

V&V Reference Report

L2 ASCDS Version : 8.1.2

Observation 1511 - L2 Version 5

Chandra X-Ray Center

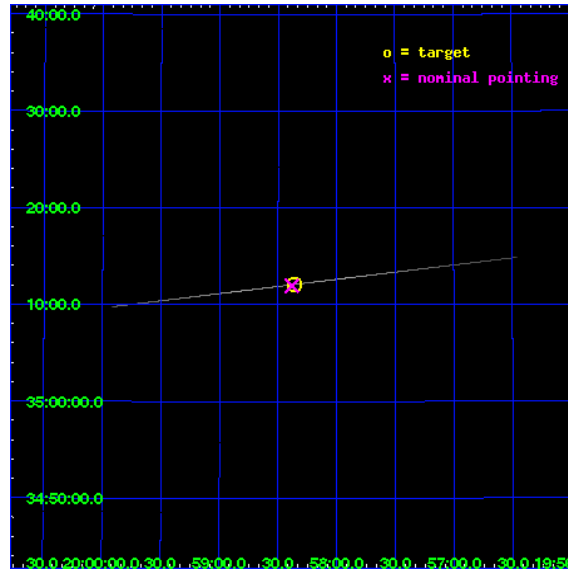
L2 Processing Date : Dec 2 2009

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1 Front

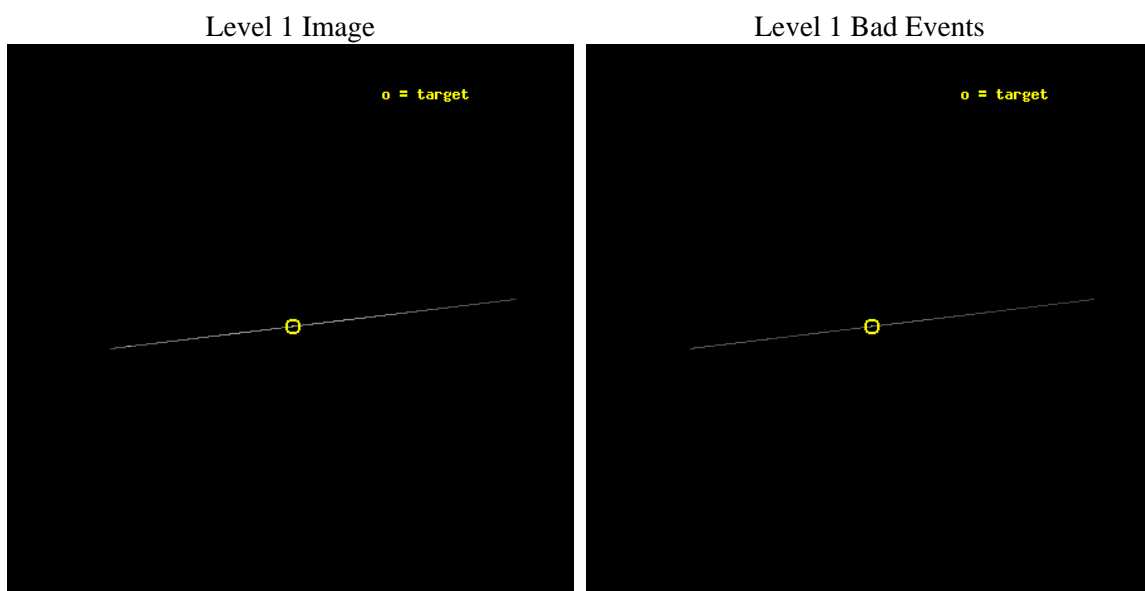
seq_num	400020	Sequence number
obs_id	1511	Observation id
title	HETG OBSERVATIONS OF X-RAY BINARIES	Proposal title
observer	Prof. Claude Canizares	Principal investigator
object	CYG X-1	Source name
ra_targ	299.59046	Observer's specified target RA
dec_targ	35.20175	Observer's specified target Dec
ra_nom	299.59560999535	Nominal RA
dec_nom	35.19932668933	Nominal Dec
roll_nom	353.08539713822	Nominal Roll
revision	5	Processing version of data
ontime	12673.041997992	Sum of GTIs [s]
livetime	12623.537927687	Livetime [s]
ontime5	12674.5	Sum of GTIs [s]
ontime6	12673.040846623	Sum of GTIs [s]
ontime7	12673.041997992	Sum of GTIs [s]
ontime8	12671.582844026	Sum of GTIs [s]
ontime9	12674.5	Sum of GTIs [s]
l2events	2951429	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	12501.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	12673.041997992	Sum of GTIs [s]
caldsver	4.1.4	 	ontime5	12674.5	Sum of GTIs [s]
date	2009-12-02T11:15:05	Date and time of file creation	ontime6	12673.040846623	Sum of GTIs [s]
revision	5	Processing version of data	ontime7	12673.041997992	Sum of GTIs [s]
			ontime8	12671.582844026	Sum of GTIs [s]
			ontime9	12674.5	Sum of GTIs [s]
			l1events	3413573	Number of level 1 events

2.1.3 Events

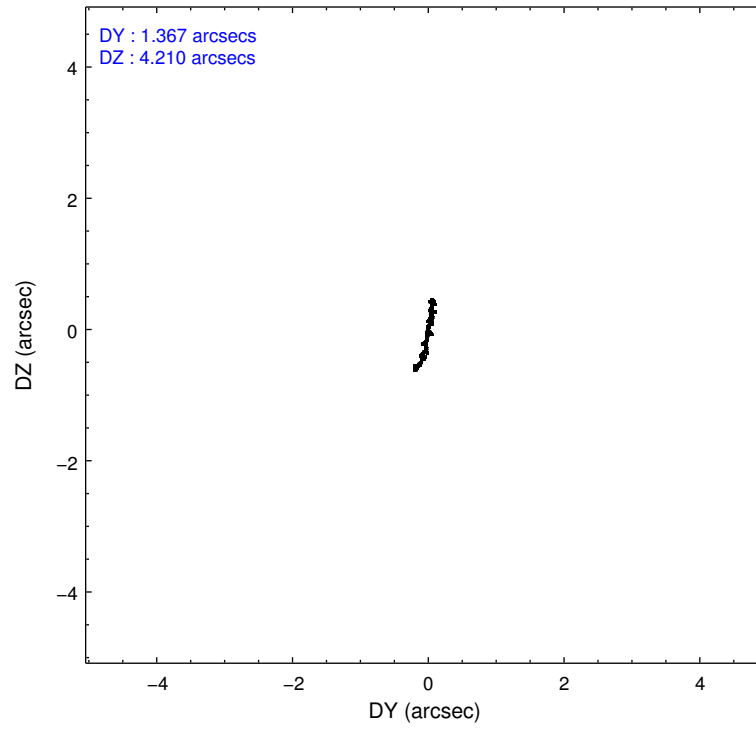
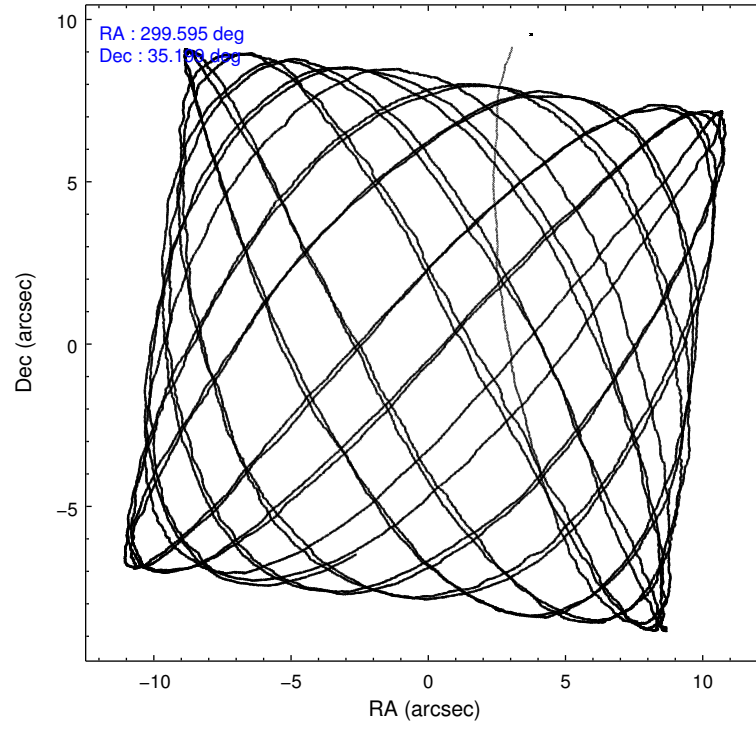
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	520379	759681	1619459	420185	93869
rejected events	7904	5667	95789	5140	2758
rejected %	1%	0%	5%	1%	2%

