

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23224 - L2 Version 1
Chandra X-Ray Center

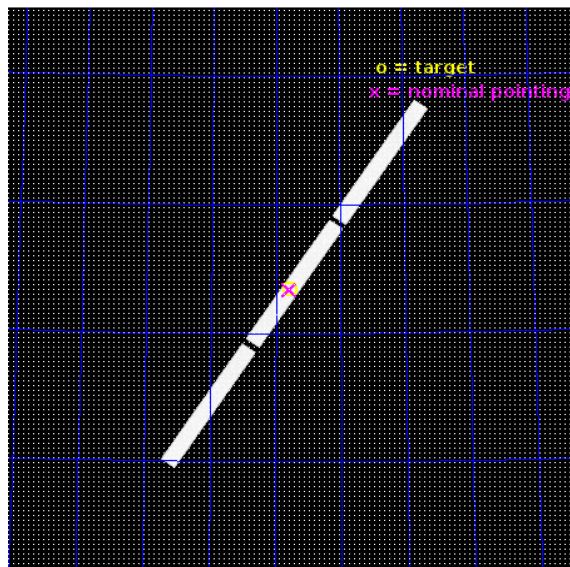
L2 Processing Date : Apr 29 2020

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1 Front

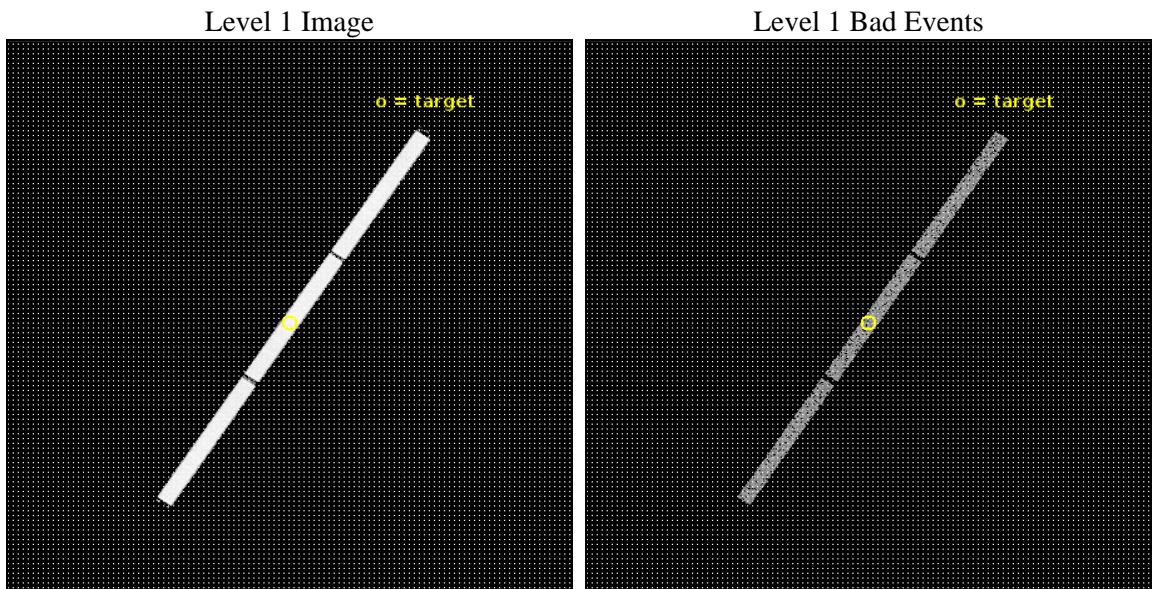
seq_num	100193	Sequence number
obs_id	23224	Observation id
title	Grating spectroscopy of the unexpectedly bright comet C/2019 Y4 ATLAS	Proposal title
observer	Dennis Bodewits	Principal investigator
object	C/2019 Y4 ATLAS	Source name
ra_targ	81.892938	Observer's specified target RA [deg]
dec_targ	61.171386	Observer's specified target Dec [deg]
ra_nom	81.8936002178	Nominal RA [deg]
dec_nom	61.1697822702	Nominal Dec [deg]
roll_nom	304.038813609	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3641.0564713478	[s]
livetime	3603.0785623225	Ontime multiplied by DTCOR
l2events	345718	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	3600.000000	[s] Scheduled observation exposure time
ascdsver	10.8.4	Processing system revision	ontime	3641.0564713478	[s]
caldsver	4.9.1	 	l1events	440581	Number of level 1 events
date	2020-04-29T10:59:35	Date and time of file creation	tgmethod	USER	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32777.36, 32812.55)	src1a sky pixel position

2.1.3 Events

Level 1 Events

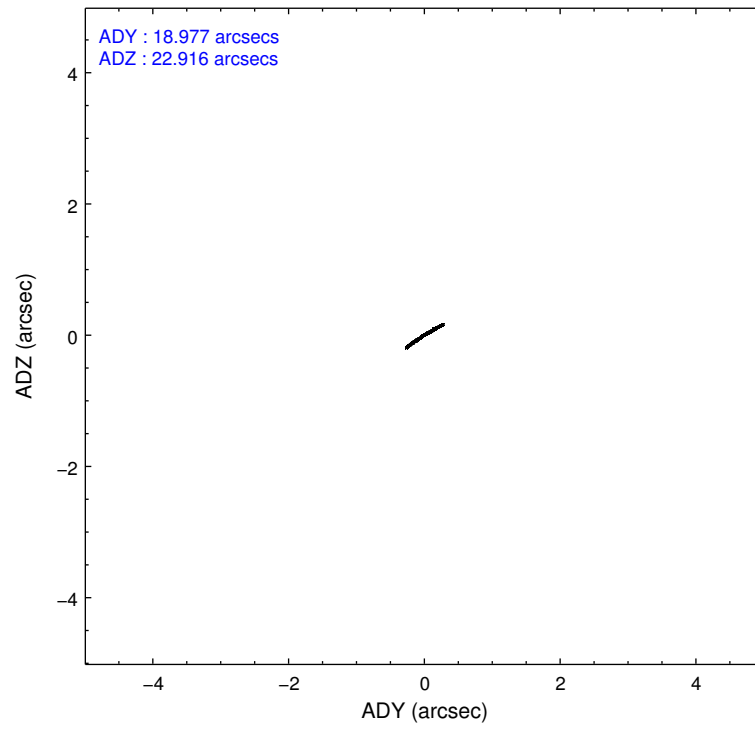
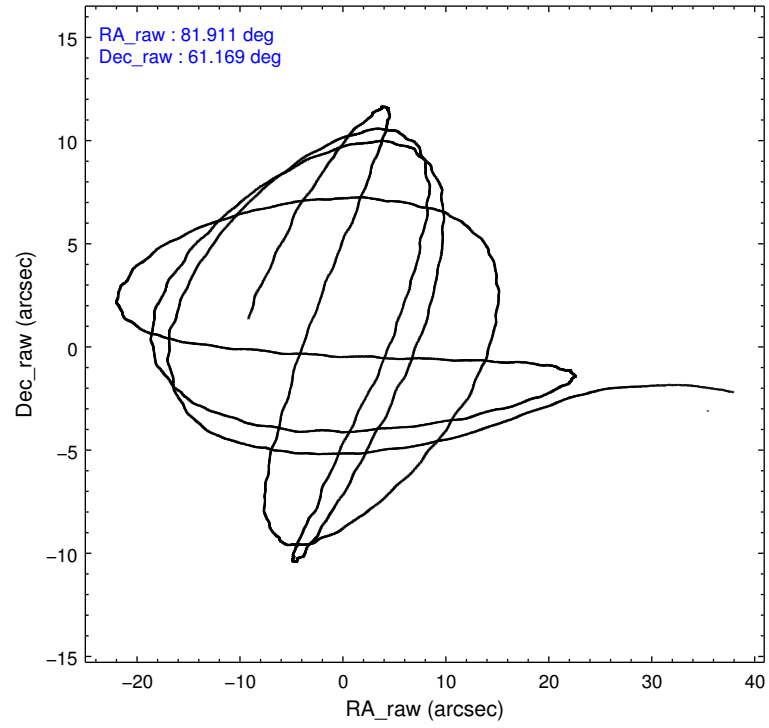
	segment 1	segment 2	segment 3
level 1 events	147192	146849	146540
rejected events	5946	6090	6012
rejected %	4%	4%	4%

