

V&V Reference Report

L2 ASCDS Version : 10.4.3.1

Observation 18434 - L2 Version 2
Chandra X-Ray Center

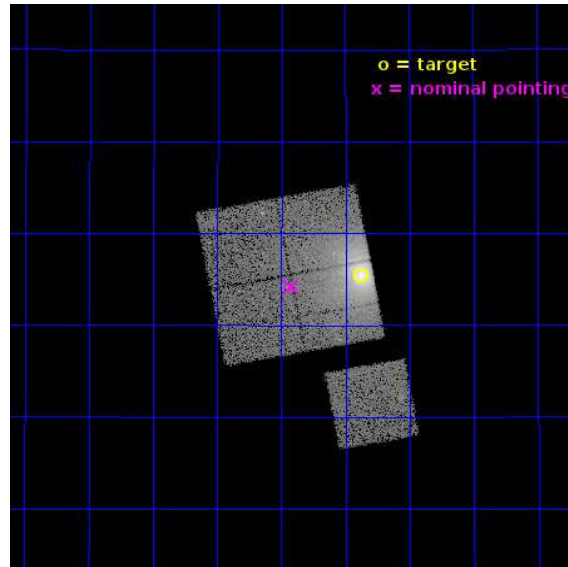
L2 Processing Date : Apr 14 2016

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

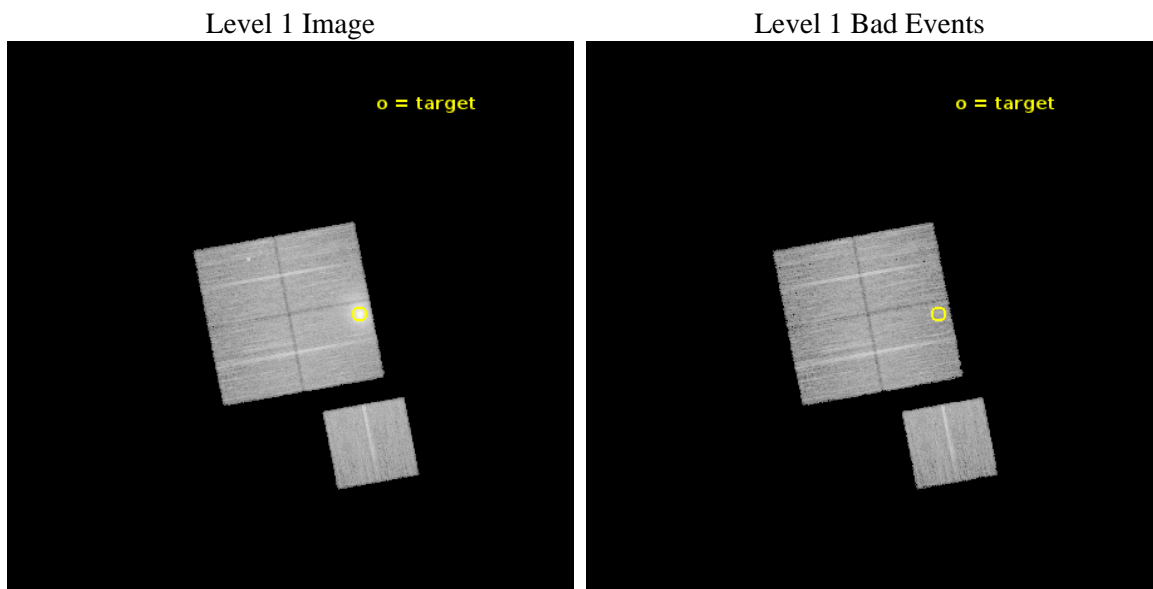
seq_num	890127	Sequence number
obs_id	18434	Observation id
title	AO-17 Calibration Observations of A1795	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	A1795	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	207.219583	Observer's specified target RA [deg]
dec_targ	26.590833	Observer's specified target Dec [deg]
ra_nom	207.35541907924	Nominal RA [deg]
dec_nom	26.570028885323	Nominal Dec [deg]
roll_nom	169.38206938817	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15372.798496127	Sum of GTIs [s]
livetime	15171.941566486	Livetime [s]
ontime0	15372.716416121	Sum of GTIs [s]
ontime1	15369.616375804	Sum of GTIs [s]
ontime2	15372.798496127	Sum of GTIs [s]
ontime3	15372.839536071	Sum of GTIs [s]
ontime6	15369.53430593	Sum of GTIs [s]
l2events	108275	Number of level 2 events



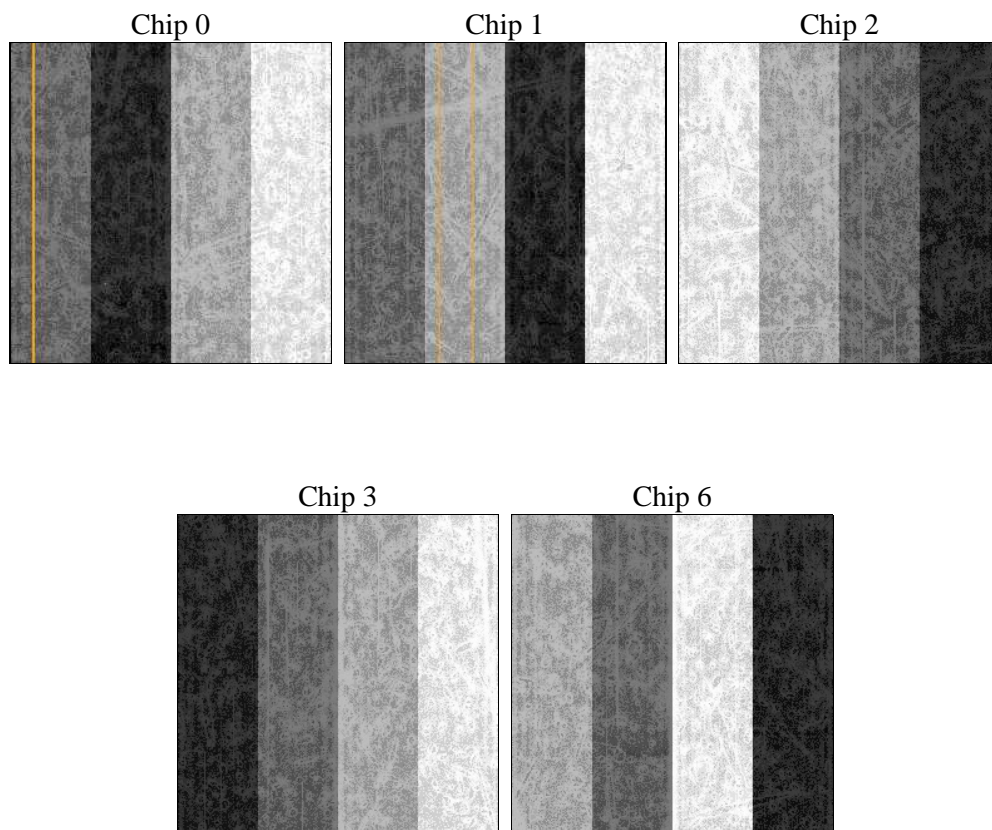
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15300.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3.1	Processing system revision	ontime	15372.798496127	Sum of GTIs [s]
caldsver	4.7.1	 	ontime0	15372.716416121	Sum of GTIs [s]
date	2016-04-14T15:01:54	Date and time of file creation	ontime1	15369.616375804	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	15372.798496127	Sum of GTIs [s]
			ontime3	15372.839536071	Sum of GTIs [s]
			ontime6	15369.53430593	Sum of GTIs [s]
			l1events	542086	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	108574	88835	150533	93617	100527
rejected events	83046	76413	87778	82967	89503
rejected %	76%	86%	58%	88%	89%

