

V&V Reference Report

L2 ASCDS Version : 8.5.1

Observation 5460 - L2 Version 4
Chandra X-Ray Center

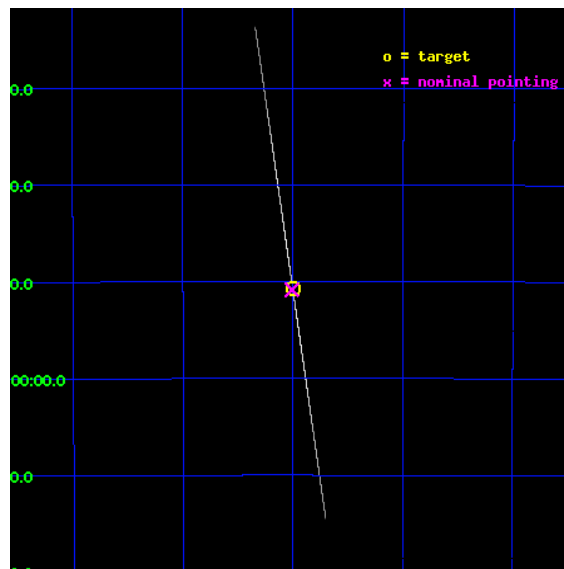
L2 Processing Date : Dec 20 2012

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1 Front

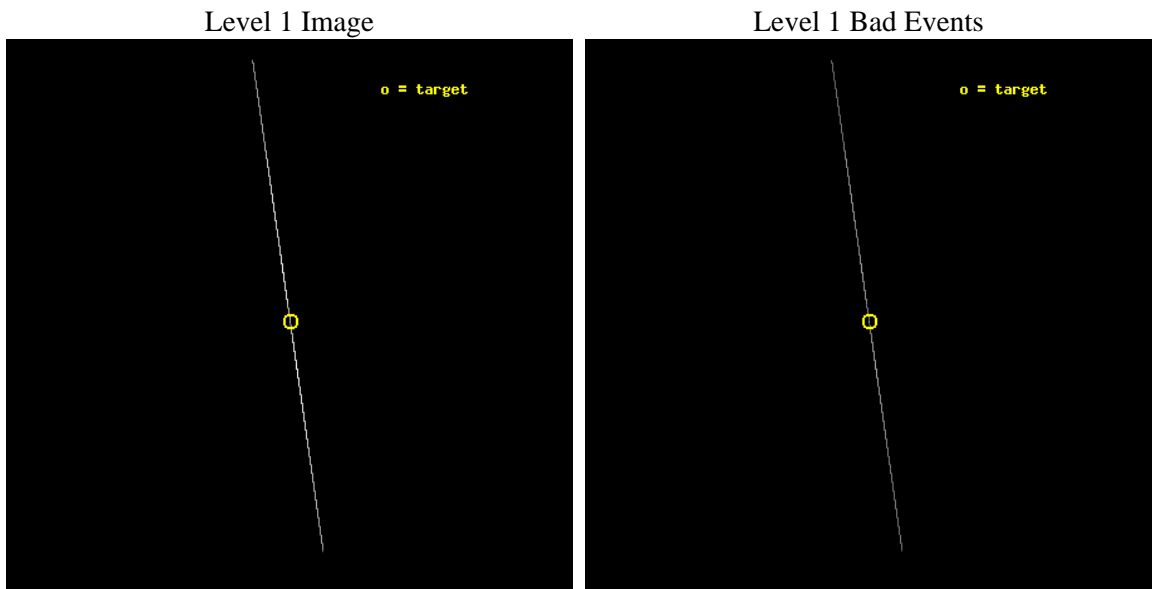
seq_num	400390	Sequence number
obs_id	5460	Observation id
title	Relativistic Effects and Outflows in a Black Hole Transient	Propos
observer	Dr Jon Miller	Principal investigator
object	GRO J1655-40	Source name
ra_targ	253.500583	Observer's specified target RA [deg]
dec_targ	-39.845806	Observer's specified target Dec [deg]
ra_nom	253.50245627682	Nominal RA [deg]
dec_nom	-39.84749063306	Nominal Dec [deg]
roll_nom	81.700894739743	Nominal Roll [deg]
revision	4	Processing version of data
ontime	14301.597694099	Sum of GTIs [s]
livetime	14245.732078106	Livetime [s]
ontime4	29659.035957396	Sum of GTIs [s]
ontime5	33566.75	Sum of GTIs [s]
ontime6	14288.461236715	Sum of GTIs [s]
ontime7	14301.597694099	Sum of GTIs [s]
ontime8	22929.274167329	Sum of GTIs [s]
ontime9	33025.319081247	Sum of GTIs [s]
l2events	11605187	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	33423.002000	[s] Scheduled observation exposure time
ascdsver	8.5.1	Processing system revision	ontime	14301.597694099	Sum of GTIs [s]
caldbver	4.5.5	 	ontime4	29659.035957396	Sum of GTIs [s]
date	2012-12-18T10:12:44	Date and time of file creation	ontime5	33566.75	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	14288.461236715	Sum of GTIs [s]
			ontime7	14301.597694099	Sum of GTIs [s]
			ontime8	22929.274167329	Sum of GTIs [s]
			ontime9	33025.319081247	Sum of GTIs [s]
			l1events	12650023	Number of level 1 events

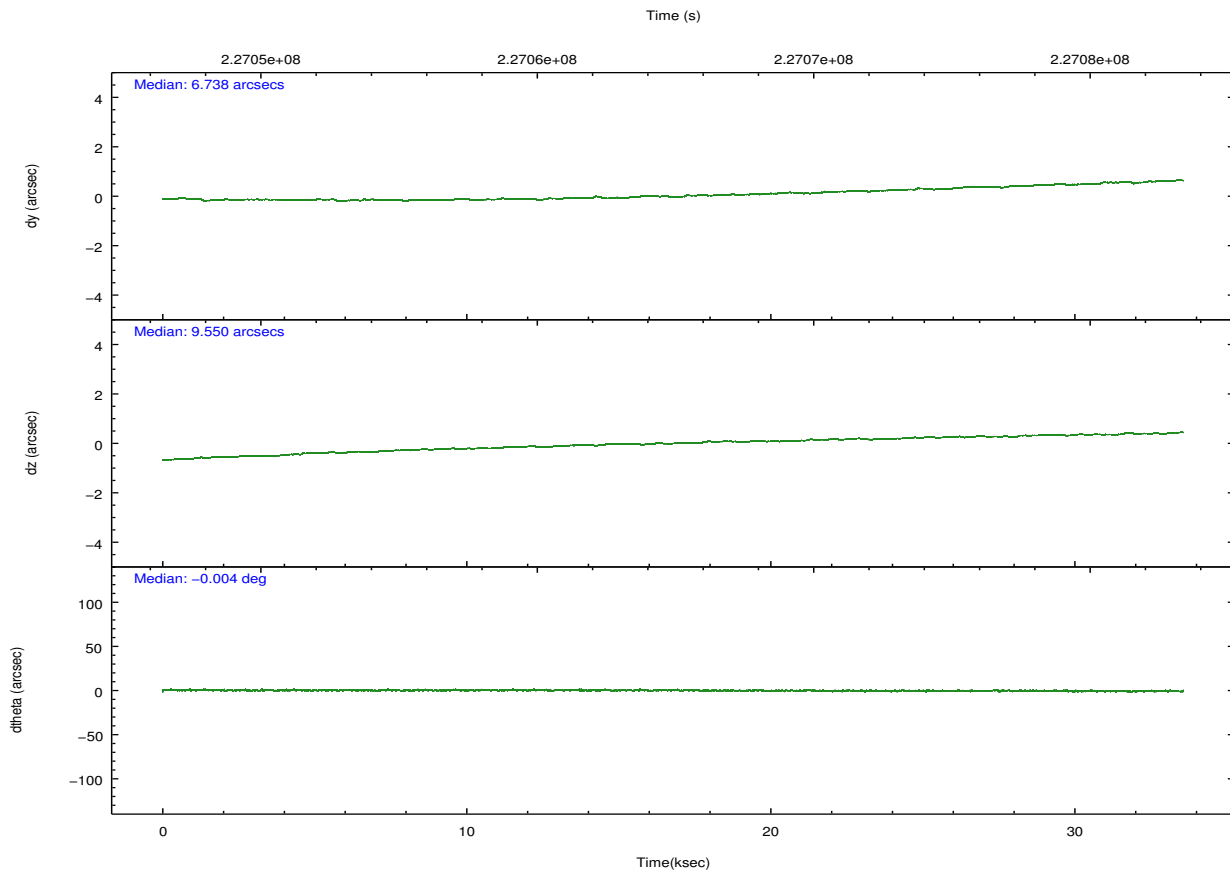
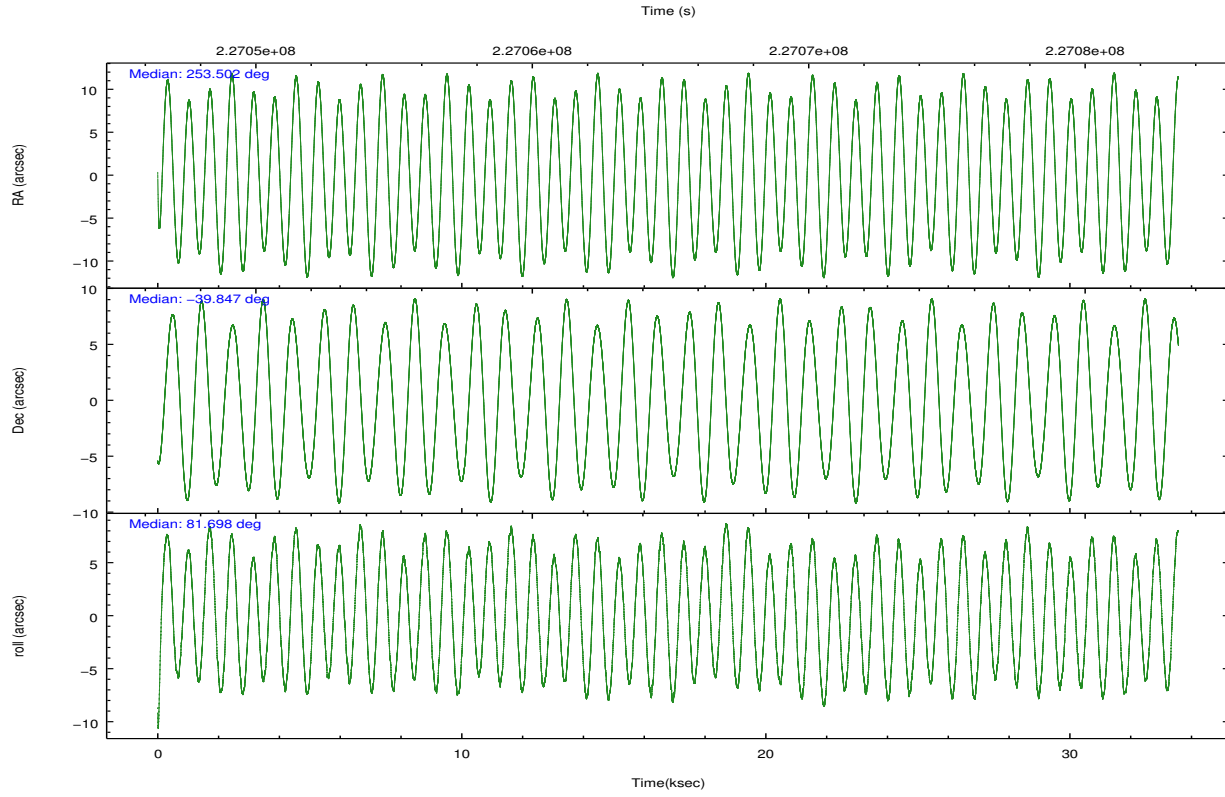
2.1.3 Events

