

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20126 - L2 Version 1
Chandra X-Ray Center

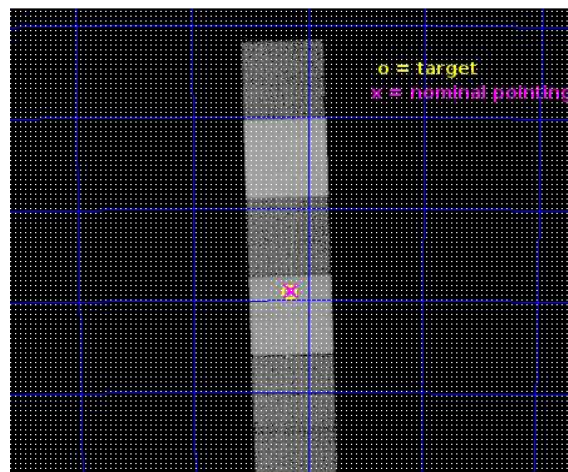
L2 Processing Date : Aug 3 2017

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1 Front

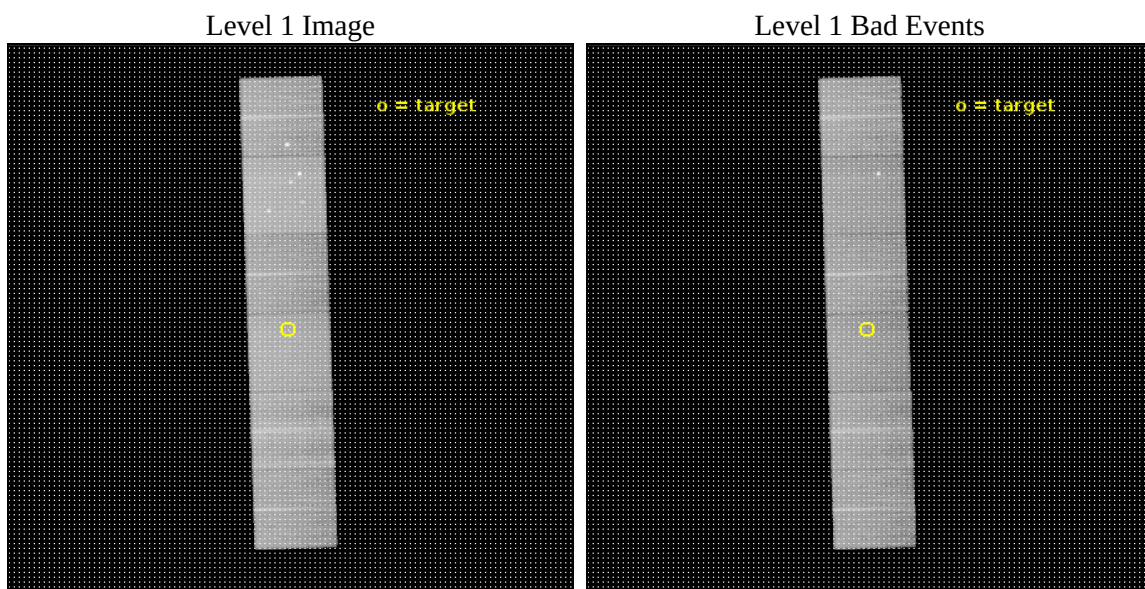
seq_num	401882	Sequence number
obs_id	20126	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.573185804517	Nominal RA [deg]
dec_nom	-66.482740127098	Nominal Dec [deg]
roll_nom	88.147302046847	Nominal Roll [deg]
revision	1	Processing version of data
ontime	27448.802878499	Sum of GTIs [s]
livetime	27101.229608767	Livetime [s]
ontime4	27448.843918443	Sum of GTIs [s]
ontime5	27448.761838436	Sum of GTIs [s]
ontime6	27448.720798492	Sum of GTIs [s]
ontime7	27448.802878499	Sum of GTIs [s]
ontime8	27448.67975843	Sum of GTIs [s]
ontime9	27448.638718486	Sum of GTIs [s]
l2events	305612	Number of level 2 events



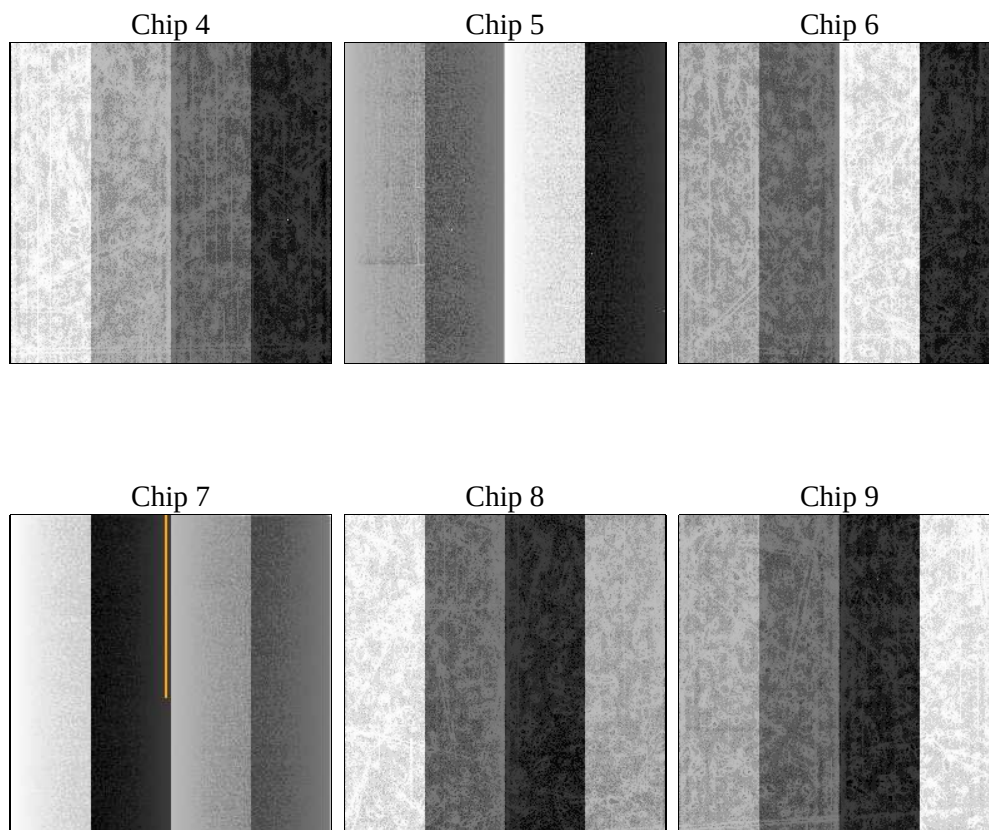
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27500.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	27448.802878499	Sum of GTIs [s]
caldsver	4.7.5	 	ontime4	27448.843918443	Sum of GTIs [s]
date	2017-08-03T05:08:12	Date and time of file creation	ontime5	27448.761838436	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	27448.720798492	Sum of GTIs [s]
			ontime7	27448.802878499	Sum of GTIs [s]
			ontime8	27448.67975843	Sum of GTIs [s]
			ontime9	27448.638718486	Sum of GTIs [s]
			l1events	1340270	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			src1a_pos	(4067.00, 4070.42)	src1a sky pixel position

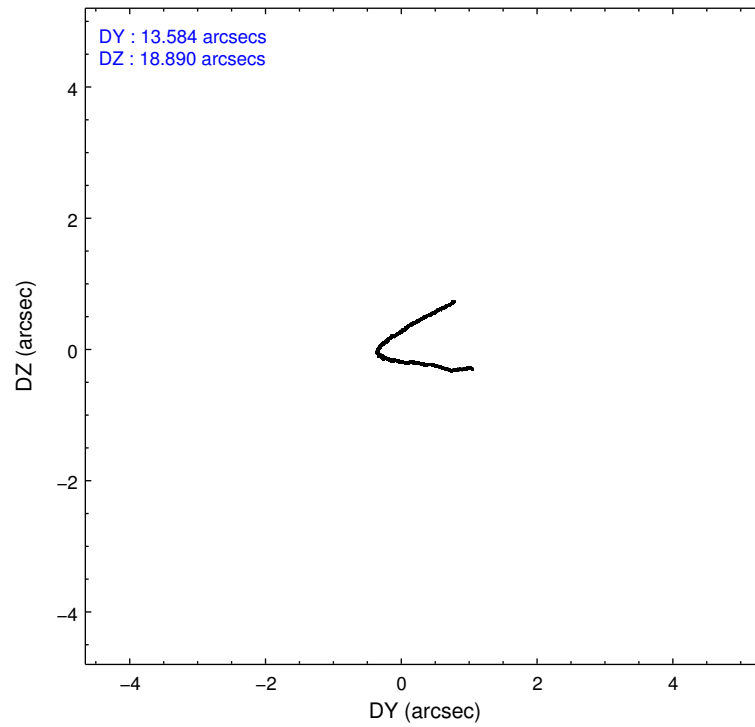
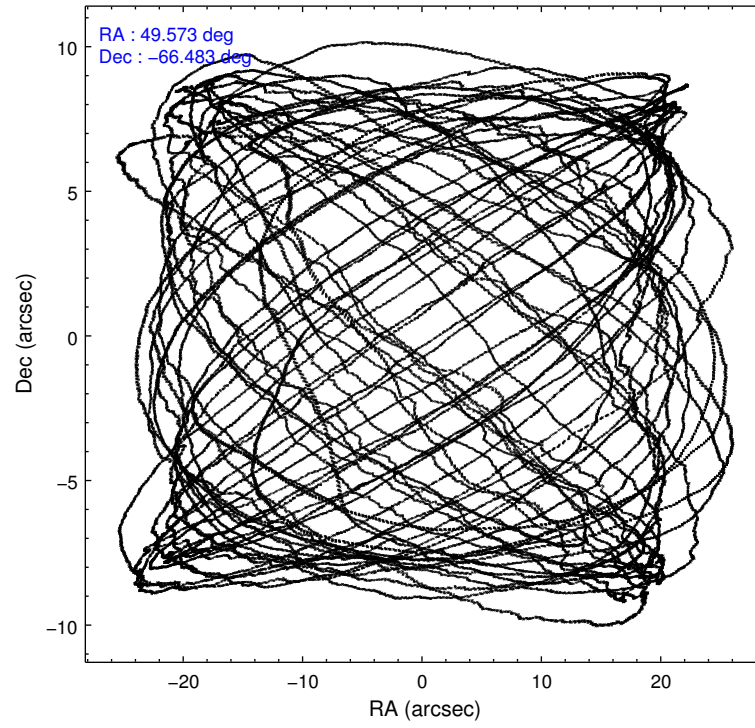
2.1.4 Events

