

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10872 - L2 Version 3
Chandra X-Ray Center

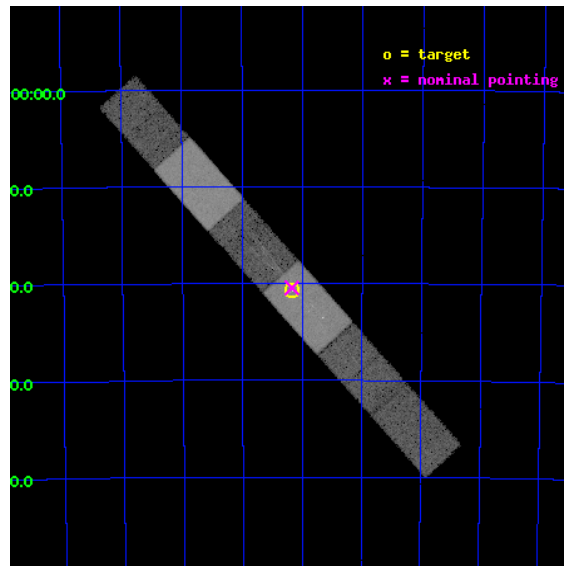
L2 Processing Date : Jun 4 2012

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1 Front

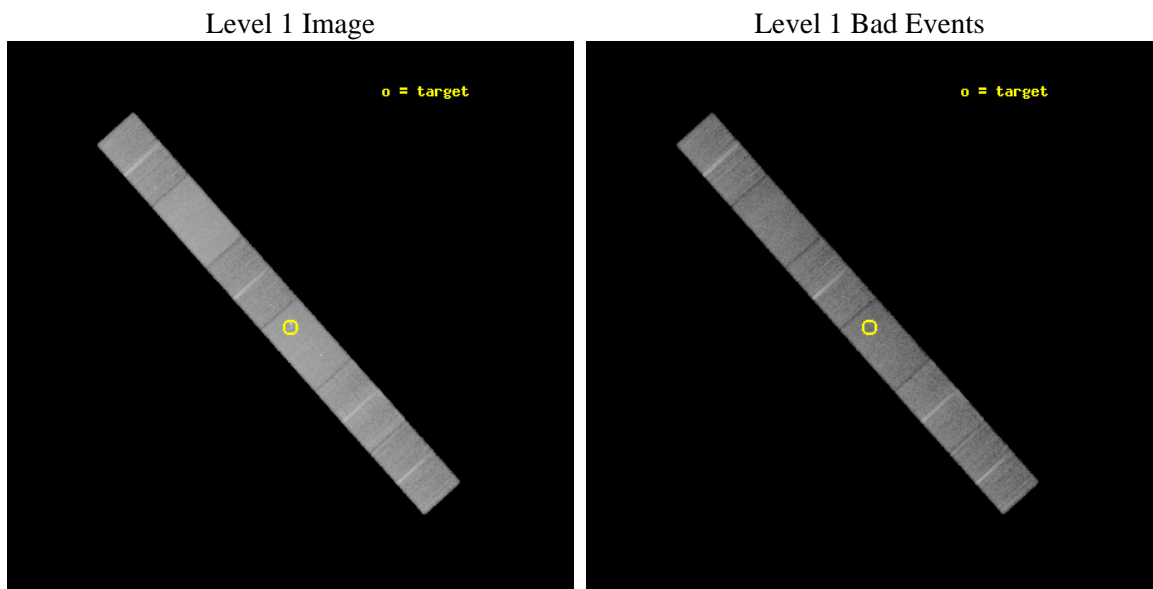
seq_num	501150	Sequence number
obs_id	10872	Observation id
title	A Deep HETG Probe of the CSM Interaction in SN1996cr	Proposal titl
observer	Dr. Franz Bauer	Principal investigator
object	SN1996cr	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	213.291667	Observer's specified target RA [deg]
dec_targ	-65.345694	Observer's specified target Dec [deg]
ra_nom	213.2937638077	Nominal RA [deg]
dec_nom	-65.340911124716	Nominal Dec [deg]
roll_nom	48.158531290978	Nominal Roll [deg]
revision	3	Processing version of data
ontime	16872.0	Sum of GTIs [s]
livetime	16532.748010818	Livetime [s]
ontime4	16872.0	Sum of GTIs [s]
ontime5	16872.0	Sum of GTIs [s]
ontime6	16872.0	Sum of GTIs [s]
ontime7	16872.0	Sum of GTIs [s]
ontime8	16872.0	Sum of GTIs [s]
ontime9	16872.0	Sum of GTIs [s]
l2events	184367	Number of level 2 events



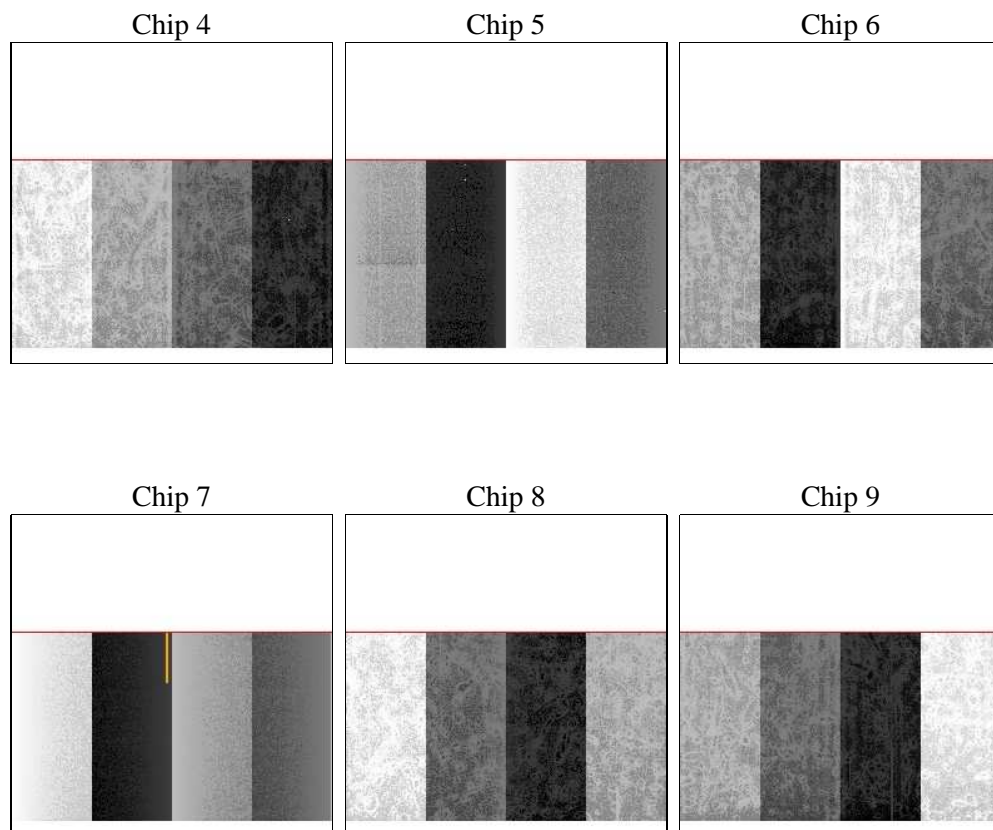
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16800.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	16872.0	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	16872.0	Sum of GTIs [s]
date	2012-06-01T23:50:19	Date and time of file creation	ontime5	16872.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	16872.0	Sum of GTIs [s]
			ontime7	16872.0	Sum of GTIs [s]
			ontime8	16872.0	Sum of GTIs [s]
			ontime9	16872.0	Sum of GTIs [s]
			l1events	762529	Number of level 1 events

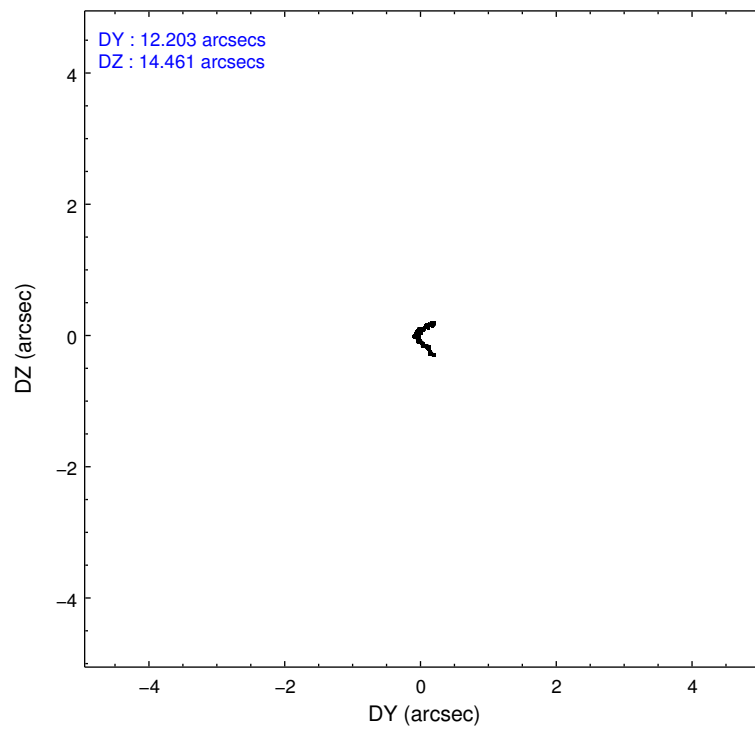
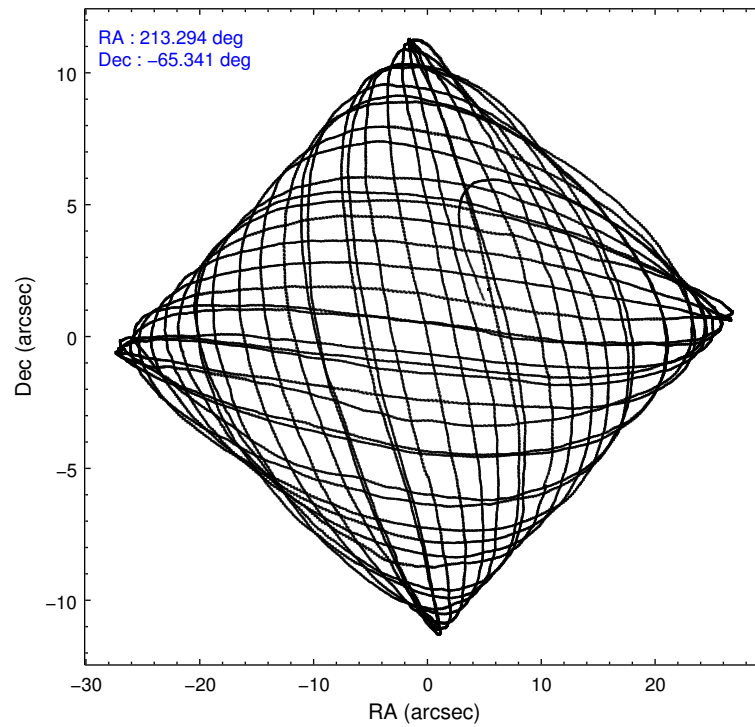
2.1.4 Events