	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	274954	2078814	3657370	3835908	2315965	487012	grade 0 events	14838	346088	1203031	748903	1498926	67284
rejected events	11905	59851	67939	88606	39666	17250		5%	16%	32%	19%	64%	13%
rejected %	4%	2%	1%	2%	1%	3%	grade 1 events	192	693	5368	4768	4887	379
								0%	0%	0%	0%	0%	0%
							grade 2 events	214767	923065	2063471	1106445	591224	351249
								78%	44%	56%	28%	25%	72%
							grade 3 events	5392	102650	55950	378072	64200	8007
								1%	4%	1%	9%	2%	1%
							grade 4 events	5618	100782	55941	376000	63193	8456
								2%	4%	1%	9%	2%	1%
							grade 5 events	9164	43908	26460	45508	17784	13312
								3%	2%	0%	1%	0%	2%
							grade 6 events	24983	561628	247149	1176212	75751	38325
								9%	27%	6%	30%	3%	7%
							grade 7 events	0	0	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	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	253.516021	253.5024562768186	Subarray requested	NONE	NONE
[deg] Pointing Dec	-39.872673	-39.84749063306039	Alternating exposures requested	N	N
[deg] Pointing Roll	81.552967	81.70089473974286	[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)	227048277.184000	227047293.98875			
Observation start date	2005-03-12T20:56:53	2005-03-12T20:41:33			
[s] Observation end time (MET)	227081700.184000	227081913.87782			
Observation end date	2005-03-13T06:13:56	2005-03-13T06:18:33			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect

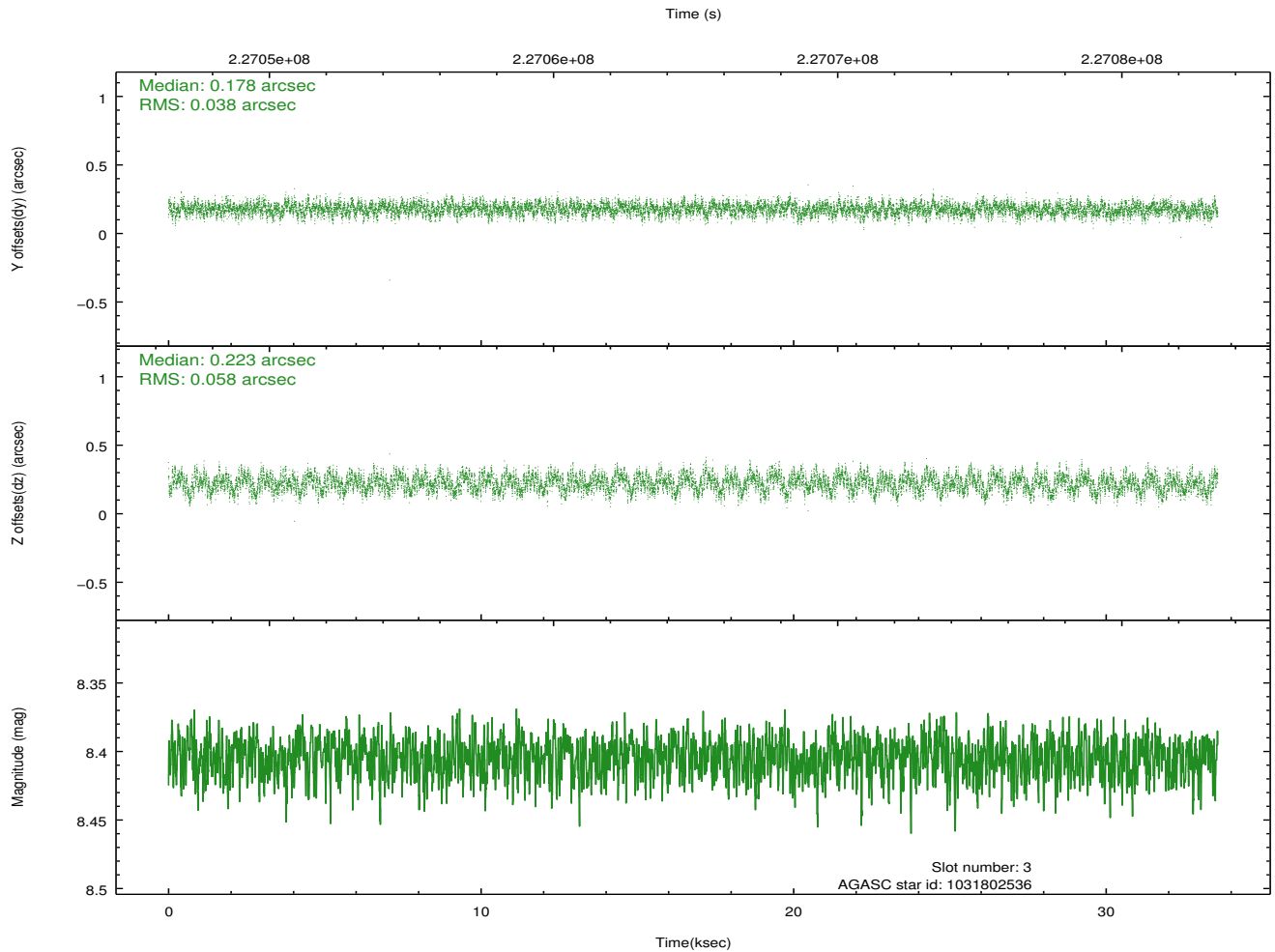
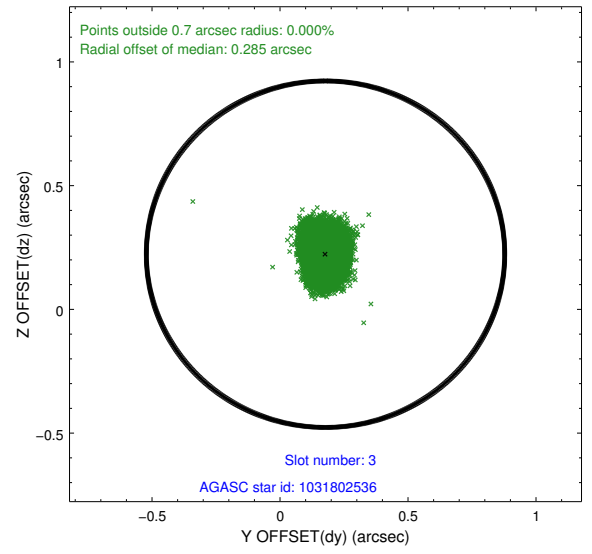
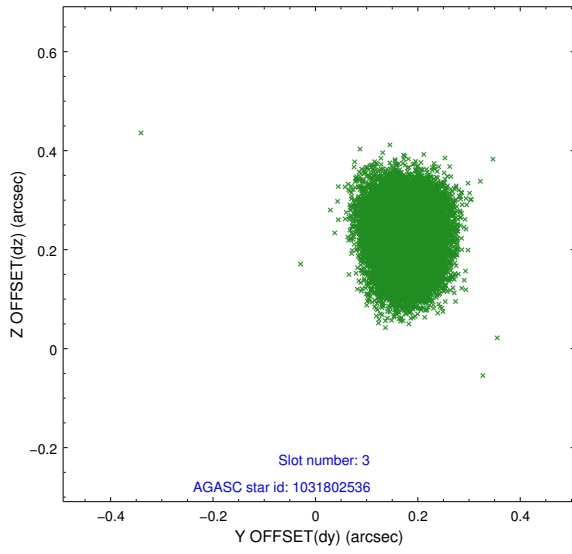


