

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23225 - L2 Version 1
Chandra X-Ray Center

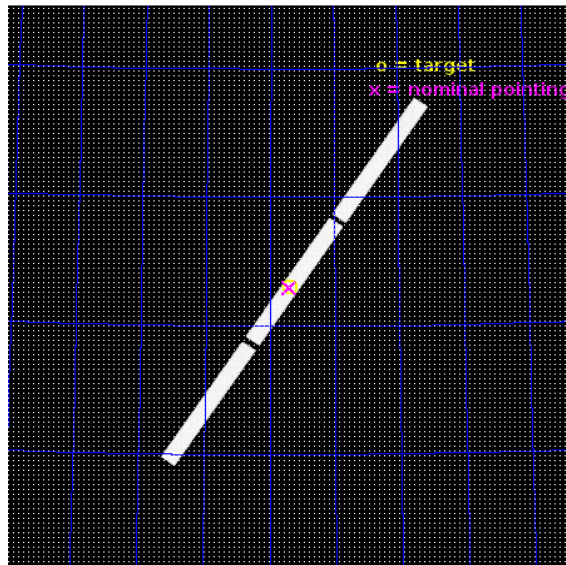
L2 Processing Date : Apr 29 2020

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Parameters	4
2.1.3	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 5	10
2.4.3	Slot 6	11
2.4.4	Slot 7	12
2.5	FID Slots	13
2.5.1	Slot 0	13
2.5.2	Slot 1	14
2.5.3	Slot 2	15
3	Gratings	16
3.1	LETG Arm	16
A	Summary	18
A.1	Status	18
A.2	Comments	18

1 Front

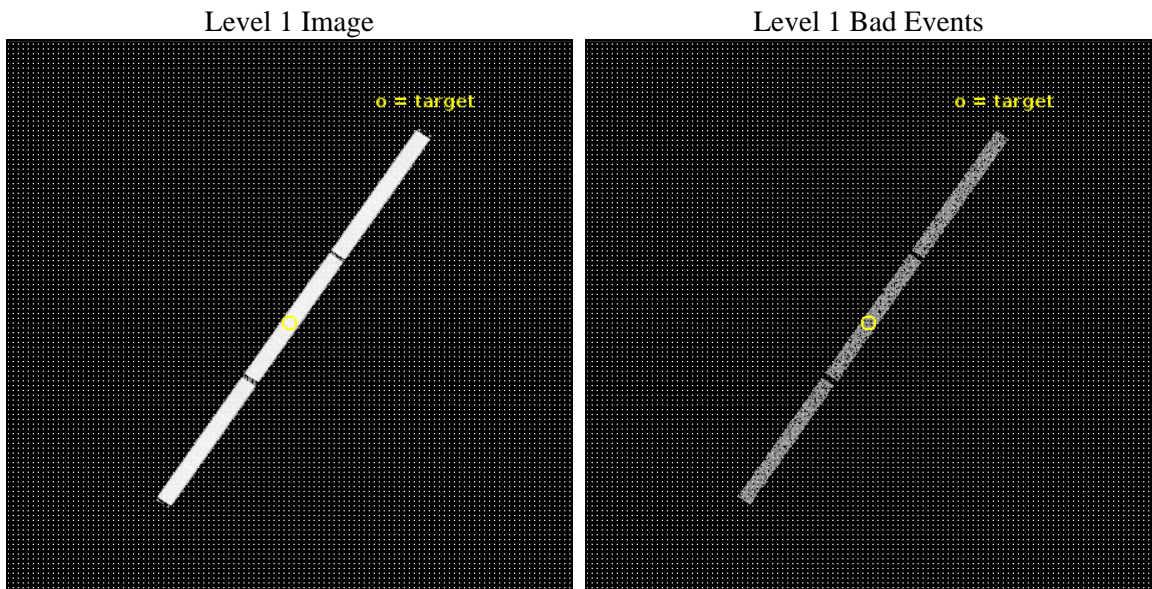
seq_num	100193	Sequence number
obs_id	23225	Observation id
title	Grating spectroscopy of the unexpectedly bright comet C/2019 Y4 ATLAS	Proposal title
observer	Dennis Bodewits	Principal investigator
object	C/2019 Y4 ATLAS	Source name
ra_targ	81.850446	Observer's specified target RA [deg]
dec_targ	61.149876	Observer's specified target Dec [deg]
ra_nom	81.8509391258	Nominal RA [deg]
dec_nom	61.1482796406	Nominal Dec [deg]
roll_nom	304.049437428	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3496.5314623117	[s]
livetime	3459.6530667126	Ontime multiplied by DTCOR
l2events	337197	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	3496.5314623117	[s]
caldsver	4.9.1	 	l1events	447522	Number of level 1 events
date	2020-04-29T11:01:43	Date and time of file creation	tgmethod	USER	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32775.11, 32812.26)	src1a sky pixel position

2.1.3 Events

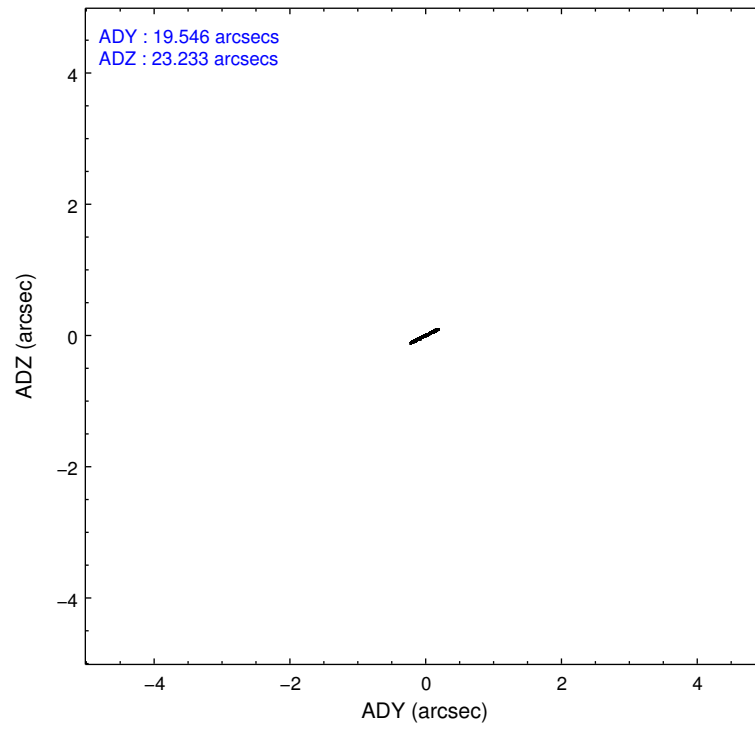
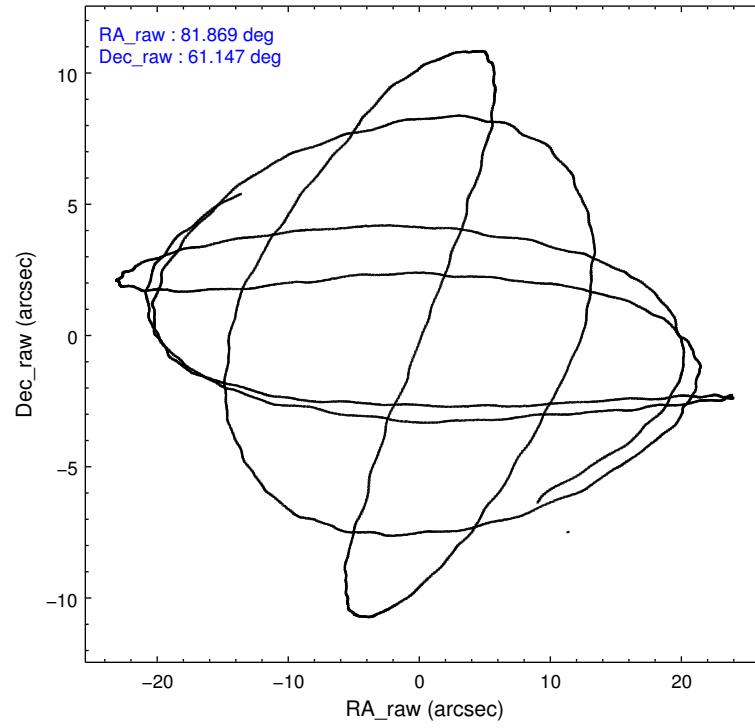
Level 1 Events

