

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15470 - L2 Version 2  
Chandra X-Ray Center

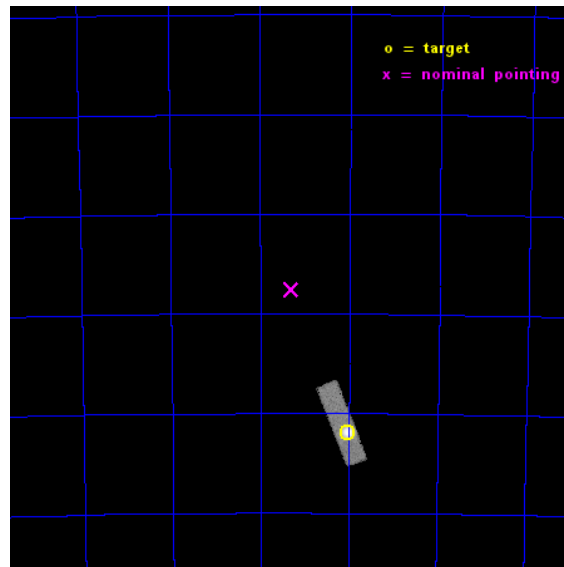
L2 Processing Date : Dec 1 2014

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

# 1 Front

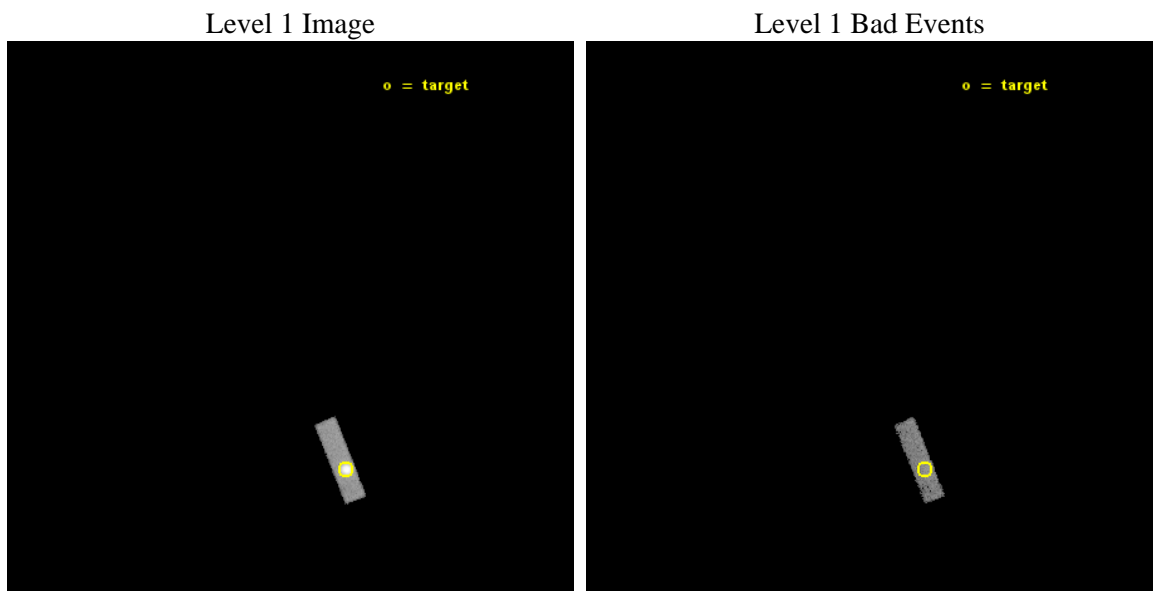
seq_num	590523	Sequence number
obs_id	15470	Observation id
title	AO-14 Calibration Observations of E0102-72	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72 S1,-120,15.50,0,8.8	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.326156175875	Nominal RA [deg]
dec_nom	-71.792945529557	Nominal Dec [deg]
roll_nom	247.62802655984	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10065.600150049	Sum of GTIs [s]
livetime	9574.4317987718	Livetime [s]
ontime5	10065.600150049	Sum of GTIs [s]
l2events	34149	Number of level 2 events



## 2 OBI

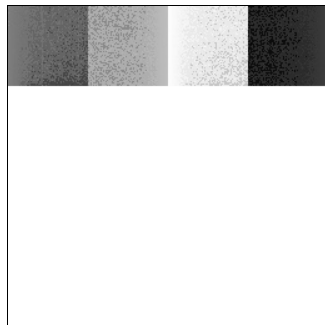
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 5



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.656000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10065.600150049	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime5	10065.600150049	Sum of GTIs [s]
date	2014-12-01T12:00:02	Date and time of file creation	l1events	44541	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

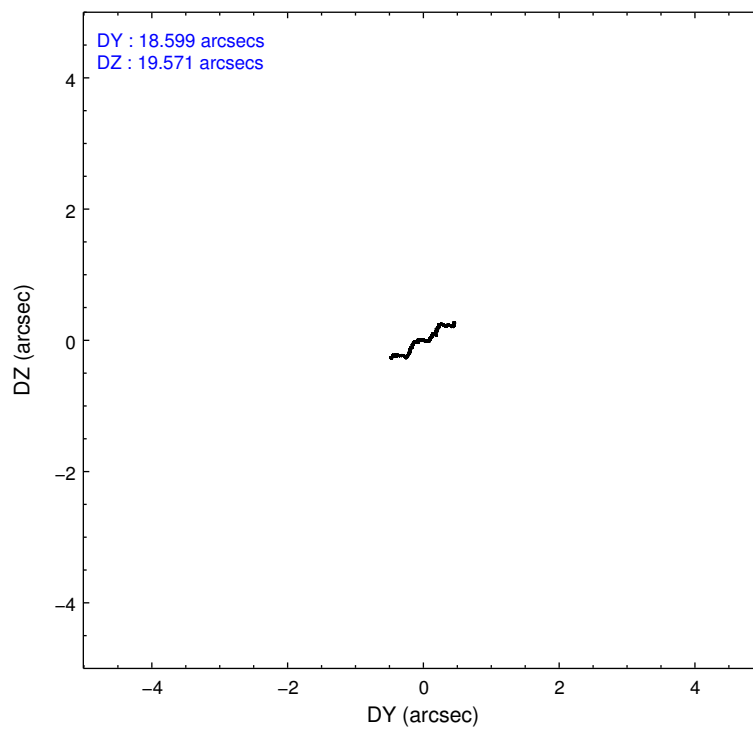
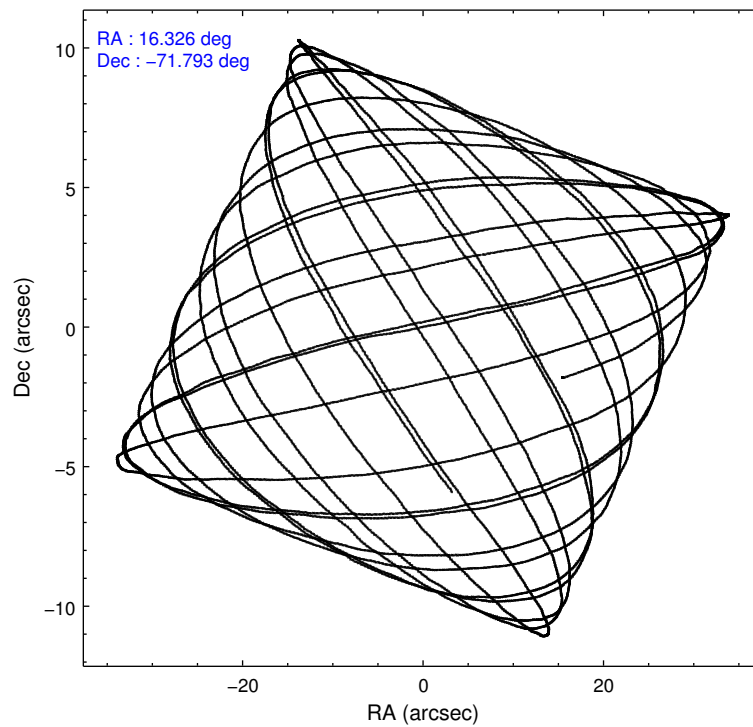
	<b>ccd 5</b>
level 1 events	44541
rejected events	10168
rejected %	22%

