

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6141 - L2 Version 4
Chandra X-Ray Center

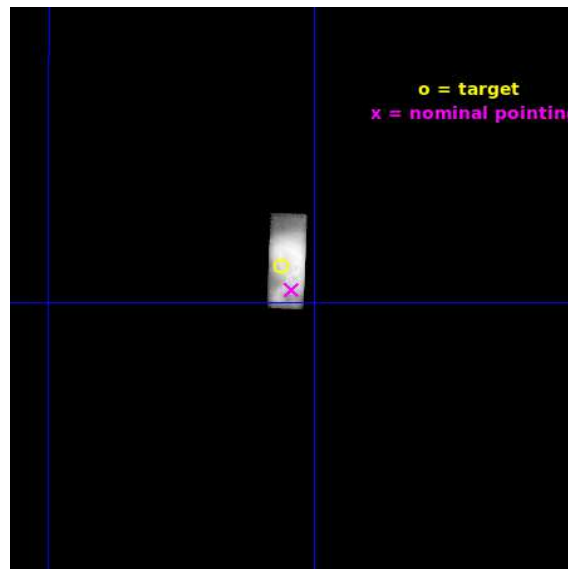
L2 Processing Date : Oct 7 2020

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1 Front

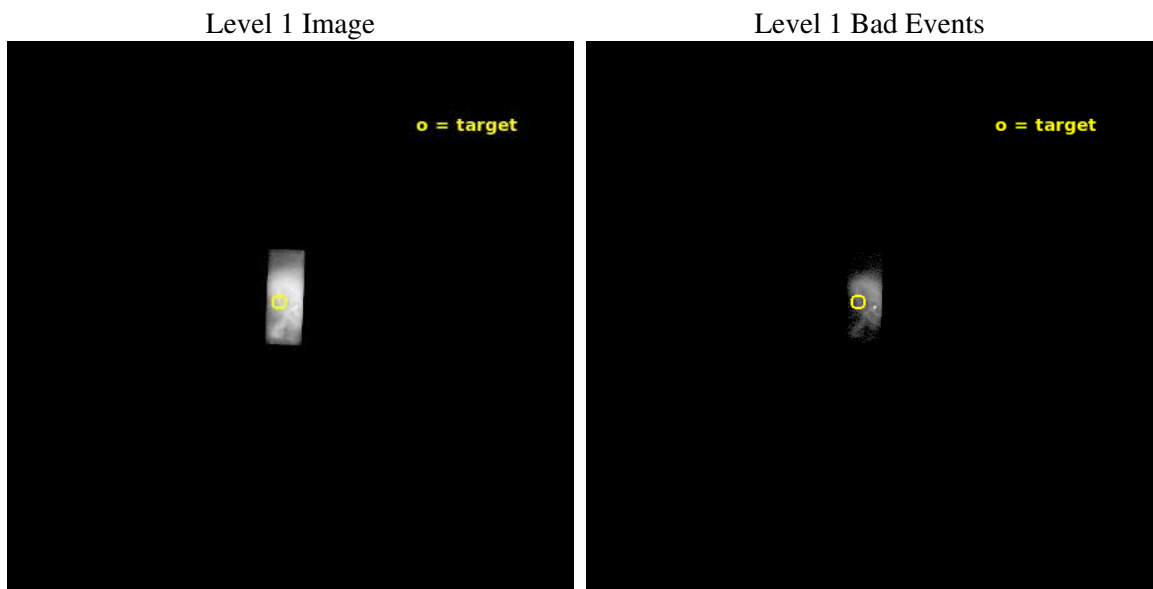
seq_num	500594	Sequence number
obs_id	6141	Observation id
title	Monitoring of the Relativistic Magnetohydrodynamic Shock in the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.640417	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.635528334465	Nominal RA [deg]
dec_nom	22.005934961453	Nominal Dec [deg]
roll_nom	272.23540165547	Nominal Roll [deg]
revision	4	Processing version of data
ontime	9857.100391686	Sum of GTIs [s]
livetime	8670.9187118983	Livetime [s]
ontime7	9857.100391686	Sum of GTIs [s]
l2events	1817811	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	9857.100391686	Sum of GTIs [s]
caldsver	4.9.2	 	ontime7	9857.100391686	Sum of GTIs [s]
date	2020-10-07T16:20:26	Date and time of file creation	l1events	1893924	Number of level 1 events
revision	4	Processing version of data	tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4086.02, 4183.79)	src1a sky pixel position
			zo_pos_tgd	(4111.68, 4158.20)	src1a sky pixel position via tgdetect

2.1.3 Events

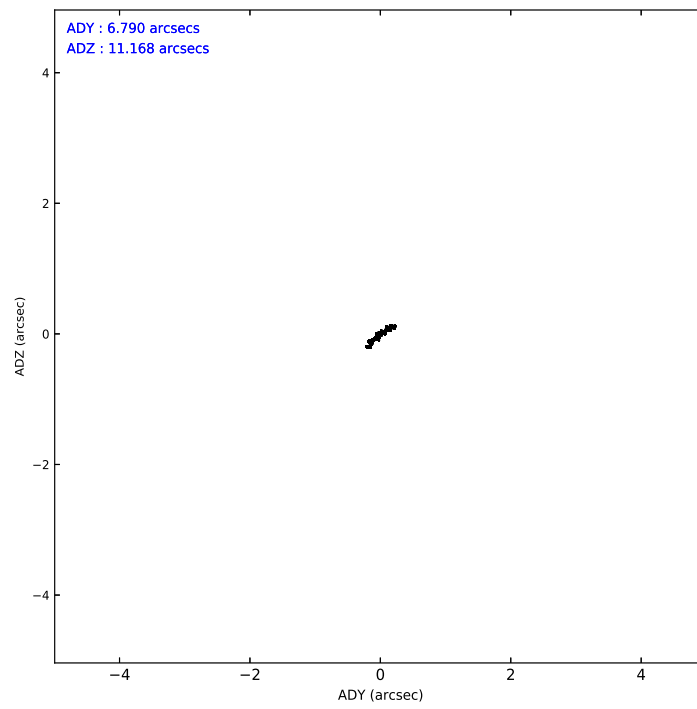
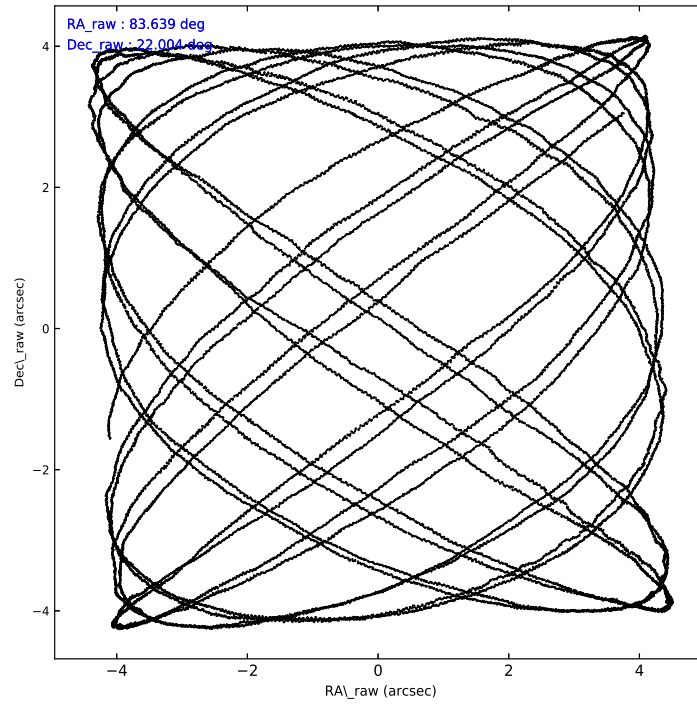
	ccd 7
level 1 events	1893924
rejected events	64844
rejected %	3%

