

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 7175 - L2 Version 4
Chandra X-Ray Center

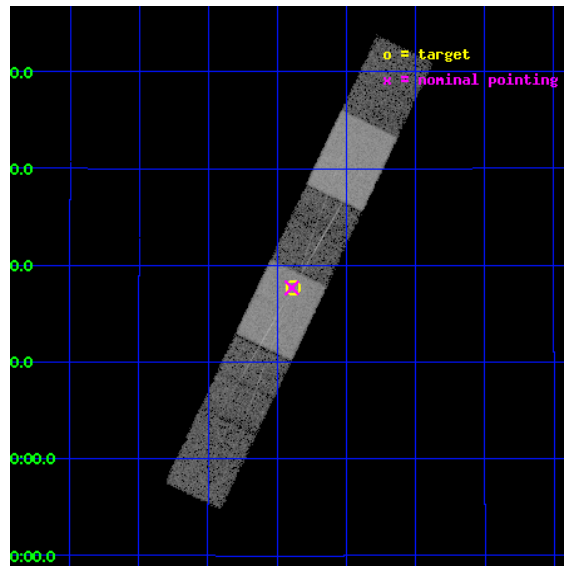
L2 Processing Date : Mar 7 2013

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1 Front

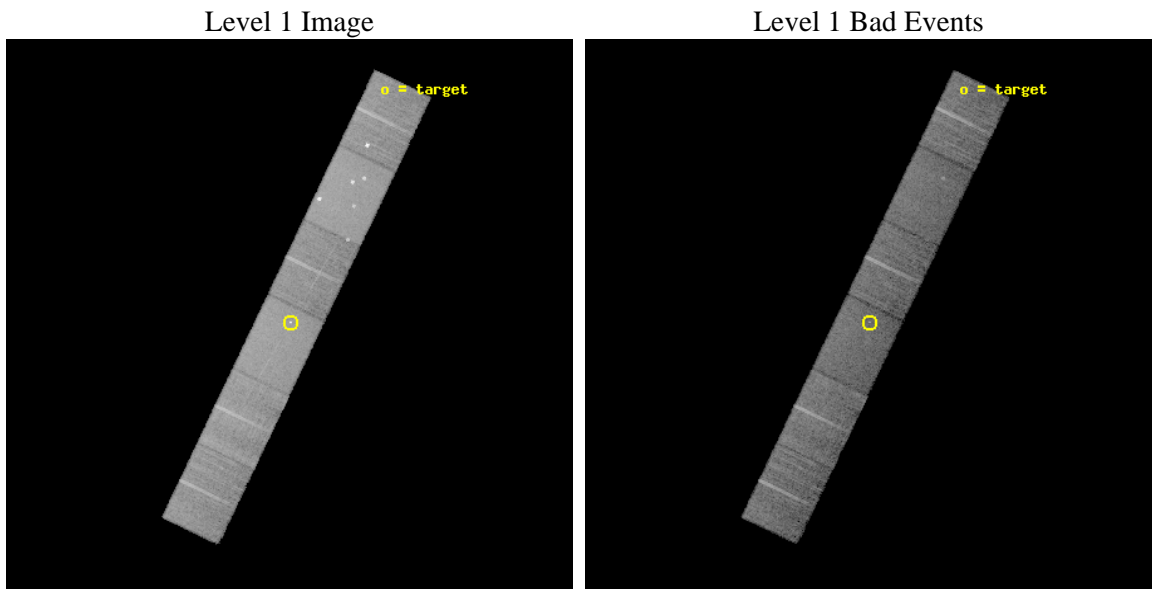
seq_num	300148	Sequence number
obs_id	7175	Observation id
title	Chandra HETG Spectroscopy of the VY Sculptoris Star TT Ari	Proposa
observer	Christopher Mauche	Principal investigator
object	TT Ari	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	31.72125	Observer's specified target RA [deg]
dec_targ	15.295278	Observer's specified target Dec [deg]
ra_nom	31.72347693628	Nominal RA [deg]
dec_nom	15.294667848886	Nominal Dec [deg]
roll_nom	115.65604088979	Nominal Roll [deg]
revision	4	Processing version of data
ontime	15130.0	Sum of GTIs [s]
livetime	14885.637376822	Livetime [s]
ontime4	15130.0	Sum of GTIs [s]
ontime5	15130.0	Sum of GTIs [s]
ontime6	15130.0	Sum of GTIs [s]
ontime7	15130.0	Sum of GTIs [s]
ontime8	15130.0	Sum of GTIs [s]
ontime9	15130.0	Sum of GTIs [s]
l2events	145305	Number of level 2 events



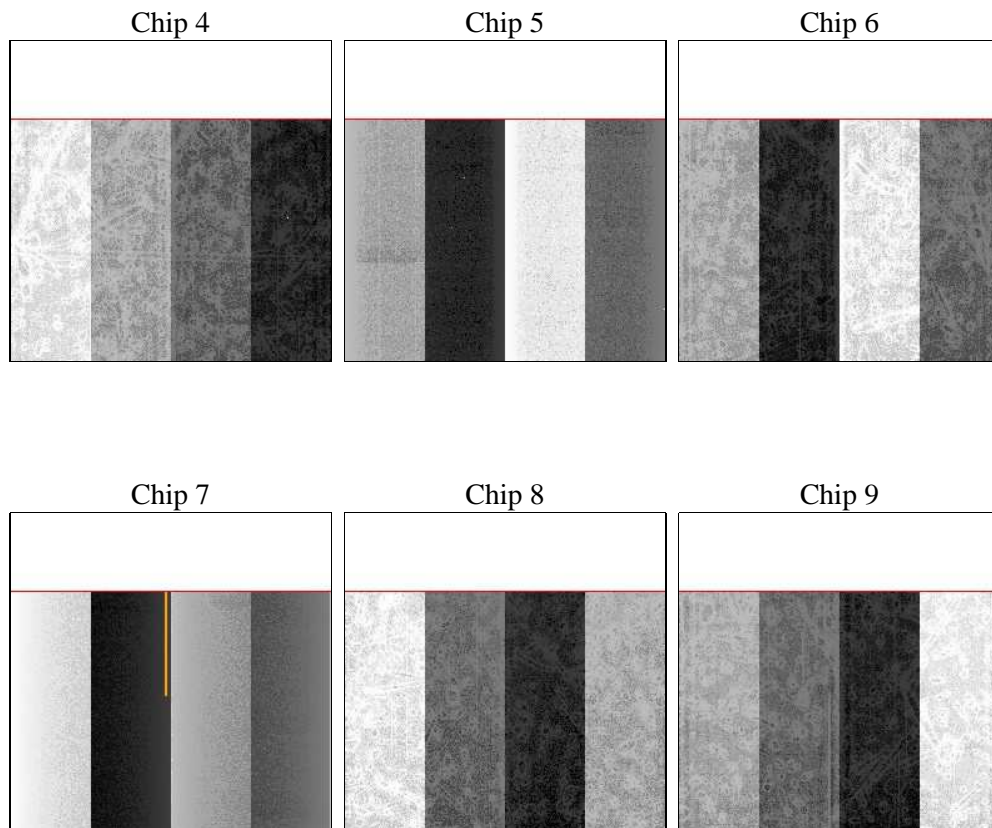
2 OBI

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	8.5.1.1	Processing system revision	ontime	15130.0	Sum of GTIs [s]
caldsver	4.5.6	 	ontime4	15130.0	Sum of GTIs [s]
date	2013-03-08T00:36:12	Date and time of file creation	ontime5	15130.0	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	15130.0	Sum of GTIs [s]
			ontime7	15130.0	Sum of GTIs [s]
			ontime8	15130.0	Sum of GTIs [s]
			ontime9	15130.0	Sum of GTIs [s]
			l1events	641556	Number of level 1 events

