

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 1004 - L2 Version 5
Chandra X-Ray Center

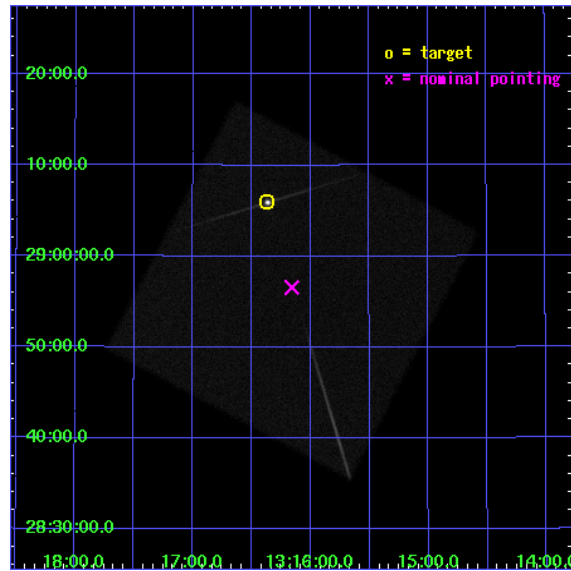
L2 Processing Date : Nov 21 2007

Contents

1	Front	2
2	OBI	3
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
3	Gratings	17
3.1	LETG Arm	17
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

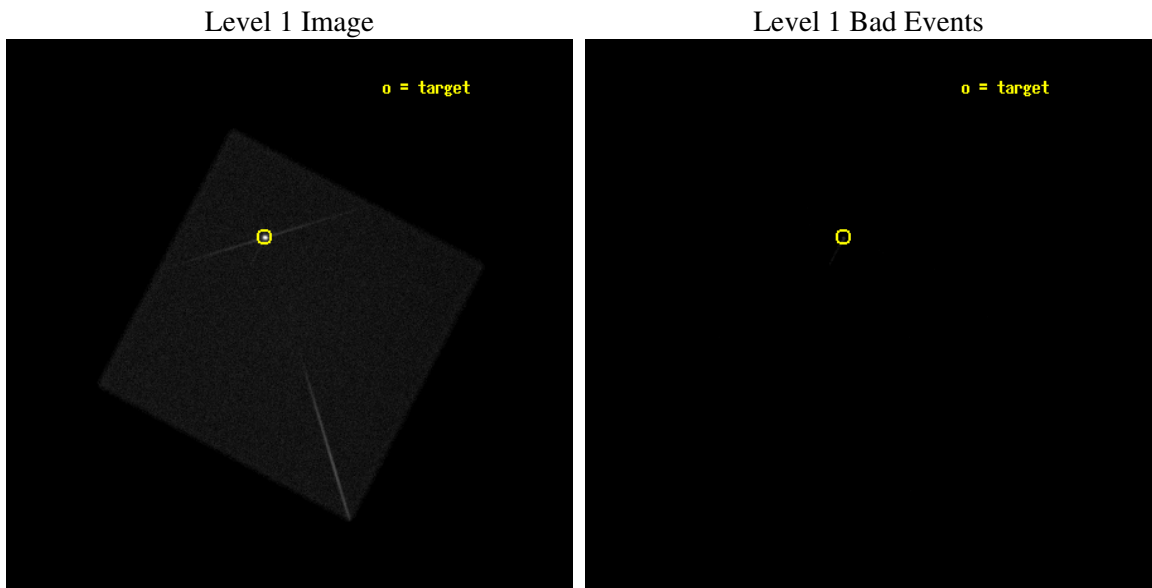
seq_num	290085
obs_id	1004
title	LETG/HRC-I CALIBRATION OBSERVATIONS OF HZ43
observer	Dr. CXC Calibration
object	HZ43
ra_targ	199.092083
dec_targ	29.099
ra_nom	199.03951652491
dec_nom	28.942945199095
roll_nom	72.918734147438
revision	5
ontime	15189.731833056
livetime	15115.63661944
l2events	408272



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0
ascdsver	7.6.11.2
caldsver	3.4.1
date	2007-11-21T07:49:27
revision	5

sched_exp_time	15000.000000
ontime	15189.731833056
l1events	596511

2.1.3 Events

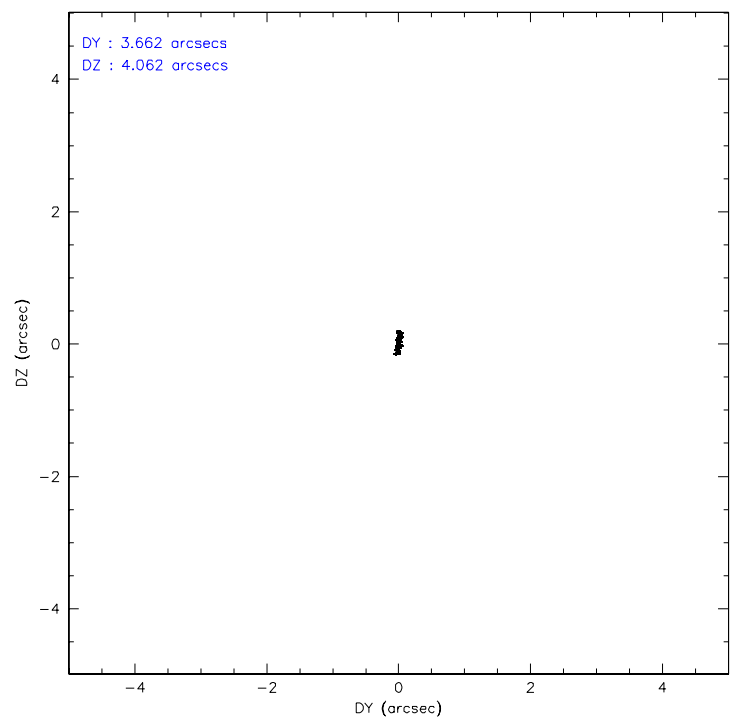
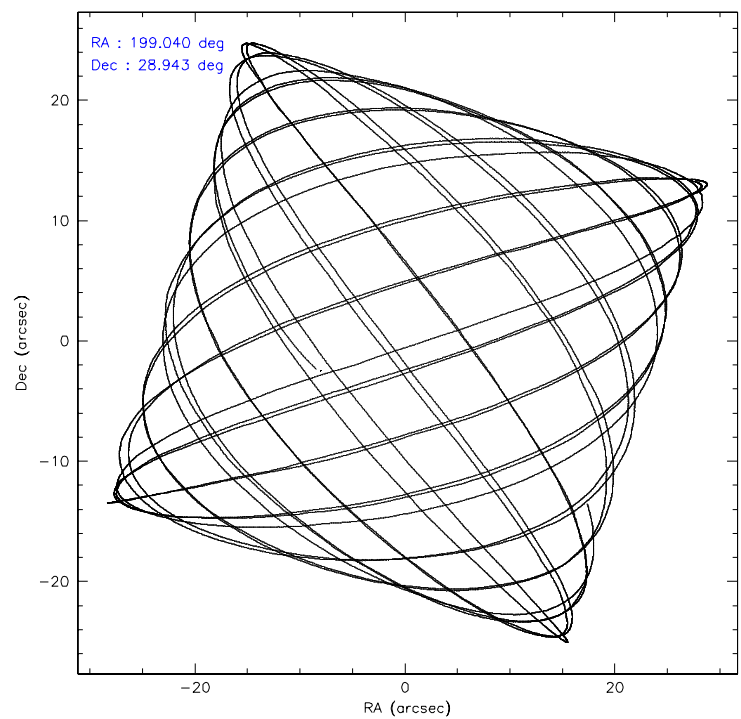
Level 1 Events

