

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 15494 - L2 Version 1
Chandra X-Ray Center

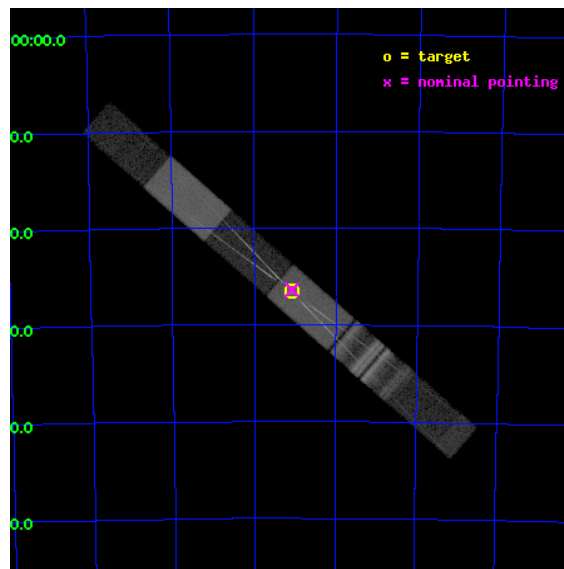
L2 Processing Date : Sep 3 2012

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1 Front

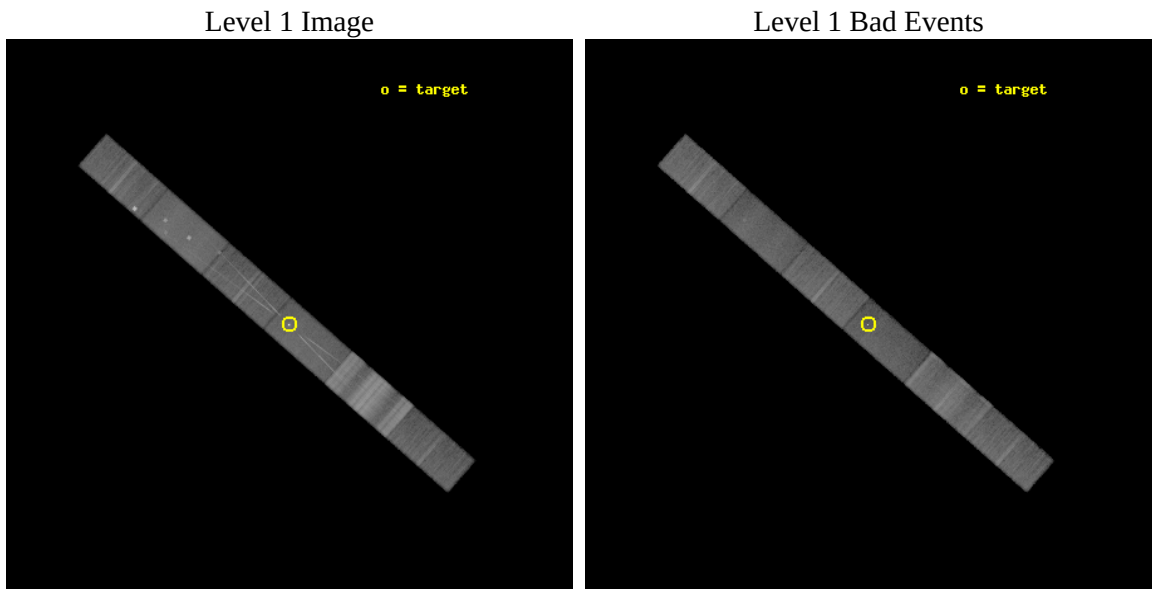
seq_num	401302	Sequence number
obs_id	15494	Observation id
title	The Wind and Warp of SMC X-1	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	SMC X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	19.271667	Observer's specified target RA [deg]
dec_targ	-73.442944	Observer's specified target Dec [deg]
ra_nom	19.270025026117	Nominal RA [deg]
dec_nom	-73.439956967853	Nominal Dec [deg]
roll_nom	41.155041513353	Nominal Roll [deg]
revision	1	Processing version of data
ontime	36046.799747288	Sum of GTIs [s]
livetime	35197.100336804	Livetime [s]
ontime4	36046.799747288	Sum of GTIs [s]
ontime5	36046.799747288	Sum of GTIs [s]
ontime6	36046.799747288	Sum of GTIs [s]
ontime7	36046.799747288	Sum of GTIs [s]
ontime8	36045.058707237	Sum of GTIs [s]
ontime9	36046.799747288	Sum of GTIs [s]
l2events	270429	Number of level 2 events



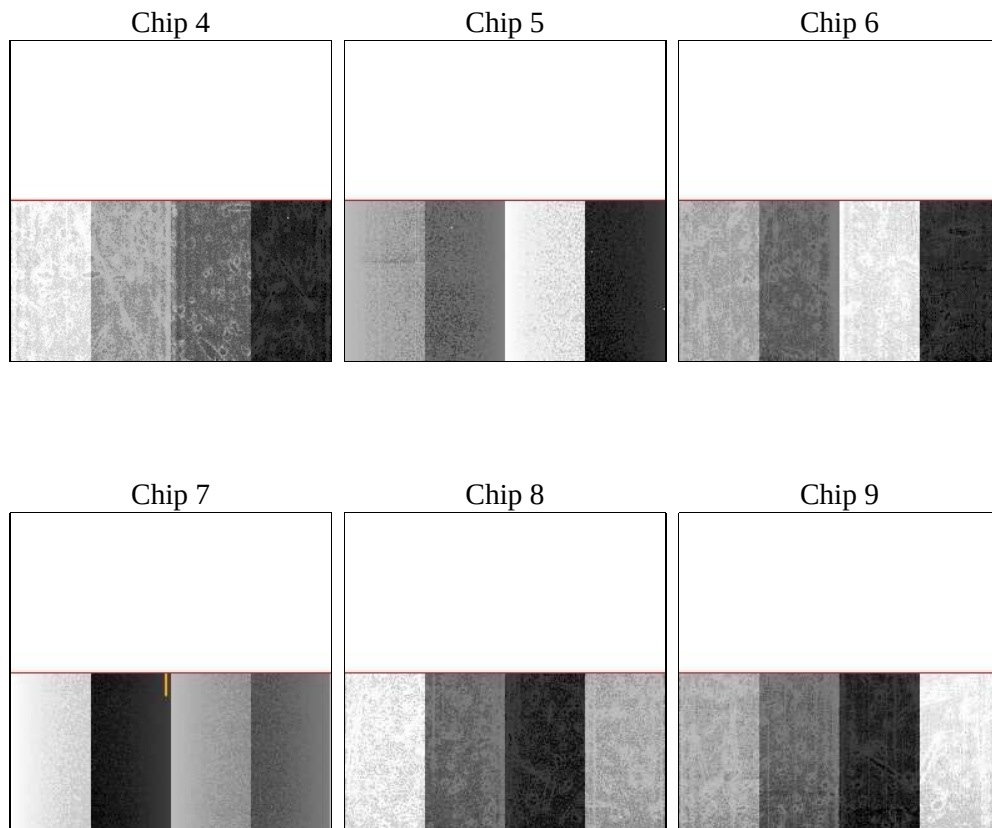
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	36046.799747288	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	36046.799747288	Sum of GTIs [s]
date	2012-09-03T05:59:44	Date and time of file creation	ontime5	36046.799747288	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	36046.799747288	Sum of GTIs [s]
			ontime7	36046.799747288	Sum of GTIs [s]
			ontime8	36045.058707237	Sum of GTIs [s]
			ontime9	36046.799747288	Sum of GTIs [s]
			l1events	1092061	Number of level 1 events

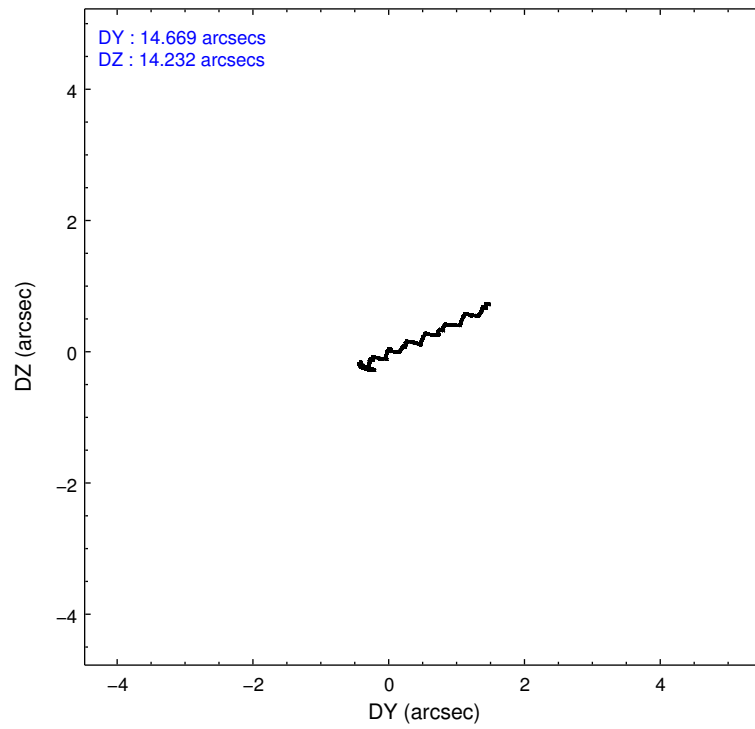
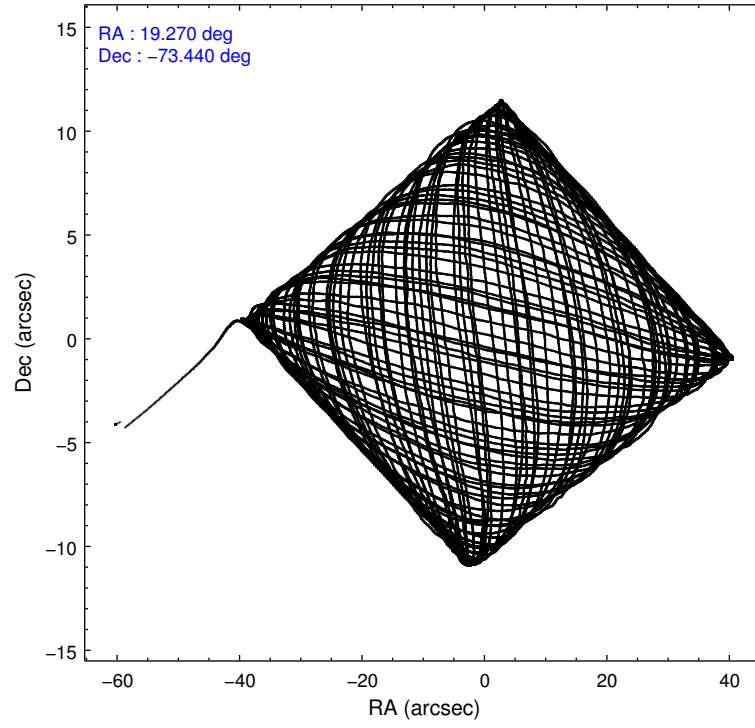
2.1.4 Events

