

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5284 - L2 Version 4
Chandra X-Ray Center

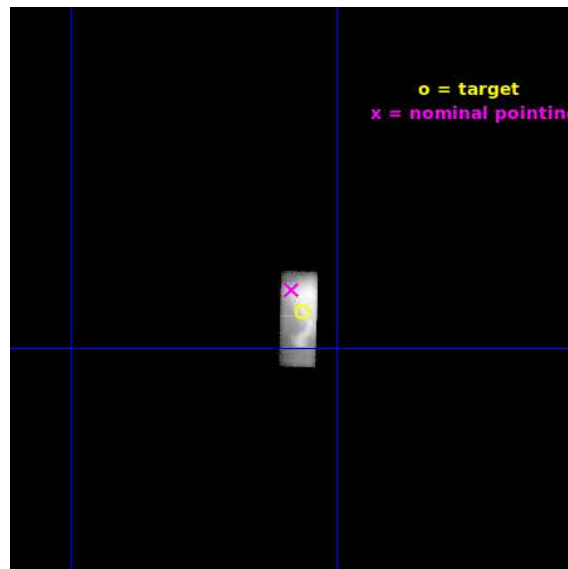
L2 Processing Date : Oct 3 2020

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1 Front

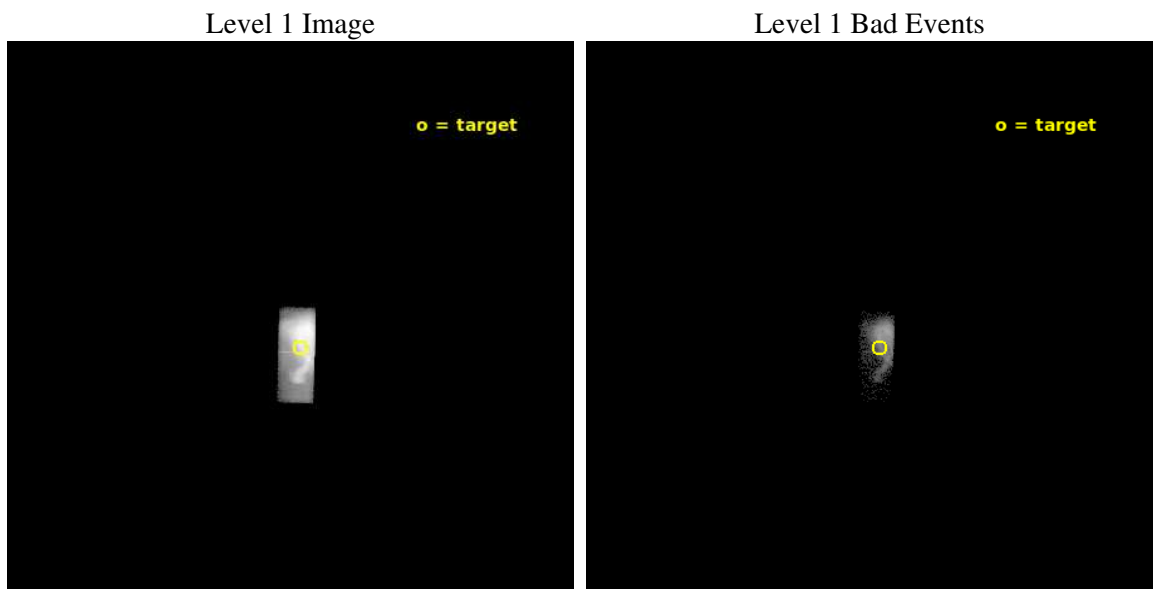
seq_num	500501	Sequence number
obs_id	5284	Observation id
title	Spectroscopic Study of the Dynamic Shock in the Pulsar Wind of the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.641083	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.645908048606	Nominal RA [deg]
dec_nom	22.026496921678	Nominal Dec [deg]
roll_nom	91.48463448253	Nominal Roll [deg]
revision	4	Processing version of data
ontime	9578.7003806233	Sum of GTIs [s]
livetime	8426.0207429832	Livetime [s]
ontime7	9578.7003806233	Sum of GTIs [s]
l2events	1023382	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	9427.340000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	9578.7003806233	Sum of GTIs [s]
caldsver	4.9.2	 	ontime7	9578.7003806233	Sum of GTIs [s]
date	2020-10-03T23:04:06	Date and time of file creation	l1events	1073270	Number of level 1 events
revision	4	Processing version of data	tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4147.40, 4029.74)	src1a sky pixel position
			zo_pos_tgd	(4153.55, 4076.62)	src1a sky pixel position via tgdetect

2.1.3 Events

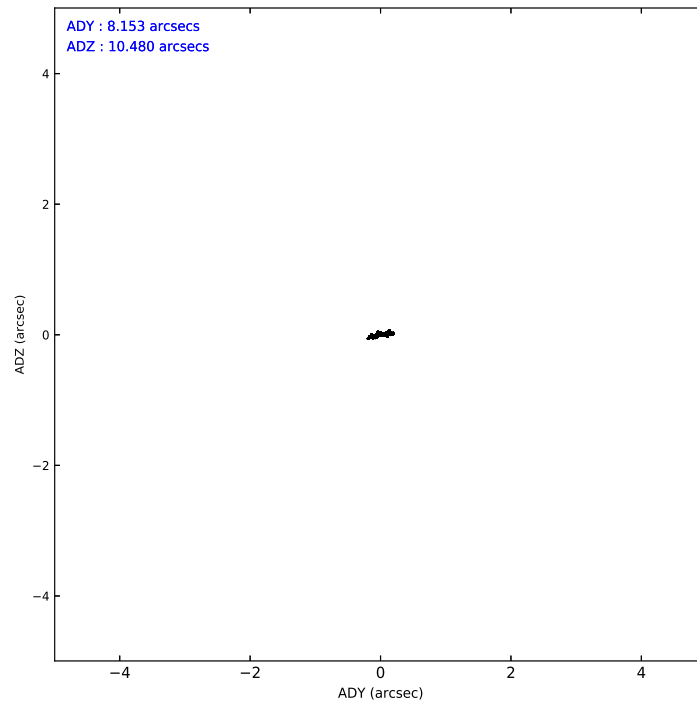
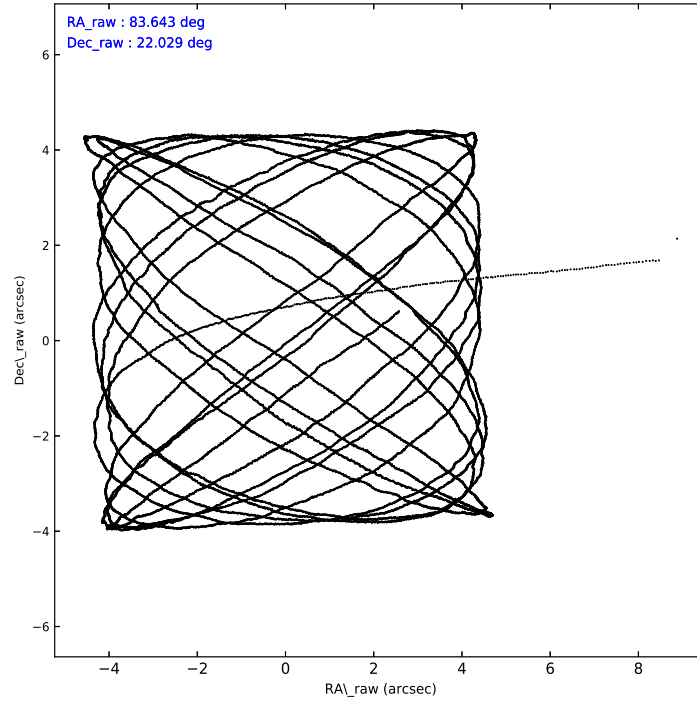
	ccd 7
level 1 events	1073270
rejected events	31959
rejected %	2%

