

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20729 - L2 Version 1
Chandra X-Ray Center

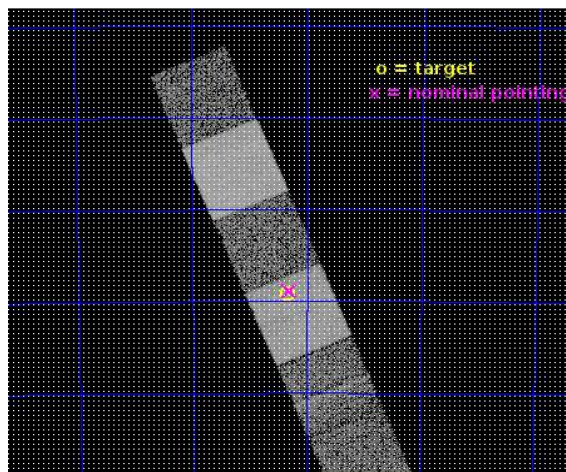
L2 Processing Date : Sep 17 2017

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1 Front

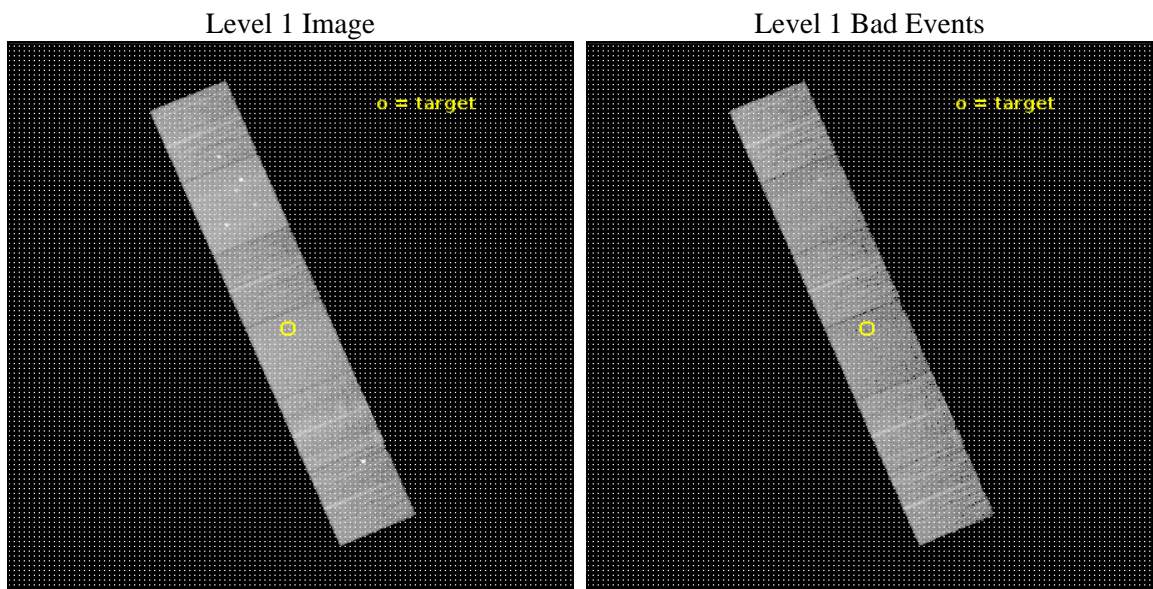
seq_num	401882	Sequence number
obs_id	20729	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.576974210995	Nominal RA [deg]
dec_nom	-66.480919744832	Nominal Dec [deg]
roll_nom	67.150741435209	Nominal Roll [deg]
revision	1	Processing version of data
ontime	9947.6222977638	Sum of GTIs [s]
livetime	9821.6595144905	Livetime [s]
ontime4	9947.6633377075	Sum of GTIs [s]
ontime5	9947.5812577009	Sum of GTIs [s]
ontime6	9947.5402177572	Sum of GTIs [s]
ontime7	9947.6222977638	Sum of GTIs [s]
ontime8	9947.4991776943	Sum of GTIs [s]
ontime9	9947.4581377506	Sum of GTIs [s]
l2events	113877	Number of level 2 events



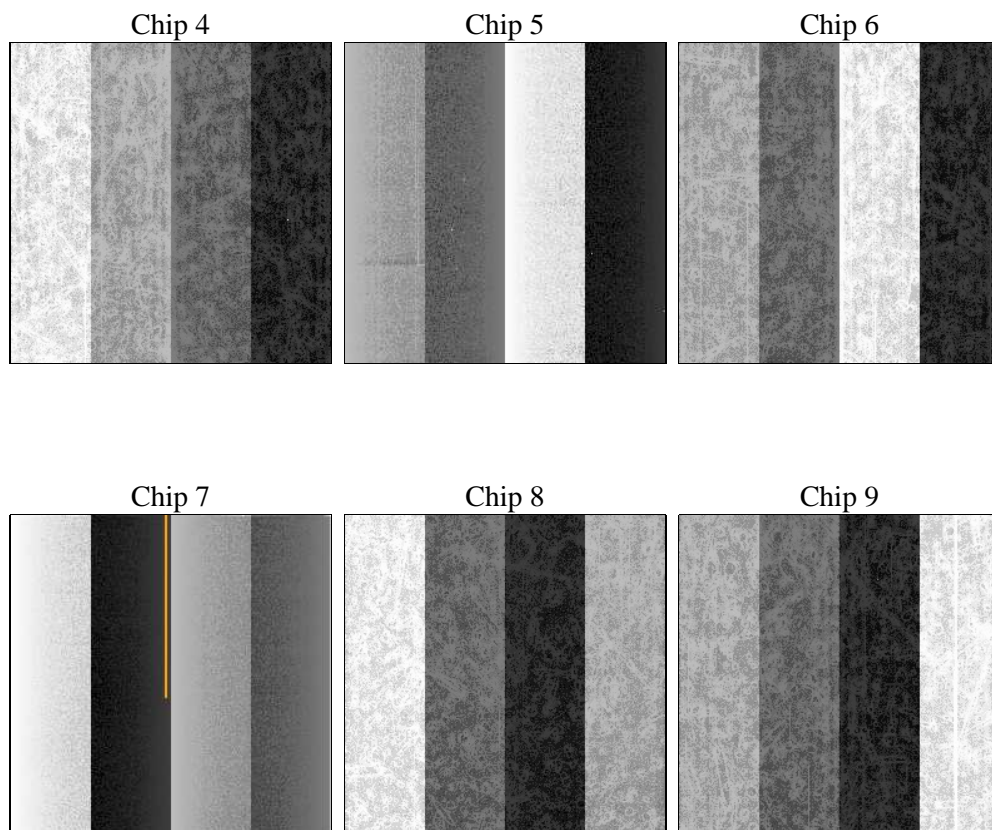
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	9947.6222977638	Sum of GTIs [s]
caldsver	4.7.6	 	ontime4	9947.6633377075	Sum of GTIs [s]
date	2017-09-17T03:26:32	Date and time of file creation	ontime5	9947.5812577009	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	9947.5402177572	Sum of GTIs [s]
			ontime7	9947.6222977638	Sum of GTIs [s]
			ontime8	9947.4991776943	Sum of GTIs [s]
			ontime9	9947.4581377506	Sum of GTIs [s]
			l1events	499122	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			ra_pos	(4077.06, 4056.58)	src1a sky pixel position

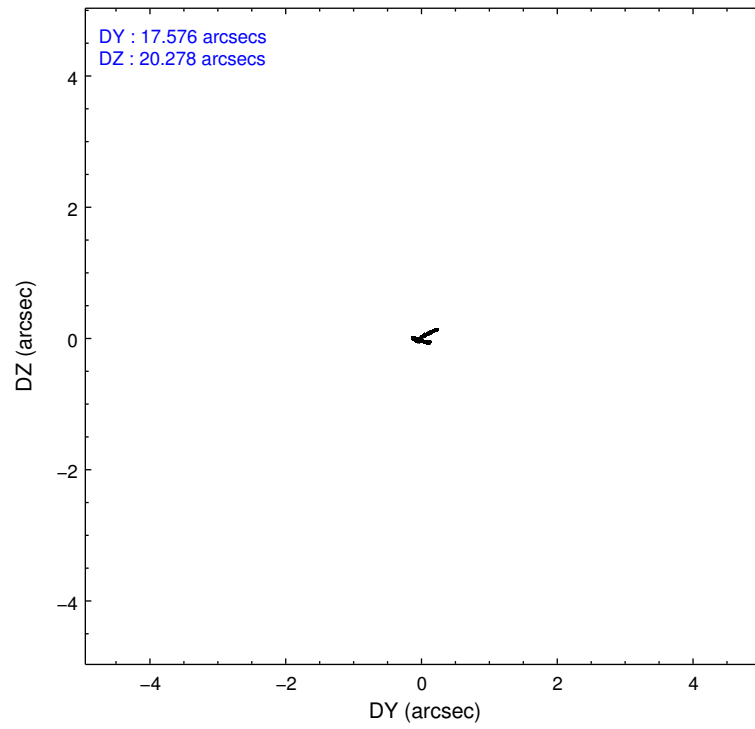
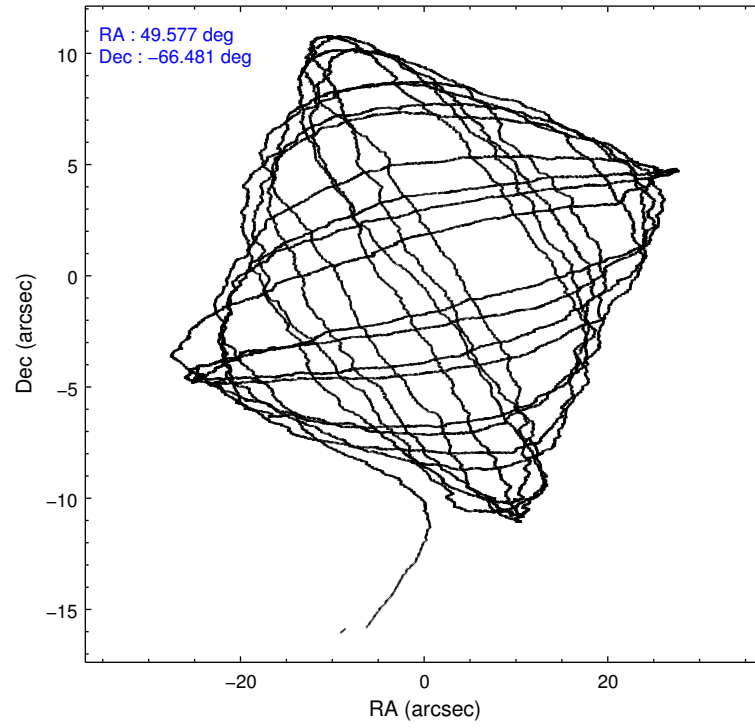
2.1.4 Events