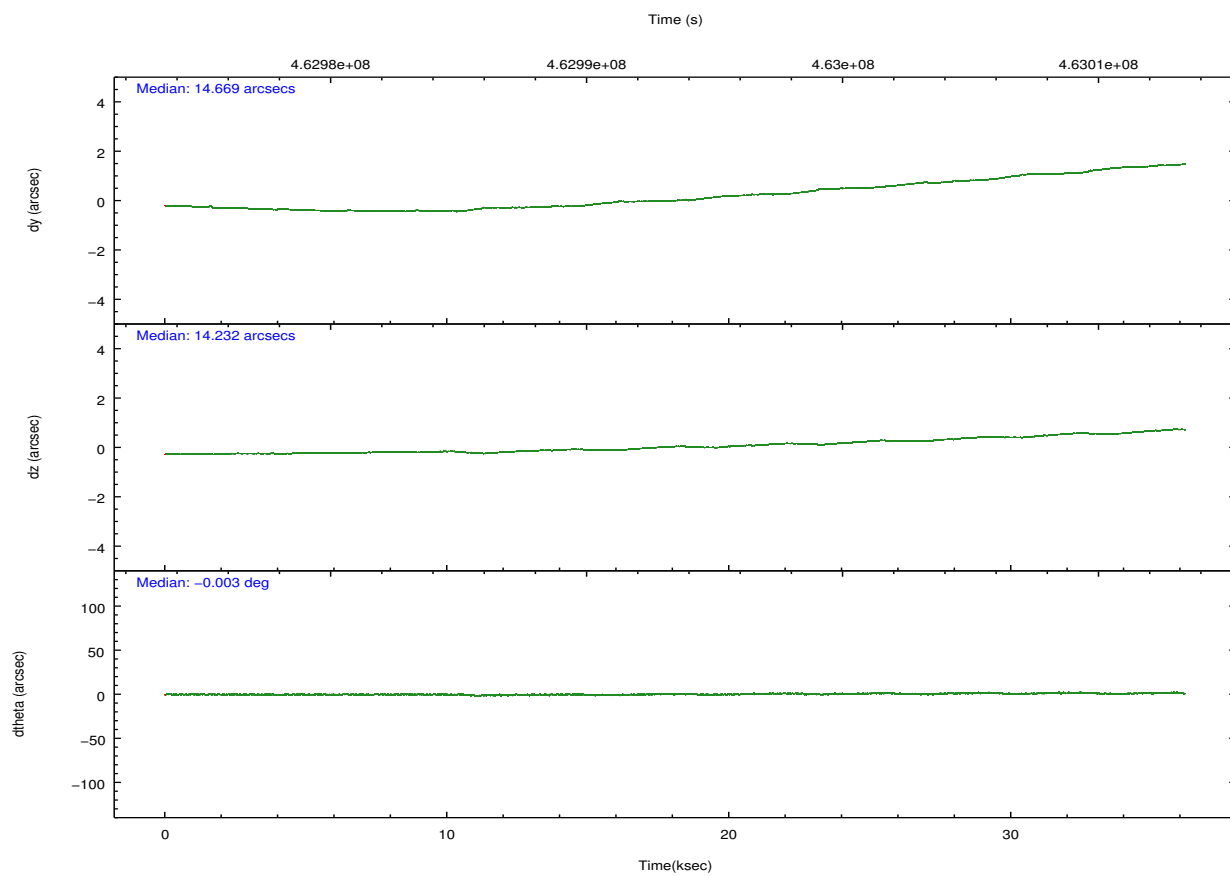
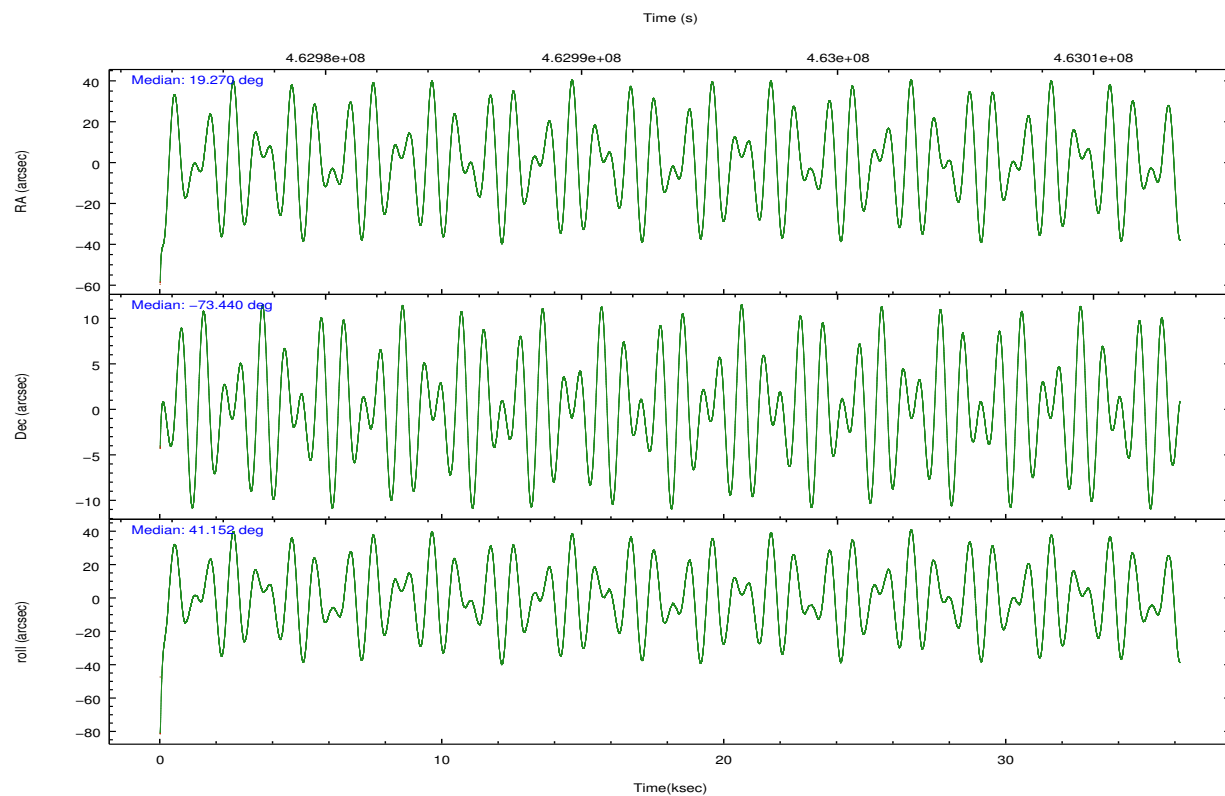
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	150719	177004	140241	168435	336131	119531	grade 0 events	17505	13377	13183	11377	48862	5590
rejected events	119230	87292	112999	78405	145644	103763		11%	7%	9%	6%	14%	4%
rejected %	79%	49%	80%	46%	43%	86%	grade 1 events	143	590	72	477	305	66
								0%	0%	0%	0%	0%	0%
							grade 2 events	7683	25035	6490	20476	30450	4128
								5%	14%	4%	12%	9%	3%
							grade 3 events	1675	4871	2030	8727	32036	1556
								1%	2%	1%	5%	9%	1%
							grade 4 events	1656	4794	1950	8609	29079	1467
								1%	2%	1%	5%	8%	1%
							grade 5 events	4794	13403	4917	15325	9399	5167
								3%	7%	3%	9%	2%	4%
							grade 6 events	2974	41647	3589	40848	50086	3027
								1%	23%	2%	24%	14%	2%
							grade 7 events	114289	73287	108010	62596	135914	98530
								75%	41%	77%	37%	40%	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	19.240282	19.27002502611731	CCD I2 on	N	N
[deg] Pointing Dec	-73.465955	-73.43995696785339	CCD I3 on	N	N
[deg] Pointing Roll	40.969920	41.15504151335317	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)	462975539.184000	462974579.60696	CCD S5 on	Y	Y
Observation start date	2012-09-02T12:17:52	2012-09-02T12:02:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	463011539.184000	463012234.00898	On-chip summing requested	N	N
Observation end date	2012-09-02T22:17:52	2012-09-02T22:30:34	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