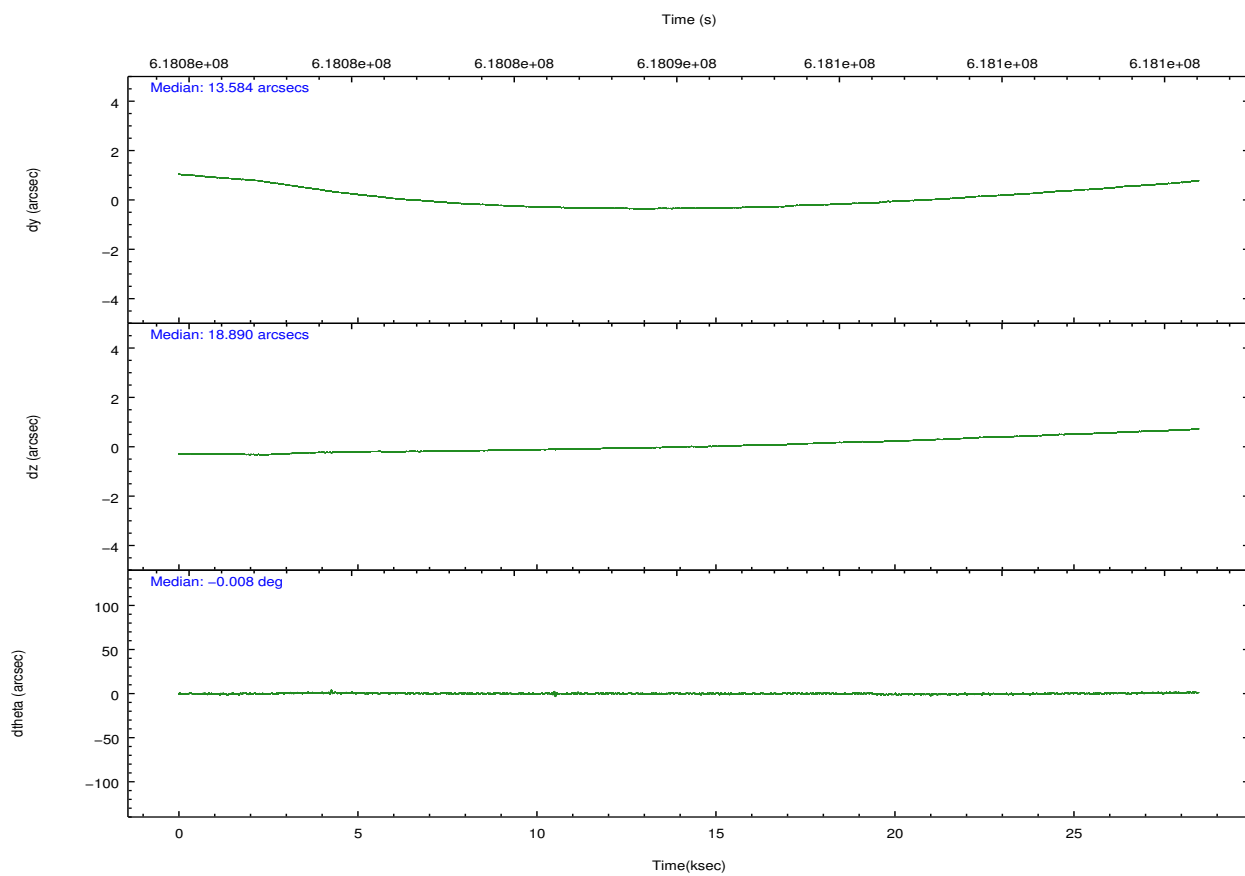
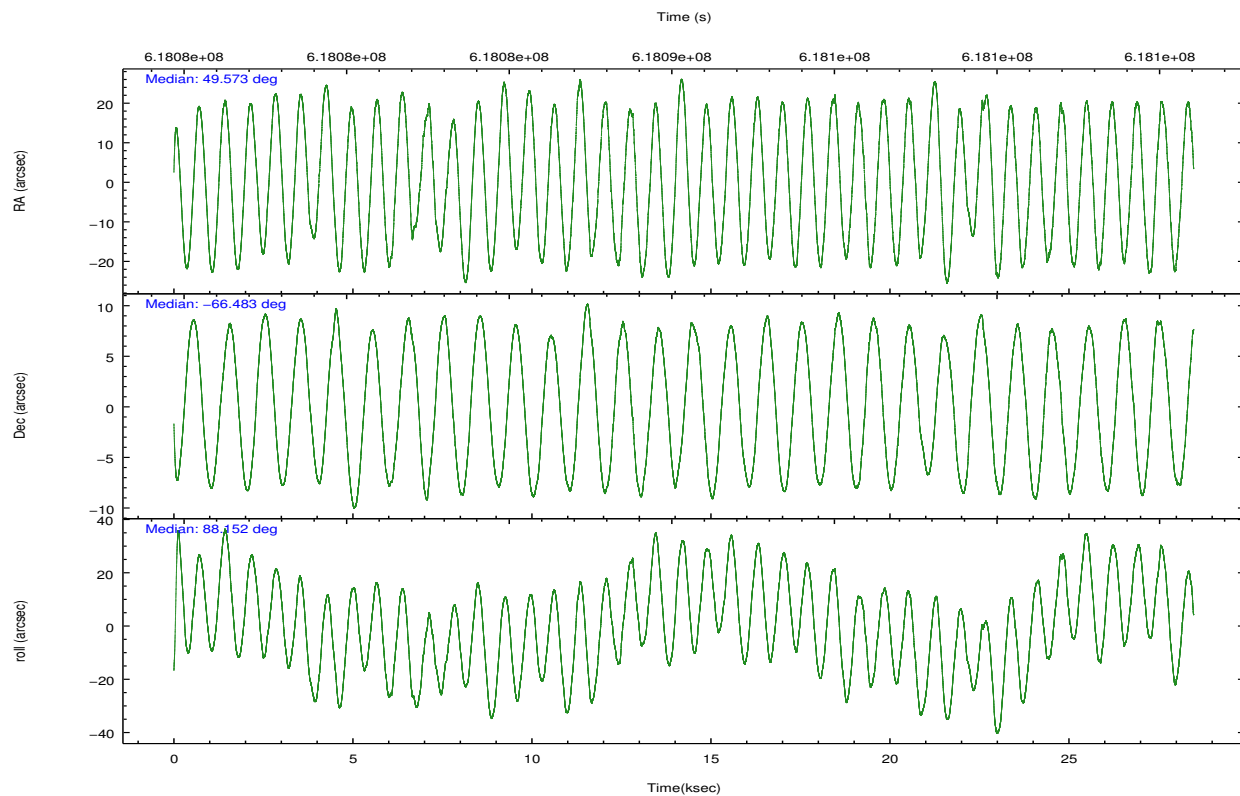
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	214081	291263	182728	235856	234608	181734	grade 0 events	12602	12069	7073	8789	17811	7640
rejected events	187726	150851	161888	133155	173148	159662		5%	4%	3%	3%	7%	4%
rejected %	87%	51%	88%	56%	73%	87%	grade 1 events	215	567	92	328	177	133
								0%	0%	0%	0%	0%	0%
							grade 2 events	5254	44506	4781	21709	14881	4973
								2%	15%	2%	9%	6%	2%
							grade 3 events	2326	4258	2106	8472	6501	2263
								1%	1%	1%	3%	2%	1%
							grade 4 events	2284	4009	2037	8368	6091	2239
								1%	1%	1%	3%	2%	1%
							grade 5 events	9040	20273	8815	23595	13063	9846
								4%	6%	4%	10%	5%	5%
							grade 6 events	3895	75604	4848	55383	16212	4961
								1%	25%	2%	23%	6%	2%
							grade 7 events	178465	129977	152976	109212	159872	149679
								83%	44%	83%	46%	68%	82%

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	49.606455	49.573185804517	CCD I2 on	N	N
[deg] Pointing Dec	-66.506745	-66.48274012709845	CCD I3 on	N	N
[deg] Pointing Roll	88.021209	88.14730204684675	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	618077108.184000	618075293.52332	CCD S5 on	Y	Y
Observation start date	2017-08-02T16:03:59	2017-08-02T15:34:53	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	618104608.184000	618105612.00009	On-chip summing requested	N	N
Observation end date	2017-08-02T23:42:19	2017-08-03T00:00:12	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



