

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1004 - L2 Version 6
Chandra X-Ray Center

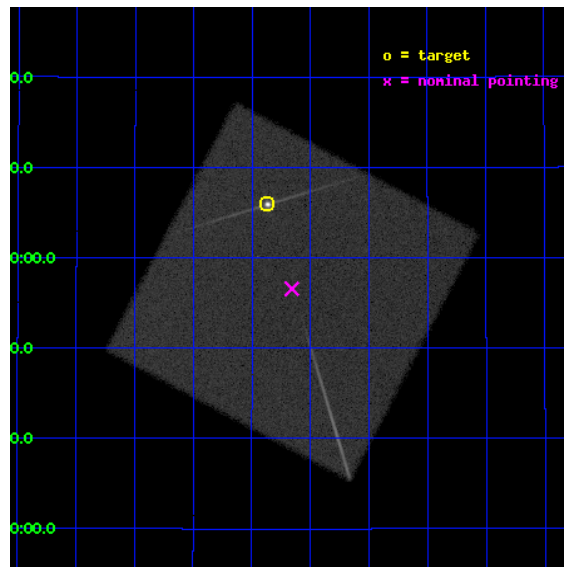
L2 Processing Date : Sep 6 2012

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1 Front

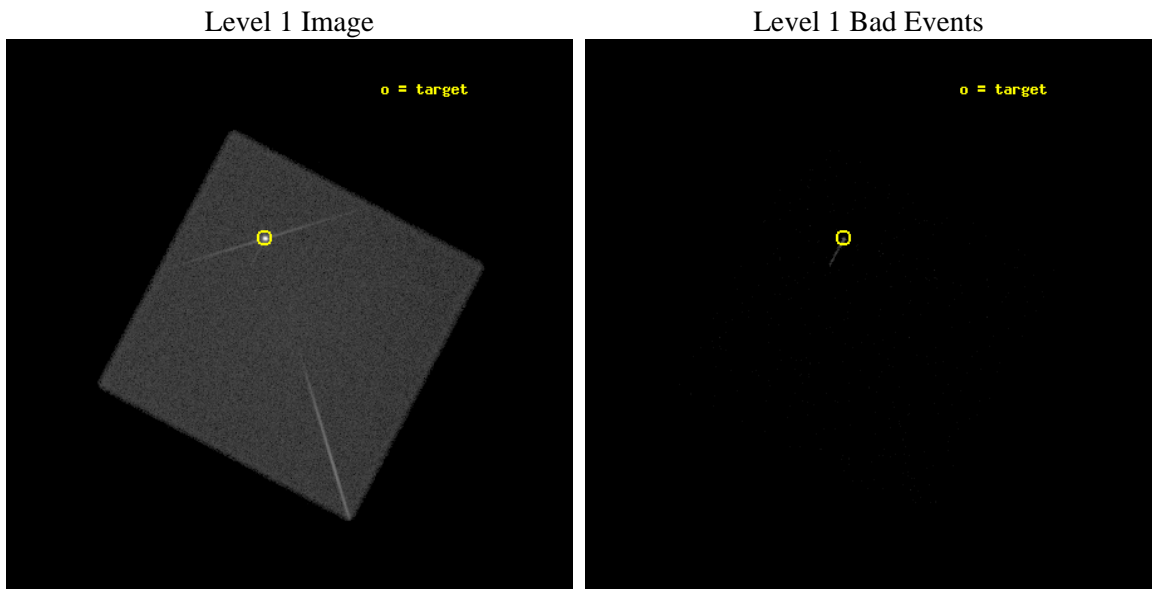
seq_num	290085	Sequence number
obs_id	1004	Observation id
title	LETG/HRC-I CALIBRATION OBSERVATIONS OF HZ43	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	HZ43	Source name
ra_targ	199.092083	Observer's specified target RA [deg]
dec_targ	29.099	Observer's specified target Dec [deg]
ra_nom	199.03951652491	Nominal RA [deg]
dec_nom	28.942945199095	Nominal Dec [deg]
roll_nom	72.918734147438	Nominal Roll [deg]
revision	6	Processing version of data
ontime	15189.731833071	[s]
livetime	15115.558699746	Ontime multiplied by DTCOR
l2events	408268	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	15189.731833071	[s]
caldsver	4.5.1.1	 	l1events	596511	Number of level 1 events
date	2012-09-06T11:22:28	Date and time of file creation			
revision	6	Processing version of data			

2.1.3 Events

Level 1 Events

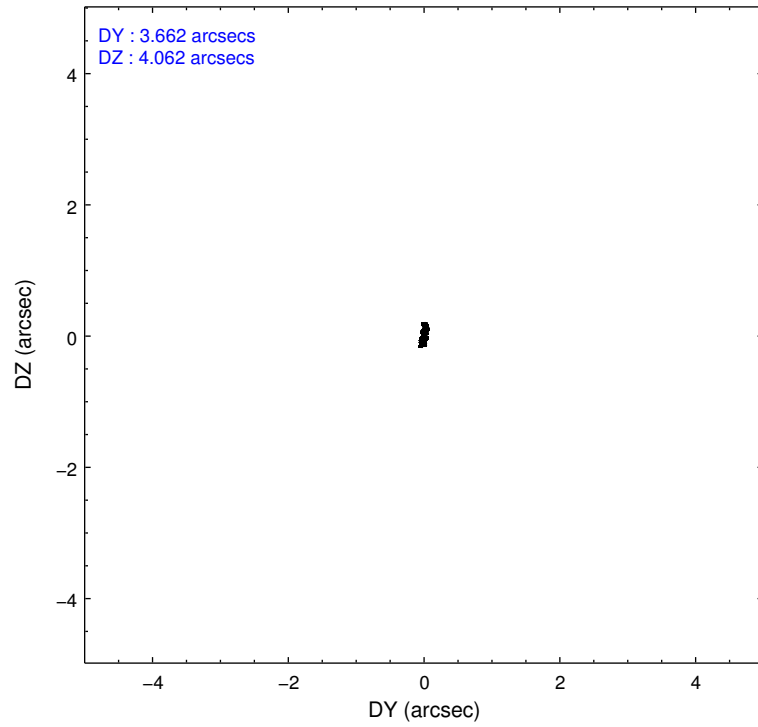
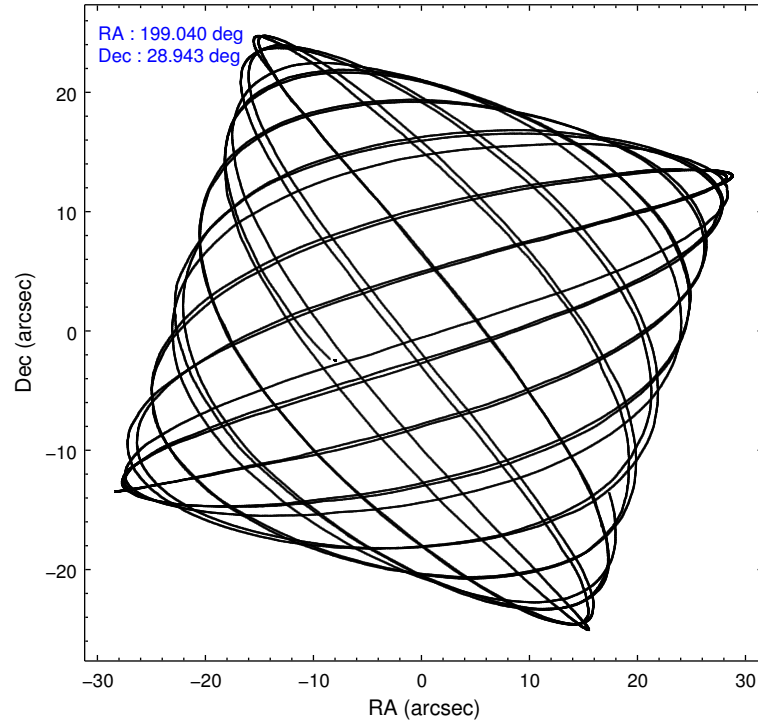
	segment 0
level 1 events	596511
rejected events	13520
rejected %	2%

