

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22186 - L2 Version 1
Chandra X-Ray Center

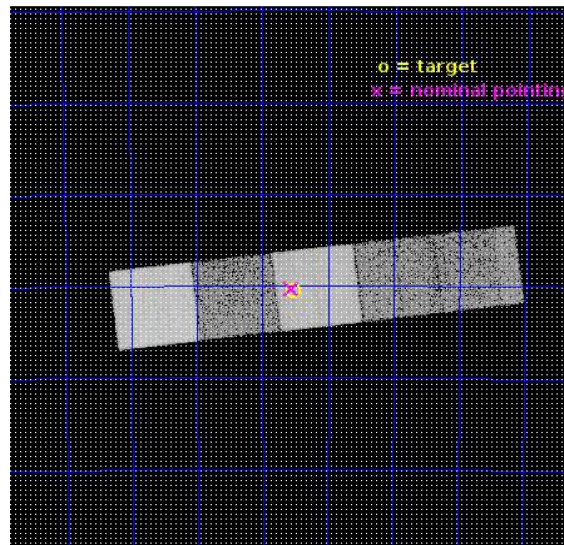
L2 Processing Date : May 6 2019

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1 Front

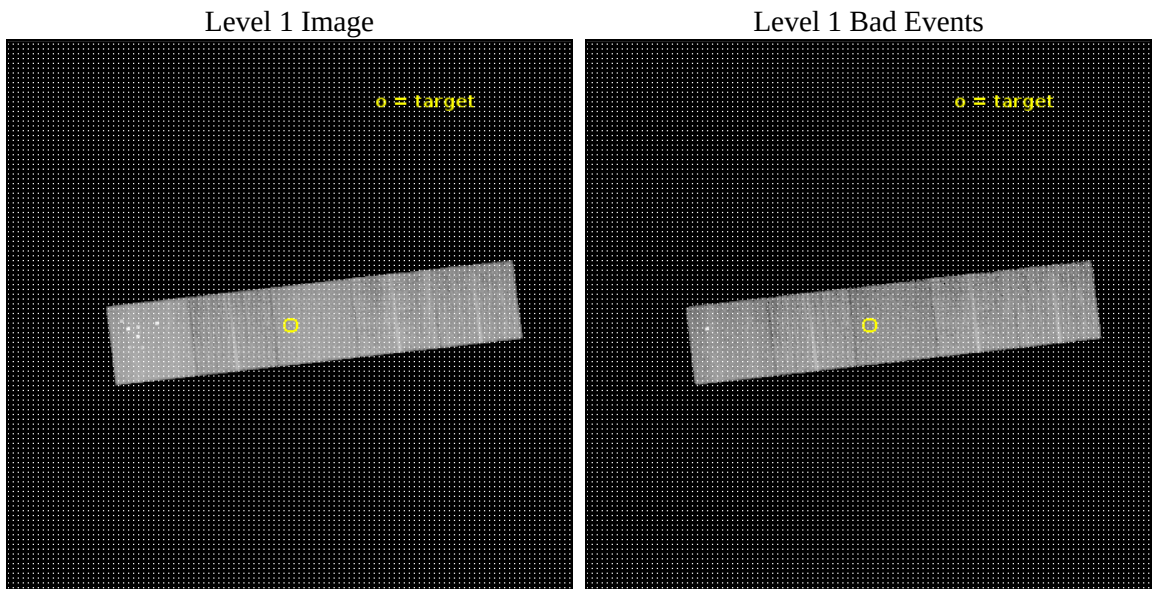
seq_num	201266	Sequence number
obs_id	22186	Observation id
title	The Origin and Impact of Flares in the Proxima Centauri Planetary System	Proposal title
observer	Meredith MacGregor	Principal investigator
object	Proxima Centauri	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.3847	Observer's specified target RA [deg]
dec_targ	-62.67535	Observer's specified target Dec [deg]
ra_nom	217.38963246845	Nominal RA [deg]
dec_nom	-62.672025743812	Nominal Dec [deg]
roll_nom	353.15885102012	Nominal Roll [deg]
revision	1	Processing version of data
ontime	12647.713035345	Sum of GTIs [s]
livetime	12482.461353427	Livetime [s]
ontime5	12647.671995401	Sum of GTIs [s]
ontime6	12647.630955338	Sum of GTIs [s]
ontime7	12647.713035345	Sum of GTIs [s]
ontime8	12647.589915395	Sum of GTIs [s]
ontime9	12647.548875332	Sum of GTIs [s]
l2events	153076	Number of level 2 events



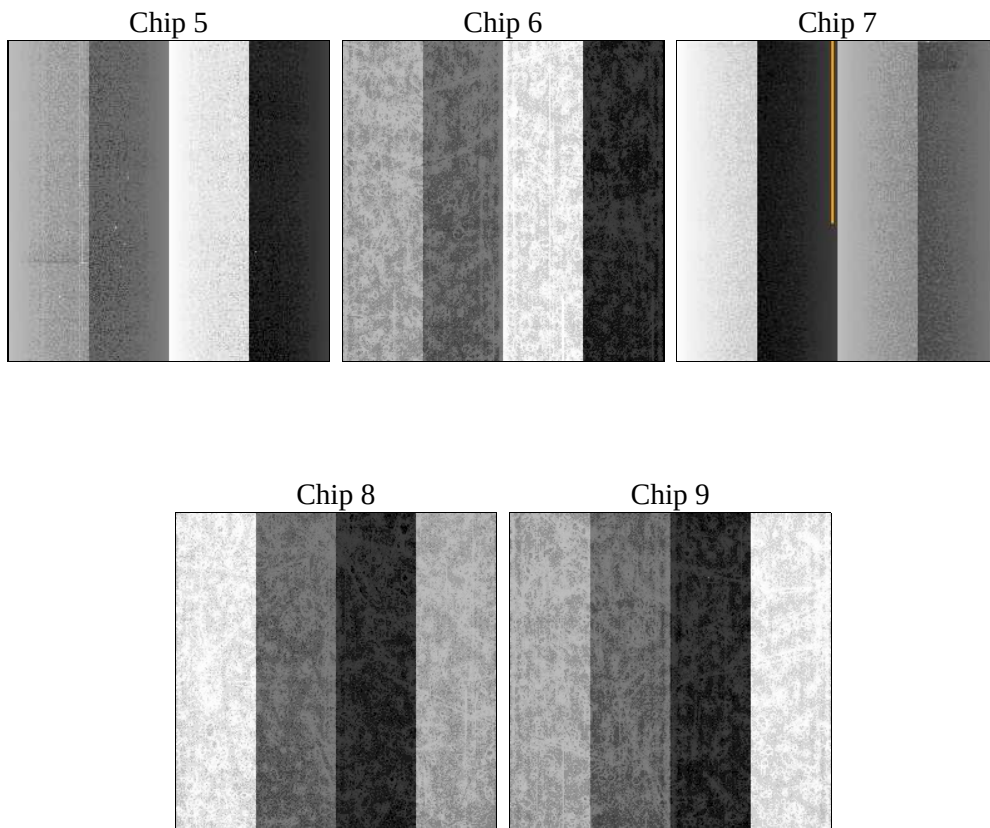
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12600.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	12647.713035345	Sum of GTIs [s]
caldsver	4.8.2	 	ontime5	12647.671995401	Sum of GTIs [s]
date	2019-05-06T13:13:33	Date and time of file creation	ontime6	12647.630955338	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	12647.713035345	Sum of GTIs [s]
			ontime8	12647.589915395	Sum of GTIs [s]
			ontime9	12647.548875332	Sum of GTIs [s]
			l1events	632179	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4112.39, 4071.96)	src1a sky pixel position

2.1.4 Events

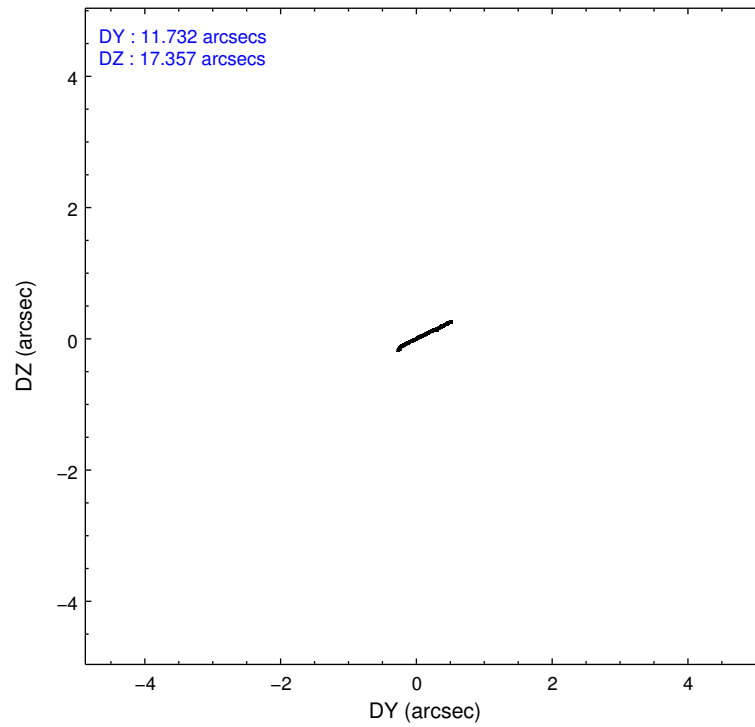
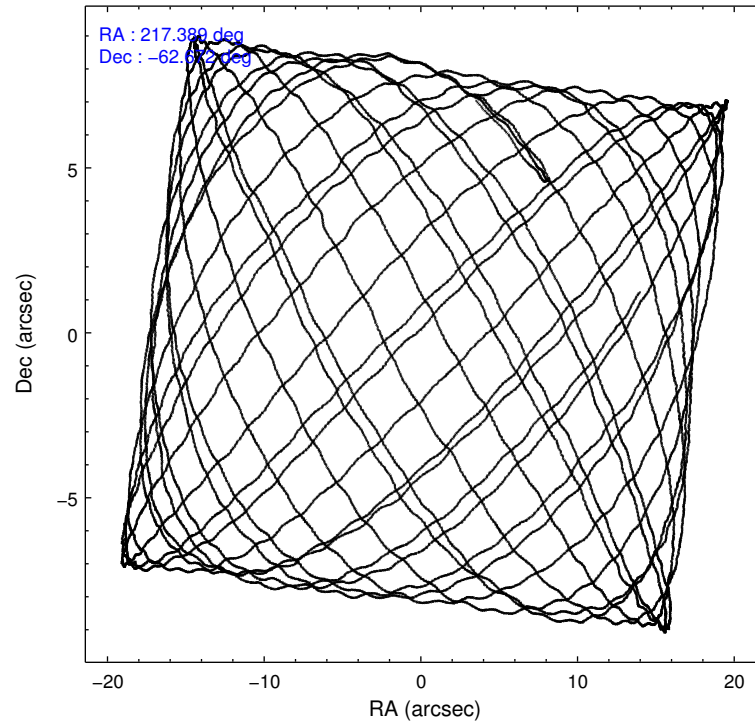
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	172702	106022	126108	125250	102097
rejected events	87014	94916	72548	93949	90478
rejected %	50%	89%	57%	75%	88%

