

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 19364 - L2 Version 2  
Chandra X-Ray Center

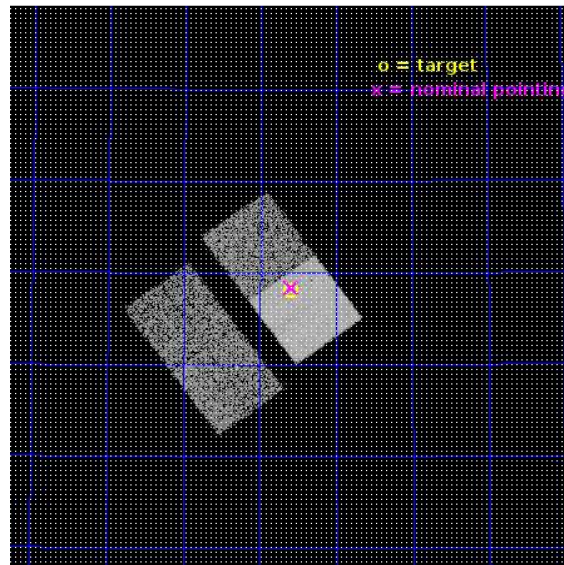
L2 Processing Date : Aug 29 2017

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# 1 Front

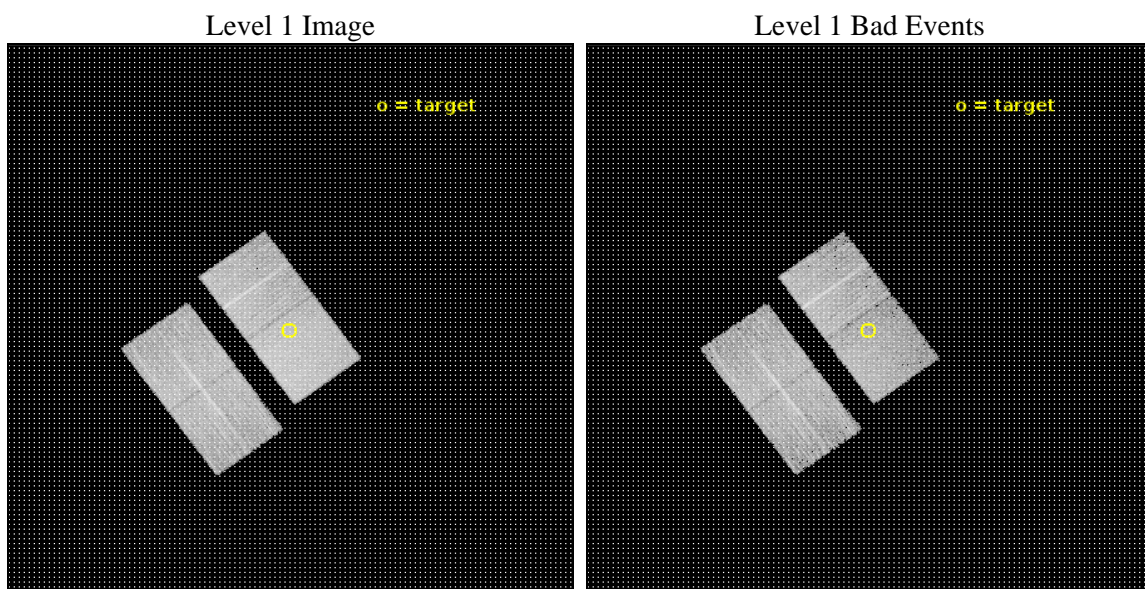
seq_num	601321	Sequence number
obs_id	19364	Observation id
title	A Statistically Complete High Resolution Chandra and Radio (eMERLIN) Survey of the Palomar Nearby Galaxies Sample	Proposal title
observer	Ian McHardy	Principal investigator
object	UGC 3828	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	111.149167	Observer's specified target RA [deg]
dec_targ	57.9675	Observer's specified target Dec [deg]
ra_nom	111.14695956778	Nominal RA [deg]
dec_nom	57.973341550173	Nominal Dec [deg]
roll_nom	54.158474923111	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10071.900077581	Sum of GTIs [s]
livetime	9940.3032882428	Livetime [s]
ontime2	10071.900077581	Sum of GTIs [s]
ontime3	10071.900077581	Sum of GTIs [s]
ontime6	10071.900077581	Sum of GTIs [s]
ontime7	10071.900077581	Sum of GTIs [s]
l2events	57342	Number of level 2 events



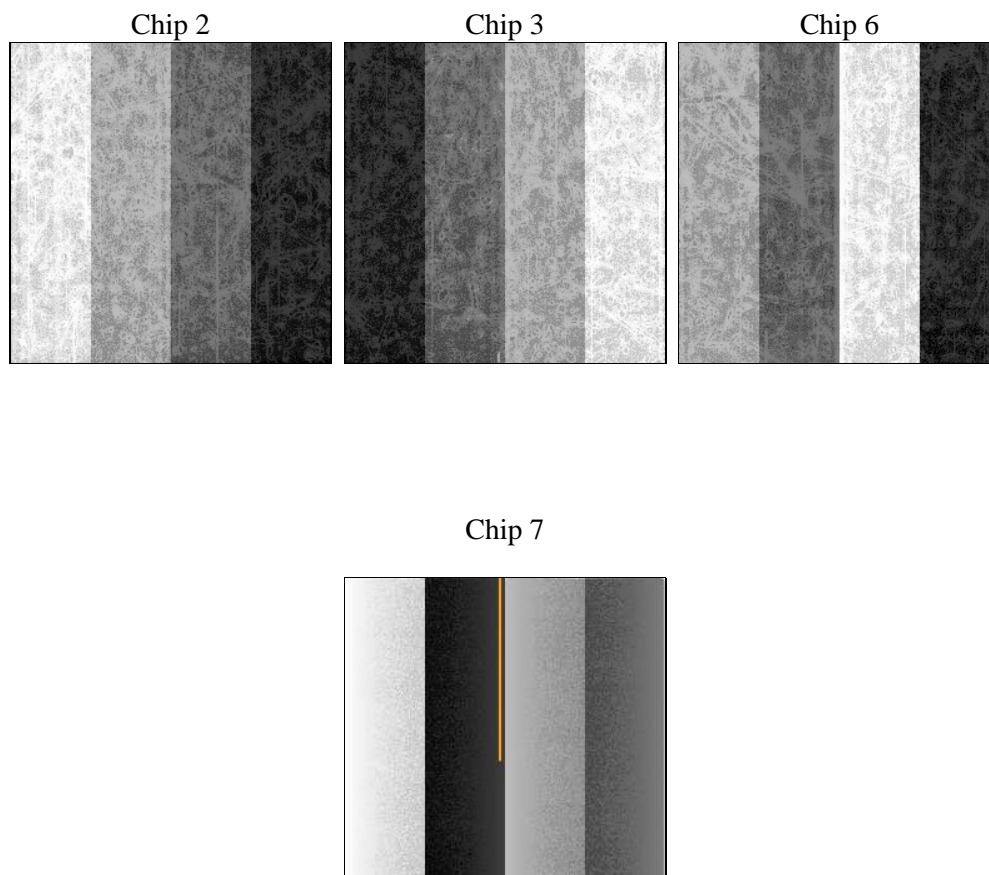
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	10071.900077581	Sum of GTIs [s]
caldsver	4.7.6	&#160	ontime2	10071.900077581	Sum of GTIs [s]
date	2017-08-29T15:07:27	Date and time of file creation	ontime3	10071.900077581	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10071.900077581	Sum of GTIs [s]
			ontime7	10071.900077581	Sum of GTIs [s]
			l1events	288099	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	67963	63839	68463	87834
rejected events	60567	56417	60672	48979
rejected %	89%	88%	88%	55%

