

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 23104 - L2 Version 1
Chandra X-Ray Center

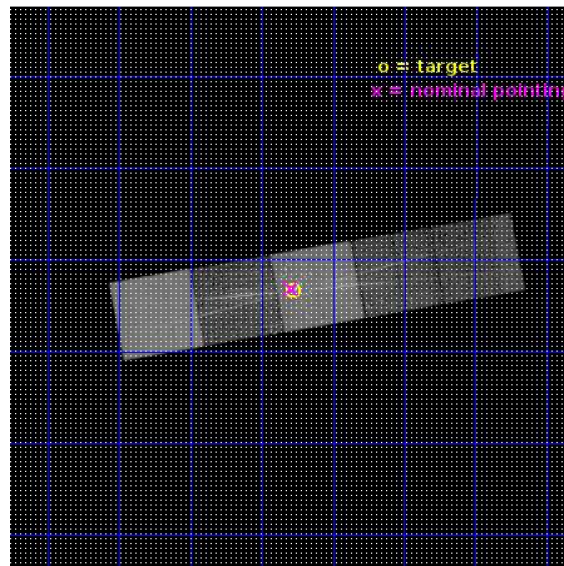
L2 Processing Date : Dec 22 2019

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1 Front

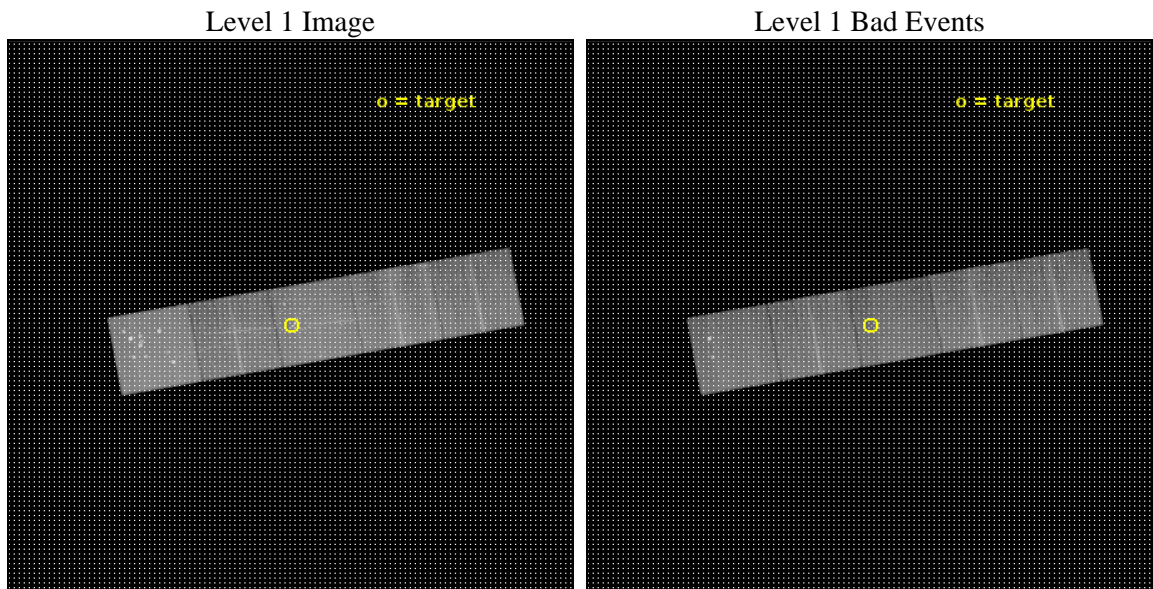
seq_num	201298	Sequence number
obs_id	23104	Observation id
title	THE TRUE NATURE OF X-RAYS FROM THE ORION TRAPEZIUM	Proposal title
observer	Norbert Schulz	Principal investigator
object	Orion Nebula Cluster	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.81875	Observer's specified target RA [deg]
dec_targ	-5.38975	Observer's specified target Dec [deg]
ra_nom	83.822794637245	Nominal RA [deg]
dec_nom	-5.3861533051997	Nominal Dec [deg]
roll_nom	349.65834774963	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25054.200192809	Sum of GTIs [s]
livetime	24726.848622656	Livetime [s]
ontime5	25054.200192809	Sum of GTIs [s]
ontime6	25054.200192809	Sum of GTIs [s]
ontime7	25054.200192809	Sum of GTIs [s]
ontime8	25054.200192809	Sum of GTIs [s]
ontime9	25054.200192809	Sum of GTIs [s]
l2events	379131	Number of level 2 events



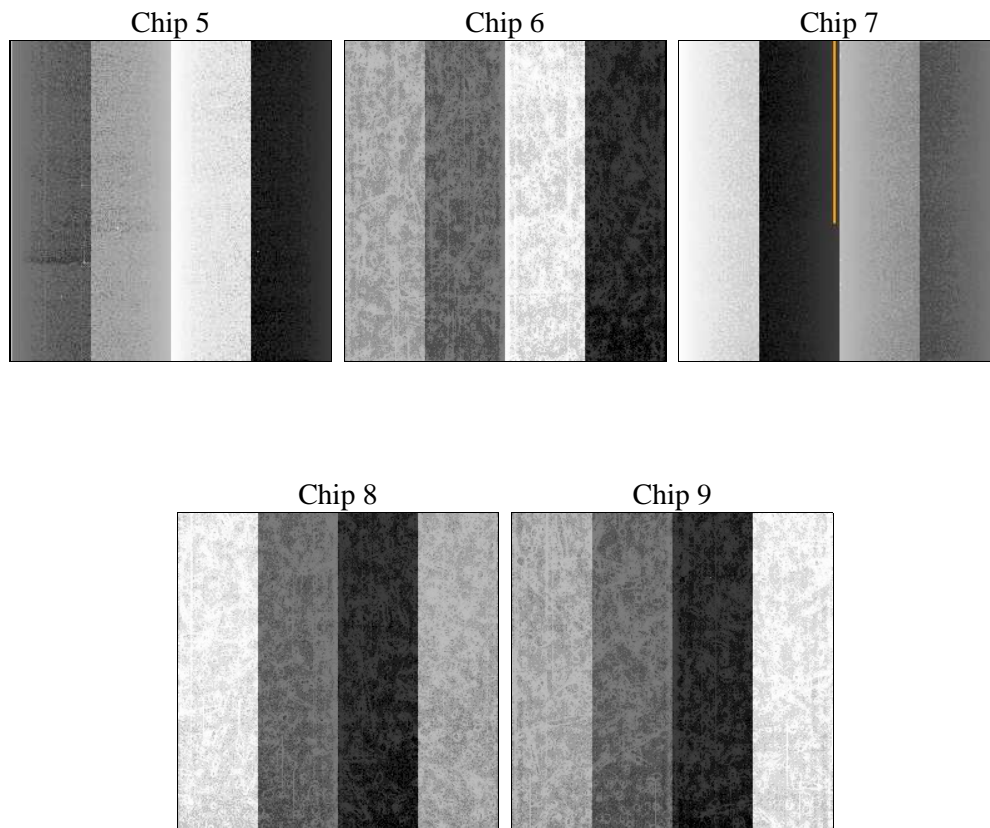
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.1	Processing system revision	ontime	25054.200192809	Sum of GTIs [s]
caldsver	4.8.4.2	 	ontime5	25054.200192809	Sum of GTIs [s]
date	2019-12-22T15:22:28	Date and time of file creation	ontime6	25054.200192809	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25054.200192809	Sum of GTIs [s]
			ontime8	25054.200192809	Sum of GTIs [s]
			ontime9	25054.200192809	Sum of GTIs [s]
			l1events	1331417	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4126.85, 4070.91)	src1a sky pixel position

2.1.4 Events

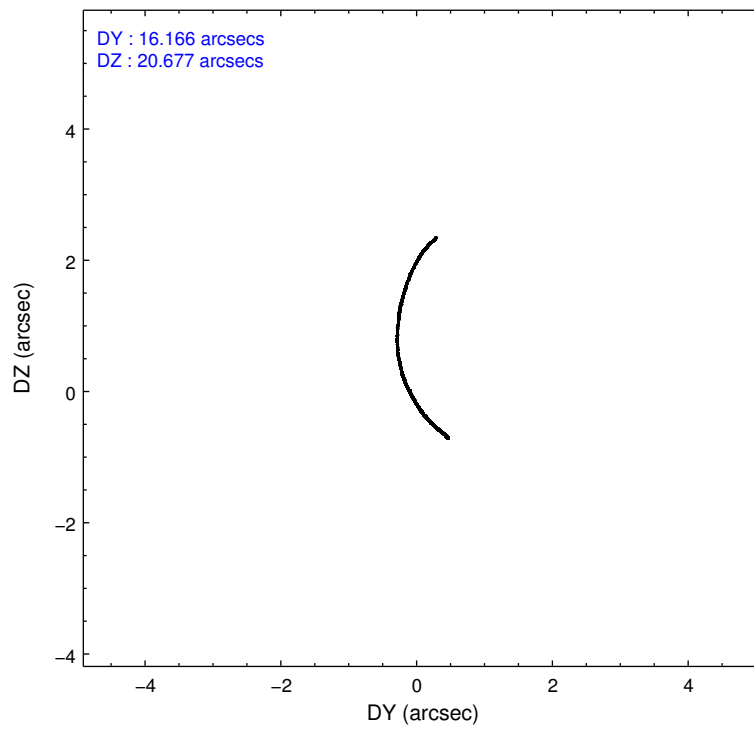
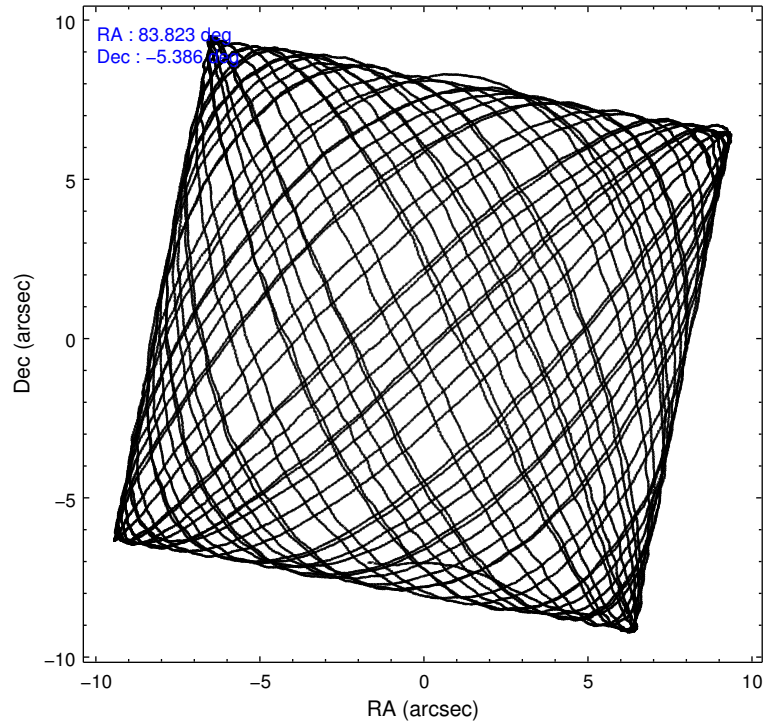
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	356815	215455	293756	266384	199007
rejected events	172266	175772	146385	186418	173531
rejected %	48%	81%	49%	69%	87%

