

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15421 - L2 Version 2  
Chandra X-Ray Center

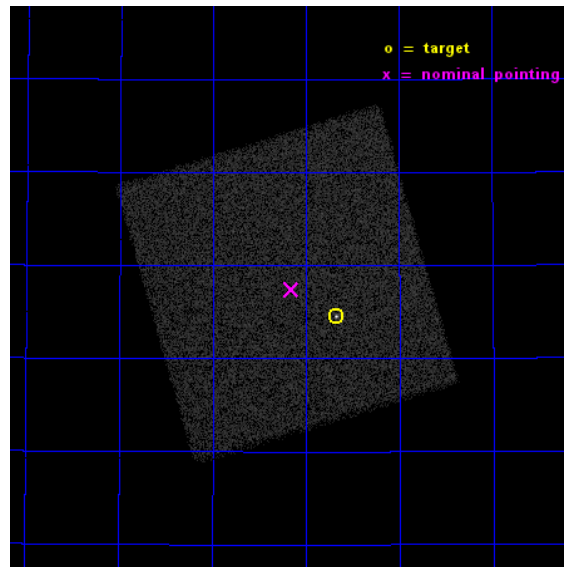
L2 Processing Date : Dec 6 2014

## 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 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
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

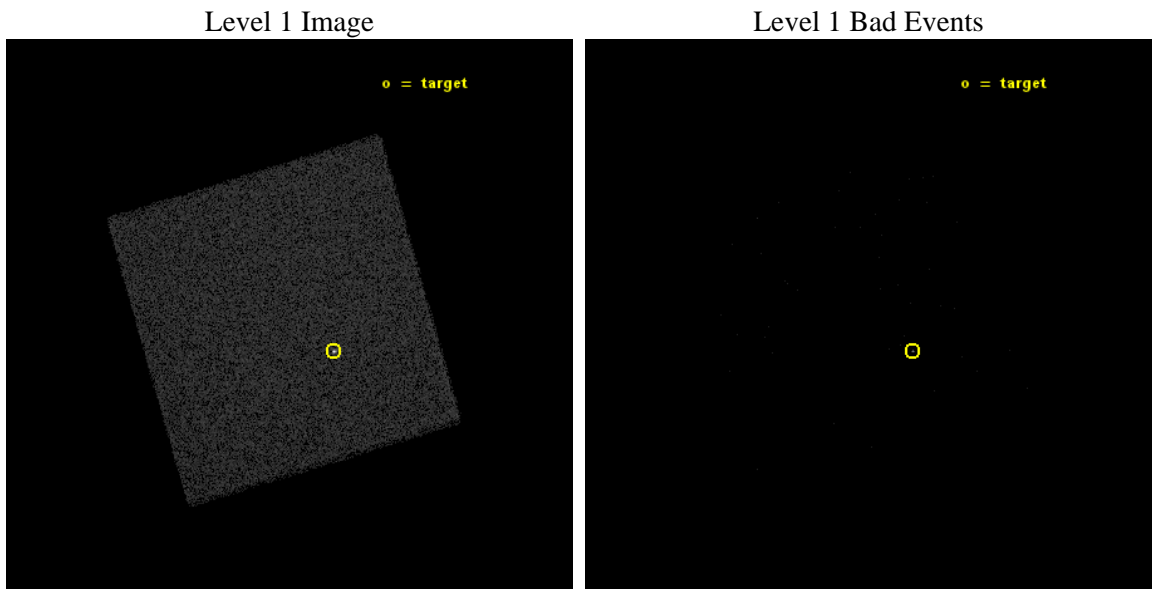
seq_num	291100	Sequence number
obs_id	15421	Observation id
title	AO-14 Calibration Observations to Monitor the Spatial Variations in the HRC-I Gain	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	332.28945262371	Nominal RA [deg]
dec_nom	45.790726714729	Nominal Dec [deg]
roll_nom	208.4937518337	Nominal Roll [deg]
revision	2	Processing version of data
ontime	1177.9813143611	[s]
livetime	1168.8177233802	Ontime multiplied by DTCOR
l2events	72248	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	10.3.1	Processing system revision	ontime	1177.9813143611	[s]
caldbver	4.6.4	&#160	l1events	114606	Number of level 1 events
date	2014-12-06T11:22:35	Date and time of file creation			
revision	2	Processing version of data			

### 2.1.3 Events

#### Level 1 Events

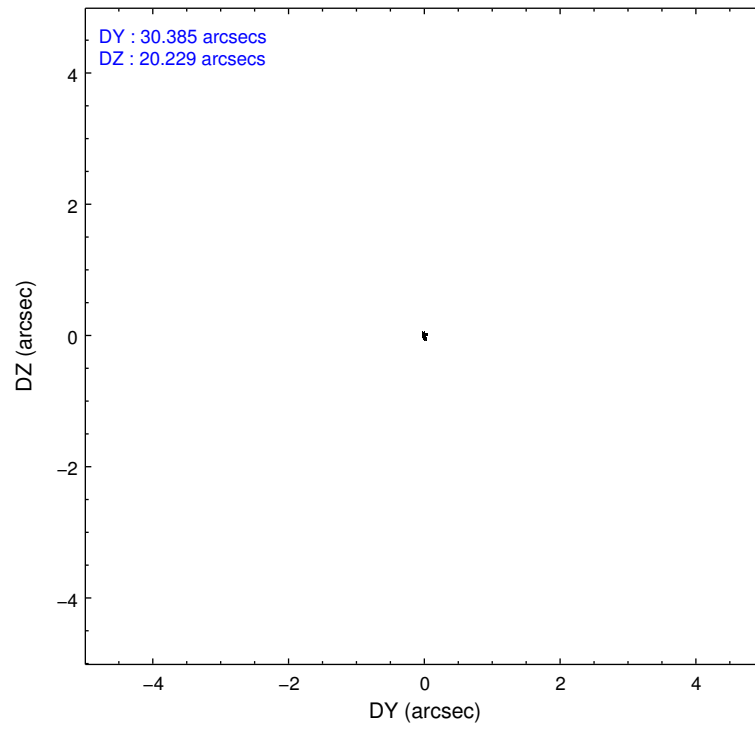
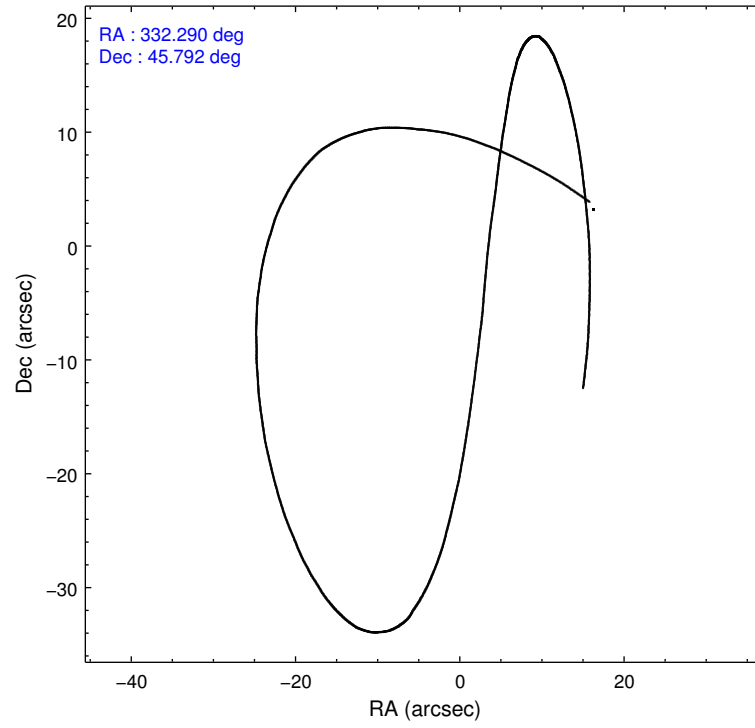
	<b>segment 0</b>
level 1 events	114606
rejected events	18143
rejected %	15%

