

V&V Reference Report

L2 ASCDS Version : 10.4.3

Observation 18741 - L2 Version 2
Chandra X-Ray Center

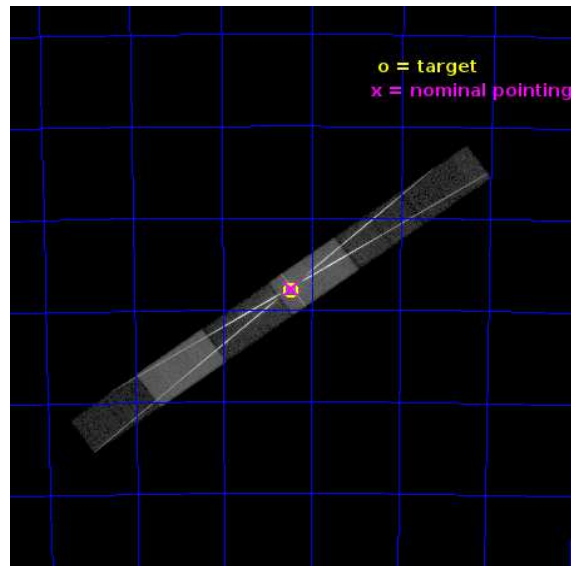
L2 Processing Date : Jan 11 2016

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1 Front

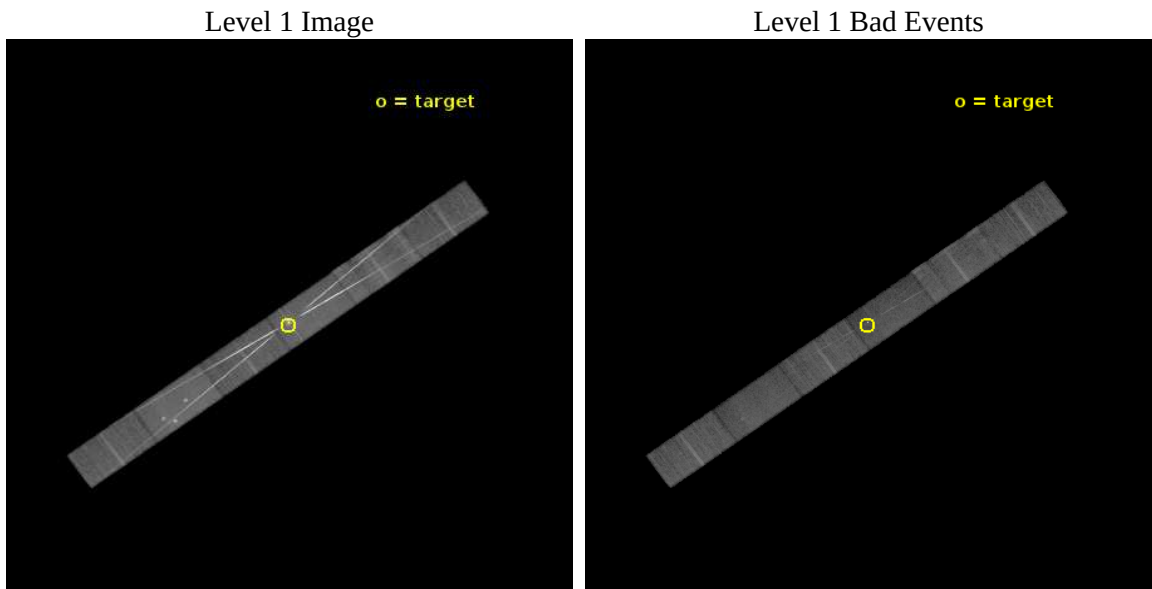
seq_num	901124	Sequence number
obs_id	18741	Observation id
title	HETG Observations of the Extragalactic Z-source LMC X-2	Proposal t
observer	Prof. Claude Canizares	Principal investigator
object	LMC X-2	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	80.116667	Observer's specified target RA [deg]
dec_targ	-71.964806	Observer's specified target Dec [deg]
ra_nom	80.113393995948	Nominal RA [deg]
dec_nom	-71.962149651252	Nominal Dec [deg]
roll_nom	324.1534945192	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30033.19534719	Sum of GTIs [s]
livetime	29325.249328116	Livetime [s]
ontime4	30033.236387134	Sum of GTIs [s]
ontime5	30033.154307127	Sum of GTIs [s]
ontime6	30033.113267183	Sum of GTIs [s]
ontime7	30033.19534719	Sum of GTIs [s]
ontime8	30033.07222712	Sum of GTIs [s]
ontime9	30033.031187177	Sum of GTIs [s]
l2events	528613	Number of level 2 events



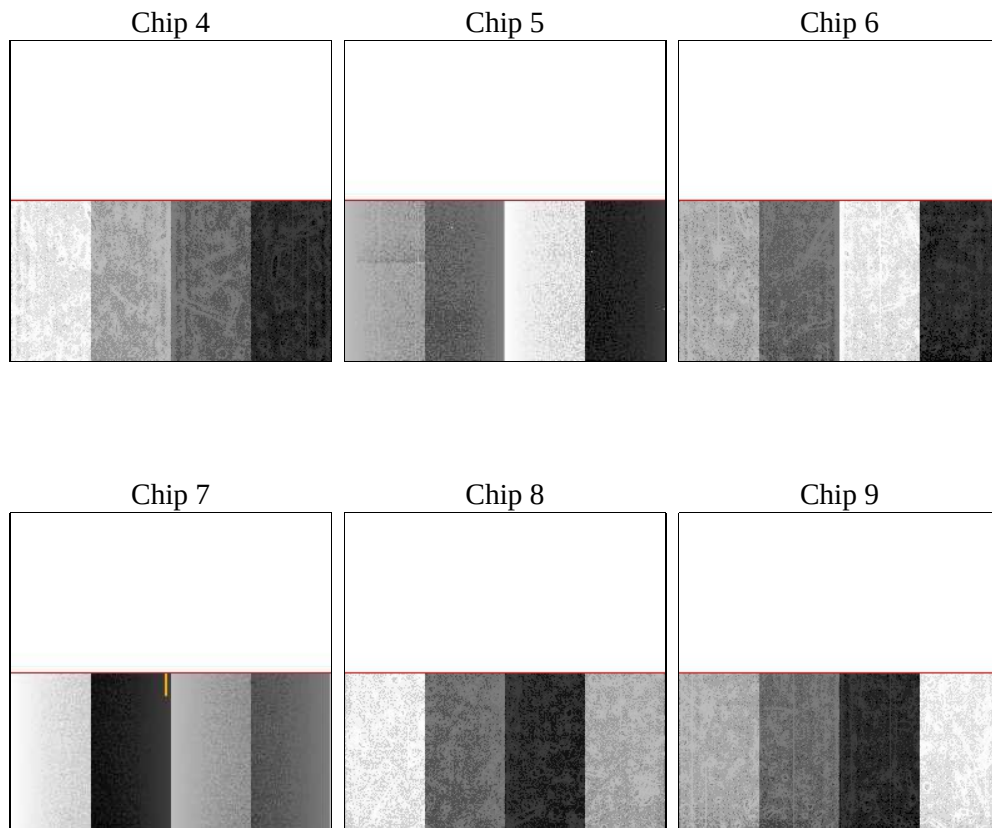
2 OBI

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	10.4.3	Processing system revision	ontime	30033.19534719	Sum of GTIs [s]
caldsver	4.7.0	 	ontime4	30033.236387134	Sum of GTIs [s]
date	2016-01-11T04:14:48	Date and time of file creation	ontime5	30033.154307127	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30033.113267183	Sum of GTIs [s]
			ontime7	30033.19534719	Sum of GTIs [s]
			ontime8	30033.07222712	Sum of GTIs [s]
			ontime9	30033.031187177	Sum of GTIs [s]
			l1events	1082277	Number of level 1 events
			tgmethod	MANUAL	Method used to create src1a file
			src1a_pos	(4087.27, 4110.40)	src1a sky pixel position

2.1.4 Events

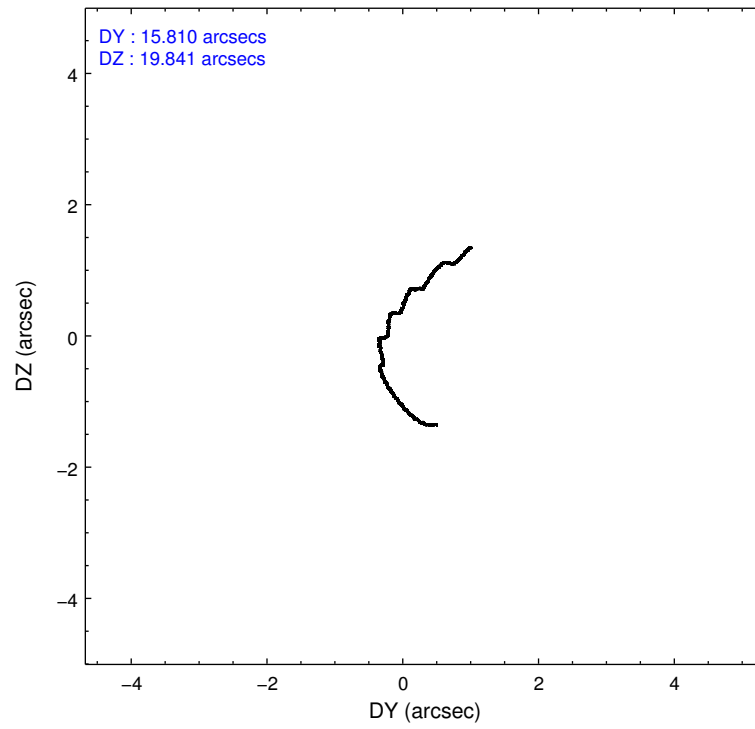
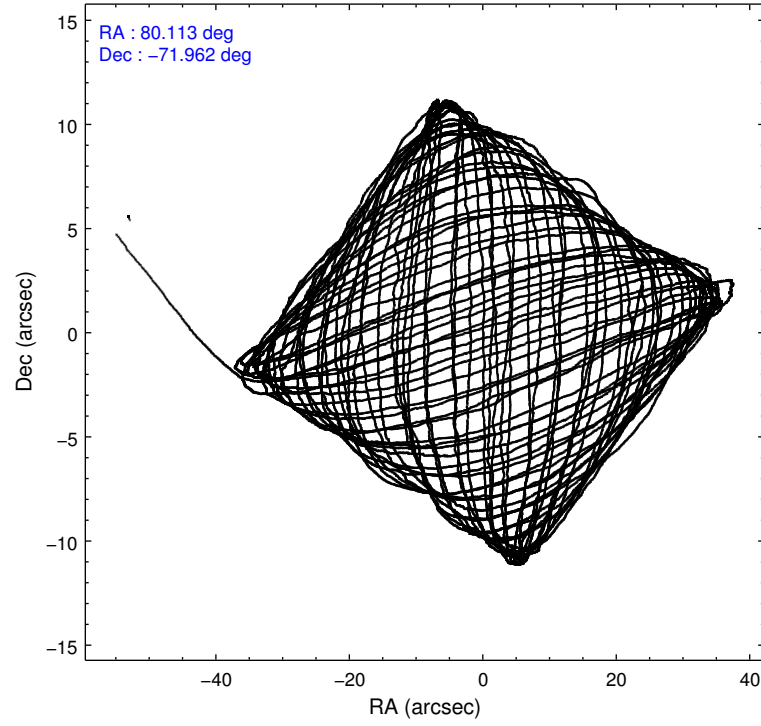
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	106963	180726	238068	280363	177946	98211
rejected events	91164	74235	88117	70687	93377	79202
rejected %	85%	41%	37%	25%	52%	80%