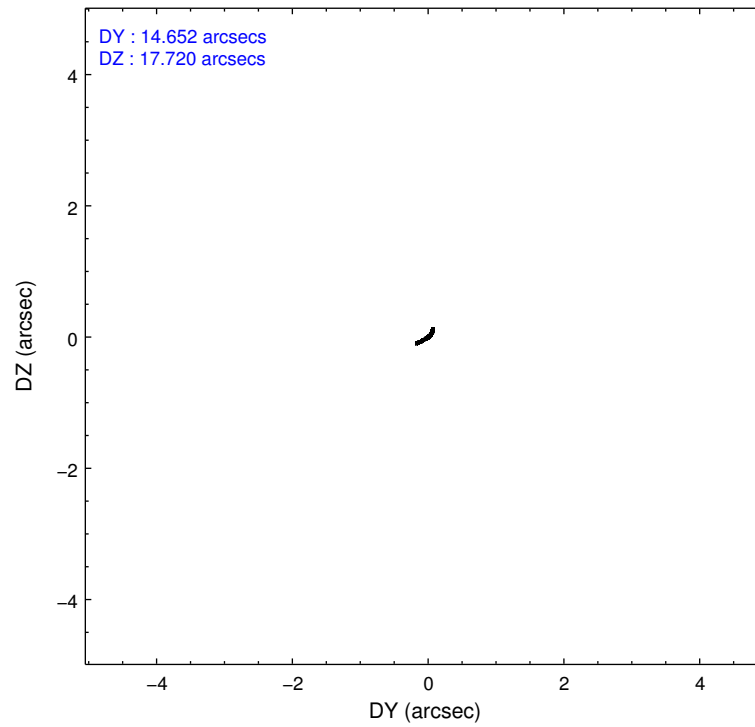
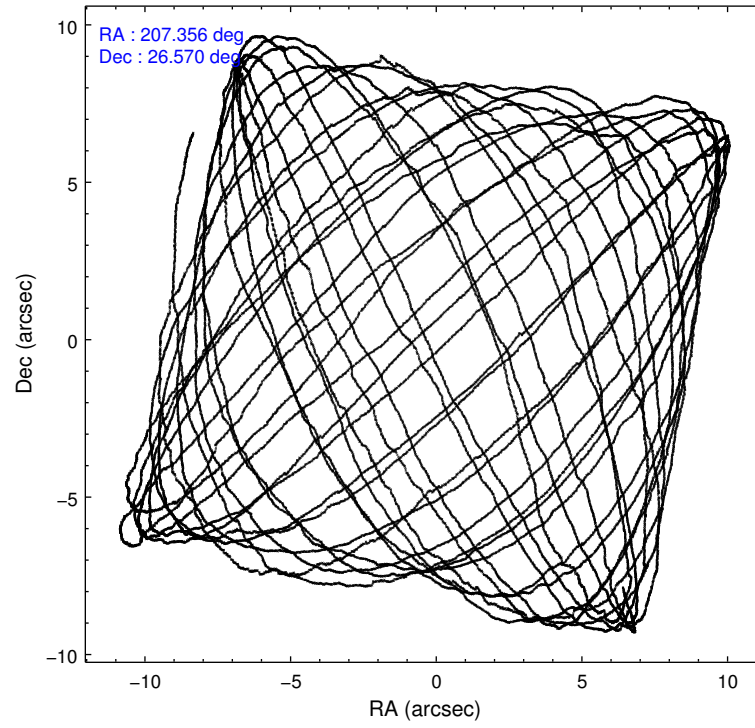
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	15274	4691	45344	3956	3695
	14%	5%	30%	4%	3%
grade 1 events	87	60	226	45	31
	0%	0%	0%	0%	0%
grade 2 events	4291	2780	8123	2309	2596
	3%	3%	5%	2%	2%
grade 3 events	1595	1118	2856	1093	1053
	1%	1%	1%	1%	1%
grade 4 events	1575	1139	2866	1082	1029
	1%	1%	1%	1%	1%
grade 5 events	4094	4171	3805	4538	4310
	3%	4%	2%	4%	4%
grade 6 events	2802	2698	3588	2215	2653
	2%	3%	2%	2%	2%
grade 7 events	78856	72178	83725	78379	85160
	72%	81%	55%	83%	84%