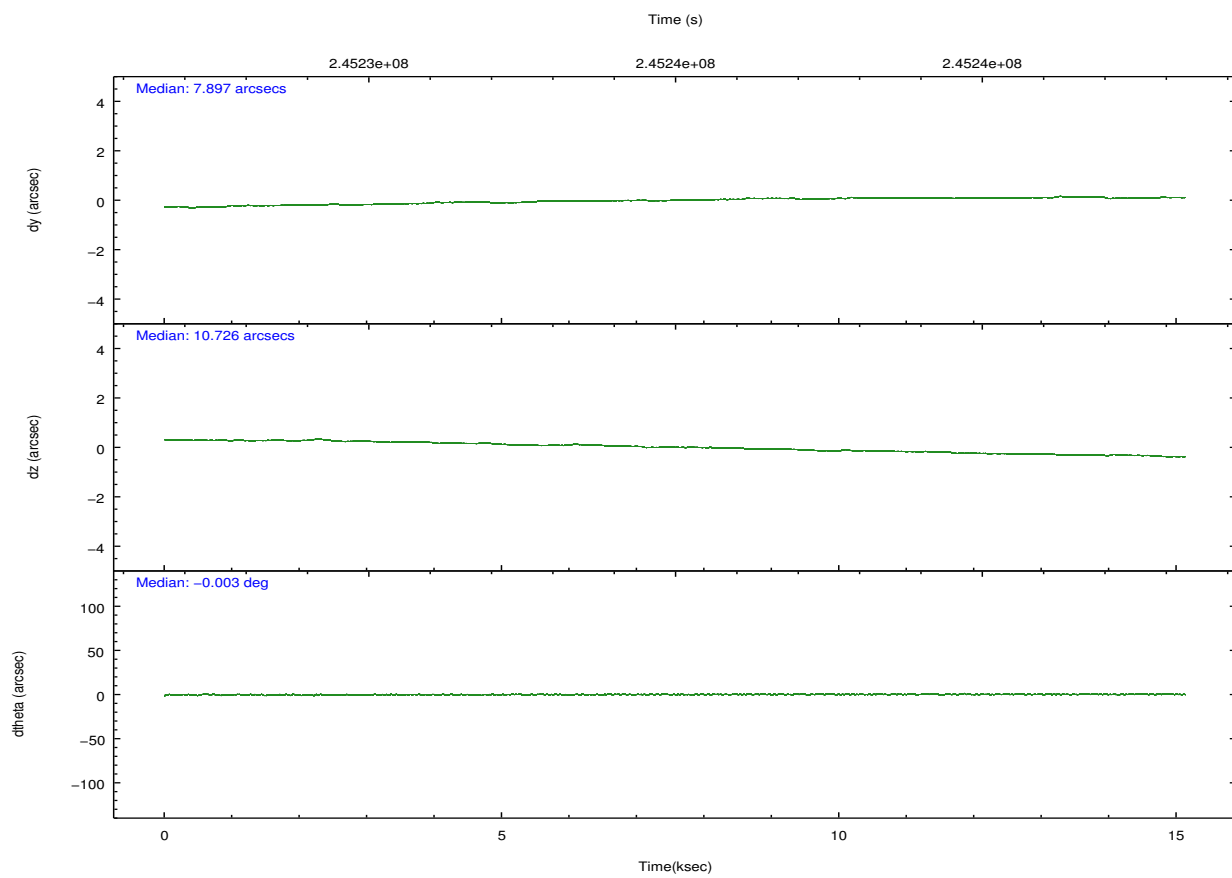
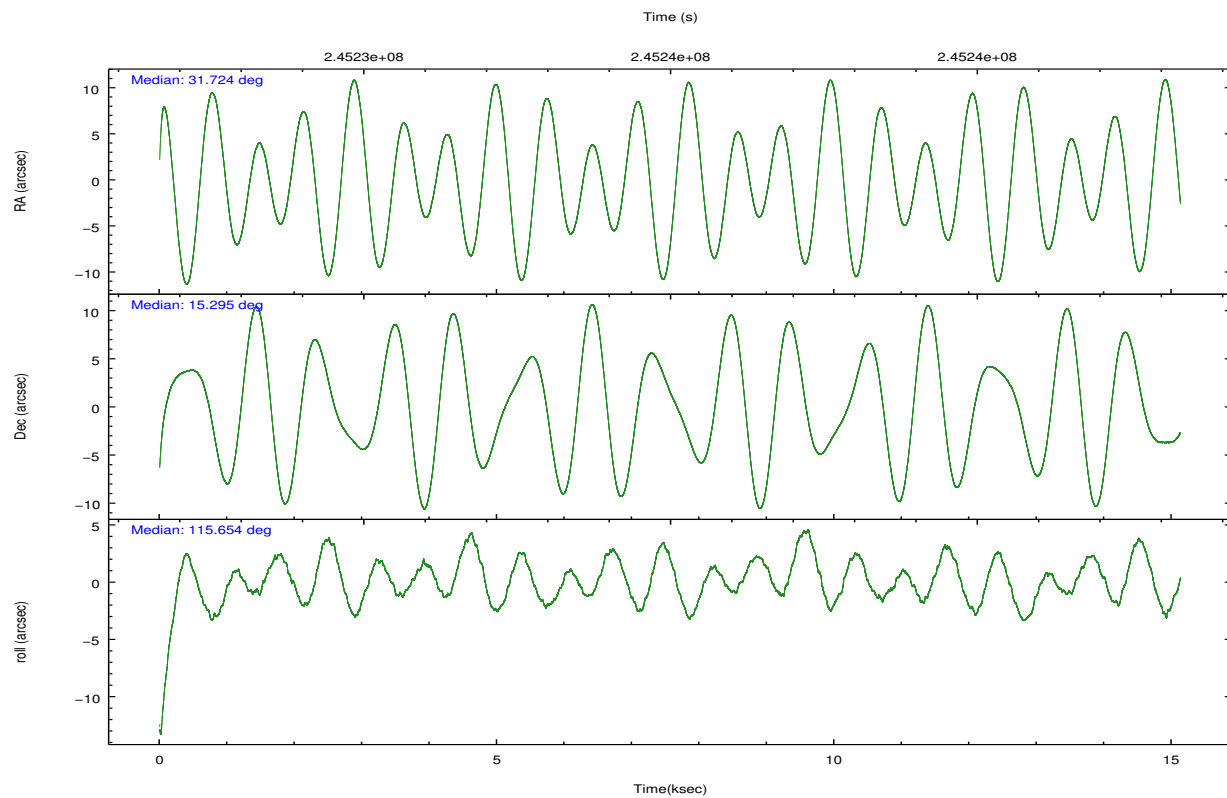
2.1.4 Events

	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	99872	140338	86151	120226	110349	84620	grade 0 events	10406	13979	4718	4780	7813	4380
rejected events	82945	71319	74827	68500	85715	73839		10%	9%	5%	3%	7%	5%
rejected %	83%	50%	86%	56%	77%	87%	grade 1 events	94	258	39	126	75	42
								0%	0%	0%	0%	0%	0%
							grade 2 events	2429	18563	2230	10460	5302	2097
								2%	13%	2%	8%	4%	2%
							grade 3 events	1205	2770	1115	4725	2698	1148
								1%	1%	1%	3%	2%	1%
							grade 4 events	1087	2658	1097	4719	2526	1050
								1%	1%	1%	3%	2%	1%
							grade 5 events	3738	10247	4070	11154	5212	4076
								3%	7%	4%	9%	4%	4%
							grade 6 events	1810	31093	2166	27082	6299	2114
								1%	22%	2%	22%	5%	2%
							grade 7 events	79103	60770	70716	57180	80424	69713
								79%	43%	82%	47%	72%	82%

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	31.746992	31.72347693628011	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	15.279613	15.29466784888641	Subarray start row	1	1
[deg] Pointing Roll	115.493208	115.6560408897853	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	245227564.184000	245226447.28187			
Observation start date	2005-10-09T06:45:00	2005-10-09T06:27:27			
[s] Observation end time (MET)	245242564.184000	245244173.12019			
Observation end date	2005-10-09T10:55:00	2005-10-09T11:22:53			
Read mode	TIMED	TIMED			