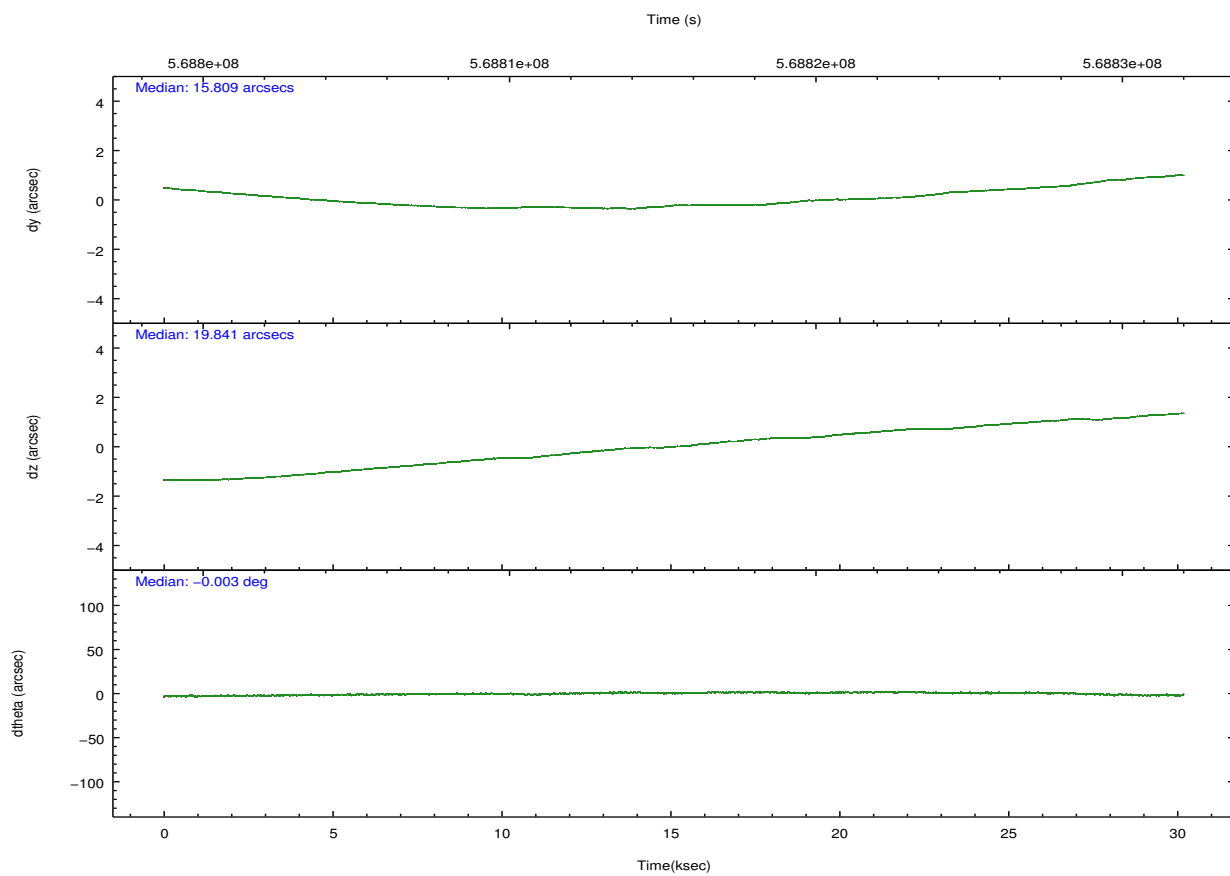
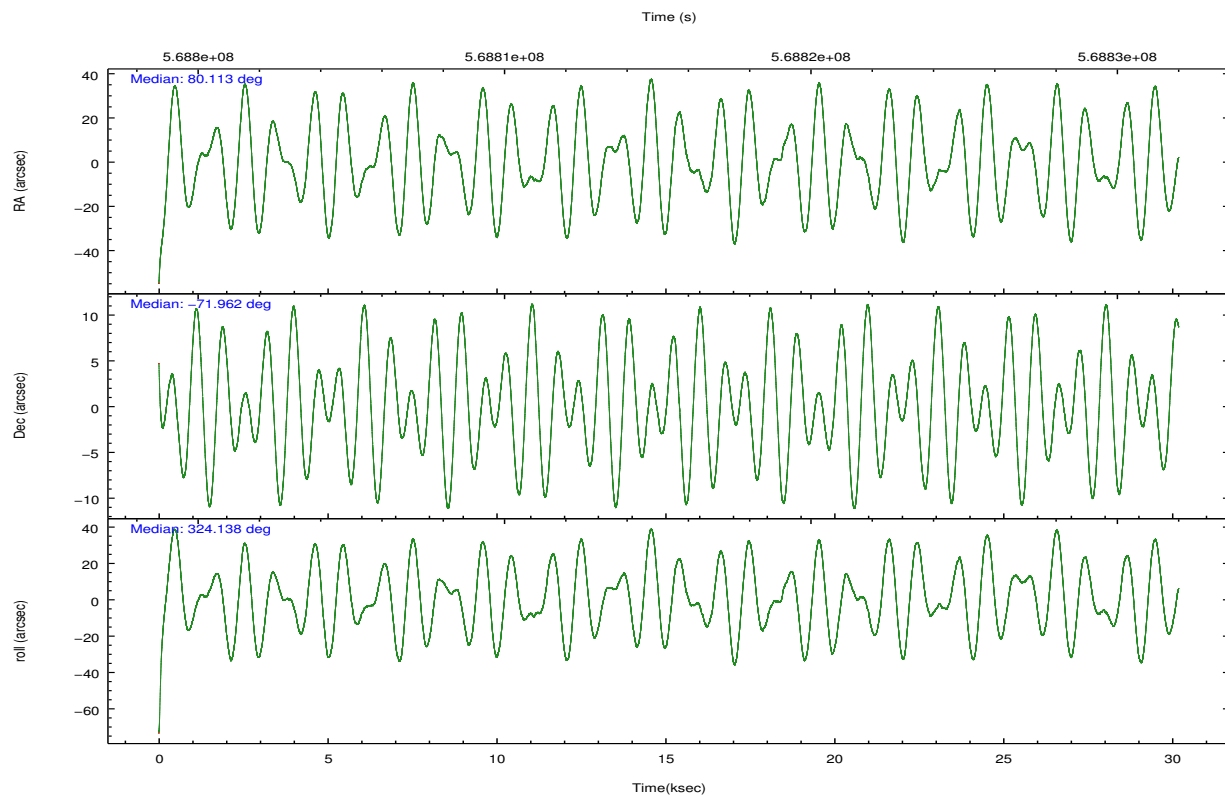
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	7412	24493	108243	38400	49882	9928
	6%	13%	45%	13%	28%	10%
grade 1 events	66	477	589	642	189	50
	0%	0%	0%	0%	0%	0%
grade 2 events	3311	28905	19701	50352	13252	3324
	3%	15%	8%	17%	7%	3%
grade 3 events	1482	5947	6737	22234	5198	1586
	1%	3%	2%	7%	2%	1%
grade 4 events	1414	5739	6854	21749	5053	1587
	1%	3%	2%	7%	2%	1%
grade 5 events	4081	11476	4638	14676	6363	4432
	3%	6%	1%	5%	3%	4%
grade 6 events	2184	41415	8435	76975	11191	2586
	2%	22%	3%	27%	6%	2%
grade 7 events	87013	62274	82871	55335	86818	74718
	81%	34%	34%	19%	48%	76%

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	80.025188	80.11339399594824	CCD I2 on	N	N
[deg] Pointing Dec	-71.959702	-71.96214965125198	CCD I3 on	N	N
[deg] Pointing Roll	323.913014	324.1534945191995	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	-183.992523	-183.9875365069546	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.144986076053243	CCD S4 on	Y	Y
[s] Observation start time (MET)	568800434.184000	568799265.47308	CCD S5 on	O2	Y
Observation start date	2016-01-10T08:06:06	2016-01-10T07:47:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	568830434.184000	568831270.0749	On-chip summing requested	N	N
Observation end date	2016-01-10T16:26:06	2016-01-10T16:41:10	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