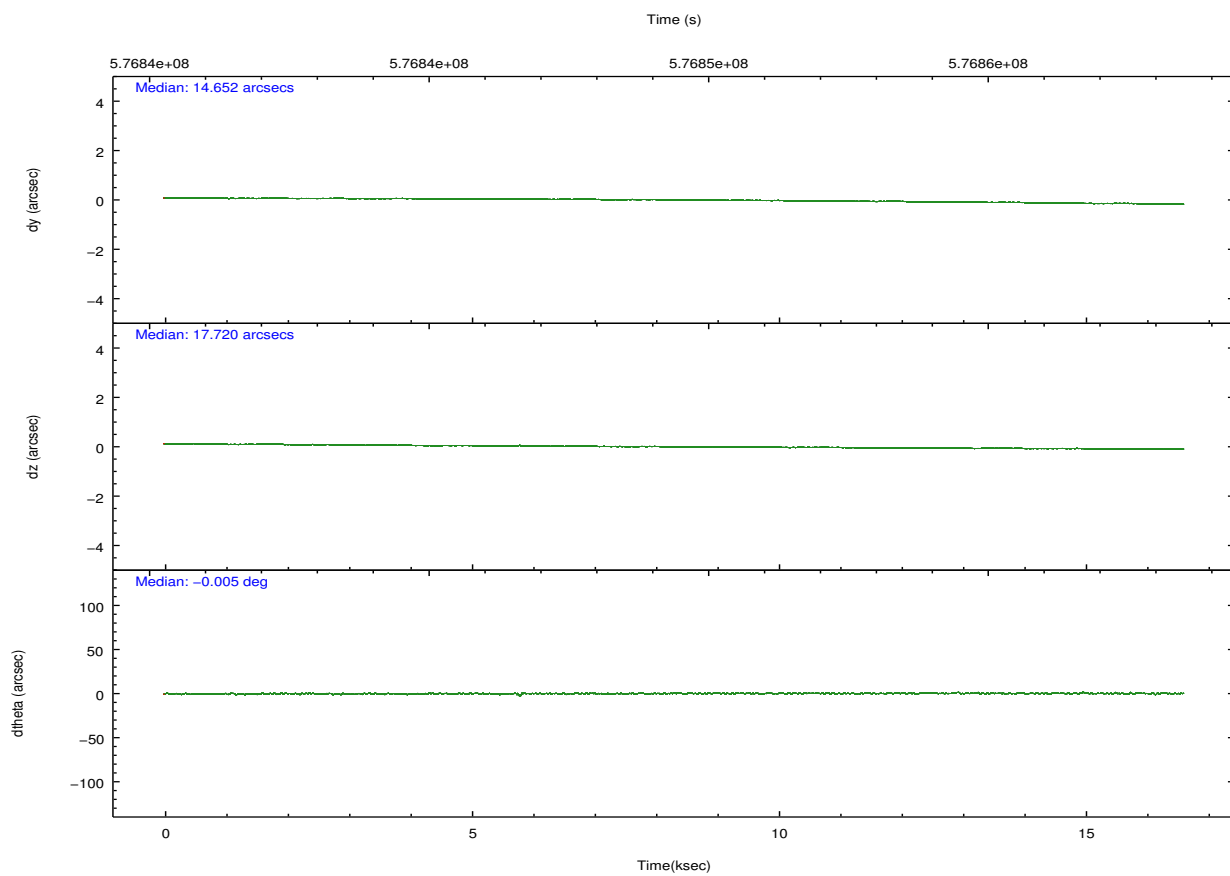
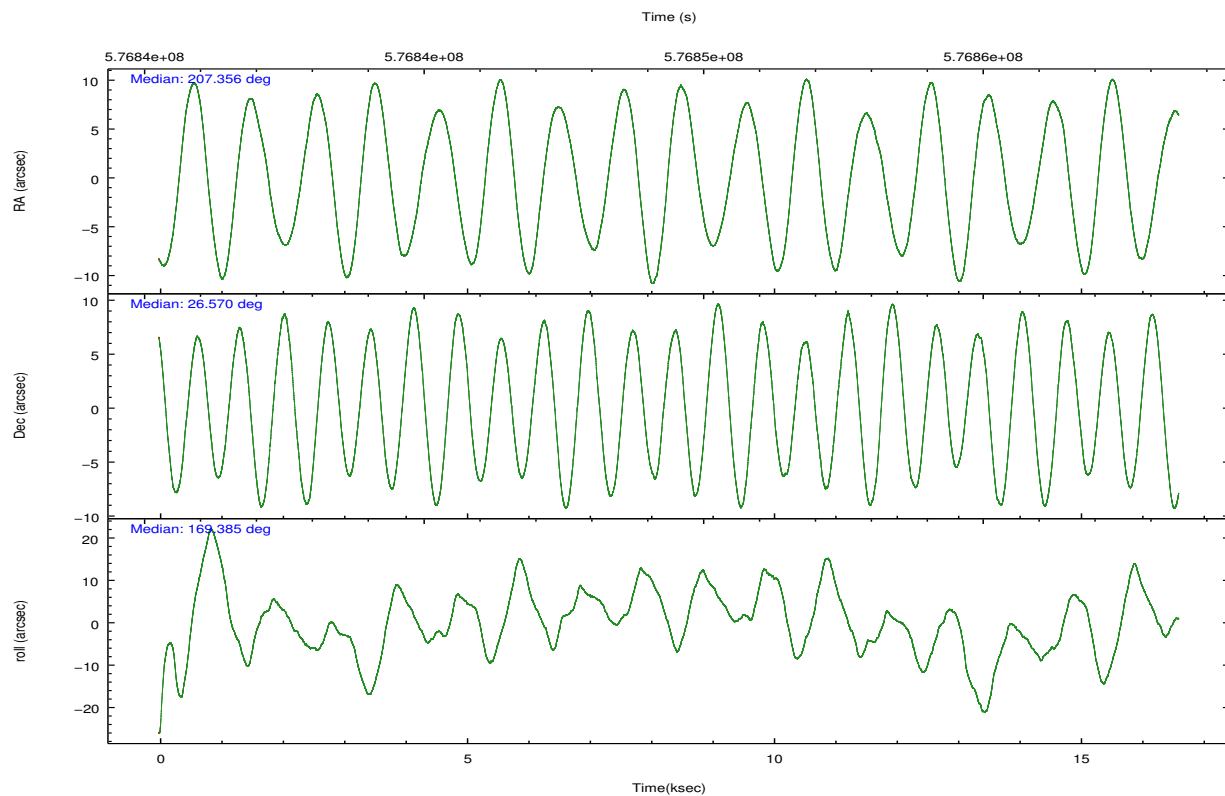
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	207.384506	207.3554190792401
[deg] Pointing Dec	26.579305	26.57002888532328
[deg] Pointing Roll	169.160367	169.3820693881719
[s] Window start time (MET)	575856068.184000	575856068.184000
[s] Window stop time (MET)	578361668.184000	578361668.184000
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-231.837463	-231.8374710109429
[mm] SIM translation stage offset	-1.755	-1.754981991986767
[s] Observation start time (MET)	576842372.184000	576840869.5416501
Observation start date	2016-04-12T09:58:24	2016-04-12T09:34:29
[s] Observation end time (MET)	576857672.184000	576858553.86766
Observation end date	2016-04-12T14:13:24	2016-04-12T14:29:13
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