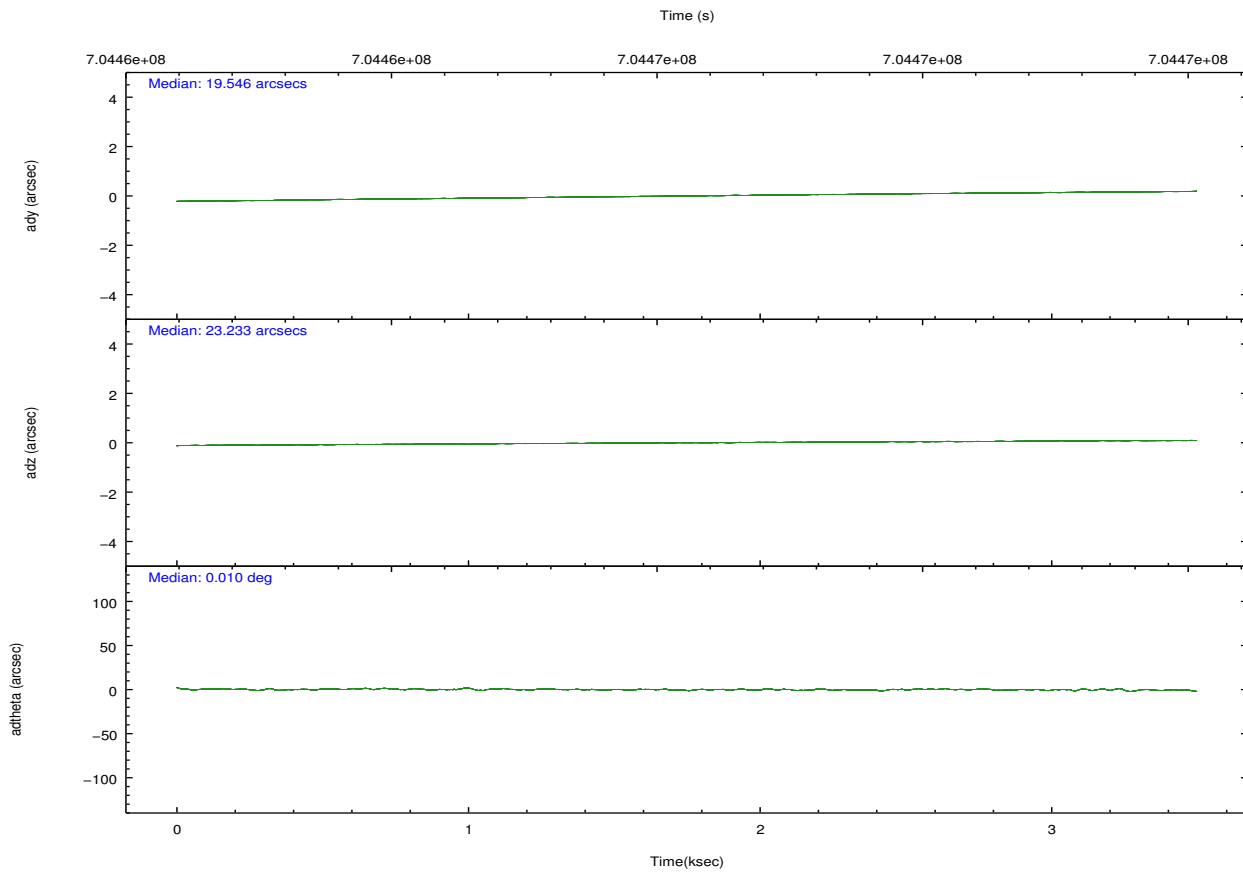
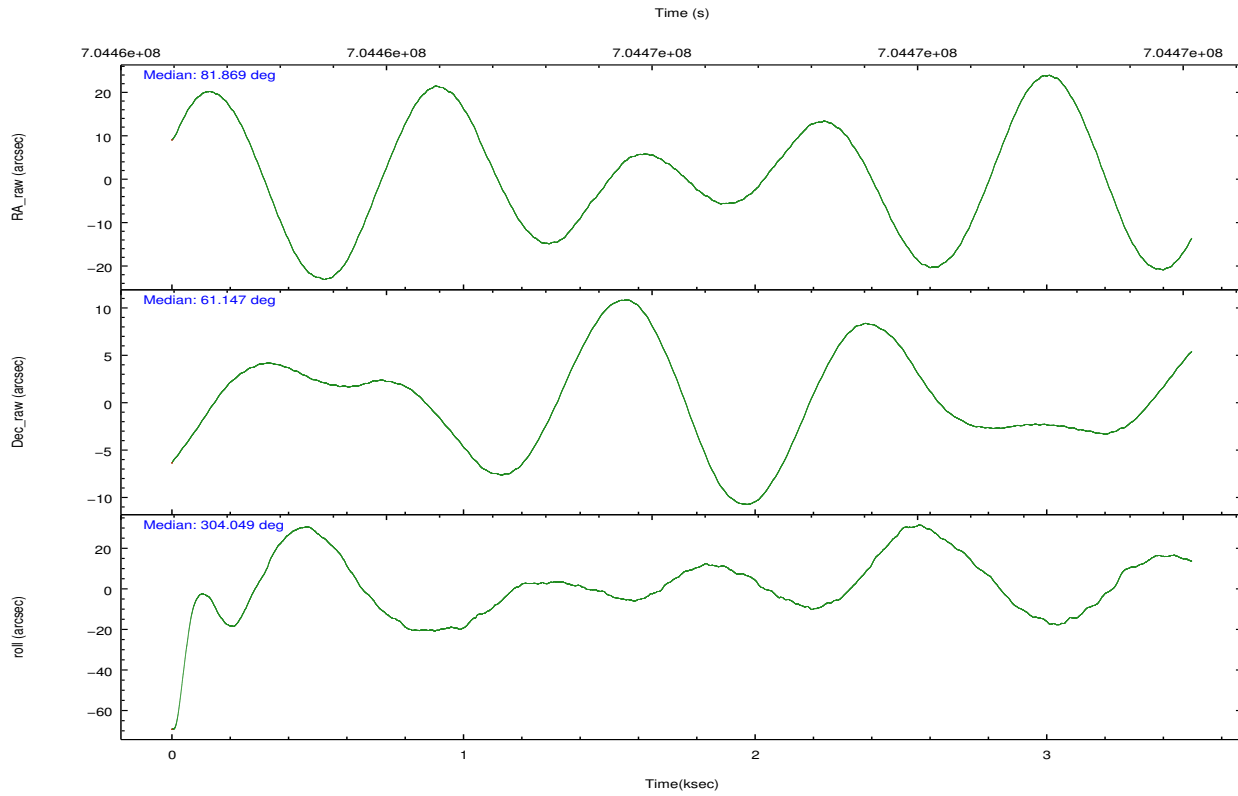
	segment 1	segment 2	segment 3
level 1 events	149680	148561	149281
rejected events	12446	11997	12195
rejected %	8%	8%	8%