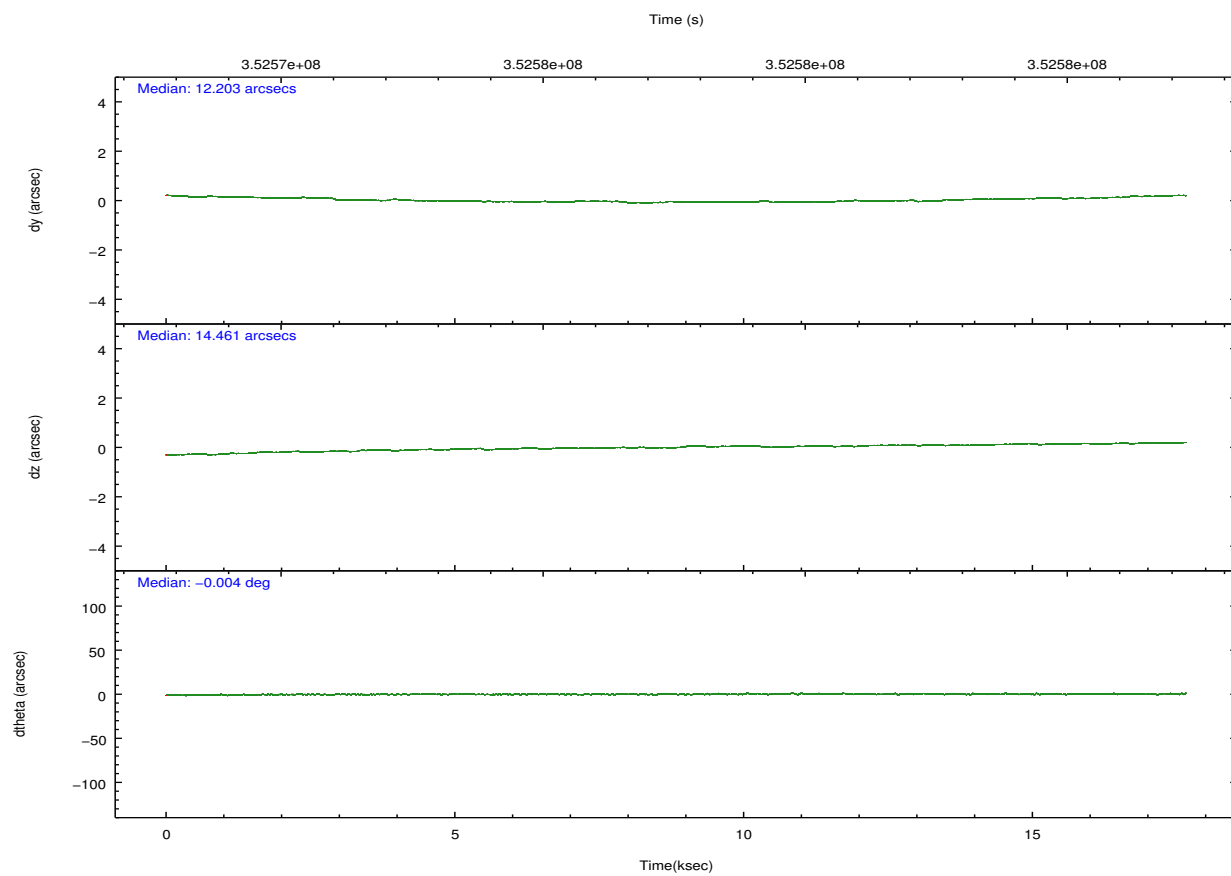
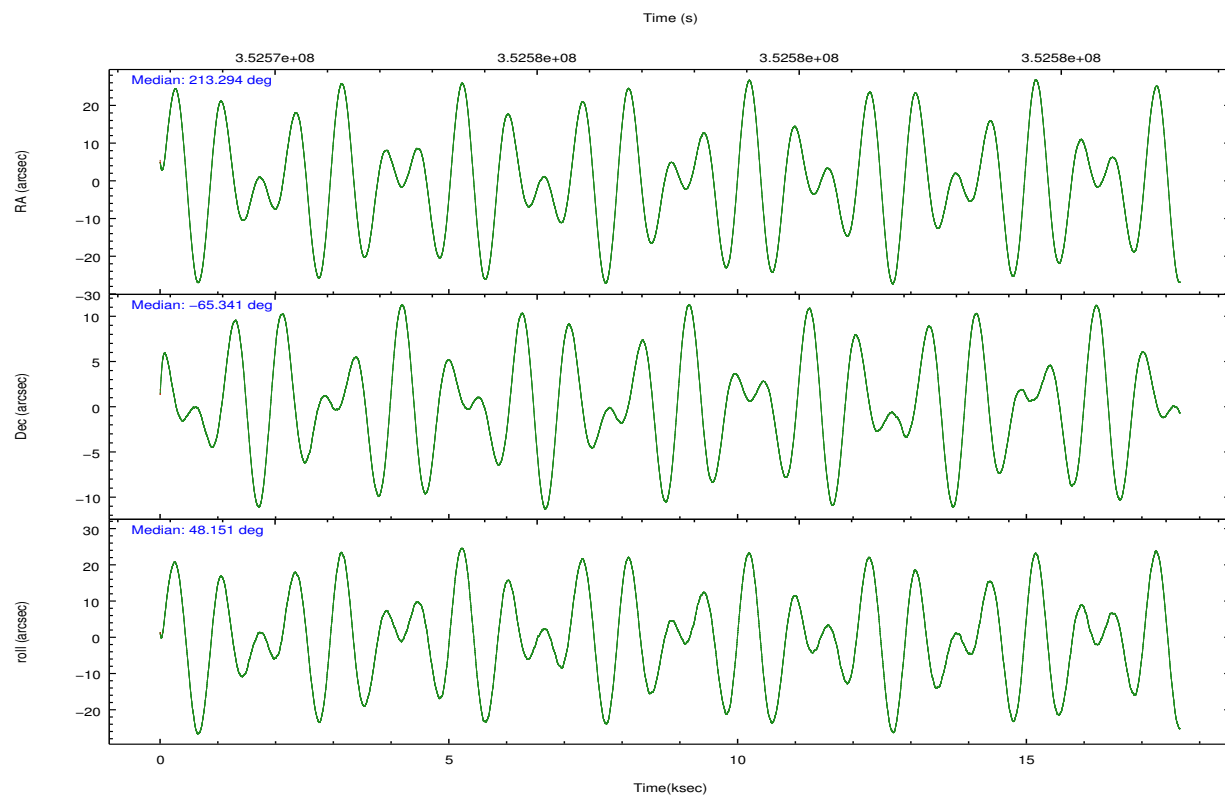
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	114687	157363	104142	149111	134522	102704	grade 0 events	6349	4537	6015	6234	9832	5426
rejected events	100288	85556	89726	82872	103438	89200		5%	2%	5%	4%	7%	5%
rejected %	87%	54%	86%	55%	76%	86%	grade 1 events	64	188	46	165	85	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	2965	22223	2908	13991	6794	2742
								2%	14%	2%	9%	5%	2%
							grade 3 events	1468	3309	1414	6077	3303	1437
								1%	2%	1%	4%	2%	1%
							grade 4 events	1420	3138	1355	5943	3066	1393
								1%	1%	1%	3%	2%	1%
							grade 5 events	4628	11852	4913	13639	6543	5177
								4%	7%	4%	9%	4%	5%
							grade 6 events	2197	38613	2726	34008	8095	2511
								1%	24%	2%	22%	6%	2%
							grade 7 events	95596	73503	84765	69054	96804	83966
								83%	46%	81%	46%	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	213.2937638076988	CCD I2 on	N	N
[deg] Pointing Dec	-65.367748	-65.34091112471609	CCD I3 on	N	N
[deg] Pointing Roll	47.990430	48.158531290978	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	-186.1372760897884	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4	-3.99524649321944	CCD S4 on	Y	Y
[s] Observation start time (MET)	352569562.184000	352567857.75336	CCD S5 on	Y	Y
Observation start date	2009-03-04T15:58:16	2009-03-04T15:30:57	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	352586362.184000	352587649.99184	On-chip summing requested	N	N
Observation end date	2009-03-04T20:38:16	2009-03-04T21:00:49	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



