

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10850 - L2 Version 3
Chandra X-Ray Center

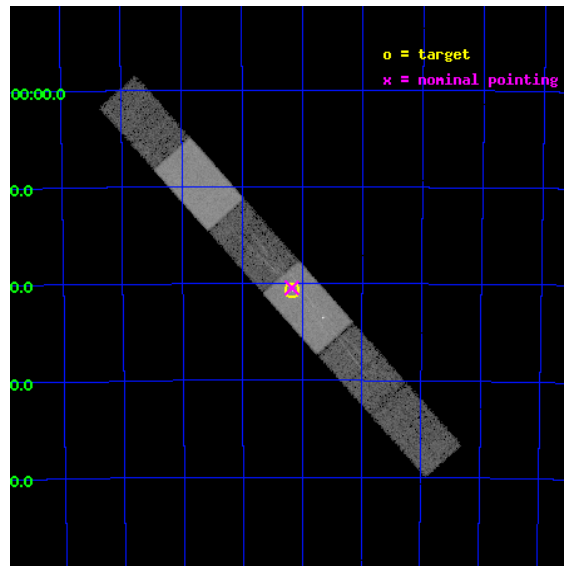
L2 Processing Date : Jun 4 2012

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1 Front

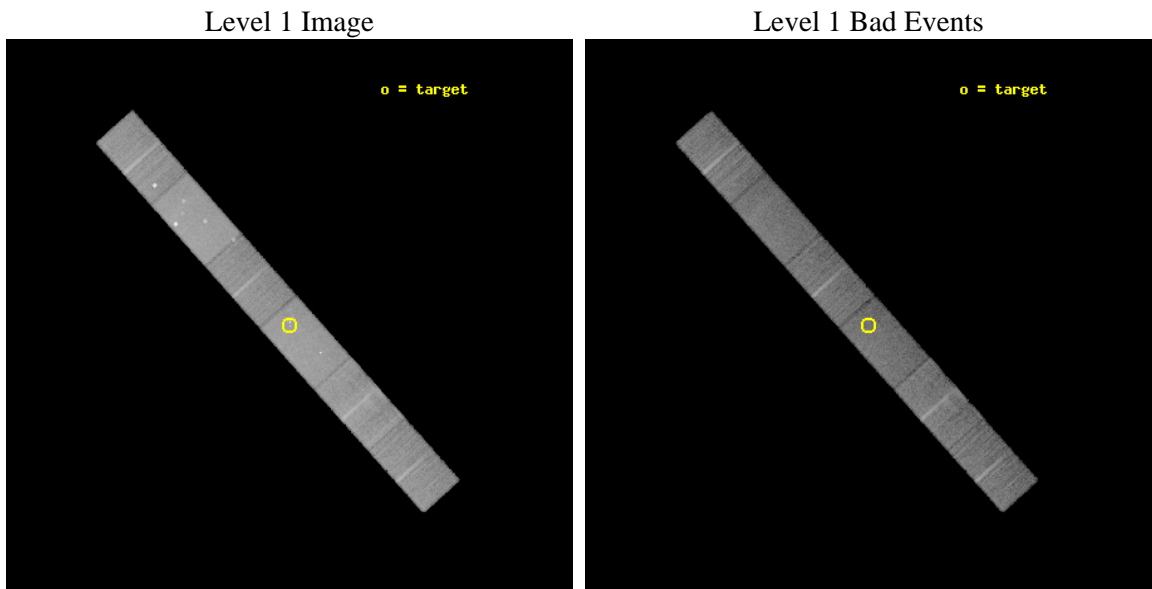
seq_num	501150	Sequence number
obs_id	10850	Observation id
title	A Deep HETG Probe of the CSM Interaction in SN1996cr	Proposal titl
observer	Dr. Franz Bauer	Principal investigator
object	SN1996cr	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	213.291667	Observer's specified target RA [deg]
dec_targ	-65.345694	Observer's specified target Dec [deg]
ra_nom	213.29369316516	Nominal RA [deg]
dec_nom	-65.340933850219	Nominal Dec [deg]
roll_nom	48.158466553672	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14133.188994884	Sum of GTIs [s]
livetime	13849.00736378	Livetime [s]
ontime4	14133.230034888	Sum of GTIs [s]
ontime5	14133.147954881	Sum of GTIs [s]
ontime6	14133.106914878	Sum of GTIs [s]
ontime7	14133.188994884	Sum of GTIs [s]
ontime8	14133.065874875	Sum of GTIs [s]
ontime9	14130.983824611	Sum of GTIs [s]
l2events	156796	Number of level 2 events



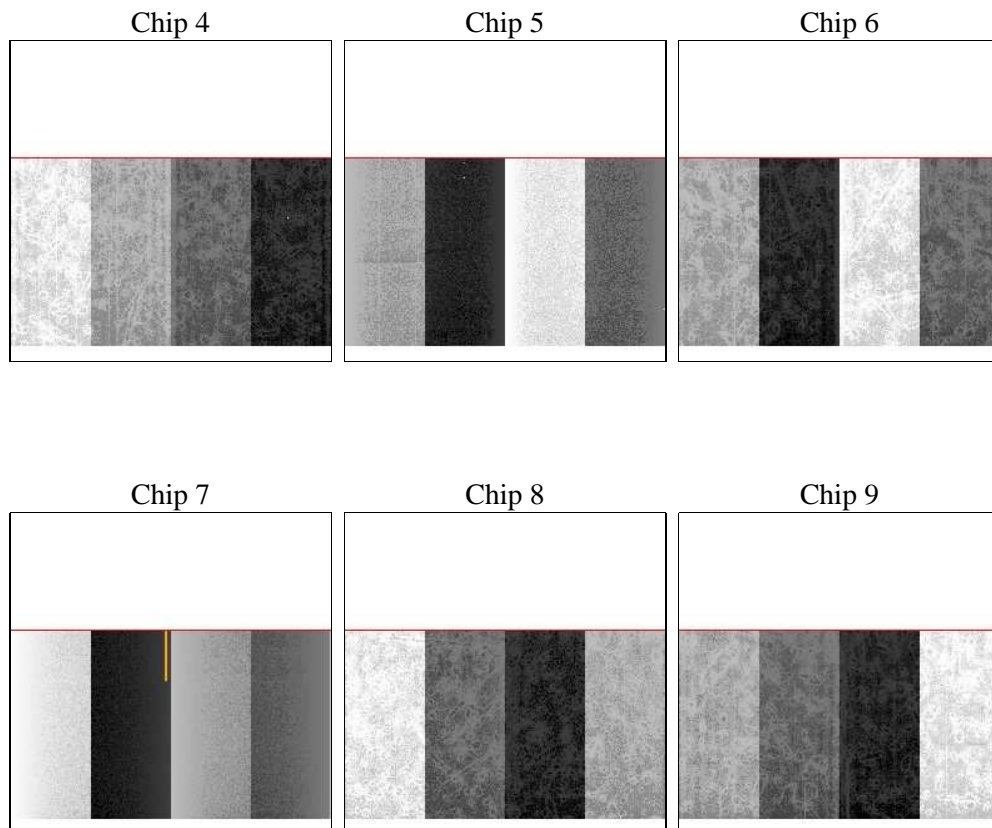
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	14133.188994884	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	14133.230034888	Sum of GTIs [s]
date	2012-06-01T23:48:01	Date and time of file creation	ontime5	14133.147954881	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14133.106914878	Sum of GTIs [s]
			ontime7	14133.188994884	Sum of GTIs [s]
			ontime8	14133.065874875	Sum of GTIs [s]
			ontime9	14130.983824611	Sum of GTIs [s]
			l1events	653313	Number of level 1 events

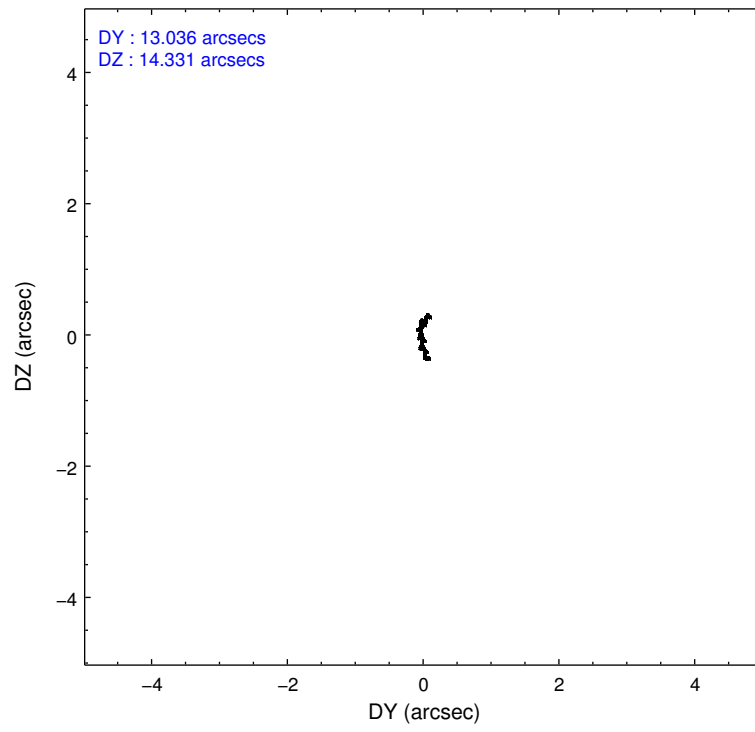
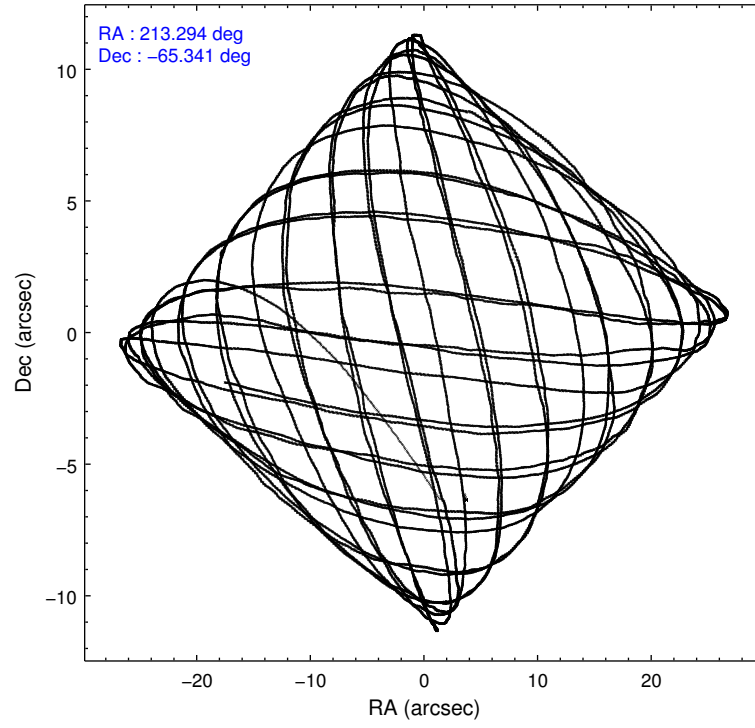
2.1.4 Events

