

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12199 - L2 Version 2
Chandra X-Ray Center

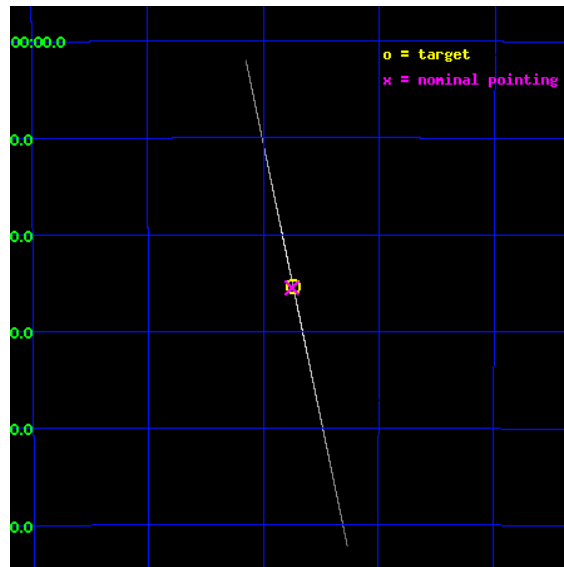
L2 Processing Date : Feb 24 2012

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1 Front

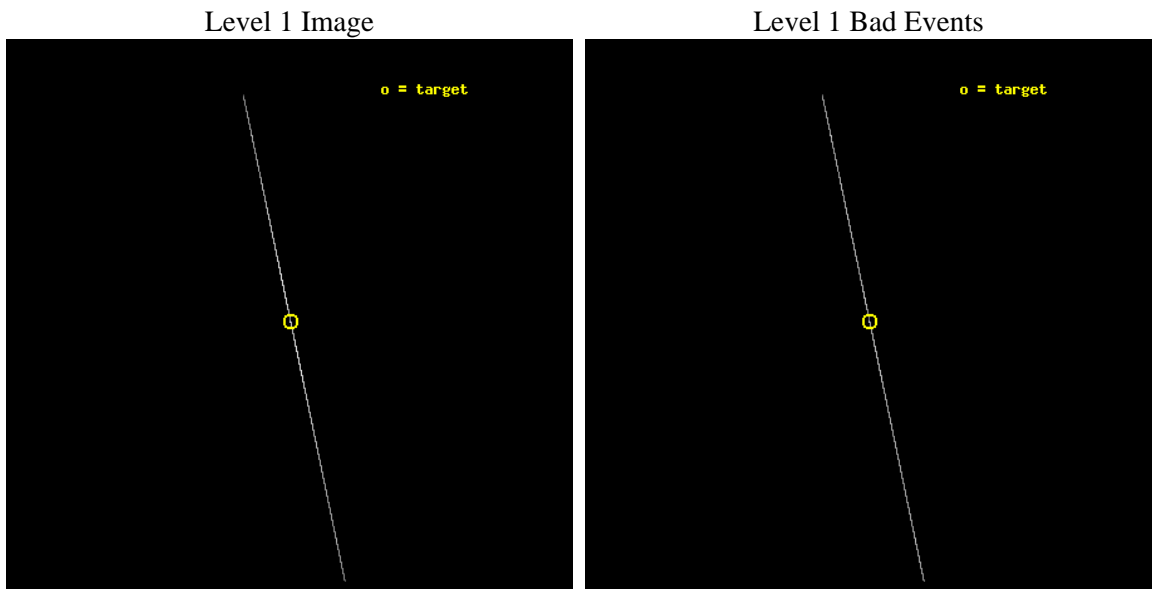
seq_num	900941	Sequence number
obs_id	12199	Observation id
title	ISM Absorption and Broad Line Emission in the Bright Z-Source GX 349+1	Proposal title
observer	Prof. Claude Canizares	Principal investigator
object	GX 349+2	Source name
ra_targ	256.435417	Observer's specified target RA [deg]
dec_targ	-36.423083	Observer's specified target Dec [deg]
ra_nom	256.4381257984	Nominal RA [deg]
dec_nom	-36.425205818082	Nominal Dec [deg]
roll_nom	258.02650985819	Nominal Roll [deg]
revision	2	Processing version of data
ontime	18842.743272185	Sum of GTIs [s]
livetime	18769.138806278	Livetime [s]
ontime4	19467.25	Sum of GTIs [s]
ontime5	19467.25	Sum of GTIs [s]
ontime6	19014.906309783	Sum of GTIs [s]
ontime7	18842.743272185	Sum of GTIs [s]
ontime8	19467.25	Sum of GTIs [s]
ontime9	19467.25	Sum of GTIs [s]
l2events	5188777	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	19393.254000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	18842.743272185	Sum of GTIs [s]
caldbver	4.4.8	 	ontime4	19467.25	Sum of GTIs [s]
date	2012-02-24T05:13:57	Date and time of file creation	ontime5	19467.25	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	19014.906309783	Sum of GTIs [s]
			ontime7	18842.743272185	Sum of GTIs [s]
			ontime8	19467.25	Sum of GTIs [s]
			ontime9	19467.25	Sum of GTIs [s]
			l1events	6889299	Number of level 1 events

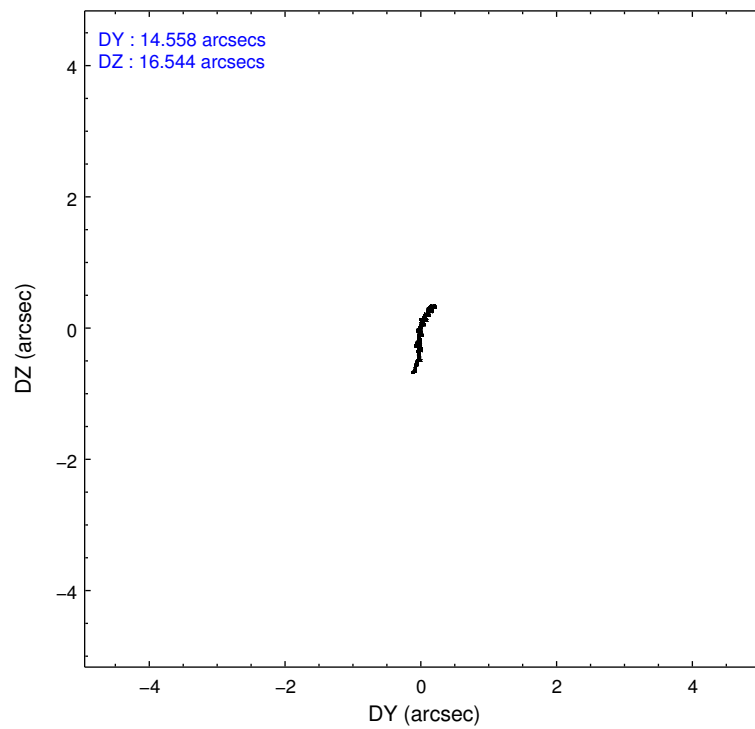
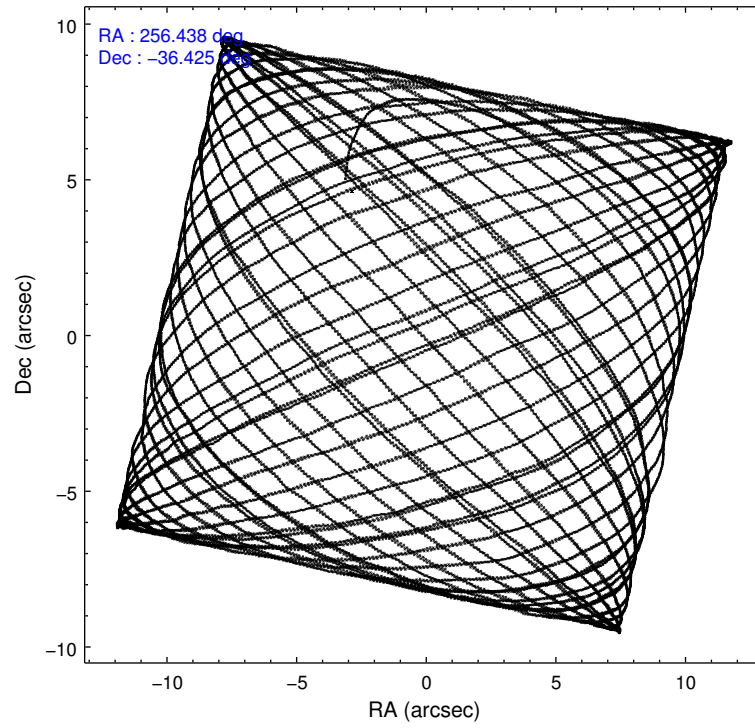
2.1.3 Events