Slot Statistics

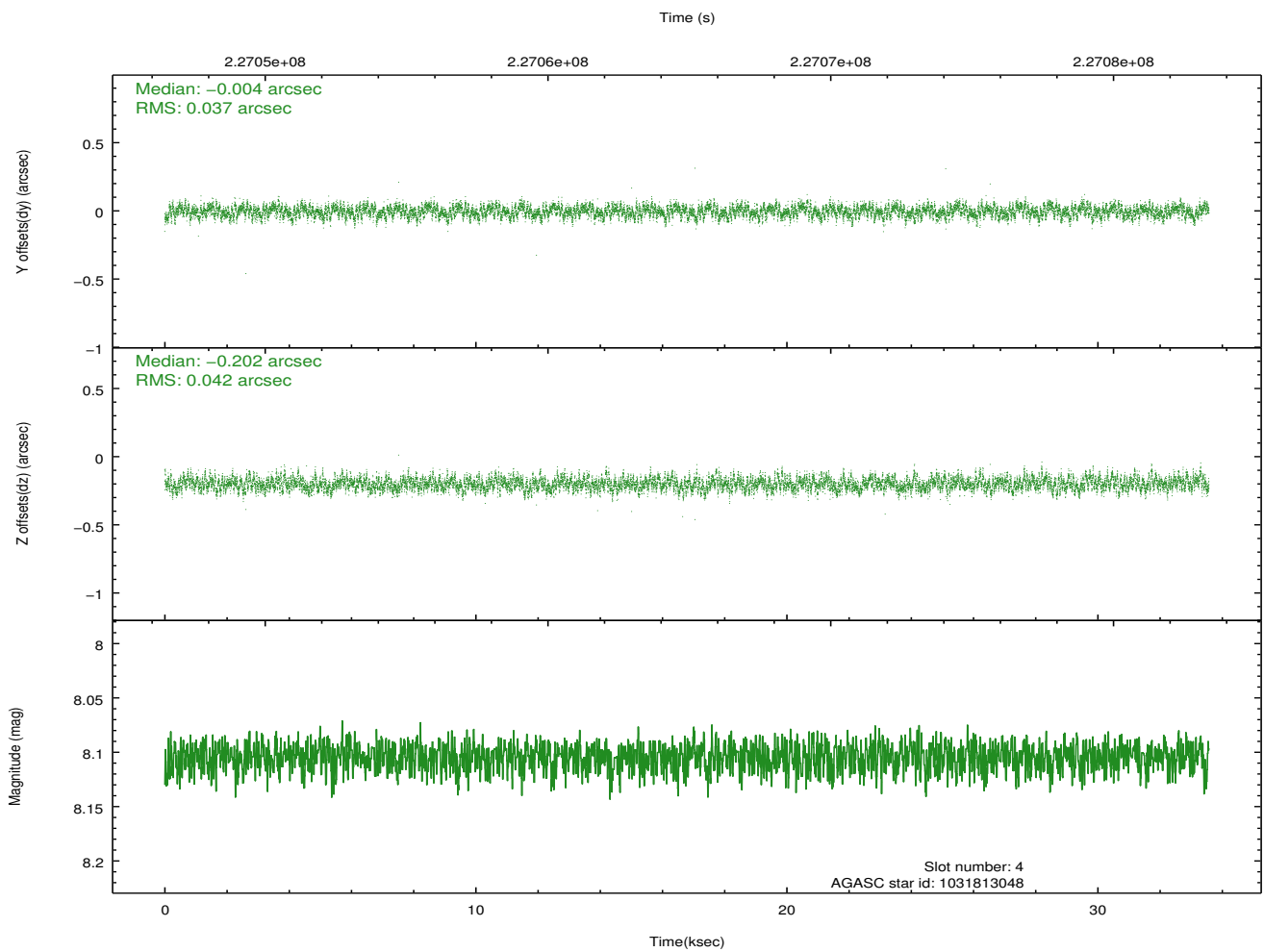
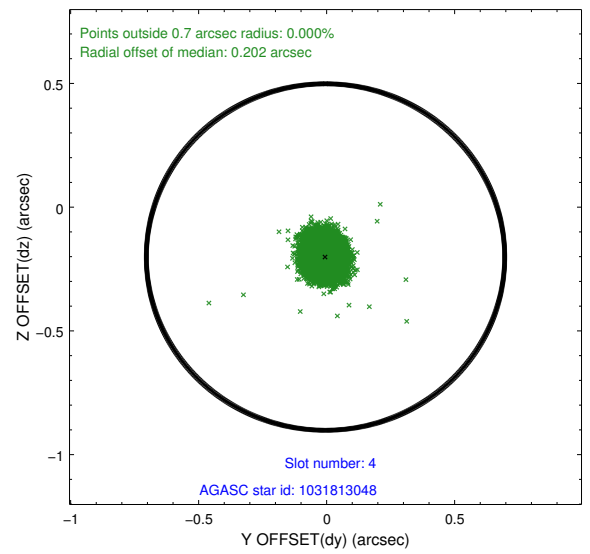
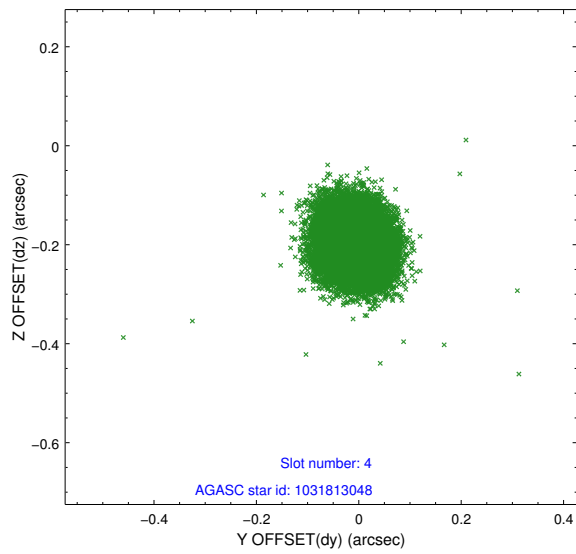
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	8188	0.040	0.162	0.029	0.042	0.000000	0.000000	937.00	-1880.56
1	FID	ACIS-S-2	7.09	8190	-0.161	-0.140	0.014	0.021	0.000000	0.000000	-759.08	-1885.44
2	FID	ACIS-S-4	7.18	8189	0.095	-0.018	0.016	0.024	0.000000	0.000000	2154.31	23.32
3	GUIDE	1031802536	8.40	16372	0.178	0.223	0.074	0.118	254.071271	-40.495693	-1999.73	-1833.63
4	GUIDE	1031813048	8.10	16375	-0.004	-0.202	0.060	0.095	252.819336	-39.835864	-159.48	1923.10
5	GUIDE	1031279512	8.07	16377	-0.276	-0.094	0.049	0.080	253.011652	-39.245400	2022.89	1722.32
6	GUIDE	1031807512	8.25	16371	-0.087	-0.148	0.070	0.106	252.886468	-39.697545	361.35	1816.64
7	GUIDE	1031807240	7.53	16375	0.191	0.226	0.056	0.093	253.730711	-40.524826	-2236.44	-925.85

2.4 Star Slots

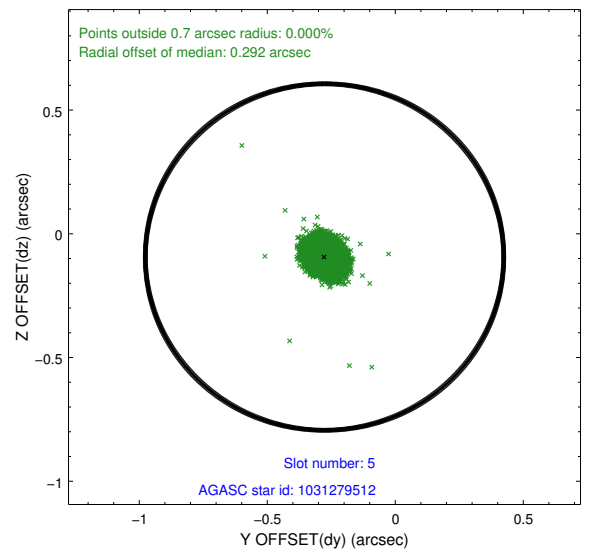
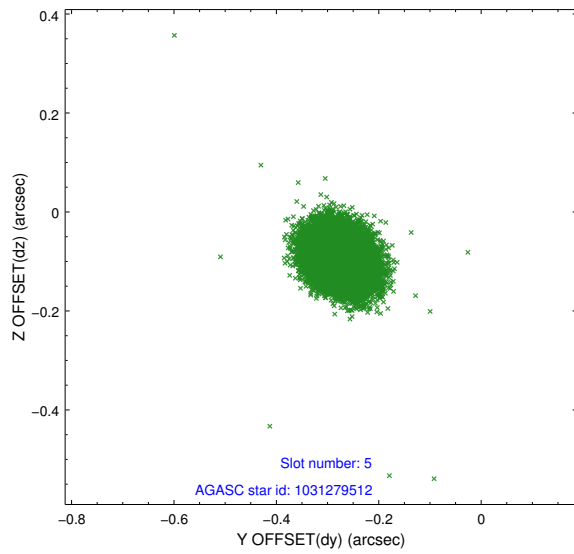
2.4.1 Slot 3



