

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 19787 - L2 Version 1
Chandra X-Ray Center

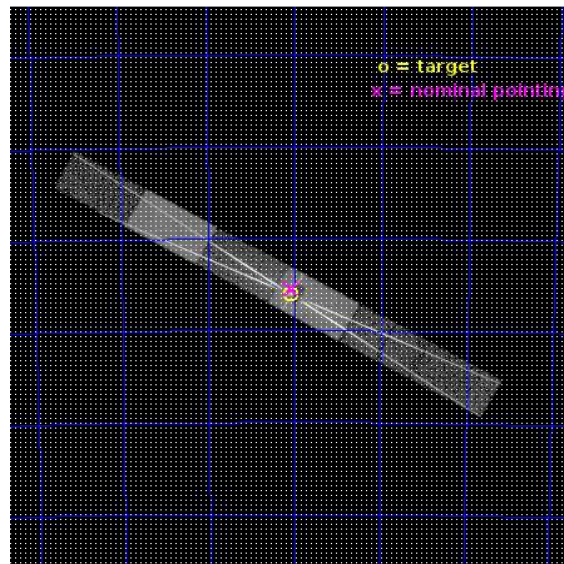
L2 Processing Date : Sep 8 2016

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1 Front

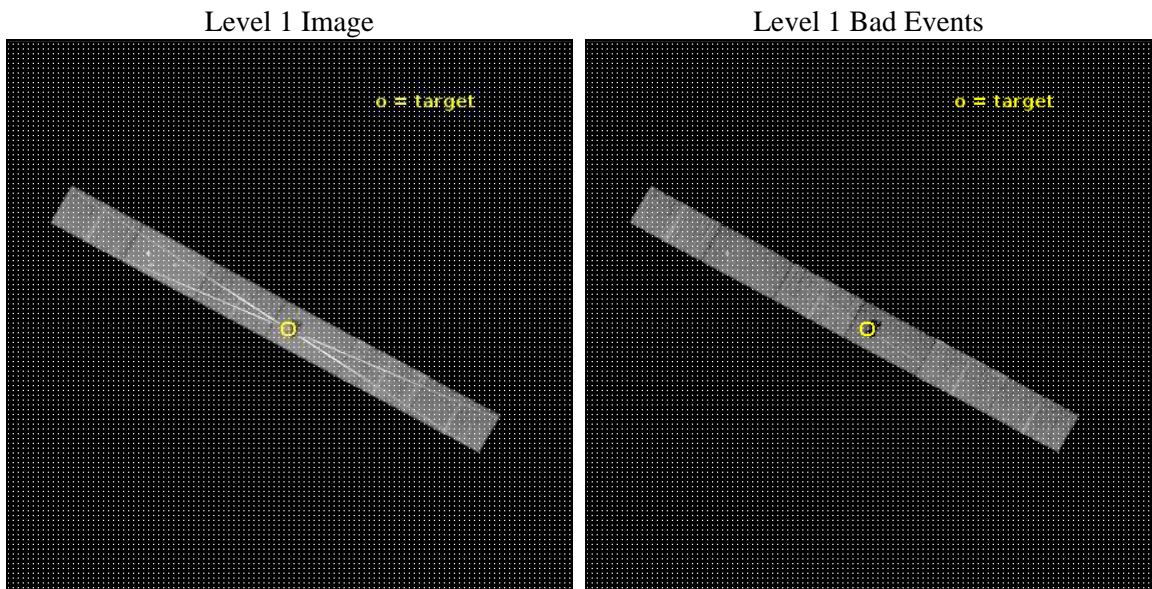
seq_num	401888	Sequence number
obs_id	19787	Observation id
title	Chandra Spectroscopy of SMC X-3 in Outburst	Proposal title
observer	Malcolm Coe	Principal investigator
object	SMC X-3	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	13.023333	Observer's specified target RA [deg]
dec_targ	-72.4345	Observer's specified target Dec [deg]
ra_nom	13.019723652321	Nominal RA [deg]
dec_nom	-72.424413527011	Nominal Dec [deg]
roll_nom	29.15315877881	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15040.450342894	Sum of GTIs [s]
livetime	14705.172411902	Livetime [s]
ontime4	15040.491382837	Sum of GTIs [s]
ontime5	15040.409302831	Sum of GTIs [s]
ontime6	15040.368262887	Sum of GTIs [s]
ontime7	15040.450342894	Sum of GTIs [s]
ontime8	15040.327222824	Sum of GTIs [s]
ontime9	15040.28618288	Sum of GTIs [s]
l2events	346498	Number of level 2 events



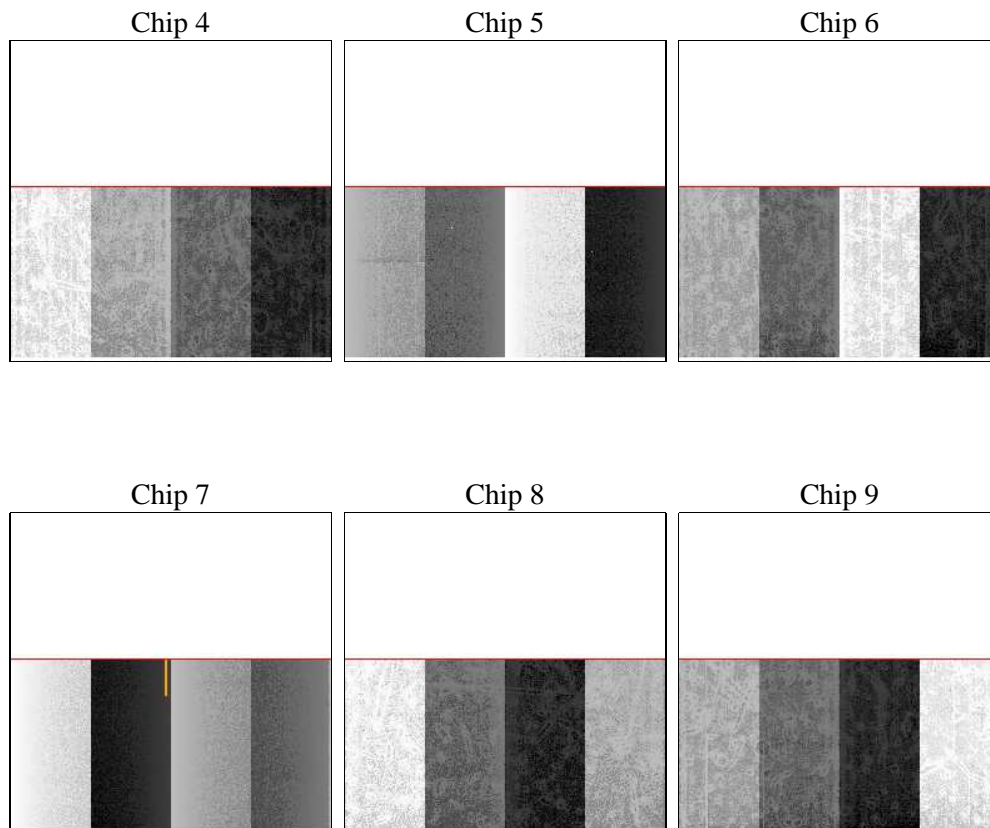
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	15040.450342894	Sum of GTIs [s]
caldbver	4.7.2	 	ontime4	15040.491382837	Sum of GTIs [s]
date	2016-09-08T15:35:37	Date and time of file creation	ontime5	15040.409302831	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	15040.368262887	Sum of GTIs [s]
			ontime7	15040.450342894	Sum of GTIs [s]
			ontime8	15040.327222824	Sum of GTIs [s]
			ontime9	15040.28618288	Sum of GTIs [s]
			l1events	662097	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			z0_pos	(4080.44 4022.17)	src1a sky pixel position

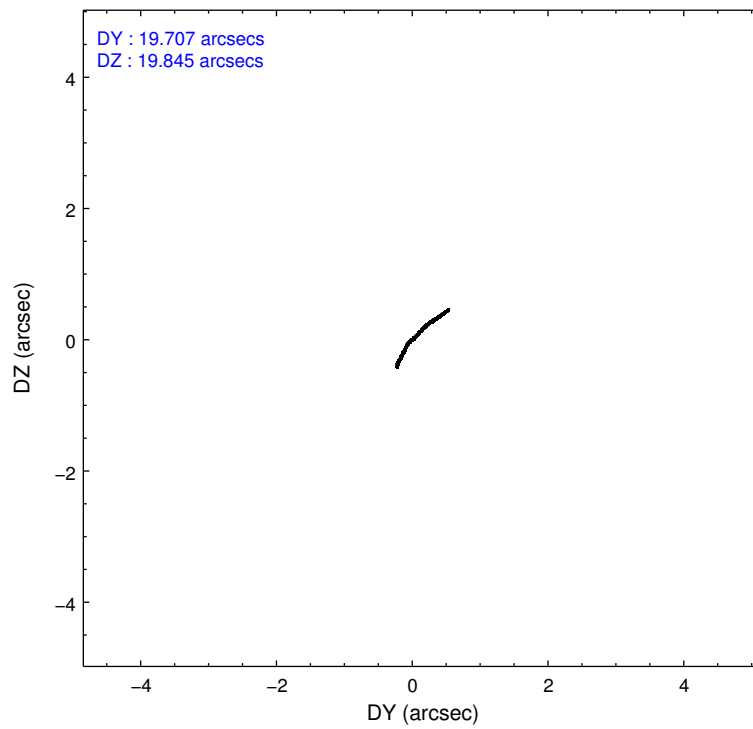
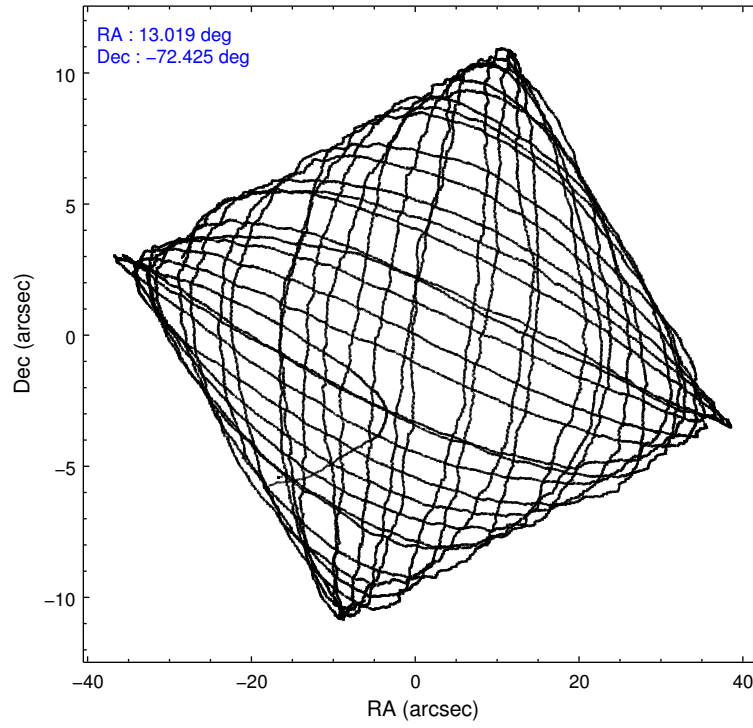
2.1.4 Events

