

# V&V Reference Report

## L2 ASCDS Version : 10.3

Observation 17005 - L2 Version 1  
Chandra X-Ray Center

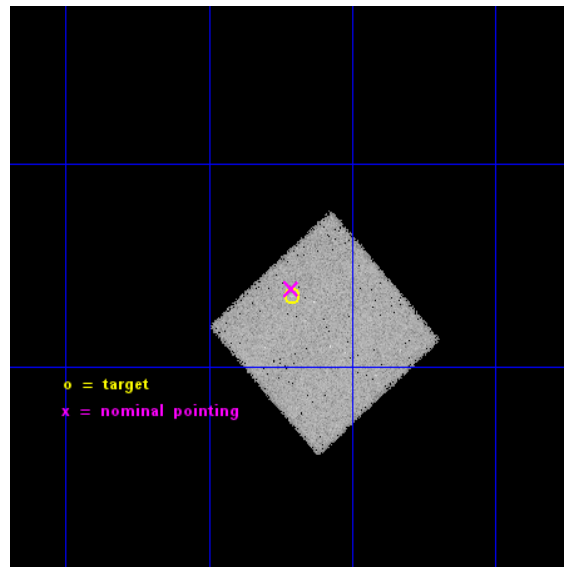
L2 Processing Date : Dec 1 2014

## 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

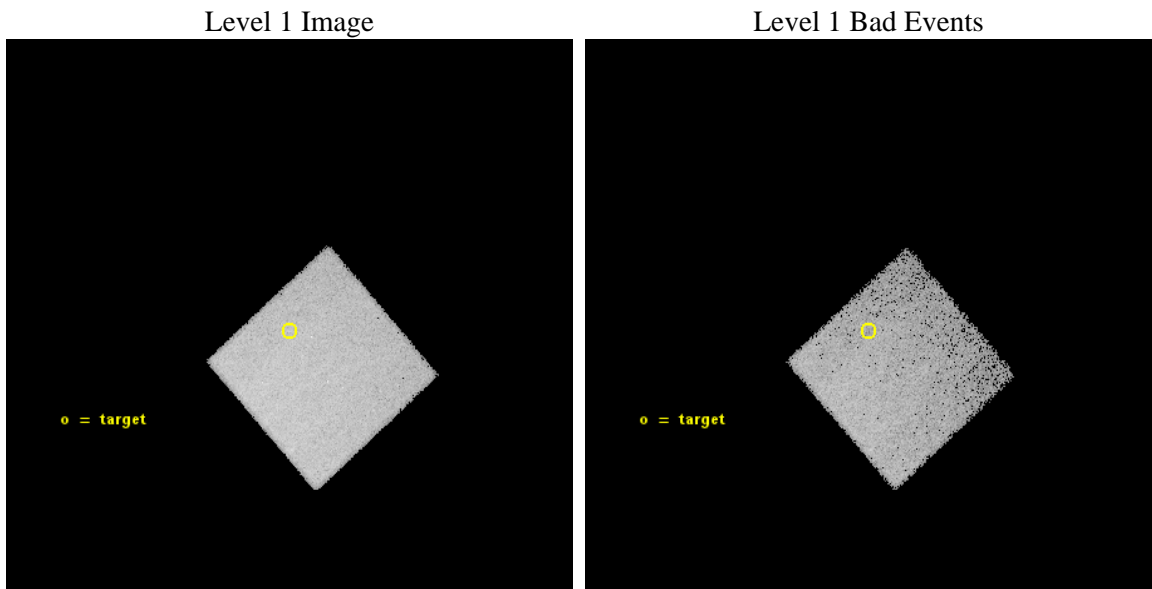
seq_num	601198	Sequence number
obs_id	17005	Observation id
title	Massive Black Holes in Water Maser Merging Galaxies	Proposal title
observer	Jeremy Darling	Principal investigator
object	IIZw40	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	88.9275	Observer's specified target RA [deg]
dec_targ	3.392222	Observer's specified target Dec [deg]
ra_nom	88.927761138246	Nominal RA [deg]
dec_nom	3.3976357470486	Nominal Dec [deg]
roll_nom	48.176996332859	Nominal Roll [deg]
revision	1	Processing version of data
ontime	29183.162852228	Sum of GTIs [s]
livetime	28789.324887763	Livetime [s]
ontime7	29183.162852228	Sum of GTIs [s]
l2events	86045	Number of level 2 events