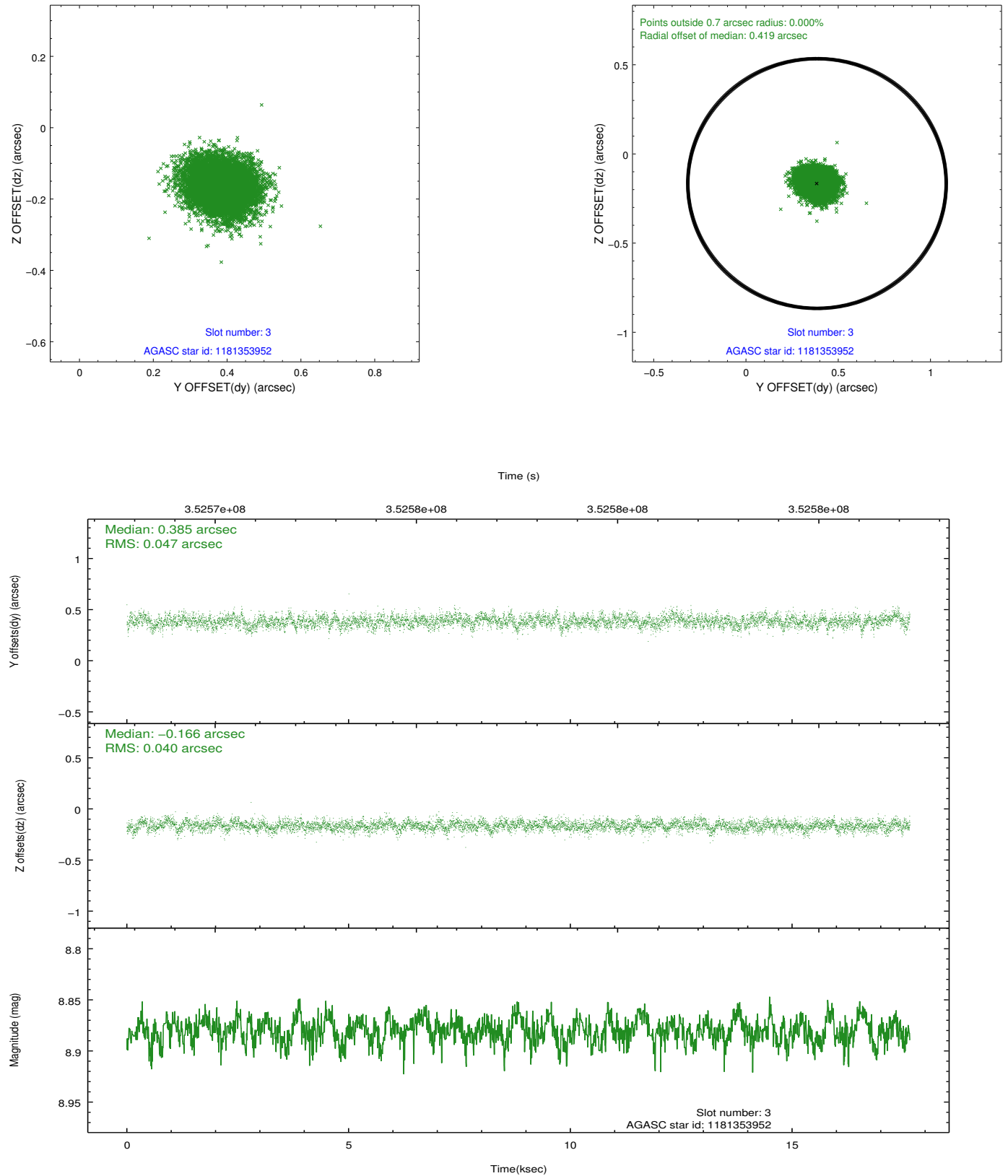


Slot Statistics

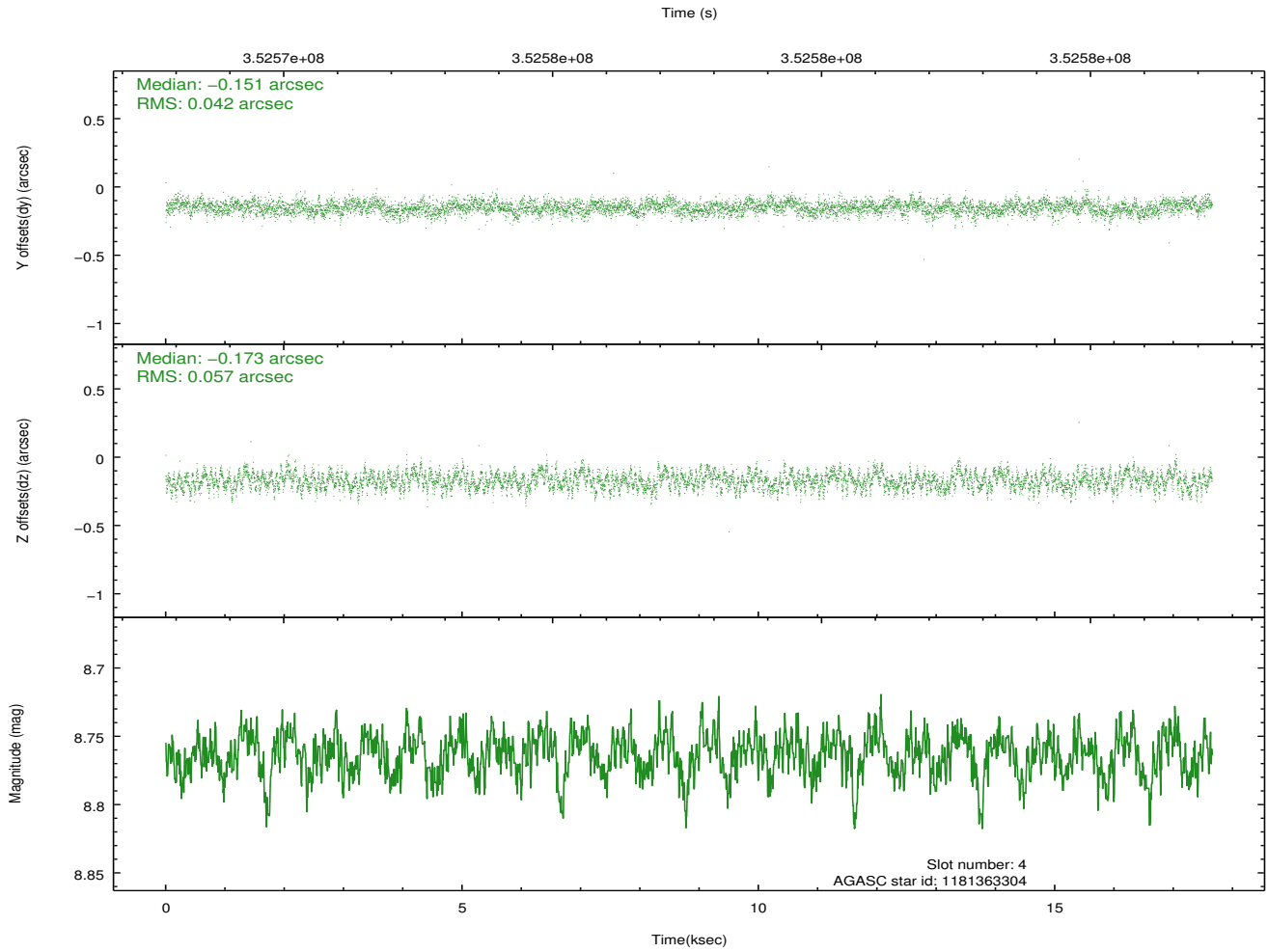
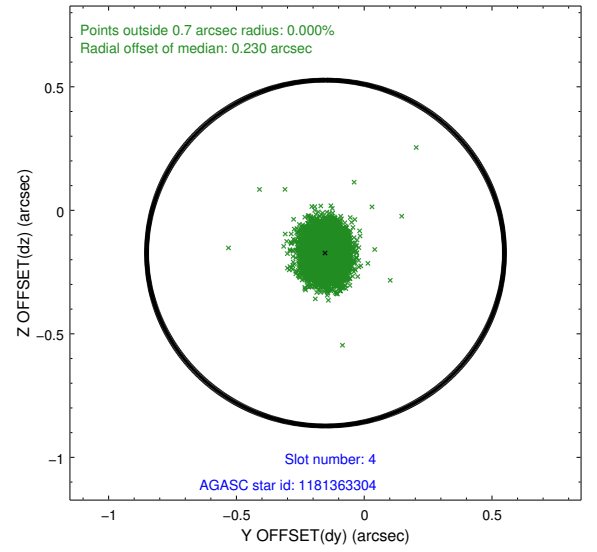
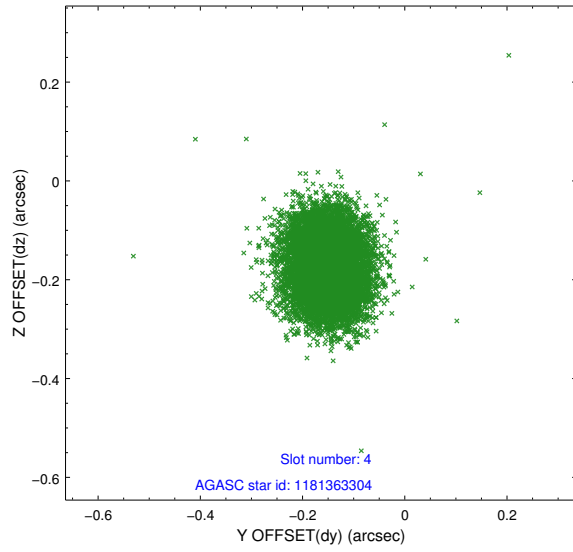
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.92	4307	-0.053	-0.072	0.008	0.015	0.000000	0.000000	-764.92	-1818.30
1	FID	ACIS-S-4	7.00	4305	0.129	0.045	0.006	0.011	0.000000	0.000000	2148.45	90.00
2	FID	ACIS-S-5	7.05	4307	-0.107	0.035	0.008	0.014	0.000000	0.000000	-1817.50	83.97
3	GUIDE	1181353952	8.88	8608	0.385	-0.166	0.065	0.107	211.658427	-65.506998	-2015.95	1442.73
4	GUIDE	1181363304	8.76	8611	-0.151	-0.173	0.075	0.120	212.741873	-65.071033	242.76	1320.97
5	GUIDE	1181492872	9.09	8608	-0.008	0.181	0.092	0.151	214.965330	-65.517798	1255.50	-2250.10
6	GUIDE	1181356824	8.91	8608	-0.237	-0.101	0.086	0.135	213.100076	-64.682630	1645.72	1857.53
7	GUIDE	1181880992	9.07	8609	0.013	0.260	0.097	0.163	213.720648	-66.170562	-1720.93	-2410.32