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	81.813723	81.8509391258			
[deg] Pointing Dec	61.158528	61.1482796406			
[deg] Pointing Roll	304.032167	304.049437428			
[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)	704464586.184000	704464210.88844			
Observation start date	2020-04-28T12:35:17	2020-04-28T12:30:10			
[s] Observation end time (MET)	704467886.184000	704468020.81367			
Observation end date	2020-04-28T13:30:17	2020-04-28T13:33:40			

2.3 Aspect



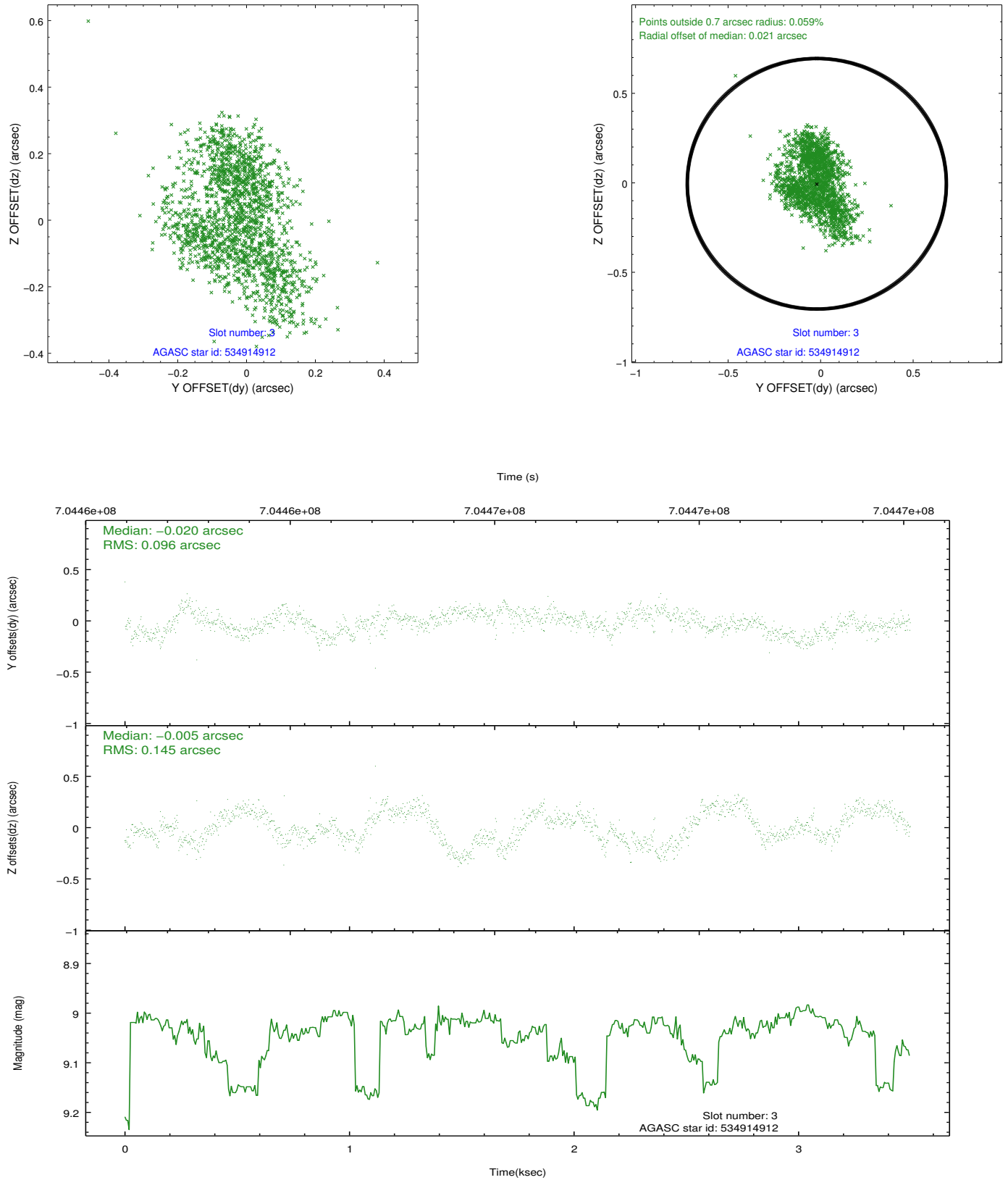


Slot Statistics

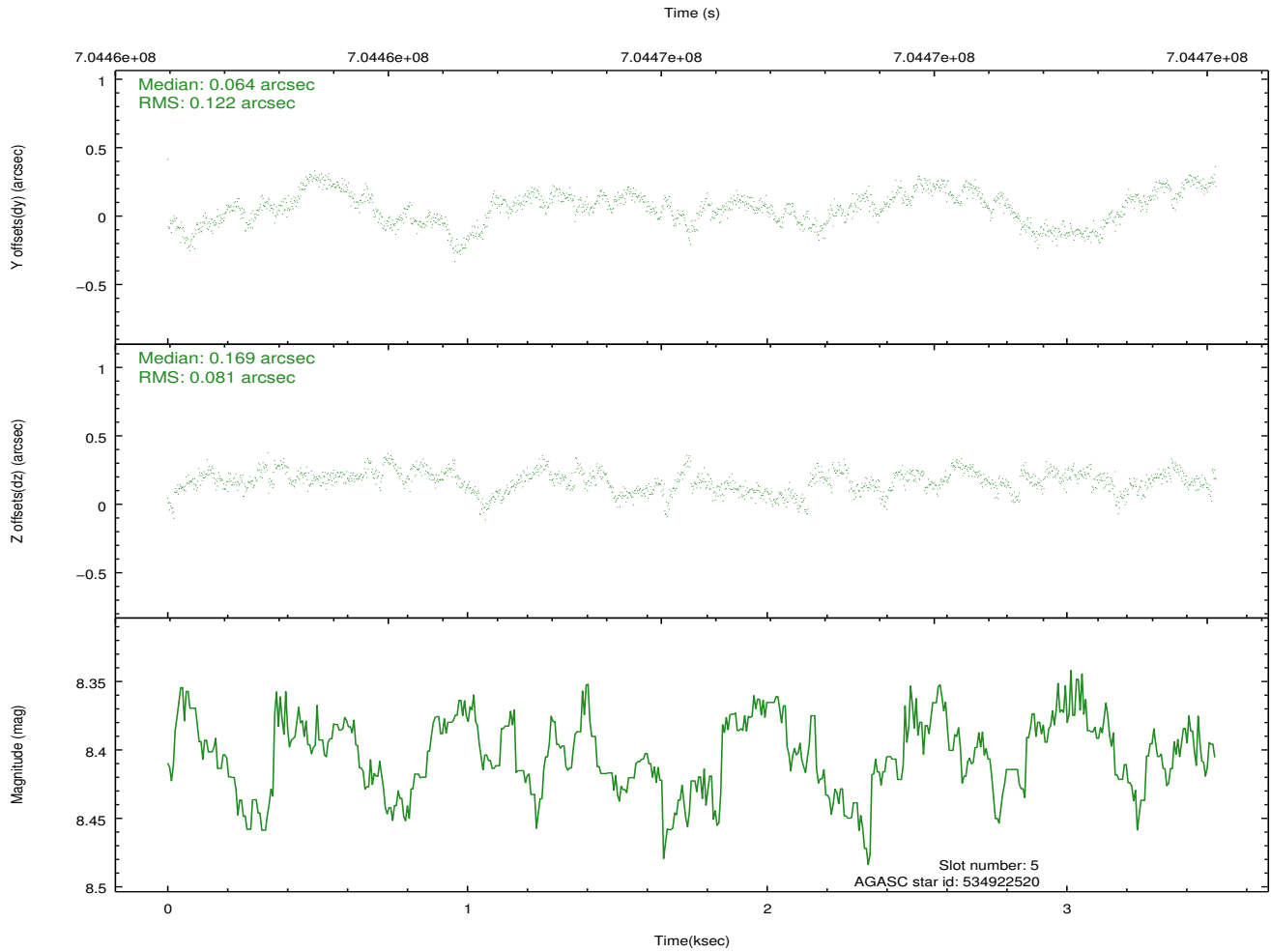
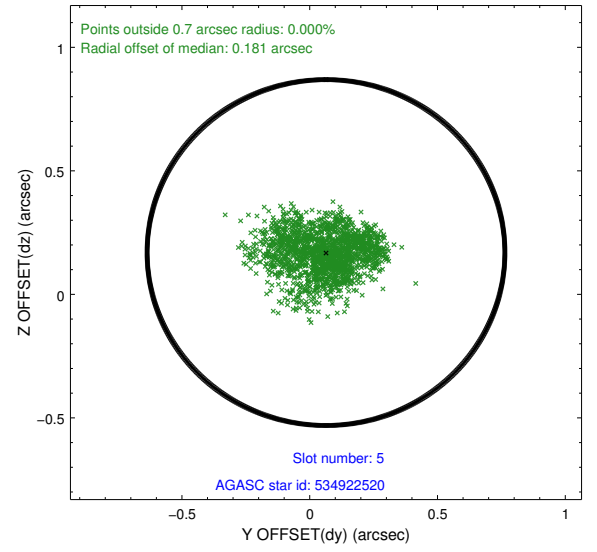
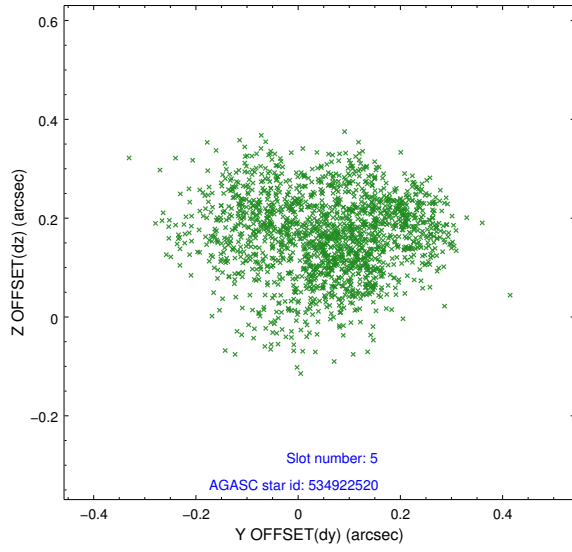
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.08	854	1.000	0.149	-0.086	0.007	0.012	0.000000	0.000000	-1174.03	-491
1	FID		HRC-S-2	7.06	854	1.000	0.322	-0.191	0.010	0.016	0.000000	0.000000	1224.45	-484
2	FID		HRC-S-3	7.07	854	1.000	-0.083	-0.026	0.010	0.017	0.000000	0.000000	-1175.31	538
3	GUIDE	used	534914912	9.04	1707	1.000	-0.020	-0.005	0.187	0.288	81.829238	61.781311	-1842.51	1276
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	534922520	8.40	1707	1.000	0.064	0.169	0.158	0.242	81.531321	61.241488	-517.23	-238
6	GUIDE	used	534923744	9.56	1700	1.000	0.054	-0.103	0.313	0.472	82.519762	61.432069	-138.87	1560
7	GUIDE	used	534921960	9.35	1702	1.000	-0.105	-0.055	0.151	0.262	83.087290	61.217431	1042.57	1960