2.3 Aspect

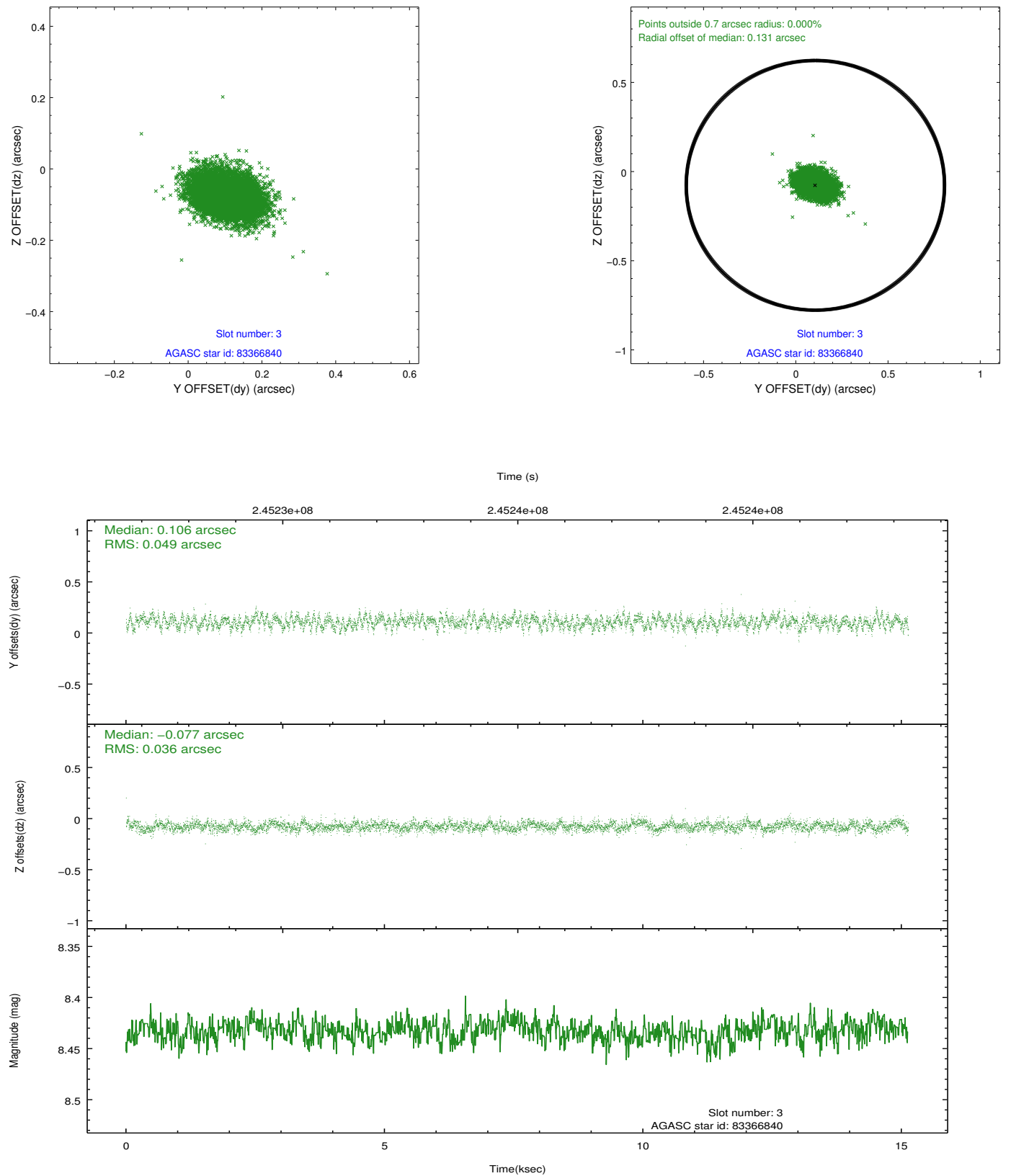


Slot Statistics

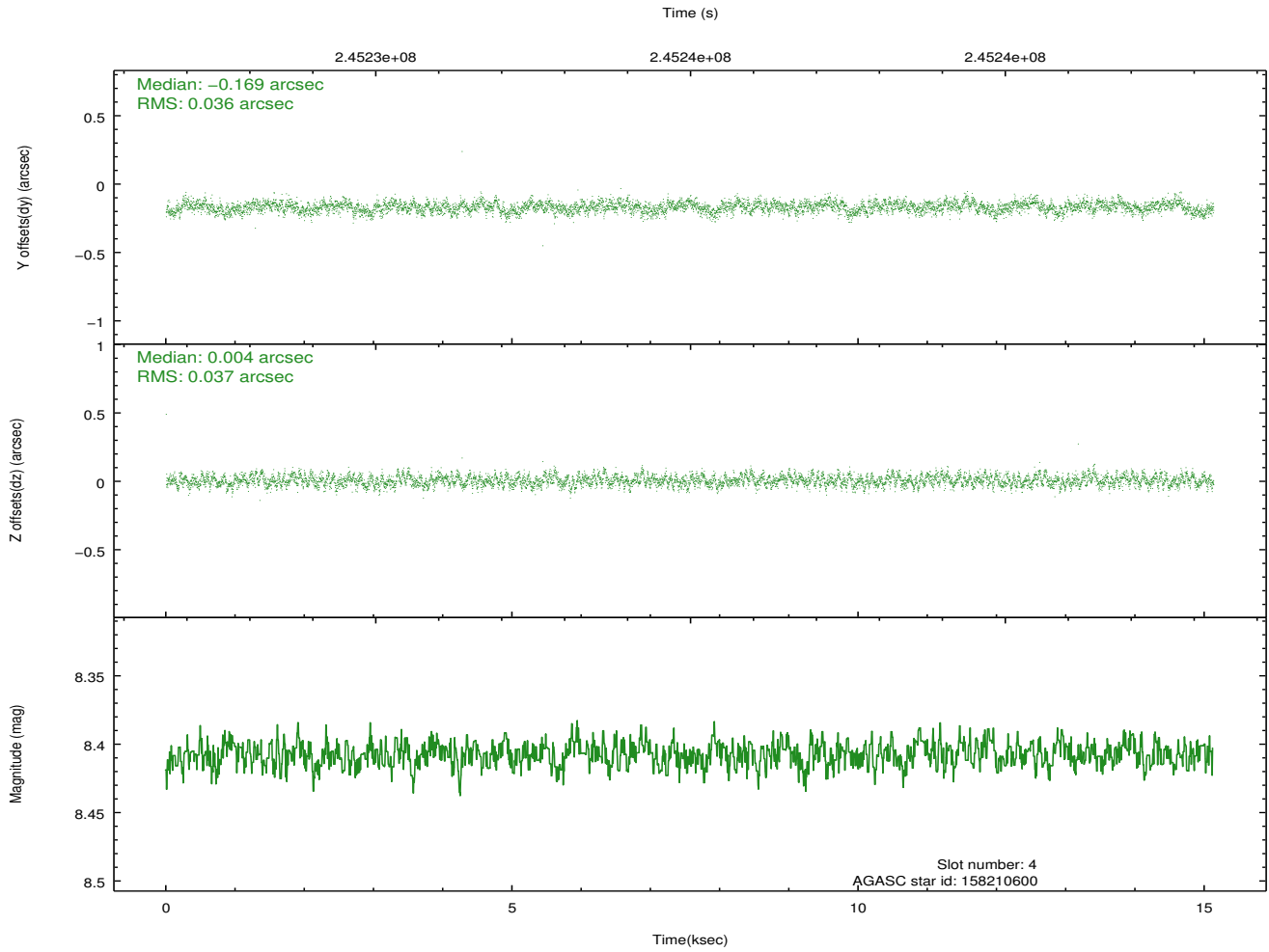
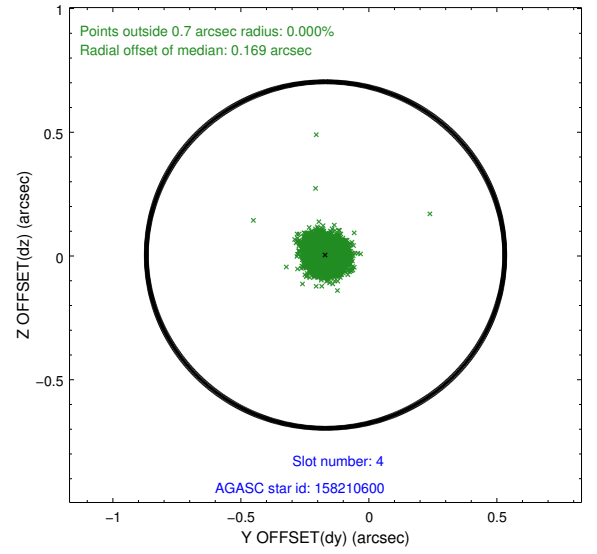
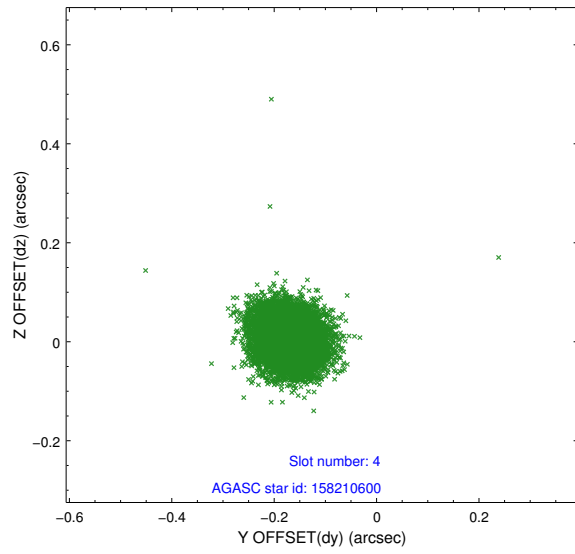
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	3690	-0.040	-0.092	0.007	0.011	0.000000	0.000000	-760.50	-1794.21
1	FID	ACIS-S-4	7.19	3690	0.103	0.044	0.006	0.012	0.000000	0.000000	2152.80	114.05
2	FID	ACIS-S-5	7.23	3691	-0.094	0.057	0.008	0.014	0.000000	0.000000	-1812.99	108.12
3	GUIDE	83366840	8.43	7383	0.106	-0.077	0.064	0.105	31.673303	14.583774	-2150.44	1309.96
4	GUIDE	158210600	8.41	7377	-0.169	0.004	0.055	0.086	31.131603	15.630068	2059.45	1381.83
5	GUIDE	158211640	9.28	7379	0.076	-0.005	0.079	0.129	31.349537	15.537415	1432.58	844.56
6	GUIDE	158215416	9.23	7379	-0.035	-0.050	0.098	0.157	31.249092	15.295299	797.15	1535.65
7	GUIDE	159131712	7.91	7378	0.024	0.132	0.062	0.102	32.565244	15.023039	-2053.20	-2172.57

