

V&V Reference Report

L2 ASCDS Version : 10.6.4

Observation 21671 - L2 Version 1
Chandra X-Ray Center

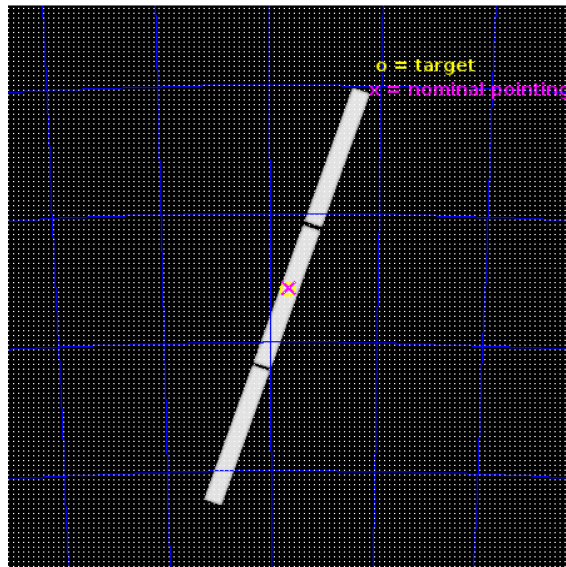
L2 Processing Date : Aug 8 2018

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1 Front

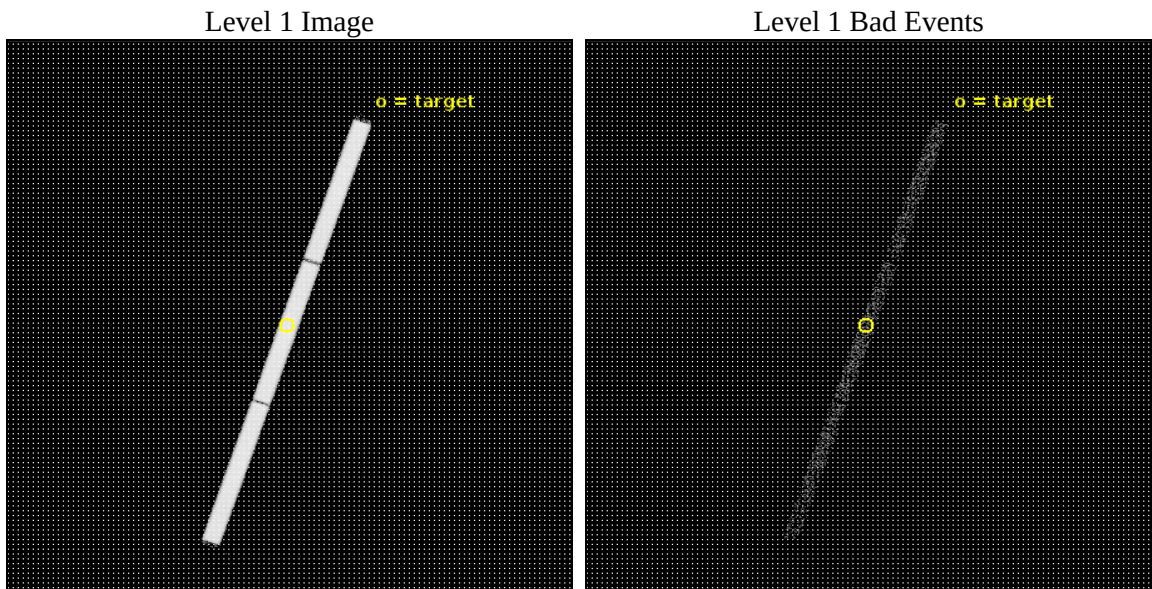
seq_num	300461	Sequence number
obs_id	21671	Observation id
title	Target Confirmation for the Great Observatories Accretion Legacy Survey	Proposal title
observer	Christian Knigge	Principal investigator
object	VW Hyi	Source name
ra_targ	62.2975	Observer's specified target RA [deg]
dec_targ	-71.294861	Observer's specified target Dec [deg]
ra_nom	62.27170850495	Nominal RA [deg]
dec_nom	-71.289287337407	Nominal Dec [deg]
roll_nom	109.05444154474	Nominal Roll [deg]
revision	1	Processing version of data
ontime	9766.4568296671	[s]
livetime	9670.3532925982	Ontime multiplied by DTCOR
l2events	866971	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.6.4	Processing system revision	ontime	9766.4568296671	[s]
caldbver	4.7.8	 	l1events	1075416	Number of level 1 events
date	2018-08-08T07:47:08	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32530.32, 32618.24)	src1a sky pixel position

2.1.3 Events

Level 1 Events

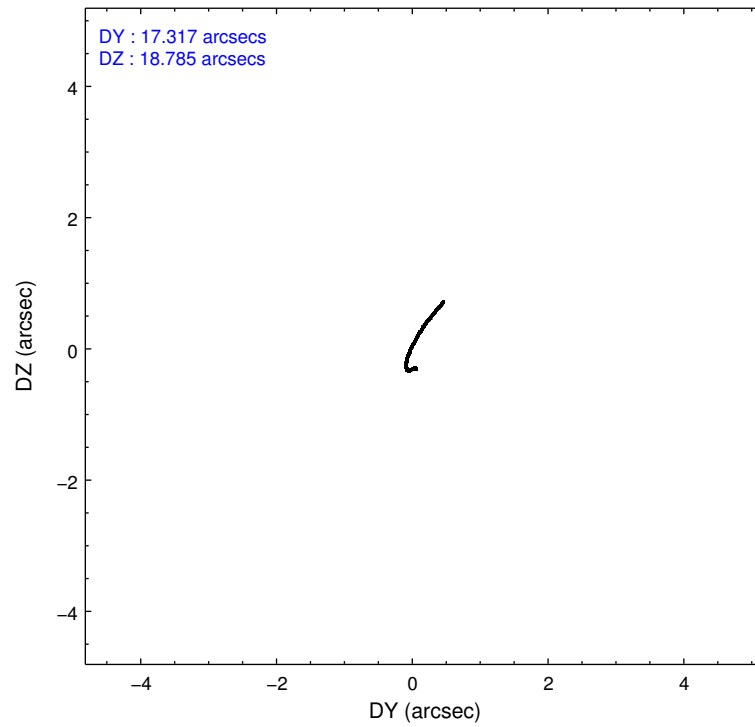
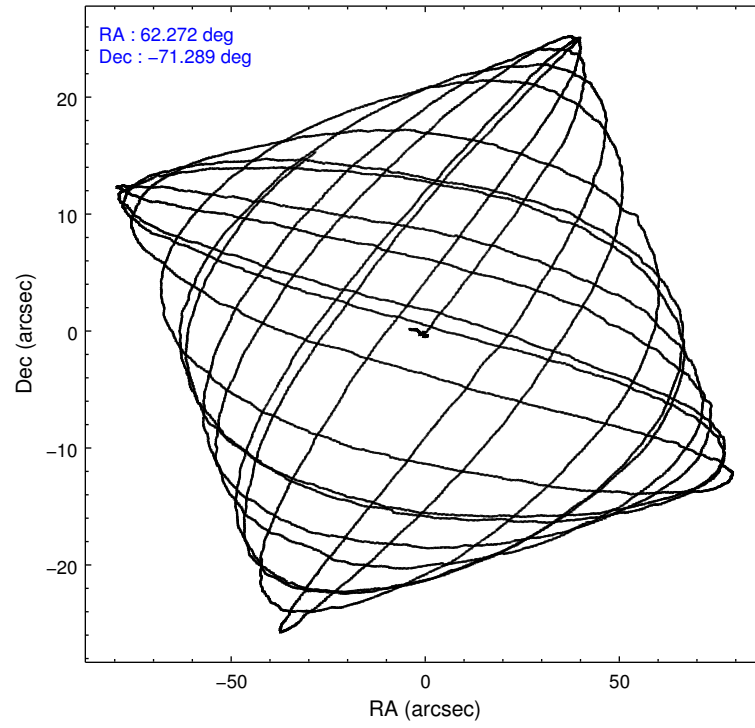
	segment 1	segment 2	segment 3
level 1 events	358389	359260	357767
rejected events	1896	2192	2031
rejected %	0%	0%	0%

