

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 22252 - L2 Version 1  
Chandra X-Ray Center

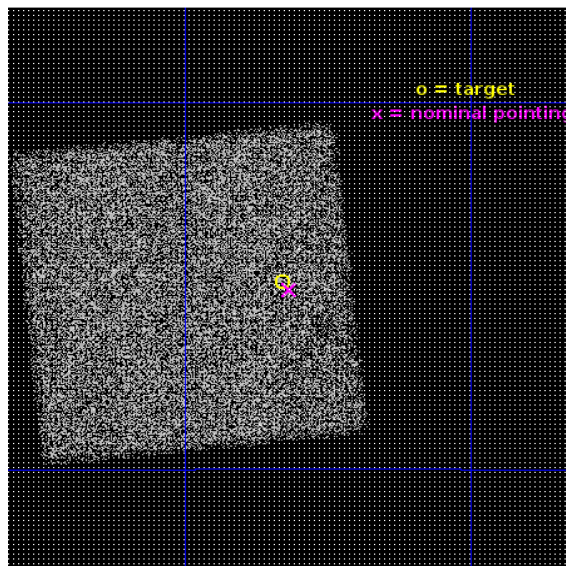
L2 Processing Date : Jun 3 2019

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# 1 Front

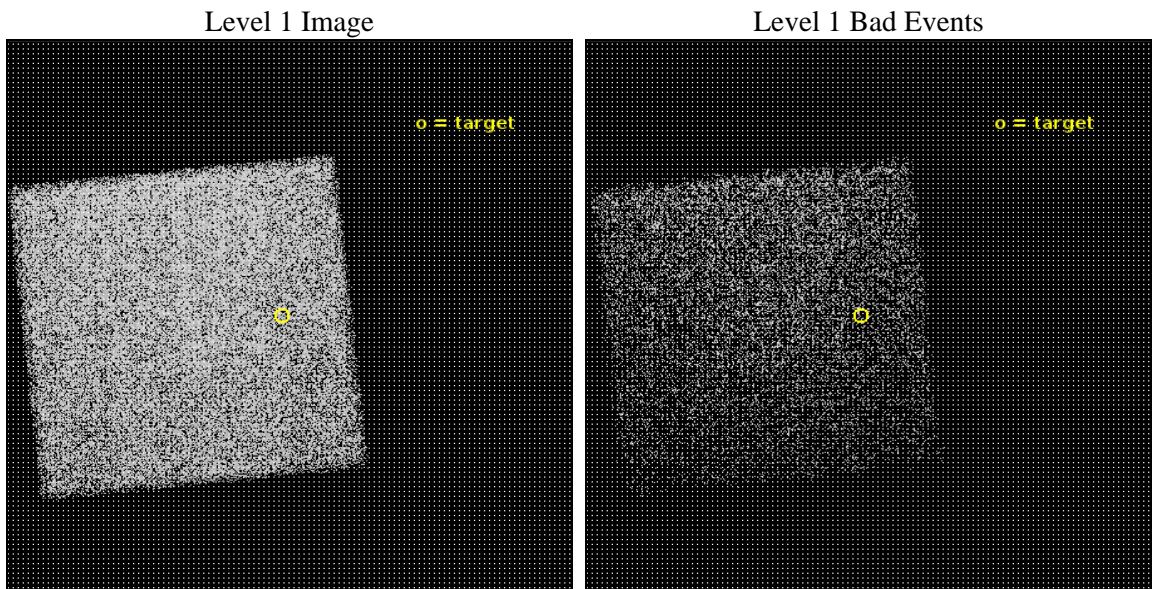
seq_num	703903	Sequence number
obs_id	22252	Observation id
title	Chandra-NuSTAR synergy in the NuSTAR serendipitous survey	Proposal
observer	Dr David Alexander	Principal investigator
object	2FGL_J1653d6m0159_s3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	253.457214	Observer's specified target RA [deg]
dec_targ	-1.914917	Observer's specified target Dec [deg]
ra_nom	253.45405321286	Nominal RA [deg]
dec_nom	-1.9185565213886	Nominal Dec [deg]
roll_nom	174.03361791248	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10091.965699673	Sum of GTIs [s]
livetime	9955.7707557343	Livetime [s]
ontime7	10091.965699673	Sum of GTIs [s]
l2events	41836	Number of level 2 events



## 2 OBI

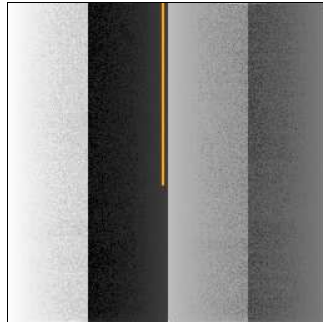
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	10091.965699673	Sum of GTIs [s]
caldsver	4.8.3	&#160	ontime7	10091.965699673	Sum of GTIs [s]
date	2019-06-04T00:35:59	Date and time of file creation	l1events	97326	Number of level 1 events
revision	1	Processing version of data			

### 2.1.4 Events

	<b>ccd 7</b>
level 1 events	97326
rejected events	54382
rejected %	55%

	<b>ccd 7</b>
grade 0 events	3673
	3%
grade 1 events	156
	0%
grade 2 events	9274
	9%
grade 3 events	3408
	3%
grade 4 events	3361
	3%
grade 5 events	9724
	9%
grade 6 events	23244
	23%
grade 7 events	44486
	45%

