

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22213 - L2 Version 1
Chandra X-Ray Center

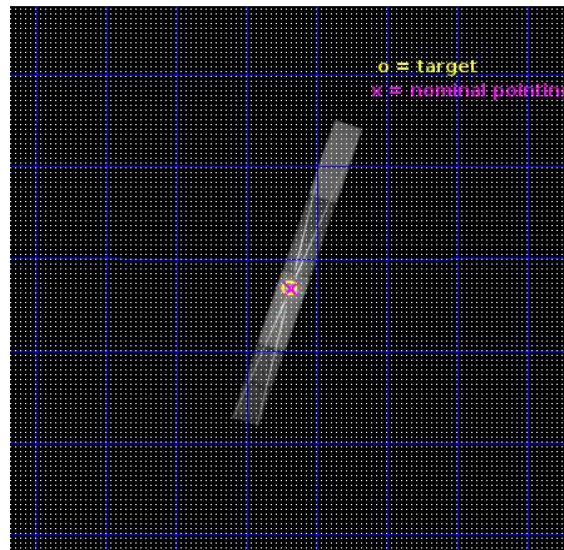
L2 Processing Date : Apr 30 2019

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1 Front

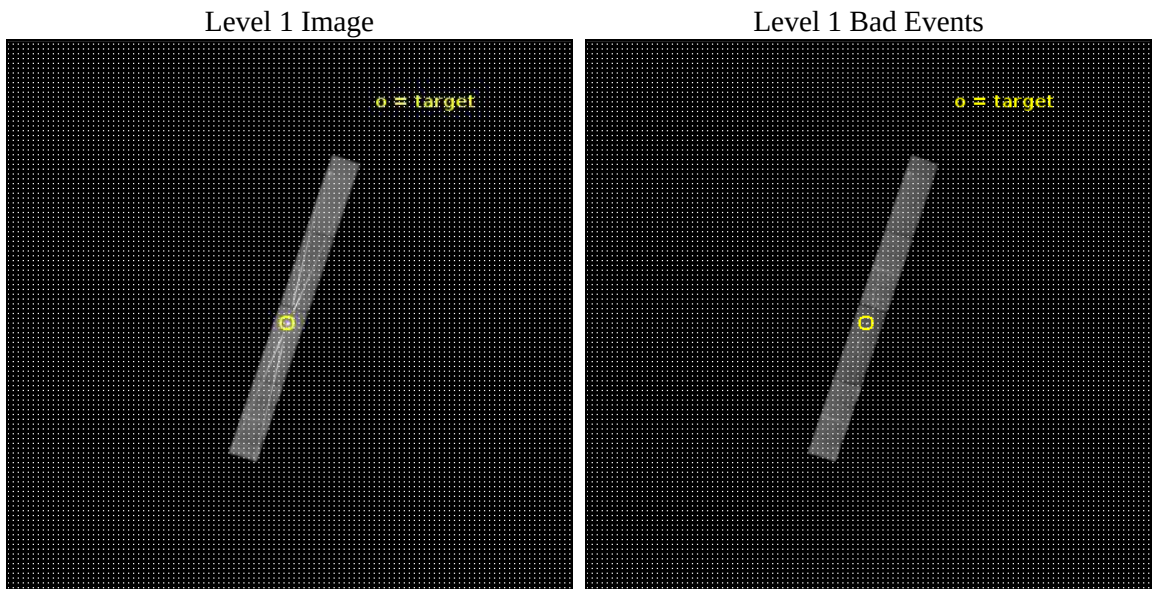
seq_num	402117	Sequence number
obs_id	22213	Observation id
title	The Microquasar GRS 1915+105 in an Unprecedented Quiet State	Propo
observer	Jon Miller	Principal investigator
object	GRS 1915+105	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945778	Observer's specified target Dec [deg]
ra_nom	288.79527686976	Nominal RA [deg]
dec_nom	10.945441697773	Nominal Dec [deg]
roll_nom	108.44125351856	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30078.001195192	Sum of GTIs [s]
livetime	29083.350604518	Livetime [s]
ontime5	30078.001195192	Sum of GTIs [s]
ontime6	30078.001195192	Sum of GTIs [s]
ontime7	30078.001195192	Sum of GTIs [s]
ontime8	30078.001195192	Sum of GTIs [s]
l2events	538785	Number of level 2 events



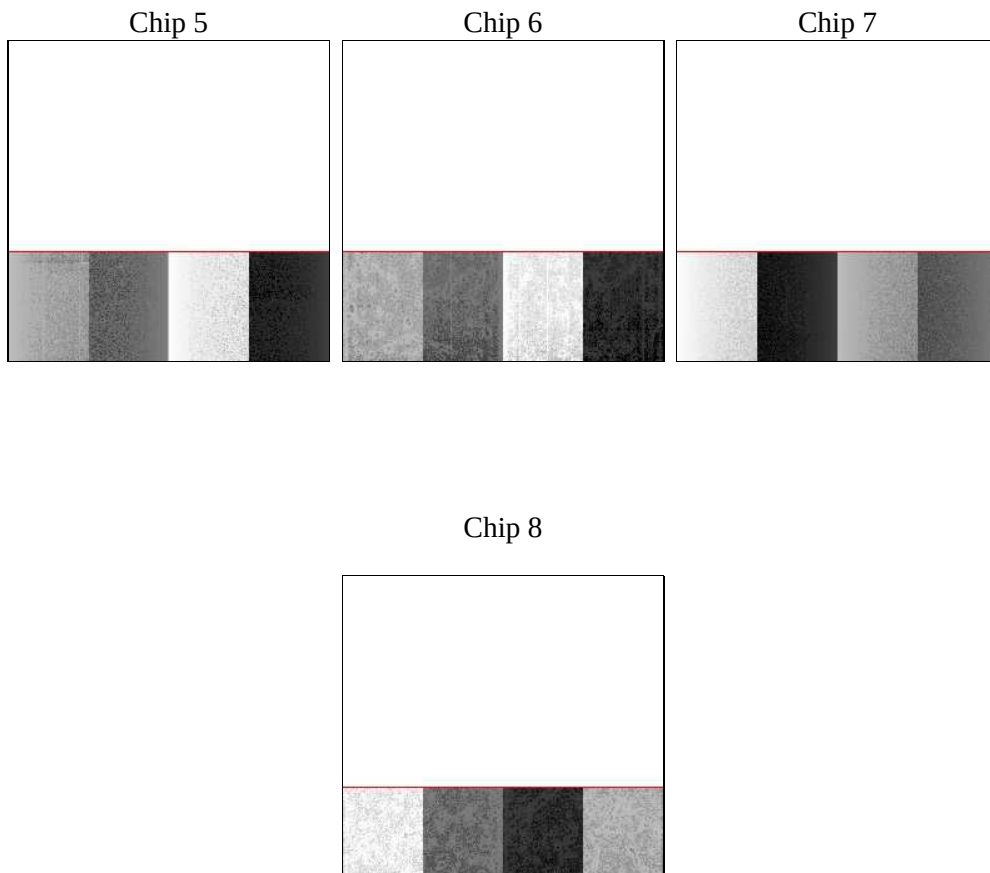
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	30078.001195192	Sum of GTIs [s]
caldsver	4.8.2	 	ontime5	30078.001195192	Sum of GTIs [s]
date	2019-05-01T00:29:20	Date and time of file creation	ontime6	30078.001195192	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	30078.001195192	Sum of GTIs [s]
			ontime8	30078.001195192	Sum of GTIs [s]
			l1events	885581	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4077.17, 4099.38)	src1a sky pixel position
			zo_pos_tgd	(4076.85, 4098.88)	src1a sky pixel position via radetect

2.1.4 Events

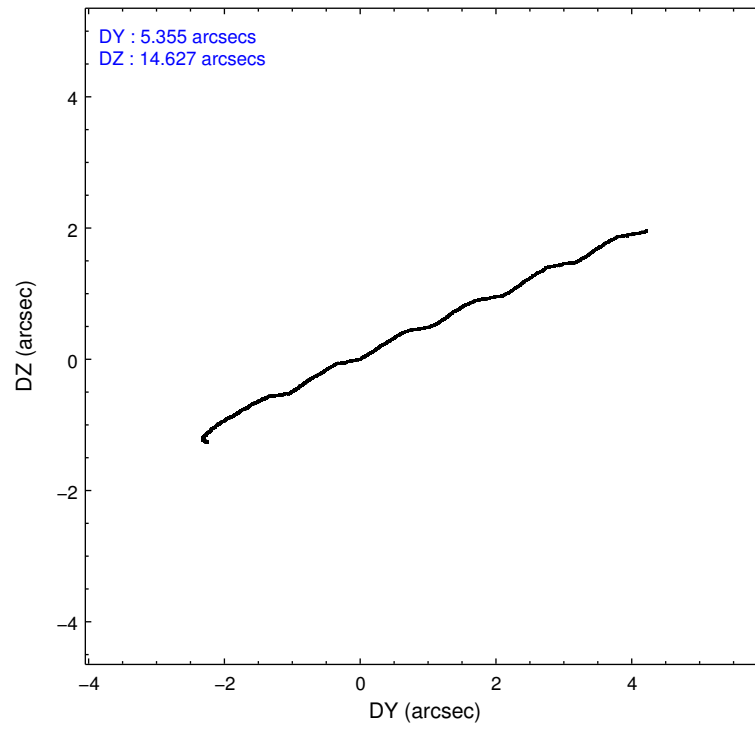
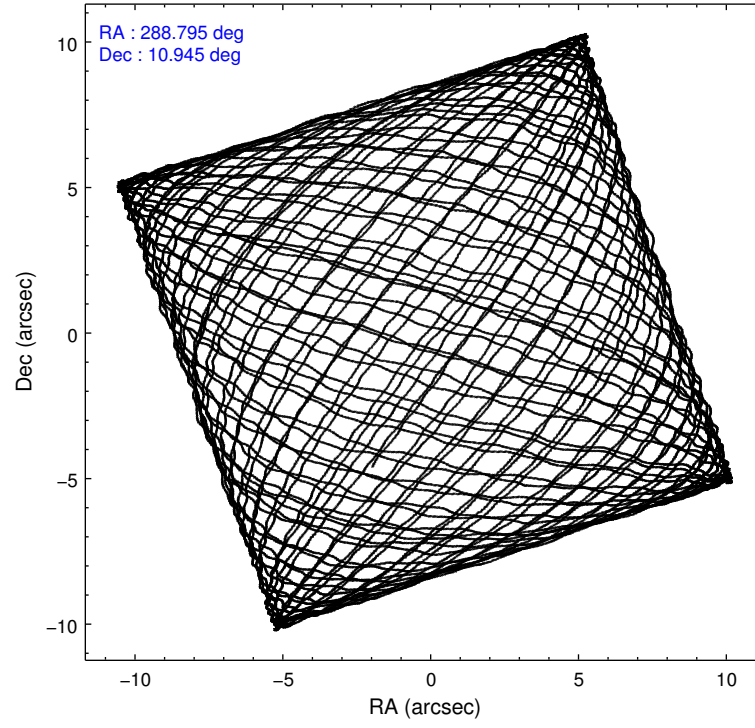
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	140669	241574	359454	143884
rejected events	67720	86104	65909	87519
rejected %	48%	35%	18%	60%