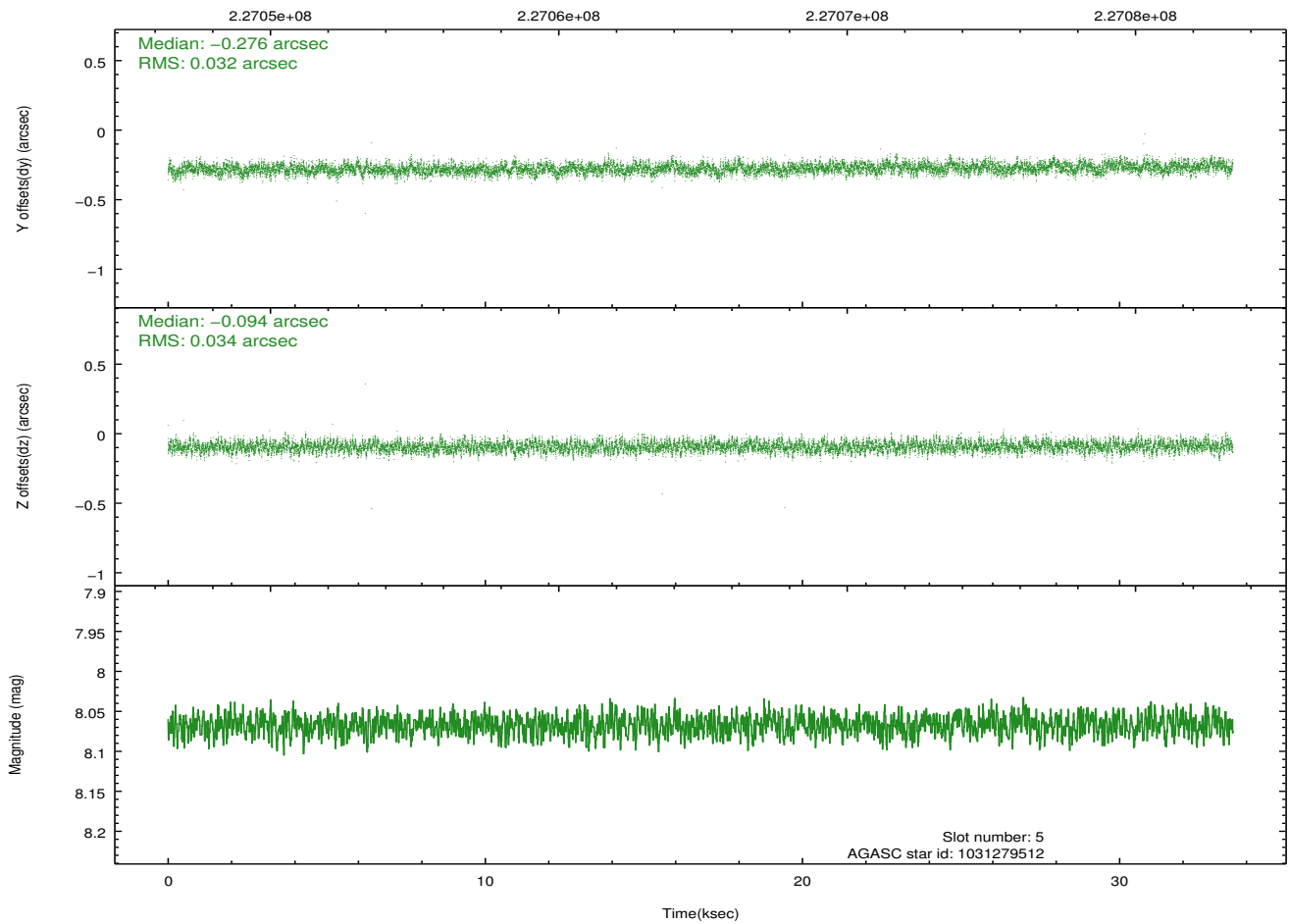
2.4.2 Slot 4



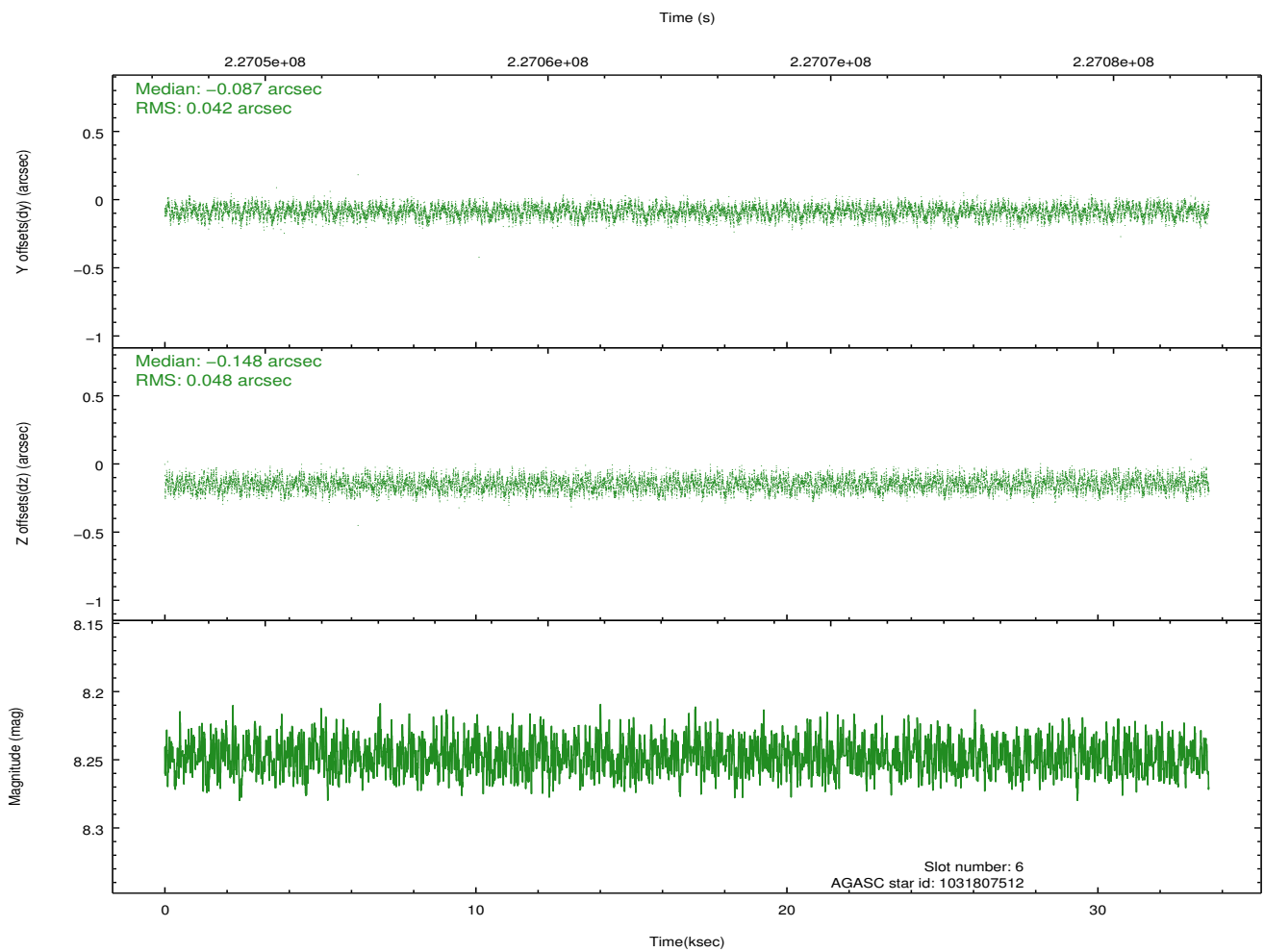
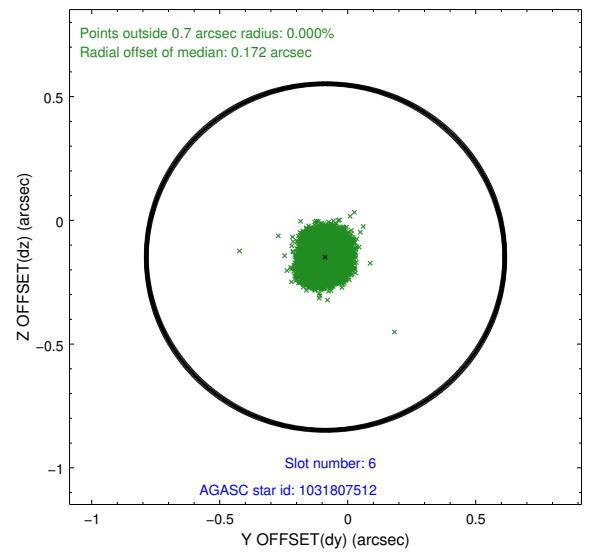
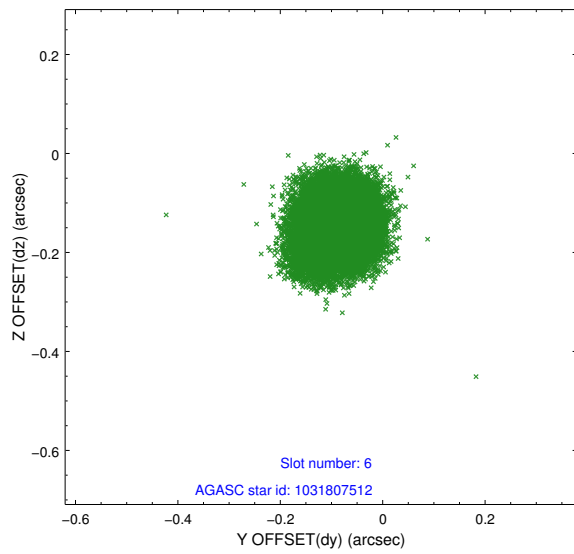
2.4.3 Slot 5



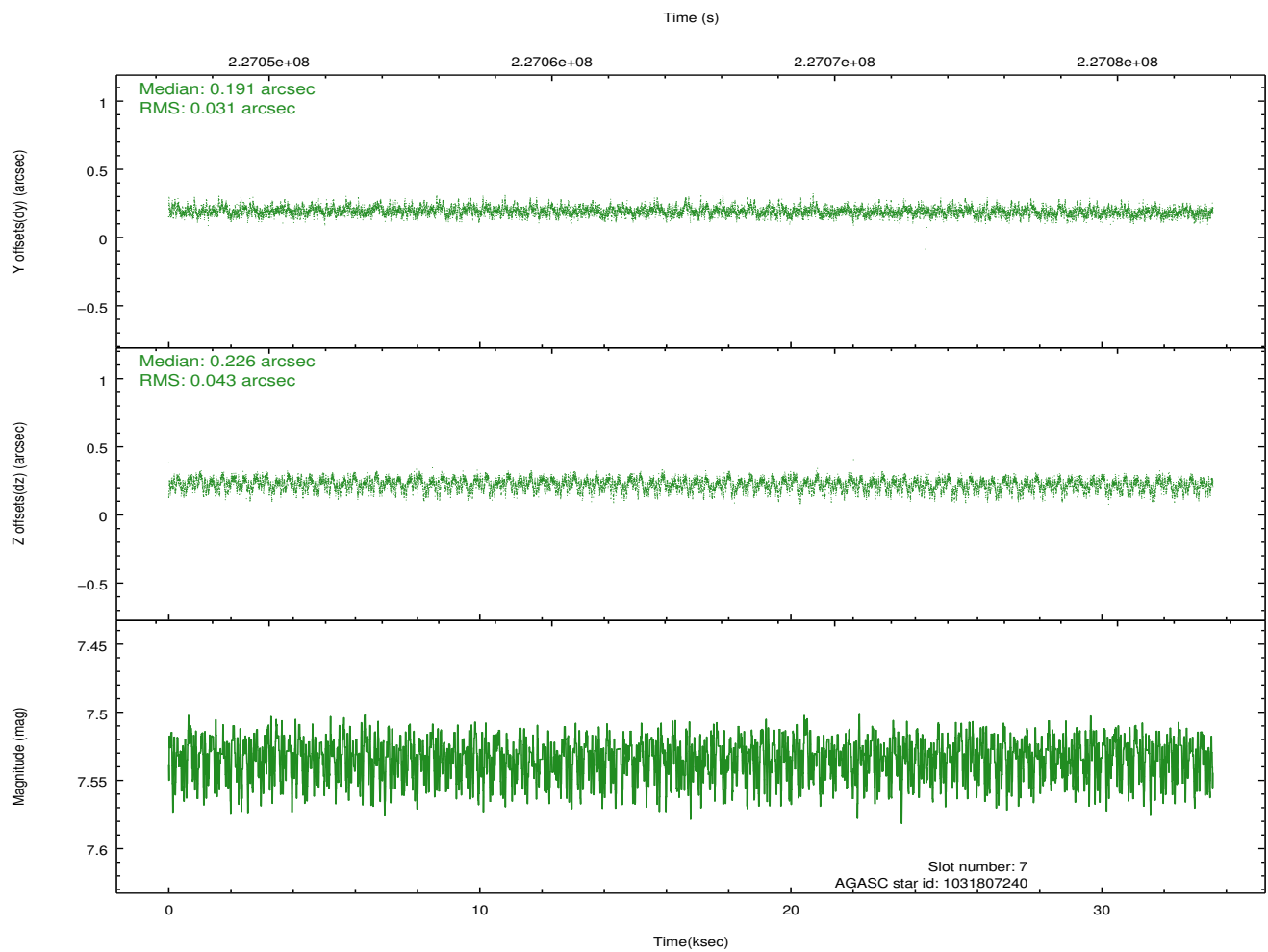
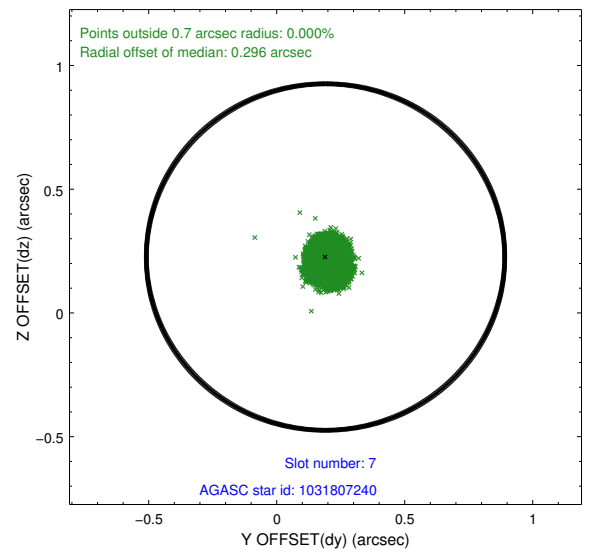
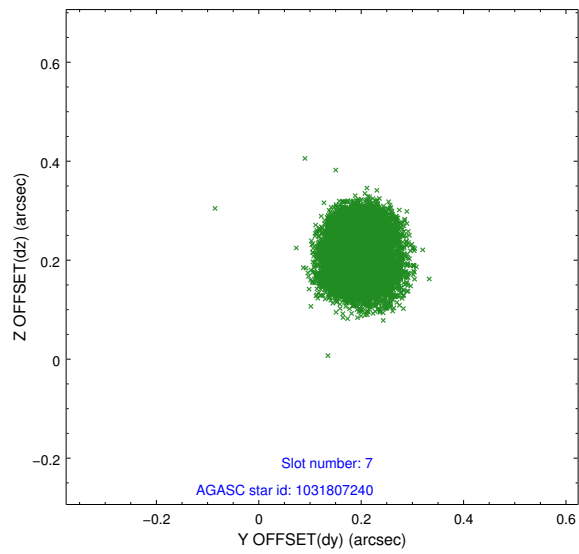
Time (s)



