

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14327 - L2 Version 2
Chandra X-Ray Center

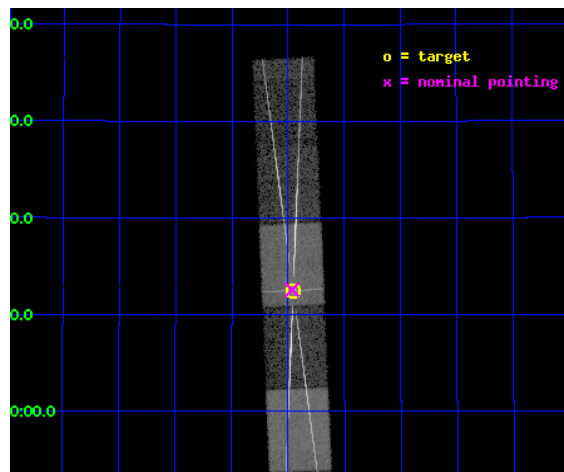
L2 Processing Date : Jul 9 2012

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1 Front

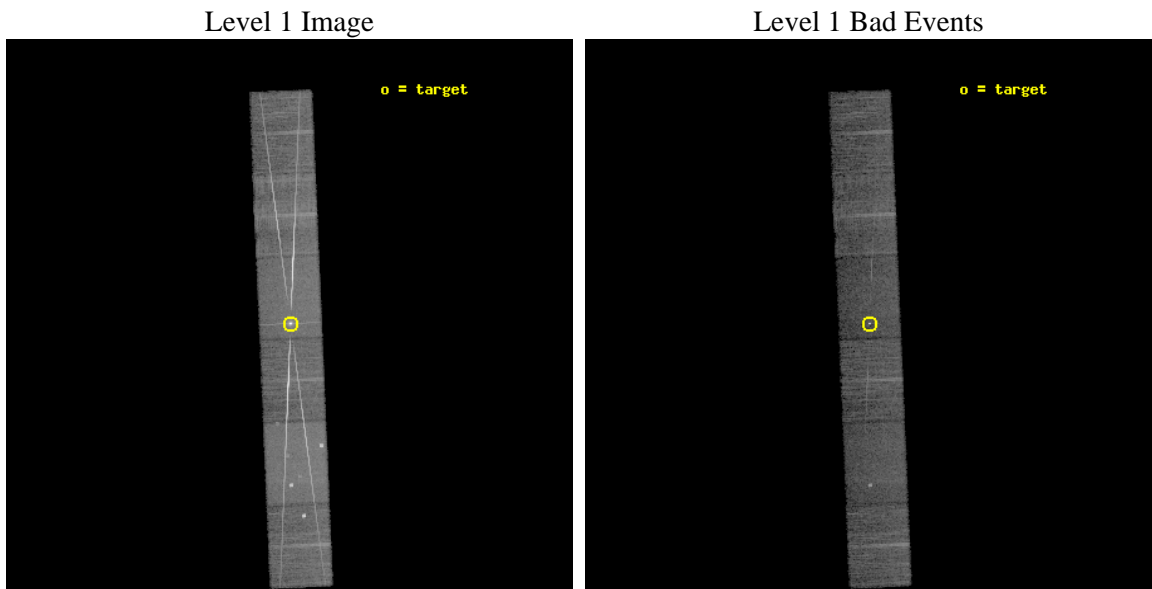
seq_num	790246	Sequence number
obs_id	14327	Observation id
title	AO-13 Calibration Observations of Mkn421 to Calibrate the New HRC-S HV Setting	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	MKN421	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.11664217654	Nominal RA [deg]
dec_nom	38.209837247427	Nominal Dec [deg]
roll_nom	267.53774575406	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15035.0	Sum of GTIs [s]
livetime	14792.171709221	Livetime [s]
ontime4	15035.0	Sum of GTIs [s]
ontime5	15035.0	Sum of GTIs [s]
ontime6	15035.0	Sum of GTIs [s]
ontime7	15035.0	Sum of GTIs [s]
ontime8	15035.0	Sum of GTIs [s]
ontime9	15035.0	Sum of GTIs [s]
l2events	303688	Number of level 2 events



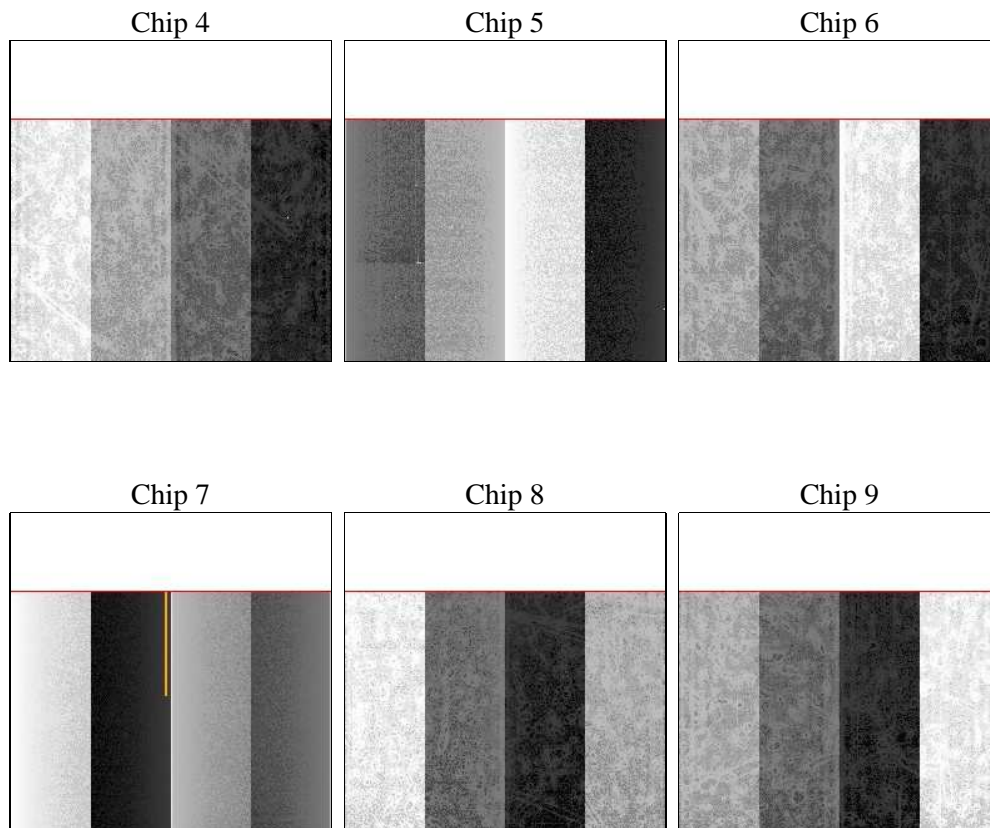
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	15035.0	Sum of GTIs [s]
caldsver	4.5.0	 	ontime4	15035.0	Sum of GTIs [s]
date	2012-07-05T19:24:45	Date and time of file creation	ontime5	15035.0	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	15035.0	Sum of GTIs [s]
			ontime7	15035.0	Sum of GTIs [s]
			ontime8	15035.0	Sum of GTIs [s]
			ontime9	15035.0	Sum of GTIs [s]
			l1events	682881	Number of level 1 events

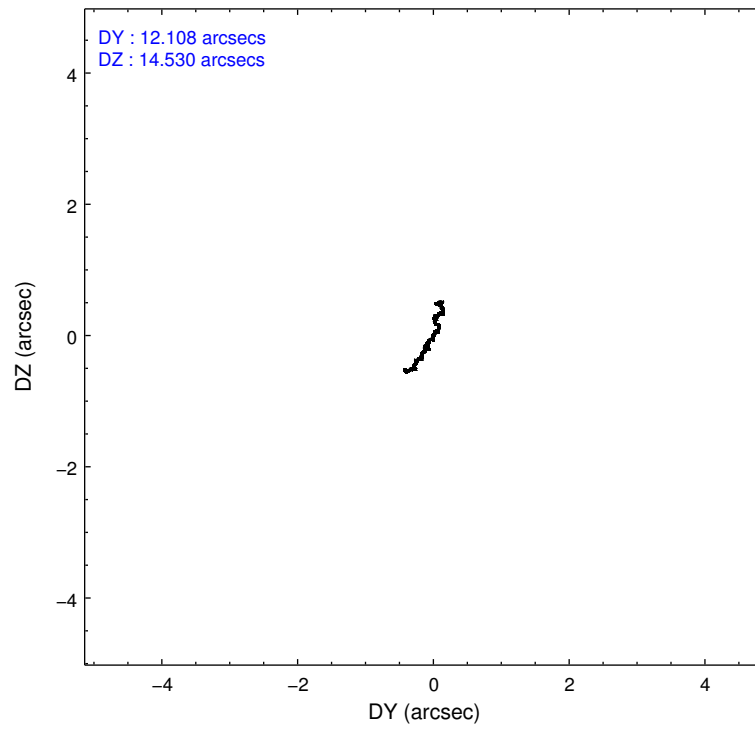
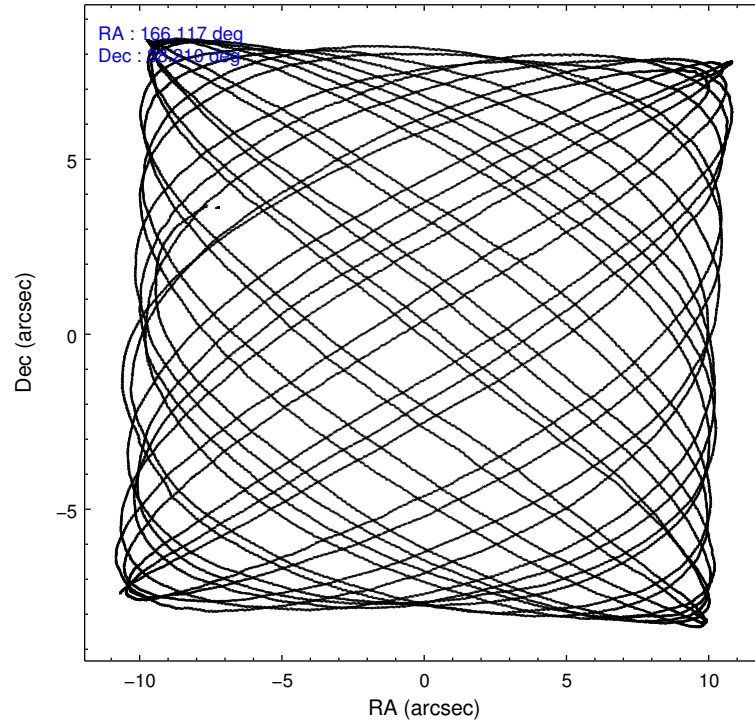
2.1.4 Events

