

# V&V Reference Report

## L2 ASCDS Version : 10.8

Observation 21761 - L2 Version 1  
Chandra X-Ray Center

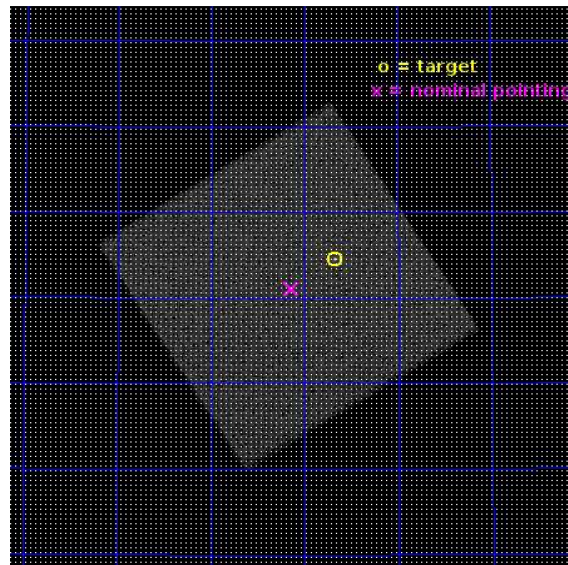
L2 Processing Date : Sep 4 2019

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Parameters . . . . .	4
2.1.3	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 7 . . . . .	12
2.5	FID Slots . . . . .	13
2.5.1	Slot 0 . . . . .	13
2.5.2	Slot 1 . . . . .	14
2.5.3	Slot 2 . . . . .	15
<b>A</b>	<b>Summary</b>	<b>16</b>
A.1	Status . . . . .	16
A.2	Comments . . . . .	16

# 1 Front

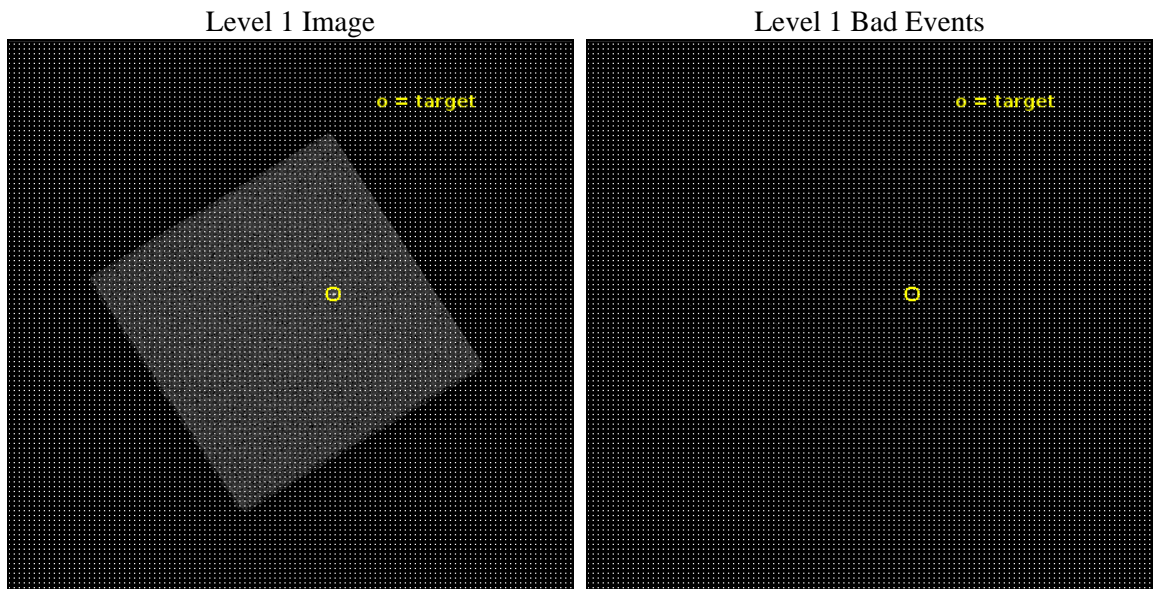
seq_num	291447	Sequence number
obs_id	21761	Observation id
title	AO-20 Calibration Observations to Monitor the Spatial Variations in the HRC-I Gain	Proposal title
observer	CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.169666	Observer's specified target RA [deg]
dec_targ	45.742509	Observer's specified target Dec [deg]
ra_nom	332.28534571303	Nominal RA [deg]
dec_nom	45.684759543169	Nominal Dec [deg]
roll_nom	192.80528520999	Nominal Roll [deg]
revision	1	Processing version of data
ontime	1191.0500717163	[s]
livetime	1174.1655167214	Ontime multiplied by DTCOR
l2events	148879	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	1000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	1191.0500717163	[s]
caldbver	4.8.4	&#160	l1events	276734	Number of level 1 events
date	2019-09-04T23:55:30	Date and time of file creation			
revision	1	Processing version of data			