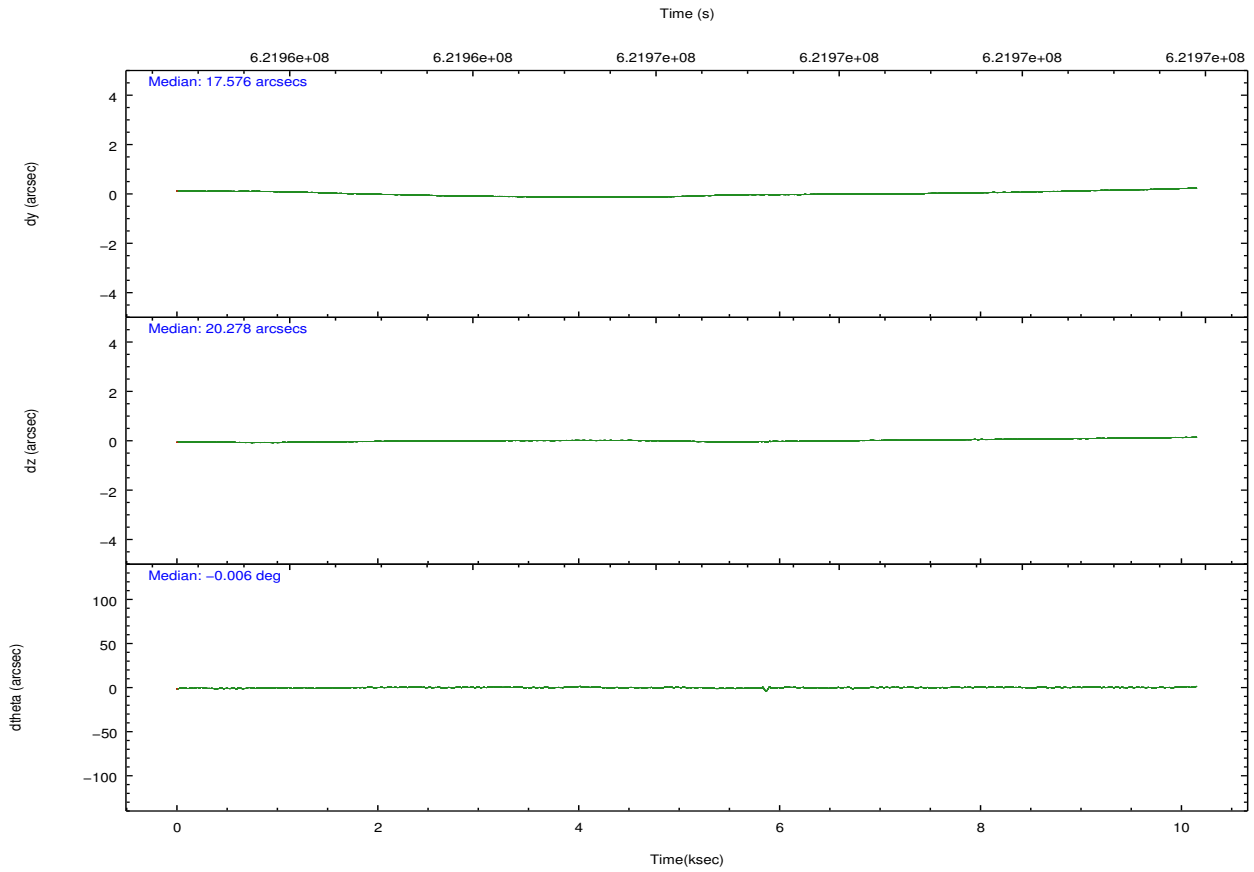
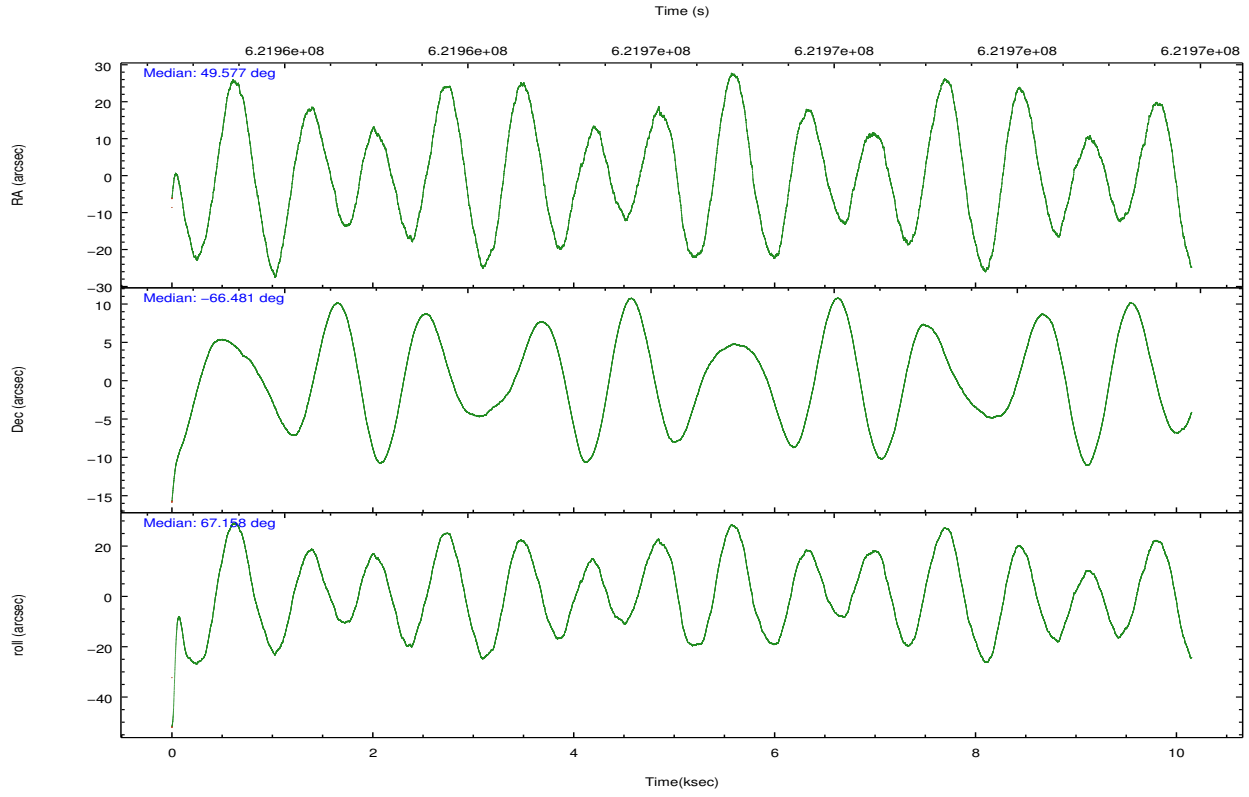
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	77446	108787	68680	86591	87669	69949	grade 0 events	4029	6186	2575	3442	6721	5843
rejected events	68652	54429	61009	48083	64272	58753		5%	5%	3%	3%	7%	8%
rejected %	88%	50%	88%	55%	73%	83%	grade 1 events	76	596	43	119	76	57
								0%	0%	0%	0%	0%	0%
							grade 2 events	1752	17027	1859	8138	5583	1862
								2%	15%	2%	9%	6%	2%
							grade 3 events	809	1552	706	3153	2419	859
								1%	1%	1%	3%	2%	1%
							grade 4 events	825	1429	673	2995	2384	798
								1%	1%	0%	3%	2%	1%
							grade 5 events	3099	6924	3029	8613	4691	3509
								4%	6%	4%	9%	5%	5%
							grade 6 events	1382	28198	1865	20800	6301	1848
								1%	25%	2%	24%	7%	2%
							grade 7 events	65474	46875	57930	39331	59494	55173
								84%	43%	84%	45%	67%	78%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	49.586502	49.57697421099544	CCD I2 on	N	N
[deg] Pointing Dec	-66.508070	-66.48091974483194	CCD I3 on	N	N
[deg] Pointing Roll	67.002906	67.15074143520901	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	621961428.184000	621960532.16286	CCD S5 on	Y	Y
Observation start date	2017-09-16T15:02:39	2017-09-16T14:48:52	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	621971428.184000	621972326.32605	On-chip summing requested	N	N
Observation end date	2017-09-16T17:49:19	2017-09-16T18:05:26	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



