

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19714 - L2 Version 1
Chandra X-Ray Center

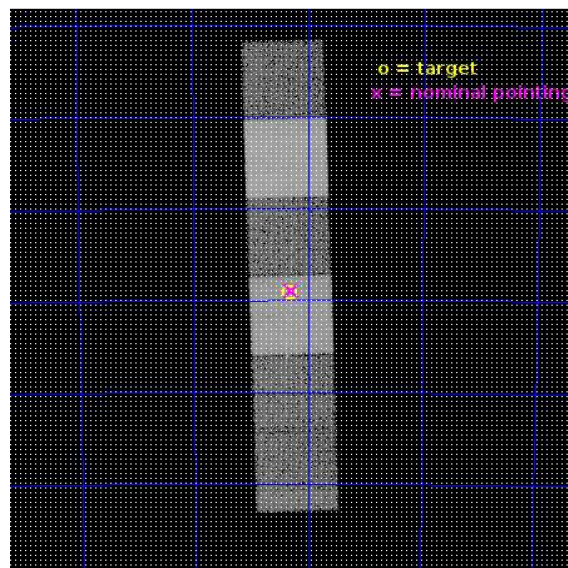
L2 Processing Date : Aug 4 2017

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1 Front

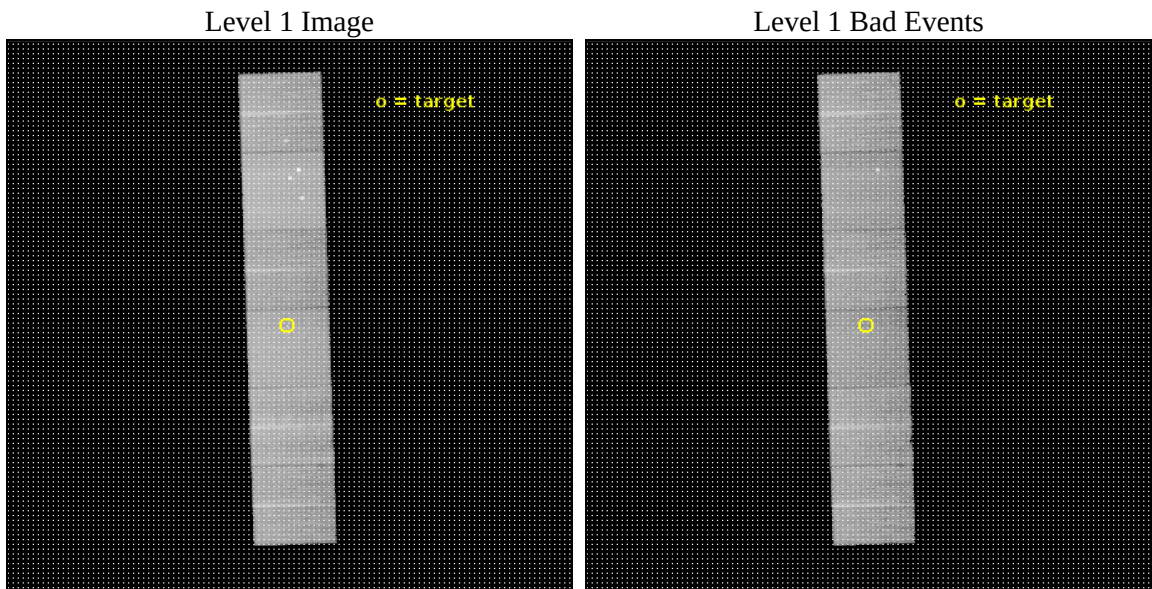
seq_num	401882	Sequence number
obs_id	19714	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.573208488389	Nominal RA [deg]
dec_nom	-66.4827116615	Nominal Dec [deg]
roll_nom	88.147258241867	Nominal Roll [deg]
revision	1	Processing version of data
ontime	19948.80029726	Sum of GTIs [s]
livetime	19696.196576171	Livetime [s]
ontime4	19948.80029726	Sum of GTIs [s]
ontime5	19948.80029726	Sum of GTIs [s]
ontime6	19948.80029726	Sum of GTIs [s]
ontime7	19948.80029726	Sum of GTIs [s]
ontime8	19948.80029726	Sum of GTIs [s]
ontime9	19948.80029726	Sum of GTIs [s]
l2events	221633	Number of level 2 events



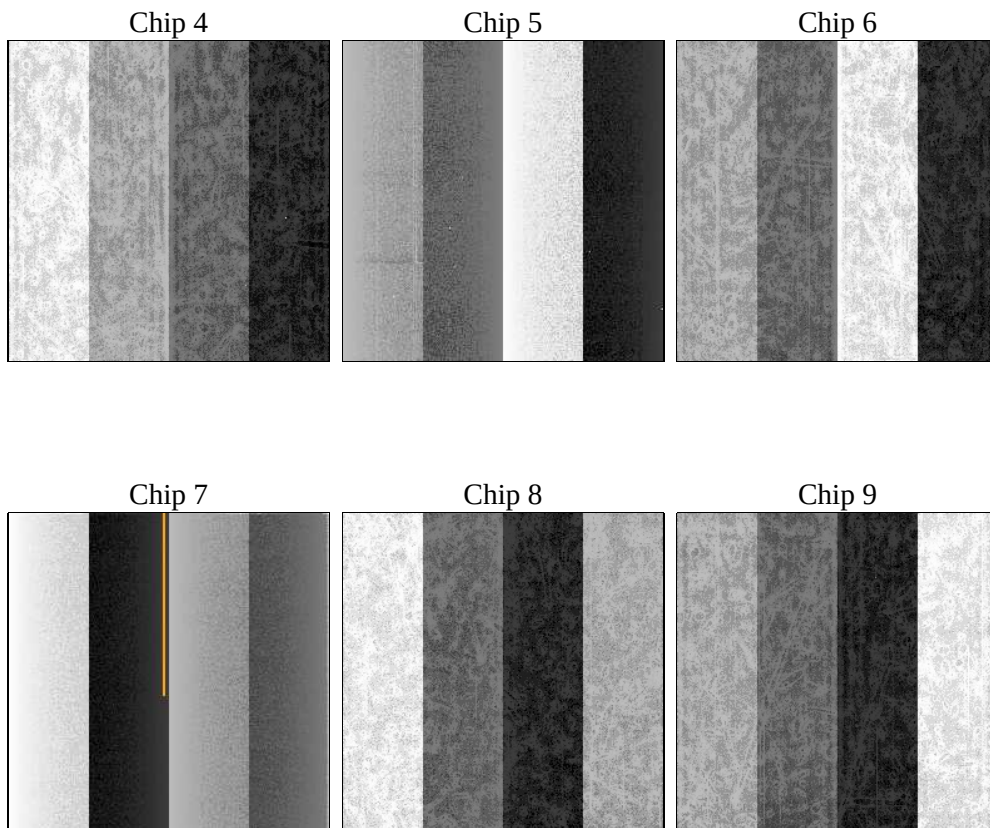
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	19948.80029726	Sum of GTIs [s]
caldsver	4.7.5	 	ontime4	19948.80029726	Sum of GTIs [s]
date	2017-08-04T13:26:52	Date and time of file creation	ontime5	19948.80029726	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	19948.80029726	Sum of GTIs [s]
			ontime7	19948.80029726	Sum of GTIs [s]
			ontime8	19948.80029726	Sum of GTIs [s]
			ontime9	19948.80029726	Sum of GTIs [s]
			l1events	1000430	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
				14067.22	

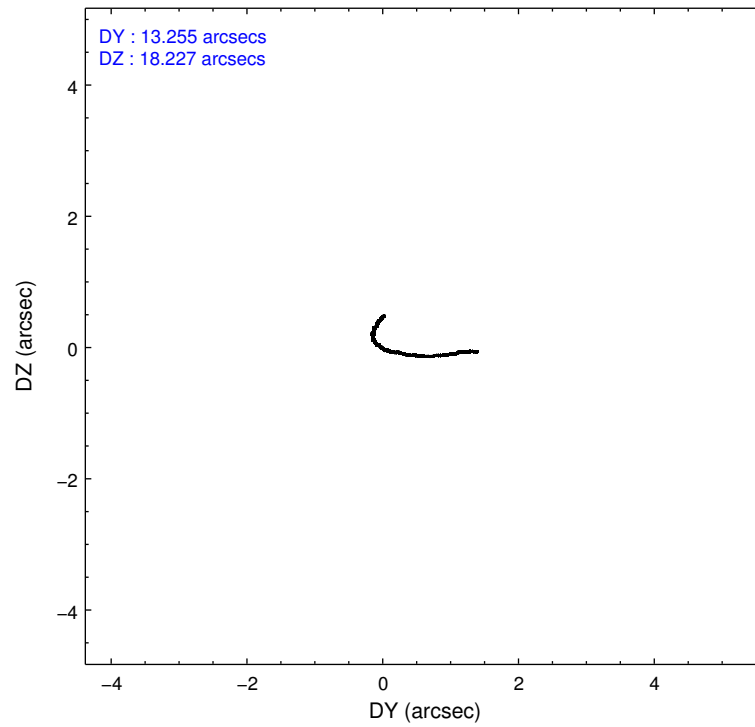
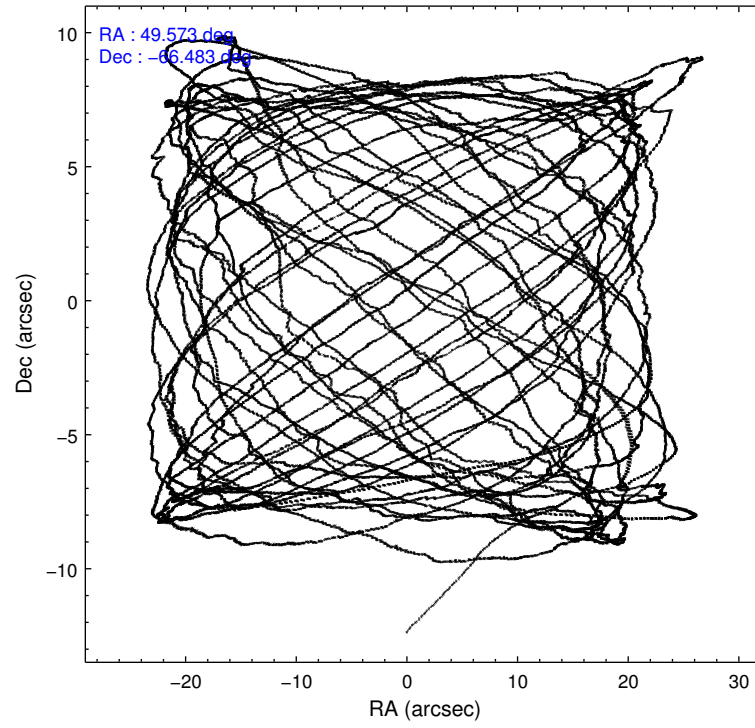
2.1.4 Events

