

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19713 - L2 Version 2
Chandra X-Ray Center

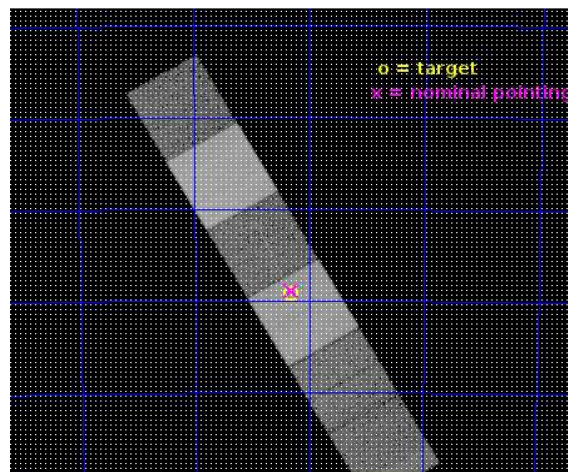
L2 Processing Date : Oct 3 2017

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1 Front

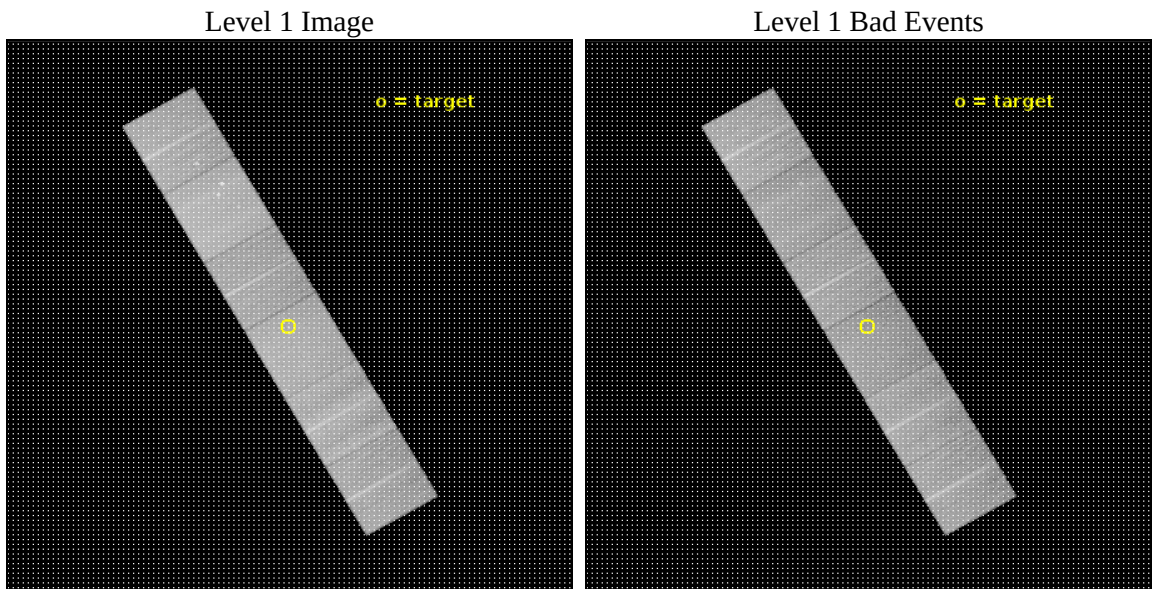
seq_num	401882	Sequence number
obs_id	19713	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.57860633943	Nominal RA [deg]
dec_nom	-66.481686532493	Nominal Dec [deg]
roll_nom	60.152268653072	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31916.800475597	Sum of GTIs [s]
livetime	31512.650729985	Livetime [s]
ontime4	31913.559415221	Sum of GTIs [s]
ontime5	31916.800475597	Sum of GTIs [s]
ontime6	31916.800475597	Sum of GTIs [s]
ontime7	31916.800475597	Sum of GTIs [s]
ontime8	31916.800475597	Sum of GTIs [s]
ontime9	31916.800475597	Sum of GTIs [s]
l2events	350354	Number of level 2 events



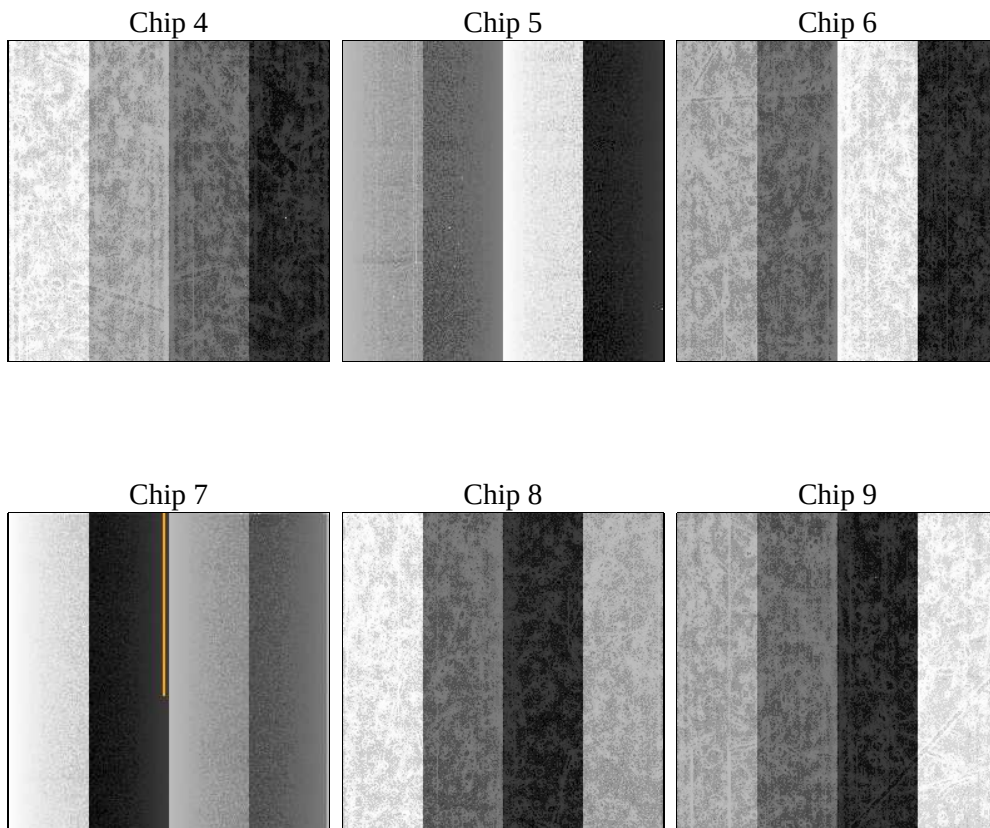
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31972.175000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	31916.800475597	Sum of GTIs [s]
caldsver	4.7.6	 	ontime4	31913.559415221	Sum of GTIs [s]
date	2017-10-03T15:54:30	Date and time of file creation	ontime5	31916.800475597	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	31916.800475597	Sum of GTIs [s]
			ontime7	31916.800475597	Sum of GTIs [s]
			ontime8	31916.800475597	Sum of GTIs [s]
			ontime9	31916.800475597	Sum of GTIs [s]
			l1events	1555441	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			src1a_pos	(4081.89, 4062.21)	src1a sky pixel position

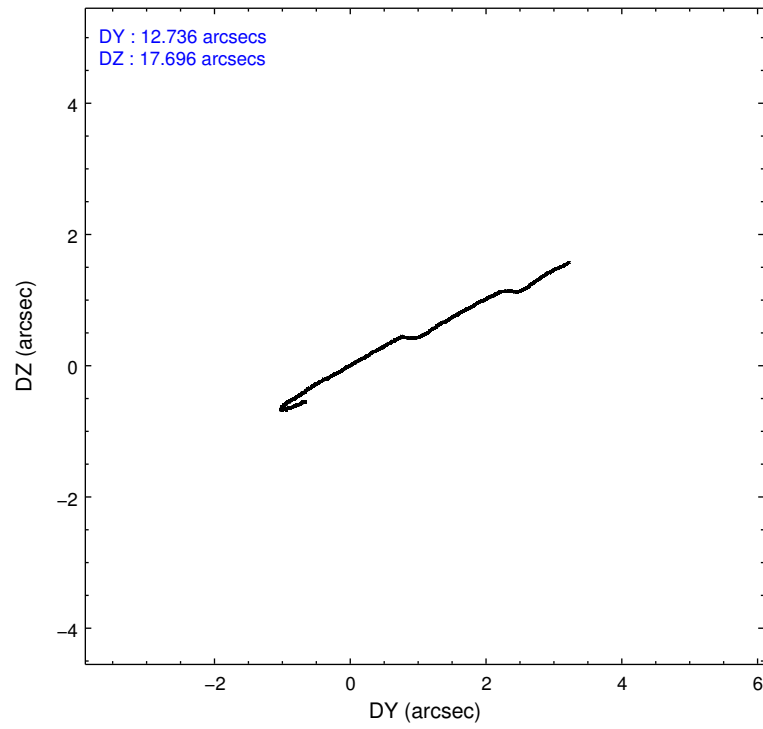
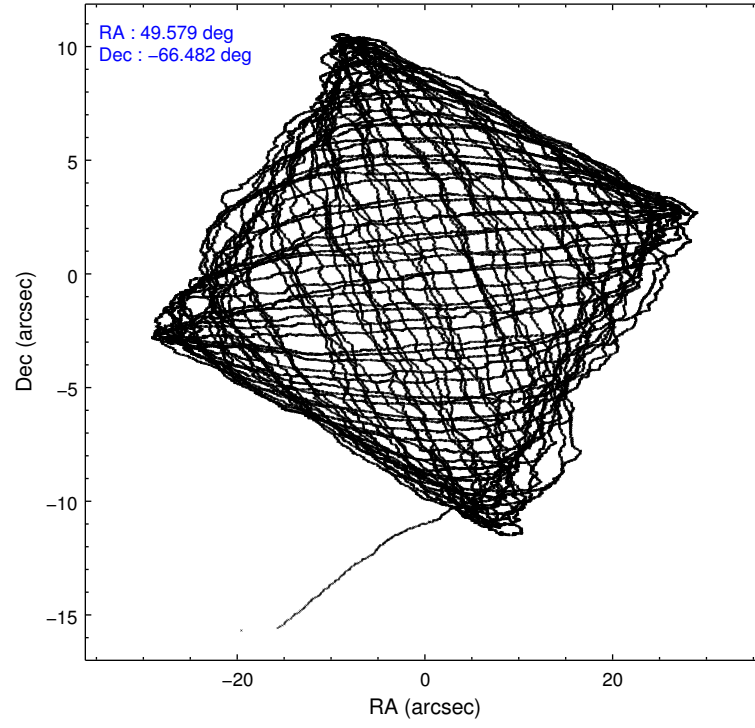
2.1.4 Events