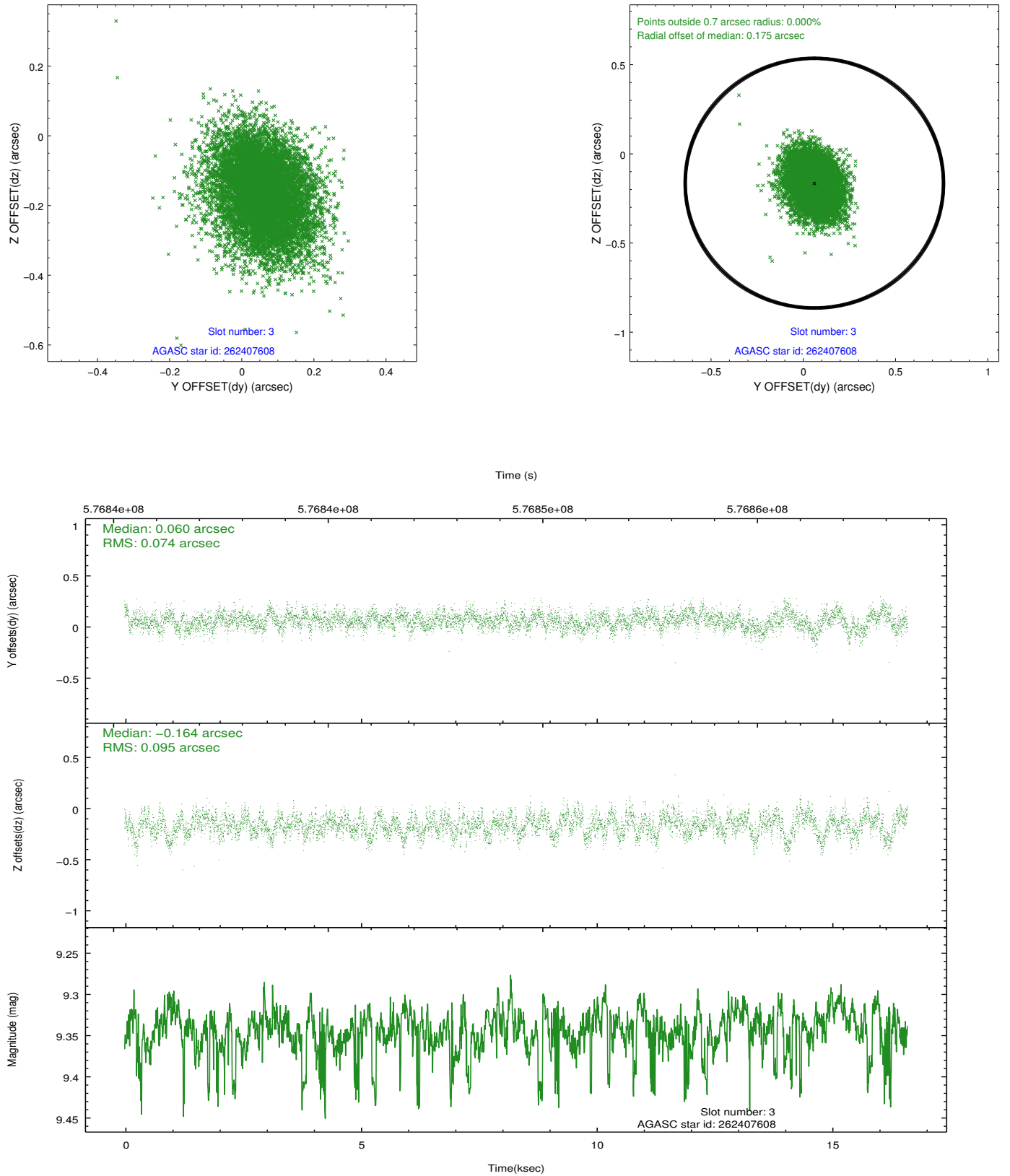


Slot Statistics

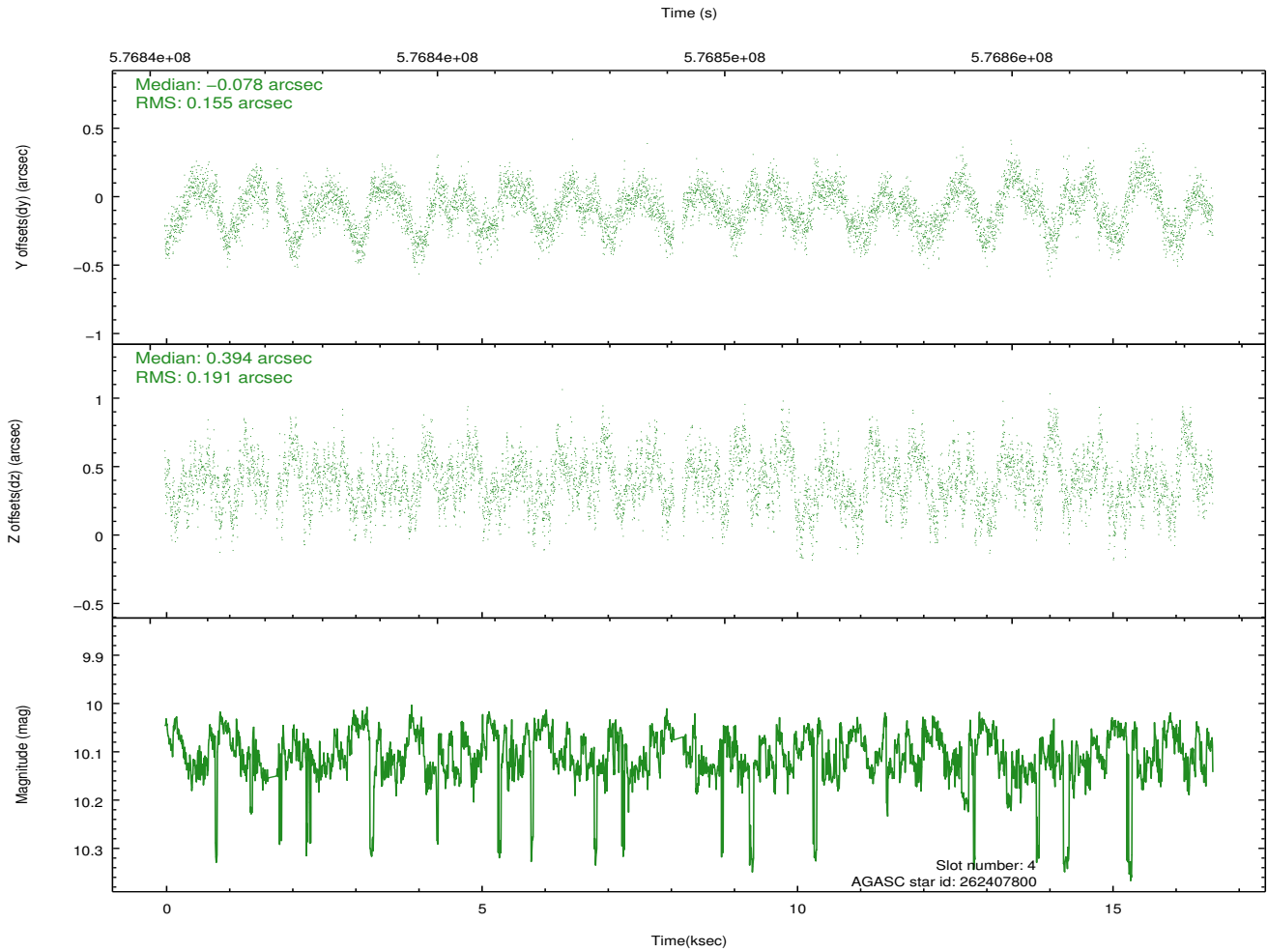
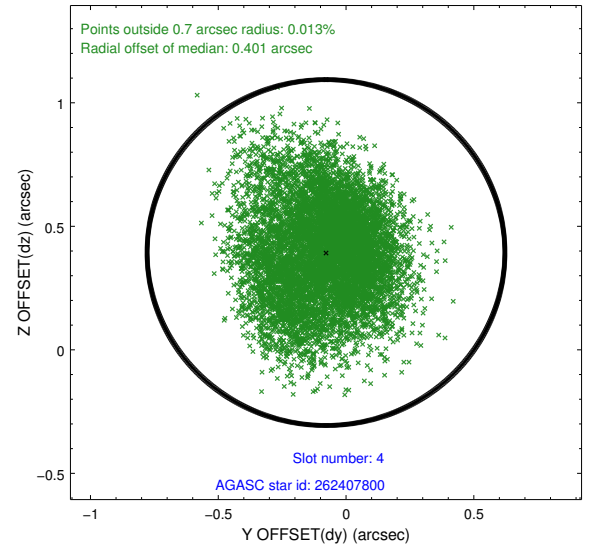
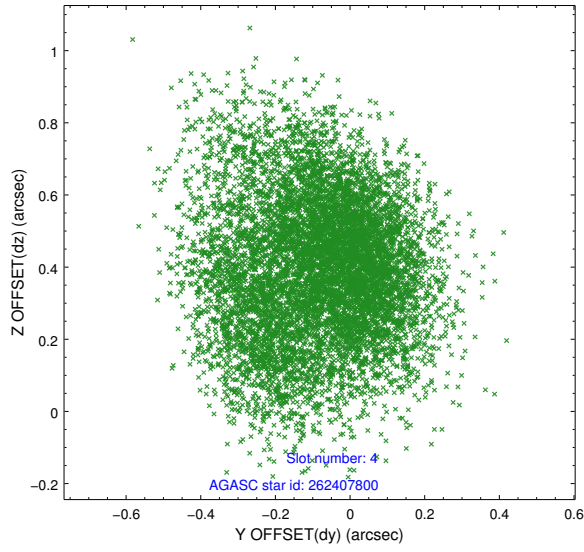
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.27	4052	0.082	-0.025	0.006	0.011	0.000000	0.000000	924.93	-877.32
1	FID		ACIS-I-5	7.27	4050	-0.360	0.046	0.006	0.011	0.000000	0.000000	-1823.58	1019.95
2	FID		ACIS-I-6	7.27	4052	0.186	0.049	0.006	0.011	0.000000	0.000000	390.16	1664.87
3	GUIDE	used	262407608	9.34	8097	0.060	-0.164	0.127	0.210	207.378401	26.435507	-77.58	512.32
4	GUIDE	used	262407800	10.11	7962	-0.078	0.394	0.265	0.417	207.321181	27.251762	657.63	-2337.66
5	GUIDE	used	262408096	9.30	8096	-0.024	-0.286	0.171	0.269	207.011678	26.515421	1137.93	449.57
6	GUIDE	used	262408512	7.98	8102	0.171	0.059	0.122	0.181	207.800210	27.128796	-934.97	-2195.05
7	GUIDE	used	262408936	9.68	8097	-0.114	-0.006	0.172	0.290	207.154731	26.726554	825.46	-382.22