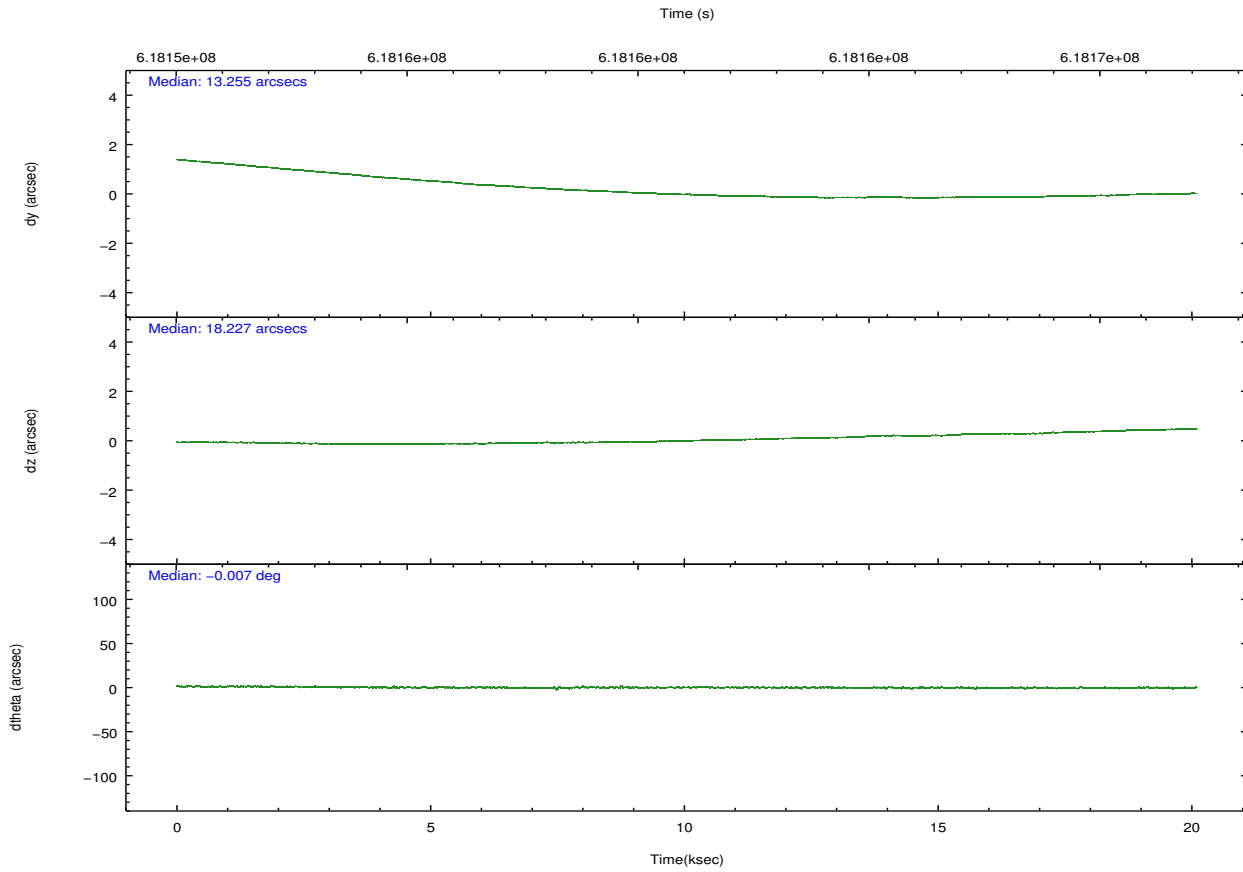
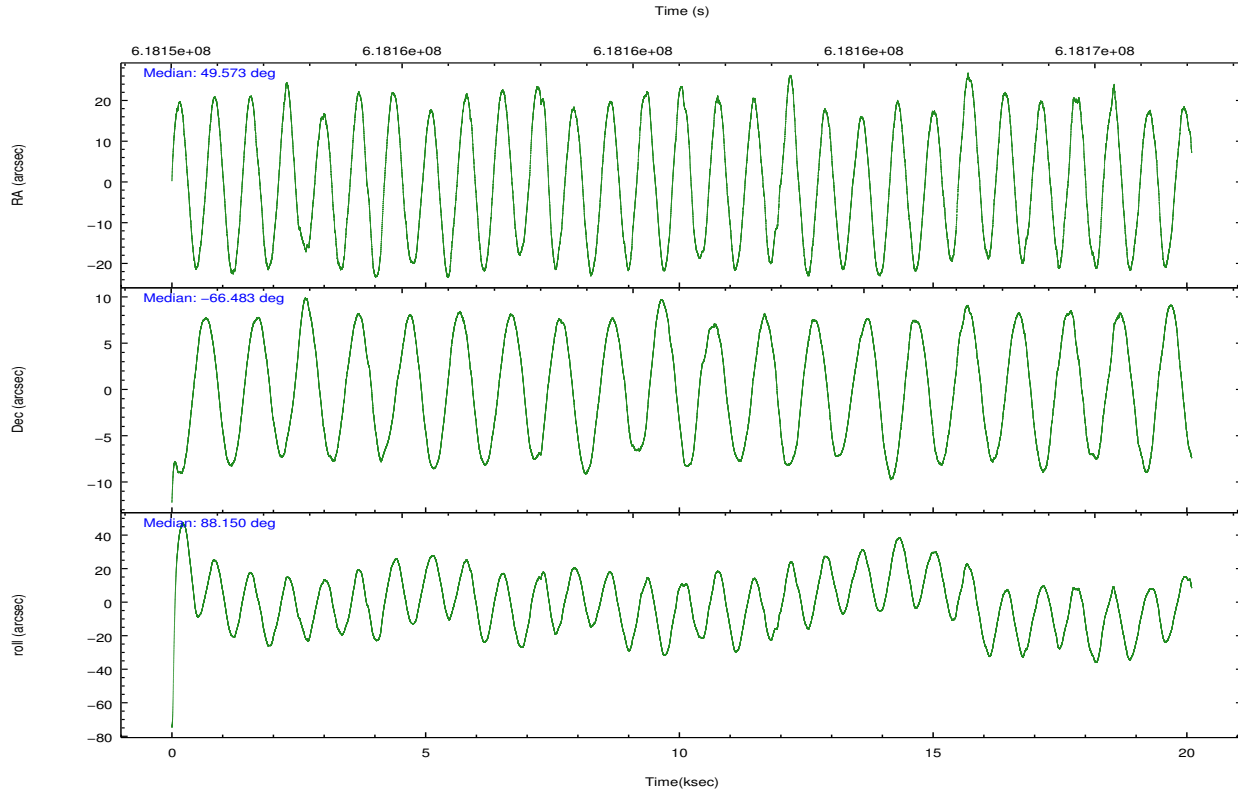
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	157024	217916	137192	173057	176320	138921	grade 0 events	6261	11168	4803	6275	12567	5467
rejected events	140866	112789	122156	98136	131557	122885		3%	5%	3%	3%	7%	3%
rejected %	89%	51%	89%	56%	74%	88%	grade 1 events	130	1726	57	214	144	89
								0%	0%	0%	0%	0%	0%
							grade 2 events	3780	31795	3674	15606	10735	3776
								2%	14%	2%	9%	6%	2%
							grade 3 events	1710	2864	1360	5875	4761	1660
								1%	1%	0%	3%	2%	1%
							grade 4 events	1668	2688	1299	5839	4226	1490
								1%	1%	0%	3%	2%	1%
							grade 5 events	6575	13790	6056	16938	9152	6687
								4%	6%	4%	9%	5%	4%
							grade 6 events	2741	56634	3904	41353	12479	3646
								1%	25%	2%	23%	7%	2%
							grade 7 events	134159	97251	116039	80957	122256	116106
								85%	44%	84%	46%	69%	83%

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	49.606432	49.5732084883894	CCD I2 on	N	N
[deg] Pointing Dec	-66.506734	-66.48271166150028	CCD I3 on	N	N
[deg] Pointing Roll	88.021187	88.14725824186746	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	-190.132523	-190.145094680475	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01257209746719923	CCD S4 on	Y	Y
[s] Observation start time (MET)	618151106.184000	618149860.74017	CCD S5 on	Y	Y
Observation start date	2017-08-03T12:37:17	2017-08-03T12:17:40	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	618171106.184000	618172333.35399	On-chip summing requested	N	N
Observation end date	2017-08-03T18:10:37	2017-08-03T18:32:13	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



