

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12405 - L2 Version 2
Chandra X-Ray Center

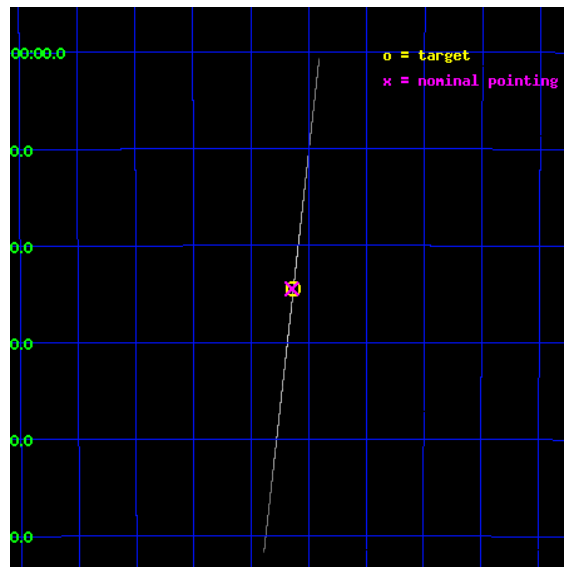
L2 Processing Date : Feb 19 2012

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1 Front

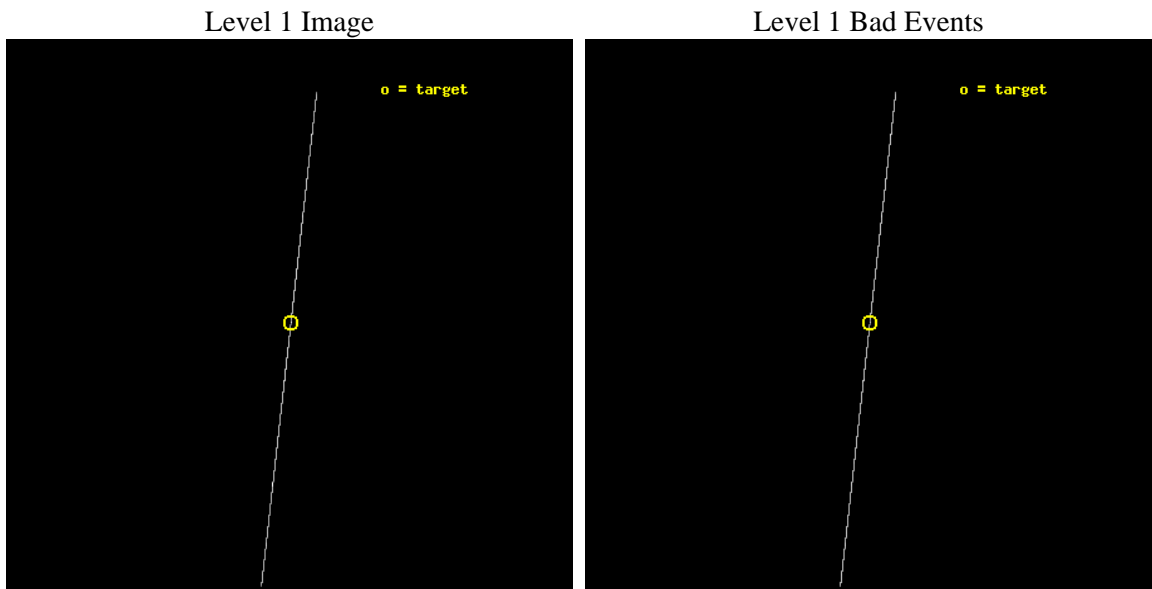
seq_num	401146	Sequence number
obs_id	12405	Observation id
title	High Resolution Spectroscopy of a Black Hole Transient	Proposal ti
observer	Dr. Jon Miller	Principal investigator
object	IGR J17091-3624	Source name
ra_targ	257.283	Observer's specified target RA [deg]
dec_targ	-36.407	Observer's specified target Dec [deg]
ra_nom	257.28634506377	Nominal RA [deg]
dec_nom	-36.407976353781	Nominal Dec [deg]
roll_nom	276.42266385901	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31329.0	Sum of GTIs [s]
livetime	31206.62109375	Livetime [s]
ontime4	31329.0	Sum of GTIs [s]
ontime5	31329.0	Sum of GTIs [s]
ontime6	31329.0	Sum of GTIs [s]
ontime7	31329.0	Sum of GTIs [s]
ontime8	31326.07980746	Sum of GTIs [s]
ontime9	31329.0	Sum of GTIs [s]
l2events	1545498	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	31255.904000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	31329.0	Sum of GTIs [s]
caldbver	4.4.8	 	ontime4	31329.0	Sum of GTIs [s]
date	2012-02-19T10:11:02	Date and time of file creation	ontime5	31329.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	31329.0	Sum of GTIs [s]
			ontime7	31329.0	Sum of GTIs [s]
			ontime8	31326.07980746	Sum of GTIs [s]
			ontime9	31329.0	Sum of GTIs [s]
			l1events	3922653	Number of level 1 events

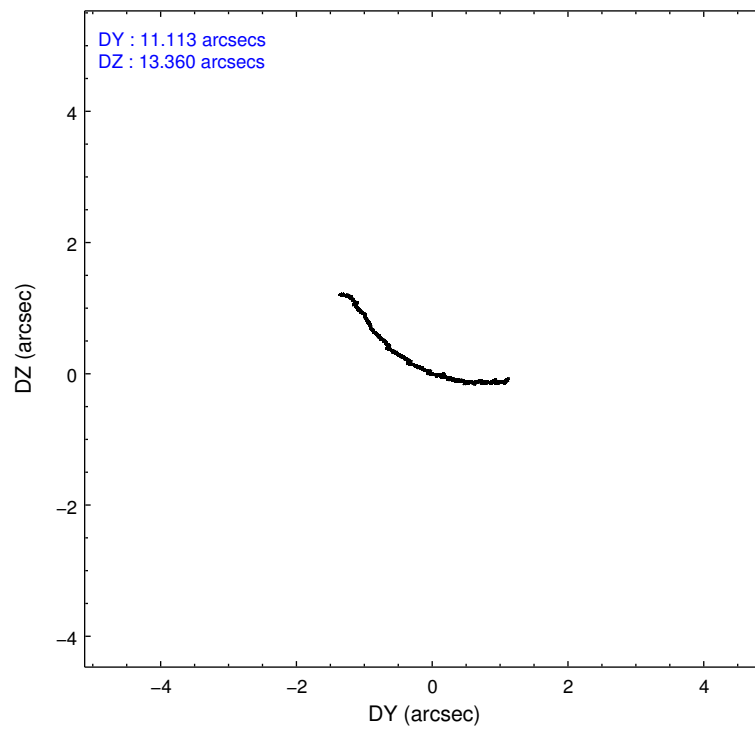
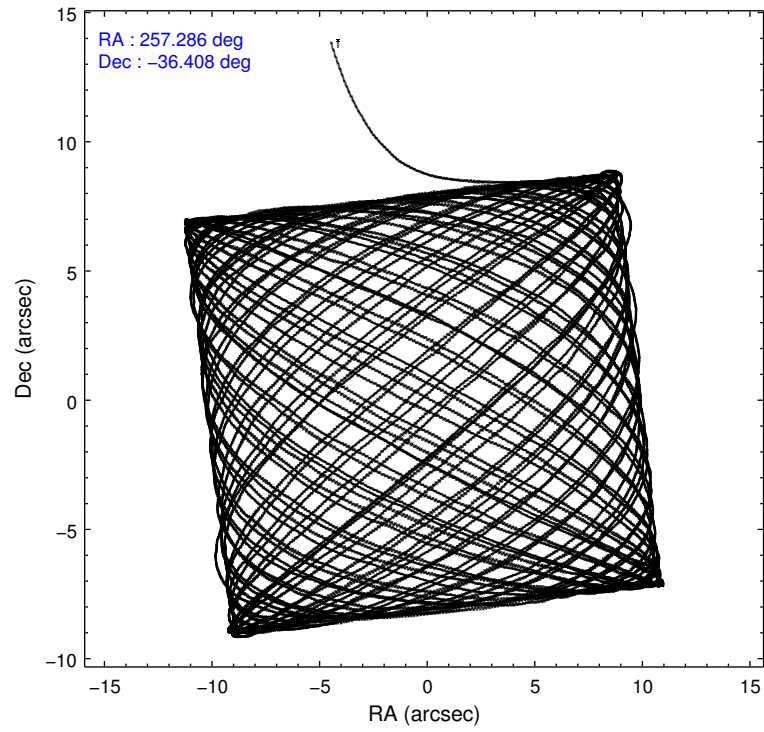
2.1.3 Events

