

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23232 - L2 Version 1
Chandra X-Ray Center

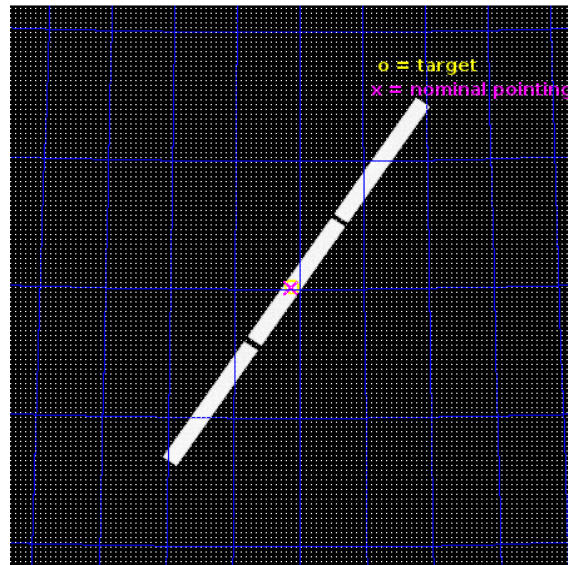
L2 Processing Date : Apr 29 2020

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1 Front

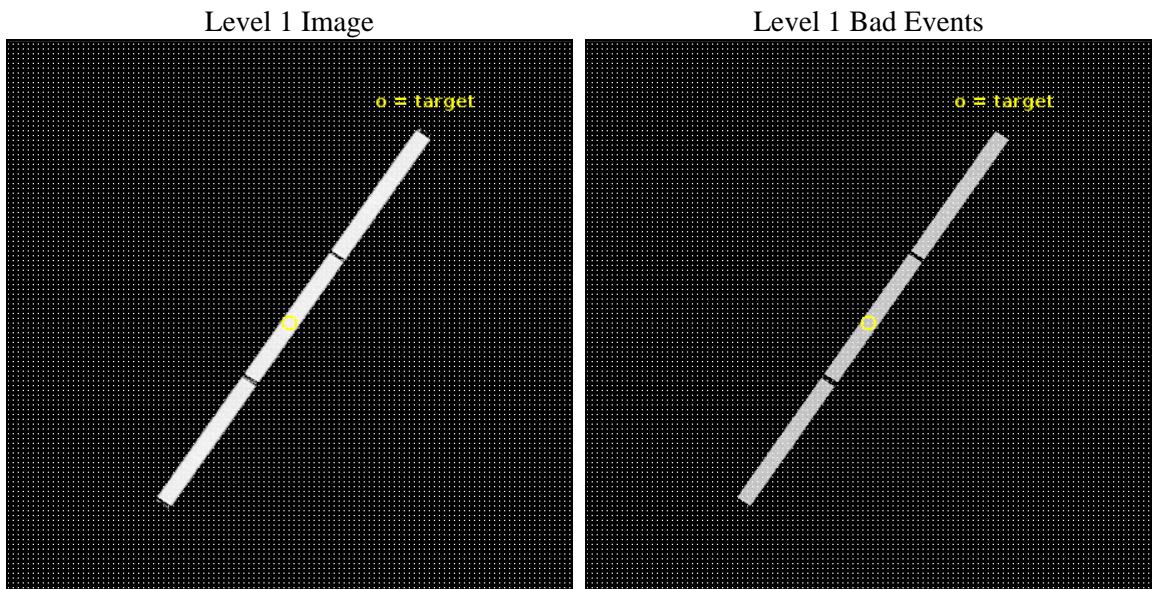
seq_num	100193	Sequence number
obs_id	23232	Observation id
title	Grating spectroscopy of the unexpectedly bright comet C/2019 Y4 ATLAS	Proposal title
observer	Dennis Bodewits	Principal investigator
object	C/2019 Y4 ATLAS	Source name
ra_targ	81.561438	Observer's specified target RA [deg]
dec_targ	61.008502	Observer's specified target Dec [deg]
ra_nom	81.5618369929	Nominal RA [deg]
dec_nom	61.0067853032	Nominal Dec [deg]
roll_nom	304.037596086	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3492.4314622879	[s]
livetime	3455.3462550388	Ontime multiplied by DTCOR
l2events	339280	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	3300.000000	[s] Scheduled observation exposure time
ascdsver	10.8.4	Processing system revision	ontime	3492.4314622879	[s]
caldsver	4.9.1	 	l1events	568106	Number of level 1 events
date	2020-04-29T11:41:05	Date and time of file creation	tgmethod	USER	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32773.91, 32815.56)	src1a sky pixel position

2.1.3 Events

Level 1 Events

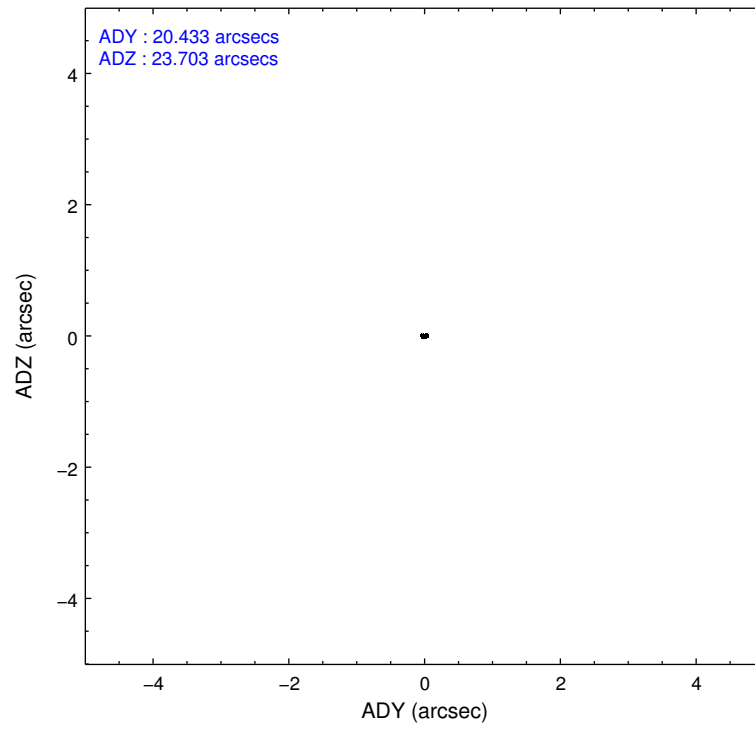
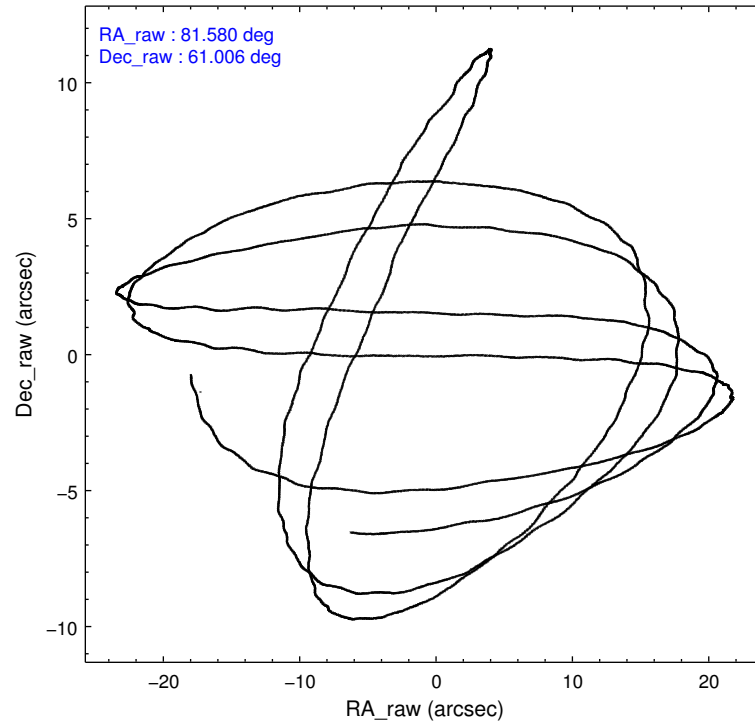
	segment 1	segment 2	segment 3
level 1 events	190615	188191	189300
rejected events	52045	51146	51523
rejected %	27%	27%	27%

