

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 16357 - L2 Version 2
Chandra X-Ray Center

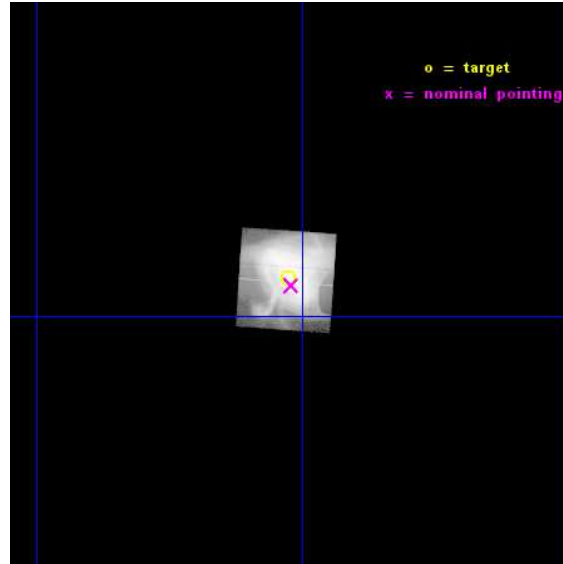
L2 Processing Date : Dec 9 2014

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1 Front

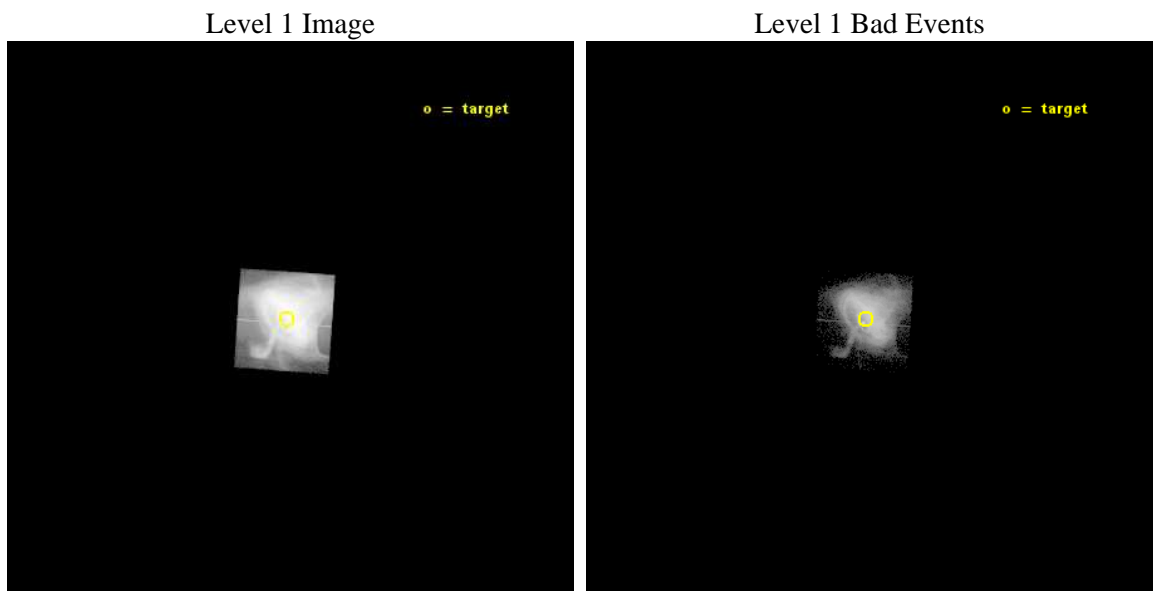
seq_num	502255	Sequence number
obs_id	16357	Observation id
title	Joint Chandra and HST Monitoring and Studies of the Crab Nebula	Pr
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630142497654	Nominal RA [deg]
dec_nom	22.012783881084	Nominal Dec [deg]
roll_nom	273.9545565784	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7561.6968591213	Sum of GTIs [s]
livetime	1303.6059819883	Livetime [s]
ontime7	7561.6968591213	Sum of GTIs [s]
l2events	3485659	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	10000.903000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	7561.6968591213	Sum of GTIs [s]
caldsver	4.6.4	 	ontime7	7561.6968591213	Sum of GTIs [s]
date	2014-12-10T02:48:00	Date and time of file creation	l1events	3884741	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

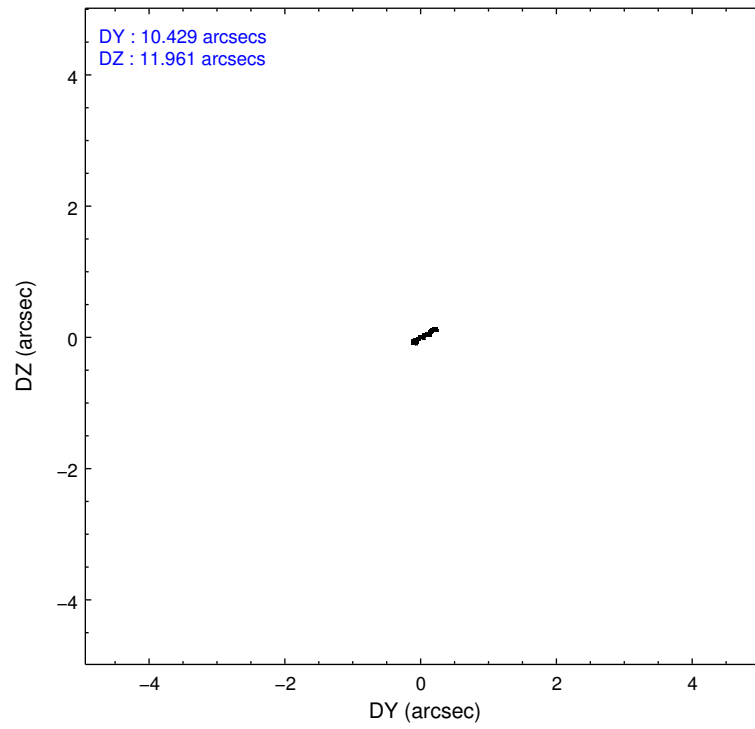
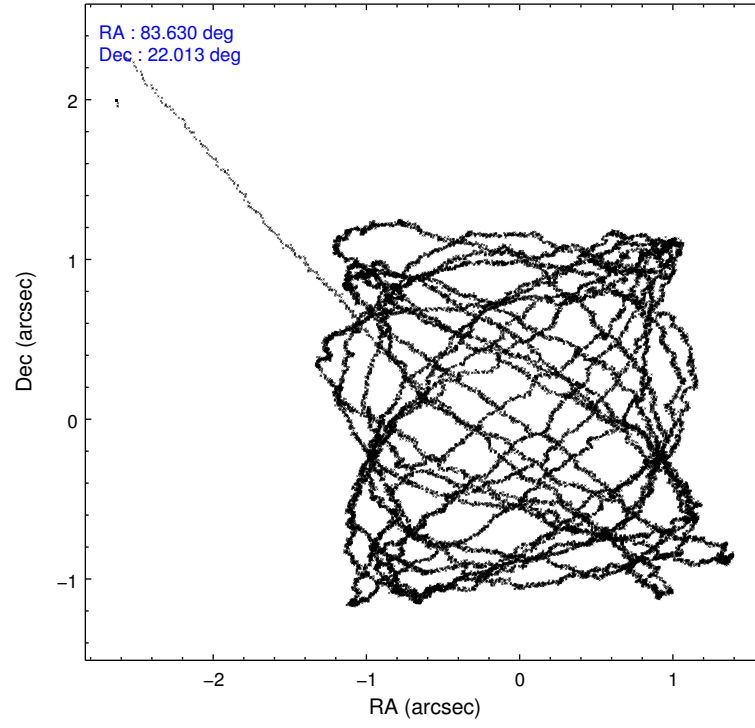
	ccd 7
level 1 events	3884741
rejected events	349930
rejected %	9%

