

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23228 - L2 Version 1
Chandra X-Ray Center

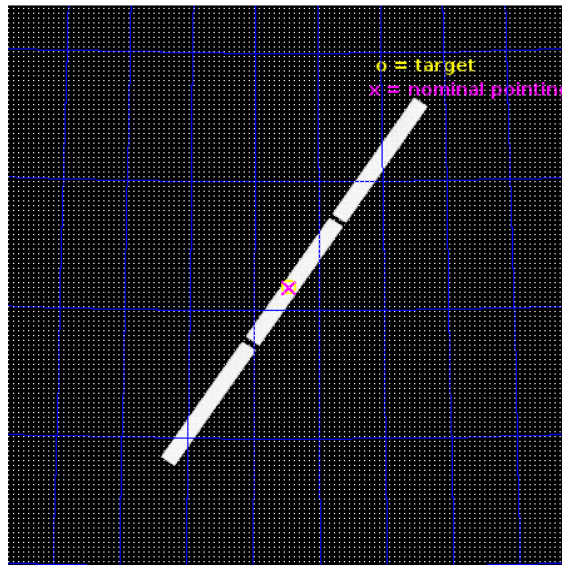
L2 Processing Date : Apr 29 2020

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1 Front

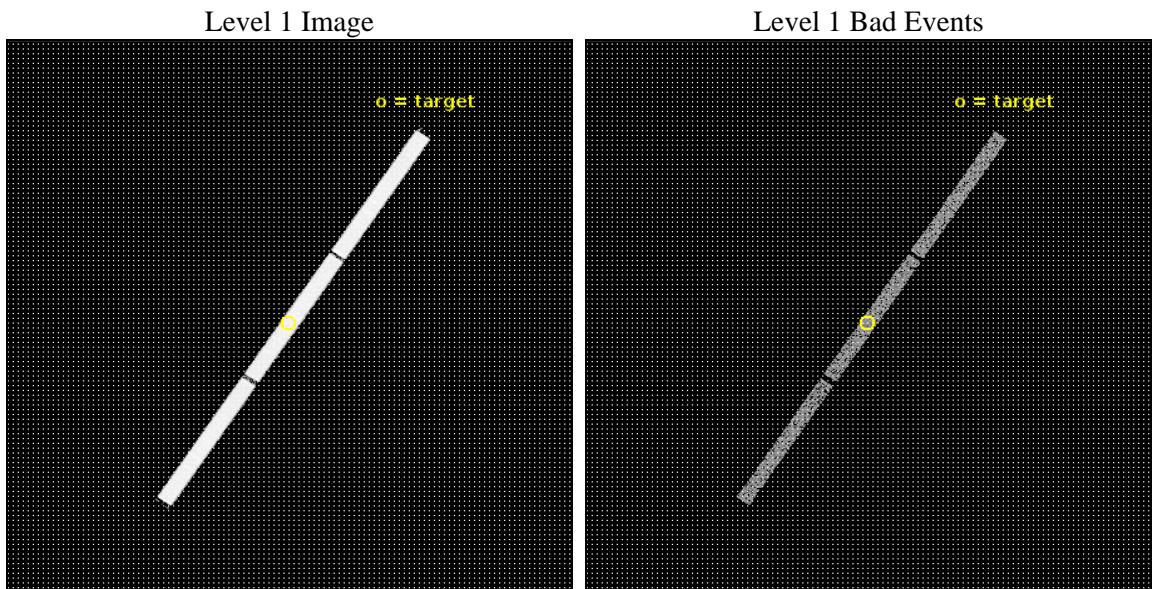
seq_num	100193	Sequence number
obs_id	23228	Observation id
title	Grating spectroscopy of the unexpectedly bright comet C/2019 Y4 ATLAS	Proposal title
observer	Dennis Bodewits	Principal investigator
object	C/2019 Y4 ATLAS	Source name
ra_targ	81.727093	Observer's specified target RA [deg]
dec_targ	61.088602	Observer's specified target Dec [deg]
ra_nom	81.7268265729	Nominal RA [deg]
dec_nom	61.0870647946	Nominal Dec [deg]
roll_nom	304.038141918	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3492.4314622879	[s]
livetime	3455.4330386184	Ontime multiplied by DTCOR
l2events	339059	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]
caldbver	4.9.1	 	l1events	450673	Number of level 1 events
date	2020-04-29T11:00:51	Date and time of file creation	tgmethod	USER	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32765.16, 32810.64)	src1a sky pixel position

2.1.3 Events

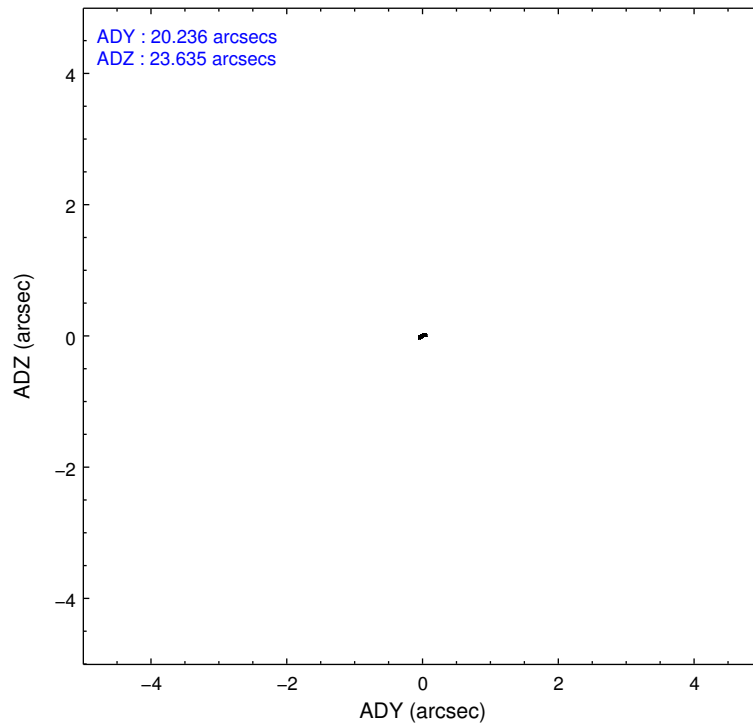
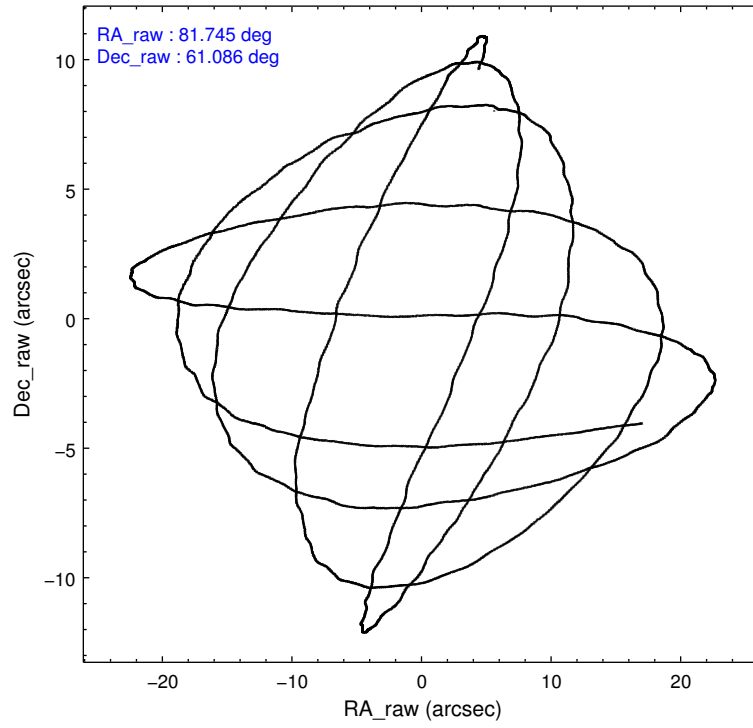
Level 1 Events

