

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 23115 - L2 Version 1
Chandra X-Ray Center

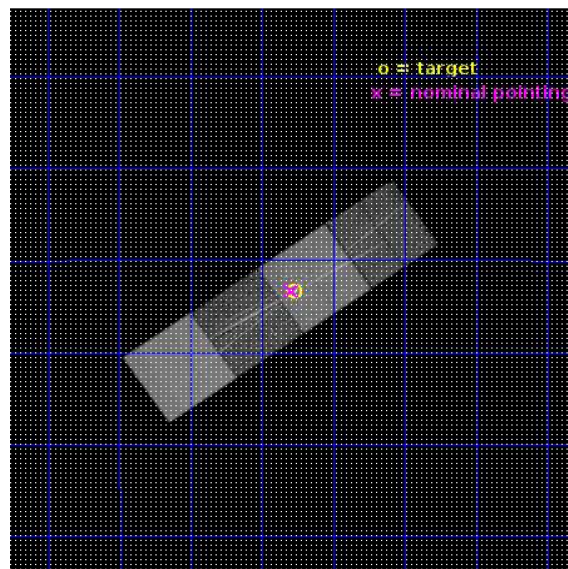
L2 Processing Date : Jan 5 2020

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

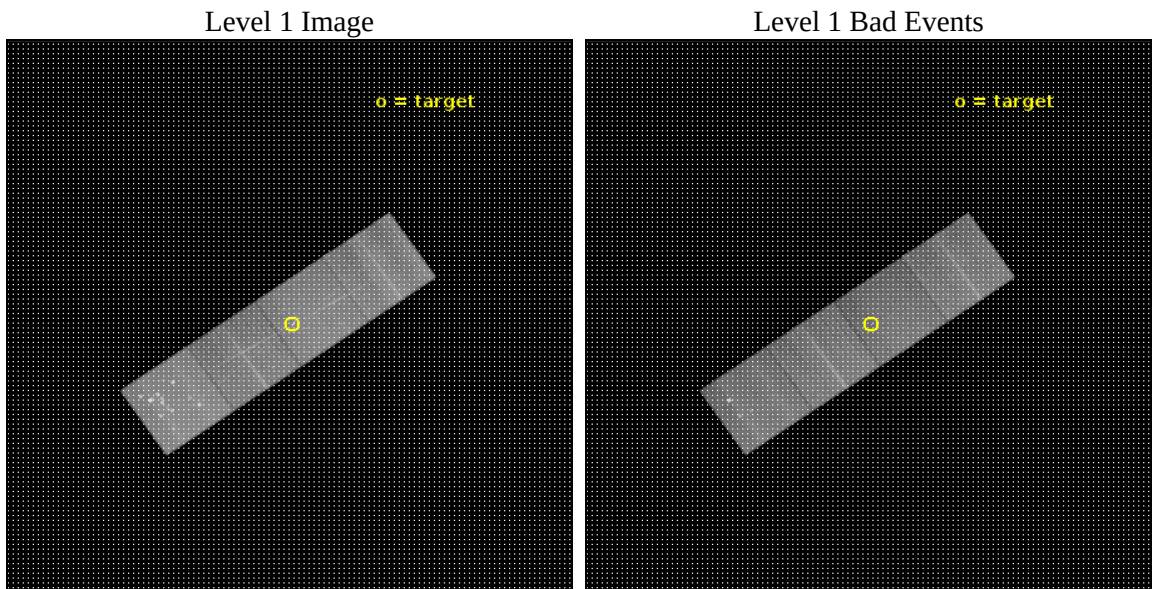
seq_num	201298	Sequence number
obs_id	23115	Observation id
title	THE TRUE NATURE OF X-RAYS FROM THE ORION TRAPEZIUM	Proposal title
observer	Norbert Schulz	Principal investigator
object	Orion Nebula Cluster	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.81875	Observer's specified target RA [deg]
dec_targ	-5.38975	Observer's specified target Dec [deg]
ra_nom	83.823922485124	Nominal RA [deg]
dec_nom	-5.3880972425986	Nominal Dec [deg]
roll_nom	325.4311676254	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30060.700231314	Sum of GTIs [s]
livetime	29667.935052426	Livetime [s]
ontime5	30060.700231314	Sum of GTIs [s]
ontime6	30060.700231314	Sum of GTIs [s]
ontime7	30060.700231314	Sum of GTIs [s]
ontime8	30060.700231314	Sum of GTIs [s]
l2events	408269	Number of level 2 events



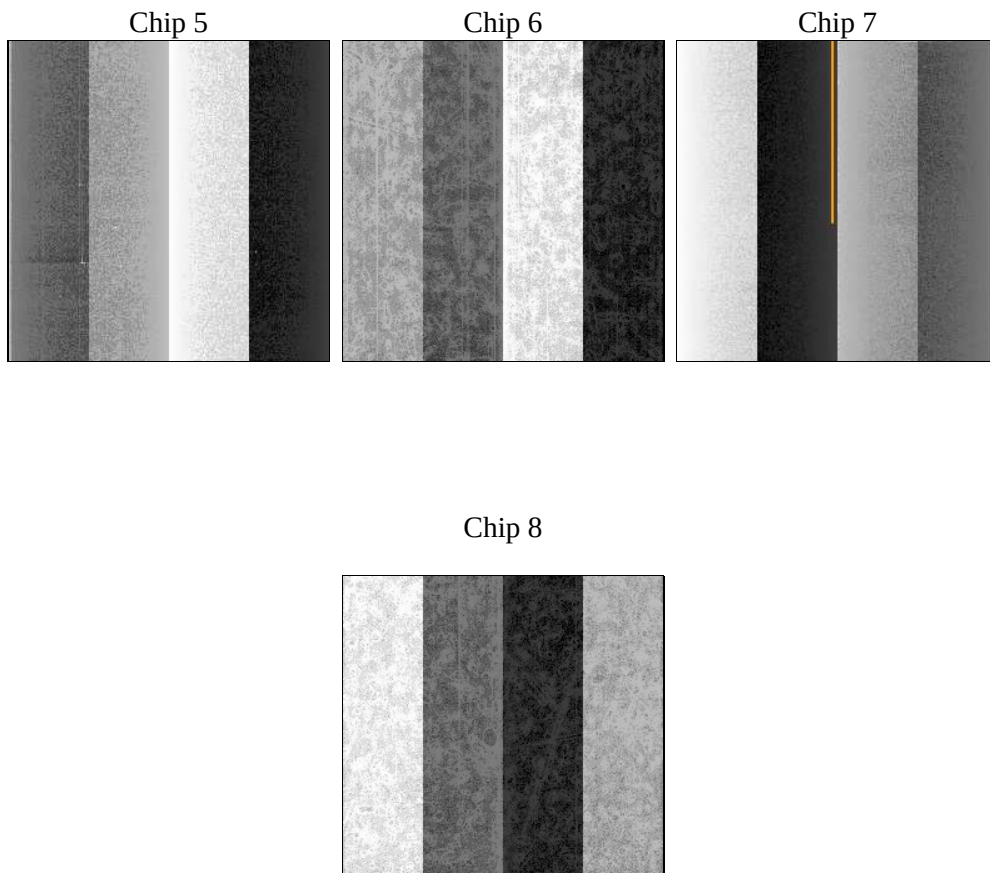
2 OBI

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	10.8.1	Processing system revision	ontime	30060.700231314	Sum of GTIs [s]
caldsver	4.8.4.2	 	ontime5	30060.700231314	Sum of GTIs [s]
date	2020-01-05T04:39:01	Date and time of file creation	ontime6	30060.700231314	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	30060.700231314	Sum of GTIs [s]
			ontime8	30060.700231314	Sum of GTIs [s]
			l1events	1357067	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4135.48, 4084.57)	src1a sky pixel position

2.1.4 Events

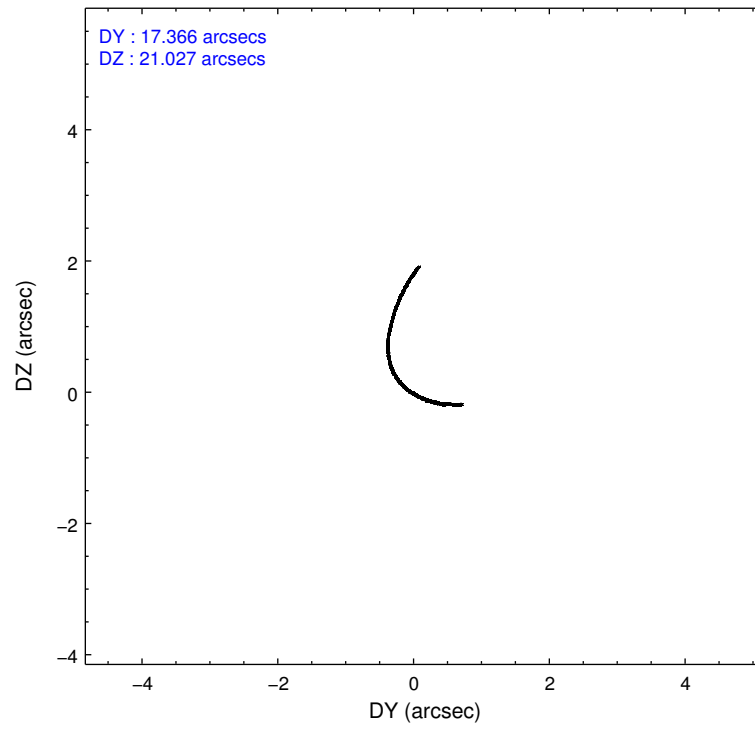
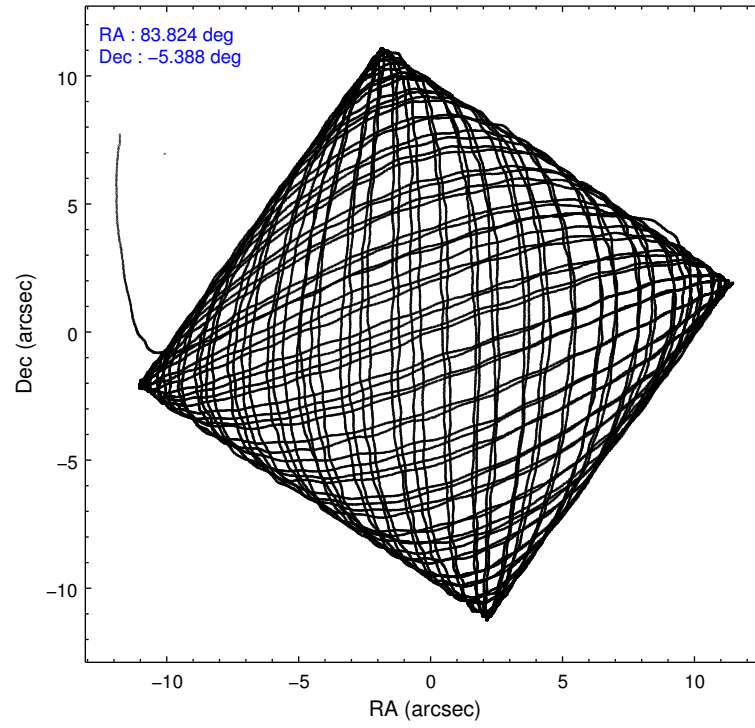
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	439336	263851	340335	313545
rejected events	210799	219734	173635	226323
rejected %	47%	83%	51%	72%

