

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23230 - L2 Version 1
Chandra X-Ray Center

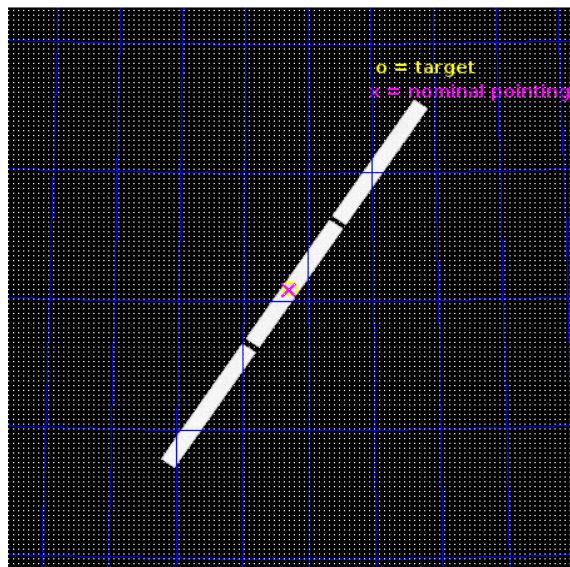
L2 Processing Date : Apr 29 2020

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1 Front

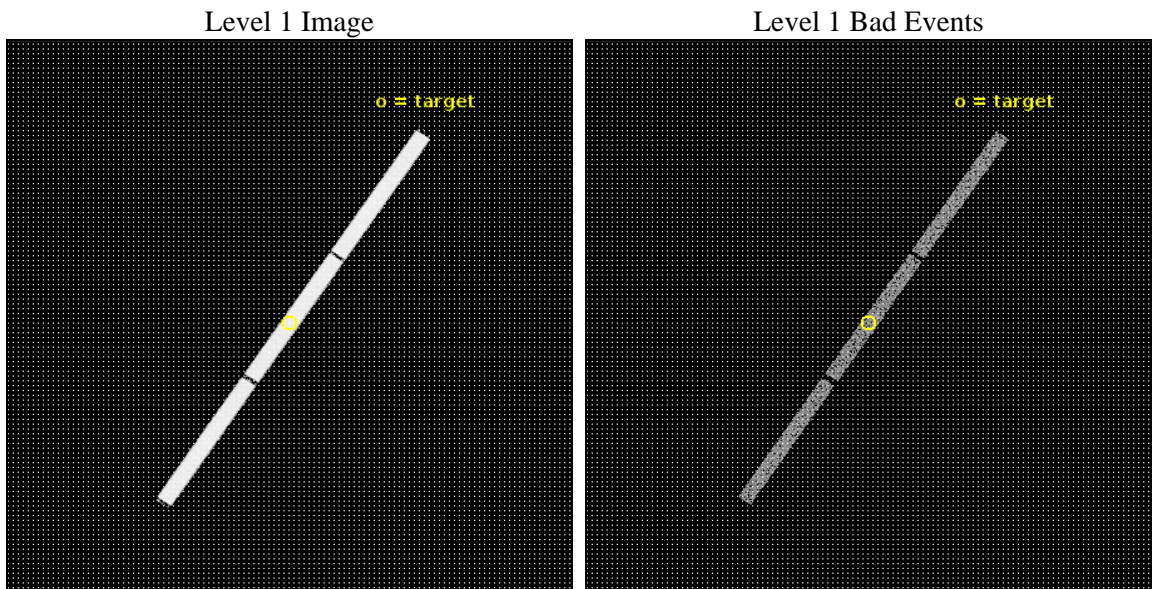
seq_num	100193	Sequence number
obs_id	23230	Observation id
title	Grating spectroscopy of the unexpectedly bright comet C/2019 Y4 ATLAS	Proposal title
observer	Dennis Bodewits	Principal investigator
object	C/2019 Y4 ATLAS	Source name
ra_targ	81.644458	Observer's specified target RA [deg]
dec_targ	61.048346	Observer's specified target Dec [deg]
ra_nom	81.6449117241	Nominal RA [deg]
dec_nom	61.046710693	Nominal Dec [deg]
roll_nom	304.049420804	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3494.4814623594	[s]
livetime	3455.3454145128	Ontime multiplied by DTCOR
l2events	365423	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	3494.4814623594	[s]
caldsver	4.9.1	 	l1events	479690	Number of level 1 events
date	2020-04-29T11:00:38	Date and time of file creation	tgmethod	USER	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32774.65, 32813.36)	src1a sky pixel position

2.1.3 Events

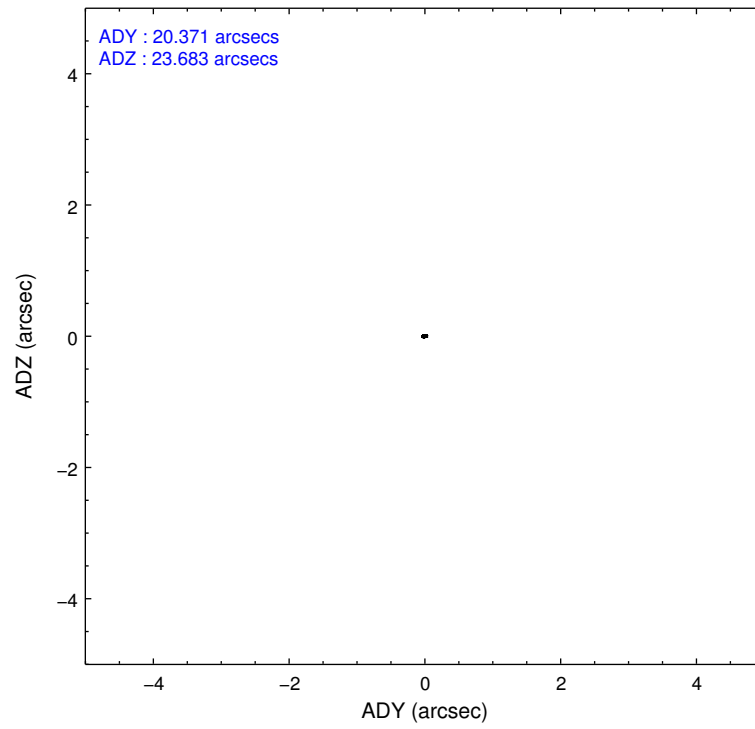
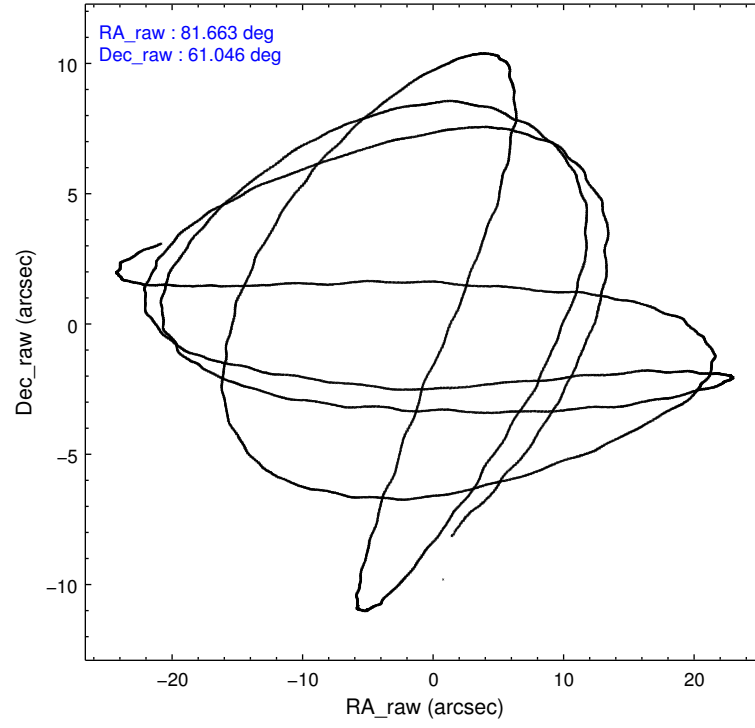
Level 1 Events

