

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6297 - L2 Version 5
Chandra X-Ray Center

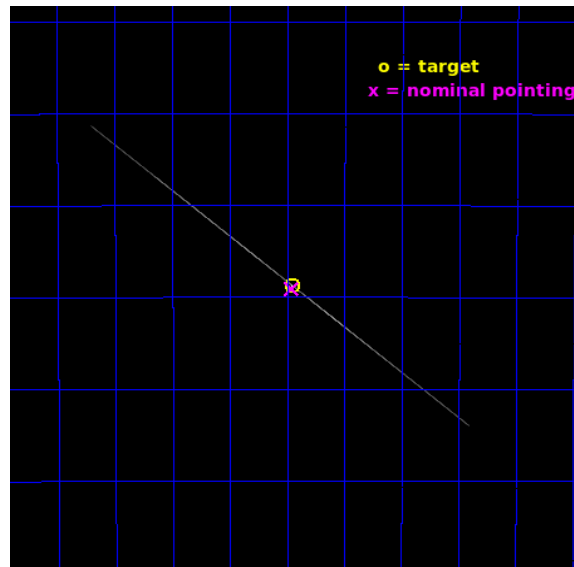
L2 Processing Date : Oct 8 2020

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	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 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

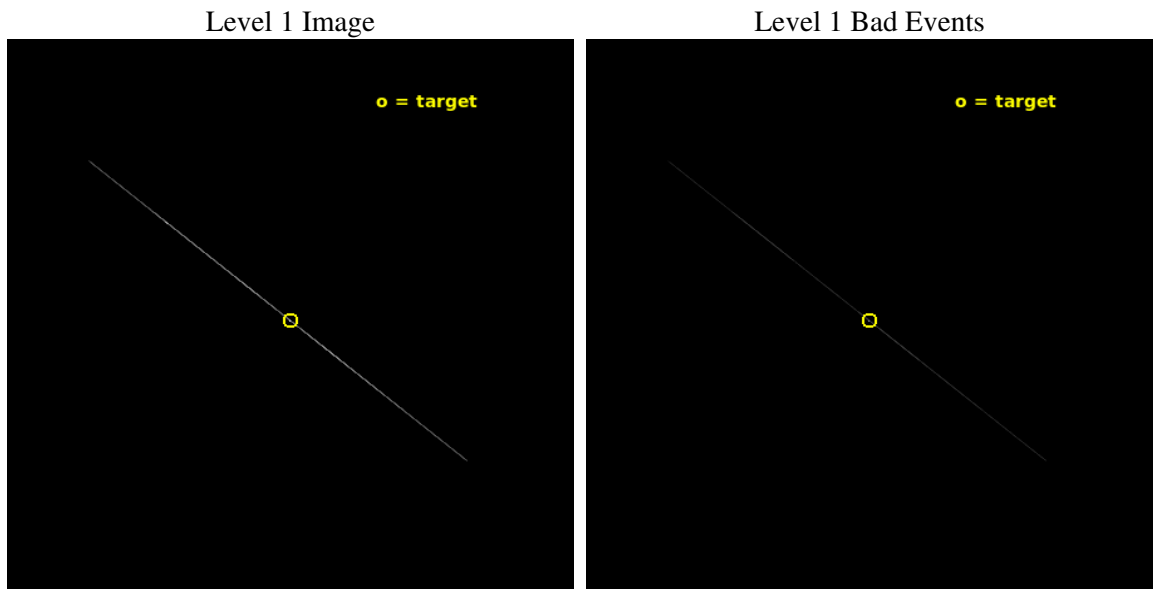
seq_num	400469	Sequence number
obs_id	6297	Observation id
title	Outburst spectroscopy of the closest accretion-powered millisecond pulsar	Proposal title
observer	Dr Duncan Galloway	Principal investigator
object	SAX J1808.4-3658	Source name
ra_targ	272.114583	Observer's specified target RA [deg]
dec_targ	-36.978972	Observer's specified target Dec [deg]
ra_nom	272.11467632753	Nominal RA [deg]
dec_nom	-36.985044718922	Nominal Dec [deg]
roll_nom	39.542416974887	Nominal Roll [deg]
revision	5	Processing version of data
ontime	14344.25	Sum of GTIs [s]
livetime	14288.217773438	Livetime [s]
ontime4	14344.25	Sum of GTIs [s]
ontime5	14344.25	Sum of GTIs [s]
ontime6	14344.25	Sum of GTIs [s]
ontime7	14344.25	Sum of GTIs [s]
ontime8	14344.25	Sum of GTIs [s]
ontime9	14344.25	Sum of GTIs [s]
l2events	1004140	Number of level 2 events



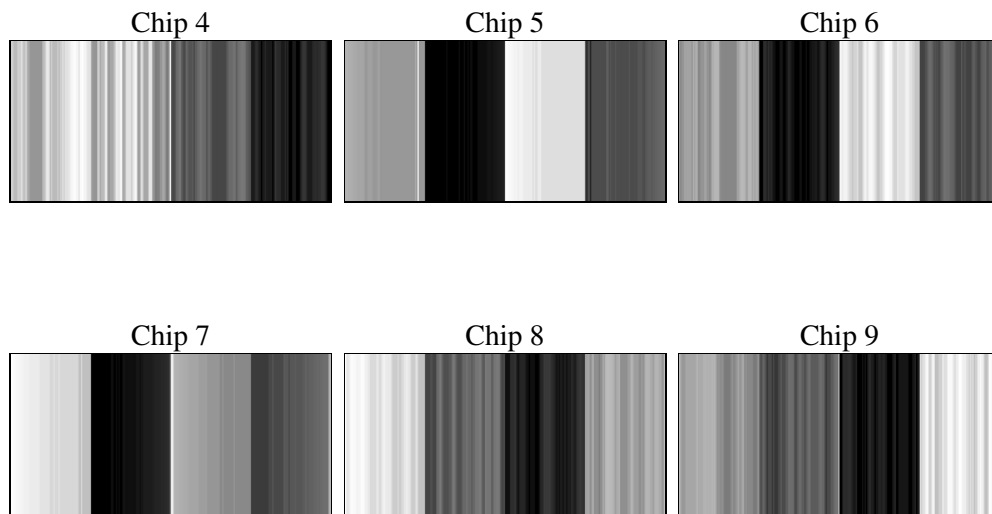
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14220.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	14344.25	Sum of GTIs [s]
caldsver	4.9.2	 	ontime4	14344.25	Sum of GTIs [s]
date	2020-10-08T19:26:43	Date and time of file creation	ontime5	14344.25	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	14344.25	Sum of GTIs [s]
			ontime7	14344.25	Sum of GTIs [s]
			ontime8	14344.25	Sum of GTIs [s]
			ontime9	14344.25	Sum of GTIs [s]
			l1events	1210619	Number of level 1 events
			tgmetho	TGDETECT	Method used to create src1a file
				14004.26	

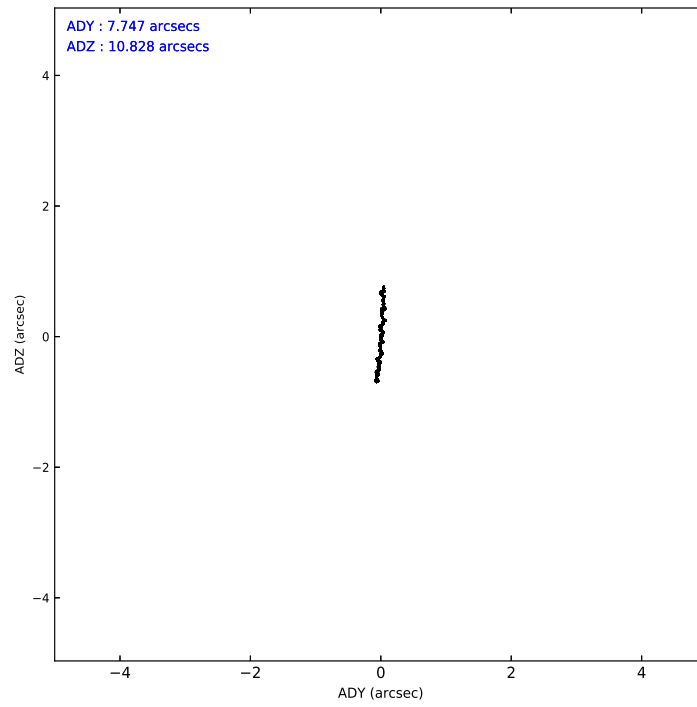
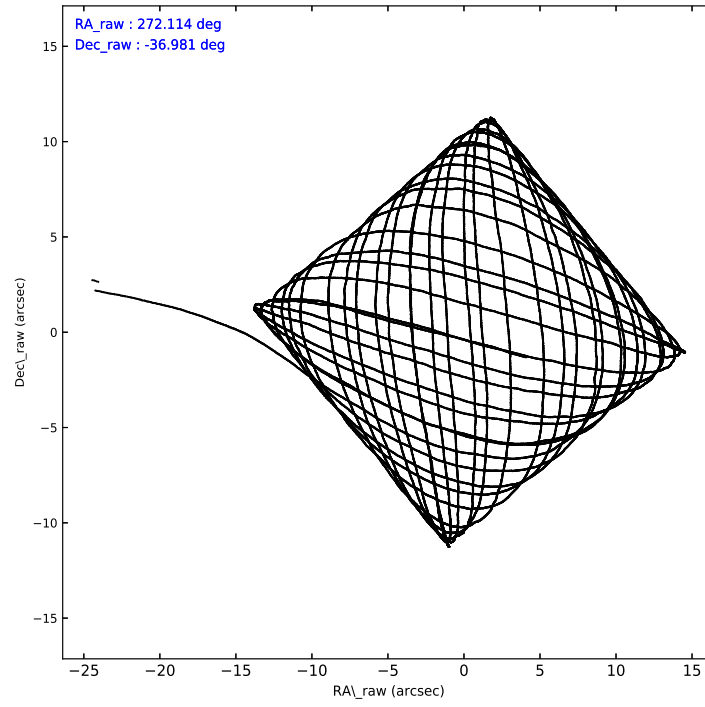
2.1.4 Events