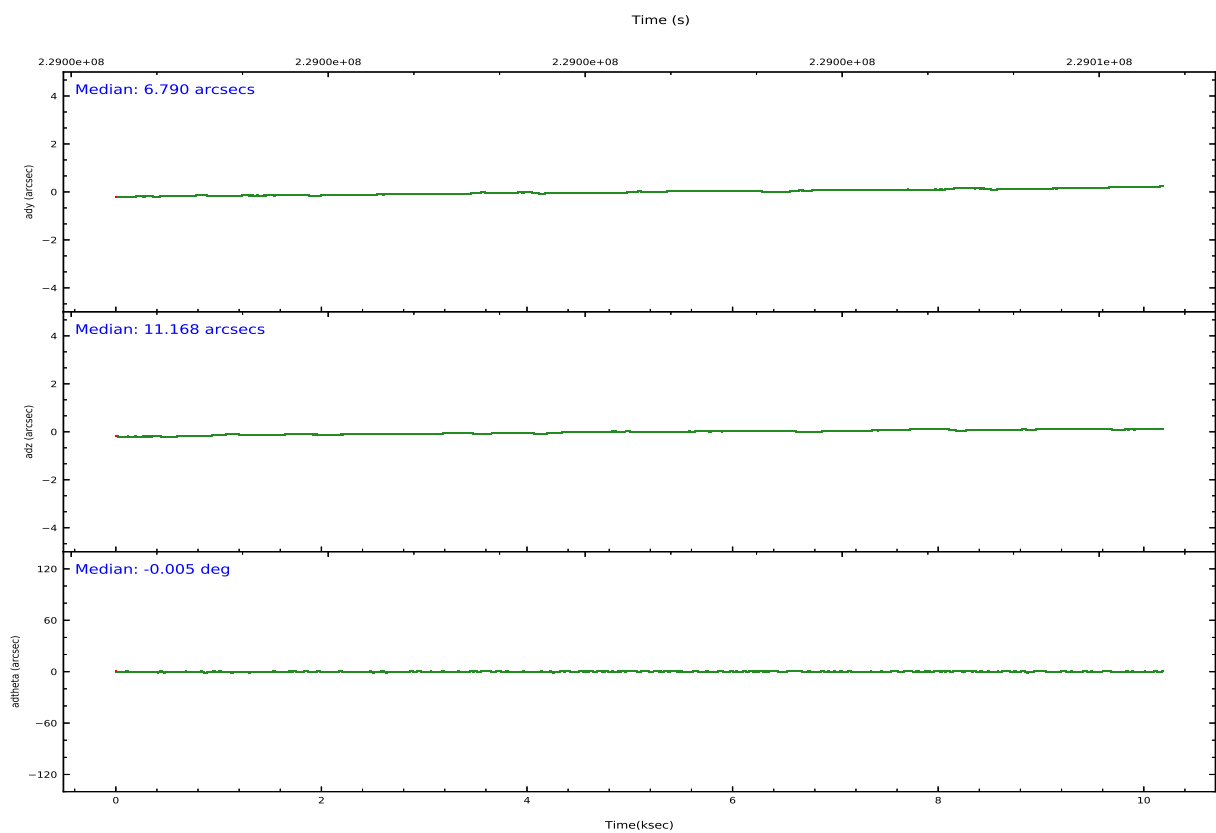
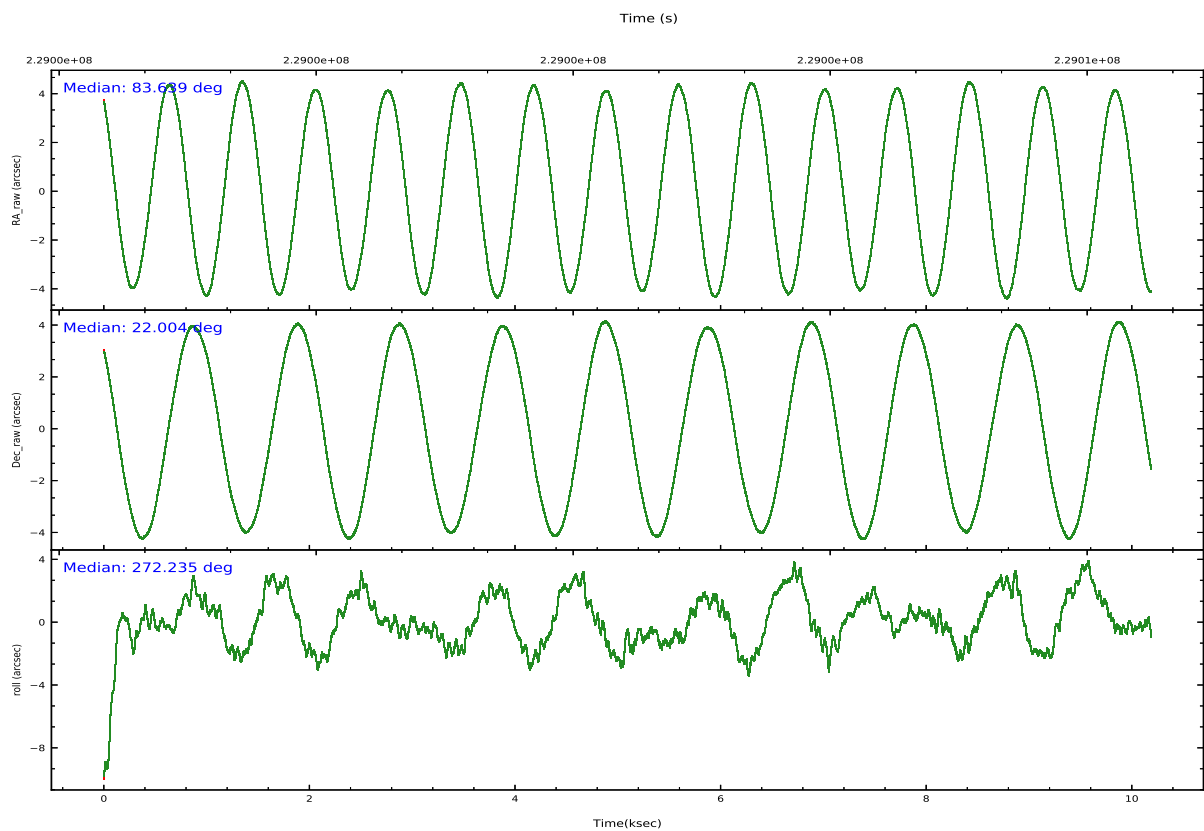
	ccd 7
grade 0 events	371349
	19%
grade 1 events	6135
	0%
grade 2 events	471788
	24%
grade 3 events	207956
	10%
grade 4 events	198755
	10%
grade 5 events	26736
	1%
grade 6 events	579441
	30%
grade 7 events	31764
	1%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.623101	83.63552833446499	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.026896	22.005934961453	Subarray start row	127	127
[deg] Pointing Roll	272.082963	272.23540165547	Subarray row count	101	101
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.3
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	228998123.184000	228997747.61476			
Observation start date	2005-04-04T10:34:19	2005-04-04T10:29:07			
[s] Observation end time (MET)	229008123.184000	229008516.77775			
Observation end date	2005-04-04T13:20:59	2005-04-04T13:28:36			
Read mode	TIMED	TIMED			