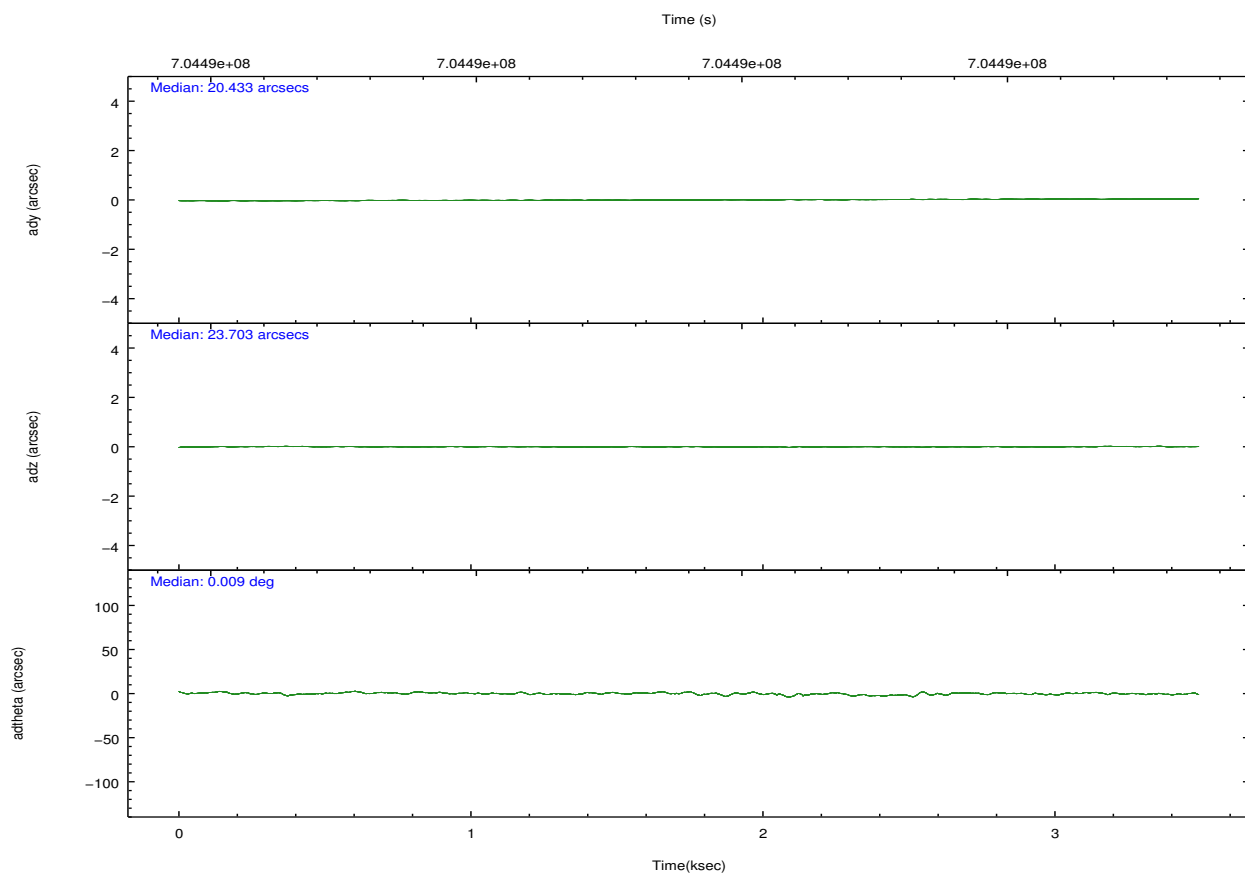
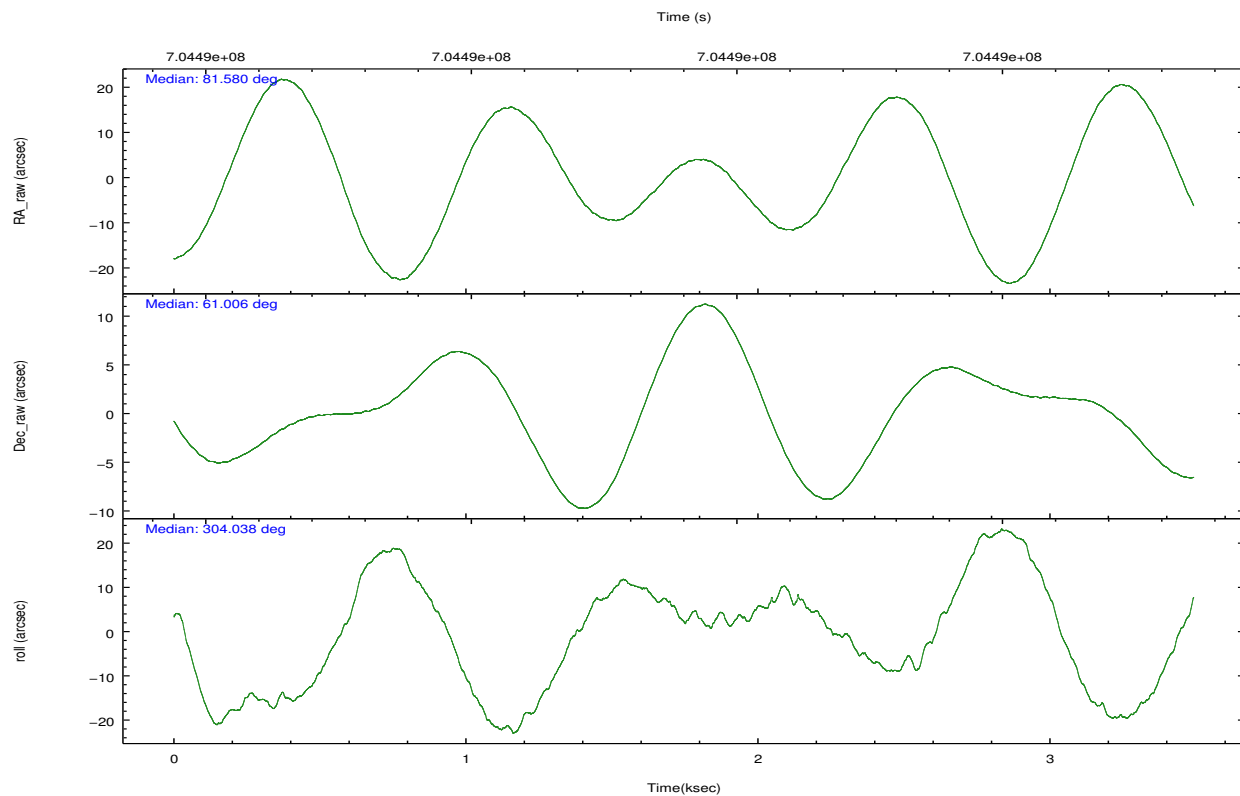
2.2 Compared Parameters

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	81.525500	81.5618369929
[deg] Pointing Dec	61.016977	61.0067853032
[deg] Pointing Roll	304.031425	304.037596086
[mm] SIM focus pos	-1.429586	-1.428180813131781
[mm] SIM defocus	0.1037507710433287	0.1051558262725154
[mm] SIM translation stage pos	251.395976	251.3913011111175
[mm] SIM translation stage offset	-0.9399999999999999	-0.9353227176203518
[s] Observation start time (MET)	704491256.184000	704490880.36506
Observation start date	2020-04-28T19:59:47	2020-04-28T19:54:40
[s] Observation end time (MET)	704494556.184000	704495672.7528501
Observation end date	2020-04-28T20:54:47	2020-04-28T21:14:32