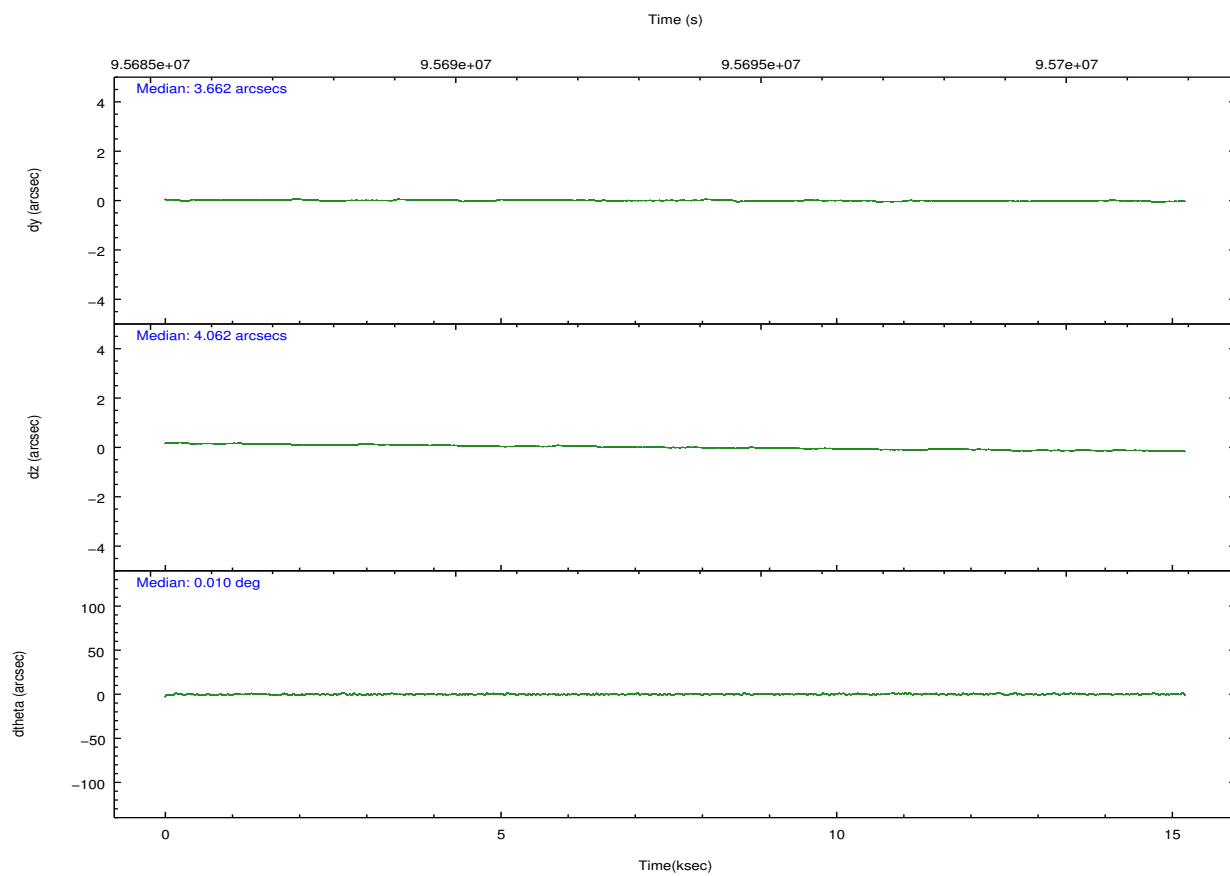
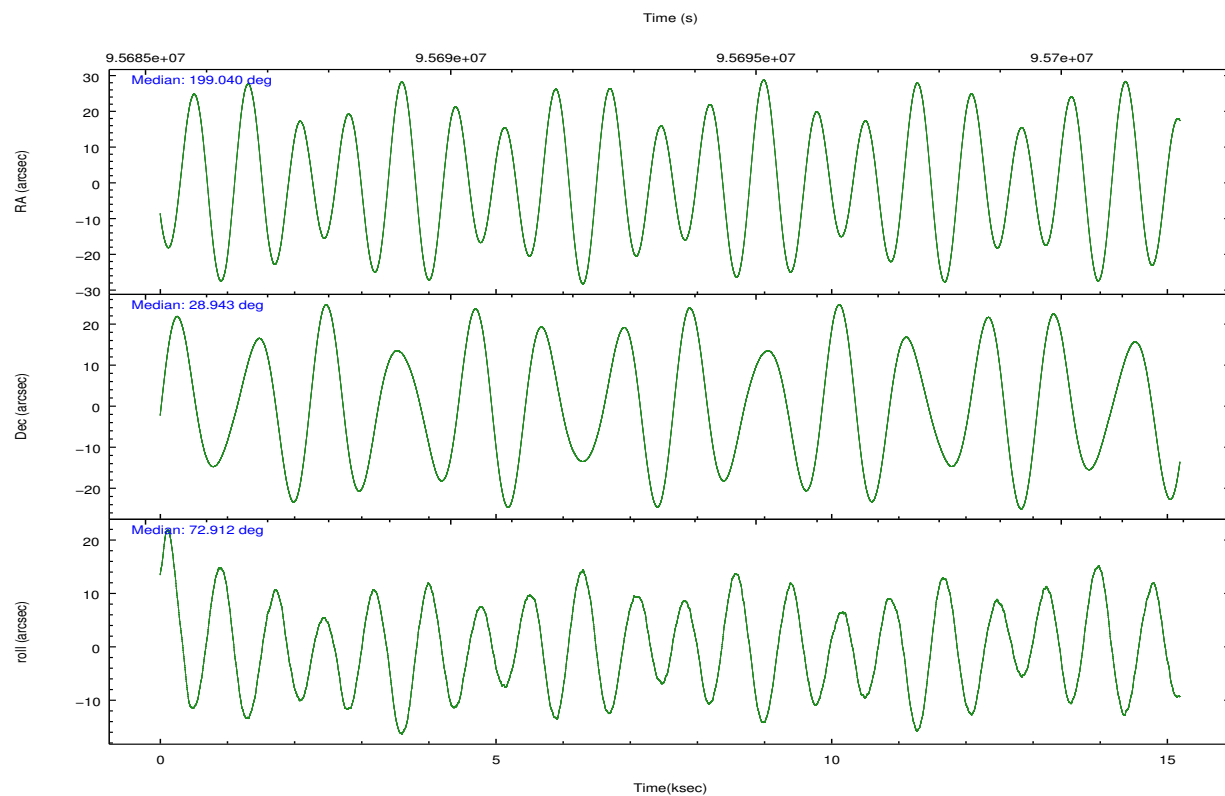
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	LETG	LETG
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	199.047023	199.0395165249147
[deg] Pointing Dec	28.916548	28.94294519909538
[deg] Pointing Roll	73.010591	72.91873414743804
[mm] SIM focus pos	-1.040293	-1.038866356238299
[mm] SIM defocus	0	0.001426264420575141
[mm] SIM translation stage pos	126.985494	126.9854943052878
[mm] SIM translation stage offset	0	-5.413686238853188e-06
[s] Observation start time (MET)	95686187.184000	95685811.514286
Observation start date	2001-01-12T11:28:43	2001-01-12T11:23:31
[s] Observation end time (MET)	95701187.184000	95701350.002382
Observation end date	2001-01-12T15:38:43	2001-01-12T15:42:30