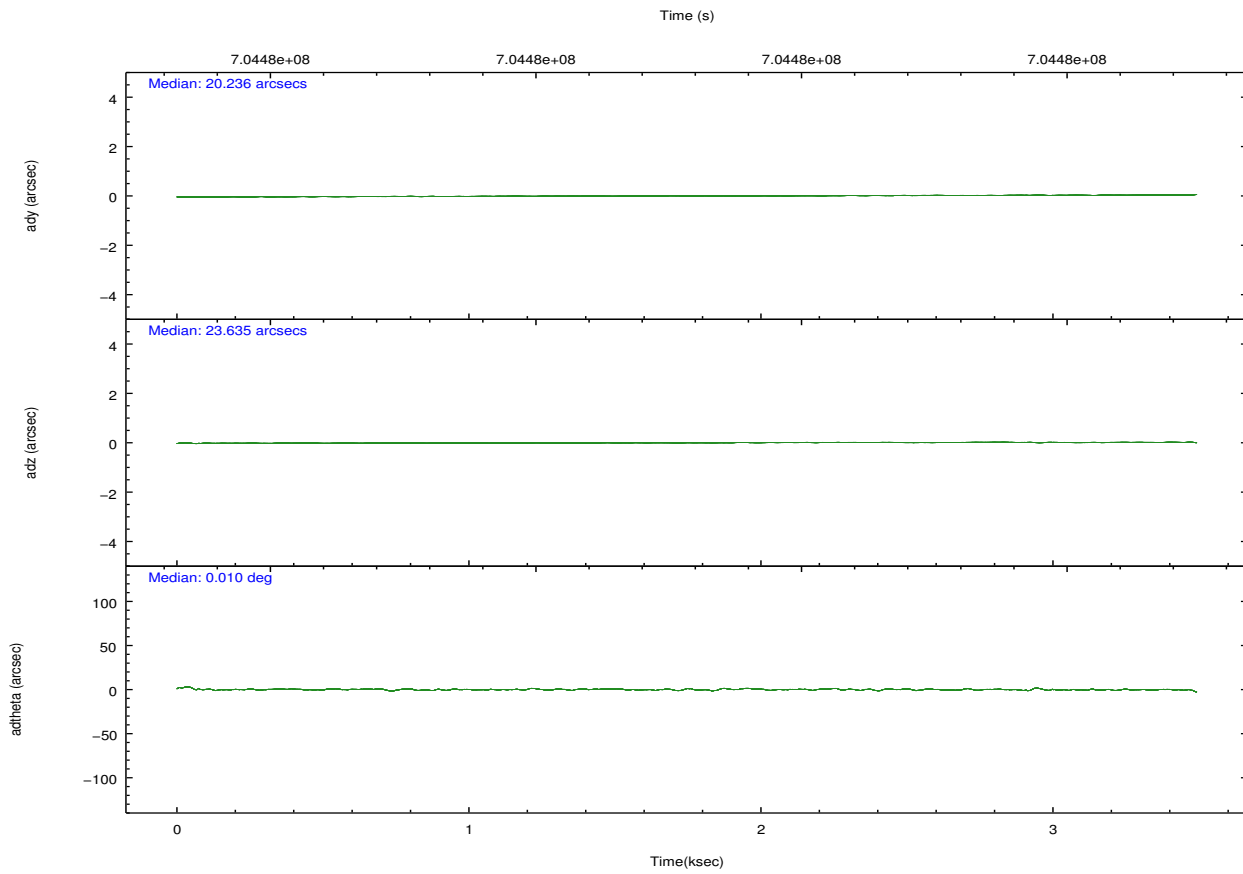
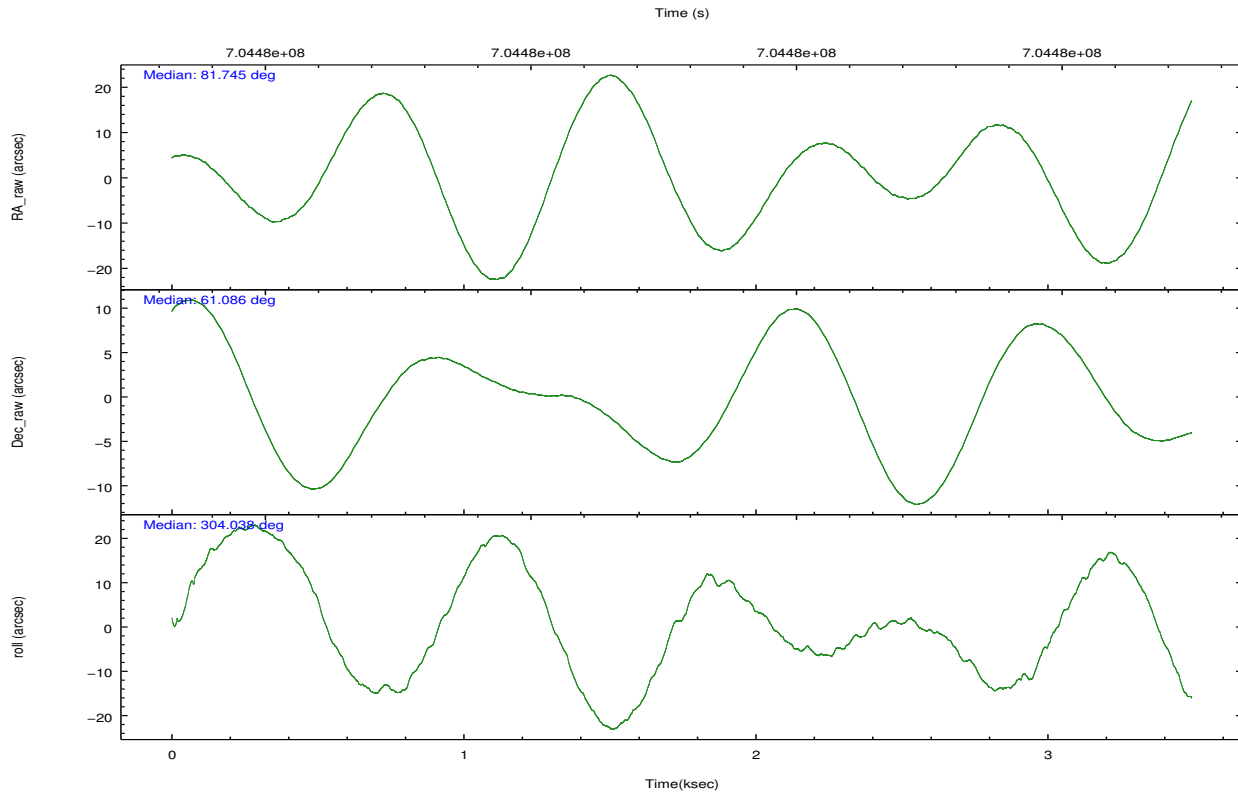
	segment 1	segment 2	segment 3
level 1 events	150366	149746	150561
rejected events	12610	12526	12418
rejected %	8%	8%	8%

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	81.690830	81.72682657289999			
[deg] Pointing Dec	61.097144	61.0870647946			
[deg] Pointing Roll	304.031762	304.038141918			
[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)	704476016.184000	704475640.66413			
Observation start date	2020-04-28T15:45:47	2020-04-28T15:40:40			
[s] Observation end time (MET)	704479316.184000	704479450.58936			
Observation end date	2020-04-28T16:40:47	2020-04-28T16:44:10			