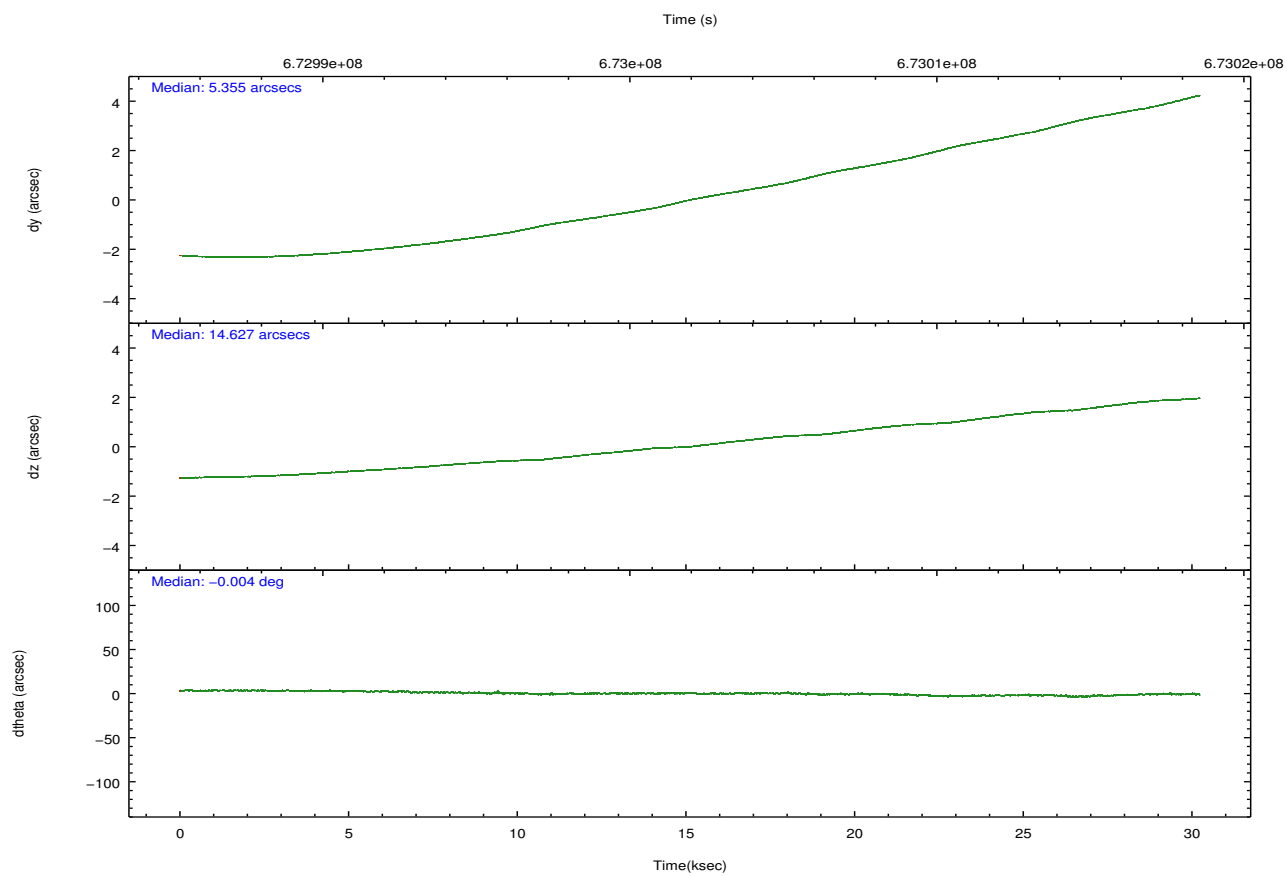
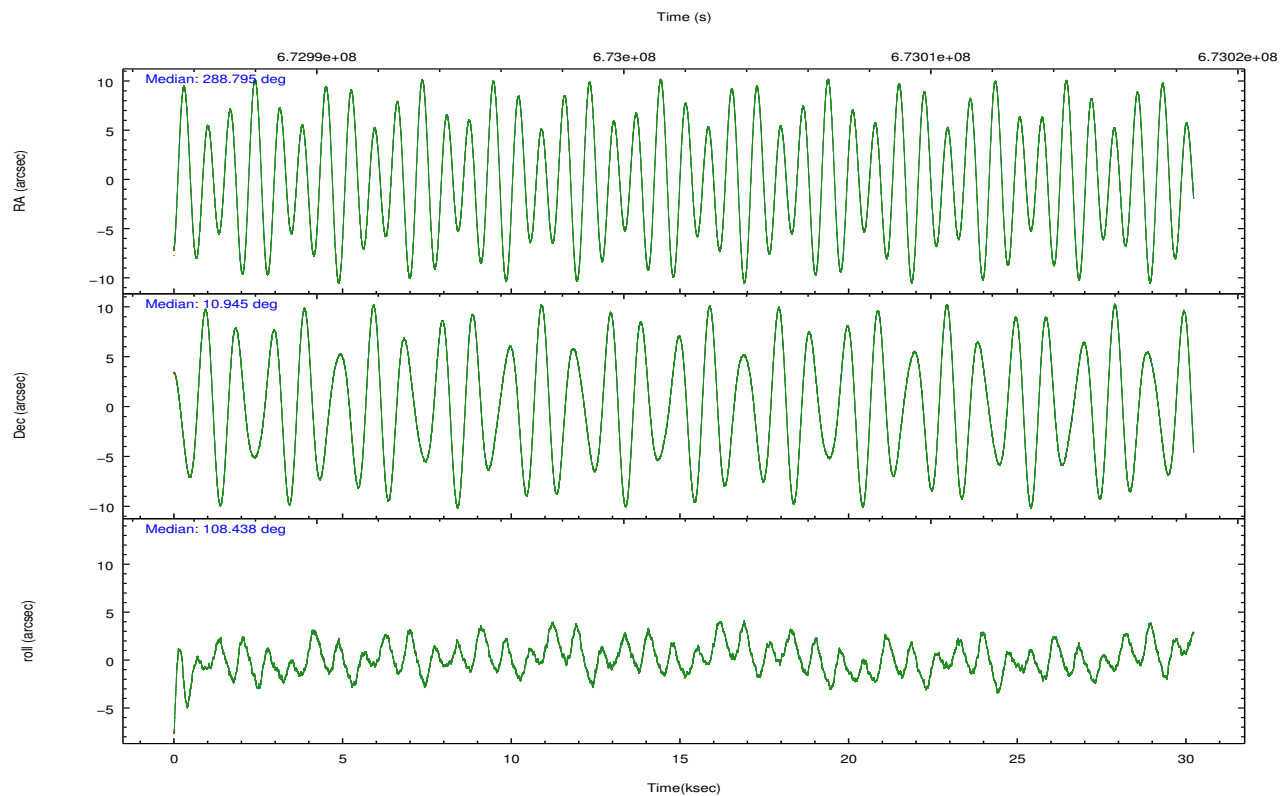
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	8755	102653	50572	26790
	6%	42%	14%	18%
grade 1 events	1597	576	882	153
	1%	0%	0%	0%
grade 2 events	21006	23487	67974	10371
	14%	9%	18%	7%
grade 3 events	3799	8169	30329	4611
	2%	3%	8%	3%
grade 4 events	3732	8099	29803	4351
	2%	3%	8%	3%
grade 5 events	9517	4294	14306	5412
	6%	1%	3%	3%
grade 6 events	35662	13070	114884	10245
	25%	5%	31%	7%
grade 7 events	56601	81226	50704	81951
	40%	33%	14%	56%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	288.816425	288.7952768697637	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	10.927501	10.94544169777254	Subarray start row	1	1
[deg] Pointing Roll	108.280609	108.4412535185643	Subarray row count	350	350
[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	1.2
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	672987064.184000	672986373.40284			
Observation start date	2019-04-30T04:49:55	2019-04-30T04:39:33			
[s] Observation end time (MET)	673017064.184000	673018079.72974			
Observation end date	2019-04-30T13:09:55	2019-04-30T13:27:59			
Read mode	TIMED	TIMED			