2.4 Star Slots

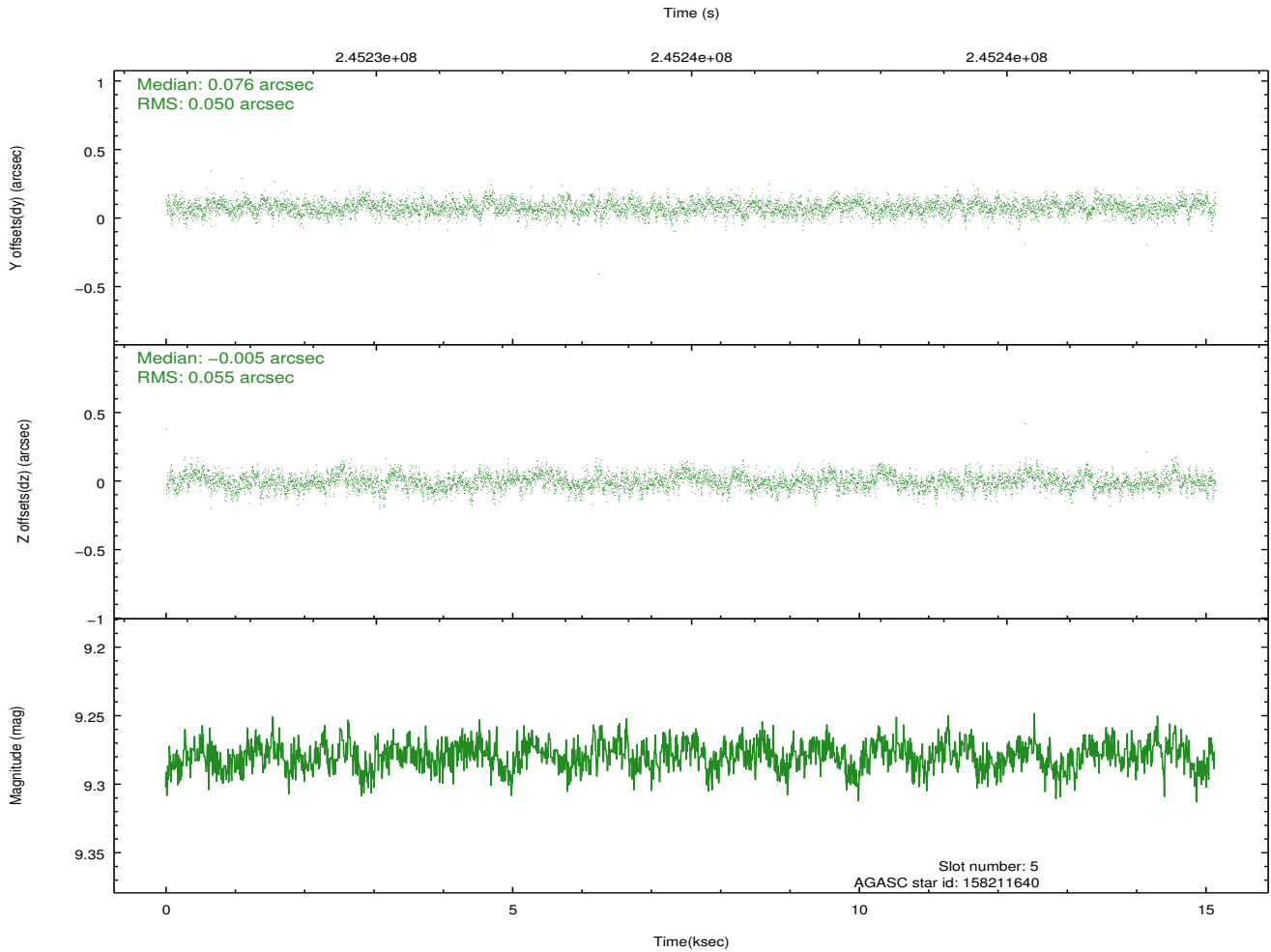
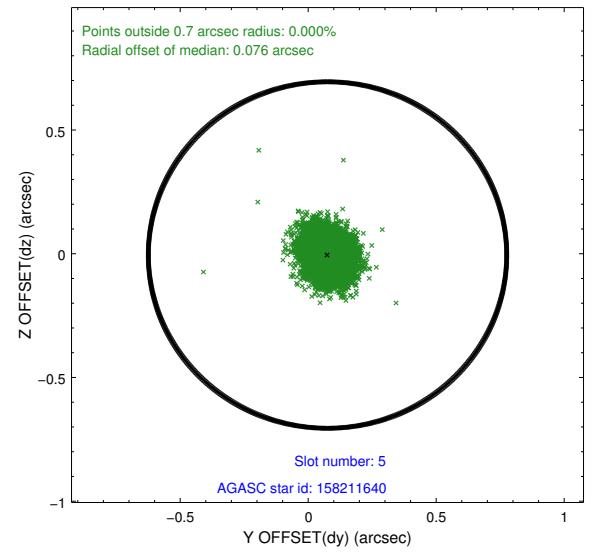
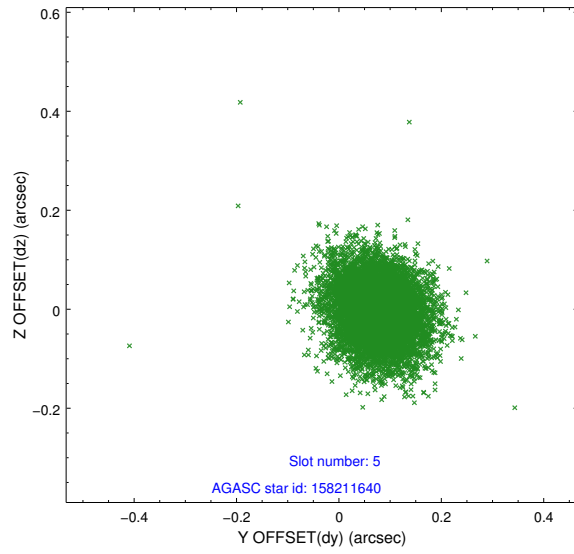
2.4.1 Slot 3



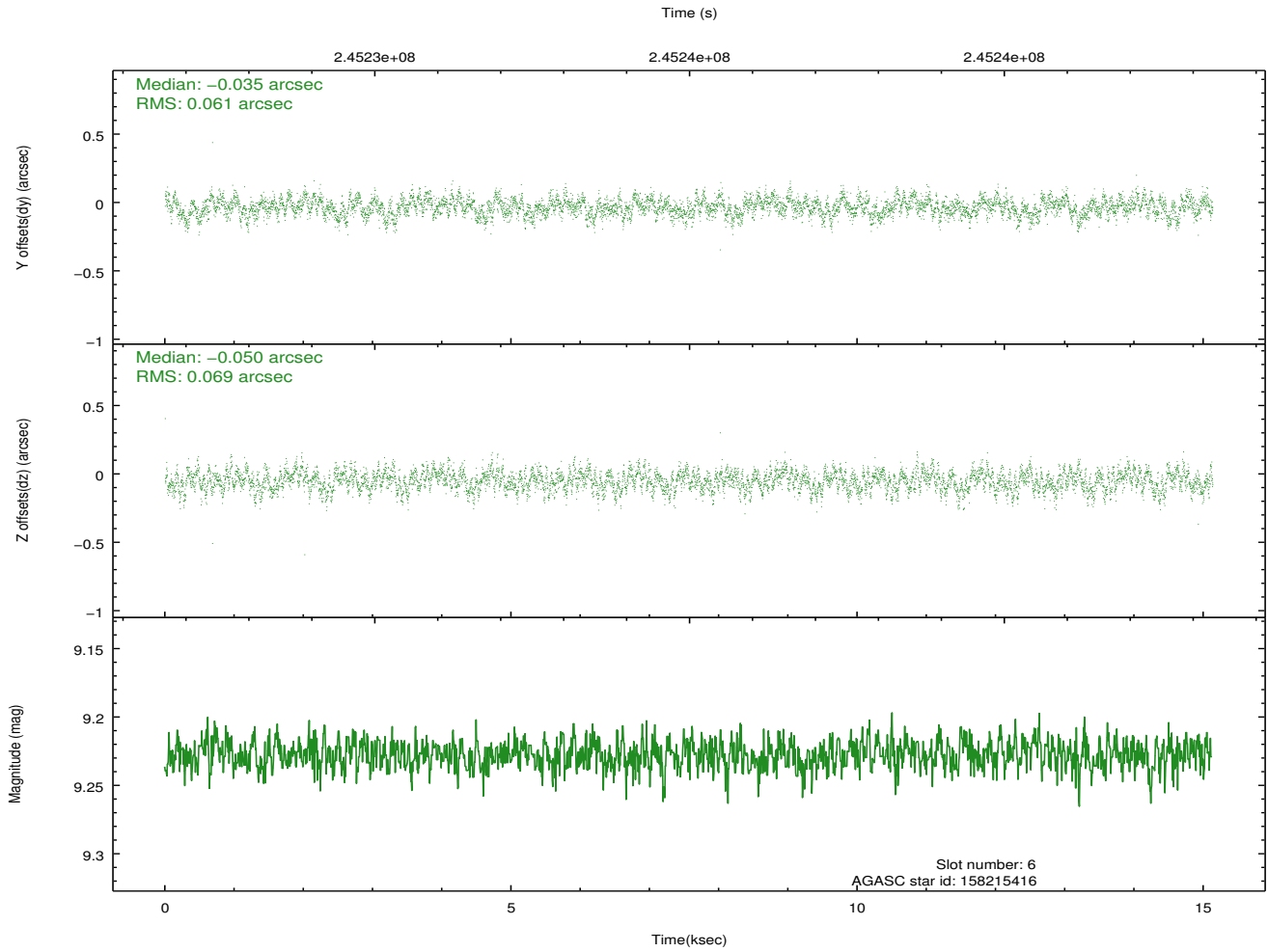
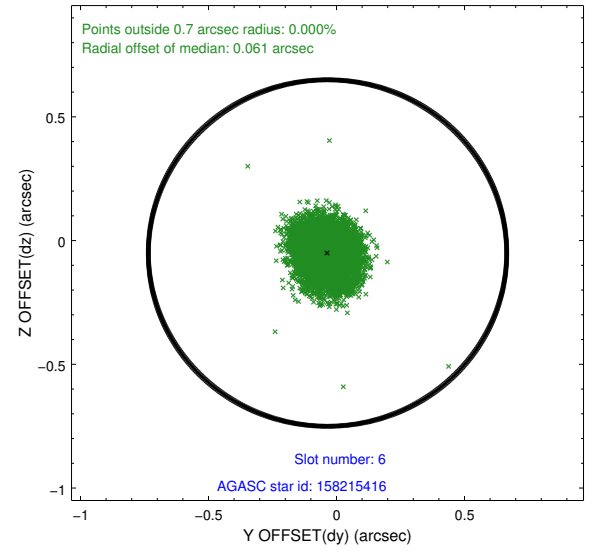
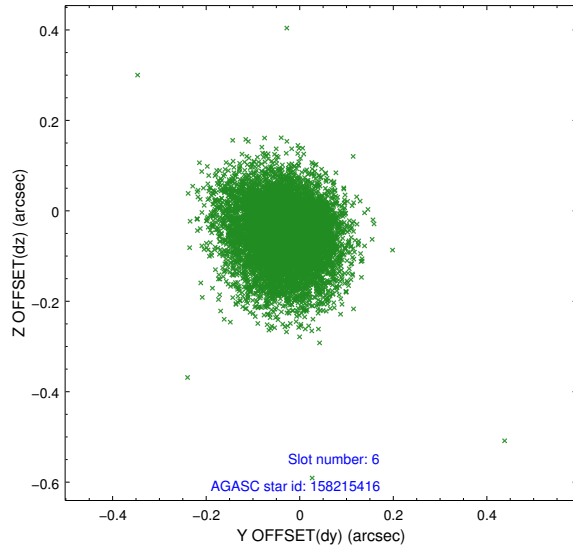
2.4.2 Slot 4