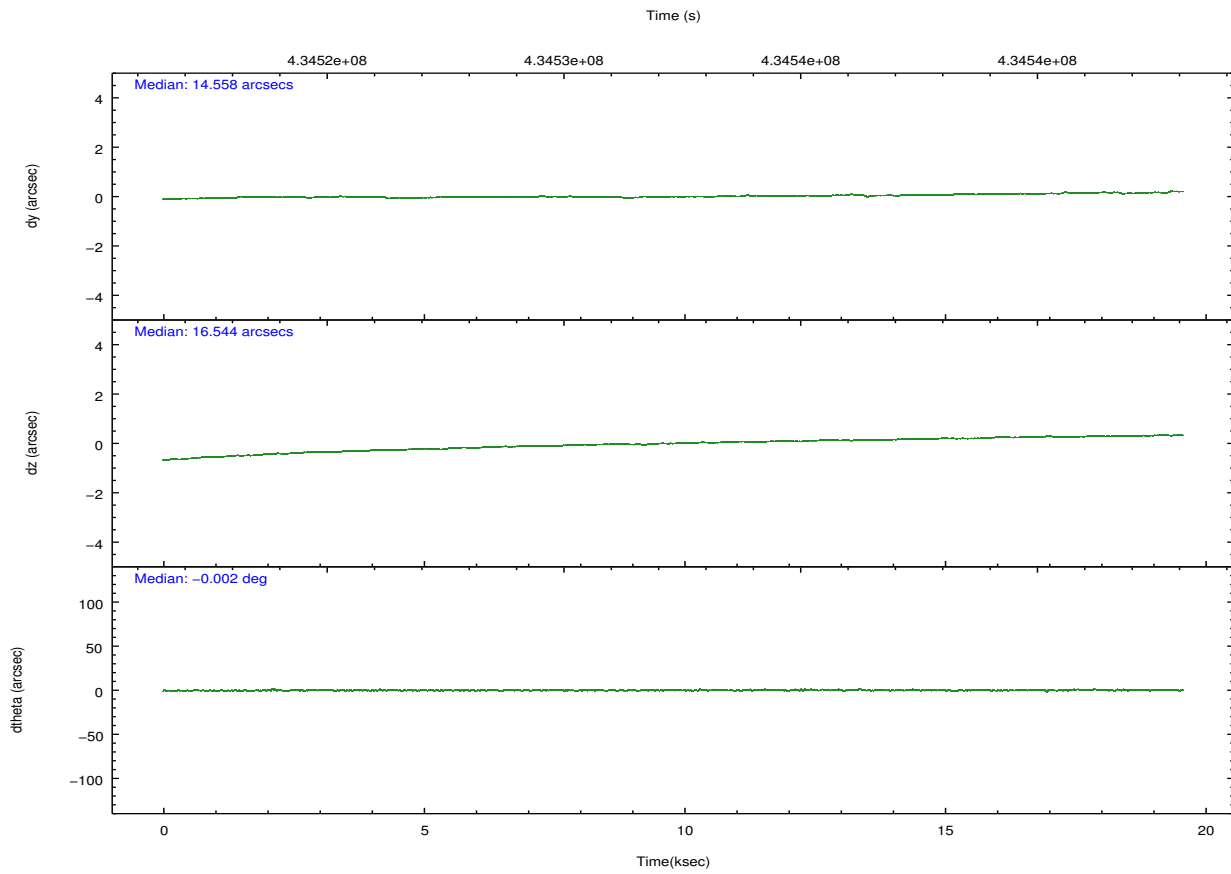
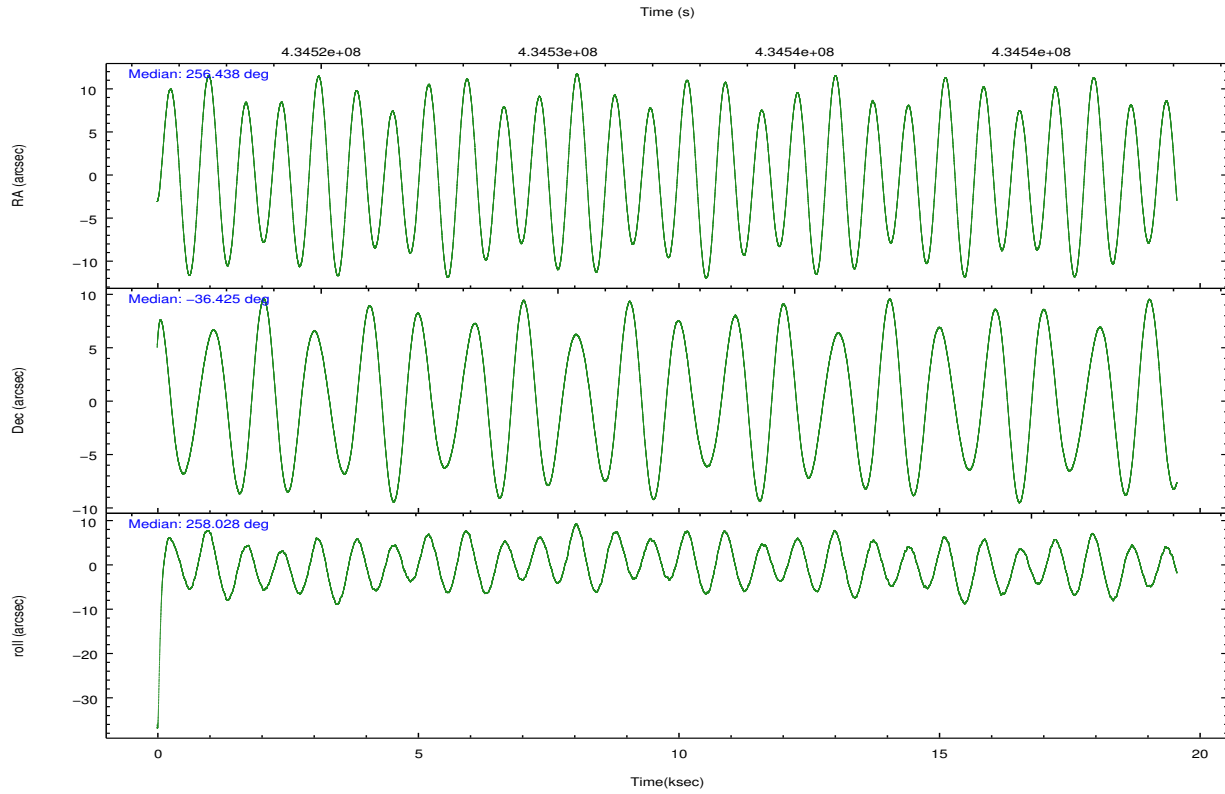
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	266011	519644	2322087	2589615	903303	288639	grade 0 events	24120	37869	167377	317484	318931	36359
rejected events	173342	134899	327594	353638	245330	156346		9%	7%	7%	12%	35%	12%
rejected %	65%	25%	14%	13%	27%	54%	grade 1 events	111	74	569	5316	836	175
								0%	0%	0%	0%	0%	0%
							grade 2 events	54422	197125	1594512	770917	264576	77698
								20%	37%	68%	29%	29%	26%
							grade 3 events	3617	12920	11233	162931	18508	3898
								1%	2%	0%	6%	2%	1%
							grade 4 events	3765	12528	11103	161717	18367	4126
								1%	2%	0%	6%	2%	1%
							grade 5 events	3071	10417	12724	43803	7169	3950
								1%	2%	0%	1%	0%	1%
							grade 6 events	6749	124365	210549	823293	37704	10239
								2%	23%	9%	31%	4%	3%
							grade 7 events	170156	124346	314020	304154	237212	152194
								63%	23%	13%	11%	26%	52%

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	CC33_GRADED	CC33_GRADED	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	256.427151	256.438125798396	CCD I2 on	N	N
[deg] Pointing Dec	-36.399326	-36.42520581808201	CCD I3 on	N	N
[deg] Pointing Roll	257.863388	258.0265098581913	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	-183.992523	-183.9875365069546	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.144986076053243	CCD S4 on	Y	Y
[s] Observation start time (MET)	434522690.184000	434521961.03958	CCD S5 on	Y	Y
Observation start date	2011-10-09T04:43:44	2011-10-09T04:32:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	434542084.184000	434542307.80315	On-chip summing requested	N	N
Observation end date	2011-10-09T10:06:58	2011-10-09T10:11:47	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect



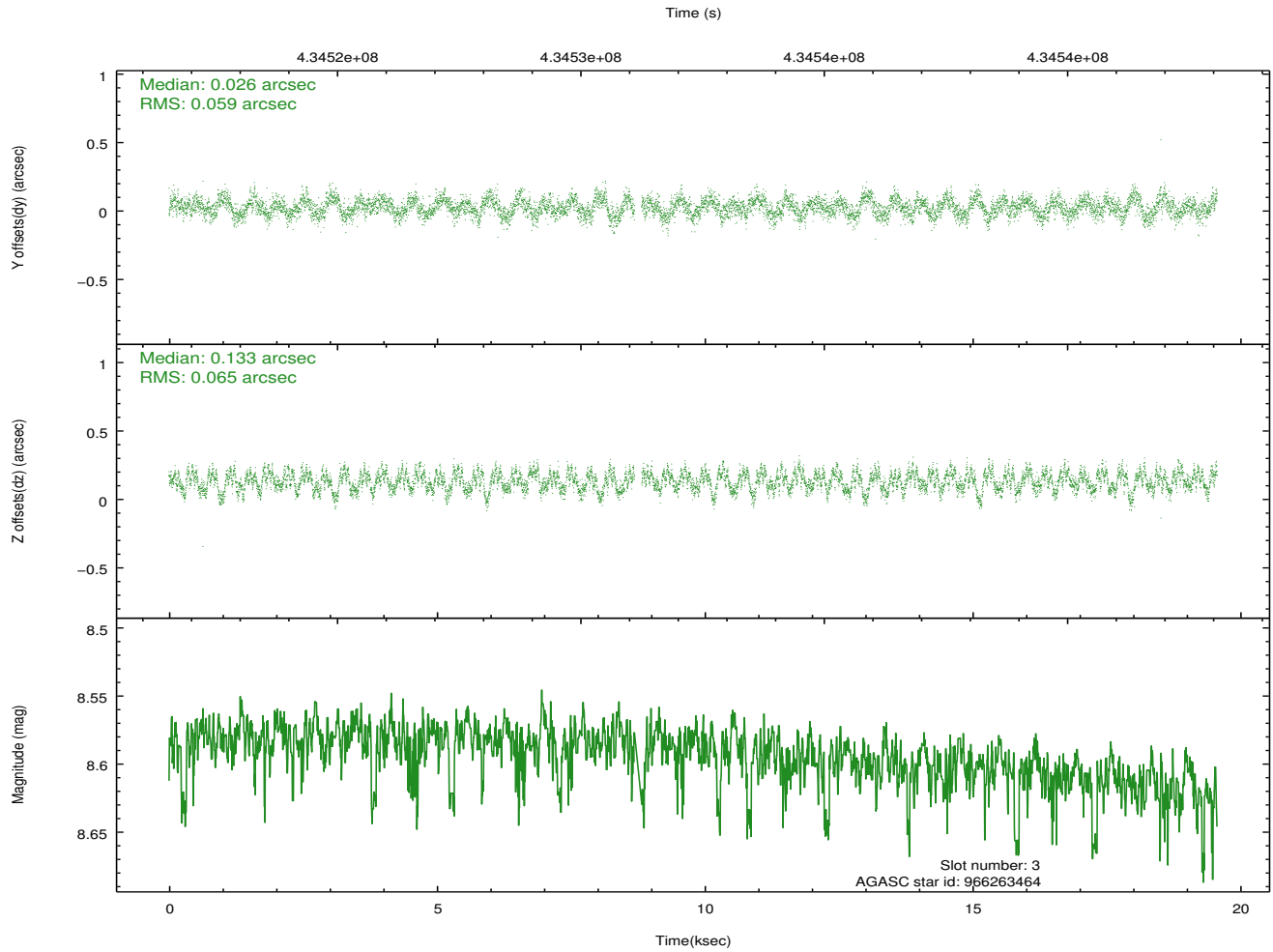
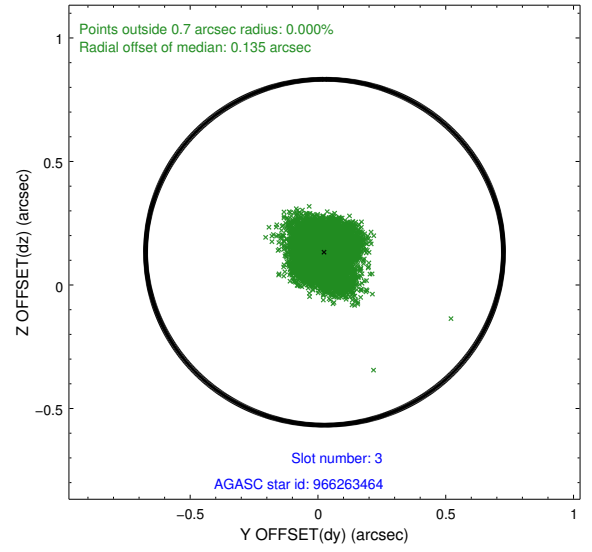
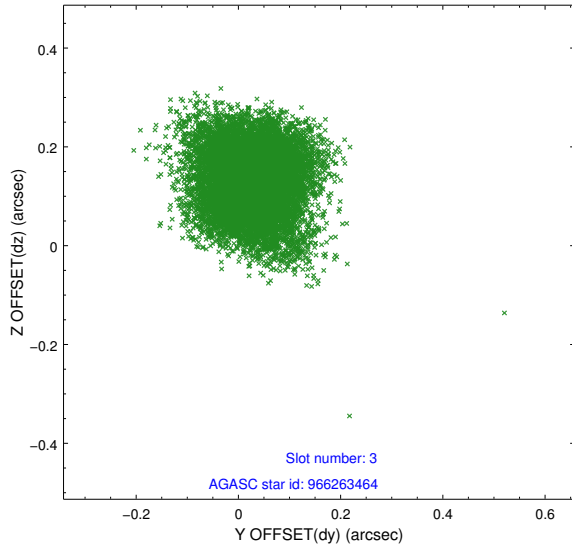