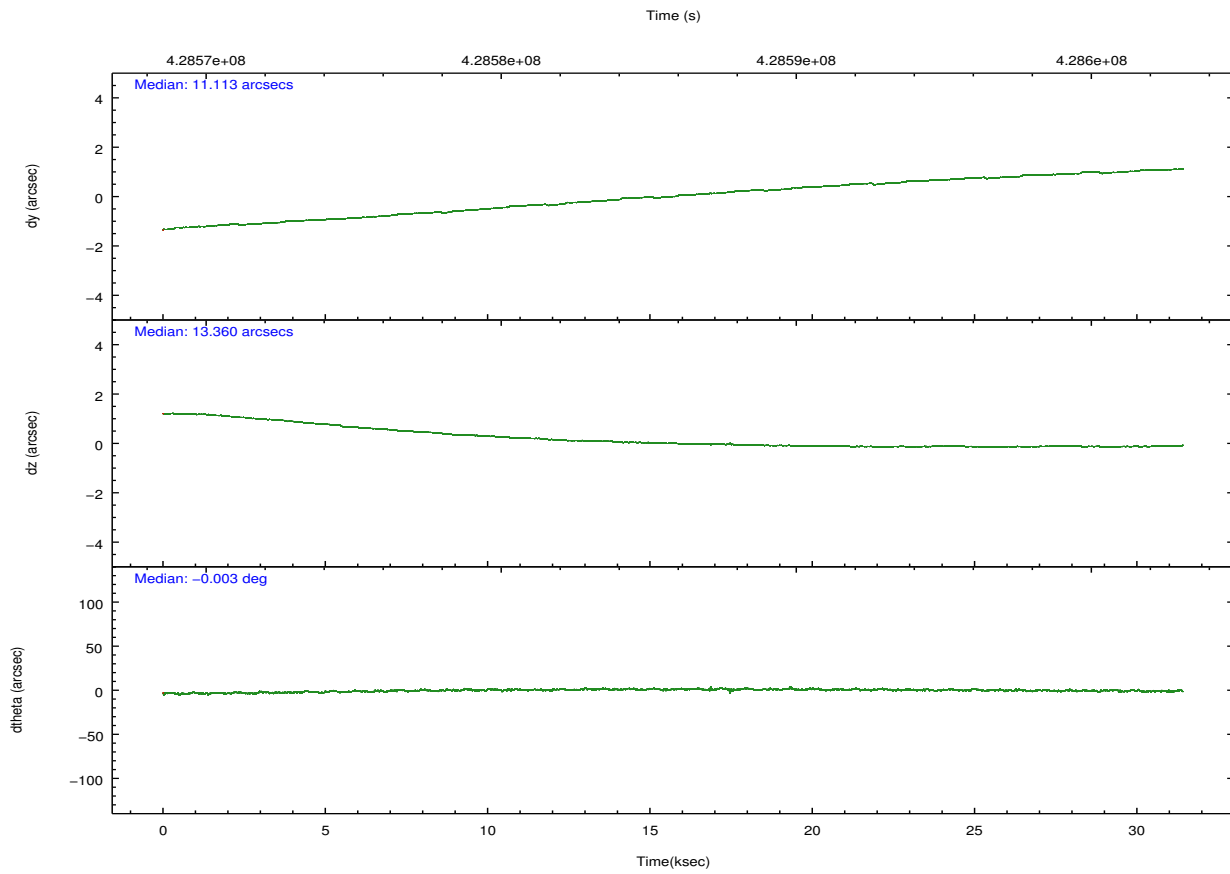
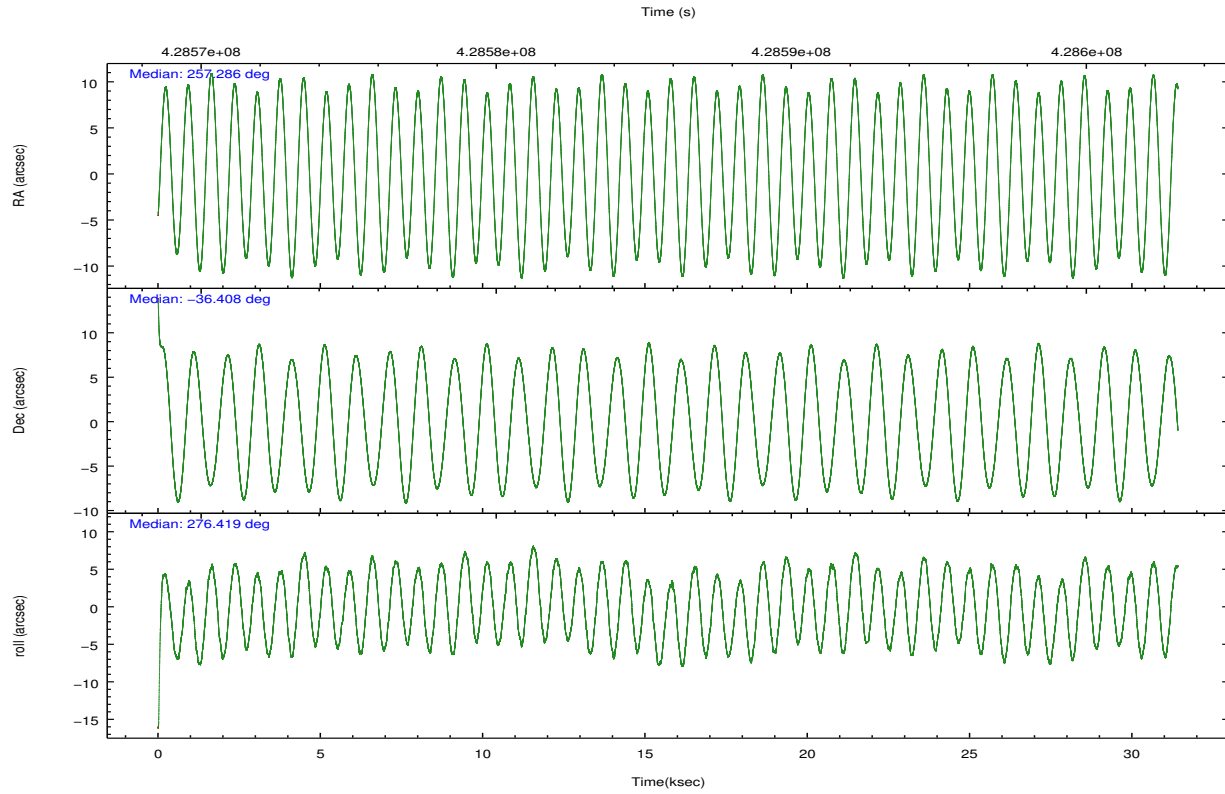
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	382072	726144	816575	917568	689805	390489	grade 0 events	5975	161462	83481	80553	109445	9034
rejected events	333703	286672	332730	293021	448843	330068		1%	22%	10%	8%	15%	2%
rejected %	87%	39%	40%	31%	65%	84%	grade 1 events	140	312	308	740	523	168
								0%	0%	0%	0%	0%	0%
							grade 2 events	23415	149559	336687	200971	75057	30889
								6%	20%	41%	21%	10%	7%
							grade 3 events	4772	6538	8744	43833	13501	4435
								1%	0%	1%	4%	1%	1%
							grade 4 events	4954	6339	8376	44075	13287	4813
								1%	0%	1%	4%	1%	1%
							grade 5 events	8151	18118	11559	23408	14147	10187
								2%	2%	1%	2%	2%	2%
							grade 6 events	9254	115618	46588	255178	29706	11252
								2%	15%	5%	27%	4%	2%
							grade 7 events	325411	268198	320832	268810	434139	319711
								85%	36%	39%	29%	62%	81%

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	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	257.265793	257.2863450637663	Subarray requested	NONE	NONE
[deg] Pointing Dec	-36.386225	-36.40797635378149	Alternating exposures requested	N	N
[deg] Pointing Roll	276.253846	276.4226638590133	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.632523	-182.64237782062			
[mm] SIM translation stage offset	-7.5	-7.490144762387843			
[s] Observation start time (MET)	428570275.184000	428569156.37748			
Observation start date	2011-08-01T07:16:49	2011-08-01T06:59:16			
[s] Observation end time (MET)	428601531.184000	428601754.96669			
Observation end date	2011-08-01T15:57:45	2011-08-01T16:02:34			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



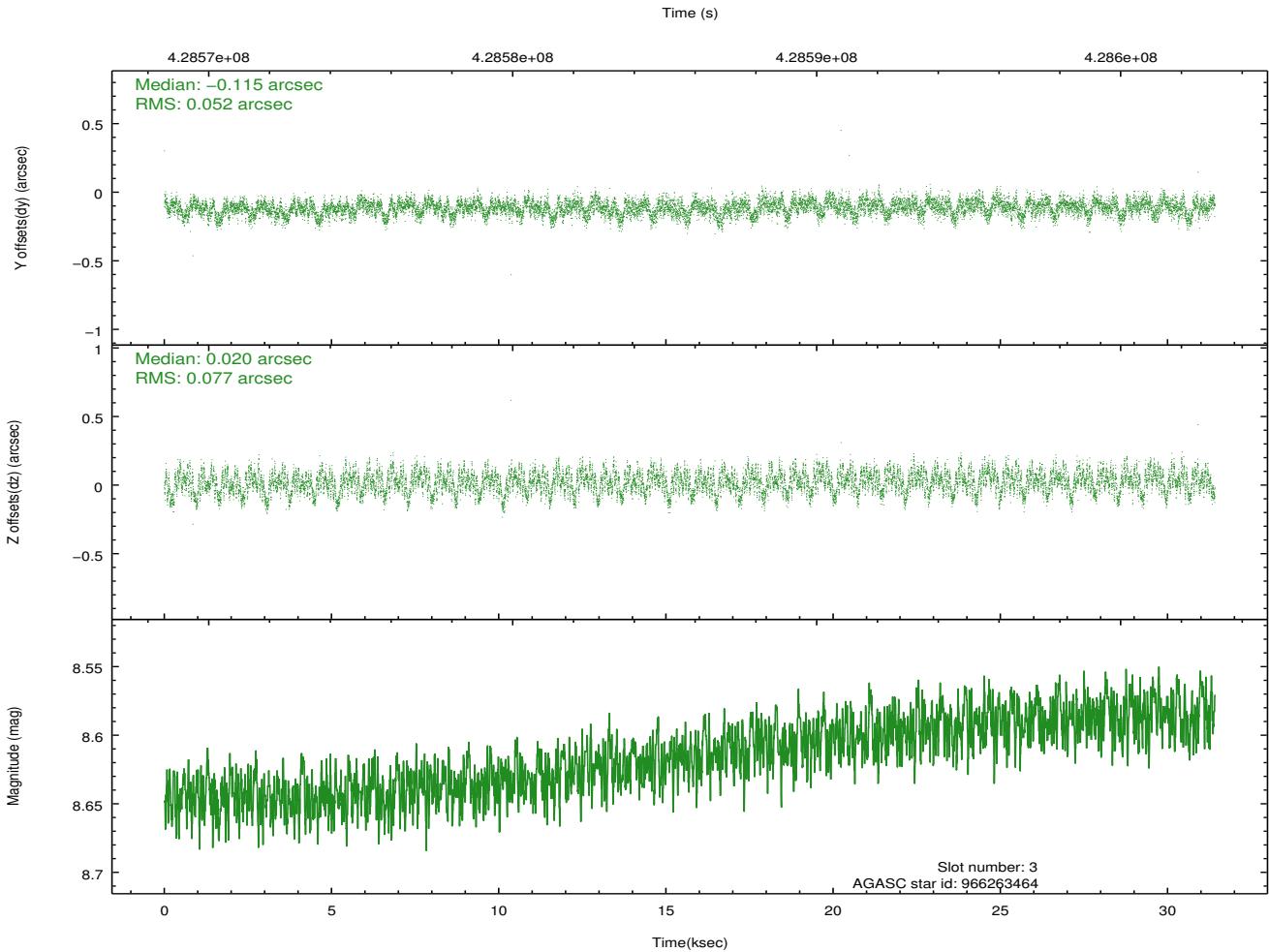
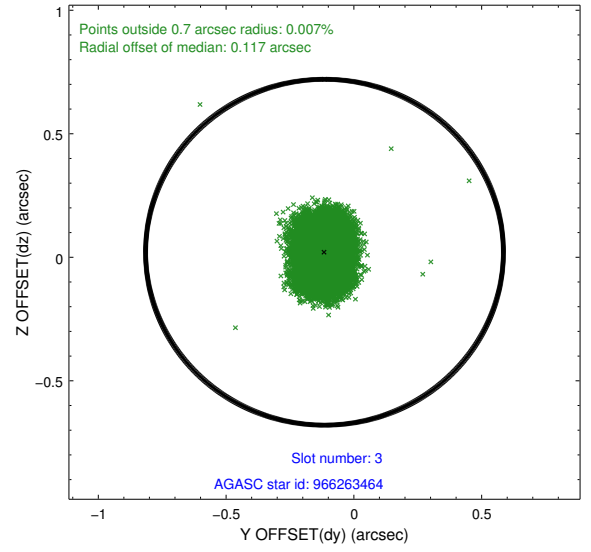
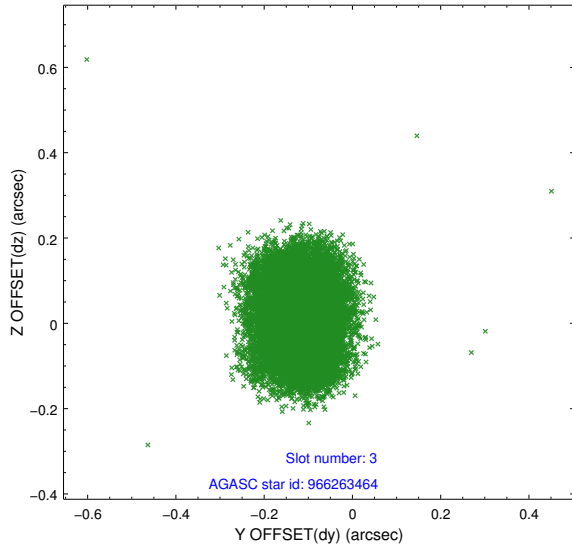


