

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 14685 - L2 Version 2
Chandra X-Ray Center

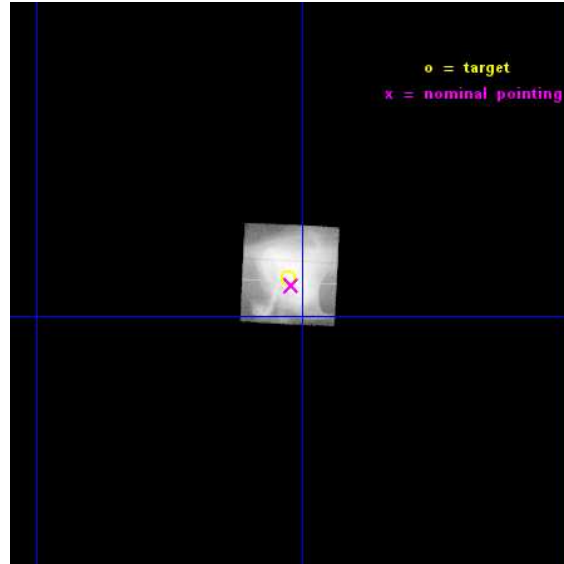
L2 Processing Date : Dec 1 2014

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1 Front

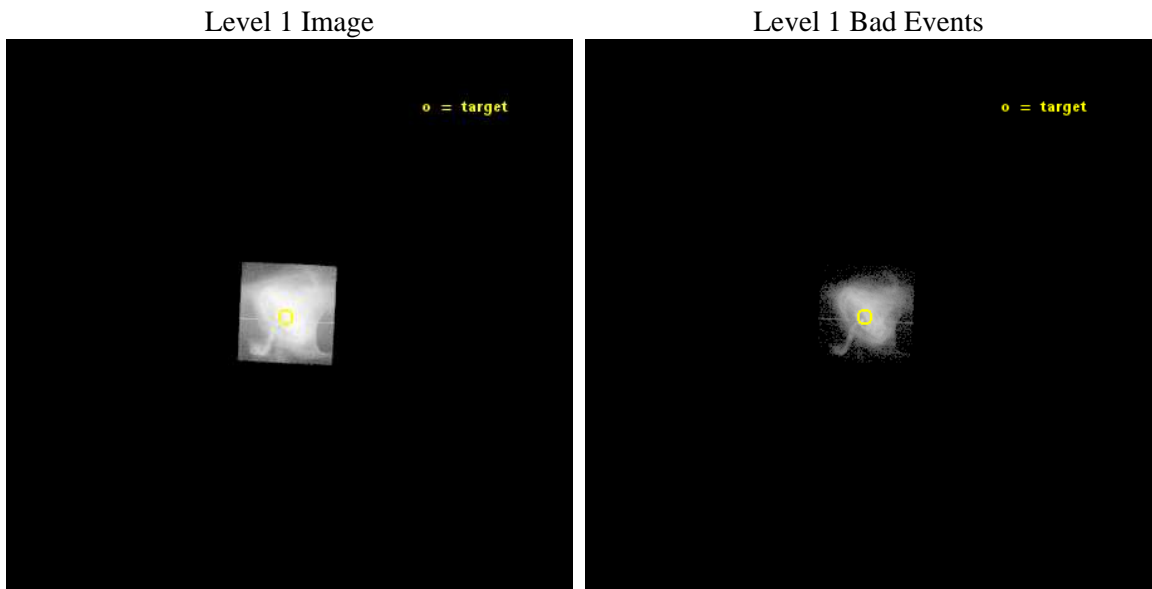
seq_num	501819	Sequence number
obs_id	14685	Observation id
title	Pre-planned Target of Opportunity Observations of the Crab Nebula upon the Occurrence of a Gamma-Ray Flare	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630086601904	Nominal RA [deg]
dec_nom	22.012807743766	Nominal Dec [deg]
roll_nom	272.89963170214	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7175.2527968287	Sum of GTIs [s]
livetime	1246.0064593528	Livetime [s]
ontime7	7175.2527968287	Sum of GTIs [s]
l2events	3499628	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	7175.2527968287	Sum of GTIs [s]
caldsver	4.6.4	 	ontime7	7175.2527968287	Sum of GTIs [s]
date	2014-12-02T00:12:15	Date and time of file creation	l1events	3891771	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

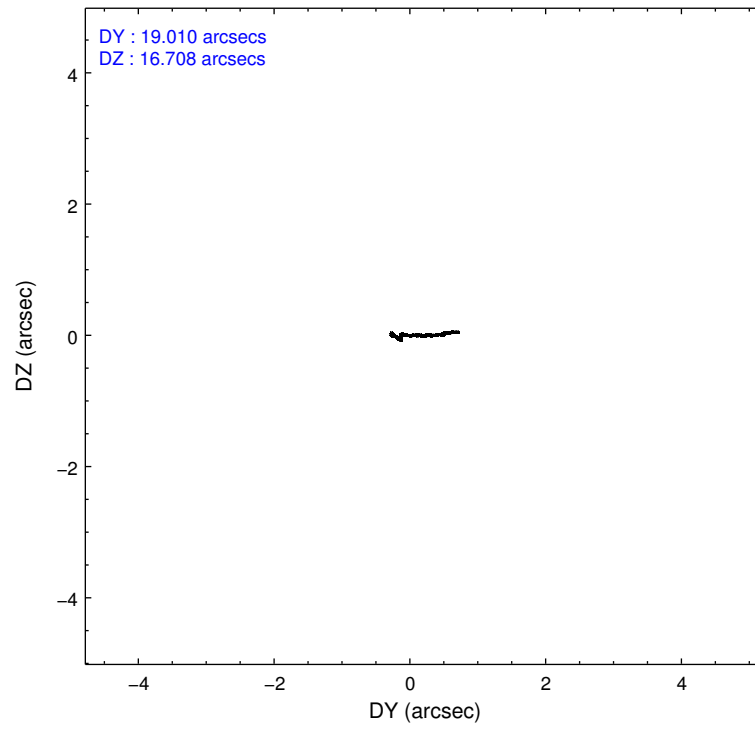
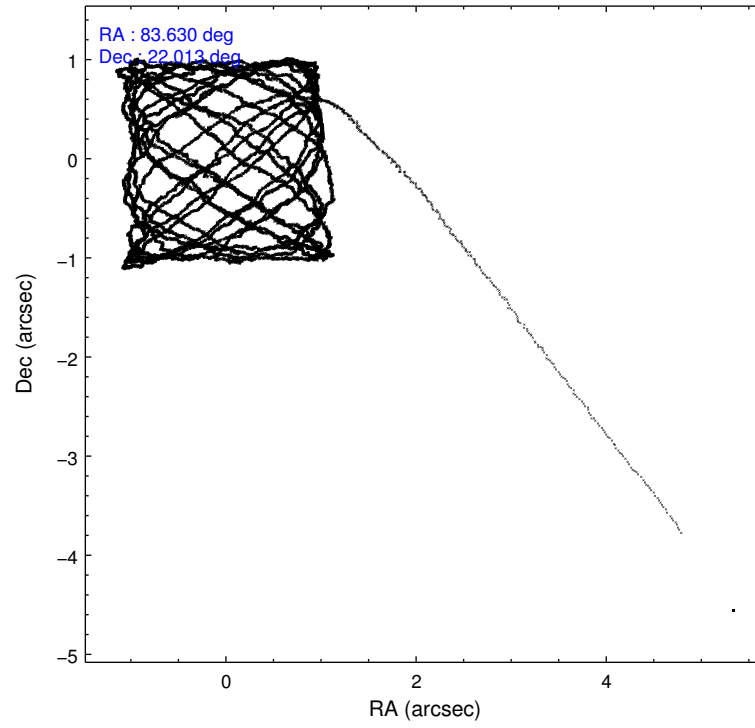
	ccd 7
level 1 events	3891771
rejected events	341027
rejected %	8%