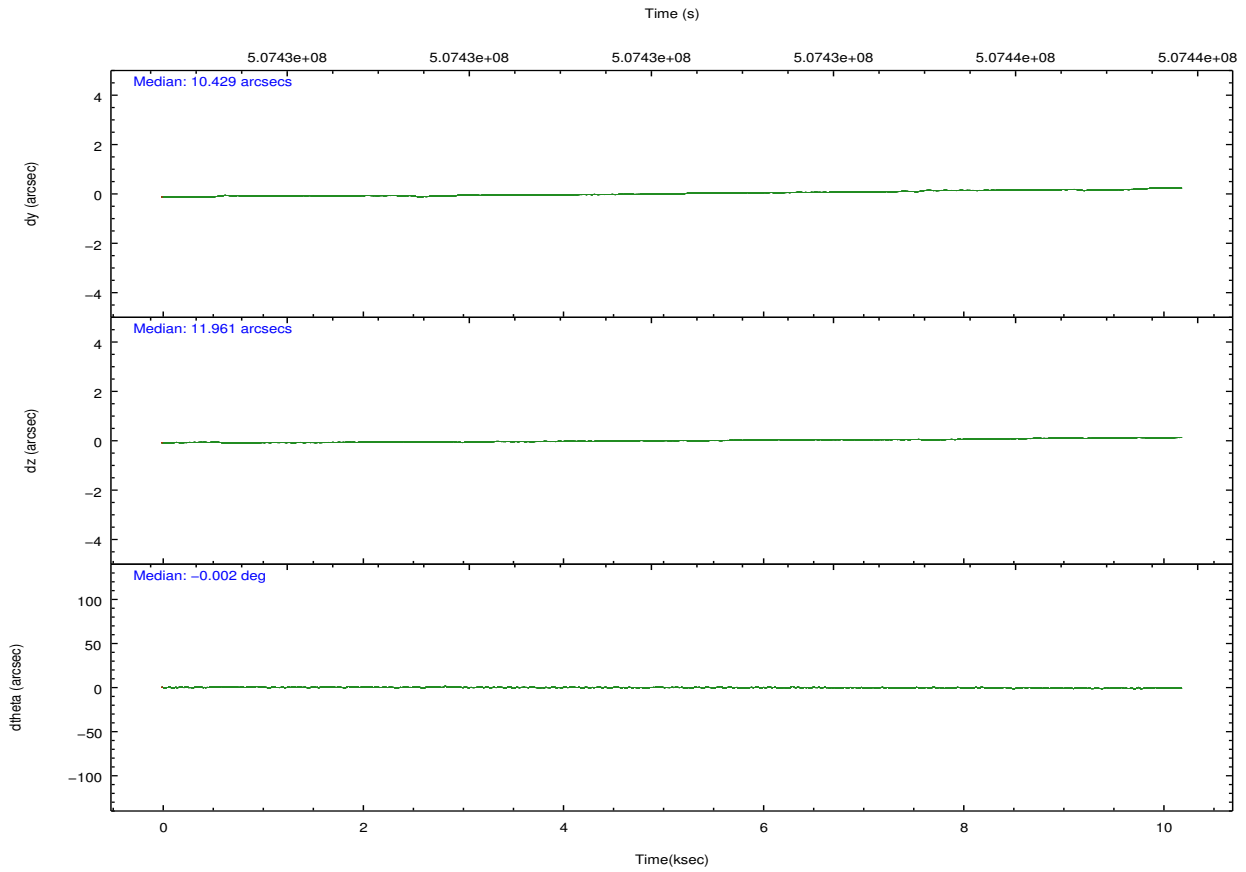
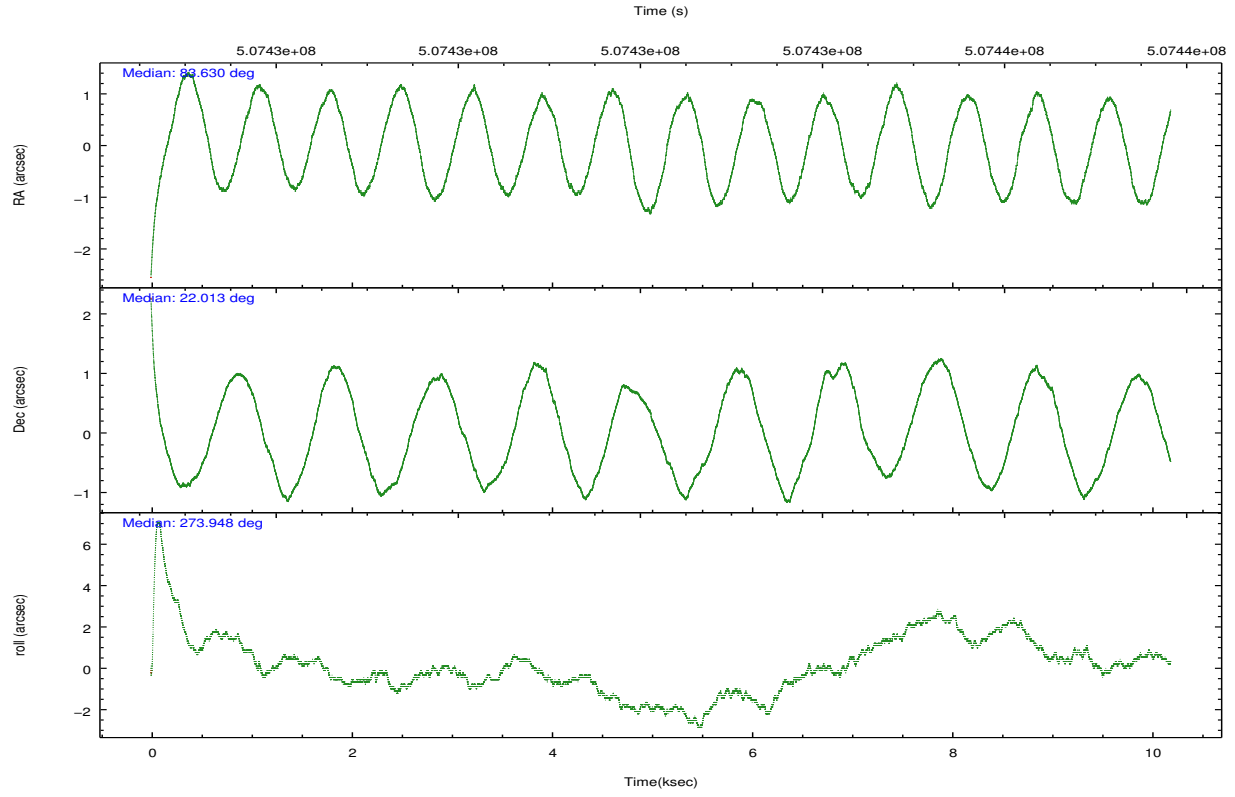
	ccd 7
grade 0 events	812444
	20%
grade 1 events	40337
	1%
grade 2 events	1009709
	25%
grade 3 events	379603
	9%
grade 4 events	370571
	9%
grade 5 events	125242
	3%
grade 6 events	963034
	24%
grade 7 events	183801
	4%