### 2.1.3 Events

#### Level 1 Events

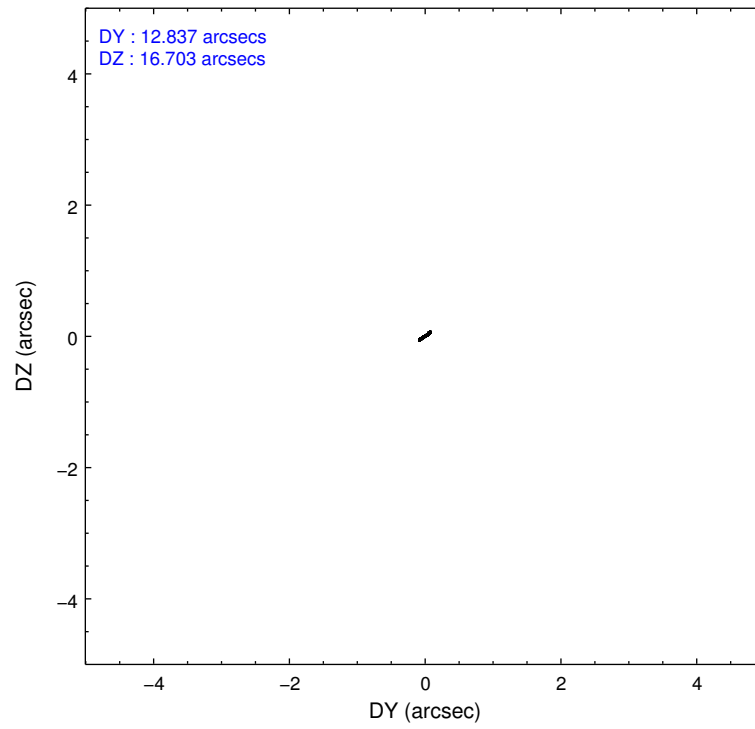
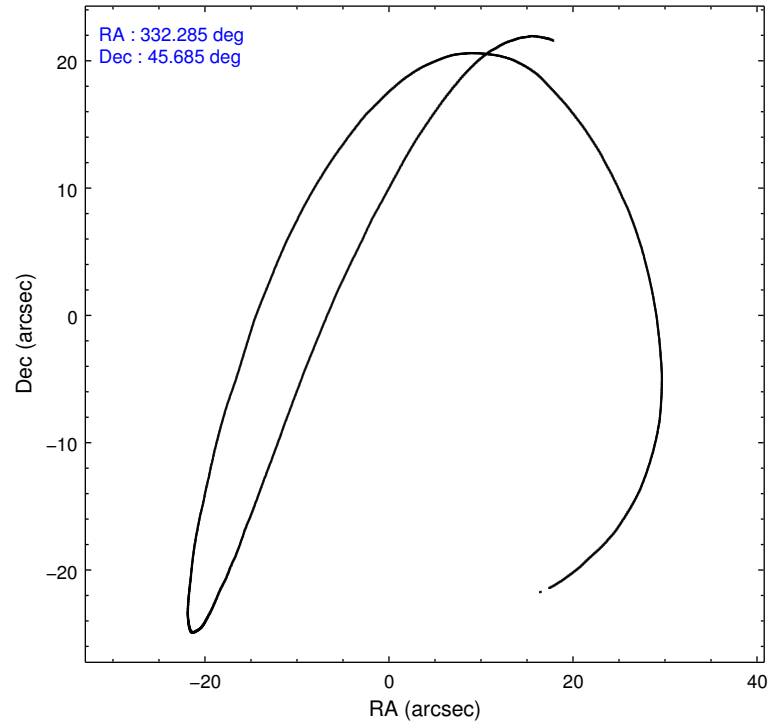
	<b>segment 0</b>
level 1 events	276734
rejected events	82607
rejected %	29%

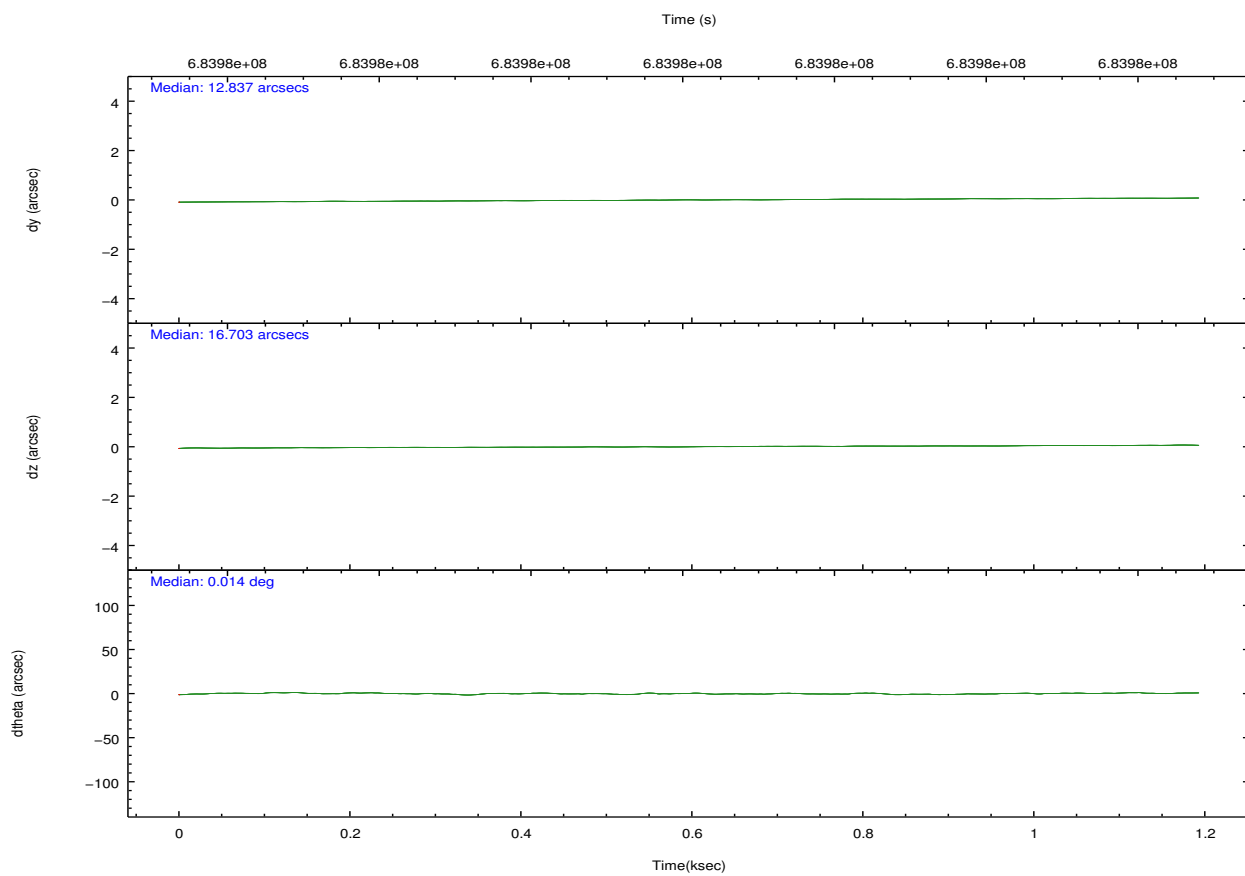
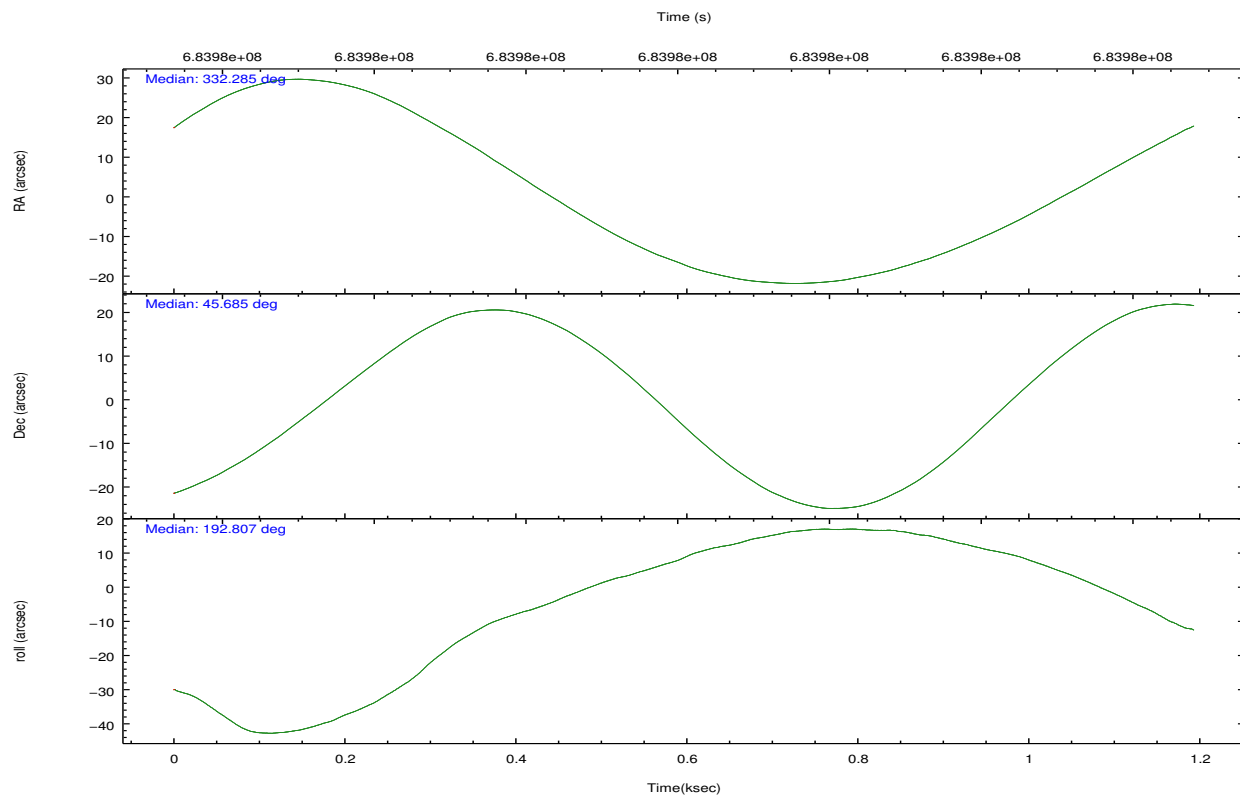
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	332.313024	332.2853457130285
[deg] Pointing Dec	45.703660	45.68475954316916
[deg] Pointing Roll	192.881031	192.8052852099933
[mm] SIM focus pos	-1.040293	-1.038866356238299
[mm] SIM defocus	0	0.001426264420575141
[mm] SIM translation stage pos	126.985494	126.9854943052878
[mm] SIM translation stage offset	0	-5.413686238853188e-06
[s] Observation start time (MET)	683979393.184000	683978738.00026
Observation start date	2019-09-04T10:15:24	2019-09-04T10:05:38
[s] Observation end time (MET)	683980393.184000	683981228.75041
Observation end date	2019-09-04T10:32:04	2019-09-04T10:47:08