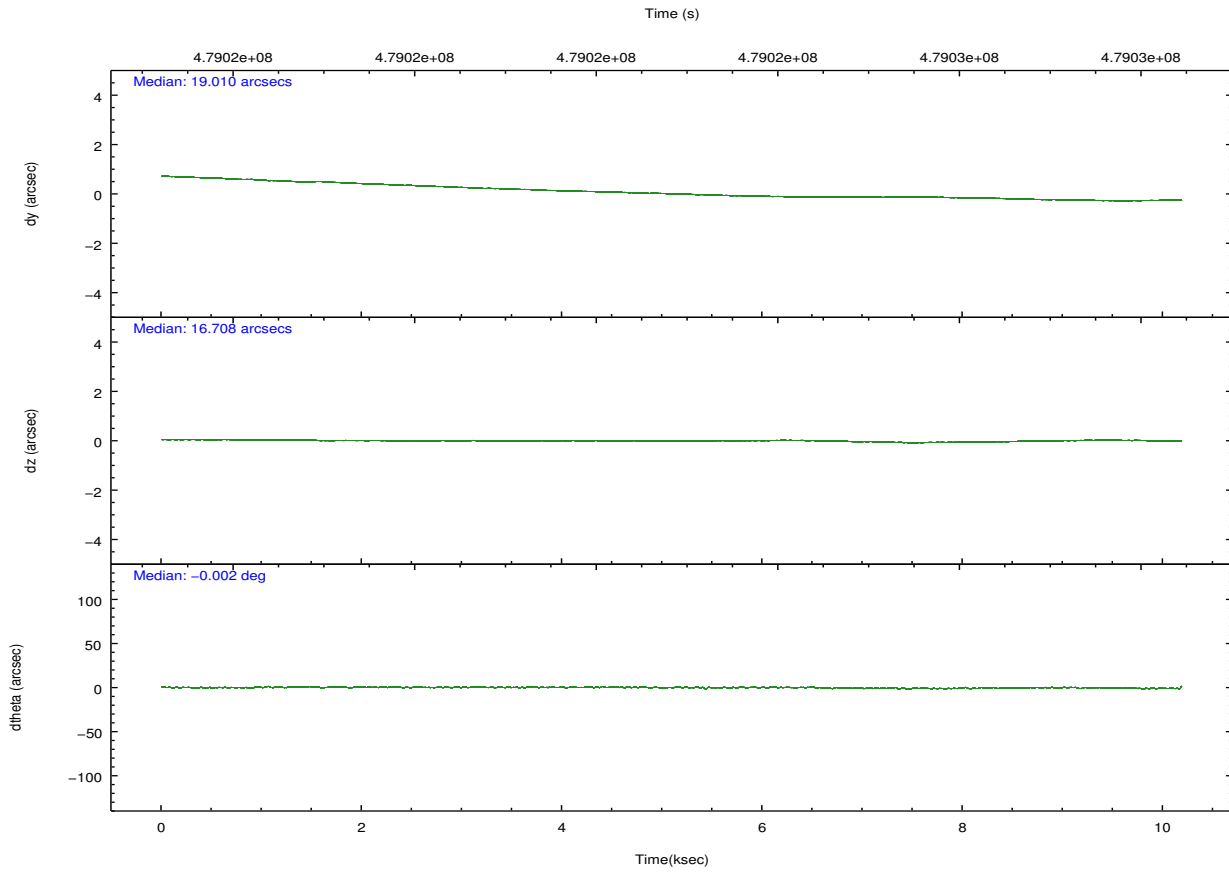
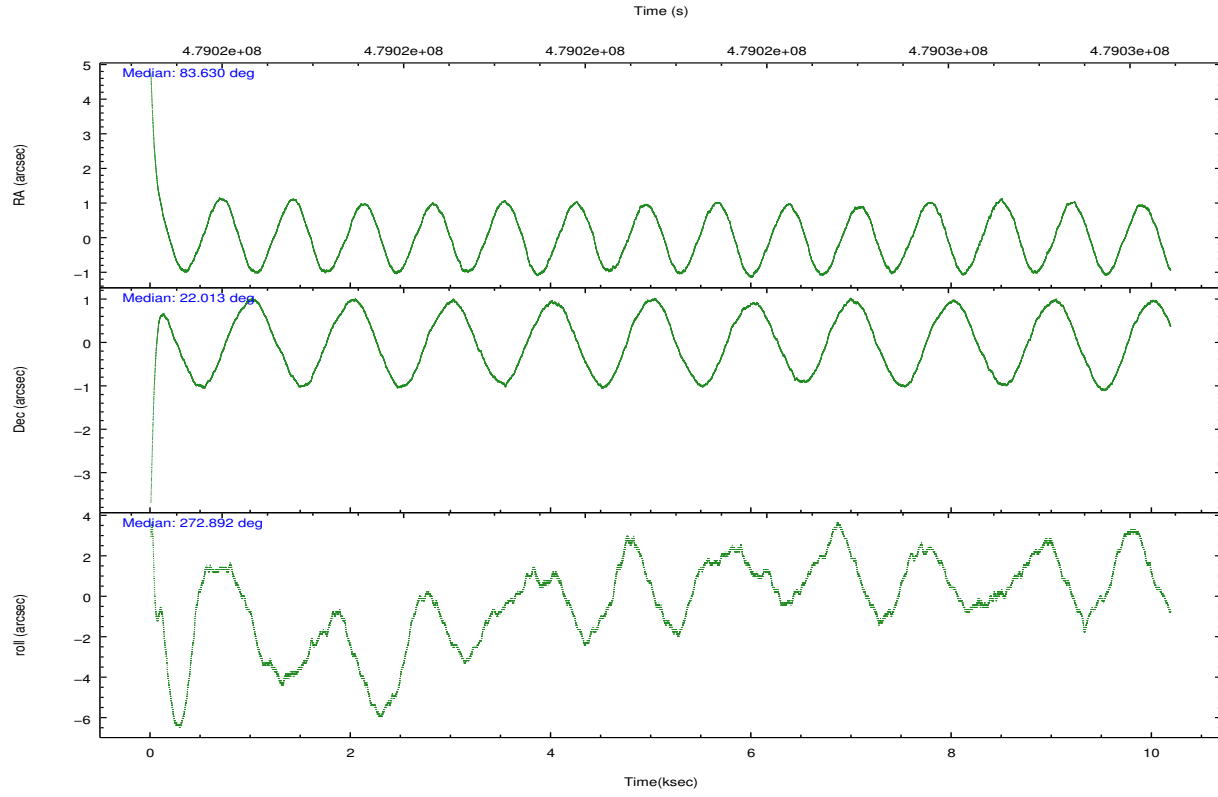
	ccd 7
grade 0 events	810199
	20%
grade 1 events	43647
	1%
grade 2 events	977163
	25%
grade 3 events	397086
	10%
grade 4 events	390254
	10%
grade 5 events	125108
	3%
grade 6 events	977187
	25%
grade 7 events	171127
	4%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.613718	83.63008660190425	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.035560	22.01280774376583	Subarray start row	235	235
[deg] Pointing Roll	272.749132	272.8996317021392	Subarray row count	300	300
[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	0.2
[mm] SIM translation stage pos	-187.676523	-187.6684941084384			
[mm] SIM translation stage offset	-2.456	-2.464028474569403			
[s] Observation start time (MET)	479017920.184000	479016805.24531			
Observation start date	2013-03-07T04:30:53	2013-03-07T04:13:25			
[s] Observation end time (MET)	479027920.184000	479028645.02095			
Observation end date	2013-03-07T07:17:33	2013-03-07T07:30:45			
Read mode	TIMED	TIMED			