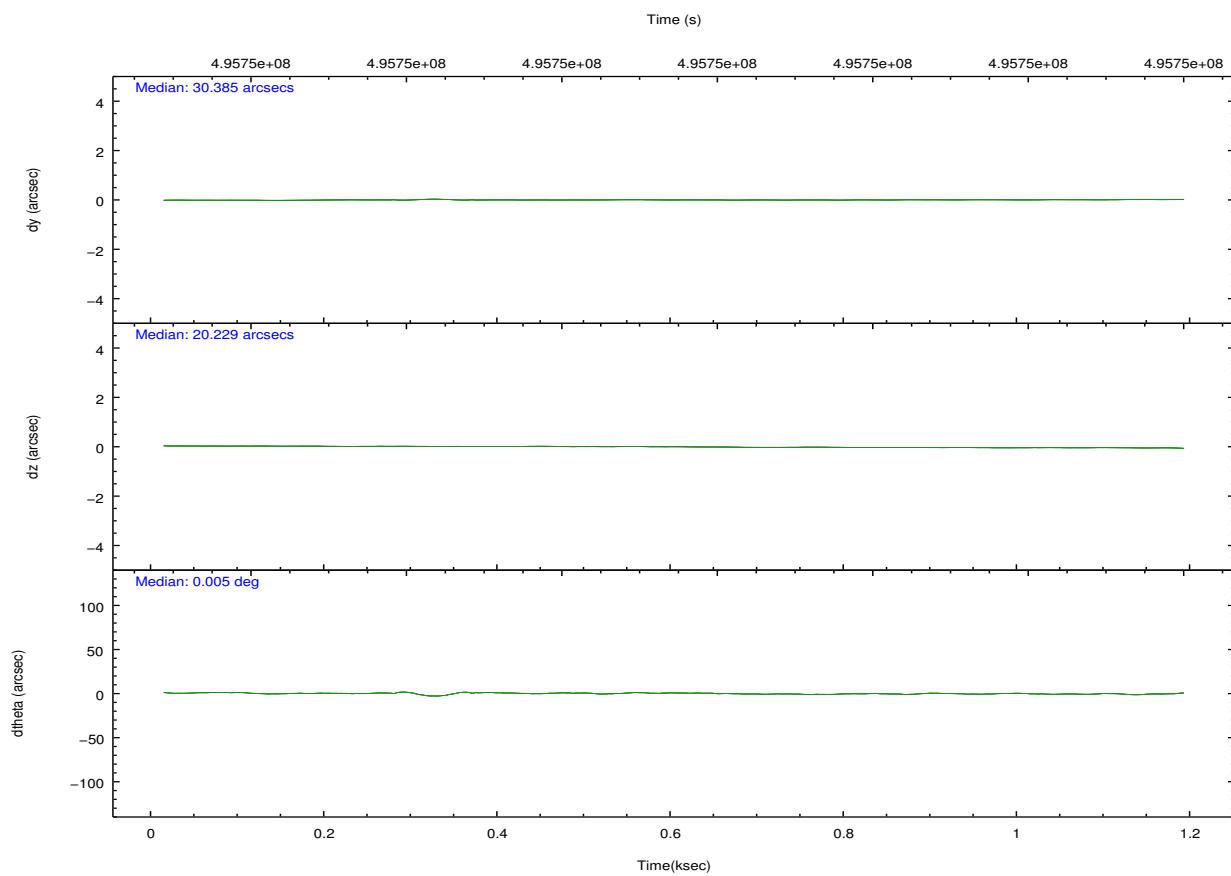
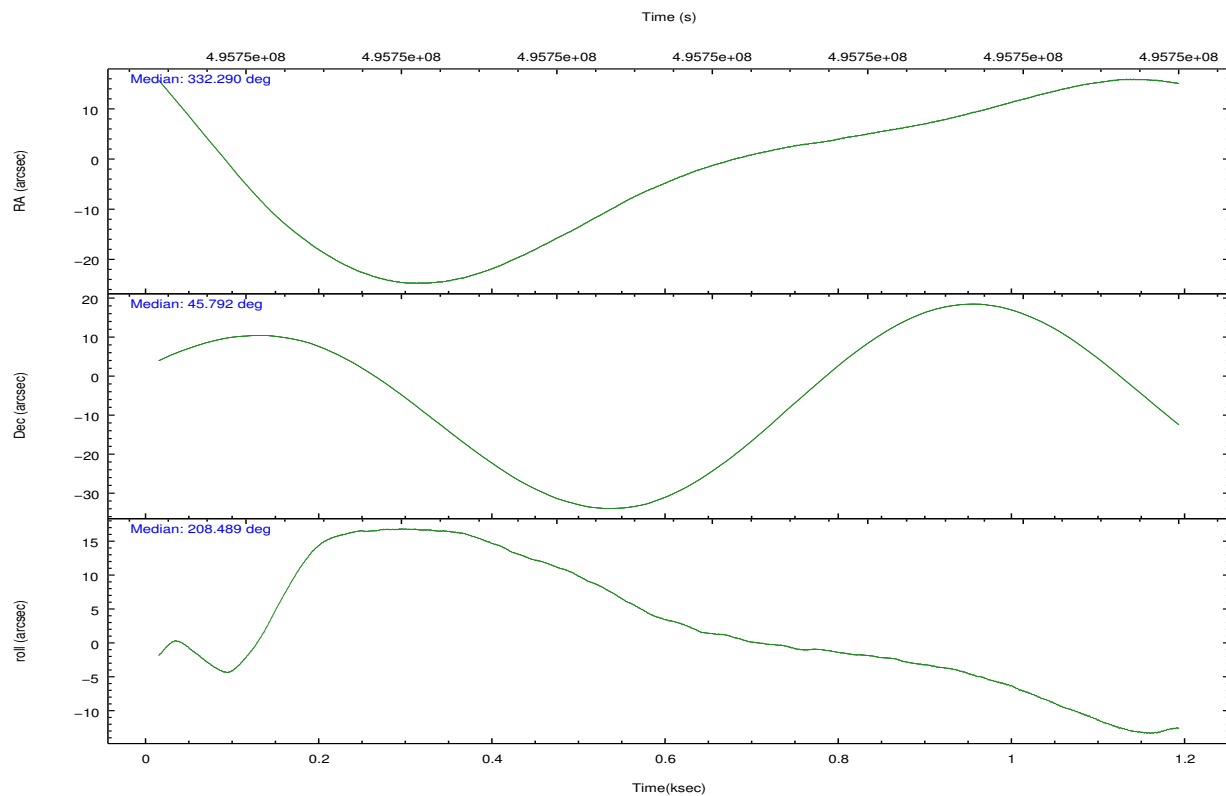
## 2.2 Compared Parameters

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	332.309429	332.289452623705
[deg] Pointing Dec	45.813233	45.7907267147289
[deg] Pointing Roll	208.574836	208.493751833699
[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)	495753345.184000	495752969.2543
Observation start date	2013-09-16T21:14:38	2013-09-16T21:09:29
[s] Observation end time (MET)	495754345.184000	495754482.15438
Observation end date	2013-09-16T21:31:18	2013-09-16T21:34:42