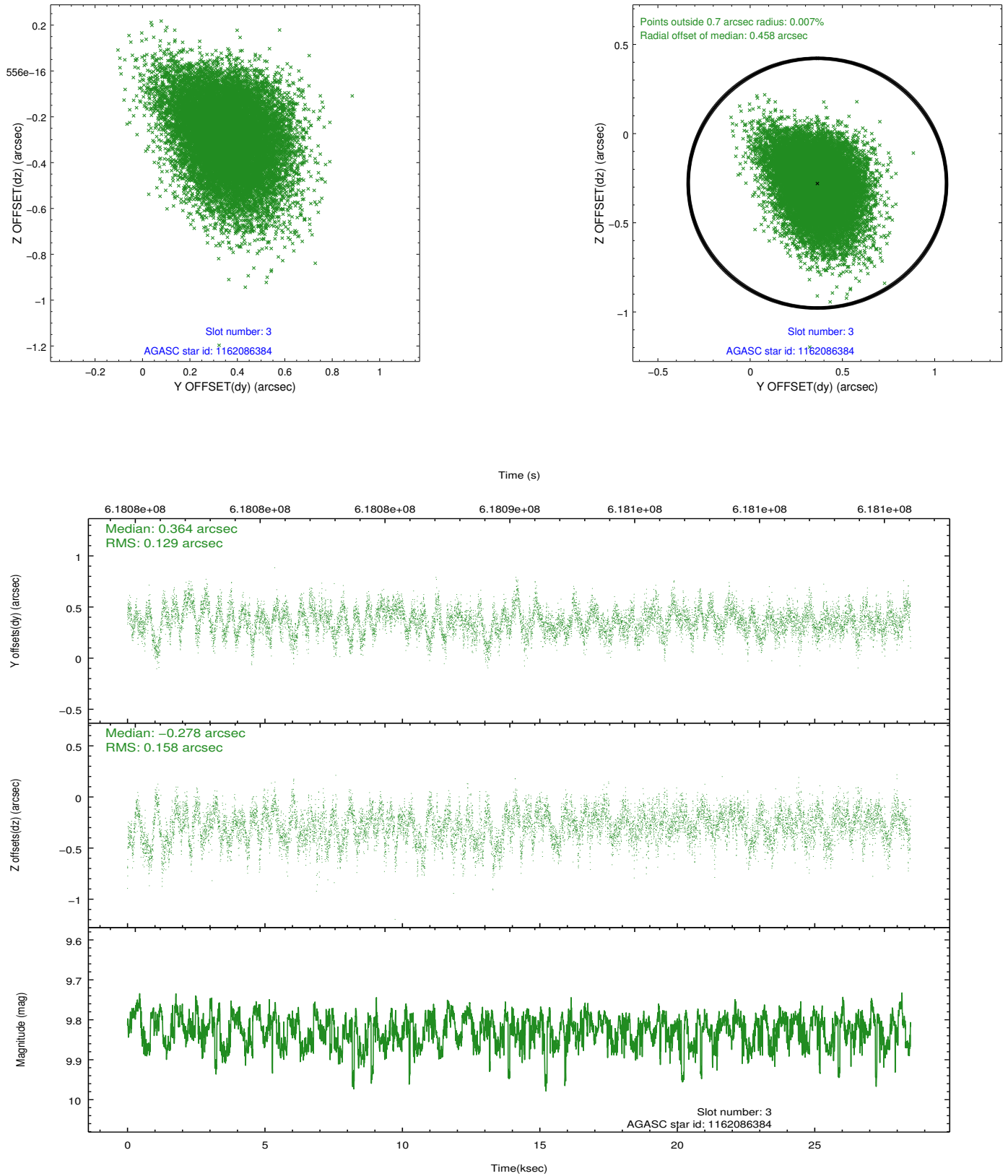


Slot Statistics

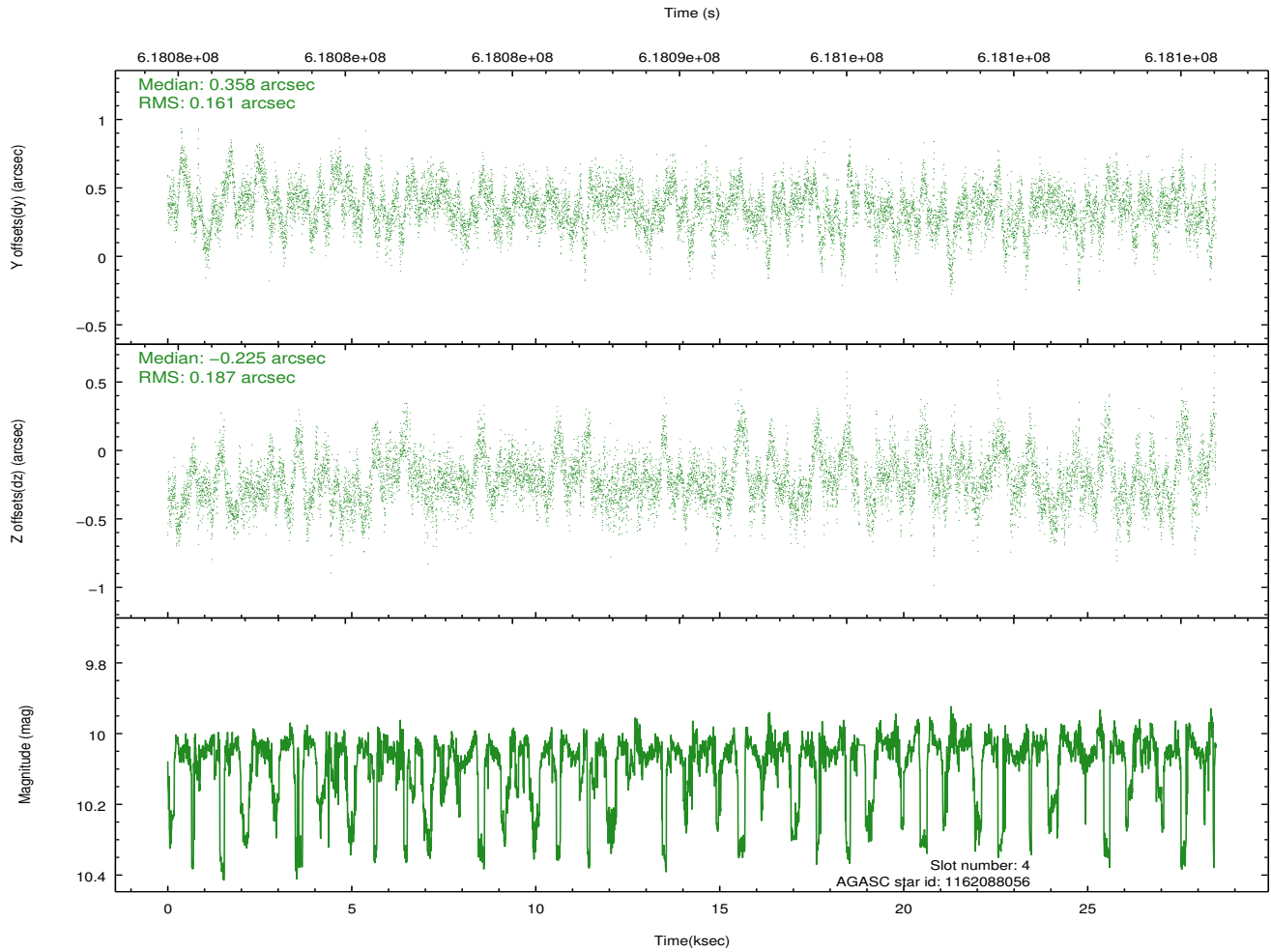
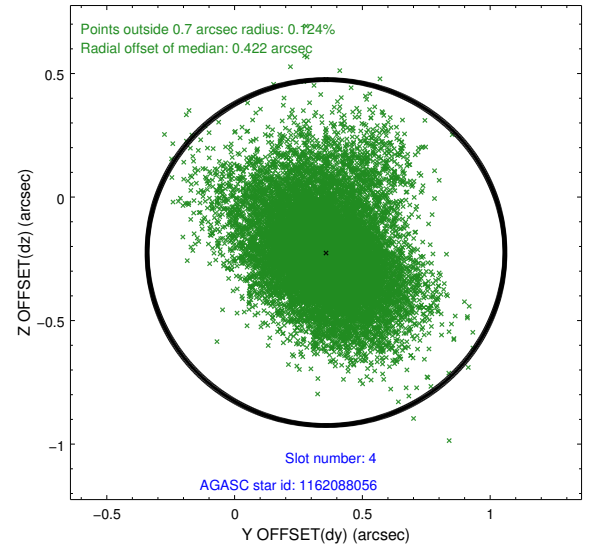
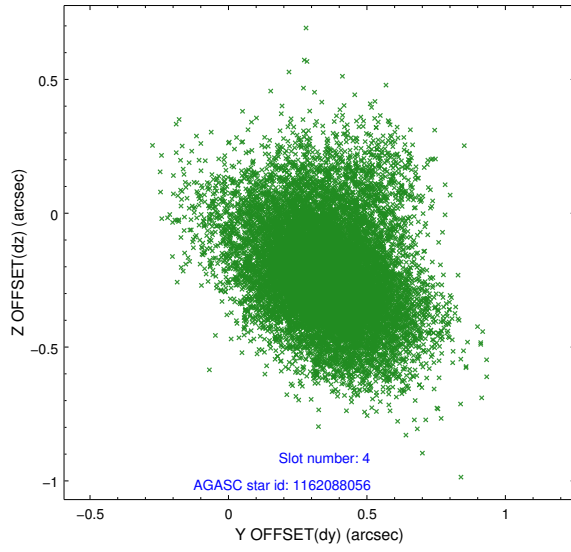
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.10	6948	0.151	-0.031	0.013	0.022	0.000000	0.000000	929.63	-1736.07
1	FID		ACIS-S-5	7.13	6948	-0.333	0.083	0.014	0.025	0.000000	0.000000	-1819.87	161.39
2	FID		ACIS-S-6	7.26	6948	0.161	-0.041	0.015	0.040	0.000000	0.000000	395.01	805.42
3	GUIDE	used	1162086384	9.83	13855	0.364	-0.278	0.214	0.354	48.033301	-66.858172	-1368.85	2179.01
4	GUIDE	used	1162088056	10.06	13726	0.358	-0.225	0.256	0.444	48.729349	-66.949806	-1645.40	1180.27
5	GUIDE	used	1162088248	7.59	13892	-0.990	0.367	0.160	0.264	49.751966	-65.888113	2231.45	-136.72
6	GUIDE	used	1162089104	9.52	13872	-0.113	0.146	0.180	0.306	48.422126	-66.410699	270.38	1716.57
7	GUIDE	used	1162090824	9.20	13876	0.395	-0.020	0.153	0.263	48.677982	-66.885202	-1416.51	1264.23

