

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20798 - L2 Version 1
Chandra X-Ray Center

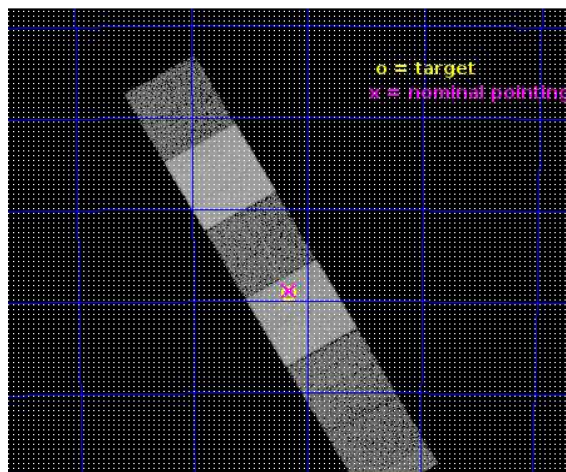
L2 Processing Date : Sep 30 2017

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1 Front

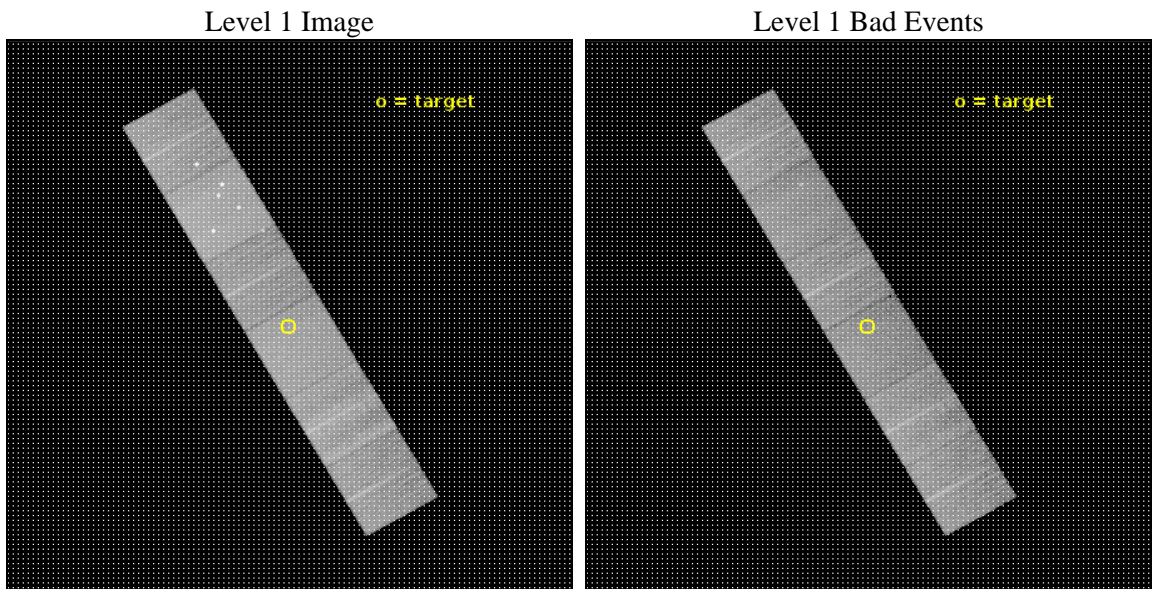
seq_num	401882	Sequence number
obs_id	20798	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.578568327409	Nominal RA [deg]
dec_nom	-66.481560564505	Nominal Dec [deg]
roll_nom	60.152244769441	Nominal Roll [deg]
revision	1	Processing version of data
ontime	17500.800260782	Sum of GTIs [s]
livetime	17279.194590163	Livetime [s]
ontime4	17500.800260782	Sum of GTIs [s]
ontime5	17500.800260782	Sum of GTIs [s]
ontime6	17500.800260782	Sum of GTIs [s]
ontime7	17500.800260782	Sum of GTIs [s]
ontime8	17500.800260782	Sum of GTIs [s]
ontime9	17500.800260782	Sum of GTIs [s]
l2events	191651	Number of level 2 events



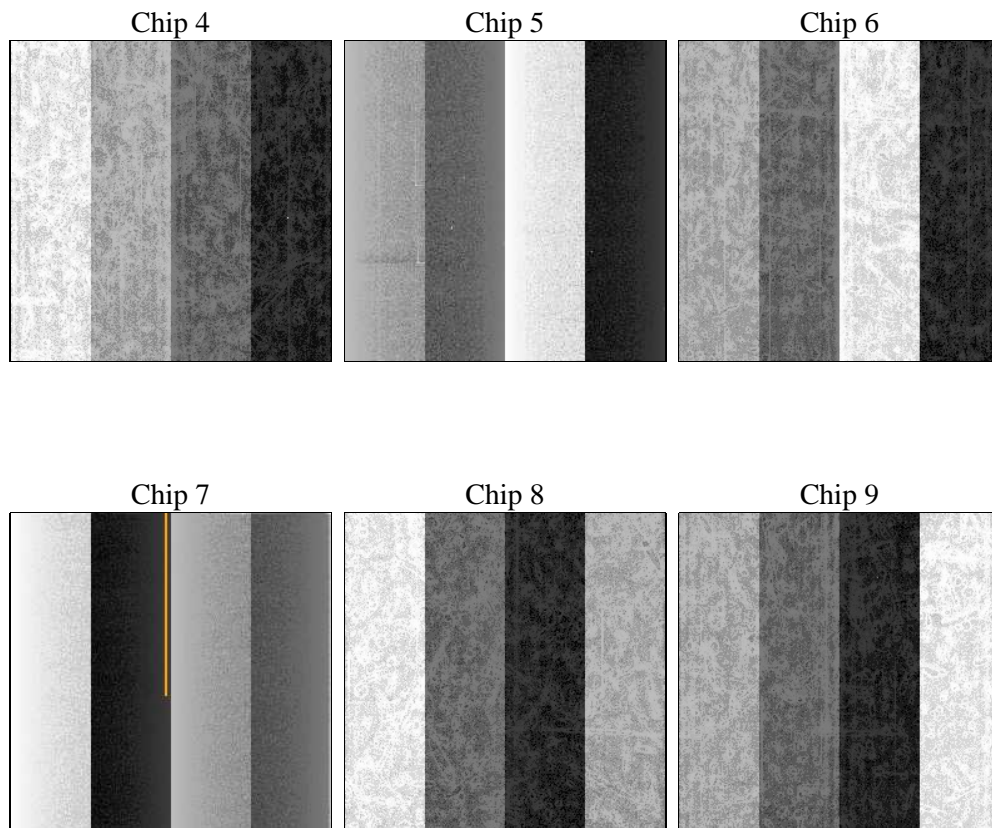
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17550.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	17500.800260782	Sum of GTIs [s]
caldsver	4.7.6	 	ontime4	17500.800260782	Sum of GTIs [s]
date	2017-09-30T13:14:32	Date and time of file creation	ontime5	17500.800260782	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	17500.800260782	Sum of GTIs [s]
			ontime7	17500.800260782	Sum of GTIs [s]
			ontime8	17500.800260782	Sum of GTIs [s]
			ontime9	17500.800260782	Sum of GTIs [s]
			l1events	848520	Number of level 1 events
			tgmetho	TGDETECT	Method used to create src1a file
			ra_pos	(4082.38, 4061.73)	src1a sky pixel position

2.1.4 Events

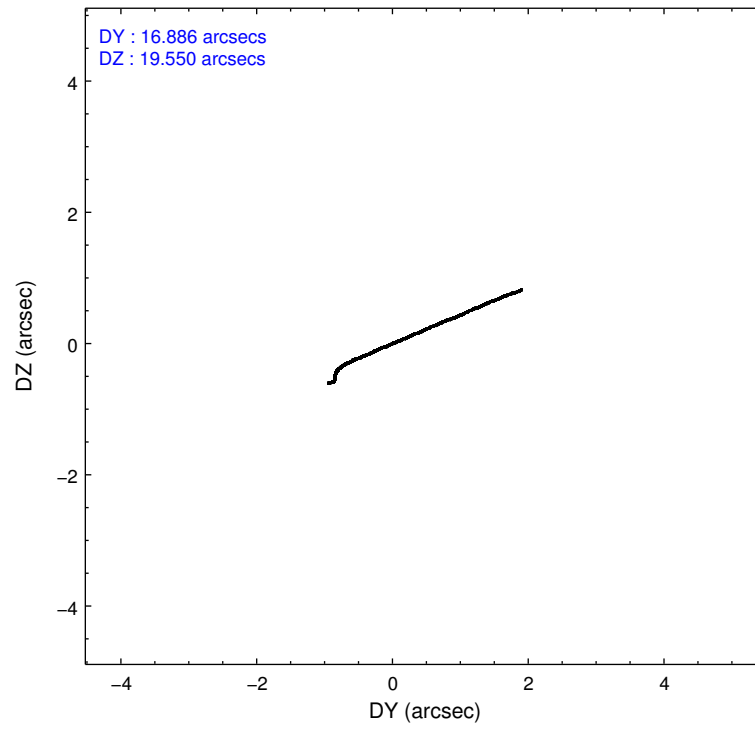
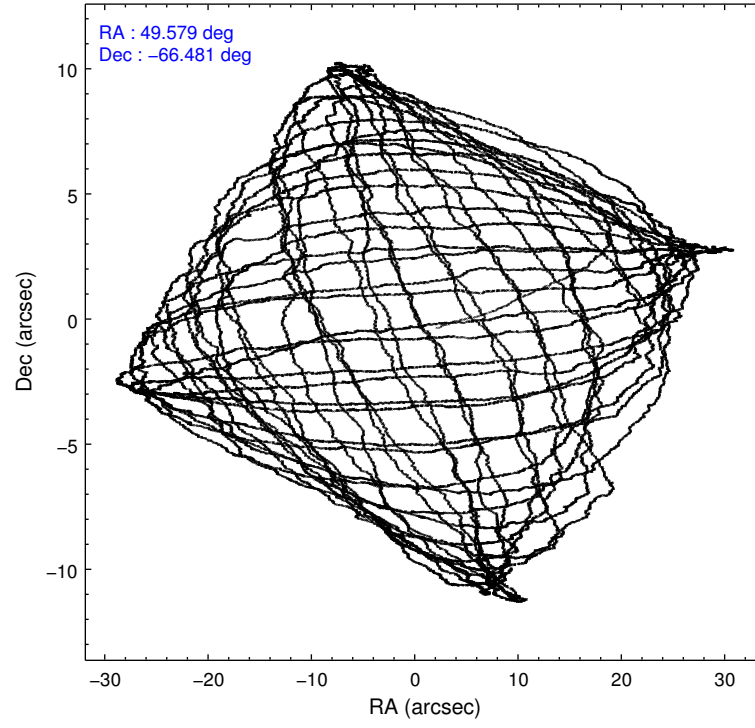
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	132199	195259	112443	146914	149124	112581	grade 0 events	9323	19786	4360	5588	11212	4798
rejected events	114238	93336	99592	82510	109468	98850		7%	10%	3%	3%	7%	4%
rejected %	86%	47%	88%	56%	73%	87%	grade 1 events	113	986	44	186	106	68
								0%	0%	0%	0%	0%	0%
							grade 2 events	3335	29131	2974	13815	9647	3086
								2%	14%	2%	9%	6%	2%
							grade 3 events	1456	2808	1232	5310	4210	1454
								1%	1%	1%	3%	2%	1%
							grade 4 events	1384	2694	1224	5074	3786	1349
								1%	1%	1%	3%	2%	1%
							grade 5 events	5631	12792	5326	14862	8222	6025
								4%	6%	4%	10%	5%	5%
							grade 6 events	2464	47529	3065	34636	10802	3045
								1%	24%	2%	23%	7%	2%
							grade 7 events	108493	79533	94218	67443	101139	92756
								82%	40%	83%	45%	67%	82%