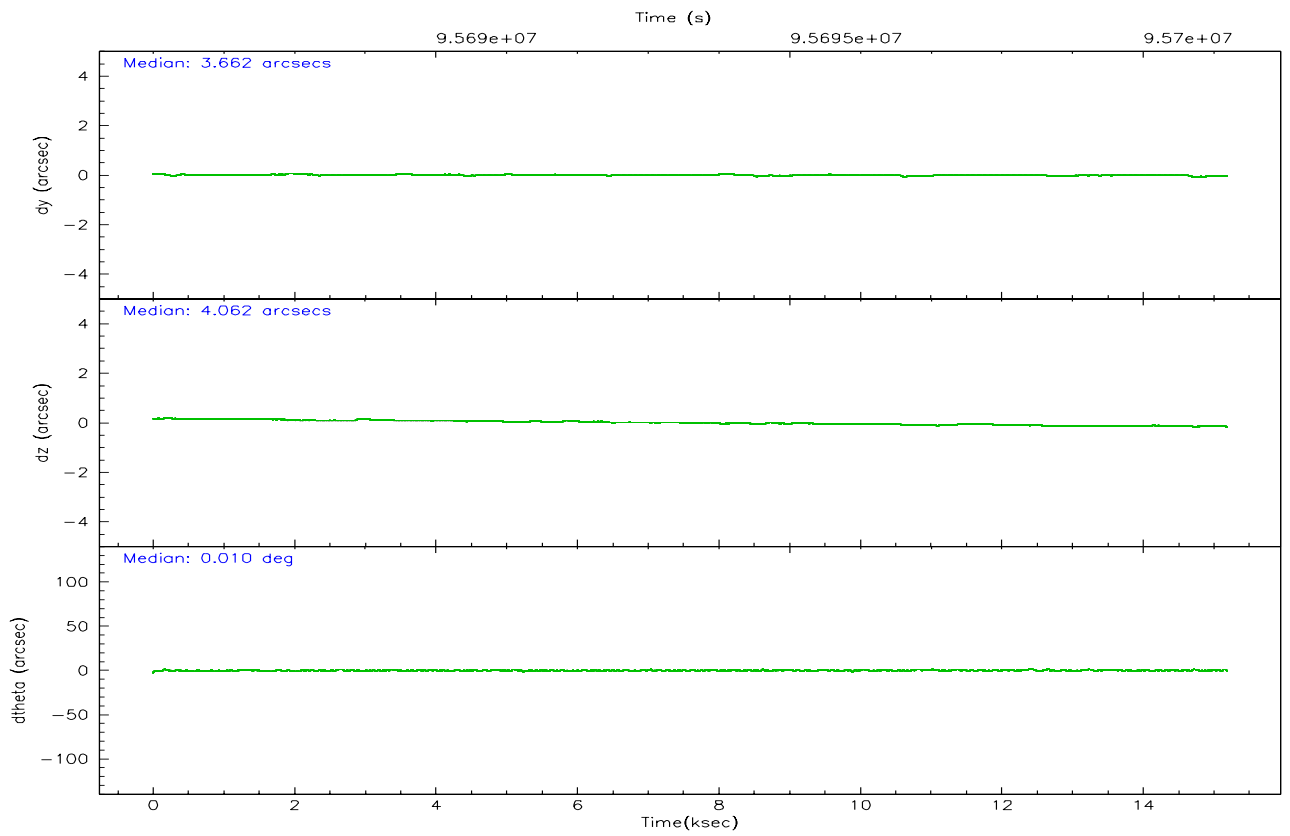
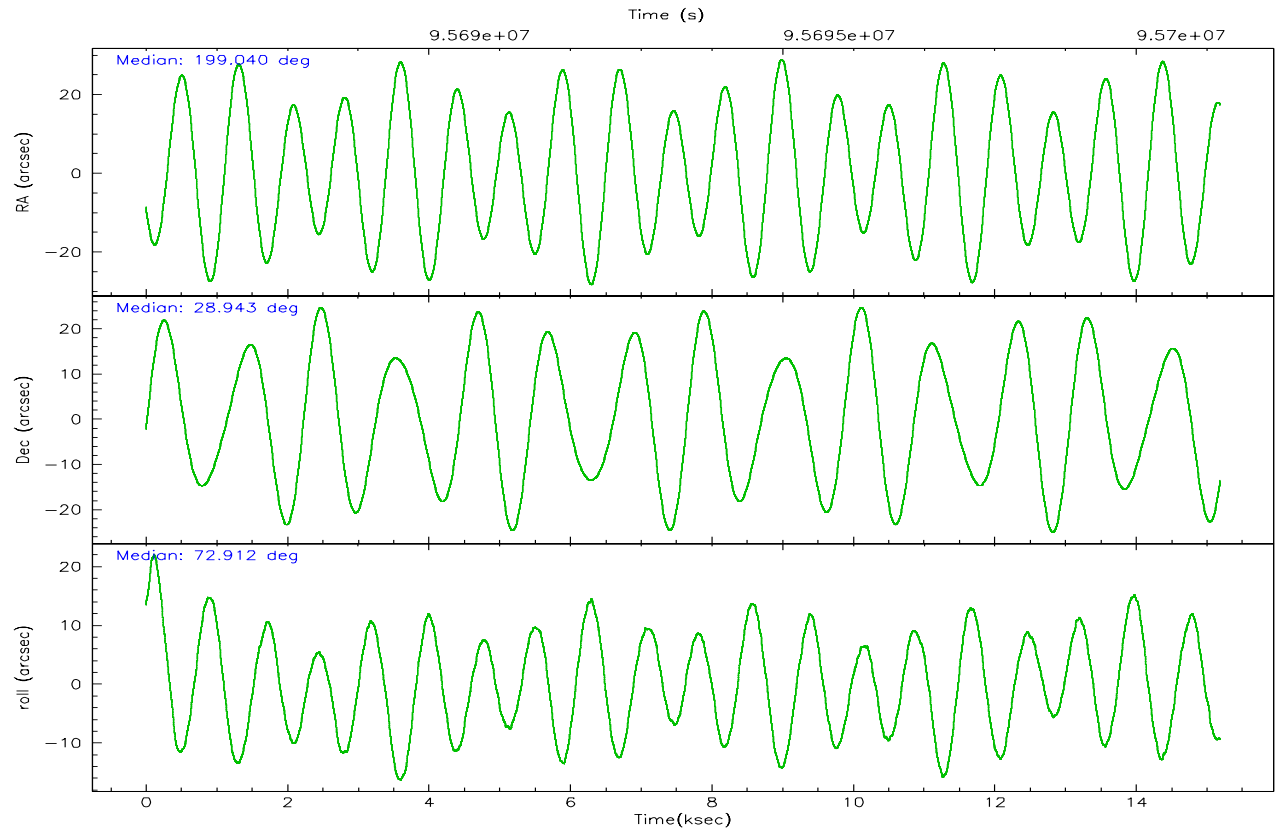
	segment 0
level 1 events	596511
rejected events	13519
rejected %	2%