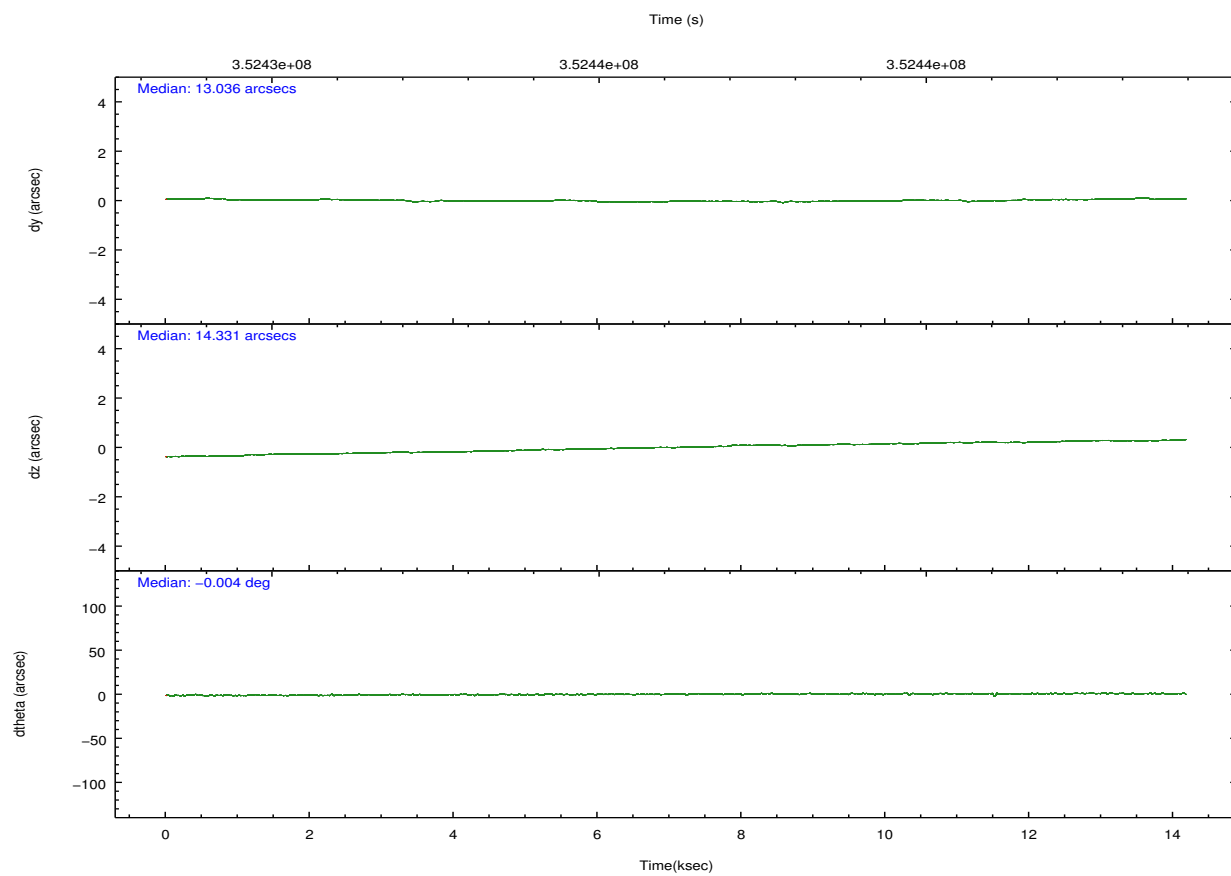
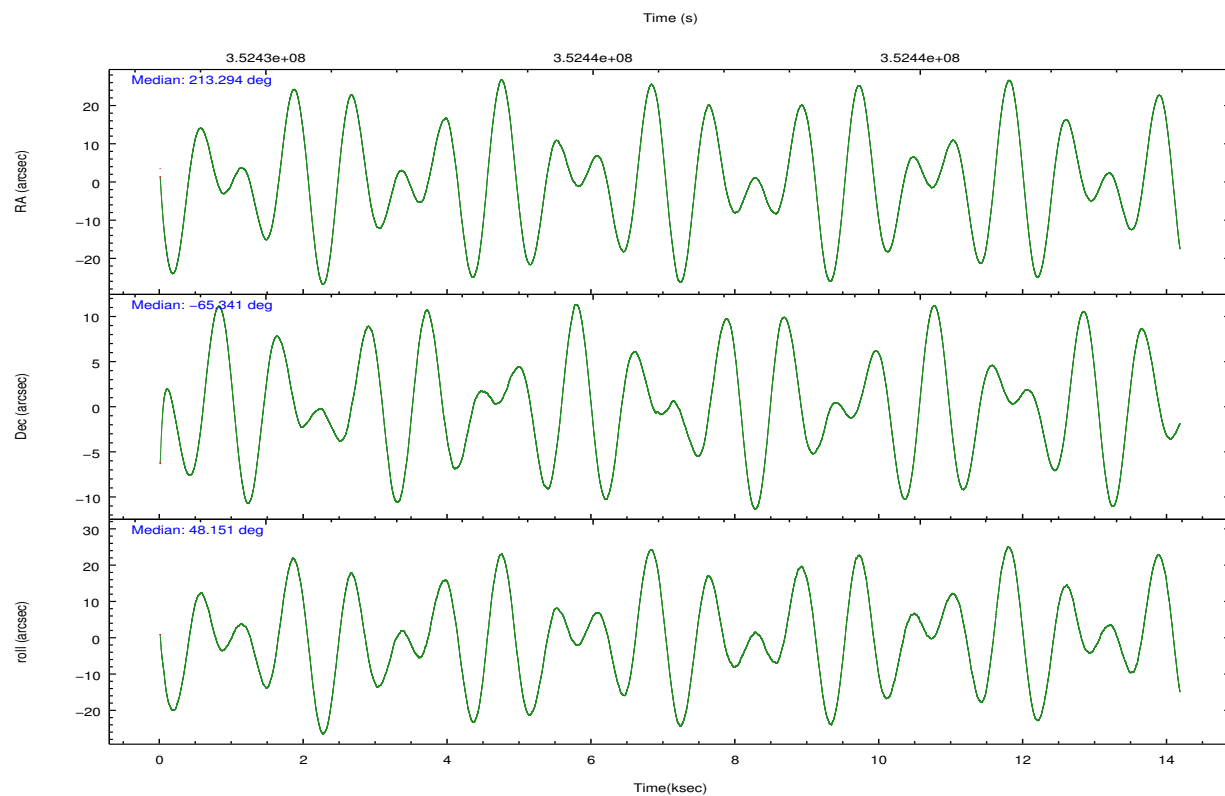
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	101208	141421	86639	124913	113096	86036	grade 0 events	9053	11836	5084	5644	8665	4538
rejected events	85184	72267	74438	68269	85981	74671		8%	8%	5%	4%	7%	5%
rejected %	84%	51%	85%	54%	76%	86%	grade 1 events	92	257	41	152	83	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	2692	18813	2475	11616	6026	2318
								2%	13%	2%	9%	5%	2%
							grade 3 events	1197	2968	1217	5197	2882	1209
								1%	2%	1%	4%	2%	1%
							grade 4 events	1189	2813	1168	5159	2603	1159
								1%	1%	1%	4%	2%	1%
							grade 5 events	3925	10429	4115	11167	5510	4300
								3%	7%	4%	8%	4%	4%
							grade 6 events	1894	32734	2258	29036	6960	2142
								1%	23%	2%	23%	6%	2%
							grade 7 events	81166	61571	70281	56942	80367	70319
								80%	43%	81%	45%	71%	81%

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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	213.281137	213.2936931651559	CCD I2 on	N	N
[deg] Pointing Dec	-65.367748	-65.34093385021939	CCD I3 on	N	N
[deg] Pointing Roll	47.990430	48.1584665536724	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	-186.132523	-186.1423047203915	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4	-3.990217862616333	CCD S4 on	Y	Y
[s] Observation start time (MET)	352429274.184000	352428264.02143	CCD S5 on	Y	Y
Observation start date	2009-03-03T01:00:08	2009-03-03T00:44:24	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	352443274.184000	352444042.87221	On-chip summing requested	N	N
Observation end date	2009-03-03T04:53:28	2009-03-03T05:07:22	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	50	50
			Subarray row count	600	600
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2