2.3 Aspect



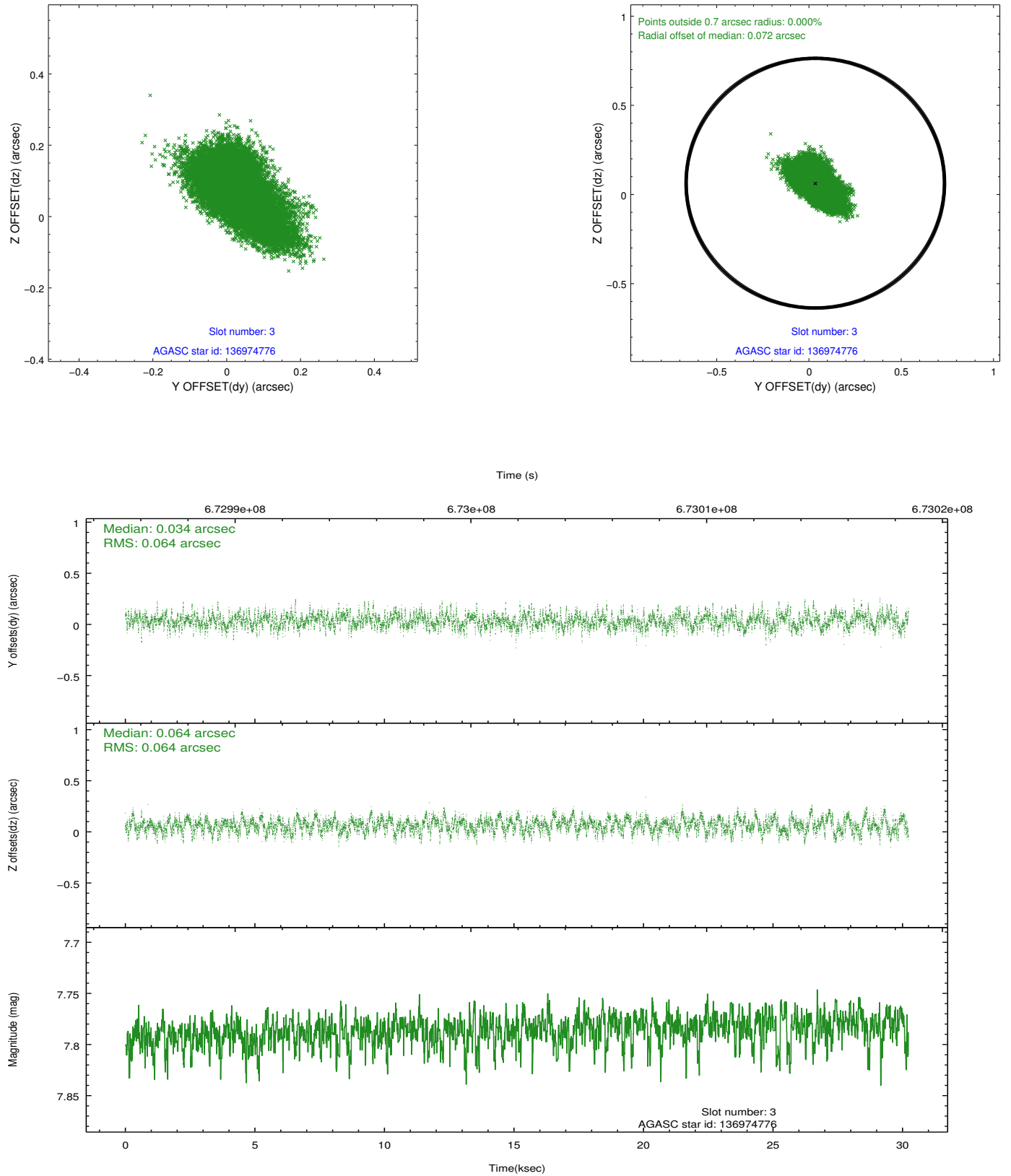


Slot Statistics

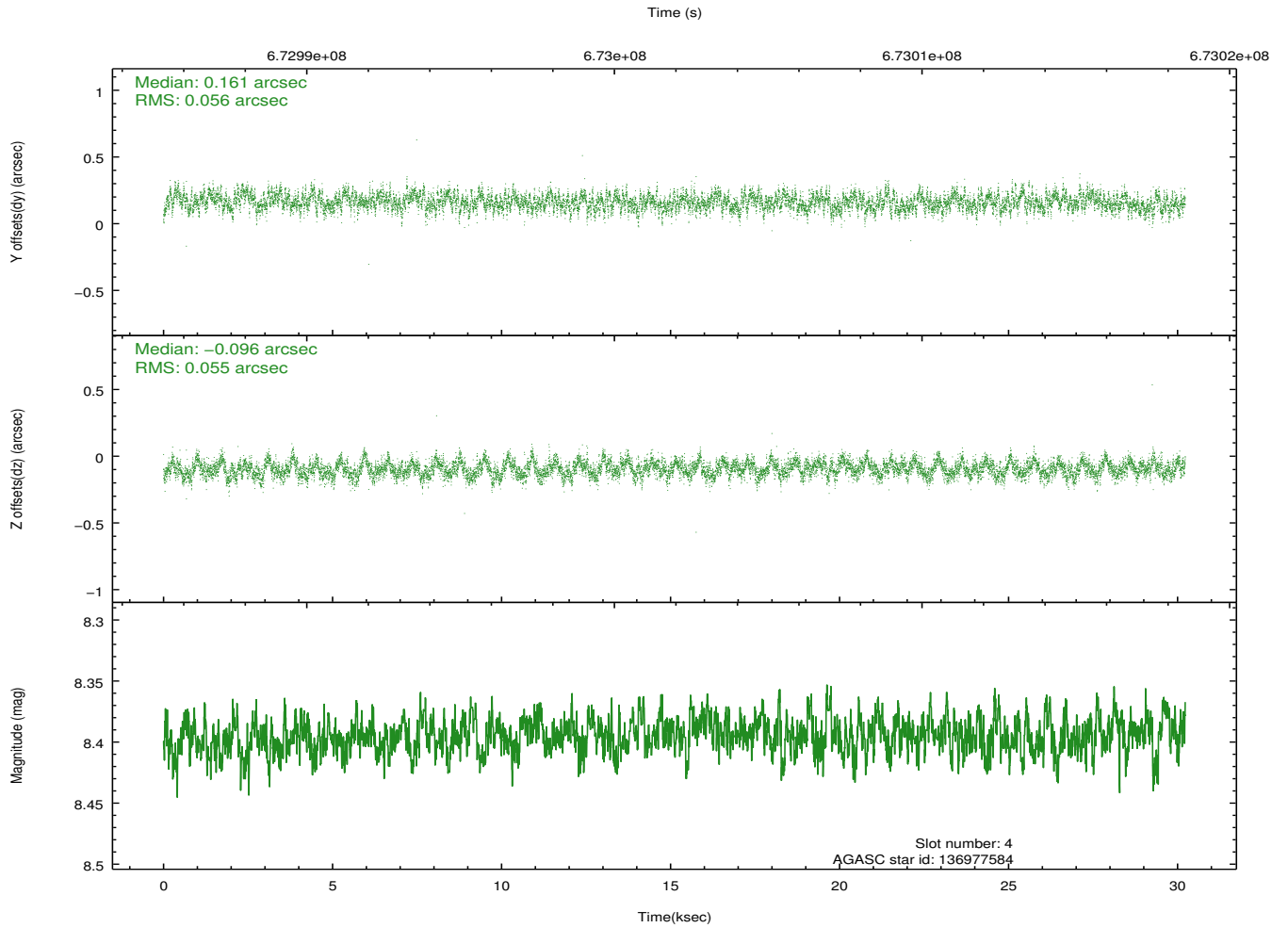
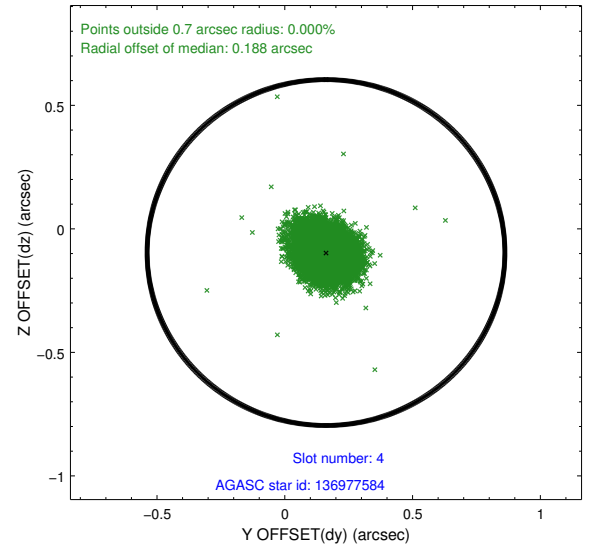
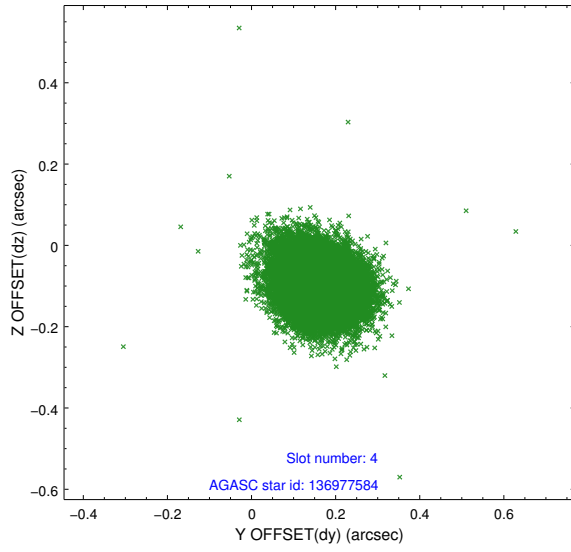
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.08	7374	1.000	-0.241	-0.175	0.046	0.068	0.000000	0.000000	-757.99	-1901
1	FID		ACIS-S-4	7.16	7374	1.000	0.604	0.159	0.030	0.064	0.000000	0.000000	2156.10	7
2	FID		ACIS-S-5	7.20	7374	1.000	-0.407	0.027	0.033	0.046	0.000000	0.000000	-1810.90	1
3	GUIDE	used	136974776	7.79	14742	1.000	0.034	0.064	0.095	0.162	288.742109	10.409402	-1688.16	835
4	GUIDE	used	136977584	8.39	14726	1.000	0.161	-0.096	0.084	0.131	288.635599	10.555283	-1071.14	1028
5	GUIDE	used	137102976	8.52	14741	1.000	0.360	0.337	0.083	0.137	289.193436	10.979652	-238.14	-1323
6	GUIDE	used	137497048	7.94	14744	1.000	-0.114	0.122	0.073	0.125	288.896055	11.554718	2051.97	-976
7	GUIDE	used	137498872	7.03	14746	1.000	-0.443	-0.418	0.123	0.194	288.350862	11.344926	1942.98	1088

