

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 19889 - L2 Version 1
Chandra X-Ray Center

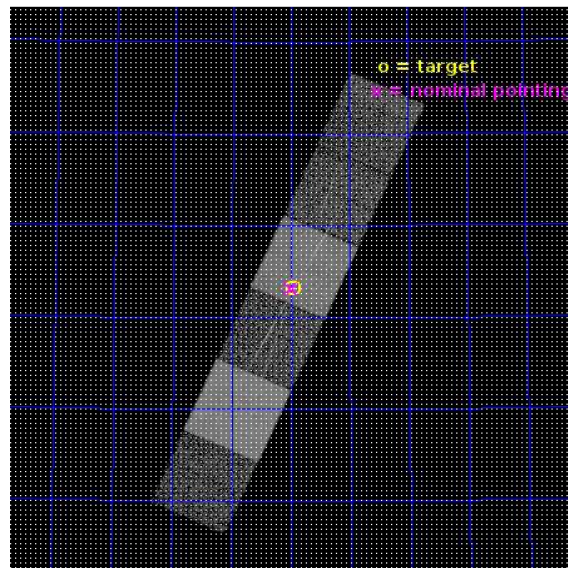
L2 Processing Date : Sep 26 2016

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1 Front

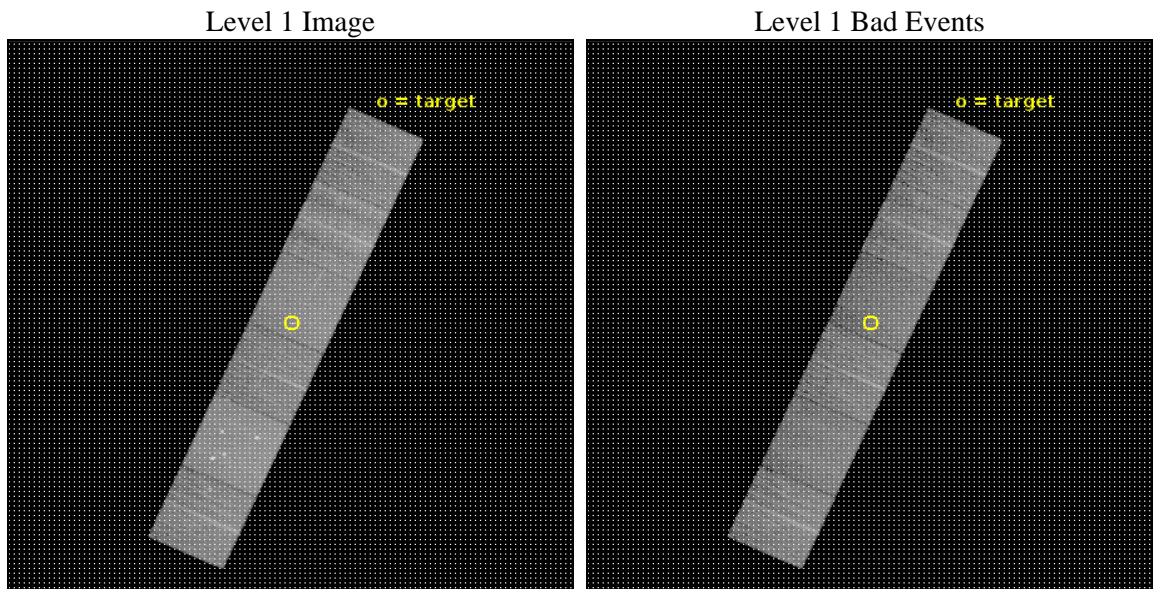
seq_num	703213	Sequence number
obs_id	19889	Observation id
title	Picturing Feedback in Action: from the innermost nuclear region to the Galaxy Scale	Proposal title
observer	Dr. Fabrizio Nicastro	Principal investigator
object	Mkn 876	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	243.488333	Observer's specified target RA [deg]
dec_targ	65.719444	Observer's specified target Dec [deg]
ra_nom	243.49825981792	Nominal RA [deg]
dec_nom	65.718527003851	Nominal Dec [deg]
roll_nom	294.14756414889	Nominal Roll [deg]
revision	1	Processing version of data
ontime	12528.000186682	Sum of GTIs [s]
livetime	12369.363104862	Livetime [s]
ontime4	12528.000186682	Sum of GTIs [s]
ontime5	12528.000186682	Sum of GTIs [s]
ontime6	12528.000186682	Sum of GTIs [s]
ontime7	12528.000186682	Sum of GTIs [s]
ontime8	12528.000186682	Sum of GTIs [s]
ontime9	12528.000186682	Sum of GTIs [s]
l2events	146201	Number of level 2 events



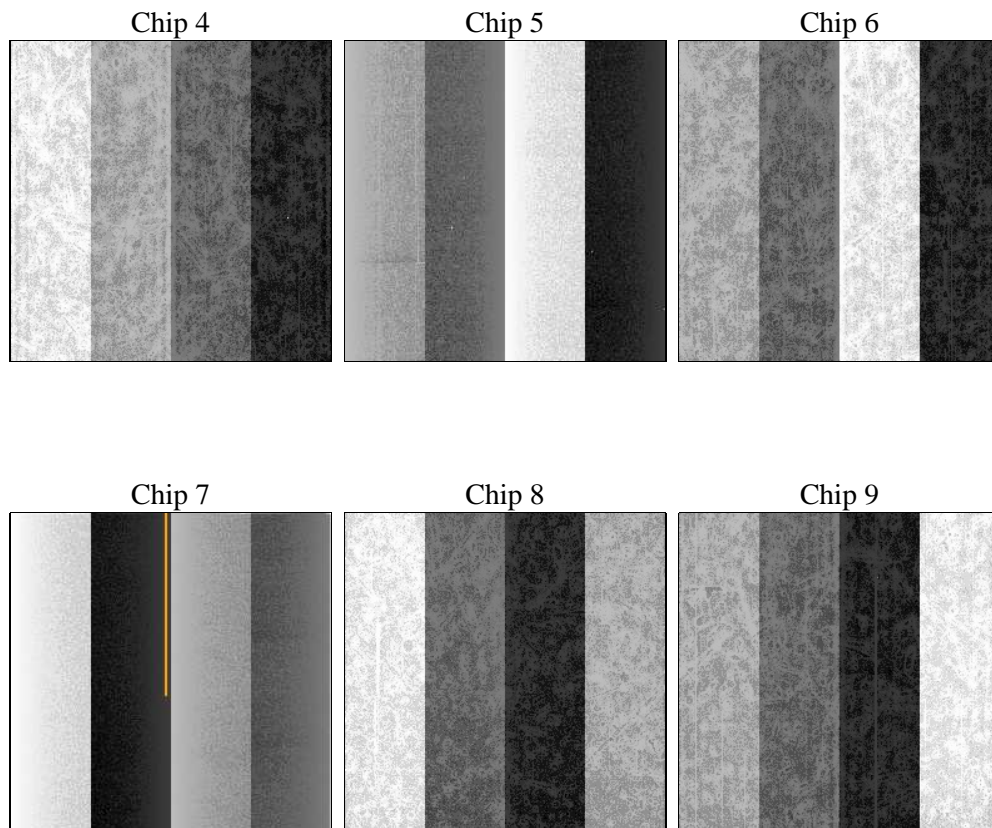
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12600.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	12528.000186682	Sum of GTIs [s]
caldsver	4.7.2	 	ontime4	12528.000186682	Sum of GTIs [s]
date	2016-09-26T06:14:43	Date and time of file creation	ontime5	12528.000186682	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	12528.000186682	Sum of GTIs [s]
			ontime7	12528.000186682	Sum of GTIs [s]
			ontime8	12528.000186682	Sum of GTIs [s]
			ontime9	12528.000186682	Sum of GTIs [s]
			l1events	635231	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			ra_pos	(4127.06, 4103.63)	Grade sky pixel position

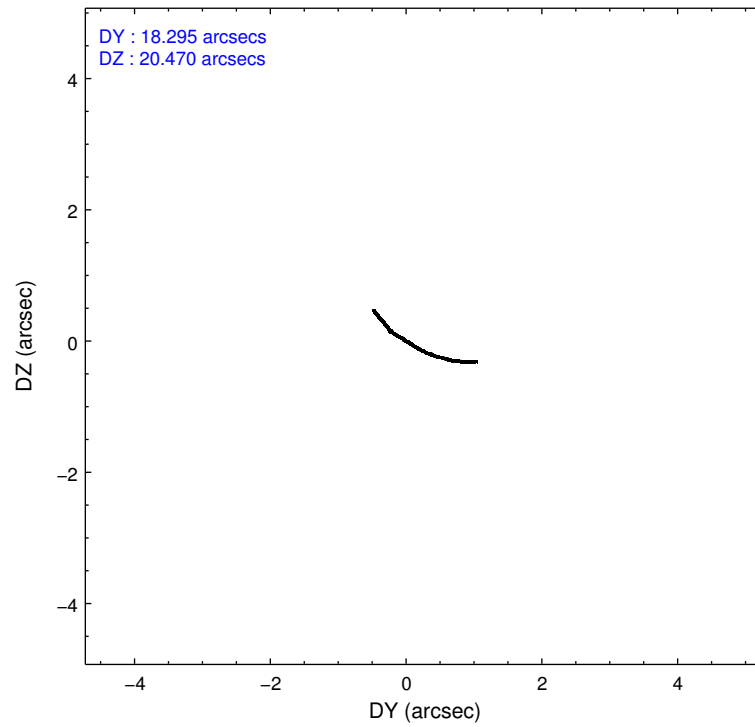
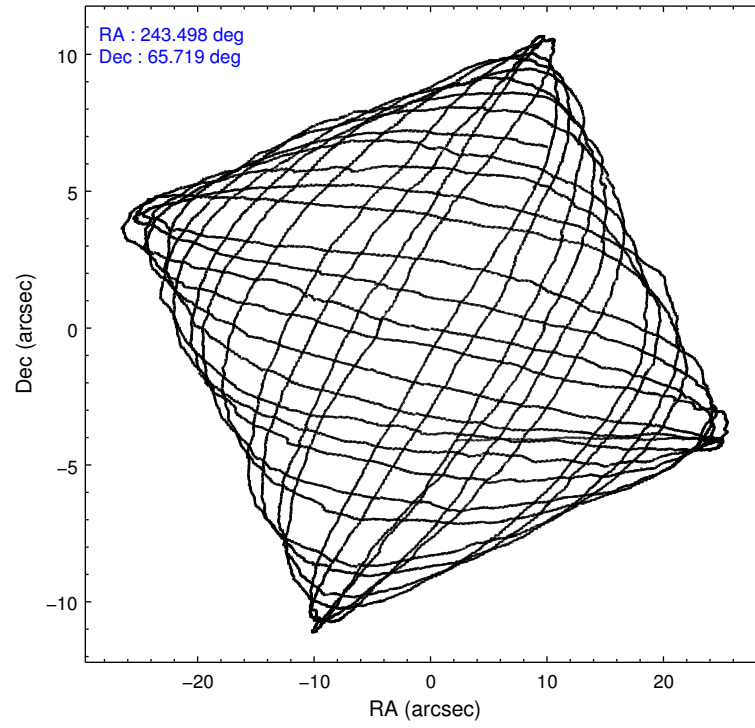
2.1.4 Events