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect



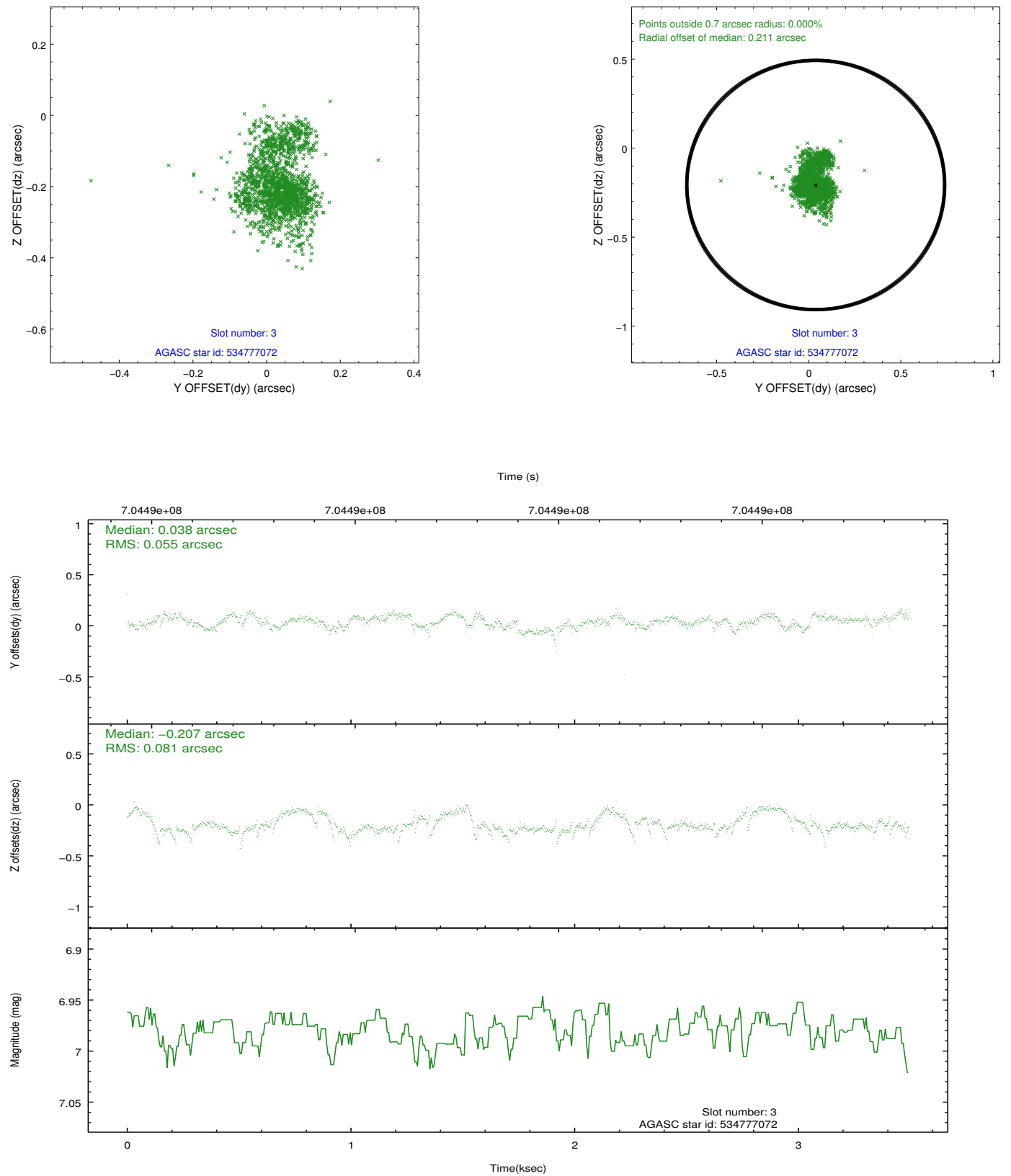


Slot Statistics

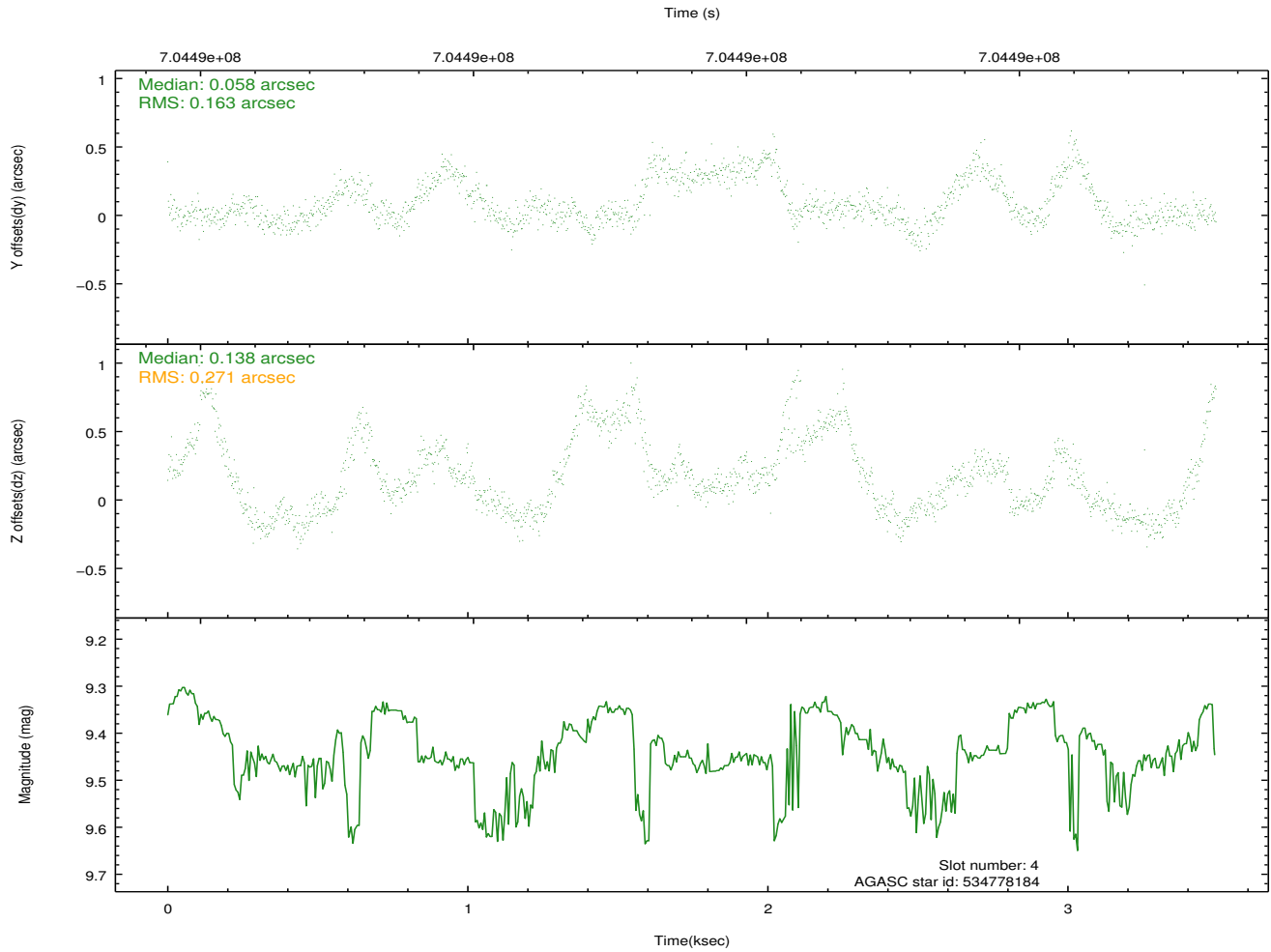
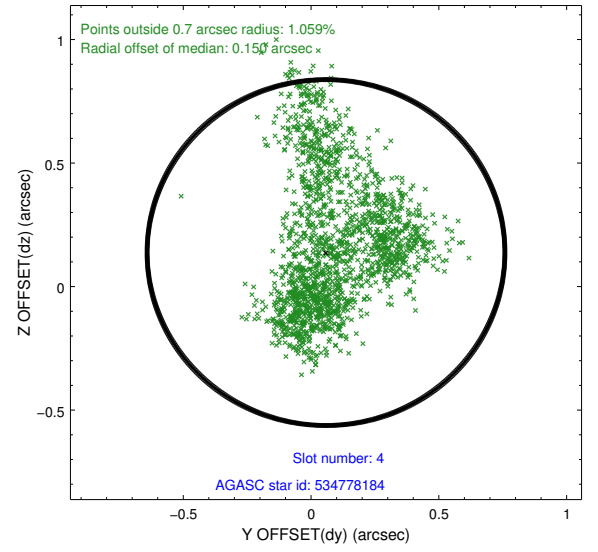
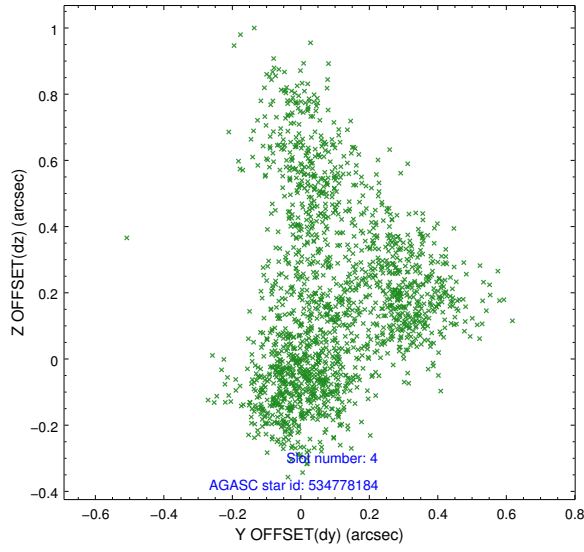
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.09	852	1.000	0.059	-0.069	0.007	0.013	0.000000	0.000000	-1175.03	-491
1	FID		HRC-S-2	7.06	852	1.000	0.288	-0.214	0.011	0.018	0.000000	0.000000	1223.50	-485
2	FID		HRC-S-4	7.06	851	1.000	0.056	-0.022	0.010	0.016	0.000000	0.000000	1224.89	539
3	GUIDE	used	534777072	6.98	1705	1.000	0.038	-0.207	0.103	0.176	80.934101	60.721041	297.37	-1456
4	GUIDE	used	534778184	9.45	1699	1.000	0.058	0.138	0.326	0.558	81.424807	61.387046	-1200.56	601
5	GUIDE	used	534914912	9.01	1703	1.000	-0.157	0.002	0.173	0.300	81.829238	61.781311	-1992.48	1969
6	GUIDE	used	534916944	8.87	1702	1.000	-0.095	0.043	0.251	0.400	81.479781	61.783099	-2328.07	1483
7	GUIDE	used	534922520	8.39	1703	1.000	0.136	-0.043	0.135	0.217	81.531321	61.241488	-659.53	460