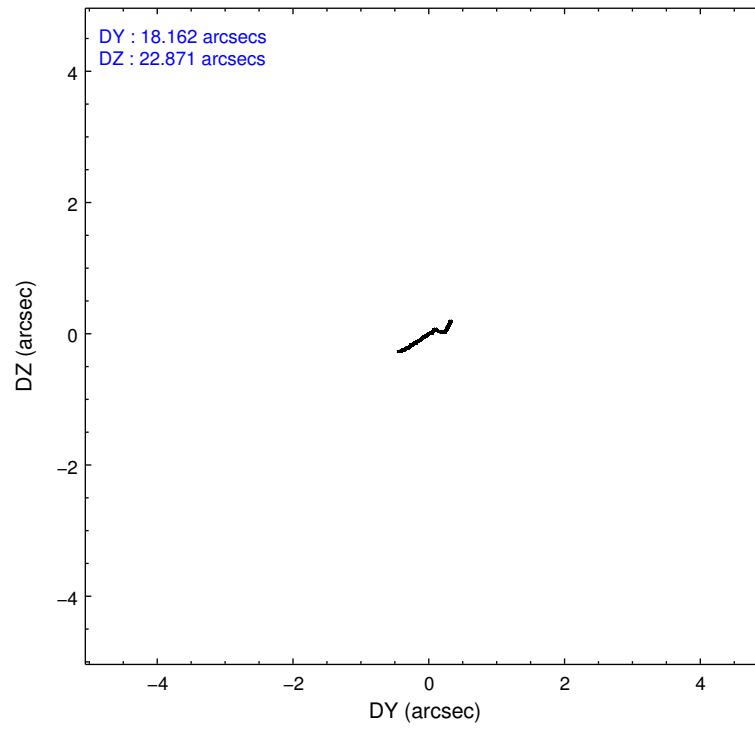
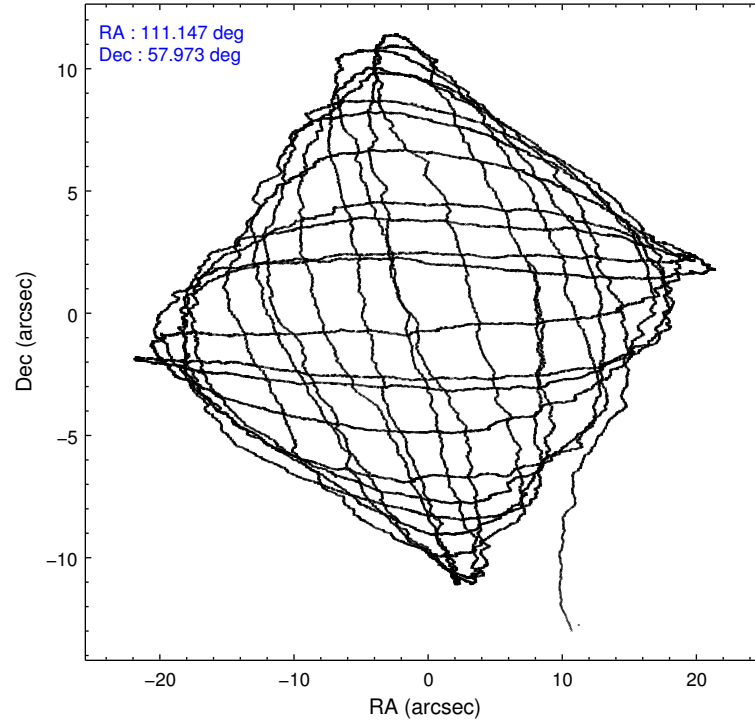
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2672	2837	2556	3520
	3%	4%	3%	4%
grade 1 events	37	41	36	131
	0%	0%	0%	0%
grade 2 events	1848	1654	1840	8275
	2%	2%	2%	9%
grade 3 events	738	791	769	3289
	1%	1%	1%	3%
grade 4 events	708	649	779	3101
	1%	1%	1%	3%
grade 5 events	2712	3390	3193	8916
	3%	5%	4%	10%
grade 6 events	1436	1491	1851	20679
	2%	2%	2%	23%
grade 7 events	57812	52986	57439	39923
	85%	82%	83%	45%