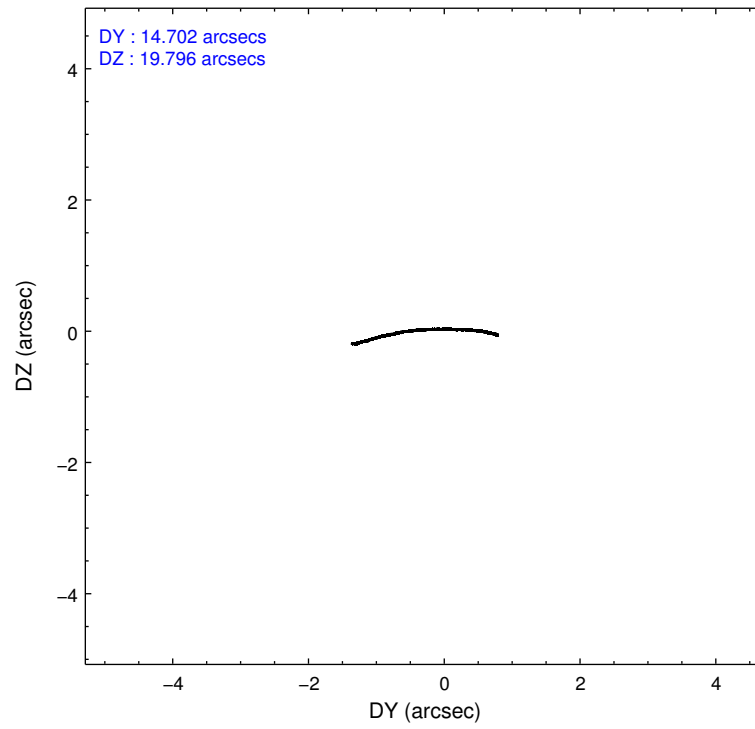
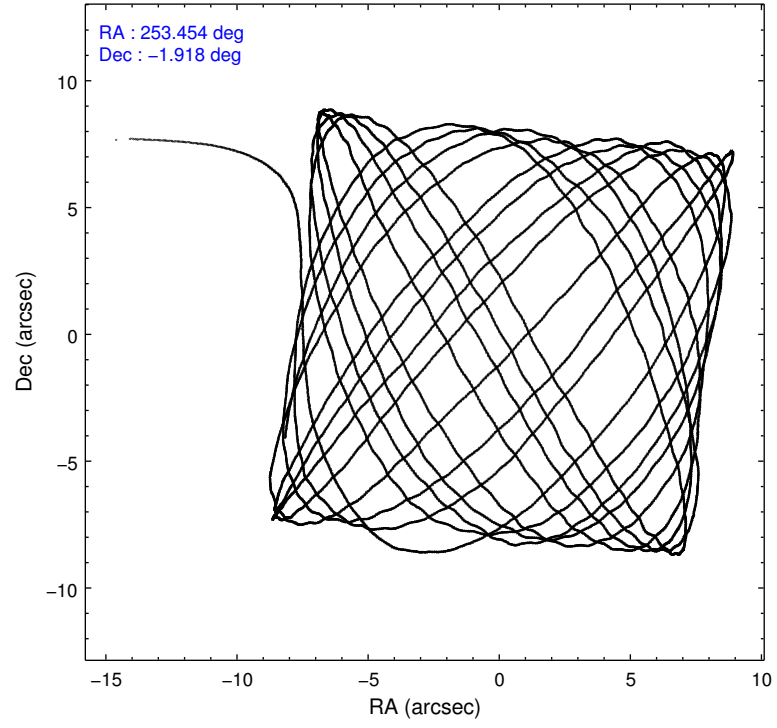


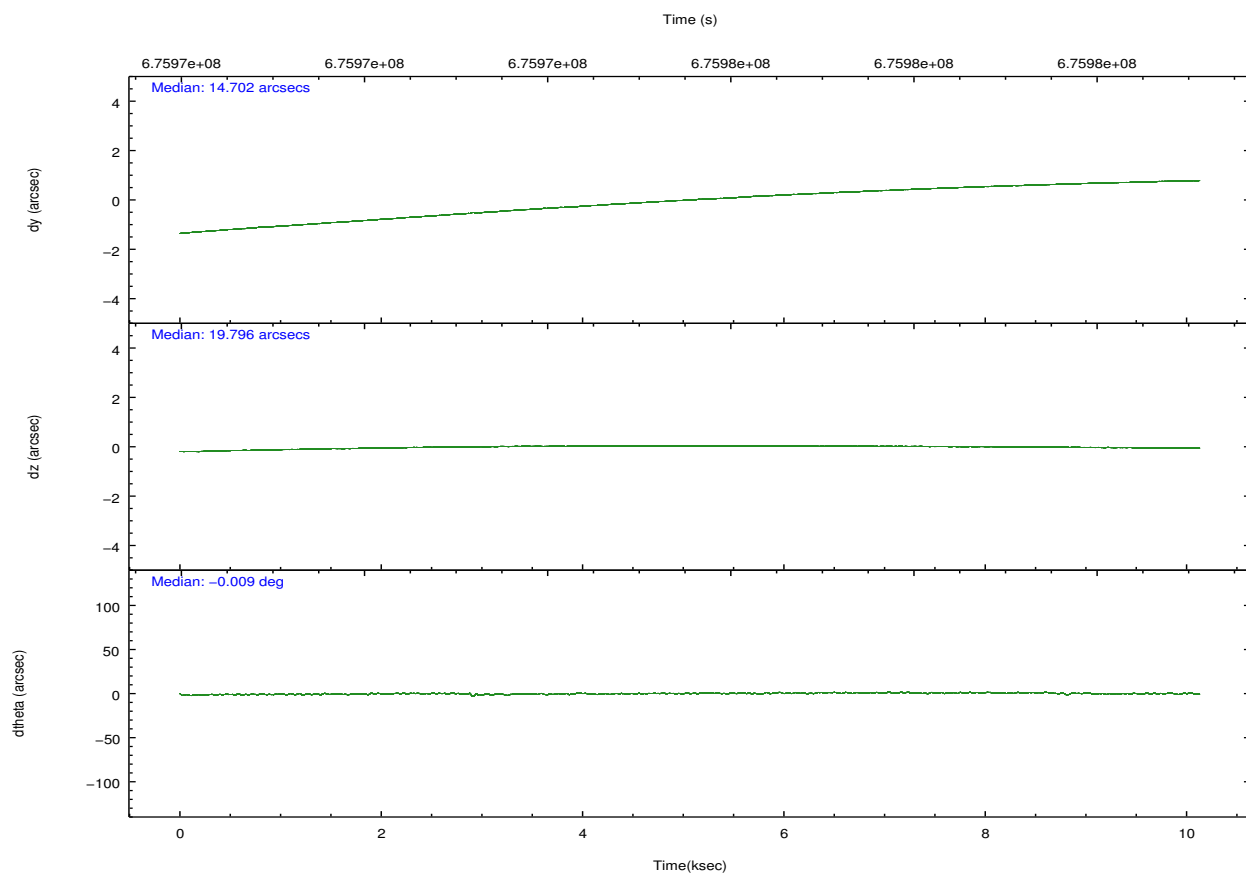
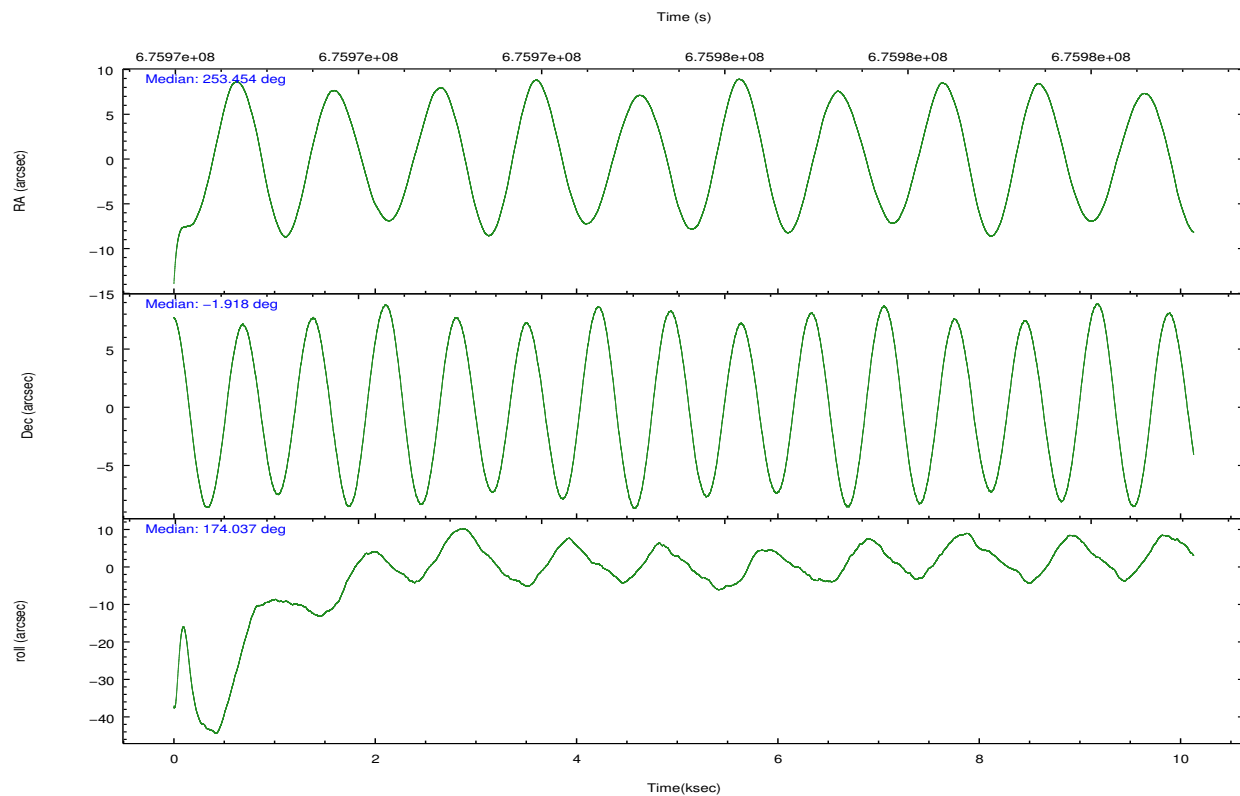
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-7	ACIS-7
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	253.479014	253.4540532128561
[deg] Pointing Dec	-1.907061	-1.918556521388617
[deg] Pointing Roll	173.877847	174.0336179124756
[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)	675970633.184000	675969586.3691
Observation start date	2019-06-03T17:36:04	2019-06-03T17:19:46
[s] Observation end time (MET)	675980633.184000	675982118.5323499
Observation end date	2019-06-03T20:22:44	2019-06-03T20:48:38
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

