

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 16358 - L2 Version 2
Chandra X-Ray Center

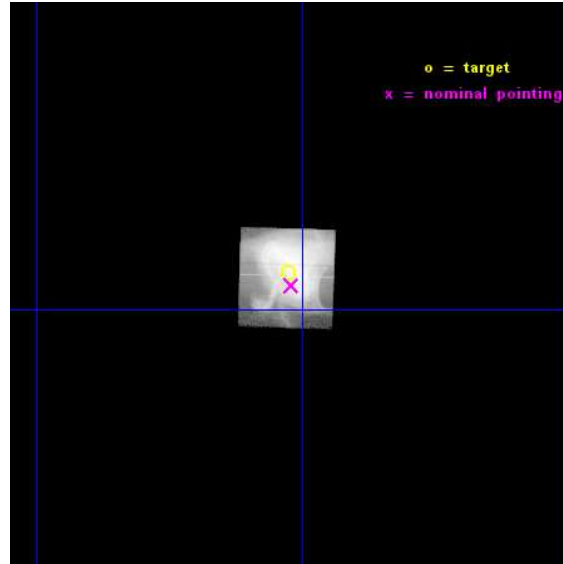
L2 Processing Date : Dec 10 2014

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1 Front

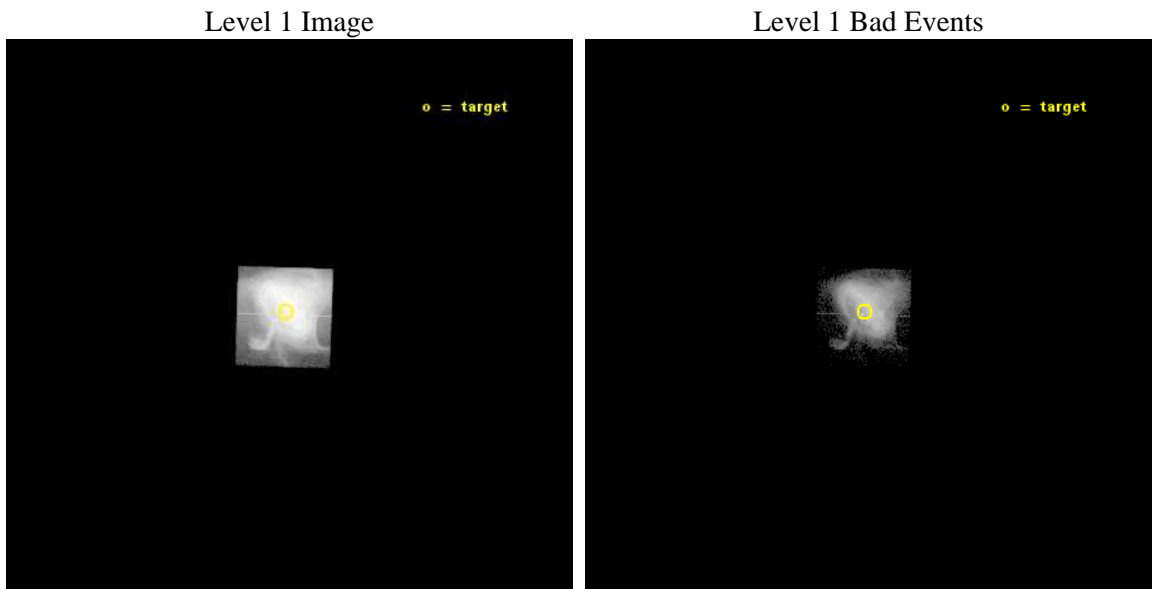
seq_num	502256	Sequence number
obs_id	16358	Observation id
title	Joint Chandra and HST Monitoring and Studies of the Crab Nebula	Pr
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630100620077	Nominal RA [deg]
dec_nom	22.010173990481	Nominal Dec [deg]
roll_nom	271.80458062089	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7640.8036051989	Sum of GTIs [s]
livetime	1316.7896469167	Livetime [s]
ontime7	7640.8036051989	Sum of GTIs [s]
l2events	3502672	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	10.3.1	Processing system revision	ontime	7640.8036051989	Sum of GTIs [s]
caldsver	4.6.4	 	ontime7	7640.8036051989	Sum of GTIs [s]
date	2014-12-11T02:51:35	Date and time of file creation	l1events	3883979	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

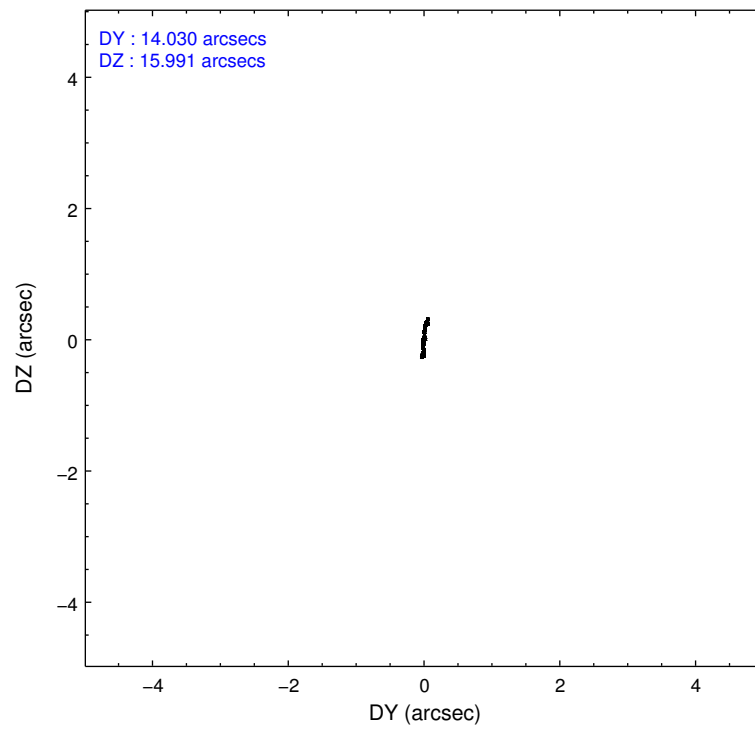
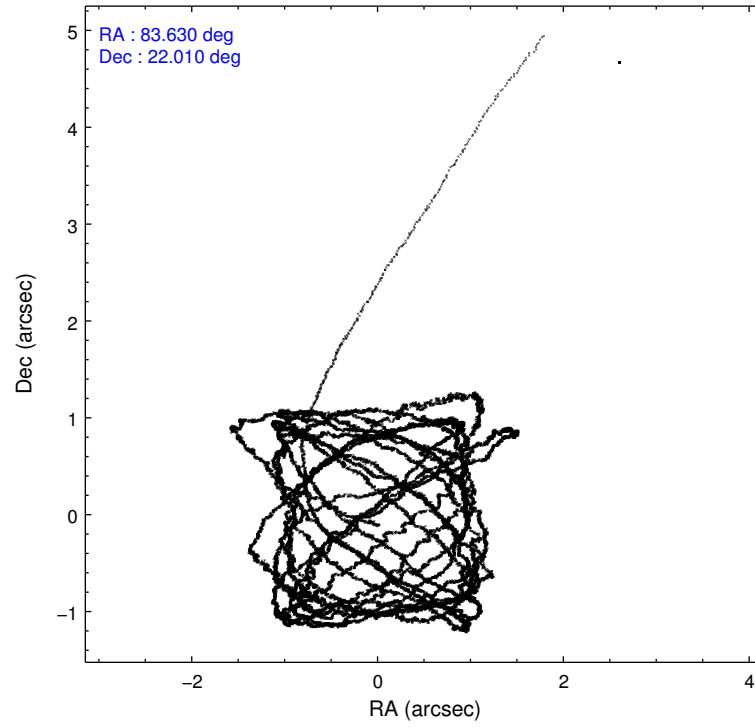
	ccd 7
level 1 events	3883979
rejected events	336230
rejected %	8%

