

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6140 - L2 Version 4
Chandra X-Ray Center

L2 Processing Date : Oct 7 2020

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1 Front

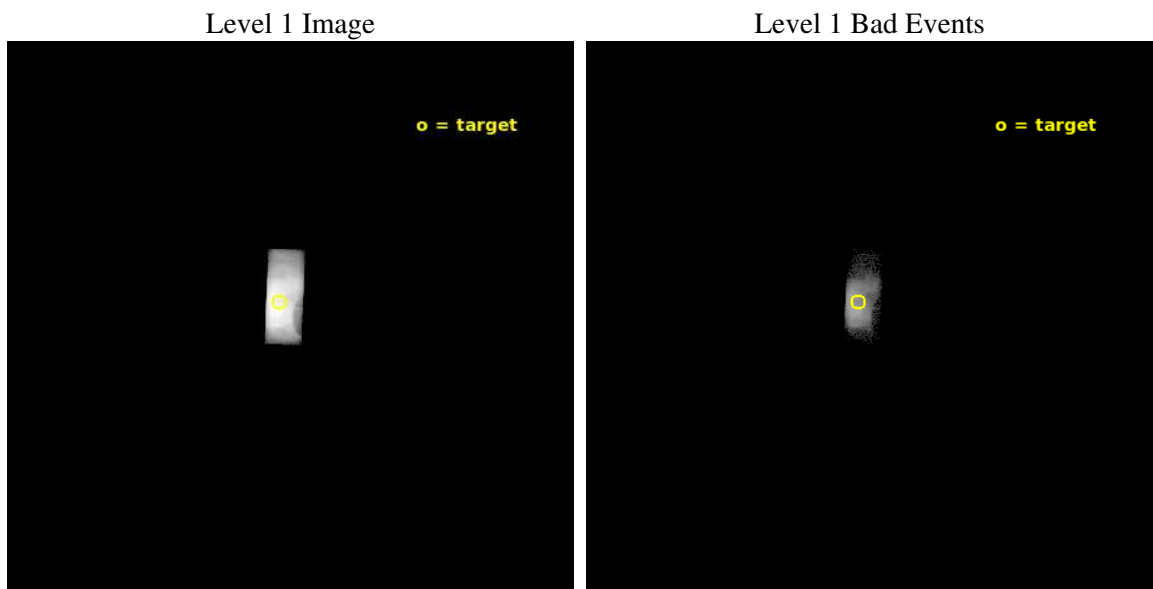
seq_num	500593	Sequence number
obs_id	6140	Observation id
title	Monitoring of the Relativistic Magnetohydrodynamic Shock in the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.62375	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.619052151474	Nominal RA [deg]
dec_nom	22.005828304557	Nominal Dec [deg]
roll_nom	272.23607585161	Nominal Roll [deg]
revision	4	Processing version of data
ontime	9853.8003915548	Sum of GTIs [s]
livetime	8668.0158264909	Livetime [s]
ontime7	9853.8003915548	Sum of GTIs [s]
l2events	1841407	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	9853.8003915548	Sum of GTIs [s]
caldsver	4.9.2	 	ontime7	9853.8003915548	Sum of GTIs [s]
date	2020-10-07T16:26:17	Date and time of file creation	l1events	1922677	Number of level 1 events
revision	4	Processing version of data	tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4064.48, 4170.72)	src1a sky pixel position
			zo_pos_tgd	(4042.20, 4193.52)	src1a sky pixel position via tgdetect

2.1.3 Events

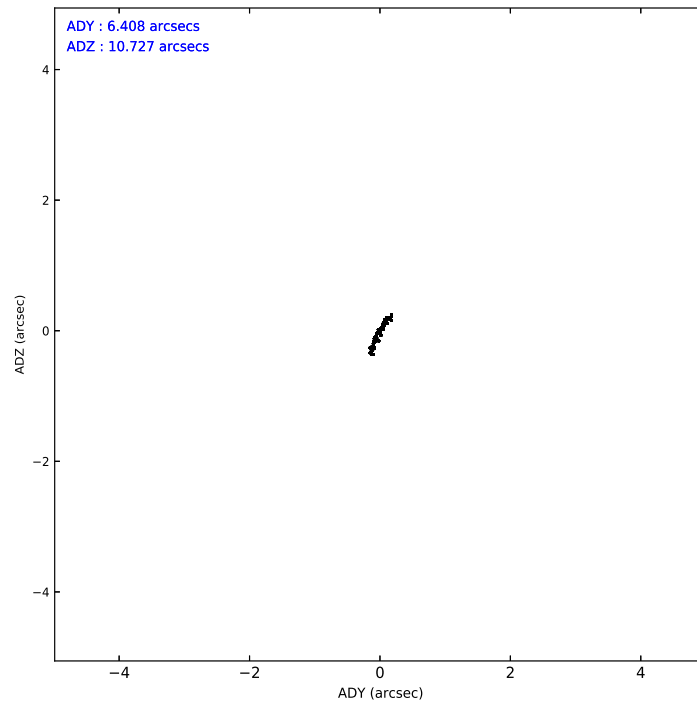
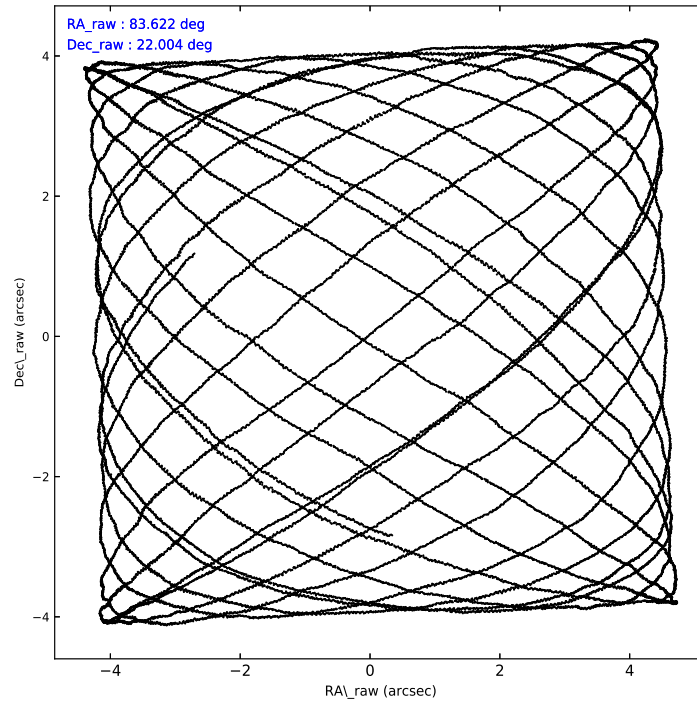
	ccd 7
level 1 events	1922677
rejected events	56925
rejected %	2%

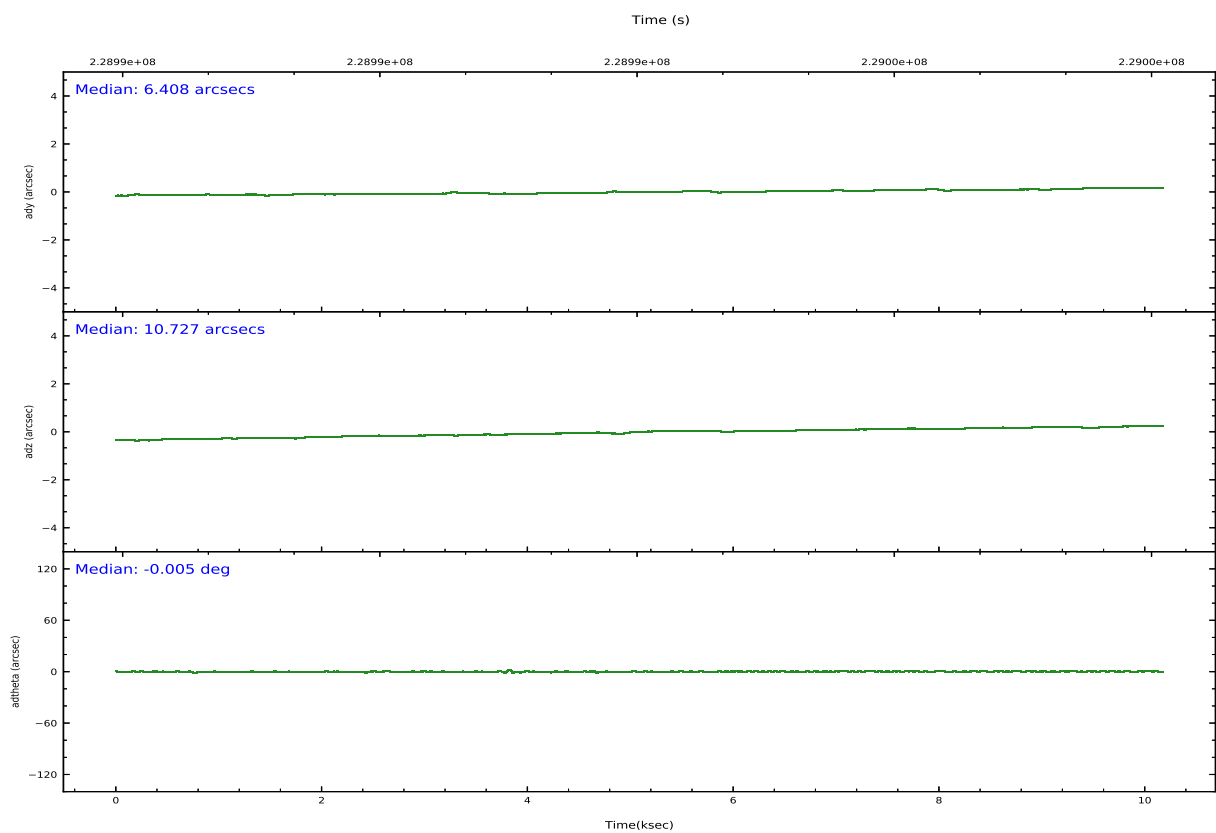
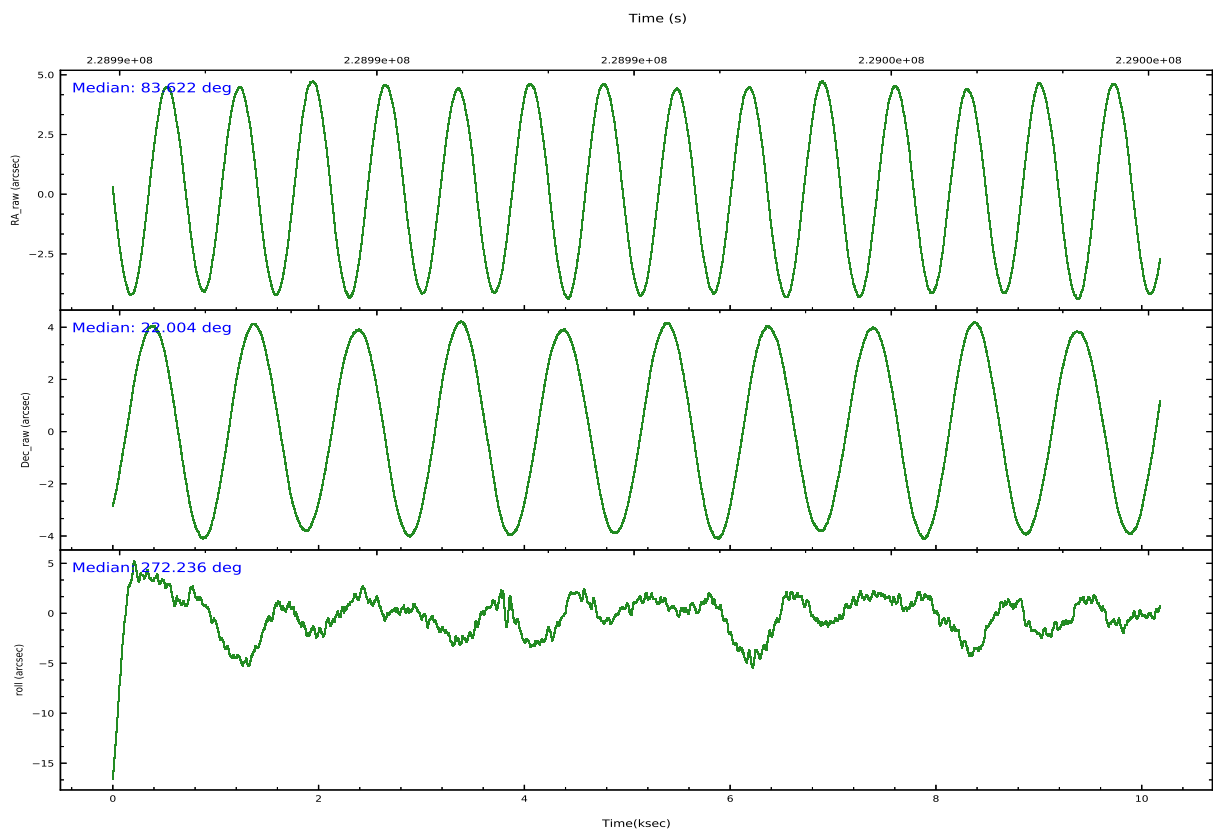
	ccd 7
grade 0 events	376599
	19%
grade 1 events	5538
	0%
grade 2 events	474924
	24%
grade 3 events	213152
	11%
grade 4 events	205048
	10%
grade 5 events	24283
	1%
grade 6 events	596146
	31%
grade 7 events	26987
	1%