Slot Statistics

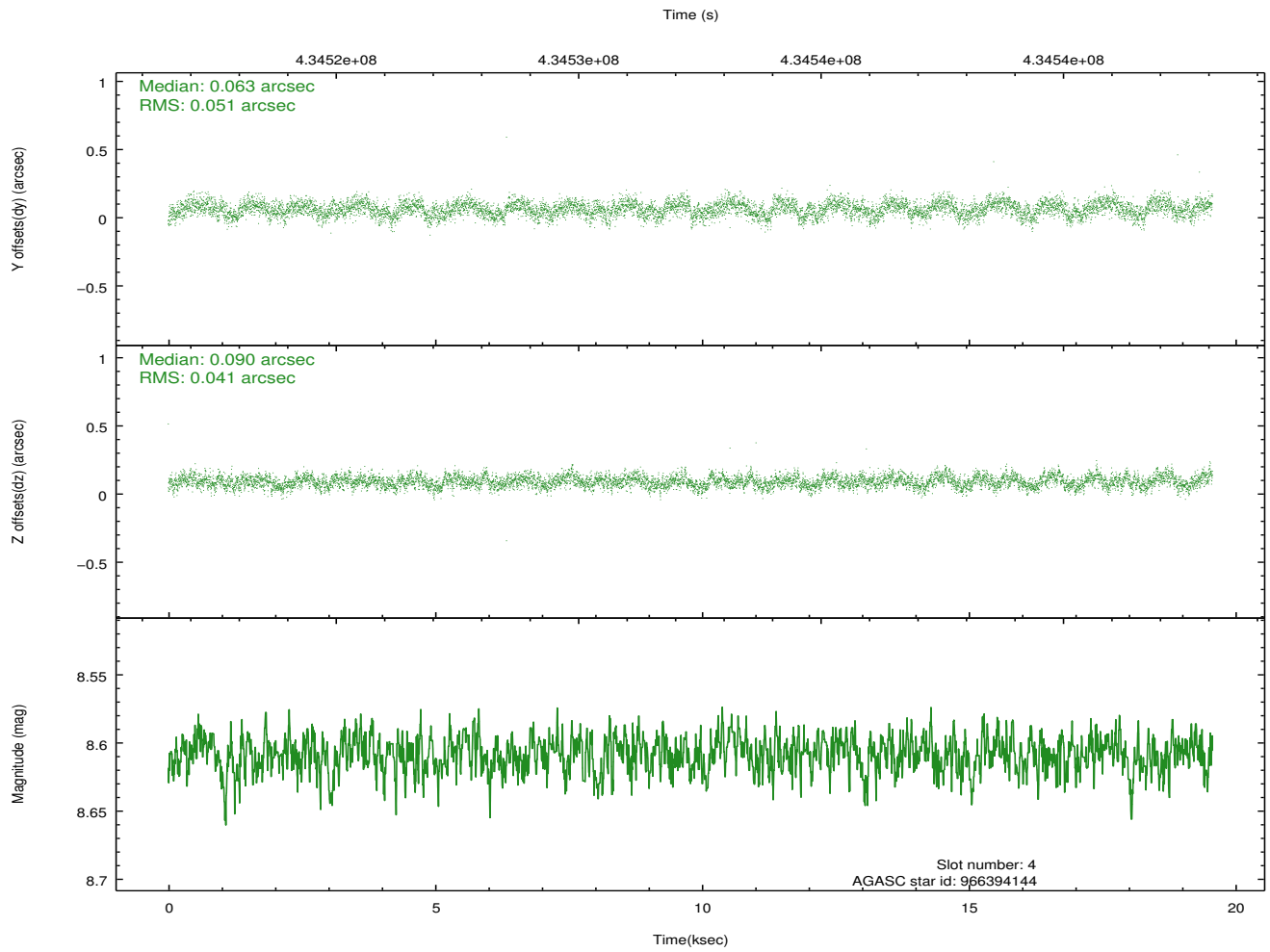
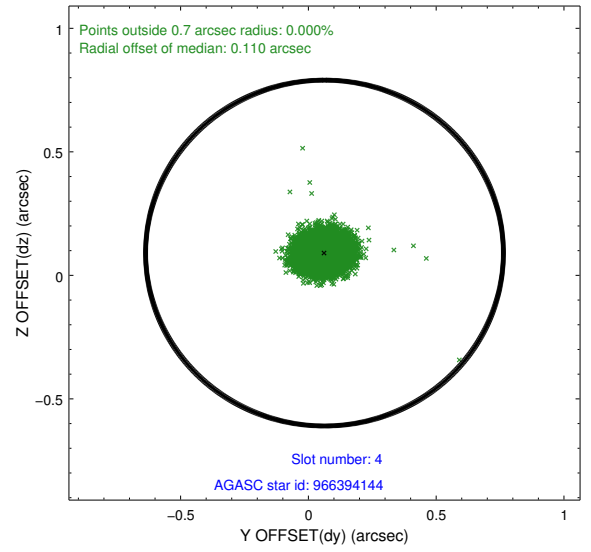
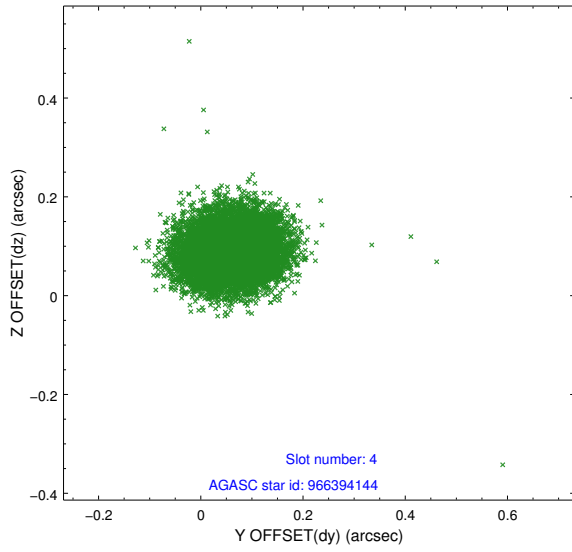
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.87	4773	-0.176	-0.113	0.007	0.012	0.000000	0.000000	-767.35	-1864.66
1	FID	ACIS-S-4	6.94	4773	0.166	0.110	0.009	0.015	0.000000	0.000000	2146.25	43.70
2	FID	ACIS-S-6	7.15	4773	-0.017	0.009	0.009	0.016	0.000000	0.000000	395.13	681.28
3	GUIDE	966263464	8.59	9478	0.026	0.133	0.094	0.149	256.403645	-35.929342	-1639.57	-422.45
4	GUIDE	966394144	8.61	9541	0.063	0.090	0.069	0.111	256.902901	-37.062041	2048.92	1838.23
5	GUIDE	966396120	7.82	9546	0.016	-0.110	0.073	0.115	256.737004	-36.720258	943.46	1117.62
6	GUIDE	966398520	8.30	9543	-0.062	-0.046	0.071	0.119	256.842646	-35.892866	-2034.13	802.43
7	GUIDE	966395864	7.59	9546	-0.049	-0.072	0.085	0.145	256.670769	-36.077904	-1279.55	450.00