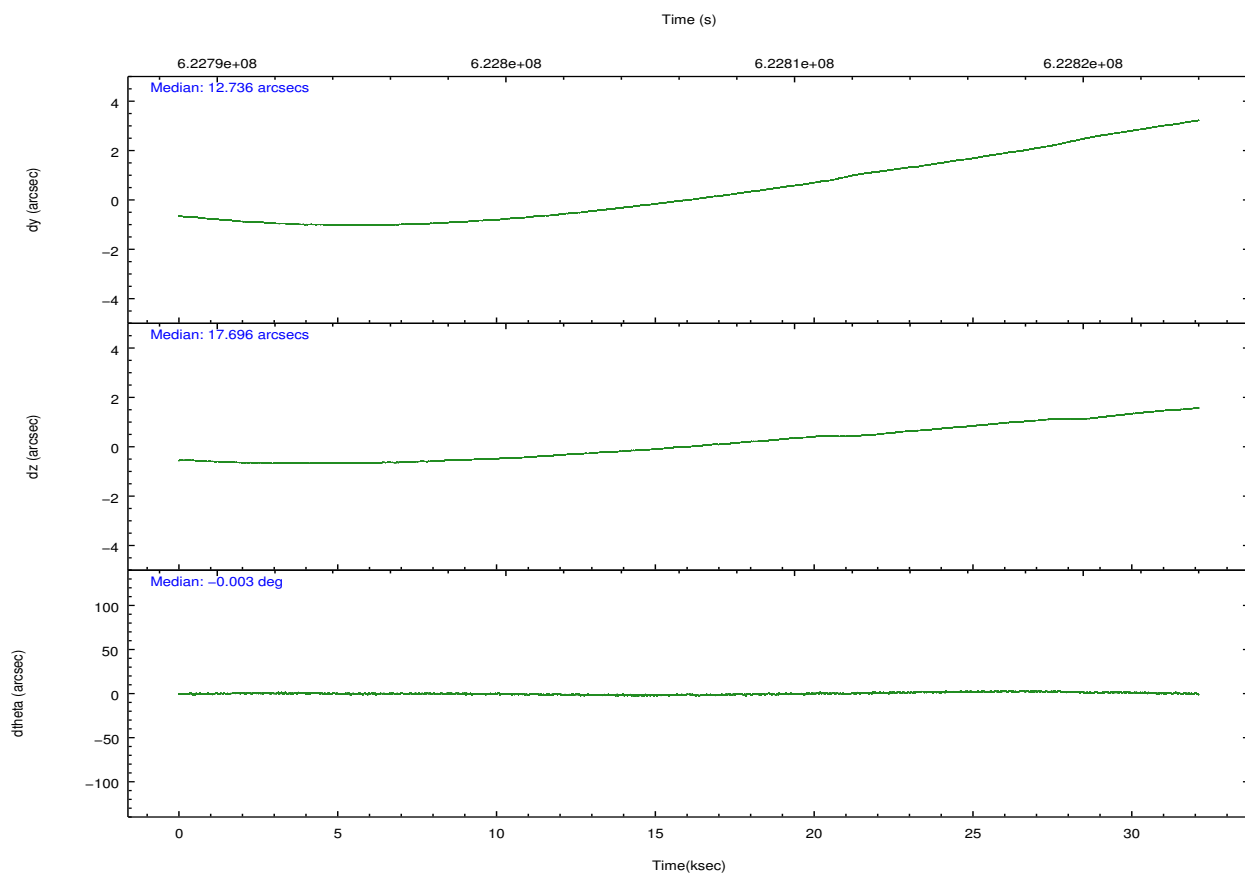
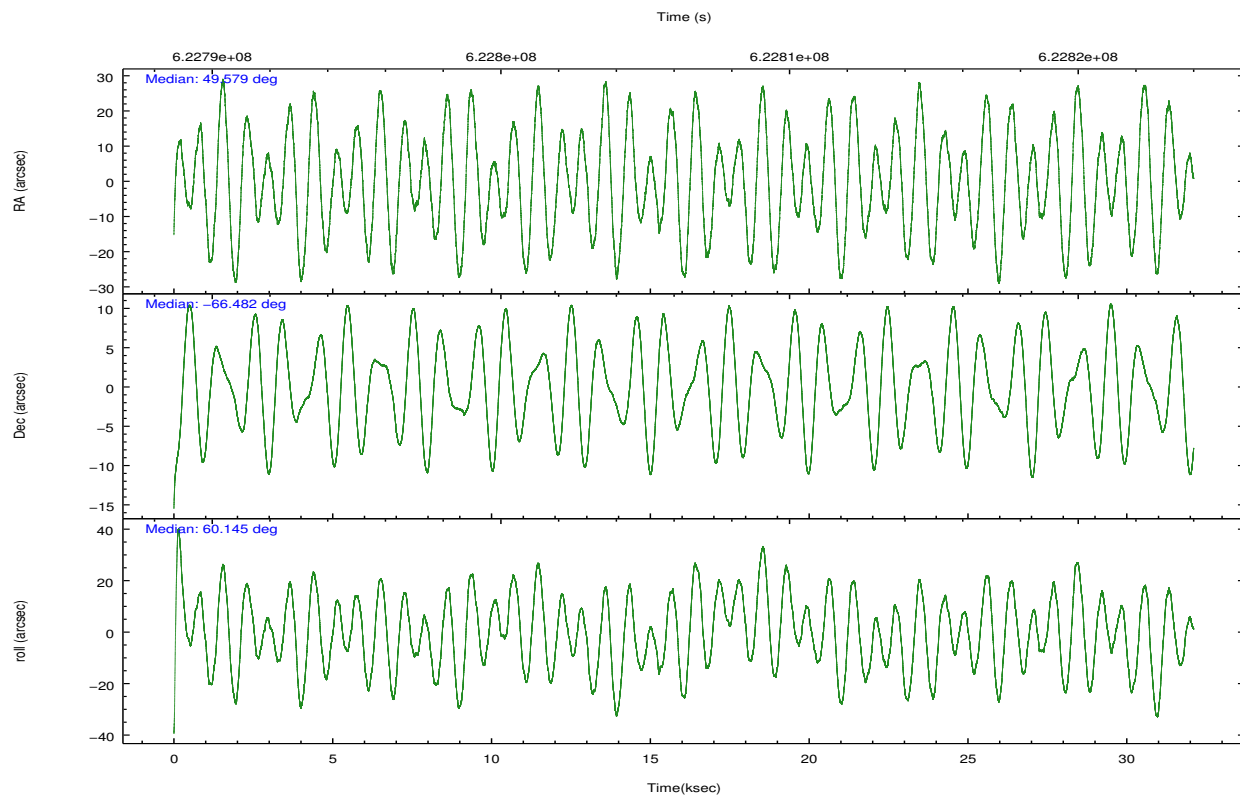
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	251714	332173	217905	272373	270205	211071	grade 0 events	9892	11056	7574	10284	19965	8412
rejected events	226516	174823	193927	153999	200399	186043		3%	3%	3%	3%	7%	3%
rejected %	89%	52%	88%	56%	74%	88%	grade 1 events	229	1189	116	383	189	131
								0%	0%	0%	0%	0%	0%
							grade 2 events	5860	48651	6084	24638	16701	5931
								2%	14%	2%	9%	6%	2%
							grade 3 events	2597	4540	2126	9664	7390	2458
								1%	1%	0%	3%	2%	1%
							grade 4 events	2590	4468	2050	9312	6841	2337
								1%	1%	0%	3%	2%	1%
							grade 5 events	10280	21523	9248	26831	14695	10712
								4%	6%	4%	9%	5%	5%
							grade 6 events	4265	88656	6148	64490	18972	5896
								1%	26%	2%	23%	7%	2%
							grade 7 events	216001	152090	184559	126771	185452	175194
								85%	45%	84%	46%	68%	83%

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	49.579671	49.57860633942983	CCD I2 on	N	N
[deg] Pointing Dec	-66.509109	-66.48168653249283	CCD I3 on	N	N
[deg] Pointing Roll	59.996643	60.15226865307174	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)	622790441.184000	622789092.49897	CCD S5 on	Y	Y
Observation start date	2017-09-26T05:19:32	2017-09-26T04:58:12	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	622822414.184000	622823140.43847	On-chip summing requested	N	N
Observation end date	2017-09-26T14:12:25	2017-09-26T14:25:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