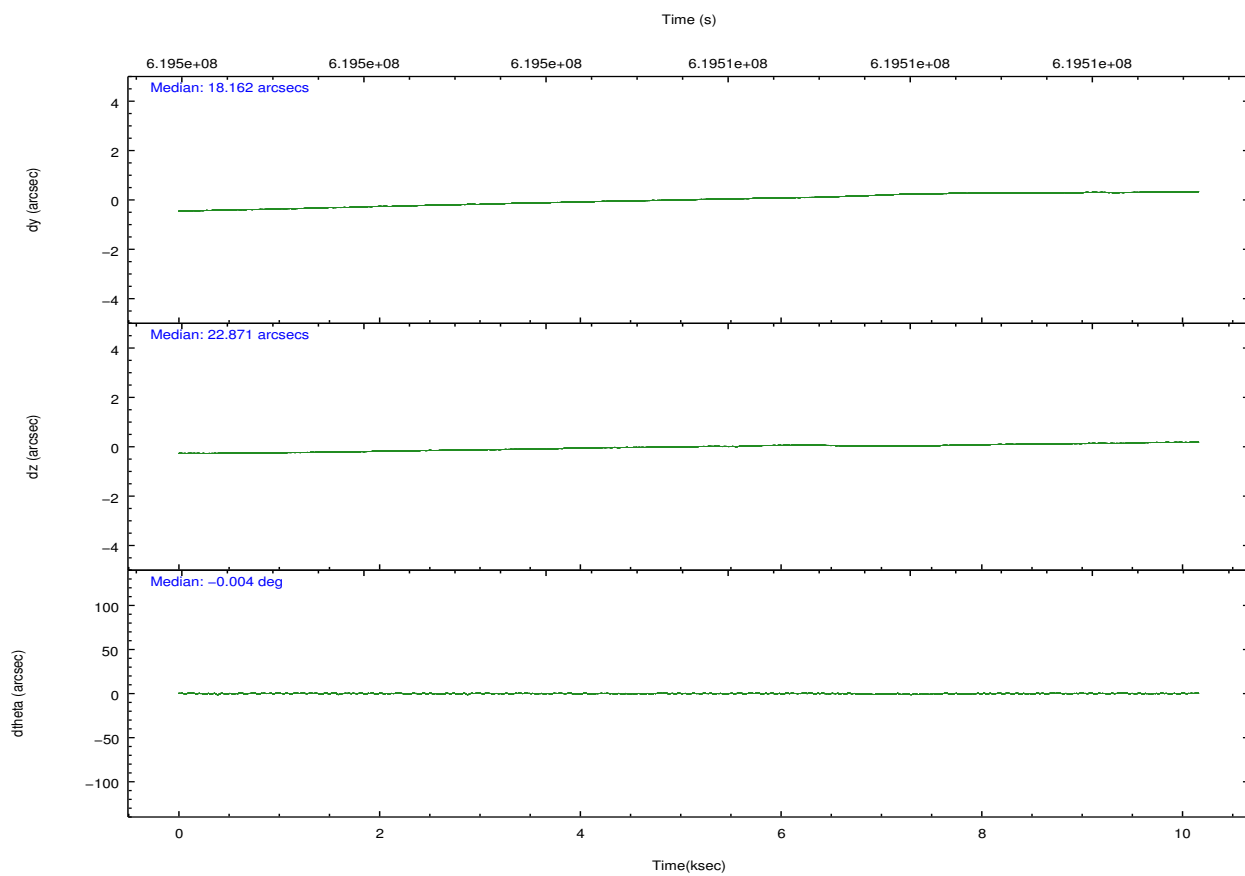
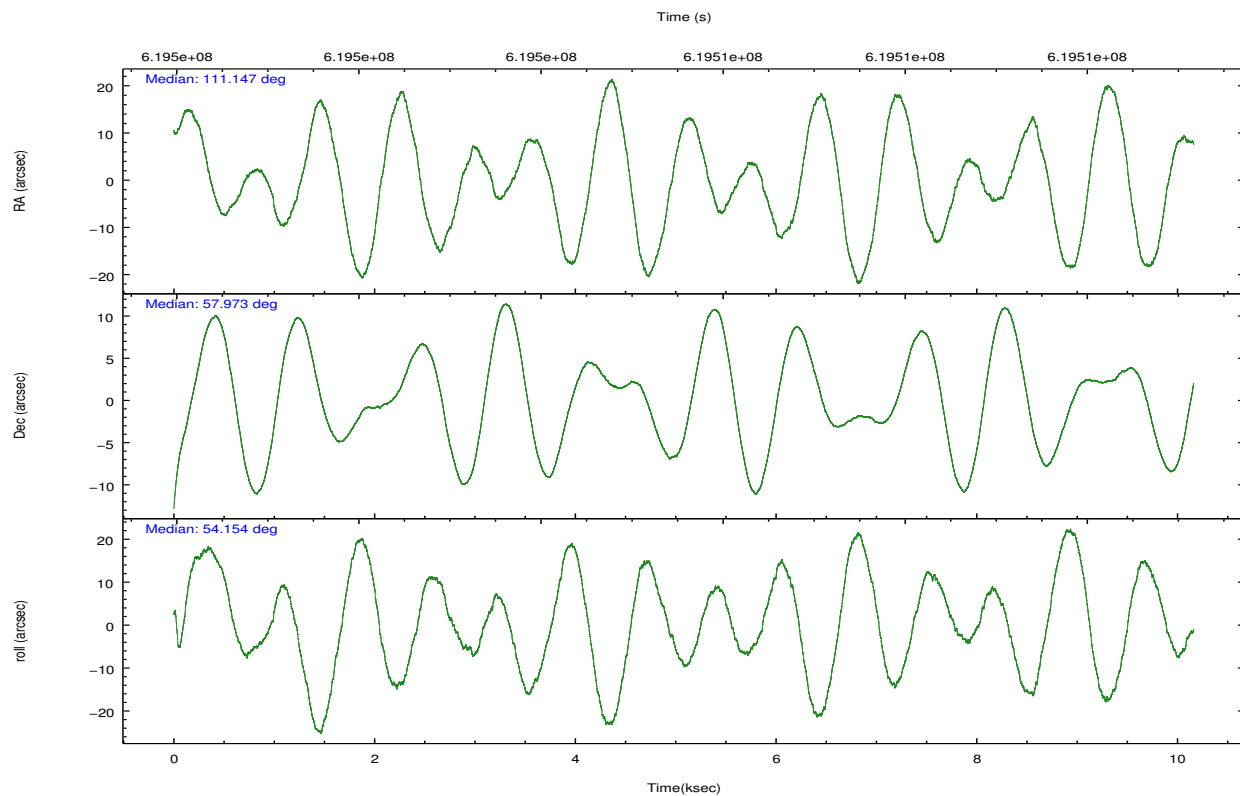


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	111.142305	111.1469595677817	Subarray requested	NONE	NONE
[deg] Pointing Dec	57.946039	57.97334155017334	Alternating exposures requested	N	N
[deg] Pointing Roll	54.005822	54.15847492311123	[s] Primary exposure time	0.000000	3.1
[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			
[s] Observation start time (MET)	619500646.184000	619499472.1690201			
Observation start date	2017-08-19T03:29:37	2017-08-19T03:11:12			
[s] Observation end time (MET)	619510646.184000	619511777.2947299			
Observation end date	2017-08-19T06:16:17	2017-08-19T06:36:17			
Read mode	TIMED	TIMED			

