

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 2601 - L2 Version 3  
Chandra X-Ray Center

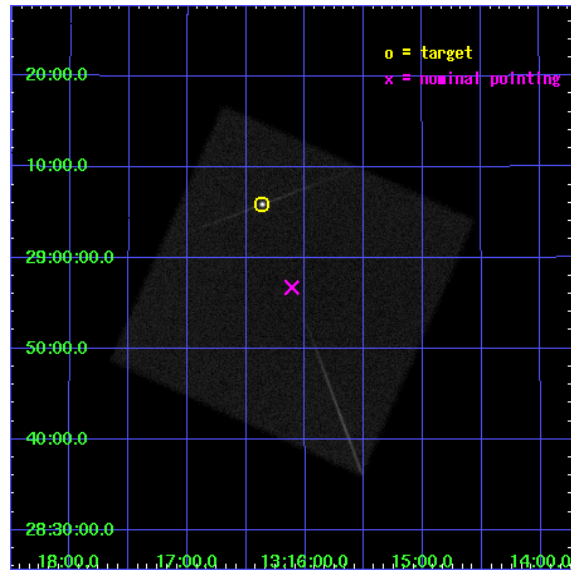
L2 Processing Date : Nov 20 2007

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# 1 Front

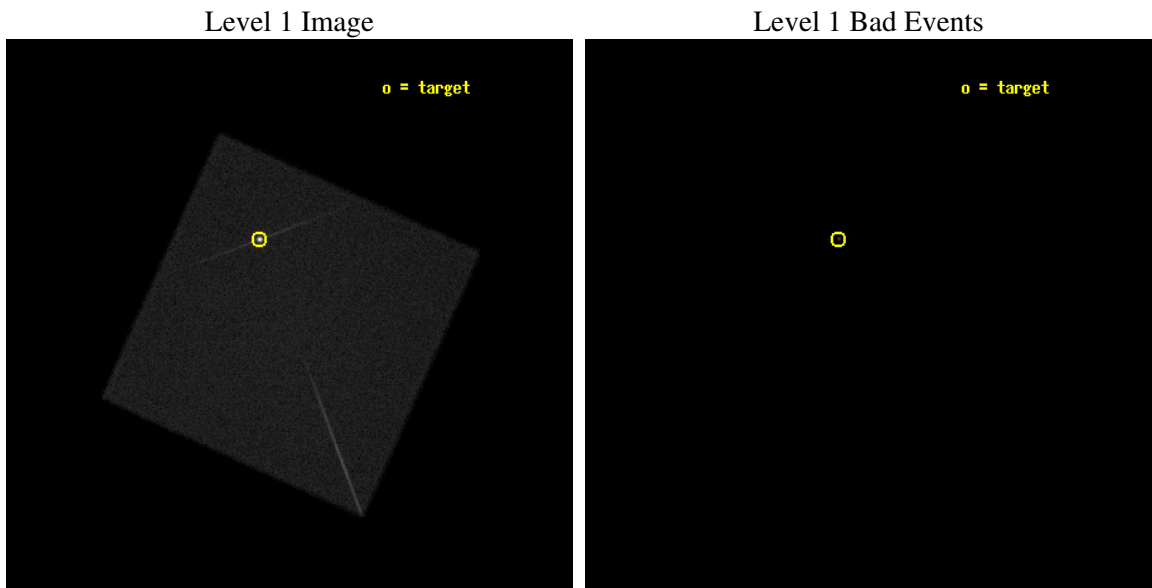
seq_num	290157
obs_id	2601
title	AO3 LETG/HRC-I CALIBRATION OBSERVATIONS OF HZ43
observer	Dr. CXC Calibration
object	HZ43
ra_targ	199.092083
dec_targ	29.099
ra_nom	199.02805497186
dec_nom	28.946248453499
roll_nom	69.234298017318
revision	3
ontime	9550.1816336513
livetime	9488.5287290203
l2events	394589



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	1
ascdsver	7.6.11.2
caldbver	3.4.1
date	2007-11-20T21:02:00
revision	3

sched_exp_time	9360.137000
ontime	9550.1816336513
l1events	596451

### 2.1.3 Events

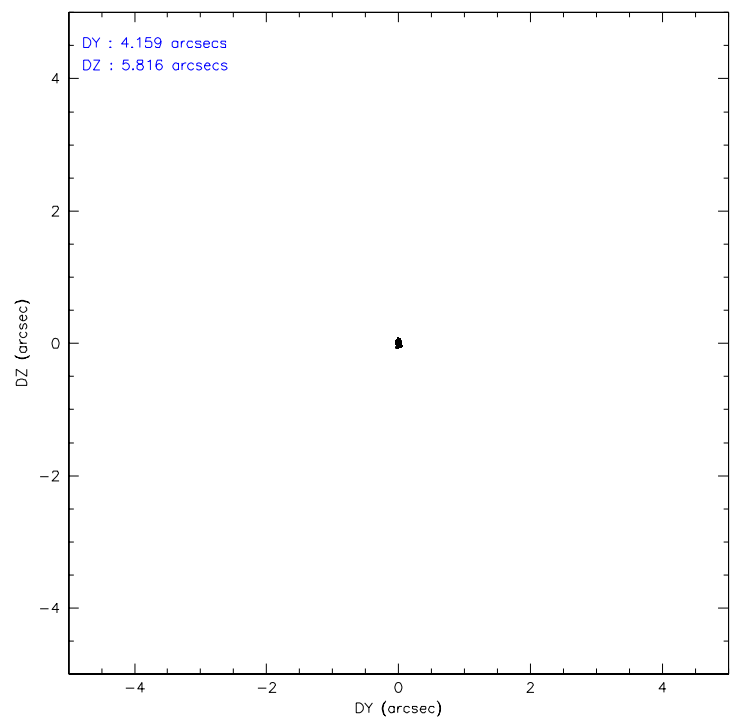
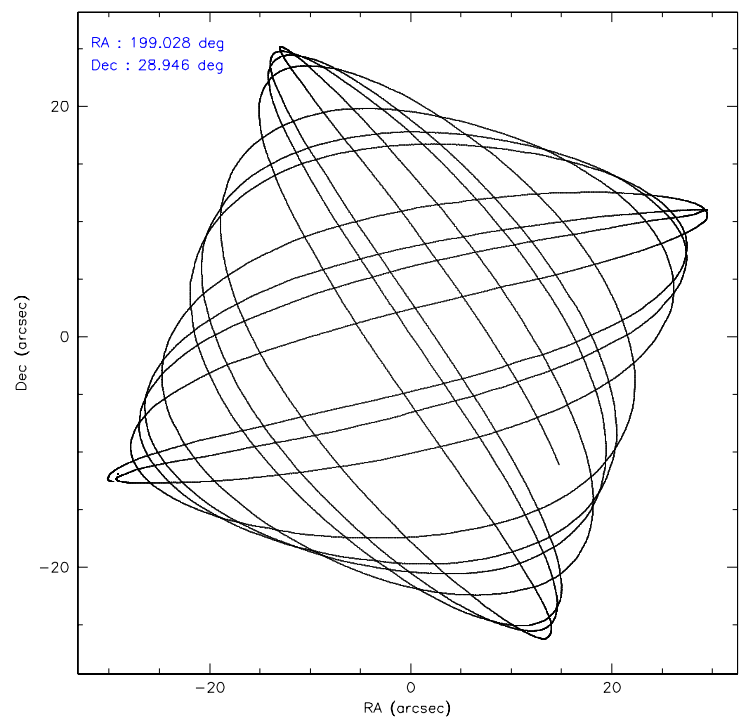
#### Level 1 Events