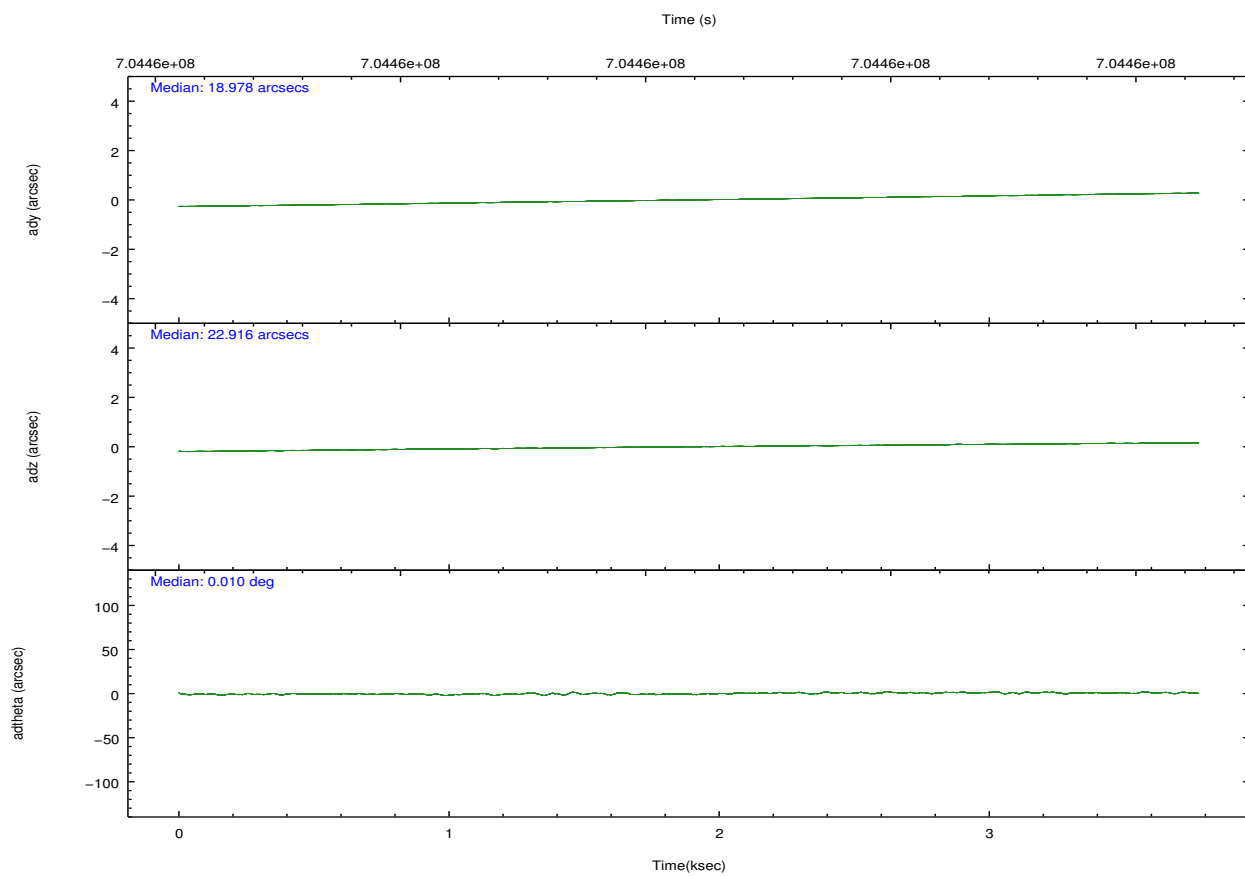
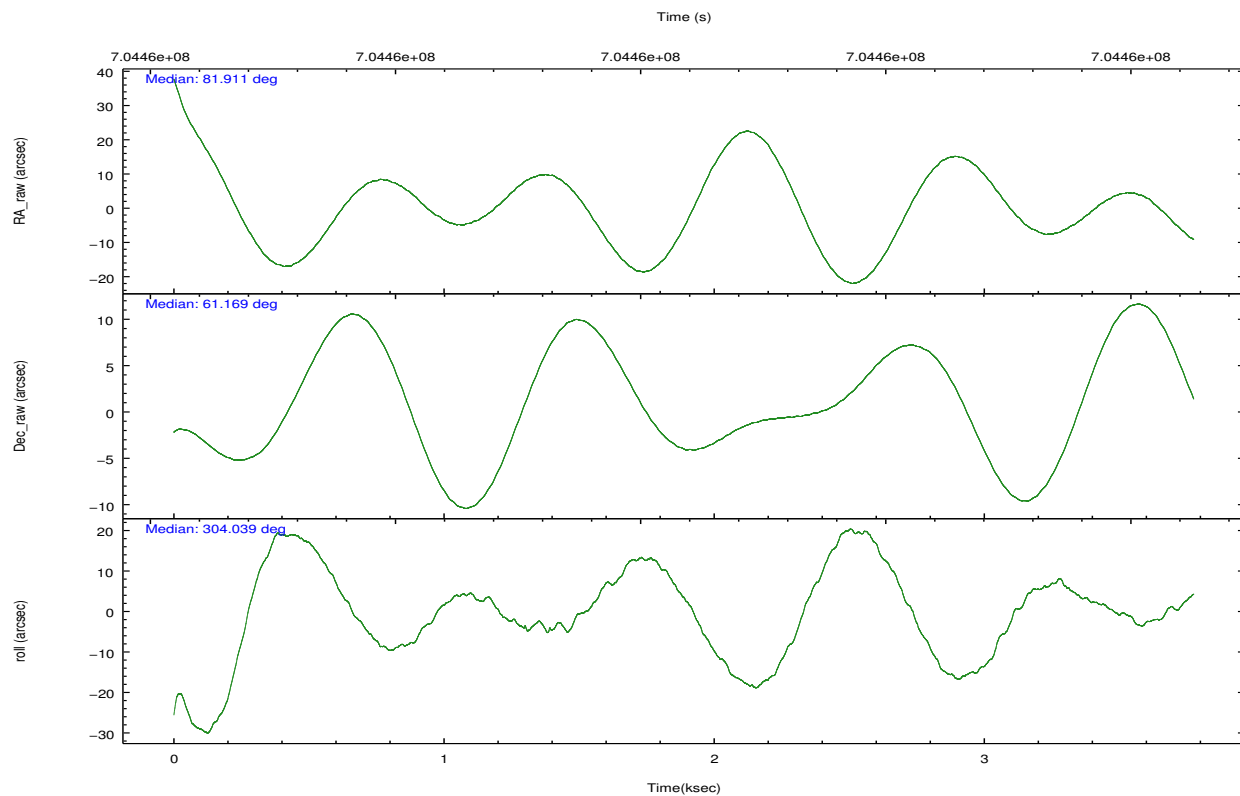
2.2 Compared Parameters

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	81.855962	81.8936002178
[deg] Pointing Dec	61.180107	61.1697822702
[deg] Pointing Roll	304.032406	304.038813609
[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)	704460476.184000	704459668.08816
Observation start date	2020-04-28T11:26:47	2020-04-28T11:14:28
[s] Observation end time (MET)	704464076.184000	704464210.88844
Observation end date	2020-04-28T12:26:47	2020-04-28T12:30:10