## 2.3 Aspect



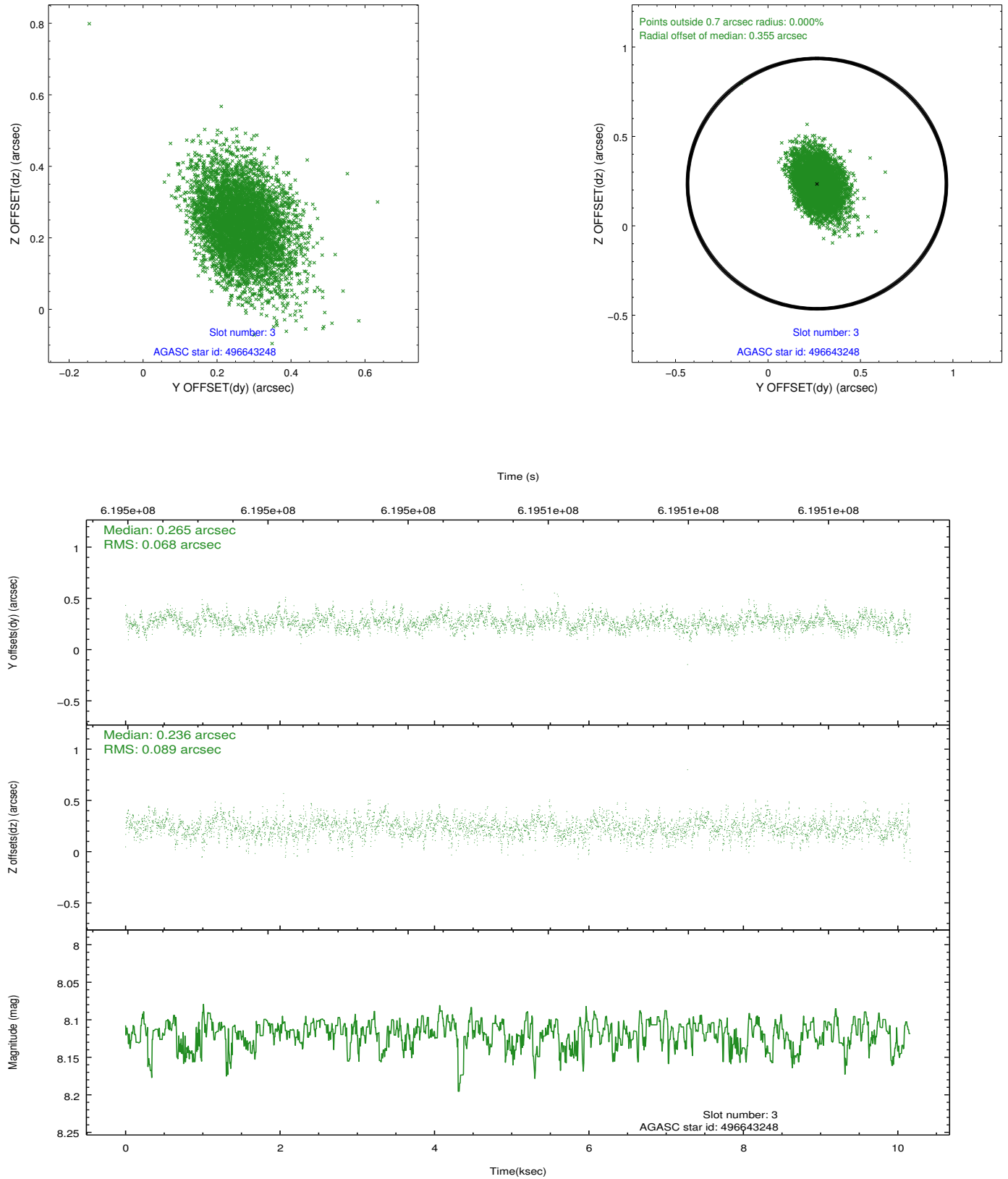


### Slot Statistics

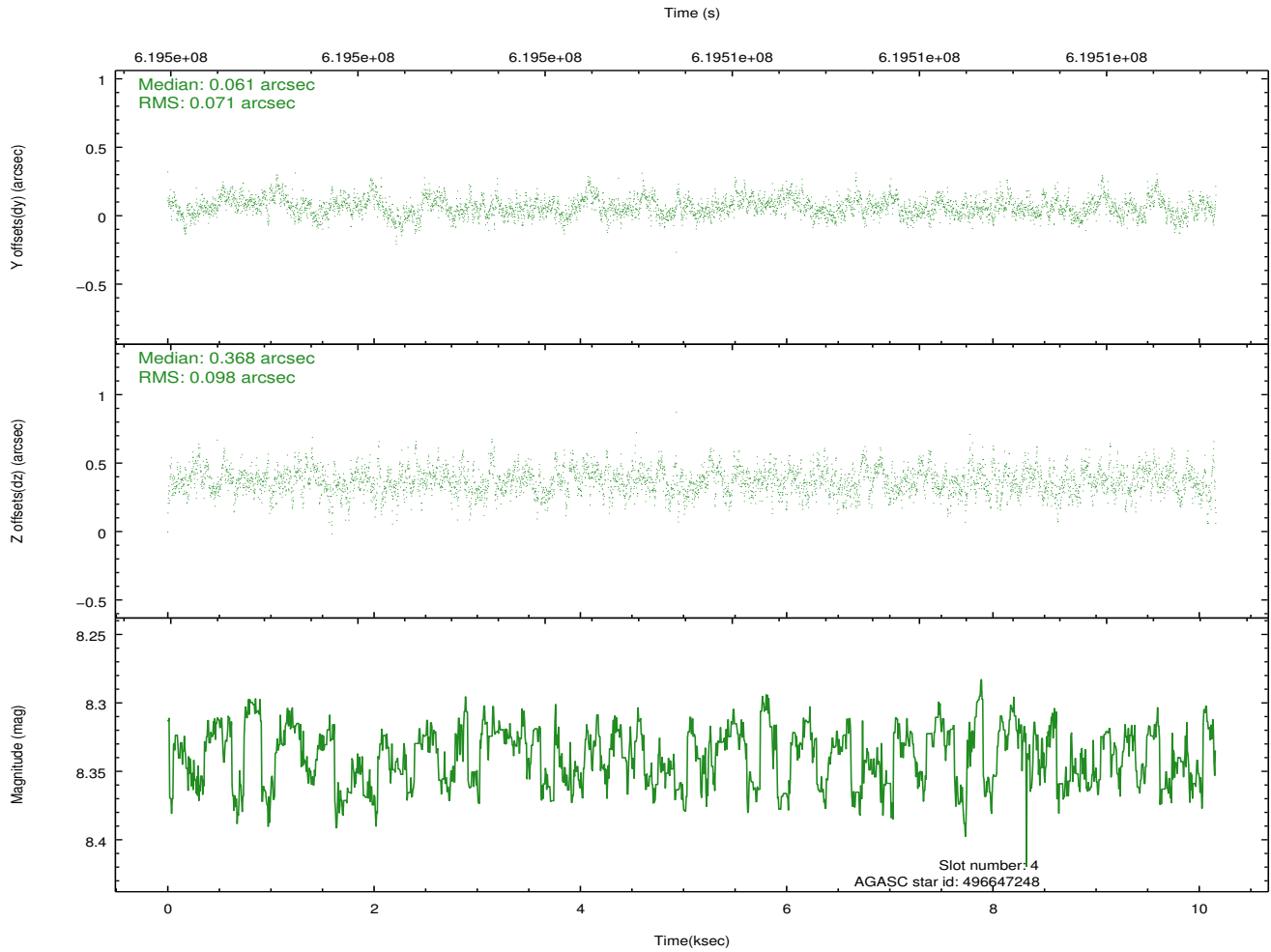
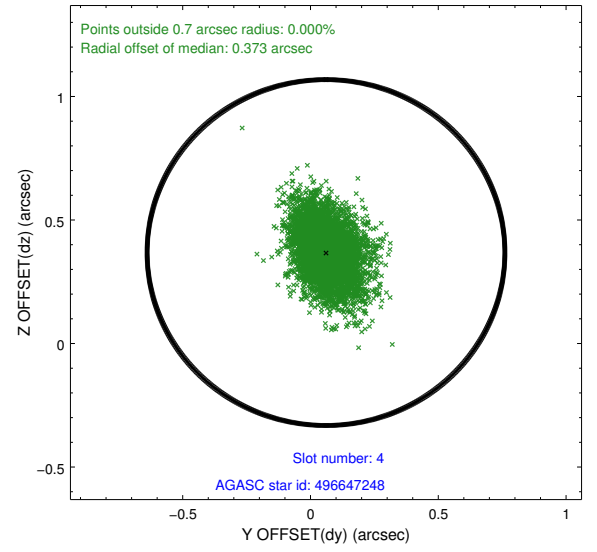
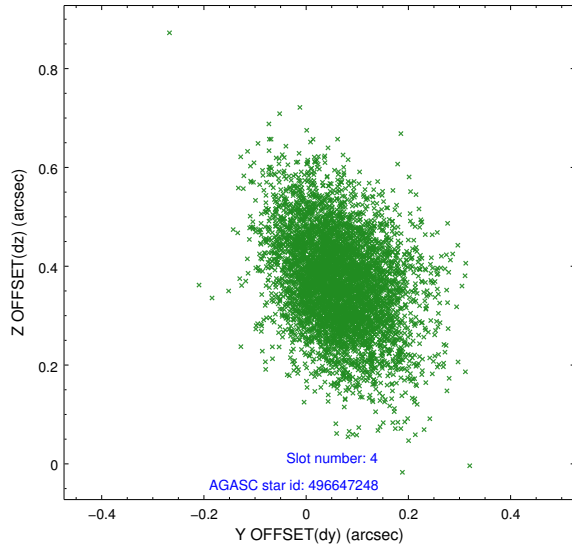
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	2479	-0.194	-0.123	0.010	0.016	0.000000	0.000000	-771.40	-1744.50
1	FID		ACIS-S-4	7.07	2479	0.456	0.127	0.014	0.022	0.000000	0.000000	2142.28	163.69
2	FID		ACIS-S-5	7.07	2478	-0.292	0.005	0.008	0.013	0.000000	0.000000	-1823.68	157.83
3	GUIDE	used	496643248	8.12	4956	0.265	0.236	0.116	0.201	110.920928	57.577203	-1324.99	-433.85
4	GUIDE	used	496647248	8.34	4954	0.061	0.368	0.123	0.215	112.147776	57.659321	314.88	-2164.08
5	GUIDE	used	497170216	9.57	4878	-0.263	-0.093	0.259	0.394	111.623561	58.338341	1679.90	96.21
6	GUIDE	used	497170448	8.86	4954	-0.207	-0.241	0.162	0.285	111.293308	58.320261	1258.54	561.25
7	GUIDE	used	496648968	9.47	4954	0.116	-0.261	0.221	0.344	110.122596	57.760130	-1679.77	1199.87

