

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 14459 - L2 Version 2
Chandra X-Ray Center

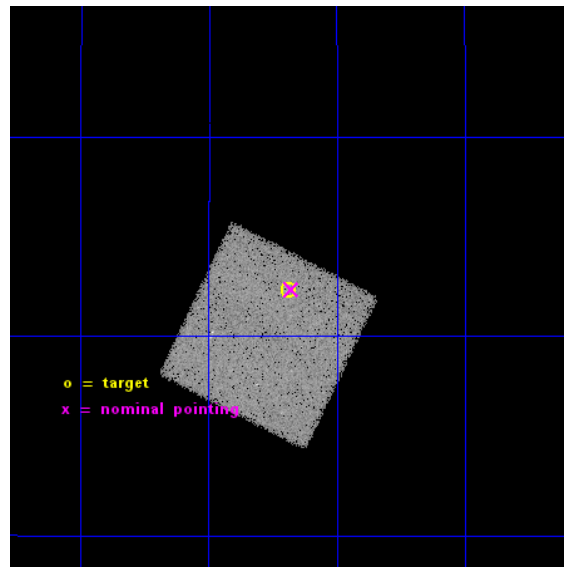
L2 Processing Date : Dec 1 2014

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1 Front

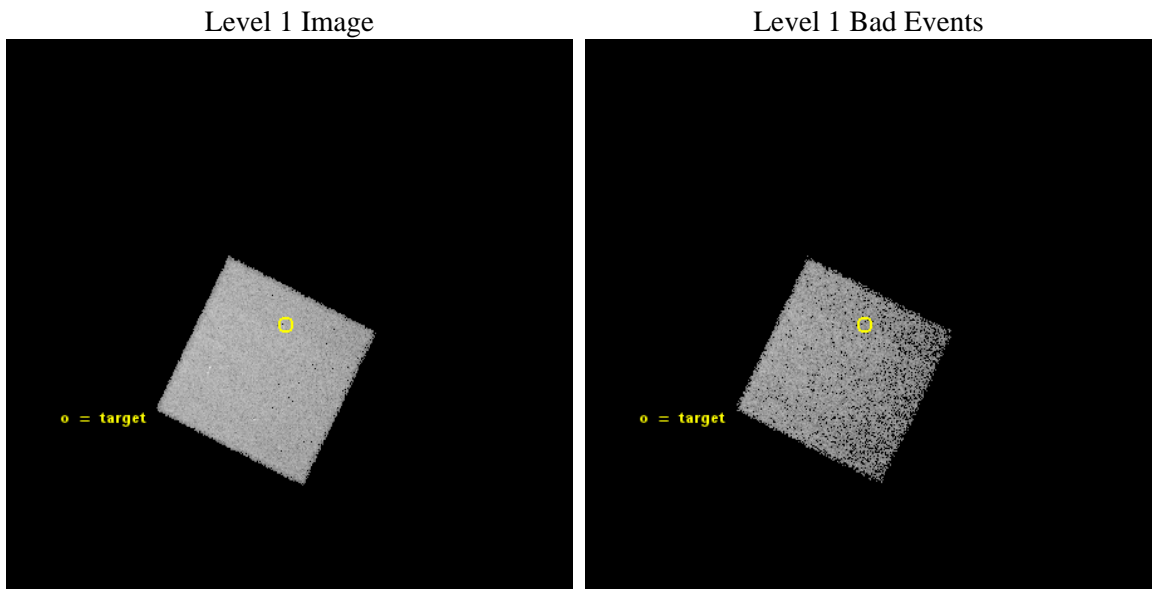
seq_num	200831	Sequence number
obs_id	14459	Observation id
title	Properties and dynamics of the upper atmosphere of the hot-Neptune GJ 436b	Proposal title
observer	Dr David Ehrenreich	Principal investigator
object	GJ 436	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	175.5475	Observer's specified target RA [deg]
dec_targ	26.705528	Observer's specified target Dec [deg]
ra_nom	175.54413294624	Nominal RA [deg]
dec_nom	26.705857299261	Nominal Dec [deg]
roll_nom	116.31751606559	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19026.0	Sum of GTIs [s]
livetime	18769.236840028	Livetime [s]
ontime7	19026.0	Sum of GTIs [s]
l2events	58990	Number of level 2 events



2 OBI

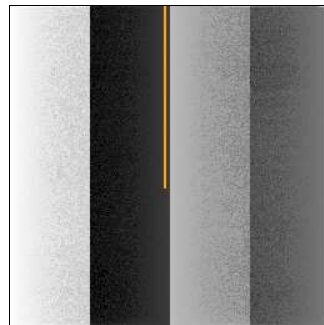
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	19026.0	Sum of GTIs [s]
caldbver	4.6.4	 	ontime7	19026.0	Sum of GTIs [s]
date	2014-12-01T13:34:24	Date and time of file creation	l1events	139799	Number of level 1 events
revision	2	Processing version of data			

2.1.4 Events

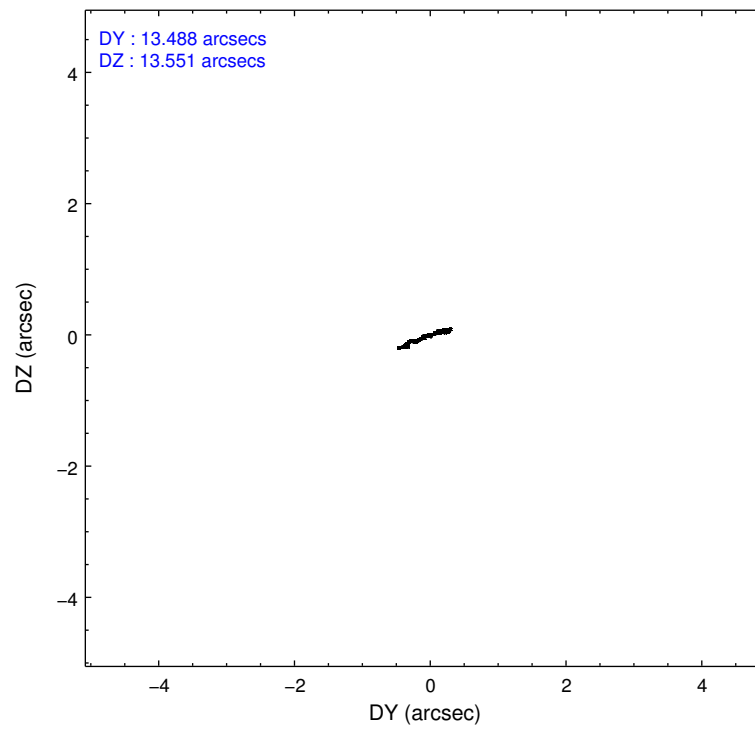
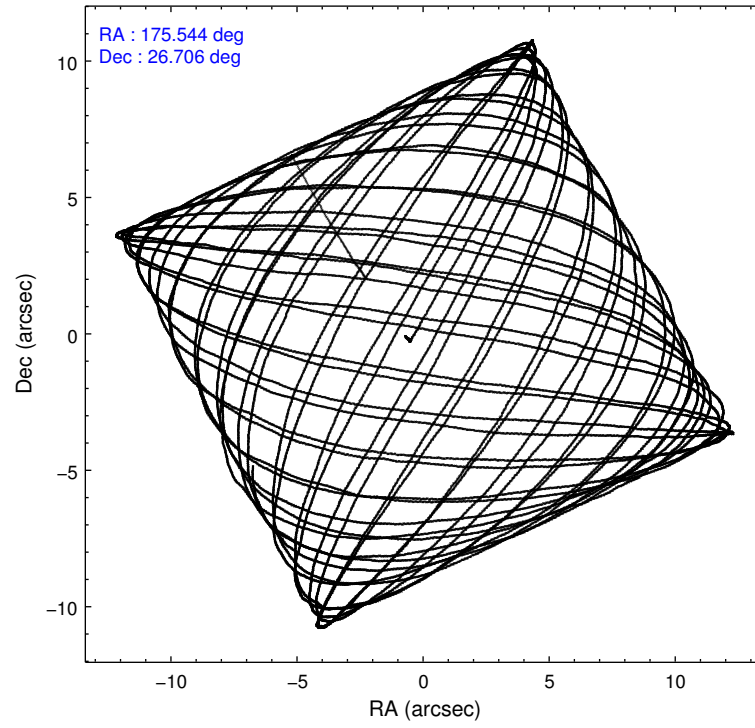
	ccd 7
level 1 events	139799
rejected events	79223
rejected %	56%