## 2.3 Aspect



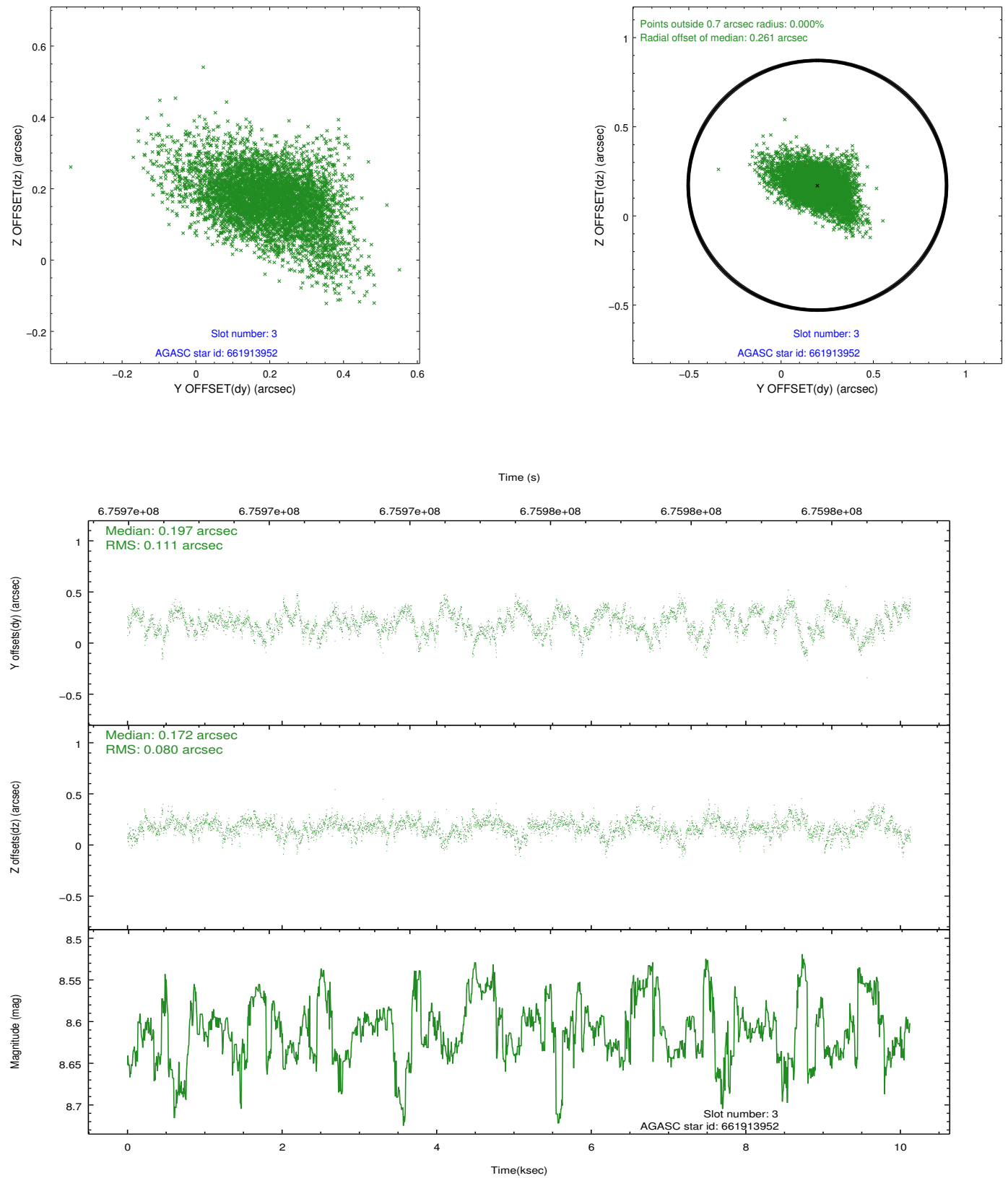


Slot Statistics

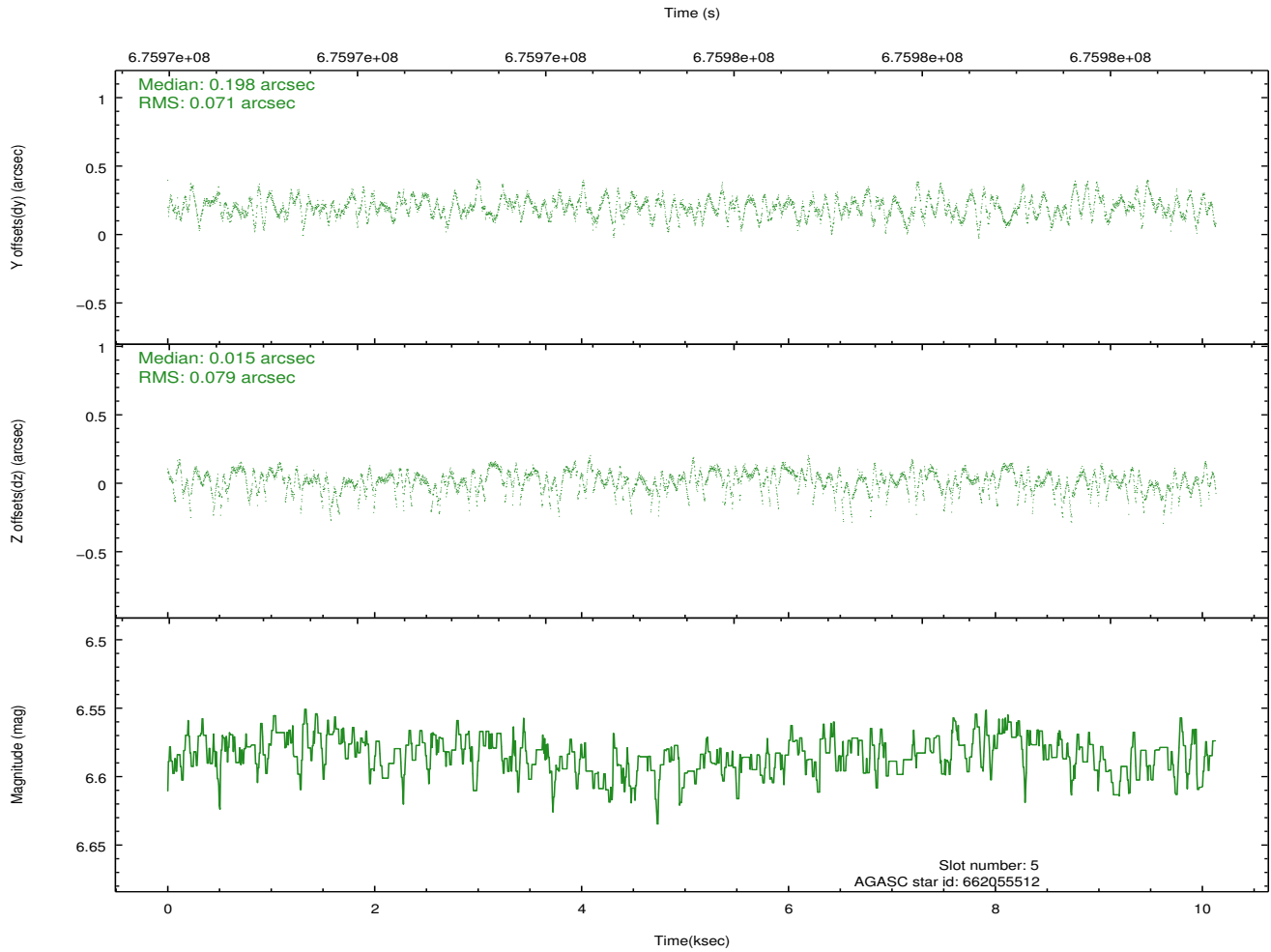
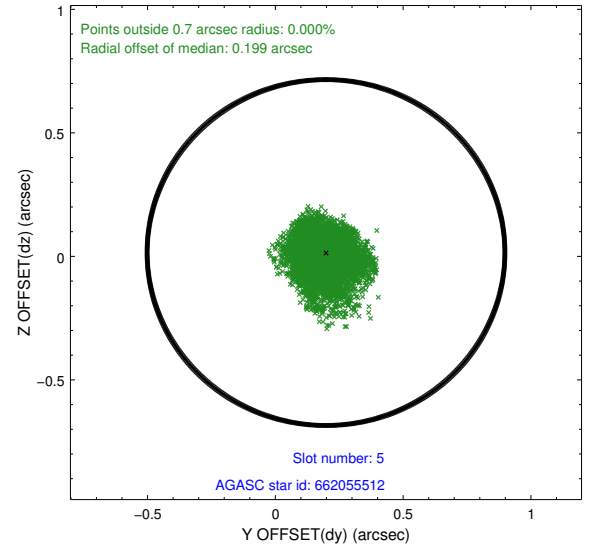
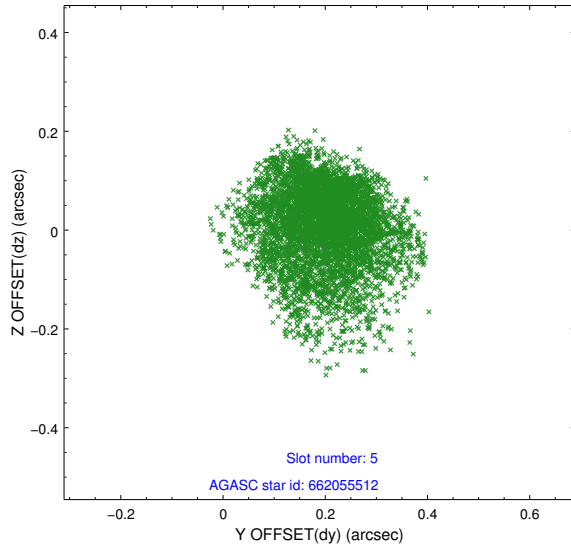
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.08	2471	1.000	0.184	-0.078	0.011	0.019	0.000000	0.000000	928.77	-1736
1	FID		ACIS-S-5	7.07	2471	1.000	-0.513	0.055	0.012	0.024	0.000000	0.000000	-1820.75	160
2	FID		ACIS-S-6	7.24	2471	1.000	0.309	0.034	0.012	0.031	0.000000	0.000000	393.72	804
3	GUIDE	used	661913952	8.61	4938	1.000	0.197	0.172	0.139	0.251	253.032008	-1.369657	1806.50	-1751
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	662055512	6.58	4942	1.000	0.198	0.015	0.112	0.185	253.544192	-1.612306	-119.60	-1078
6	GUIDE	used	662438264	8.54	4939	1.000	-0.421	-0.342	0.093	0.153	252.881677	-1.945963	2121.37	368
7	GUIDE	used	662582488	8.99	4935	1.000	0.025	0.166	0.135	0.203	253.965777	-1.903271	-1739.24	-198