2.3 Aspect



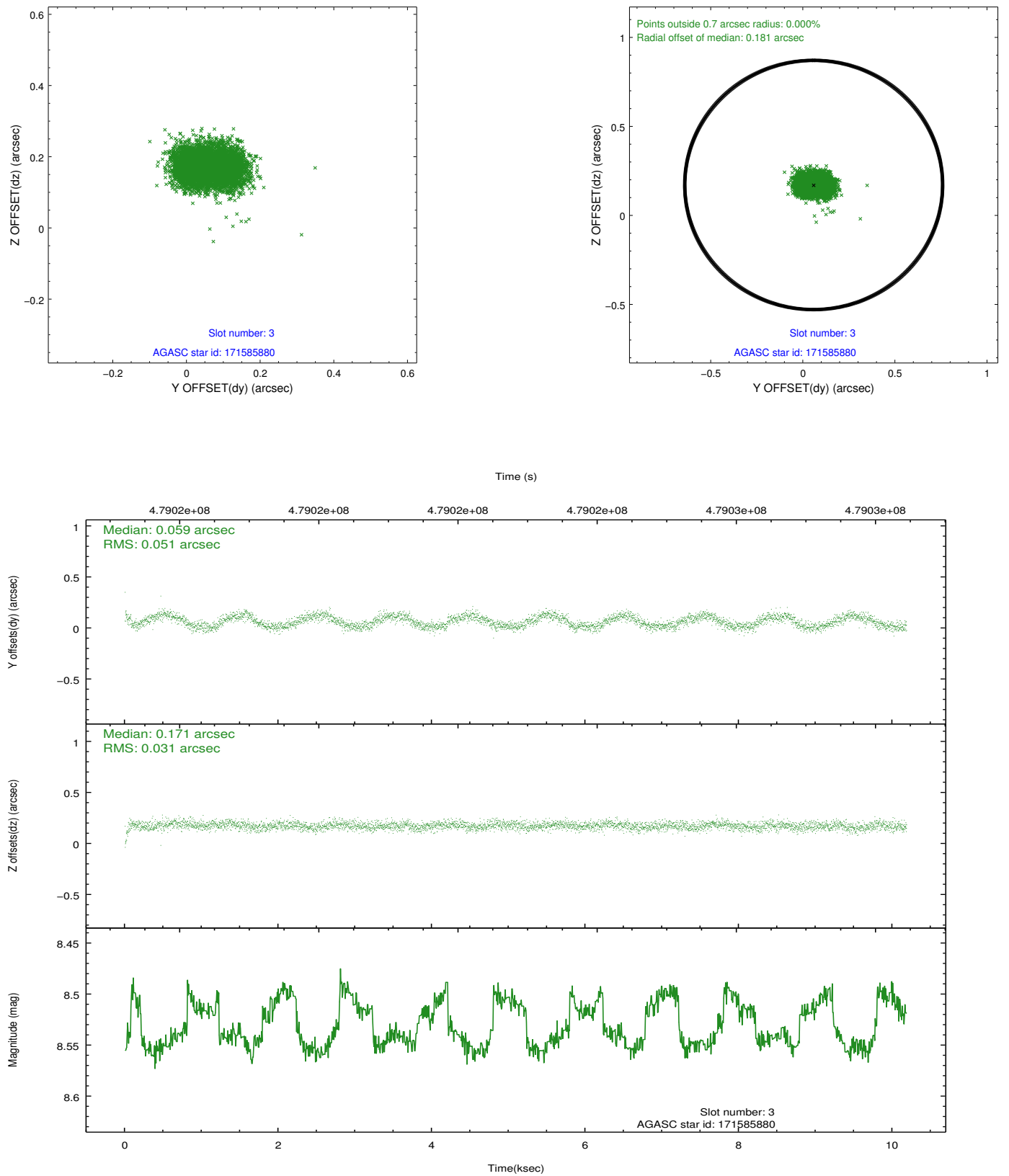


Slot Statistics

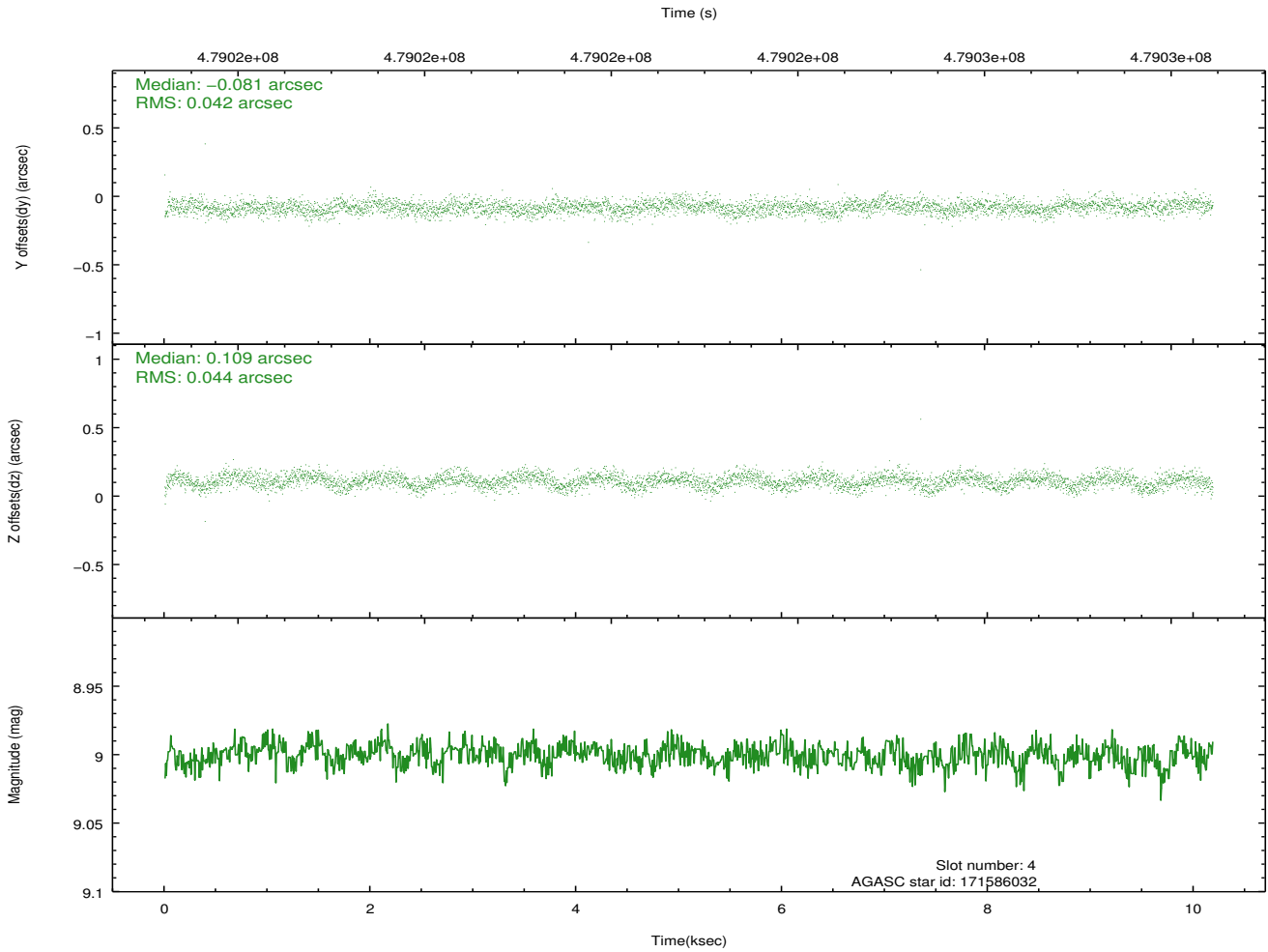
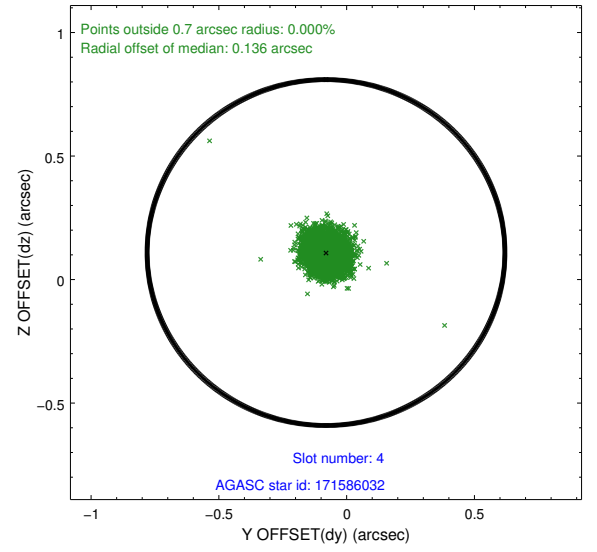
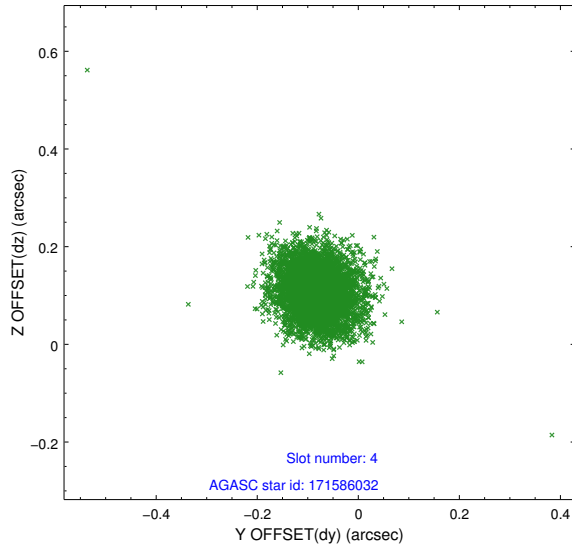
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.07	2484	-0.134	-0.067	0.011	0.020	0.000000	0.000000	-772.20	-1789.08
1	FID		ACIS-S-4	7.14	2484	0.311	0.083	0.014	0.021	0.000000	0.000000	2141.34	118.91
2	FID		ACIS-S-5	7.19	2484	-0.207	-0.007	0.009	0.016	0.000000	0.000000	-1824.40	113.19
3	GUIDE	used	171585880	8.54	4969	0.059	0.171	0.064	0.099	83.676260	22.176319	-495.56	233.03
4	GUIDE	used	171586032	9.00	4968	-0.081	0.109	0.064	0.104	83.950197	22.083225	-118.54	1129.97
5	GUIDE	used	171721904	9.24	4966	-0.049	-0.101	0.084	0.136	84.272676	22.116922	-191.69	2209.90
6	GUIDE	used	243941560	8.41	4967	0.102	-0.094	0.069	0.109	83.733264	22.568598	-1897.02	489.29
7	GUIDE	used	171597832	9.18	4965	-0.028	-0.084	0.098	0.157	83.183230	21.366702	2334.34	-1556.36