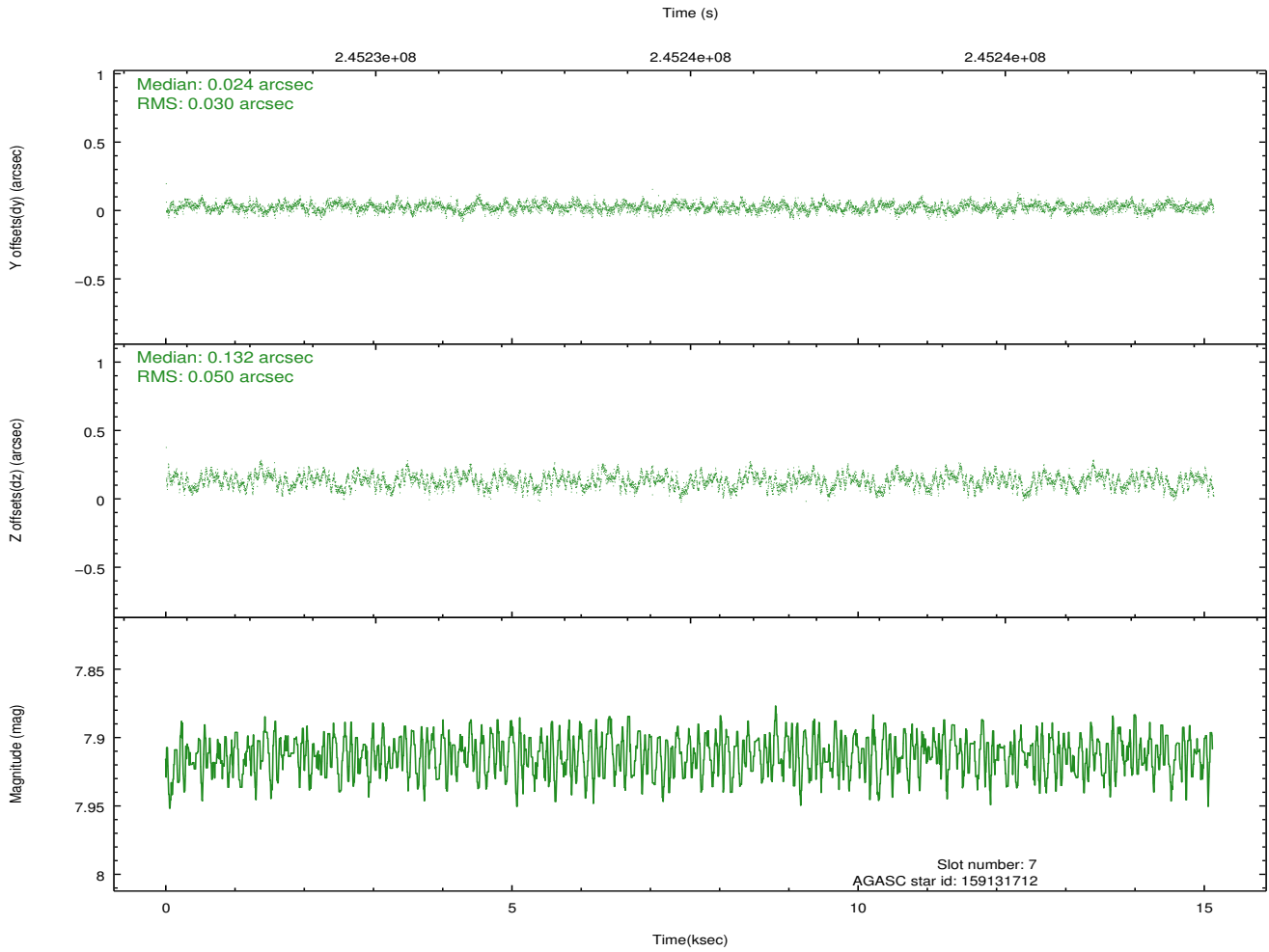
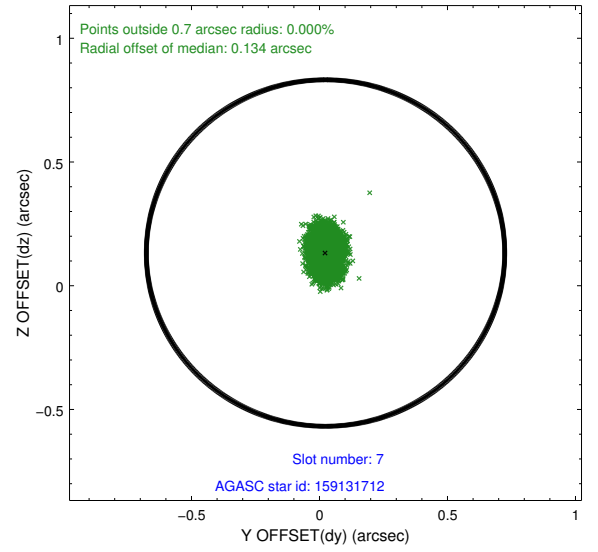
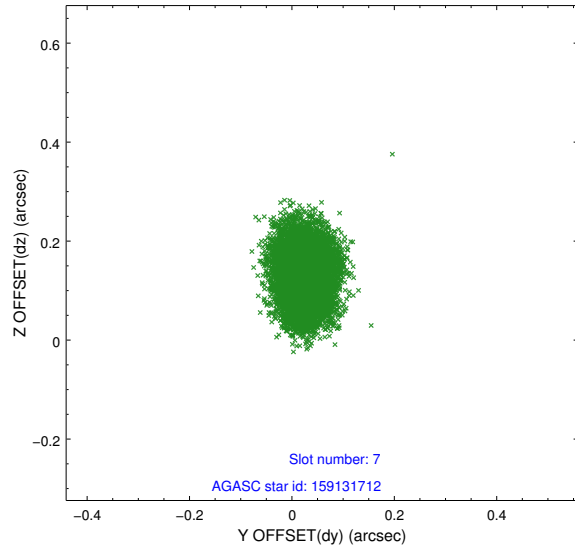
2.4.3 Slot 5