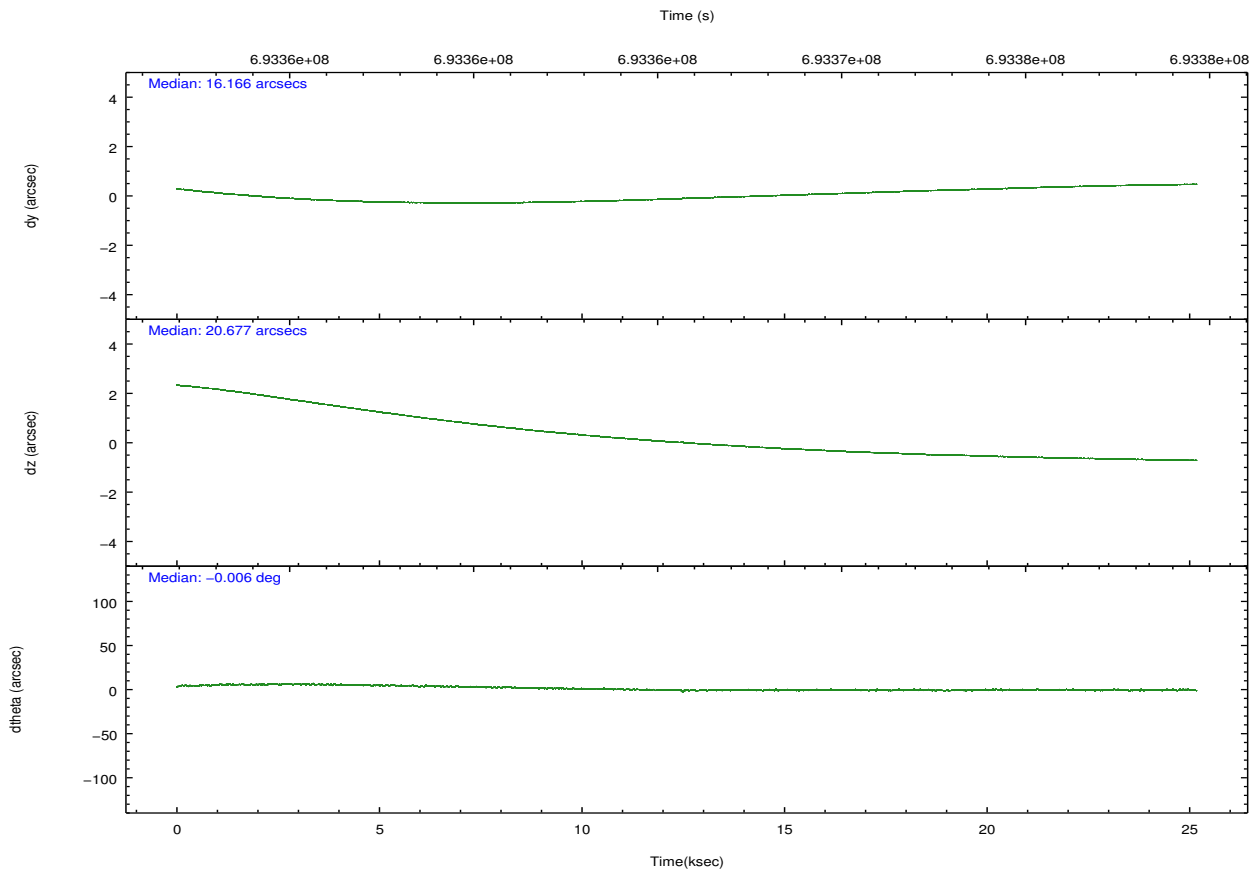
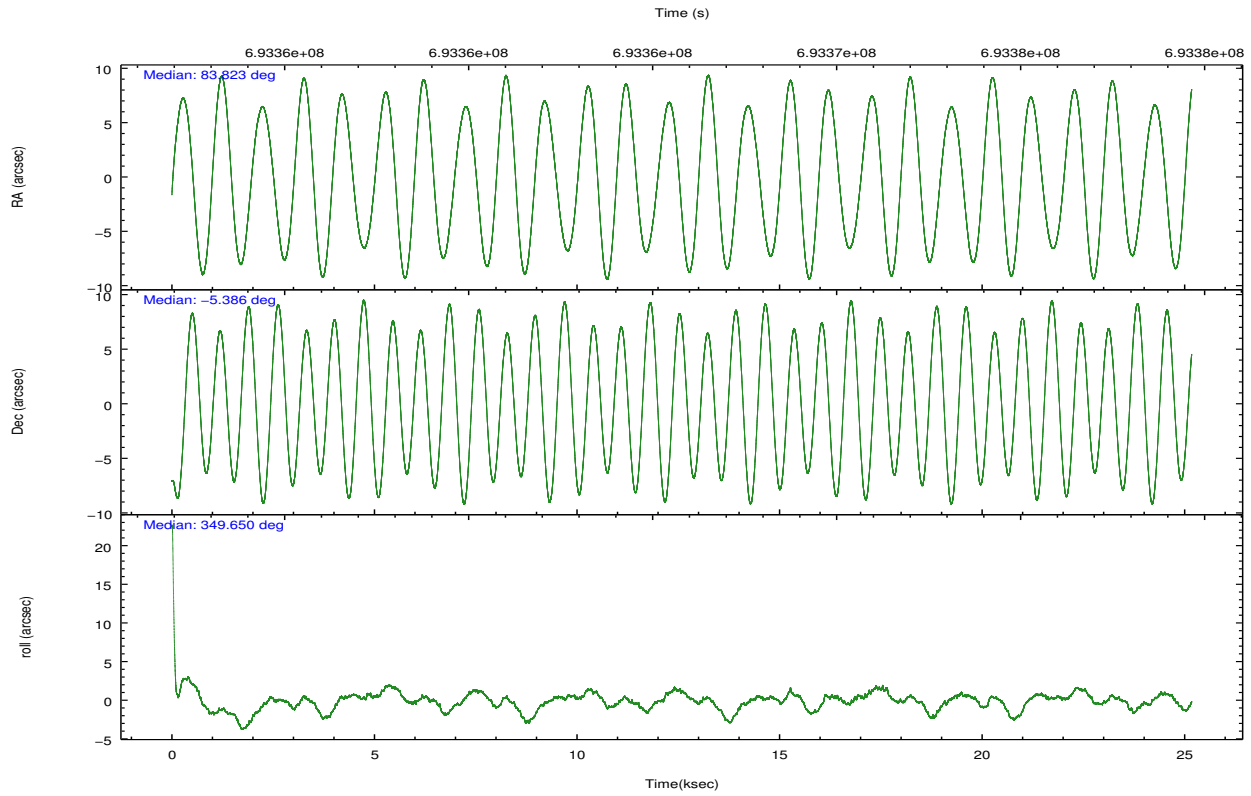
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	36116	20591	17030	27109	9864
	10%	9%	5%	10%	4%
grade 1 events	745	153	513	225	138
	0%	0%	0%	0%	0%
grade 2 events	53792	7607	33395	17890	5546
	15%	3%	11%	6%	2%
grade 3 events	6246	2734	12500	7990	2428
	1%	1%	4%	2%	1%
grade 4 events	4520	2723	12490	7607	2225
	1%	1%	4%	2%	1%
grade 5 events	22330	9101	25711	13937	10512
	6%	4%	8%	5%	5%
grade 6 events	83901	6032	71972	19375	5415
	23%	2%	24%	7%	2%
grade 7 events	149165	166514	120145	172251	162879
	41%	77%	40%	64%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	83.796960	83.82279463724454	CCD I2 on	N	N
[deg] Pointing Dec	-5.395709	-5.386153305199694	CCD I3 on	N	N
[deg] Pointing Roll	349.499284	349.658347749632	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)	693353368.184000	693352092.9653701	CCD S5 on	O2	Y
Observation start date	2019-12-21T22:08:19	2019-12-21T21:48:12	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	693378368.184000	693378971.54199	On-chip summing requested	N	N
Observation end date	2019-12-22T05:04:59	2019-12-22T05:16:11	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





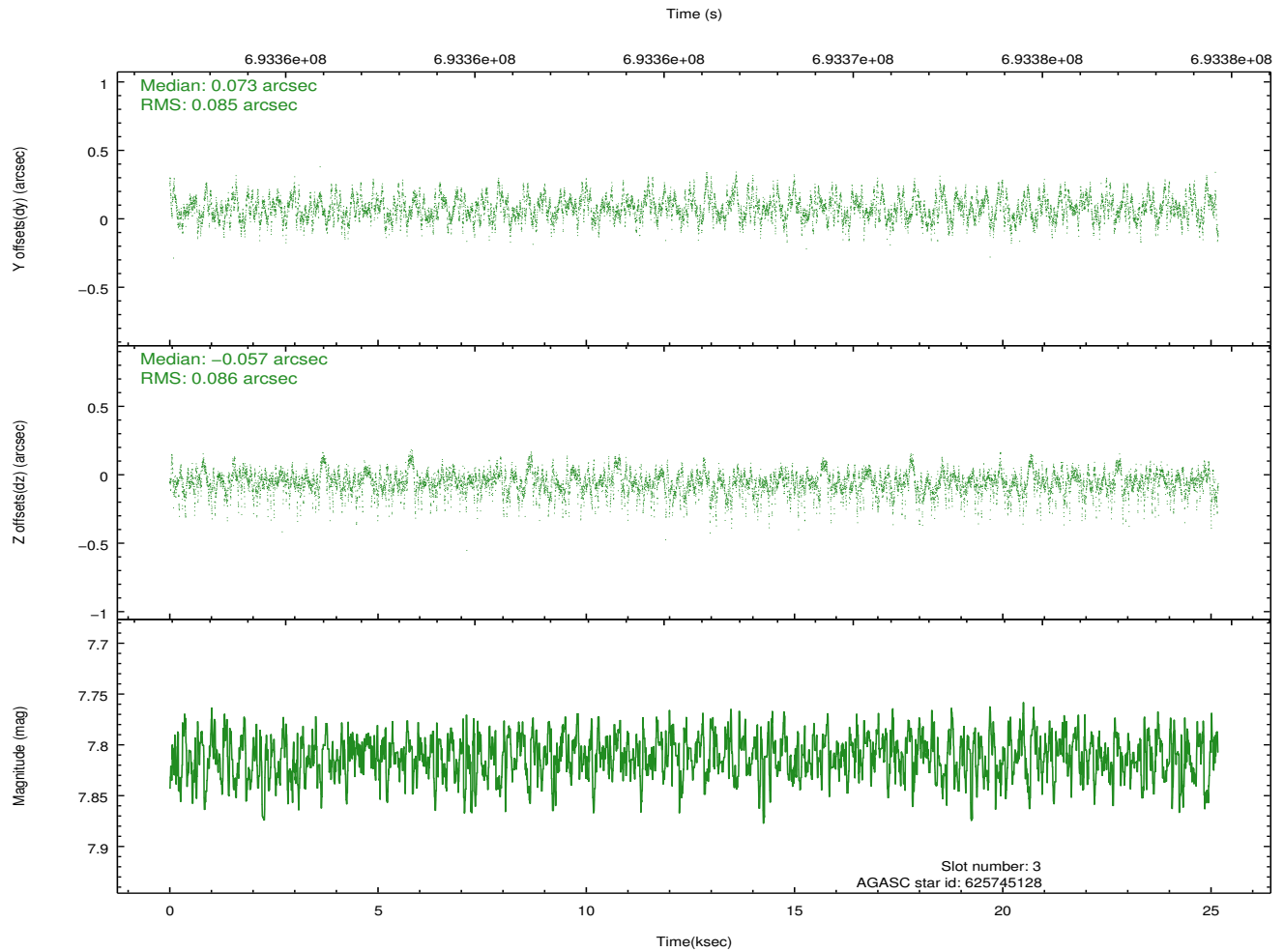
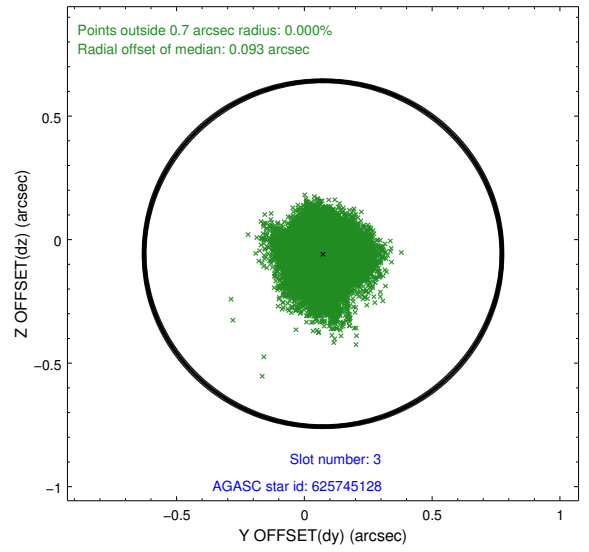
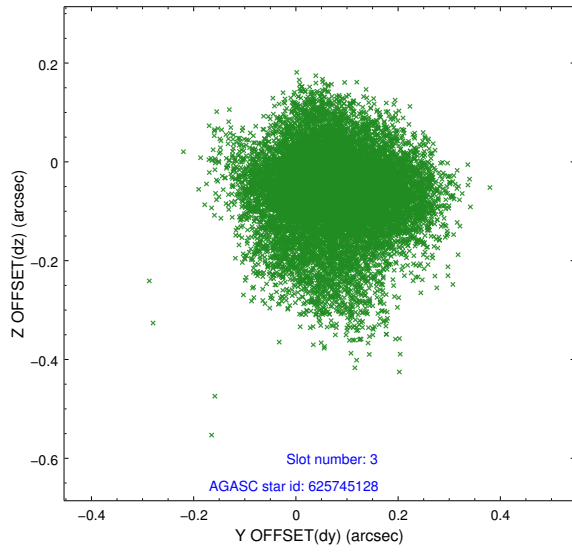
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-3	7.28	6140	1.000	-0.203	-0.237	0.023	0.055	0.000000	0.000000	43.87	-1871
1	FID		ACIS-S-4	7.18	6140	1.000	0.729	0.218	0.033	0.065	0.000000	0.000000	2144.87	166
2	FID		ACIS-S-5	7.12	6140	1.000	-0.554	0.031	0.013	0.025	0.000000	0.000000	-1822.45	159
3	GUIDE	used	625745128	7.81	12279	1.000	0.073	-0.057	0.130	0.203	83.769930	-4.731835	-531.29	2331
4	GUIDE	used	625745136	7.20	12279	1.000	-0.101	0.093	0.121	0.209	83.600341	-4.804339	-1081.84	1964
5	GUIDE	used	625874672	7.70	12278	1.000	-0.197	-0.490	0.101	0.159	84.403143	-4.934124	1834.52	2028
6	GUIDE	used	626272760	6.67	12280	1.000	0.171	-0.056	0.133	0.218	84.363987	-5.938389	2353.13	-1551
7	GUIDE	used	626272880	7.67	12280	1.000	0.053	0.525	0.119	0.195	83.815609	-6.032748	484.14	-2242