## 2.4 Star Slots

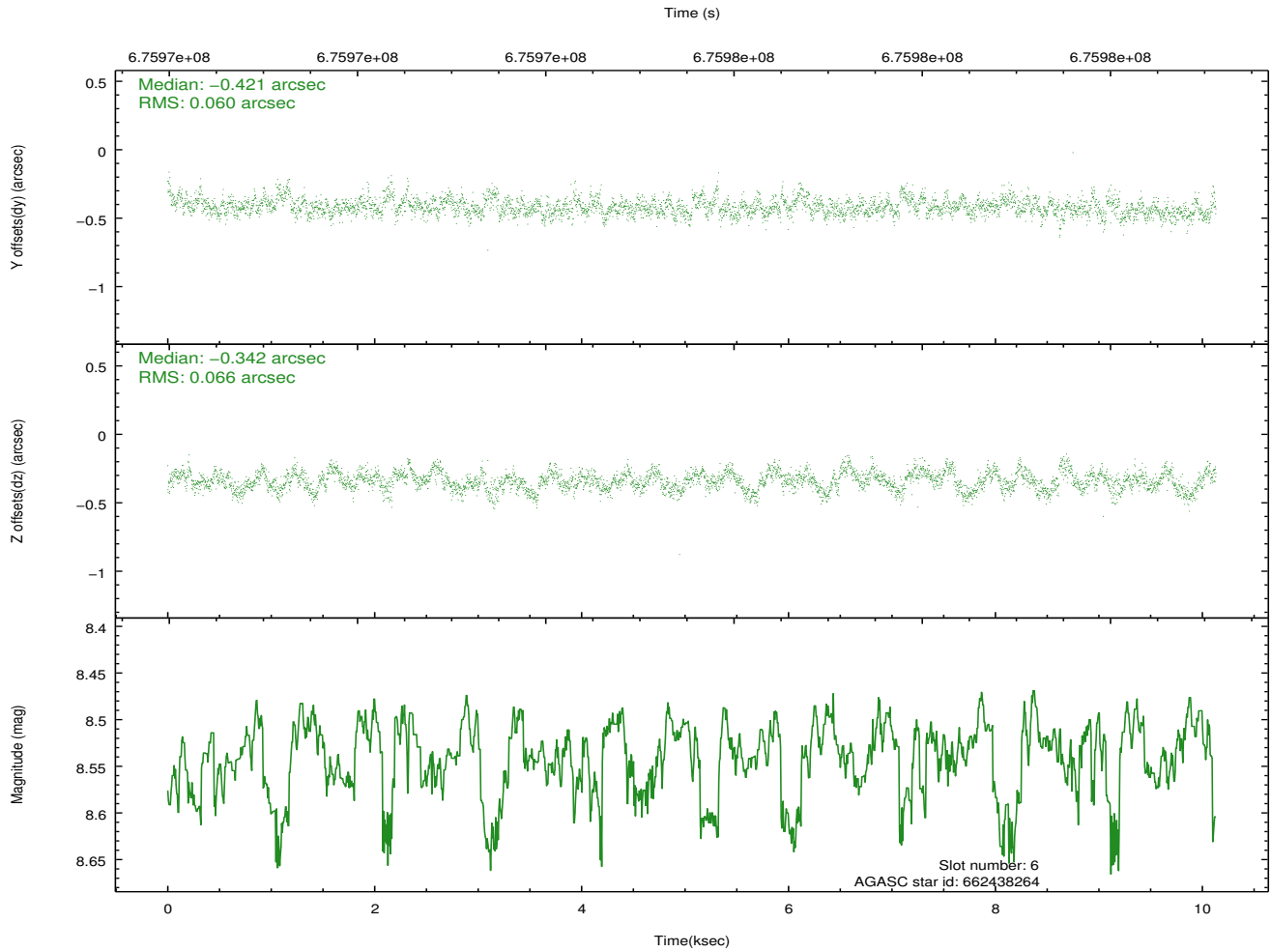
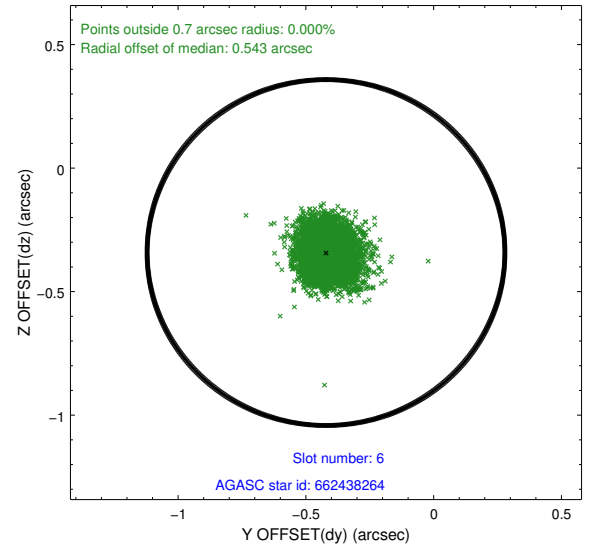
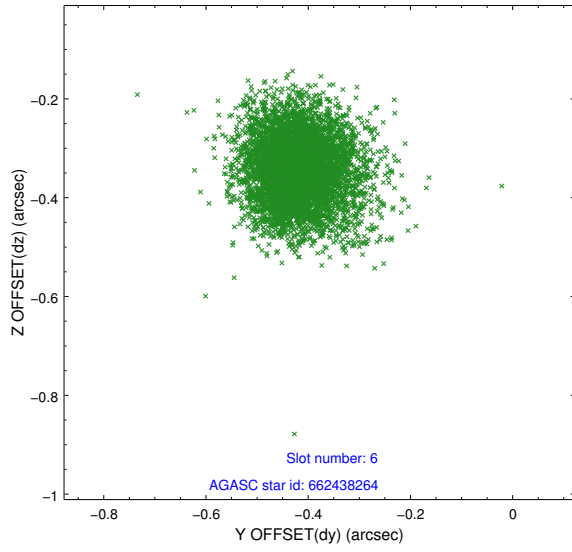
### 2.4.1 Slot 3



