

V&V Reference Report

L2 ASCDS Version : 10.3.3

Observation 17649 - L2 Version 1
Chandra X-Ray Center

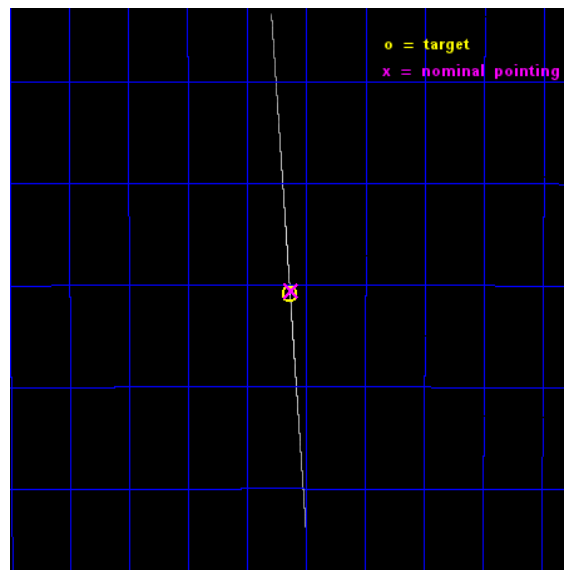
L2 Processing Date : Apr 15 2015

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1 Front

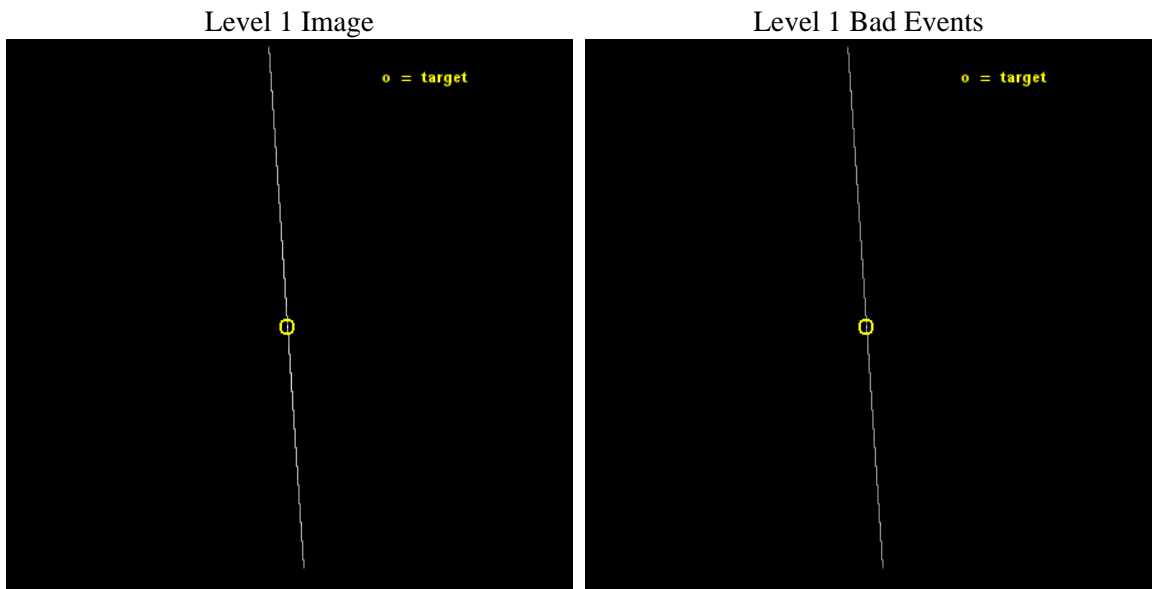
seq_num	401691	Sequence number
obs_id	17649	Observation id
title	Seizing a rare opportunity to catch a disk wind in a neutron star X-ray binary	Proposal title
observer	Dr Nathalie Degenaar	Principal investigator
object	1RXS J180408.9-342058	Source name
ra_targ	271.035	Observer's specified target RA [deg]
dec_targ	-34.347528	Observer's specified target Dec [deg]
ra_nom	271.03122455113	Nominal RA [deg]
dec_nom	-34.343063118722	Nominal Dec [deg]
roll_nom	85.889684453728	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30073.0	Sum of GTIs [s]
livetime	29955.52734375	Livetime [s]
ontime4	30073.0	Sum of GTIs [s]
ontime5	30073.0	Sum of GTIs [s]
ontime6	30073.0	Sum of GTIs [s]
ontime7	30073.0	Sum of GTIs [s]
ontime8	30073.0	Sum of GTIs [s]
ontime9	30073.0	Sum of GTIs [s]
l2events	3631405	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	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	30073.0	Sum of GTIs [s]
caldbver	4.6.7	 	ontime4	30073.0	Sum of GTIs [s]
date	2015-04-15T12:32:33	Date and time of file creation	ontime5	30073.0	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30073.0	Sum of GTIs [s]
			ontime7	30073.0	Sum of GTIs [s]
			ontime8	30073.0	Sum of GTIs [s]
			ontime9	30073.0	Sum of GTIs [s]
			l1events	5082545	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
				30073.50	

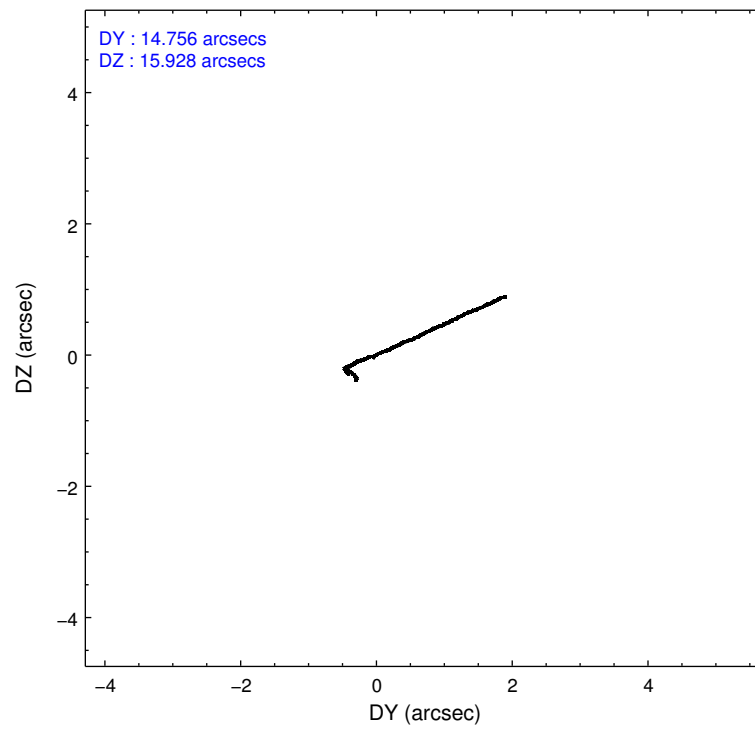
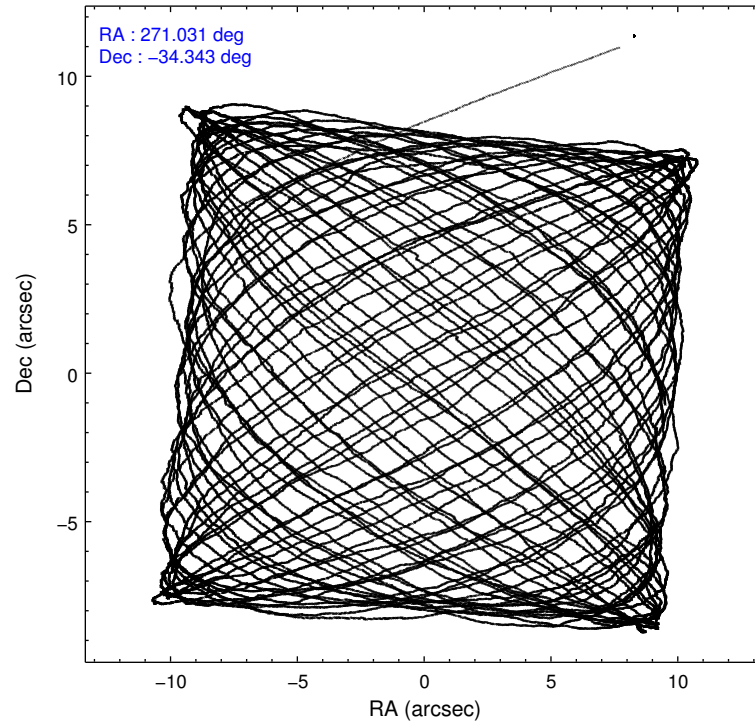
2.1.3 Events