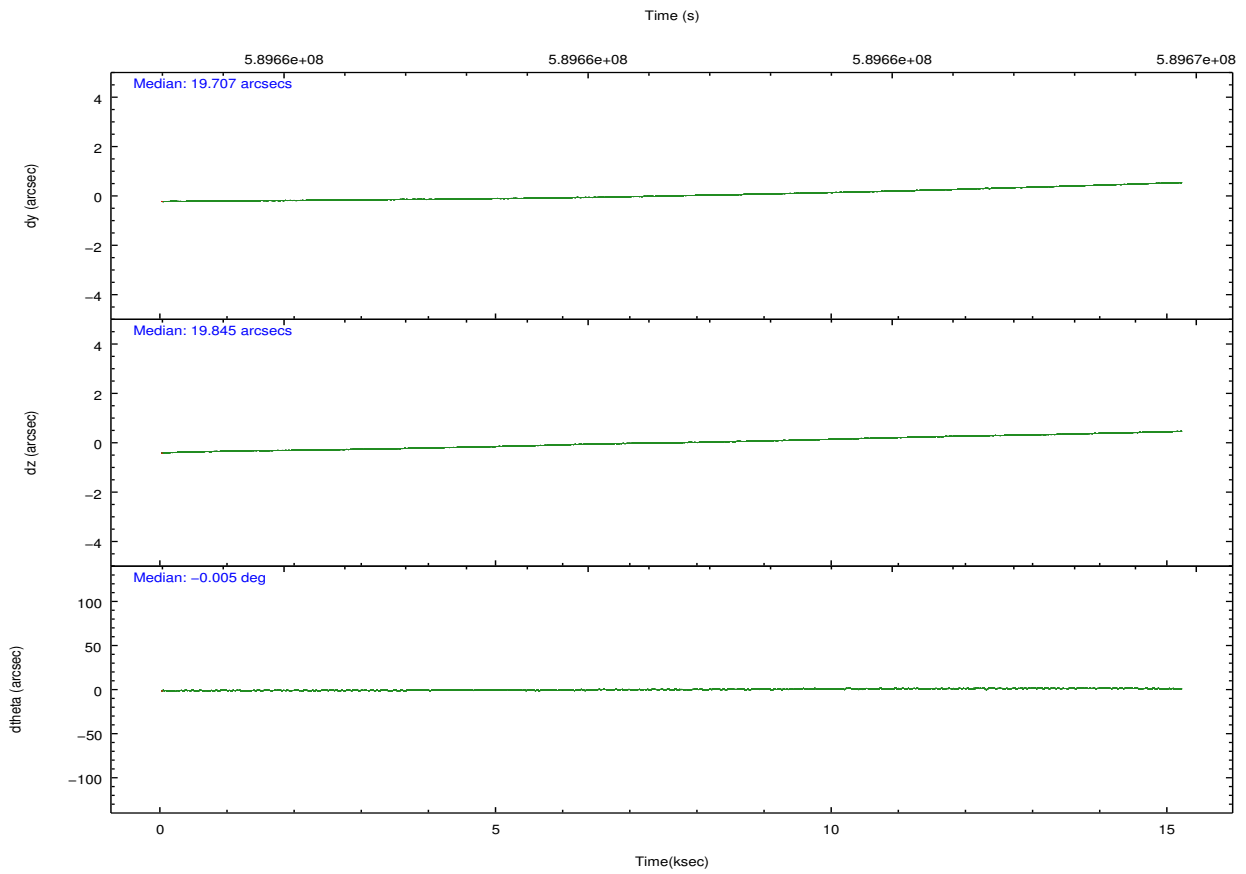
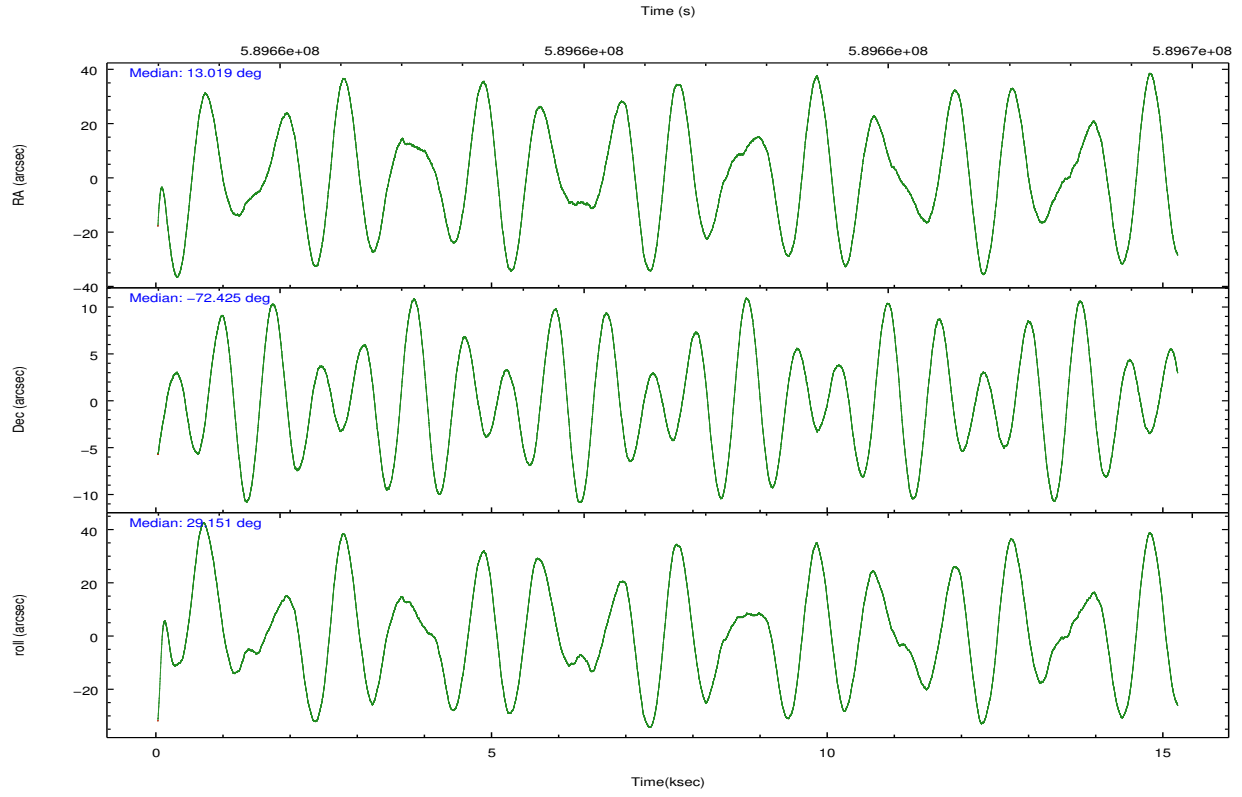
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	61933	109629	159451	166718	106992	57374	grade 0 events	4771	15056	78516	25758	34531	7521
rejected events	52308	44147	50587	36913	51805	44261		7%	13%	49%	15%	32%	13%
rejected %	84%	40%	31%	22%	48%	77%	grade 1 events	48	1545	519	282	168	39
								0%	1%	0%	0%	0%	0%
							grade 2 events	1991	18402	14405	31828	8167	2199
								3%	16%	9%	19%	7%	3%
							grade 3 events	858	4053	4822	13604	3128	984
								1%	3%	3%	8%	2%	1%
							grade 4 events	826	3849	4742	13703	3147	894
								1%	3%	2%	8%	2%	1%
							grade 5 events	2469	6506	2979	7497	3590	2800
								3%	5%	1%	4%	3%	4%
							grade 6 events	1179	24138	6407	44922	6225	1516
								1%	22%	4%	26%	5%	2%
							grade 7 events	49791	36080	47061	29124	48036	41421
								80%	32%	29%	17%	44%	72%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	12.974191	13.01972365232074	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-72.448170	-72.4244135270114	Subarray start row	15	15
[deg] Pointing Roll	28.953150	29.15315877881037	Subarray row count	542	542
[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	1.8
[mm] SIM translation stage pos	-184.532523	-184.5306286120915			
[mm] SIM translation stage offset	-5.6	-5.601893970916279			
[s] Observation start time (MET)	589653981.184000	589652824.9761			
Observation start date	2016-09-07T16:45:13	2016-09-07T16:27:04			
[s] Observation end time (MET)	589668981.184000	589669624.72706			
Observation end date	2016-09-07T20:55:13	2016-09-07T21:07:04			
Read mode	TIMED	TIMED			

2.3 Aspect





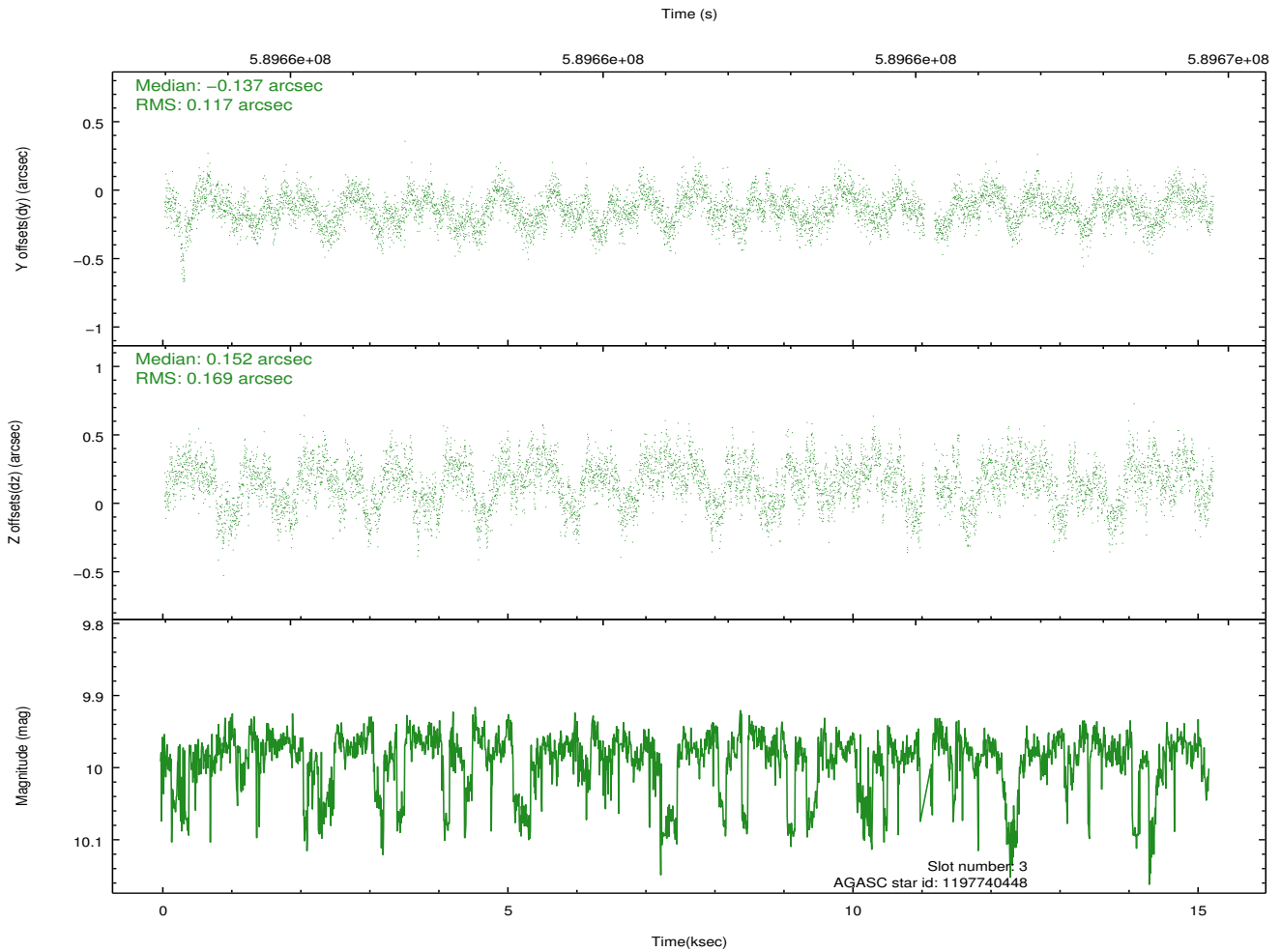
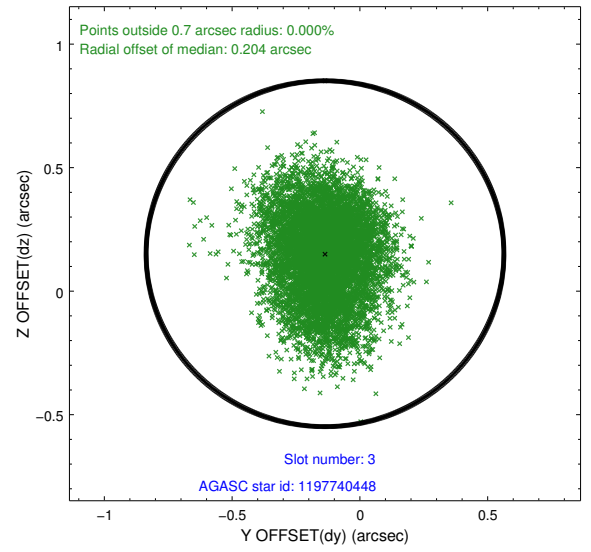
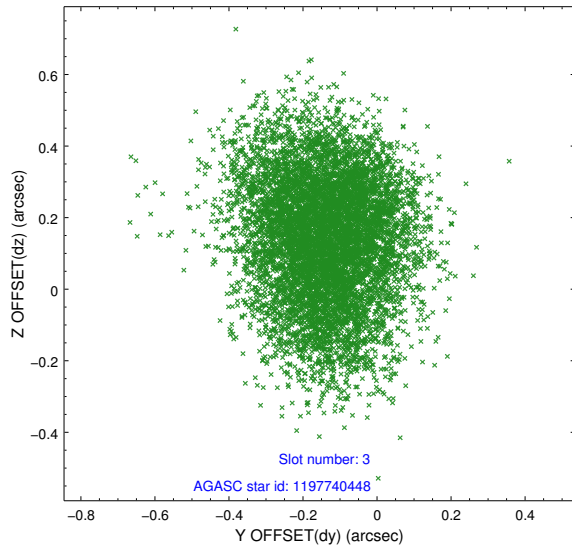
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.03	3706	-0.262	-0.106	0.020	0.028	0.000000	0.000000	-772.71	-1856.96
1	FID		ACIS-S-4	7.14	3706	0.531	0.155	0.009	0.015	0.000000	0.000000	2141.20	51.46
2	FID		ACIS-S-5	7.17	3705	-0.300	-0.041	0.013	0.020	0.000000	0.000000	-1825.23	45.23
3	GUIDE	used	1197740448	9.98	7329	-0.137	0.152	0.218	0.356	11.121728	-72.248718	-1446.27	1585.38
4	GUIDE	used	1197749776	9.84	7380	0.087	-0.227	0.230	0.368	12.674349	-72.322893	-69.01	552.72
5	GUIDE	used	1198189696	7.37	7410	-0.152	0.109	0.121	0.201	15.223750	-72.697522	1651.17	-1990.52
6	GUIDE	used	1198191400	8.37	7403	0.201	-0.165	0.114	0.192	11.617890	-72.595865	-1542.40	227.05
7	GUIDE	used	1198192408	9.37	7407	0.022	0.135	0.190	0.336	12.860639	-72.678863	-508.11	-667.75