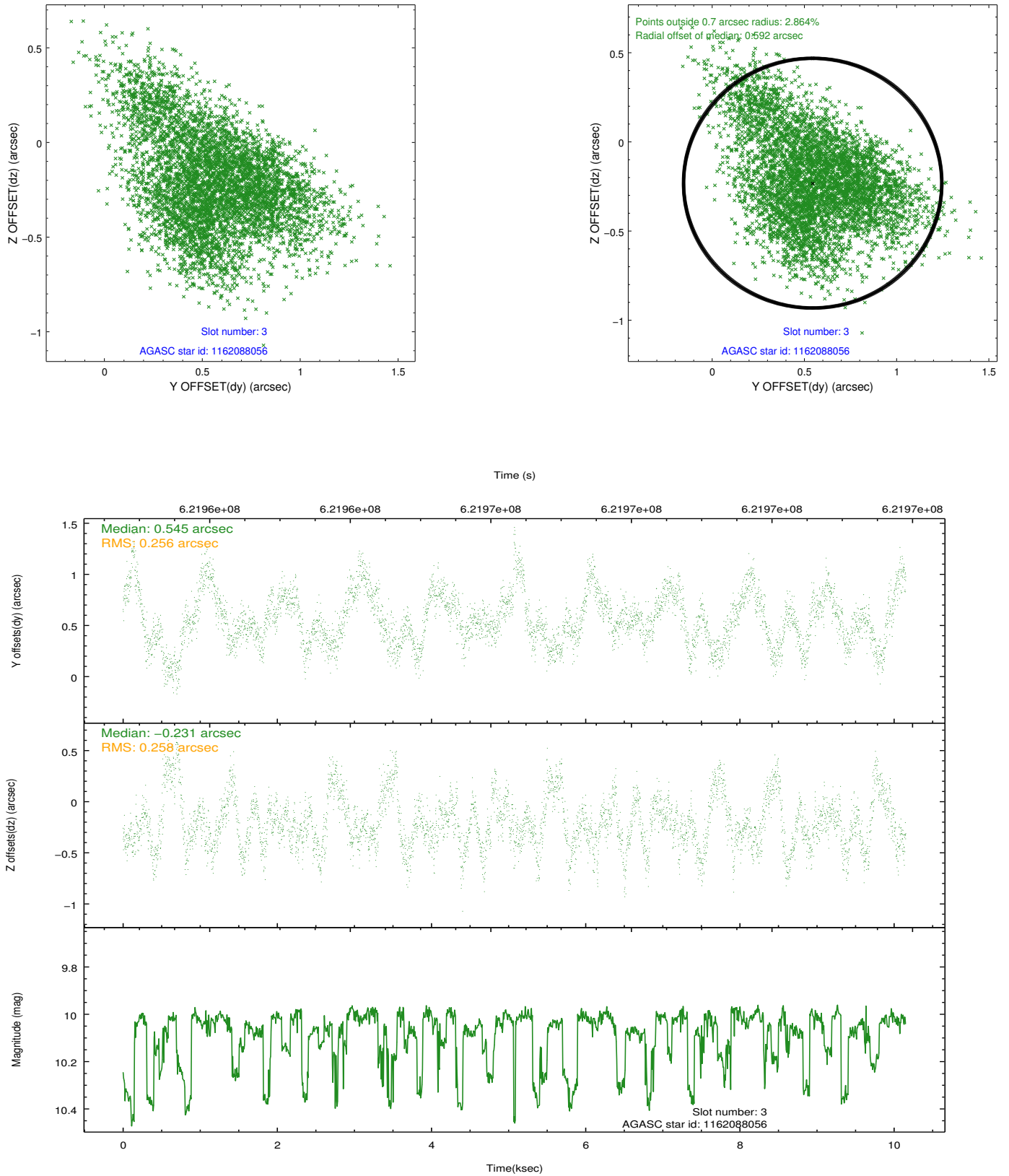


Slot Statistics

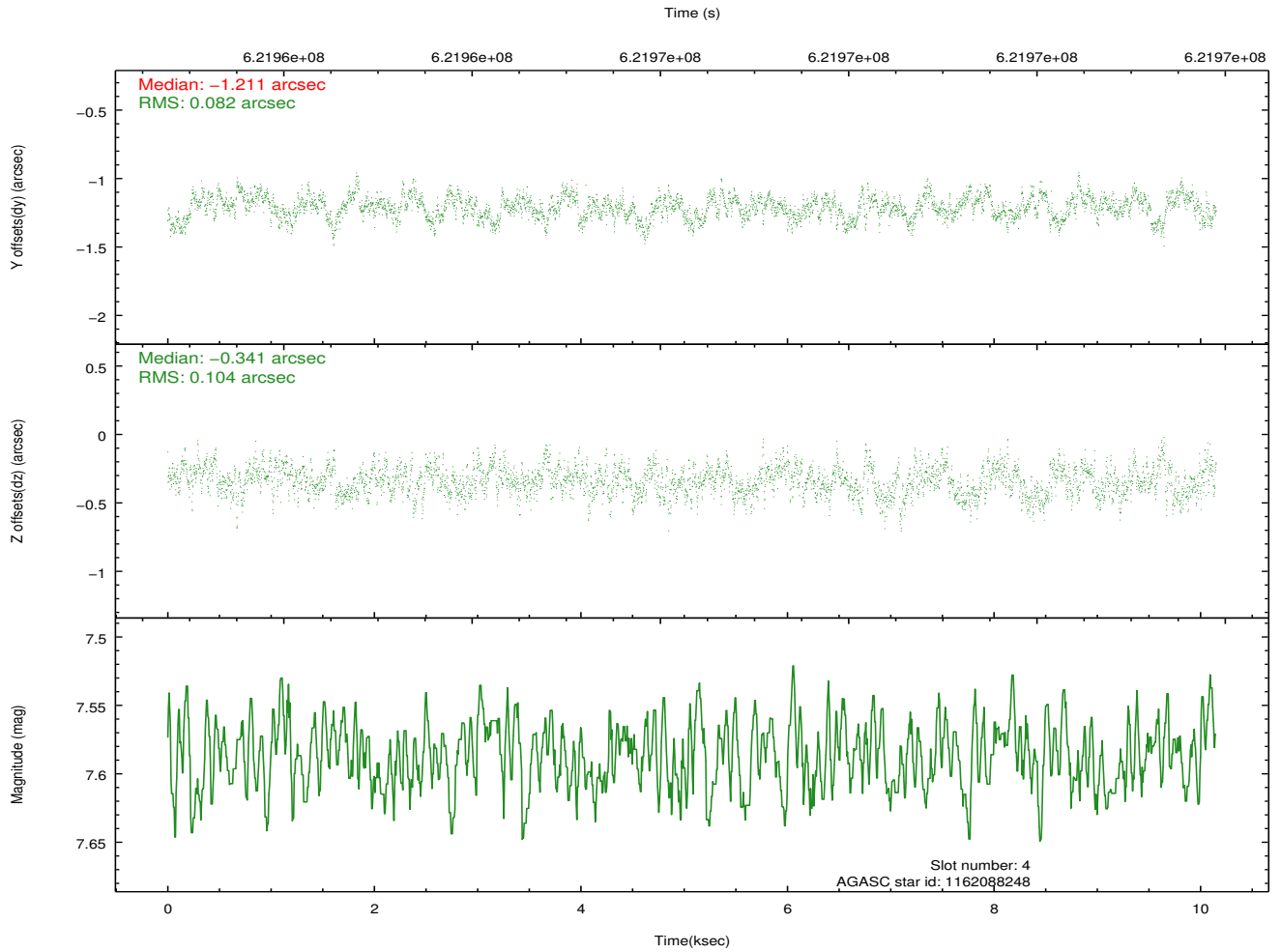
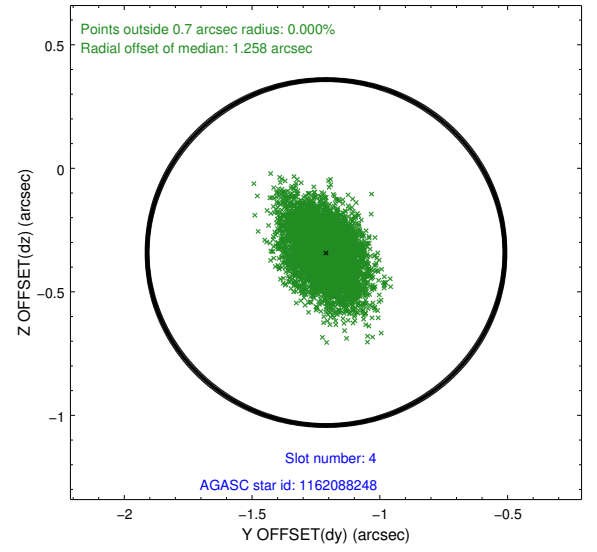
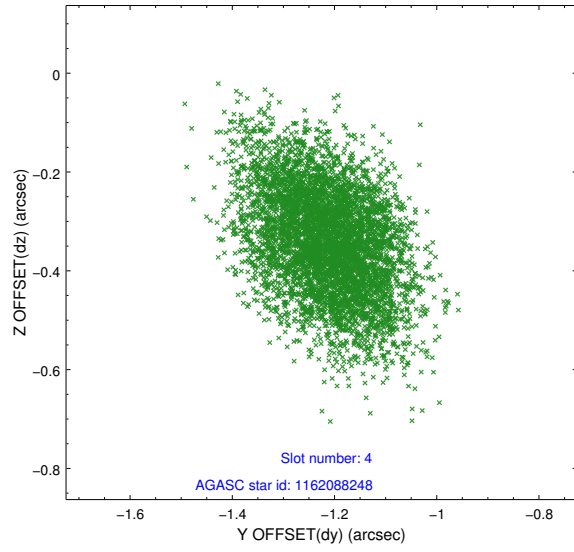
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.05	2477	-0.214	-0.098	0.007	0.012	0.000000	0.000000	-770.79	-1741.93
1	FID		ACIS-S-4	7.16	2477	0.511	0.130	0.006	0.011	0.000000	0.000000	2142.92	166.32
2	FID		ACIS-S-5	7.14	2477	-0.328	-0.023	0.007	0.012	0.000000	0.000000	-1823.13	160.32
3	GUIDE	used	1162088056	10.06	4923	0.545	-0.231	0.377	0.641	48.729349	-66.949806	-1943.00	487.54
4	GUIDE	used	1162088248	7.59	4953	-1.211	-0.341	0.139	0.231	49.751966	-65.888113	2147.62	647.22
5	GUIDE	used	1162089104	9.53	4950	-0.072	0.183	0.217	0.349	48.422126	-66.410699	-346.58	1675.13
6	GUIDE	used	1162090824	9.22	4950	0.327	-0.042	0.148	0.250	48.677982	-66.885202	-1759.77	648.24
7	GUIDE	used	1162094224	9.66	4940	0.403	0.407	0.202	0.340	49.638584	-66.701903	-613.53	-340.40