2.3 Aspect



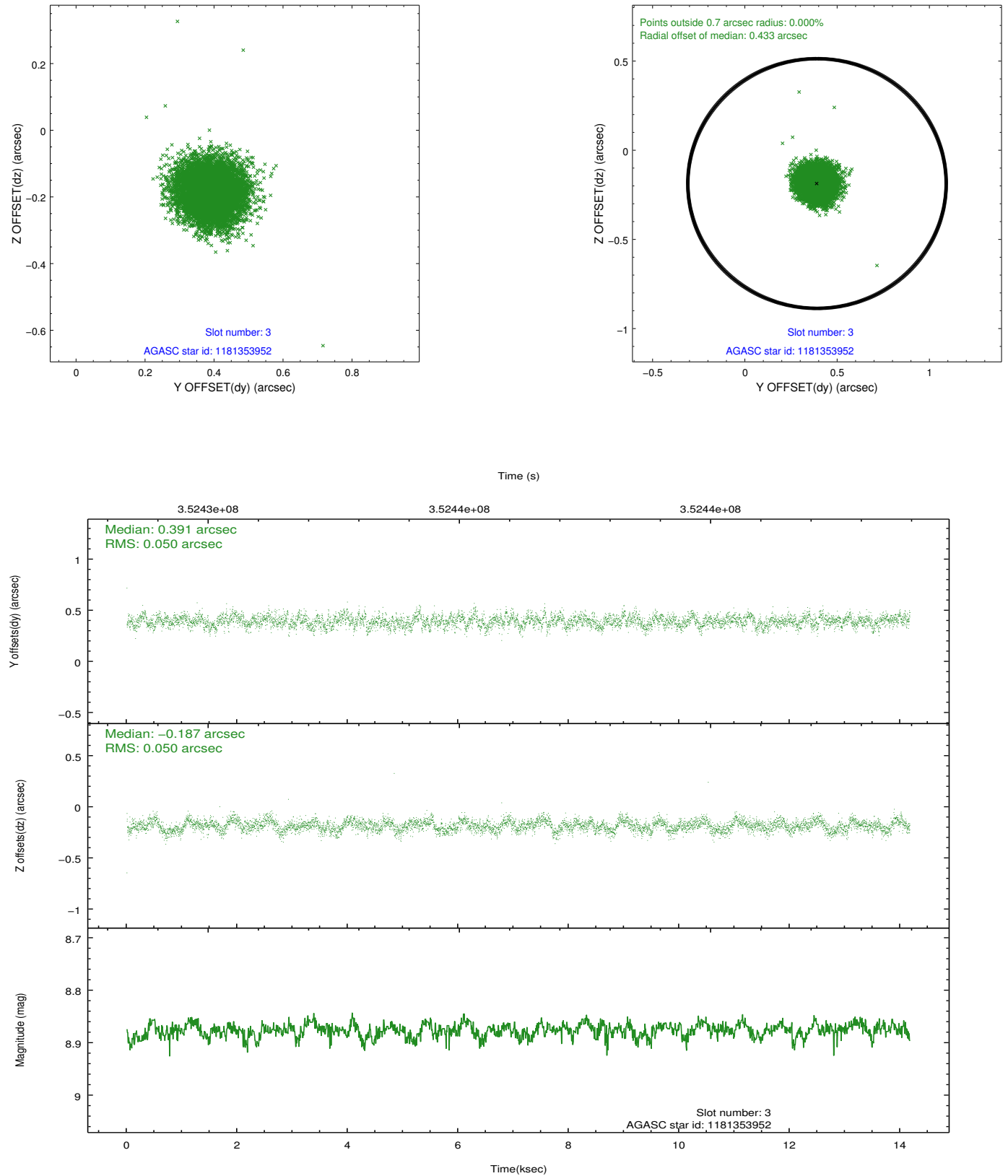


Slot Statistics

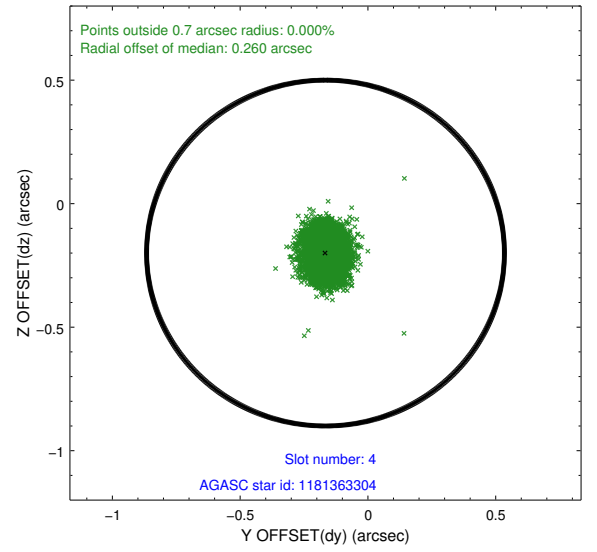
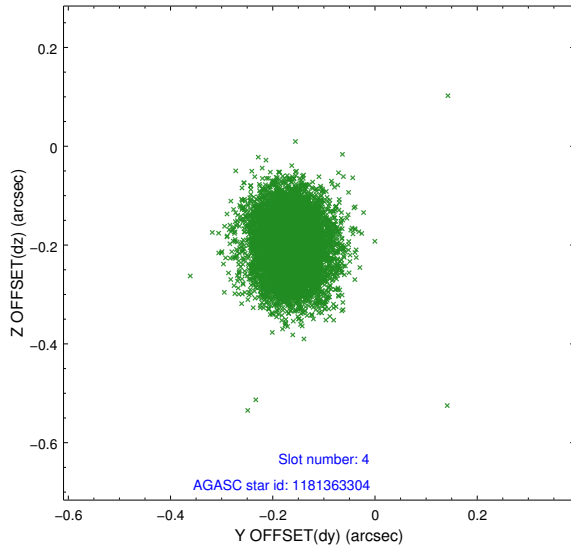
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.96	3458	-0.060	-0.081	0.012	0.021	0.000000	0.000000	-765.75	-1818.08
1	FID	ACIS-S-4	7.03	3458	0.184	0.051	0.006	0.011	0.000000	0.000000	2147.63	90.15
2	FID	ACIS-S-5	7.08	3457	-0.155	0.039	0.012	0.020	0.000000	0.000000	-1818.26	84.20
3	GUIDE	1181353952	8.88	6909	0.391	-0.187	0.075	0.120	211.658427	-65.506998	-2015.81	1442.69
4	GUIDE	1181363304	8.76	6907	-0.166	-0.200	0.074	0.120	212.741873	-65.071033	242.82	1320.96
5	GUIDE	1181492872	9.09	6900	-0.034	0.210	0.109	0.172	214.965330	-65.517798	1255.64	-2250.04
6	GUIDE	1181356824	8.92	6910	-0.248	-0.135	0.082	0.130	213.100076	-64.682630	1645.88	1857.42
7	GUIDE	1181880992	9.07	6903	0.055	0.310	0.100	0.159	213.720648	-66.170562	-1720.70	-2410.24