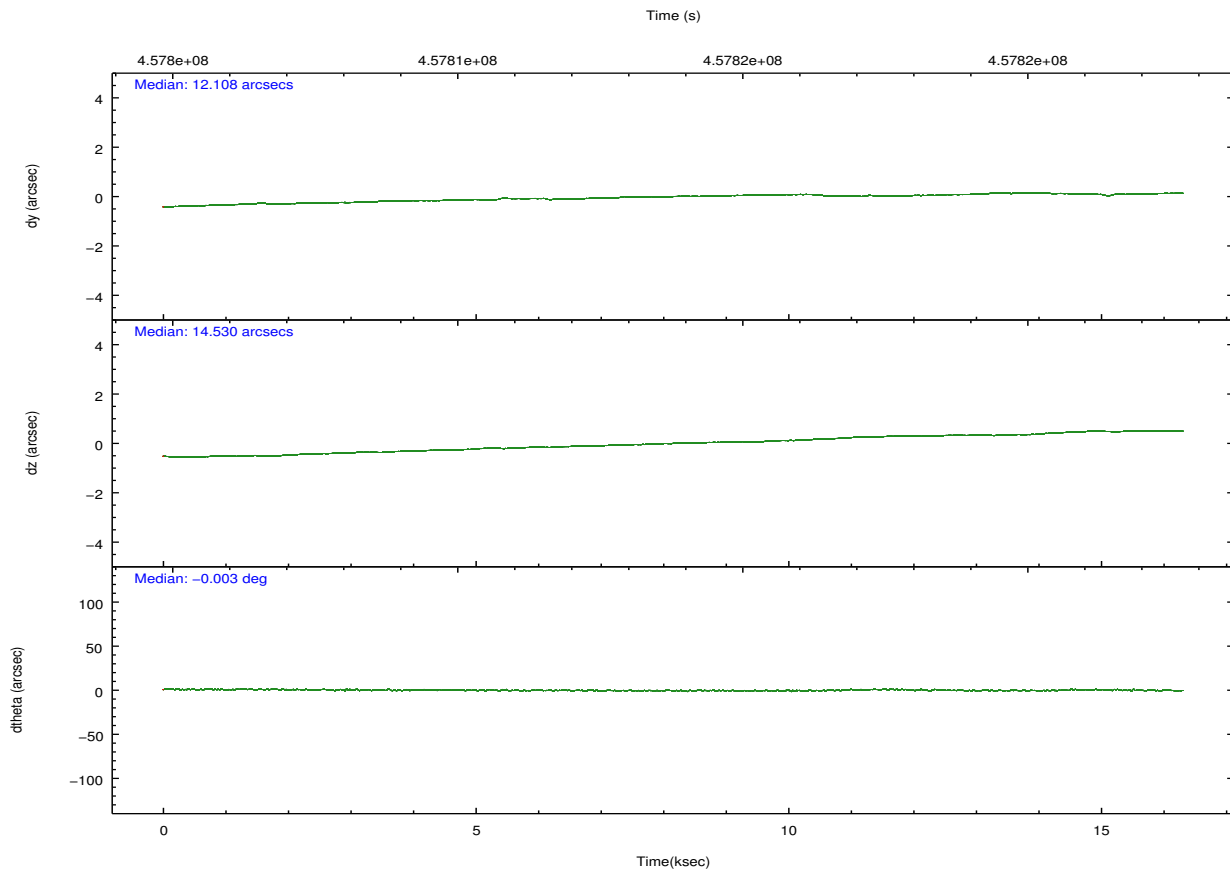
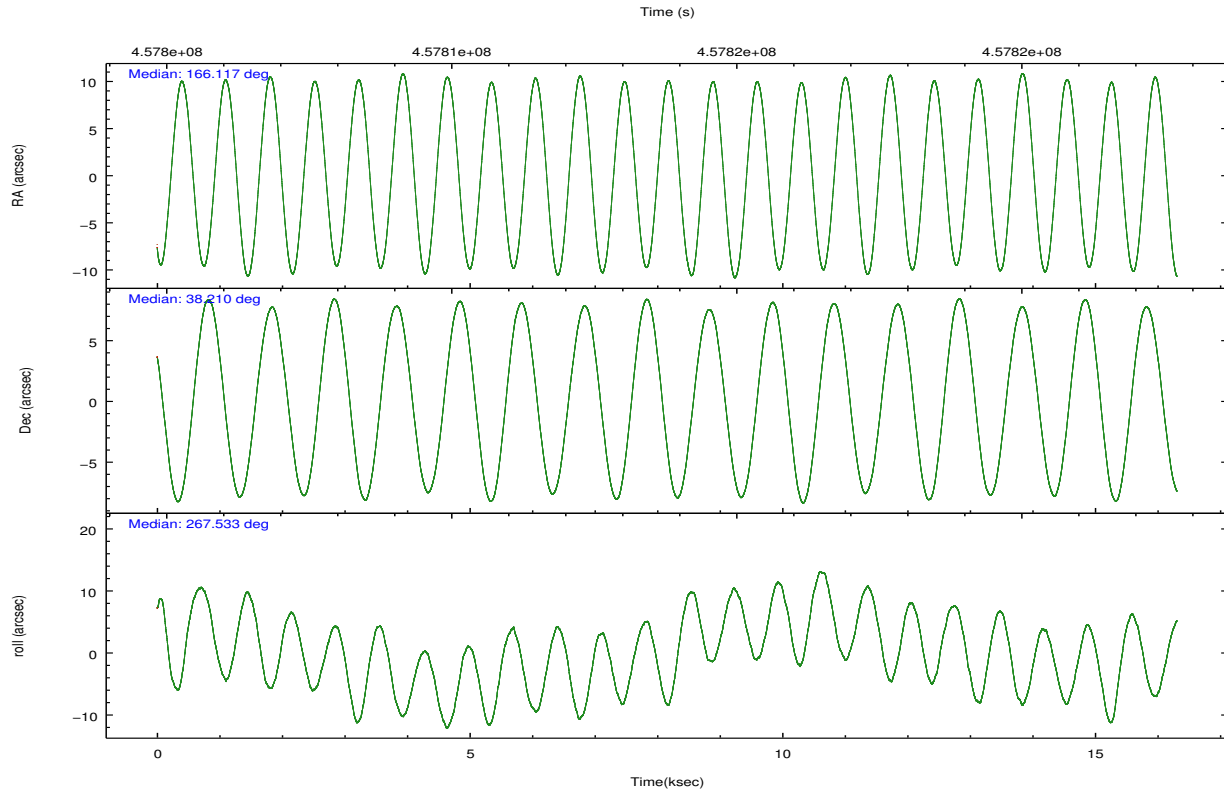
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	79688	137034	128640	142646	123681	71192	grade 0 events	12583	20879	53219	18728	39064	9980
rejected events	61084	52777	58097	48001	62893	54632		15%	15%	41%	13%	31%	14%
rejected %	76%	38%	45%	33%	50%	76%	grade 1 events	78	211	364	389	198	54
								0%	0%	0%	0%	0%	0%
							grade 2 events	2533	24296	8588	22630	8456	2494
								3%	17%	6%	15%	6%	3%
							grade 3 events	1050	4748	2873	9820	3558	1112
								1%	3%	2%	6%	2%	1%
							grade 4 events	994	4691	2751	9904	3421	1096
								1%	3%	2%	6%	2%	1%
							grade 5 events	3071	8405	3417	9835	4663	3453
								3%	6%	2%	6%	3%	4%
							grade 6 events	1452	29673	3139	33593	6302	1886
								1%	21%	2%	23%	5%	2%
							grade 7 events	57927	44131	54289	37747	58019	51117
								72%	32%	42%	26%	46%	71%

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	166.100135	166.1166421765445	CCD I2 on	N	N
[deg] Pointing Dec	38.233925	38.20983724742727	CCD I3 on	N	N
[deg] Pointing Roll	267.391334	267.5377457540579	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	-187.132523	-187.1228876879999	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-3	-3.009634895007935	CCD S4 on	Y	Y
[s] Observation start time (MET)	457806935.184000	457805313.16827	CCD S5 on	Y	Y
Observation start date	2012-07-04T16:34:28	2012-07-04T16:08:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	457821935.184000	457822707.9317	On-chip summing requested	N	N
Observation end date	2012-07-04T20:44:28	2012-07-04T20:58:27	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	774	774
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.5

2.3 Aspect



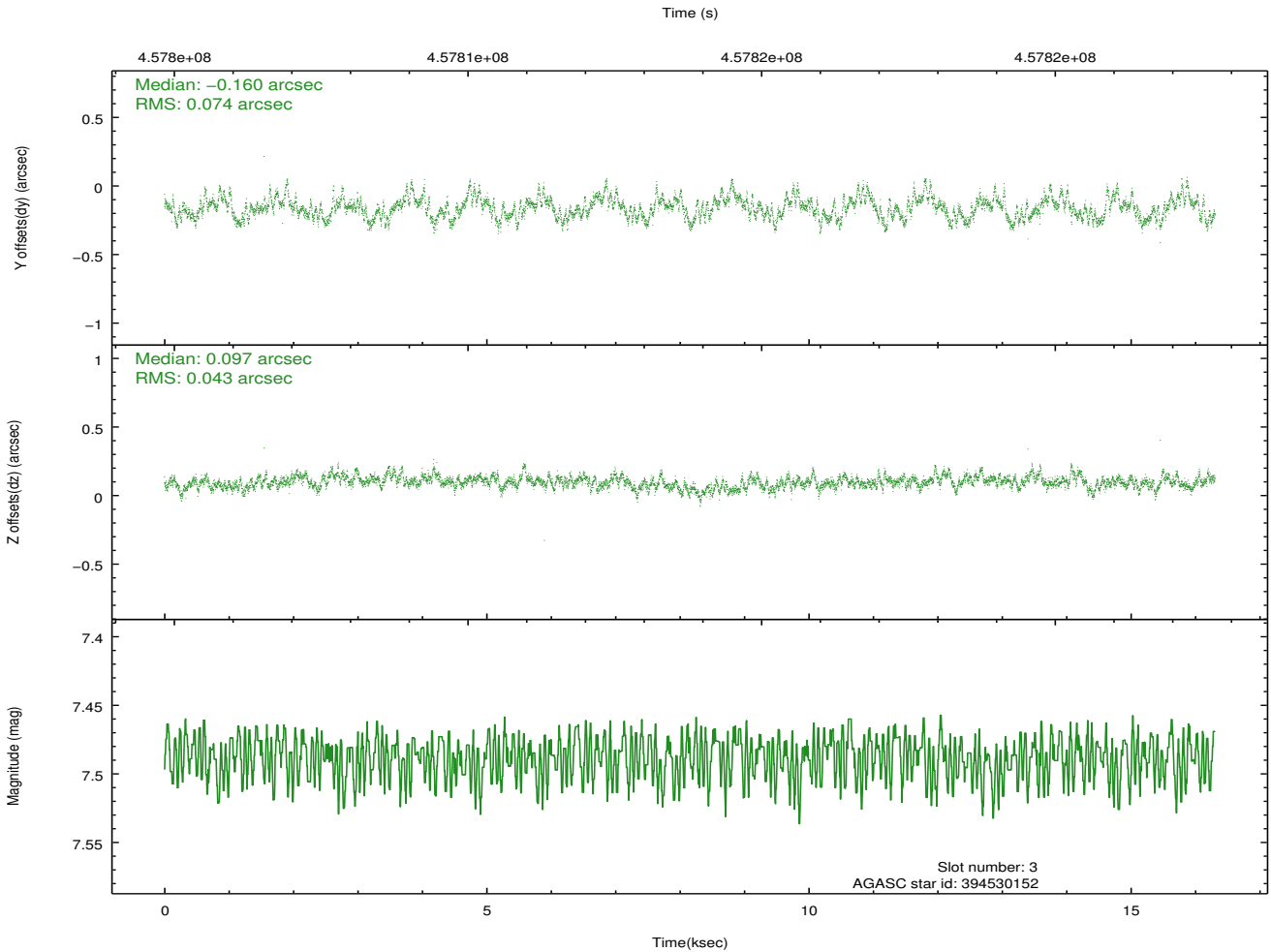
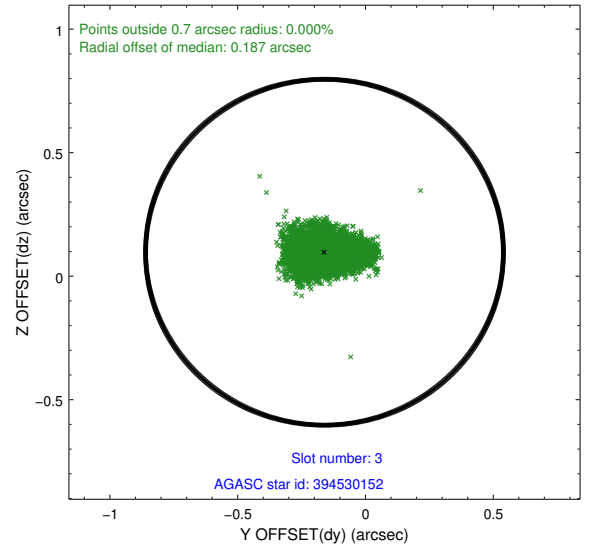
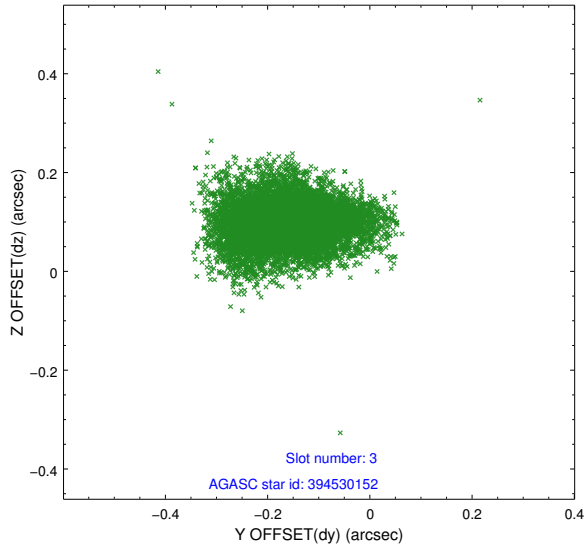