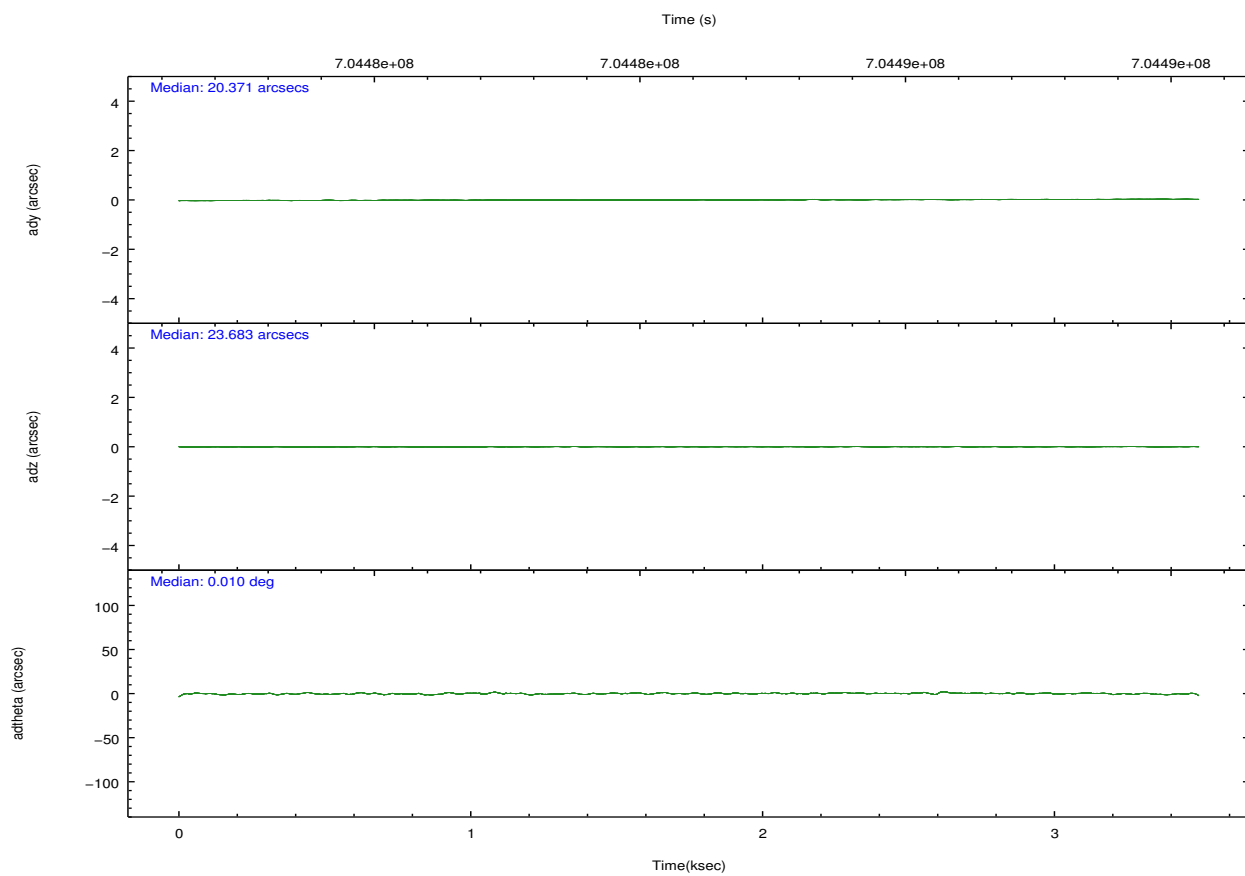
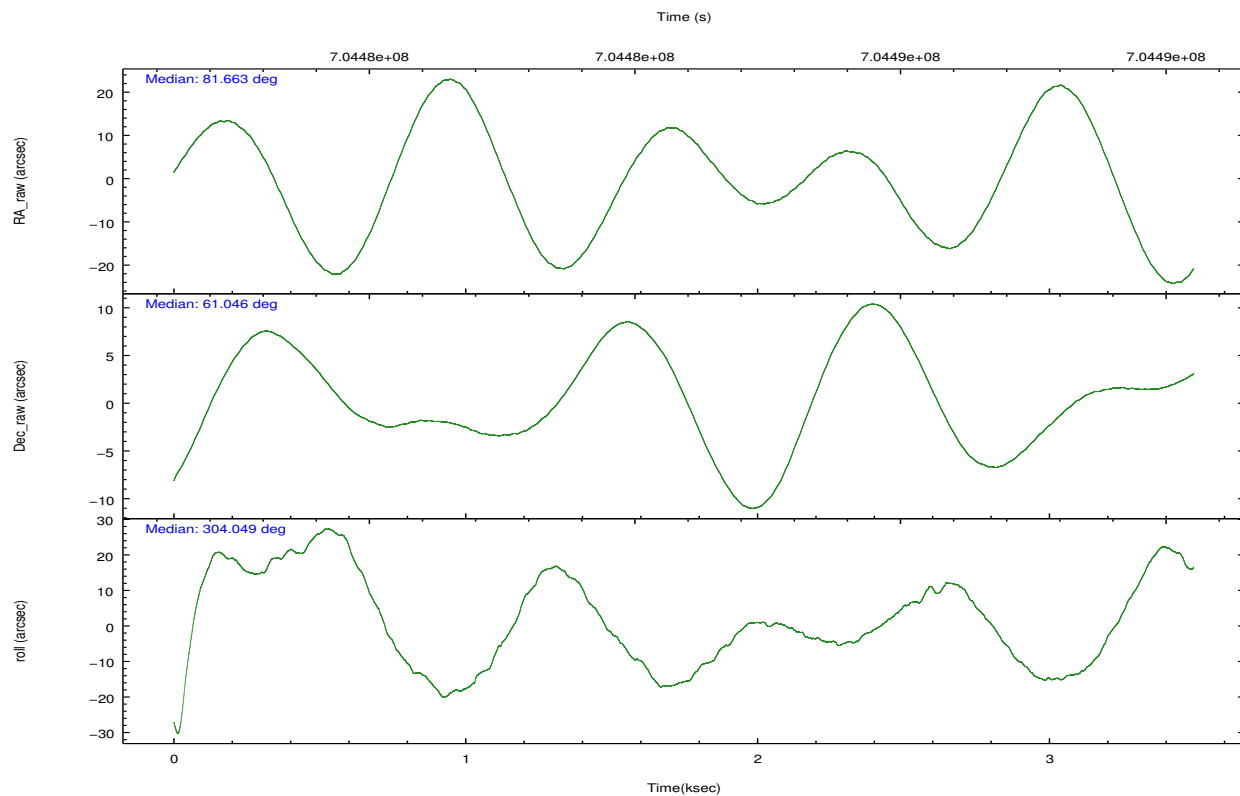
	segment 1	segment 2	segment 3
level 1 events	162575	157266	159849
rejected events	13434	12697	13266
rejected %	8%	8%	8%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar version number	8	8
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
[deg] Pointing RA	81.608370	81.6449117241			
[deg] Pointing Dec	61.056858	61.046710693			
[deg] Pointing Roll	304.031570	304.049420804			
[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)	704483636.184000	704483260.51459			
Observation start date	2020-04-28T17:52:47	2020-04-28T17:47:40			
[s] Observation end time (MET)	704486936.184000	704487070.4398299			
Observation end date	2020-04-28T18:47:47	2020-04-28T18:51:10			