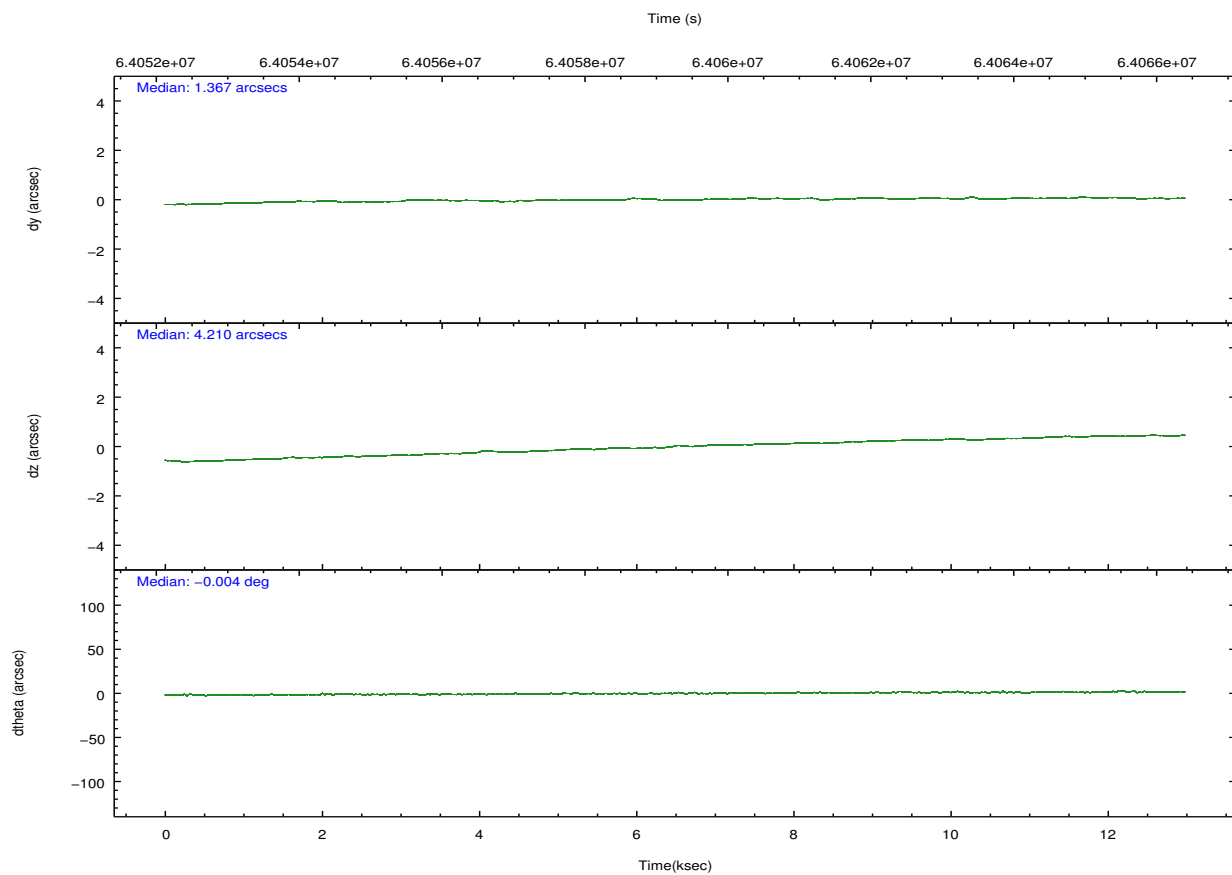
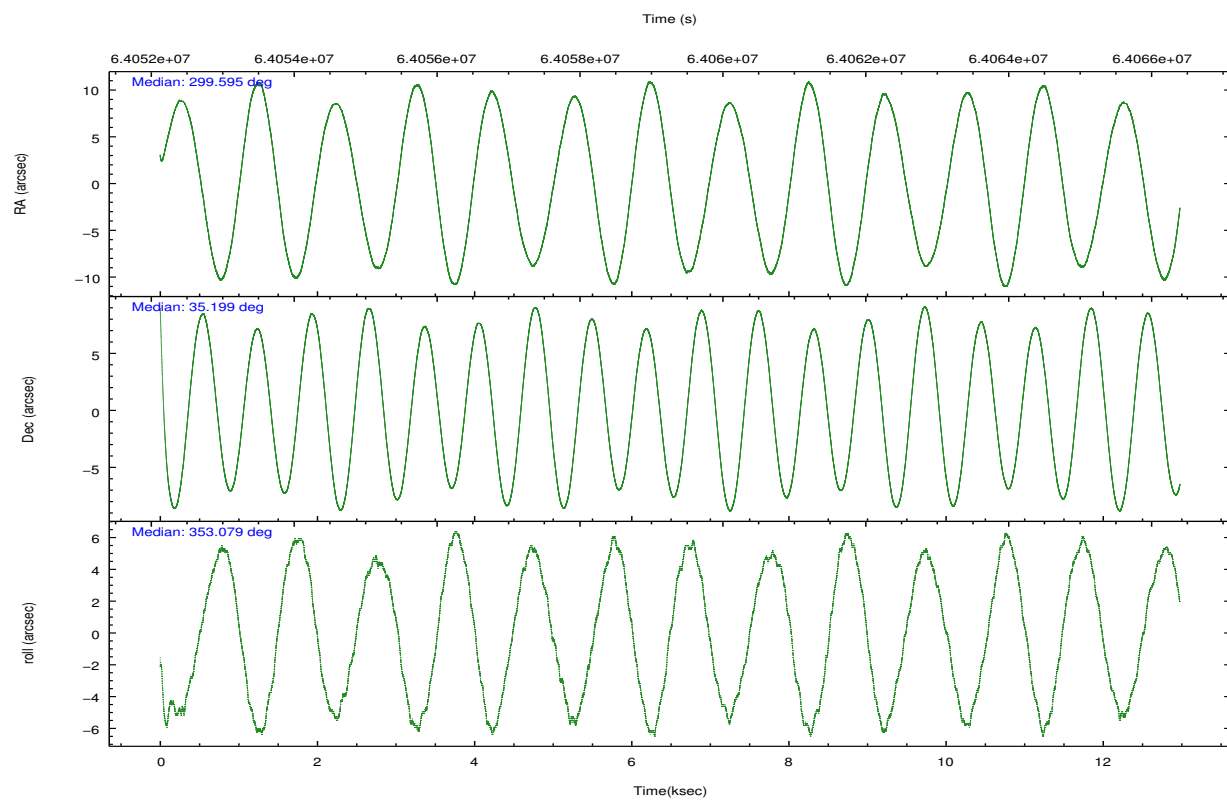
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	252086	32096	326124	85954	22935
	48%	4%	20%	20%	24%
grade 1 events	350	110	16489	219	91
	0%	0%	1%	0%	0%
grade 2 events	153822	648587	383953	291018	55265
	29%	85%	23%	69%	58%
grade 3 events	22471	3776	165613	7678	3280
	4%	0%	10%	1%	3%
grade 4 events	21416	3890	157210	7582	3428
	4%	0%	9%	1%	3%
grade 5 events	7446	5415	78961	4841	2644
	1%	0%	4%	1%	2%
grade 6 events	62788	65807	491109	22893	6226
	12%	8%	30%	5%	6%
grade 7 events	0	0	0	0	0
	0%	0%	0%	0%	0%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-56789	ACIS-56789	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
Pointing RA	299.564621	299.5956099953502	Subarray requested	NONE	NONE
Pointing Dec	35.188576	35.19932668933038	Alternating exposures requested	N	N
Pointing Roll	352.946633	353.0853971382235	Primary exposure time	0.000000	0
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.127916318603			
SIM translation stage offset (mm)	-3	-3.004606264404799			
Observation start time	64053247.184000	64052116.78345			
Observation start date	2000-01-12T08:33:03	2000-01-12T08:15:16			
Observation end time	64065748.184000	64066511.883973			
Observation end date	2000-01-12T12:01:24	2000-01-12T12:15:11			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