Slot Statistics

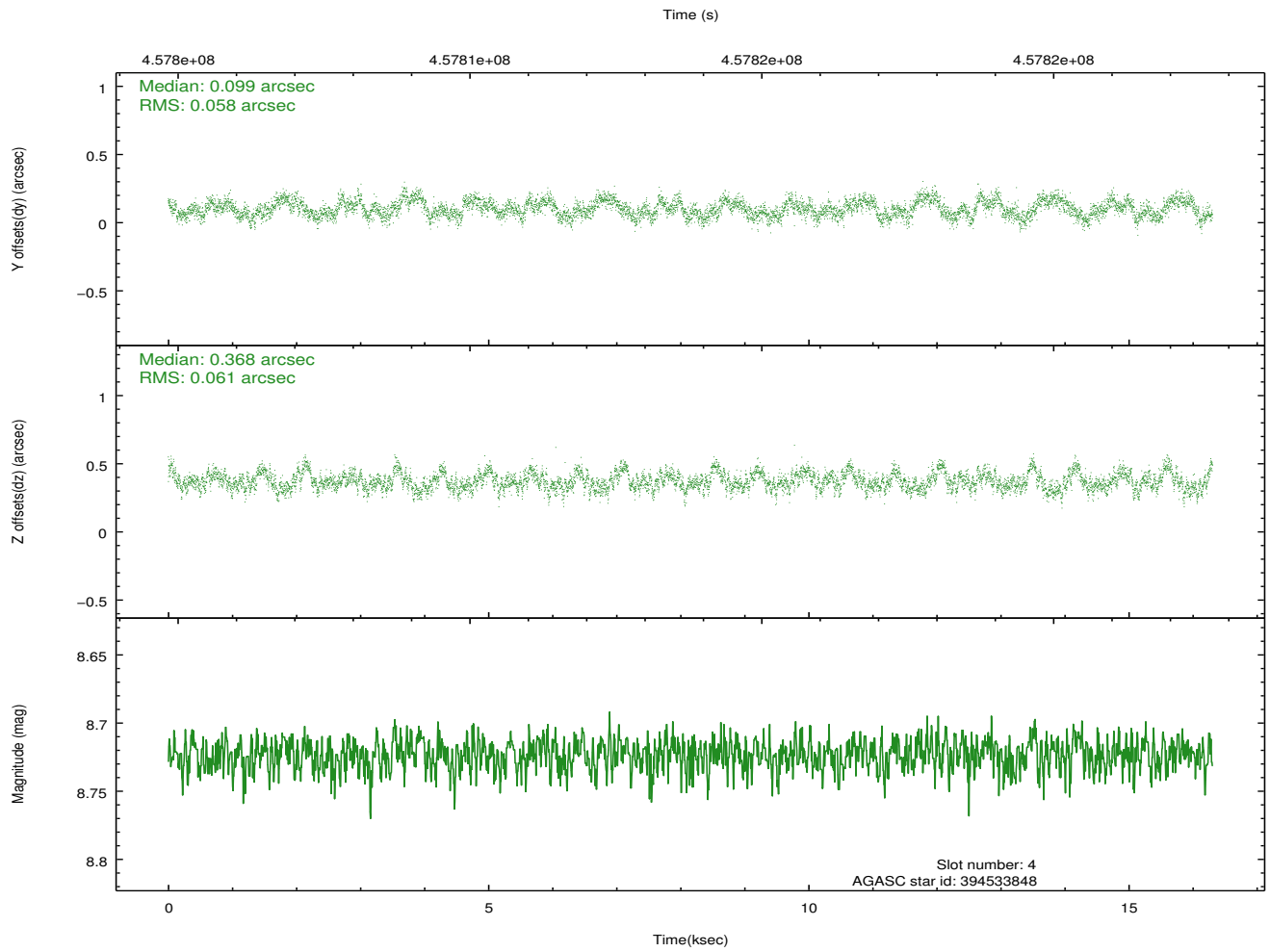
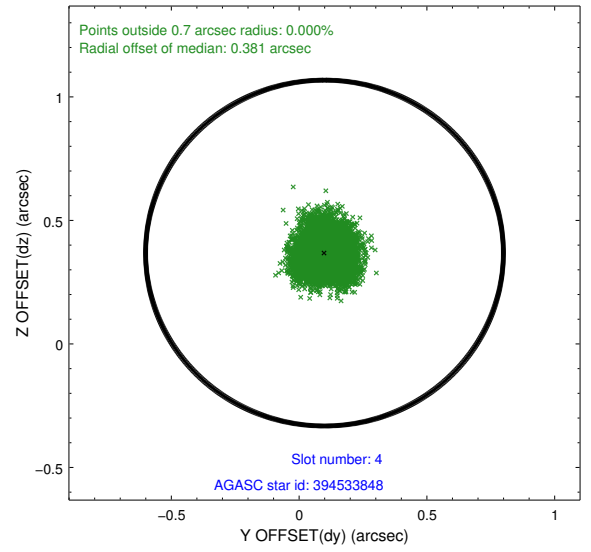
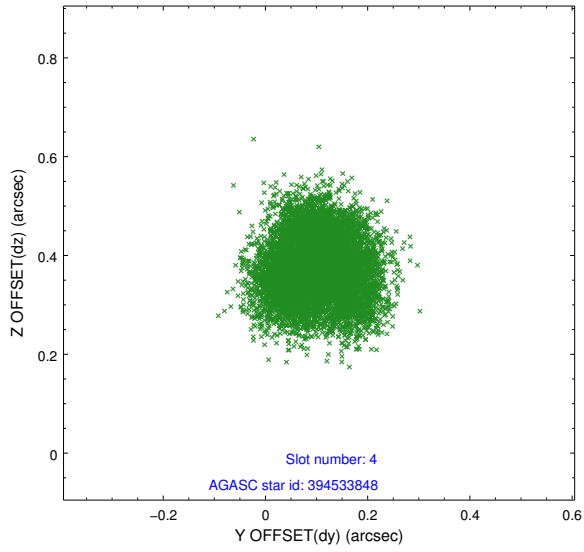
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.83	3978	-0.123	-0.091	0.006	0.010	0.000000	0.000000	-764.89	-1798.10
1	FID	ACIS-S-4	6.91	3976	0.144	0.055	0.007	0.012	0.000000	0.000000	2148.57	110.18
2	FID	ACIS-S-6	7.07	3978	-0.048	0.044	0.009	0.014	0.000000	0.000000	397.55	747.90
3	GUIDE	394530152	7.49	7953	-0.160	0.097	0.090	0.150	166.075805	38.868252	-2278.04	-171.95
4	GUIDE	394533848	8.72	7953	0.099	0.368	0.092	0.142	166.382906	38.276007	-189.53	787.67
5	GUIDE	394543960	9.75	7938	0.218	0.176	0.344	0.491	165.802757	37.787371	1643.52	-771.51
6	GUIDE	394546712	6.61	7955	-0.187	0.274	0.149	0.230	166.451462	38.394357	-623.52	963.27
7	GUIDE	394546720	6.41	7954	0.053	-0.900	0.111	0.183	166.130115	38.241361	-30.42	82.88

2.4 Star Slots

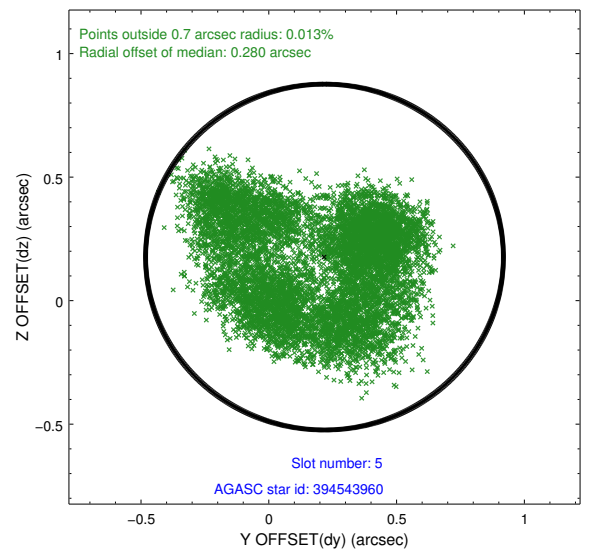
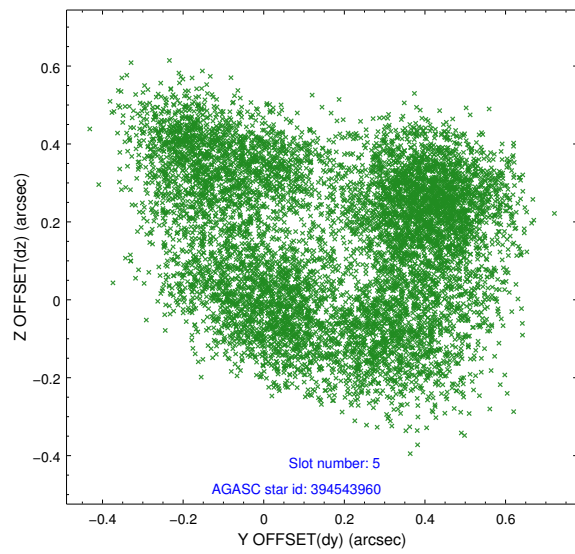
2.4.1 Slot 3