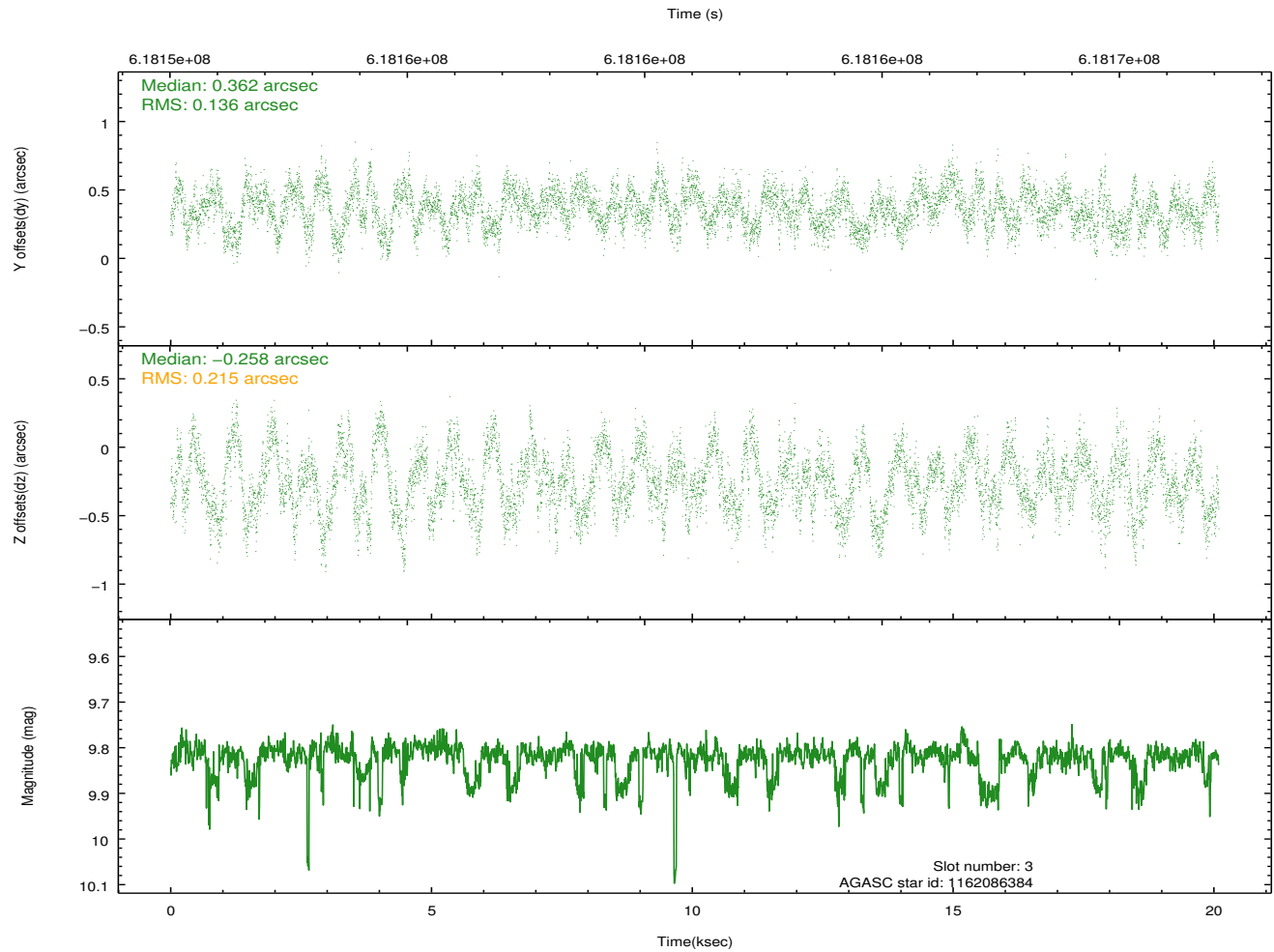
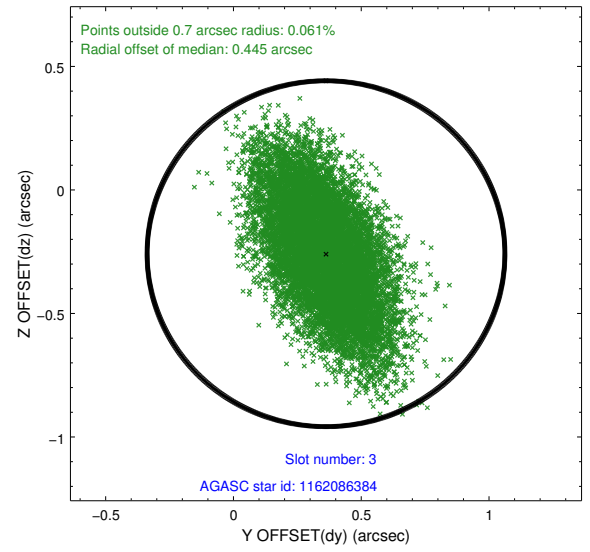
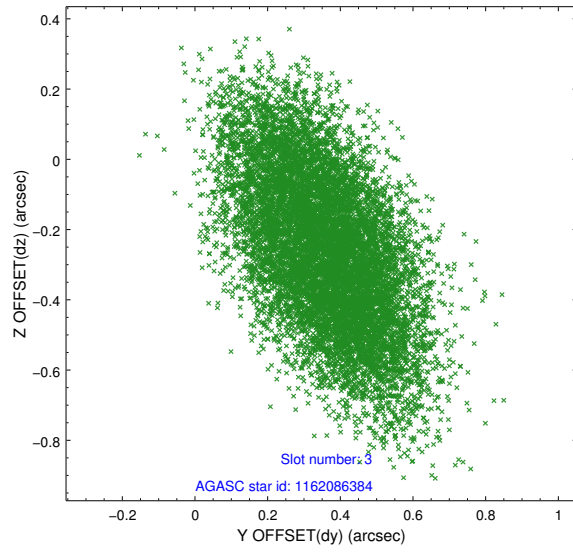


Slot Statistics

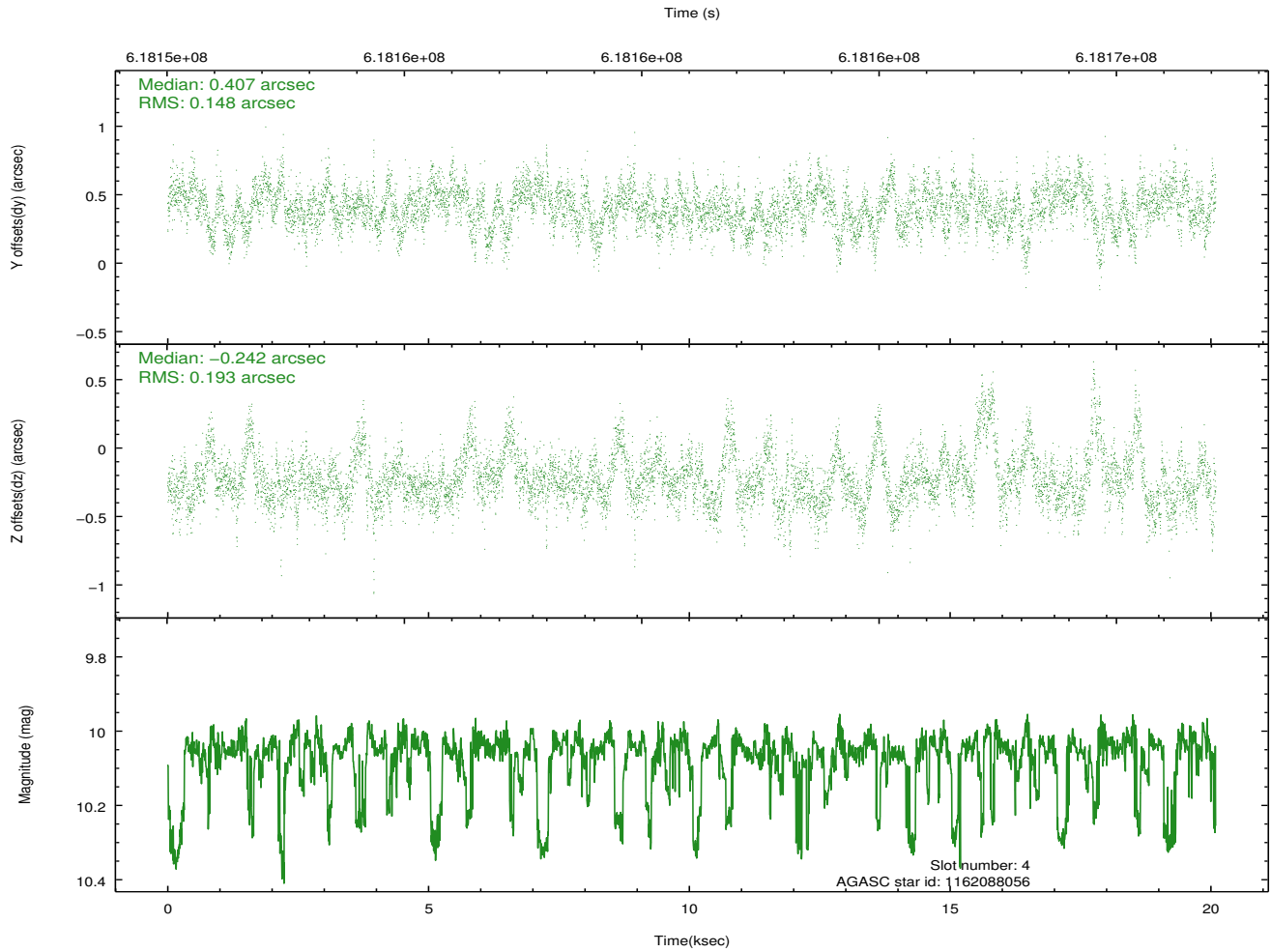
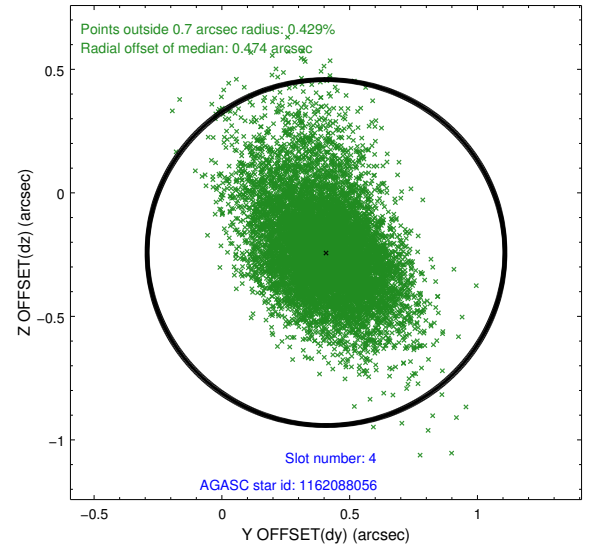
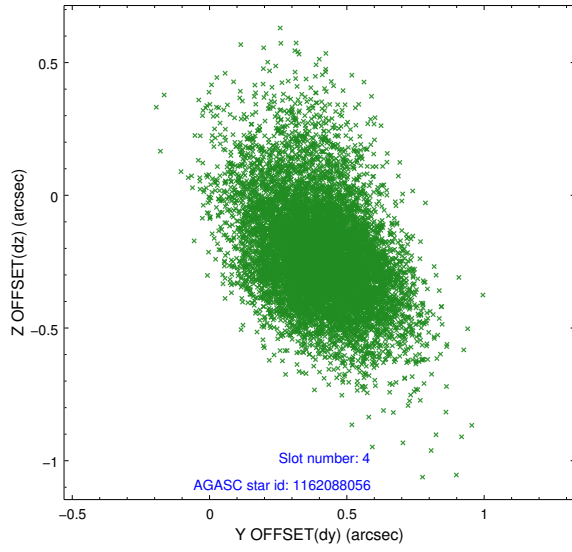
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.21	4902	0.166	-0.032	0.009	0.019	0.000000	0.000000	929.84	-1735.30
1	FID		ACIS-S-5	7.23	4901	-0.330	0.100	0.011	0.017	0.000000	0.000000	-1819.61	162.11
2	FID		ACIS-S-6	7.36	4902	0.141	-0.055	0.011	0.019	0.000000	0.000000	395.08	806.19
3	GUIDE	used	1162086384	9.82	9788	0.362	-0.258	0.268	0.450	48.033301	-66.858172	-1369.02	2178.98
4	GUIDE	used	1162088056	10.06	9781	0.407	-0.242	0.241	0.453	48.729349	-66.949806	-1645.54	1180.27
5	GUIDE	used	1162088248	7.59	9801	-1.006	0.386	0.163	0.270	49.751966	-65.888113	2231.32	-136.56
6	GUIDE	used	1162089104	9.52	9790	-0.147	0.117	0.188	0.310	48.422126	-66.410699	270.26	1716.55
7	GUIDE	used	1162090824	9.20	9793	0.390	-0.021	0.163	0.283	48.677982	-66.885202	-1416.64	1264.21