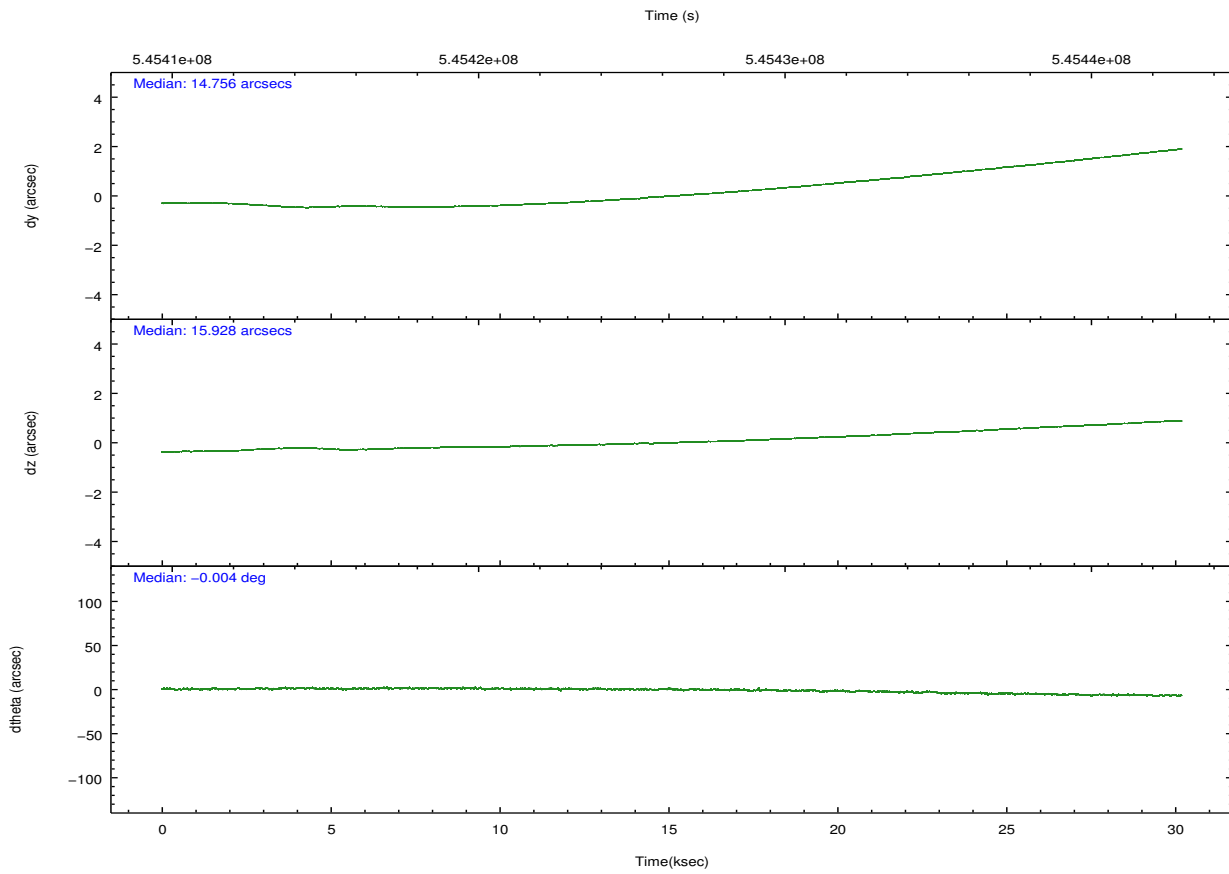
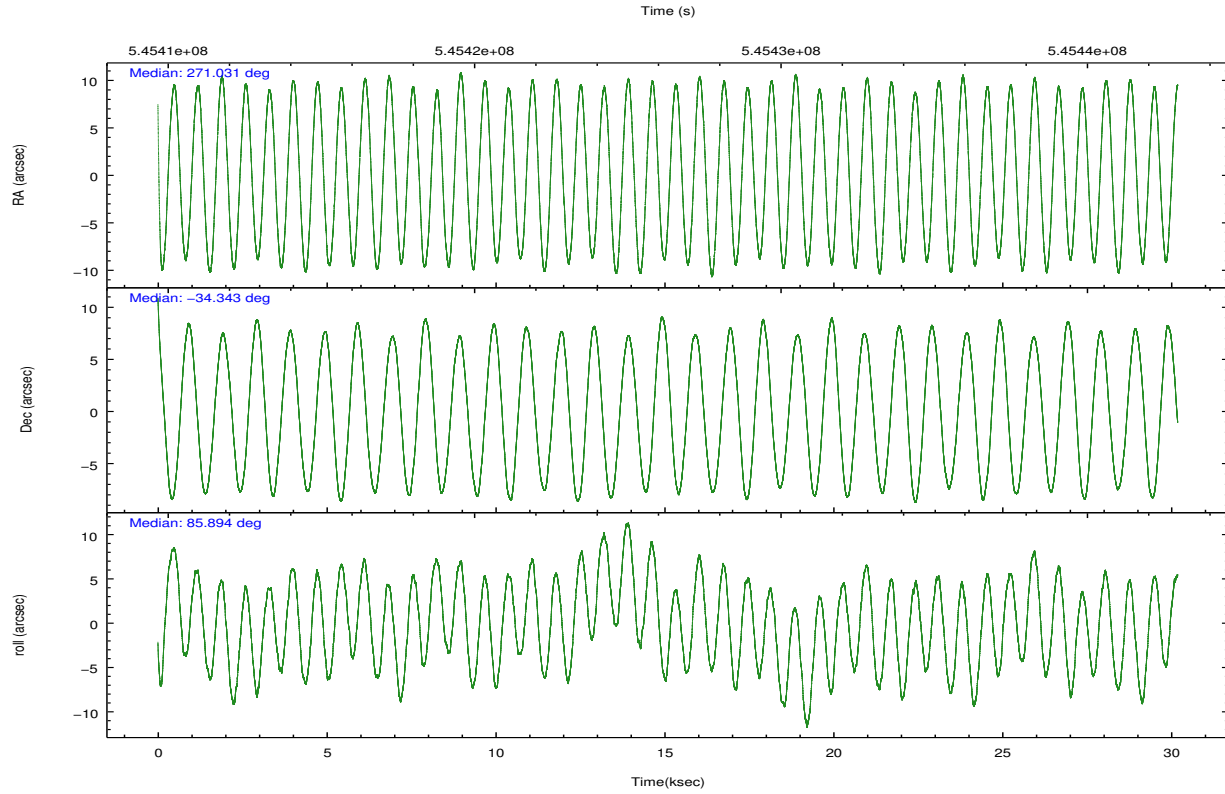
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	314592	604583	1420579	1549505	845580	347706	grade 0 events	8785	56583	27672	172287	113623	17651
rejected events	147783	170289	166326	236725	205242	149029		2%	9%	1%	11%	13%	5%
rejected %	46%	28%	11%	15%	24%	42%	grade 1 events	113	266	150	2122	311	117
								0%	0%	0%	0%	0%	0%
							grade 2 events	141327	229368	1112432	529939	467771	161380
								44%	37%	78%	34%	55%	46%
							grade 3 events	3422	9191	4468	83278	11159	3448
								1%	1%	0%	5%	1%	0%
							grade 4 events	3555	9091	4220	81796	10800	3661
								1%	1%	0%	5%	1%	1%
							grade 5 events	6479	15891	11028	31720	12013	7832
								2%	2%	0%	2%	1%	2%
							grade 6 events	9739	130101	105583	445616	37163	12551
								3%	21%	7%	28%	4%	3%
							grade 7 events	141172	154092	155026	202747	192740	141066
								44%	25%	10%	13%	22%	40%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	271.046146	271.0312245511286	CCD I2 on	N	N
[deg] Pointing Dec	-34.367608	-34.3430631187222	CCD I3 on	N	N
[deg] Pointing Roll	85.741479	85.88968445372767	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-186.132523	-186.1372760897884	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4	-3.99524649321944	CCD S4 on	Y	Y
[s] Observation start time (MET)	545411376.184000	545410534.05249	CCD S5 on	Y	Y
Observation start date	2015-04-14T15:08:29	2015-04-14T14:55:34	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	545441376.184000	545442878.95427	On-chip summing requested	N	N
Observation end date	2015-04-14T23:28:29	2015-04-14T23:54:38	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect





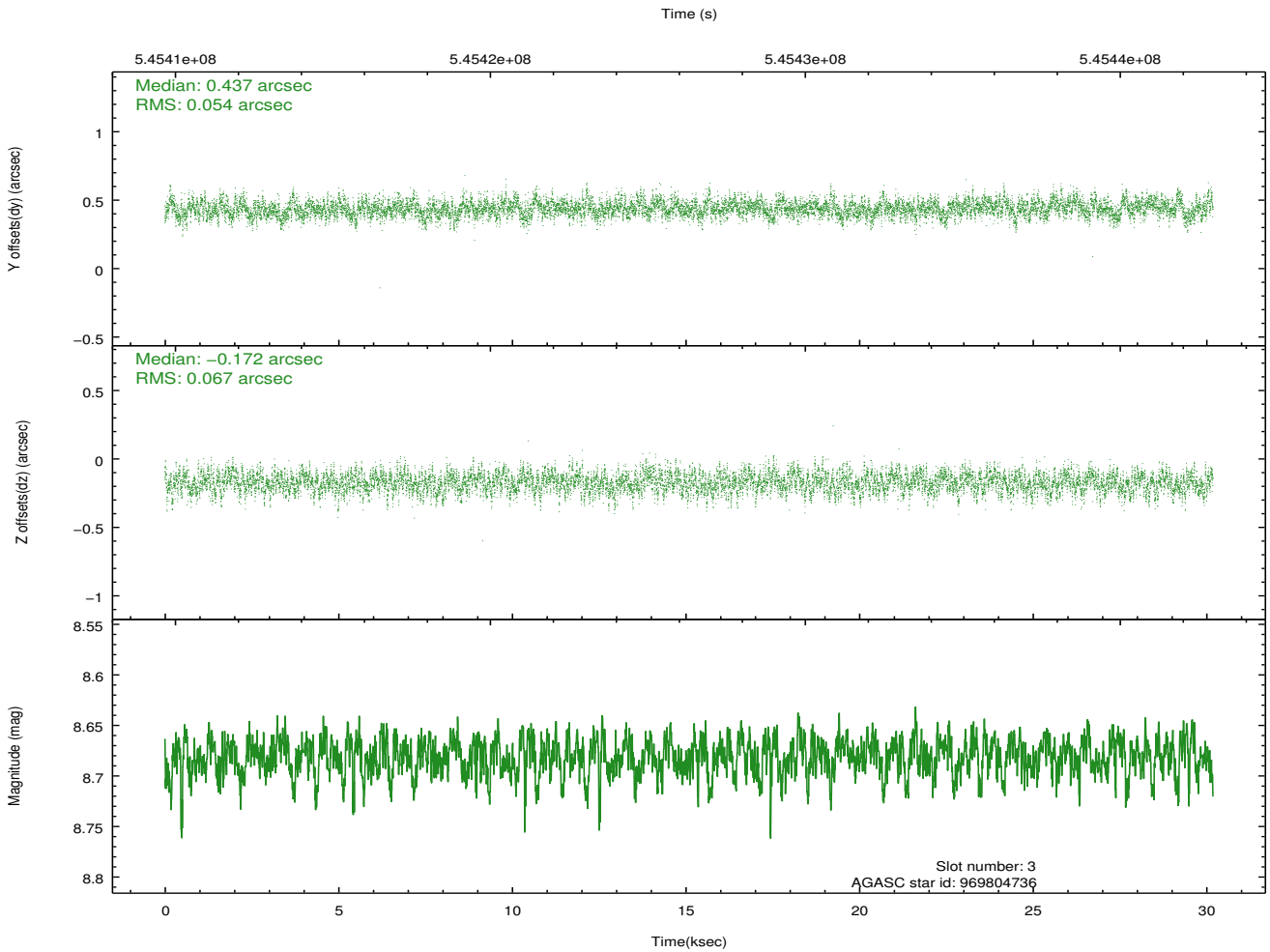
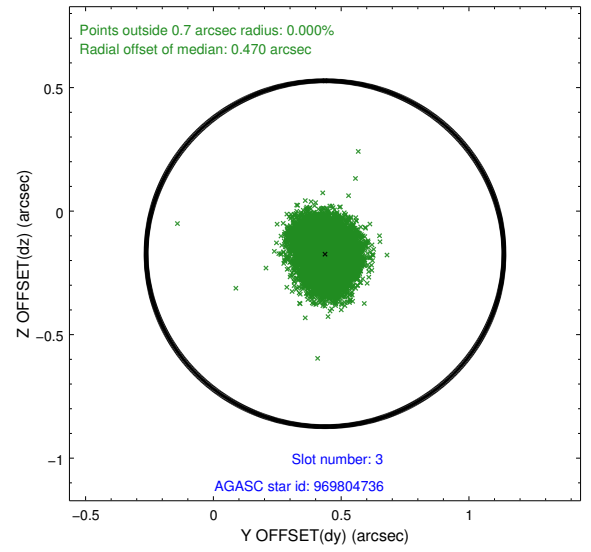
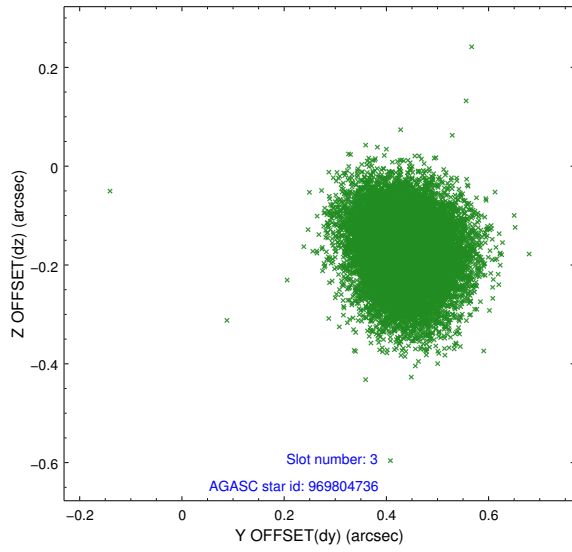
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-4	7.13	7363	0.266	0.038	0.008	0.015	0.000000	0.000000	2145.89	88.82
1	FID		ACIS-S-5	7.16	7364	-0.306	0.026	0.011	0.031	0.000000	0.000000	-1820.77	82.29
2	FID		ACIS-S-6	7.32	7363	0.010	-0.049	0.011	0.027	0.000000	0.000000	393.82	725.95
3	GUIDE	used	969804736	8.68	14720	0.437	-0.172	0.092	0.149	270.864636	-34.846483	-1759.23	406.44
4	GUIDE	used	969808480	9.28	14716	-0.098	0.237	0.135	0.208	271.591846	-34.610796	-757.77	-1677.34
5	GUIDE	used	969804960	8.31	14725	-0.284	-0.109	0.076	0.124	270.573437	-33.767997	2043.60	1570.70
6	GUIDE	used	969808432	7.88	14725	-0.287	-0.097	0.082	0.136	270.678847	-33.889180	1633.98	1222.37
7	GUIDE	used	969805616	7.42	14723	0.229	0.137	0.084	0.131	271.051245	-34.821011	-1626.37	-135.83