2.4 Star Slots

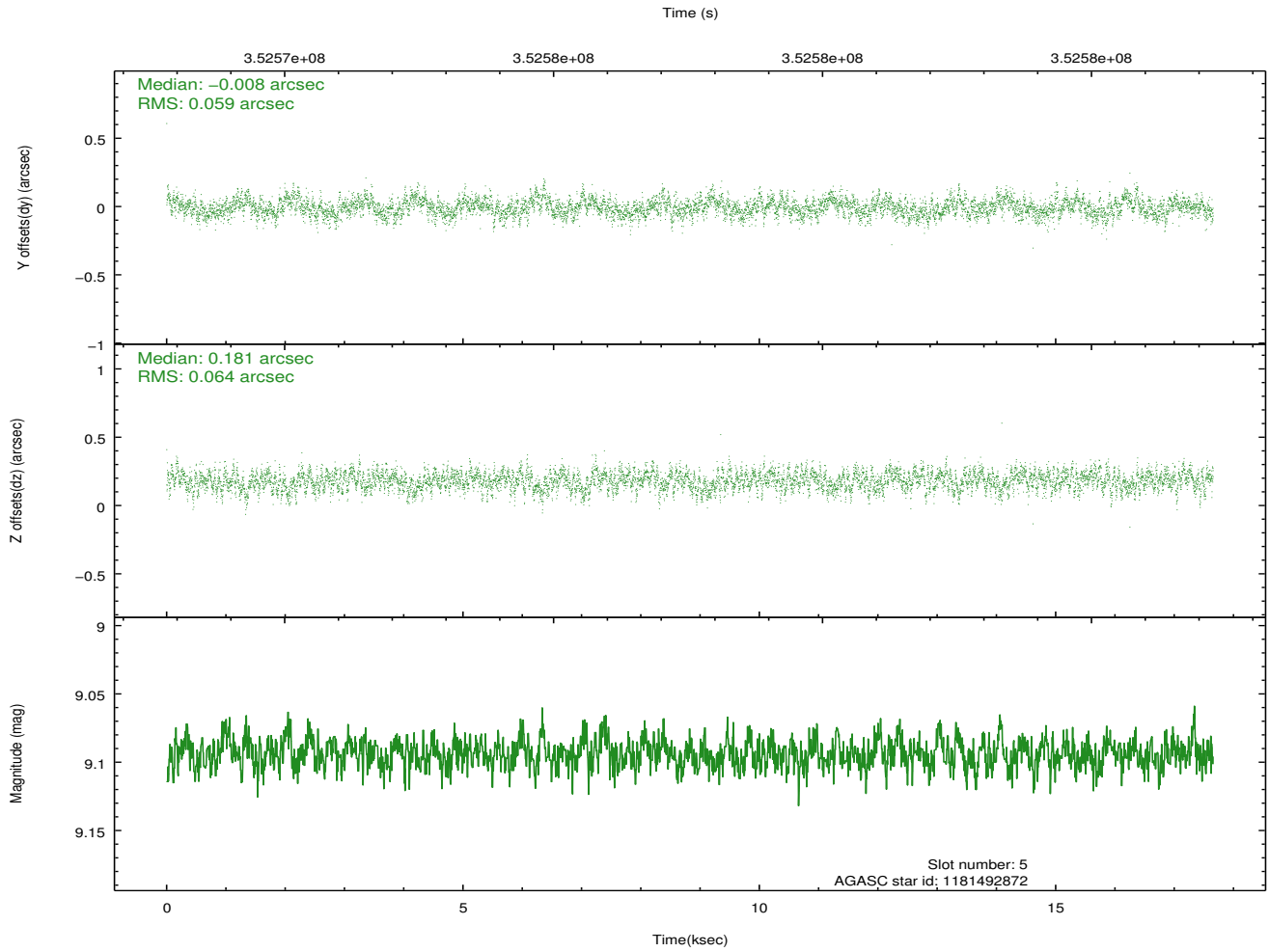
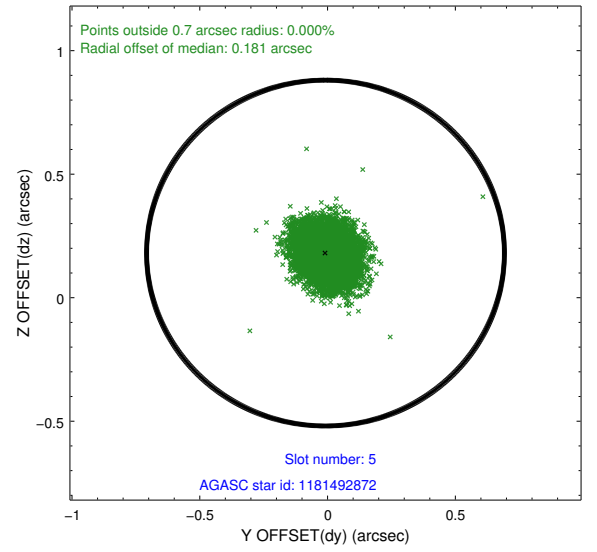
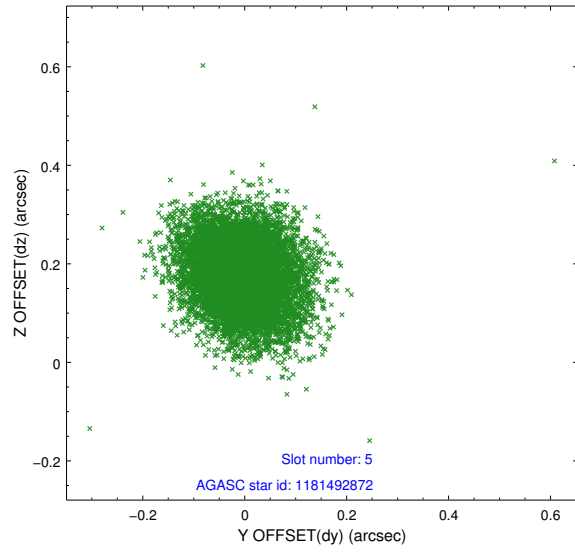
2.4.1 Slot 3



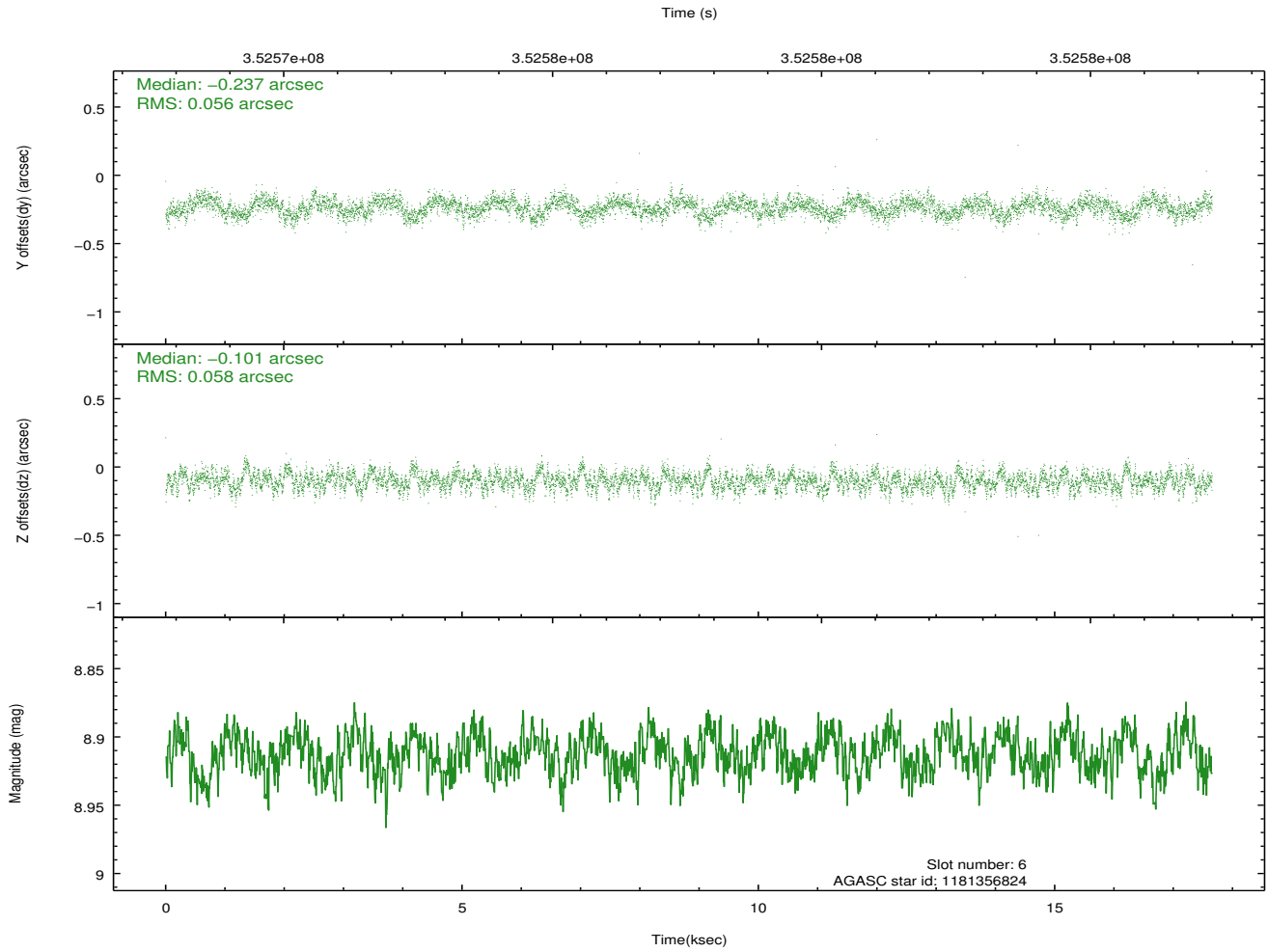
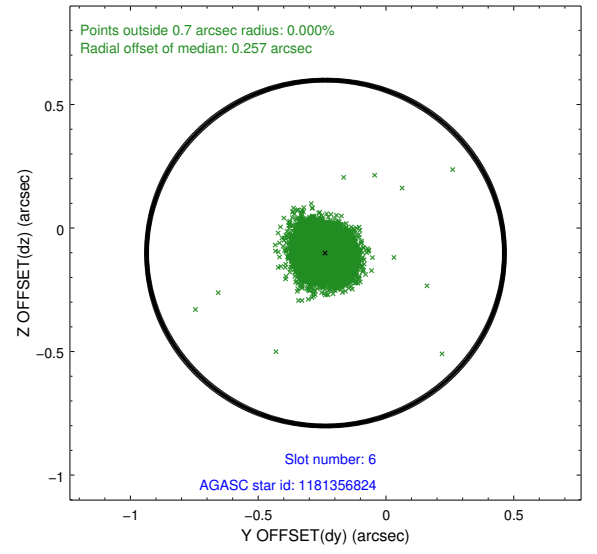
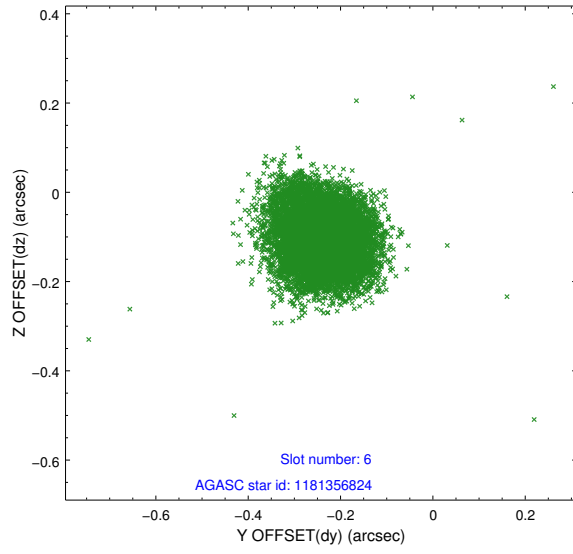
2.4.2 Slot 4