2.4 Star Slots

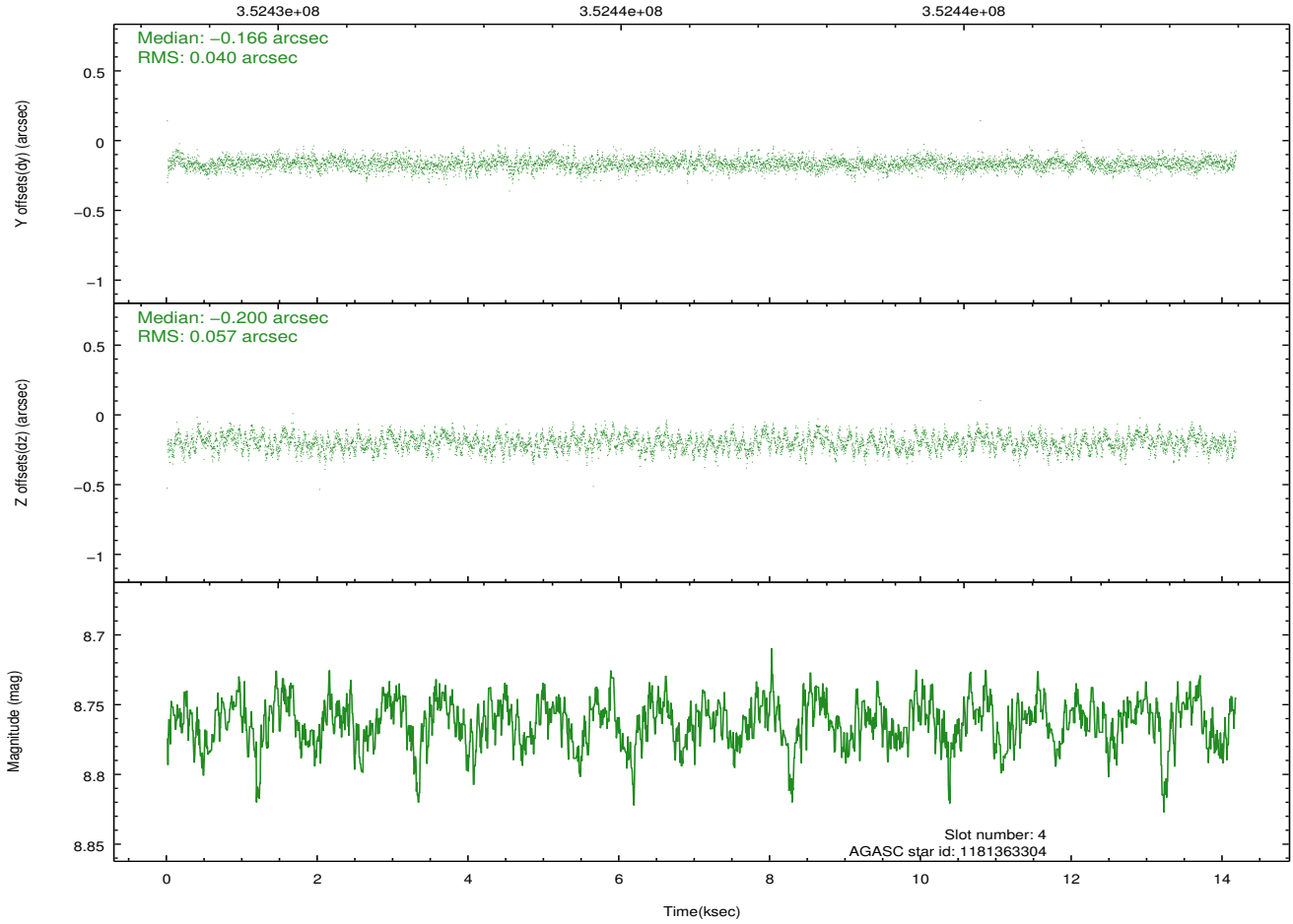
2.4.1 Slot 3



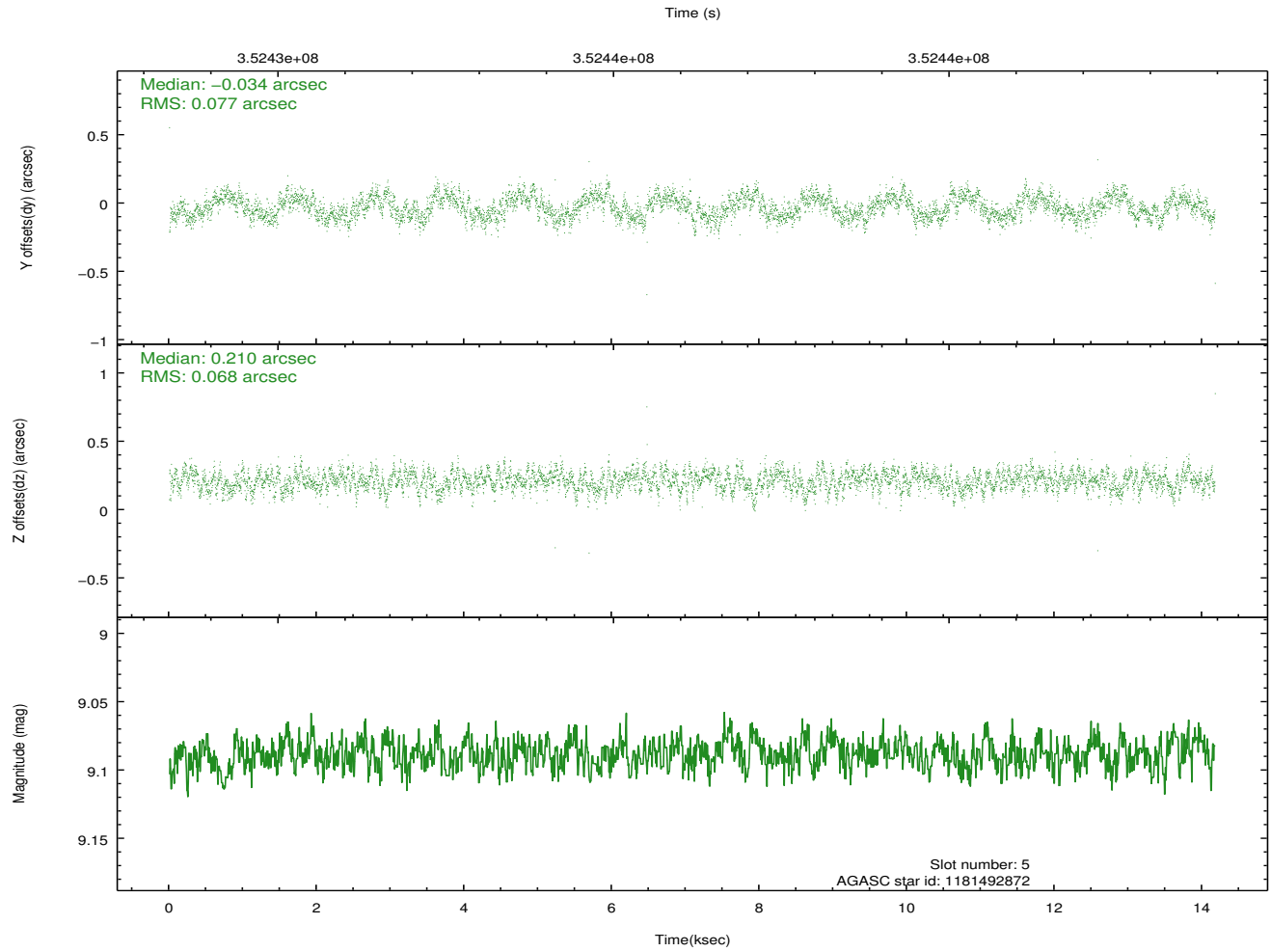
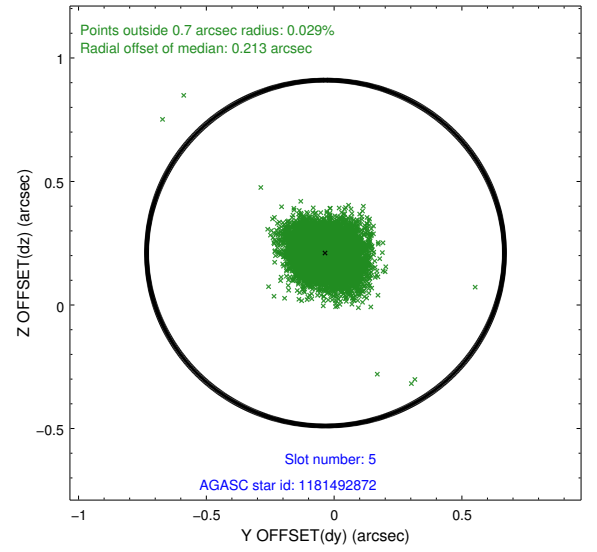
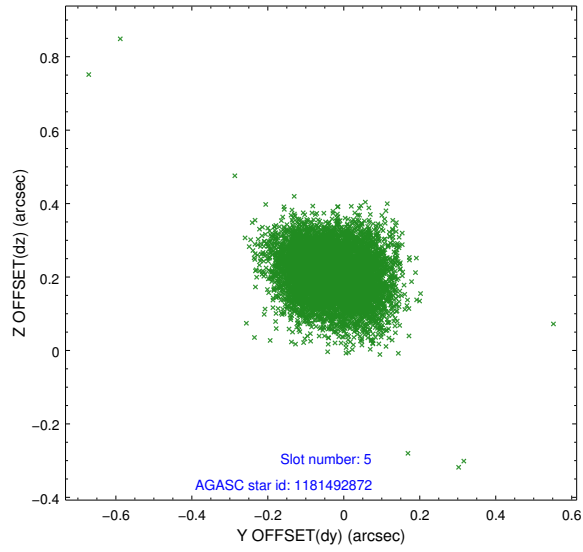
2.4.2 Slot 4



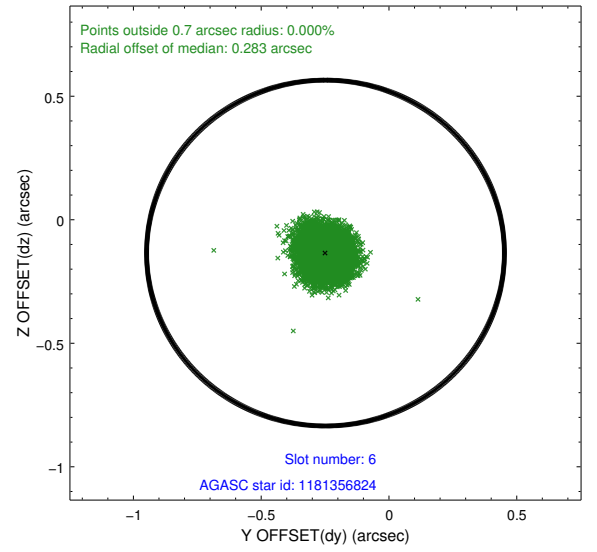
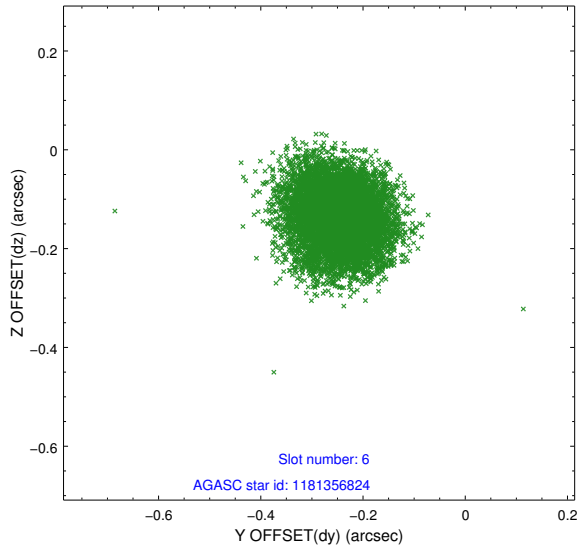
Time (s)