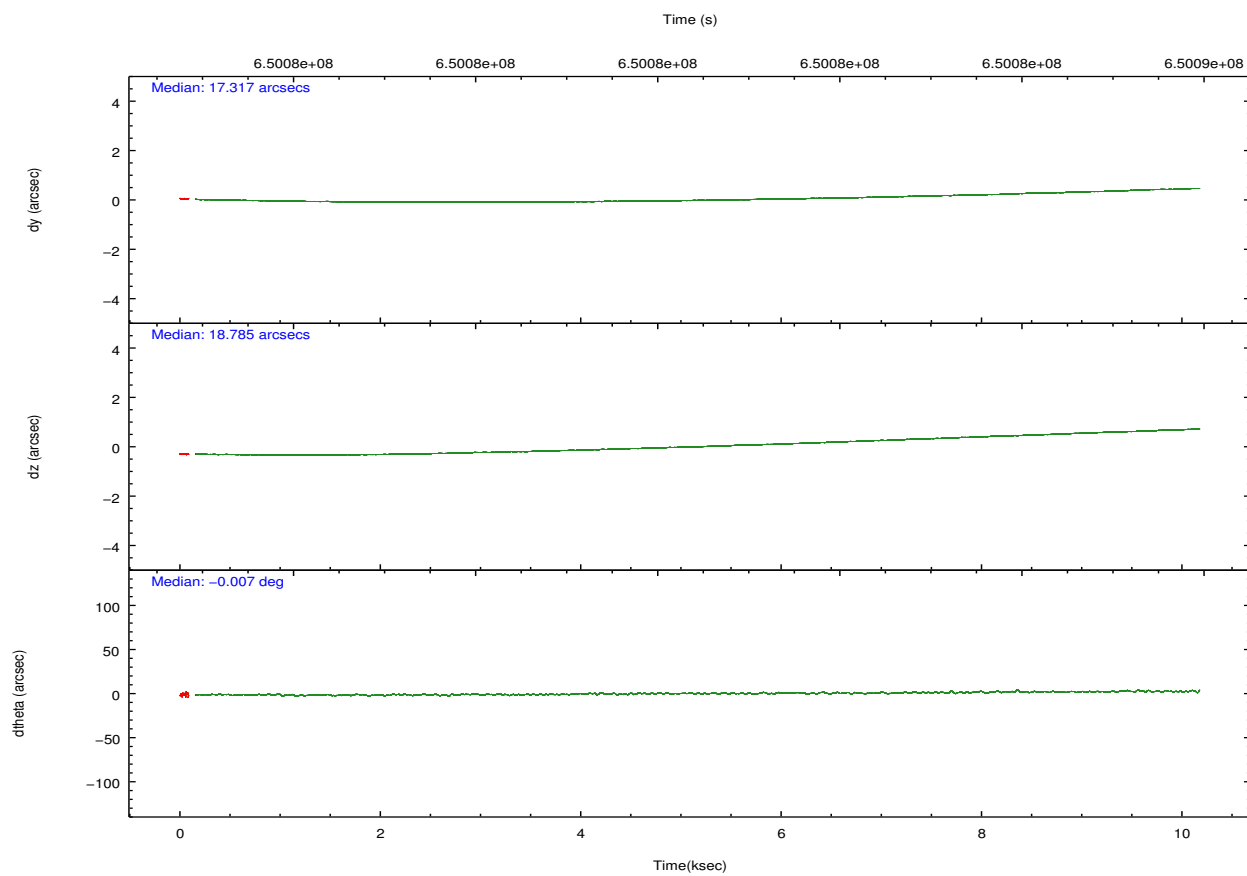
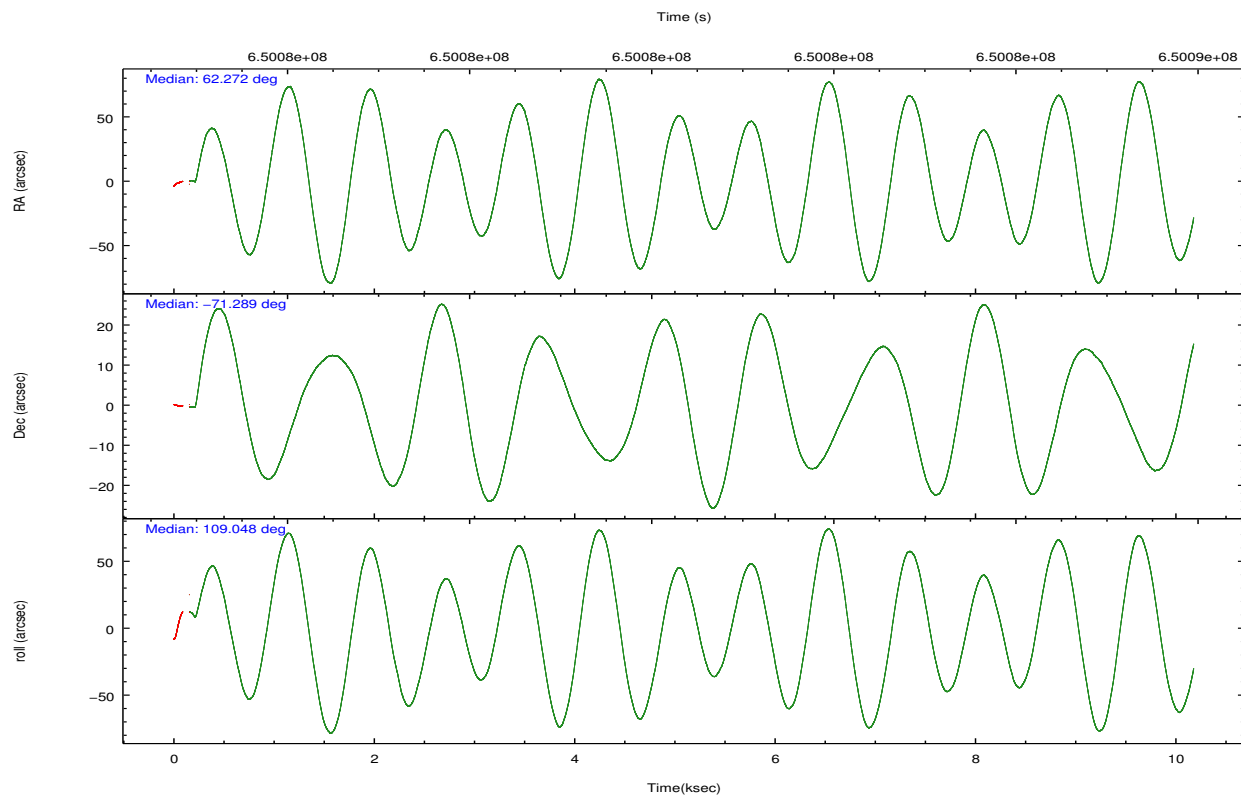
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	LETG	LETG
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	62.342579	62.27170850495038
[deg] Pointing Dec	-71.307173	-71.28928733740743
[deg] Pointing Roll	109.054259	109.0544415447438
[mm] SIM focus pos	-1.429586	-1.428180813131781
[mm] SIM defocus	0.1037507710433287	0.1051558262725154
[mm] SIM translation stage pos	250.455976	250.466033080201
[mm] SIM translation stage offset	0	-0.01005468664627074
[s] Observation start time (MET)	650075412.184000	650074590.51943
Observation start date	2018-08-08T00:29:03	2018-08-08T00:16:30
[s] Observation end time (MET)	650085412.184000	650085543.6700799
Observation end date	2018-08-08T03:15:43	2018-08-08T03:19:03