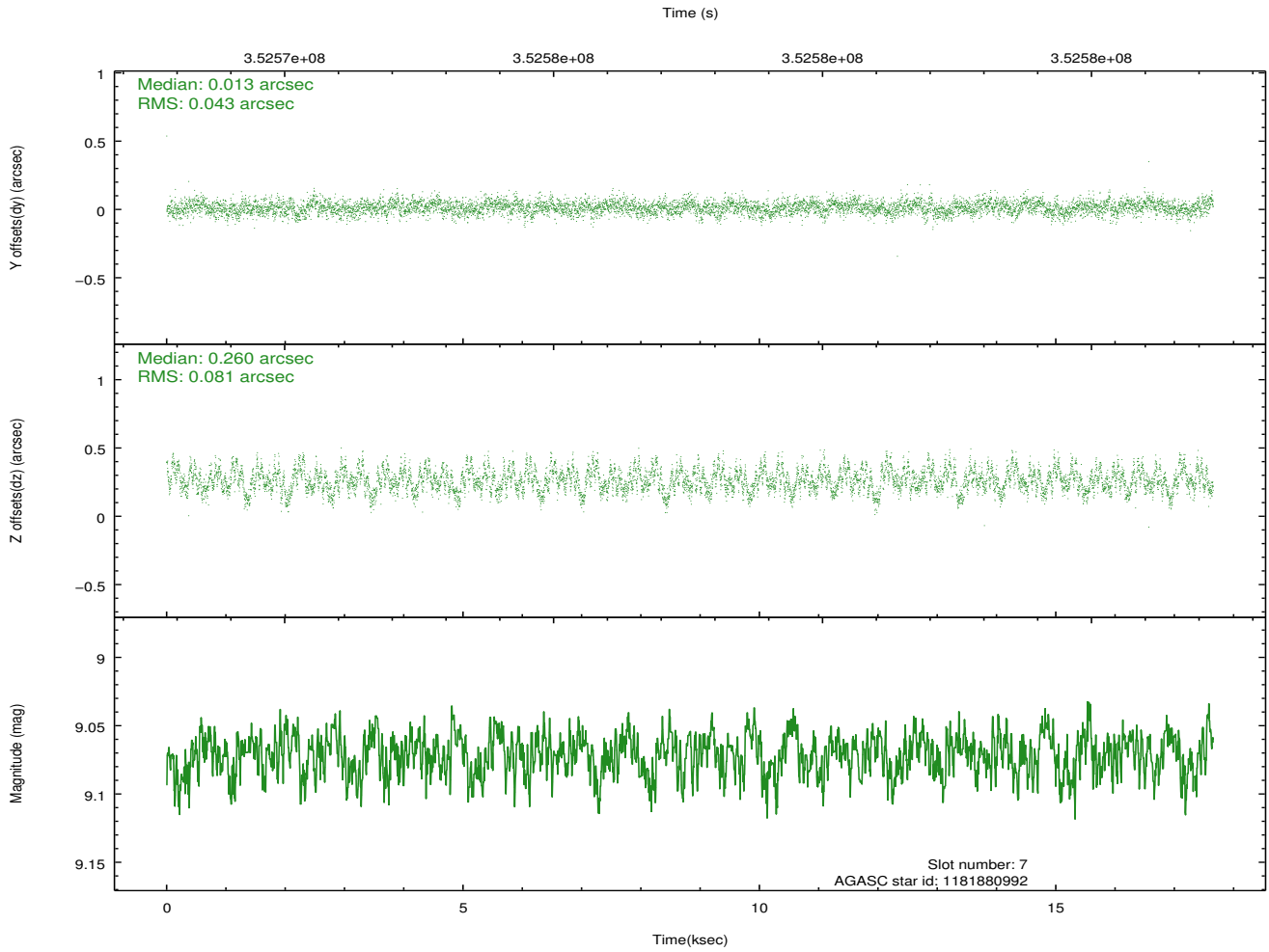
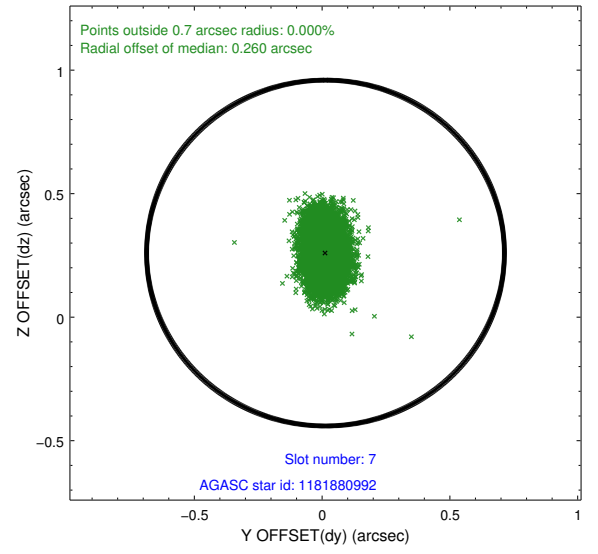
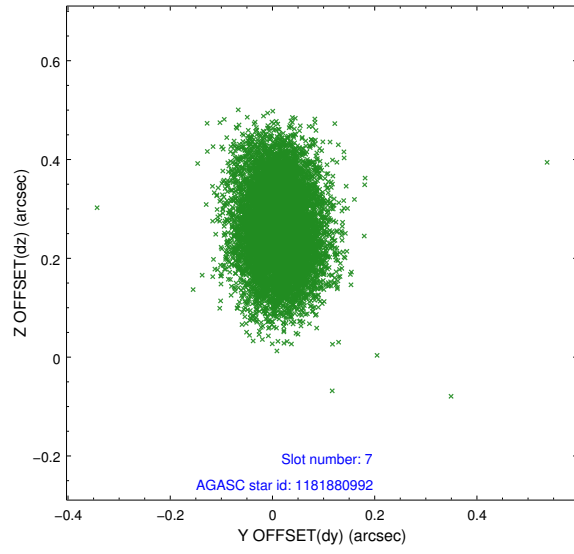
2.4.3 Slot 5