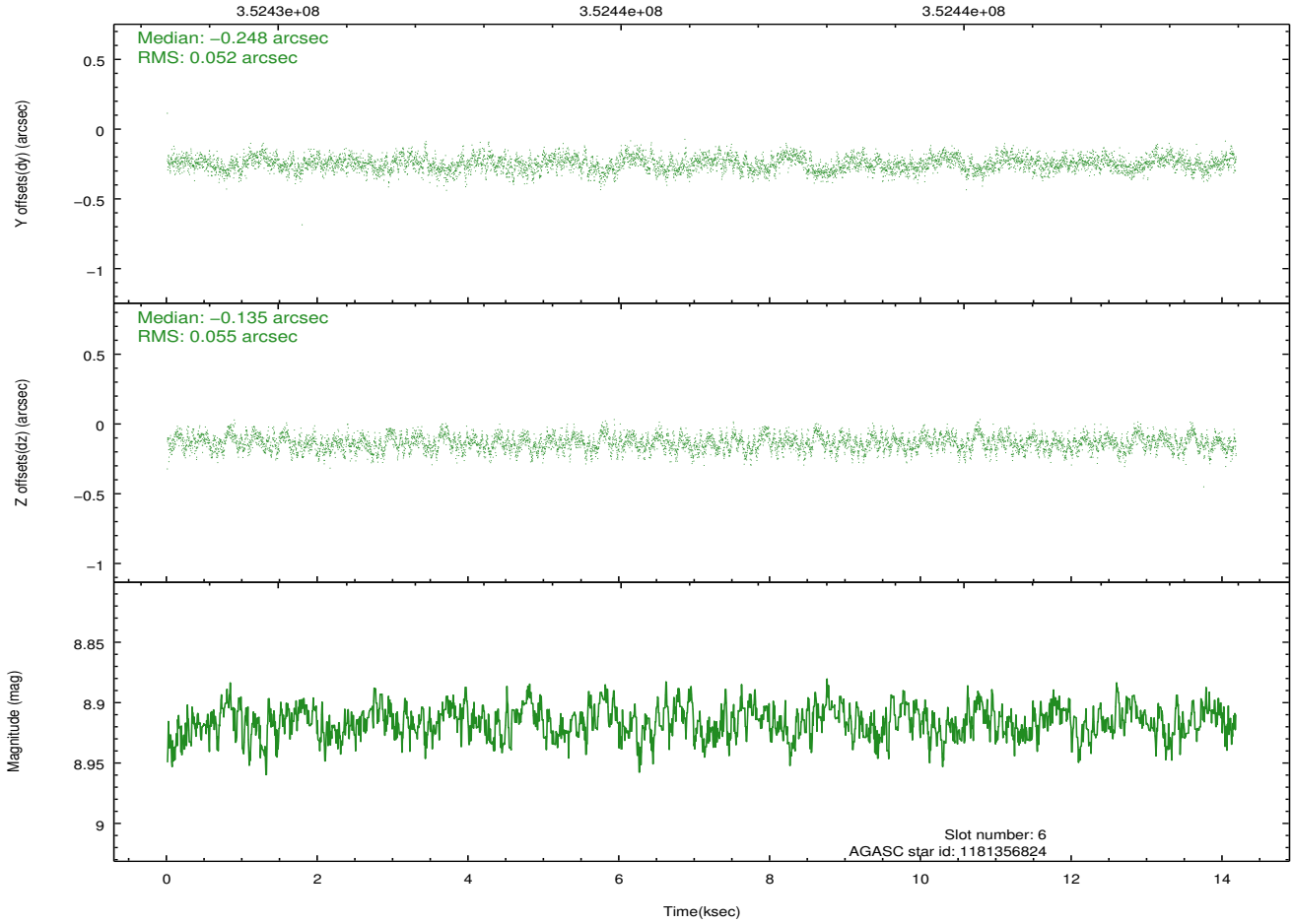
2.4.3 Slot 5



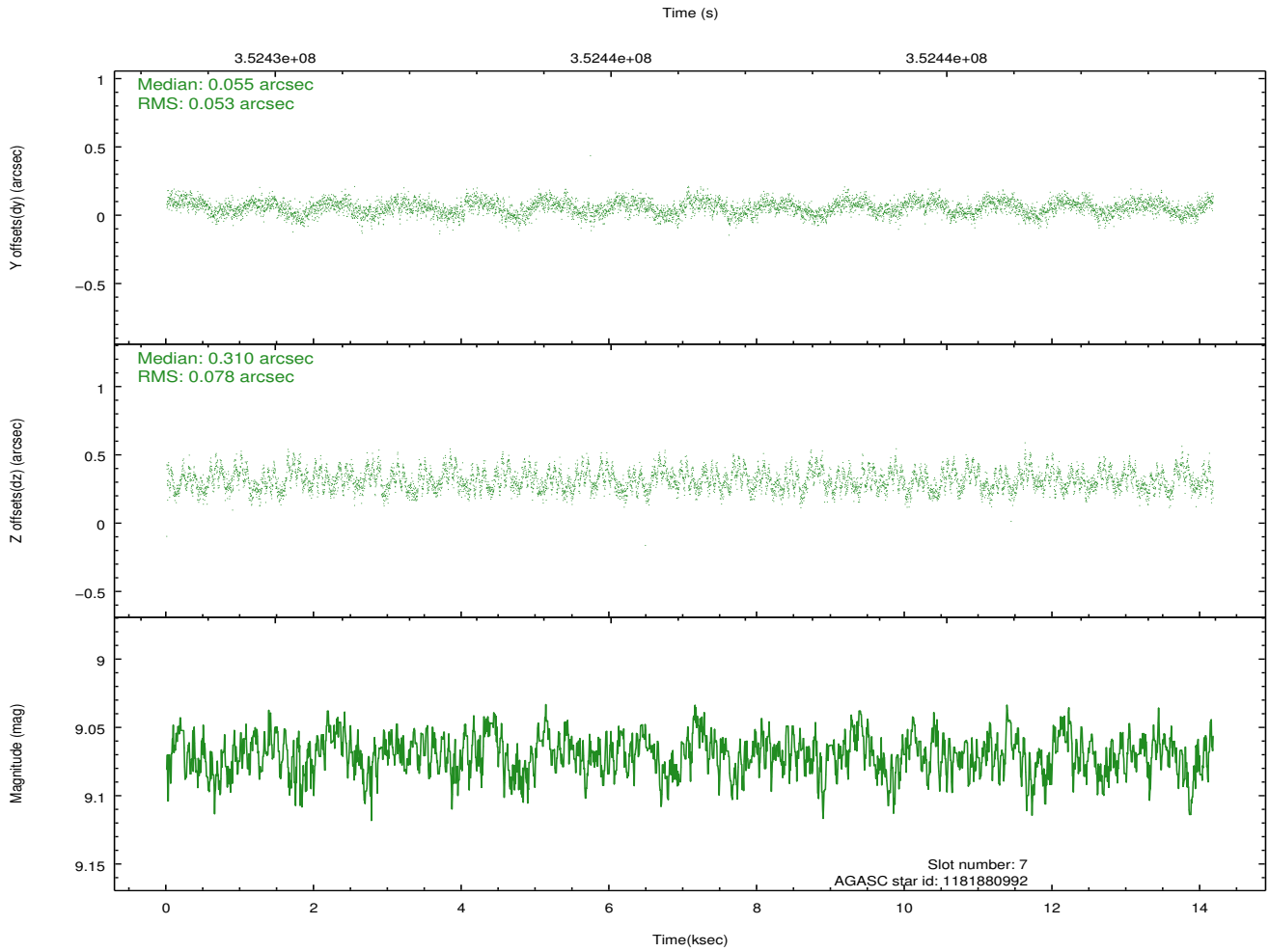
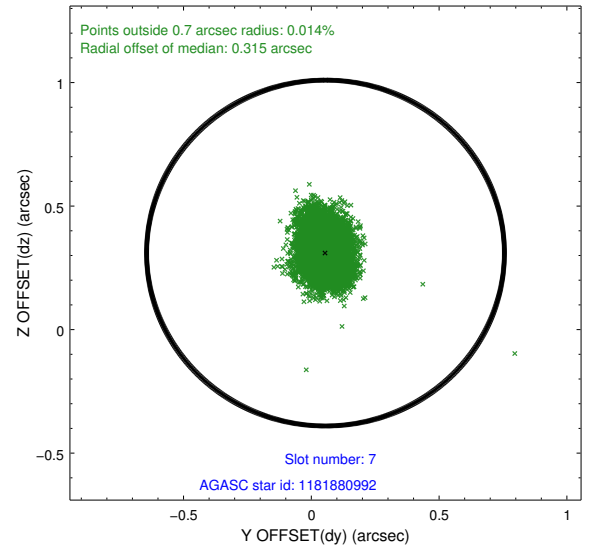
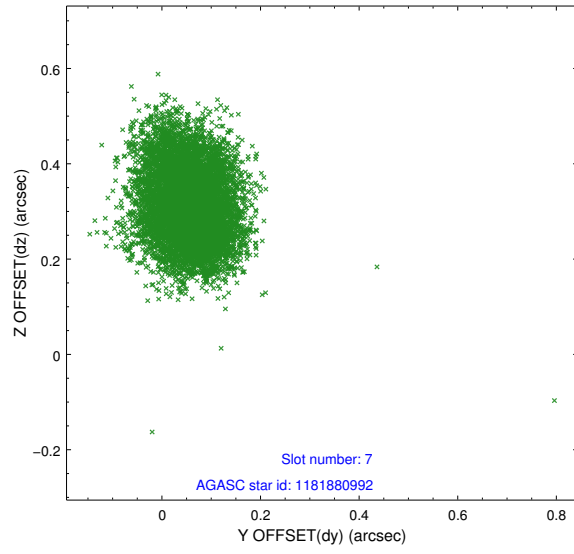
2.4.4 Slot 6



Time (s)