2.4.4 Slot 6

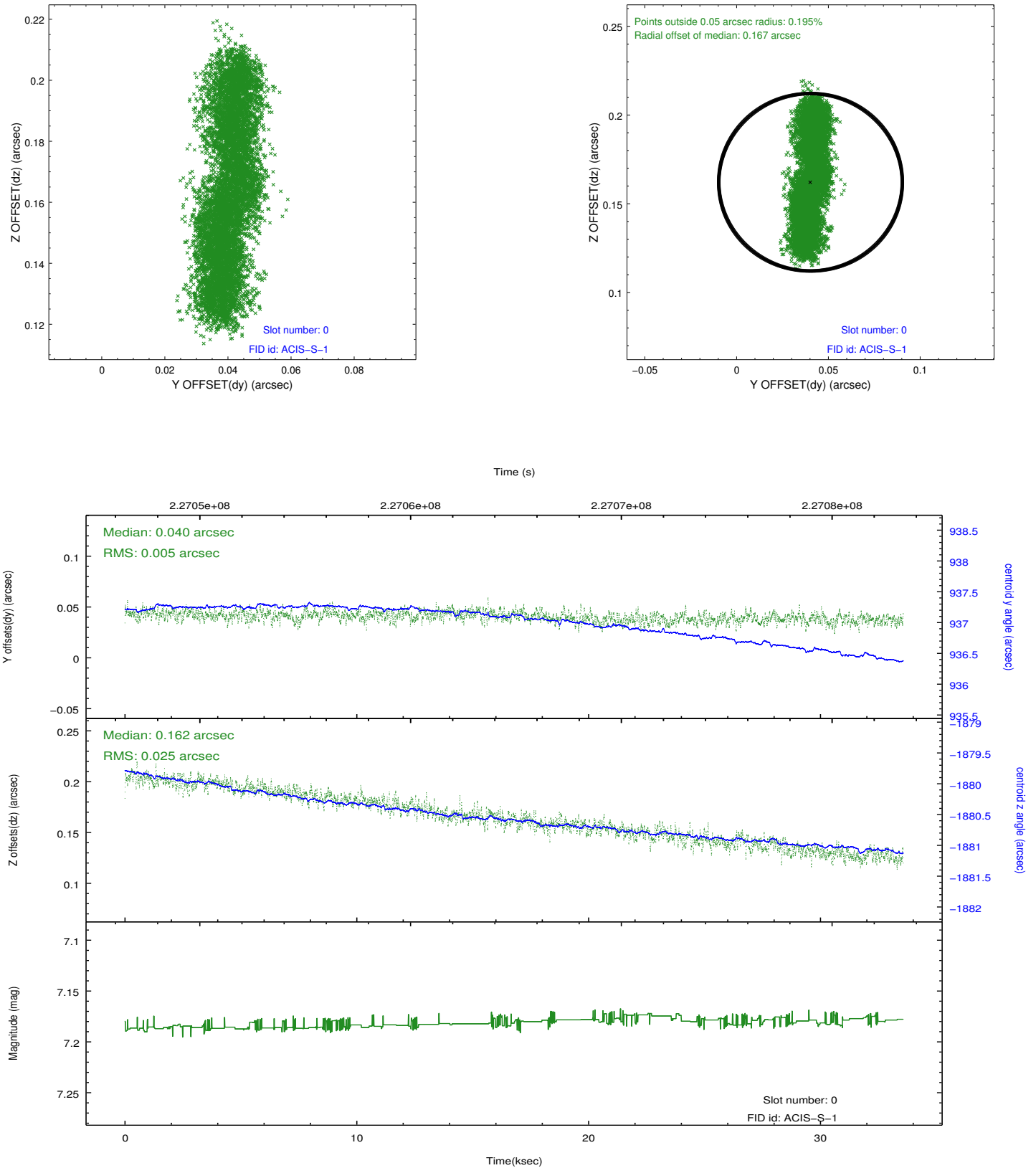


2.4.5 Slot 7

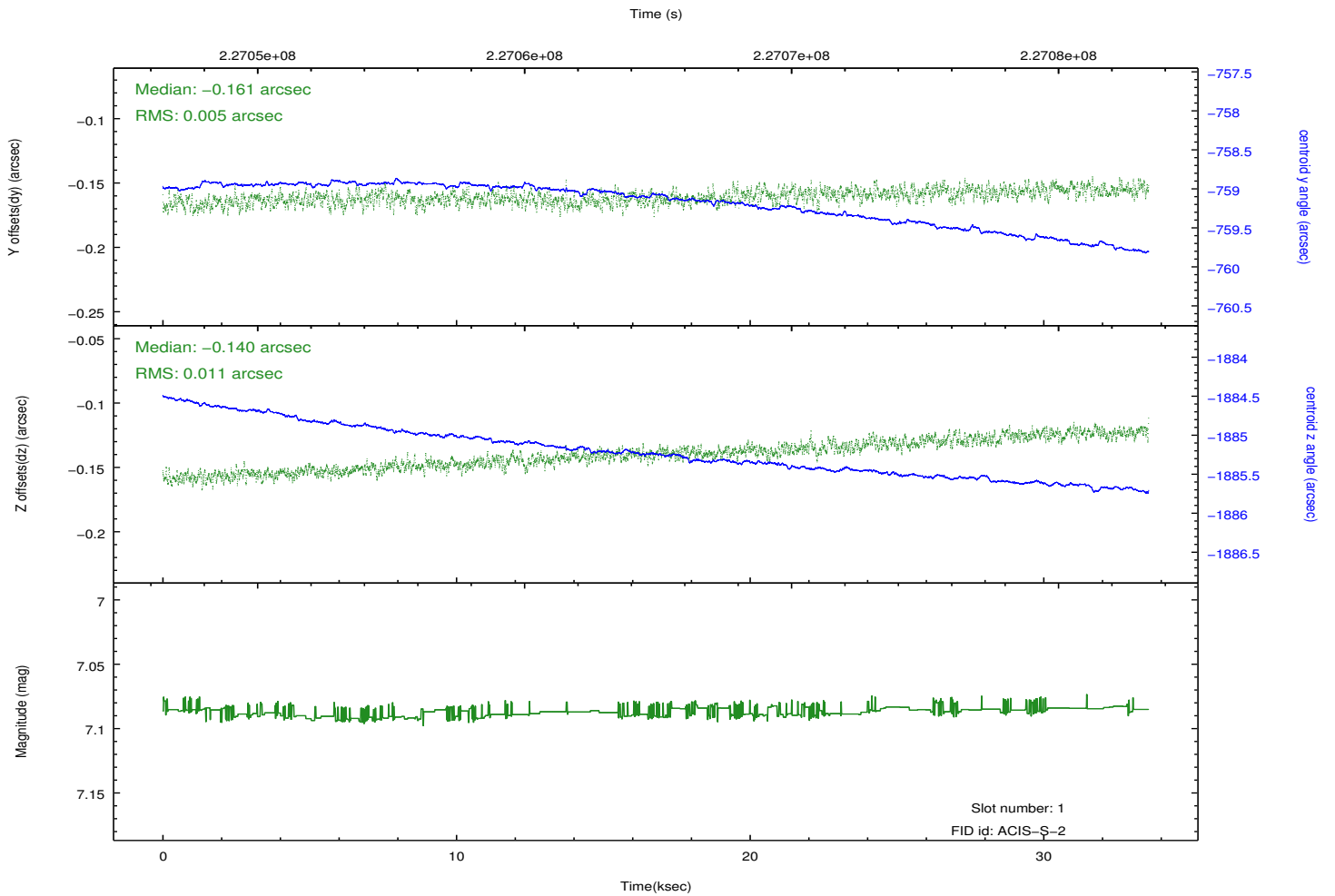
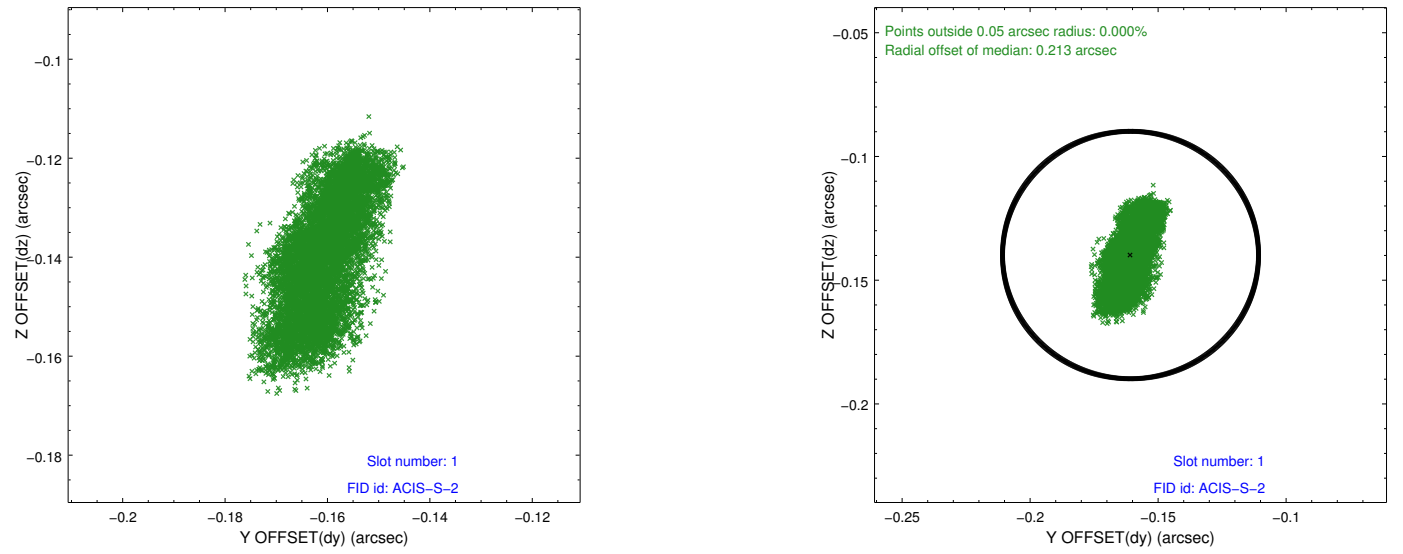