2.3 Aspect



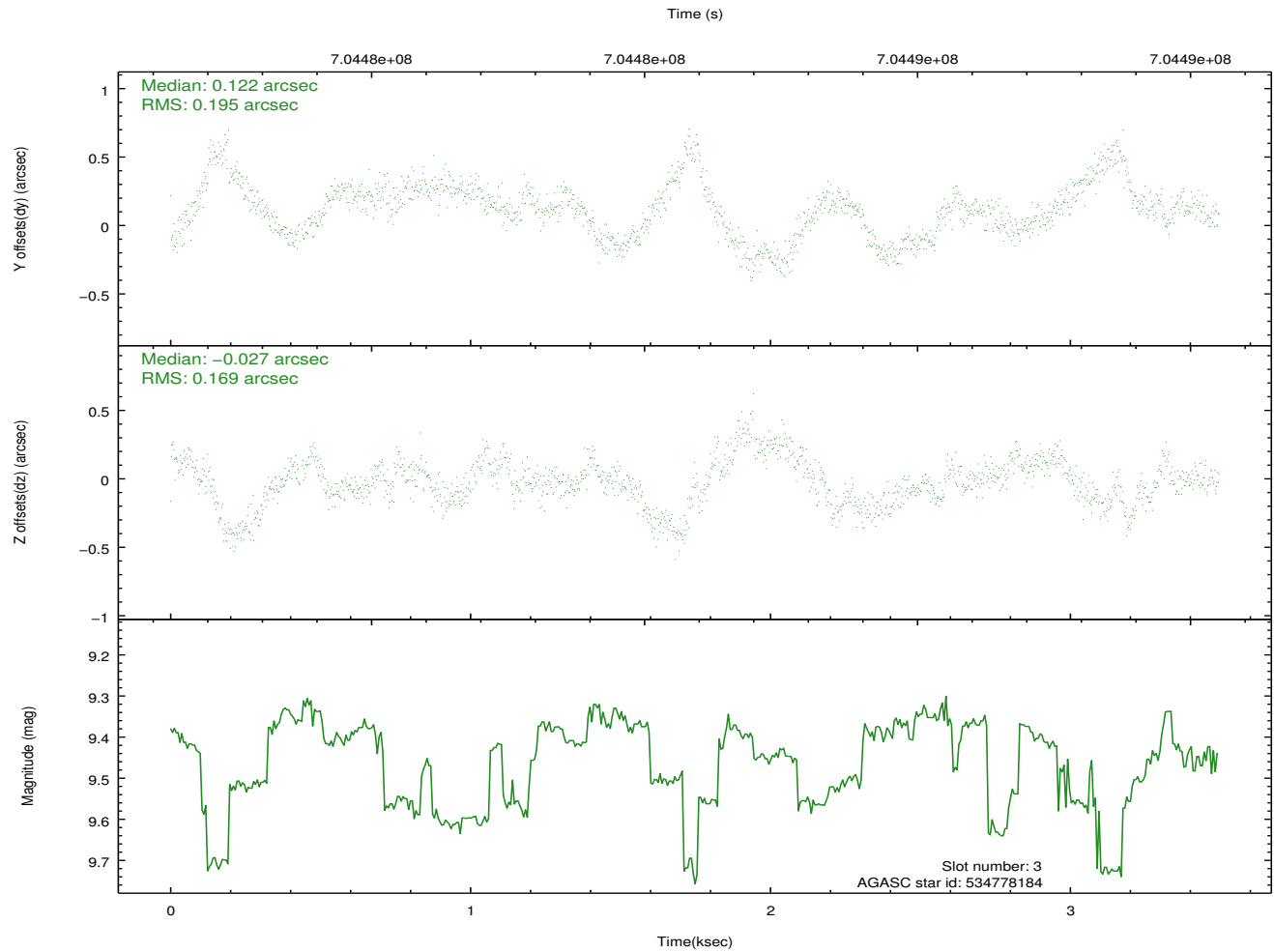
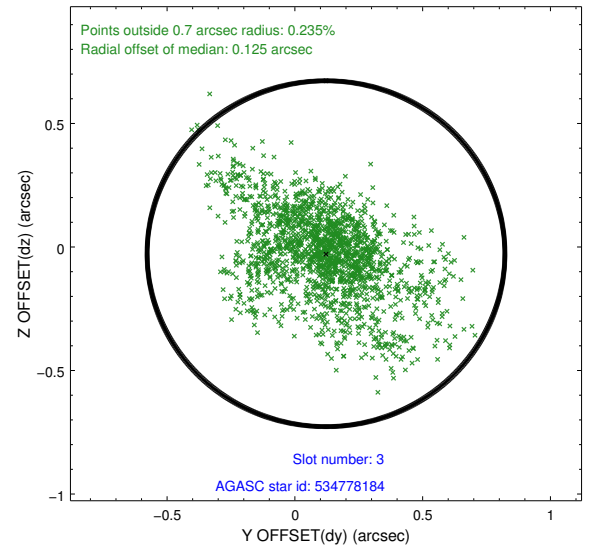
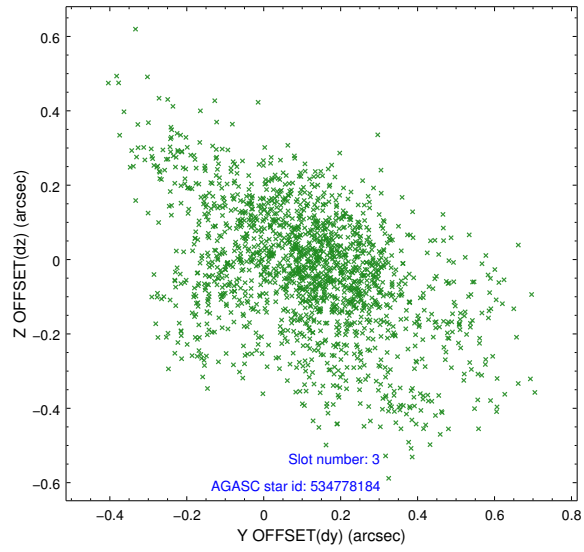


Slot Statistics

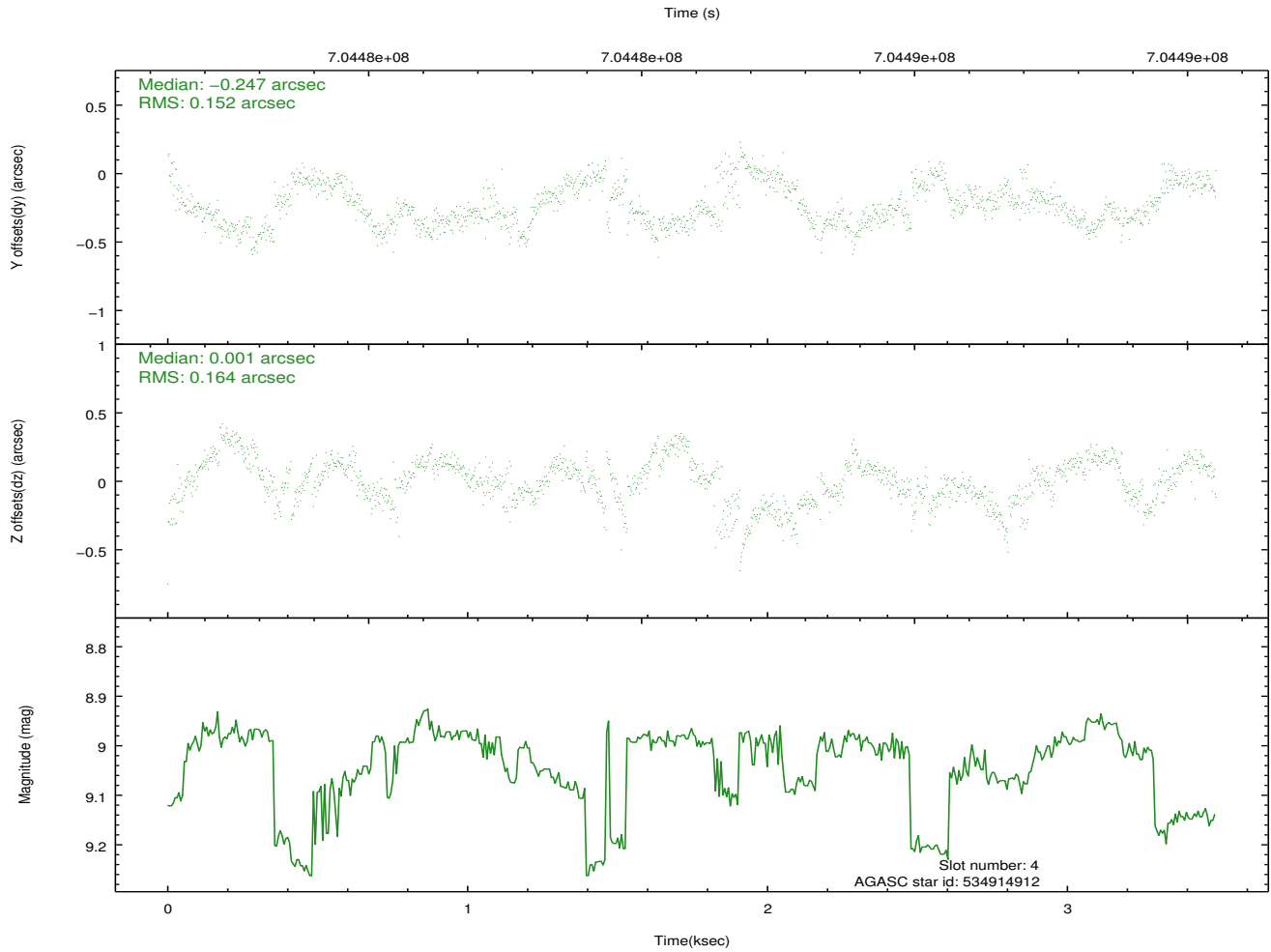
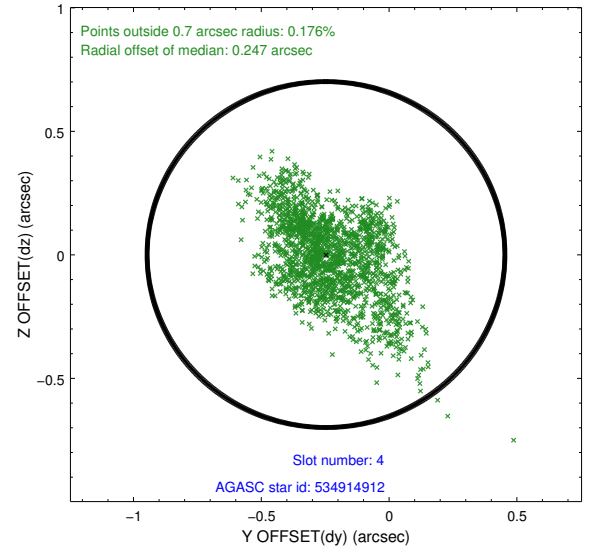
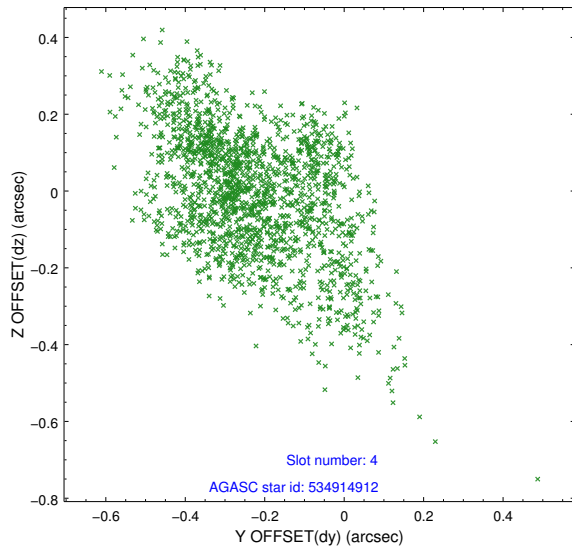
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.09	853	1.000	0.129	-0.095	0.007	0.012	0.000000	0.000000	-1174.90	-491
1	FID		HRC-S-2	7.06	853	1.000	0.372	-0.204	0.006	0.011	0.000000	0.000000	1223.65	-485
2	FID		HRC-S-3	7.07	853	1.000	-0.112	-0.004	0.007	0.011	0.000000	0.000000	-1176.19	537
3	GUIDE	used	534778184	9.44	1702	1.000	0.122	-0.027	0.261	0.479	81.424807	61.387046	-1161.82	403
4	GUIDE	used	534914912	9.02	1701	1.000	-0.247	0.001	0.228	0.395	81.829238	61.781311	-1951.58	1771
5	GUIDE	used	534916944	8.87	1705	1.000	-0.198	0.128	0.161	0.255	81.479781	61.783099	-2287.92	1286
6	GUIDE	used	534921240	9.58	1705	1.000	0.217	-0.047	0.196	0.353	82.836622	60.642787	2431.14	973
7	GUIDE	used	534922520	8.38	1704	1.000	0.080	-0.041	0.140	0.223	81.531321	61.241488	-618.11	260