2.4 Star Slots

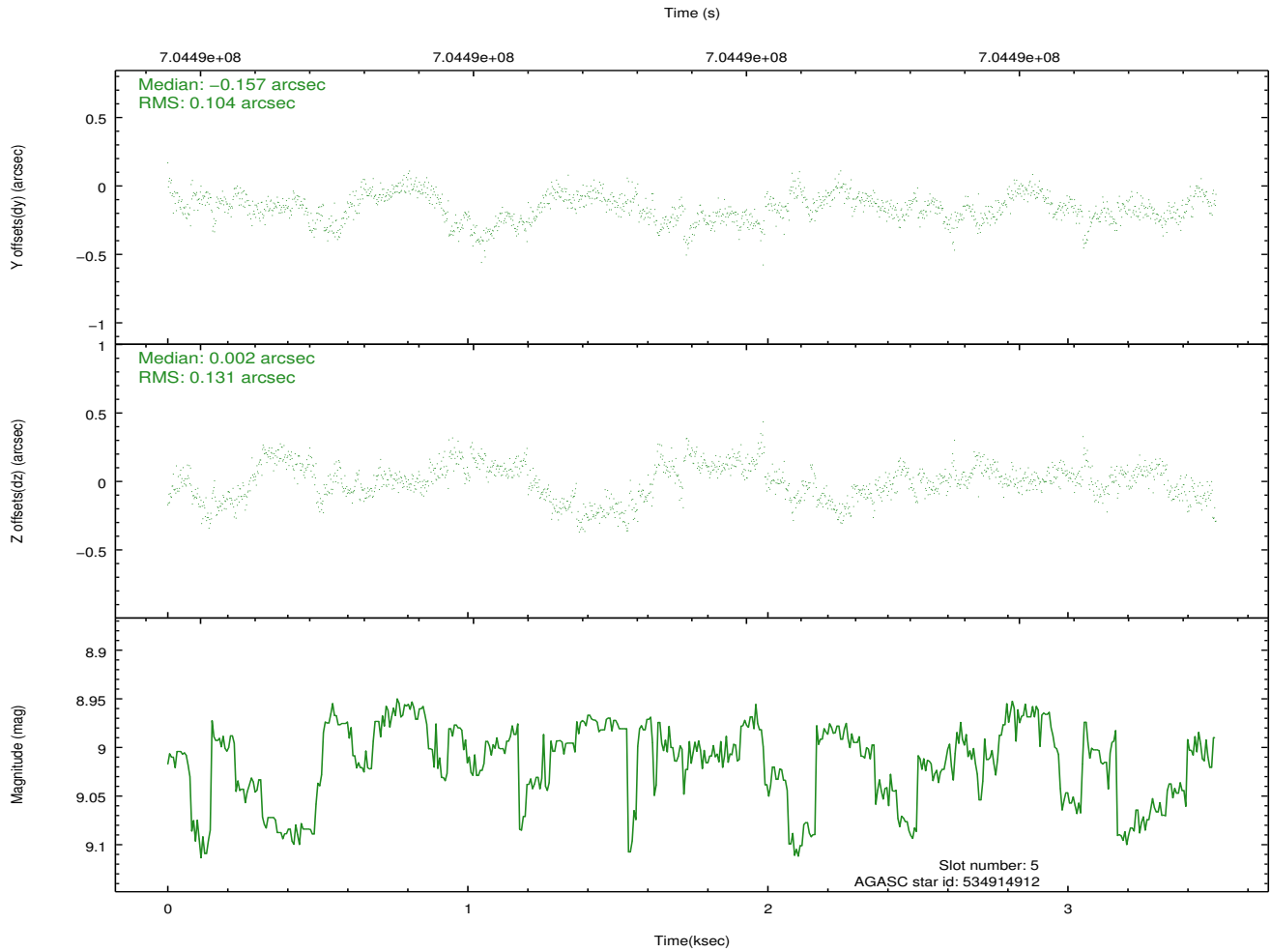
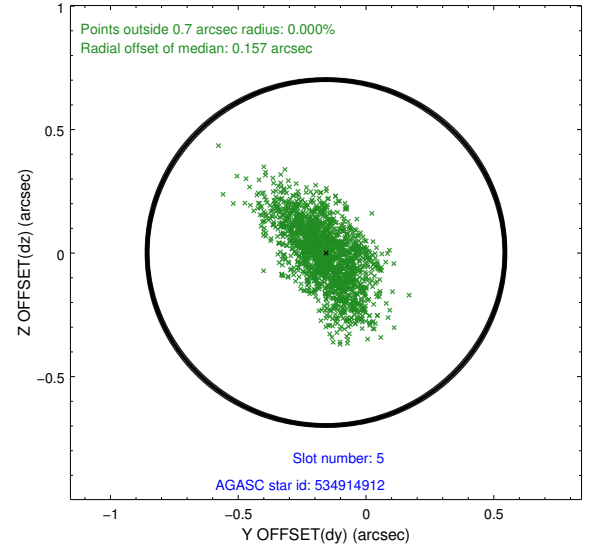
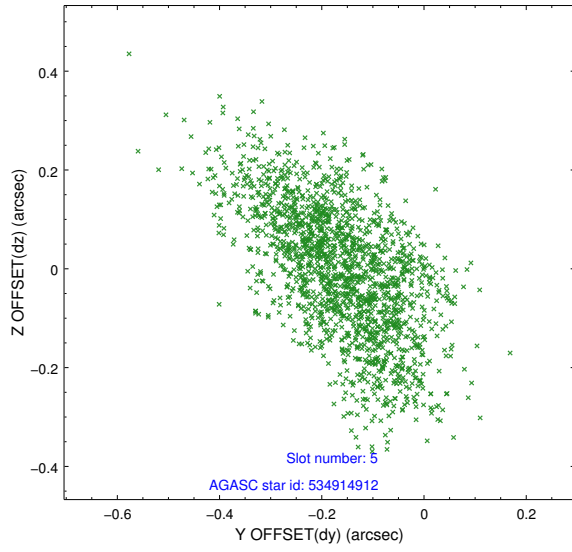
2.4.1 Slot 3