2.4 Star Slots

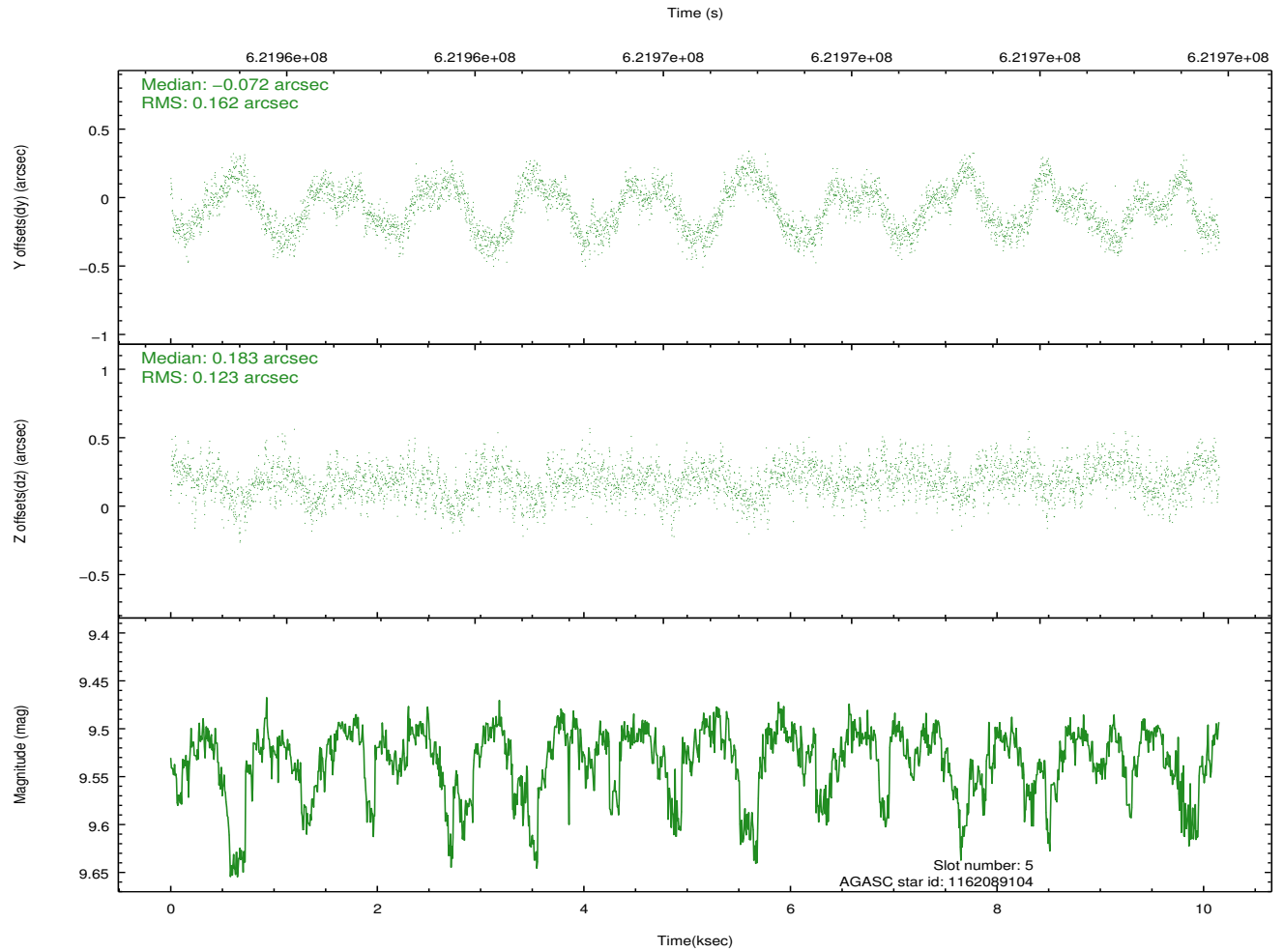
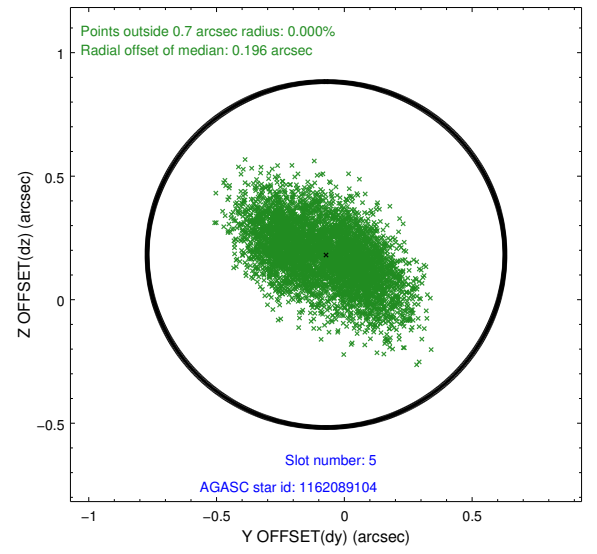
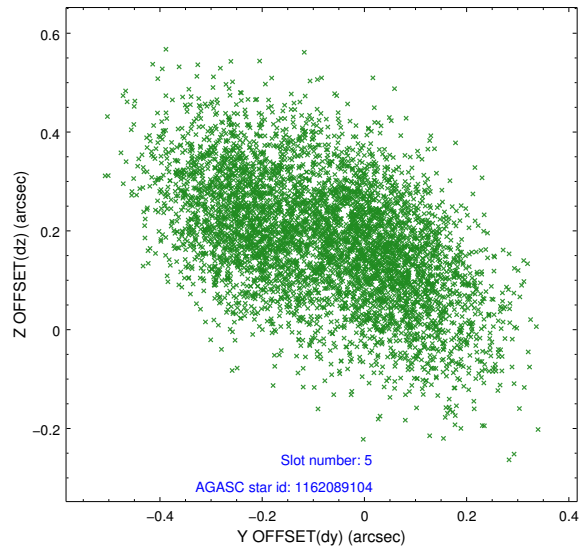
2.4.1 Slot 3



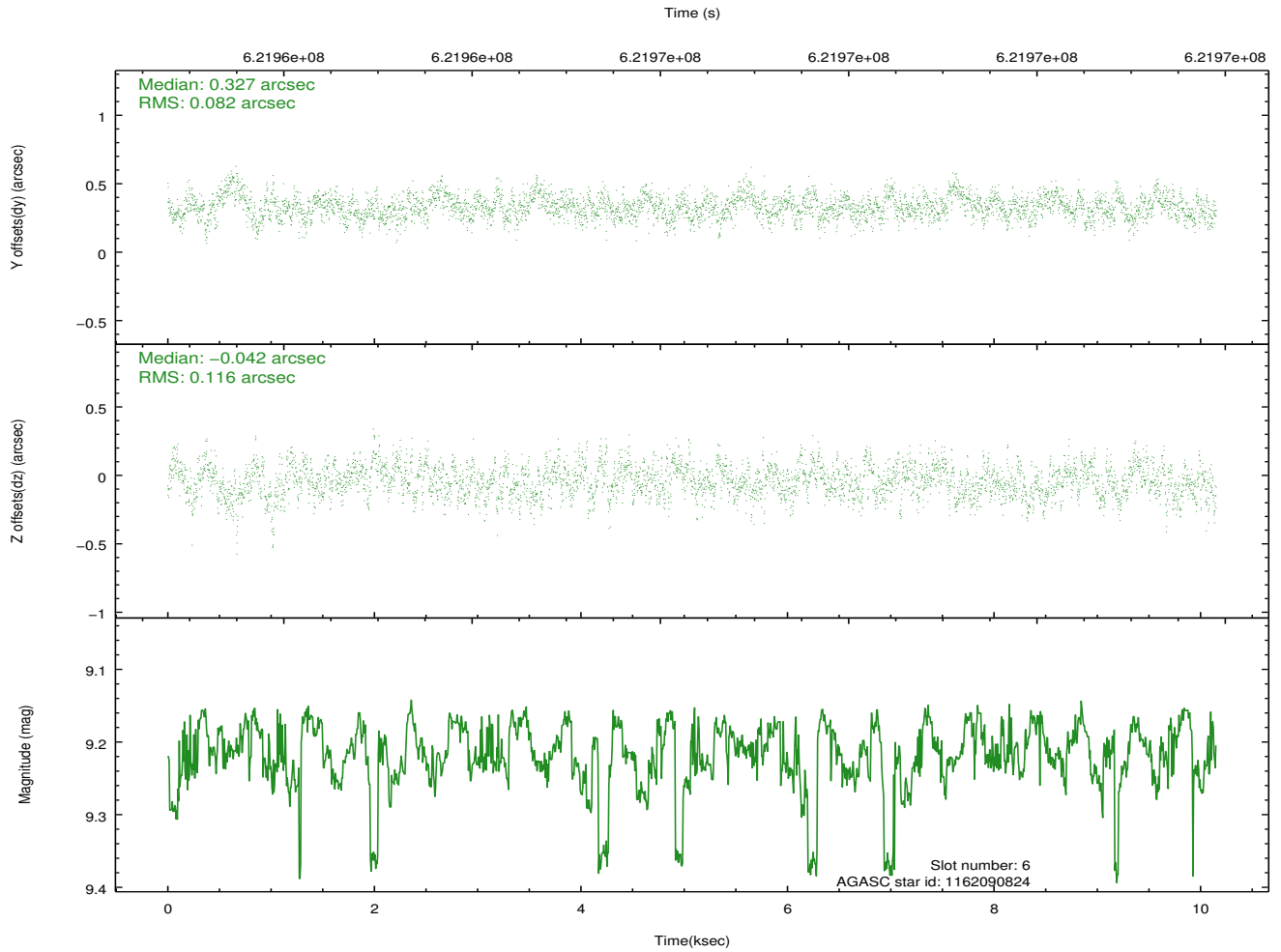
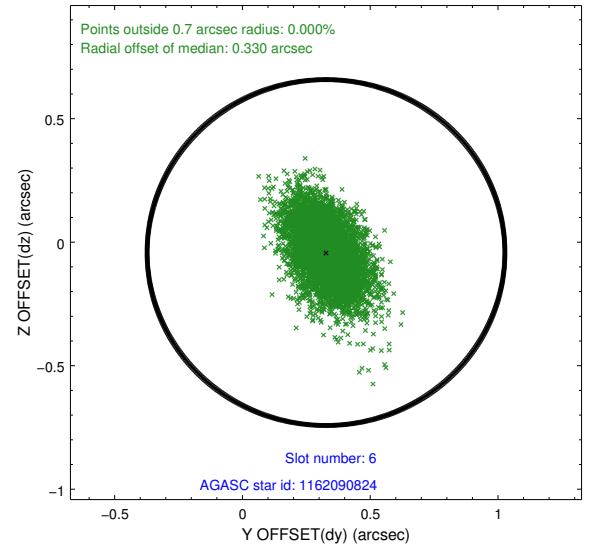
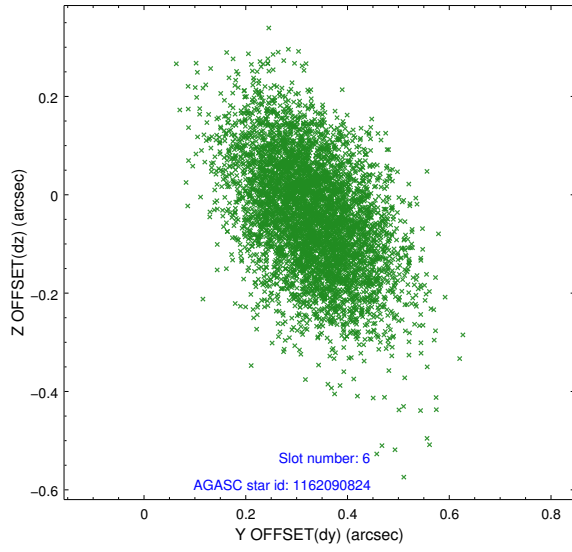
2.4.2 Slot 4