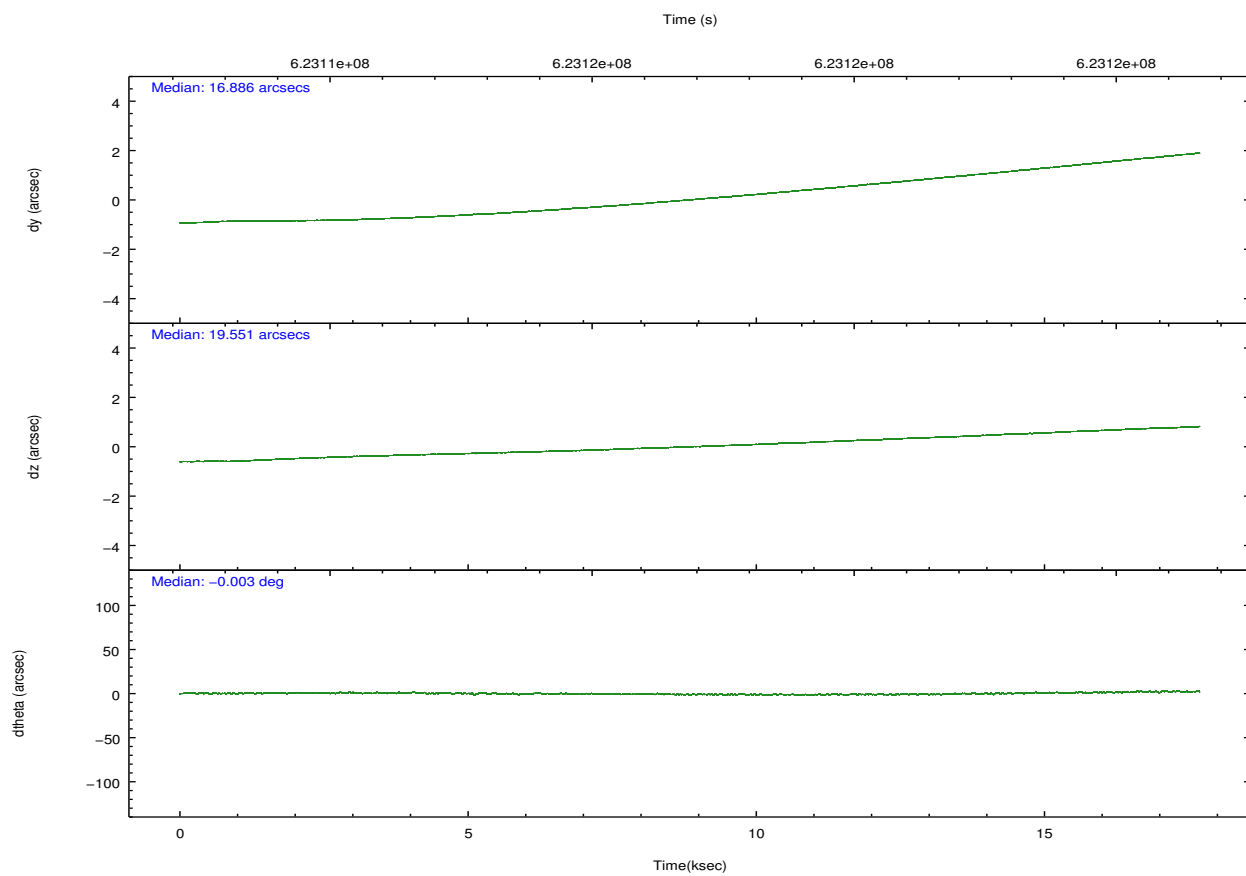
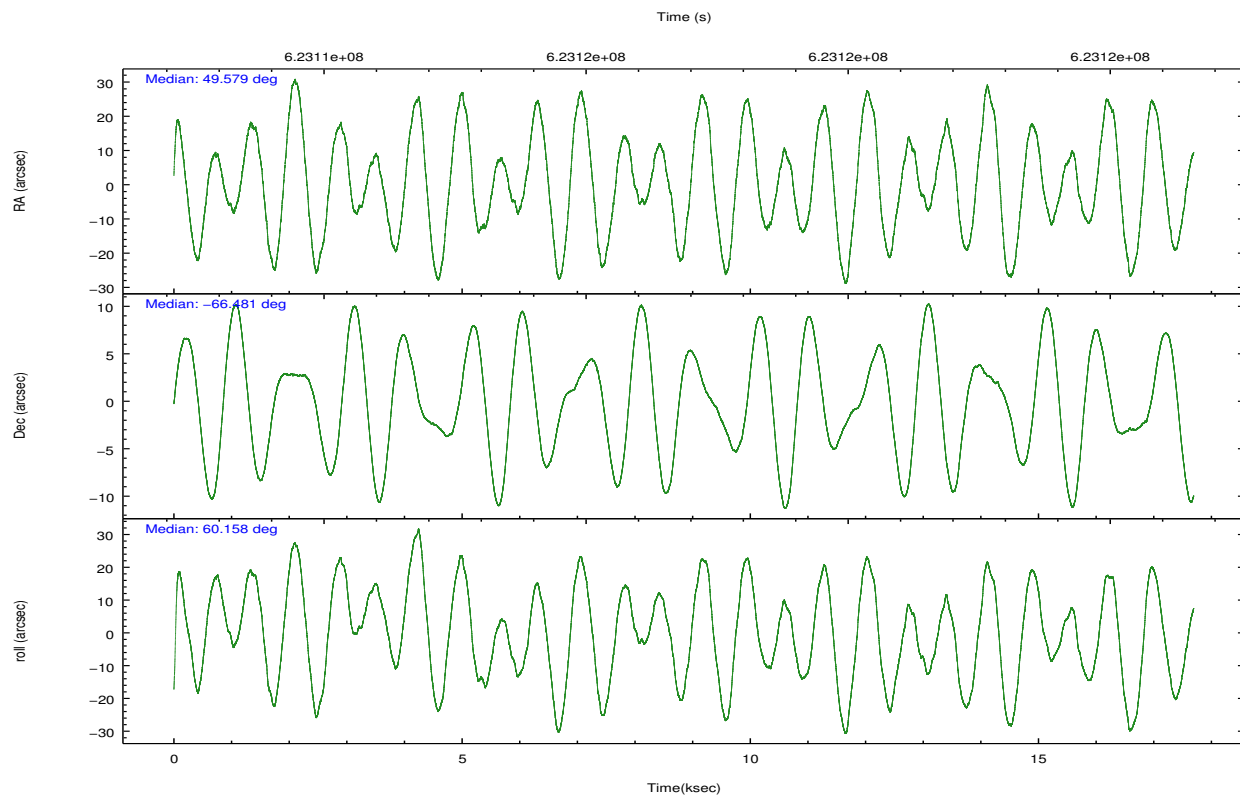
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	49.579687	49.57856832740924
[deg] Pointing Dec	-66.508994	-66.48156056450463
[deg] Pointing Roll	59.996653	60.15224476944108
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	623108149.184000	623107259.6925499
Observation start date	2017-09-29T21:34:40	2017-09-29T21:20:59
[s] Observation end time (MET)	623125699.184000	623126272.93116
Observation end date	2017-09-30T02:27:10	2017-09-30T02:37:52
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	O1	Y
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	Y	Y
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