2.3 Aspect





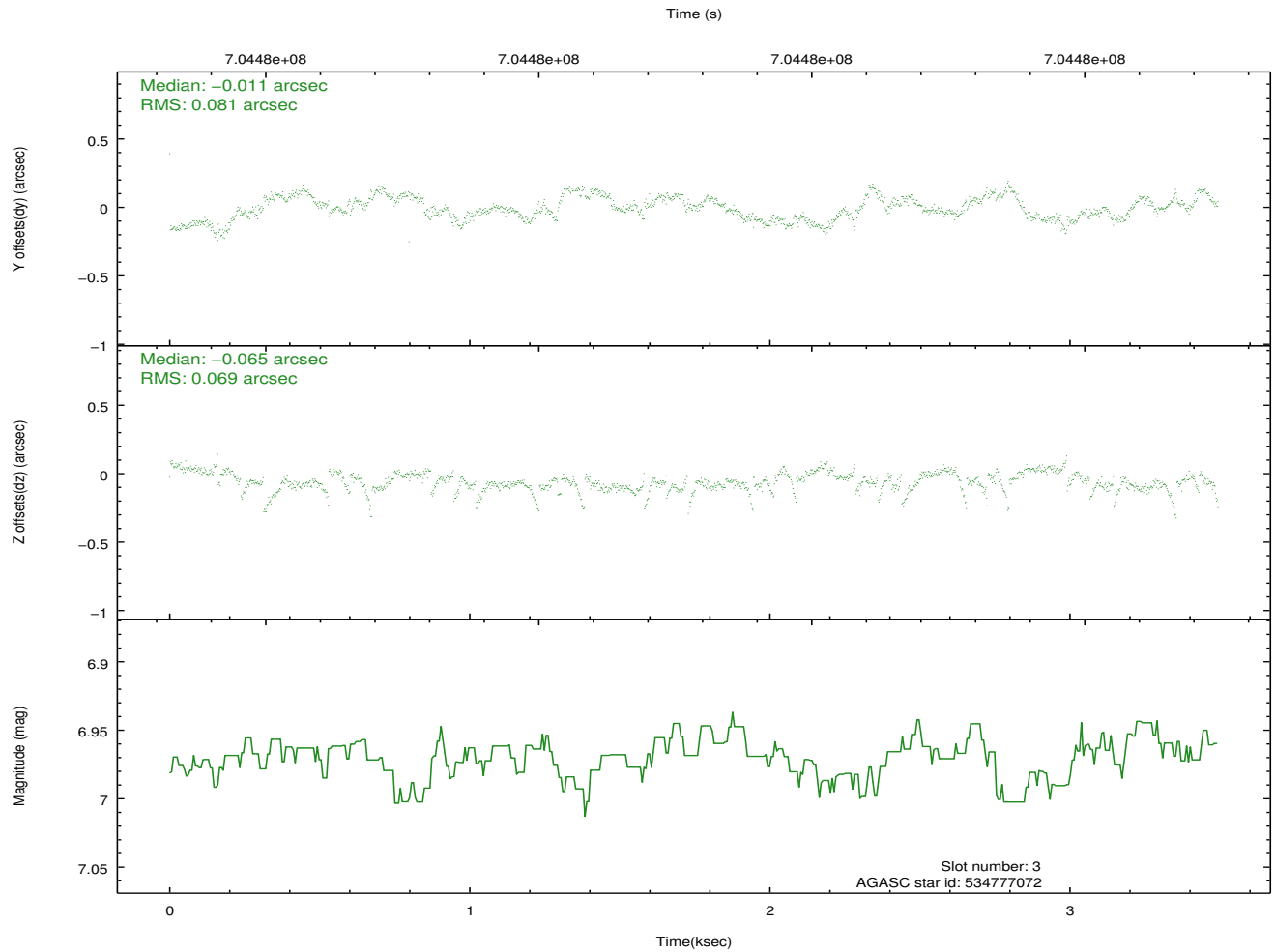
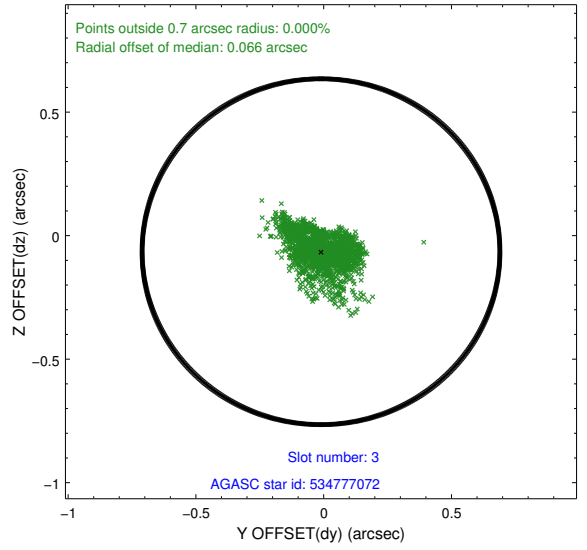
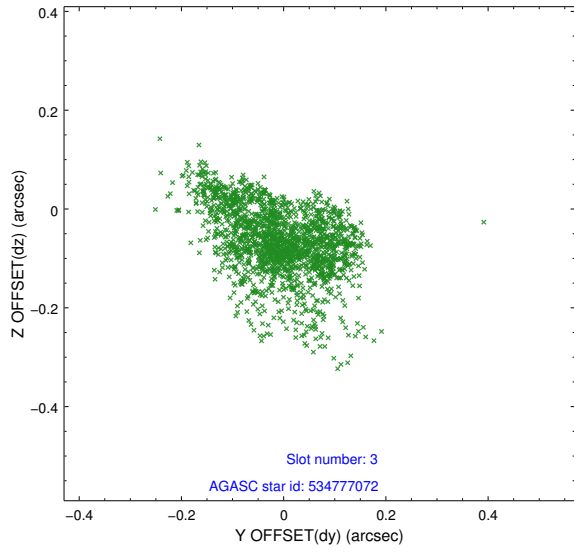
Slot Statistics

slot	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	0.134	-0.096	0.006	0.012	0.000000	0.000000	-1174.75	-491
1	FID		HRC-S-2	7.06	852	1.000	0.365	-0.203	0.004	0.009	0.000000	0.000000	1223.78	-485
2	FID		HRC-S-3	7.07	852	1.000	-0.110	-0.004	0.006	0.012	0.000000	0.000000	-1176.05	537
3	GUIDE	used	534777072	6.97	1705	1.000	-0.011	-0.065	0.114	0.184	80.934101	60.721041	372.09	-1857
4	GUIDE	used	534778184	9.49	1702	1.000	0.042	0.030	0.194	0.330	81.424807	61.387046	-1120.57	203
5	GUIDE	used	534914912	9.02	1704	1.000	-0.116	-0.045	0.194	0.309	81.829238	61.781311	-1908.92	1574
6	GUIDE	used	534916944	8.91	1704	1.000	-0.168	0.211	0.180	0.299	81.479781	61.783099	-2245.84	1089
7	GUIDE	used	534922520	8.39	1700	1.000	0.249	-0.113	0.238	0.348	81.531321	61.241488	-579.72	61

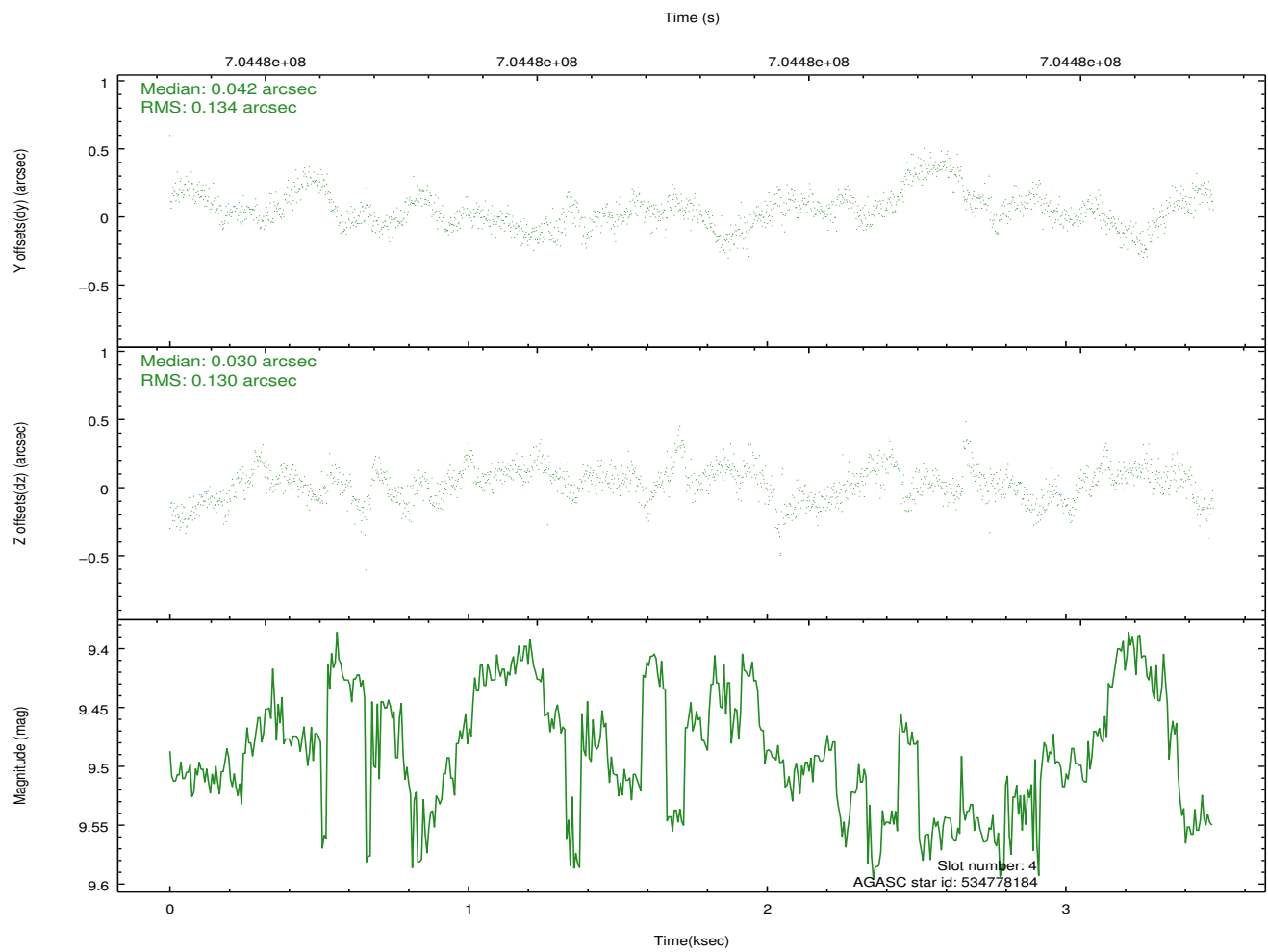
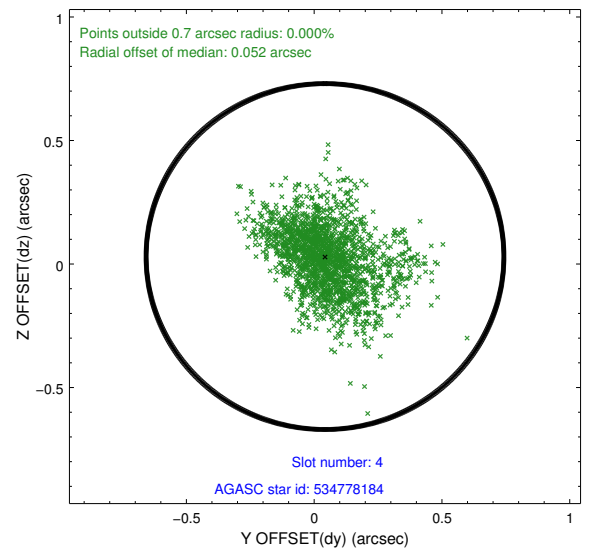
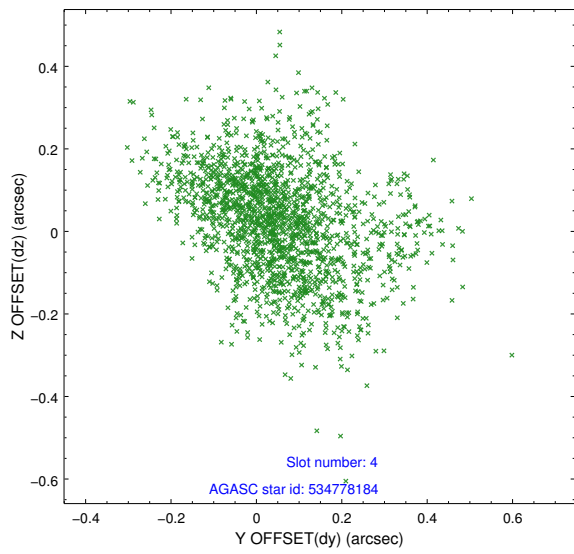
∞