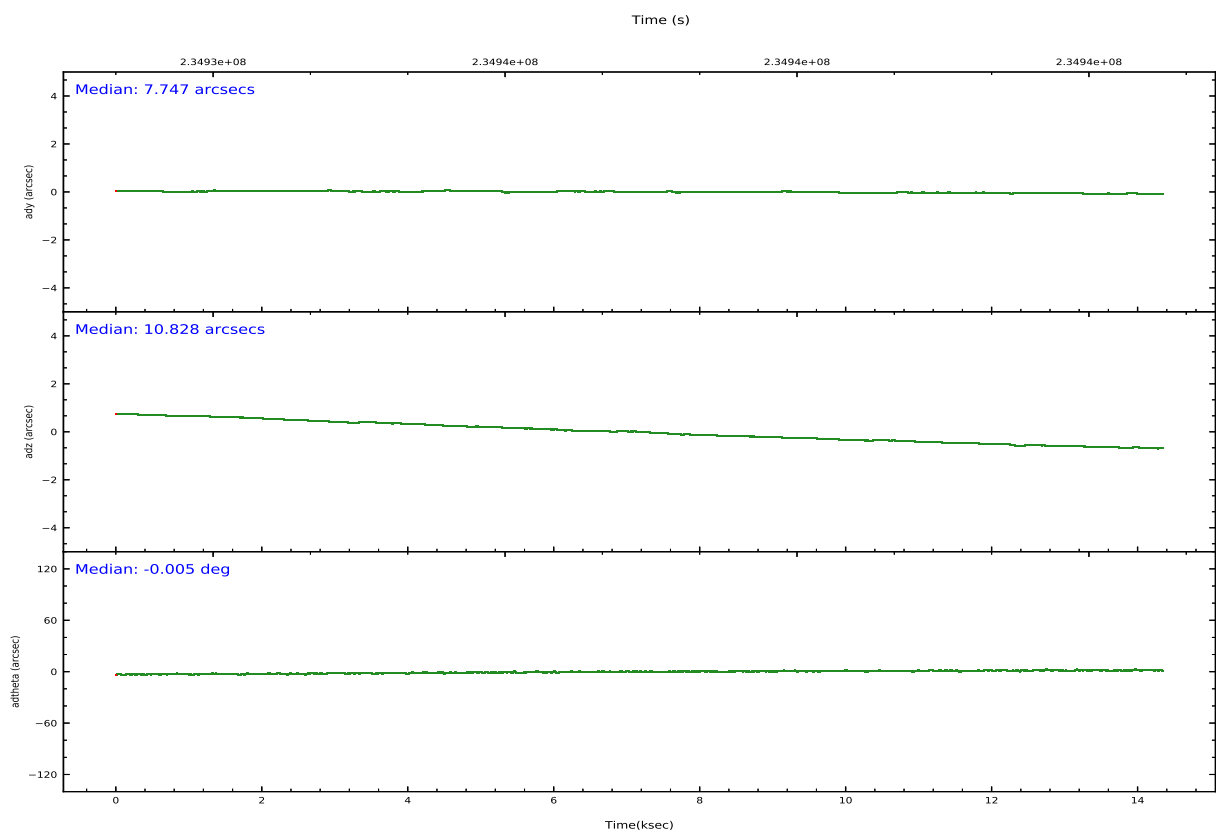
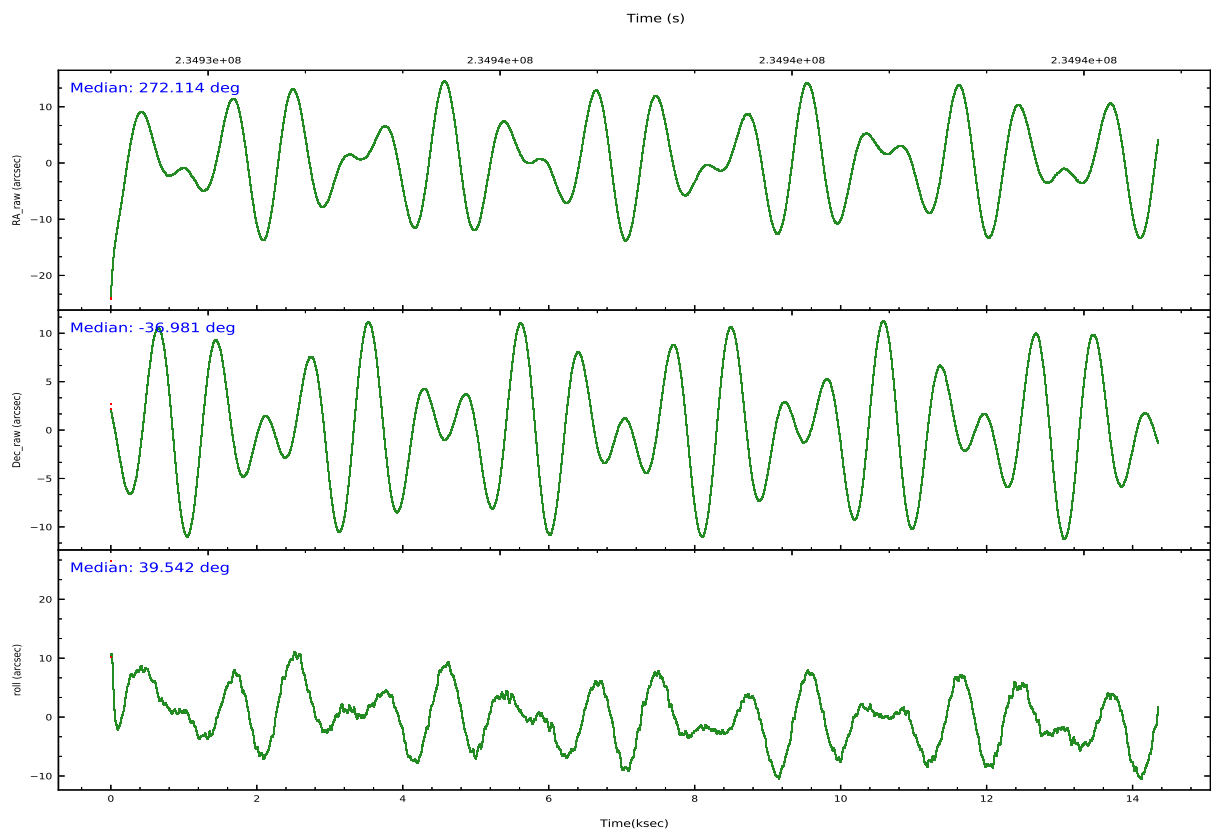
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	40262	204844	205947	564401	147114	48051	grade 0 events	8575	55423	35940	119056	61185	11952
rejected events	6493	27454	10227	40870	12057	7544		21%	27%	17%	21%	41%	24%
rejected %	16%	13%	4%	7%	8%	15%	grade 1 events	135	1726	133	3774	223	109
								0%	0%	0%	0%	0%	0%
							grade 2 events	16273	59640	138441	143643	51560	18610
								40%	29%	67%	25%	35%	38%
							grade 3 events	2846	7176	3921	56751	6449	2712
								7%	3%	1%	10%	4%	5%
							grade 4 events	2953	7317	3858	55950	6384	3000
								7%	3%	1%	9%	4%	6%
							grade 5 events	4490	13743	6103	23607	7368	5479
								11%	6%	2%	4%	5%	11%
							grade 6 events	4990	59819	17551	161620	13945	6189
								12%	29%	8%	28%	9%	12%
							grade 7 events	0	0	0	0	0	0
								0%	0%	0%	0%	0%	0%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	CC33_FAINT	CC33_FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	272.102995	272.11467632753	Subarray requested	NONE	NONE
[deg] Pointing Dec	-37.006834	-36.985044718922	Alternating exposures requested	N	N
[deg] Pointing Roll	39.384734	39.542416974887	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-186.132523	-186.1397904050899			
[mm] SIM translation stage offset	-4	-3.992732177917873			
[s] Observation start time (MET)	234930796.184000	234929473.10985			
Observation start date	2005-06-12T02:32:12	2005-06-12T02:11:13			
[s] Observation end time (MET)	234945016.184000	234945541.01059			
Observation end date	2005-06-12T06:29:12	2005-06-12T06:39:01			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



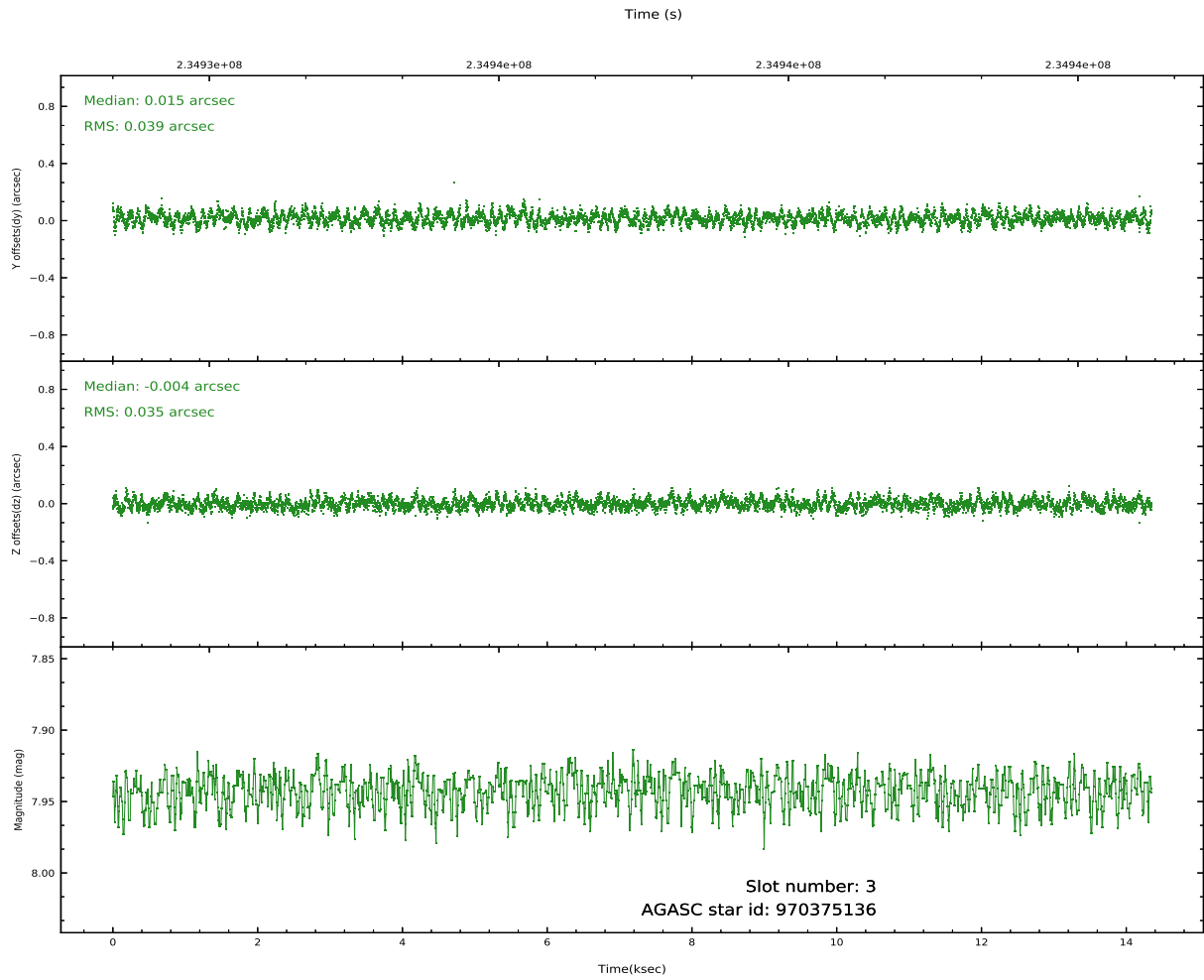
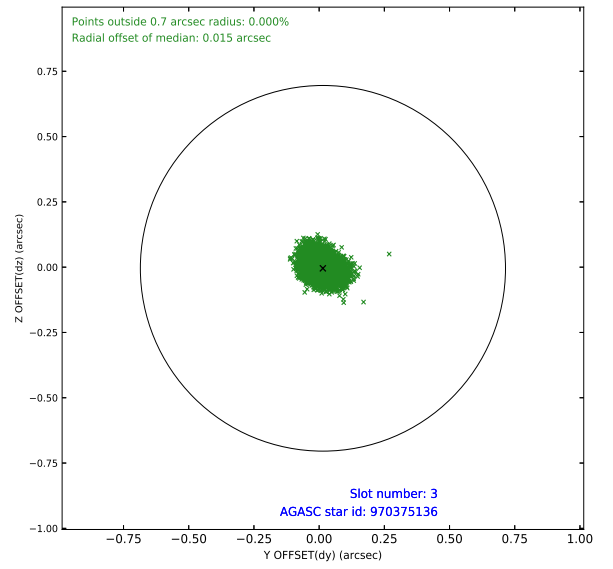
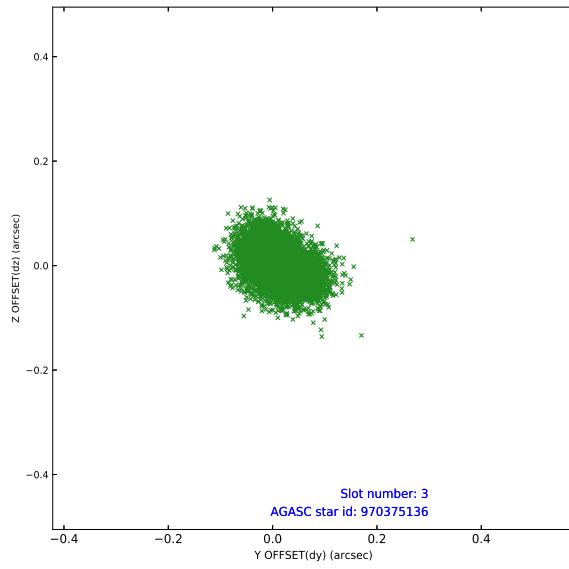


