

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 21237 - L2 Version 2
Chandra X-Ray Center

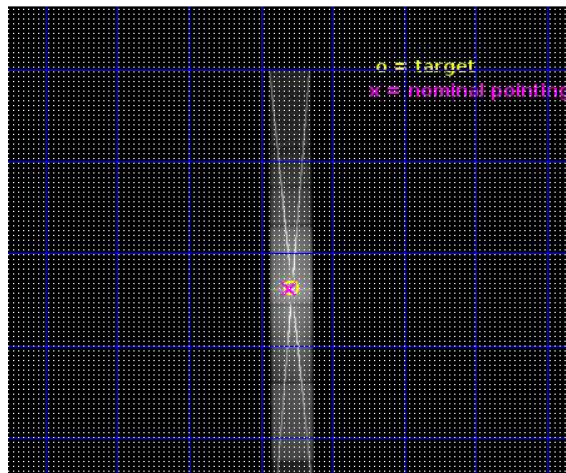
L2 Processing Date : Sep 24 2019

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

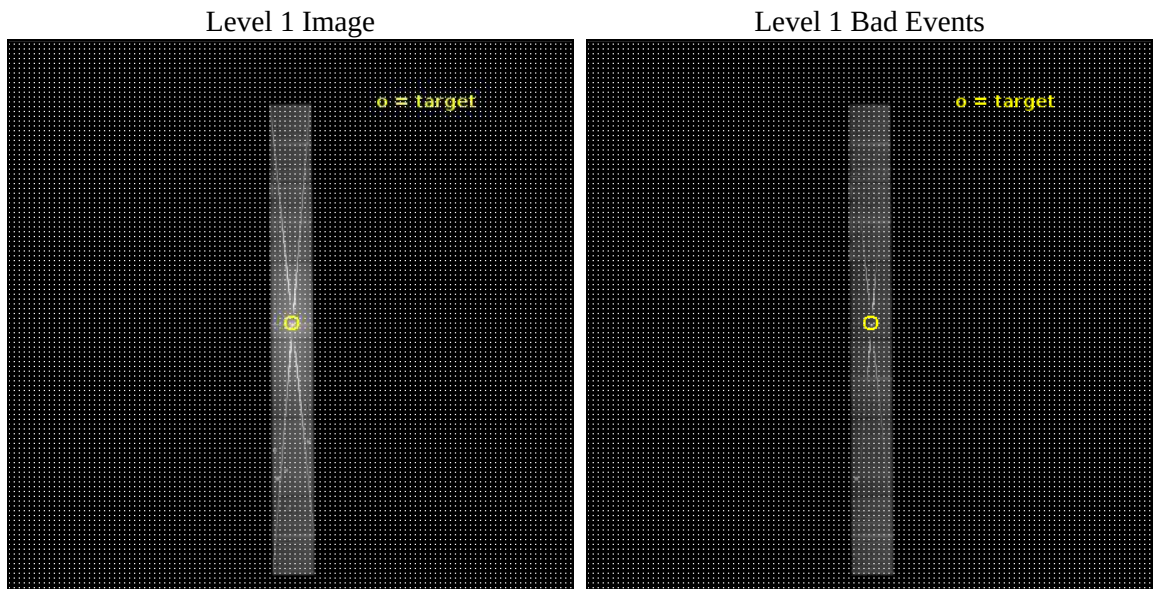
seq_num	402069	Sequence number
obs_id	21237	Observation id
title	An Integrated Approach to Winds, Jets, and State Transitions	Propo
observer	Joey Neilsen	Principal investigator
object	EXO 1846-031	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	282.3213	Observer's specified target RA [deg]
dec_targ	-3.0622	Observer's specified target Dec [deg]
ra_nom	282.32476866006	Nominal RA [deg]
dec_nom	-3.0638453633434	Nominal Dec [deg]
roll_nom	269.5826620374	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30068.999203444	Sum of GTIs [s]
livetime	29398.708646308	Livetime [s]
ontime4	30068.999203444	Sum of GTIs [s]
ontime5	30068.999203444	Sum of GTIs [s]
ontime6	30068.999203444	Sum of GTIs [s]
ontime7	30068.999203444	Sum of GTIs [s]
ontime8	30068.999203444	Sum of GTIs [s]
ontime9	30068.999203444	Sum of GTIs [s]
l2events	3617513	Number of level 2 events



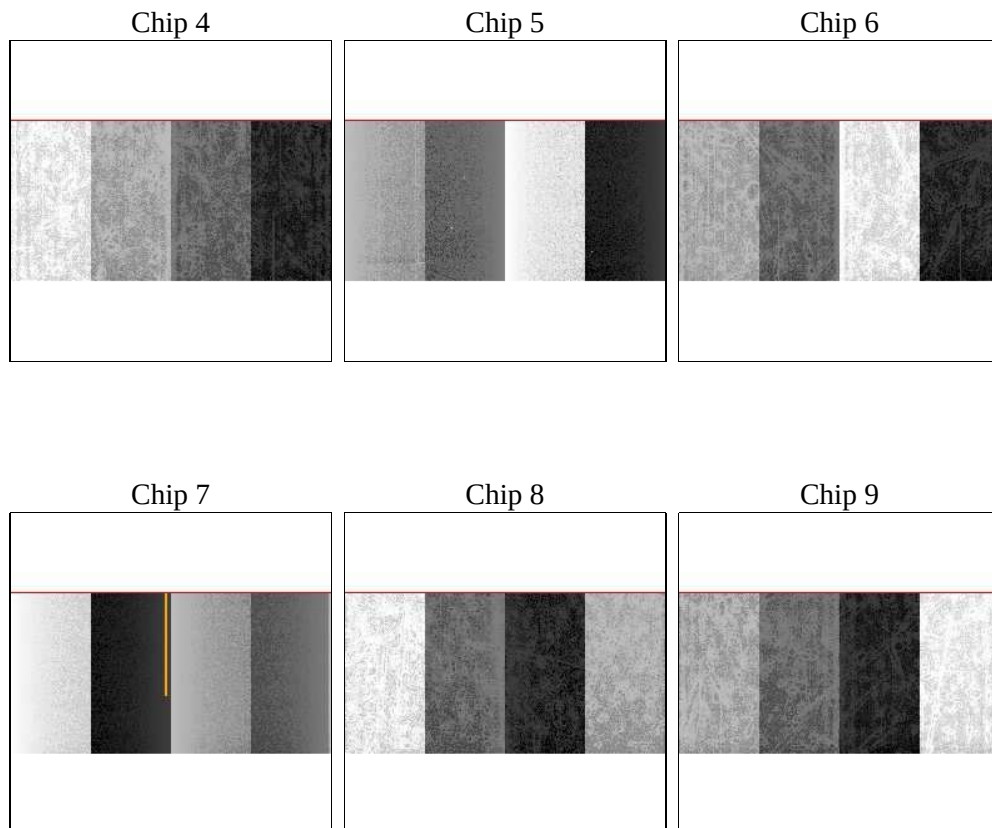
2 OBI

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	10.8	Processing system revision	ontime	30068.999203444	Sum of GTIs [s]
caldsver	4.8.4.1	 	ontime4	30068.999203444	Sum of GTIs [s]
date	2019-09-20T14:39:47	Date and time of file creation	ontime5	30068.999203444	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30068.999203444	Sum of GTIs [s]
			ontime7	30068.999203444	Sum of GTIs [s]
			ontime8	30068.999203444	Sum of GTIs [s]
			ontime9	30068.999203444	Sum of GTIs [s]
			l1events	4679111	Number of level 1 events
			tgmethod	MANUAL	Method used to create src1a file
			src1a_pos	(4122.05, 4085.04)	src1a sky pixel position

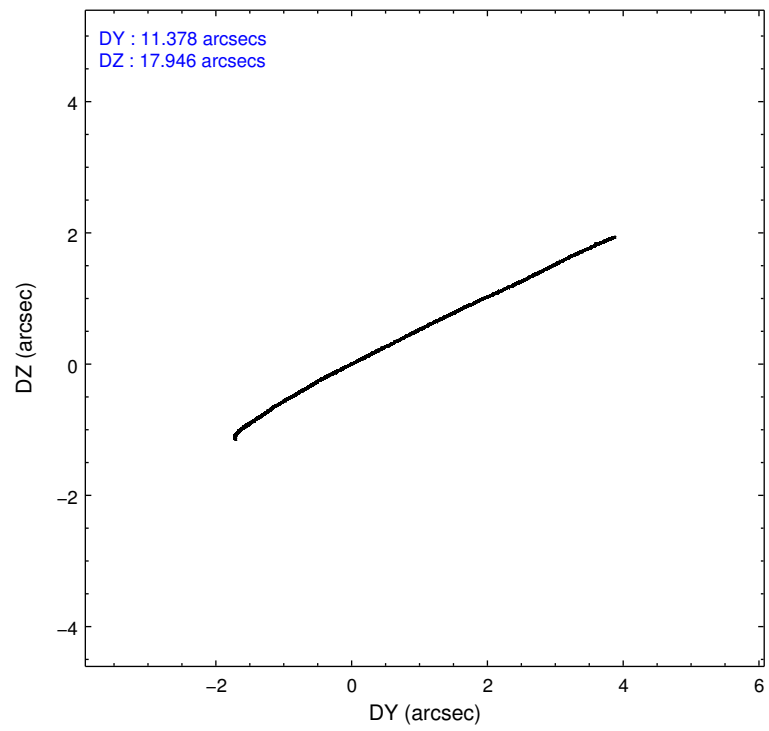
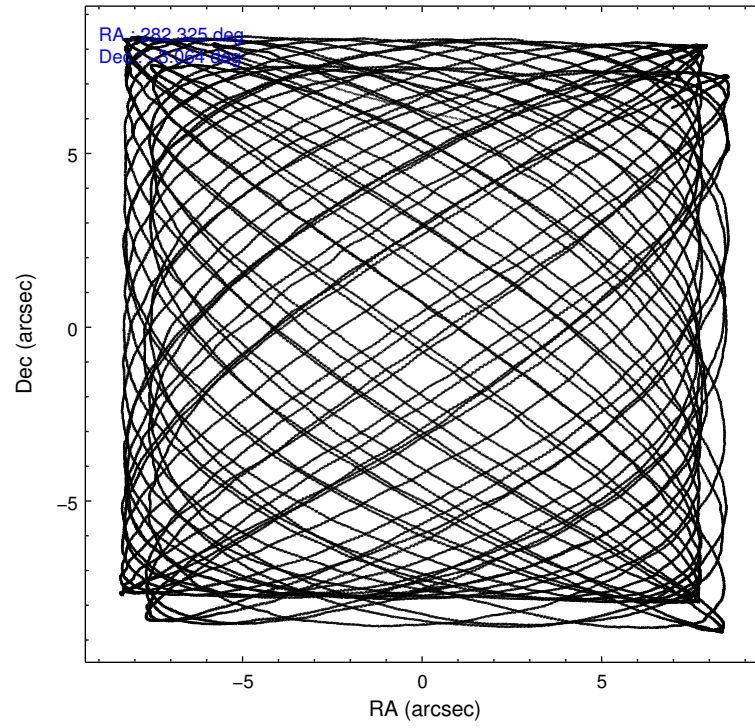
2.1.4 Events