2.4 Star Slots

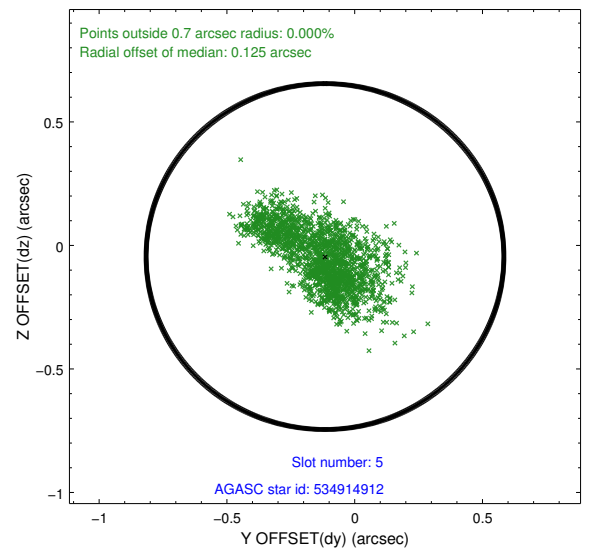
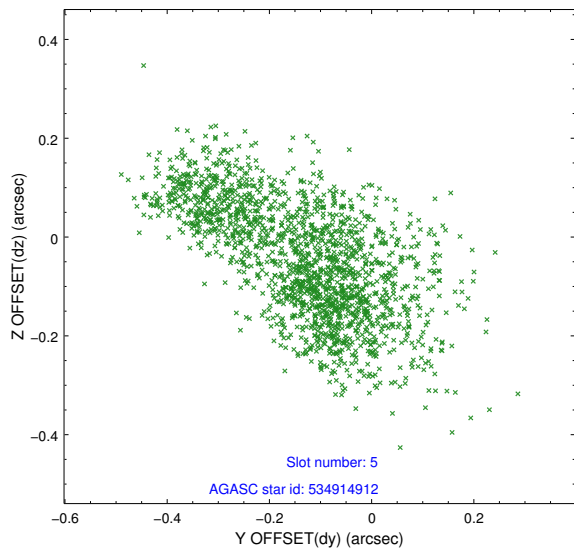
2.4.1 Slot 3



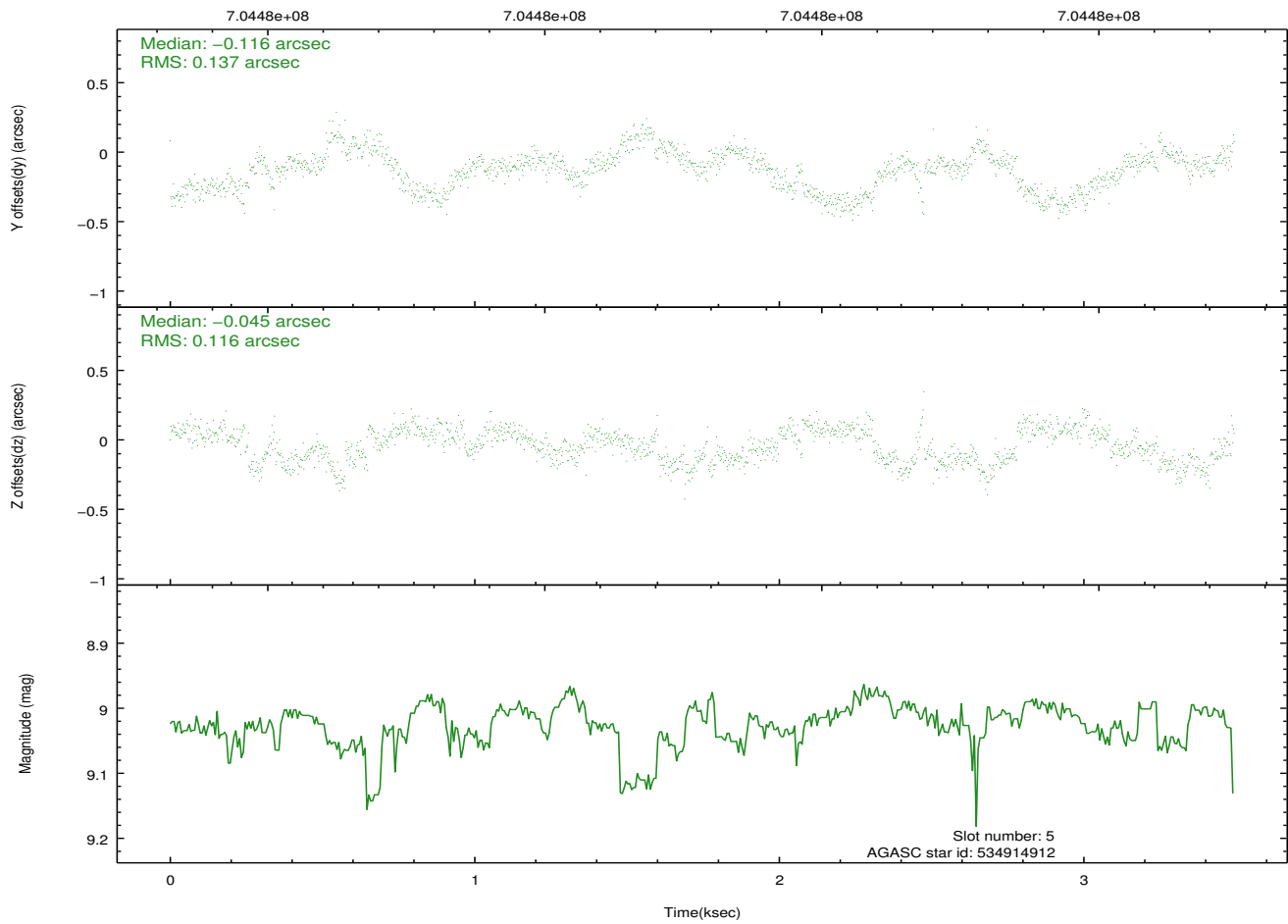
2.4.2 Slot 4



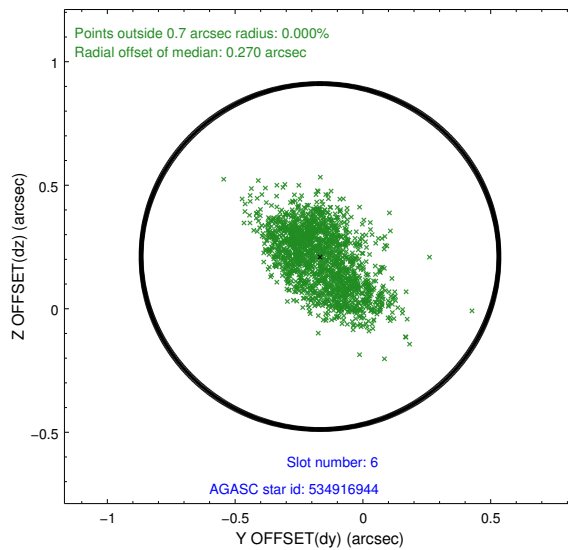
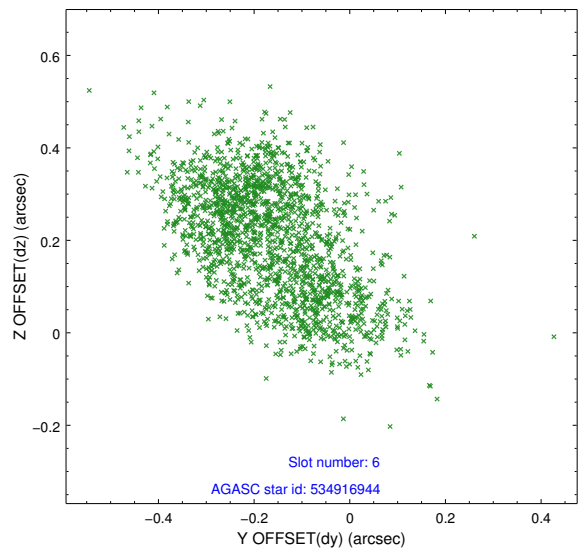
2.4.3 Slot 5