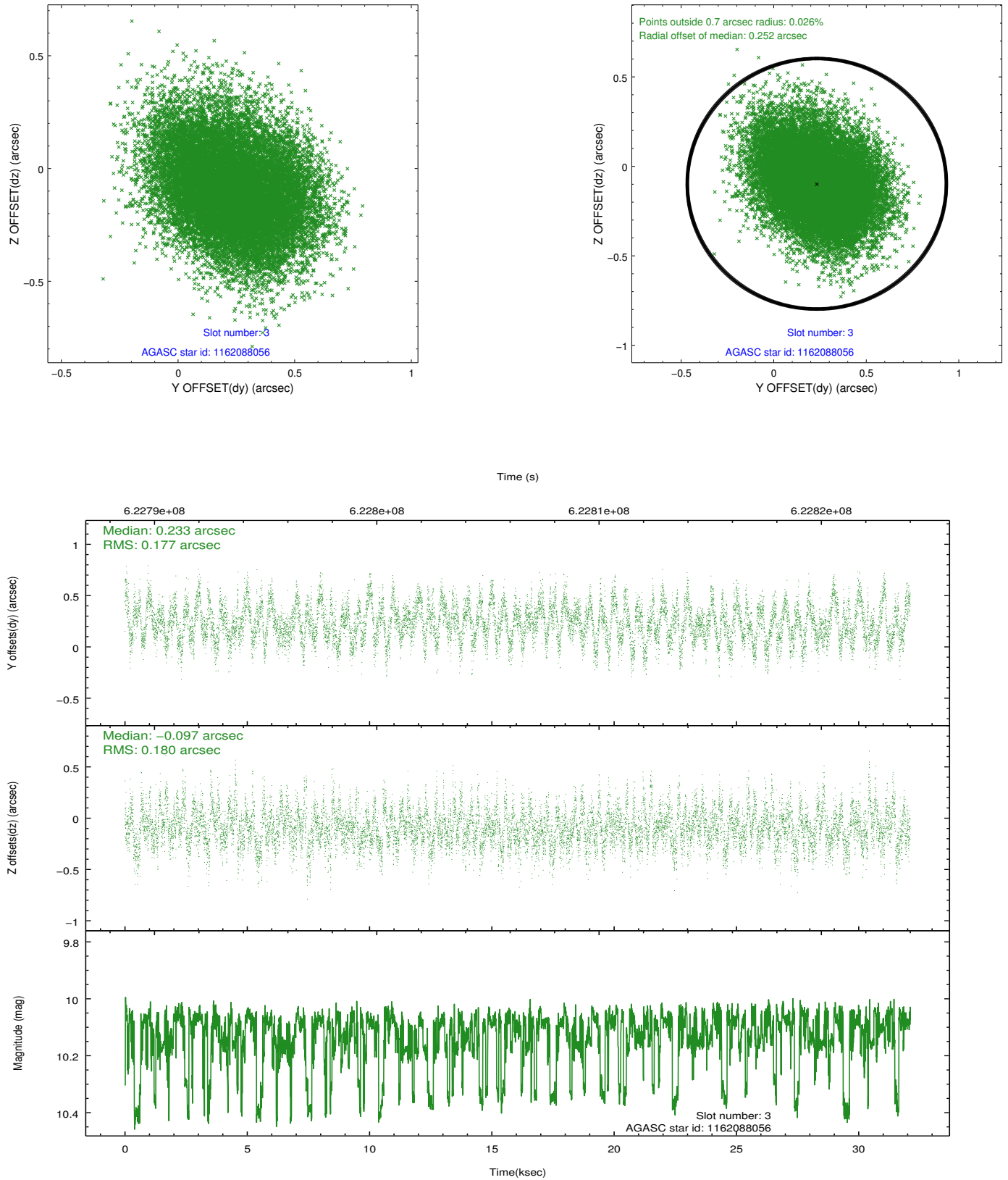


Slot Statistics

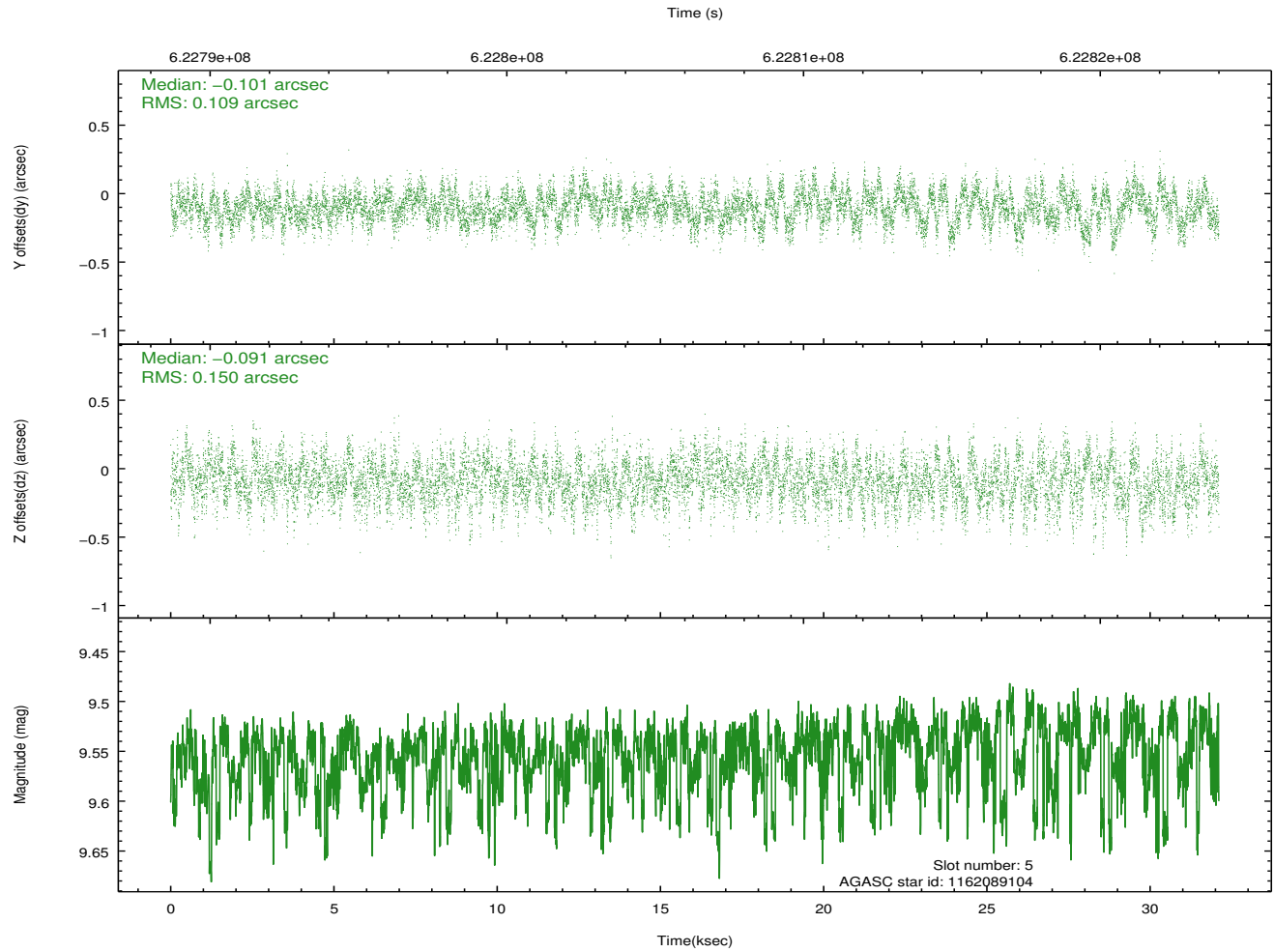
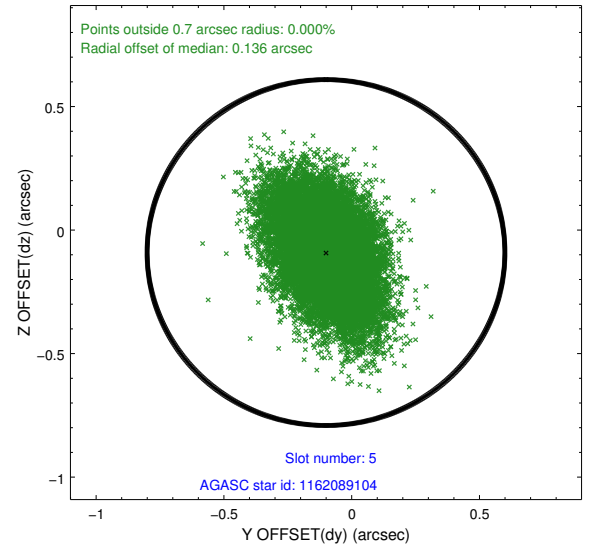
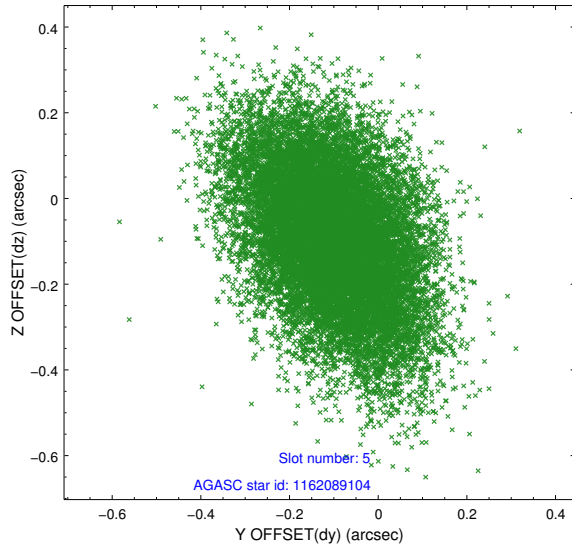
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.11	7831	-0.231	-0.143	0.038	0.058	0.000000	0.000000	-766.34	-1739.43
1	FID		ACIS-S-4	7.23	7831	0.288	0.127	0.034	0.056	0.000000	0.000000	2147.48	169.23
2	FID		ACIS-S-6	7.37	7830	-0.080	0.017	0.015	0.024	0.000000	0.000000	395.92	806.60
3	GUIDE	used	1162088056	10.12	15598	0.233	-0.097	0.272	0.433	48.729349	-66.949806	-1980.07	240.57
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	GUIDE	used	1162089104	9.55	15641	-0.101	-0.091	0.195	0.327	48.422126	-66.410699	-540.83	1613.75
6	GUIDE	used	1162090824	9.20	15646	0.090	0.090	0.182	0.301	48.677982	-66.885202	-1817.66	422.26
7	GUIDE	used	1162094224	9.66	15641	-0.197	0.089	0.227	0.370	49.638584	-66.701903	-559.37	-419.29