2.4 Star Slots

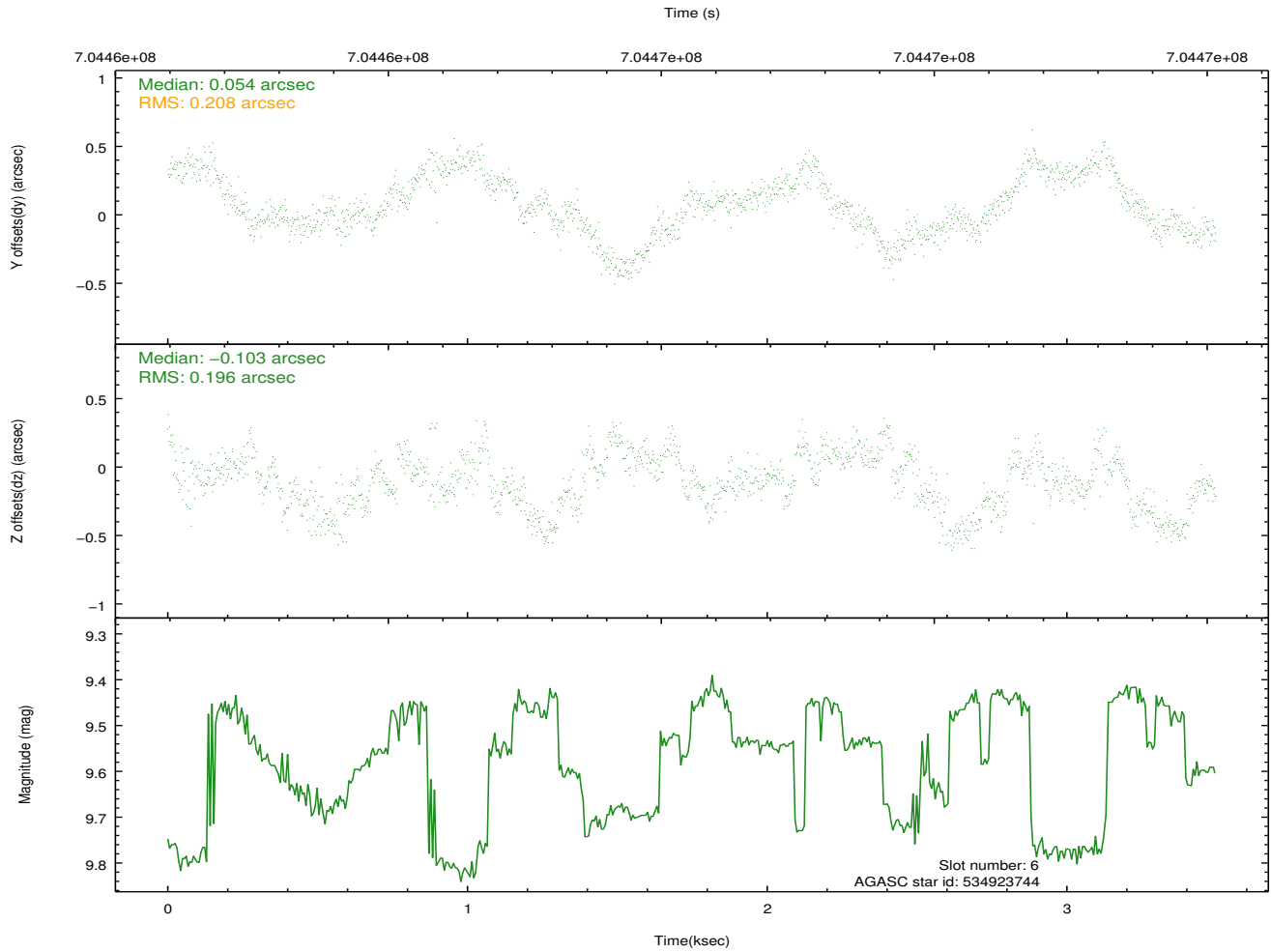
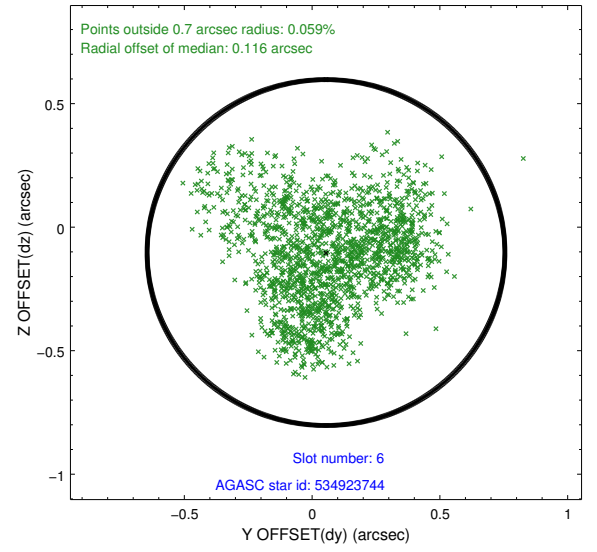
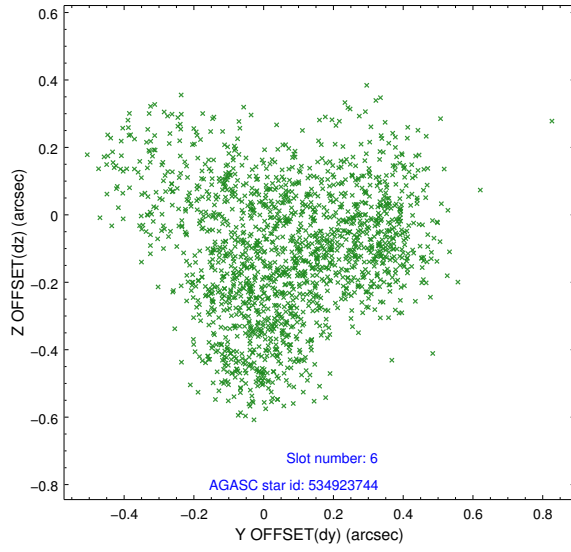