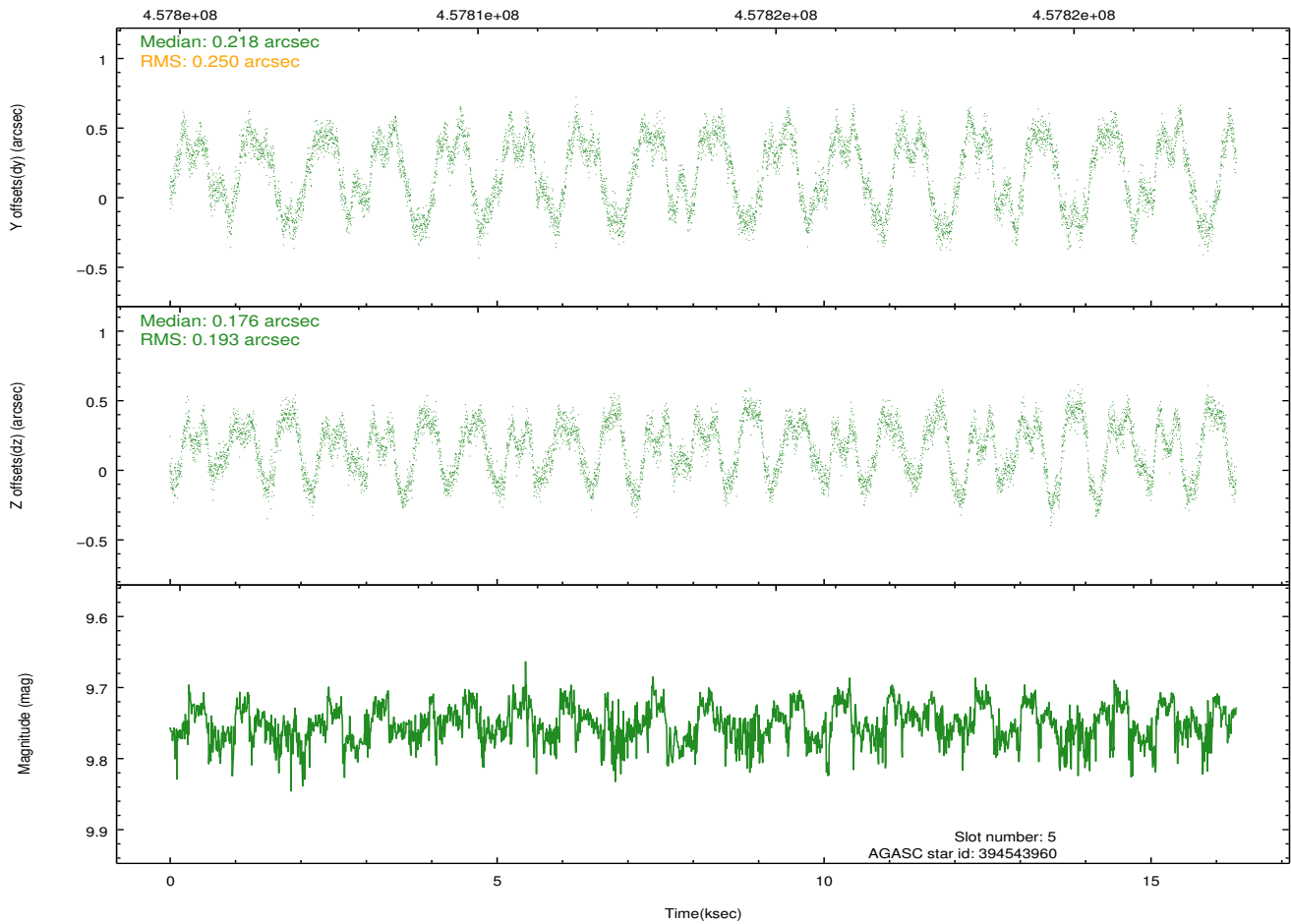
2.4.2 Slot 4



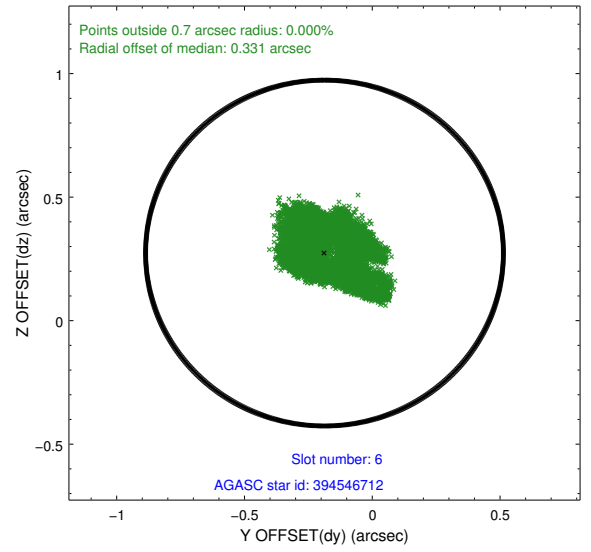
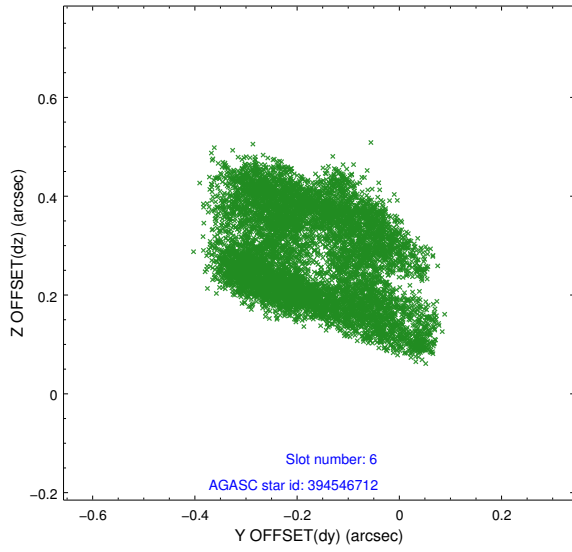
2.4.3 Slot 5



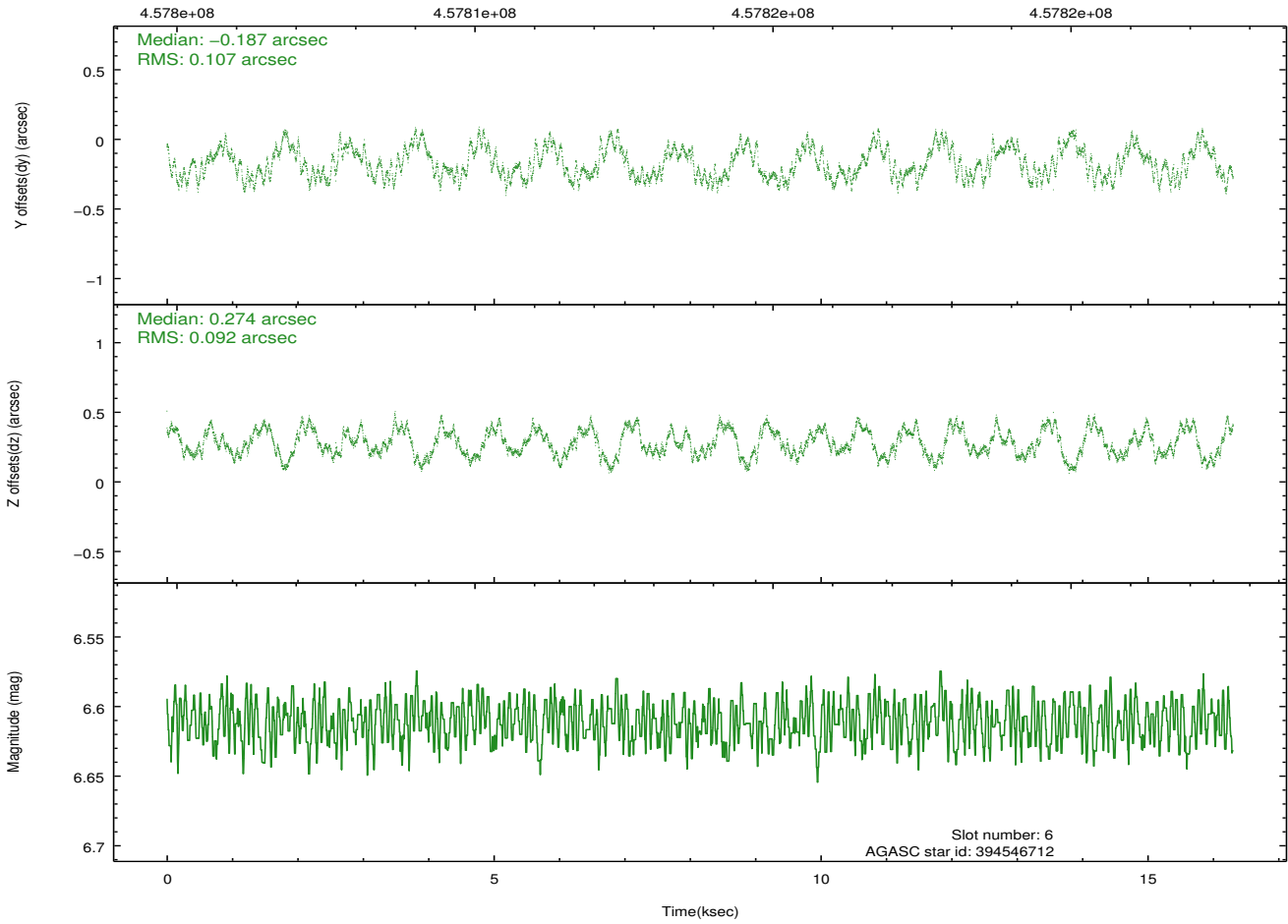
Time (s)