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	199.047023	199.0395165249147			
Pointing Dec	28.916548	28.94294519909539			
Pointing Roll	73.010591	72.91873414743806			
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	95686187.184000	95685811.514286			
Observation start date	2001-01-12T11:28:43	2001-01-12T11:23:31			
Observation end time	95701187.184000	95701350.002382			
Observation end date	2001-01-12T15:38:43	2001-01-12T15:42:30			

2.3 Aspect



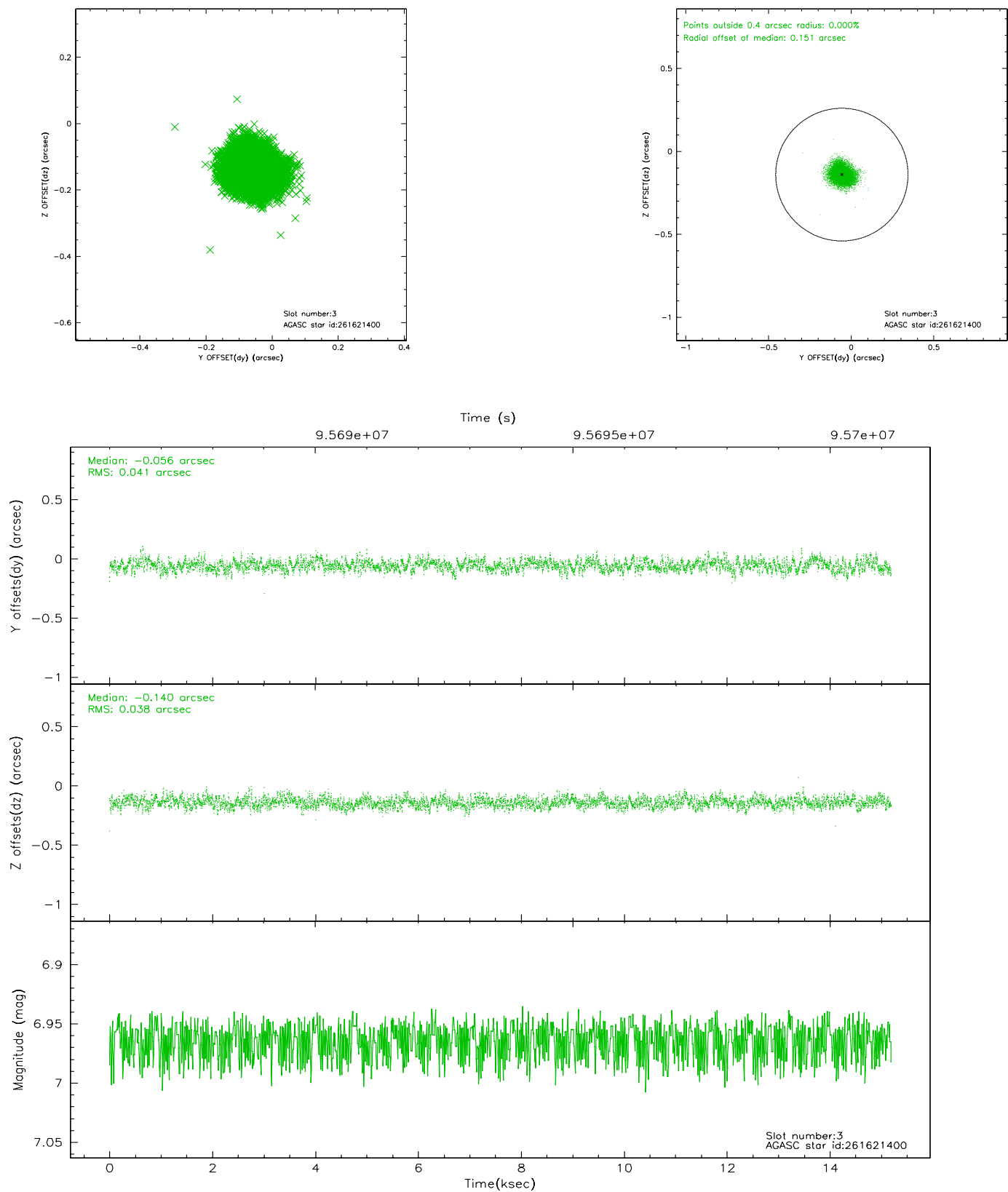


Slot Statistics

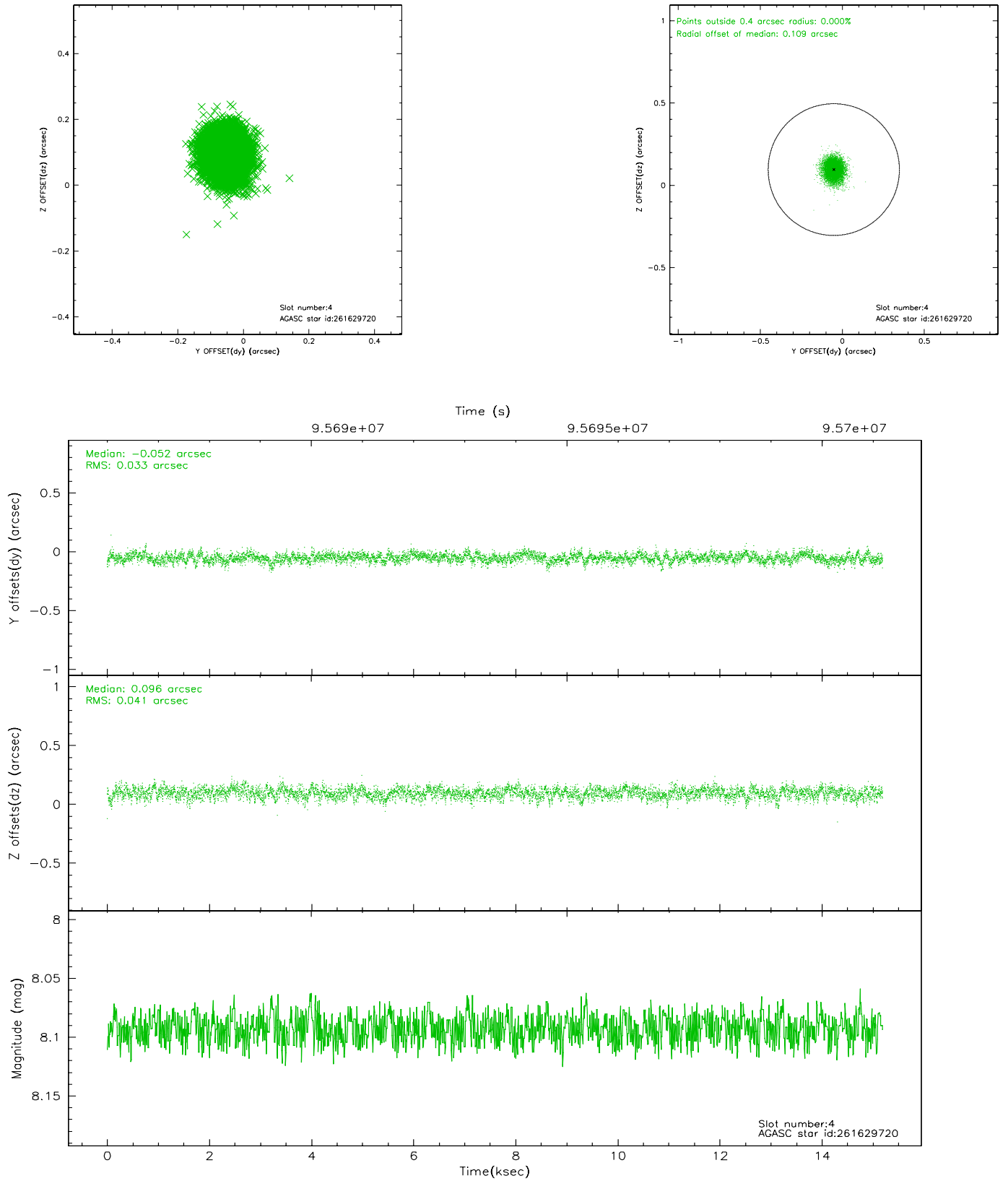
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.98	3704	0.034	0.047	0.006	0.011	0.000000	0.000000	-759.16	-1291.81
1	FID	HRC-I-2	7.03	3705	0.106	-0.080	0.007	0.011	0.000000	0.000000	853.34	-1293.90
2	FID	HRC-I-4	7.01	3705	-0.024	-0.058	0.006	0.011	0.000000	0.000000	1283.87	1009.85
3	GUIDE	261621400	6.96	7411	-0.056	-0.140	0.060	0.095	198.901600	28.741982	-735.22	255.93
4	GUIDE	261629720	8.09	7411	-0.052	0.096	0.055	0.090	199.236176	29.044452	614.40	-433.79
5	GUIDE	261619776	8.80	7409	-0.124	-0.093	0.077	0.125	198.654383	29.401174	1310.16	1688.73
6	GUIDE	261619992	9.32	7410	0.175	-0.181	0.090	0.145	198.395553	28.647634	-1521.97	1687.72
7	GUIDE	261623624	9.12	7407	0.056	0.316	0.100	0.158	199.611555	28.454113	-1066.16	-2192.97