2.3 Aspect



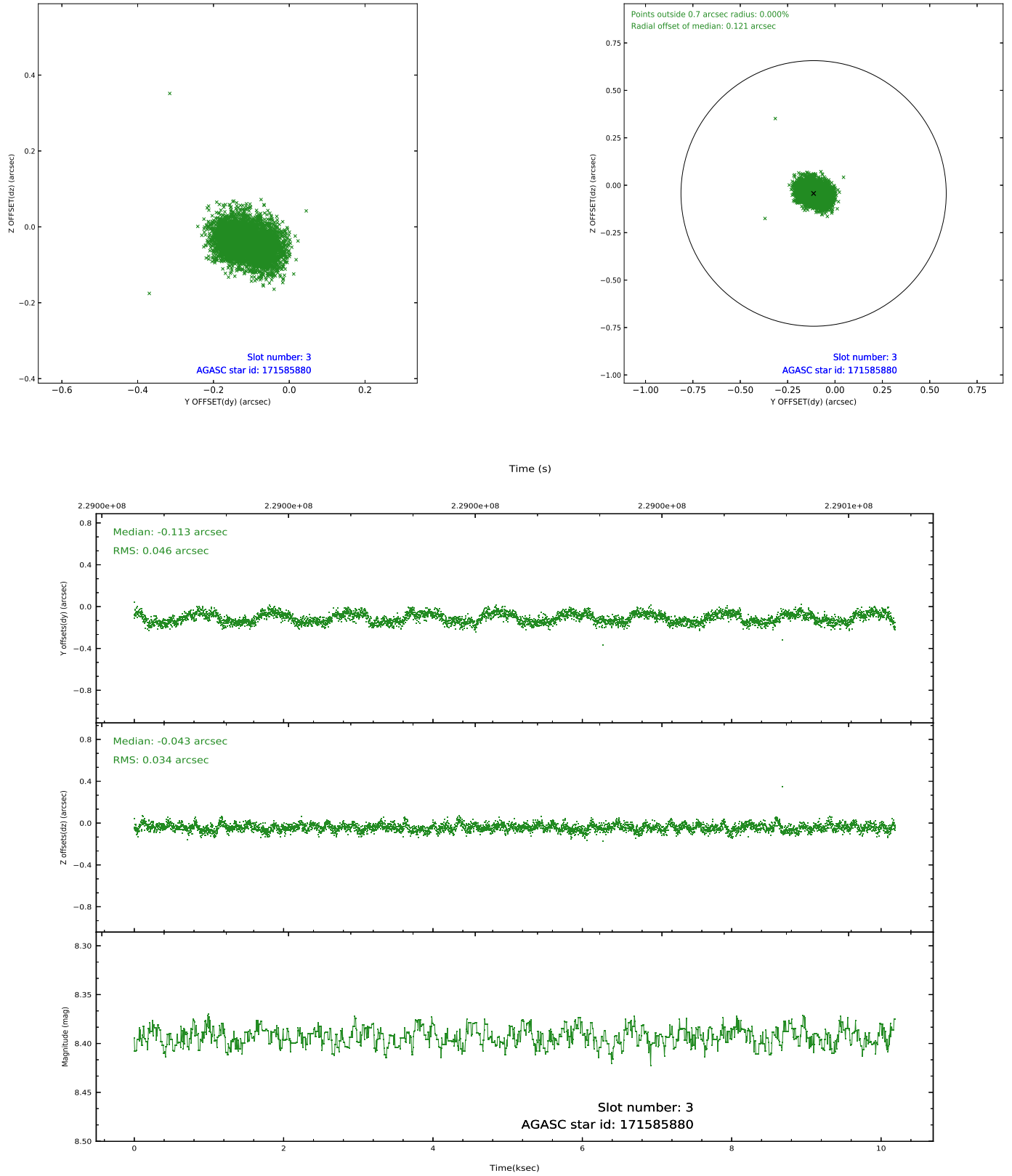


Slot Statistics

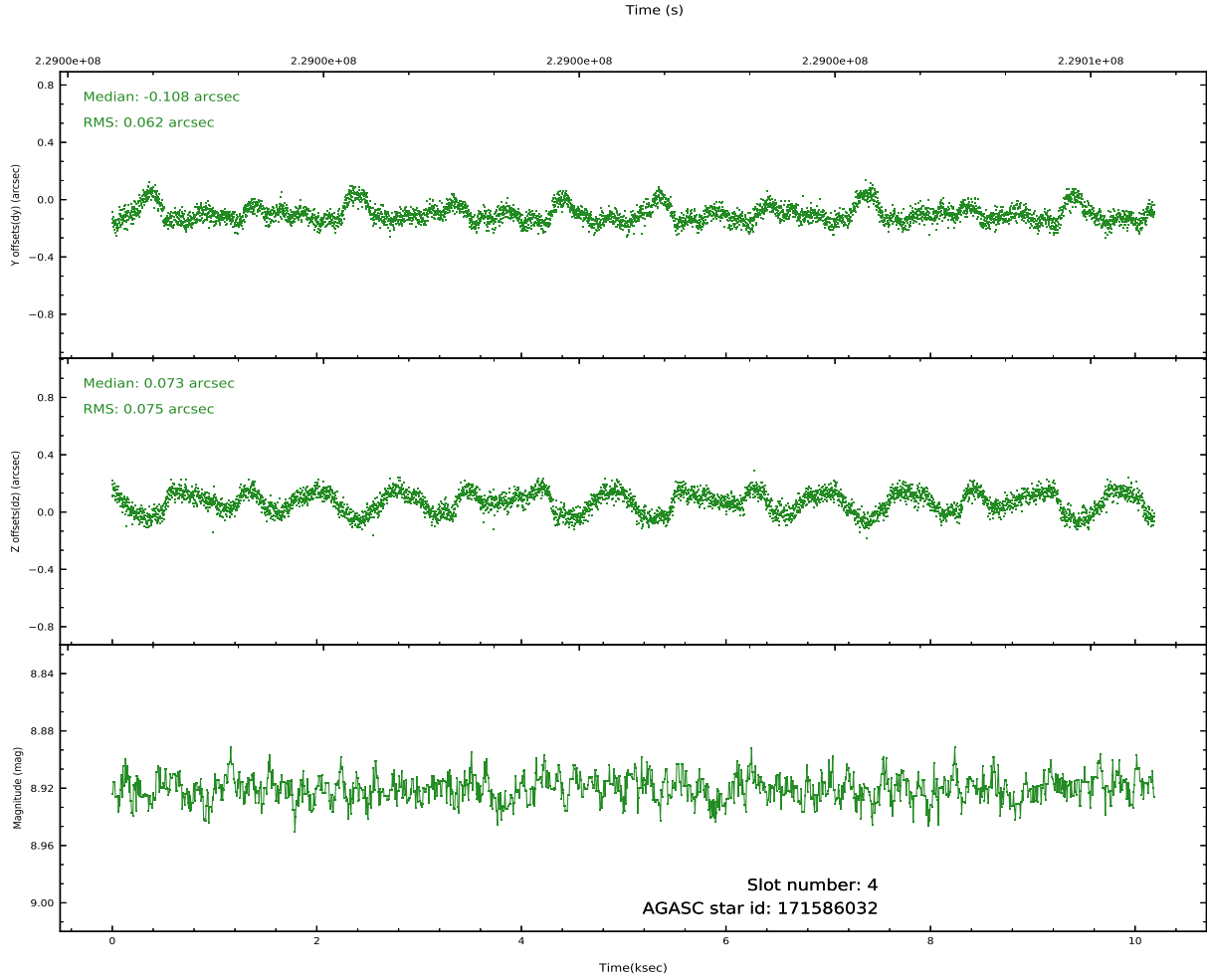
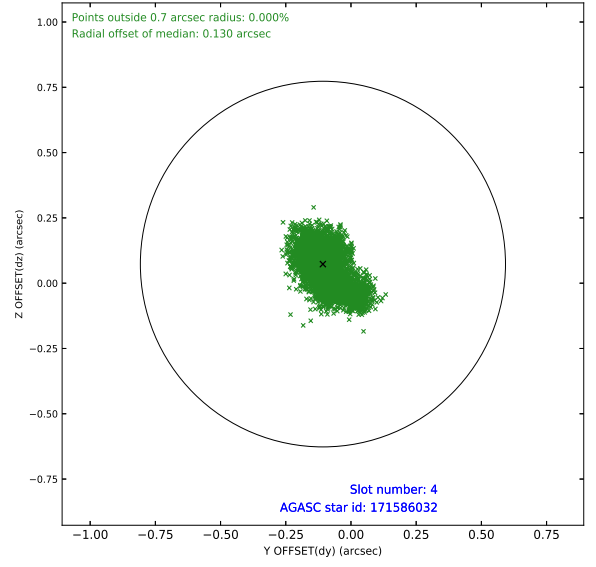
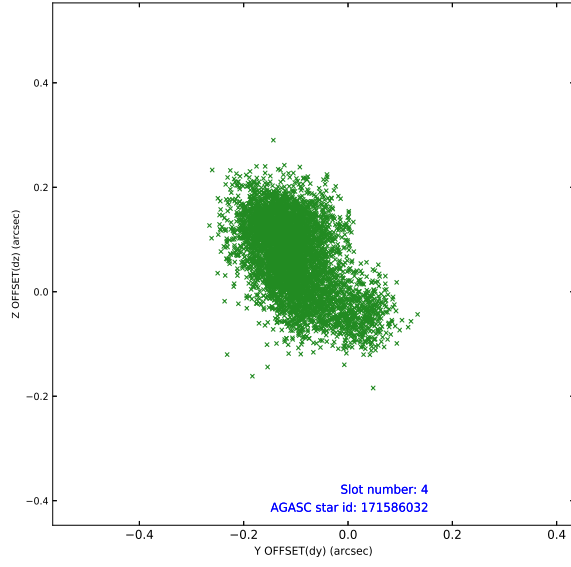
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.08	2486	1.000	-0.102	-0.163	0.009	0.014	0.000000	0.000000	-759.03	-1897
1	FID		ACIS-S-4	7.18	2486	1.000	0.174	0.093	0.006	0.012	0.000000	0.000000	2154.26	10
2	FID		ACIS-S-5	7.23	2486	1.000	-0.103	0.079	0.008	0.013	0.000000	0.000000	-1811.23	5
3	GUIDE	used	171585880	8.39	4970	1.000	-0.113	-0.043	0.063	0.097	83.676260	22.176319	-530.93	196
4	GUIDE	used	171586032	8.92	4966	1.000	-0.108	0.073	0.100	0.180	83.950197	22.083225	-164.06	1098
5	GUIDE	used	171597832	9.17	4967	1.000	0.202	-0.144	0.099	0.155	83.183230	21.366702	2320.05	-1559
6	GUIDE	used	171721904	9.21	4966	1.000	0.129	0.191	0.093	0.145	84.272676	22.116922	-248.98	2177
7	GUIDE	used	243941560	8.29	4970	1.000	-0.119	-0.075	0.061	0.098	83.733264	22.568598	-1935.48	437

2.4 Star Slots

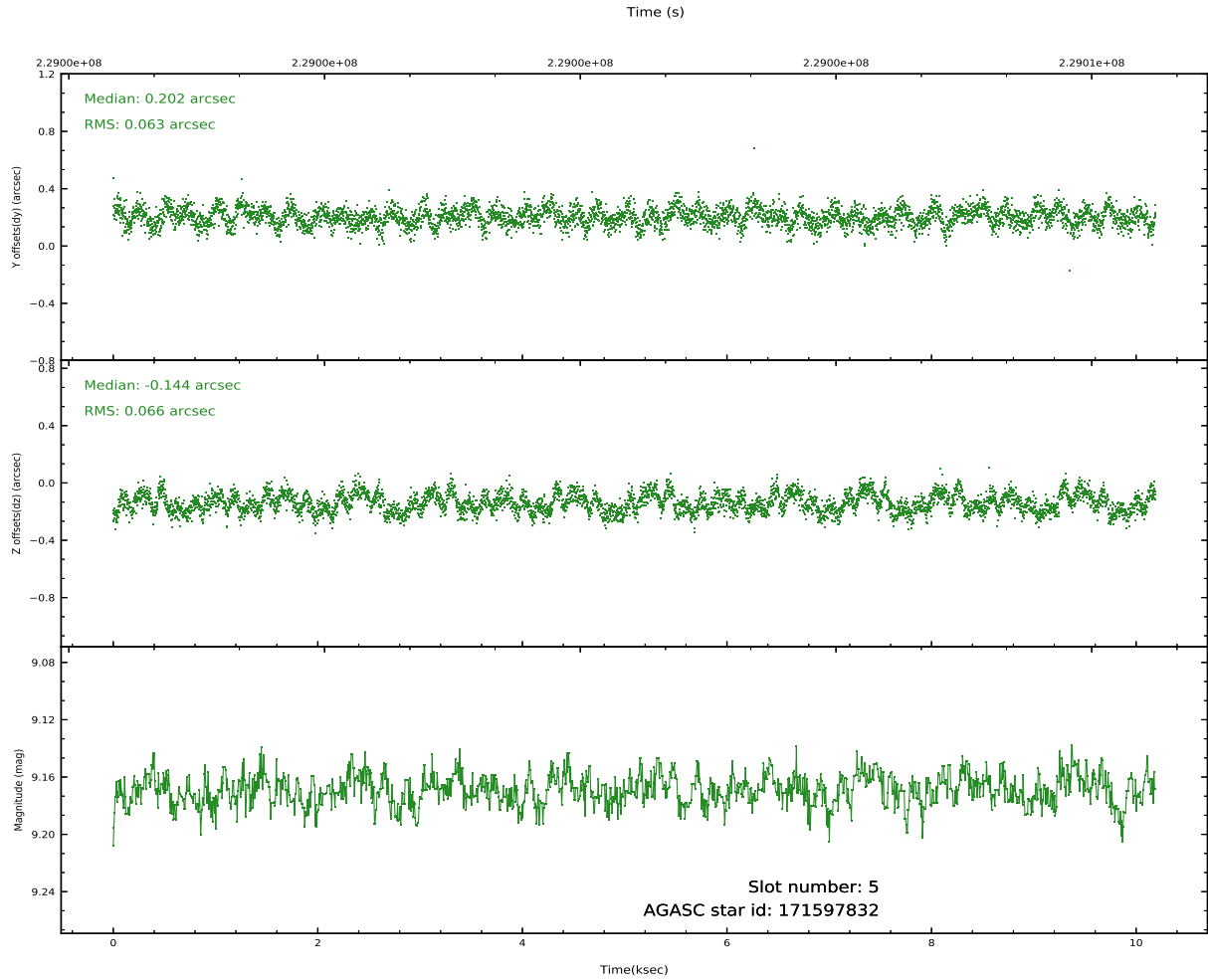
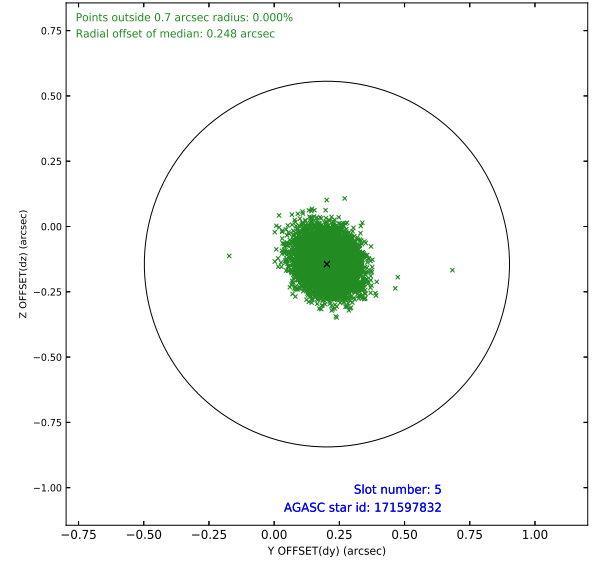
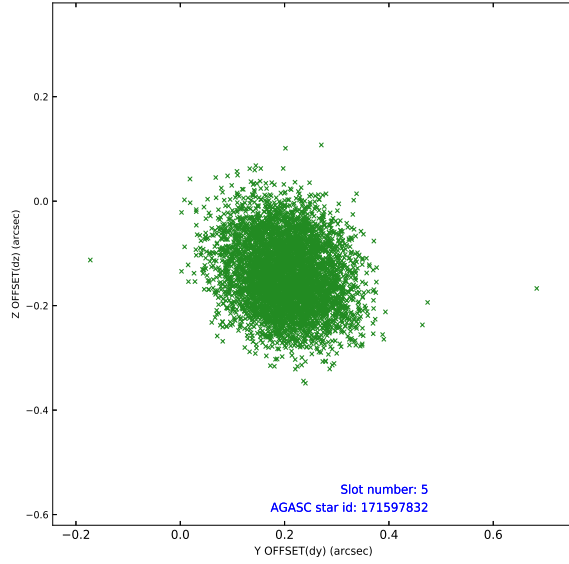
2.4.1 Slot 3