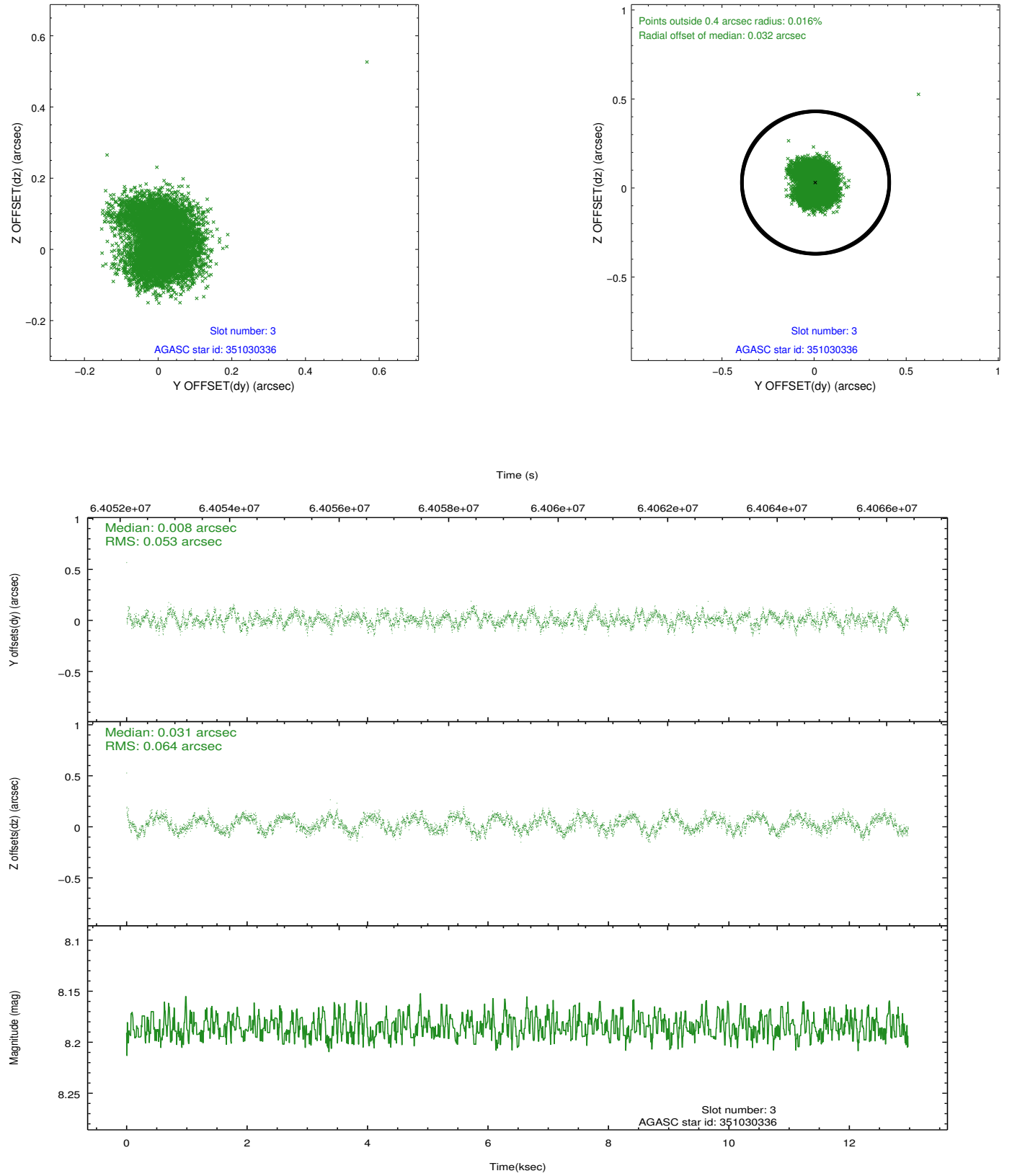


Slot Statistics

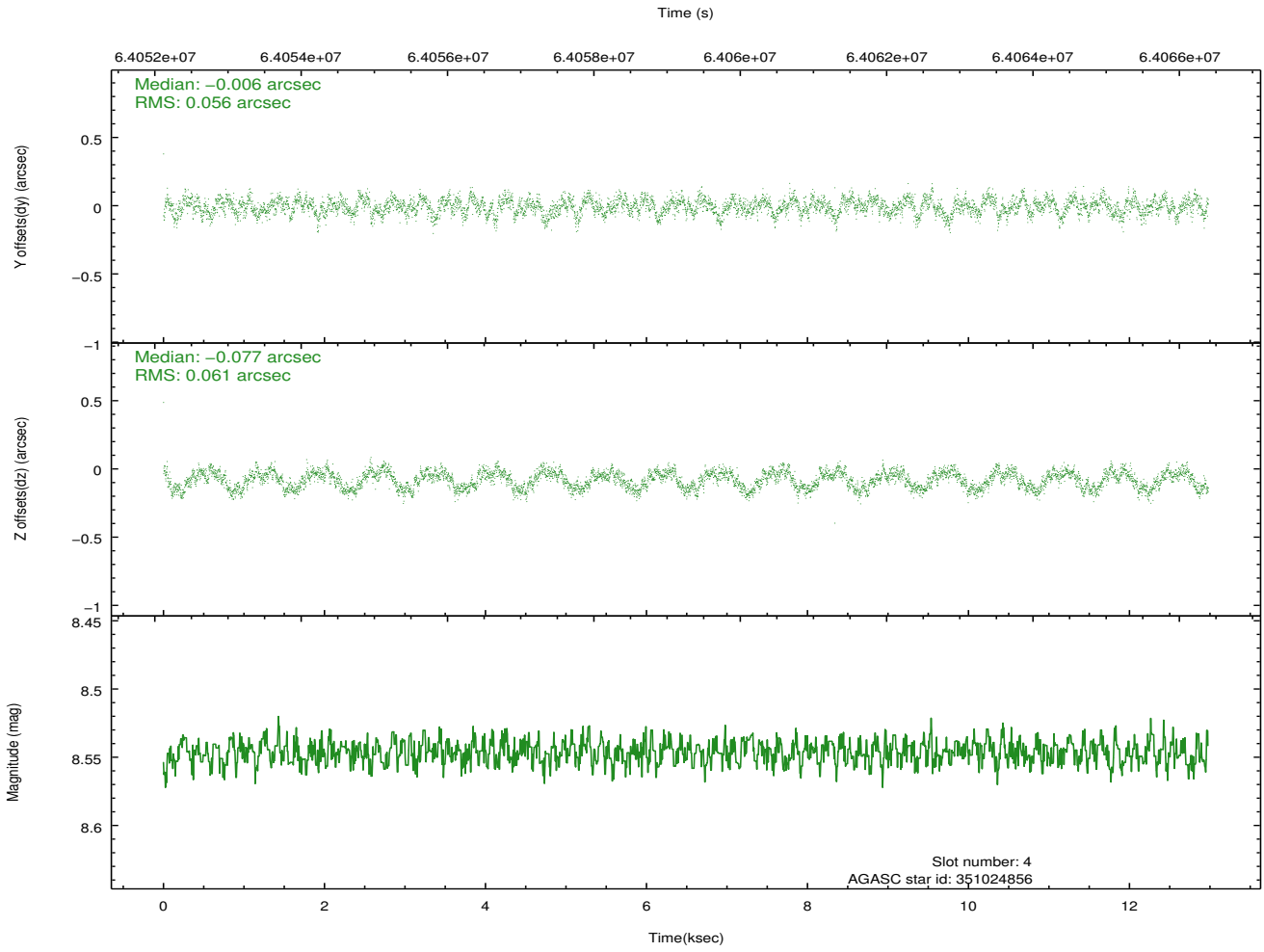
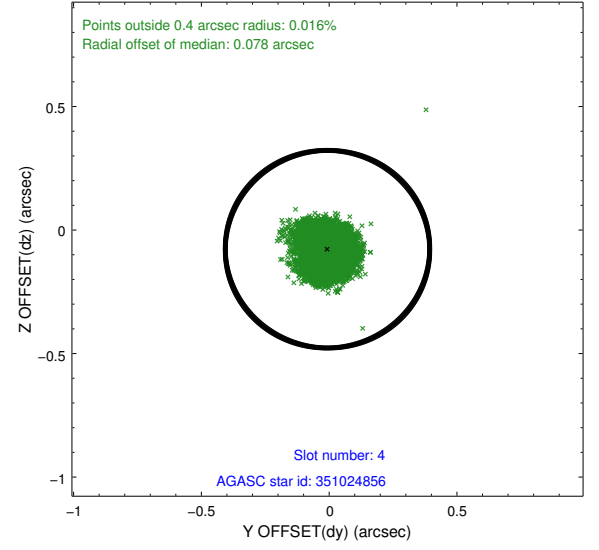
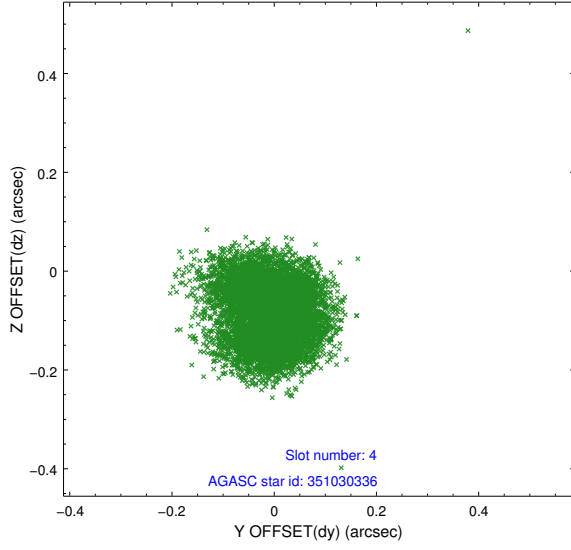
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	3165	-0.012	0.006	0.012	0.020	0.000000	0.000000	942.22	-1782.95
1	FID	ACIS-S-4	7.20	3165	-0.002	0.005	0.010	0.017	0.000000	0.000000	2159.90	120.77
2	FID	ACIS-S-5	7.23	3166	-0.013	0.001	0.008	0.013	0.000000	0.000000	-1806.12	114.88
3	GUIDE	351030336	8.19	6329	0.008	0.031	0.092	0.135	299.870055	34.492102	1207.94	-2375.52
4	GUIDE	351024856	8.55	6328	-0.006	-0.077	0.090	0.133	300.374482	35.139033	2387.45	125.22
5	GUIDE	351414960	9.17	6328	0.062	0.034	0.123	0.196	298.994276	35.824617	-1933.36	2072.66
6	GUIDE	350880272	9.54	6322	0.061	0.015	0.108	0.167	298.910133	34.790533	-1744.79	-1653.31
7	GUIDE	351546032	9.70	6325	-0.147	-0.007	0.280	0.369	299.857538	35.753052	599.46	2122.91