2.4.4 Slot 6

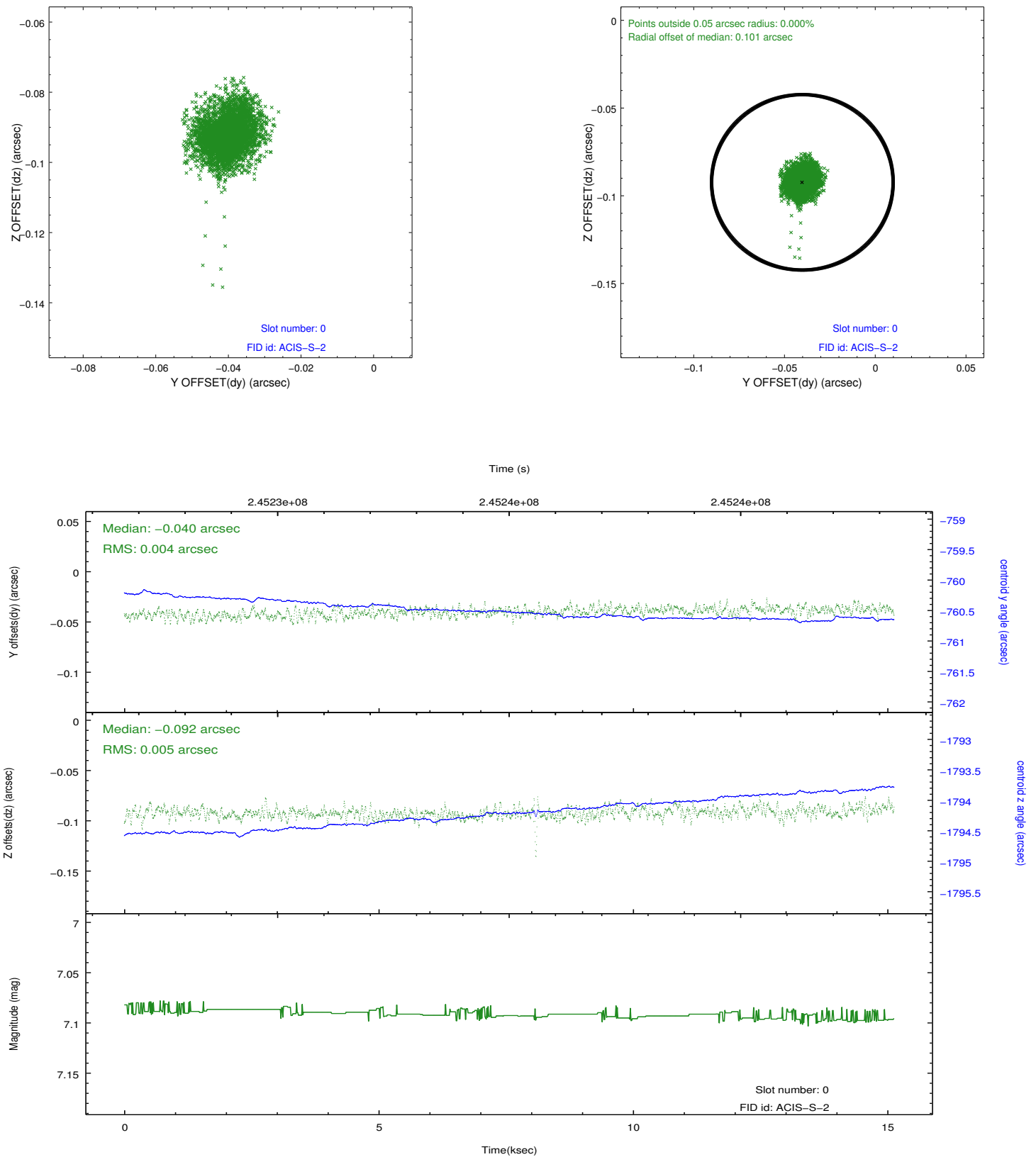


2.4.5 Slot 7

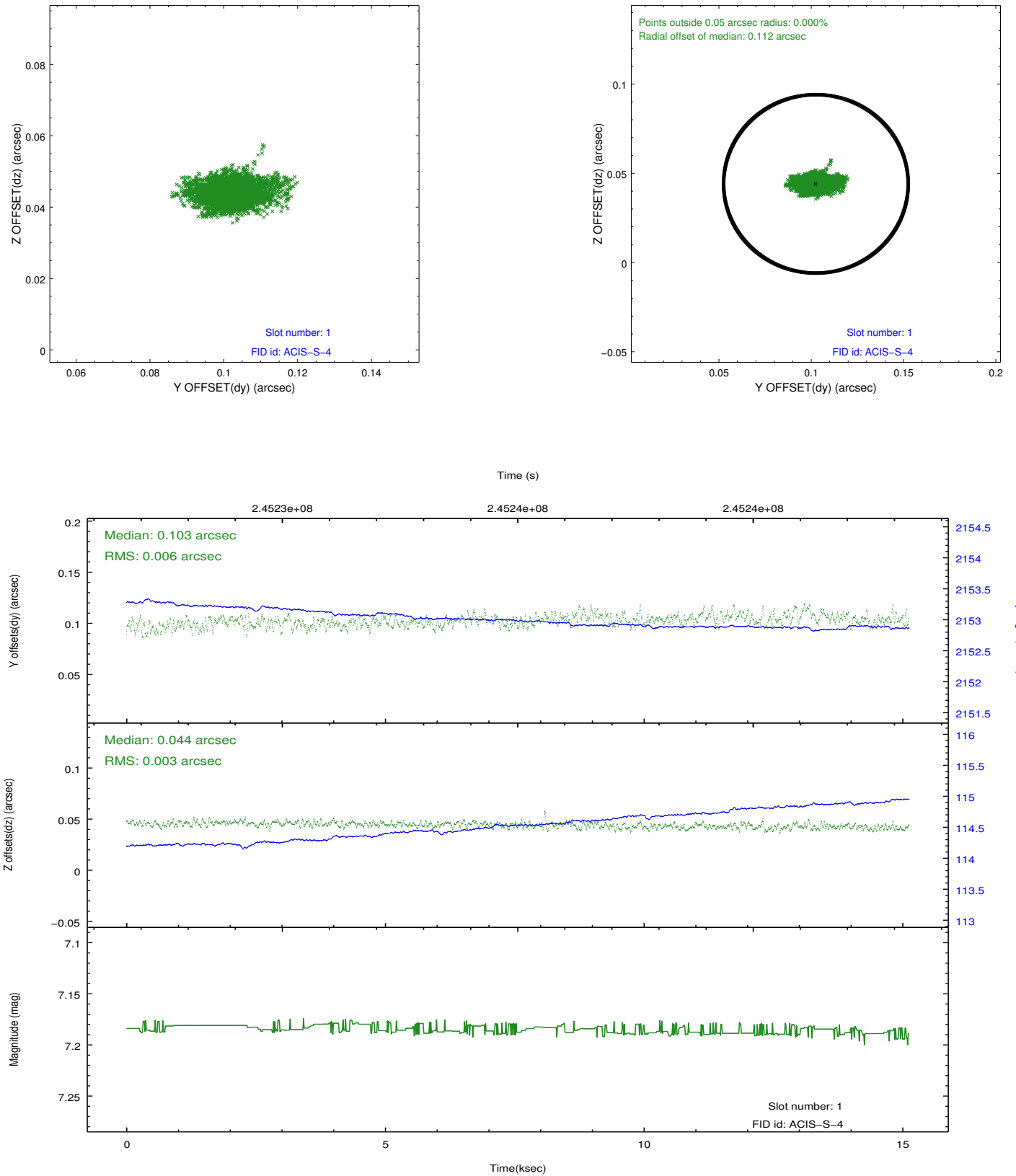


2.5 FID Slots

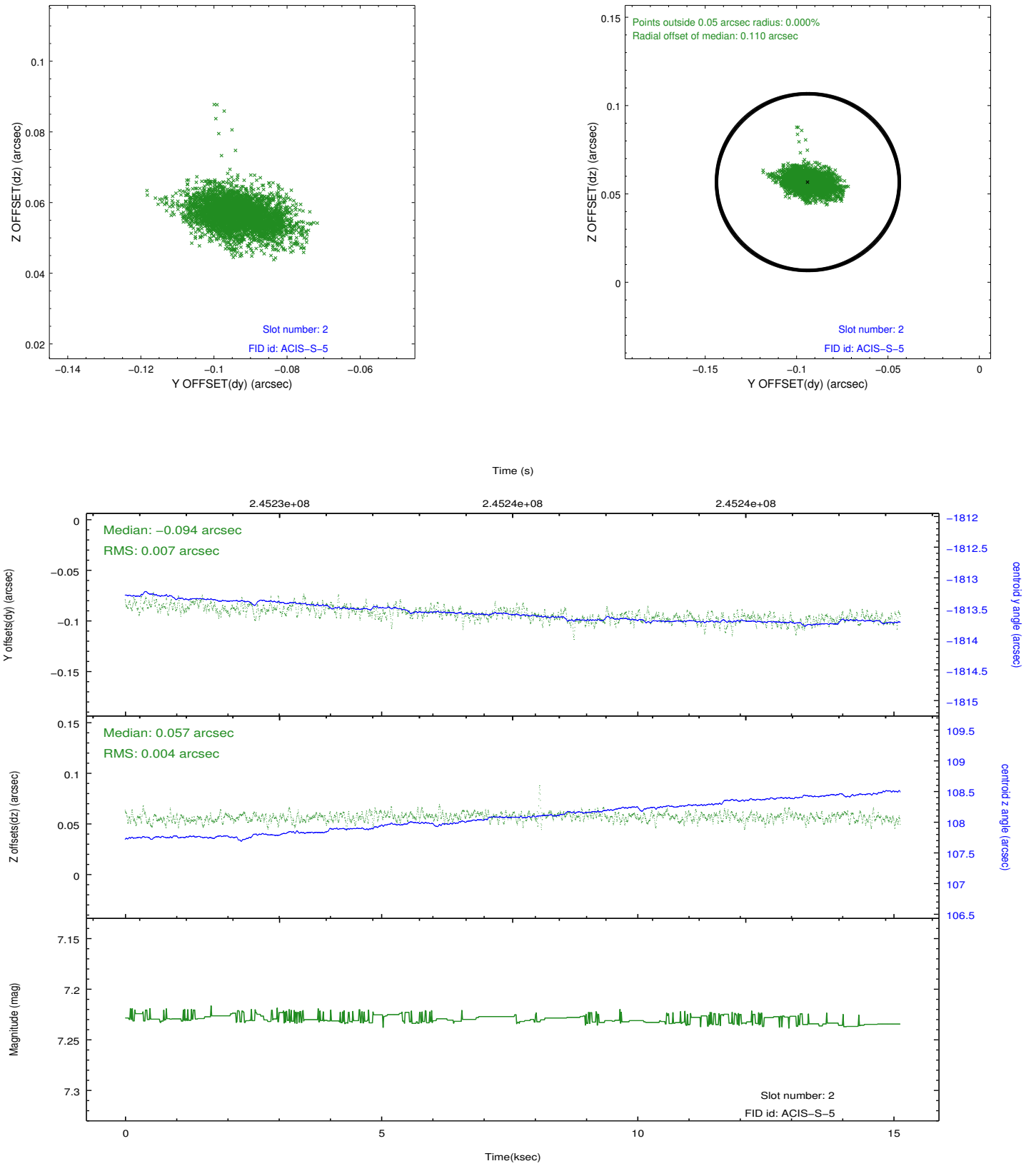
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