2.4 Star Slots

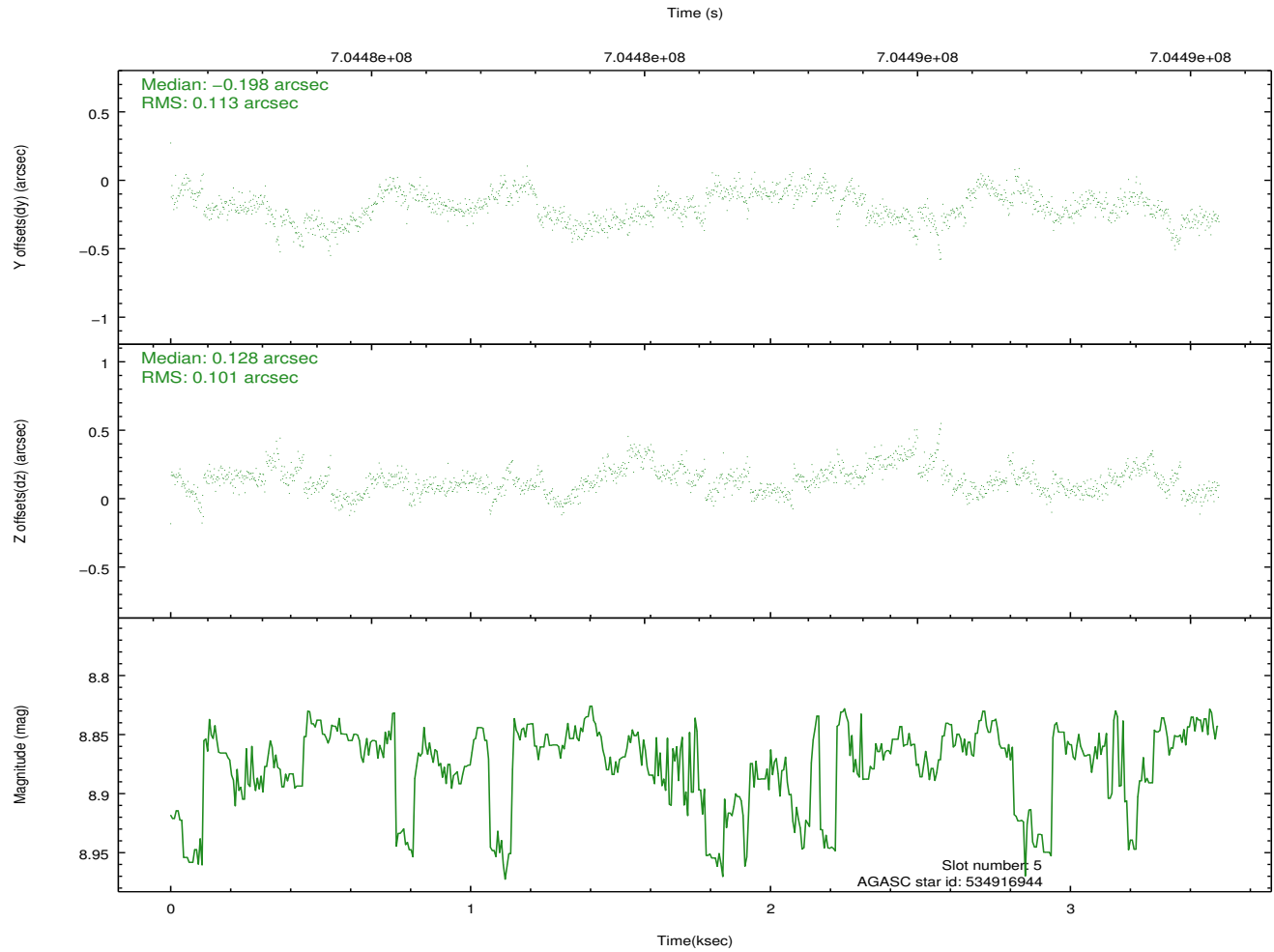
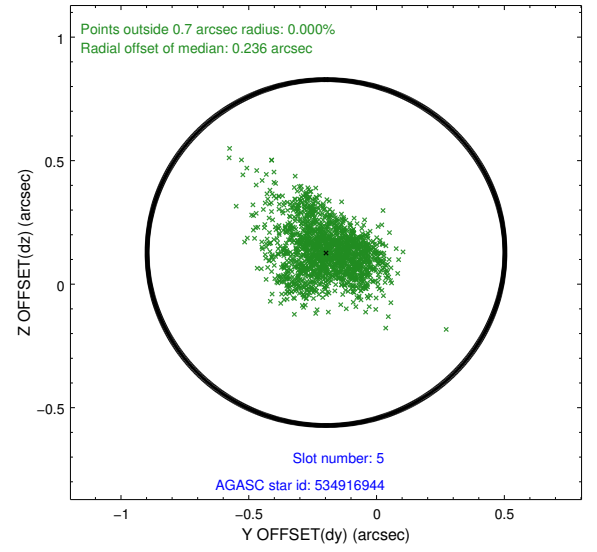
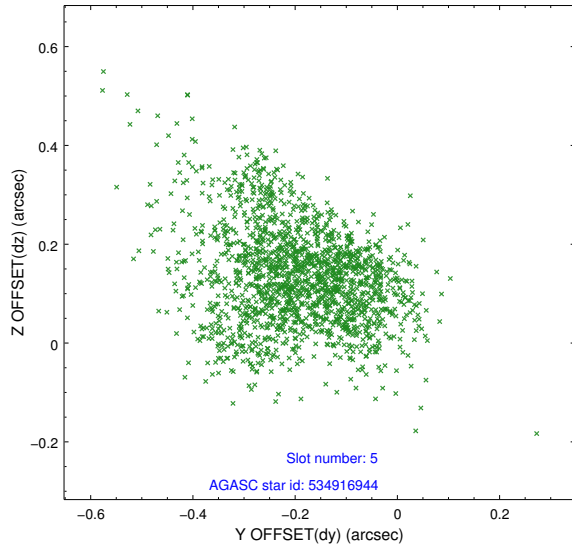
2.4.1 Slot 3