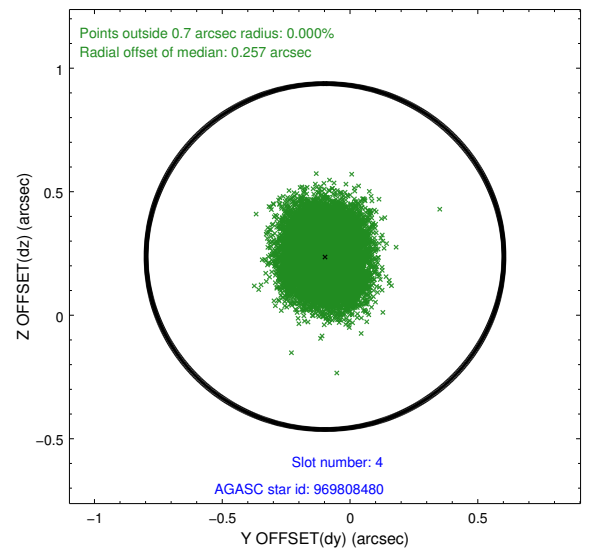
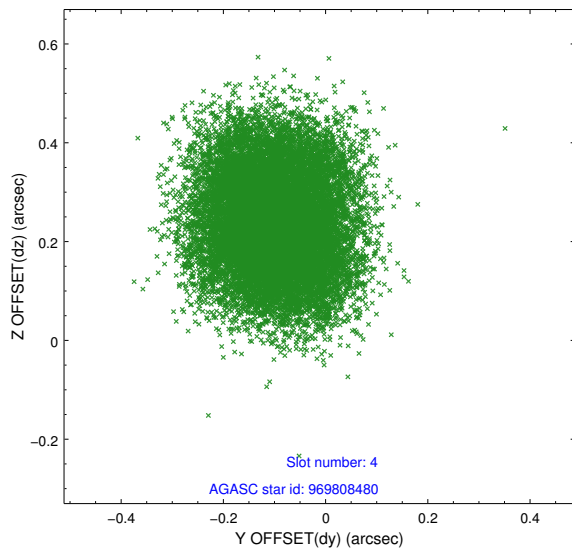
∞

2.4 Star Slots

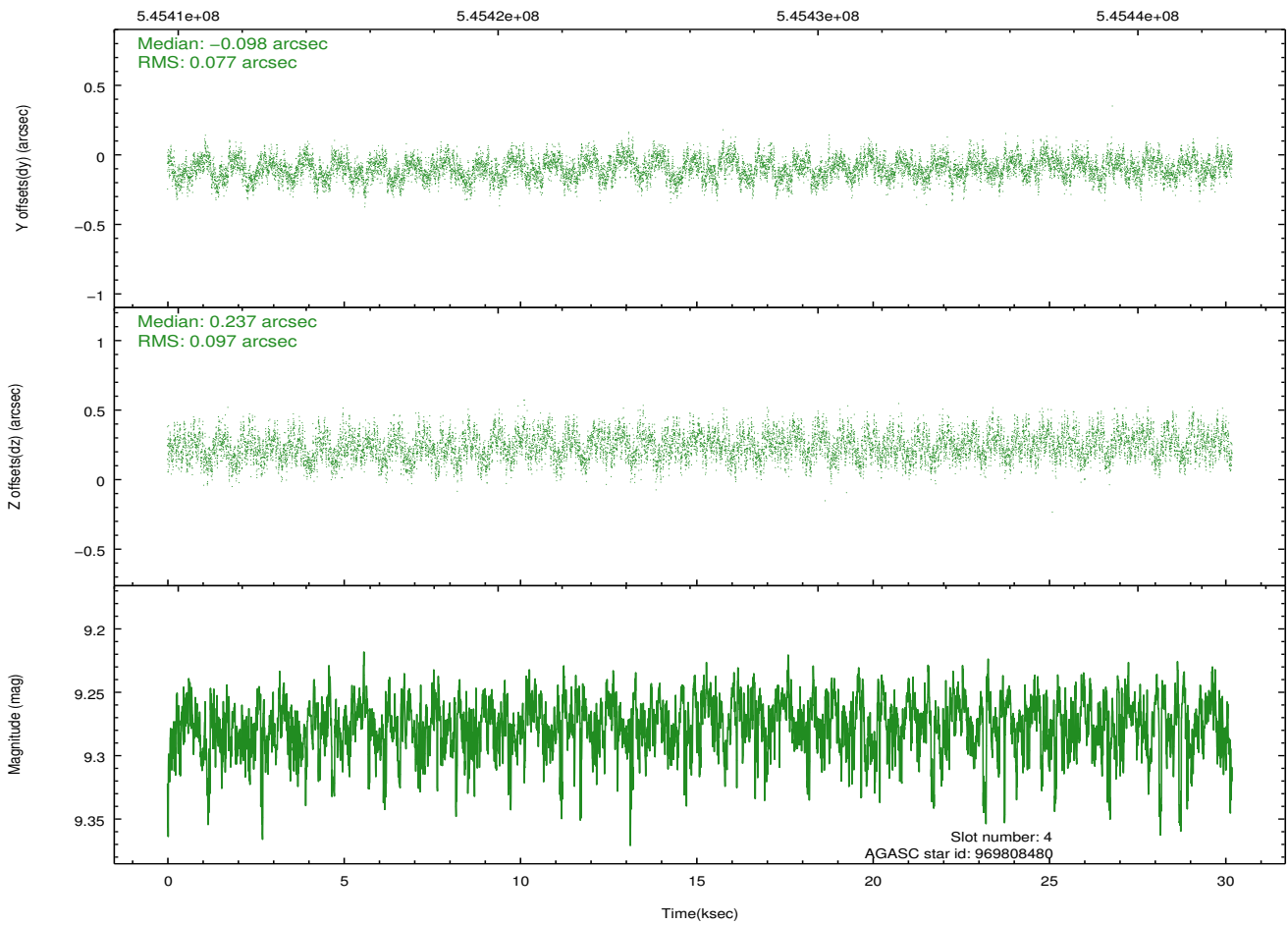
2.4.1 Slot 3



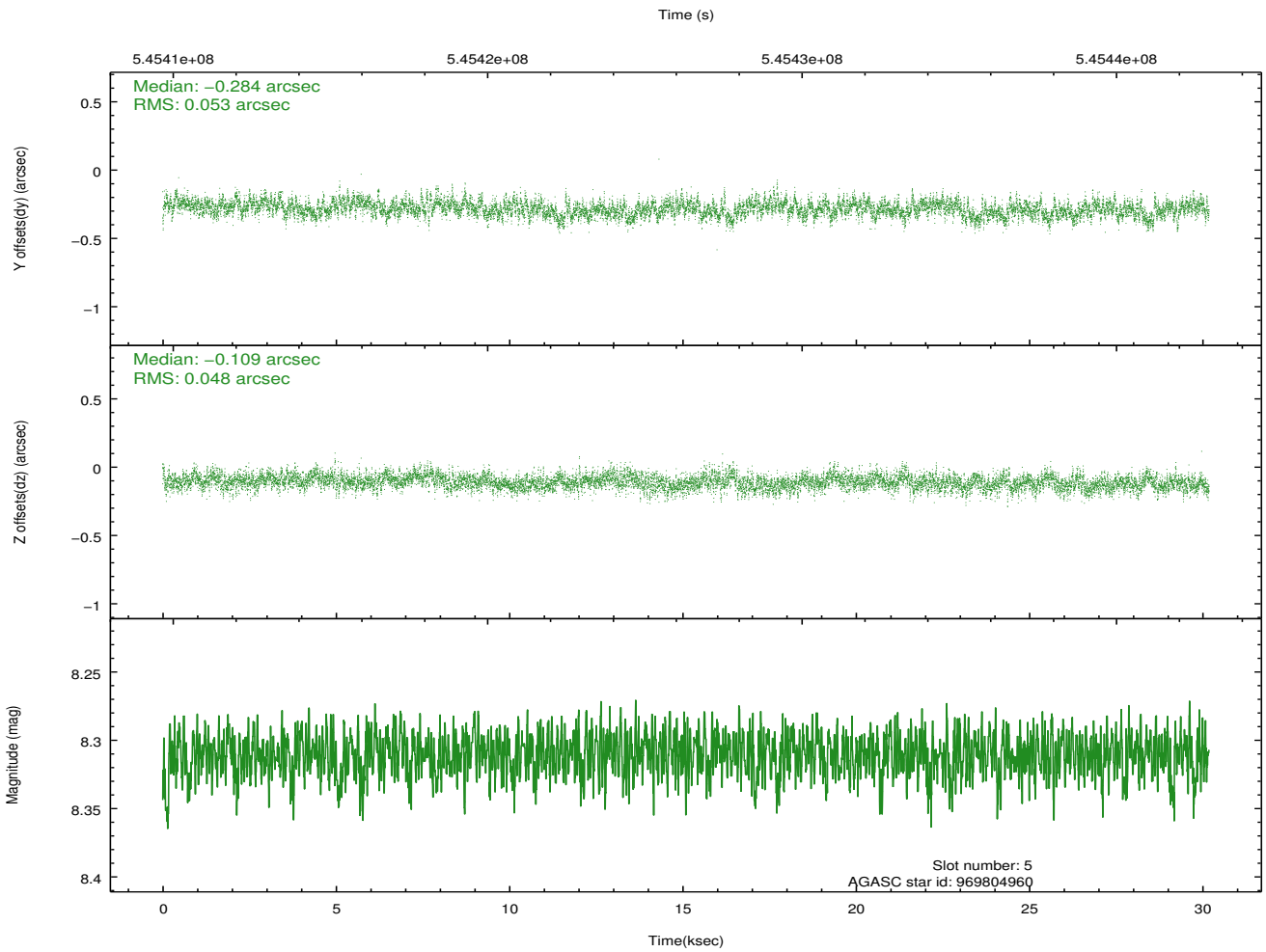
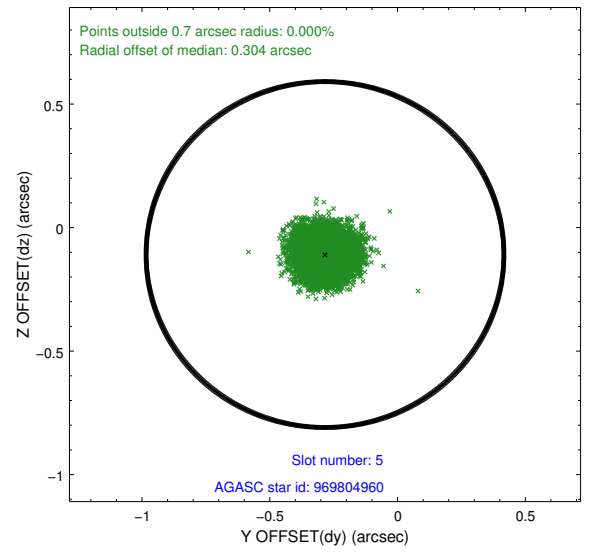
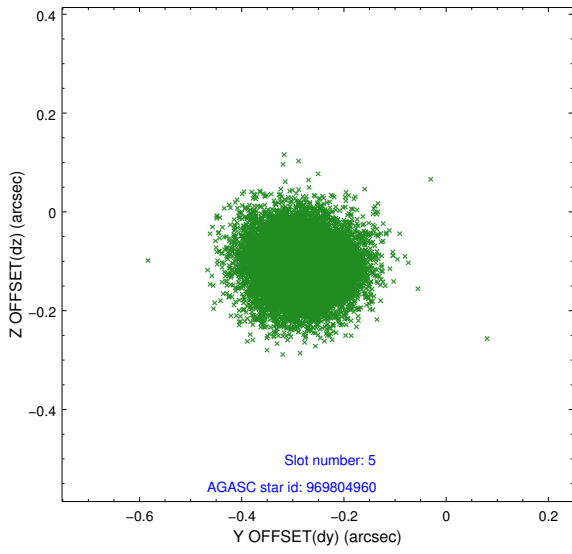
2.4.2 Slot 4