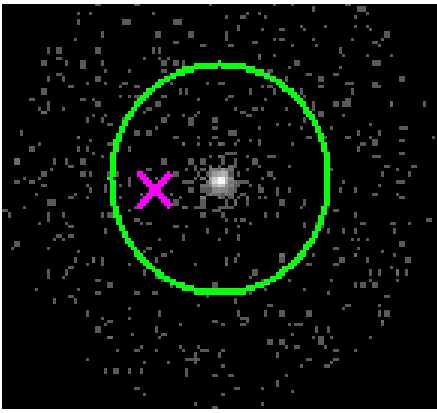


3 Gratings

3.1 HEG Arm



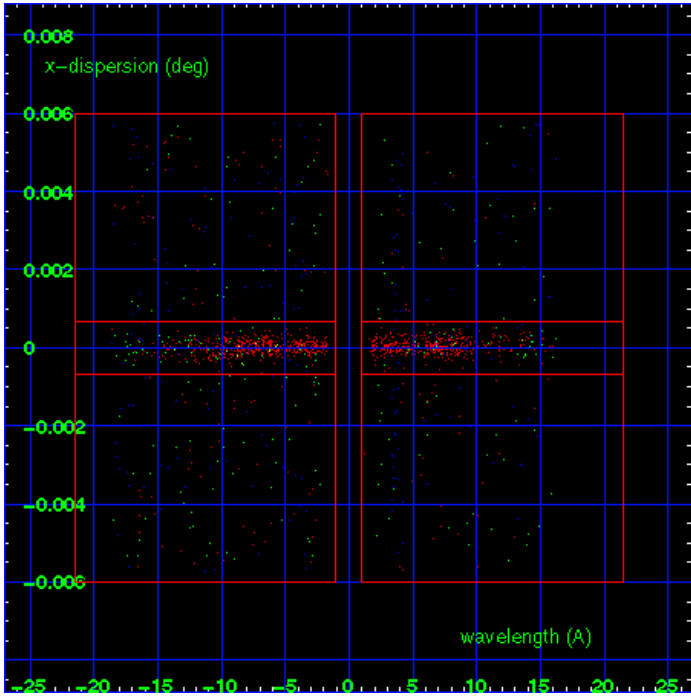
HEG Order Sort 123



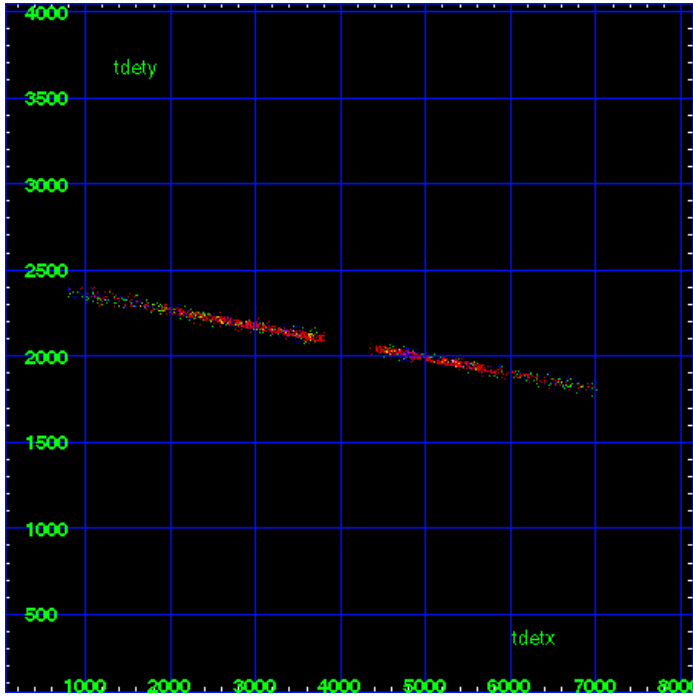
HEG Zero Order



HEG Order Sort ALL

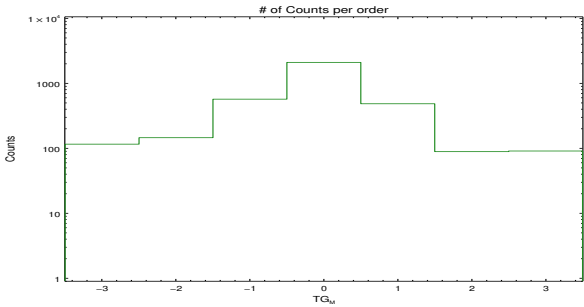


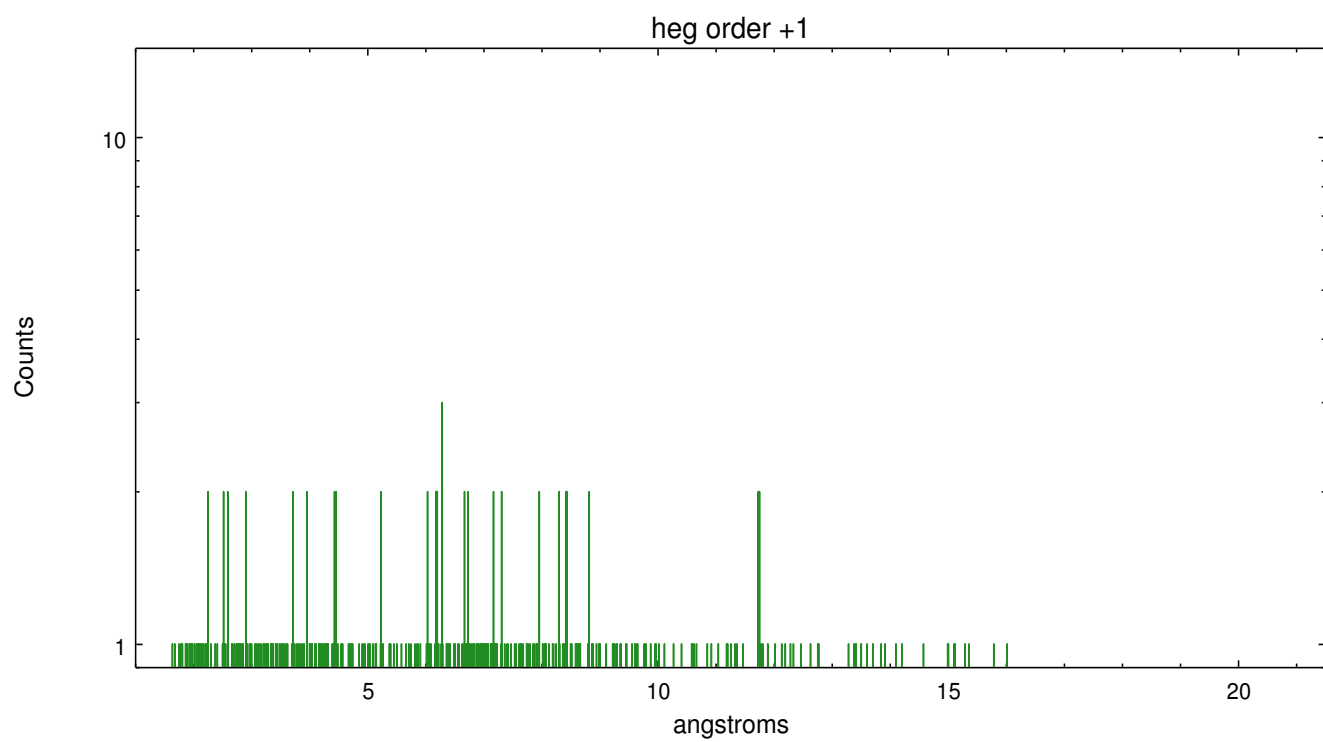
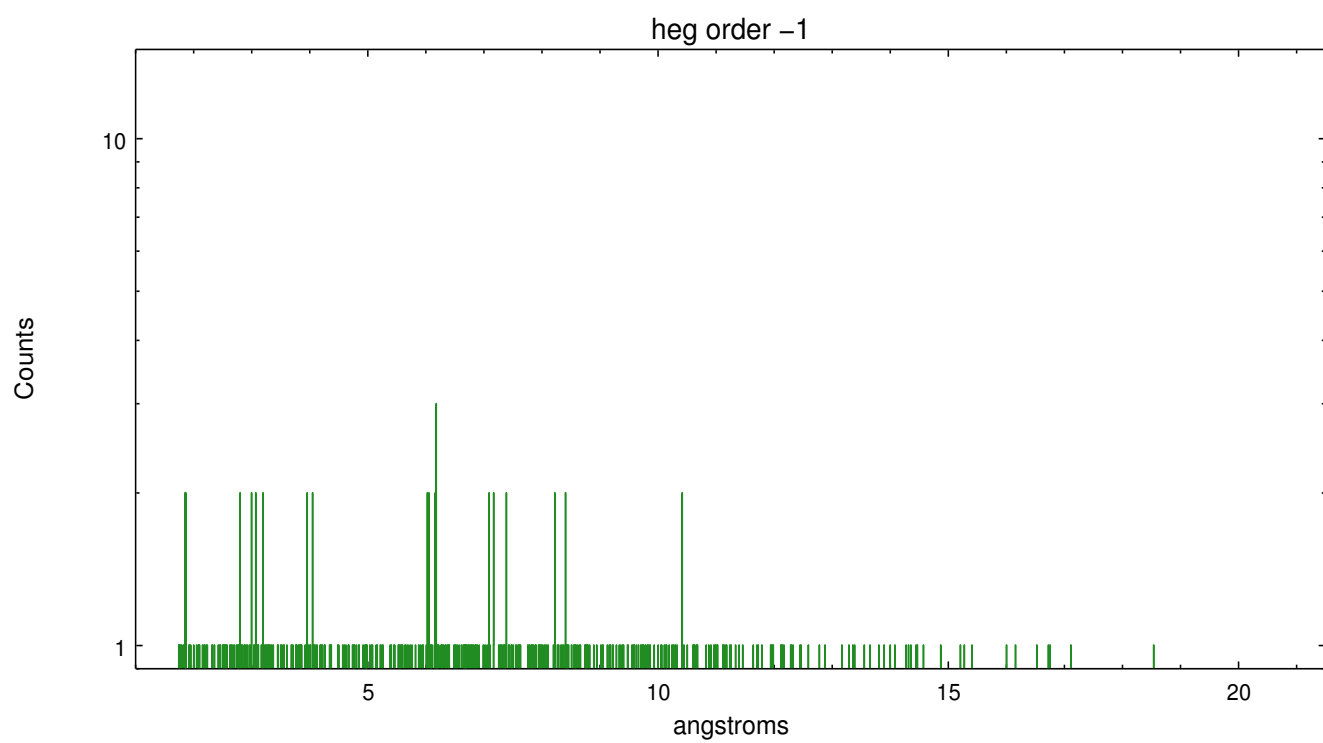
Spot Image HEG



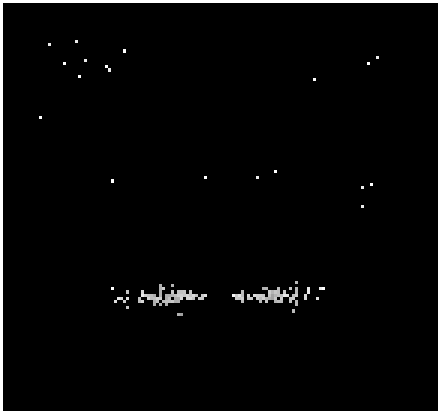
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	116	146	573	2115	487	89	91