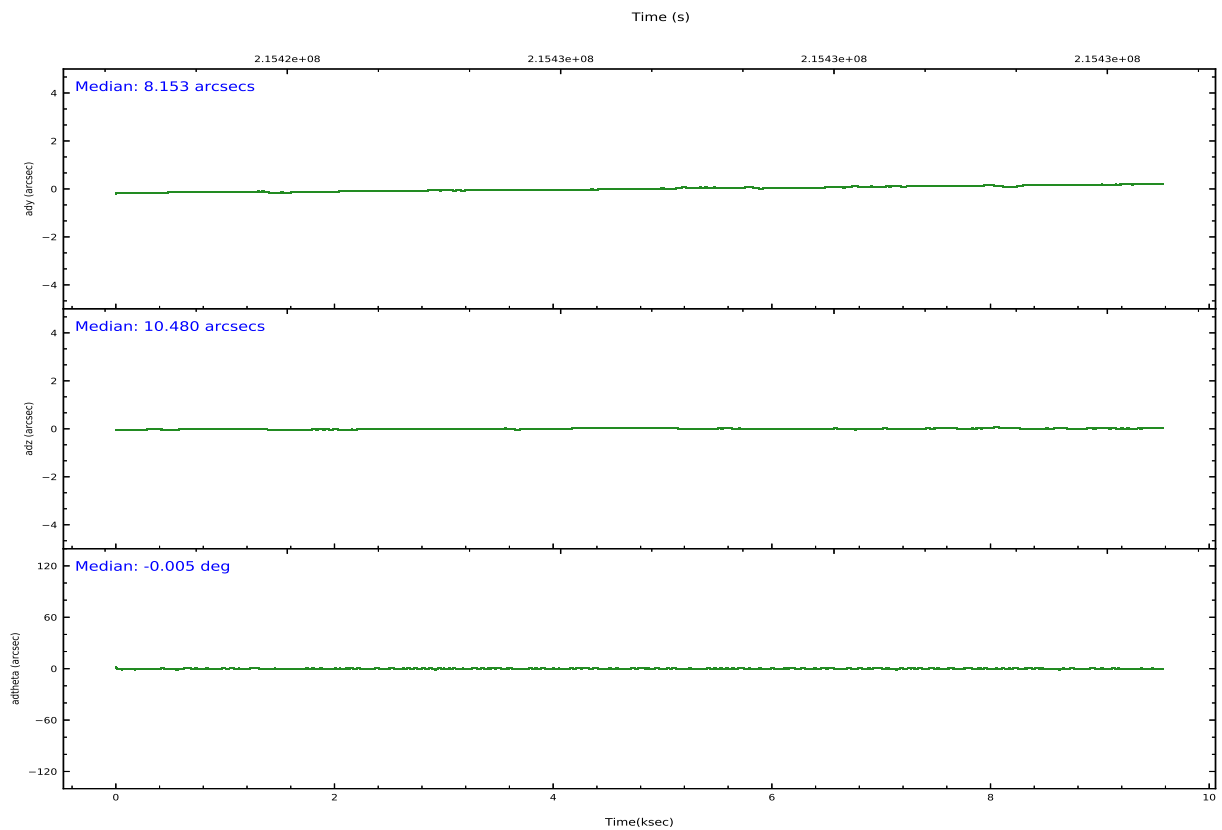
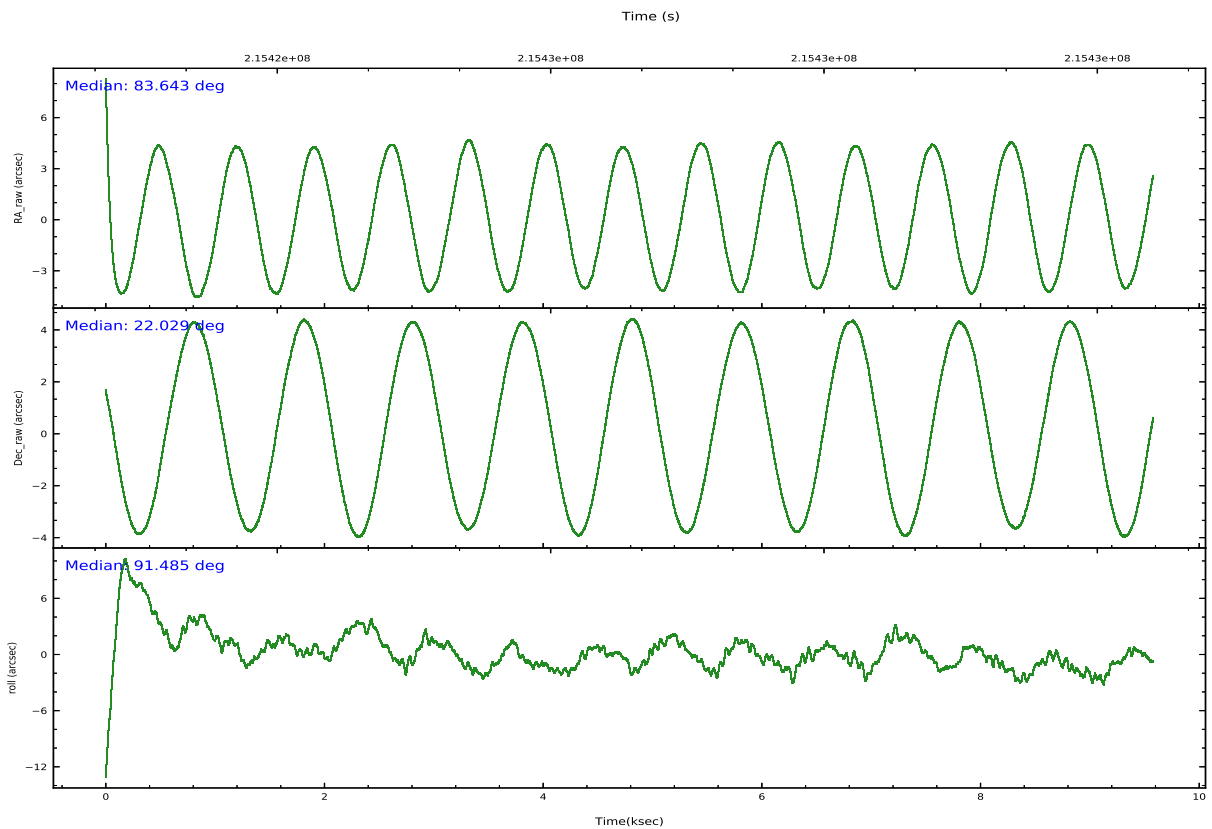
	ccd 7
grade 0 events	206055
	19%
grade 1 events	2341
	0%
grade 2 events	265109
	24%
grade 3 events	117709
	10%
grade 4 events	114934
	10%
grade 5 events	11928
	1%
grade 6 events	342087
	31%
grade 7 events	13107
	1%

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	83.658259	83.645908048606	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.005838	22.026496921678	Subarray start row	127	127
[deg] Pointing Roll	91.321531	91.48463448253	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	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	215423583.184000	215422343.08972			
Observation start date	2004-10-29T07:51:59	2004-10-29T07:32:23			
[s] Observation end time (MET)	215433010.184000	215433233.2027			
Observation end date	2004-10-29T10:29:06	2004-10-29T10:33:53			
Read mode	TIMED	TIMED			

2.3 Aspect



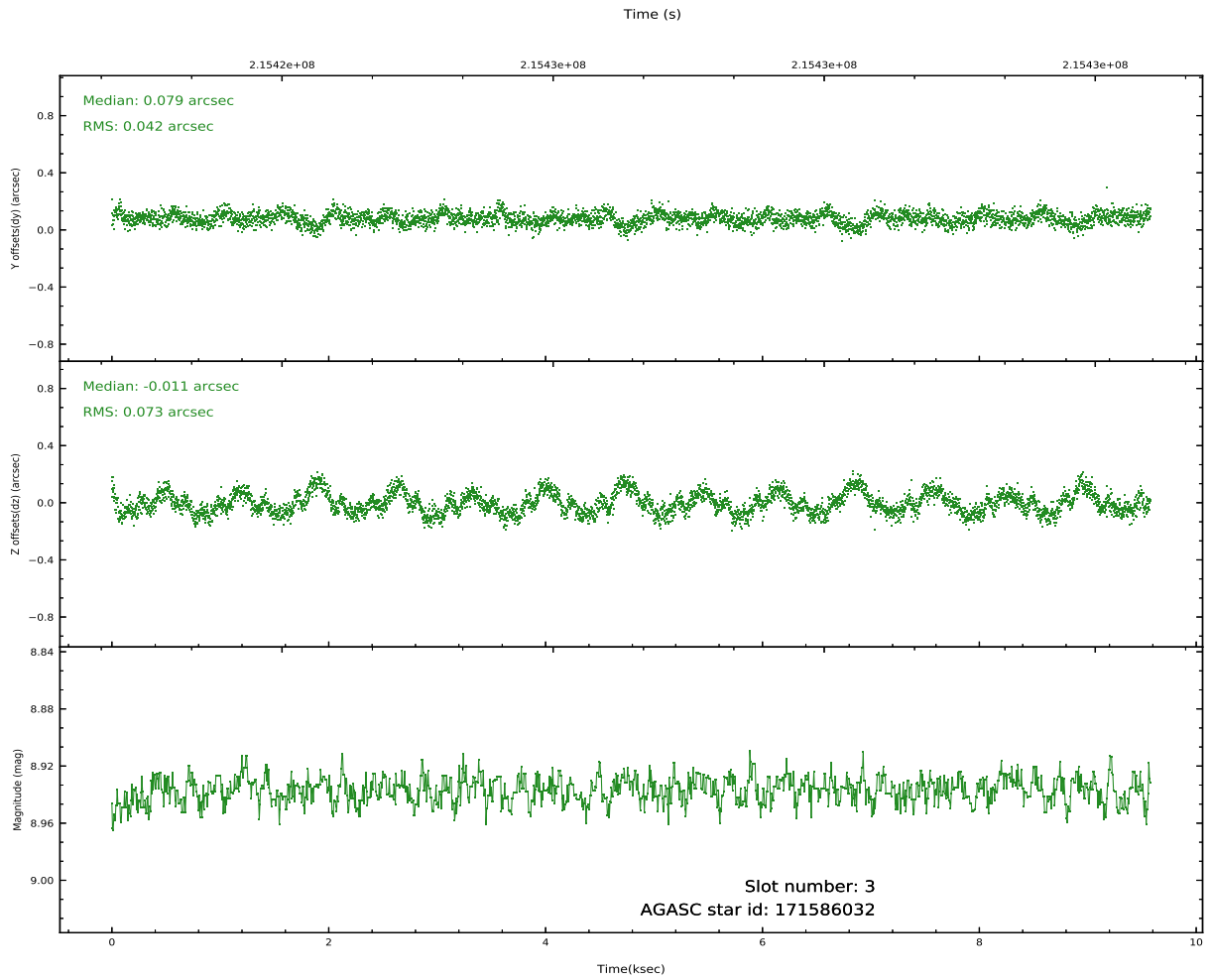
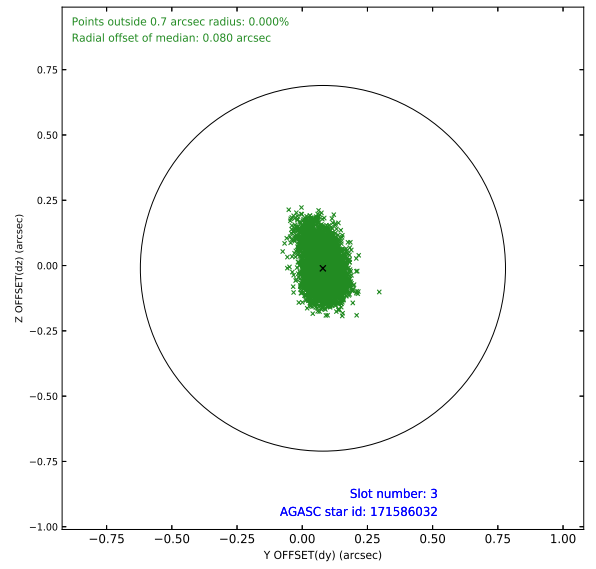
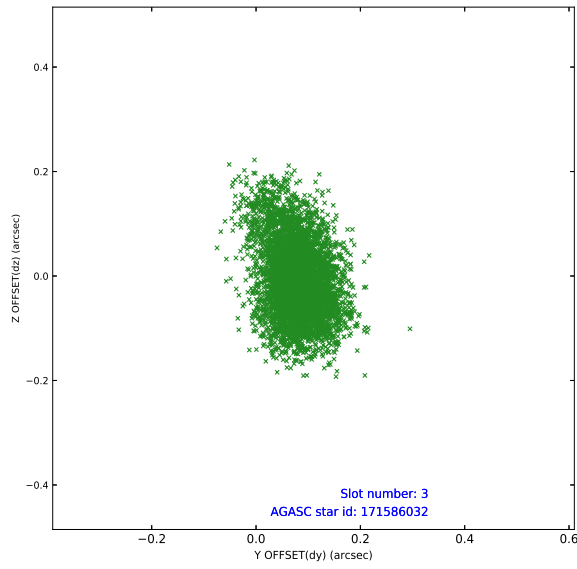