Slot Statistics

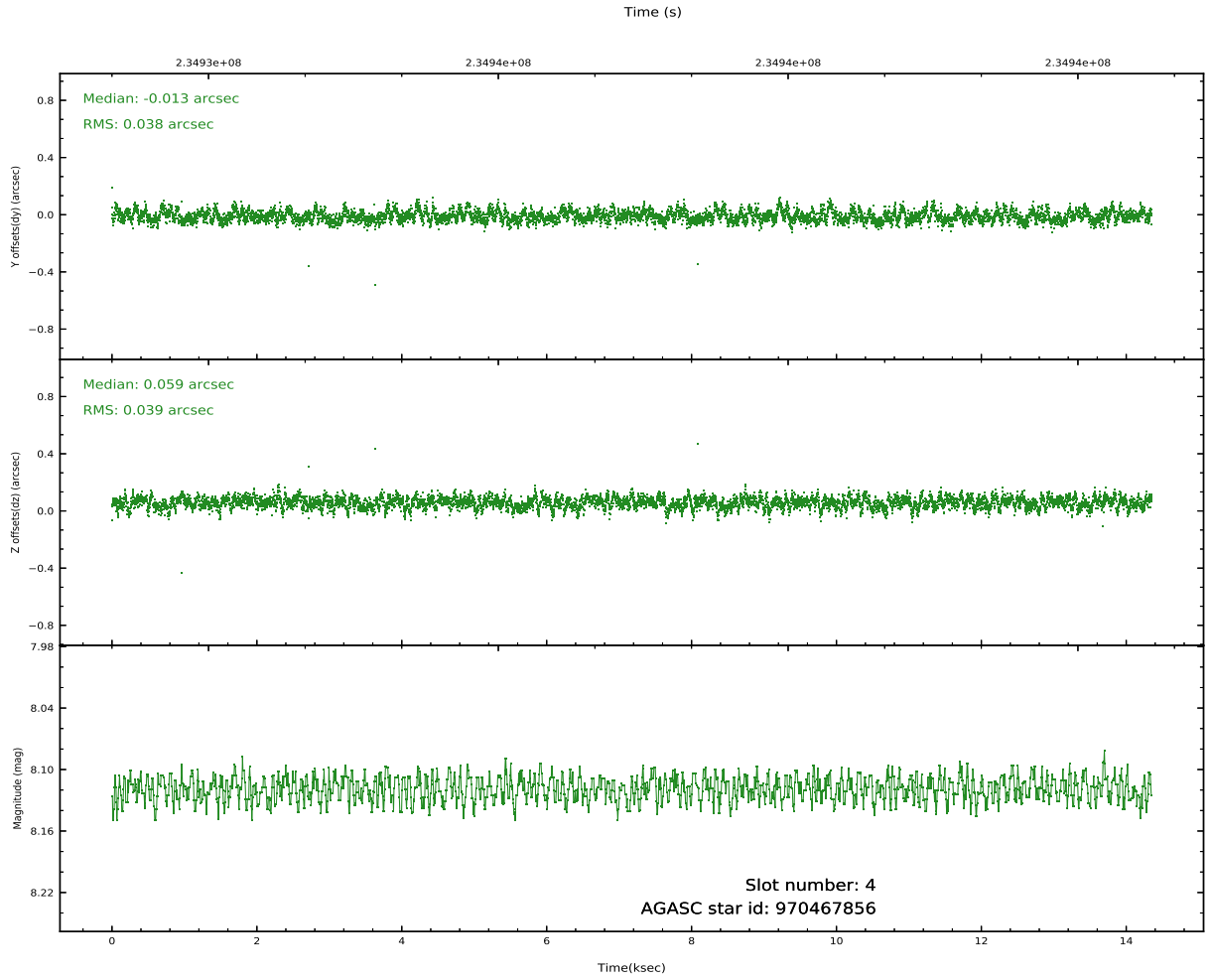
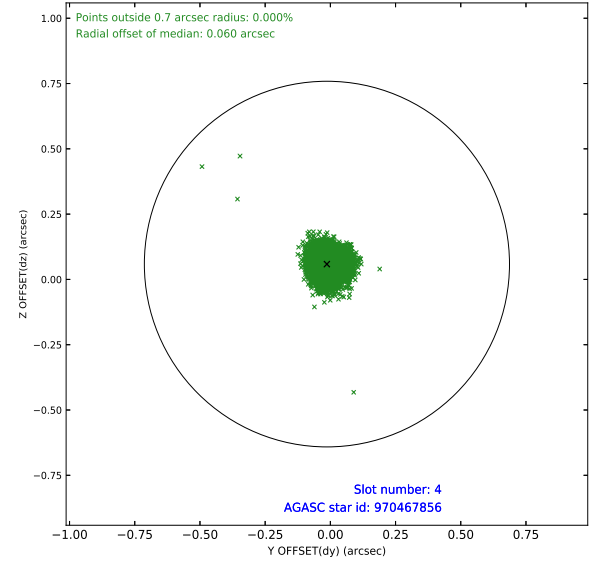
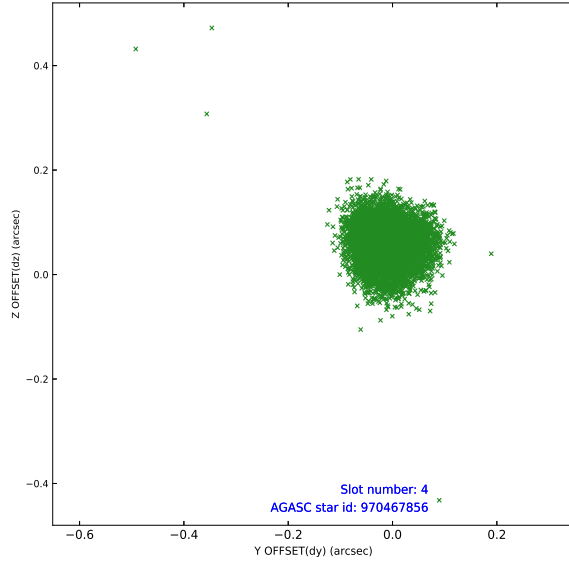
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.08	3501	1.000	-0.073	-0.143	0.010	0.023	0.000000	0.000000	-760.28	-1814
1	FID		ACIS-S-4	7.18	3501	1.000	0.146	0.073	0.006	0.011	0.000000	0.000000	2153.04	93
2	FID		ACIS-S-5	7.23	3501	1.000	-0.104	0.079	0.010	0.022	0.000000	0.000000	-1812.77	87
3	GUIDE	used	970375136	7.94	7001	1.000	0.015	-0.004	0.056	0.090	271.398909	-36.754910	-998.99	1983
4	GUIDE	used	970467856	8.12	7000	1.000	-0.013	0.059	0.057	0.091	272.620241	-37.224567	646.46	-1549
5	GUIDE	used	970481256	7.12	7001	1.000	-0.084	0.054	0.047	0.073	272.321587	-36.966000	579.34	-286
6	GUIDE	used	970485720	8.97	6999	1.000	0.080	0.021	0.091	0.153	273.024642	-37.041963	1959.53	-1787
7	GUIDE	used	970501016	7.03	6999	1.000	0.000	-0.131	0.078	0.125	272.343750	-36.672537	1301.04	488

2.4 Star Slots

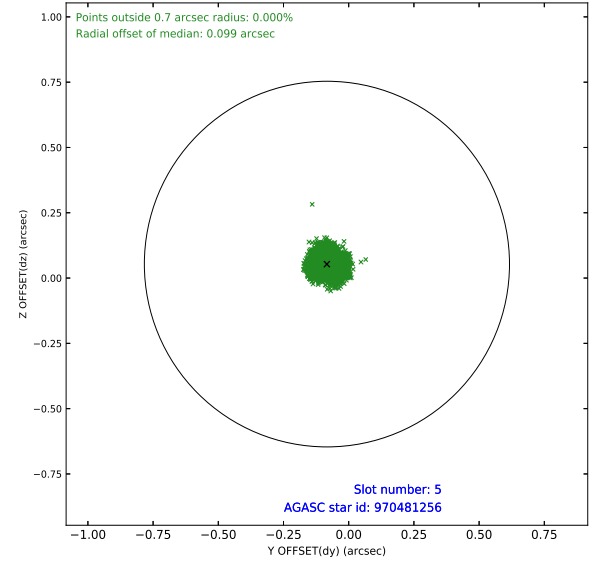
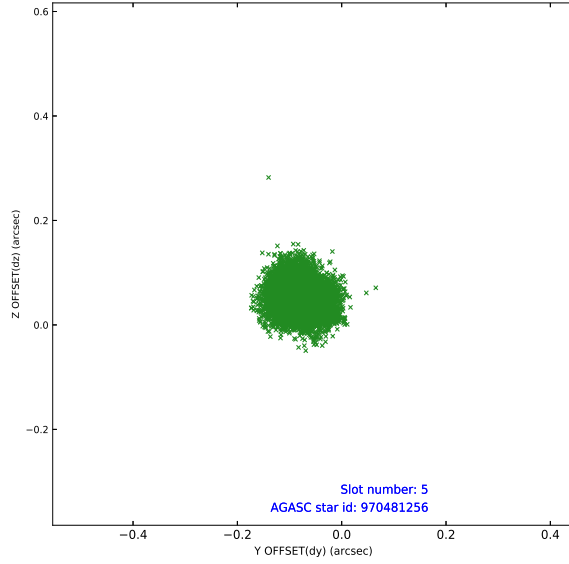
2.4.1 Slot 3