2.4 Star Slots

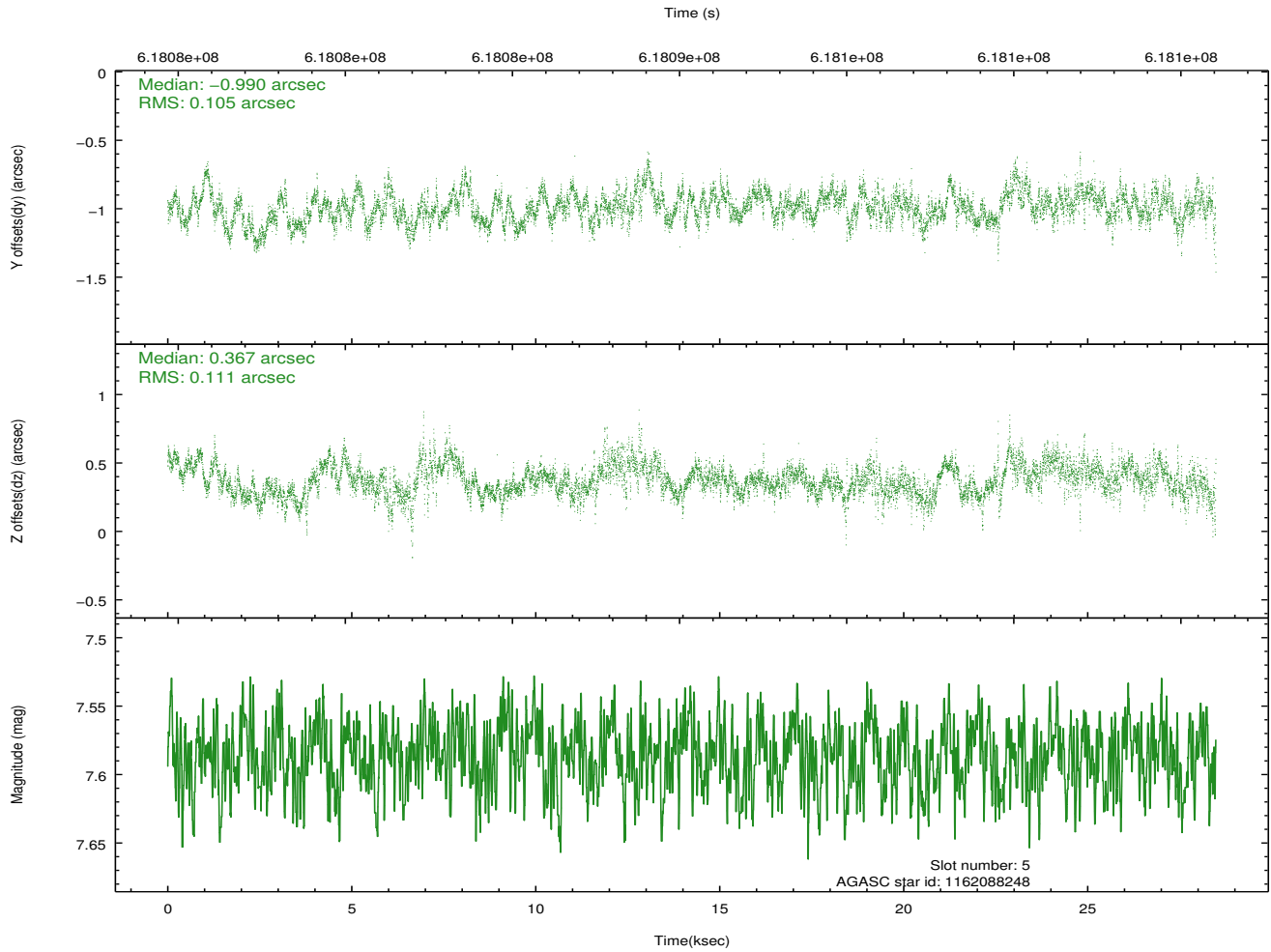
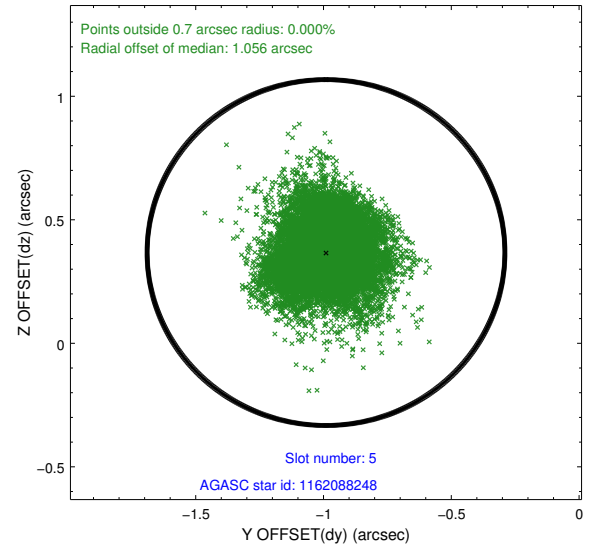
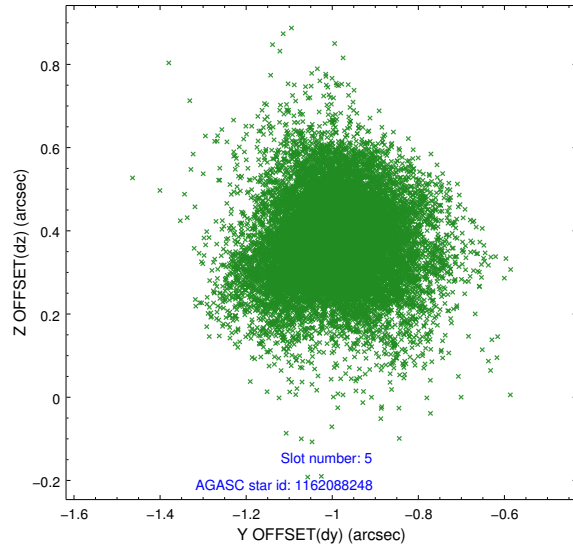
2.4.1 Slot 3



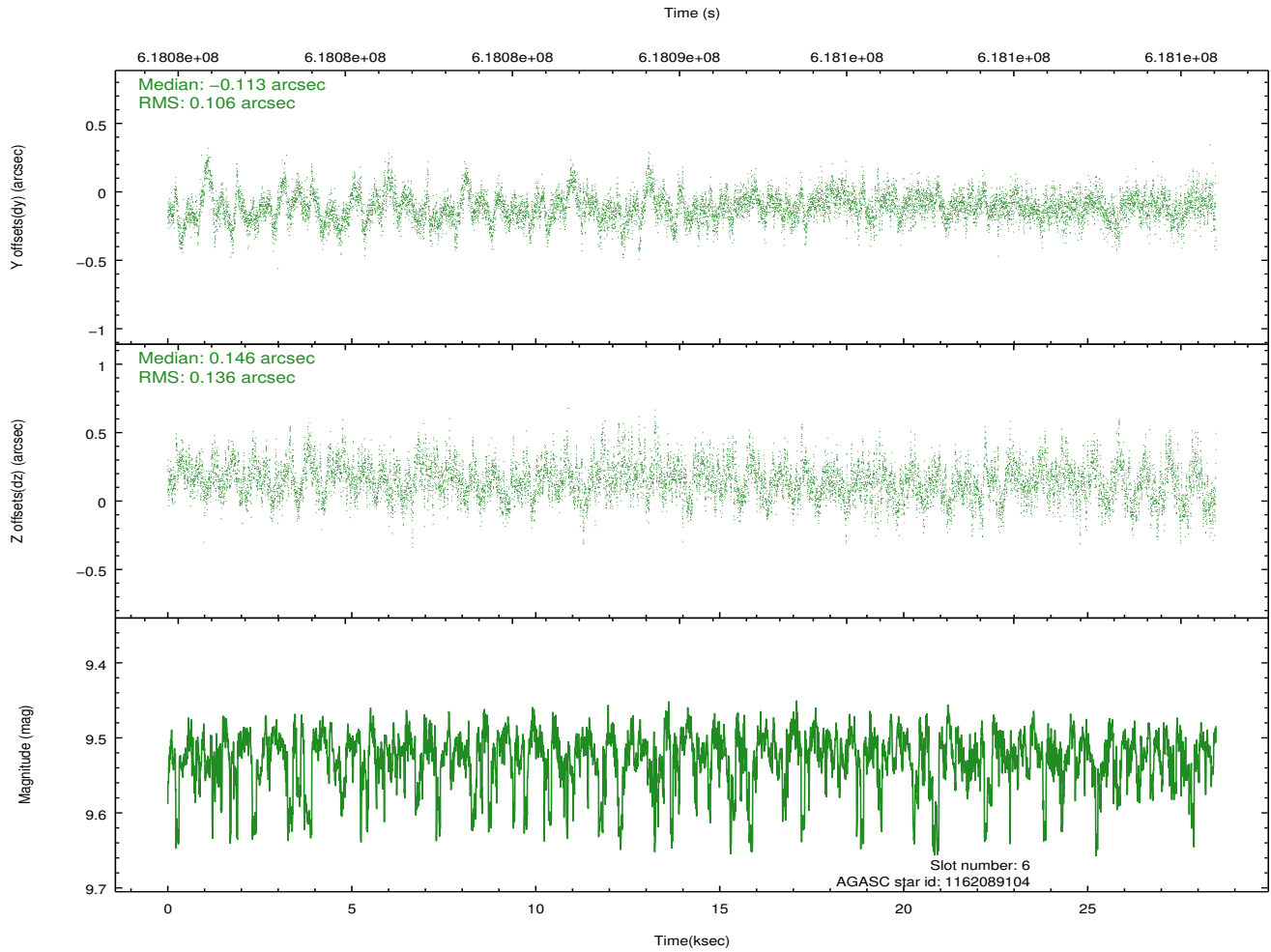
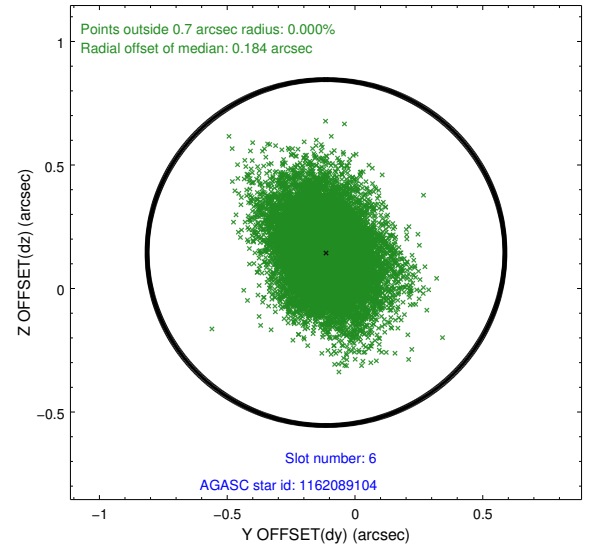
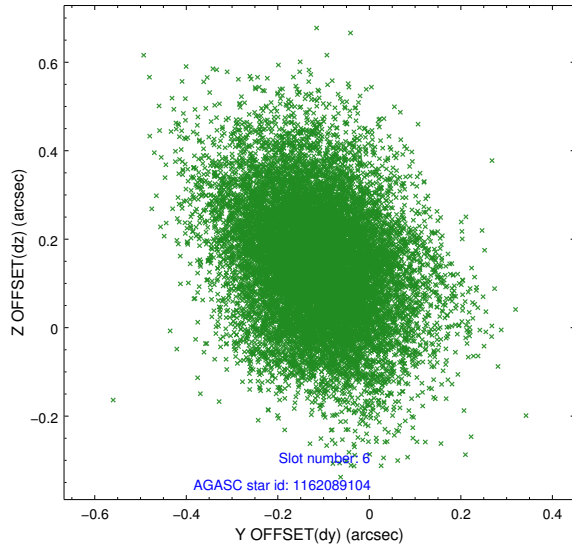
2.4.2 Slot 4