Slot Statistics

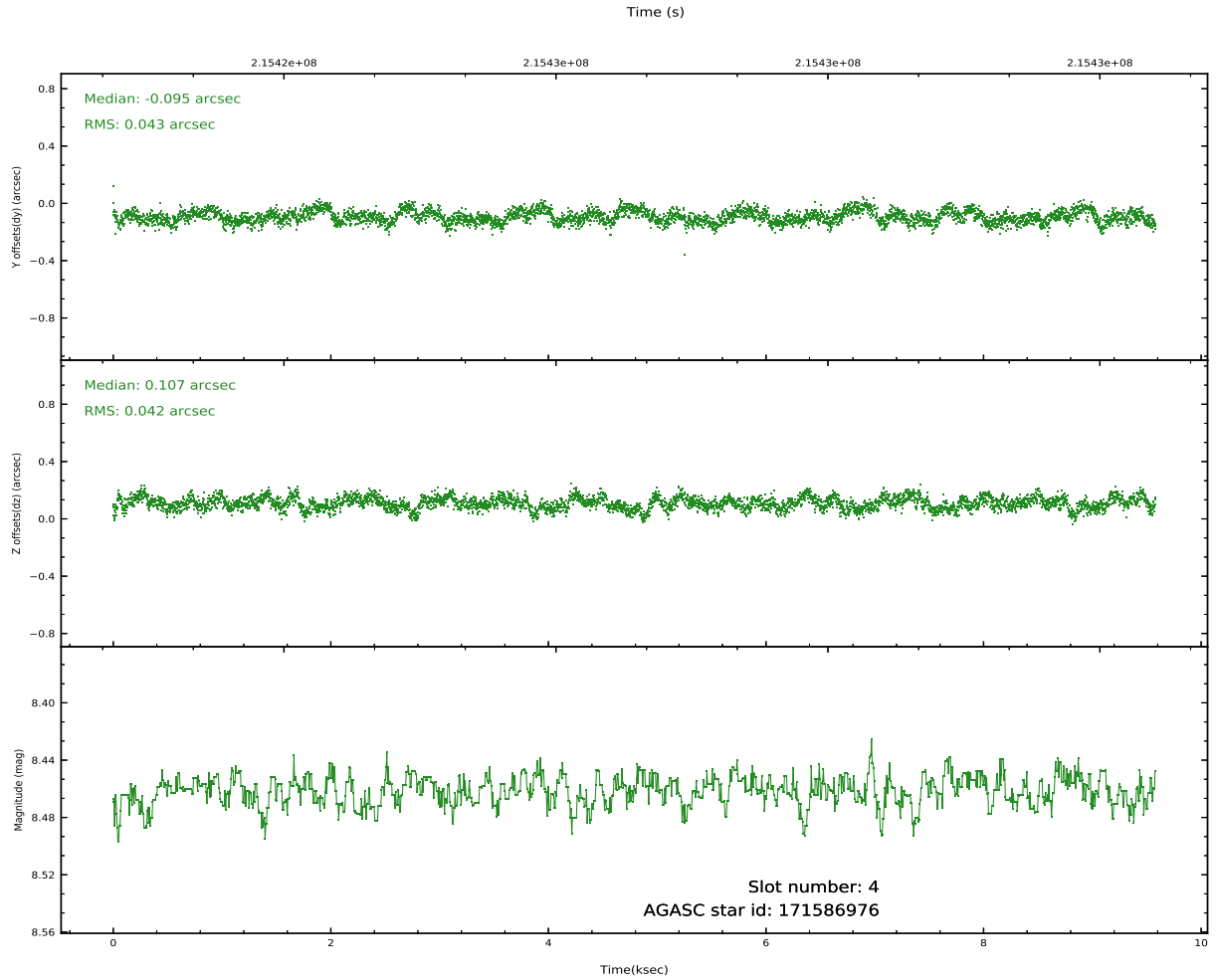
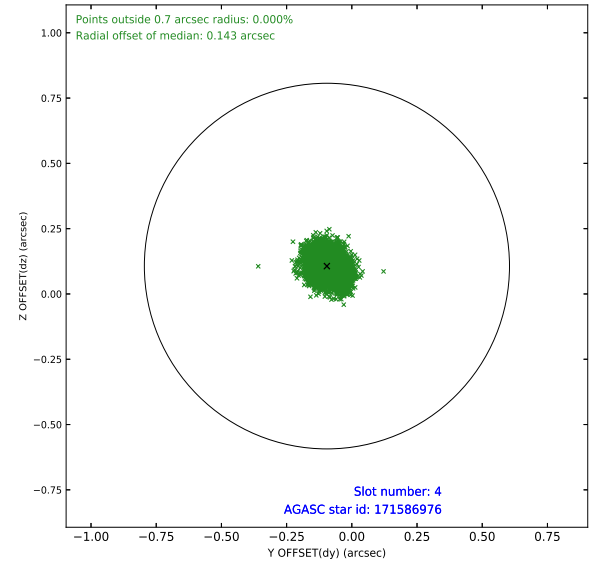
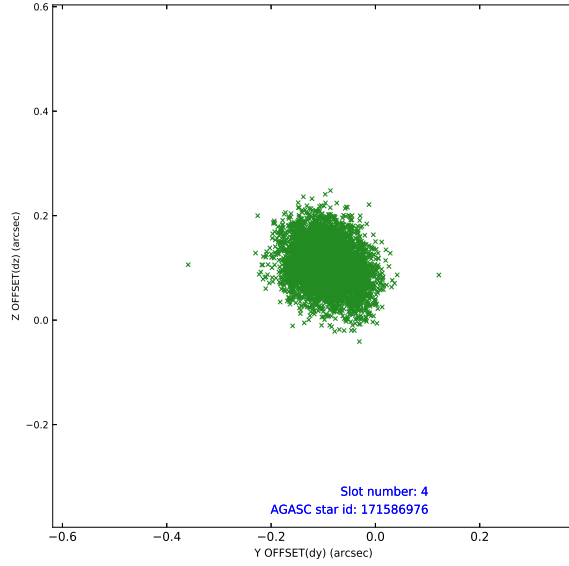
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.09	2337	1.000	-0.088	-0.135	0.007	0.011	0.000000	0.000000	-760.41	-1896
1	FID		ACIS-S-4	7.18	2337	1.000	0.163	0.078	0.007	0.012	0.000000	0.000000	2152.82	11
2	FID		ACIS-S-5	7.23	2337	1.000	-0.106	0.064	0.008	0.014	0.000000	0.000000	-1812.59	5
3	GUIDE	used	171586032	8.94	4671	1.000	0.079	-0.011	0.087	0.152	83.950197	22.083225	257.58	-979
4	GUIDE	used	171586976	8.46	4673	1.000	-0.095	0.107	0.065	0.103	83.857953	22.438065	1541.11	-700
5	GUIDE	used	171597832	9.14	4672	1.000	0.235	-0.128	0.085	0.134	83.183230	21.366702	-2260.26	1644
6	GUIDE	used	171721904	9.19	4670	1.000	-0.032	-0.002	0.104	0.155	84.272676	22.116922	356.82	-2057
7	GUIDE	used	243941560	8.32	4673	1.000	-0.188	0.012	0.085	0.126	83.733264	22.568598	2020.03	-296

2.4 Star Slots

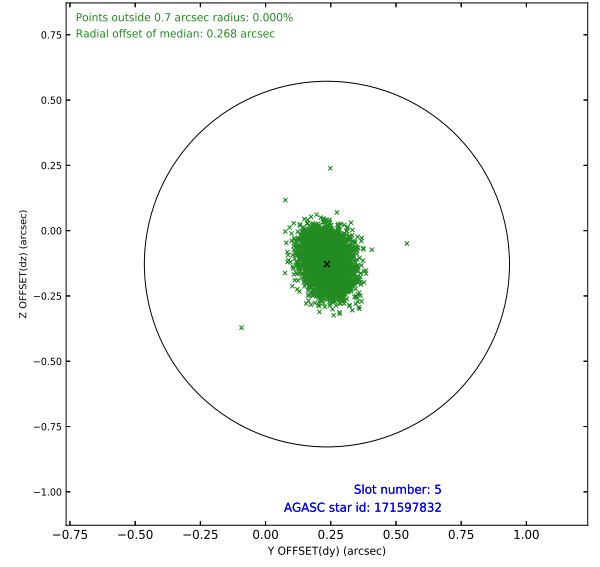
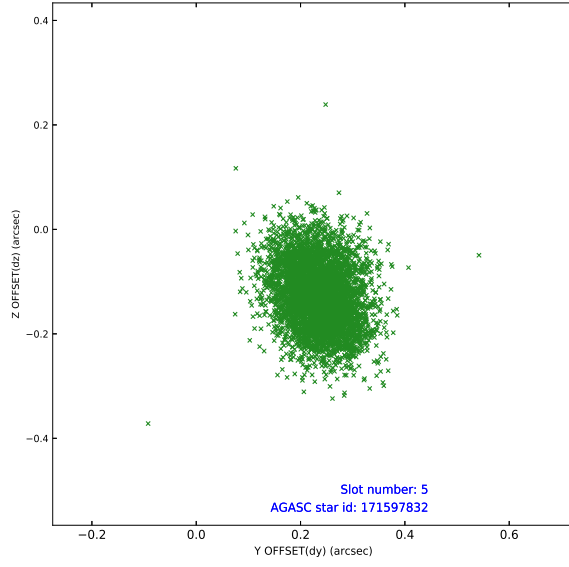
2.4.1 Slot 3