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

## 2.3 Aspect





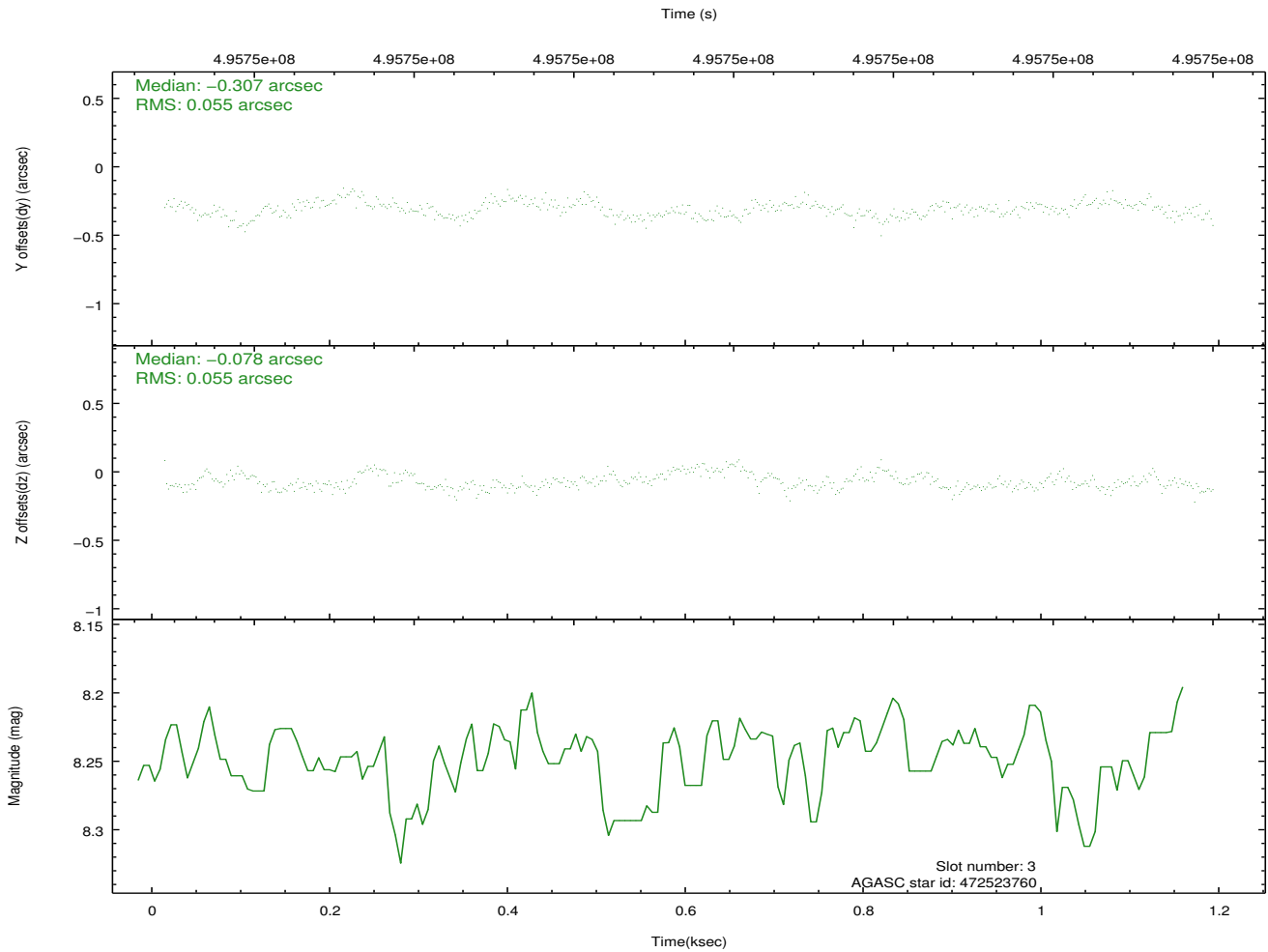
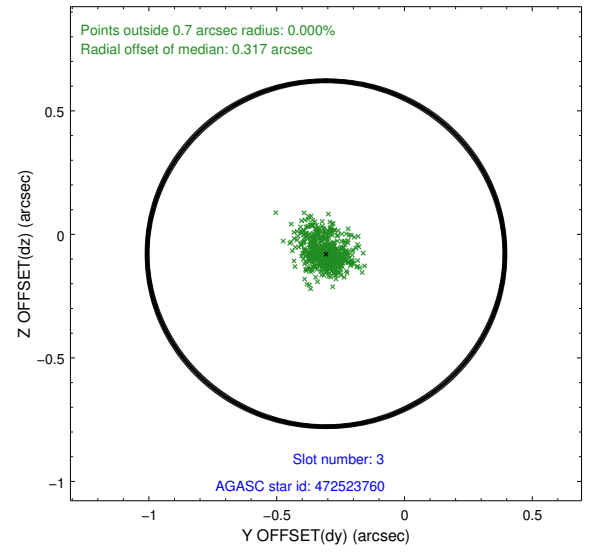
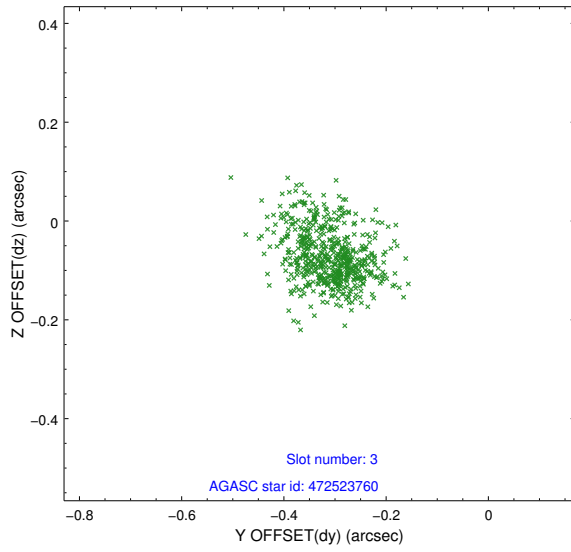
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-I-1	7.02	288	-0.138	-0.008	0.007	0.012	0.000000	0.000000	-786.67	-1308.57
1	FID		HRC-I-2	7.05	288	0.223	-0.043	0.006	0.012	0.000000	0.000000	823.59	-1314.63
2	FID		HRC-I-3	7.11	288	0.033	-0.038	0.005	0.011	0.000000	0.000000	-1212.26	991.38
3	GUIDE	used	472523760	8.25	576	-0.307	-0.078	0.082	0.134	331.645363	45.403260	2177.81	491.24
4	GUIDE	used	472651904	6.11	576	-0.265	-0.416	0.118	0.173	332.170077	45.742257	434.69	60.16
5	GUIDE	used	472655152	9.42	572	0.140	-0.168	0.192	0.282	332.504239	45.862991	-512.67	79.76
6	GUIDE	used	472665256	9.01	576	0.315	0.264	0.101	0.150	332.808125	46.195041	-1749.83	-611.87
7	GUIDE	used	472533912	9.16	571	0.122	0.396	0.157	0.249	331.791136	46.368695	170.78	-2372.18