2.3 Aspect



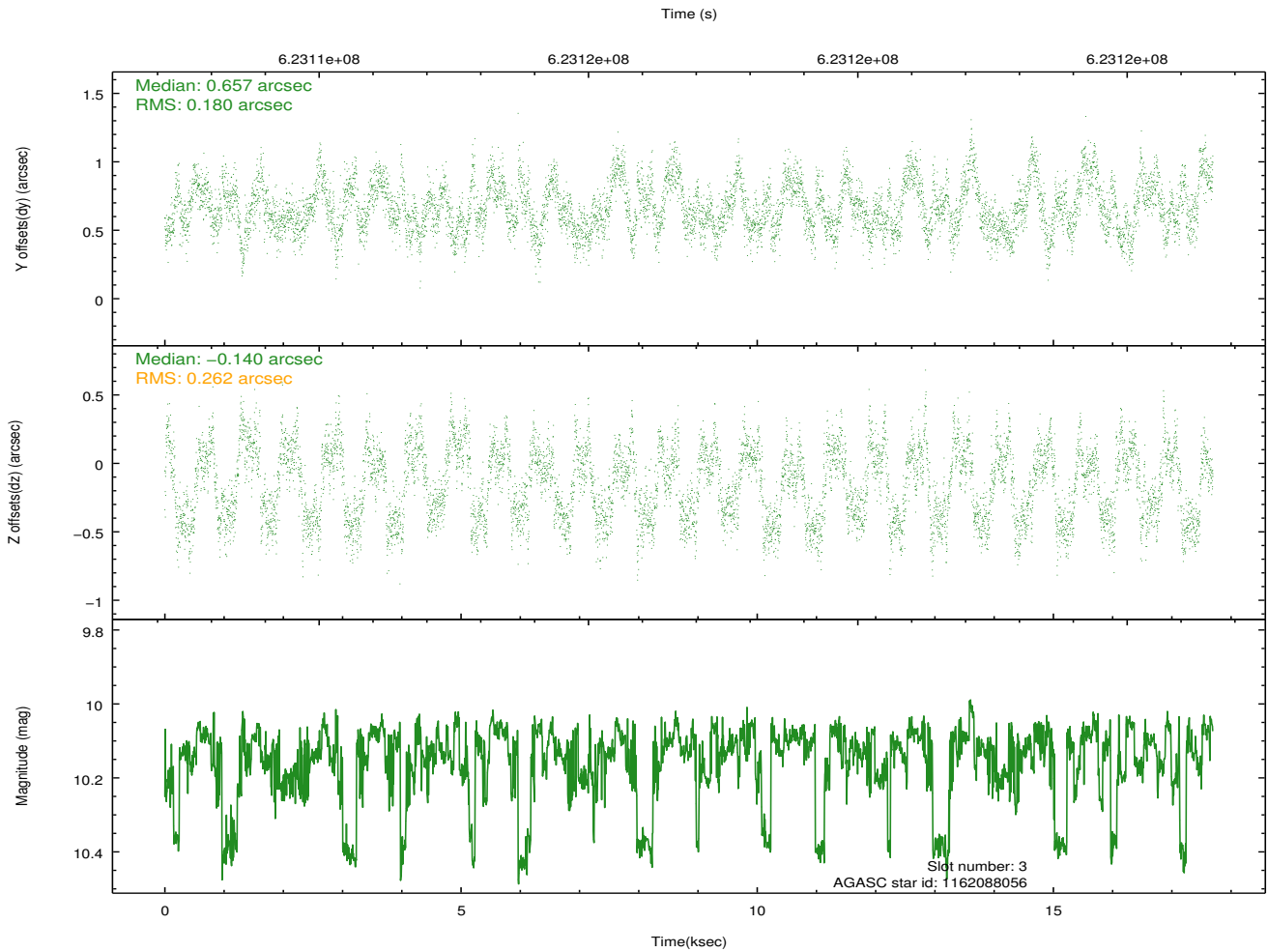
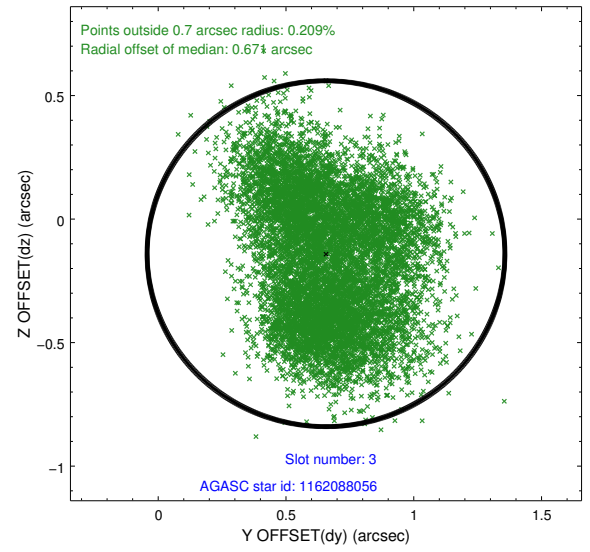
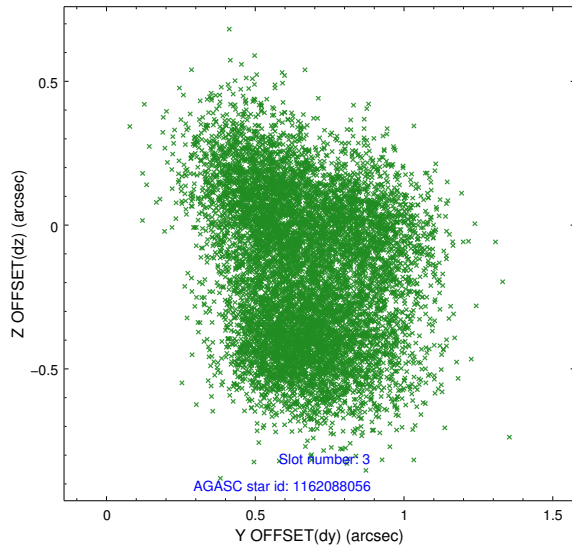


Slot Statistics

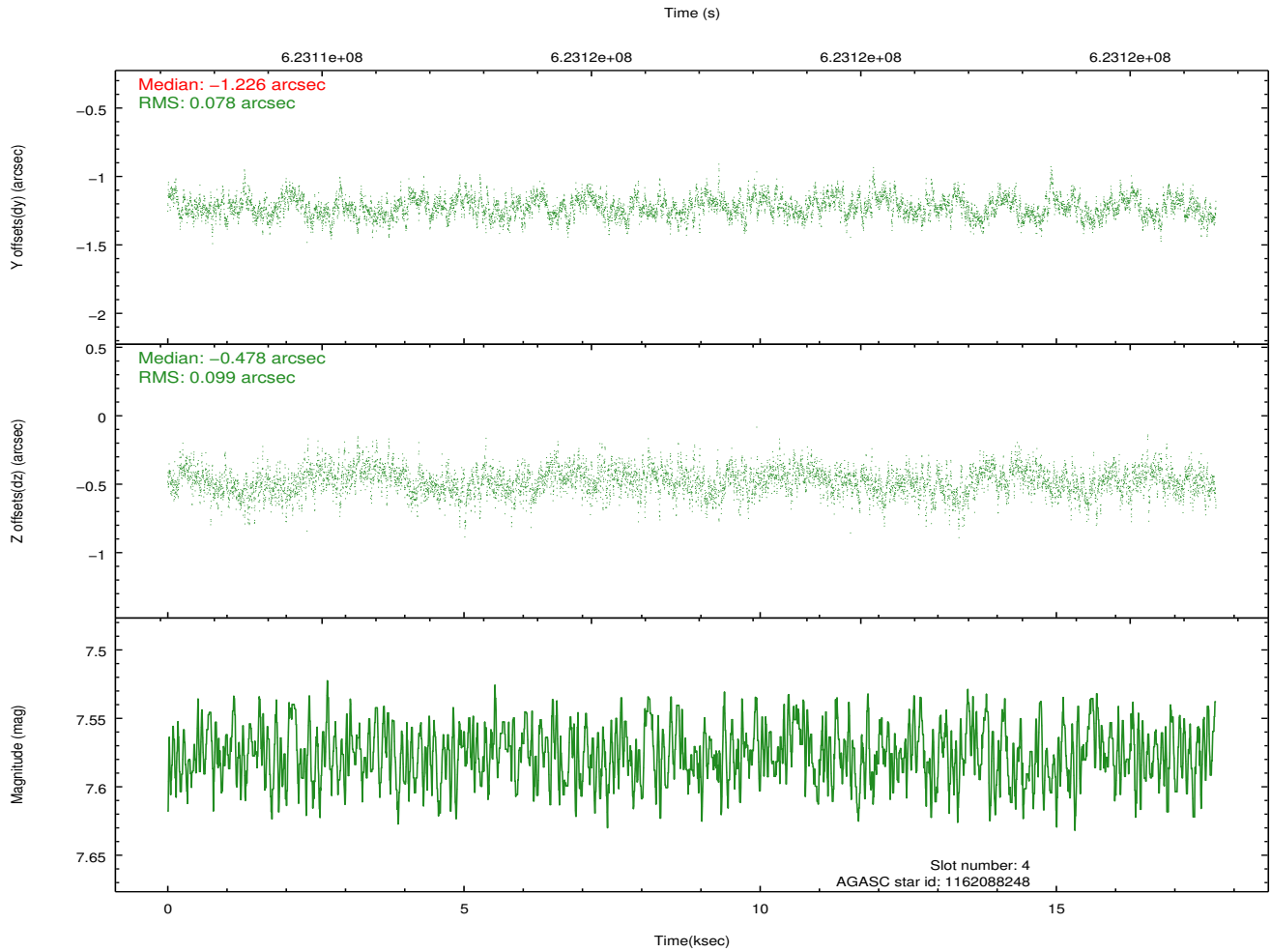
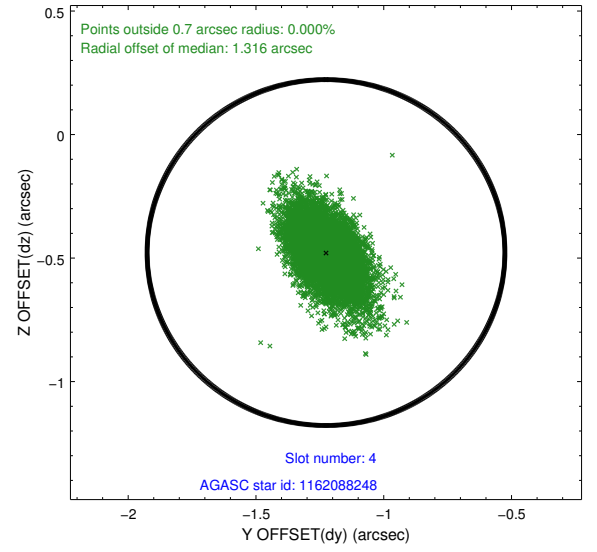
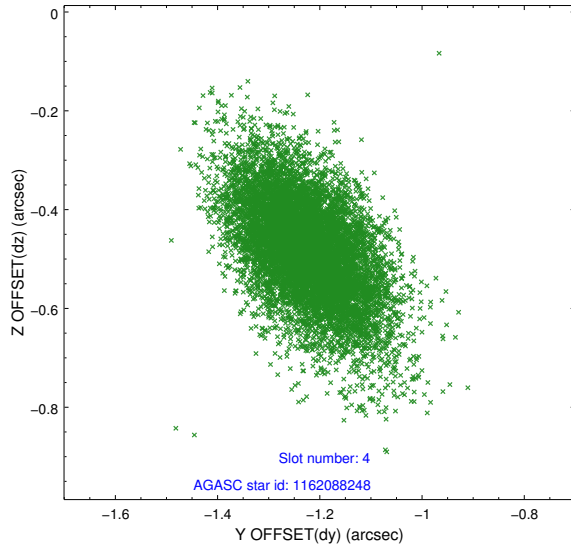
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.99	4315	-0.273	-0.158	0.013	0.043	0.000000	0.000000	-770.38	-1741.25
1	FID		ACIS-S-4	7.10	4316	0.316	0.167	0.010	0.021	0.000000	0.000000	2143.41	167.28
2	FID		ACIS-S-6	7.24	4316	-0.069	0.002	0.013	0.021	0.000000	0.000000	392.15	804.80
3	GUIDE	used	1162088056	10.14	8600	0.657	-0.140	0.345	0.516	48.729349	-66.949806	-1980.32	240.32
4	GUIDE	used	1162088248	7.58	8631	-1.226	-0.478	0.129	0.227	49.751966	-65.888113	2060.36	897.43
5	GUIDE	used	1162089104	9.55	8626	-0.139	0.212	0.197	0.328	48.422126	-66.410699	-540.87	1613.63
6	GUIDE	used	1162090824	9.19	8625	0.377	0.088	0.222	0.344	48.677982	-66.885202	-1818.05	422.12
7	GUIDE	used	1162094224	9.66	8620	0.331	0.327	0.193	0.332	49.638584	-66.701903	-559.76	-419.53