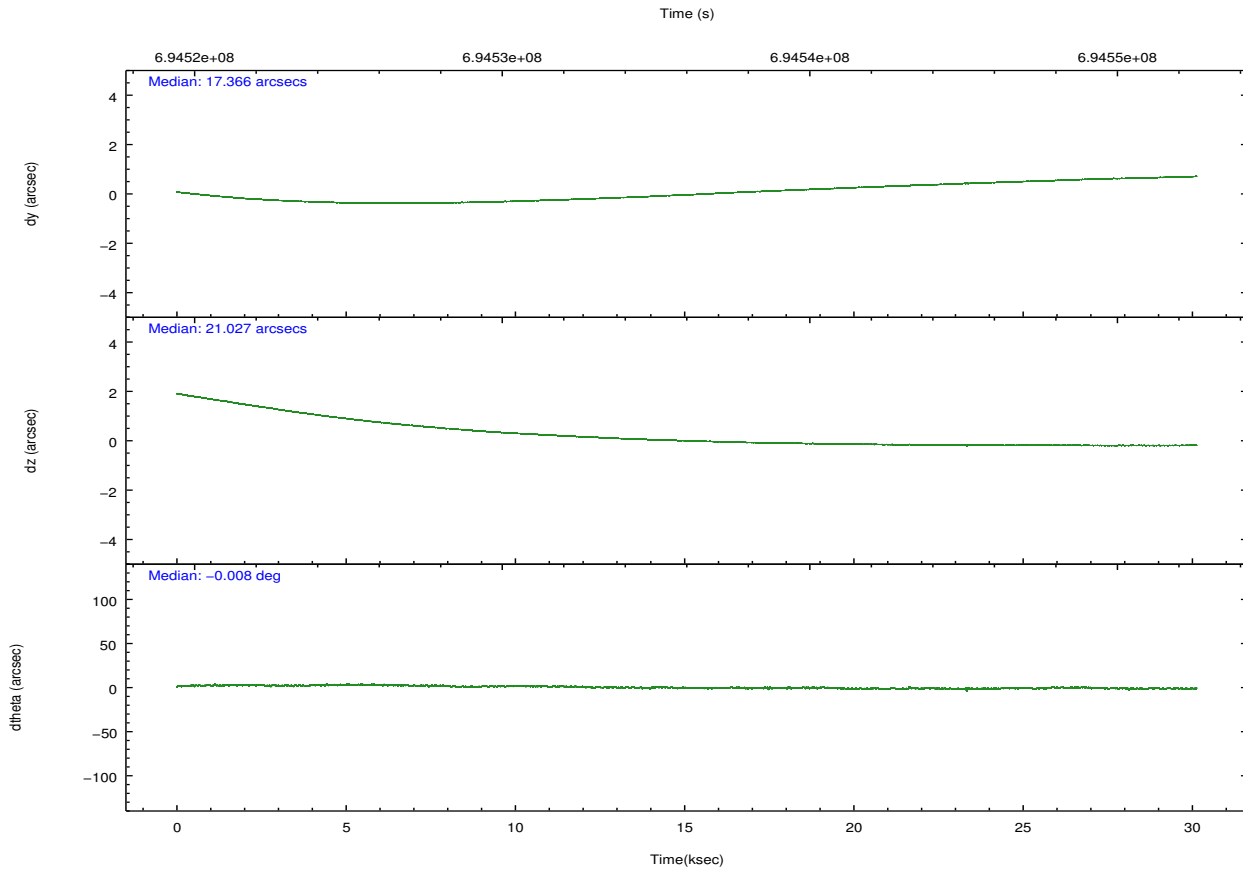
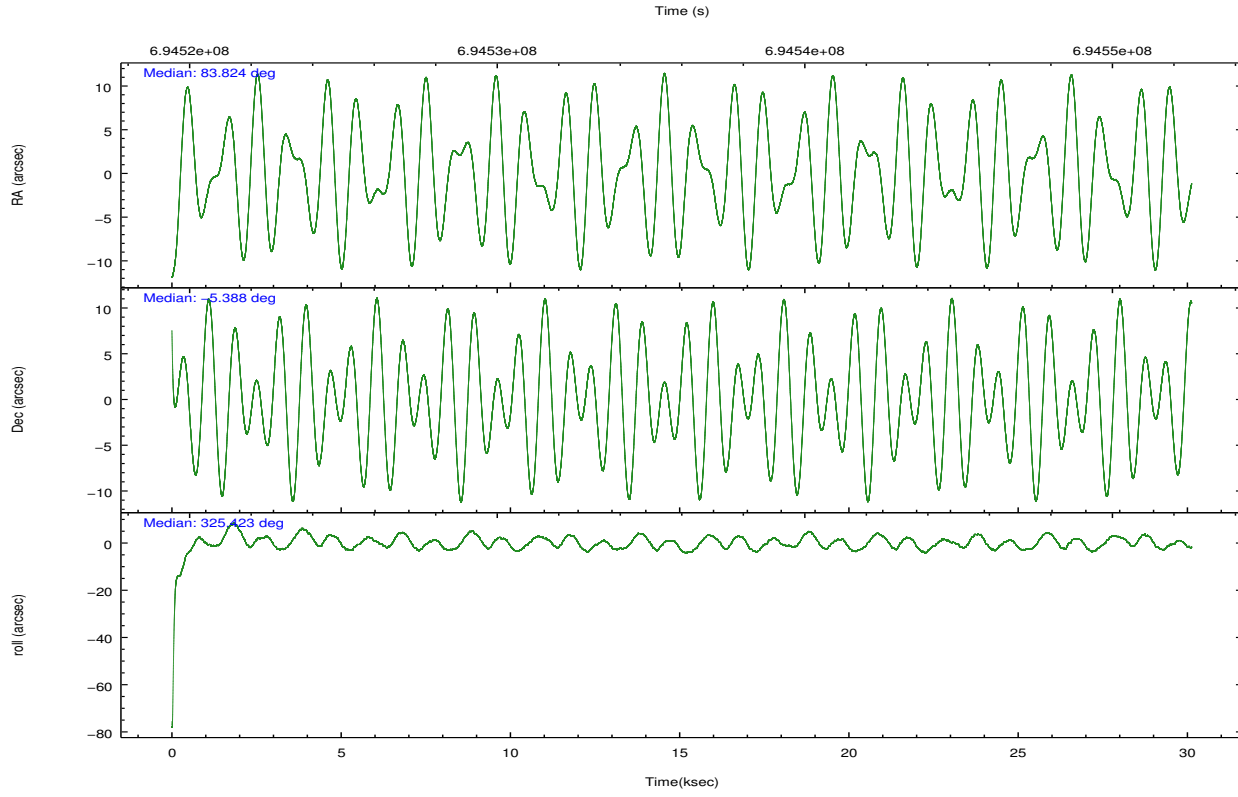
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	48876	21152	18407	28353
	11%	8%	5%	9%
grade 1 events	1173	147	601	285
	0%	0%	0%	0%
grade 2 events	67217	9787	37148	20460
	15%	3%	10%	6%
grade 3 events	5726	2856	13690	8127
	1%	1%	4%	2%
grade 4 events	5139	2658	13468	7679
	1%	1%	3%	2%
grade 5 events	25349	9903	29365	15854
	5%	3%	8%	5%
grade 6 events	101638	7676	84033	22644
	23%	2%	24%	7%
grade 7 events	184218	209672	143623	210143
	41%	79%	42%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	83.796420	83.8239224851238	CCD I2 on	N	N
[deg] Pointing Dec	-5.386286	-5.388097242598551	CCD I3 on	N	N
[deg] Pointing Roll	325.271986	325.4311676253967	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	694521080.184000	694519390.19841	CCD S5 on	O2	N
Observation start date	2020-01-04T10:30:11	2020-01-04T10:03:10	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	694551080.184000	694552048.75038	On-chip summing requested	N	N
Observation end date	2020-01-04T18:50:11	2020-01-04T19:07:28	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