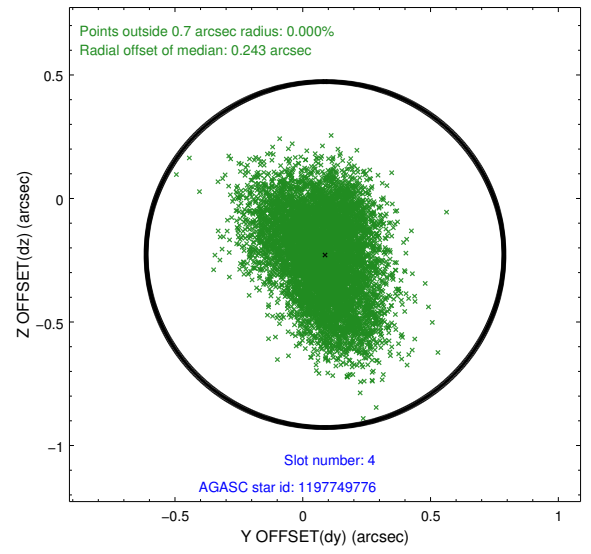
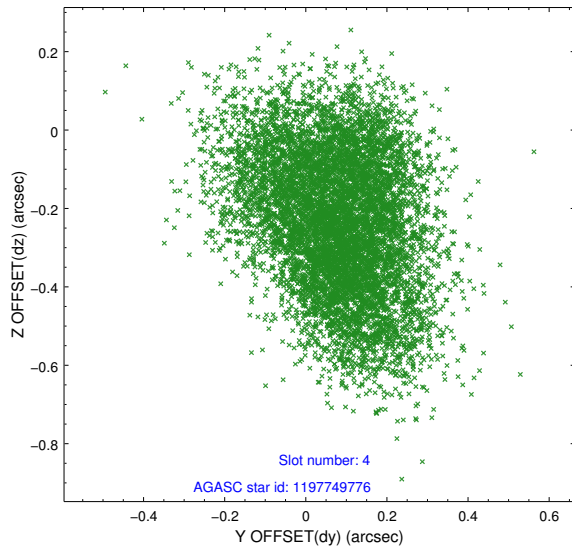
∞

2.4 Star Slots

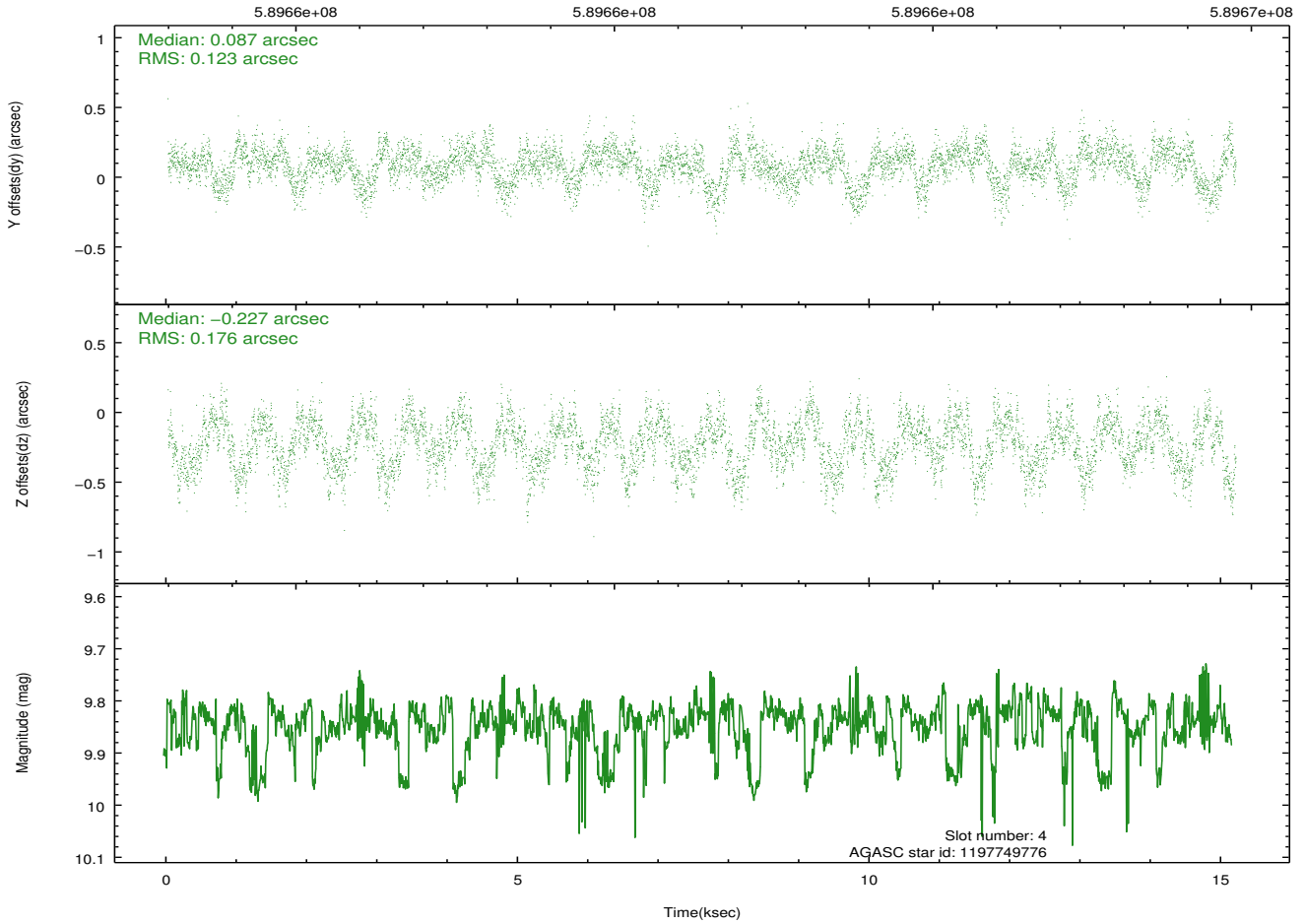
2.4.1 Slot 3



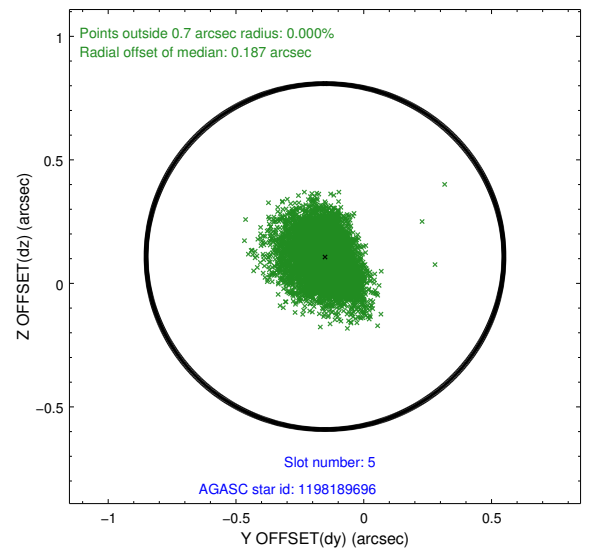
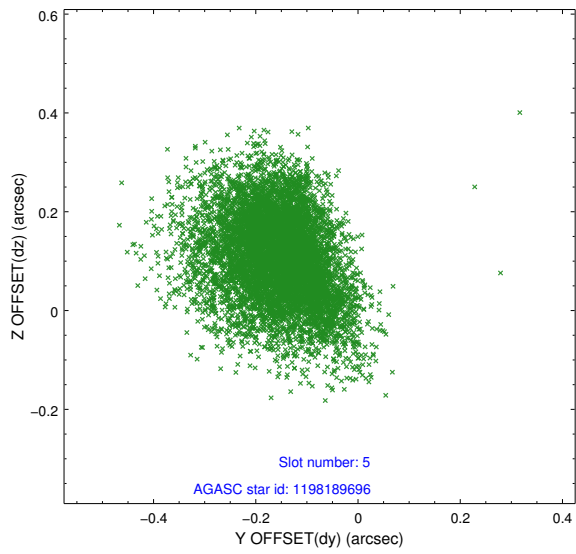
2.4.2 Slot 4



