

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2568 - L2 Version 4
Chandra X-Ray Center

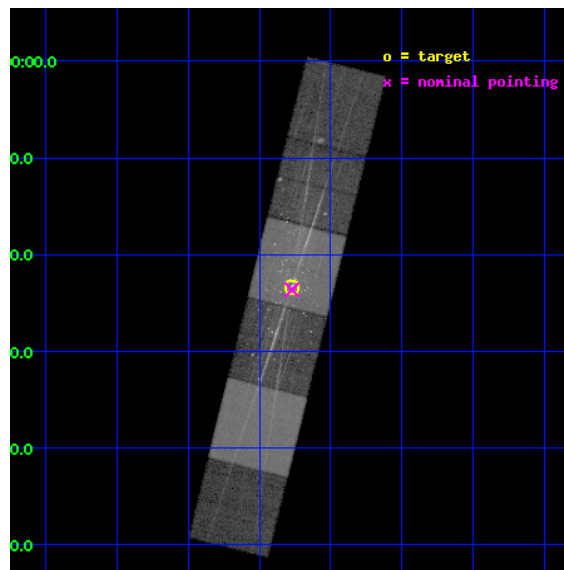
L2 Processing Date : Nov 3 2012

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1 Front

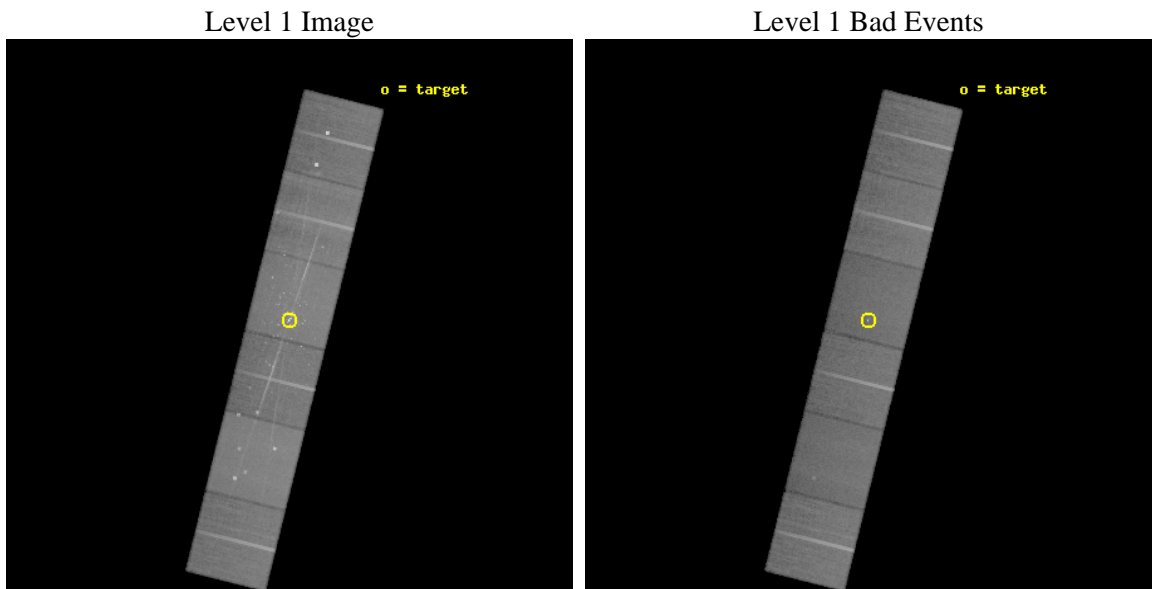
seq_num	200176	Sequence number
obs_id	2568	Observation id
title	PHASE-RESOLVED SPECTROSCOPY OF THETA-1 ORIONIS C (O7 V)	Proposal t
observer	Prof. Marc Gagne	Principal investigator
object	HD 37022	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.81875	Observer's specified target RA [deg]
dec_targ	-5.38975	Observer's specified target Dec [deg]
ra_nom	83.818075596846	Nominal RA [deg]
dec_nom	-5.3940926152738	Nominal Dec [deg]
roll_nom	283.93858111459	Nominal Roll [deg]
revision	4	Processing version of data
ontime	46926.535454884	Sum of GTIs [s]
livetime	46332.323407187	Livetime [s]
ontime4	46926.576494887	Sum of GTIs [s]
ontime5	46926.494414881	Sum of GTIs [s]
ontime6	46926.453374892	Sum of GTIs [s]
ontime7	46926.535454884	Sum of GTIs [s]
ontime8	46926.412334889	Sum of GTIs [s]
ontime9	46926.371294886	Sum of GTIs [s]
l2events	674880	Number of level 2 events



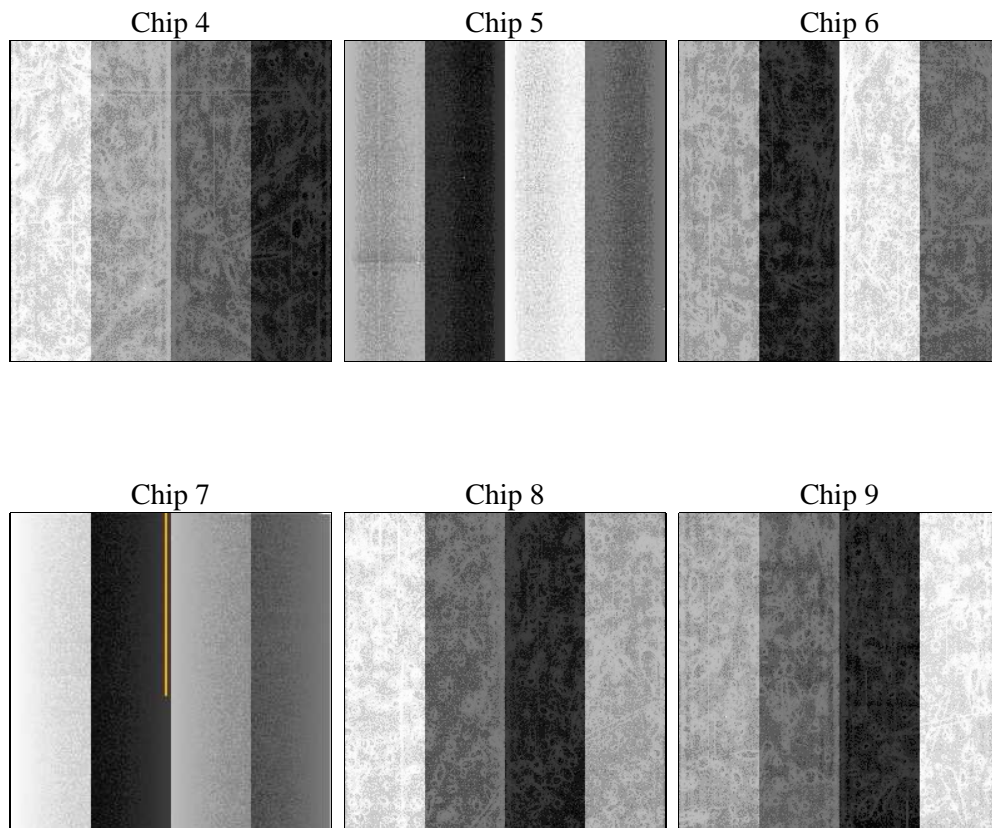
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	47000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	46926.535454884	Sum of GTIs [s]
caldbver	4.5.2	 	ontime4	46926.576494887	Sum of GTIs [s]
date	2012-11-03T01:02:17	Date and time of file creation	ontime5	46926.494414881	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	46926.453374892	Sum of GTIs [s]
			ontime7	46926.535454884	Sum of GTIs [s]
			ontime8	46926.412334889	Sum of GTIs [s]
			ontime9	46926.371294886	Sum of GTIs [s]
			l1events	2481767	Number of level 1 events

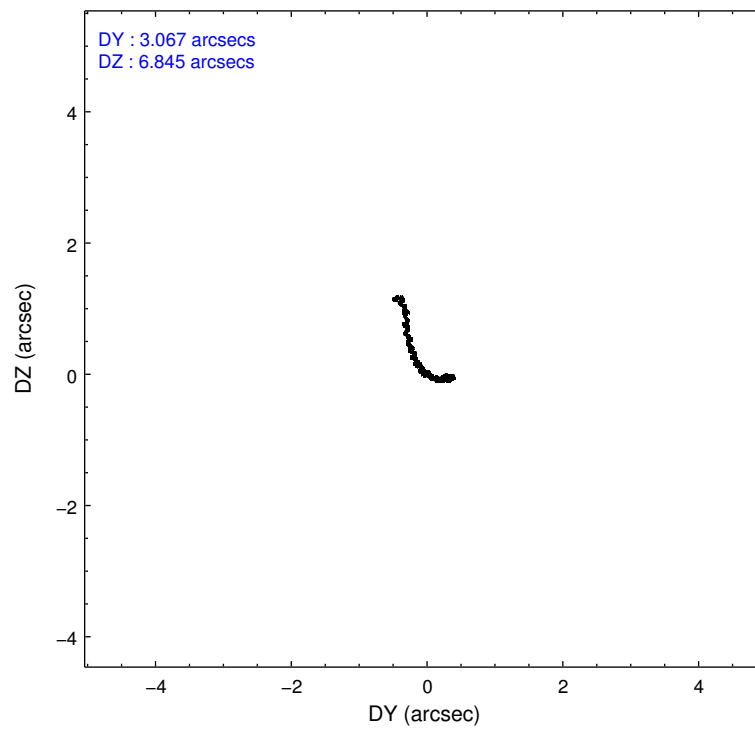
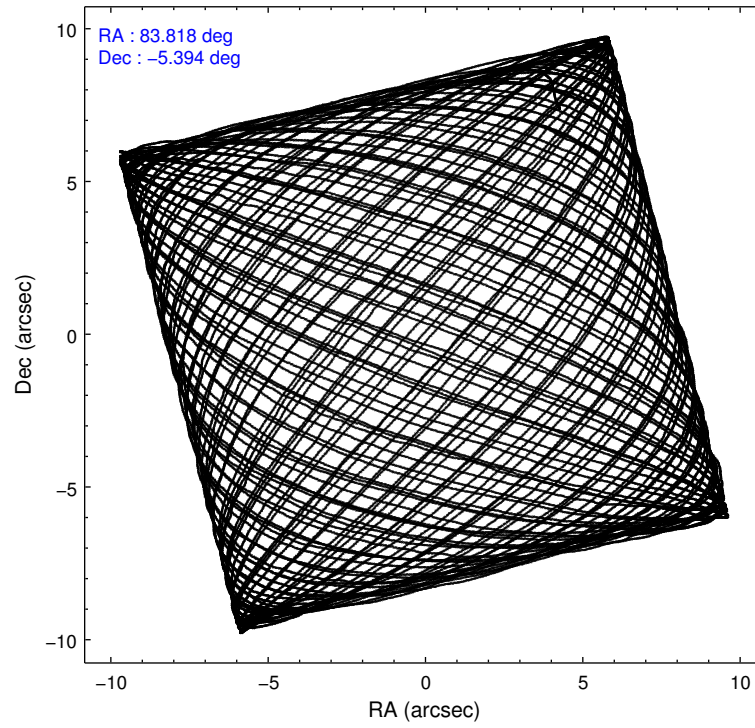
2.1.4 Events