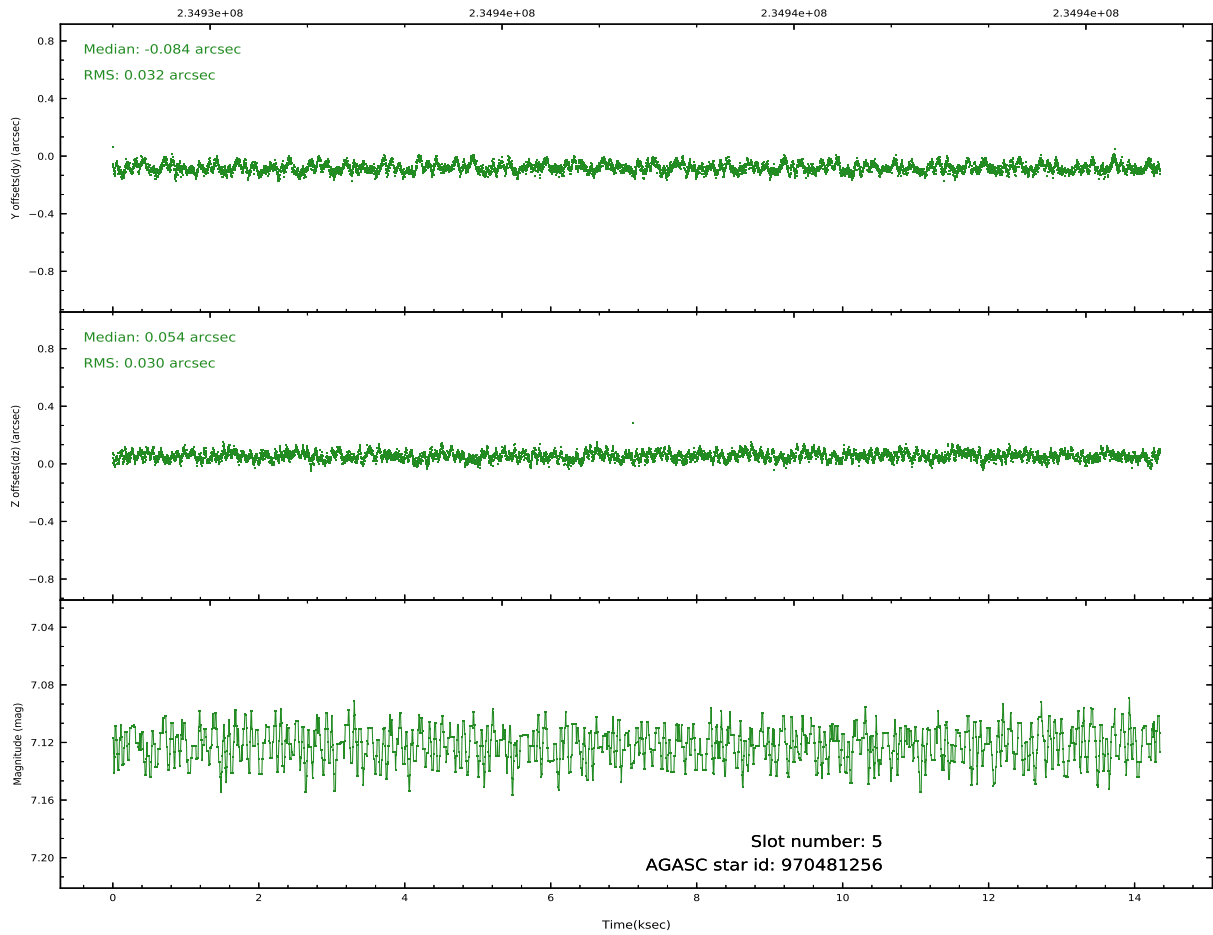
2.4.2 Slot 4



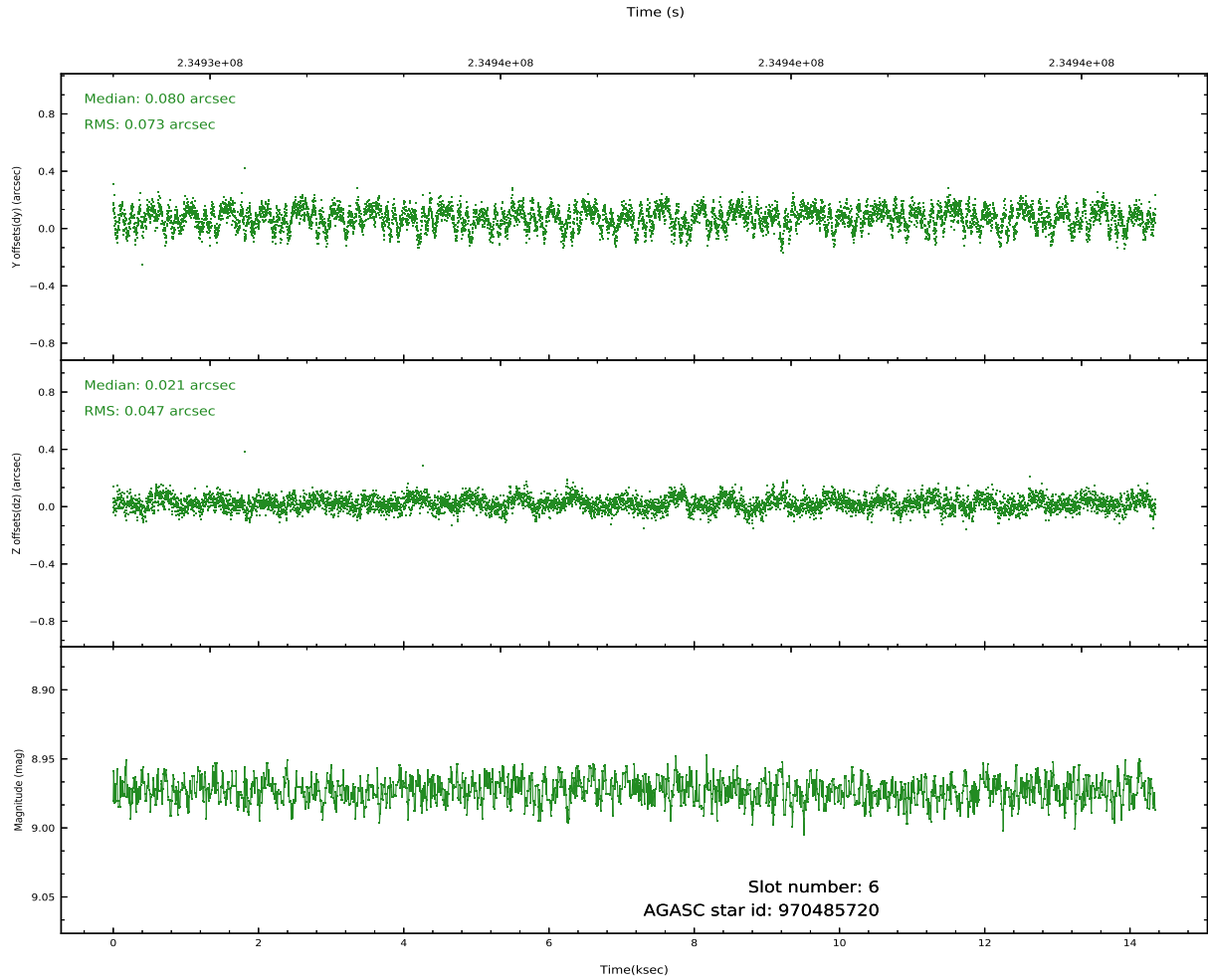
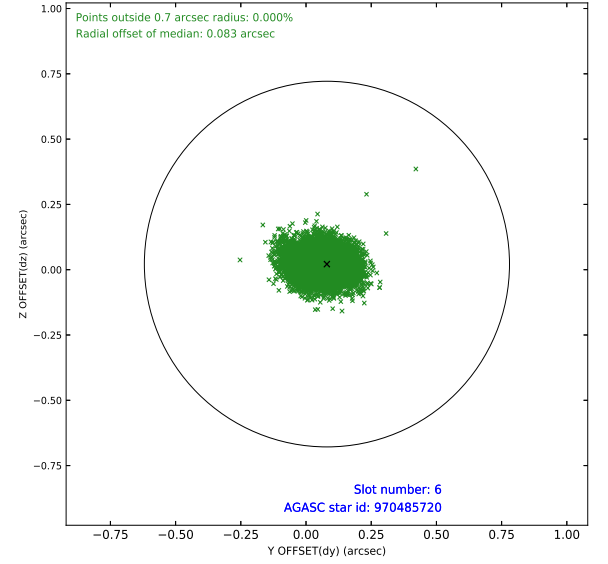
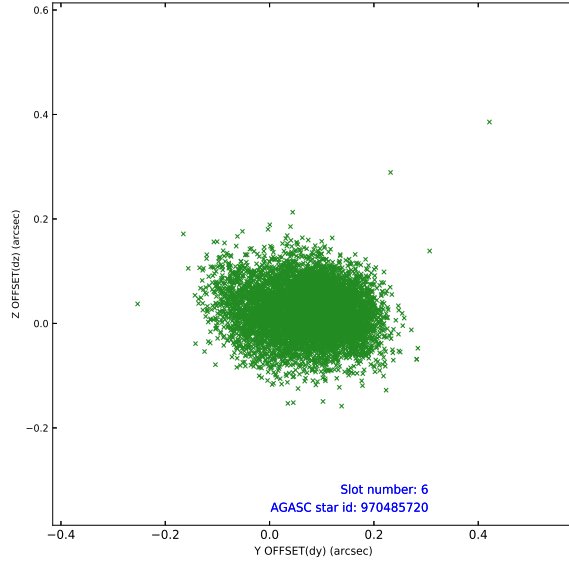
2.4.3 Slot 5