2.4 Star Slots

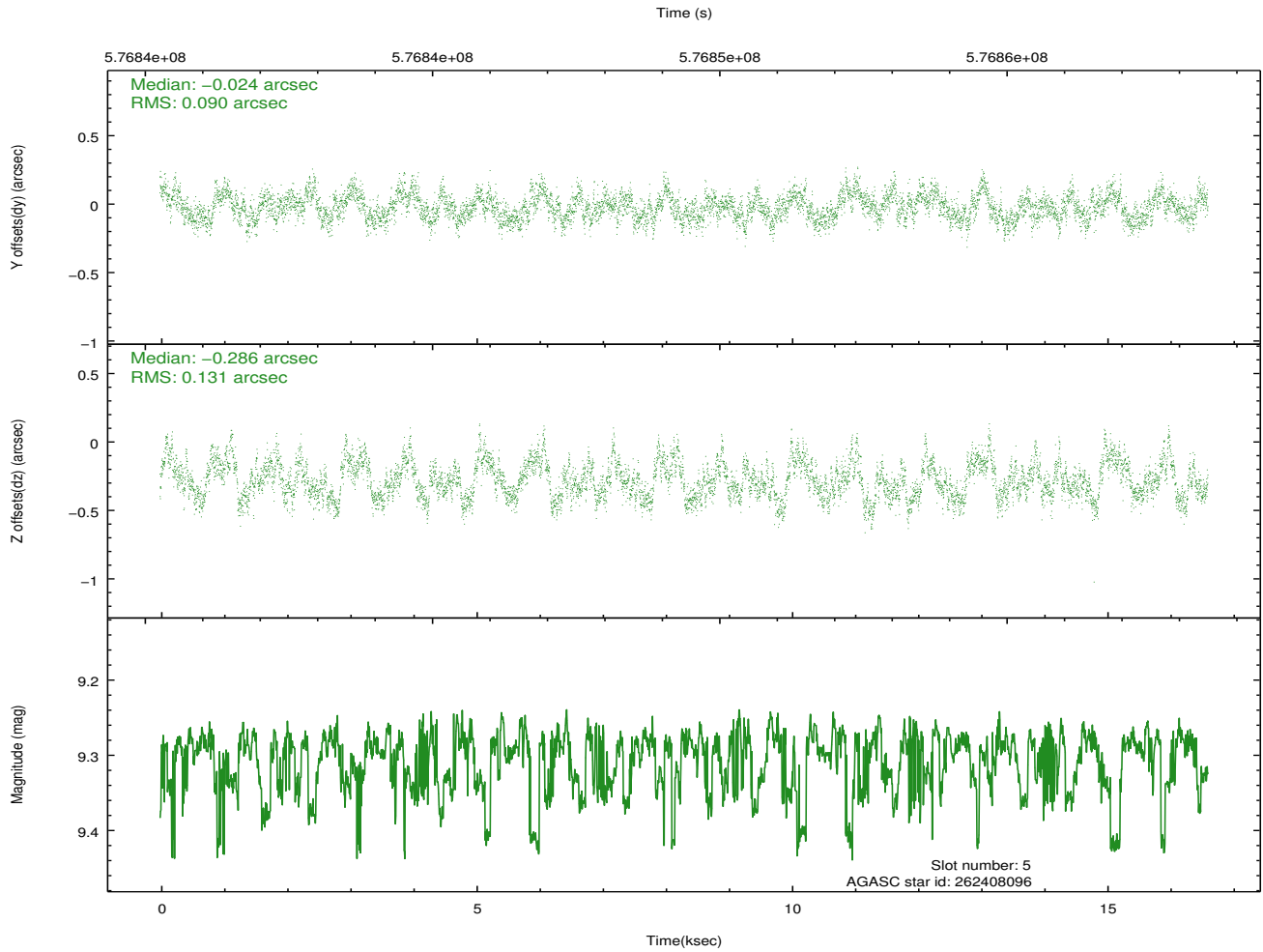
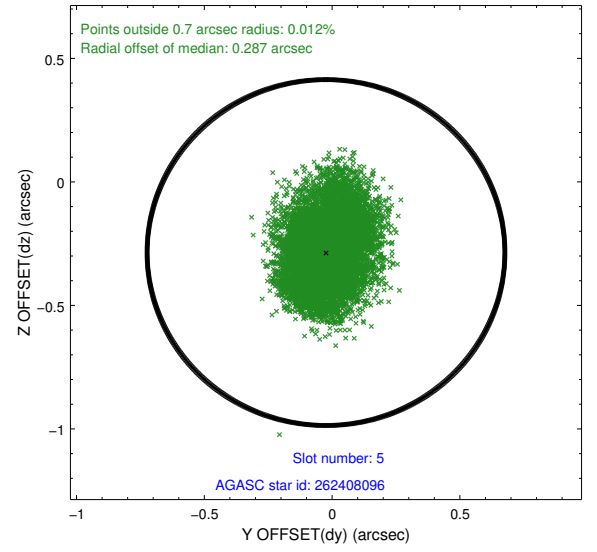
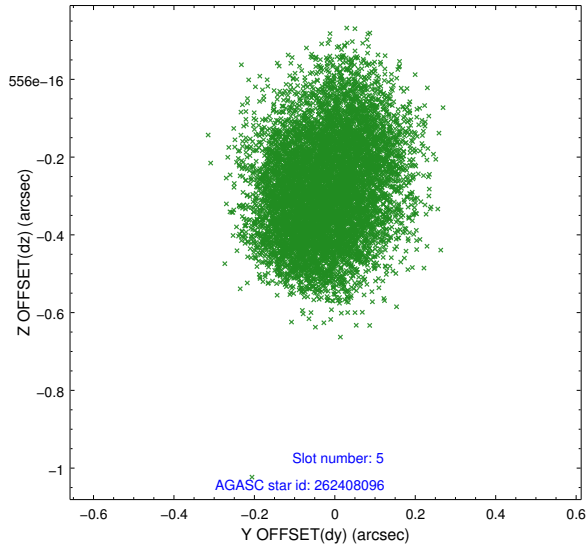
2.4.1 Slot 3