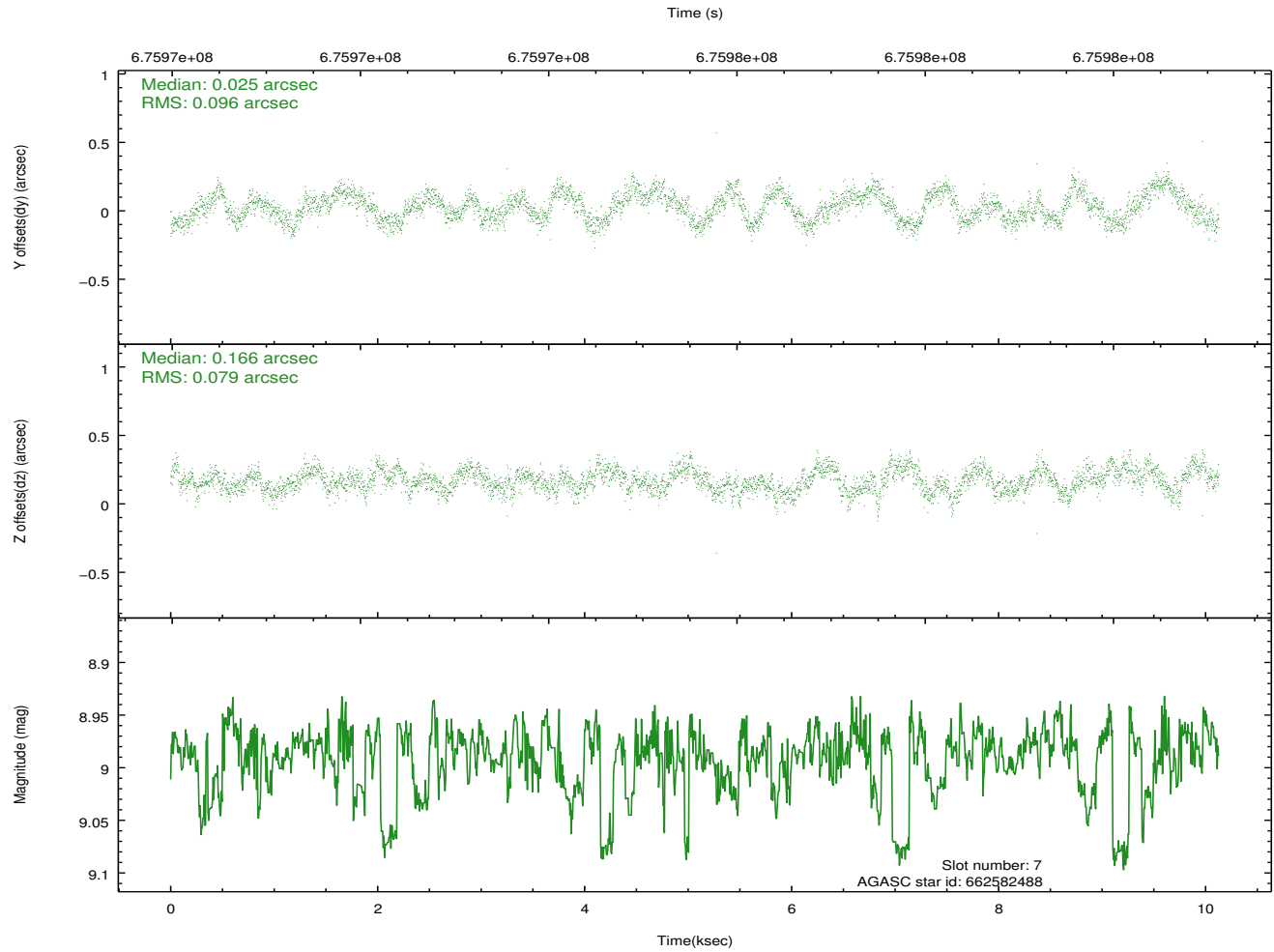
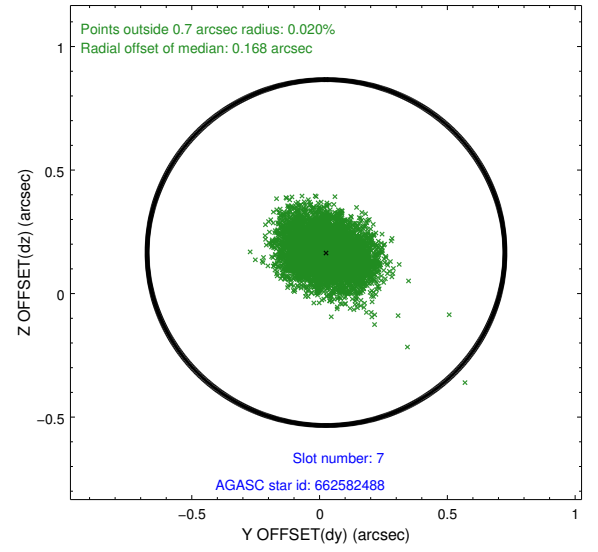
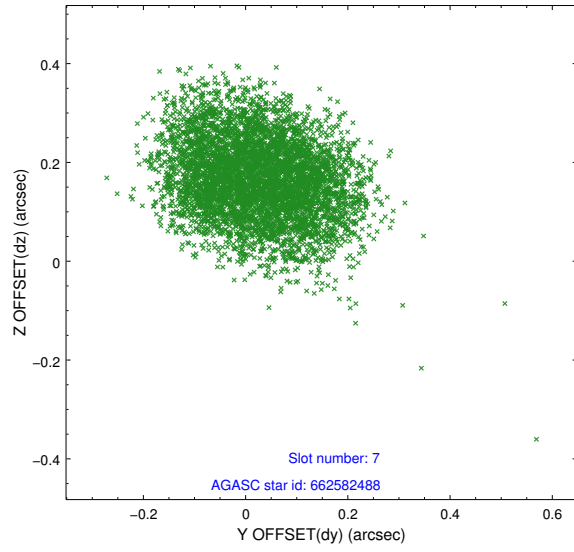
## 2.4.2 Slot 5