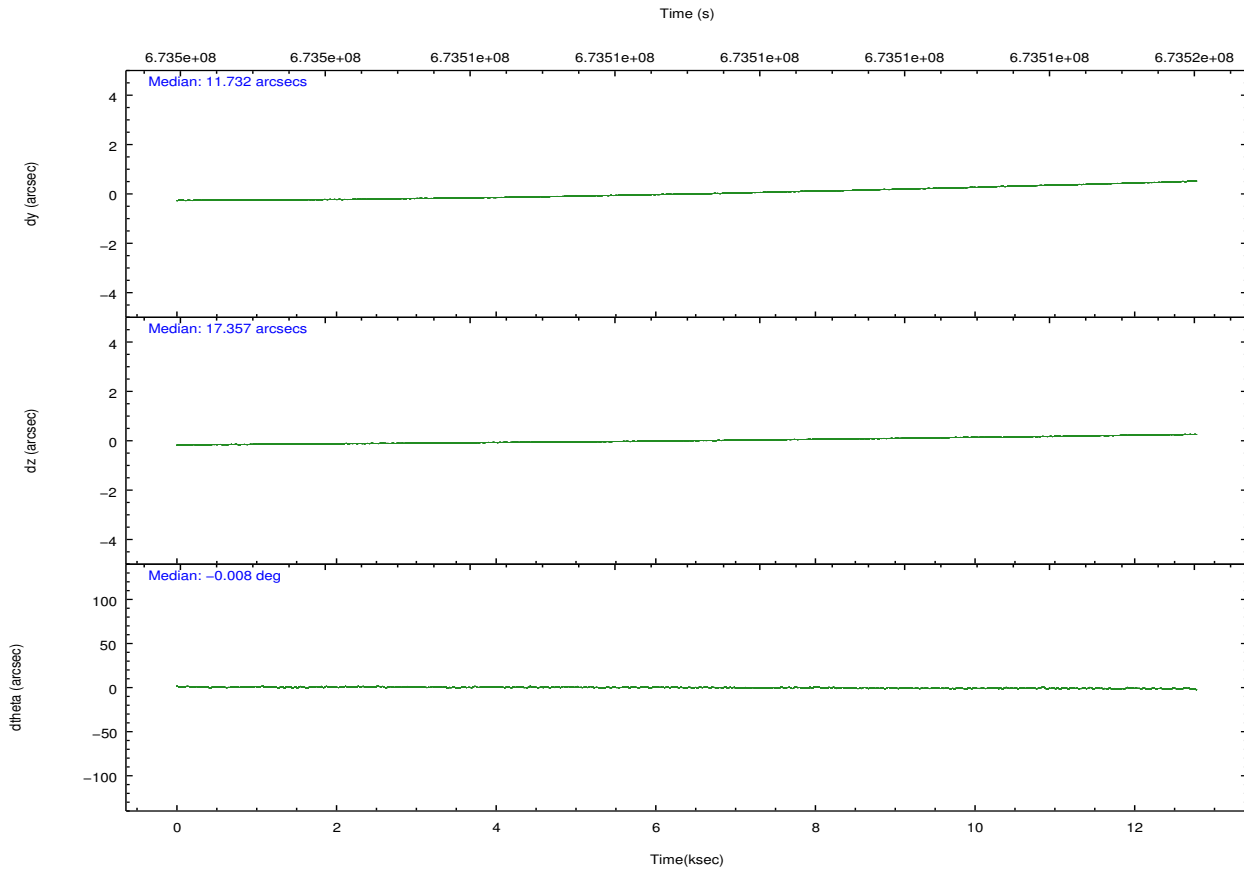
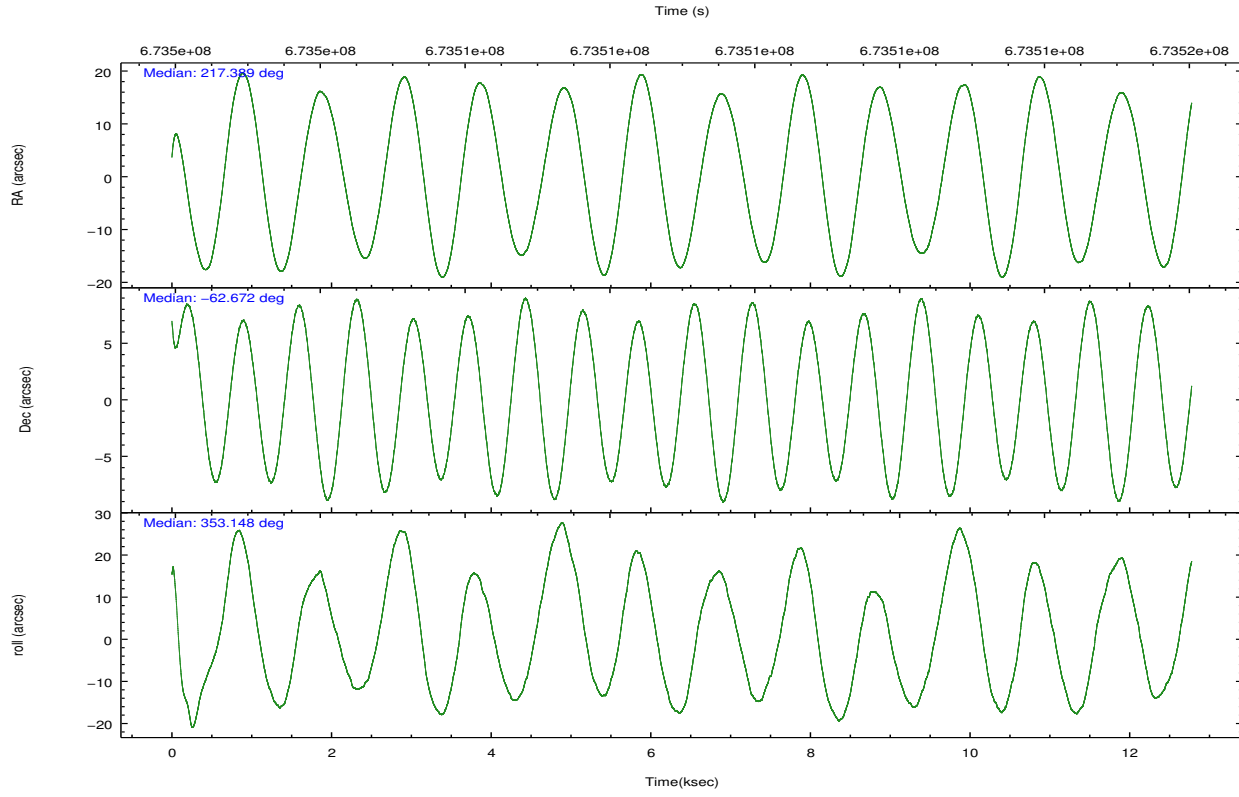
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	15016	3082	4381	8415	3639
	8%	2%	3%	6%	3%
grade 1 events	463	46	218	83	62
	0%	0%	0%	0%	0%
grade 2 events	24295	3169	11030	7873	3008
	14%	2%	8%	6%	2%
grade 3 events	2246	923	4172	3163	1070
	1%	0%	3%	2%	1%
grade 4 events	2051	870	4070	3027	1058
	1%	0%	3%	2%	1%
grade 5 events	10697	4026	12191	6533	4763
	6%	3%	9%	5%	4%
grade 6 events	42093	3067	29916	8826	2852
	24%	2%	23%	7%	2%
grade 7 events	75841	90839	60130	87330	85645
	43%	85%	47%	69%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	217.335047	217.3896324684464	CCD I2 on	N	N
[deg] Pointing Dec	-62.683161	-62.67202574381185	CCD I3 on	N	N
[deg] Pointing Roll	352.953708	353.1588510201225	CCD S0 on	O1	N
[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	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	673502793.184000	673501486.15871	CCD S5 on	O2	Y
Observation start date	2019-05-06T04:05:24	2019-05-06T03:44:46	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	673515393.184000	673516497.79711	On-chip summing requested	N	N
Observation end date	2019-05-06T07:35:24	2019-05-06T07:54:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