## 2 OBI

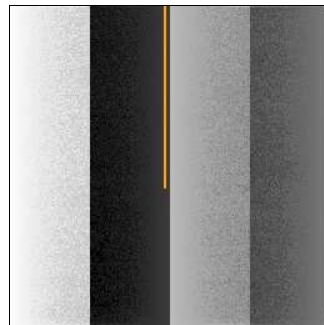
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29090.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	29183.162852228	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	29183.162852228	Sum of GTIs [s]
date	2014-12-01T16:46:23	Date and time of file creation	l1events	200775	Number of level 1 events
revision	1	Processing version of data			

### 2.1.4 Events

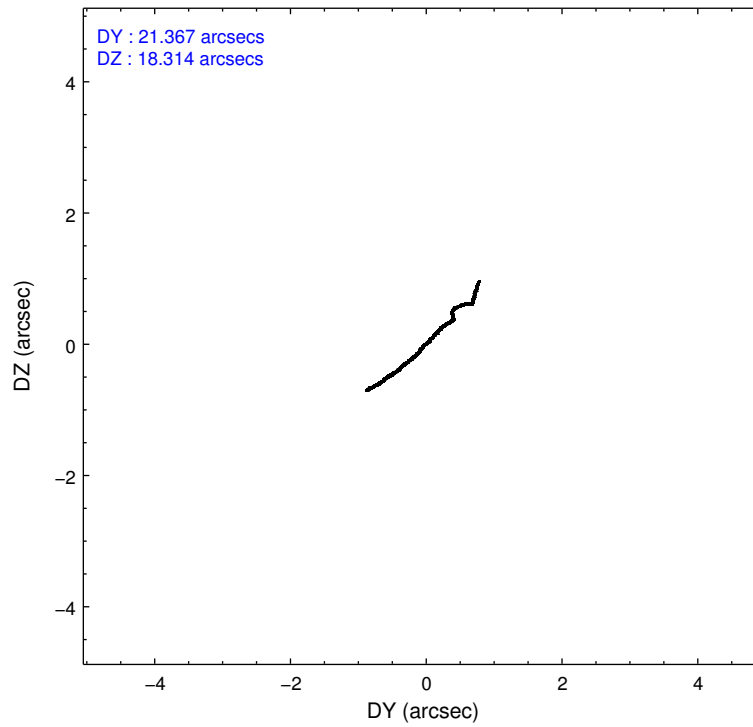
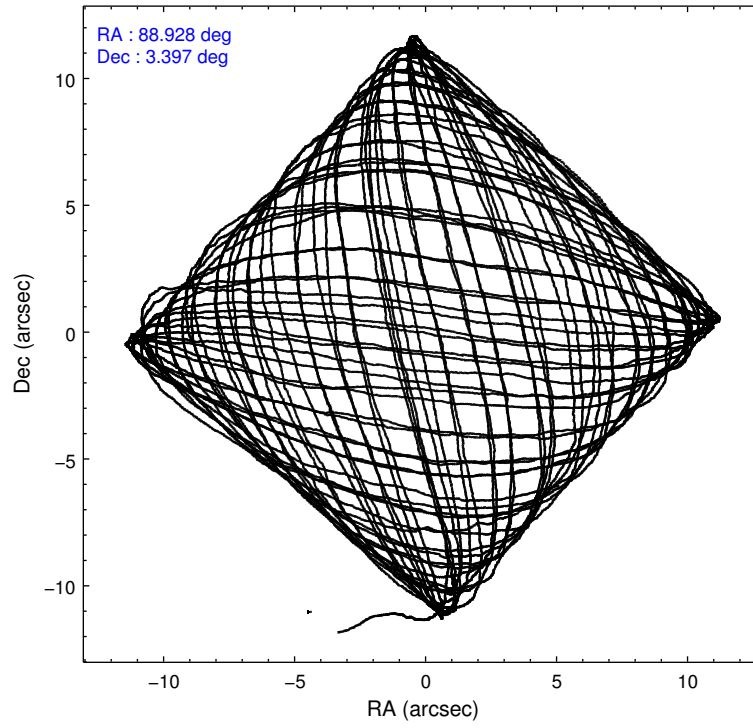
	<b>ccd 7</b>
level 1 events	200775
rejected events	112541
rejected %	<b>56%</b>