2.4 Star Slots

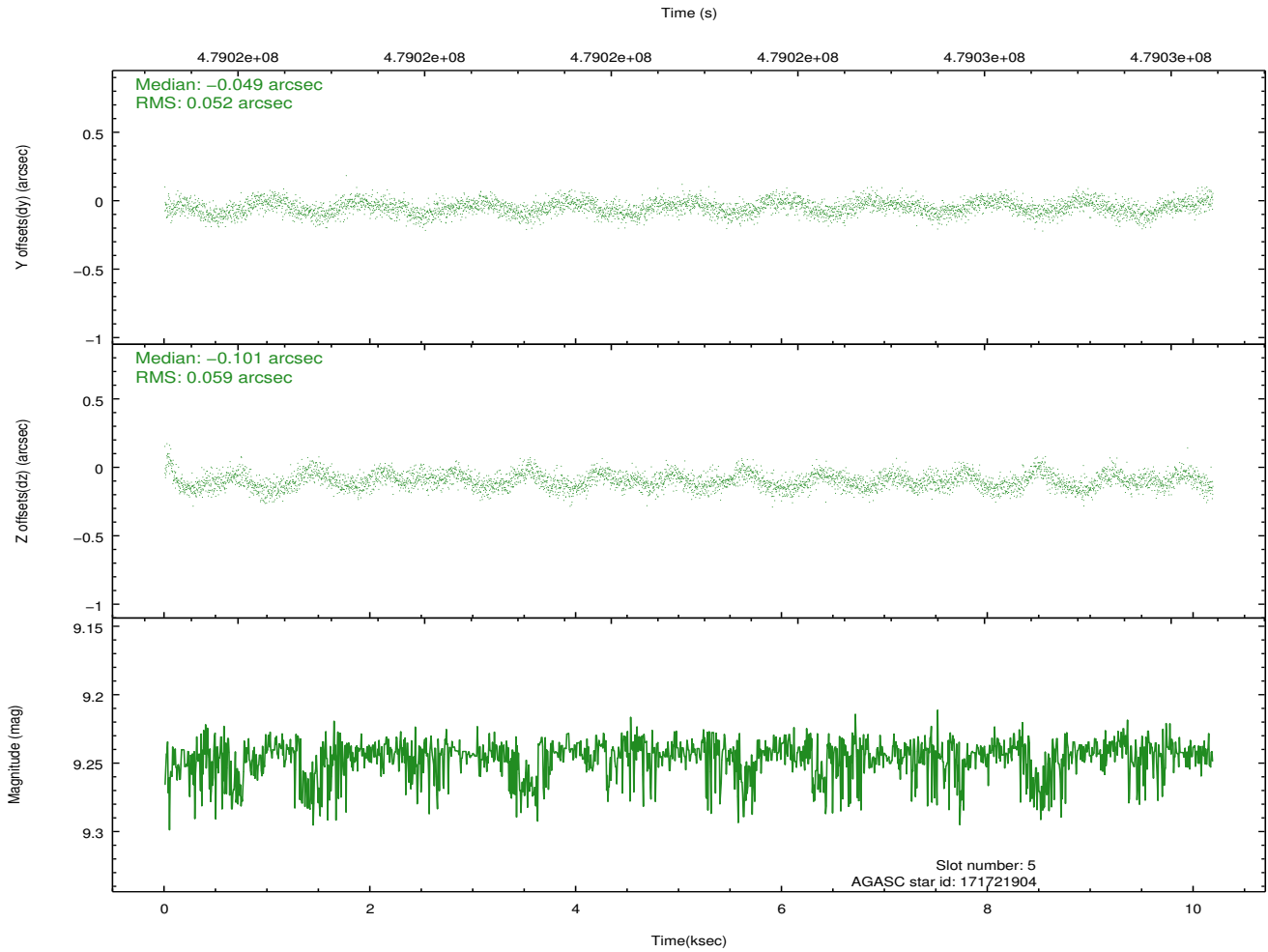
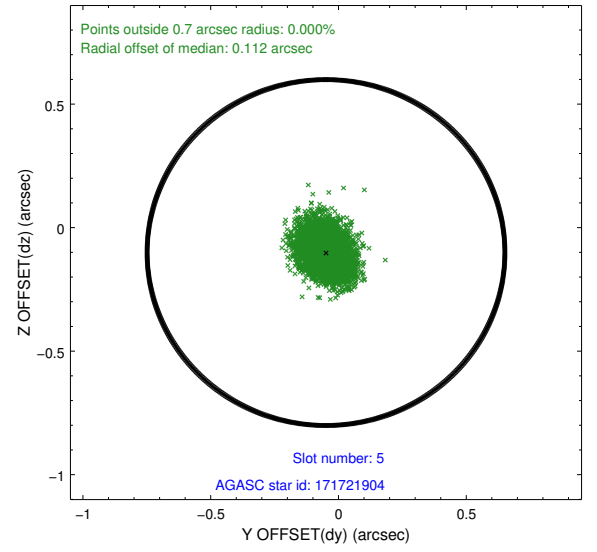
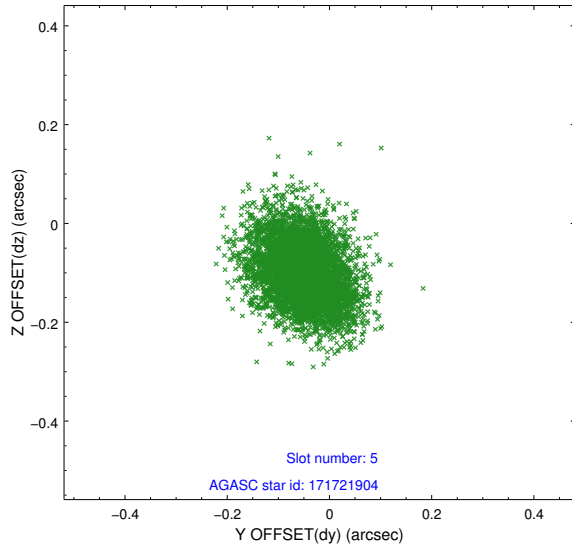