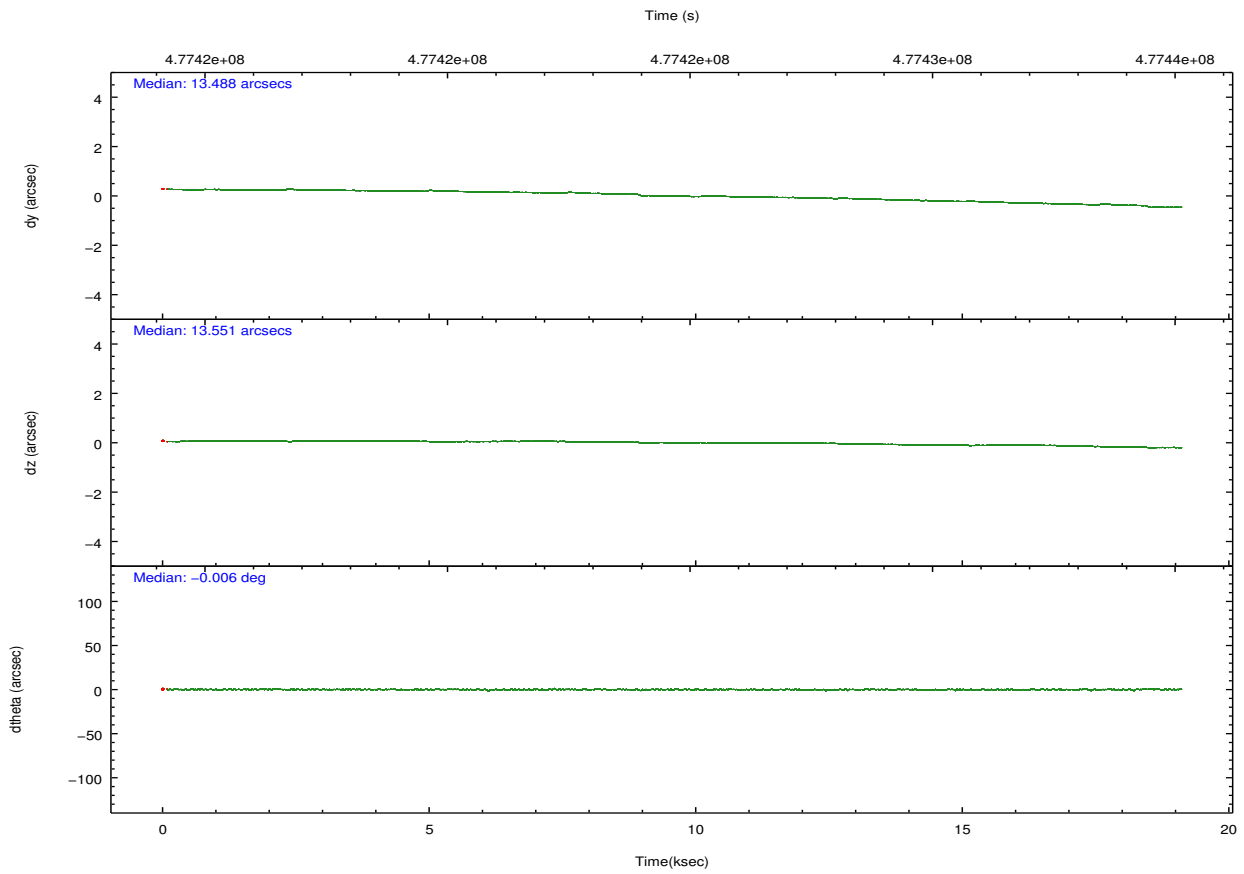
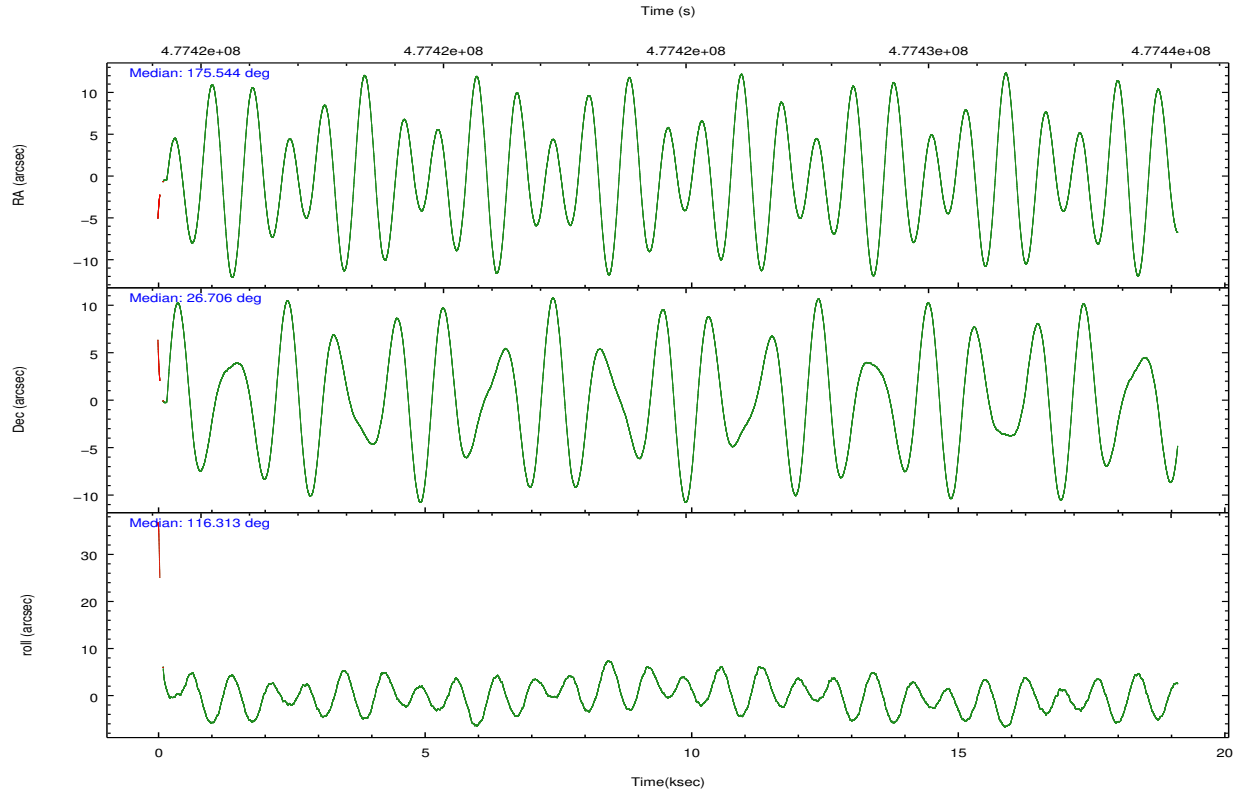
	ccd 7
grade 0 events	5048
	3%
grade 1 events	150
	0%
grade 2 events	12486
	8%
grade 3 events	5071
	3%
grade 4 events	4822
	3%
grade 5 events	13930
	9%
grade 6 events	33375
	23%
grade 7 events	64917
	46%