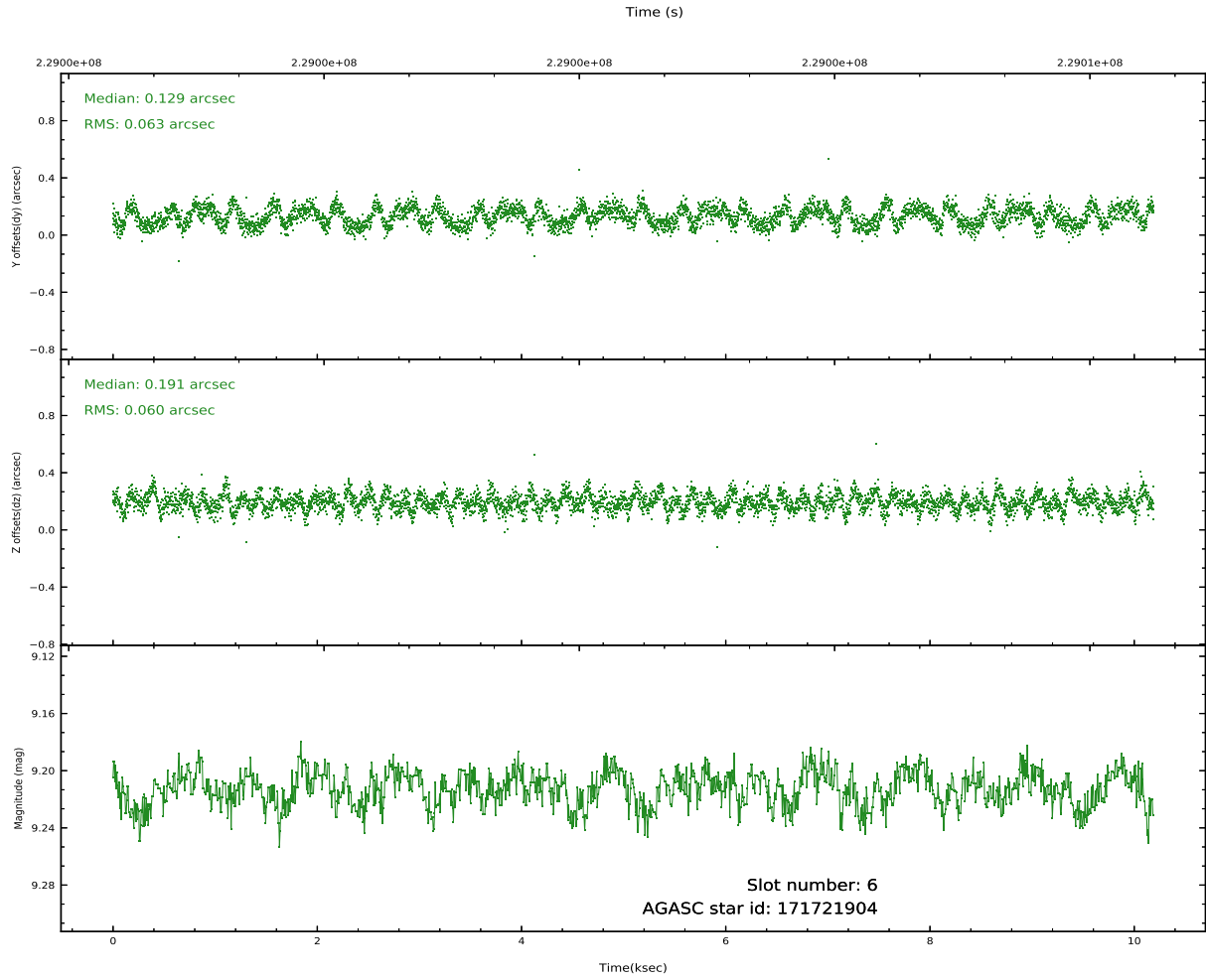
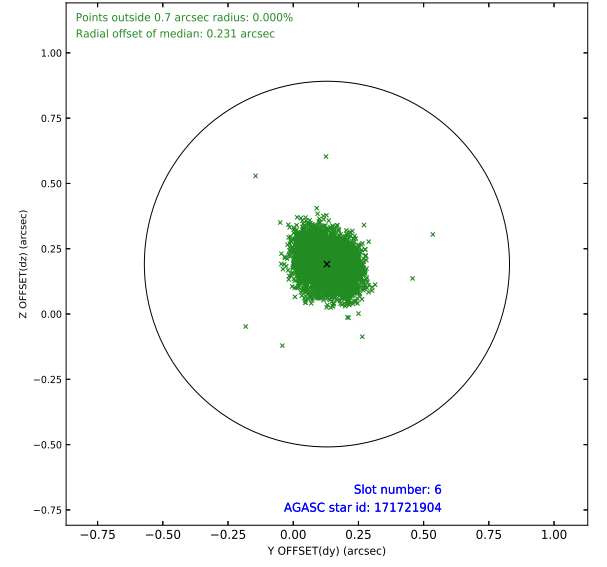
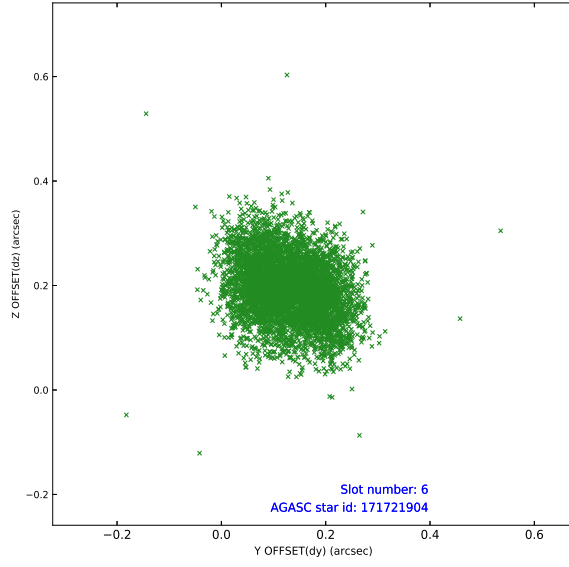
2.4.2 Slot 4



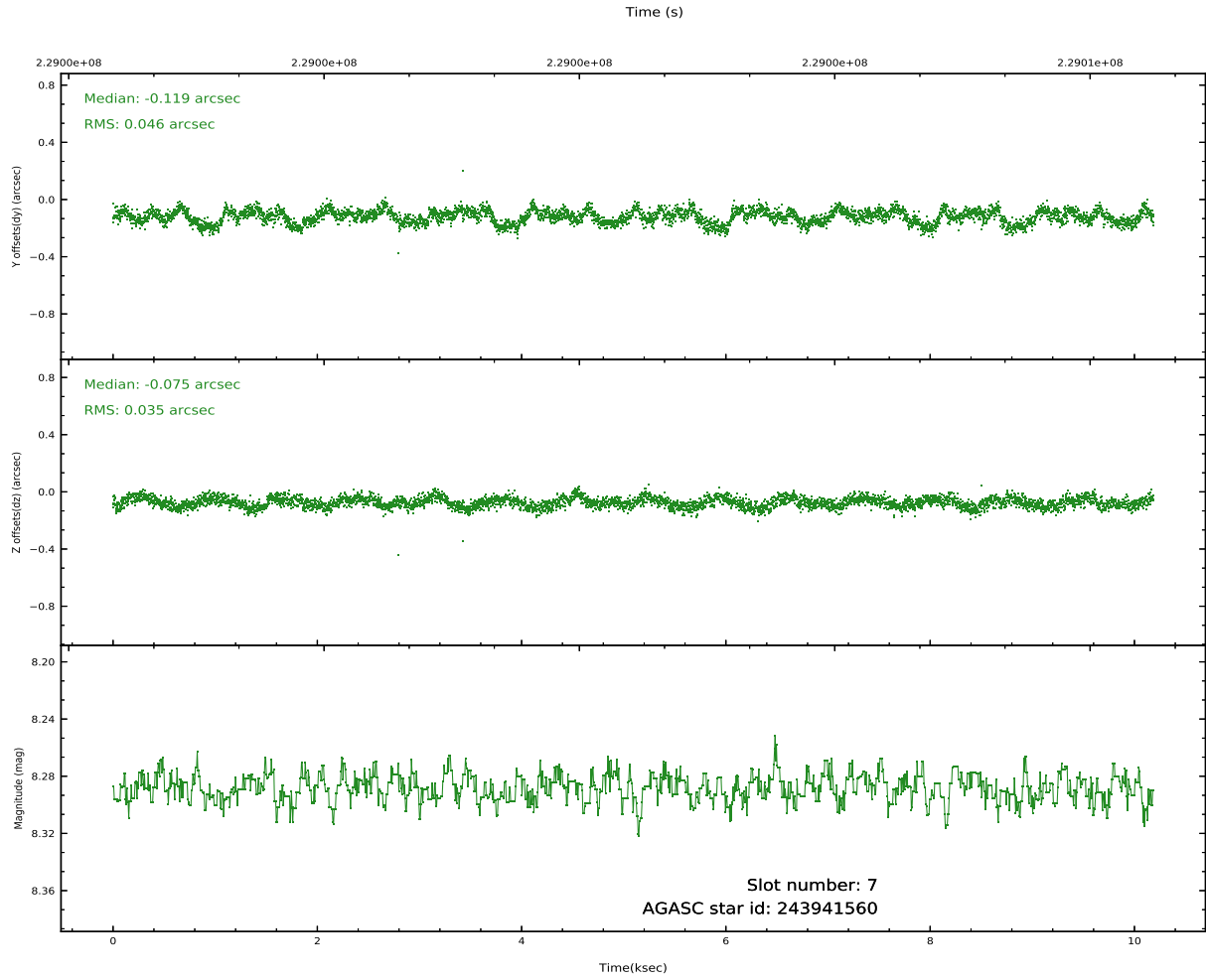
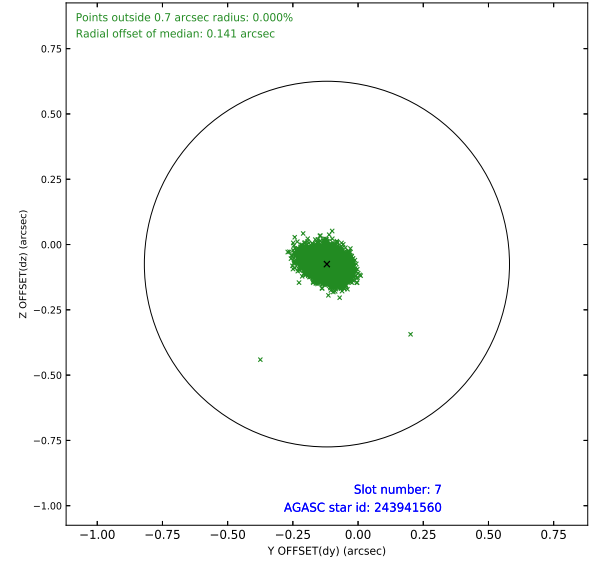
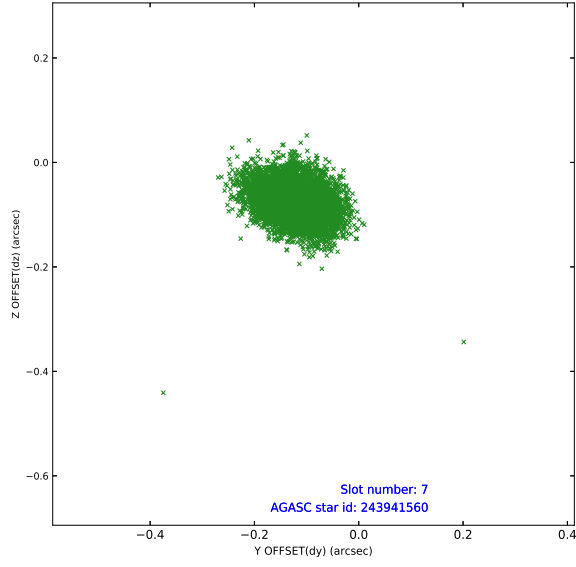
2.4.3 Slot 5