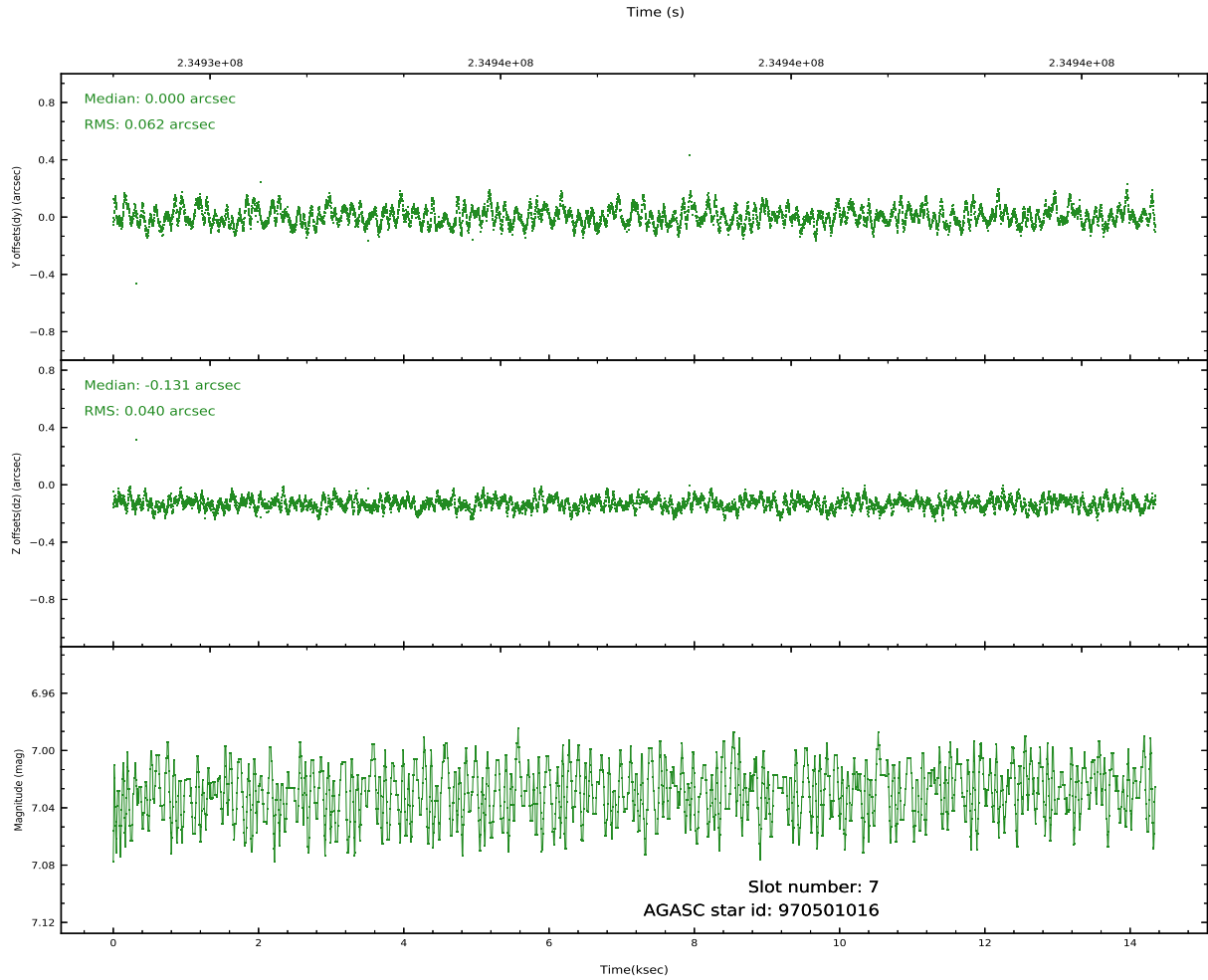
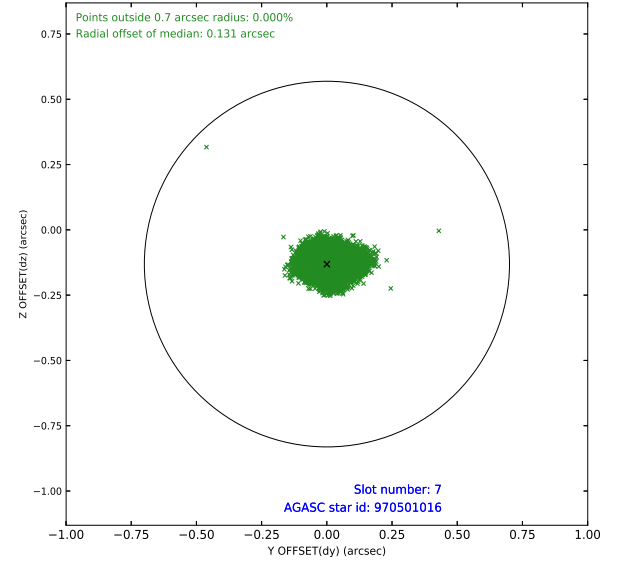
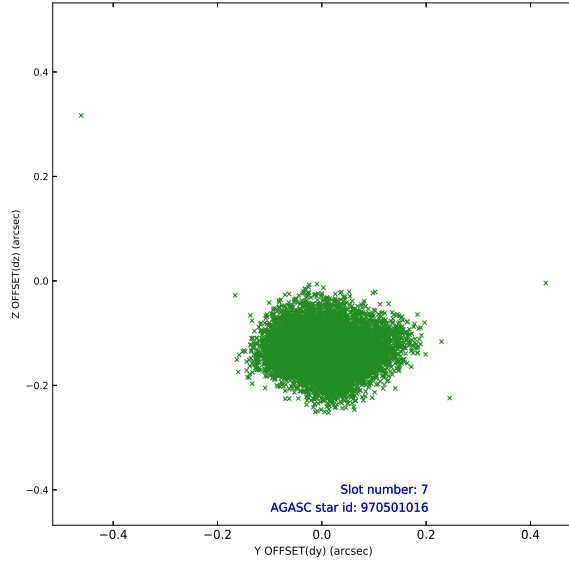
Time (s)



2.4.4 Slot 6

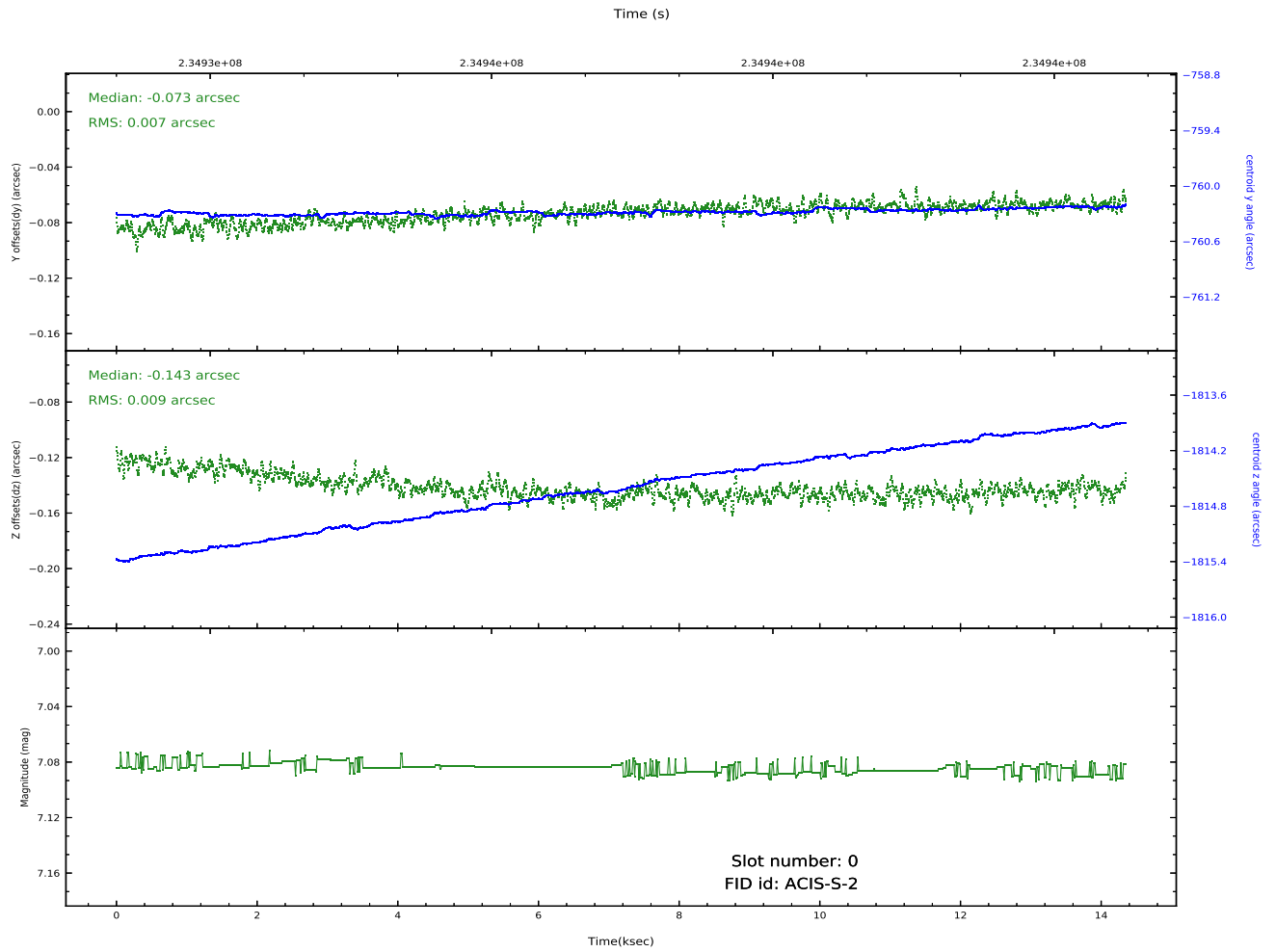
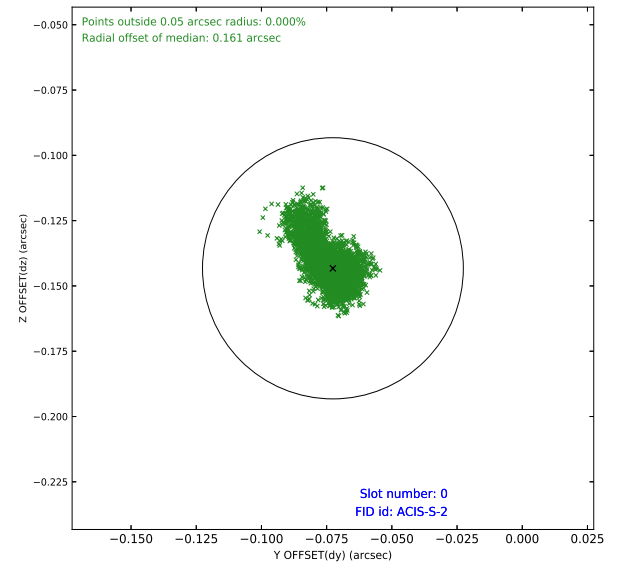
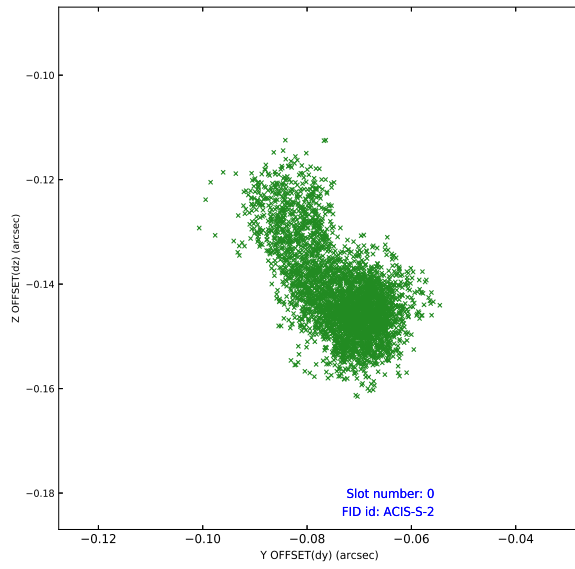