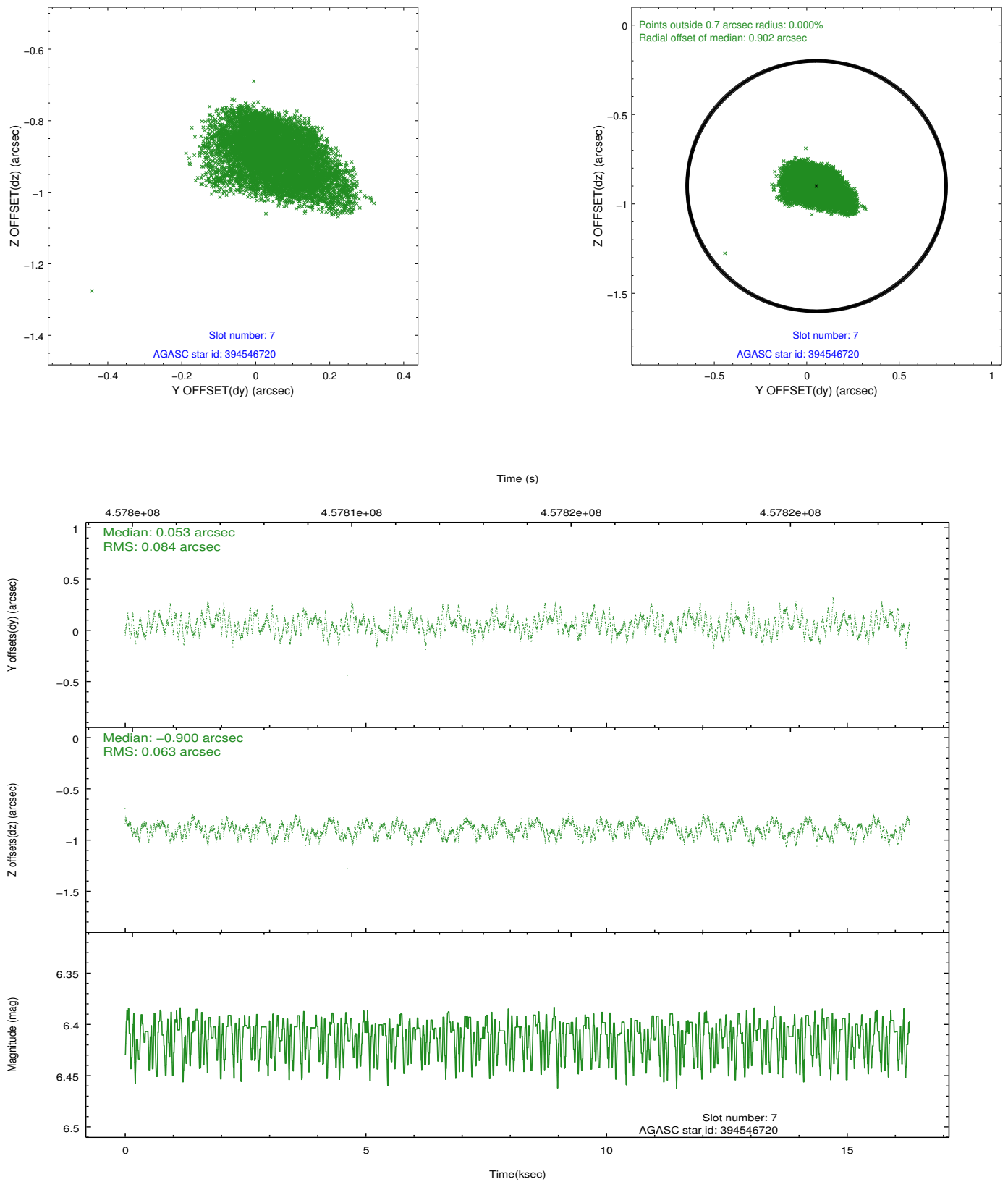
2.4.4 Slot 6



Time (s)

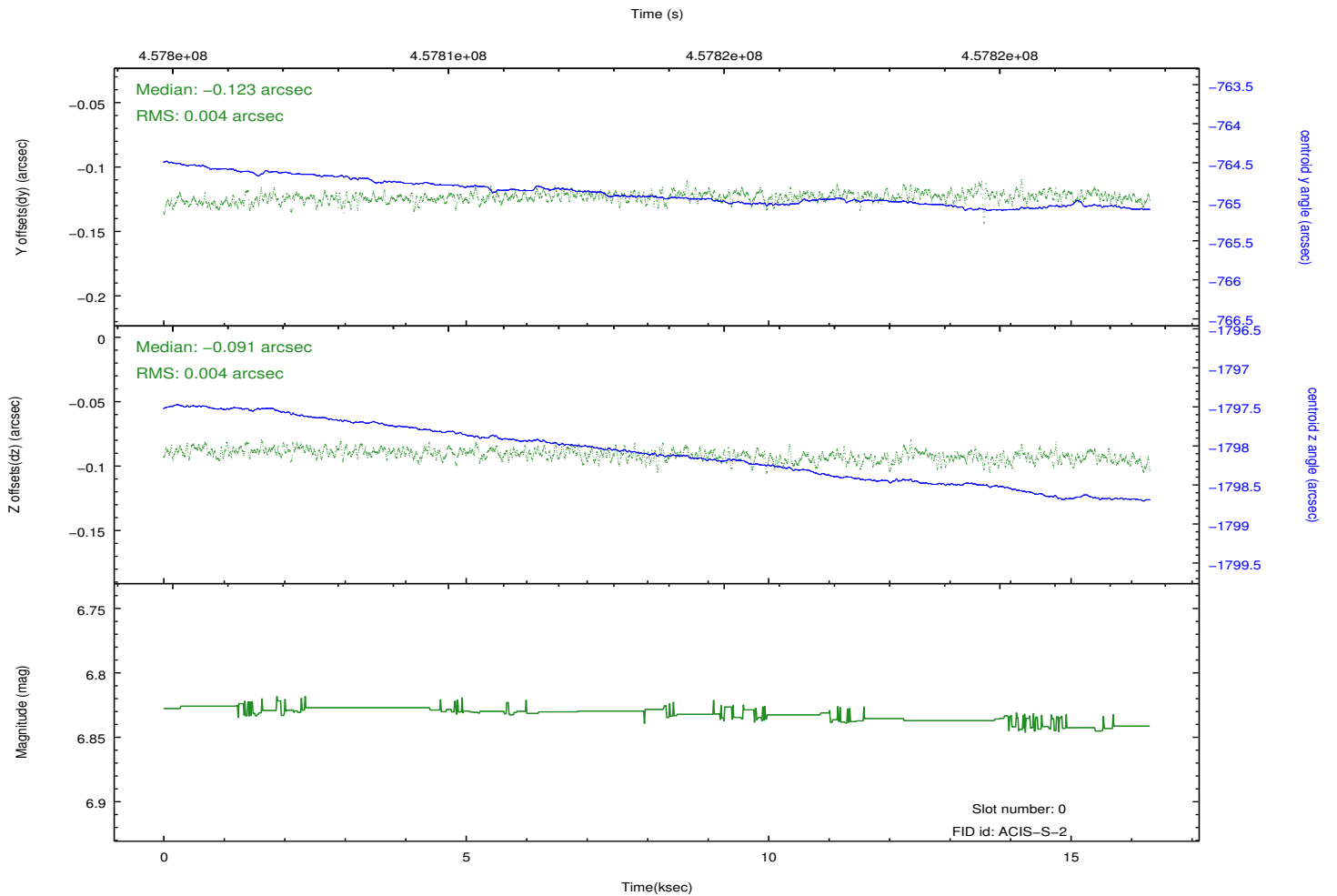
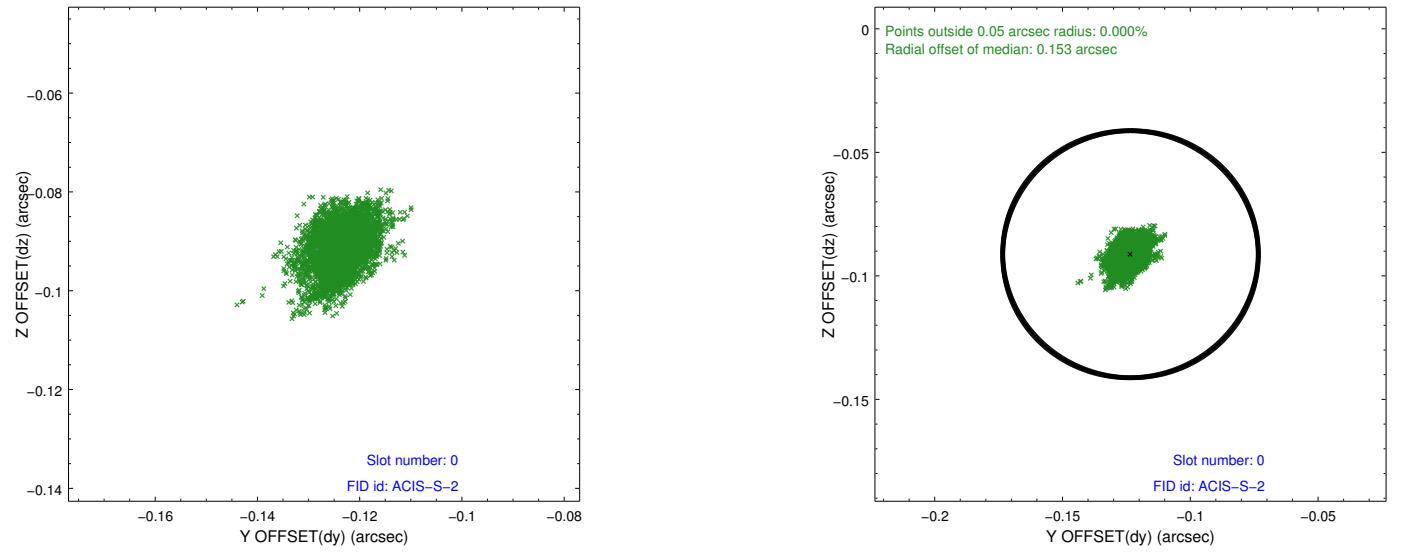


2.4.5 Slot 7

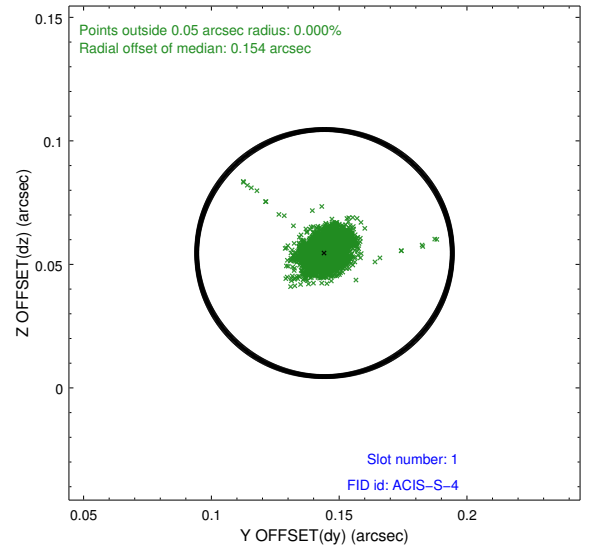
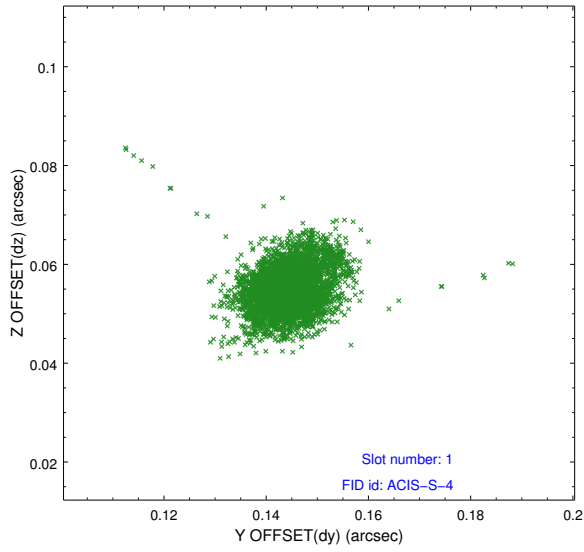