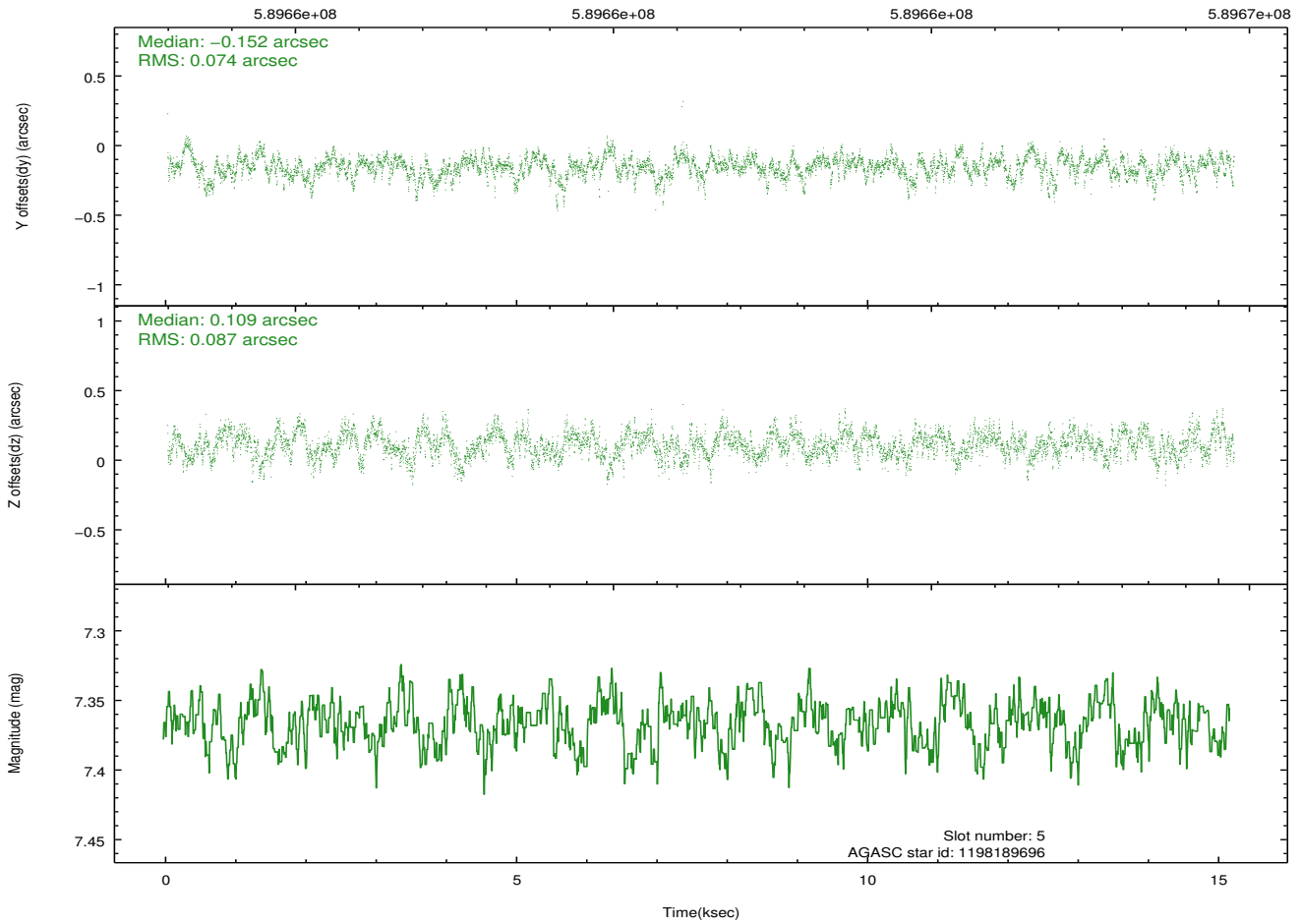
Time (s)



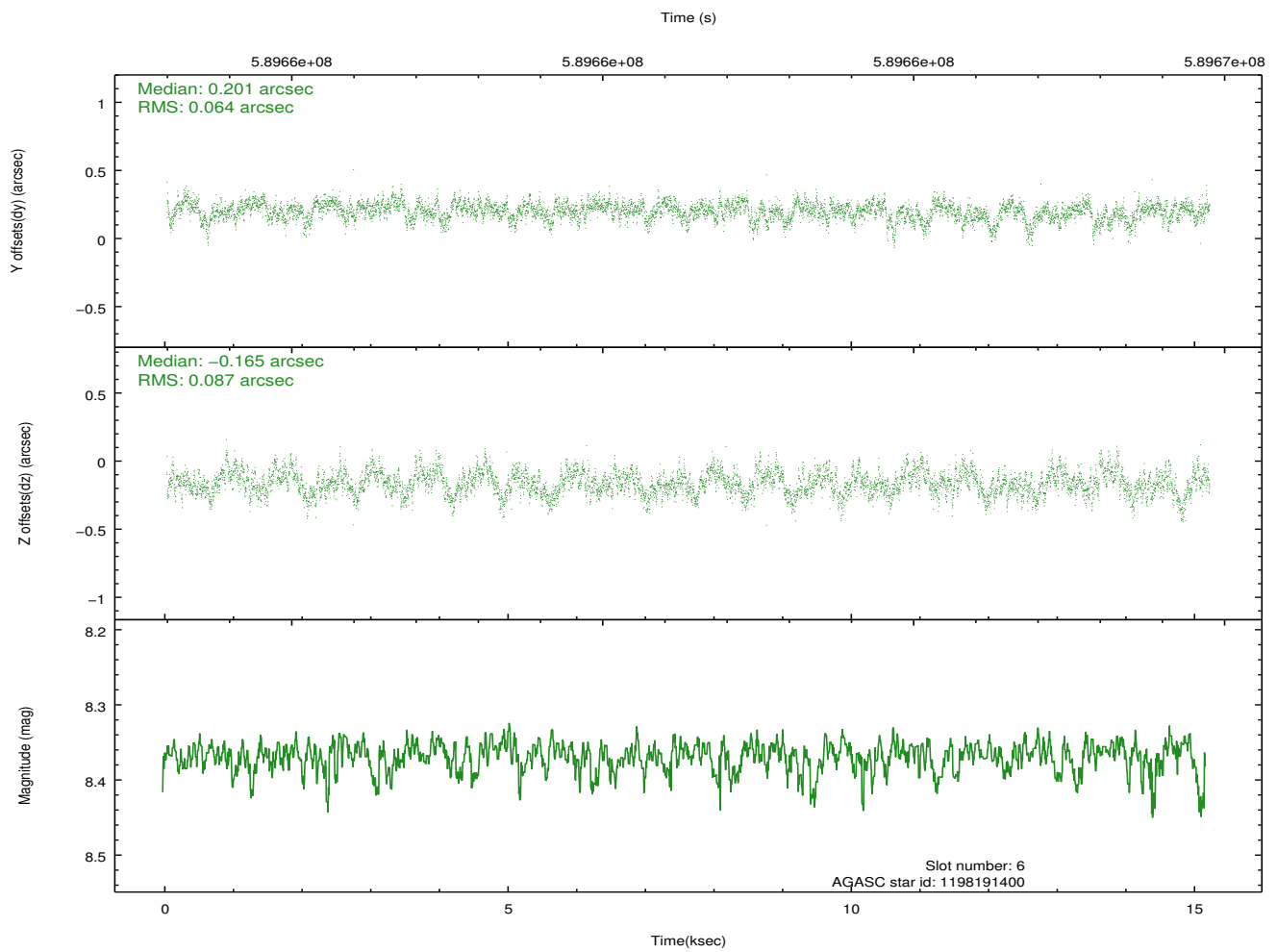
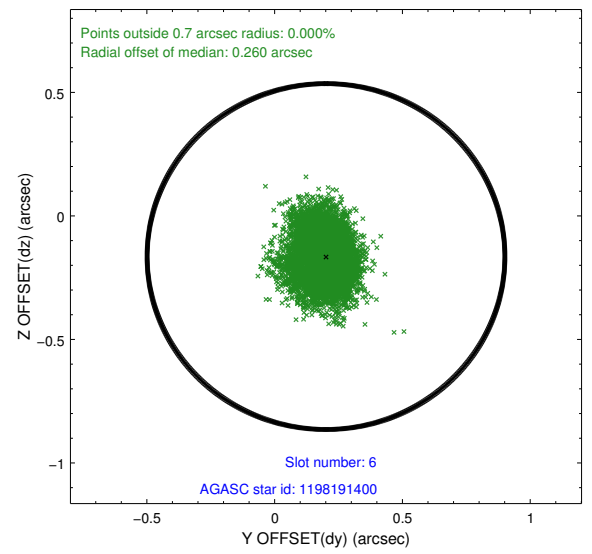
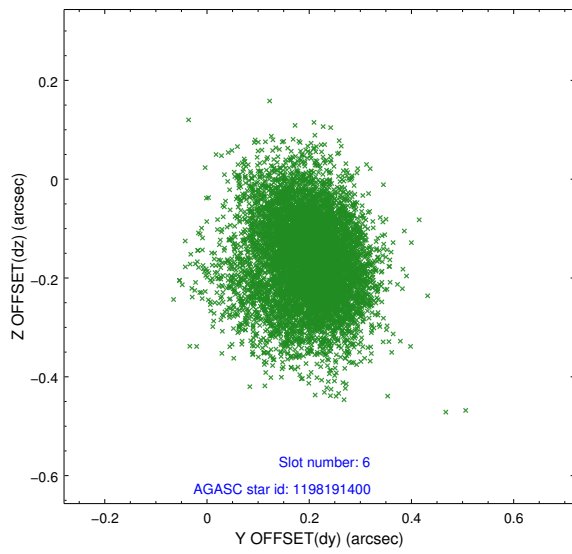
2.4.3 Slot 5



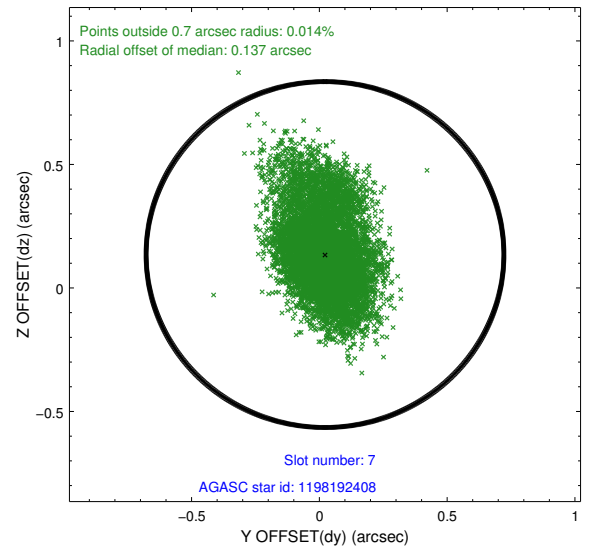
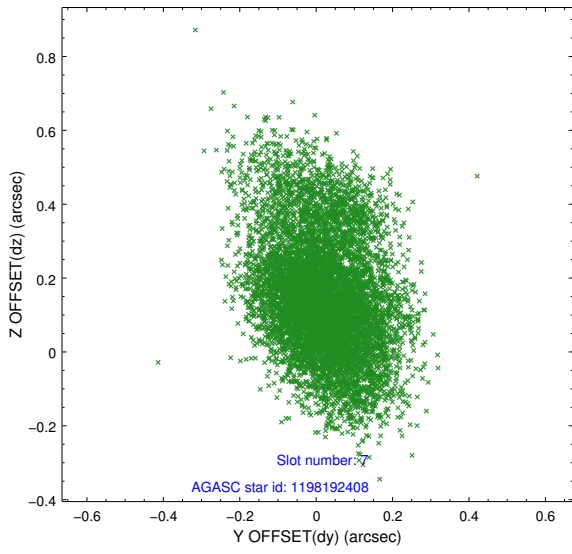
Time (s)