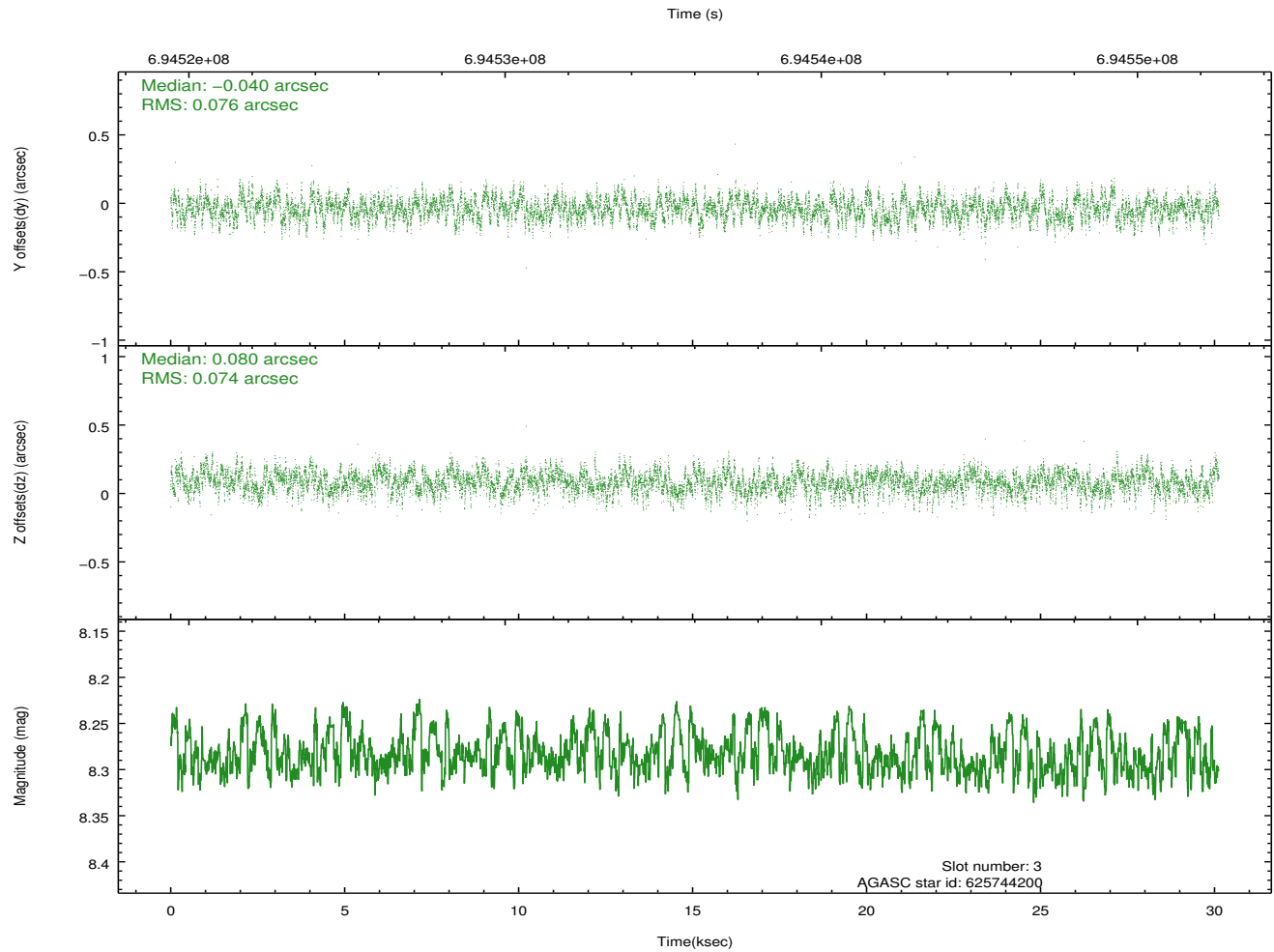
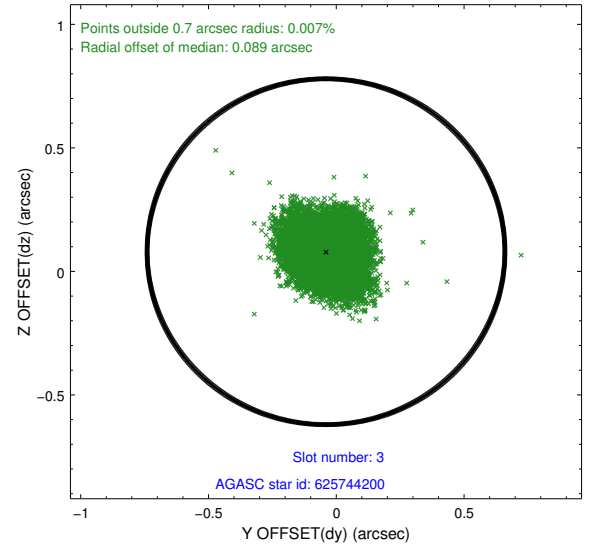
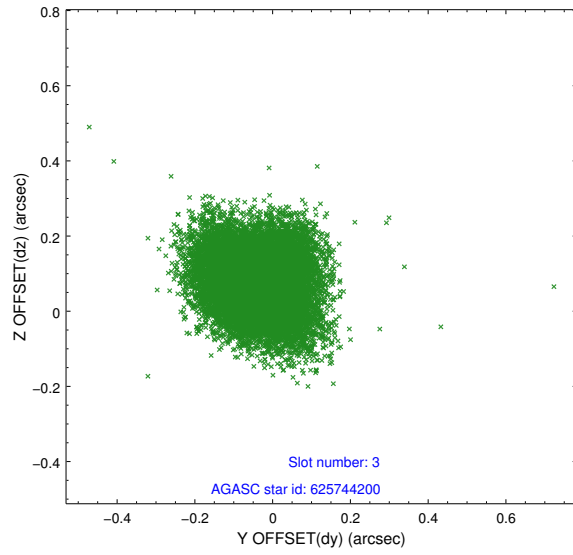


Slot Statistics

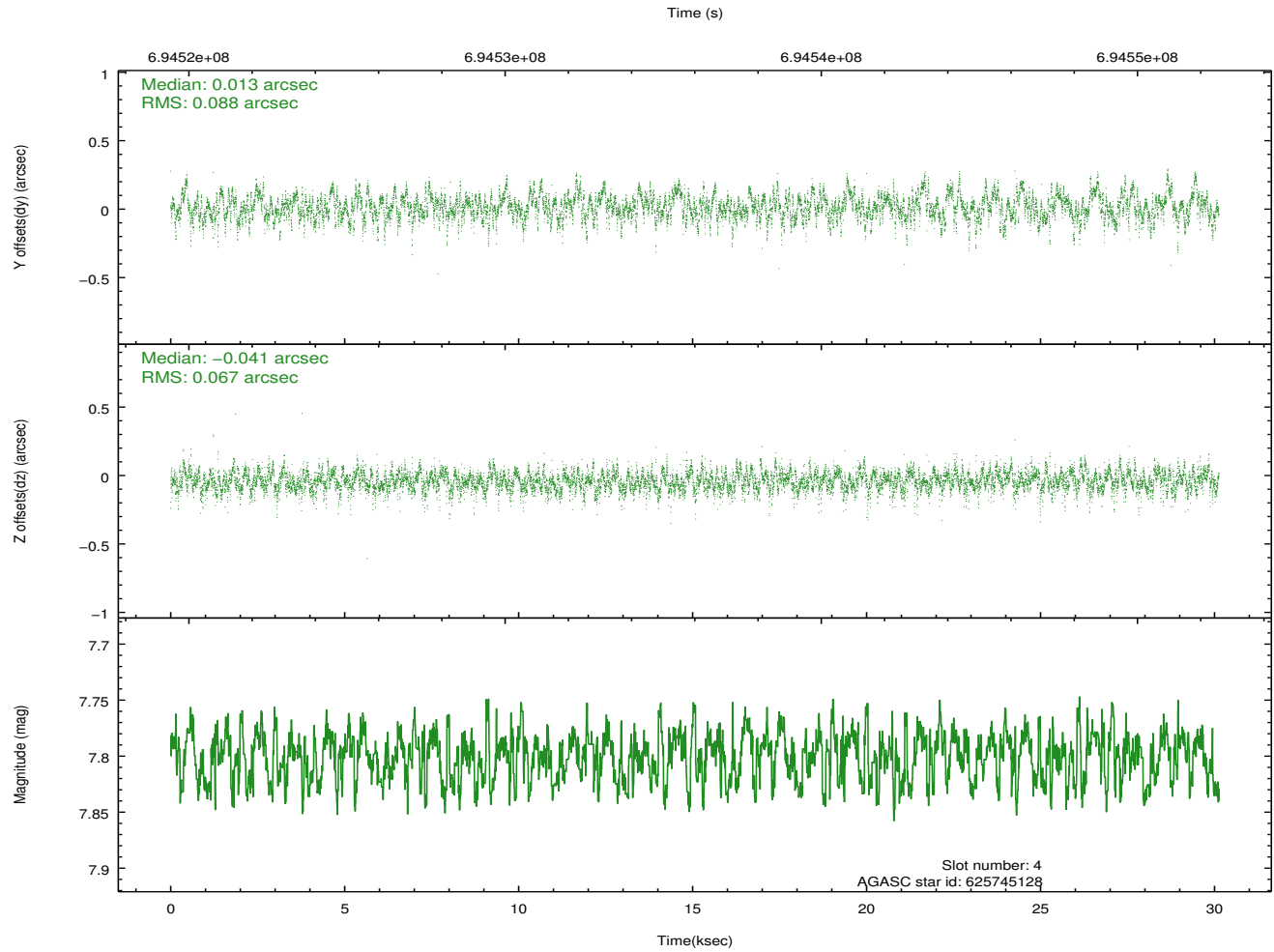
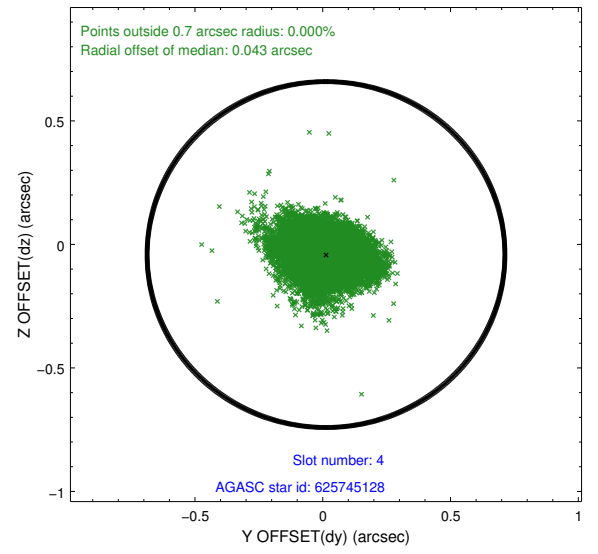
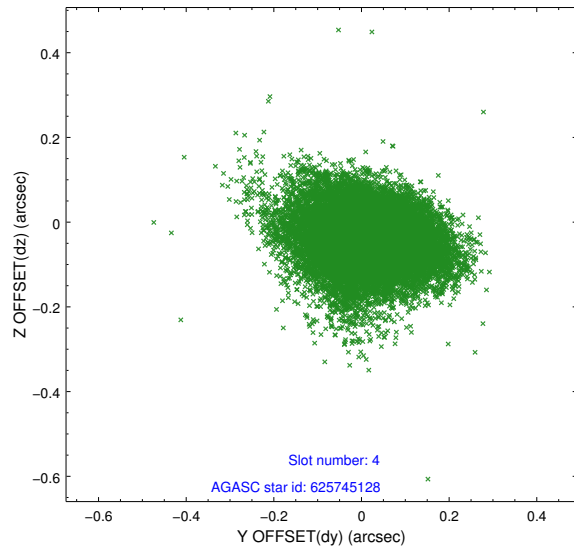
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.24	7346	1.000	0.255	-0.168	0.029	0.072	0.000000	0.000000	925.90	-1738
1	FID		ACIS-S-5	7.23	7349	1.000	-0.555	0.107	0.015	0.027	0.000000	0.000000	-1823.95	159
2	FID		ACIS-S-6	7.42	7348	1.000	0.279	0.074	0.022	0.074	0.000000	0.000000	391.29	803
3	GUIDE	used	625744200	8.29	14684	1.000	-0.040	0.080	0.112	0.183	83.695760	-5.570729	82.50	-750
4	GUIDE	used	625745128	7.80	14692	1.000	0.013	-0.041	0.116	0.193	83.769930	-4.731835	-1420.03	1882
5	GUIDE	used	625745136	7.20	14691	1.000	-0.127	0.128	0.116	0.190	83.600341	-4.804339	-1771.29	1321
6	GUIDE	used	626272880	7.67	14690	1.000	-0.003	-0.040	0.119	0.190	83.815609	-6.032748	1383.02	-1872
7	GUIDE	used	626272976	7.96	14683	1.000	0.153	-0.116	0.104	0.174	83.795875	-5.926912	1108.22	-1600