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	83.606433	83.61905215147399	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.026899	22.005828304557	Subarray start row	127	127
[deg] Pointing Roll	272.085598	272.23607585161	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)	228987613.184000	228987237.26428			
Observation start date	2005-04-04T07:39:09	2005-04-04T07:33:57			
[s] Observation end time (MET)	228997613.184000	228997747.61476			
Observation end date	2005-04-04T10:25:49	2005-04-04T10:29:07			
Read mode	TIMED	TIMED			

2.3 Aspect



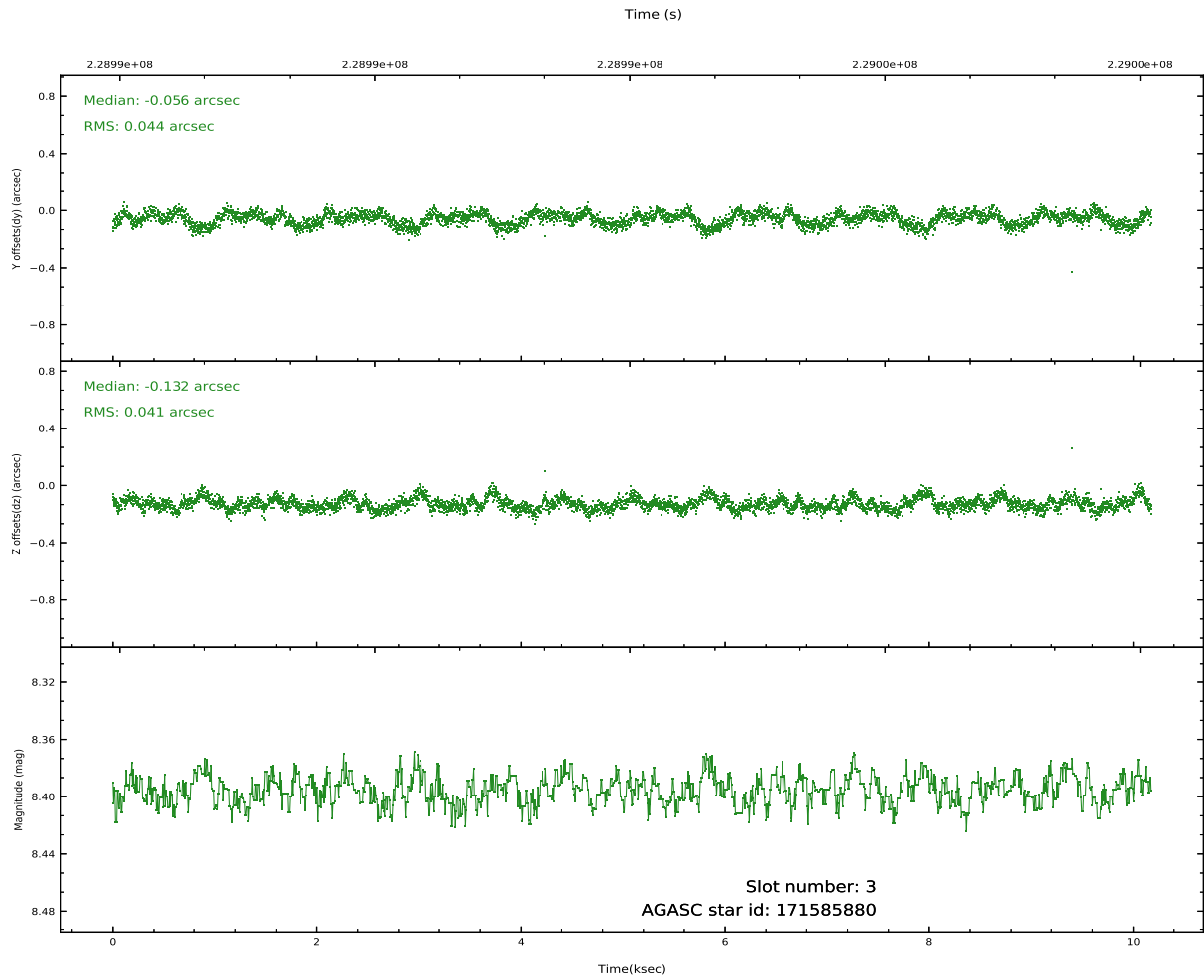
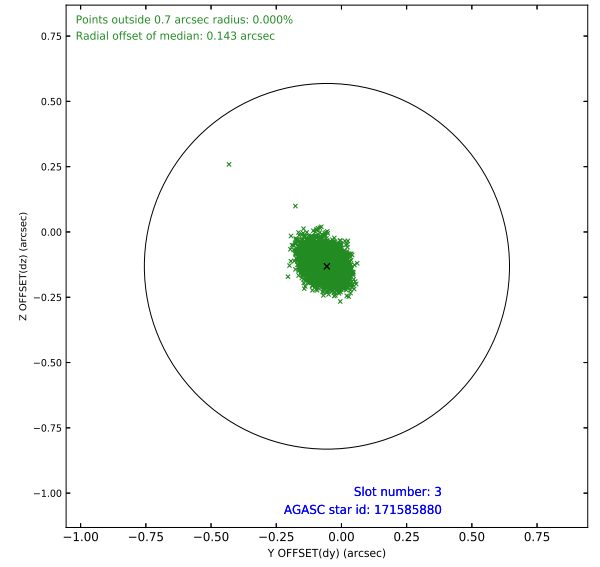
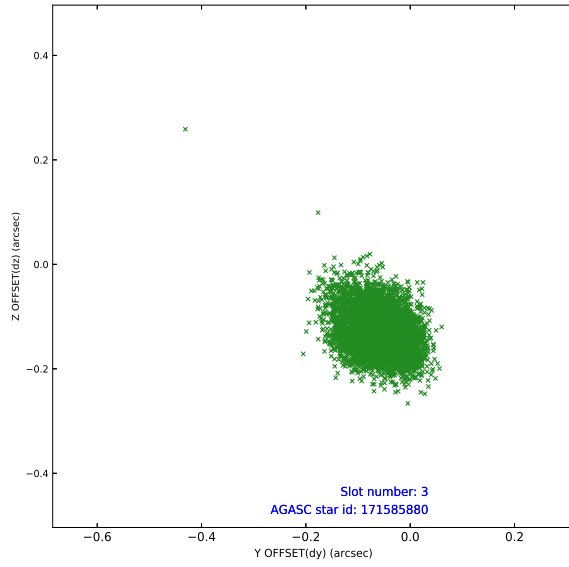