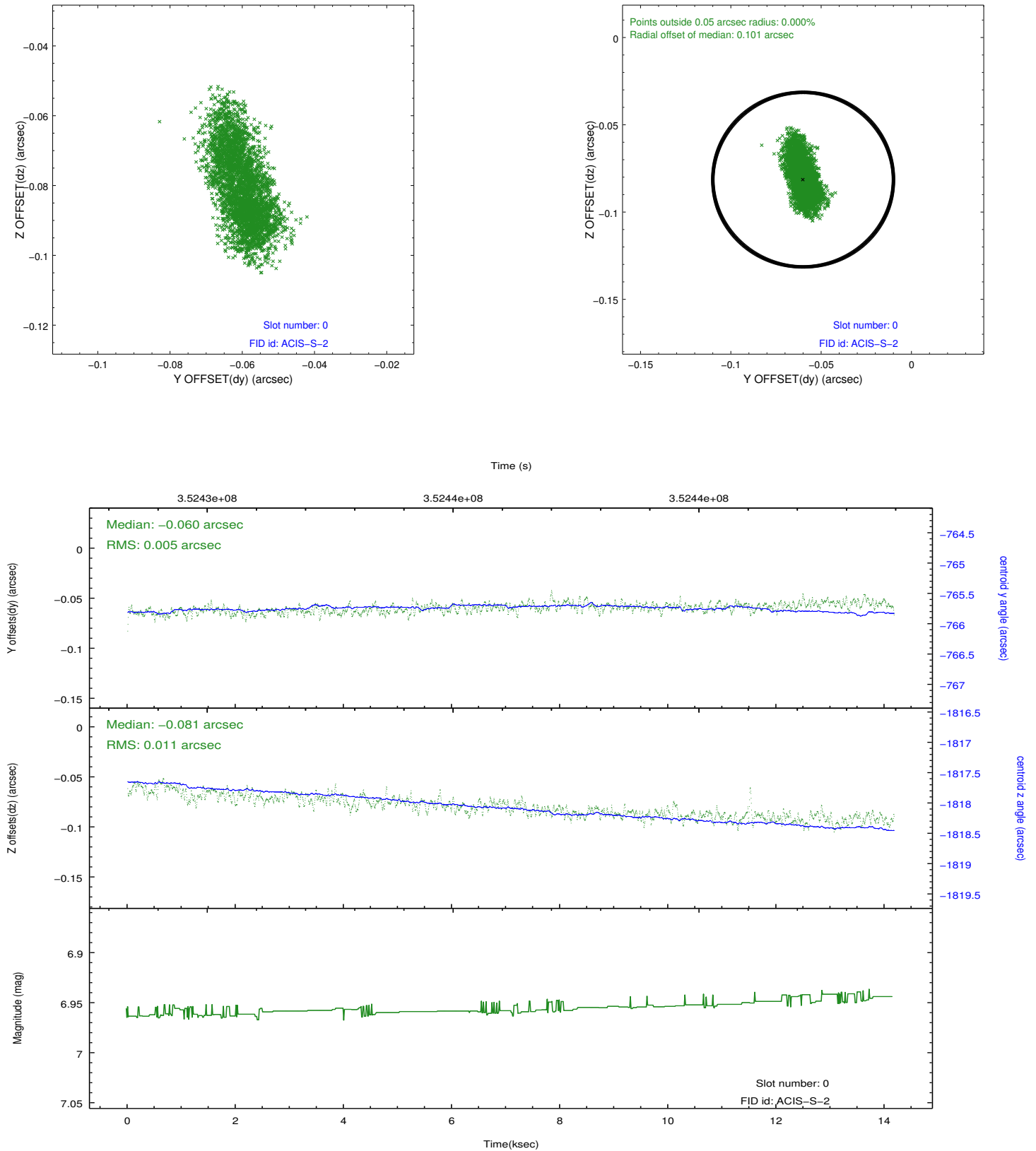


2.4.5 Slot 7

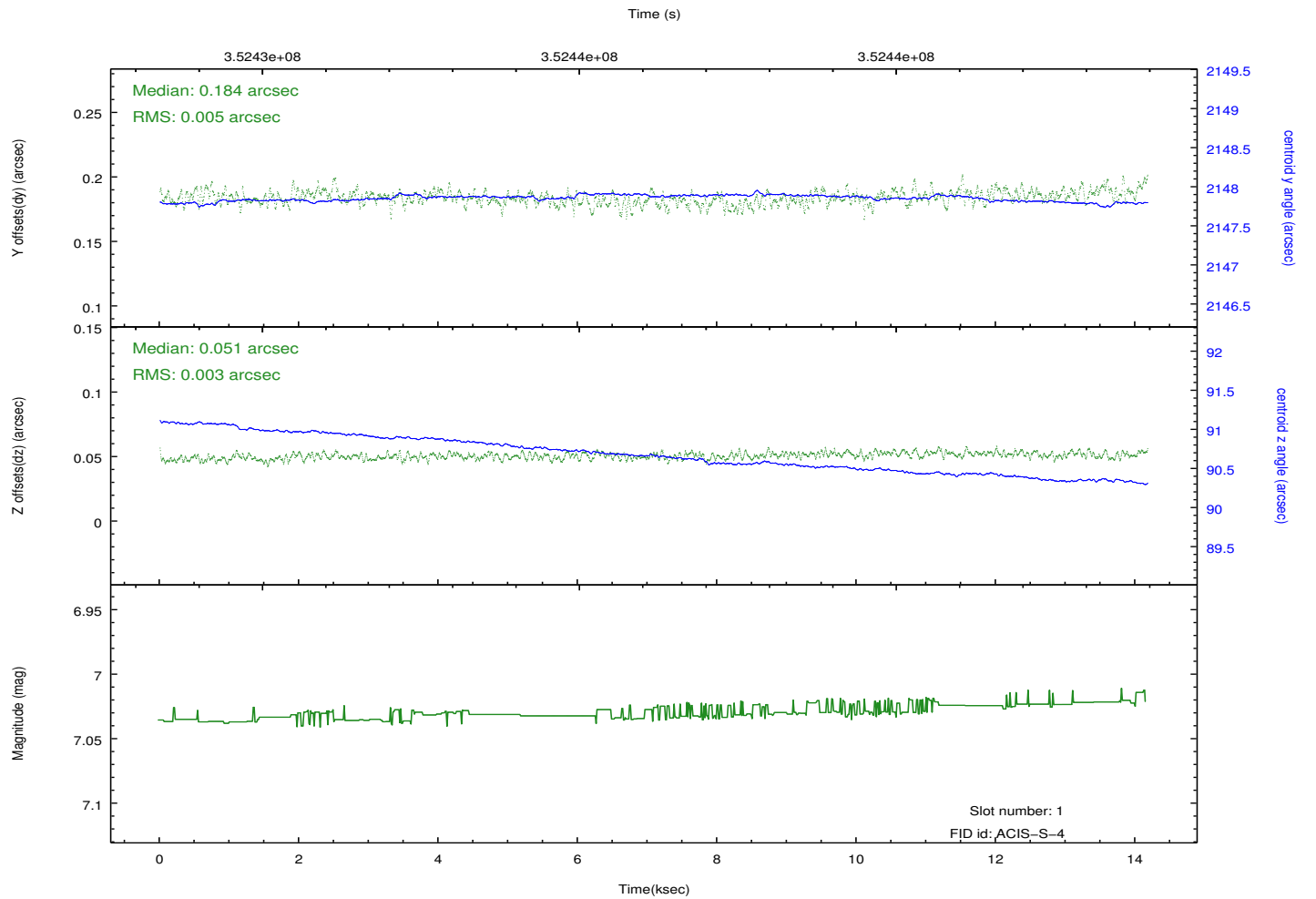
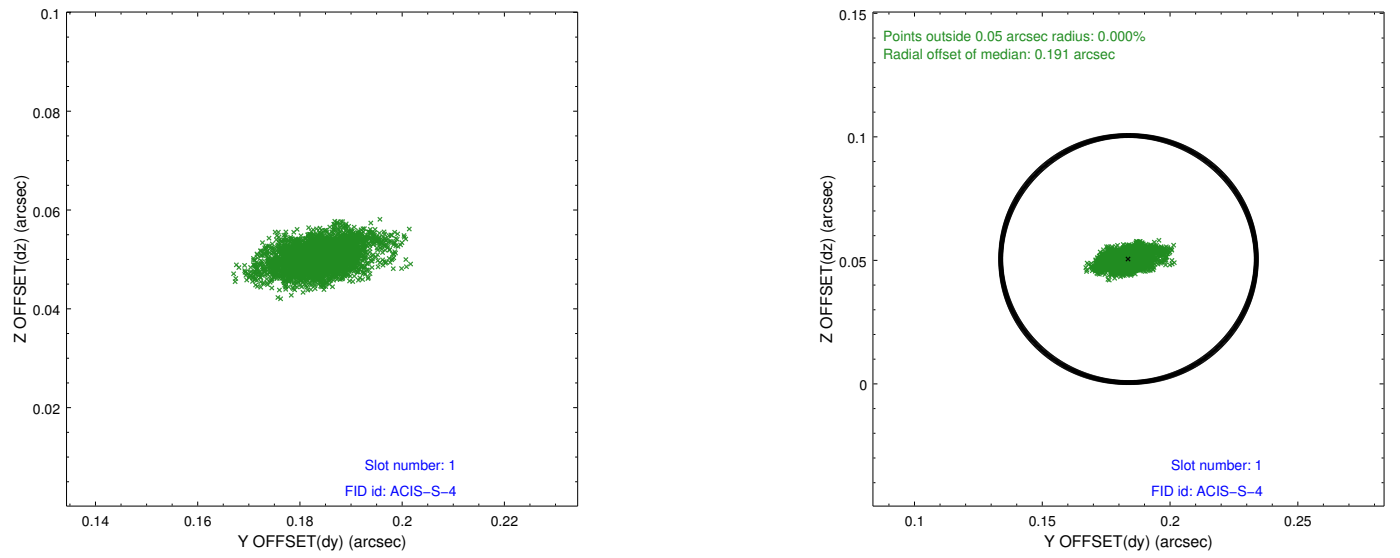


2.5 FID Slots

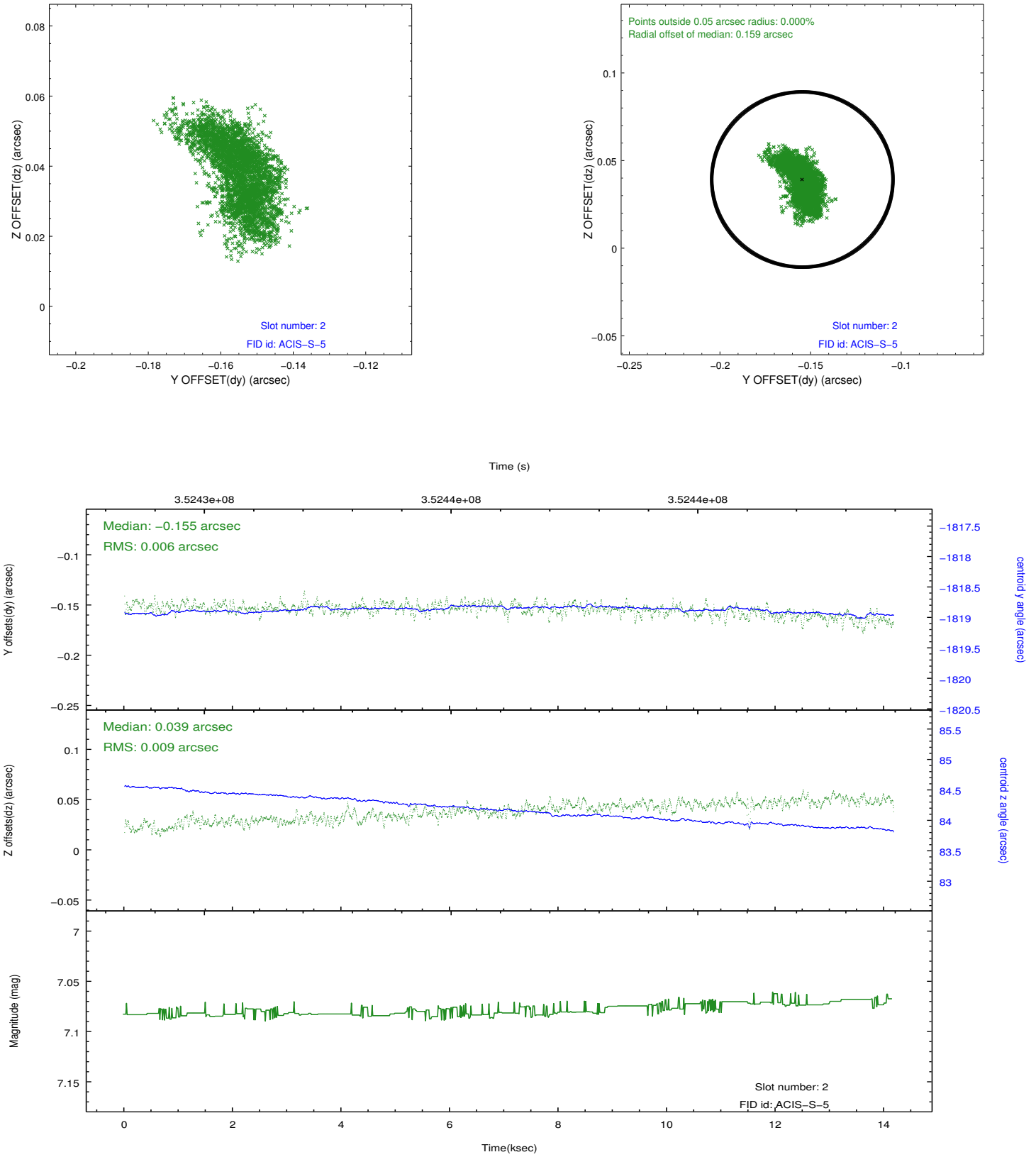
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