2.4.4 Slot 6

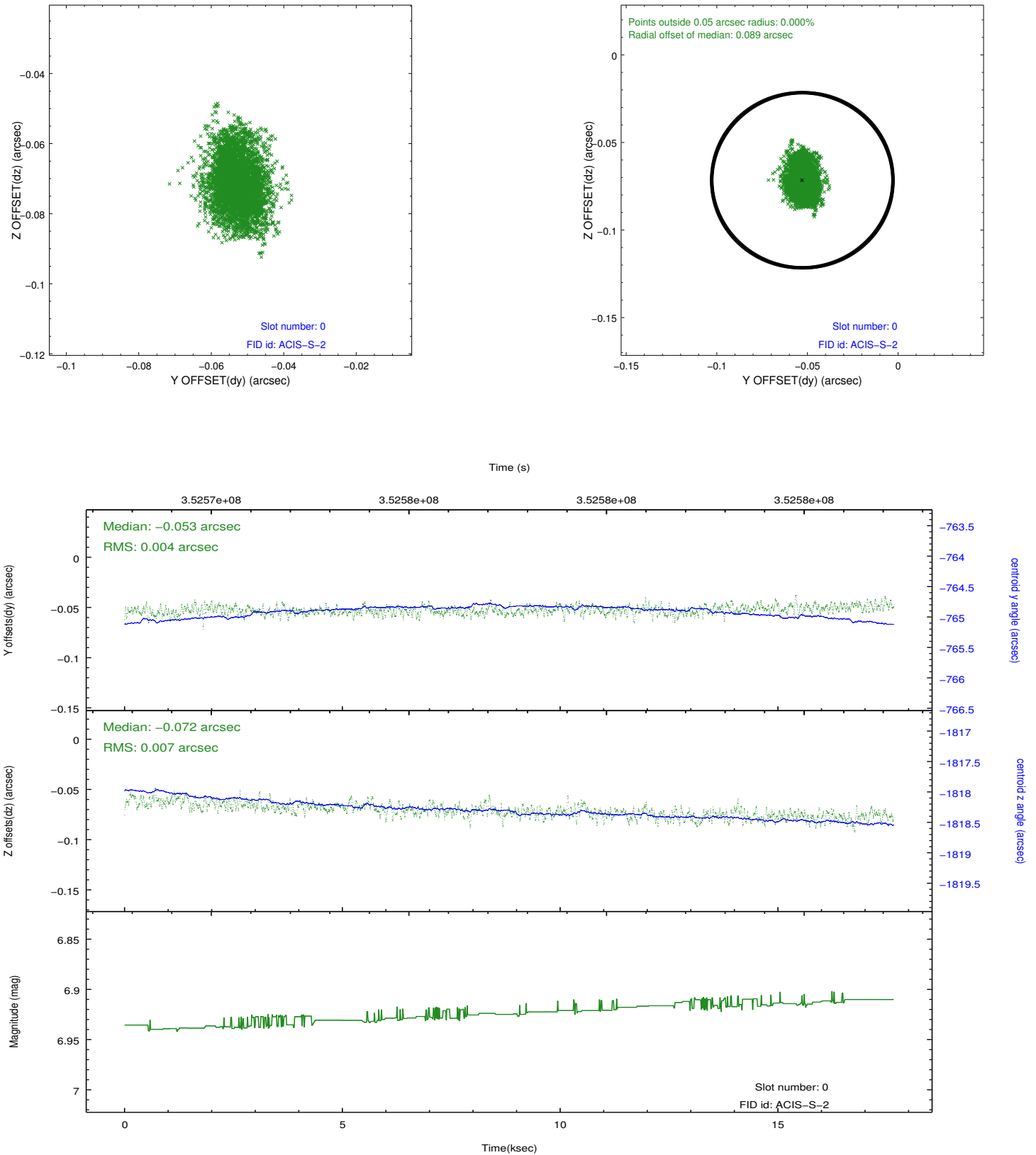


2.4.5 Slot 7

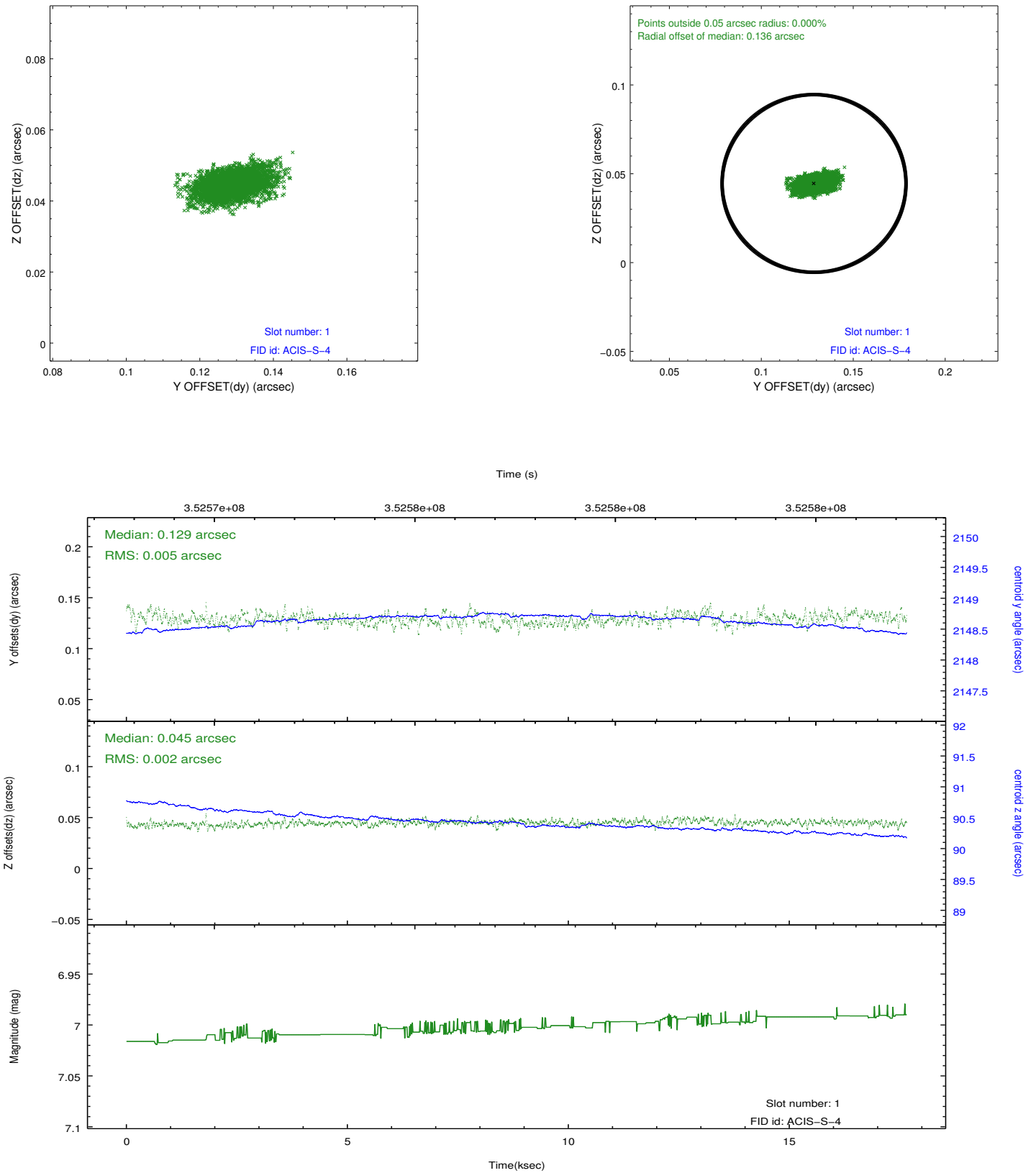


2.5 FID Slots

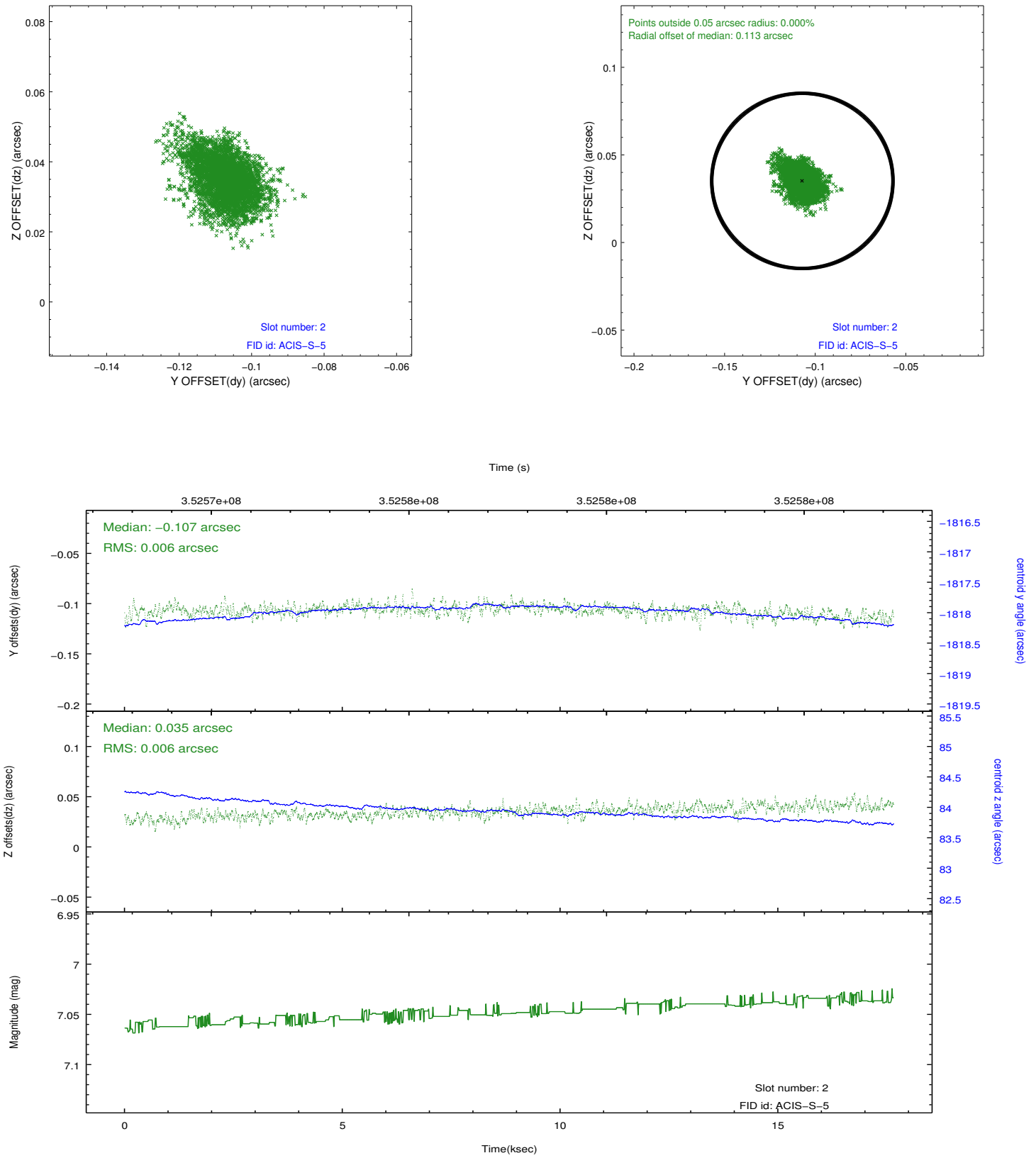
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