2.4 Star Slots

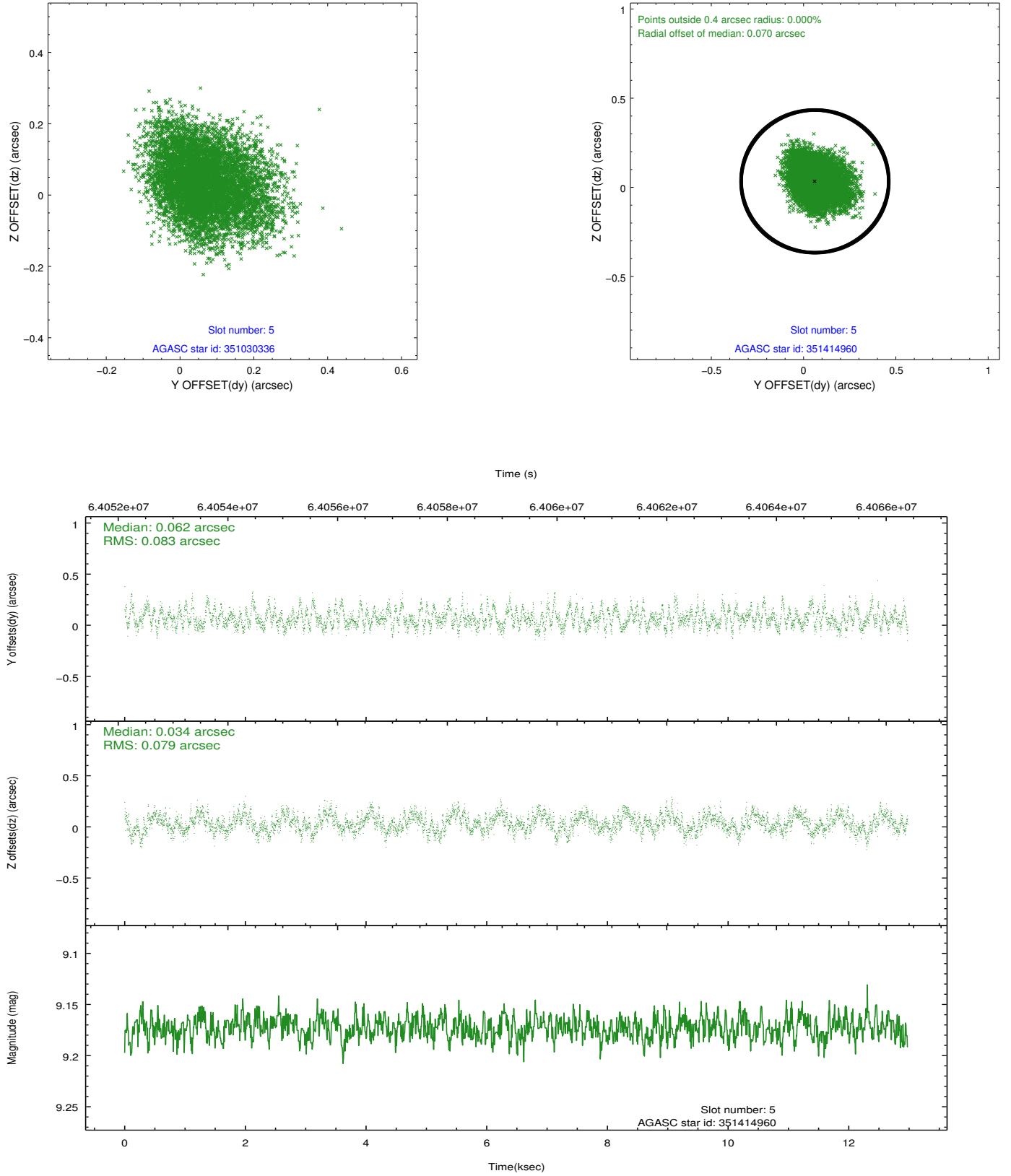
2.4.1 Slot 3



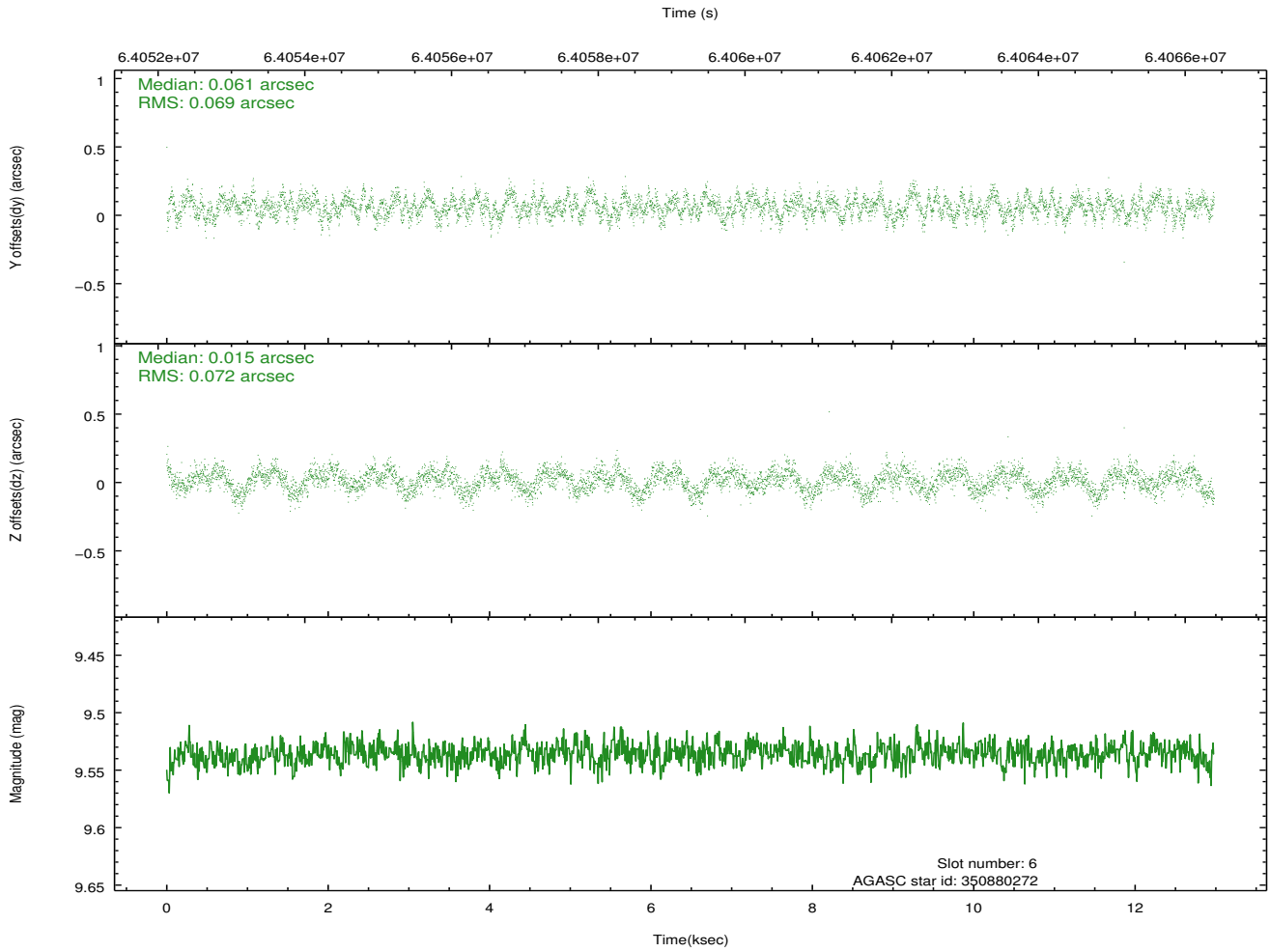
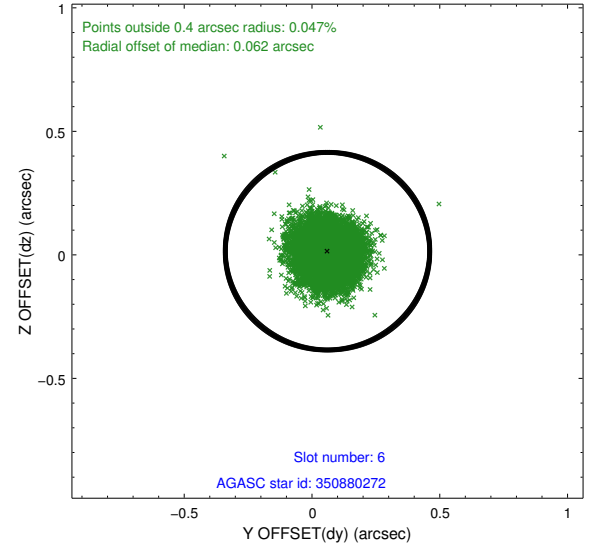
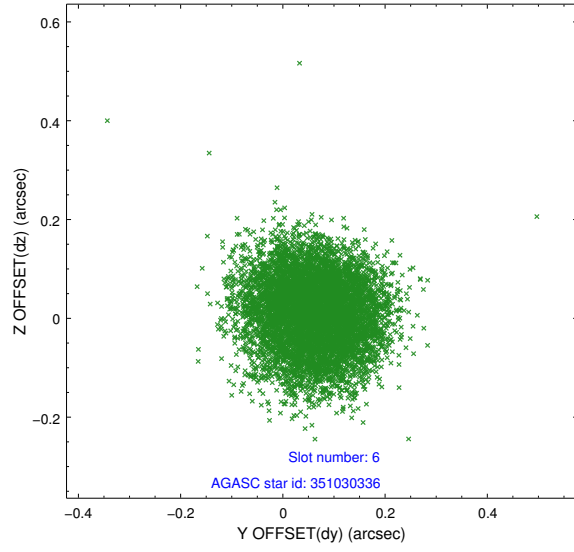
2.4.2 Slot 4