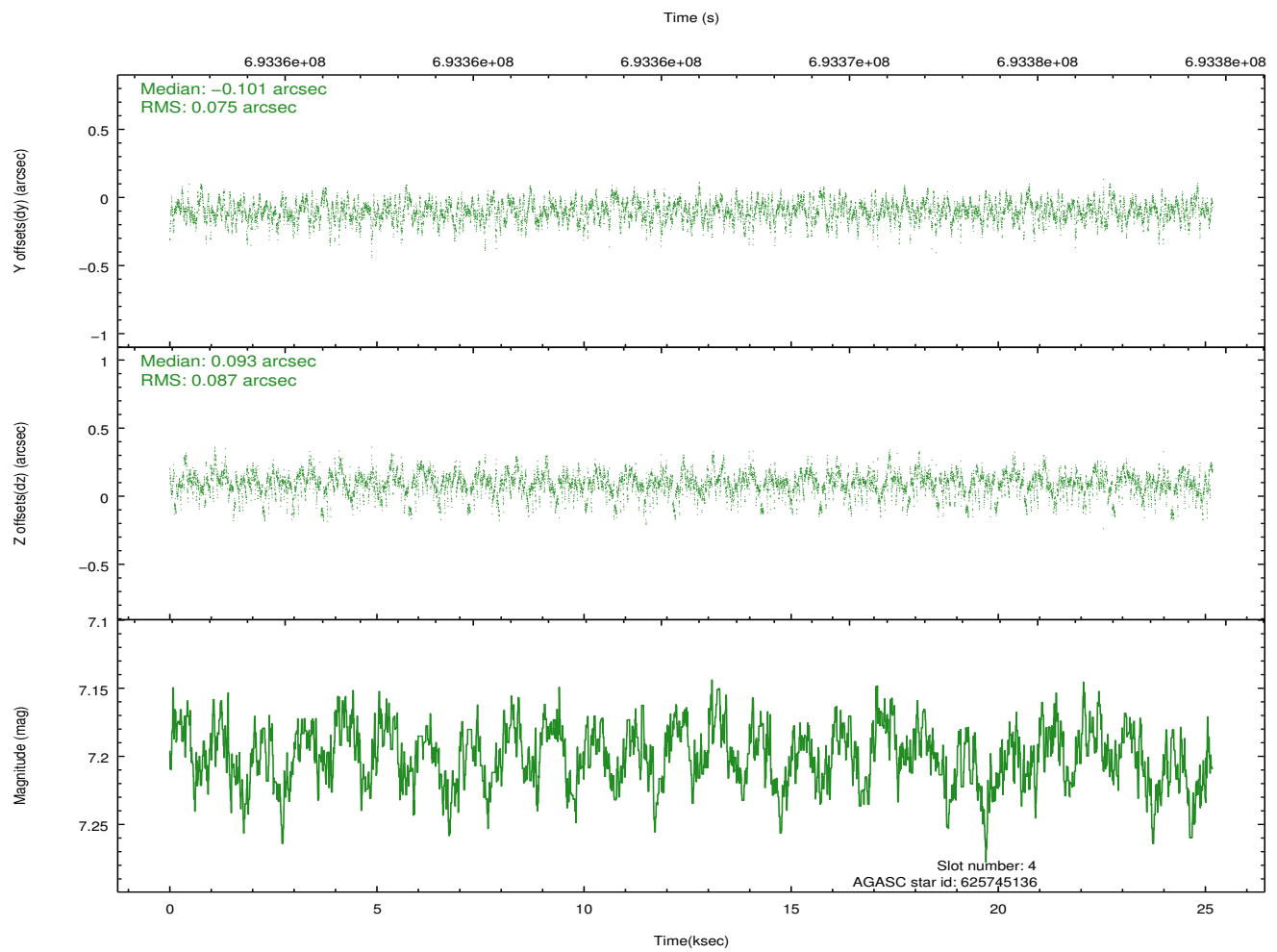
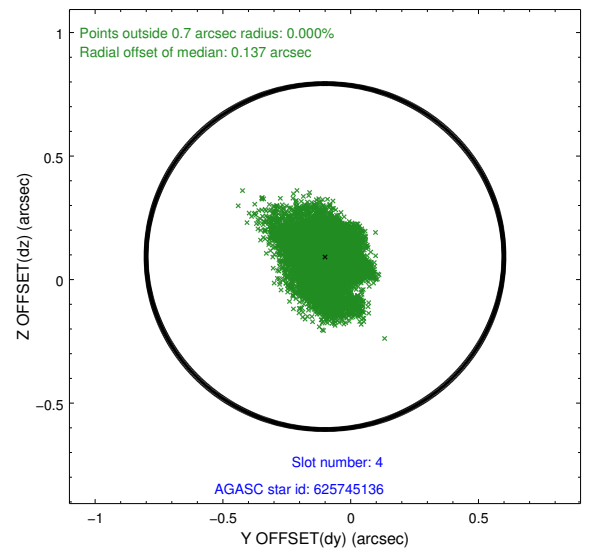
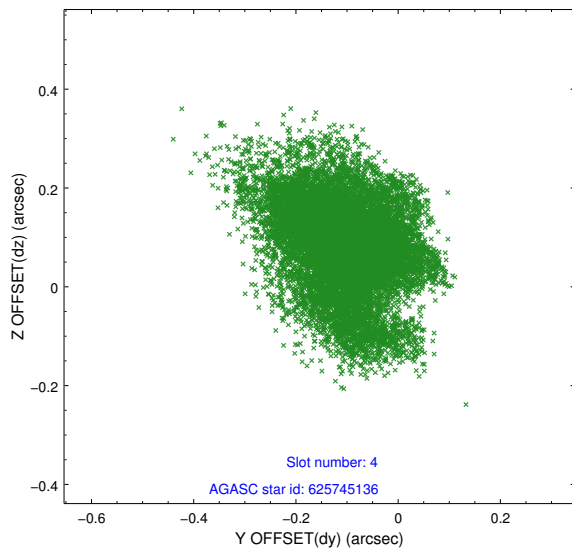
∞