Slot Statistics

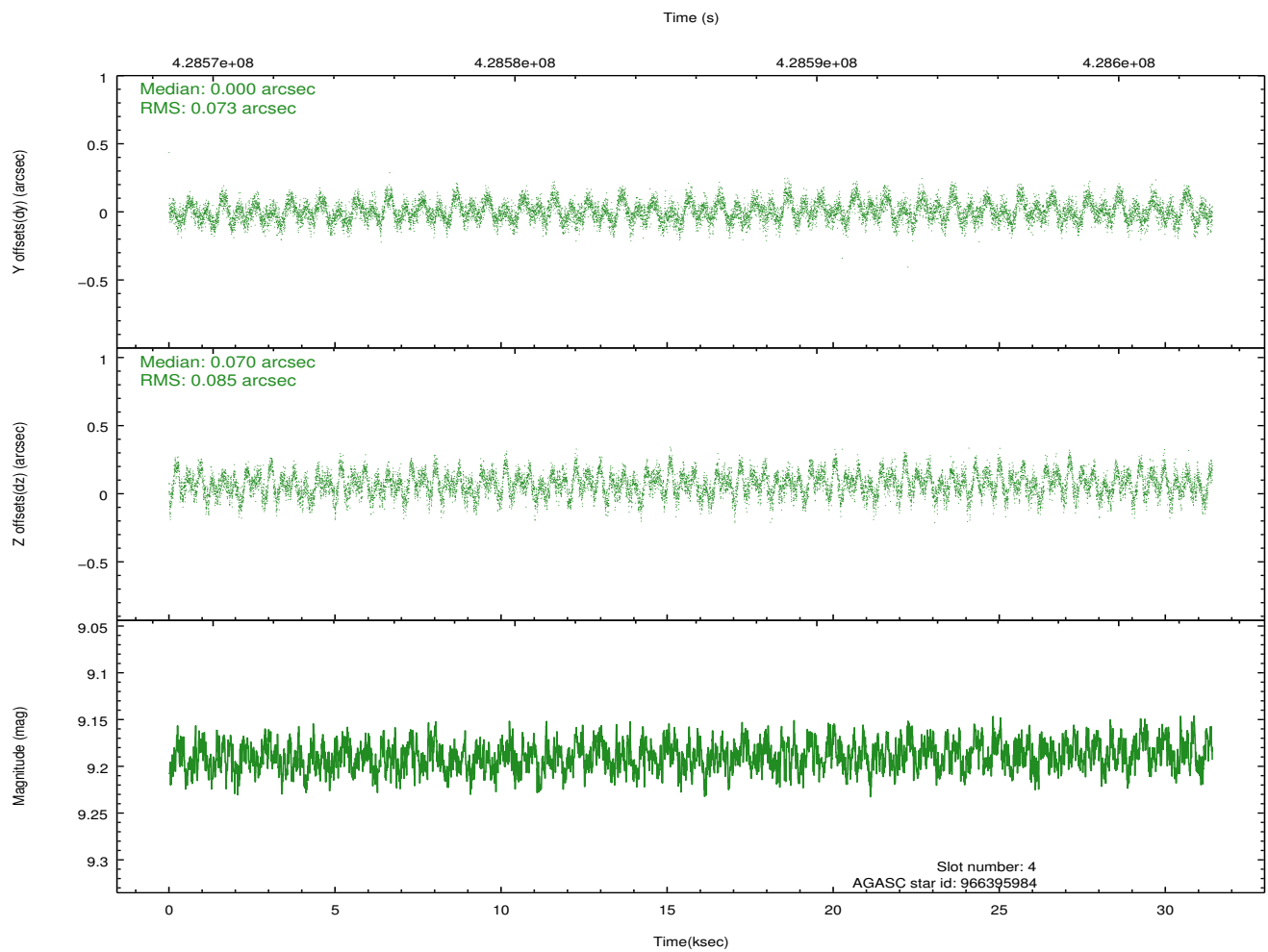
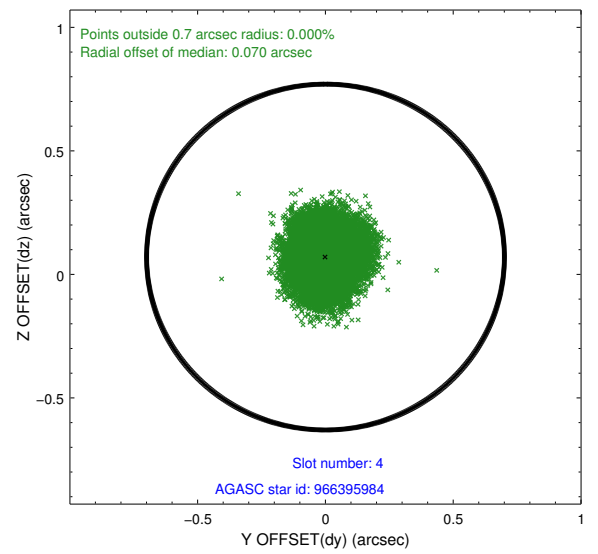
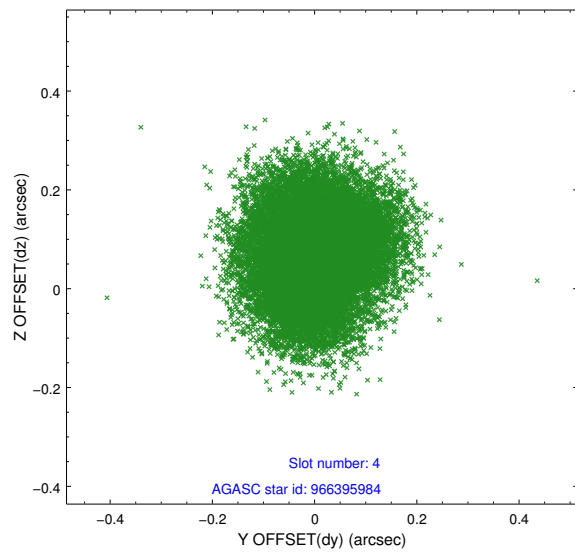
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.00	7662	-0.010	0.158	0.014	0.052	0.000000	0.000000	932.55	-1884.74
1	FID	ACIS-S-4	6.97	7662	0.095	-0.074	0.015	0.033	0.000000	0.000000	2150.15	19.06
2	FID	ACIS-S-6	7.21	7661	-0.107	-0.072	0.013	0.022	0.000000	0.000000	398.55	656.54
3	GUIDE	966263464	8.62	15309	-0.115	0.020	0.100	0.159	256.403645	-35.929342	-1897.21	-2320.33
4	GUIDE	966395984	9.19	15301	0.000	0.070	0.122	0.186	256.535204	-35.907673	-1936.18	-1930.95
5	GUIDE	966402904	8.10	15322	-0.127	0.007	0.061	0.097	257.709598	-36.005094	-1220.04	1433.90
6	GUIDE	966396120	7.84	15312	0.026	-0.116	0.072	0.117	256.737004	-36.720258	1034.04	-1647.98
7	GUIDE	966394144	8.64	15315	0.214	0.025	0.085	0.138	256.902901	-37.062041	2308.01	-1301.87

2.4 Star Slots

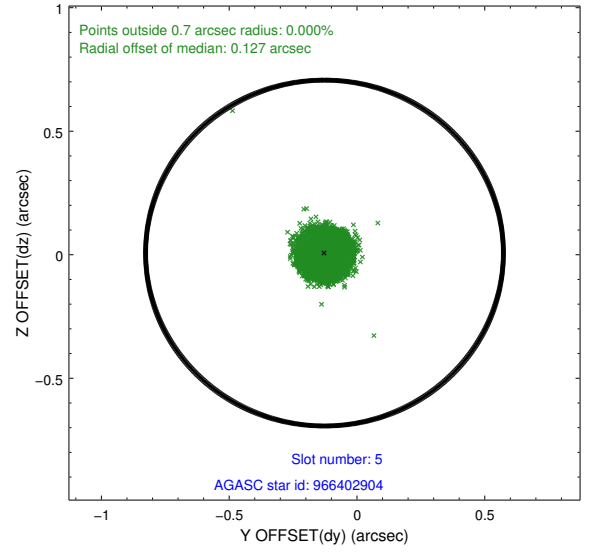
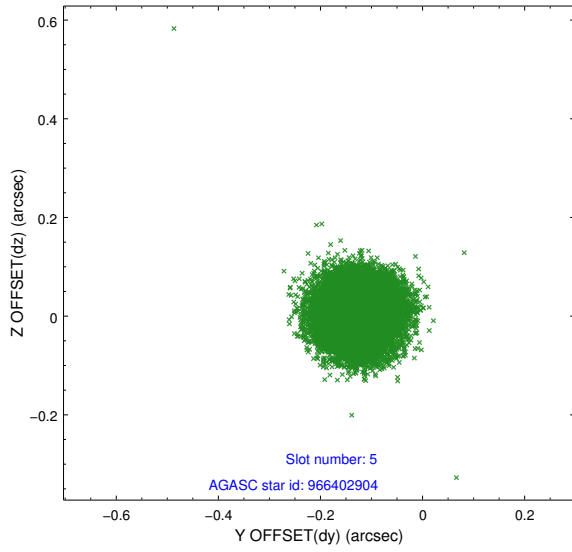
2.4.1 Slot 3