2.4 Star Slots

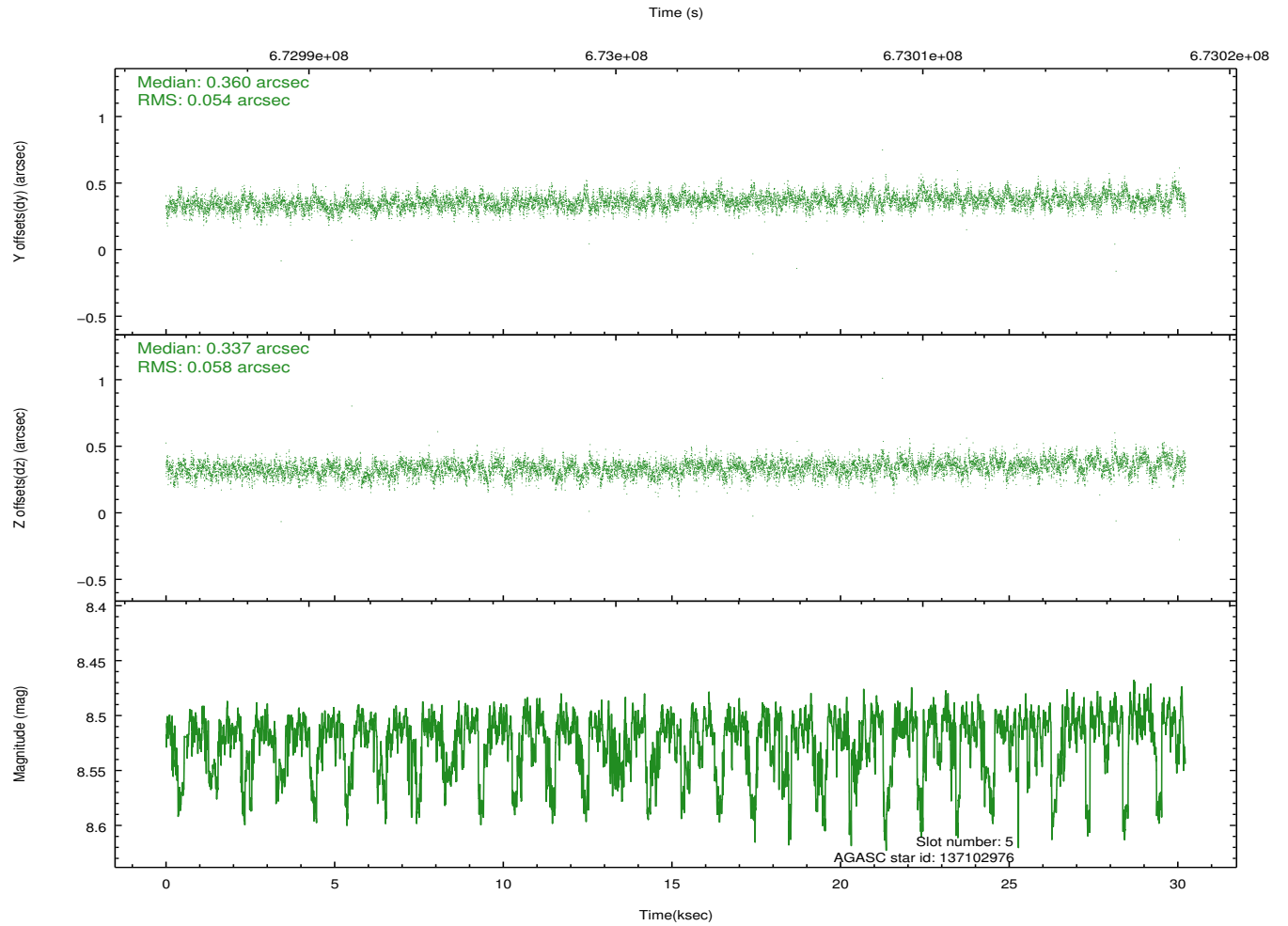
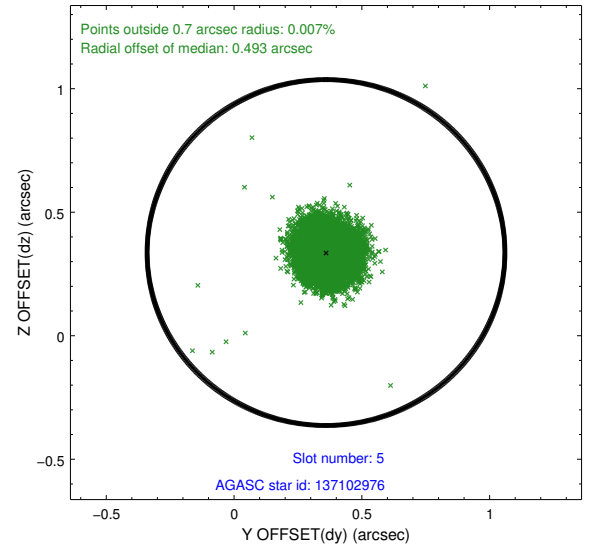
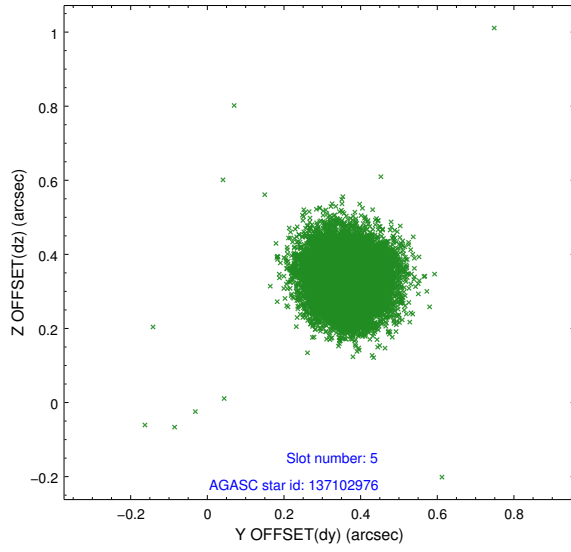
2.4.1 Slot 3



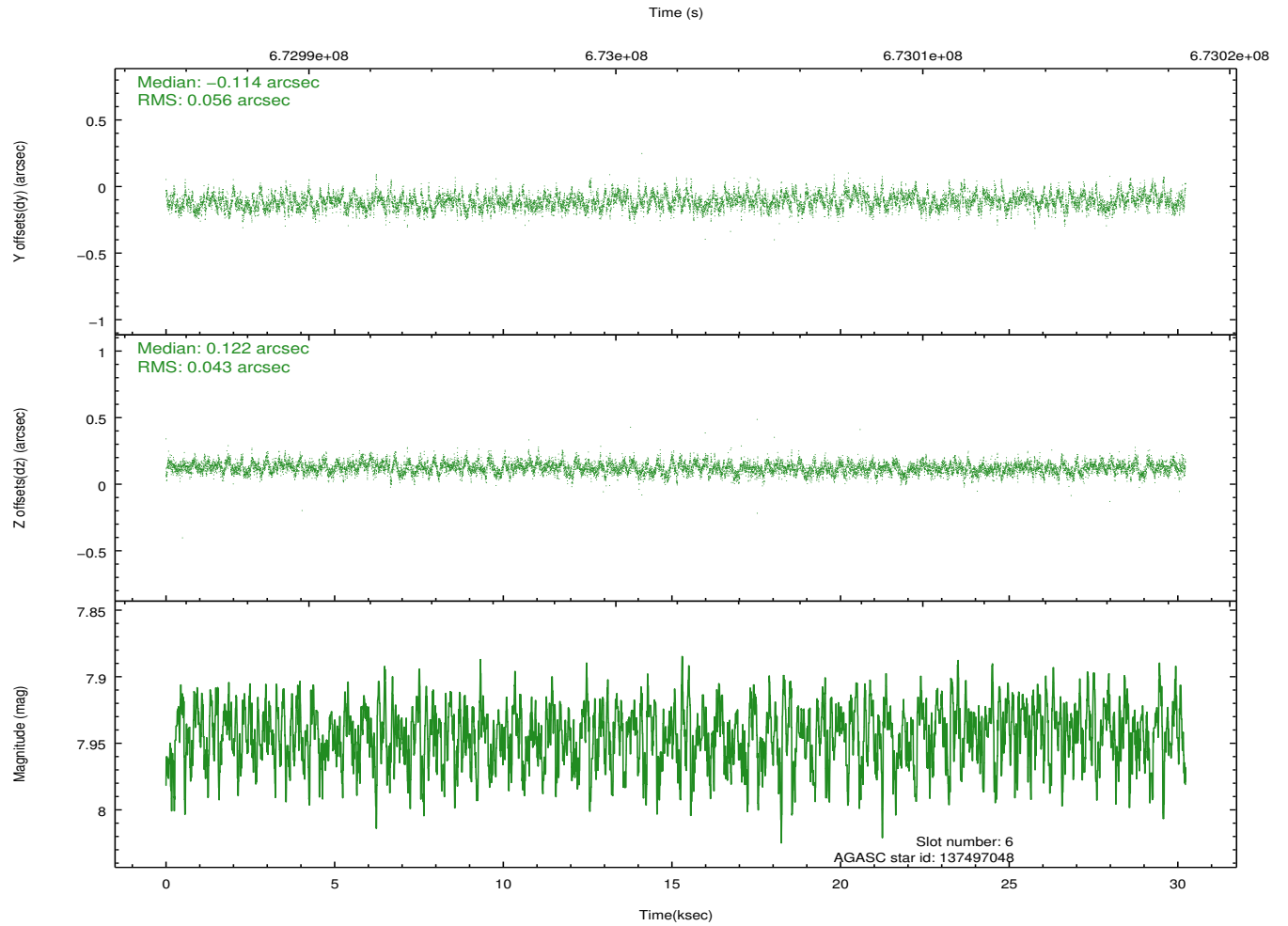
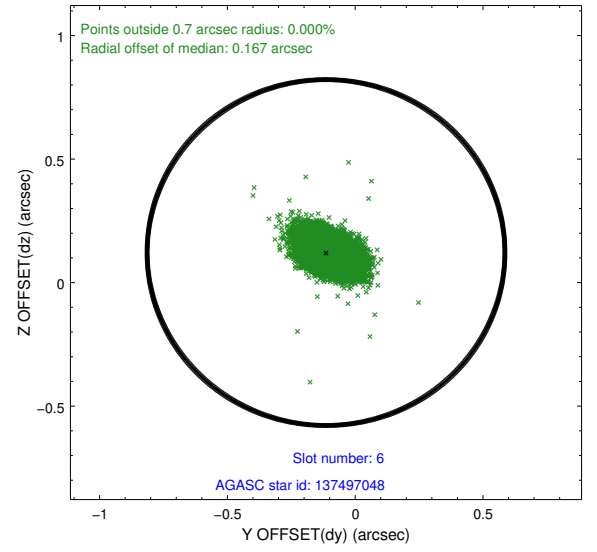
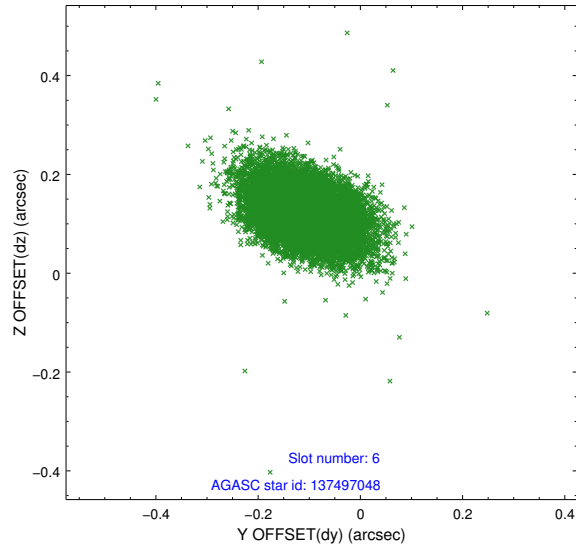
2.4.2 Slot 4