2.4 Star Slots

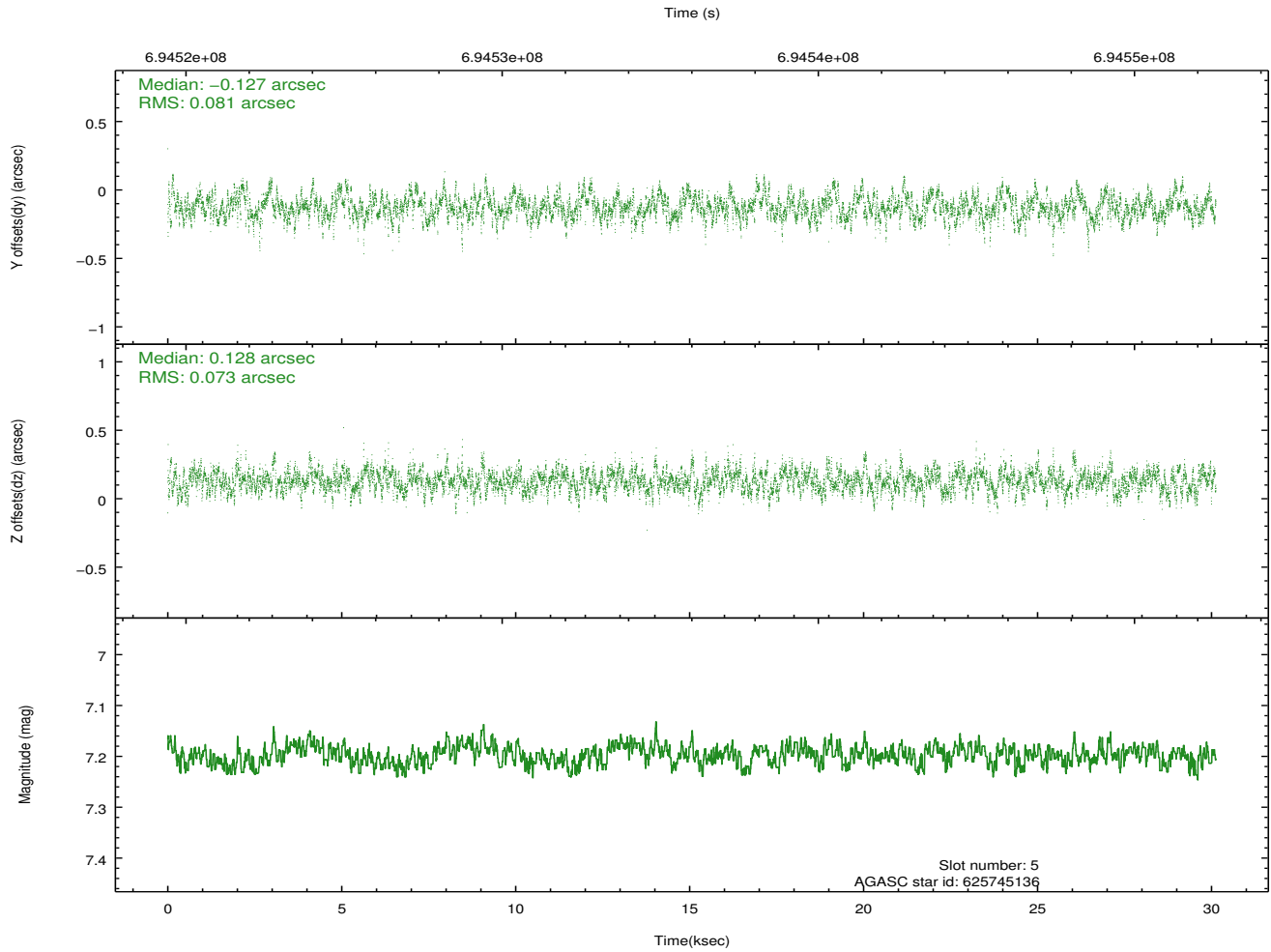
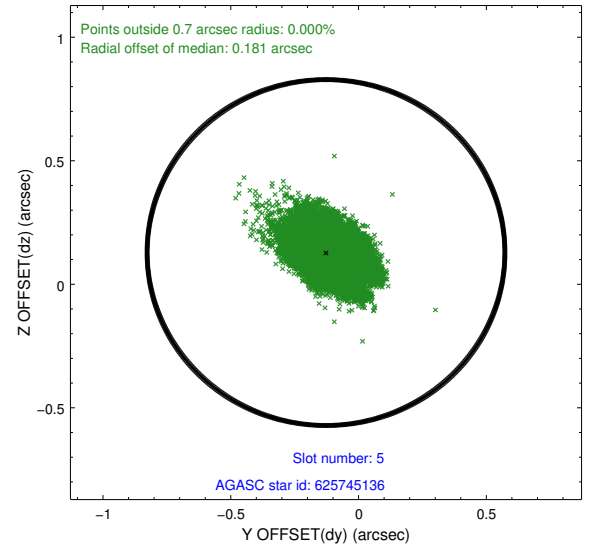
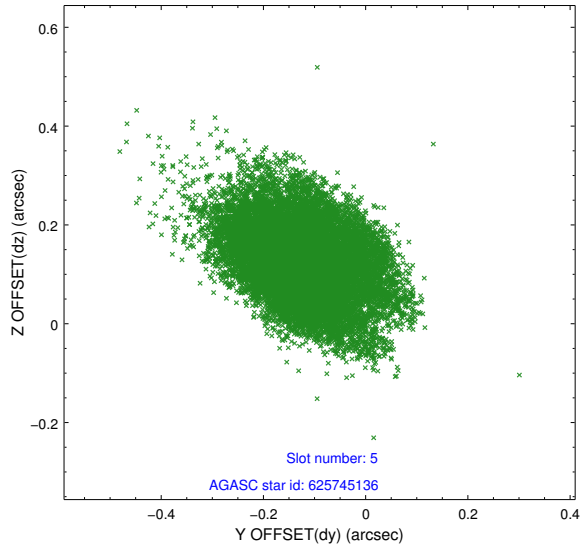
2.4.1 Slot 3



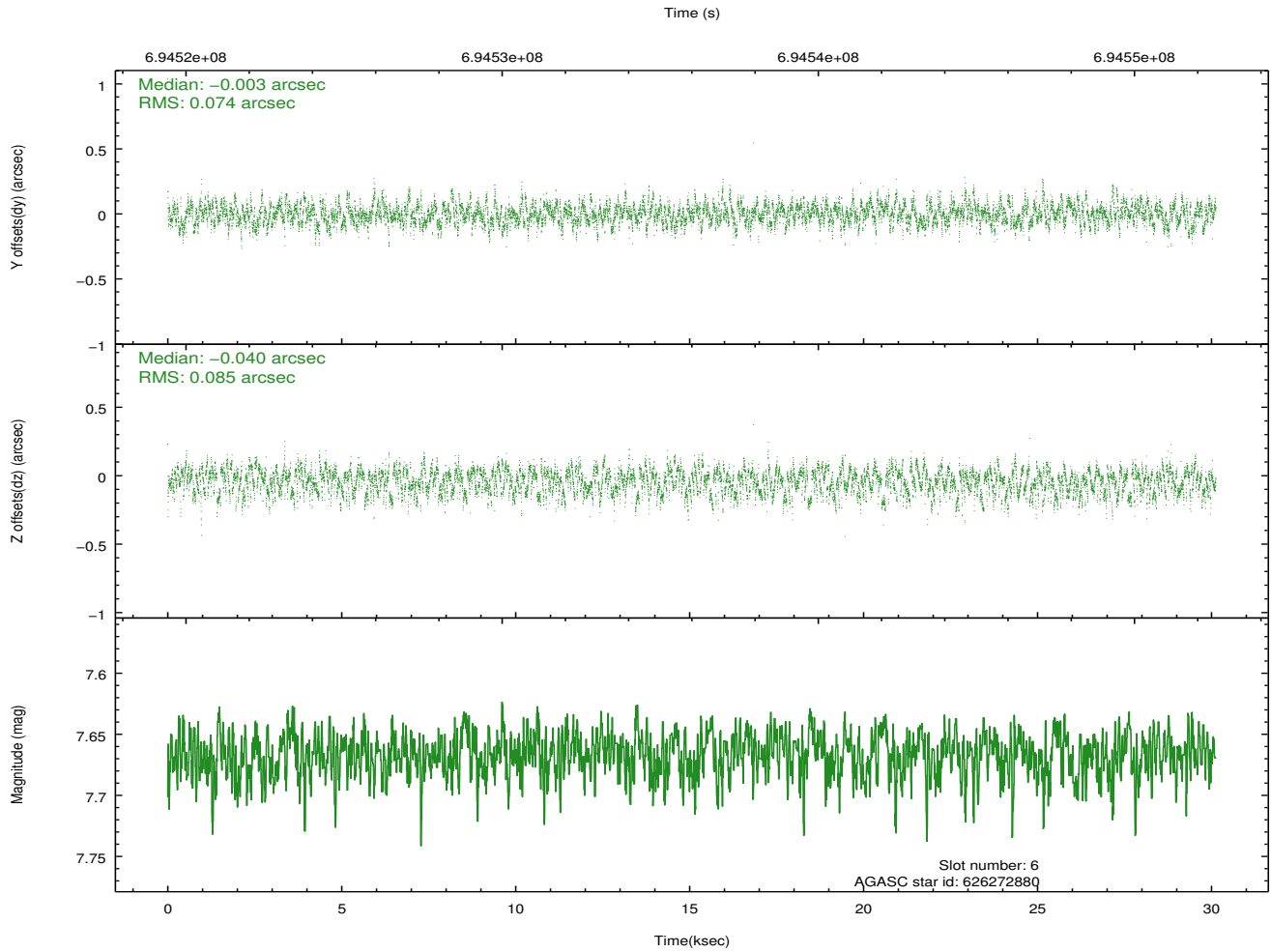
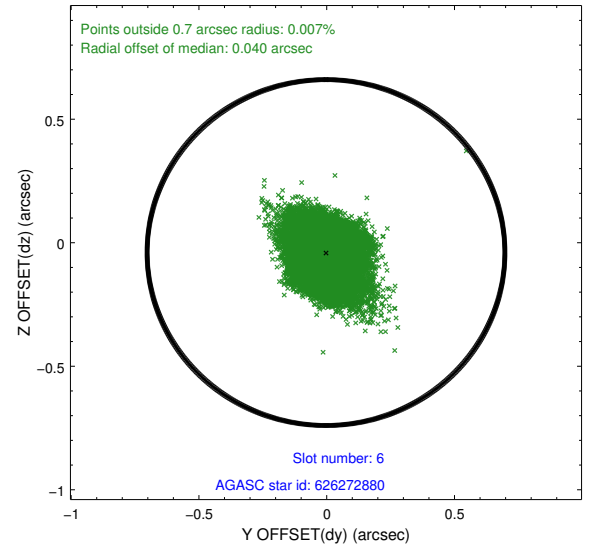
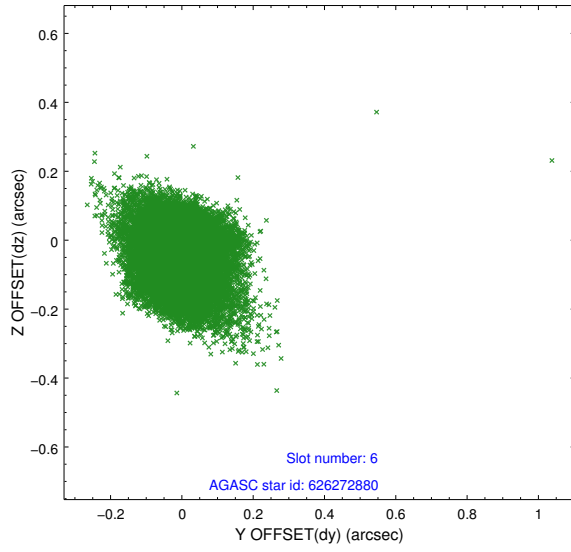
2.4.2 Slot 4