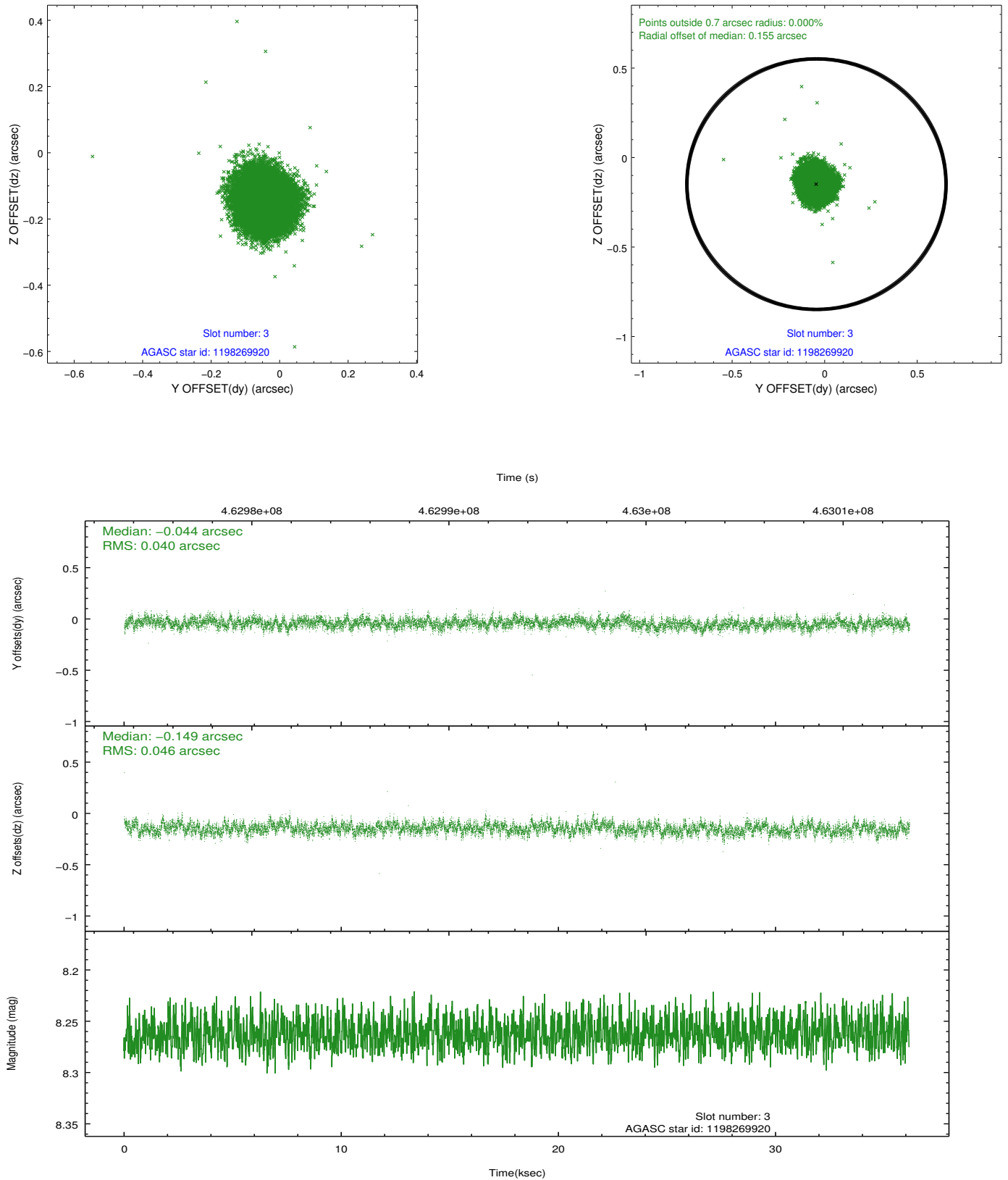


Slot Statistics

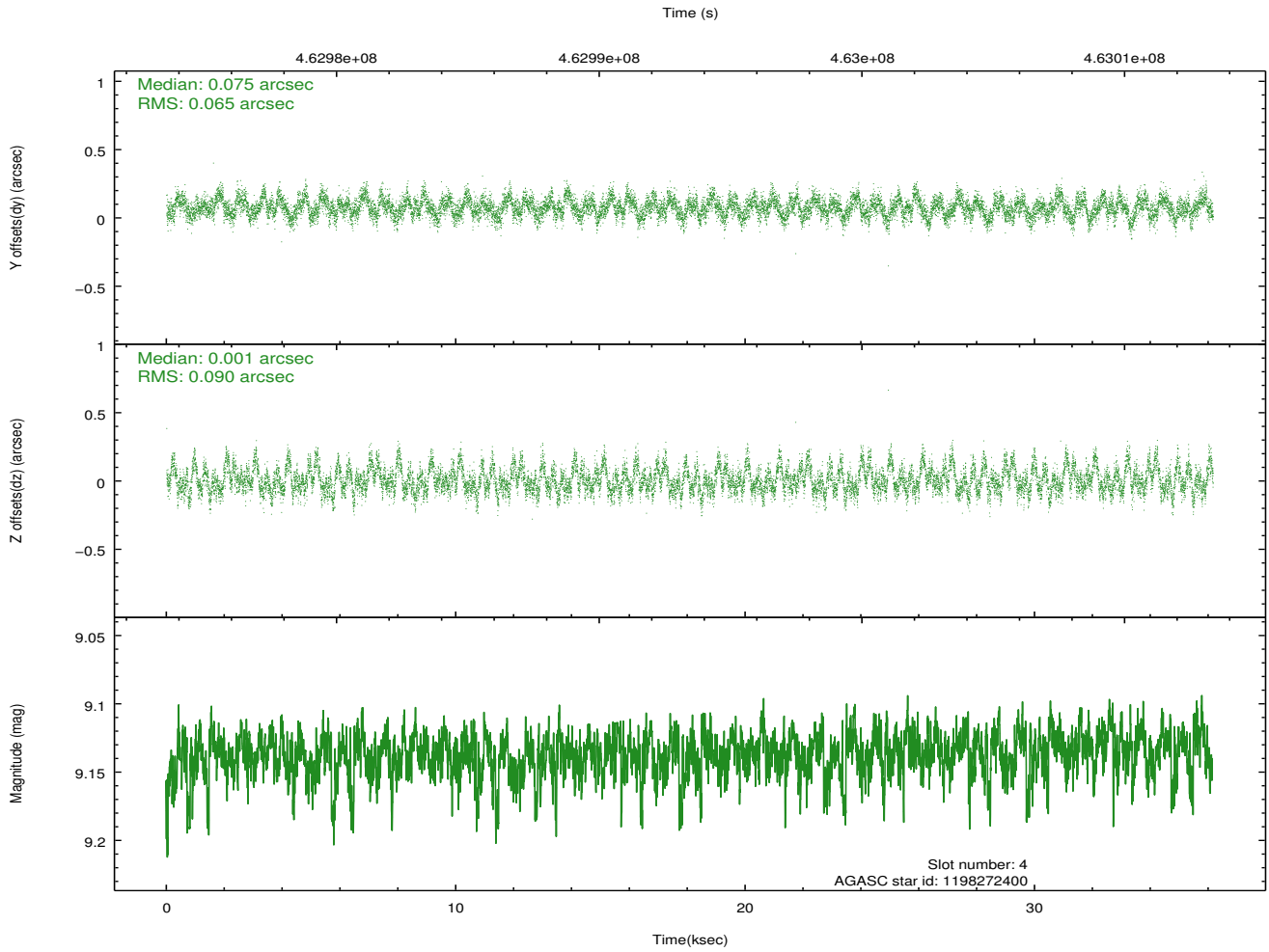
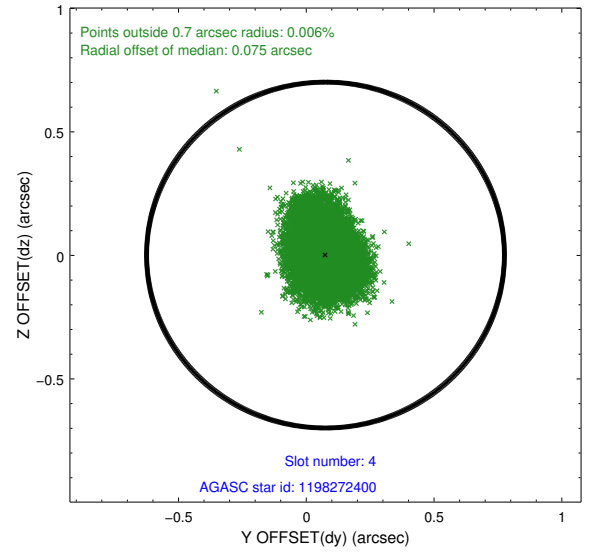
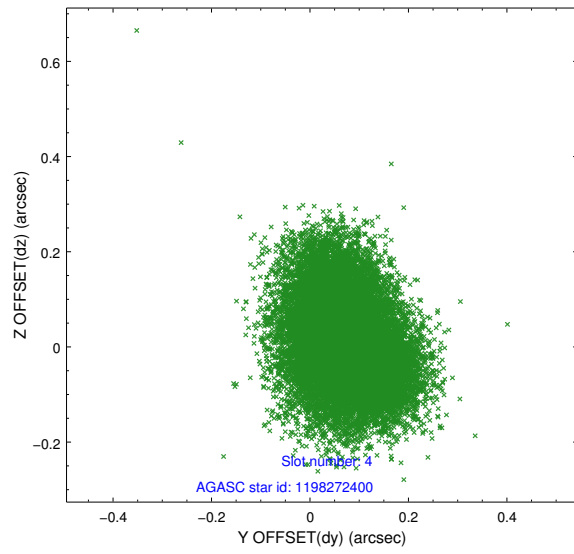
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.02	8821	-0.119	-0.127	0.014	0.027	0.000000	0.000000	-767.58	-1862.43
1	FID	ACIS-S-4	7.09	8821	0.277	0.092	0.010	0.016	0.000000	0.000000	2146.12	46.15
2	FID	ACIS-S-5	7.15	8821	-0.190	0.043	0.013	0.024	0.000000	0.000000	-1820.41	39.89
3	GUIDE	1198269920	8.26	17637	-0.044	-0.149	0.065	0.103	20.316466	-73.033728	1867.59	425.97
4	GUIDE	1198272400	9.14	17627	0.075	0.001	0.118	0.193	20.411923	-73.620598	525.81	-1208.69
5	GUIDE	1198273408	9.31	17624	-0.092	-0.008	0.105	0.168	17.532323	-73.621495	-1691.96	695.16
6	GUIDE	1198276744	8.59	17632	0.207	0.028	0.077	0.121	19.489008	-74.153493	-1438.22	-2029.37
7	GUIDE	1198282824	7.30	17638	-0.150	0.114	0.076	0.120	18.044095	-73.907062	-1949.06	-425.80