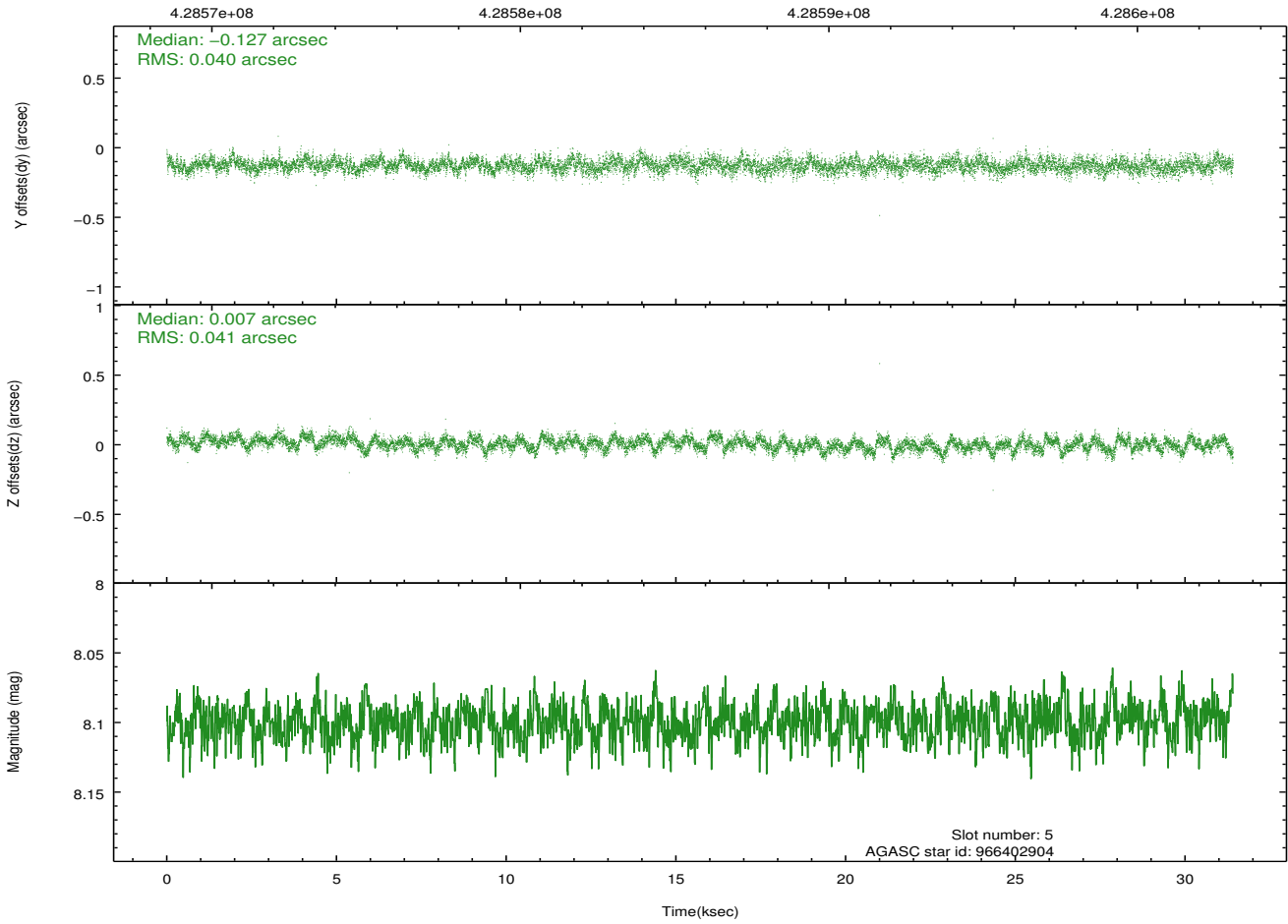
2.4.2 Slot 4



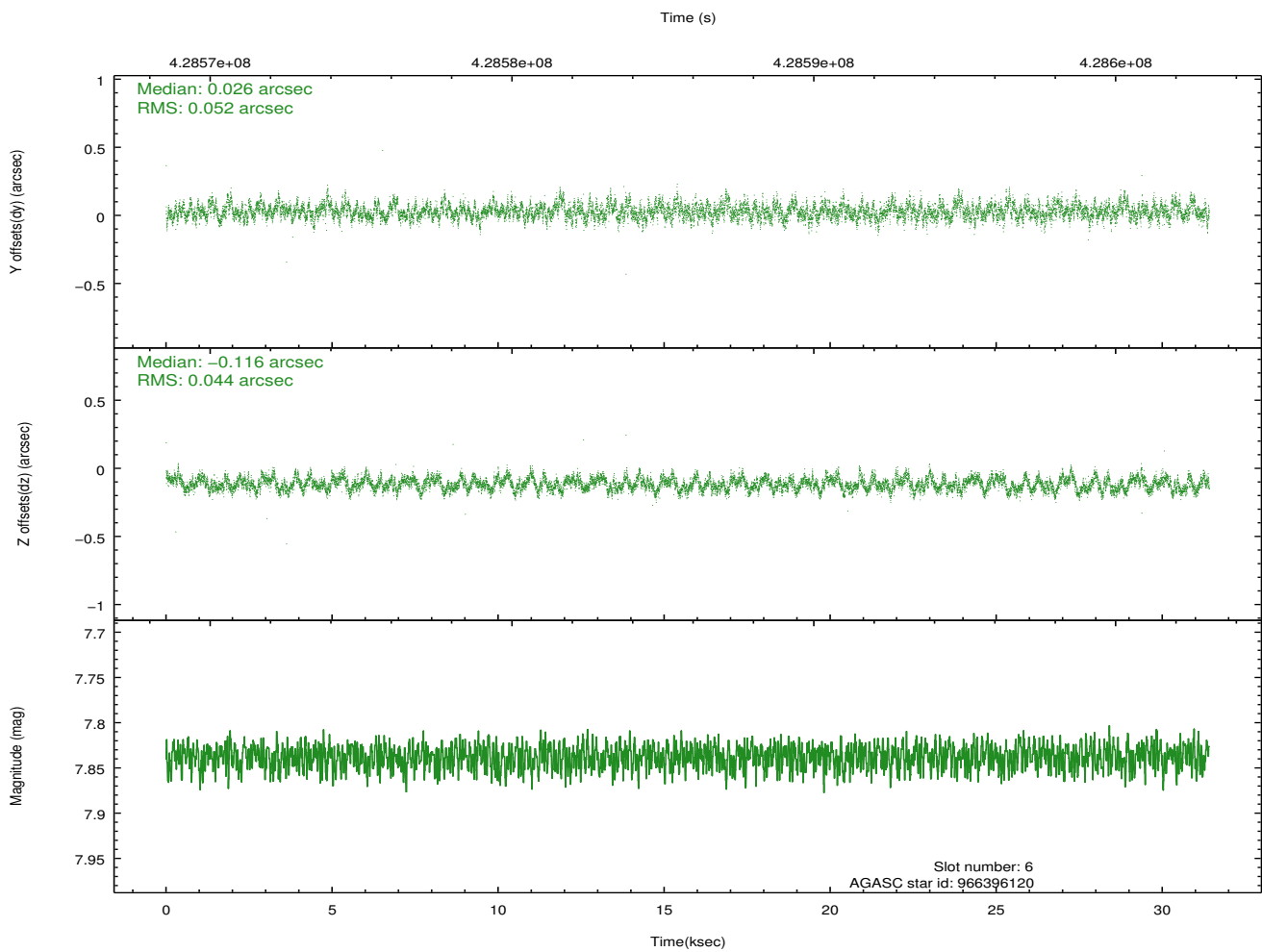
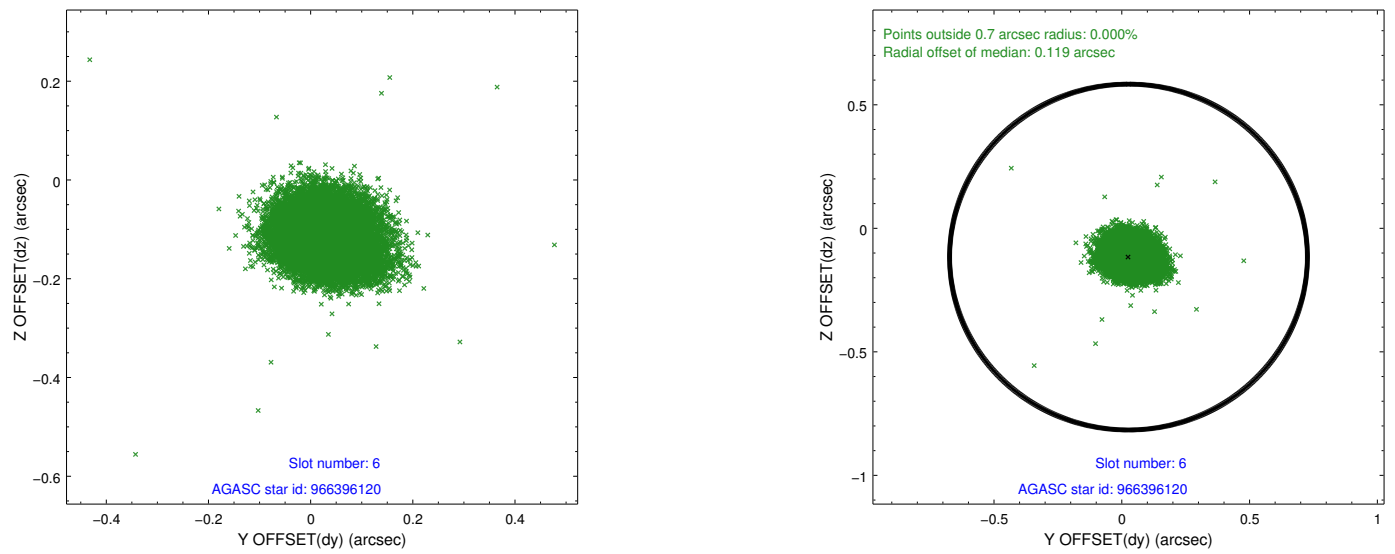
2.4.3 Slot 5