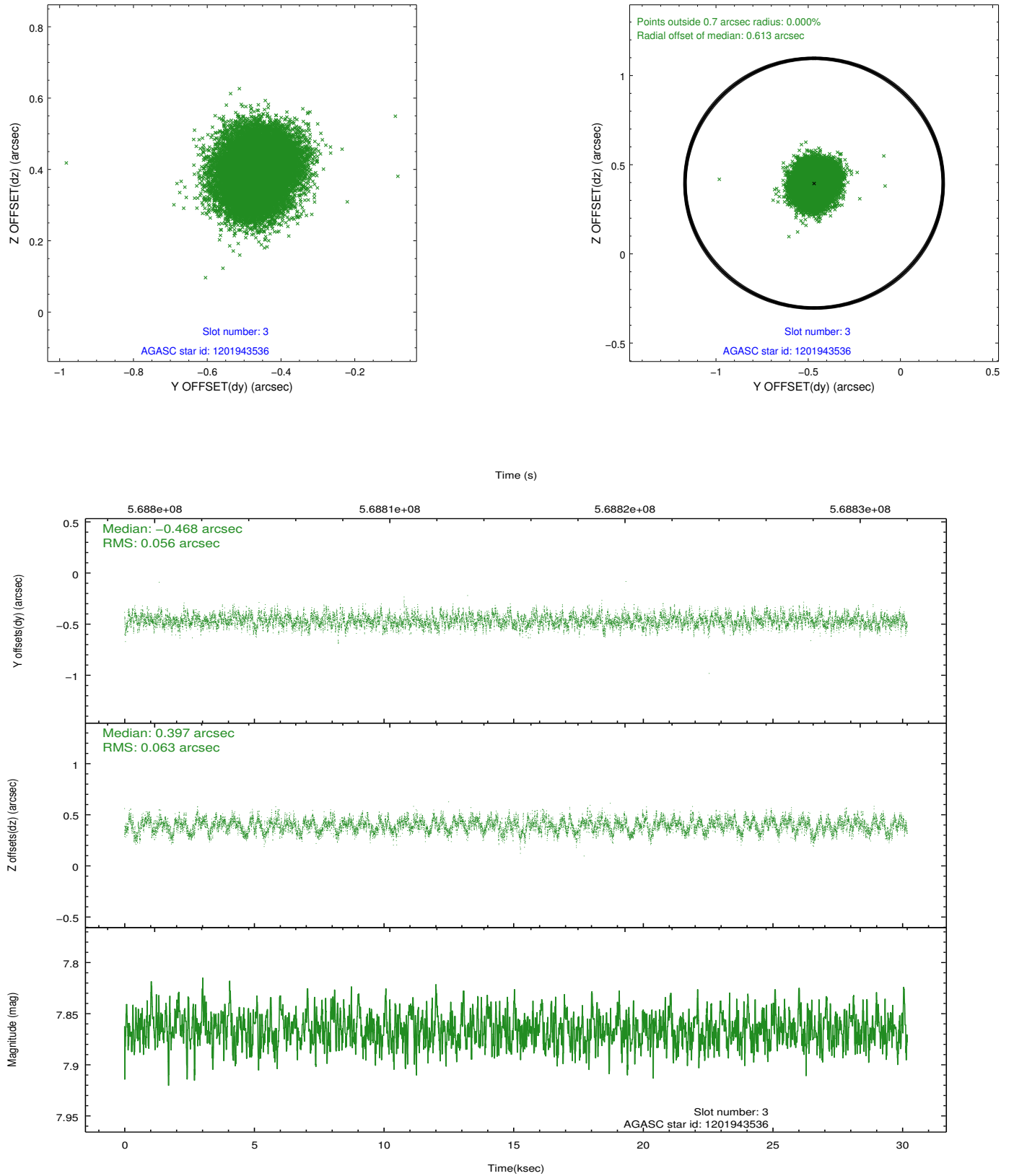


Slot Statistics

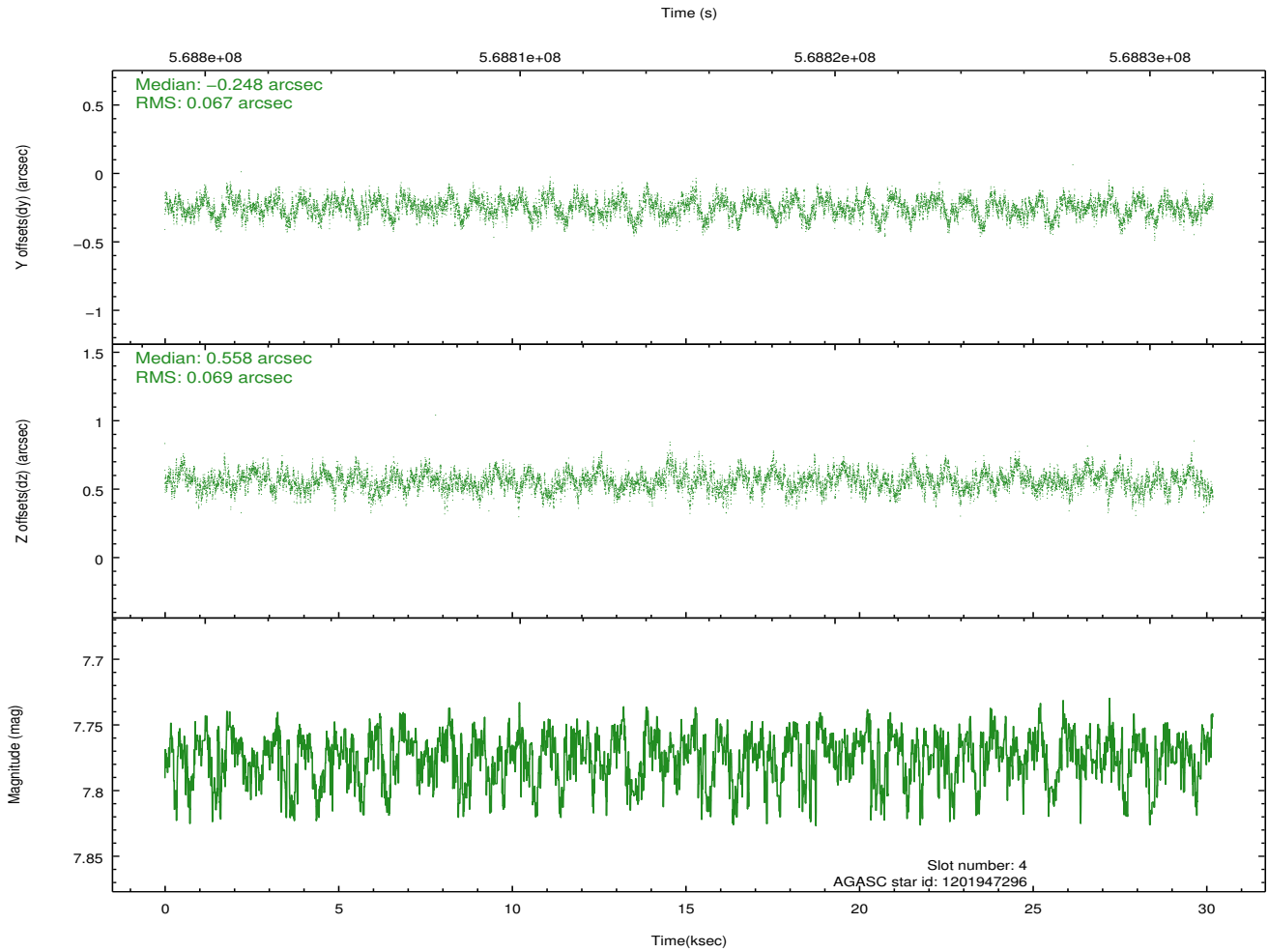
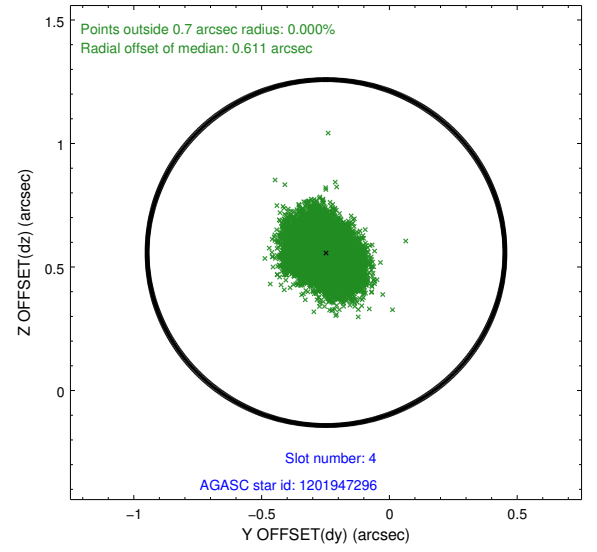
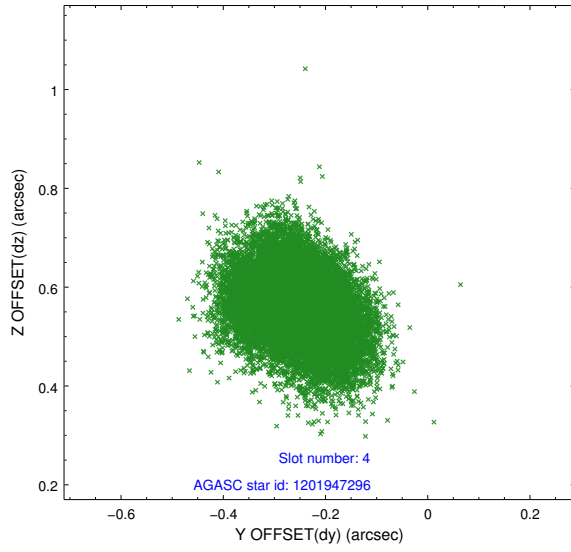
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.09	7363	-0.212	-0.162	0.024	0.048	0.000000	0.000000	-768.68	-1868.14
1	FID		ACIS-S-4	7.19	7363	0.441	0.146	0.012	0.030	0.000000	0.000000	2145.24	40.50
2	FID		ACIS-S-5	7.23	7363	-0.258	0.028	0.019	0.044	0.000000	0.000000	-1821.46	34.18
3	GUIDE	used	1201943536	7.87	14722	-0.468	0.397	0.091	0.139	80.686918	-72.338612	1389.86	-678.53
4	GUIDE	used	1201947296	7.77	14724	-0.248	0.558	0.104	0.166	80.605426	-71.506504	-423.99	1707.12
5	GUIDE	used	1201947968	7.39	14723	0.991	-1.094	0.071	0.120	79.357687	-71.533125	-1516.13	788.48
6	GUIDE	used	1201948040	8.28	14723	0.071	0.178	0.094	0.155	78.573490	-71.502940	-2296.39	336.40
7	GUIDE	used	1201943568	9.15	14718	-0.346	-0.034	0.149	0.238	79.668048	-72.694310	1249.74	-2362.49