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

2.3 Aspect



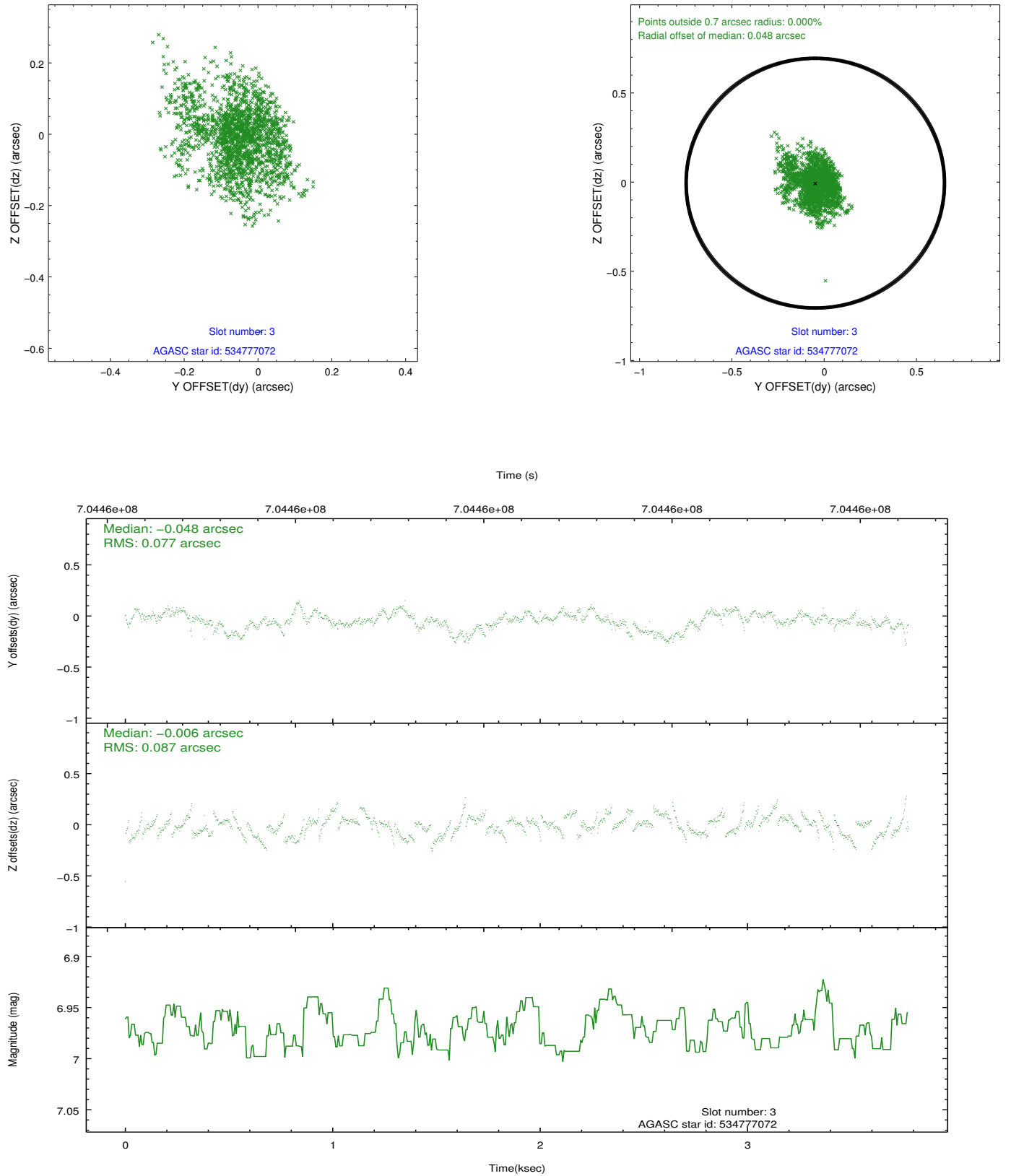


Slot Statistics

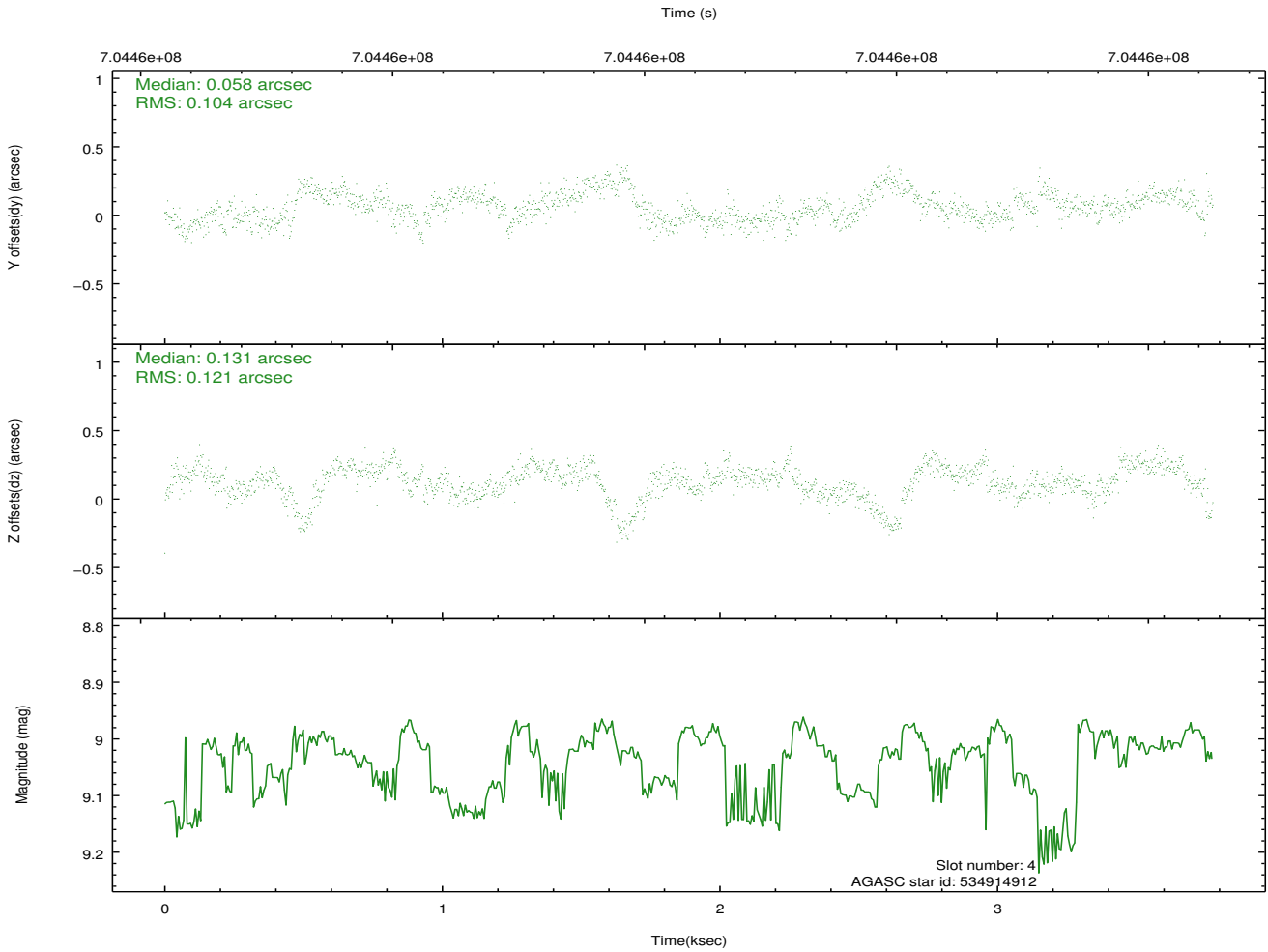
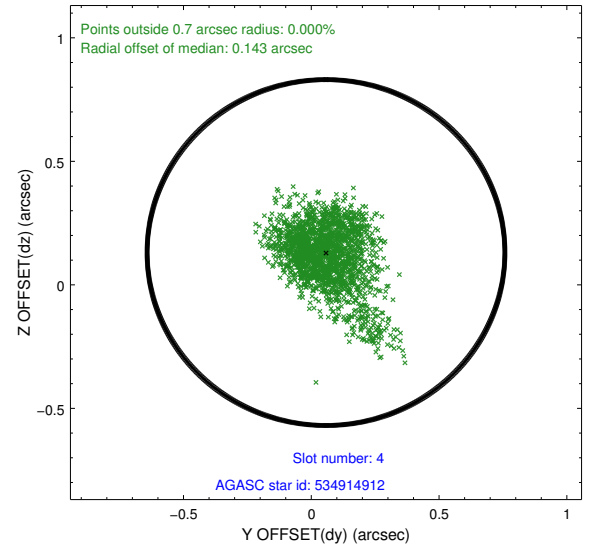
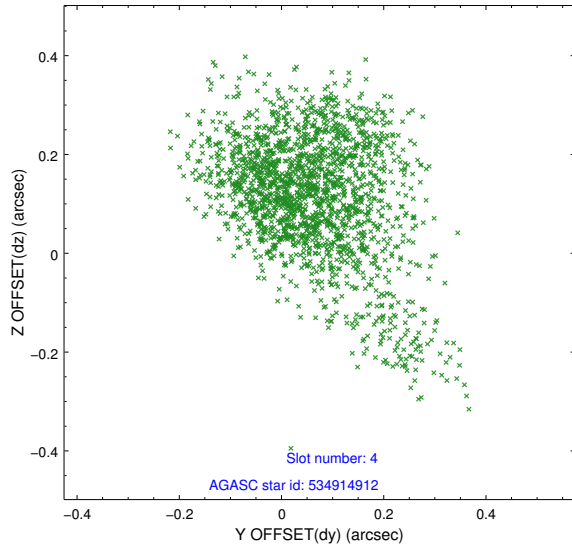
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.07	921	1.000	0.150	-0.087	0.010	0.015	0.000000	0.000000	-1173.45	-490
1	FID		HRC-S-2	7.06	921	1.000	0.312	-0.187	0.009	0.014	0.000000	0.000000	1225.12	-484
2	FID		HRC-S-3	7.06	921	1.000	-0.073	-0.028	0.007	0.013	0.000000	0.000000	-1174.83	538
3	GUIDE	used	534777072	6.97	1843	1.000	-0.048	-0.006	0.123	0.204	80.934101	60.721041	452.80	-2264
4	GUIDE	used	534914912	9.03	1843	1.000	0.058	0.131	0.156	0.298	81.829238	61.781311	-1818.31	1171
5	GUIDE	used	534915072	9.02	1838	1.000	-0.063	-0.220	0.176	0.273	83.202635	61.256813	1055.37	2099
6	GUIDE	used	534919352	8.33	1843	1.000	-0.217	-0.171	0.139	0.205	82.925366	61.611939	-275.34	2396
7	GUIDE	used	534922520	8.41	1842	1.000	0.268	0.276	0.162	0.249	81.531321	61.241488	-492.92	-341