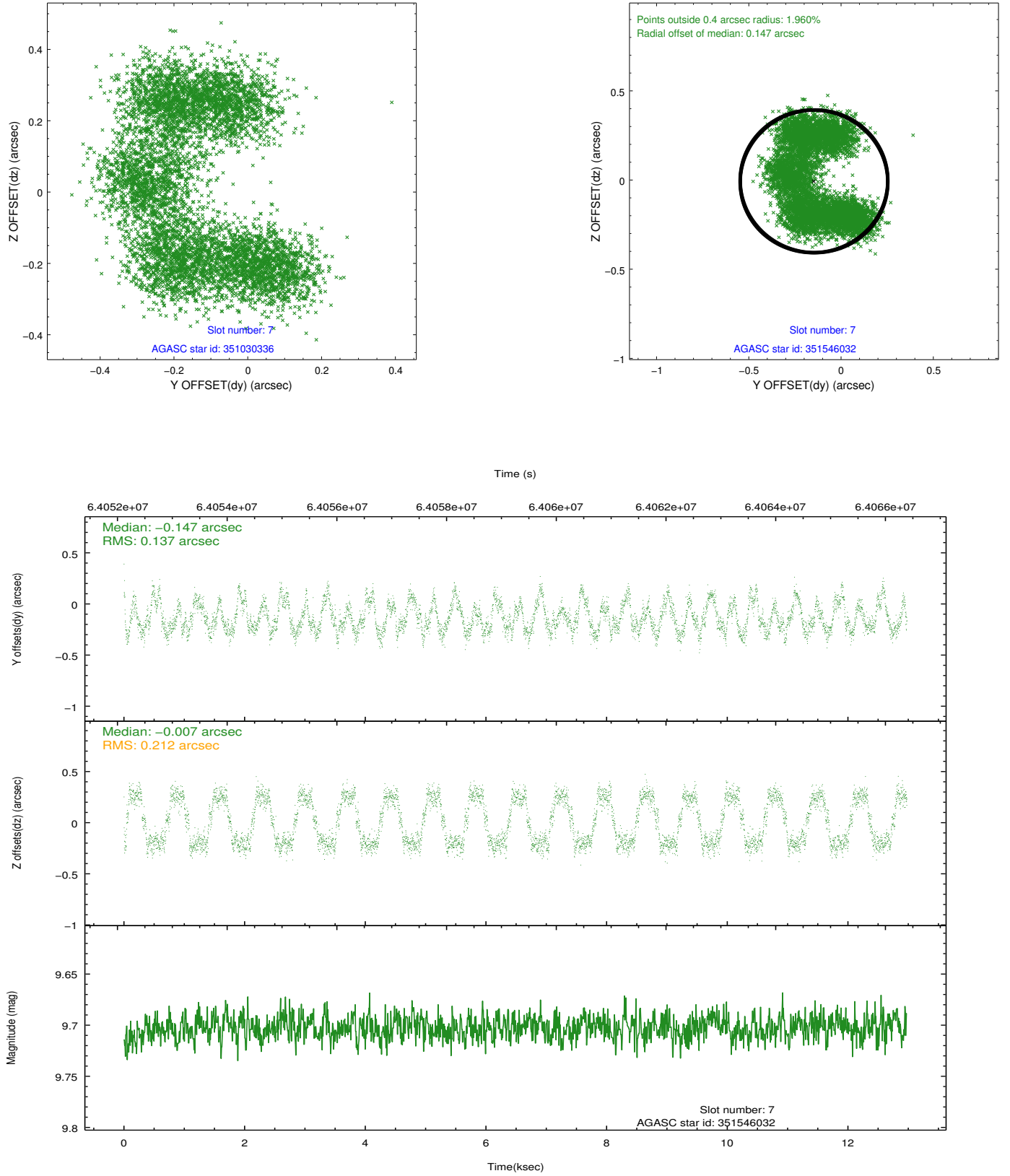
2.4.3 Slot 5



2.4.4 Slot 6

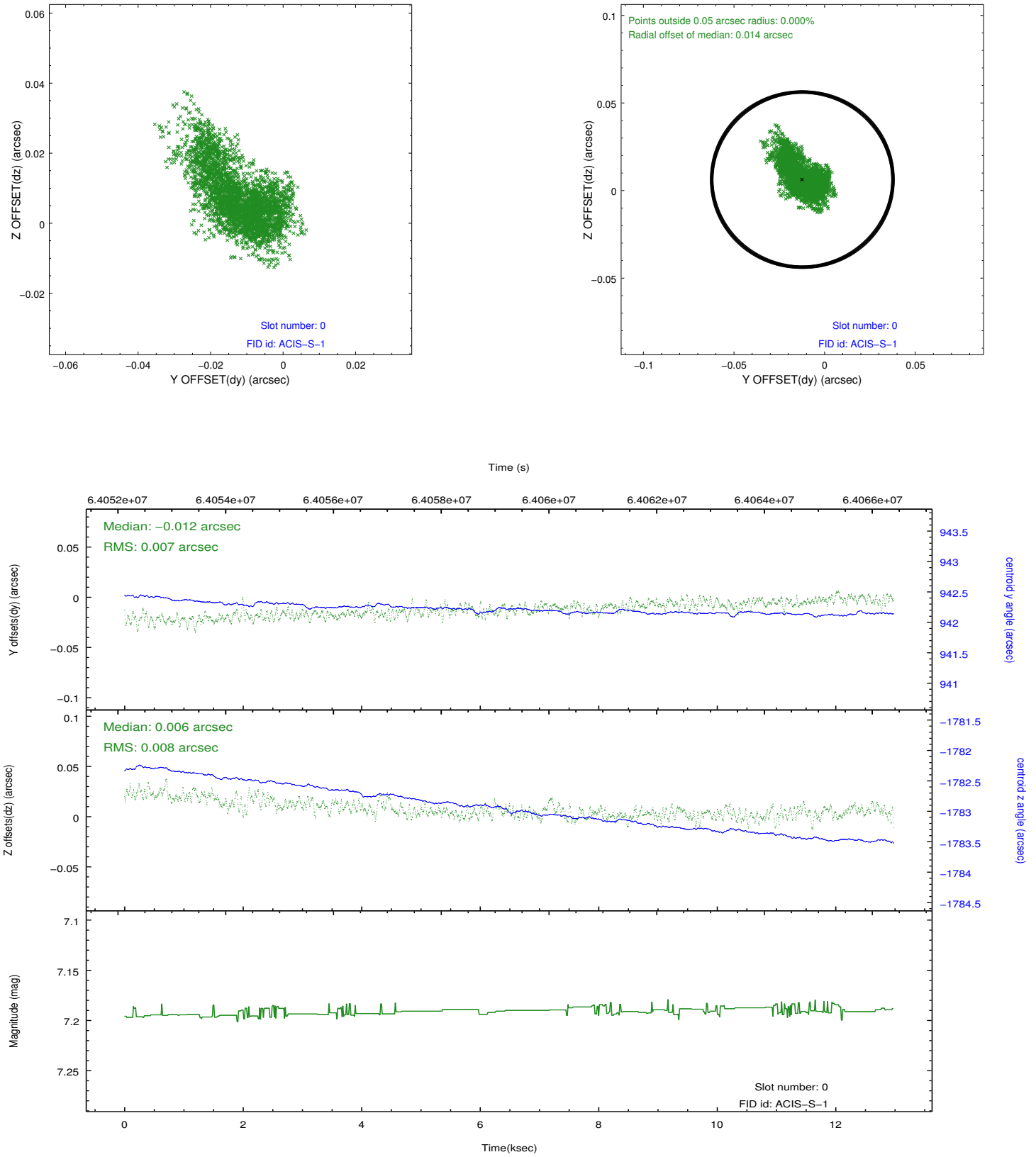


2.4.5 Slot 7

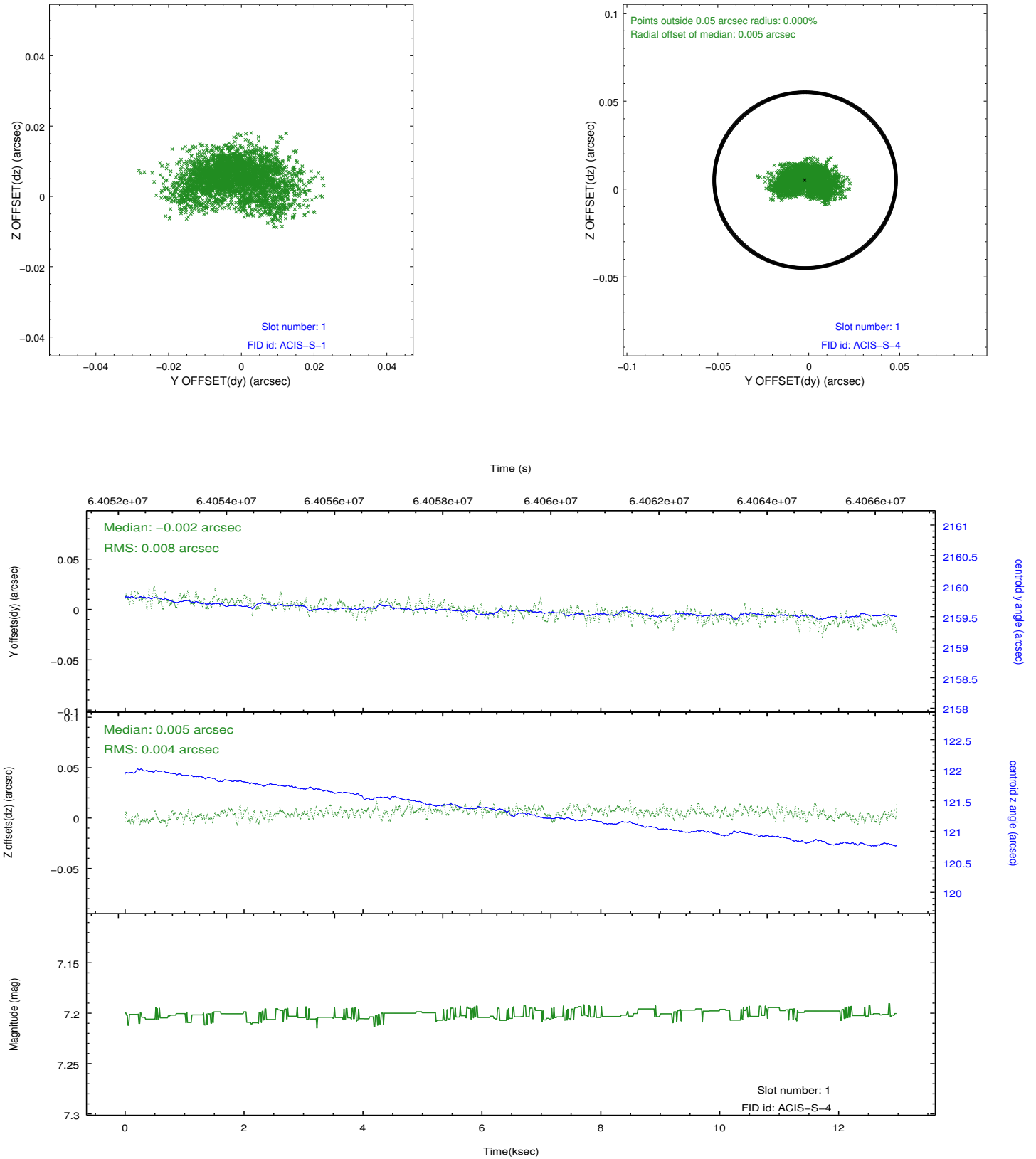


2.5 FID Slots

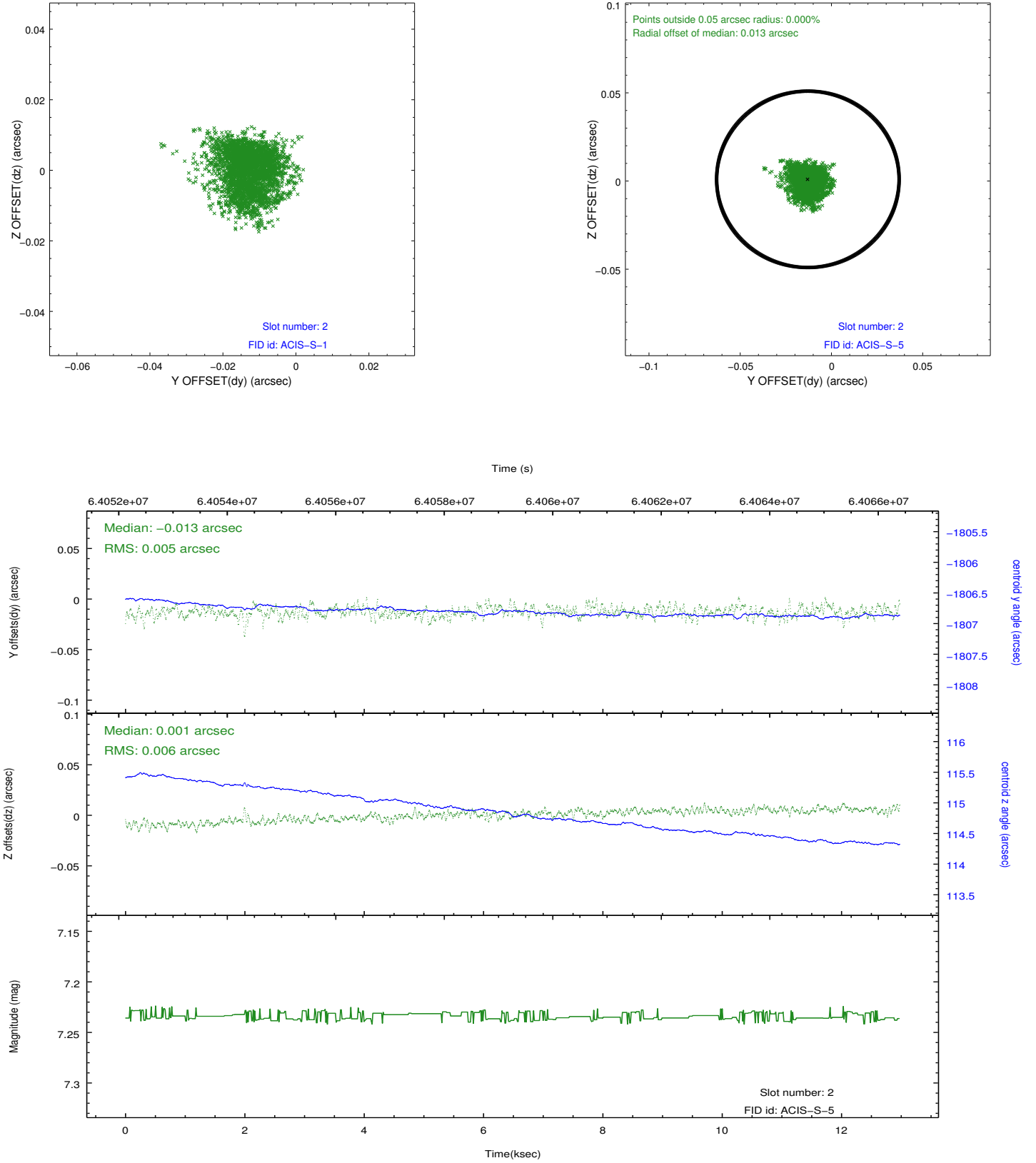
2.5.1 Slot 0



2.5.2 Slot 1