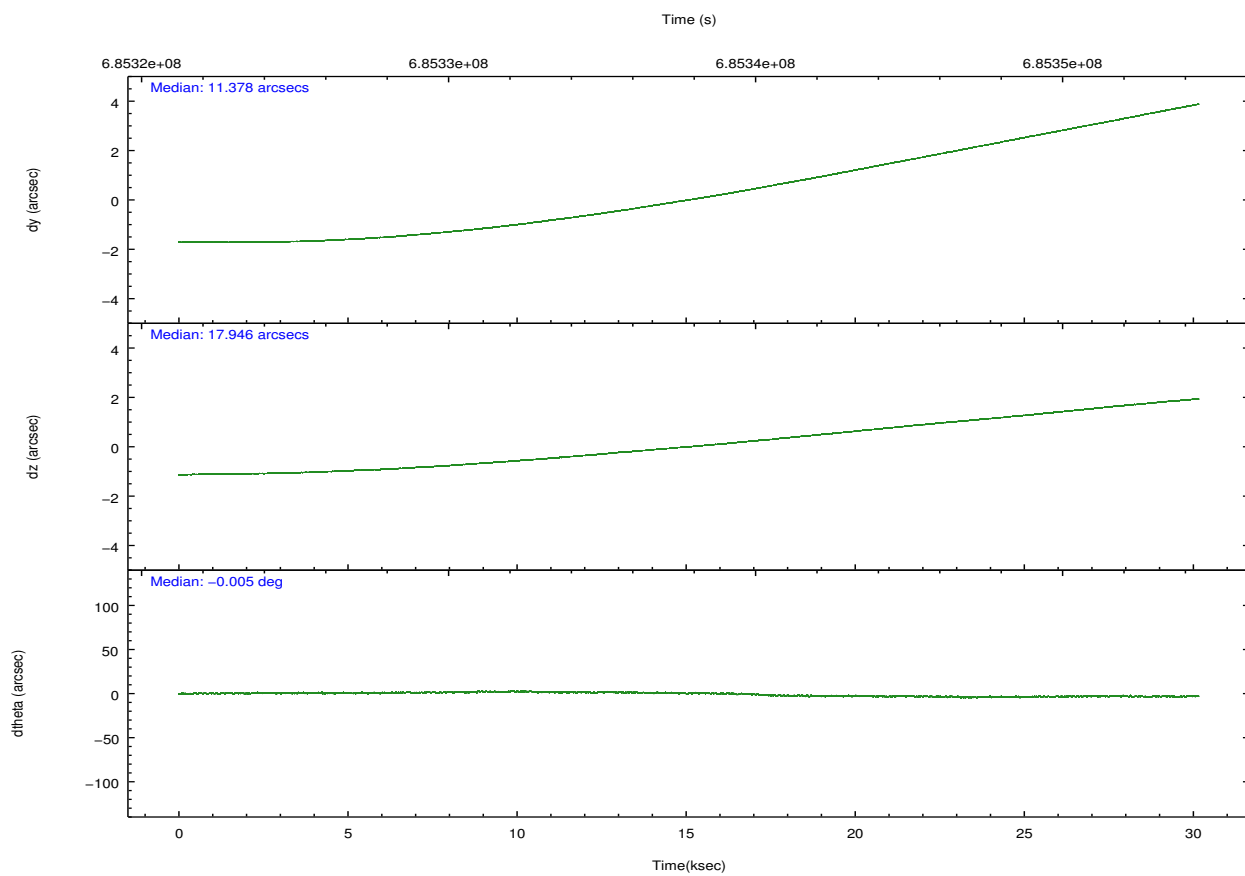
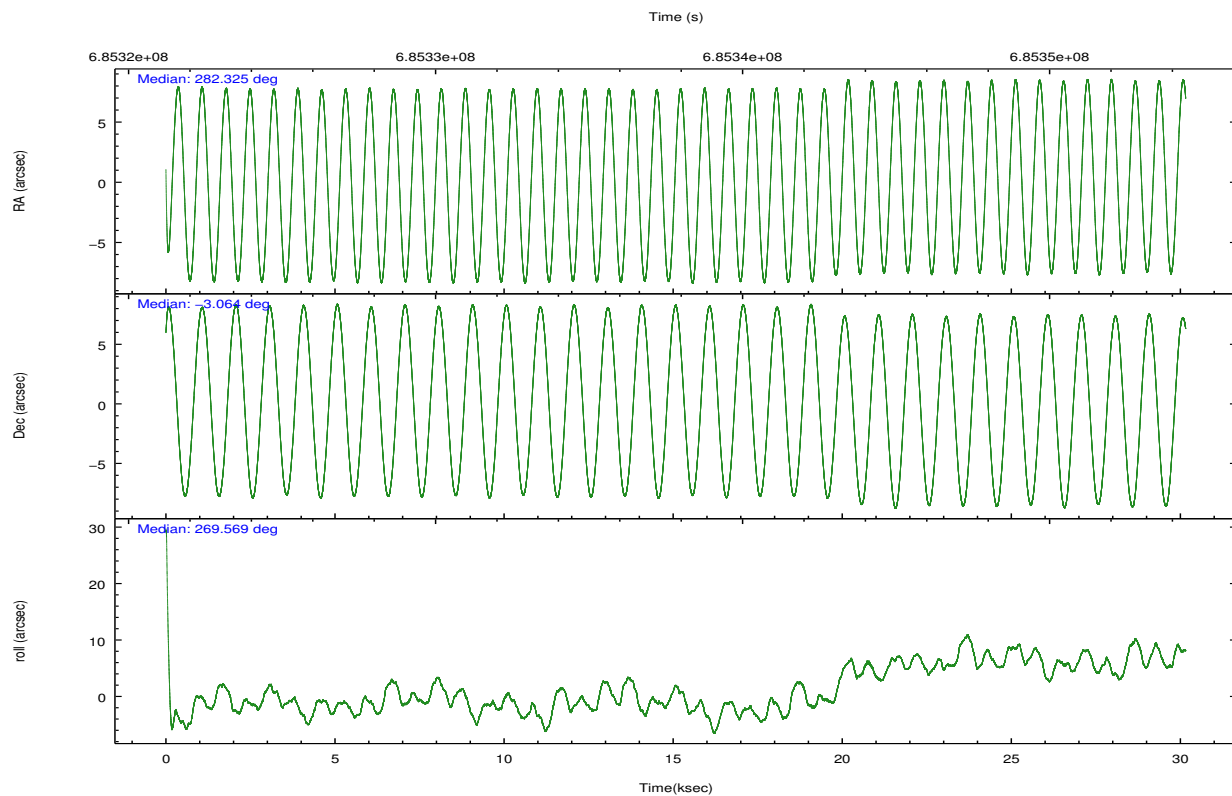
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	177767	364098	1463948	2047001	445355	180942	grade 0 events	27034	52994	911145	350799	229589	44890
rejected events	136156	112194	181867	210558	129617	114865		15%	14%	62%	17%	51%	24%
rejected %	76%	30%	12%	10%	29%	63%	grade 1 events	245	4358	25033	9212	1731	220
								0%	1%	1%	0%	0%	0%
							grade 2 events	5961	91643	194681	449667	40425	9292
								3%	25%	13%	21%	9%	5%
							grade 3 events	2785	11286	56531	197168	13834	3556
								1%	3%	3%	9%	3%	1%
							grade 4 events	2654	11071	56006	195424	13566	3638
								1%	3%	3%	9%	3%	2%
							grade 5 events	6204	15404	26574	61375	9772	6453
								3%	4%	1%	2%	2%	3%
							grade 6 events	3183	84943	63889	643631	18354	4712
								1%	23%	4%	31%	4%	2%
							grade 7 events	129701	92399	130089	139725	118084	108181
								72%	25%	8%	6%	26%	59%

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	282.310875	282.324768660059	CCD I2 on	N	N
[deg] Pointing Dec	-3.040167	-3.063845363343425	CCD I3 on	N	N
[deg] Pointing Roll	269.425289	269.5826620374033	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)	685322912.184000	685321949.33109	CCD S5 on	O2	Y
Observation start date	2019-09-19T23:27:23	2019-09-19T23:12:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	685352912.184000	685353805.30801	On-chip summing requested	N	N
Observation end date	2019-09-20T07:47:23	2019-09-20T08:03:25	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.8