2.4 Star Slots

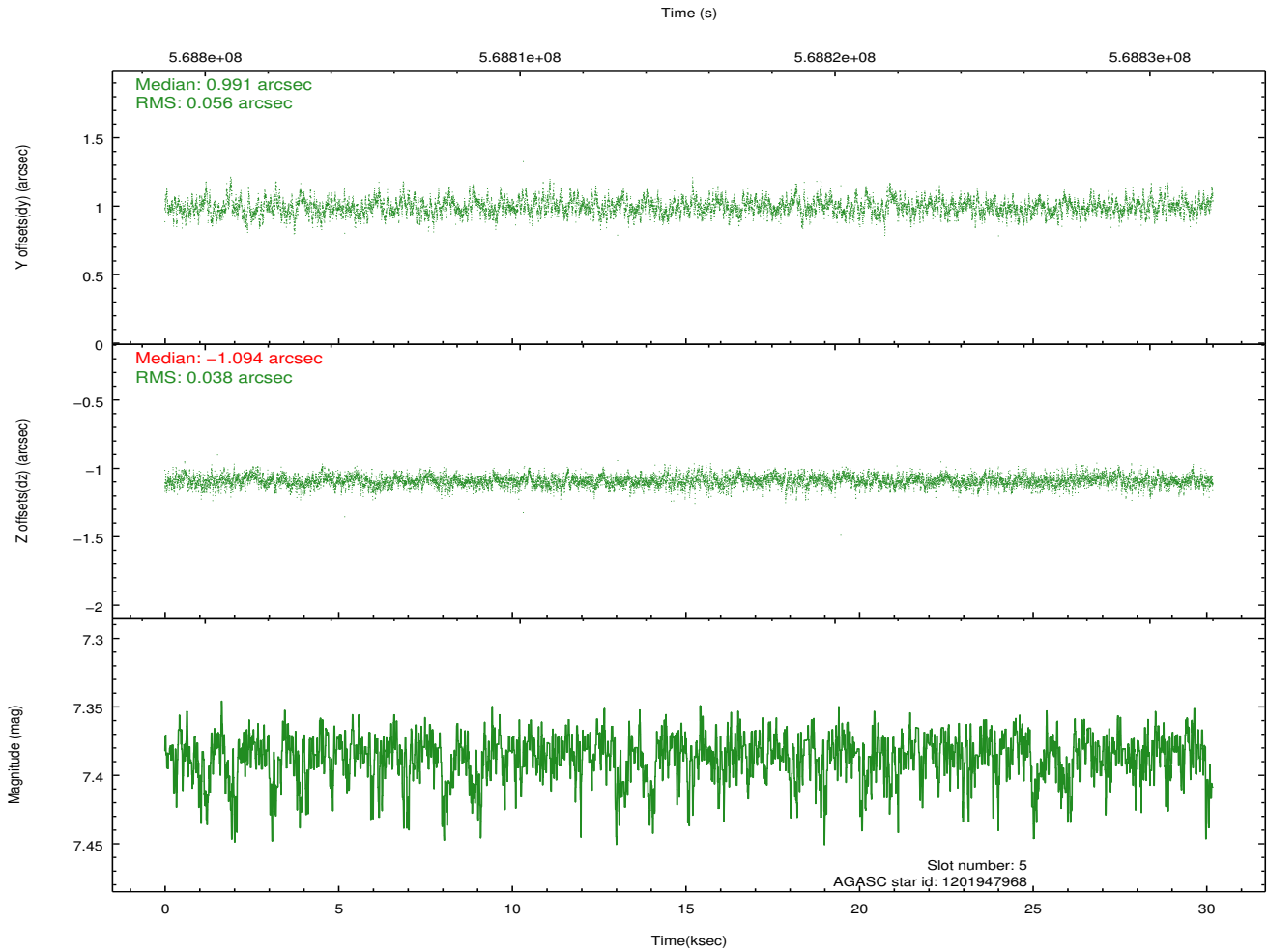
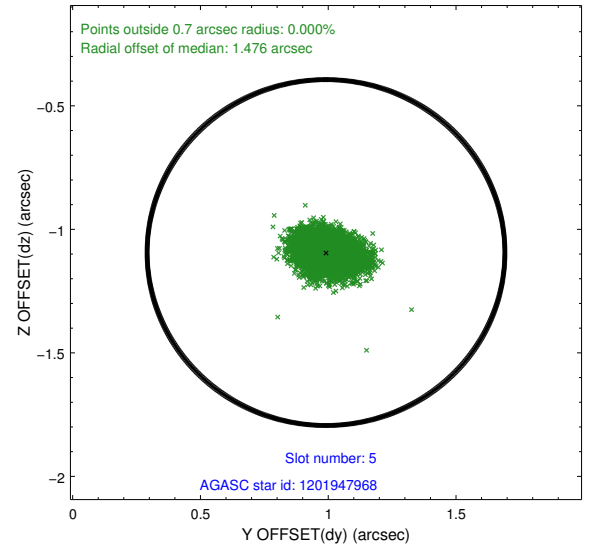
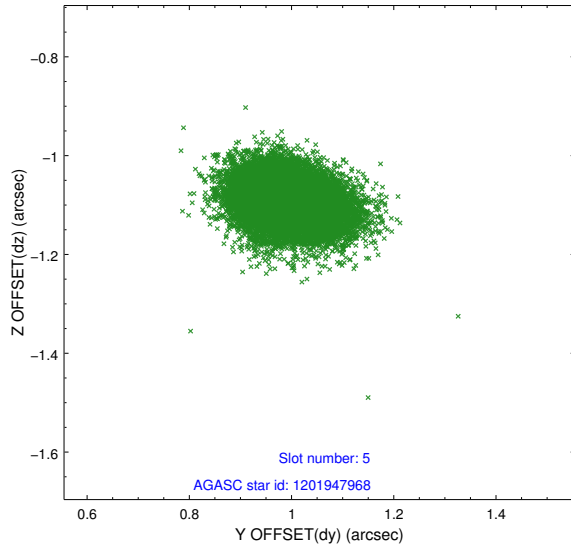
2.4.1 Slot 3



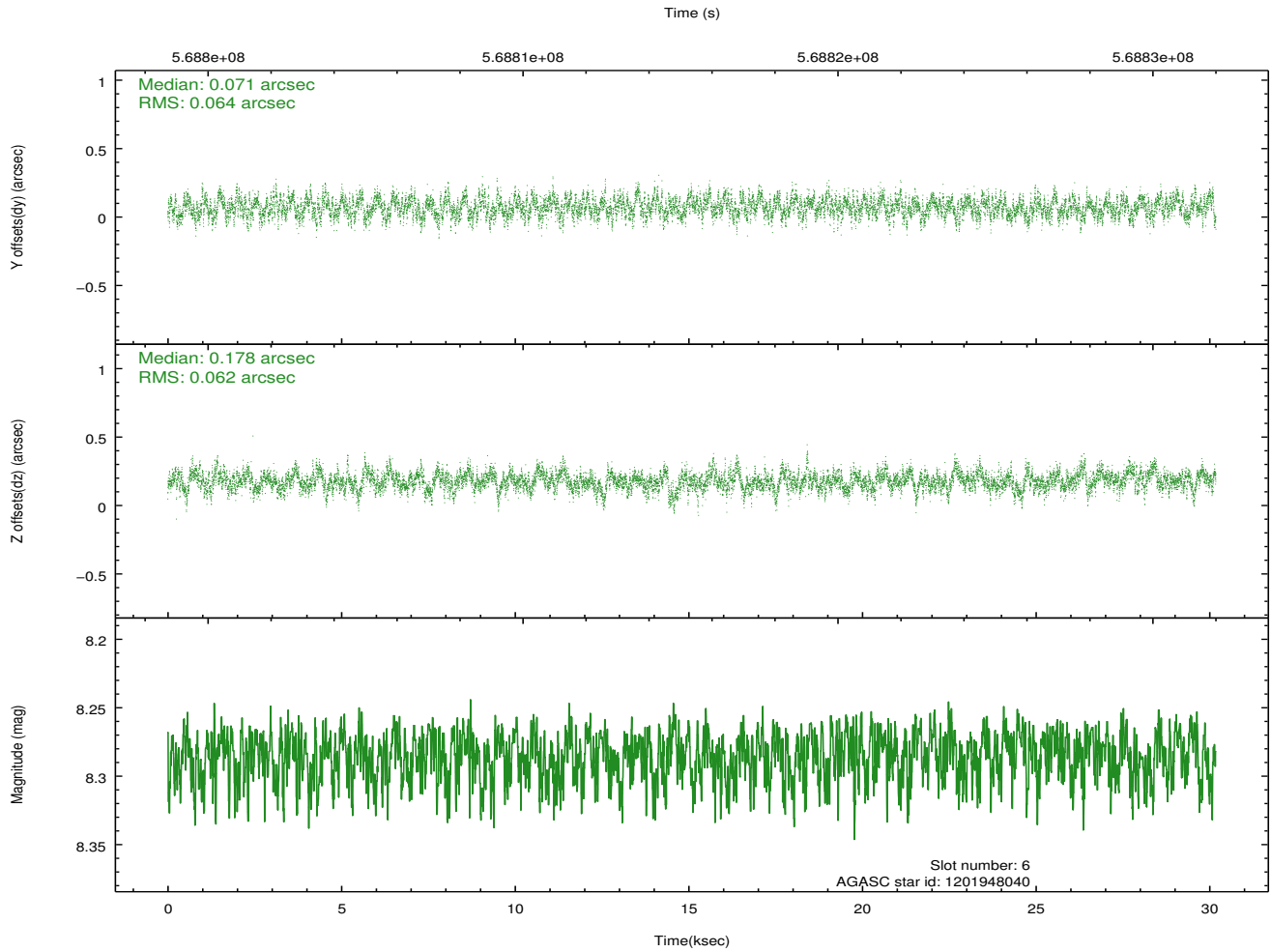
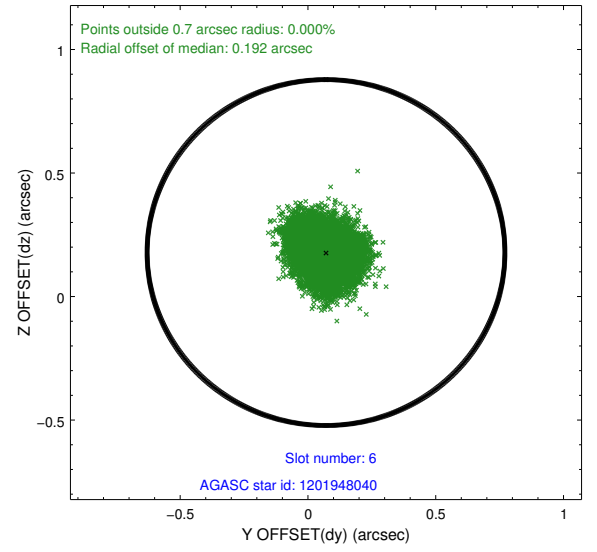
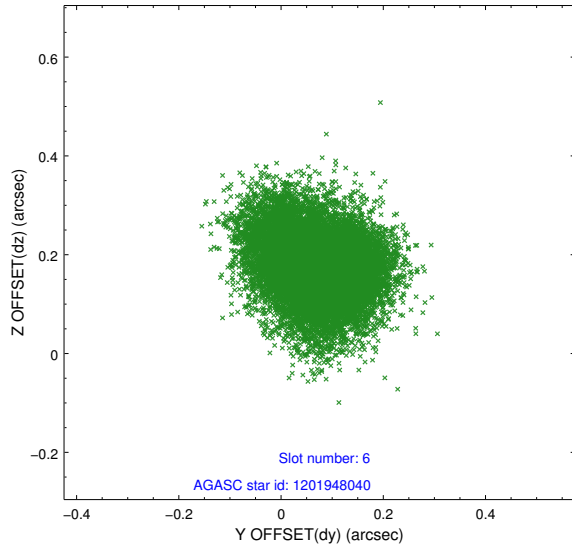
2.4.2 Slot 4



