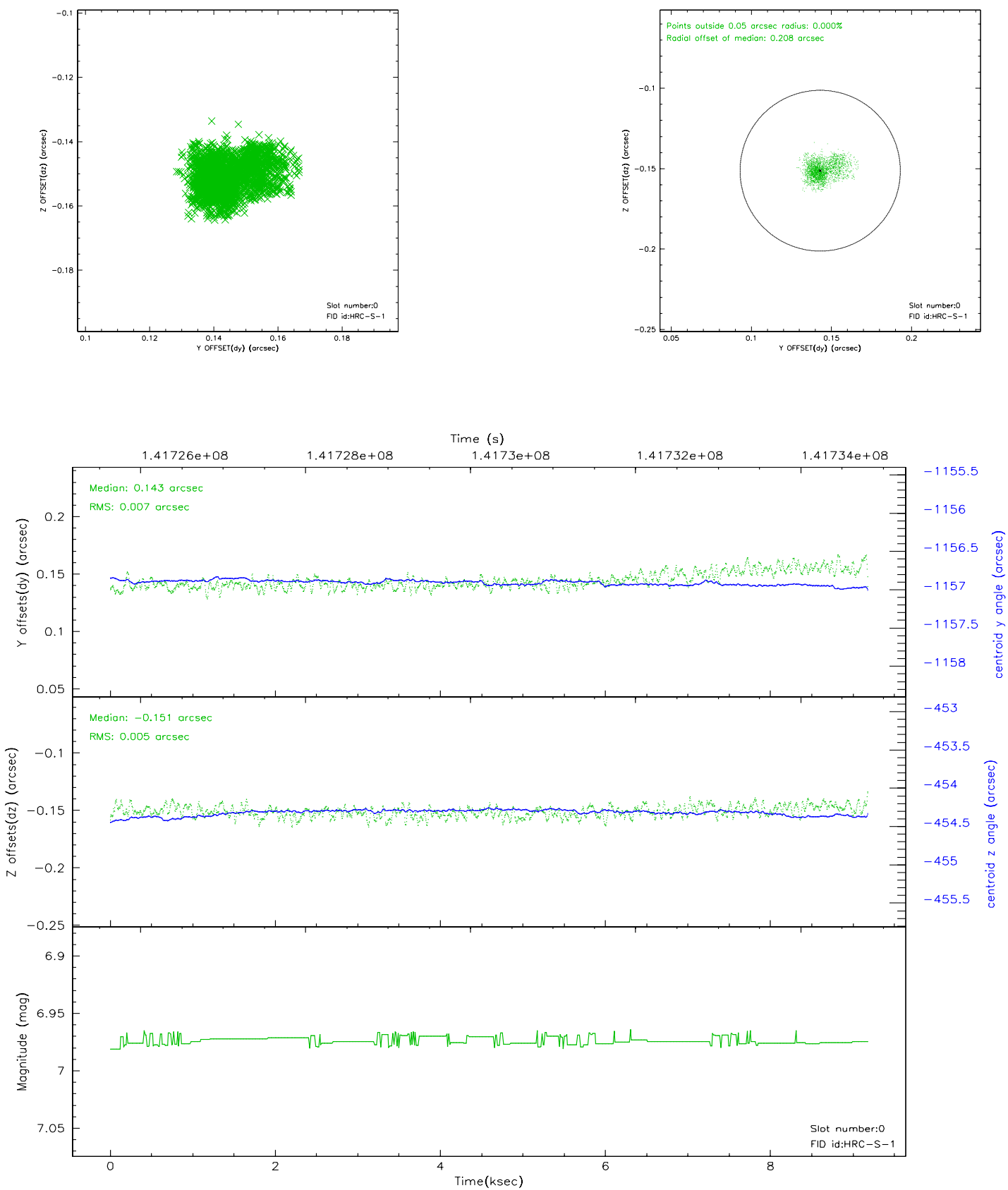


## 2.4.5 Slot 7

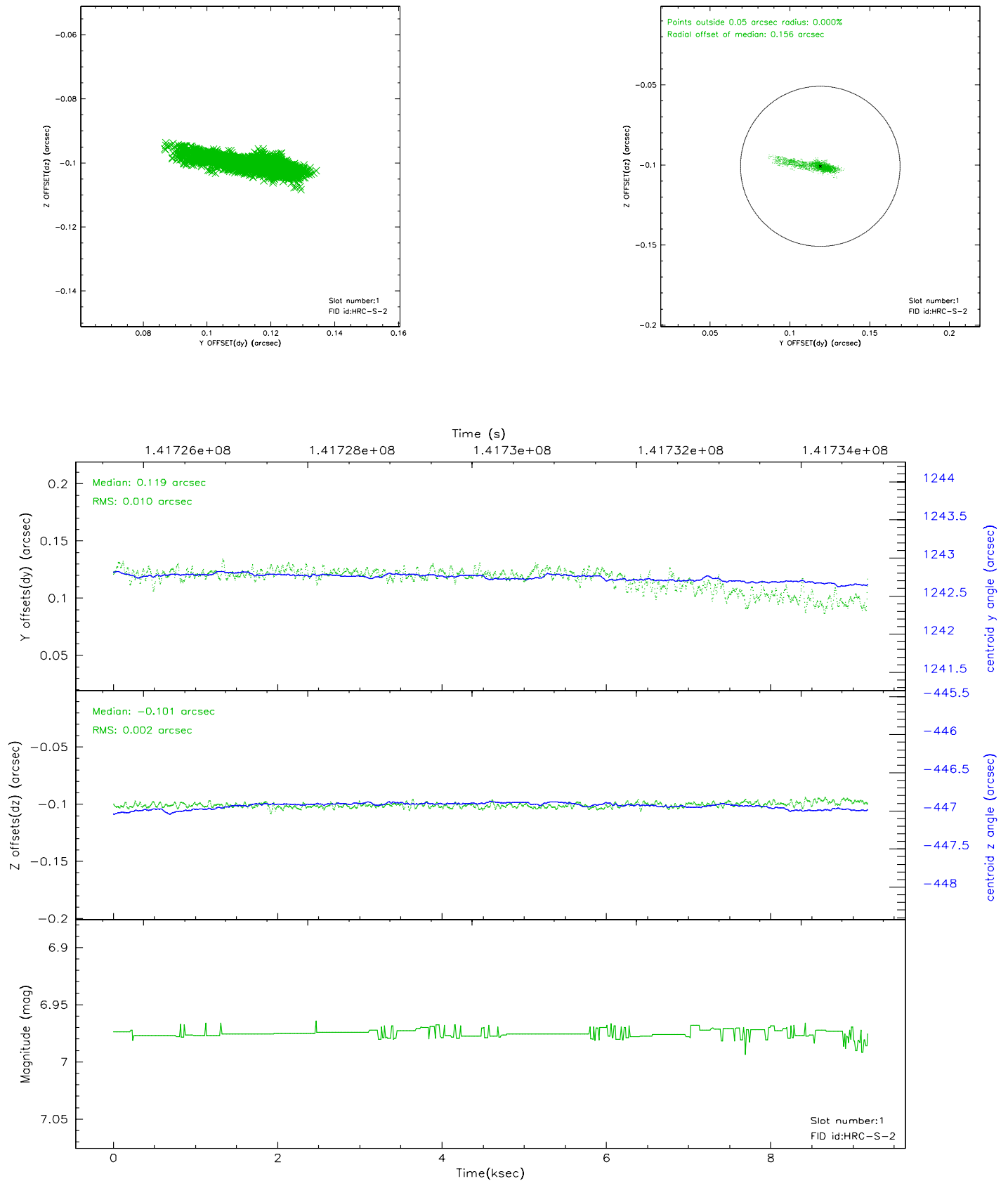


## 2.5 FID Slots