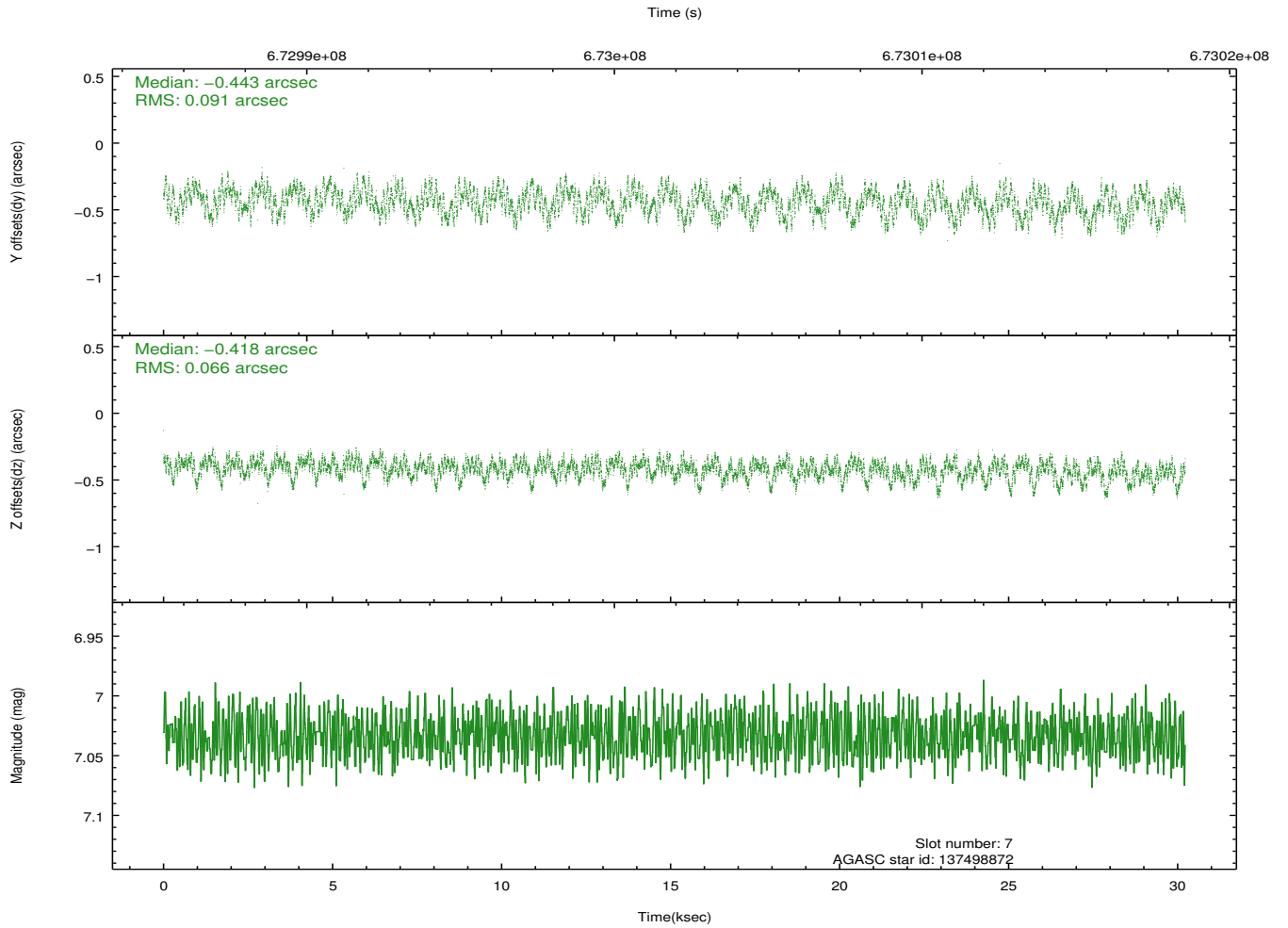
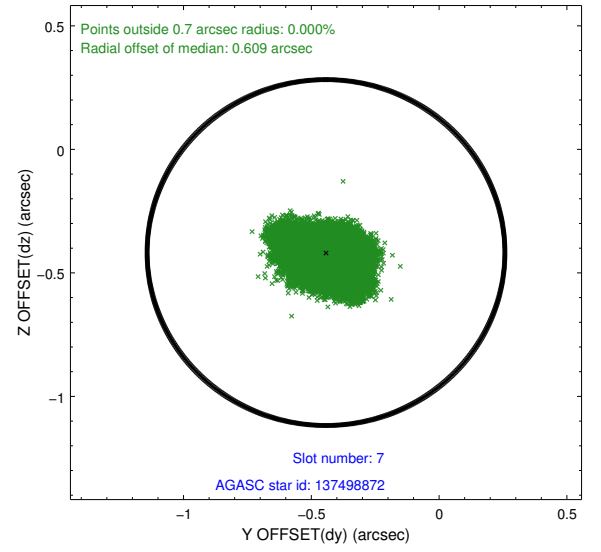
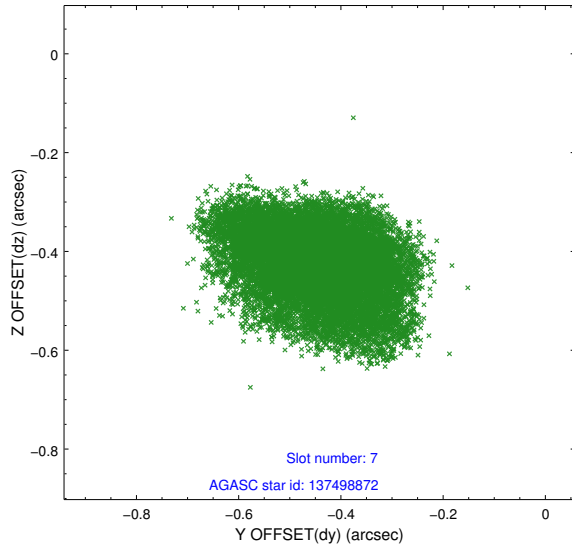
2.4.3 Slot 5