Slot Statistics

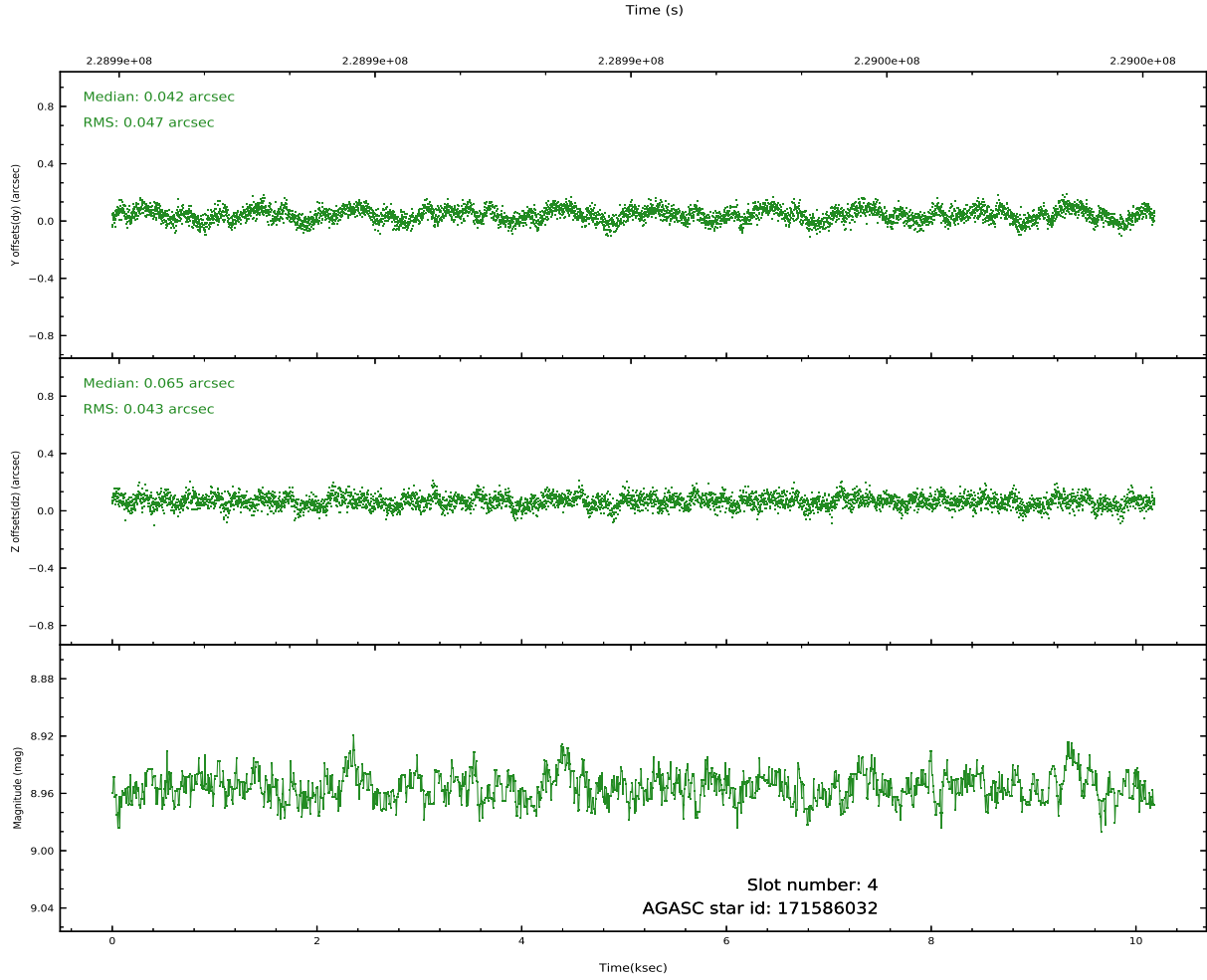
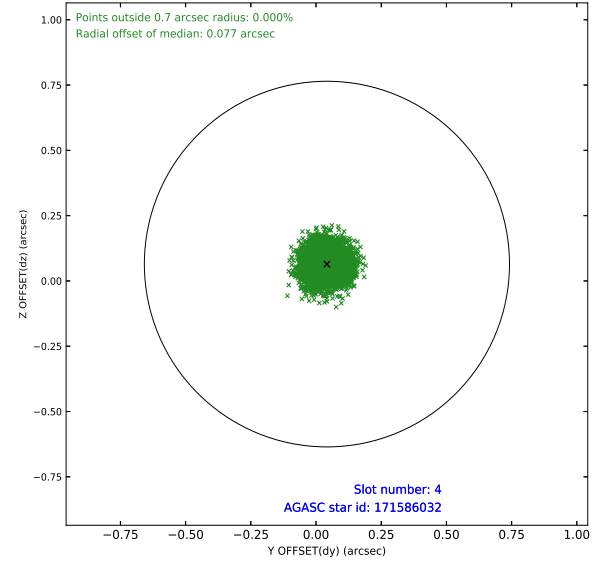
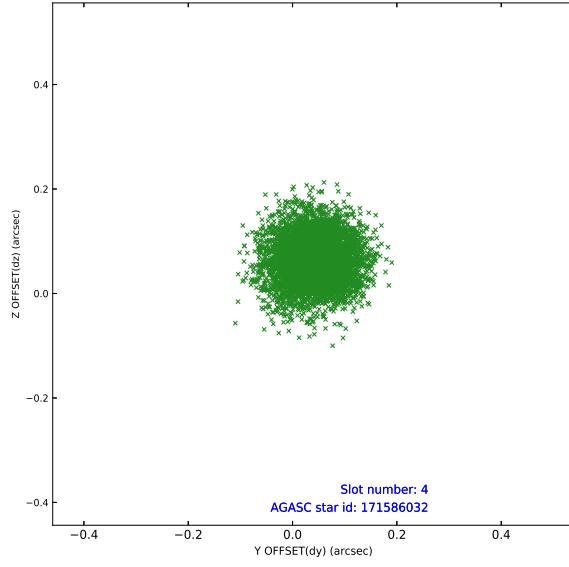
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.09	2483	1.000	-0.114	-0.148	0.011	0.017	0.000000	0.000000	-758.64	-1896
1	FID		ACIS-S-4	7.18	2483	1.000	0.201	0.094	0.010	0.021	0.000000	0.000000	2154.68	11
2	FID		ACIS-S-5	7.23	2483	1.000	-0.117	0.062	0.012	0.018	0.000000	0.000000	-1810.85	5
3	GUIDE	used	171585880	8.40	4967	1.000	-0.056	-0.132	0.063	0.103	83.676260	22.176319	-528.89	252
4	GUIDE	used	171586032	8.96	4962	1.000	0.042	0.065	0.068	0.109	83.950197	22.083225	-162.03	1153
5	GUIDE	used	171597832	9.17	4965	1.000	0.157	-0.103	0.100	0.157	83.183230	21.366702	2322.16	-1503
6	GUIDE	used	171721904	9.21	4966	1.000	0.054	0.192	0.100	0.155	84.272676	22.116922	-247.28	2232
7	GUIDE	used	243941560	8.30	4963	1.000	-0.193	-0.024	0.047	0.079	83.733264	22.568598	-1933.59	492

2.4 Star Slots

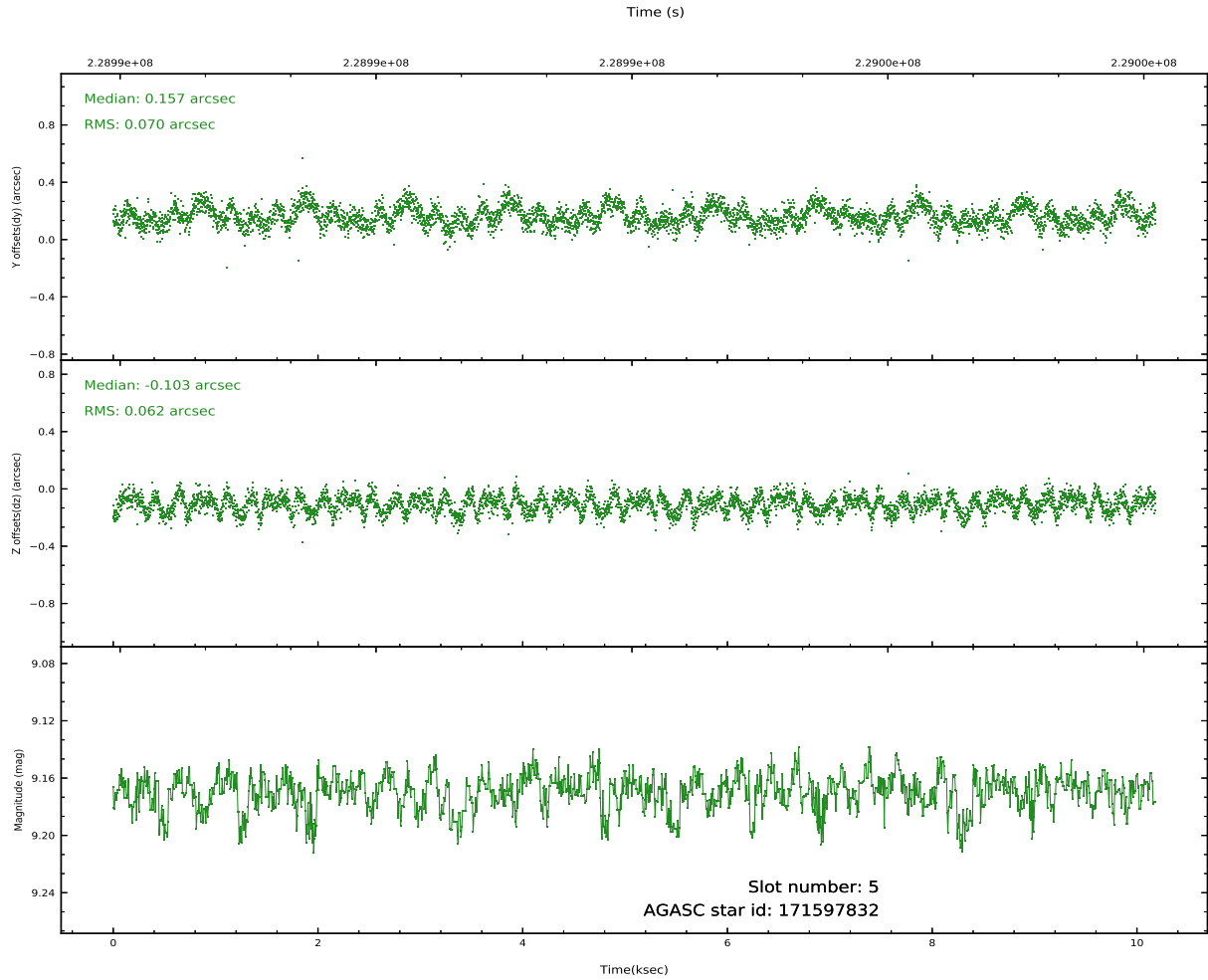
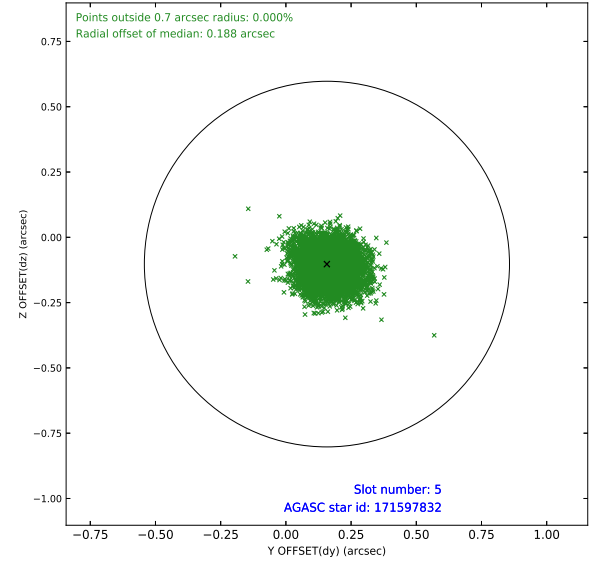
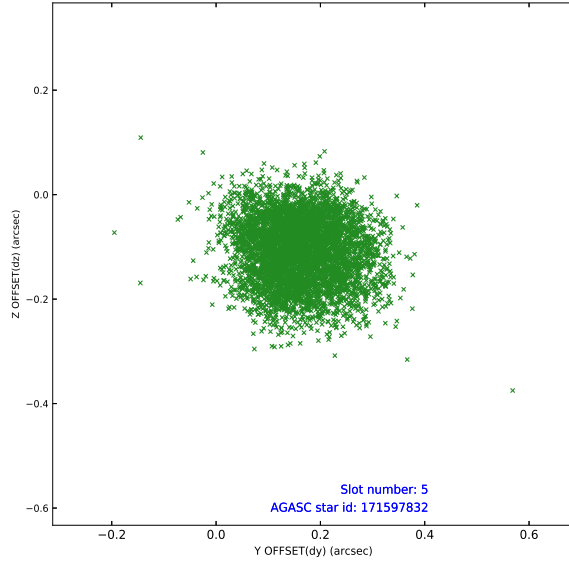
2.4.1 Slot 3