## 2.4 Star Slots

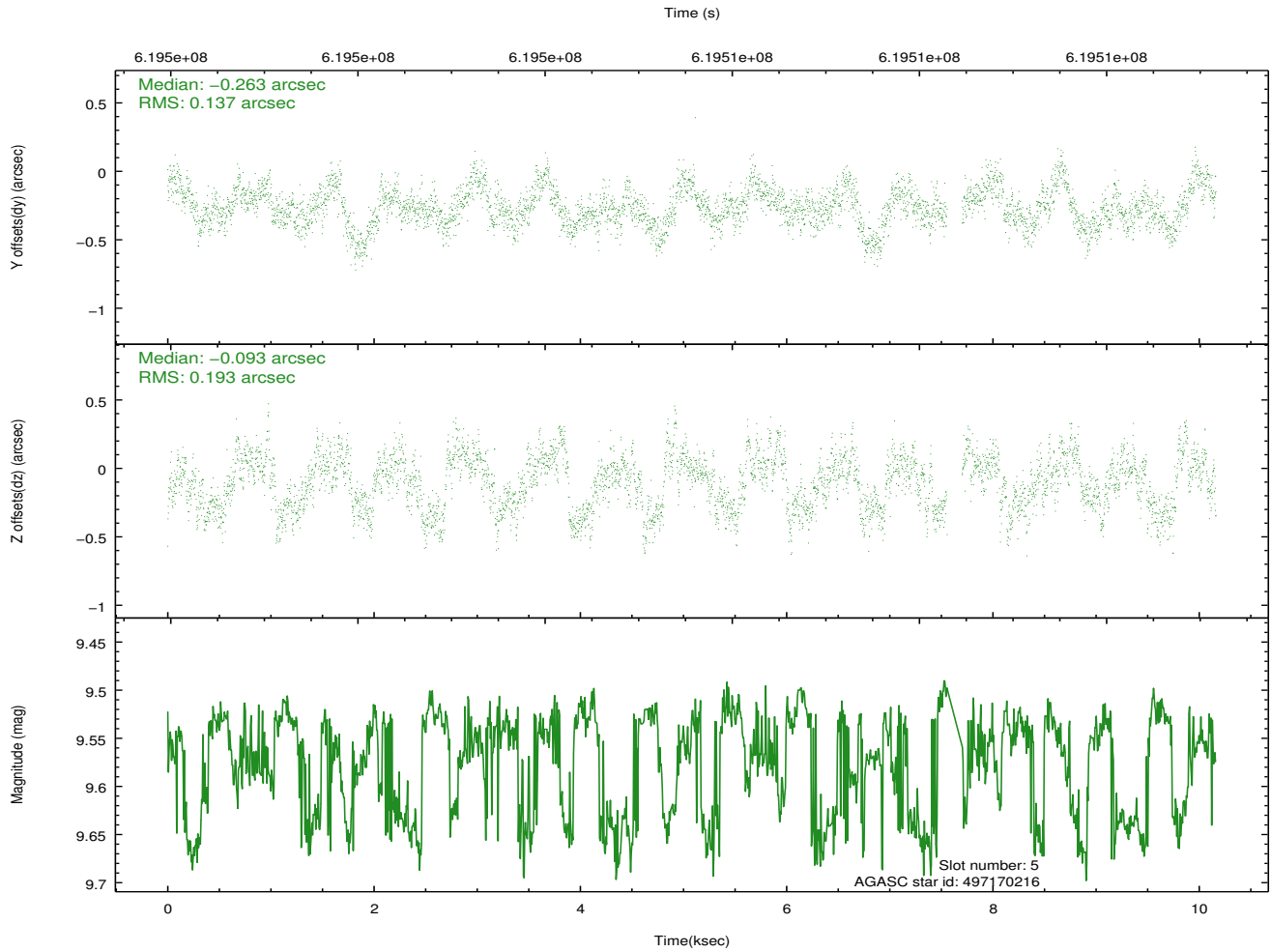
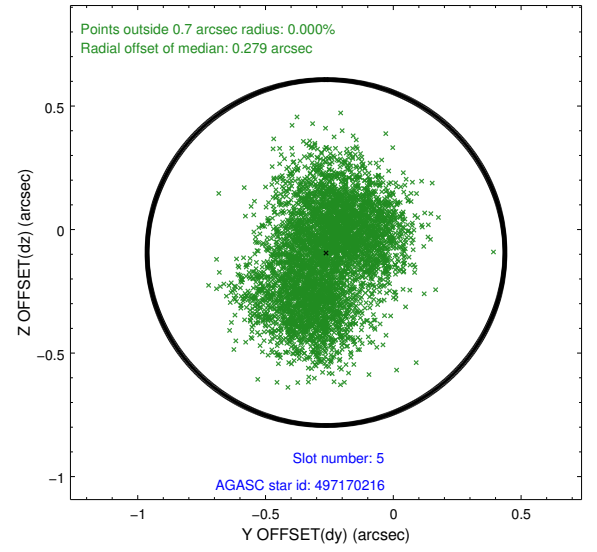
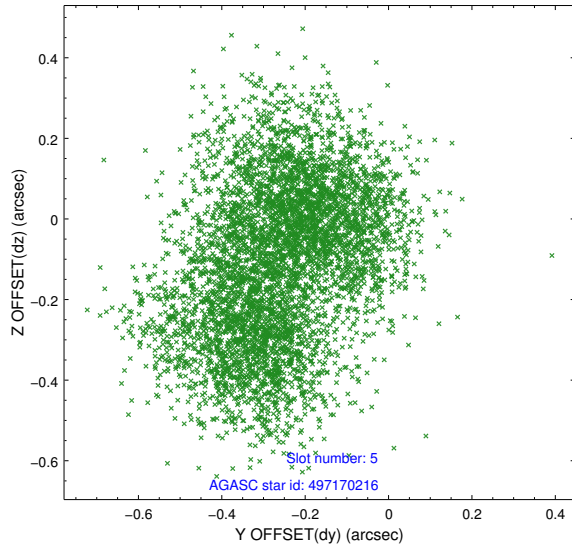
### 2.4.1 Slot 3