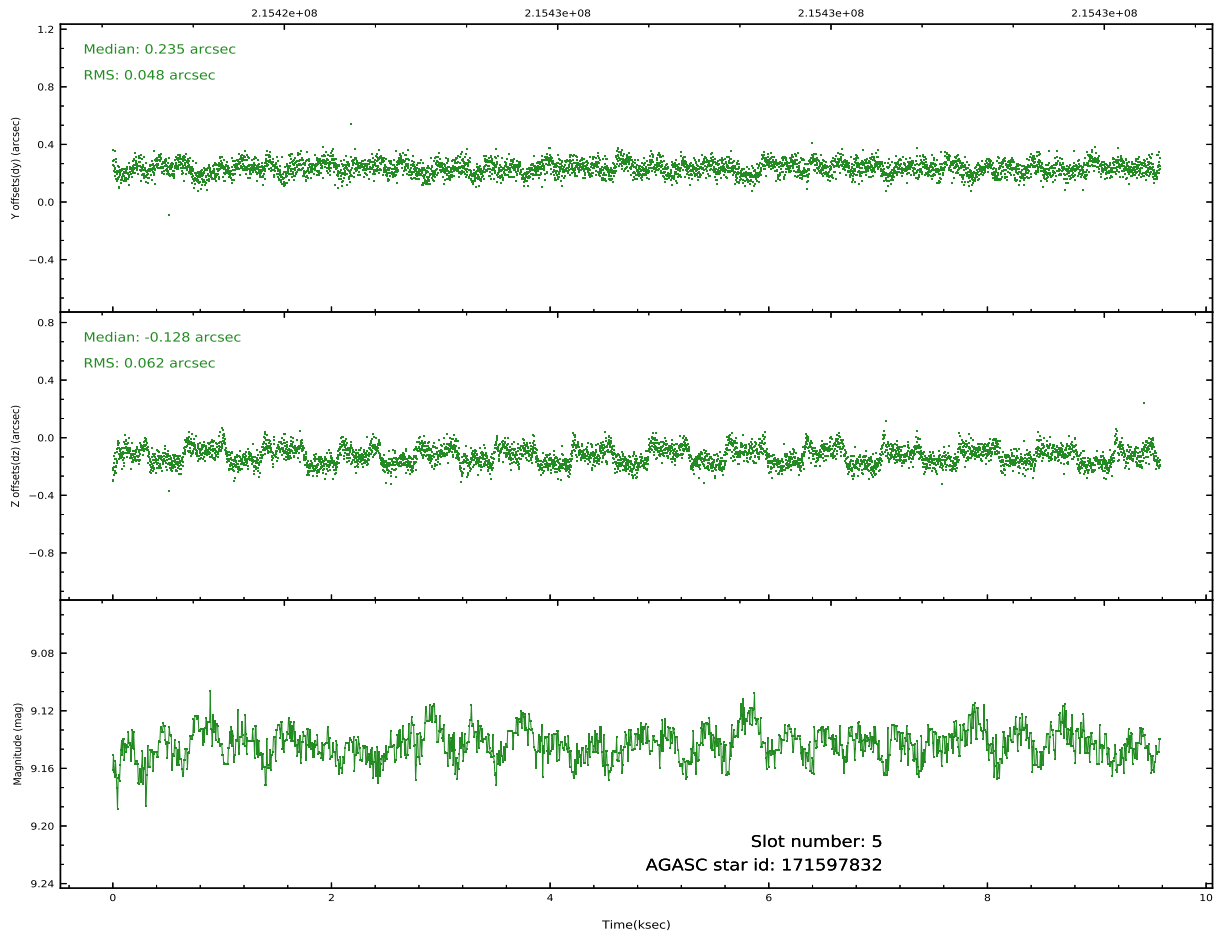
2.4.2 Slot 4



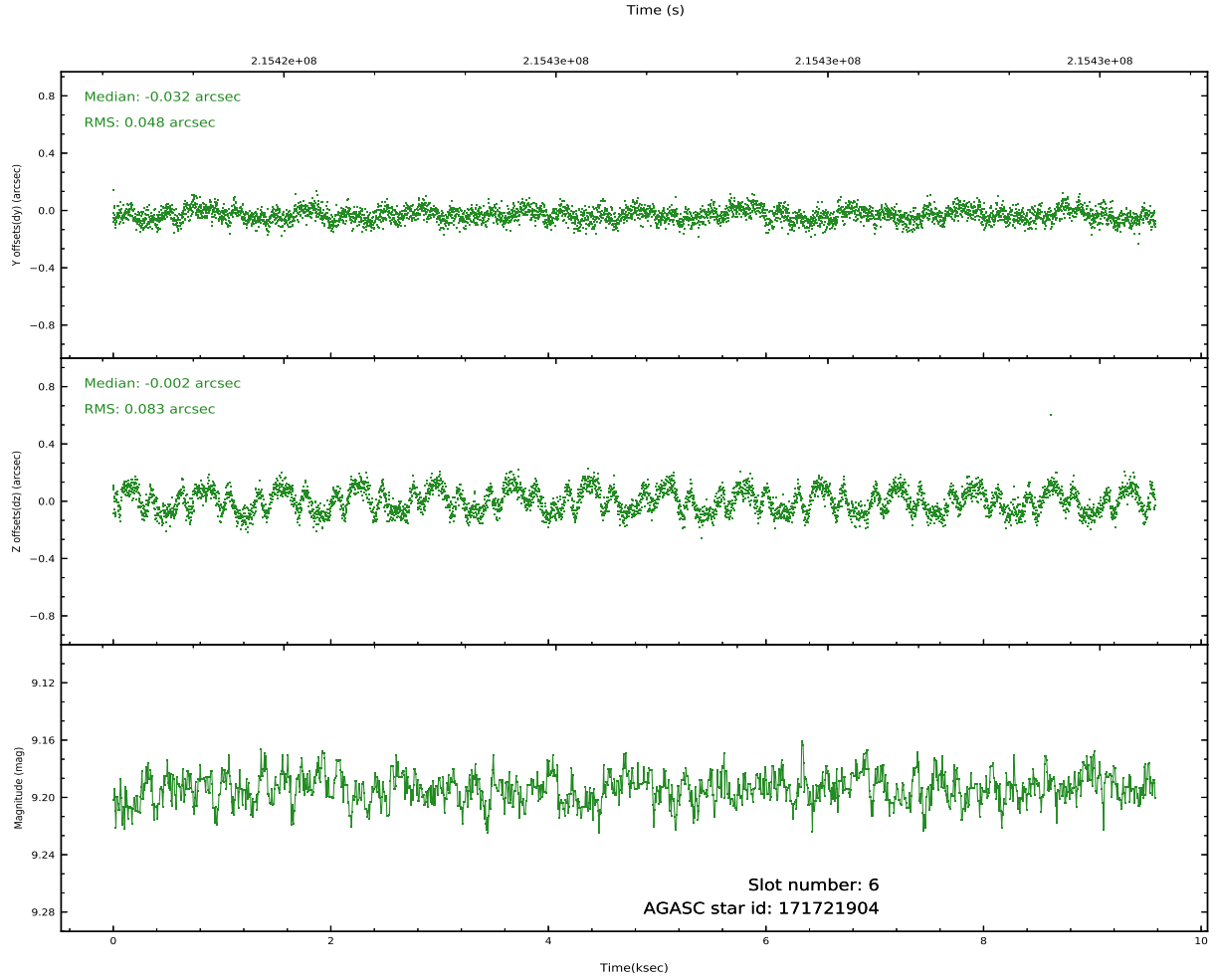
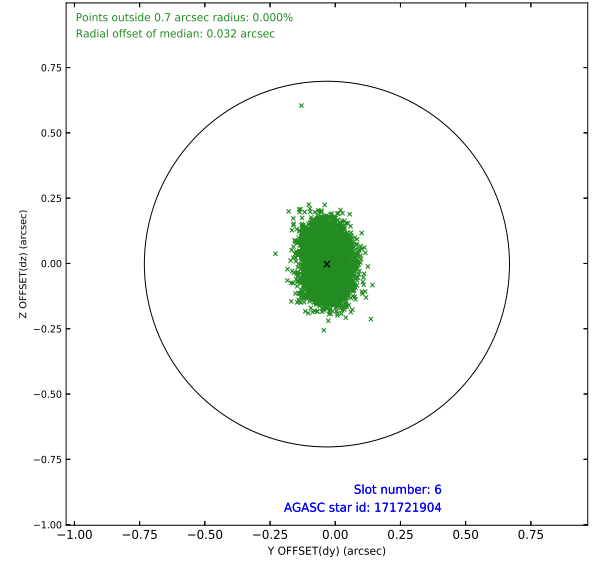
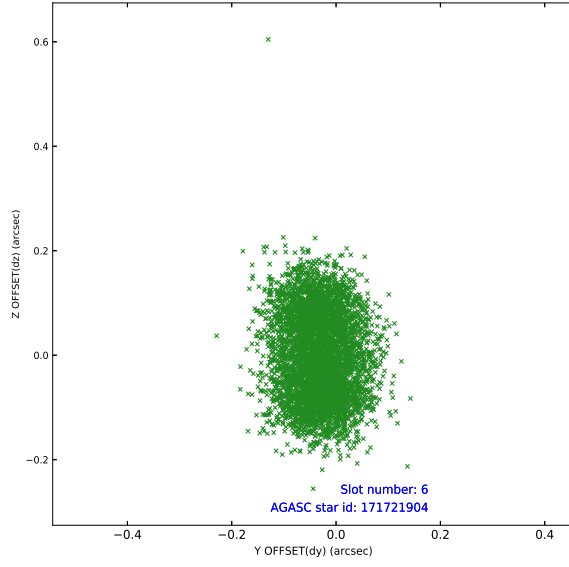
2.4.3 Slot 5



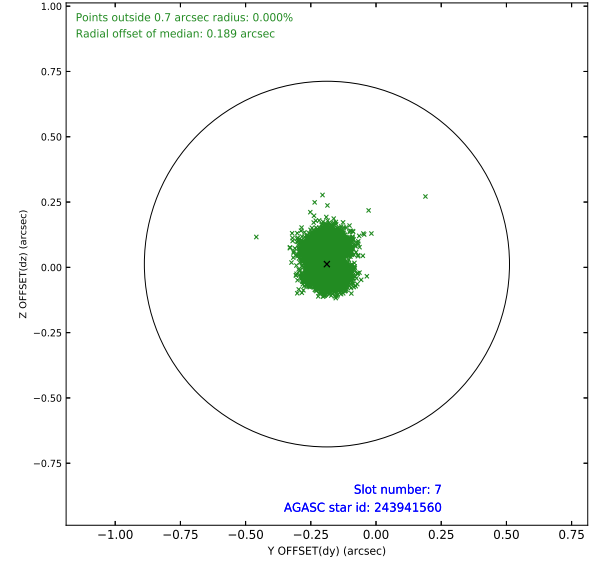
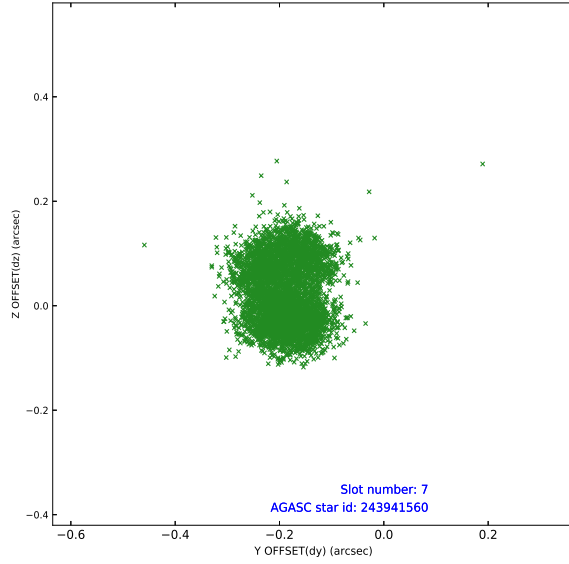
Time (s)