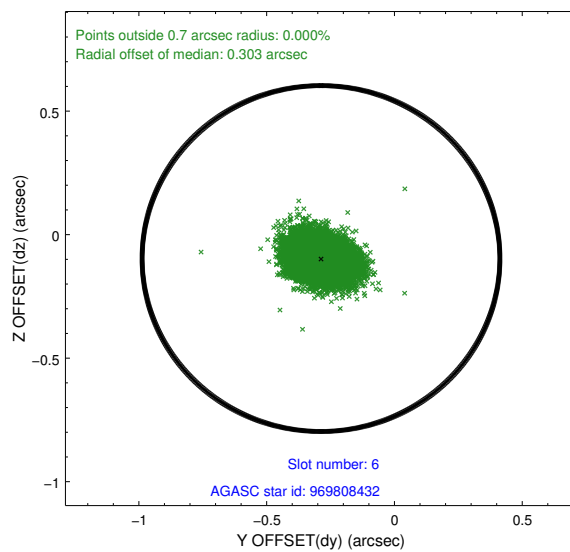
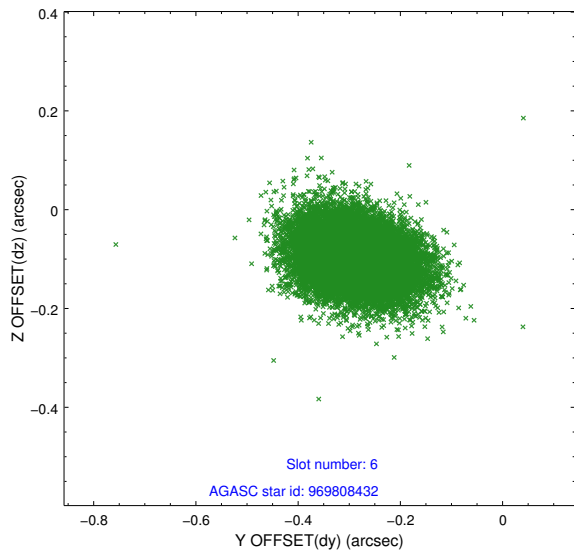
Time (s)



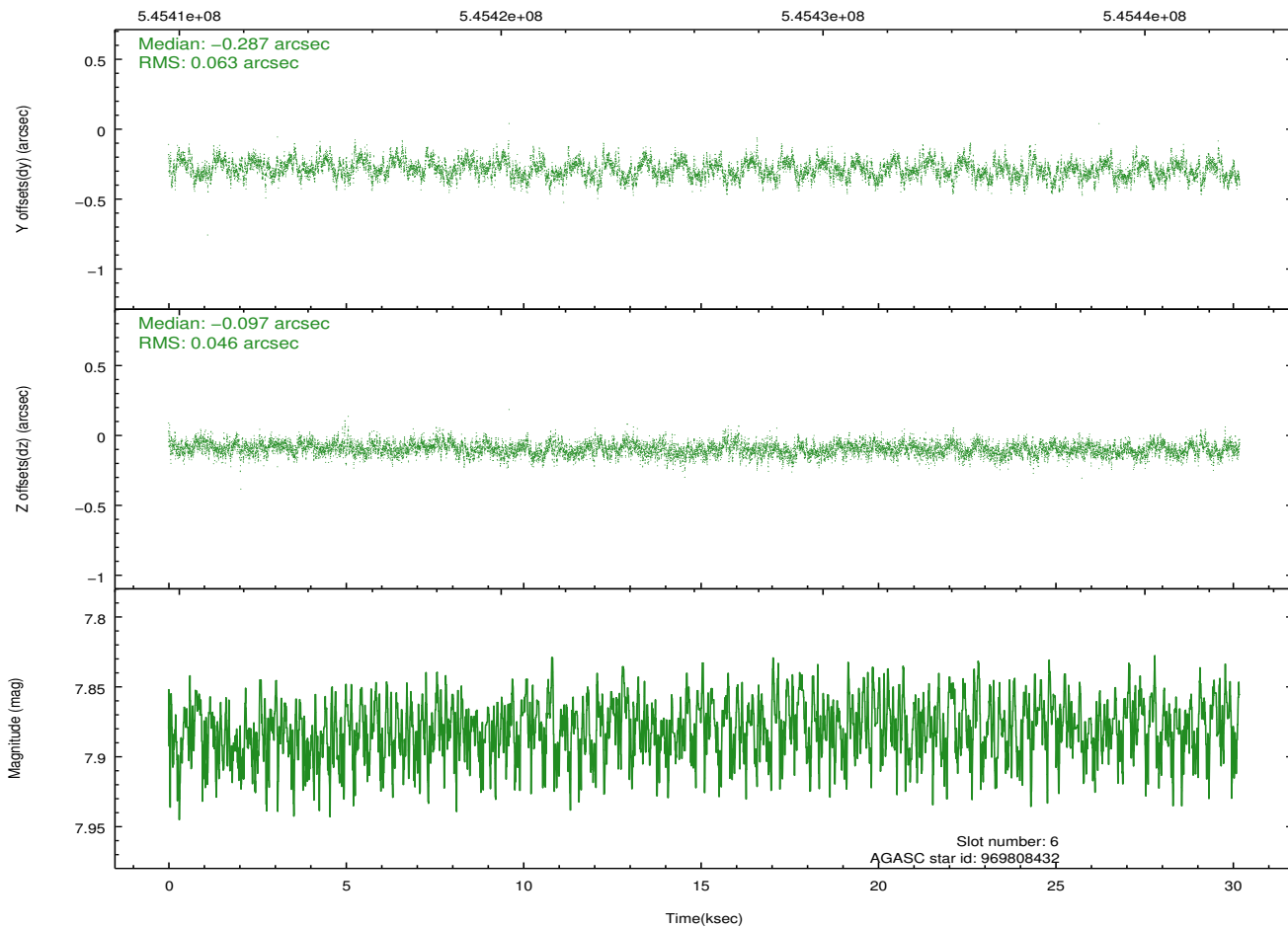
2.4.3 Slot 5



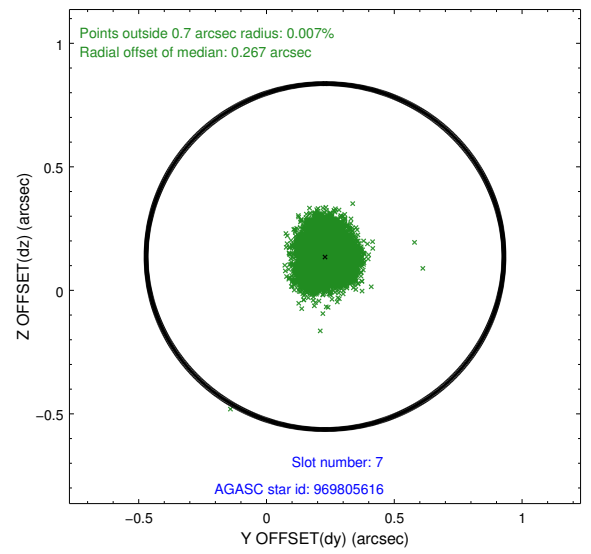
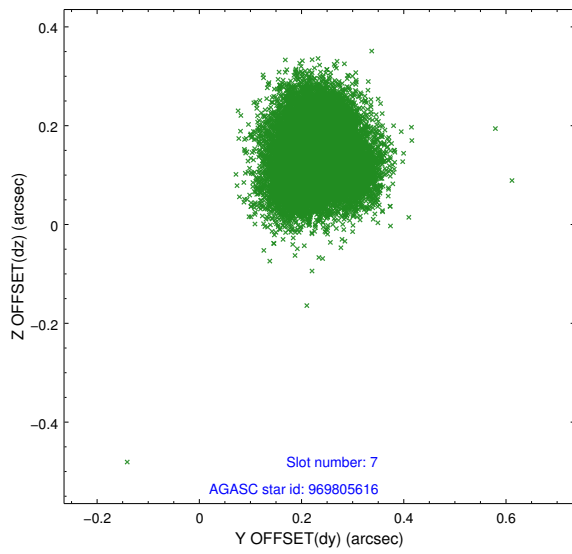
2.4.4 Slot 6