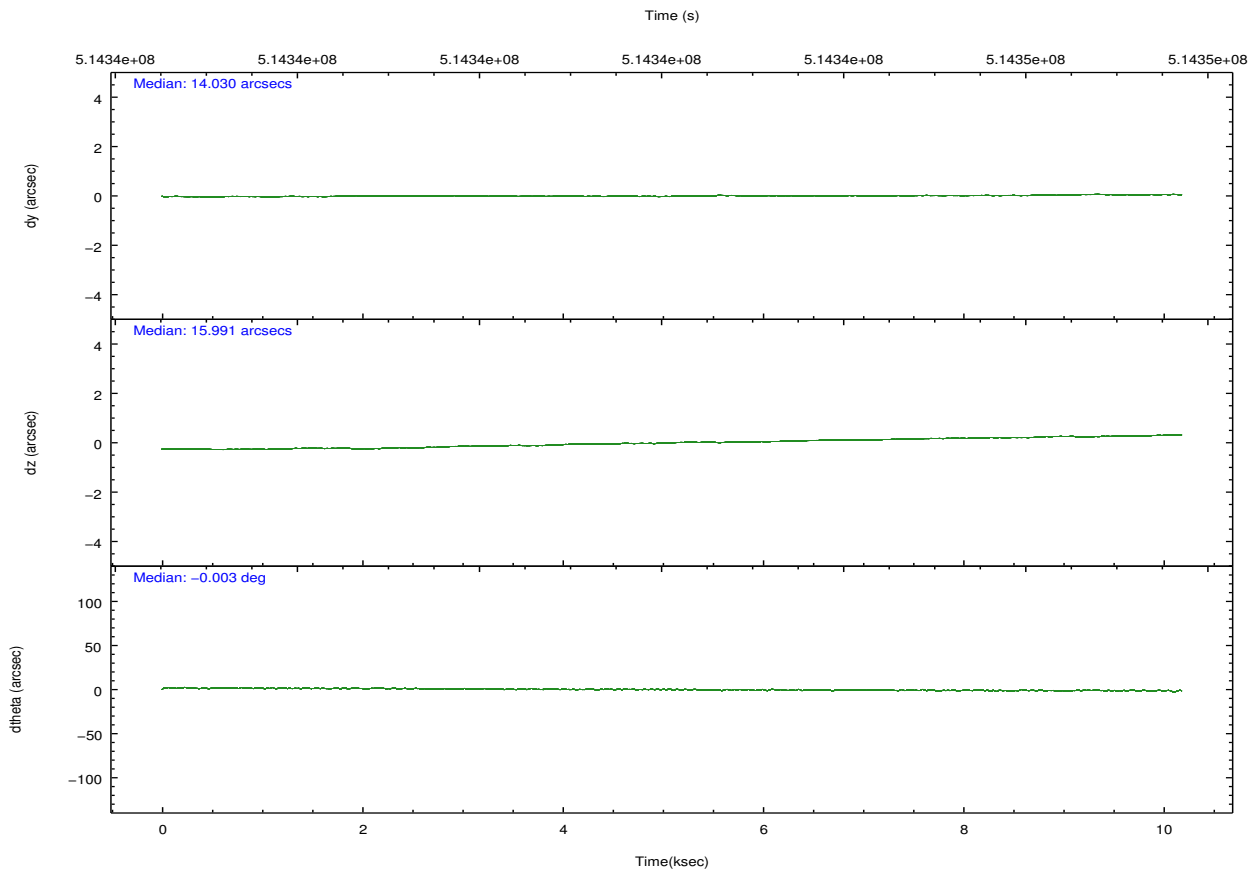
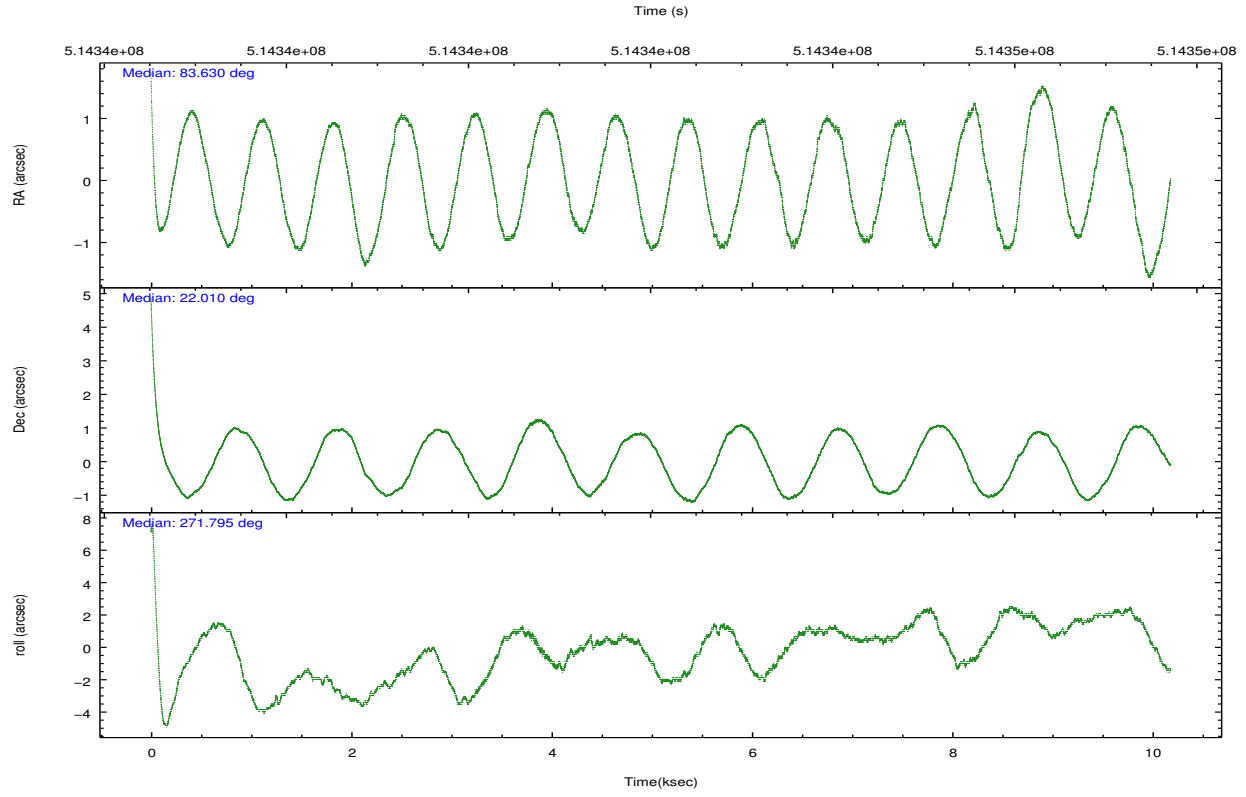
	ccd 7
grade 0 events	834846
	21%
grade 1 events	42774
	1%
grade 2 events	1001455
	25%
grade 3 events	387486
	9%
grade 4 events	378634
	9%
grade 5 events	123937
	3%
grade 6 events	945879
	24%
grade 7 events	168968
	4%

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	83.614212	83.63010062007746	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.033210	22.01017399048069	Subarray start row	455	455
[deg] Pointing Roll	271.653901	271.8045806208858	Subarray row count	300	300
[s] Window start time (MET)	513216067.184000	513216067.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	514944067.184000	514944067.184000	[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	-193.112523	-193.1170153669189			
[mm] SIM translation stage offset	2.98	2.984492783911122			
[s] Observation start time (MET)	514337199.184000	514336528.28737			
Observation start date	2014-04-19T23:25:32	2014-04-19T23:15:28			
[s] Observation end time (MET)	514347199.184000	514347637.23798			
Observation end date	2014-04-20T02:12:12	2014-04-20T02:20:37			
Read mode	TIMED	TIMED			