2.4.5 Slot 7

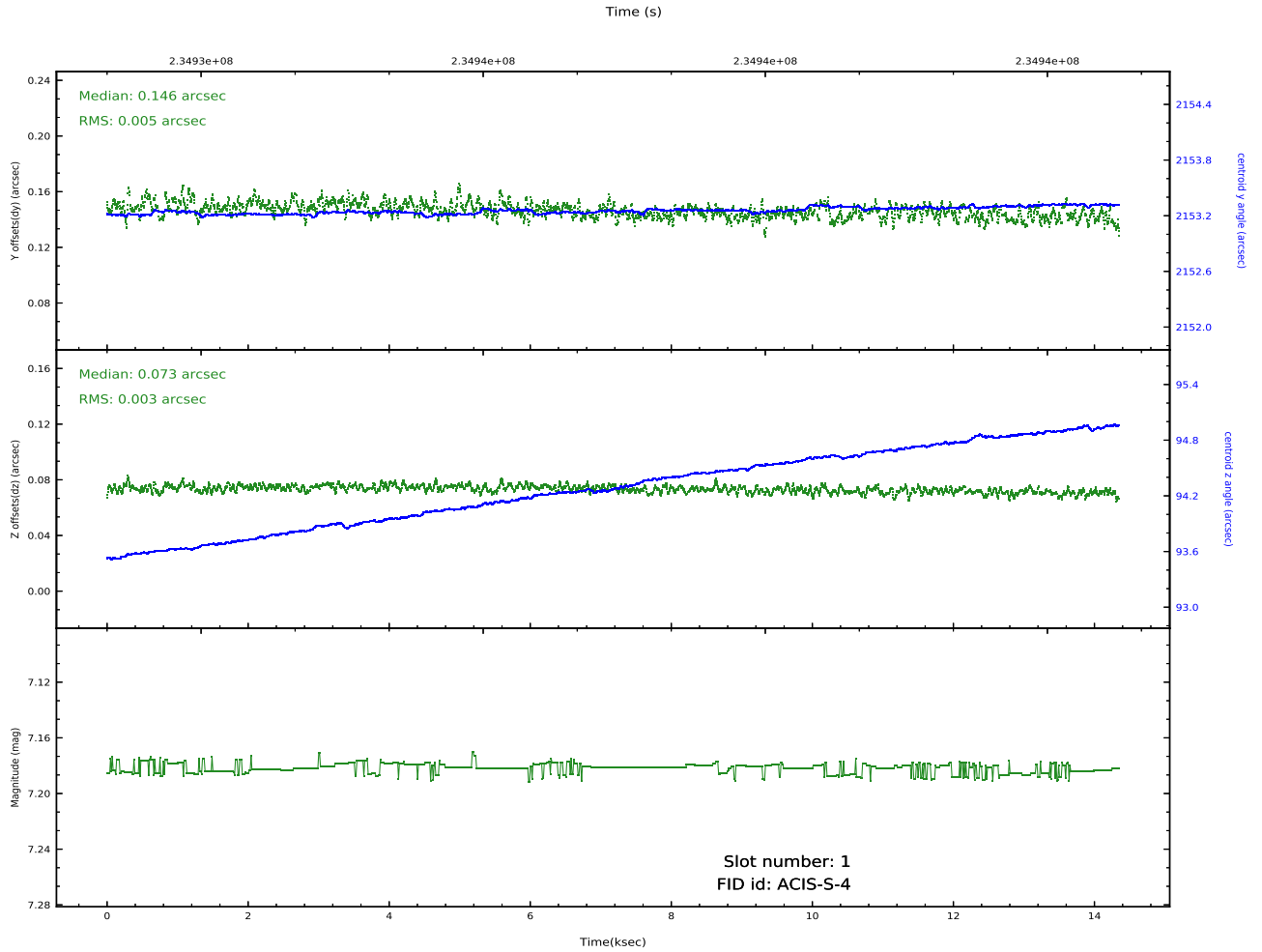
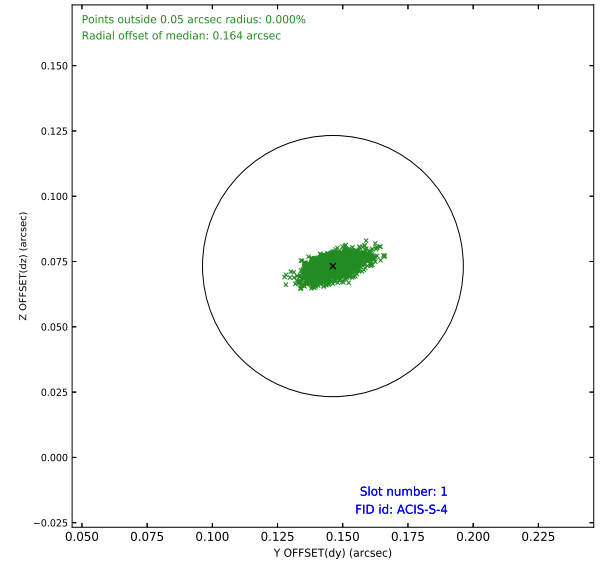
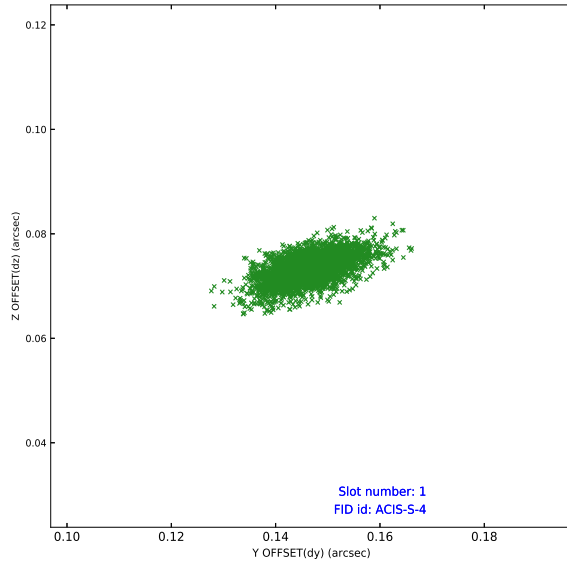


2.5 FID Slots

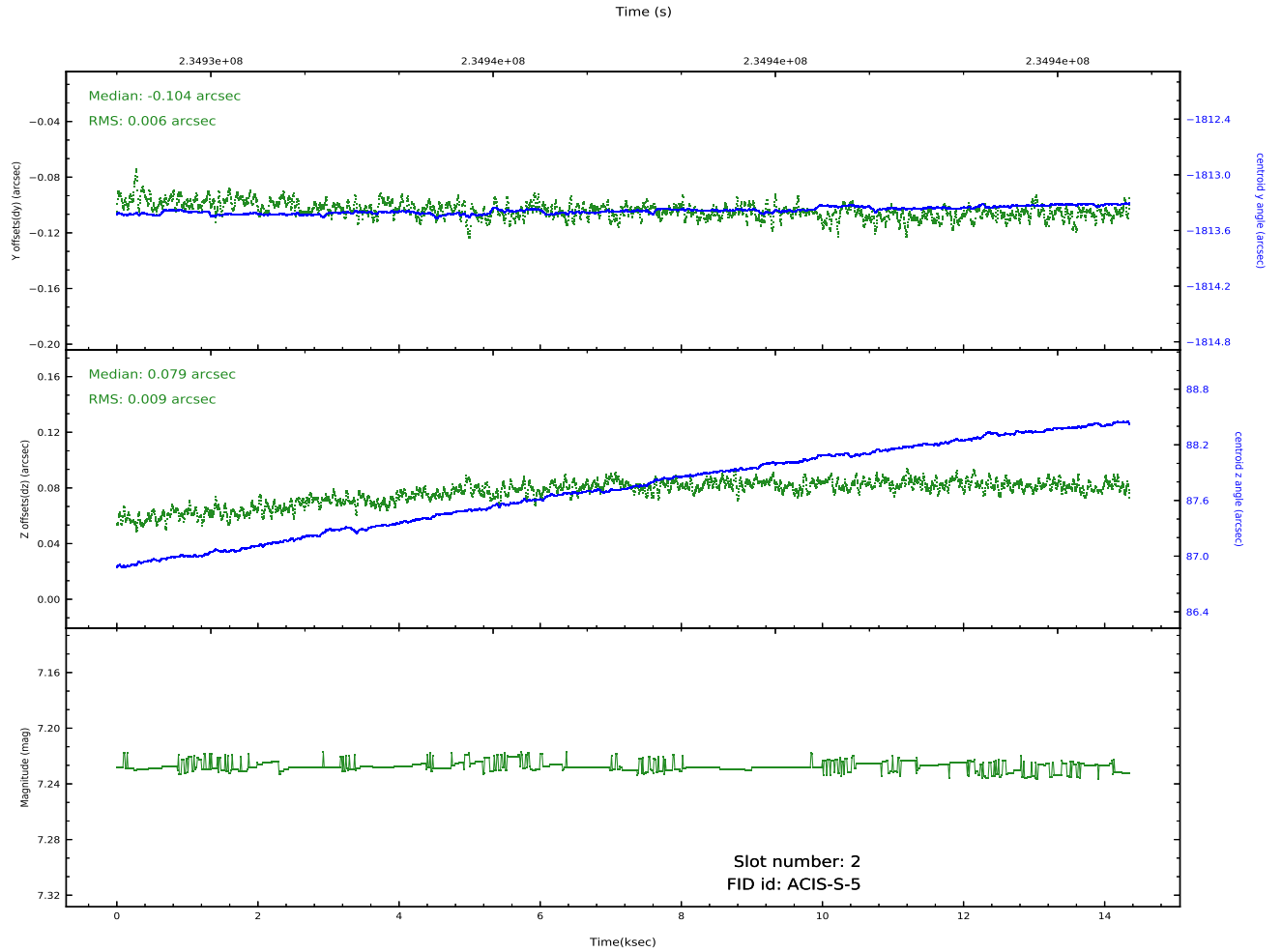
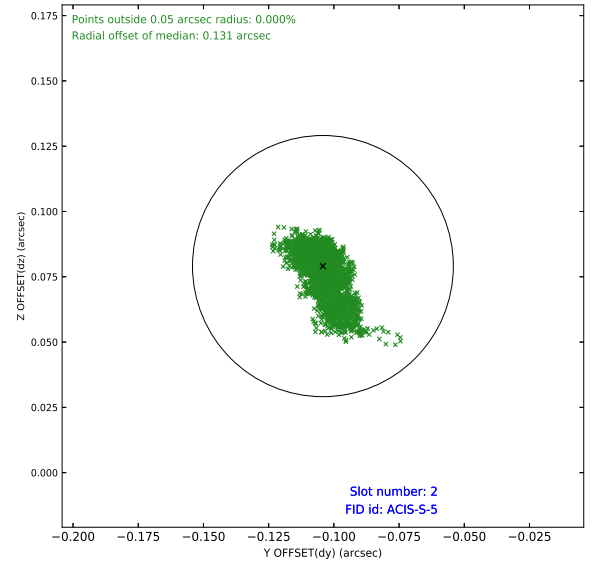
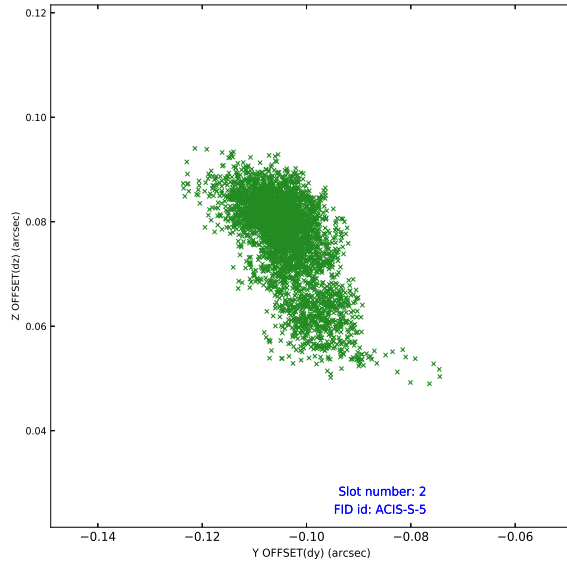
2.5.1 Slot 0