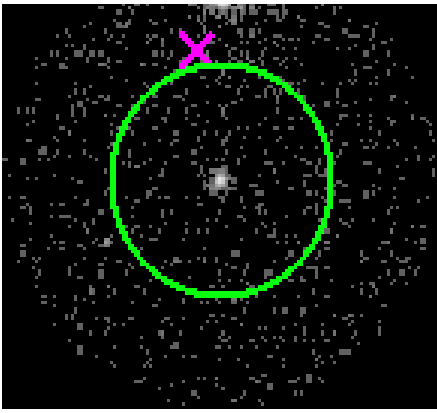


3 Gratings

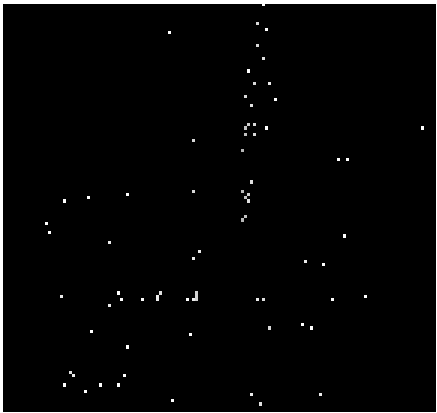
3.1 HEG Arm



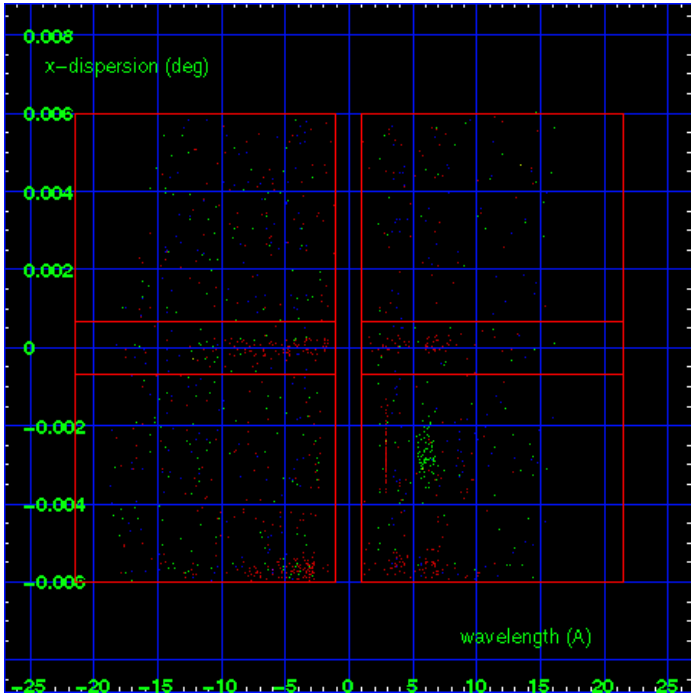
HEG Order Sort 123



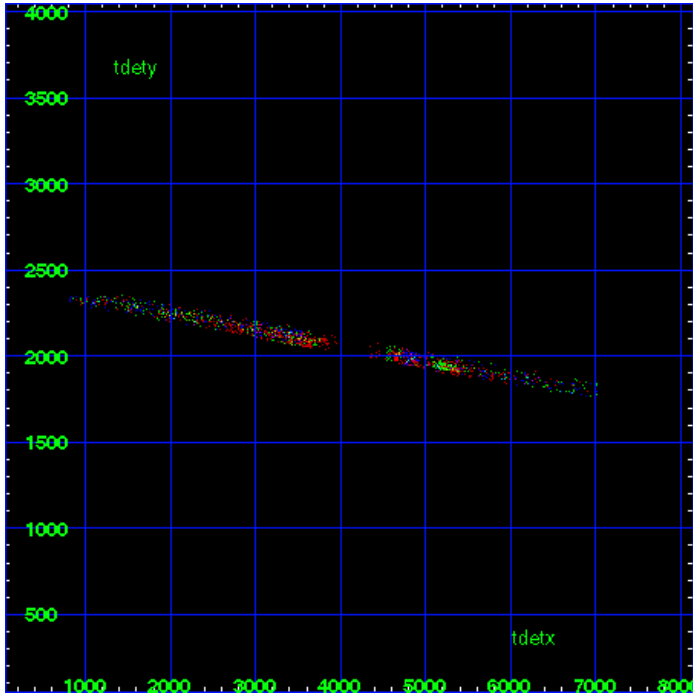
HEG Zero Order



HEG Order Sort ALL

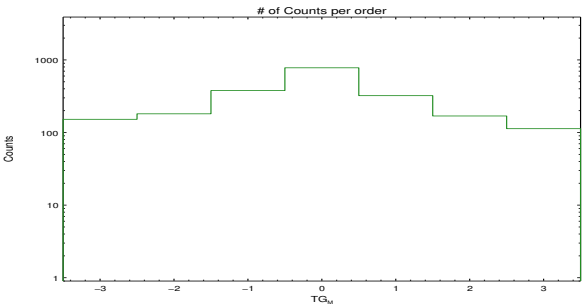


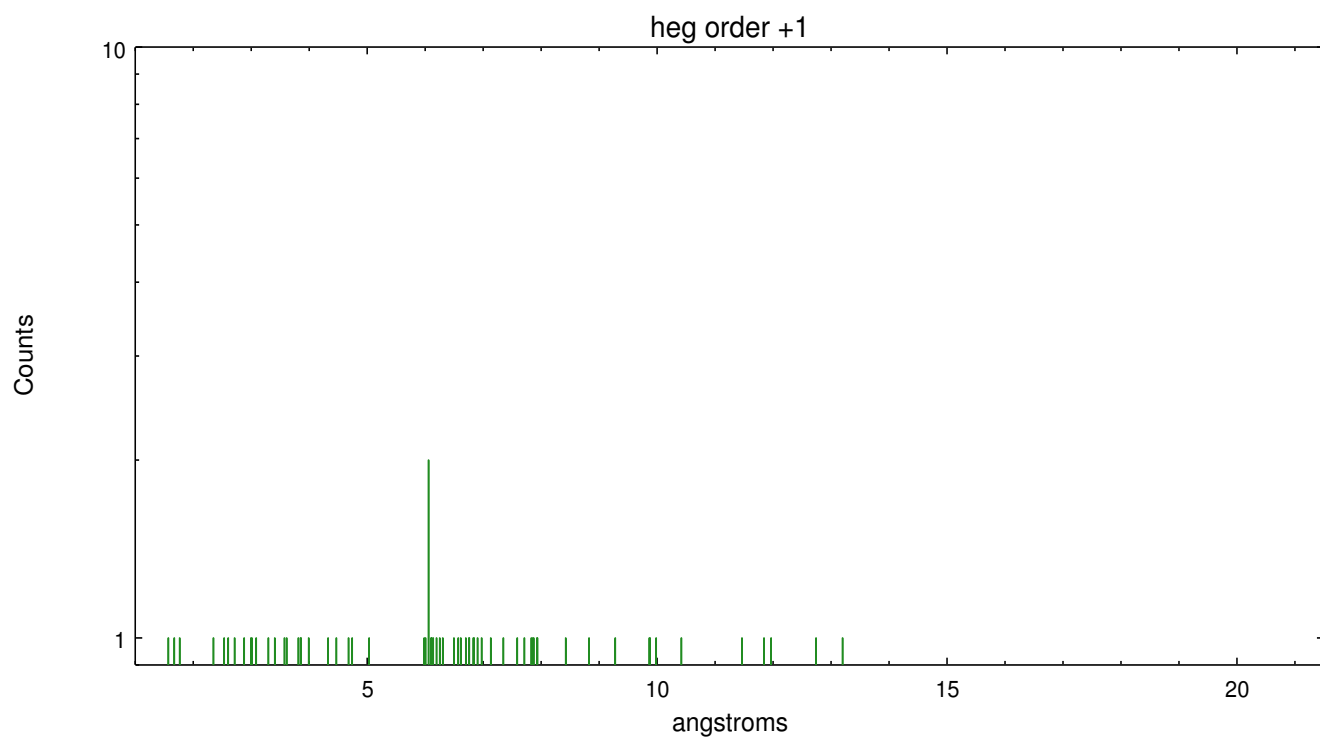
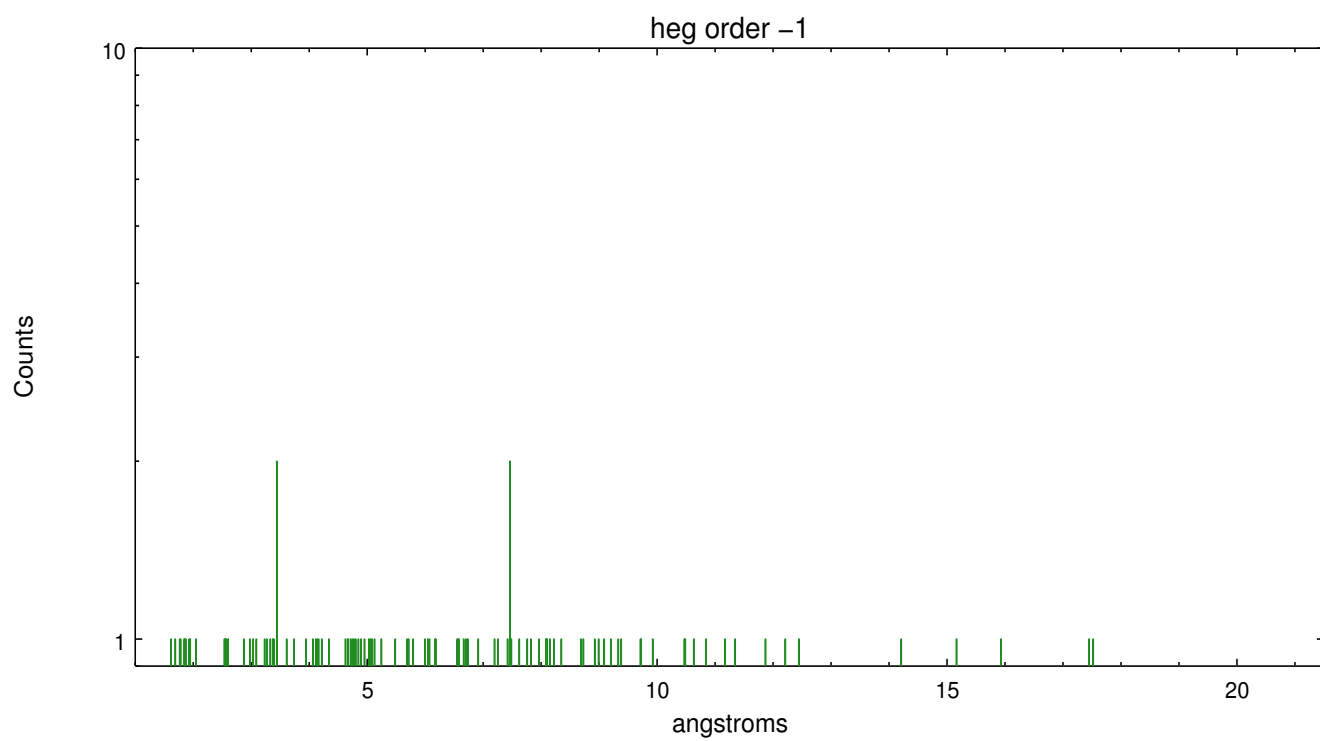
Spot Image HEG



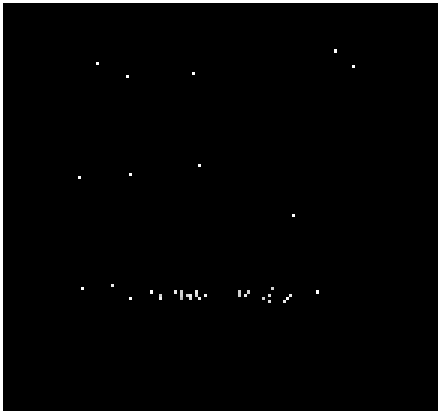
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	152	181	378	779	322	169	113