2.5 FID Slots

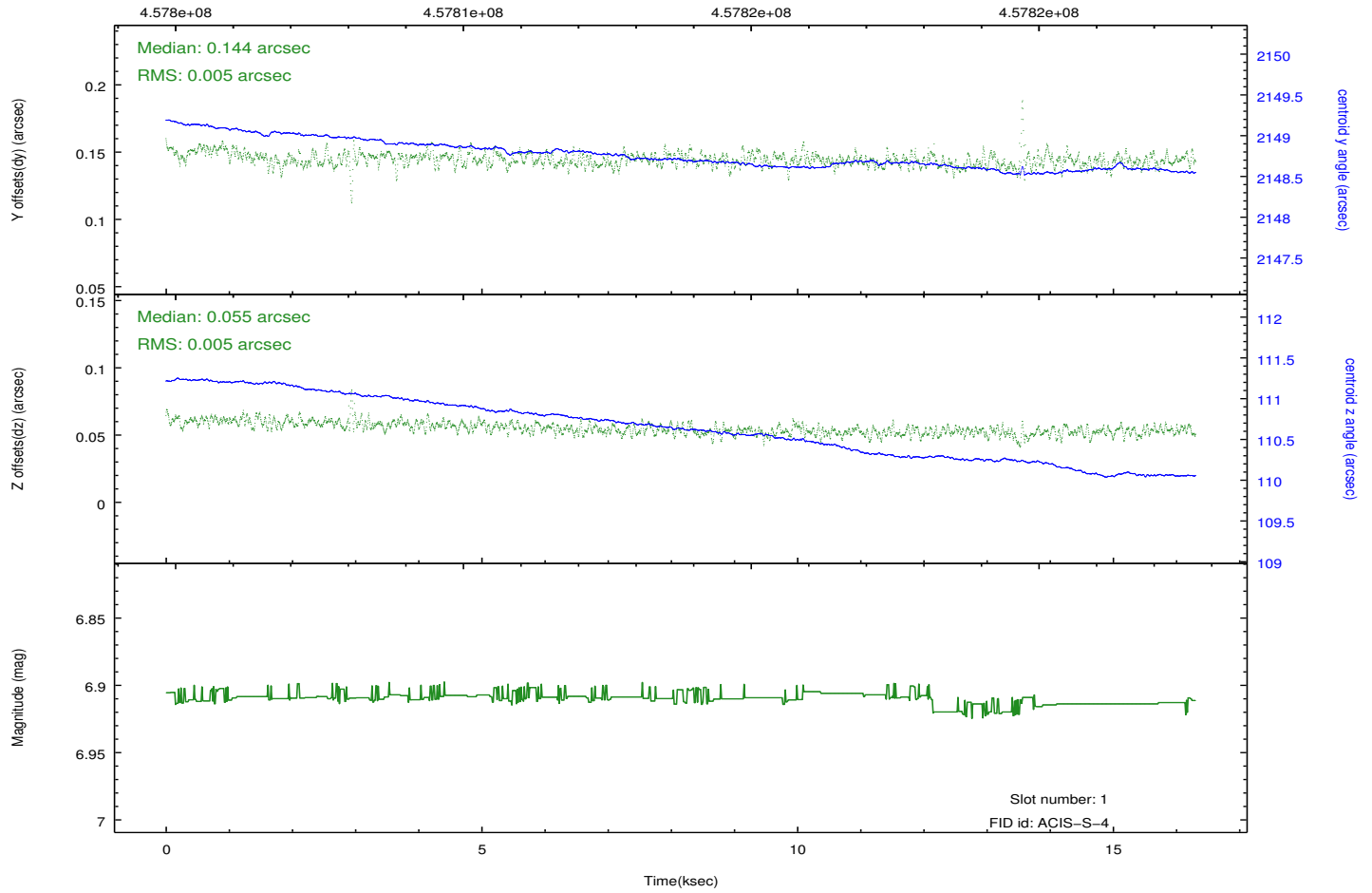
2.5.1 Slot 0



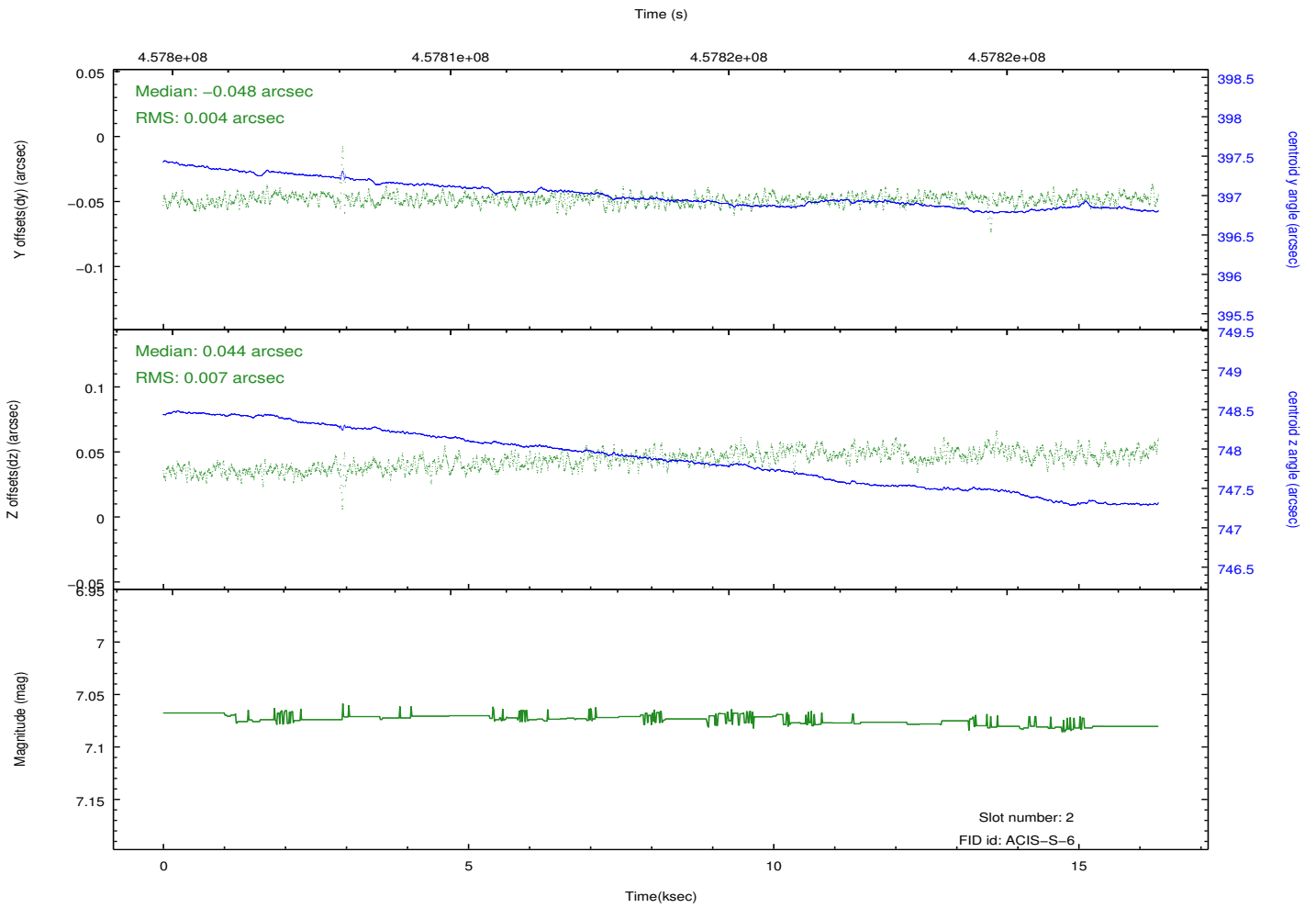
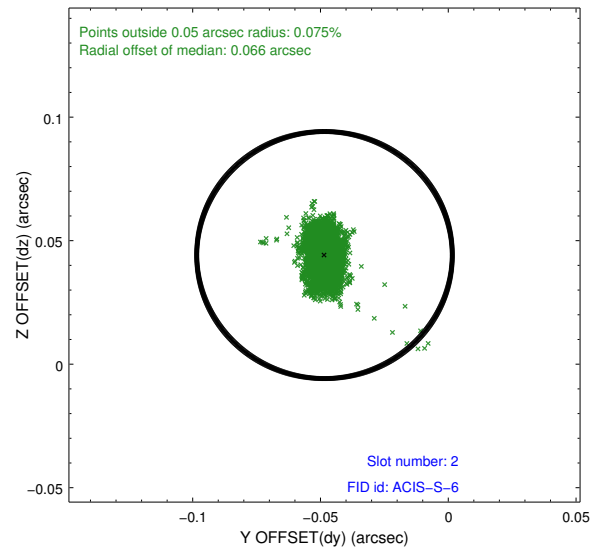
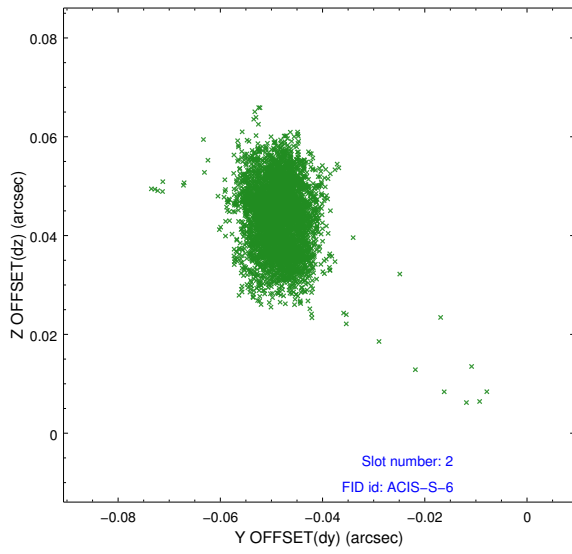
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2