2.4 Star Slots

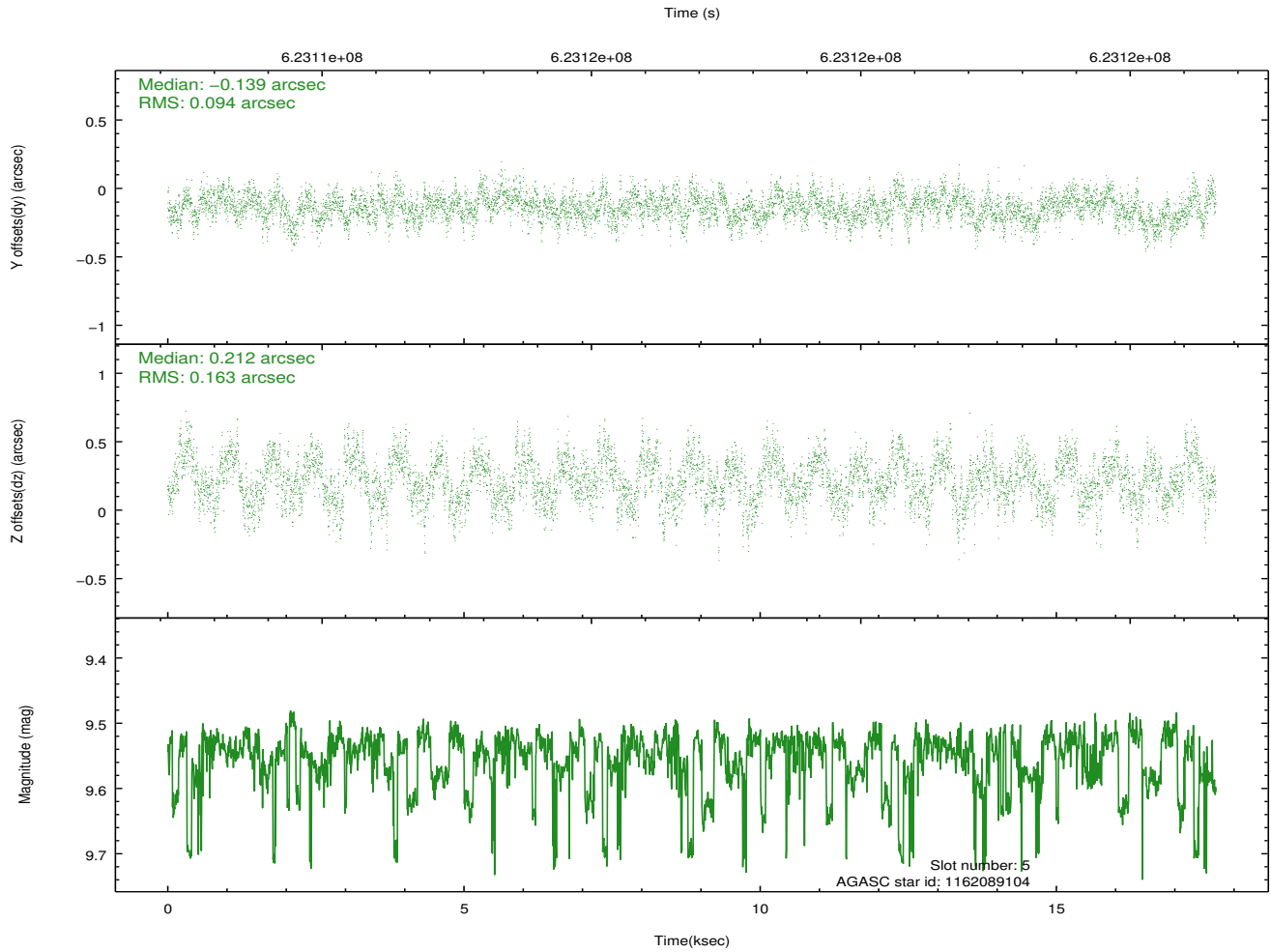
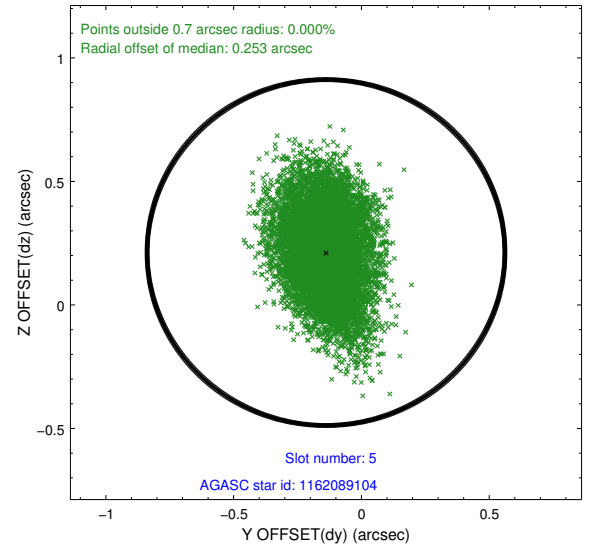
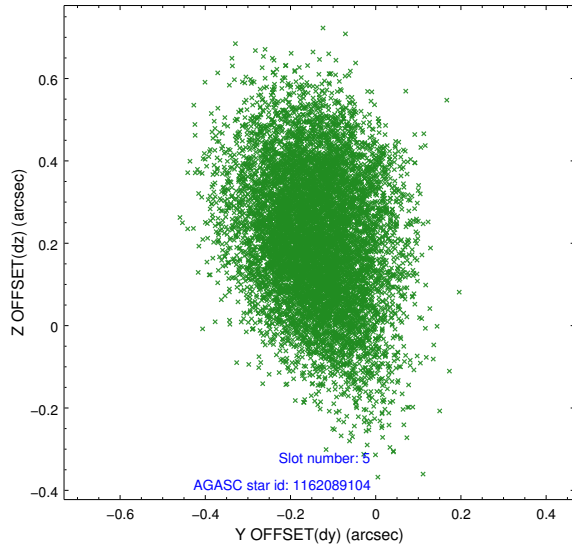
2.4.1 Slot 3



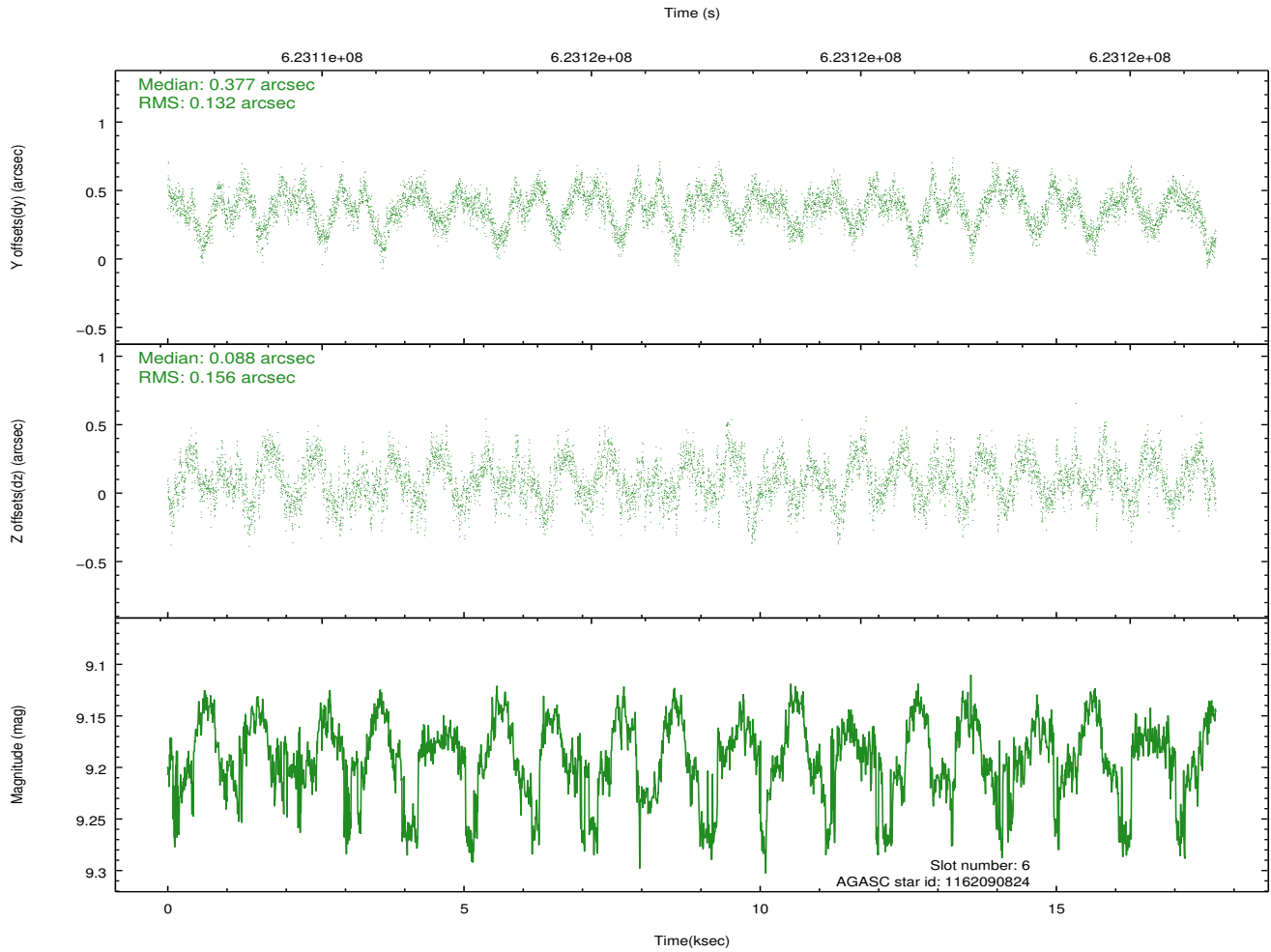
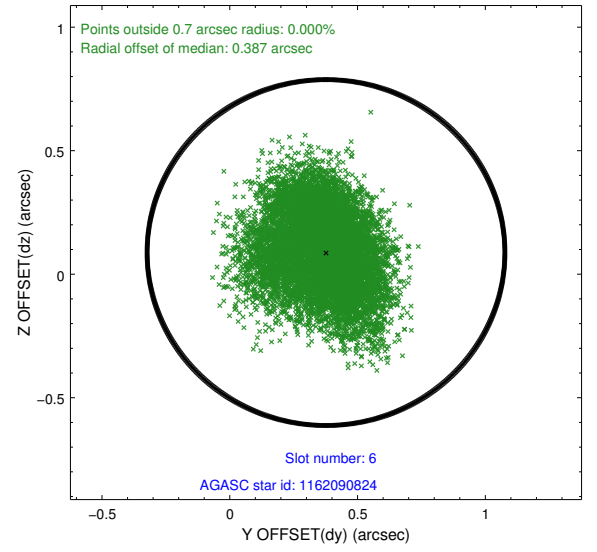
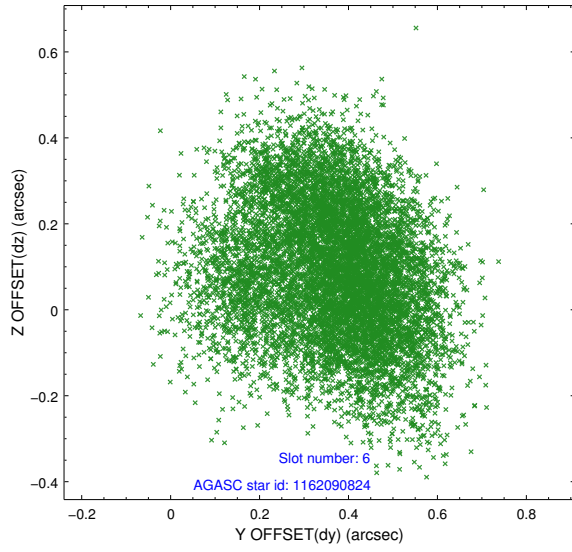
2.4.2 Slot 4