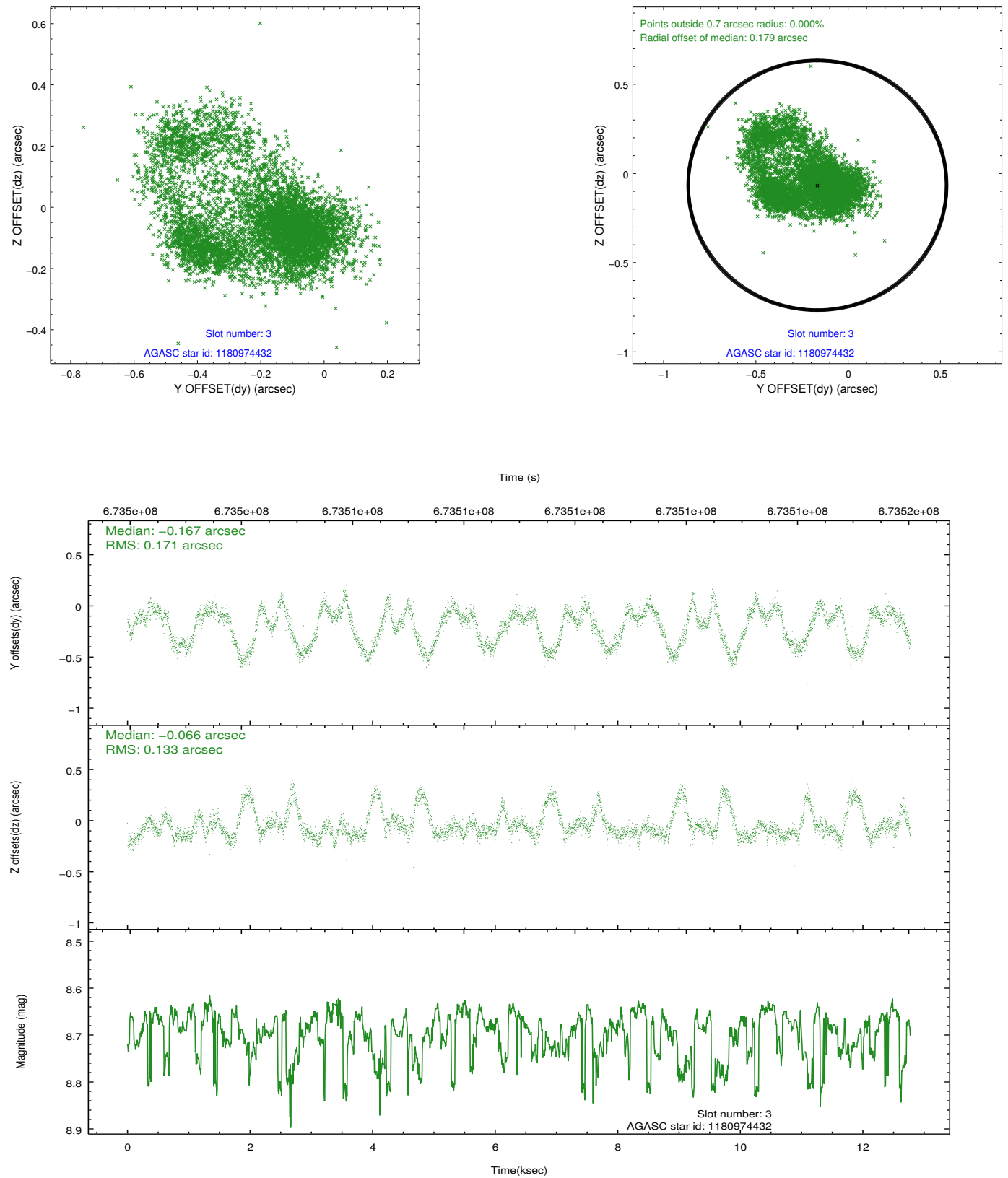


Slot Statistics

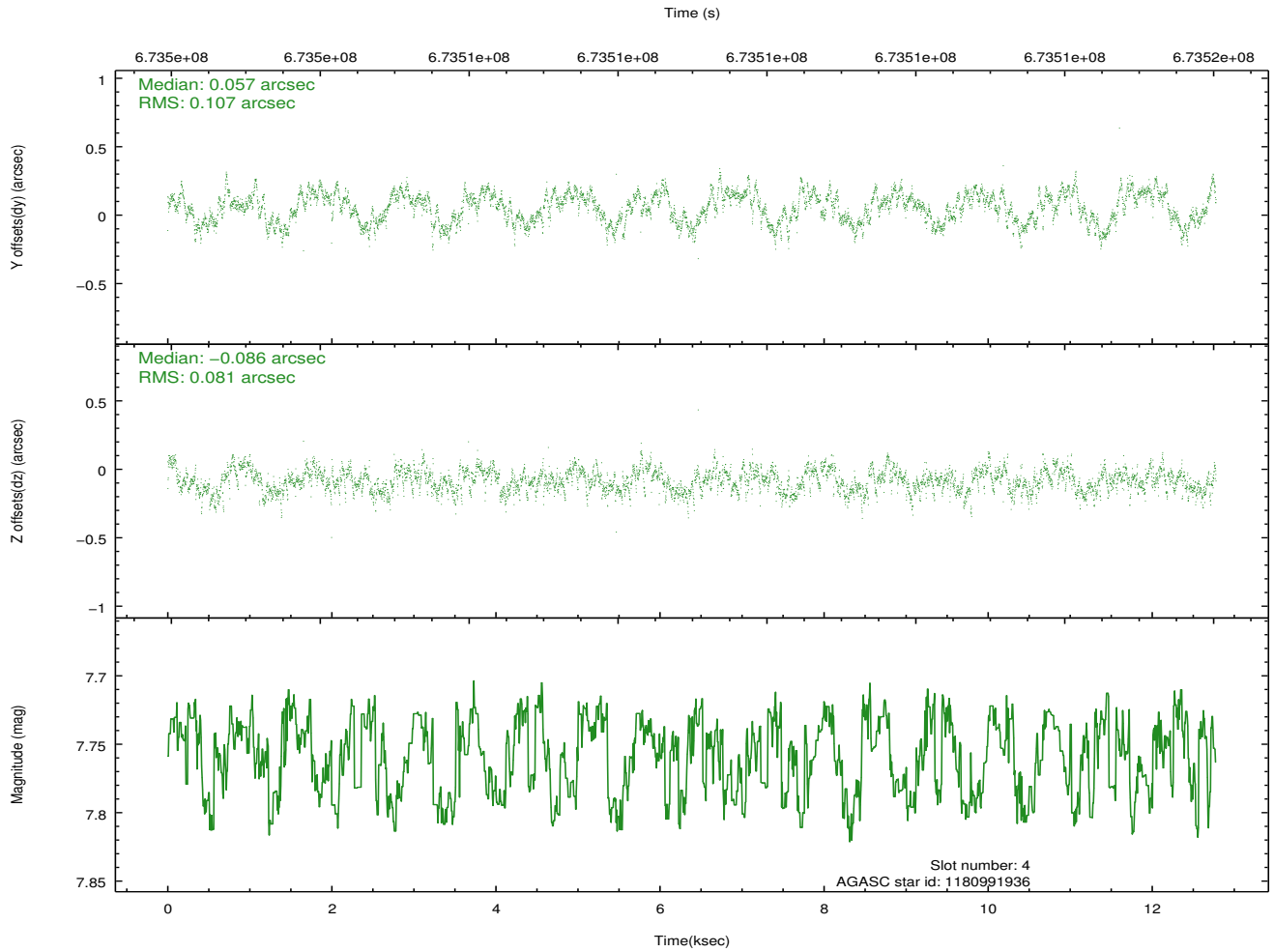
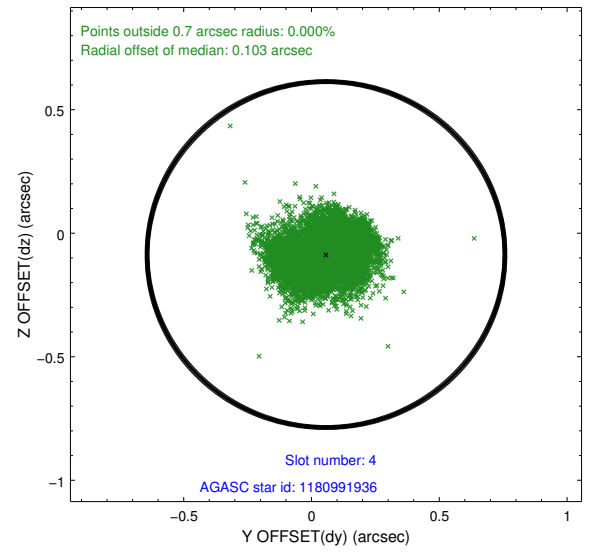
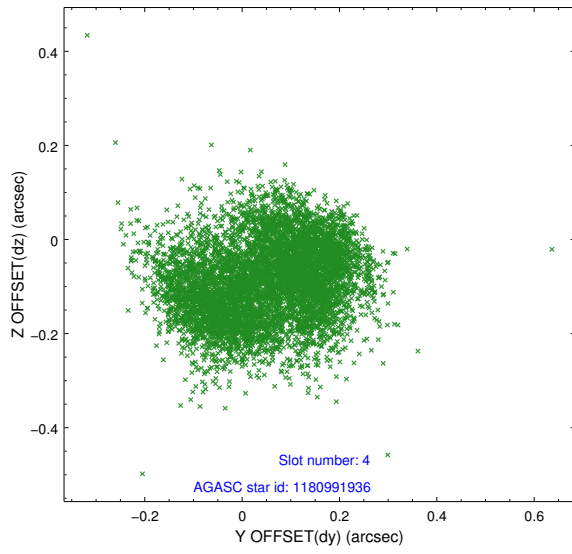
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.24	3117	1.000	0.185	-0.086	0.020	0.032	0.000000	0.000000	931.65	-1734
1	FID		ACIS-S-5	7.26	3117	1.000	-0.448	0.074	0.024	0.041	0.000000	0.000000	-1817.85	162
2	FID		ACIS-S-6	7.41	3116	1.000	0.242	0.023	0.009	0.016	0.000000	0.000000	396.73	807
3	GUIDE	used	1180974432	8.69	6233	1.000	-0.167	-0.066	0.219	0.414	217.803607	-62.540366	709.50	602
4	GUIDE	used	1180991936	7.76	6232	1.000	0.057	-0.086	0.146	0.214	216.873169	-61.996737	-1077.62	2353
5	GUIDE	used	1180992136	8.19	6233	1.000	-0.030	-0.407	0.120	0.186	217.334663	-62.071437	-270.88	2185
6	GUIDE	used	1180985824	8.75	6225	1.000	0.053	0.279	0.135	0.228	216.565550	-62.139830	-1523.76	1774
7	GUIDE	used	1180970632	9.44	6222	1.000	0.141	0.258	0.180	0.273	217.492140	-62.959690	377.92	-956