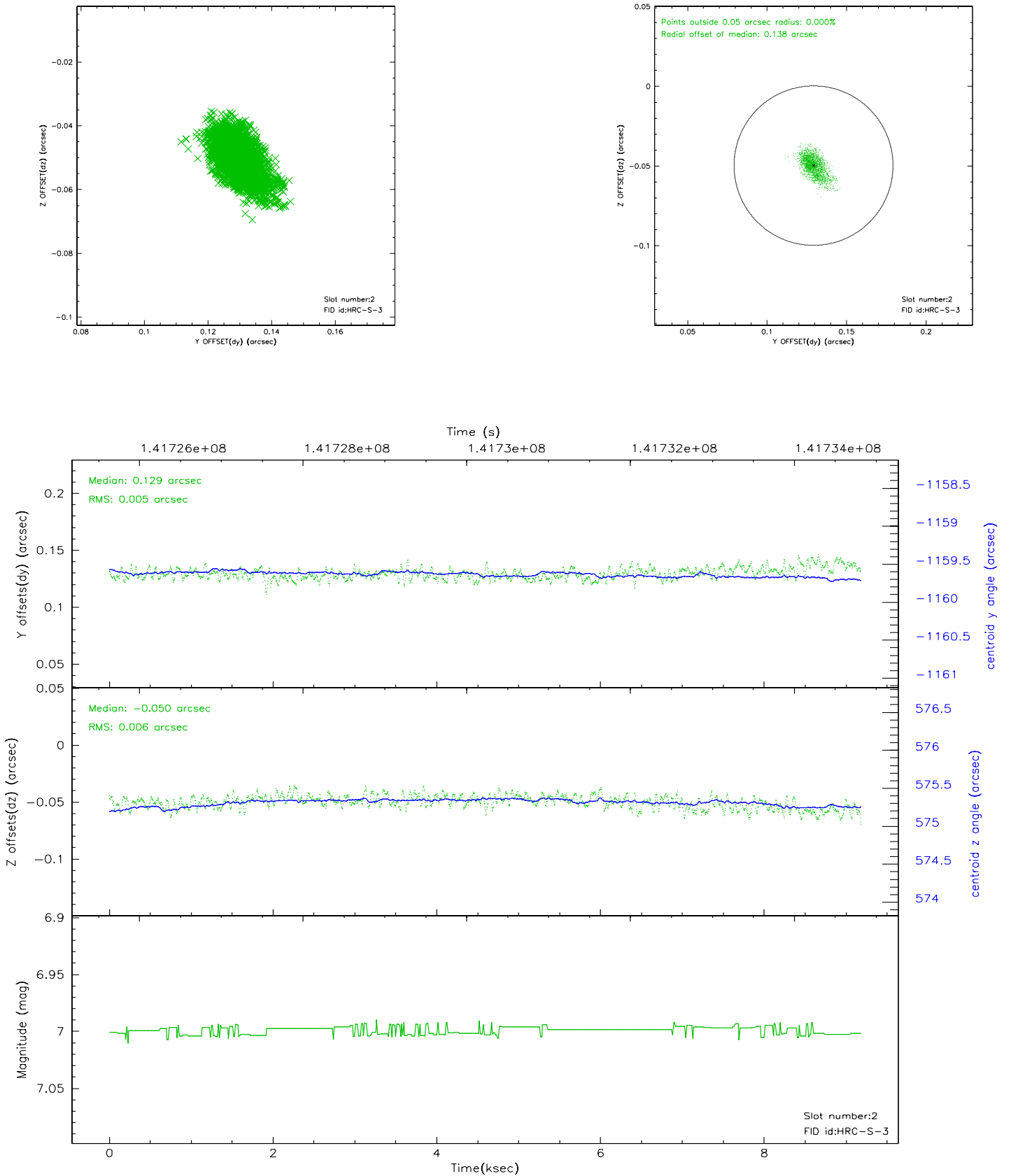
### 2.5.1 Slot 0



## 2.5.2 Slot 1



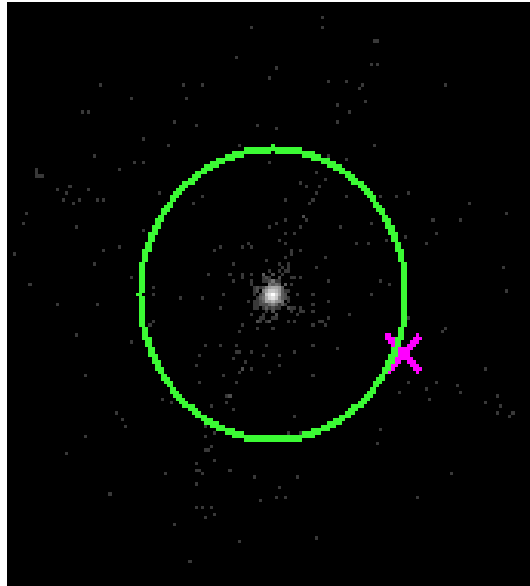
### 2.5.3 Slot 2