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

## 2.3 Aspect





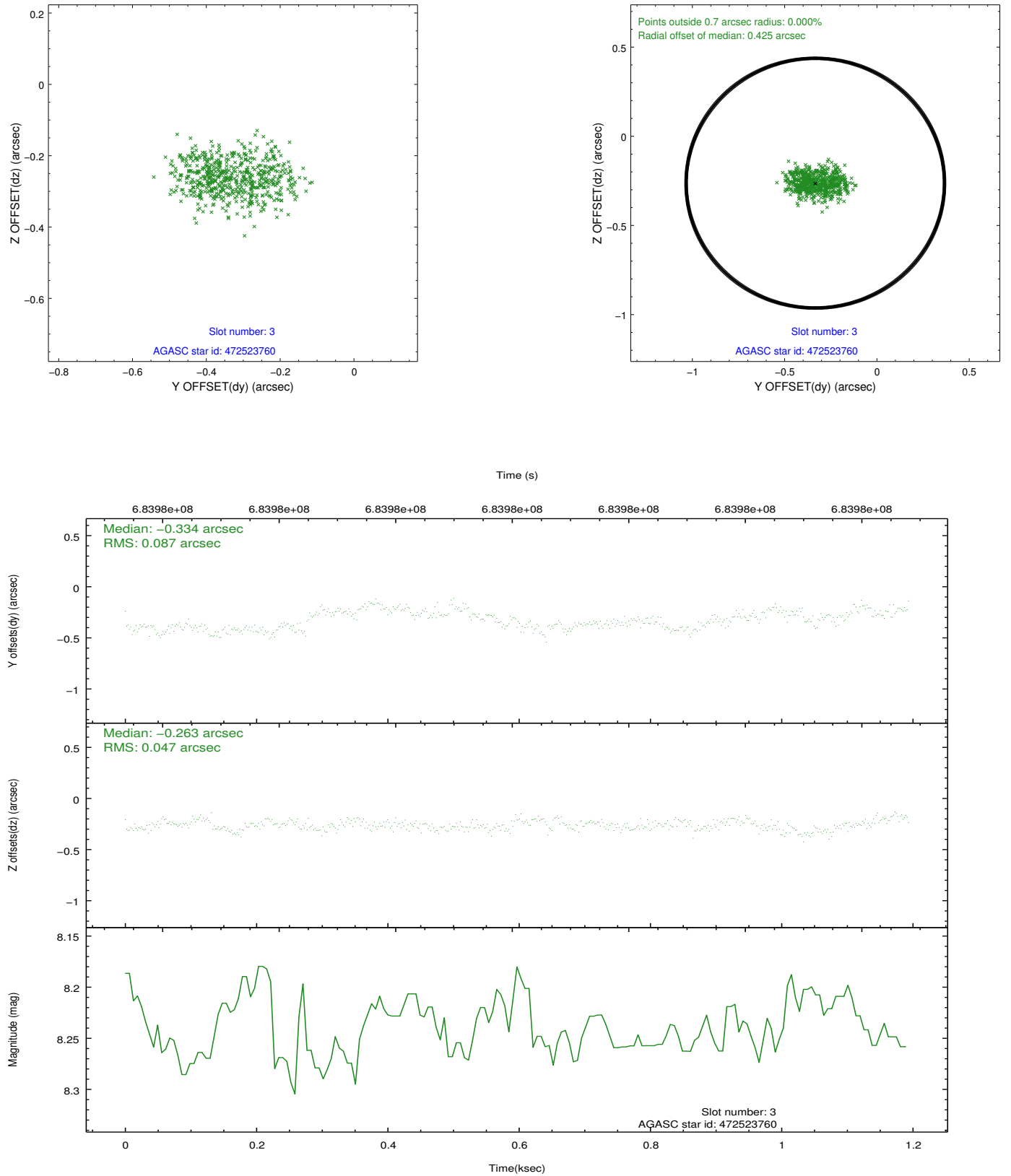
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-I-1	7.05	292	1.000	-0.183	-0.173	0.007	0.012	0.000000	0.000000	-768.88	-1304
1	FID		HRC-I-3	7.12	292	1.000	-0.298	-0.116	0.007	0.014	0.000000	0.000000	-1199.90	995
2	FID		HRC-I-4	7.06	292	1.000	0.594	0.199	0.005	0.008	0.000000	0.000000	1270.79	1000
3	GUIDE	used	472523760	8.24	583	1.000	-0.334	-0.263	0.109	0.164	331.645363	45.403260	1885.92	671
4	GUIDE	used	472525528	6.63	583	1.000	-0.598	-0.307	0.109	0.188	331.551102	45.248694	2249.20	1158
5	GUIDE	used	472655152	9.40	583	1.000	0.315	0.152	0.198	0.308	332.504239	45.862991	-589.83	-450
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	472665256	8.95	582	1.000	0.611	0.429	0.167	0.277	332.808125	46.195041	-1596.98	-1453