2.4 Star Slots

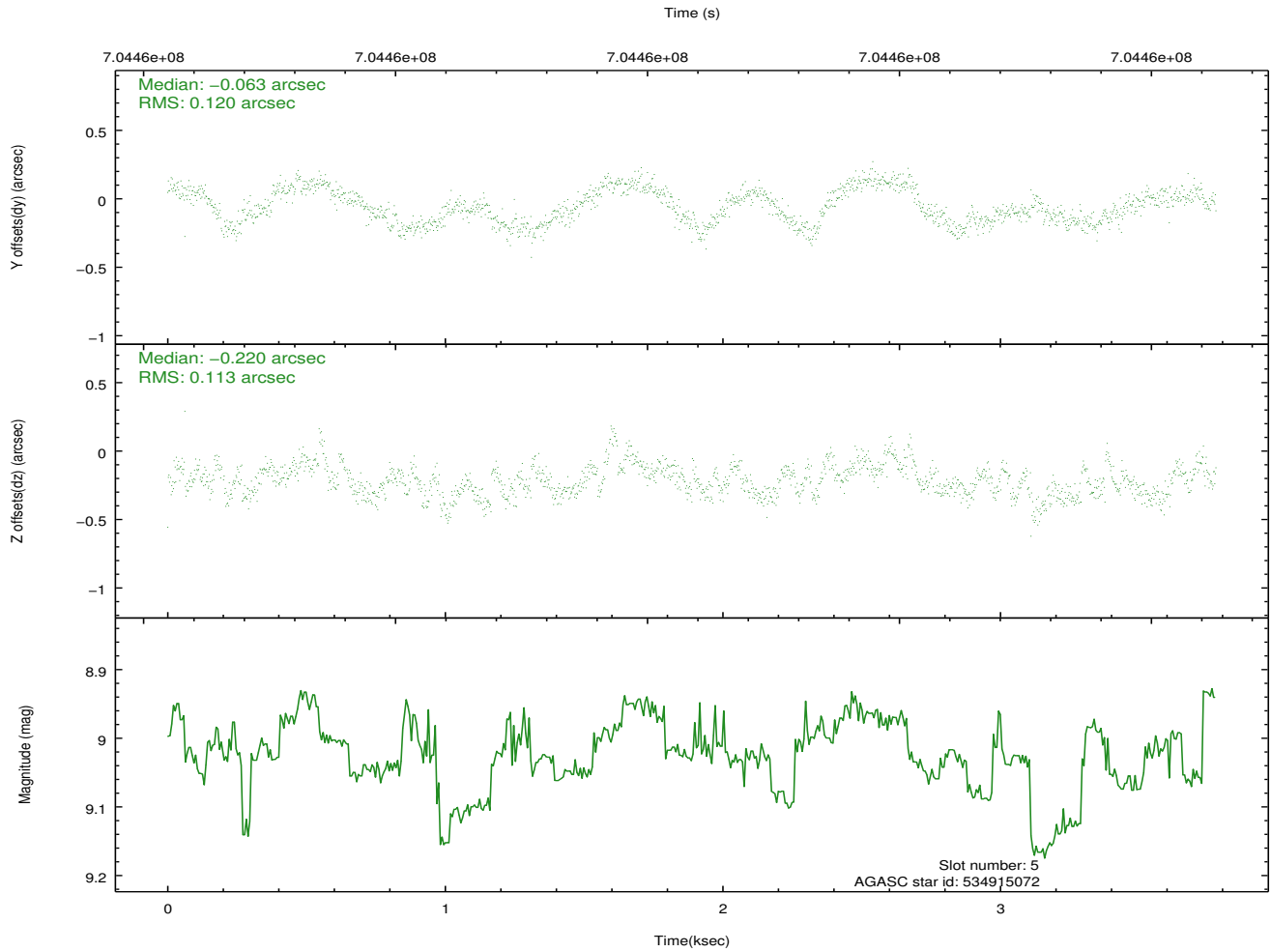
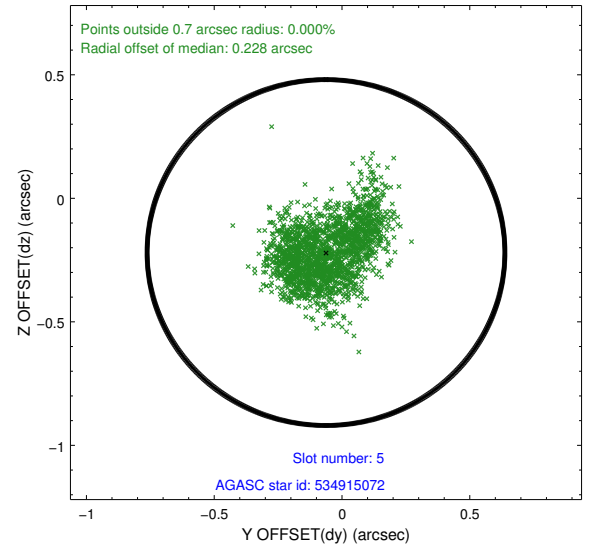
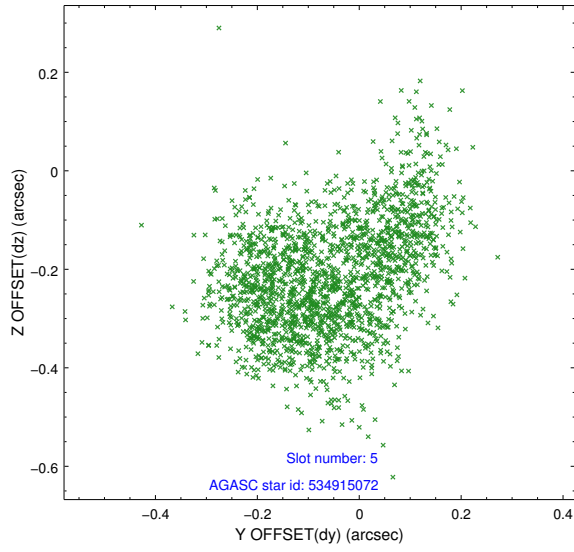
2.4.1 Slot 3