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	83.613319	83.63014249765354	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.035248	22.01278388108351	Subarray start row	445	445
[deg] Pointing Roll	273.804242	273.9545565784047	Subarray row count	300	300
[s] Window start time (MET)	506131267.184000	506131267.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	507945667.184000	507945667.184000	[s] Primary exposure time	0.000000	0.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-192.716523	-192.7172392339709			
[mm] SIM translation stage offset	2.584	2.584716650963088			
[s] Observation start time (MET)	507427314.184000	507426146.51919			
Observation start date	2014-01-30T00:00:47	2014-01-29T23:42:26			
[s] Observation end time (MET)	507437314.184000	507437540.93232			
Observation end date	2014-01-30T02:47:27	2014-01-30T02:52:20			
Read mode	TIMED	TIMED			

2.3 Aspect



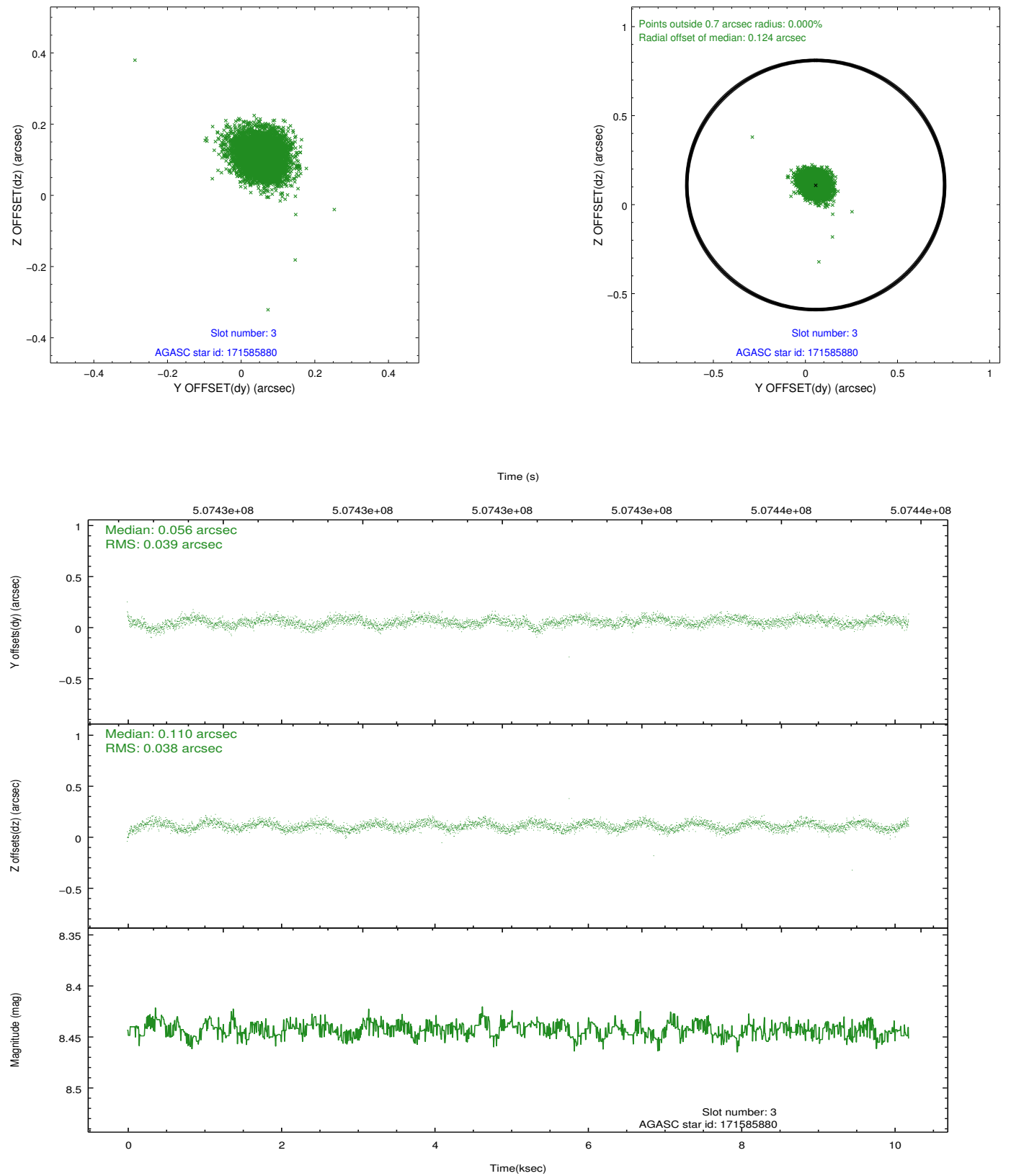


Slot Statistics

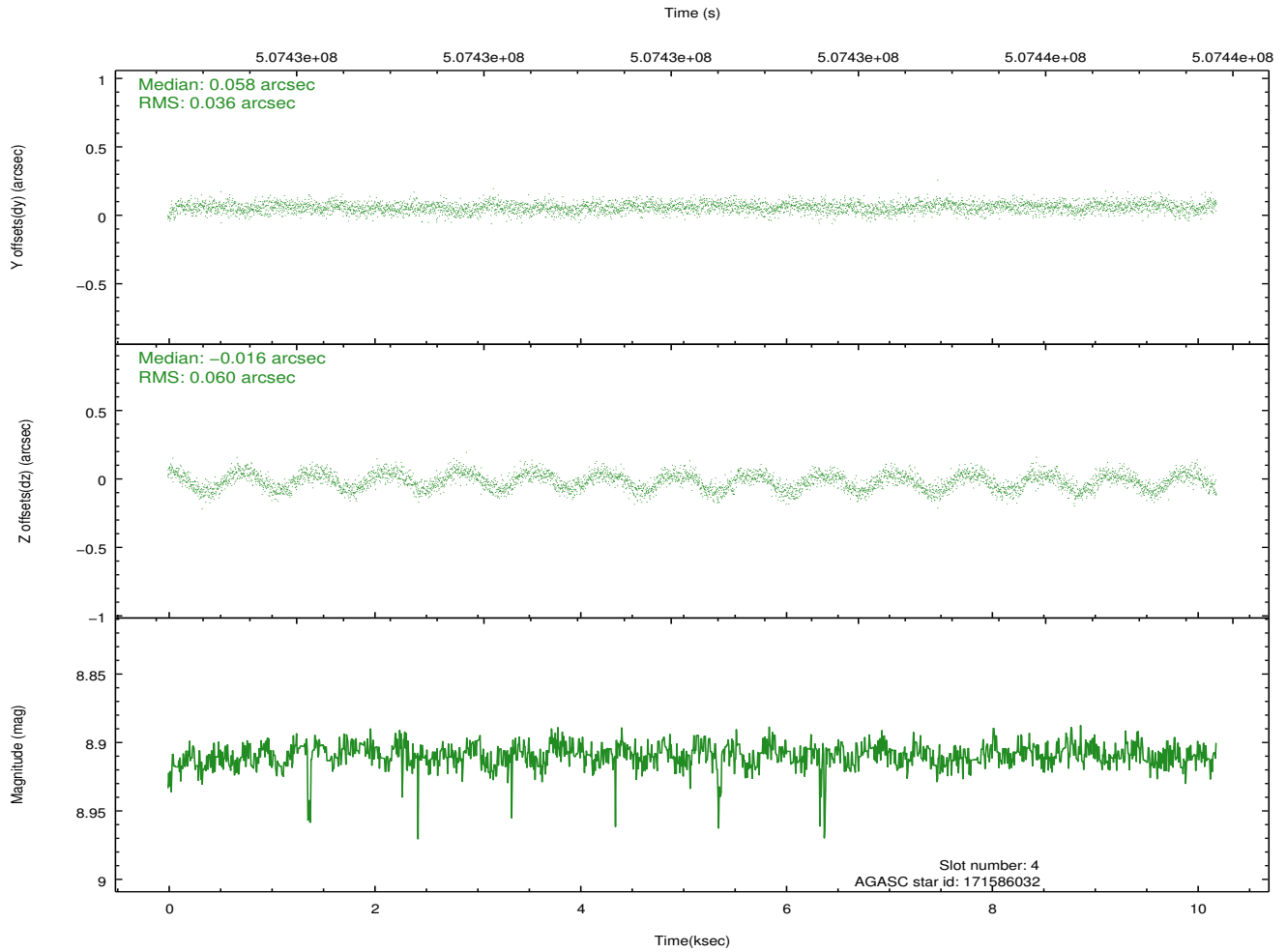
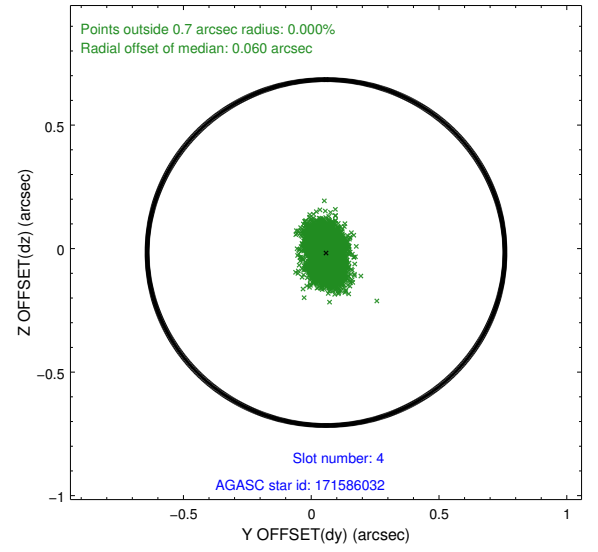
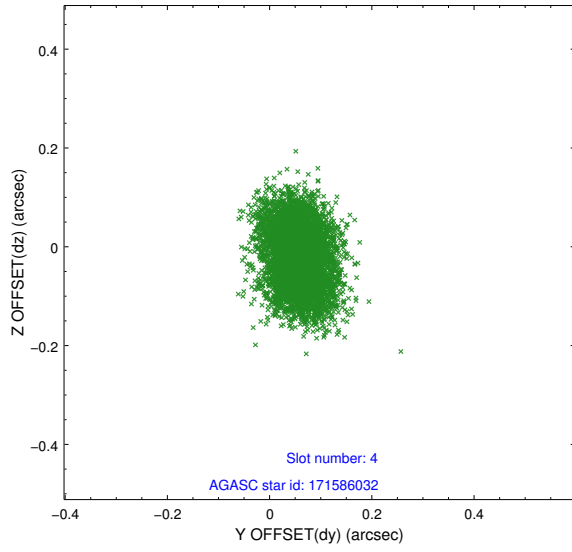
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.10	2485	-0.088	-0.023	0.010	0.018	0.000000	0.000000	-763.60	-1680.15
1	FID		ACIS-S-4	7.18	2486	0.183	0.049	0.011	0.020	0.000000	0.000000	2149.76	227.81
2	FID		ACIS-S-5	7.22	2486	-0.126	-0.016	0.011	0.021	0.000000	0.000000	-1815.77	222.12
3	GUIDE	used	171585880	8.44	4970	0.056	0.110	0.057	0.091	83.676260	22.176319	-492.48	243.23
4	GUIDE	used	171586032	8.91	4972	0.058	-0.016	0.075	0.121	83.950197	22.083225	-98.84	1132.99
5	GUIDE	used	171597832	9.17	4971	0.011	-0.067	0.097	0.163	83.183230	21.366702	2304.37	-1597.81
6	GUIDE	used	171721904	9.20	4969	0.054	0.133	0.097	0.159	84.272676	22.116922	-151.63	2213.91
7	GUIDE	used	243941560	8.33	4971	-0.180	-0.162	0.048	0.078	83.733264	22.568598	-1889.23	525.25