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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	175.569830	175.5441329462355	Subarray requested	NONE	NONE
[deg] Pointing Dec	26.690995	26.70585729926137	Alternating exposures requested	N	N
[deg] Pointing Roll	116.149325	116.3175160655857	[s] Primary exposure time	0.000000	3
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
Phase constraints	Y	Y			
[d] Phase period	2.643898	2.643898			
[d] Phase epoch (MJD)	54864.583210	54864.583210			
Phase start	0.900000	0.900000			
Phase end	0.990000	0.990000			
Phase start error	0.030000	0.030000			
Phase end error	0.030000	0.030000			
[s] Observation start time (MET)	477415187.184000	477413550.38363			
Observation start date	2013-02-16T15:18:40	2013-02-16T14:52:30			
[s] Observation end time (MET)	477434187.184000	477435234.2598			
Observation end date	2013-02-16T20:35:20	2013-02-16T20:53:54			
Read mode	TIMED	TIMED			

2.3 Aspect





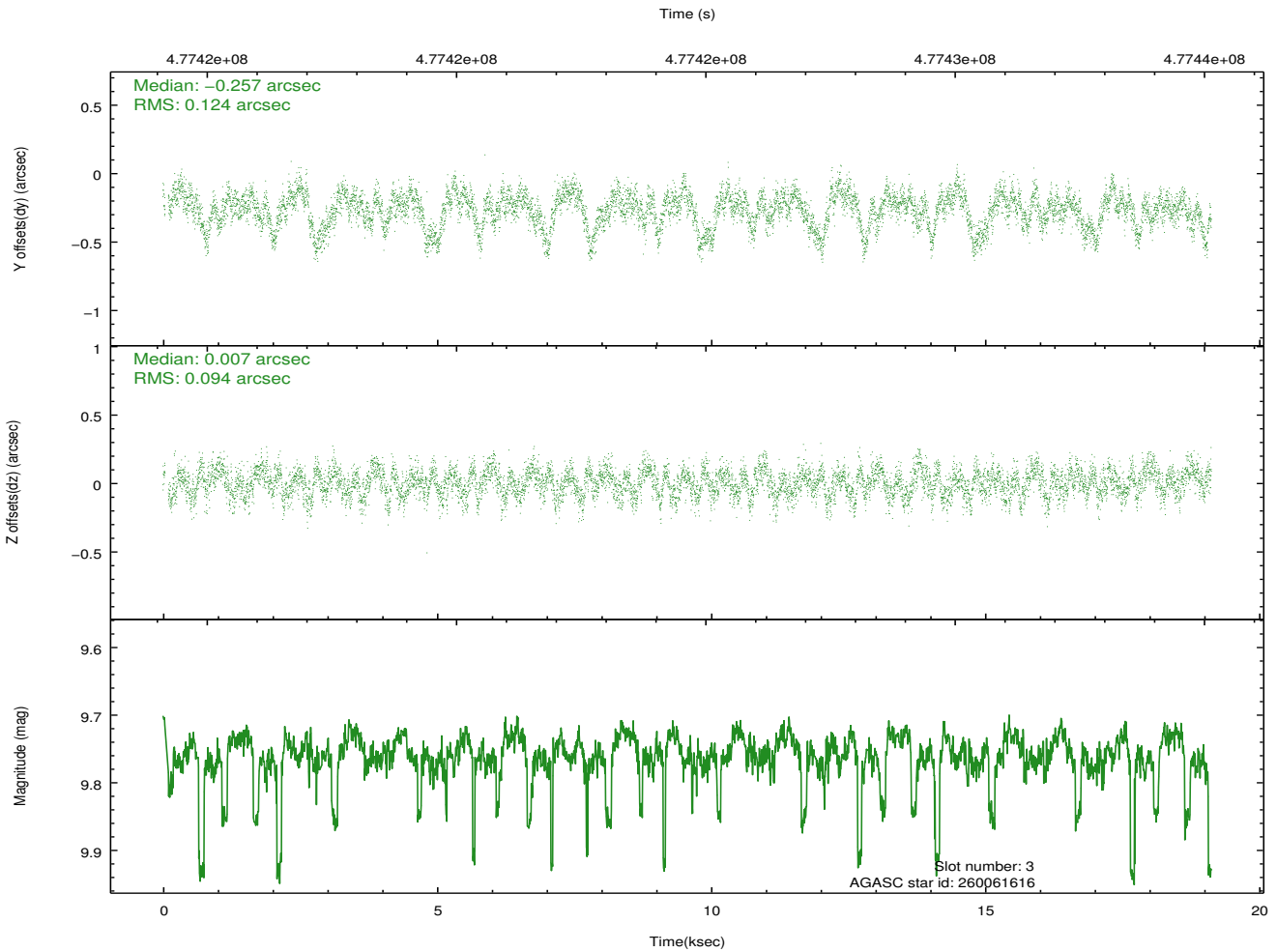
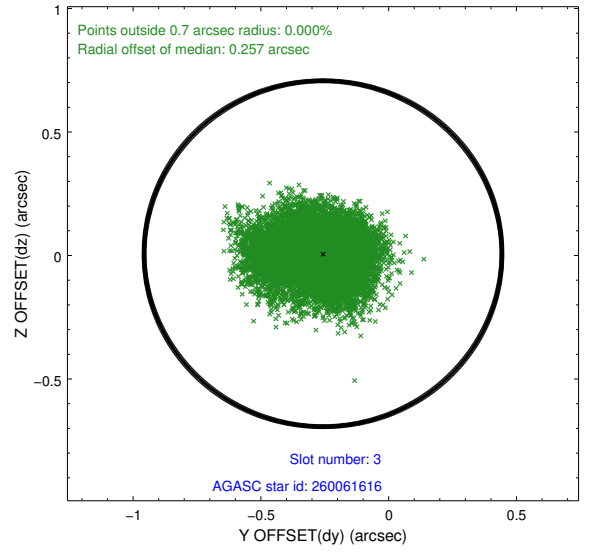
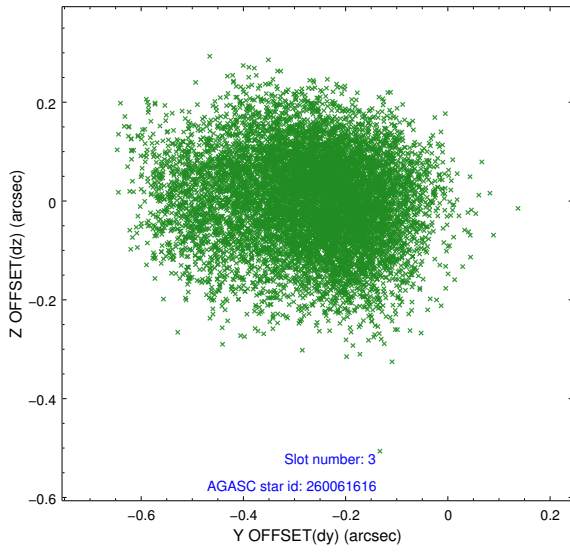
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.18	4651	0.119	-0.055	0.007	0.011	0.000000	0.000000	929.77	-1730.50
1	FID		ACIS-S-5	7.21	4651	-0.172	0.087	0.009	0.018	0.000000	0.000000	-1819.42	166.96
2	FID		ACIS-S-6	7.31	4651	0.031	-0.020	0.010	0.018	0.000000	0.000000	394.99	811.07
3	GUIDE	used	260061616	9.76	9237	-0.257	0.007	0.166	0.273	175.767684	26.863293	277.31	-843.51
4	GUIDE	used	260064728	9.01	9295	-0.028	-0.039	0.116	0.178	175.679144	27.248869	1649.35	-1196.45
5	GUIDE	used	259798288	8.50	9298	0.129	-0.011	0.097	0.148	175.466547	25.926495	-2323.58	1512.42
6	GUIDE	used	260453480	8.04	9299	0.176	0.062	0.139	0.231	175.865114	27.568448	2421.69	-2237.81
7	MONITOR	unused		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