2.3 Aspect



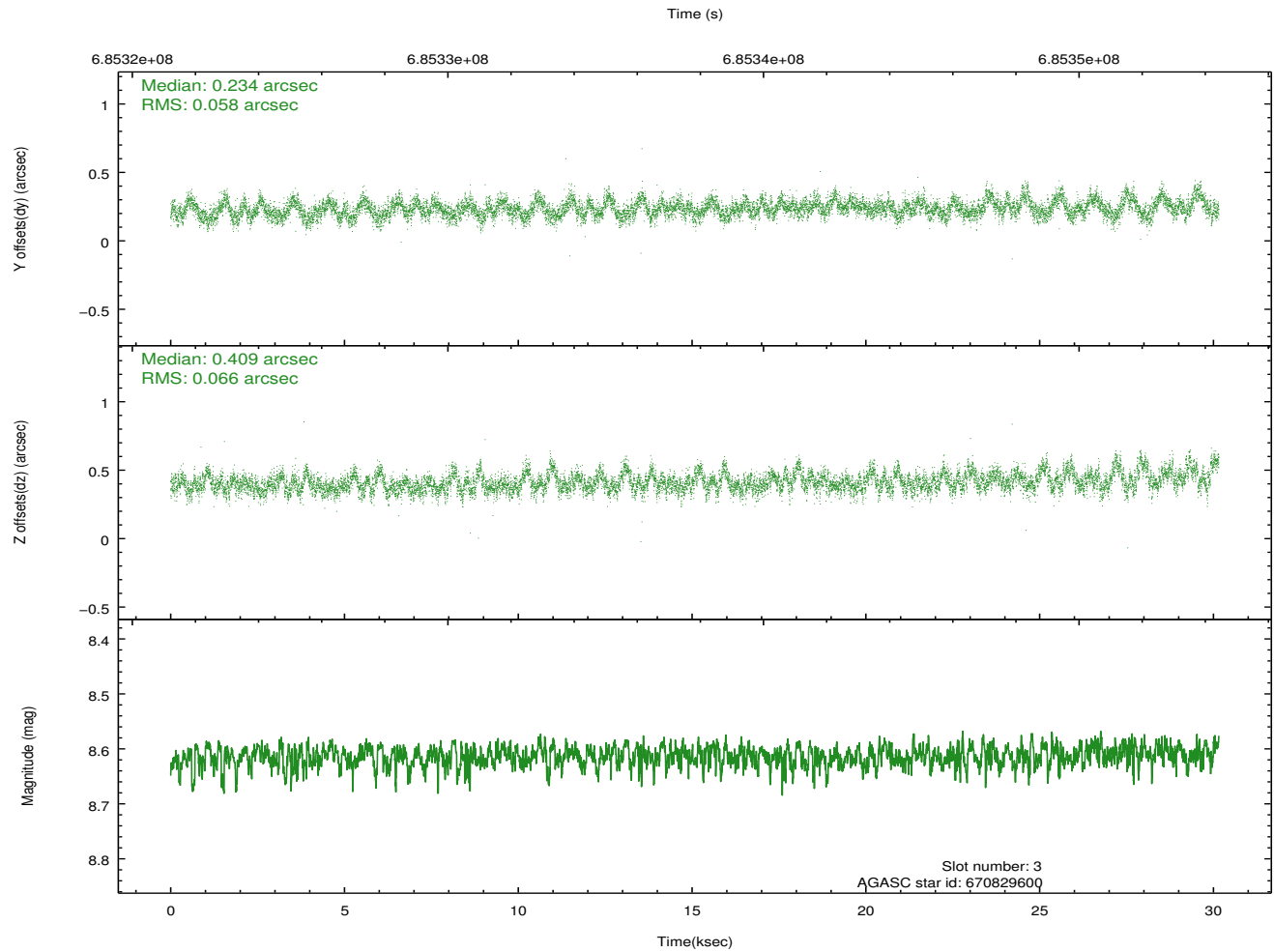
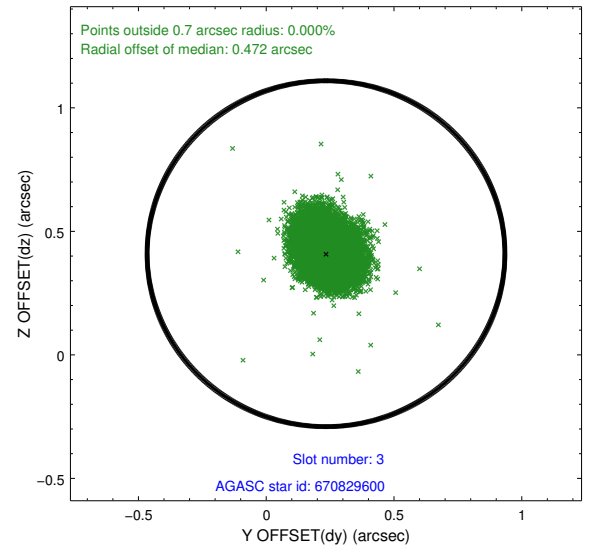
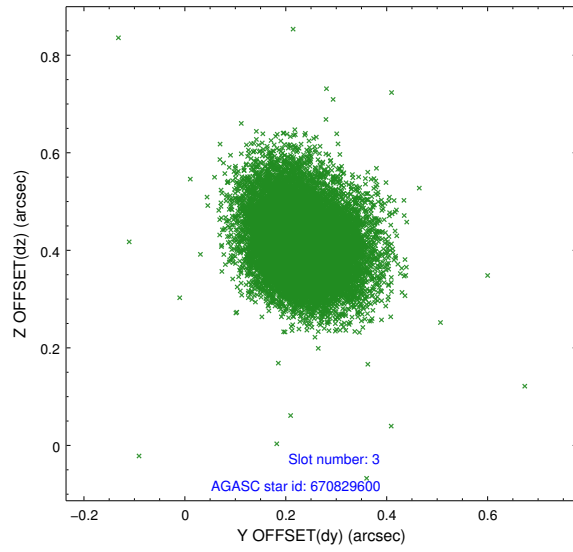


Slot Statistics

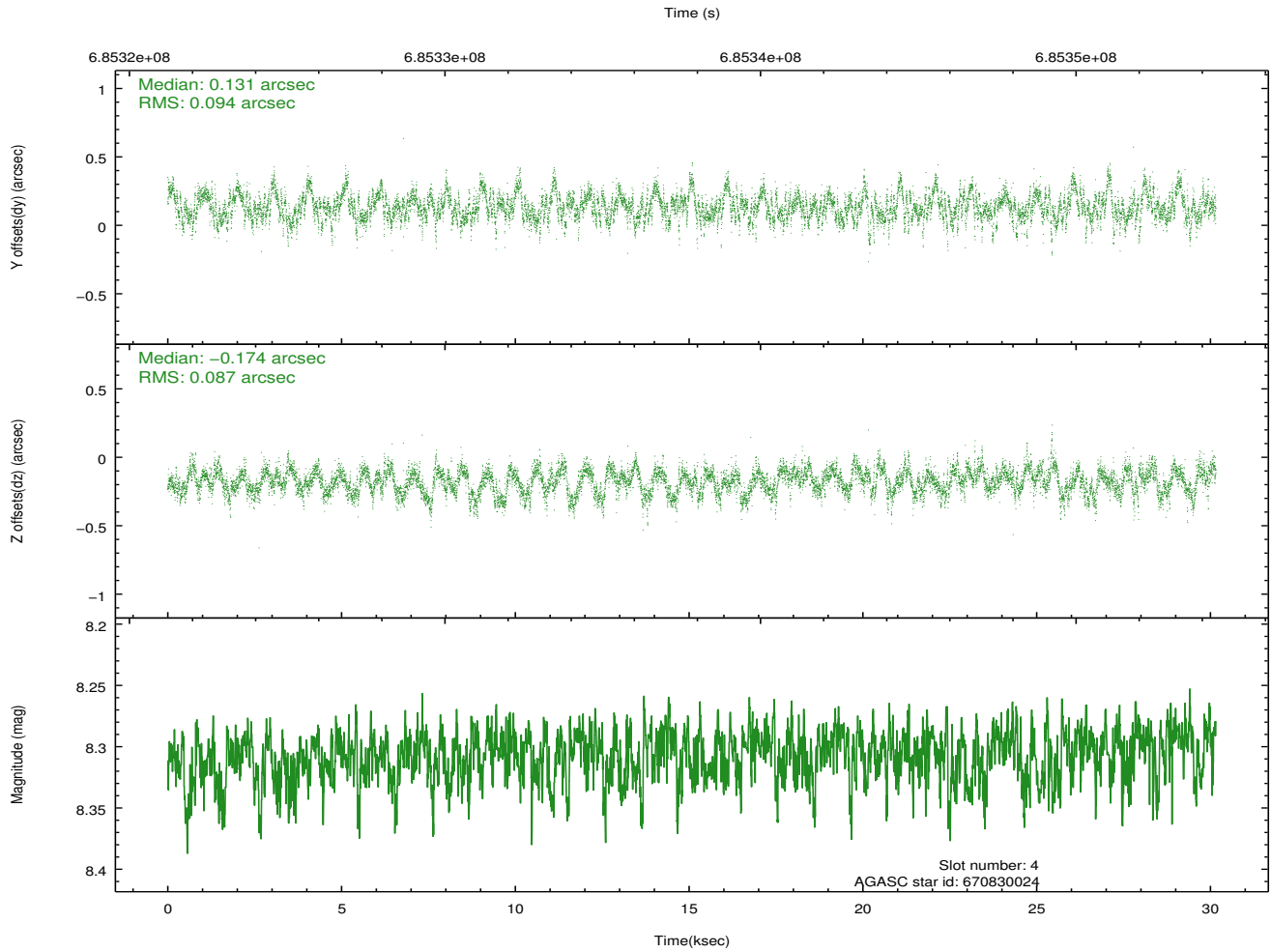
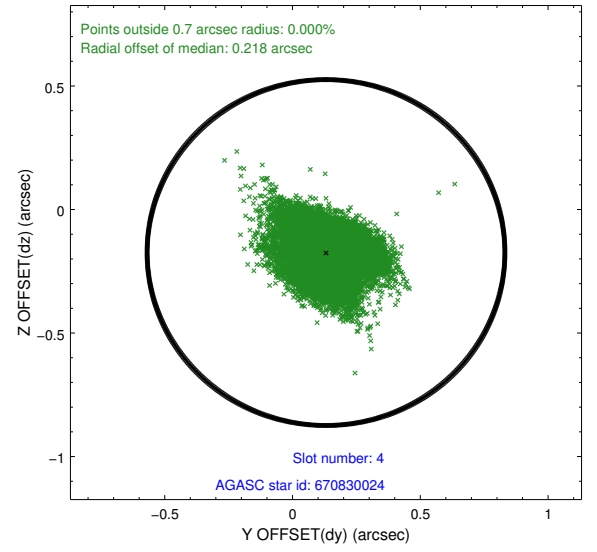
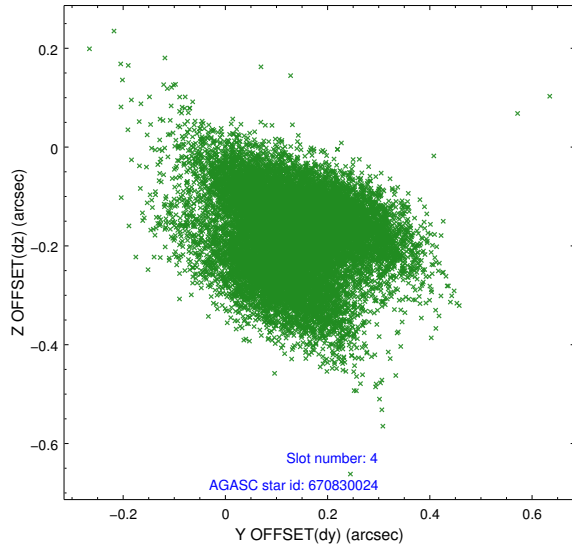
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.12	7356	1.000	-0.245	-0.208	0.046	0.073	0.000000	0.000000	-764.83	-1739
1	FID		ACIS-S-4	7.25	7356	1.000	0.672	0.169	0.061	0.158	0.000000	0.000000	2149.33	169
2	FID		ACIS-S-5	7.22	7353	1.000	-0.467	0.037	0.071	0.101	0.000000	0.000000	-1817.86	162
3	GUIDE	used	670829600	8.61	14700	1.000	0.234	0.409	0.091	0.155	282.227270	-3.031765	-26.76	-300
4	GUIDE	used	670830024	8.31	14705	1.000	0.131	-0.174	0.135	0.219	281.863539	-3.639841	2181.35	-1588
5	GUIDE	used	670830160	6.38	14712	1.000	-0.128	-0.047	0.115	0.169	282.842323	-3.317856	981.17	1919
6	GUIDE	used	670830248	7.19	14710	1.000	-0.226	0.104	0.100	0.157	282.772544	-3.261134	779.94	1666
7	GUIDE	used	670830256	8.17	14700	1.000	-0.011	-0.290	0.087	0.143	282.680944	-3.575346	1913.38	1348