2.4 Star Slots

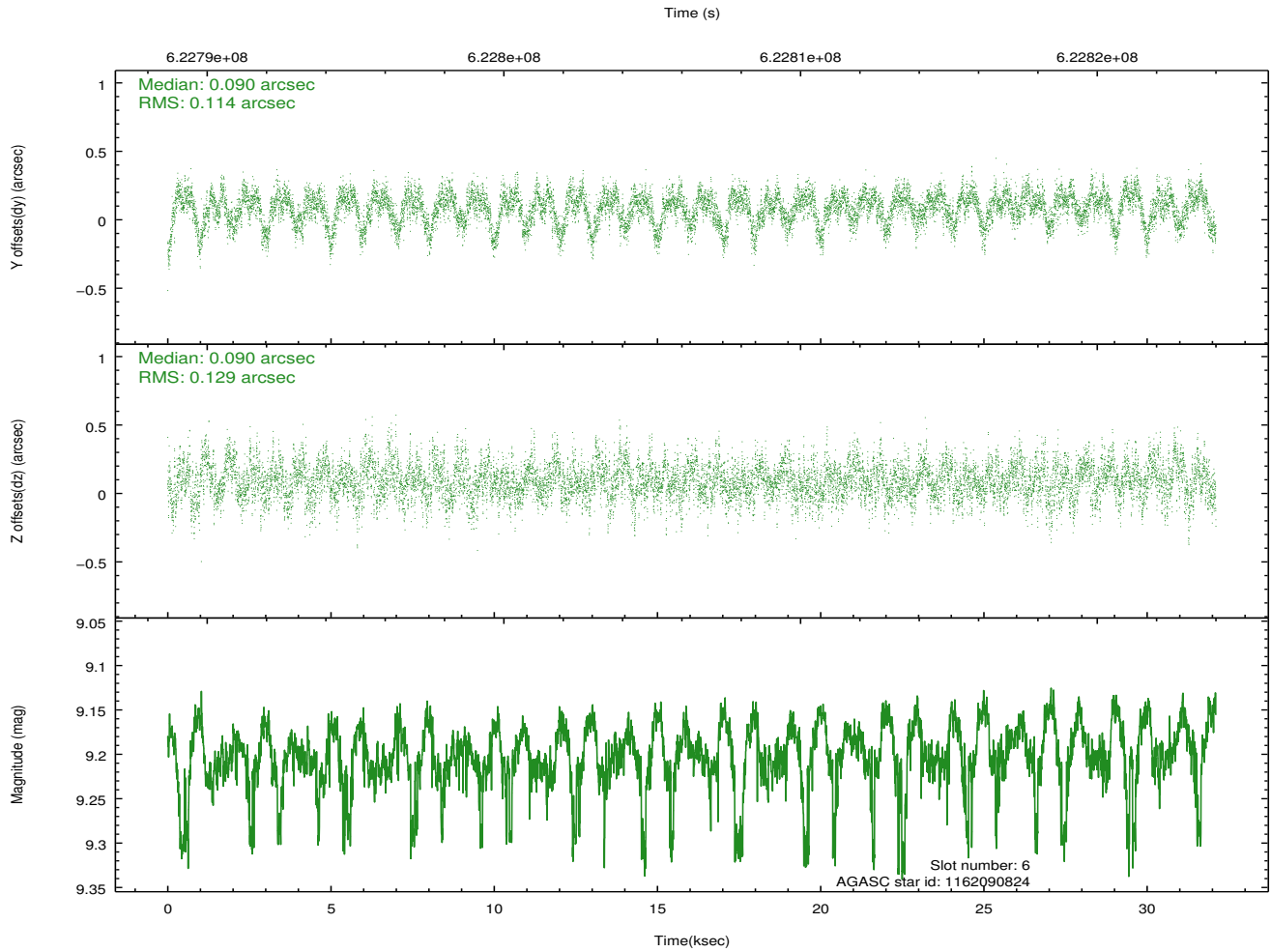
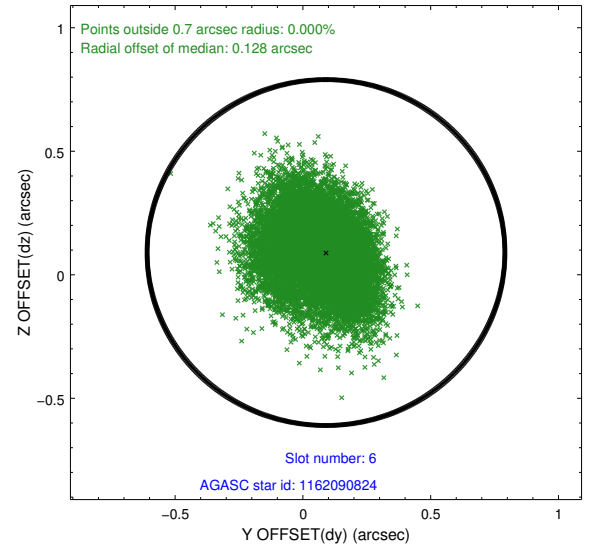
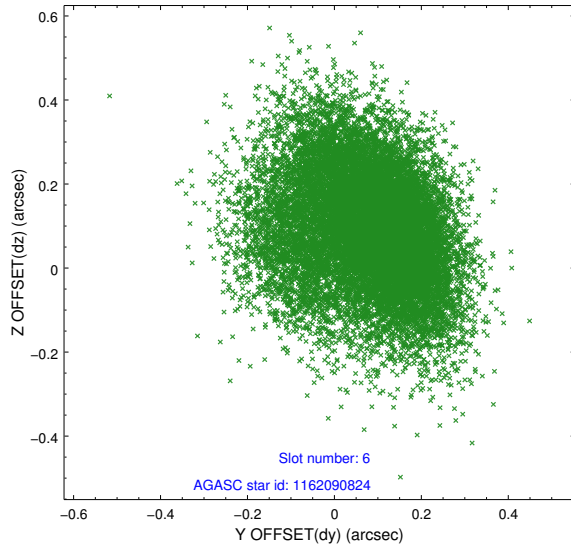
2.4.1 Slot 3



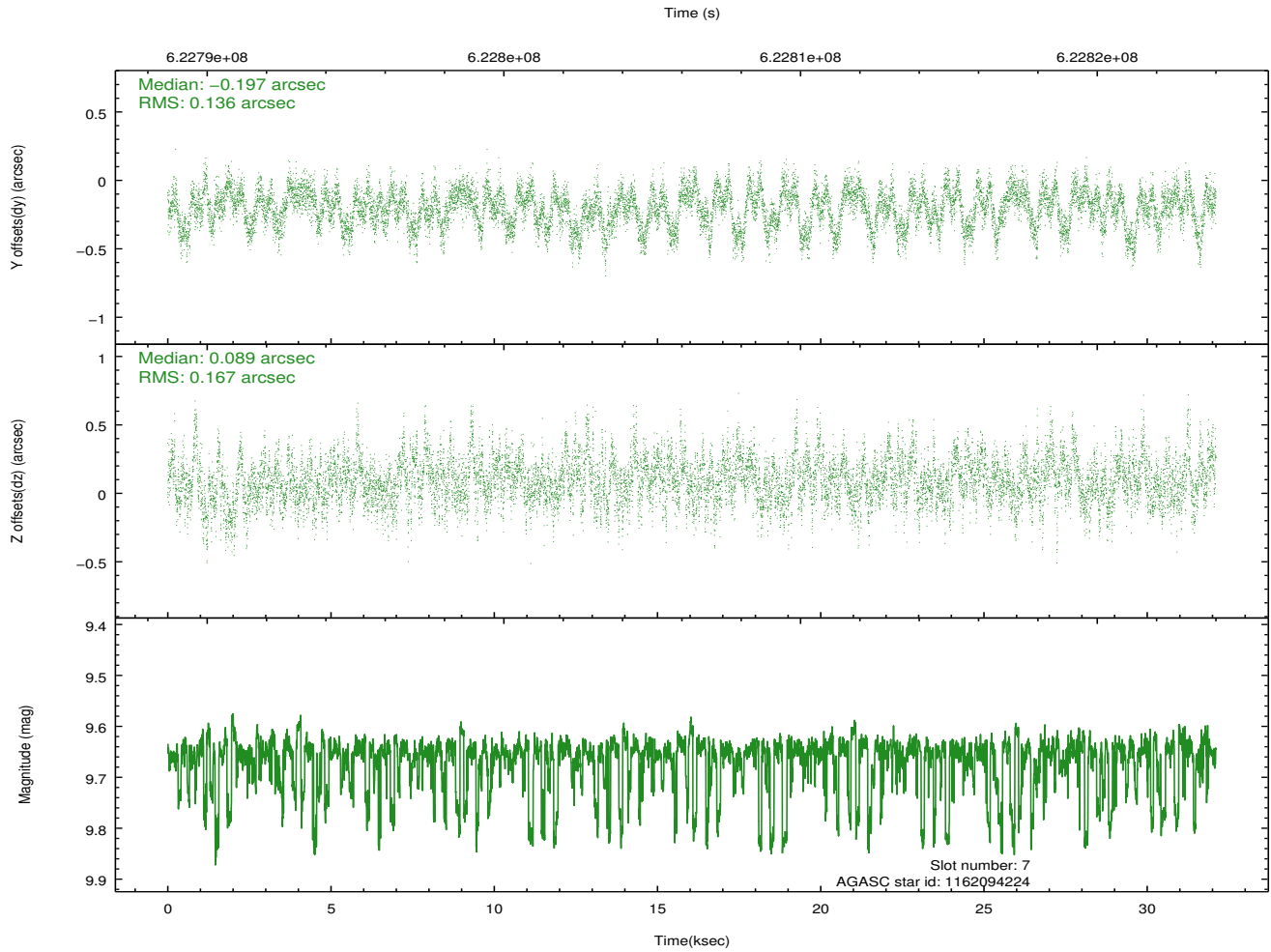
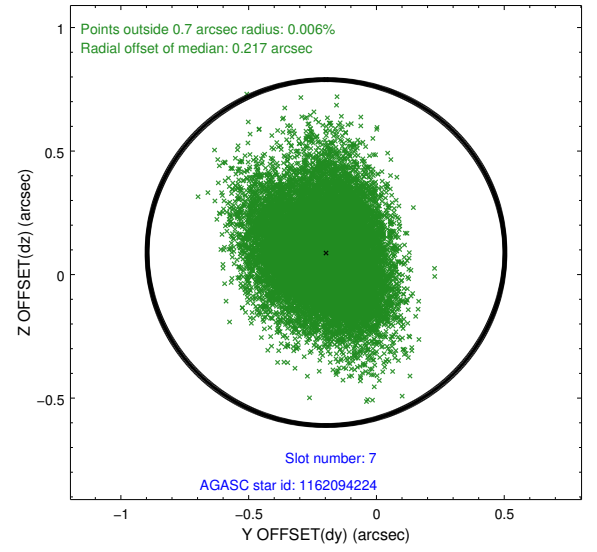
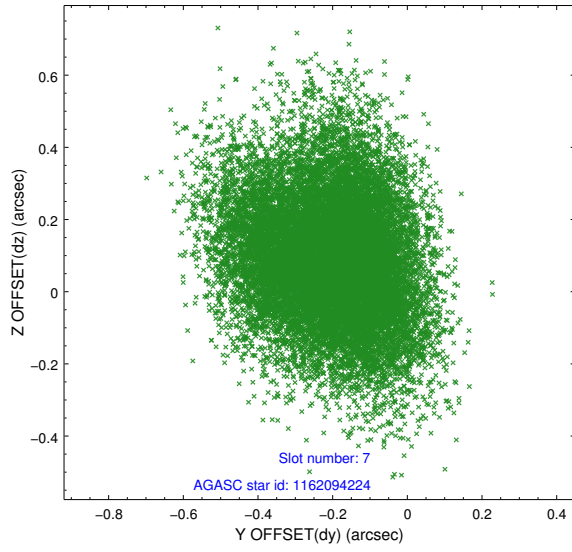
2.4.2 Slot 5