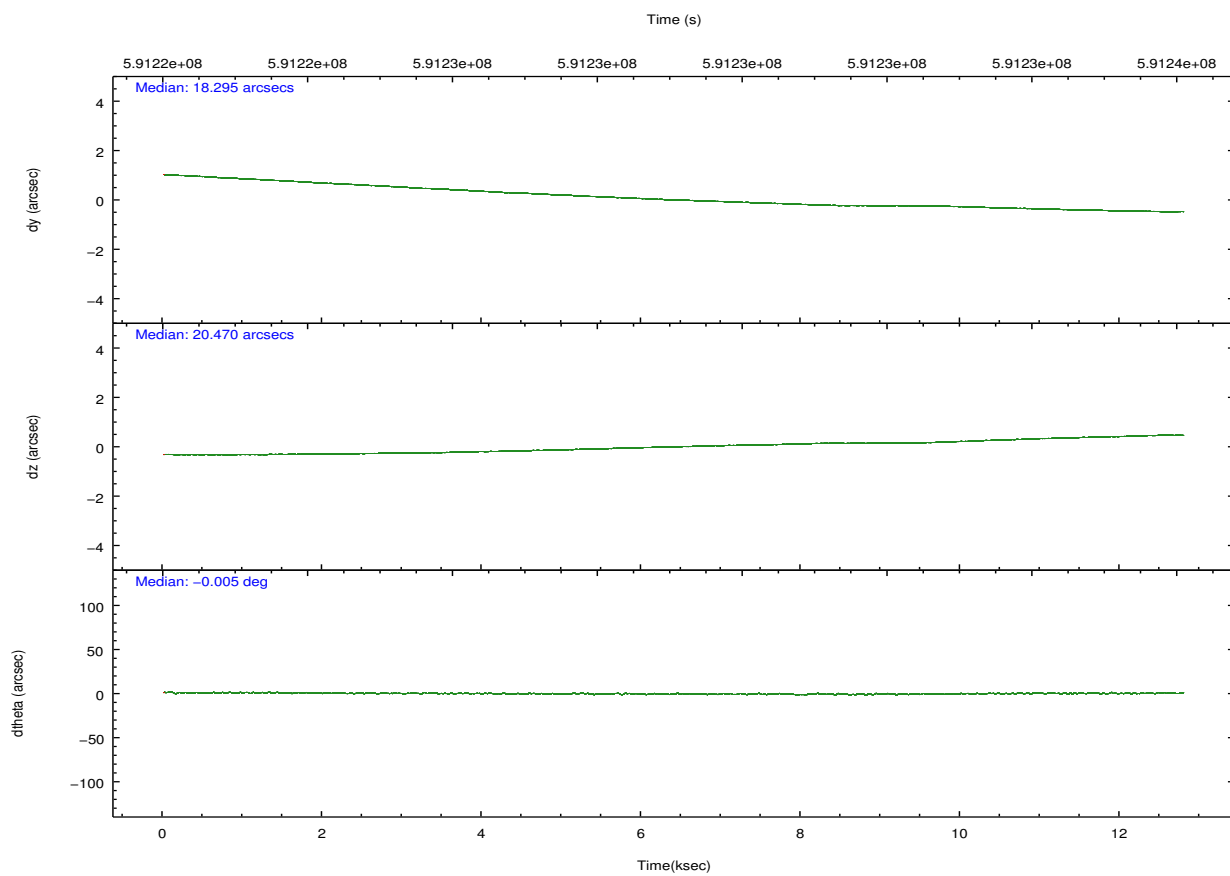
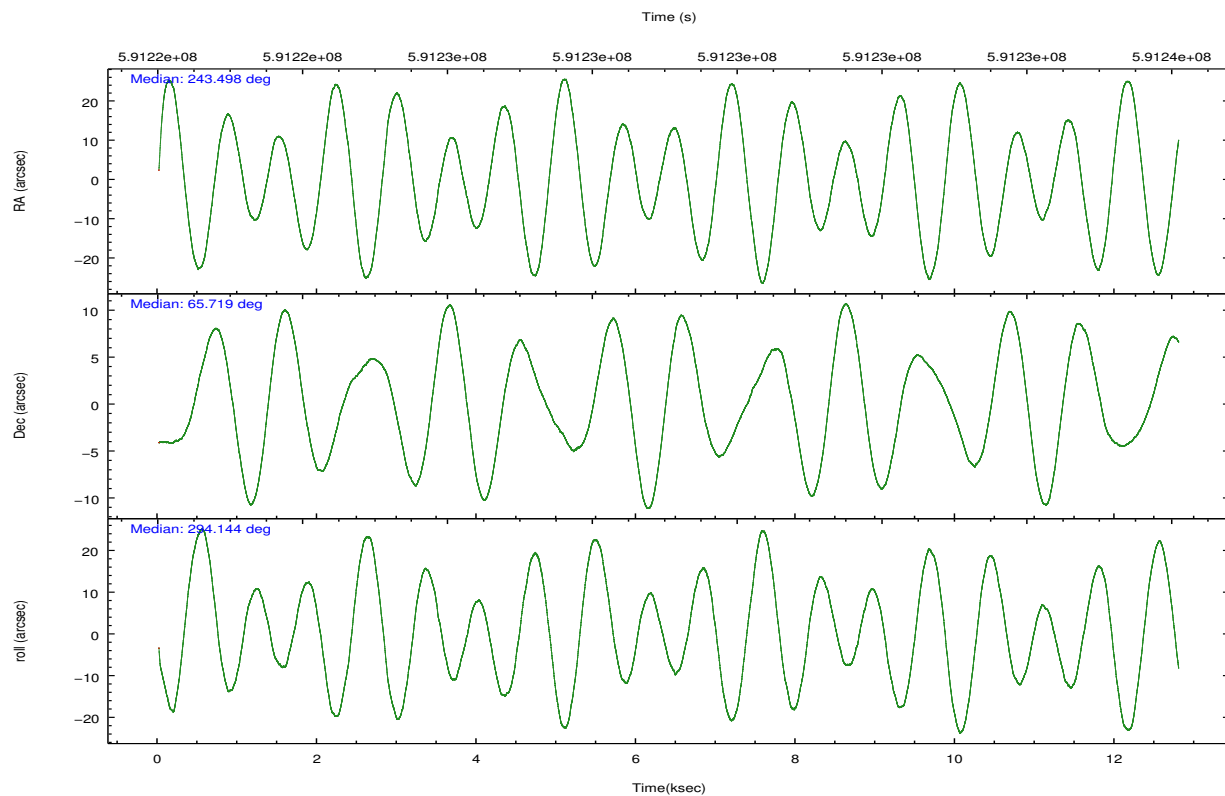
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	97681	139638	89833	111798	111472	84809	grade 0 events	4007	9741	4037	4606	8675	3649
rejected events	87343	68920	79173	61646	81665	74480		4%	6%	4%	4%	7%	4%
rejected %	89%	49%	88%	55%	73%	87%	grade 1 events	91	303	50	171	81	40
								0%	0%	0%	0%	0%	0%
							grade 2 events	2431	21491	2389	10796	7128	2312
								2%	15%	2%	9%	6%	2%
							grade 3 events	1091	1997	1031	4086	3087	1036
								1%	1%	1%	3%	2%	1%
							grade 4 events	1068	1870	902	3871	2796	1033
								1%	1%	1%	3%	2%	1%
							grade 5 events	4147	9015	3897	10716	5938	4477
								4%	6%	4%	9%	5%	5%
							grade 6 events	1743	35633	2302	26805	8132	2301
								1%	25%	2%	23%	7%	2%
							grade 7 events	83103	59588	75225	50747	75635	69961
								85%	42%	83%	45%	67%	82%

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	243.443613	243.4982598179176	CCD I2 on	N	N
[deg] Pointing Dec	65.734306	65.71852700385087	CCD I3 on	N	N
[deg] Pointing Roll	294.040768	294.1475641488896	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	591222868.184000	591221756.69134	CCD S5 on	Y	Y
Observation start date	2016-09-25T20:33:20	2016-09-25T20:15:56	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	591235468.184000	591236040.06716	On-chip summing requested	N	N
Observation end date	2016-09-26T00:03:20	2016-09-26T00:14:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