2.4.1 Slot 3



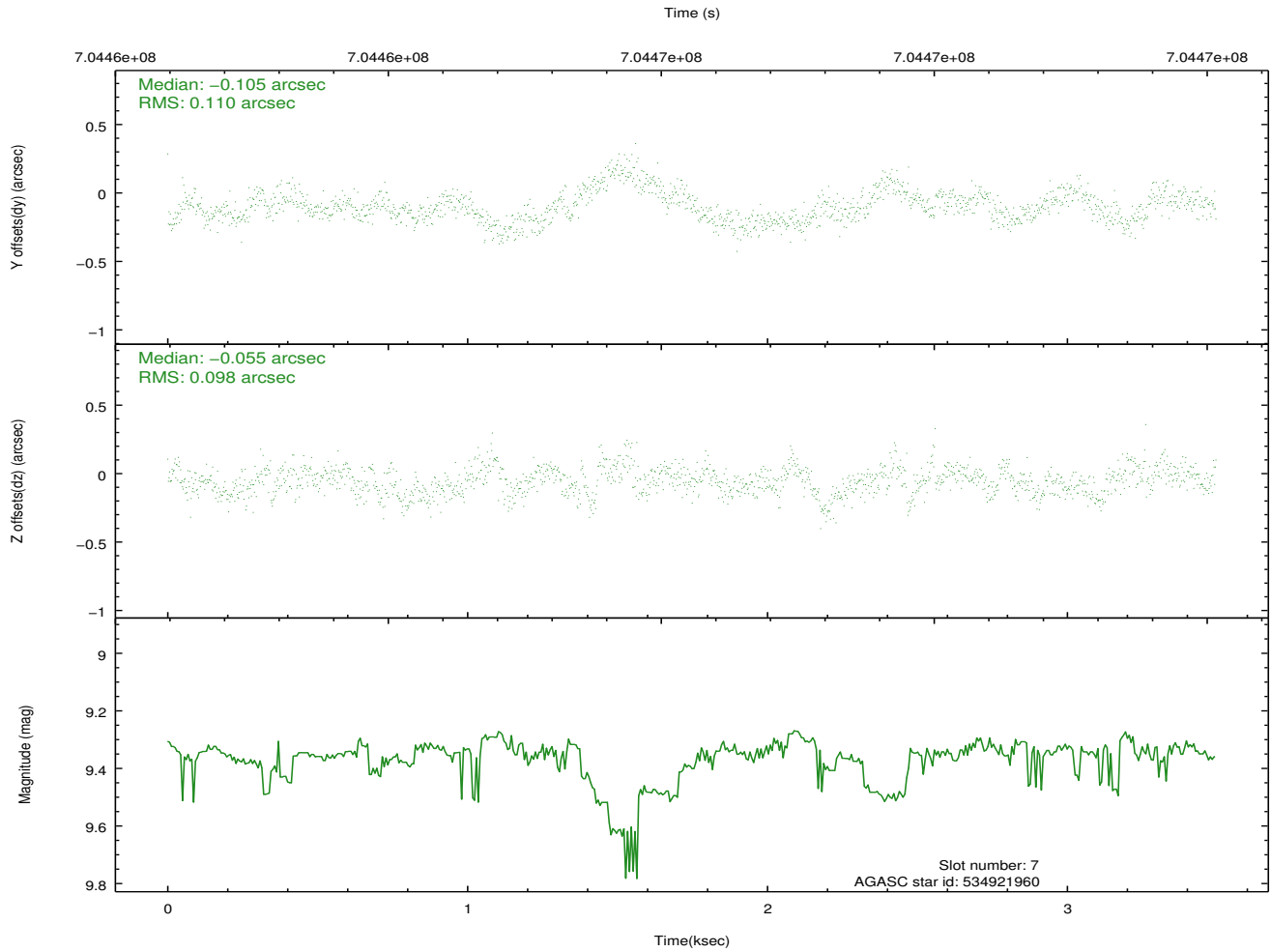
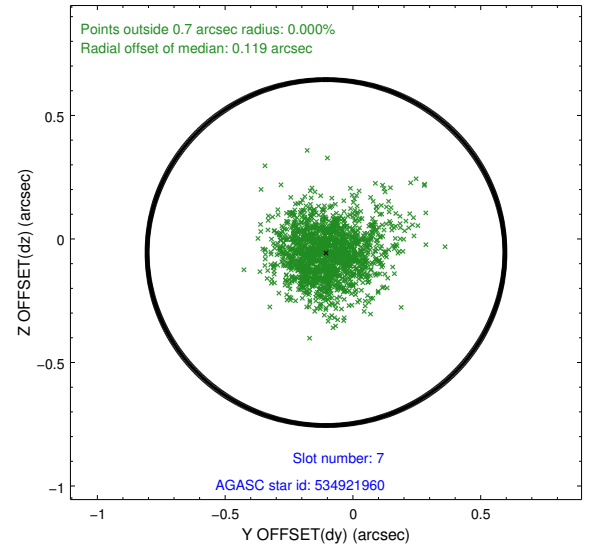
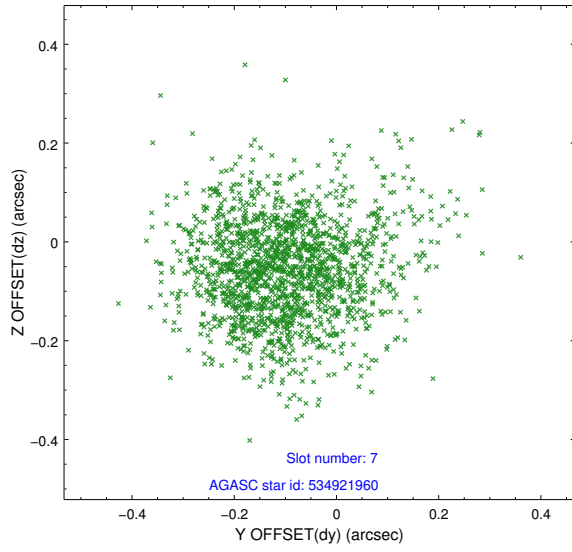
2.4.2 Slot 5