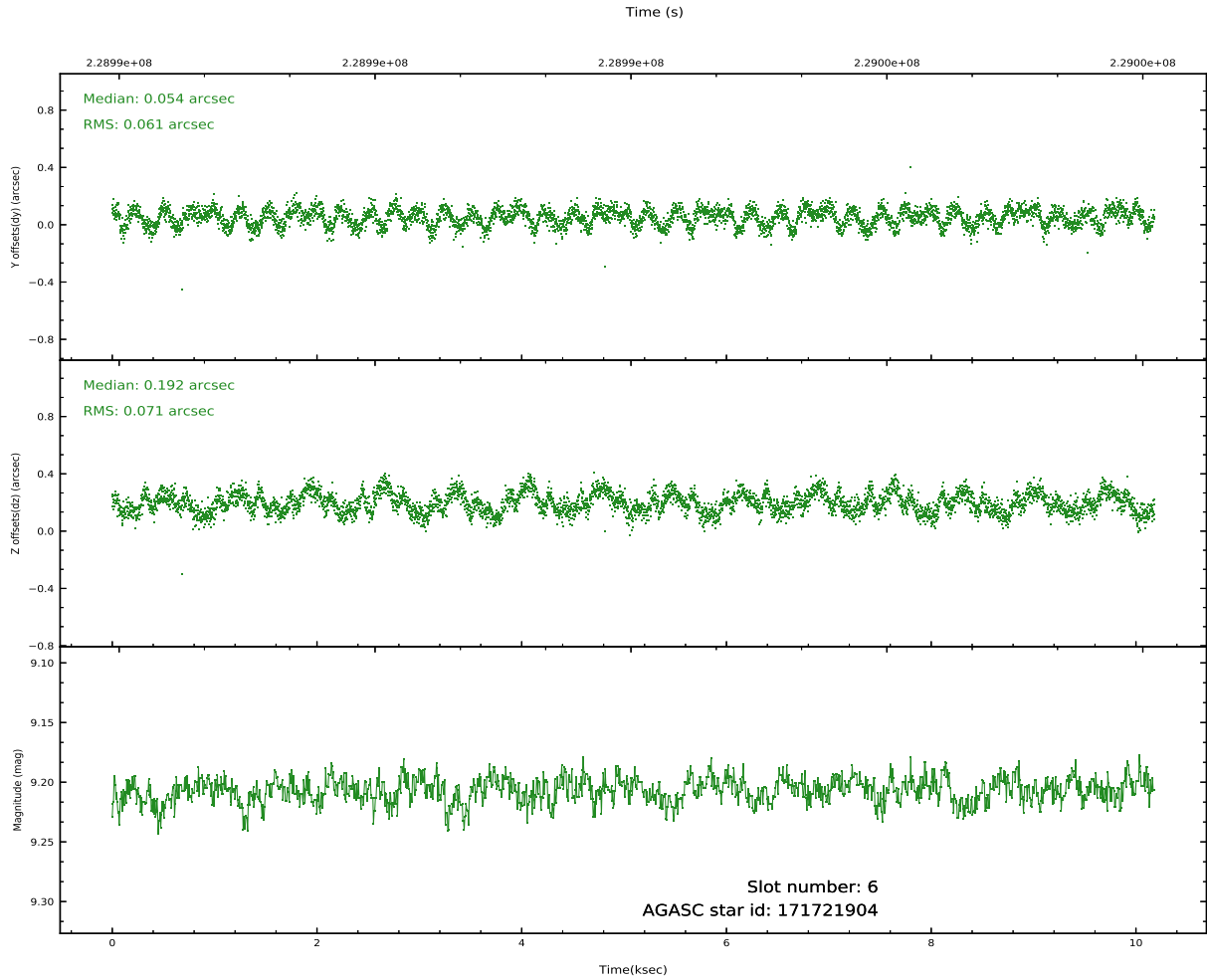
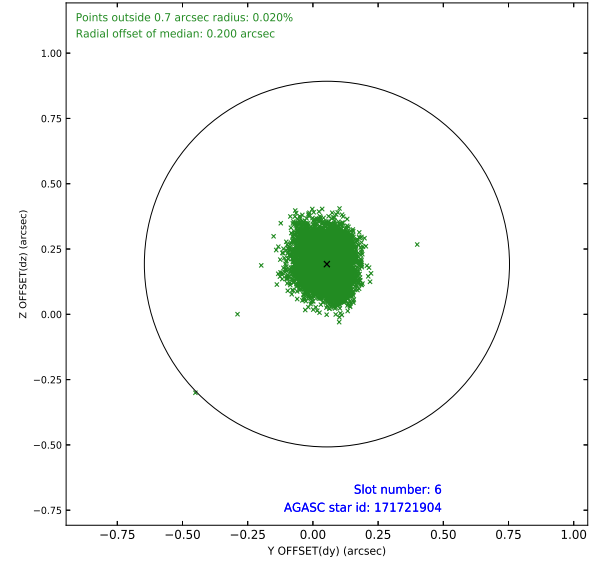
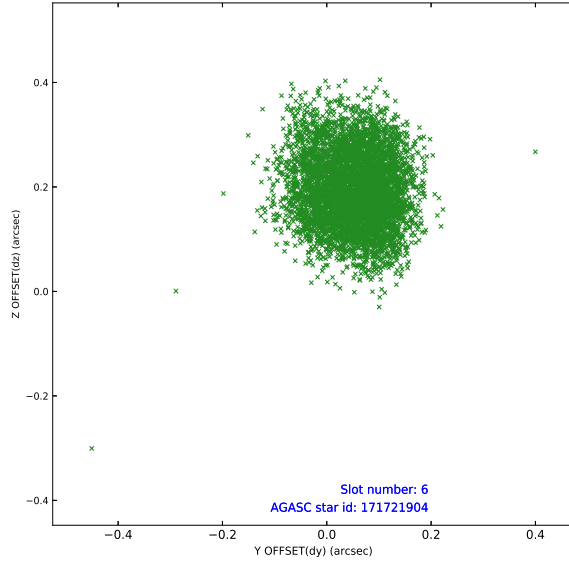
2.4.2 Slot 4



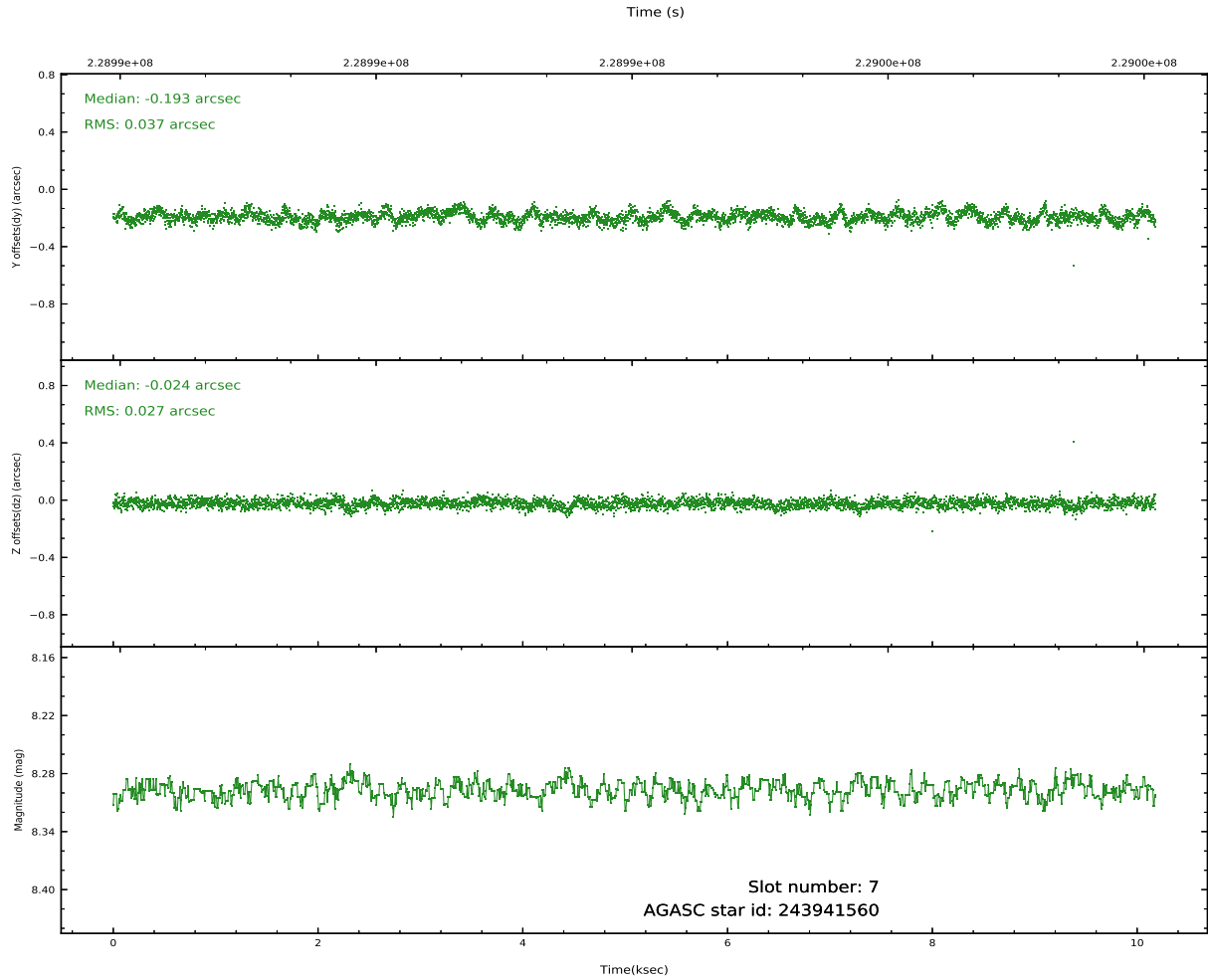
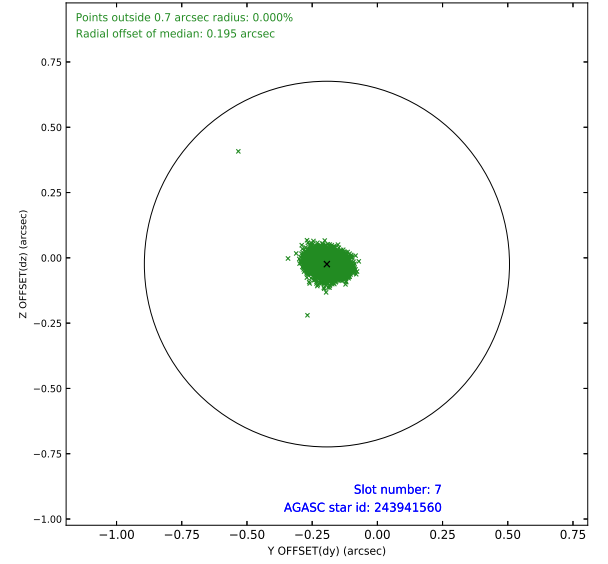
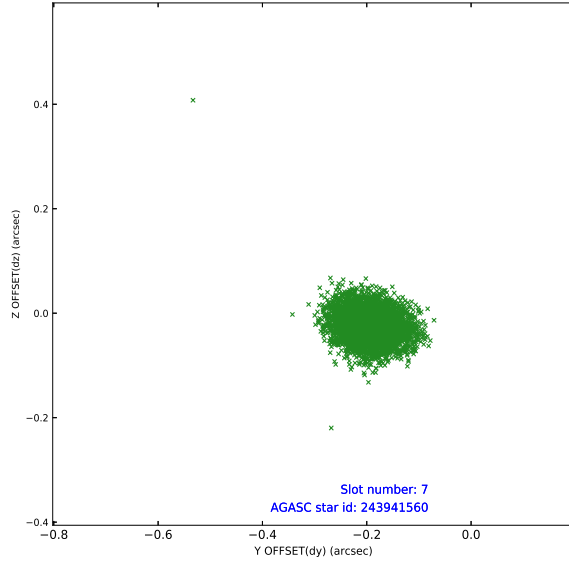
2.4.3 Slot 5