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect



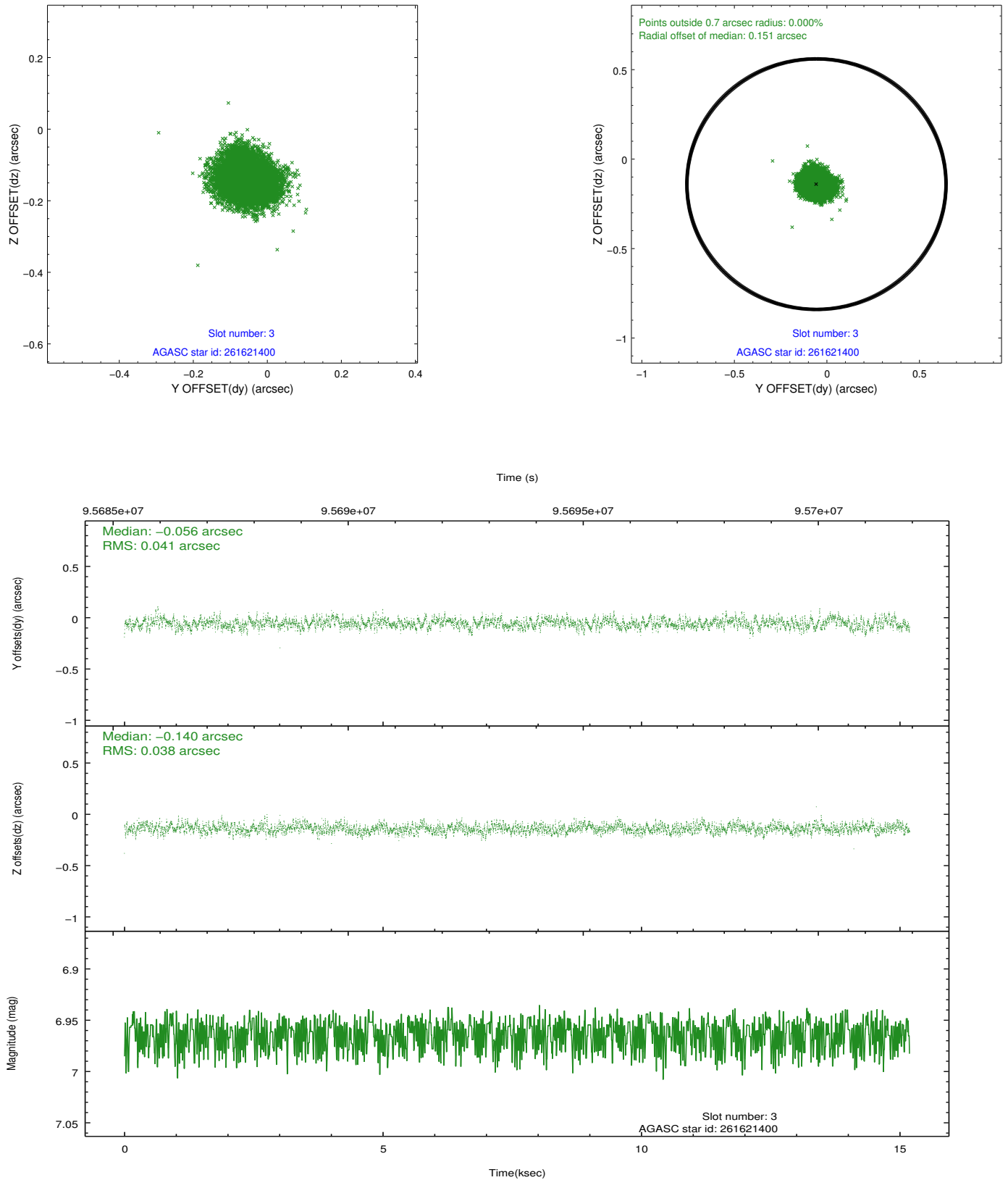


Slot Statistics

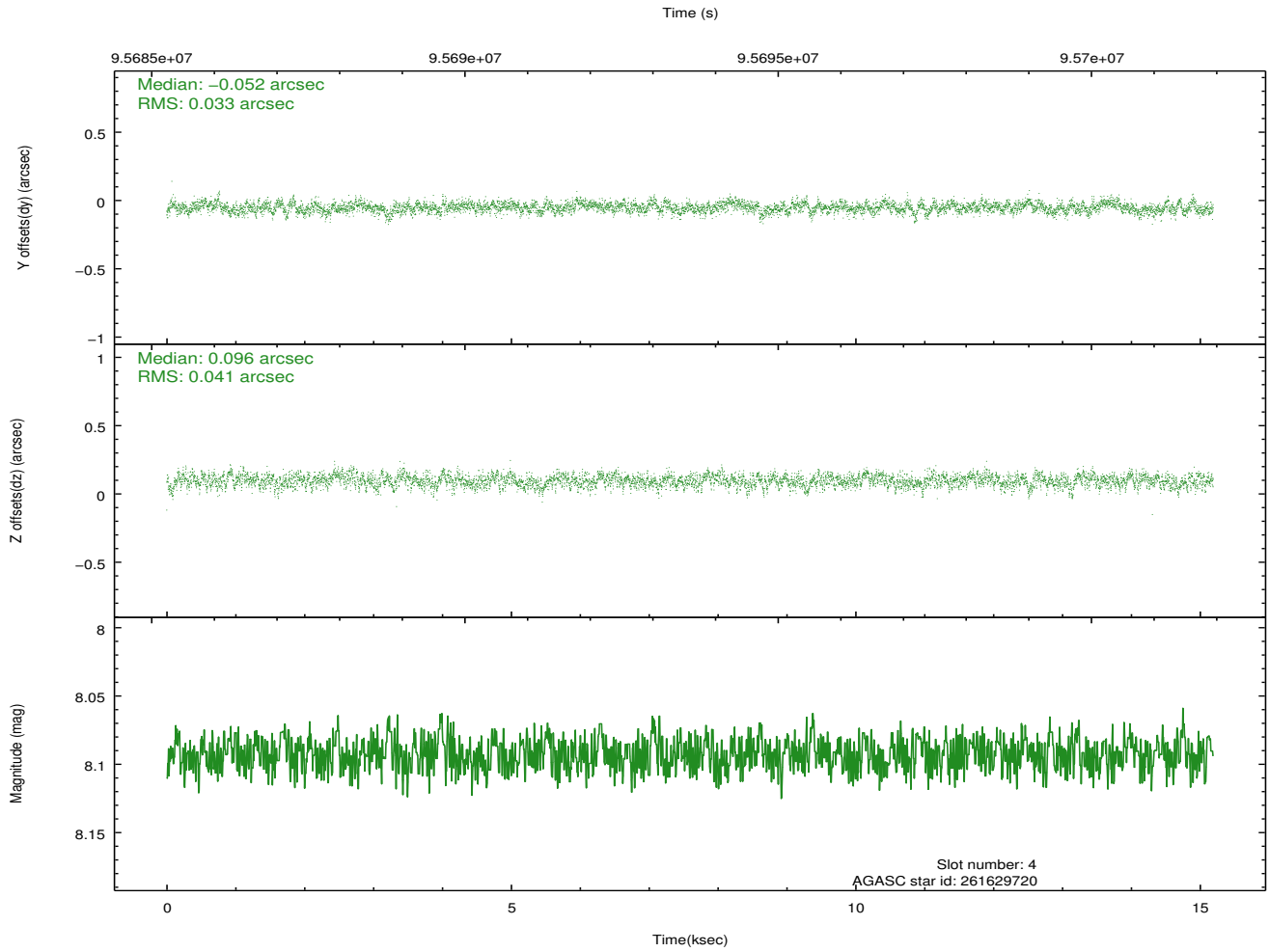
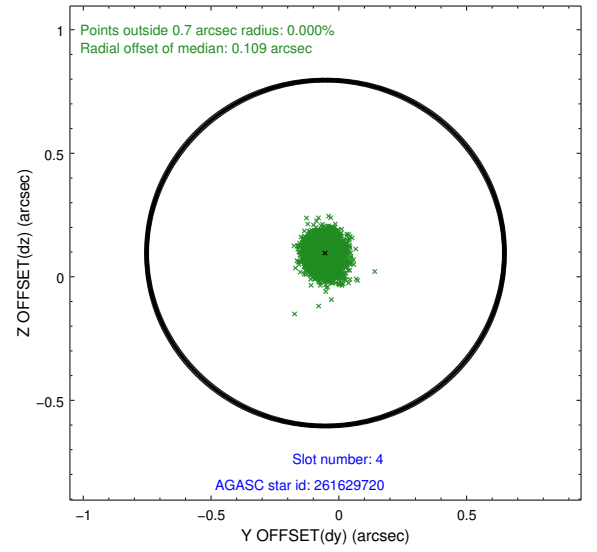
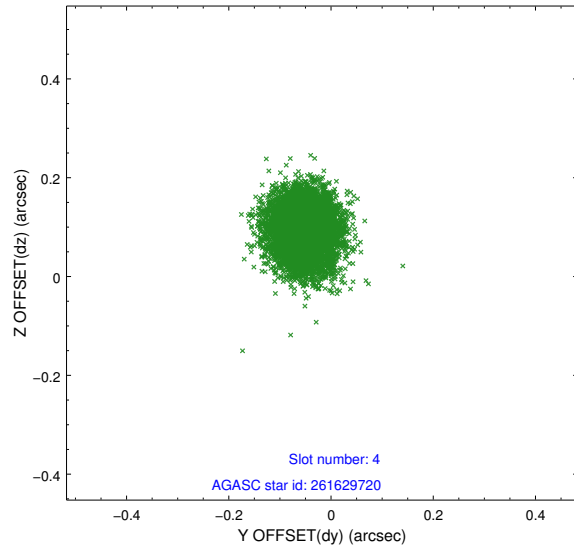
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.98	3704	0.034	0.047	0.006	0.011	0.000000	0.000000	-759.16	-1291.81
1	FID	HRC-I-2	7.03	3705	0.106	-0.080	0.007	0.011	0.000000	0.000000	853.34	-1293.90
2	FID	HRC-I-4	7.01	3705	-0.024	-0.058	0.006	0.011	0.000000	0.000000	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