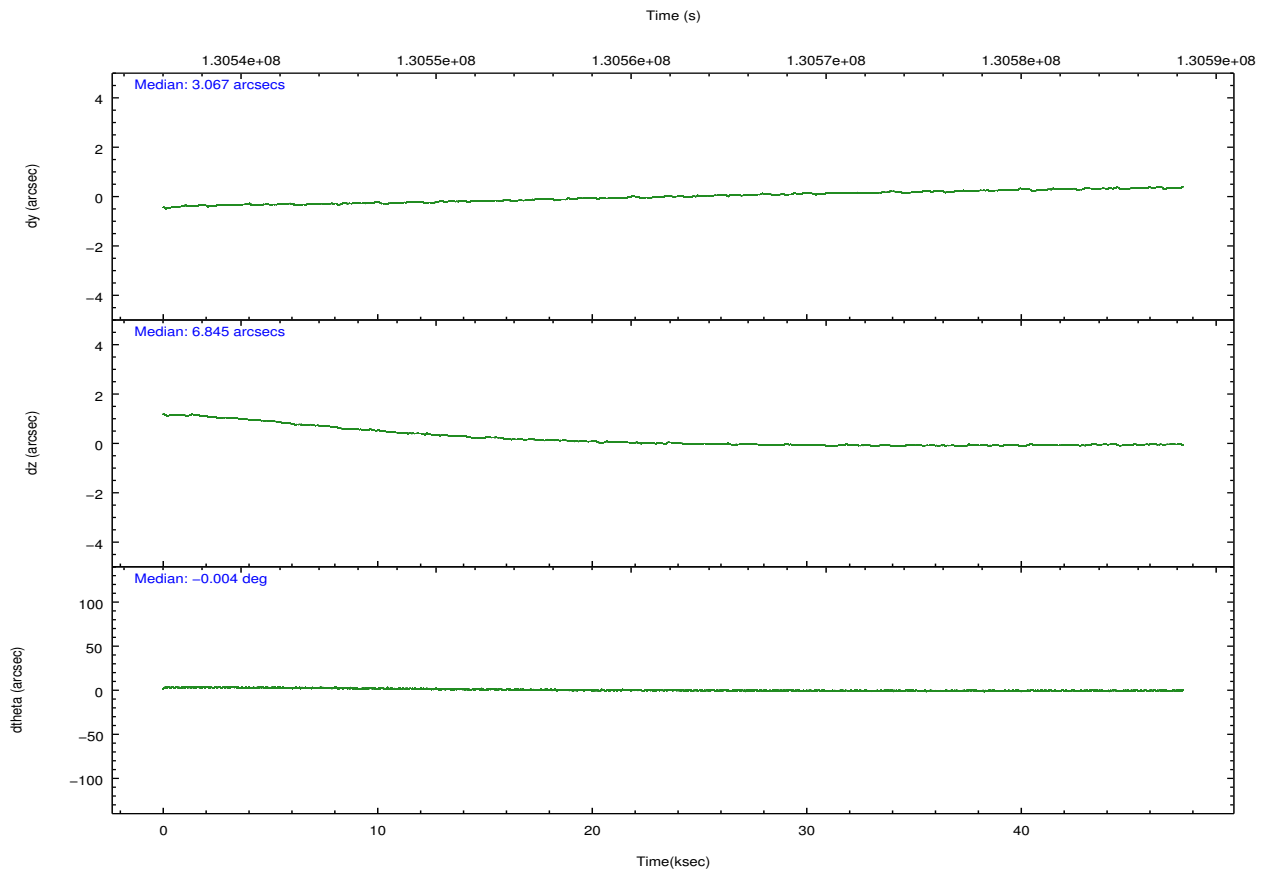
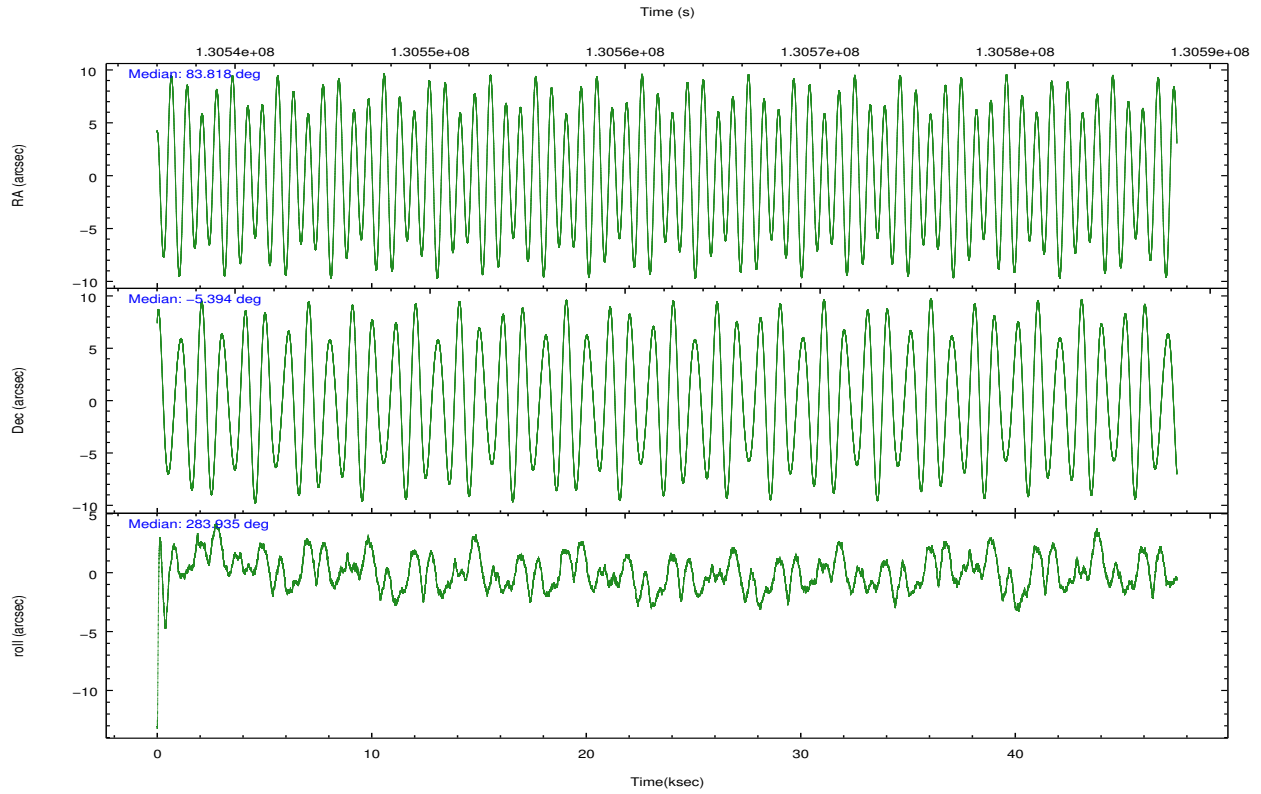
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	361333	476521	366246	495200	426747	355720	grade 0 events	19529	36092	52275	34771	49220	48746
rejected events	317215	243562	281244	243120	314767	281134		5%	7%	14%	7%	11%	13%
rejected %	87%	51%	76%	49%	73%	79%	grade 1 events	188	1077	338	611	343	282
								0%	0%	0%	0%	0%	0%
							grade 2 events	10193	64828	12762	54616	21399	9946
								2%	13%	3%	11%	5%	2%
							grade 3 events	3699	10771	5381	24528	9799	4026
								1%	2%	1%	4%	2%	1%
							grade 4 events	3607	10400	5366	24619	9130	3871
								0%	2%	1%	4%	2%	1%
							grade 5 events	11801	34610	13991	40868	17606	13932
								3%	7%	3%	8%	4%	3%
							grade 6 events	7094	110910	9226	113567	22438	8007
								1%	23%	2%	22%	5%	2%
							grade 7 events	305222	207833	266907	201620	296812	266910
								84%	43%	72%	40%	69%	75%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.798849	83.81807559684637	Subarray requested	NONE	NONE
[deg] Pointing Dec	-5.374707	-5.39409261527384	Alternating exposures requested	N	N
[deg] Pointing Roll	283.780149	283.9385811145942	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
Phase constraints	Y	Y			
[d] Phase period	15.422000	15.422000			
[d] Phase epoch (MJD)	51392.550000	51392.550000			
Phase start	0.479000	0.479000			
Phase end	0.521000	0.521000			
Phase start error	0.030000	0.030000			
Phase end error	0.030000	0.030000			
[s] Observation start time (MET)	130538919.184000	130537782.42284			
Observation start date	2002-02-19T20:47:35	2002-02-19T20:29:42			
[s] Observation end time (MET)	130585919.184000	130586519.12481			
Observation end date	2002-02-20T09:50:55	2002-02-20T10:01:59			
Read mode	TIMED	TIMED			