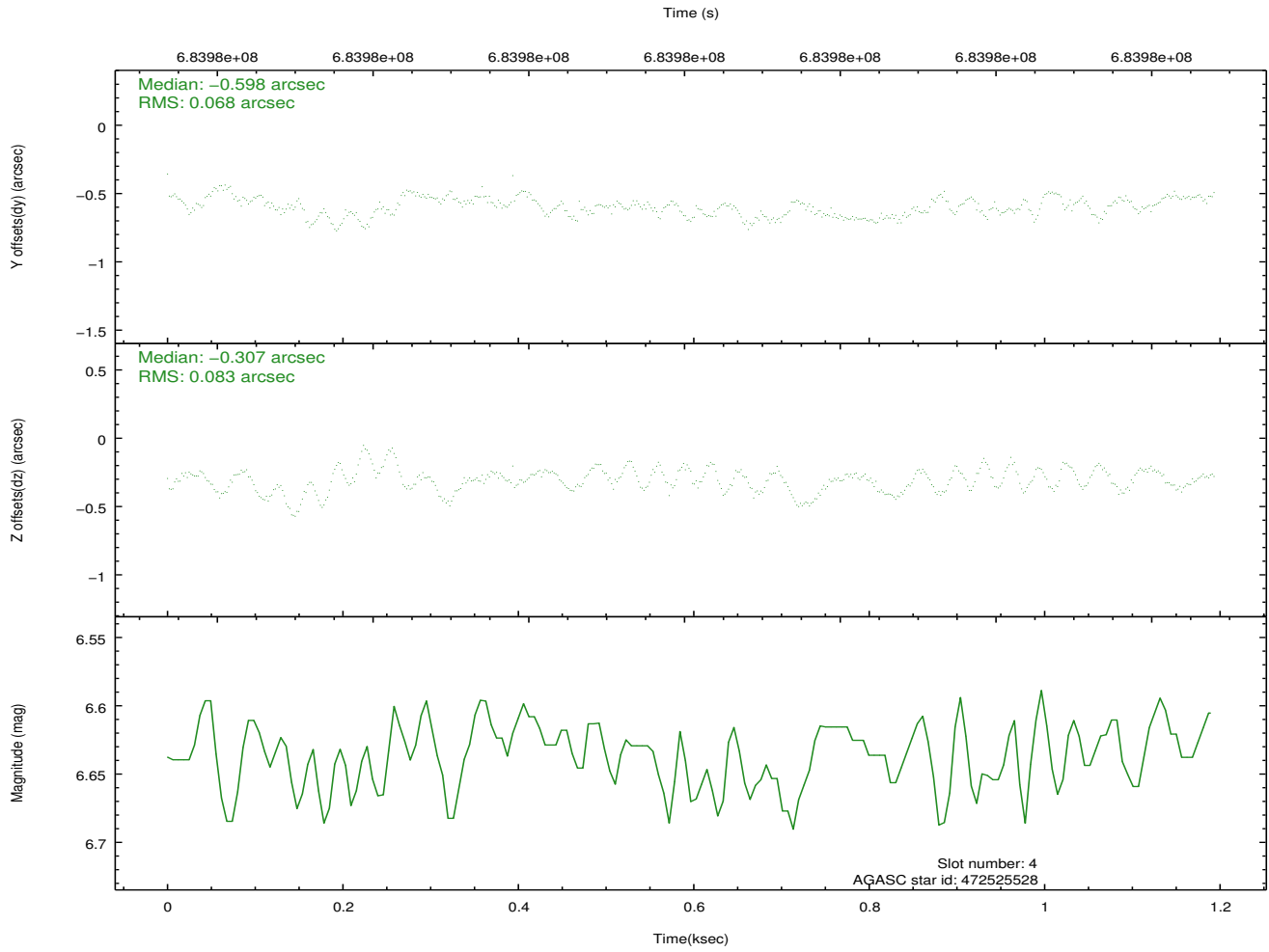
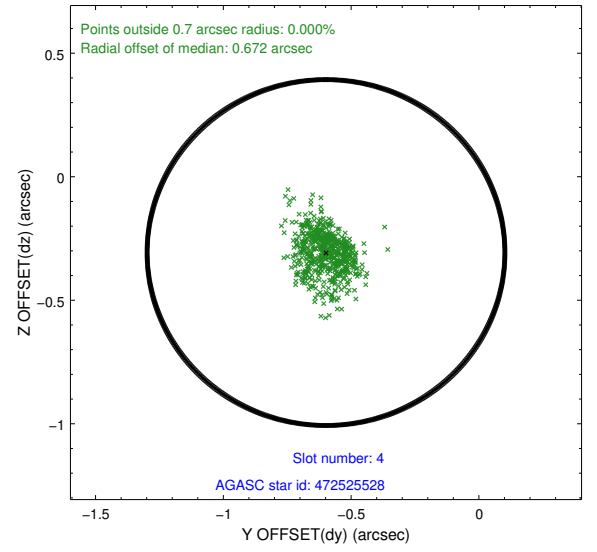
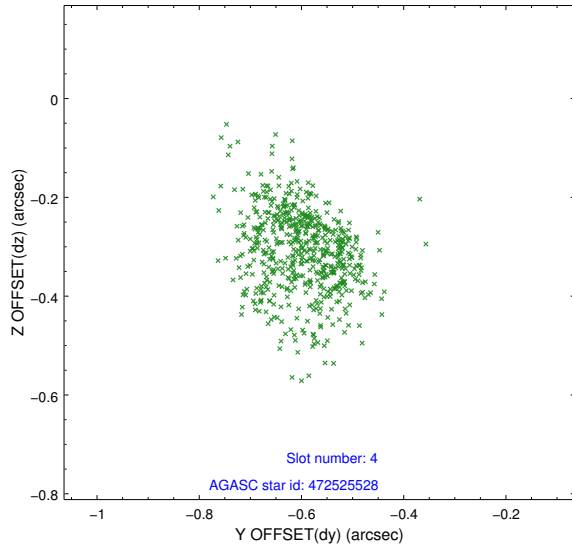