2.4 Star Slots

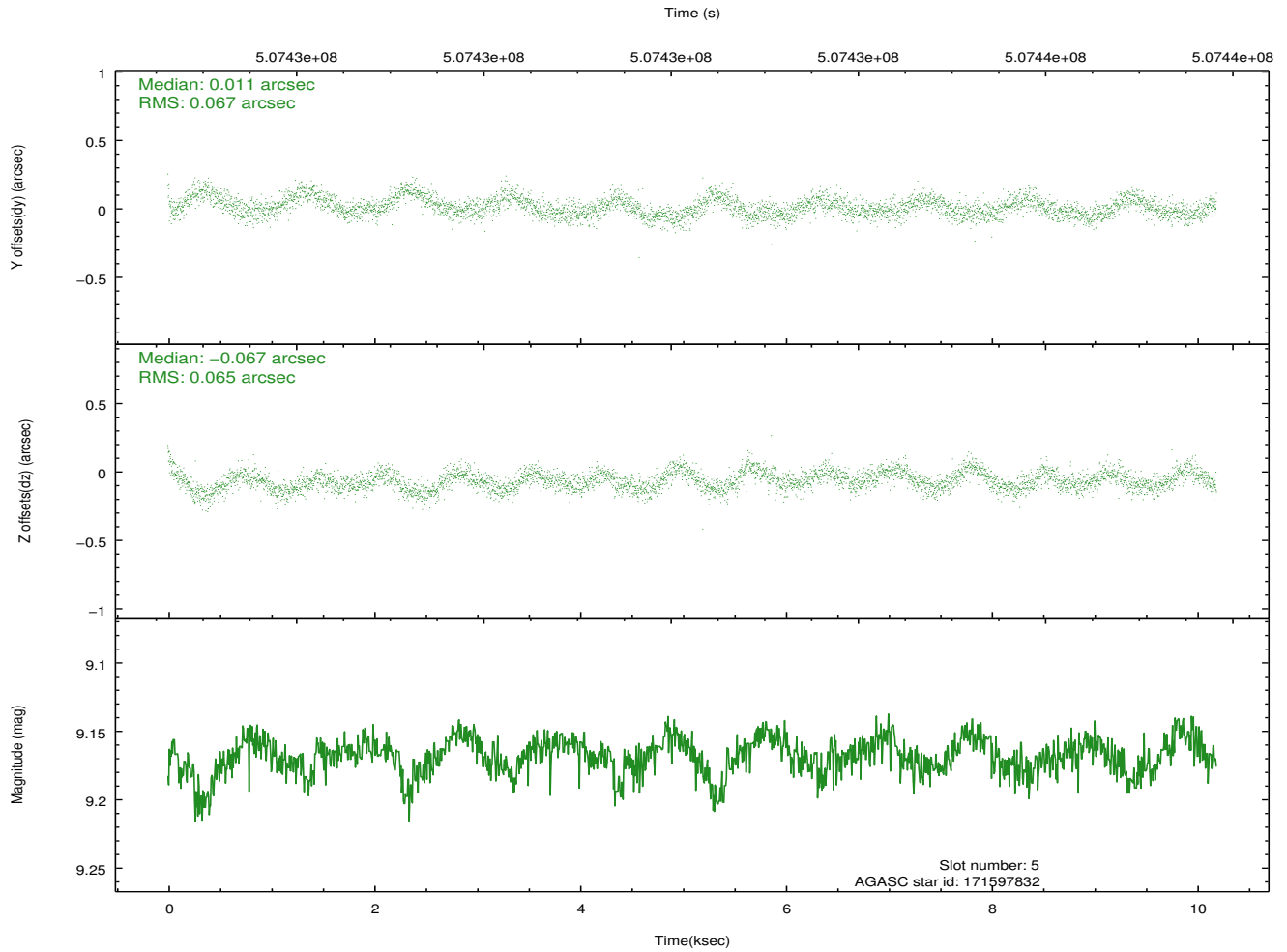
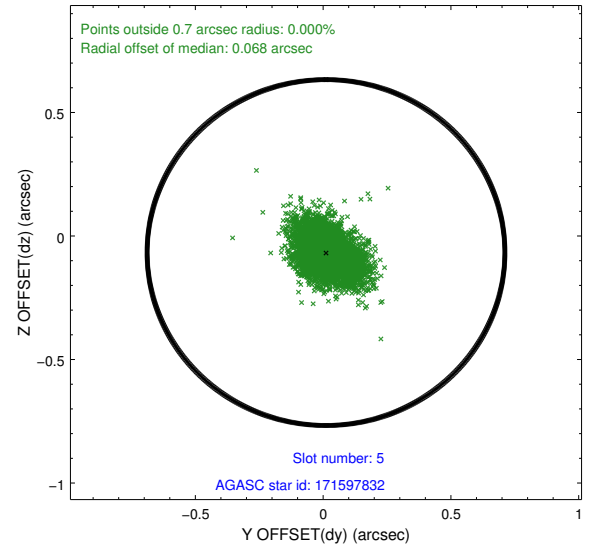
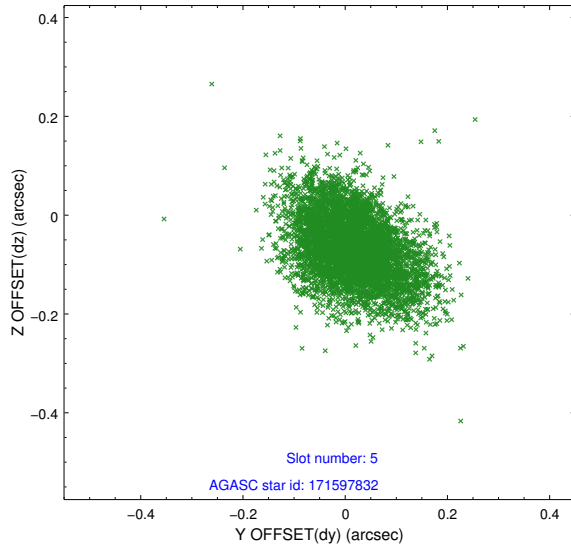
2.4.1 Slot 3