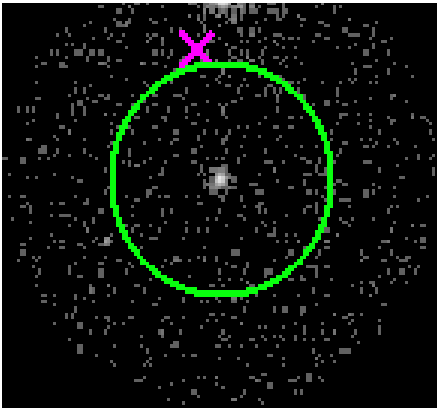




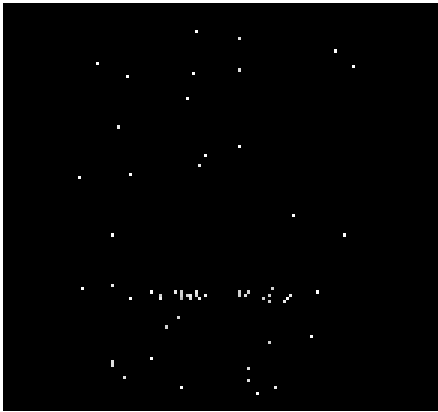
3.2 MEG Arm



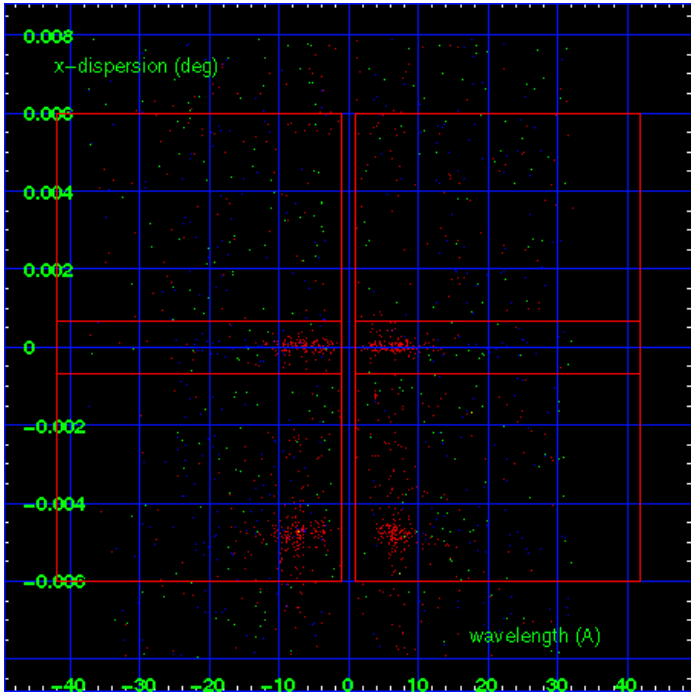
MEG Order Sort 123



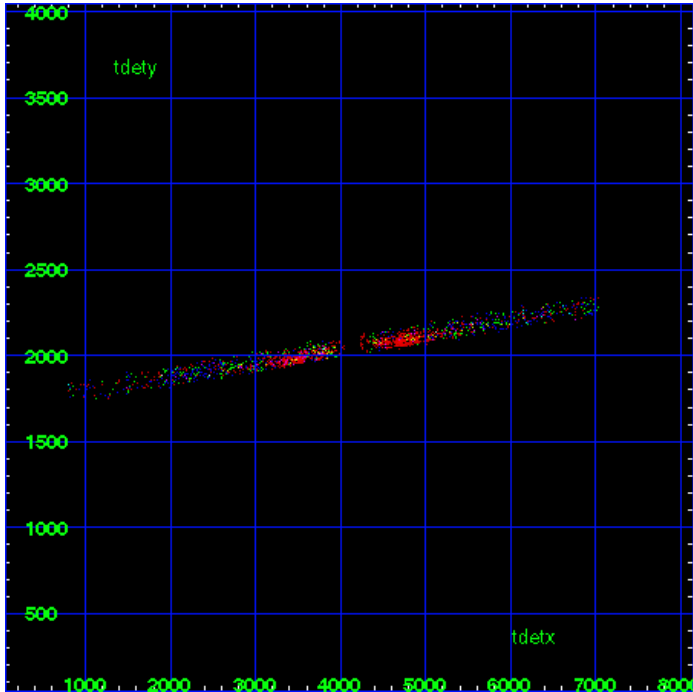
MEG Zero Order



MEG Order Sort ALL

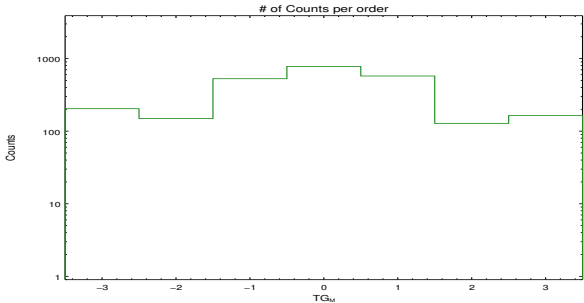


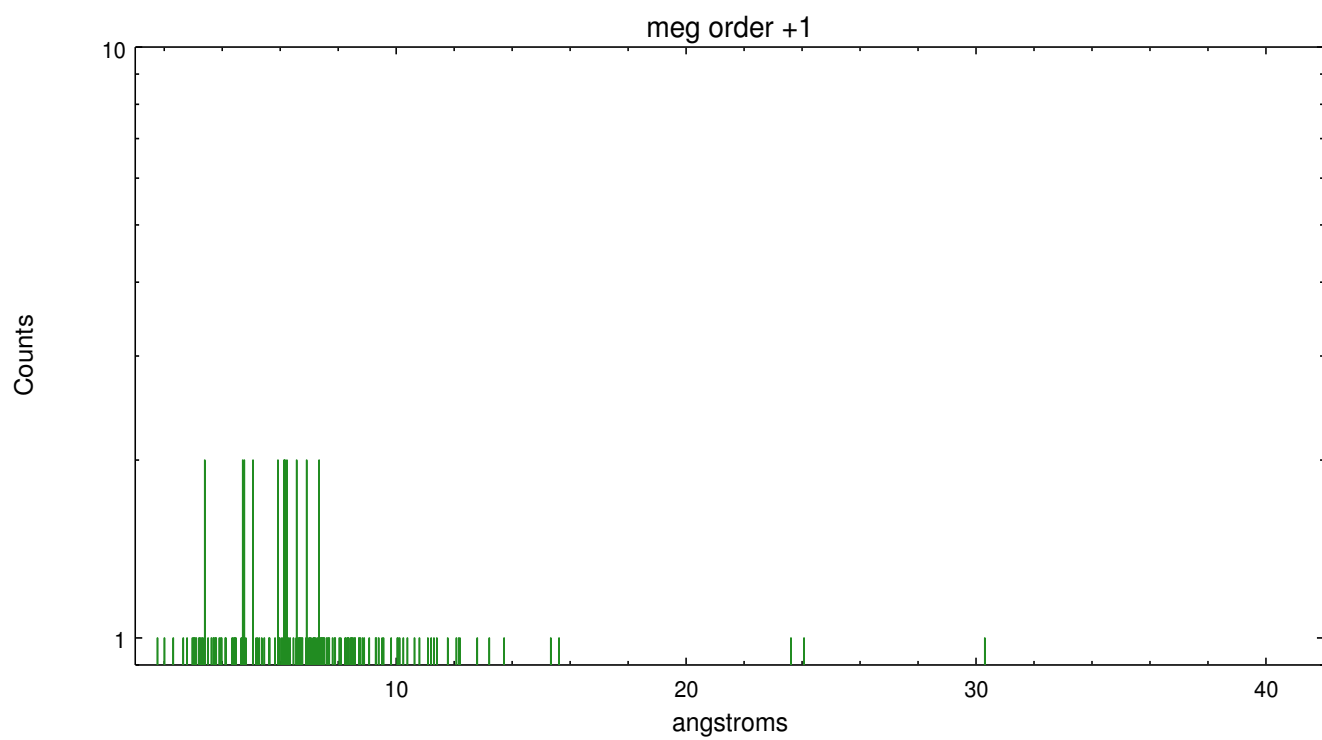
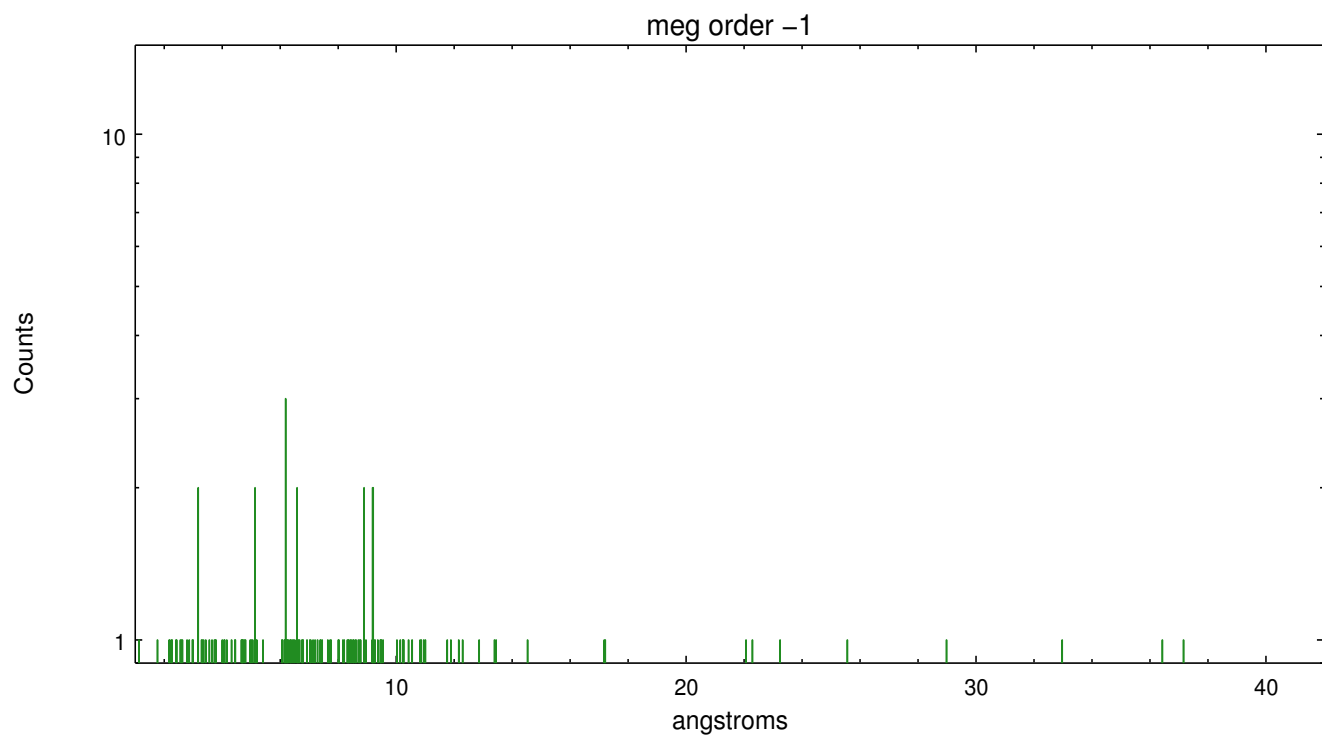
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	204	149	528	779	575	128	164





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.134

A.2 Comments

The HETG dispersed spectra for these data products have been extracted using the position of SN1996cr as the position of the zeroth order. The sky coordinates x=4102.66, y=4061.67 were manually input to the tg_create_mask tool. The newly determined zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect. Therefore the extracted spectra correspond to the supernova remnant, not the center of the galaxy. There are multiple dispersed spectra associated with different sources in this observation. The ciao tool tgextract2 can be used to create non-standard background regions. ===== In future analysis, if the ciao tool tgdetect is used on this observation to locate the zeroth order source, the center of the Cir galaxy will be found, not SN 1996cr, which is not as X-ray-bright. == Data products for spectral extractions of other targets in this field can be found in TGCat.