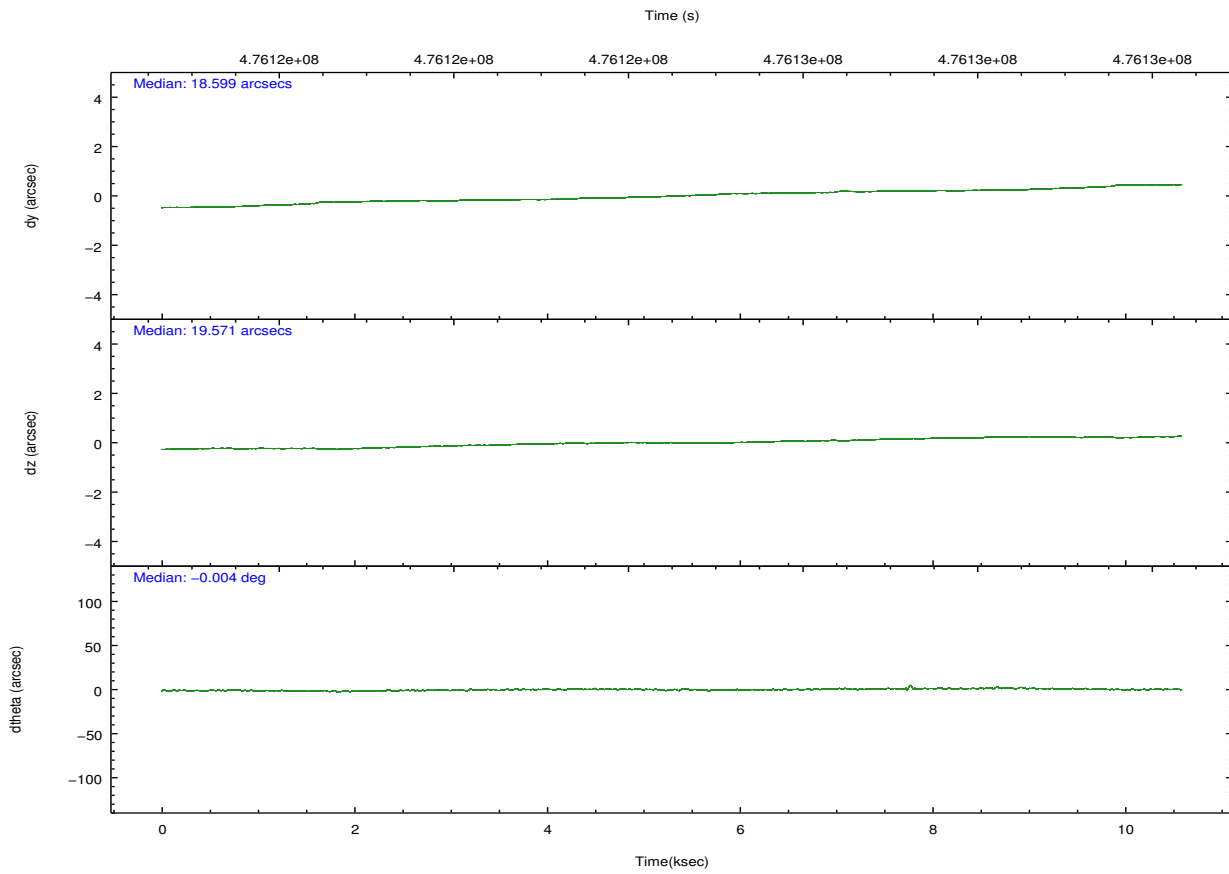
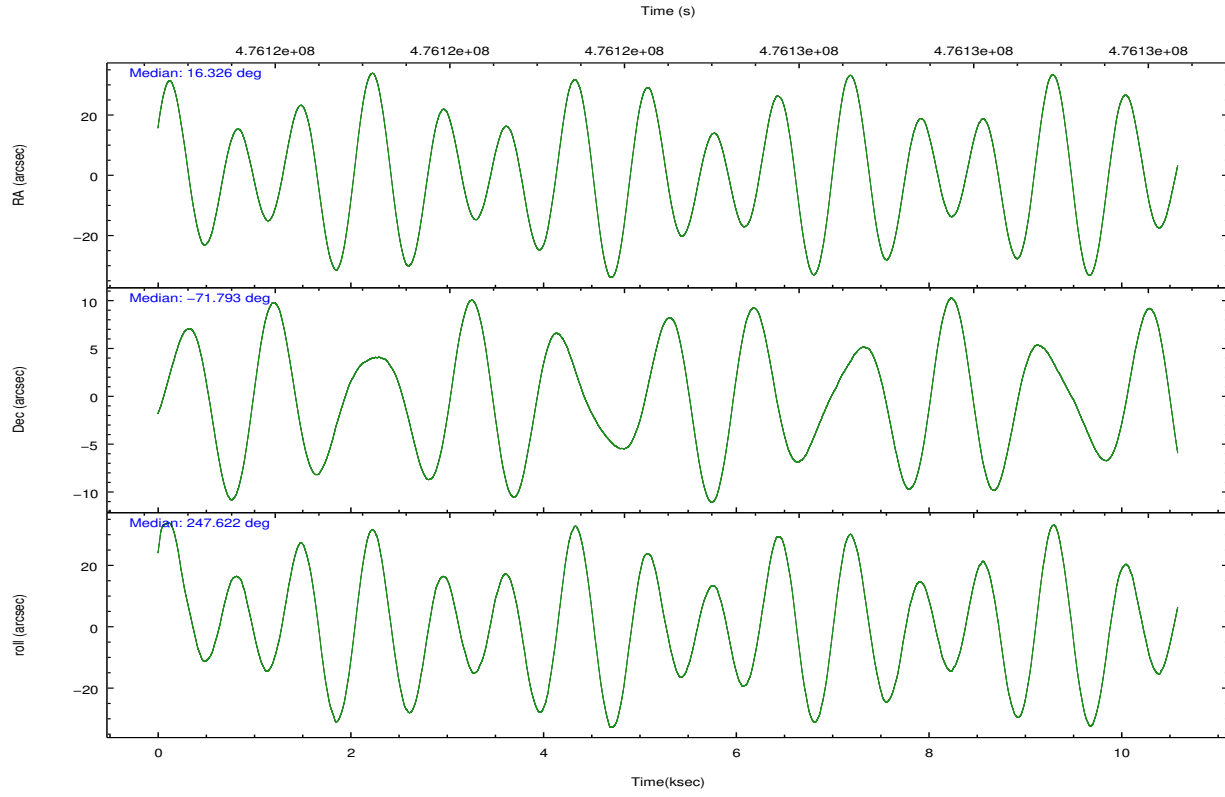
	<b>ccd 5</b>
grade 0 events	12290
	27%
grade 1 events	104
	0%
grade 2 events	9618
	21%
grade 3 events	2785
	6%
grade 4 events	2743
	6%
grade 5 events	2101
	4%
grade 6 events	6941
	15%
grade 7 events	7959
	17%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5	ACIS-5	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	16.313312	16.32615617587543	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-71.765962	-71.79294552955741	Subarray start row	769	769
[deg] Pointing Roll	247.459214	247.6280265598355	Subarray row count	256	256
[s] Window start time (MET)	470707267.184000	470707267.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	483667267.184000	483667267.184000	[s] Primary exposure time	0.000000	0.8
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-200.662523	-200.6599612715989			
[mm] SIM translation stage offset	10.53	10.5274386885911			
[s] Observation start time (MET)	476119779.184000	476118997.86367			
Observation start date	2013-02-01T15:28:32	2013-02-01T15:16:37			
[s] Observation end time (MET)	476129780.184000	476130008.41426			
Observation end date	2013-02-01T18:15:13	2013-02-01T18:20:08			
Read mode	TIMED	TIMED			