2.4.3 Slot 6

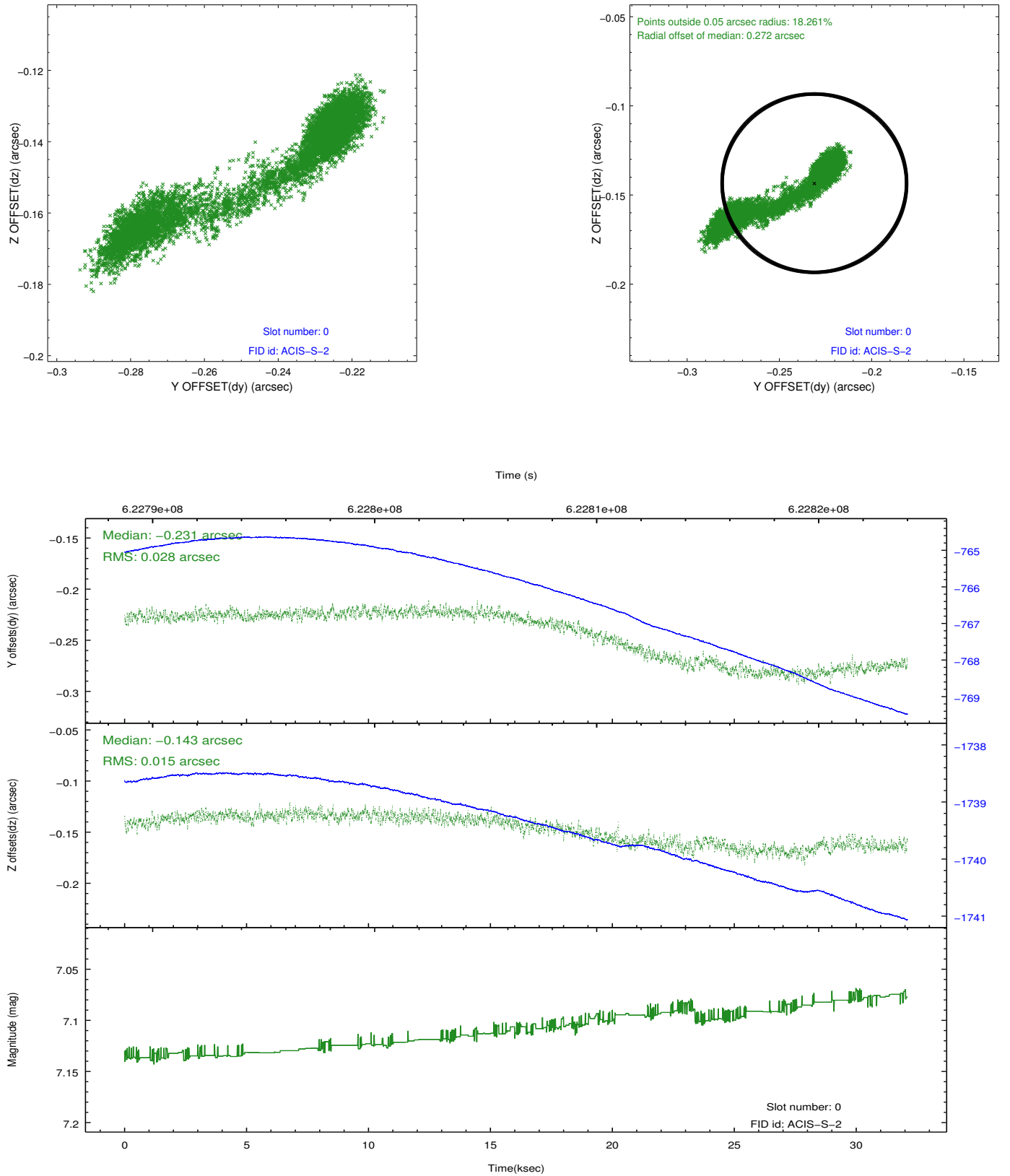


2.4.4 Slot 7

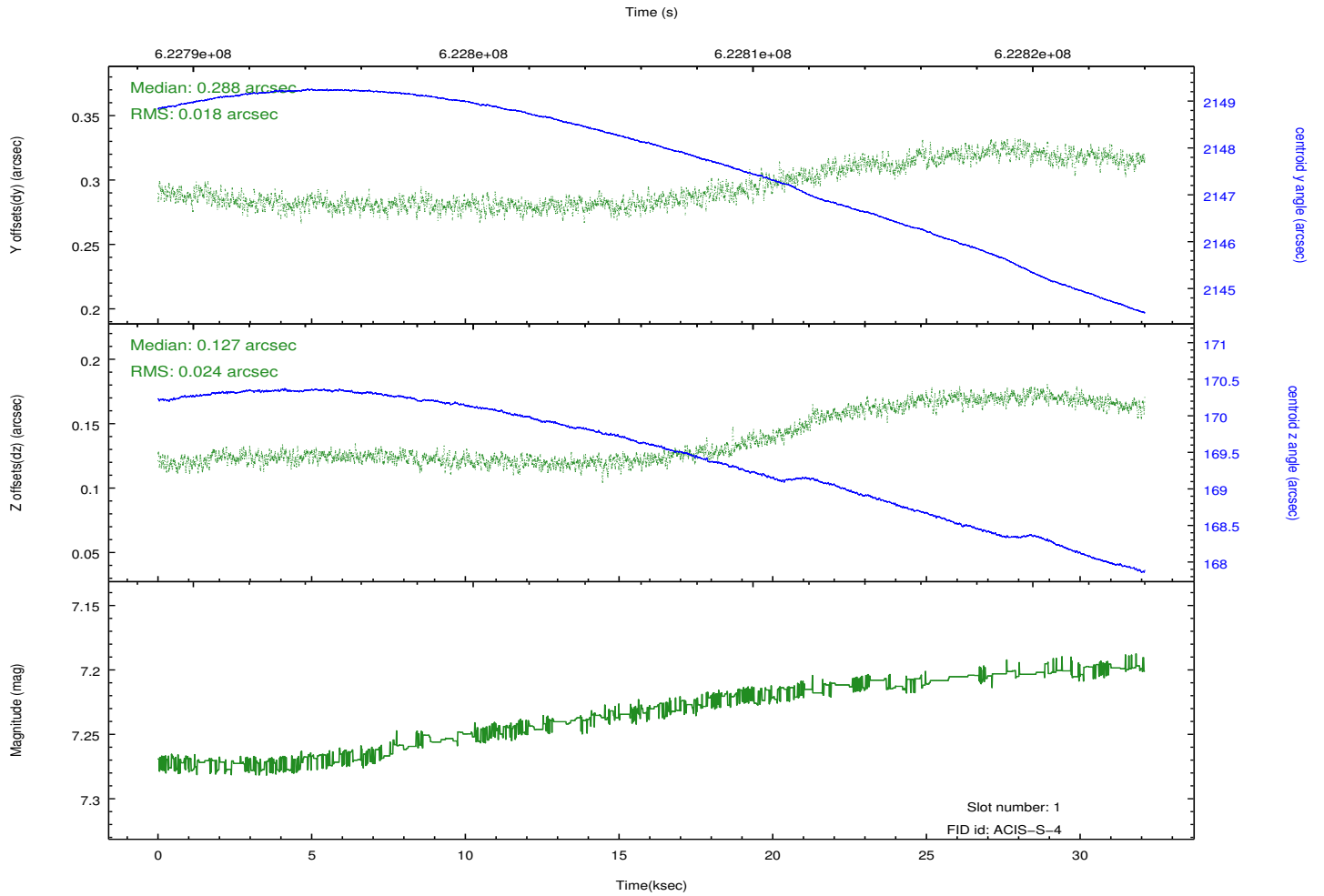
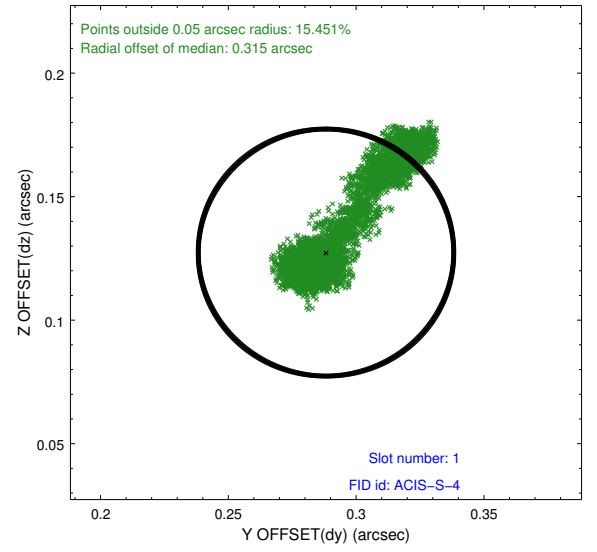
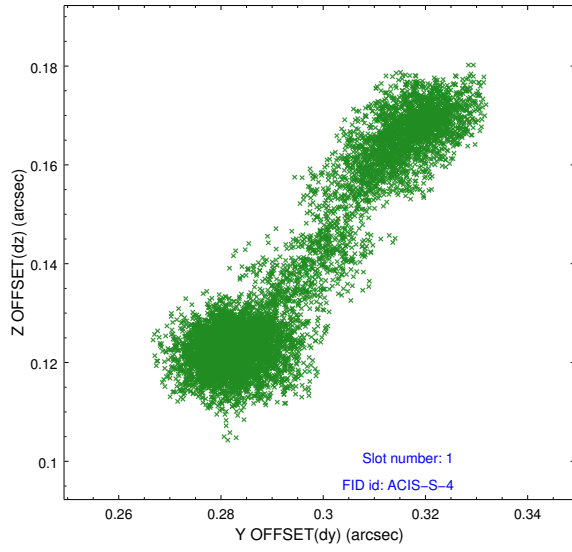