2.4.4 Slot 6

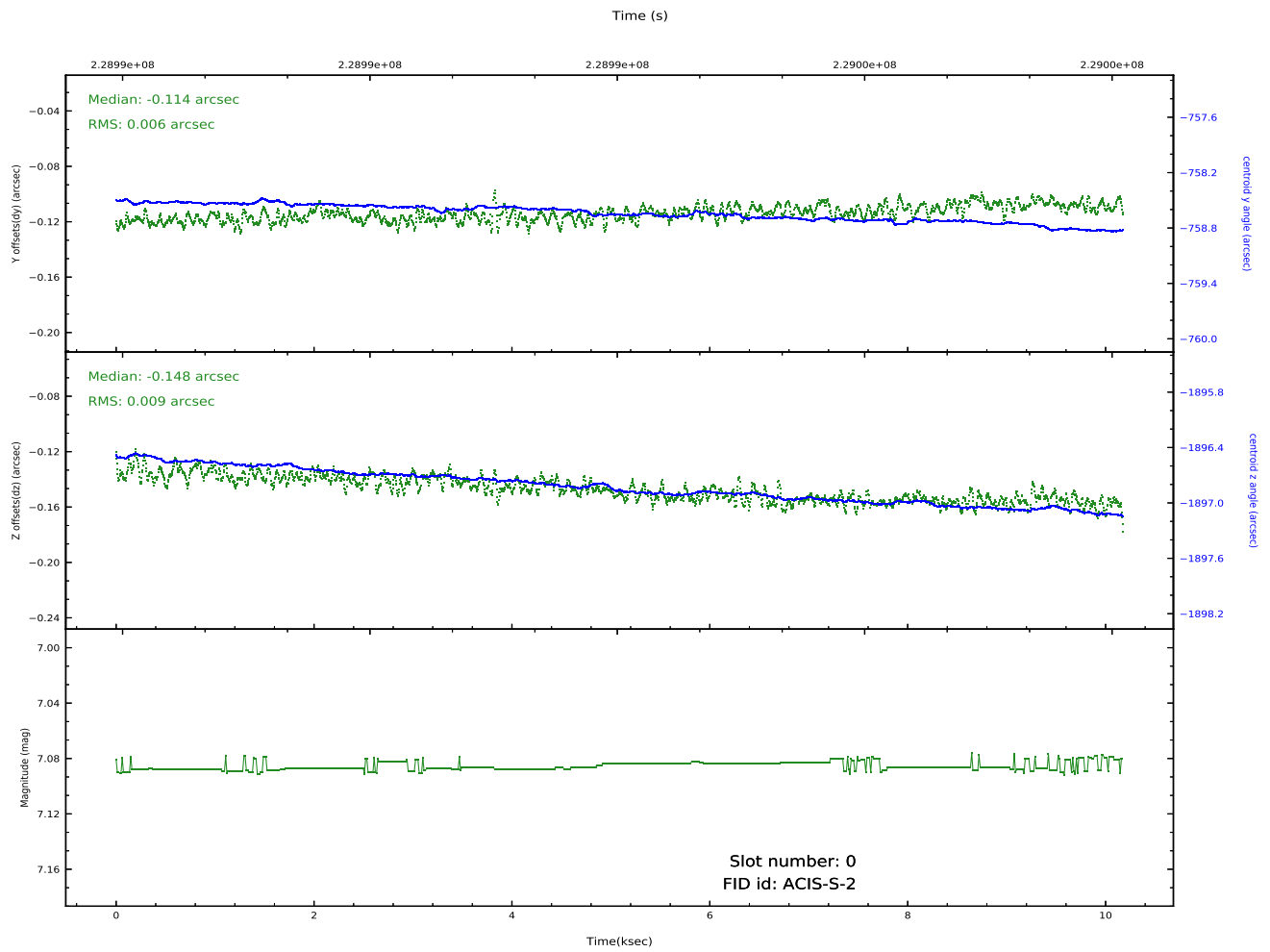
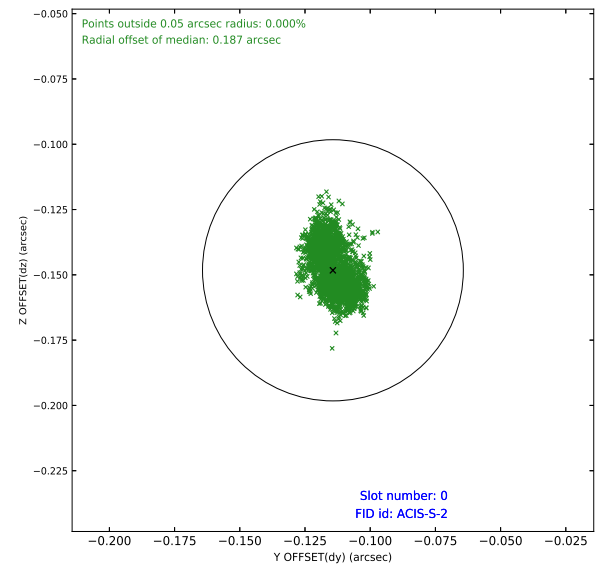
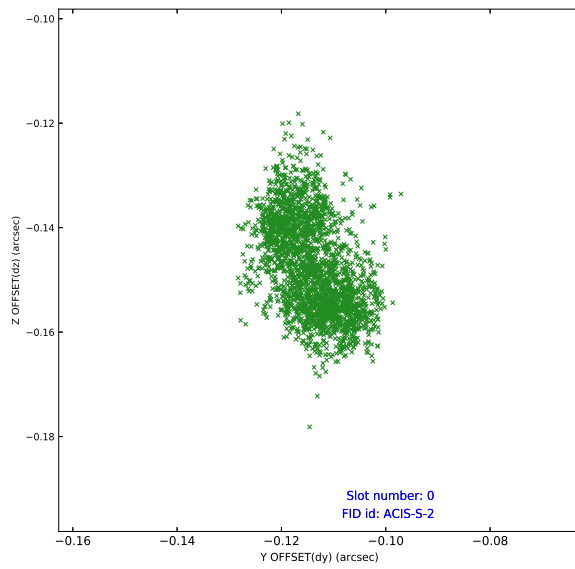