2.3 Aspect



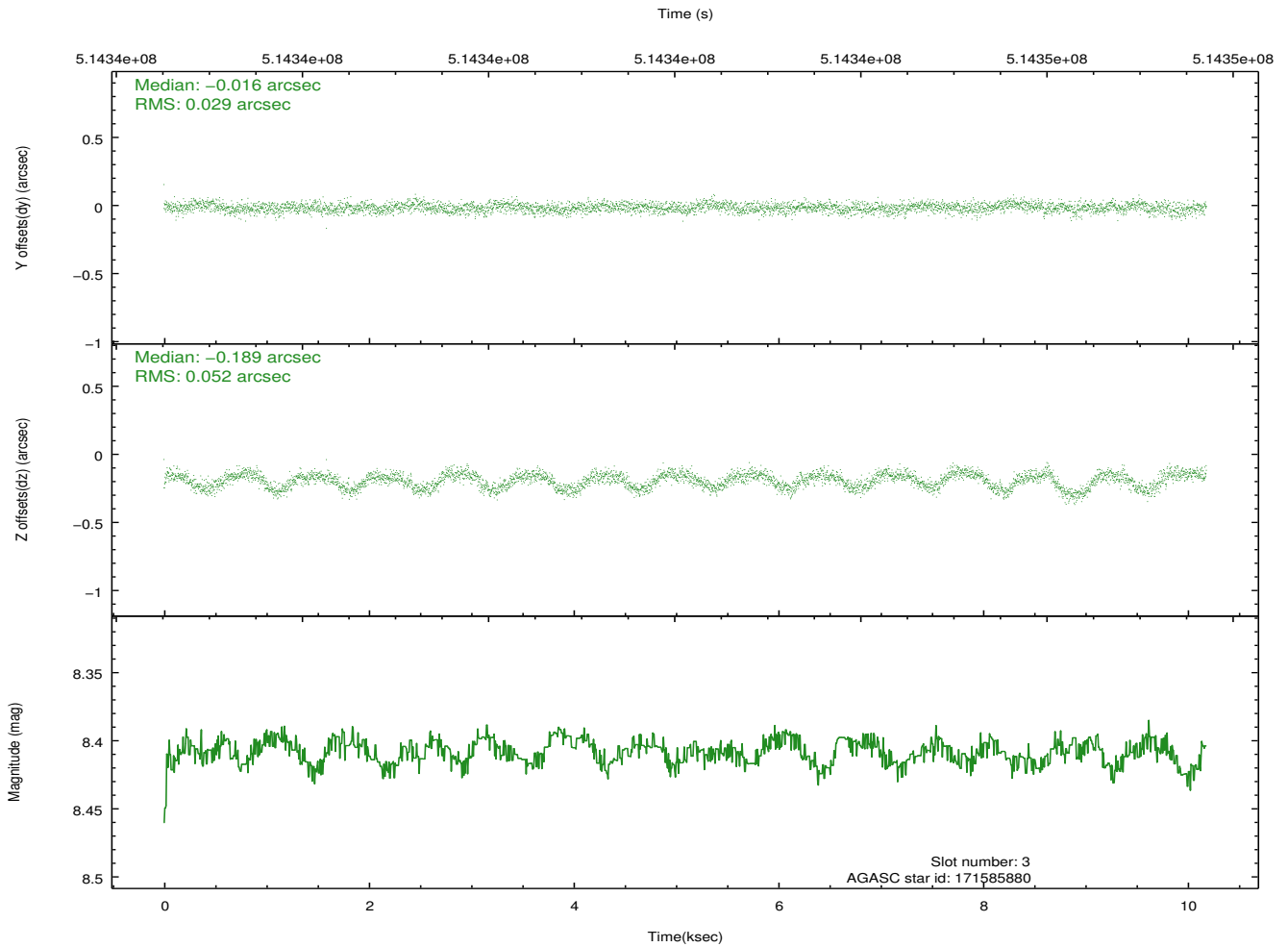
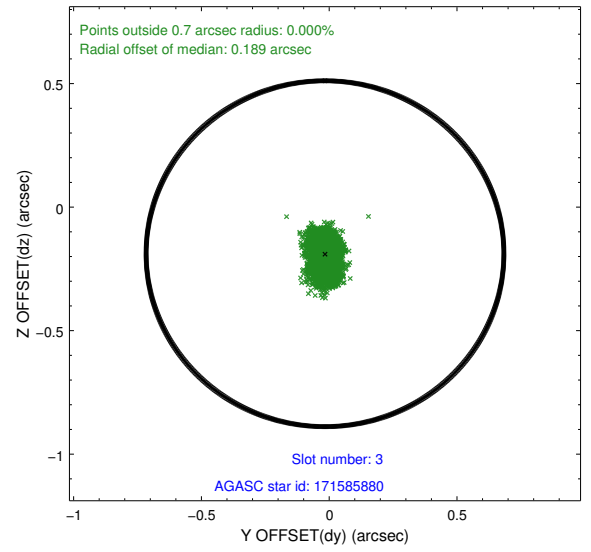
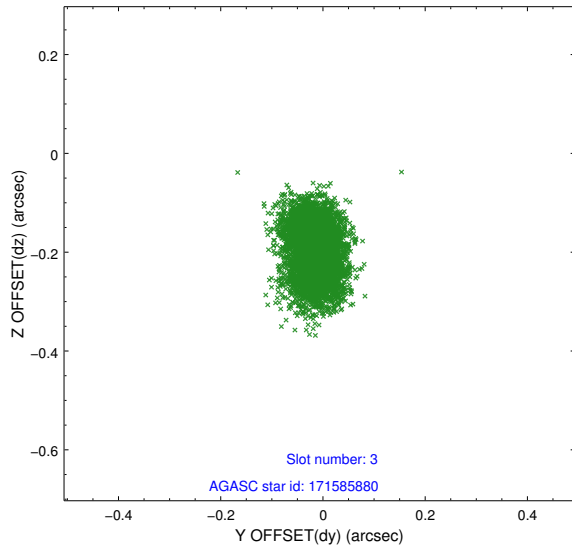