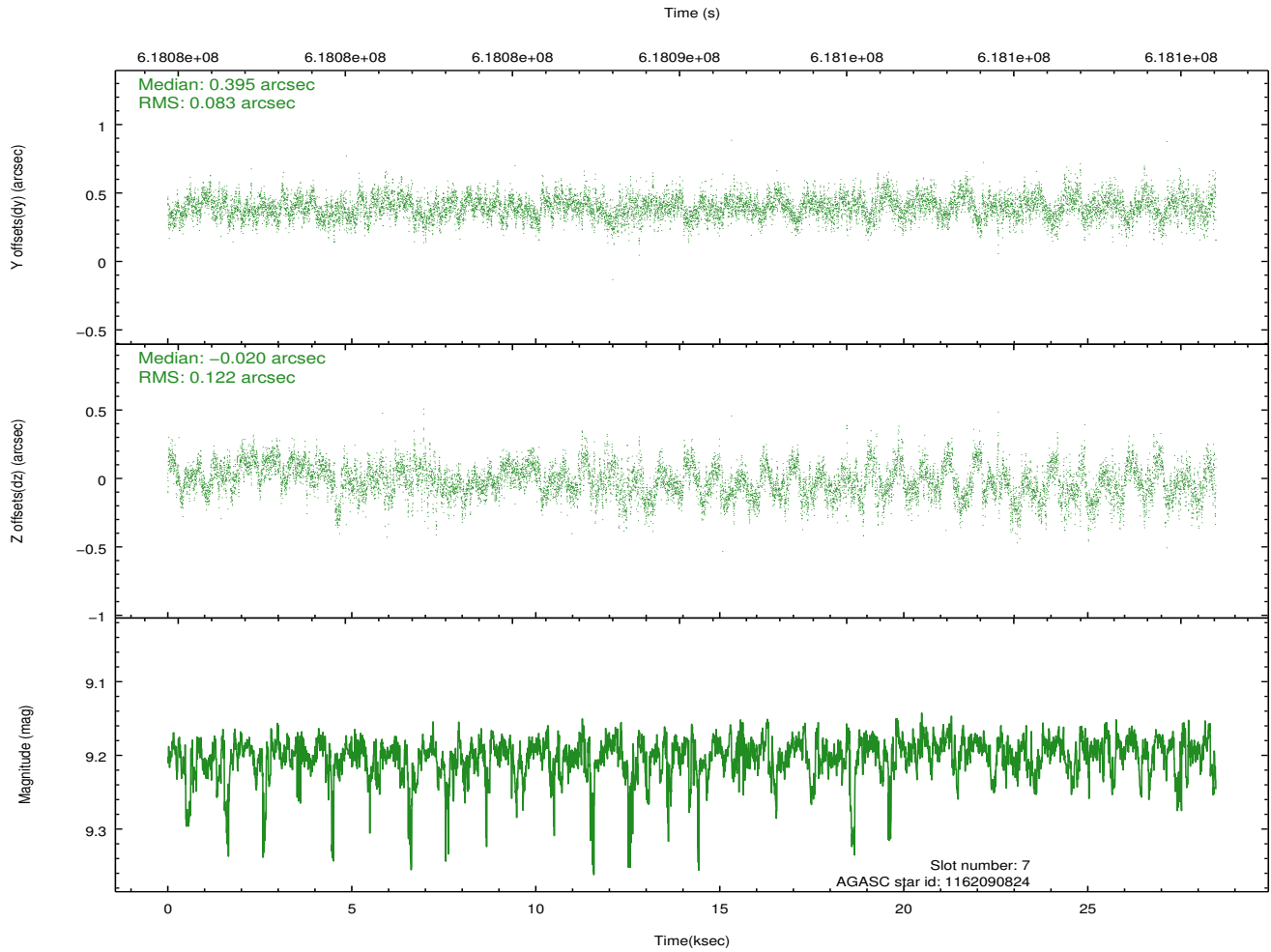
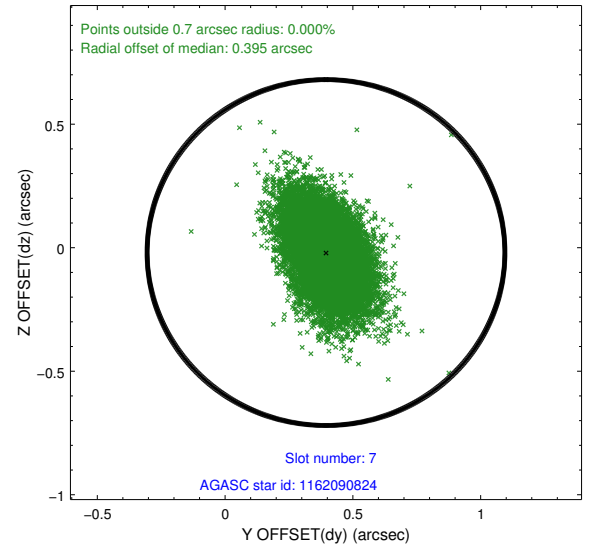
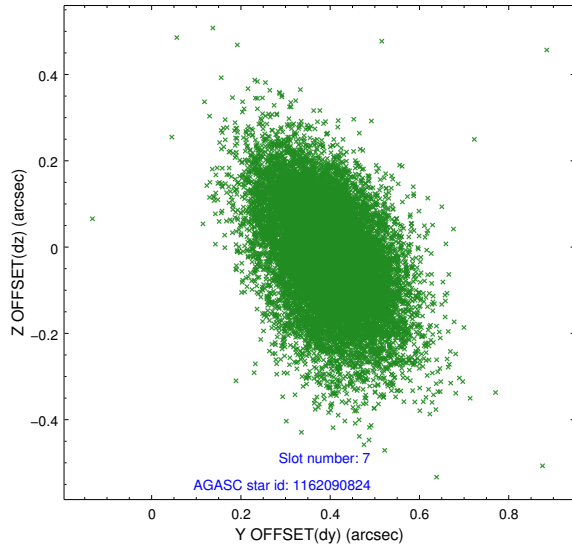
2.4.3 Slot 5