2.4 Star Slots

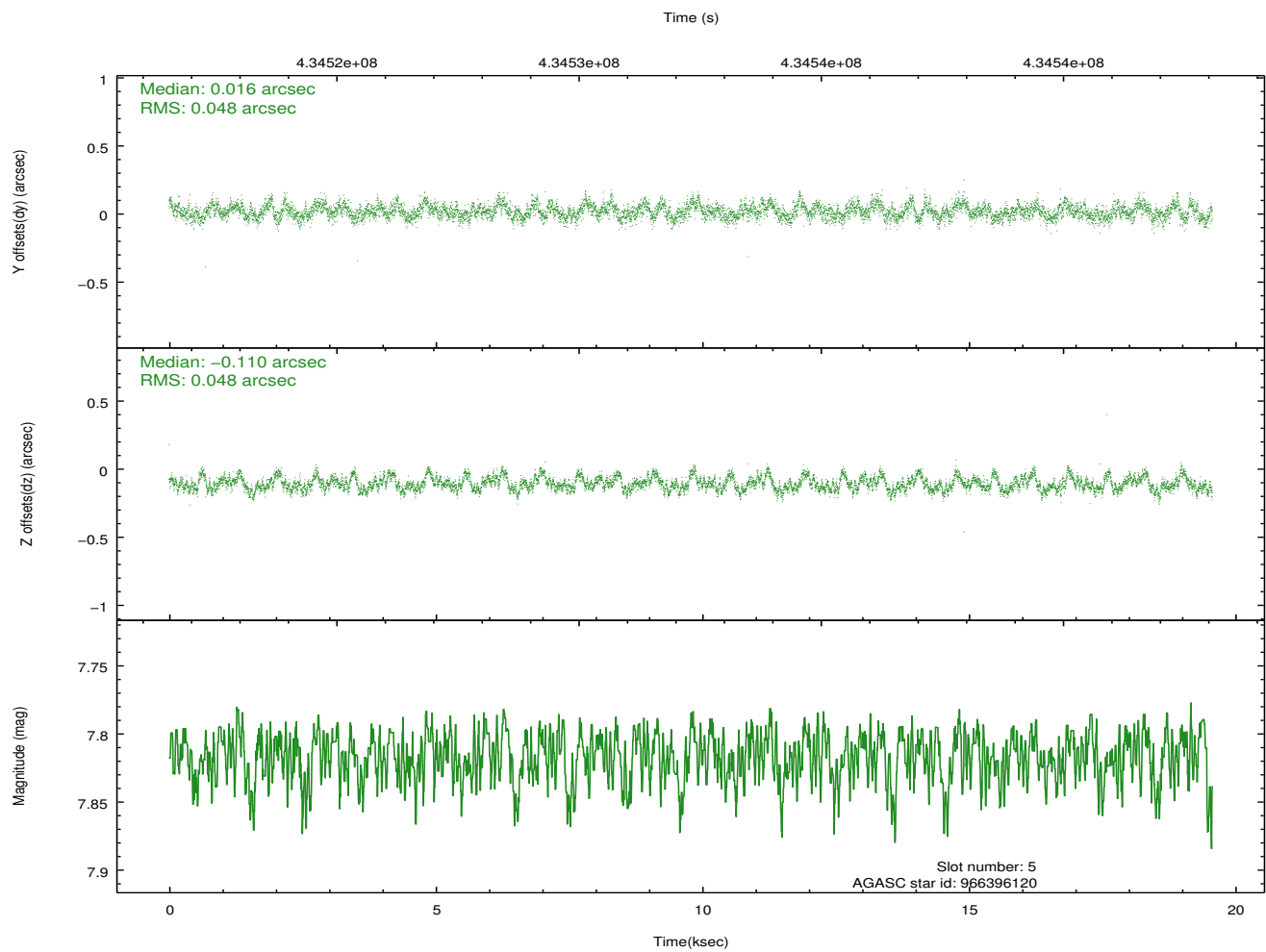
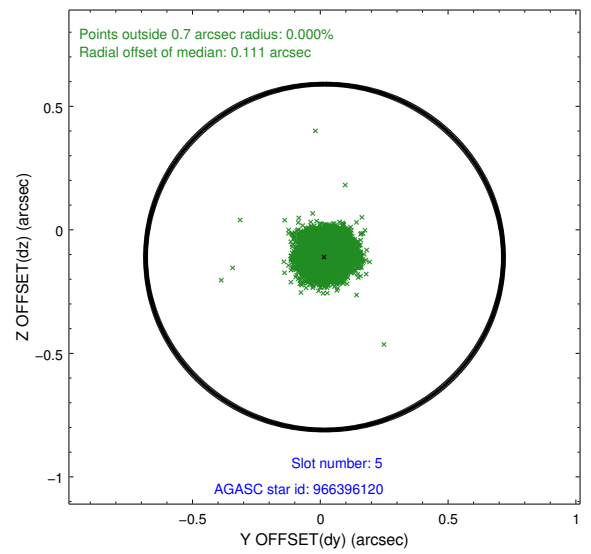
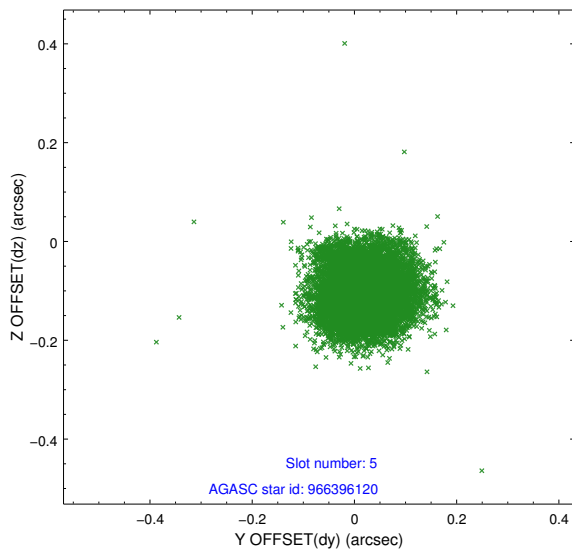
2.4.1 Slot 3



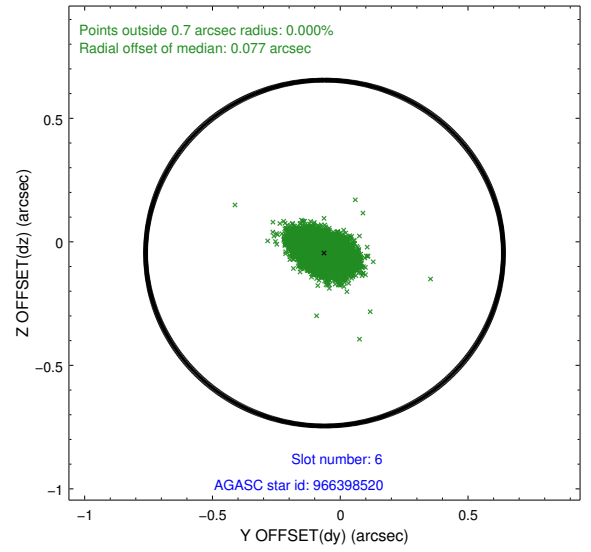
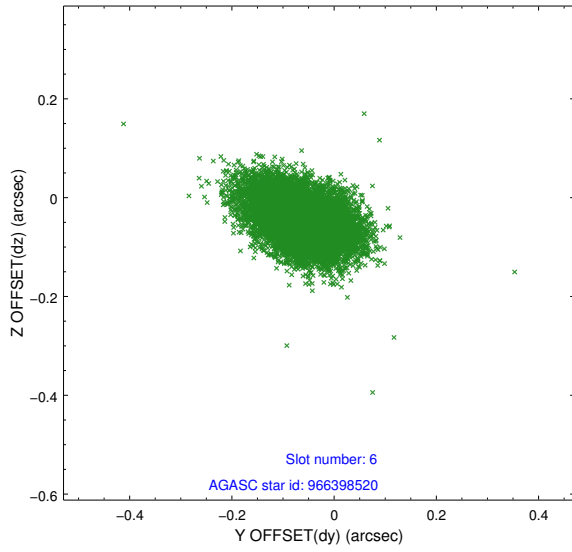
2.4.2 Slot 4



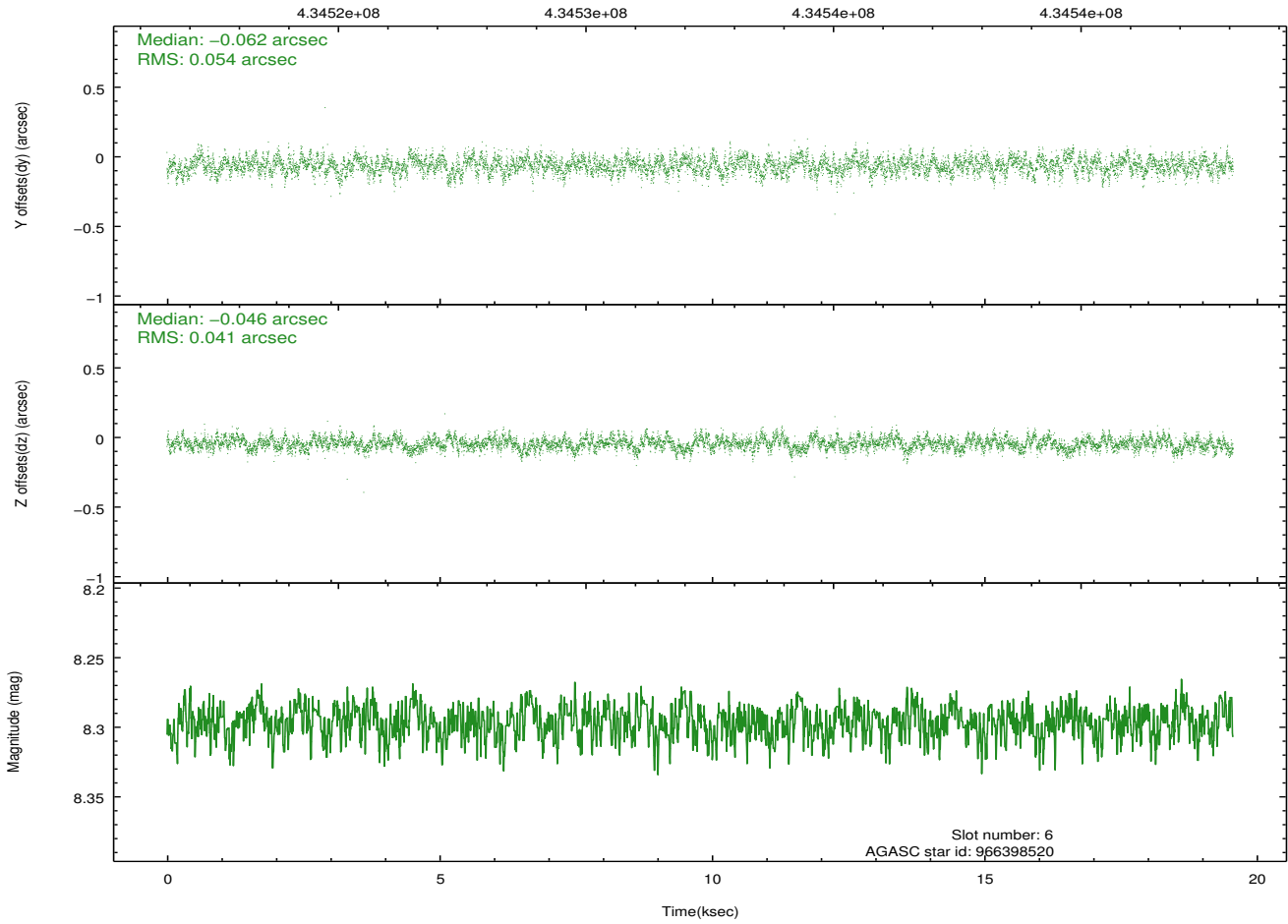
2.4.3 Slot 5



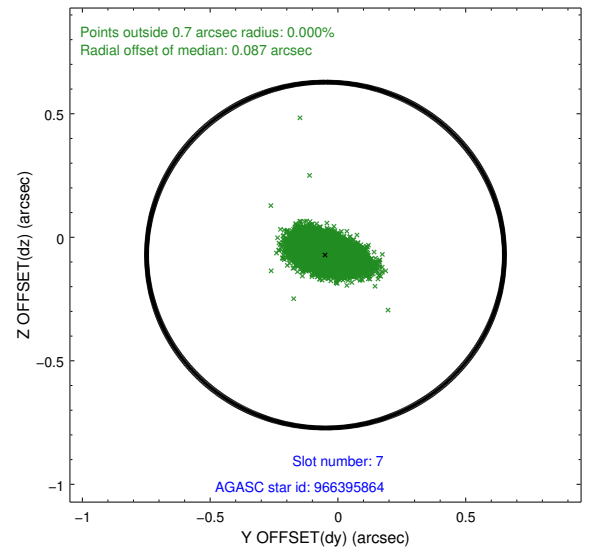
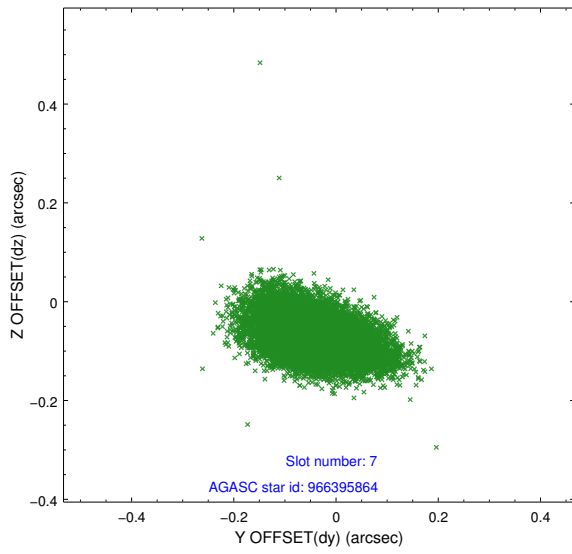
2.4.4 Slot 6