Slot Statistics

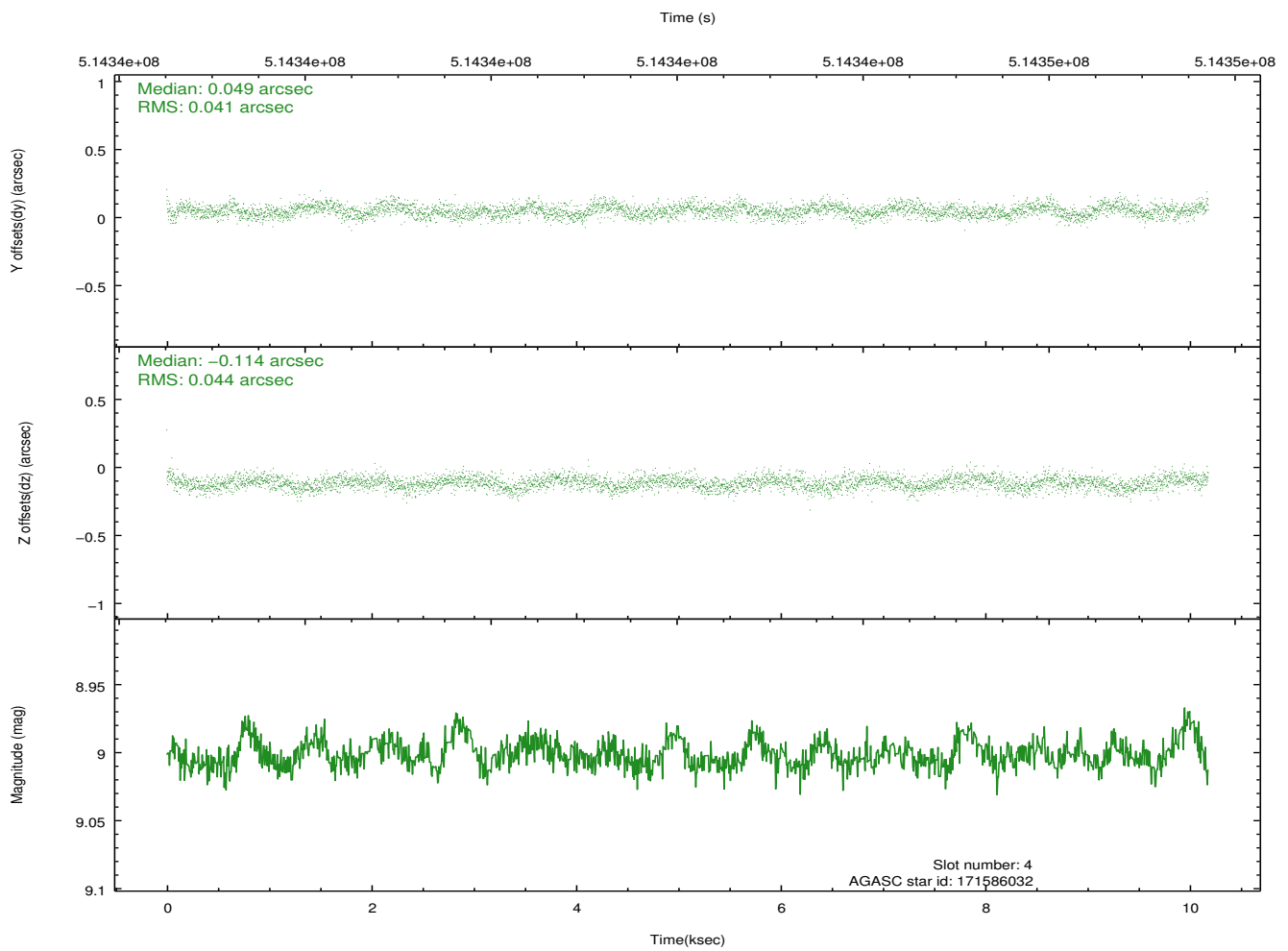
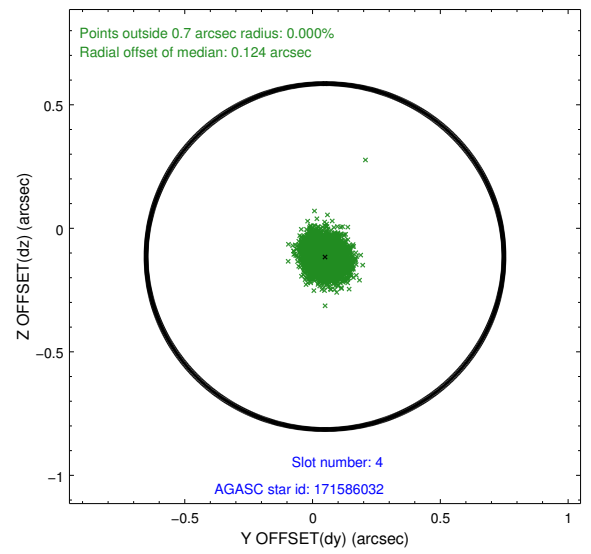
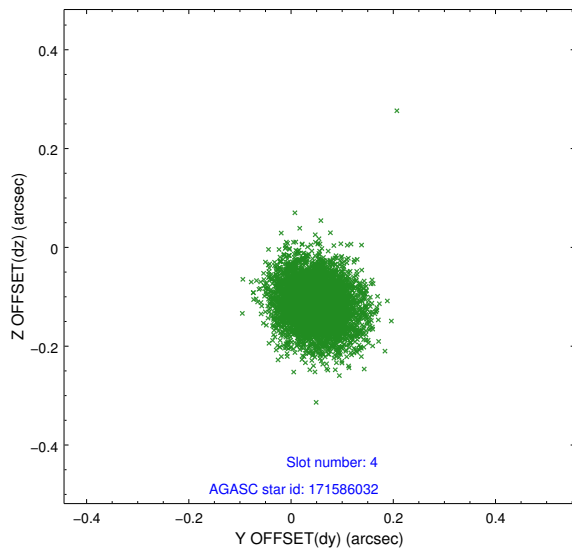
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.89	2484	-0.078	0.025	0.008	0.013	0.000000	0.000000	-767.26	-1676.00
1	FID		ACIS-S-4	6.97	2484	0.158	0.031	0.006	0.011	0.000000	0.000000	2146.03	231.95
2	FID		ACIS-S-5	6.99	2484	-0.112	-0.047	0.008	0.012	0.000000	0.000000	-1819.45	226.17
3	GUIDE	used	171585880	8.41	4965	-0.016	-0.189	0.063	0.105	83.676260	22.176319	-508.75	221.64
4	GUIDE	used	171586032	9.00	4966	0.049	-0.114	0.063	0.103	83.950197	22.083225	-148.75	1125.77
5	GUIDE	used	171721904	9.25	4963	0.138	0.254	0.074	0.123	84.272676	22.116922	-242.50	2204.68
6	GUIDE	used	243941560	8.28	4968	-0.174	-0.019	0.051	0.081	83.733264	22.568598	-1915.04	451.46
7	GUIDE	used	171597832	9.16	4965	0.005	0.073	0.086	0.140	83.183230	21.366702	2354.96	-1512.75