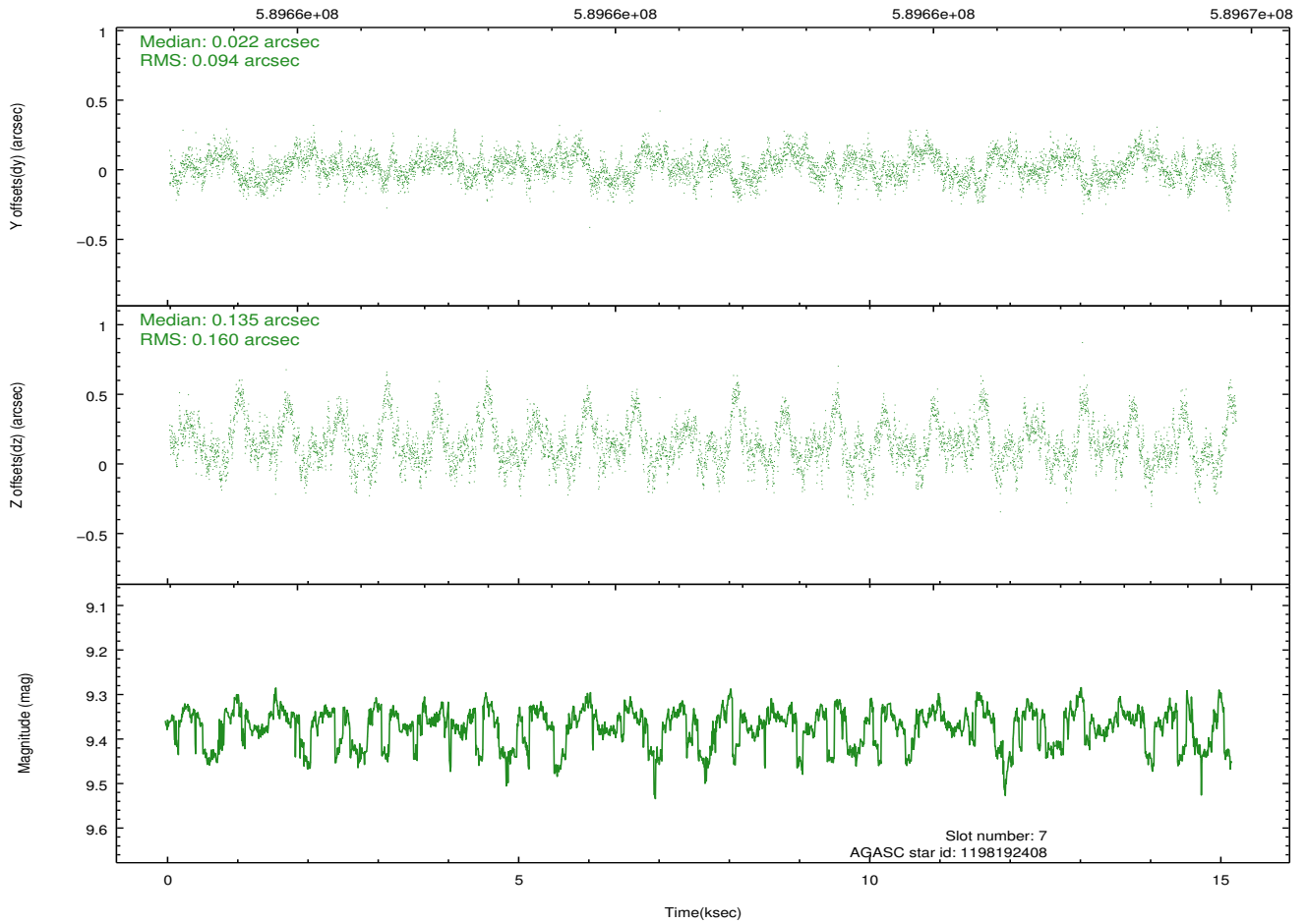
2.4.4 Slot 6



2.4.5 Slot 7

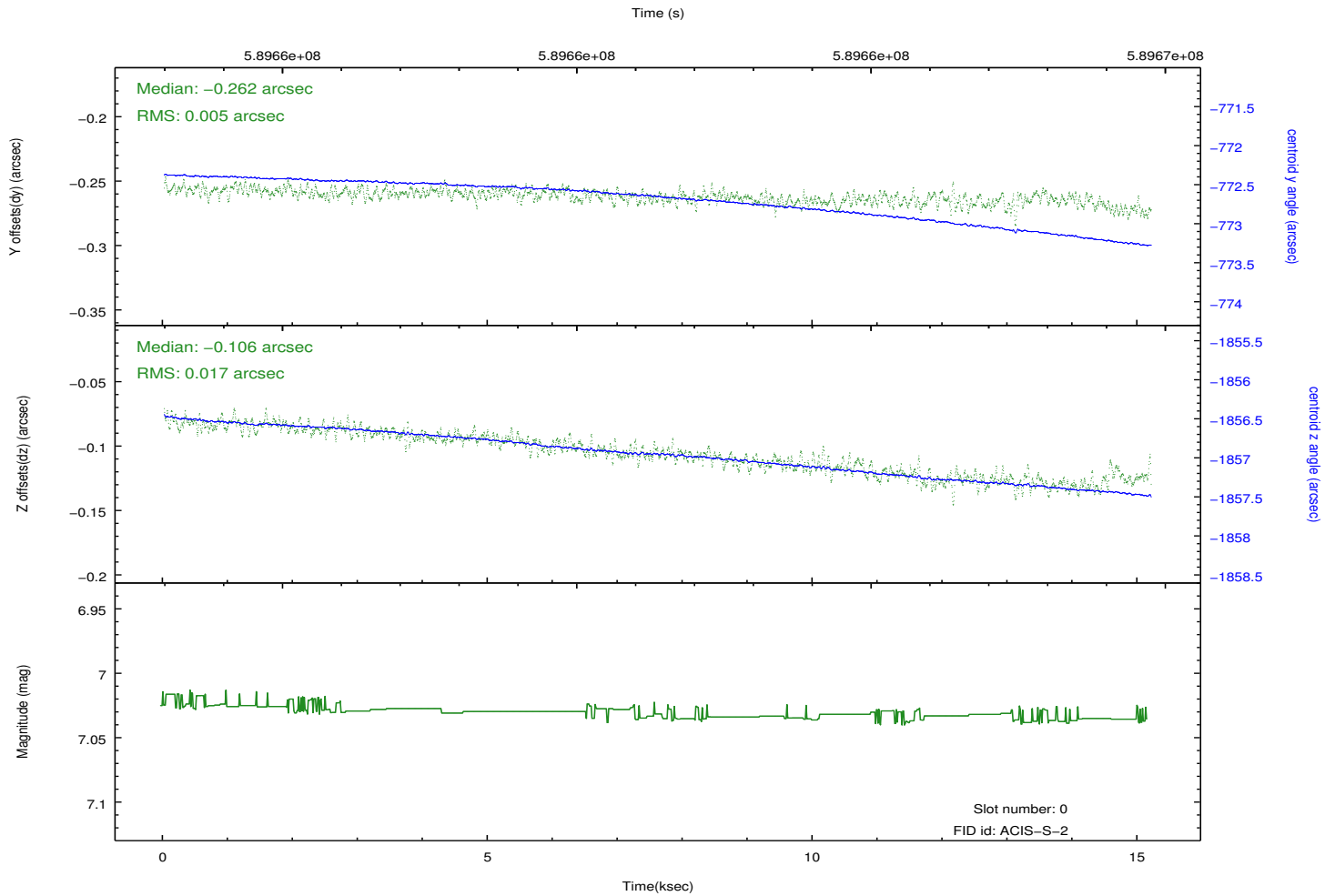
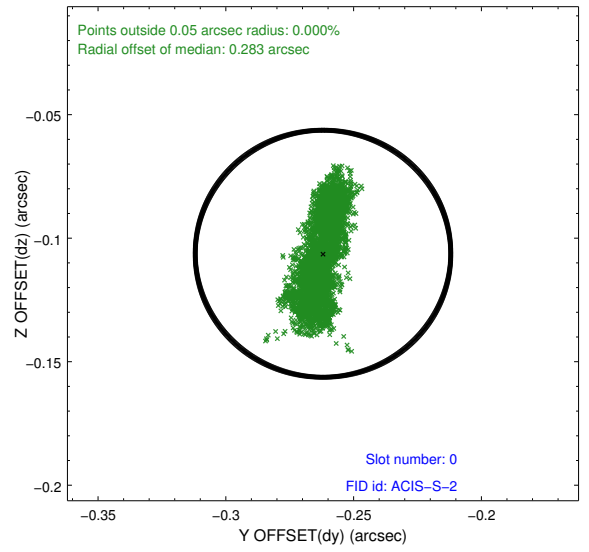
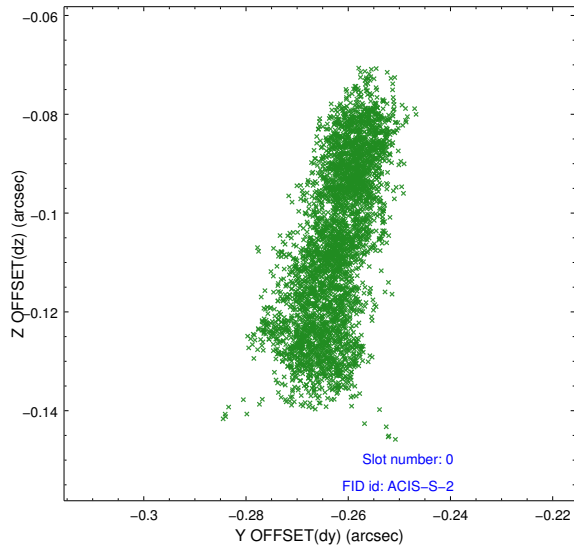


Time (s)