### 2.4.3 Slot 6



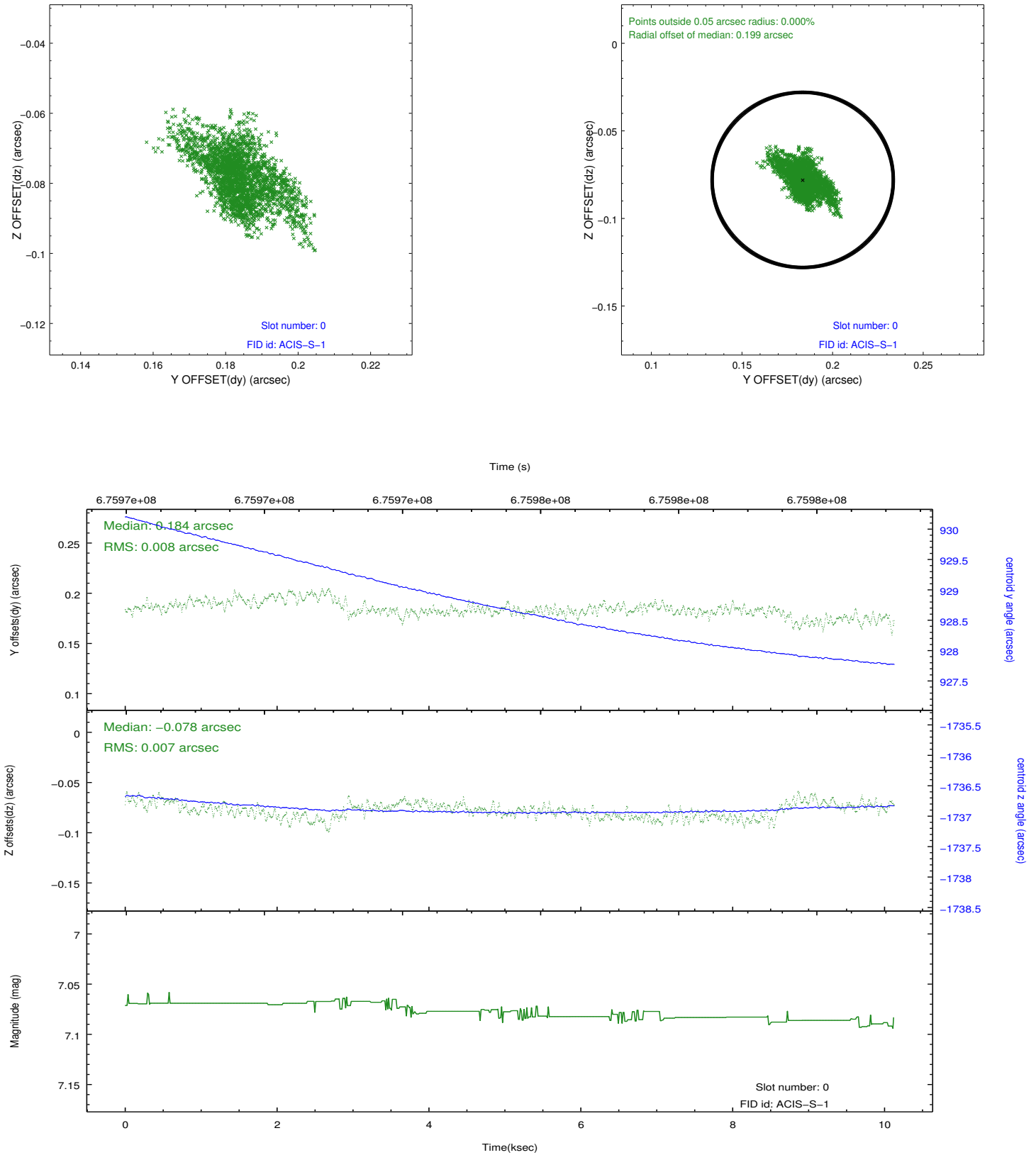
## 2.4.4 Slot 7



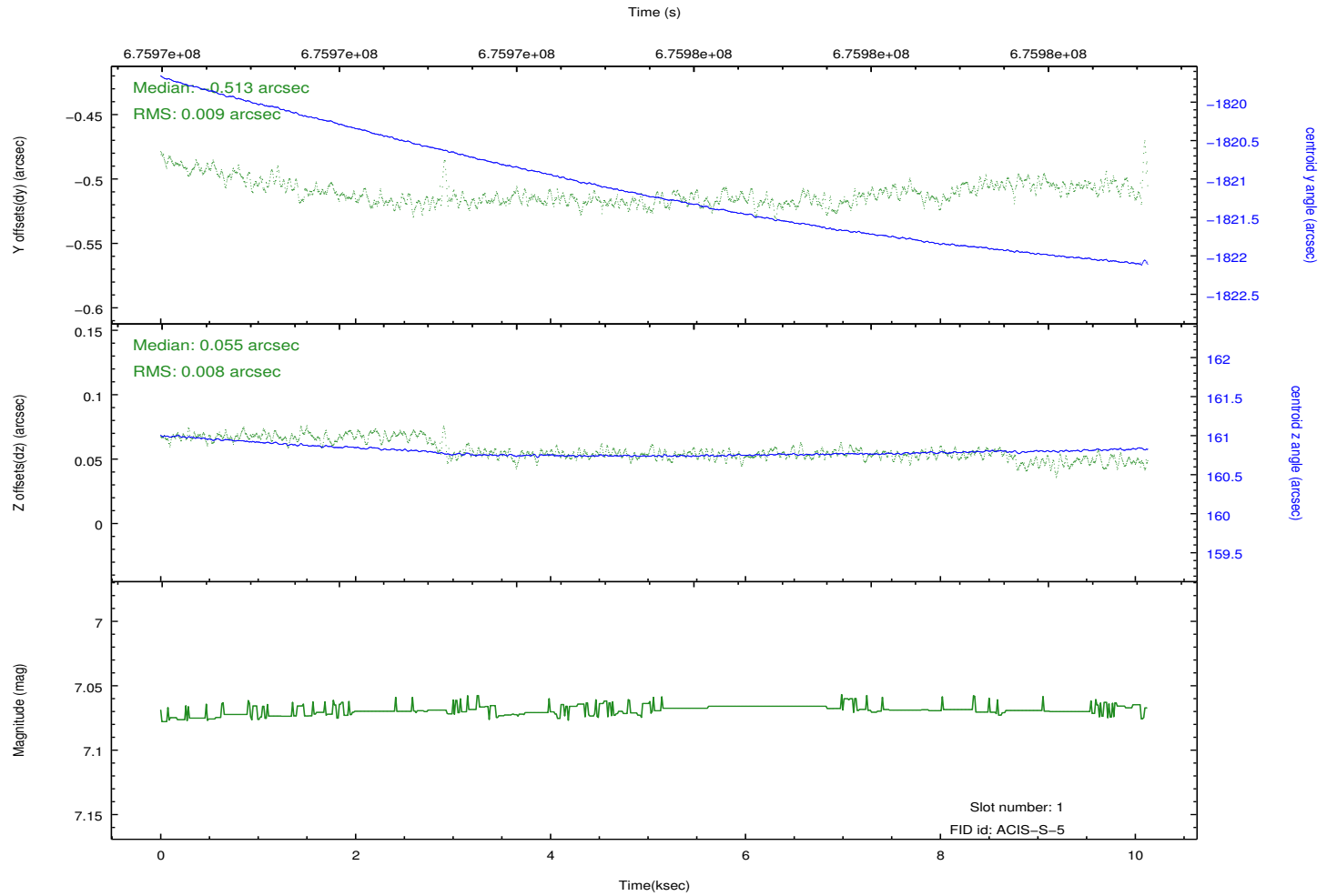
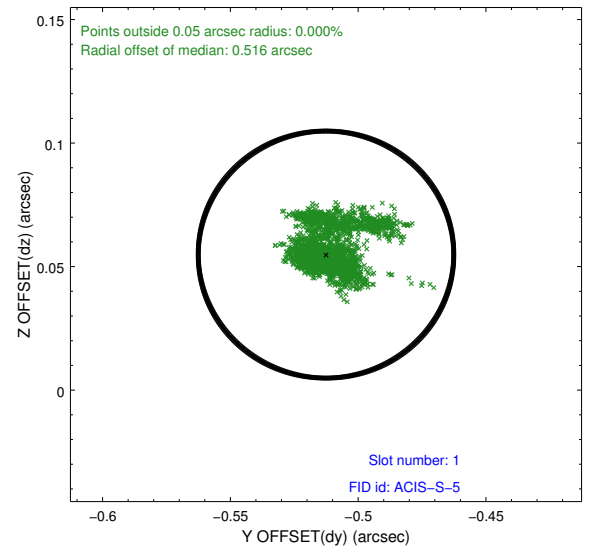
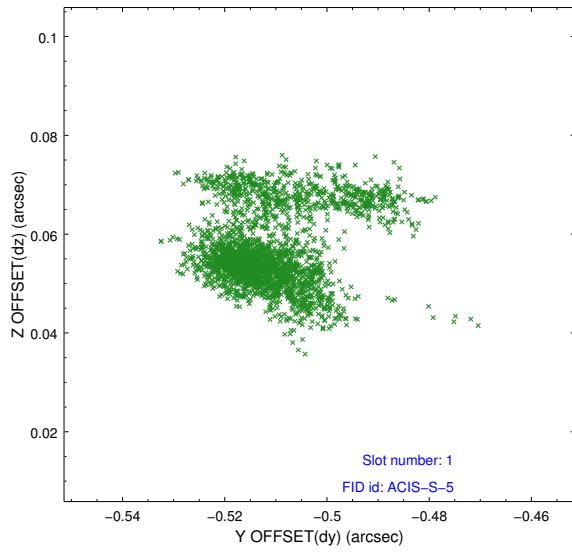