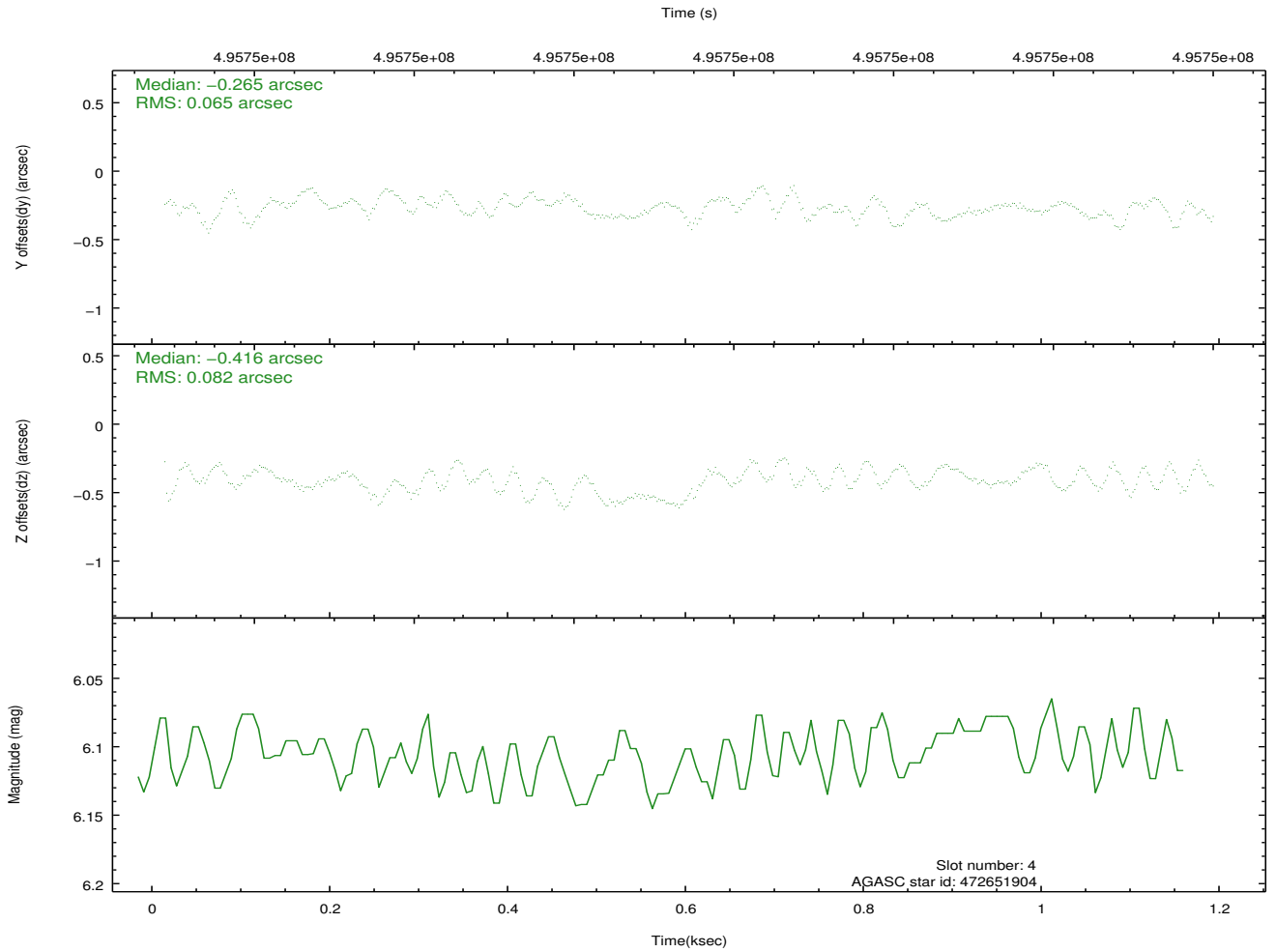
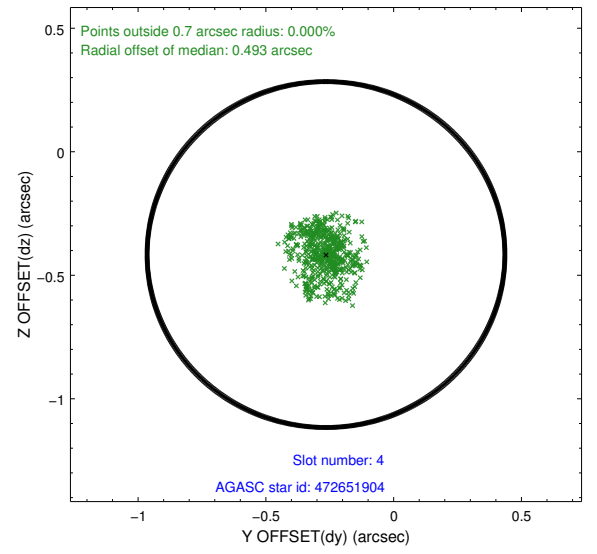
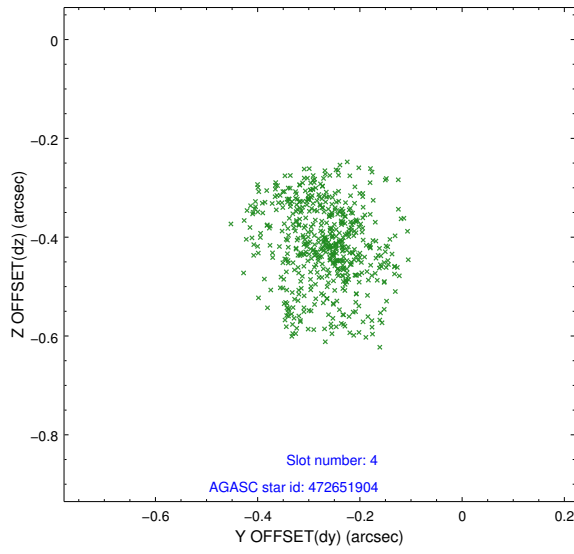