2.4 Star Slots

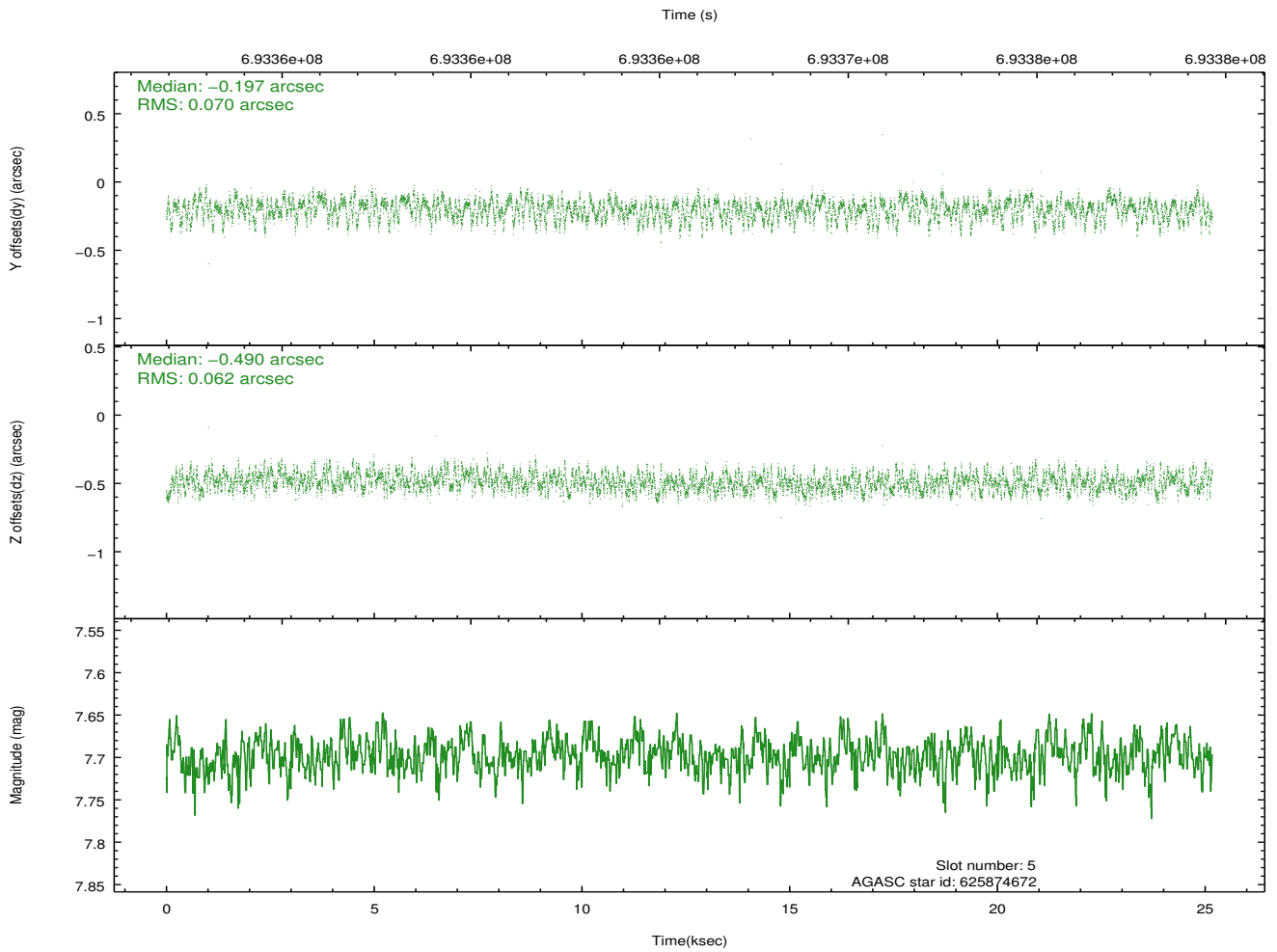
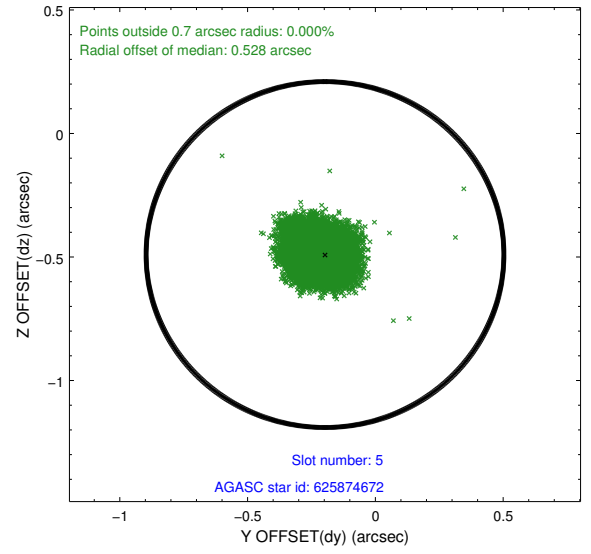
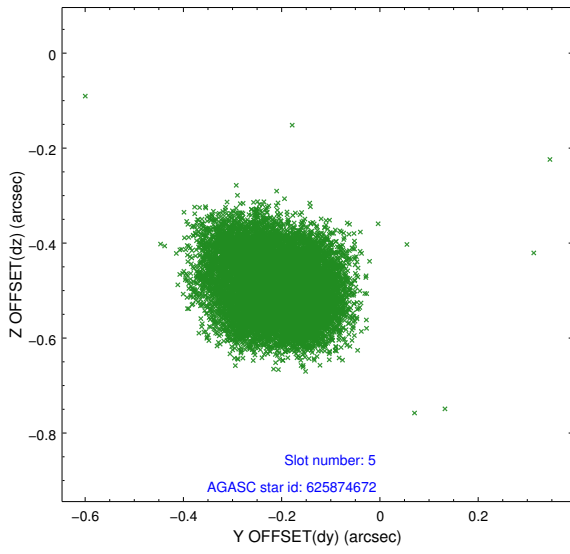
2.4.1 Slot 3



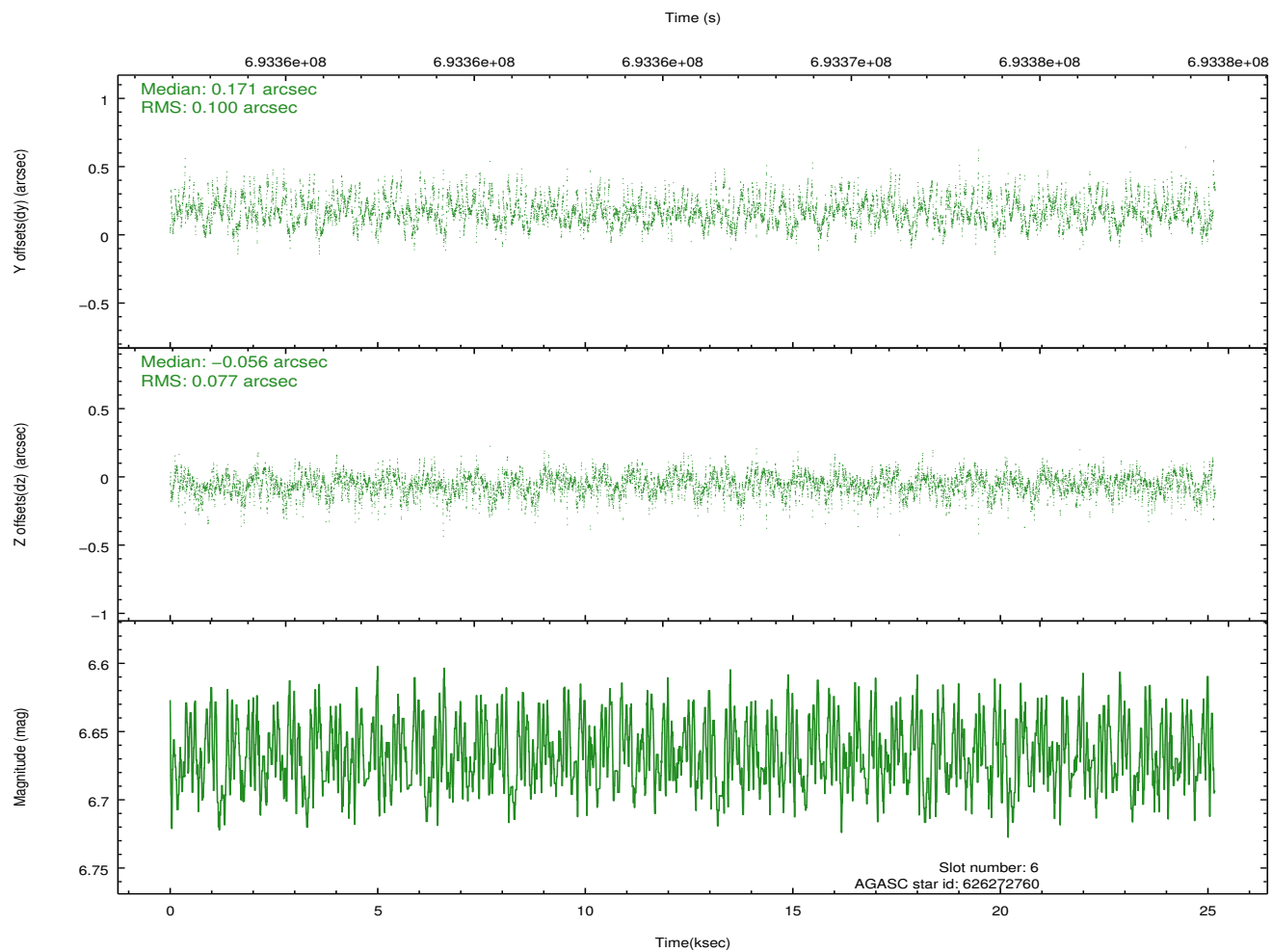
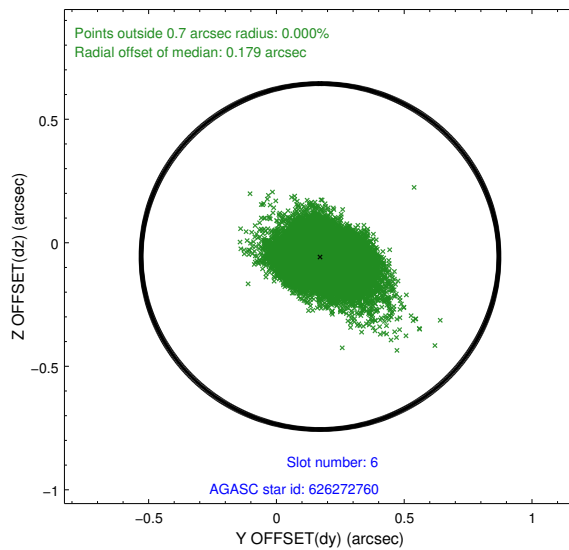
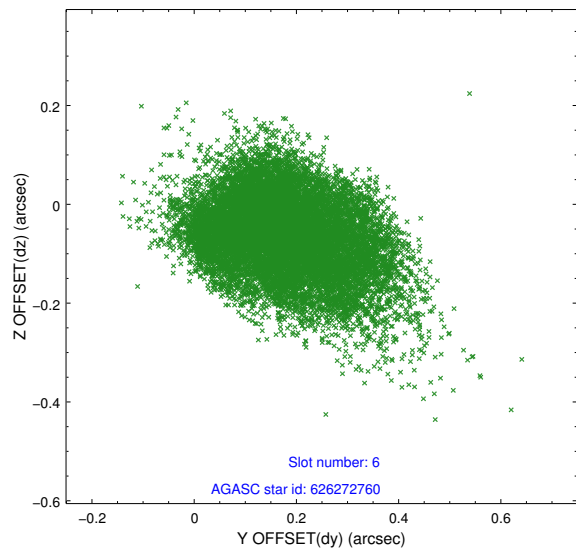
2.4.2 Slot 4