2.4.1 Slot 3



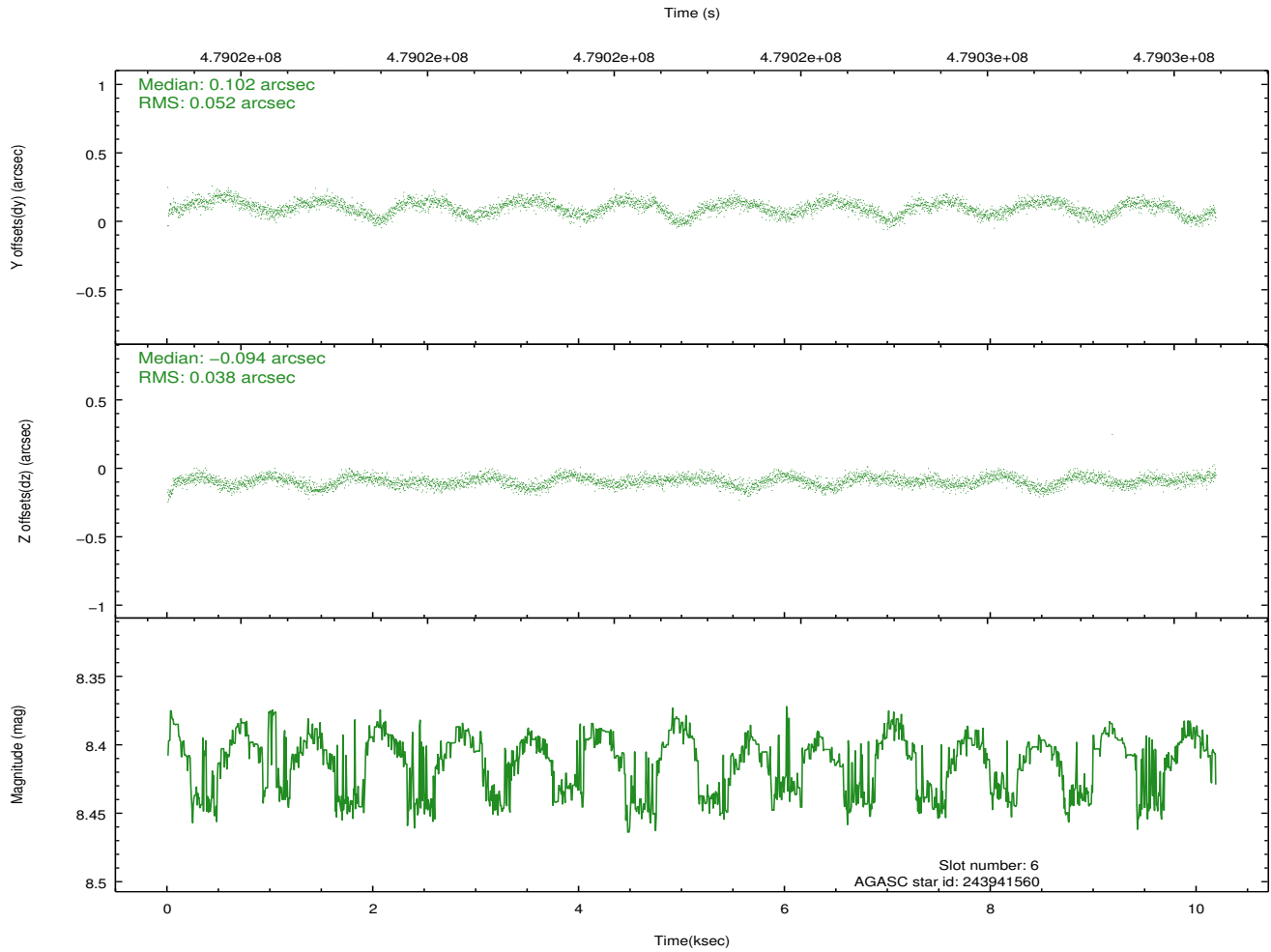
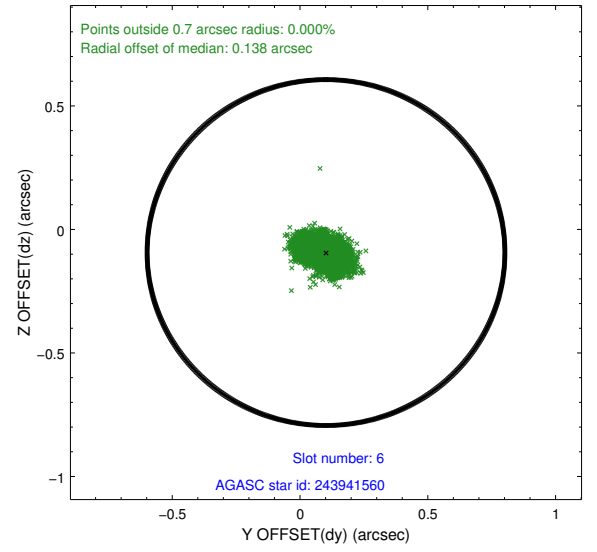
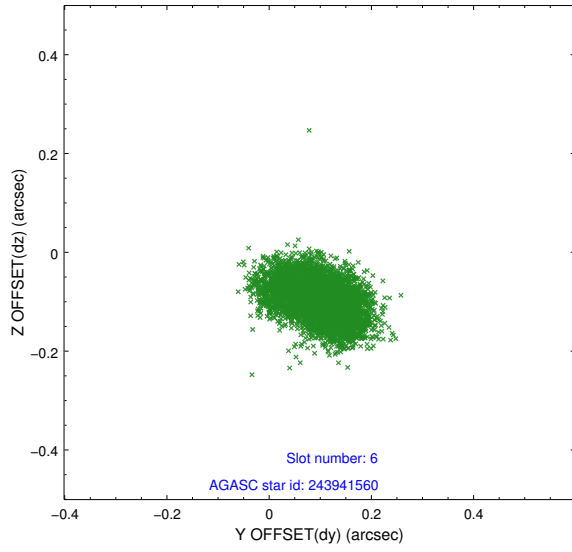
2.4.2 Slot 4