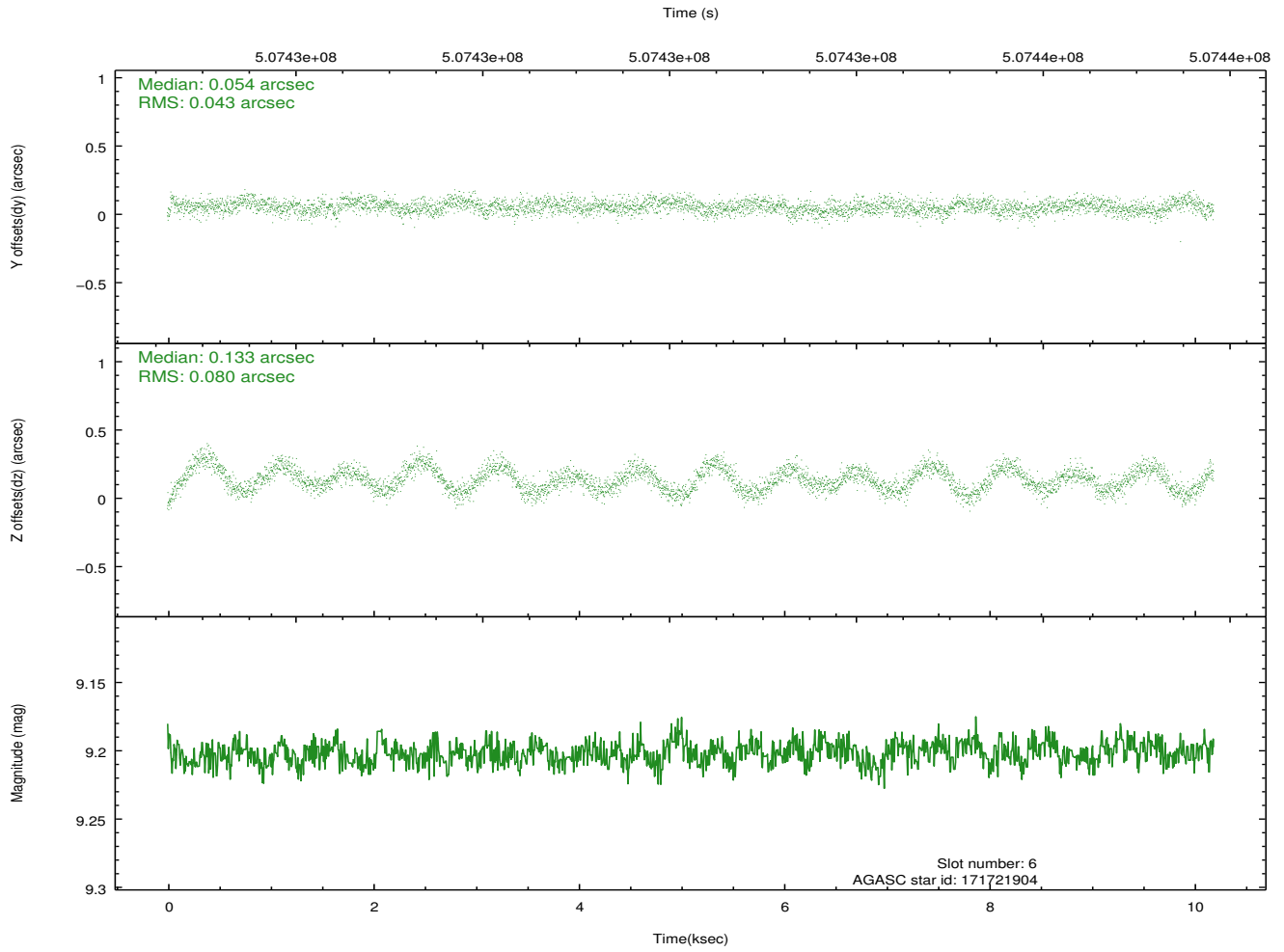
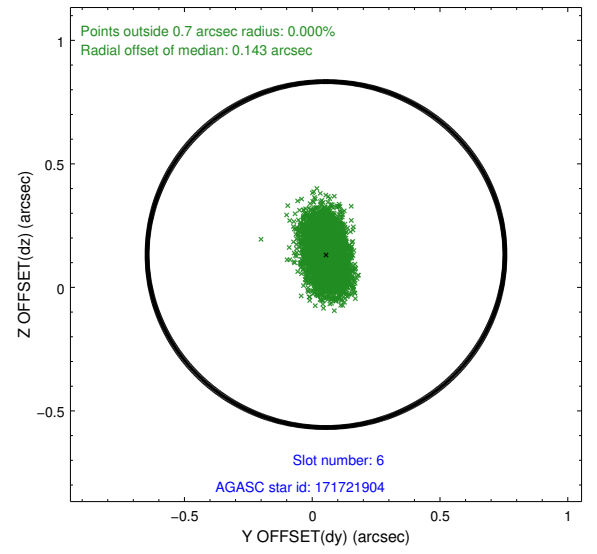
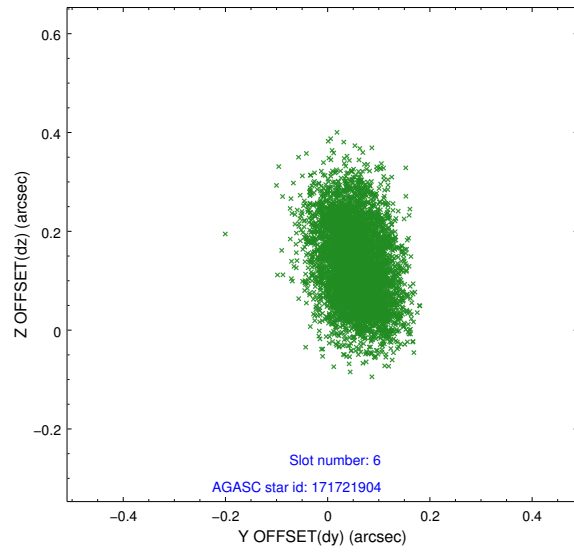
2.4.2 Slot 4