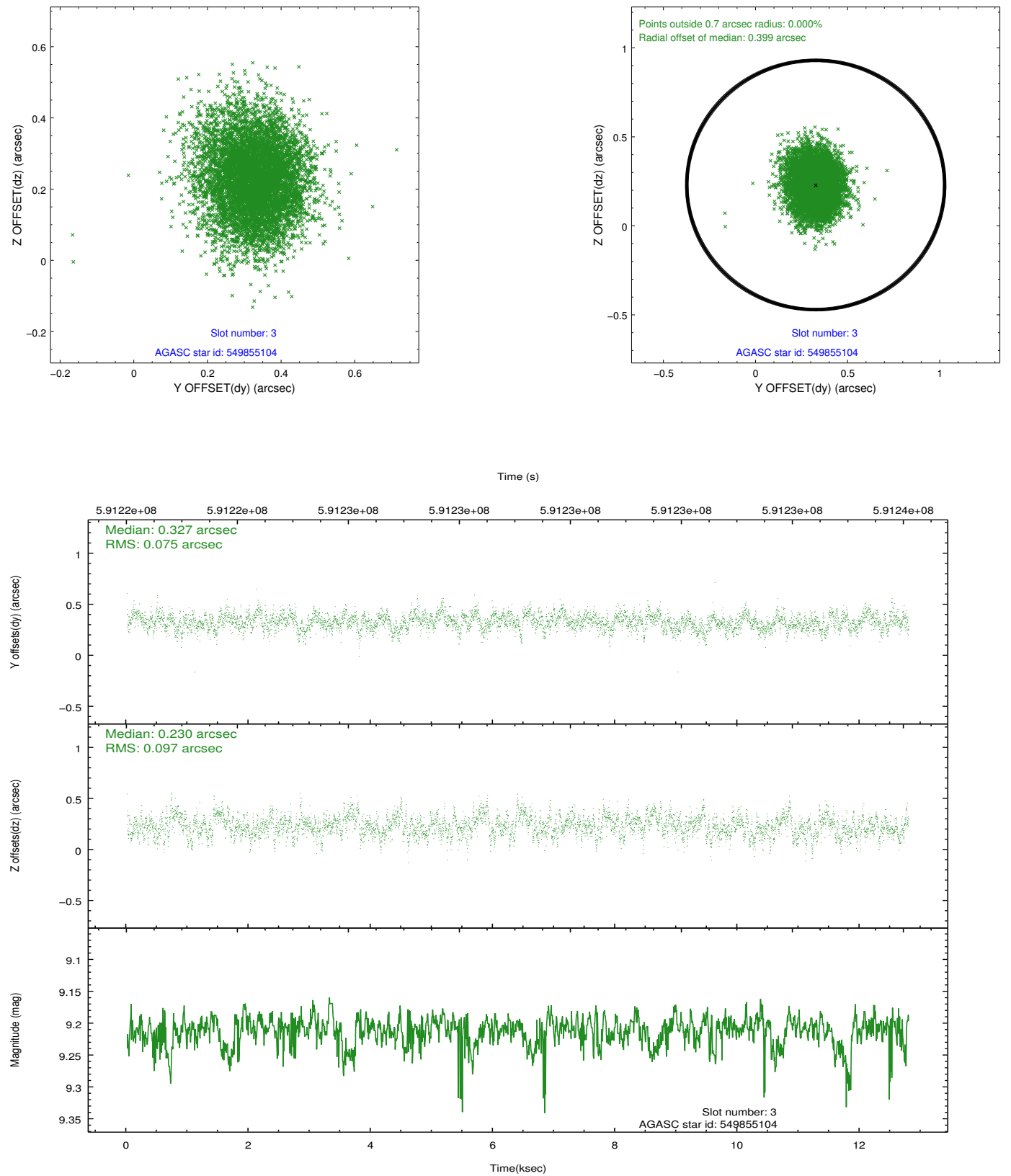


Slot Statistics

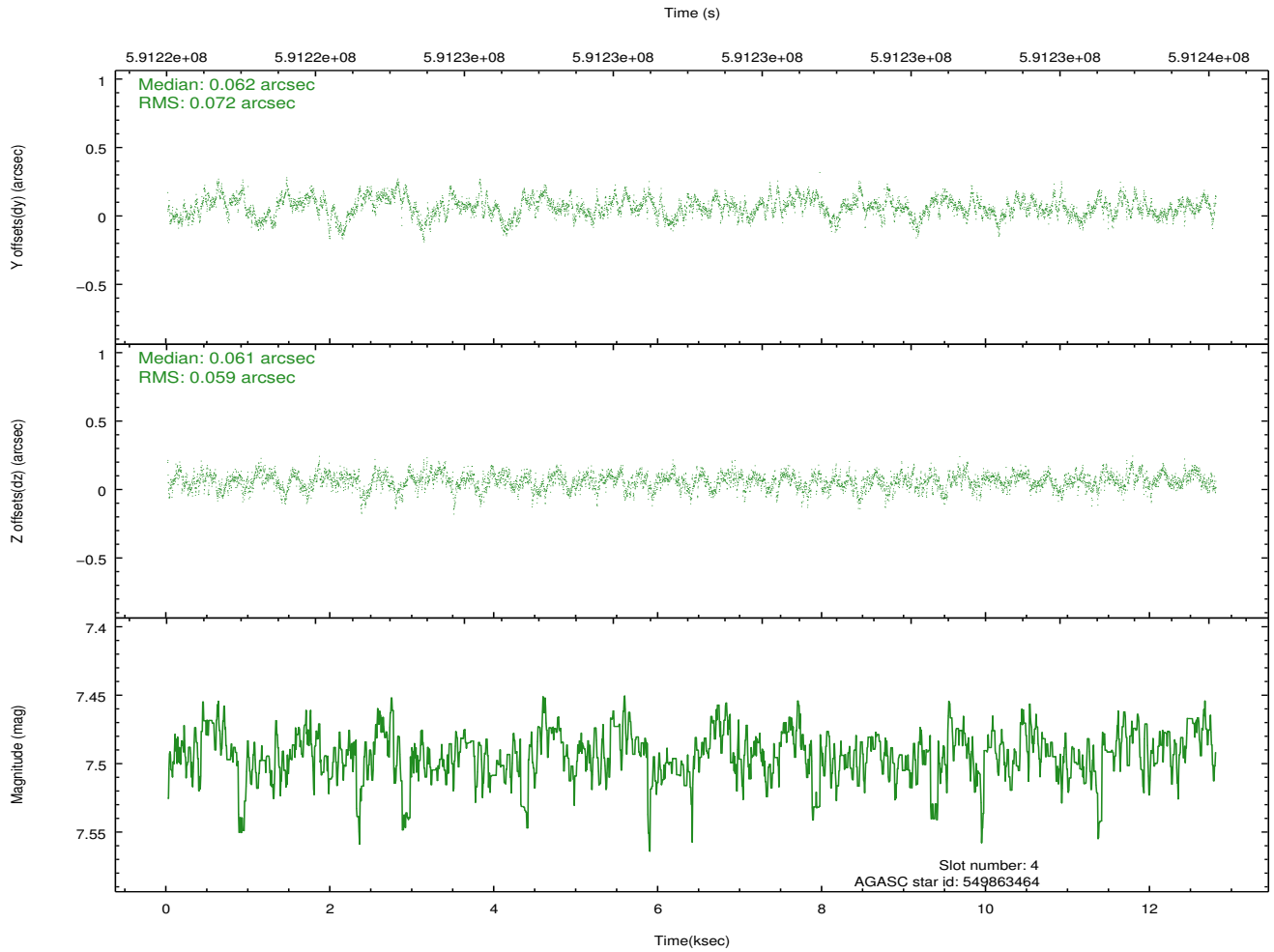
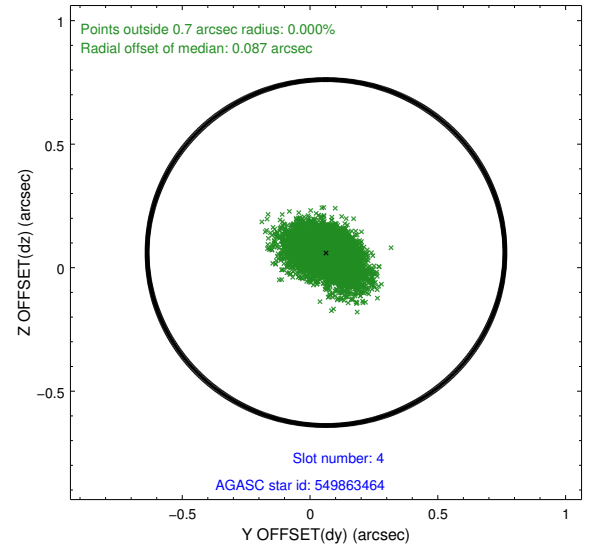
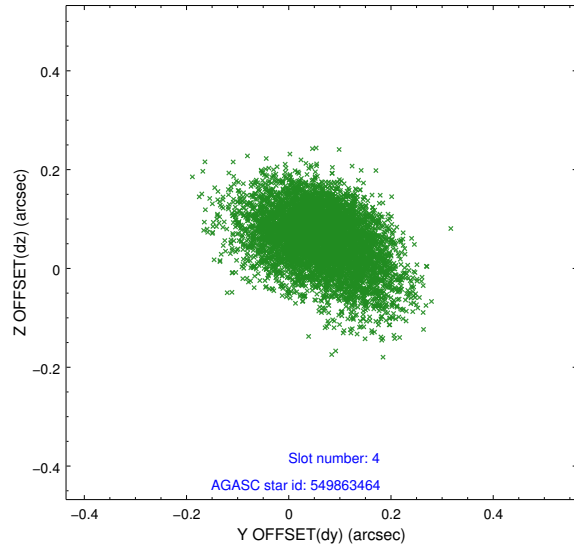
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.04	3120	-0.236	-0.138	0.021	0.029	0.000000	0.000000	-771.68	-1742.10
1	FID		ACIS-S-4	7.15	3119	0.543	0.151	0.029	0.039	0.000000	0.000000	2142.17	166.32
2	FID		ACIS-S-5	7.15	3120	-0.336	-0.005	0.011	0.017	0.000000	0.000000	-1824.16	160.21
3	GUIDE	used	549855104	9.21	6227	0.327	0.230	0.129	0.211	242.414078	65.829144	-936.18	-1241.91
4	GUIDE	used	549863464	7.49	6239	0.062	0.061	0.098	0.168	243.630740	66.376841	-2002.75	1188.74
5	GUIDE	used	549864184	9.09	6233	0.056	-0.006	0.165	0.260	243.727034	65.246202	1778.05	-325.17
6	GUIDE	used	549864952	8.91	6233	-0.304	-0.186	0.188	0.272	244.861755	65.614211	1231.89	1758.34
7	GUIDE	used	549859024	7.85	6236	-0.150	-0.076	0.087	0.145	243.777882	65.072262	2381.41	-506.89