2.5 FID Slots

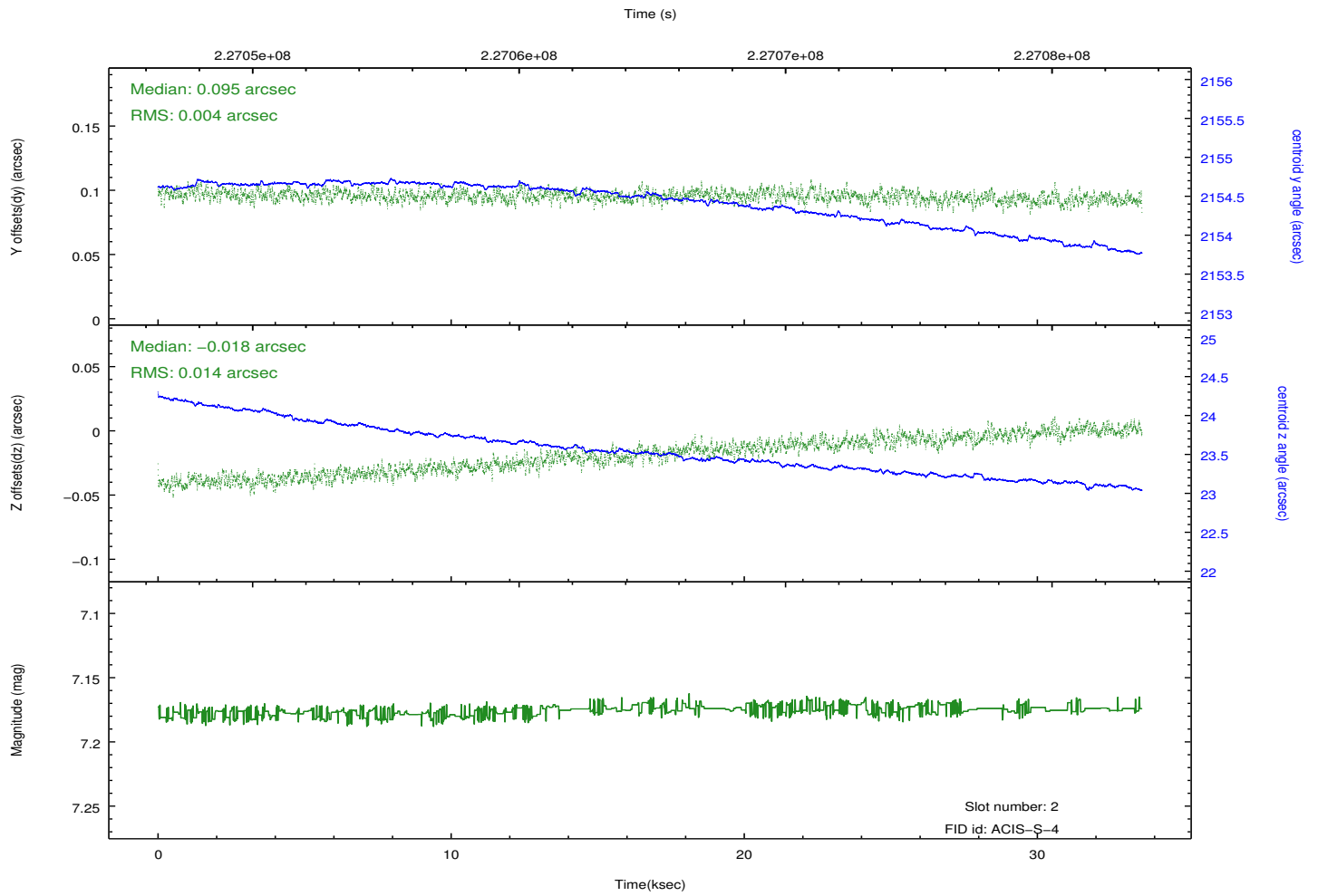
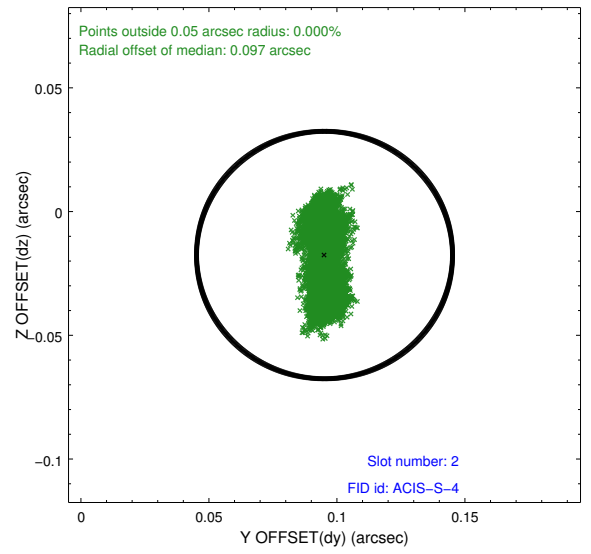
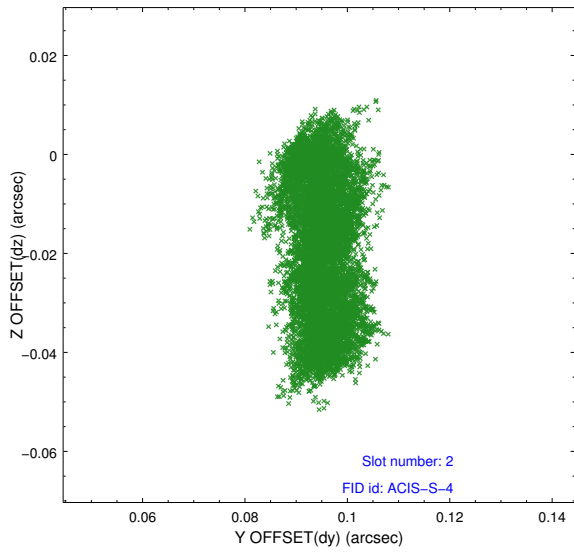
2.5.1 Slot 0