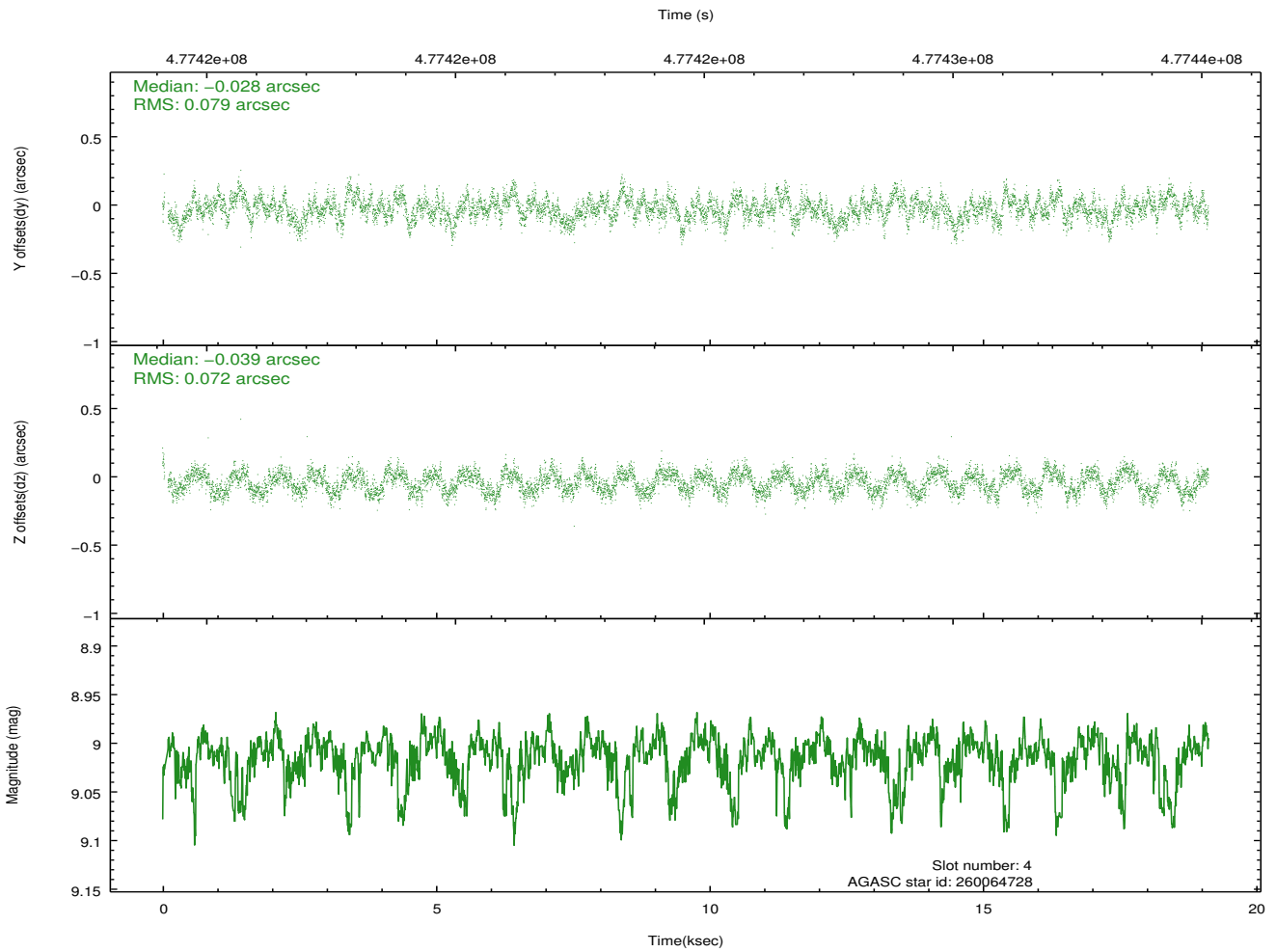
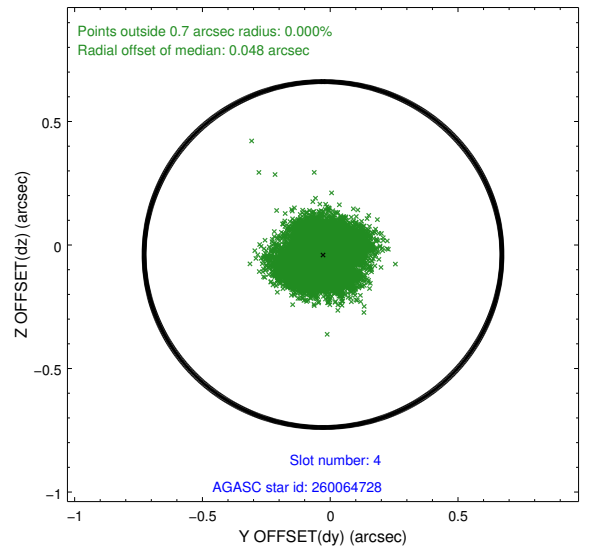
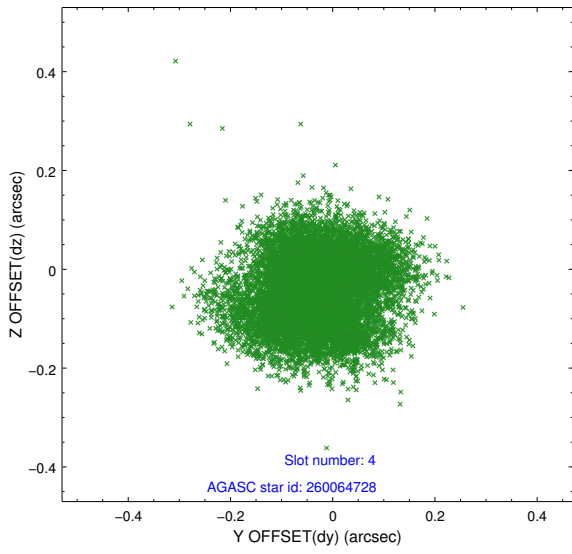
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2.4 Star Slots