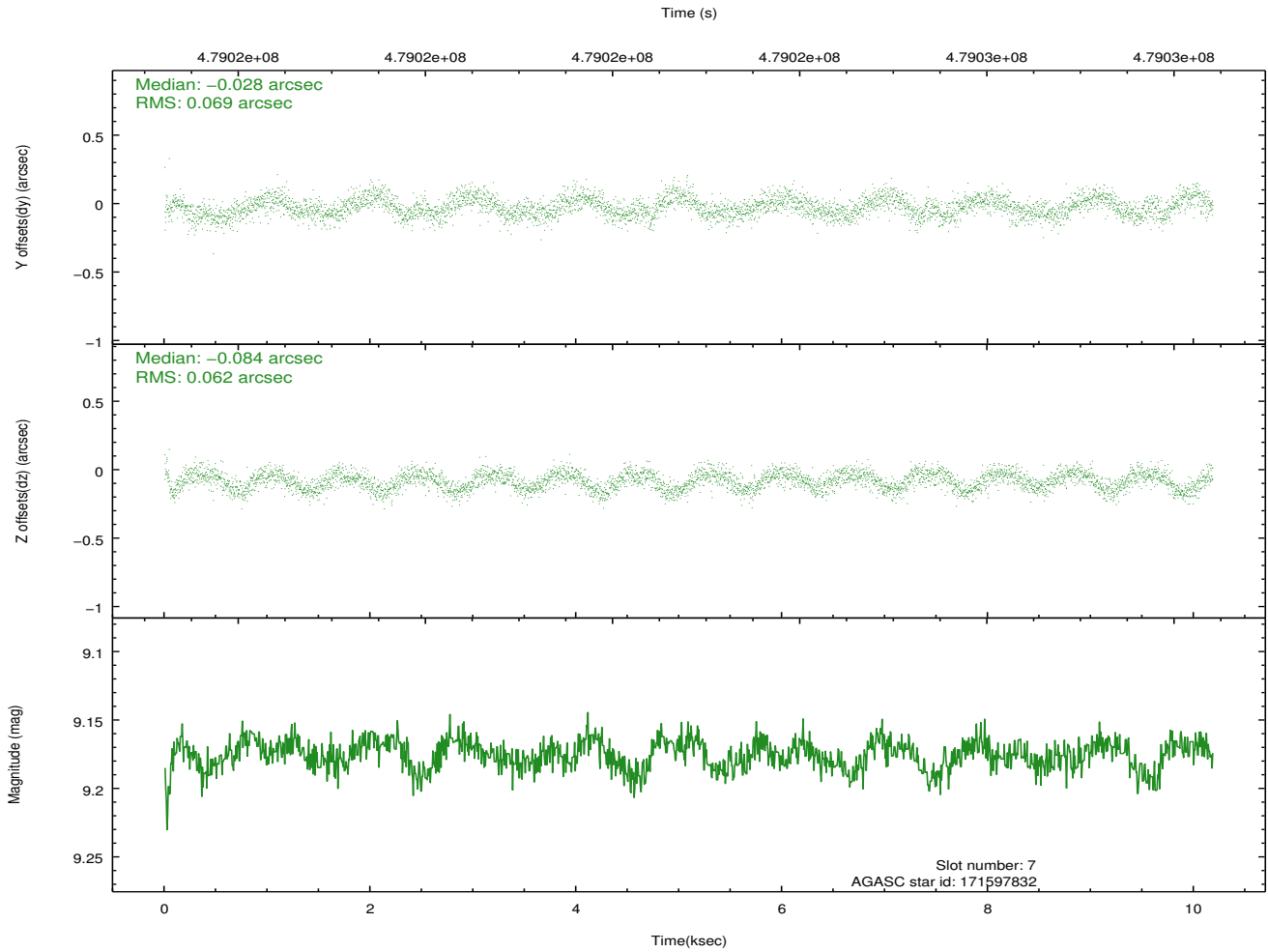
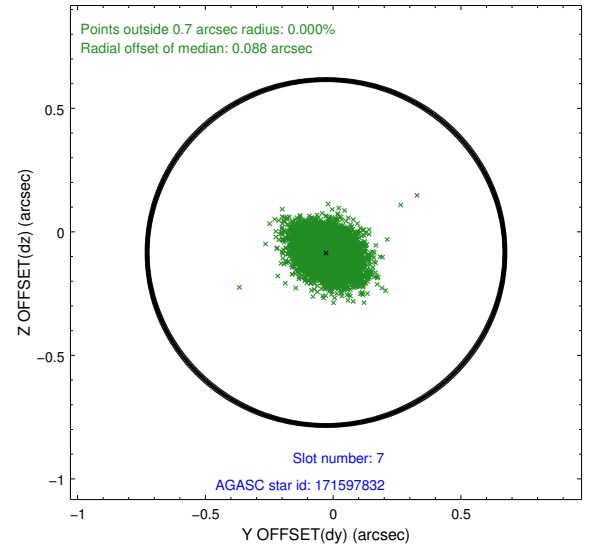
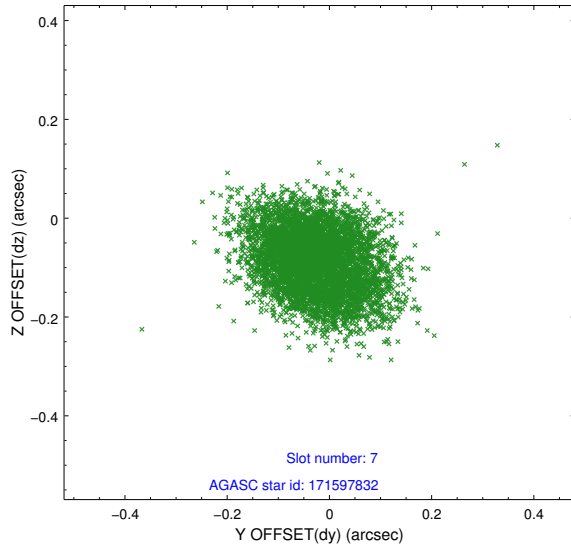
2.4.3 Slot 5