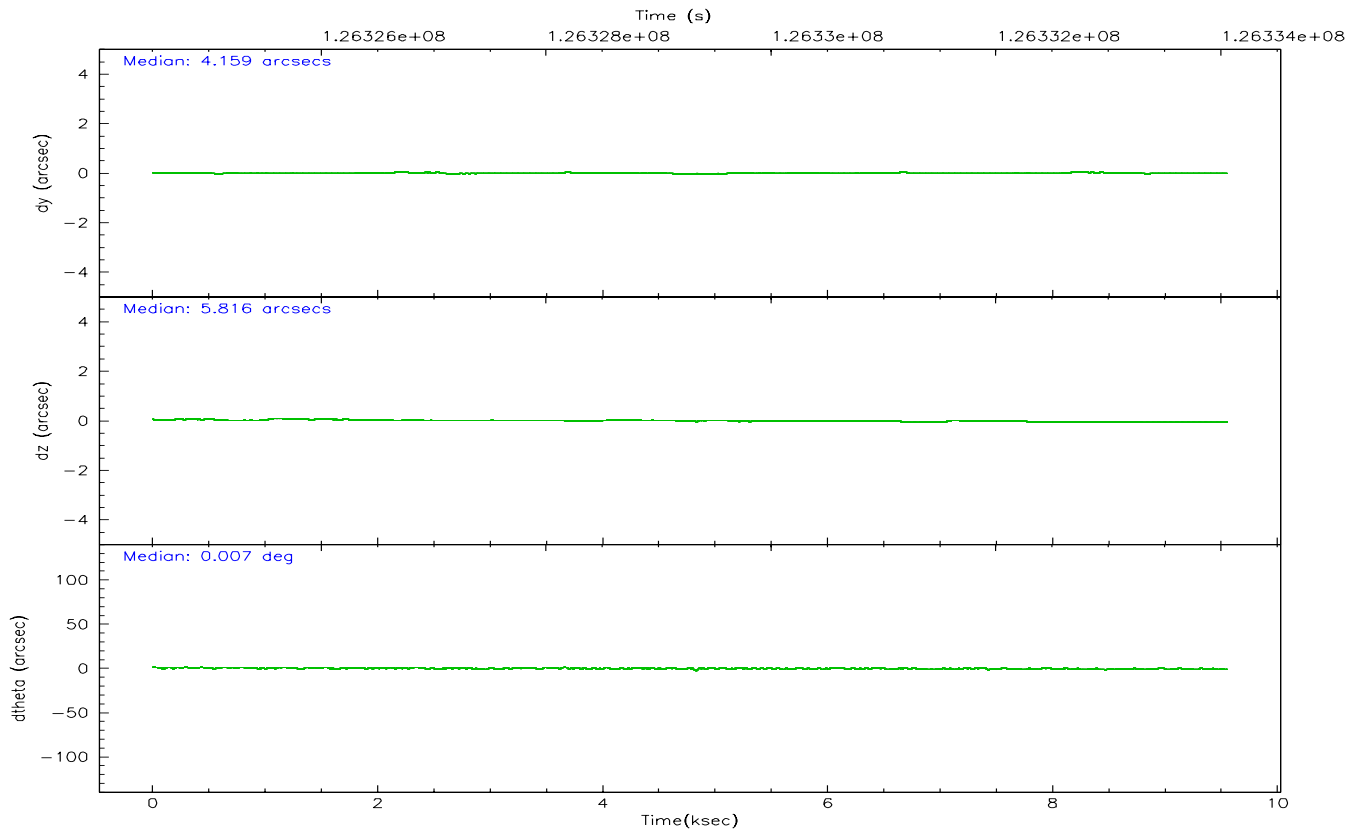
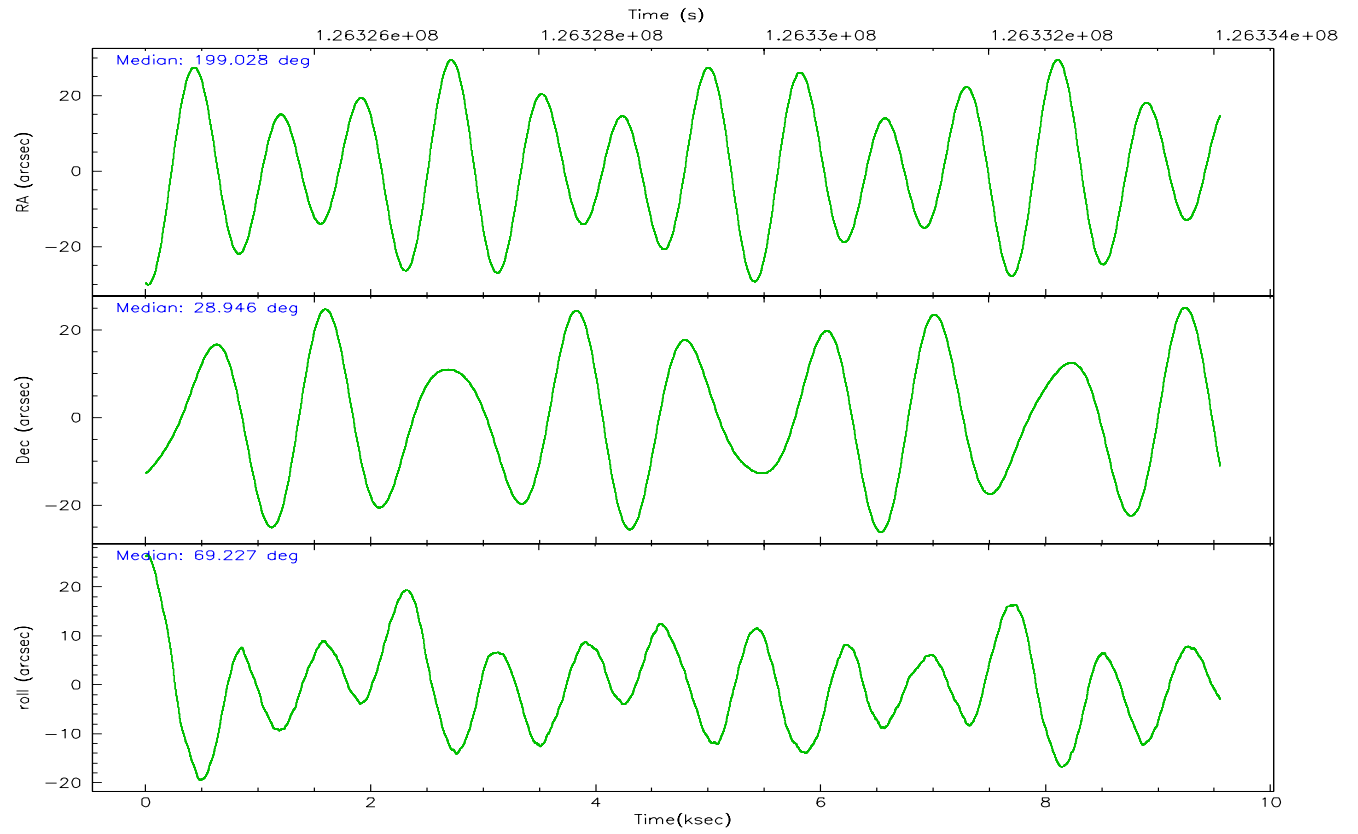
	<b>segment 0</b>
level 1 events	596451
rejected events	27855
rejected %	4%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar format version number	6	6
Detector	HRC-I	HRC-I	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
Pointing RA	199.033712	199.0280549718592			
Pointing Dec	28.919462	28.94624845349942			
Pointing Roll	69.327053	69.23429801731777			
Window start time	126230464.184000	126230464.184000			
Window stop time	128822464.184000	128822464.184000			
SIM focus pos (mm)	-1.040293	-1.038866356238299			
SIM defocus (mm)	0	0.001426264420575141			
SIM translation stage pos (mm)	126.985494	126.9854943052878			
SIM translation stage offset (mm)	0	-5.413686238853188e-06			
Observation start time	126324698.184000	126324321.41561			
Observation start date	2002-01-02T02:10:34	2002-01-02T02:05:21			
Observation end time	126334058.184000	126334372.56601			
Observation end date	2002-01-02T04:46:34	2002-01-02T04:52:52			