2.4 Star Slots

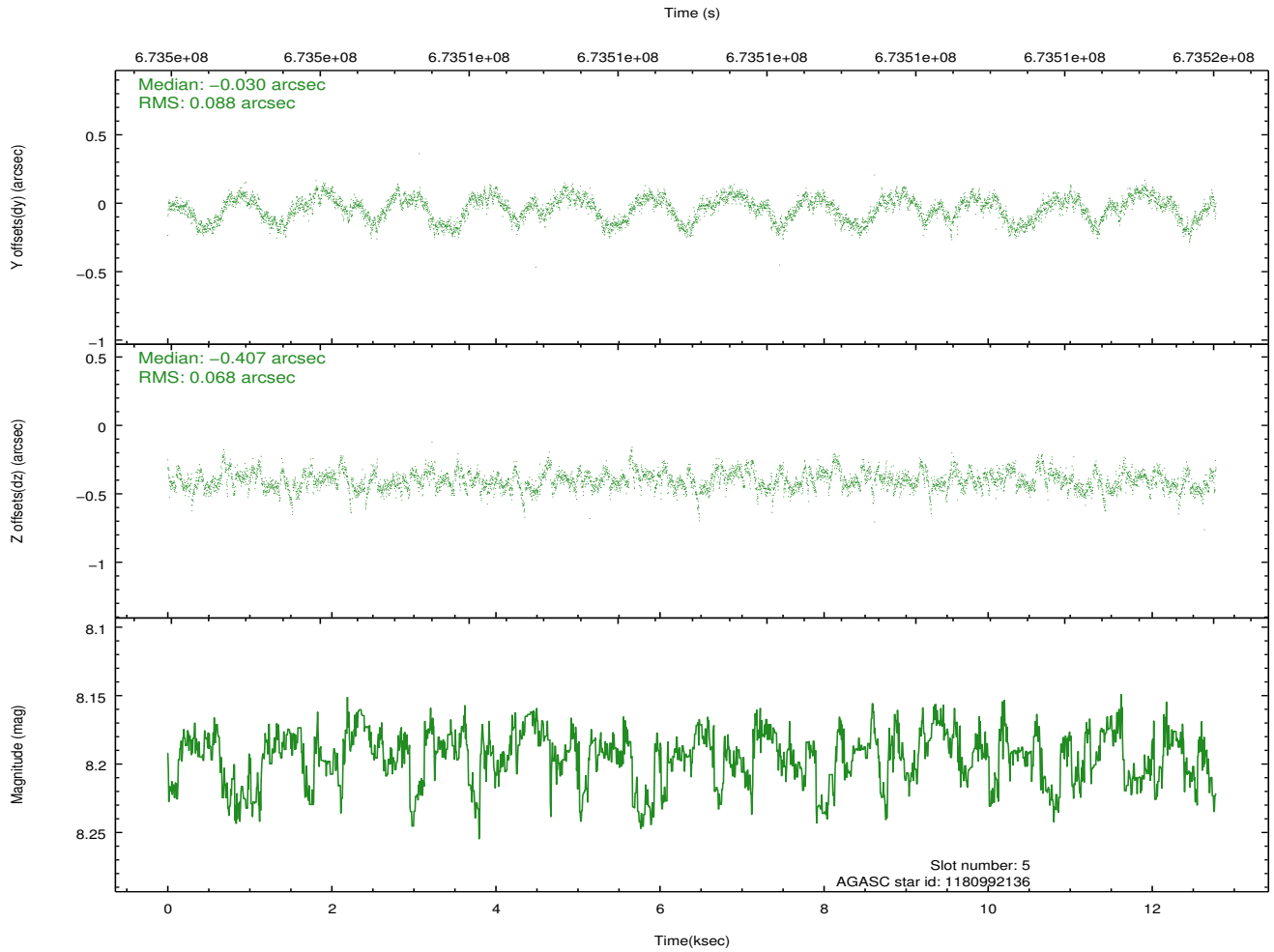
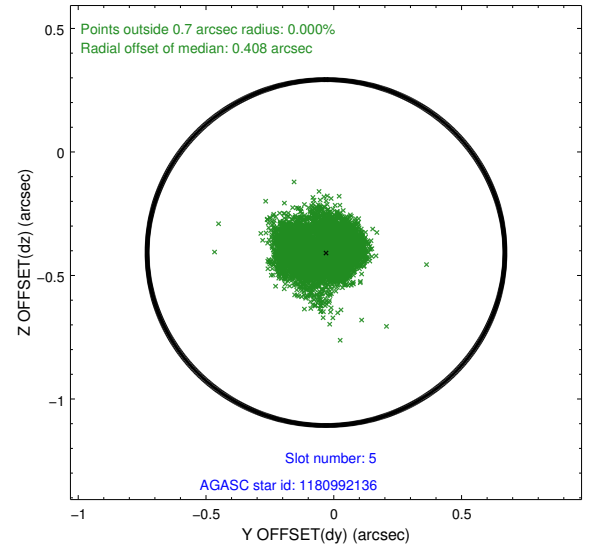
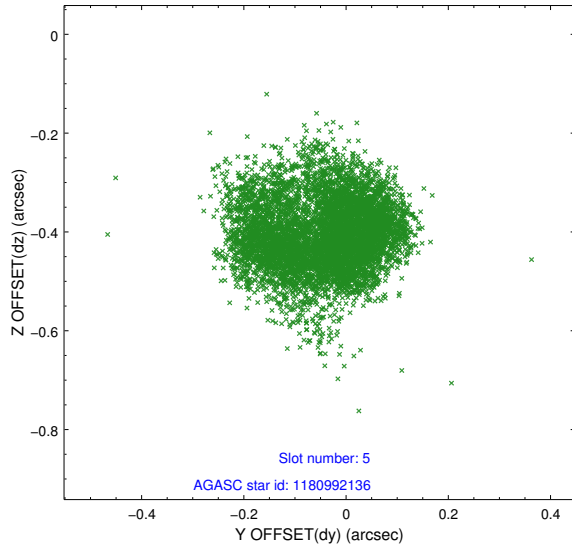
2.4.1 Slot 3



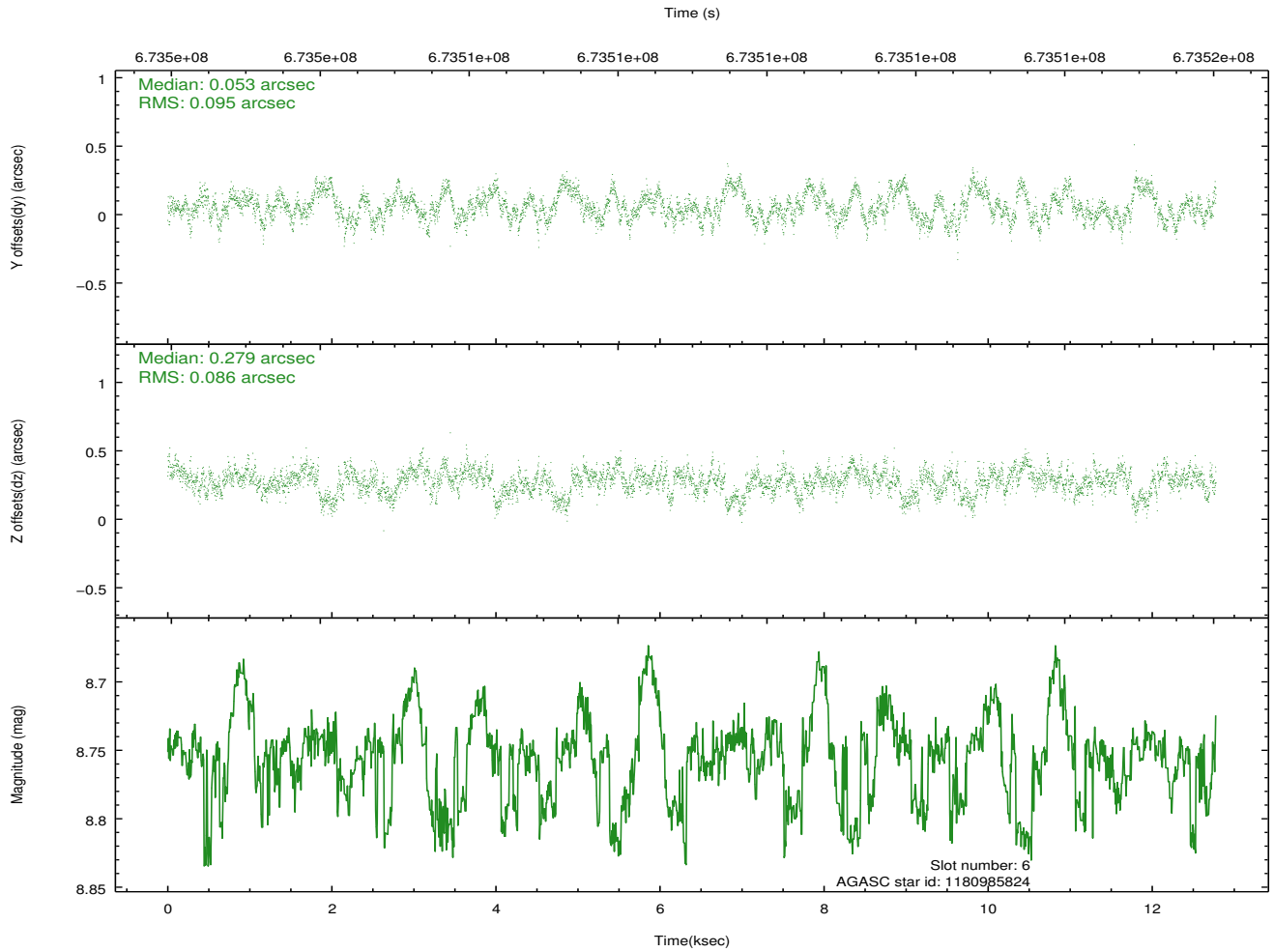
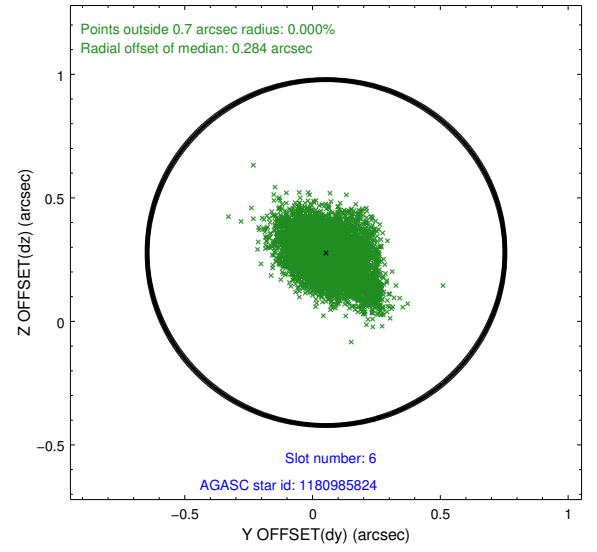
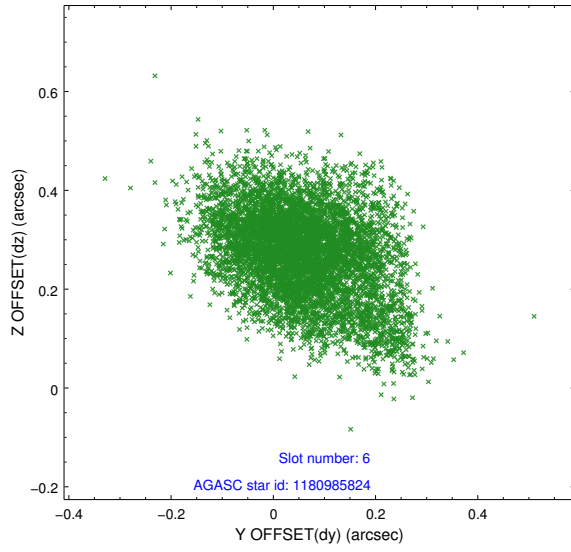
2.4.2 Slot 4