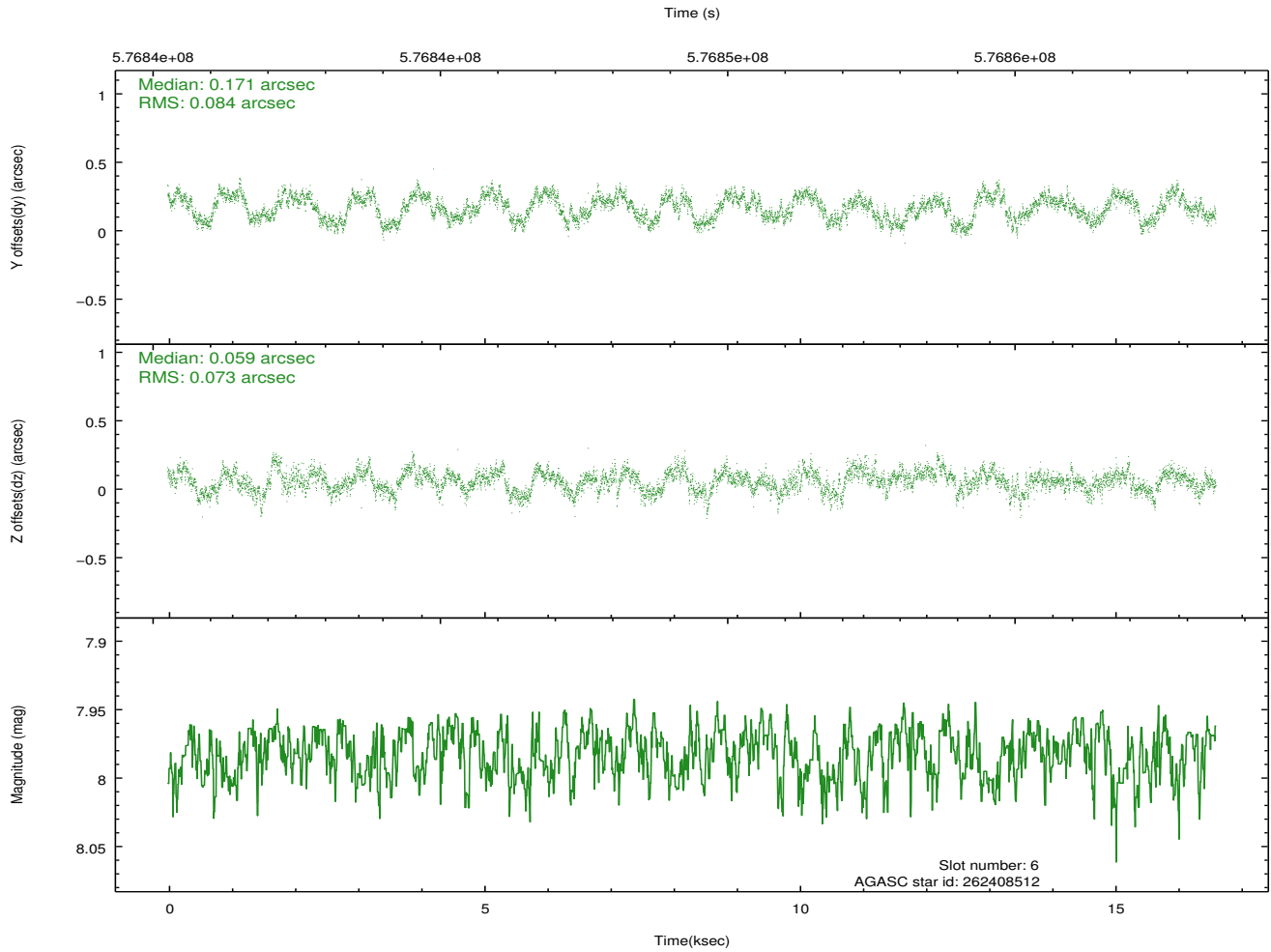
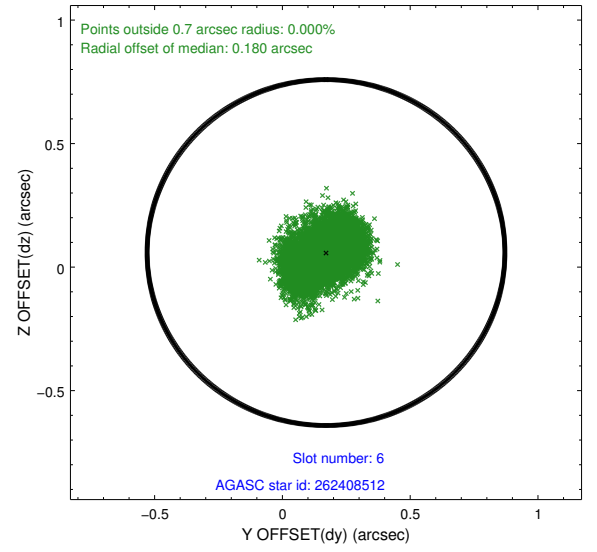
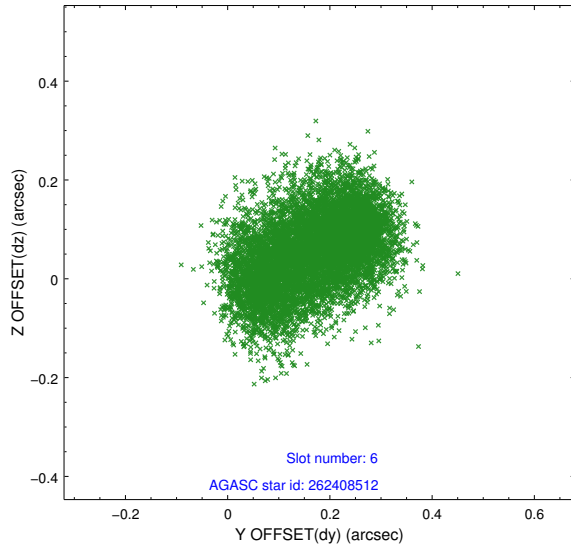
2.4.2 Slot 4



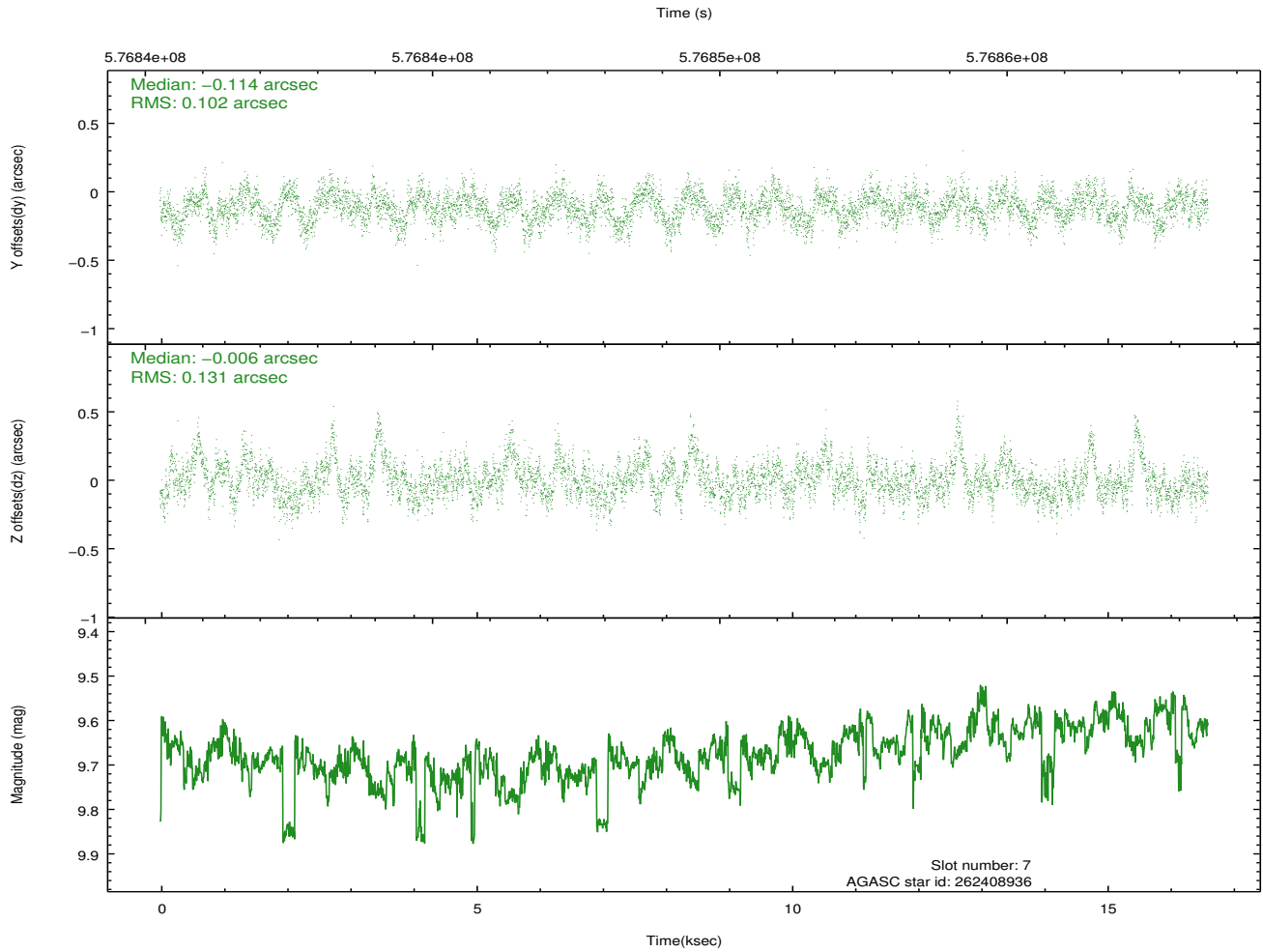
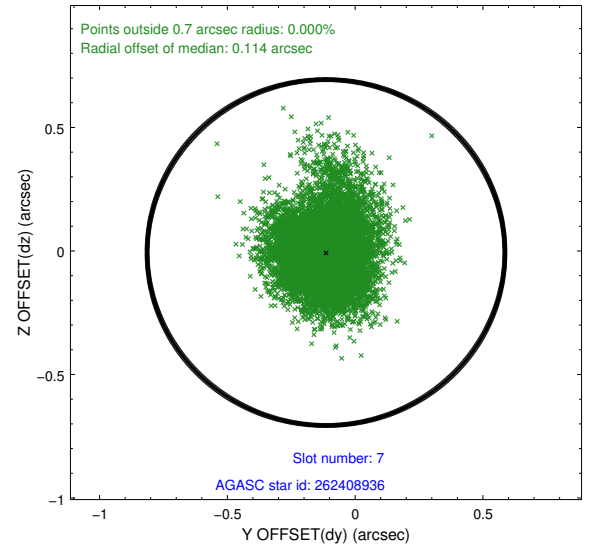
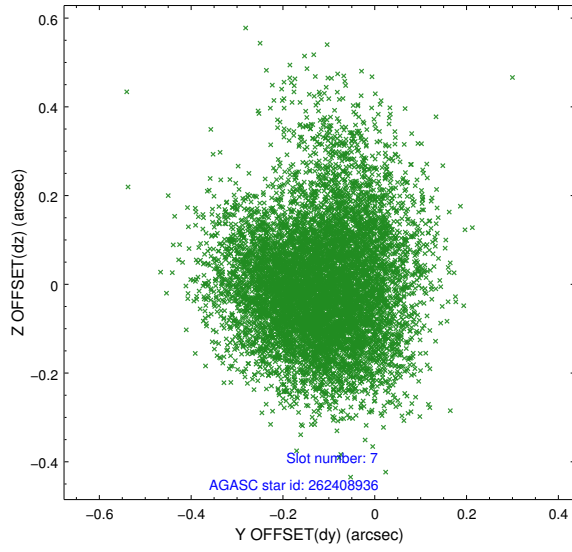
2.4.3 Slot 5