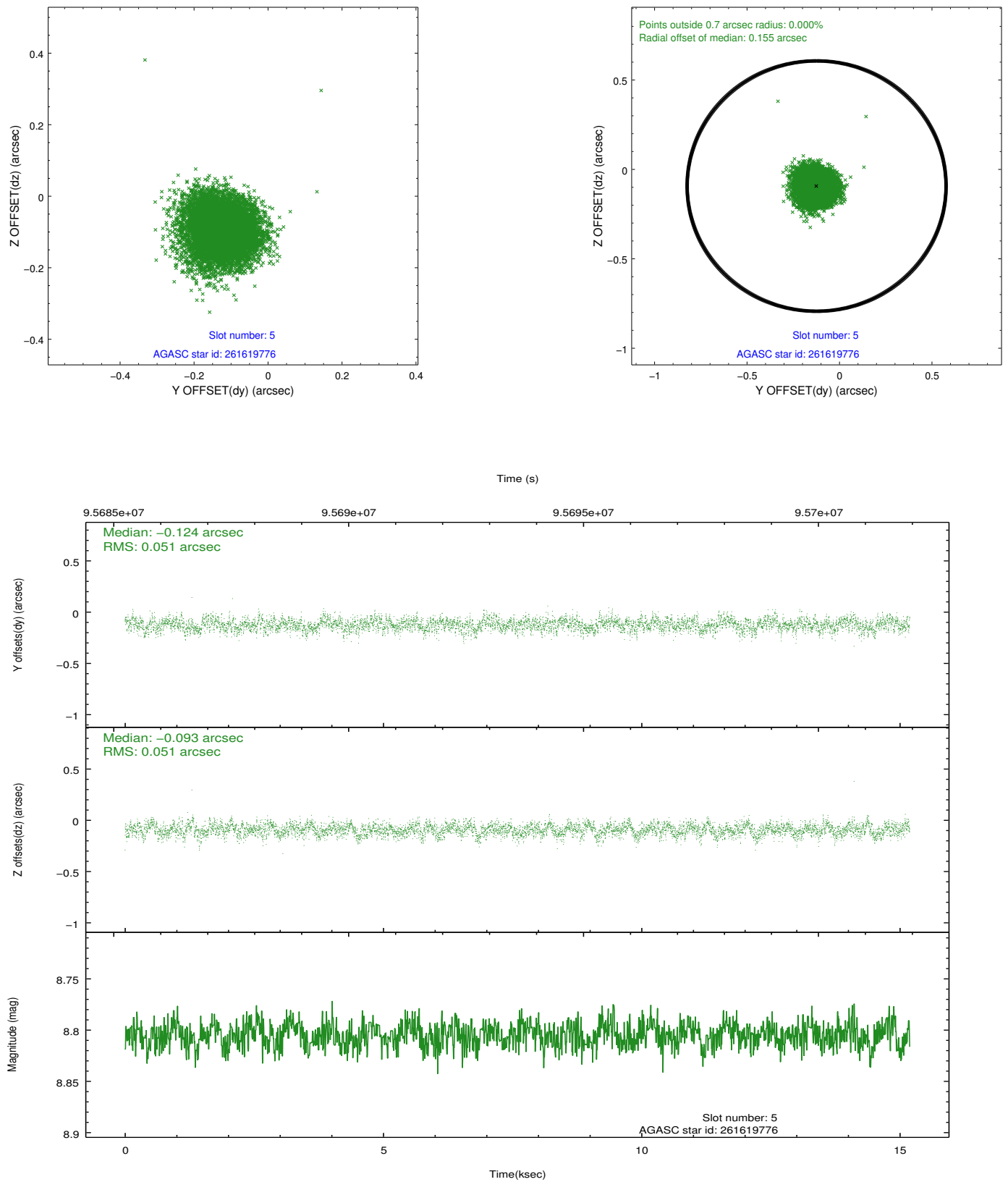
2.4.1 Slot 3



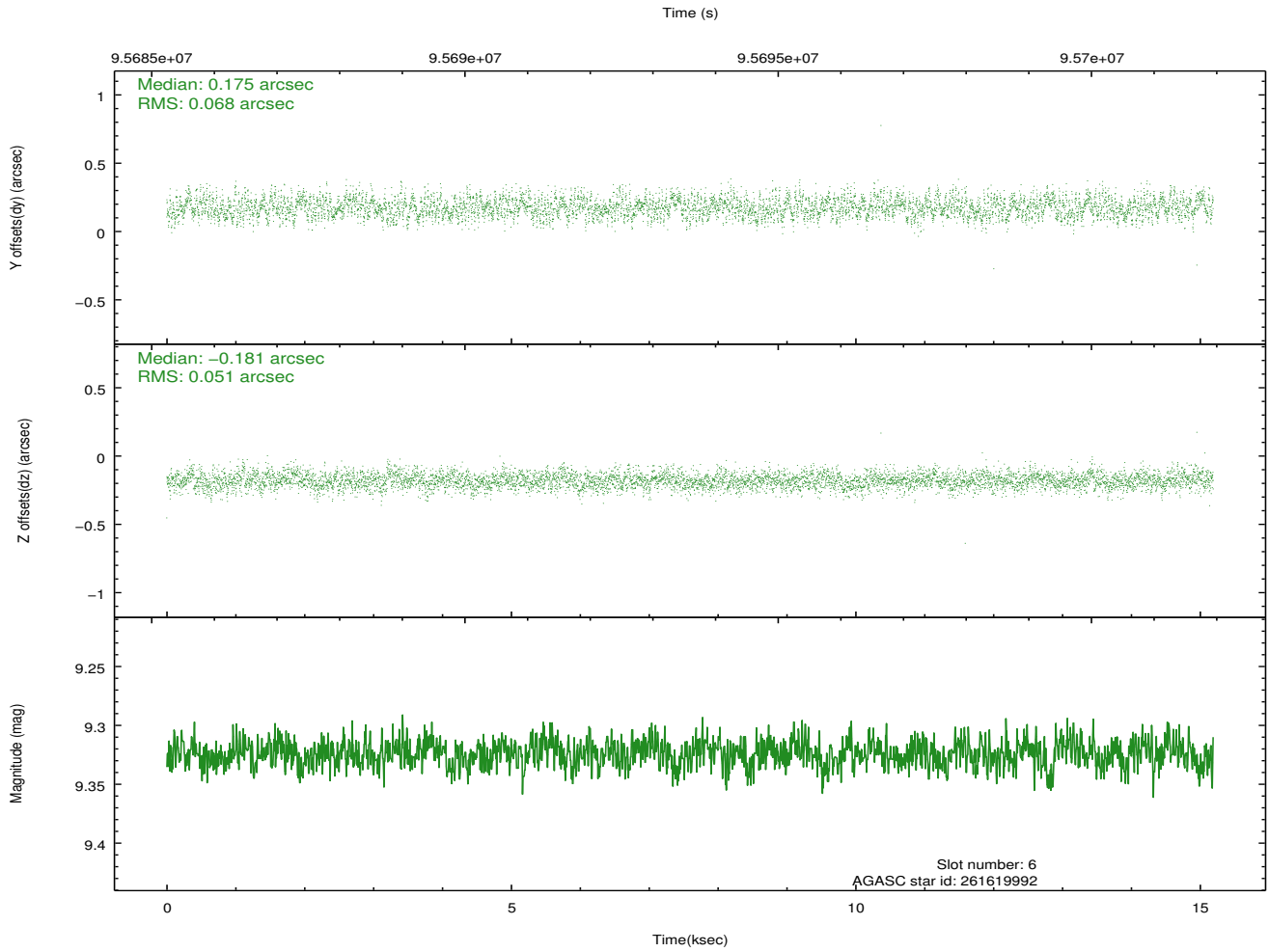
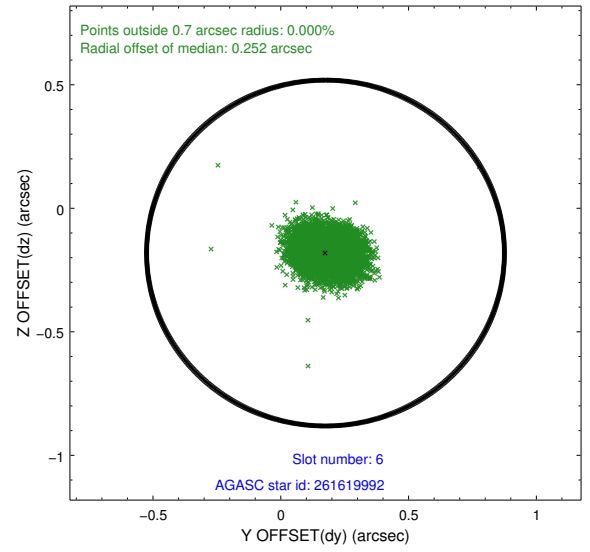
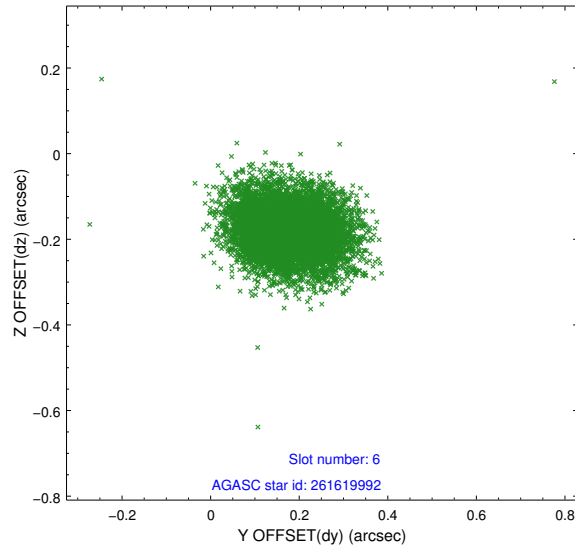
2.4.2 Slot 4