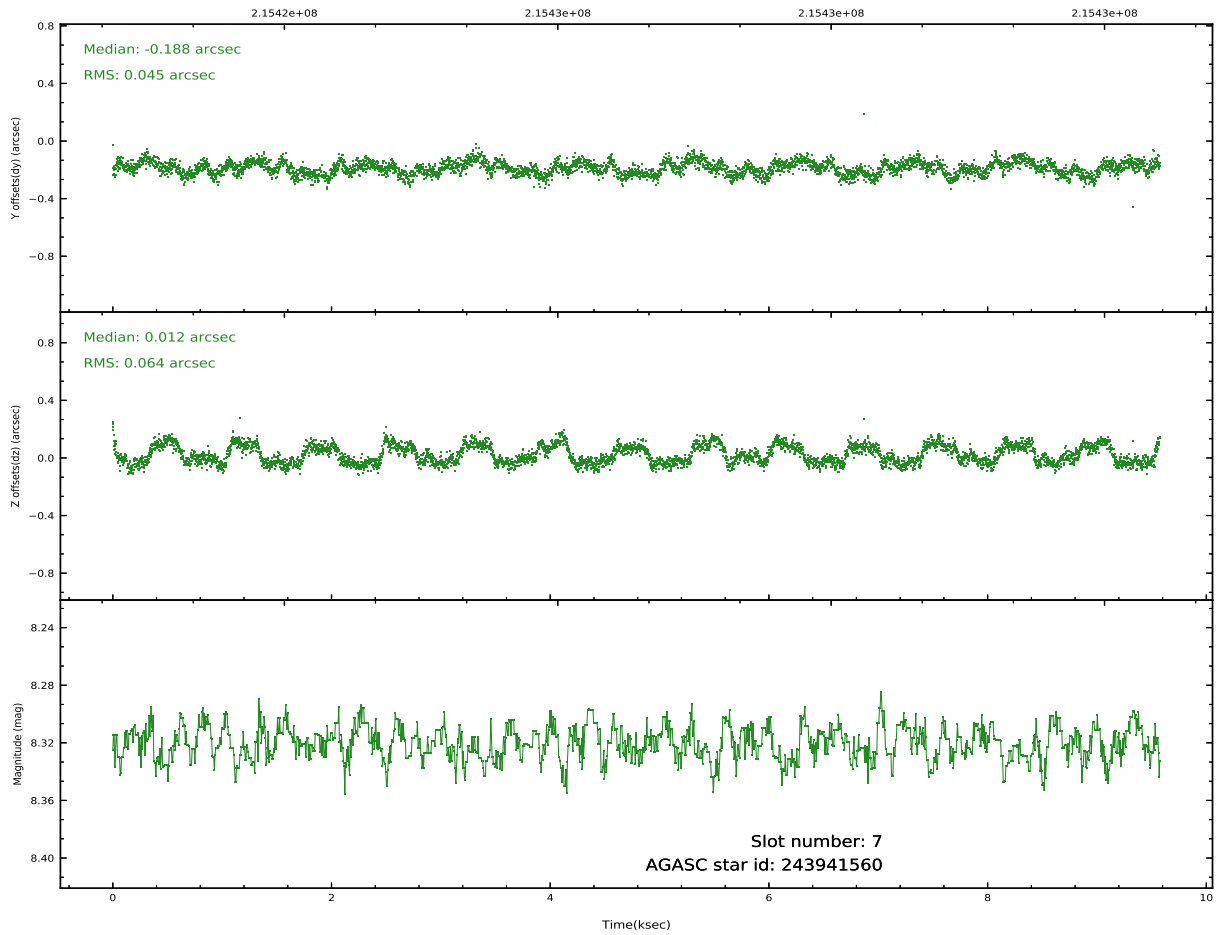
2.4.4 Slot 6



2.4.5 Slot 7

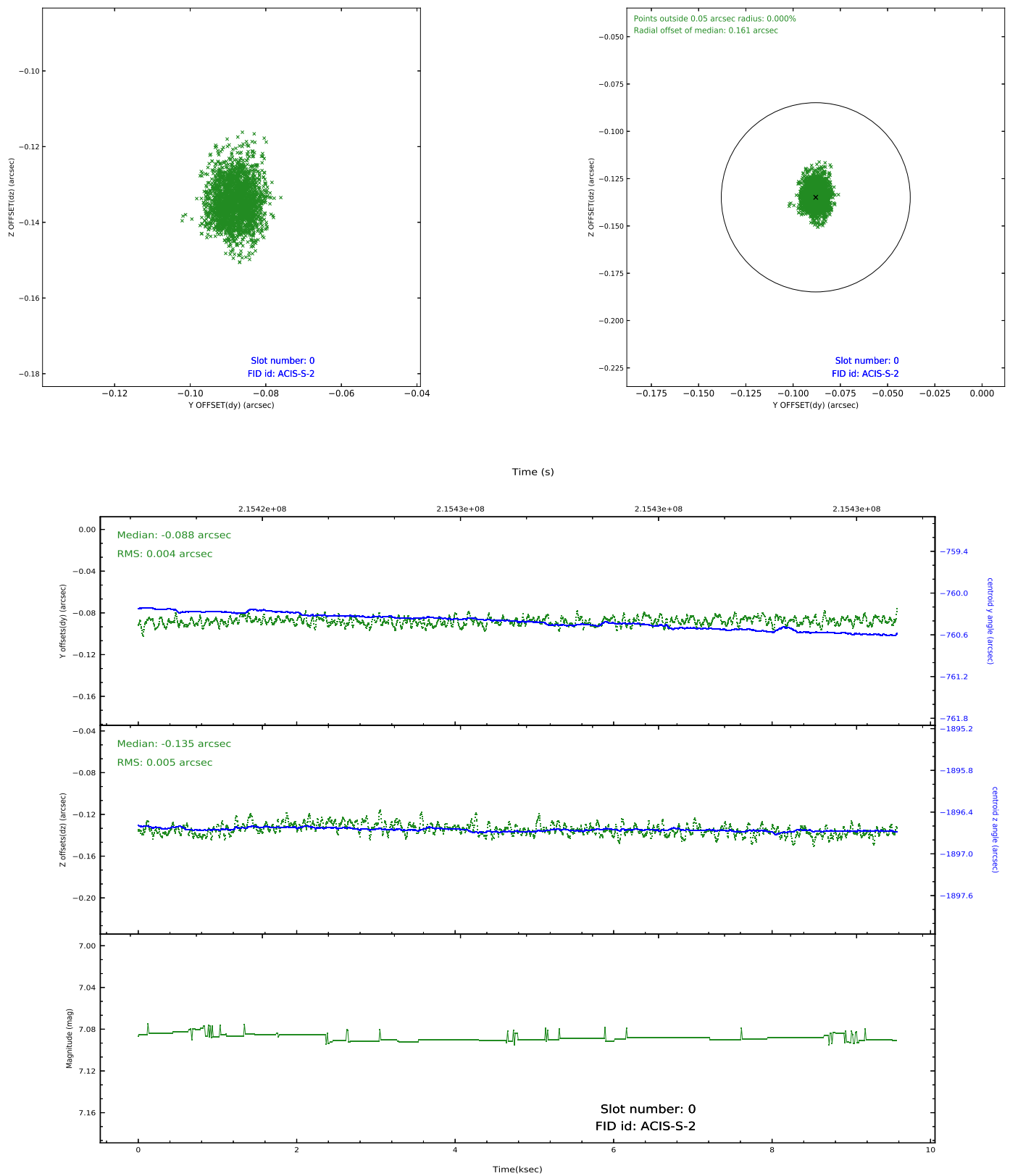


Time (s)