2.3 Aspect



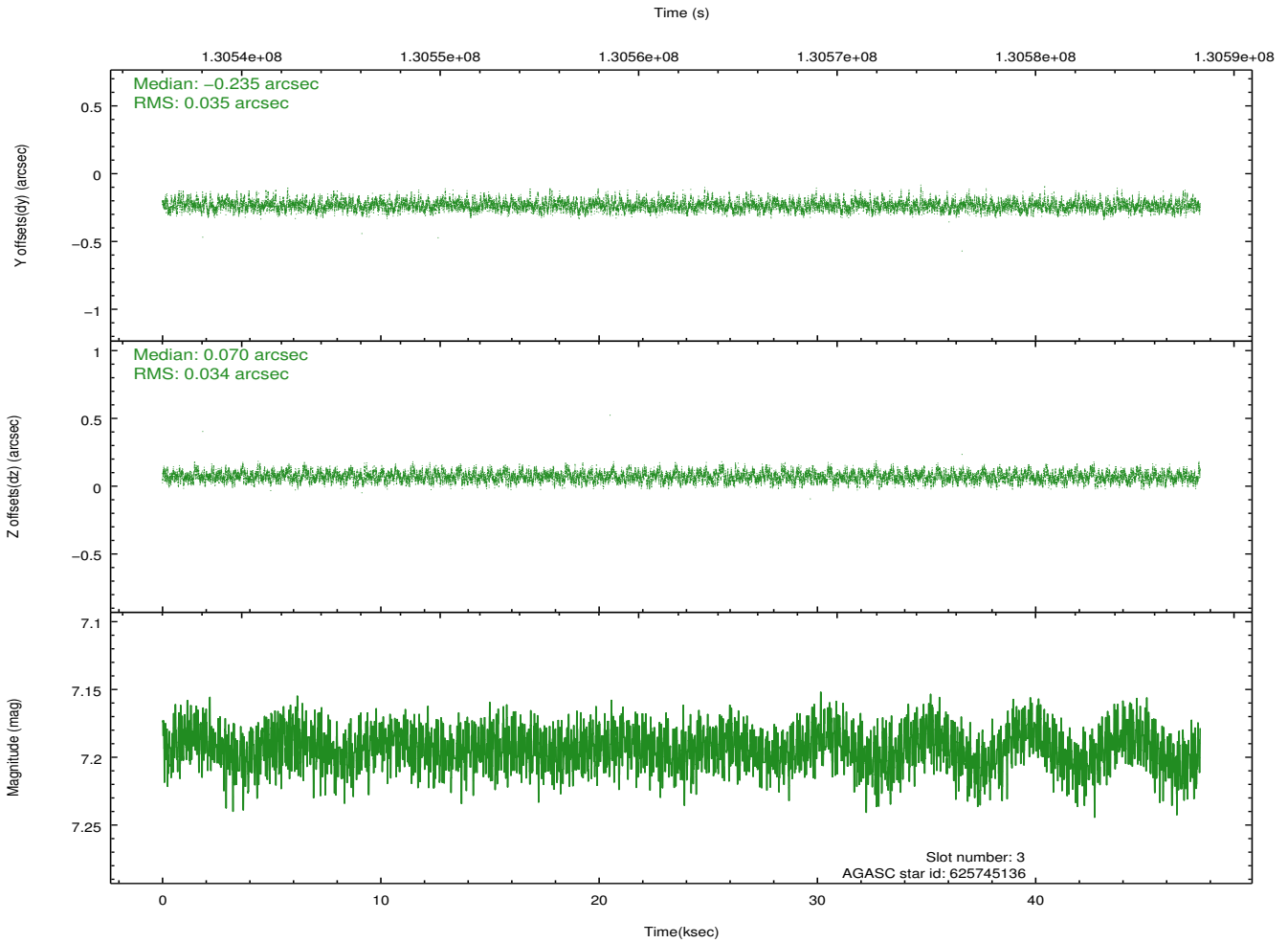
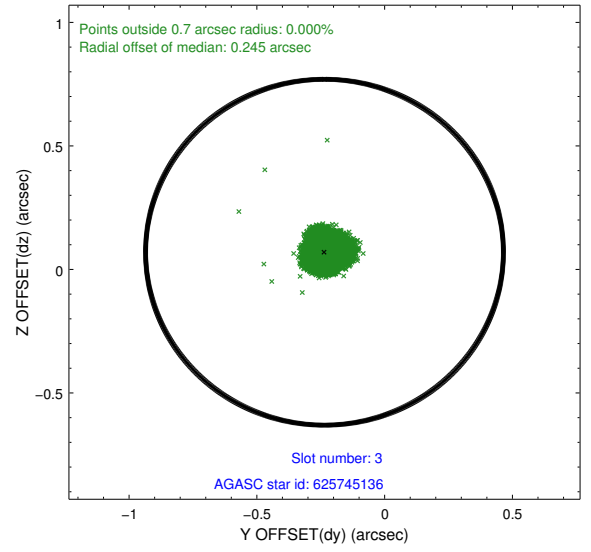
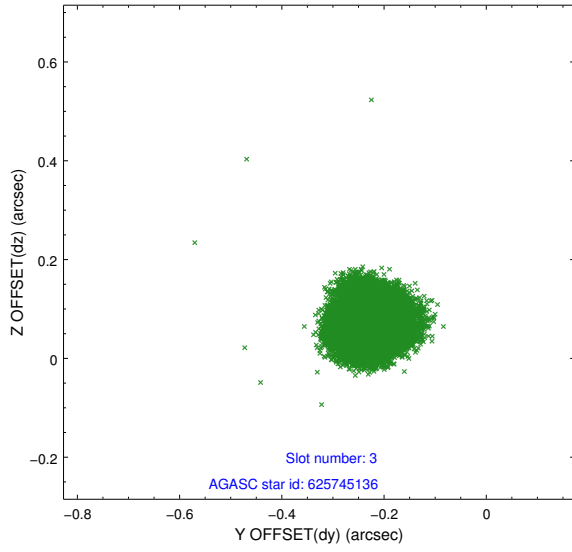


Slot Statistics

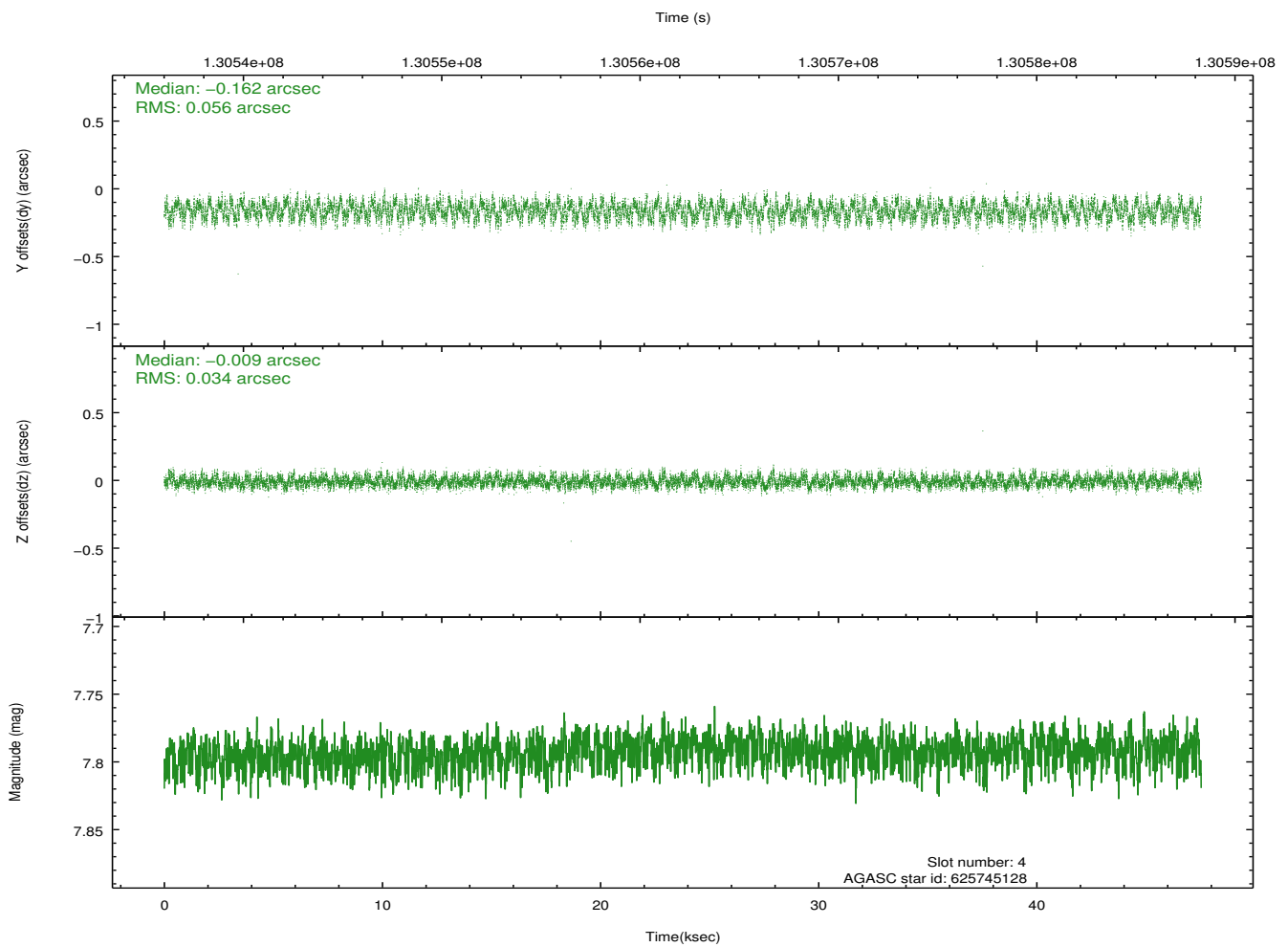
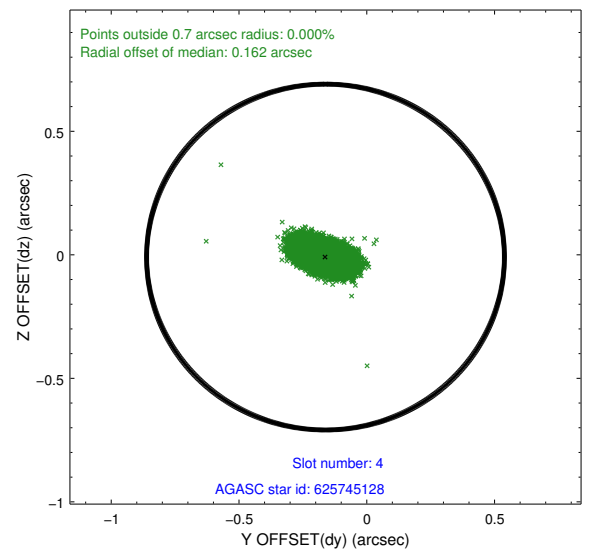
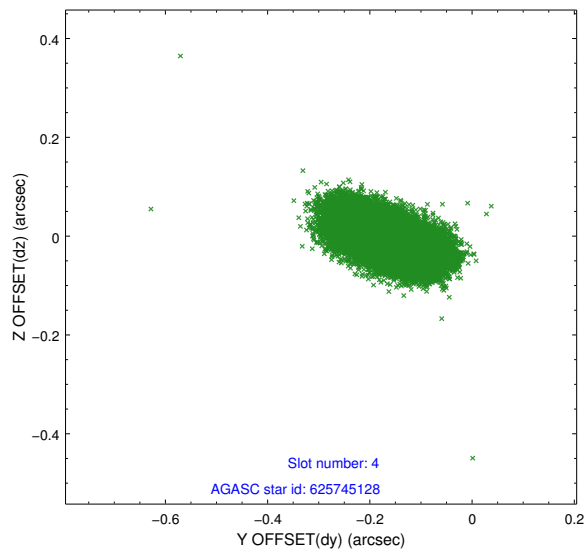
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	11595	-0.014	0.007	0.010	0.016	0.000000	0.000000	-755.70	-1728.17
1	FID	ACIS-S-4	7.20	11595	-0.034	0.004	0.019	0.028	0.000000	0.000000	2157.55	180.34
2	FID	ACIS-S-5	7.24	11595	0.017	-0.003	0.013	0.021	0.000000	0.000000	-1808.54	173.97
3	GUIDE	625745136	7.19	23187	-0.235	0.070	0.053	0.082	83.600341	-4.804339	-2163.81	-202.94
4	GUIDE	625745128	7.79	23189	-0.162	-0.009	0.070	0.114	83.769930	-4.731835	-2272.55	450.02
5	GUIDE	626272880	7.69	23187	0.166	-0.012	0.078	0.121	83.815609	-6.032748	2315.32	-506.24
6	GUIDE	626272976	7.97	23189	0.197	0.008	0.059	0.091	83.795875	-5.926912	1928.67	-484.14
7	GUIDE	625869904	9.99	23168	0.027	-0.058	0.128	0.204	84.416435	-5.090874	-463.60	2393.50