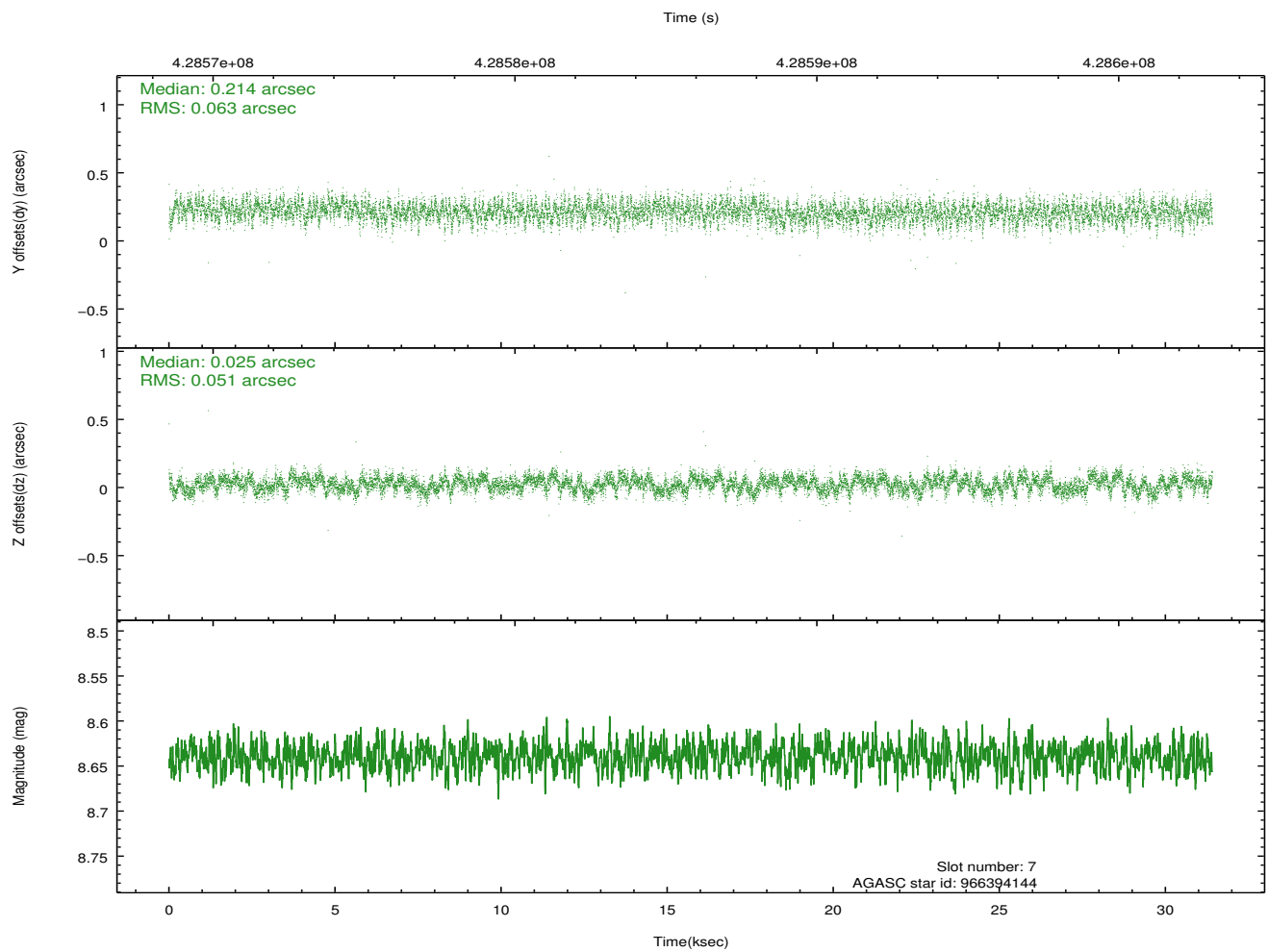
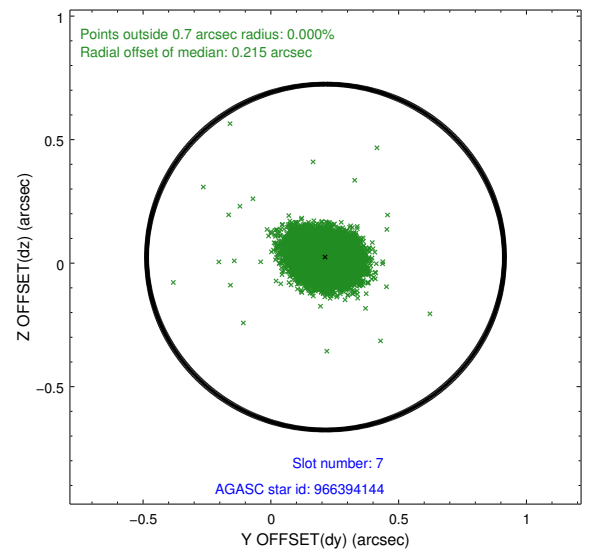
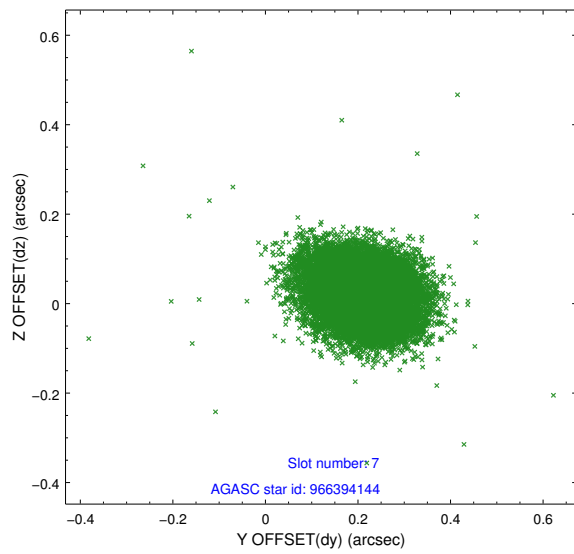
Time (s)



2.4.4 Slot 6

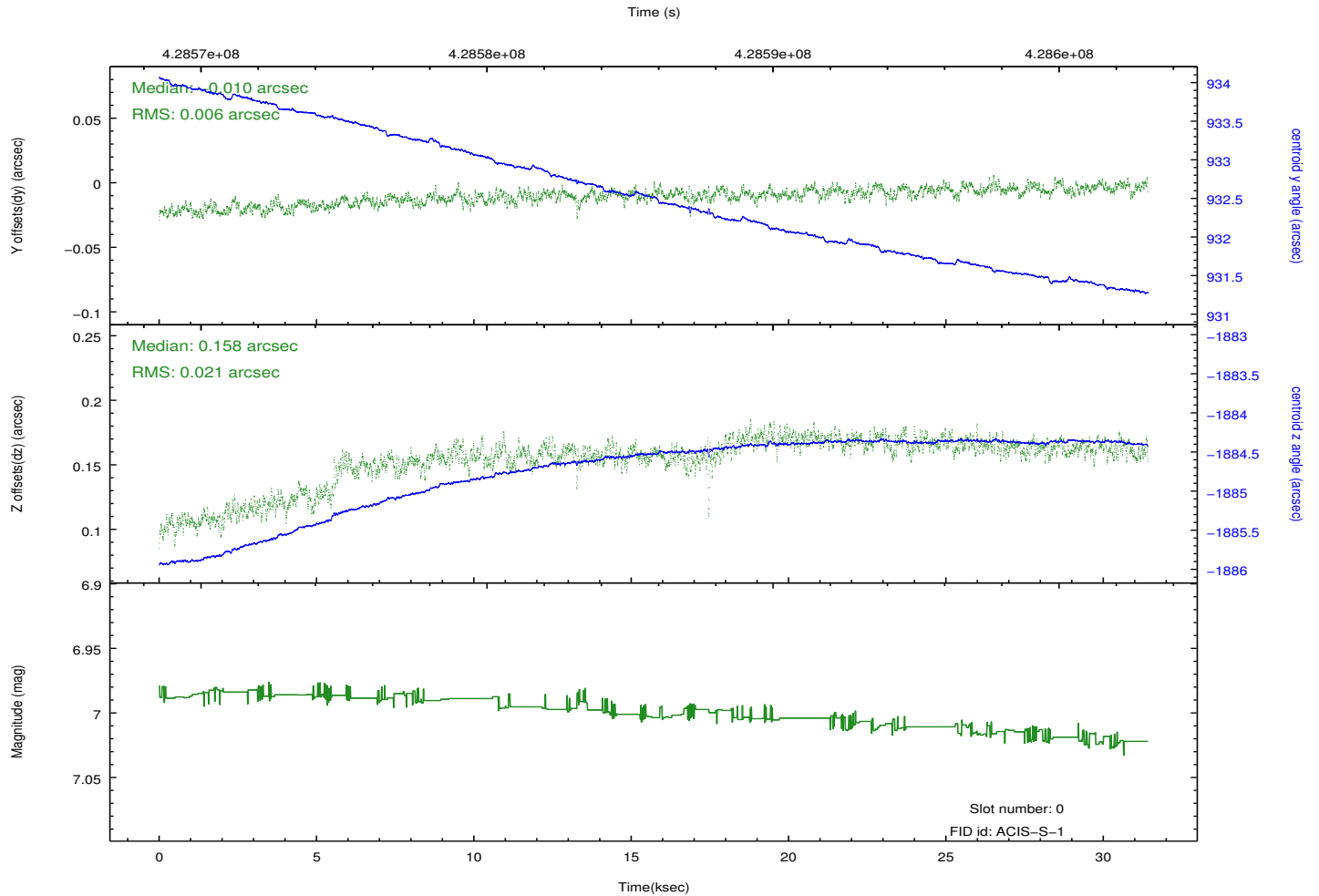
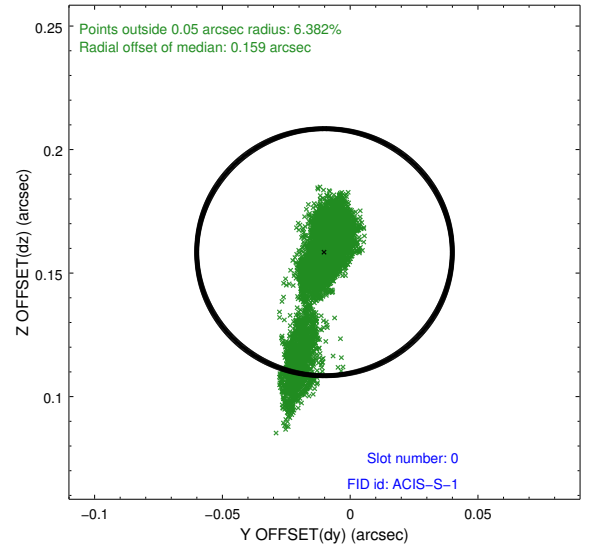
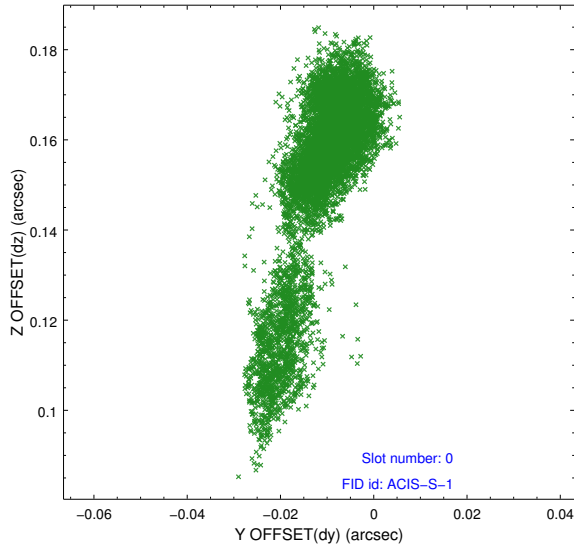