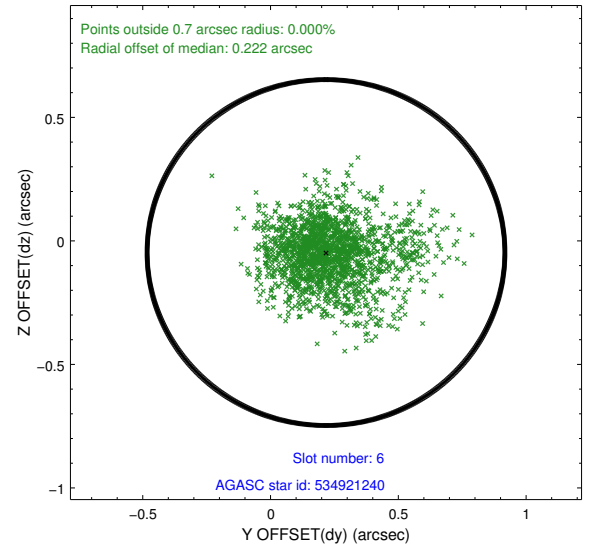
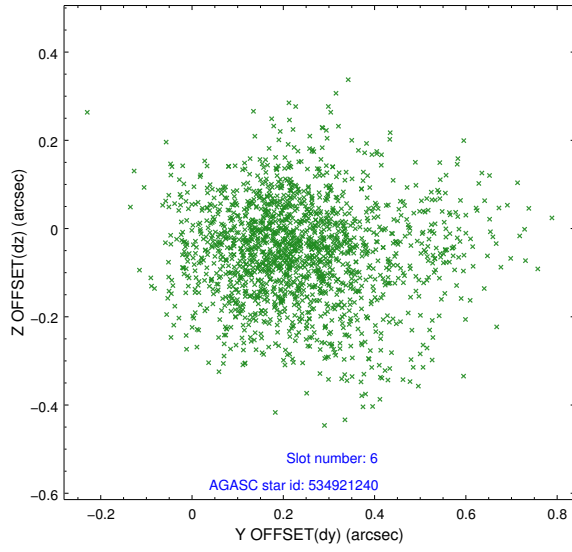
2.4.2 Slot 4