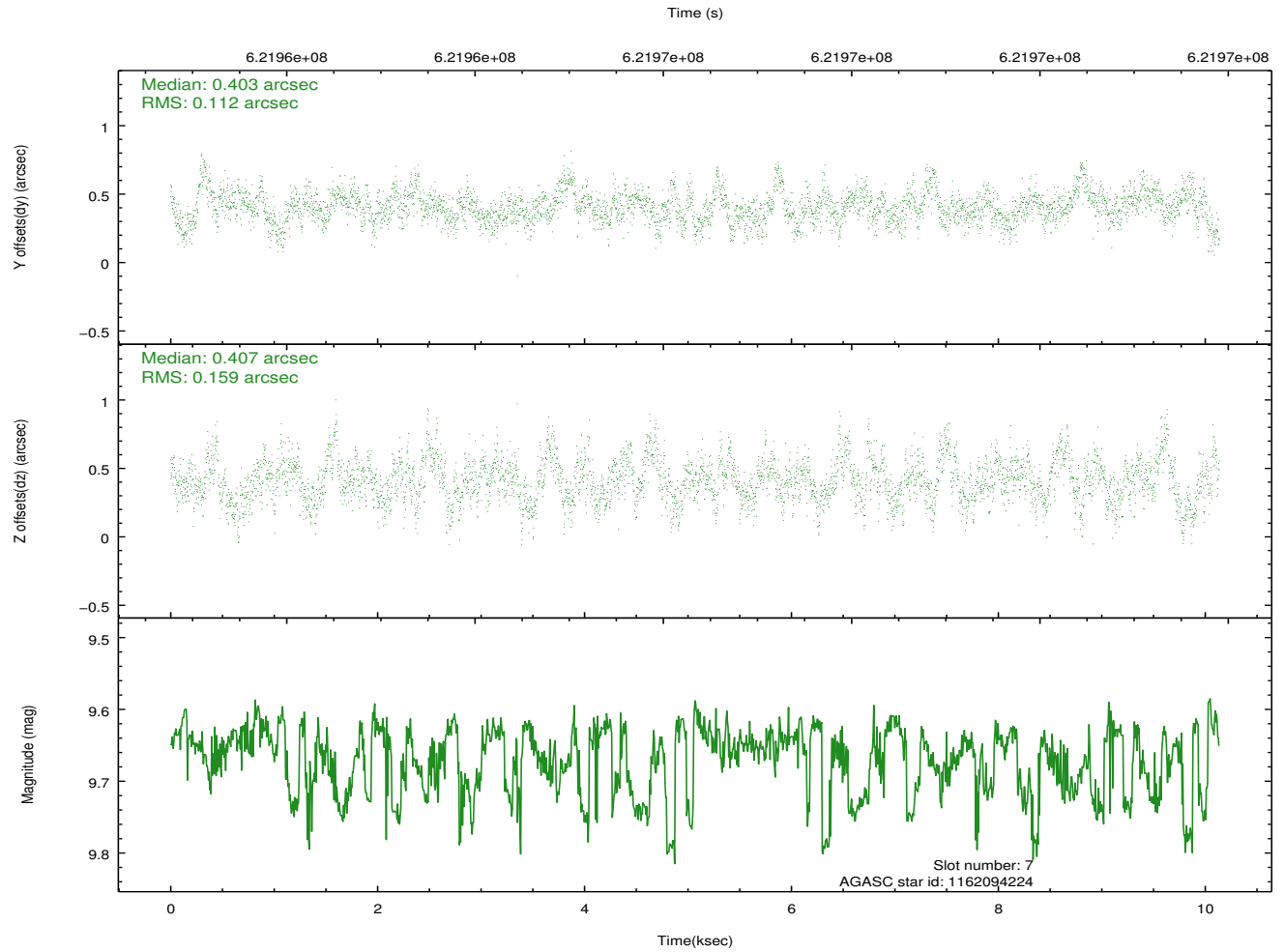
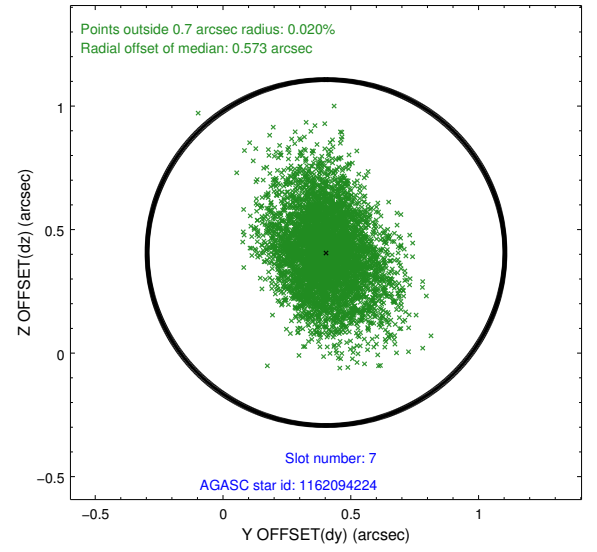
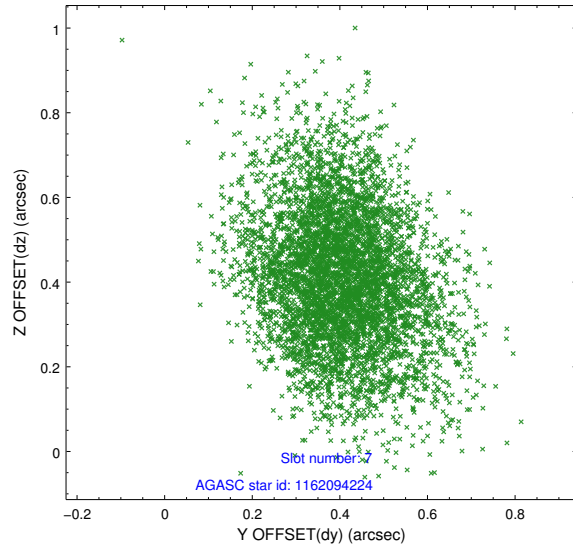
2.4.3 Slot 5