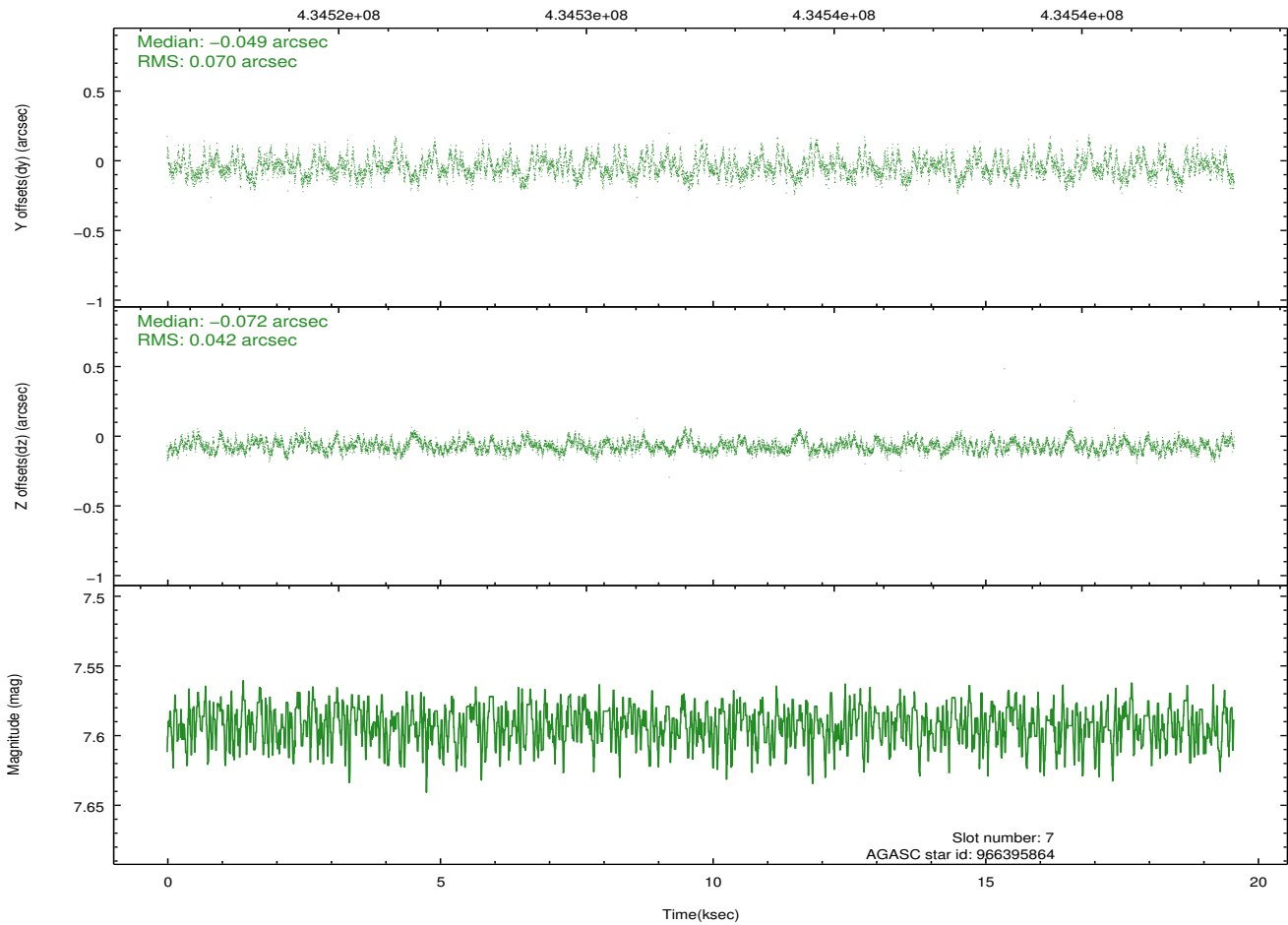
Time (s)



2.4.5 Slot 7

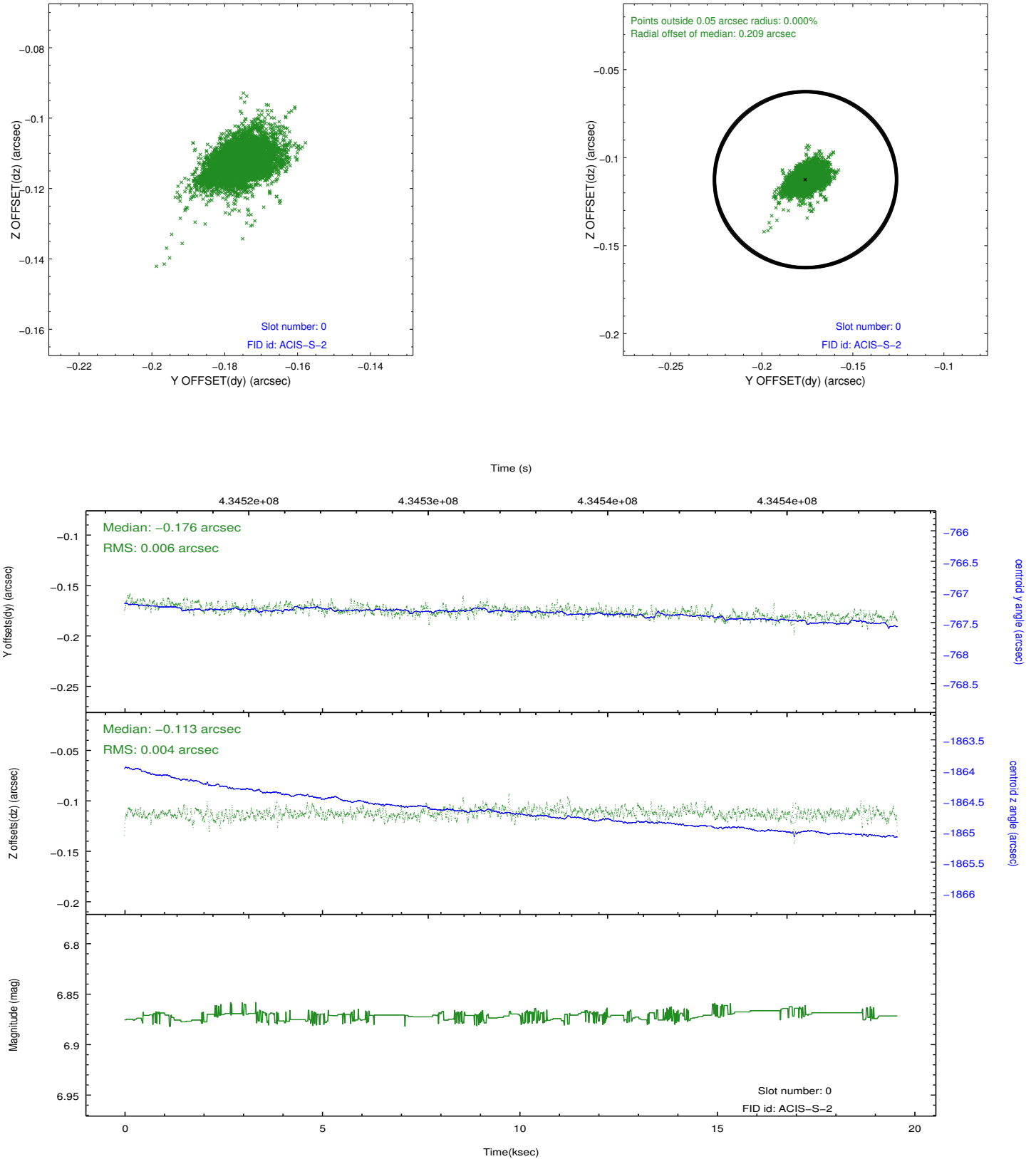


Time (s)