2.4 Star Slots

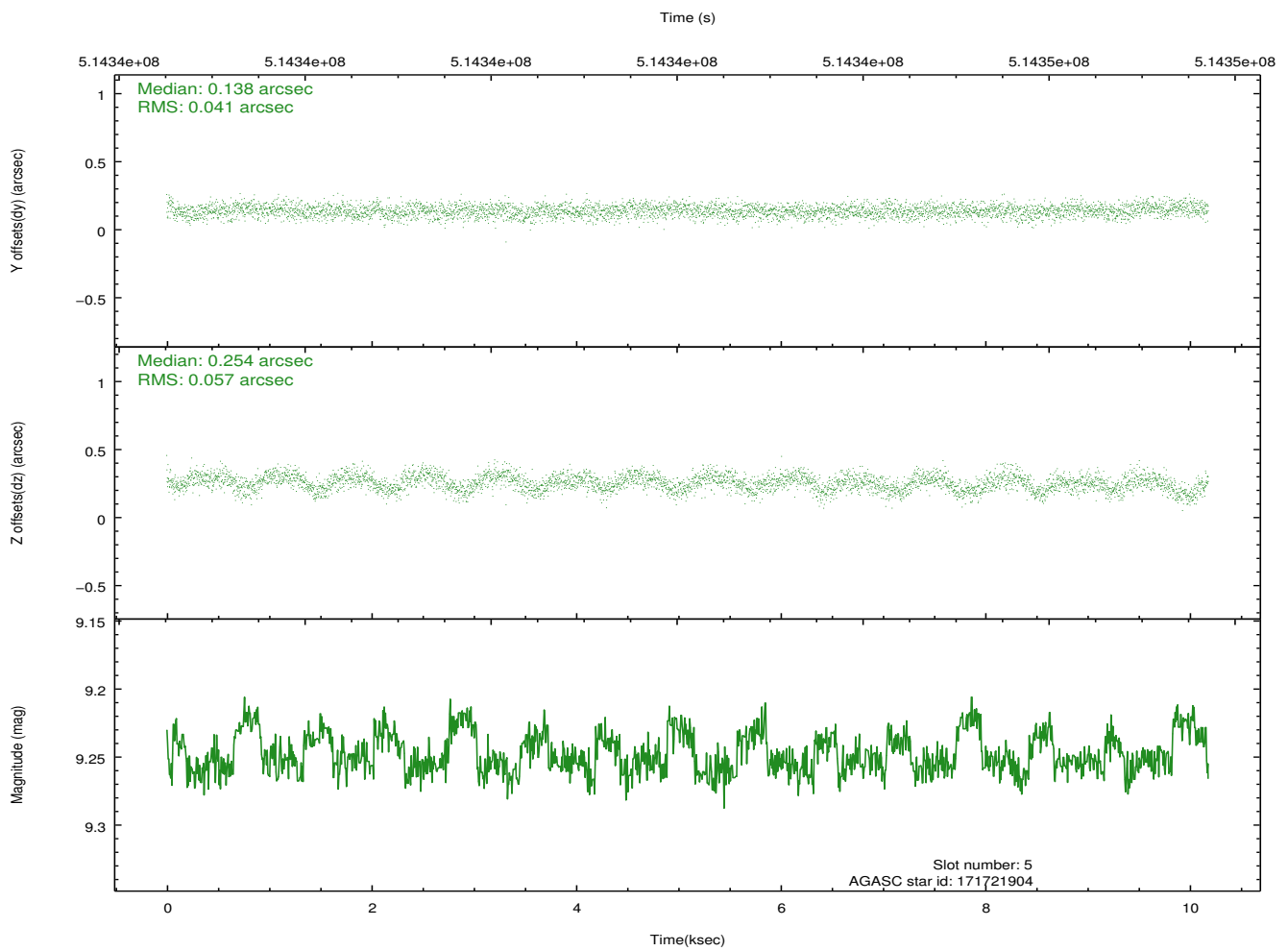
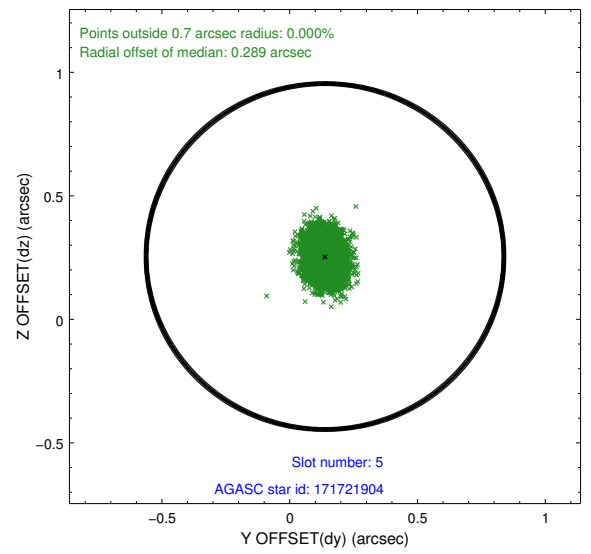
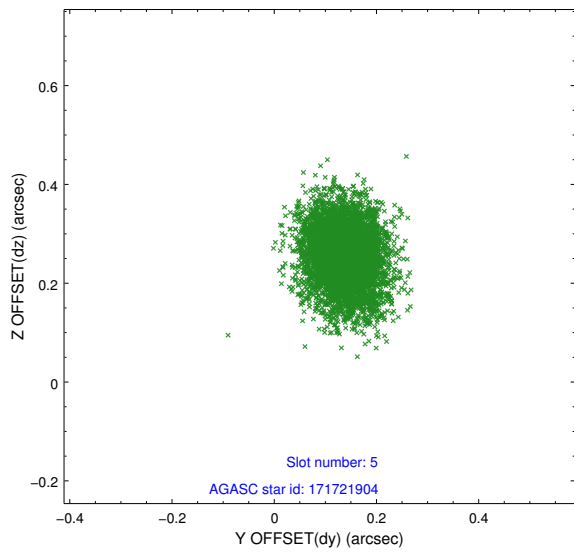
2.4.1 Slot 3



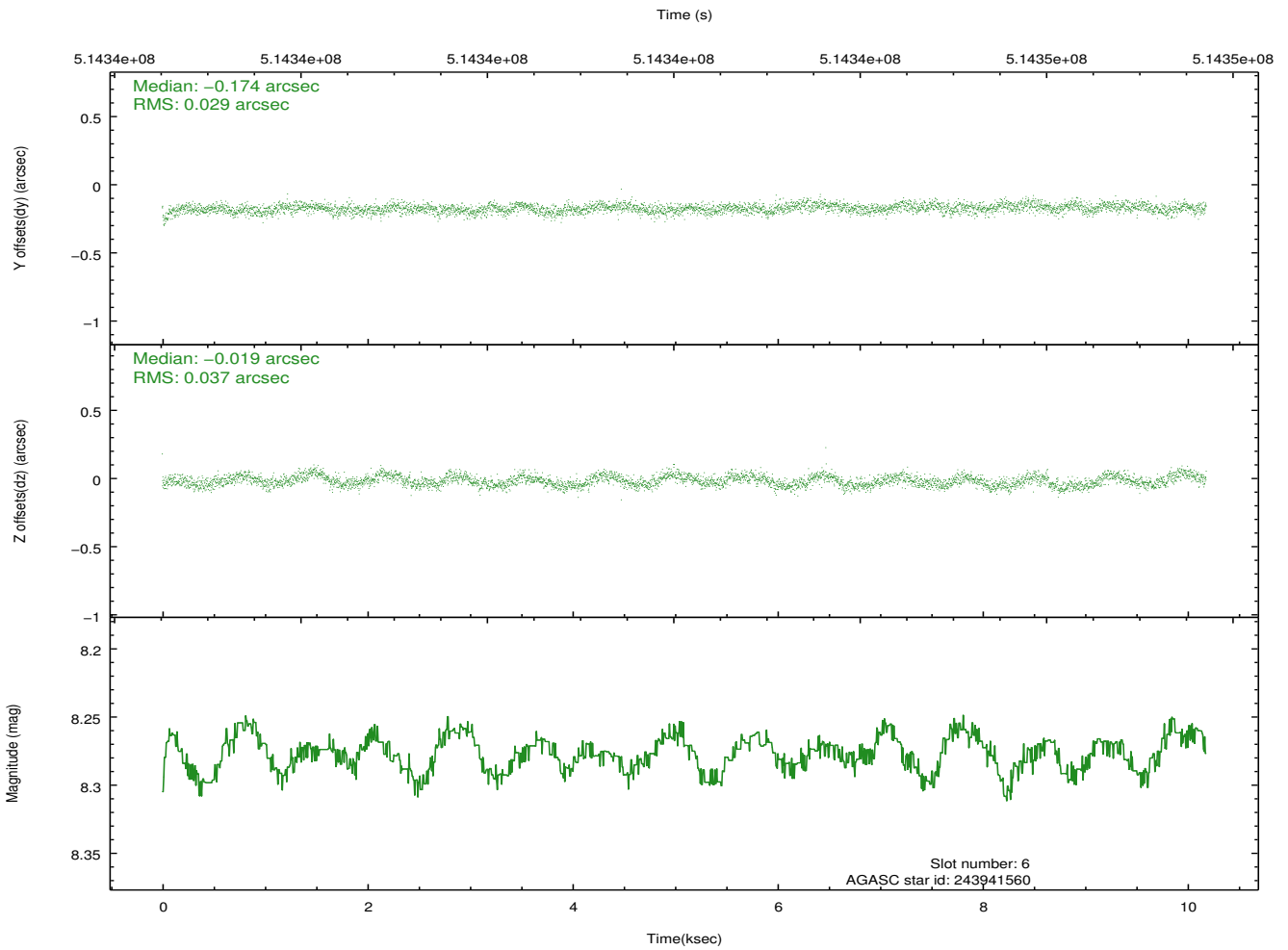
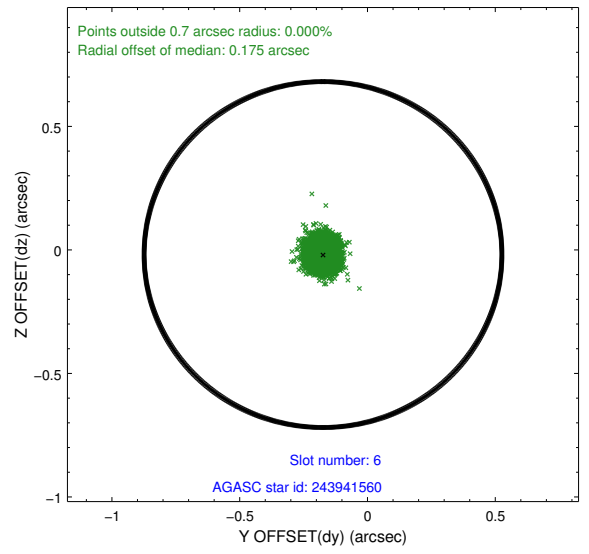
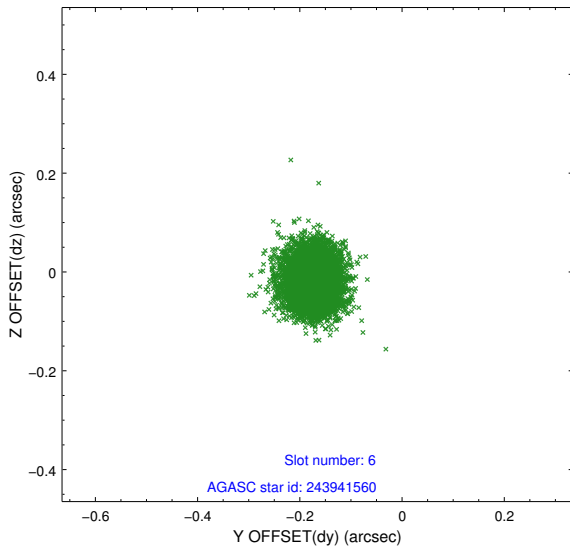
2.4.2 Slot 4