2.4 Star Slots

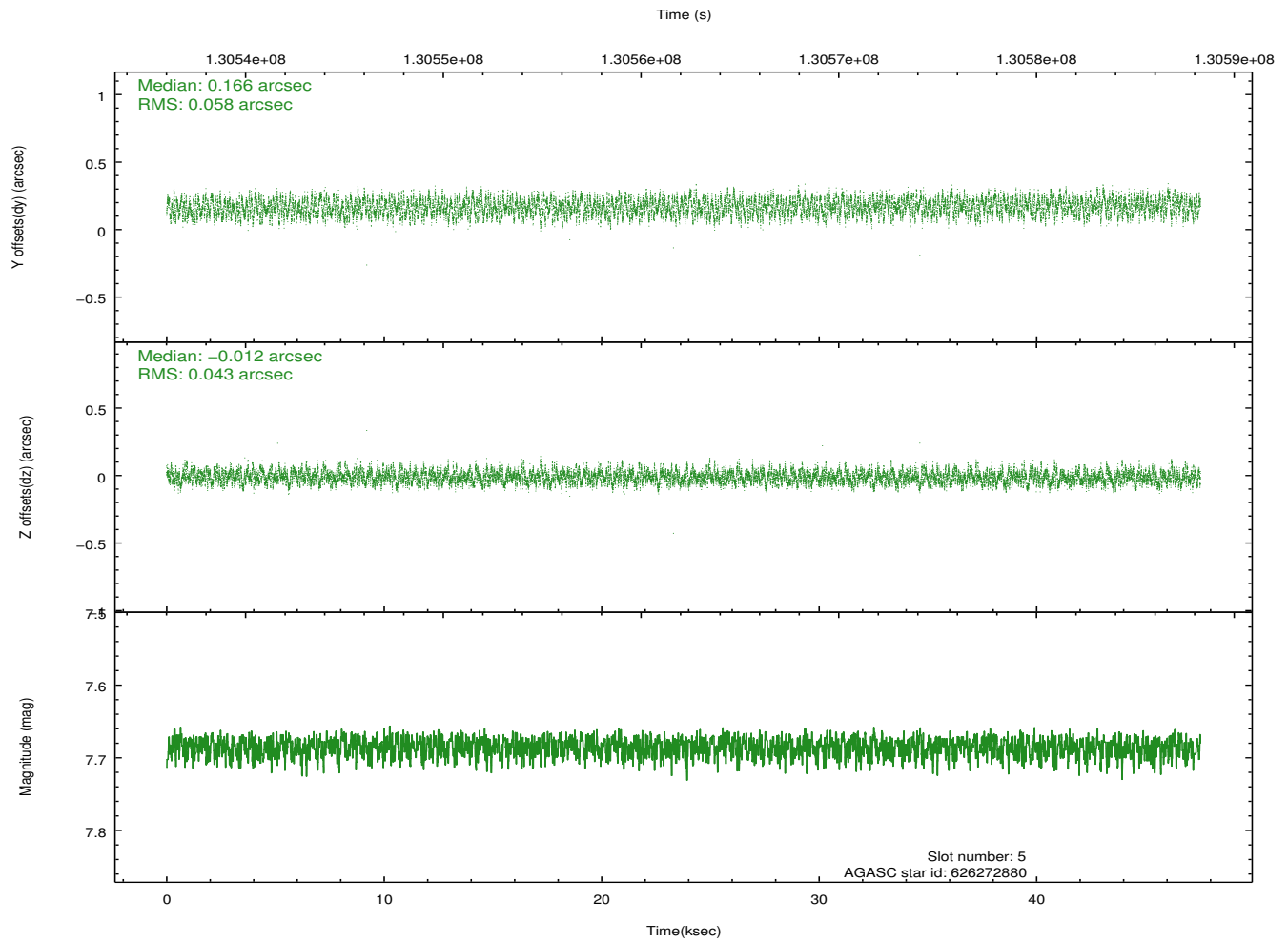
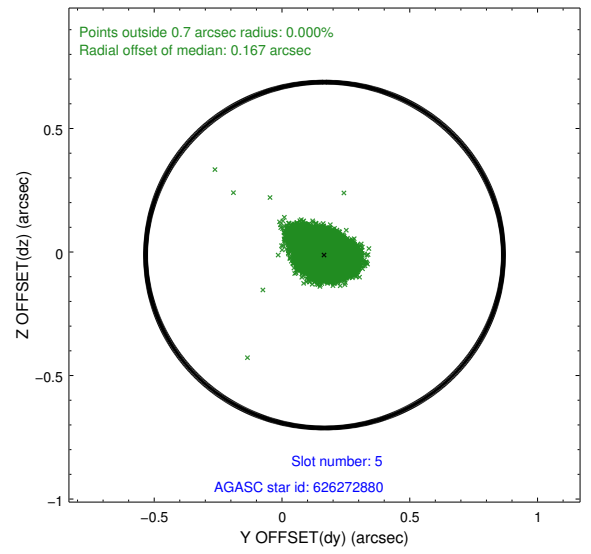
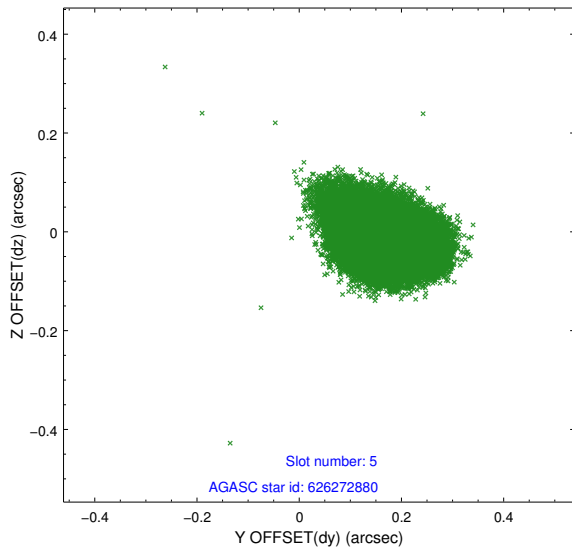
2.4.1 Slot 3



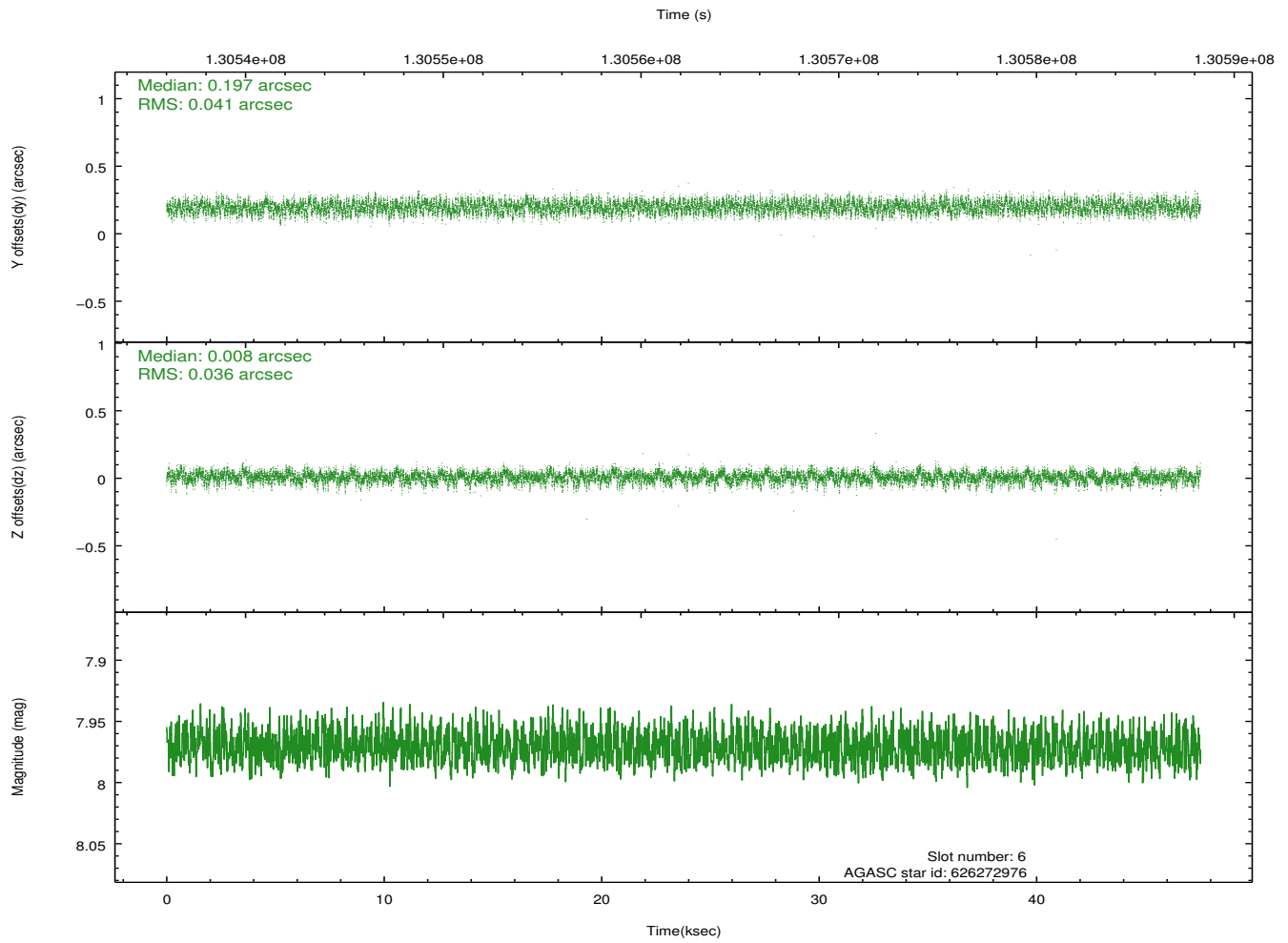
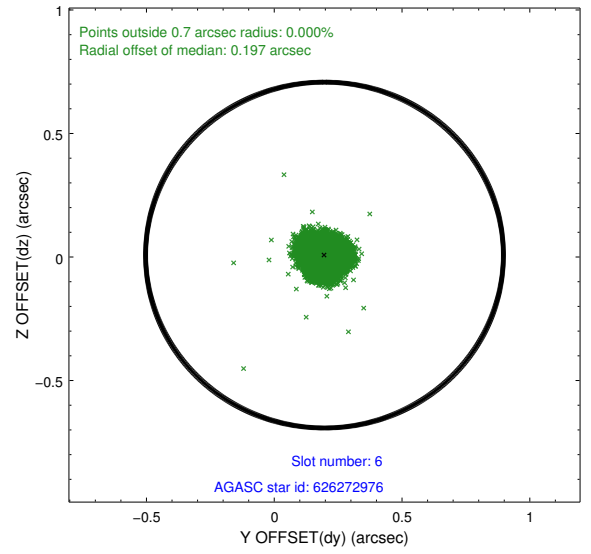
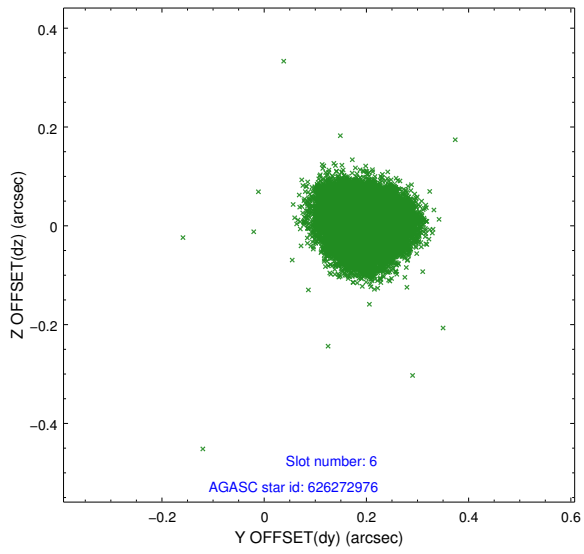
2.4.2 Slot 4