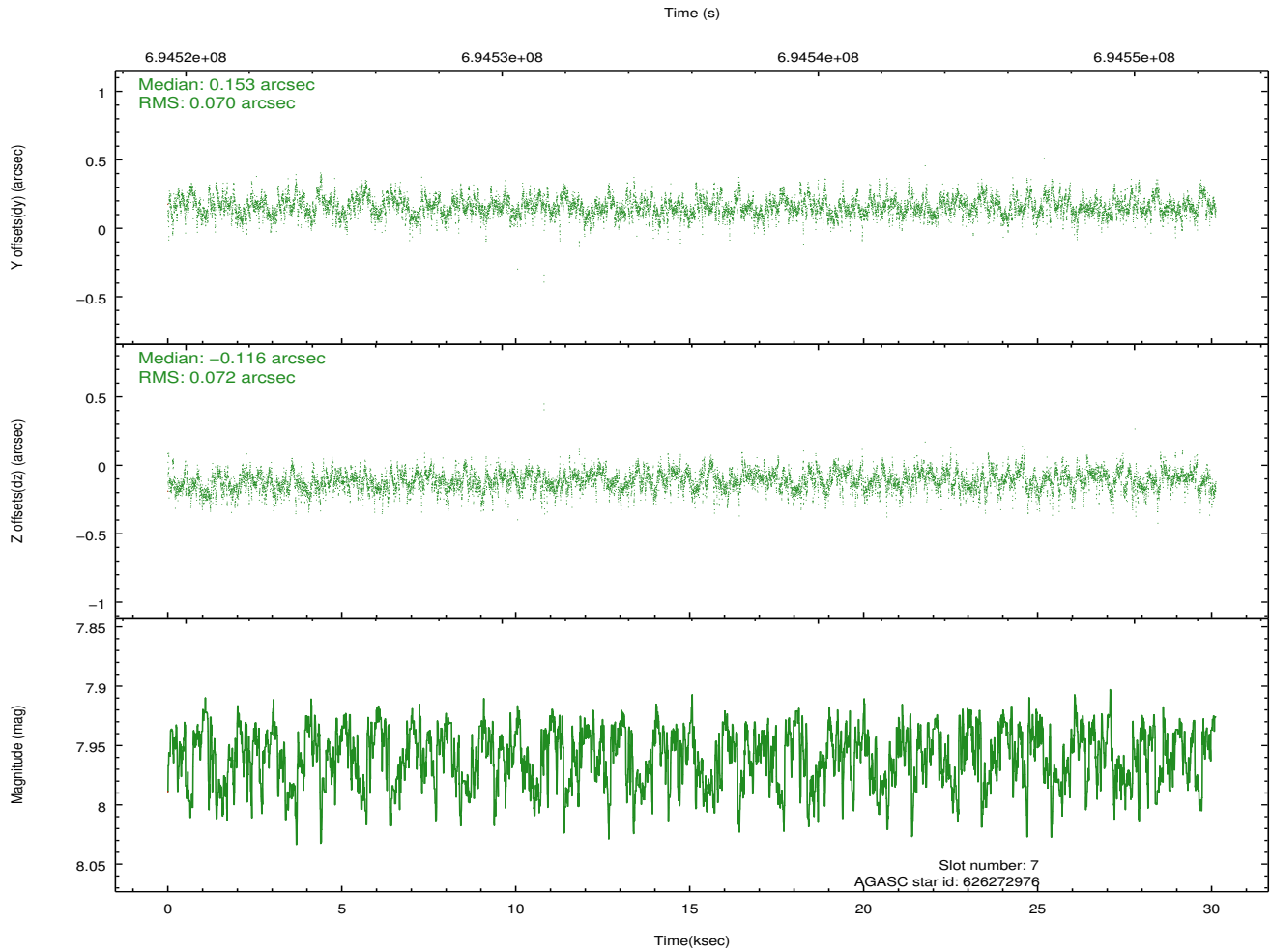
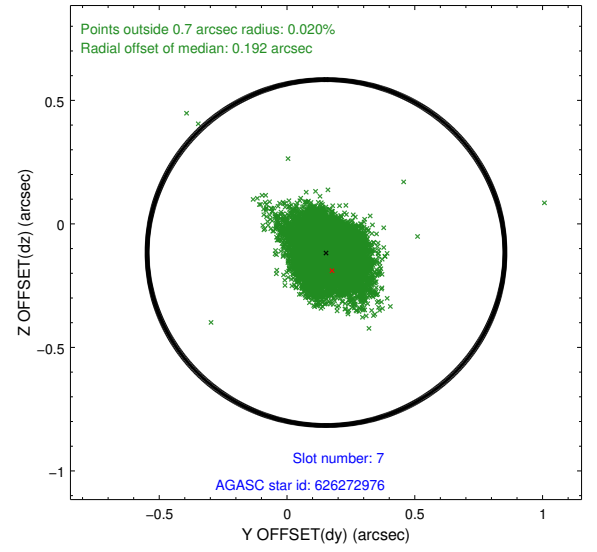
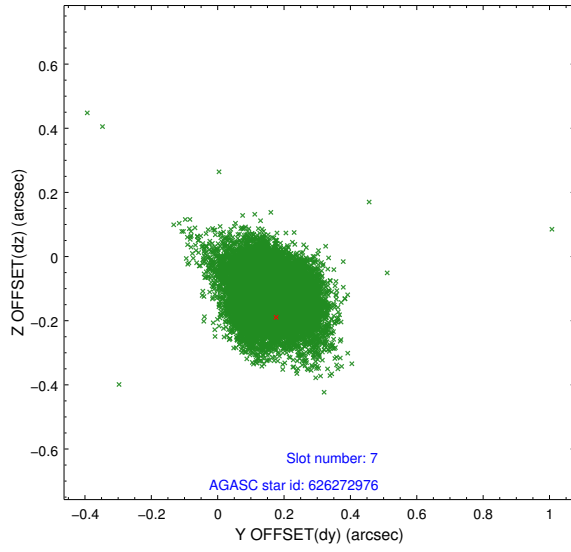
2.4.3 Slot 5