2.4 Star Slots

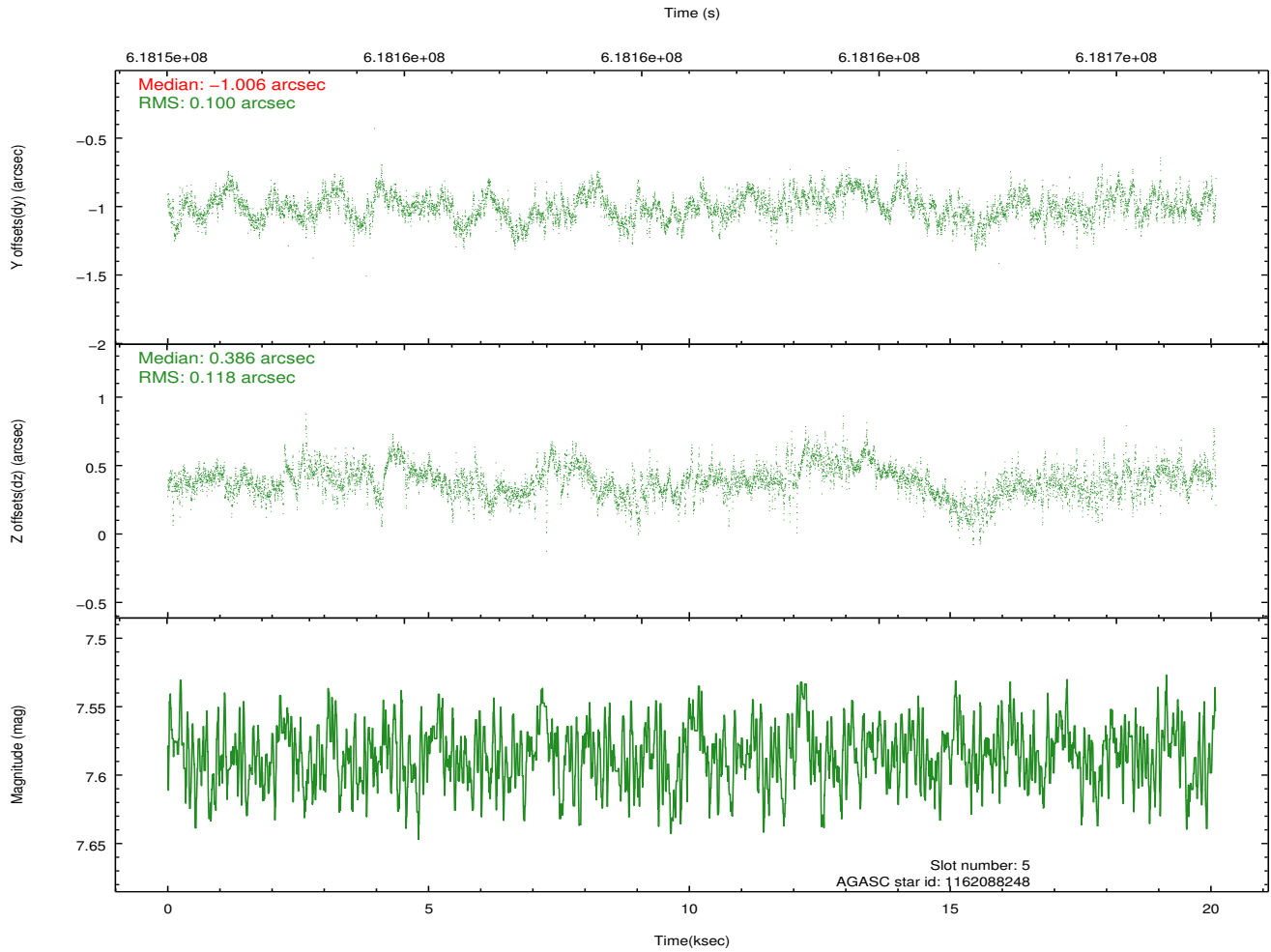
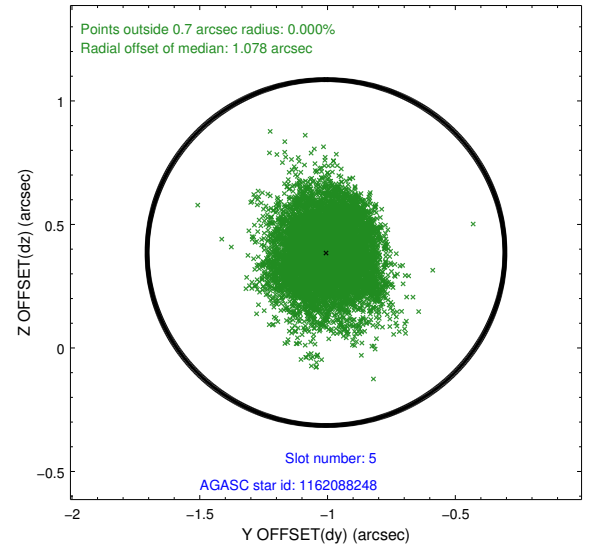
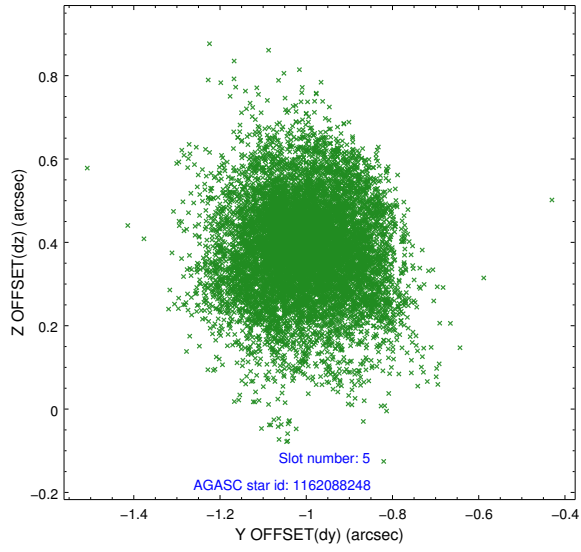
2.4.1 Slot 3



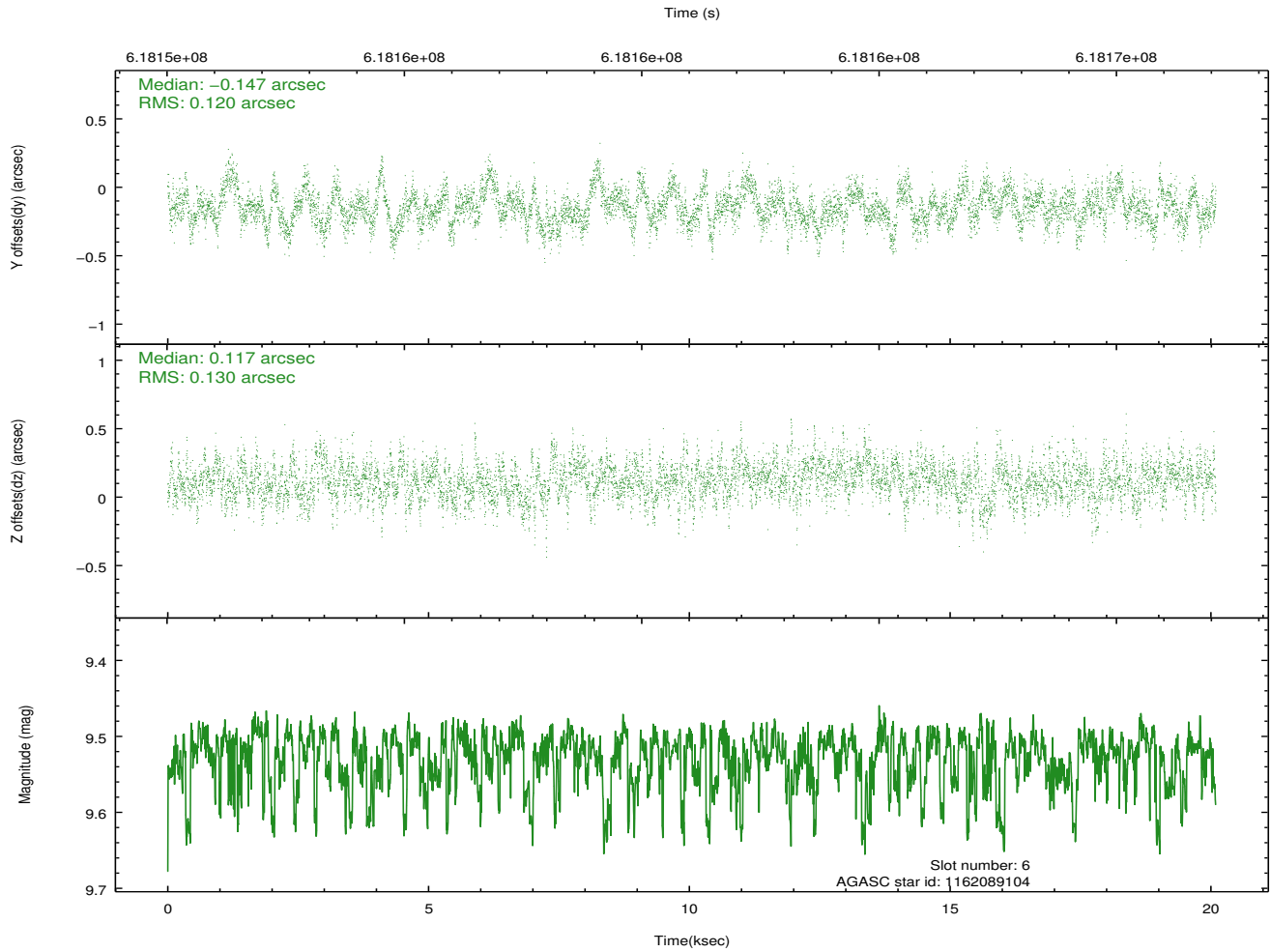
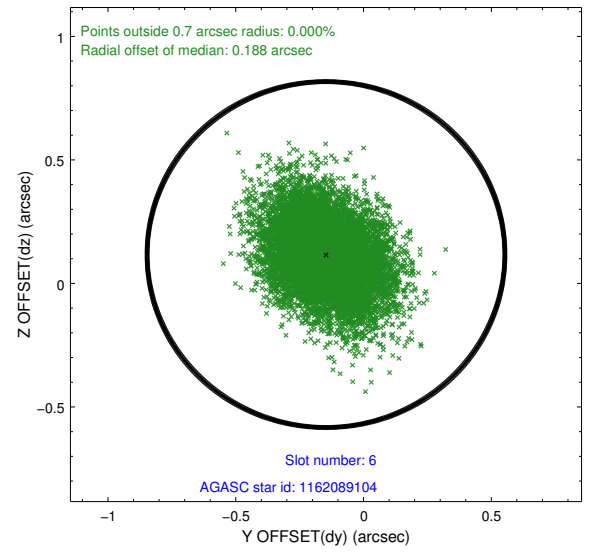
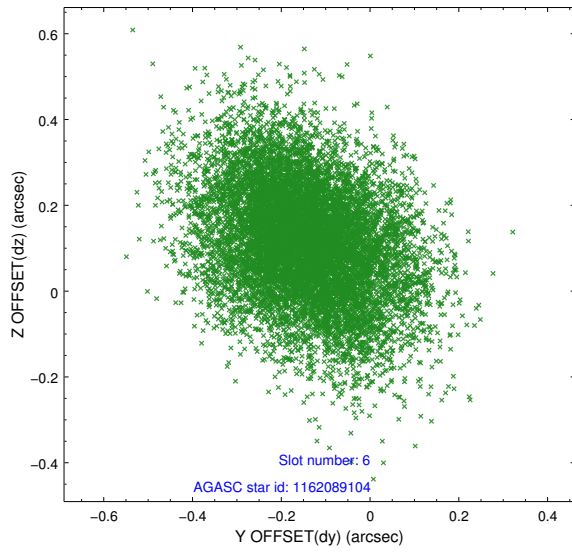
2.4.2 Slot 4