## 2.4 Star Slots

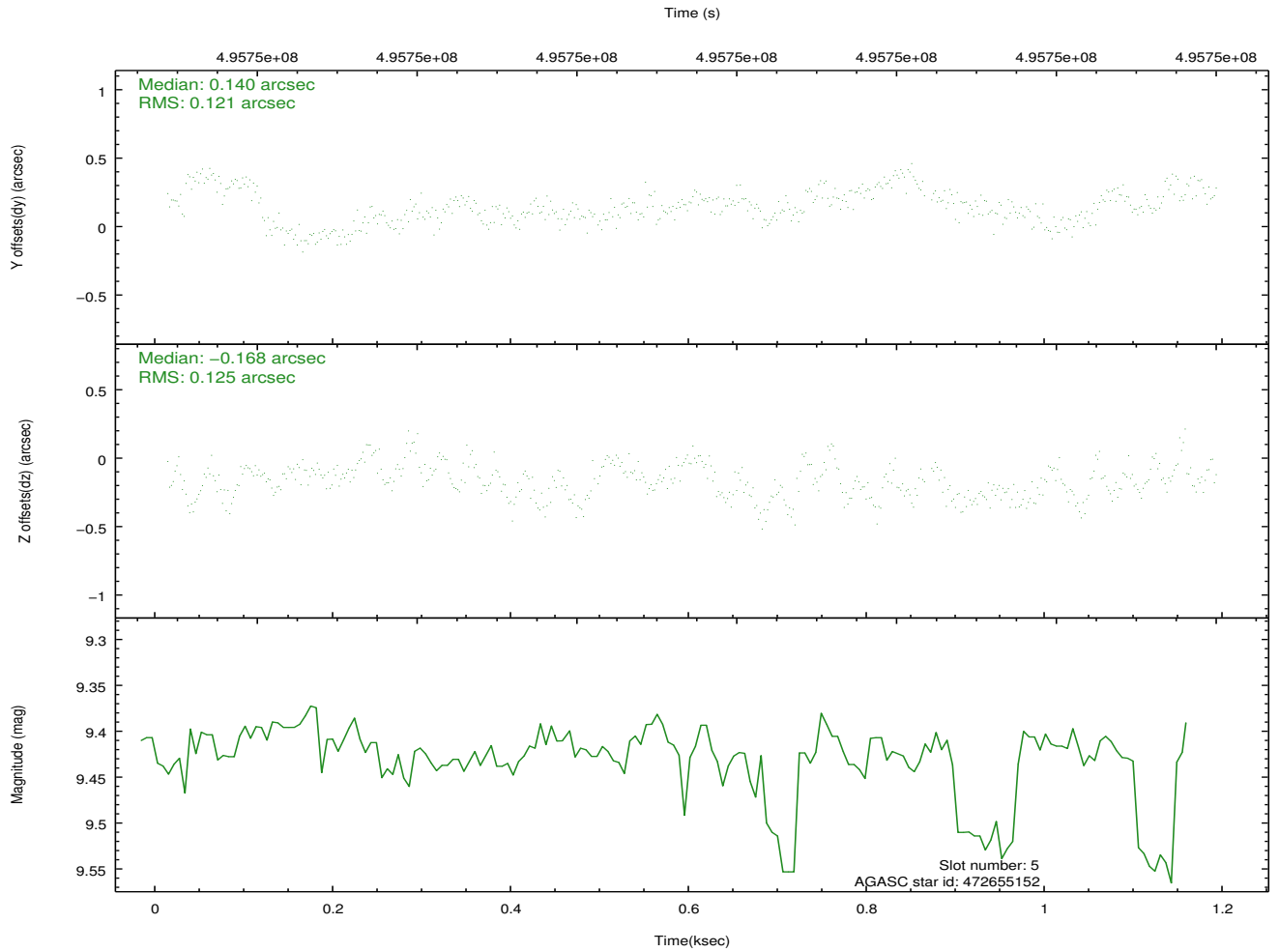
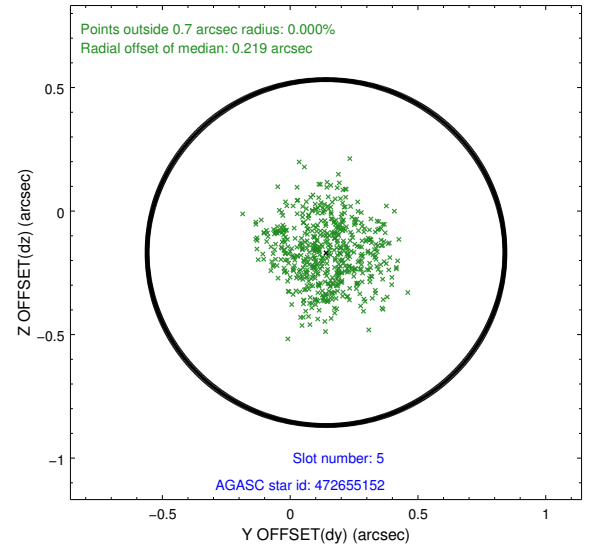
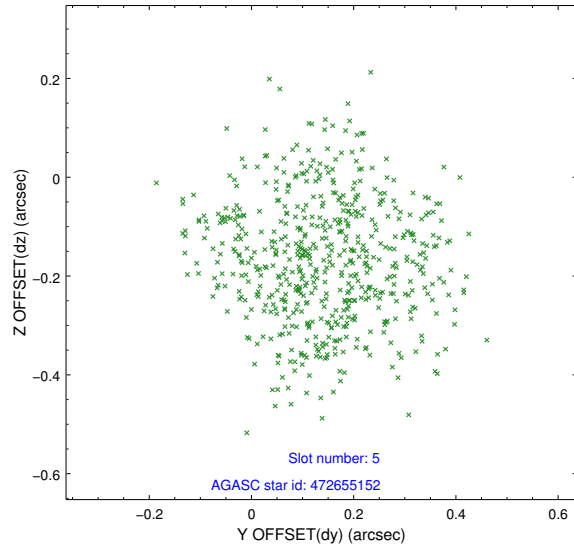
### 2.4.1 Slot 3



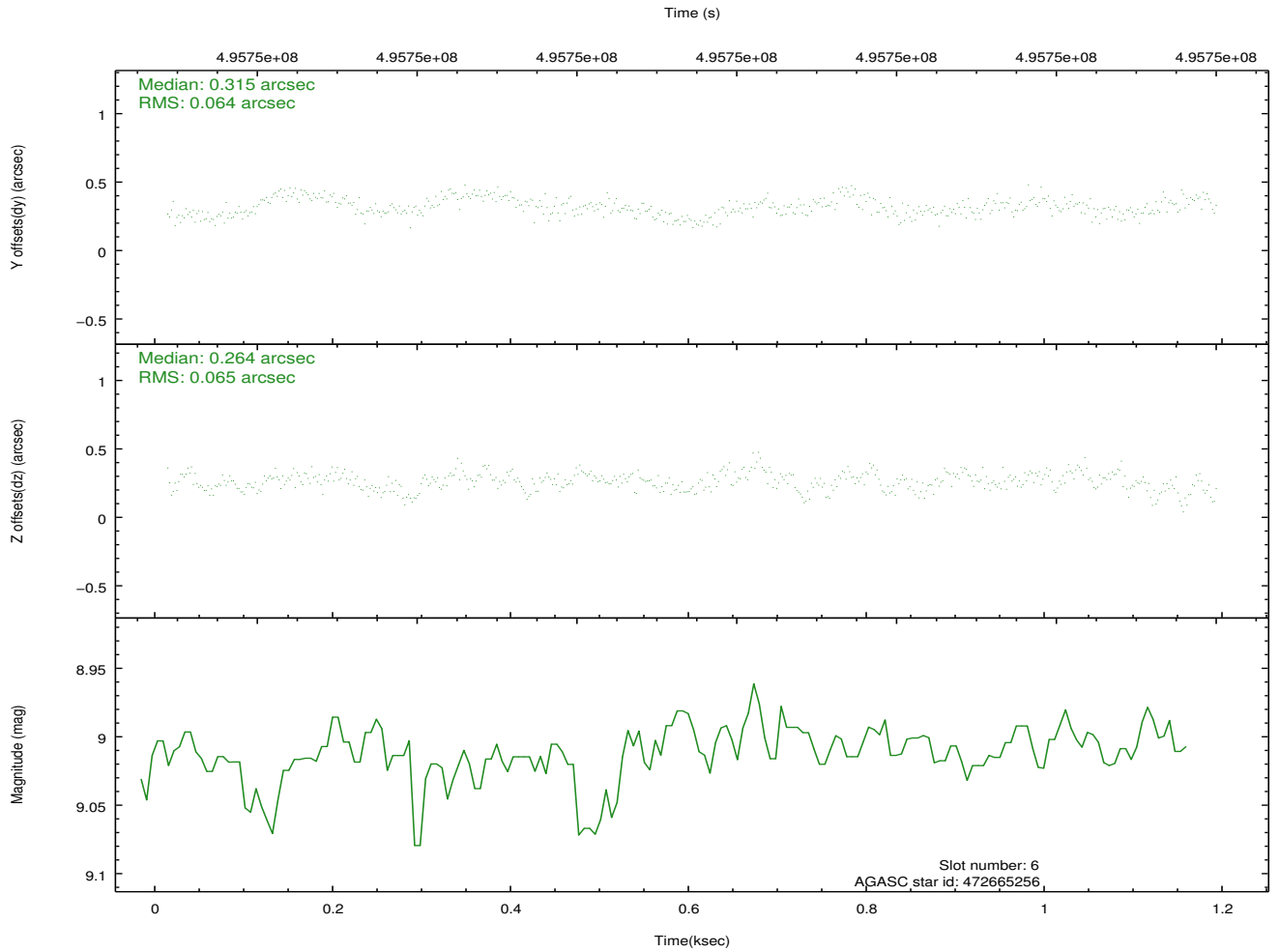
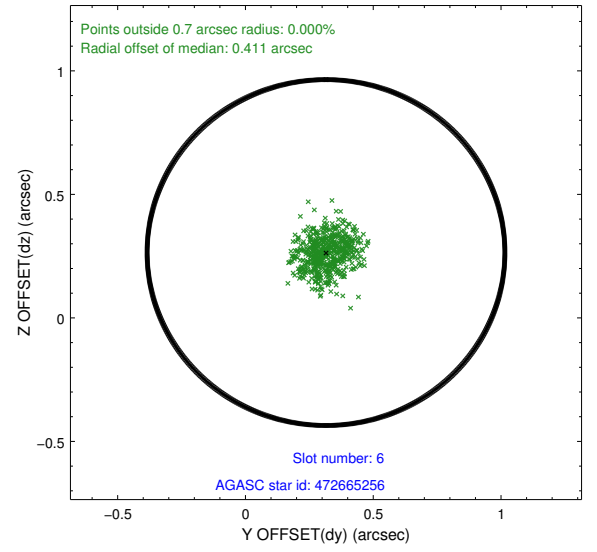
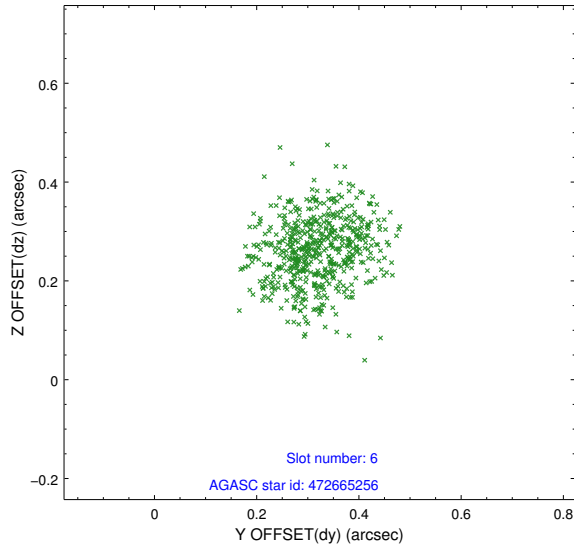
## 2.4.2 Slot 4