2.4.5 Slot 7

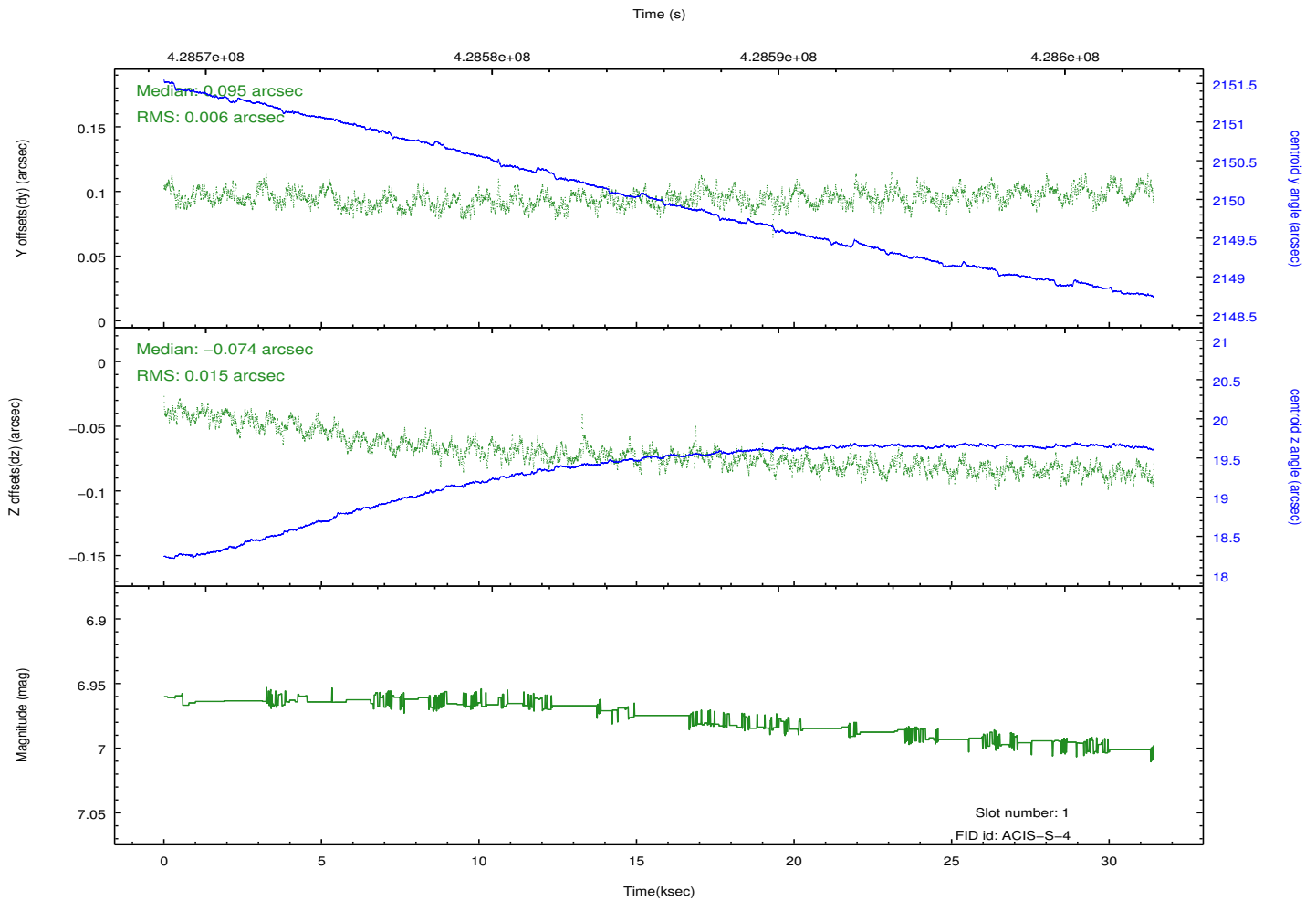
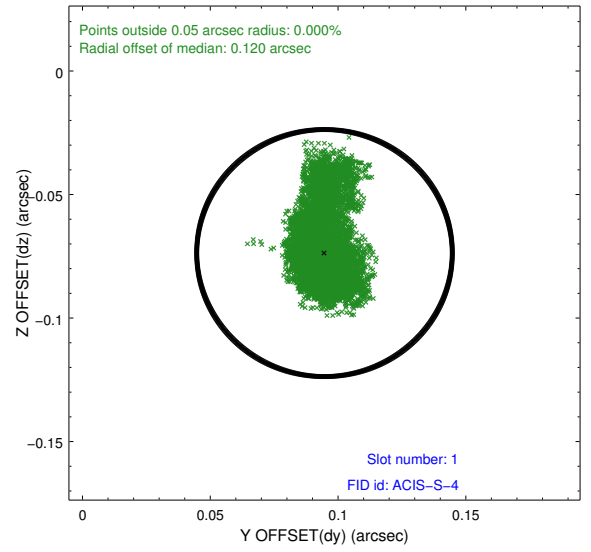
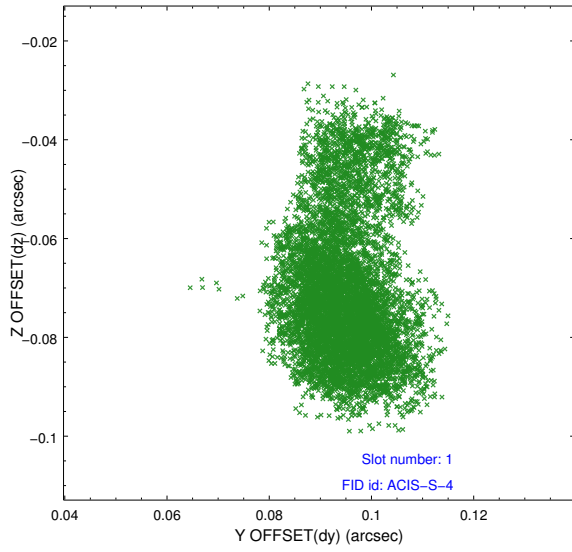


2.5 FID Slots

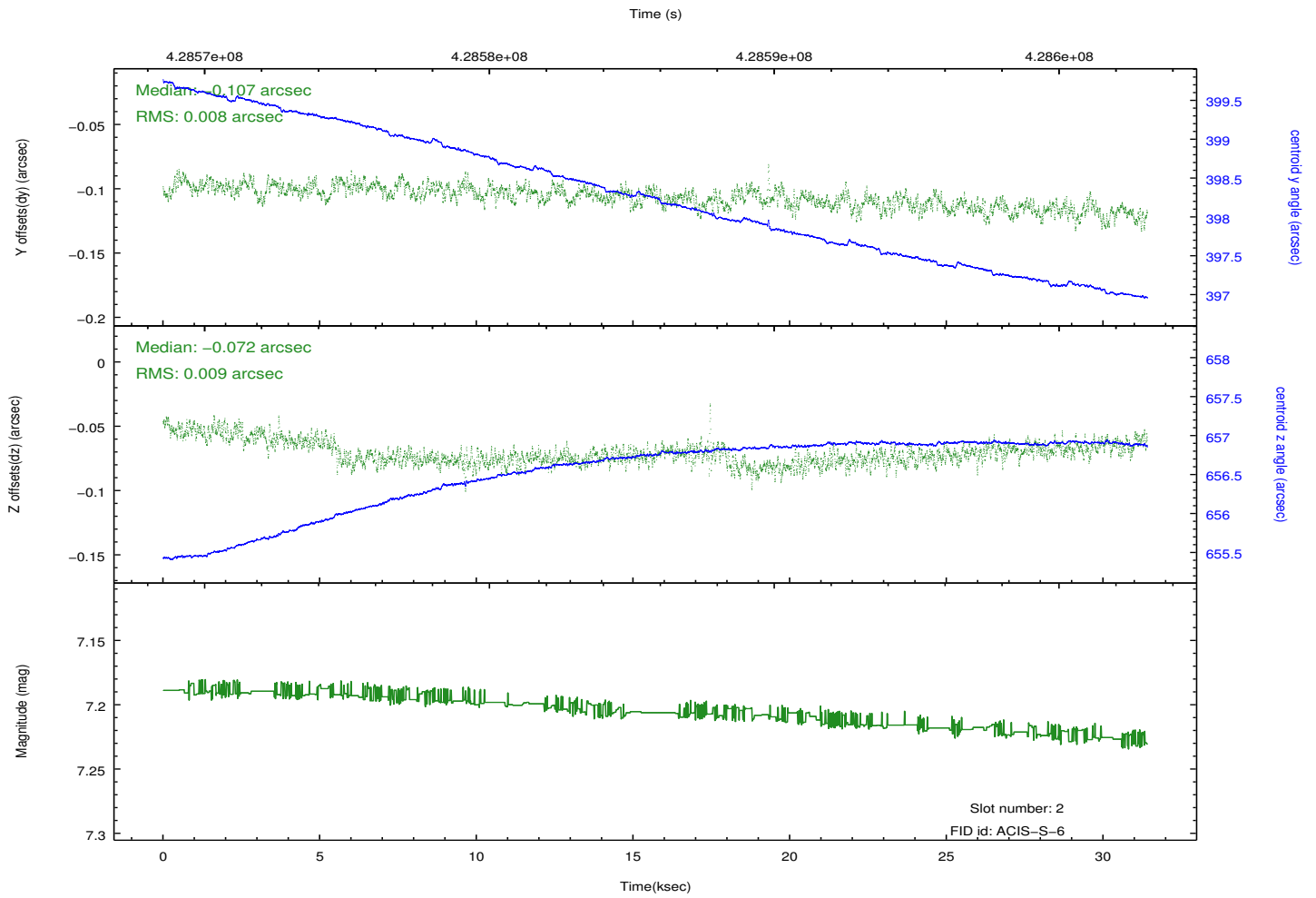
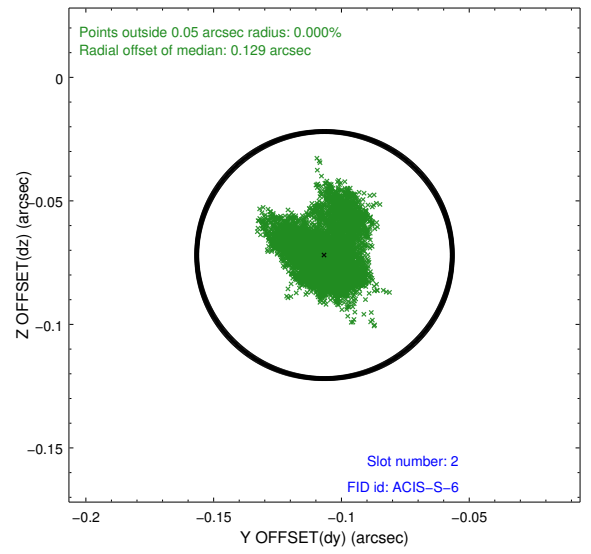
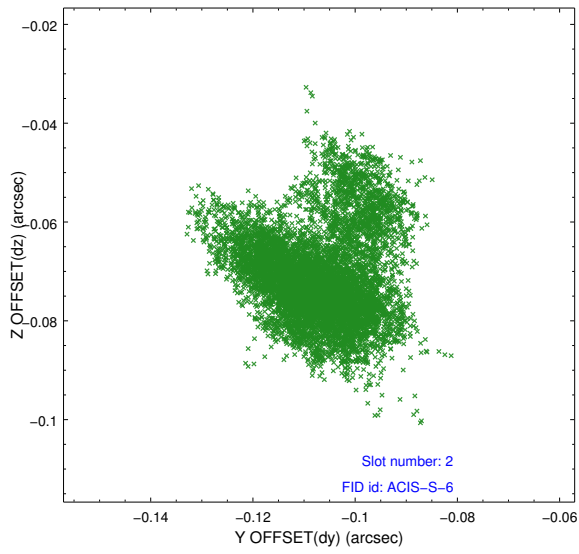
2.5.1 Slot 0