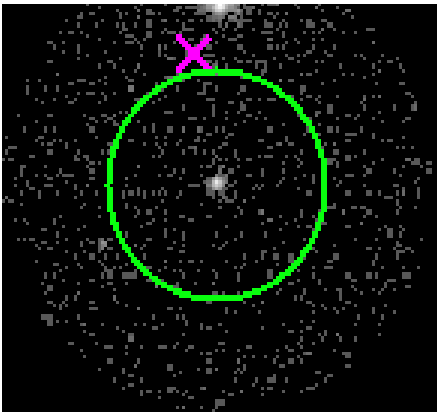


3 Gratings

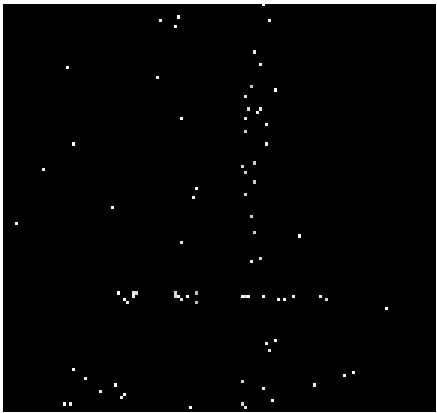
3.1 HEG Arm



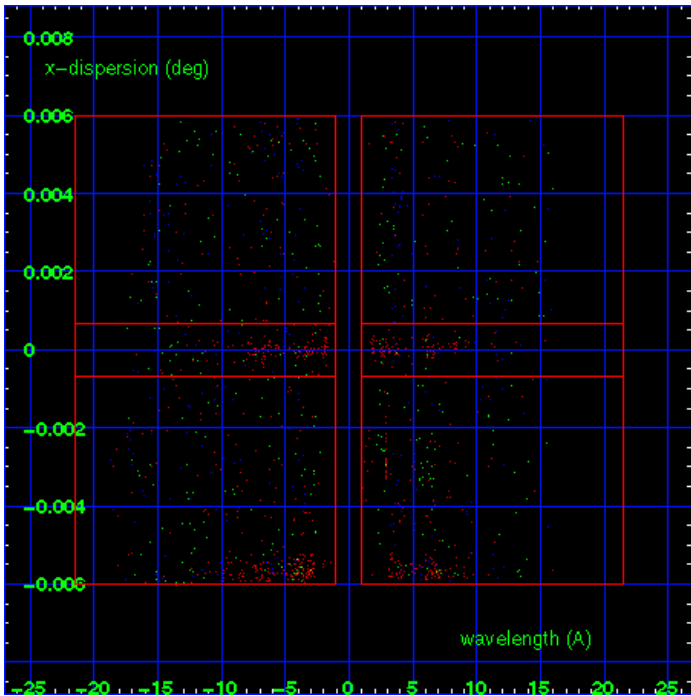
HEG Order Sort 123



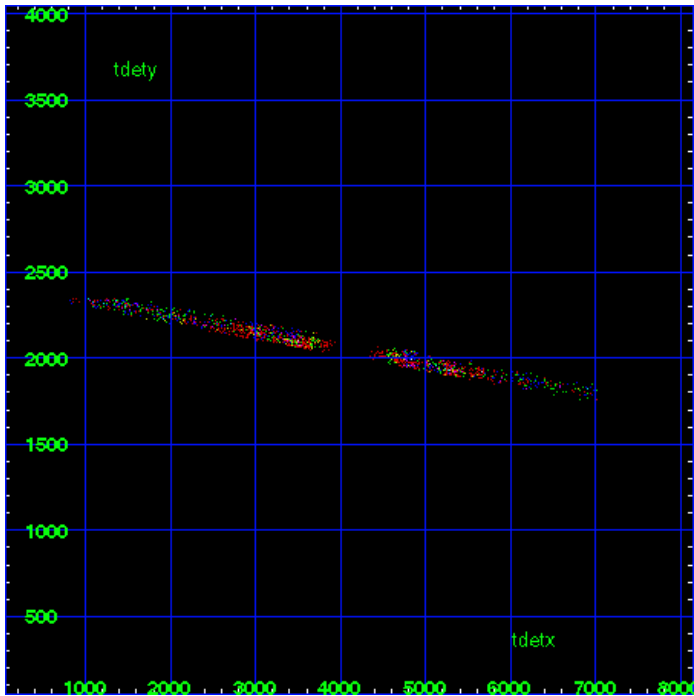
HEG Zero Order



HEG Order Sort ALL

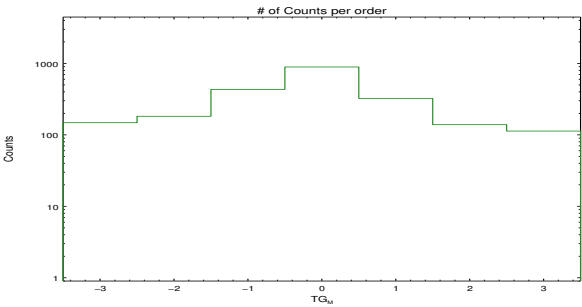


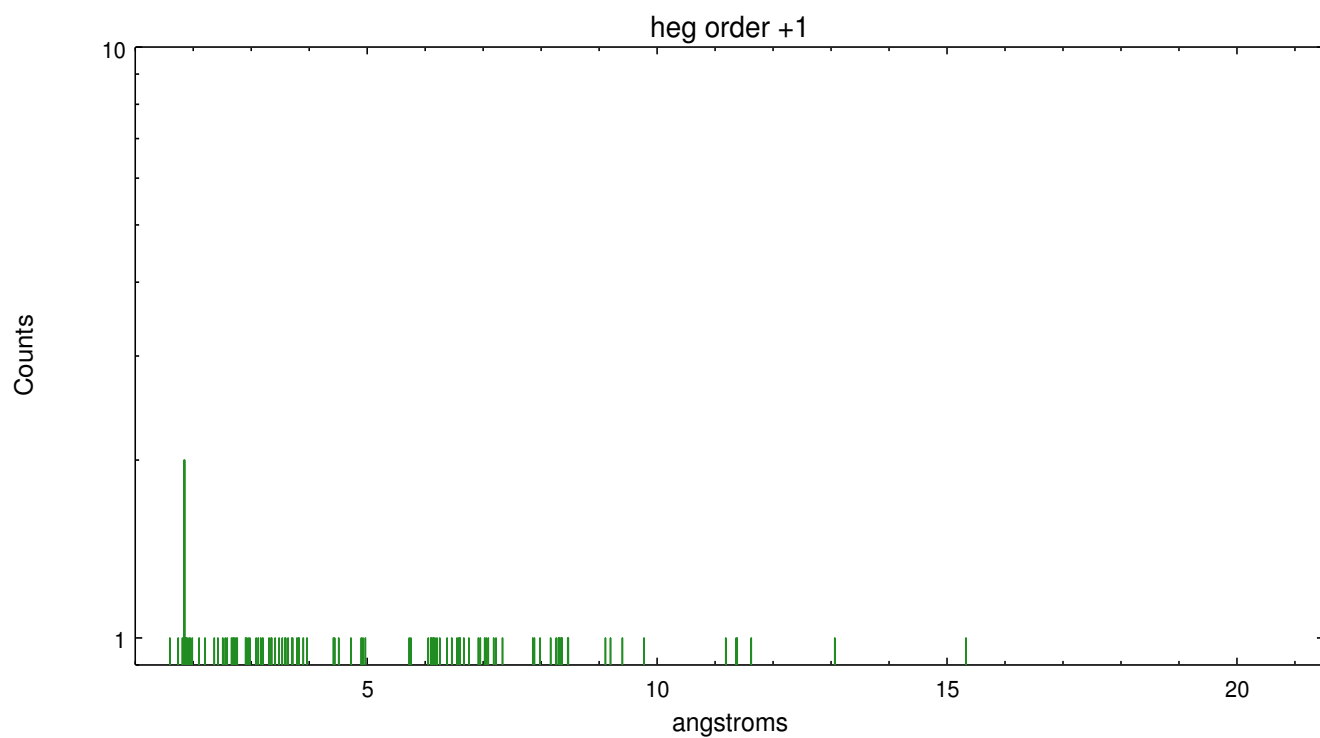
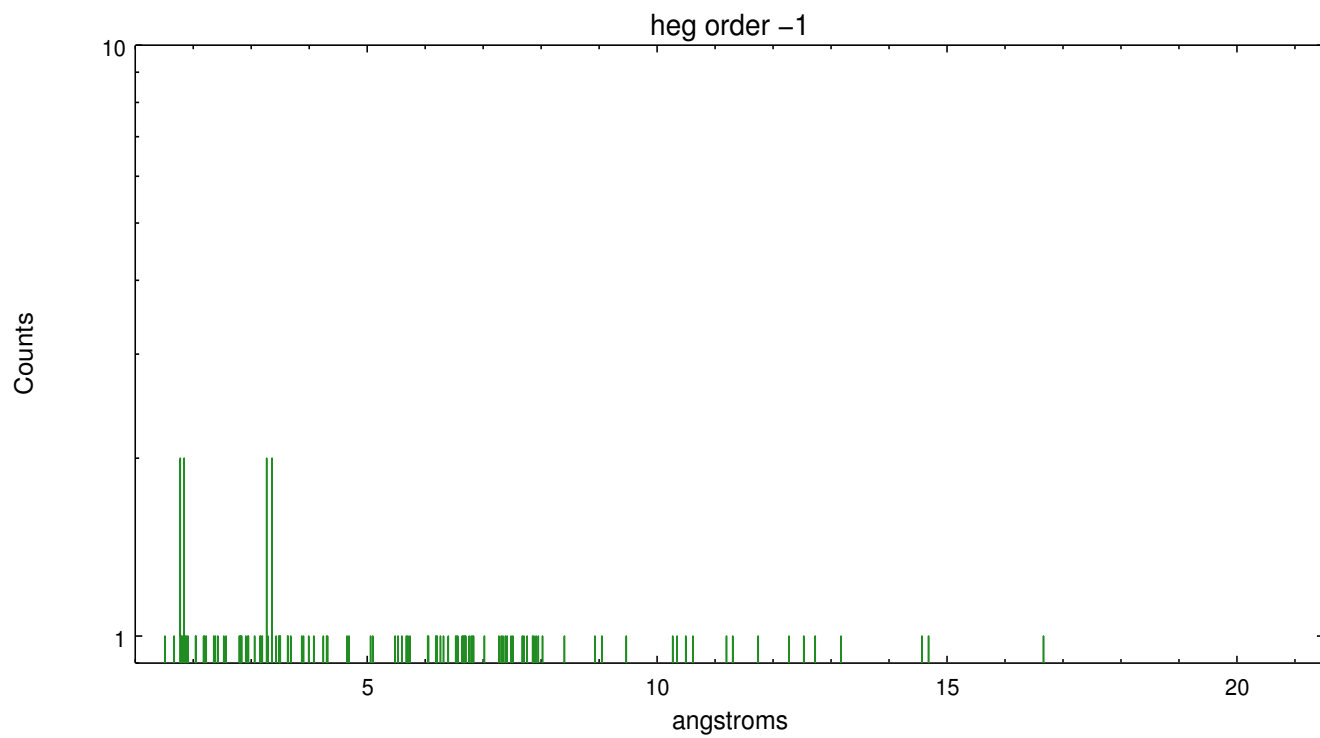
Spot Image HEG



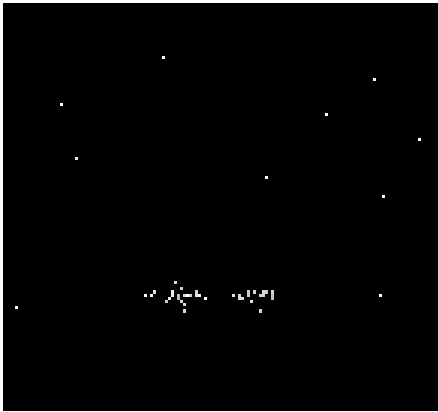
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	148	182	433	891	324	139	113