## 2.3 Aspect





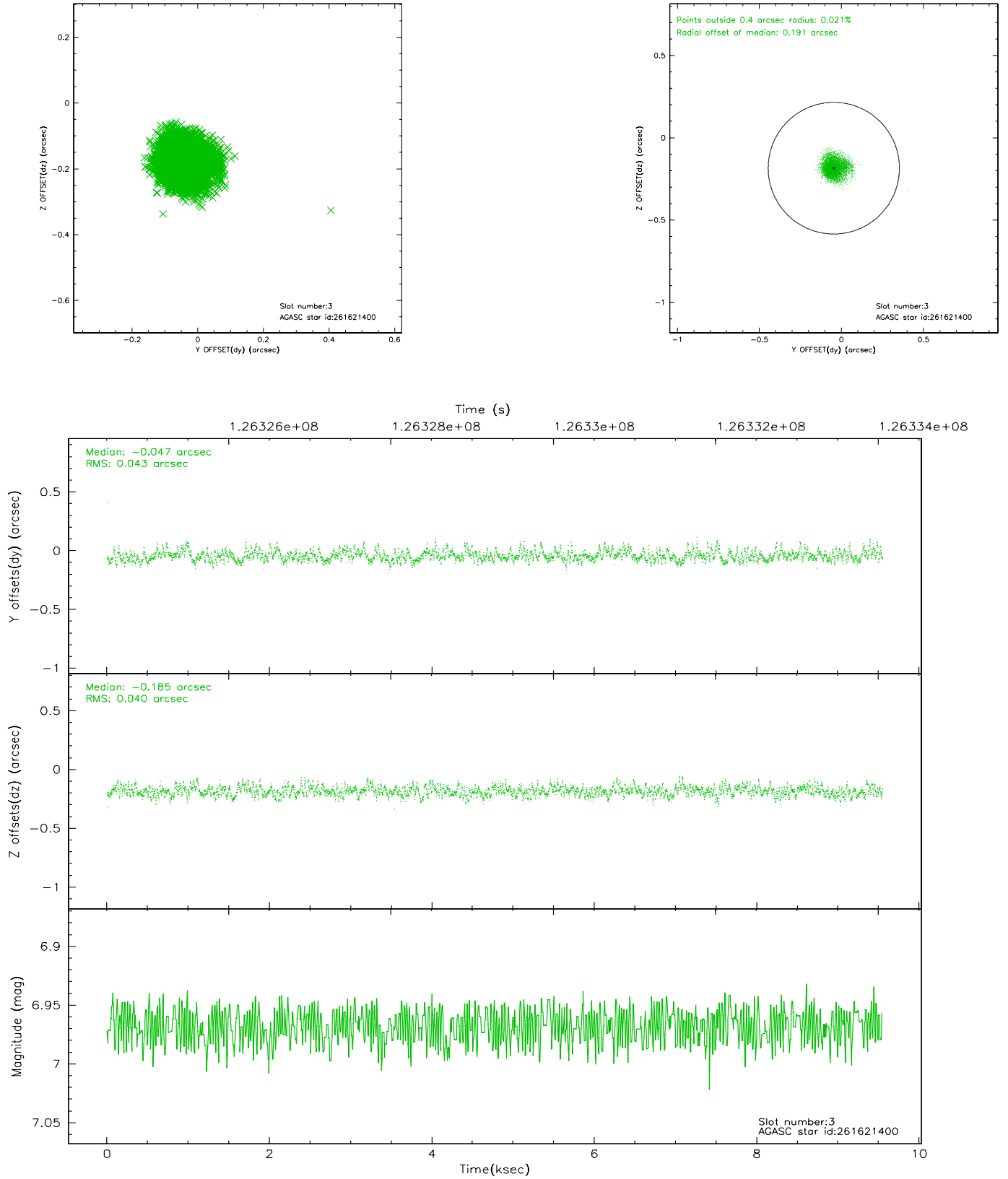
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.97	2330	0.005	0.028	0.007	0.011	0.000000	0.000000	-759.62	-1293.68
1	FID	HRC-I-2	7.02	2330	0.085	-0.055	0.006	0.010	0.000000	0.000000	852.77	-1295.83
2	FID	HRC-I-3	7.06	2330	0.029	-0.061	0.006	0.010	0.000000	0.000000	-1187.79	1010.23
3	GUIDE	261621400	6.97	4659	-0.047	-0.185	0.062	0.100	198.901600	28.741982	-745.86	165.29
4	GUIDE	261629720	8.10	4660	-0.075	0.101	0.057	0.091	199.236176	29.044452	645.29	-436.10
5	GUIDE	261619776	8.80	4660	-0.101	-0.105	0.087	0.137	198.654383	29.401174	1203.10	1726.67
6	GUIDE	261619992	9.32	4655	0.179	-0.186	0.098	0.158	198.395553	28.647634	-1623.06	1543.59
7	GUIDE	261623624	9.12	4656	0.039	0.385	0.105	0.165	199.611555	28.454113	-918.60	-2299.64