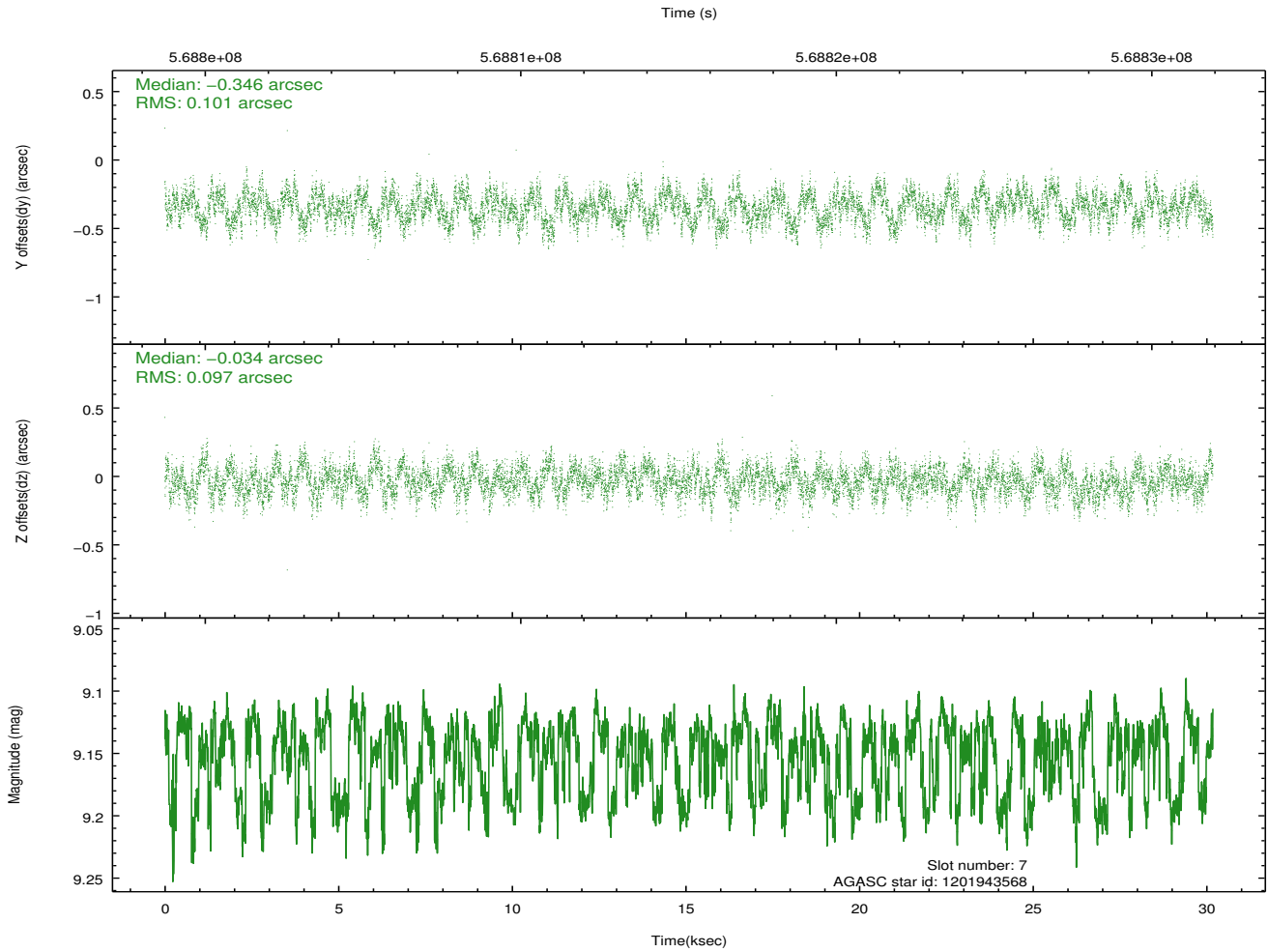
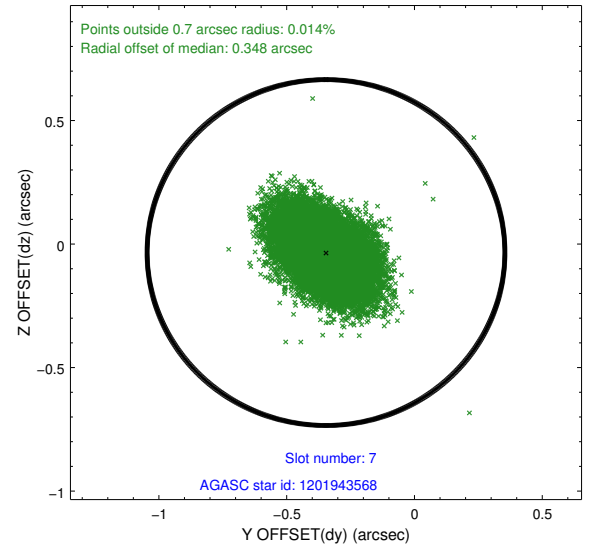
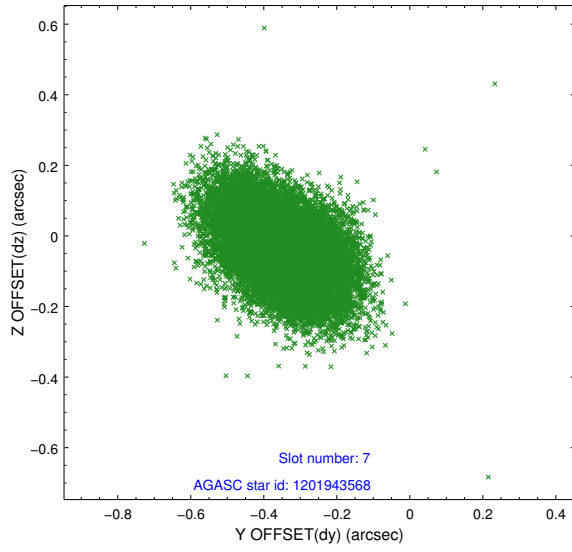
2.4.3 Slot 5