2.4.4 Slot 6

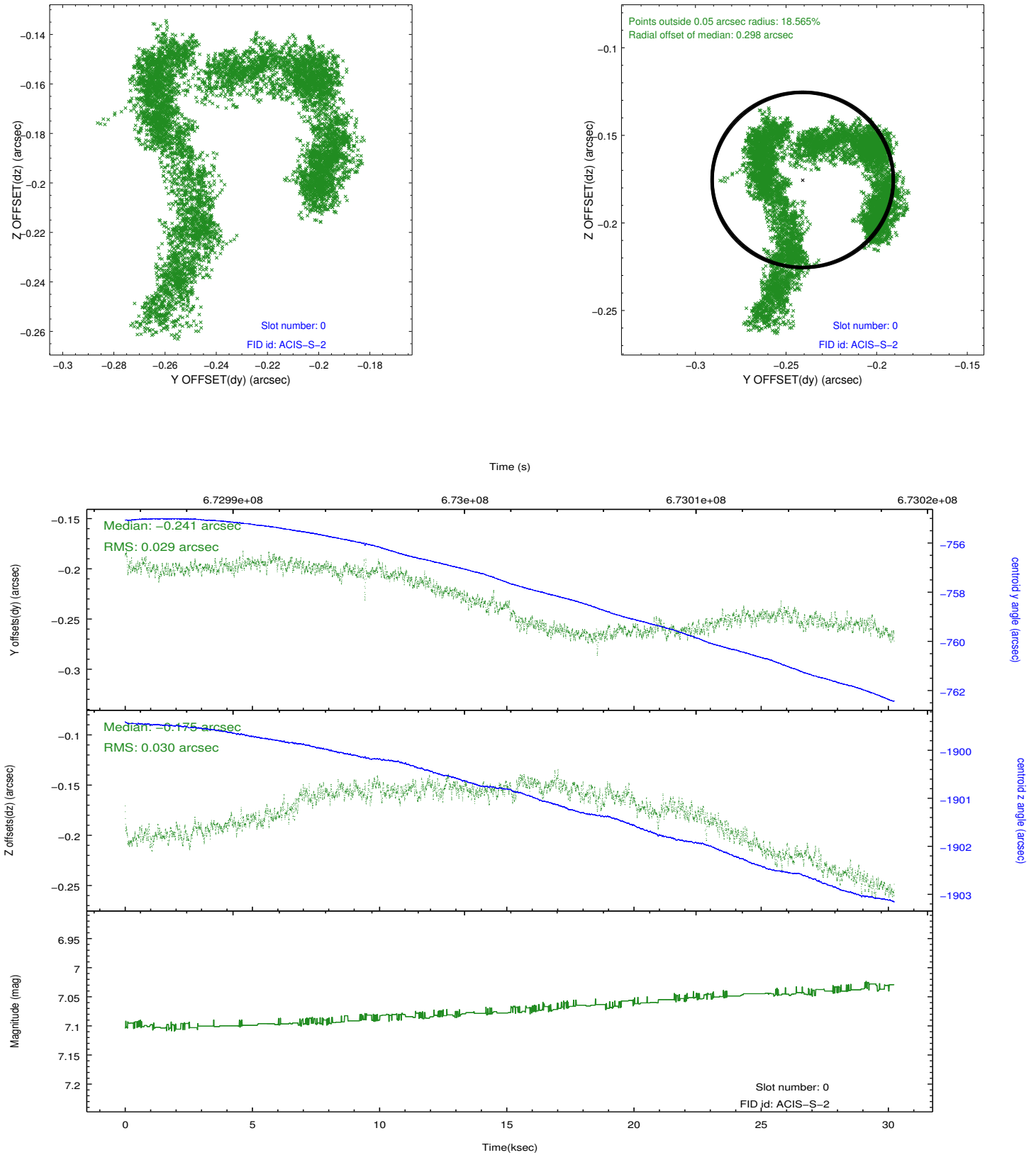


2.4.5 Slot 7

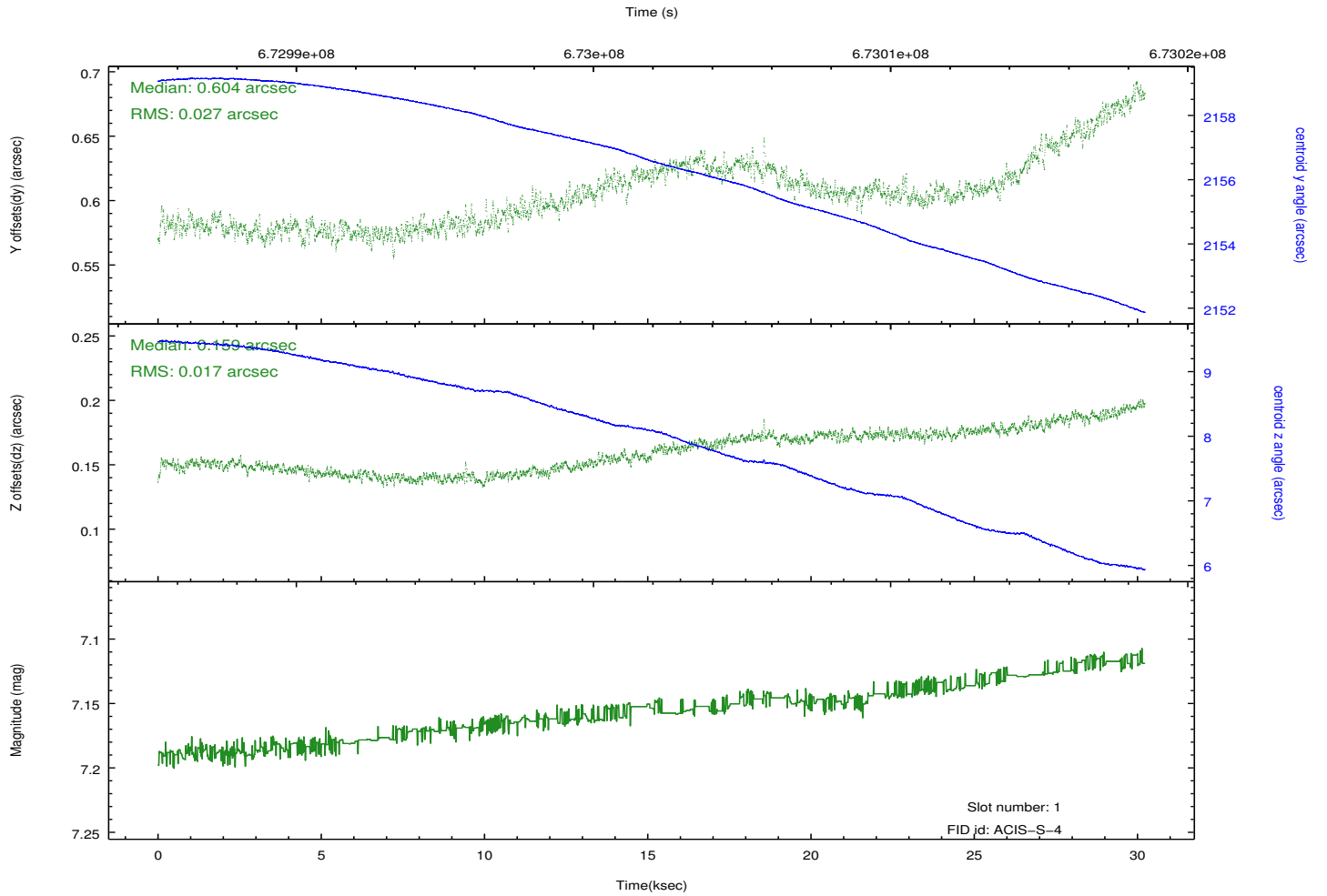
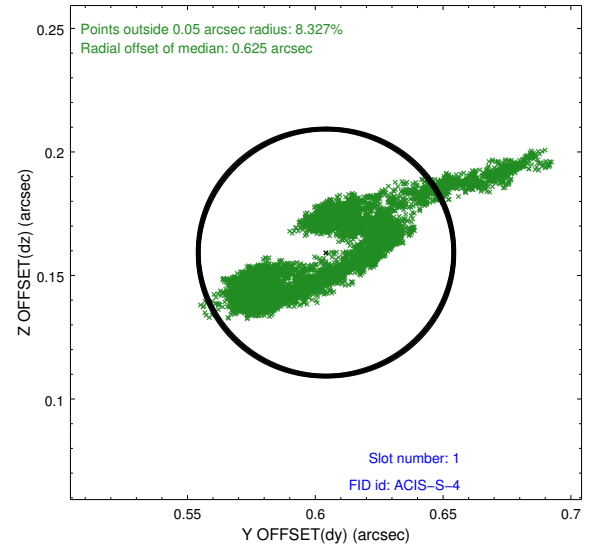
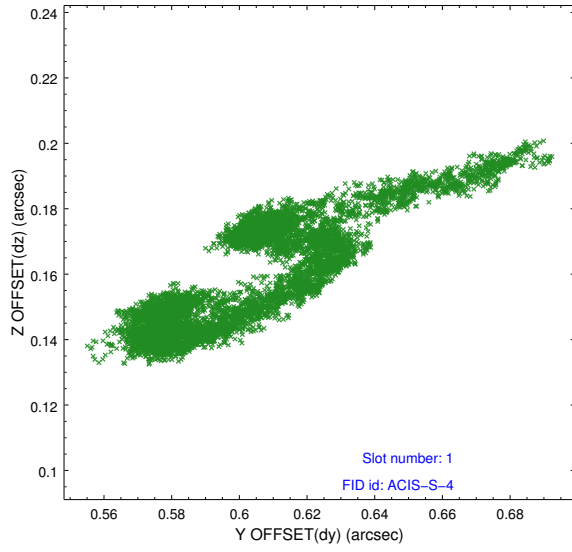