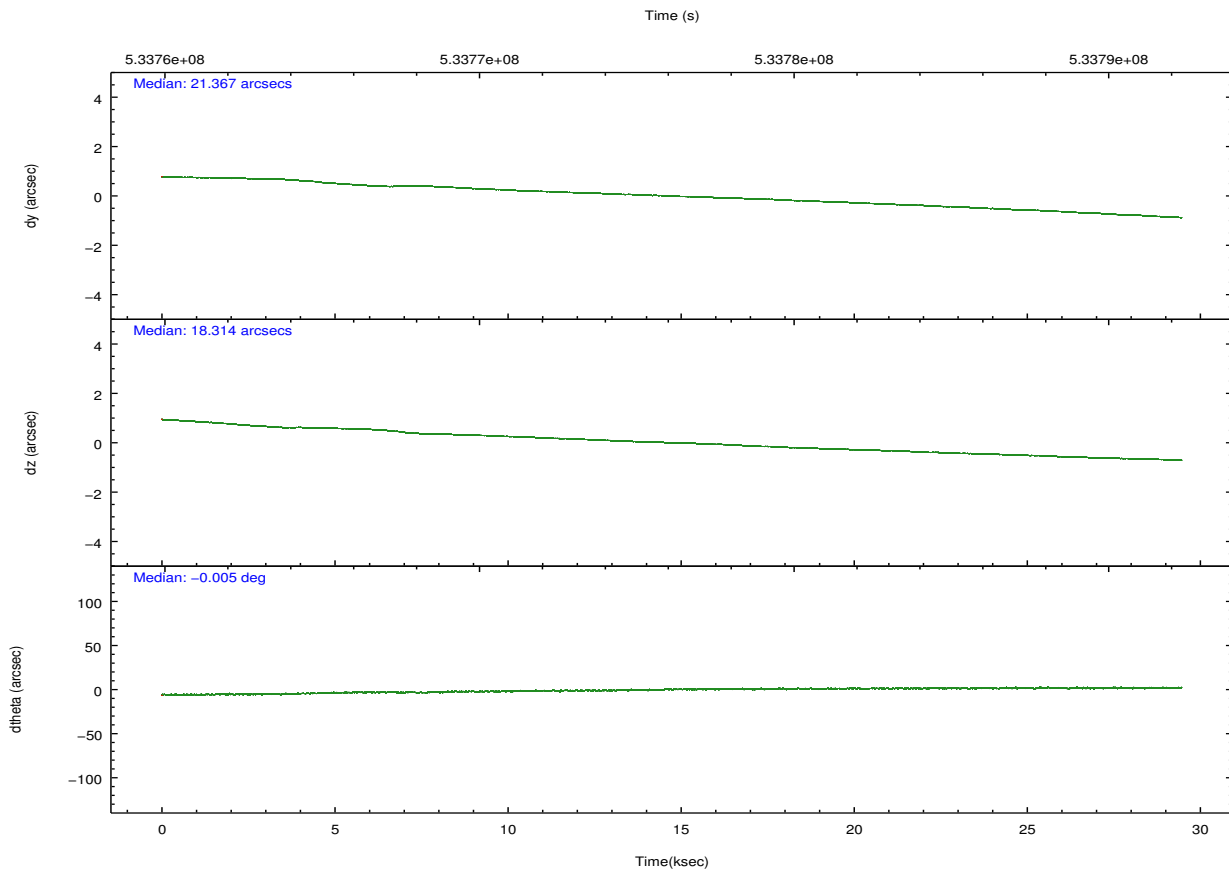
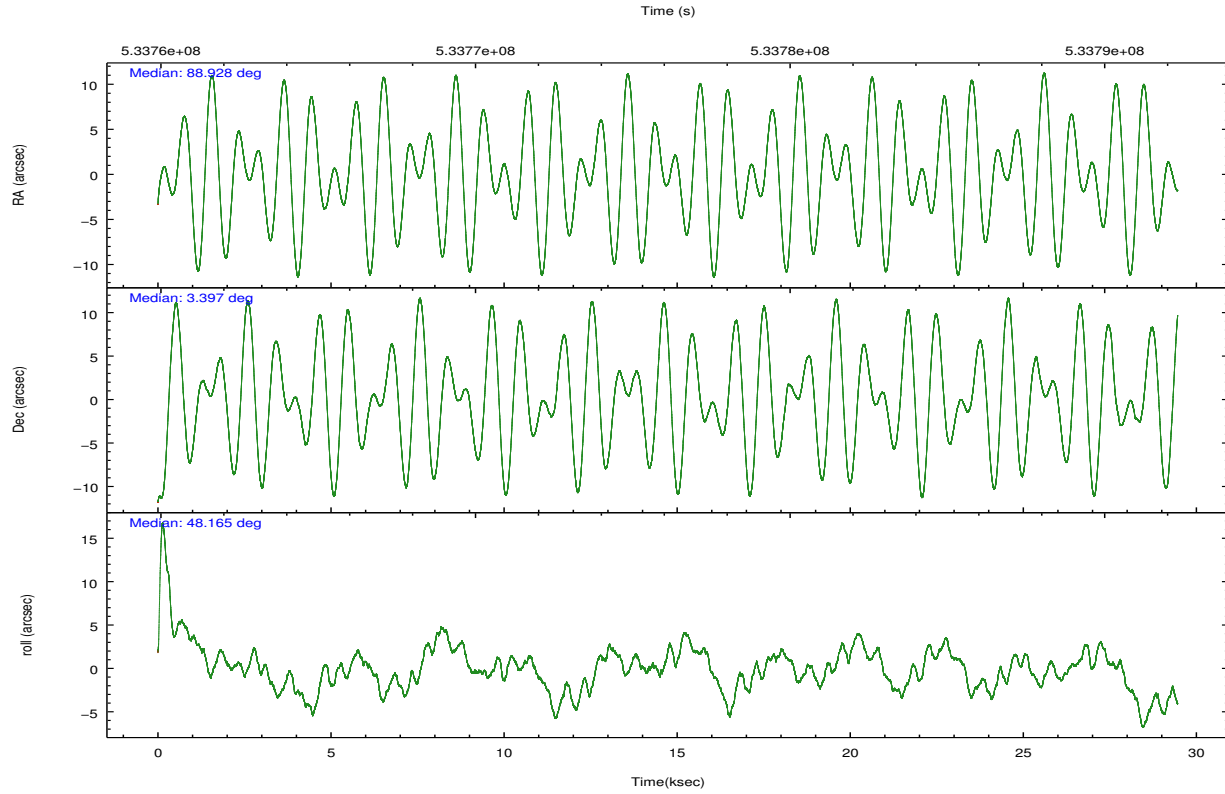
	<b>ccd 7</b>
grade 0 events	7698
	3%
grade 1 events	253
	0%
grade 2 events	18130
	9%
grade 3 events	7358
	3%
grade 4 events	7372
	3%
grade 5 events	20532
	10%
grade 6 events	47689
	23%
grade 7 events	91743
	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	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	88.922489	88.92776113824584	Subarray requested	NONE	NONE
[deg] Pointing Dec	3.370713	3.397635747048635	Alternating exposures requested	N	N
[deg] Pointing Roll	48.020682	48.17699633285915	[s] Primary exposure time	0.000000	3
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	533761745.184000	533760664.25167			
Observation start date	2014-11-30T19:07:58	2014-11-30T18:51:04			
[s] Observation end time (MET)	533790835.184000	533791896.51591			
Observation end date	2014-12-01T03:12:48	2014-12-01T03:31:36			
Read mode	TIMED	TIMED			