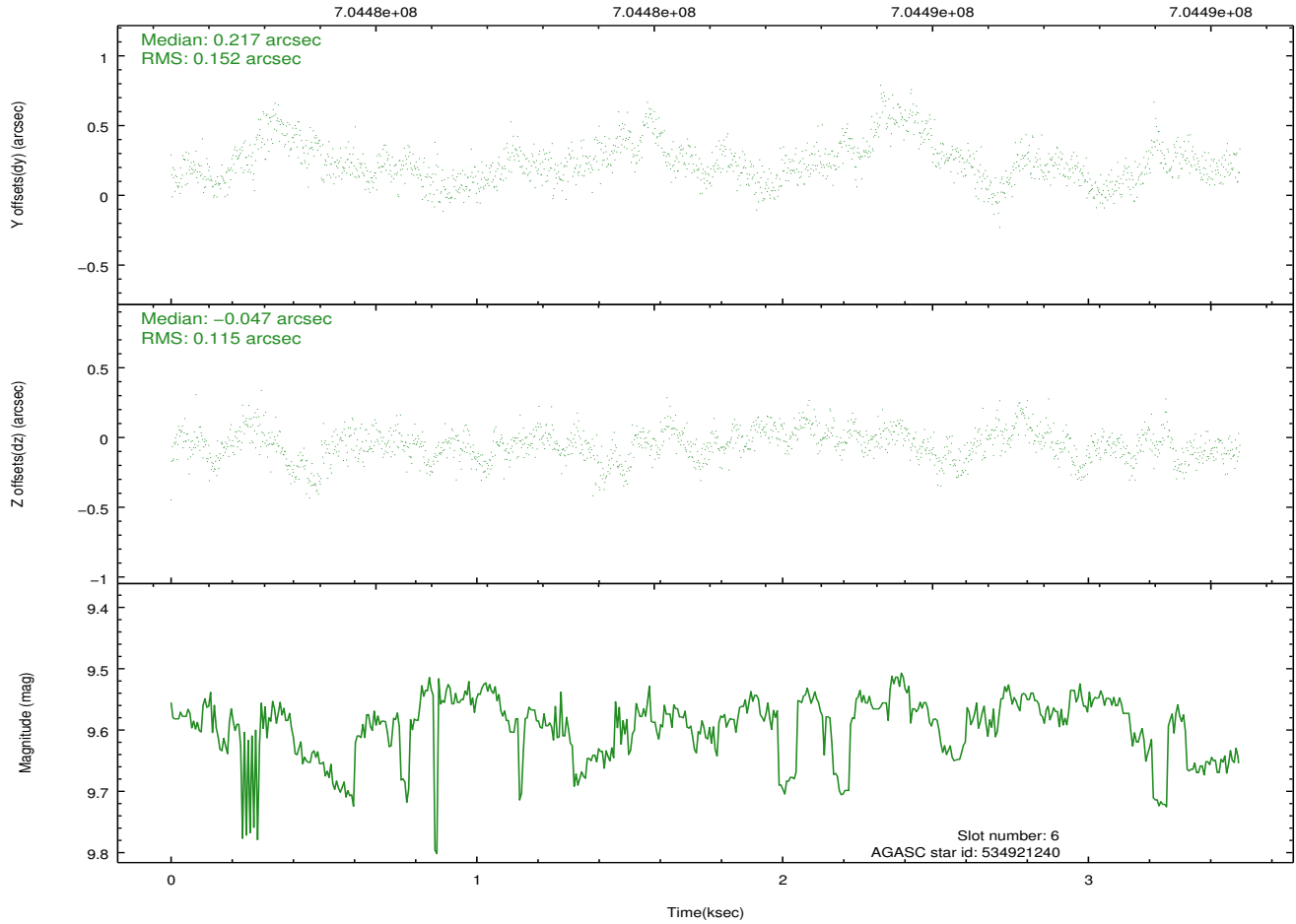
2.4.3 Slot 5



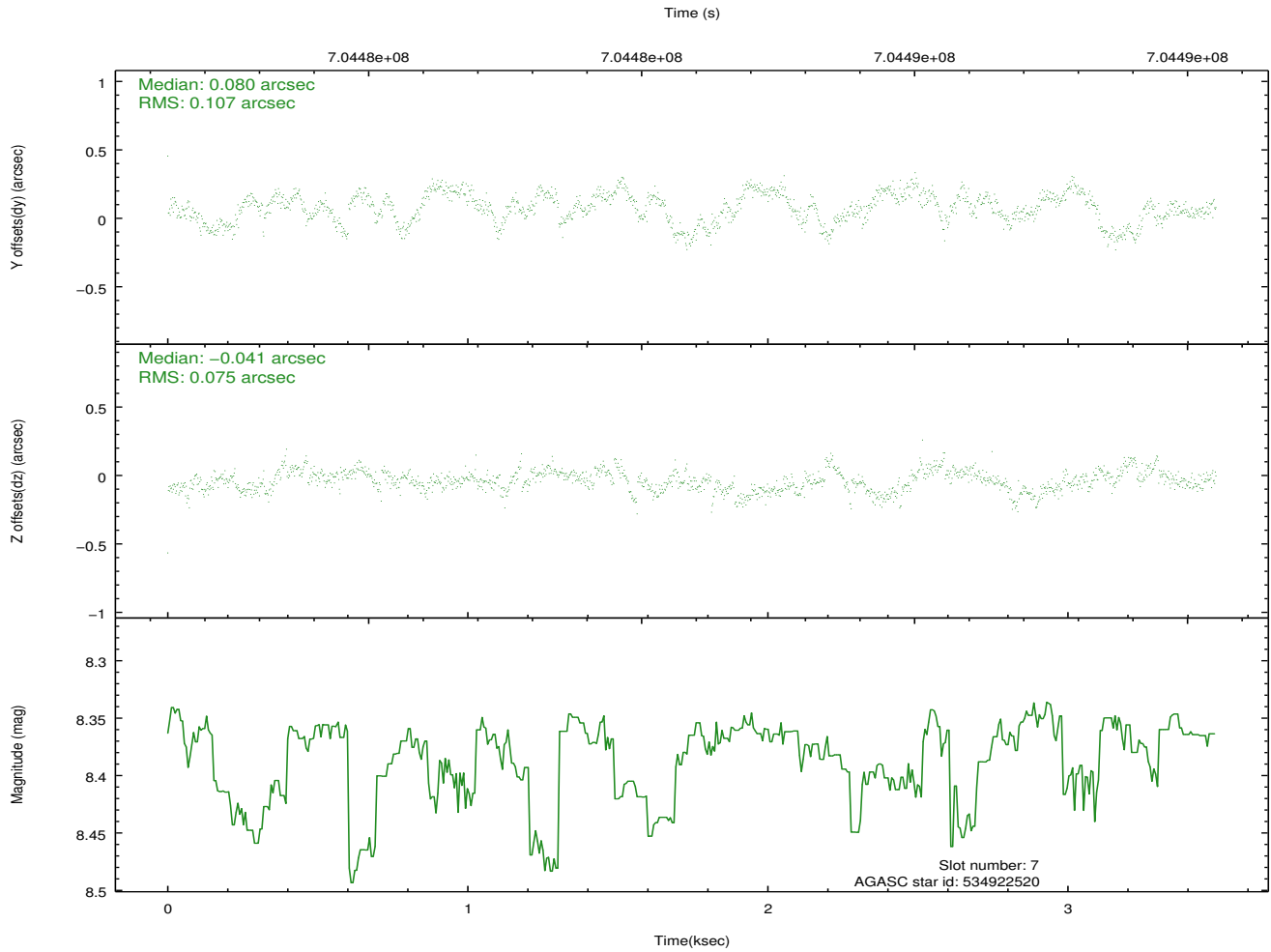
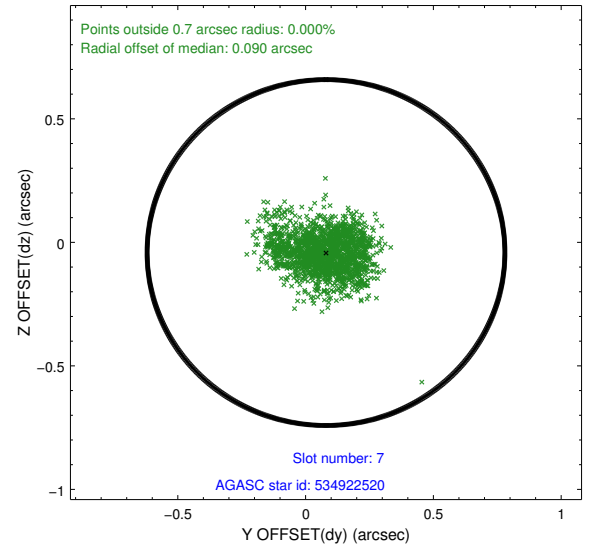
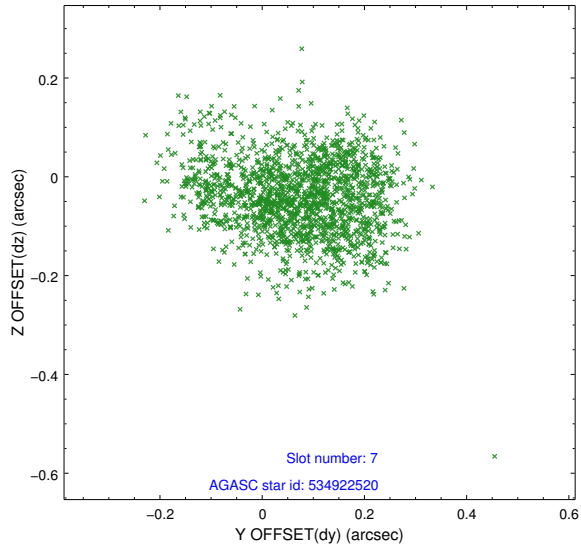
2.4.4 Slot 6



Time (s)