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

2.3 Aspect



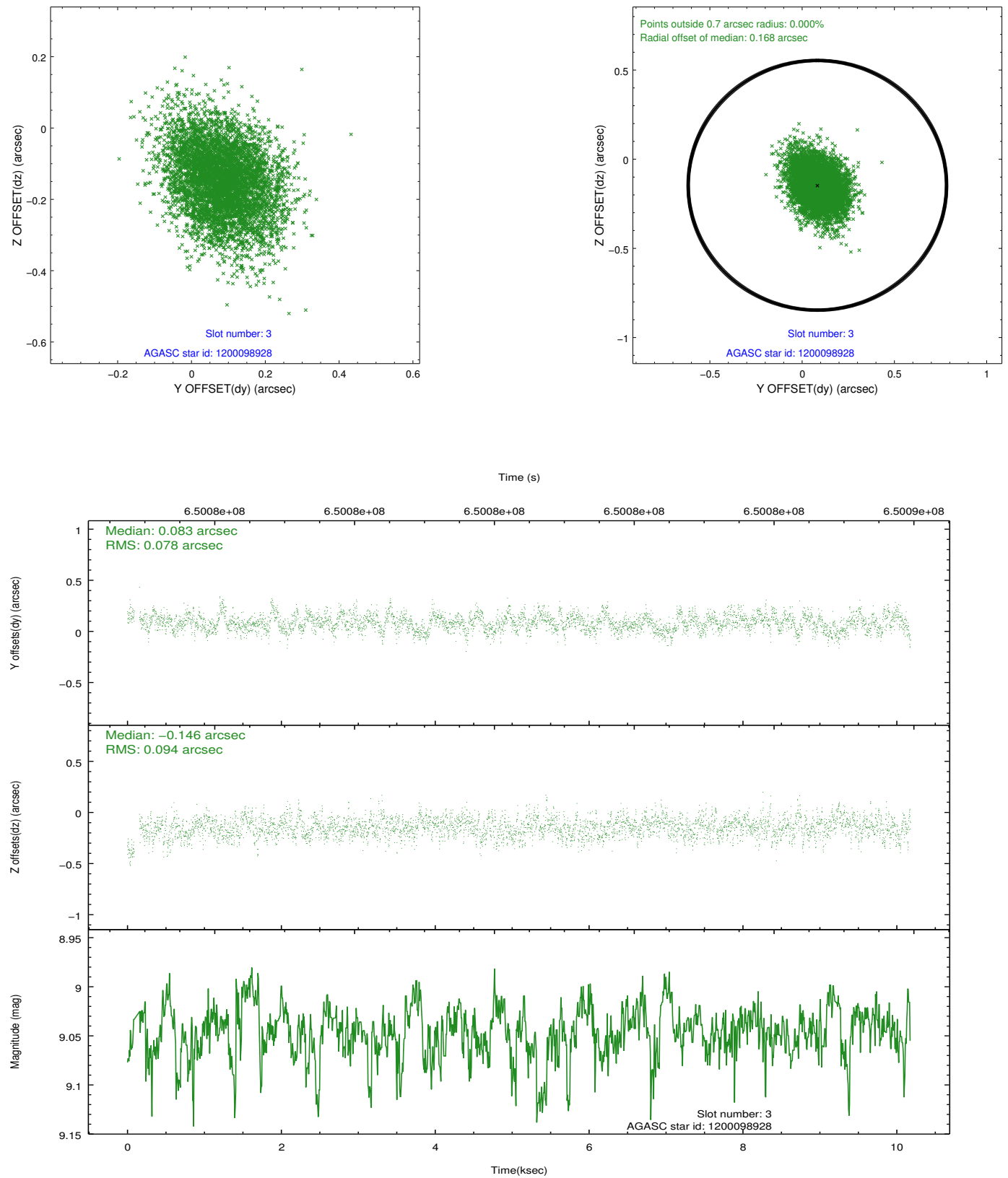


Slot Statistics

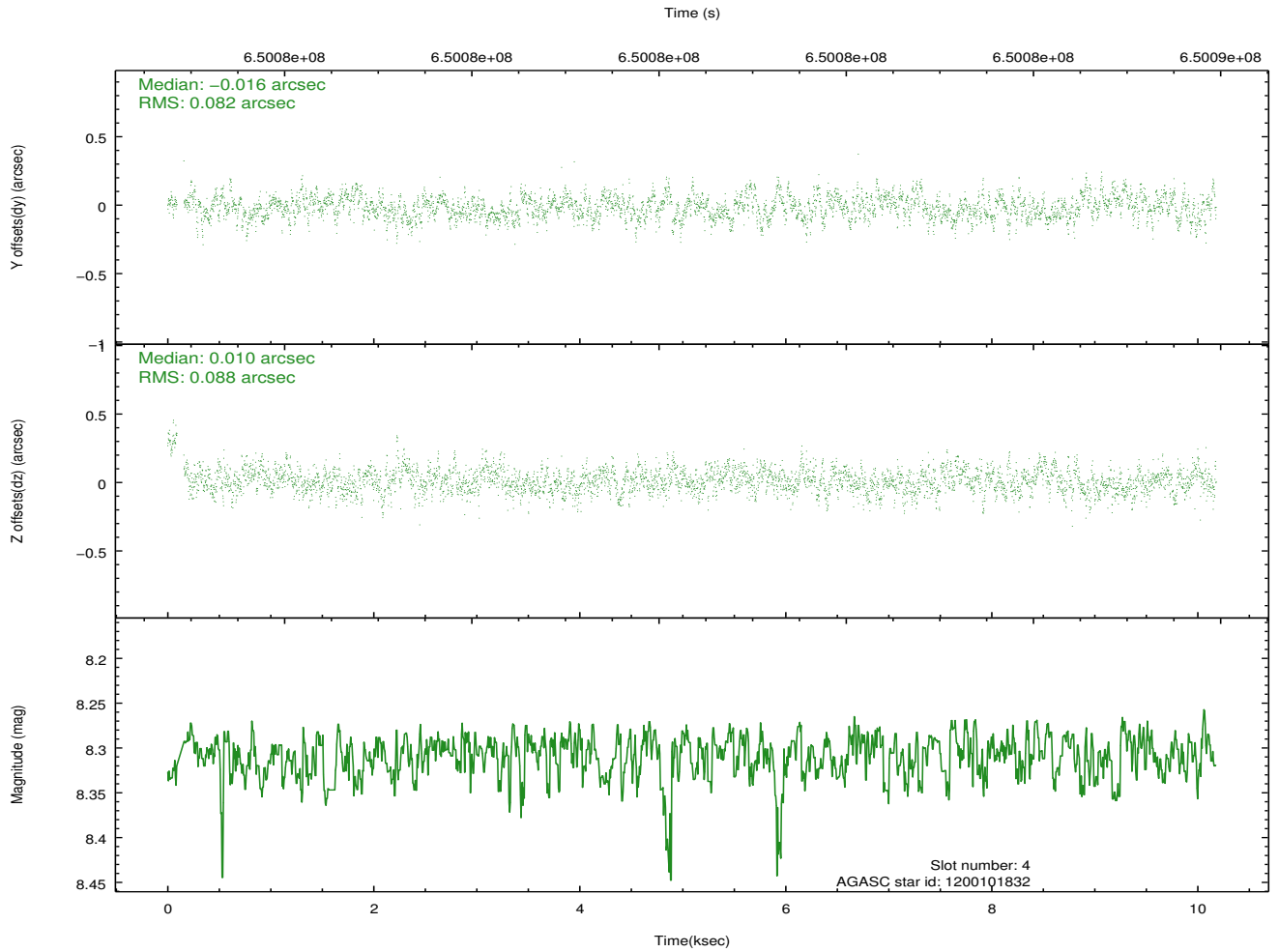
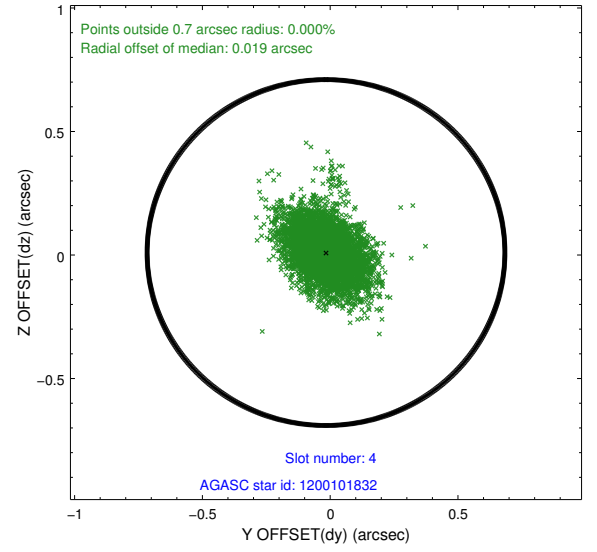
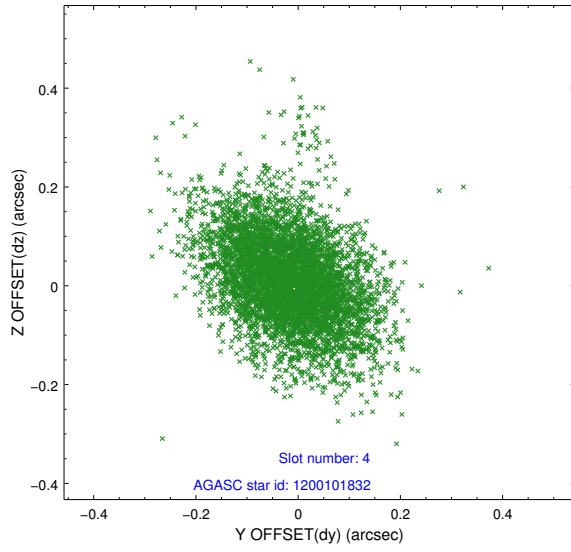
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.06	2467	1.000	-0.061	-0.254	0.020	0.029	0.000000	0.000000	-1171.95	-467
1	FID		HRC-S-2	7.02	2467	1.000	0.385	-0.127	0.006	0.012	0.000000	0.000000	1227.70	-460
2	FID		HRC-S-3	7.04	2467	1.000	0.066	0.079	0.019	0.027	0.000000	0.000000	-1174.11	561
3	GUIDE	used	1200098928	9.05	4930	1.000	0.083	-0.146	0.129	0.213	62.656390	-71.691571	-1424.53	115
4	GUIDE	used	1200101832	8.31	4931	1.000	-0.016	0.010	0.124	0.211	63.630030	-70.760106	1347.70	-2080
5	GUIDE	used	1200104232	8.04	4931	1.000	-0.412	-0.530	0.106	0.182	61.005355	-71.399615	170.37	1564
6	GUIDE	used	1200240840	8.88	4924	1.000	0.345	0.665	0.121	0.207	64.434081	-71.667868	-2038.45	-1799
7	MONITOR	unused		0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