## 2.4 Star Slots

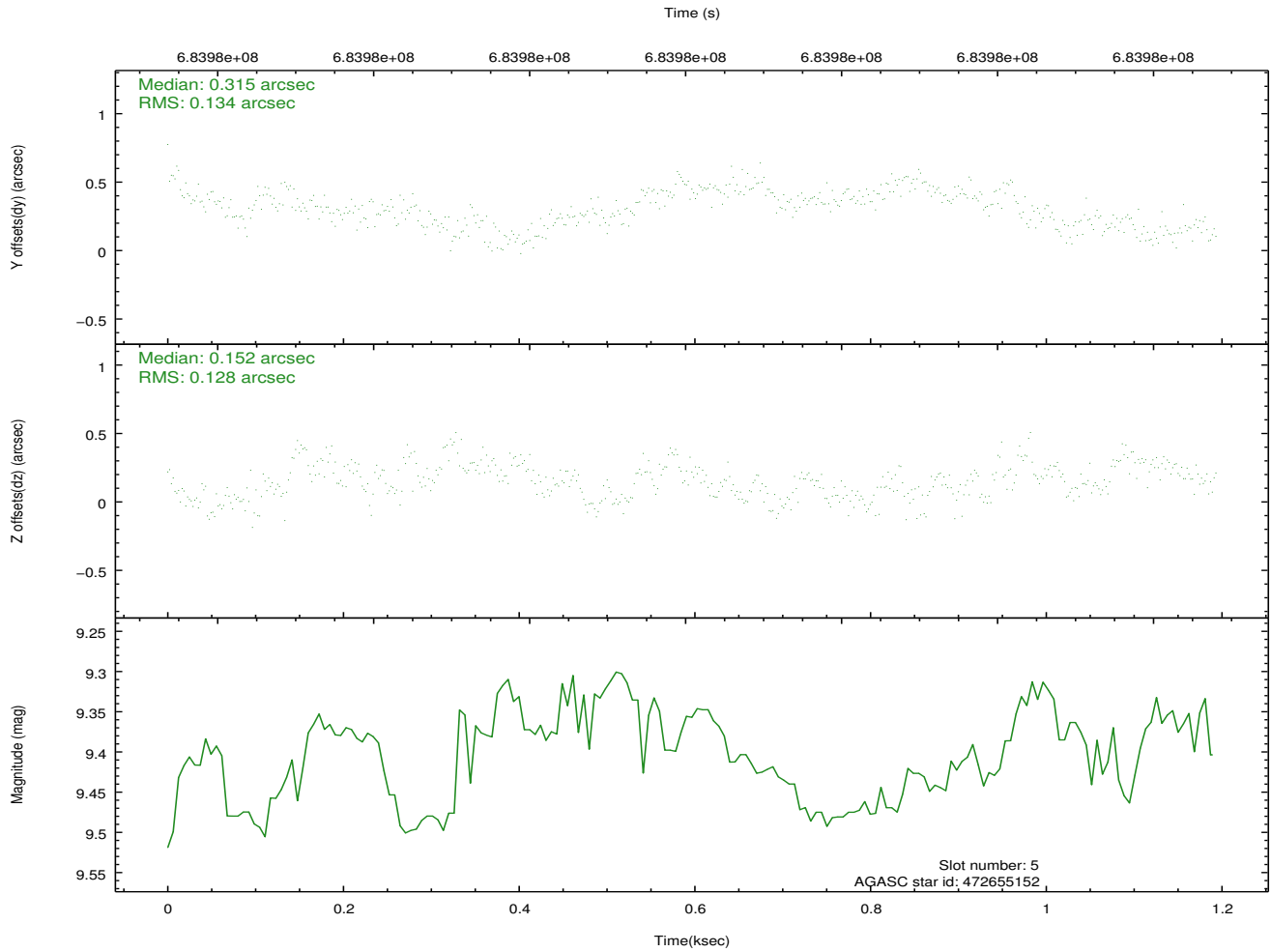
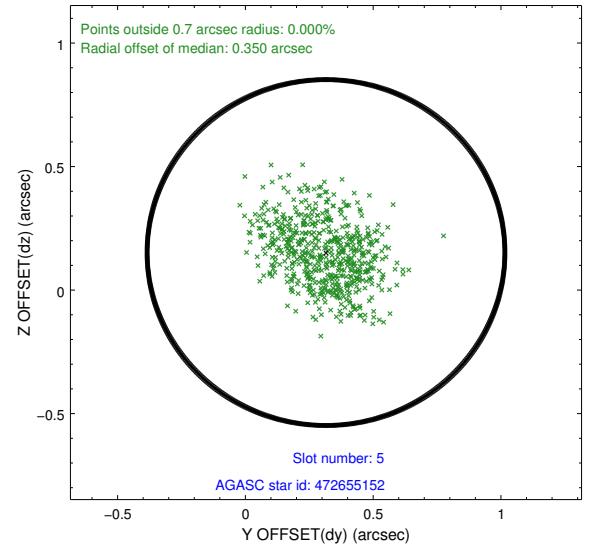
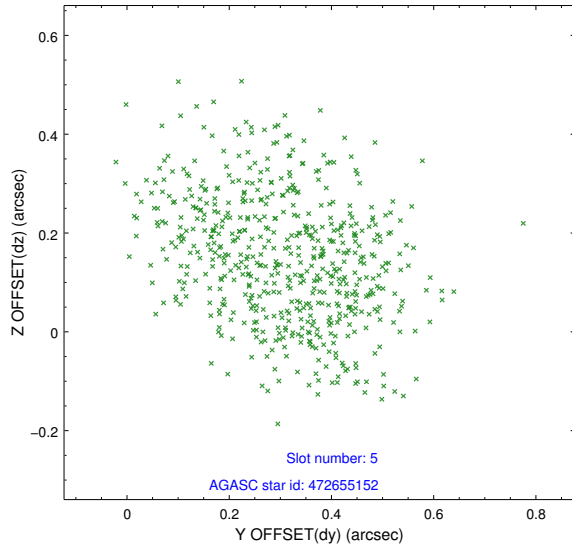
### 2.4.1 Slot 3