2.4 Star Slots

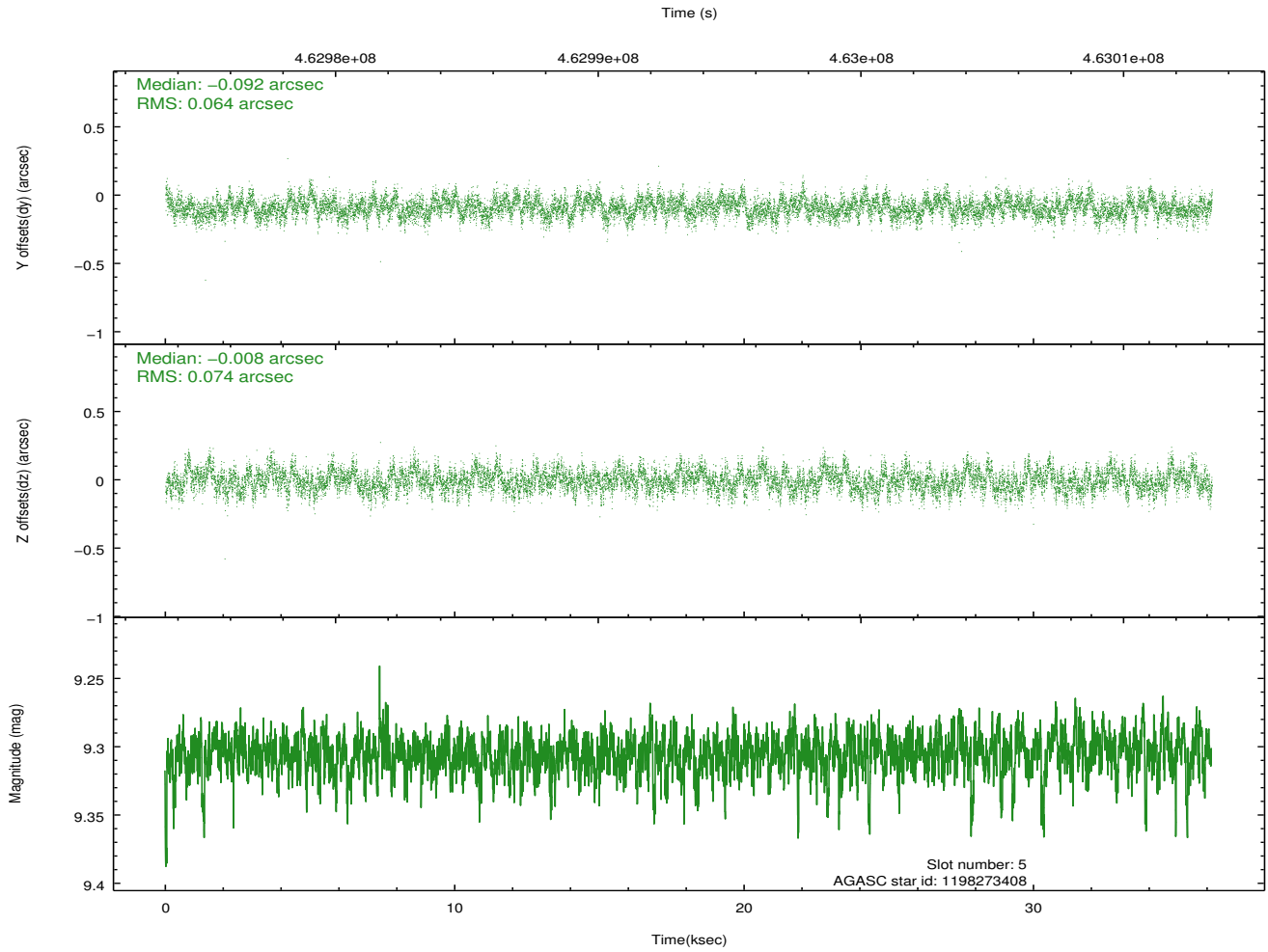
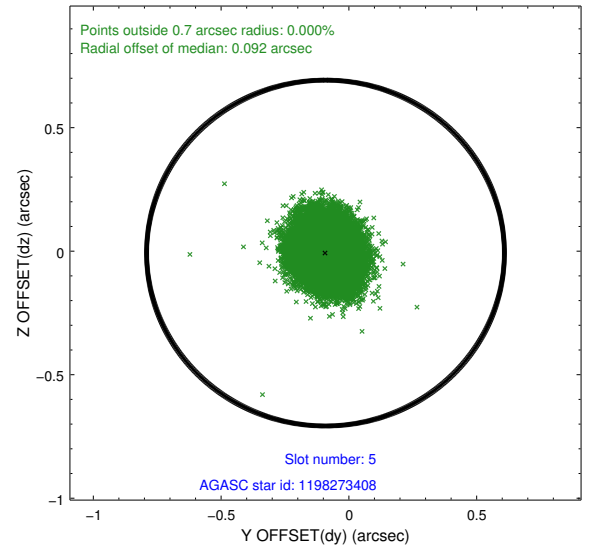
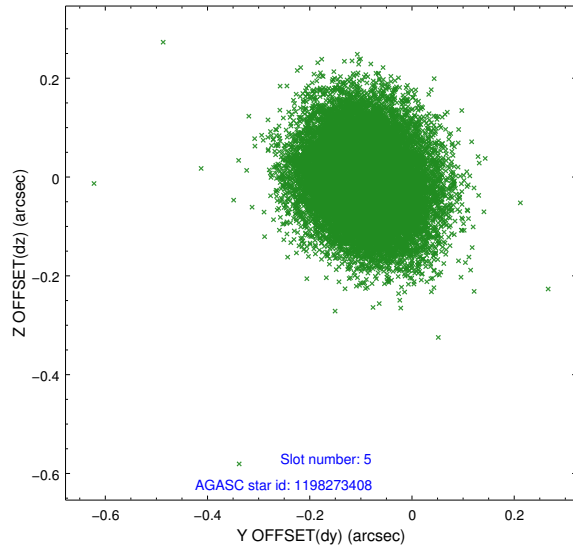
2.4.1 Slot 3



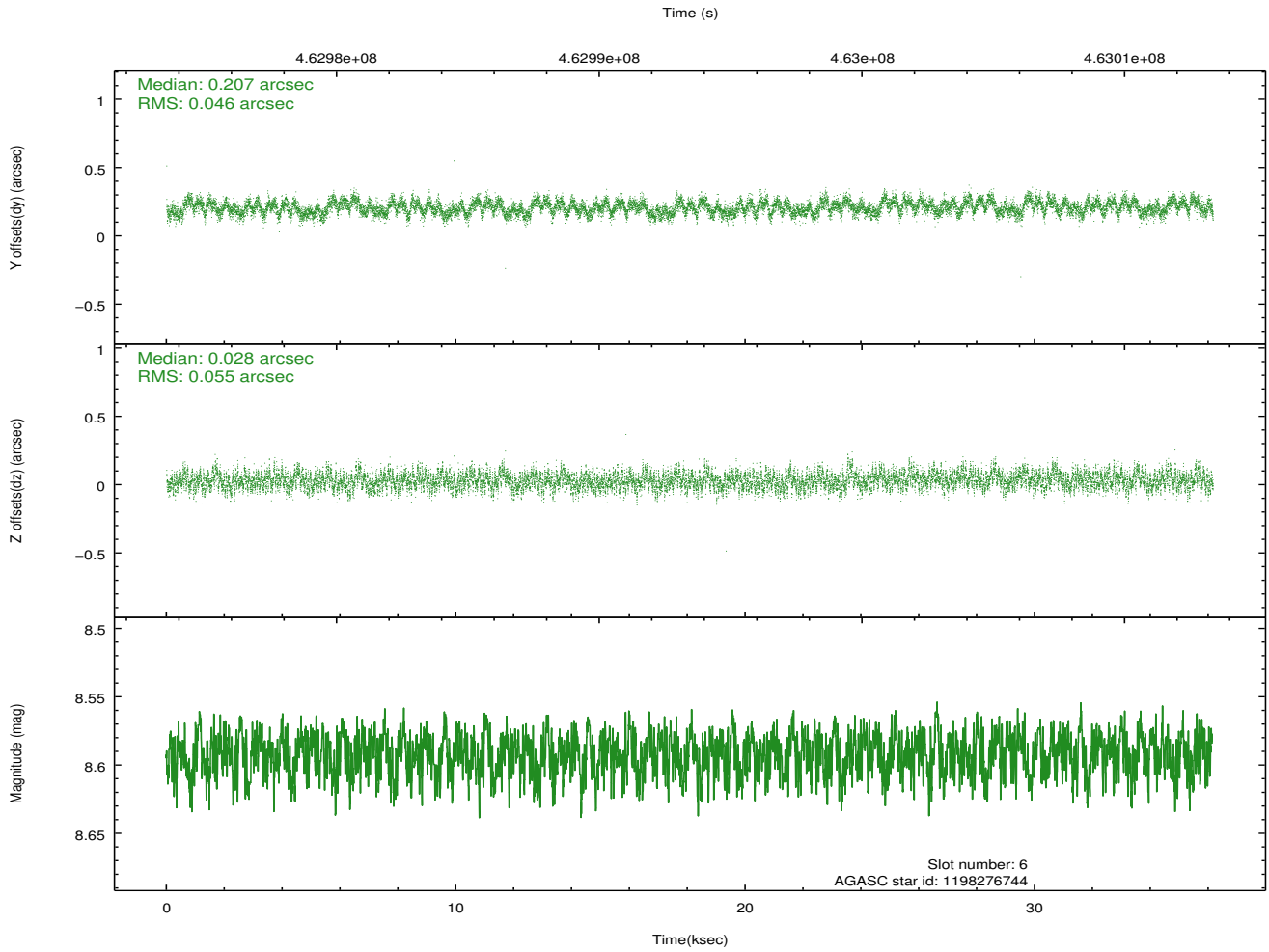
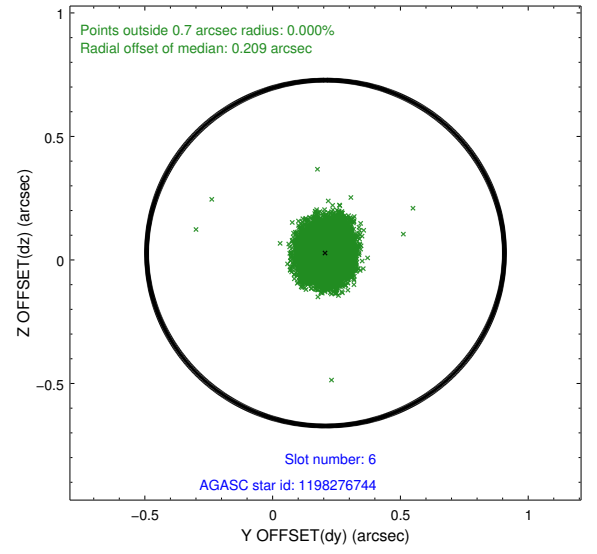
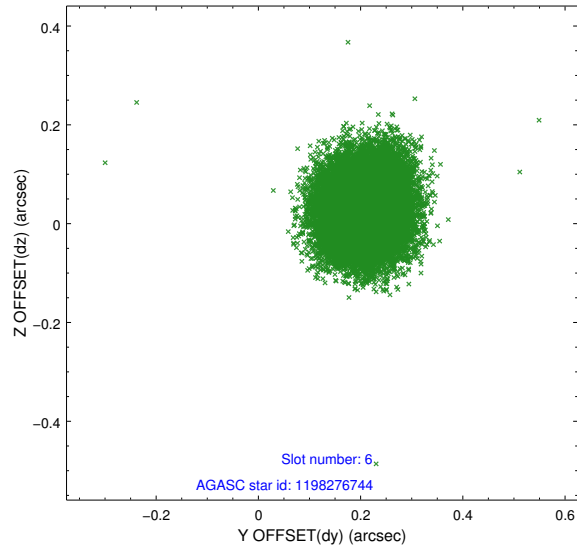
2.4.2 Slot 4