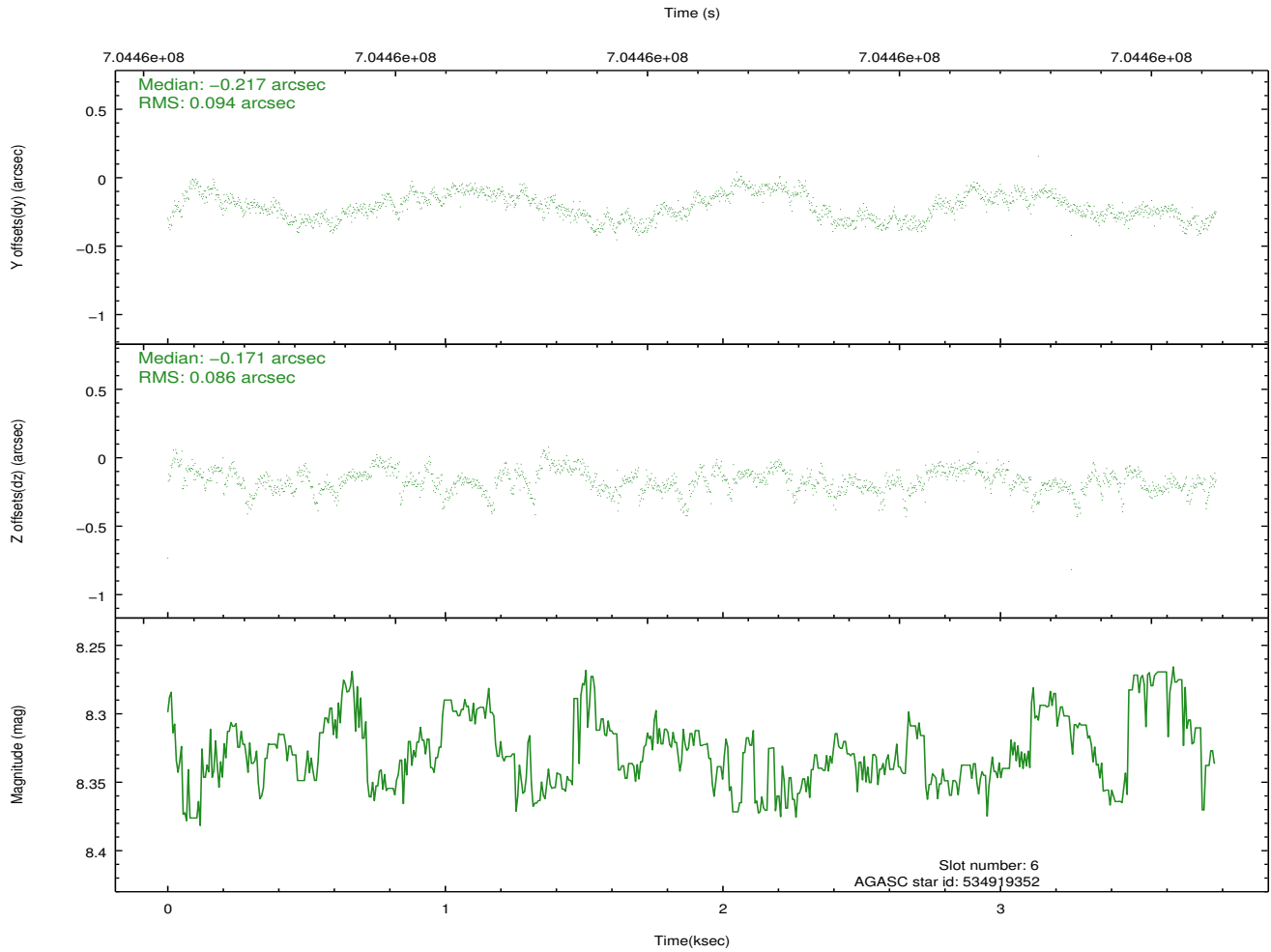
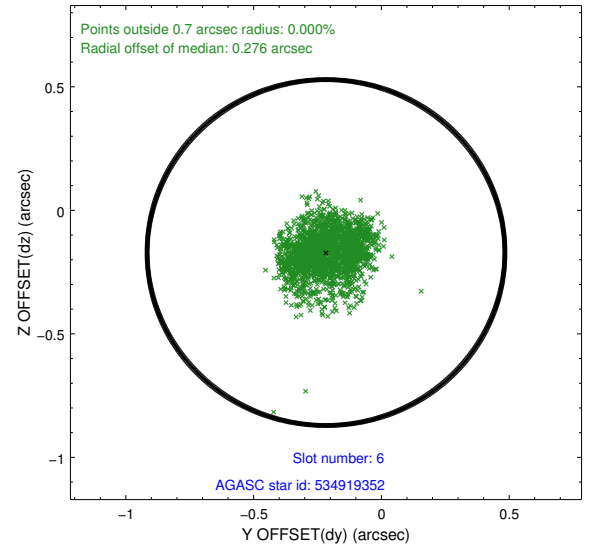
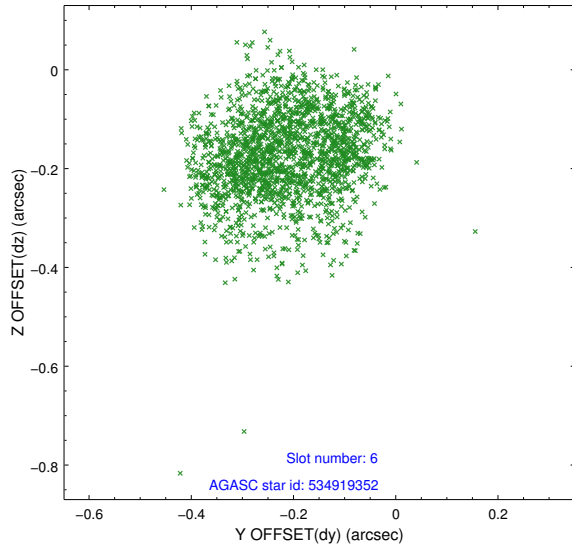
2.4.2 Slot 4