2.4.3 Slot 6

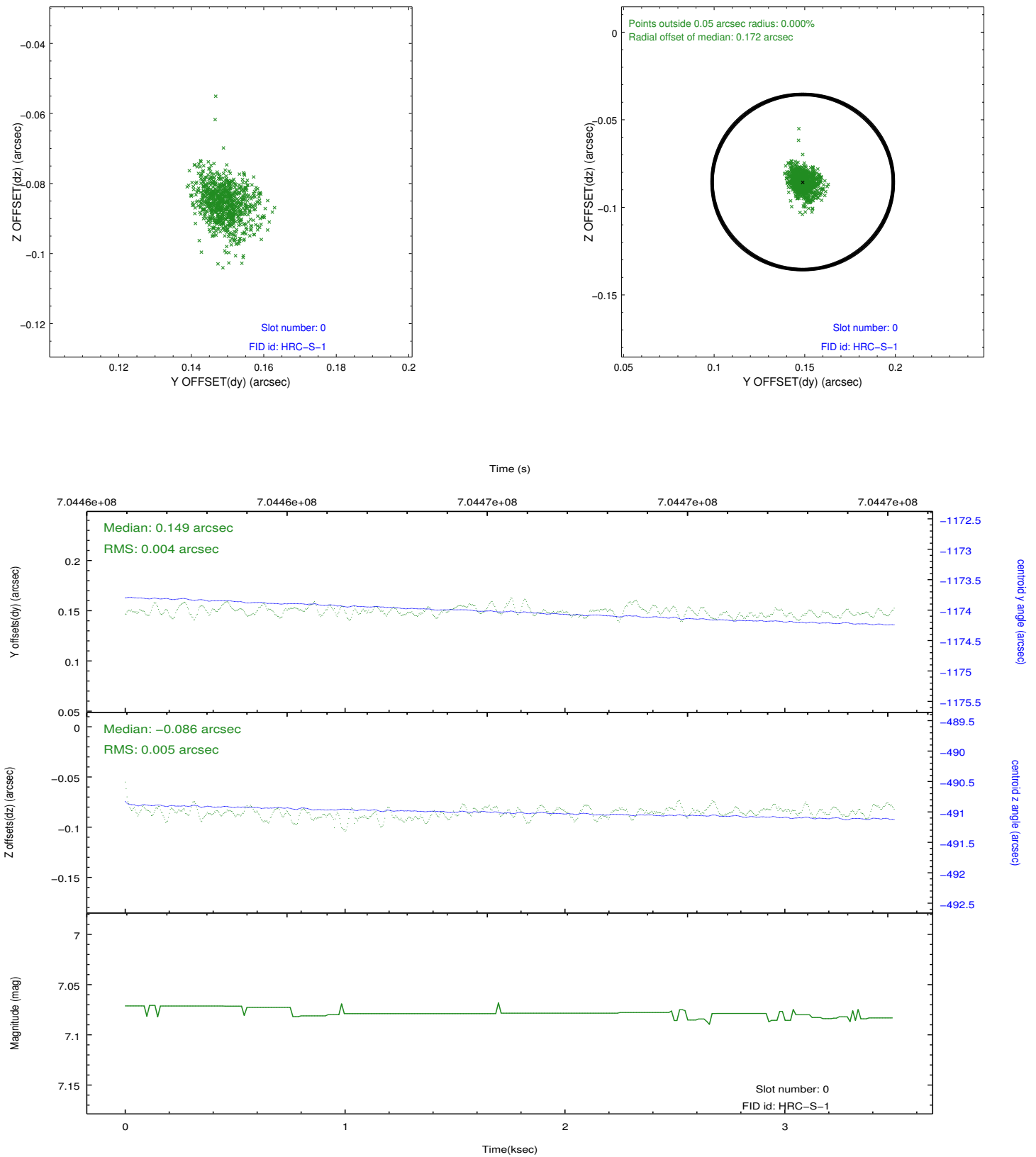


2.4.4 Slot 7

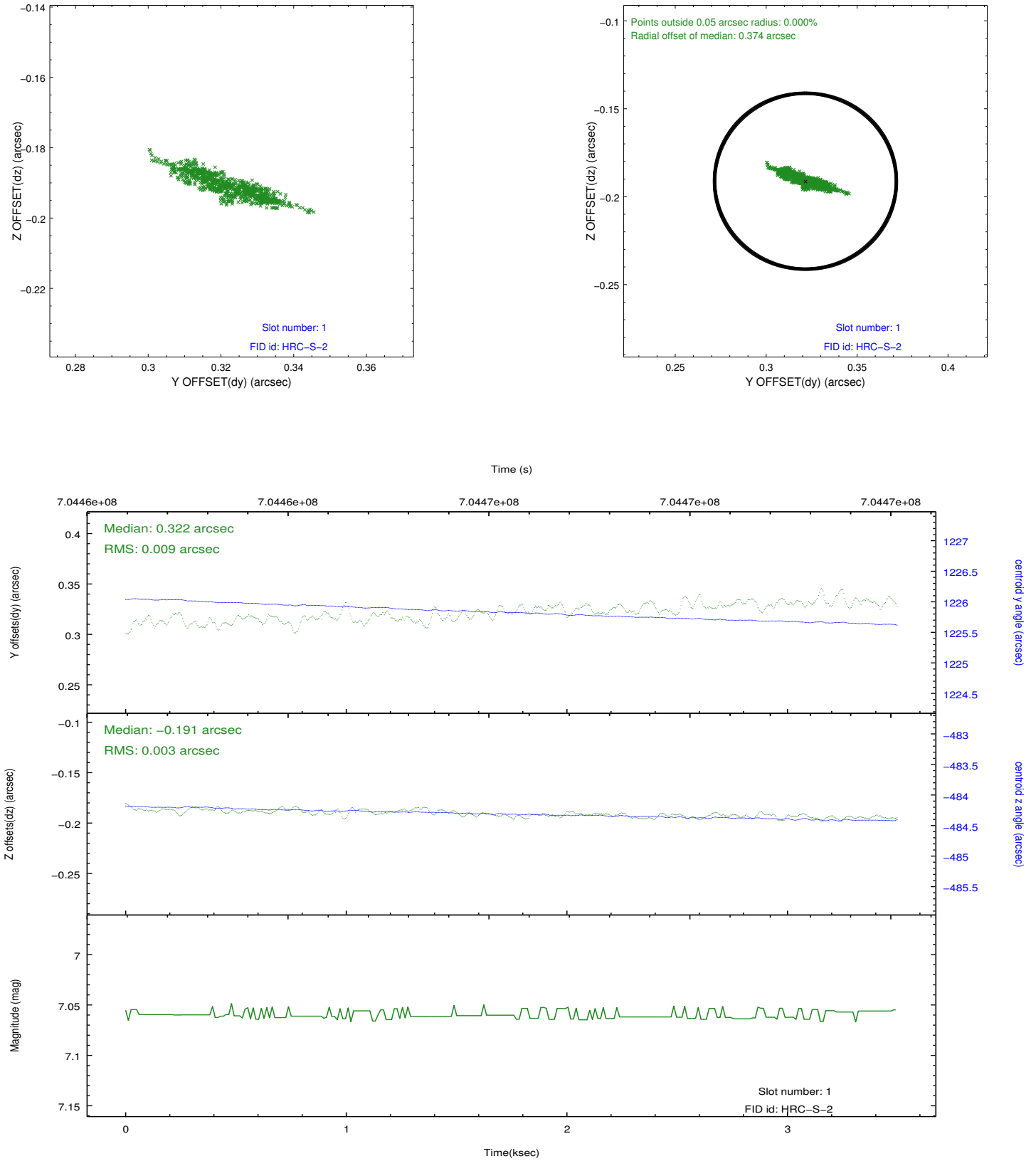


2.5 FID Slots

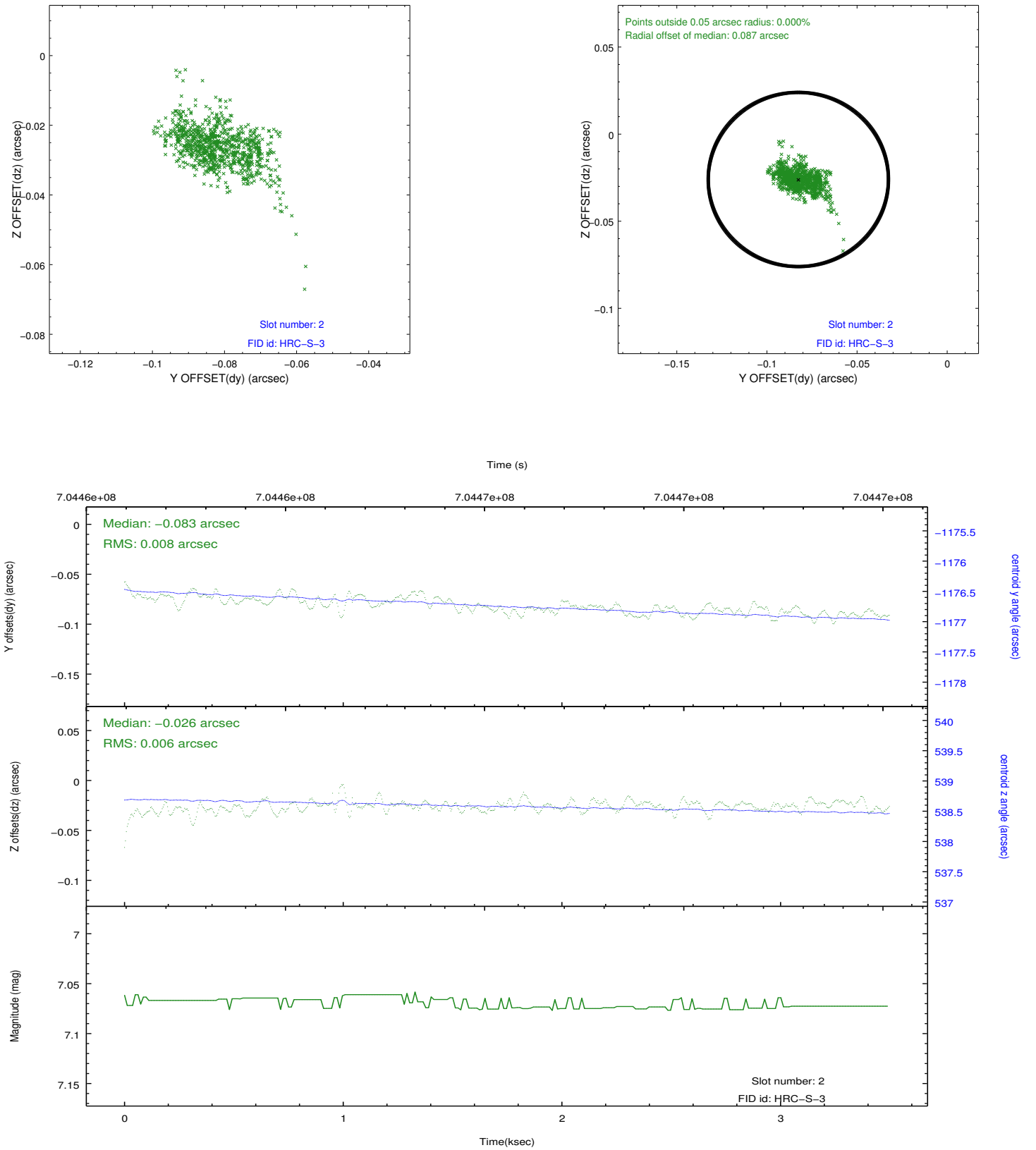