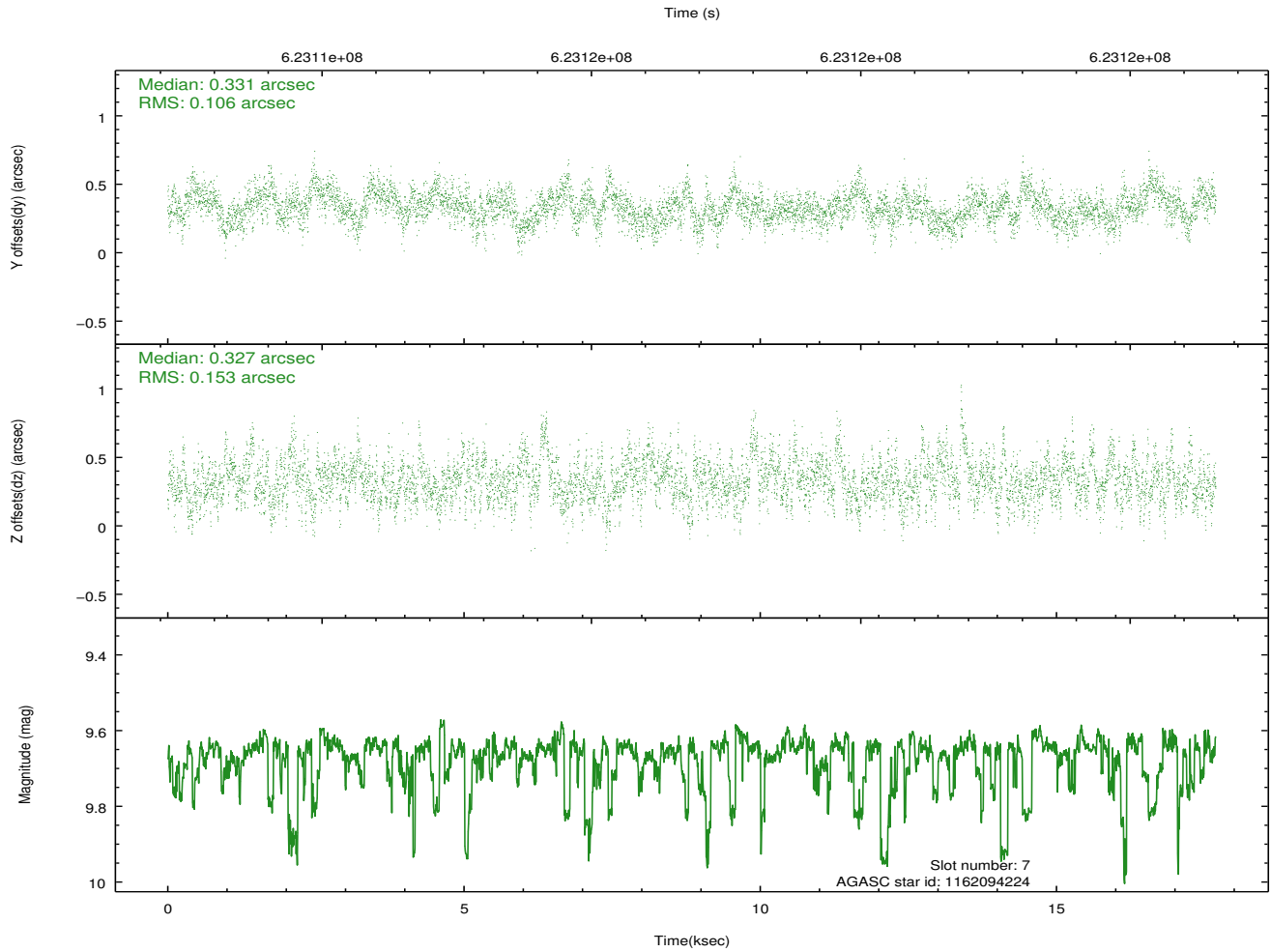
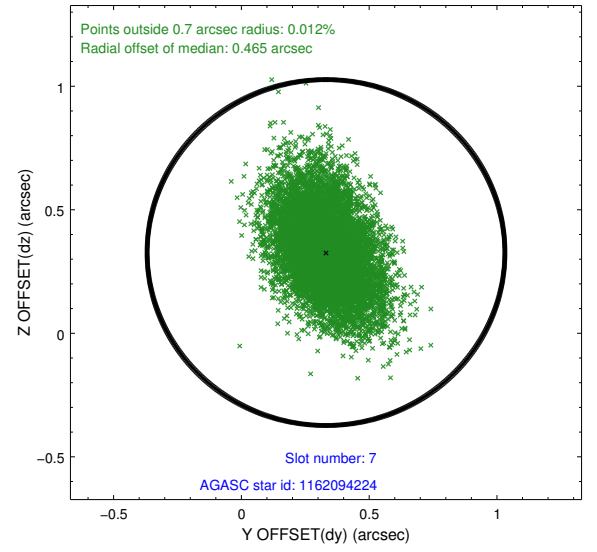
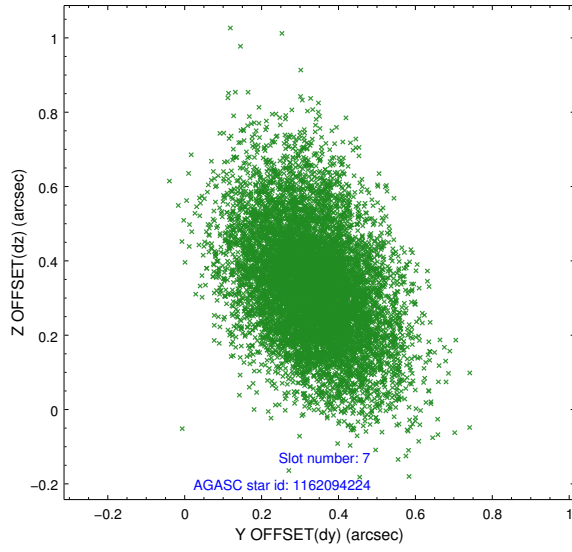
2.4.3 Slot 5