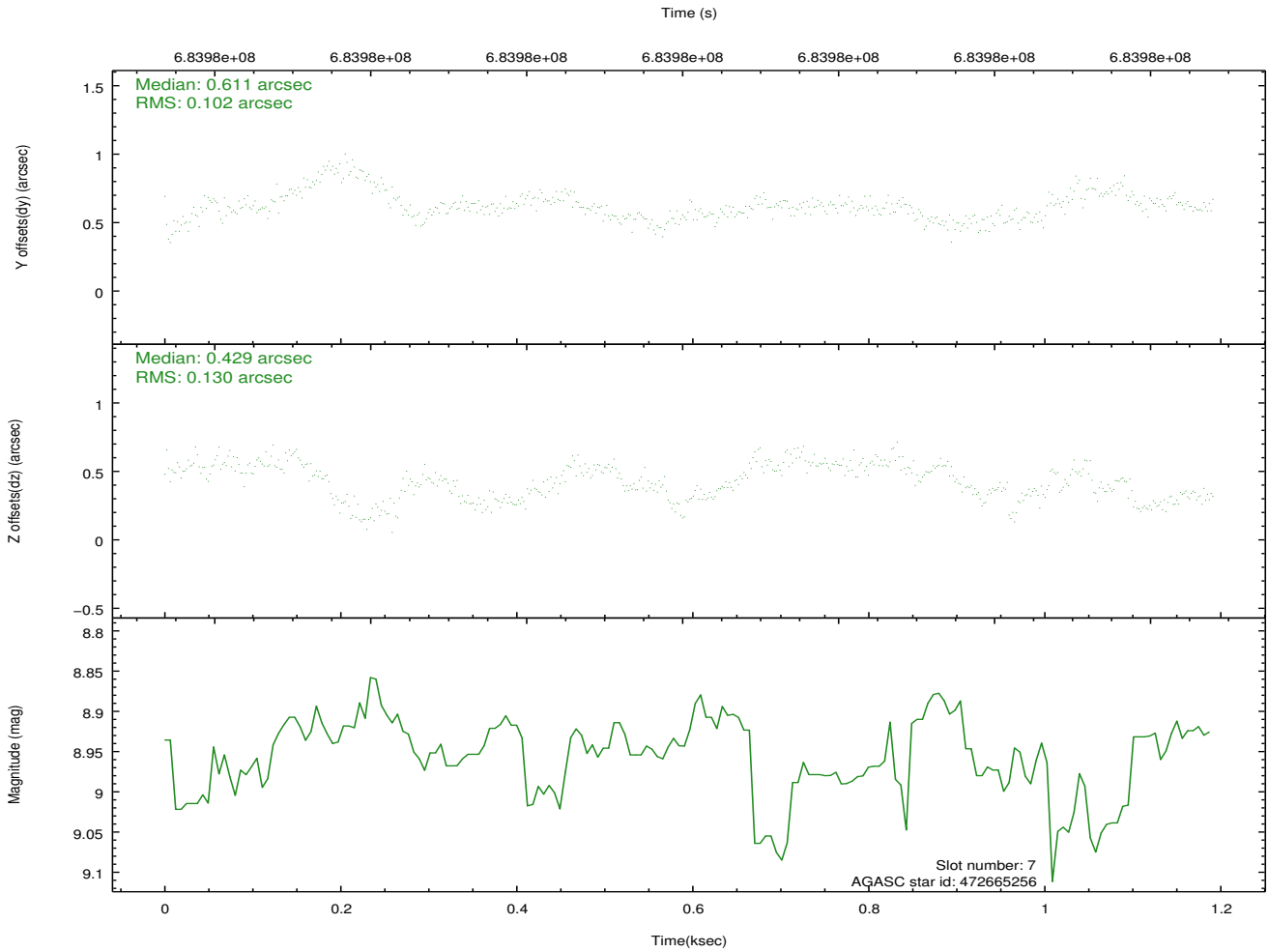
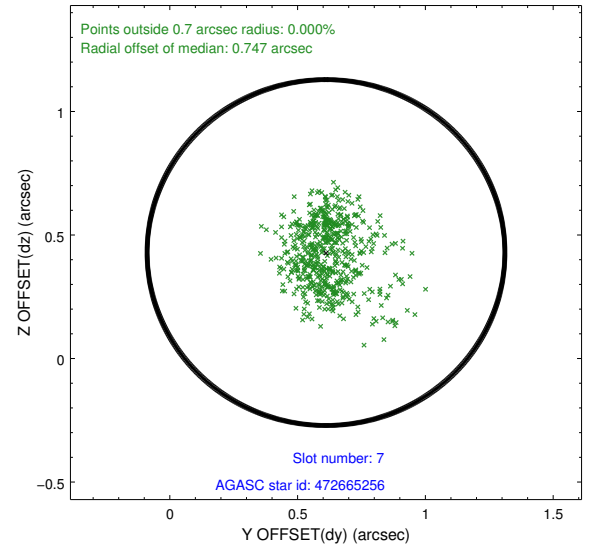
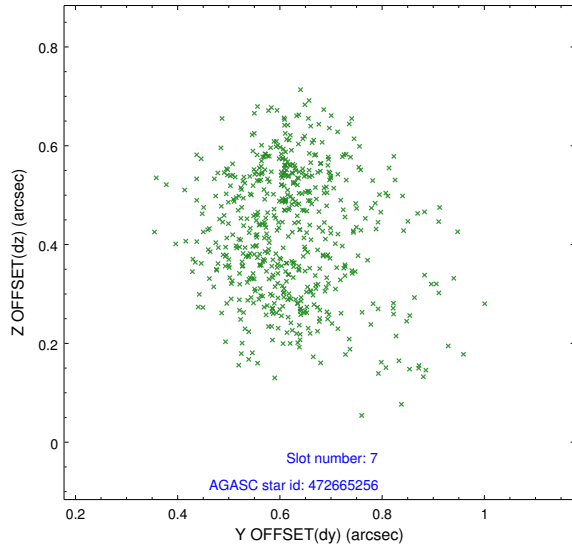
## 2.4.2 Slot 4