2.4 Star Slots

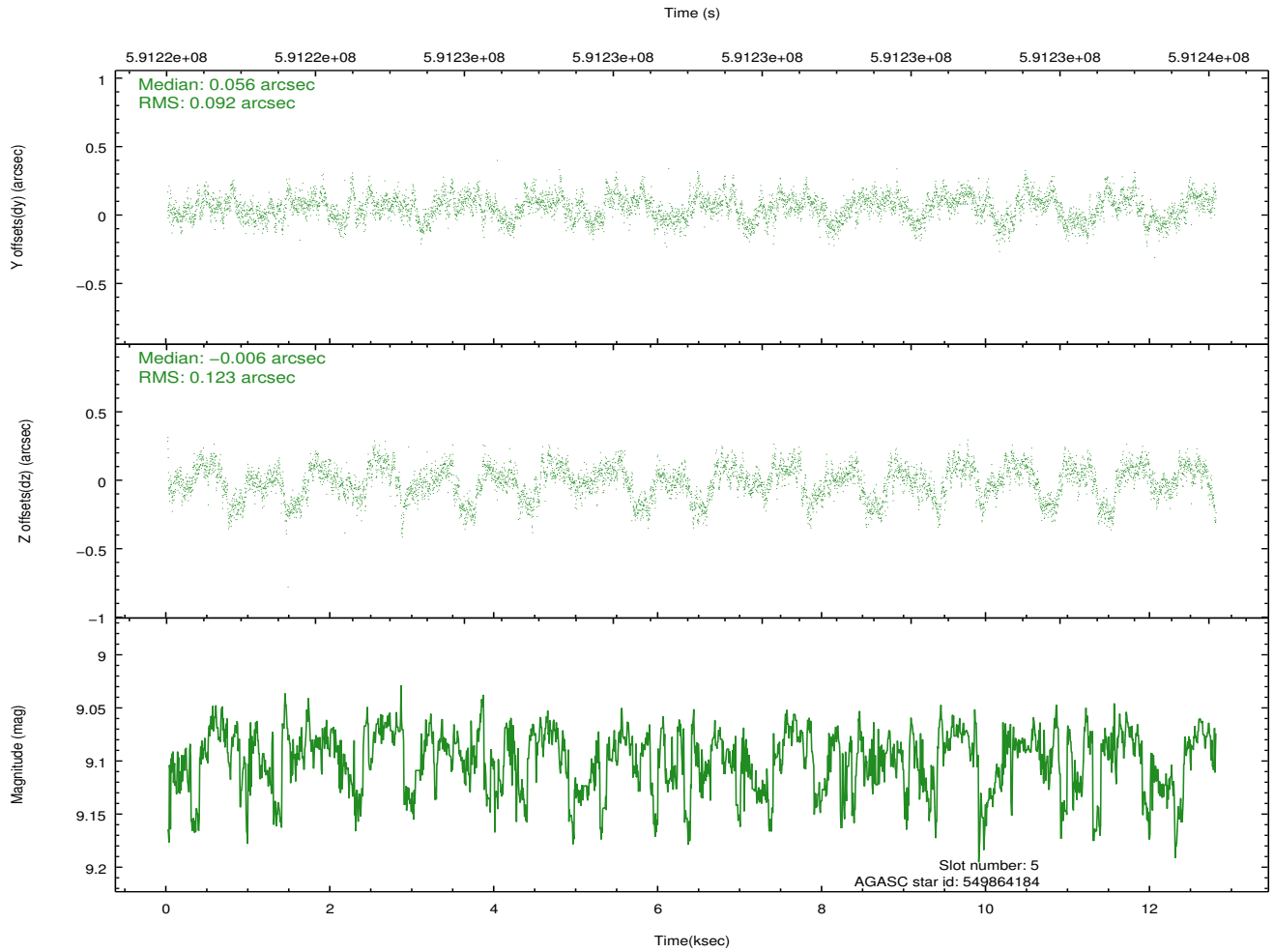
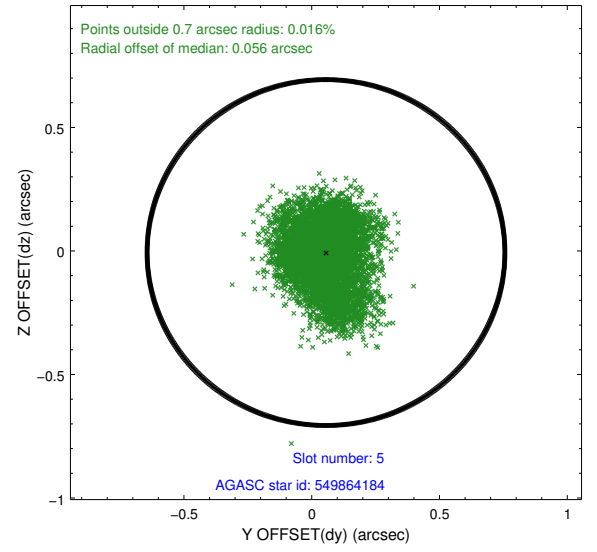
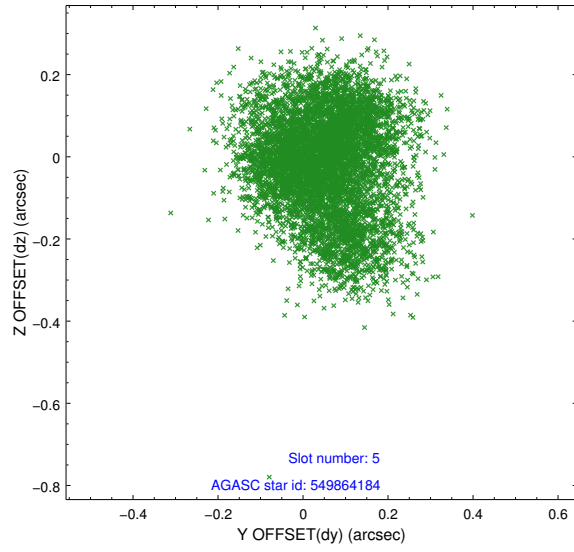
2.4.1 Slot 3



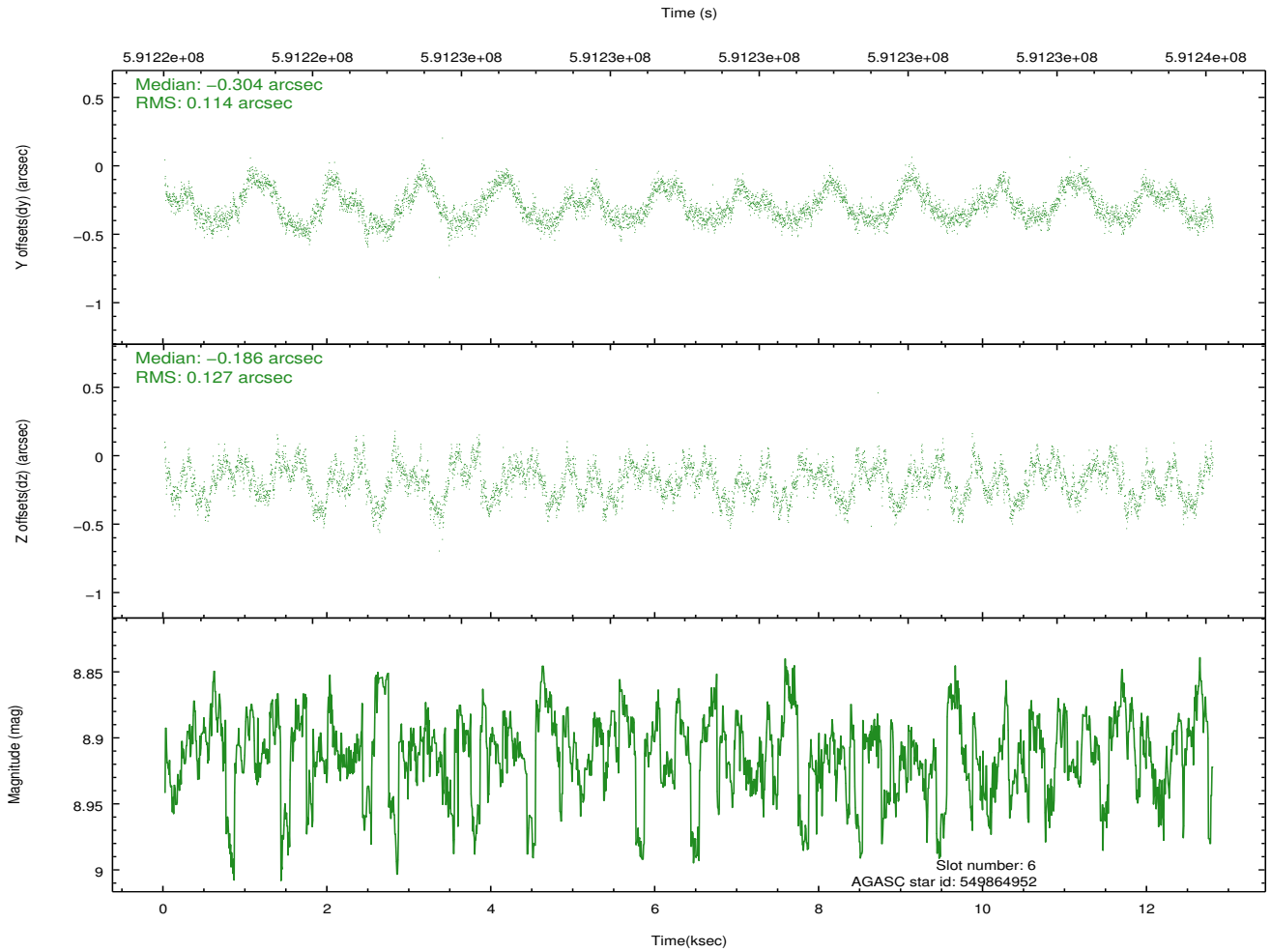
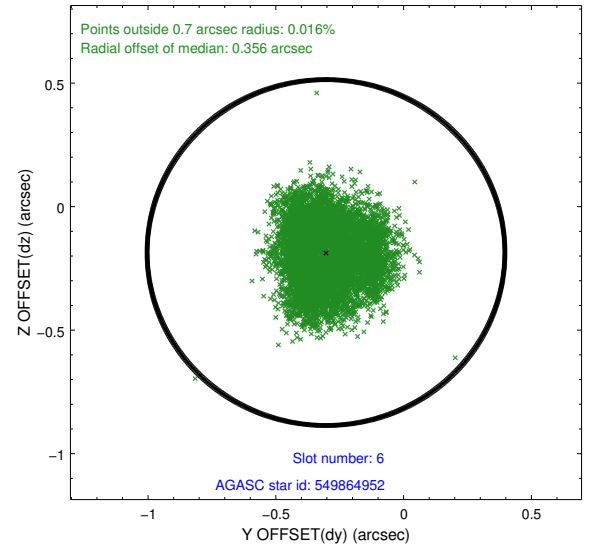
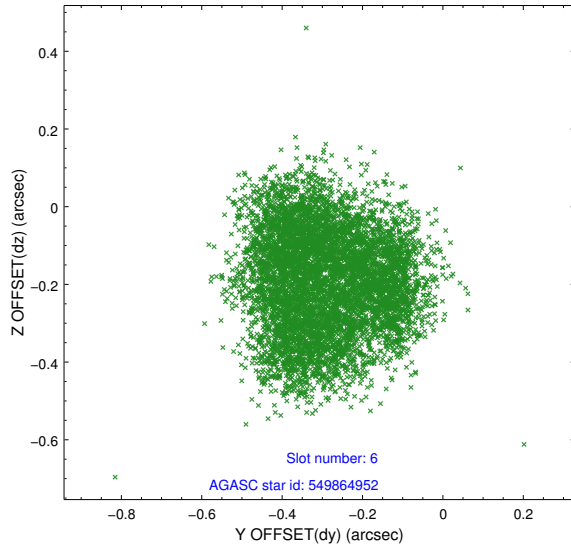
2.4.2 Slot 4