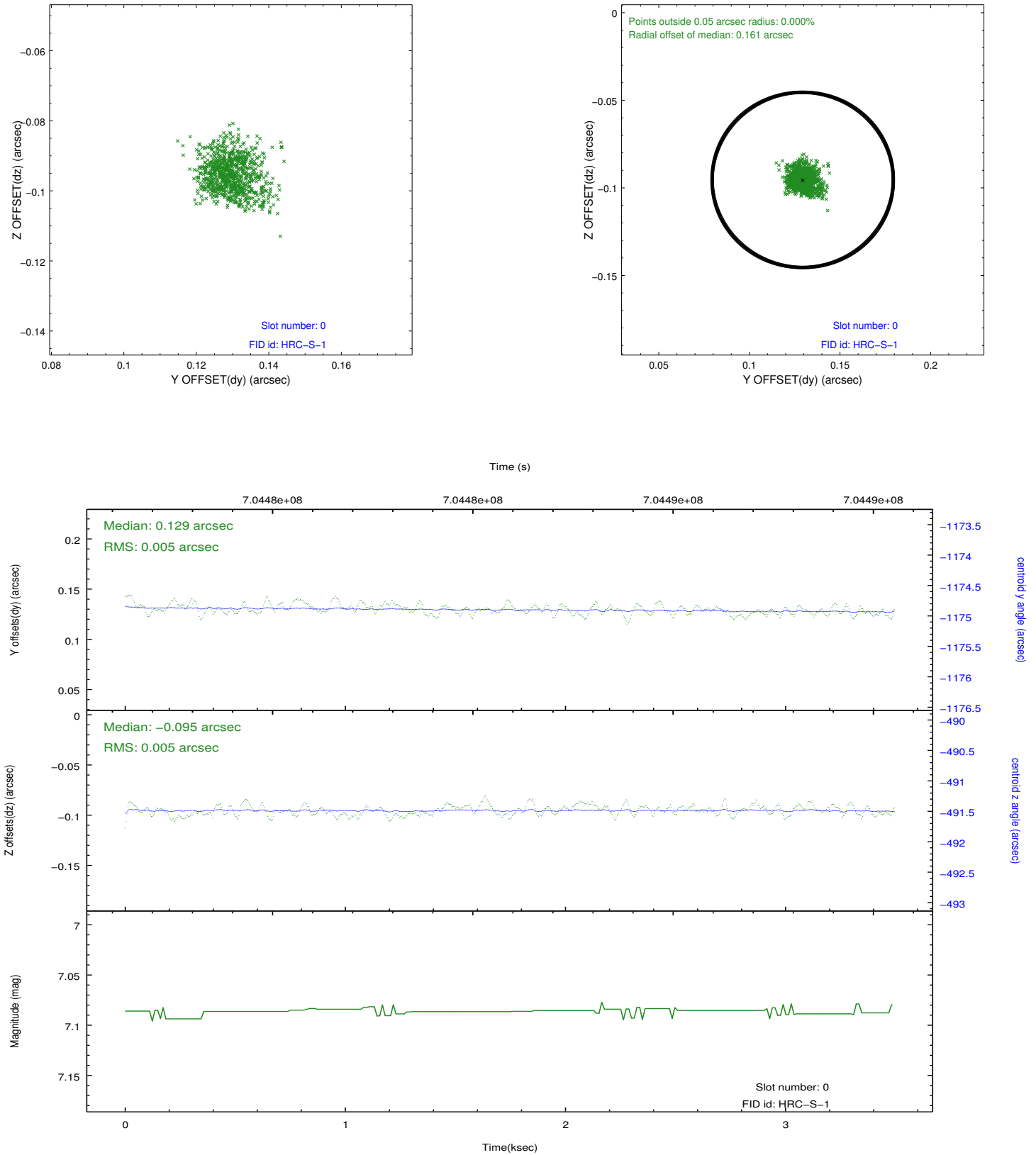


2.4.5 Slot 7

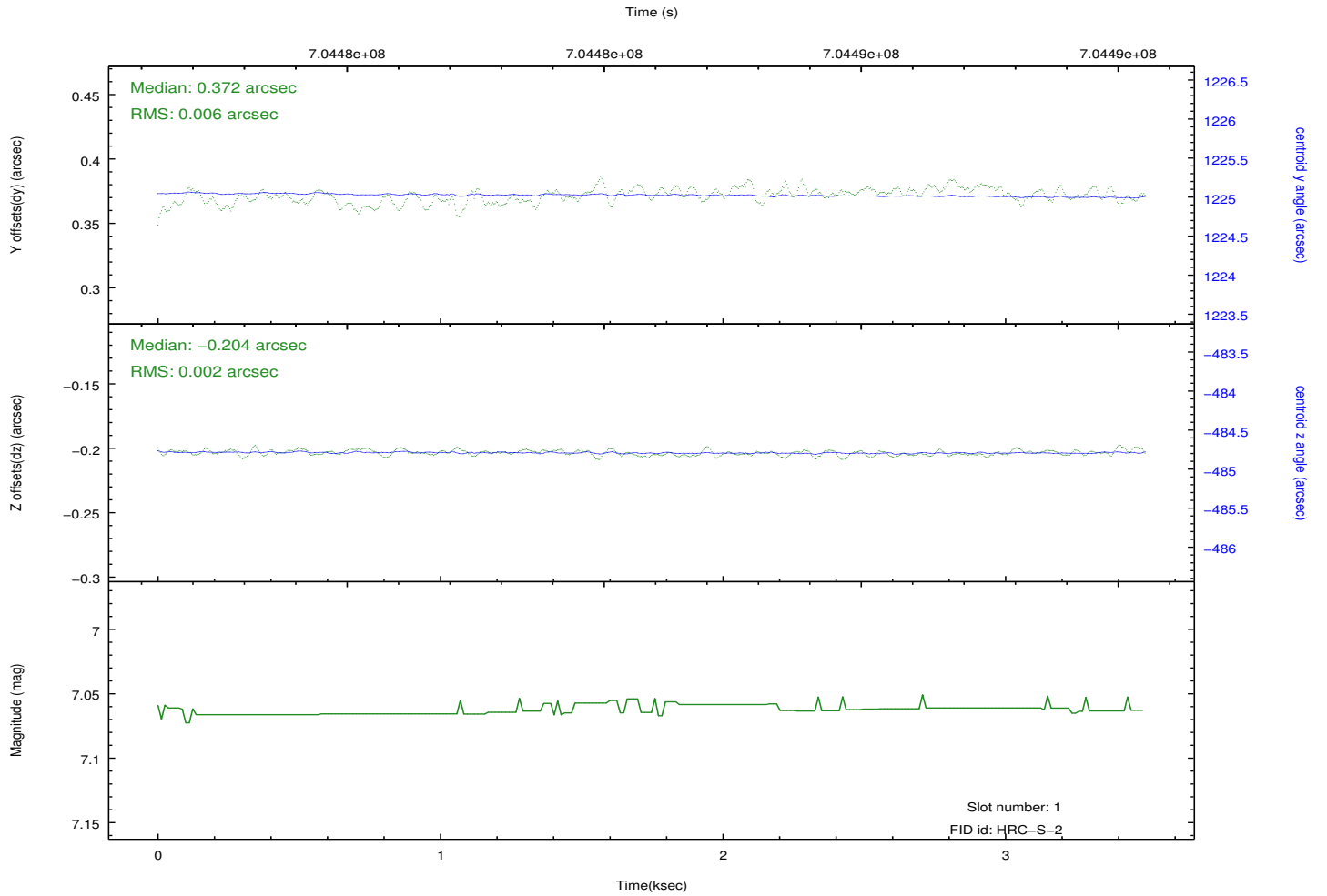
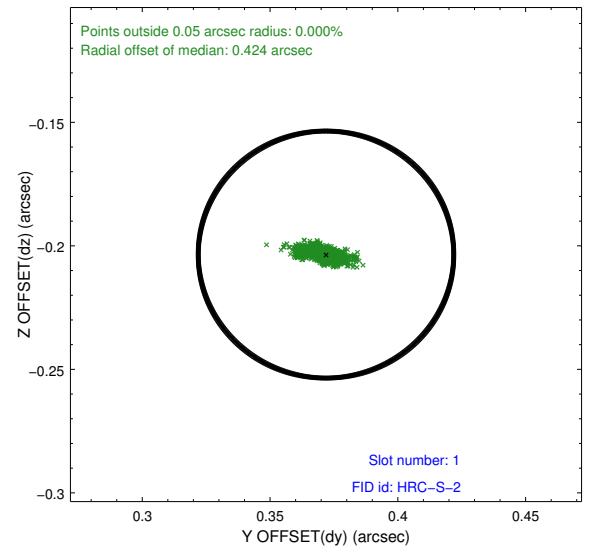
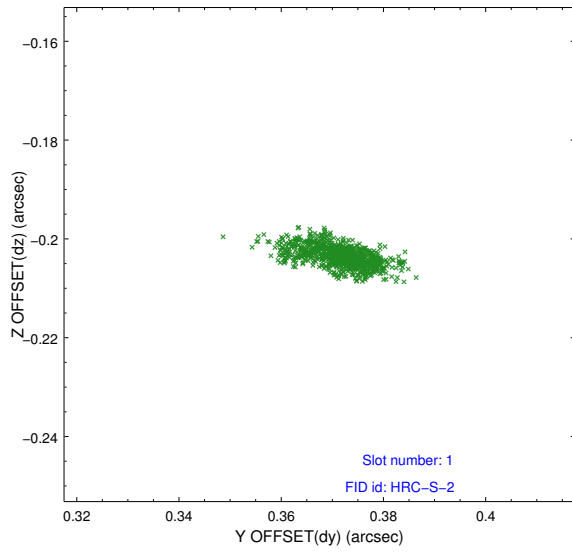