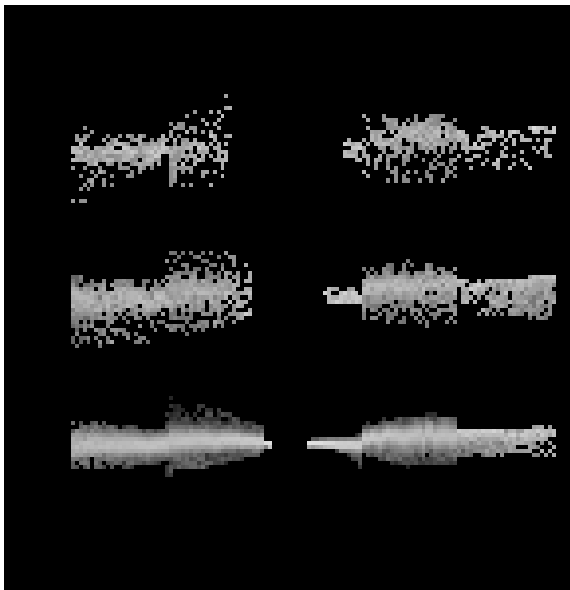


2.5.3 Slot 2

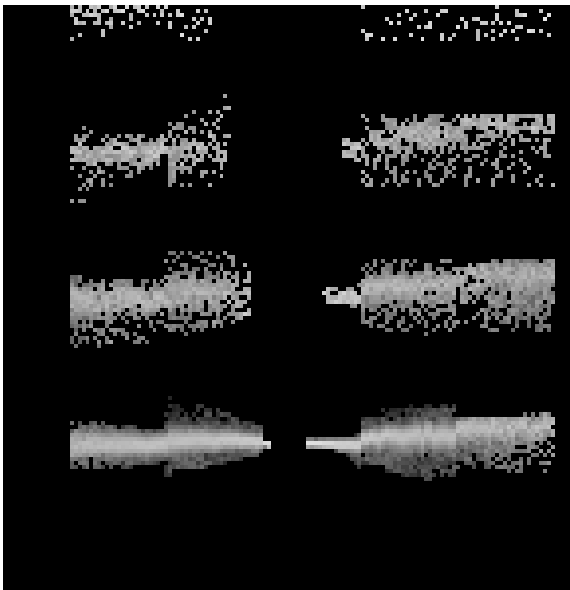


3 Gratings

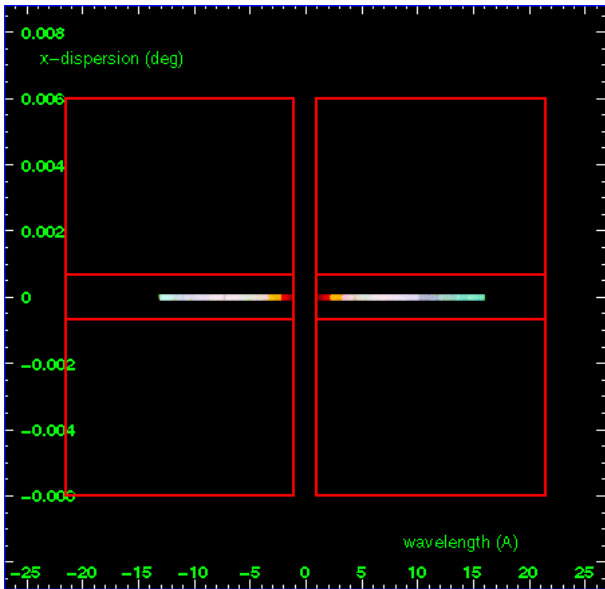
3.1 HEG Arm



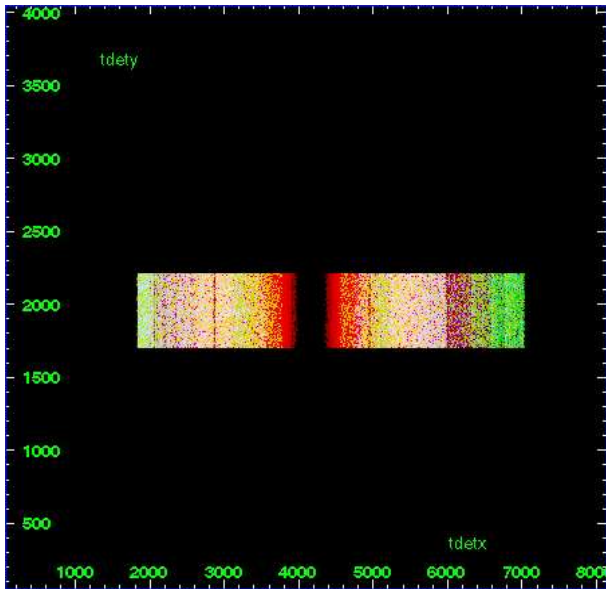
HEG Order Sort 123



HEG Order Sort ALL