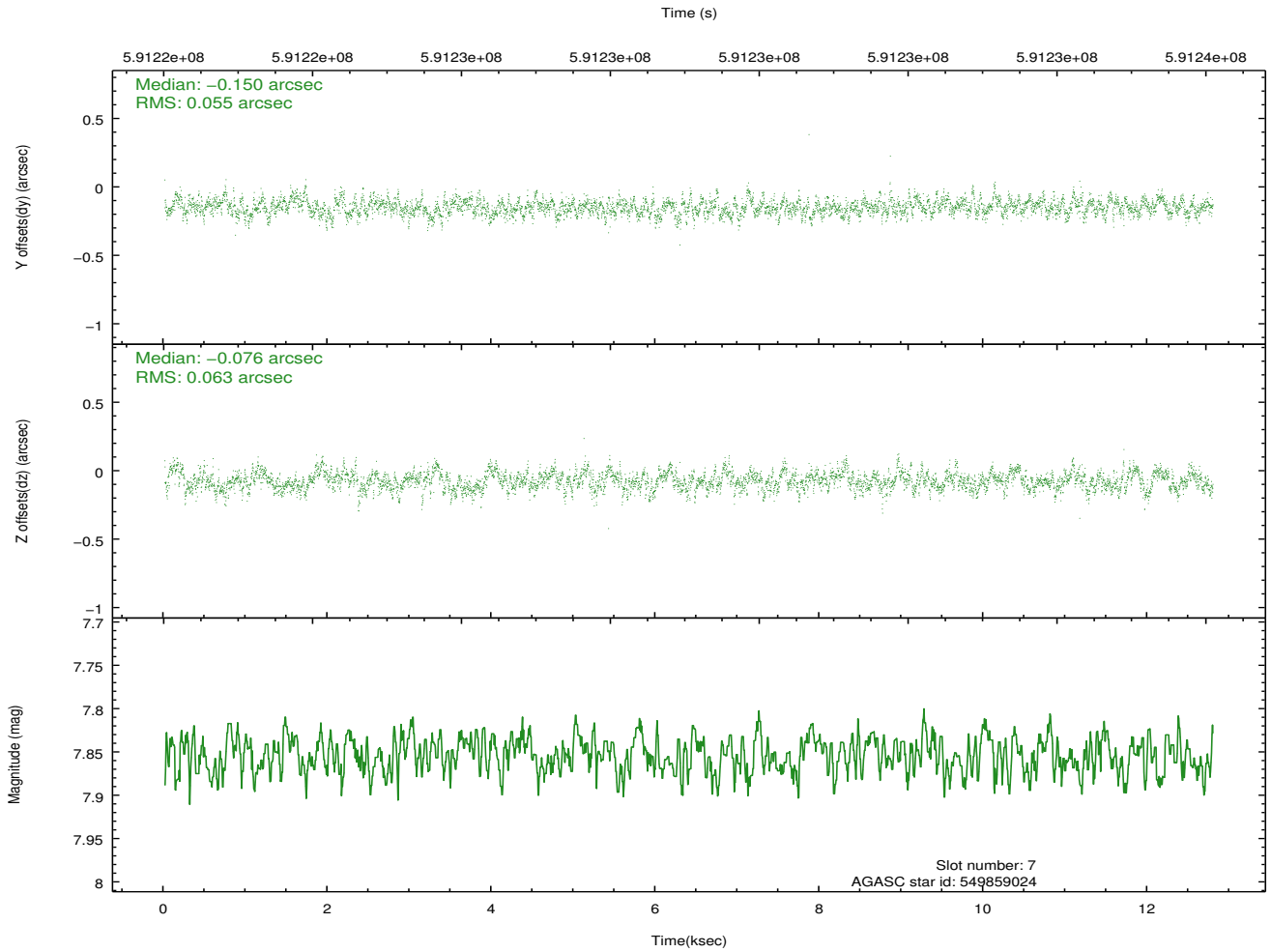
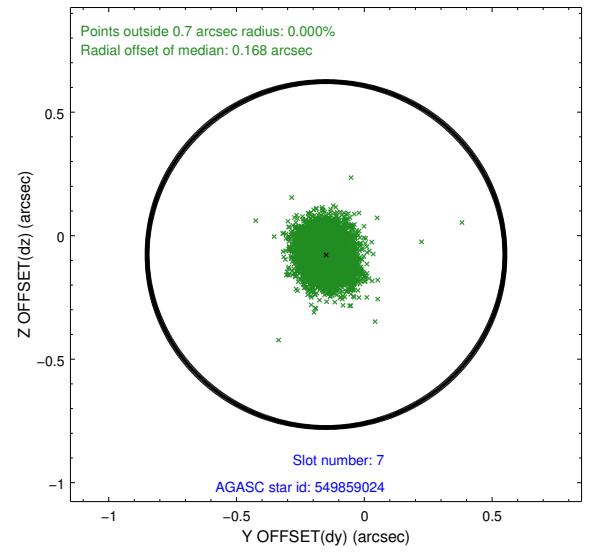
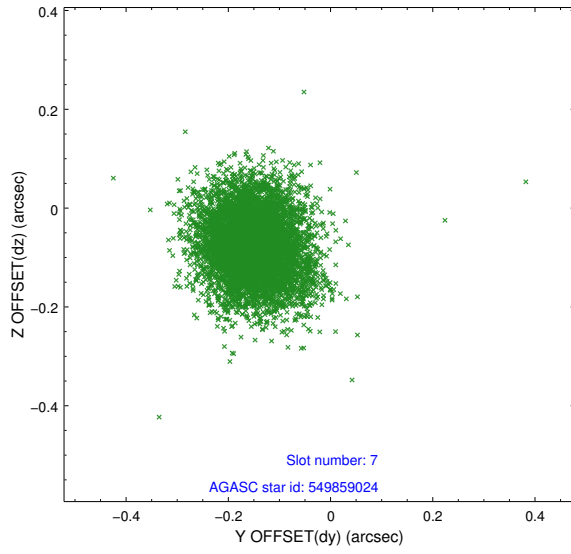
2.4.3 Slot 5