## 2.3 Aspect





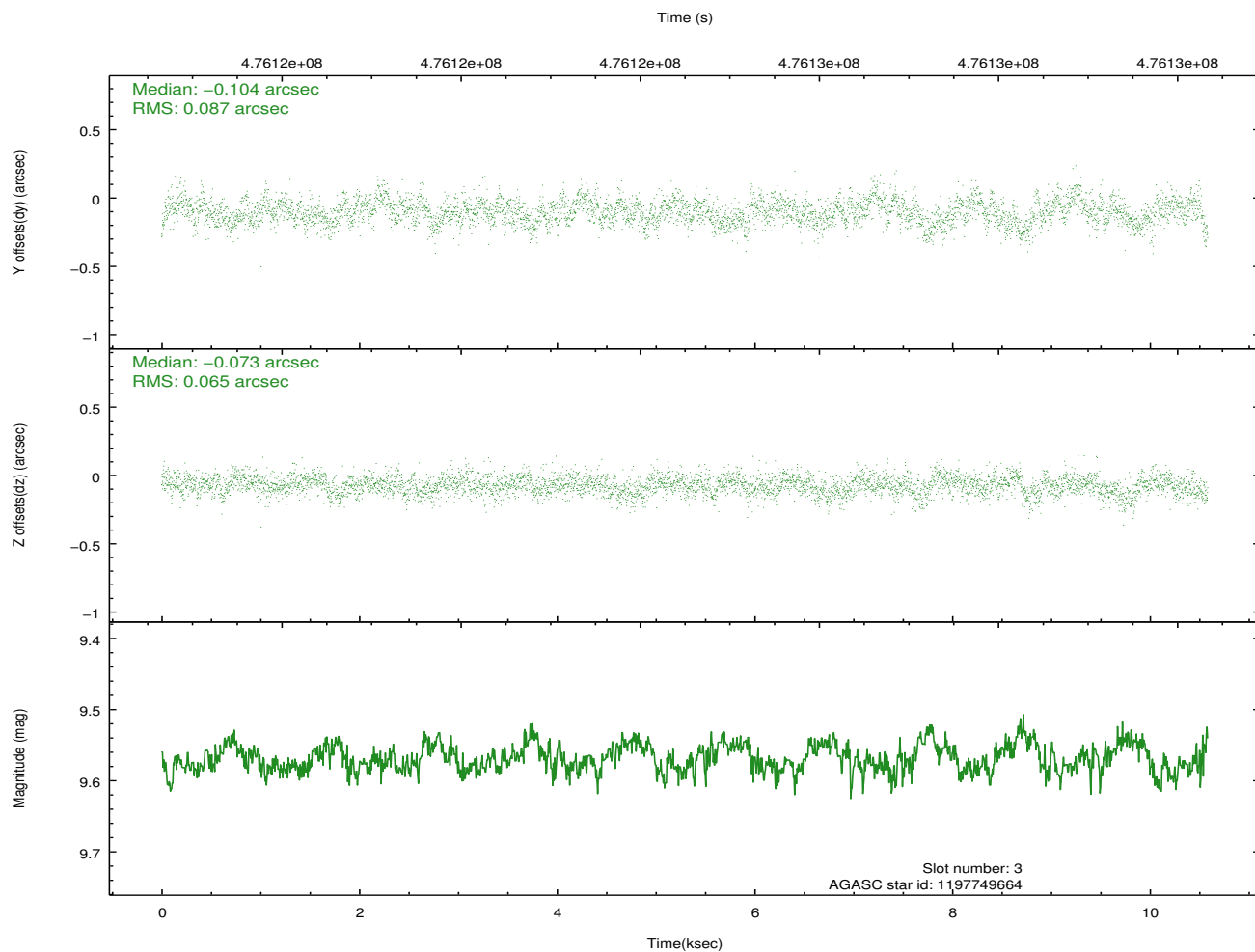
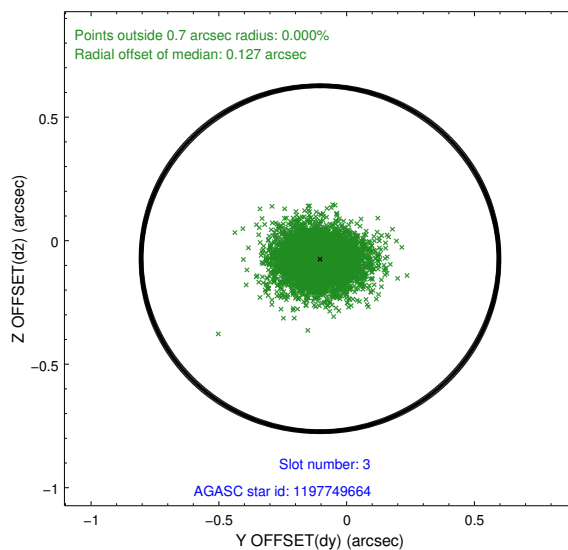
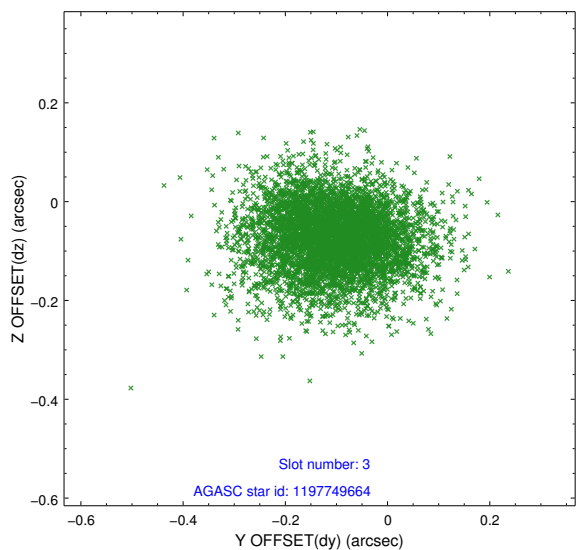
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.02	2582	0.061	-0.190	0.013	0.022	0.000000	0.000000	923.76	-1519.89
1	FID		ACIS-S-5	7.03	2581	-0.102	0.008	0.009	0.015	0.000000	0.000000	-1825.07	377.54
2	FID		ACIS-S-6	7.10	2582	0.019	0.194	0.012	0.020	0.000000	0.000000	388.81	1022.17
3	GUIDE	used	1197749664	9.57	5160	-0.104	-0.073	0.113	0.192	15.809015	-72.366369	2209.69	322.00
4	GUIDE	used	1197750936	7.58	5162	0.191	0.185	0.073	0.113	15.387940	-71.549550	-306.05	-1268.56
5	GUIDE	used	1197884536	8.50	5164	-0.054	0.071	0.078	0.128	17.160729	-71.835289	-127.41	976.57
6	GUIDE	used	1197884712	8.29	5163	0.004	-0.050	0.068	0.105	16.087398	-72.252690	1714.50	443.49
7	GUIDE	used	1197885104	9.34	5161	-0.043	-0.139	0.113	0.181	17.845067	-72.189368	782.85	2150.26