2.4 Star Slots

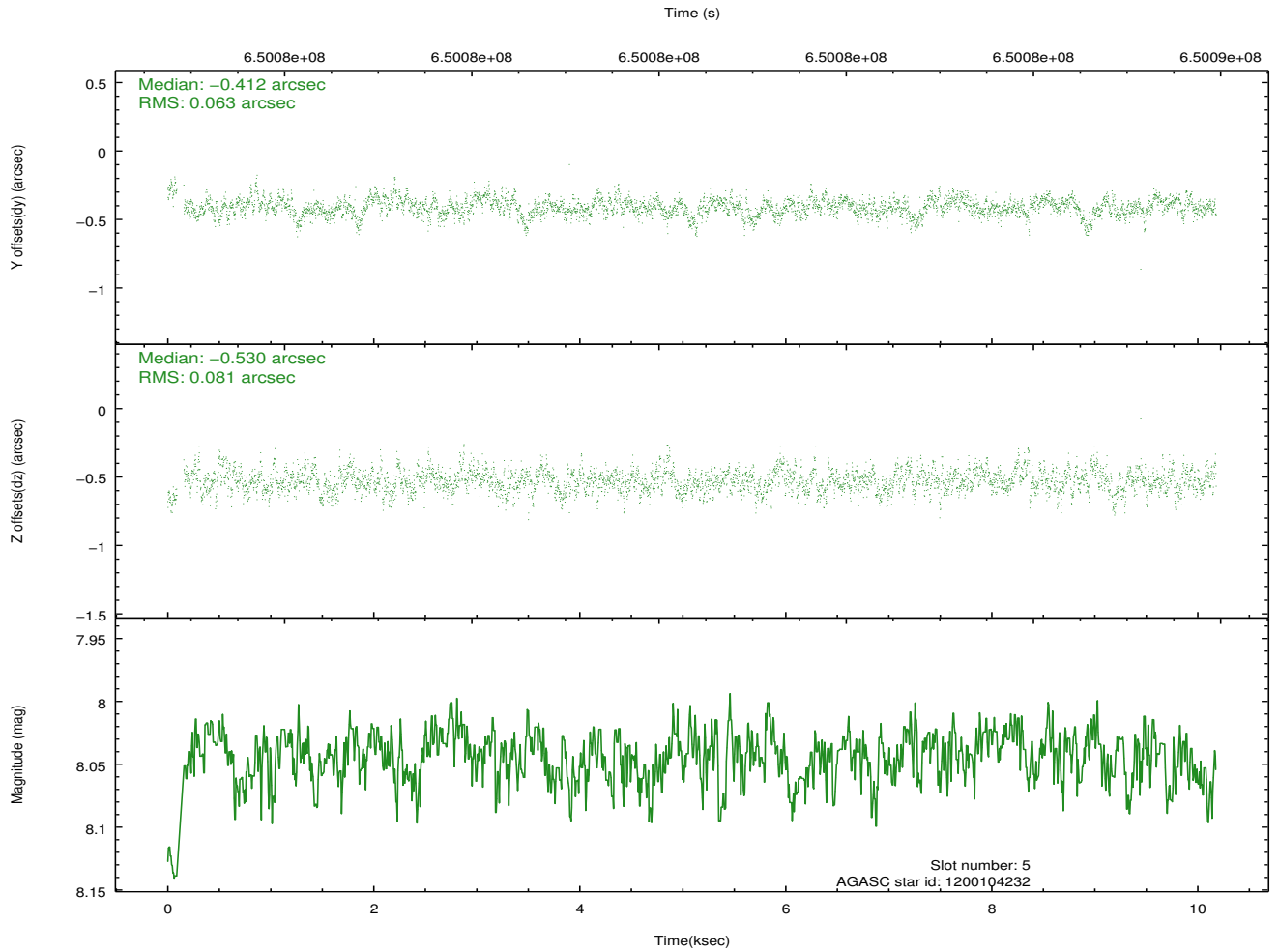
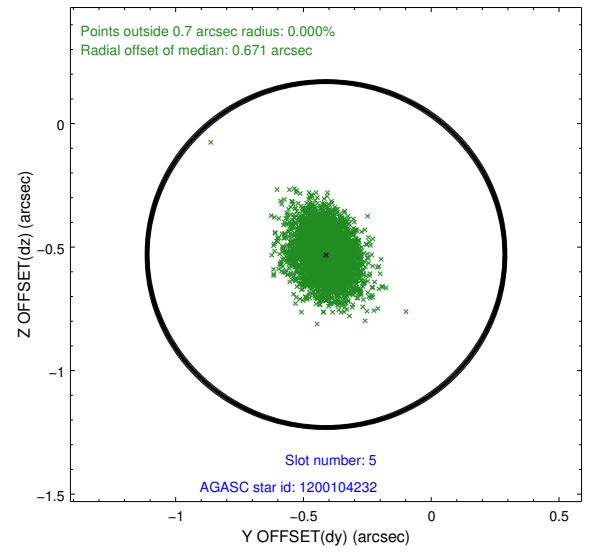
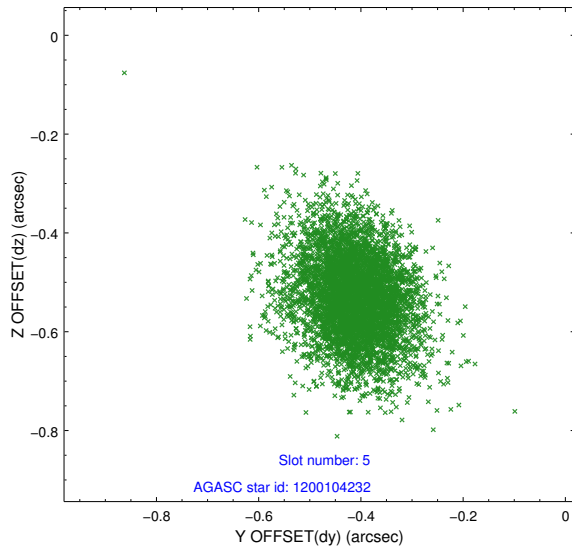
2.4.1 Slot 3