2.4.4 Slot 6

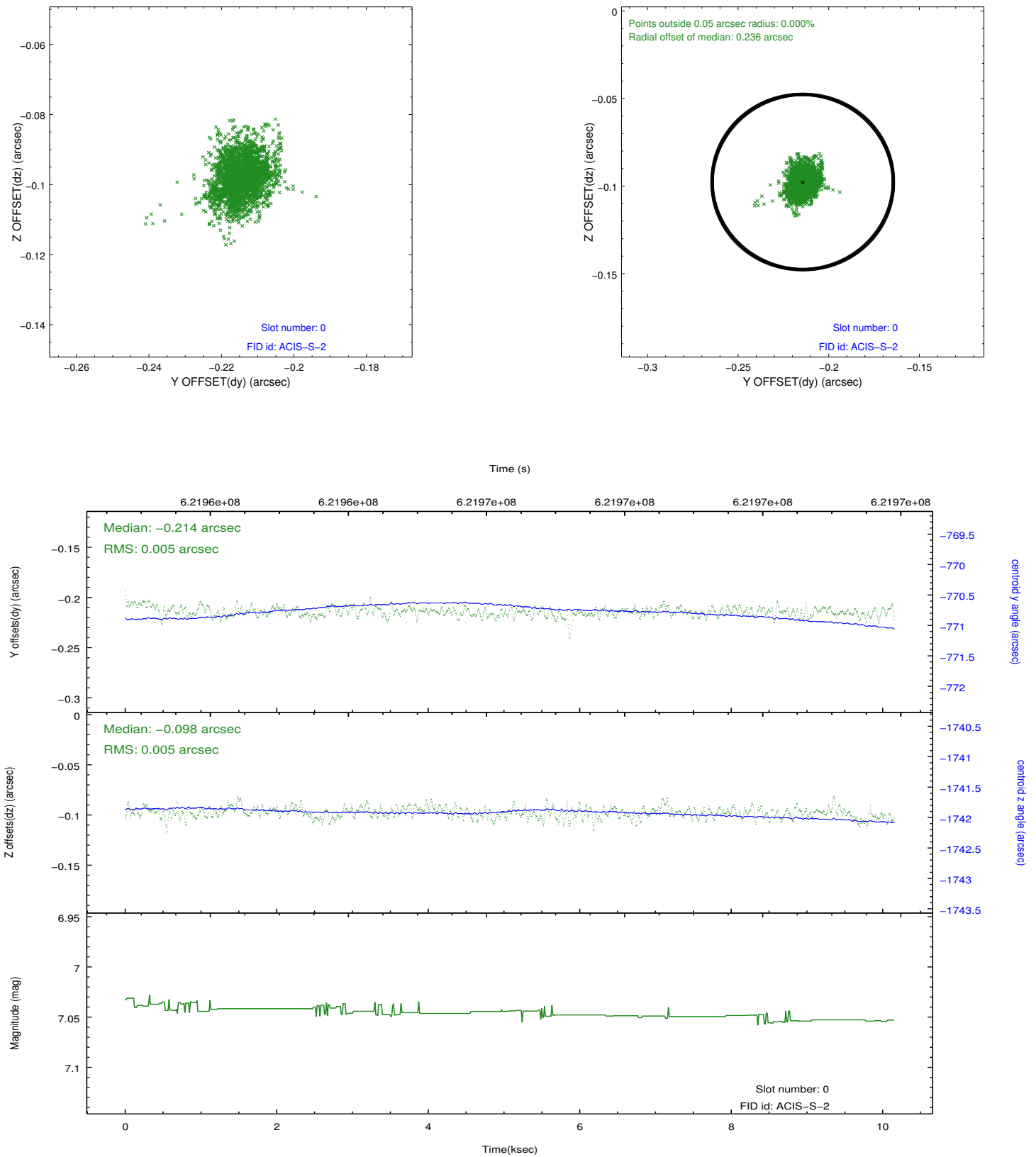


2.4.5 Slot 7

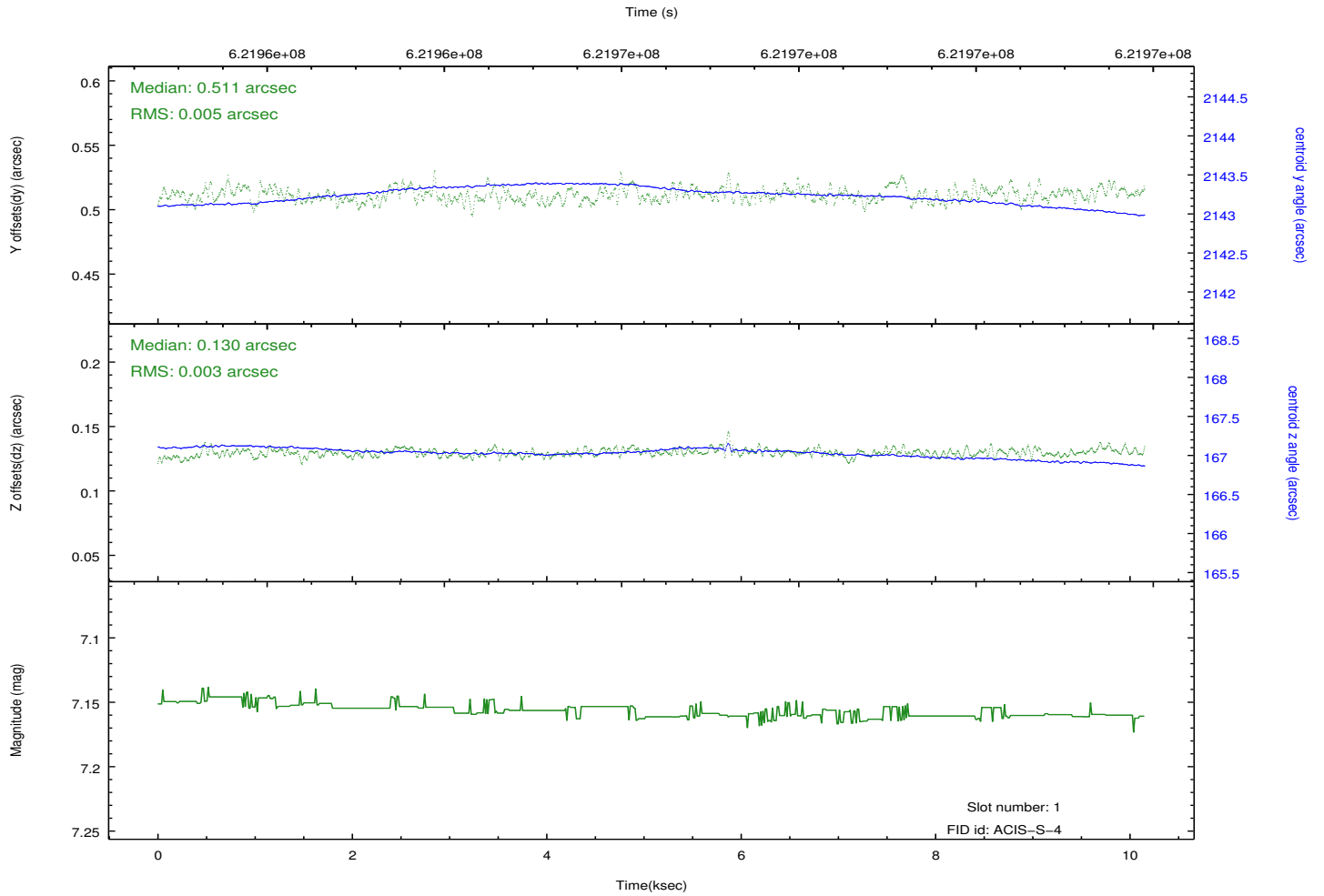
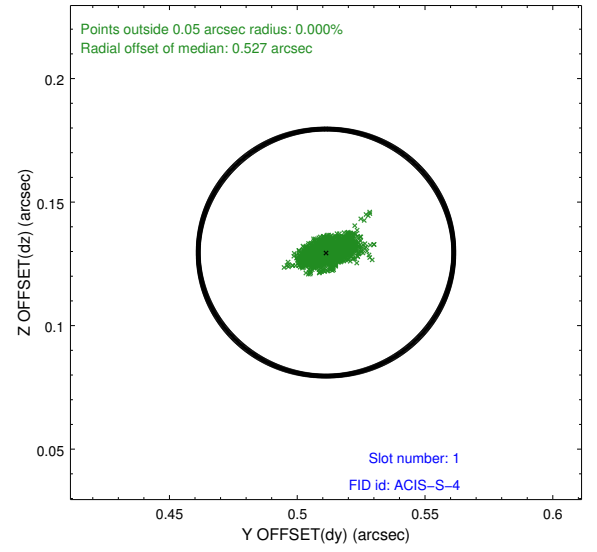
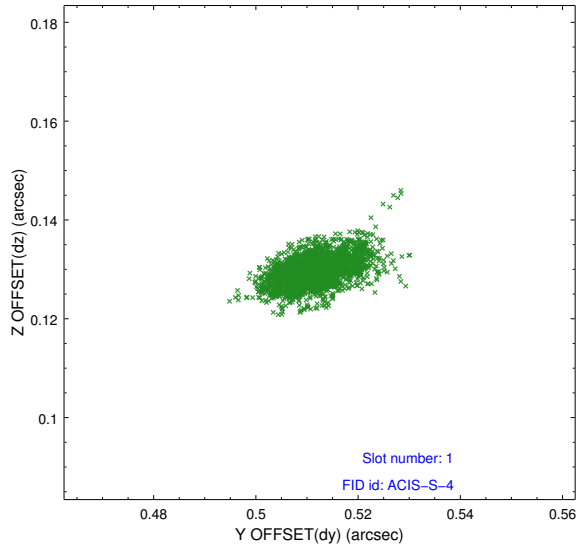


2.5 FID Slots

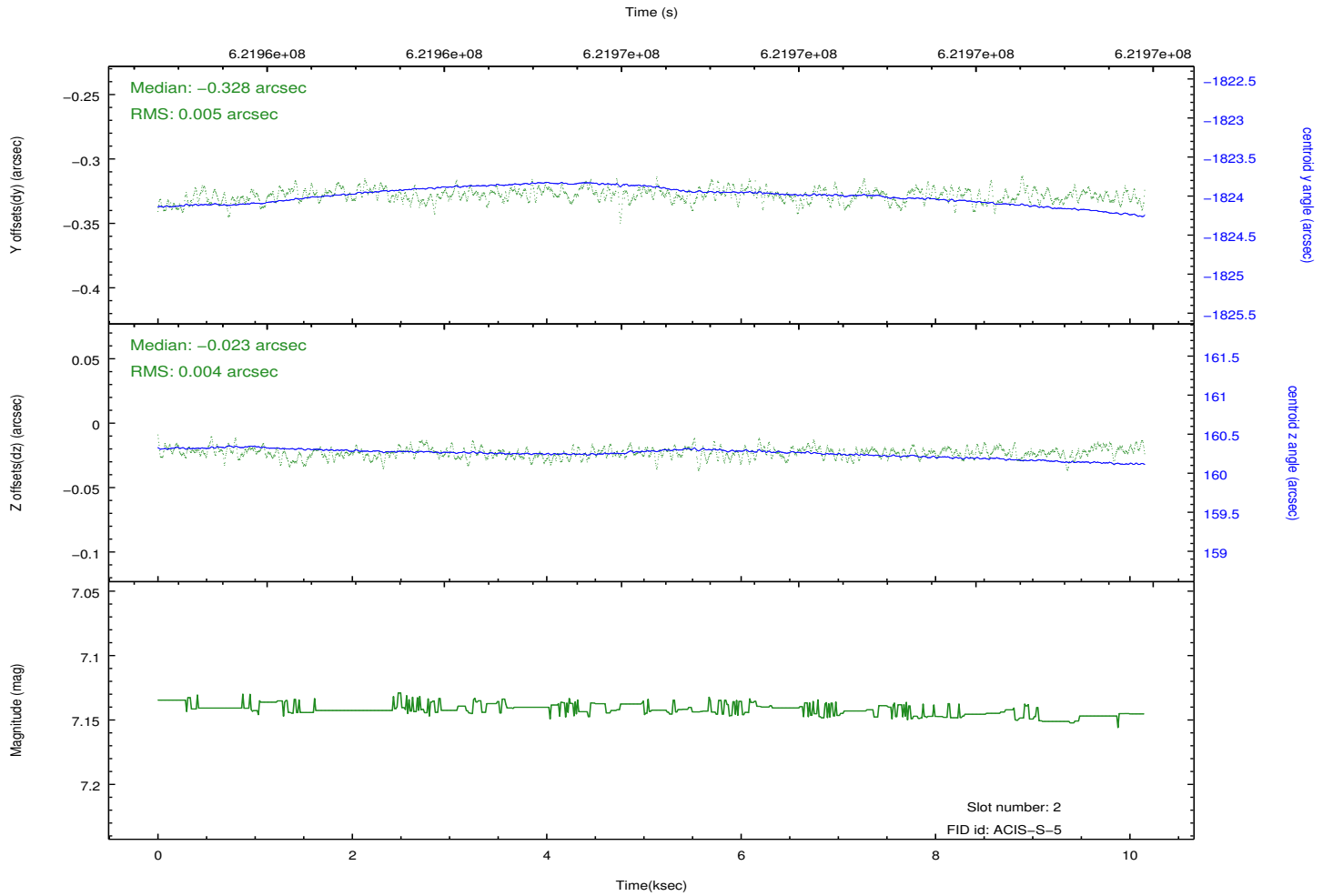
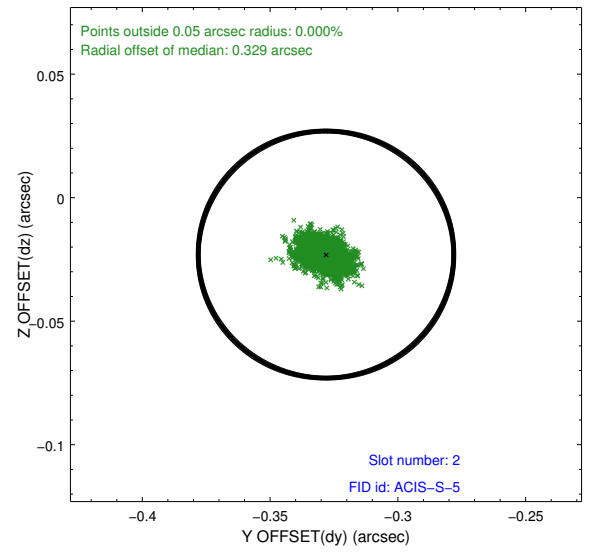
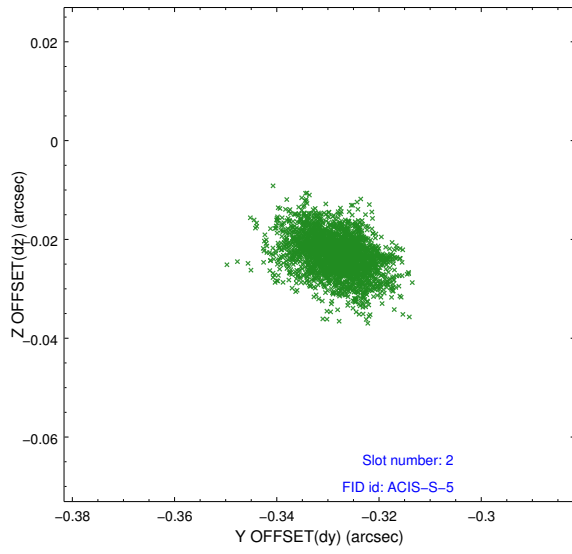
2.5.1 Slot 0