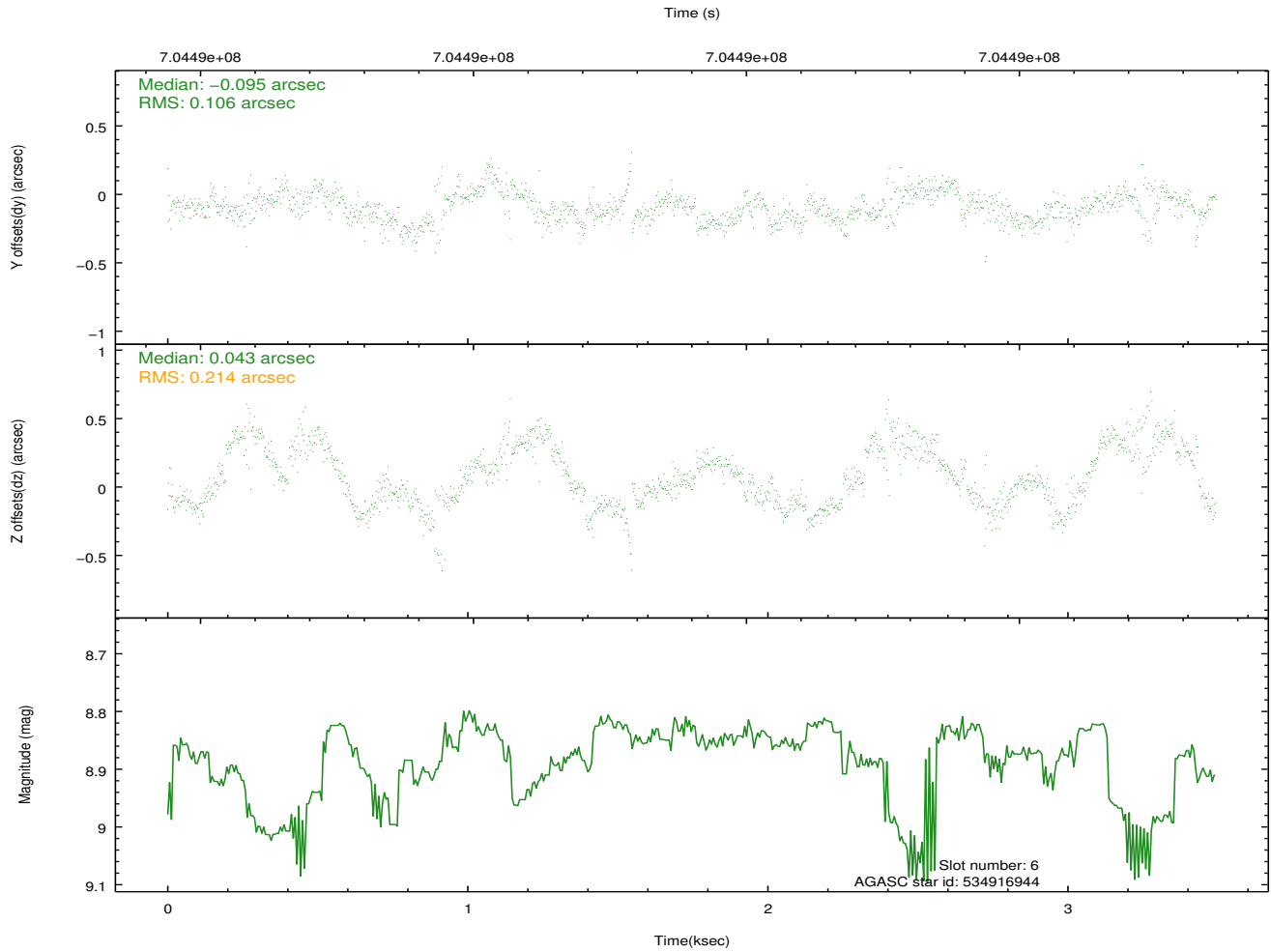
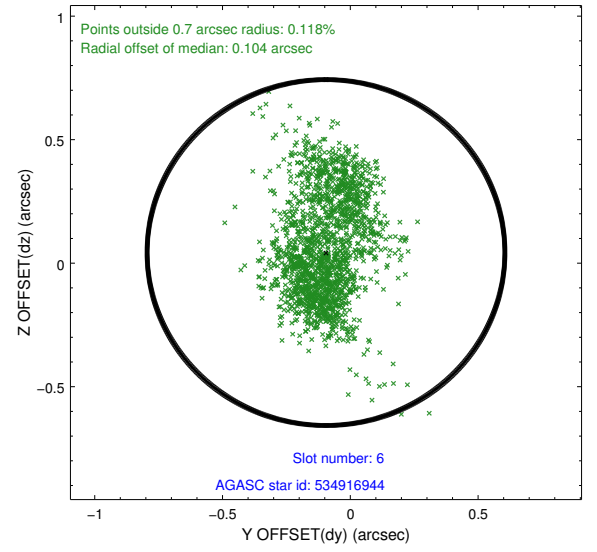
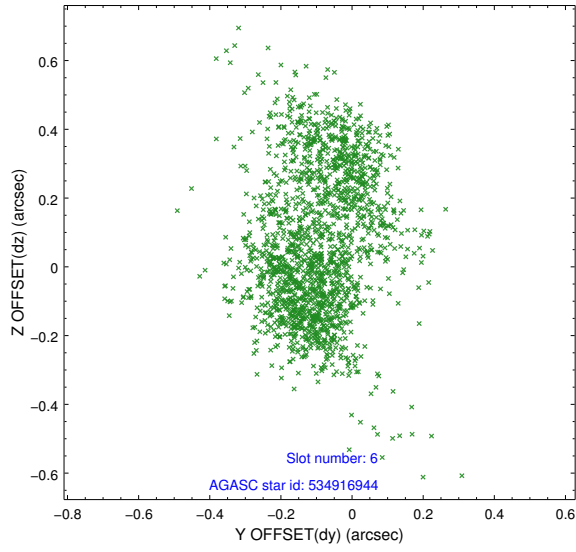
2.4.2 Slot 4



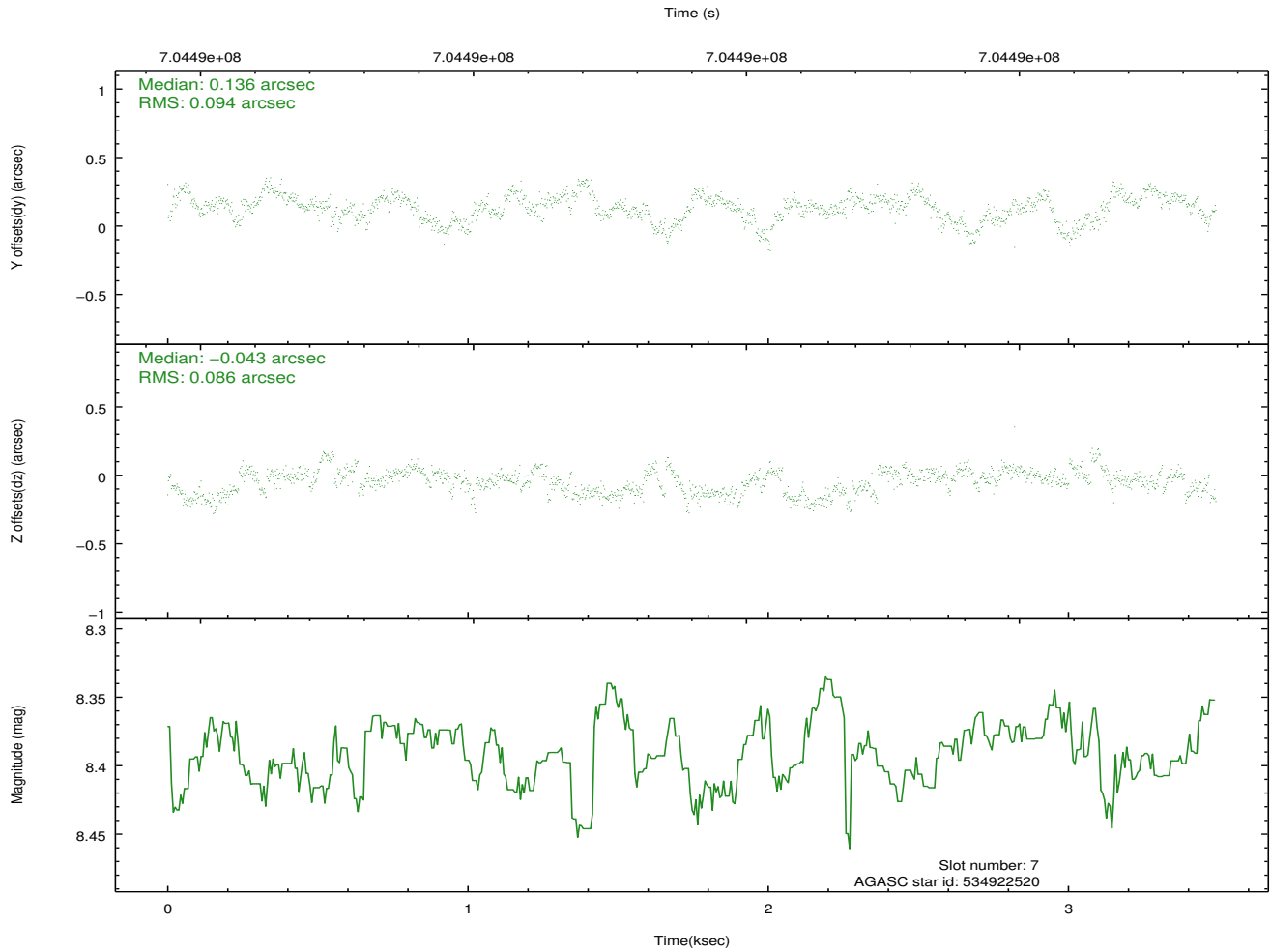
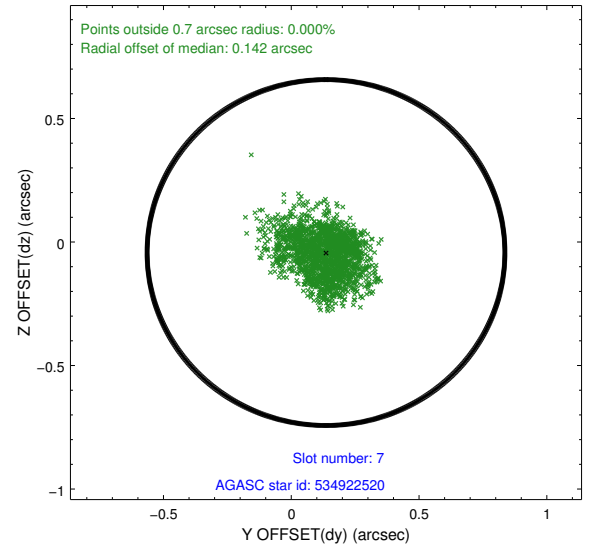
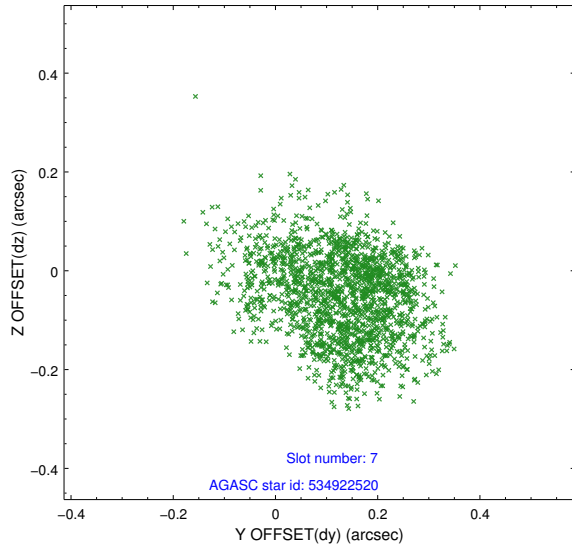
2.4.3 Slot 5