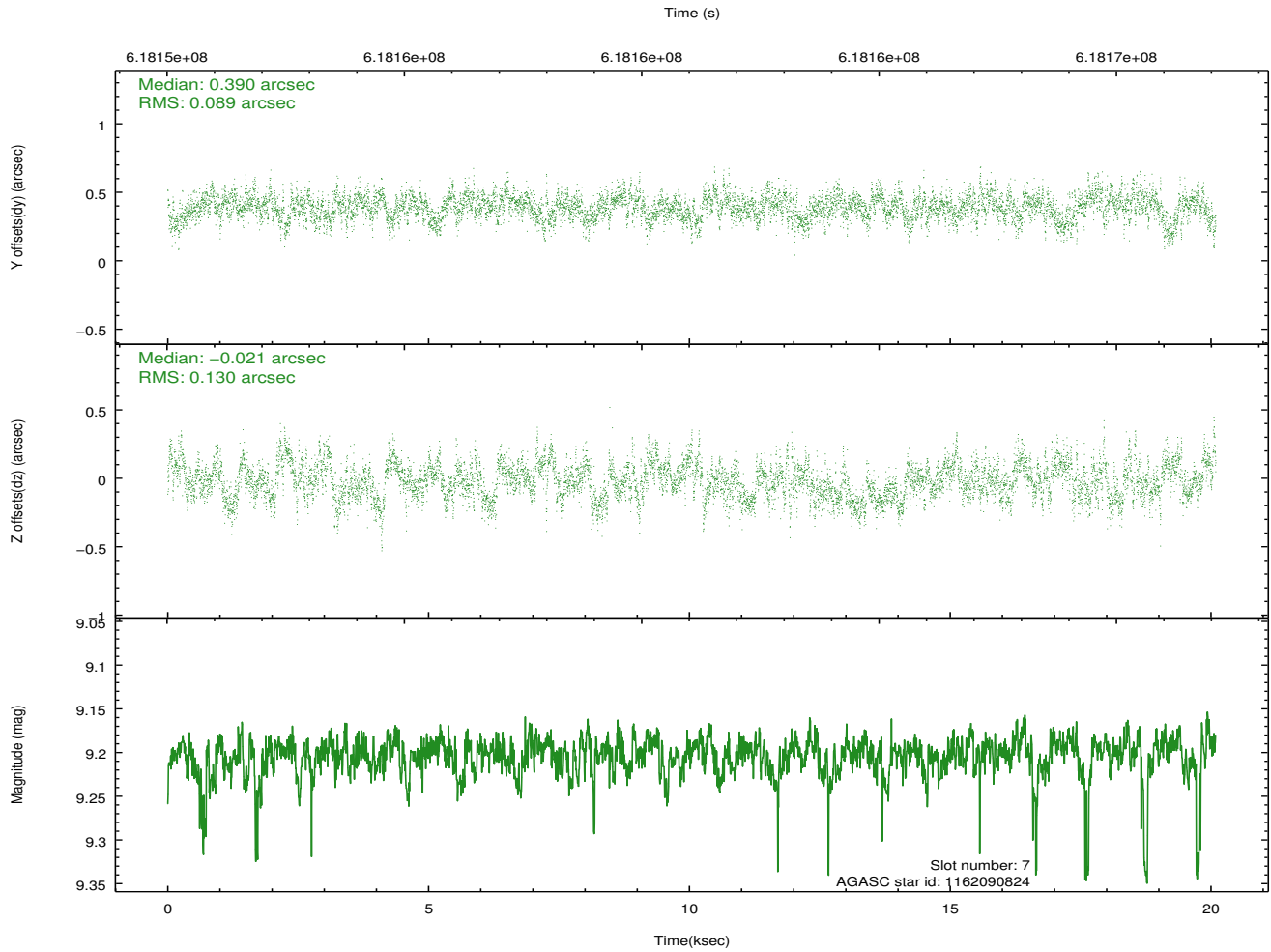
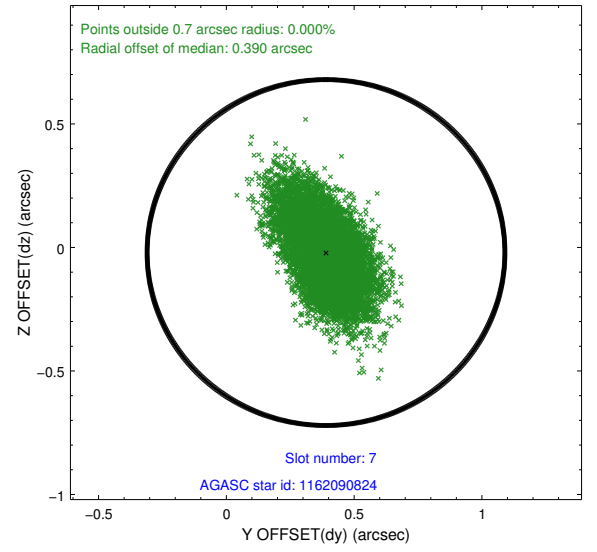
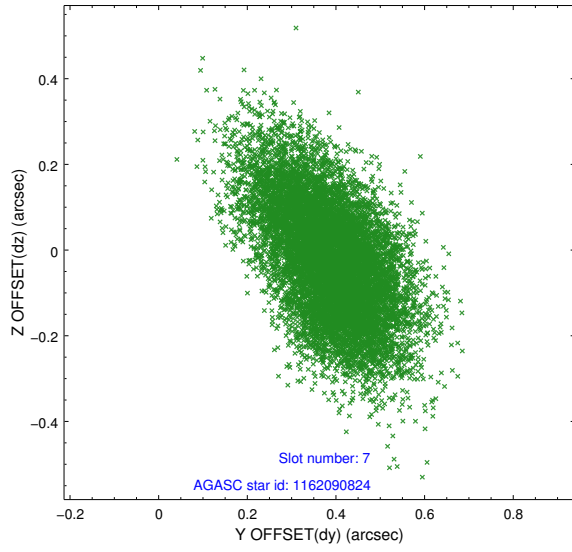
2.4.3 Slot 5