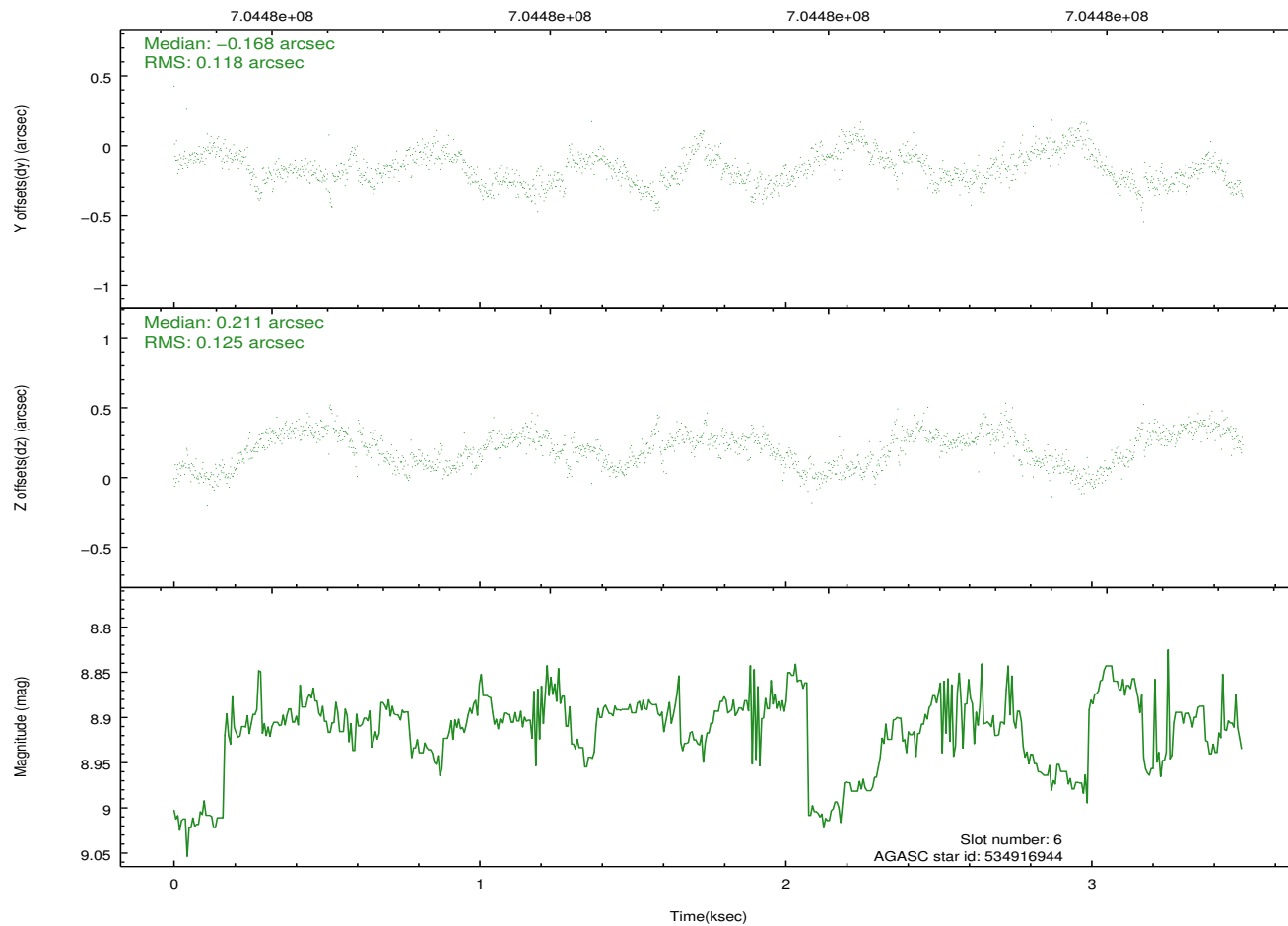
Time (s)



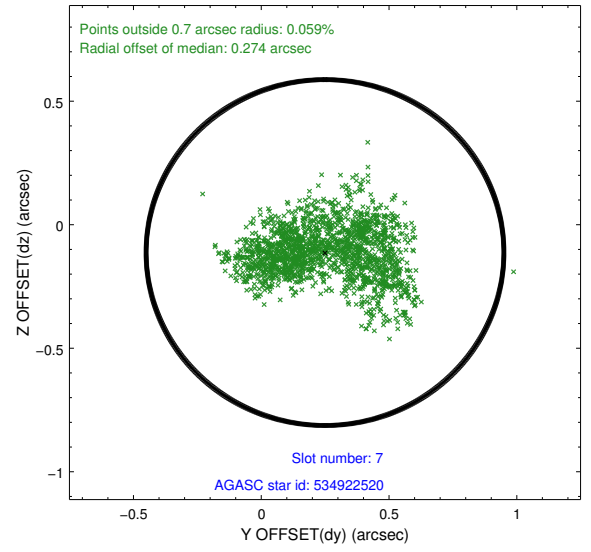
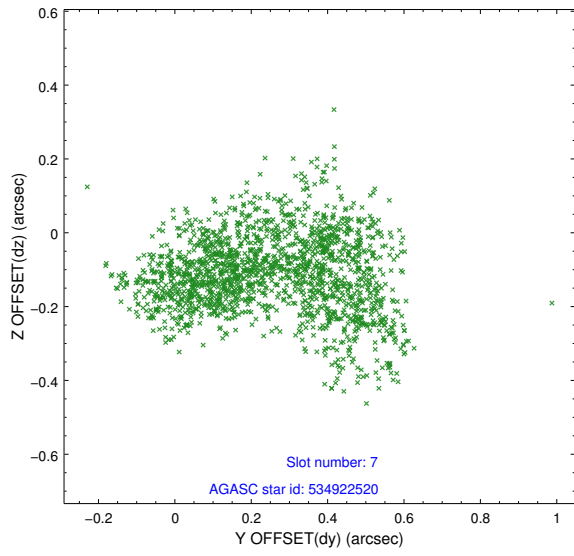
2.4.4 Slot 6



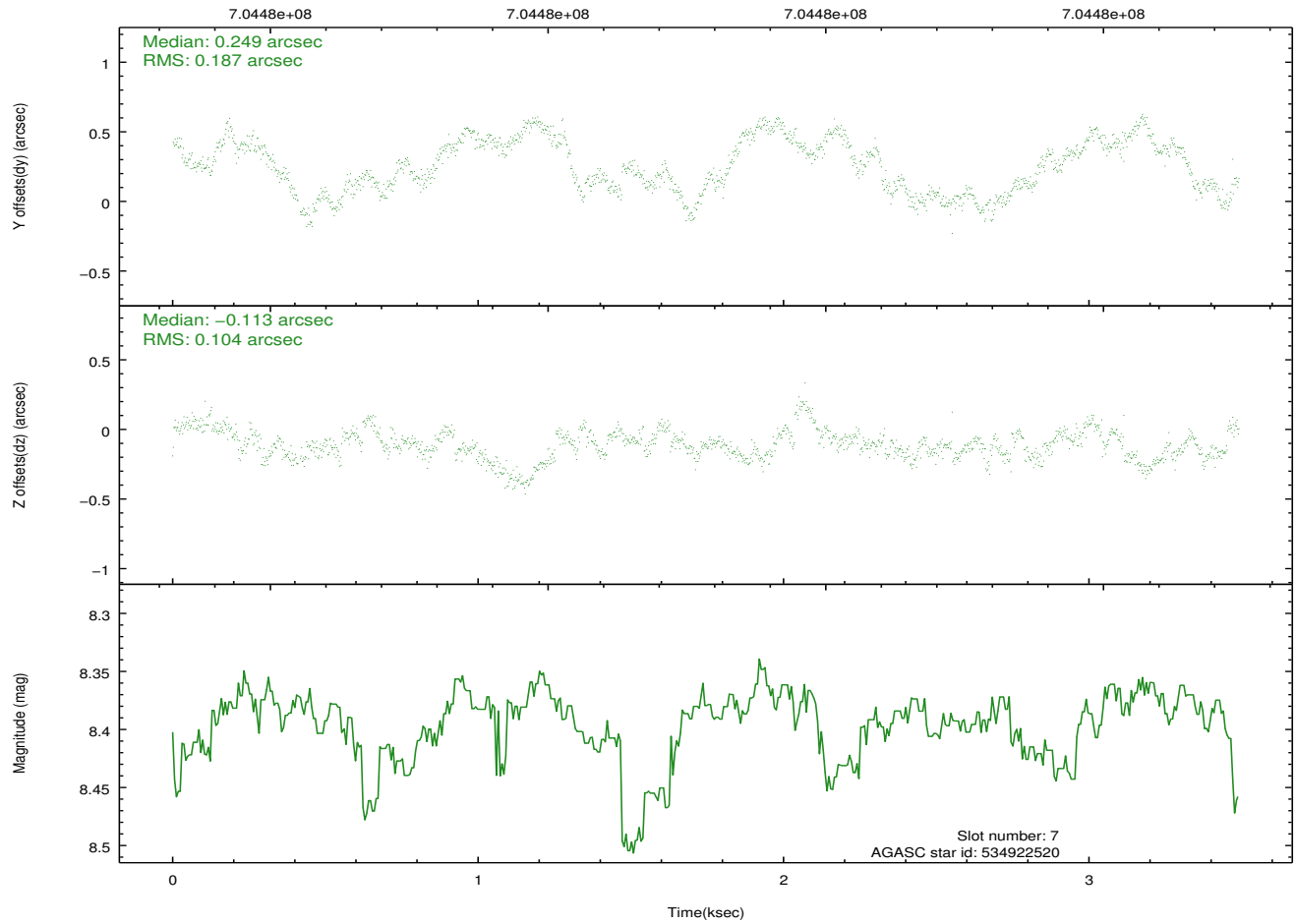
Time (s)