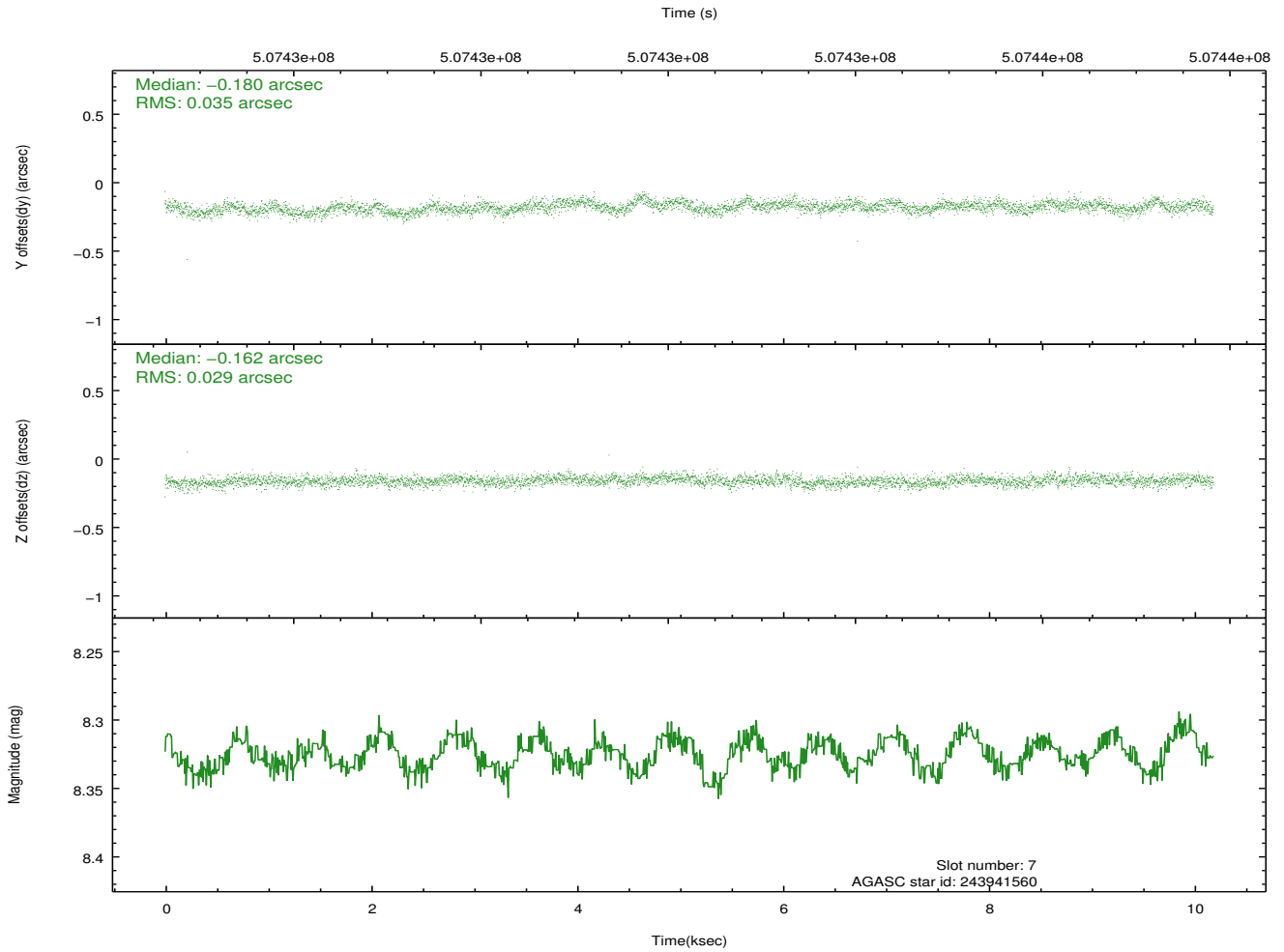
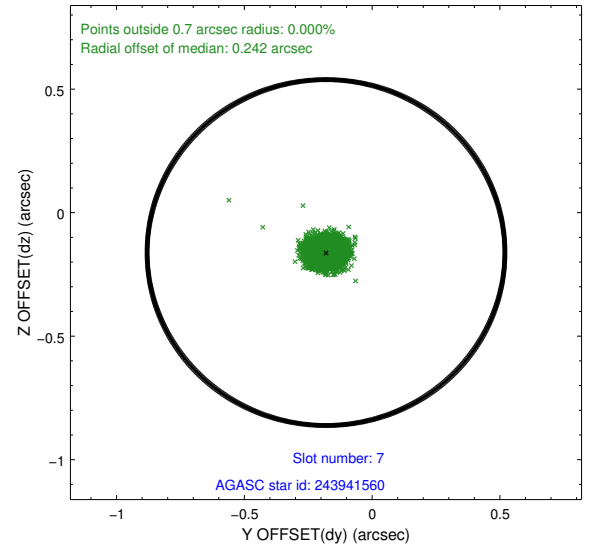
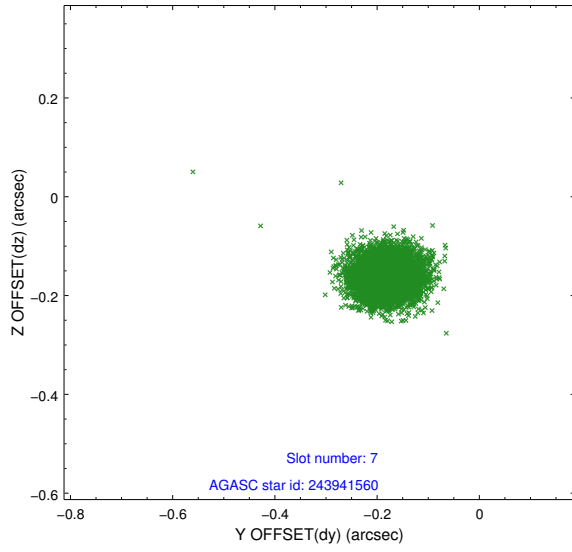
2.4.3 Slot 5