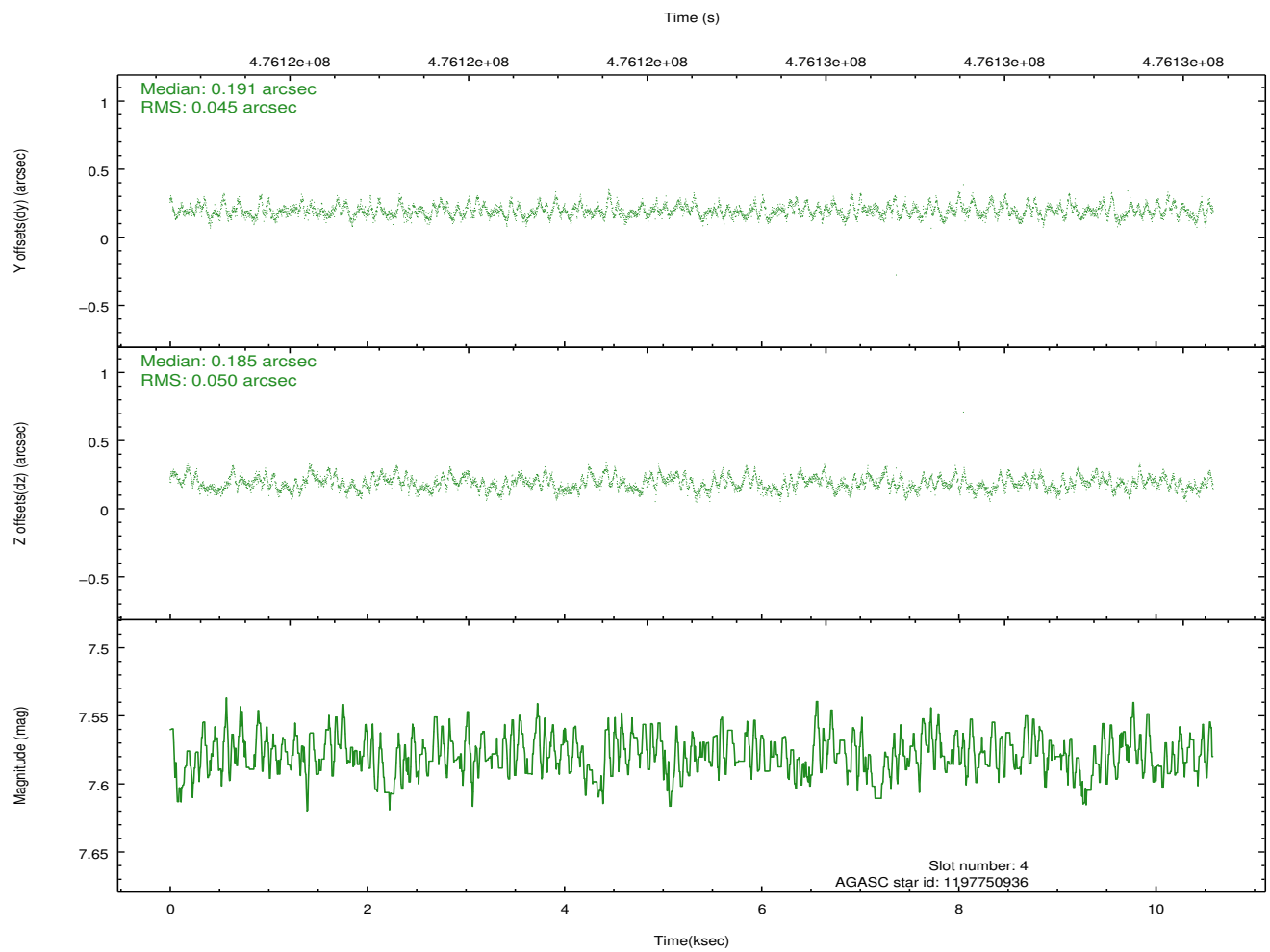
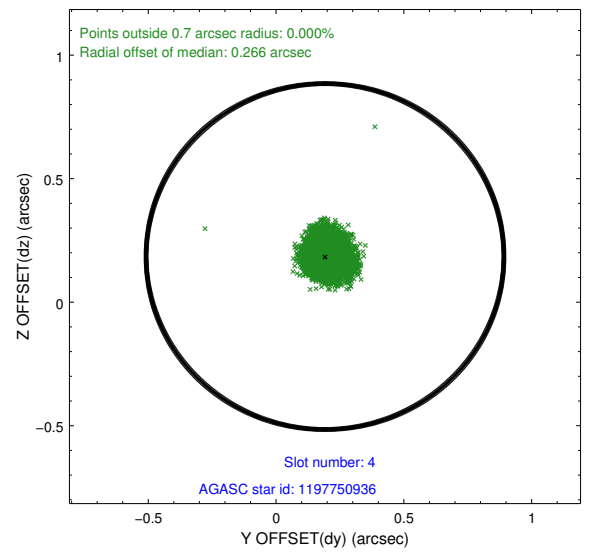
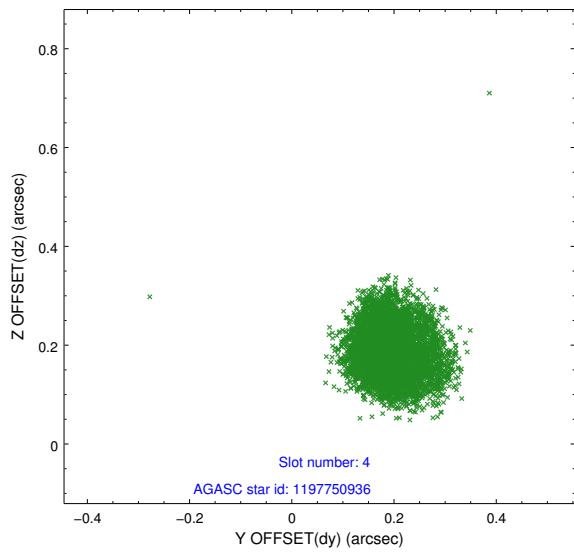
∞

## 2.4 Star Slots

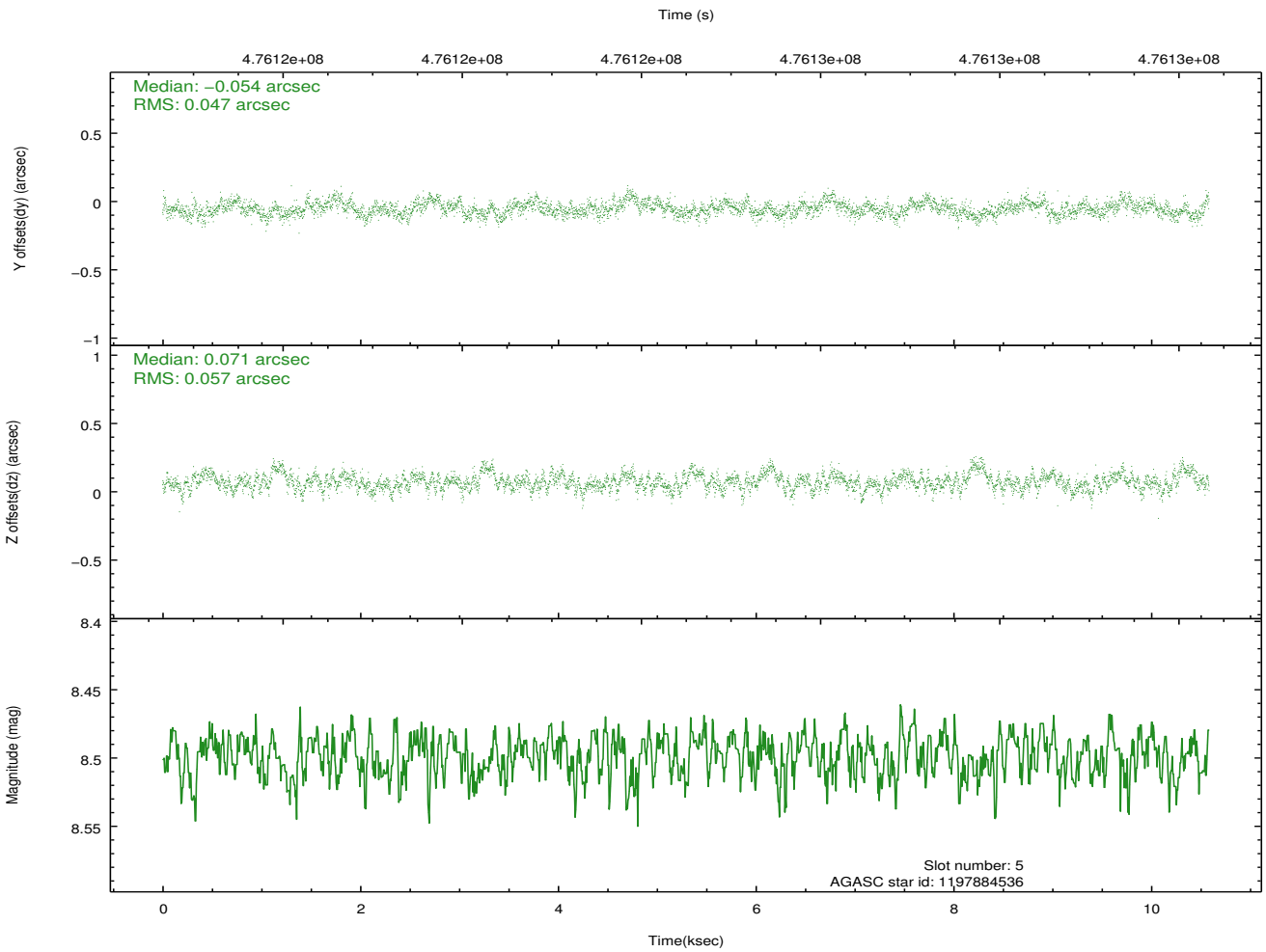
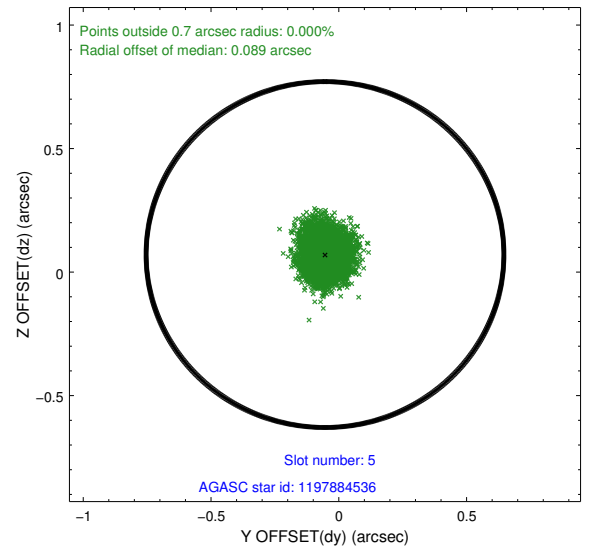
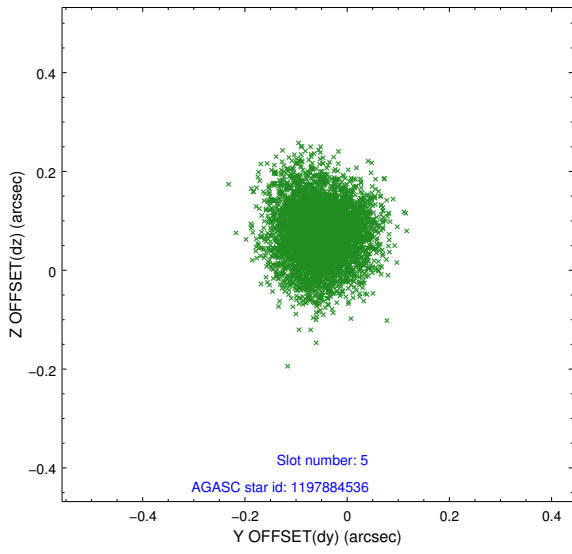
### 2.4.1 Slot 3