2.5 FID Slots

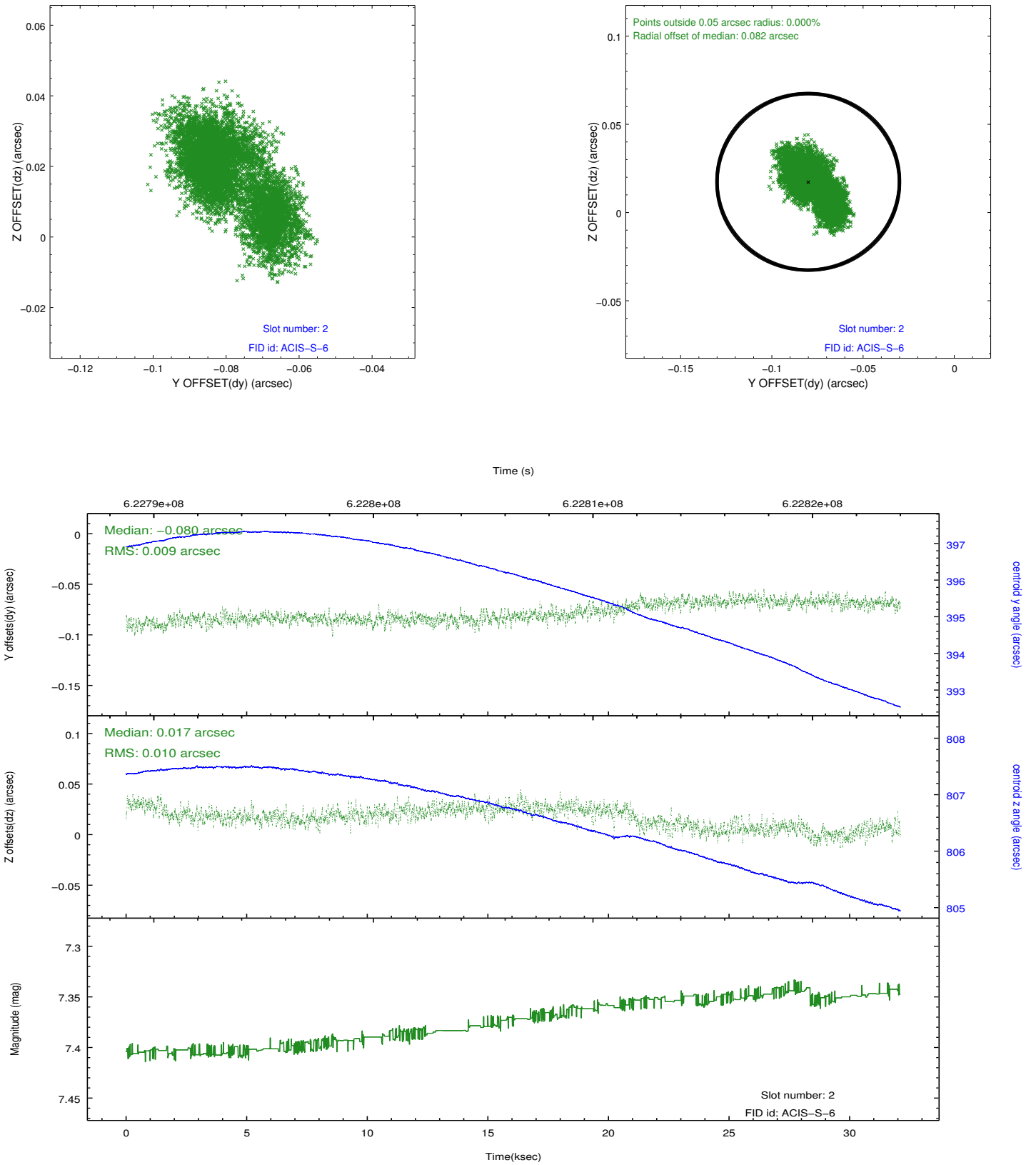
2.5.1 Slot 0



2.5.2 Slot 1

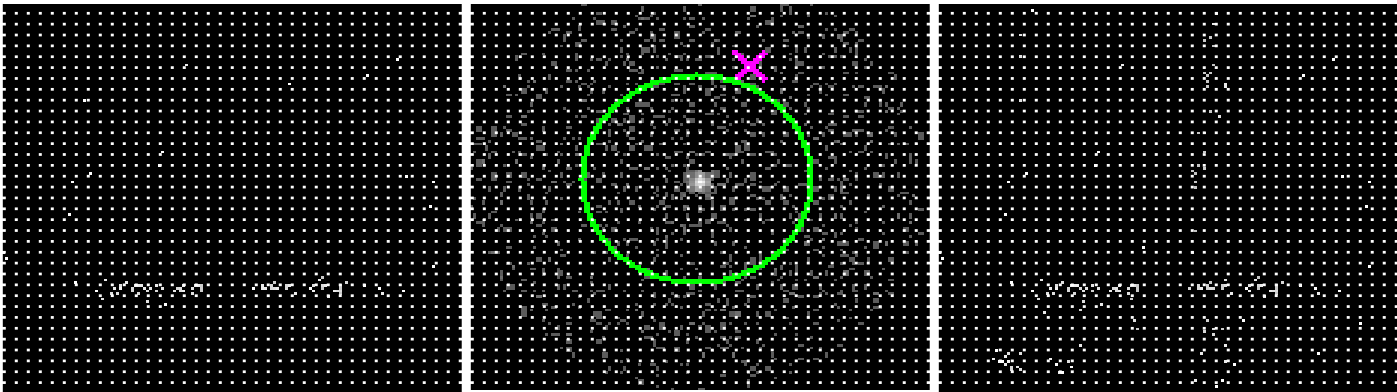


2.5.3 Slot 2



3 Gratings

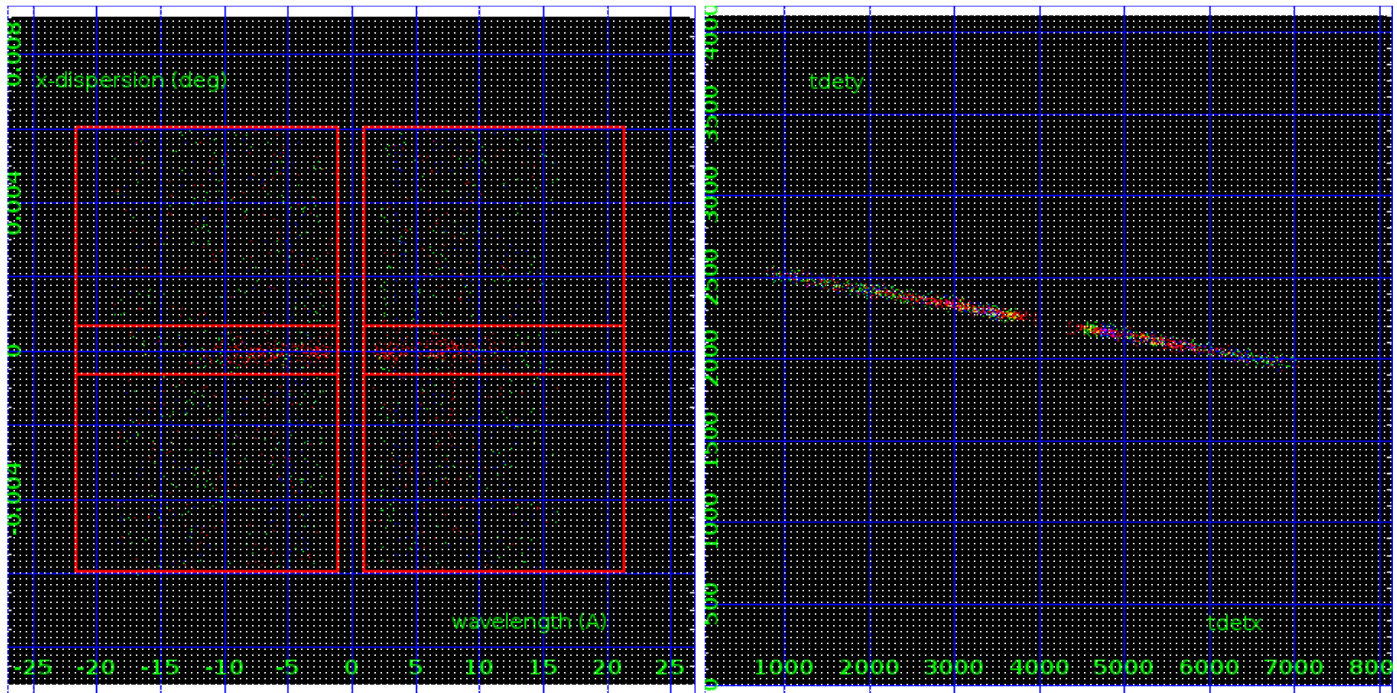
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