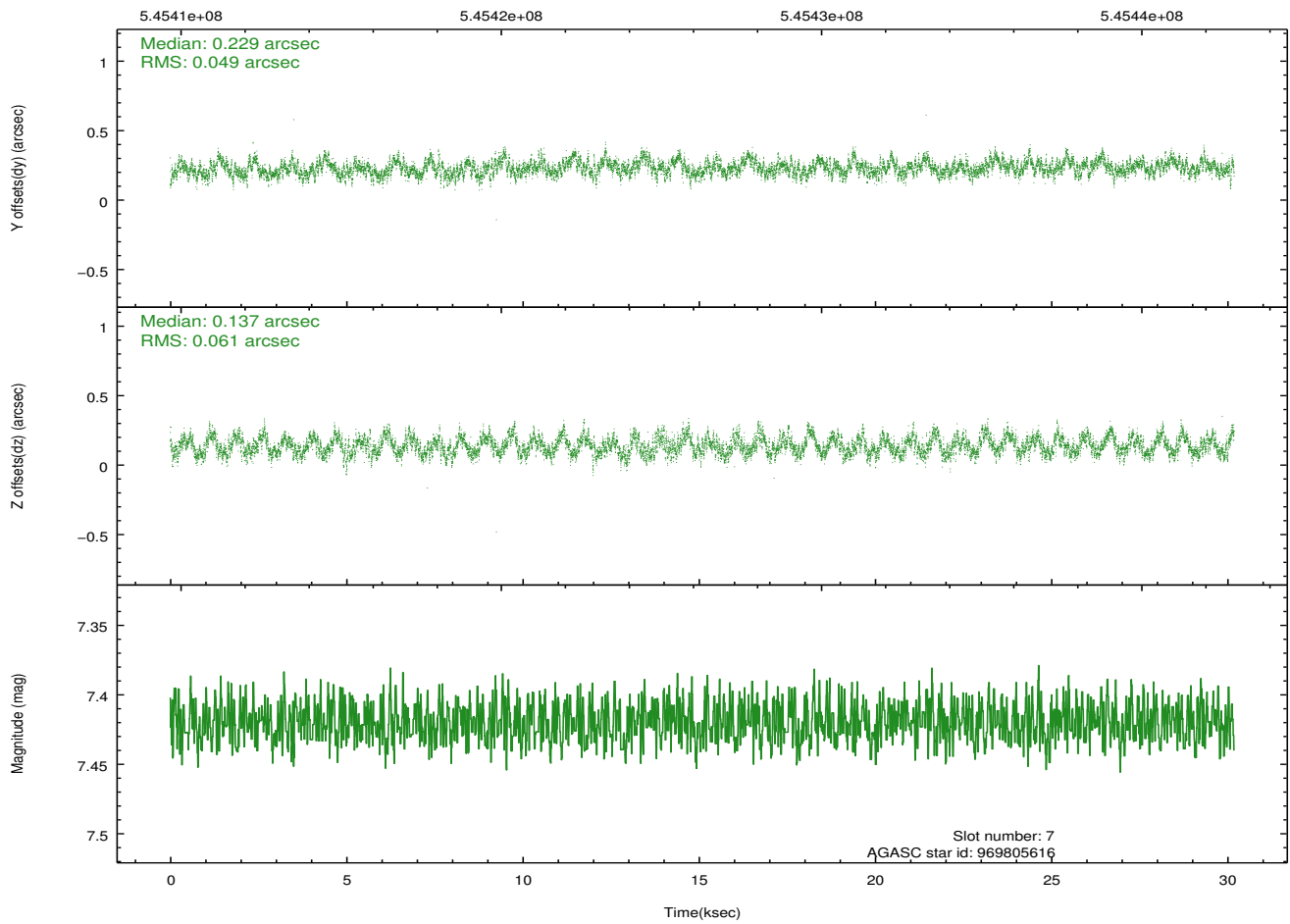
Time (s)



2.4.5 Slot 7

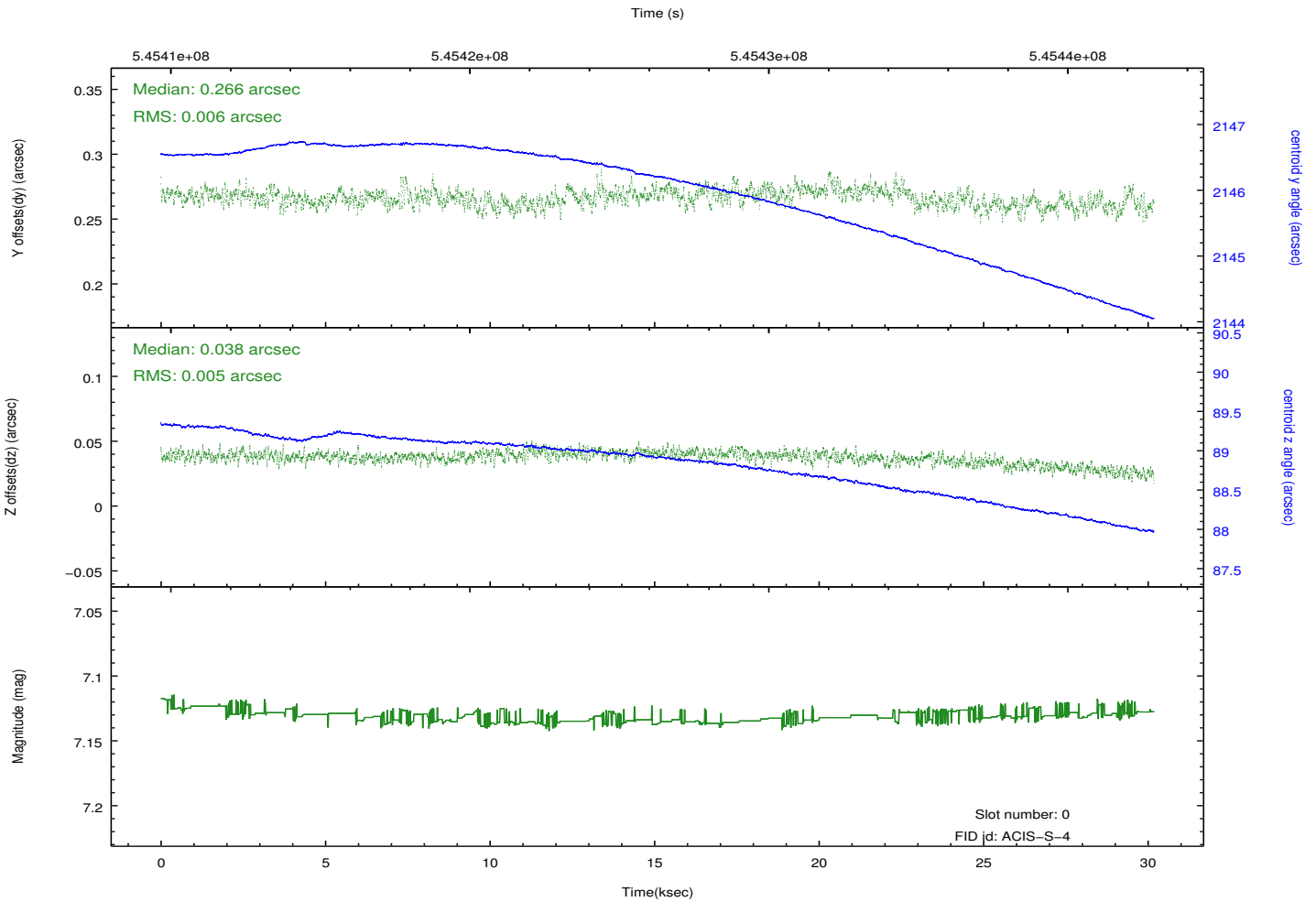
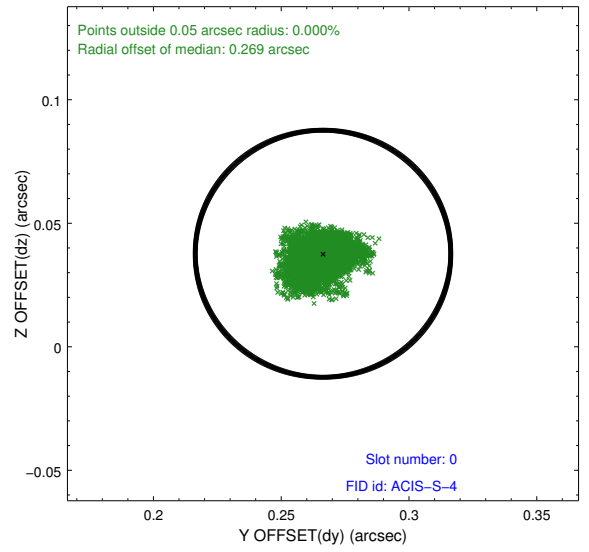
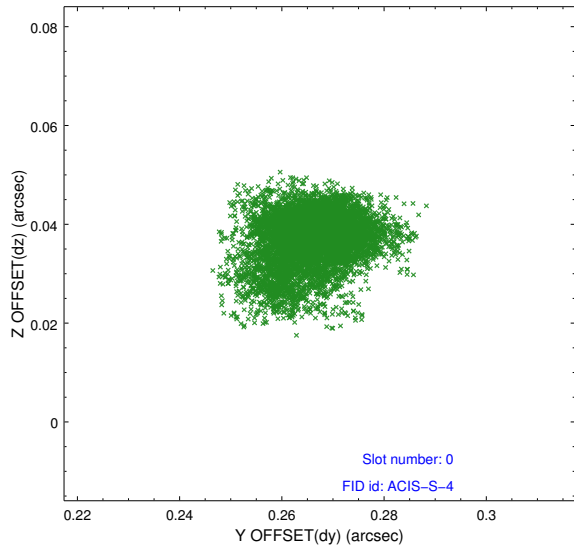


Time (s)