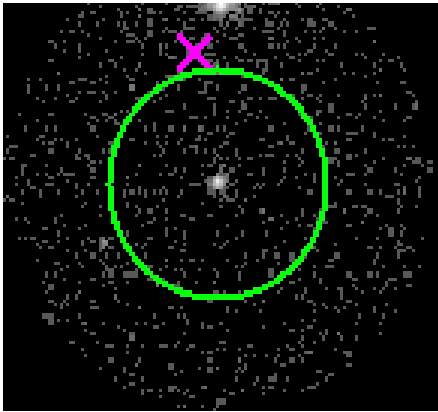




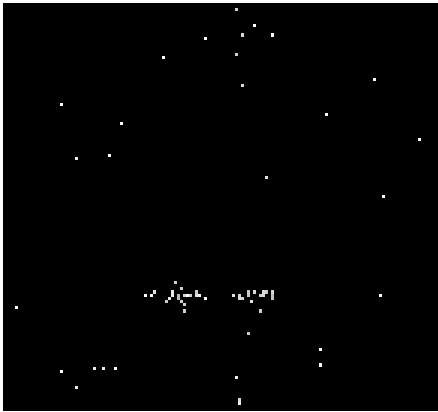
3.2 MEG Arm



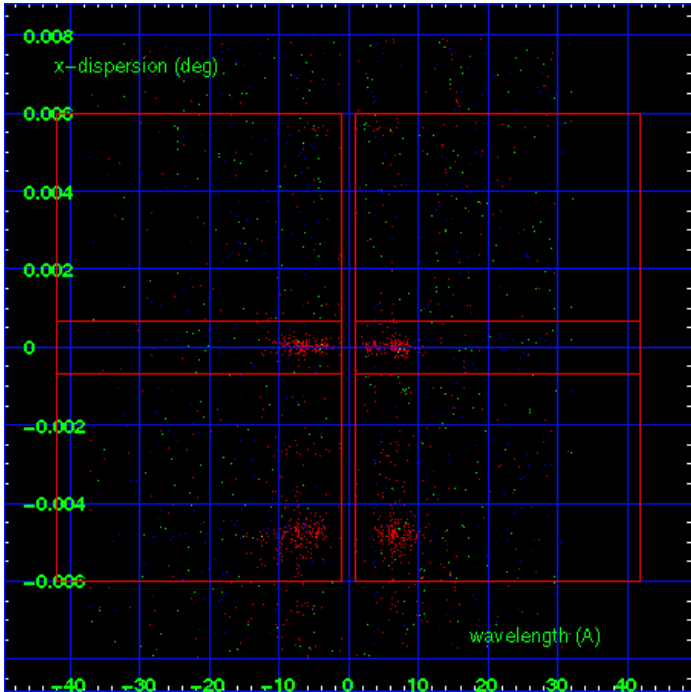
MEG Order Sort 123



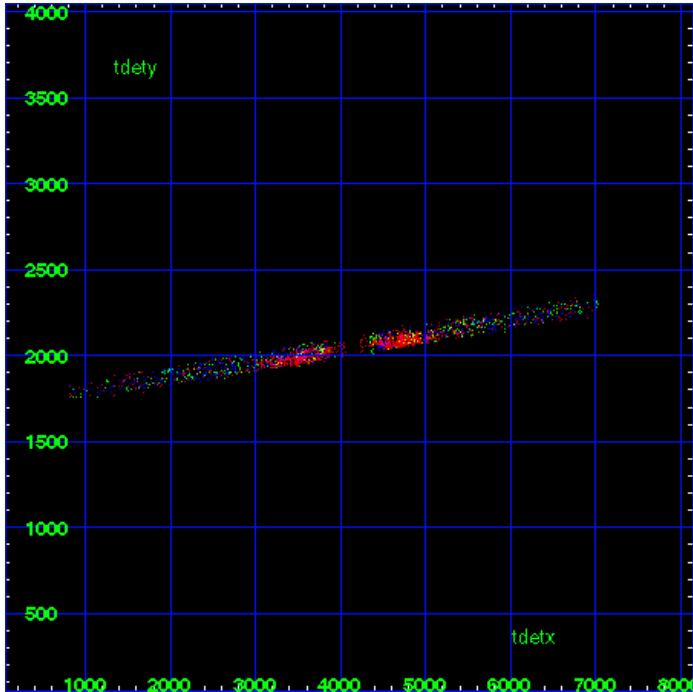
MEG Zero Order



MEG Order Sort ALL

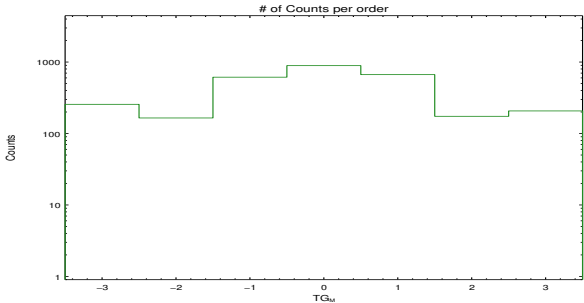


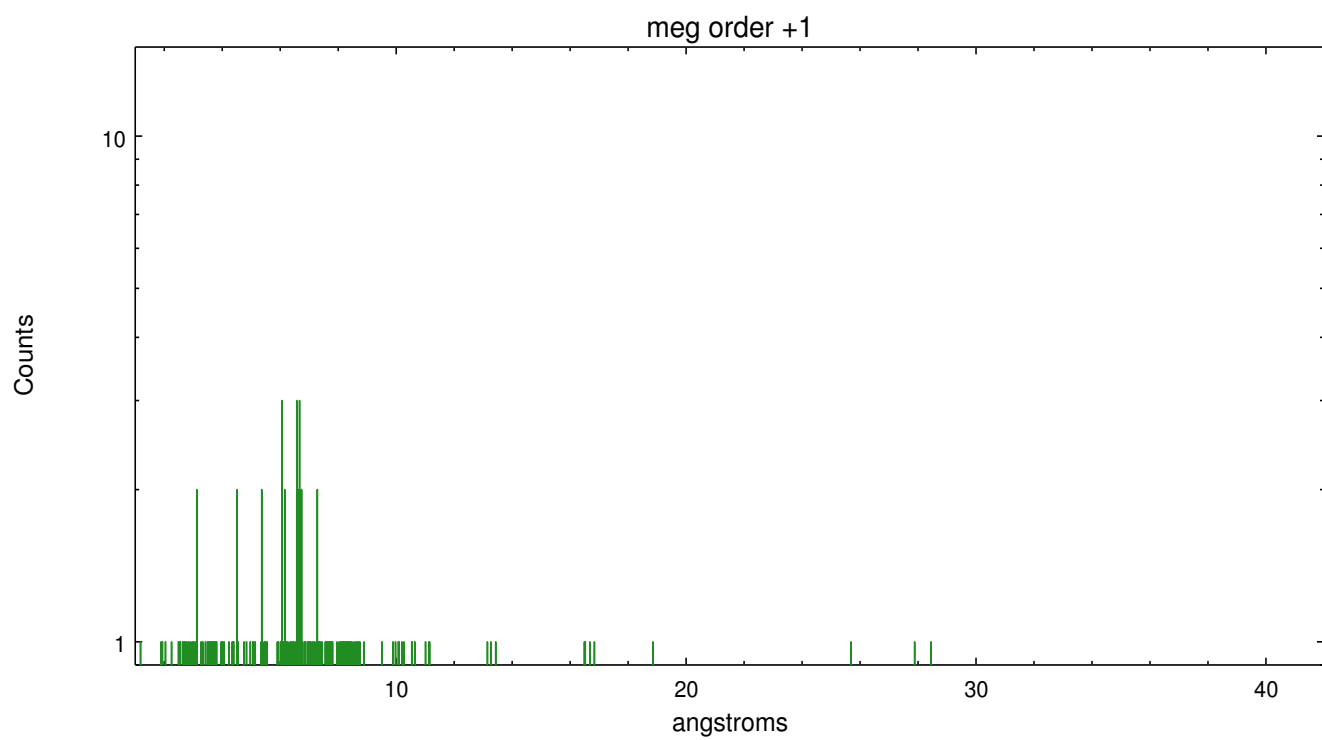
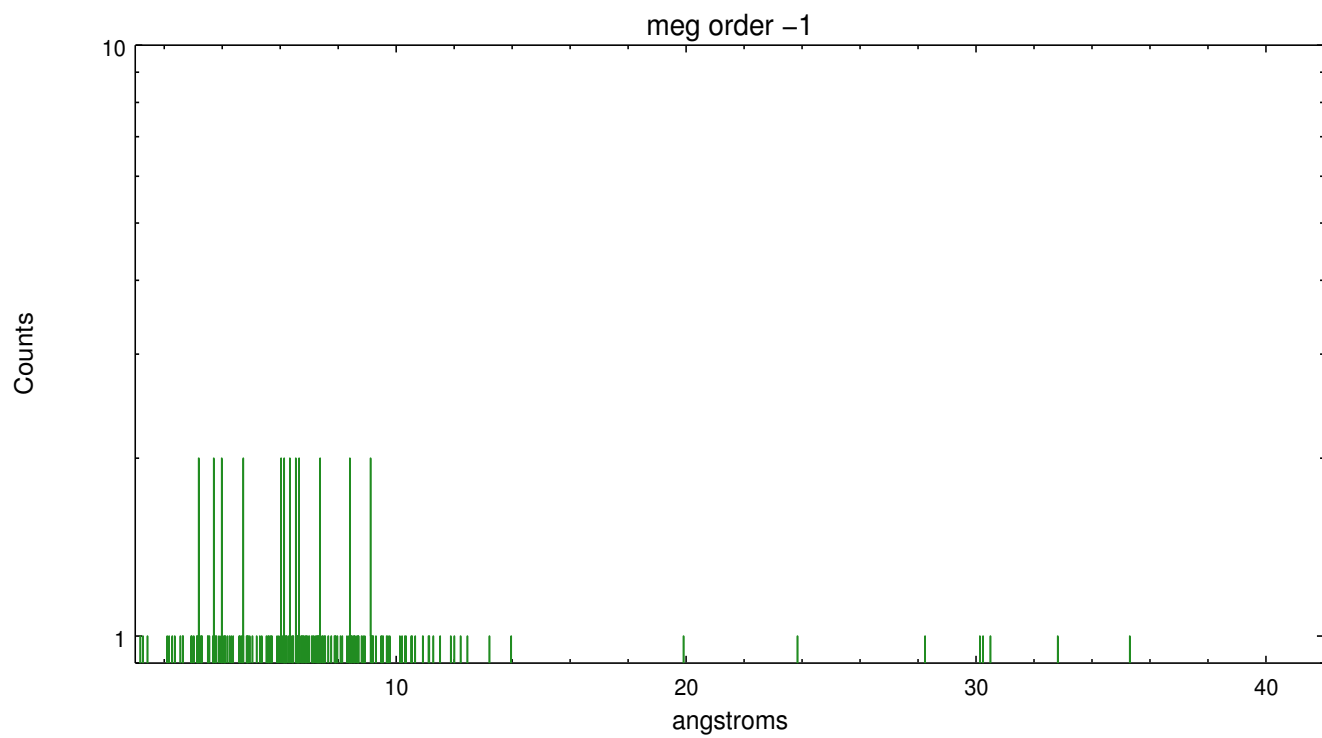
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	256	165	614	891	667	174	207





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	16.872

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=4102.9, y=4061.51 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.