2.4.5 Slot 7

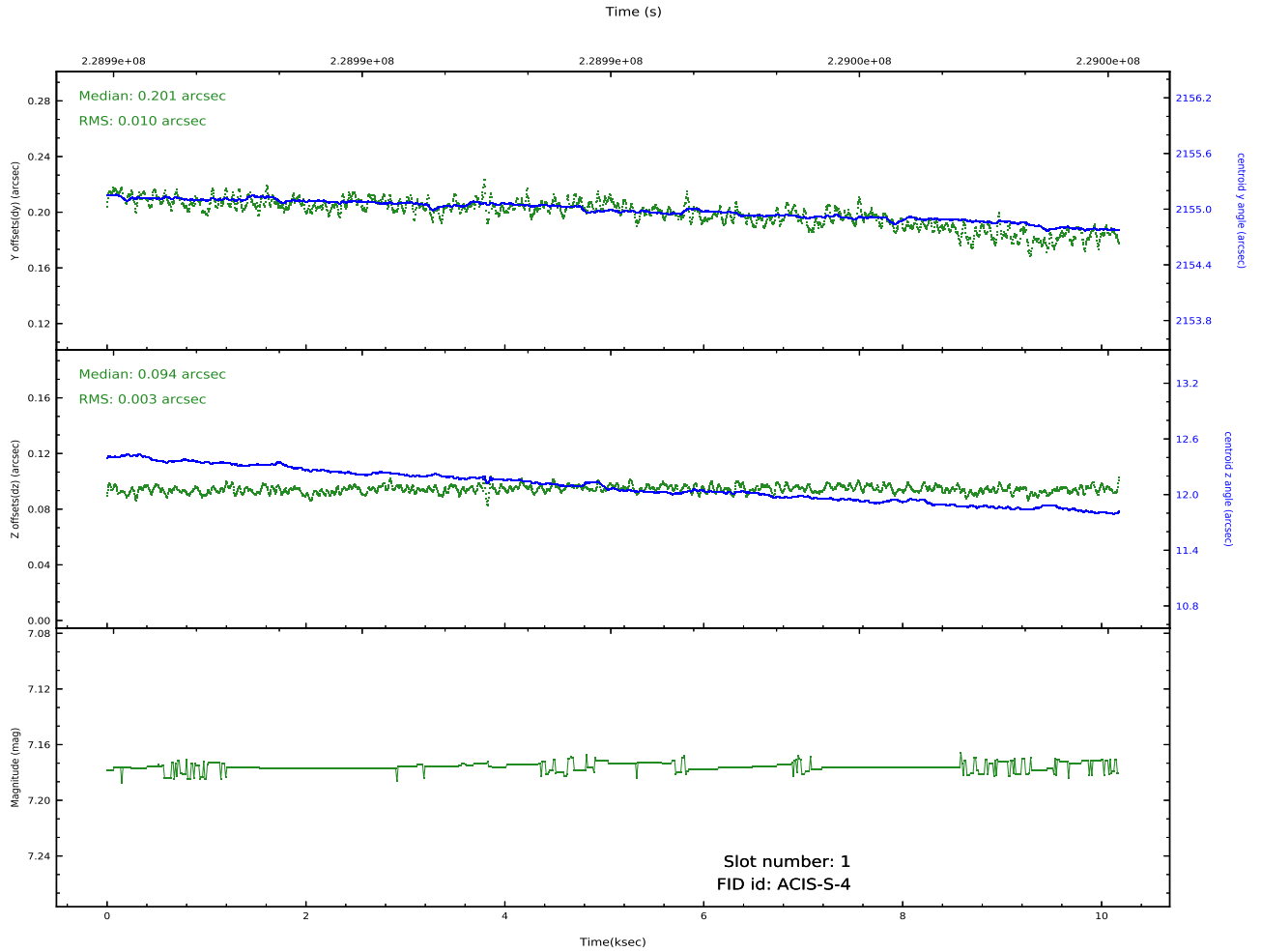
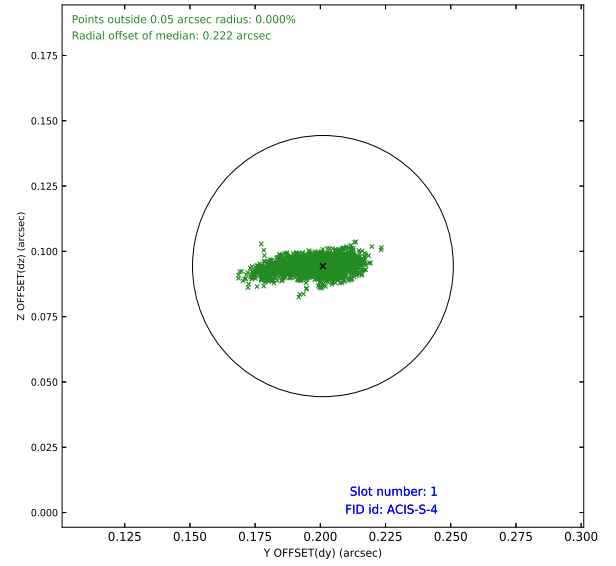
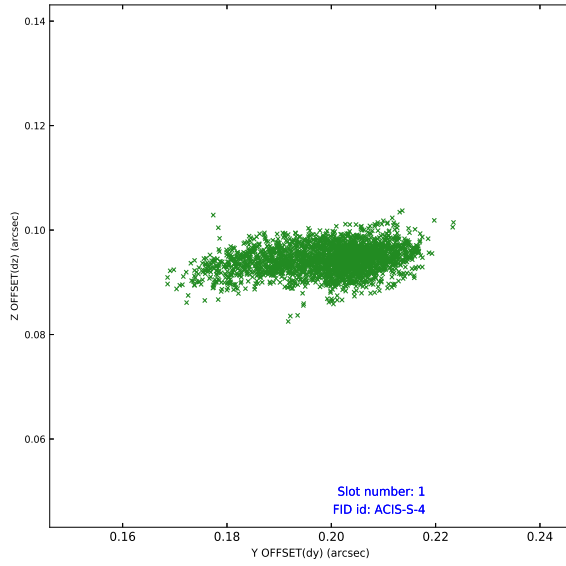


2.5 FID Slots

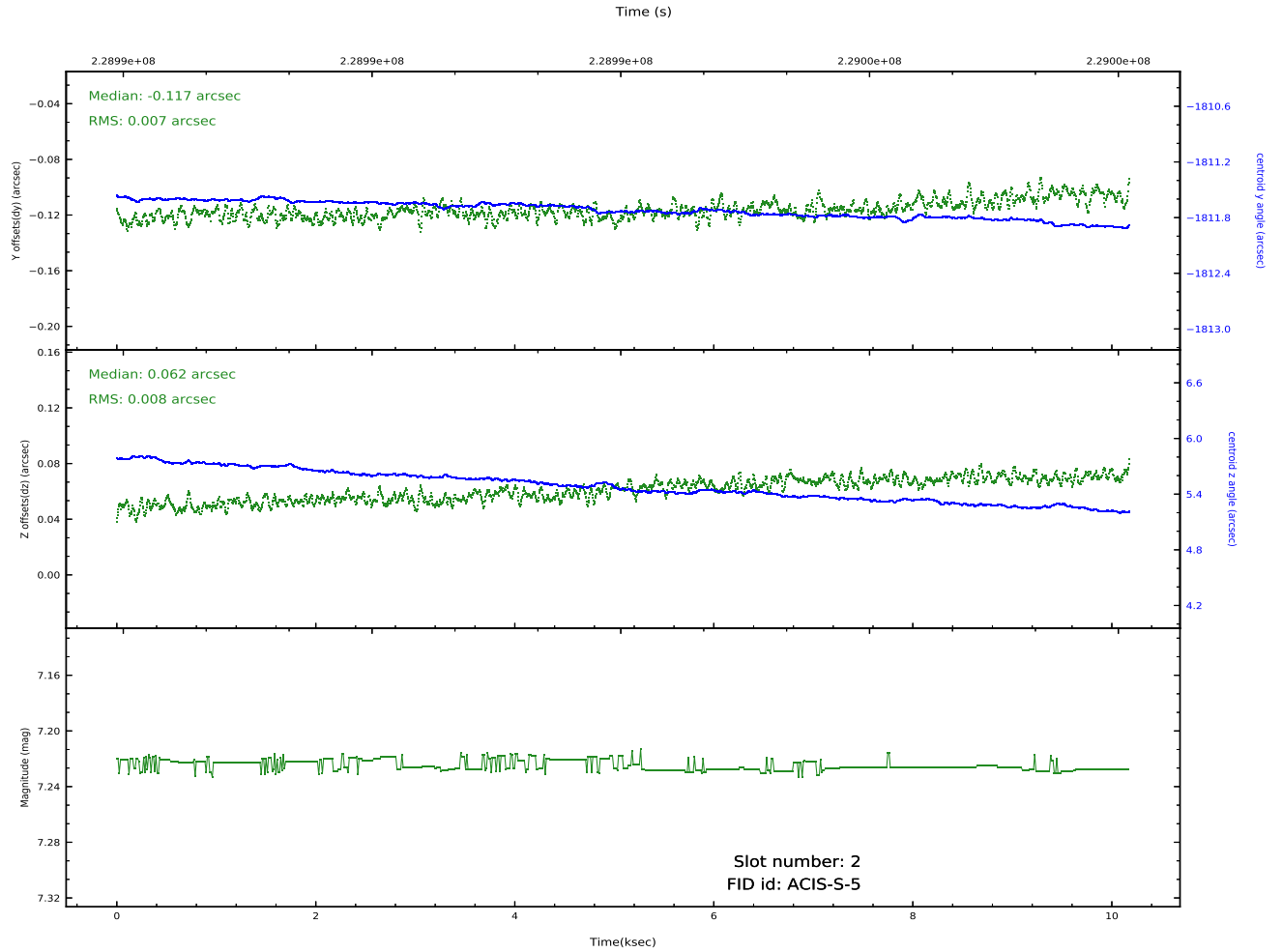
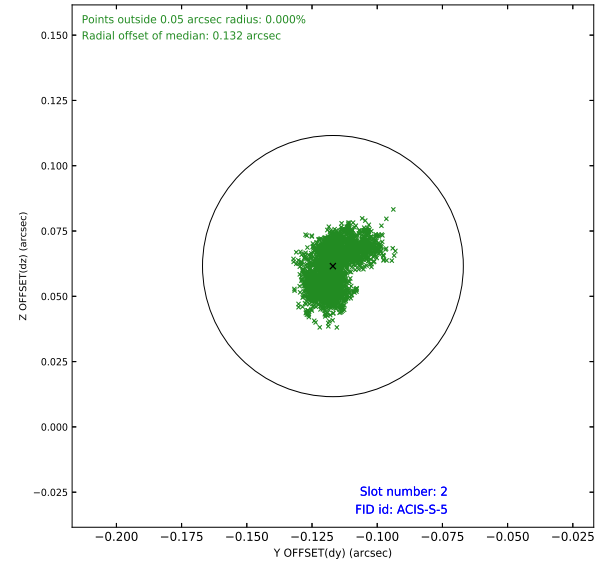
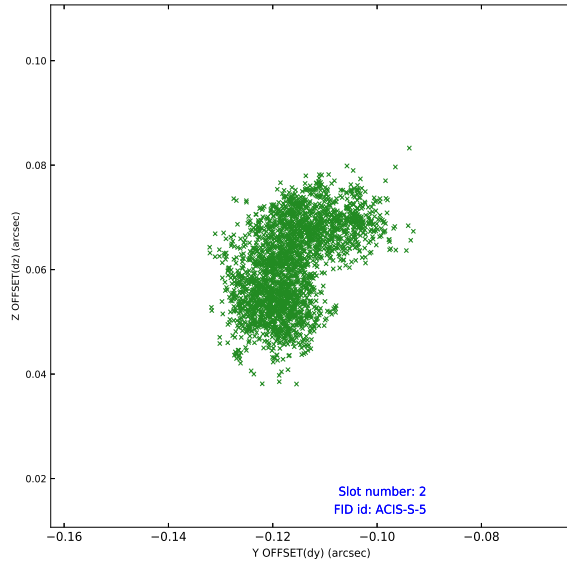
2.5.1 Slot 0