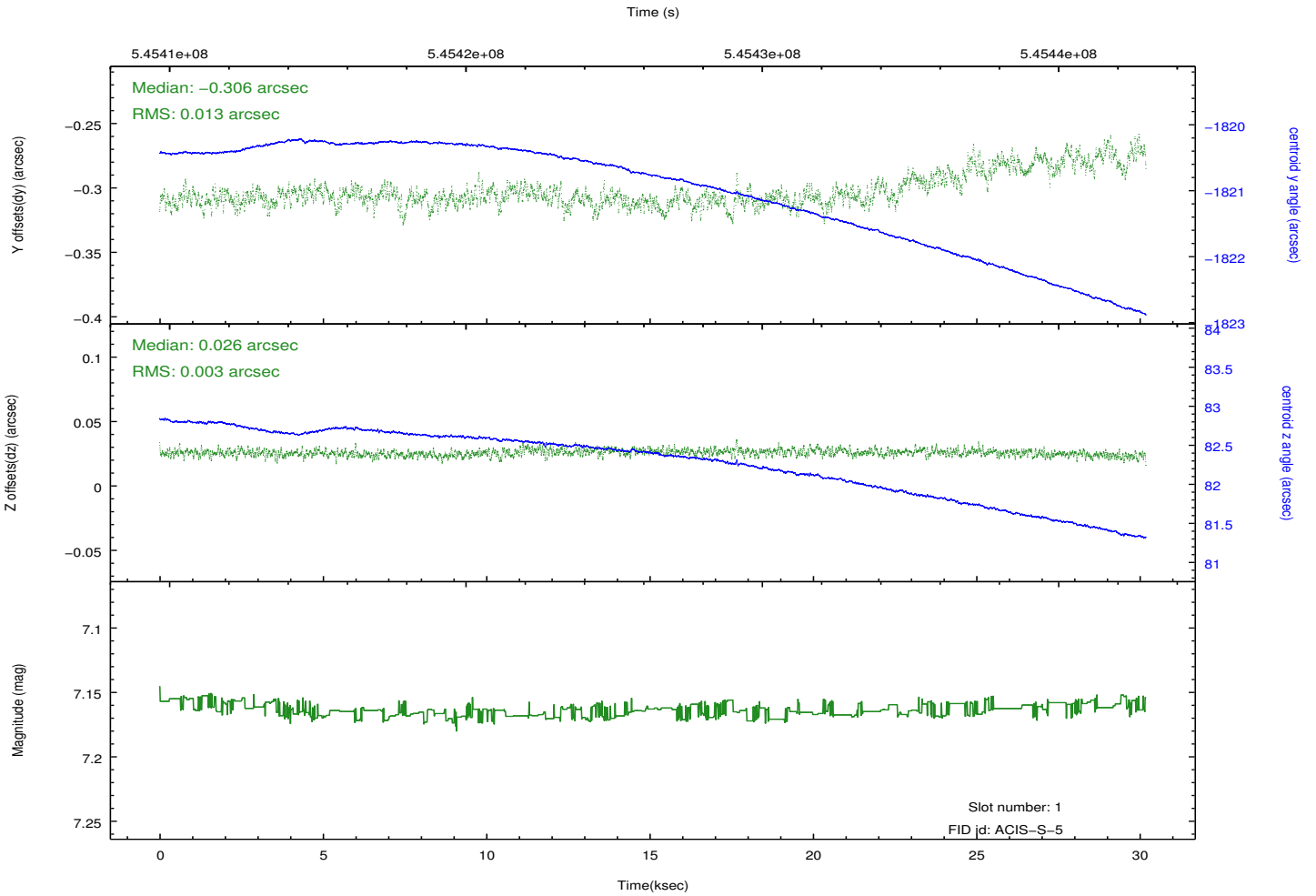
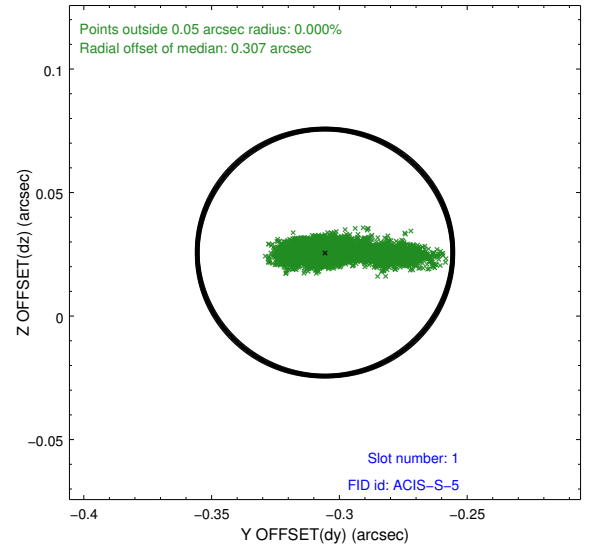
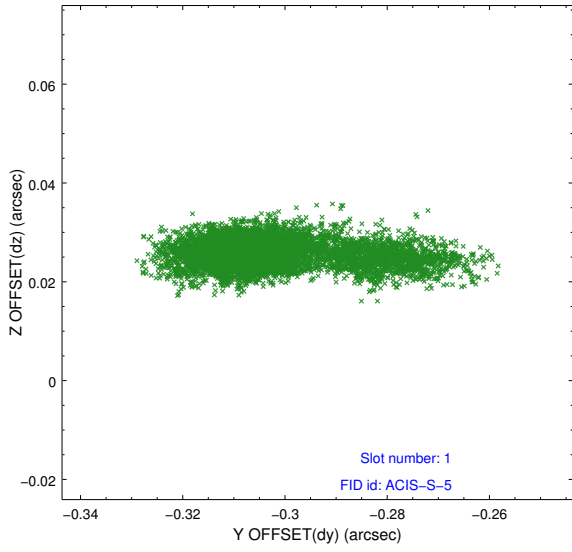


2.5 FID Slots

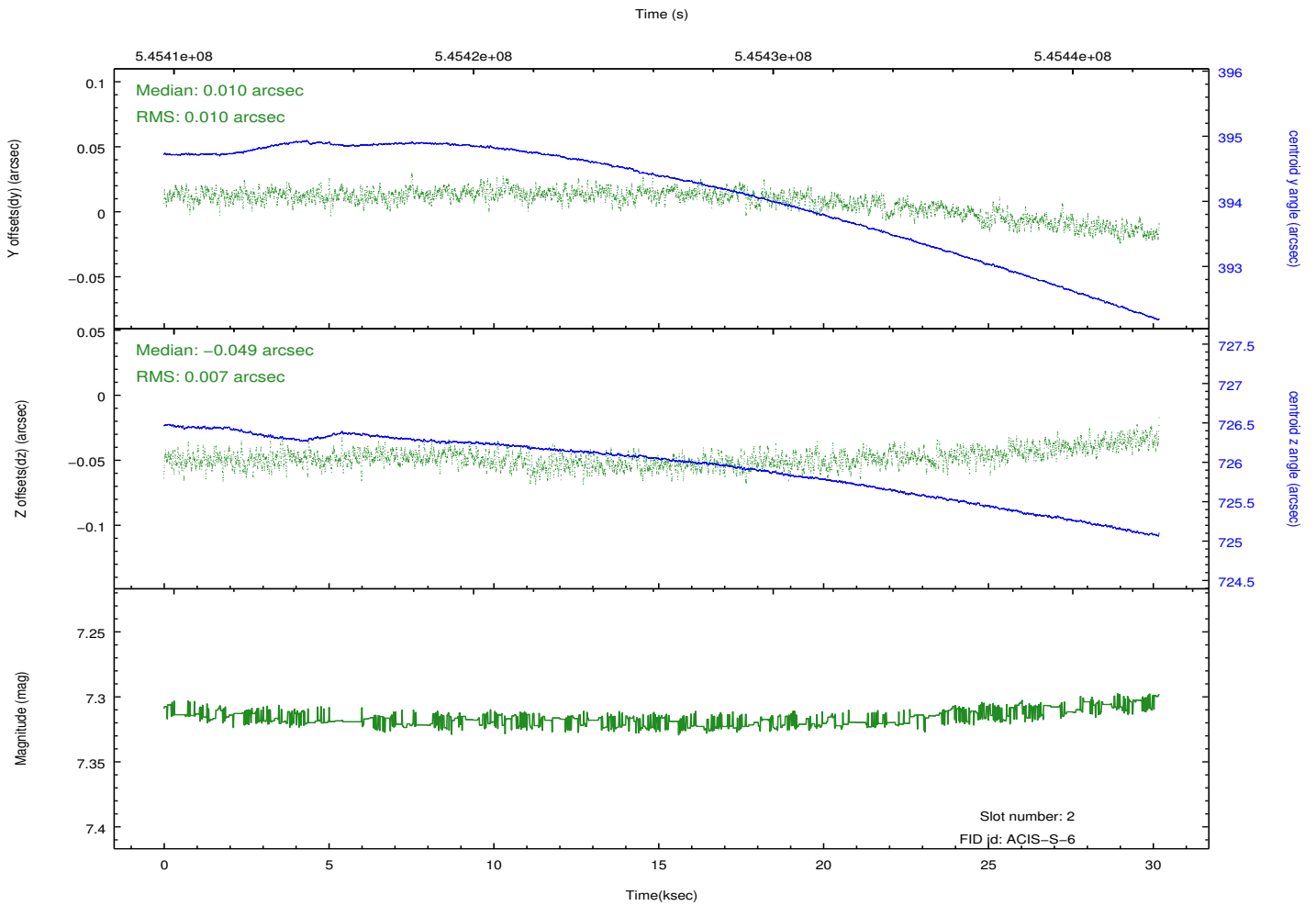
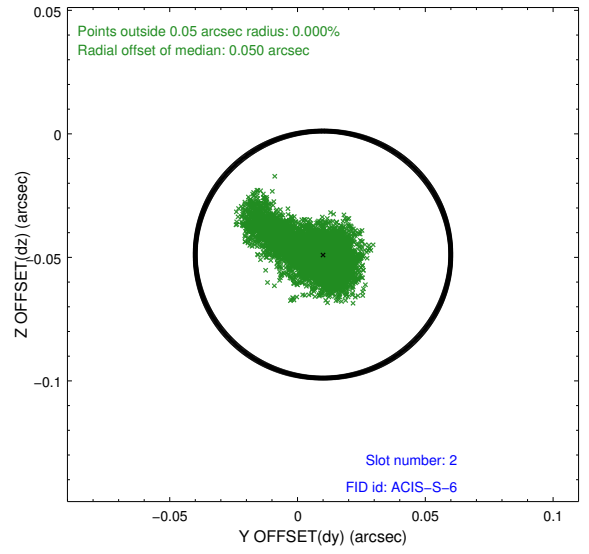
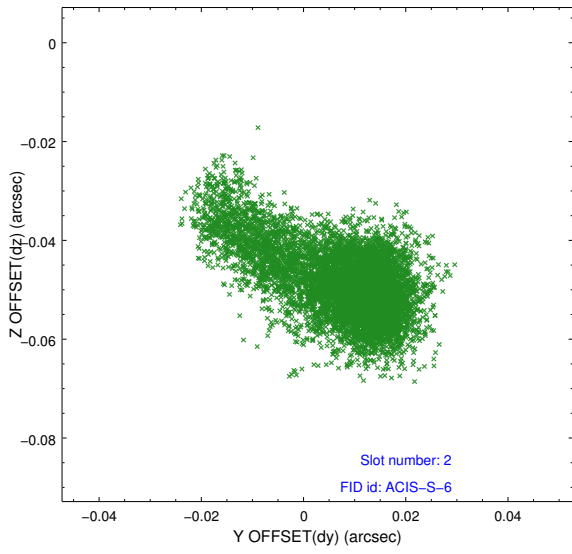
2.5.1 Slot 0