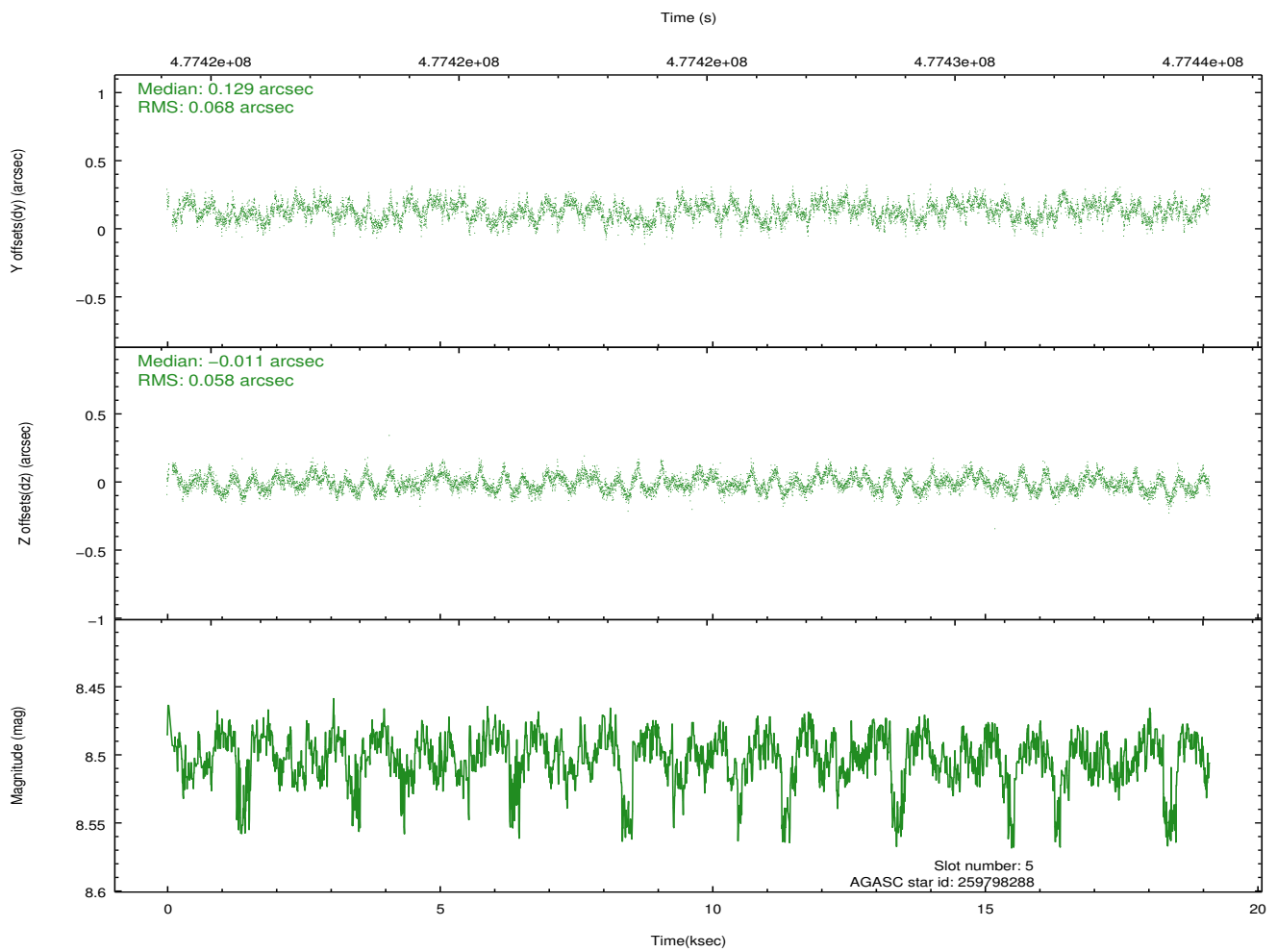
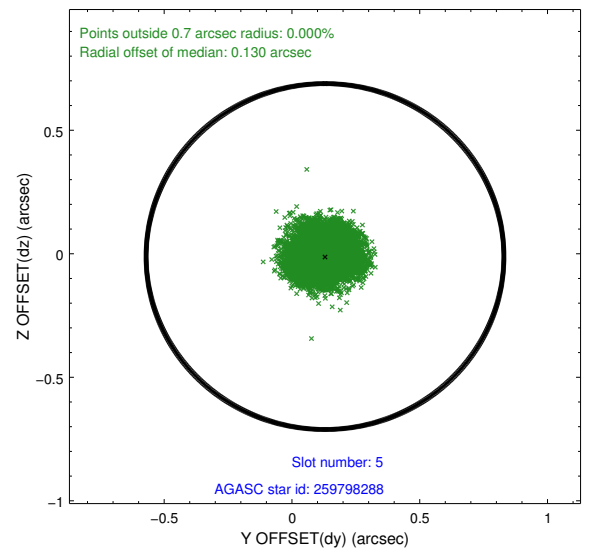
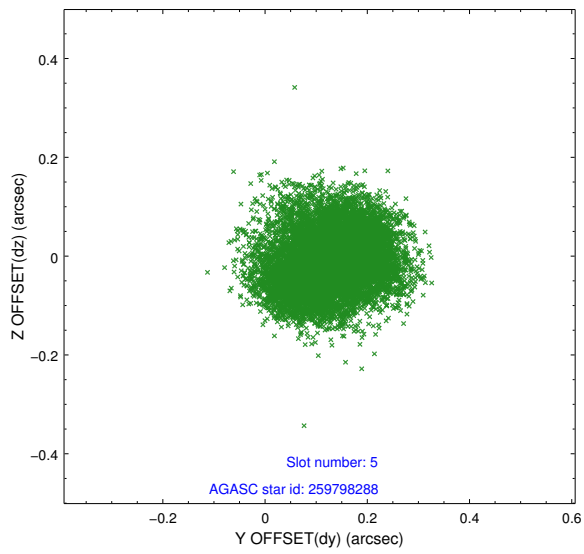
2.4.1 Slot 3