2.5.2 Slot 1

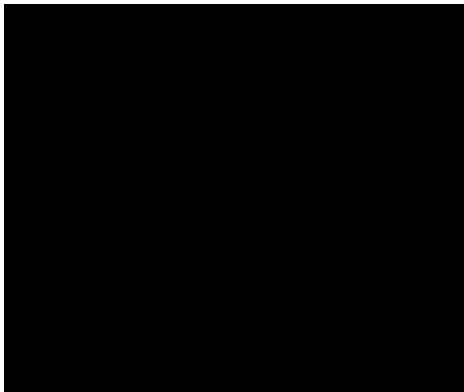


2.5.3 Slot 2

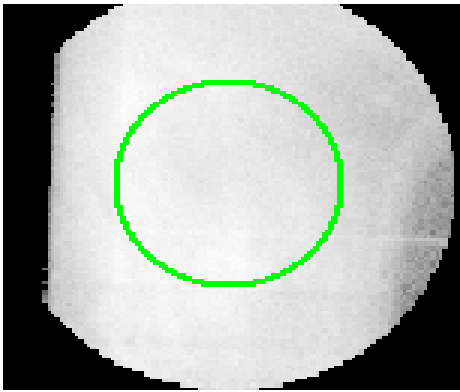


3 Gratings

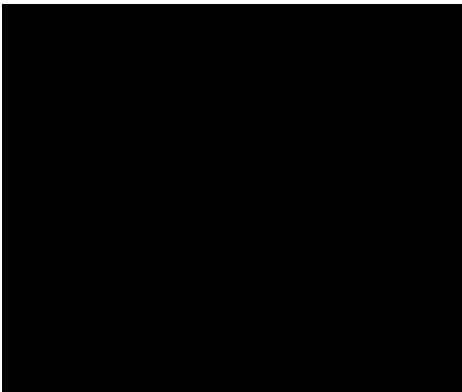
3.1 HEG Arm



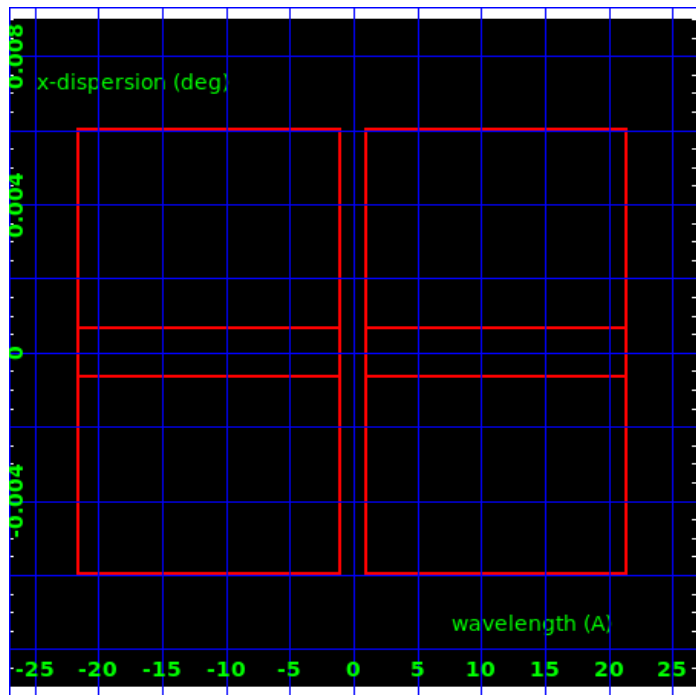
HEG Order Sort 123



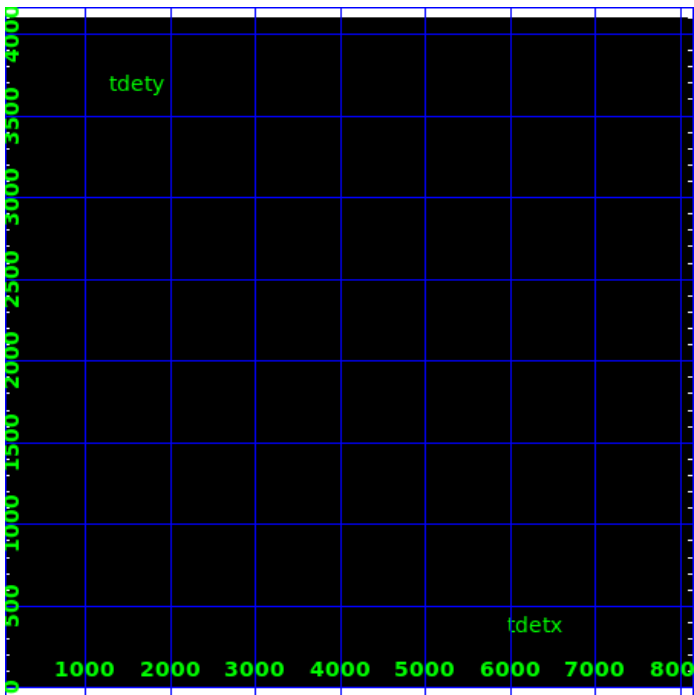
HEG Zero Order



HEG Order Sort ALL

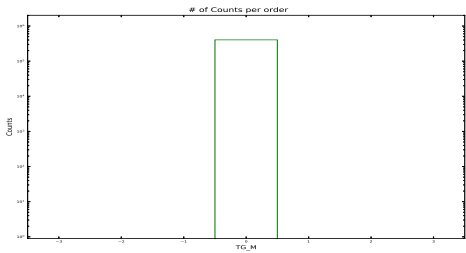


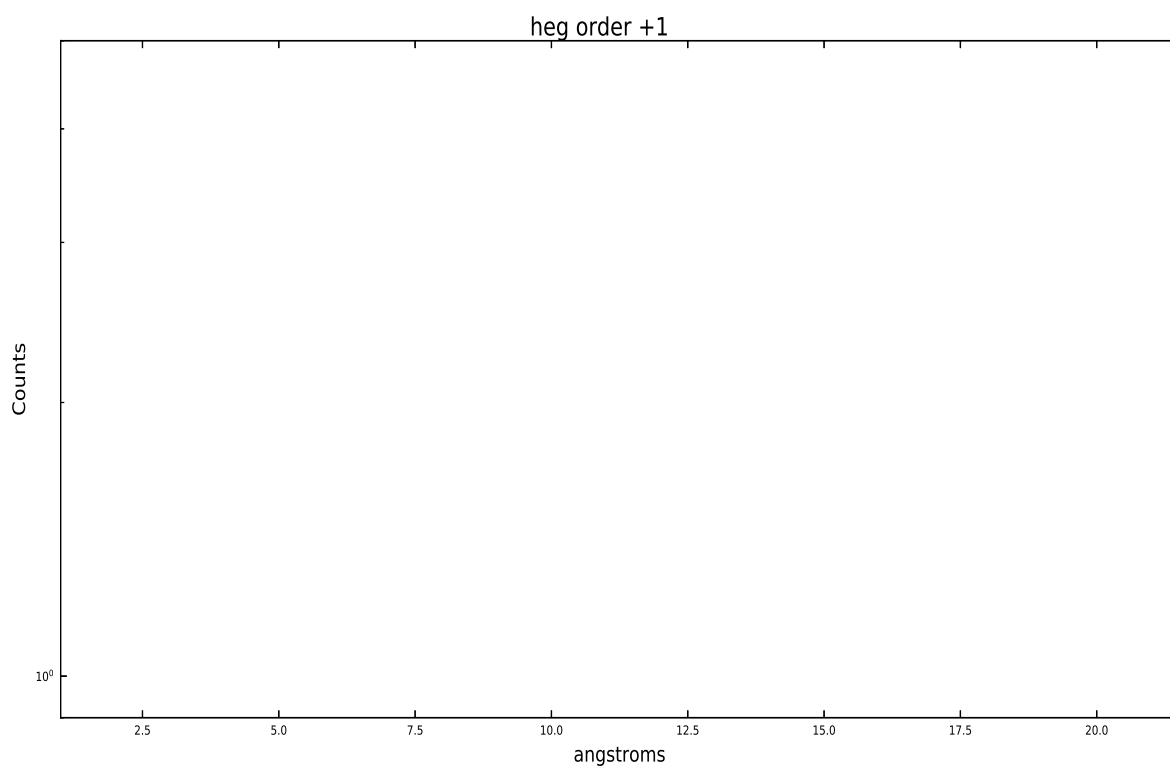
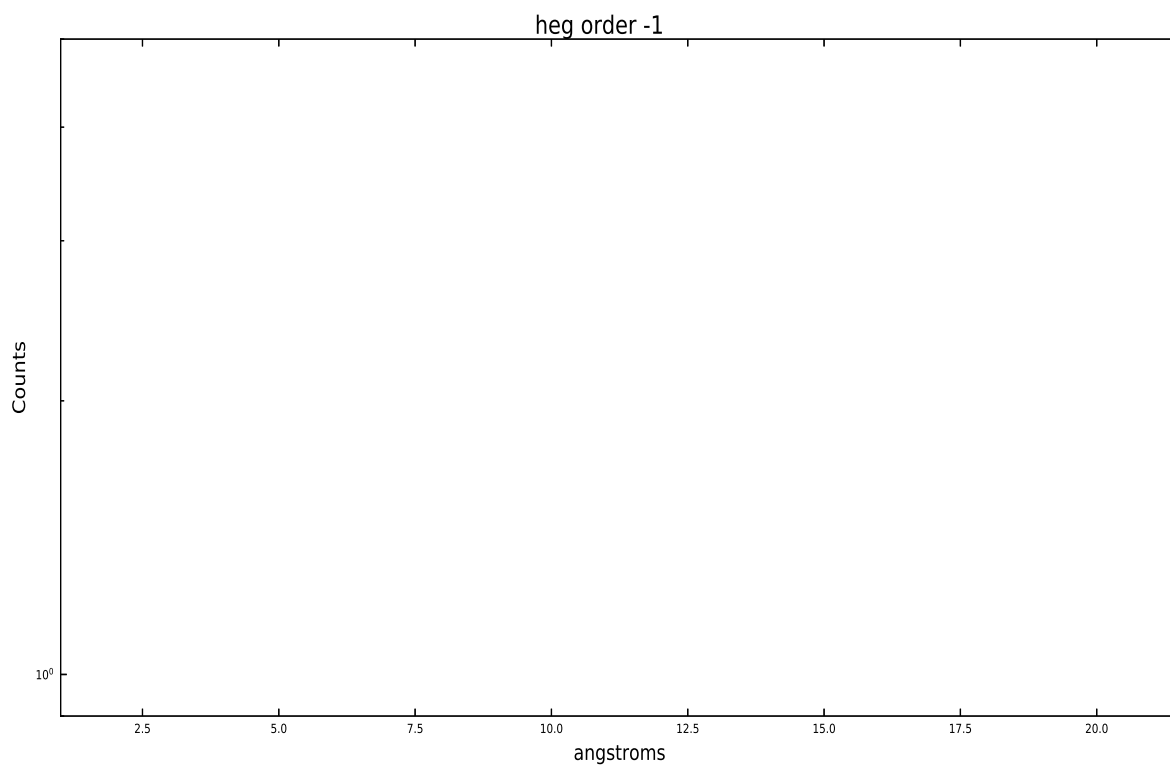
Spot Image HEG