2.4.4 Slot 6

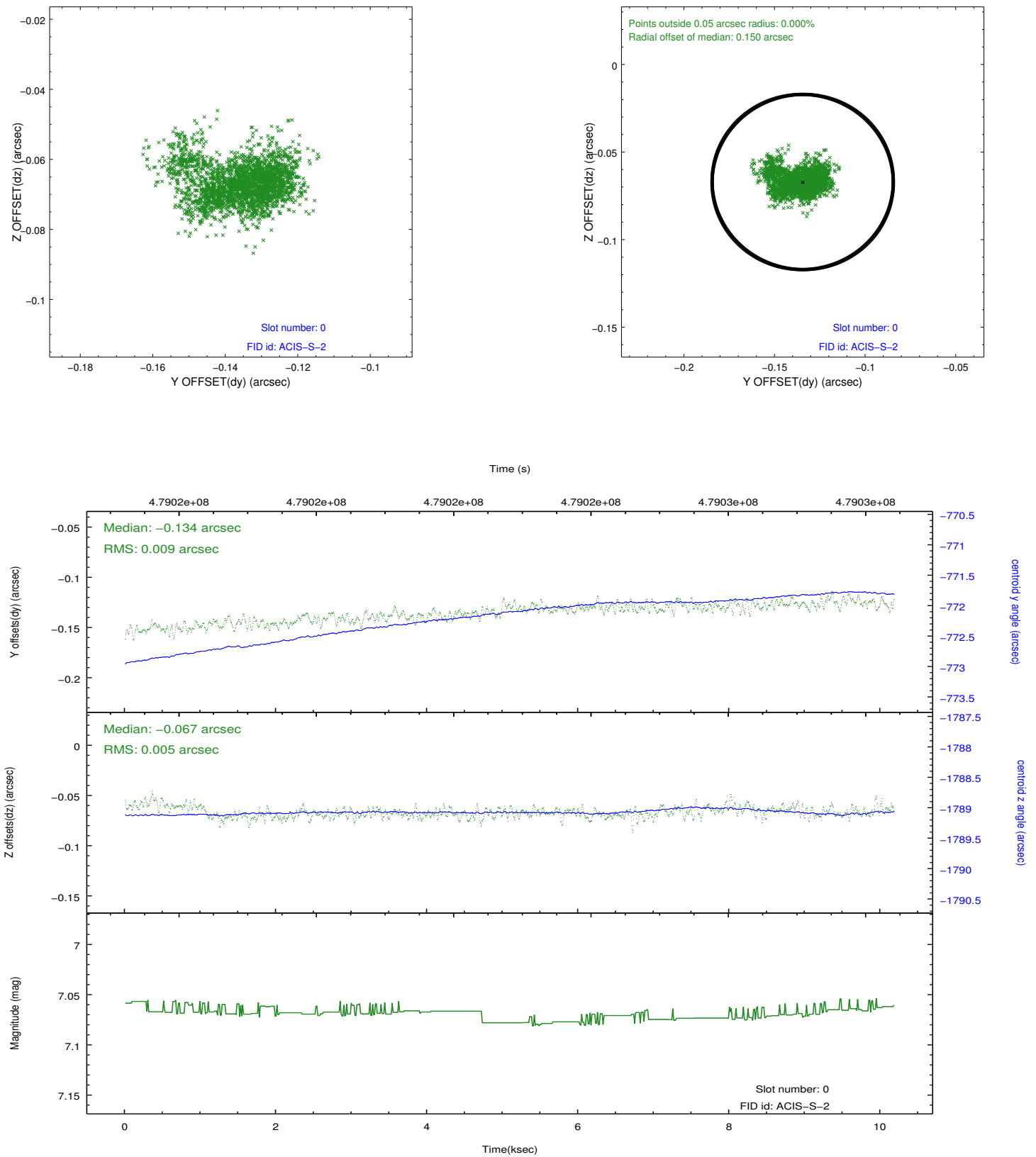


2.4.5 Slot 7

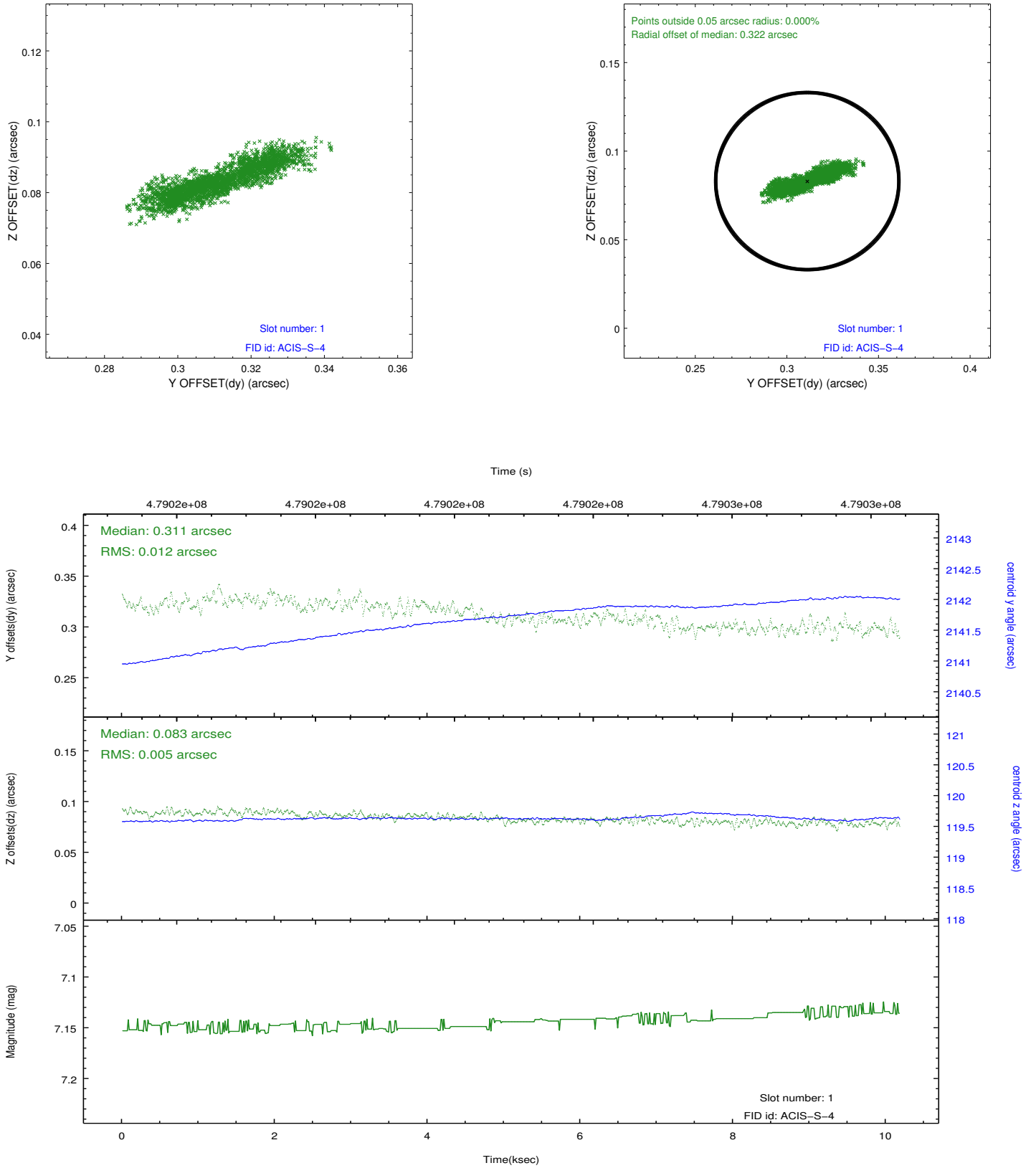


2.5 FID Slots

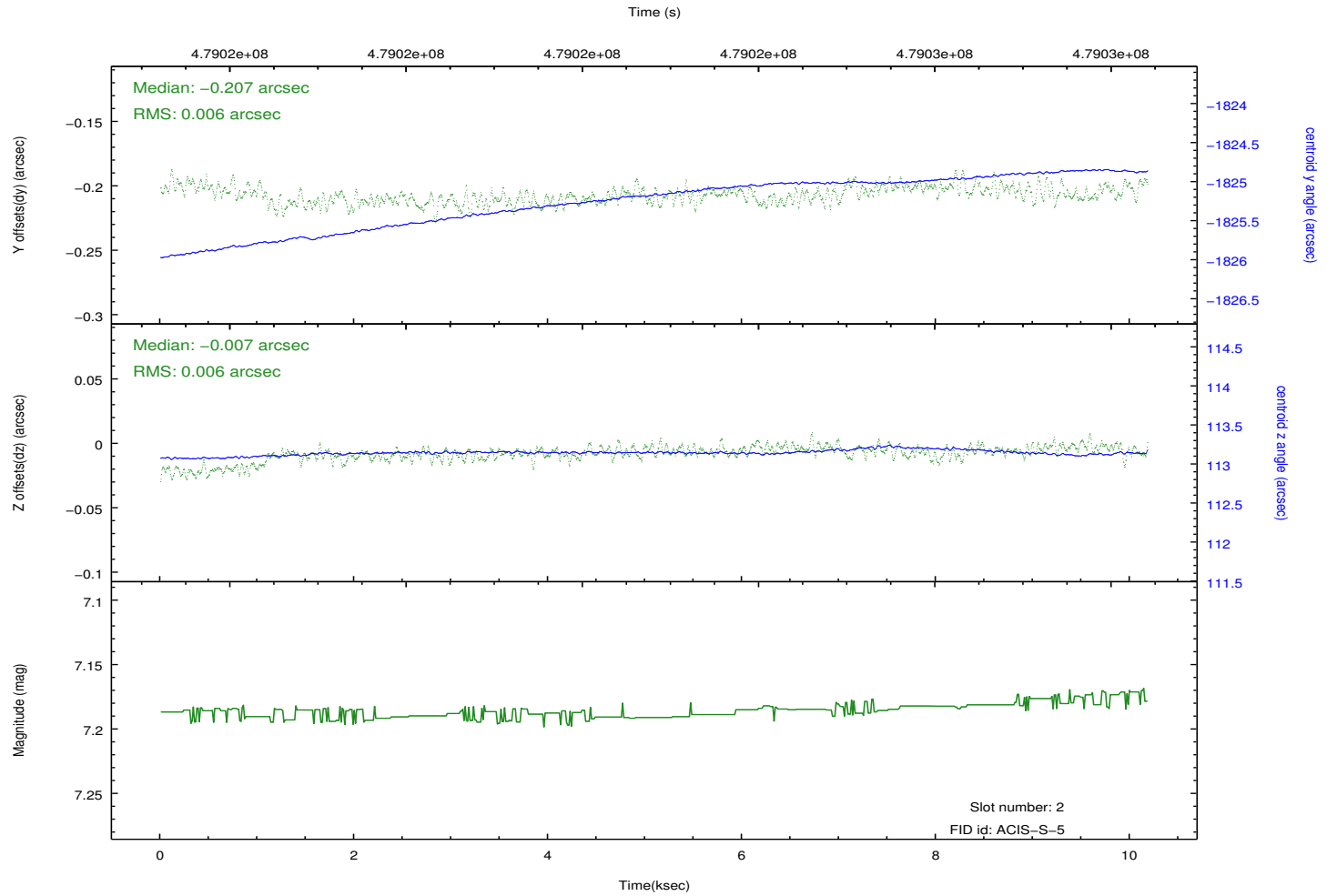
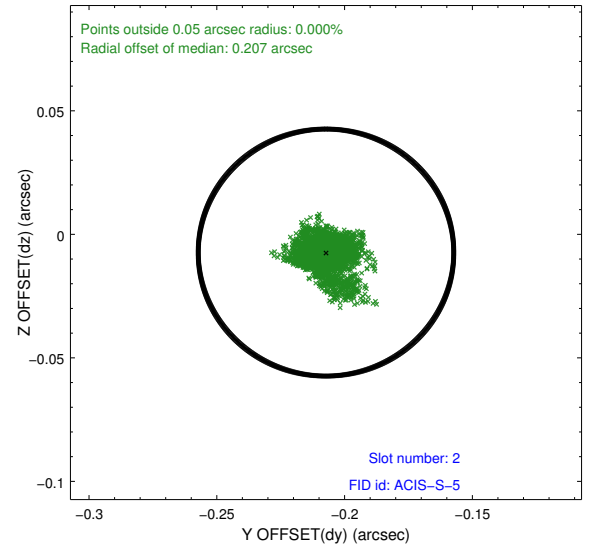
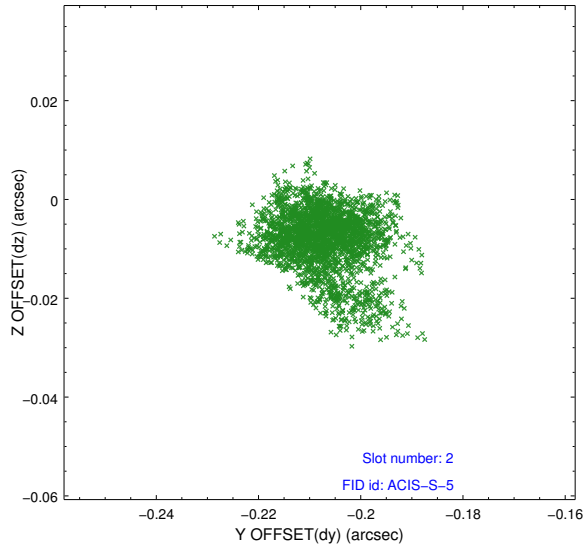
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10

A.2 Comments

Charge time is set to the scheduled time for this observation, although the ontime is 7175 s, which is significantly less due to telemetry saturation. In addition, the livetime of the detector is about 1246 s, significantly shorter than the ONTIME of 7175 s. This is because the frame time of 0.2 s is shorter than the minimum time that it takes to read out the detector (about 0.9 s) in the specified configuration. Therefore, there is a flush of 0.90588 s preceding each frame. This flush time is dead time.

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.