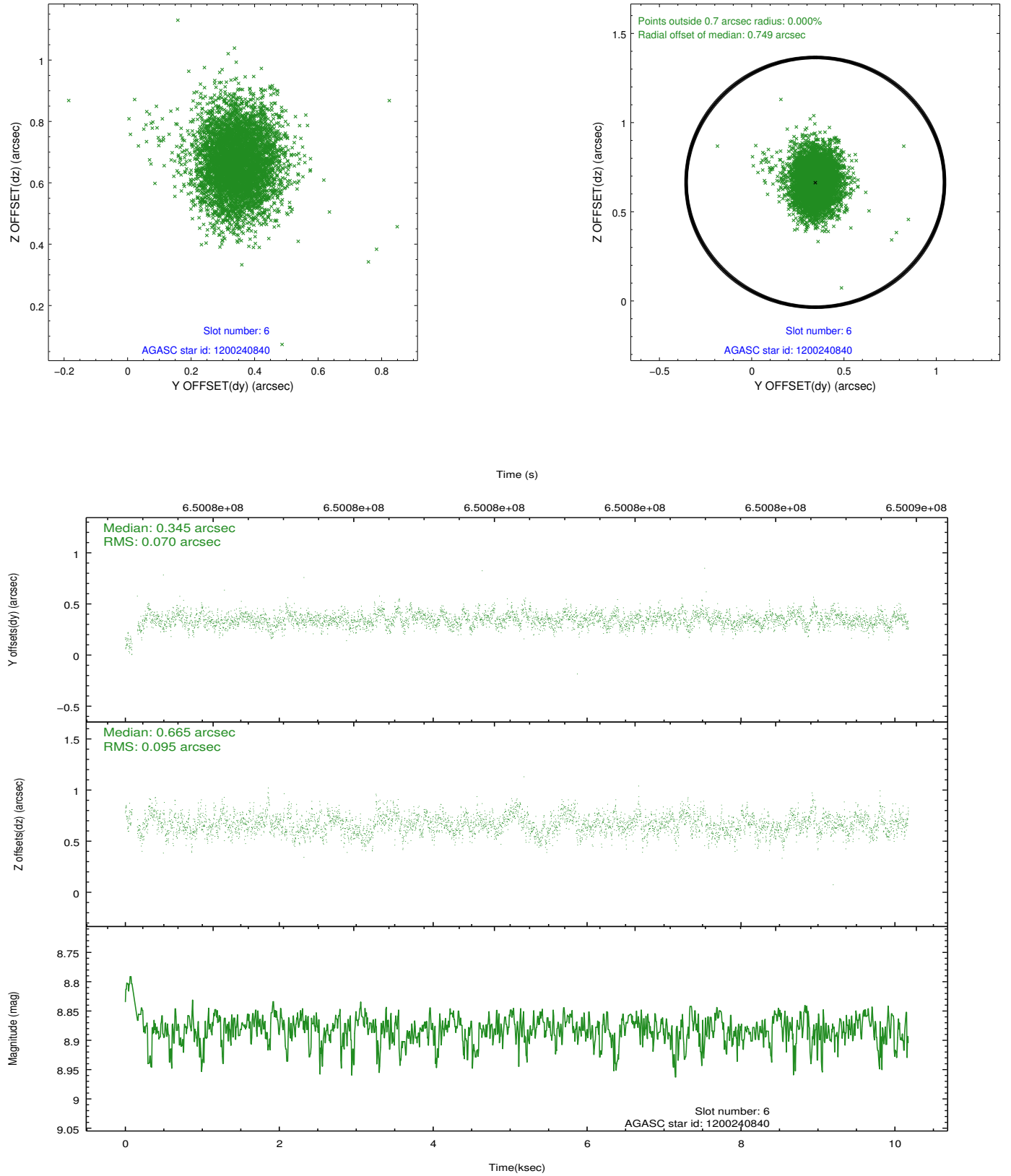
2.4.2 Slot 4



2.4.3 Slot 5

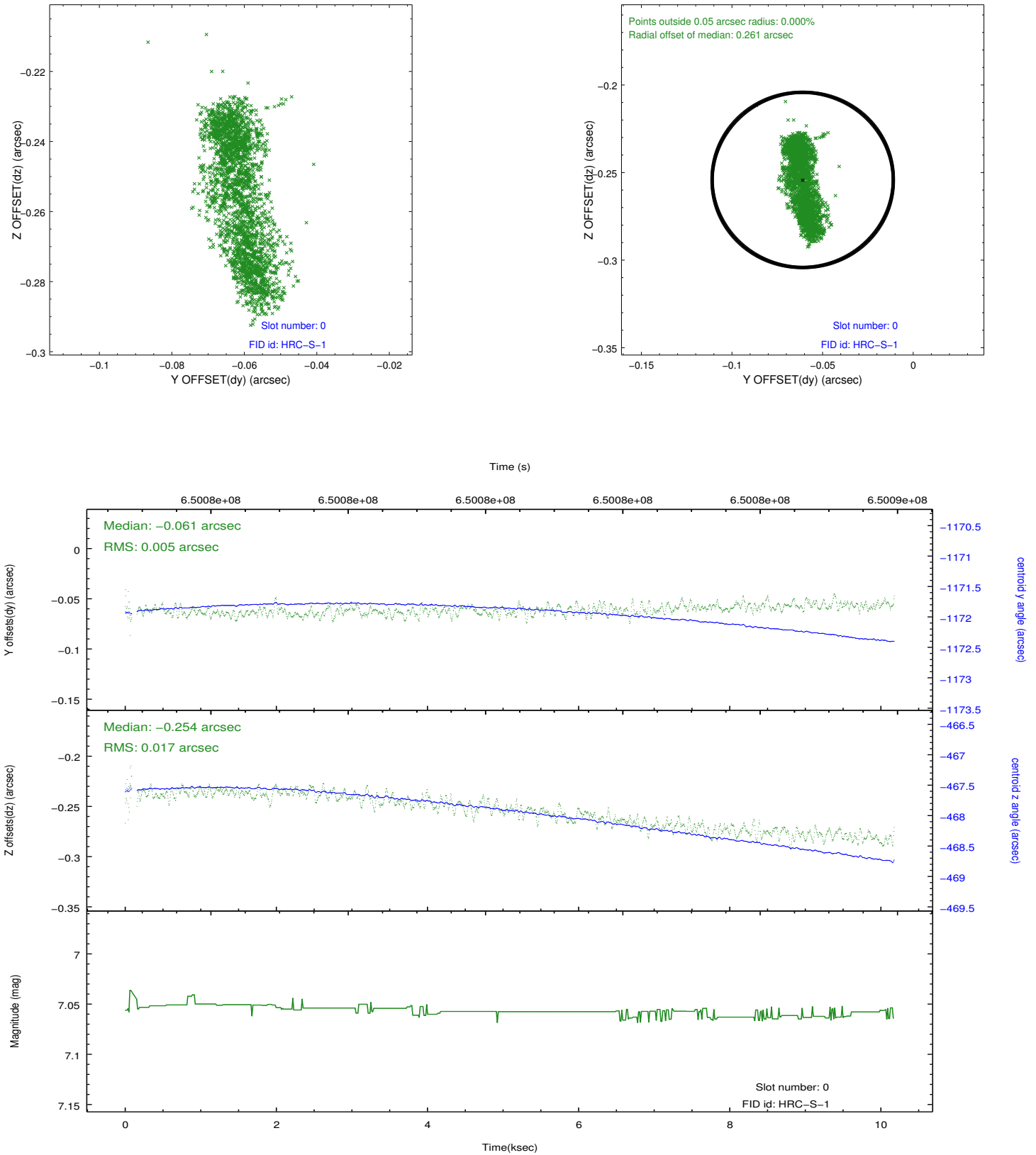


2.4.4 Slot 6