2.4.4 Slot 6

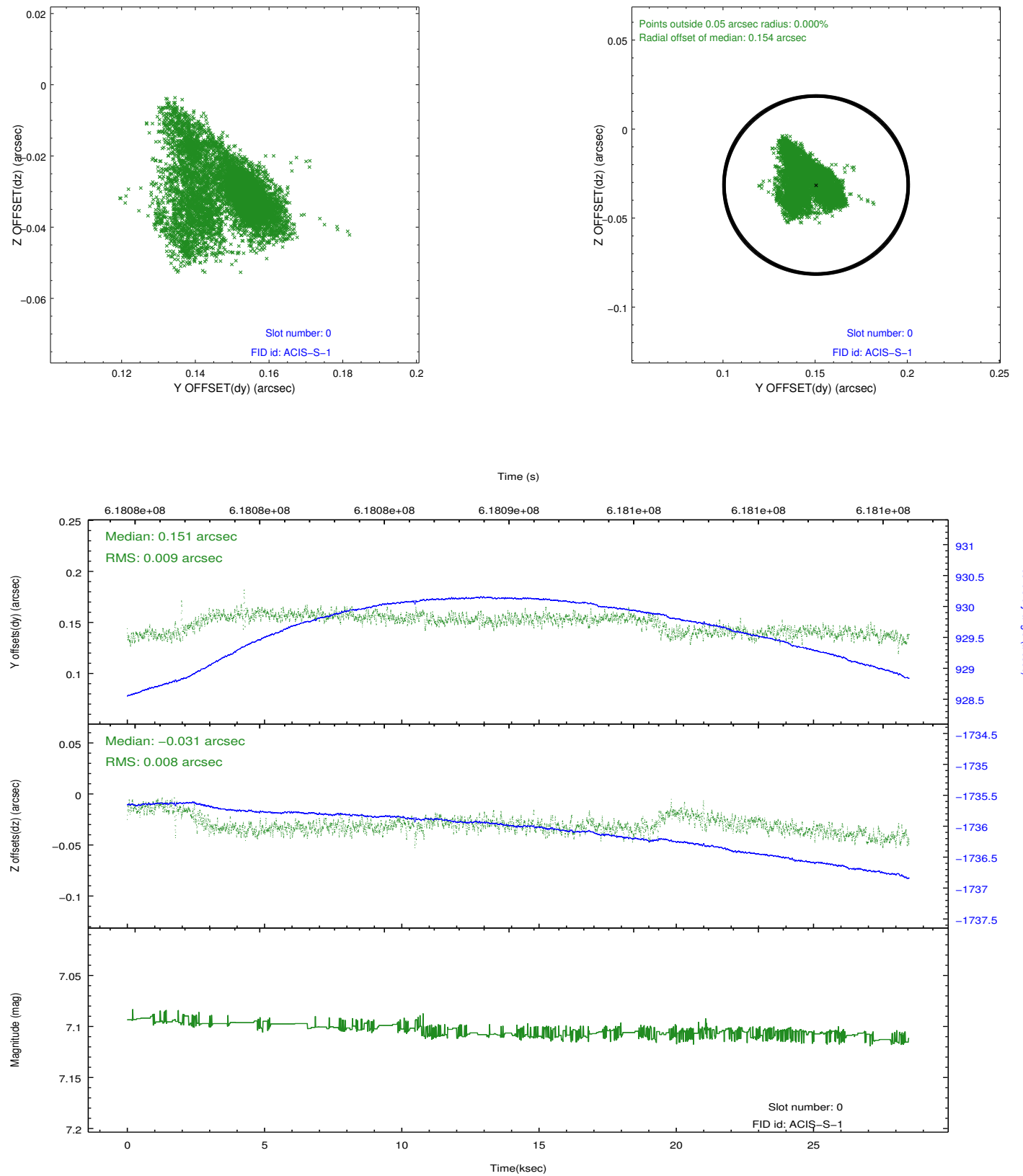


2.4.5 Slot 7

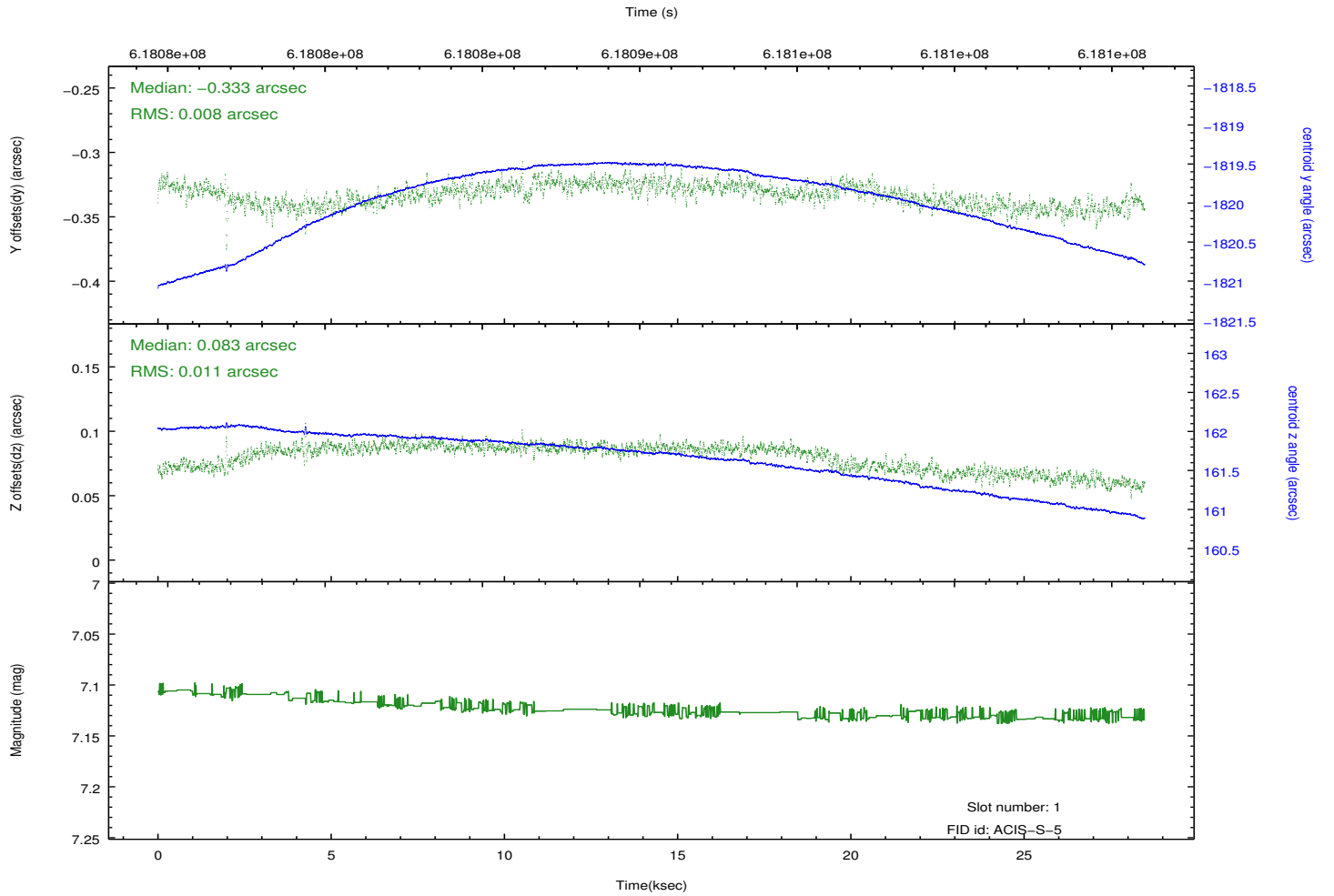
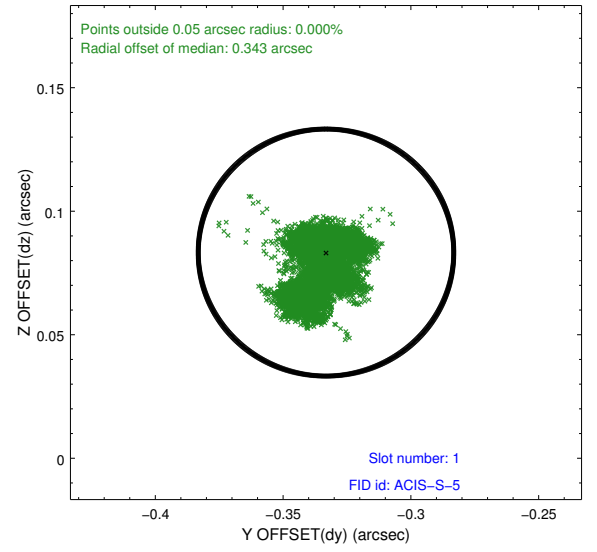
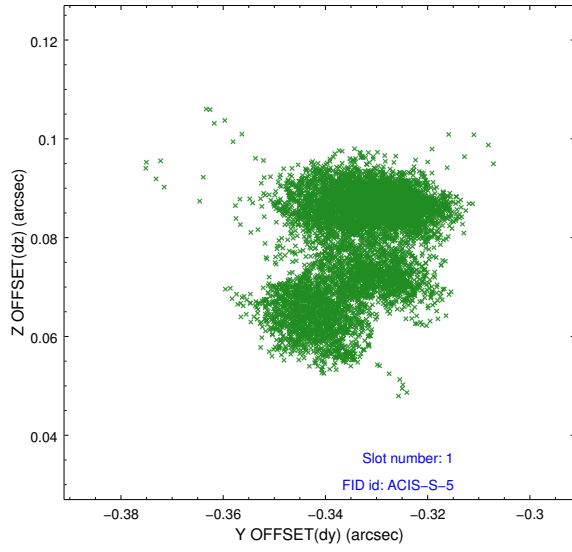


2.5 FID Slots

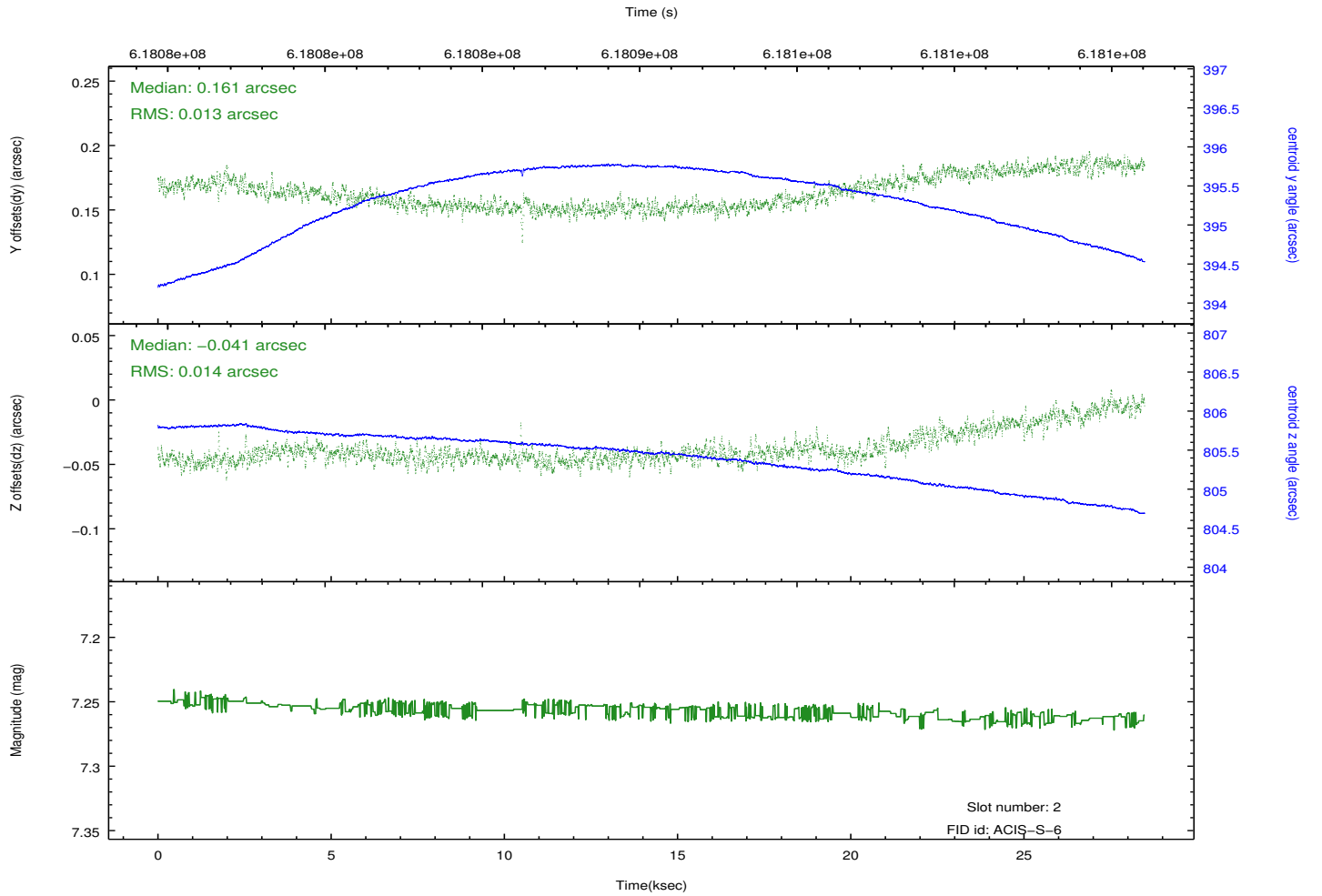
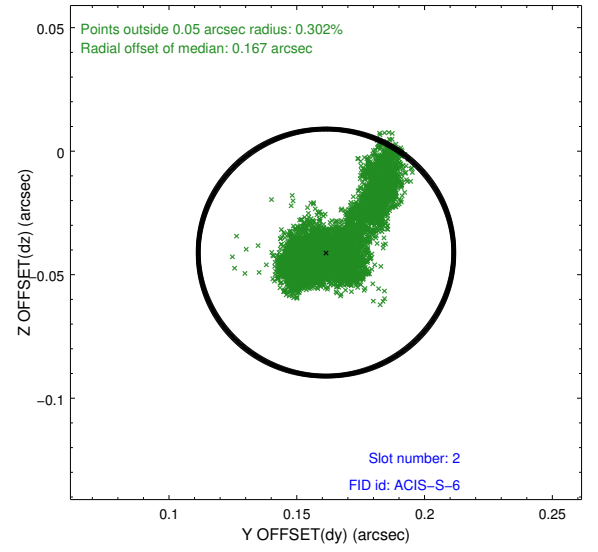
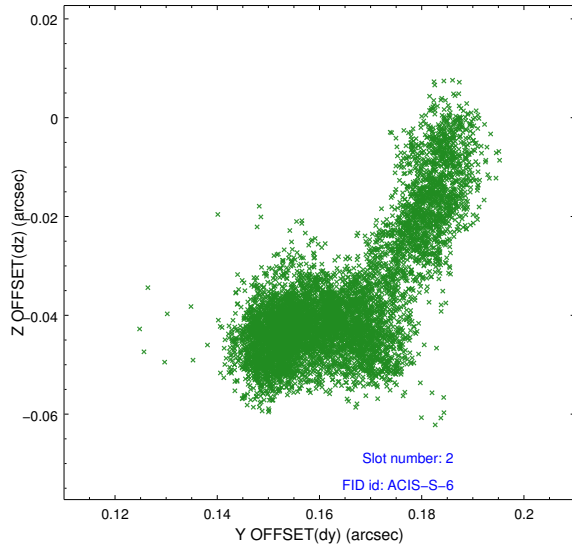
2.5.1 Slot 0