2.5.2 Slot 1

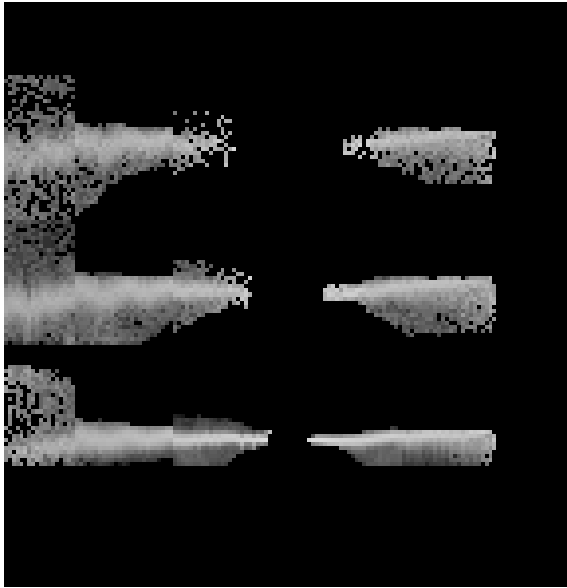


2.5.3 Slot 2



3 Gratings

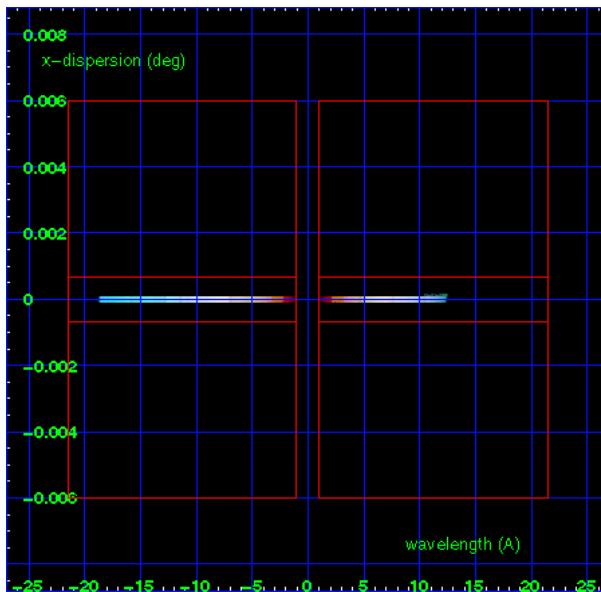
3.1 HEG Arm



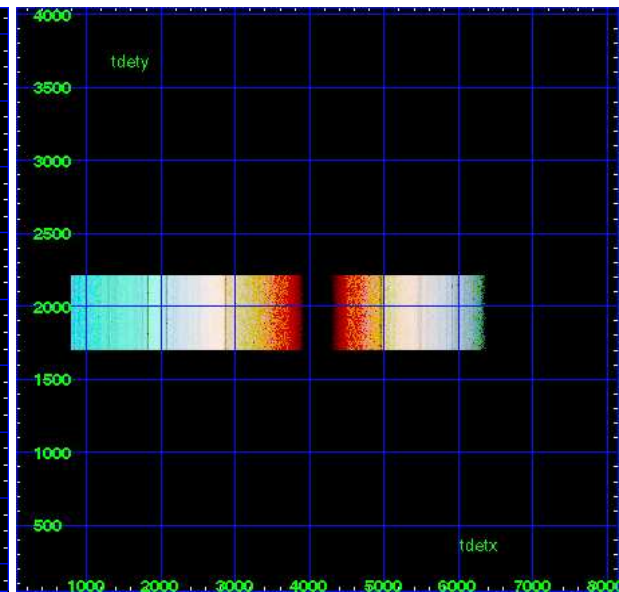
HEG Order Sort 123



HEG Order Sort ALL

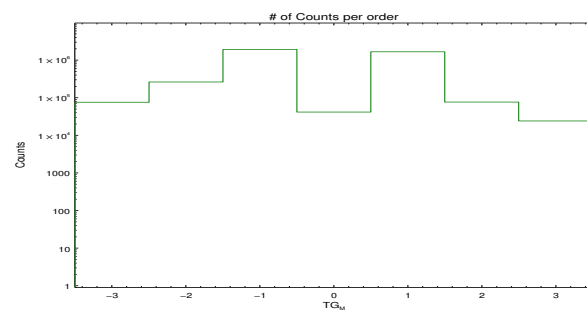


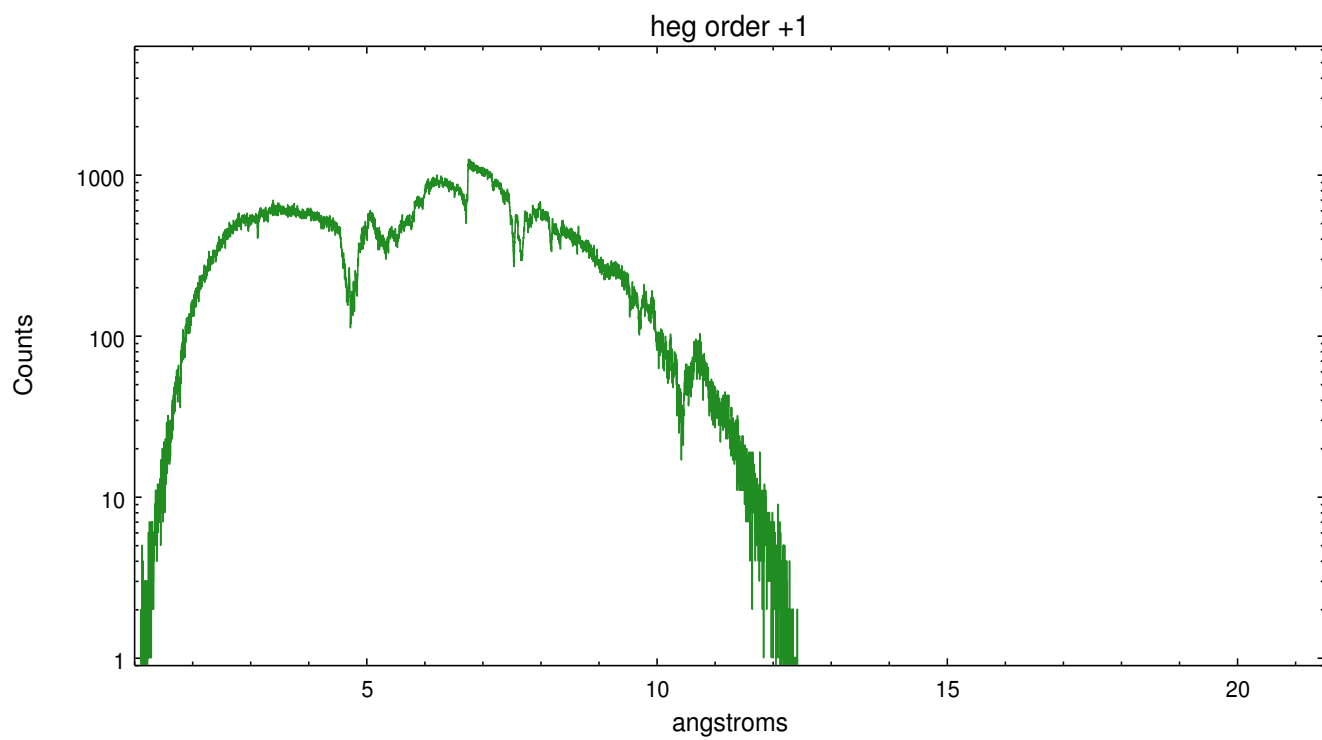
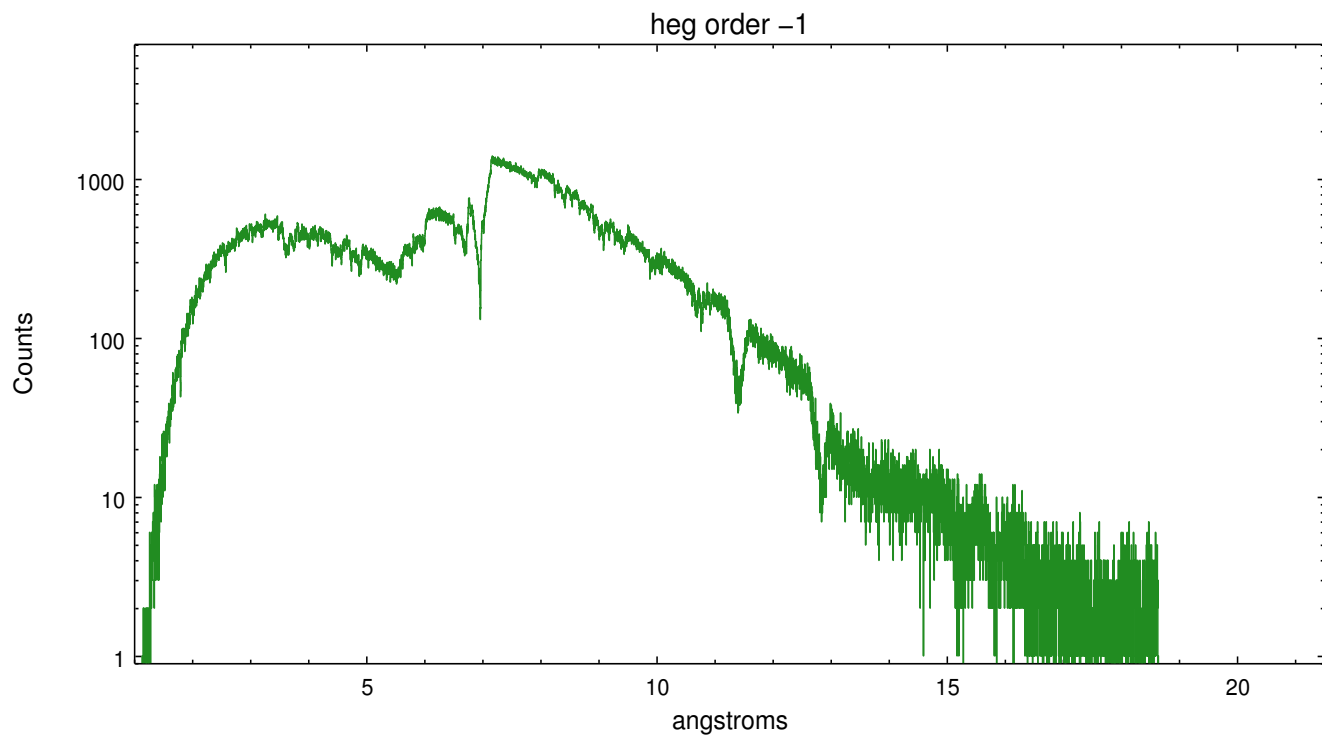
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	76245	264275	1940902	41775	1685972	77079	24226