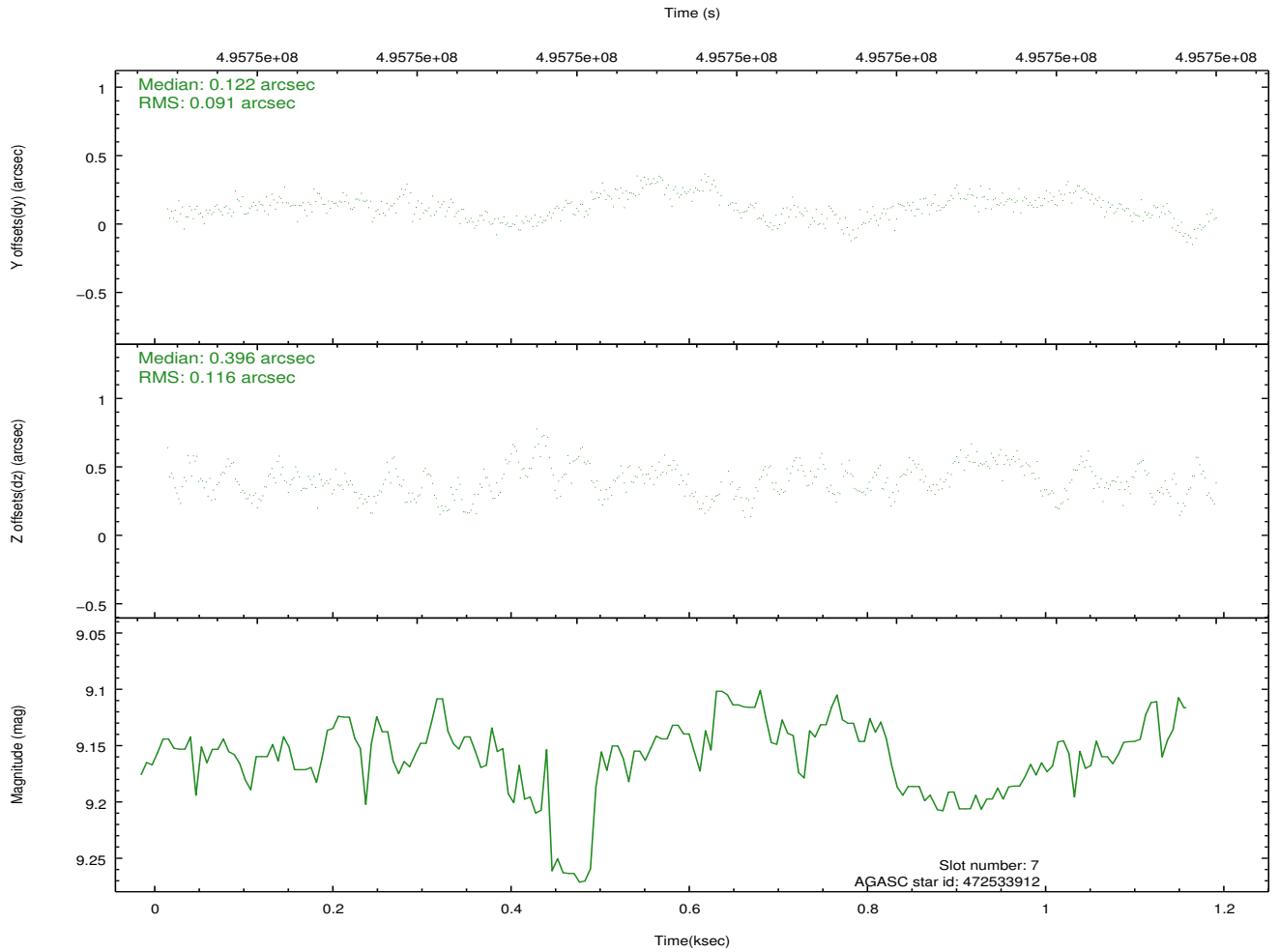
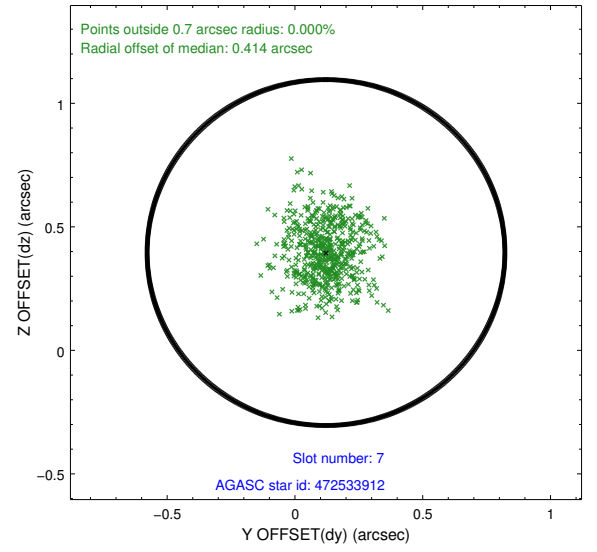
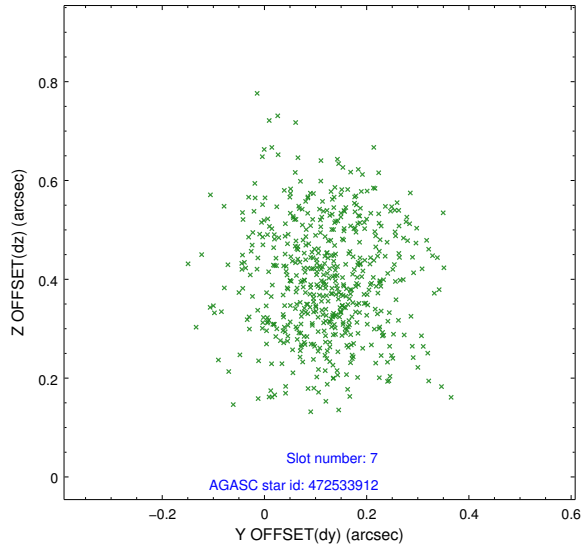
### 2.4.3 Slot 5