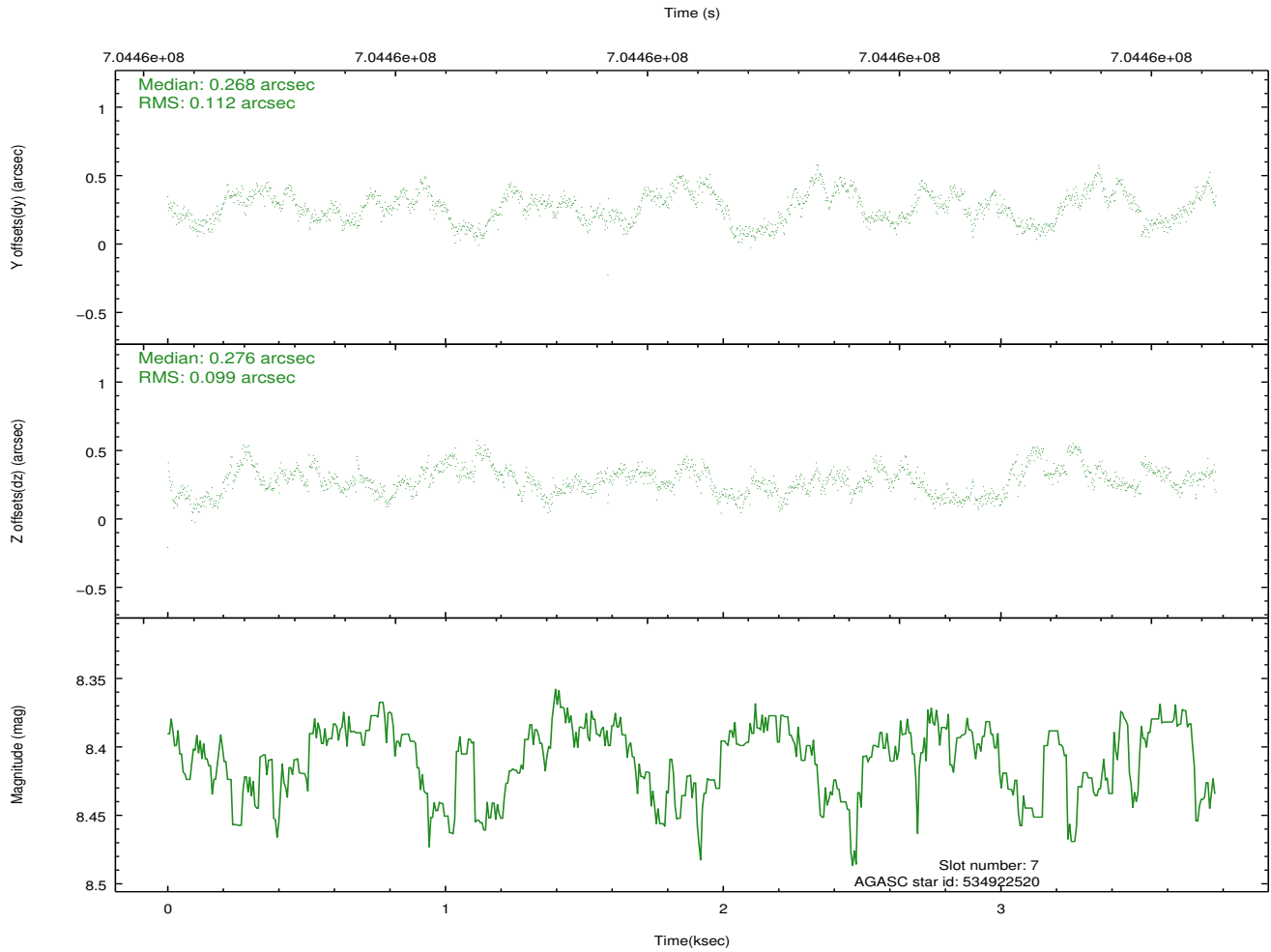
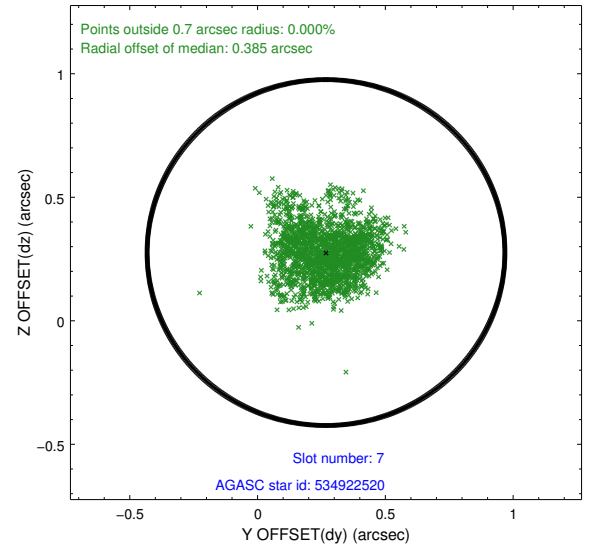
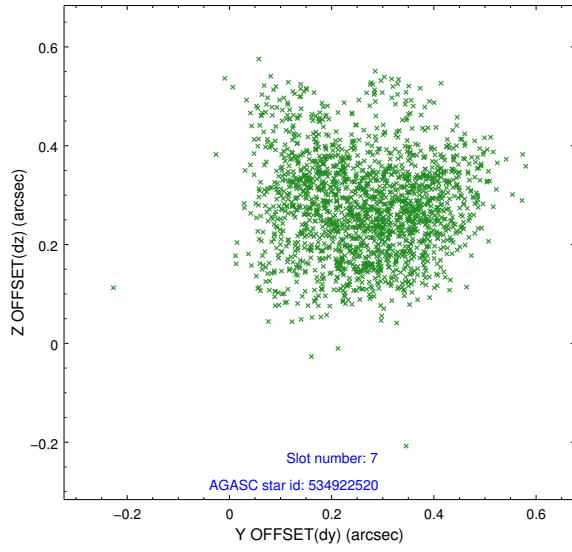
2.4.3 Slot 5