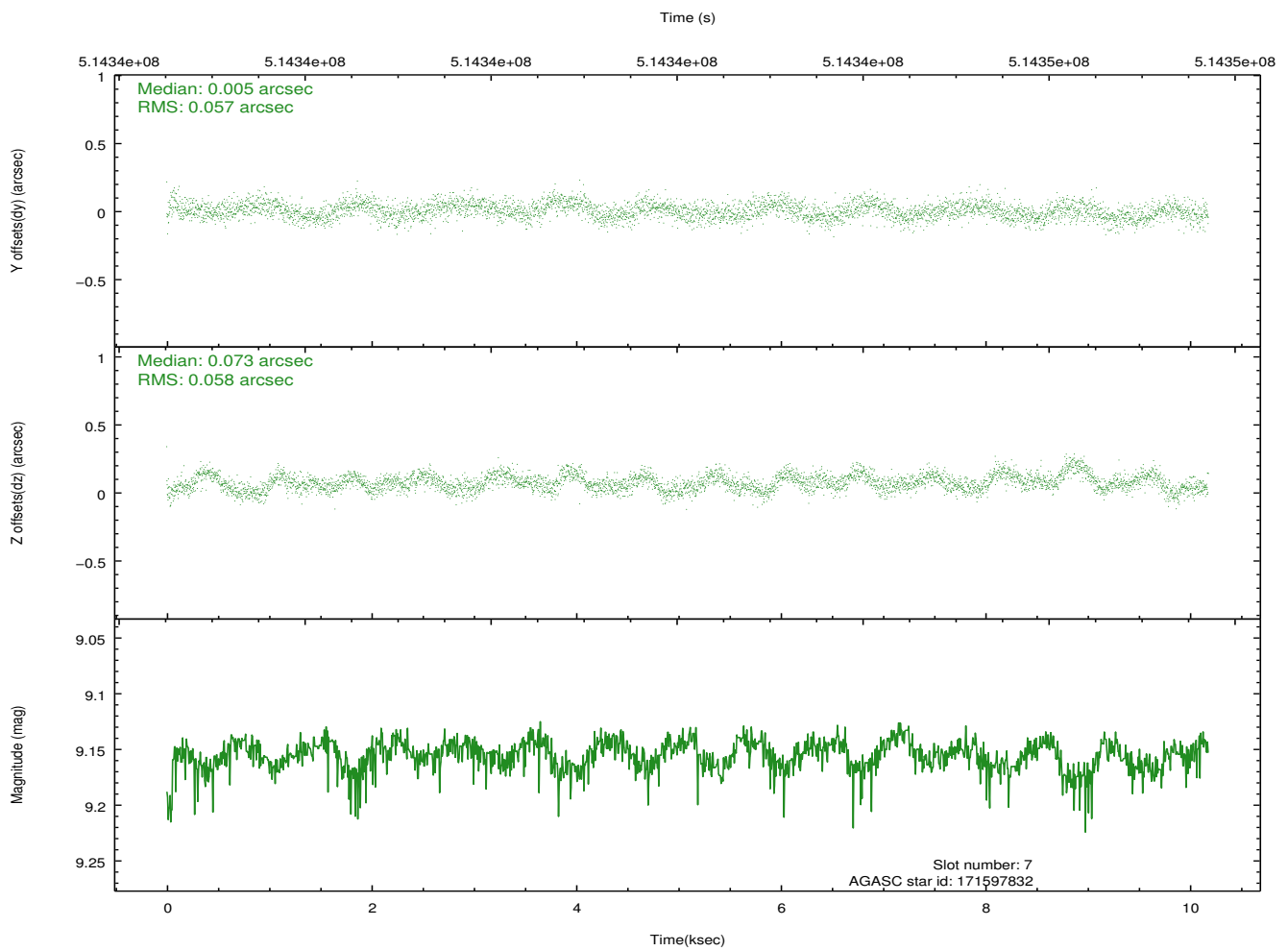
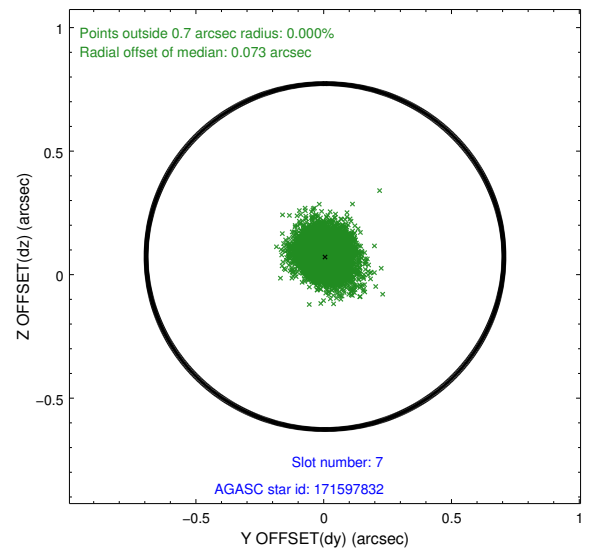
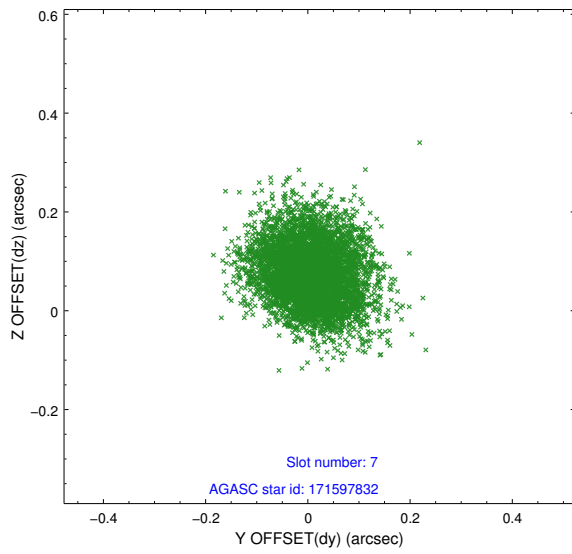
2.4.3 Slot 5