2.5 FID Slots

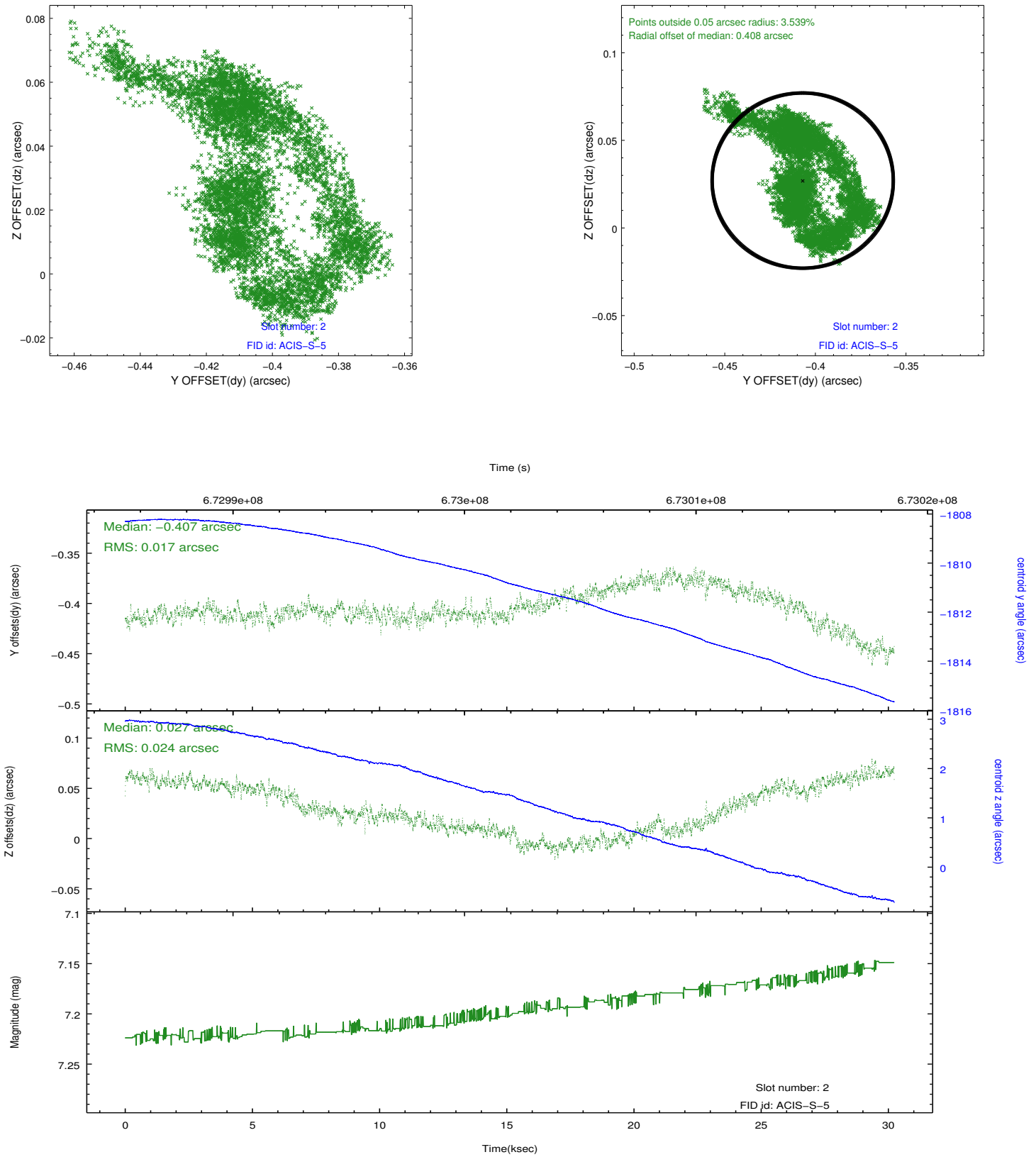
2.5.1 Slot 0



2.5.2 Slot 1

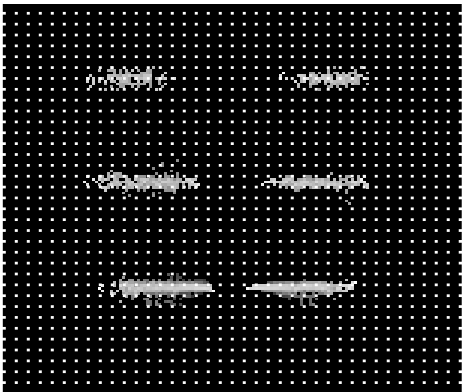


2.5.3 Slot 2

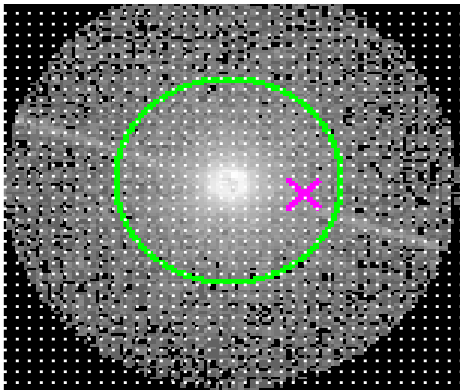


3 Gratings

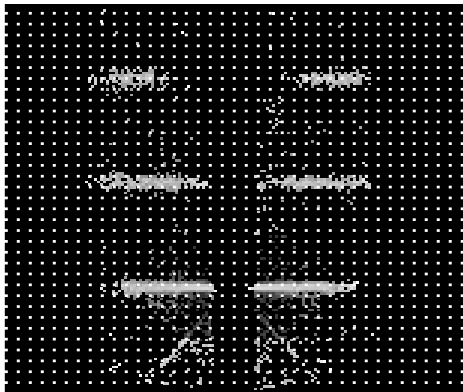
3.1 HEG Arm



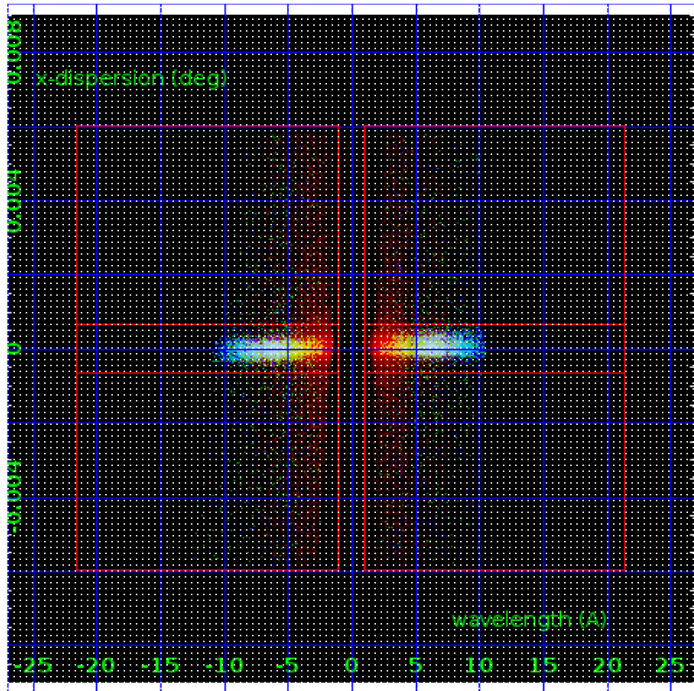
HEG Order Sort 123



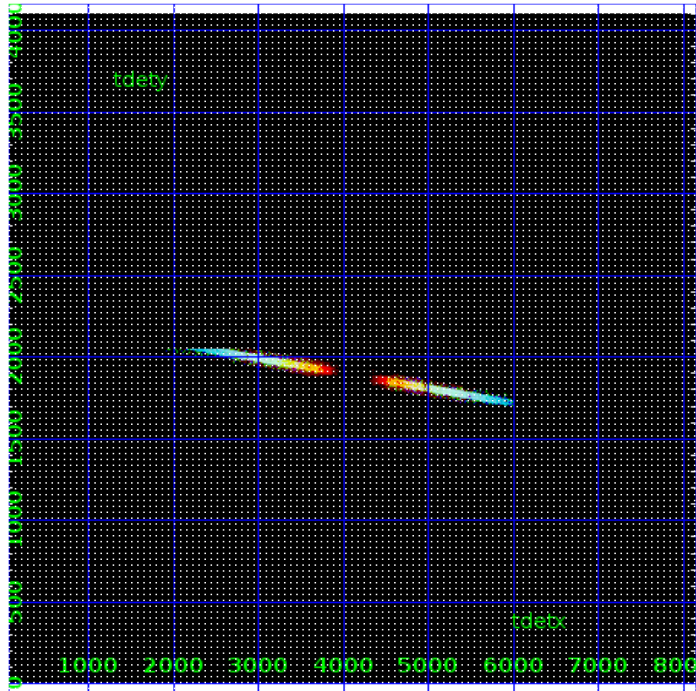
HEG Zero Order



HEG Order Sort ALL

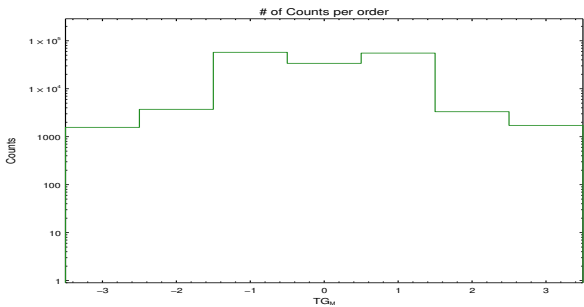


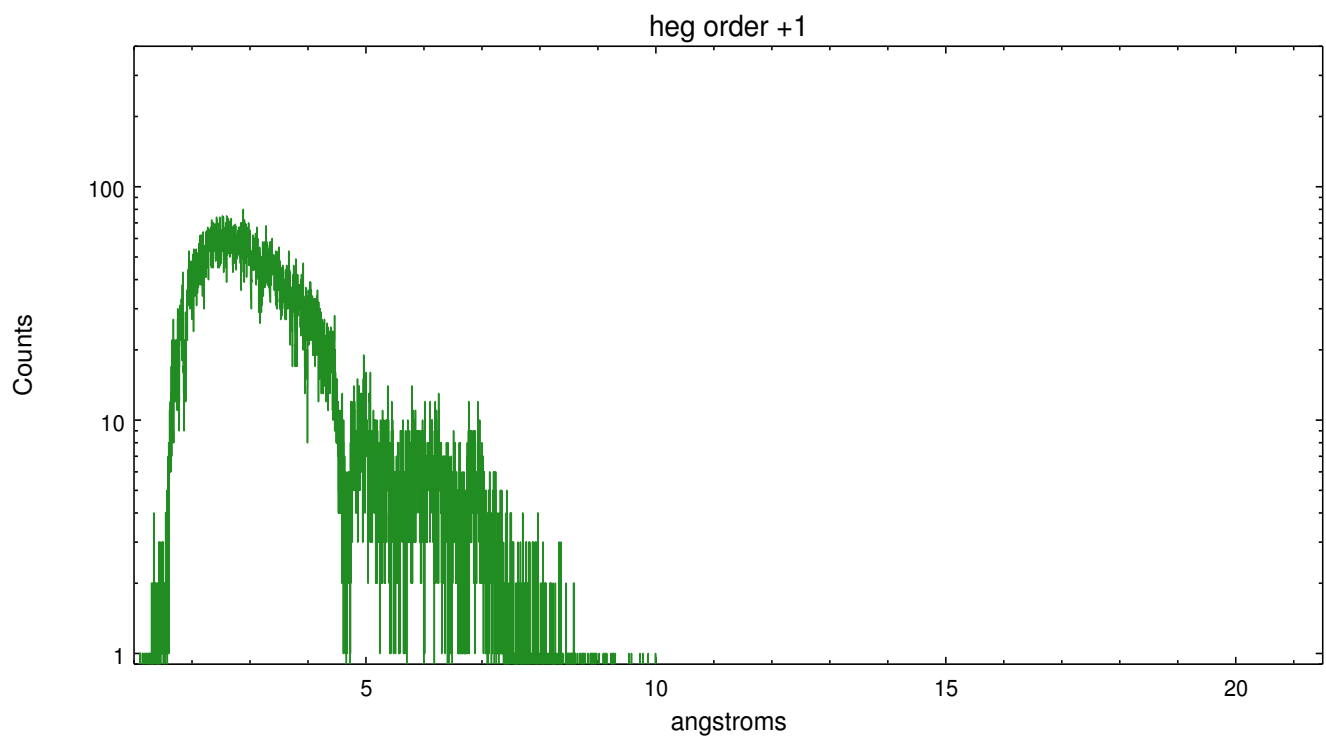
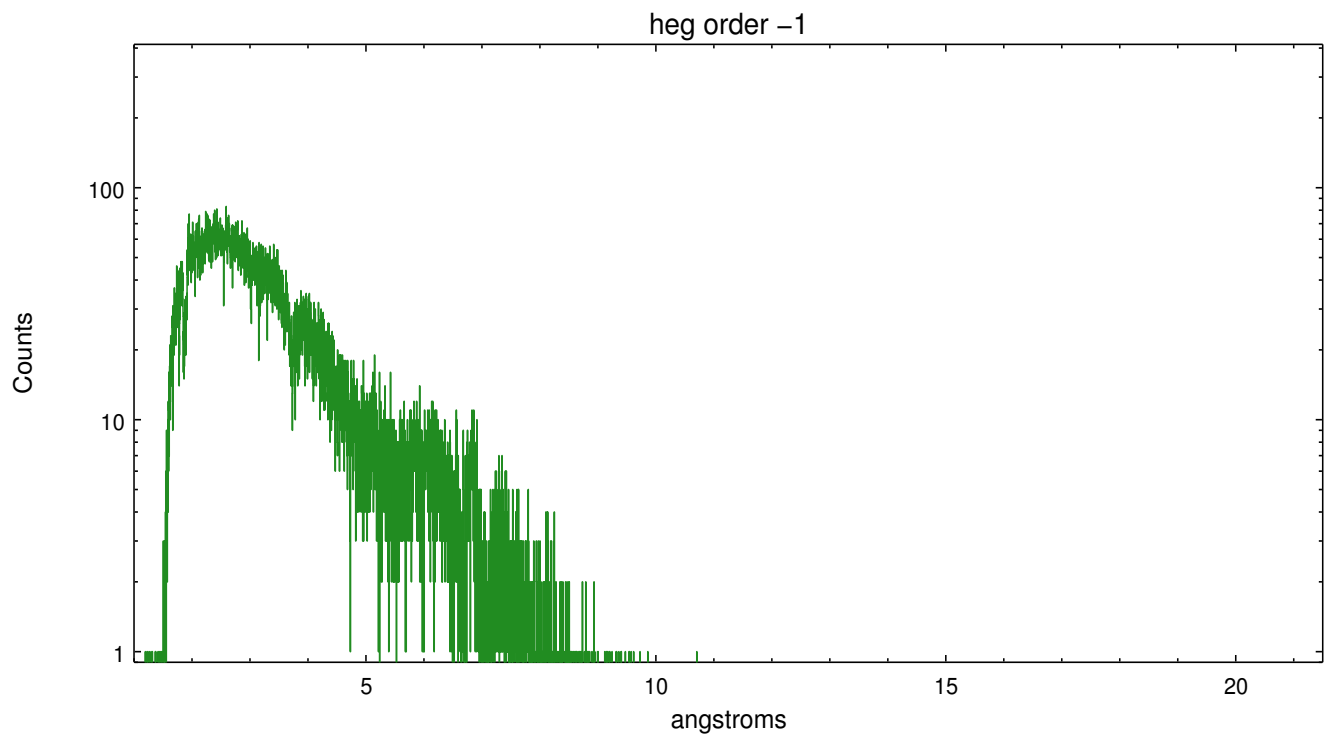
Spot Image HEG



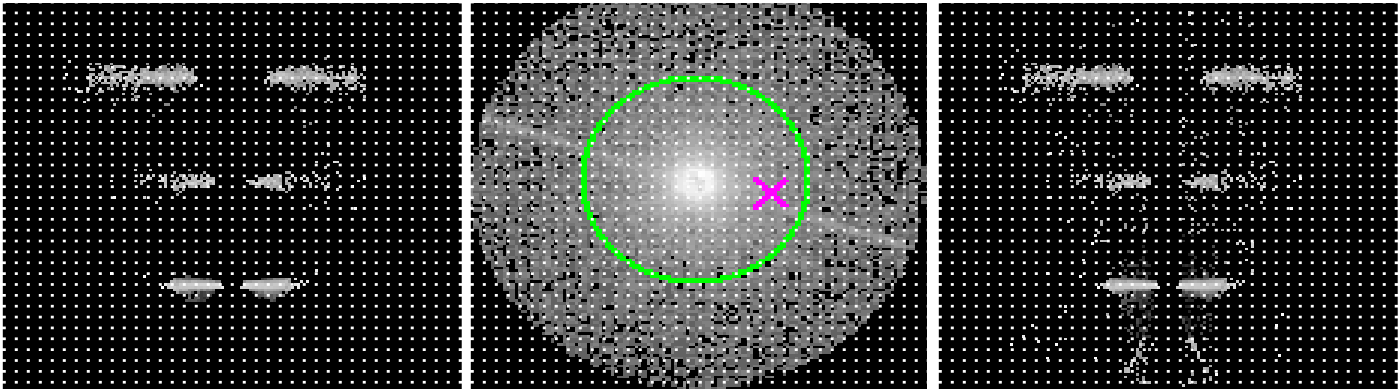
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1566	3720	57456	33841	55336	3319	1721