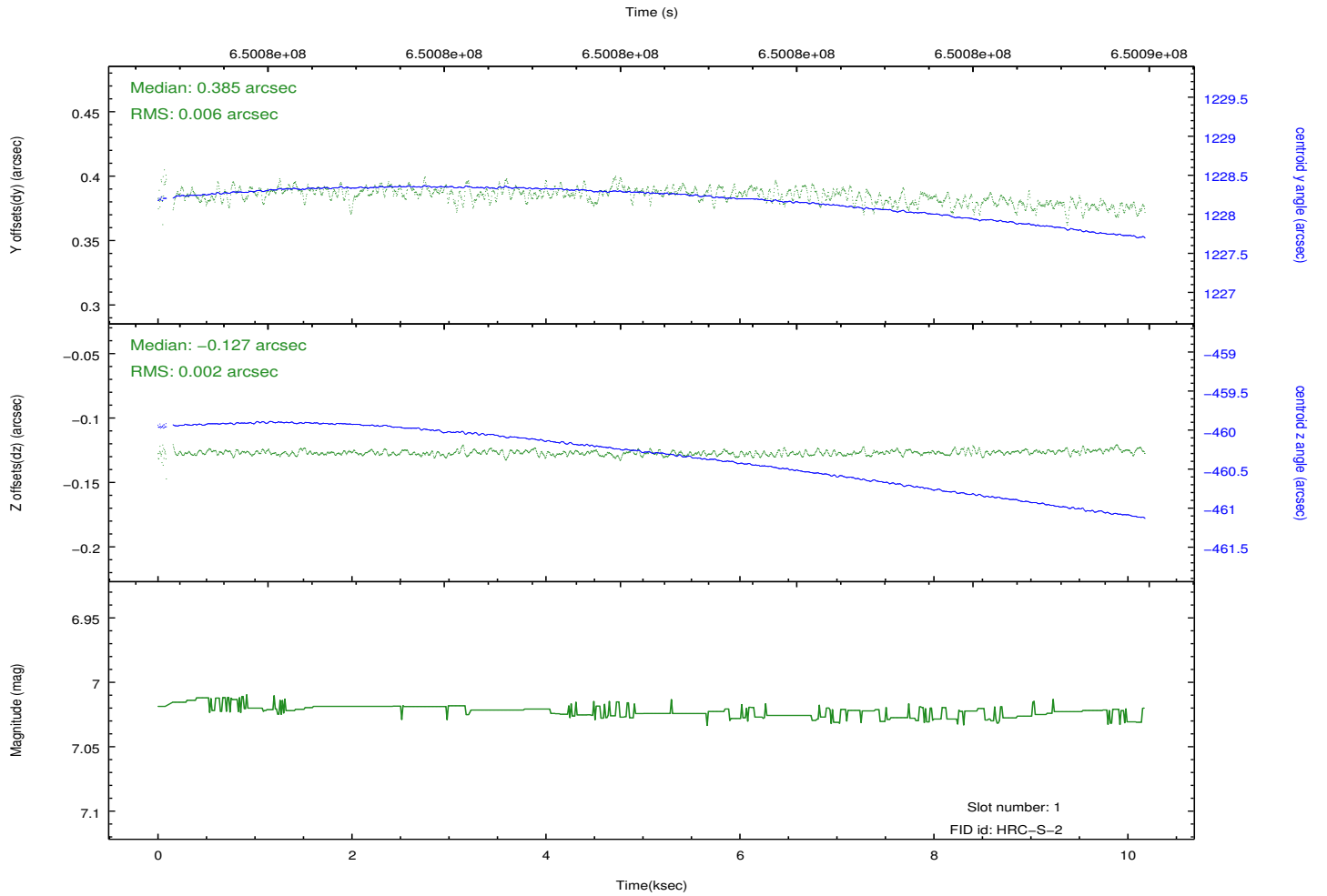
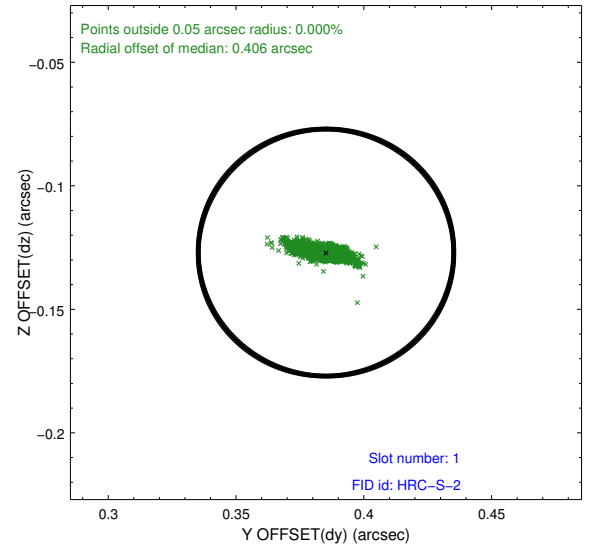
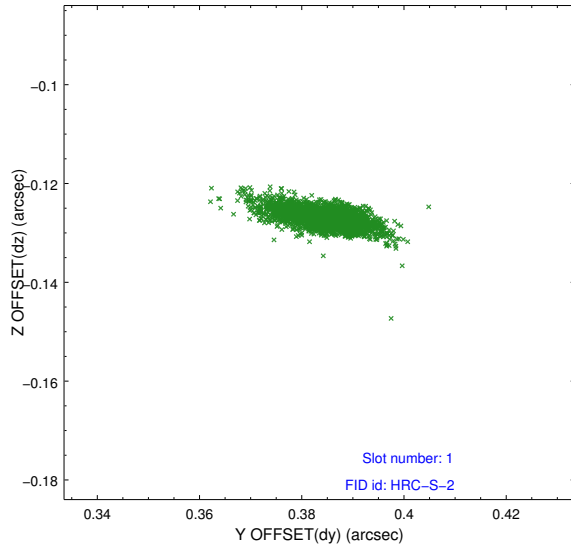