2.4.4 Slot 6

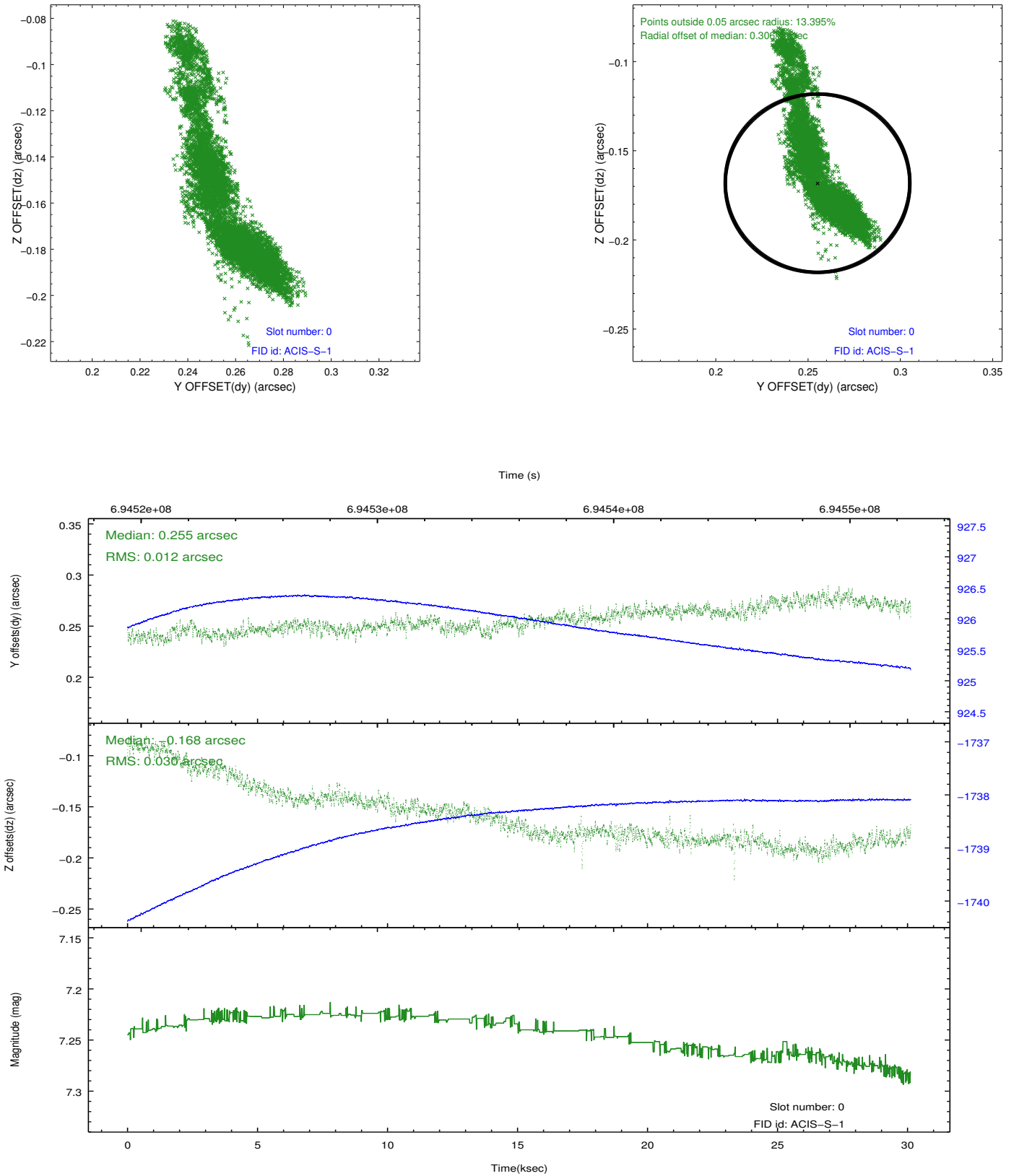


2.4.5 Slot 7

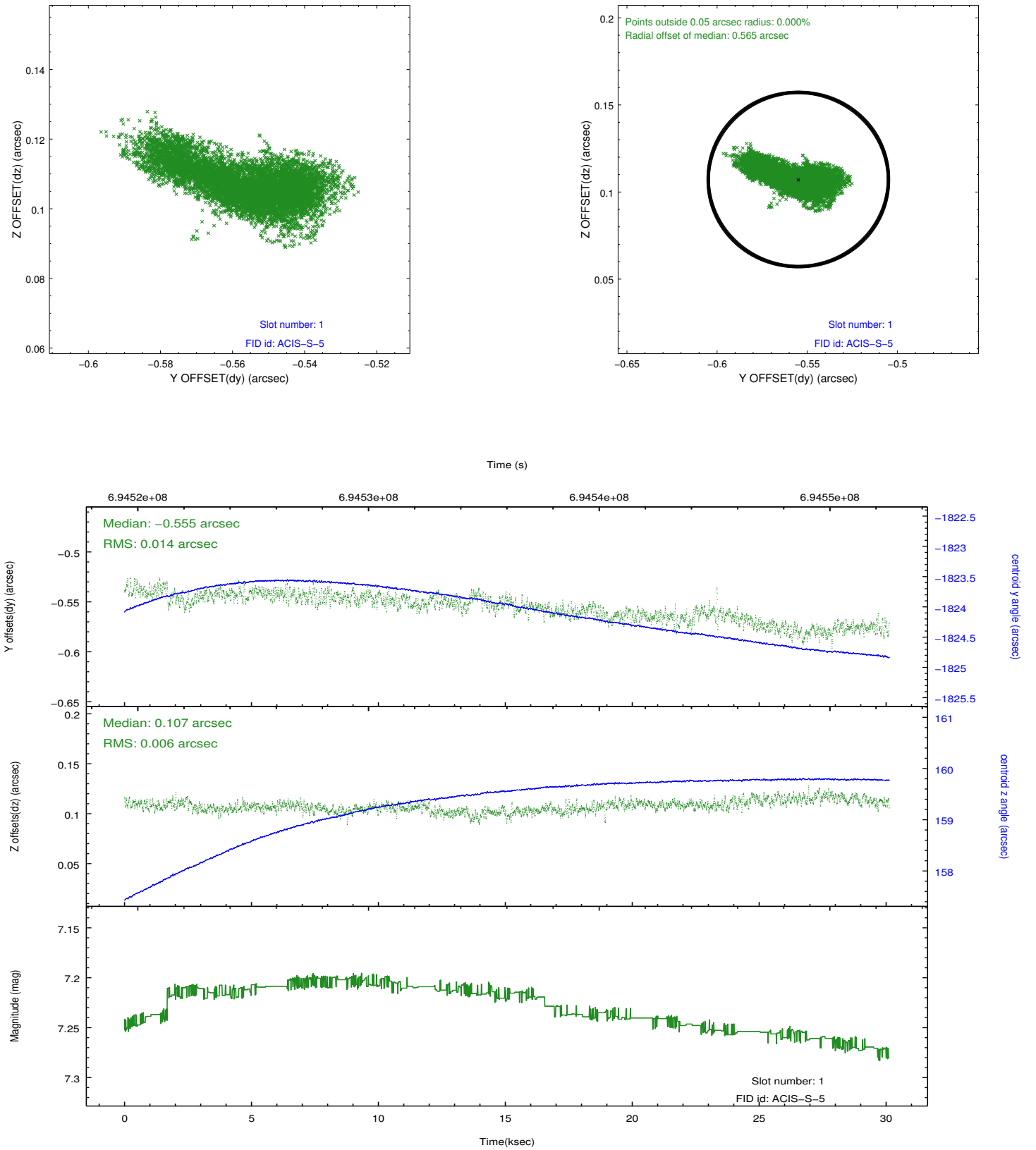


2.5 FID Slots

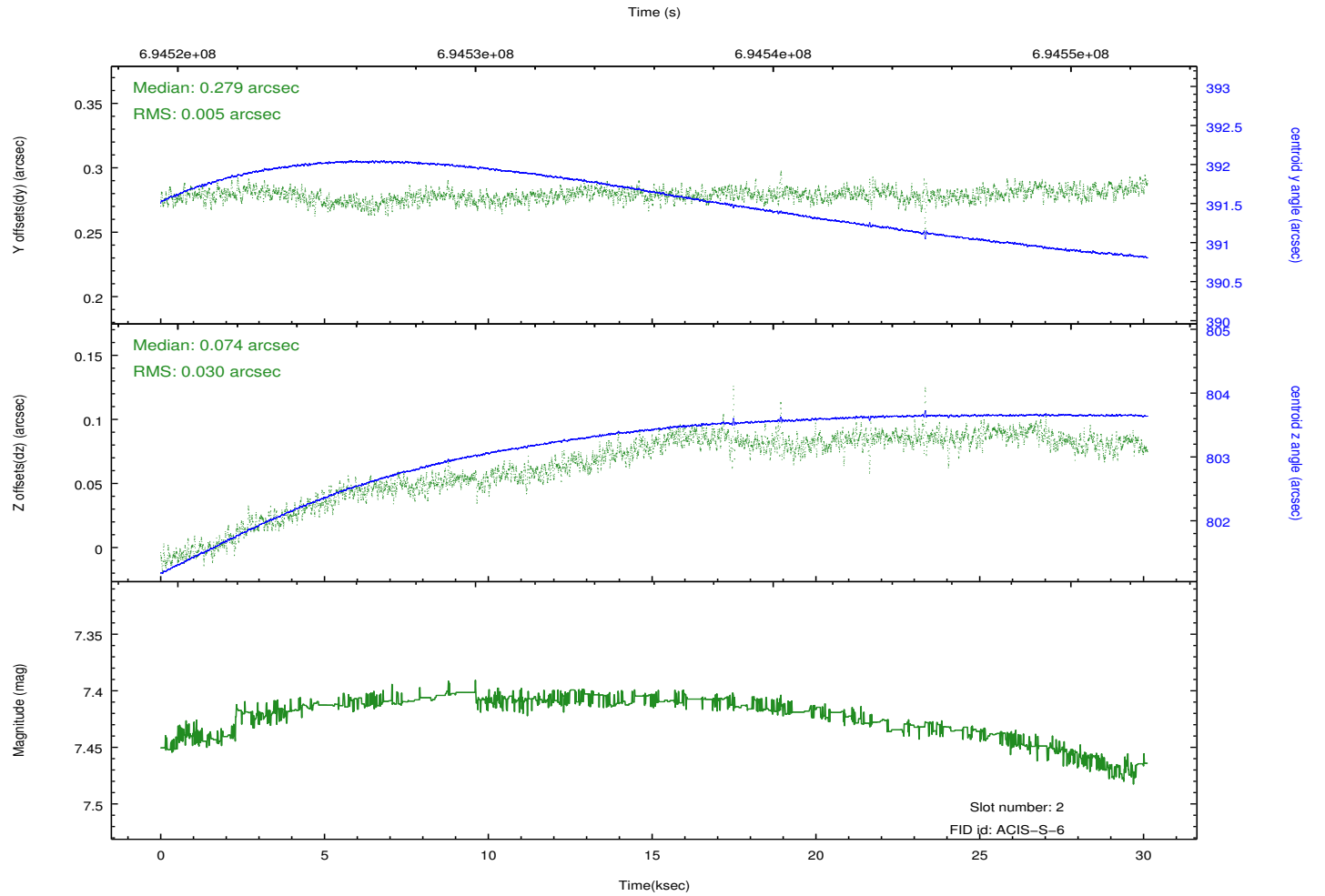
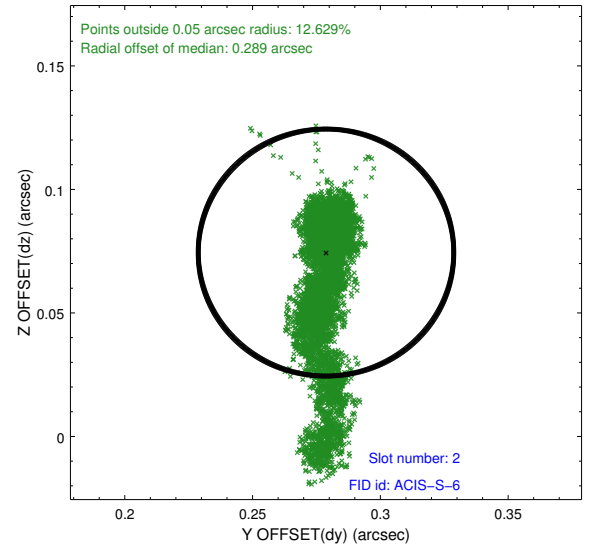
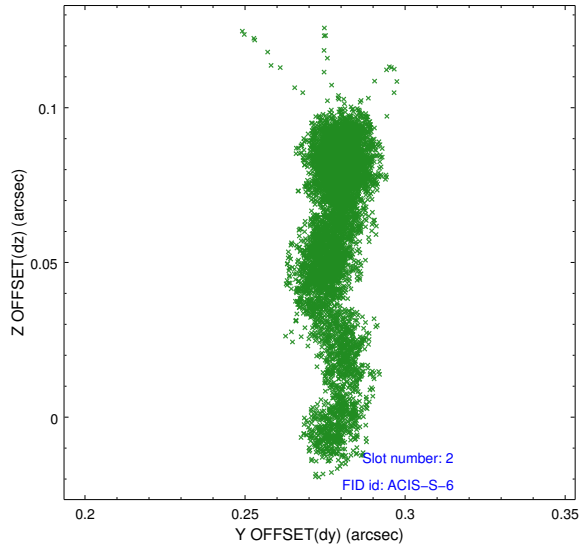
2.5.1 Slot 0