2.4.4 Slot 6

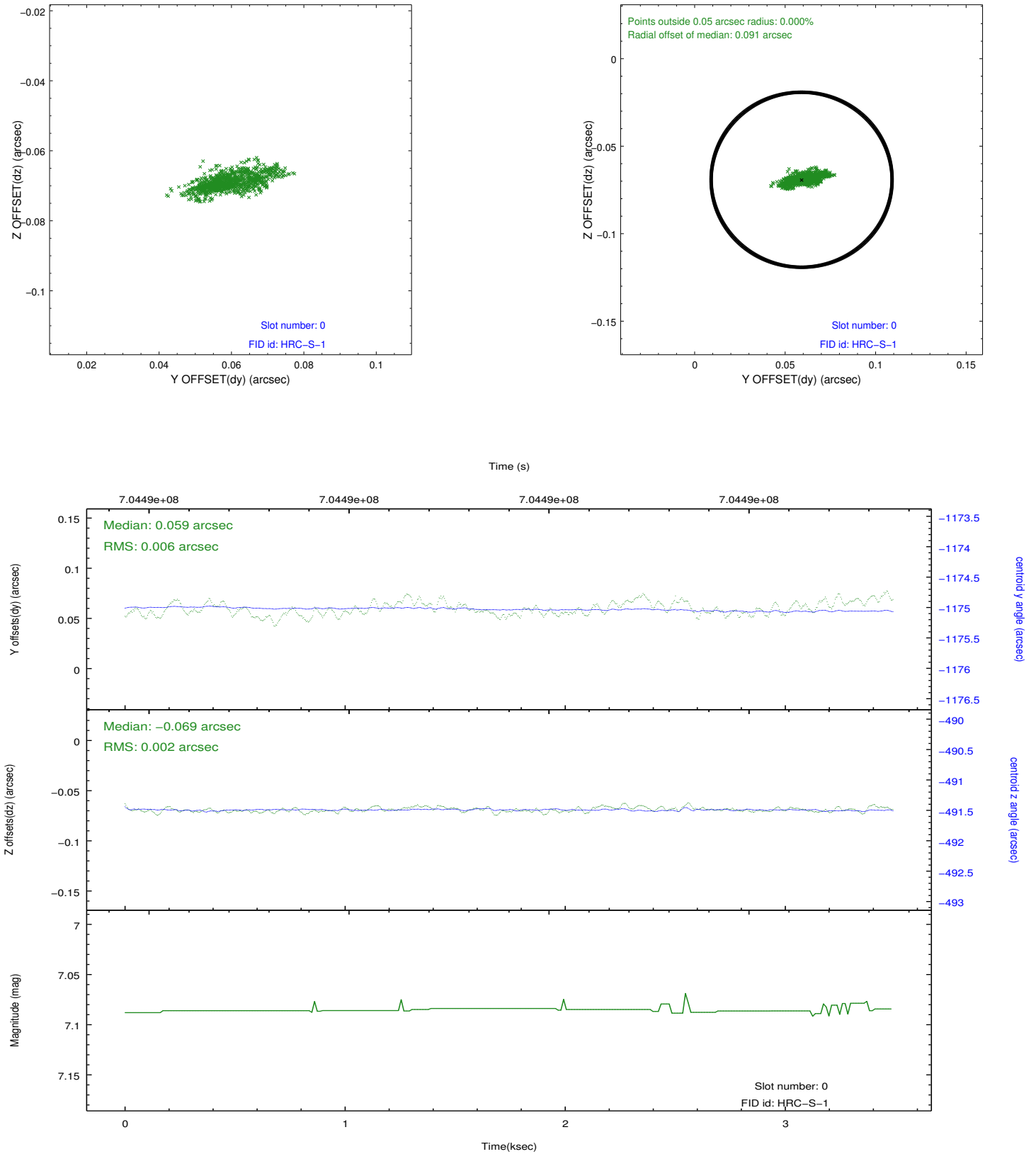


2.4.5 Slot 7

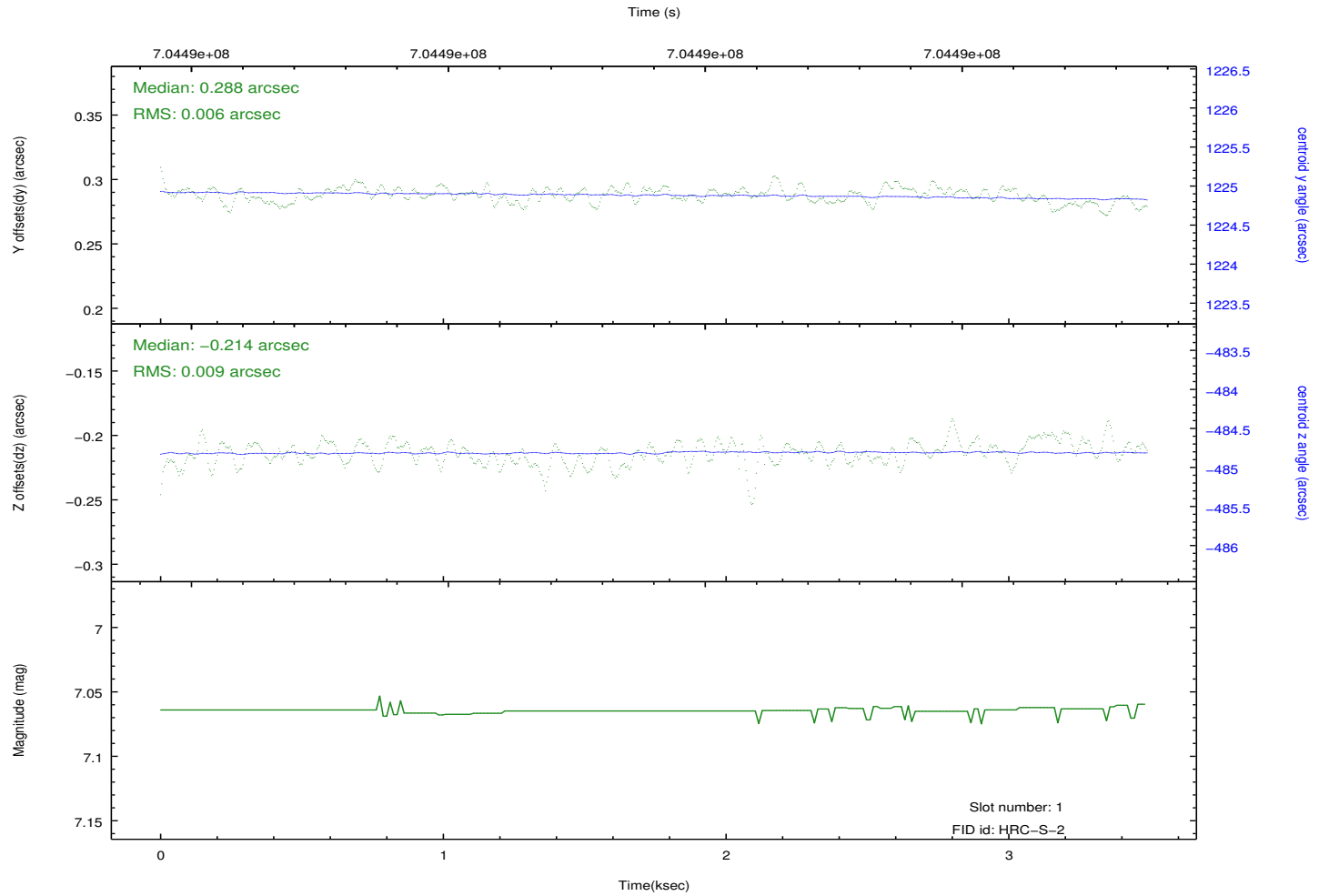
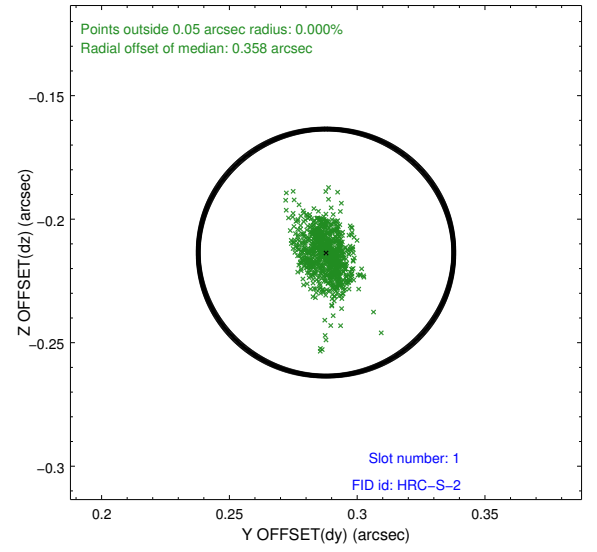
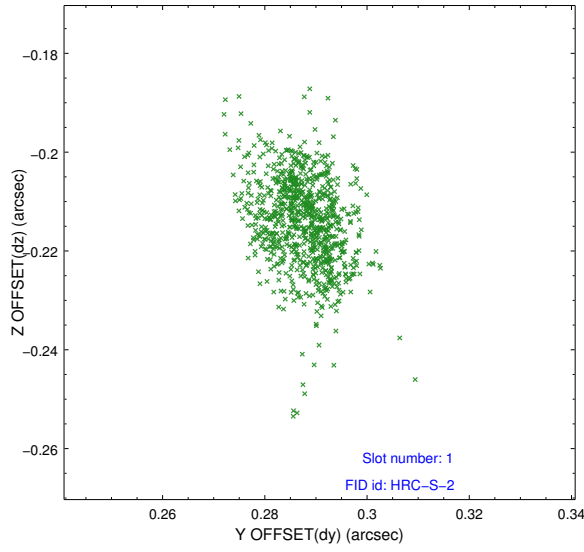