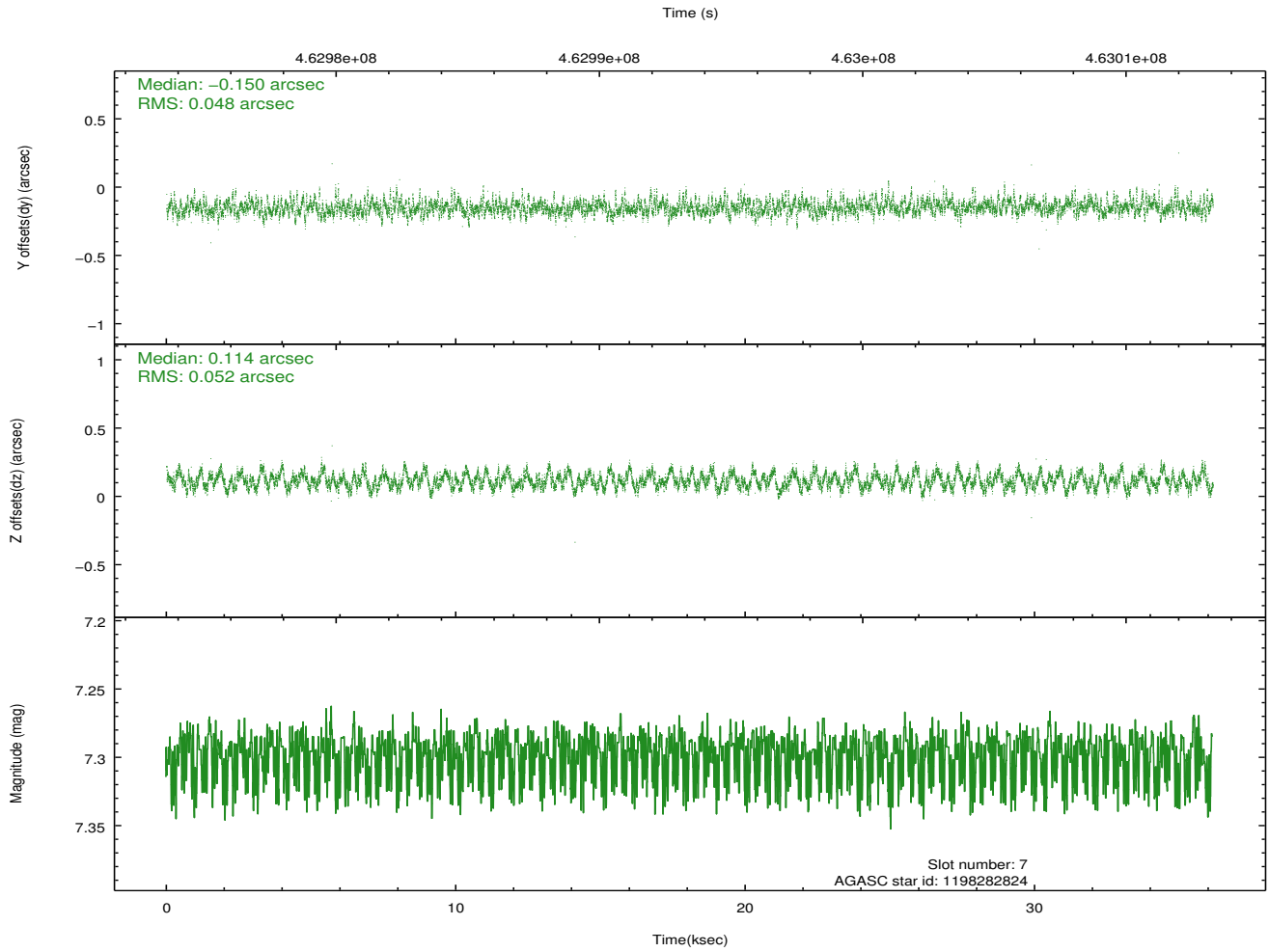
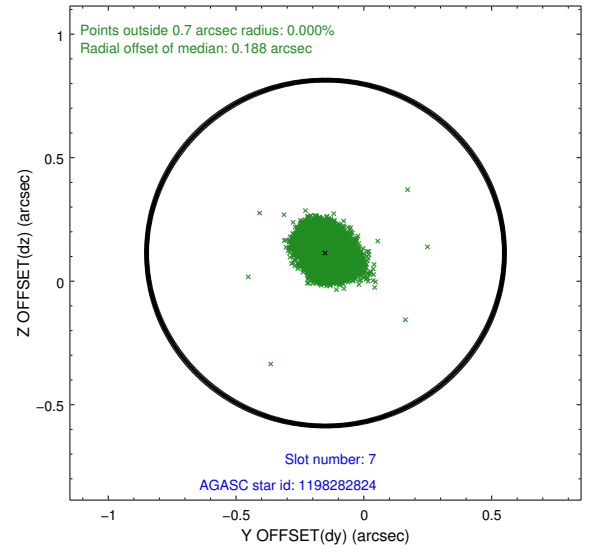
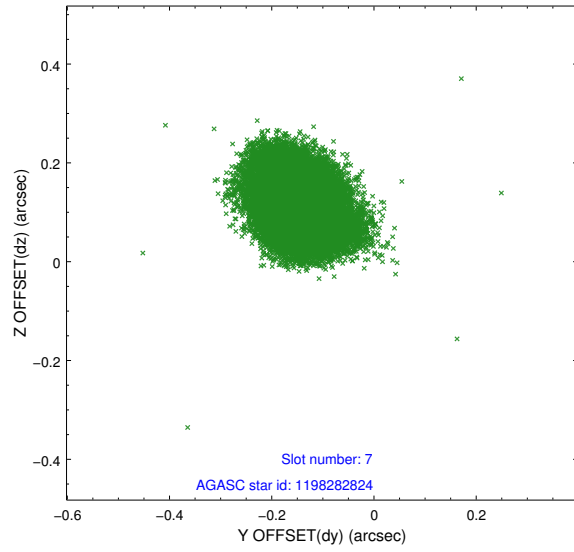
2.4.3 Slot 5