2.5.2 Slot 1

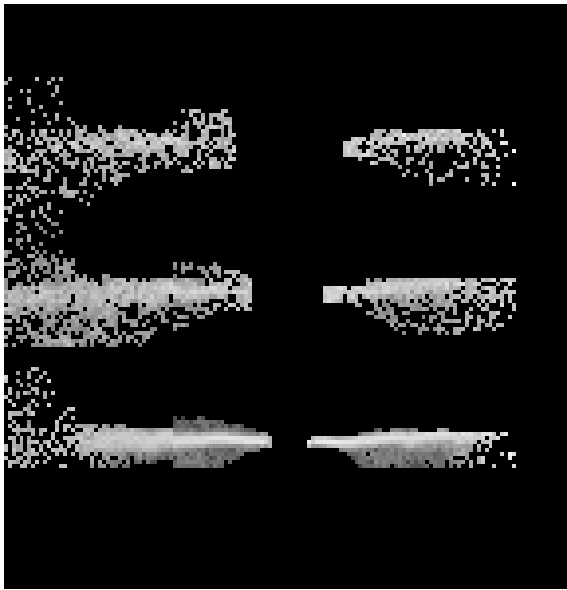


2.5.3 Slot 2

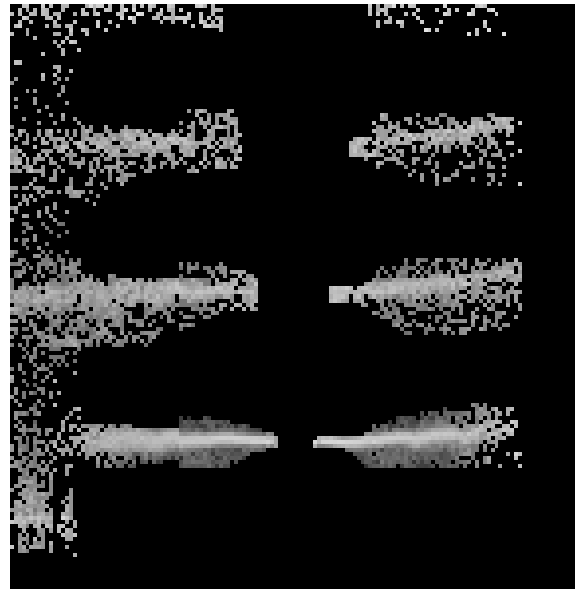


3 Gratings

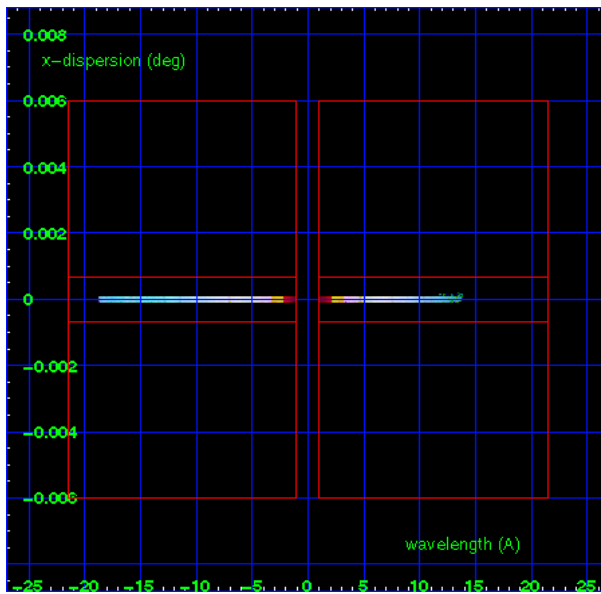
3.1 HEG Arm



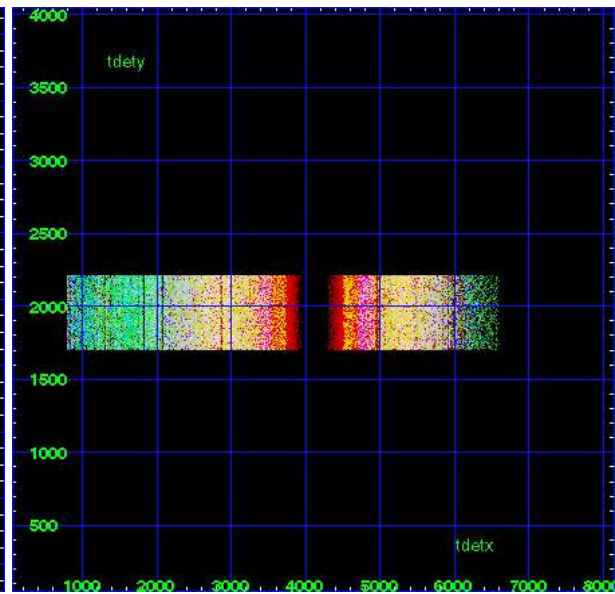
HEG Order Sort 123



HEG Order Sort ALL

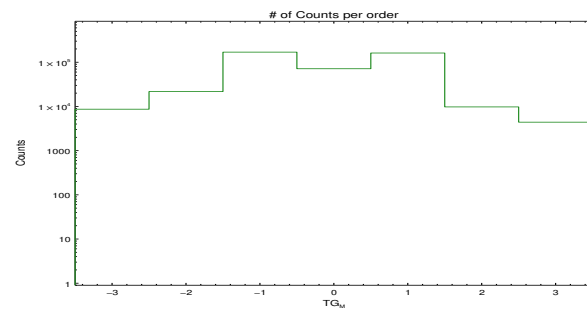


Spot Image HEG

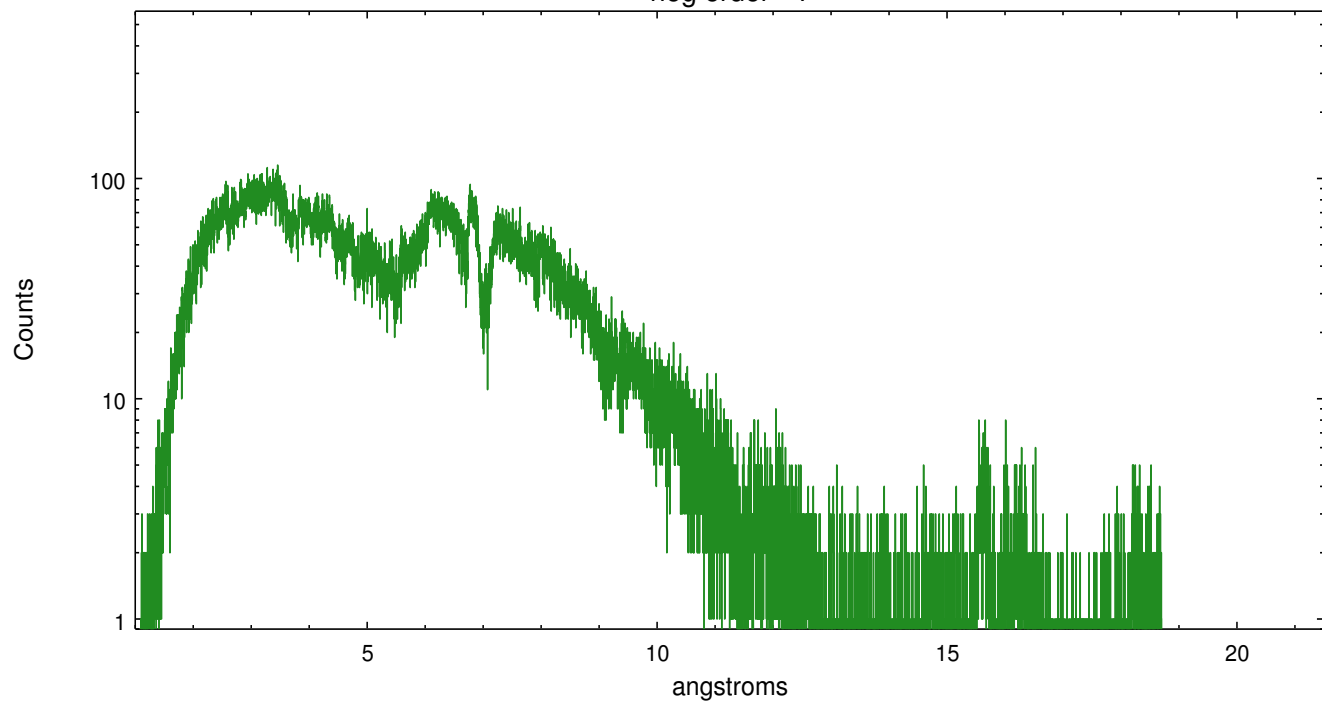


Full Detector HEG

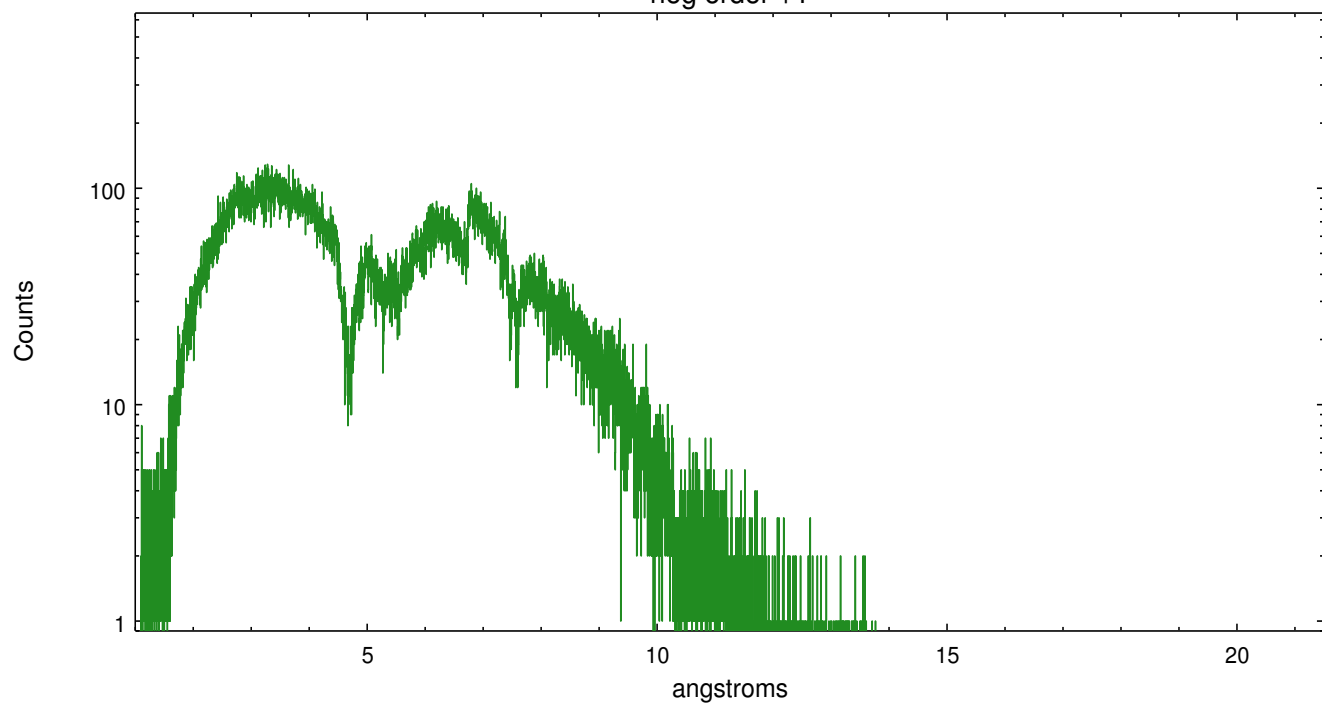
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	8656	21692	169327	71362	161729	9759	4403