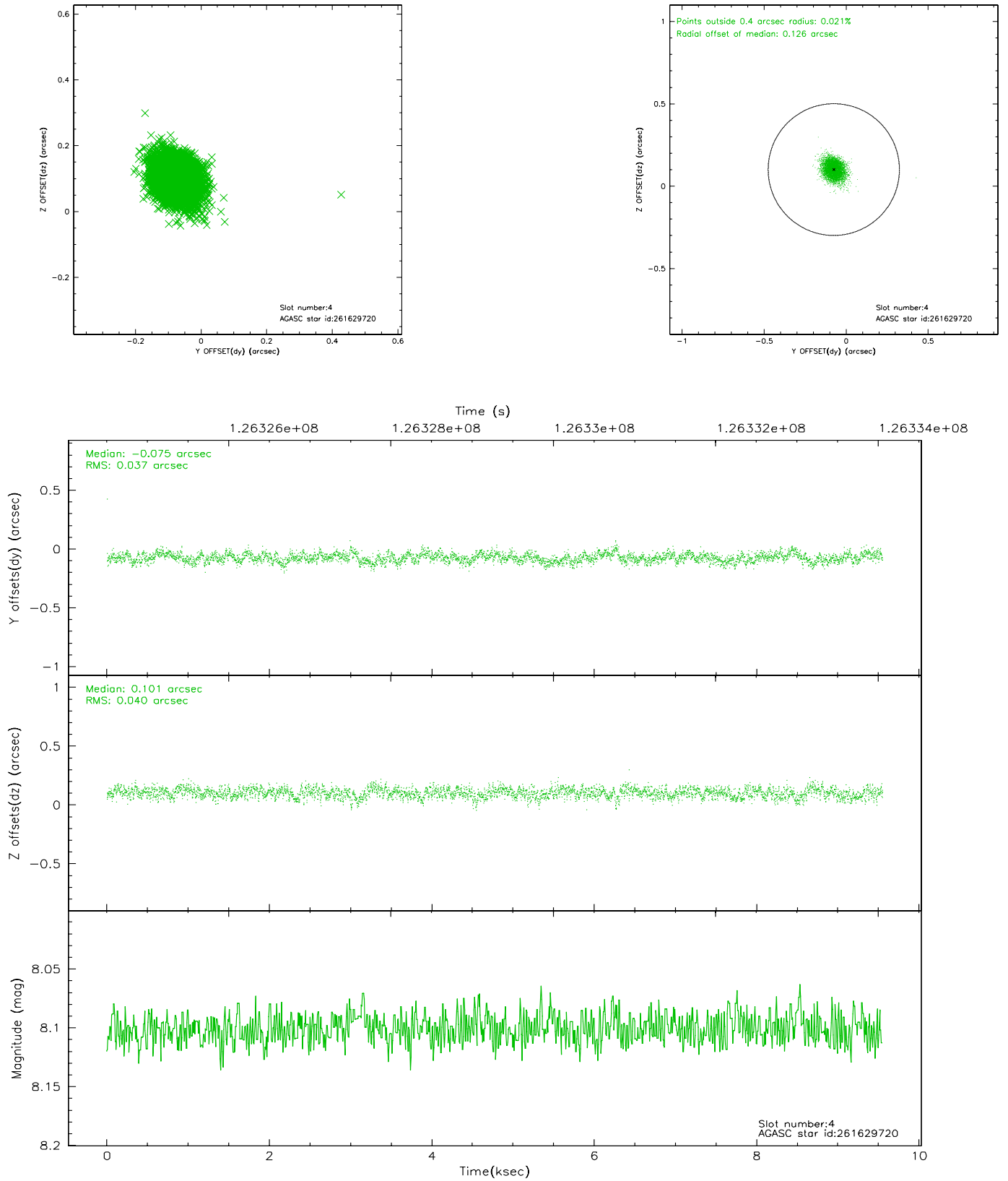


## 2.4 Star Slots

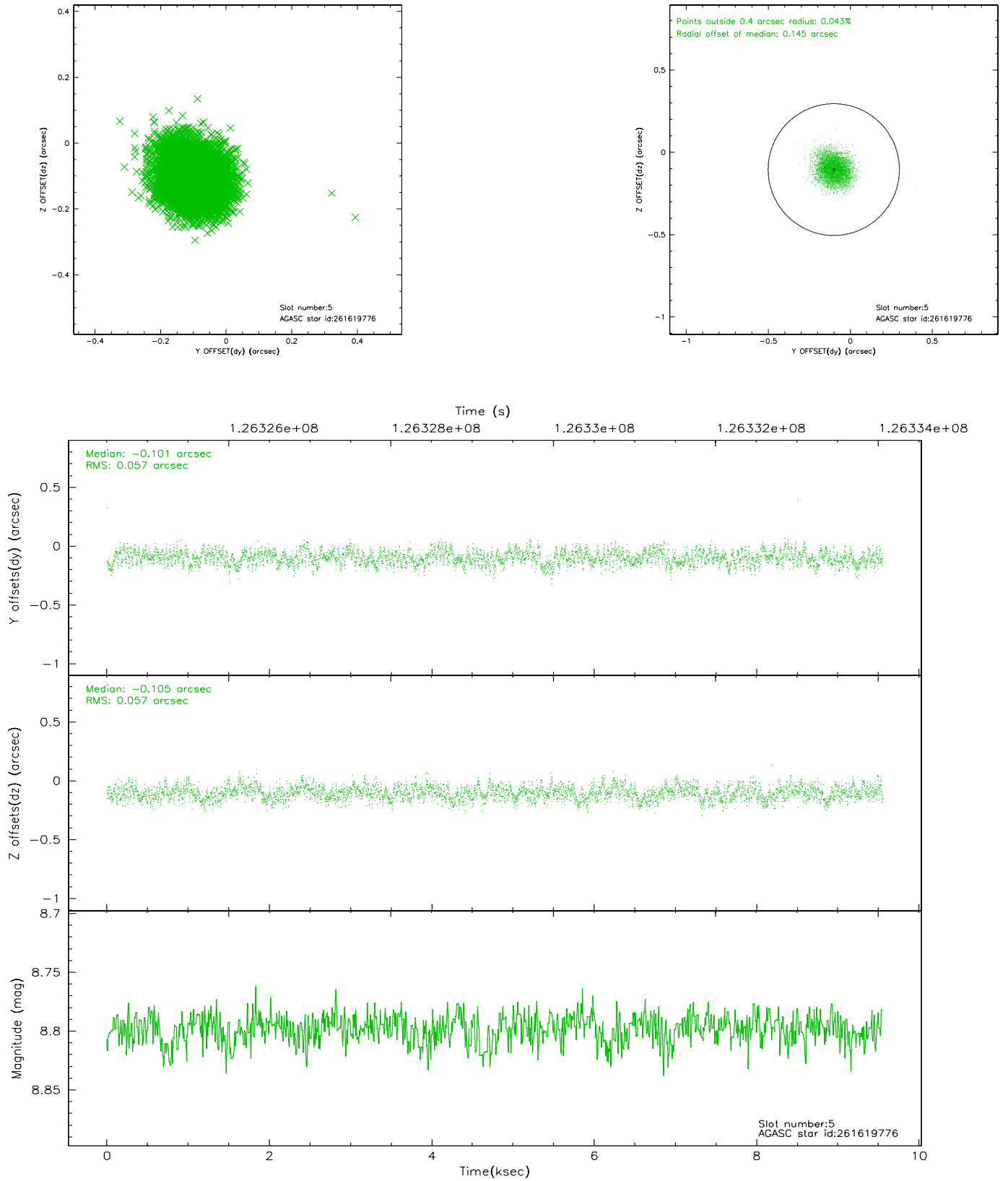
### 2.4.1 Slot 3



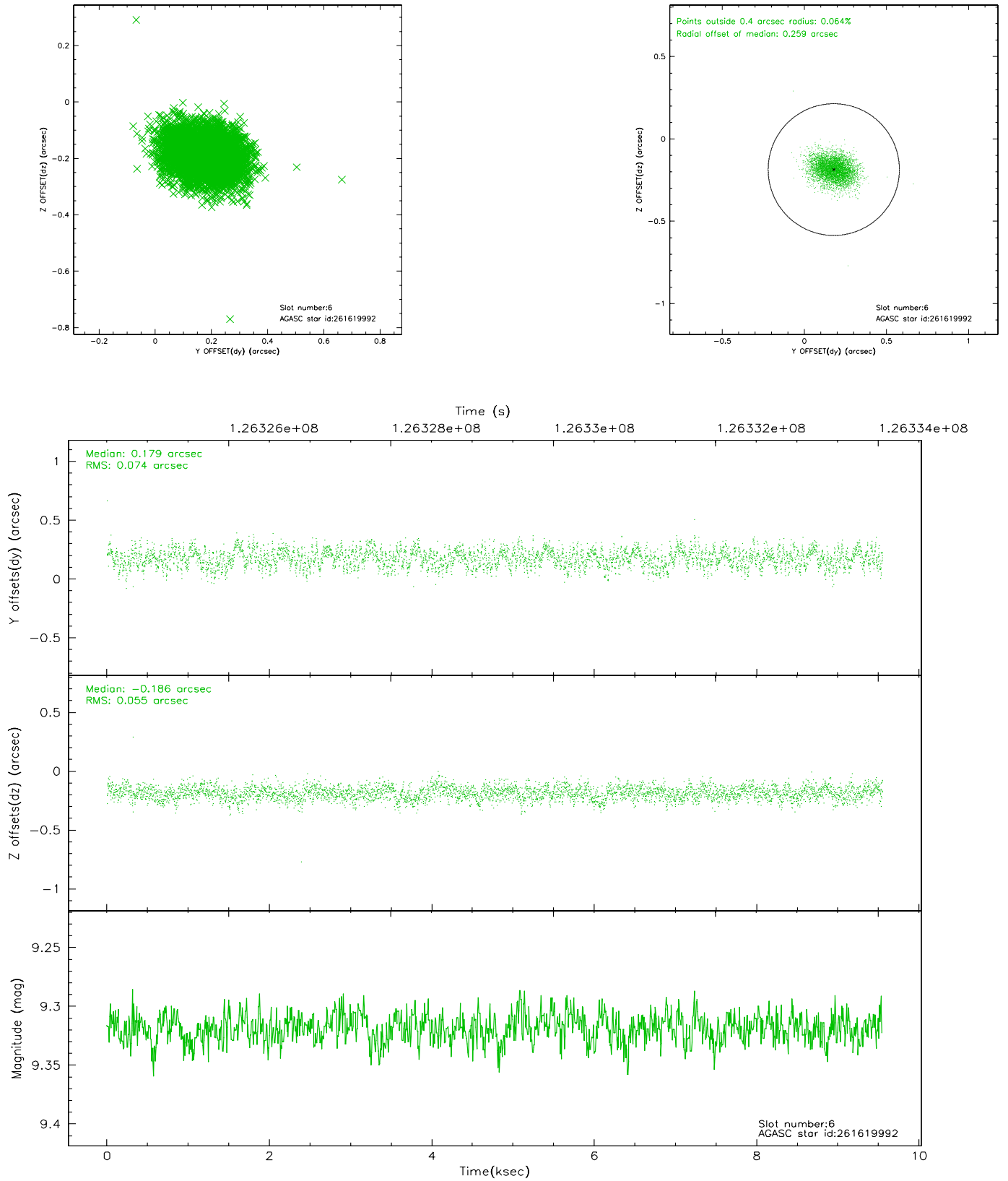
## 2.4.2 Slot 4



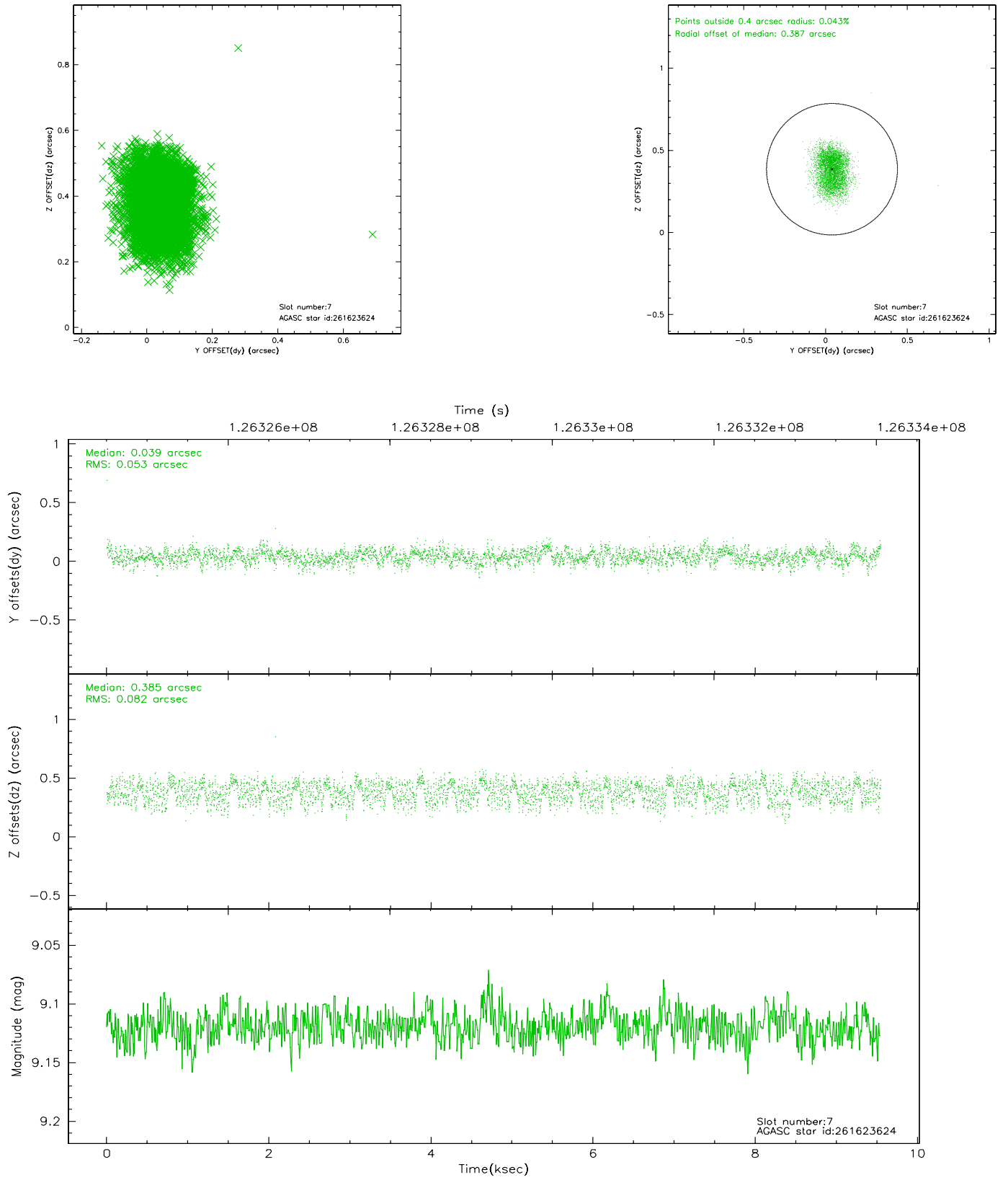
### 2.4.3 Slot 5



## 2.4.4 Slot 6

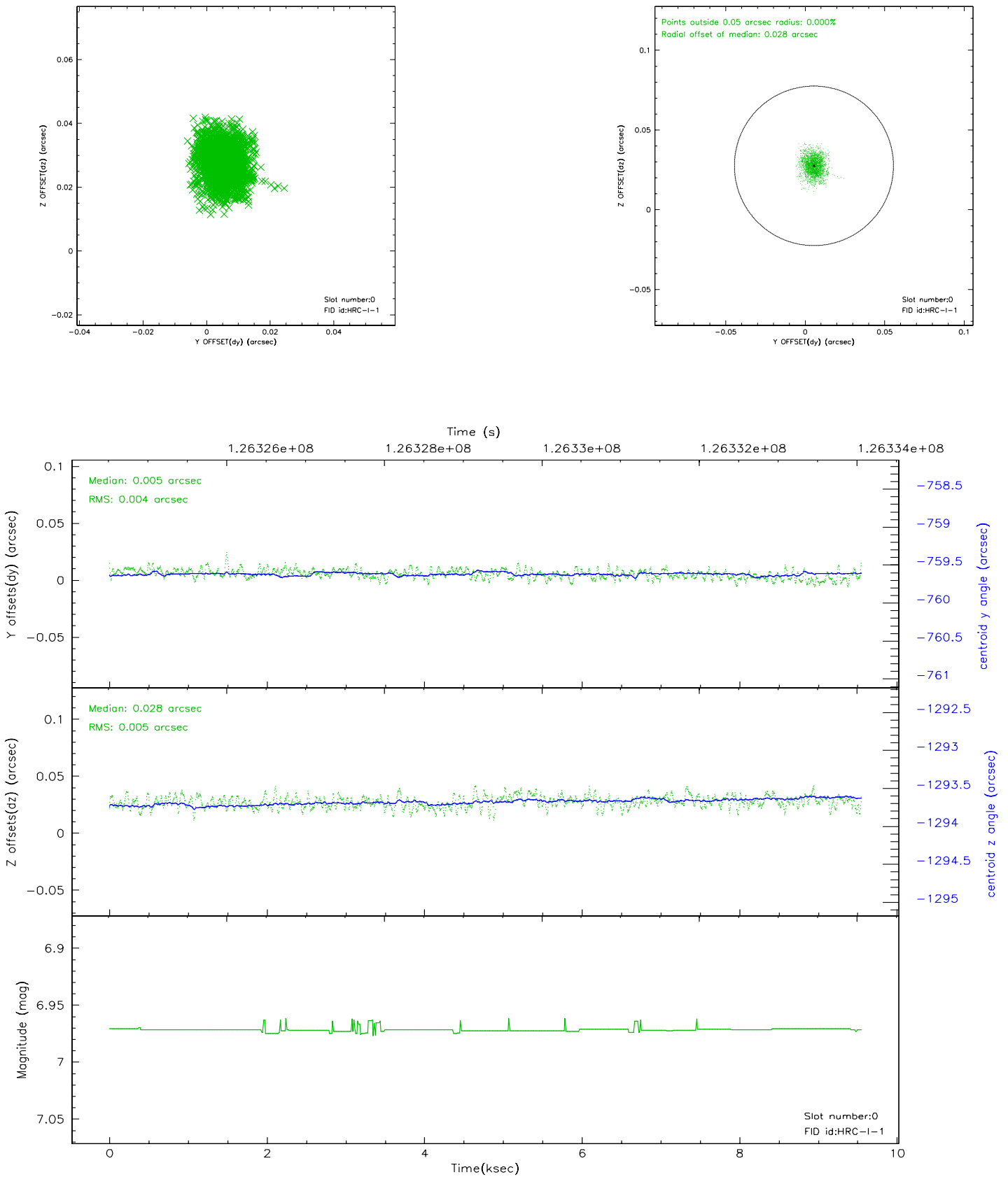


## 2.4.5 Slot 7

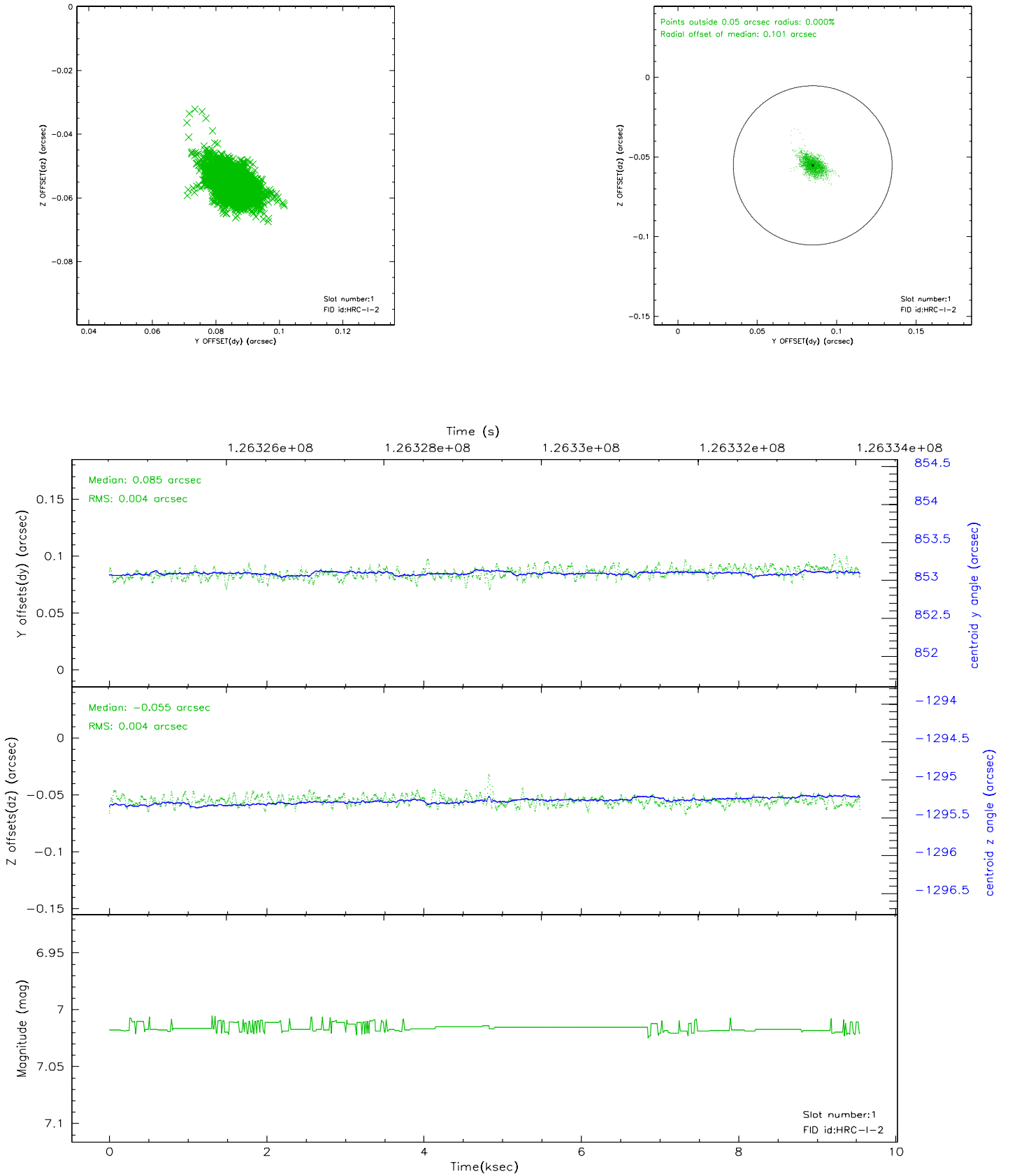