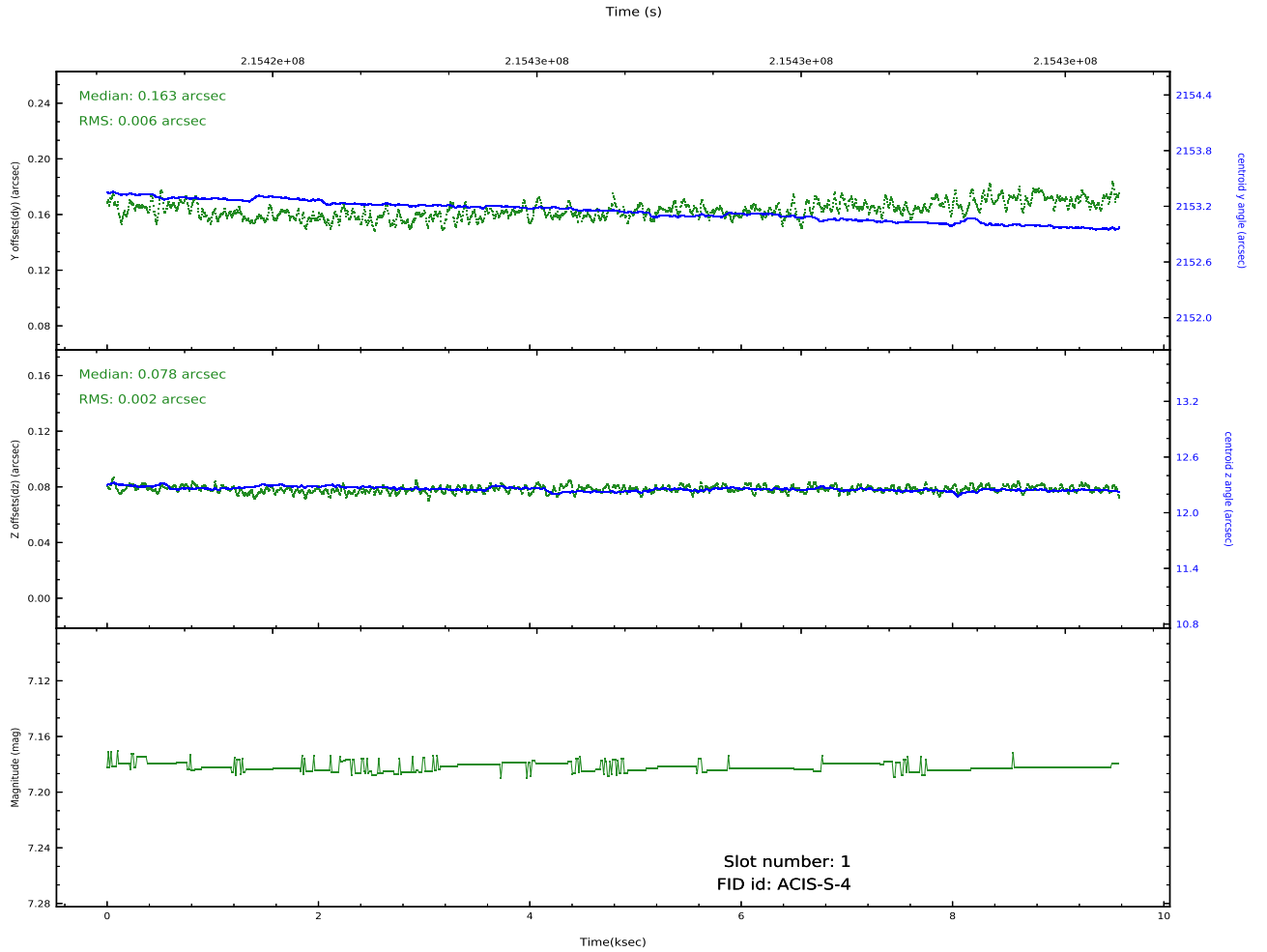
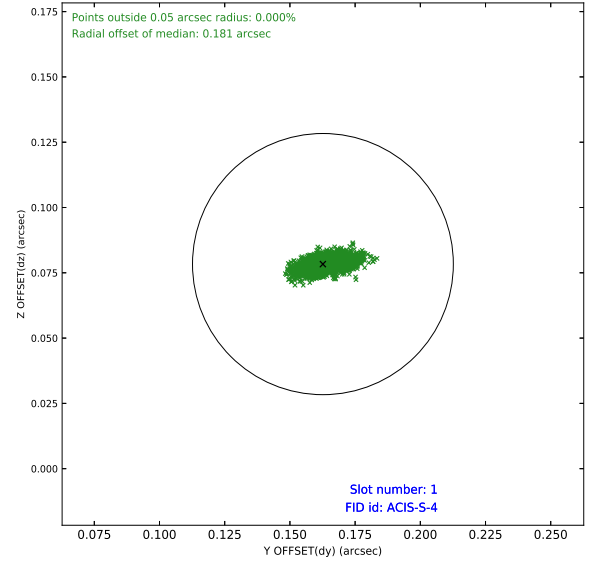
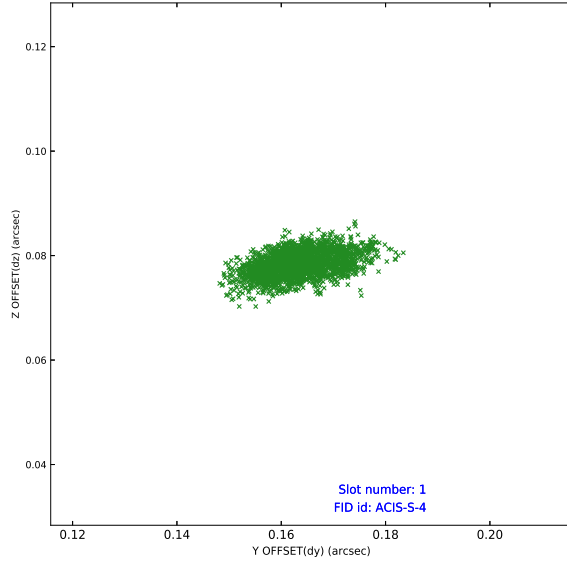


2.5 FID Slots

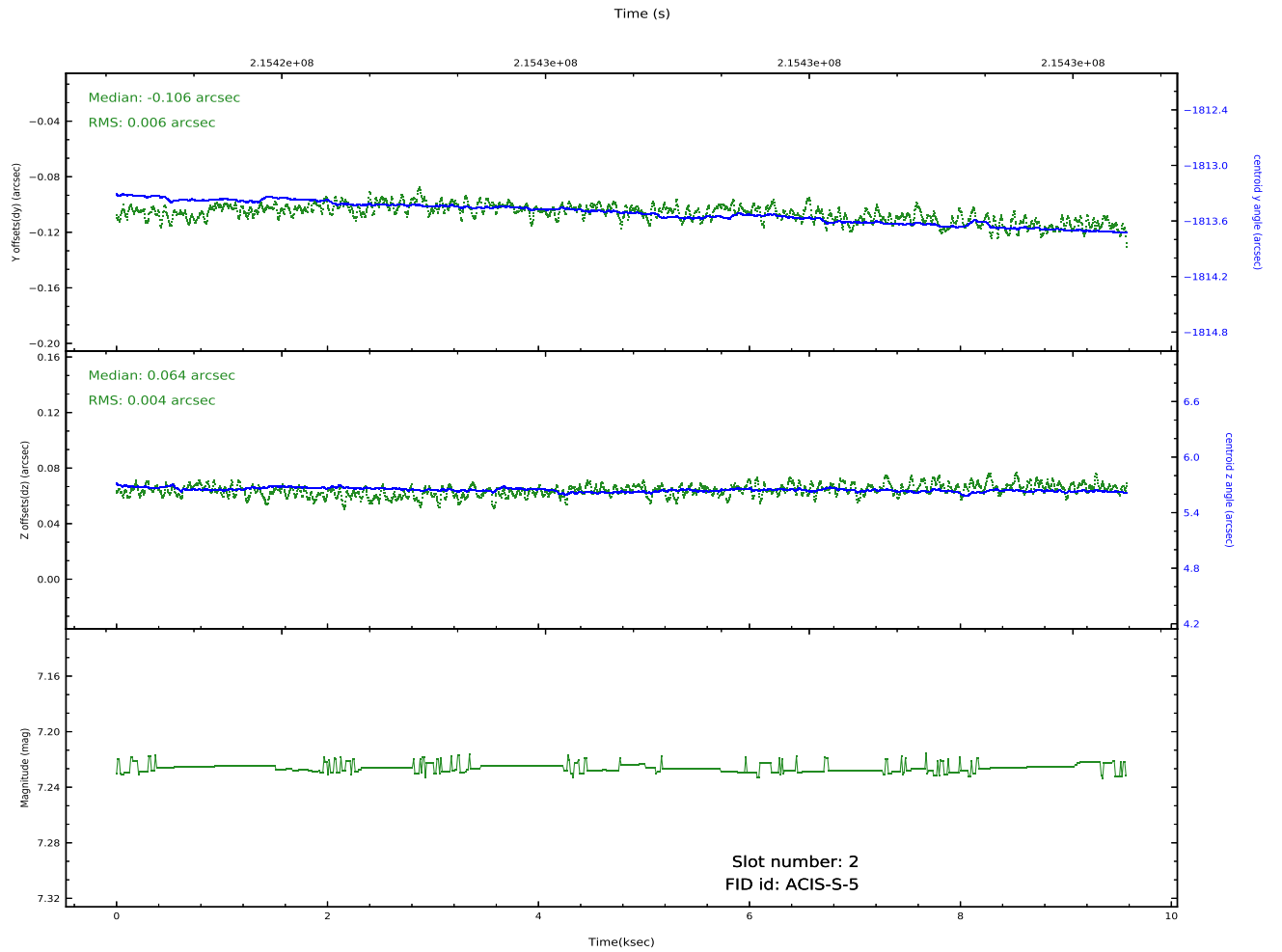
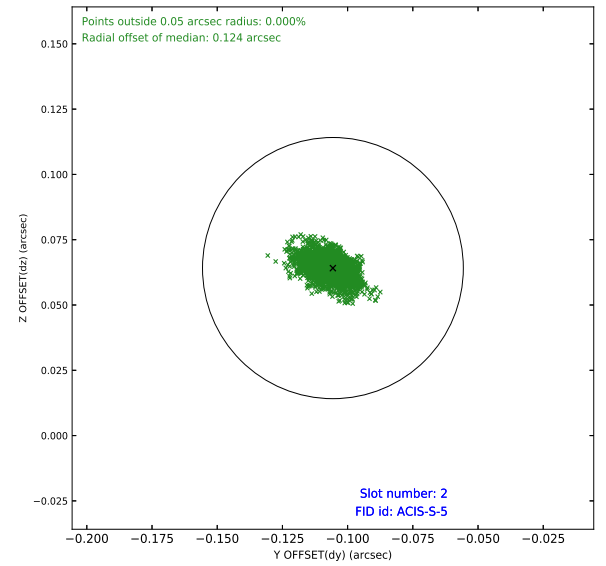
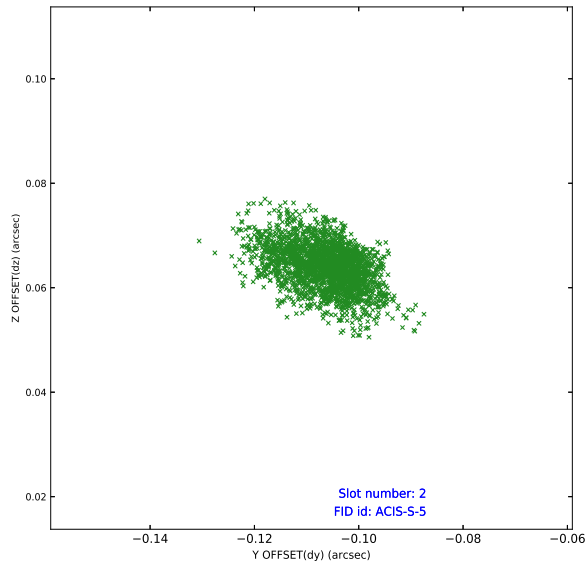
2.5.1 Slot 0