2.5.2 Slot 1

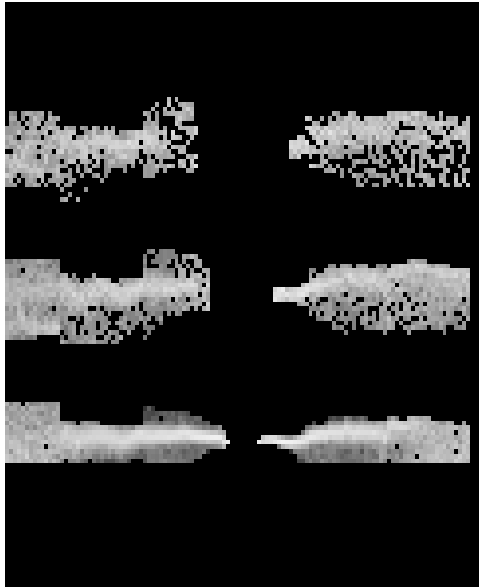


2.5.3 Slot 2



3 Gratings

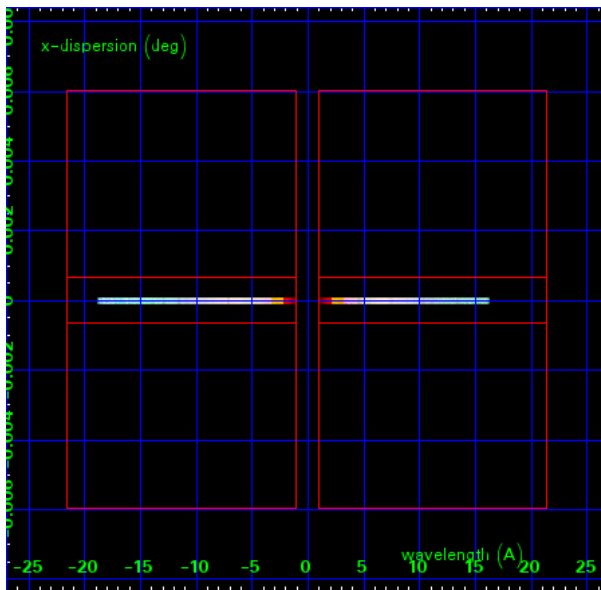
3.1 HEG Arm



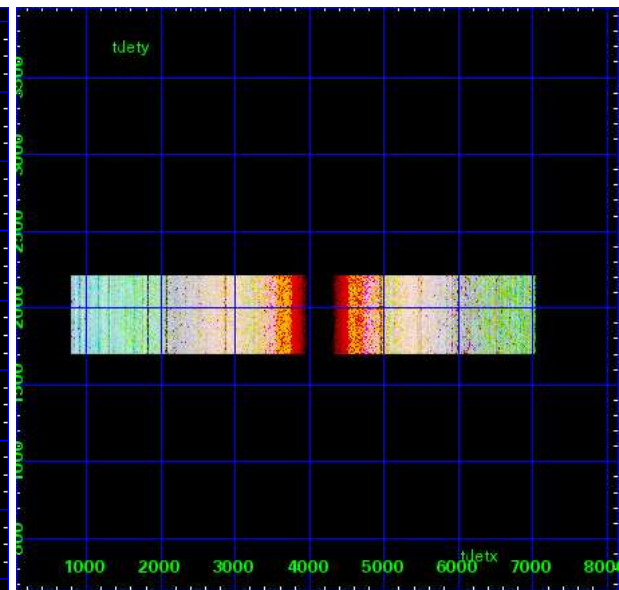
HEG Order Sort 123



HEG Order Sort ALL

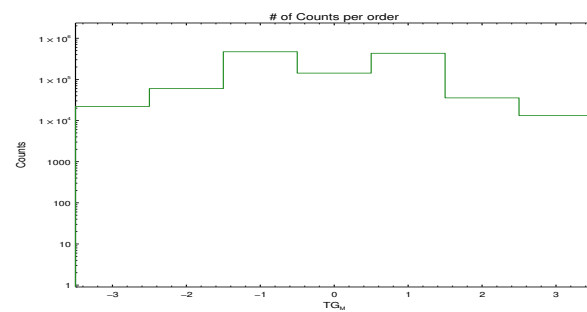


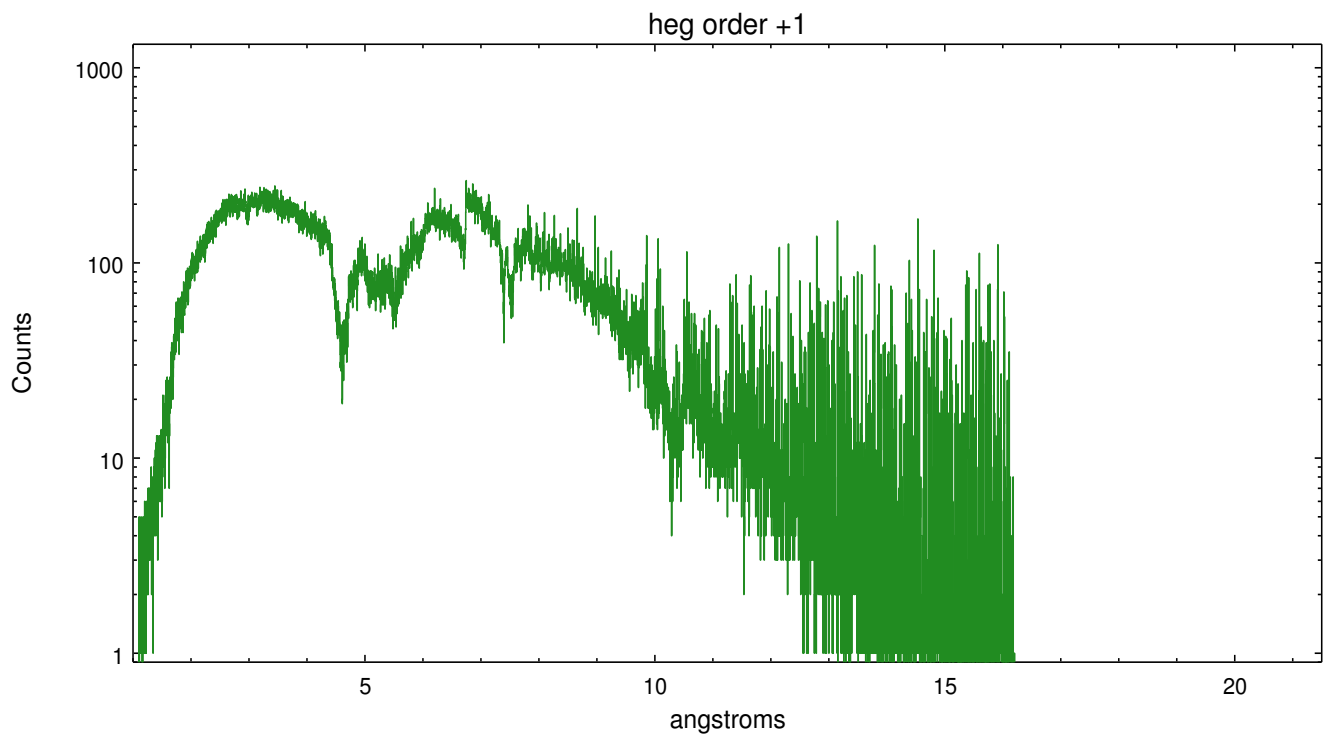
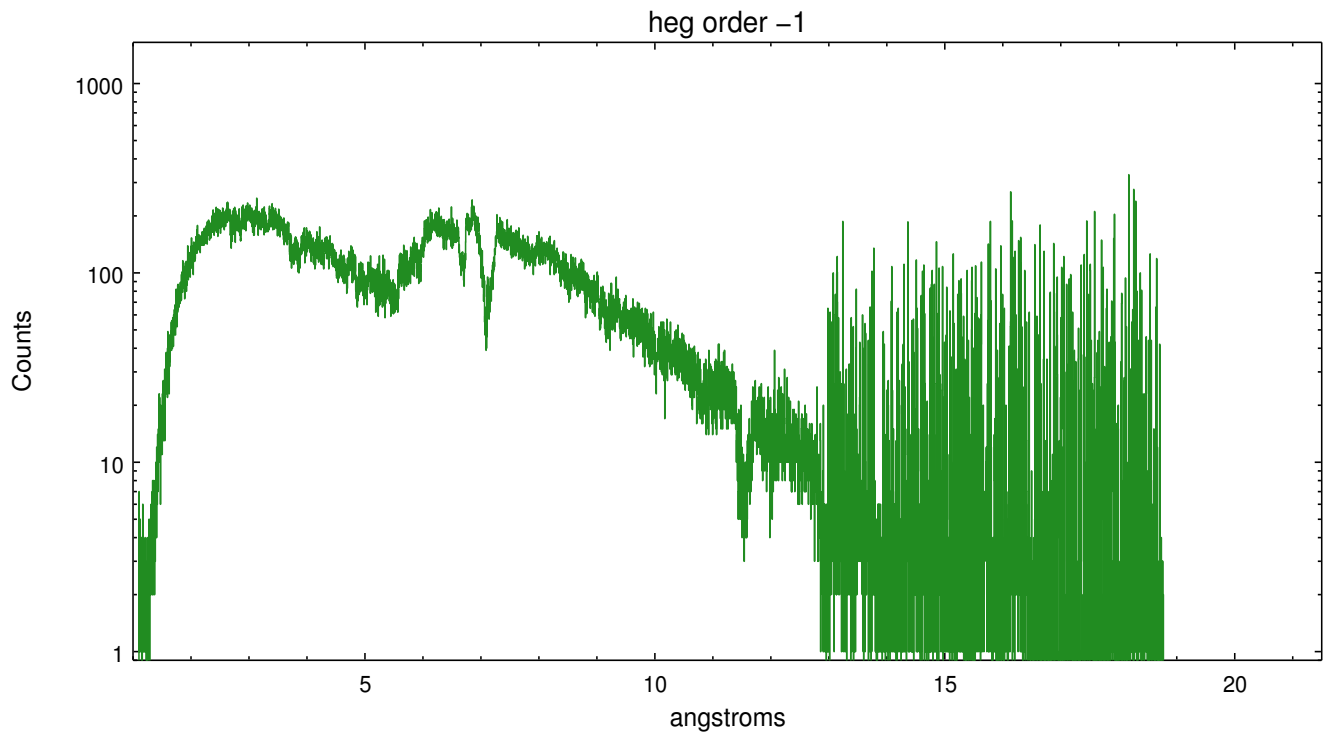
Spot Image HEG



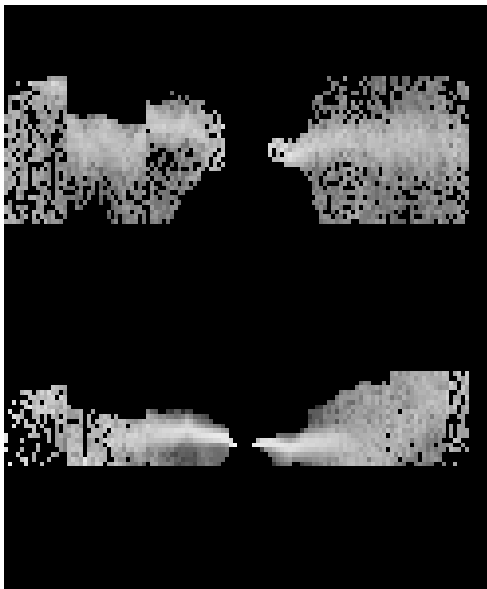
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	22040	59710	469591	141959	430432	35504	13166