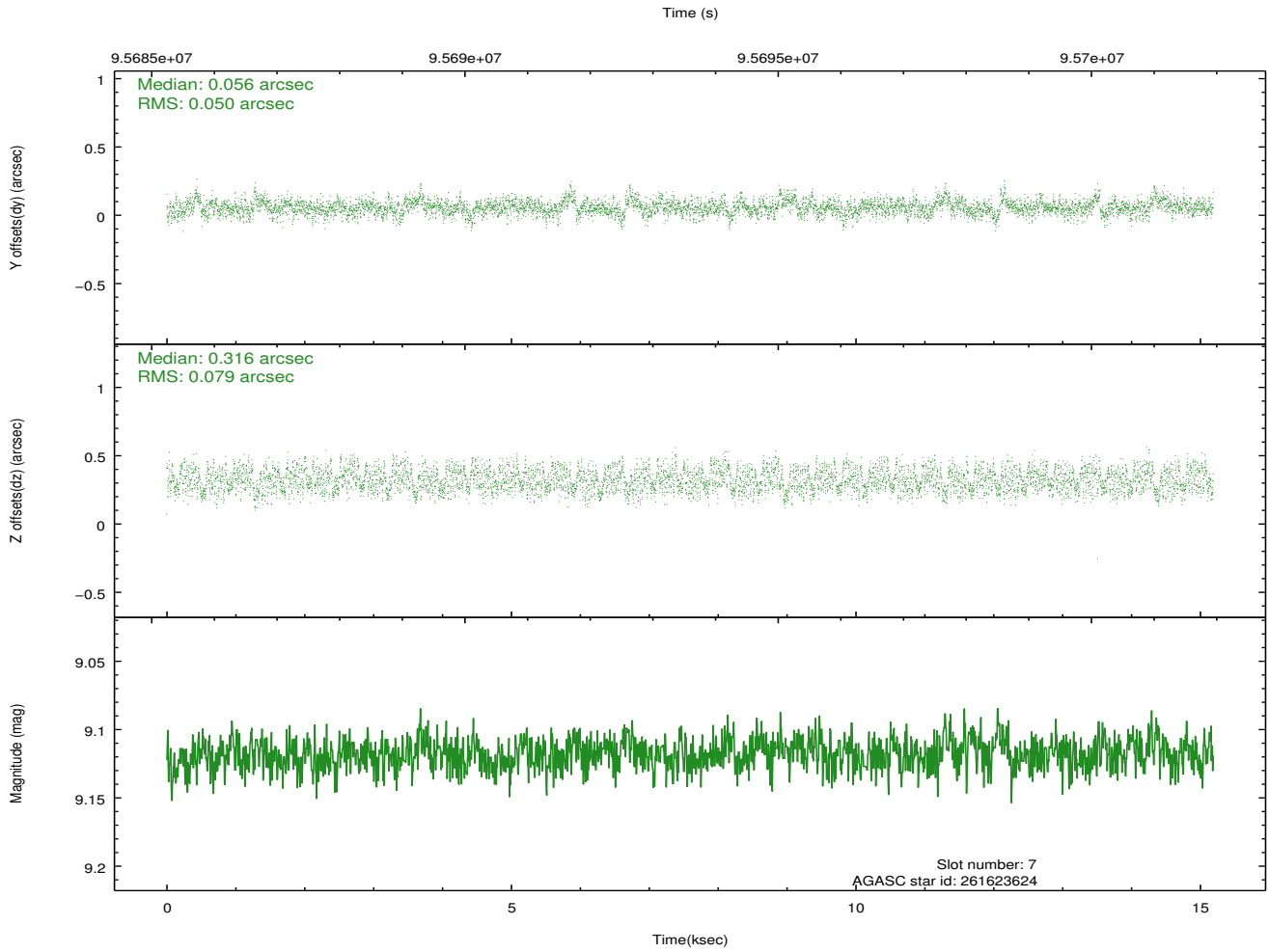
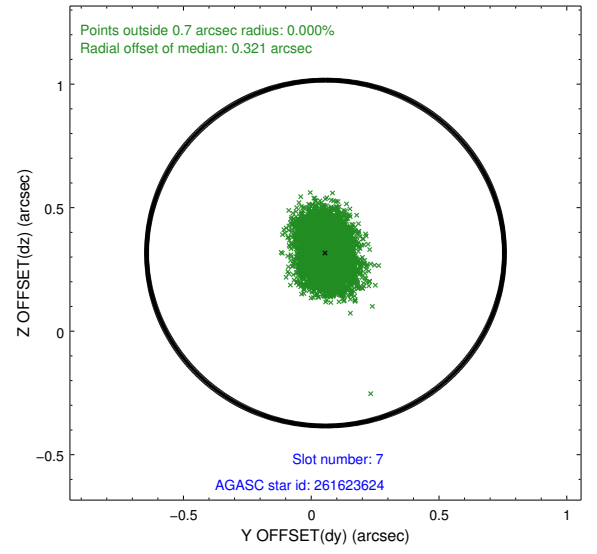
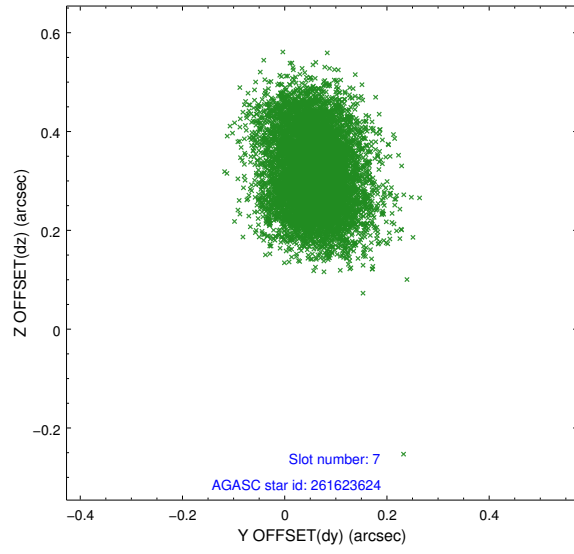
2.4.3 Slot 5