2.4.4 Slot 6

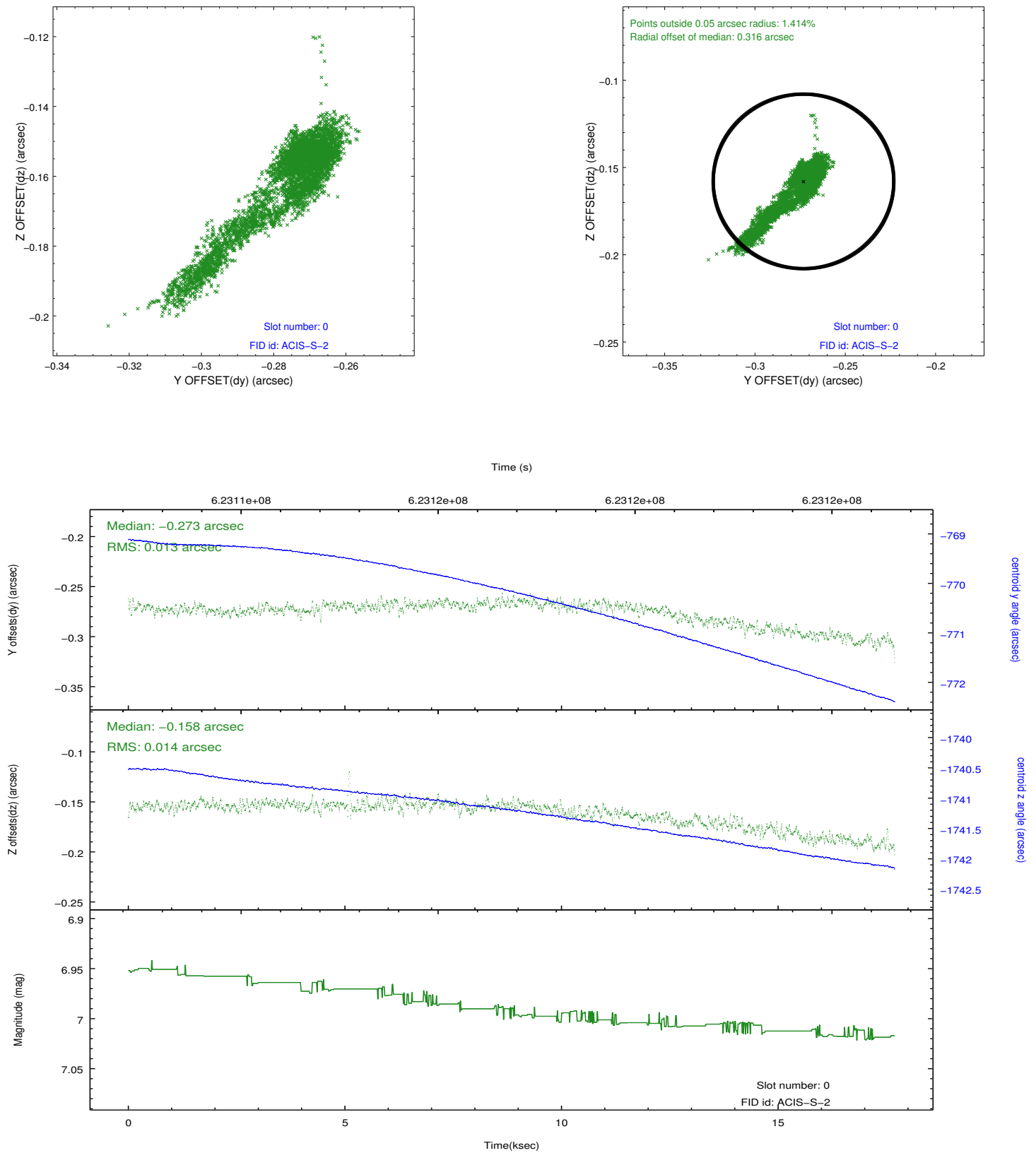


2.4.5 Slot 7

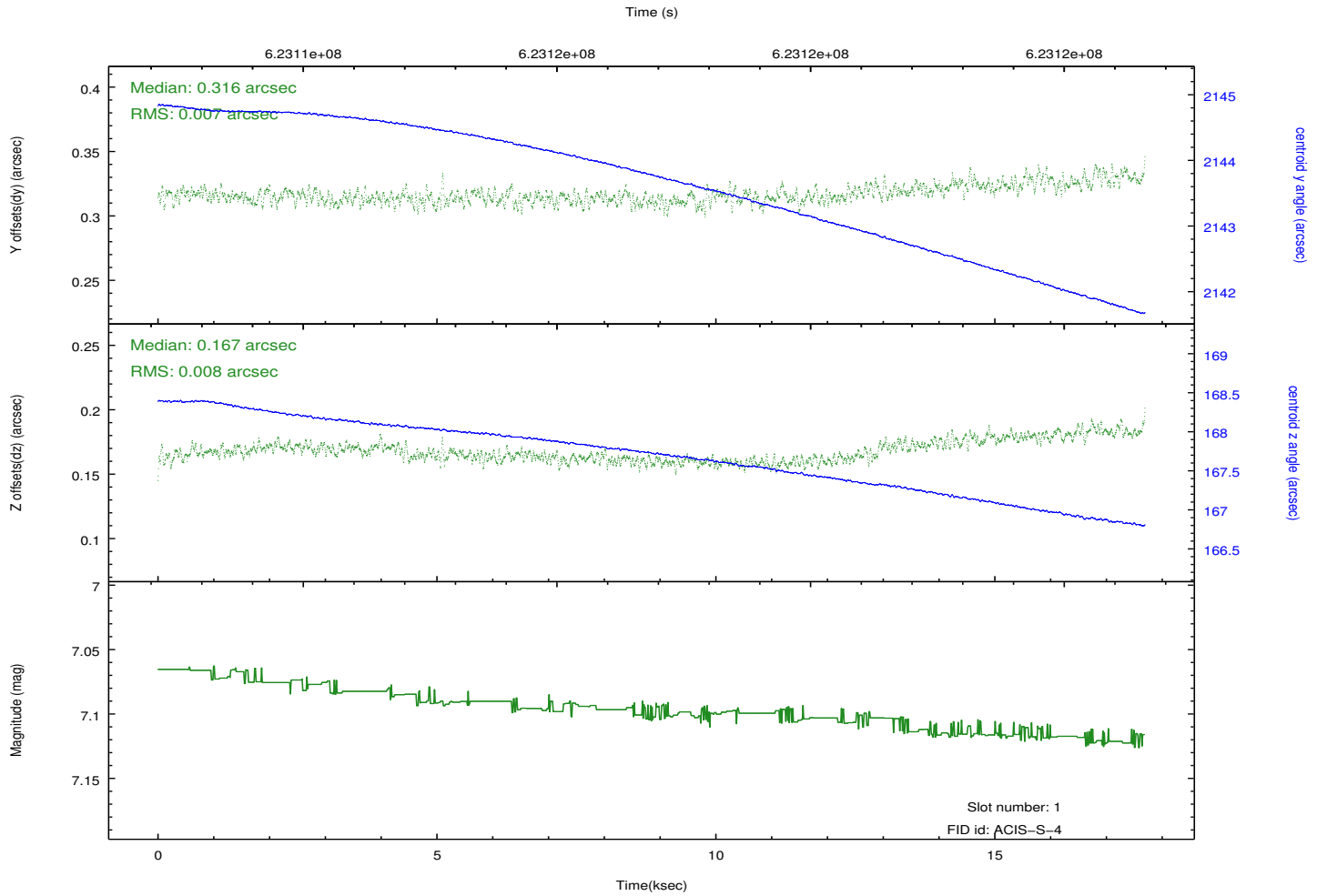
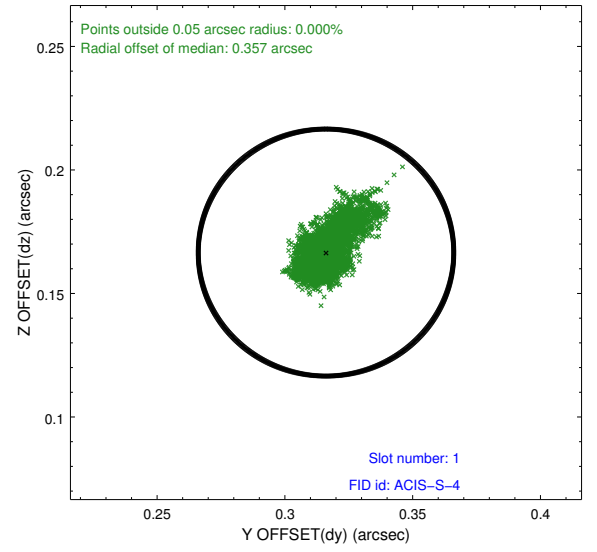
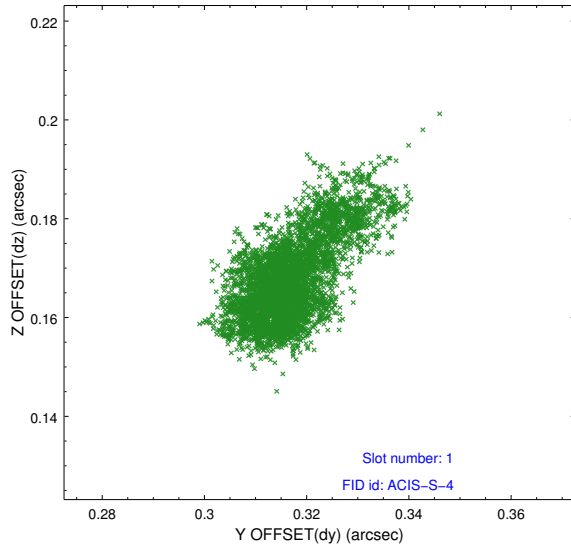