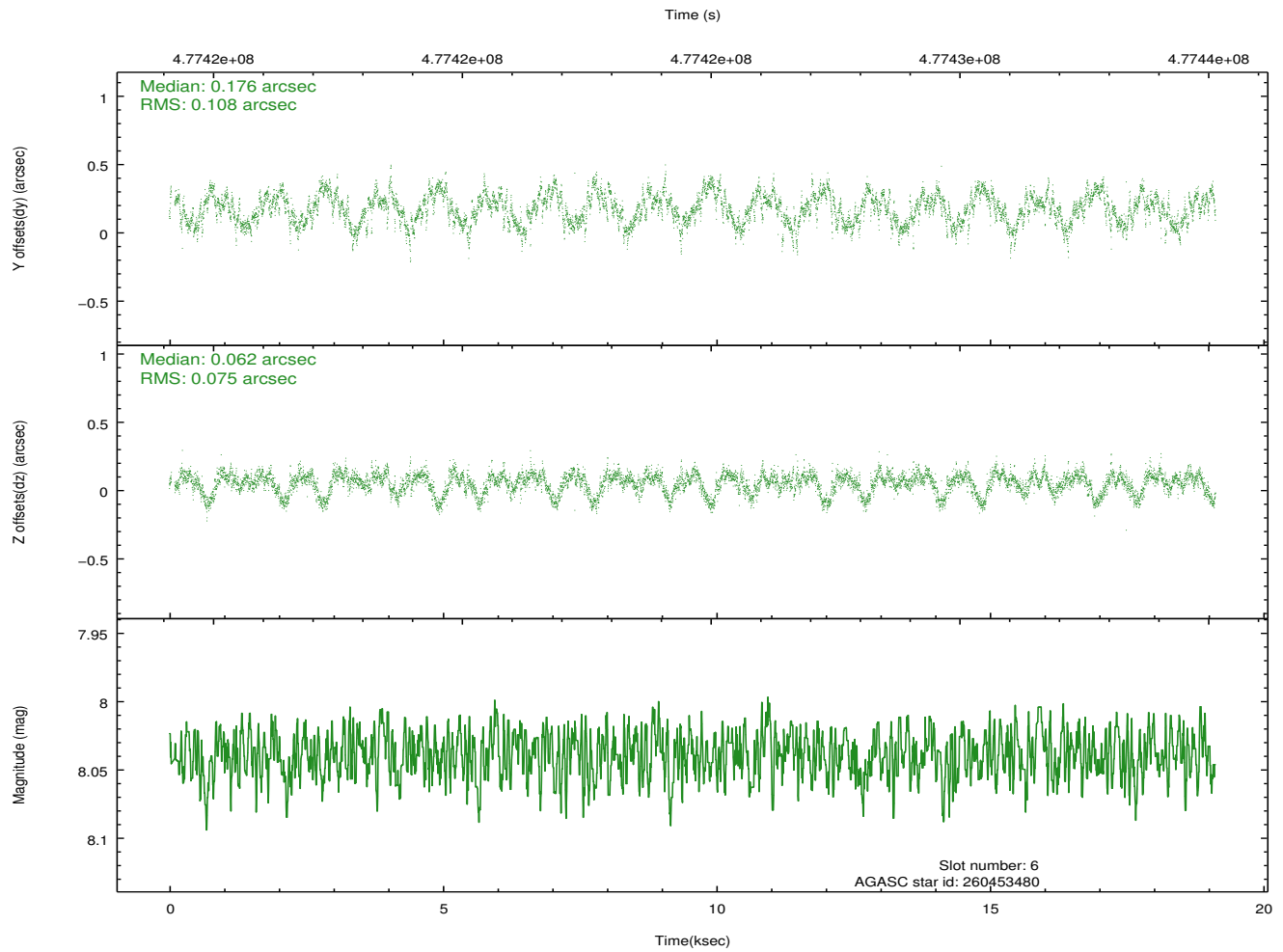
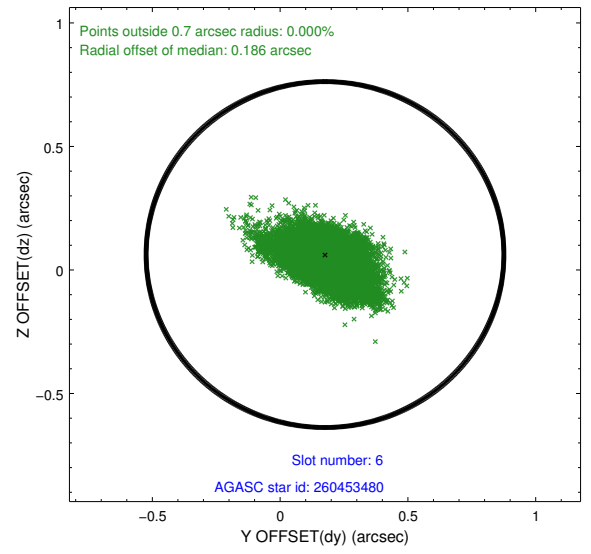
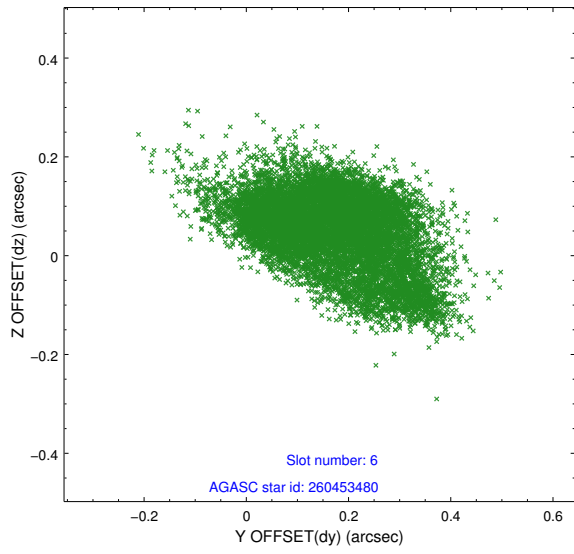
2.4.2 Slot 4