## 2.3 Aspect



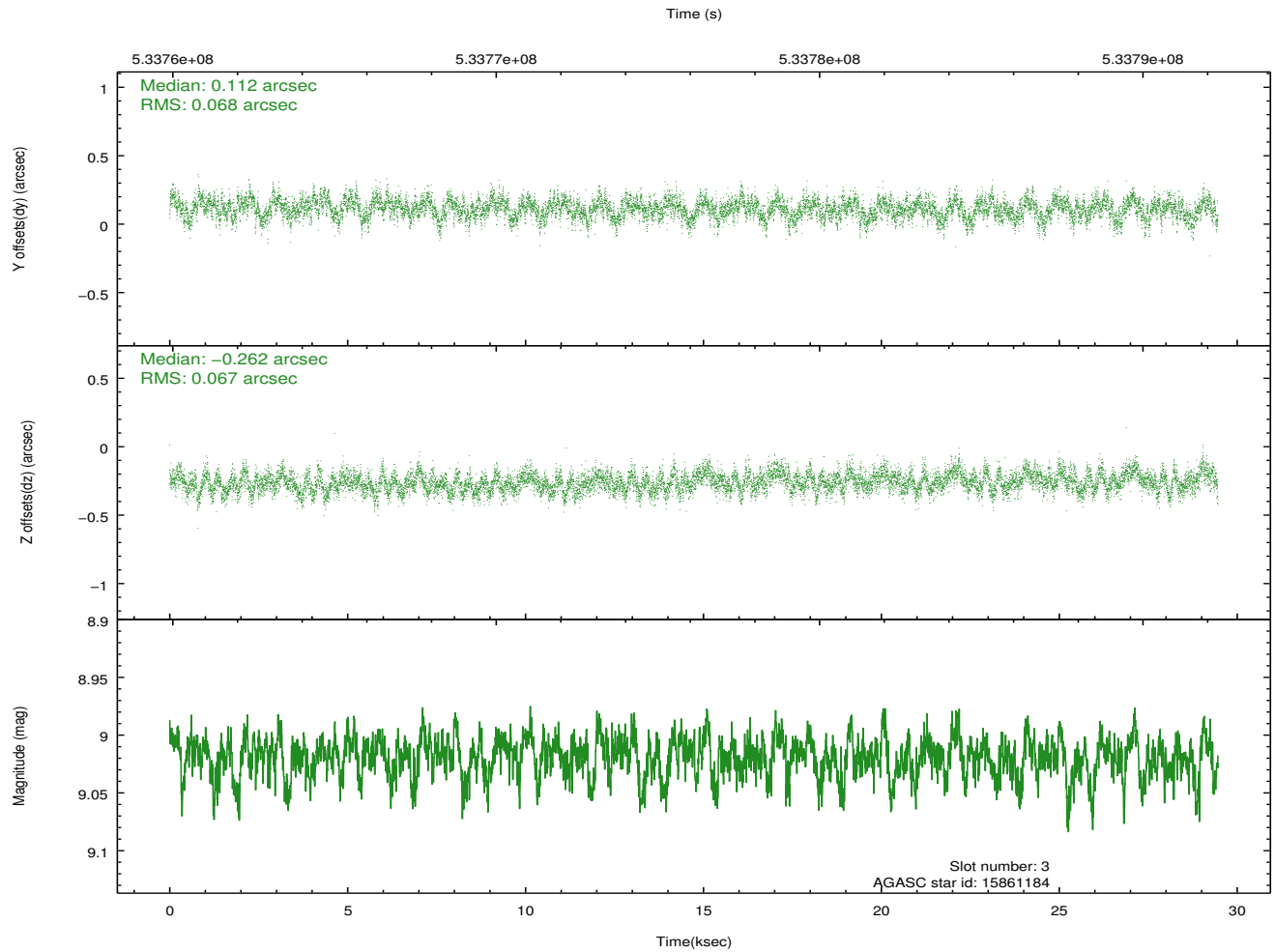
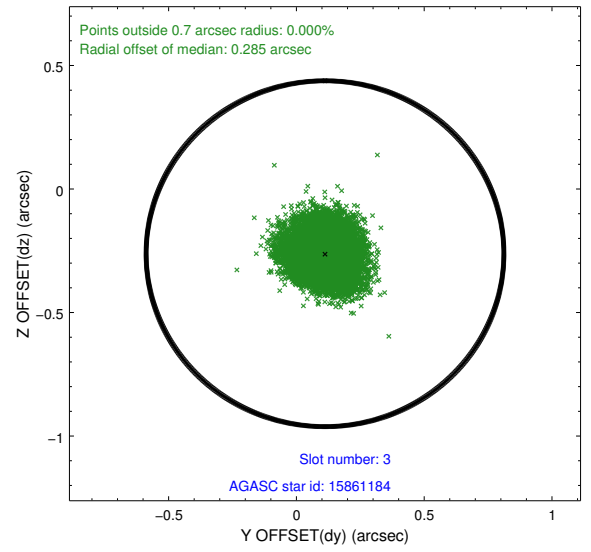
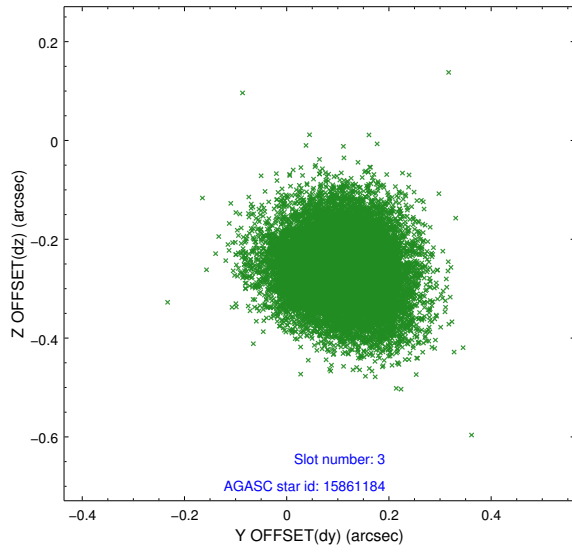