2.5 FID Slots

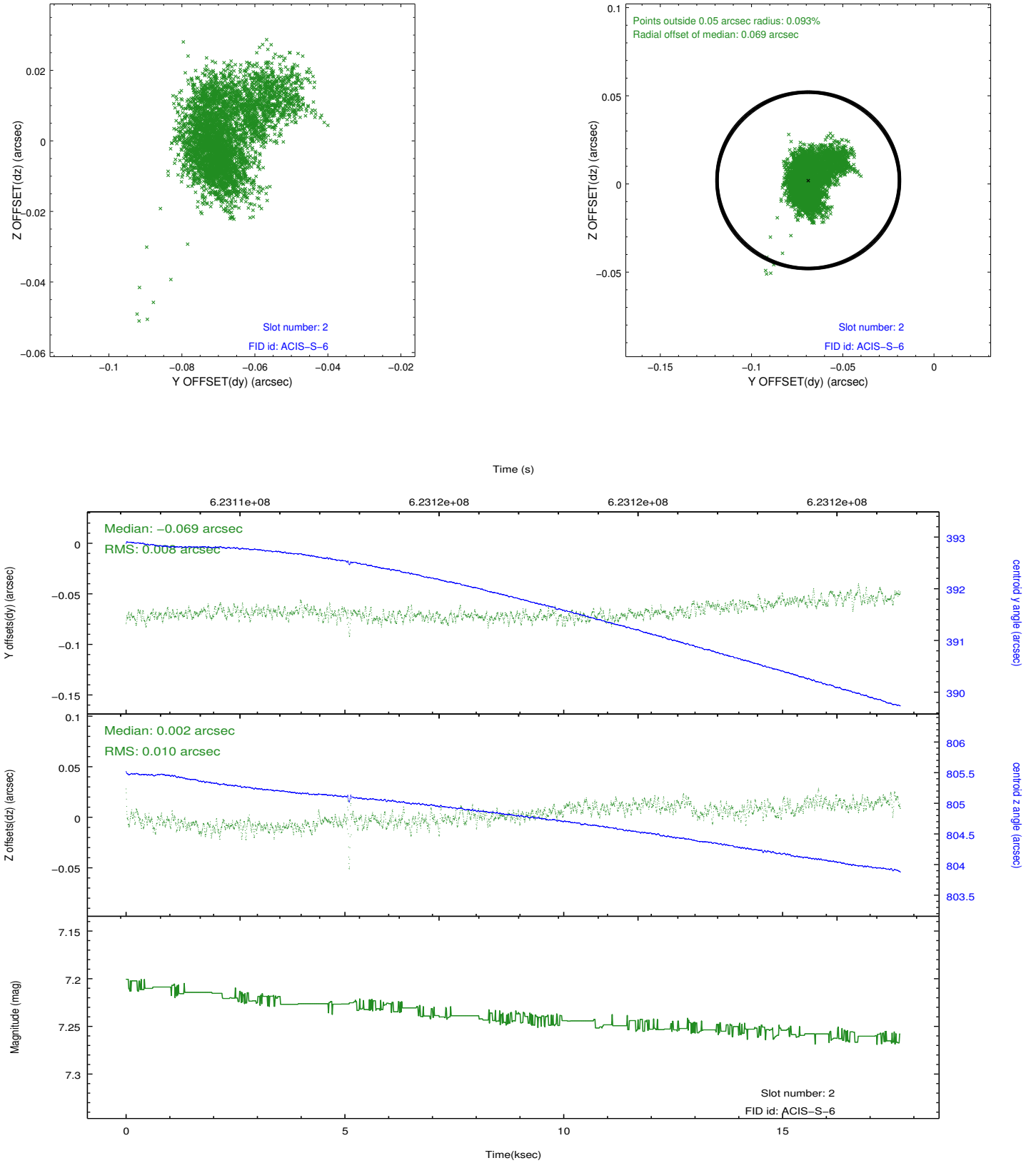
2.5.1 Slot 0



2.5.2 Slot 1

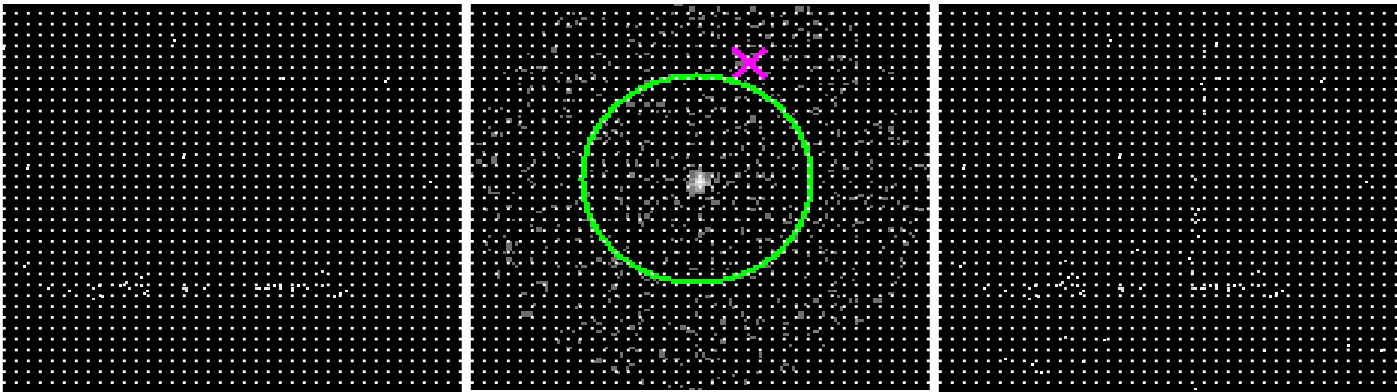


2.5.3 Slot 2



3 Gratings

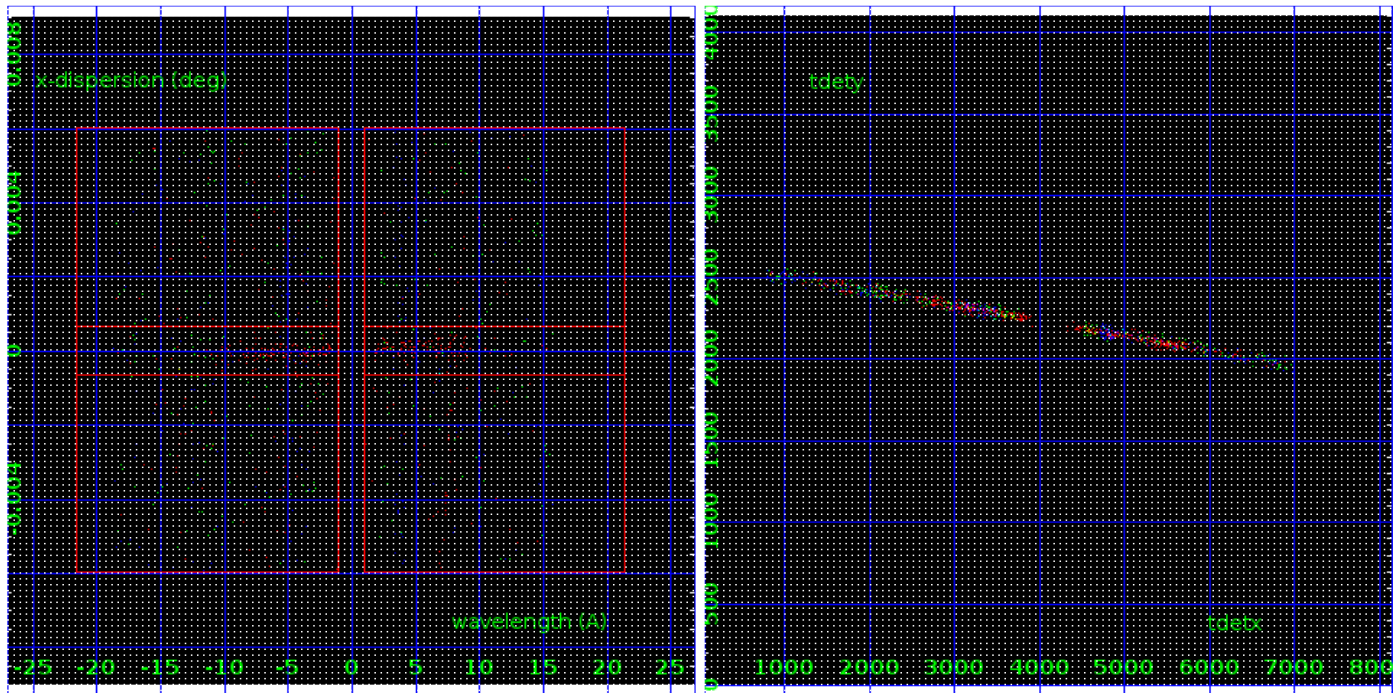
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

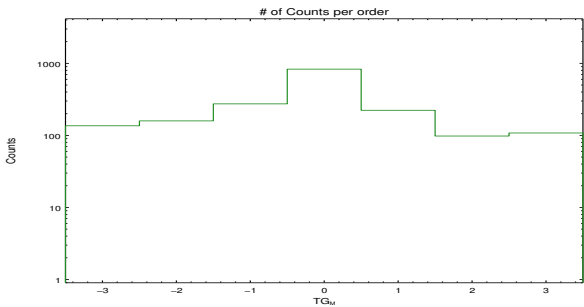
HEG Order Sort ALL

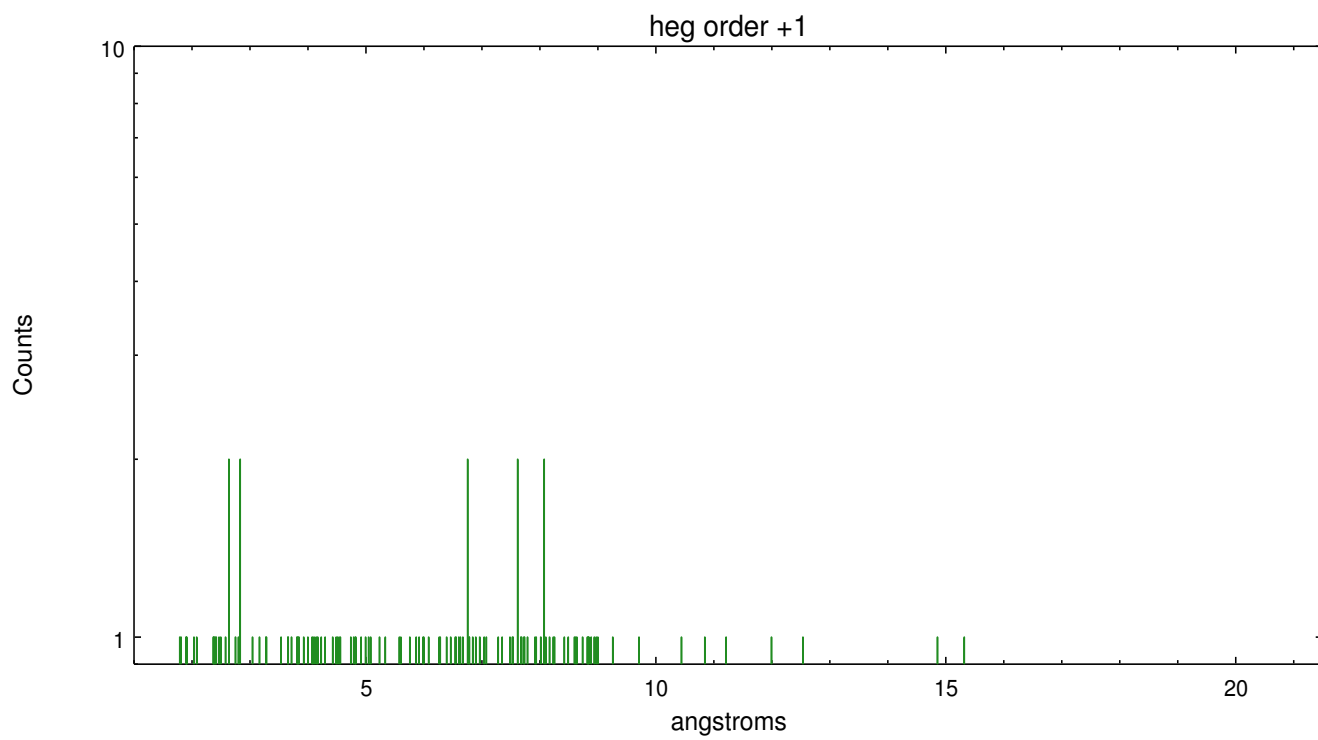
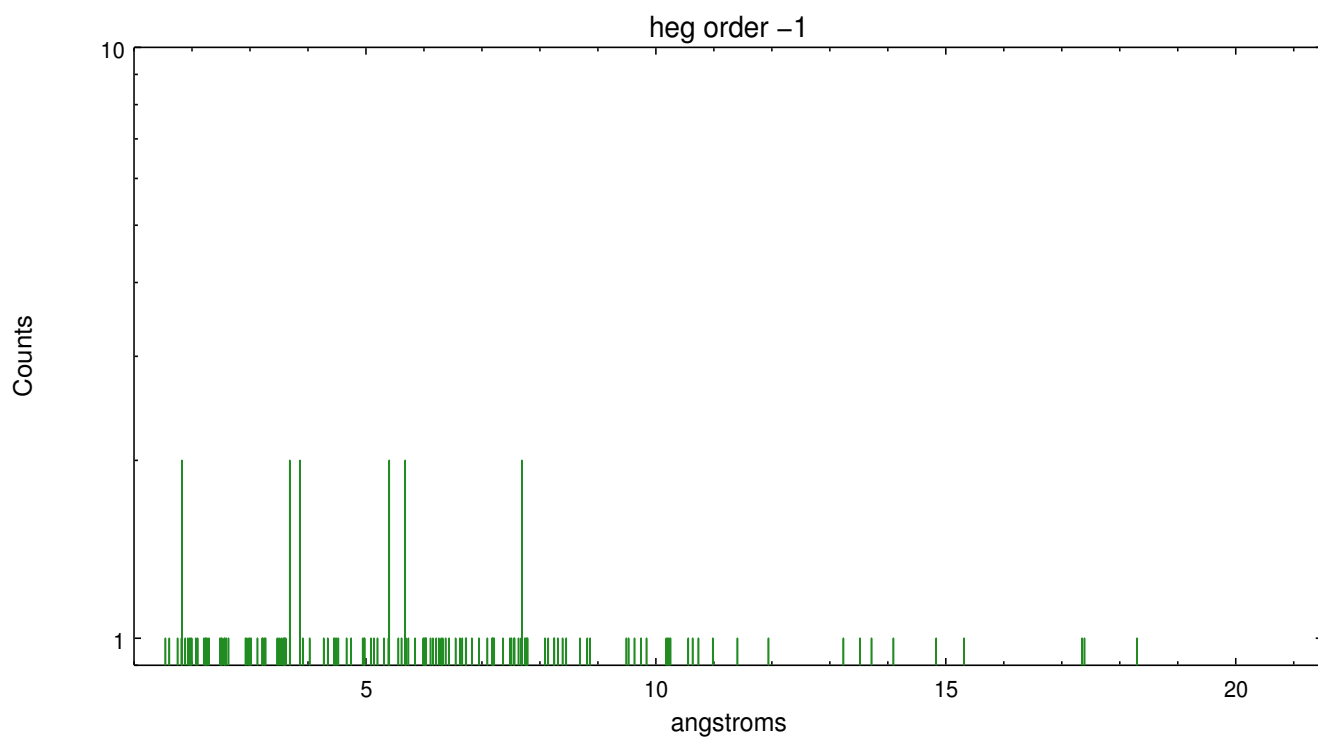


Spot Image HEG

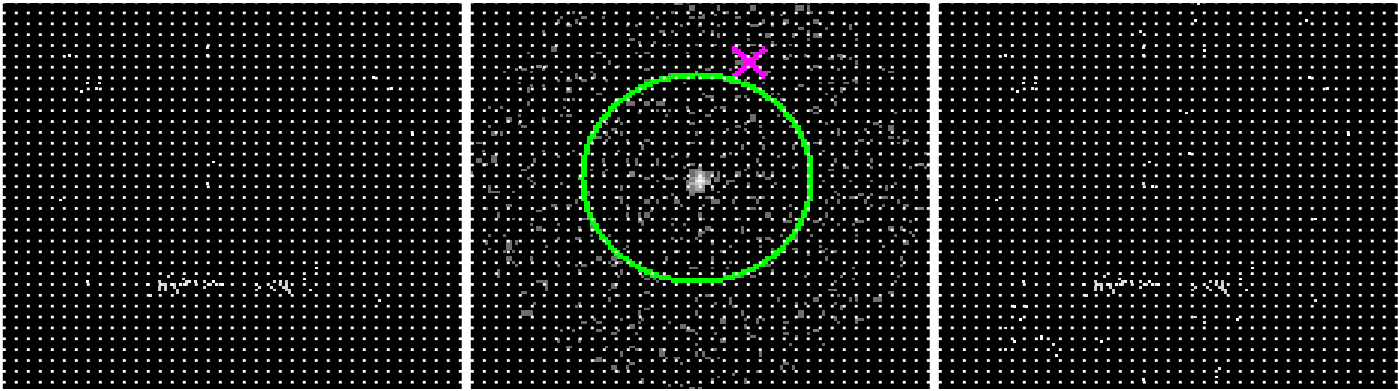
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	136	159	274	831	223	98	108