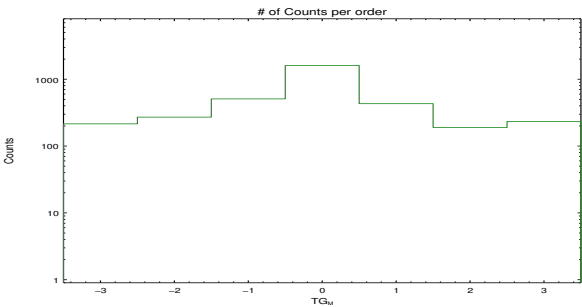
HEG Order Sort ALL

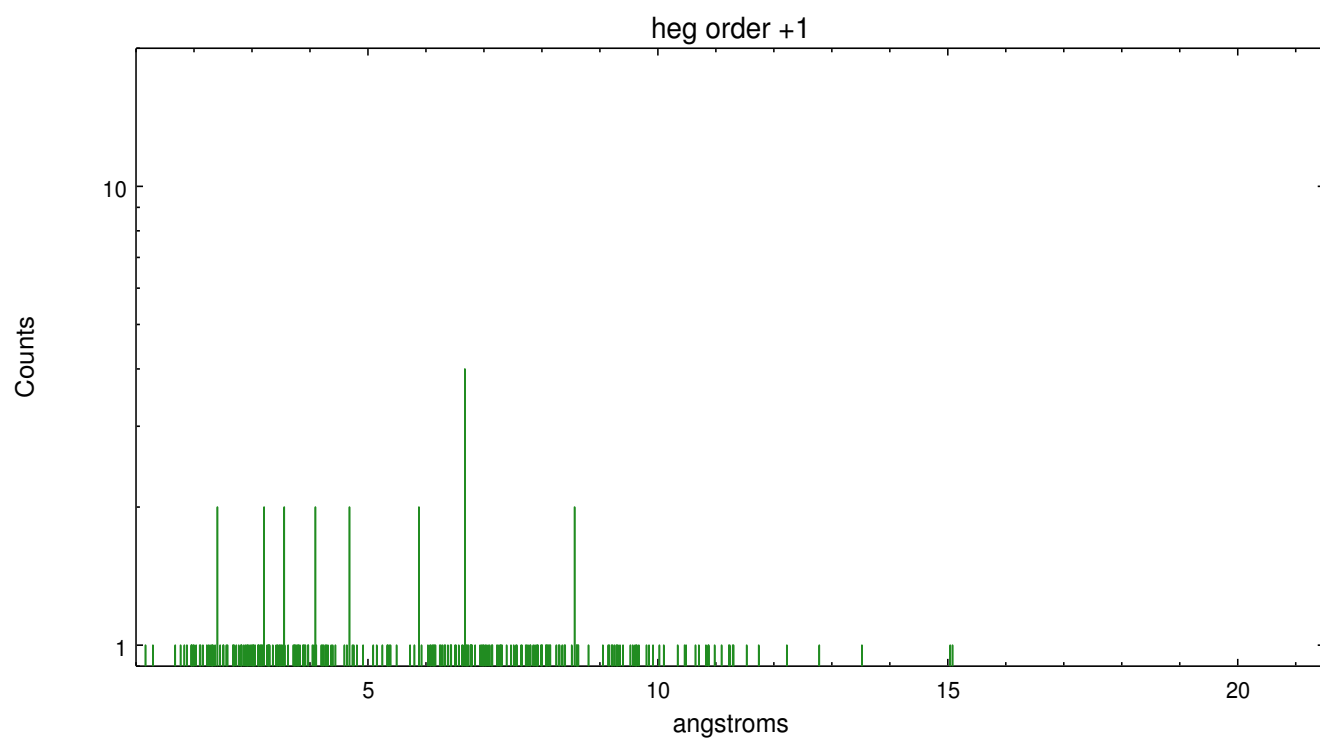
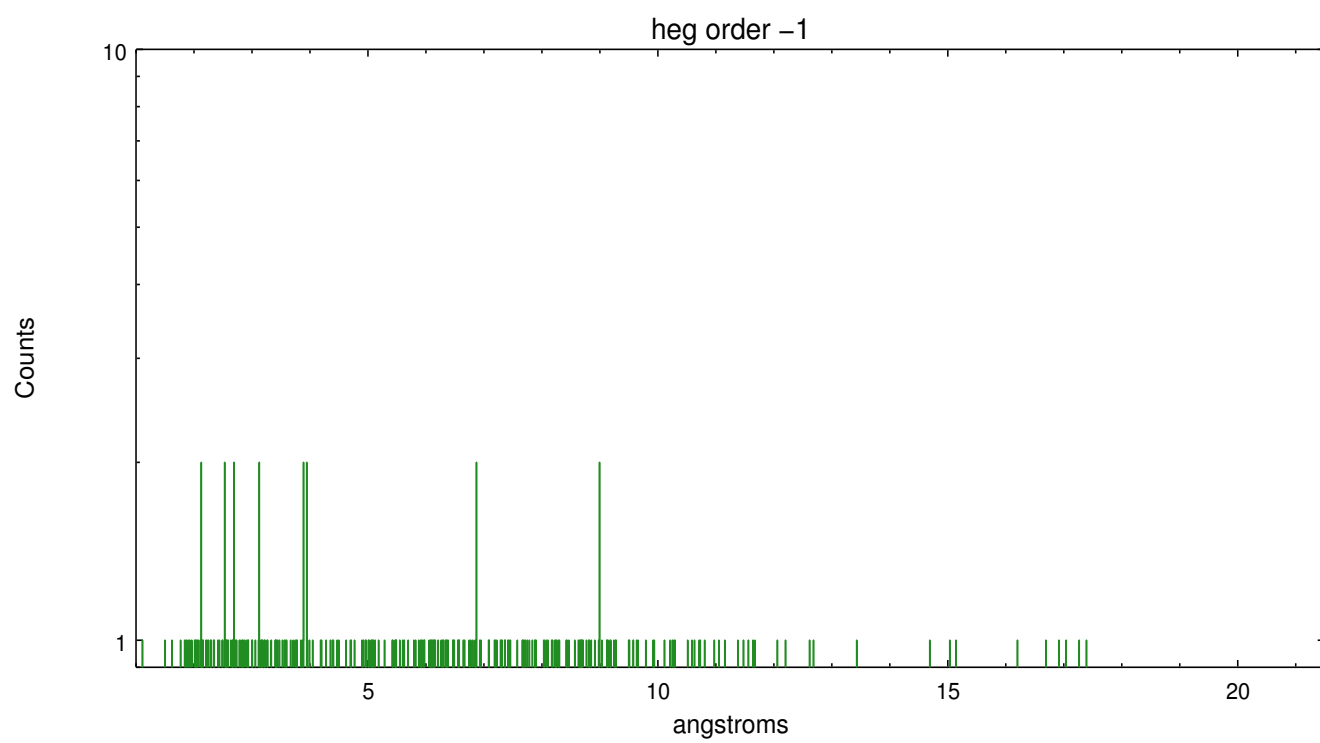


Spot Image HEG

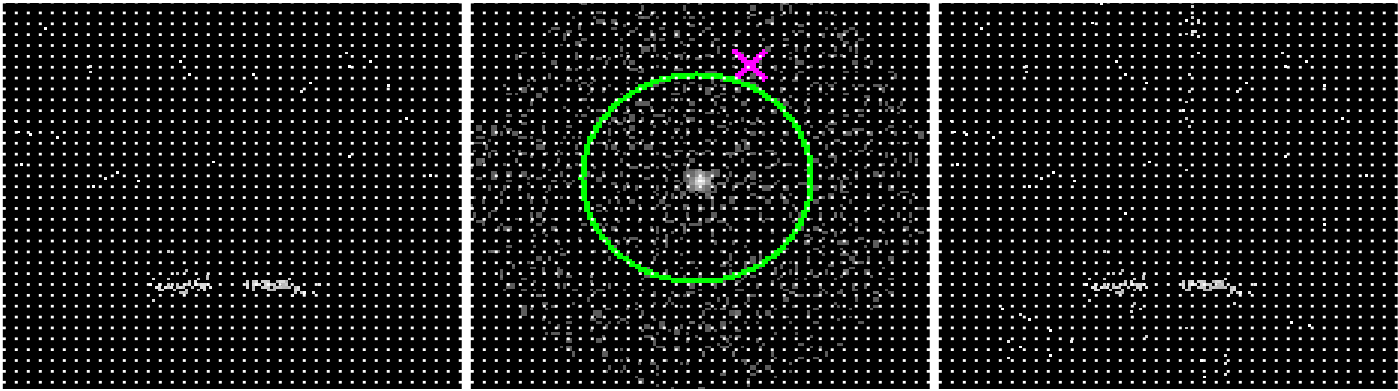
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	215	271	508	1605	431	190	233