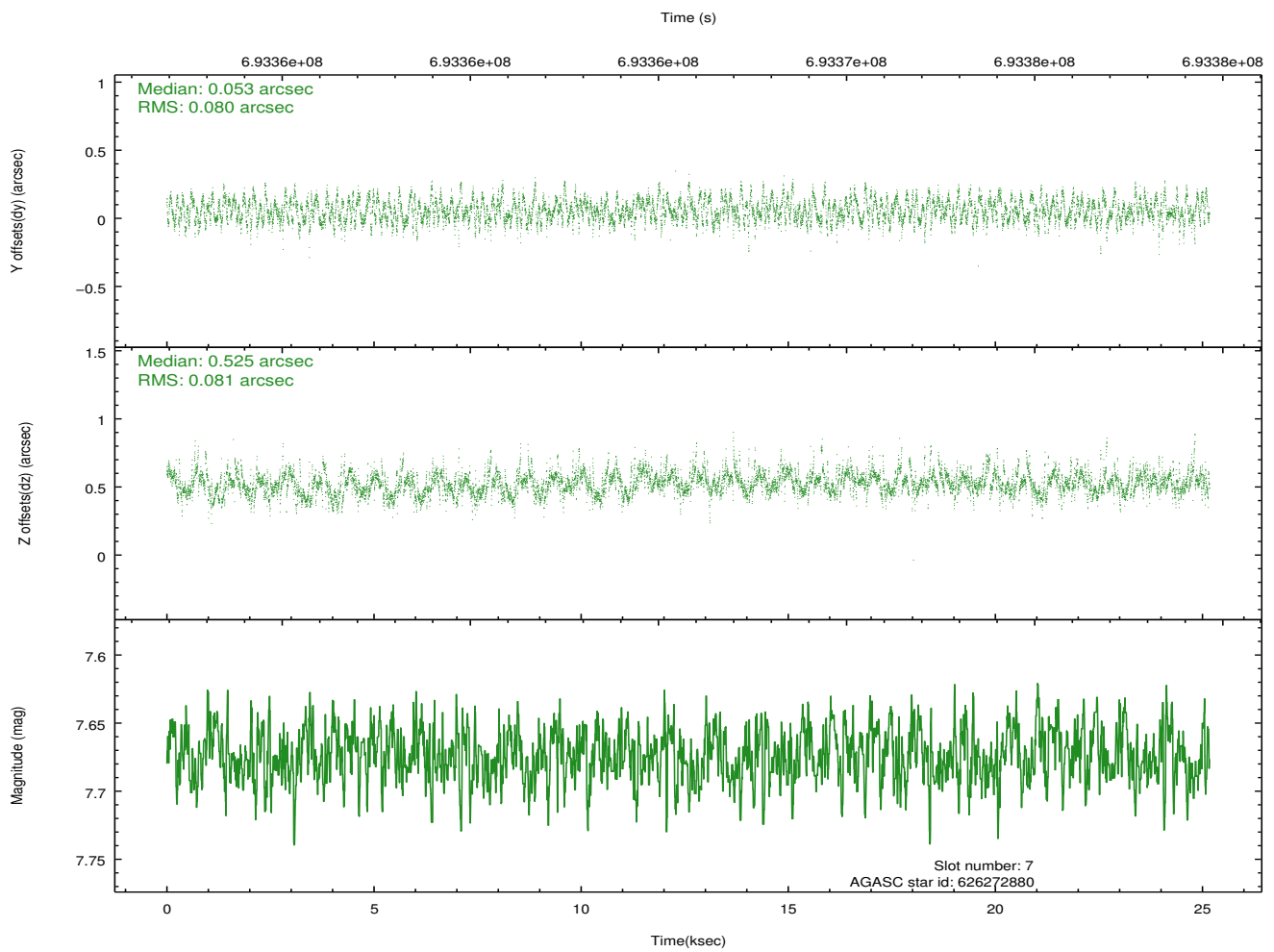
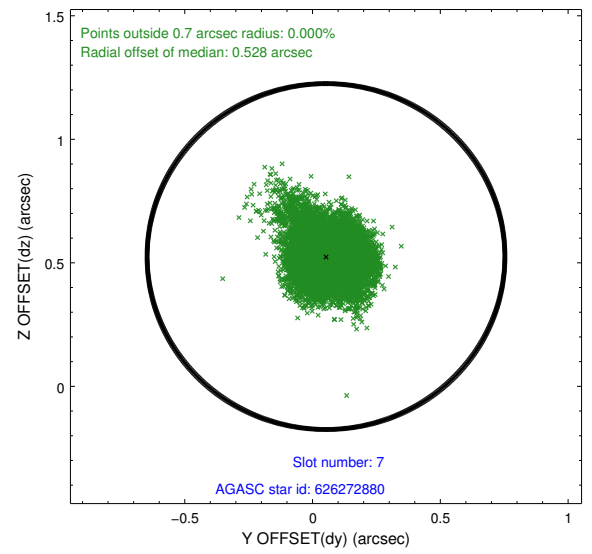
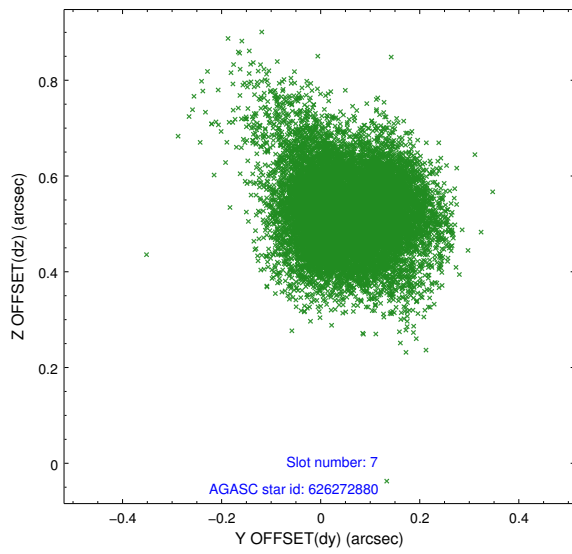
2.4.3 Slot 5



2.4.4 Slot 6

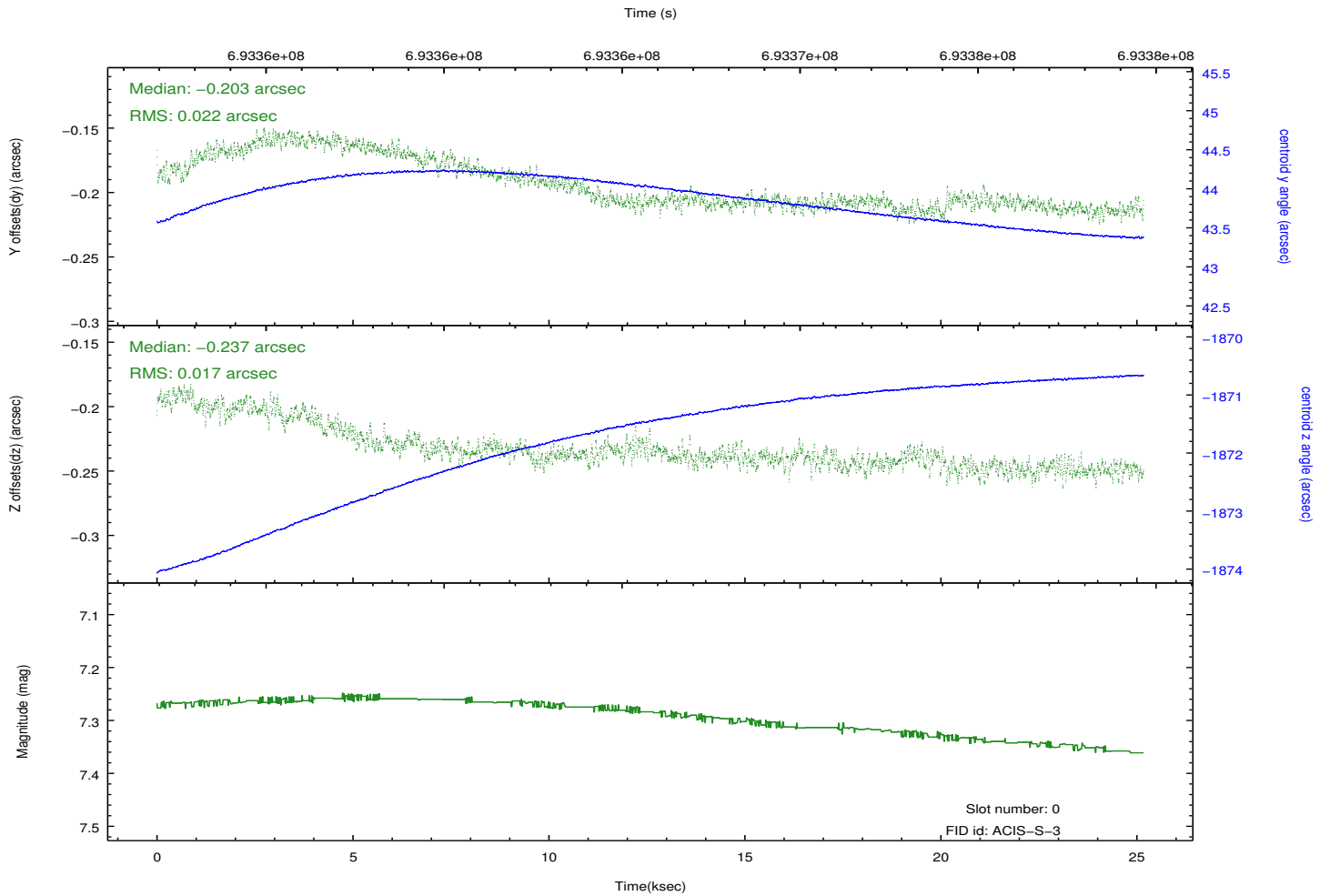
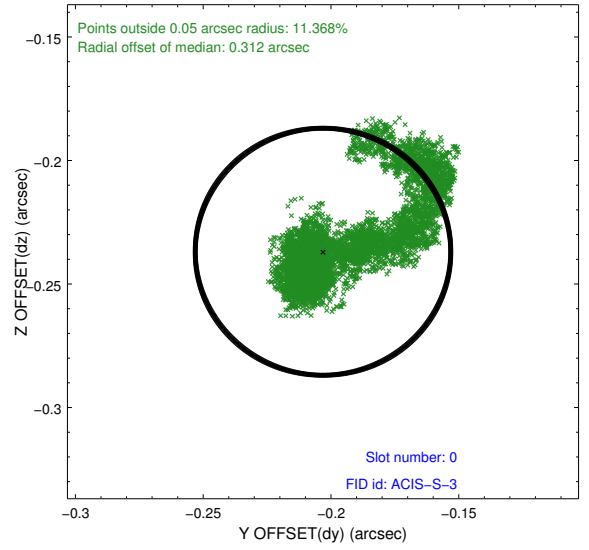
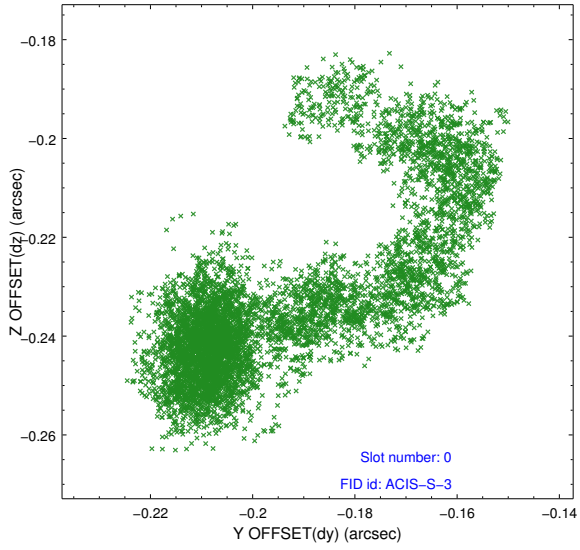