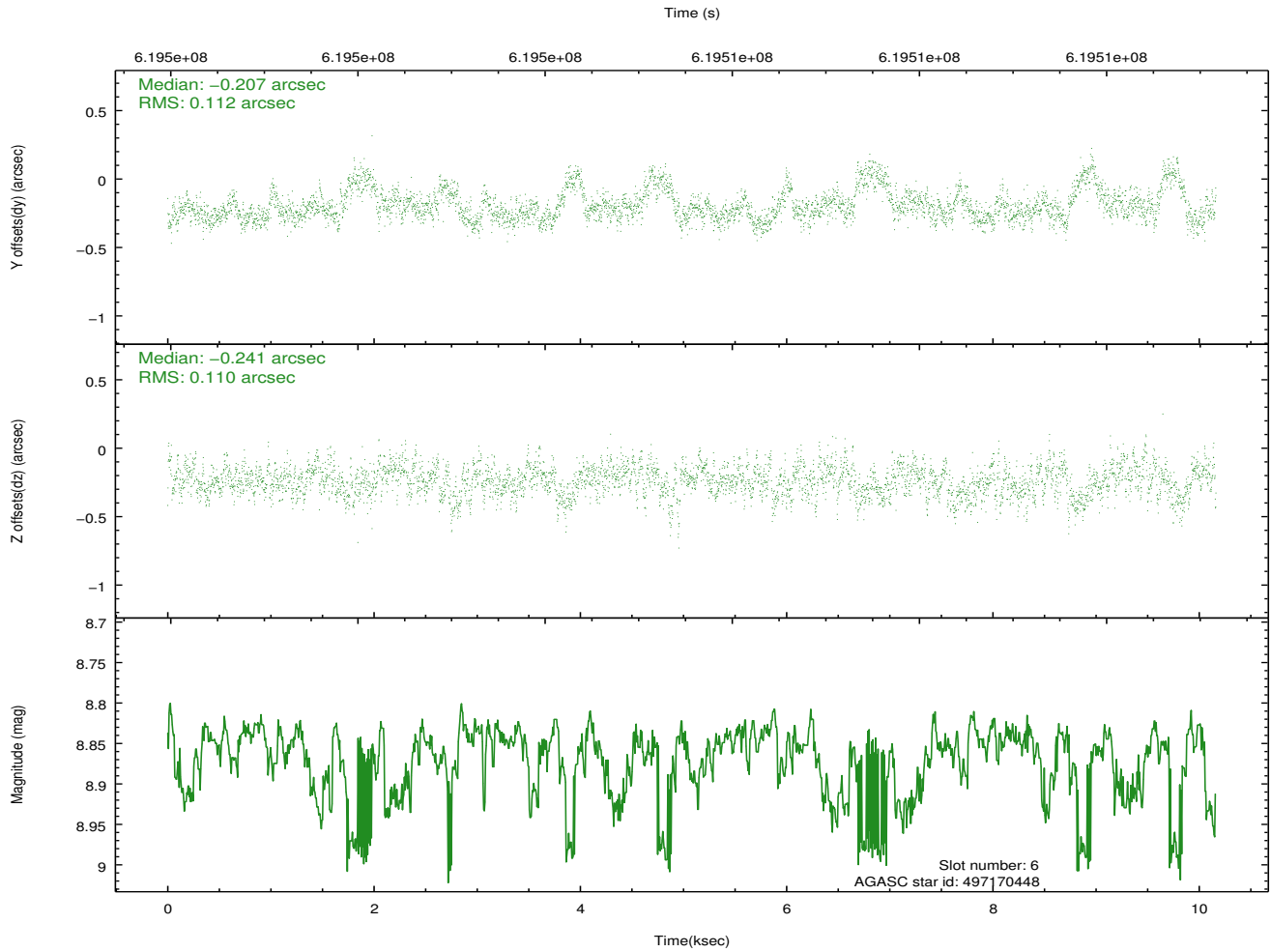
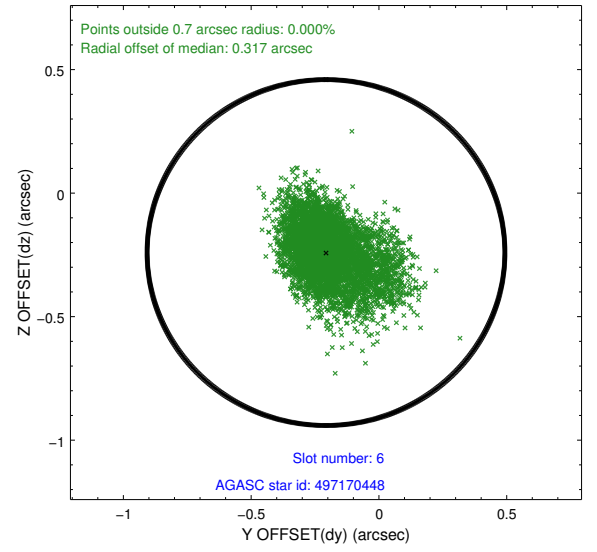
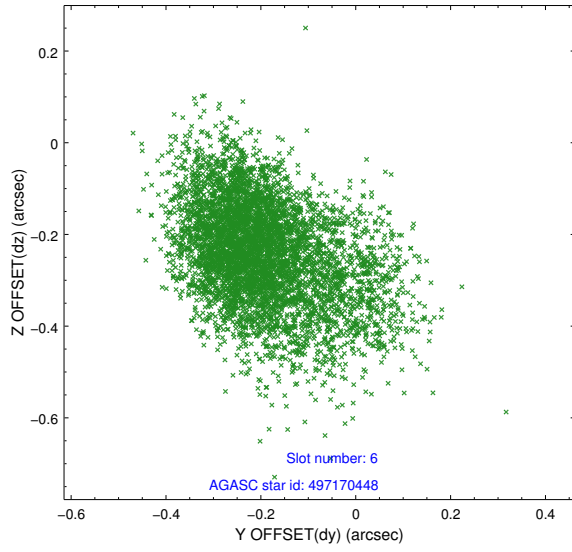
## 2.4.2 Slot 4