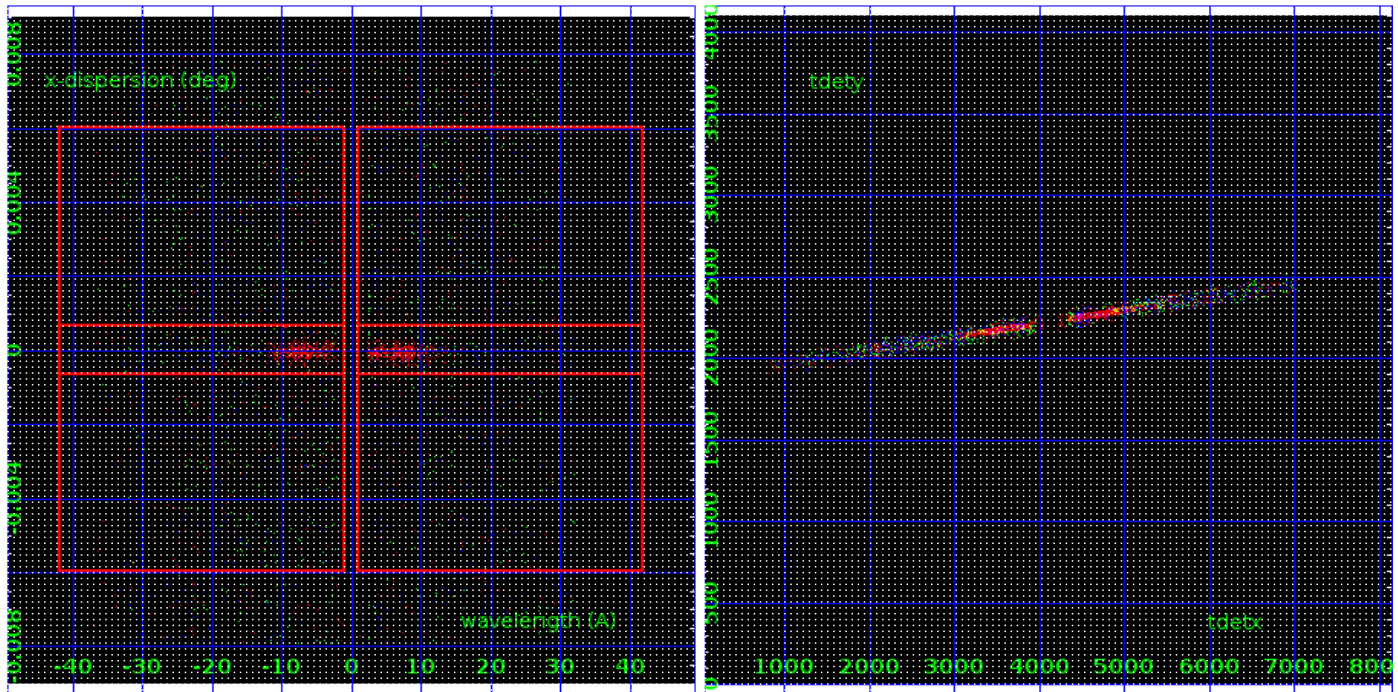
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

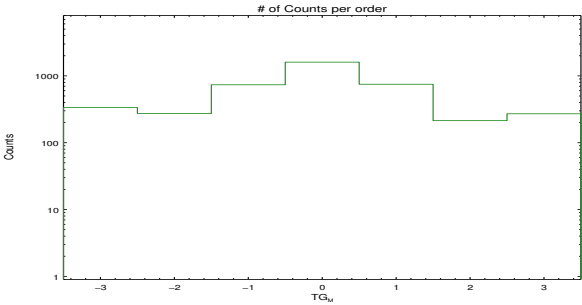
MEG Order Sort ALL

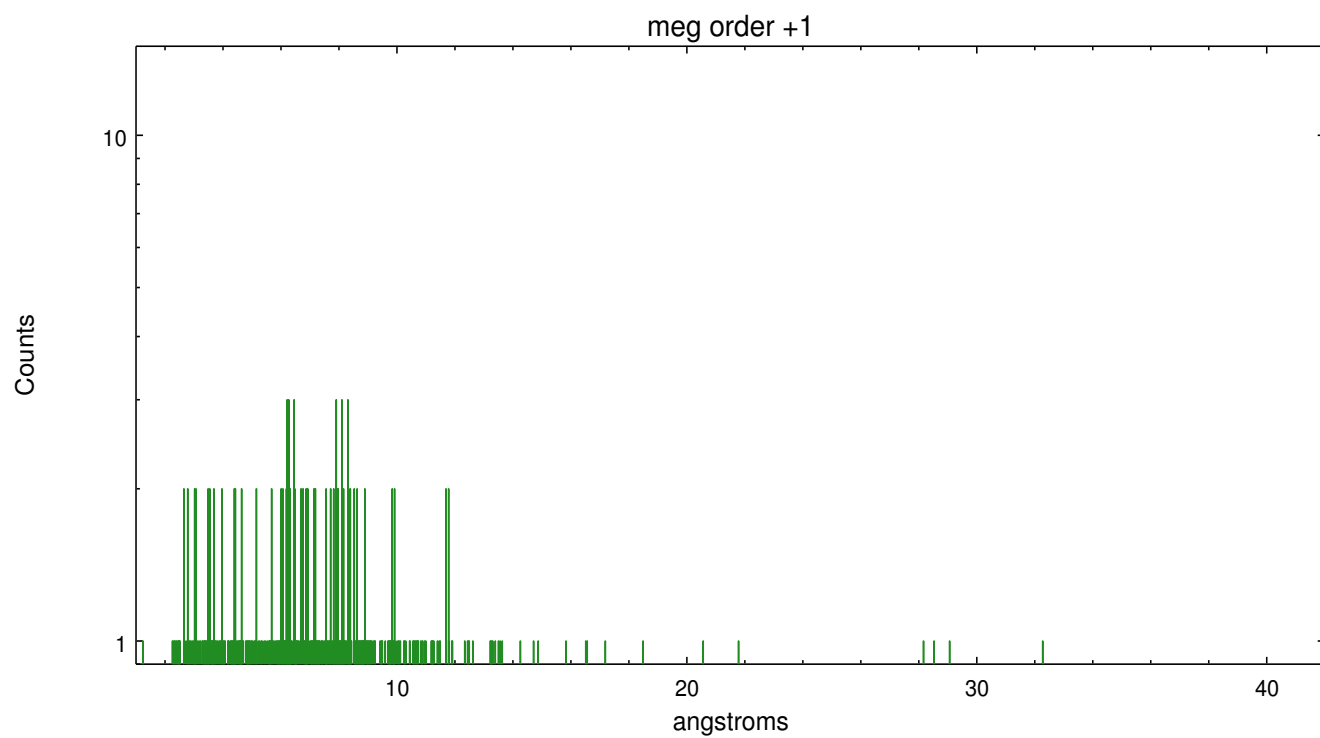
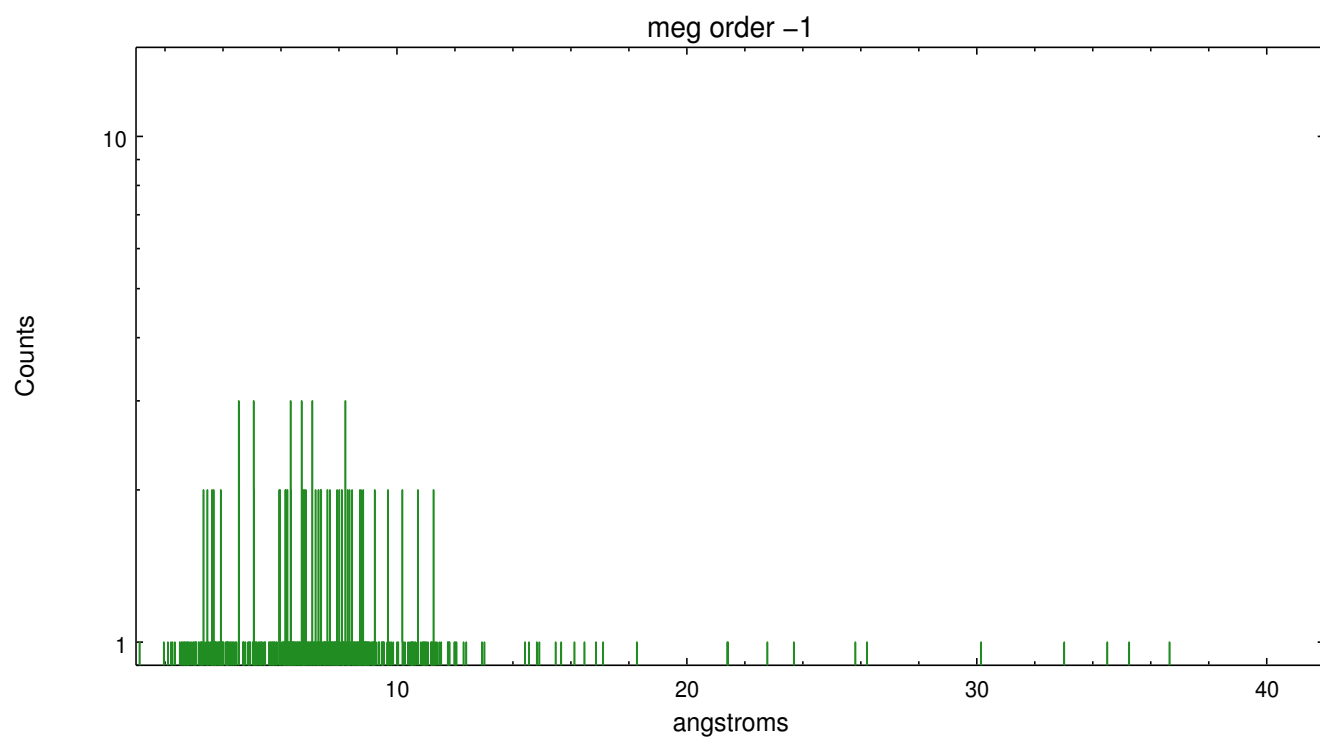


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	336	273	736	1605	749	214	271





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.916800475597

A.2 Comments

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.