2.5 FID Slots

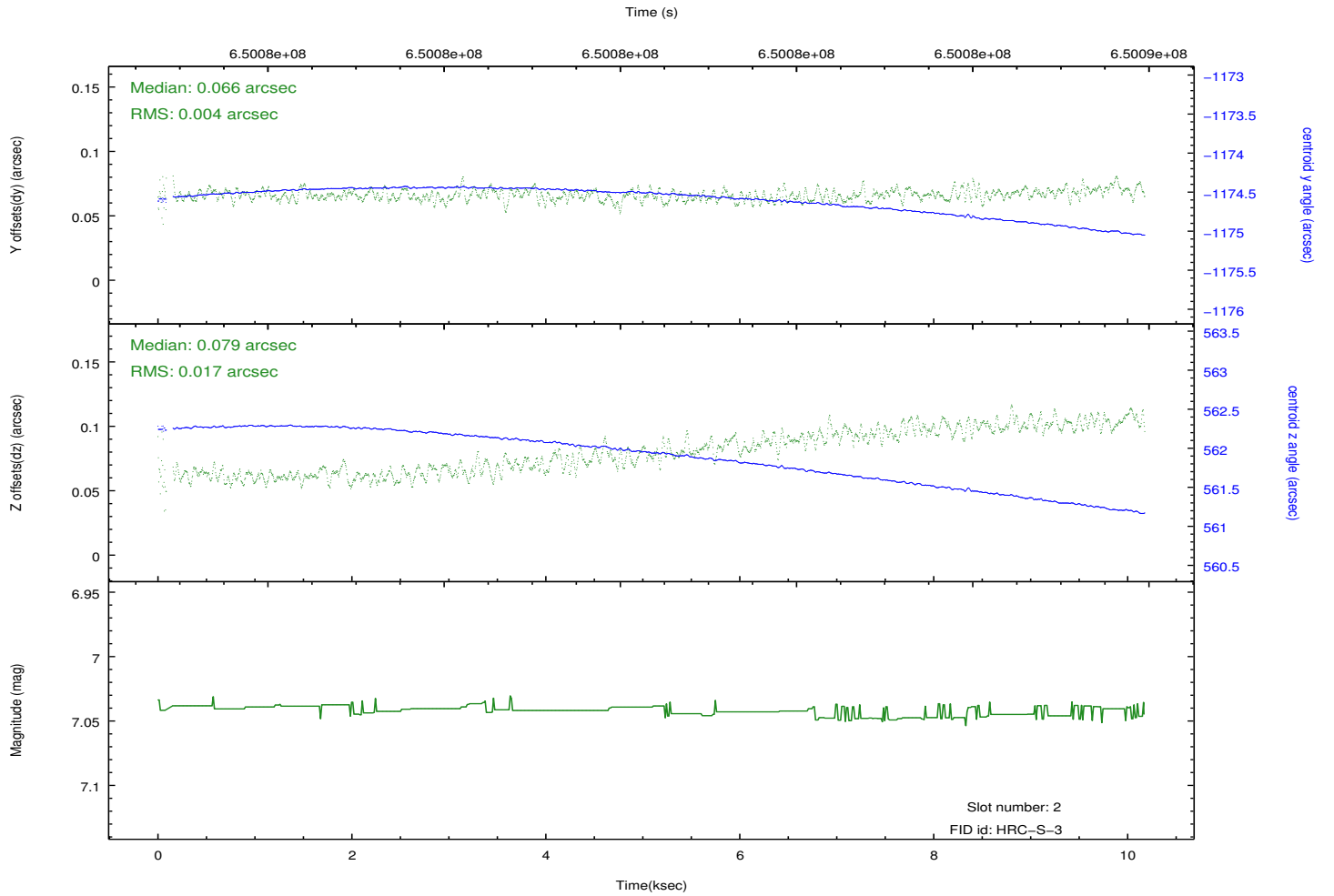
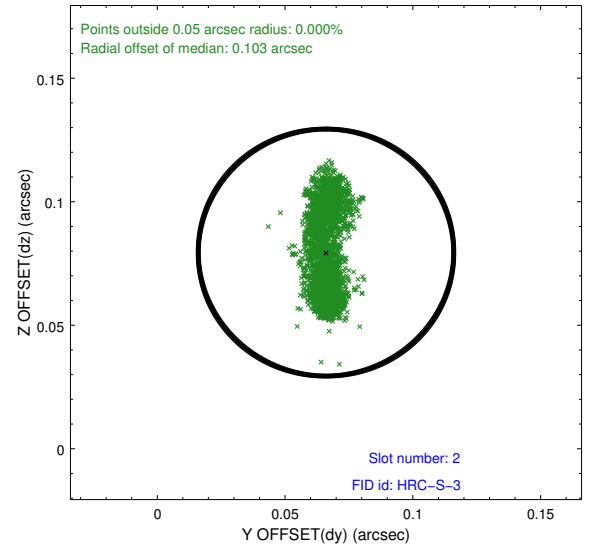
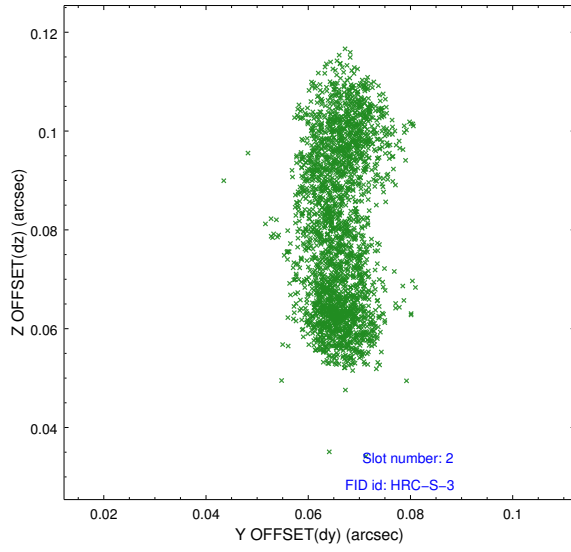
2.5.1 Slot 0