2.5.2 Slot 1

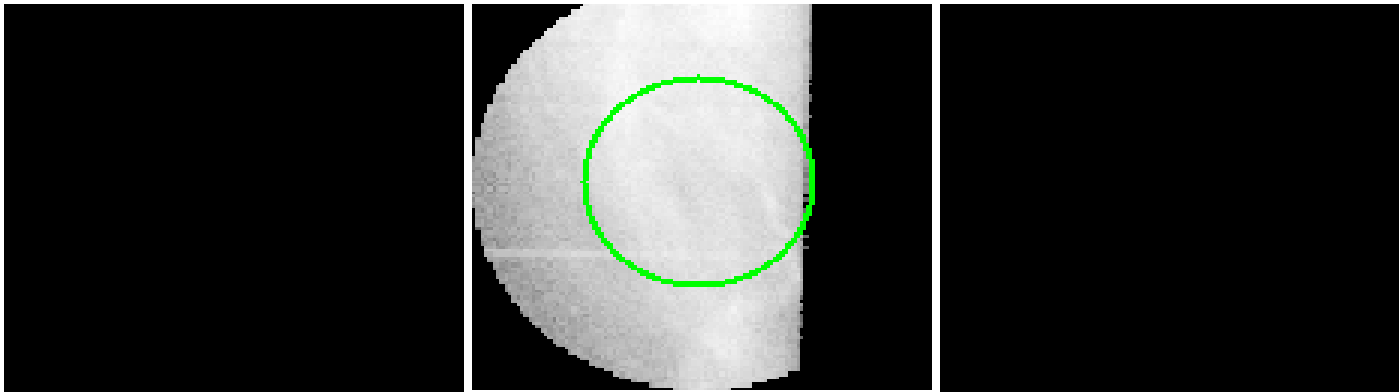


2.5.3 Slot 2



3 Gratings

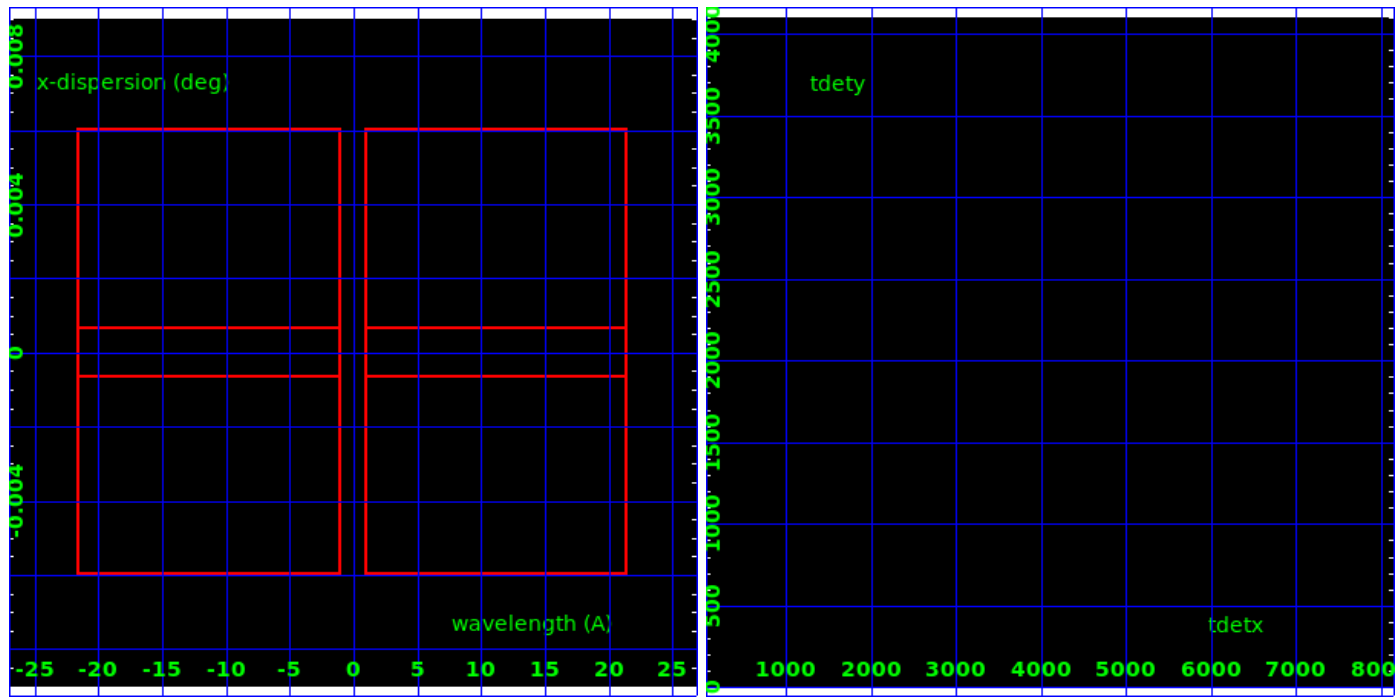
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

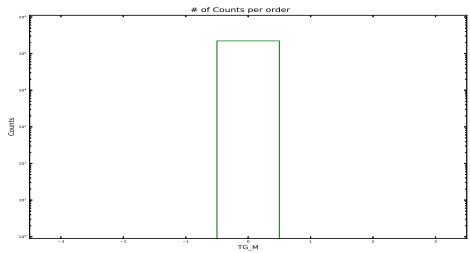
HEG Order Sort ALL

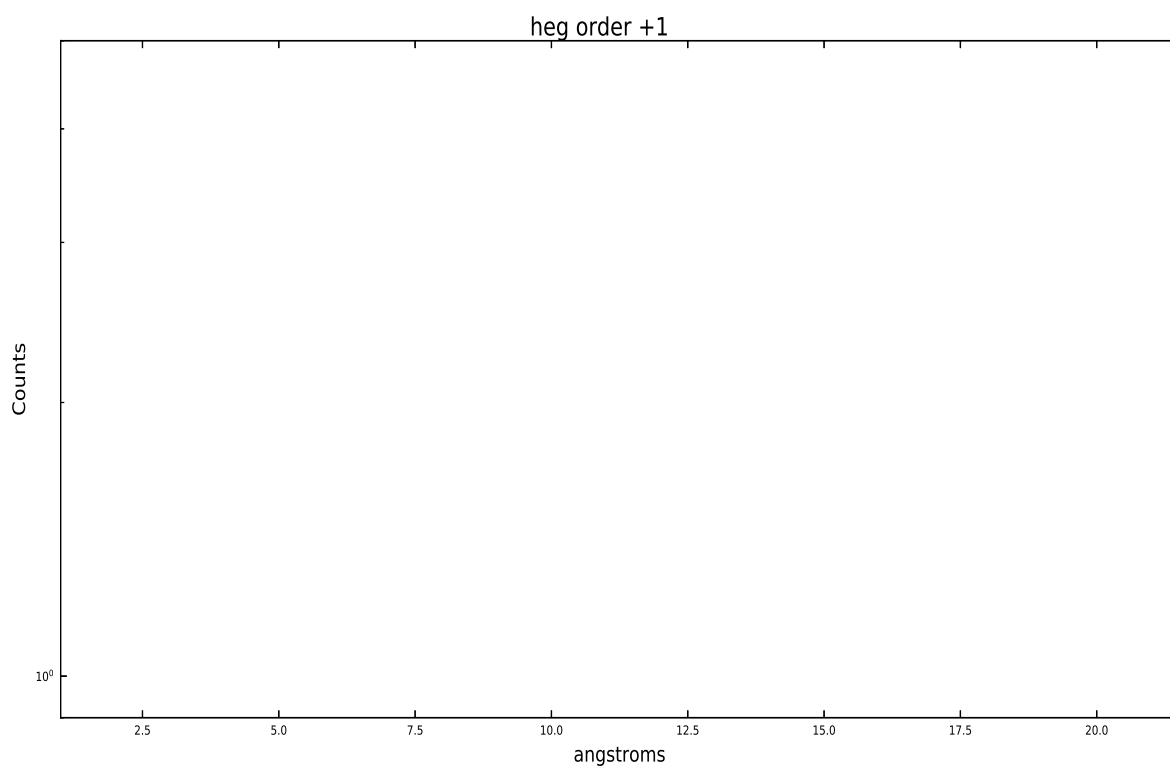
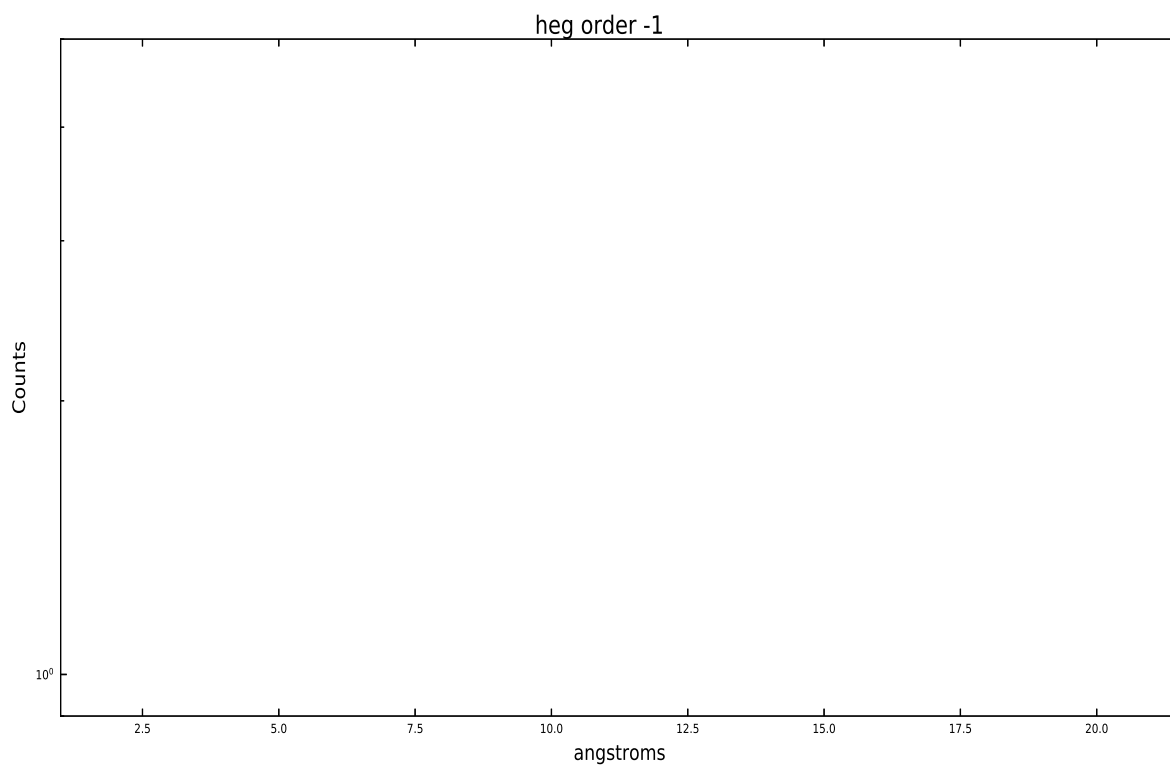