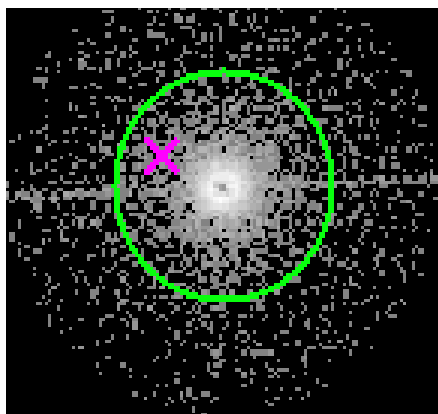


3 Gratings

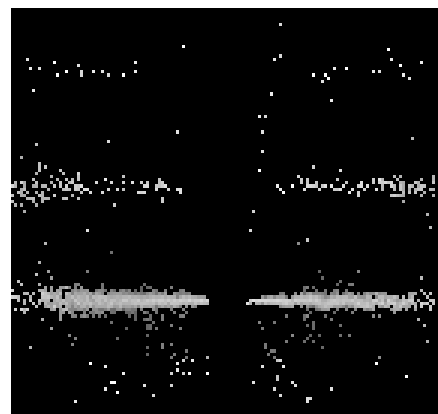
3.1 HEG Arm



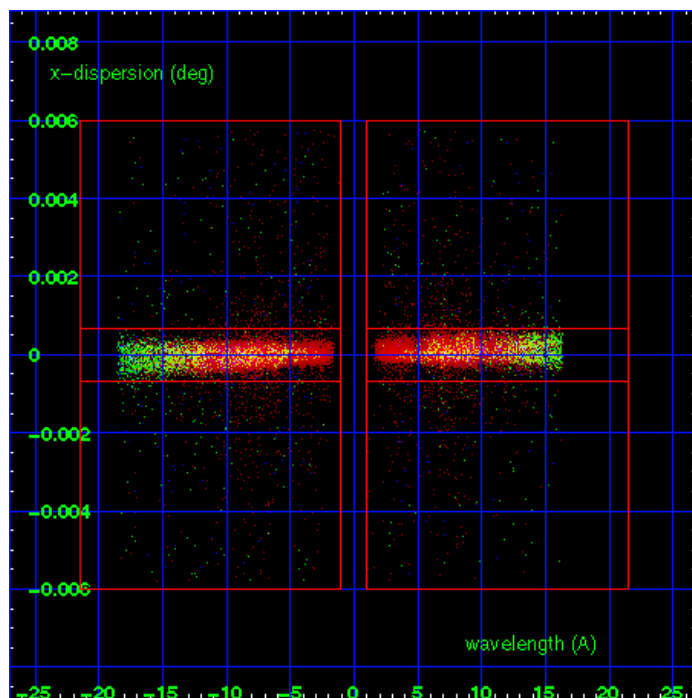
HEG Order Sort 123



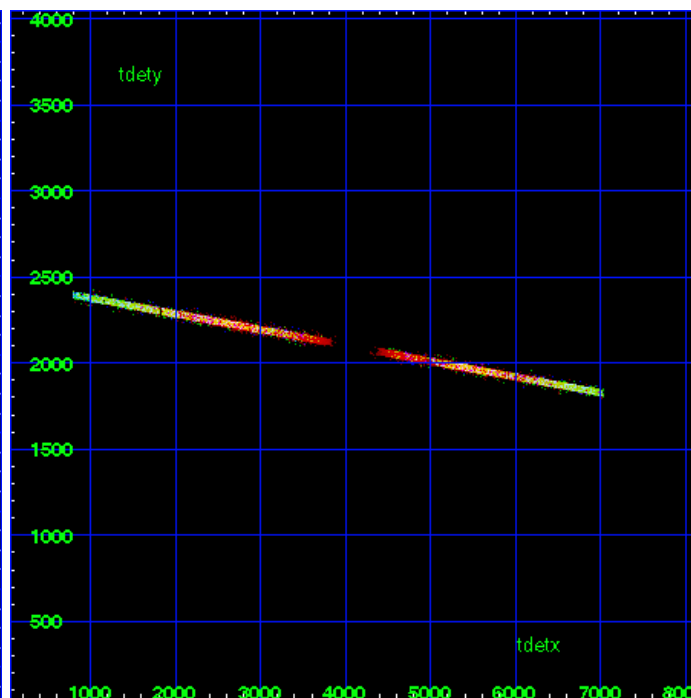
HEG Zero Order



HEG Order Sort ALL

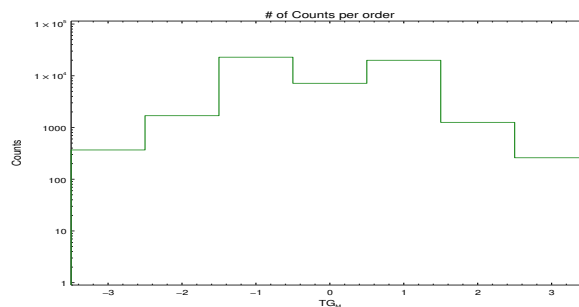


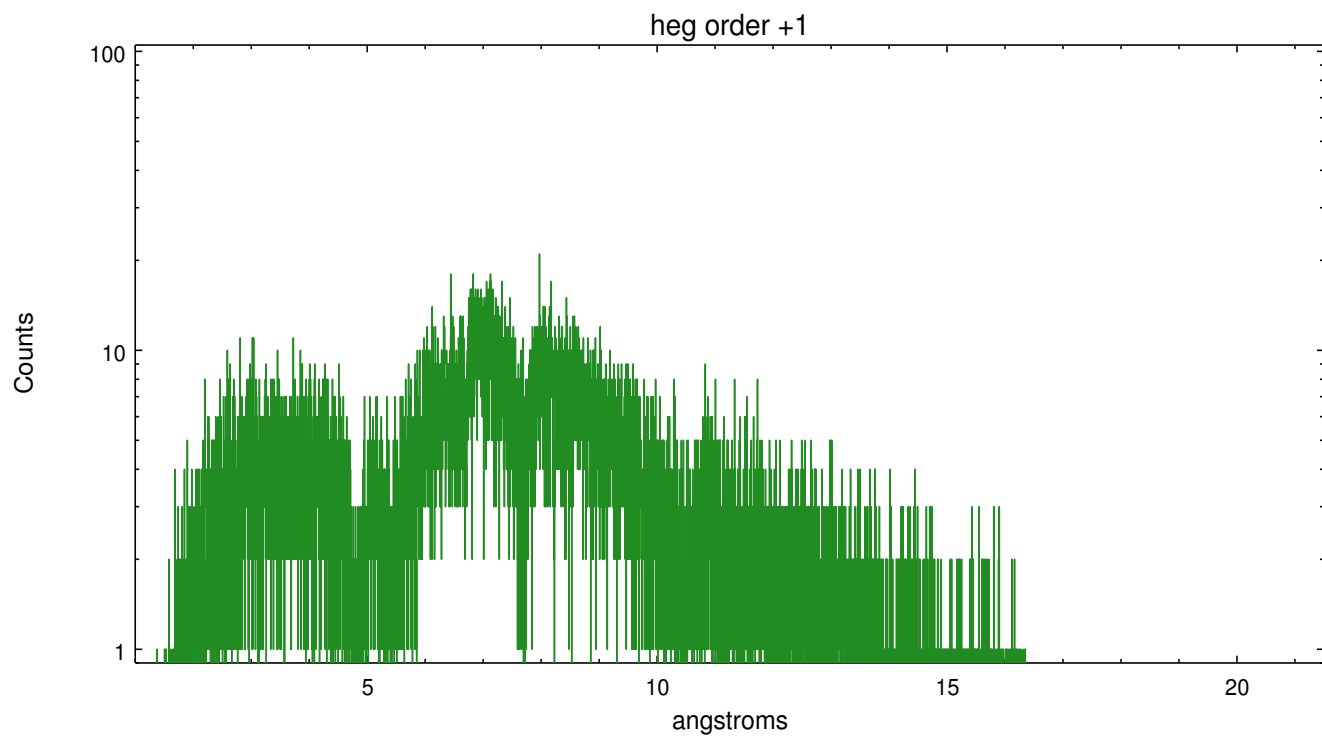
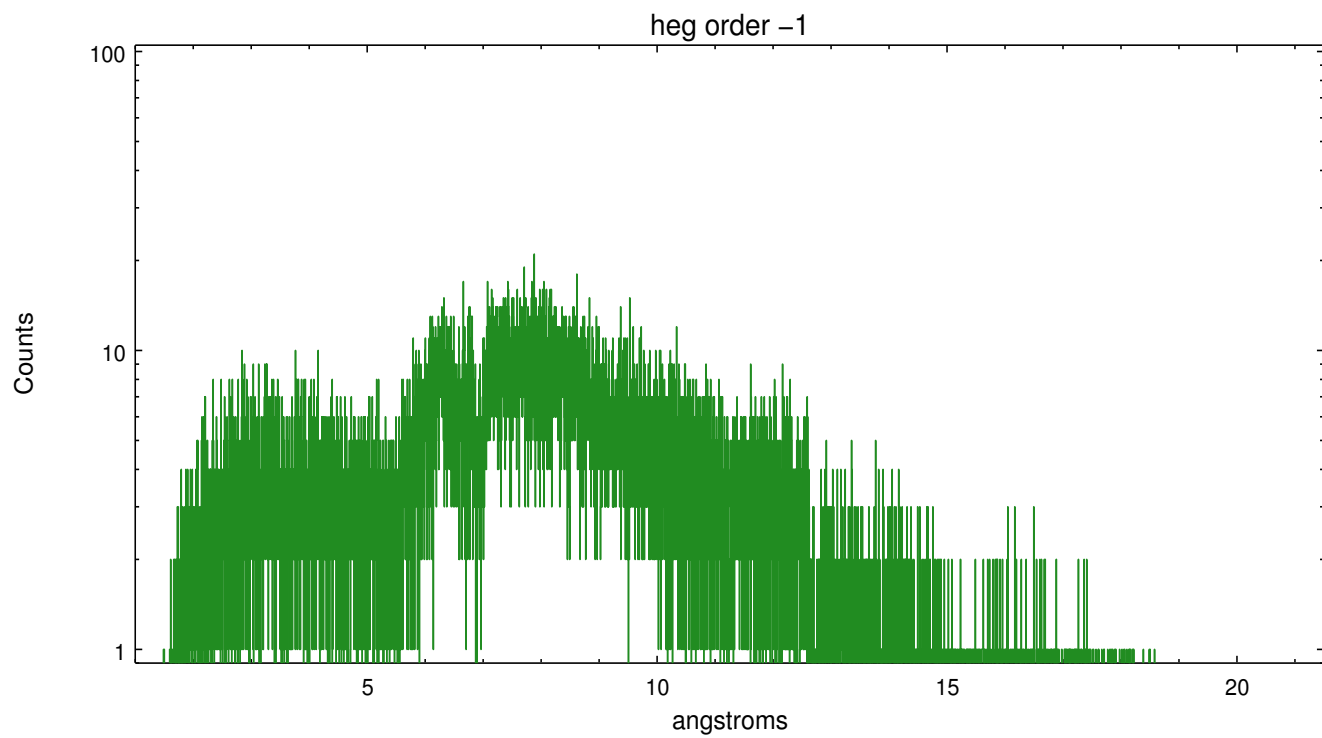
Spot Image HEG



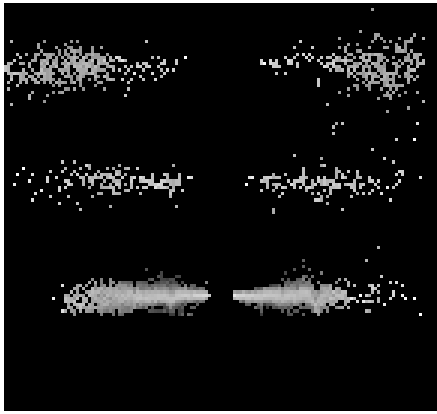
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	368	1692	22863	7151	19932	1257	260