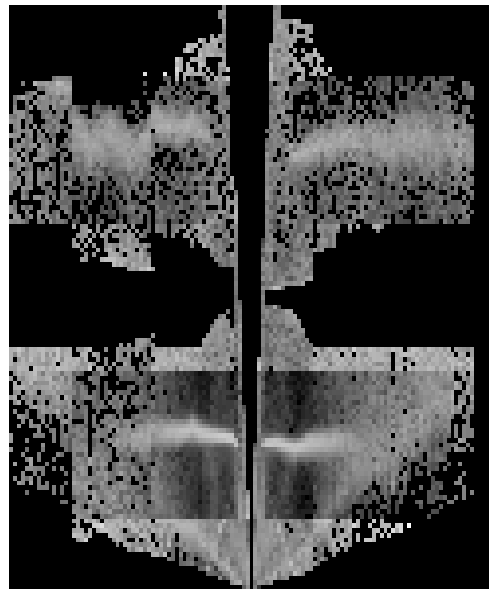




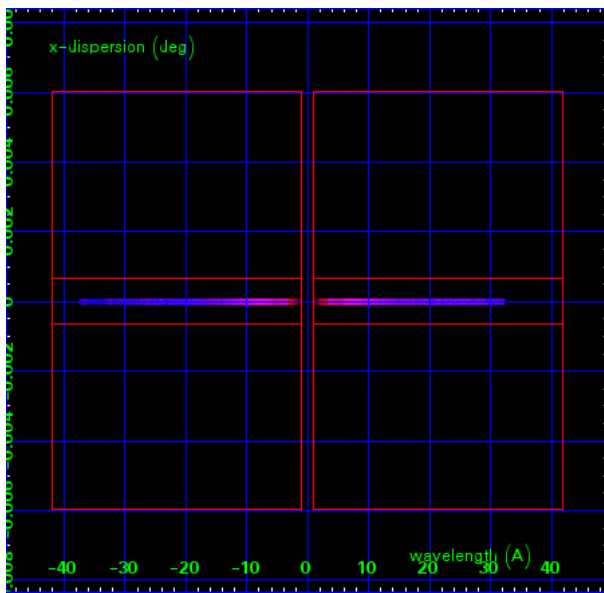
3.2 MEG Arm



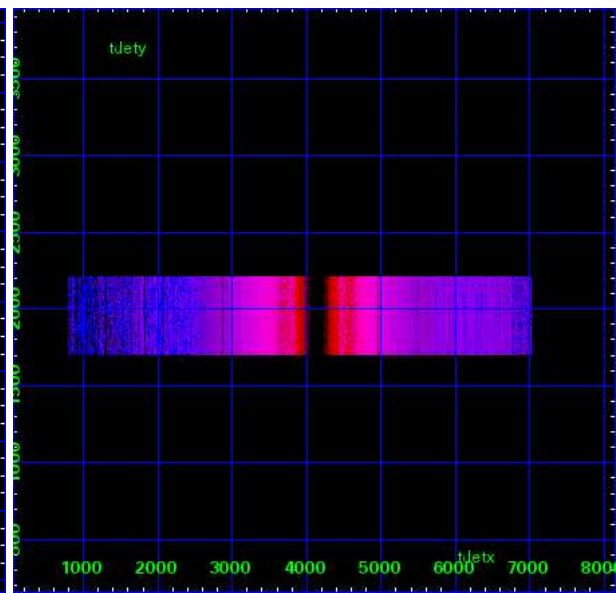
MEG Order Sort 123



MEG Order Sort ALL

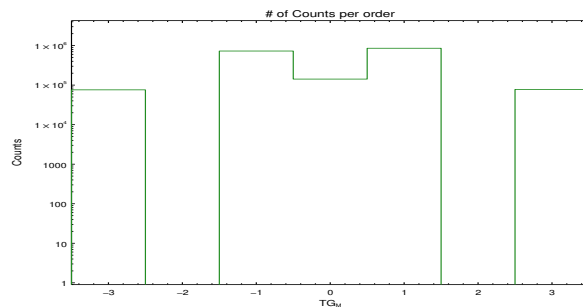


Spot Image MEG

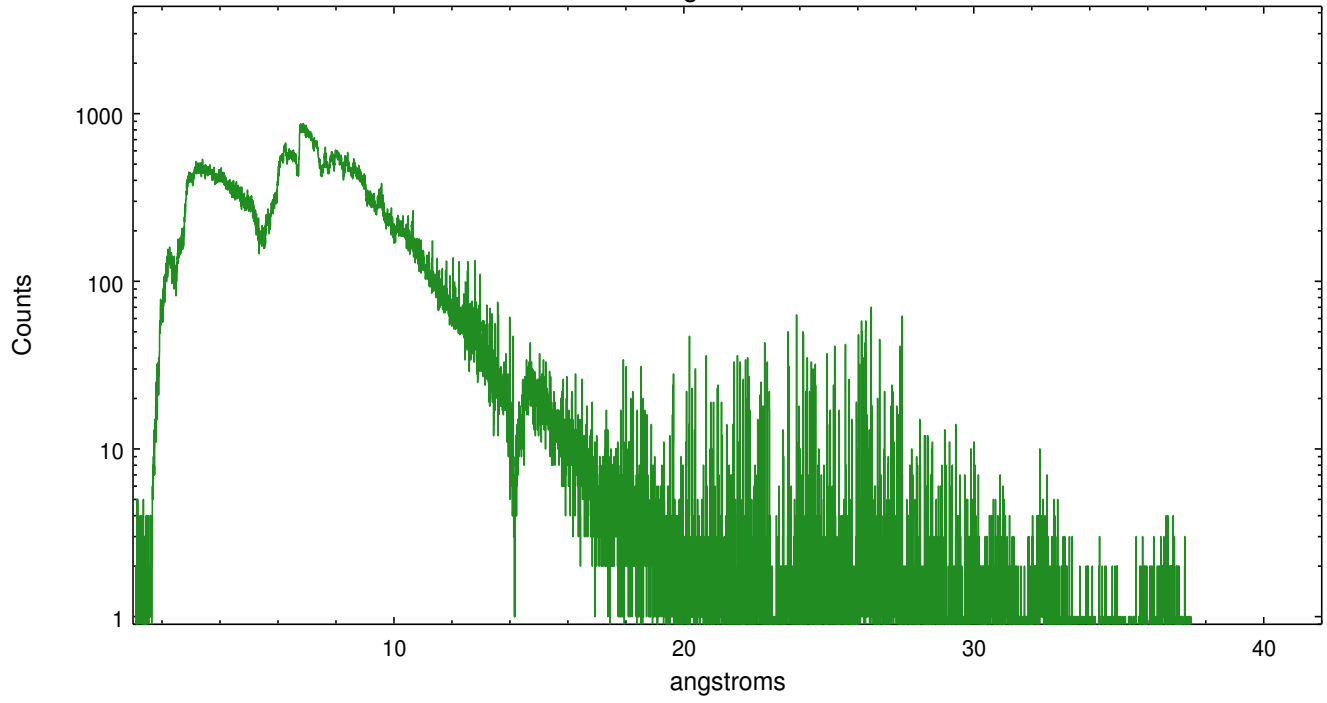


Full Detector MEG

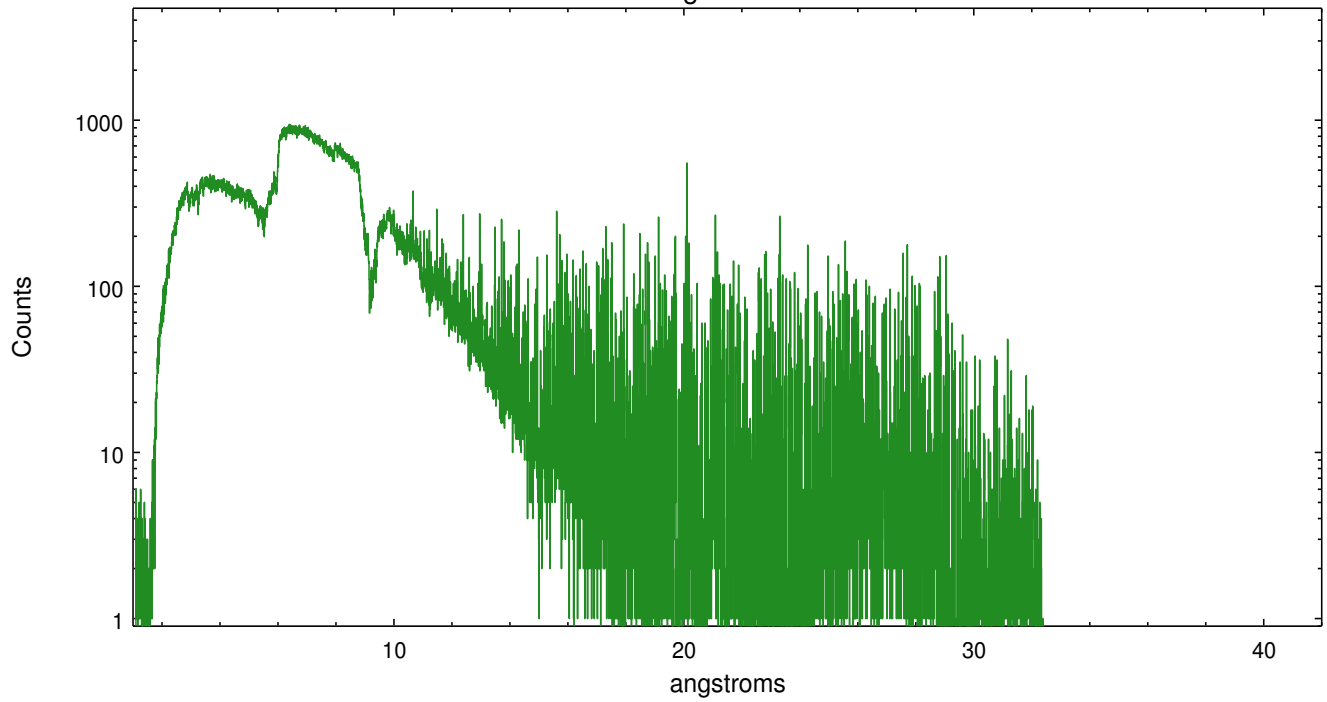
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	75945	0	727608	141959	854777	0	77759



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2015.04.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.073

A.2 Comments

As of November 1, 2009, events with a flight grade of 66 were added to the telemetry stream for continuous-clocking mode observations because it was found that a significant fraction of real X-ray events have this flight grade in this mode. To prevent these events from being discarded from Level 2 event files, the CALDB grade file was modified to change the 'ASCA' grade for these events from 7 (a bad grade) to 2 (a good grade). The new grade file has been used in standard pipeline processing for code versions DS 10.3 and later (i.e. 2014 Oct 30 and later). Since the calibration products for continuous-clocking mode observations are appropriate for data that includes flight grade 66 events, data obtained on or after 2009 Nov 1, but that were processed using an earlier version of the pipeline code, should be reprocessed with CIAO using version 4.7 (i.e. 2014 December) or later. Note that it is not possible to fix the data obtained before 2009 Nov 1. Since these earlier continuous-clocking observations are not calibrated at present, spectral analyses of these data may yield inaccurate results.

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For ACIS/CC-mode w/ HETG, at 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.