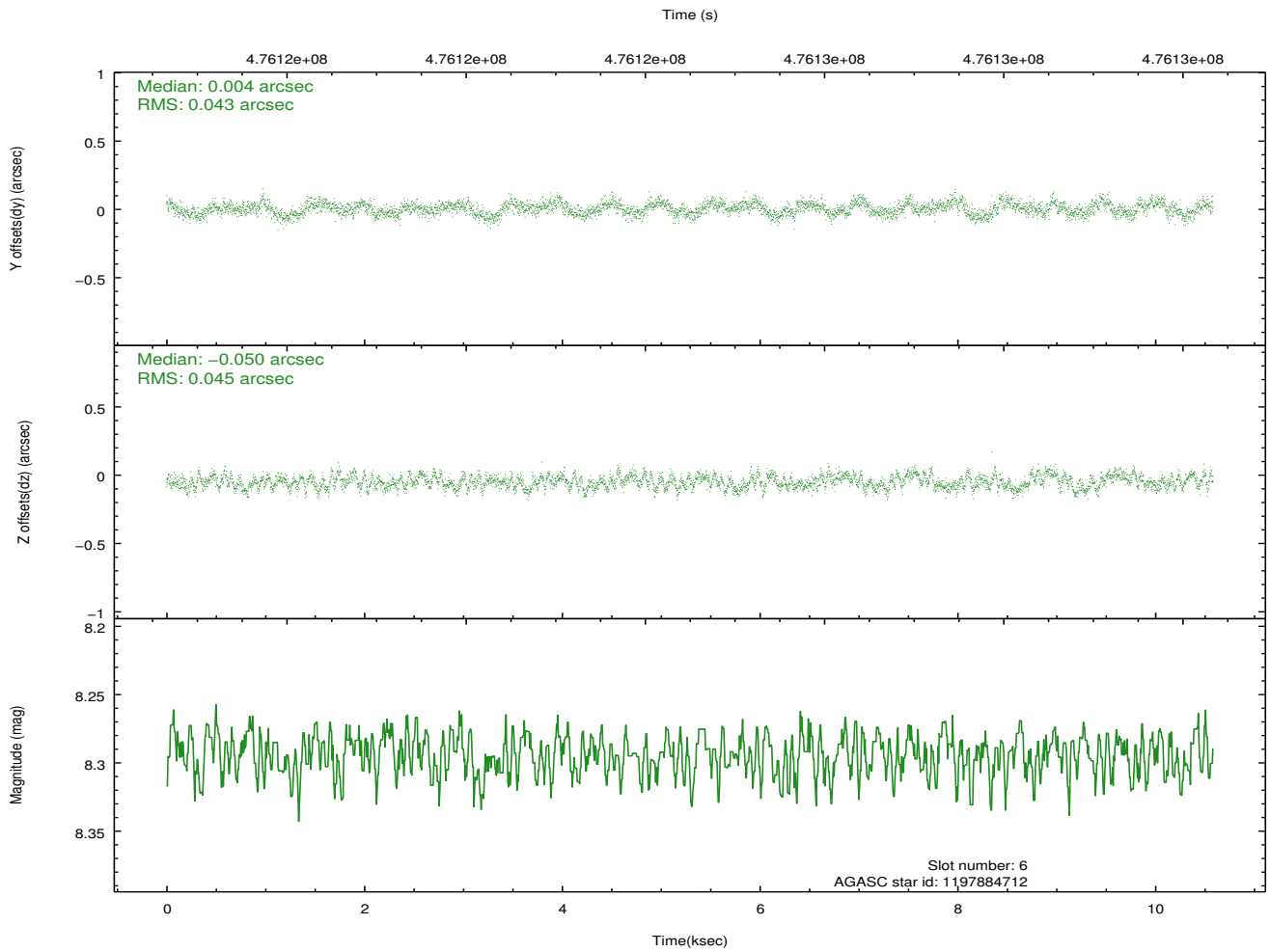
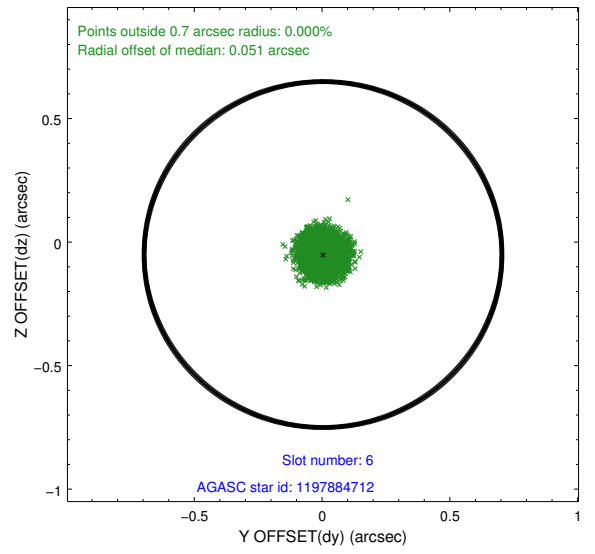
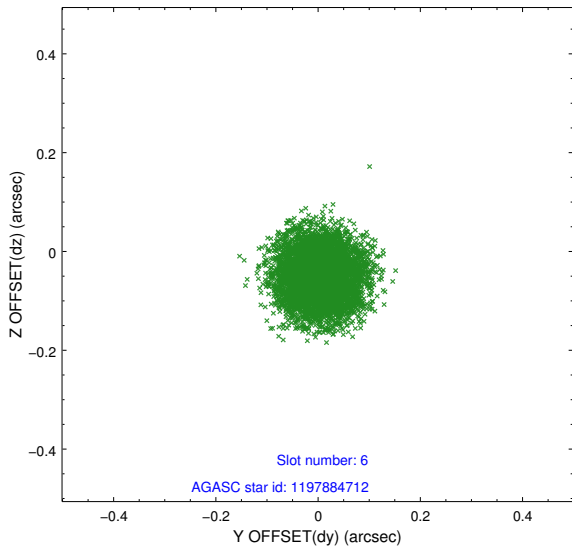
## 2.4.2 Slot 4