2.4.4 Slot 6

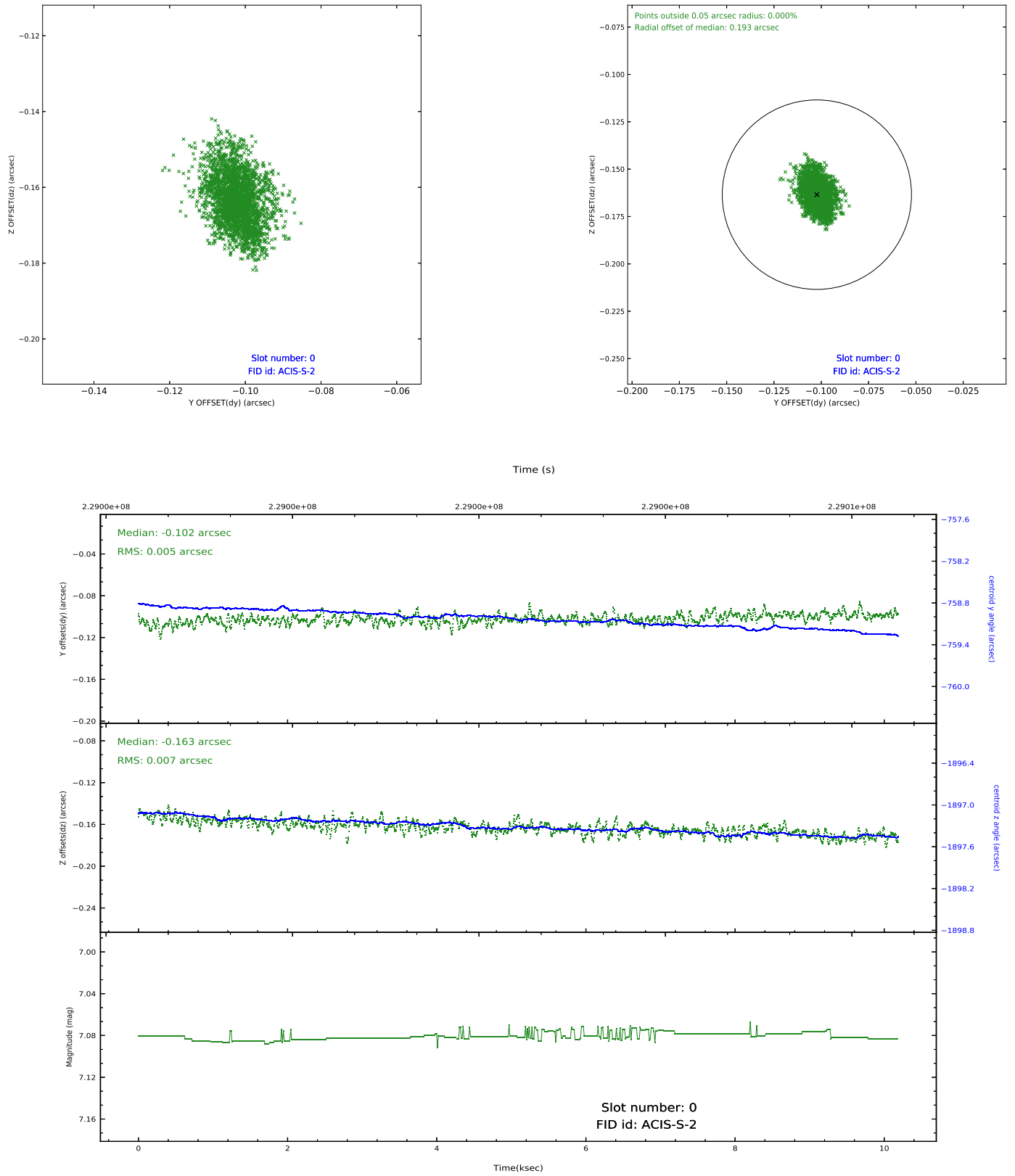


2.4.5 Slot 7

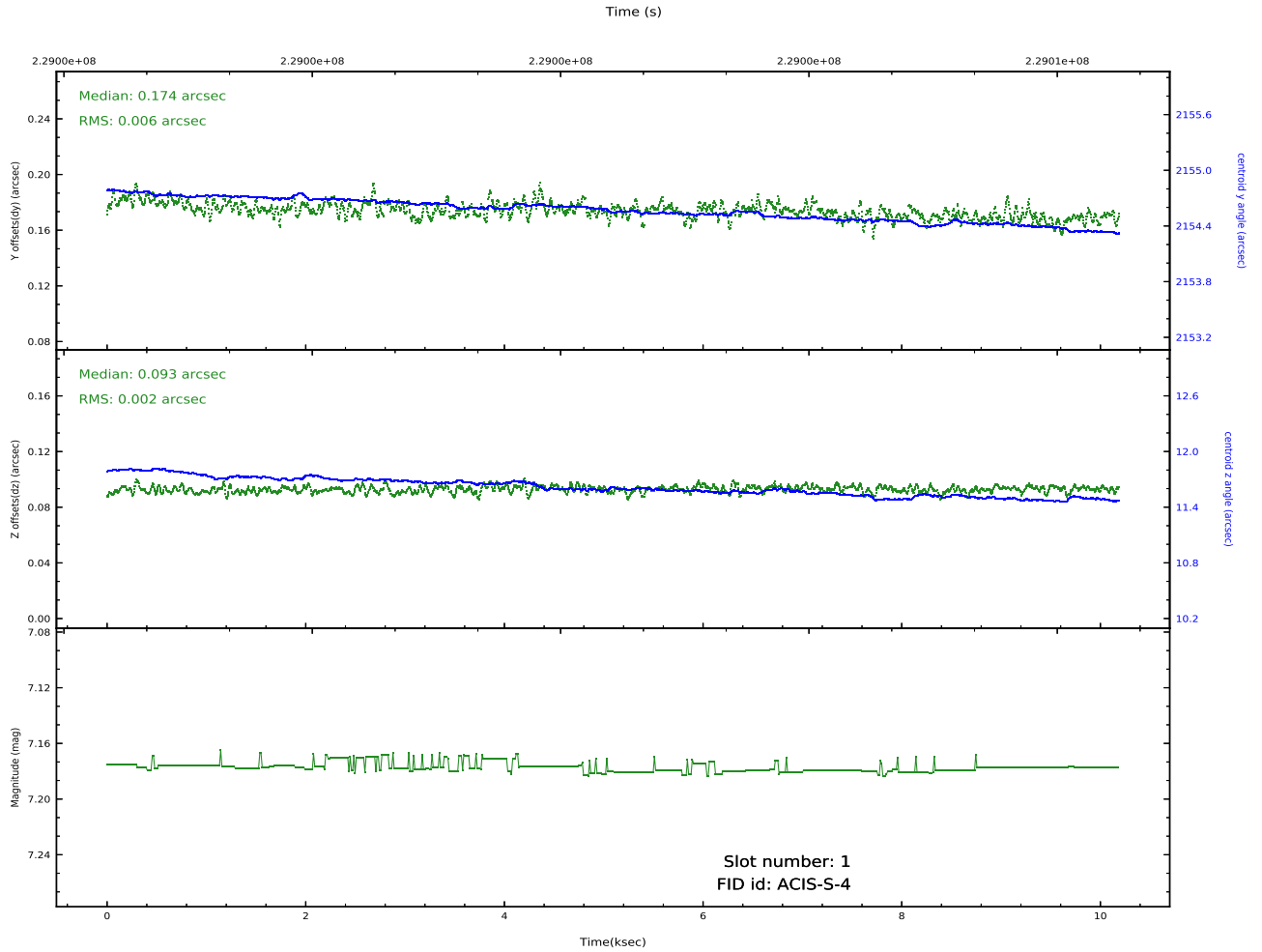
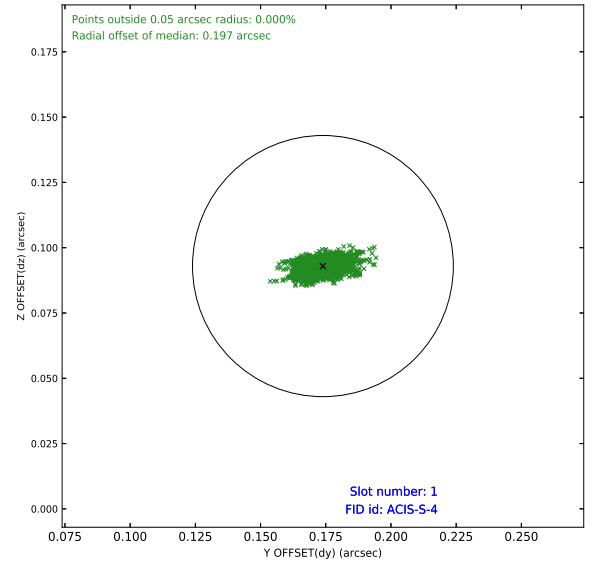
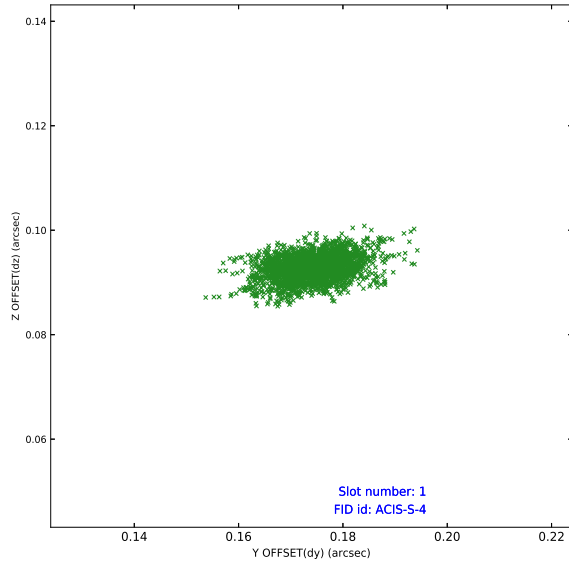