## 2.5 FID Slots

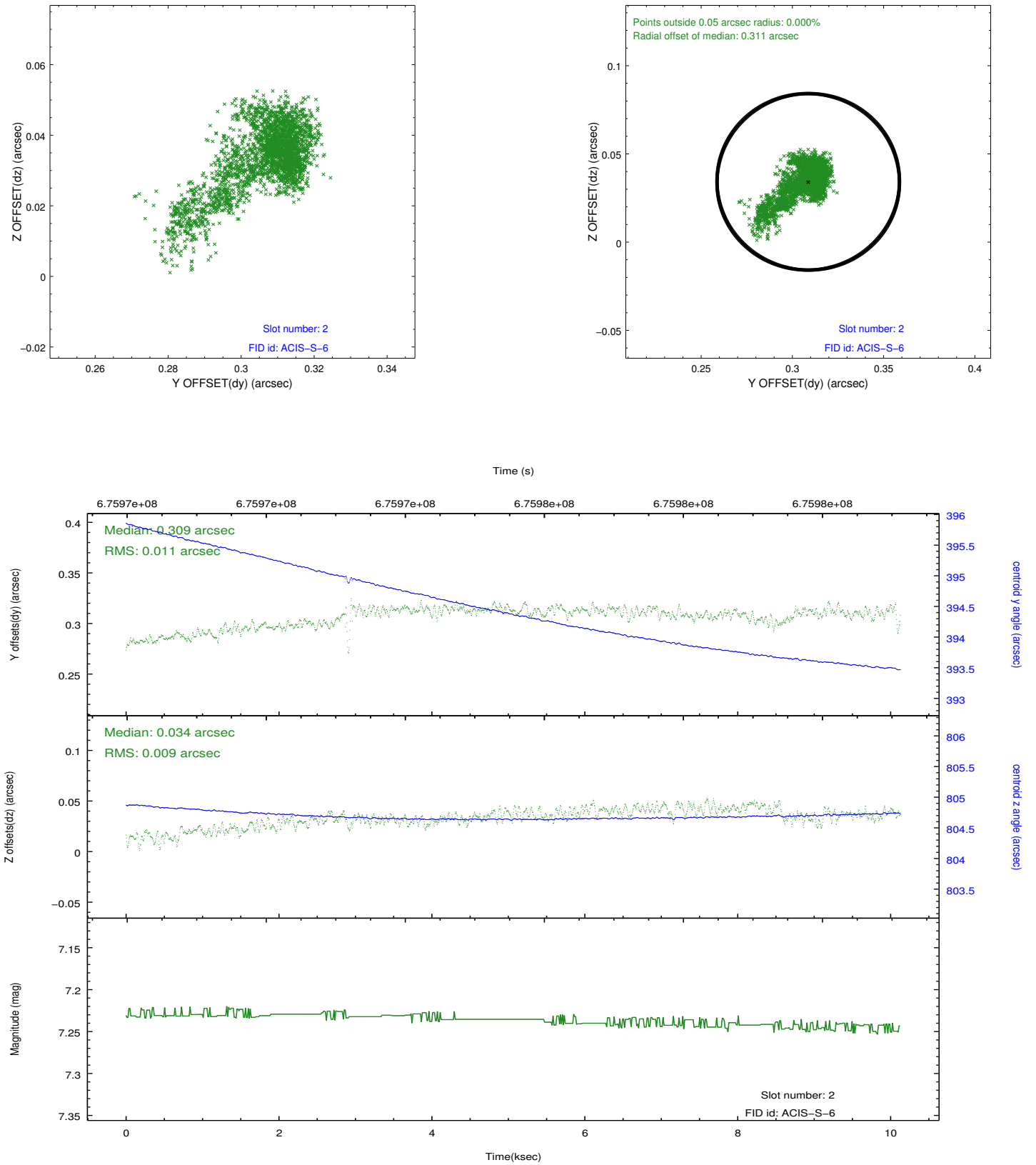
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.06.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.091965699673

### A.2 Comments

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.