2.4.5 Slot 7

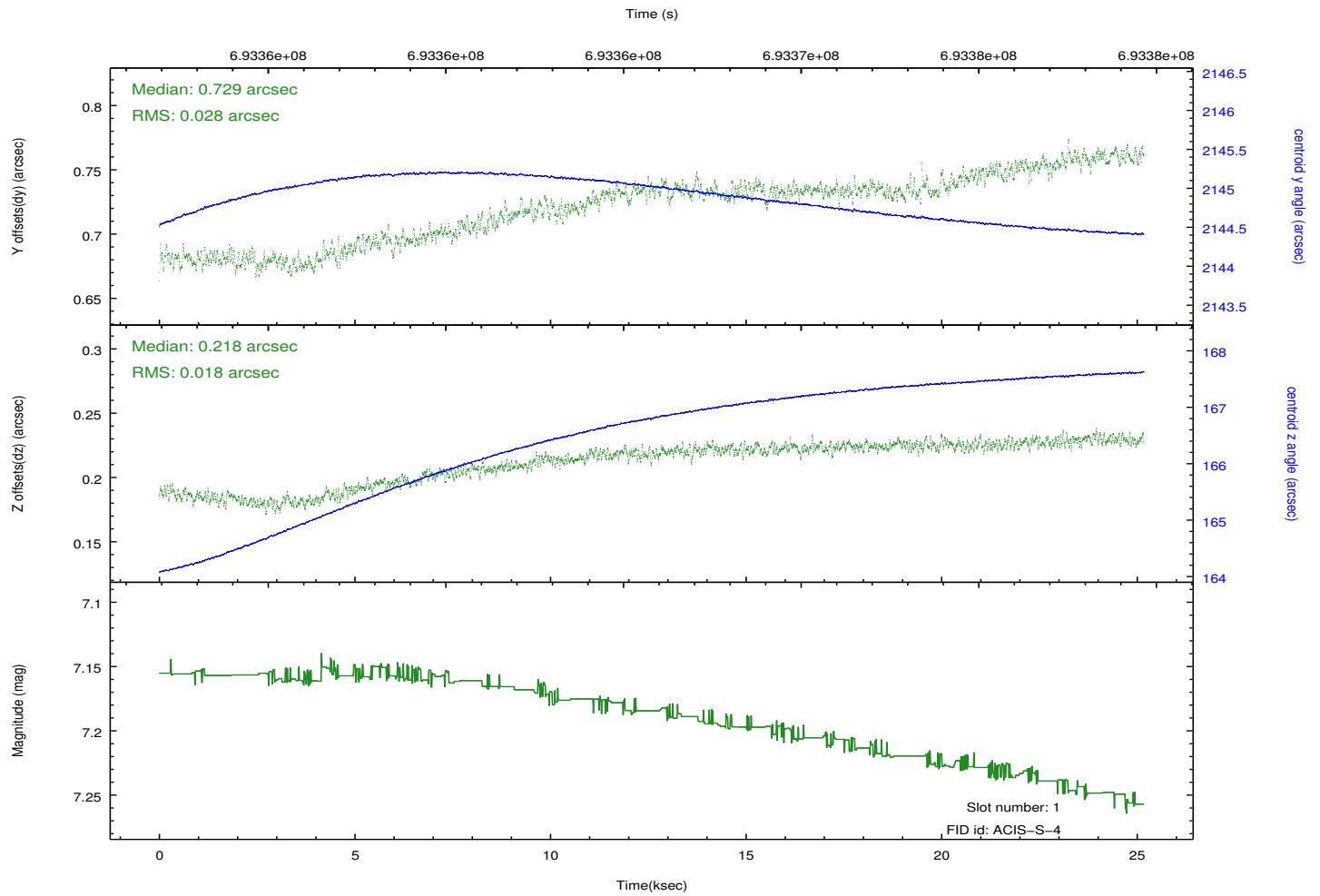
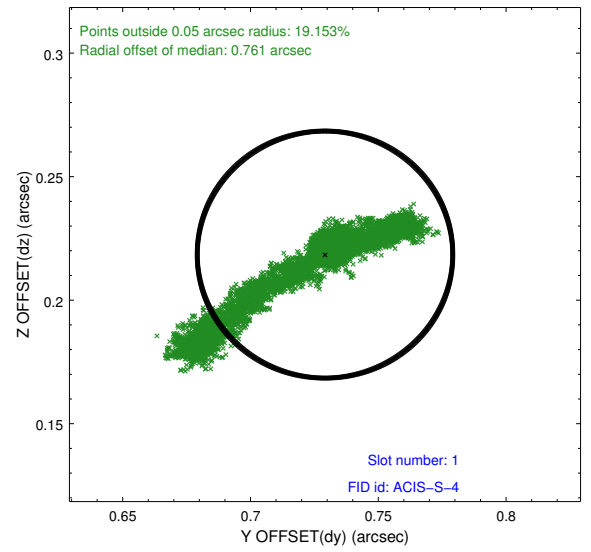
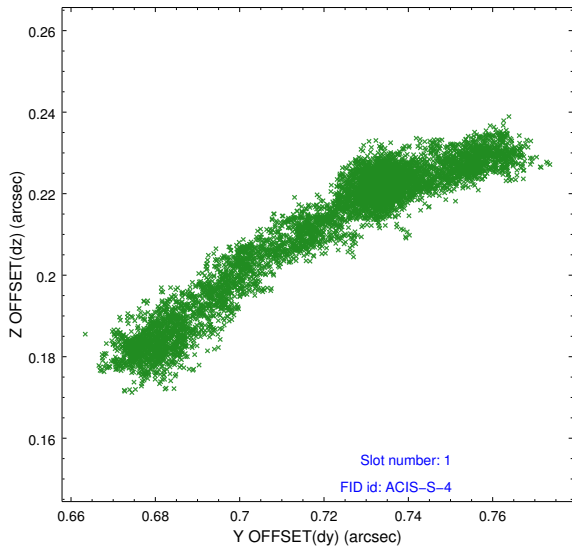


2.5 FID Slots

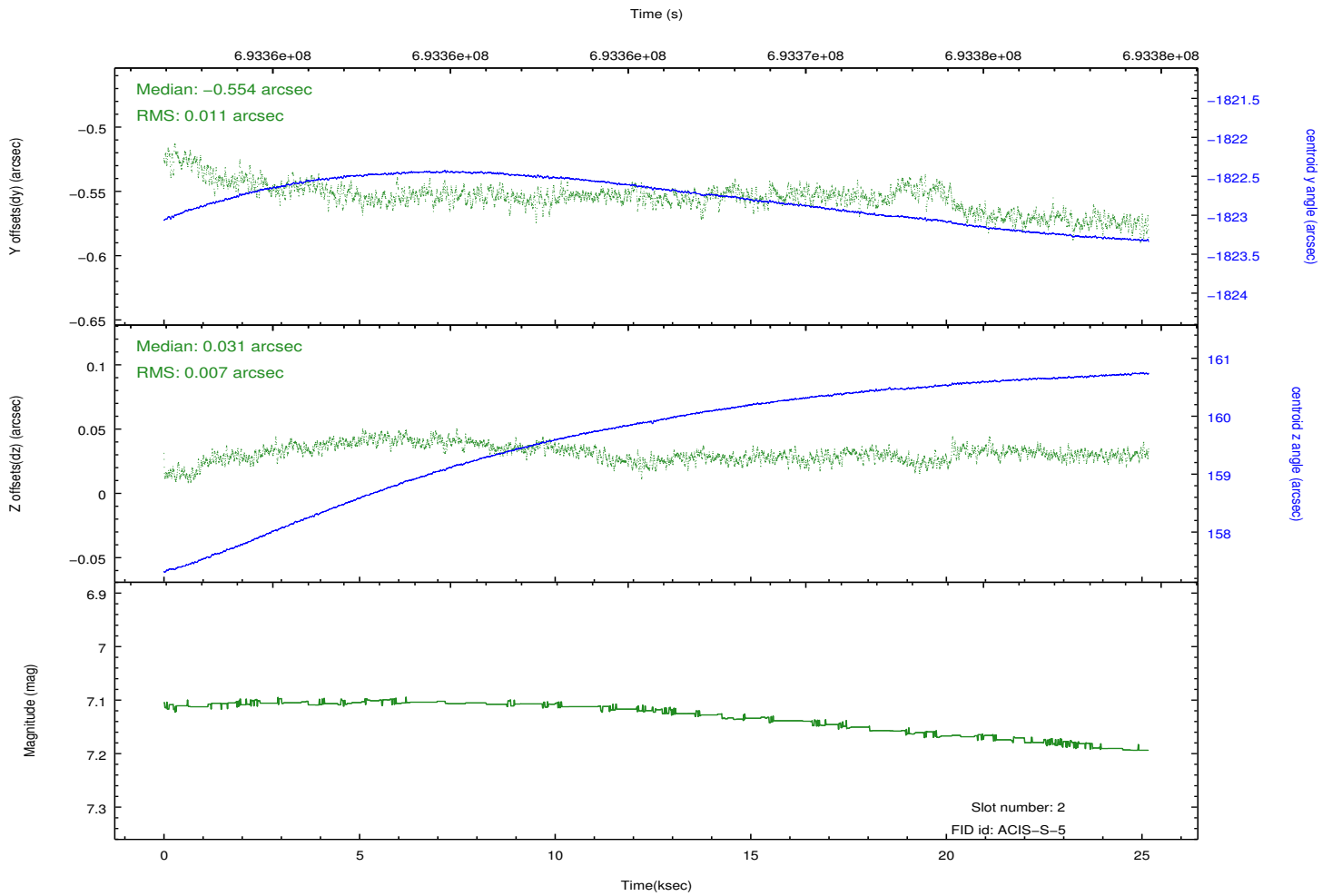
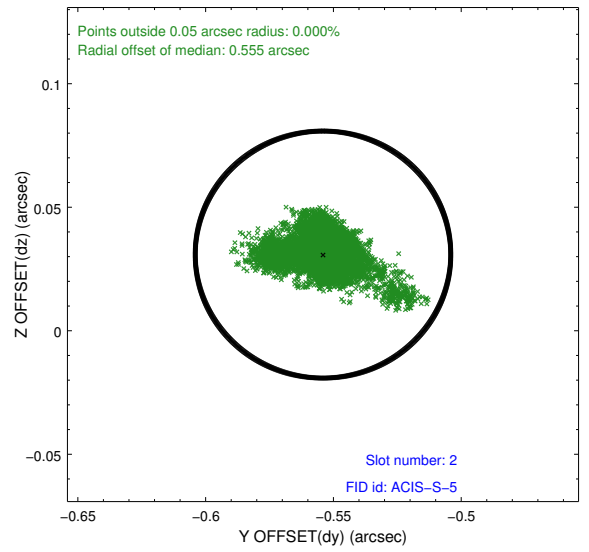
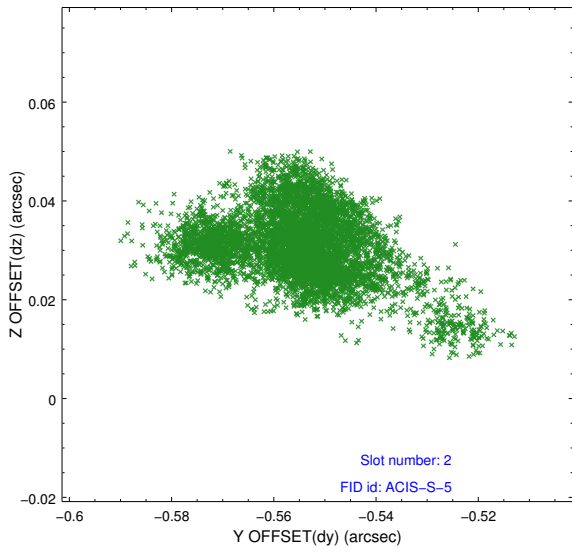
2.5.1 Slot 0