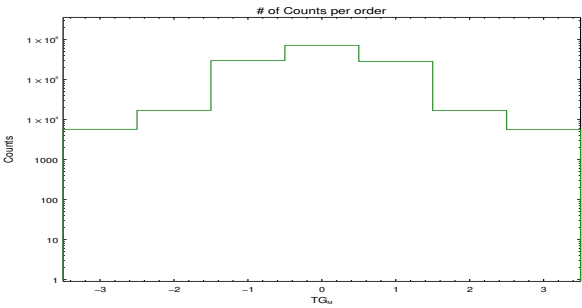


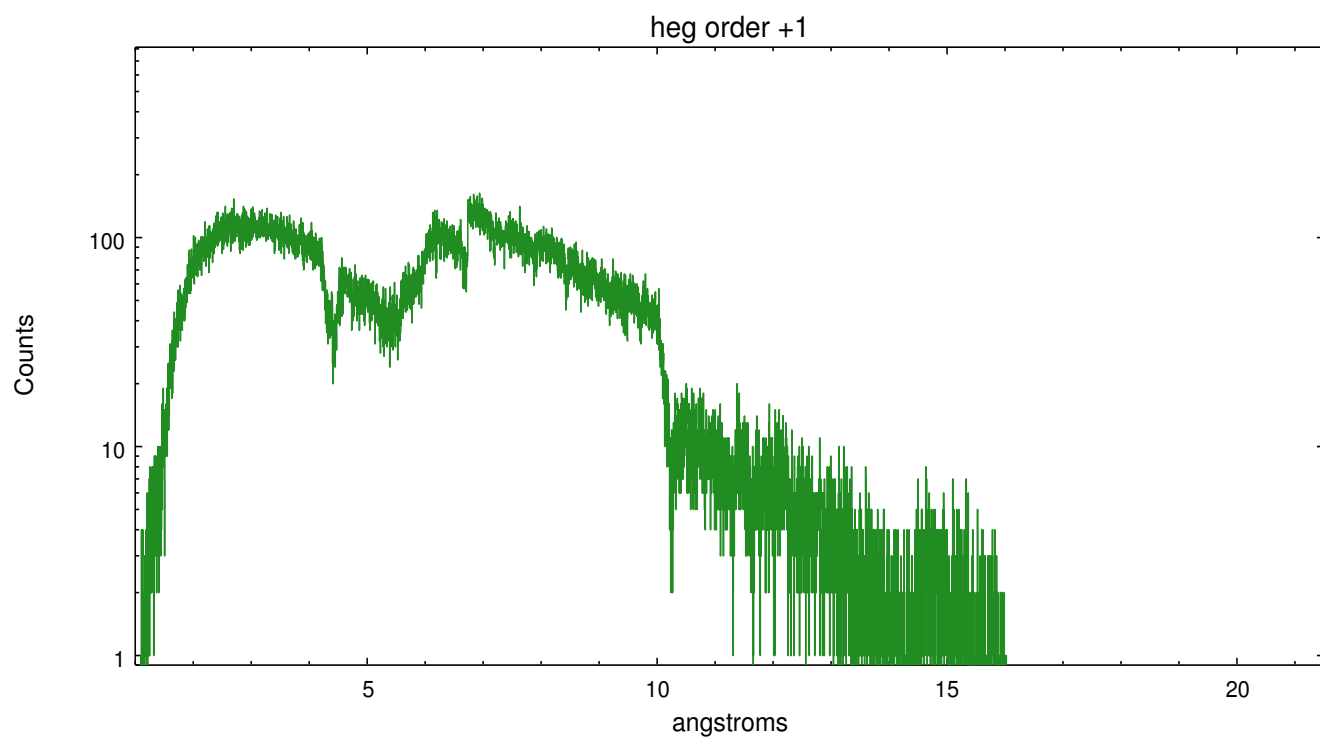
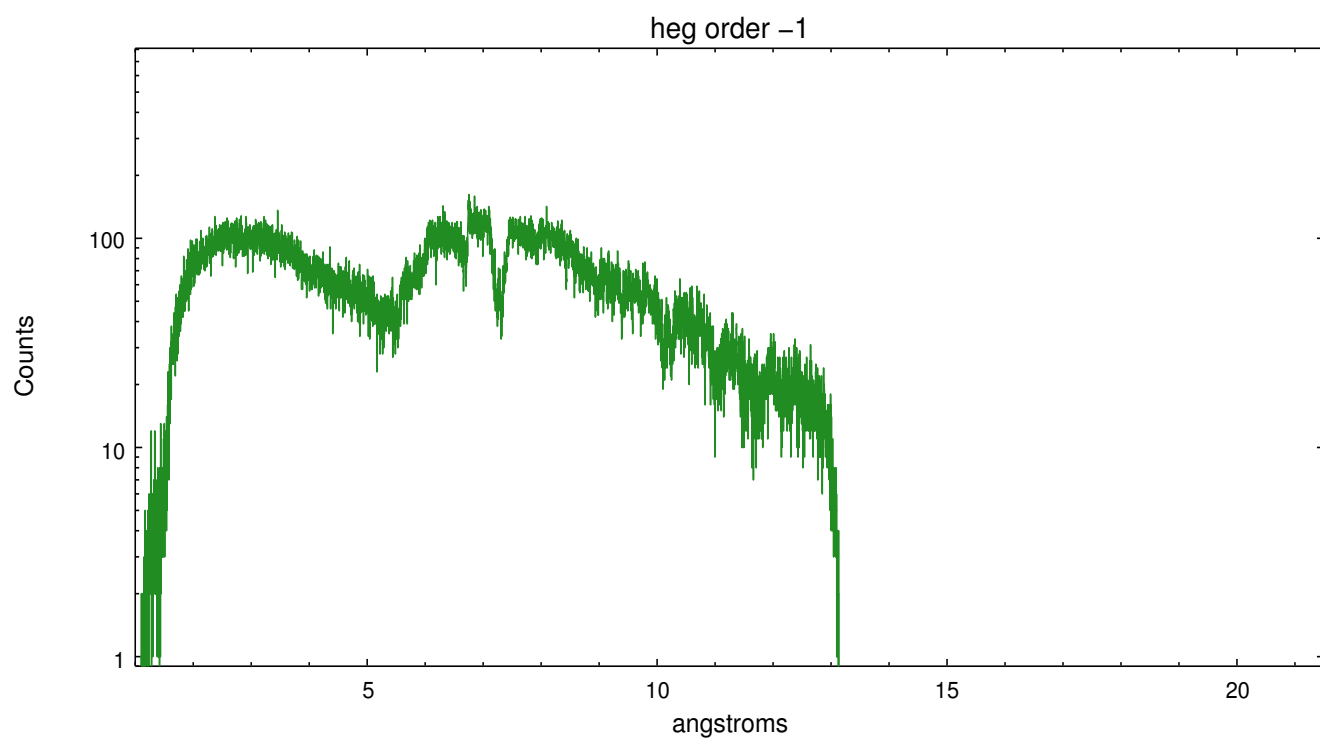
Spot Image HEG



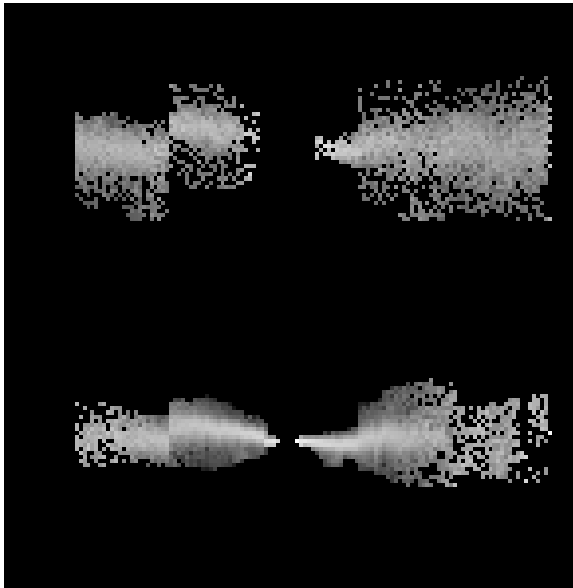
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5677	16914	296166	714281	281042	16750	5578