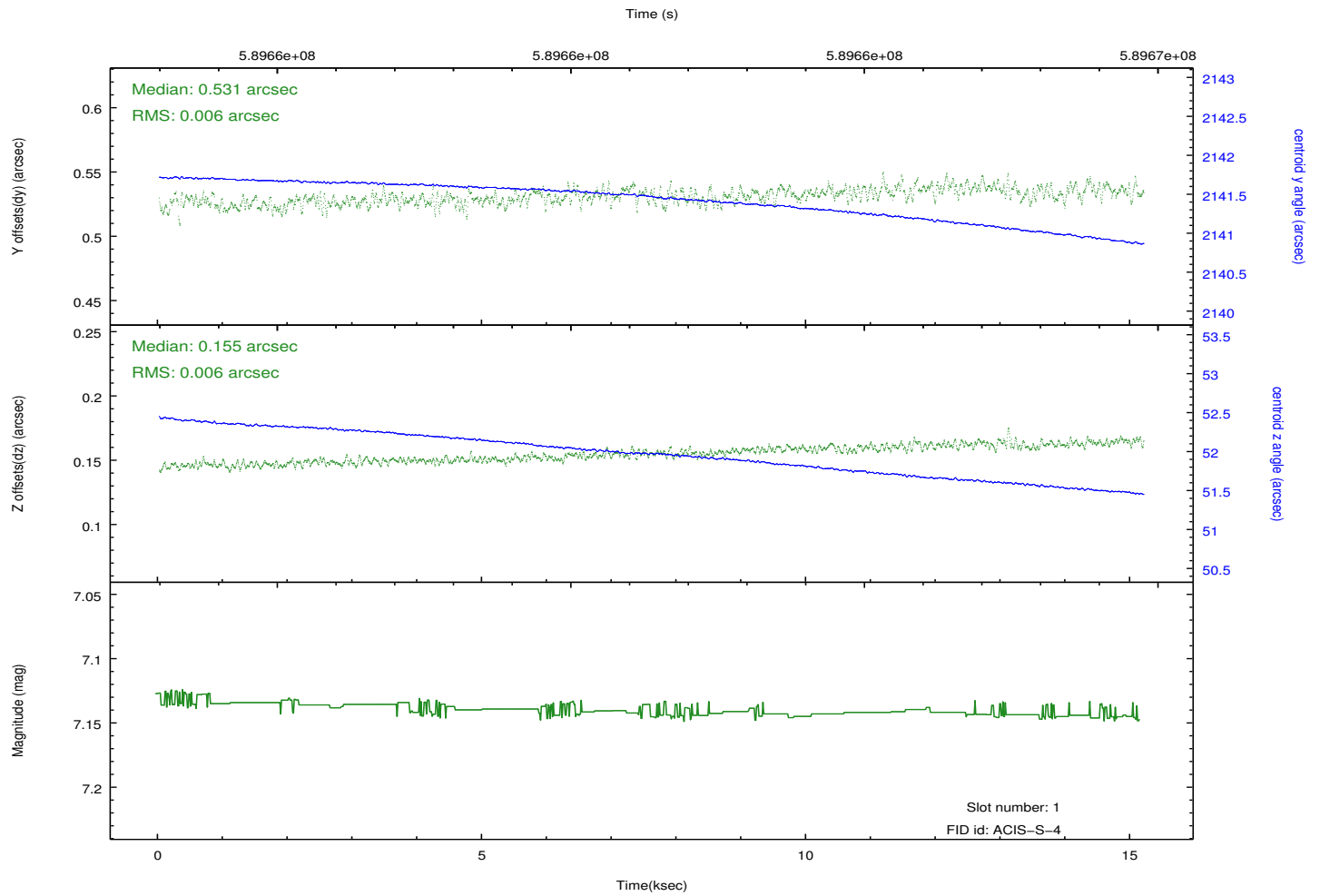
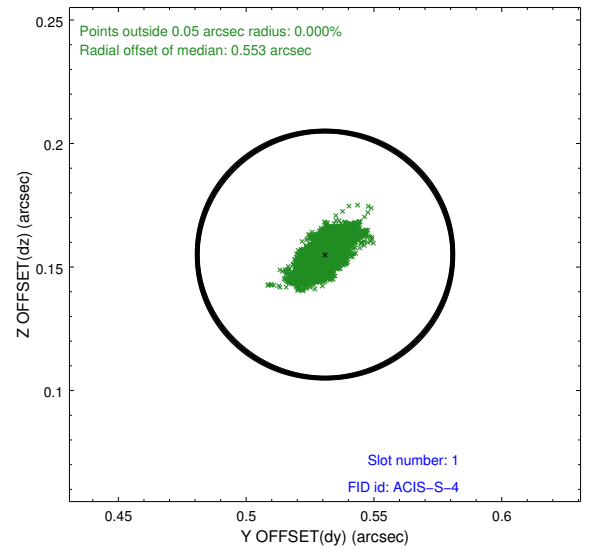
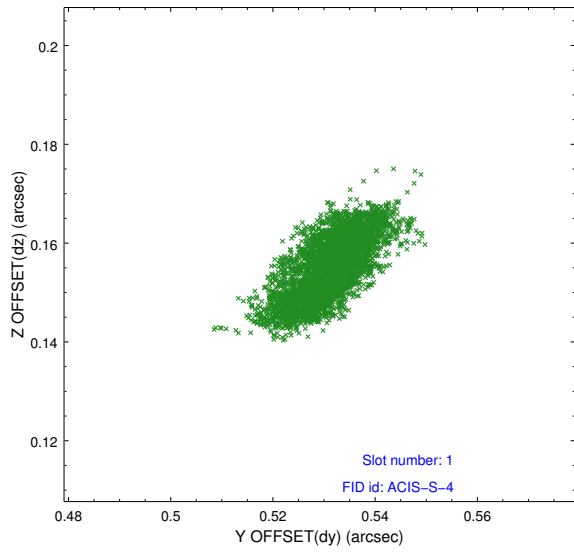


2.5 FID Slots

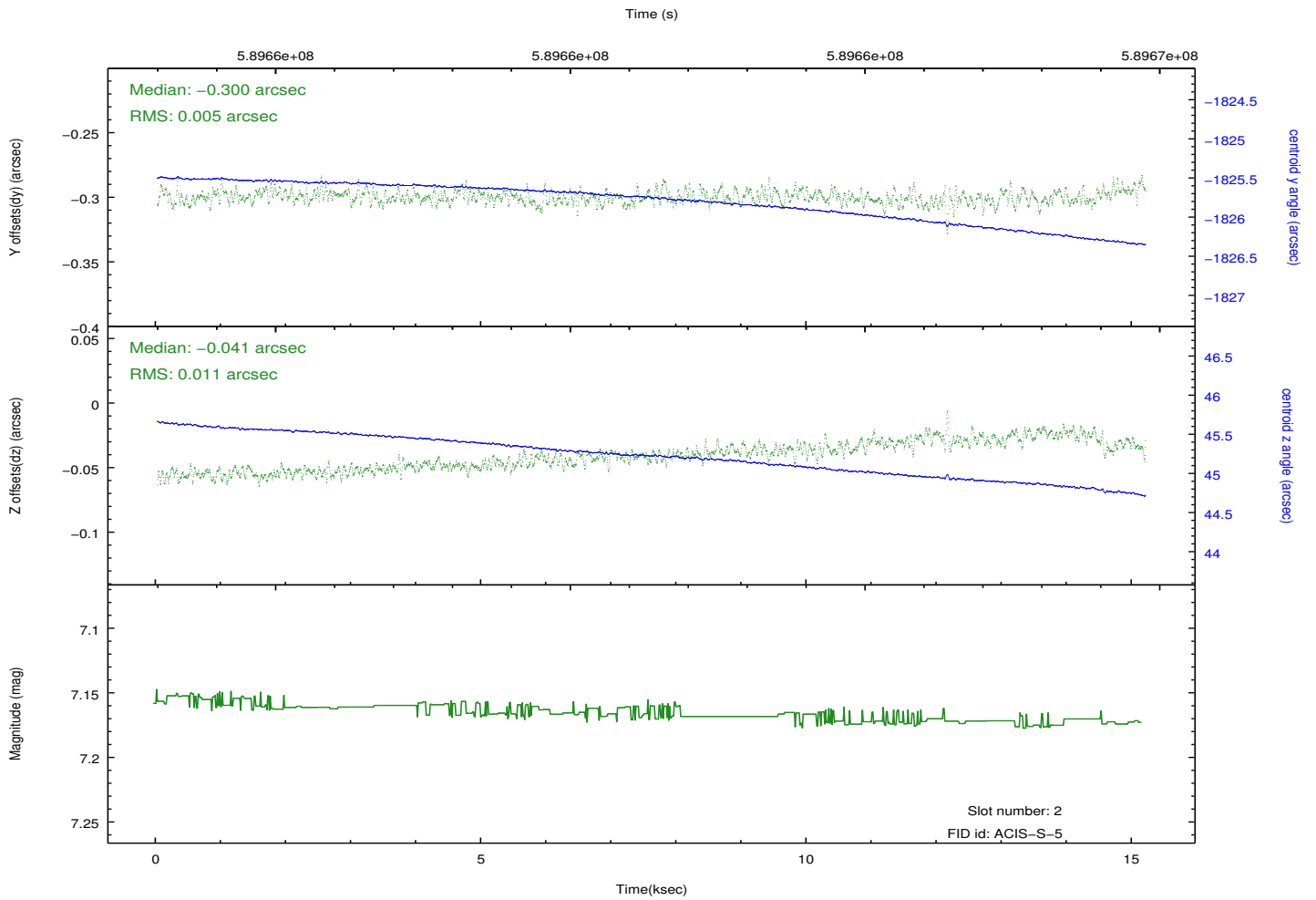
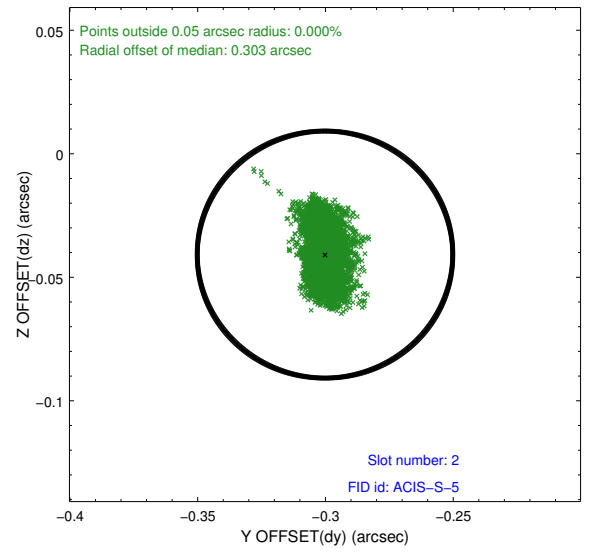
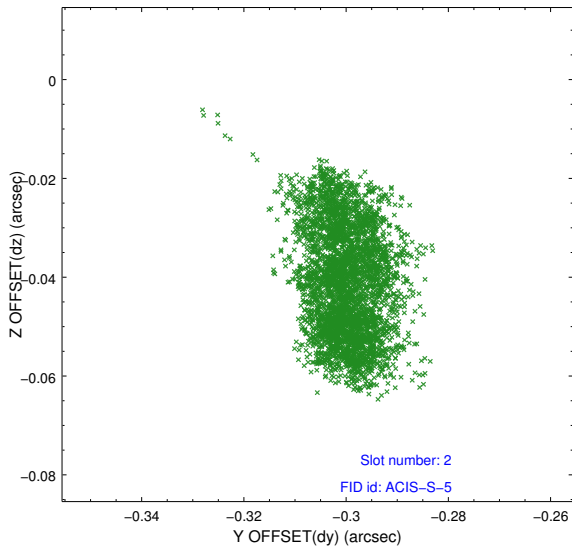
2.5.1 Slot 0