## 2.5 FID Slots

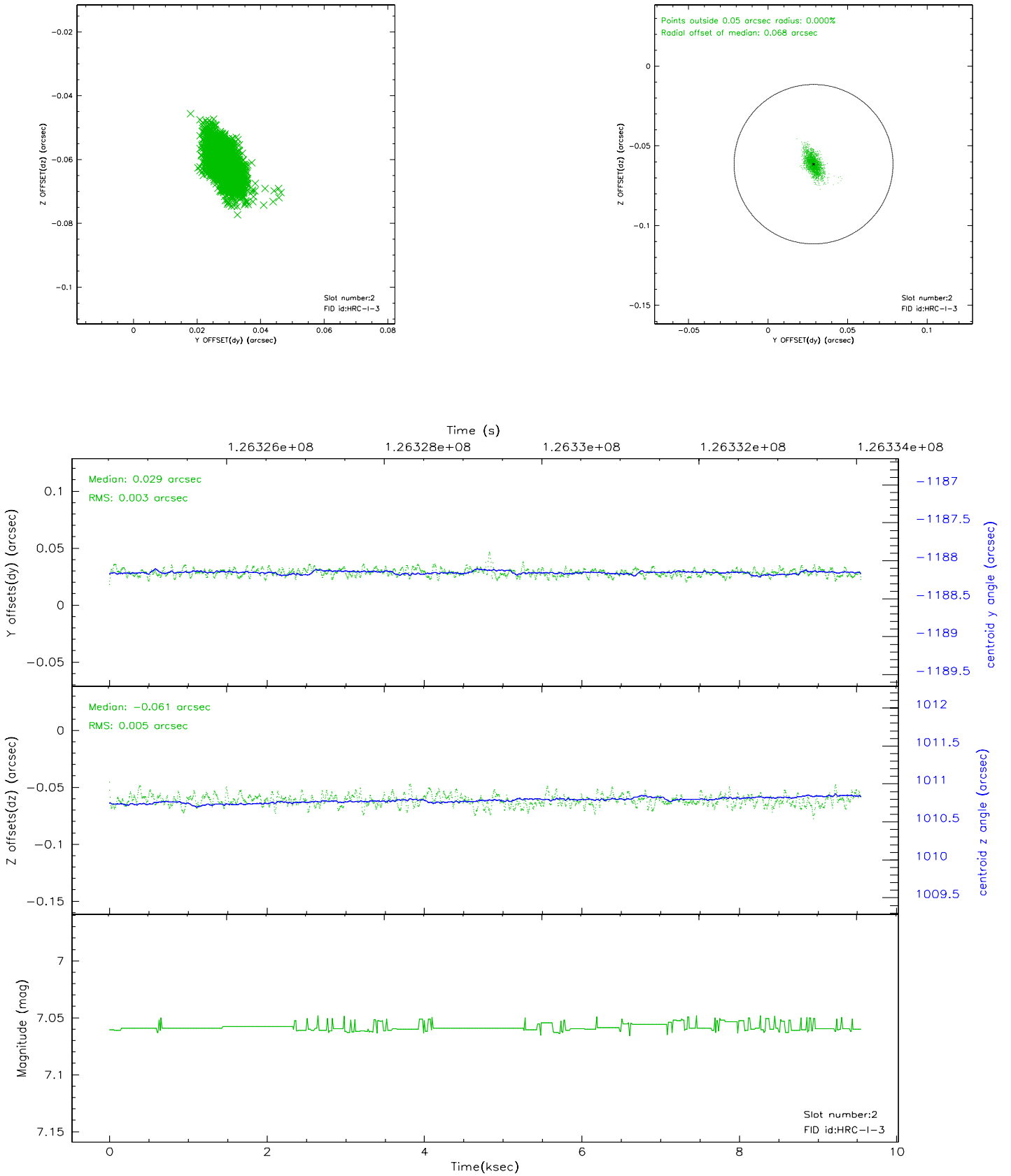
### 2.5.1 Slot 0



## 2.5.2 Slot 1



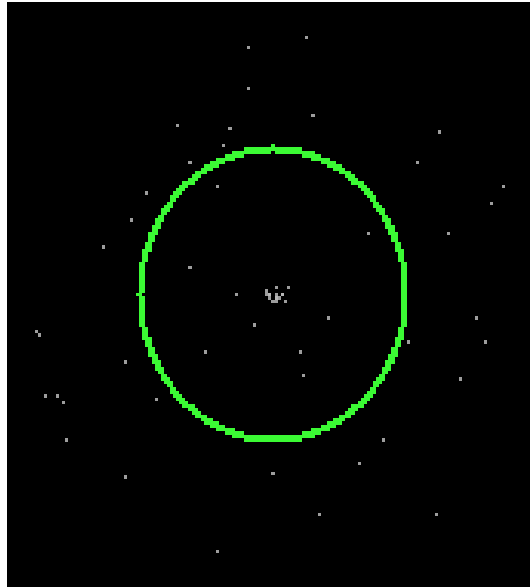
### 2.5.3 Slot 2



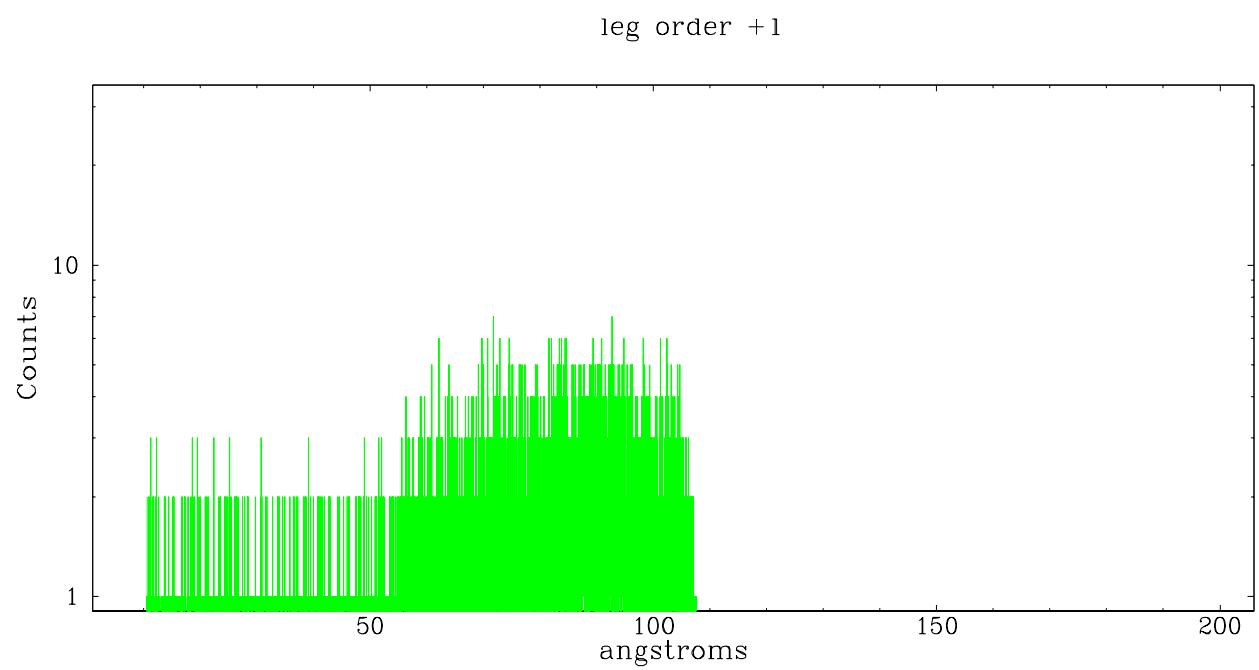
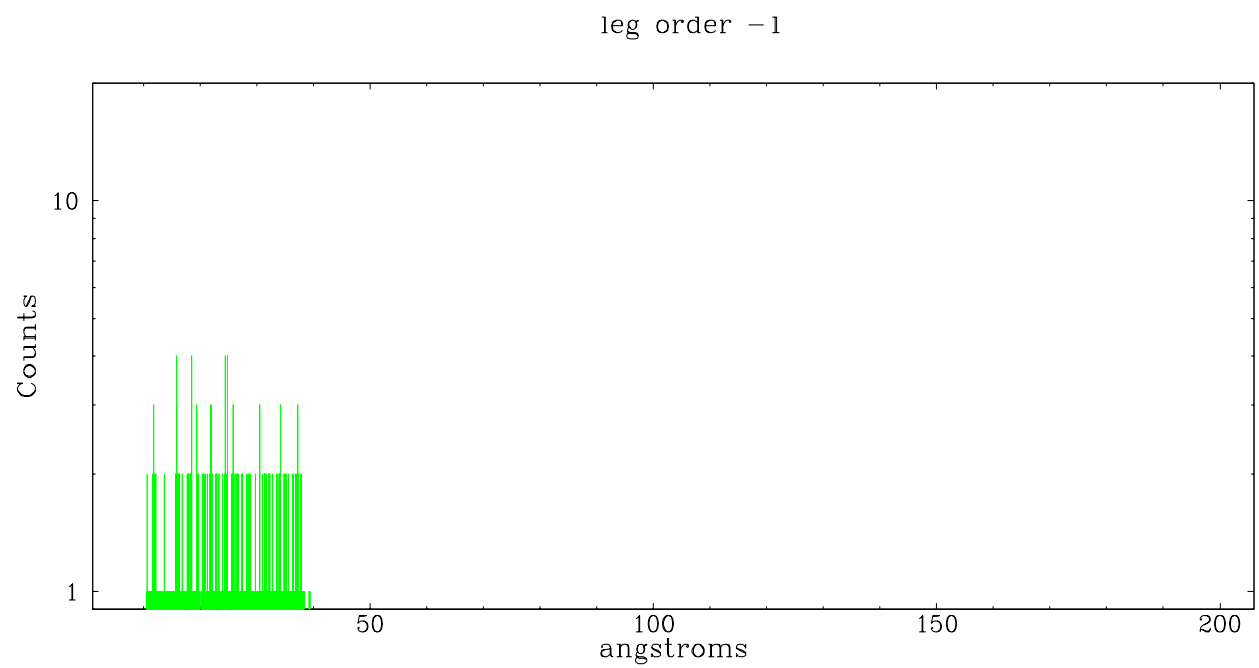


## 3 Gratings

### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.547

## A.2 Comments

Source is placed about 12 arcmin off-axis toward the corner of the detector. The point spread function is significantly extended by this off-axis position. Off-axis source gratings observation: WARNING: there are no standard CIAO tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle. WARNING: The user will need to deconvolve the PSF of the off-axis source to get an accurate determination of the zeroth order position, then use software tools such as CIAO to specify the coordinates of the zeroth order before running the tools to resolve the dispersed events. The spectral data supplied in this processing are only energy-calibrated user-supplied zeroth order source position, because tgdetect failed to find the source.

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The current observation has been reprocessed as part of Repro III ('C' supplement) the purpose of which is to update all HRC-I ObsIDs since Jan 2000 to the latest calibrations available for that configuration. Specifically, we are updating the DEGAP solution and the Gain Maps applied. For more information see the Repro IIIC web page at

<http://asc.harvard.edu/cda/repro3.html#IIIC>

and the associated links.