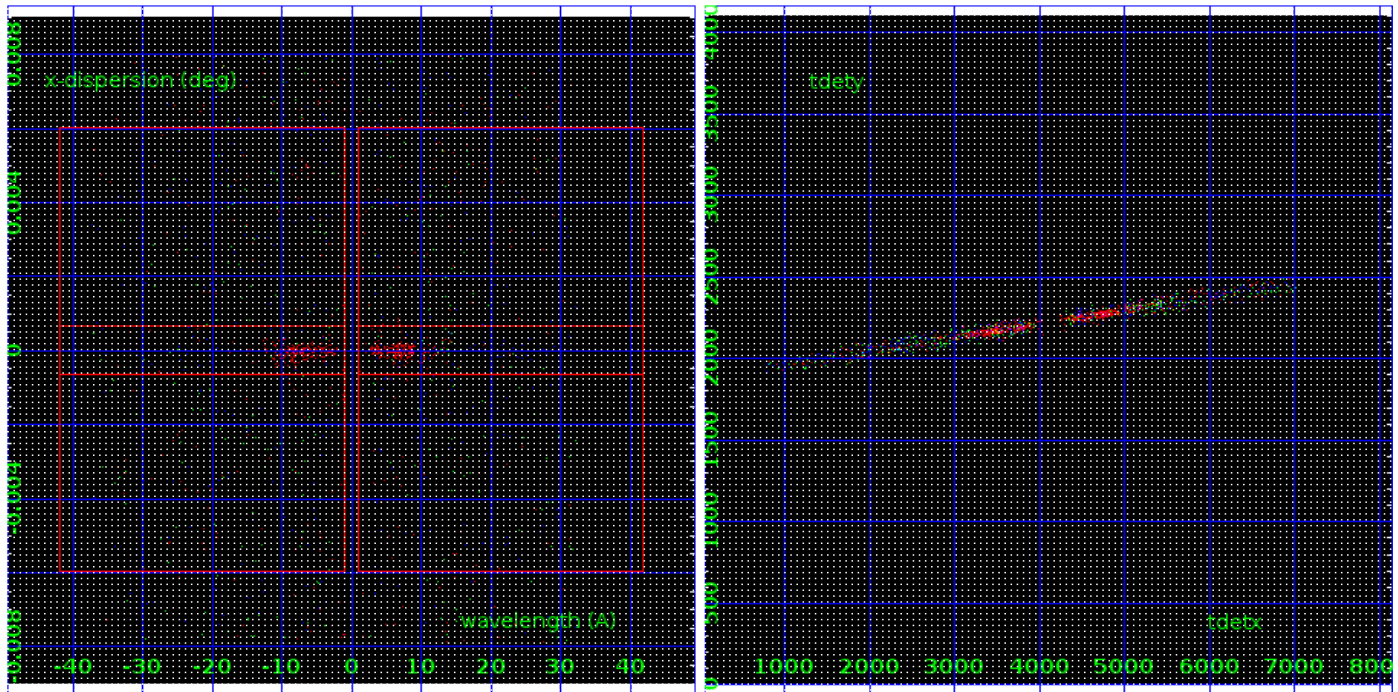
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

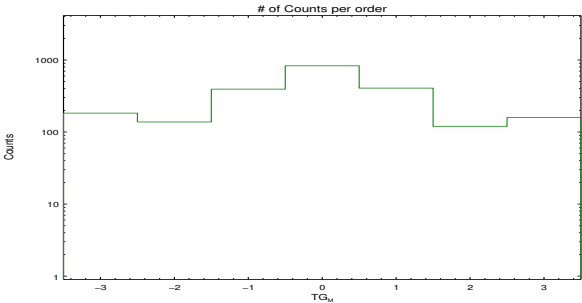
MEG Order Sort ALL

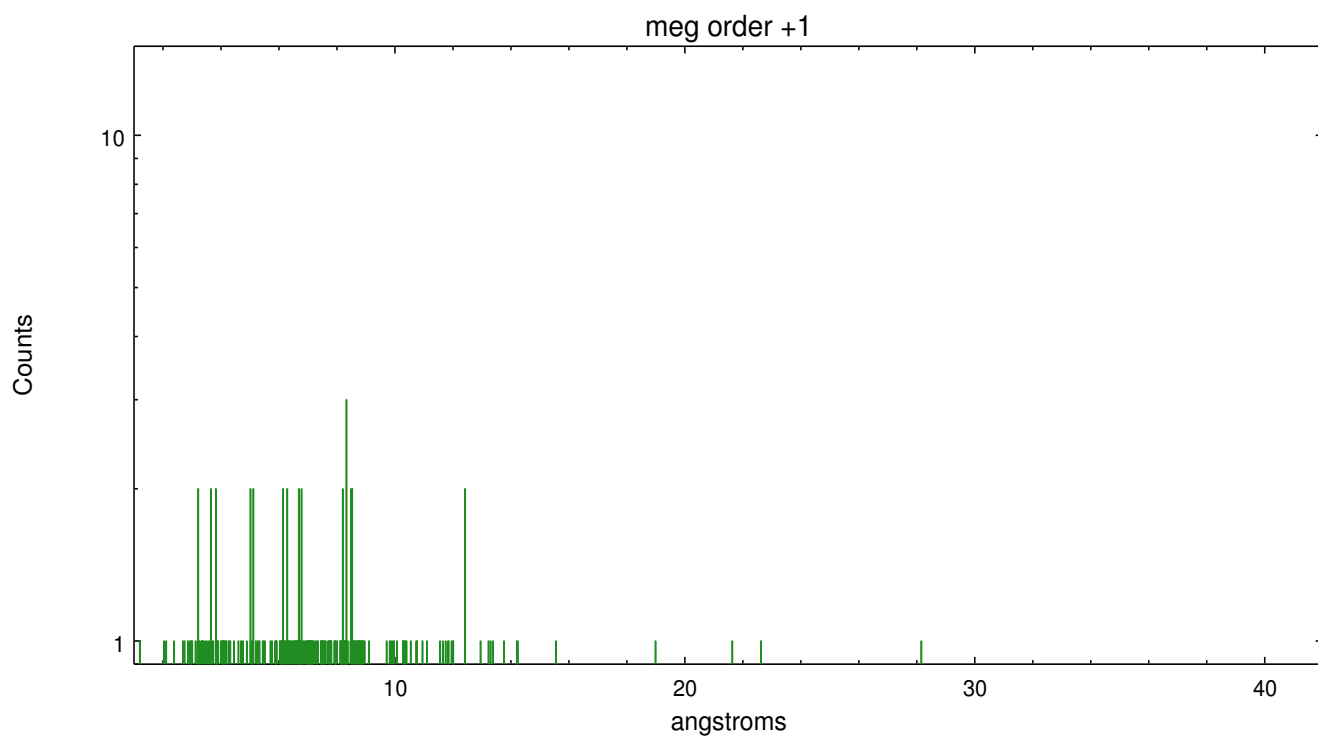
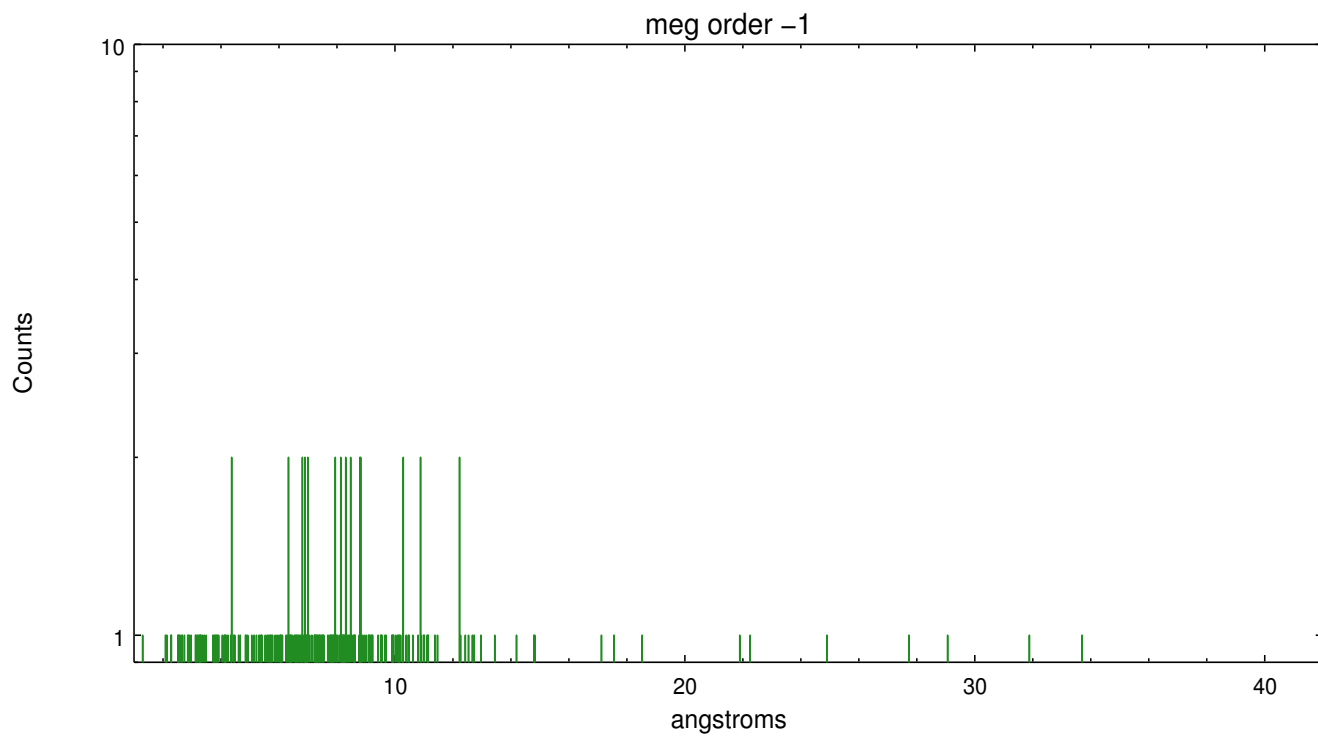


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	183	138	394	831	407	120	159





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.10.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.500800260782

A.2 Comments