2.4.4 Slot 6

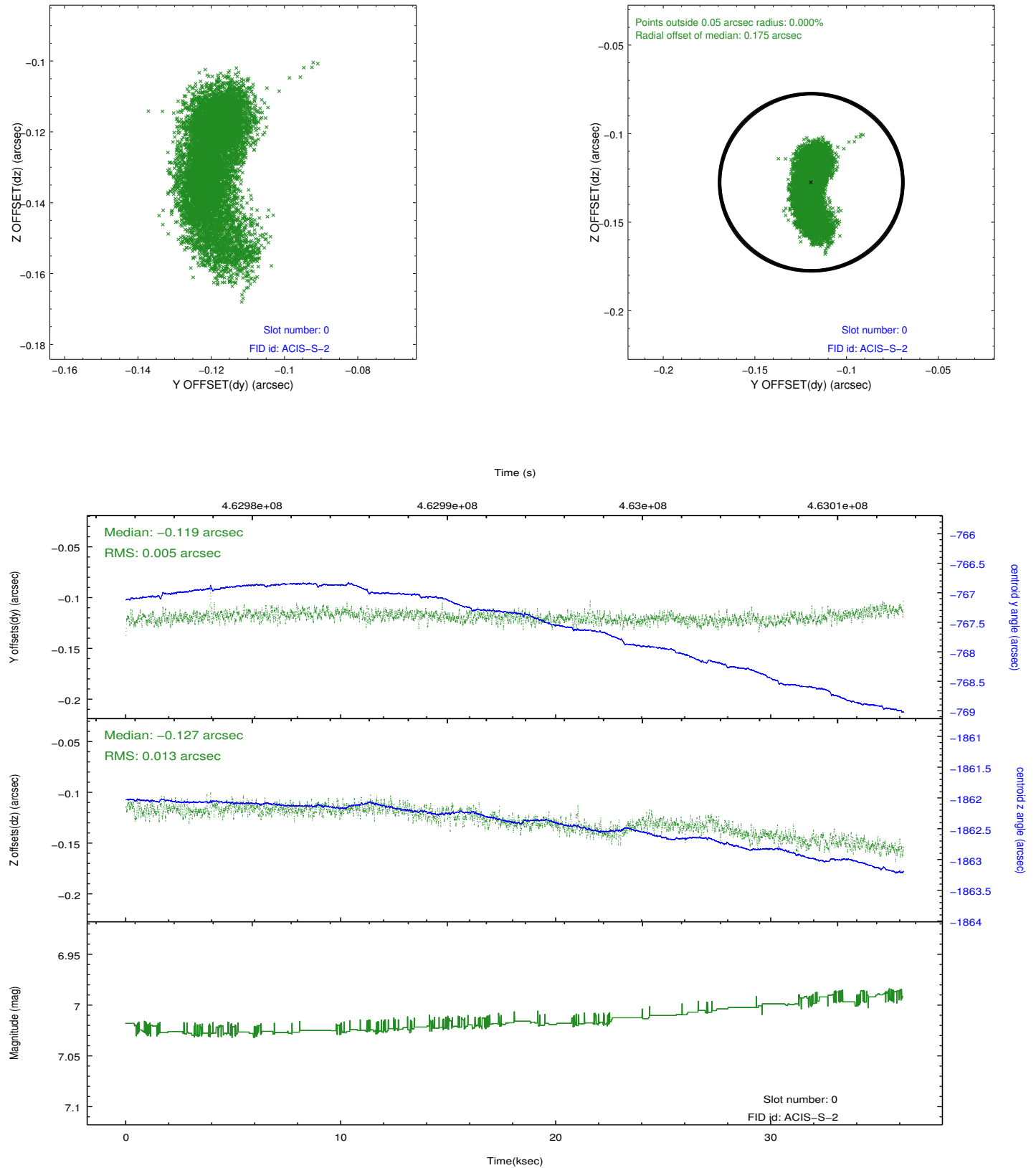


2.4.5 Slot 7

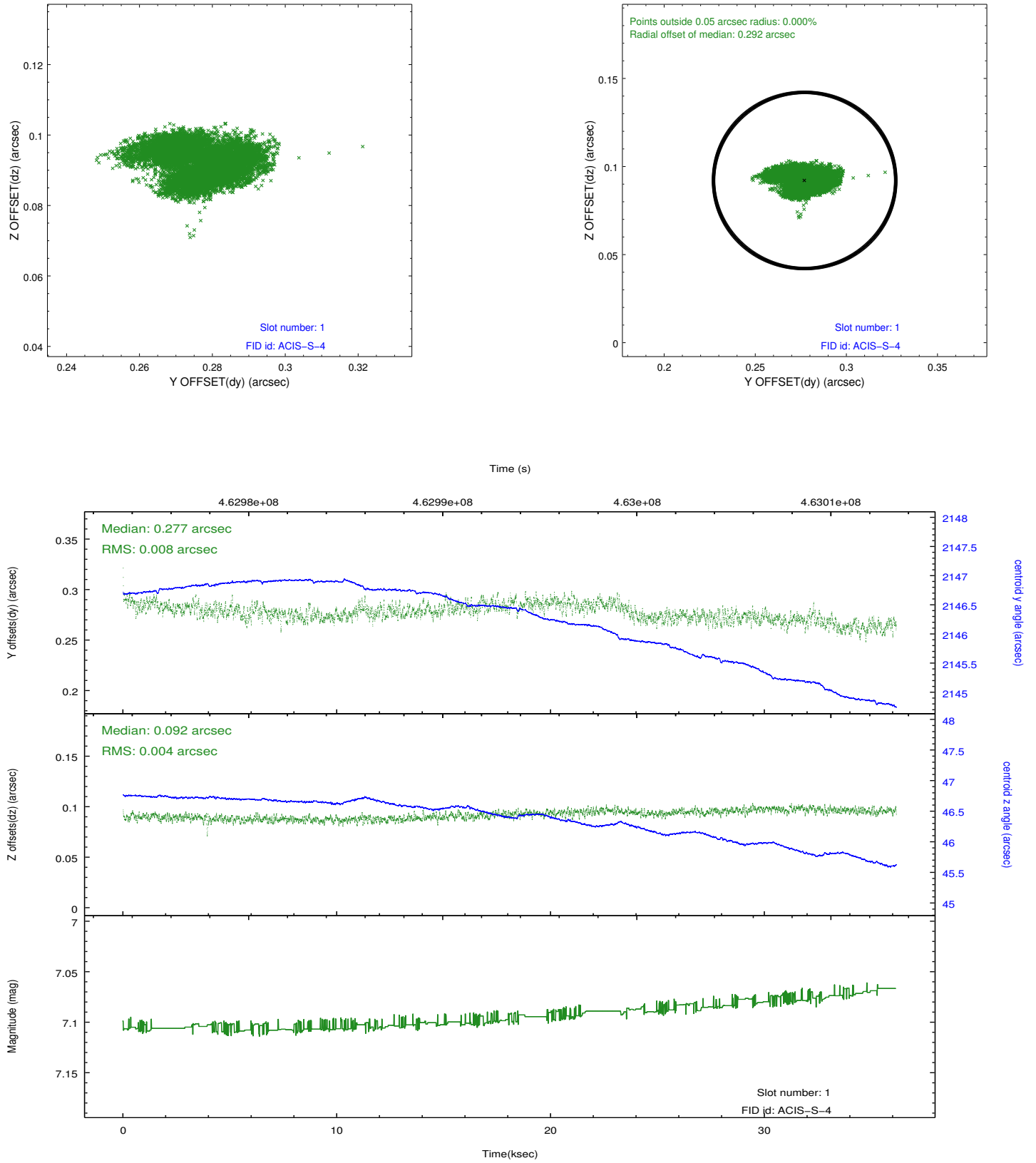


2.5 FID Slots

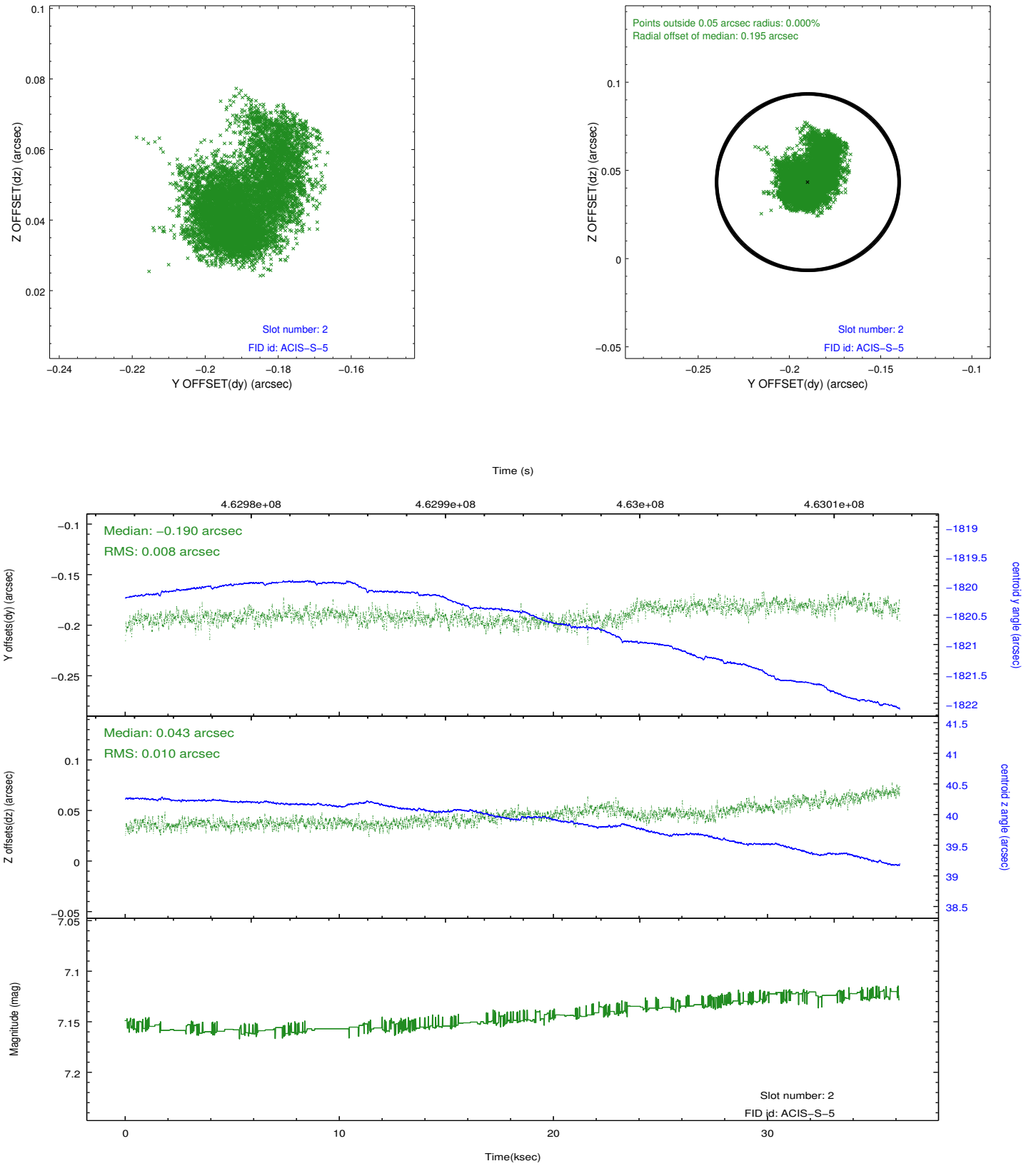
2.5.1 Slot 0



2.5.2 Slot 1

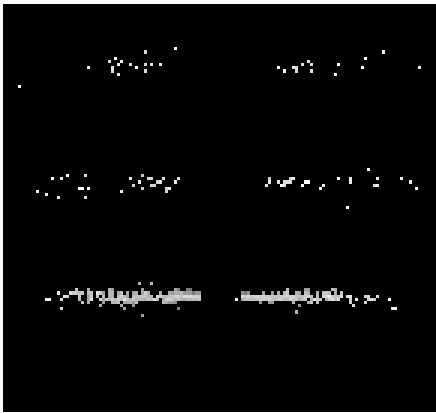


2.5.3 Slot 2

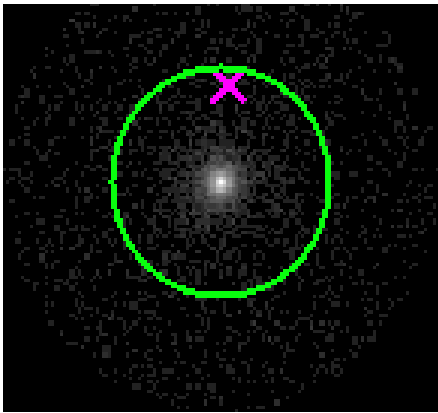


3 Gratings

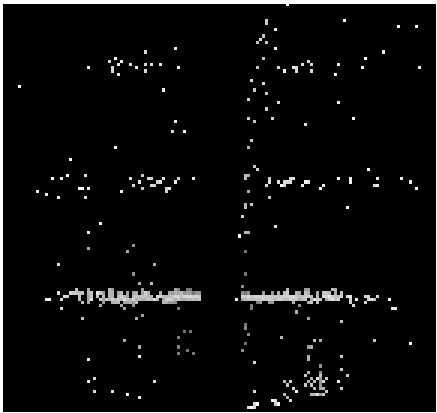
3.1 HEG Arm