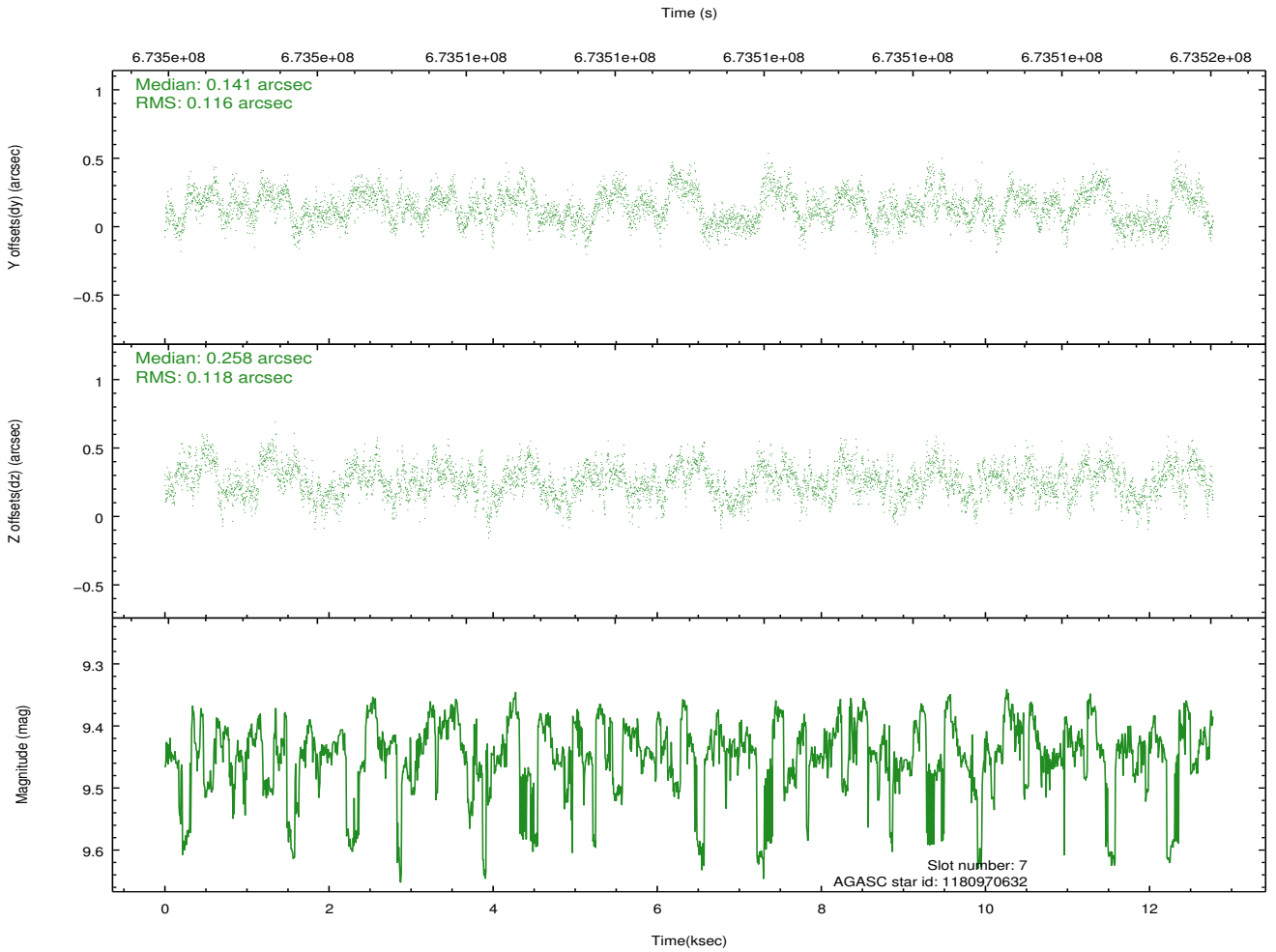
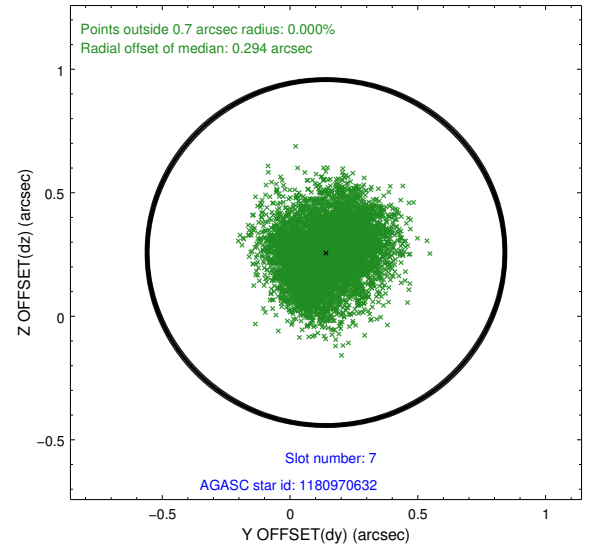
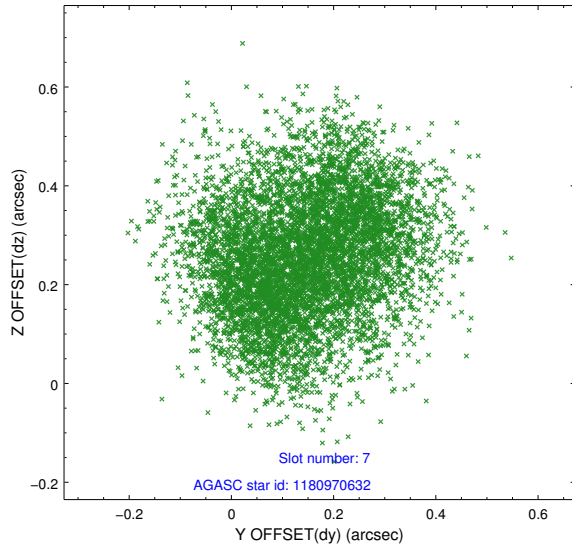
2.4.3 Slot 5