2.4.4 Slot 6

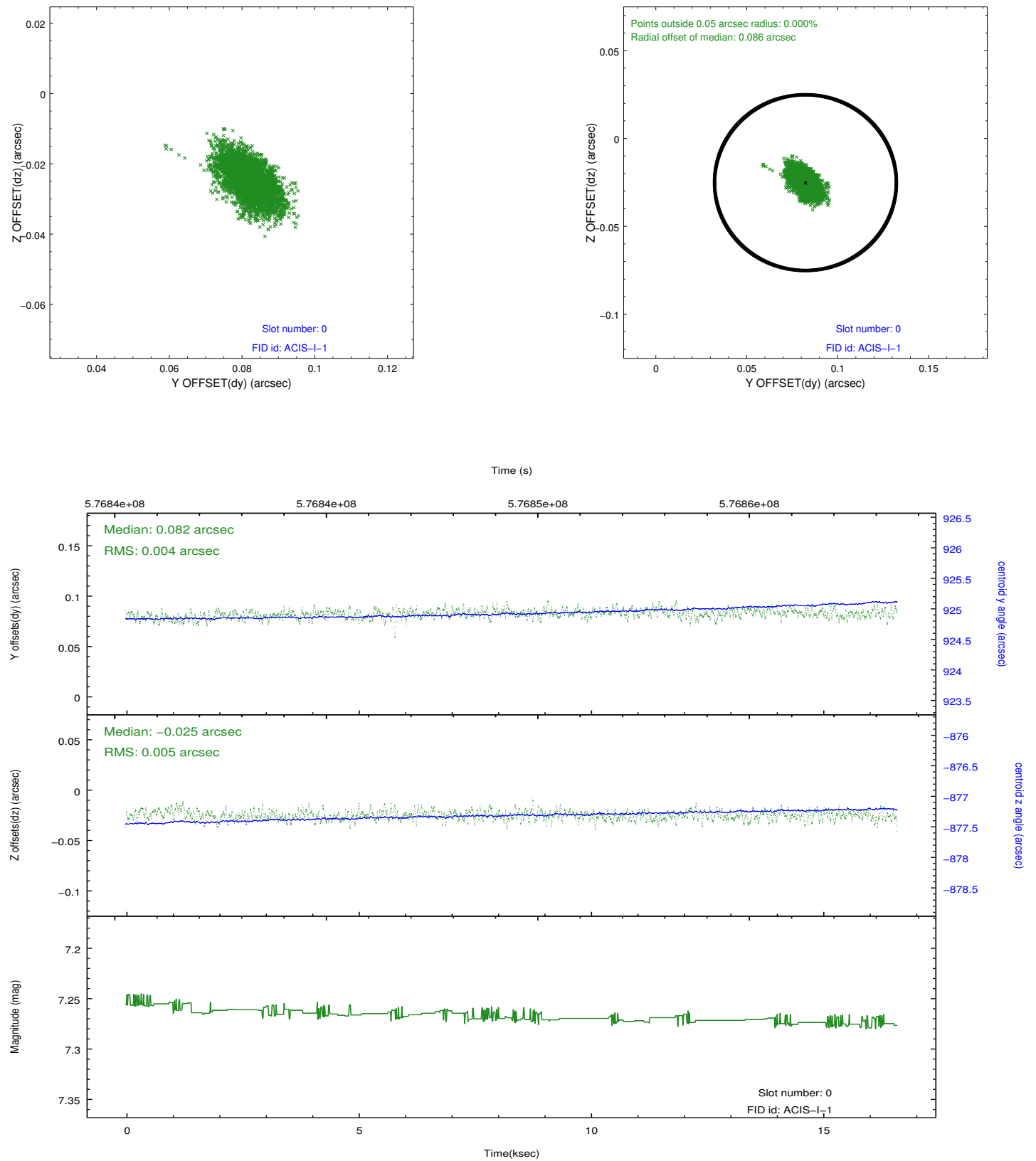


2.4.5 Slot 7

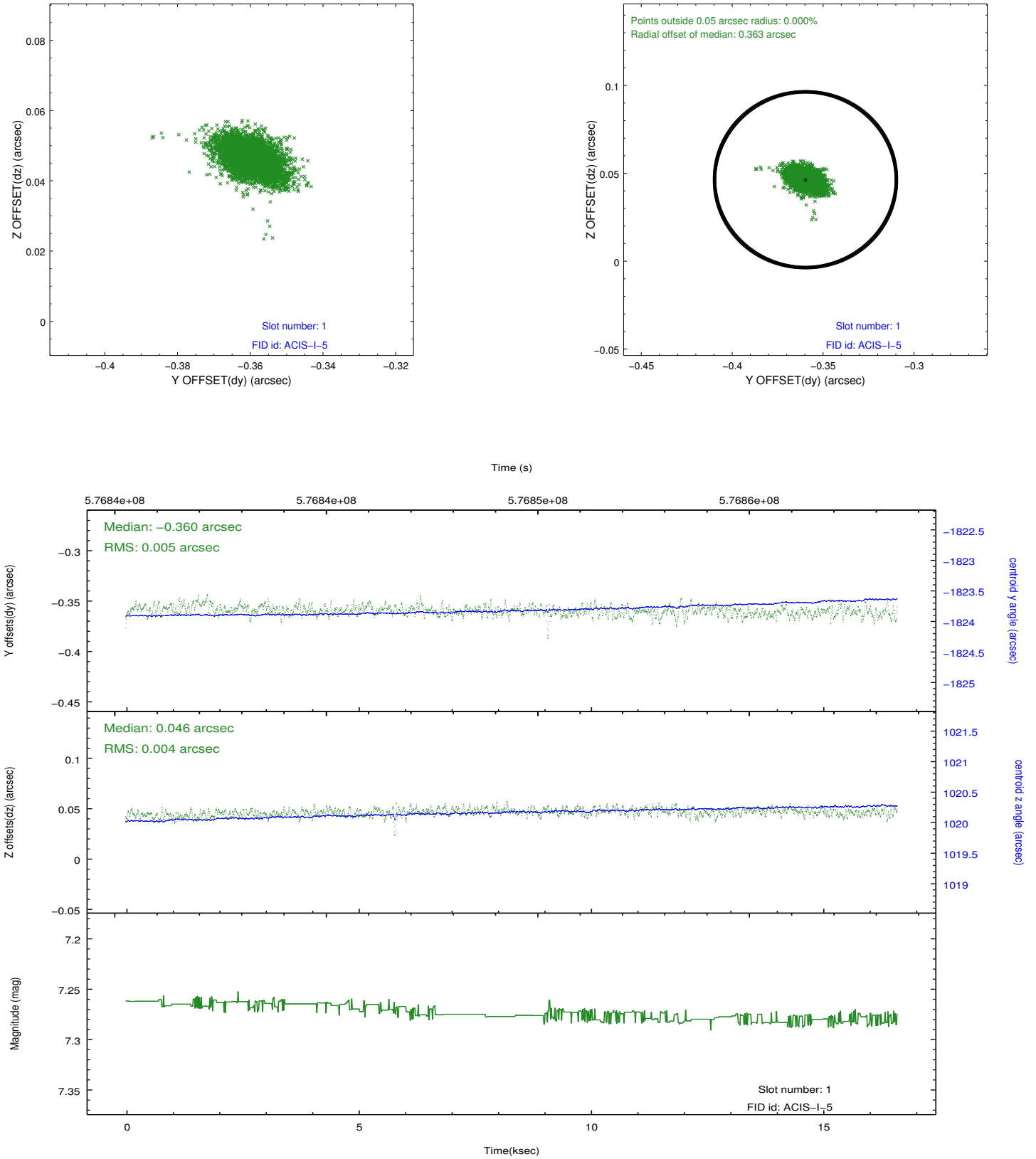


2.5 FID Slots

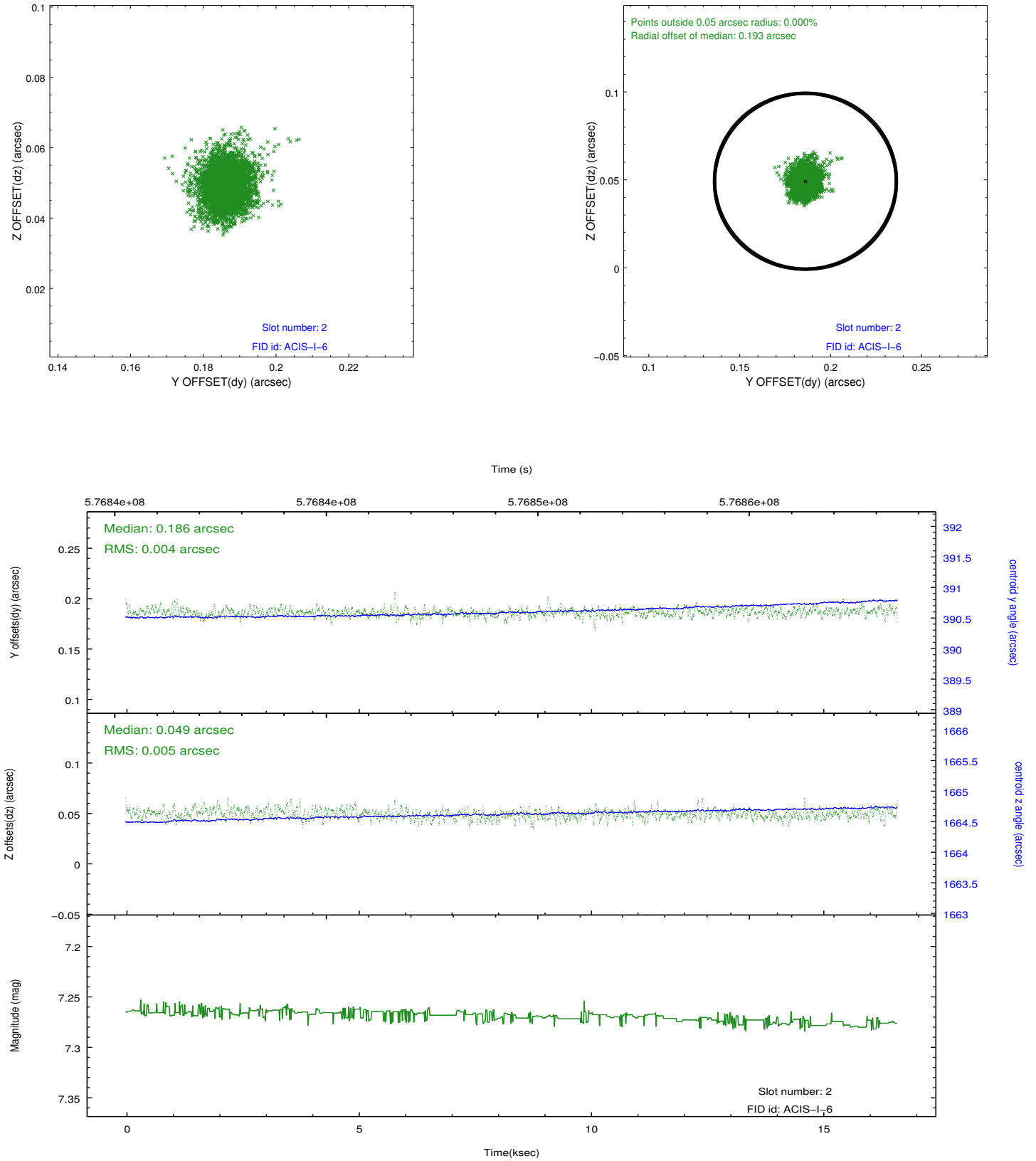
2.5.1 Slot 0



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)	2016.04.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.372798496127

A.2 Comments

Window preference met.

A spatial region of the original bias maps for CCD = 0 and CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias maps for CCD = 0 and CCD = 6 have been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels on CCD = 0 affected by the anomaly are bounded by sky coords:

(207.23302,26.62591), (207.23223,26.62216),
(207.35843,26.60107), (207.35922,26.60482).

The affected pixels on CCD = 6 are bounded by sky coords:

(207.11919,26.29942), (207.12338,26.29872), (207.13276,26.34422),
(207.12856,26.34491).