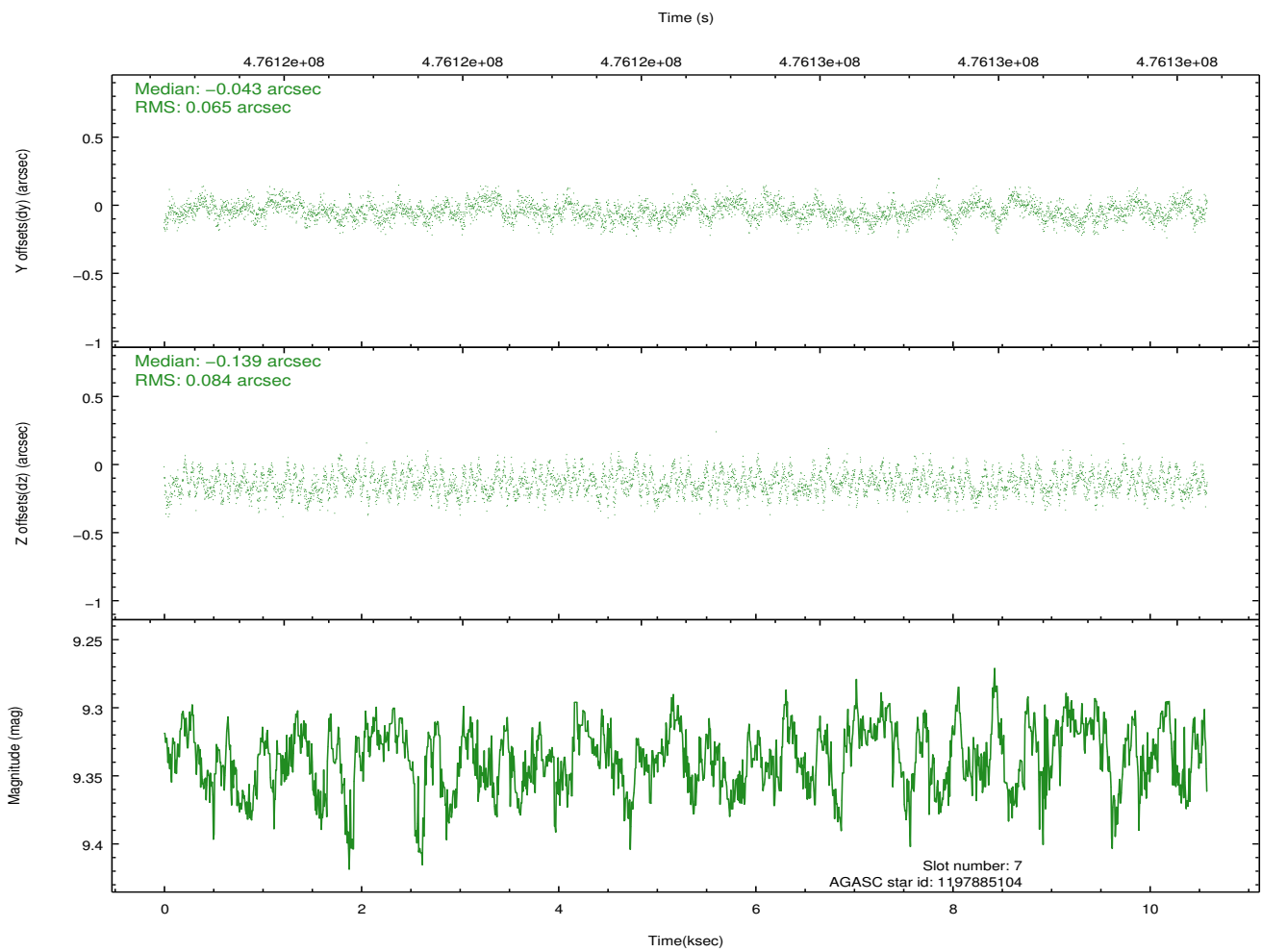
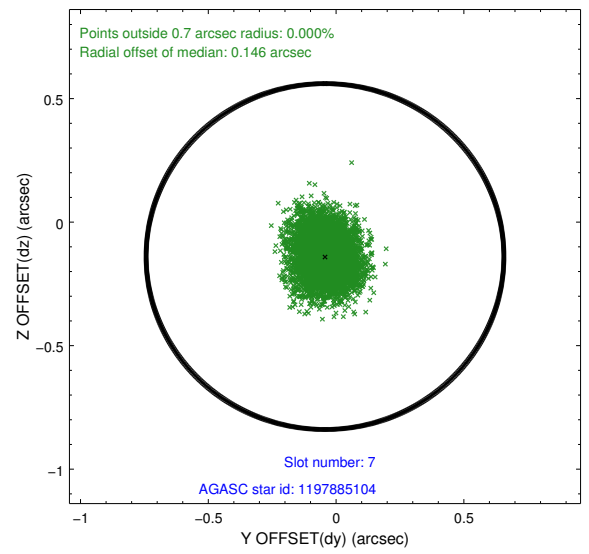
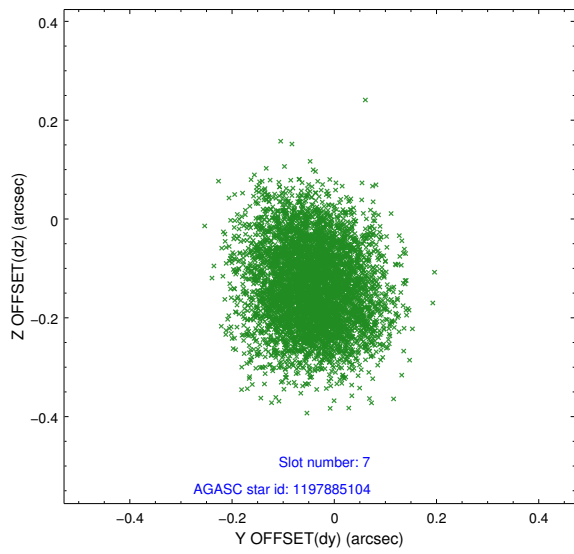
### 2.4.3 Slot 5