2.4 Star Slots

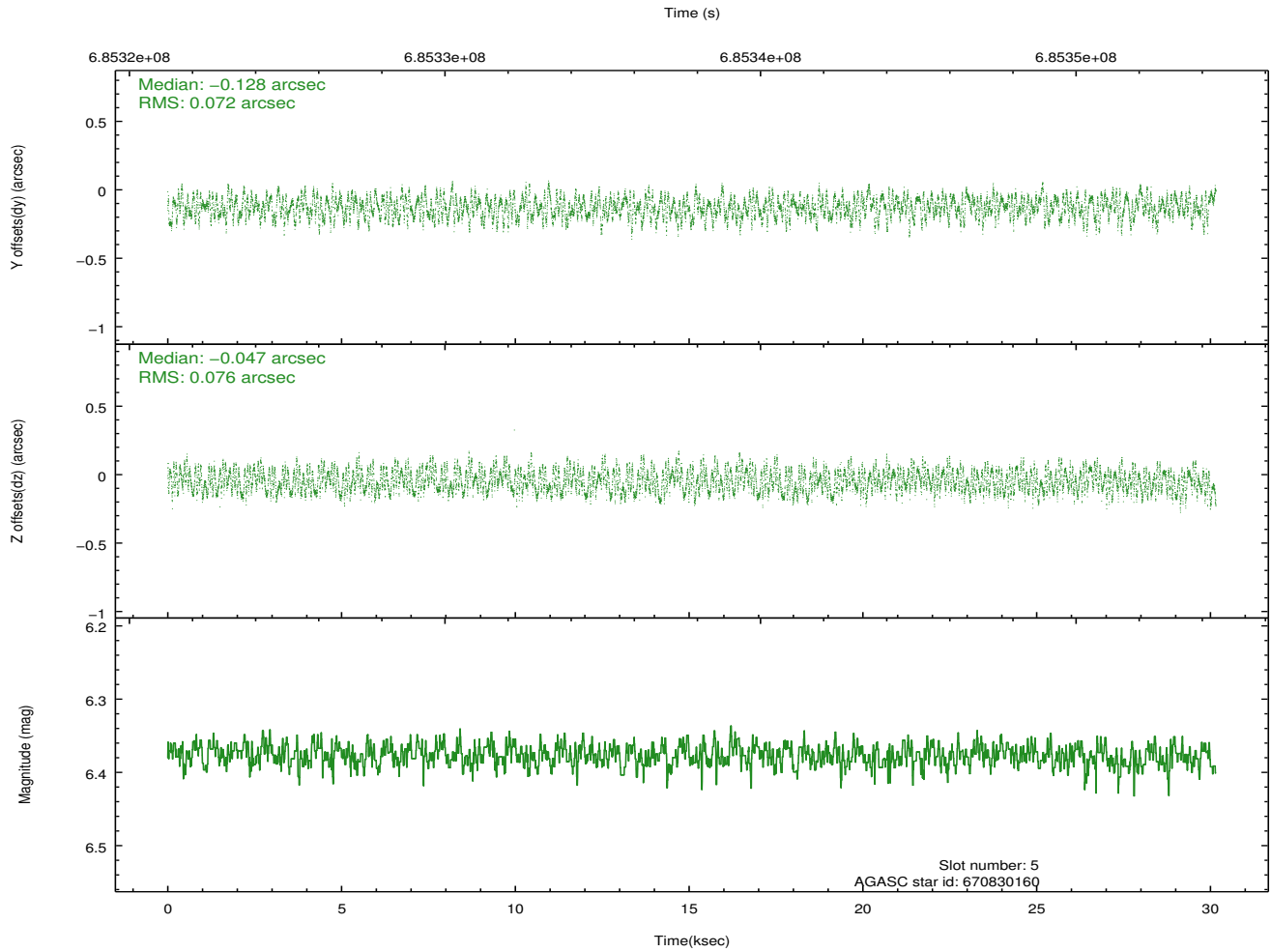
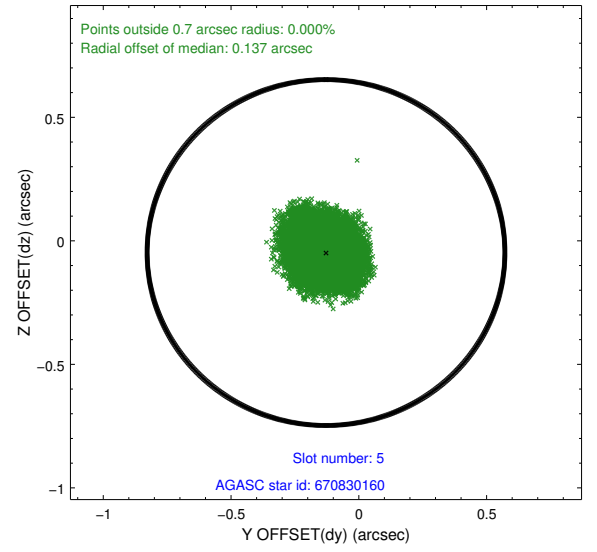
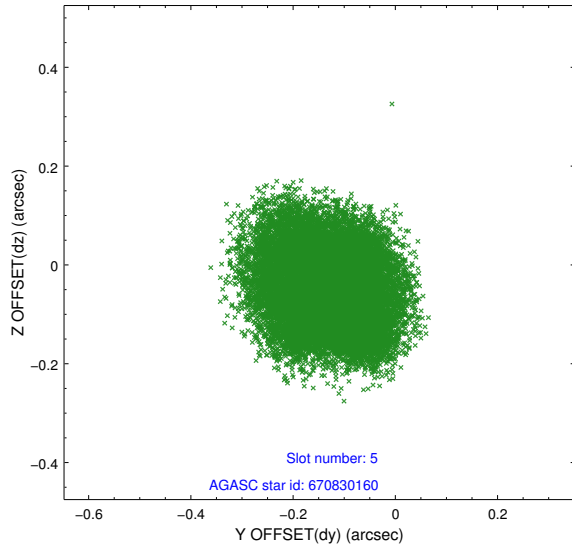
2.4.1 Slot 3



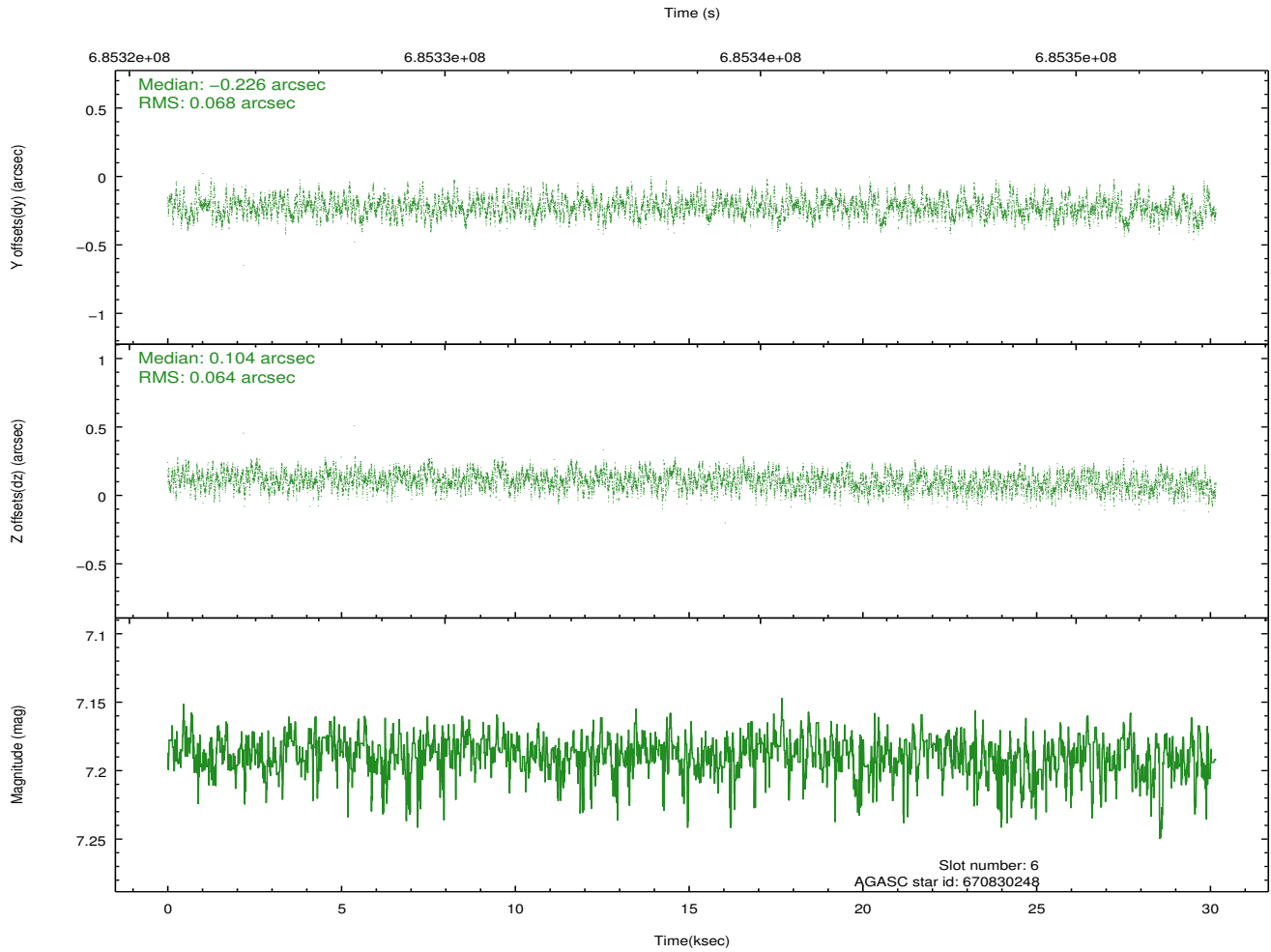
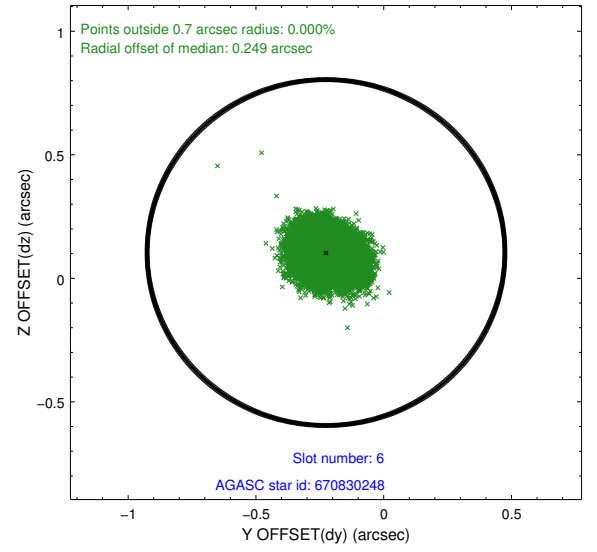
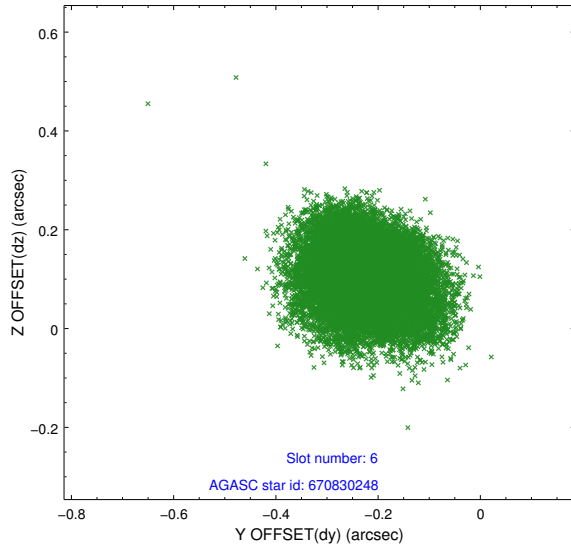
2.4.2 Slot 4