2.5.2 Slot 1

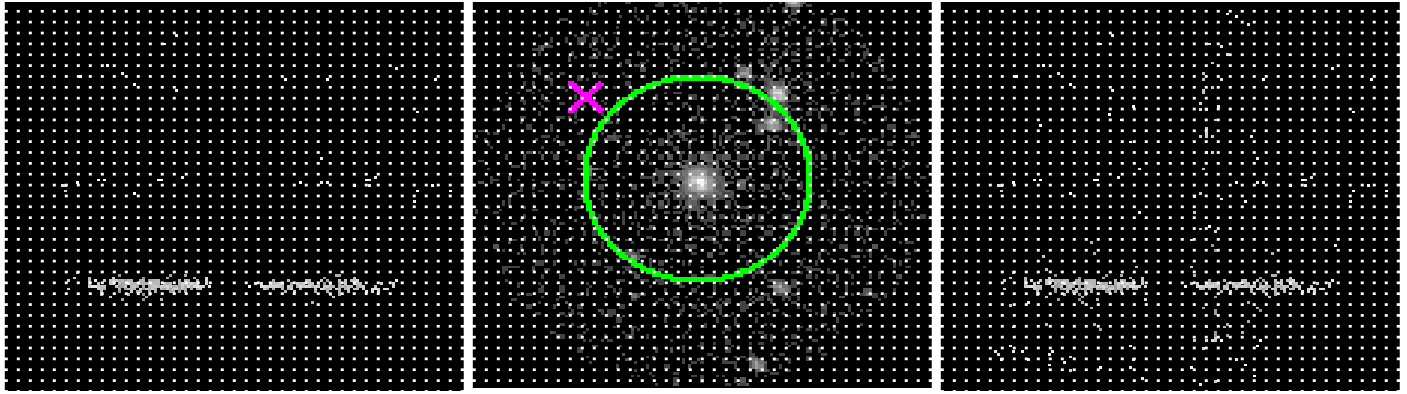


2.5.3 Slot 2



3 Gratings

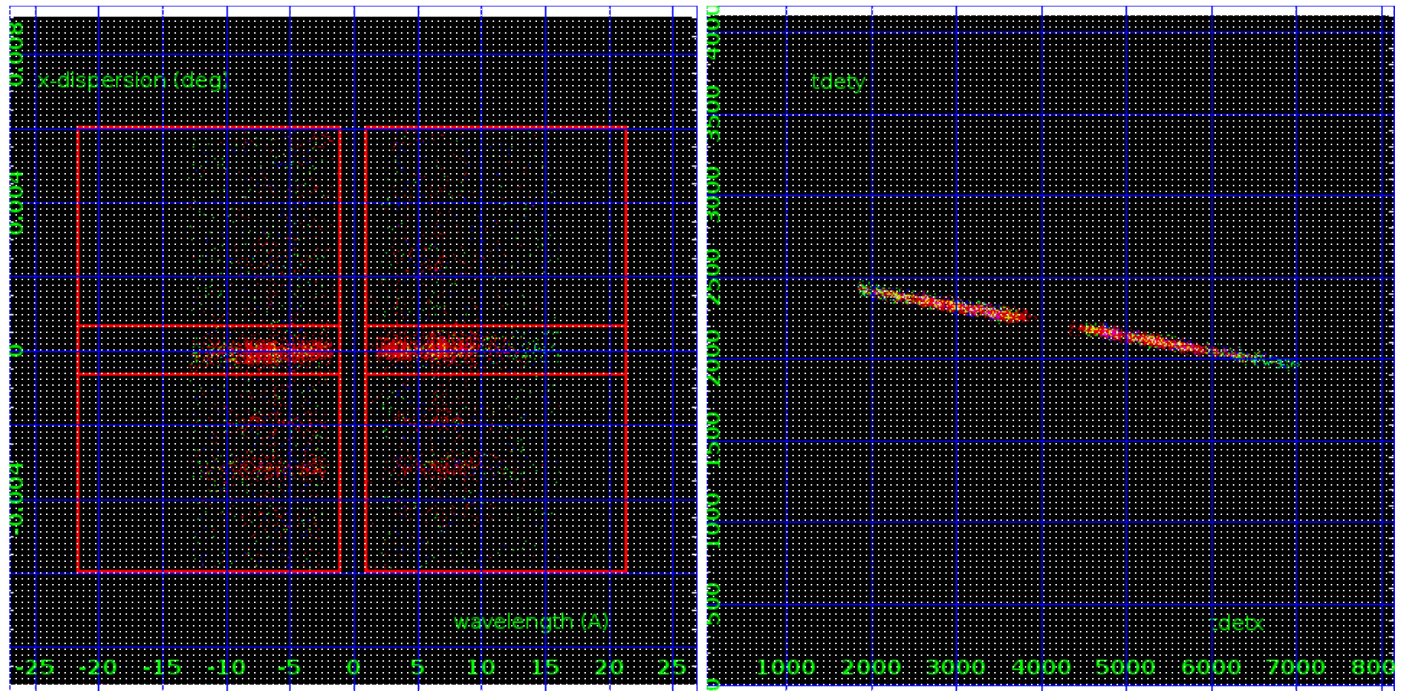
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

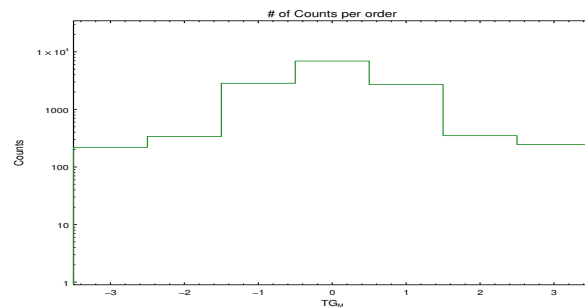
HEG Order Sort ALL



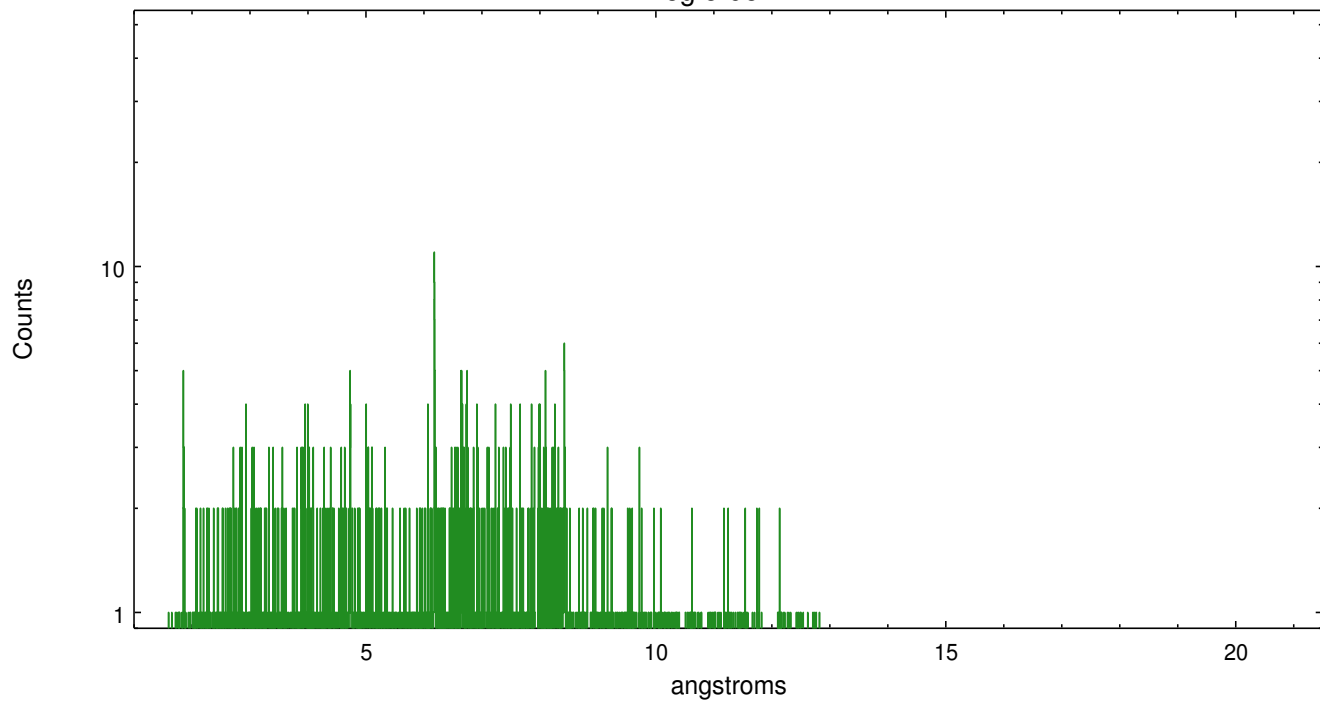
Spot Image HEG

Full Detector HEG

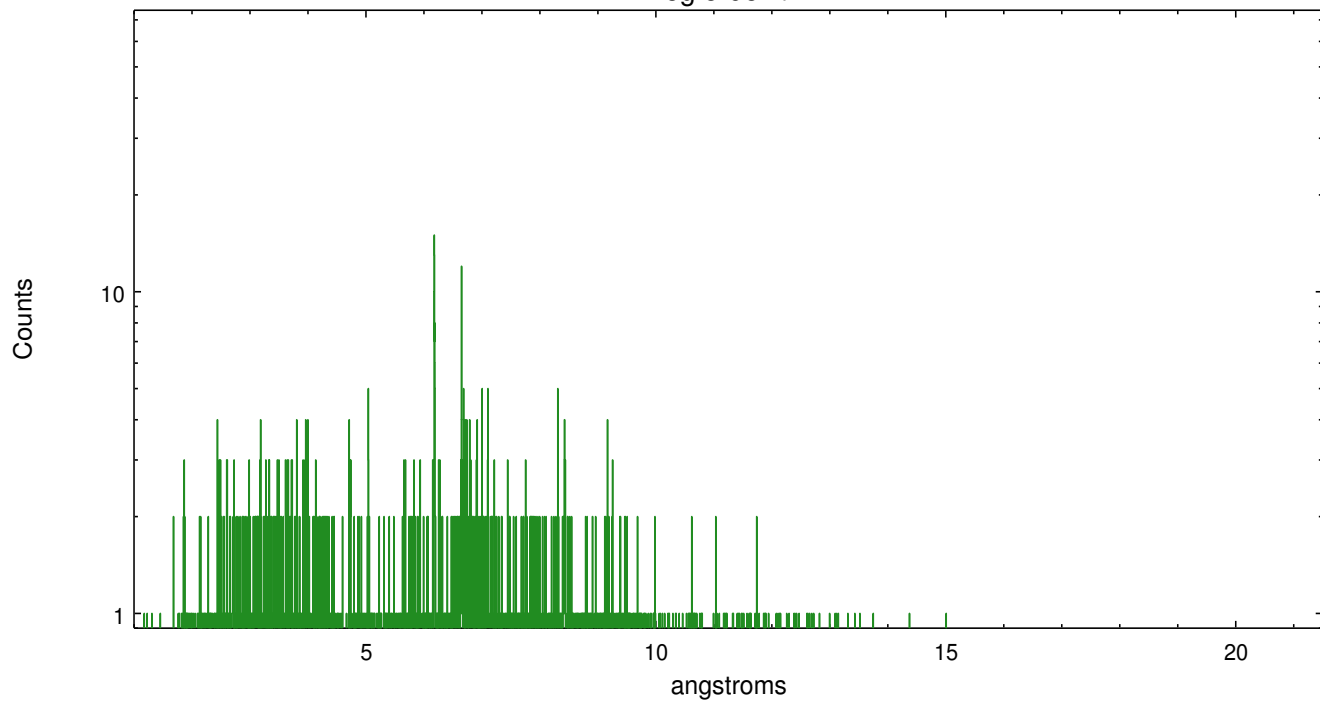
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	219	338	2836	6905	2703	350	245