### 2.4.4 Slot 6

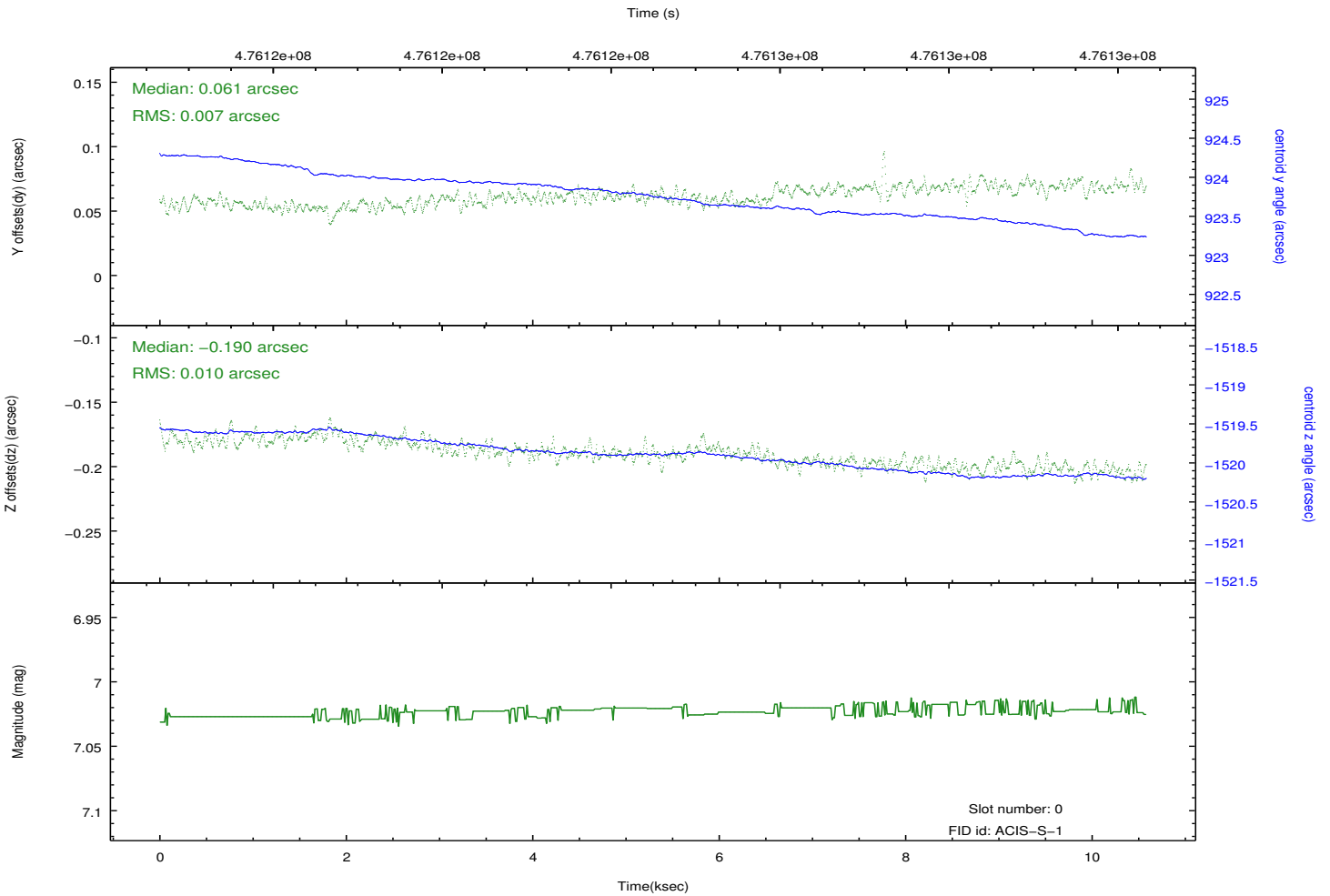
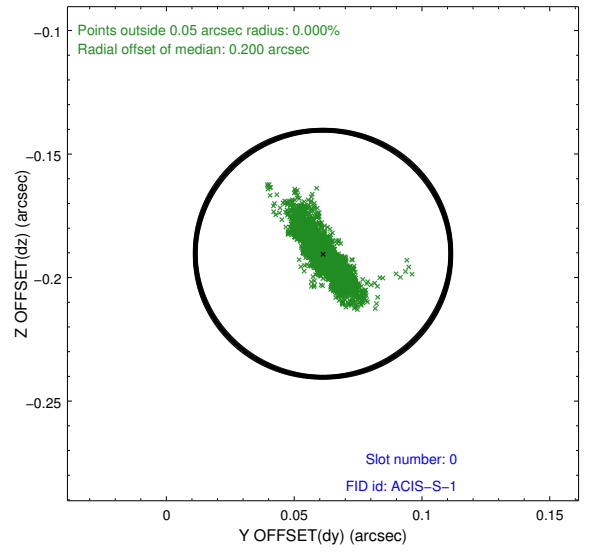
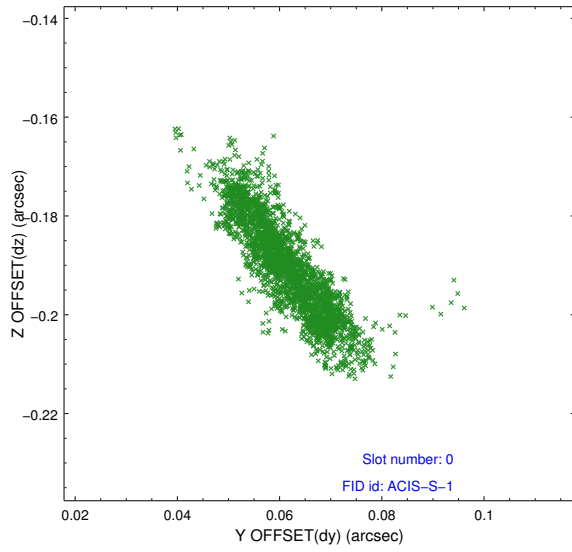


## 2.4.5 Slot 7

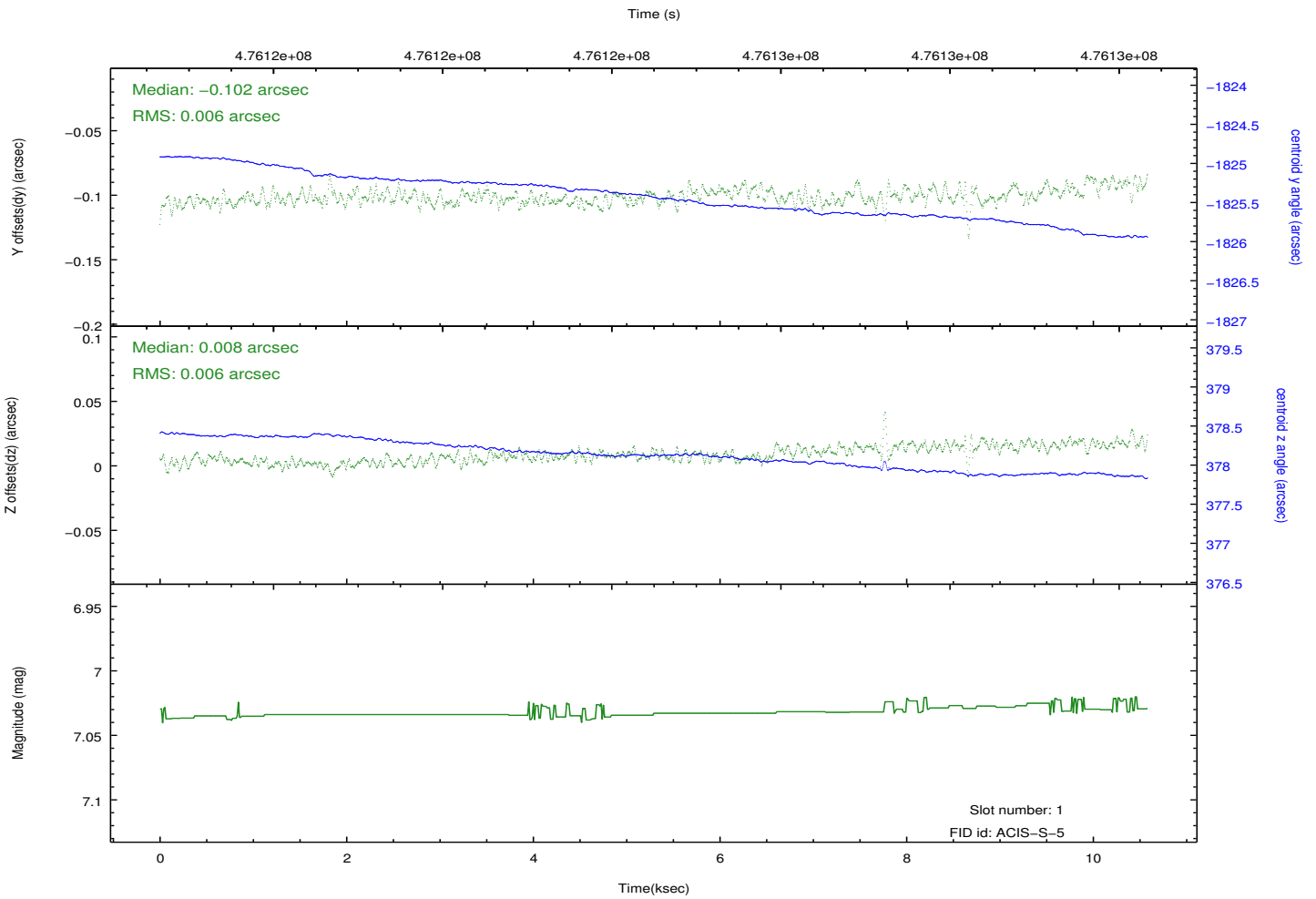
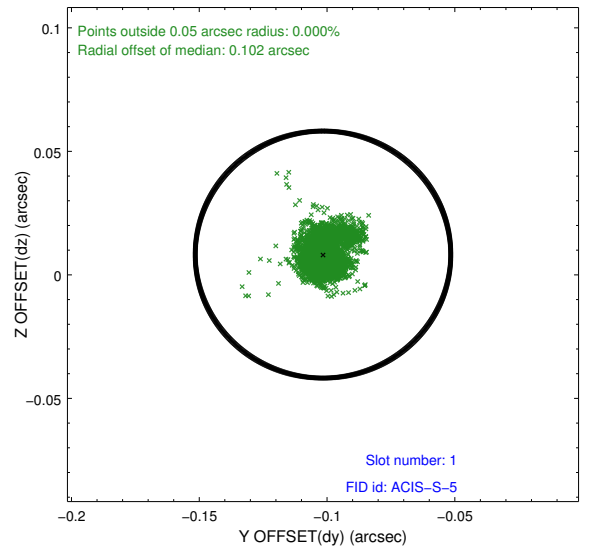
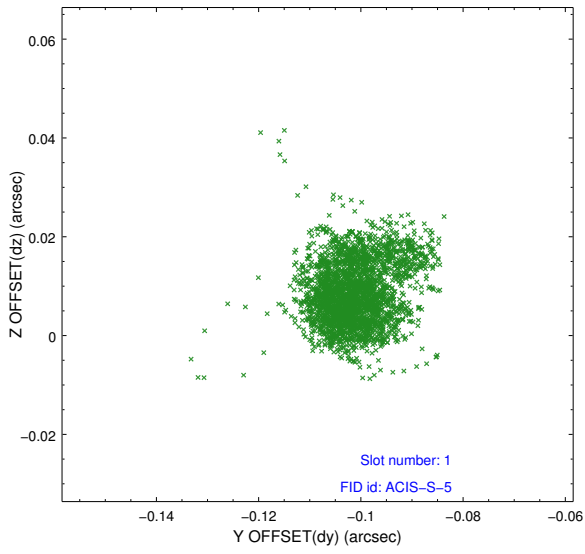