2.5.2 Slot 1

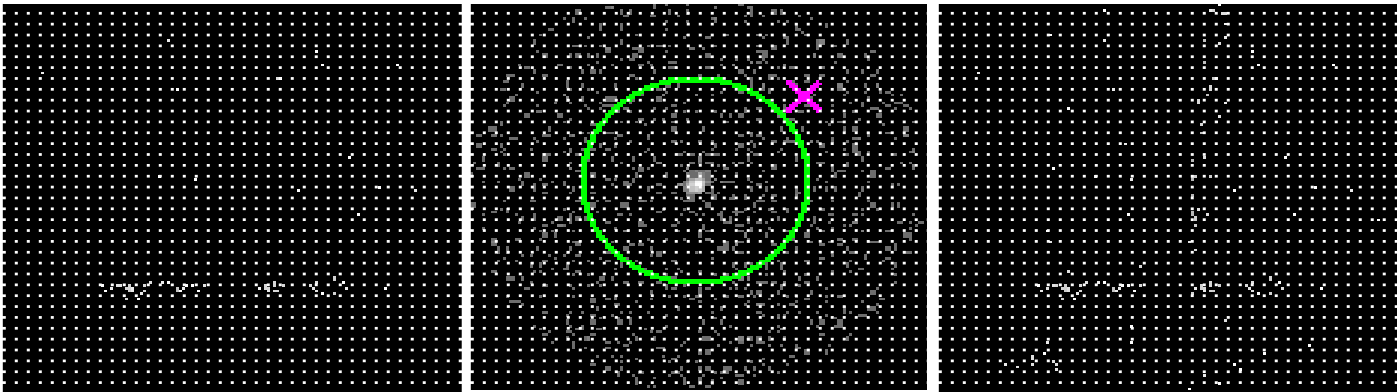


2.5.3 Slot 2



3 Gratings

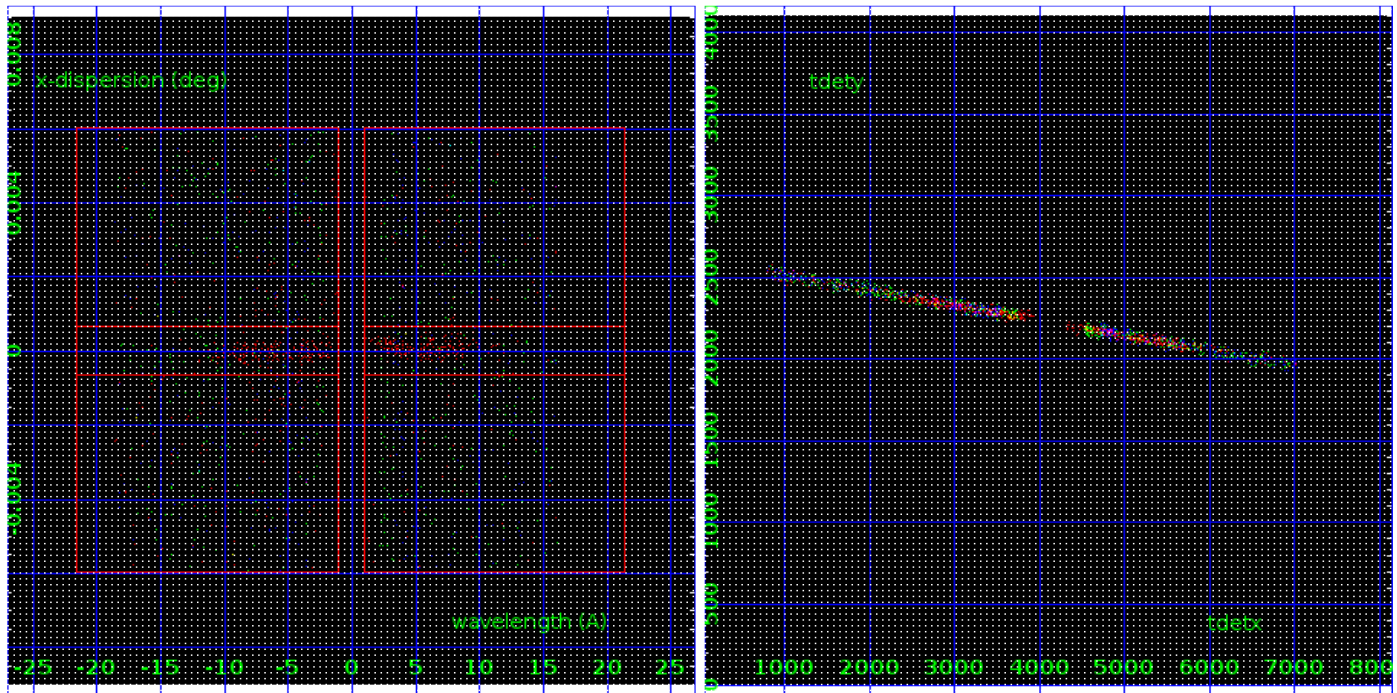
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

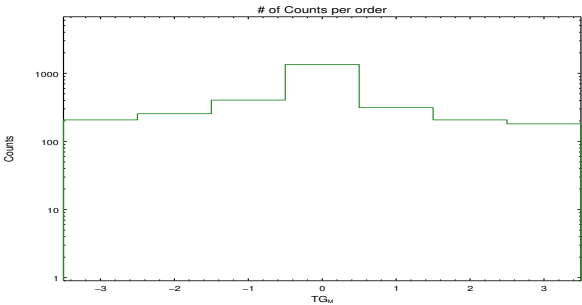
HEG Order Sort ALL

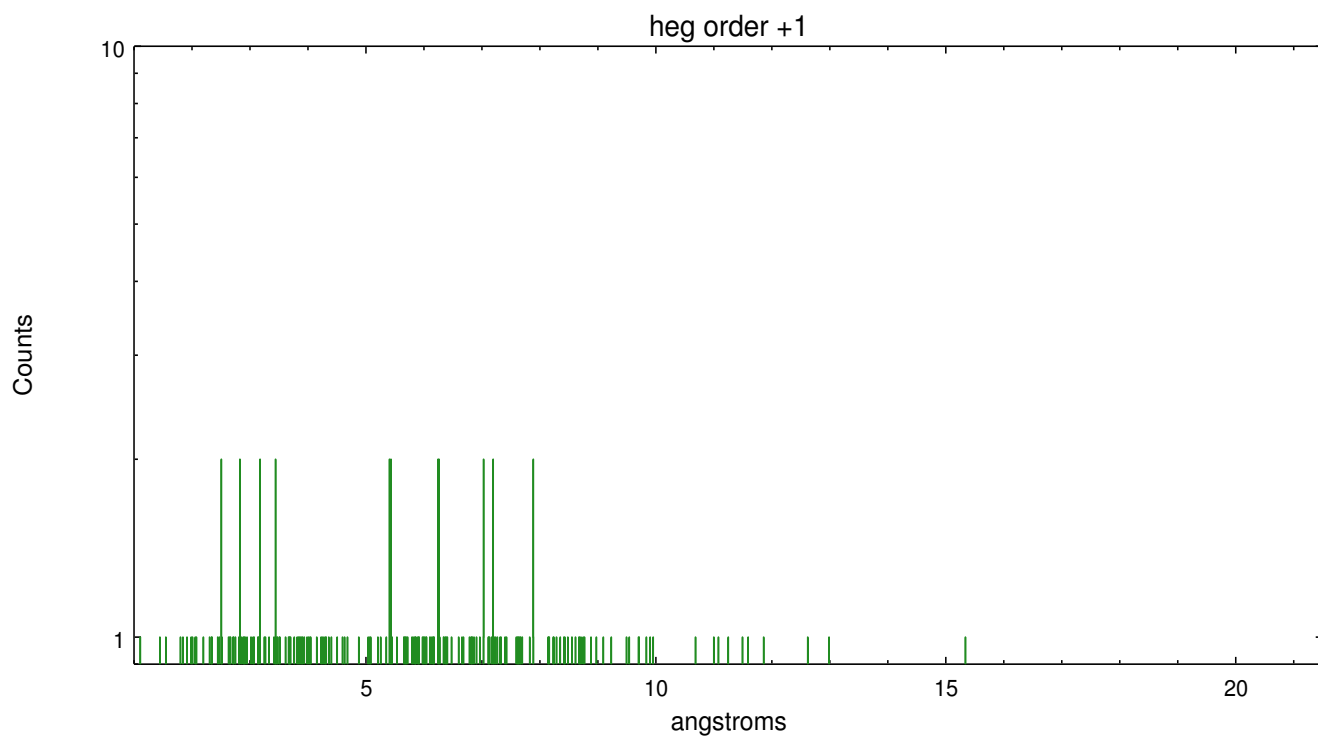
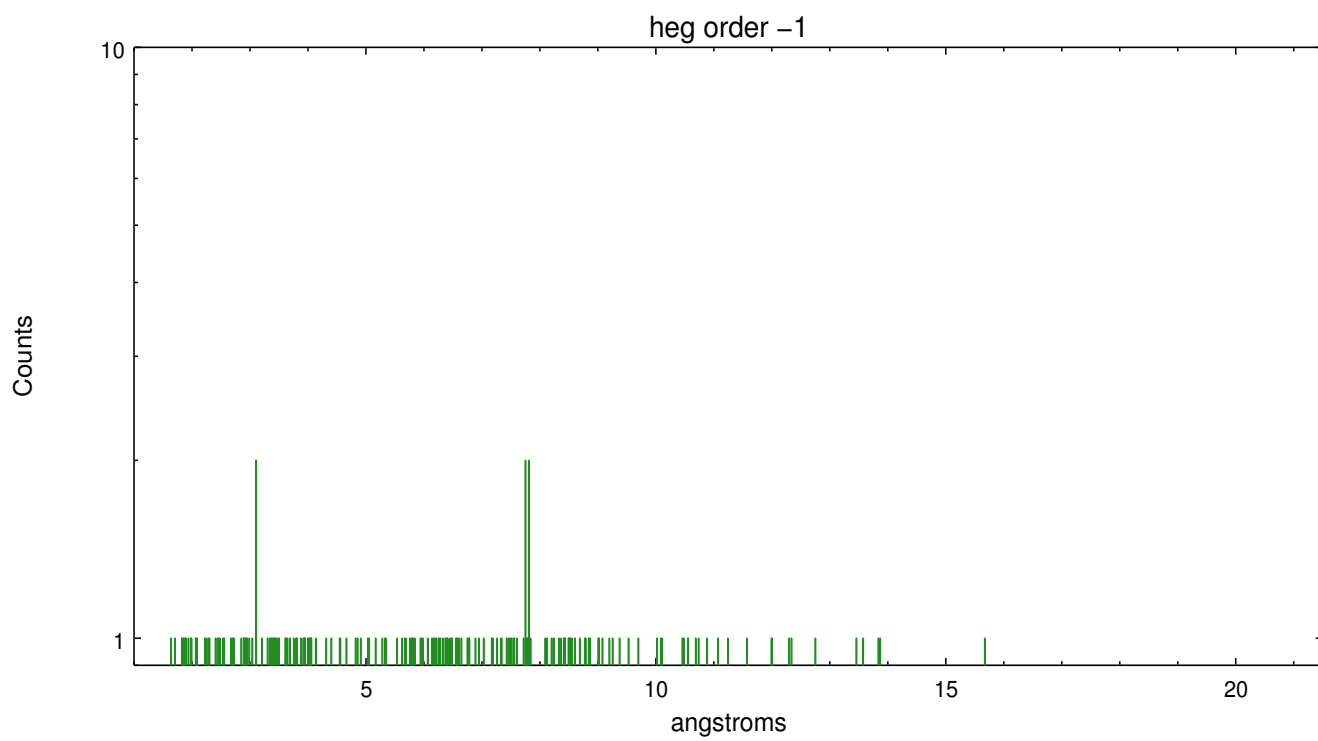


Spot Image HEG

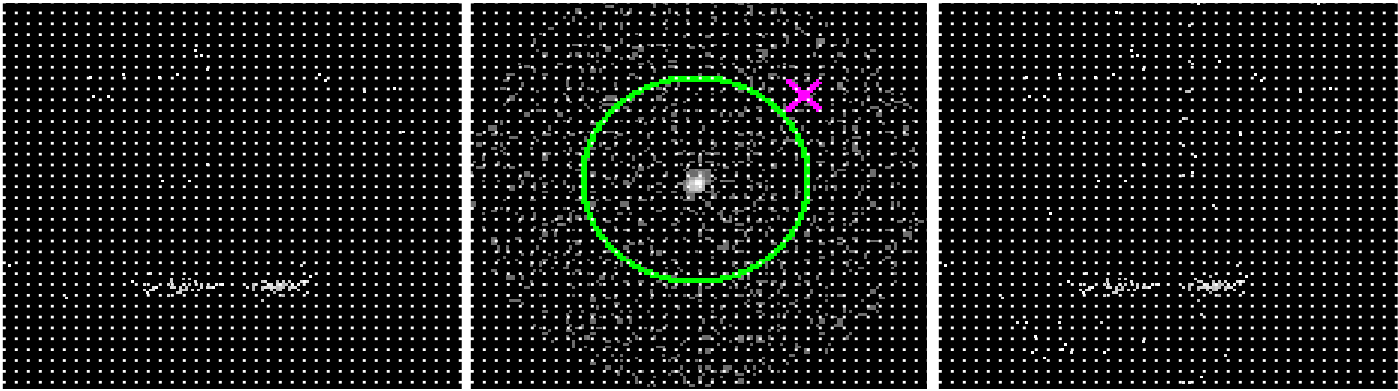
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	207	255	404	1350	313	207	181