2.4.5 Slot 7

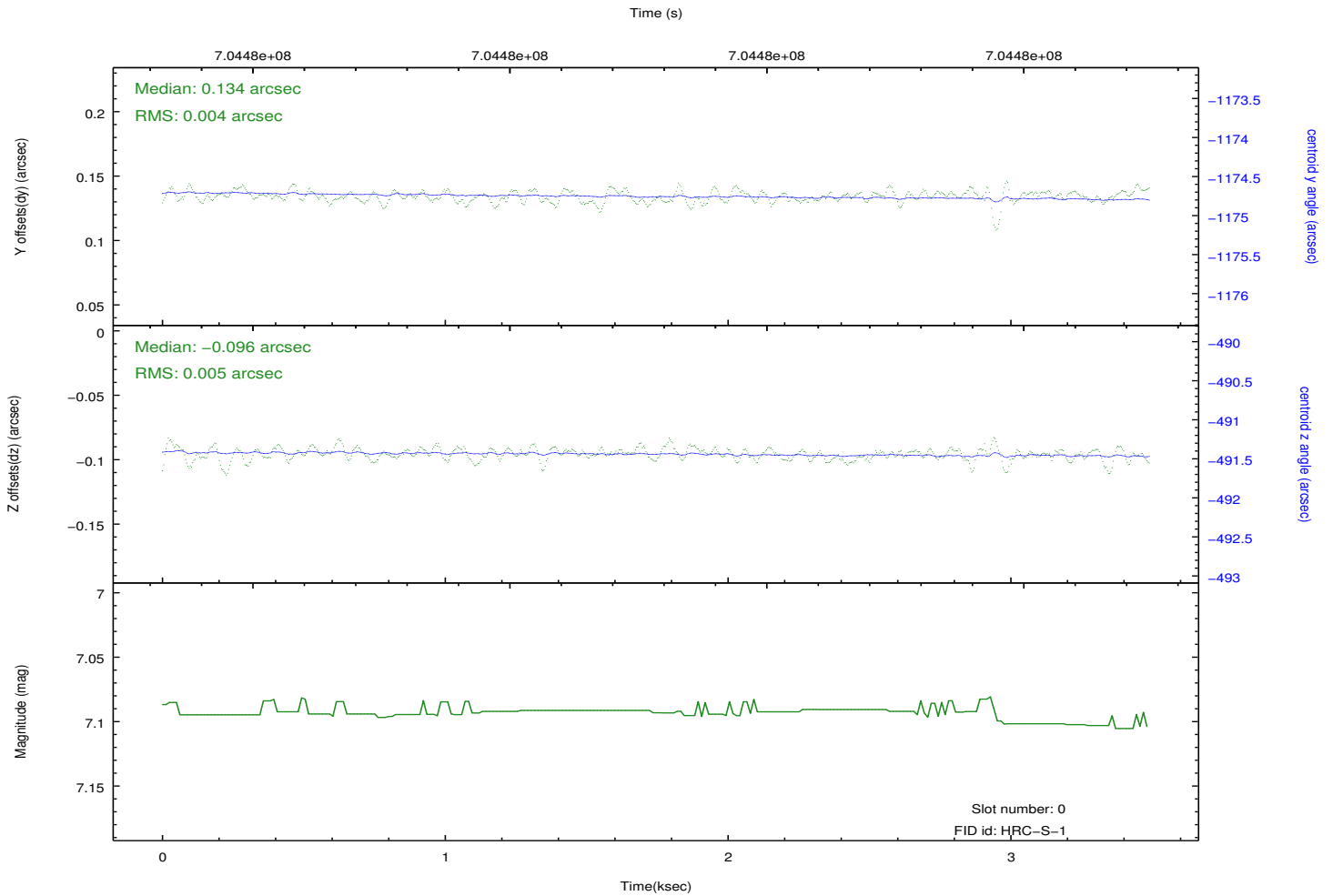
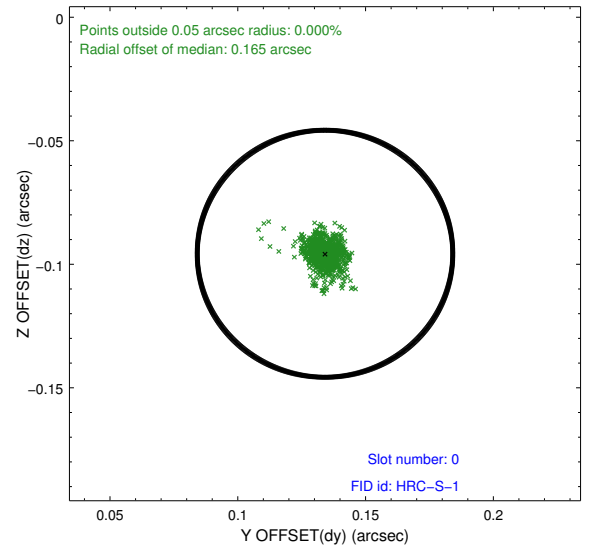
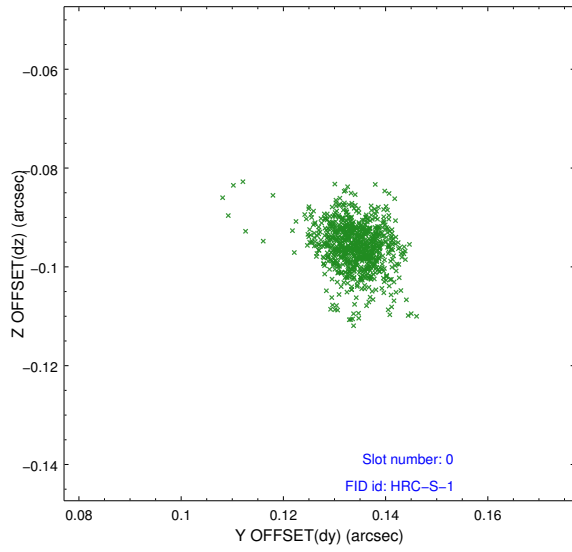


Time (s)