2.4 Star Slots

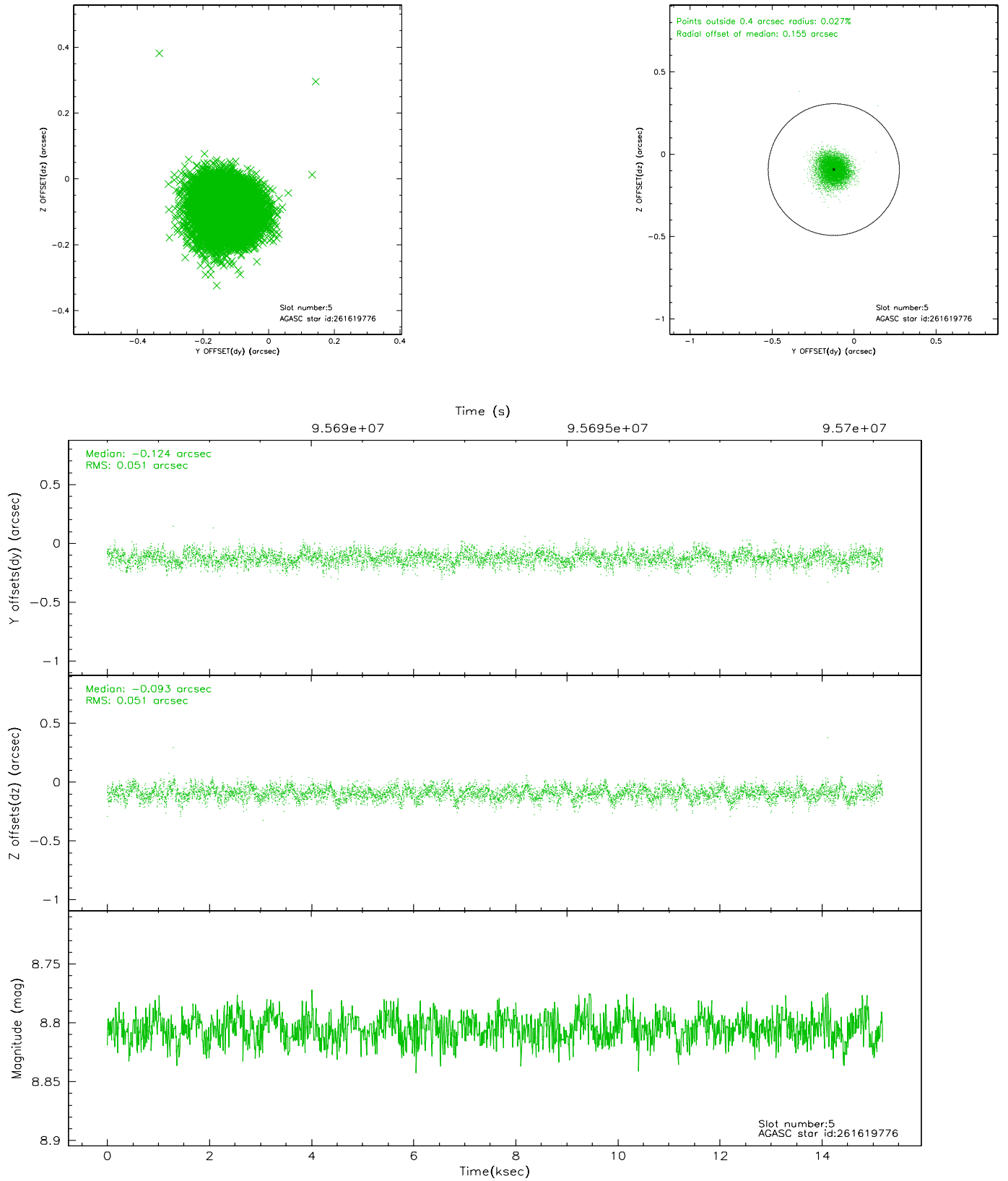
2.4.1 Slot 3



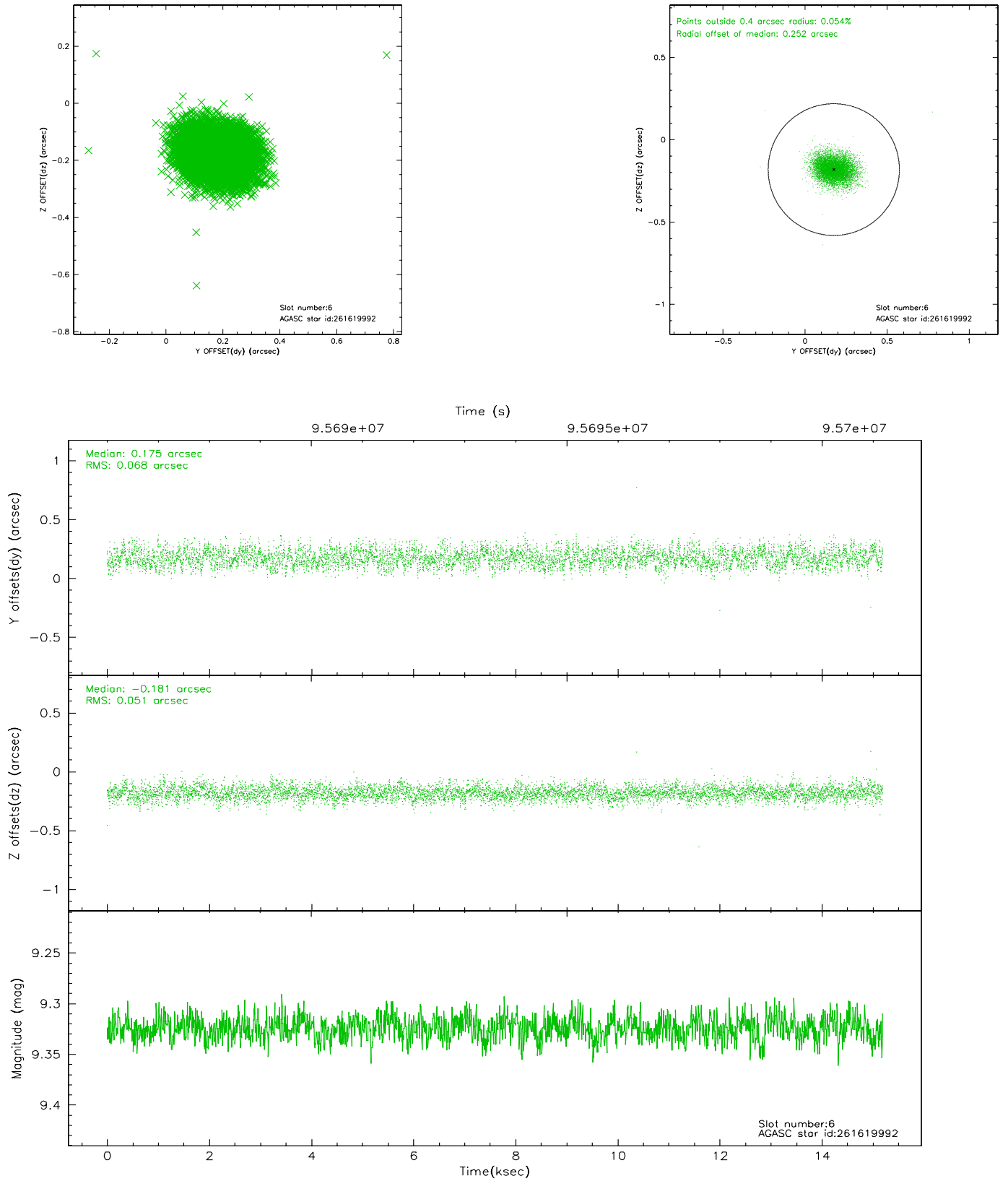