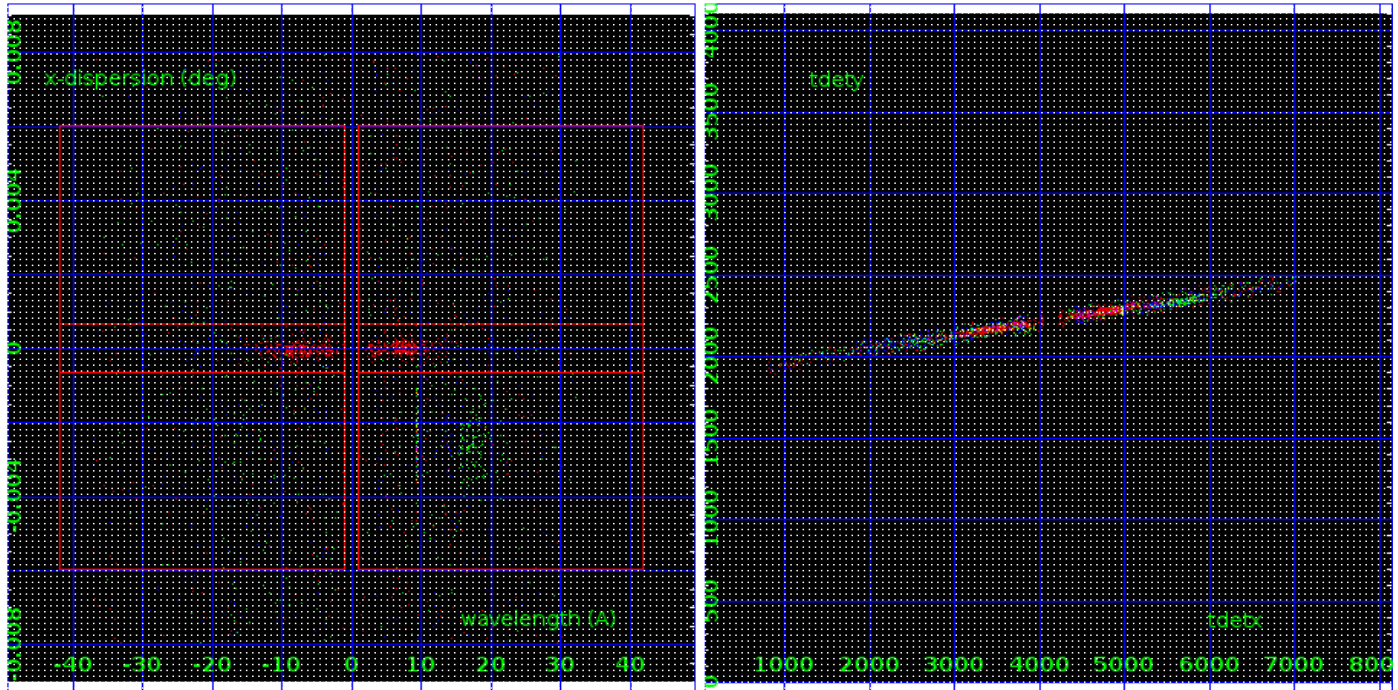
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

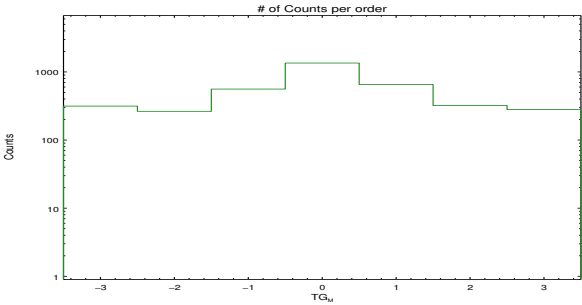
MEG Order Sort ALL

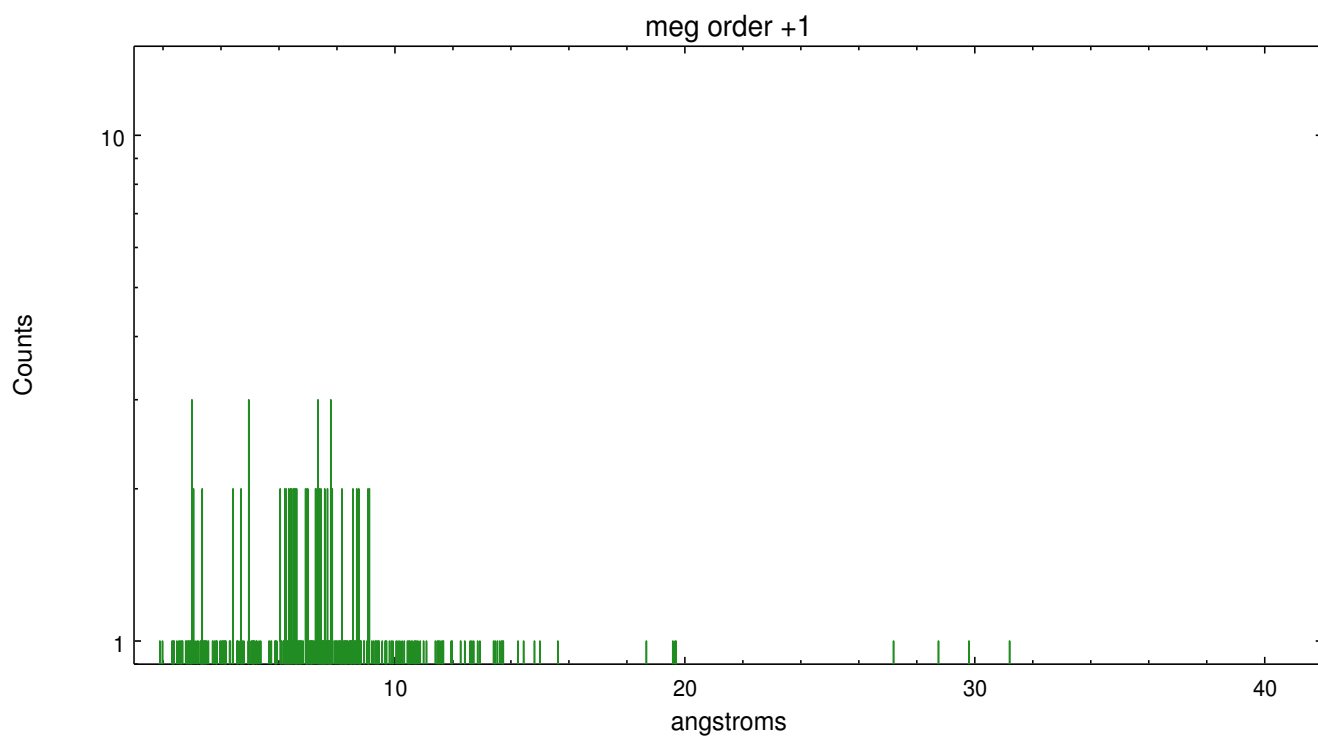
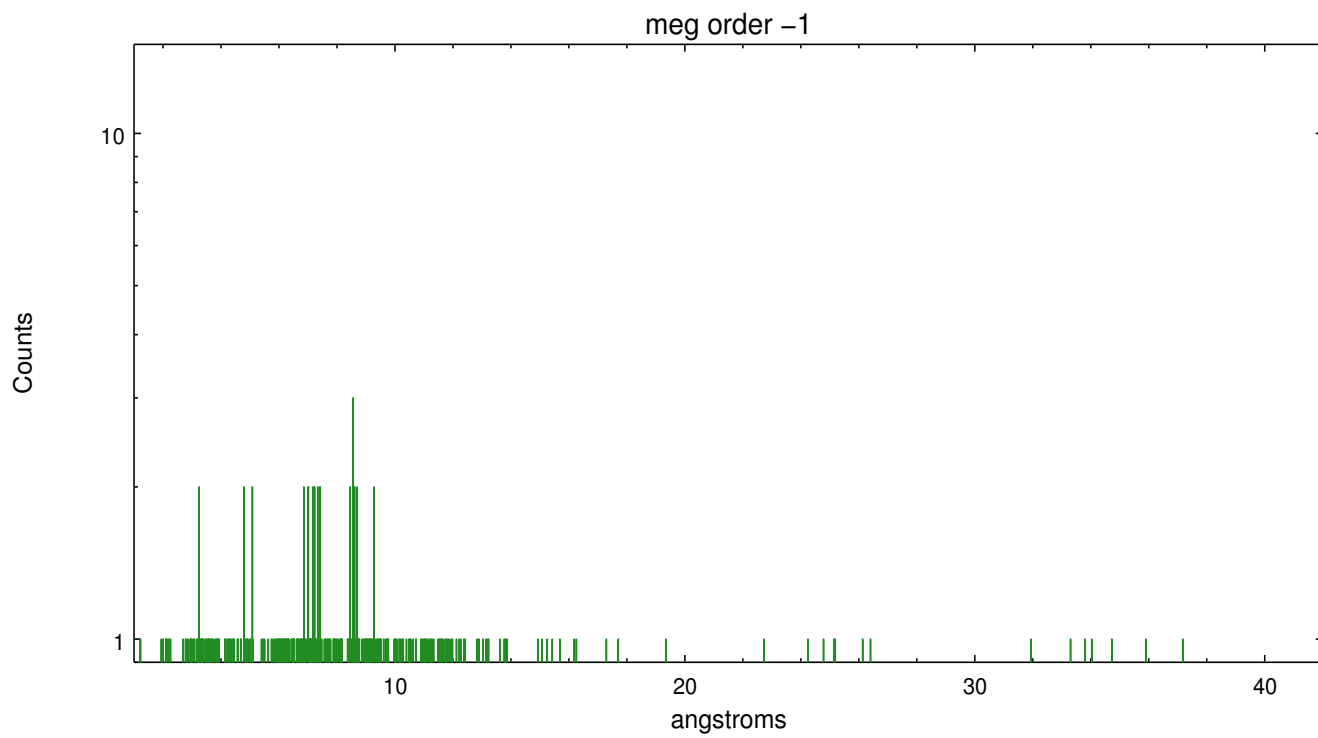


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	315	264	560	1350	652	321	280





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.08.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.448802878499

A.2 Comments