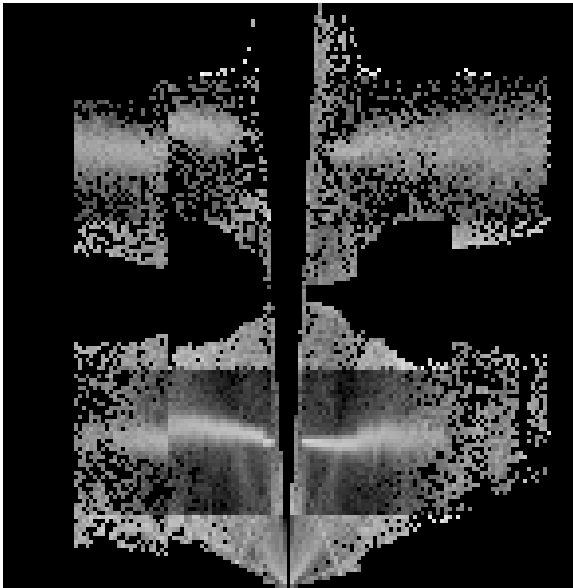




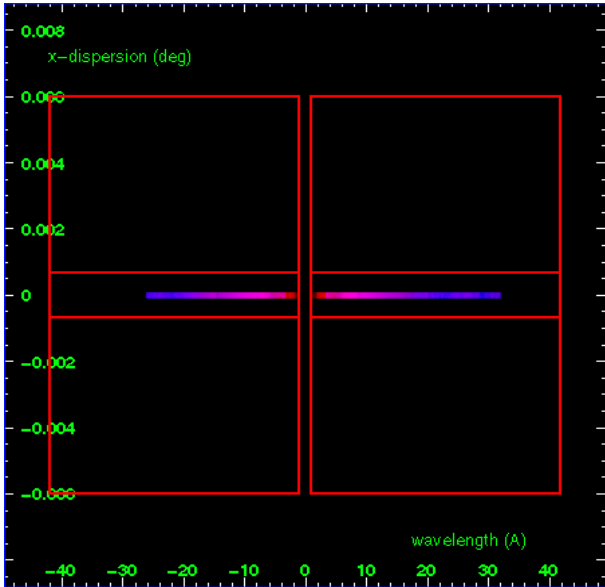
3.2 MEG Arm



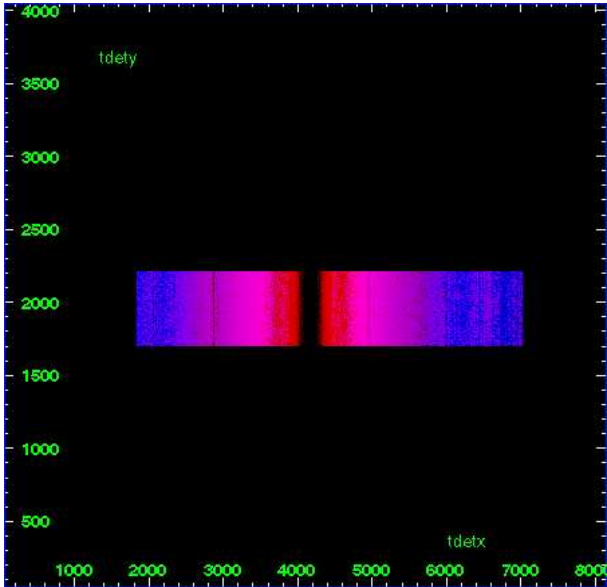
MEG Order Sort 123



MEG Order Sort ALL

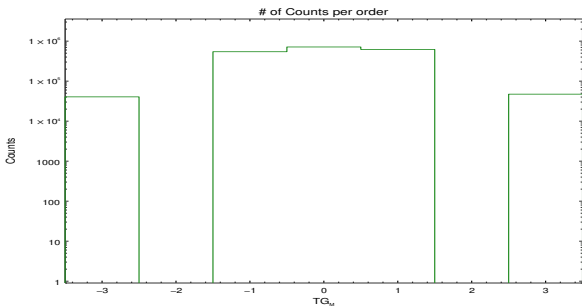


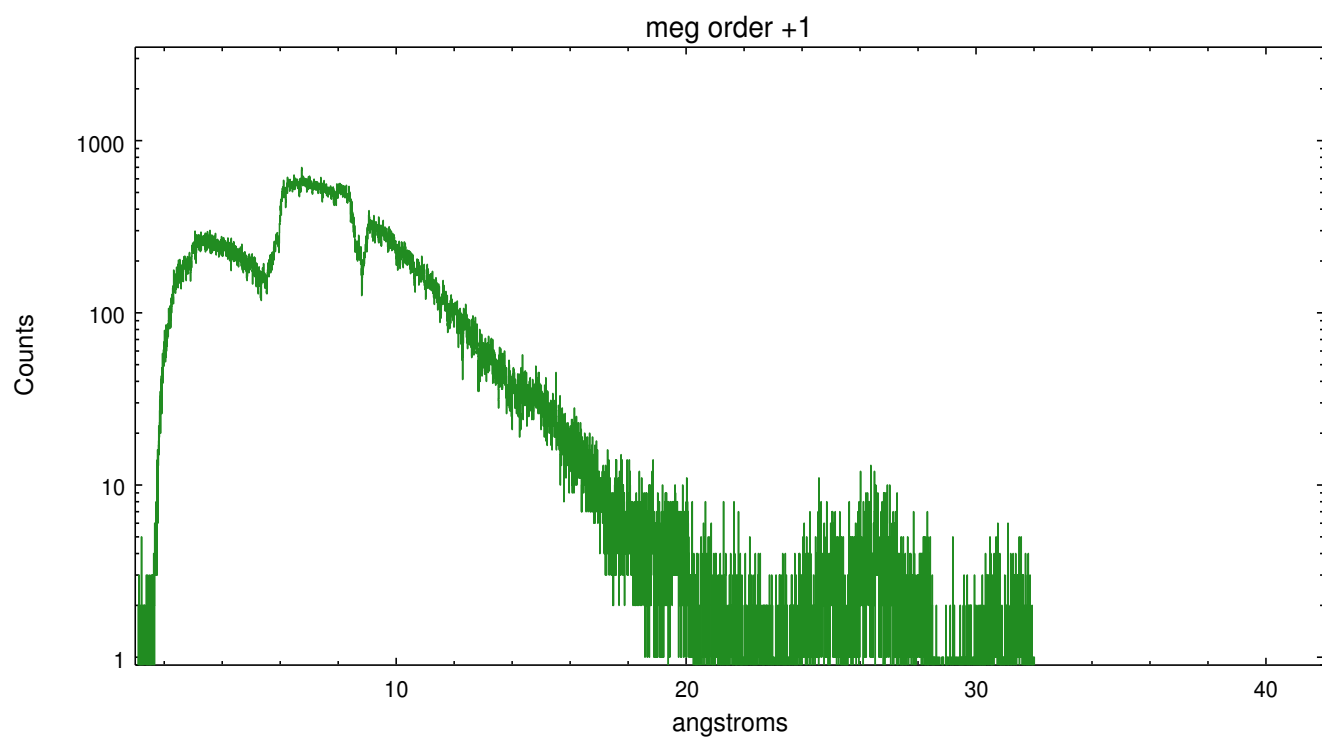
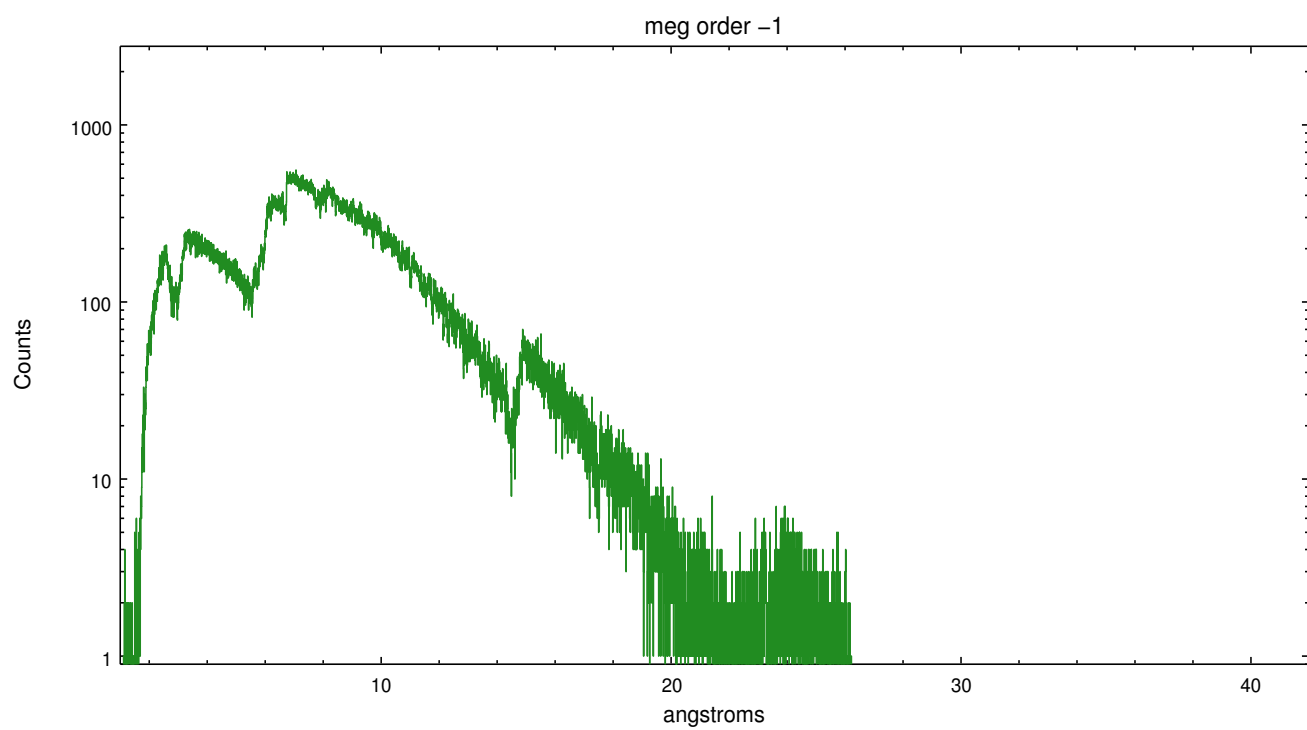
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	40472	0	543732	714281	620134	0	47207





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2009.12.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.675

A.2 Comments

poor gain corrections in cc-mode at this epoch (CCD temperature) may cause some spectral clipping during order-sorting.