2.4.4 Slot 6

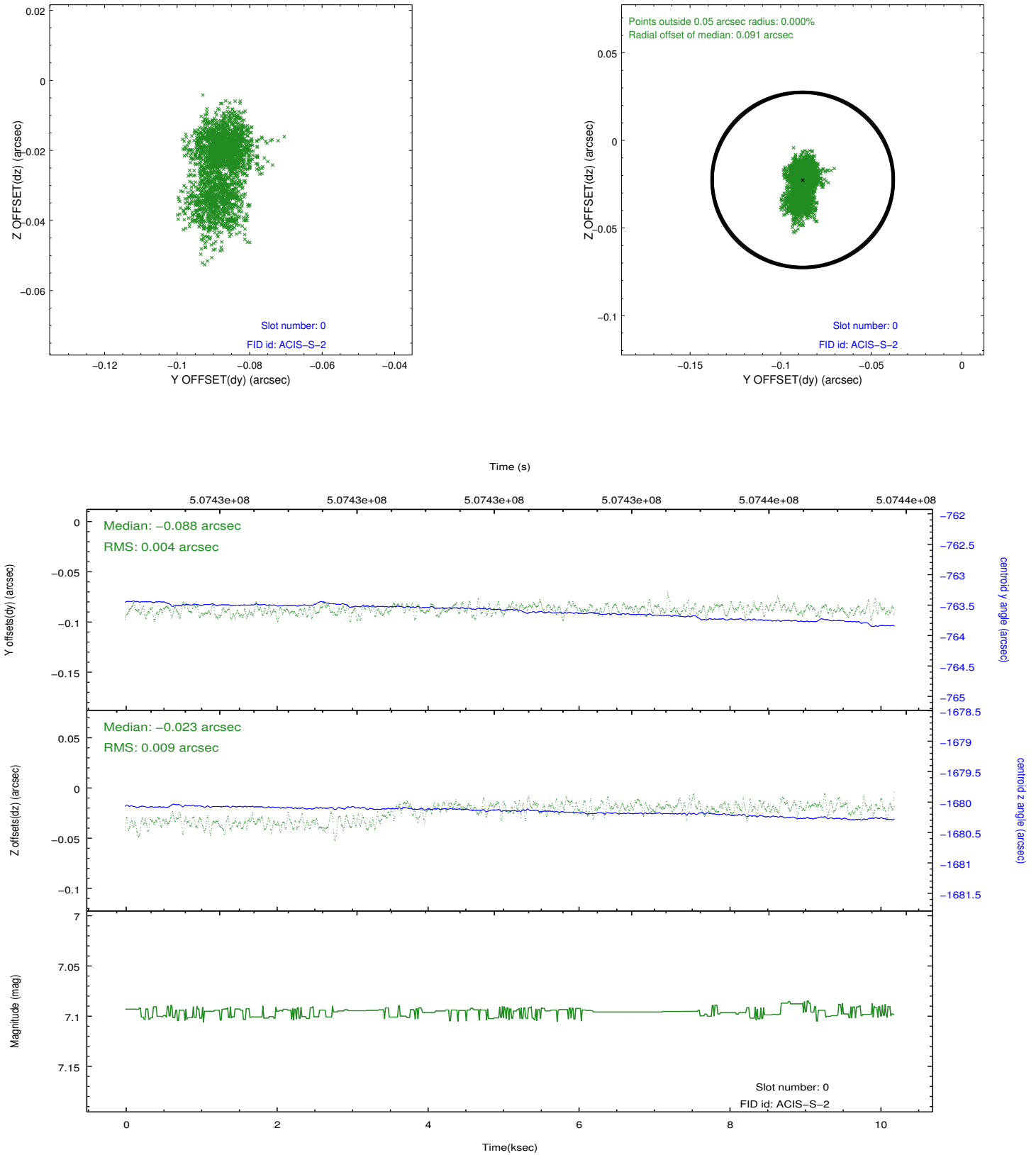


2.4.5 Slot 7

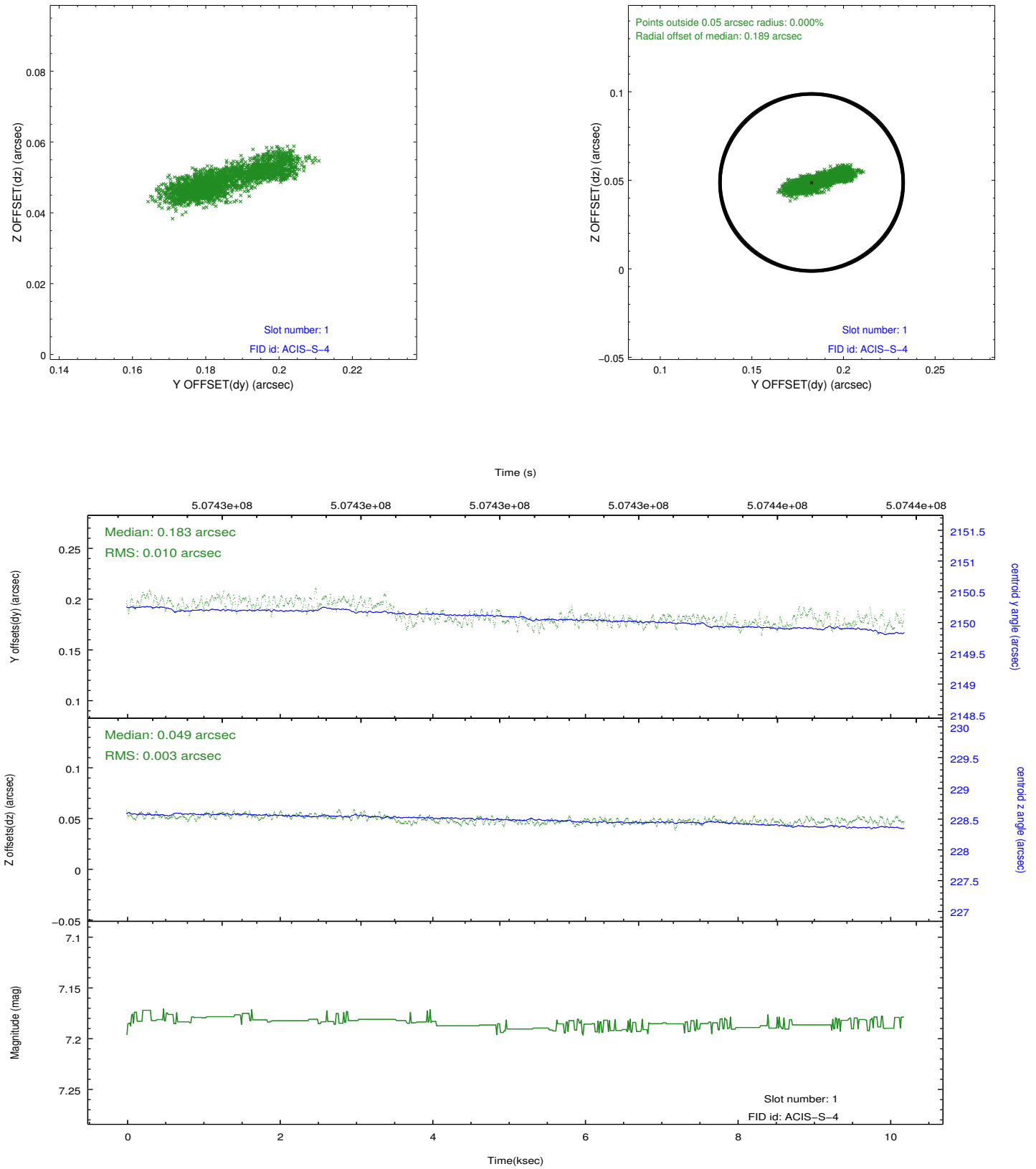


2.5 FID Slots

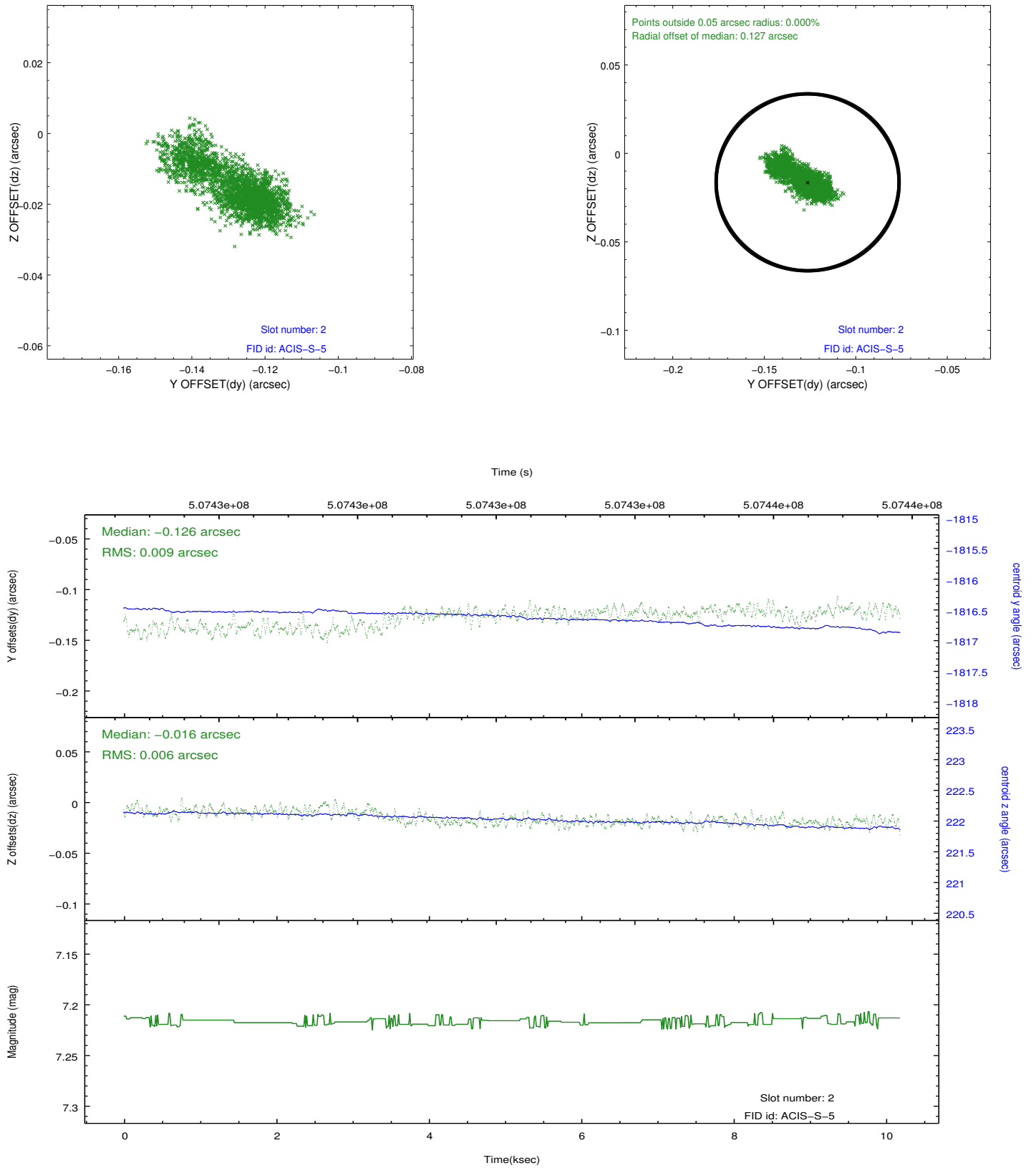
2.5.1 Slot 0



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)	2014.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10

A.2 Comments

Joint Proposal with HST. Window constraint met. A non-standard dither was used for this observation.

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Charge time is set to the scheduled time for this observation, although the ontime is 7562 s, which is significantly less due to telemetry saturation. In addition, the livetime of the detector is about 1304 s, significantly shorter than the ONTIME of 7562 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 0.9 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.