2.4.4 Slot 6

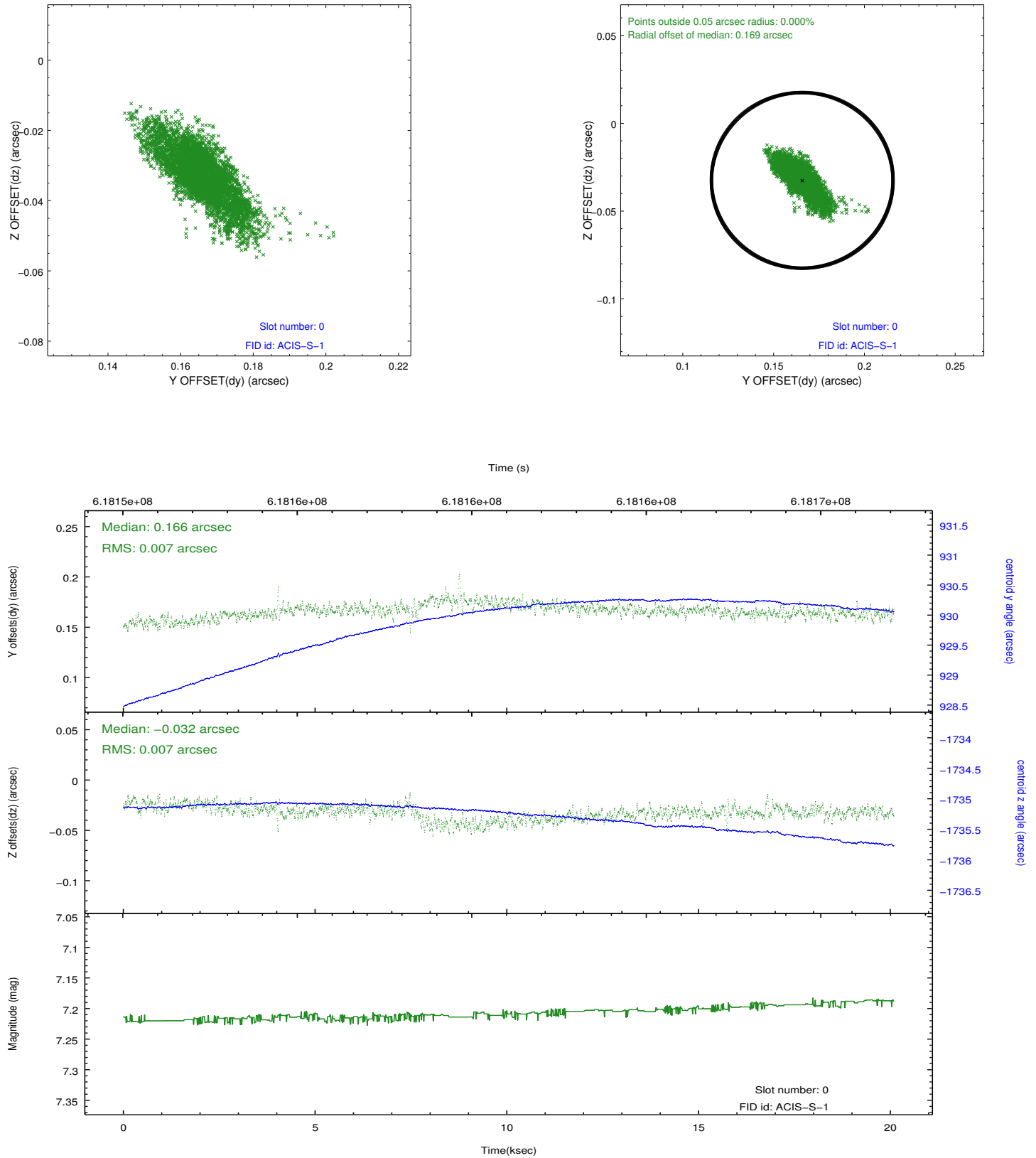


2.4.5 Slot 7

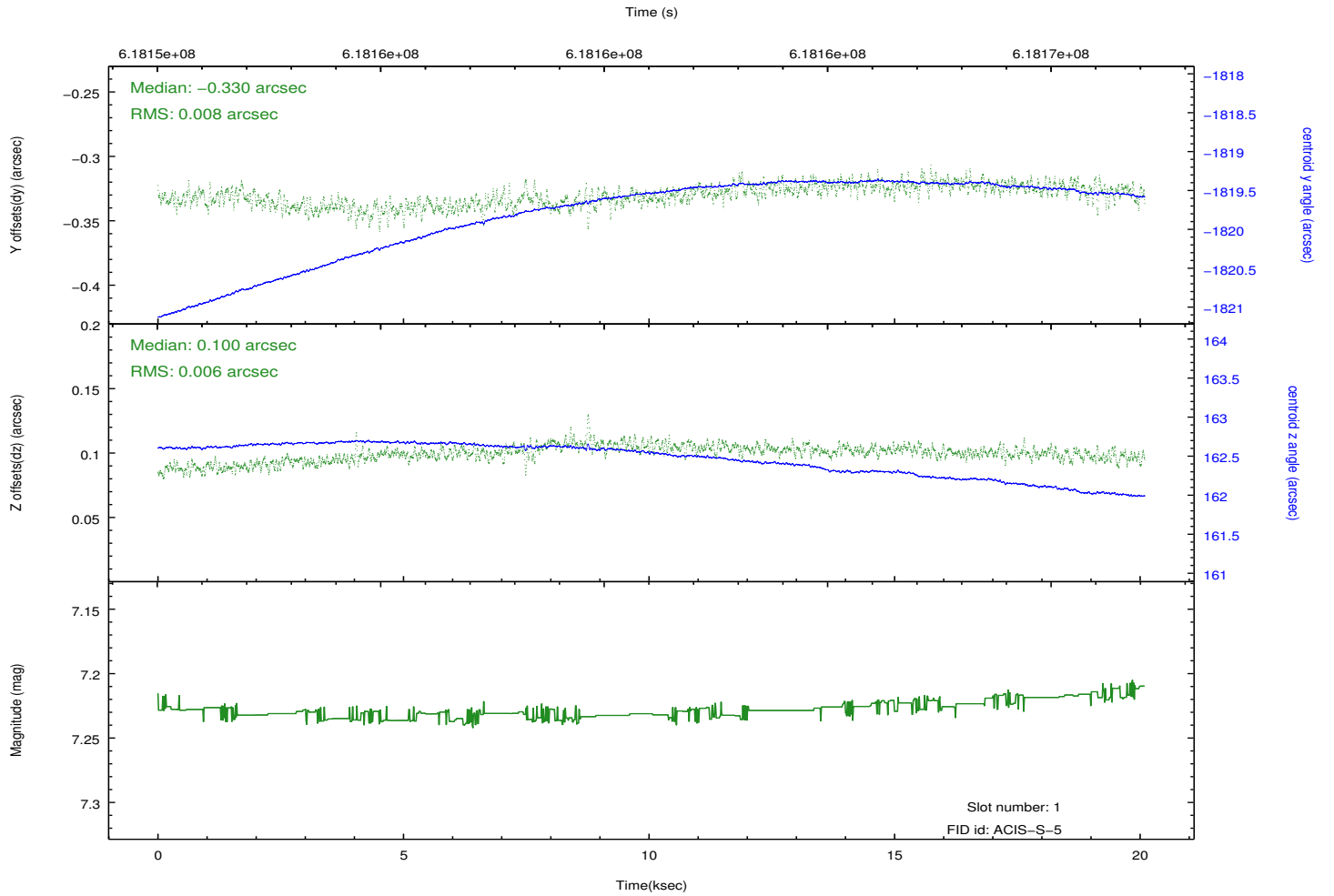
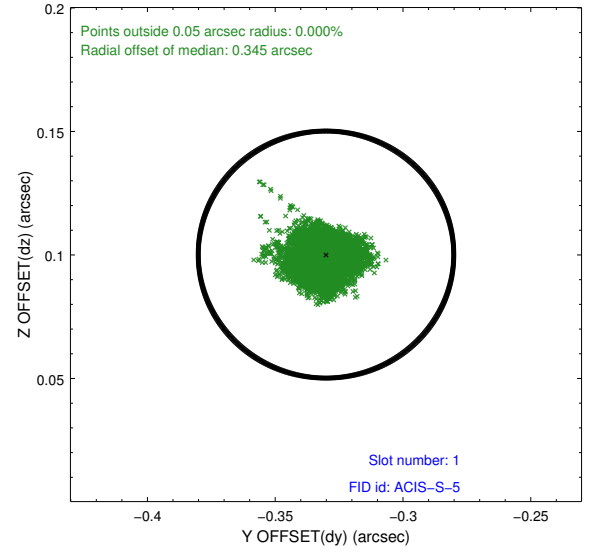
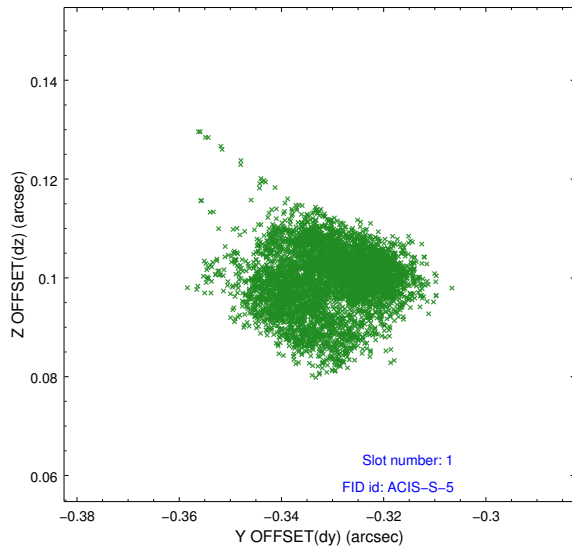