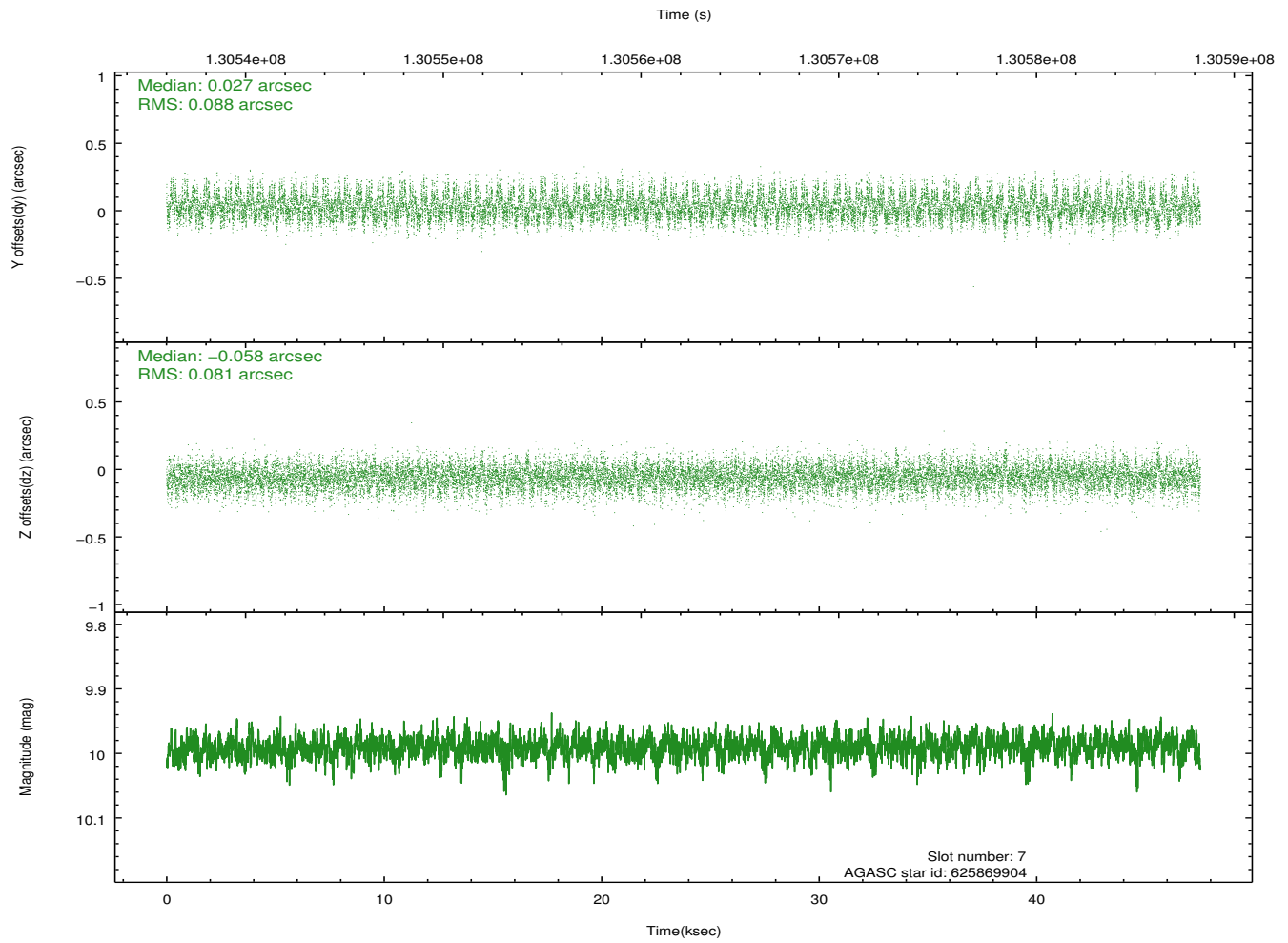
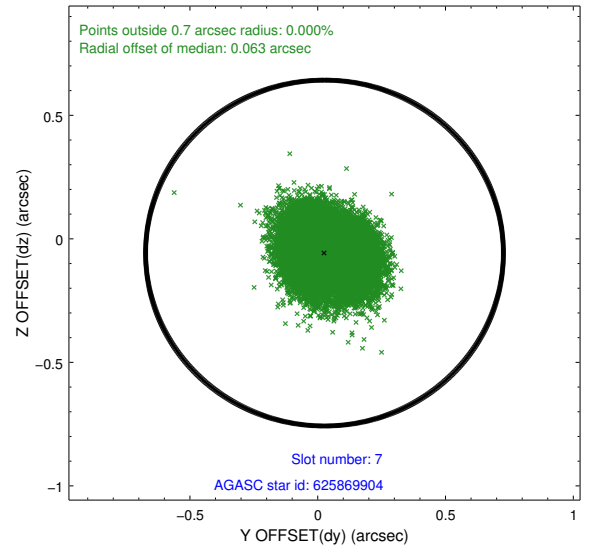
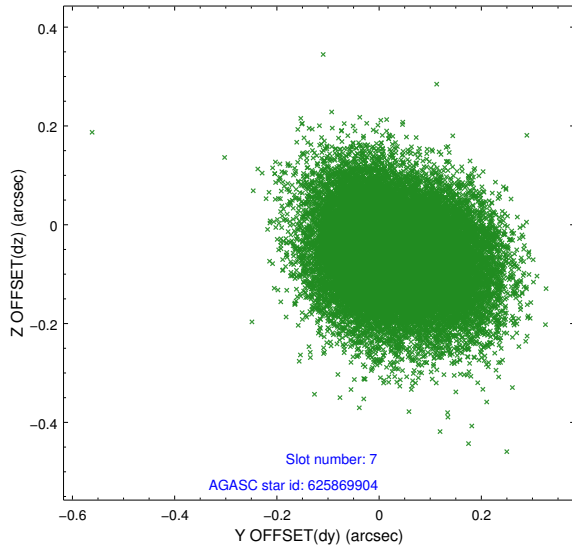
2.4.3 Slot 5