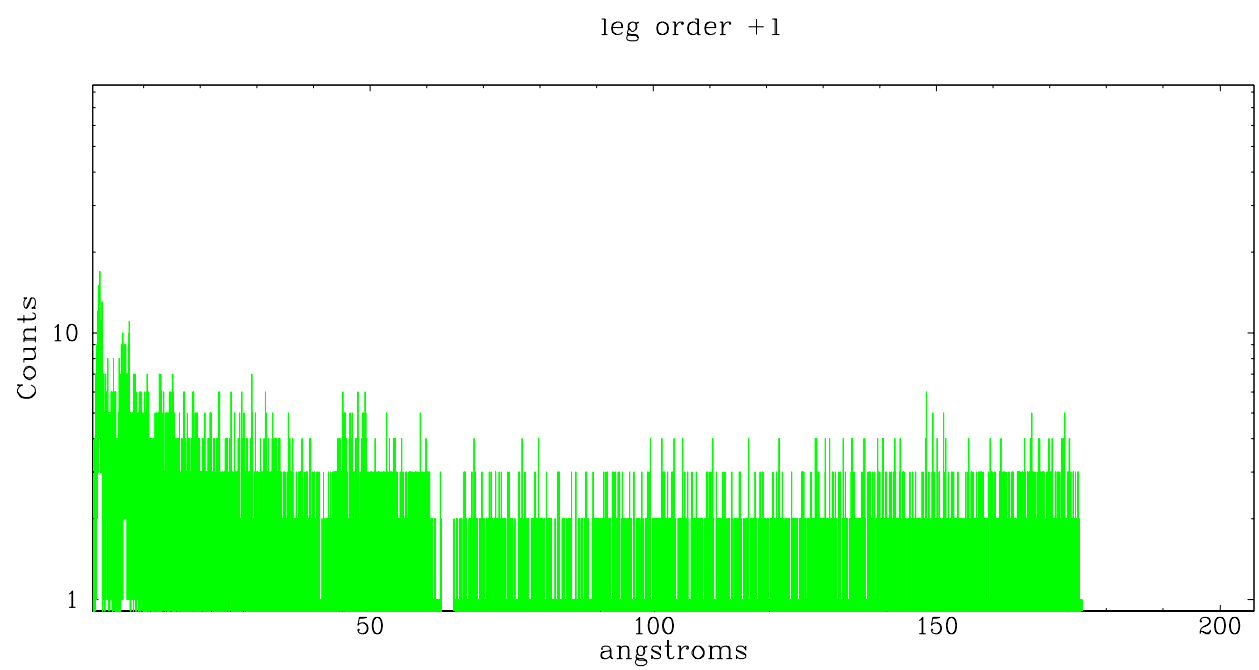
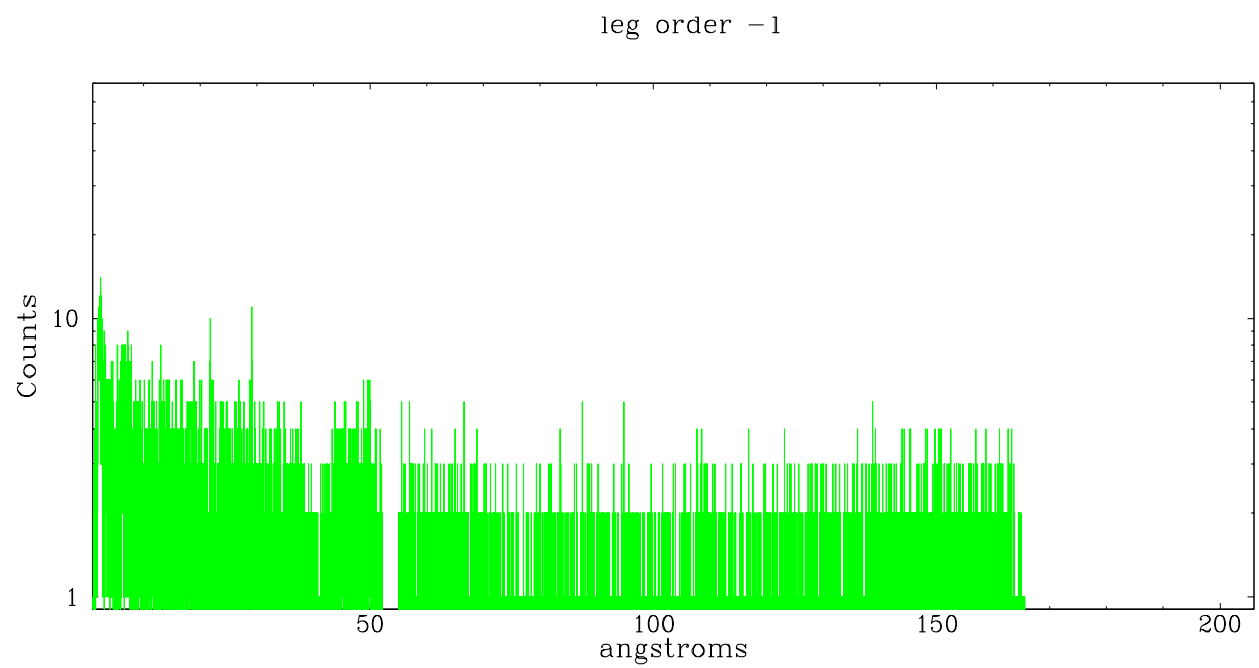


## 3 Gratings

### 3.1 LETG Arm



LETG Zero Order



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.09.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.855

### A.2 Comments

Phase constraint met.