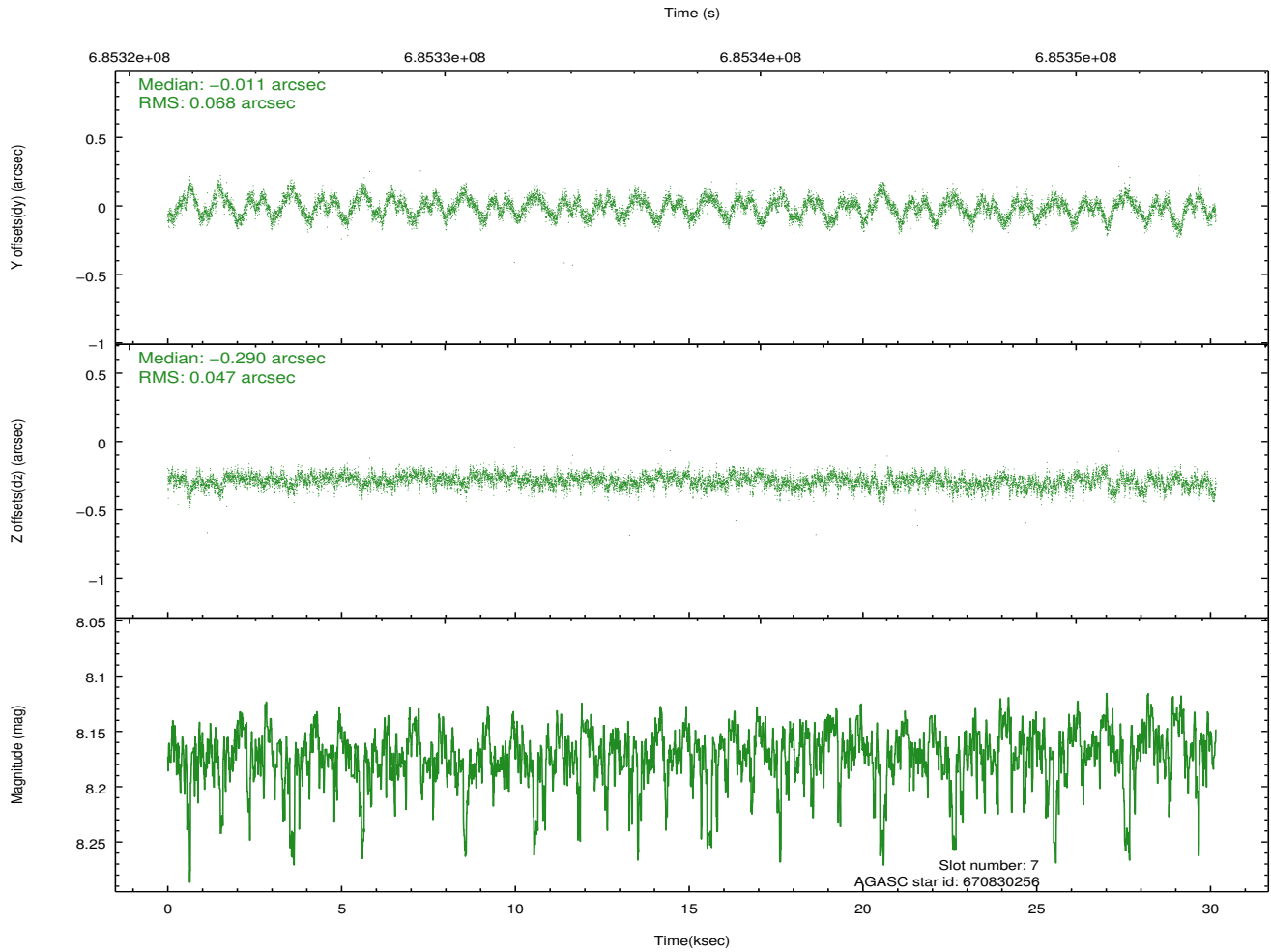
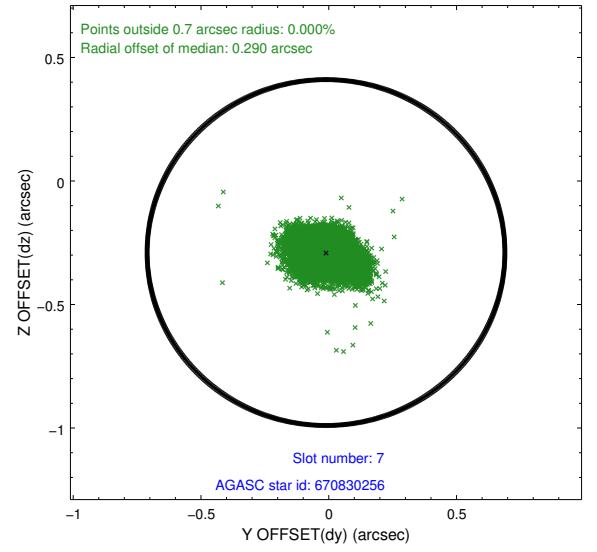
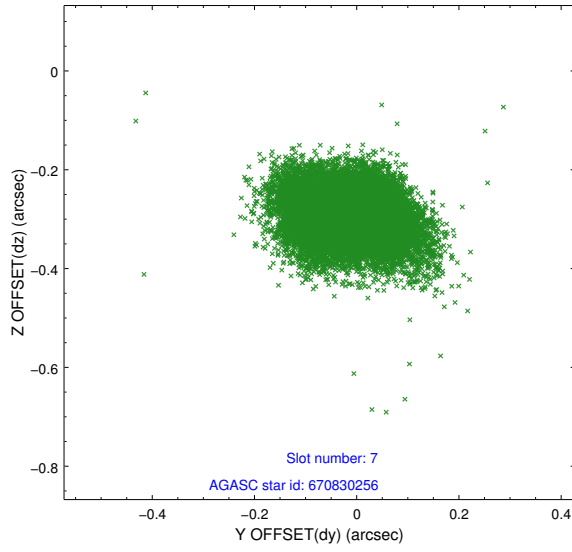
2.4.3 Slot 5