2.4.4 Slot 6

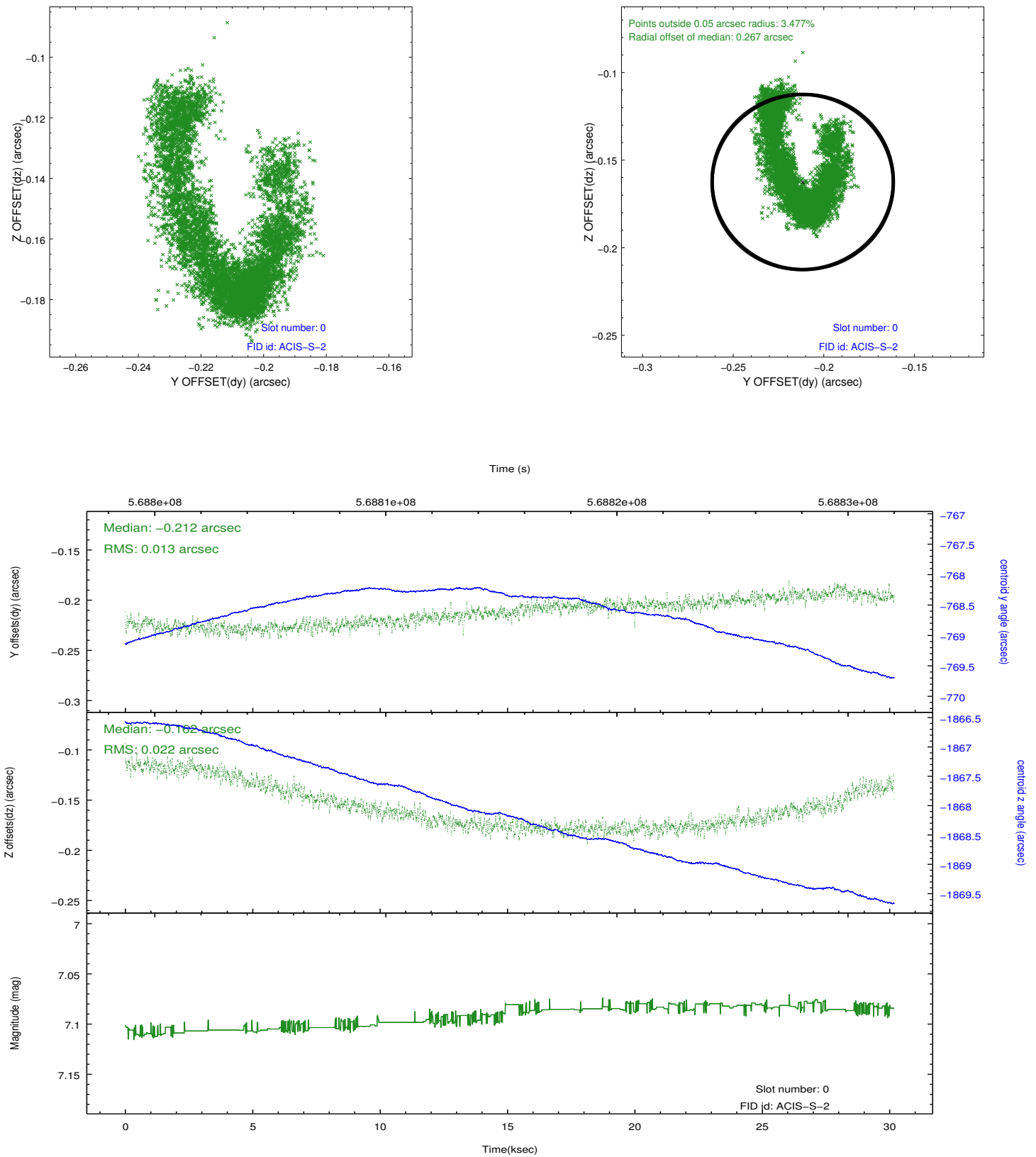


2.4.5 Slot 7

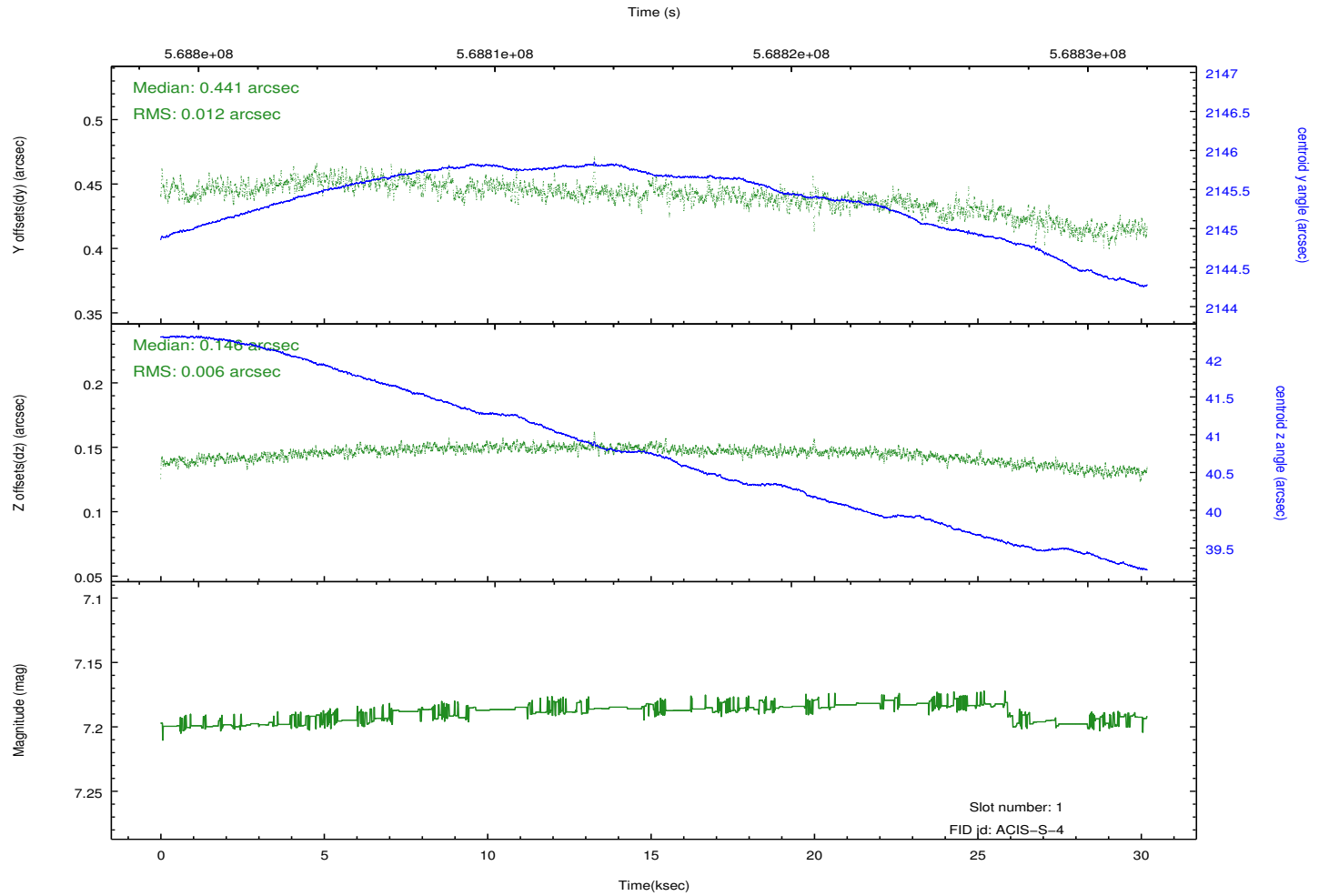
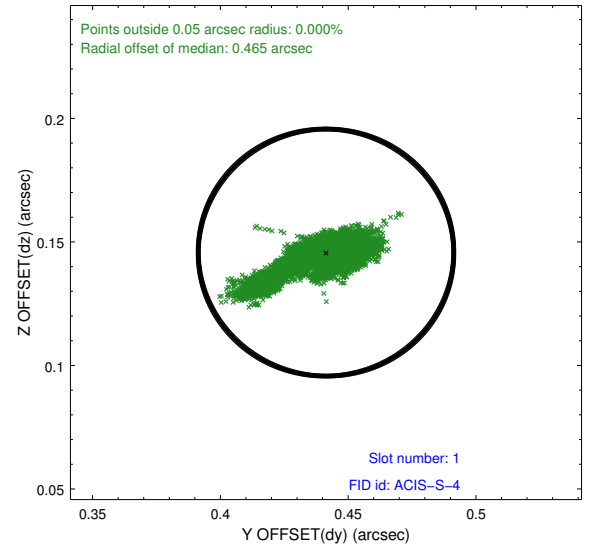
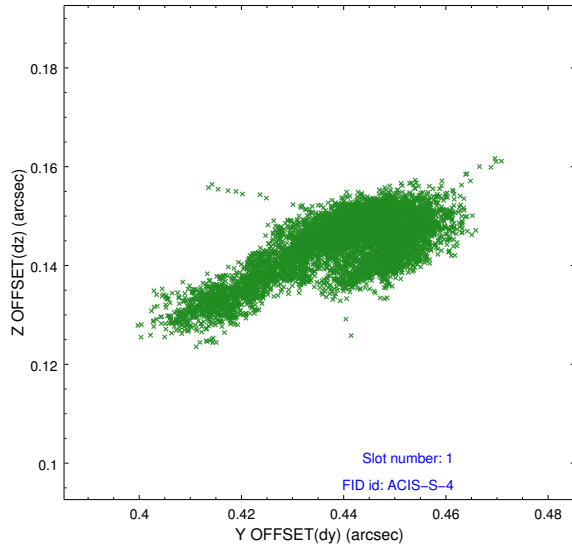