2.5 FID Slots

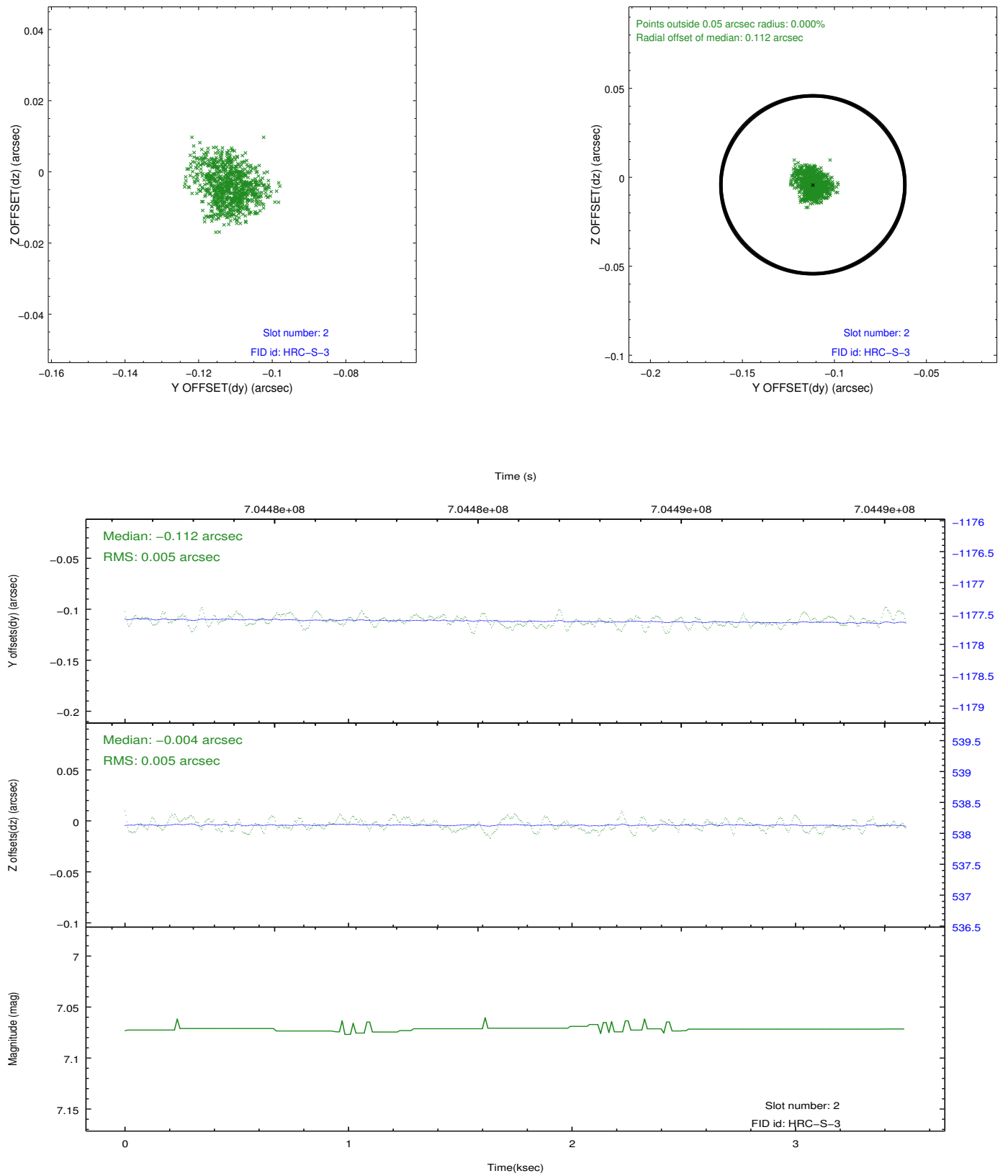
2.5.1 Slot 0



2.5.2 Slot 1

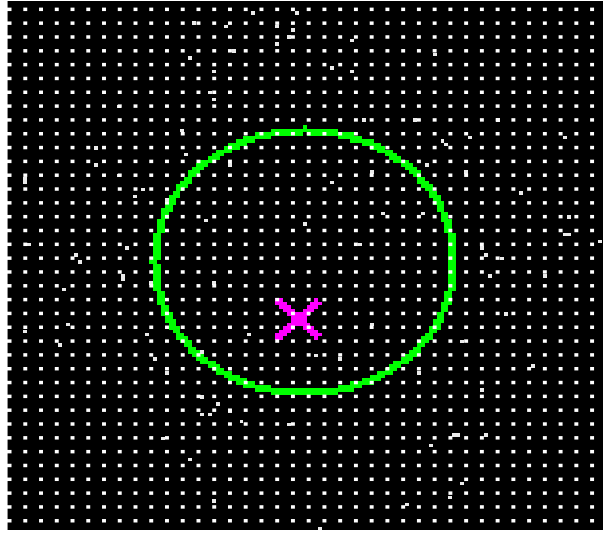


2.5.3 Slot 2

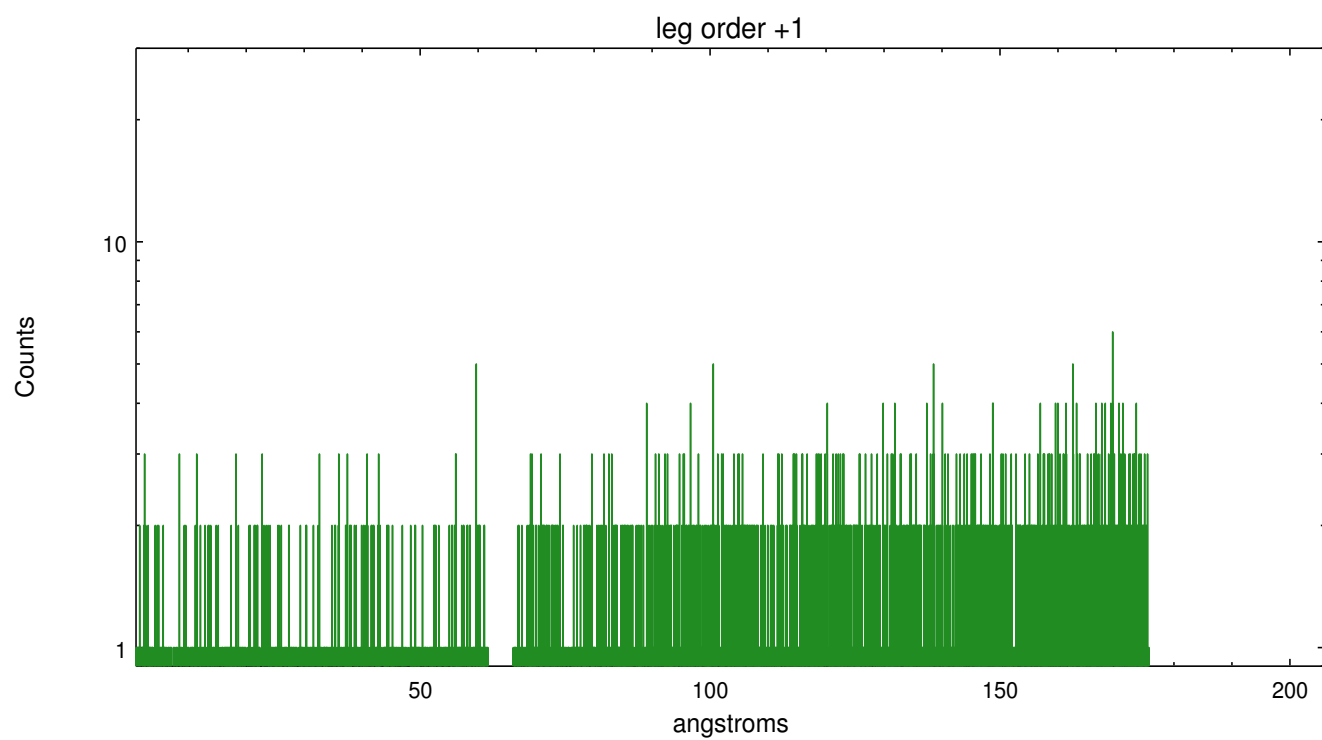
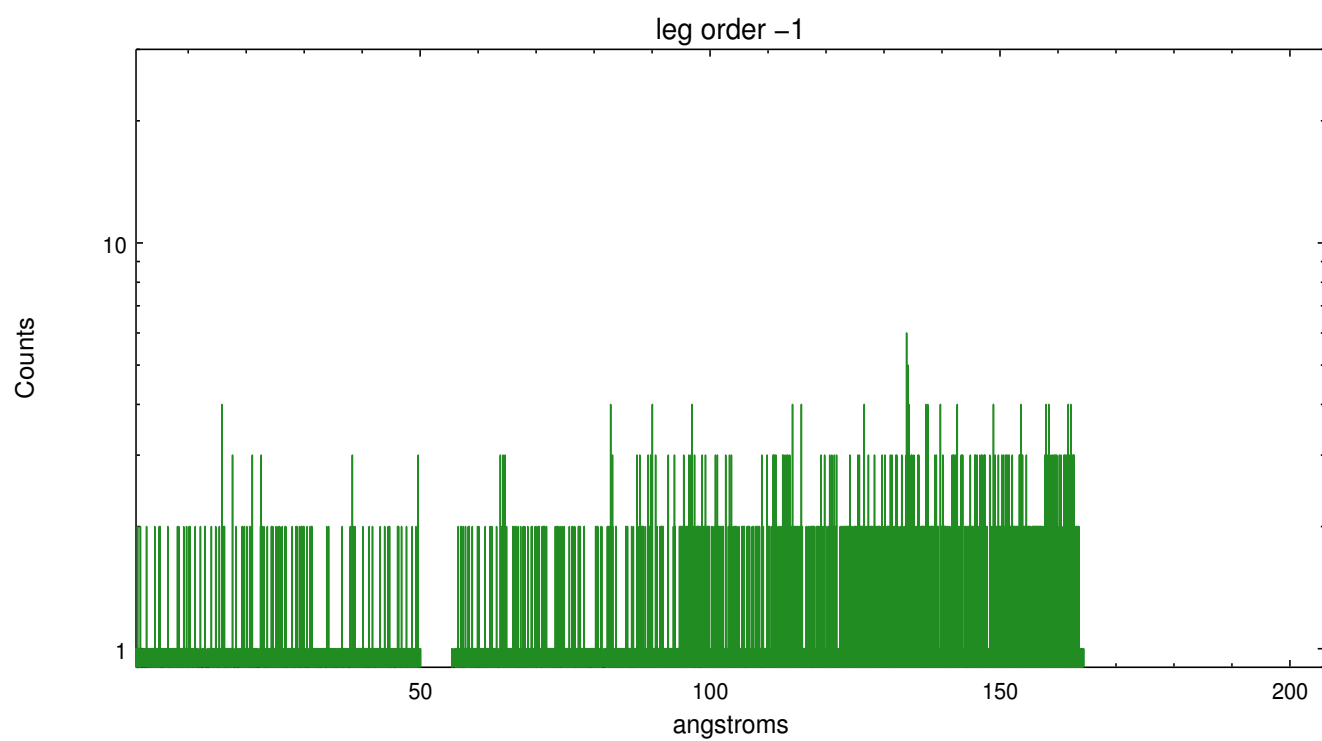


3 Gratings

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	3.4944814623594

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`).