2.4.4 Slot 6

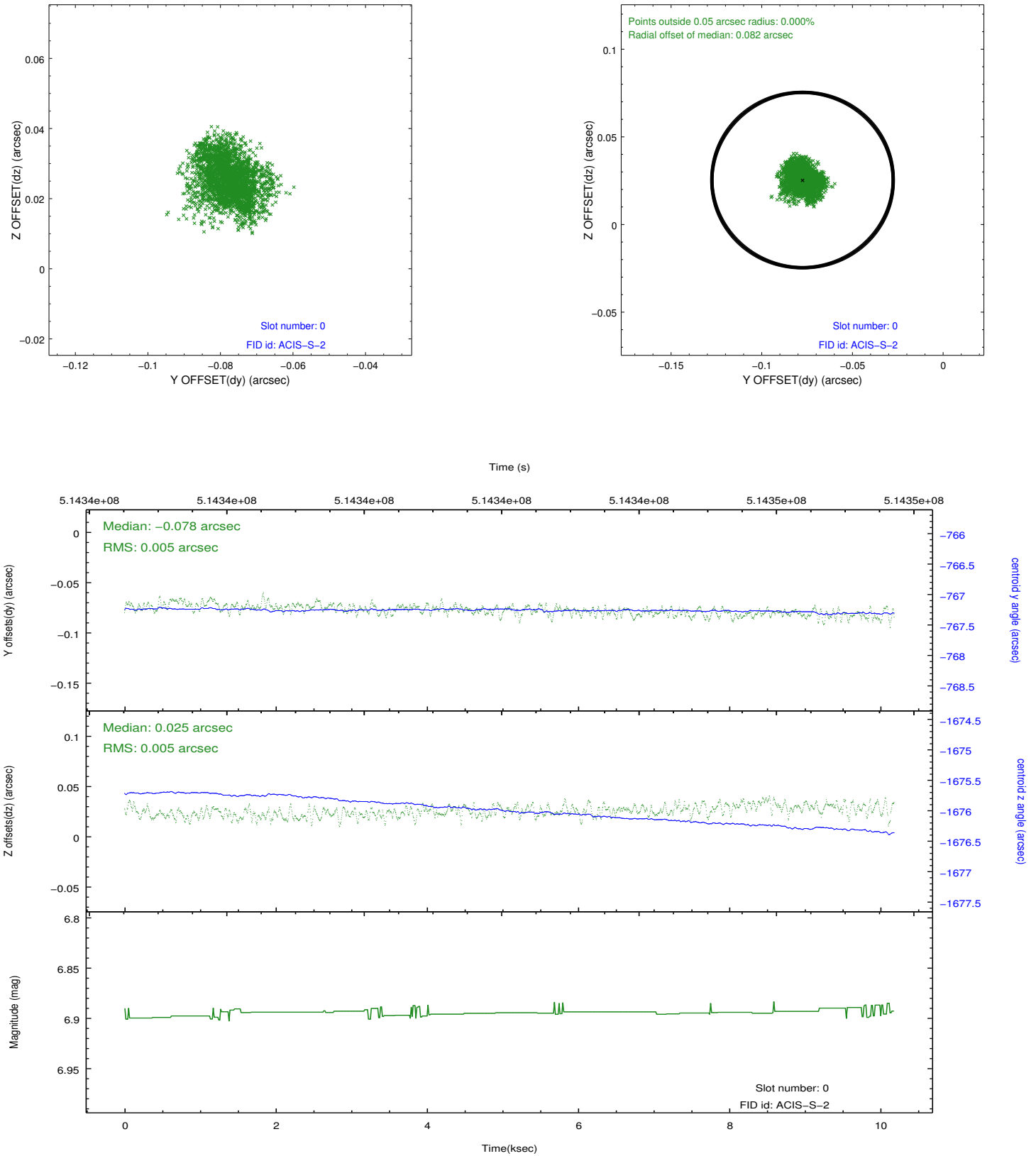


2.4.5 Slot 7

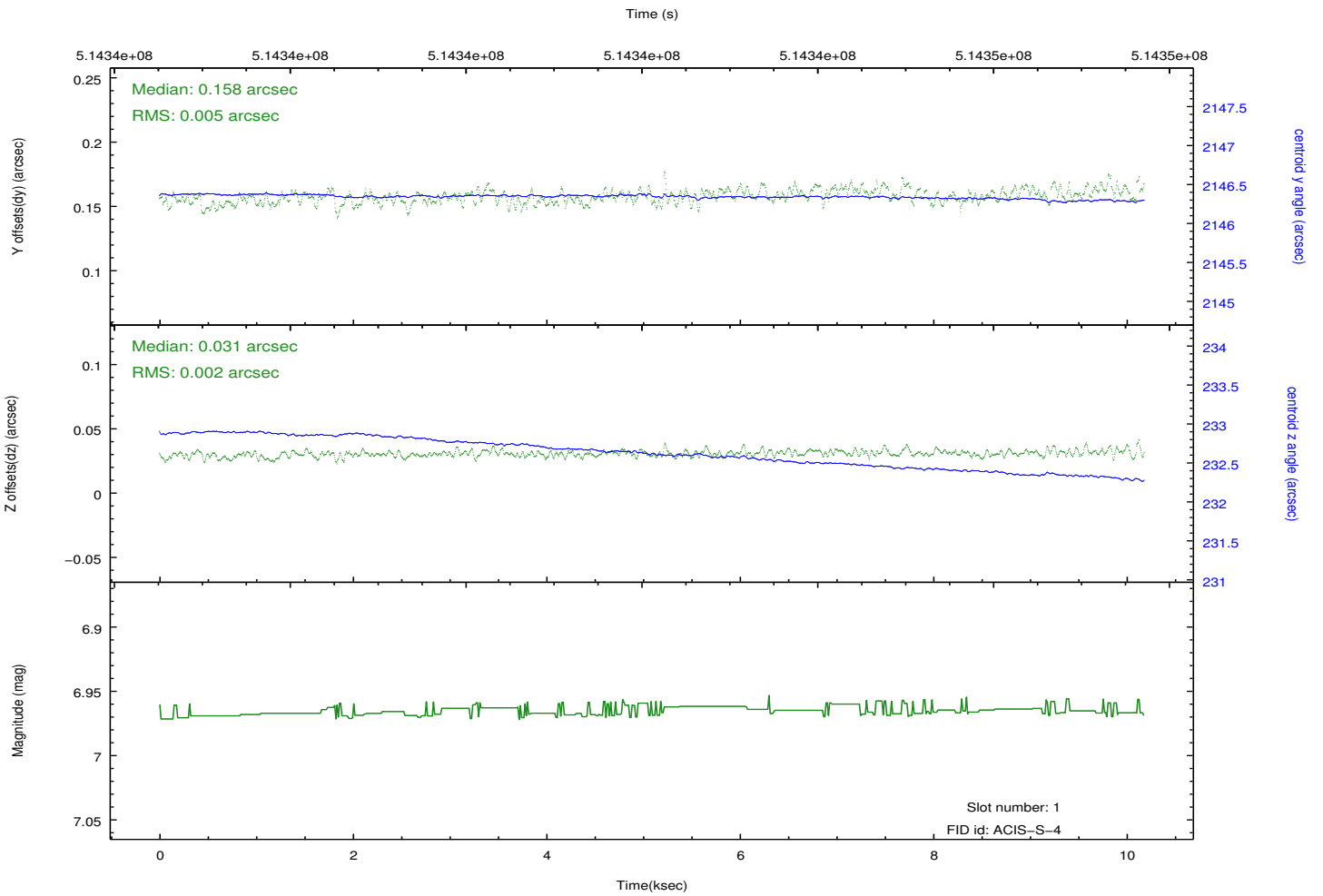
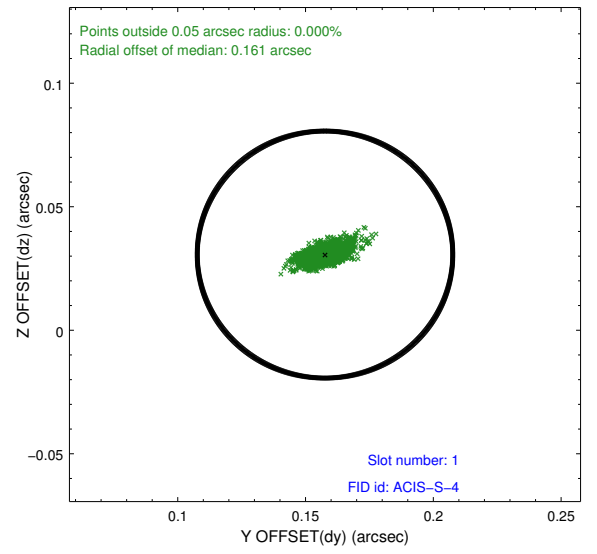
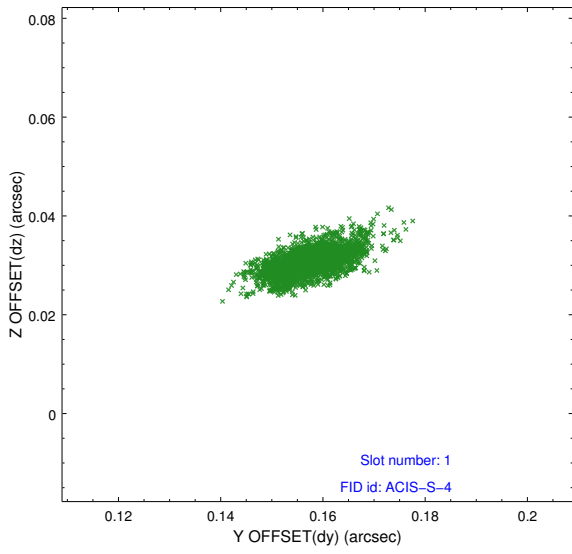