2.4.3 Slot 5

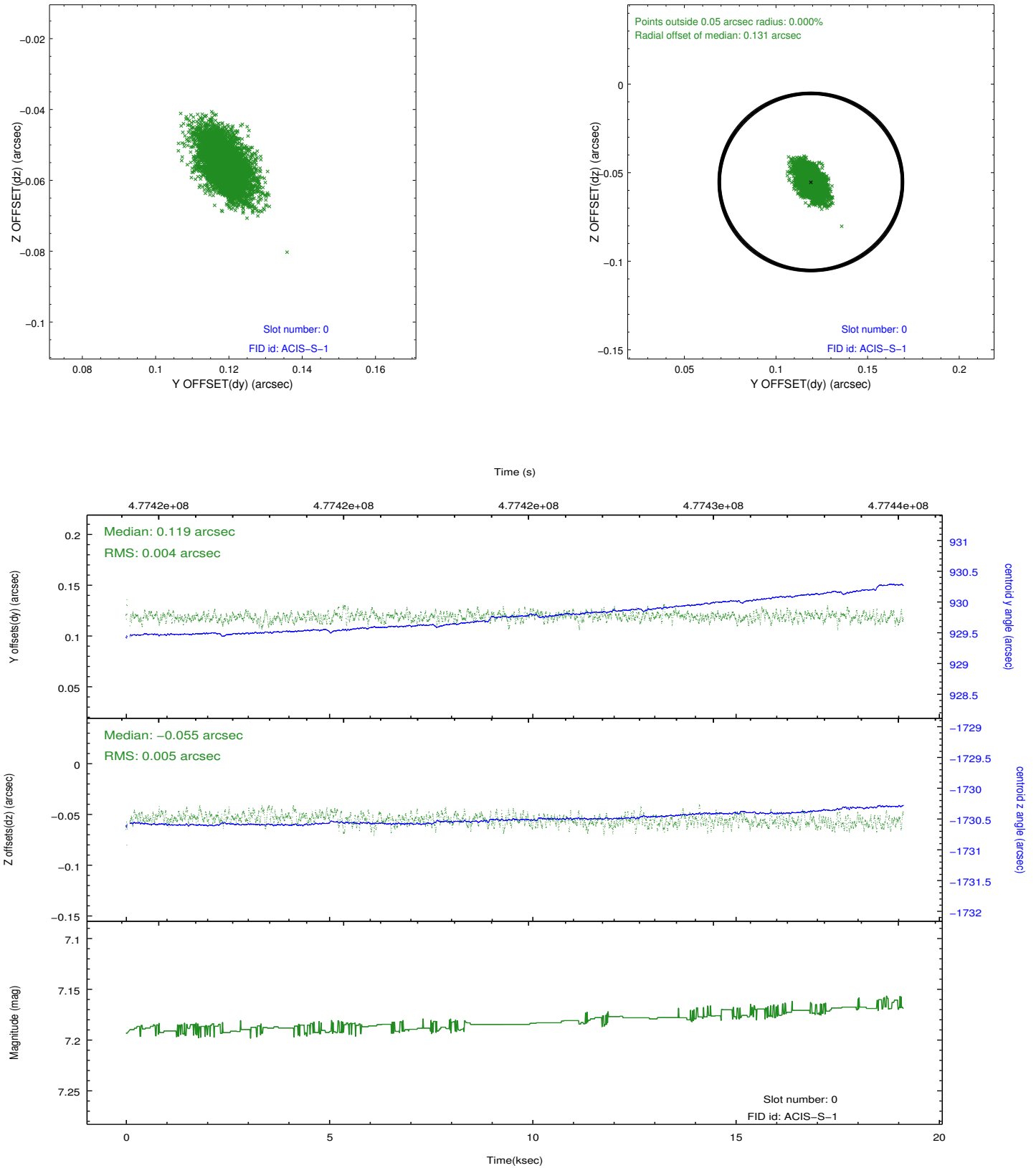


2.4.4 Slot 6

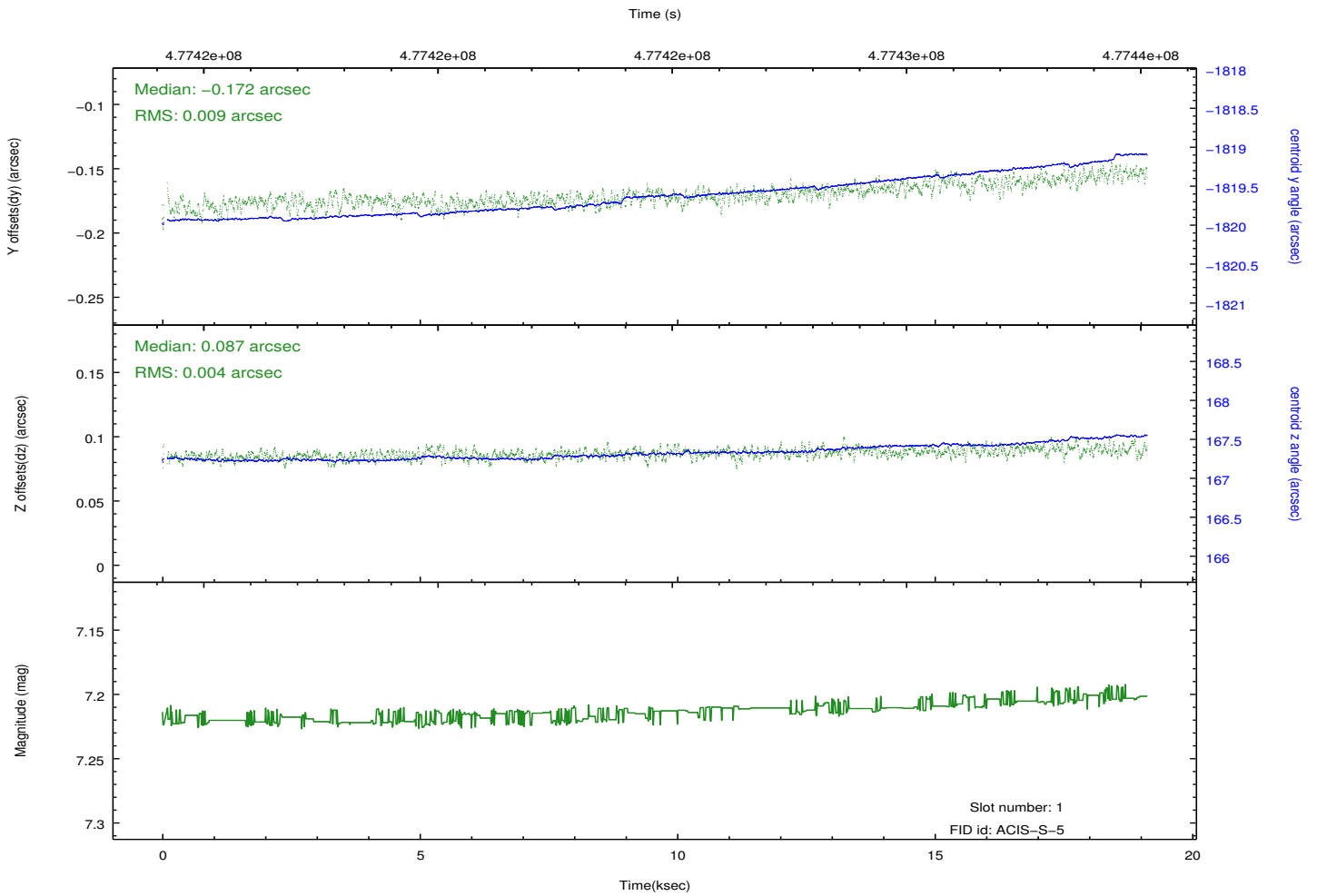
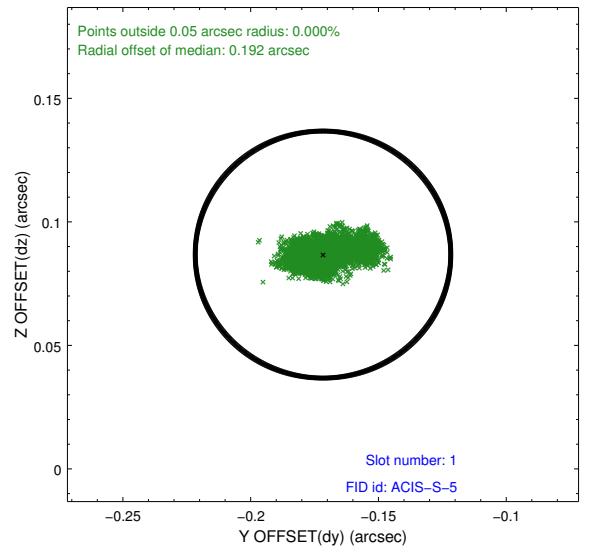
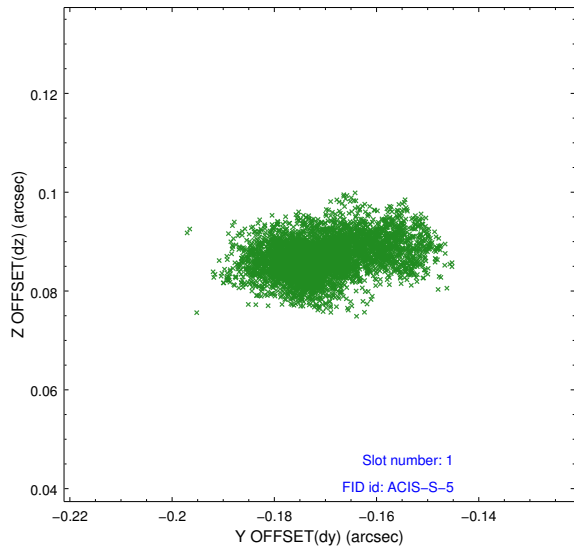