2.4.4 Slot 6

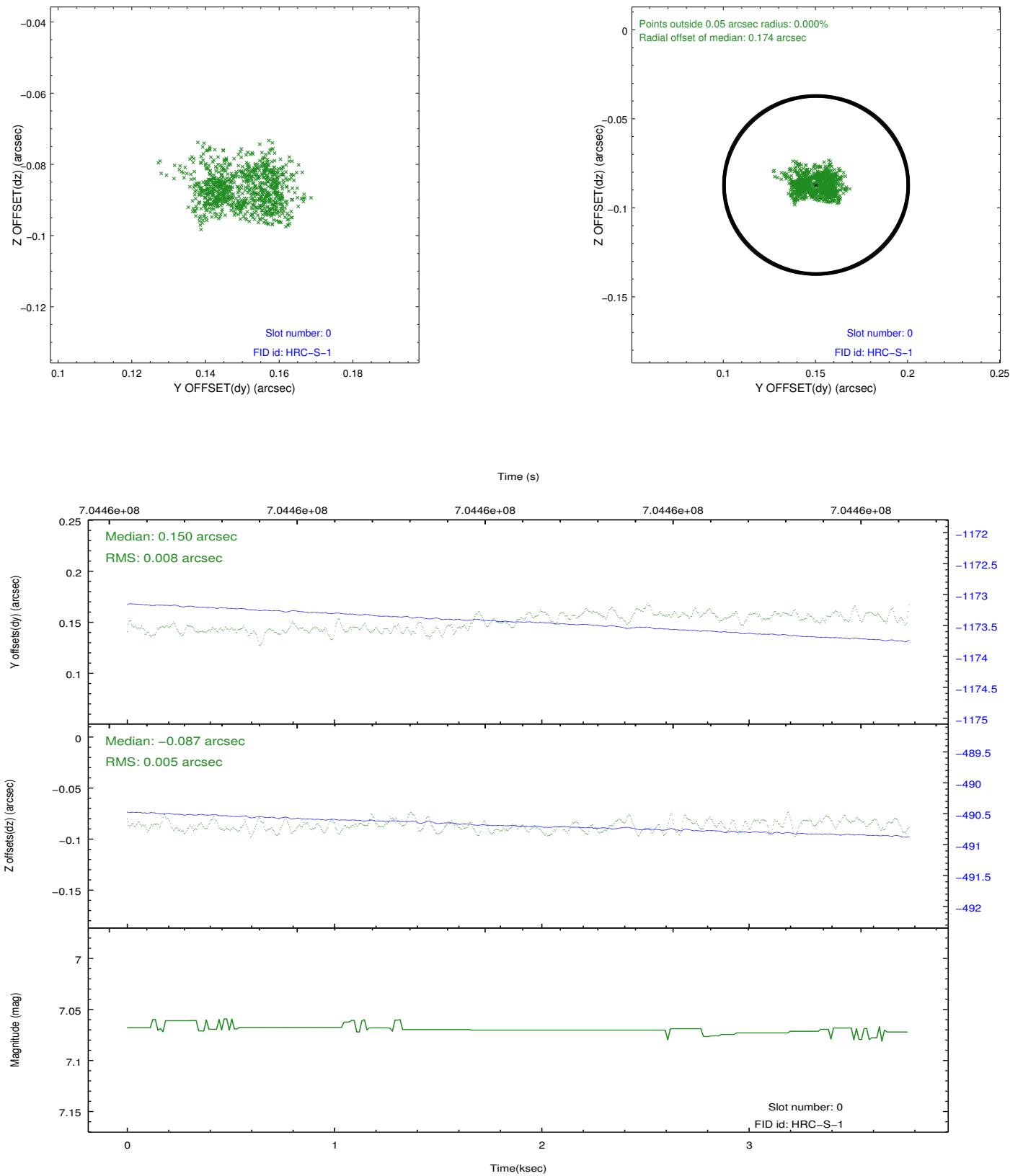


2.4.5 Slot 7

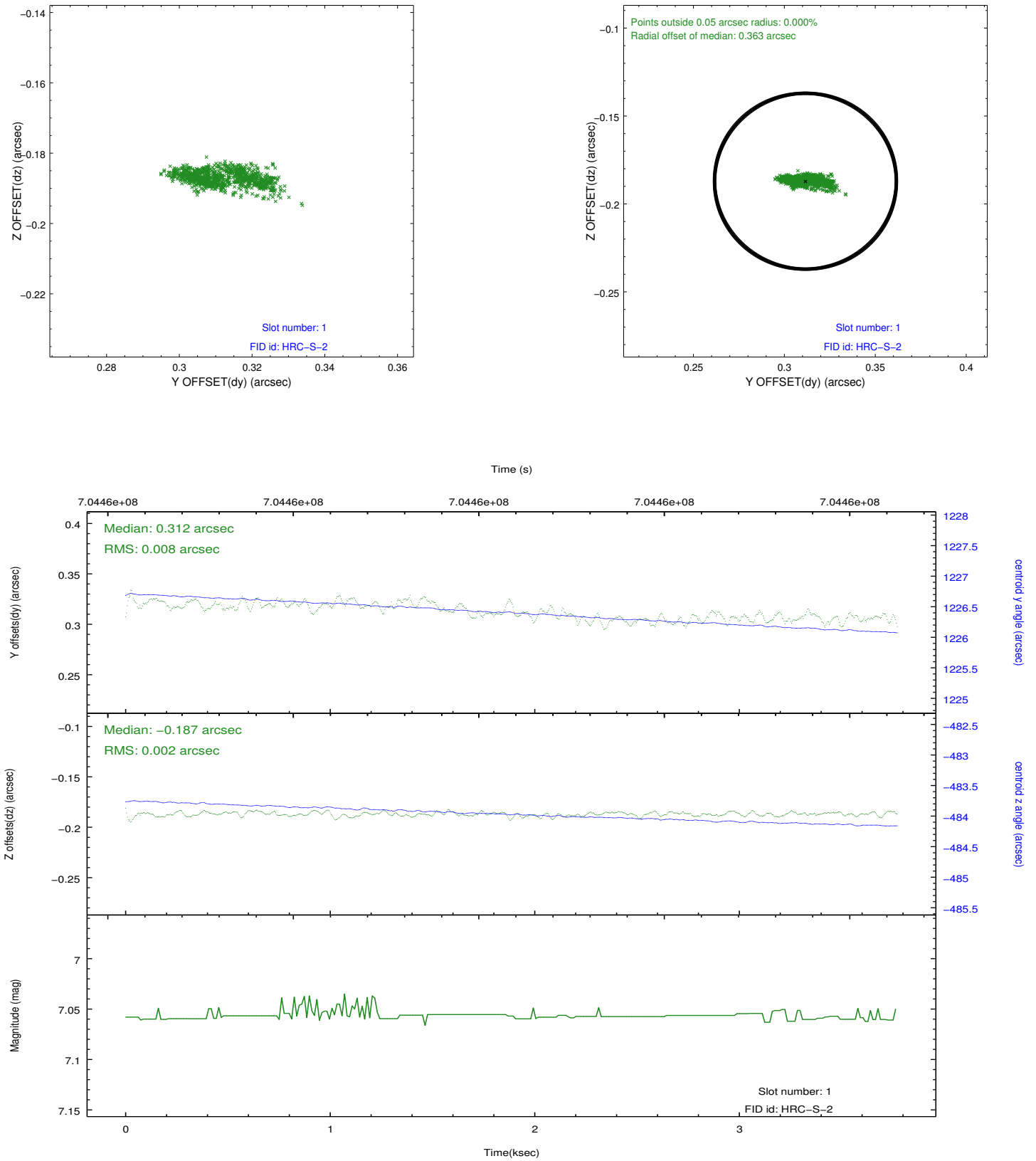


2.5 FID Slots

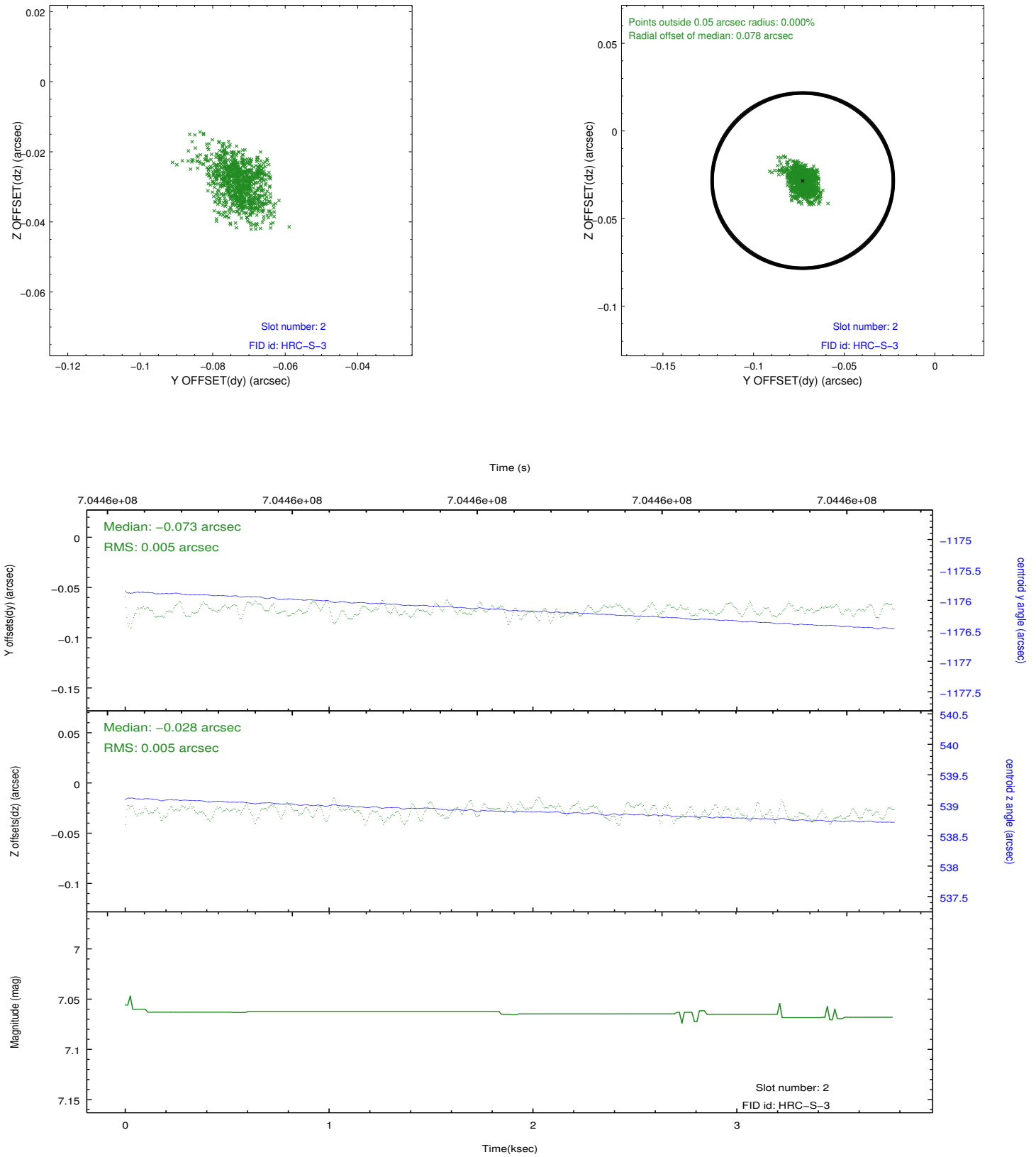
2.5.1 Slot 0



2.5.2 Slot 1

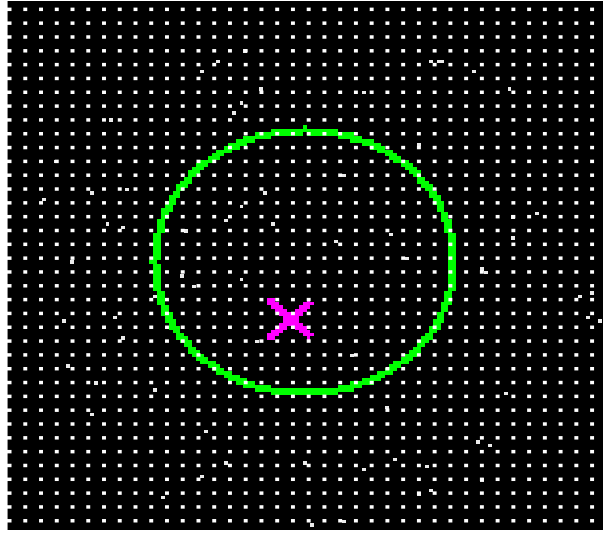