2.4.4 Slot 6

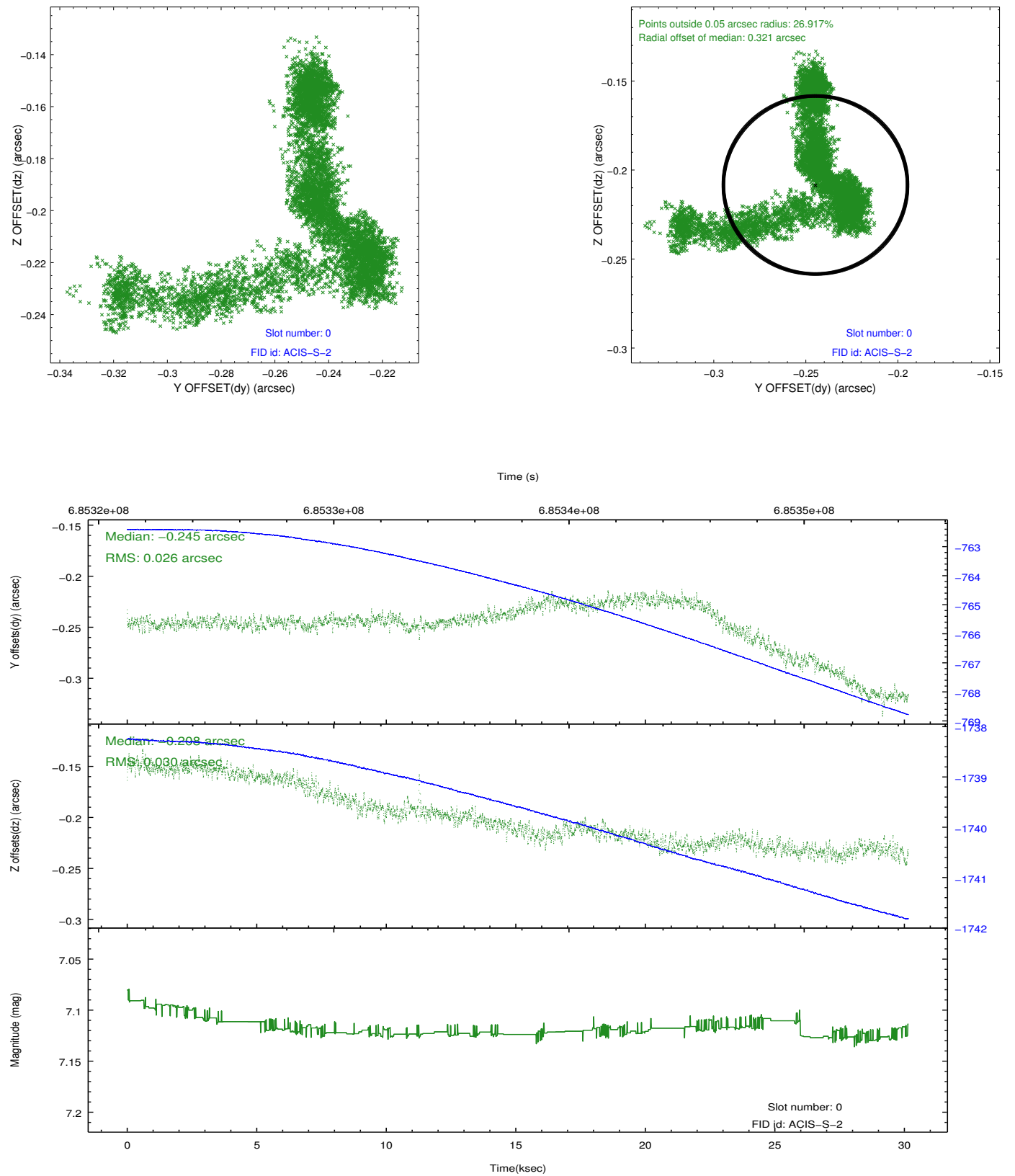


2.4.5 Slot 7

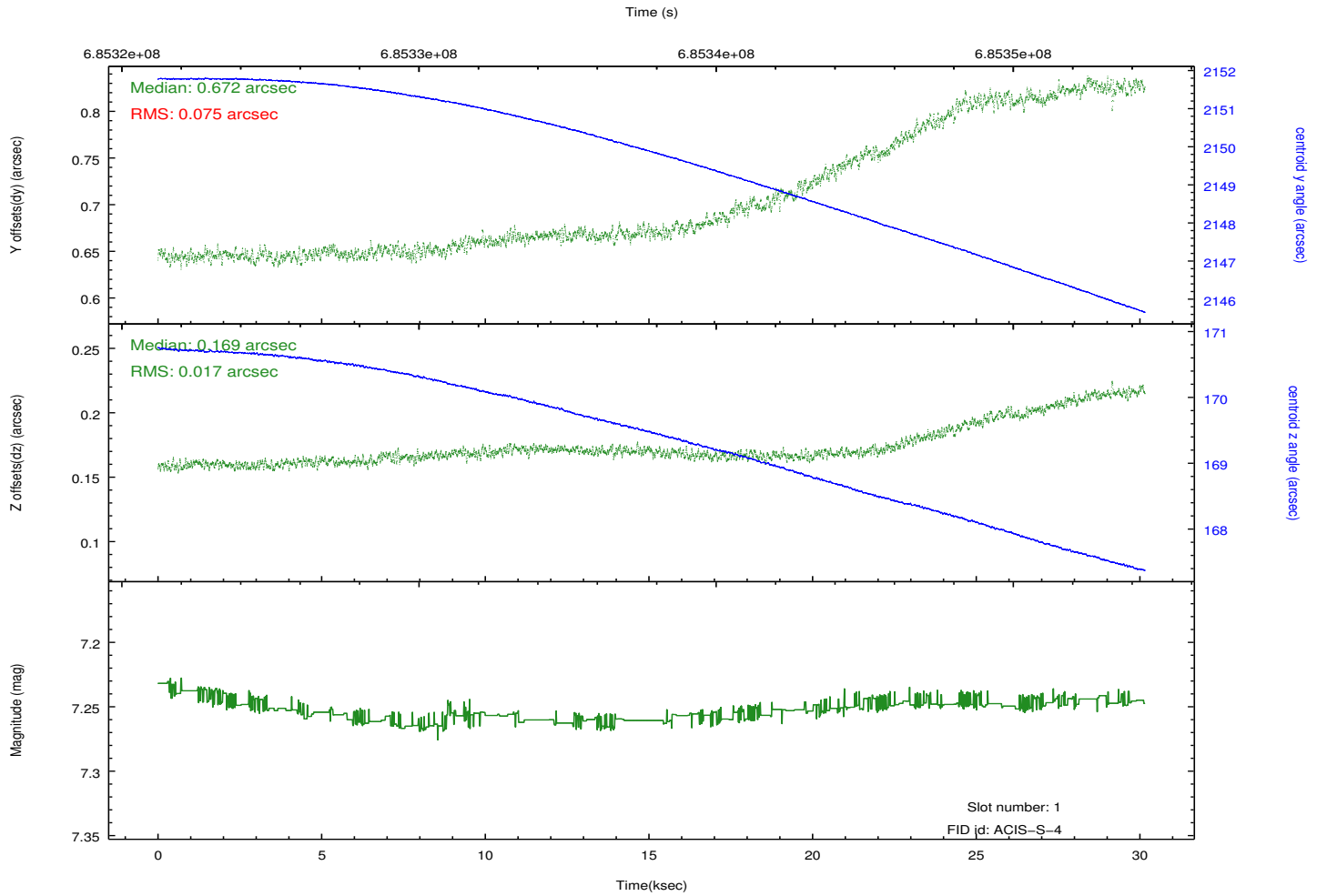
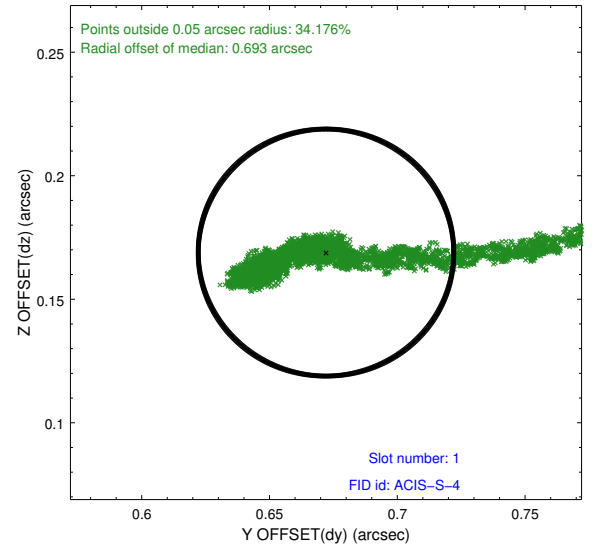
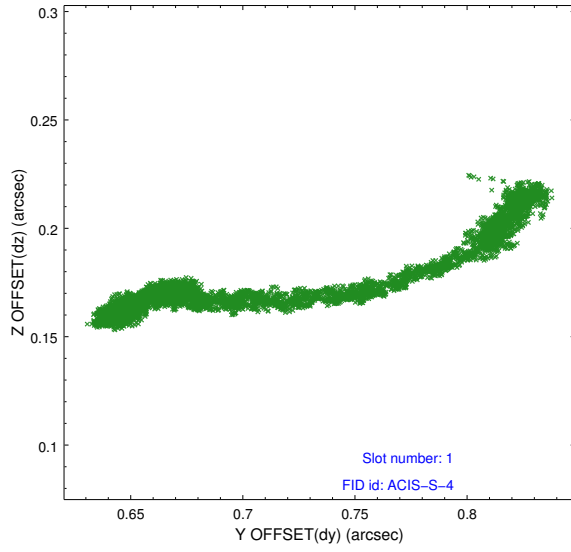