2.5 FID Slots

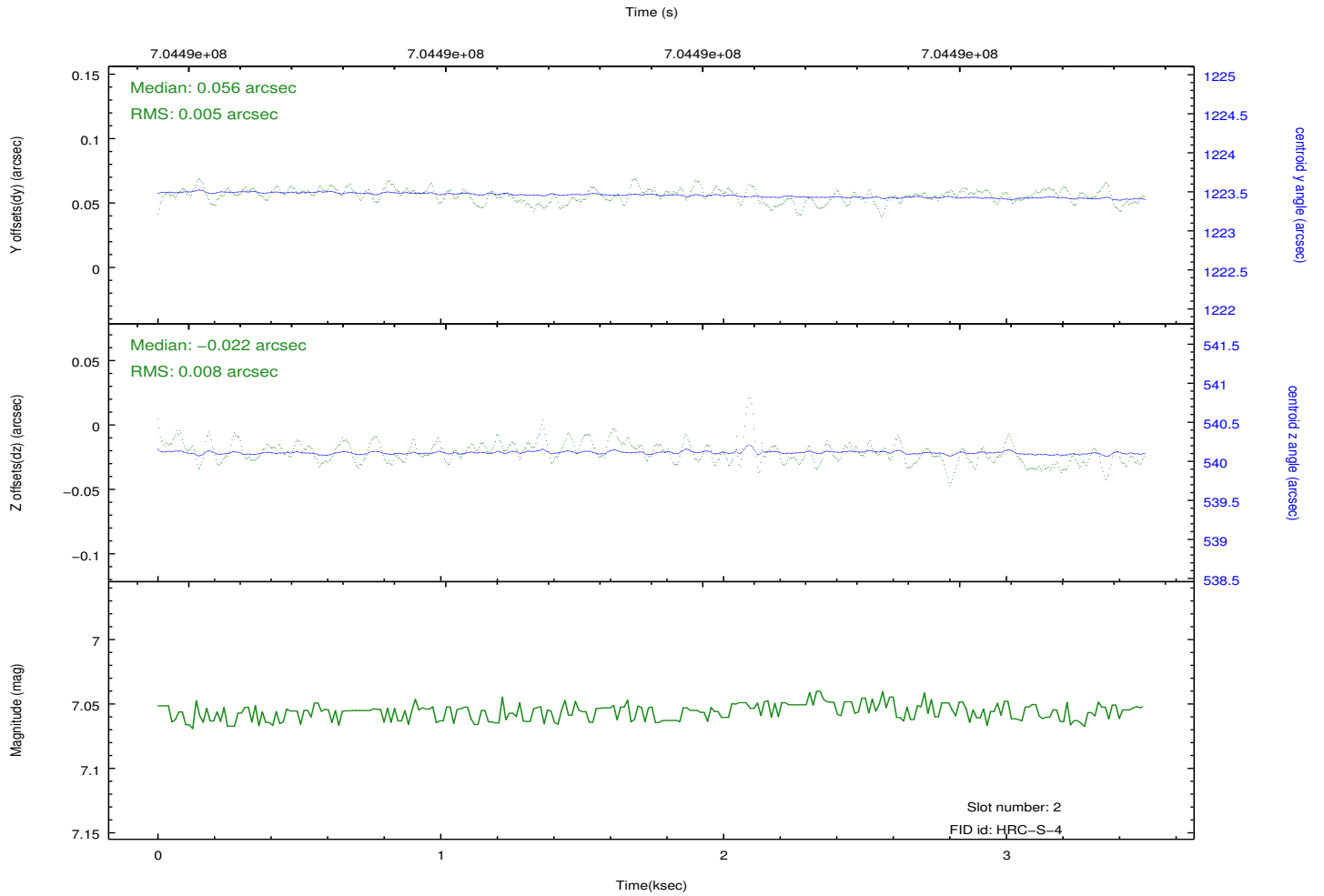
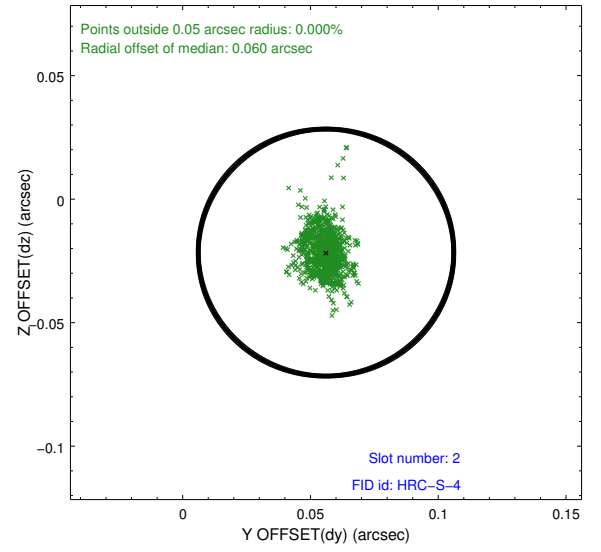
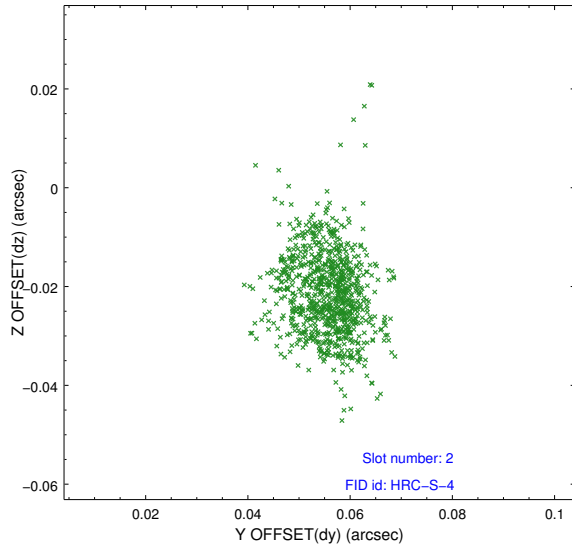
2.5.1 Slot 0