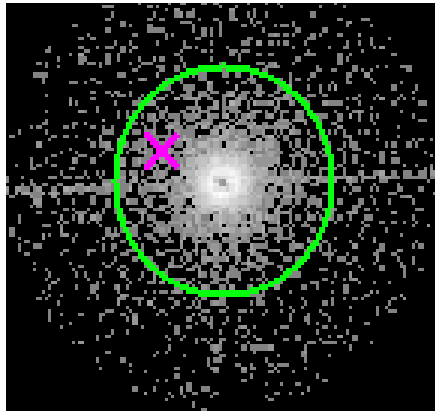




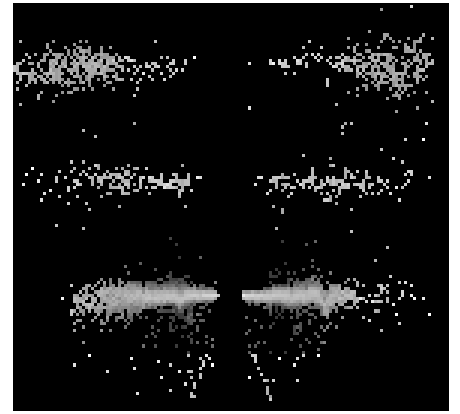
3.2 MEG Arm



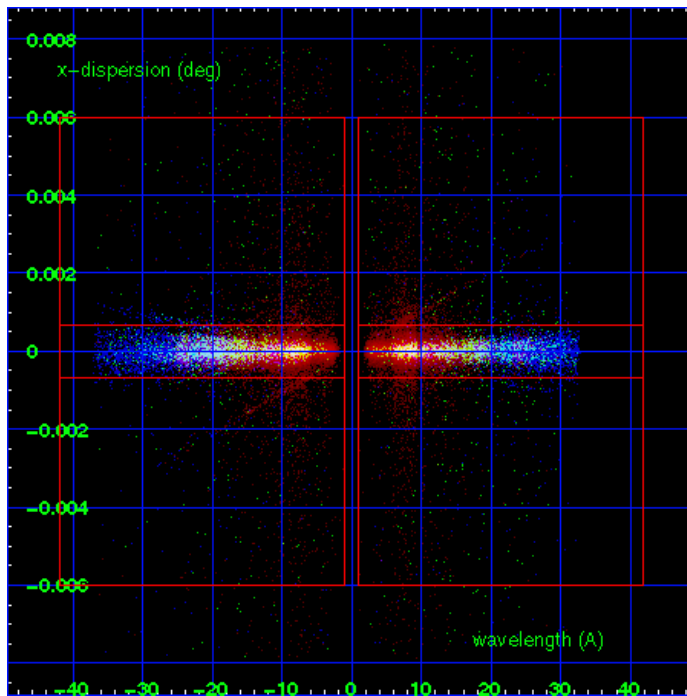
MEG Order Sort 123



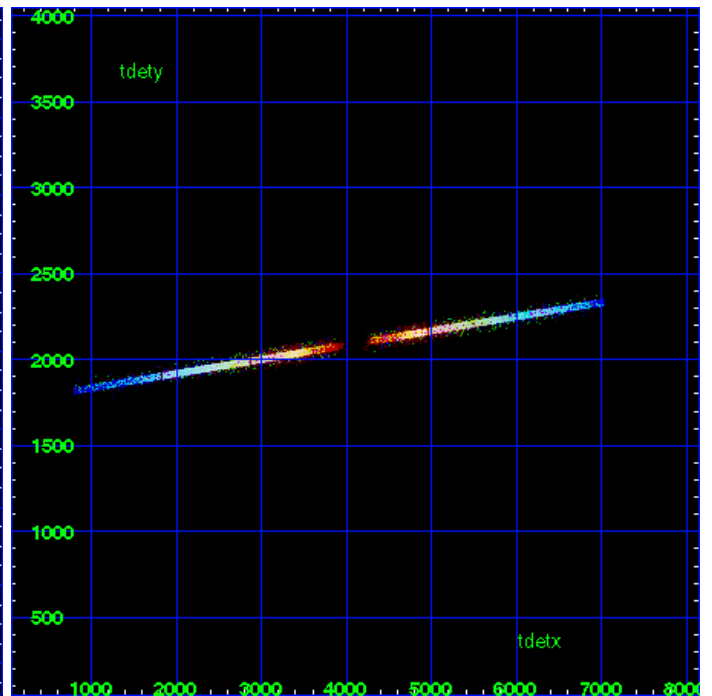
MEG Zero Order



MEG Order Sort ALL

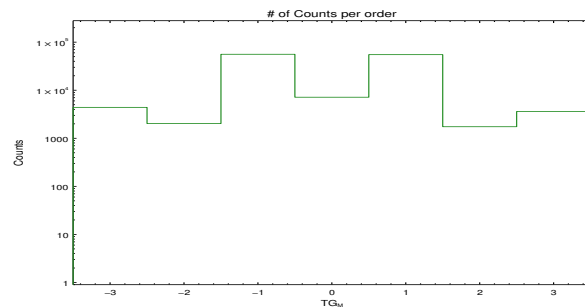


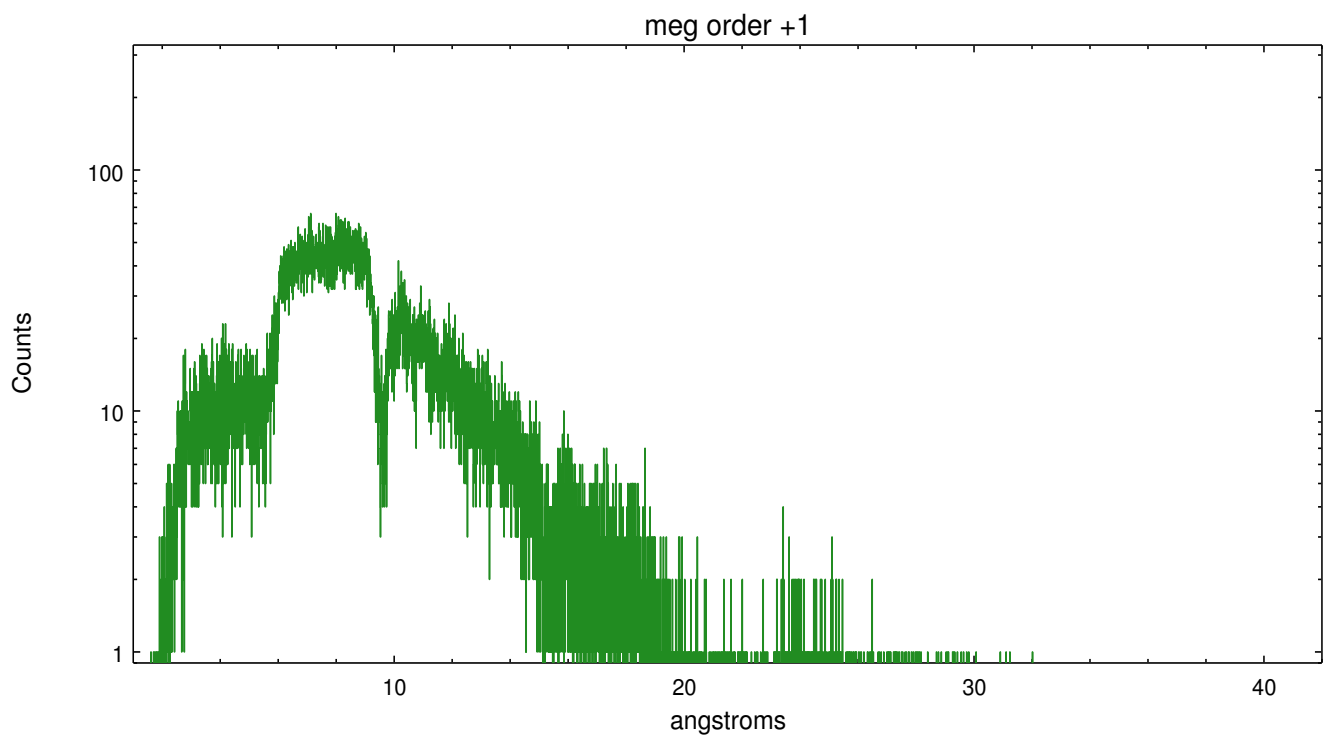
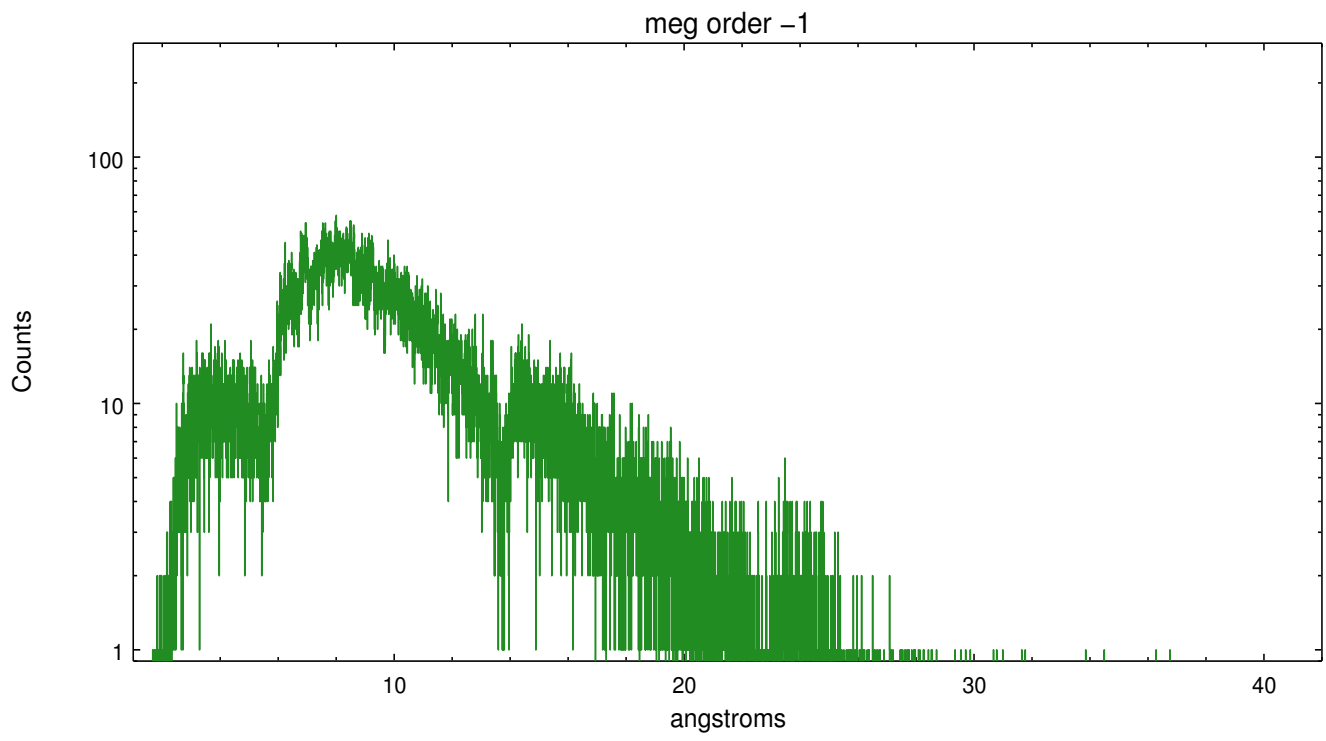
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4398	2026	55977	7151	55034	1742	3609





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.035

A.2 Comments