2.5 FID Slots

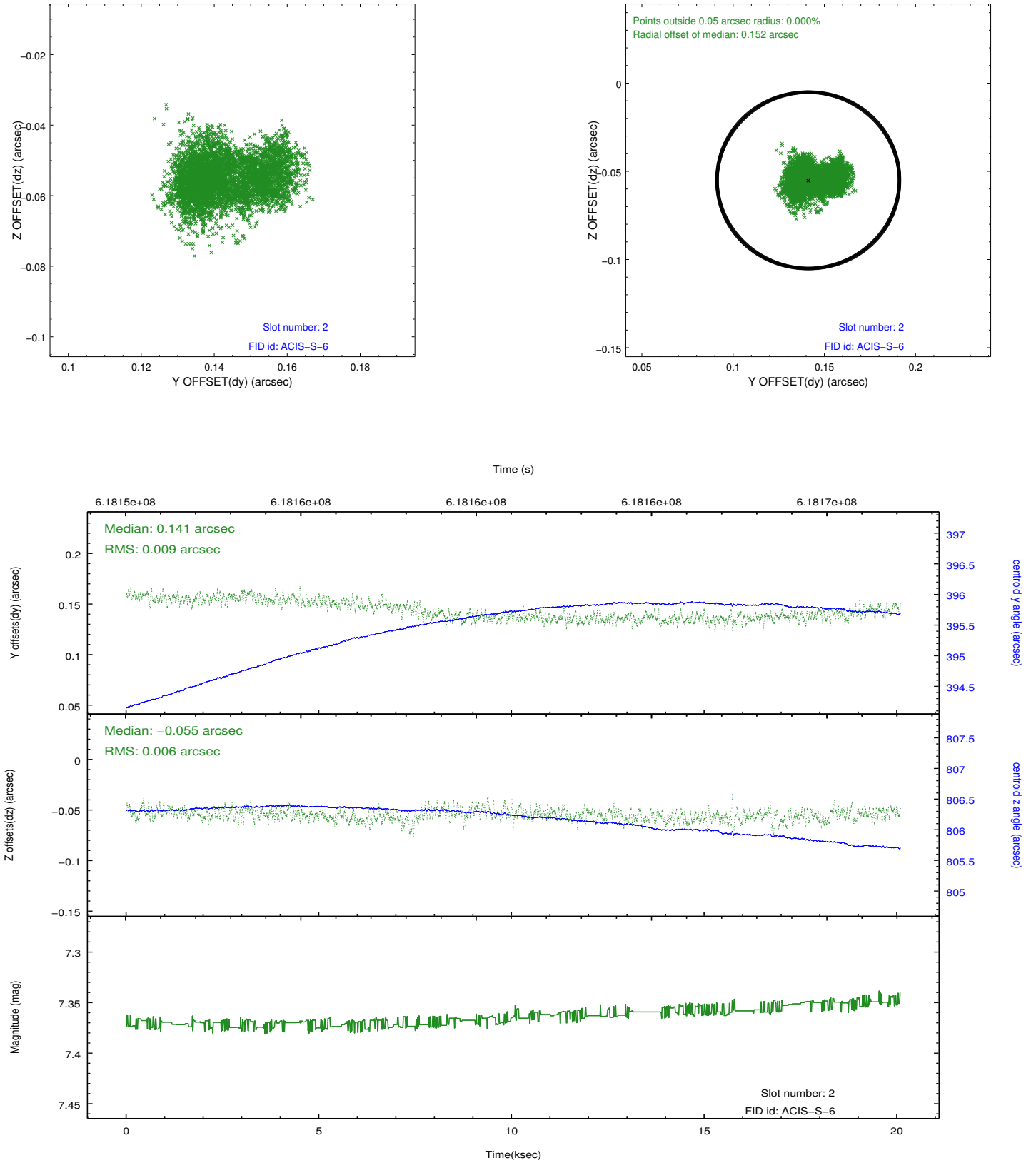
2.5.1 Slot 0



2.5.2 Slot 1

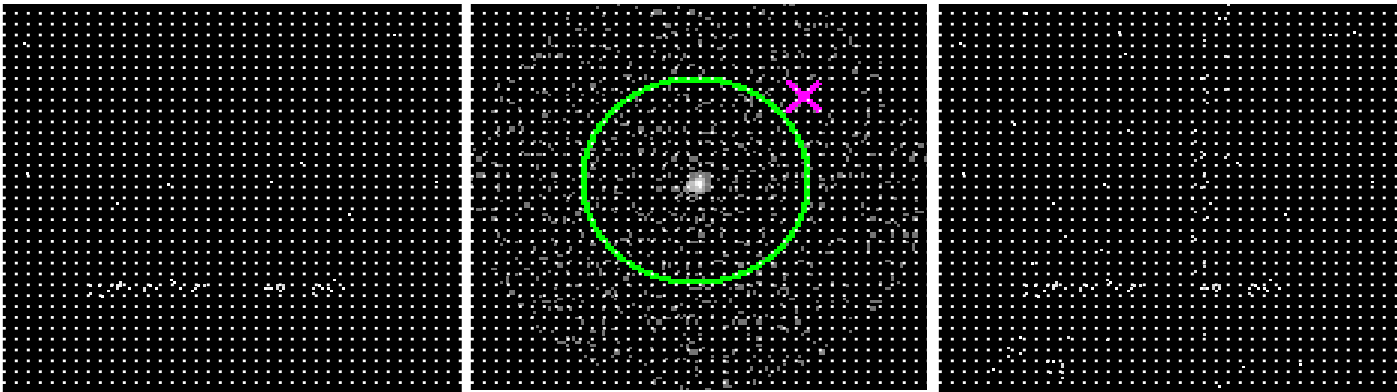


2.5.3 Slot 2



3 Gratings

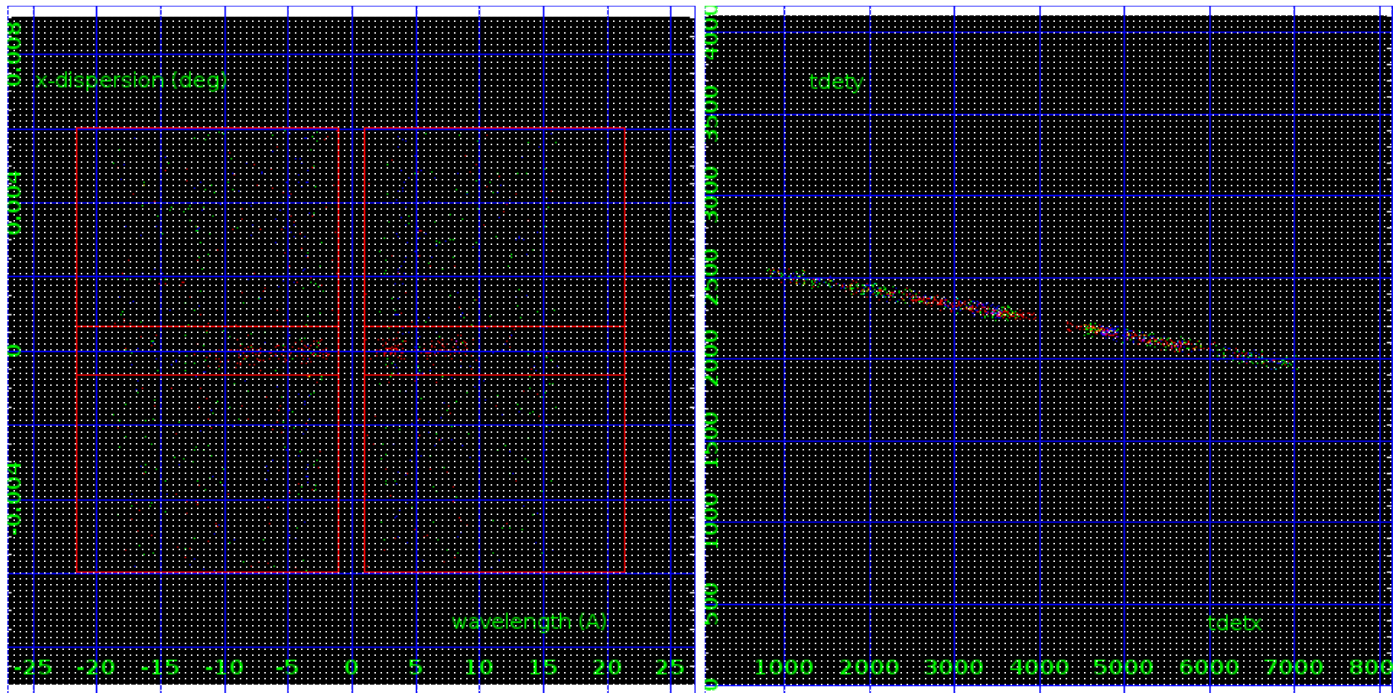
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

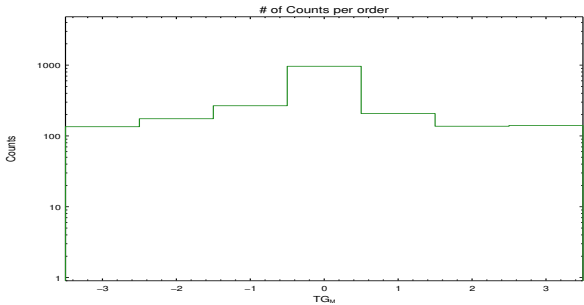
HEG Order Sort ALL

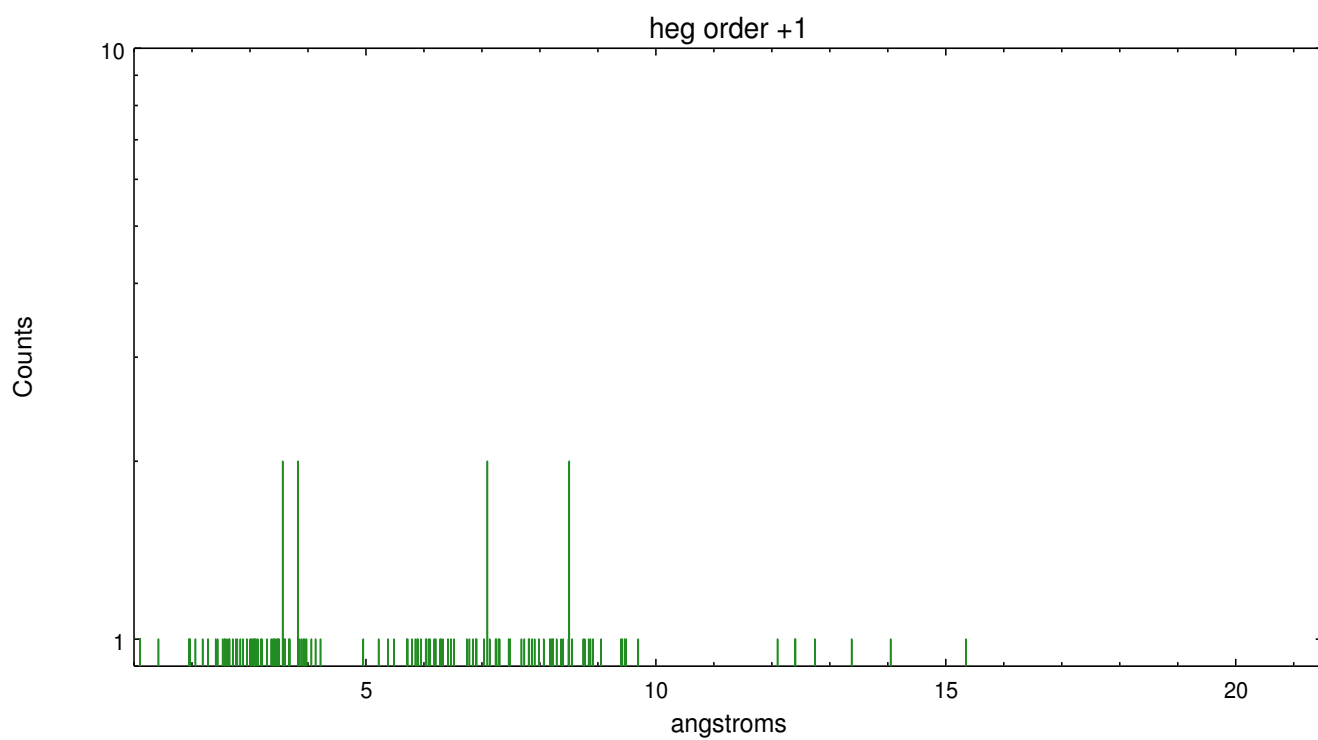
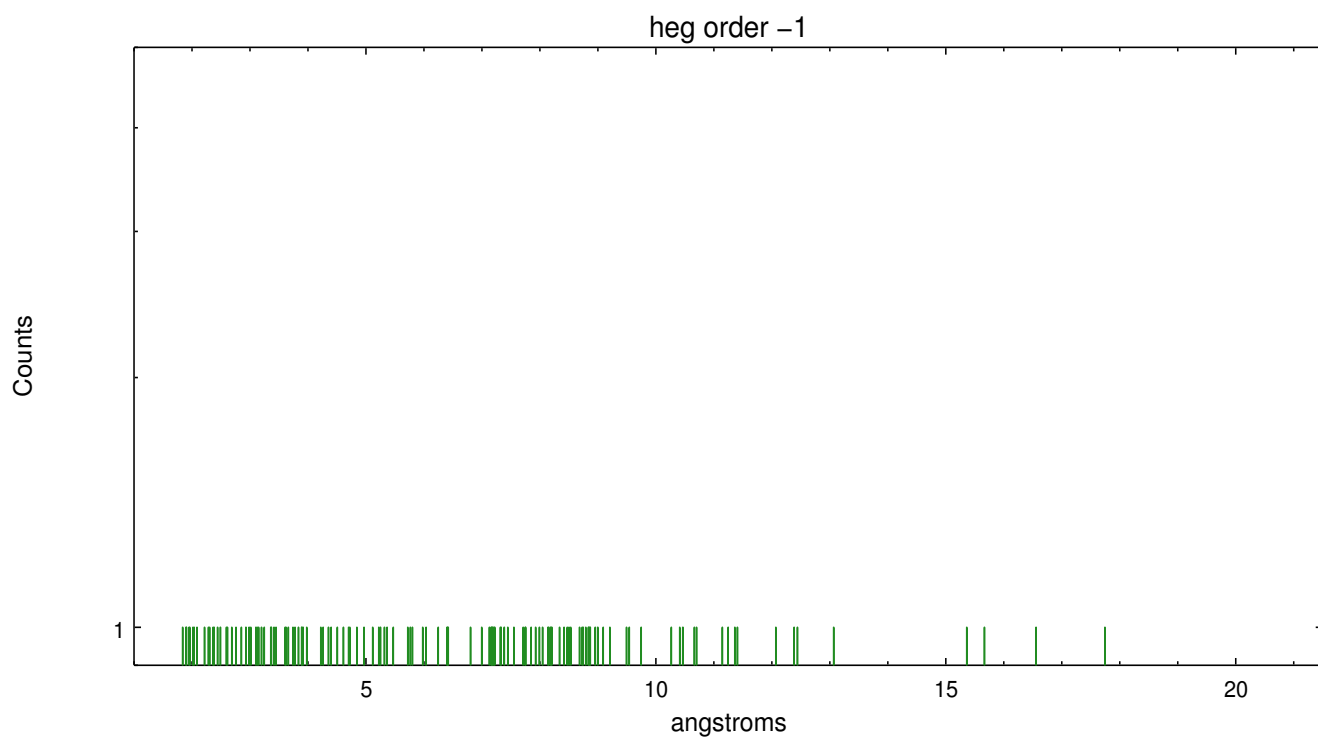


Spot Image HEG

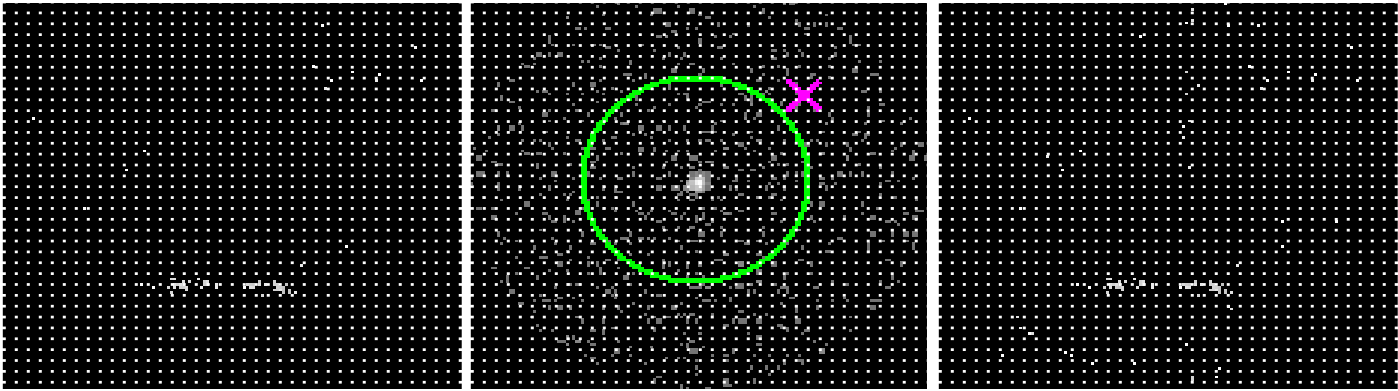
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	135	175	267	963	207	137	140