2.5 FID Slots

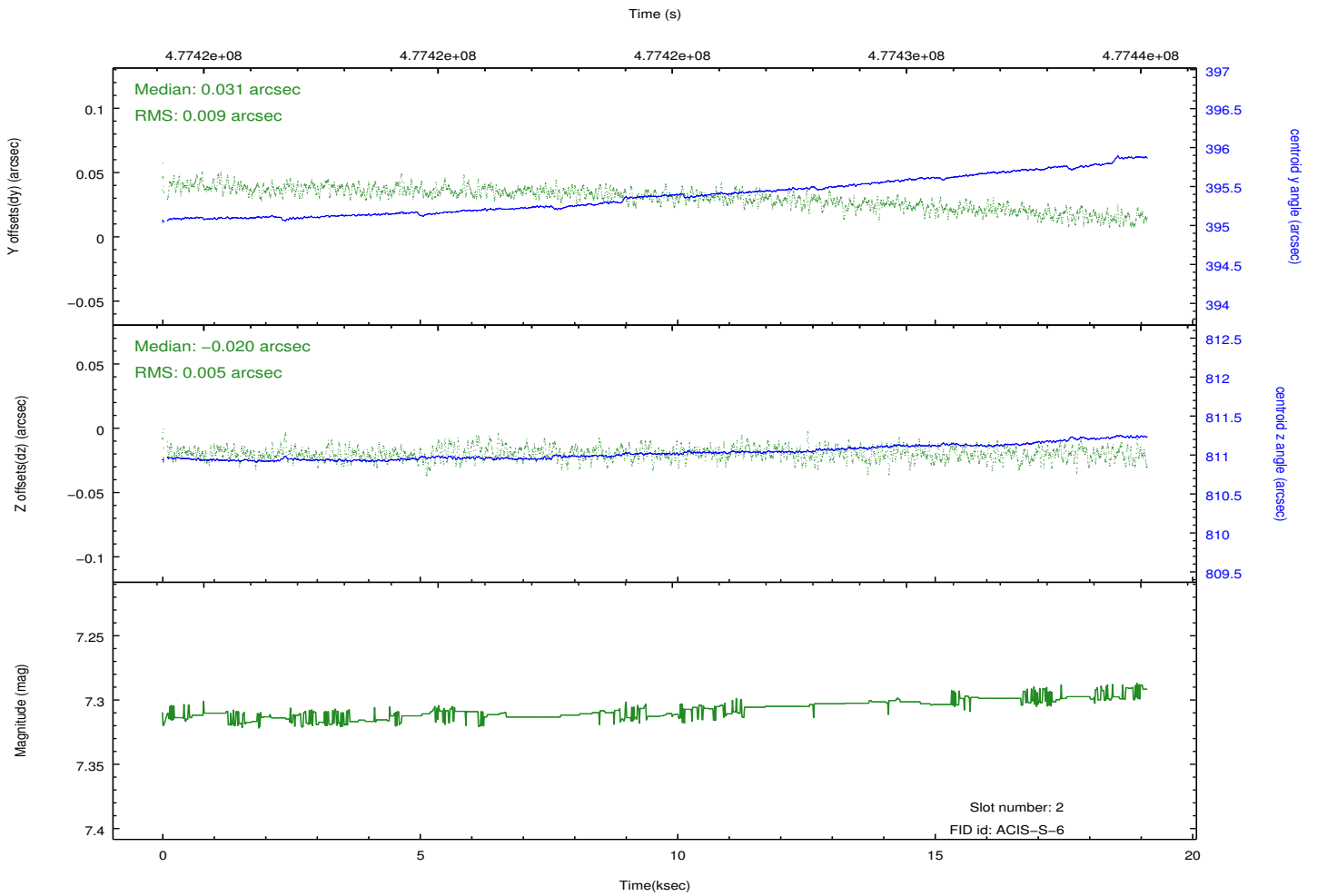
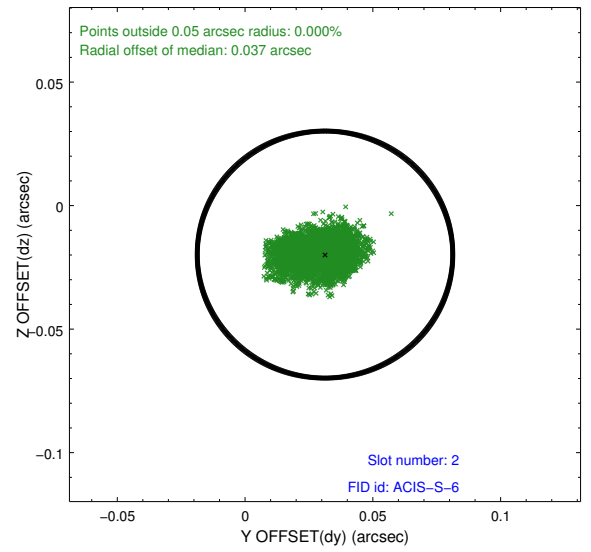
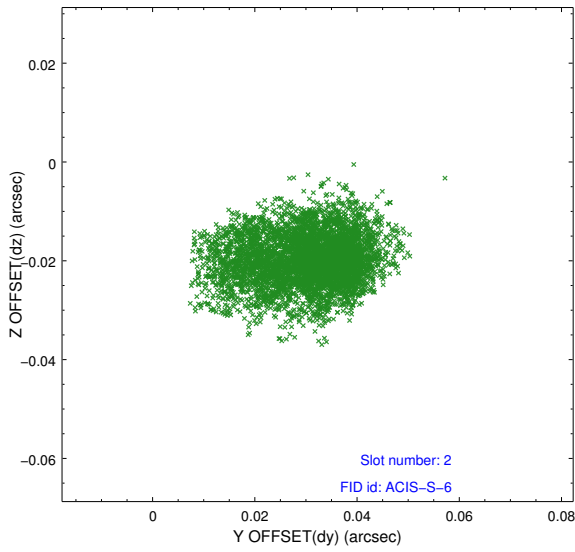
2.5.1 Slot 0



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)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.026

A.2 Comments

Joint proposal with HST.

Observation coordinated with HST.

Slot 7 used for optical photometry of the target.

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.