2.5.2 Slot 1

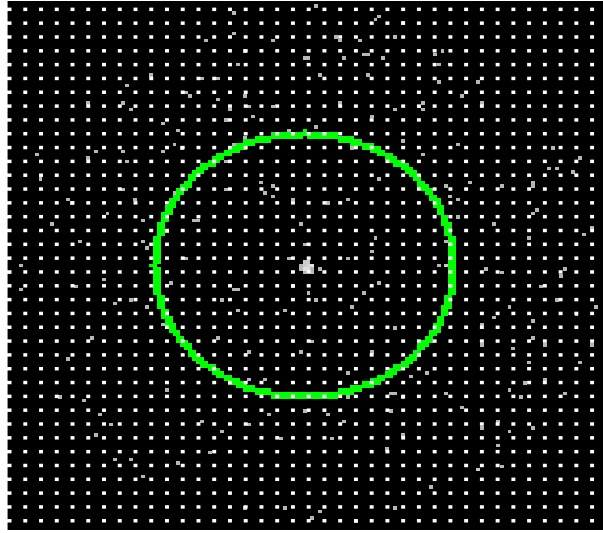


2.5.3 Slot 2

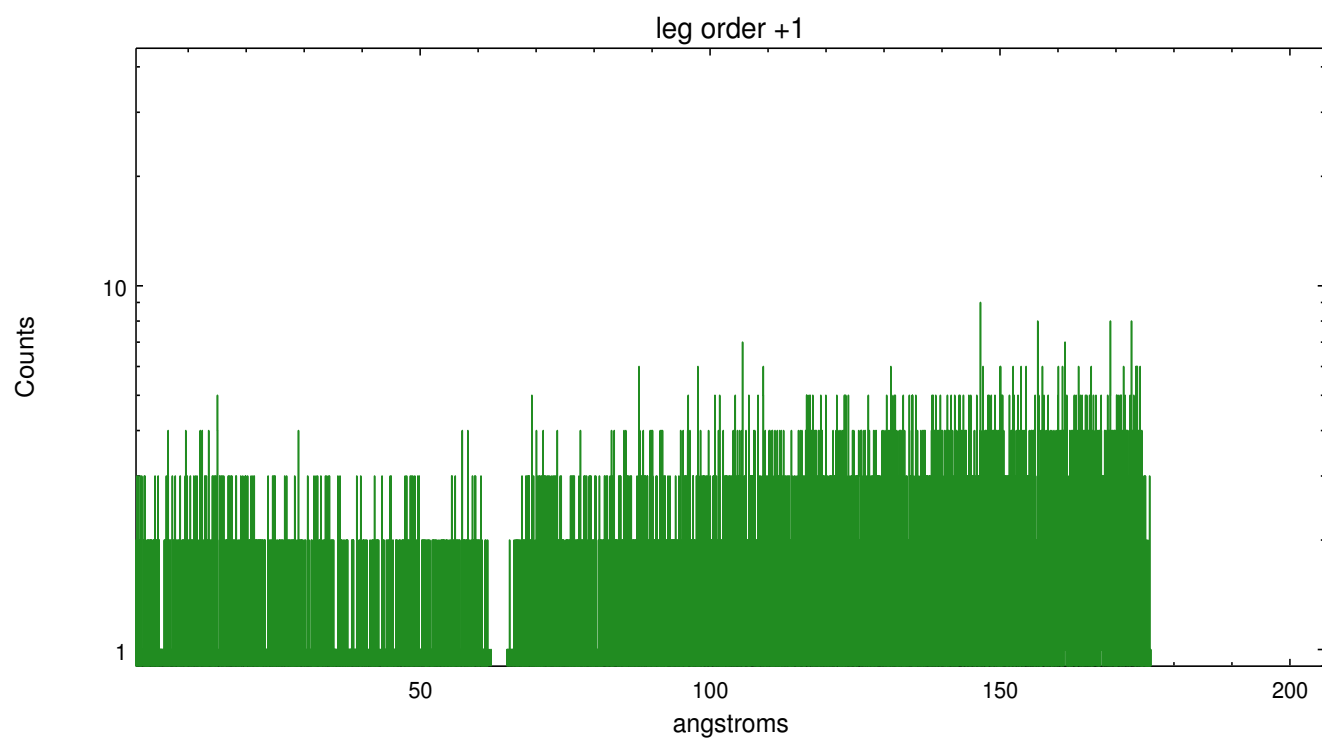
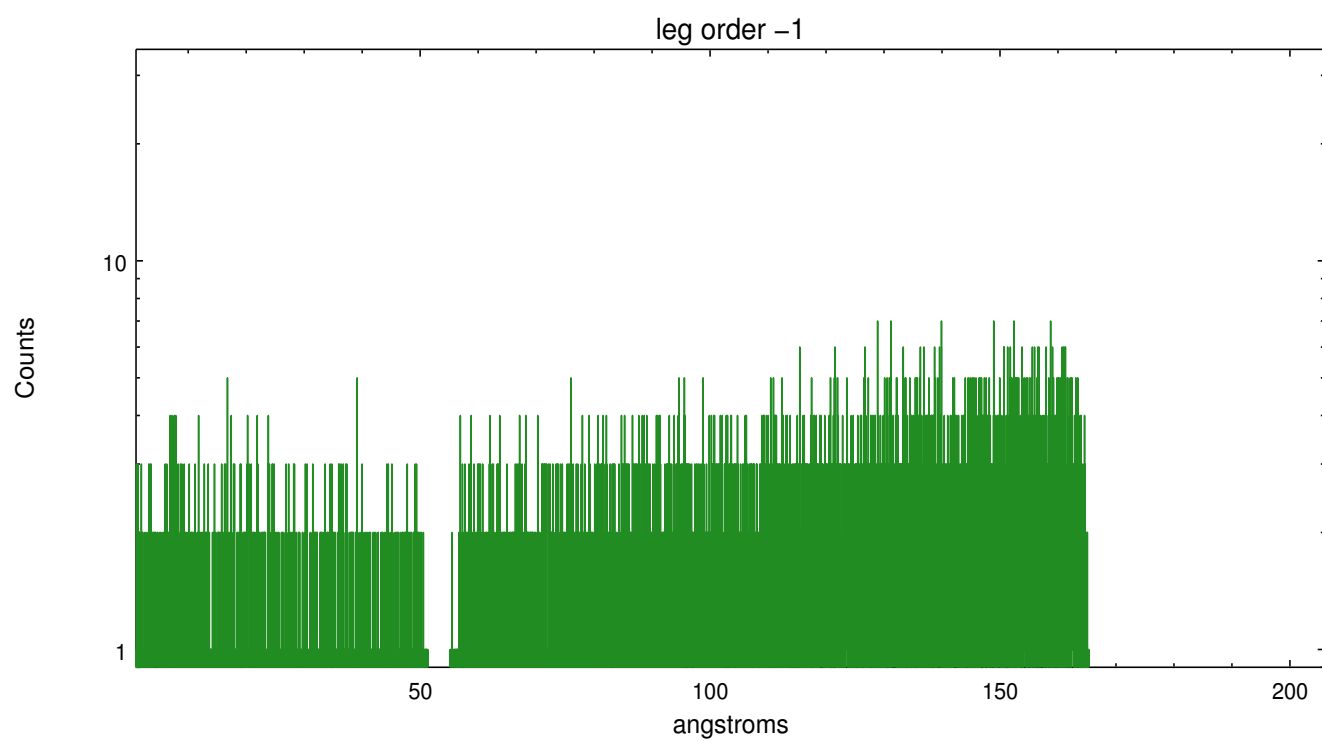


3 Gratings

3.1 LETG Arm



LETG Zero Order



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.08.08
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	9.7664568296671

A.2 Comments

The following is a comment from the Chandra Calibration Team concerning this obsid.

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Just a comment. As we're near solar minimum, we're also near the detector background maximum. I'd estimate the current L1 quiescent rate as 110 ct/s over the standard 6-tap HRC-S spectroscopy region (see POG Fig 9.21 at http://cxc.harvard.edu/proposer/POG/html/chap9.html#tth_sEc9.3.6).

> Total Field Count Rate : 60.00000

I'd guess the 60 ct/s is a pretty rough guess, but taking it at face value that would mean you're getting pretty close to the 183 ct/s telemetry limit, without any background flares (which are fairly rare these days).

Without knowing details of the science goals I can't comment on analysis implications if telem is saturated, but there would be small (likely negligible) degradation of event position accuracy (--> spectral resolution) and some additional uncertainty in true source rate, which I'd guess is unlikely to matter much.

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The ACA has the capability to devote one or more of the eight image slots to "monitor" particular sky locations. This allows simultaneous optical photometry of one or more targets in the ACA field of view. These optical sources can be slightly fainter than the ACA guide star limit of mACA = 10.2 mag. The bright-end limit for monitor star photometry is mACA=6.2 mag. However, since there are a fixed number of image slots, devoting a slot to photometry instead of tracking a guide star results in a degradation of the image reconstruction and celestial location accuracy (Section 5.4). Using one monitor slot represents a 15 - 25% increase in the aspect image reconstruction RMS diameter, depending on the particular guide star configuration. Two monitor slots would increase the diameter by about 50 - 60%, but this configuration is not operationally allowed under normal circumstances. The photometric accuracy which can be achieved depends primarily on the star magnitude,

integration time, CCD dark current, CCD read noise, sky background, and the CCD dark current uncertainty.