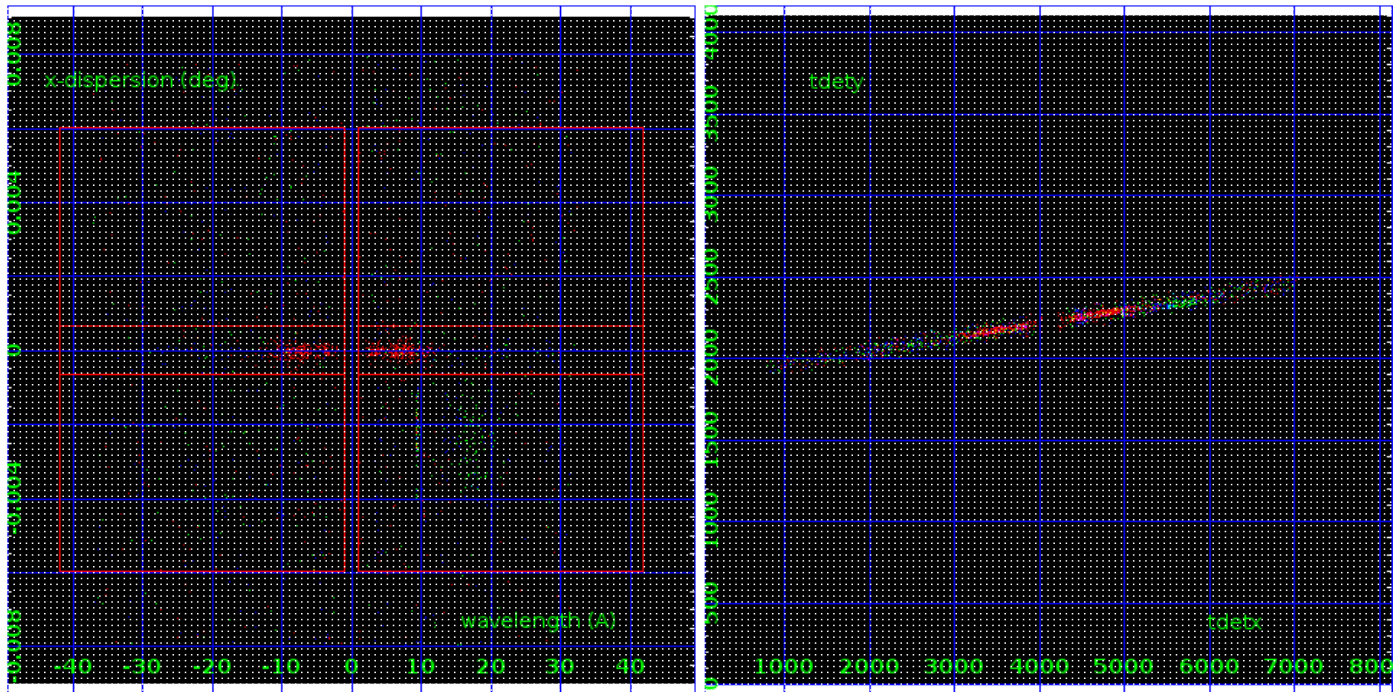
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

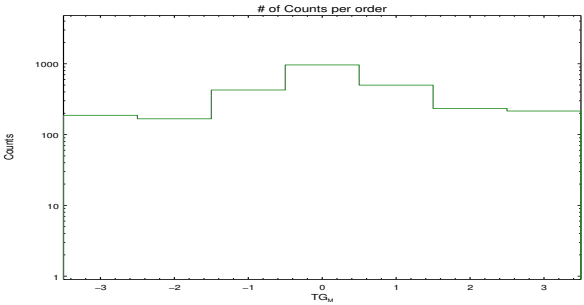
MEG Order Sort ALL

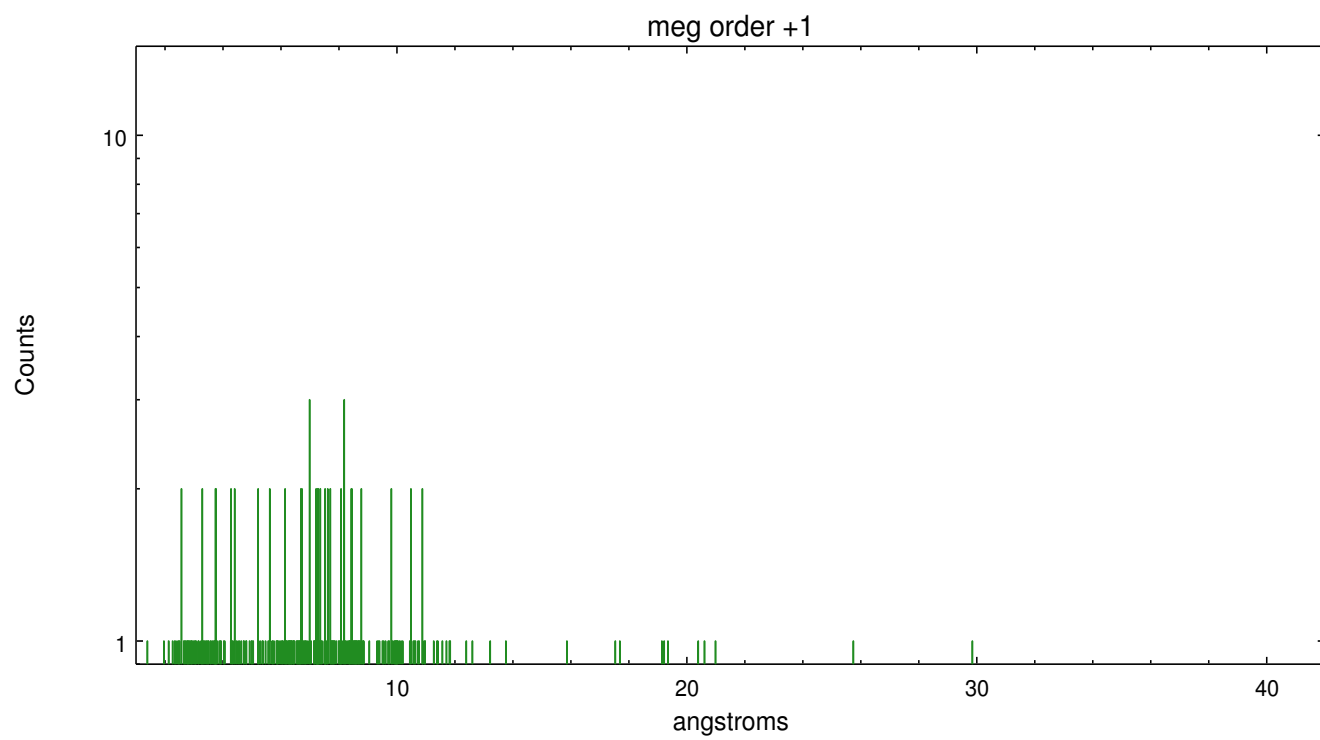
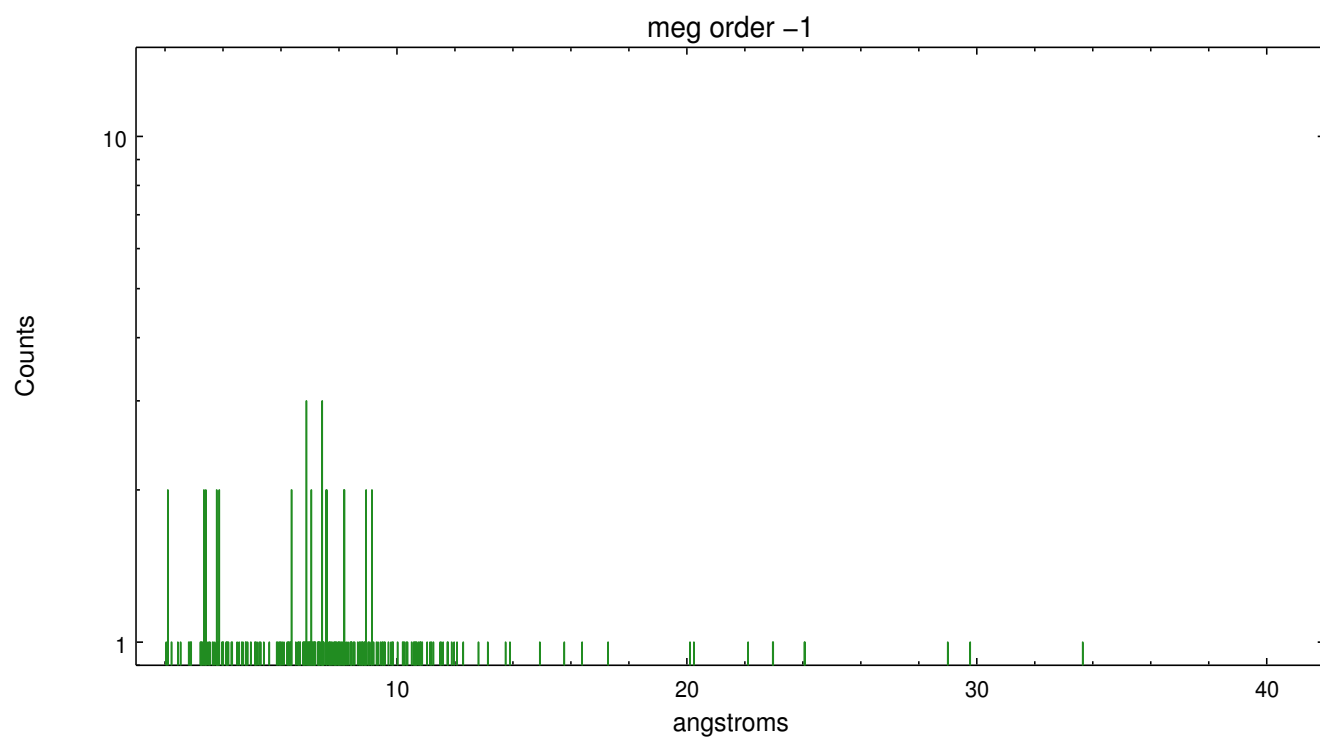


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	187	167	426	963	499	233	215





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.08.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.94880029726

A.2 Comments

Comments for Obi 0

Star in slot 3 has an RMS deviation > 0.200000 arcsec