2.5 FID Slots

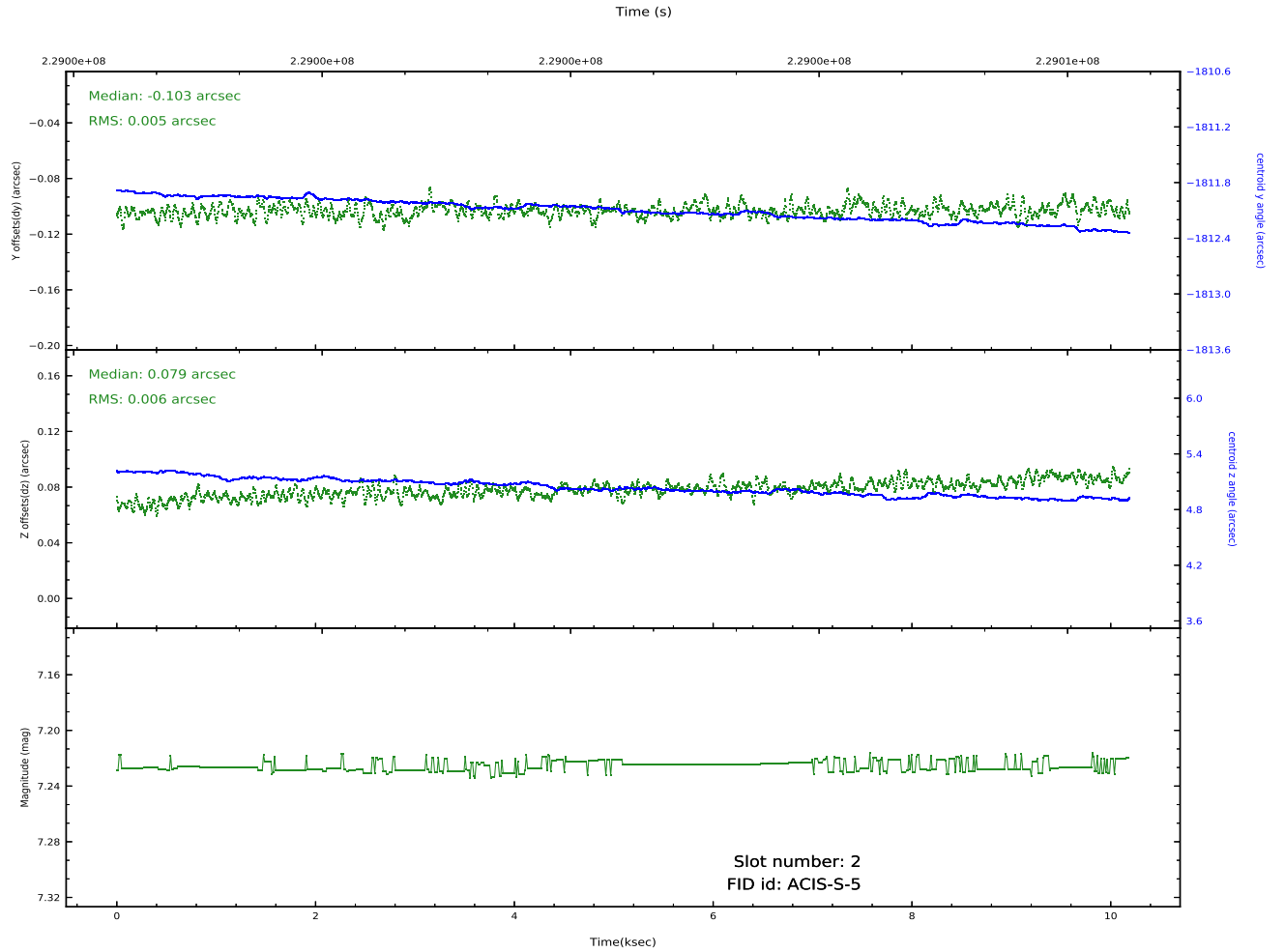
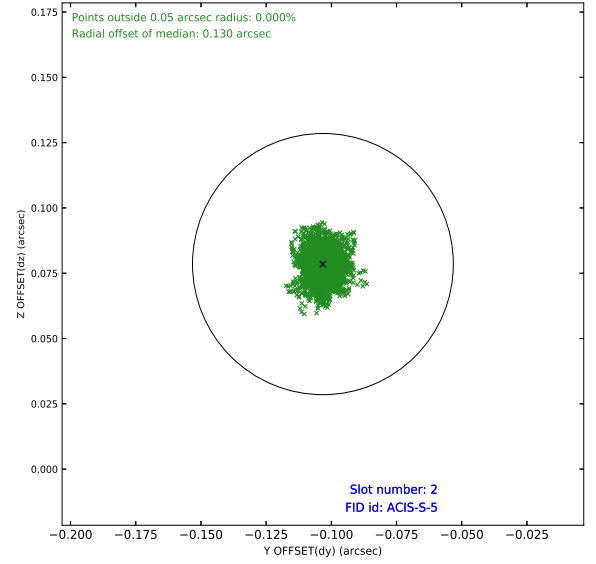
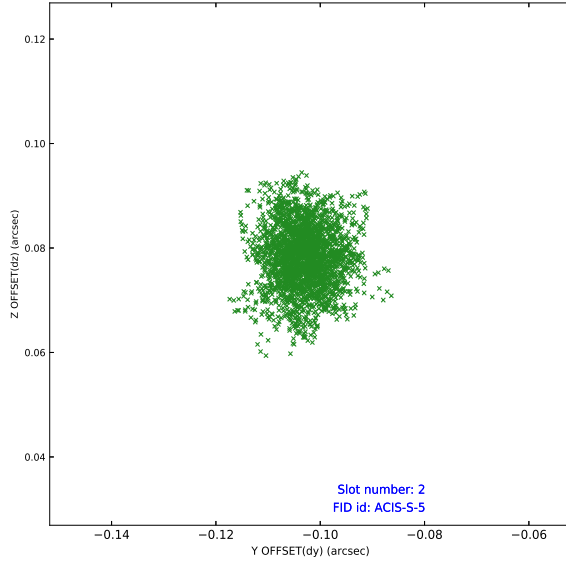
2.5.1 Slot 0