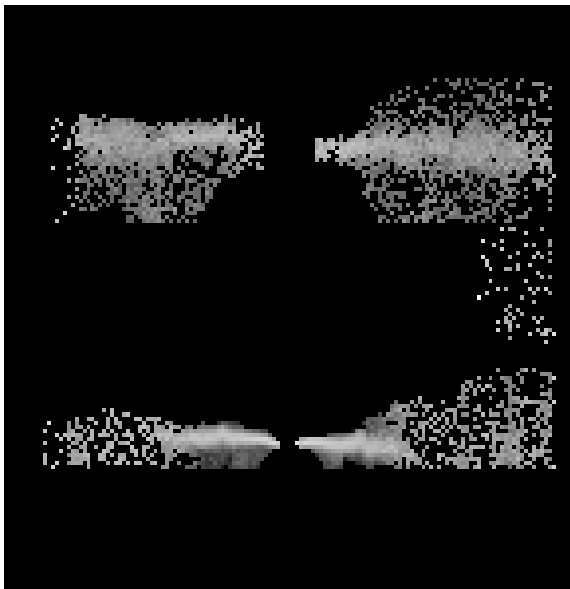
heg order -1



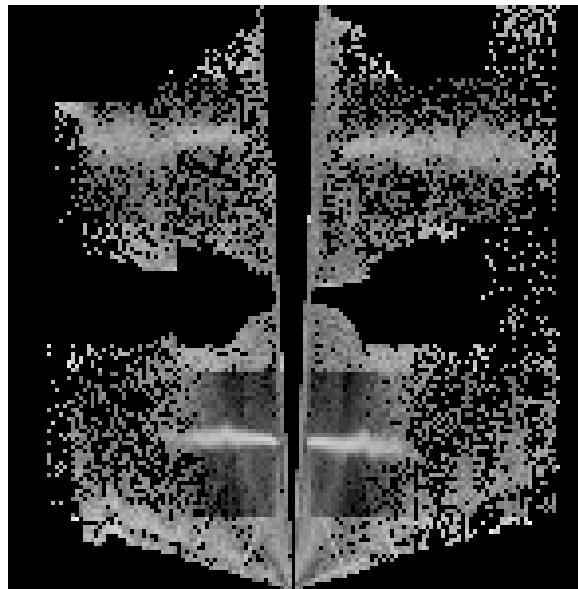
heg order +1



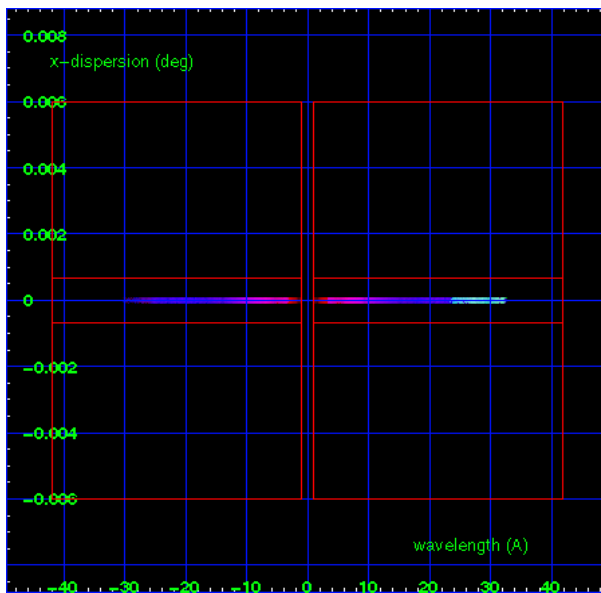
3.2 MEG Arm



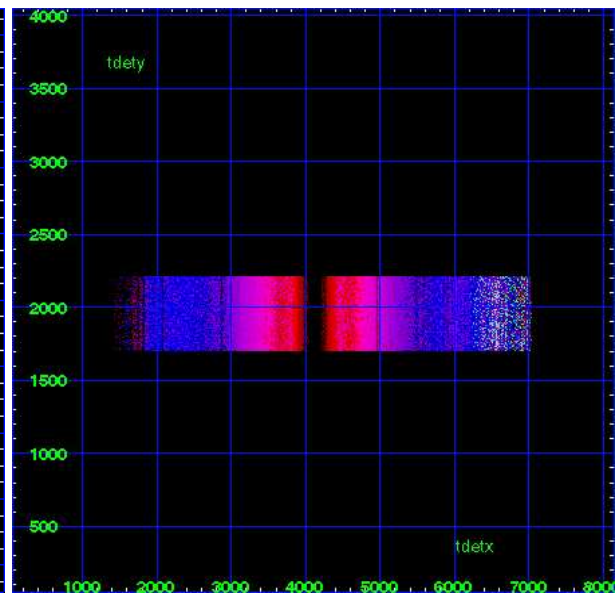
MEG Order Sort 123



MEG Order Sort ALL

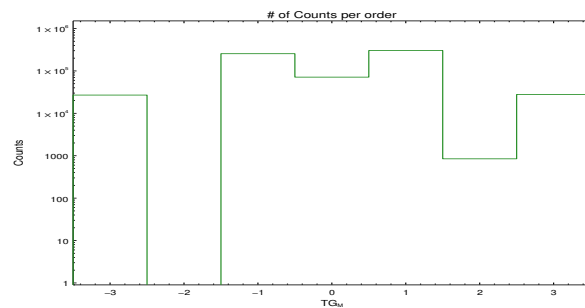


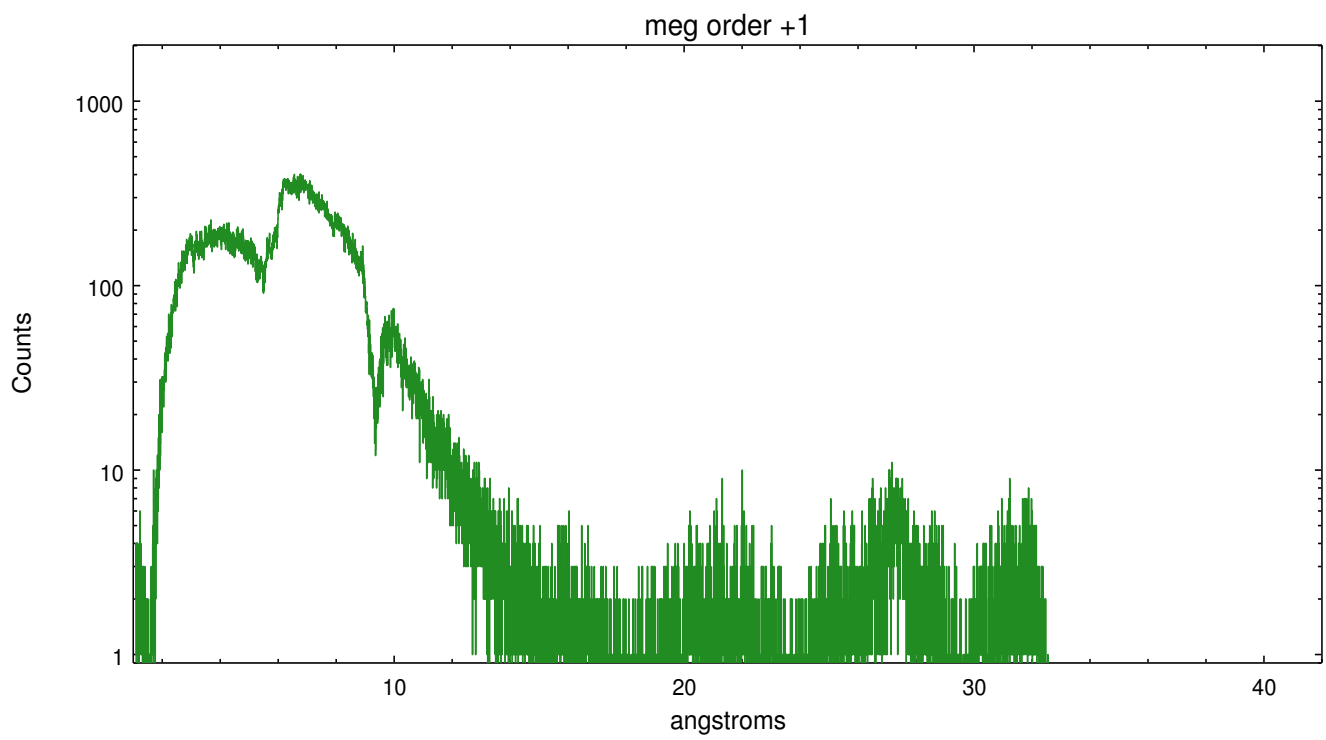
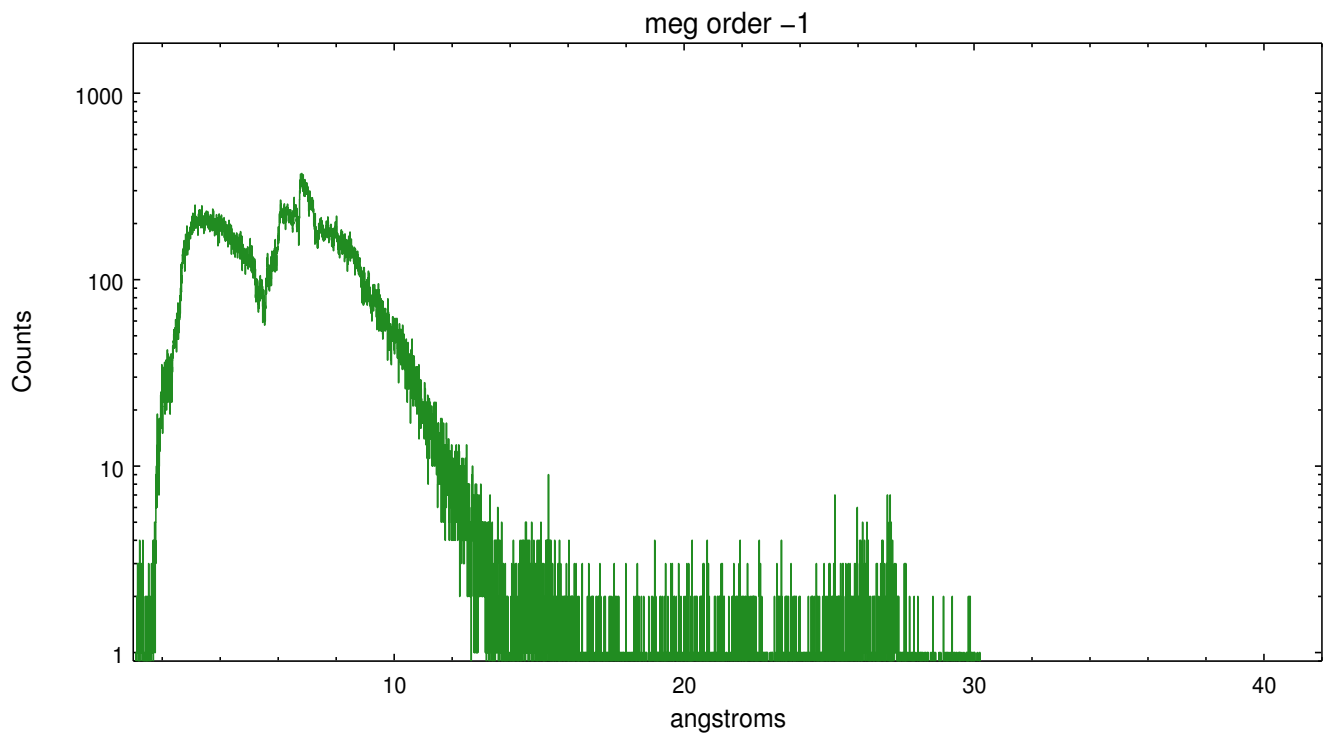
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	26942	0	254972	71362	302791	846	27844





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.329

A.2 Comments

For ACIS/CC-mode w/ HETG, with no SIM-Z offset, there are no MEG even order counts. MEG even orders overlap with HEG orders in energy, but MEG even order efficiencies are very low. Since HEG and MEG cannot be spatially separated, events are preferentially assigned to HEG. (MEG odd orders can be resolved.) For observations with a SIM-Z offset, MEG negative and MEG positive orders will be missing (off the array), and remove some of the ambiguity.