2.4.4 Slot 6

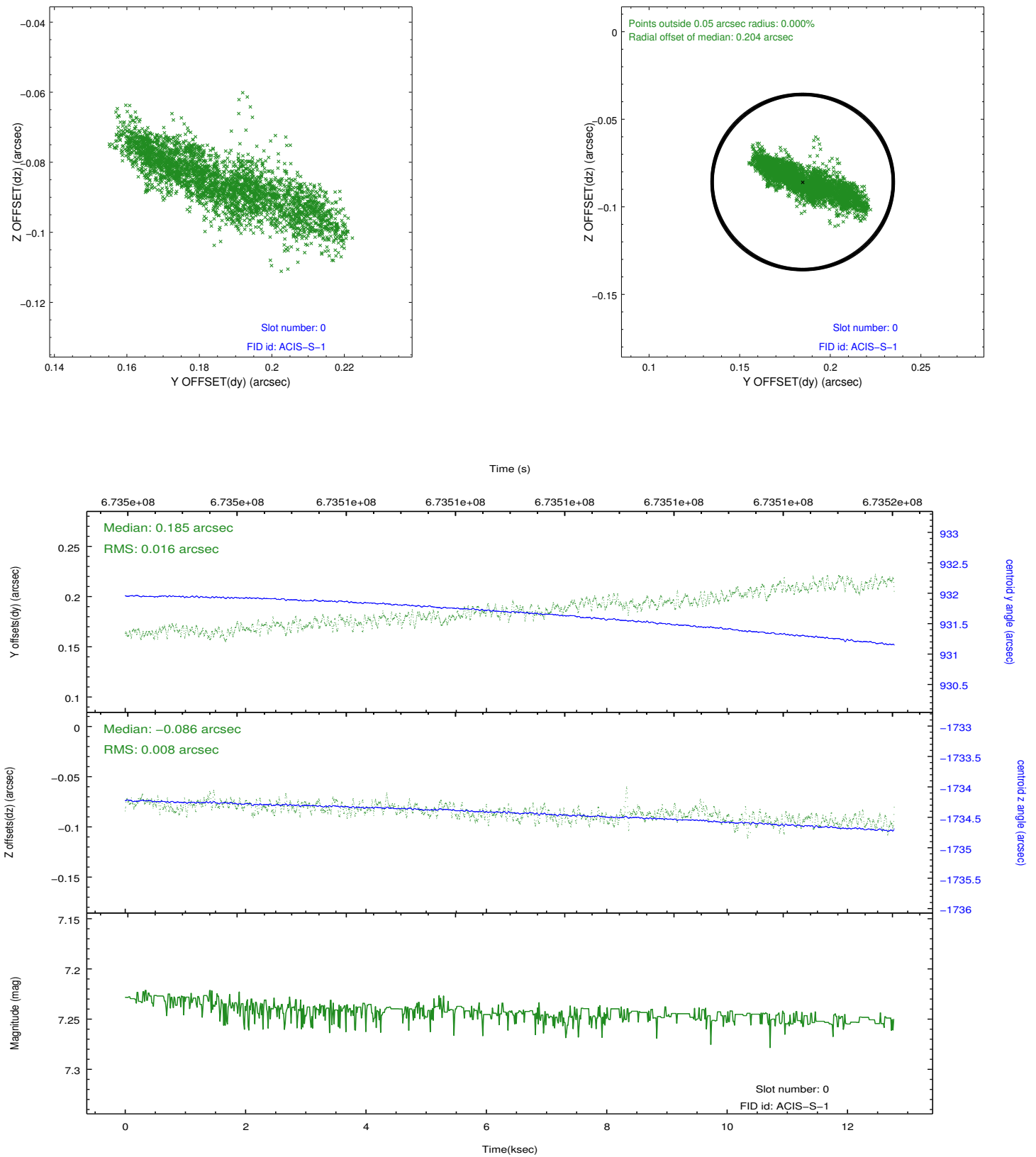


2.4.5 Slot 7

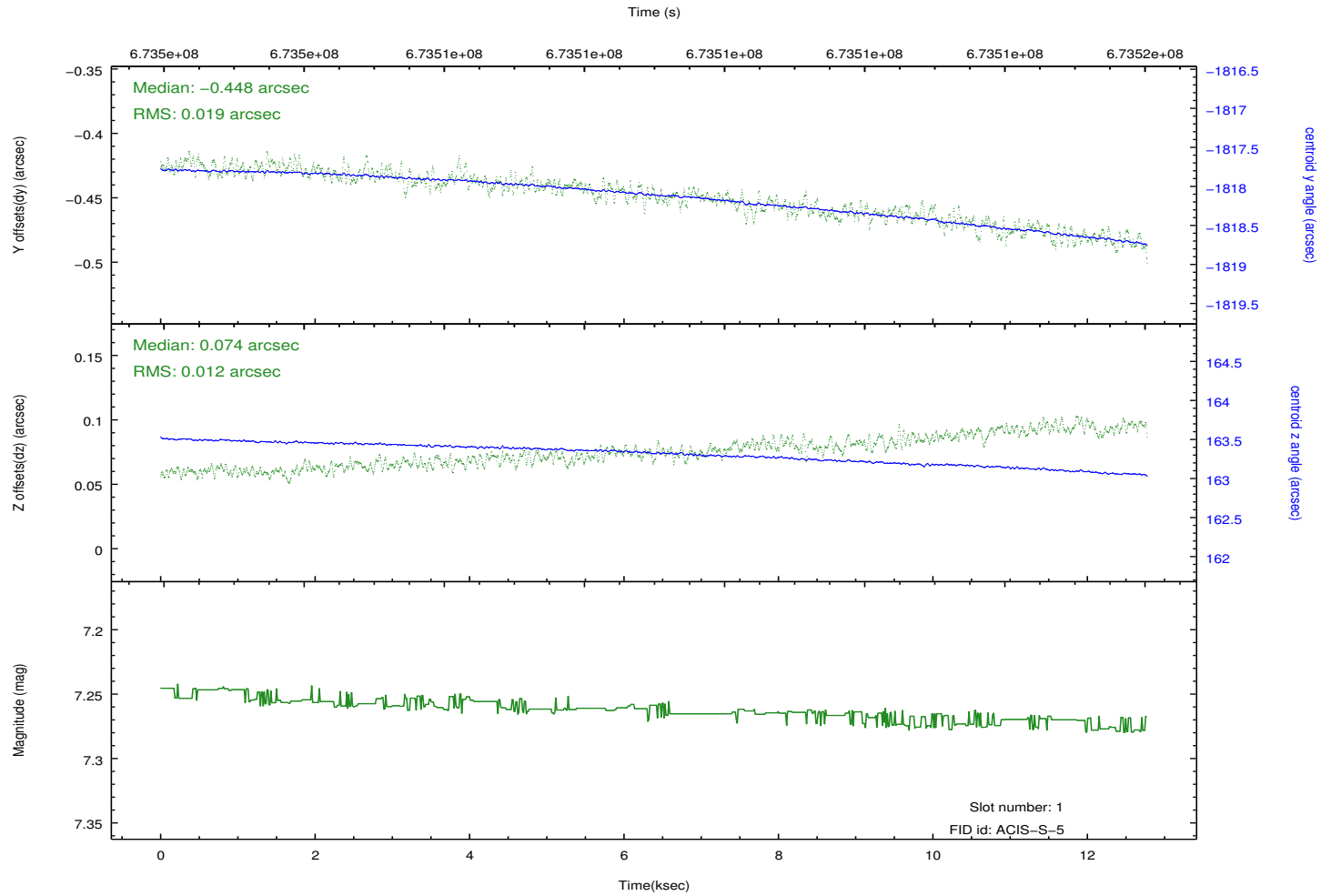
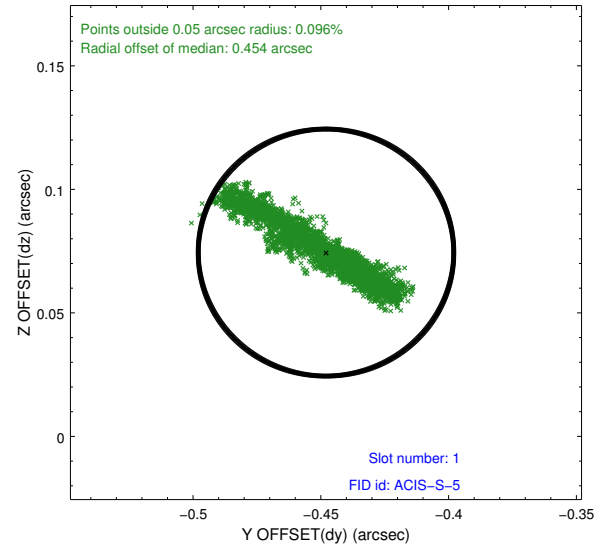
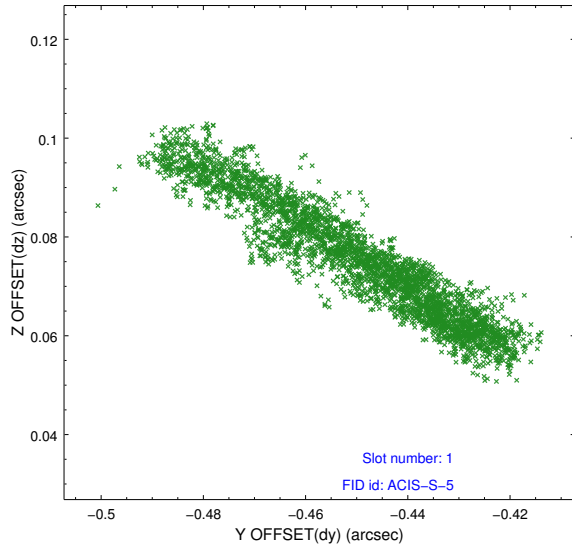