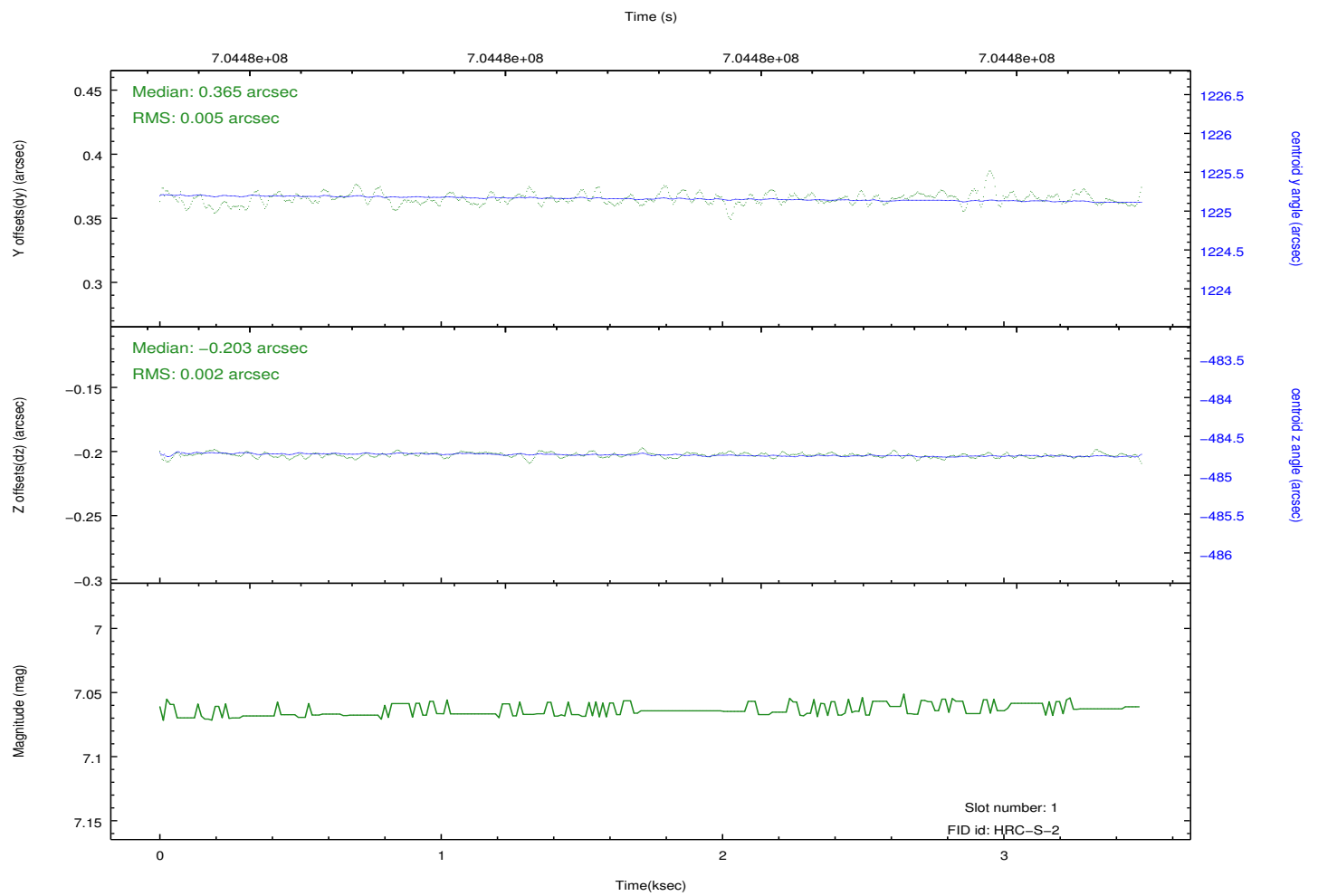
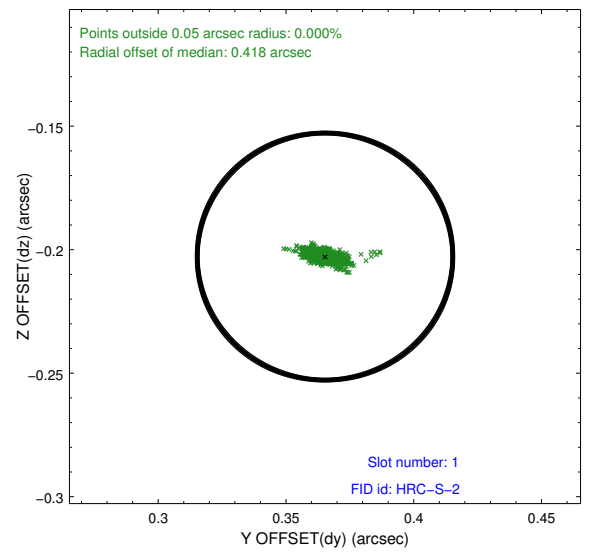
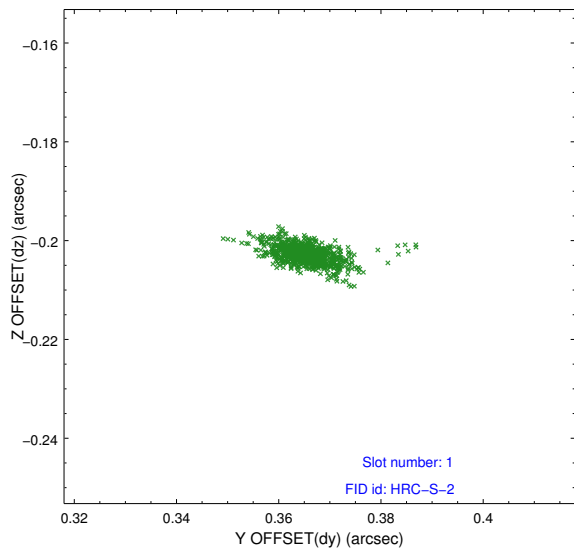


2.5 FID Slots

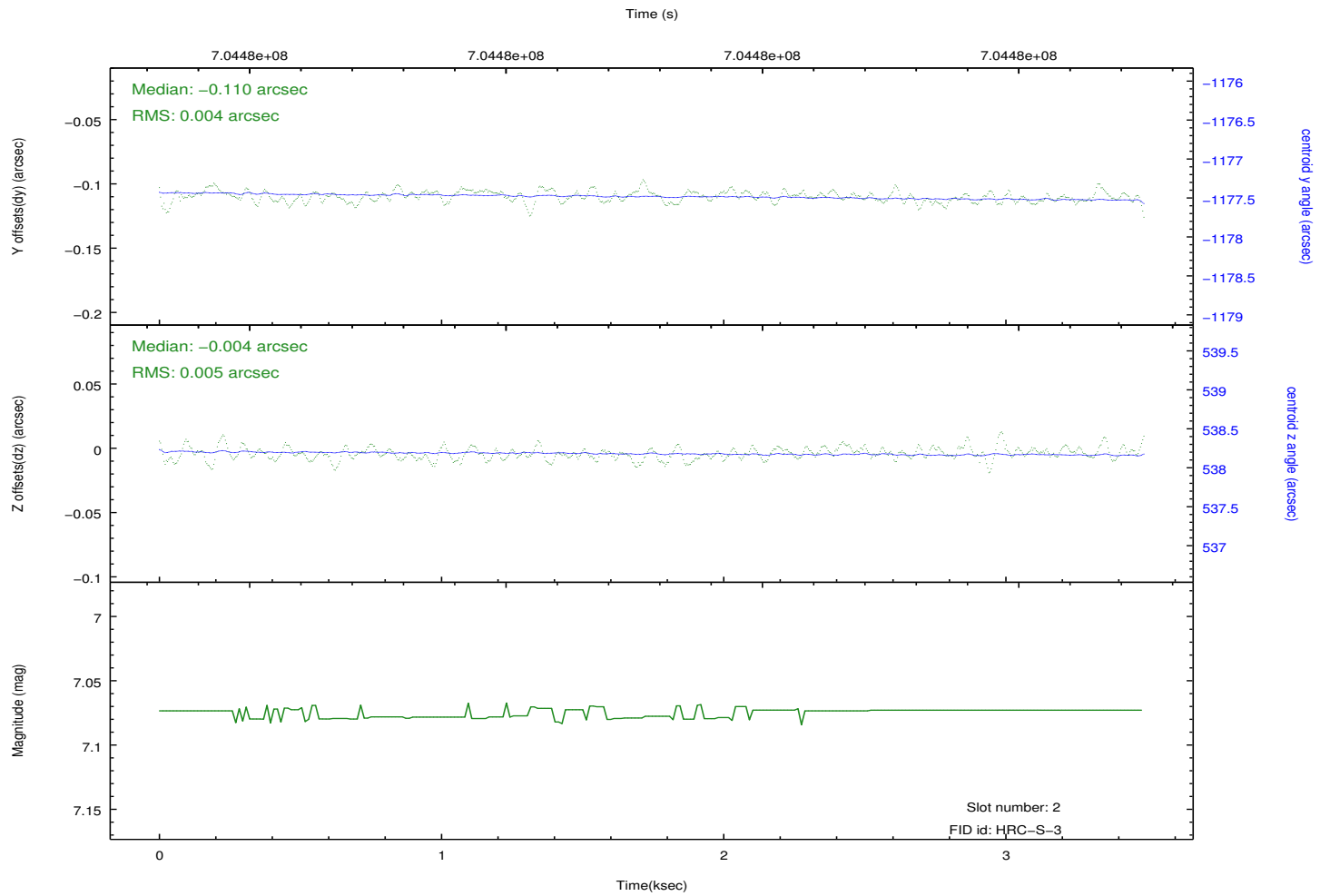
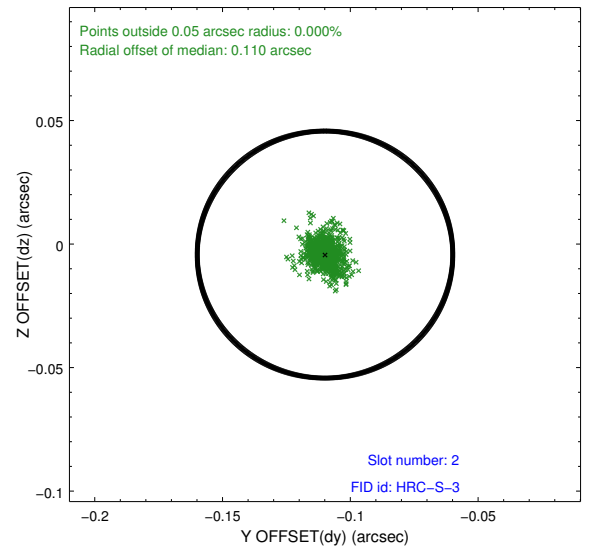
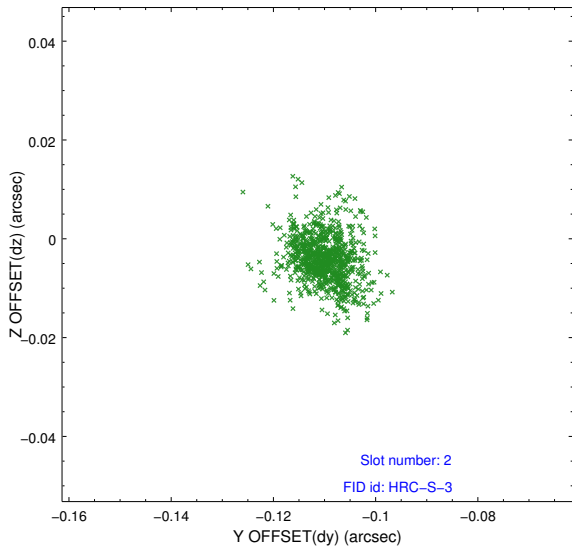
2.5.1 Slot 0