2.4.4 Slot 6

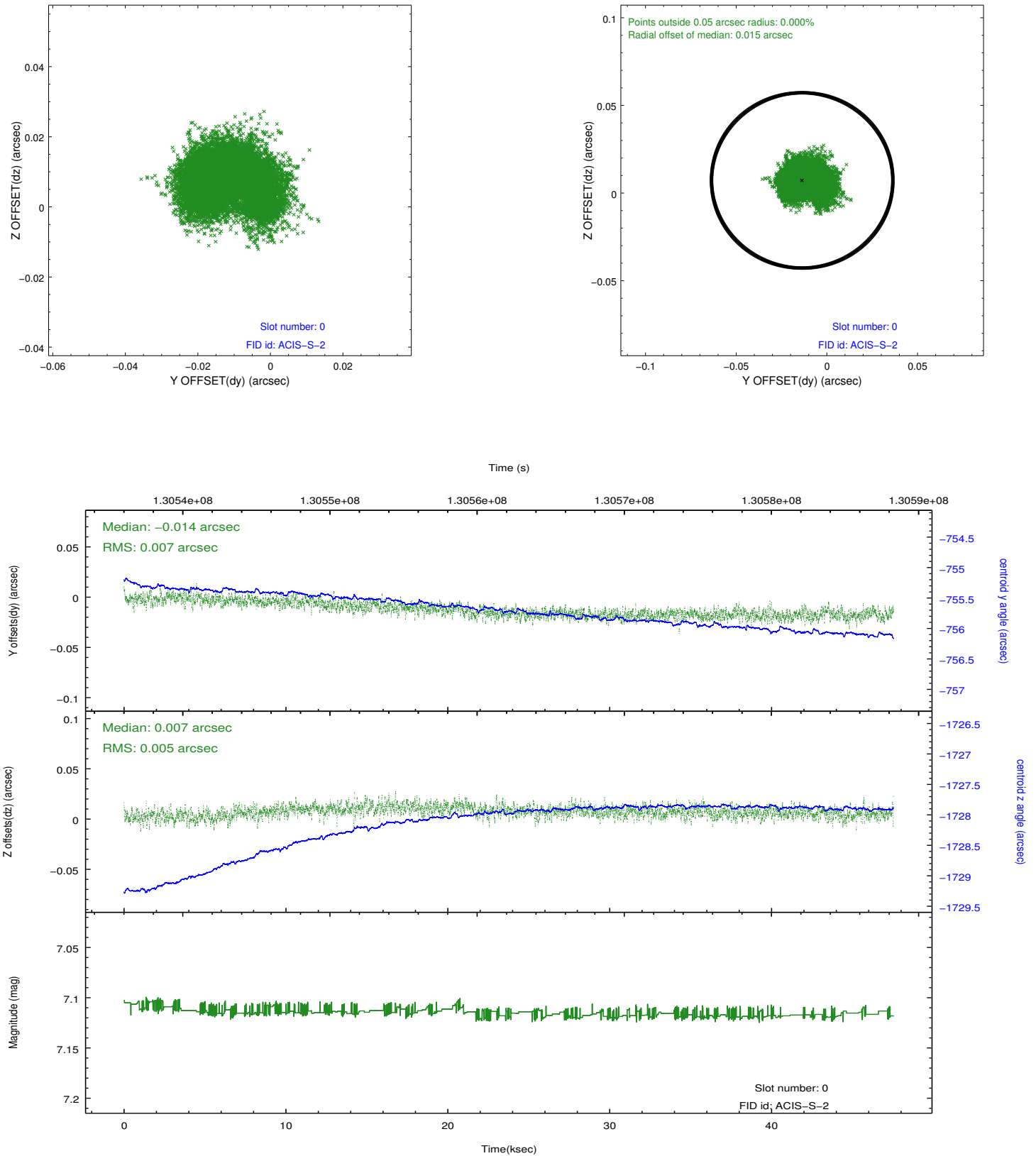


2.4.5 Slot 7

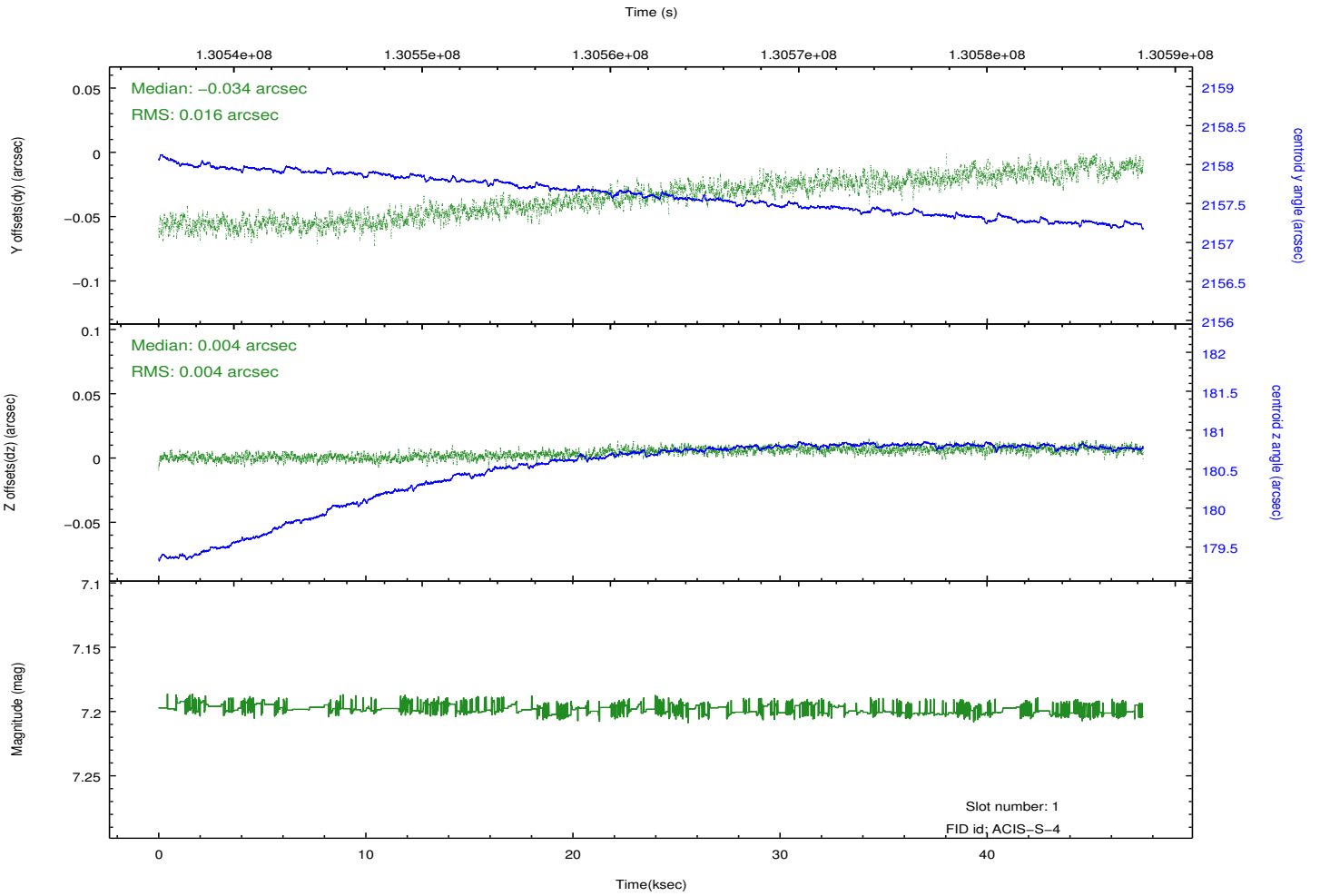
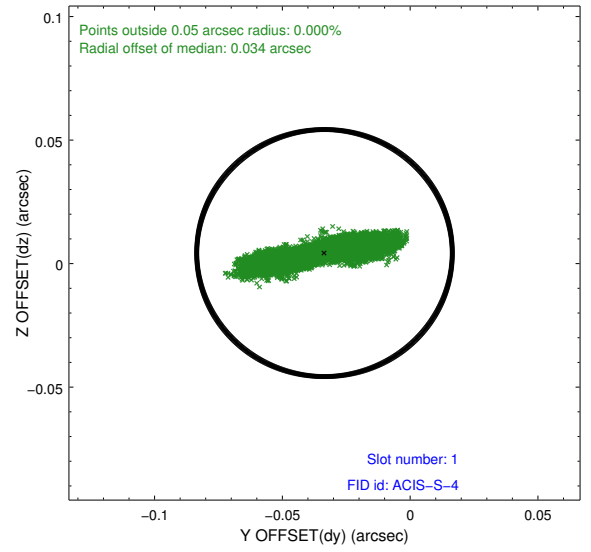
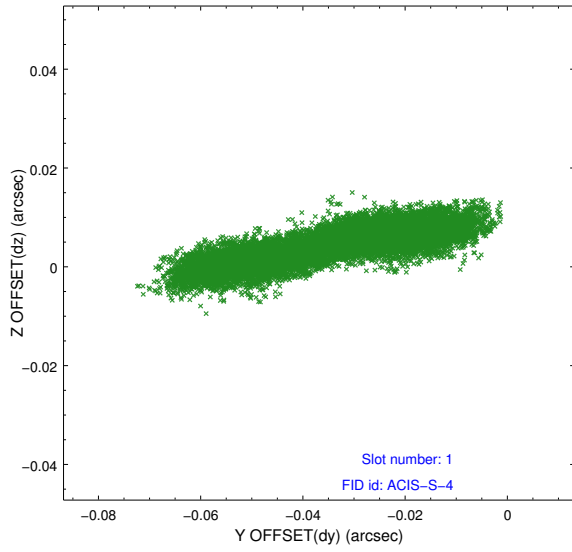


2.5 FID Slots

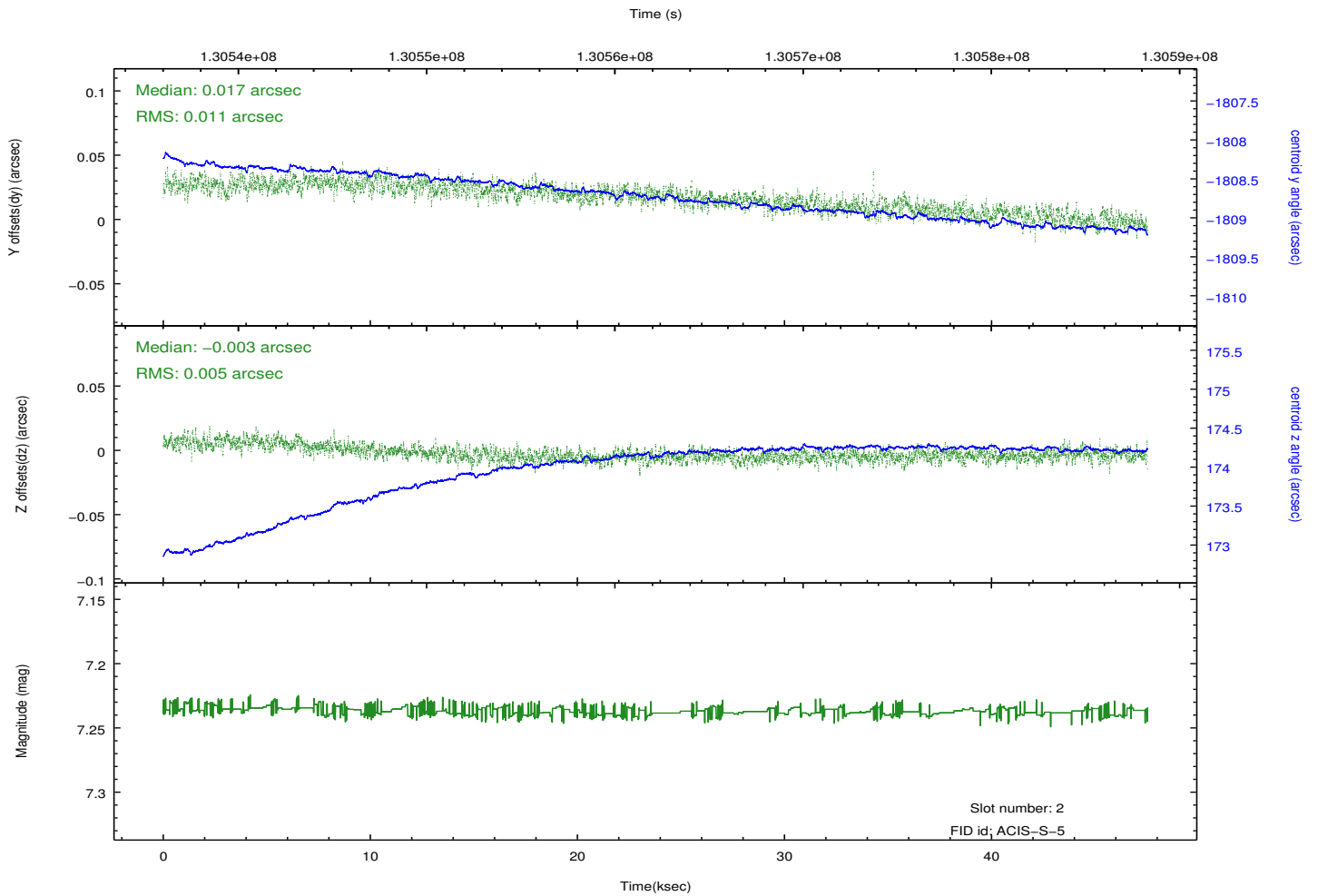
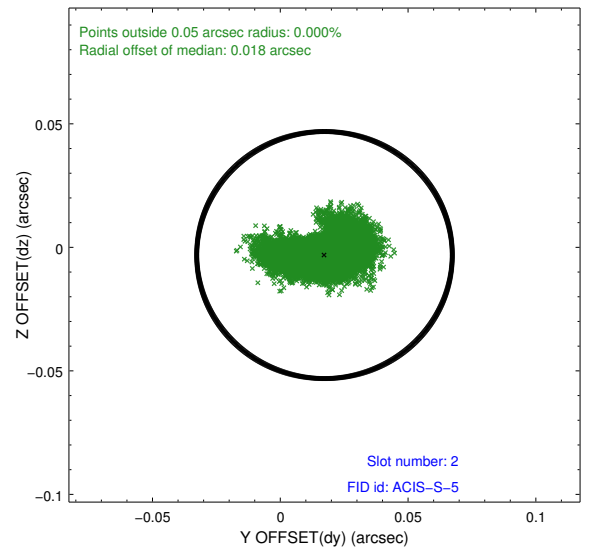
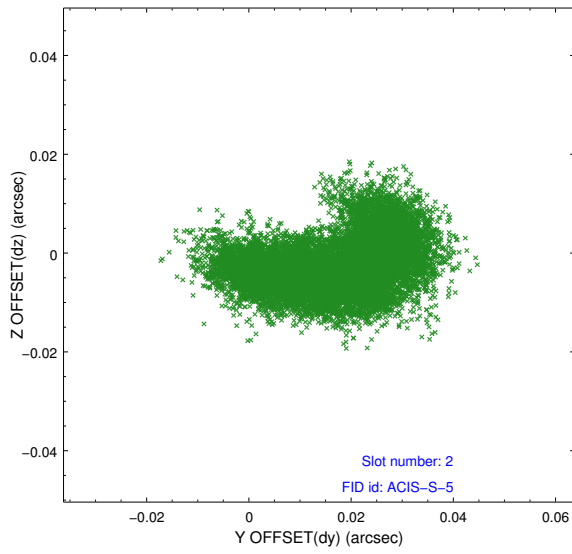
2.5.1 Slot 0