2.5 FID Slots

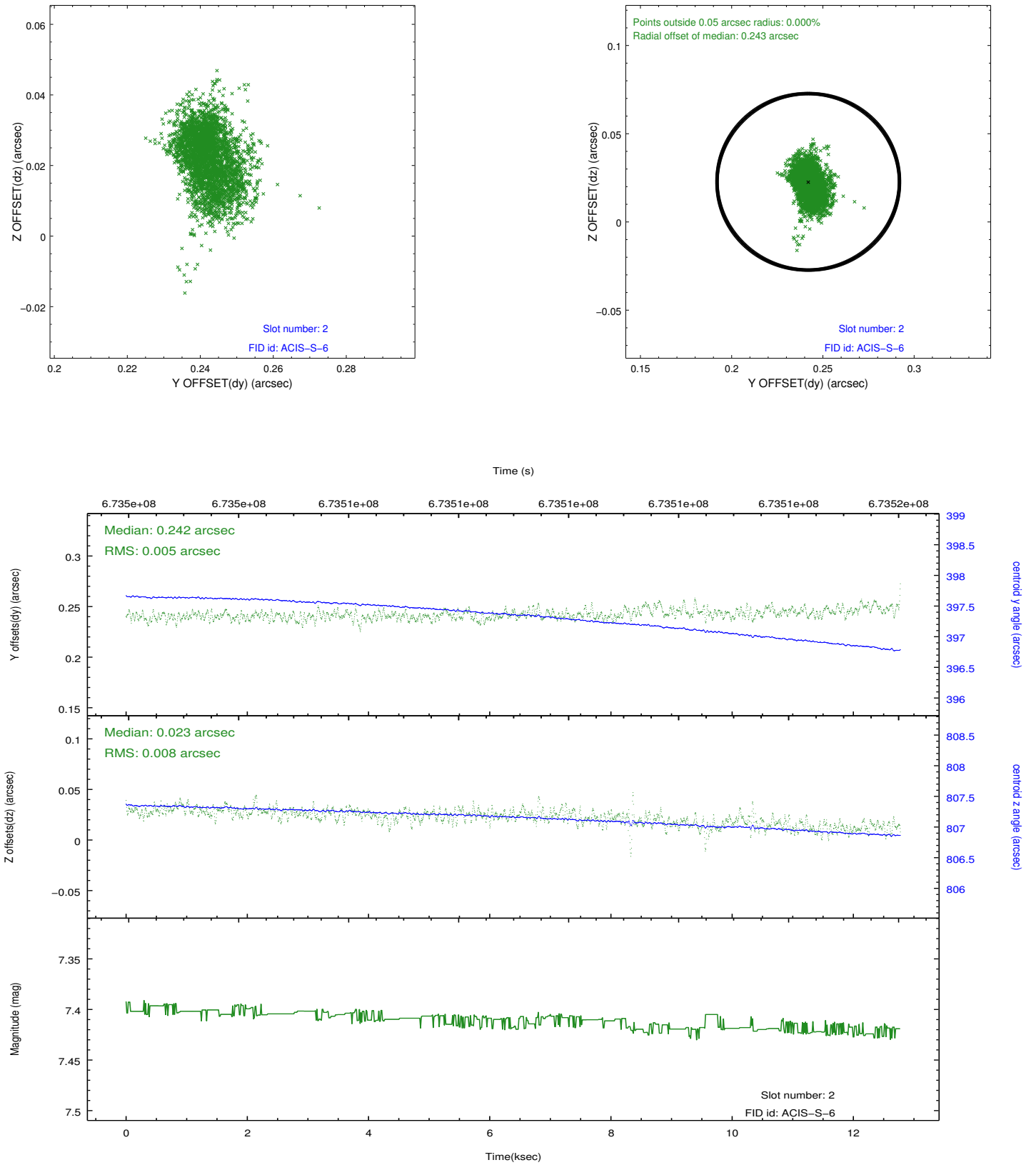
2.5.1 Slot 0



2.5.2 Slot 1

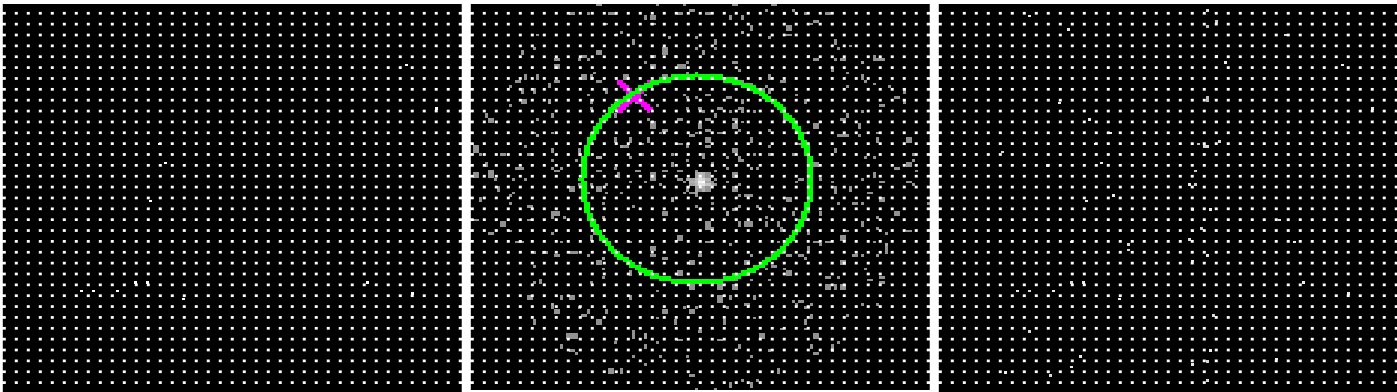


2.5.3 Slot 2



3 Gratings

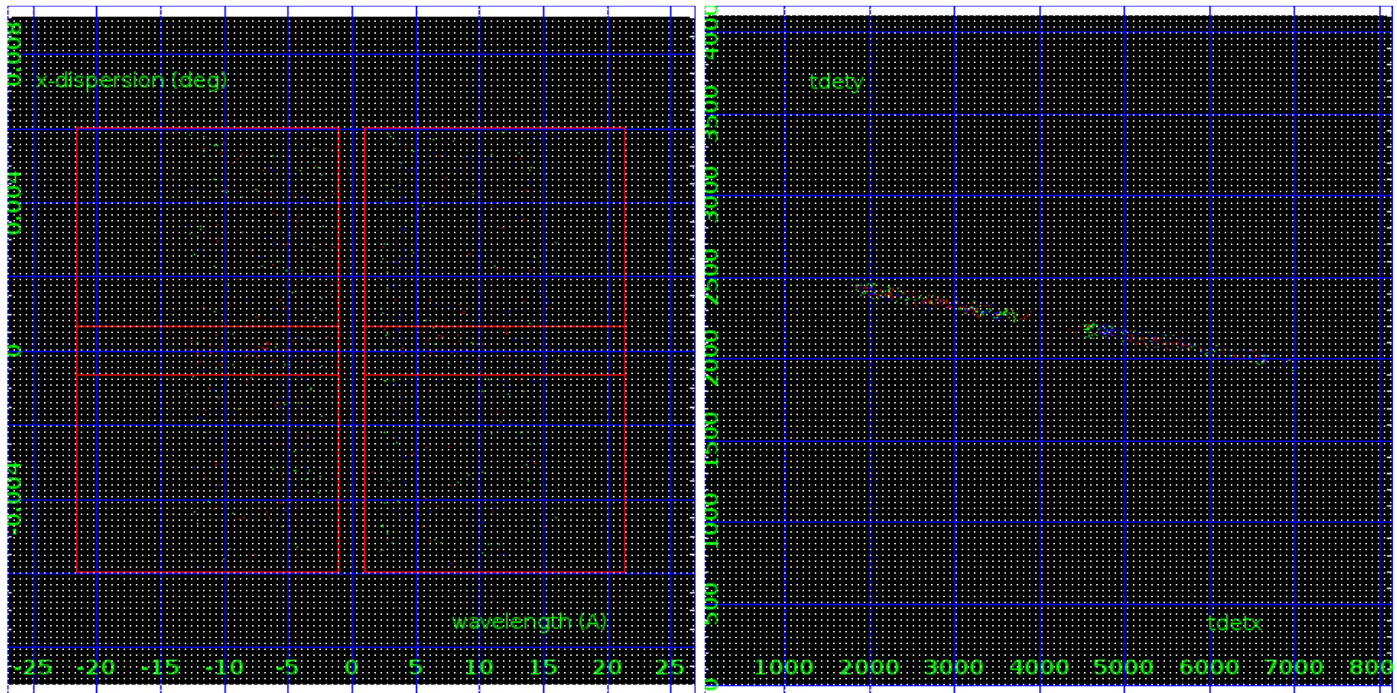
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

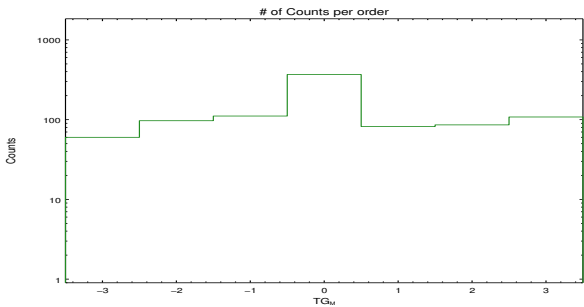
HEG Order Sort ALL

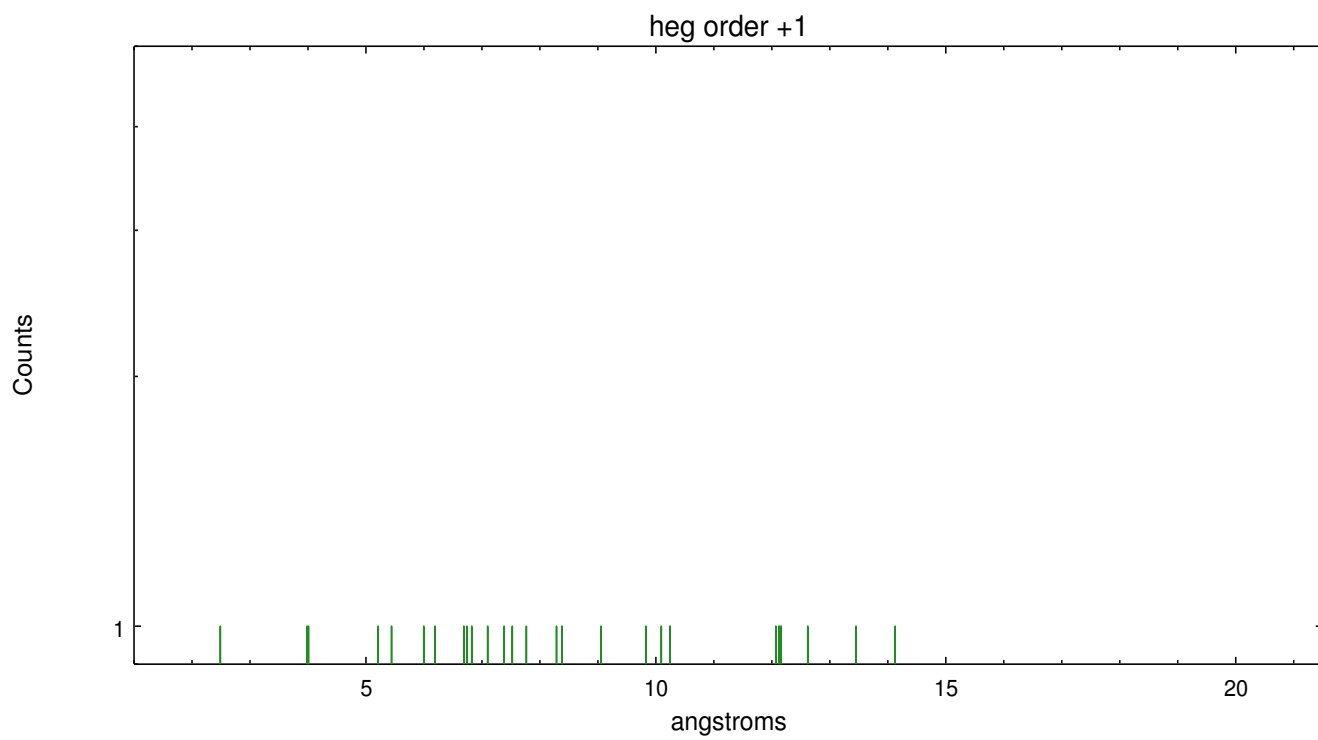
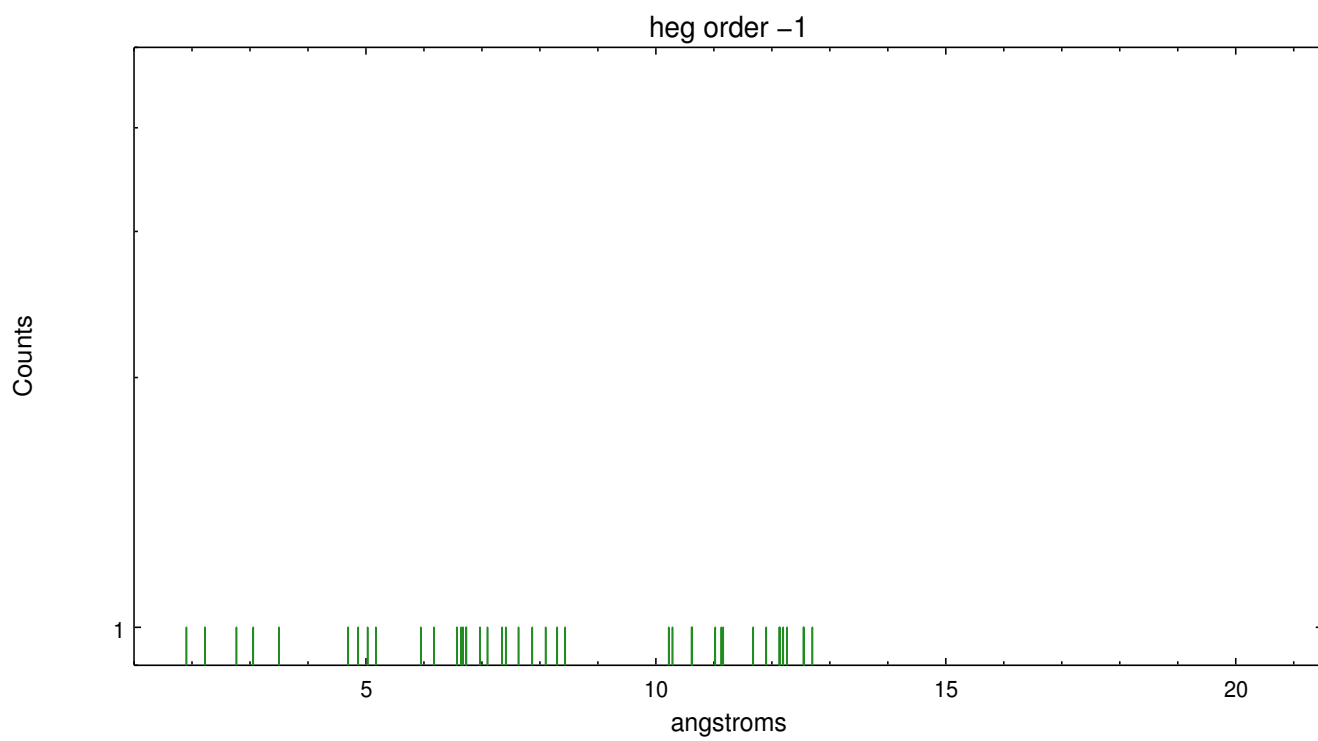


Spot Image HEG

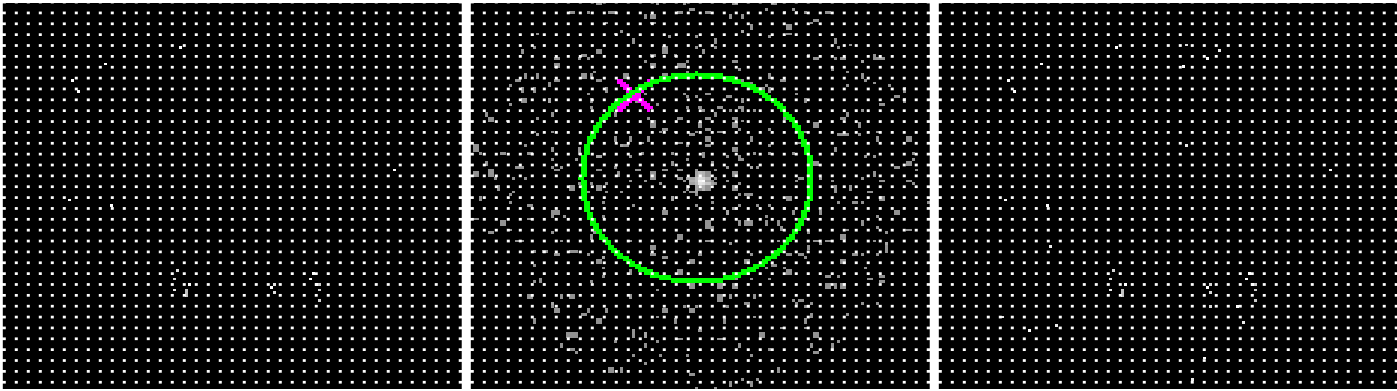
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	60	97	111	368	82	86	108