2.5.2 Slot 1

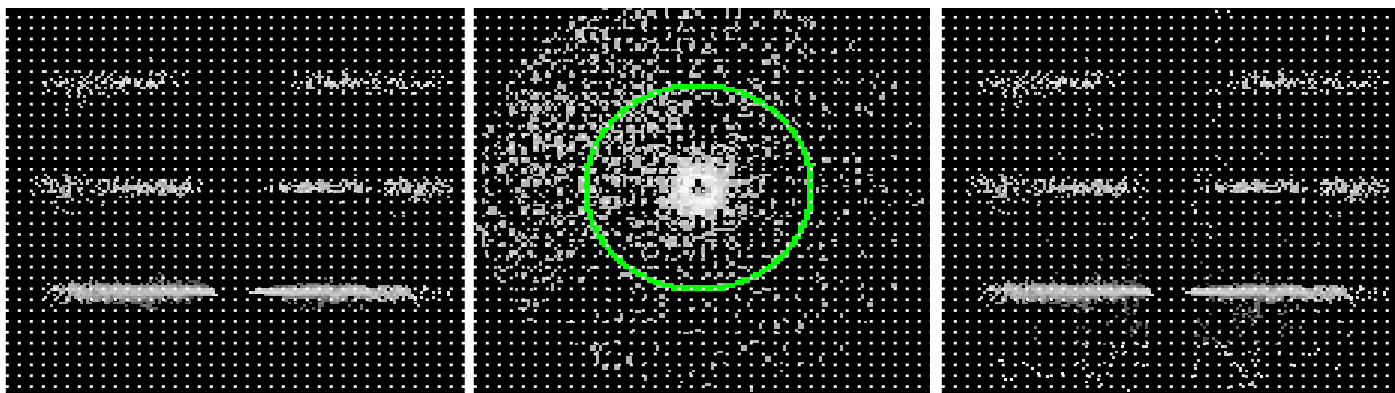


2.5.3 Slot 2



3 Gratings

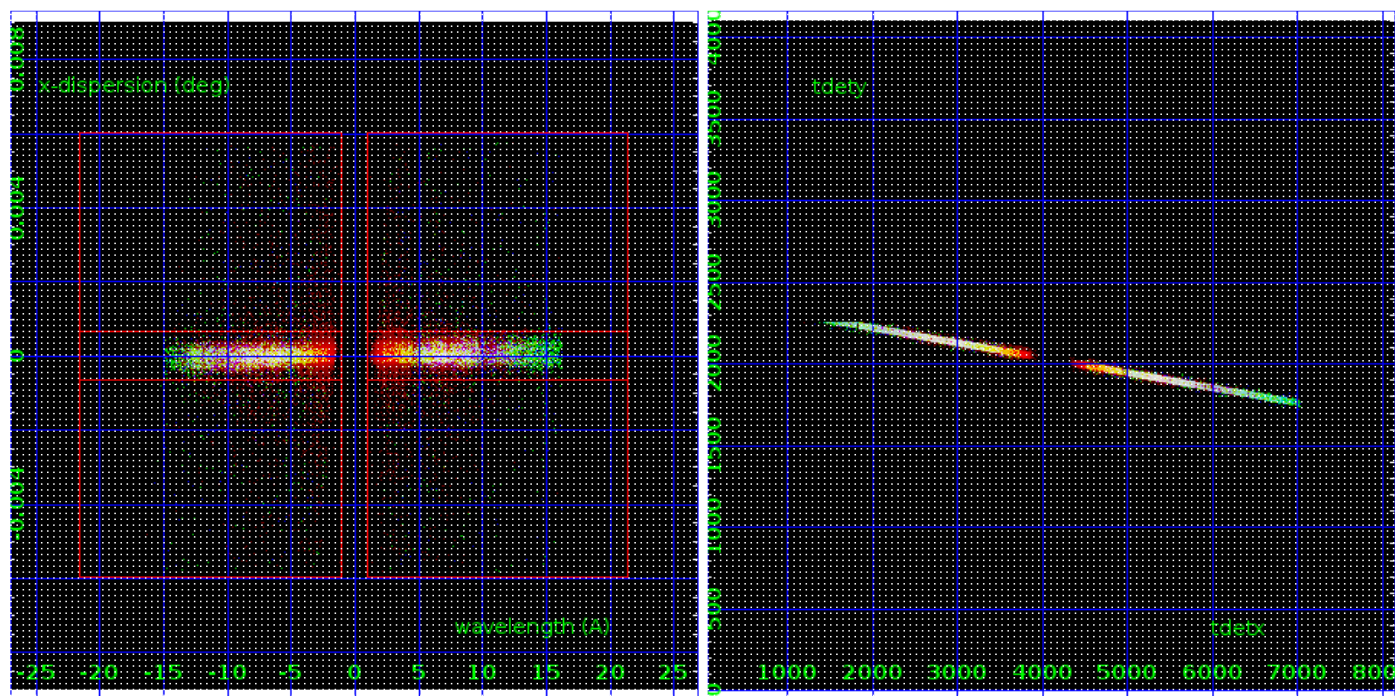
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

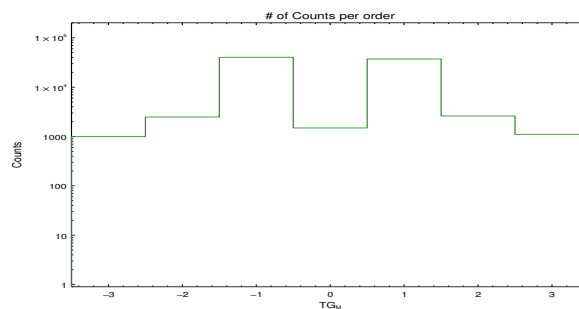
HEG Order Sort ALL

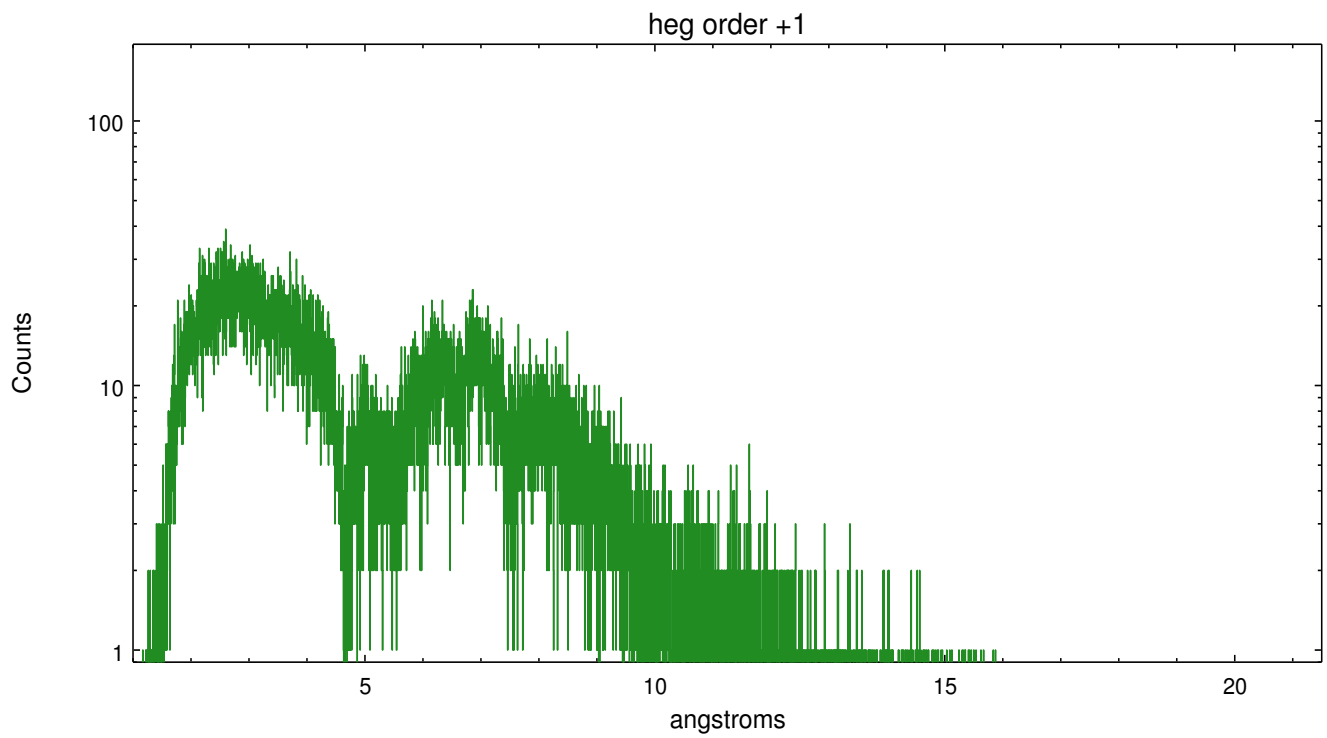
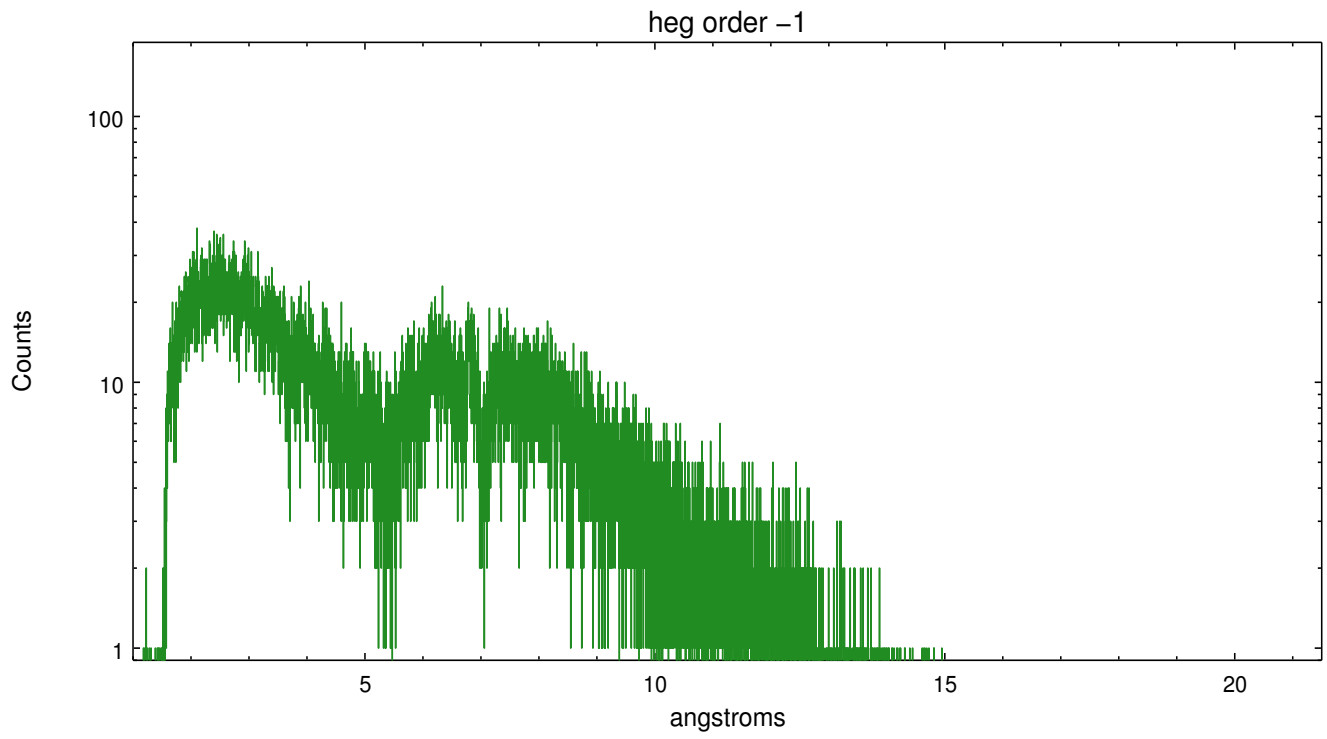