## 2.5 FID Slots

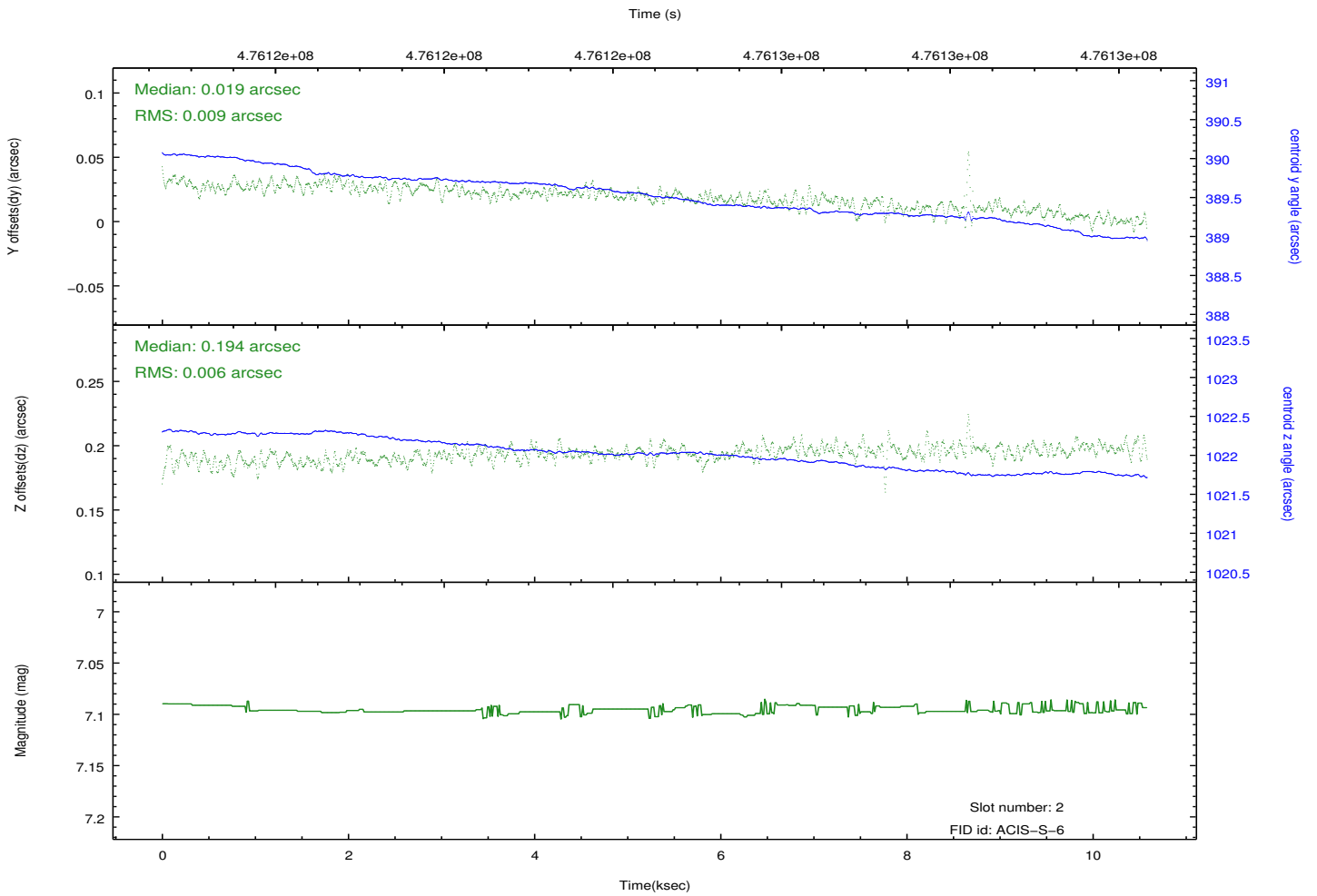
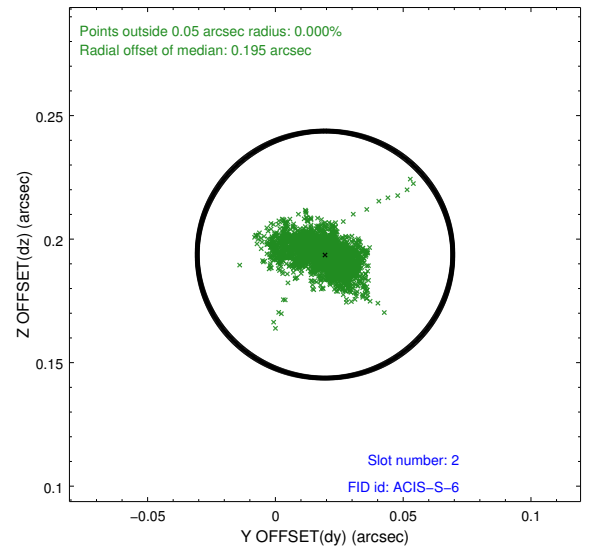
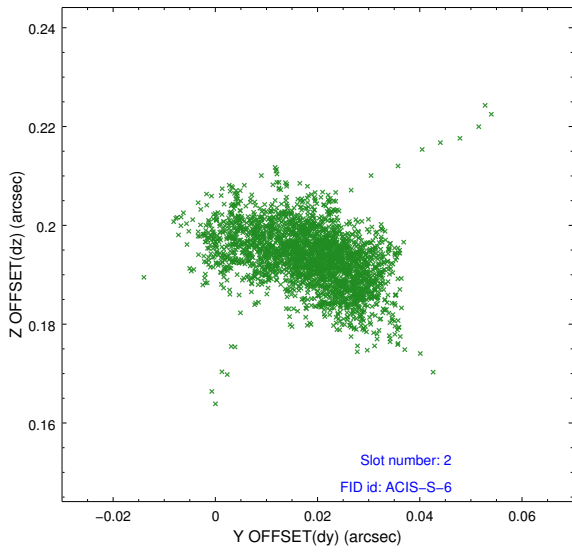
### 2.5.1 Slot 0



## 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)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.065600150049

## A.2 Comments

Window preference met.

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.