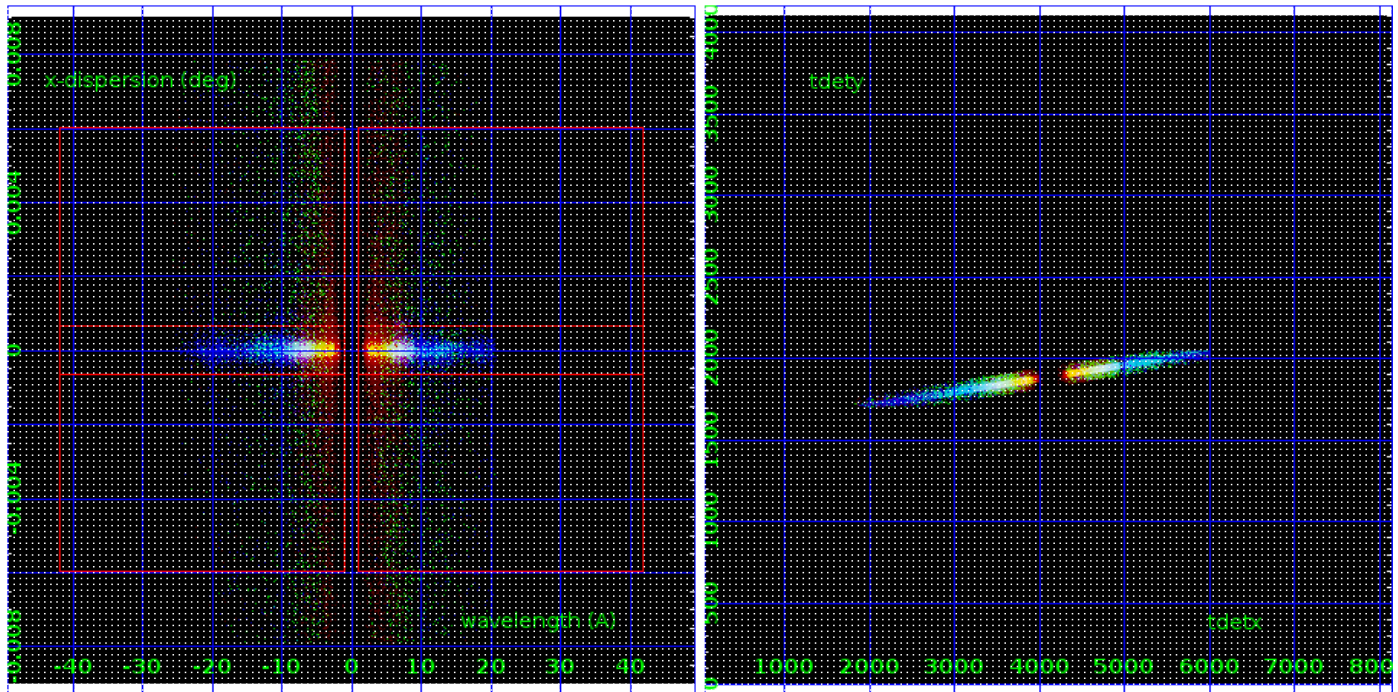
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

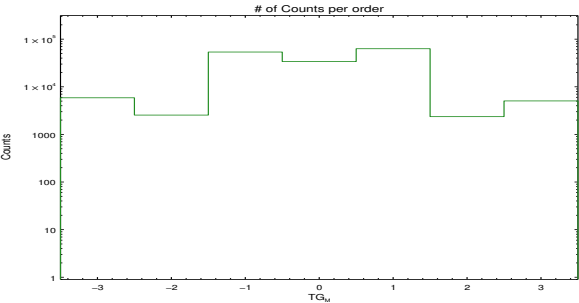
MEG Order Sort ALL

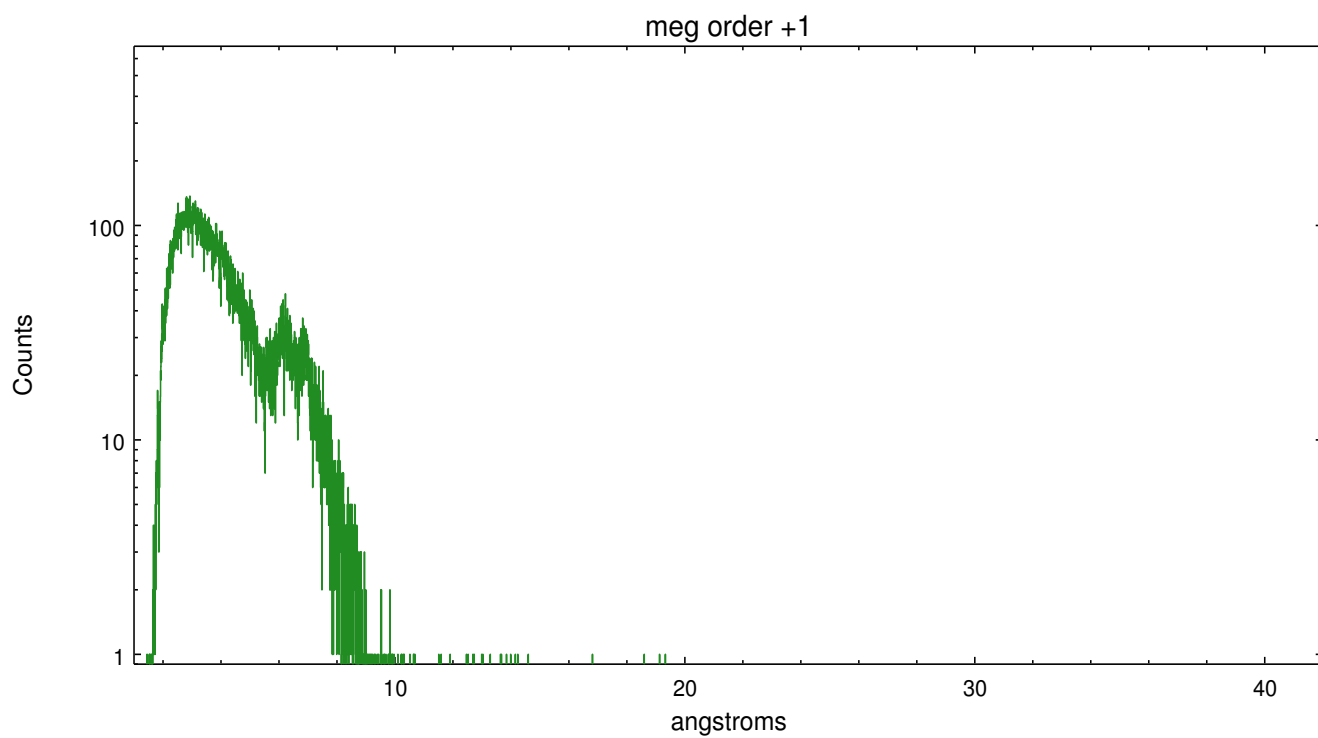
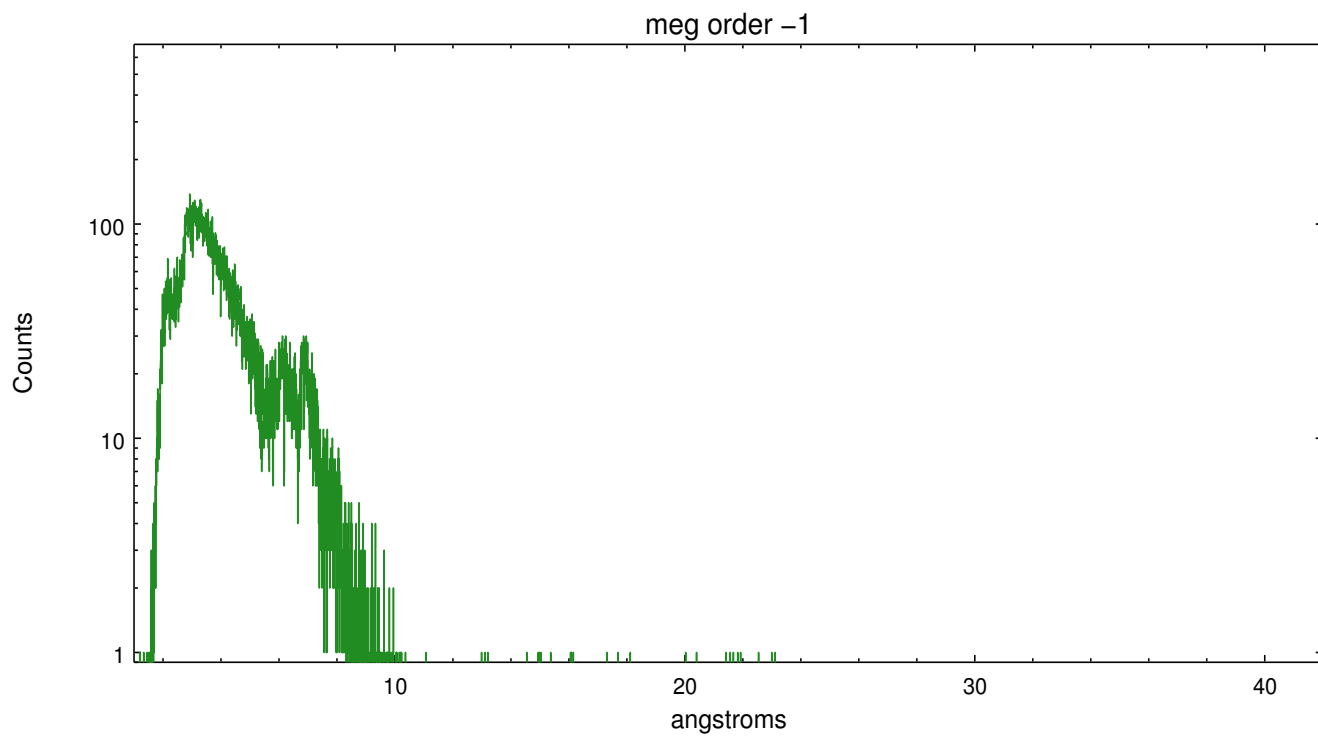


Spot Image MEG

Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	5876	2544	53693	33841	63048	2361	5050





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.05.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.078001195192

A.2 Comments

Comments for Obi 0

The ACIS focal plane temperature is warmer than -114.0 C degrees during the interval 672986982.40 - 672995854.00 (MET s) of this observation. The ACIS spectral response calibration for the front-illuminated chips is less accurate at these warmer temperatures than it is at -115.0 C. The back-illuminated chips are not affected at the focal plane temperatures recorded for this observation. Users whose science objectives depend on the most accurate spectral response (e.g., fitting line-rich ccd imaging spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.