Spot Image HEG

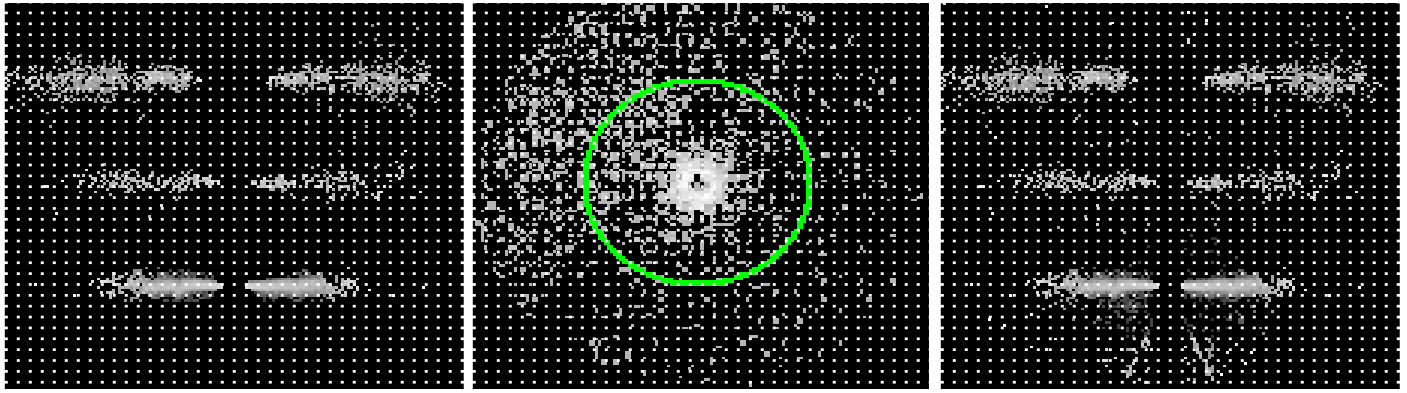
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	994	2490	40393	1492	37260	2608	1107





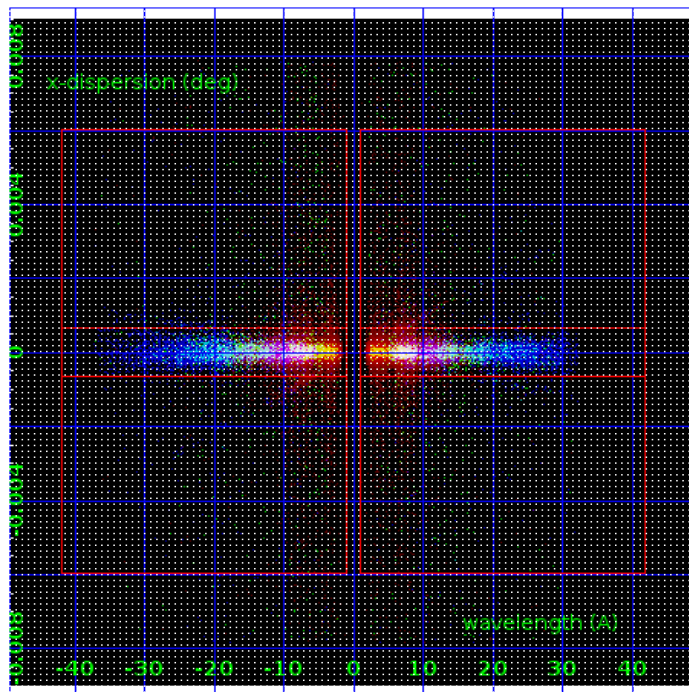
3.2 MEG Arm



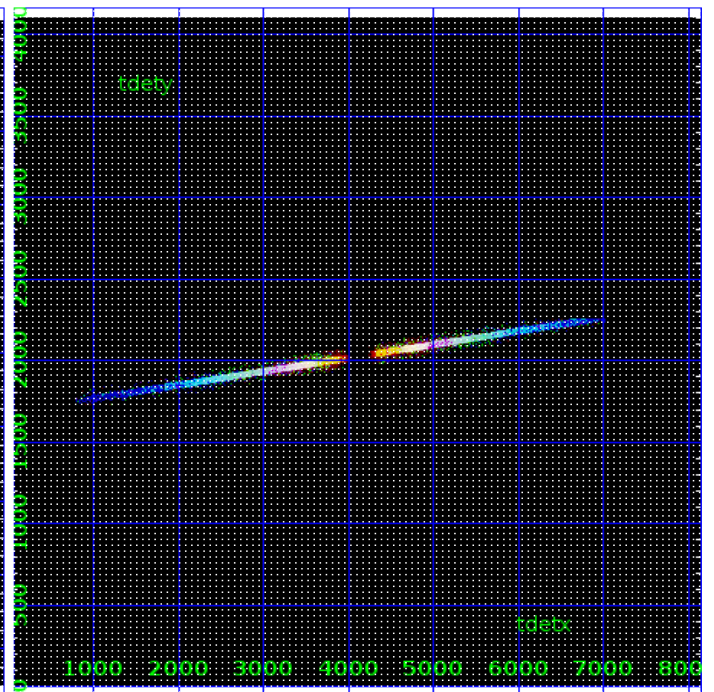
MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

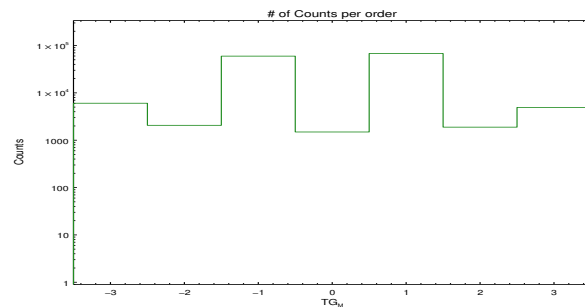


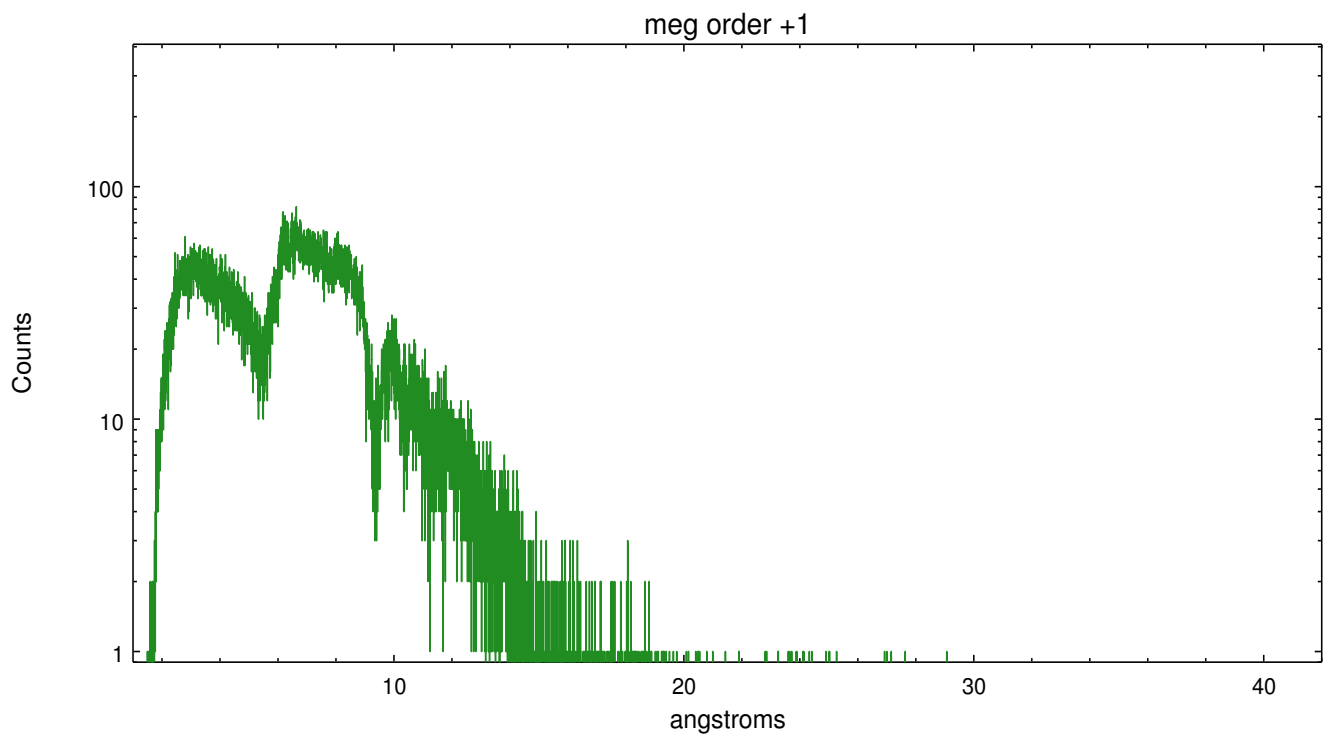
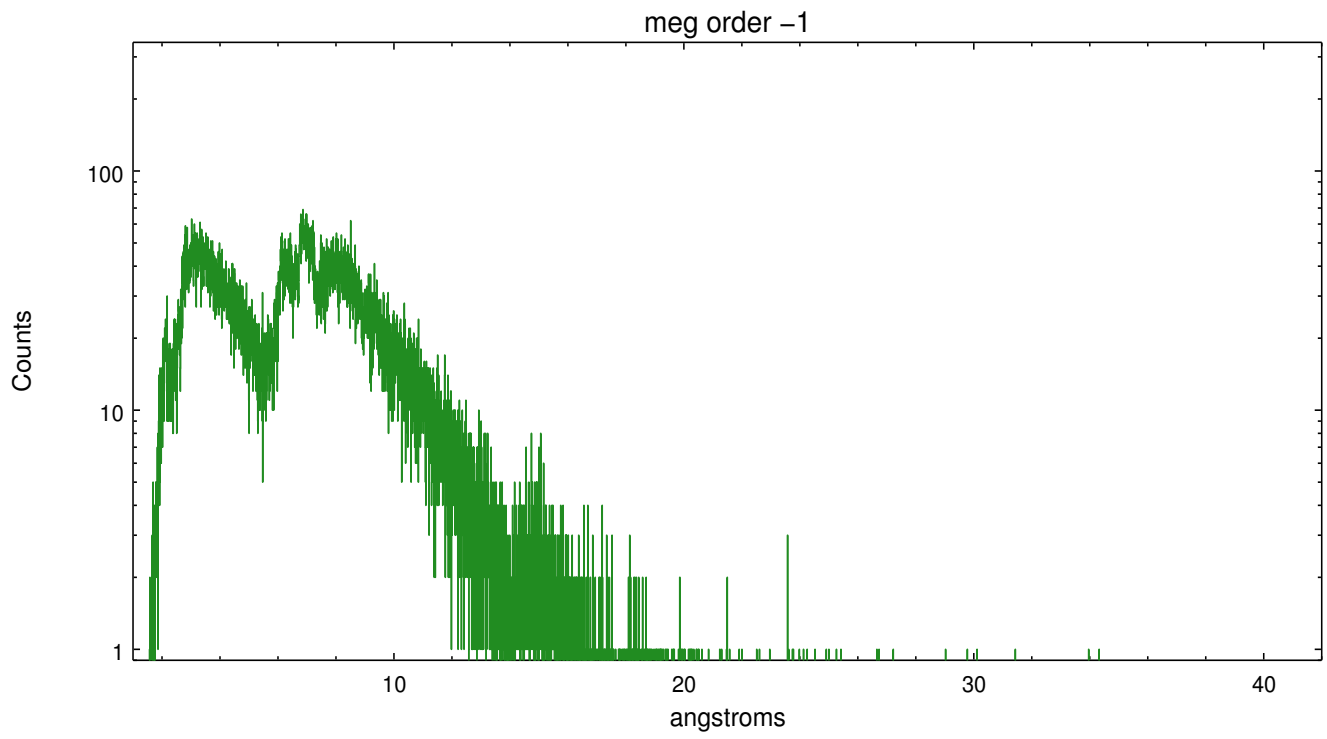
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	6037	2061	59648	1492	67736	1886	4922





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.09.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.040450342894

A.2 Comments

Comments for Obi 1

Fid in slot 1 radial offset > 0.550000 arcsec

ASPECT review: offset is acceptable.

Note: the dispersed spectra are faintly visible in the Level 1 Bad events, which could mean that there may be some pileup in the dispersed spectrum.