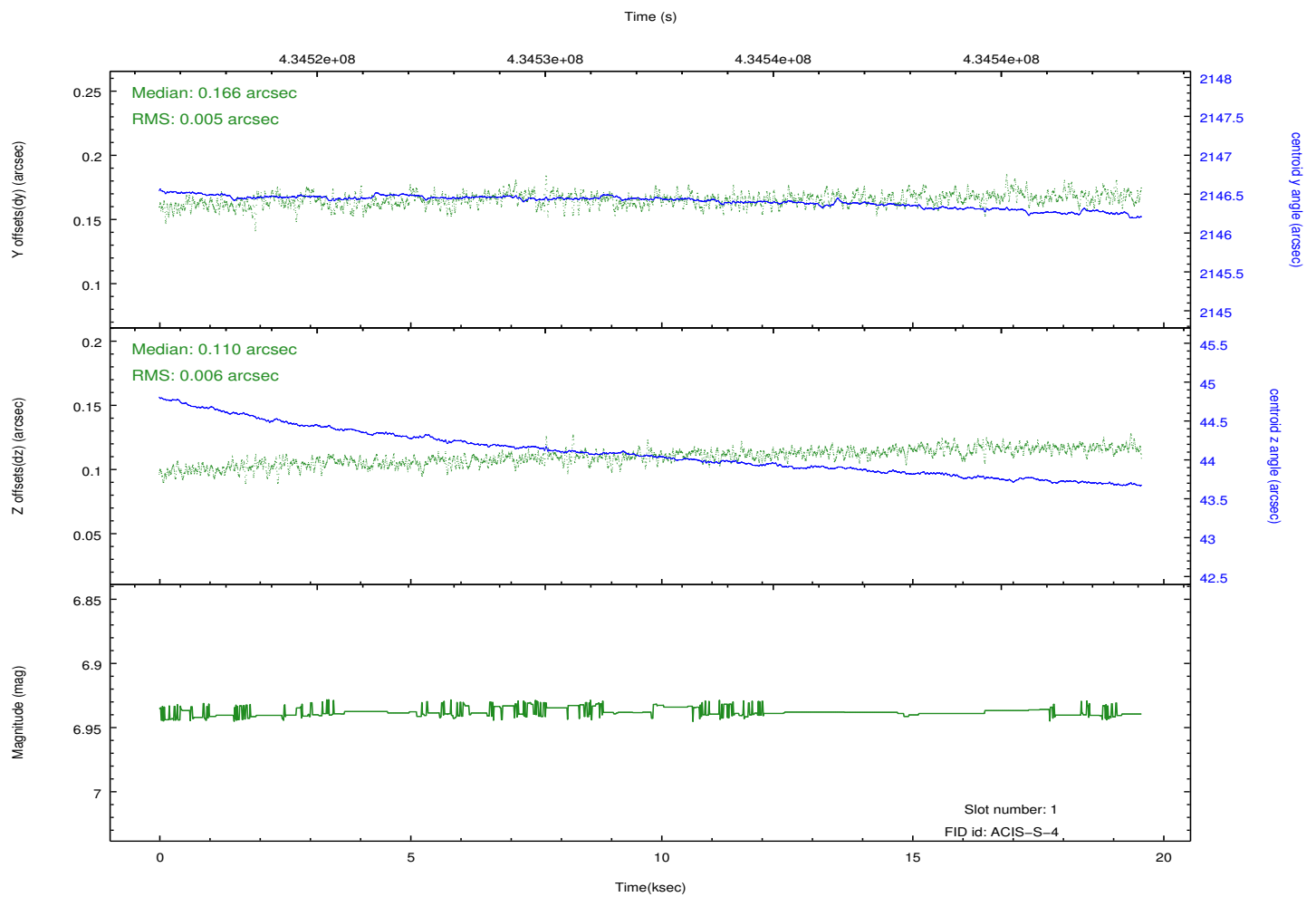
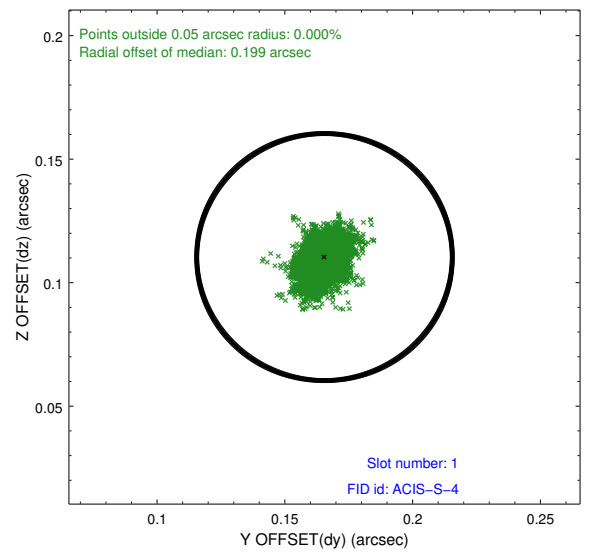
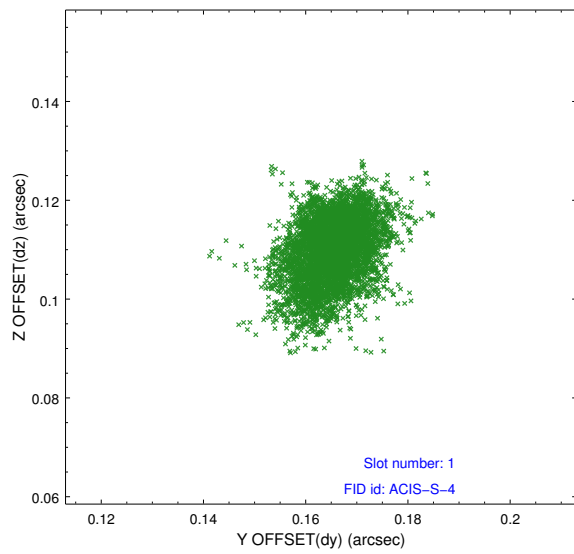


2.5 FID Slots

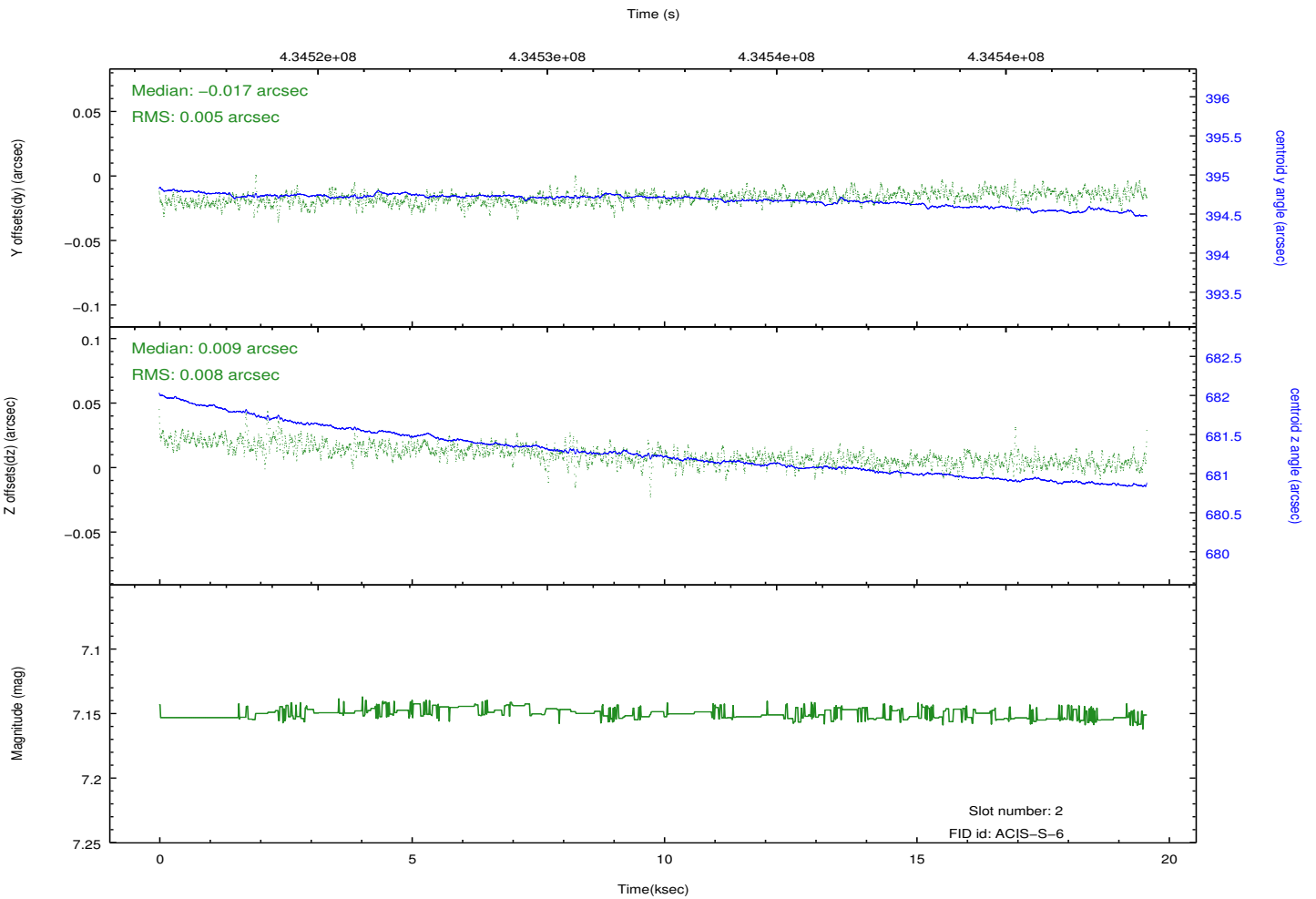
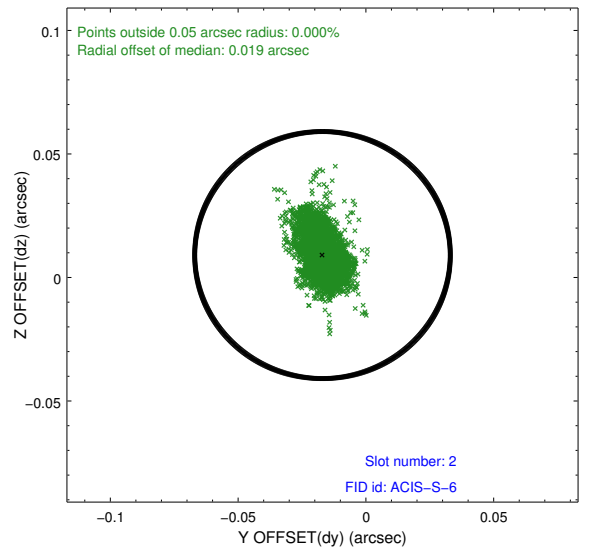
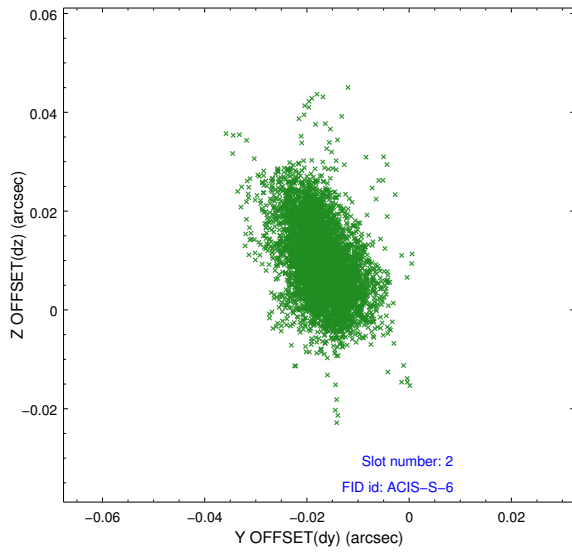
2.5.1 Slot 0