Spot Image HEG

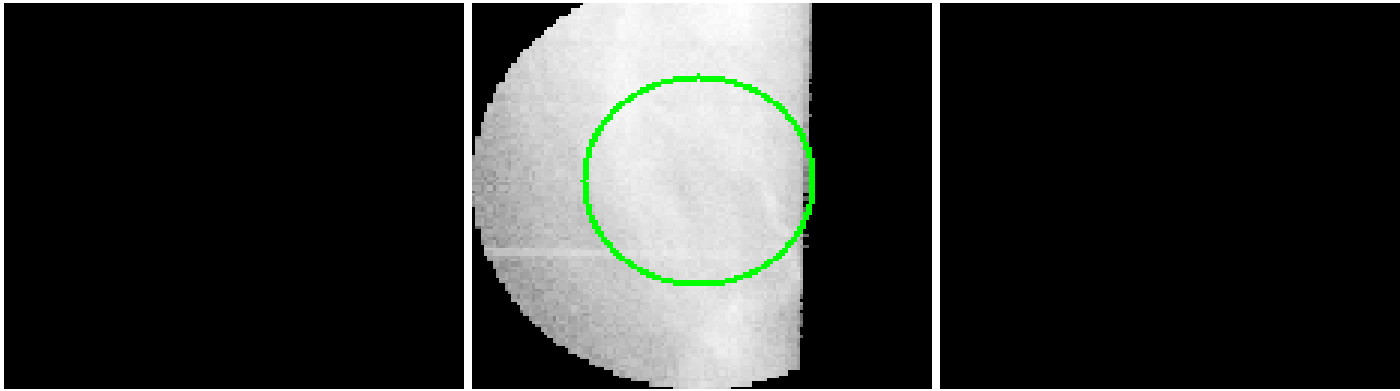
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	222791	0	0	0





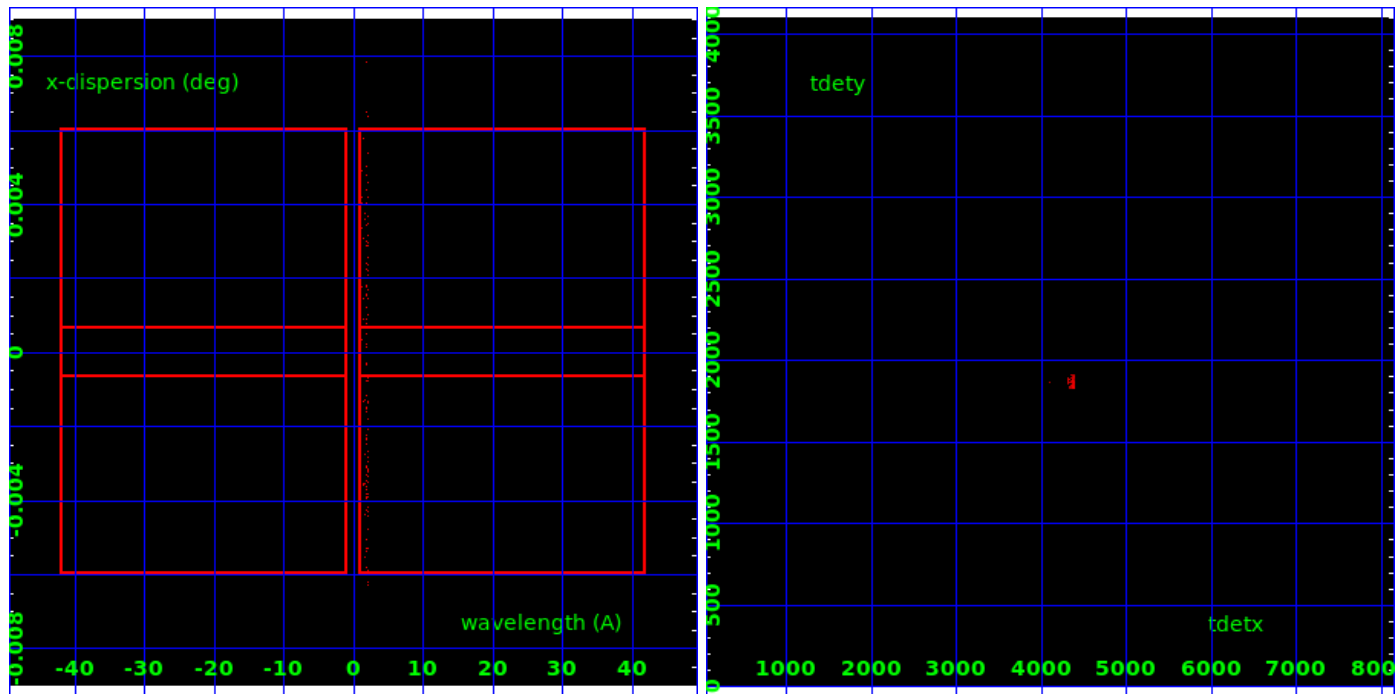
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

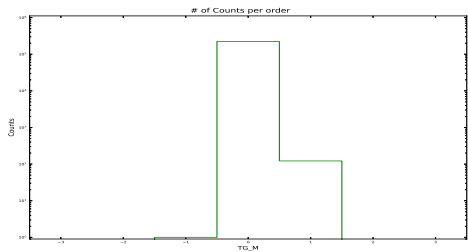
MEG Order Sort ALL

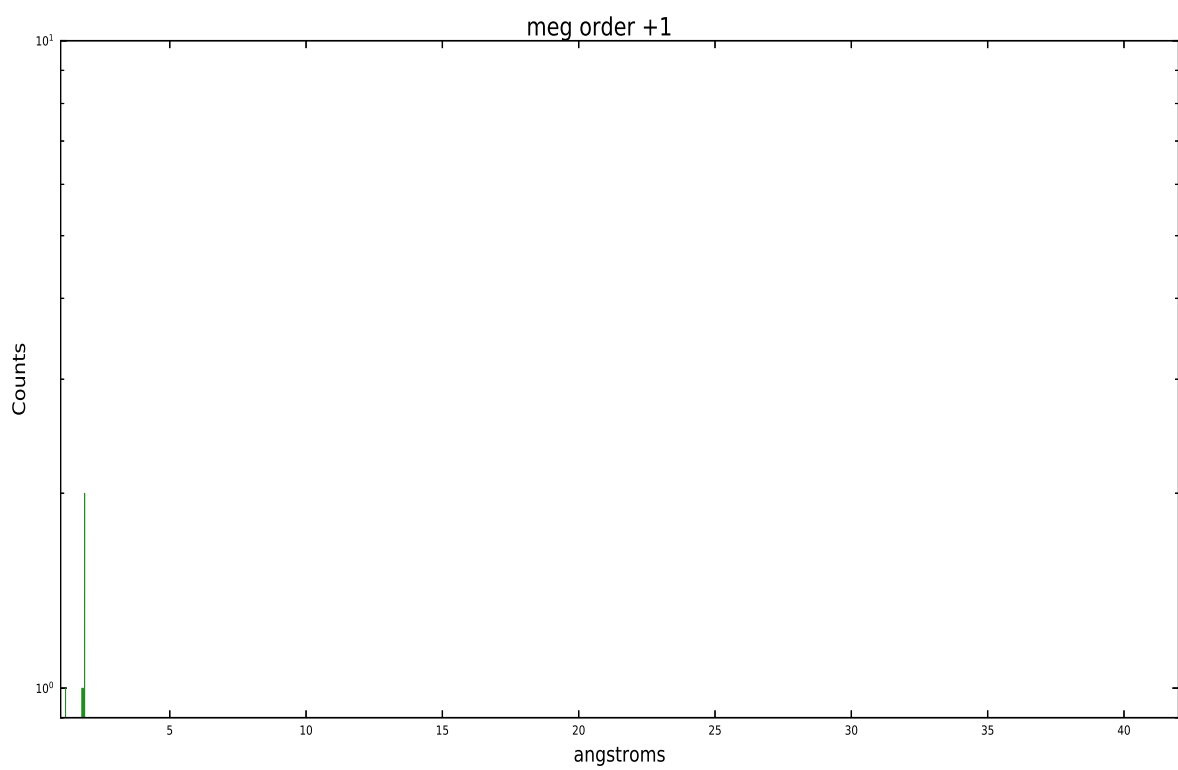
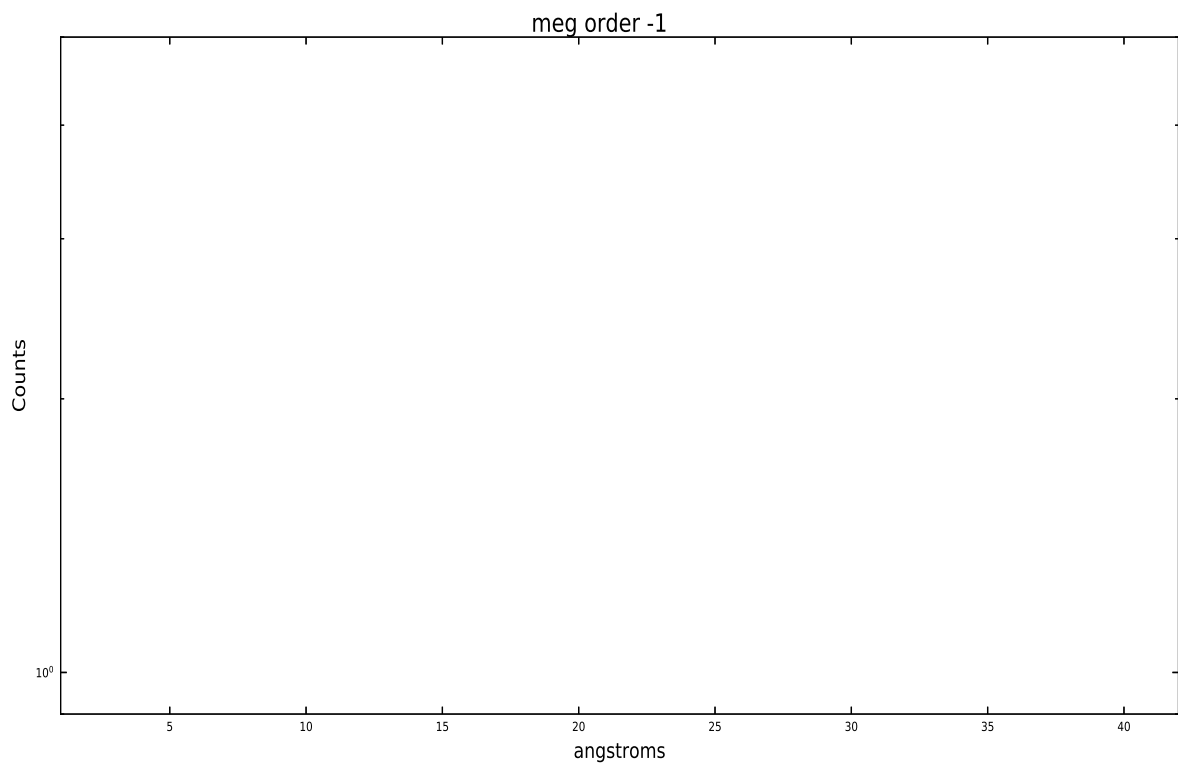


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	1	222791	122	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	9.578

A.2 Comments

HETG is inserted as a filter; there is very little useful gratings information in the observation. The zeroth order position used in the grating extraction is NOT at the position of the pulsar, but is near a bright emission knot to the SE.