2.5.2 Slot 1

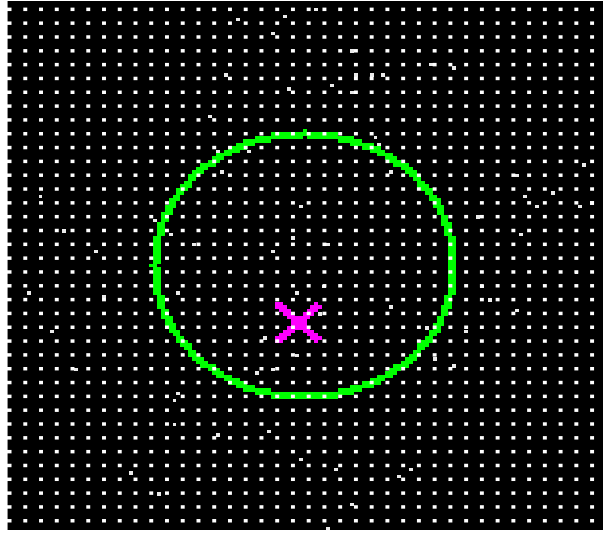


2.5.3 Slot 2

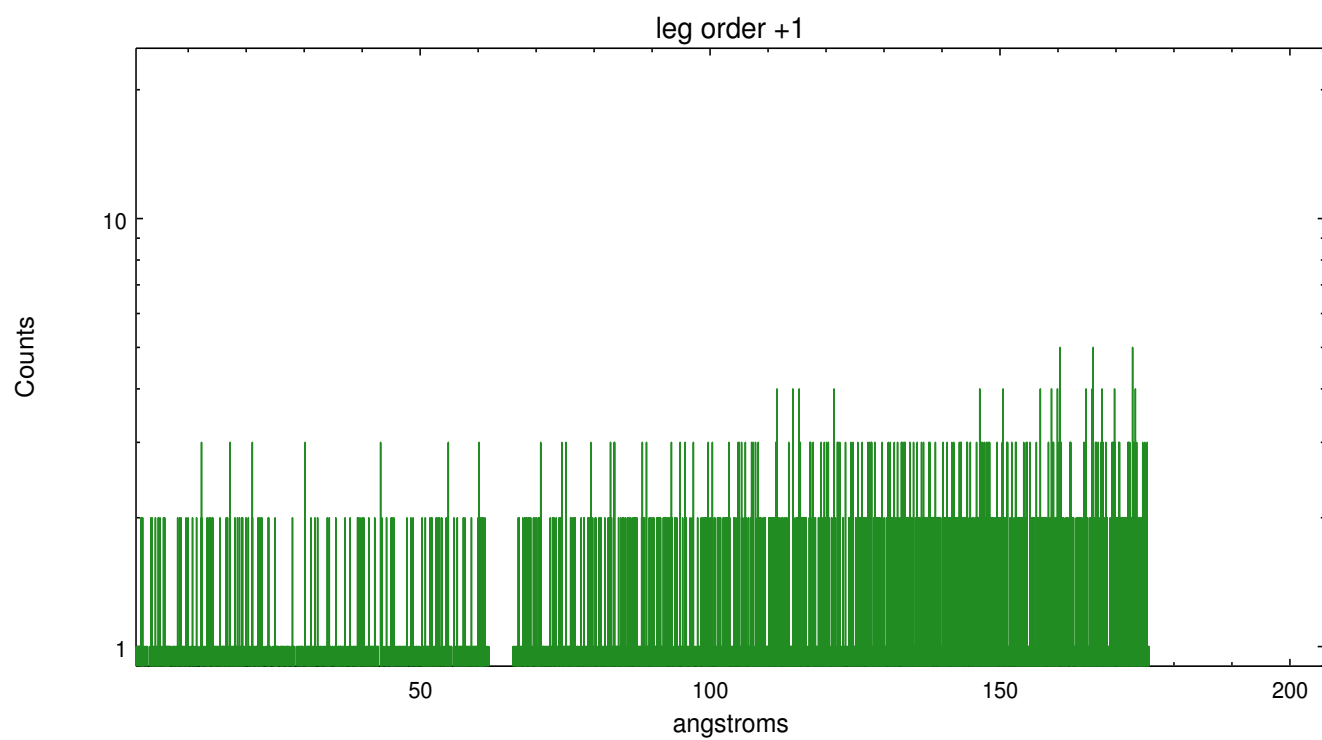
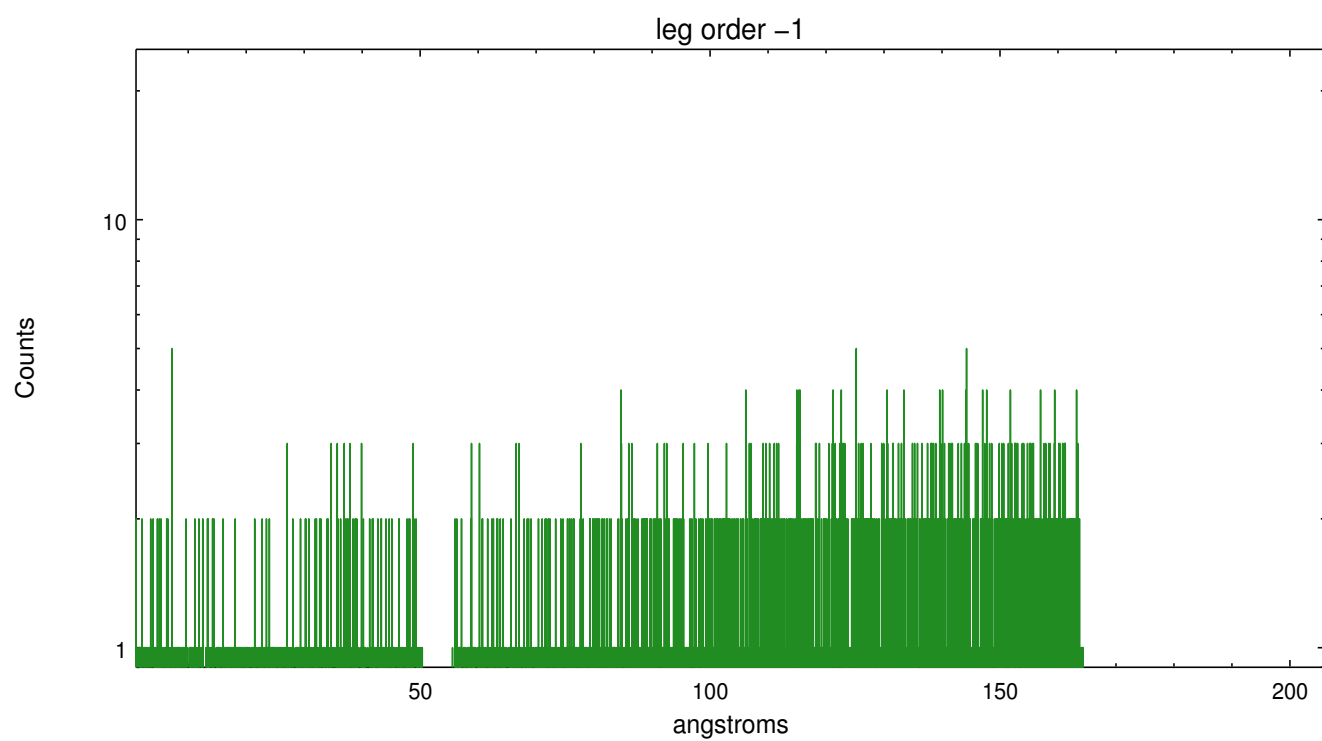


3 Gratings

3.1 LETG Arm



LETG Zero Order



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2020.05.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.4924314622879

A.2 Comments

WARNING: this is a moving, extended object; it was processed as if a stationary point source at the nominal source coordinates. Custom methods will be required (such as sso_freeze); it is unlikely that existing ciao programs will compute grating diffraction coordinates for a moving source (even with the modified aspect solution from sso_freeze).

Comments for Obi 0

Star in slot 4 has an RMS deviation > 0.200000 arcsec

Star in slot 6 has an RMS deviation > 0.200000 arcsec

(acceptable, as per aspect review)