2.5.2 Slot 1

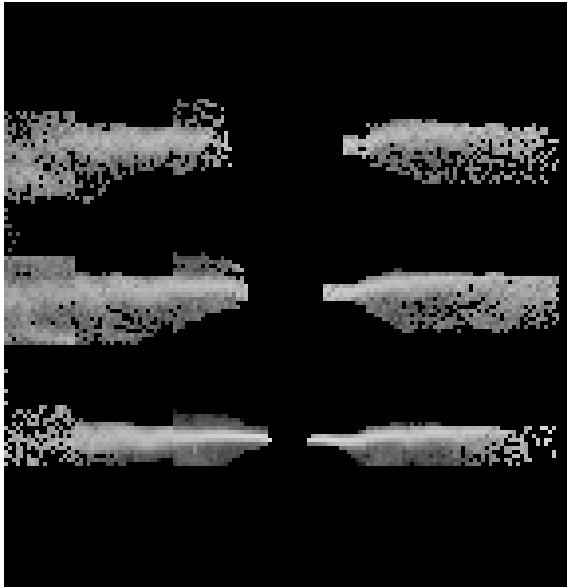


2.5.3 Slot 2

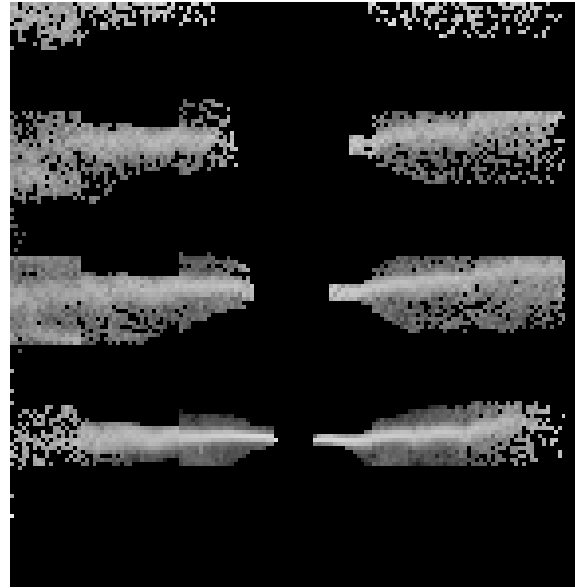


3 Gratings

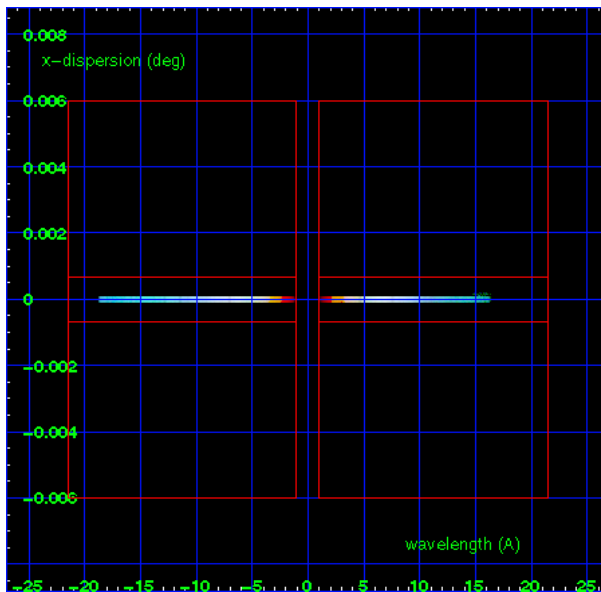
3.1 HEG Arm



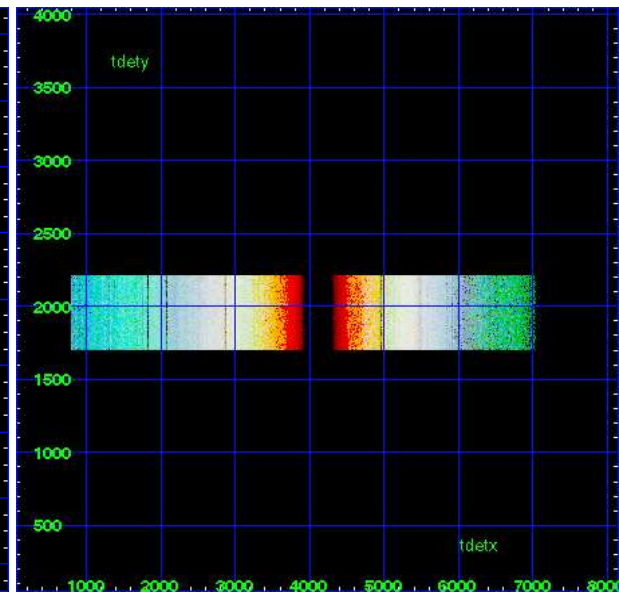
HEG Order Sort 123



HEG Order Sort ALL

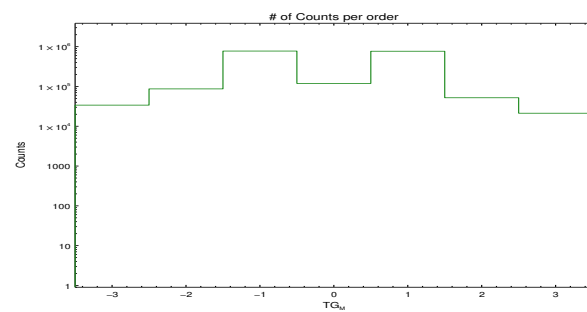


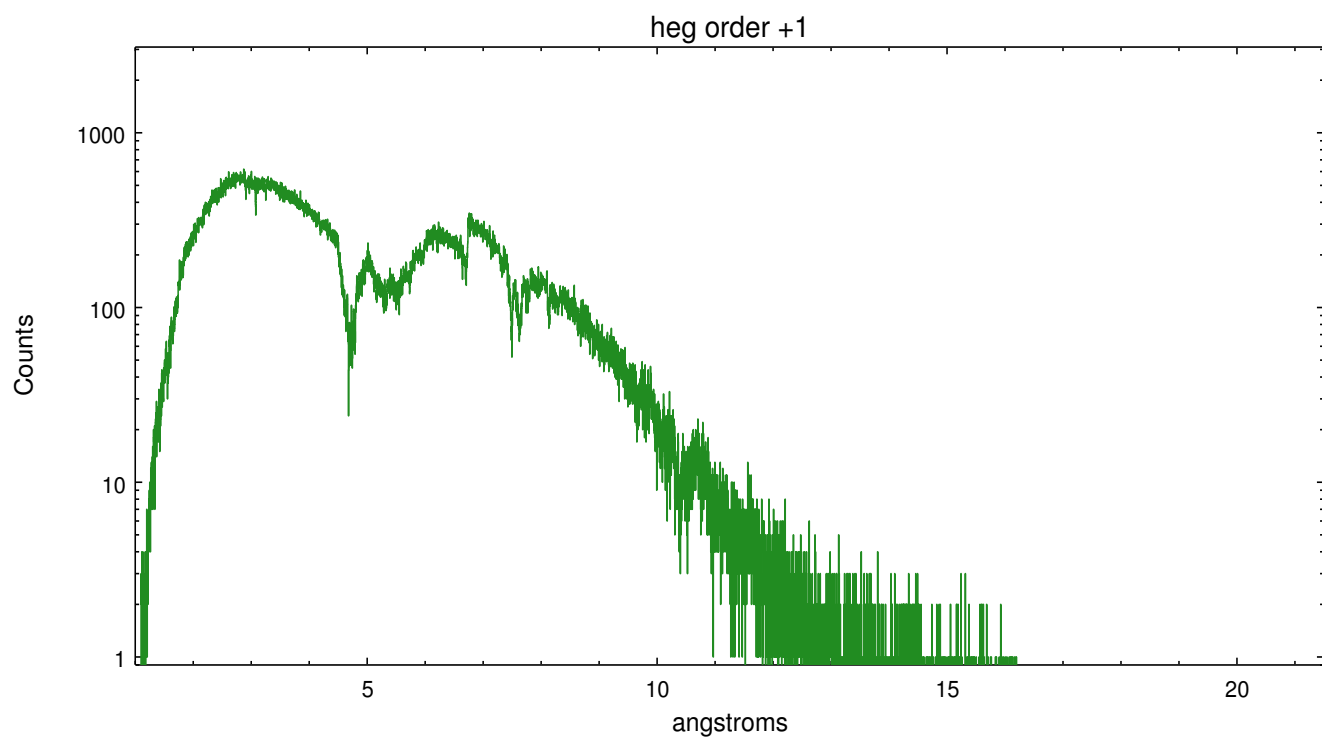
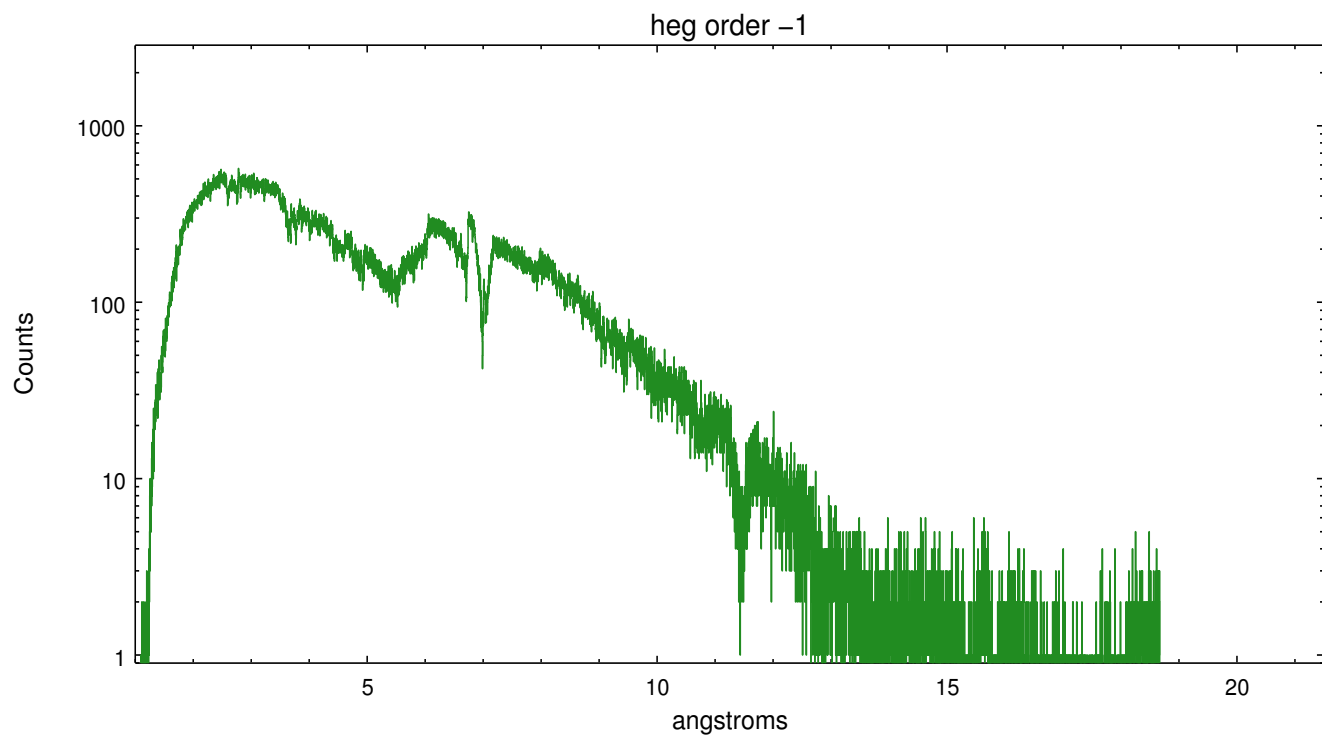
Spot Image HEG



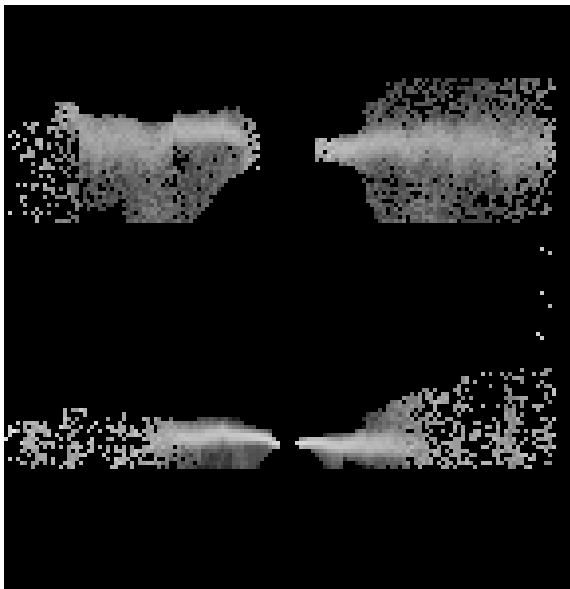
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	33922	86907	775498	119206	767169	52058	21240