2.4.4 Slot 6

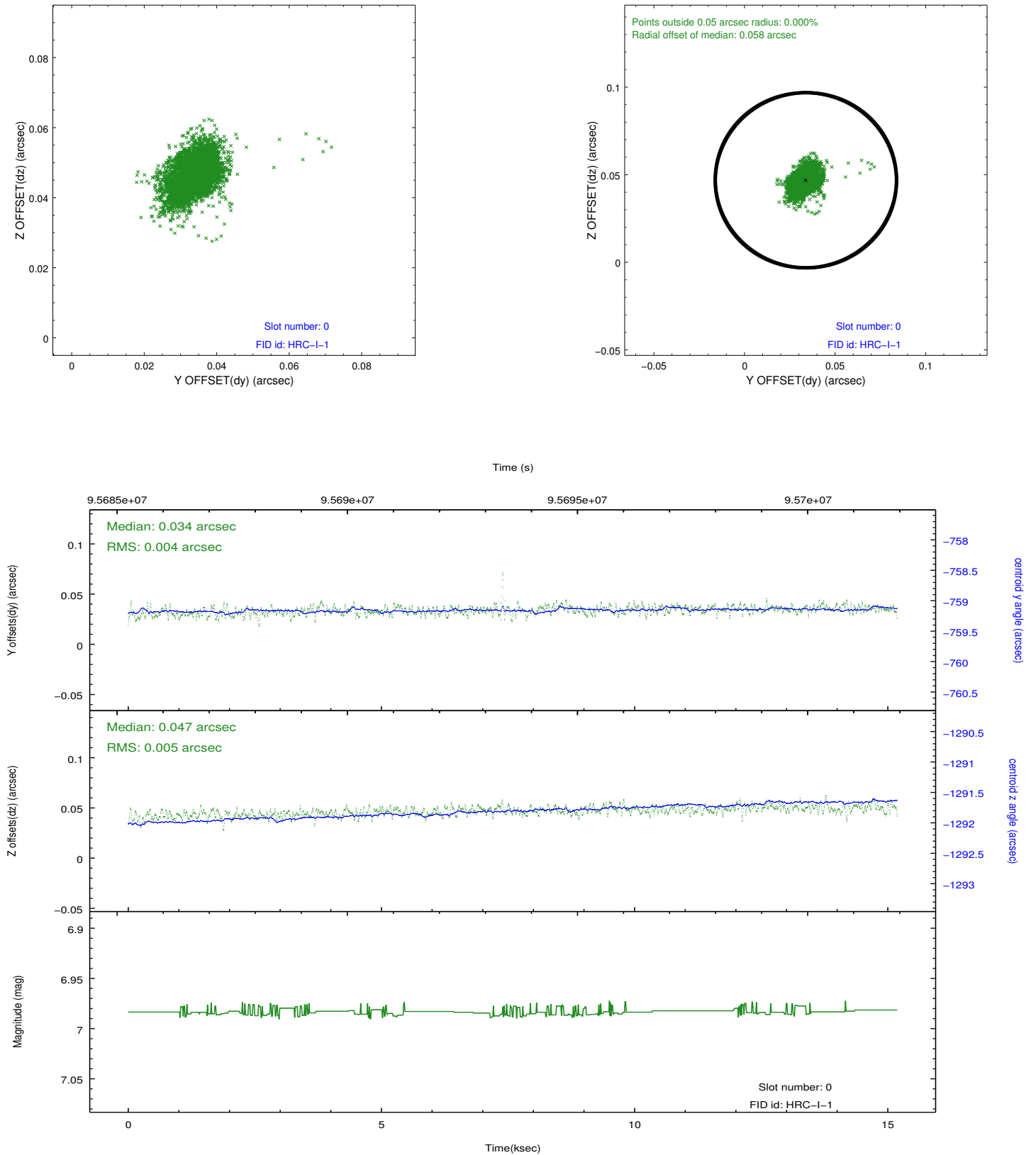


2.4.5 Slot 7

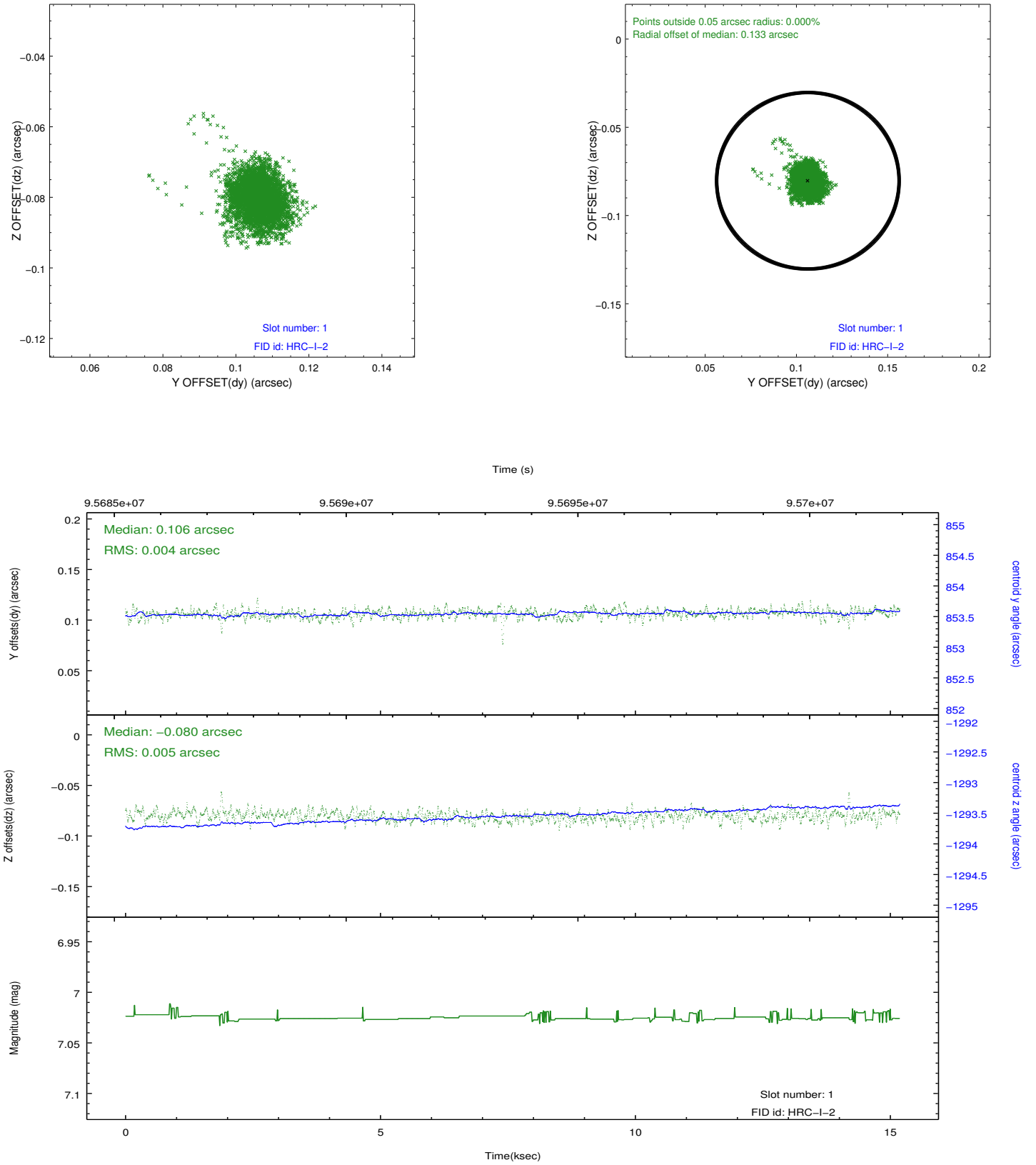


2.5 FID Slots

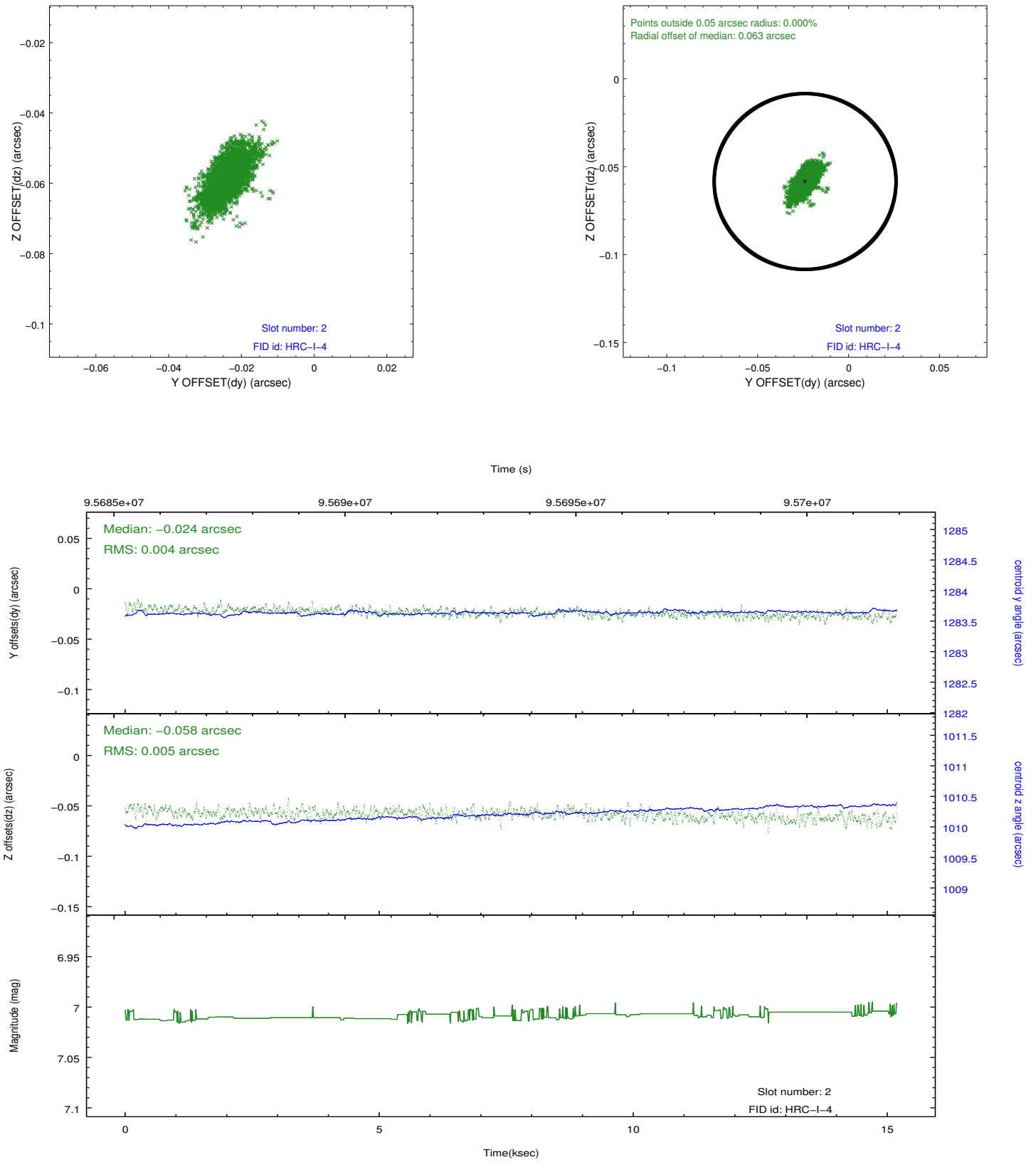