### Slot Statistics

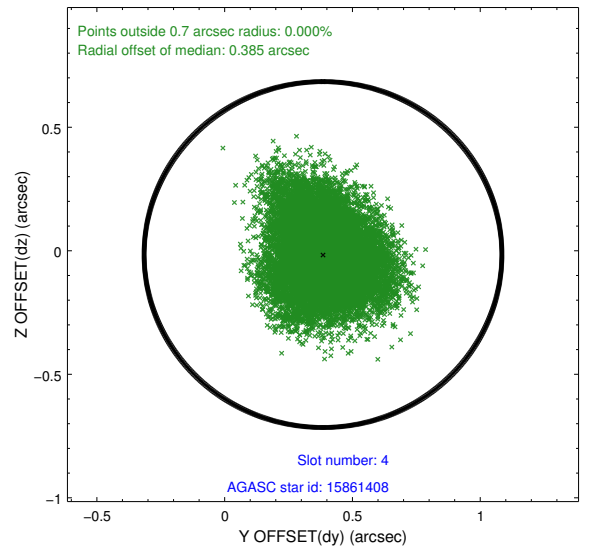
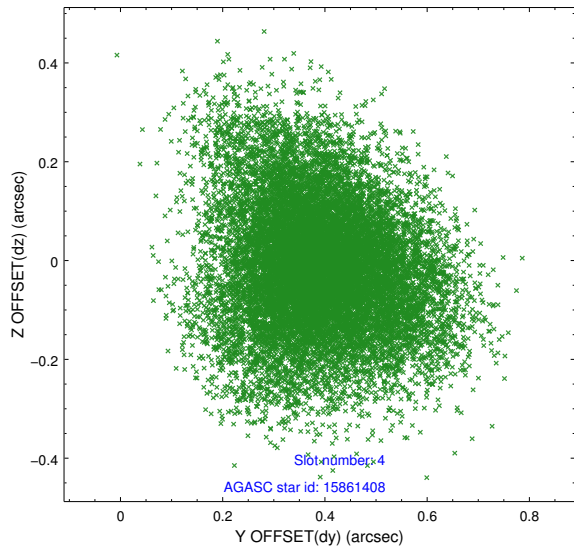
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.02	7186	0.032	0.009	0.015	0.023	0.000000	0.000000	921.56	-1735.44
1	FID		ACIS-S-4	7.02	7186	0.183	-0.019	0.016	0.030	0.000000	0.000000	2139.16	168.62
2	FID		ACIS-S-5	7.04	7186	-0.243	0.021	0.011	0.027	0.000000	0.000000	-1827.49	162.33
3	GUIDE	used	15861184	9.02	14367	0.112	-0.262	0.102	0.163	88.177557	3.346684	-1854.32	1932.80
4	GUIDE	used	15861408	9.62	14357	0.385	-0.015	0.179	0.297	88.479994	3.147474	-1660.69	645.31
5	GUIDE	used	15863448	9.68	14347	0.130	0.404	0.178	0.281	89.279730	2.844092	-549.46	-2222.30
6	GUIDE	used	15865512	8.69	14367	-0.504	0.129	0.134	0.208	89.567711	3.435310	1724.37	-1566.85
7	GUIDE	used	15865984	6.01	14371	-0.137	-0.269	0.091	0.141	88.565659	3.225644	-1245.77	602.86