2.5.1 Slot 0



2.5.2 Slot 1

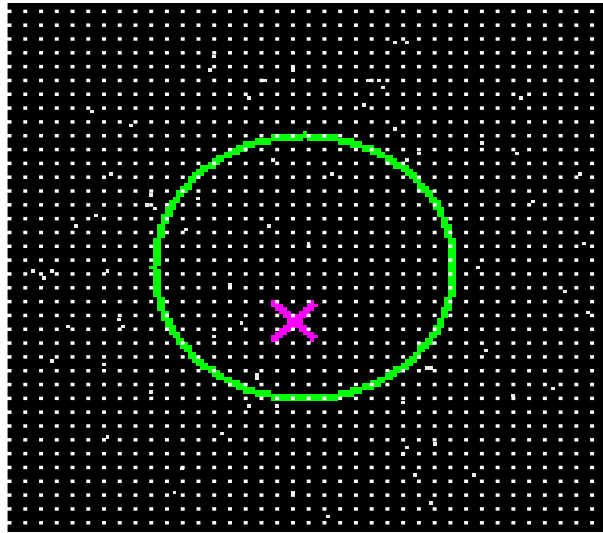


2.5.3 Slot 2

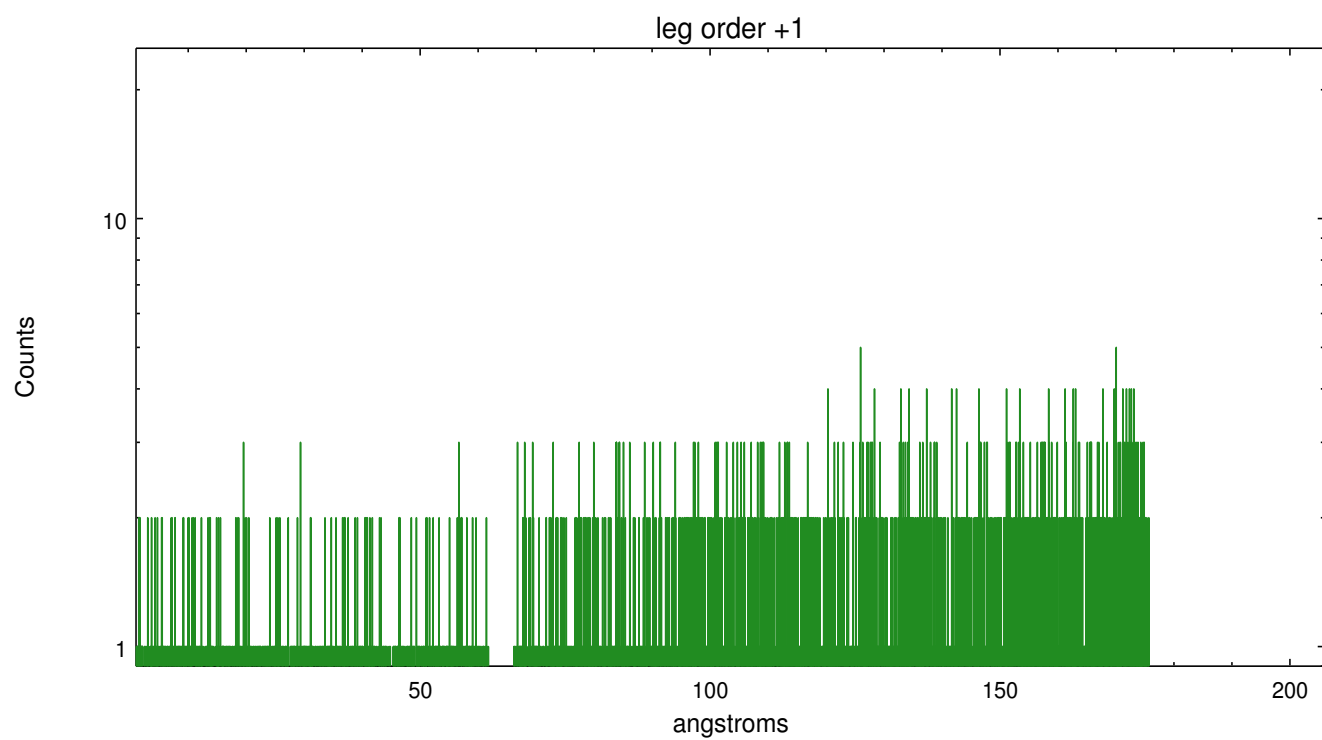
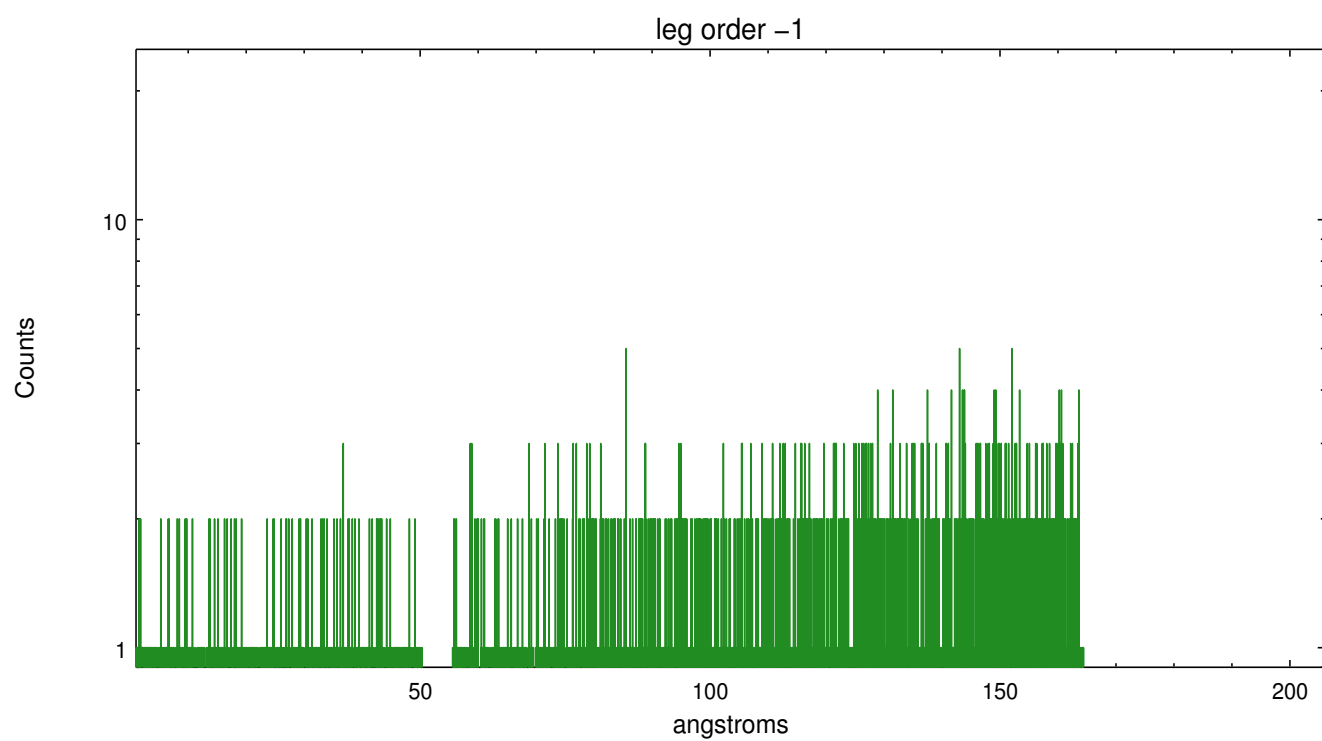


3 Gratings

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	3.4965314623117

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 6 has an RMS deviation > 0.200000 arcsec
(acceptable)