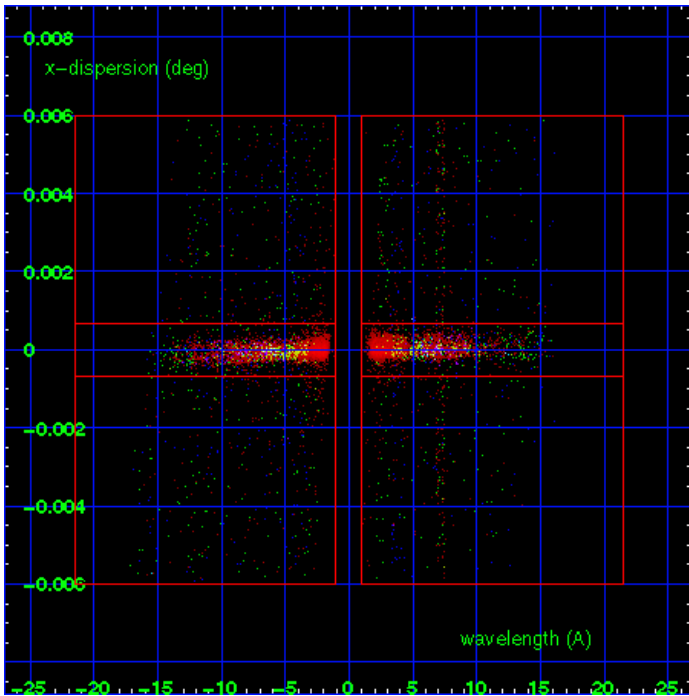
HEG Order Sort 123



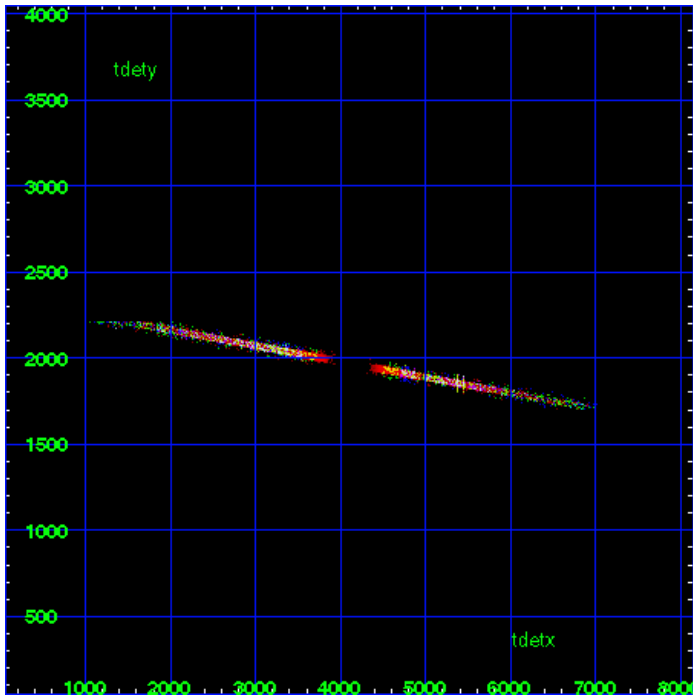
HEG Zero Order



HEG Order Sort ALL

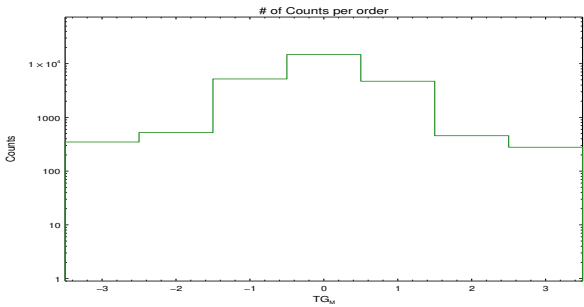


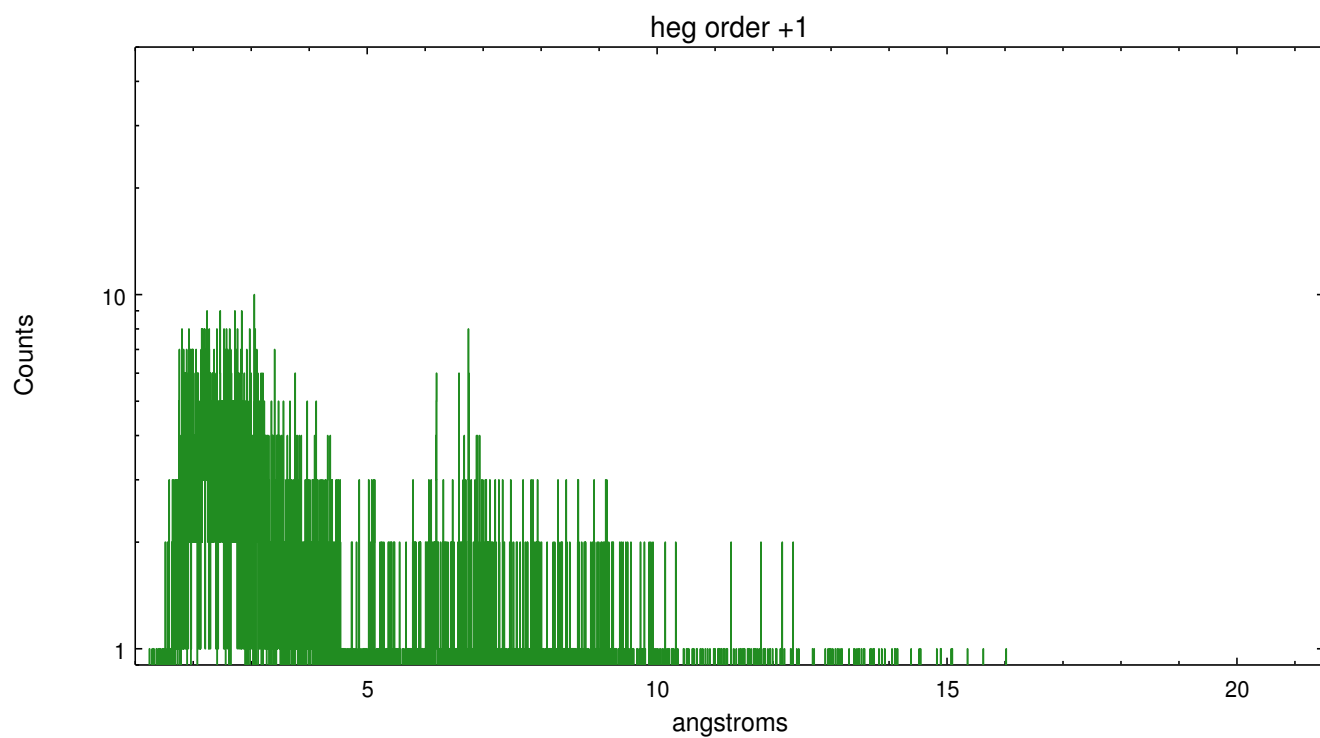
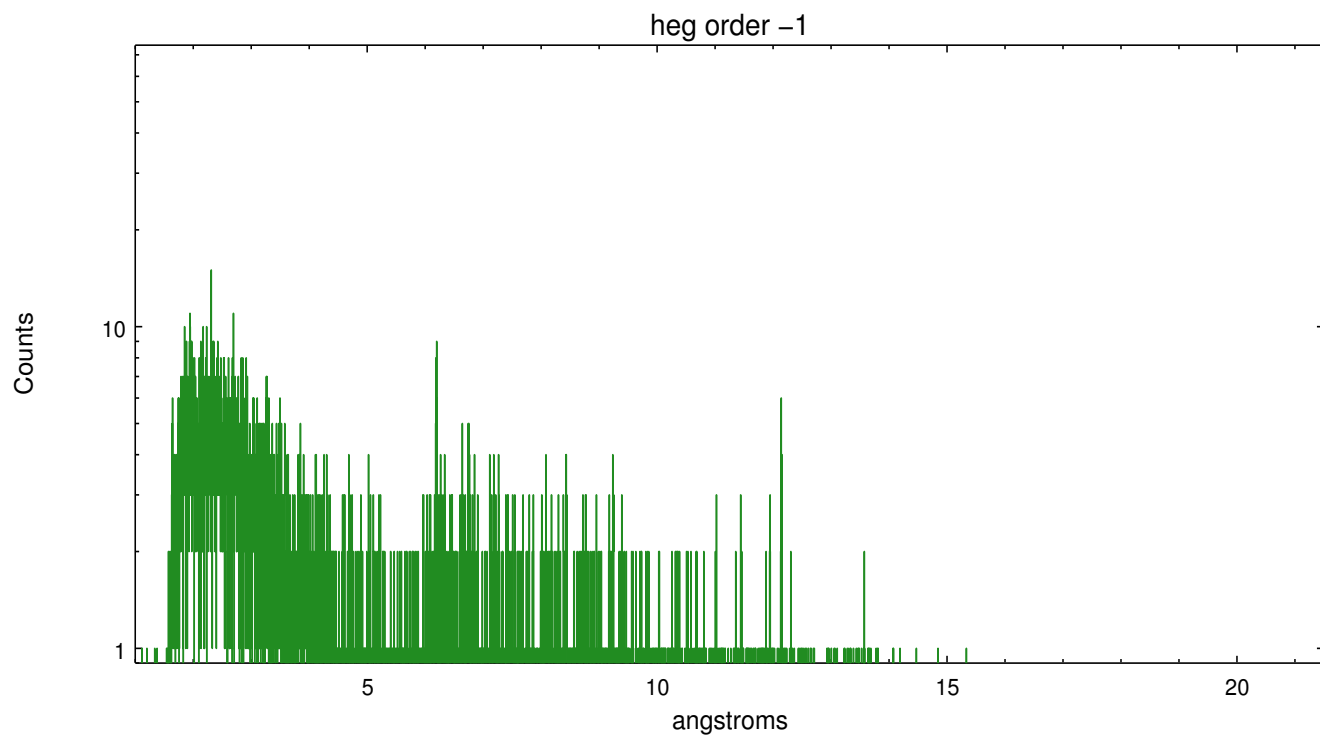
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	348	522	5189	14734	4706	456	278