2.5 FID Slots

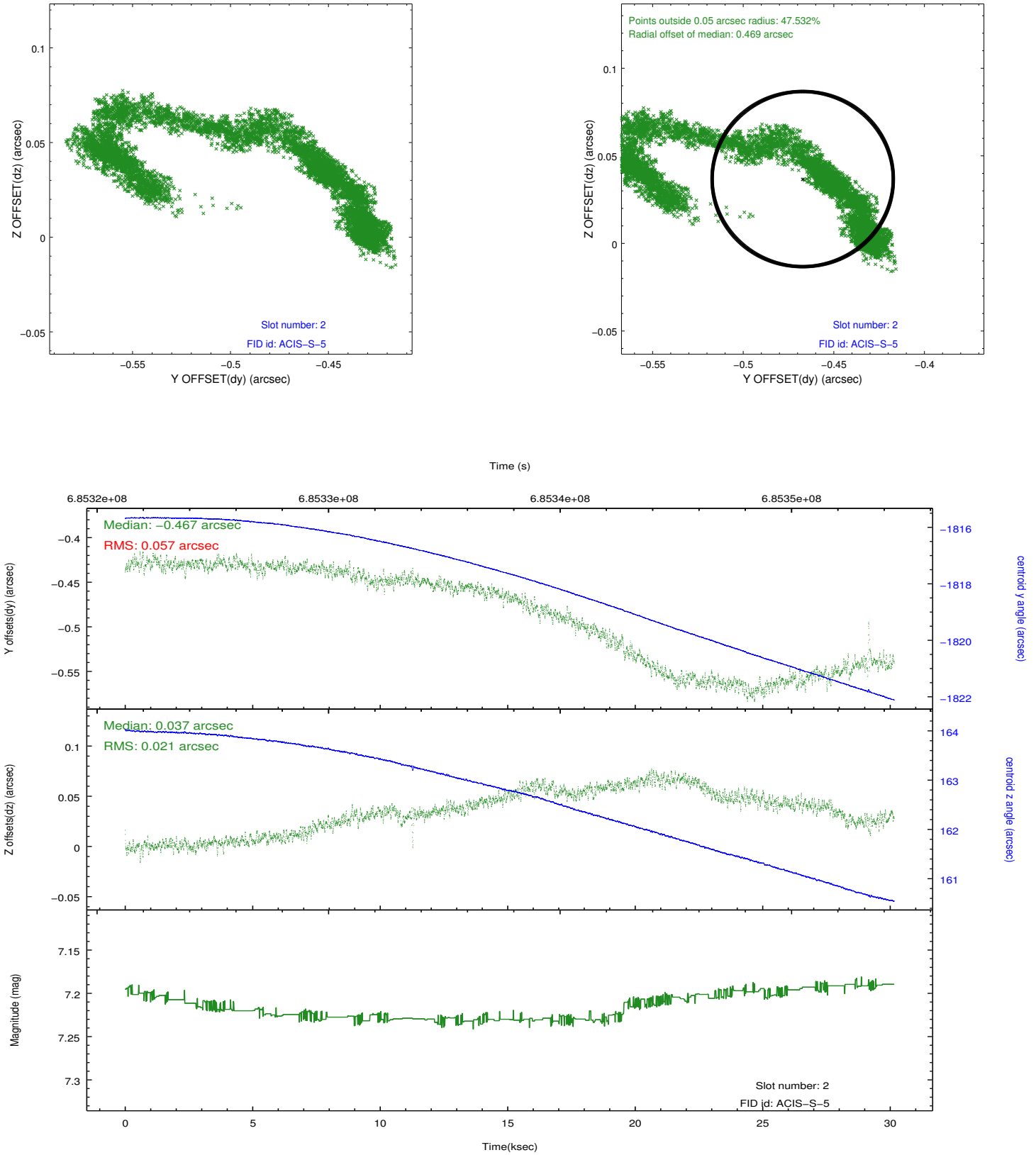
2.5.1 Slot 0



2.5.2 Slot 1

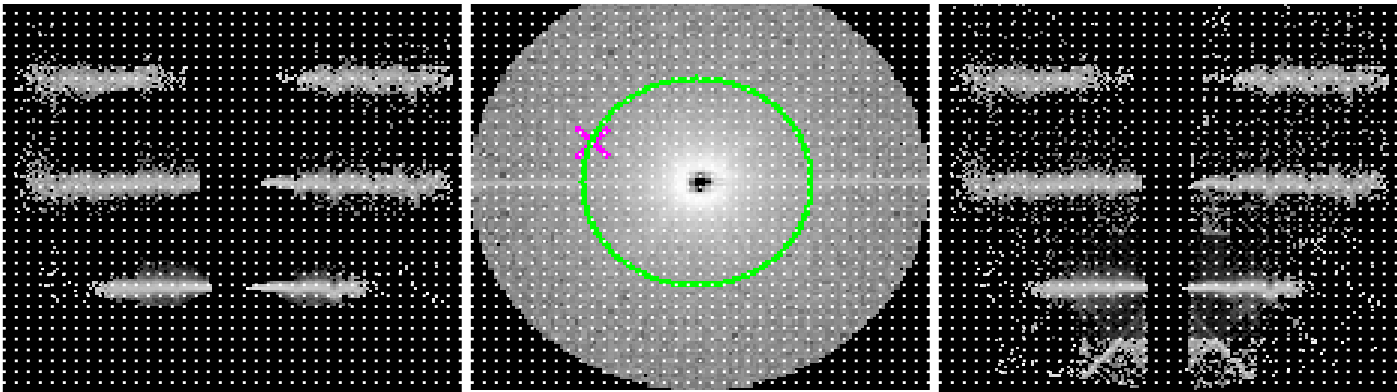


2.5.3 Slot 2



3 Gratings

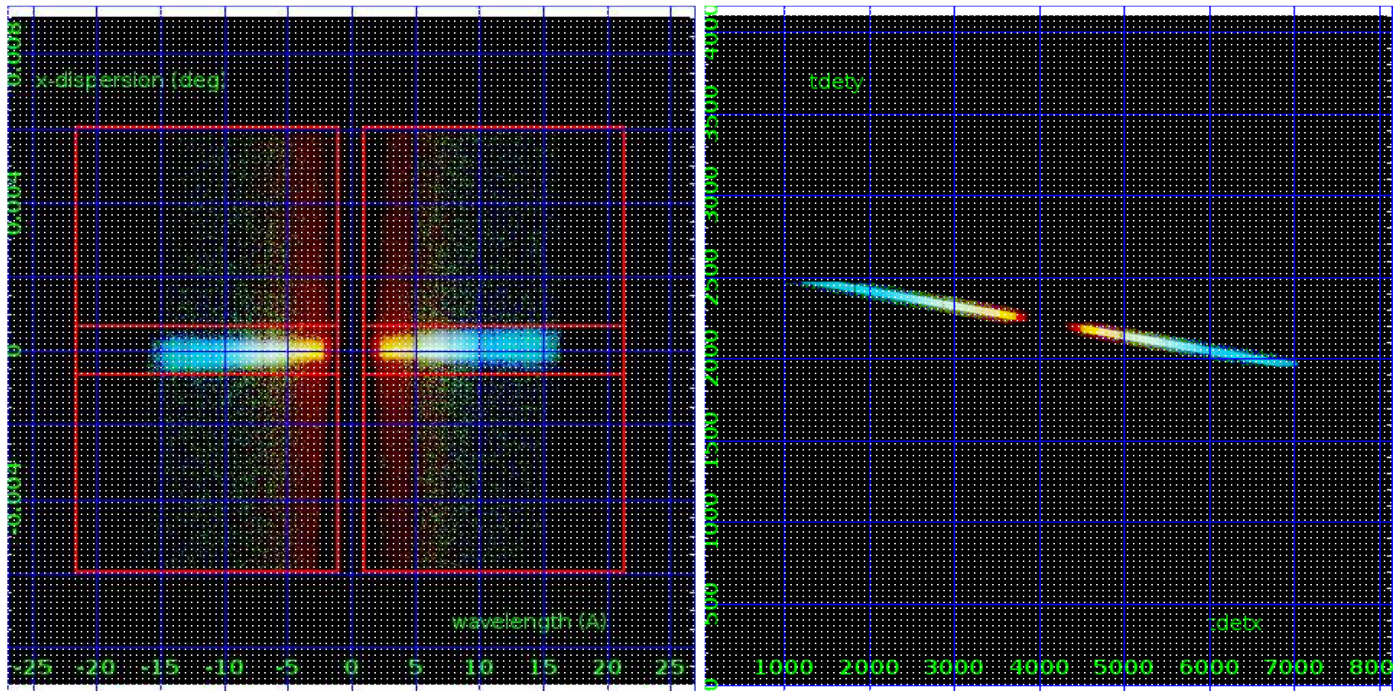
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

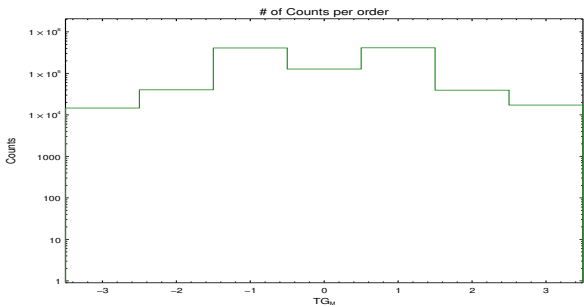
HEG Order Sort ALL

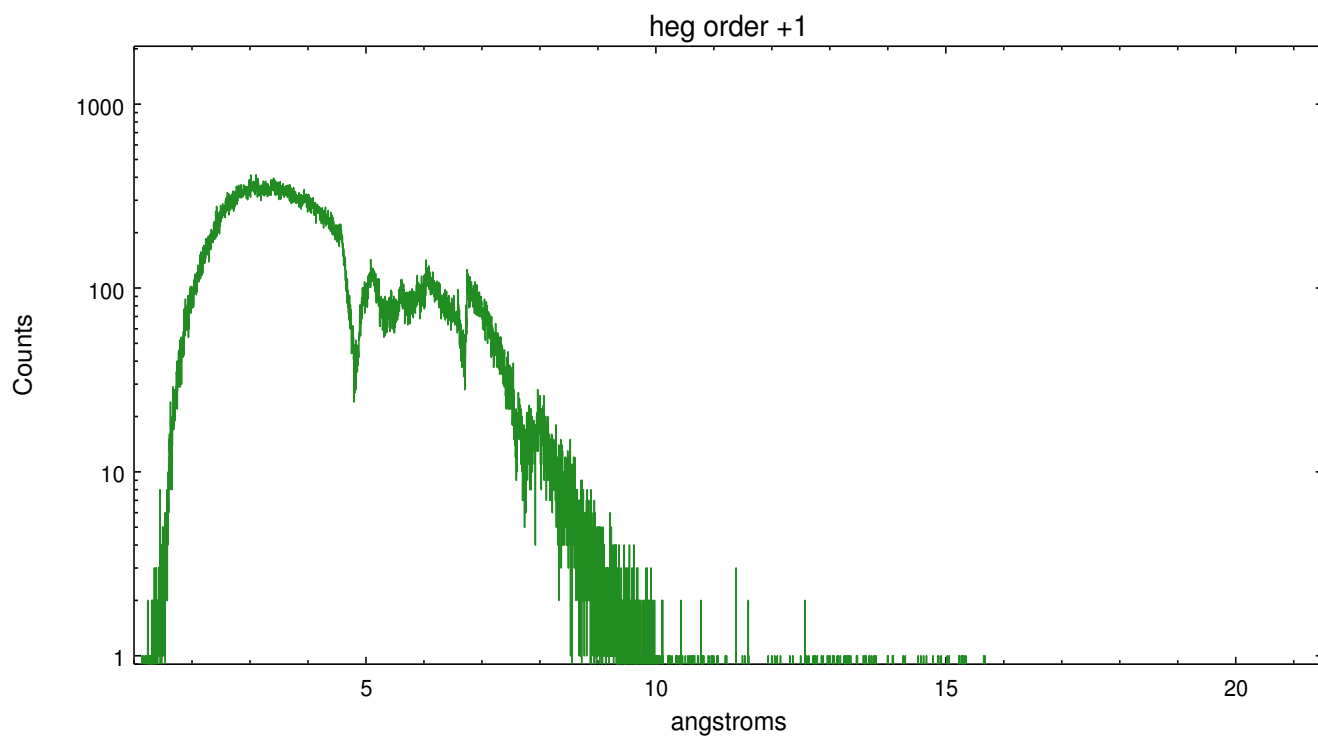
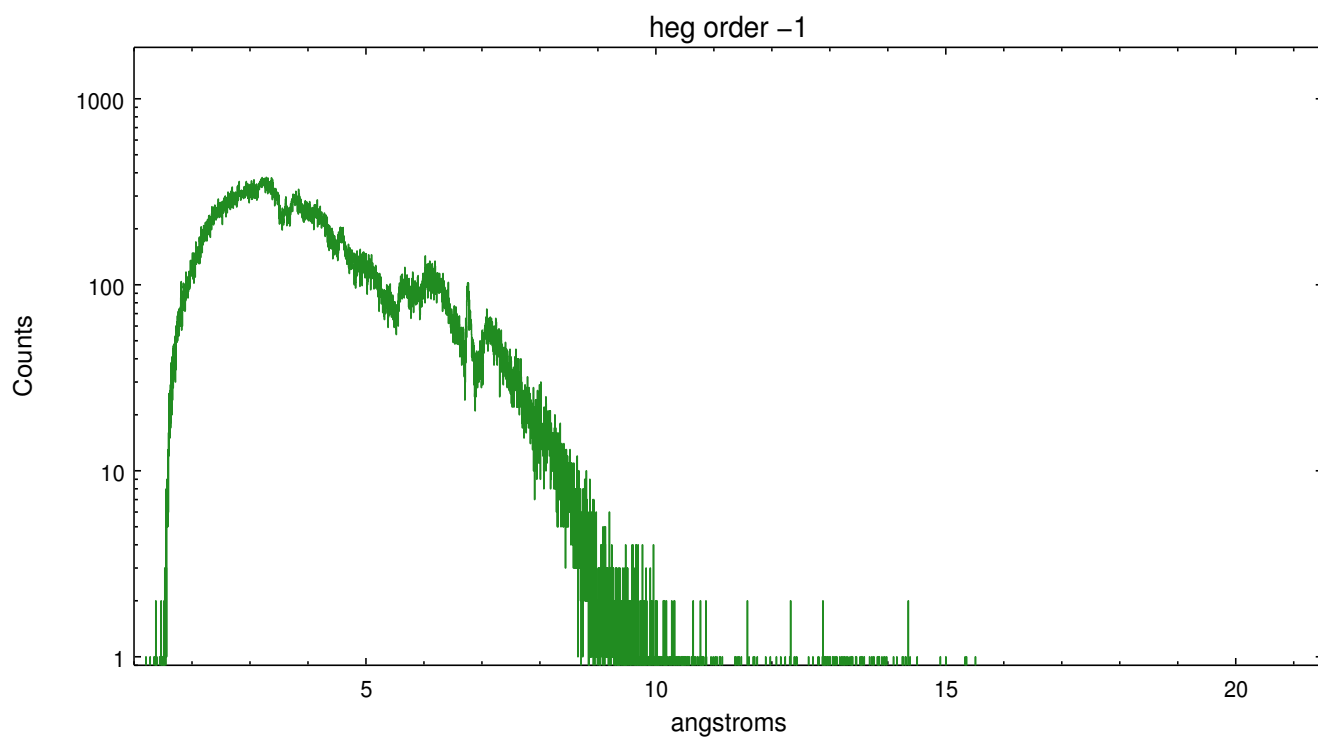


Spot Image HEG

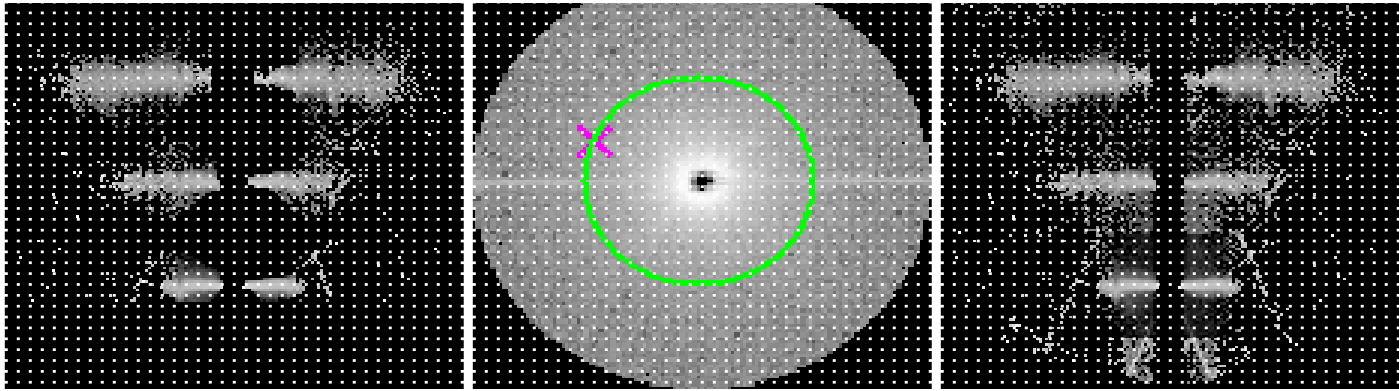
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	14599	40176	409236	127059	413084	39291	17218