2.5 FID Slots

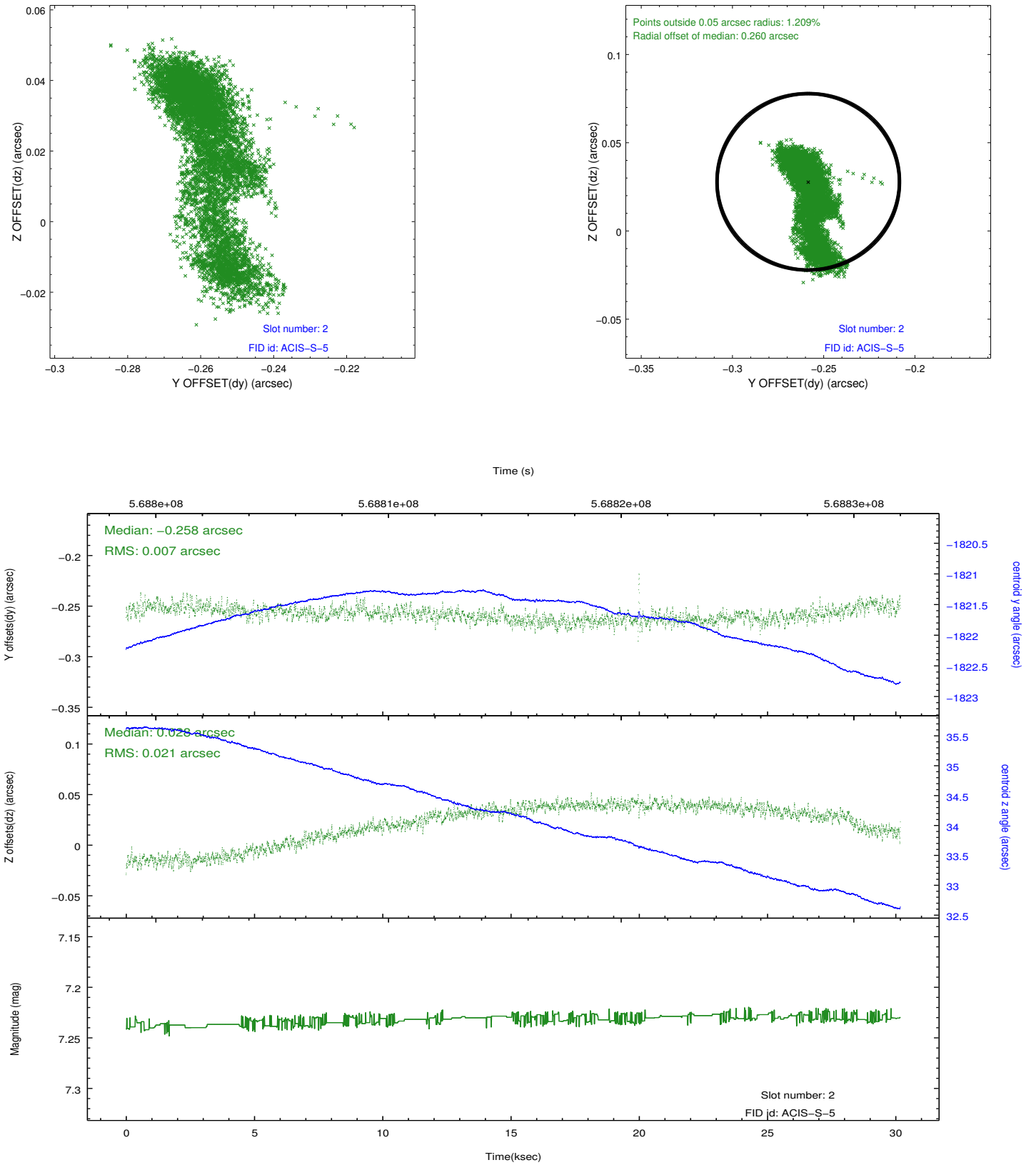
2.5.1 Slot 0



2.5.2 Slot 1

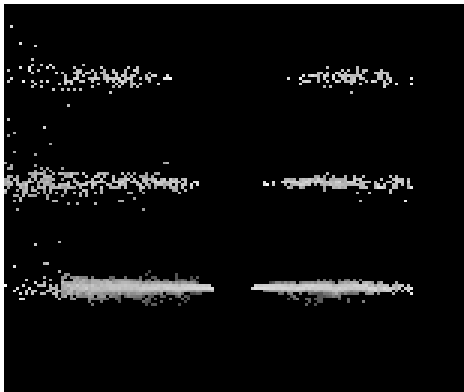


2.5.3 Slot 2

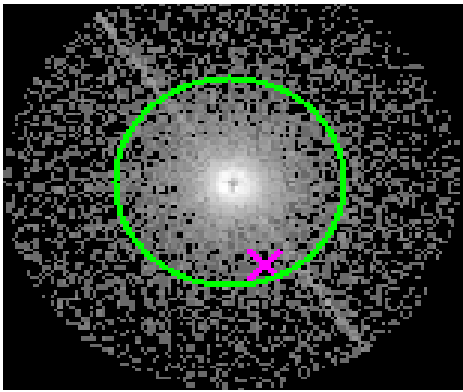


3 Gratings

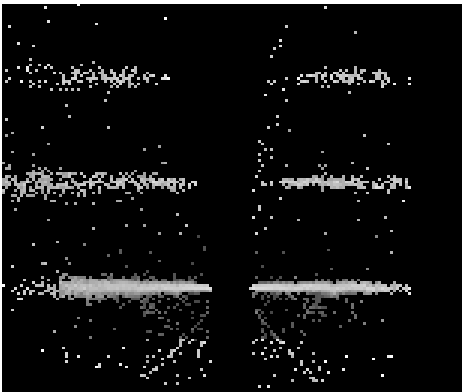
3.1 HEG Arm



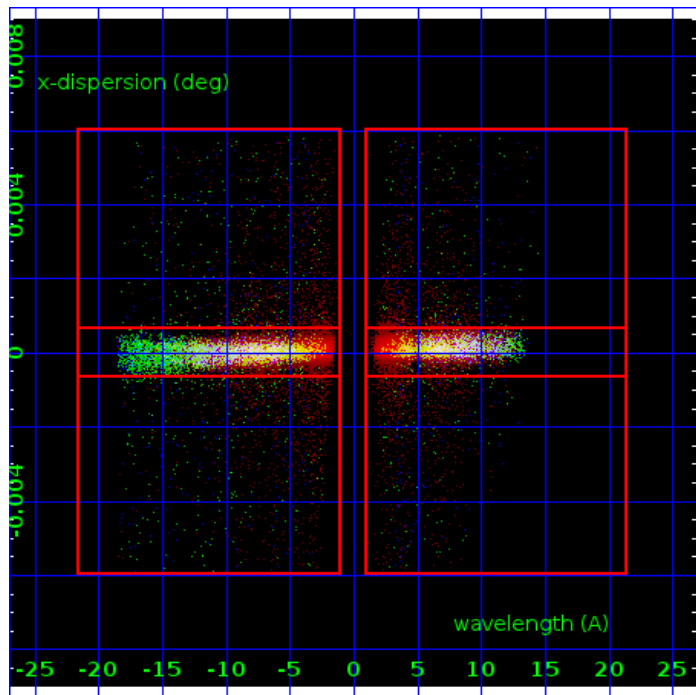
HEG Order Sort 123



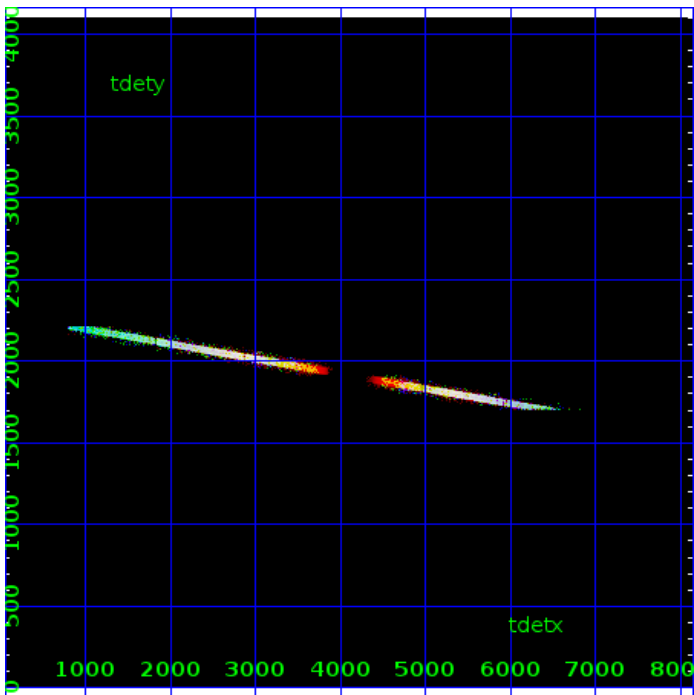
HEG Zero Order



HEG Order Sort ALL

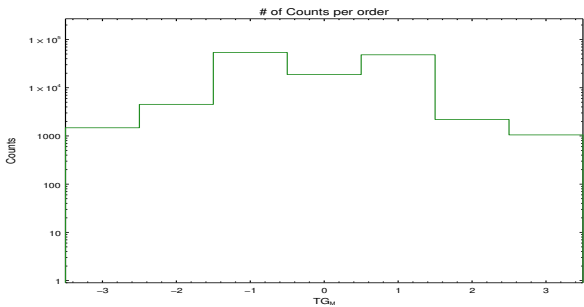


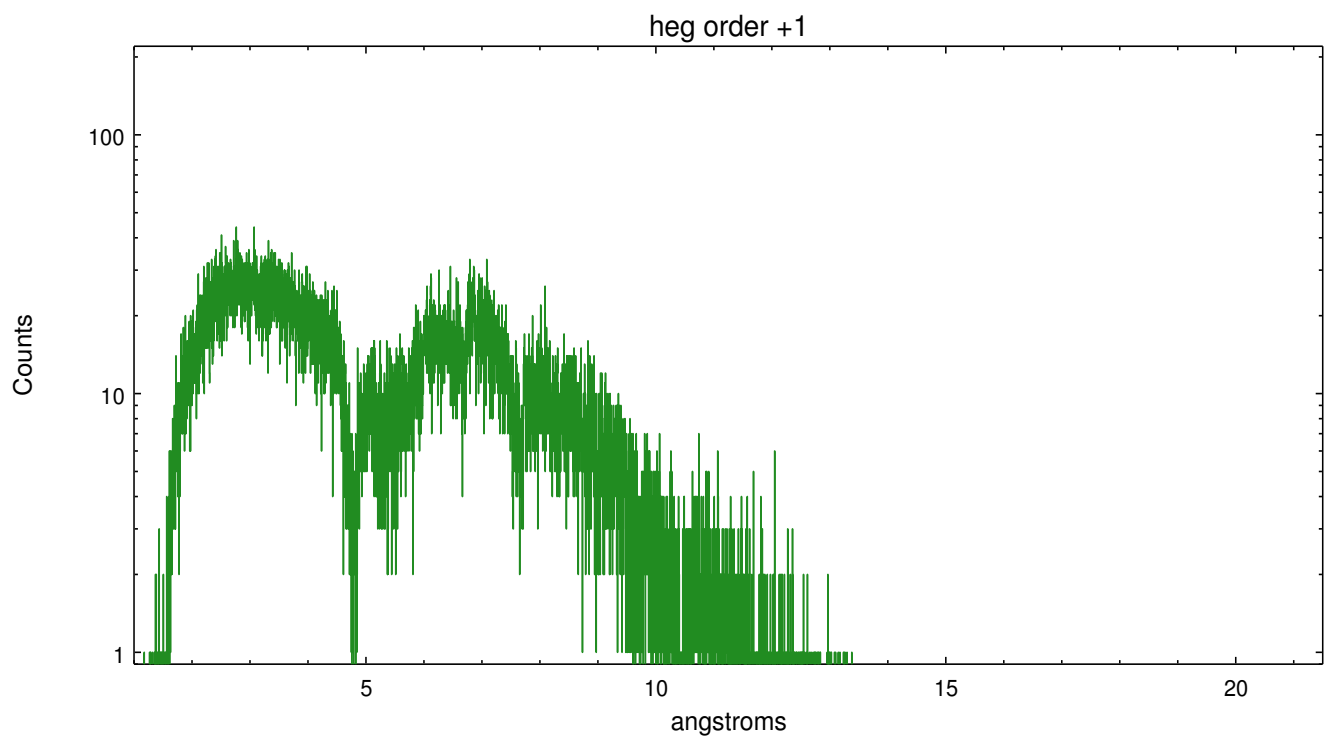
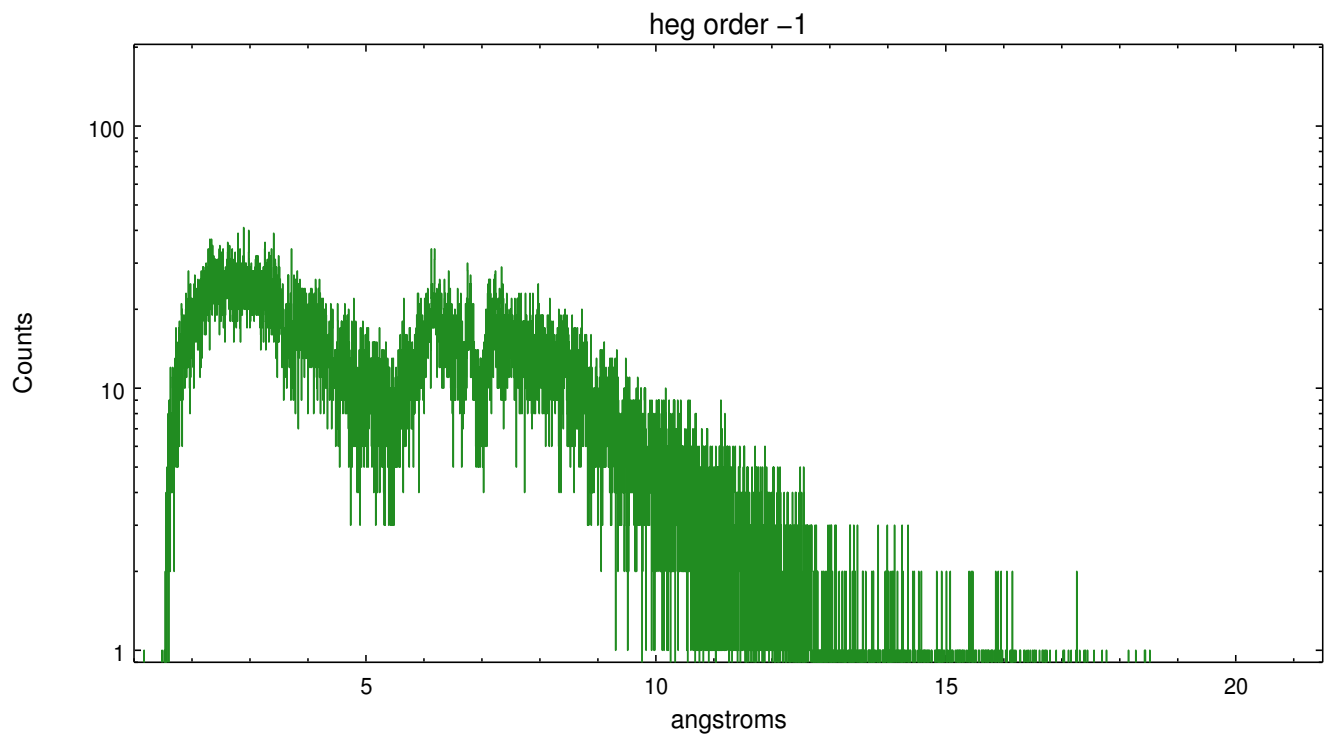
Spot Image HEG



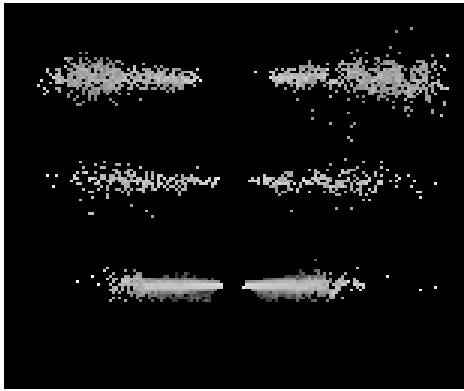
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1478	4514	53828	18744	48231	2196	1051