### 2.4.3 Slot 5

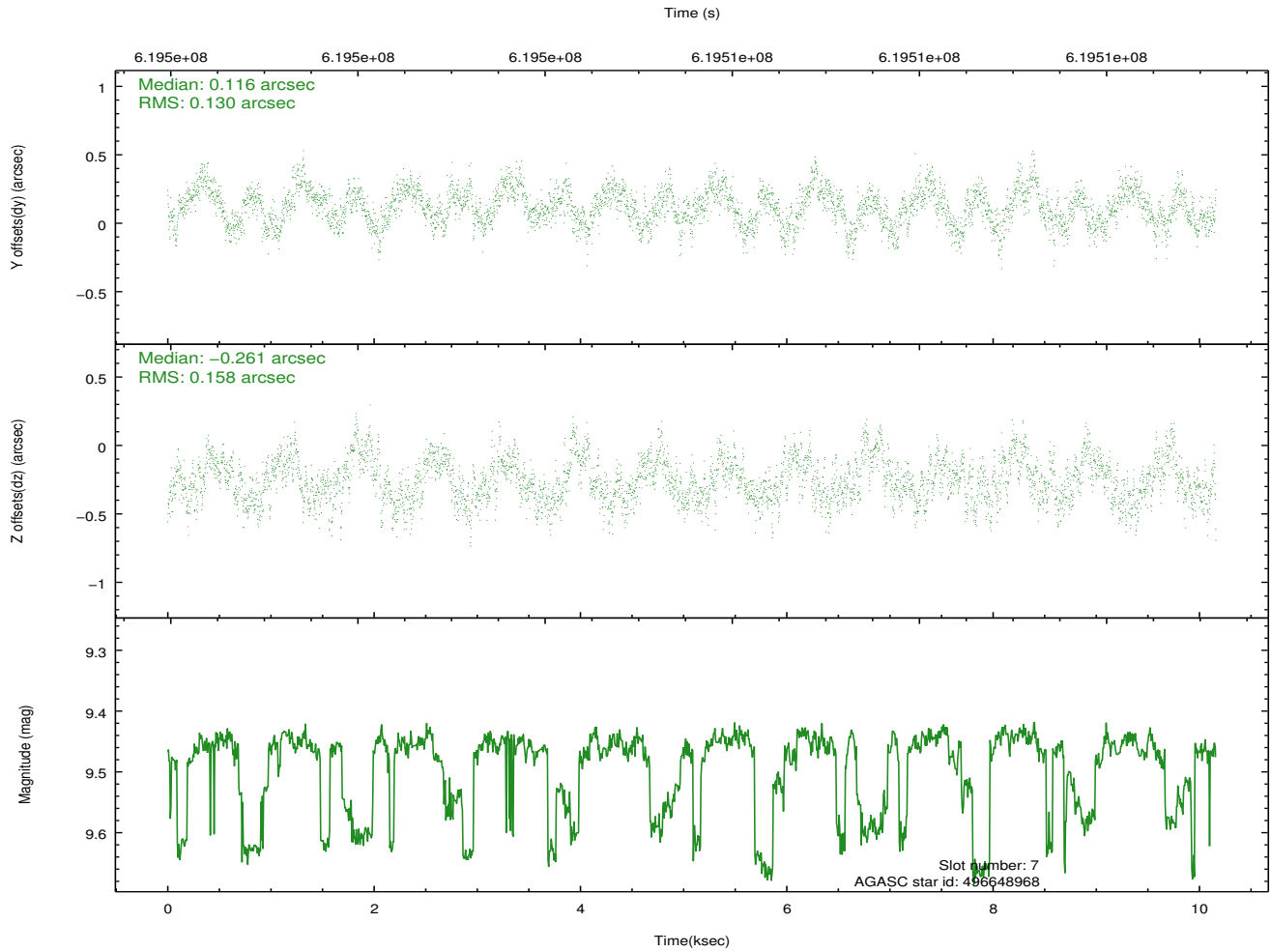
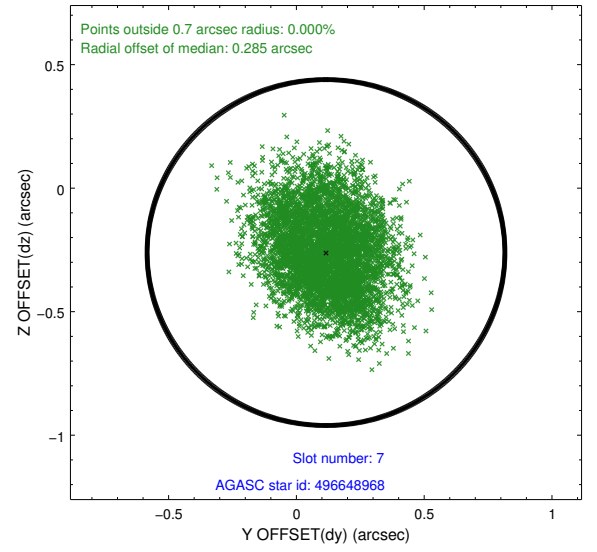
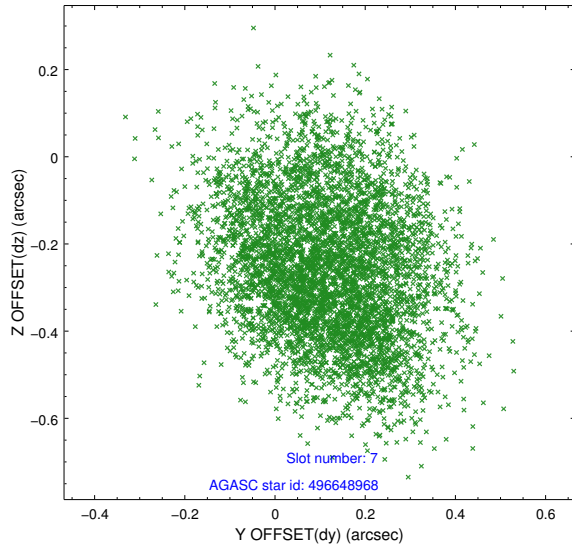