2.5.3 Slot 2

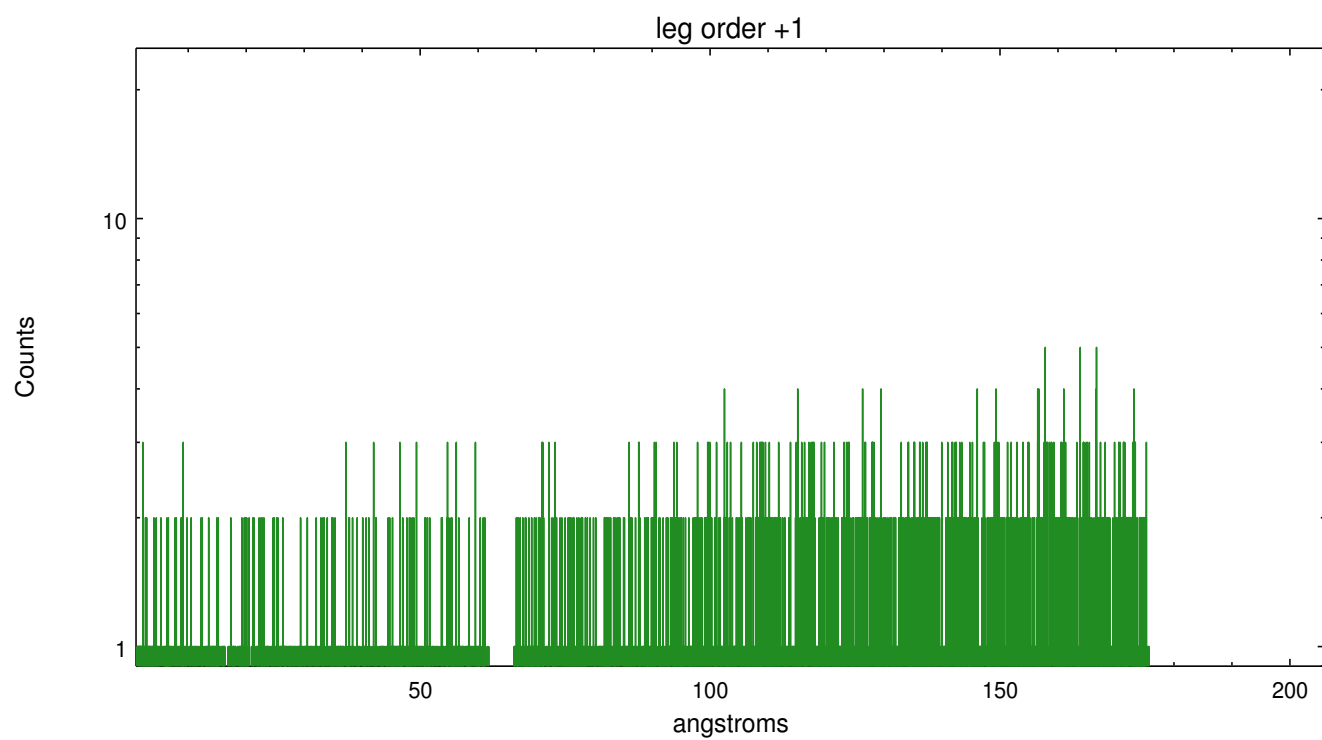
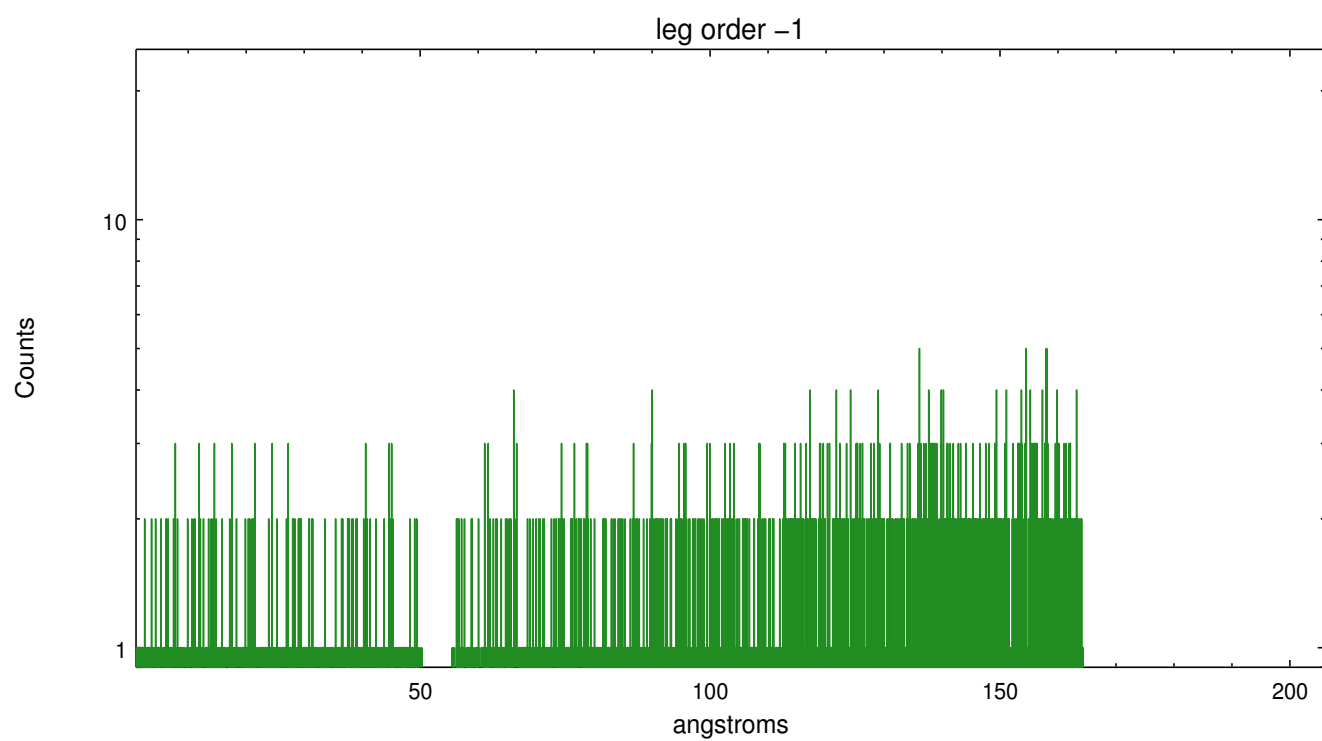


3 Gratings

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	3.6410564713478

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`).