2.5.2 Slot 1

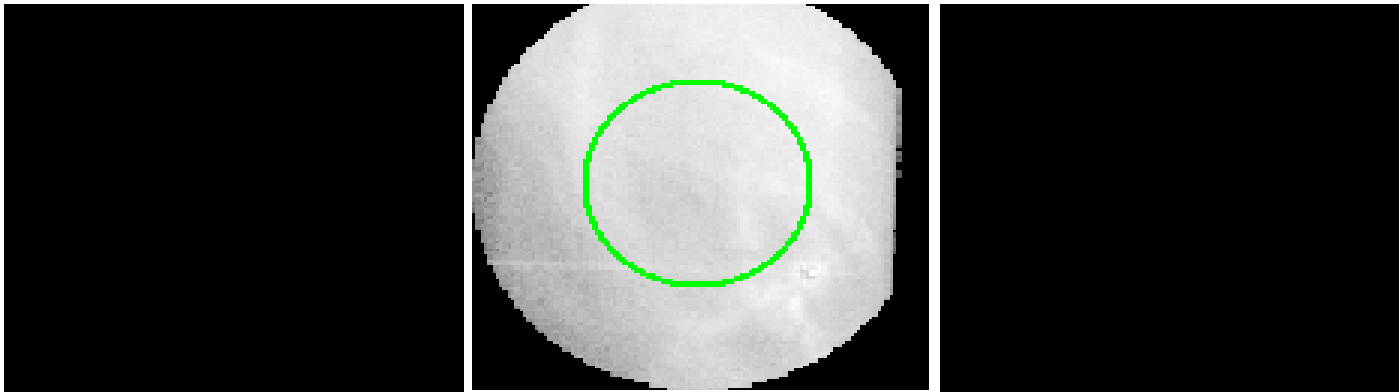


2.5.3 Slot 2



3 Gratings

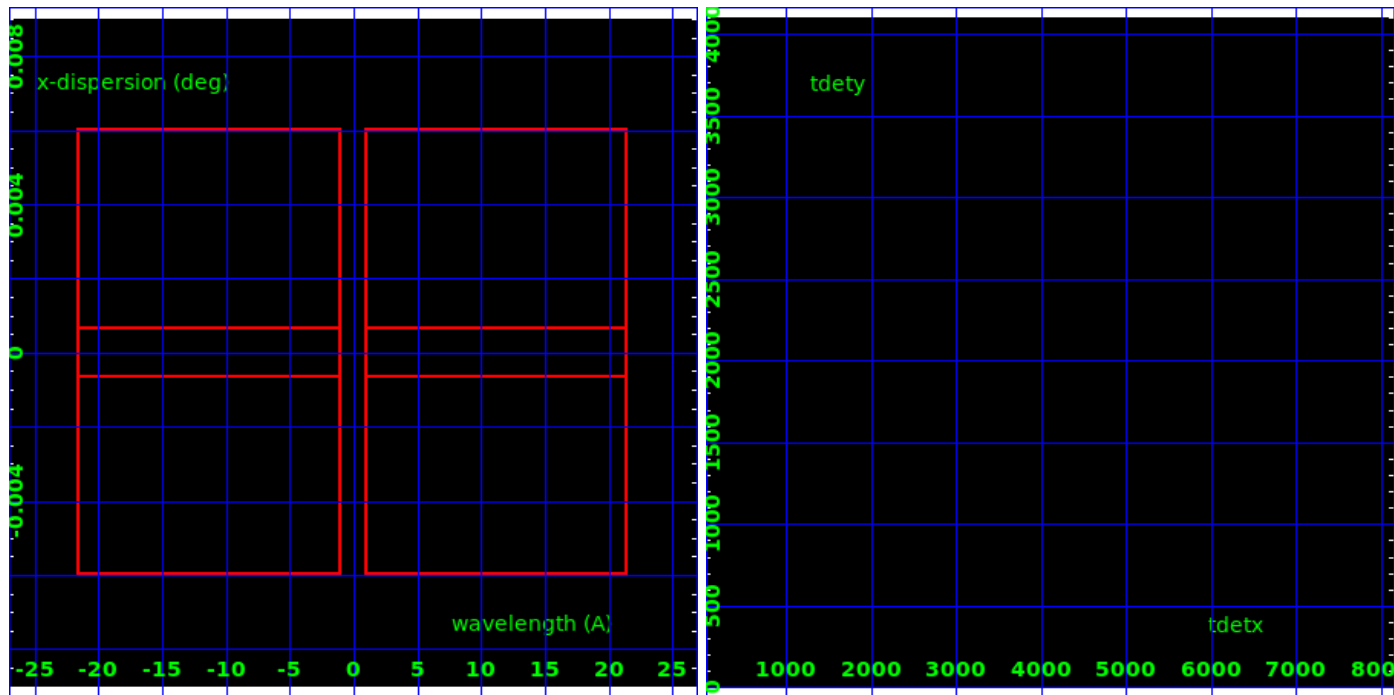
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

HEG Order Sort ALL

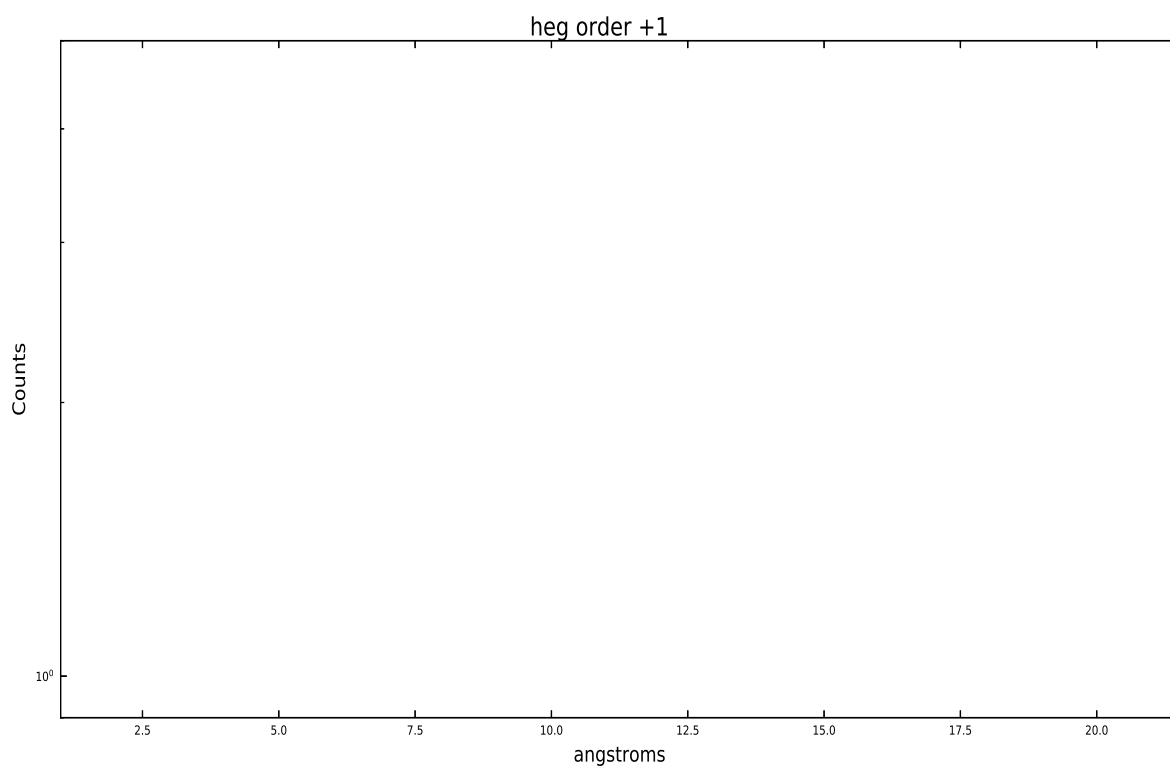
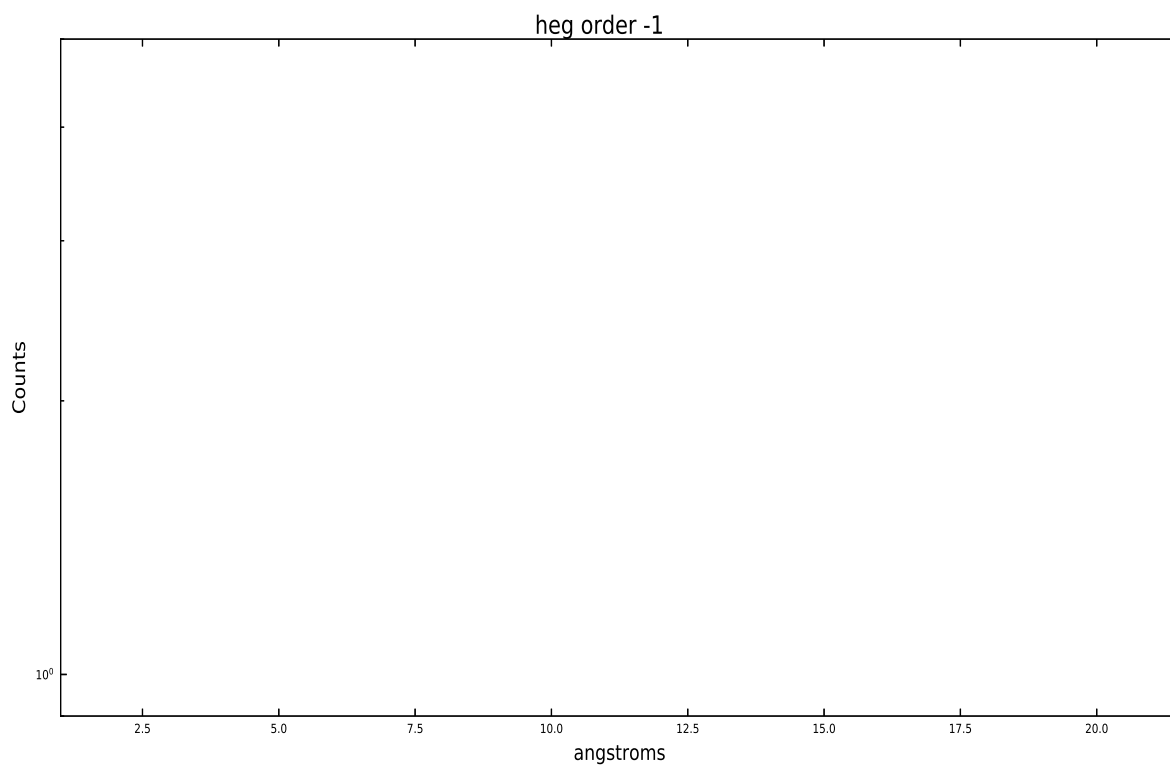


Spot Image HEG

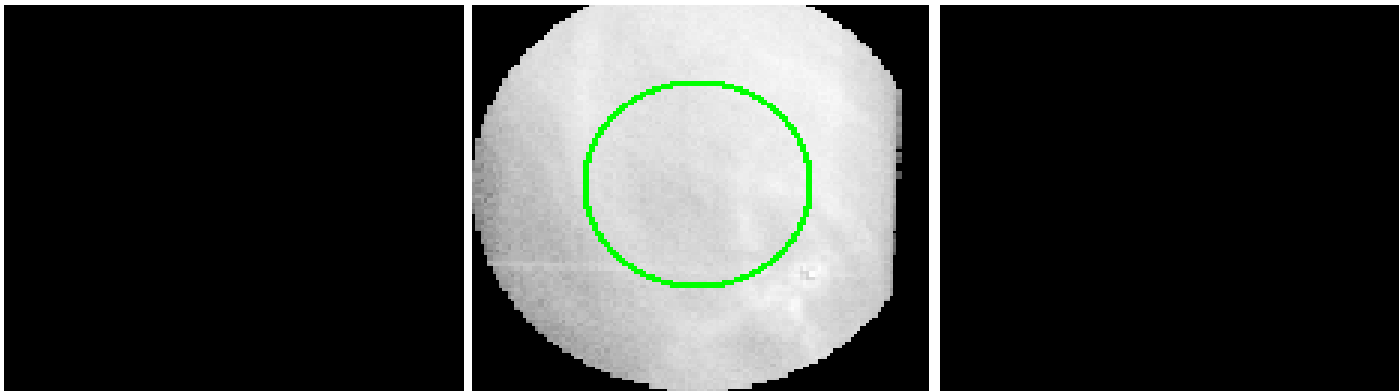
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	339451	0	0	0