2.4.4 Slot 6

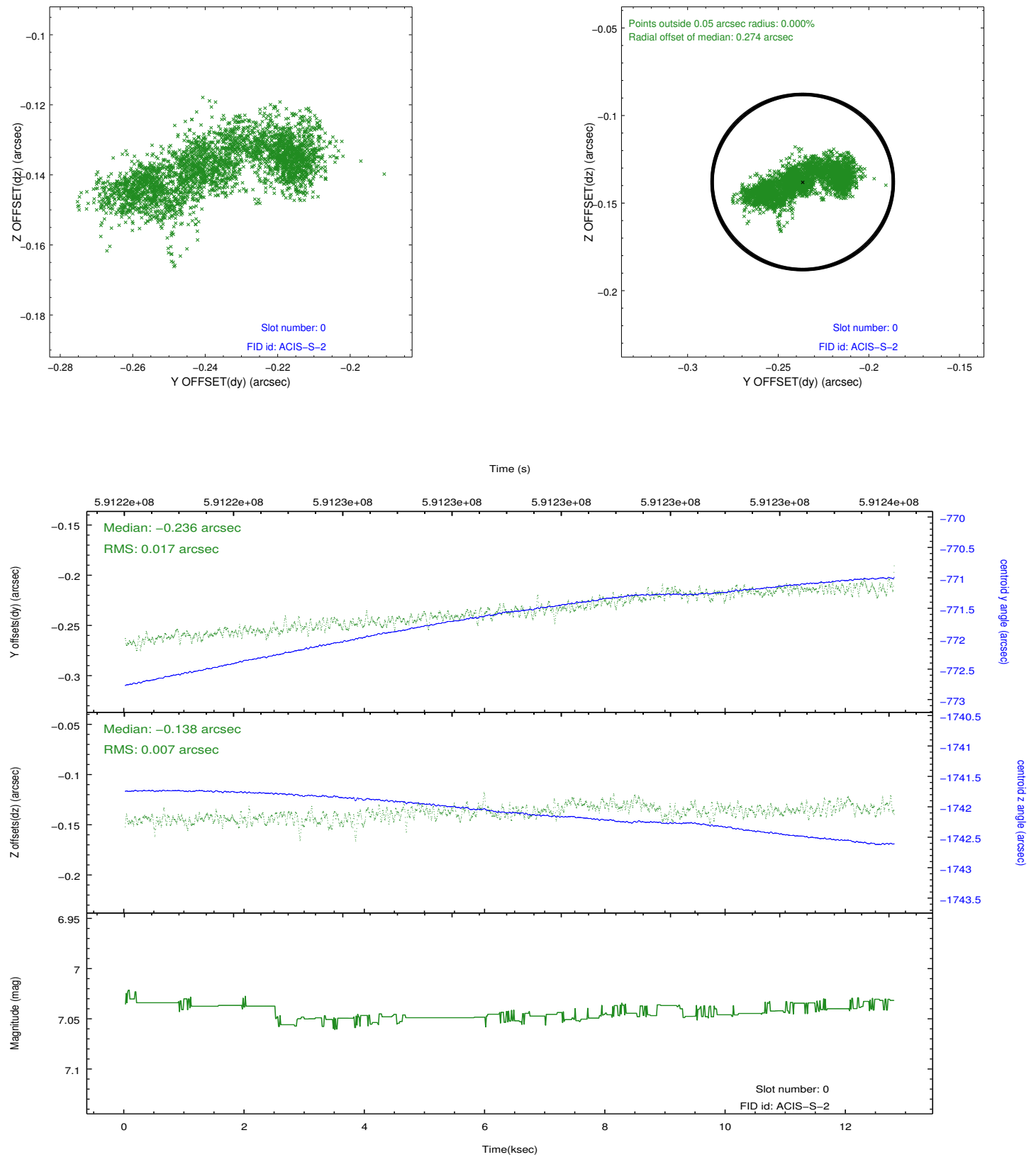


2.4.5 Slot 7

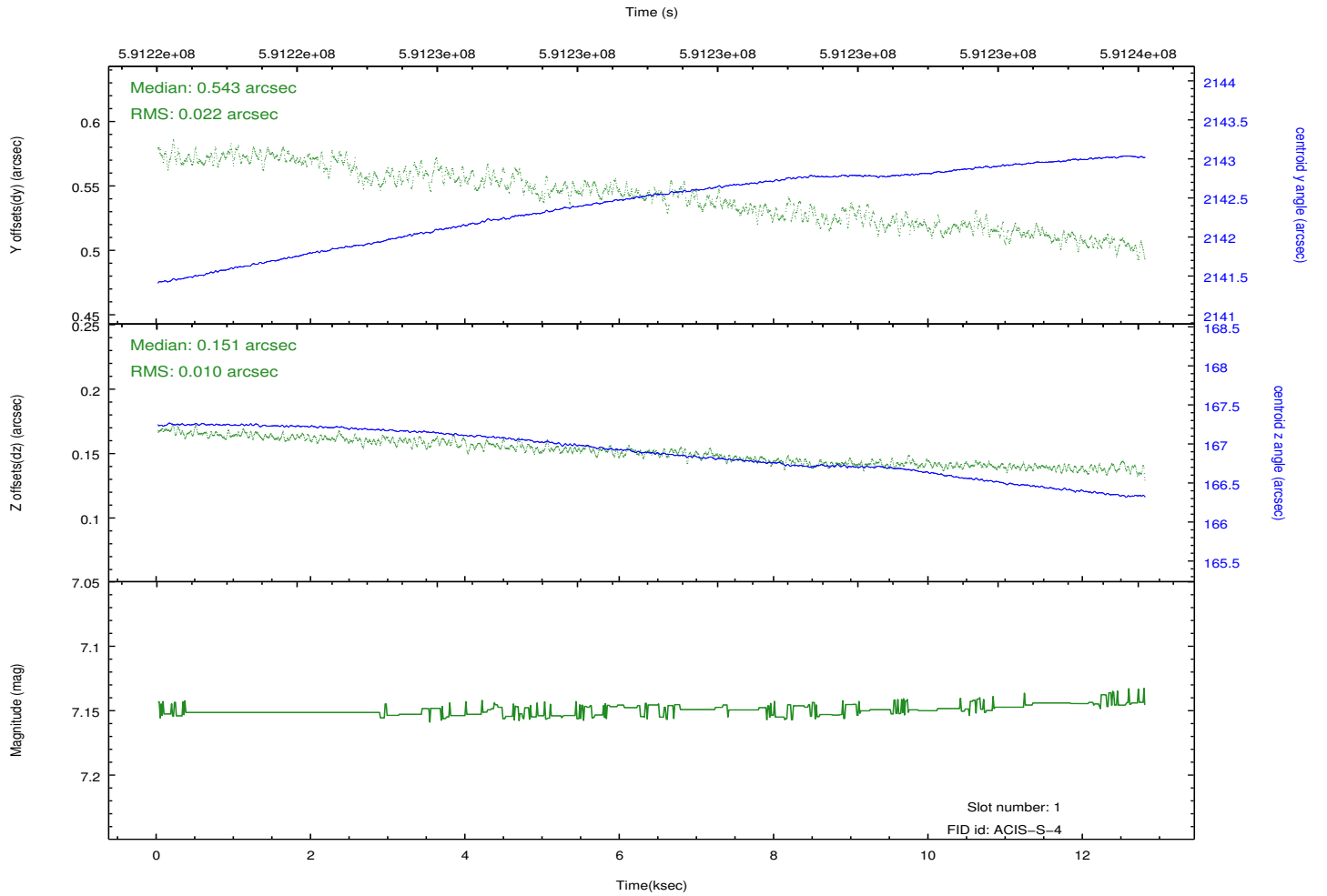
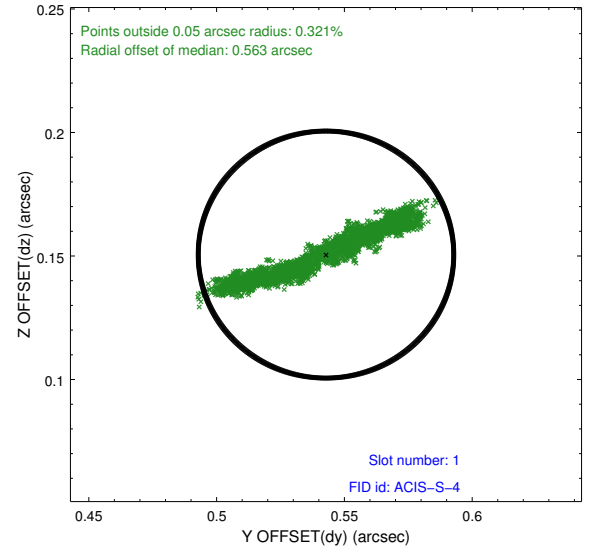
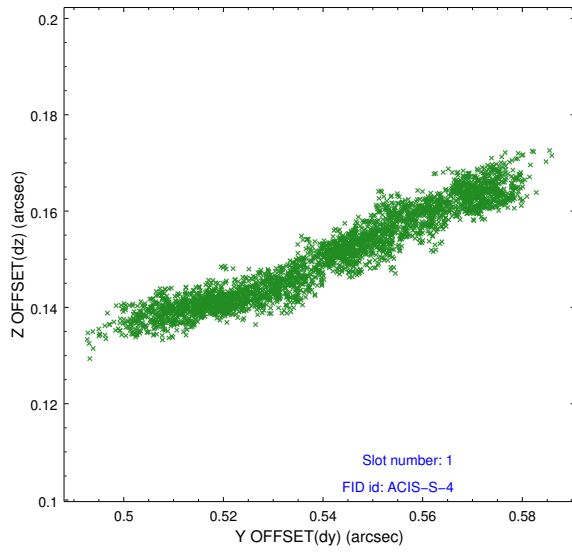


2.5 FID Slots

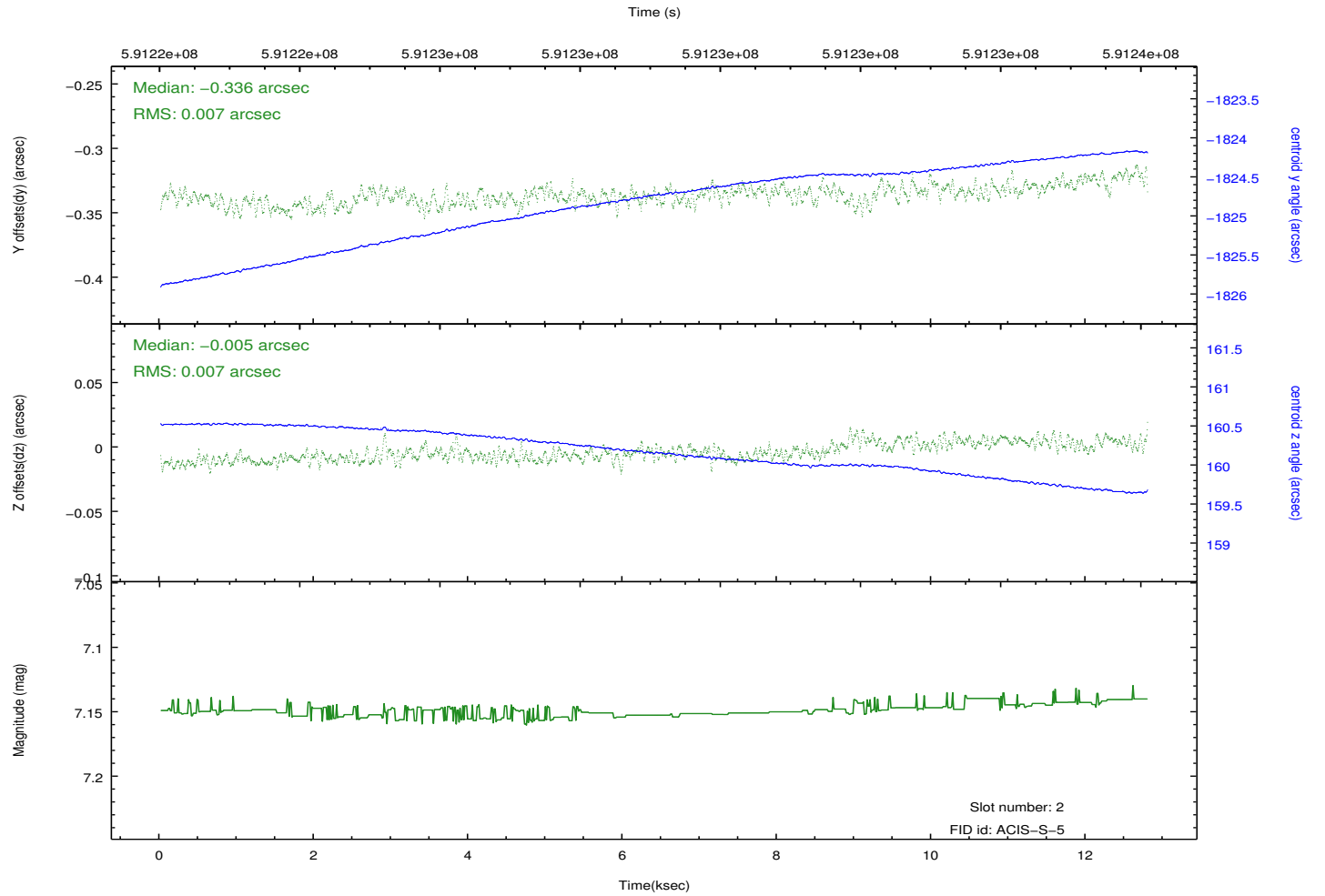
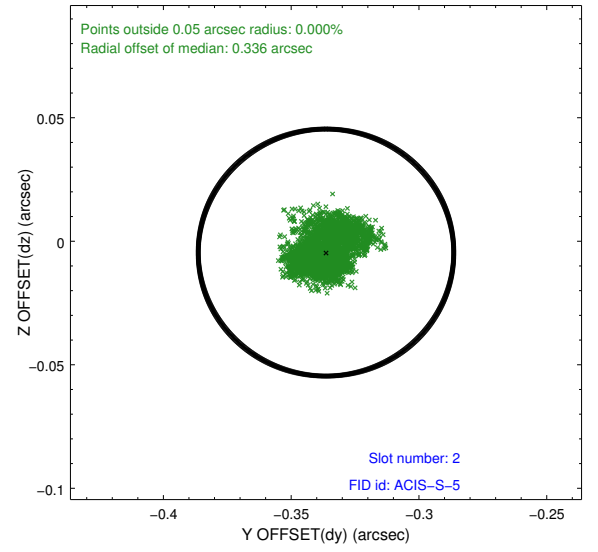
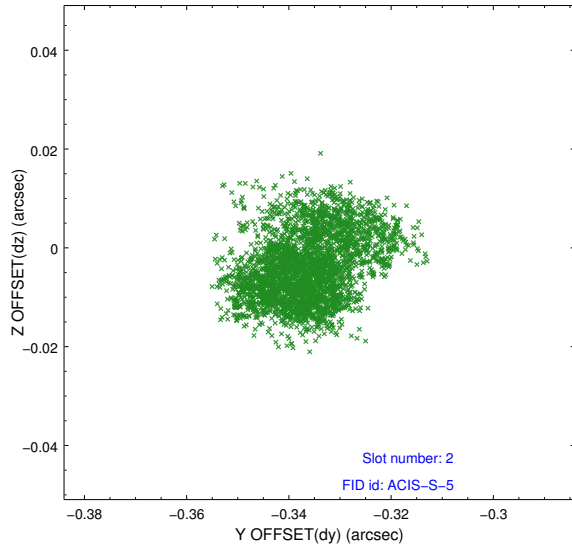
2.5.1 Slot 0