2.5.2 Slot 1

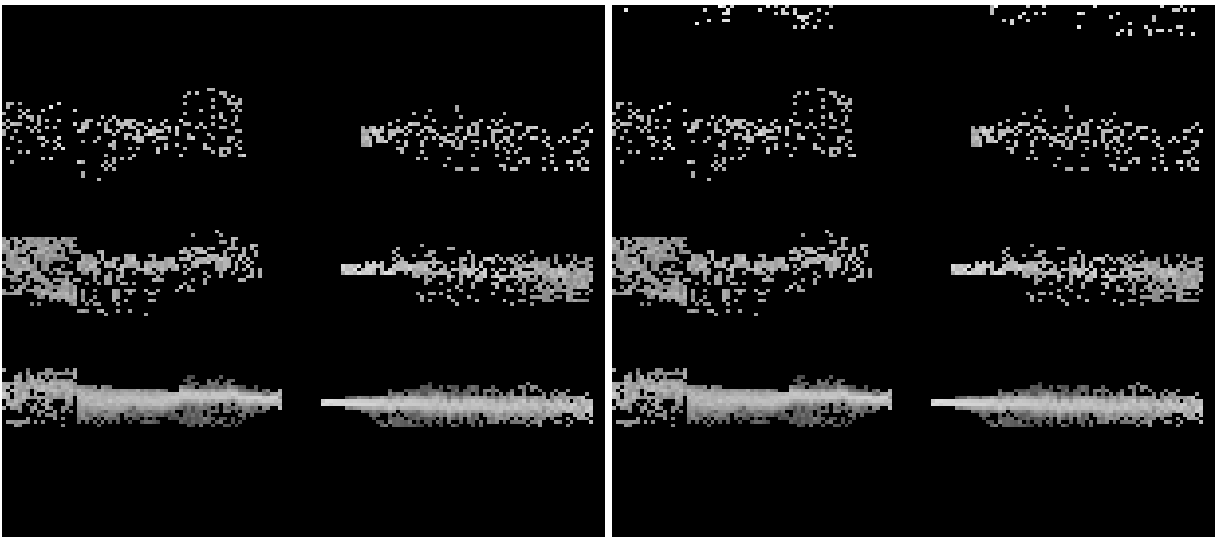


2.5.3 Slot 2



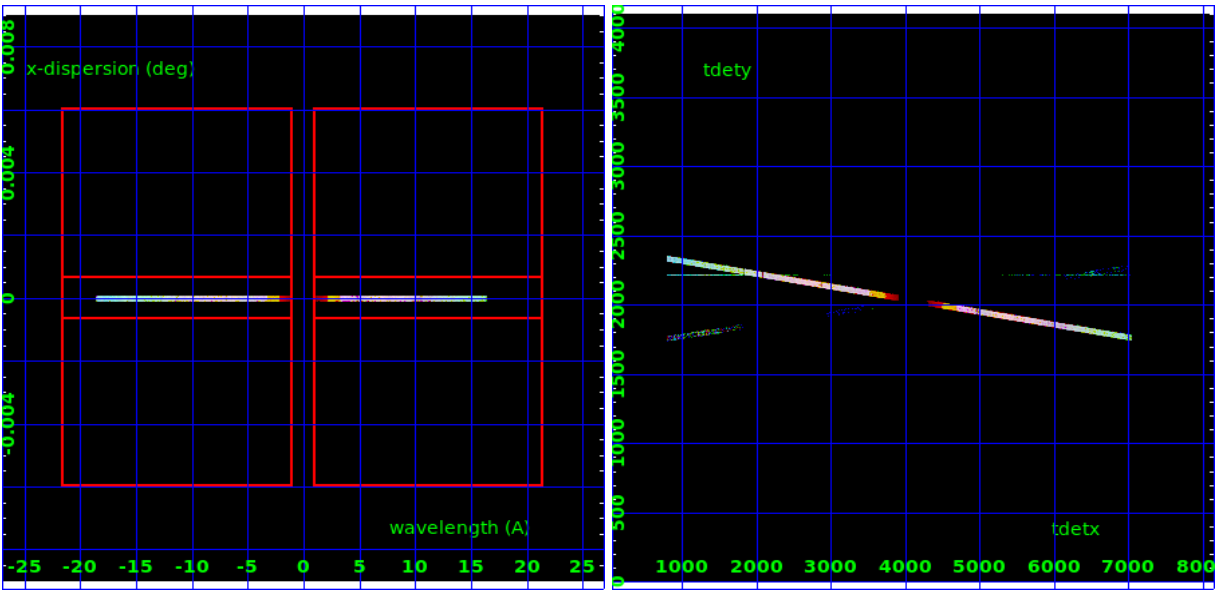
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

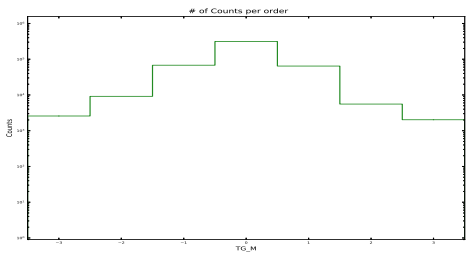
HEG Order Sort ALL

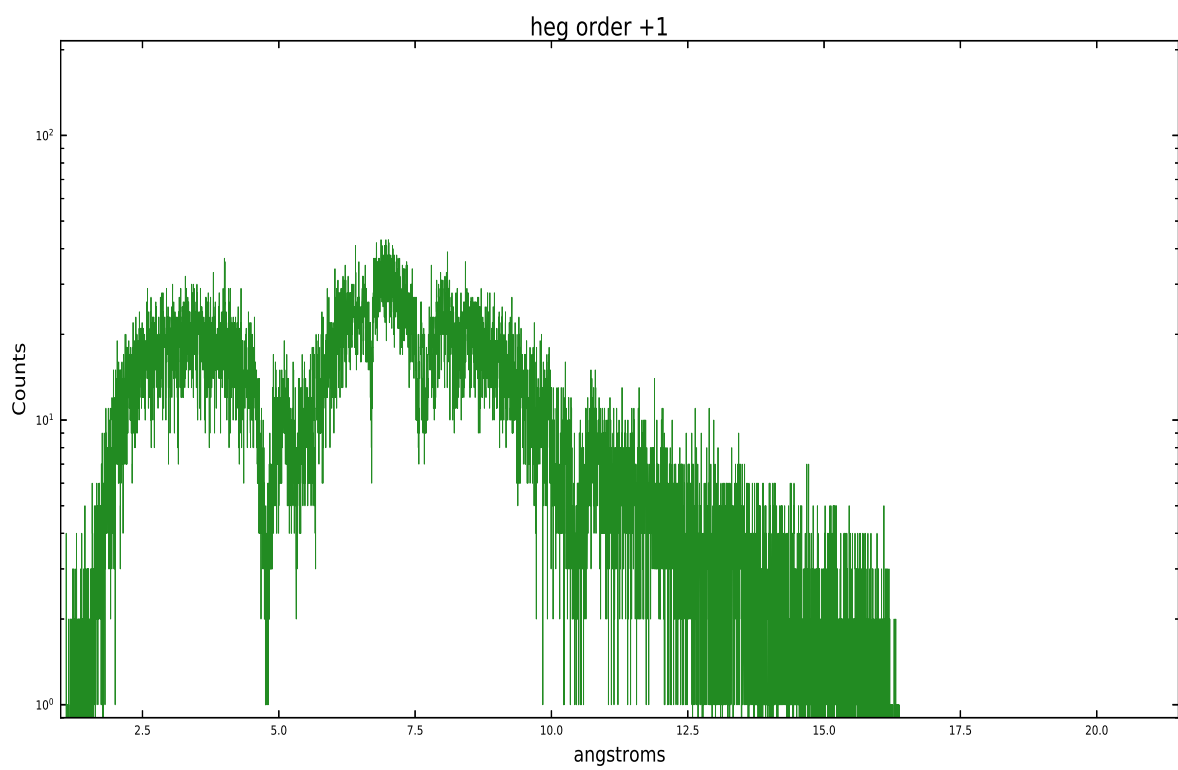
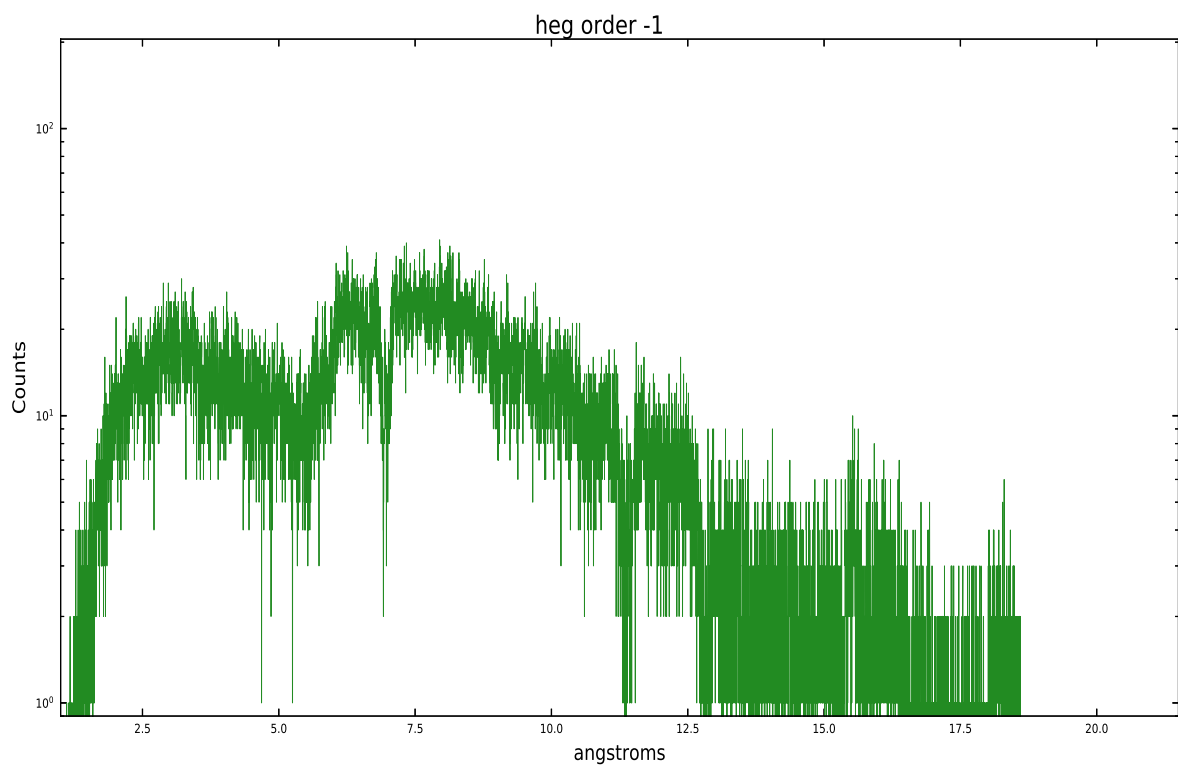