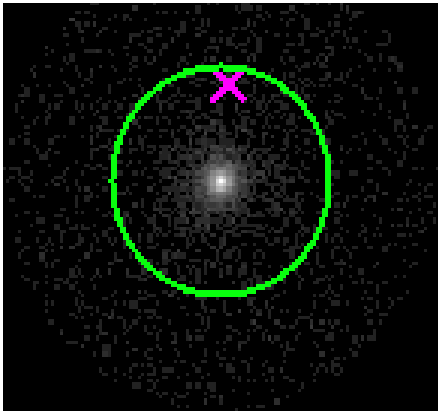




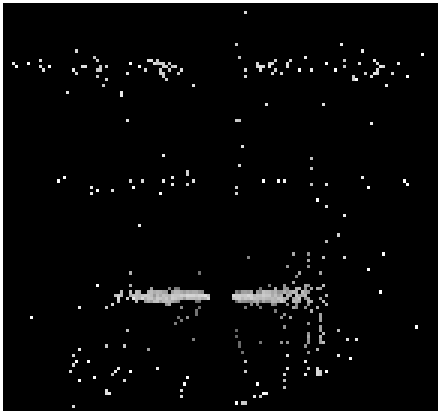
3.2 MEG Arm



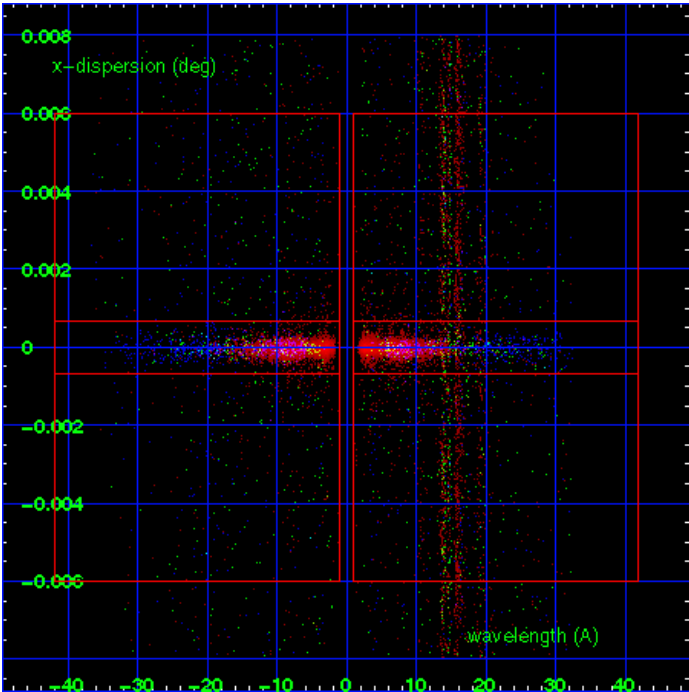
MEG Order Sort 123



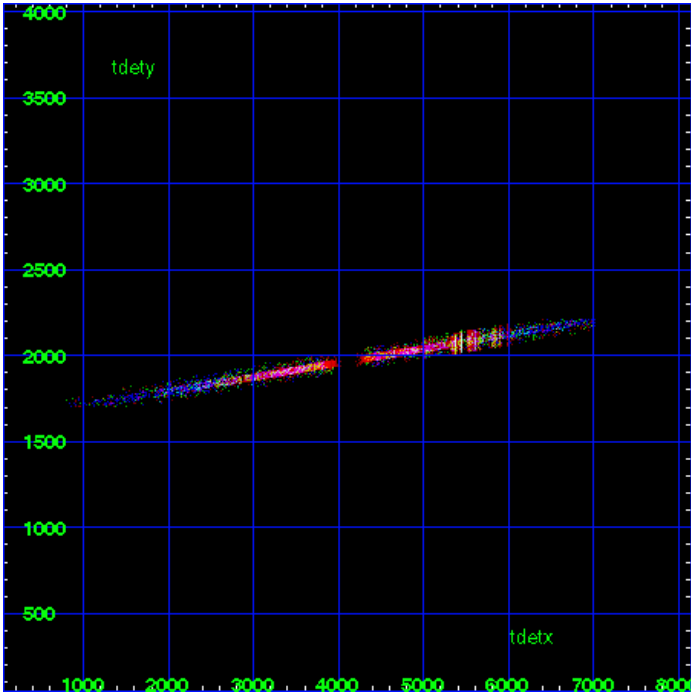
MEG Zero Order



MEG Order Sort ALL

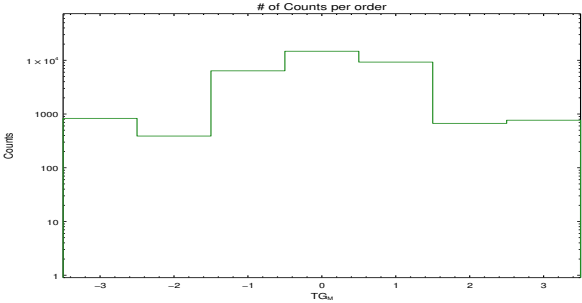


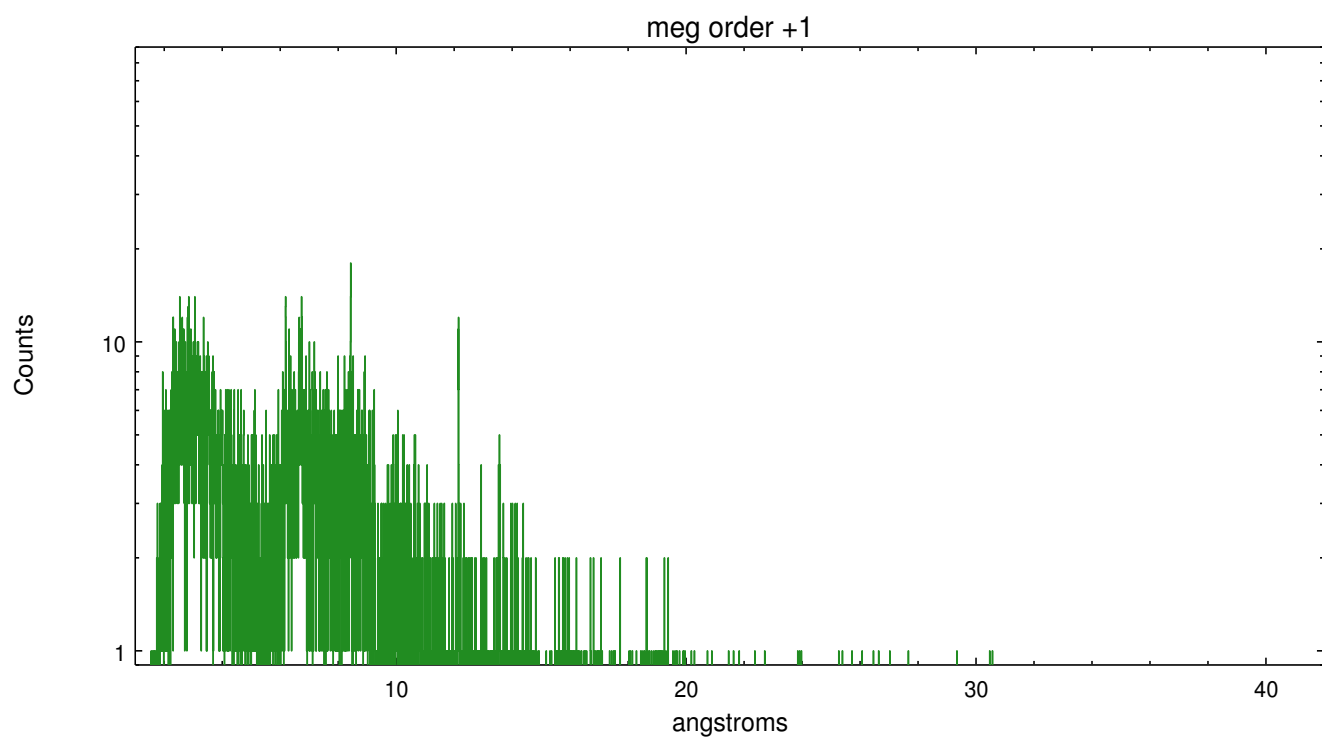
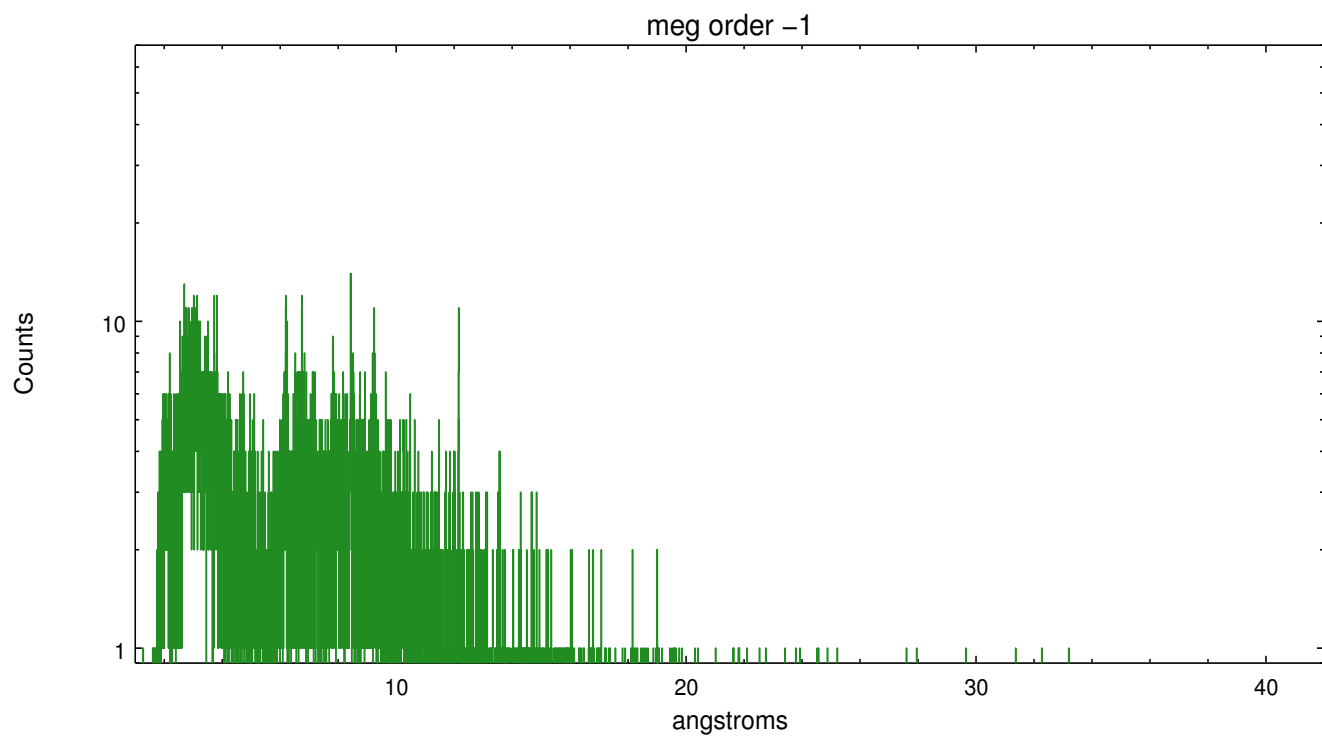
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	830	389	6366	14734	9255	670	767





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.09.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.046799747288

A.2 Comments

Chip ACIS-S4 suffers from an unusually large amplitude of streaks of instrumental origin. The user may want to run the CIAO tool 'destreak' on the Level 2 event data. When using destreak, note that setting 'max' to 1, especially for gratings data, may remove a large fraction of the data. Users should check the output 'timefile' to see what percent of the data was removed. See the CIAO help file for more details.