## 2.4.4 Slot 6

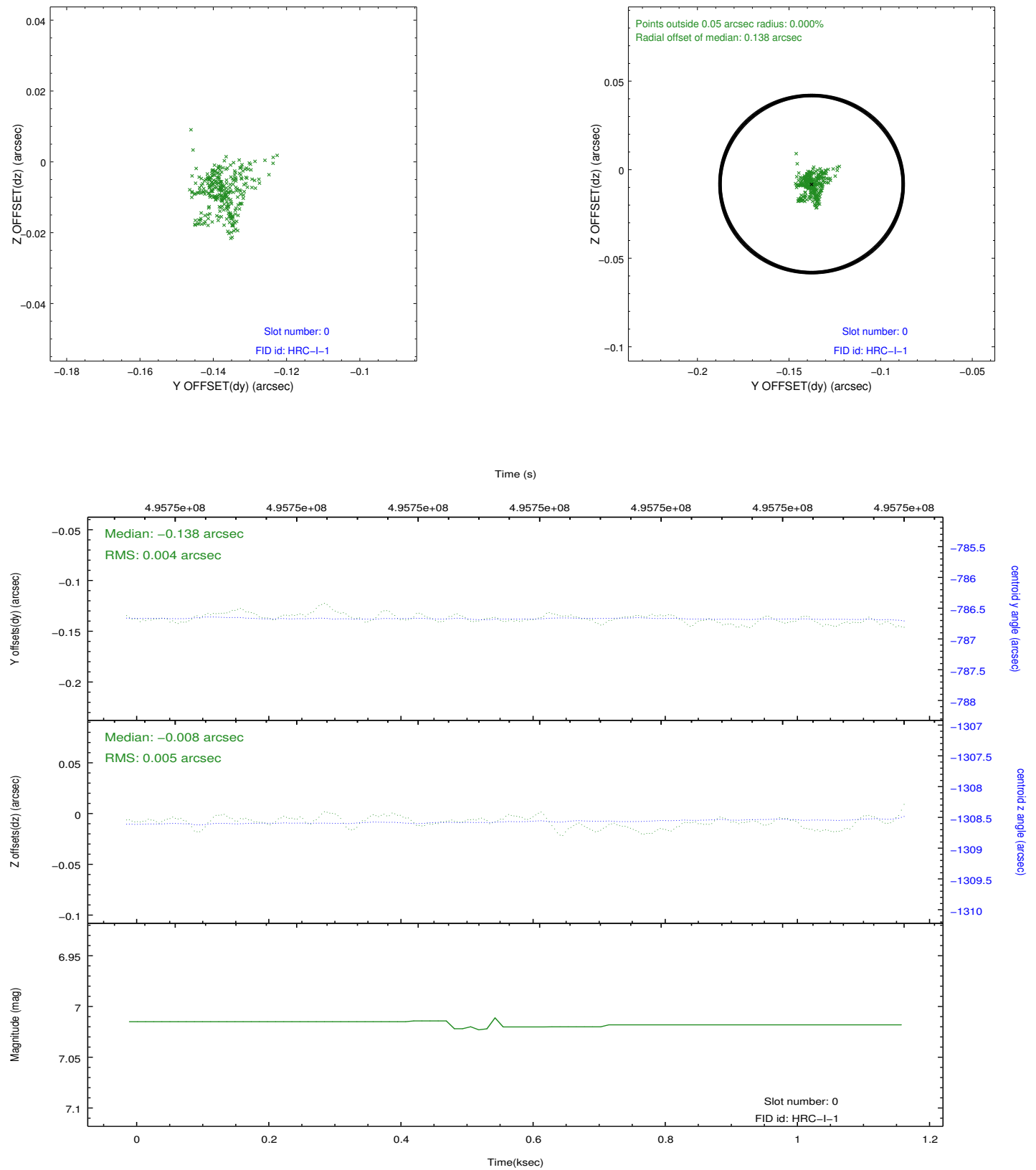


## 2.4.5 Slot 7

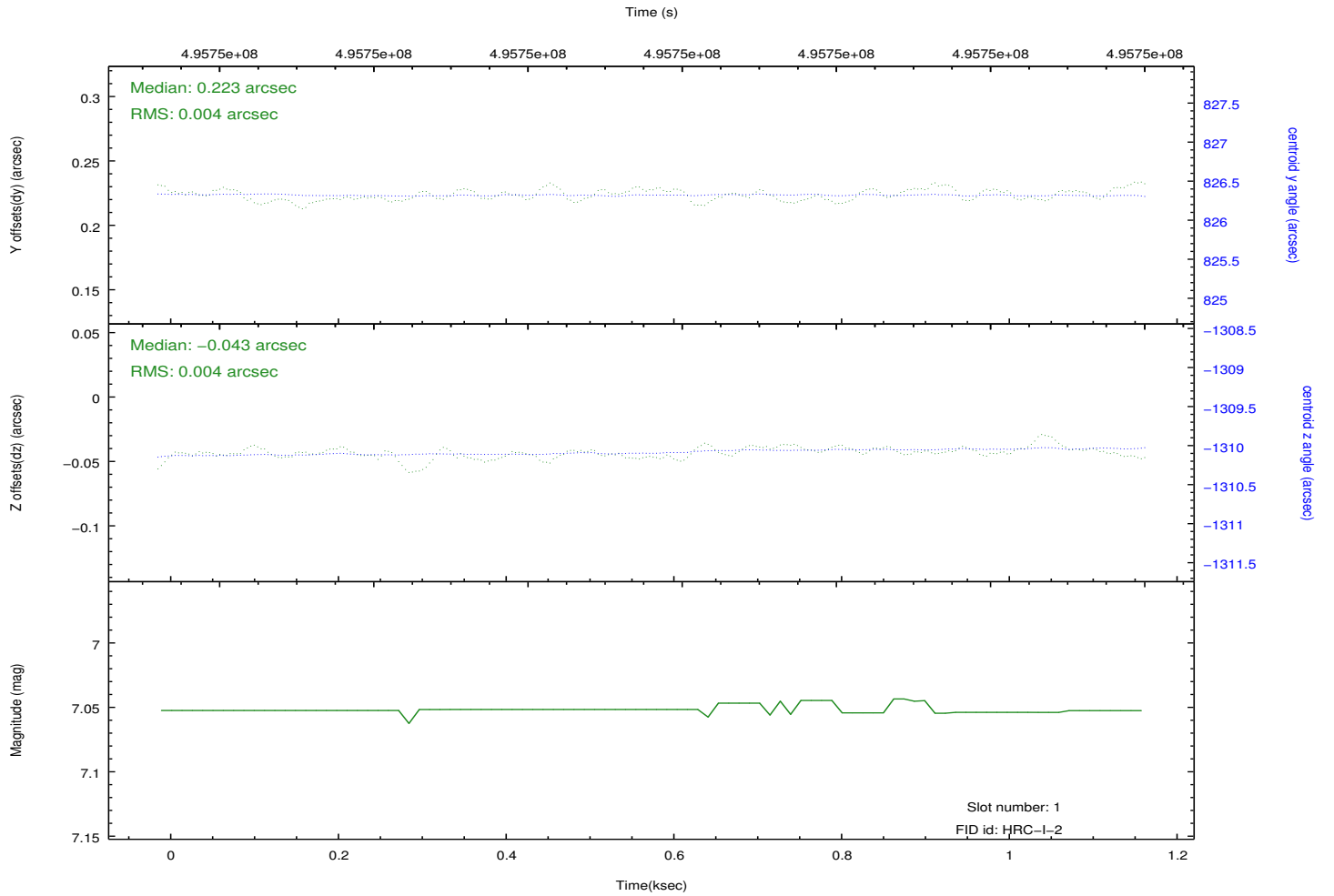
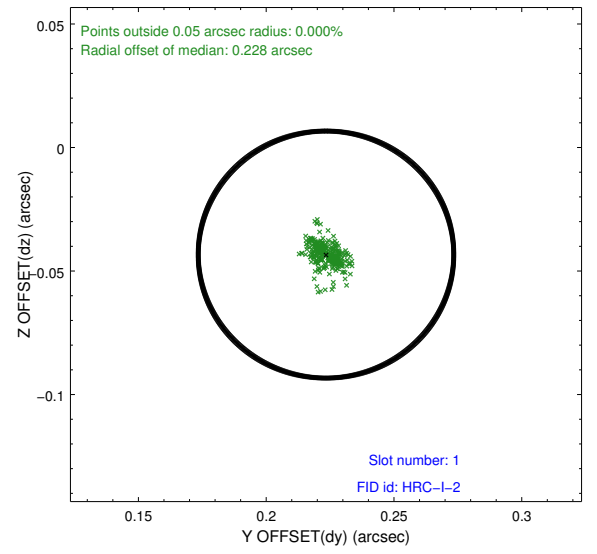
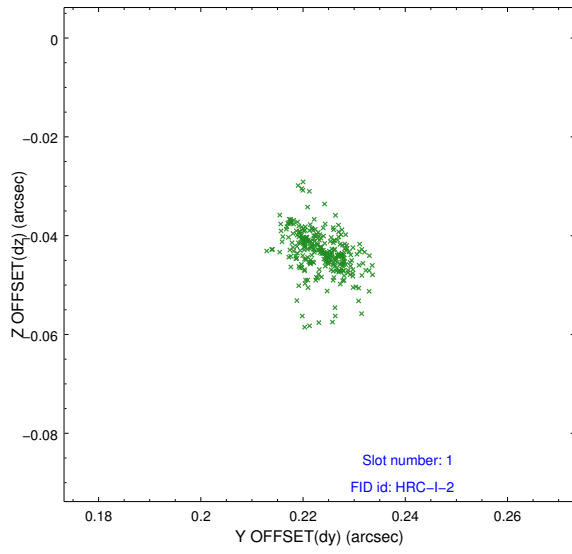


## 2.5 FID Slots

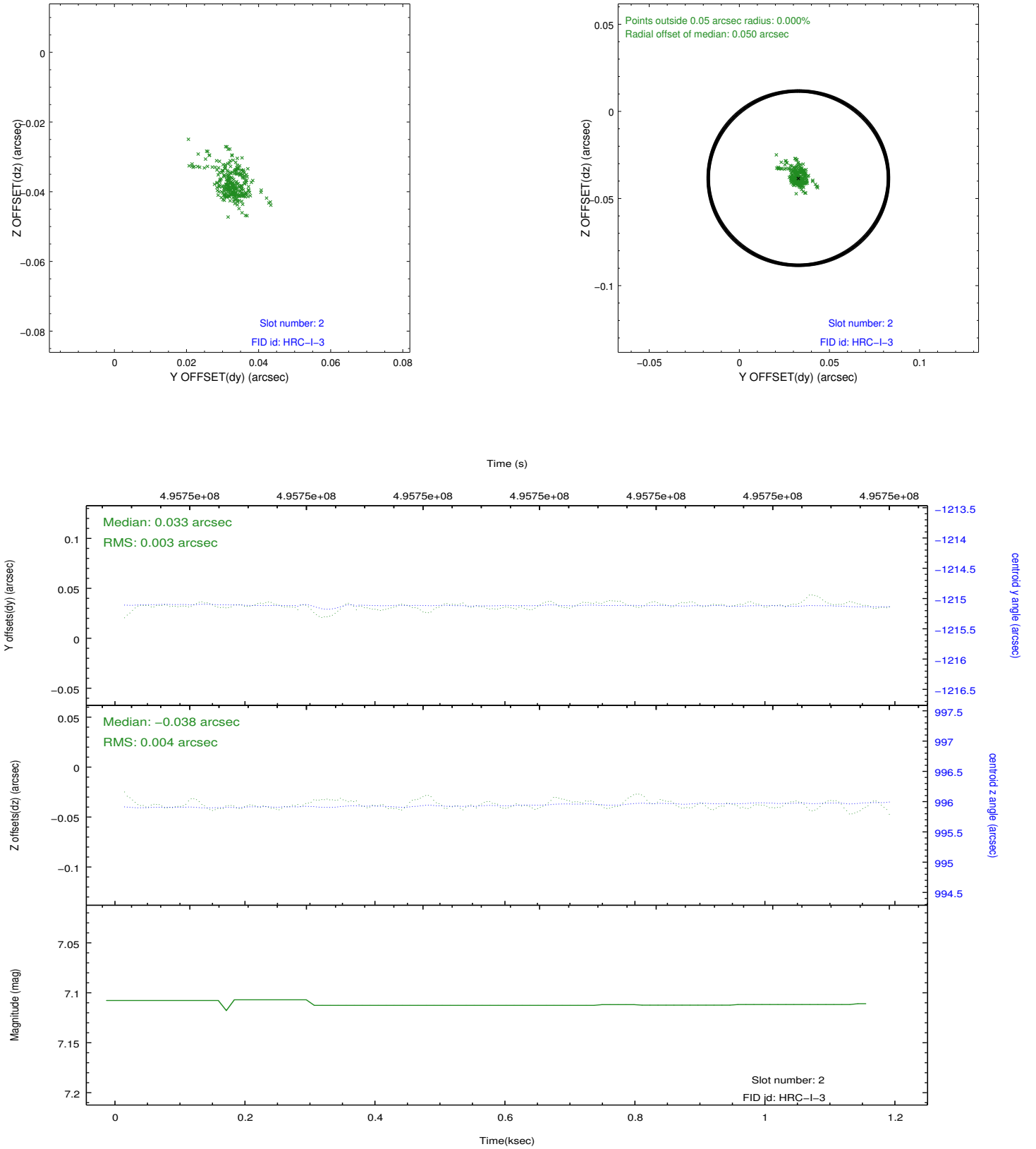
### 2.5.1 Slot 0



## 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)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.1779813143611

## A.2 Comments

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.