2.4.2 Slot 4



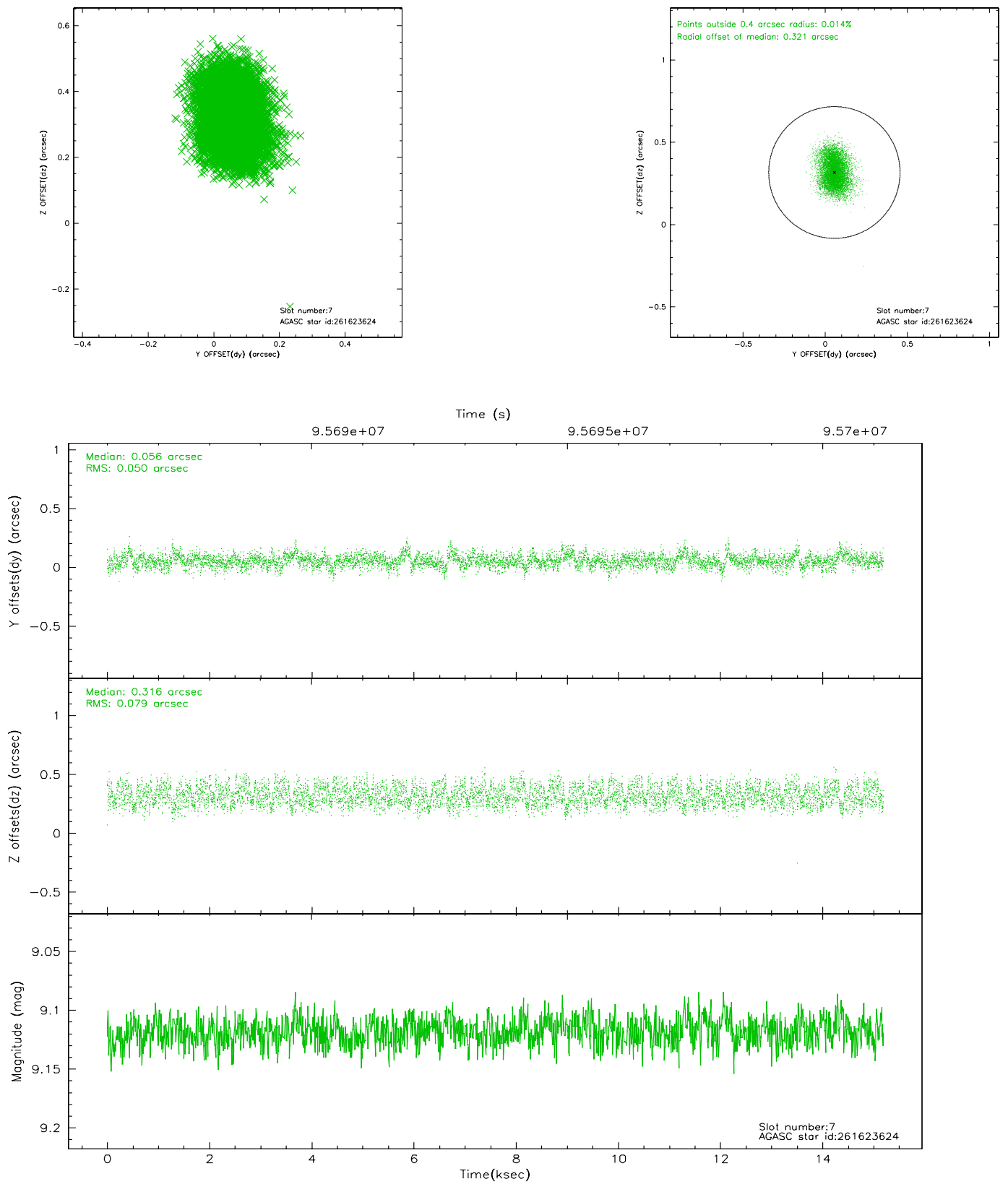
2.4.3 Slot 5



2.4.4 Slot 6