2.5.2 Slot 1

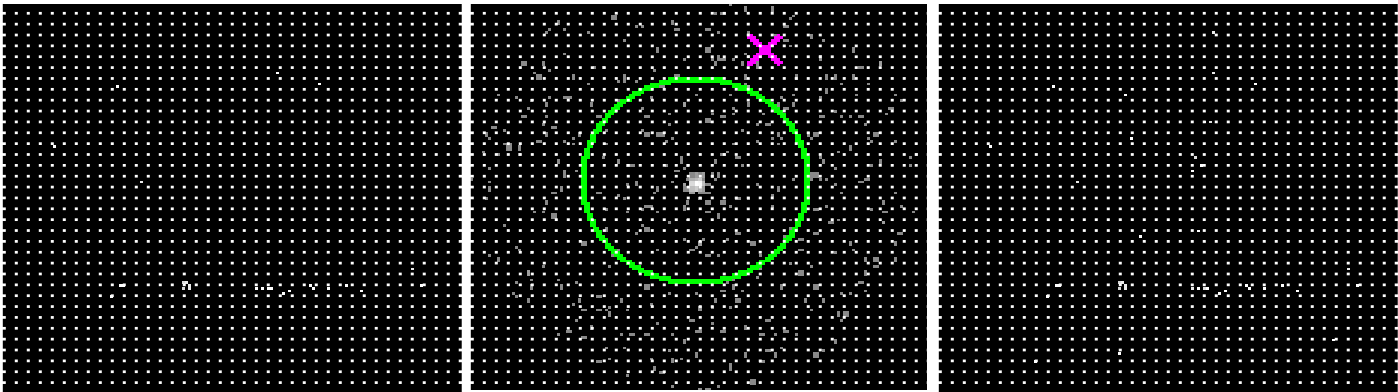


2.5.3 Slot 2



3 Gratings

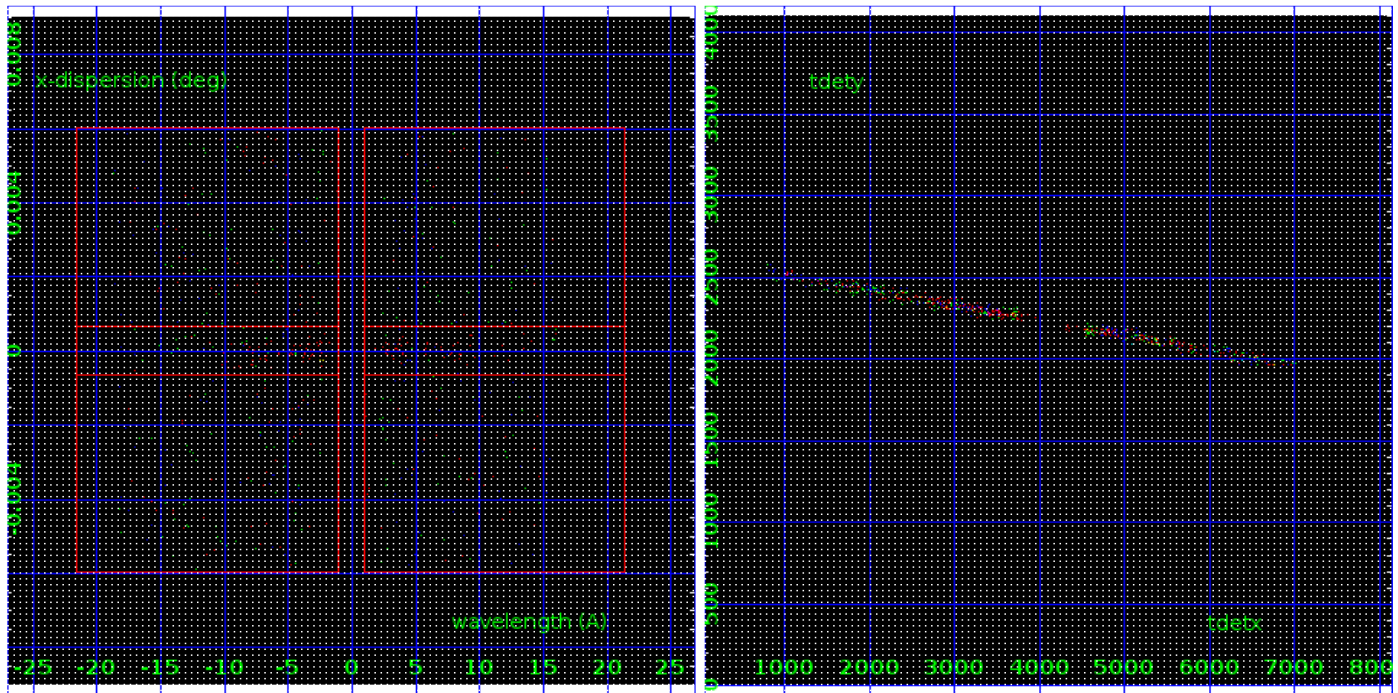
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

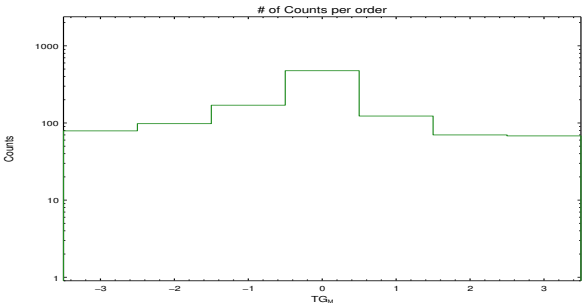
HEG Order Sort ALL

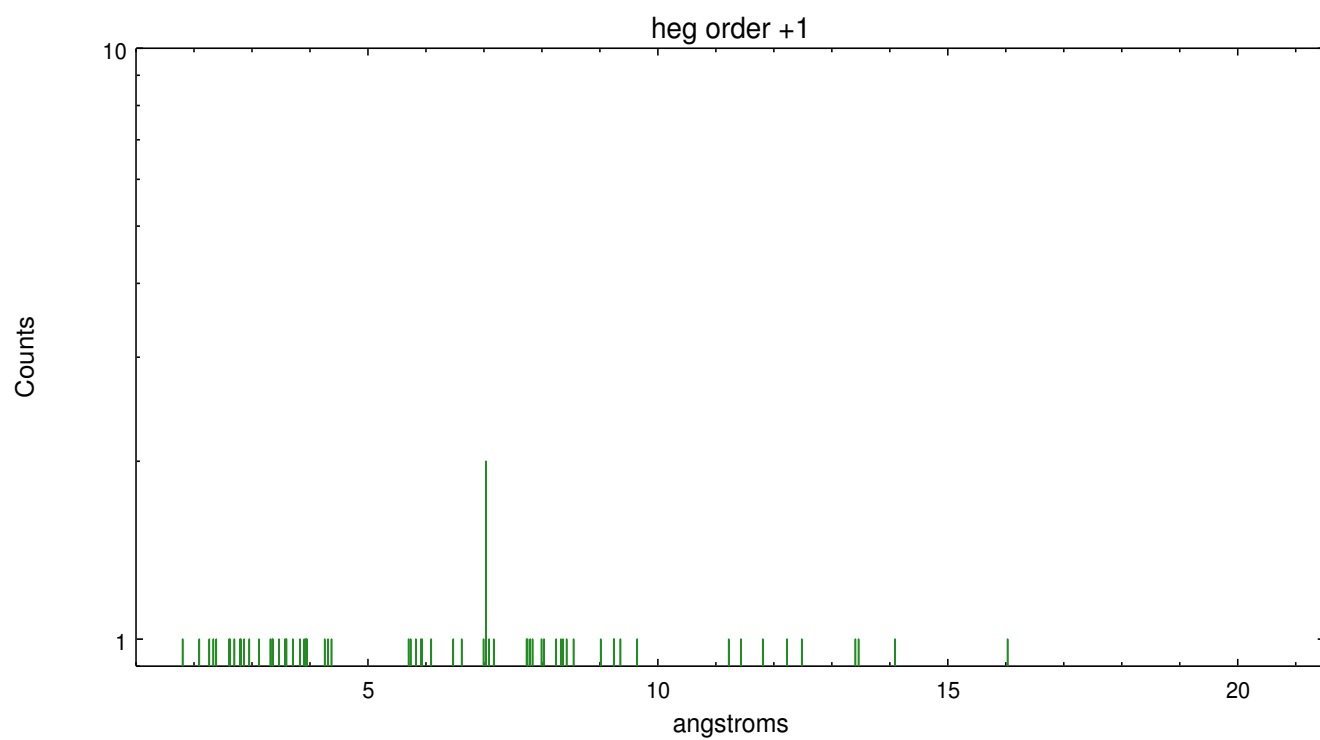
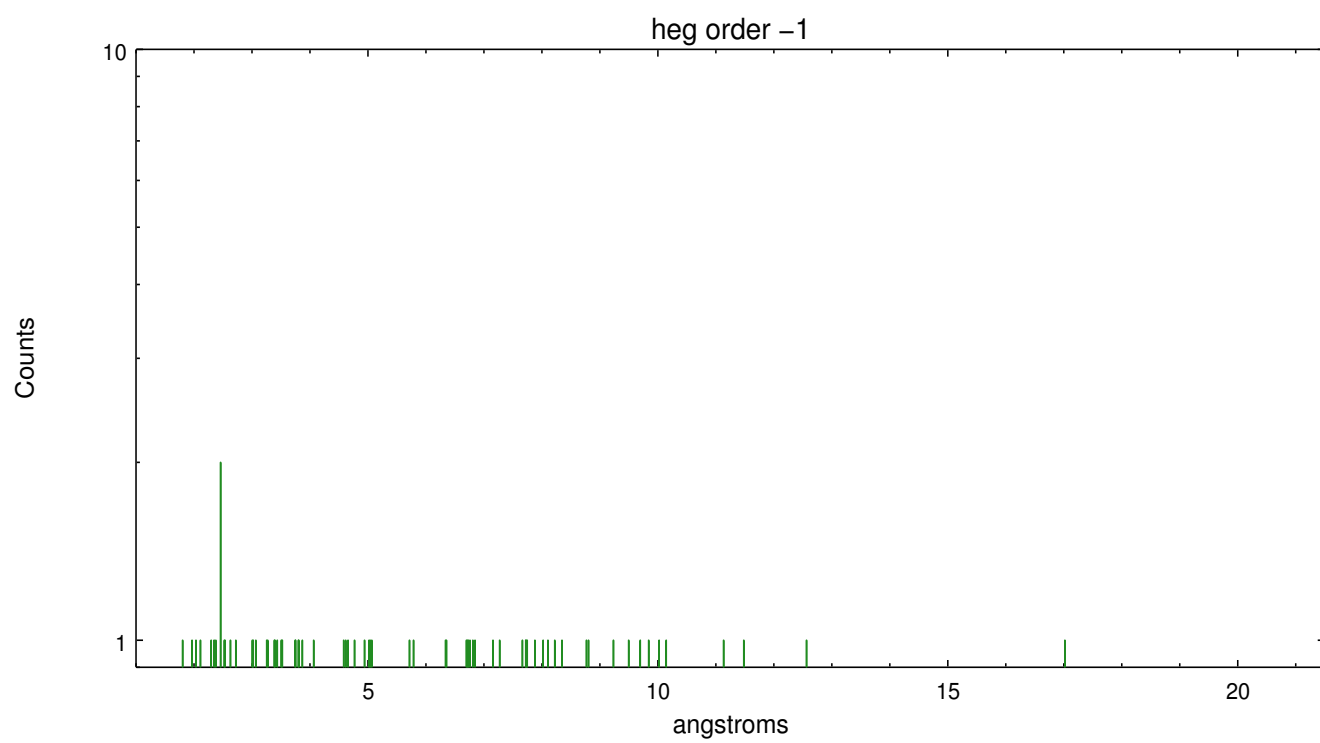


Spot Image HEG

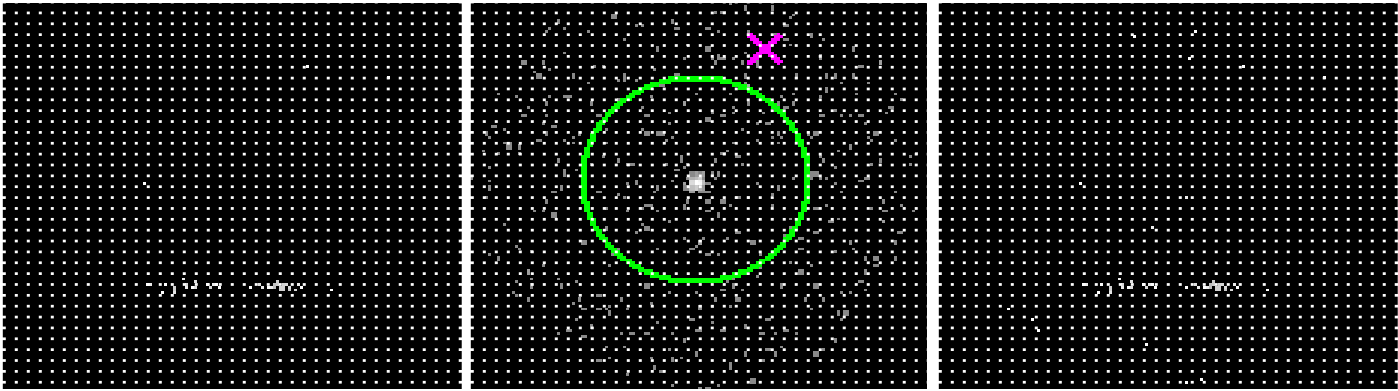
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	79	98	170	476	123	70	68