2.5.2 Slot 1

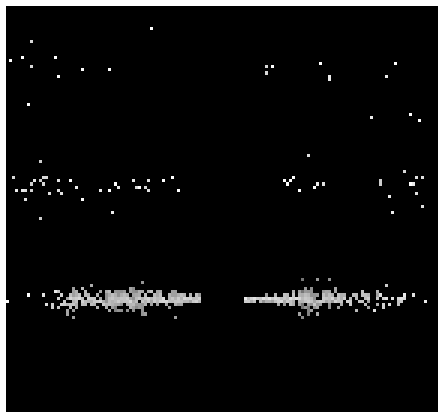


2.5.3 Slot 2

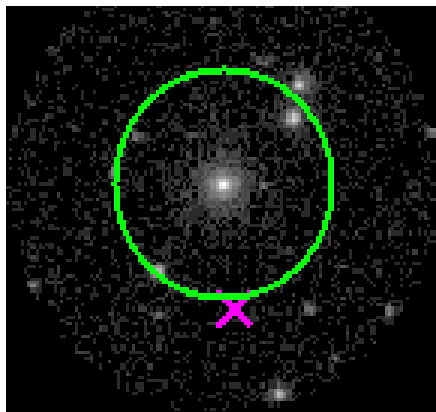


3 Gratings

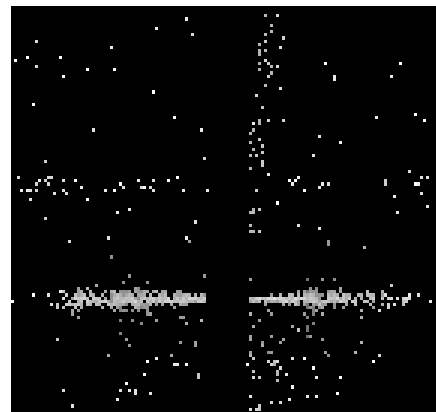
3.1 HEG Arm



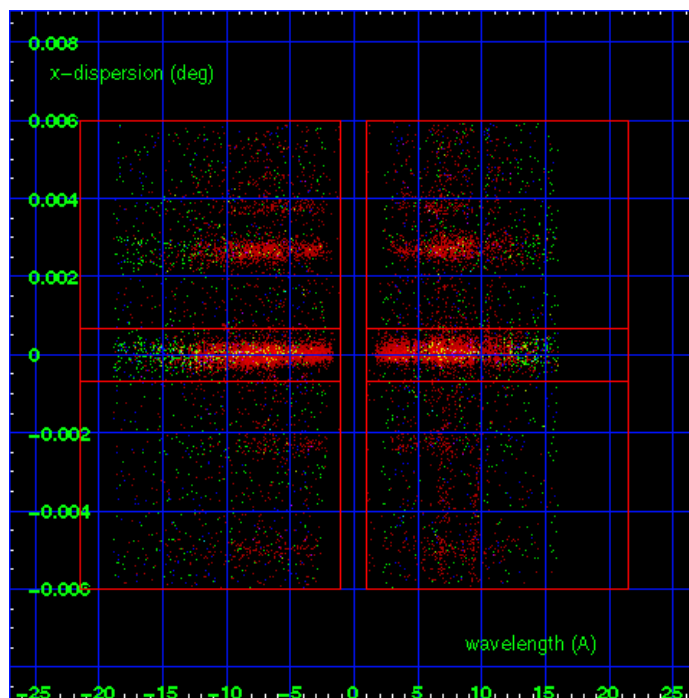
HEG Order Sort 123



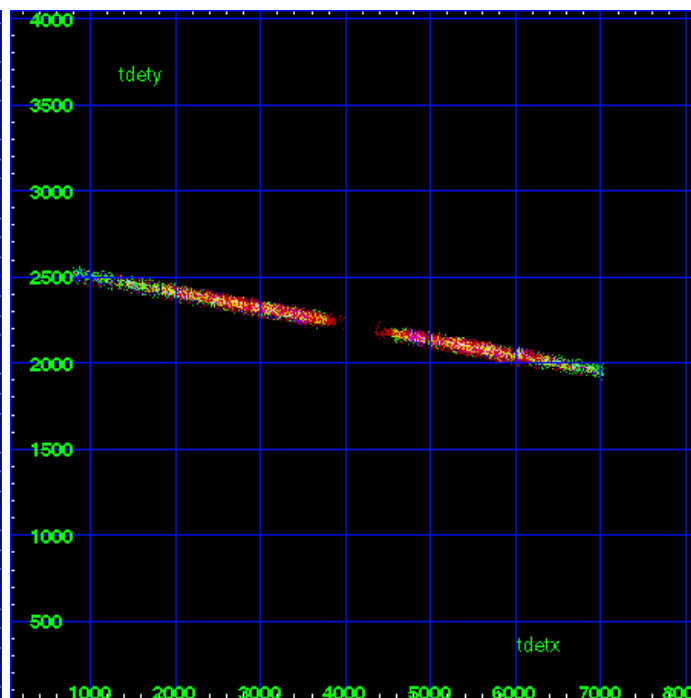
HEG Zero Order



HEG Order Sort ALL

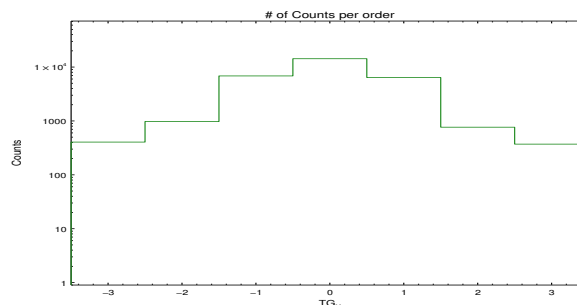


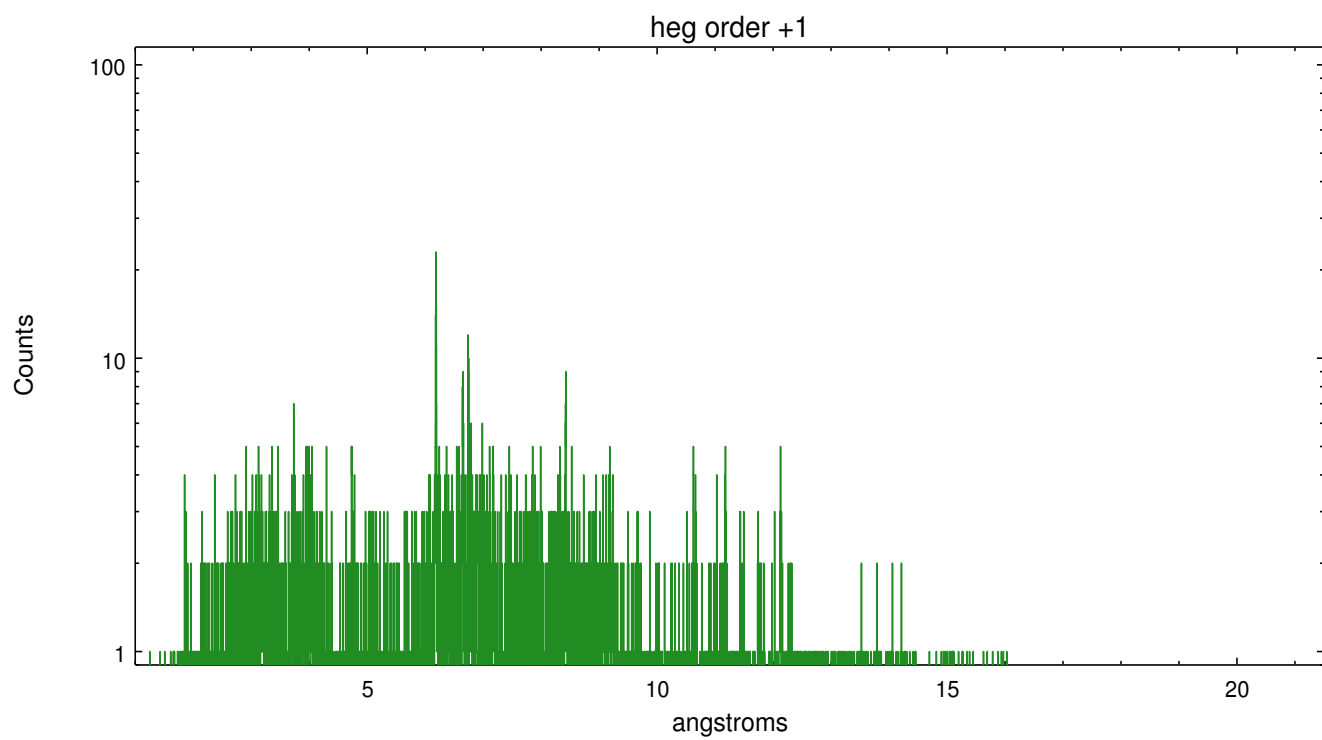
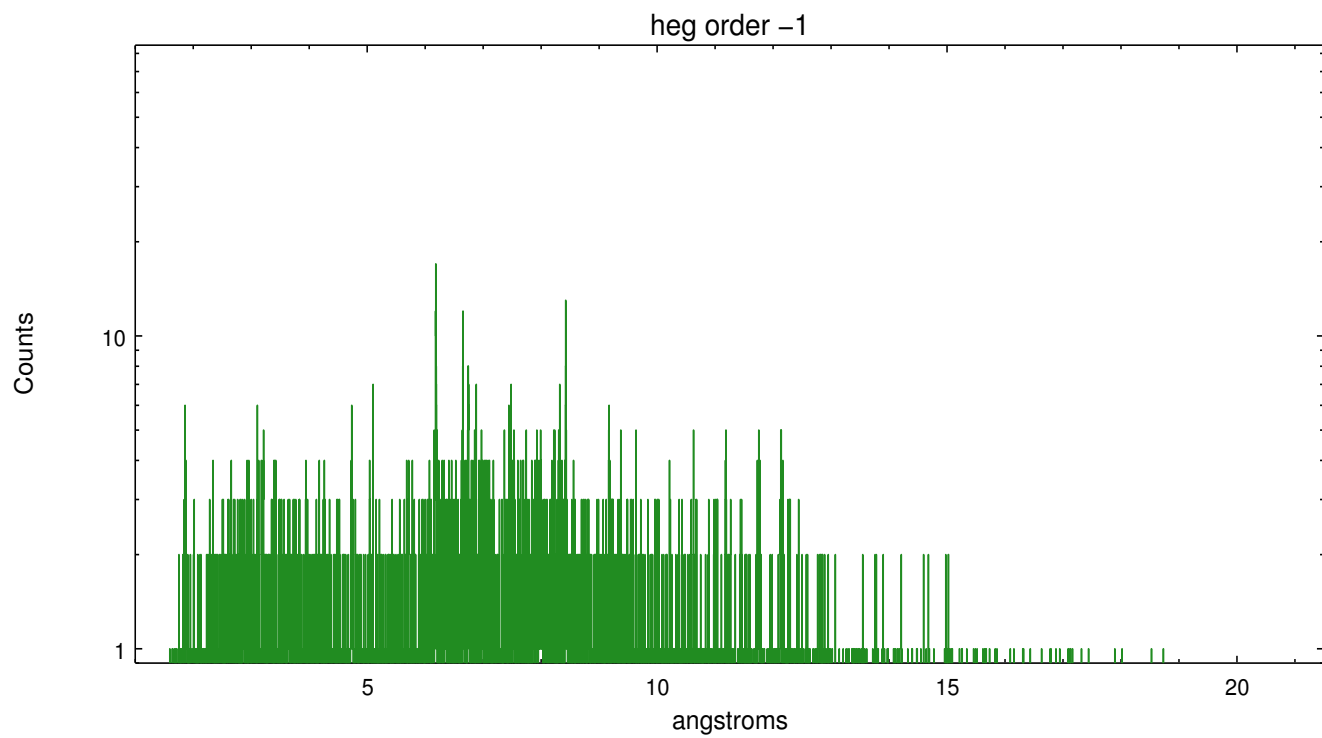
Spot Image HEG



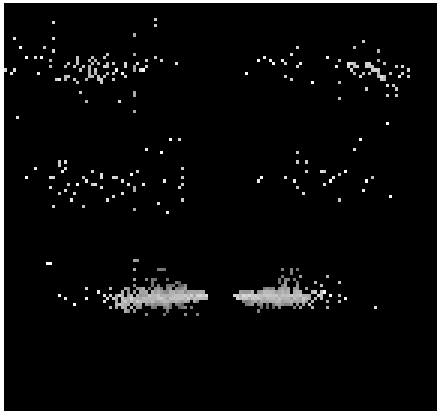
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	405	975	6848	14290	6395	765	371