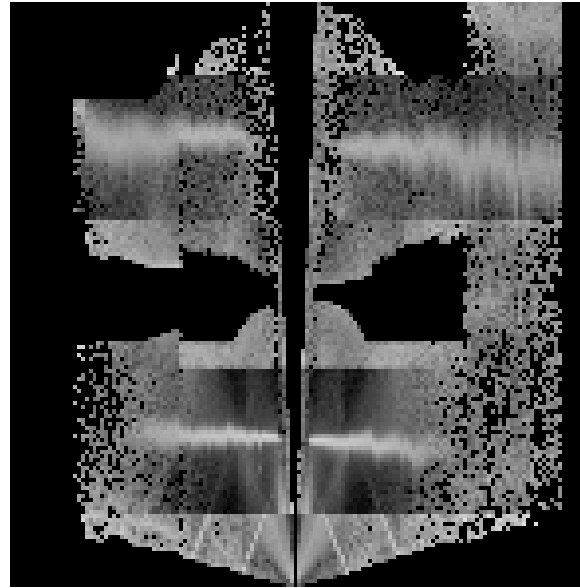




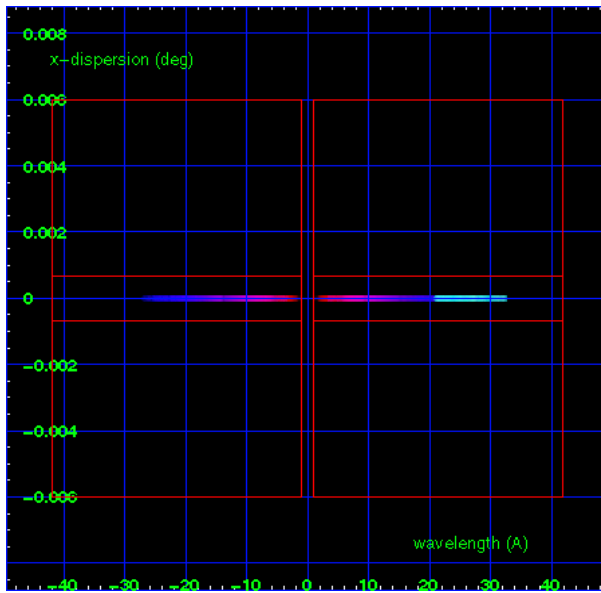
3.2 MEG Arm



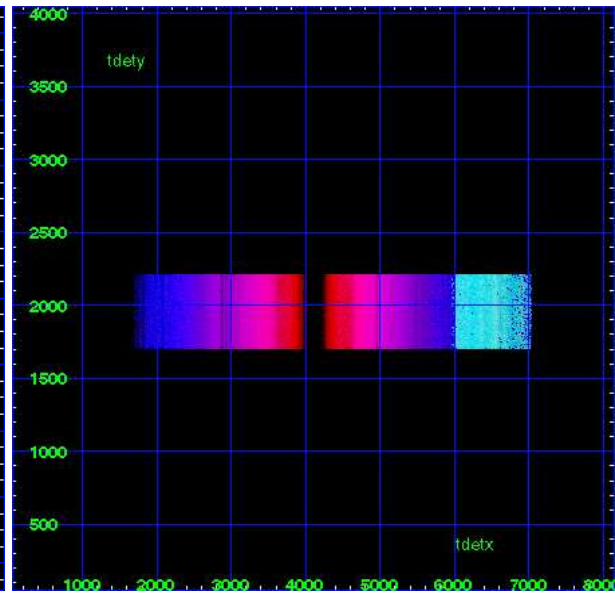
MEG Order Sort 123



MEG Order Sort ALL

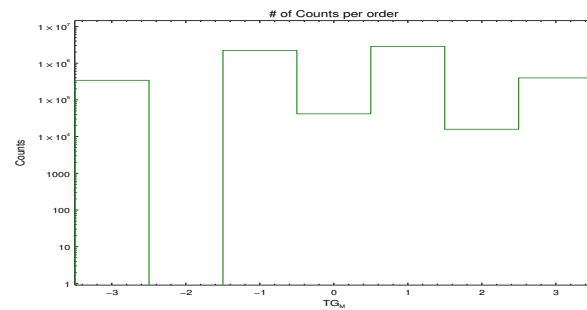


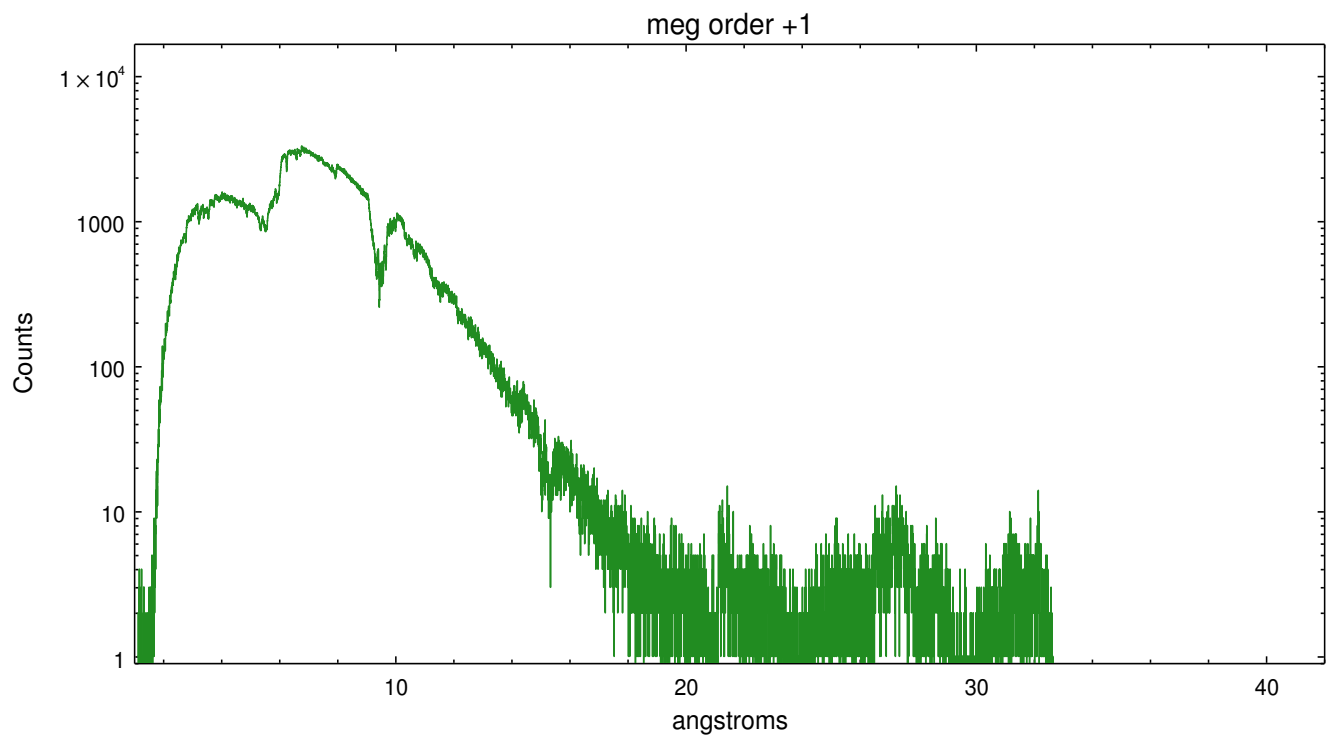
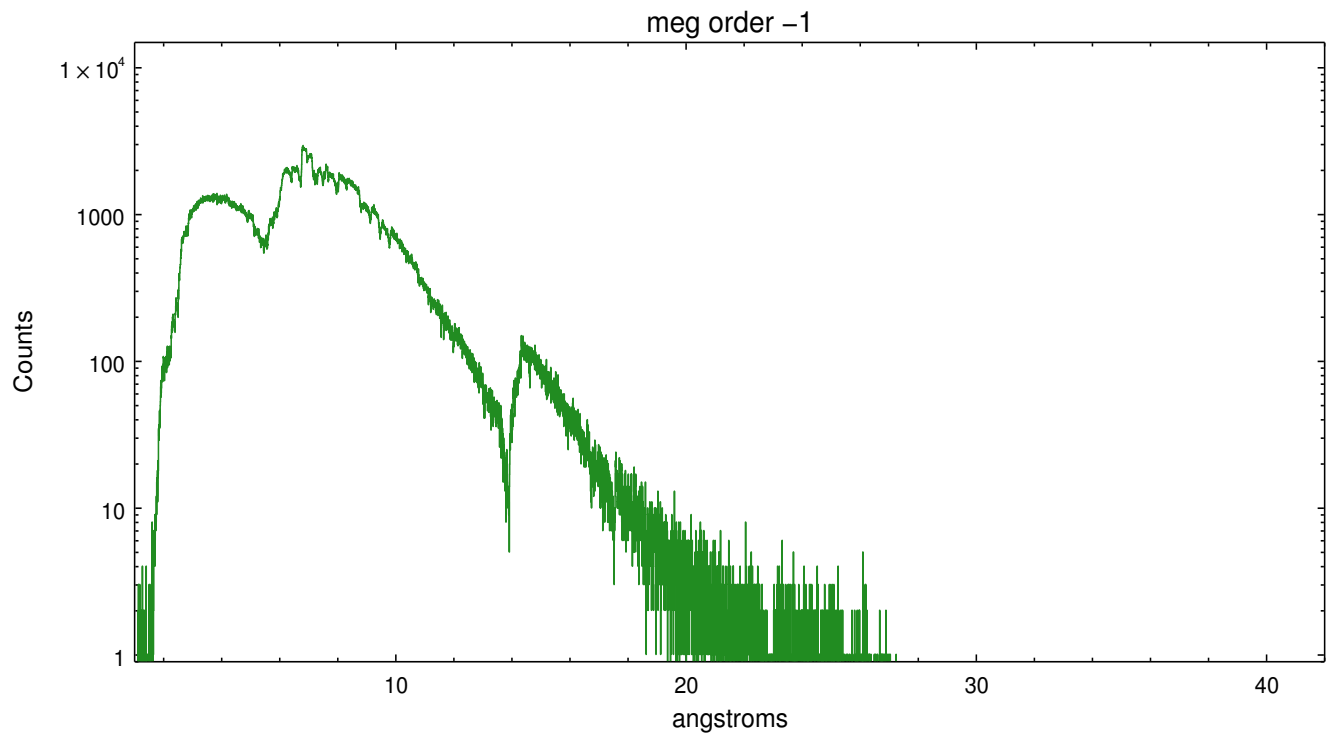
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	343141	0	2240512	41775	2874400	15855	399731





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2013.01.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33

A.2 Comments

Charge time:

used ontime9 for charge time, which indicates the duration of the observation. other chips can be lower due to telemetry saturation by the bright source.

=====

New charge time is less than existing charge time used in previously distributed version

NEW CHARGE TIME = 14.301598 ks, 1 Obis

EXISTING CHARGE TIME = 34.300000 ks, 1 Obis.

Variation in Chips > 15% threshold.

Low Chip 6, ONTIME=14288.461237 seconds

High Chip 5, ONTIME=33566.750000 seconds

Chip 8, ONTIME=22929.274167 seconds is less than 80% of scheduled time=33423.002000 seconds

Chip 7, ONTIME=14301.597694 seconds is less than 80% of scheduled time=33423.002000 seconds

Chip 6, ONTIME=14288.461237 seconds is less than 80% of scheduled time=33423.002000 seconds

ONTIME of 14301.597694099 seconds is less than 85% of expected scheduled time of 33423.002 seconds