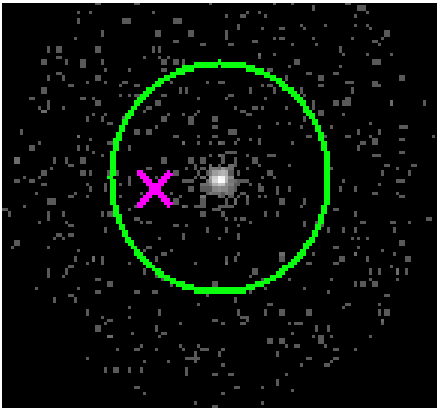




3.2 MEG Arm



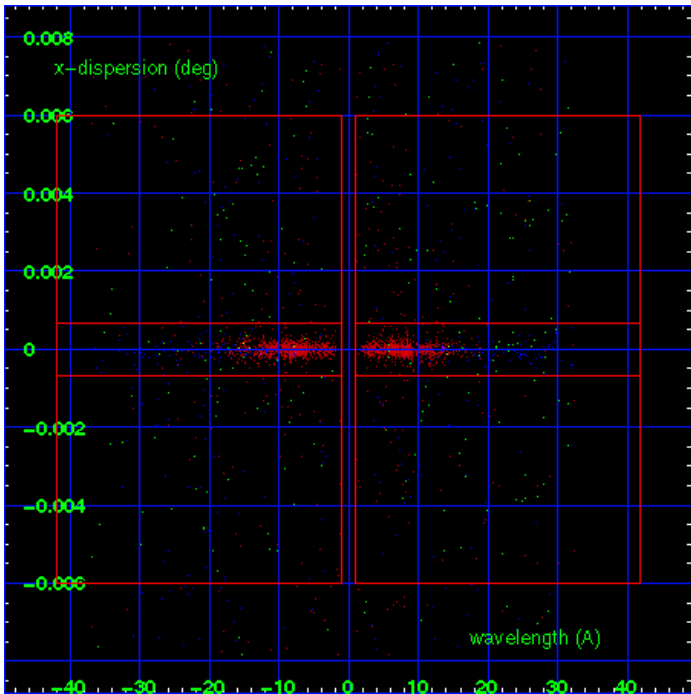
MEG Order Sort 123



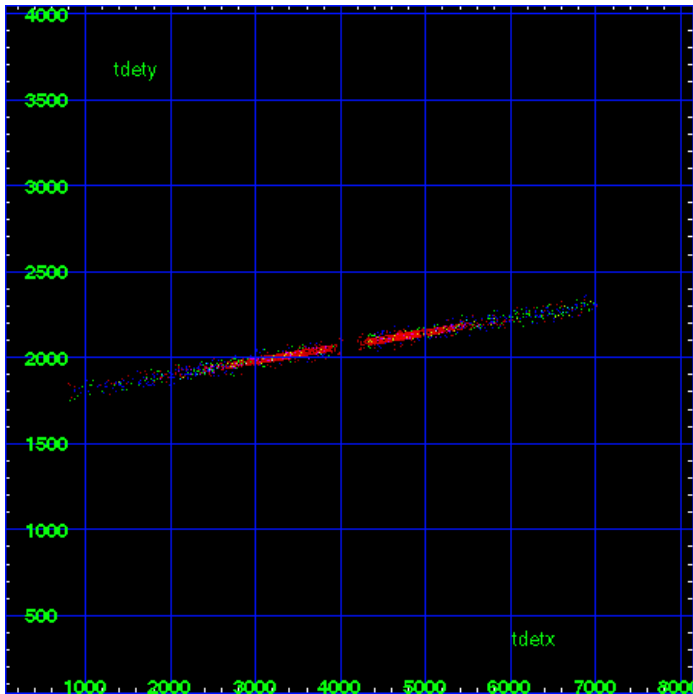
MEG Zero Order



MEG Order Sort ALL

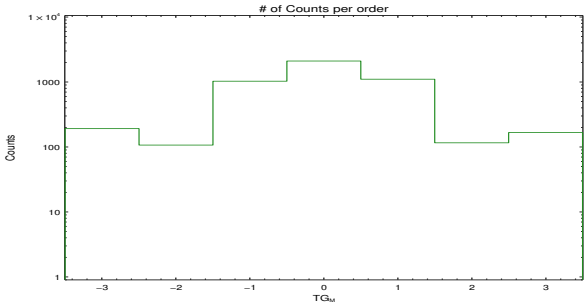


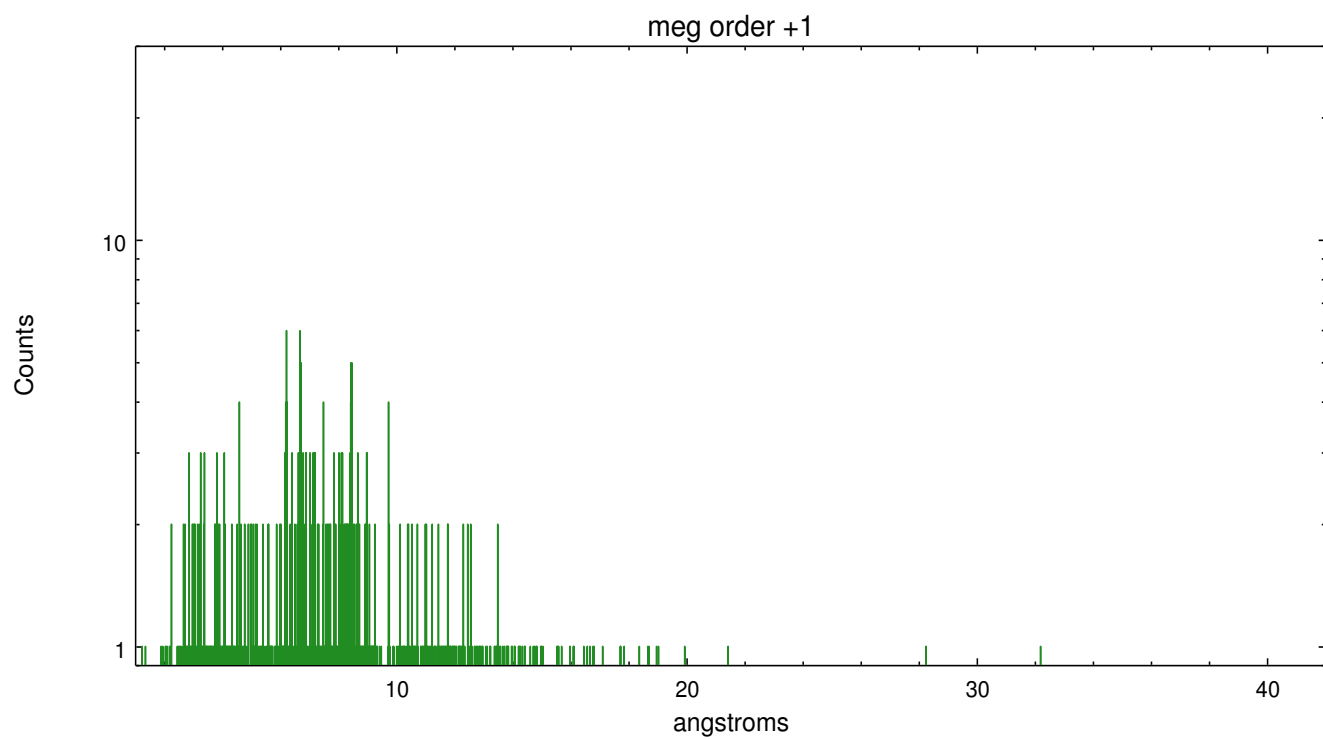
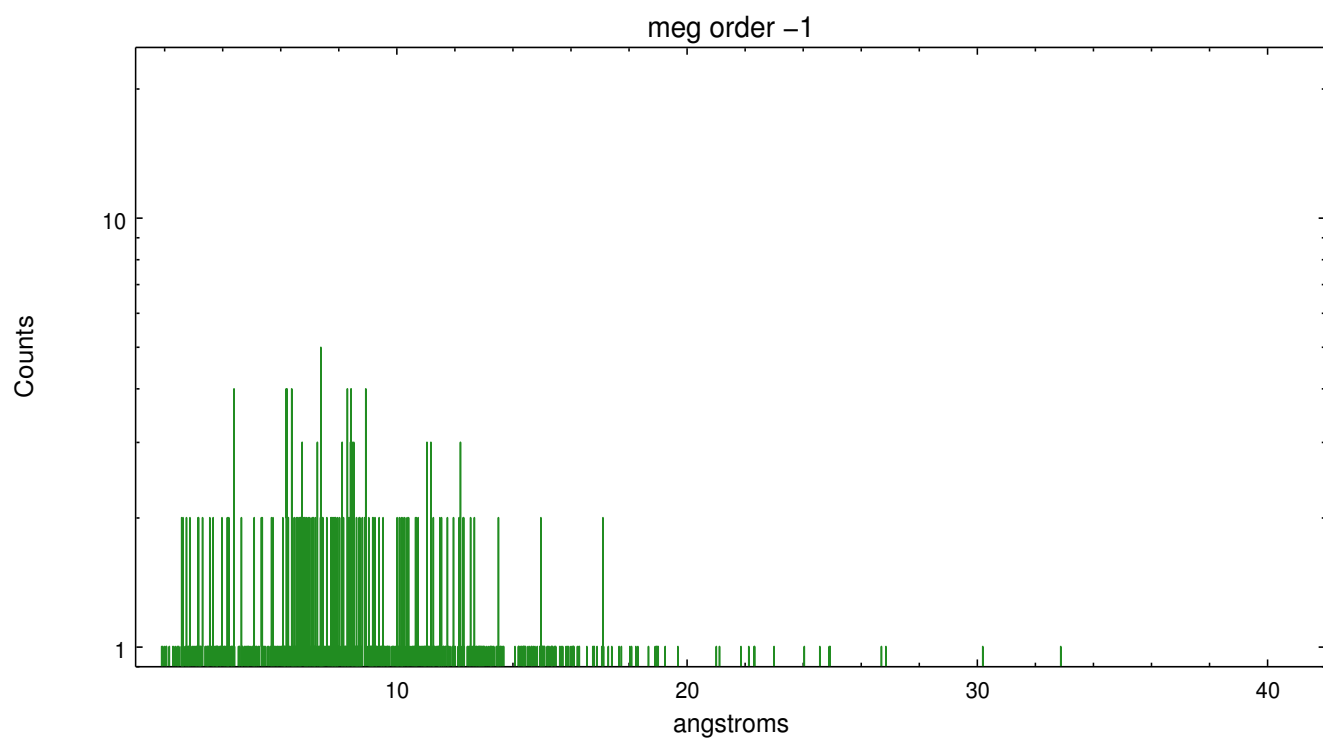
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	192	107	1033	2115	1109	116	167





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.03.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.13

A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files are incorrect by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct. If using the FP temp values in the headers of data files (some CIAO tools require this information), investigators should subtract 1.3 degrees from the reported temperature to determine the true temperature.