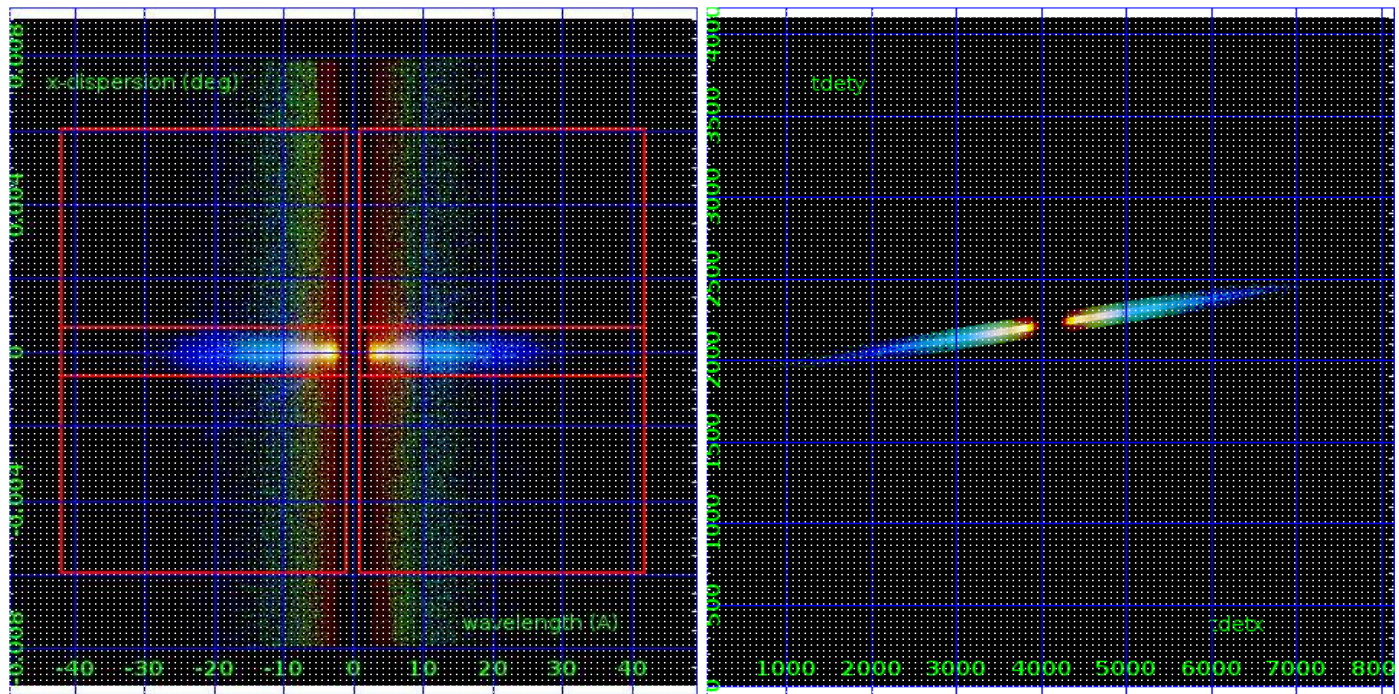
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

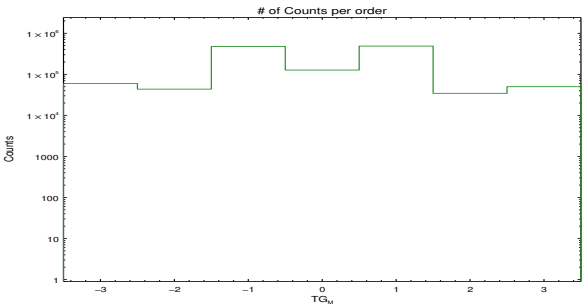
MEG Order Sort ALL

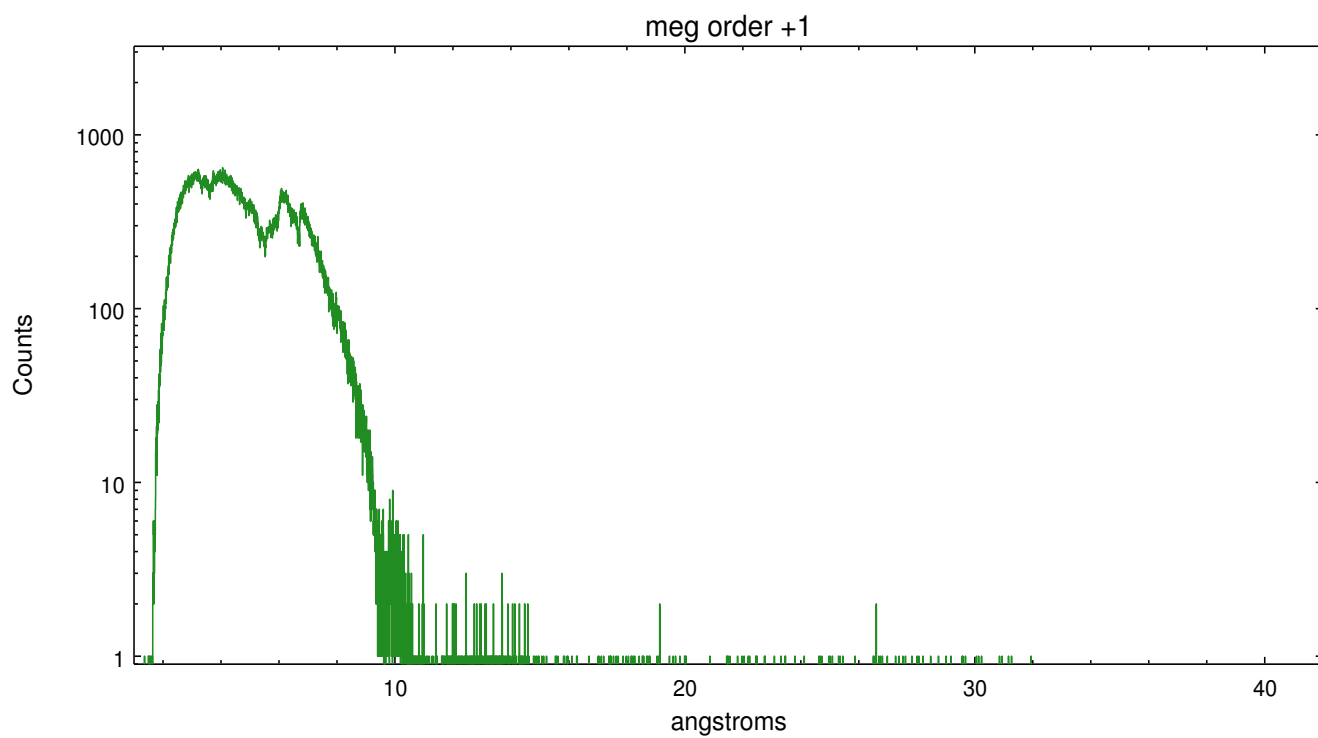
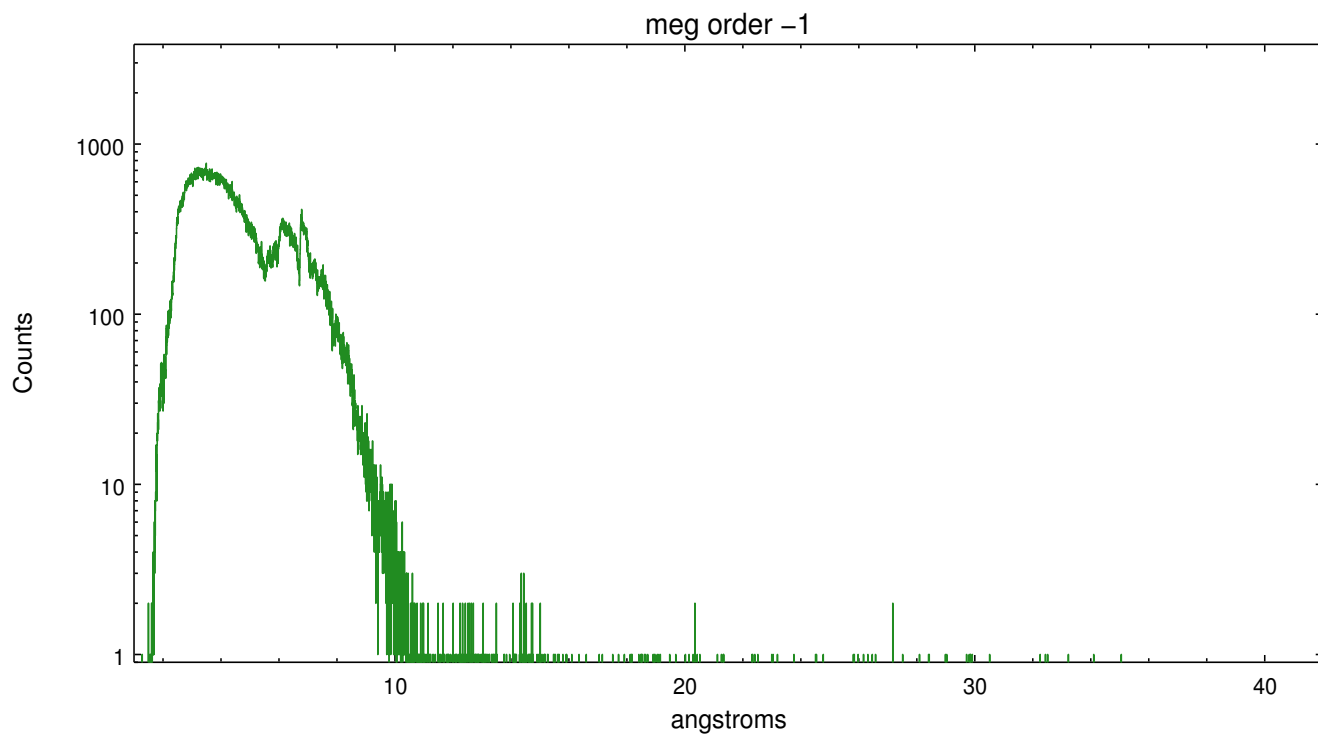


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	59524	43592	476318	127059	487180	34443	49962





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.09.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.068999203444

A.2 Comments

Comments for Obi 0

Fid in slot 1 has an RMS deviation > 0.050000 arcsec

Fid in slot 2 has an RMS deviation > 0.050000 arcsec

(Acceptable, as per aspect review.)