2.5.2 Slot 1

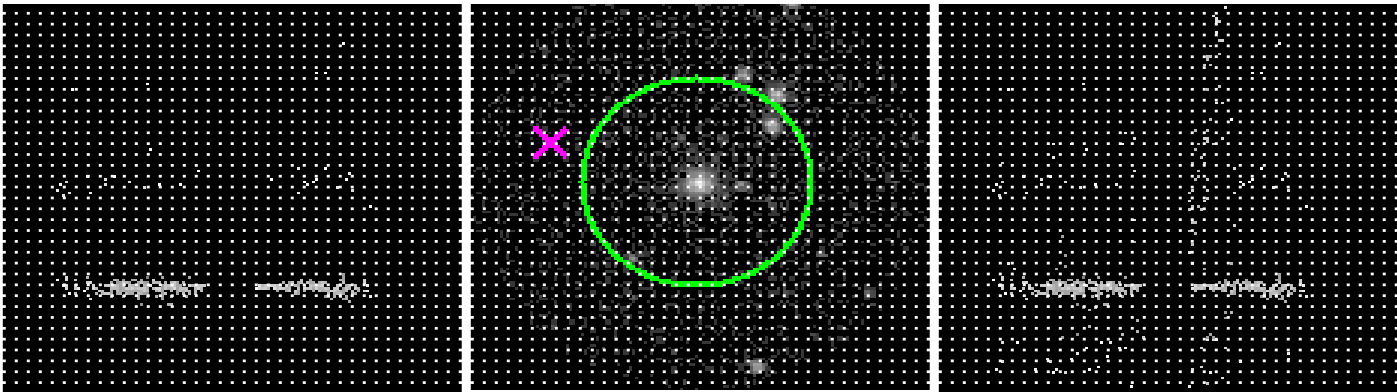


2.5.3 Slot 2



3 Gratings

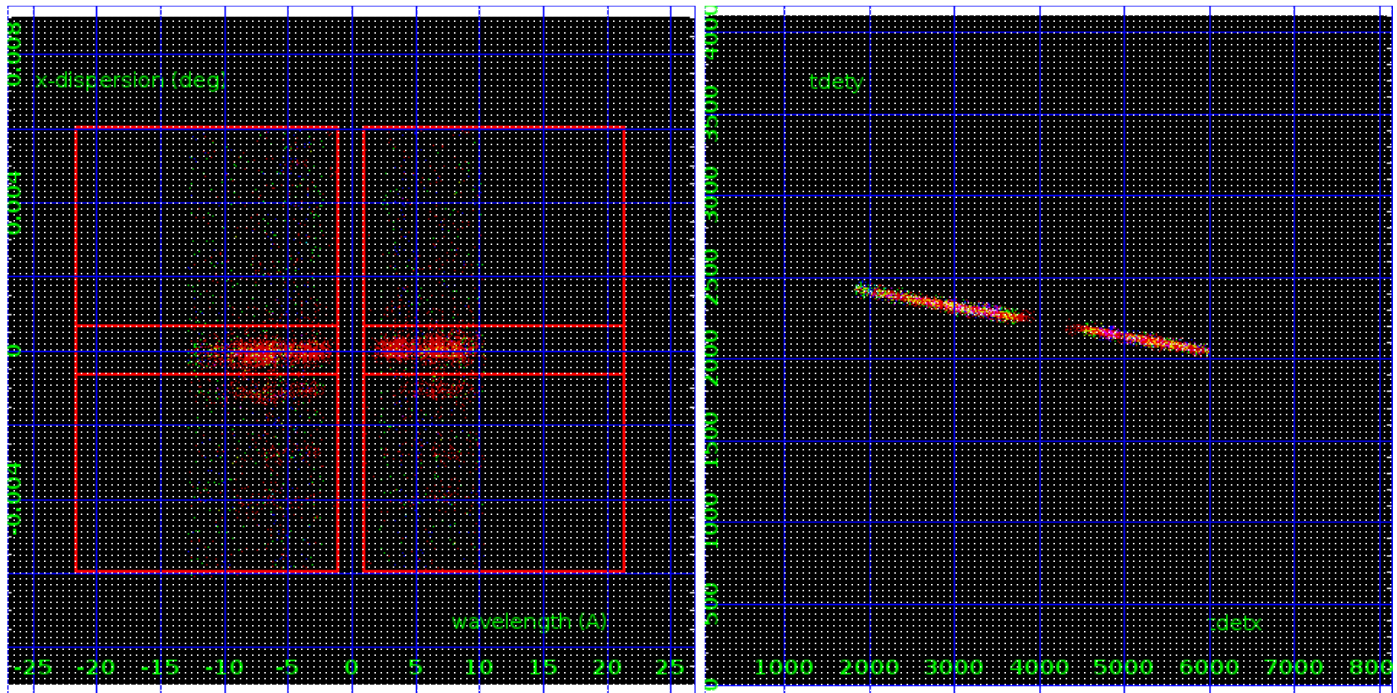
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

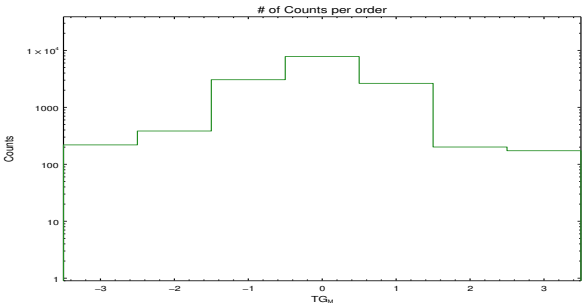
HEG Order Sort ALL

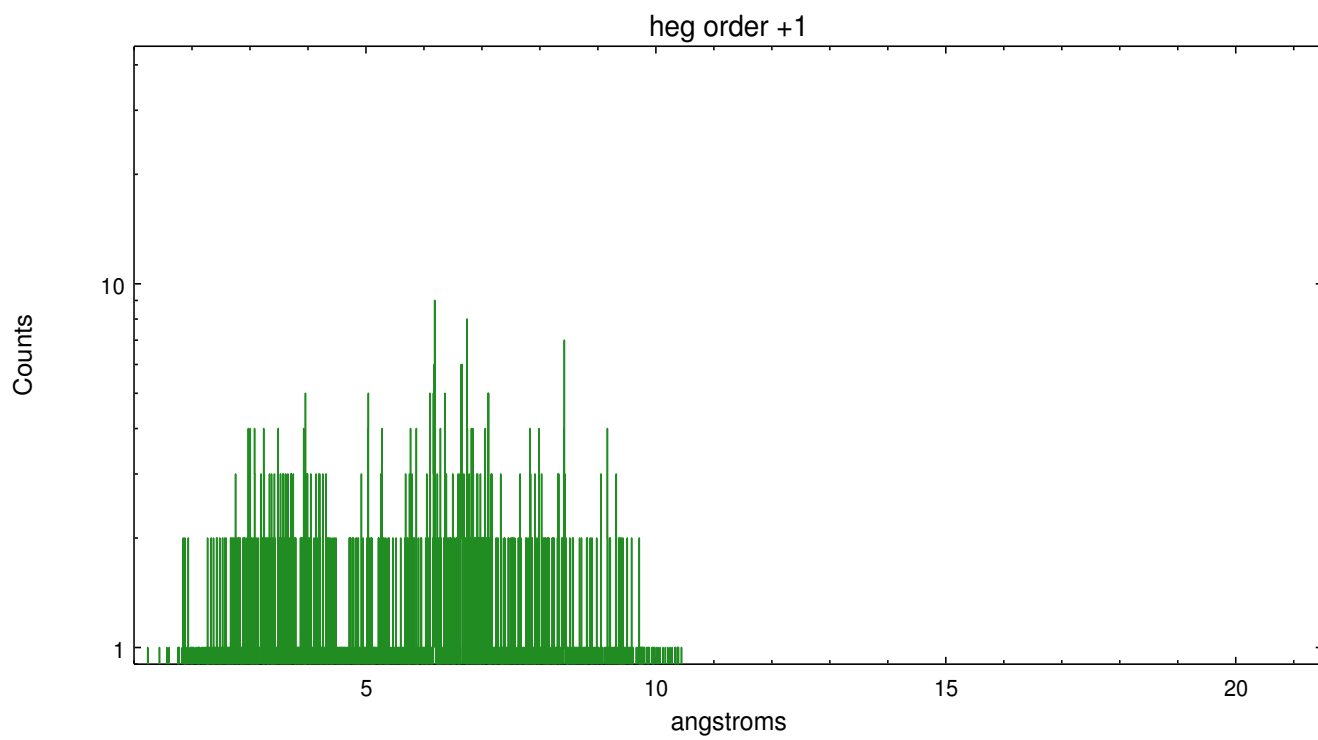
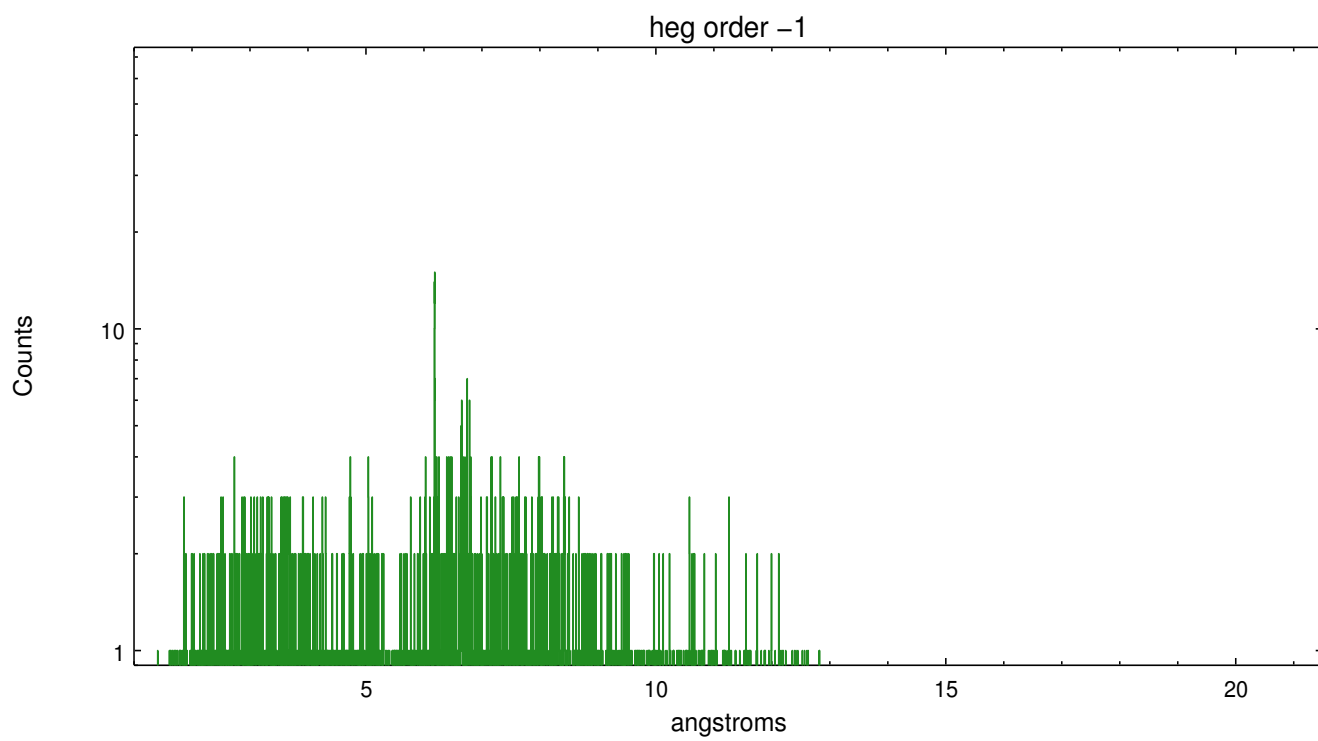


Spot Image HEG

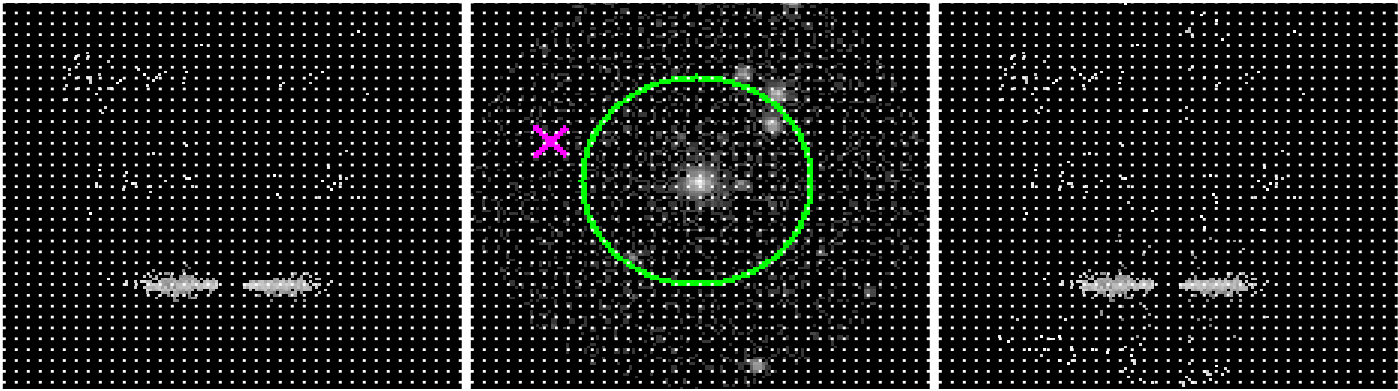
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	219	384	3055	7779	2636	201	173