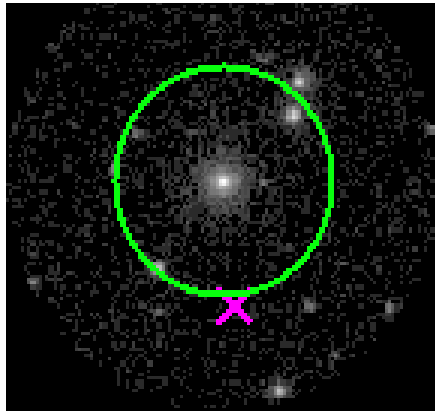




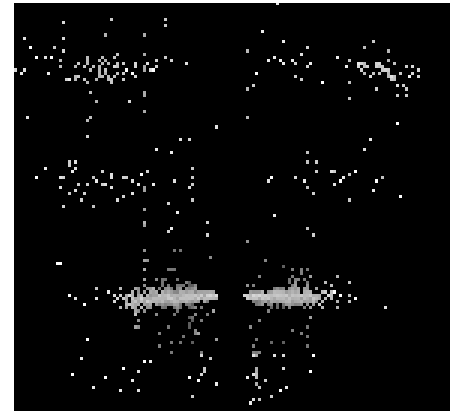
3.2 MEG Arm



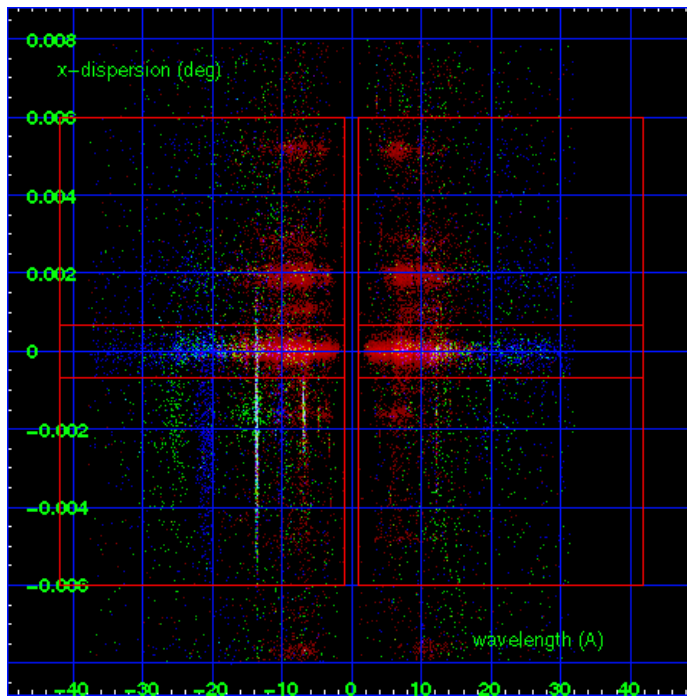
MEG Order Sort 123



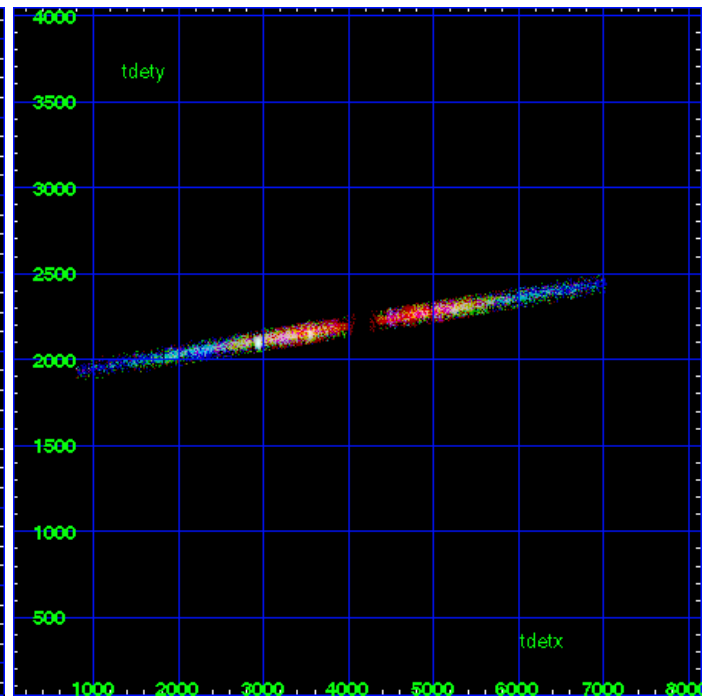
MEG Zero Order



MEG Order Sort ALL

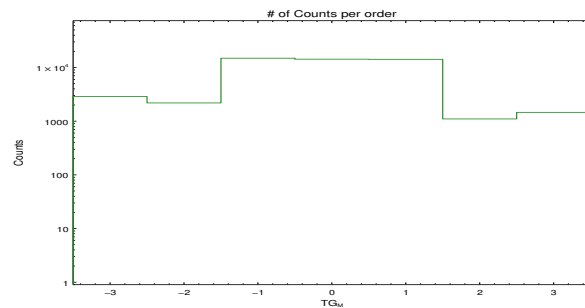


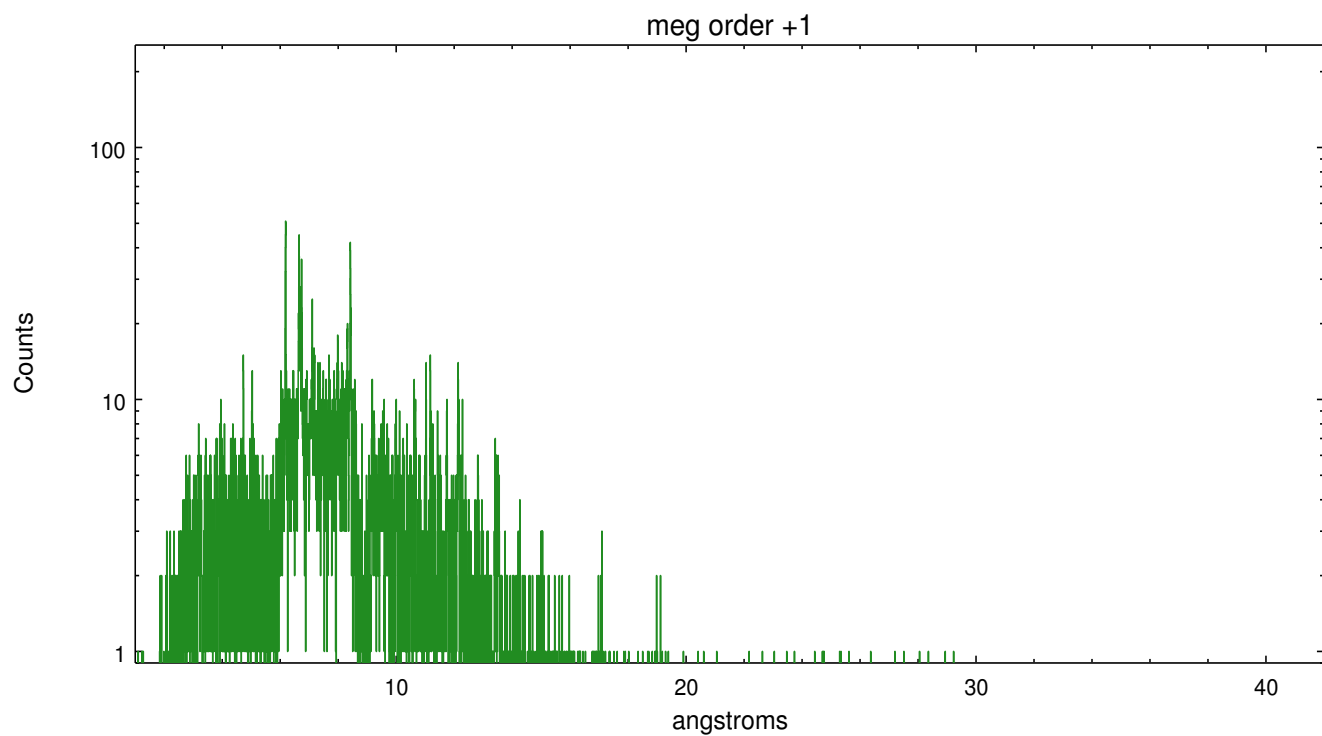
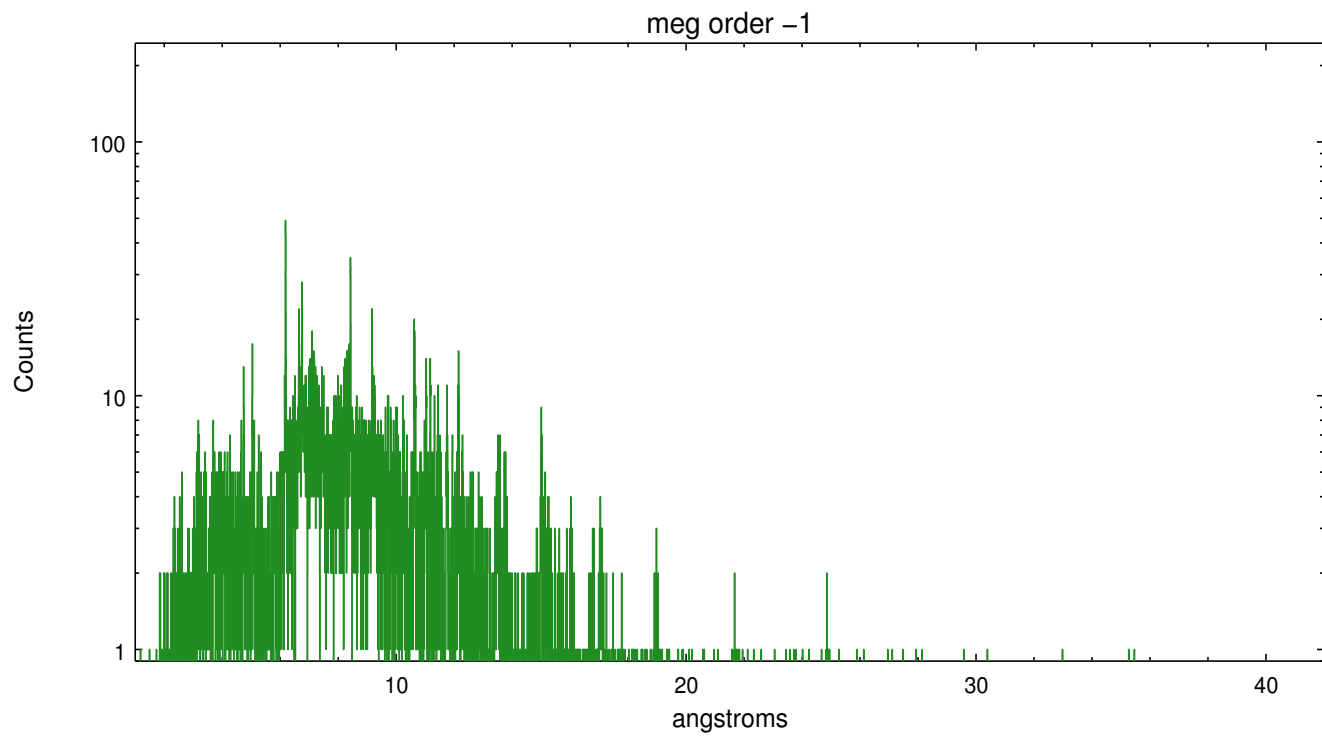
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2877	2187	14890	14290	14197	1101	1460





A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.11.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.928

A.2 Comments

This field is extremely crowded. Extraction is centered on theta 1 Ori C. The dispersed spectral arms of the target and of several other sources are parallel to each other and separated by 3-4 pixels. The width of the extraction region is +/-6.6e-4 deg, which is about 8 pixels full width. Multiple sources in the field may cause contamination of the primary extraction at some wavelengths. The extracted spectral data will probably include data from several sources, but if the zeroth orders for these sources are sufficiently separated spatially, energy discrimination in the order sorting may reject neighboring spectral orders. Custom extraction of the dispersed spectral data is critical to analysis of these data. === Dispersed spectral data from a number of other sources can be extracted from this observation.

===

Phase constraint requested: min 0.479, err 0.03 max 0.521, err 0.03.

Actual

phase, tstart 0.453, tstop 0.489.

====

A spatial region of the original bias map for CCD = 8 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 8 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(83.77699, -5.26441), (83.77570, -5.25925), (83.75468, -5.26445), (83.75344, -5.27024)