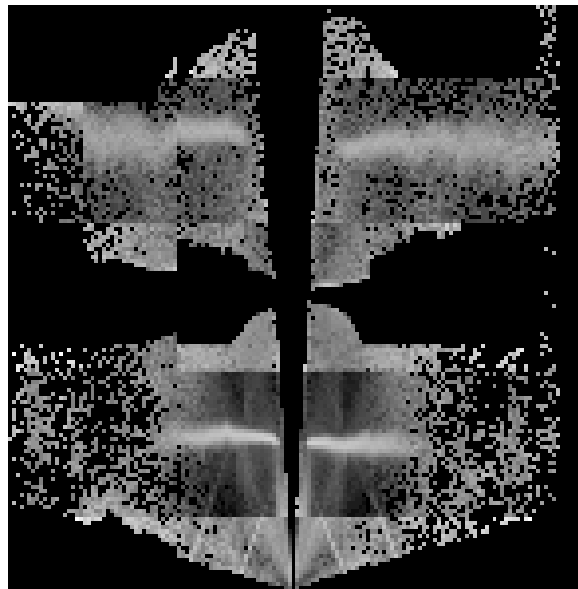




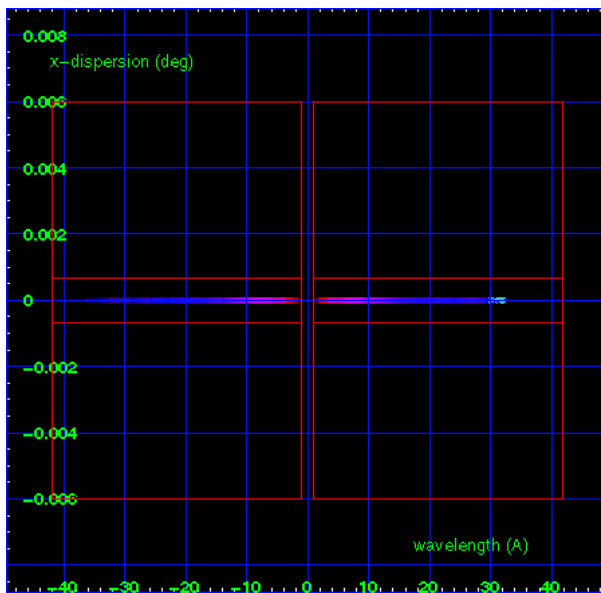
3.2 MEG Arm



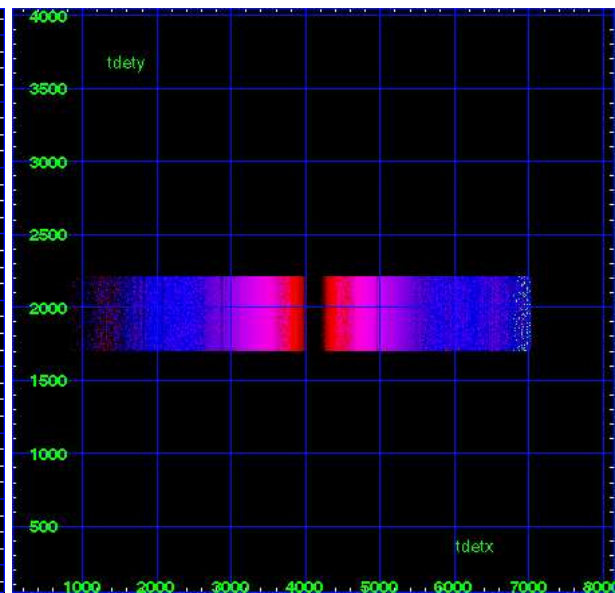
MEG Order Sort 123



MEG Order Sort ALL

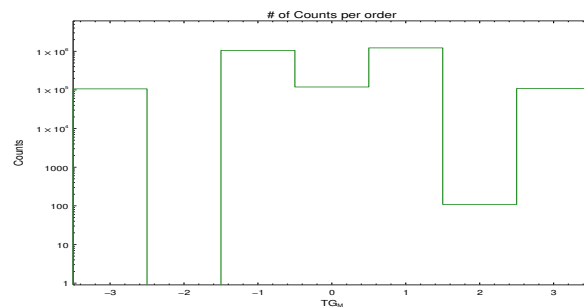


Spot Image MEG

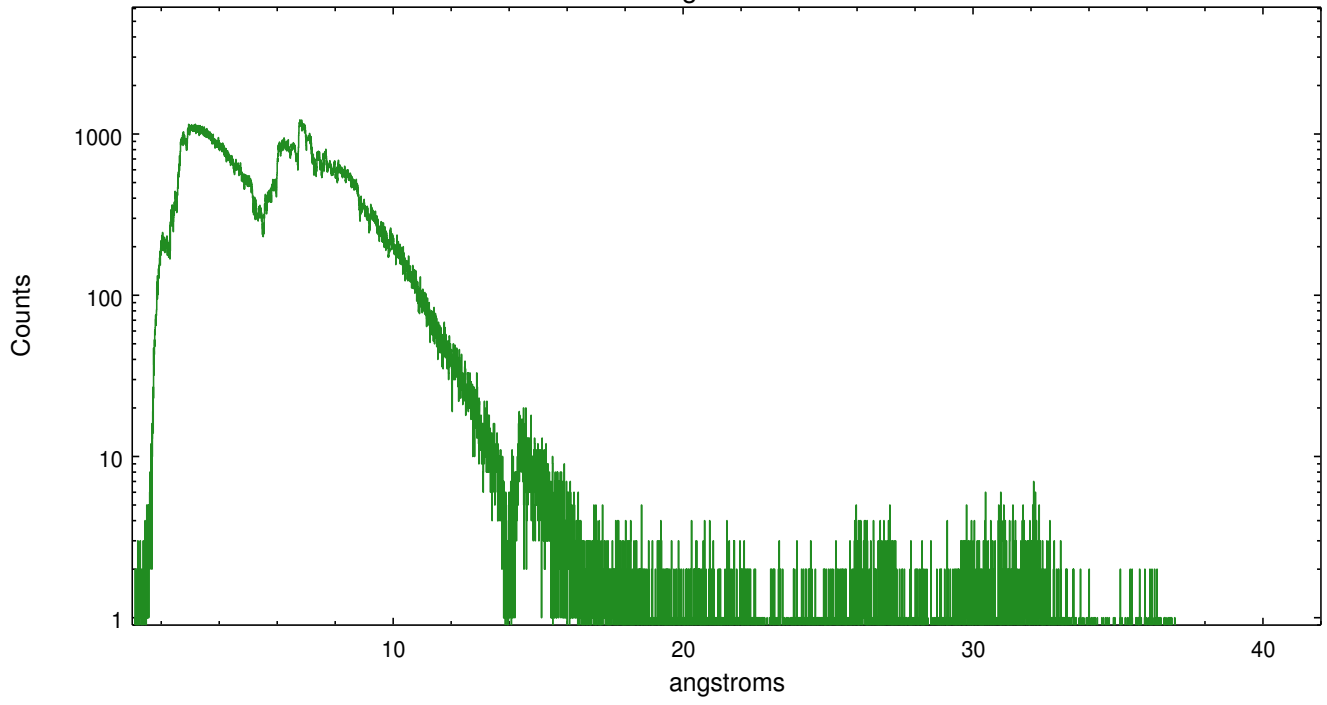


Full Detector MEG

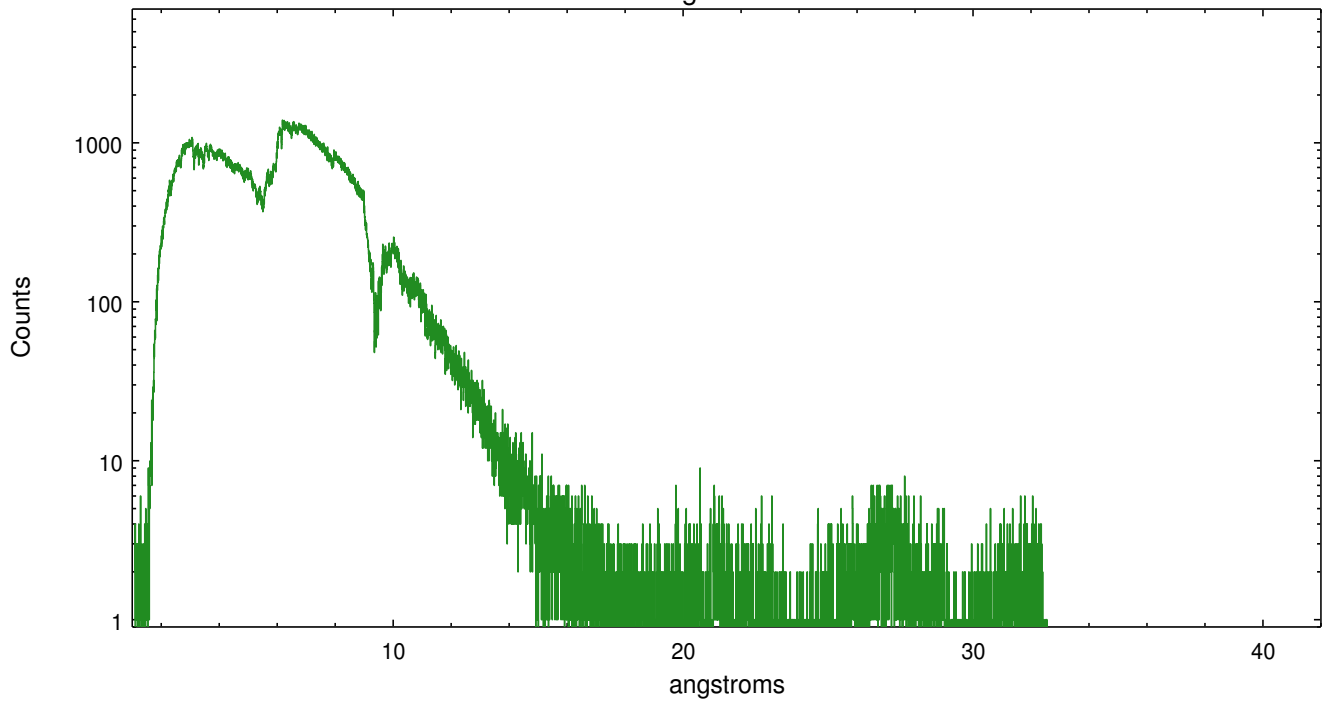
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	106616	0	1051333	119206	1224947	109	108742



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.842743272662

A.2 Comments

For ACIS/CC-mode w/ HETG, with no SIM-Z offset, there are no MEG even order counts. MEG even orders overlap with HEG orders in energy, but MEG even order efficiencies are very low. Since HEG and MEG cannot be spatially separated, events are preferentially assigned to HEG. (MEG odd orders can be resolved.) For observations with a SIM-Z offset, MEG negative and MEG positive orders will be missing (off the array), and remove some of the ambiguity.