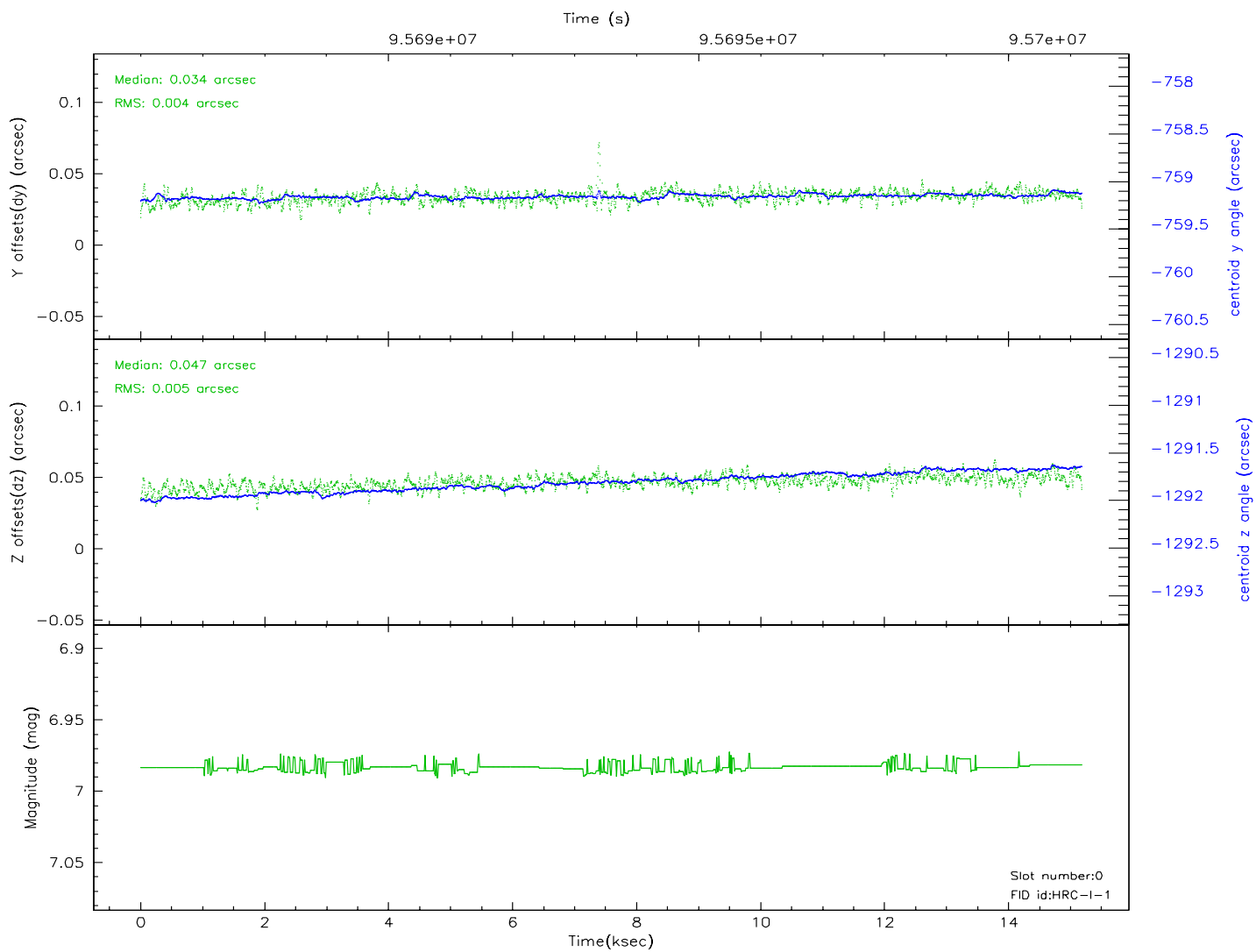
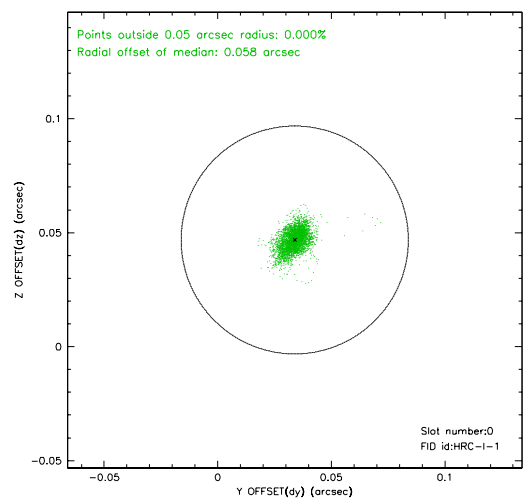
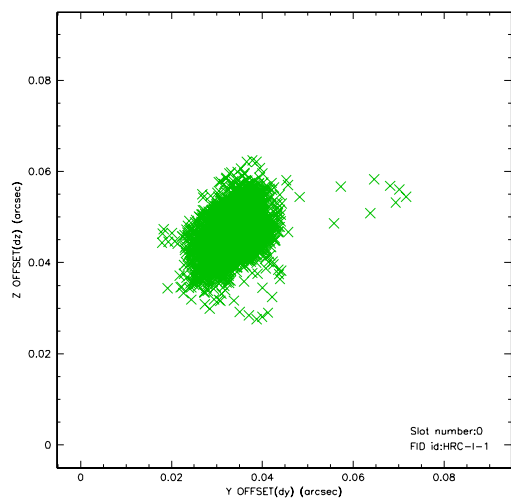