## 2.4.4 Slot 6



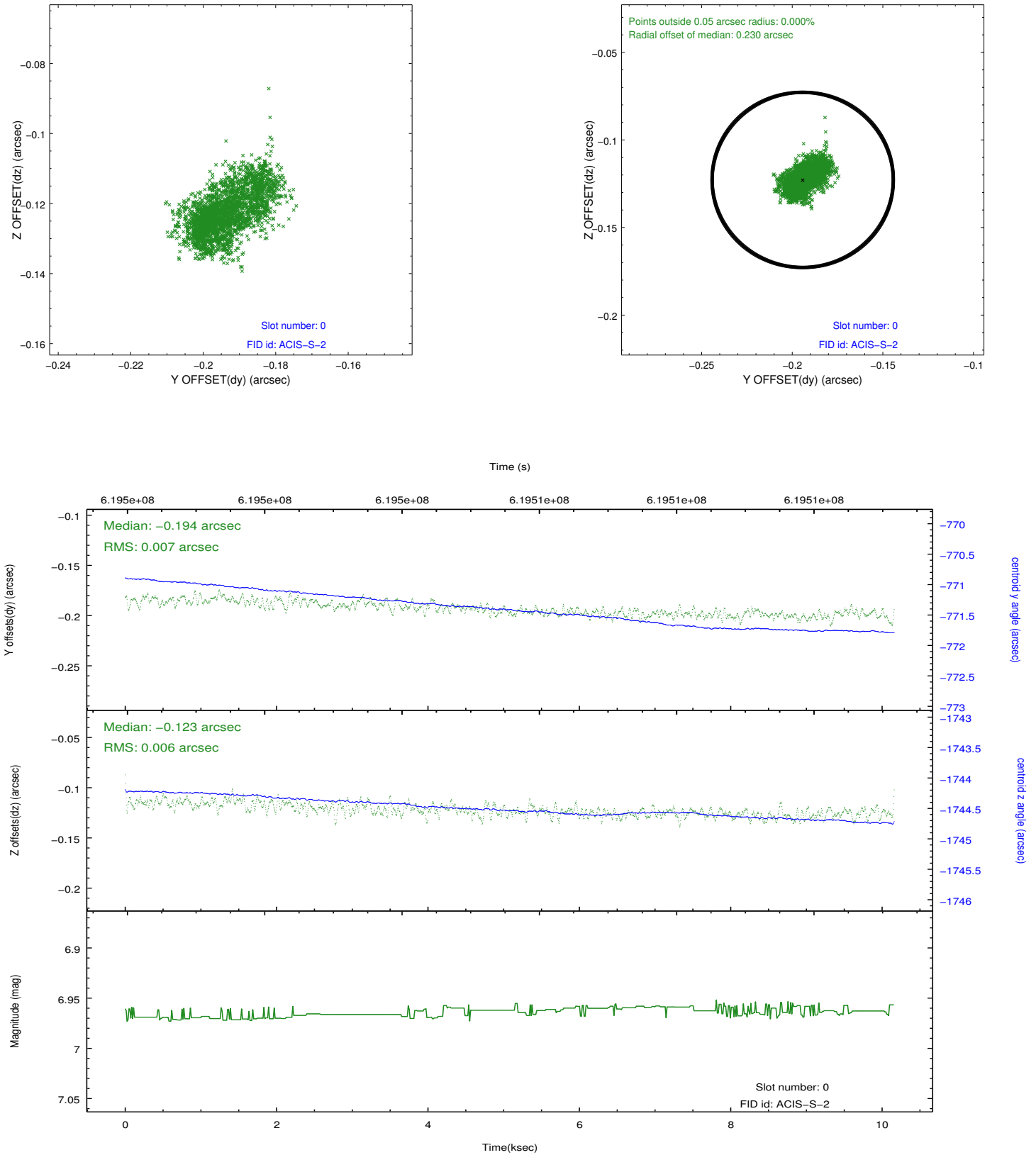


## 2.4.5 Slot 7

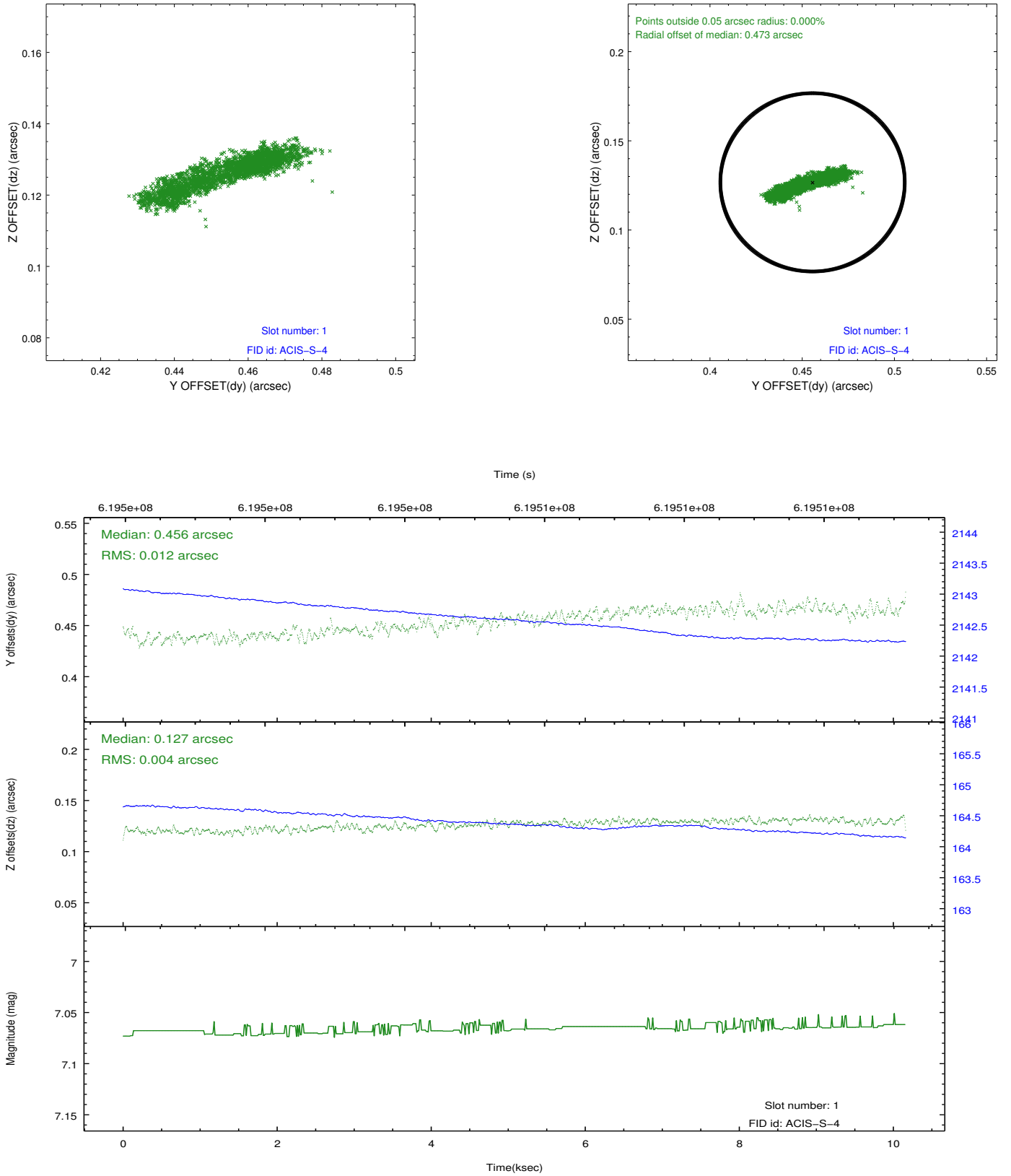


## 2.5 FID Slots

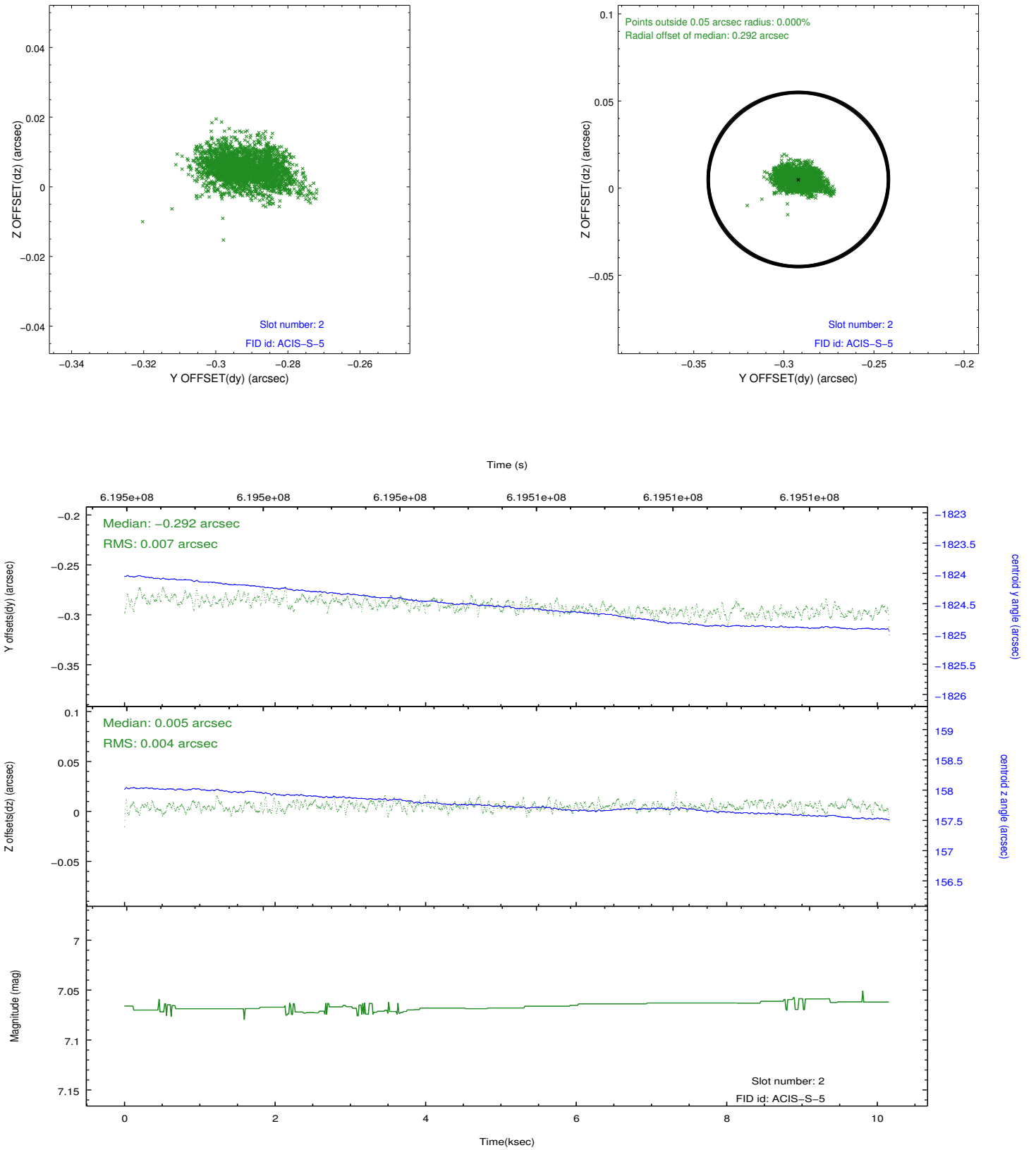
### 2.5.1 Slot 0



## 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)	2017.08.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.071900077581

## A.2 Comments

A spatial region of the original bias map for CCD = 2 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 ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (111.61129,57.90381), (111.60652,57.90565), (111.52990,57.85000), (111.53375,57.84749).