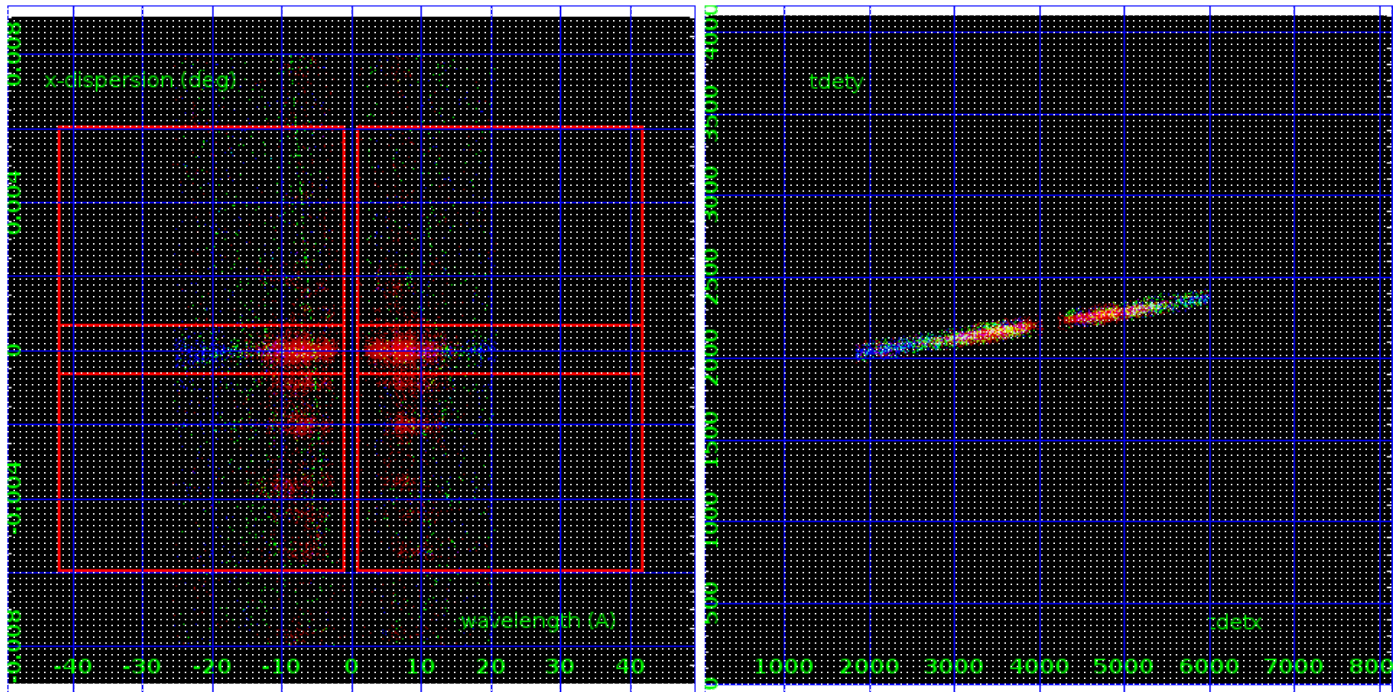
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

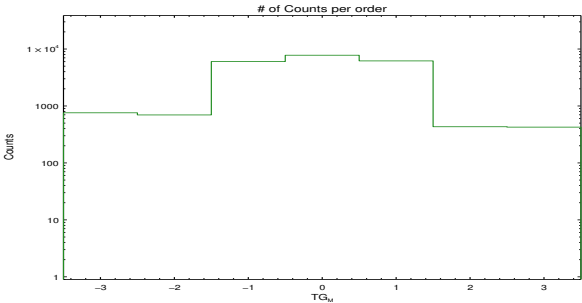
MEG Order Sort ALL

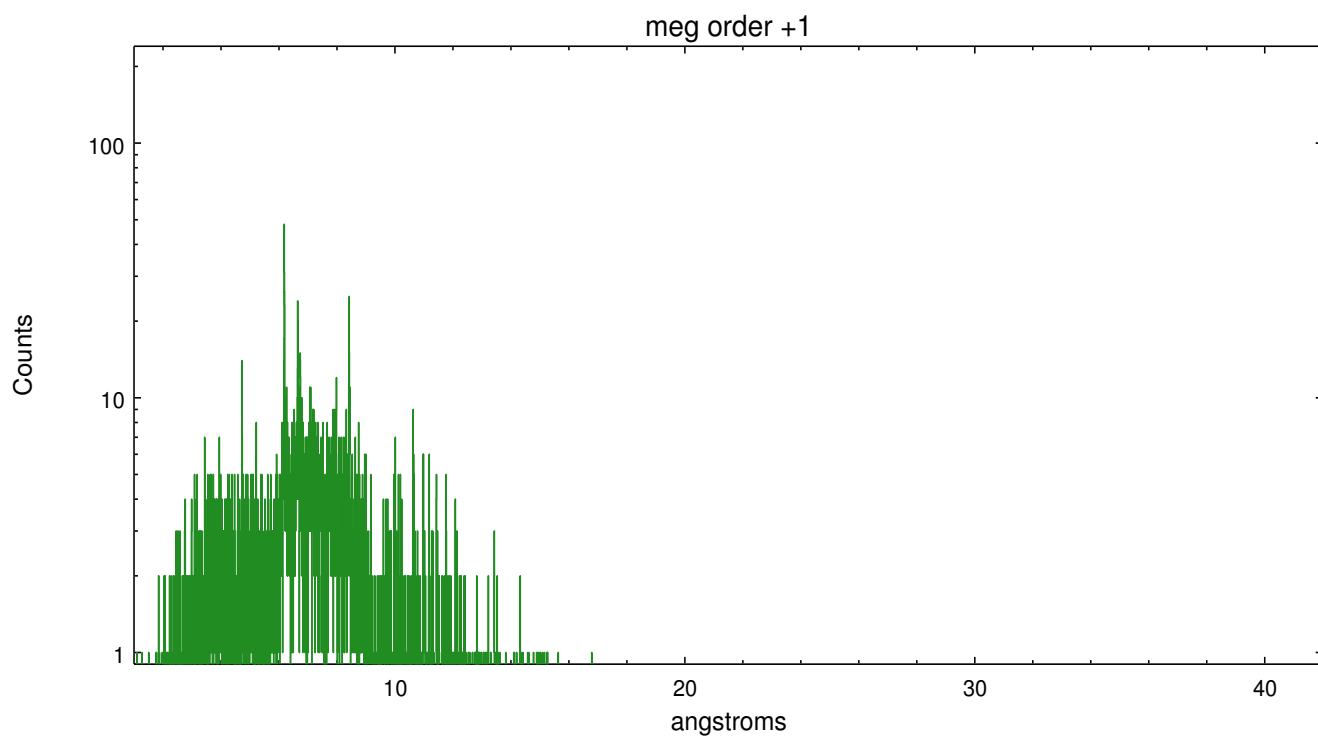
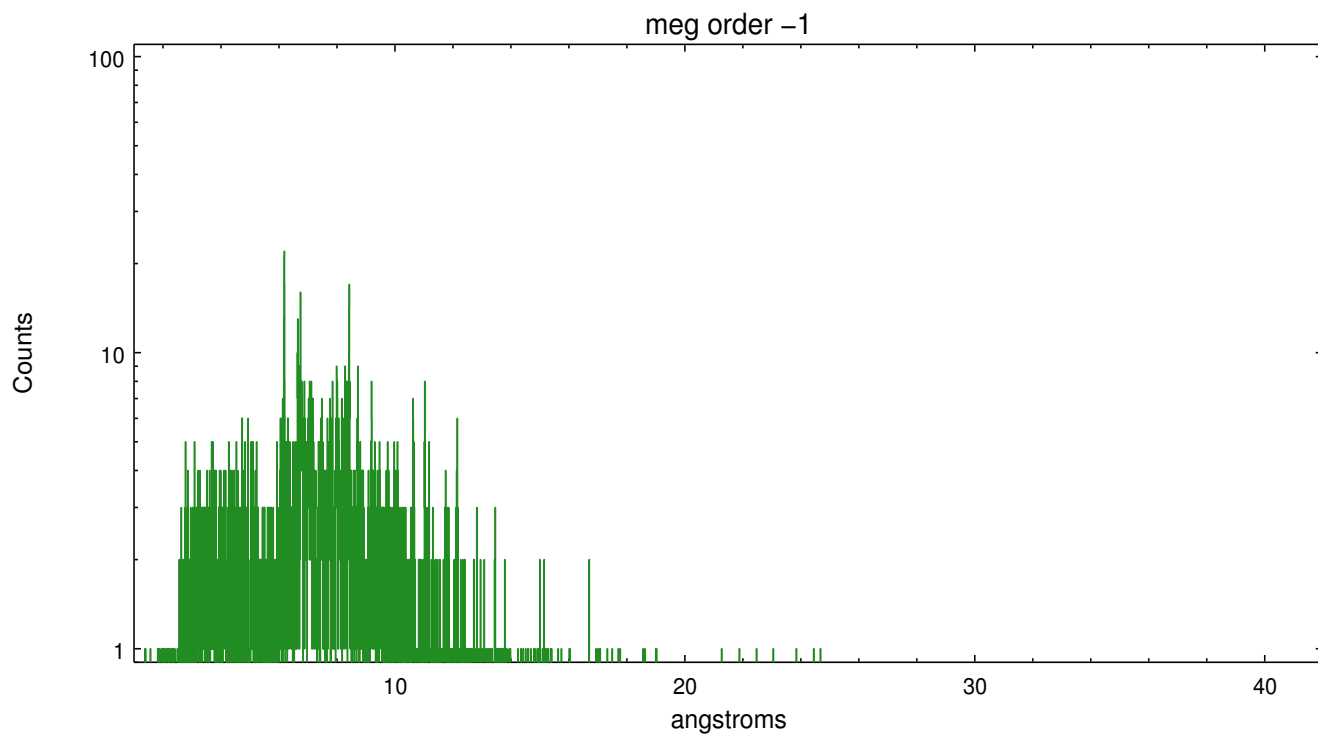


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	759	696	6020	7779	6187	432	425





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.060700231314

A.2 Comments