2.5.1 Slot 0



2.5.2 Slot 1

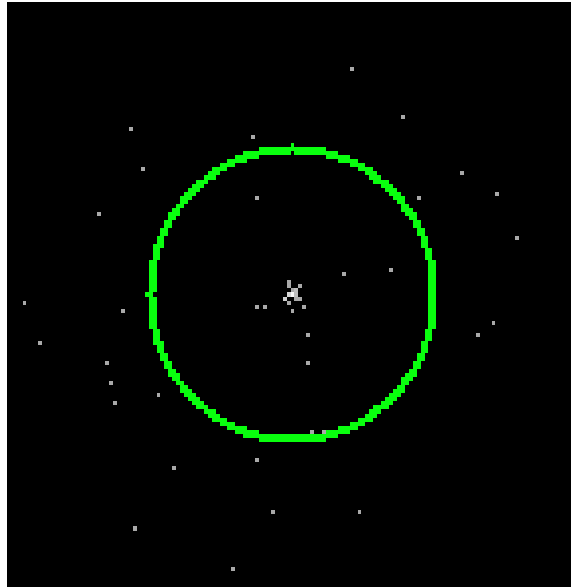


2.5.3 Slot 2

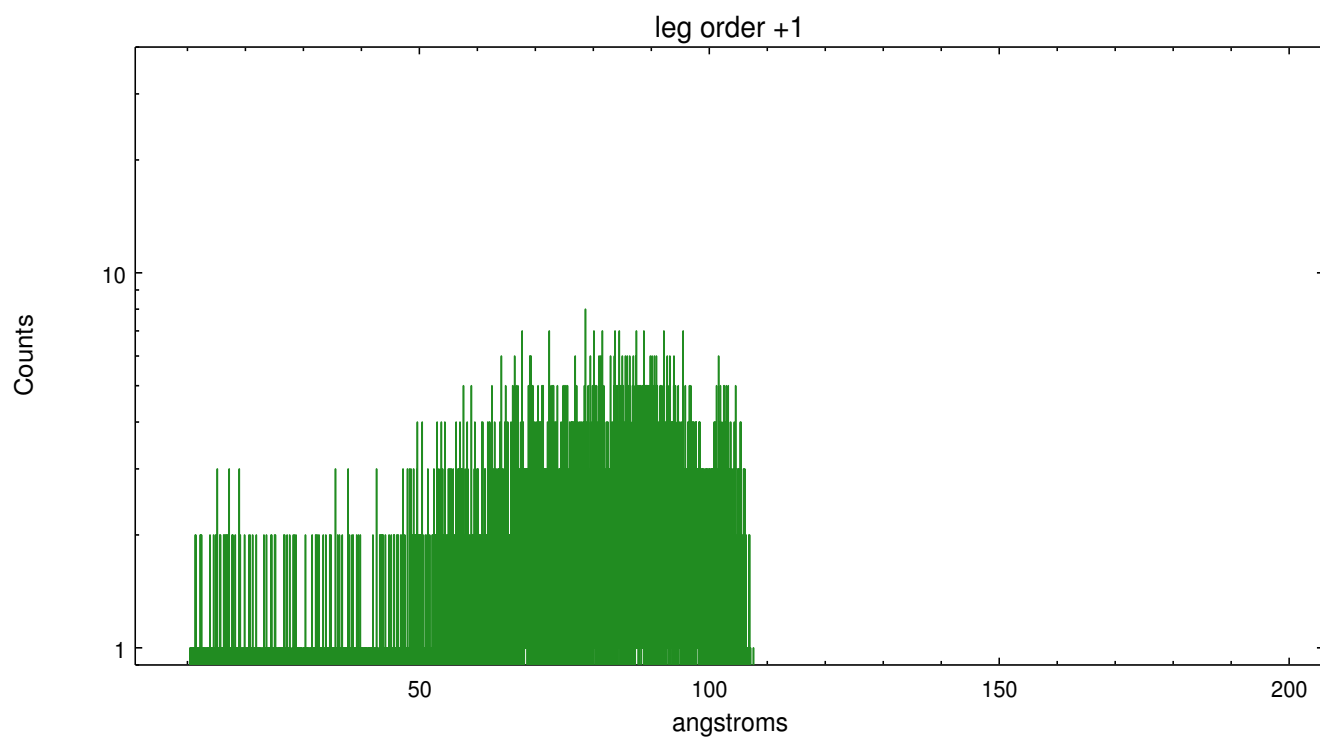
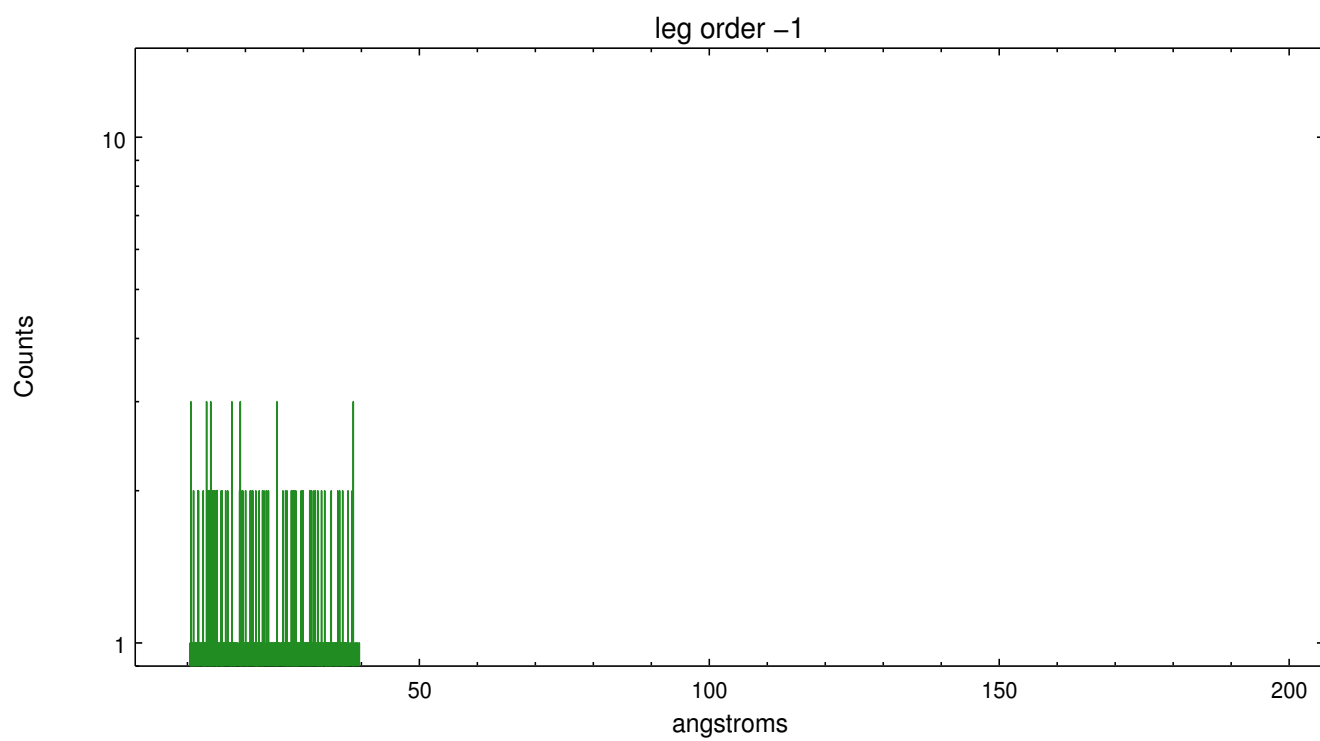


3 Gratings

3.1 LETG Arm



LETG Zero Order



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.12
V&V Edition	1
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.