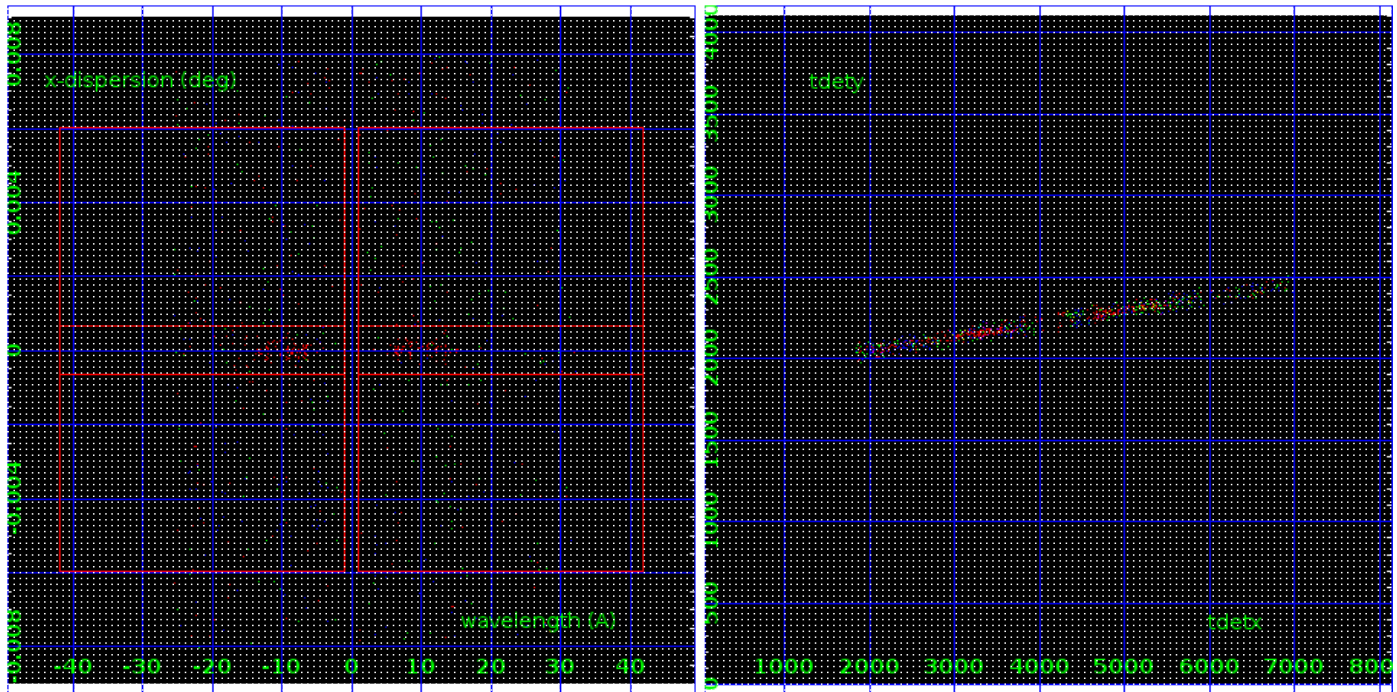
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

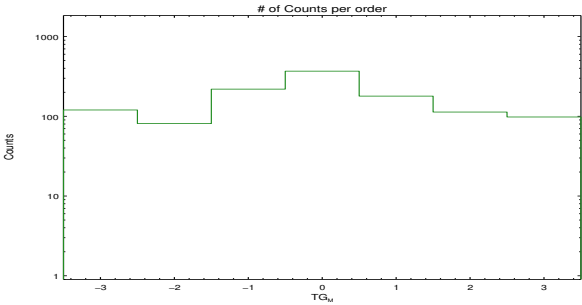
MEG Order Sort ALL

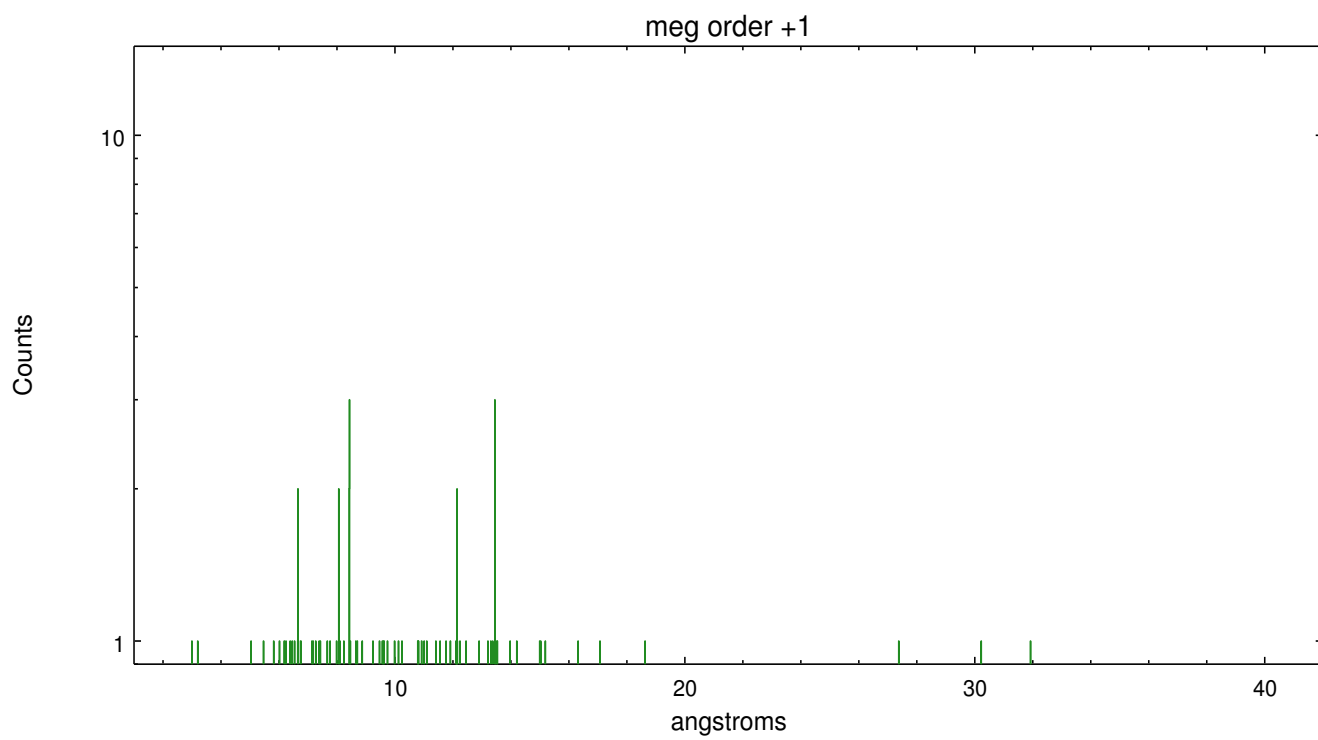
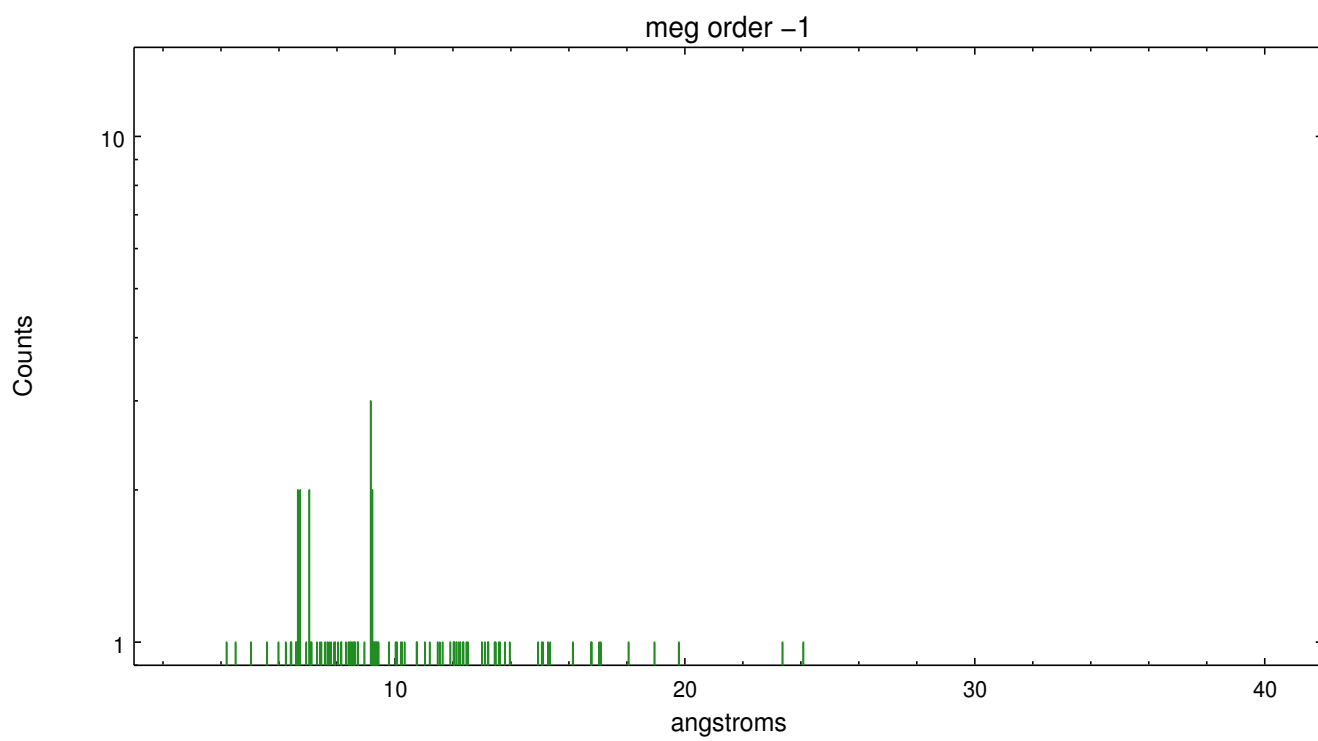


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	120	81	219	368	179	113	98





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.05.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.647713035345

A.2 Comments

Comments for Obi 0

The ACIS focal plane temperature is warmer than -114.0 C degrees during the interval 673502740.11 - 673515385.01 (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 CCD-resolution spectral response (e.g., fitting low-resolution line-rich spectra) may notice an effect.

Users whose science objectives do not depend on the most accurate spectral response or using grating spectra should not notice an effect.