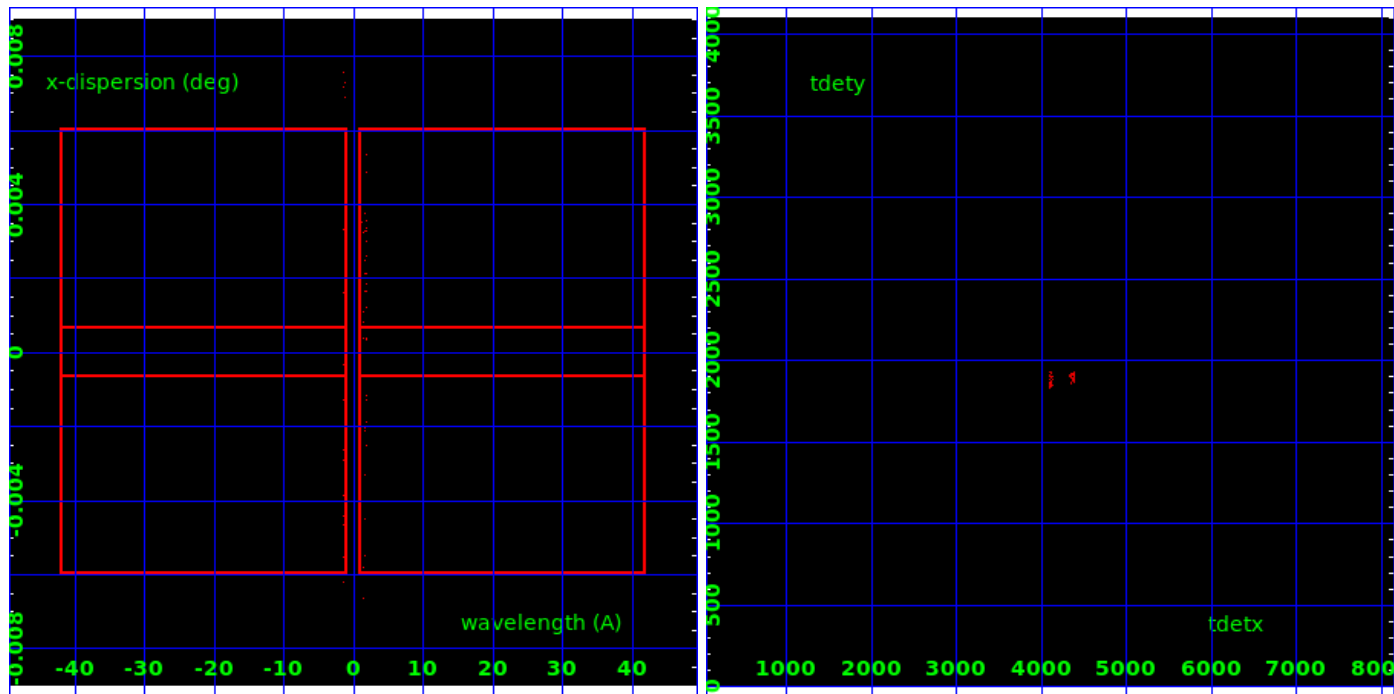
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

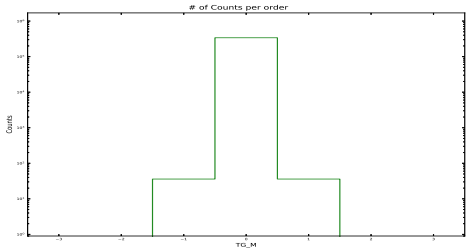
MEG Order Sort ALL

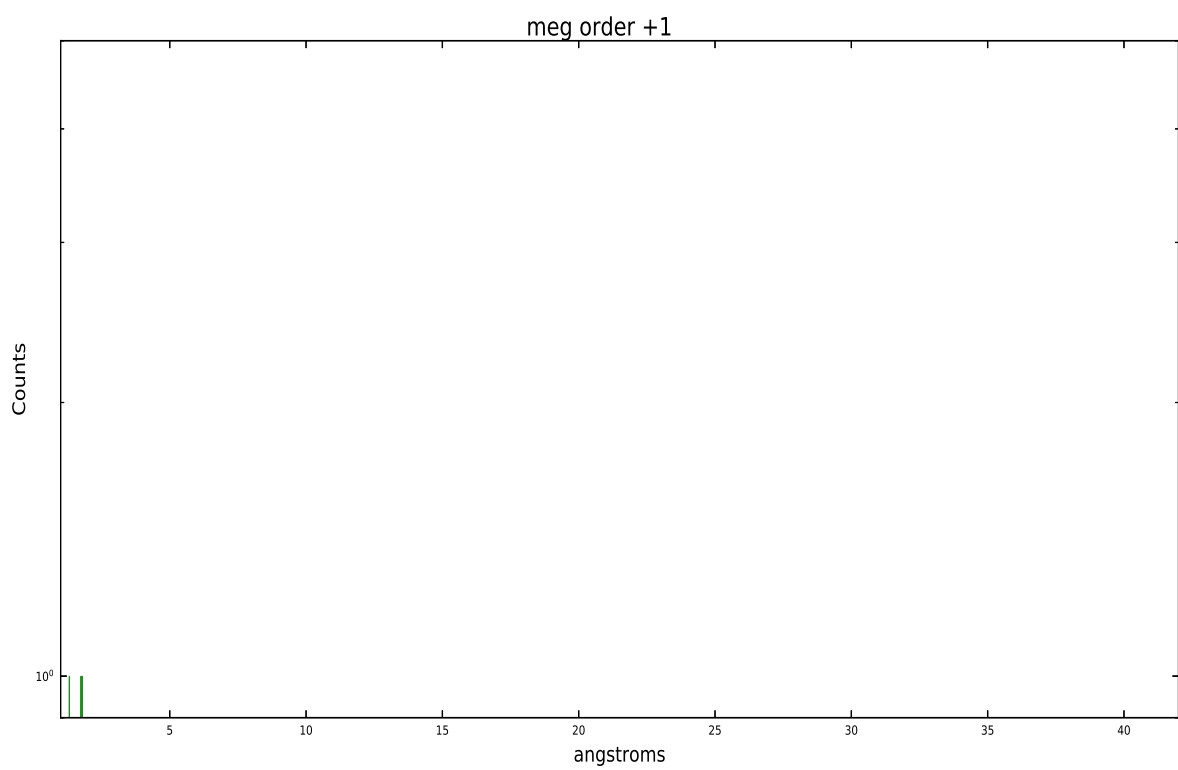
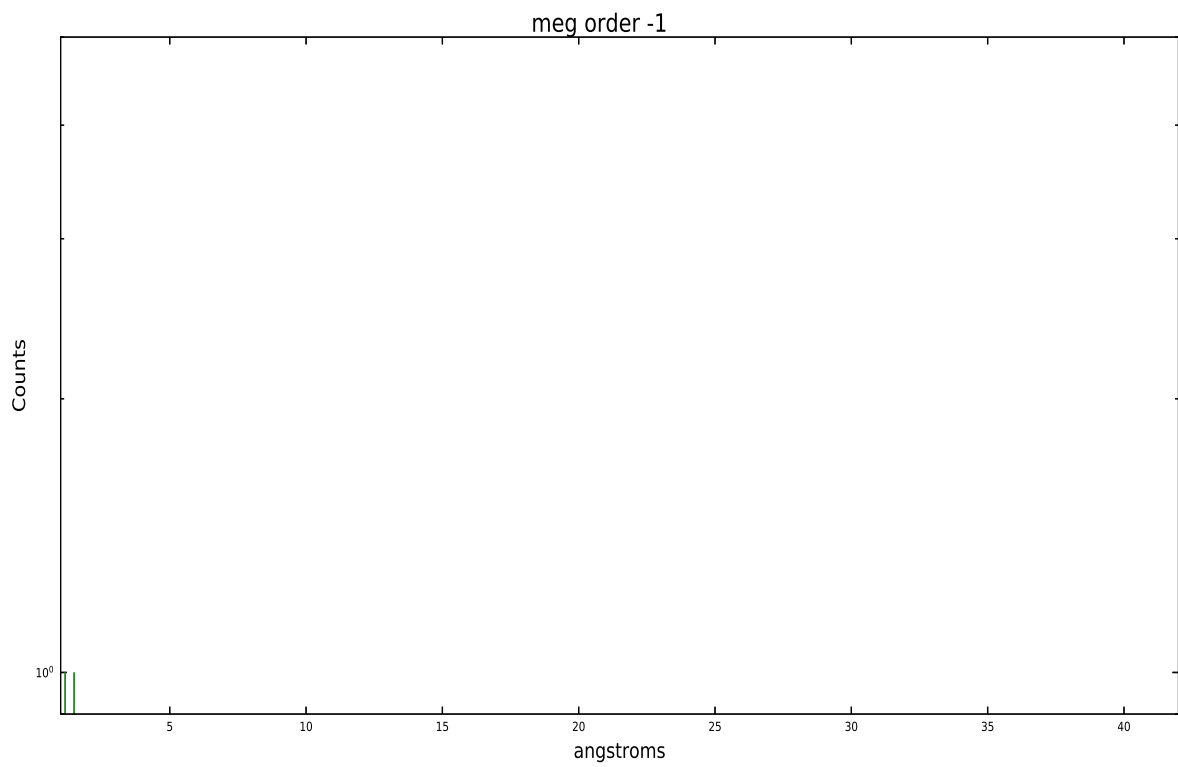


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	36	339451	36	0	0





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.8571

A.2 Comments

HETG is inserted as a filter; there is no useful gratings information in the observation. The zeroth order position used in the grating extraction is NOT at the position of the pulsar (which is not included in the pointing), but is near the edge of the subarray.