2.5.2 Slot 1

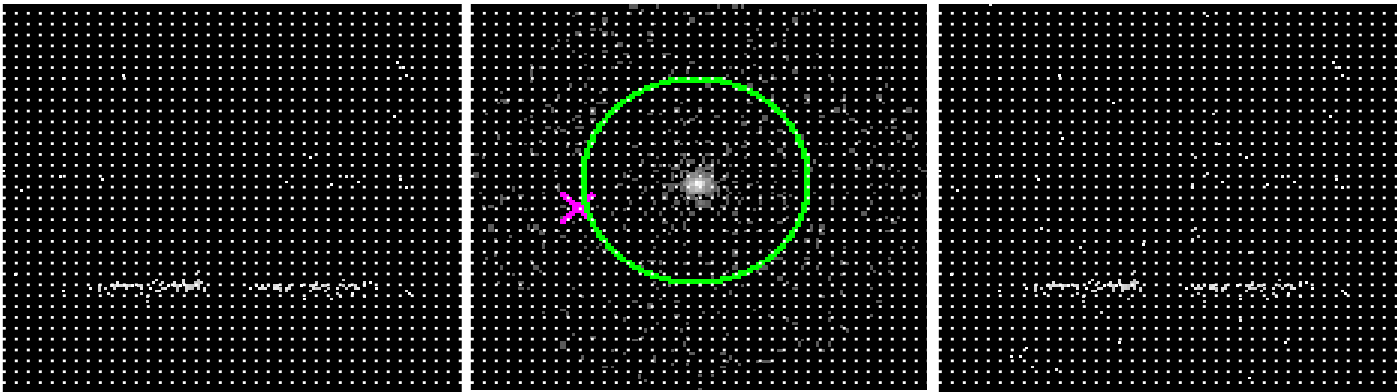


2.5.3 Slot 2



3 Gratings

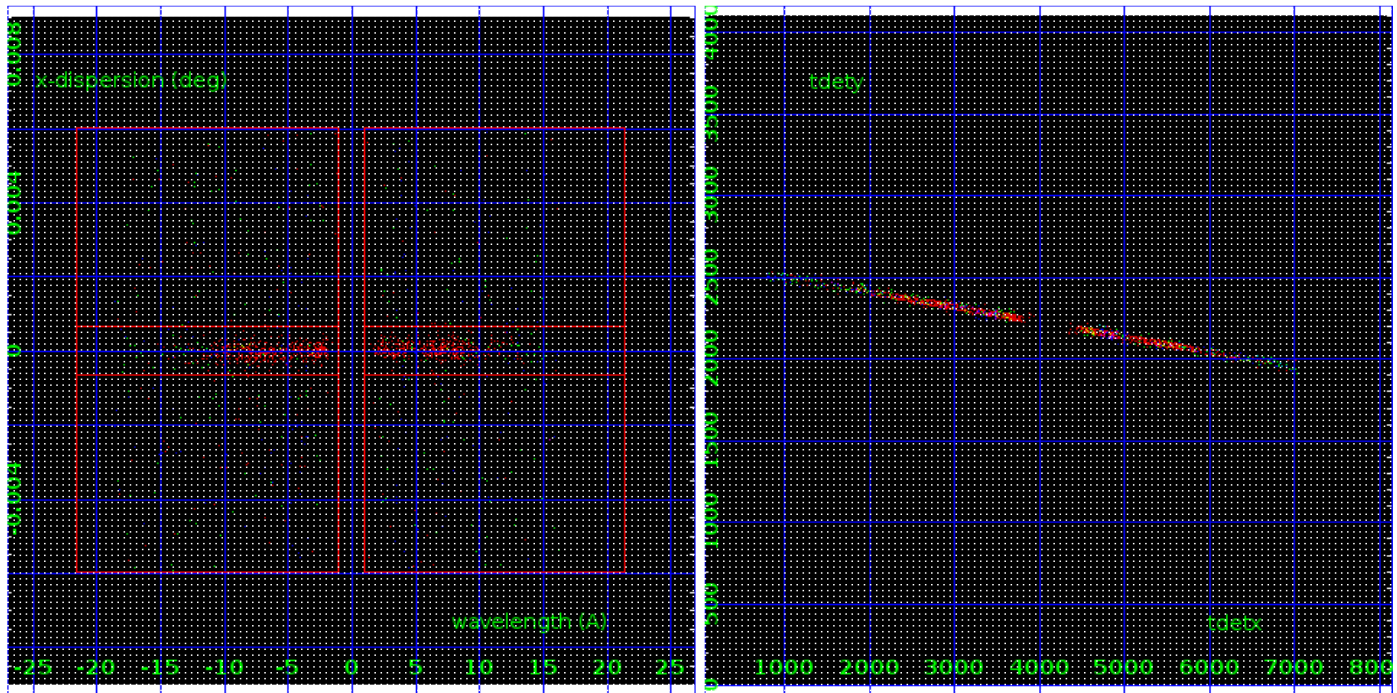
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

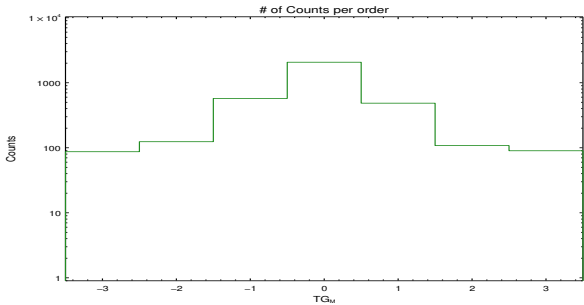
HEG Order Sort ALL

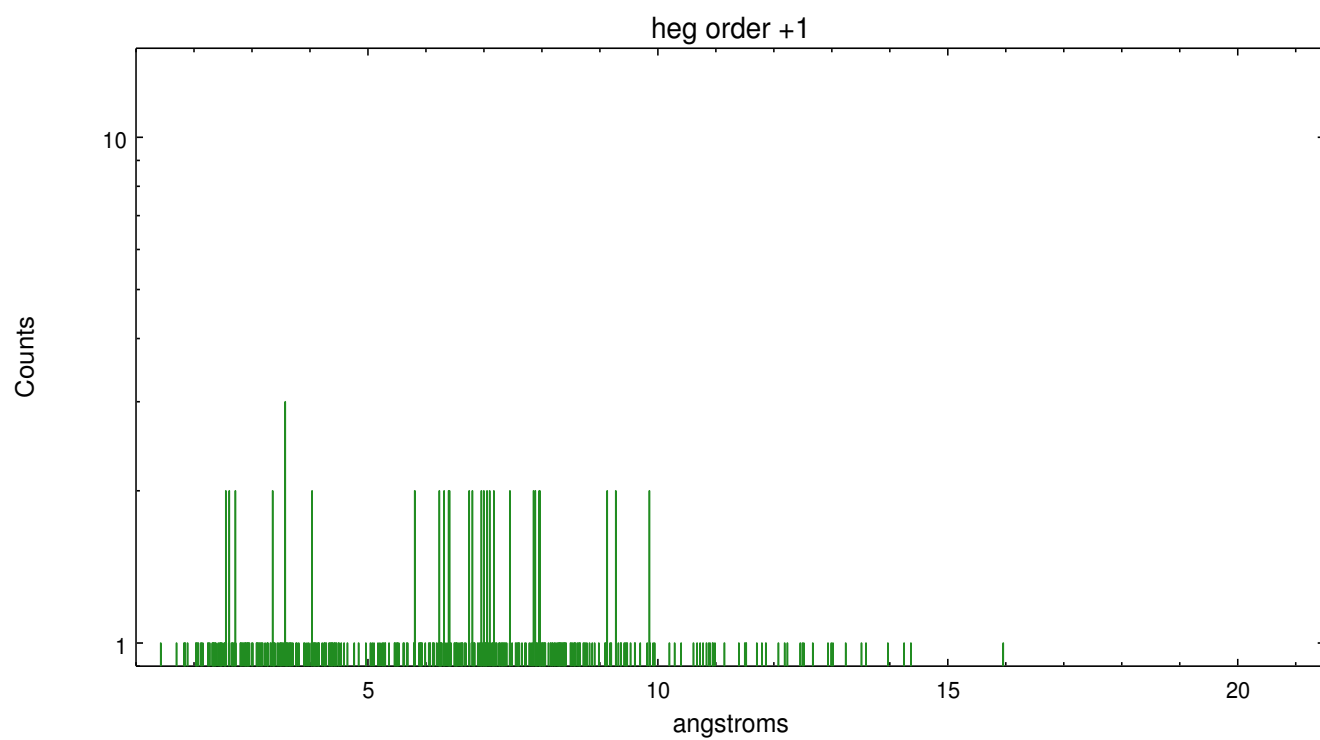
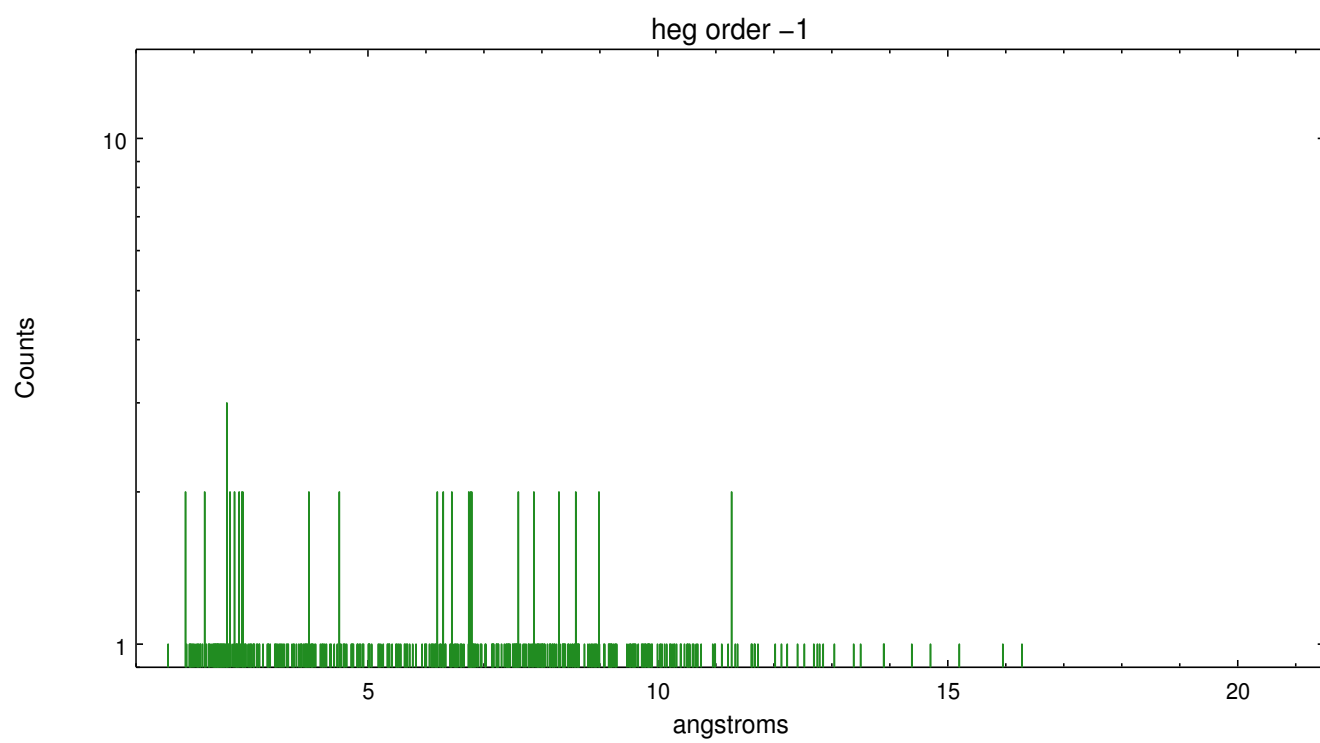


Spot Image HEG

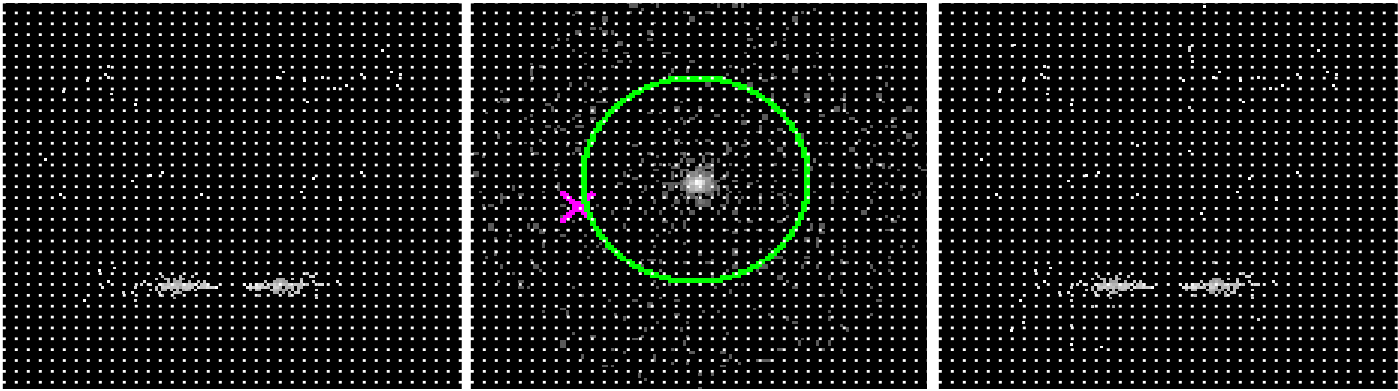
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	87	124	574	2068	485	108	90