Spot Image HEG

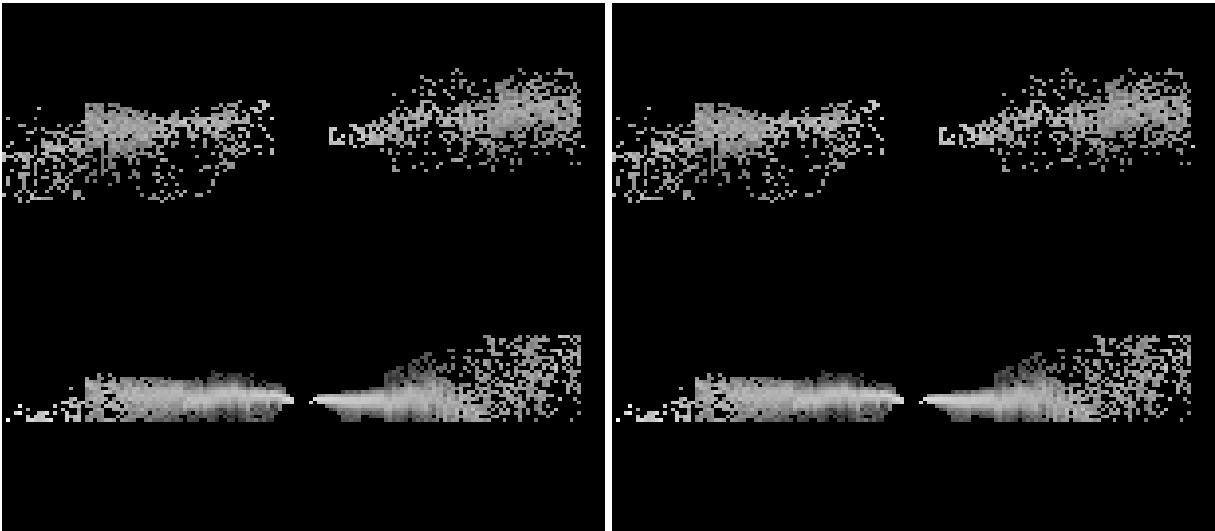
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2580	9152	67940	313343	64337	5563	2027



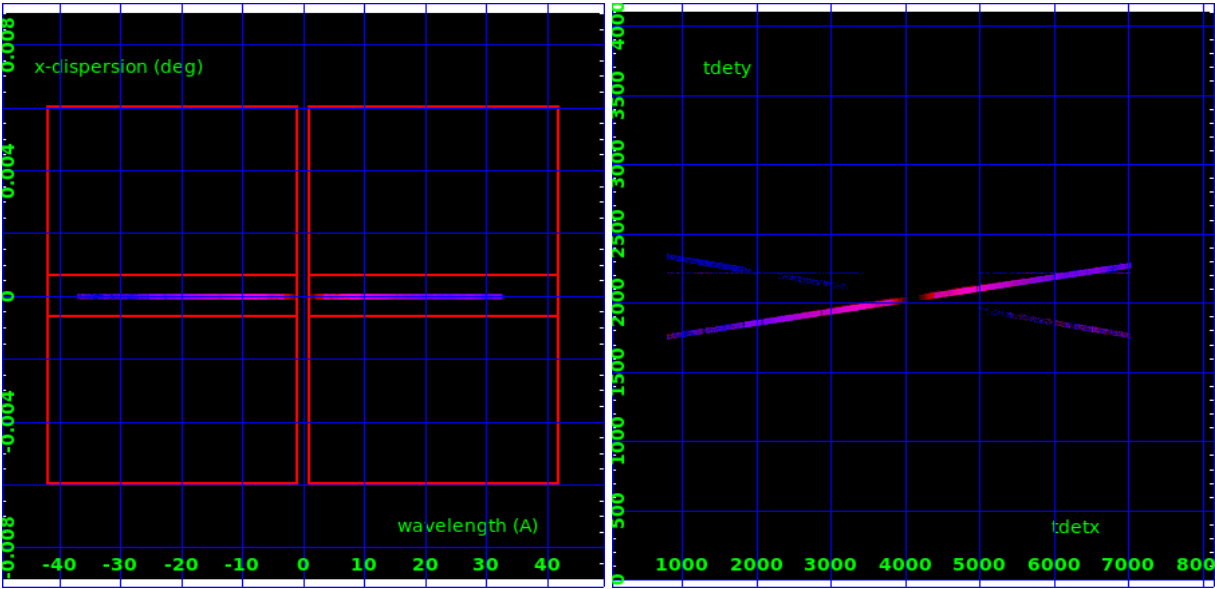


3.2 MEG Arm



MEG Order Sort 123

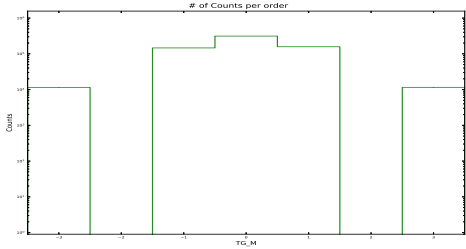
MEG Order Sort ALL

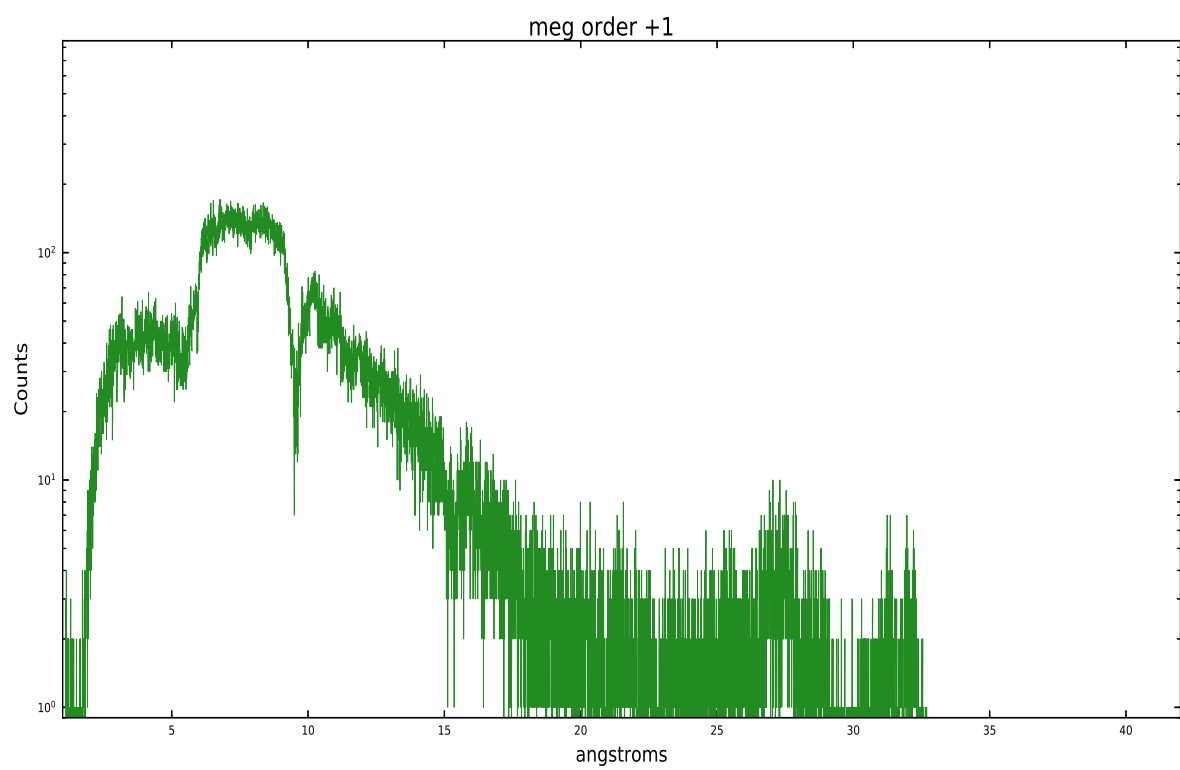
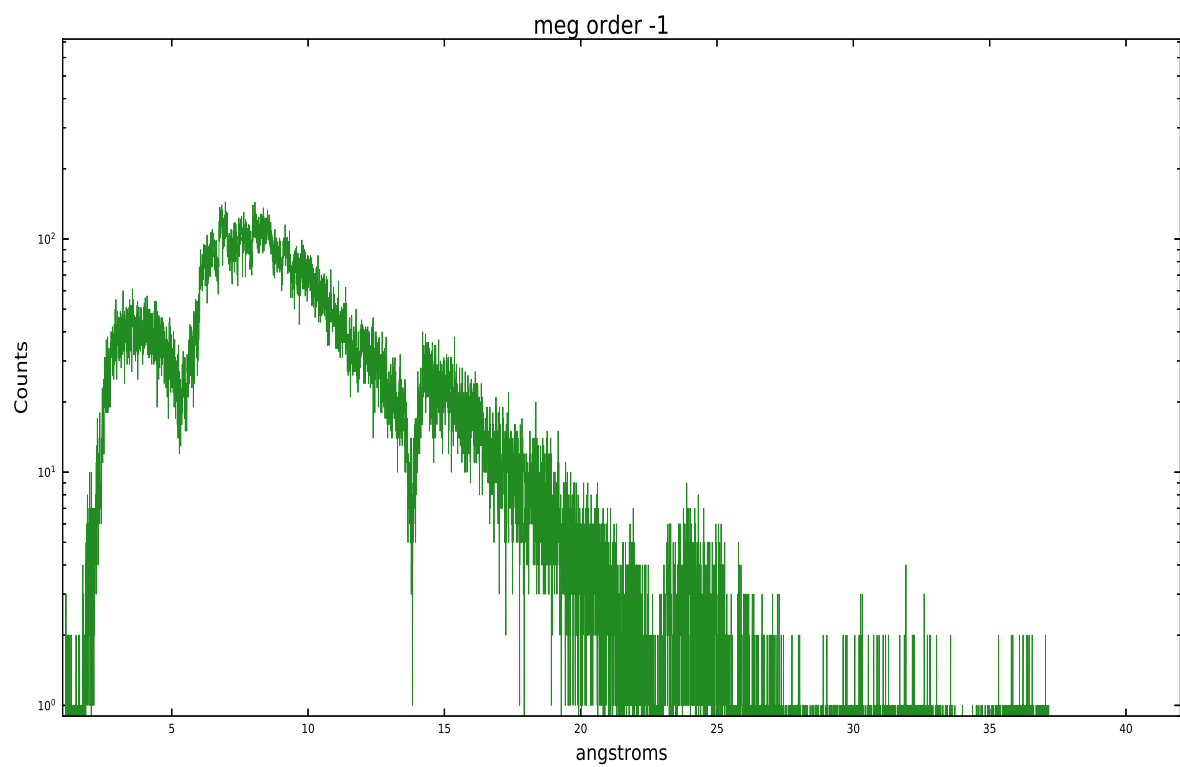


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	11518	0	146236	313343	157955	0	11529





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2020.10.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.344

A.2 Comments