2.5 FID Slots

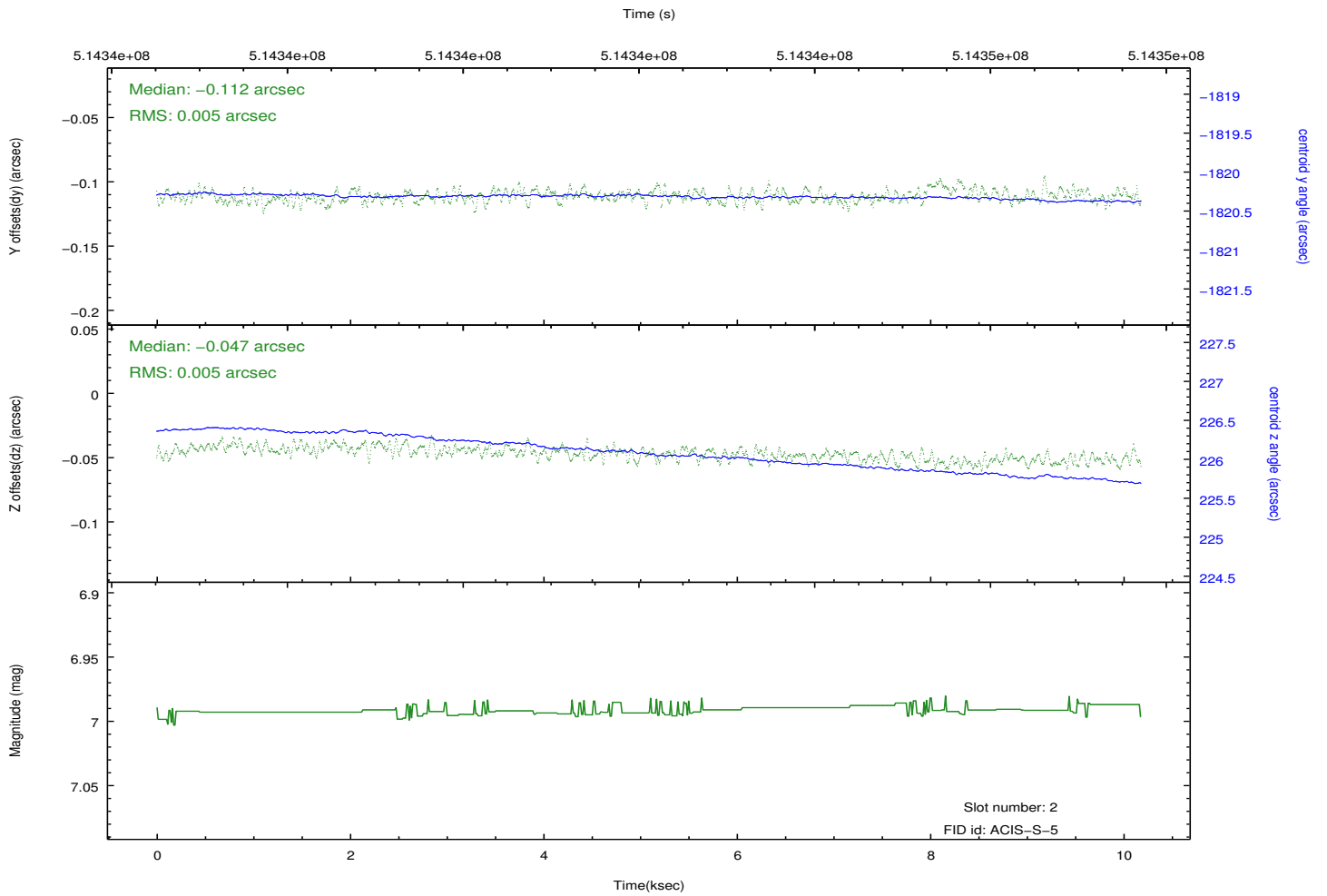
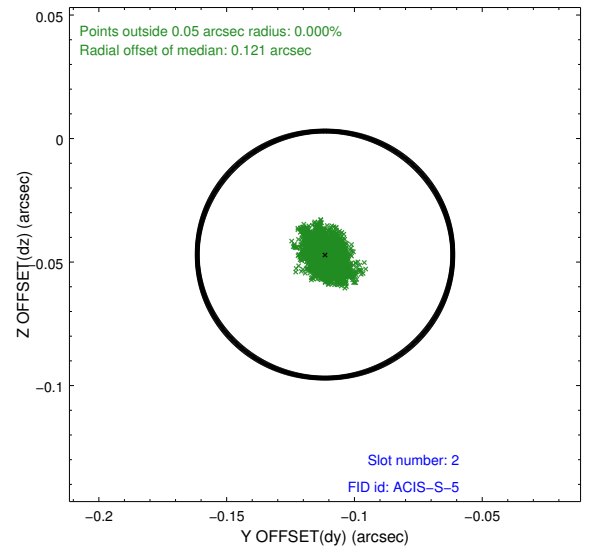
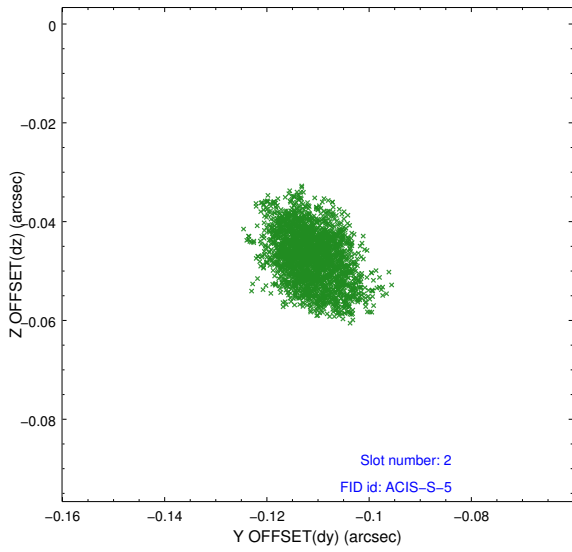
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10

A.2 Comments

Joint proposal with HST.

Window preference met.

A non-standard dither was used for this observation.

Charge time is set to the scheduled time for this observation, although the ontime is less due to telemetry saturation. In addition, the livetime of the detector is about 1317 s, significantly shorter than the ontime of 7641 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.

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.