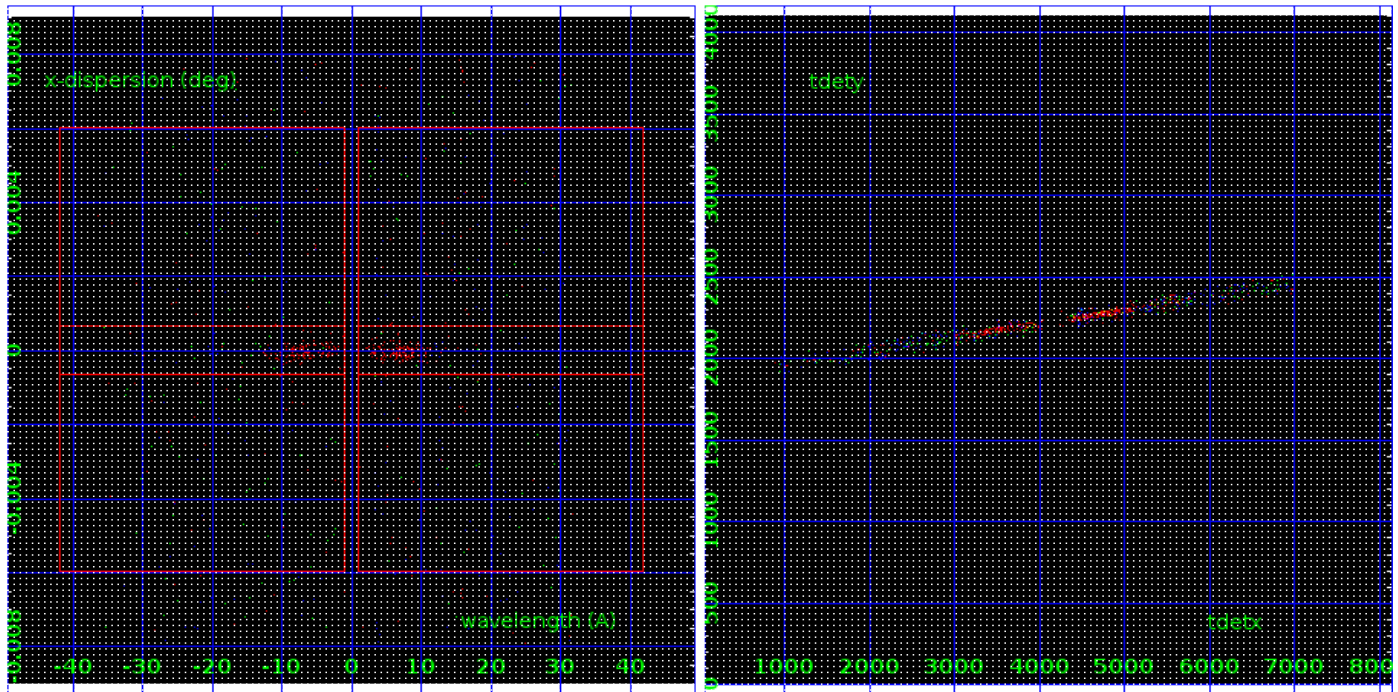
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

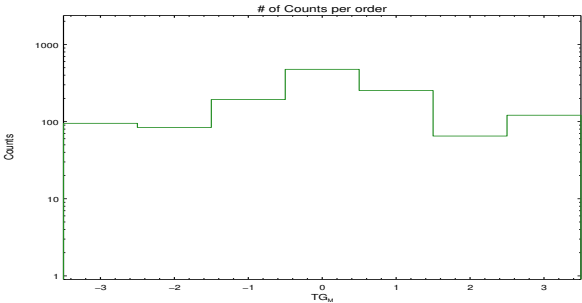
MEG Order Sort ALL

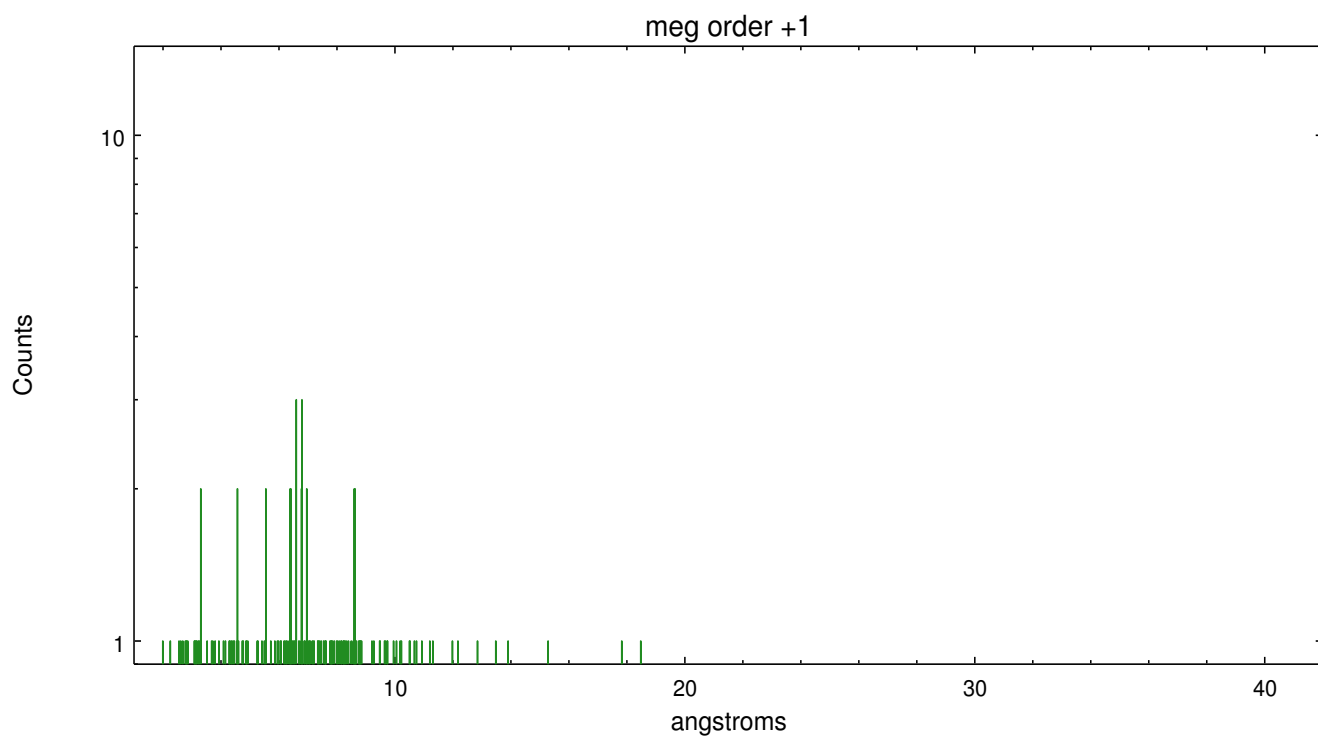
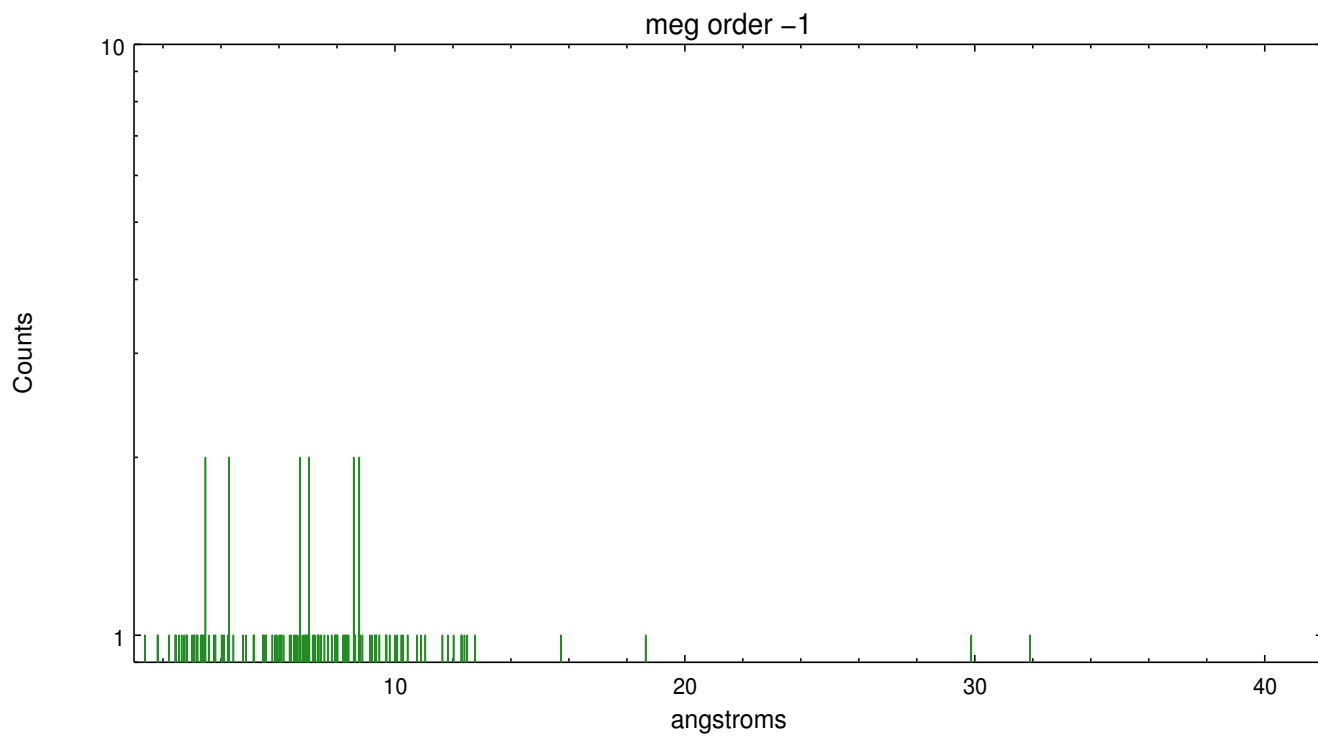


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	95	84	193	476	253	65	121





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.09.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9476222977638

A.2 Comments