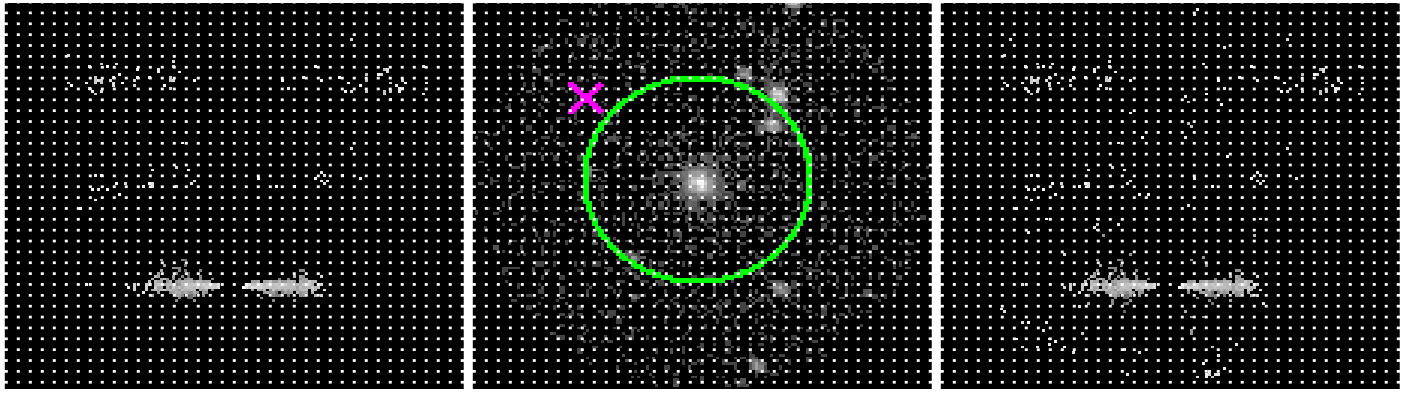
heg order -1



heg order +1



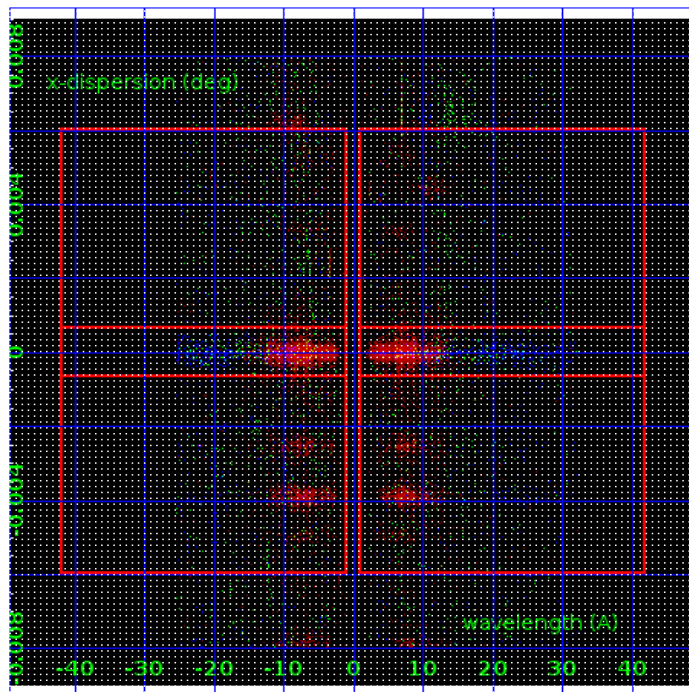
3.2 MEG Arm



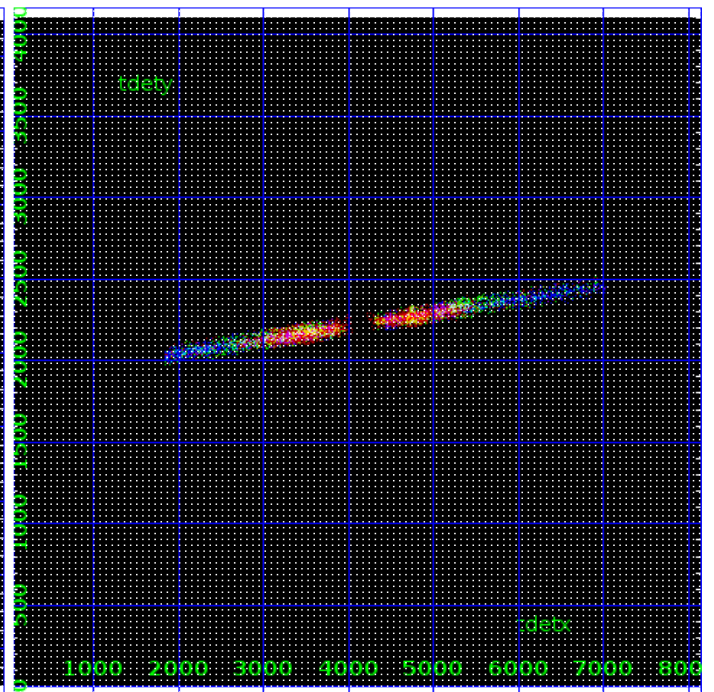
MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

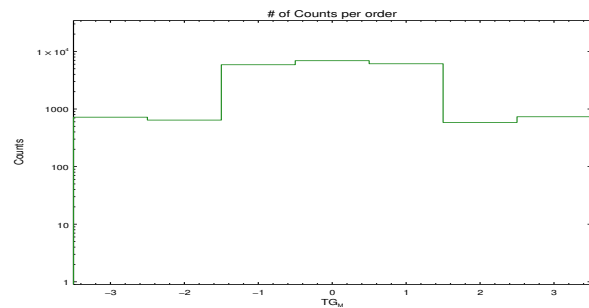


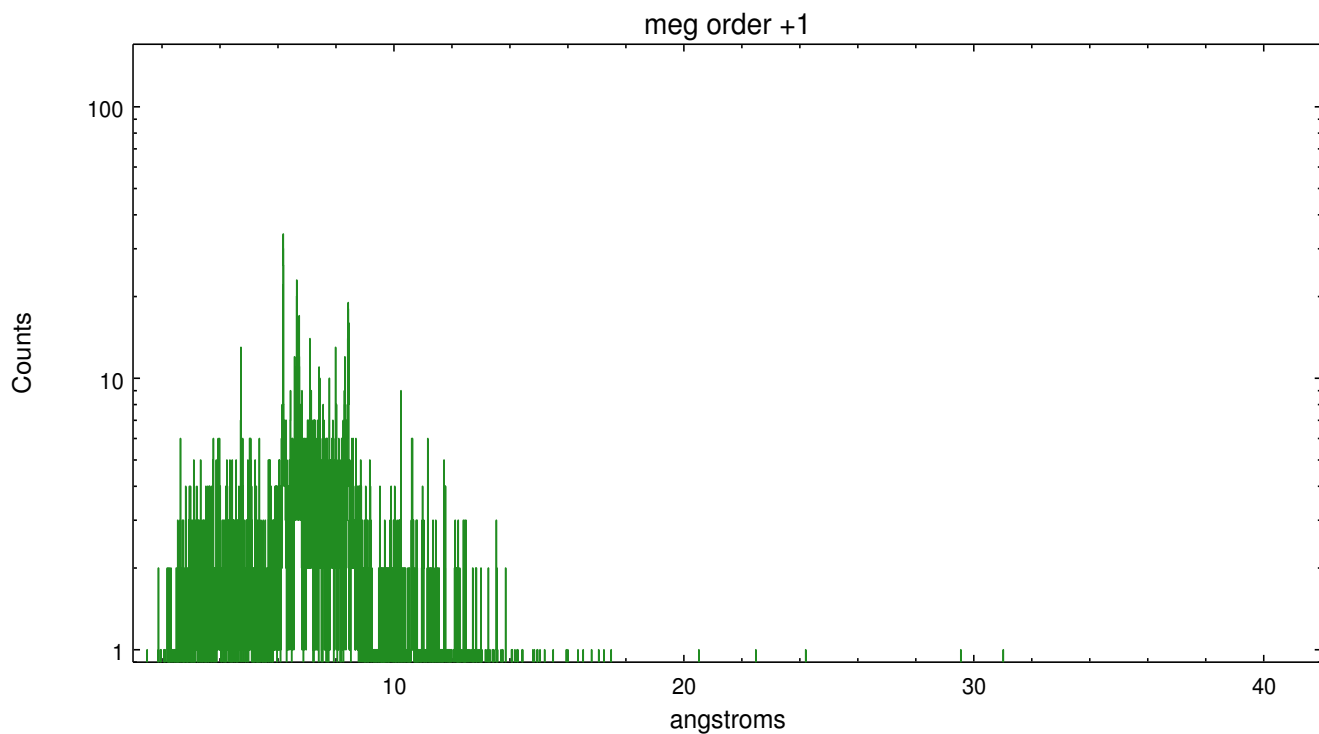
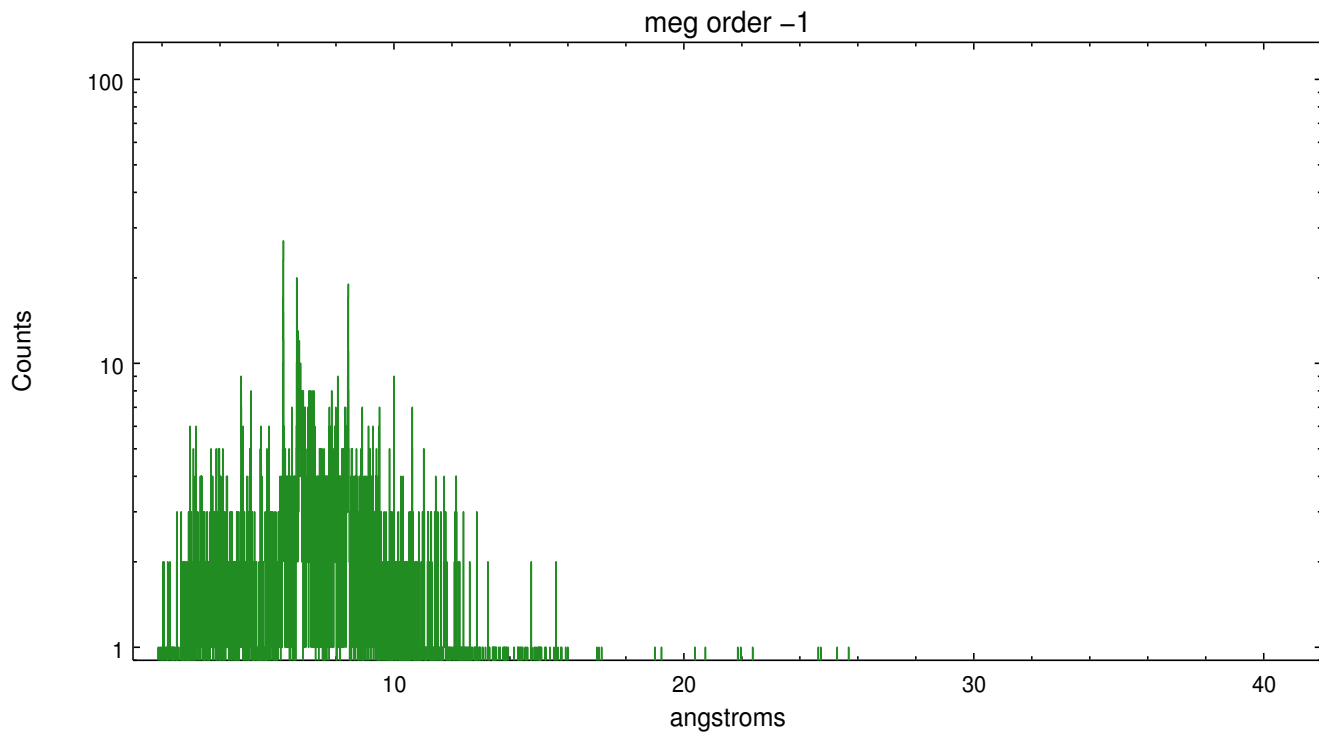
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	721	642	5873	6905	6107	585	734





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2019.12.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.054200192809

A.2 Comments