2.4.5 Slot 7

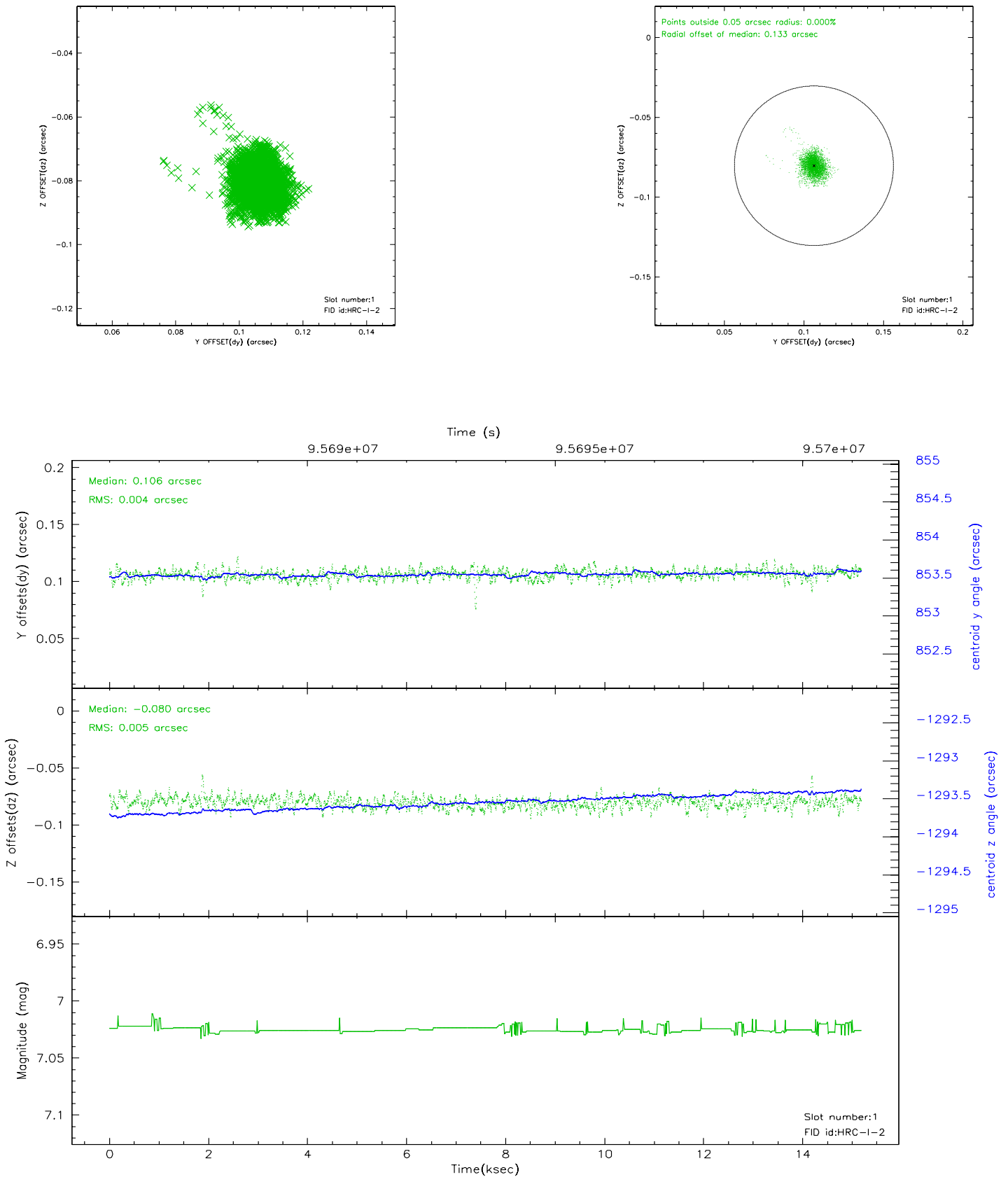


2.5 FID Slots

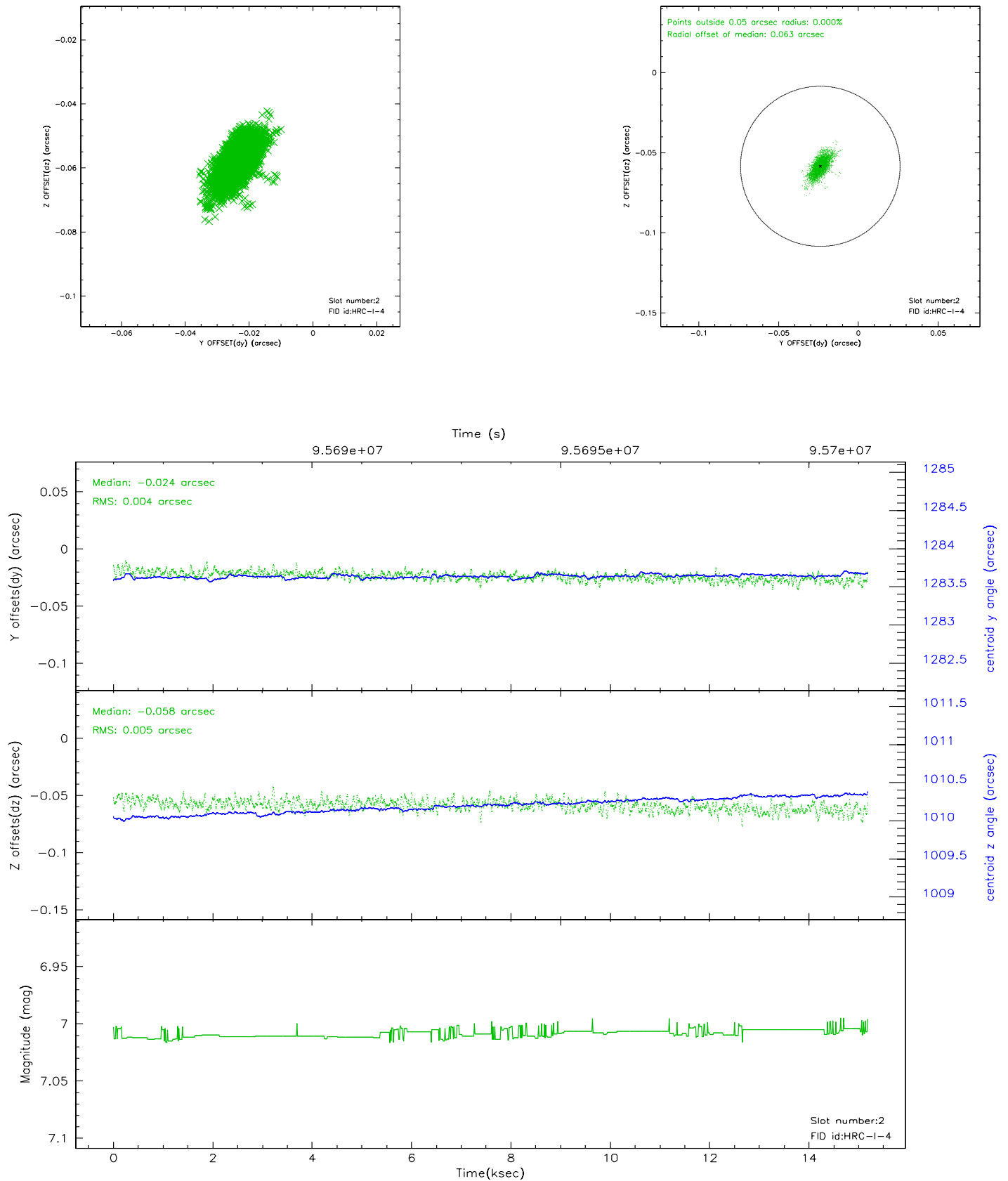
2.5.1 Slot 0



2.5.2 Slot 1

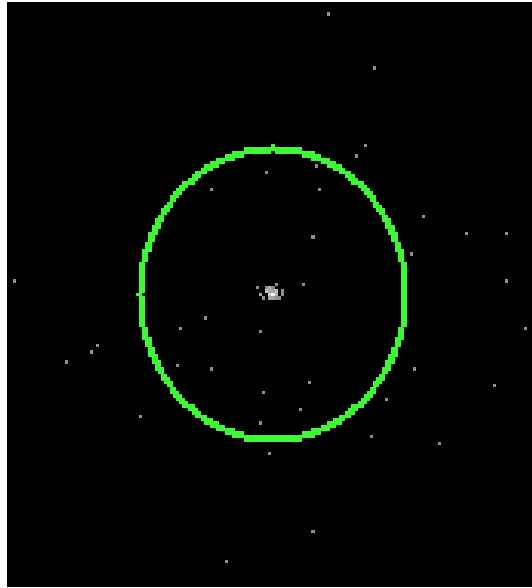


2.5.3 Slot 2

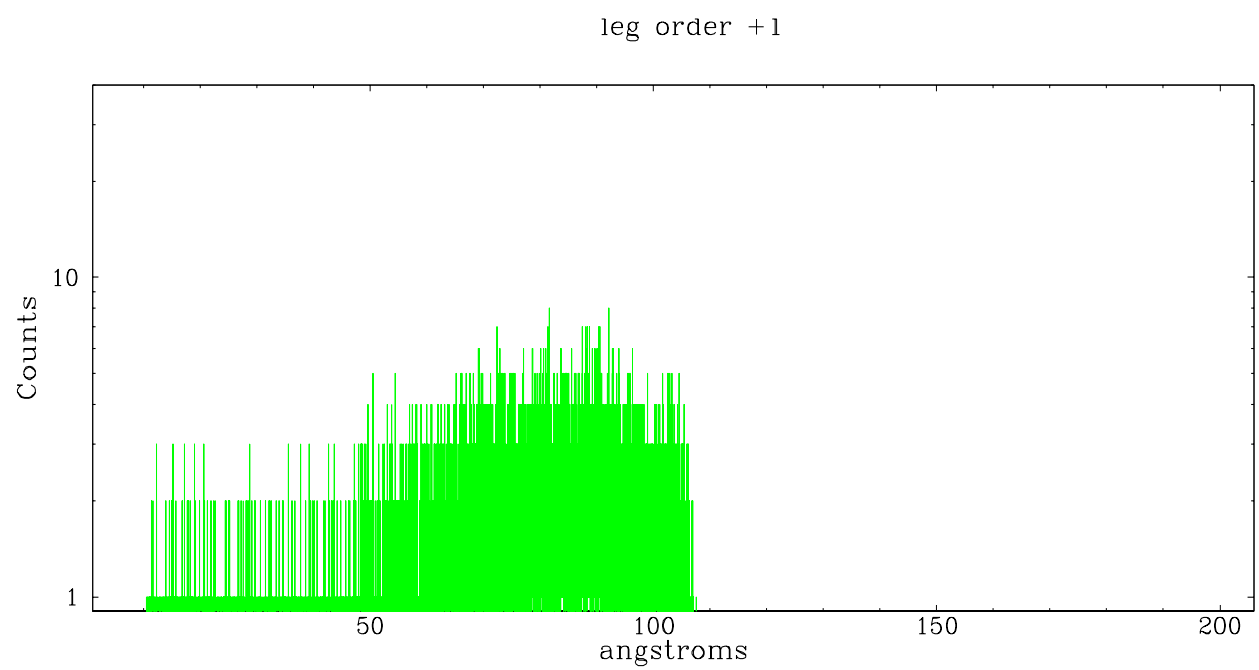
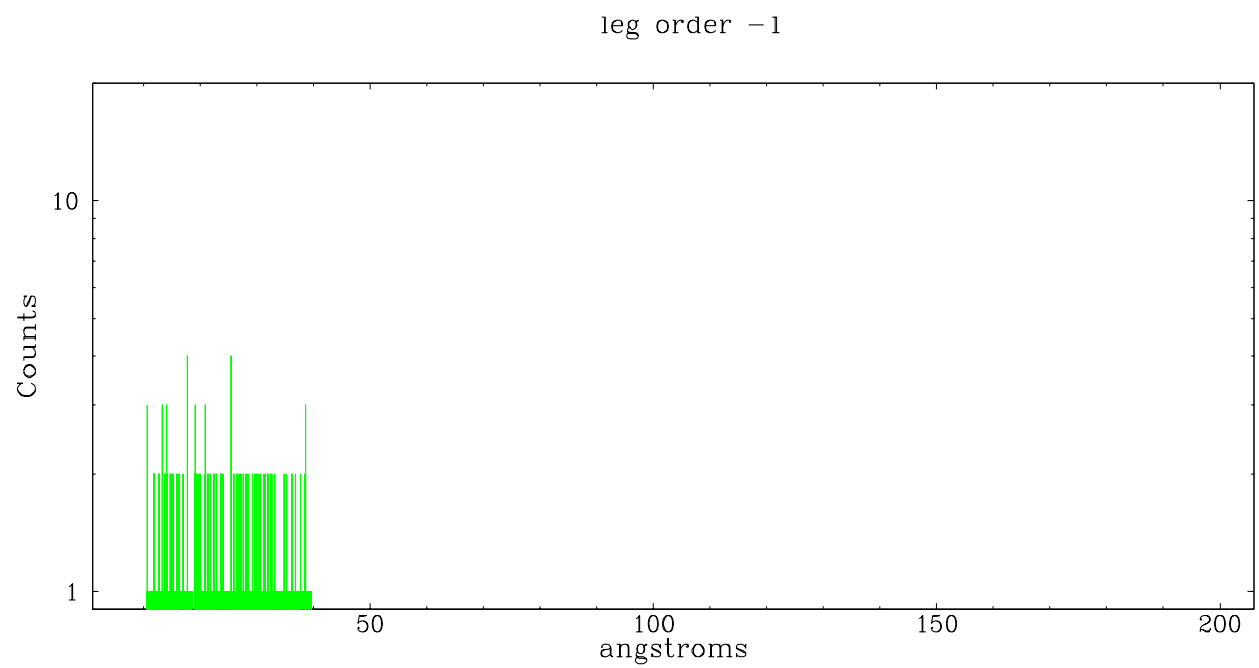


3 Gratings

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	2
V&V Disposition and Status	OK
V&V Charge Time	15.185

A.2 Comments

Source is quite far off-axis, and the PSF is asymmetric and contains the pattern of the struts. The zeroth order is not found at the precise center of the PSF, but is within about 1 arcsec. The off-axis position yields a plus side spectrum with energies beyond 100 A. The minus side spectrum is truncated.

=====

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 for the zeroth order position found by tgdetect, which is not necessarily correct.

=====

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.