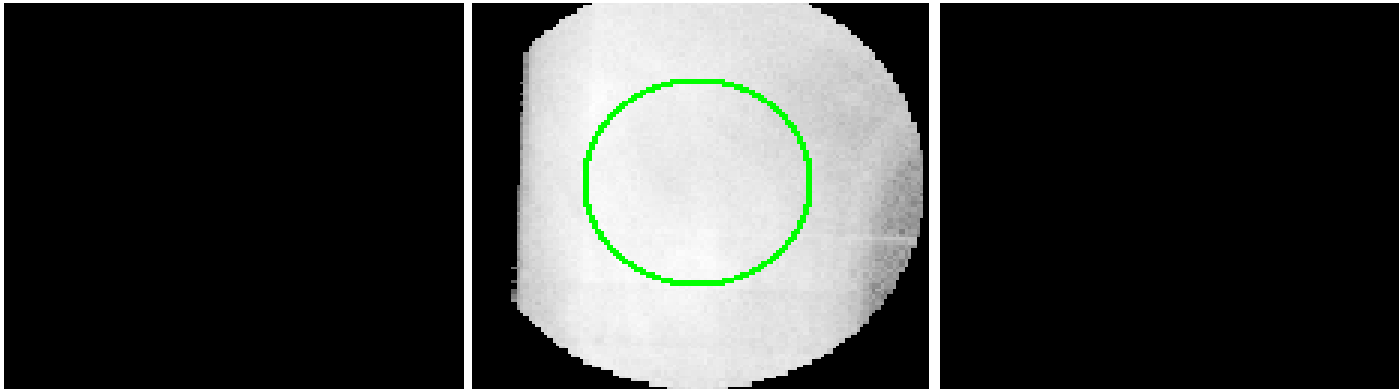
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	404330	0	0	0





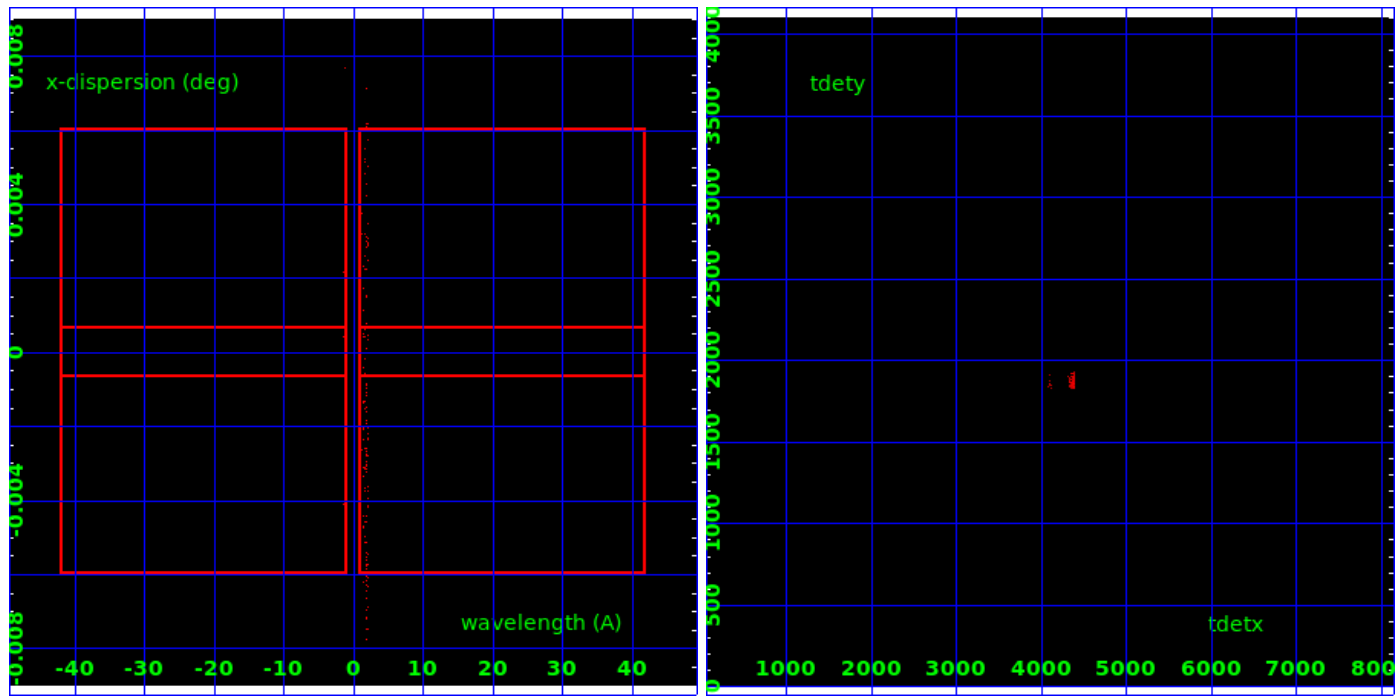
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

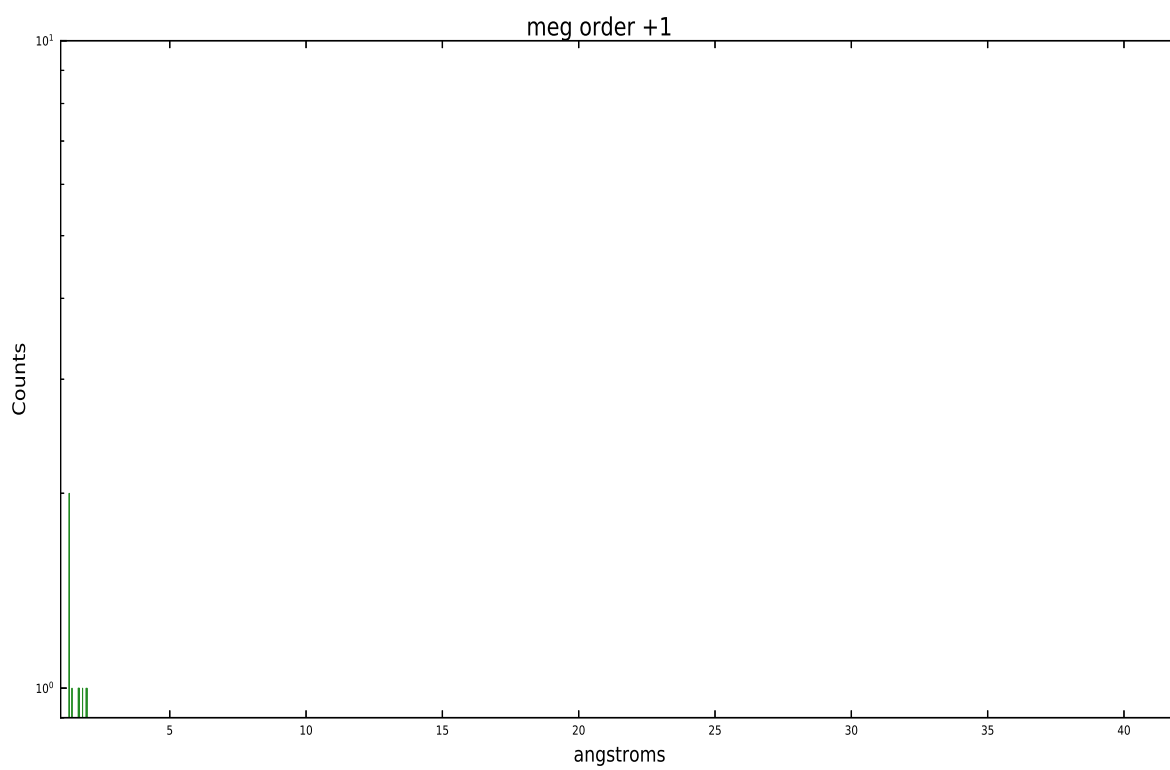
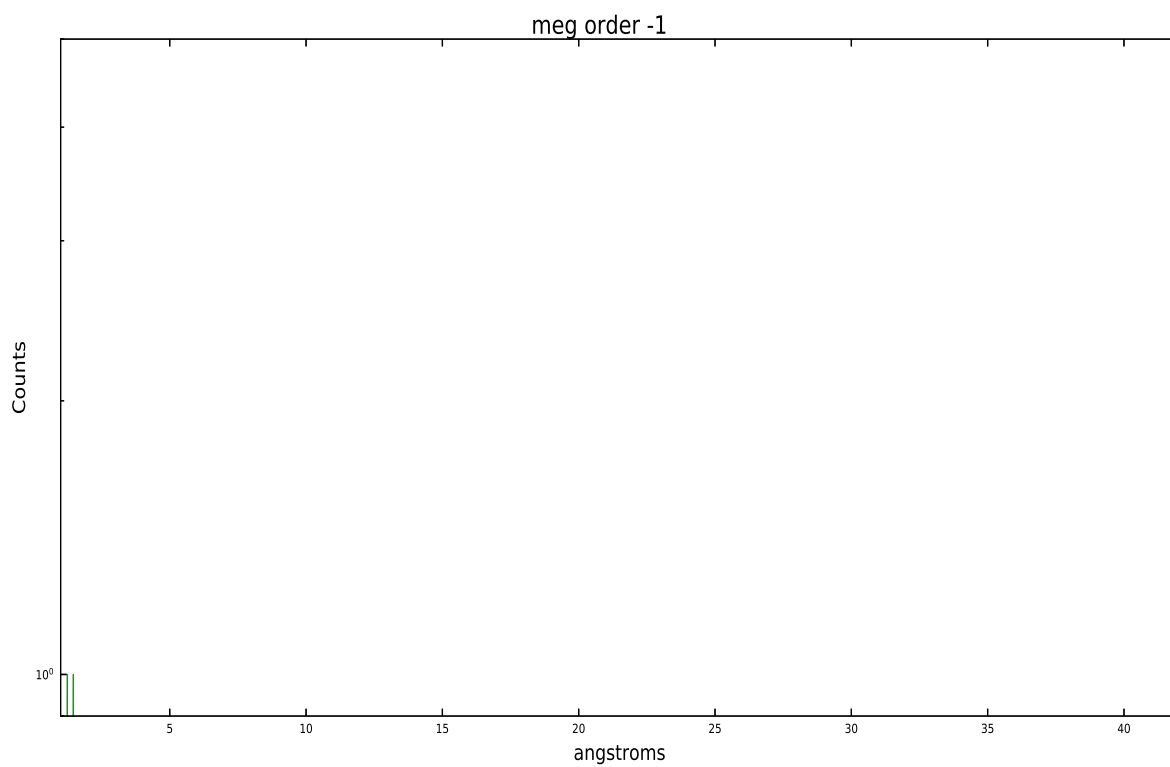


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	9	404330	130	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	9.8538

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.