2.5.2 Slot 1

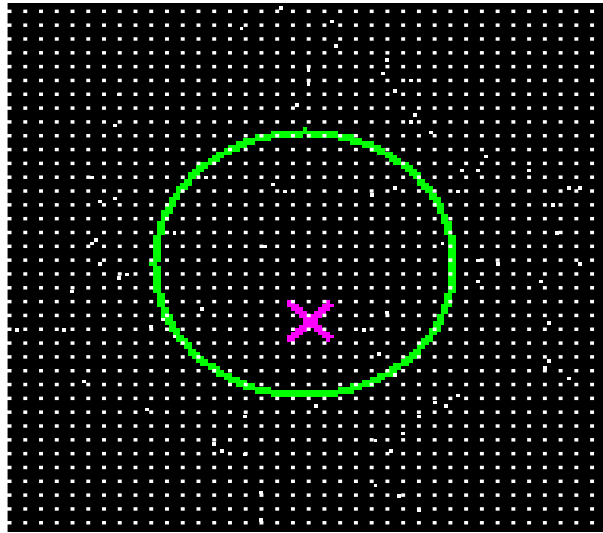


2.5.3 Slot 2

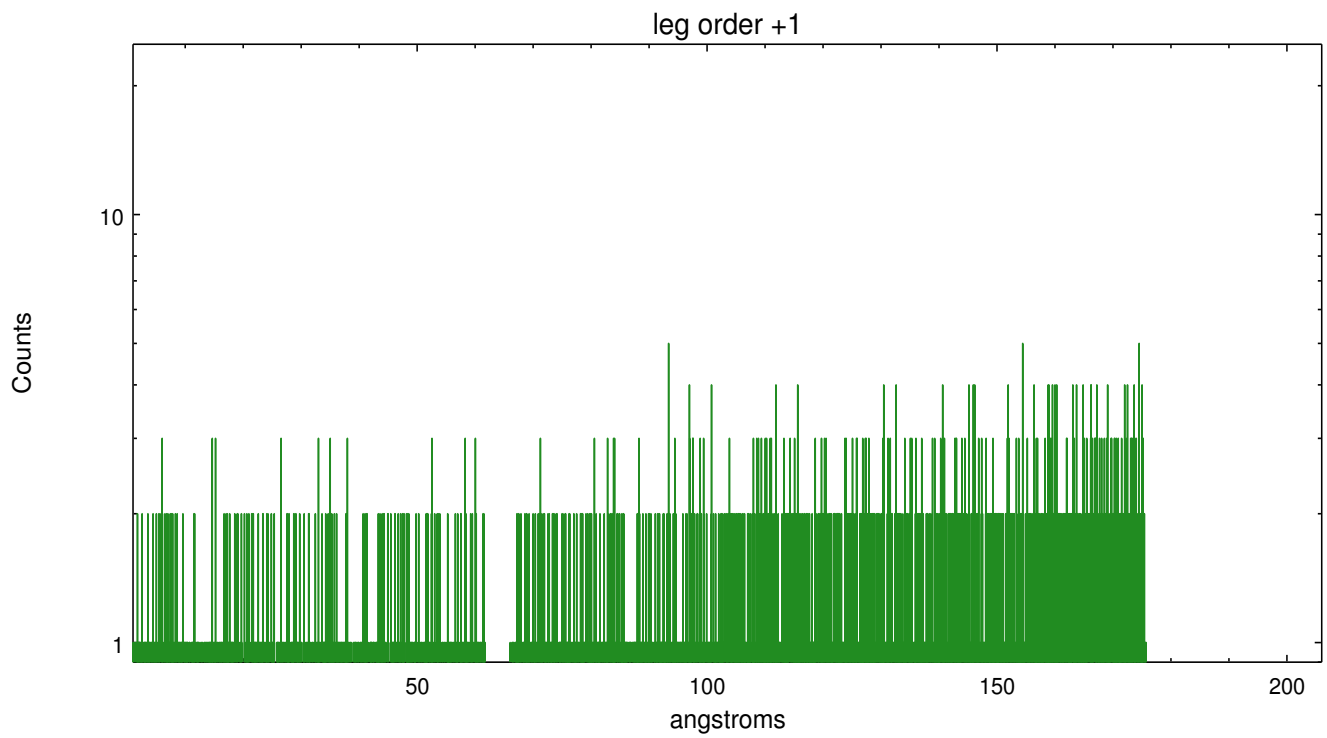
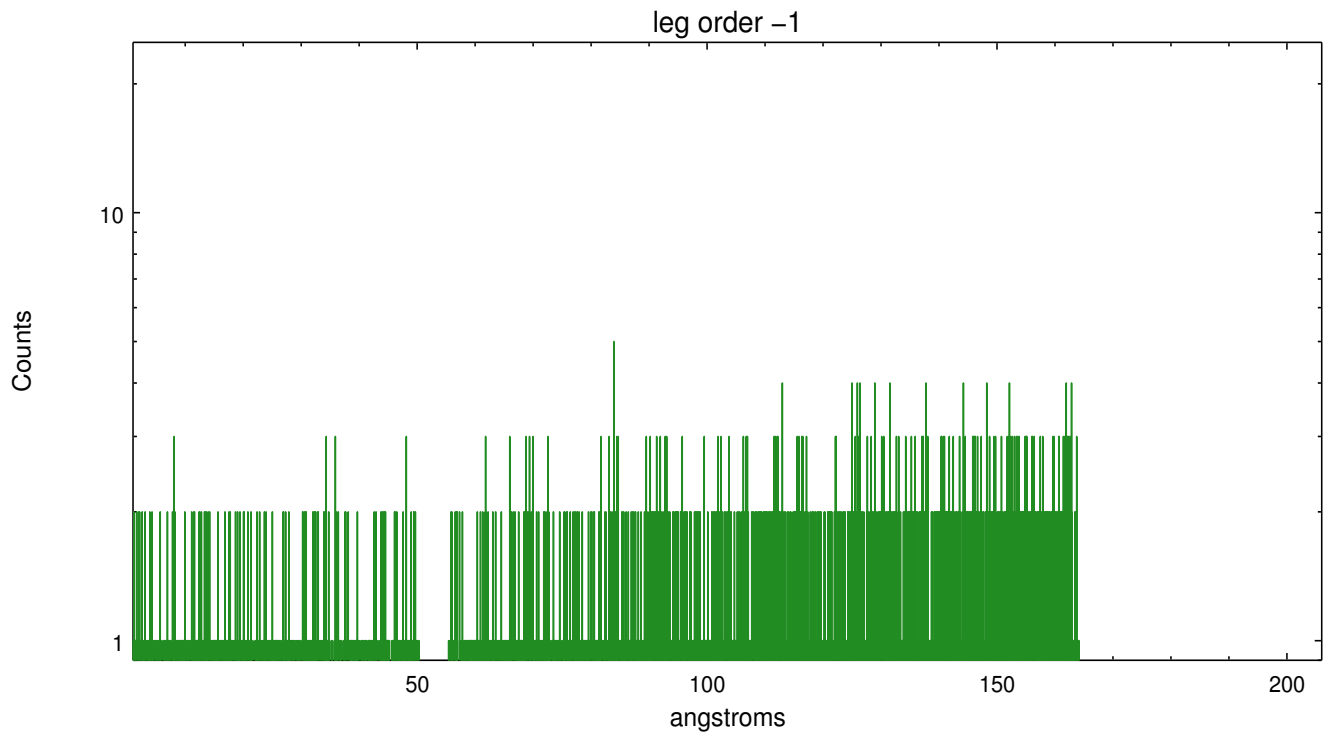


3 Gratings

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`).