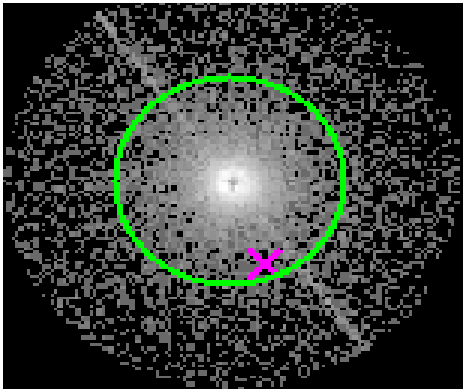




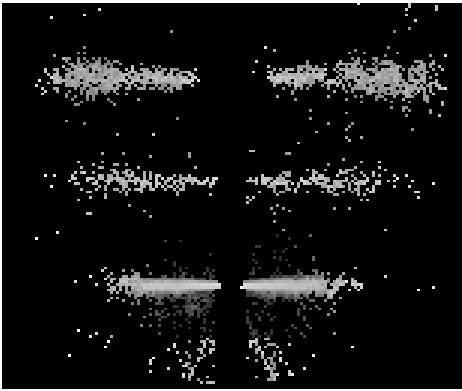
3.2 MEG Arm



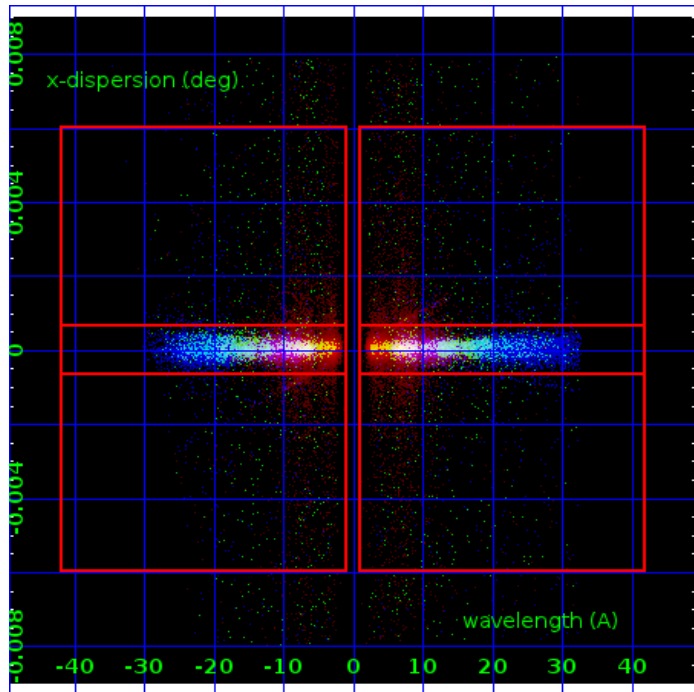
MEG Order Sort 123



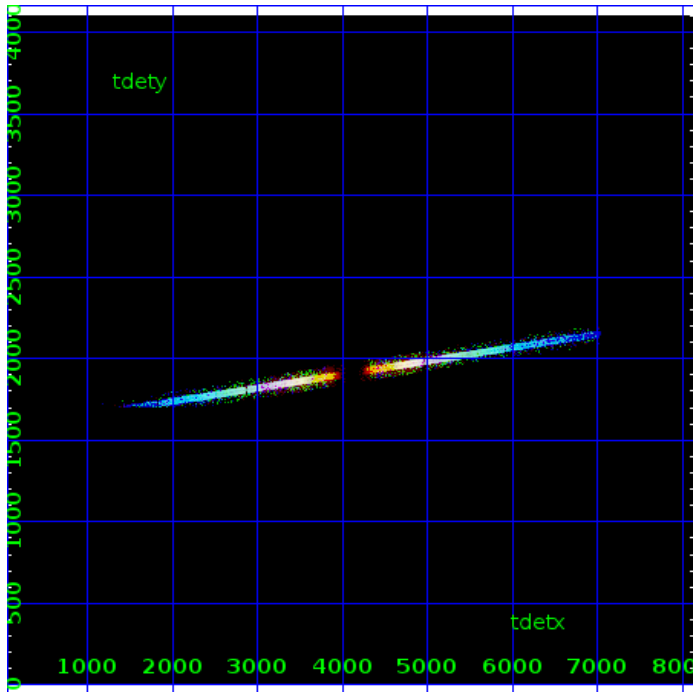
MEG Zero Order



MEG Order Sort ALL

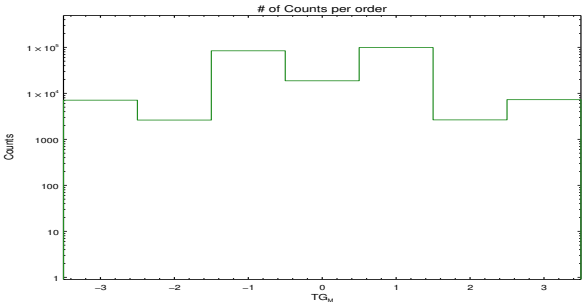


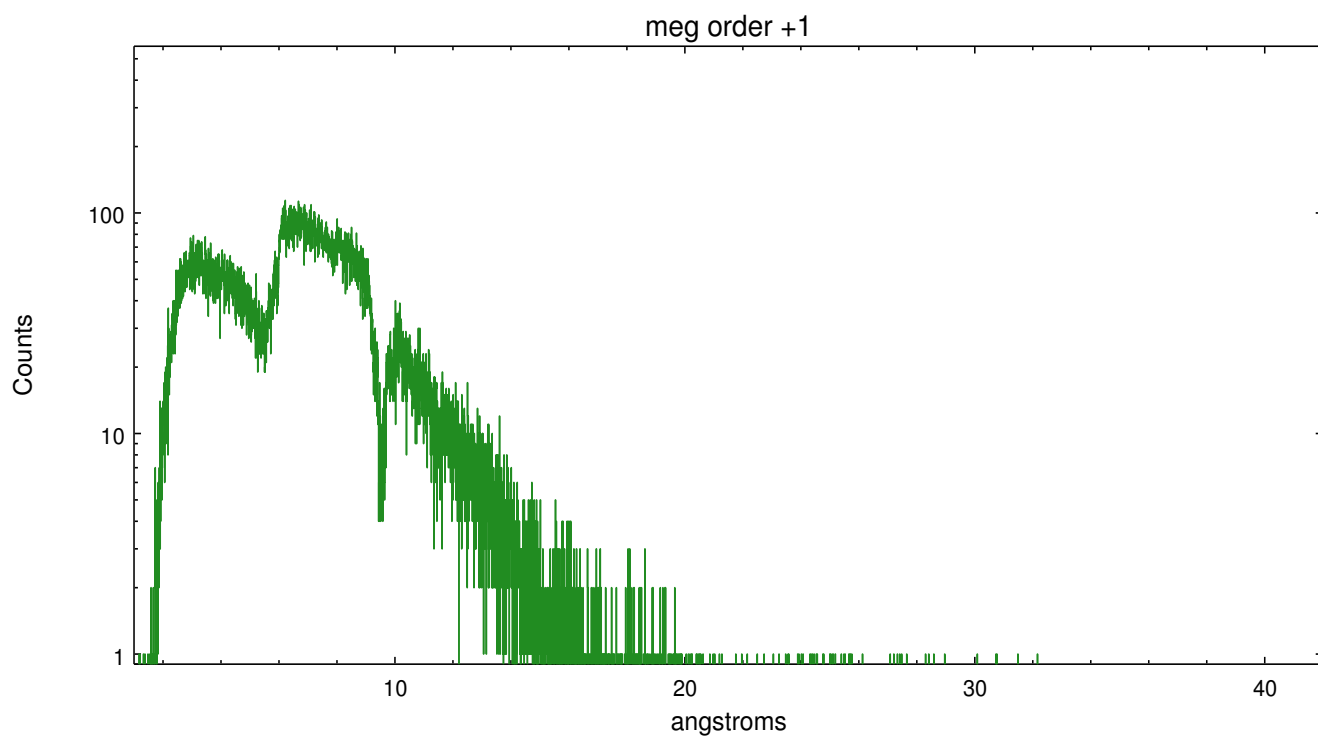
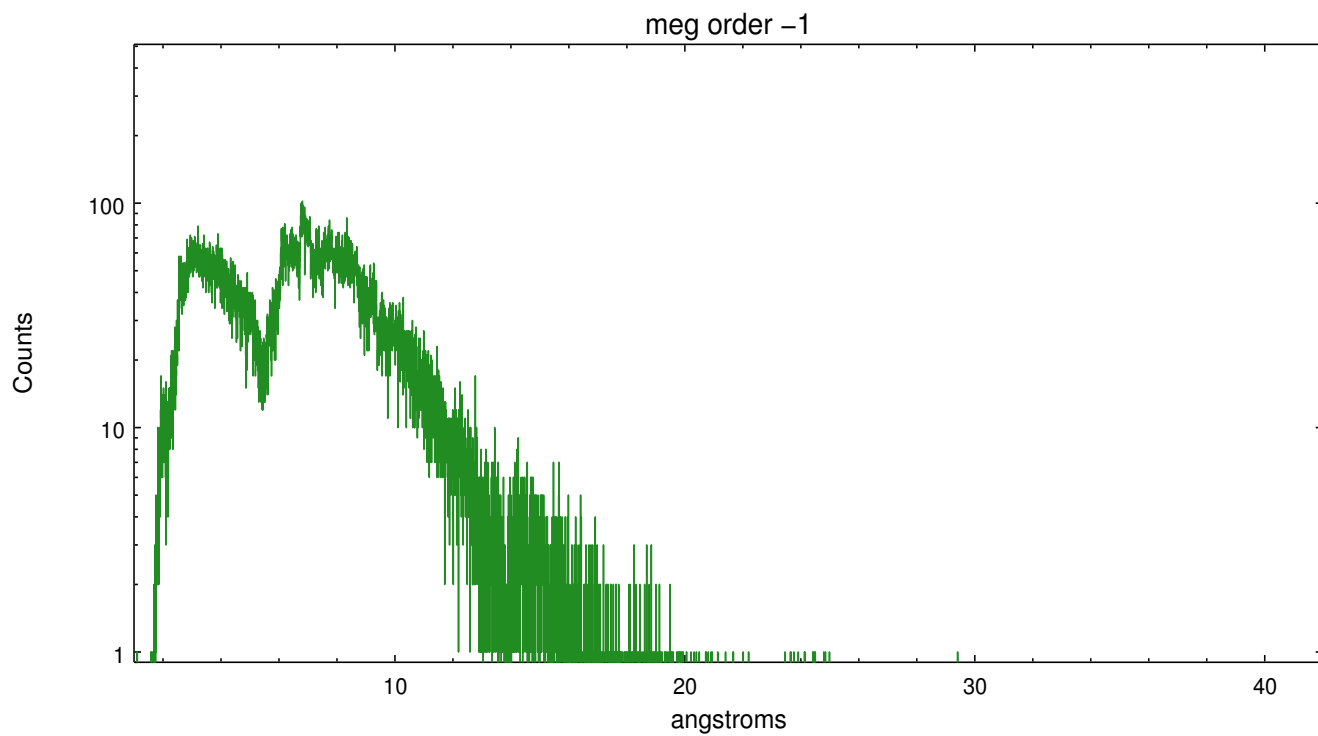
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7101	2624	84148	18744	98825	2648	7289





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.01.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.03319534719

A.2 Comments