### 2.4.3 Slot 5

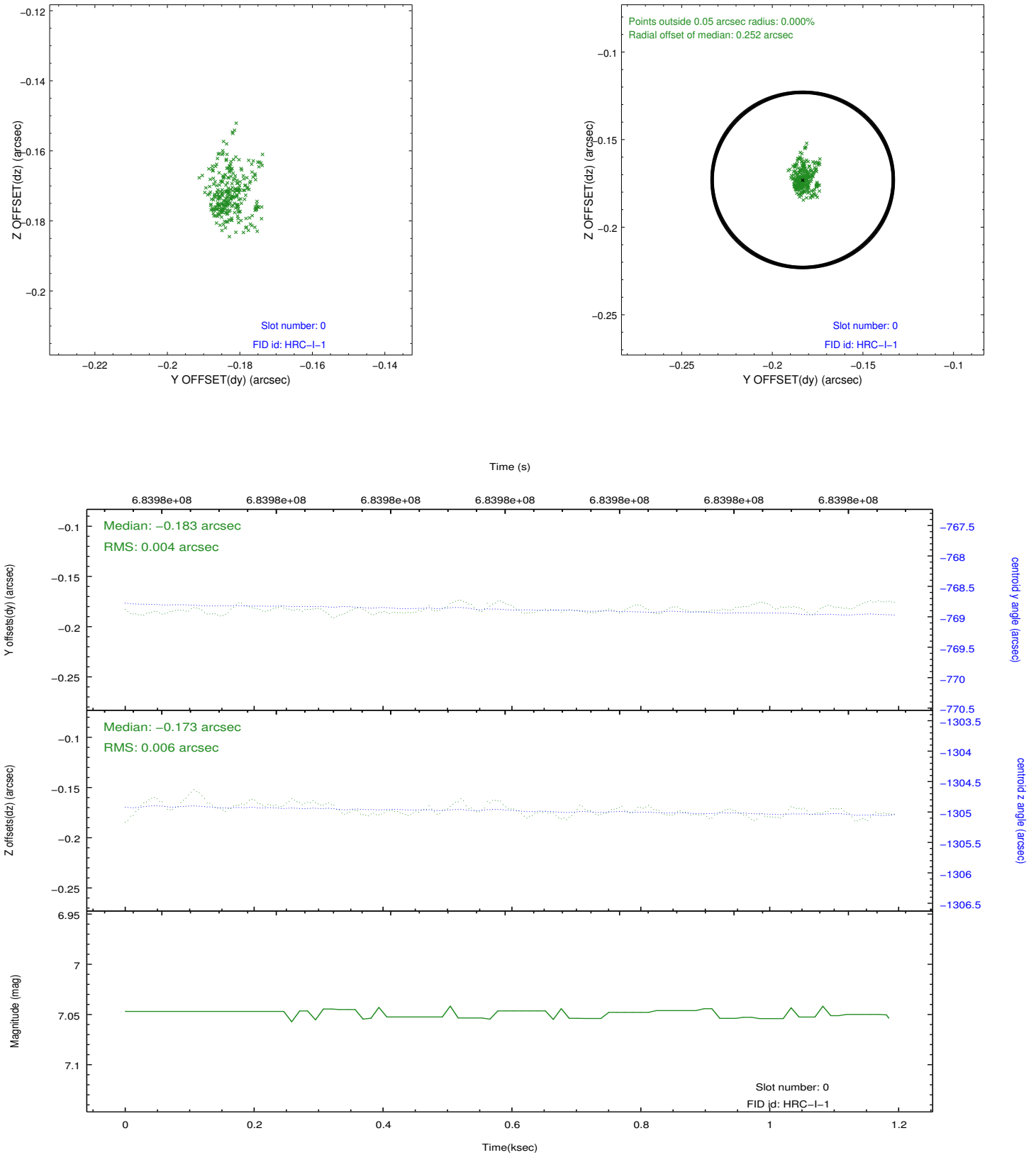


## 2.4.4 Slot 7

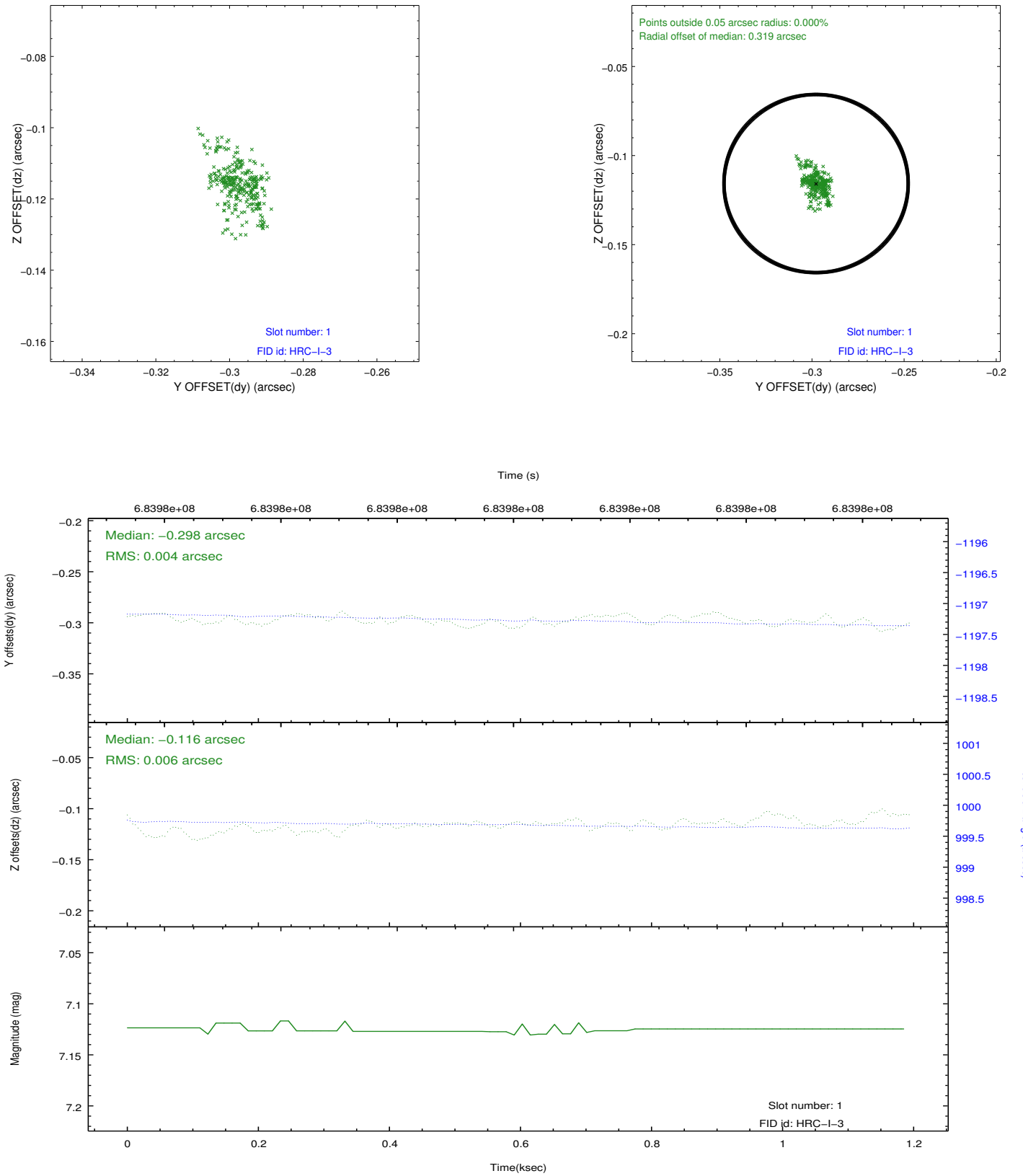


## 2.5 FID Slots

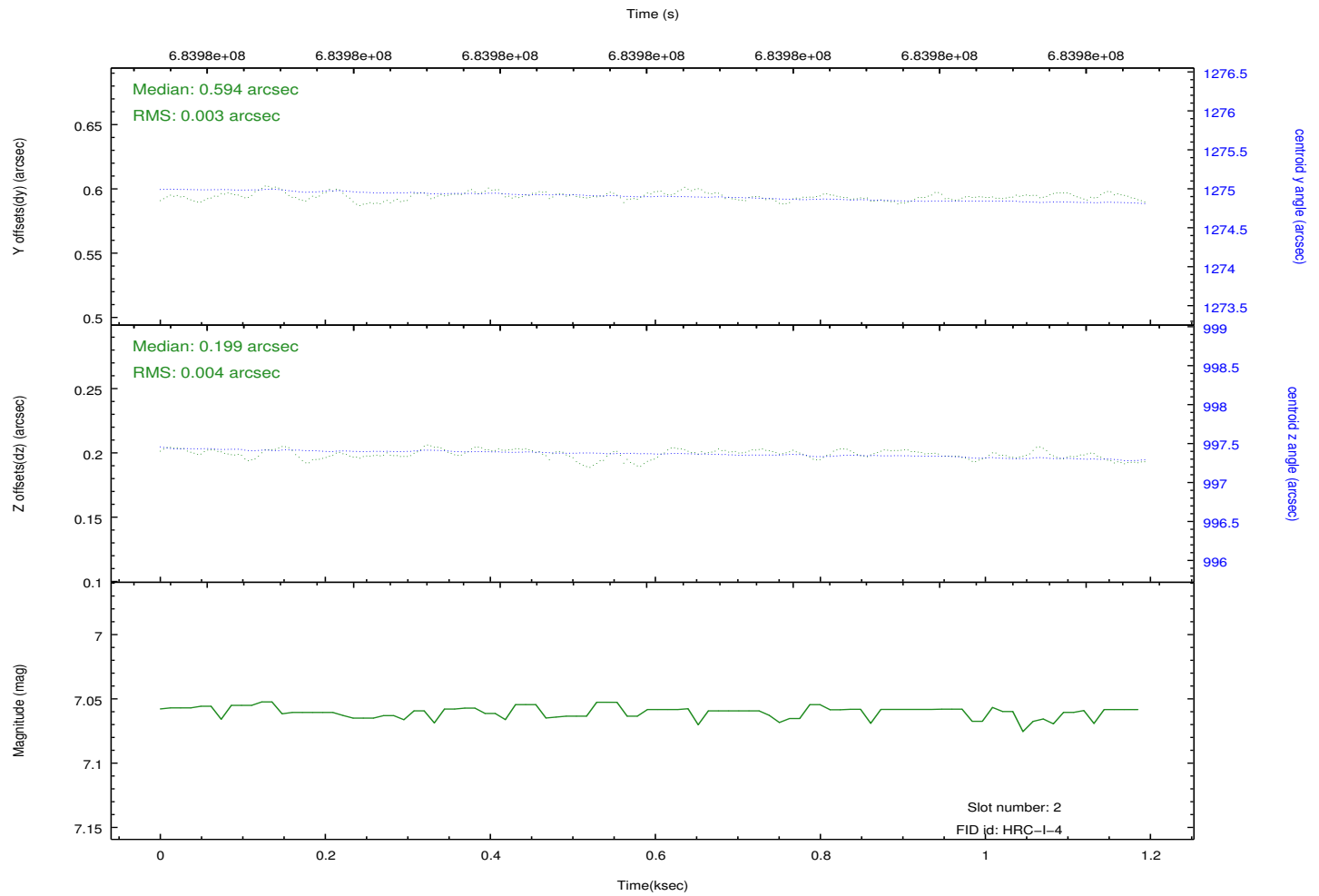
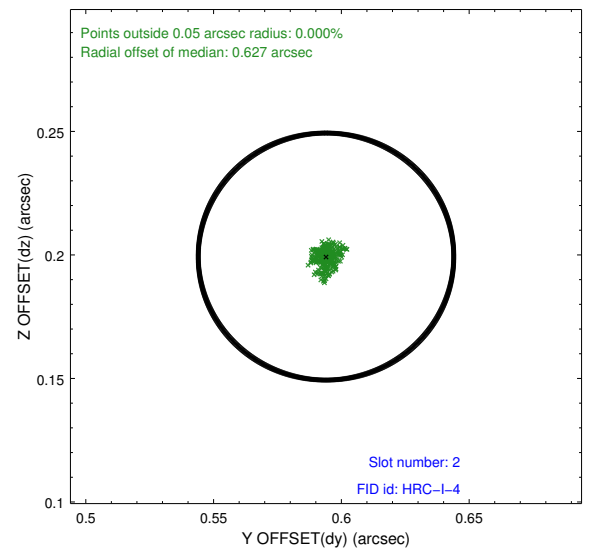
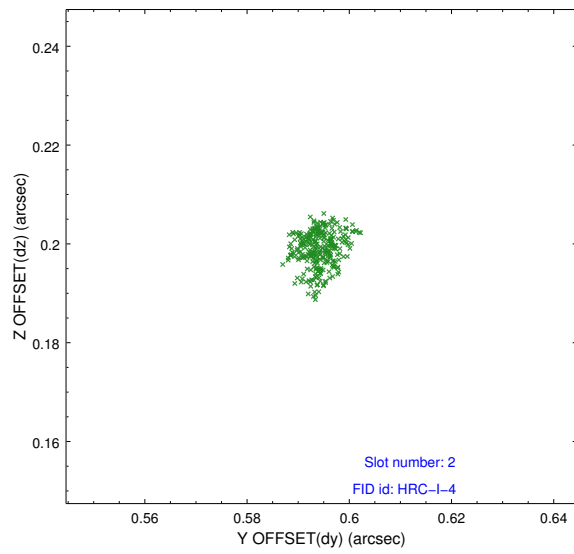
### 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.09.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.1910500717163

## A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.