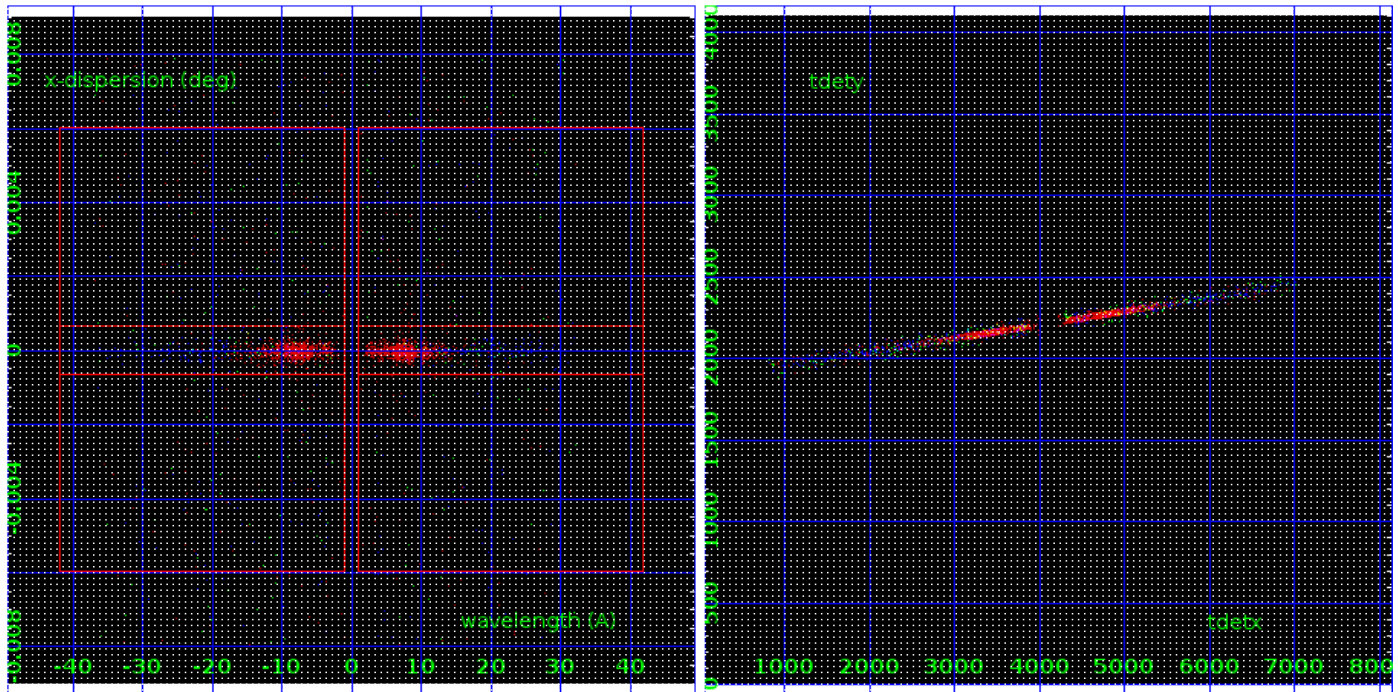
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

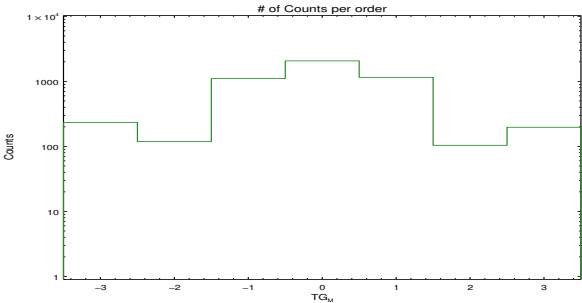
MEG Order Sort ALL

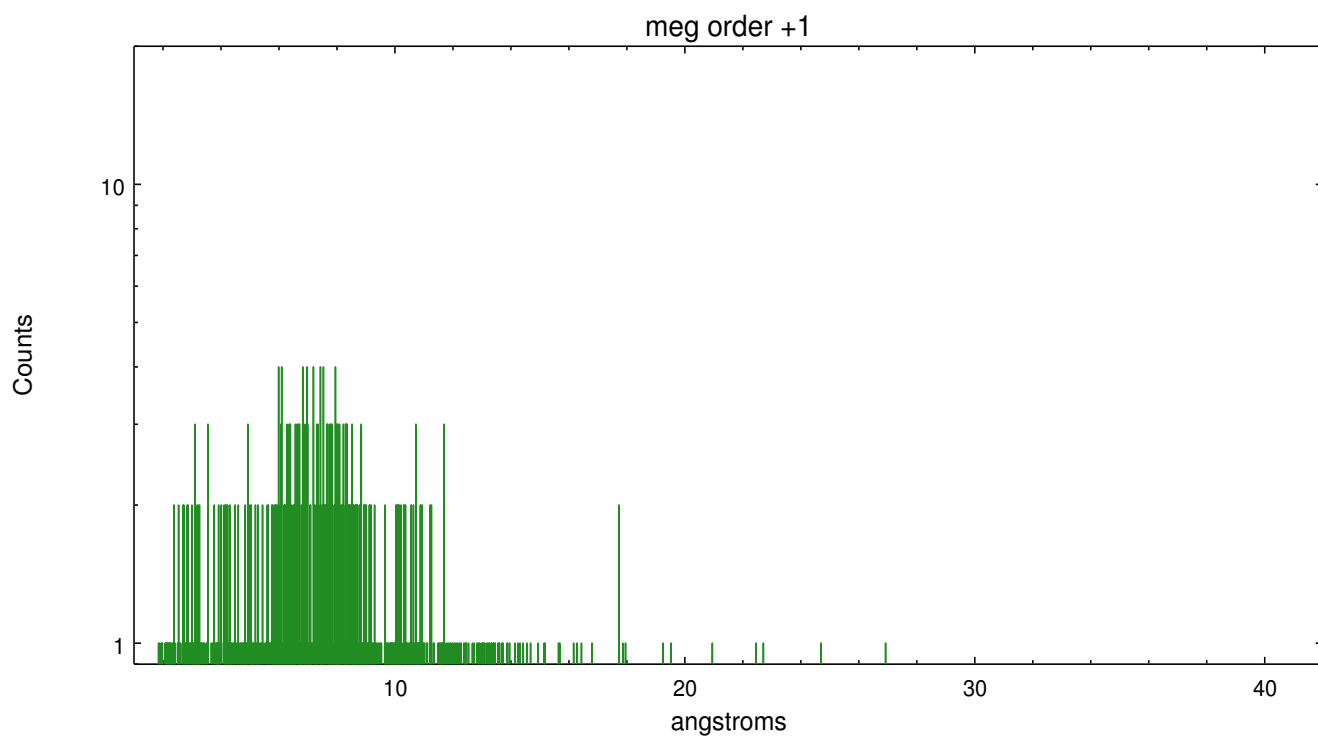
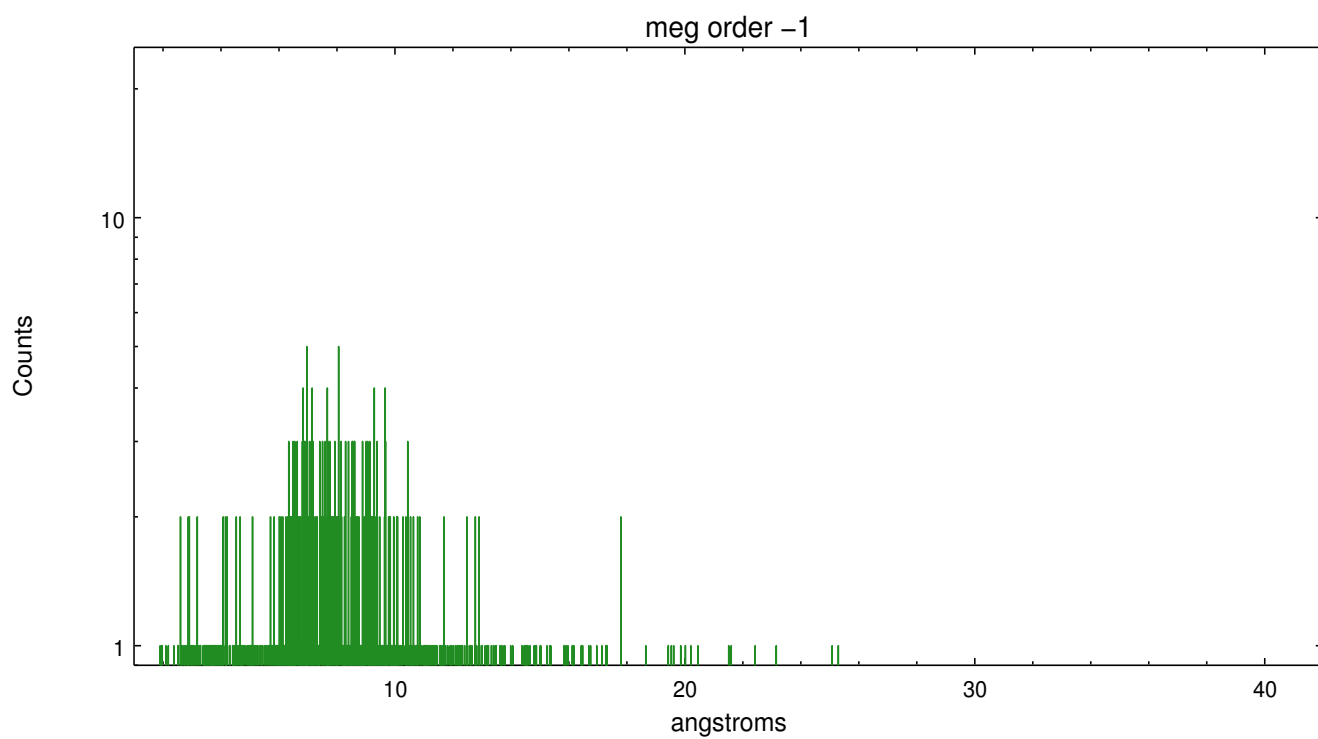


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	233	119	1105	2068	1155	104	197





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.09.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.528000186682

A.2 Comments

The slot 1 fid radial offset of 0.563 arcsec is acceptable.