## 2.4 Star Slots

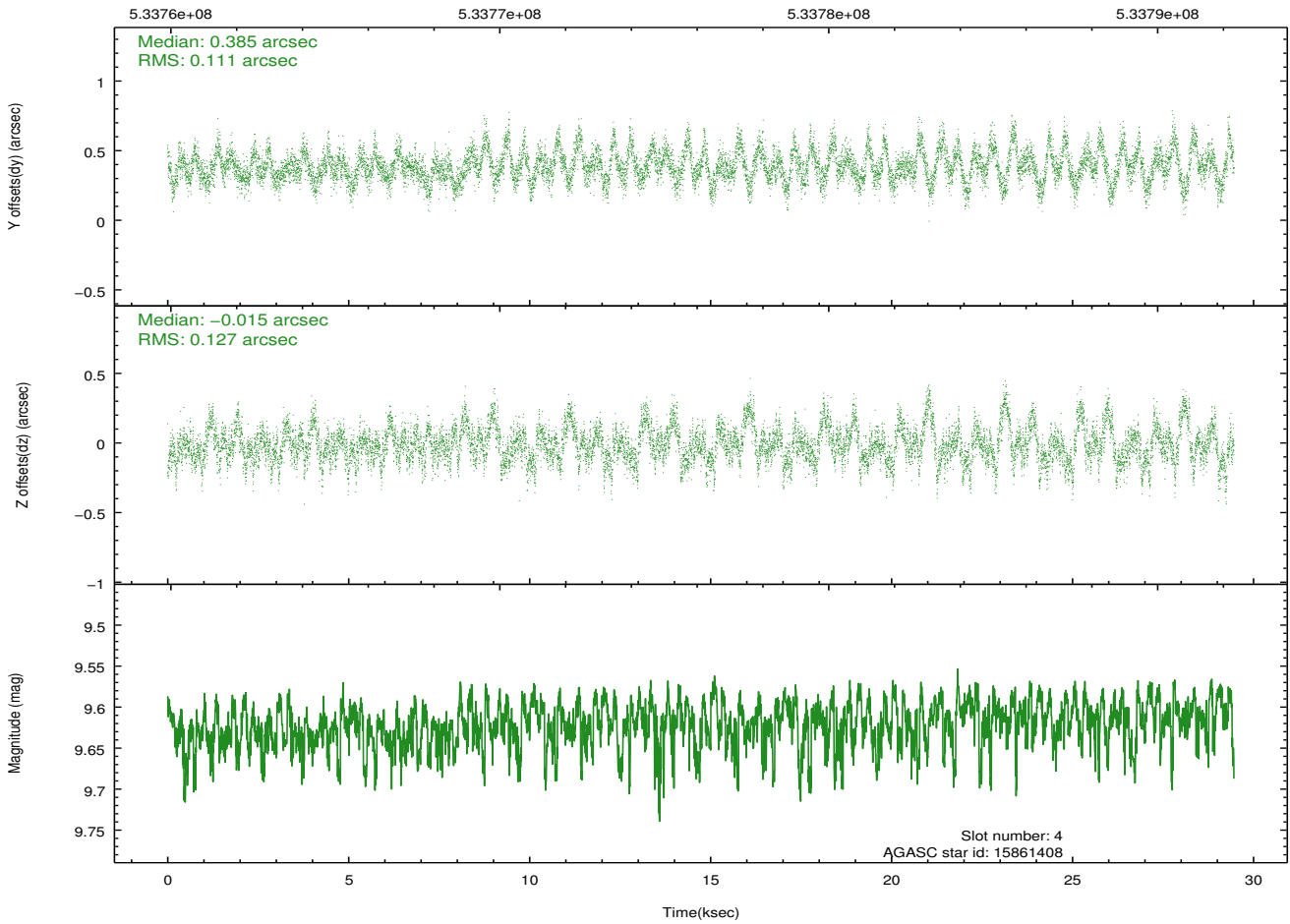
### 2.4.1 Slot 3



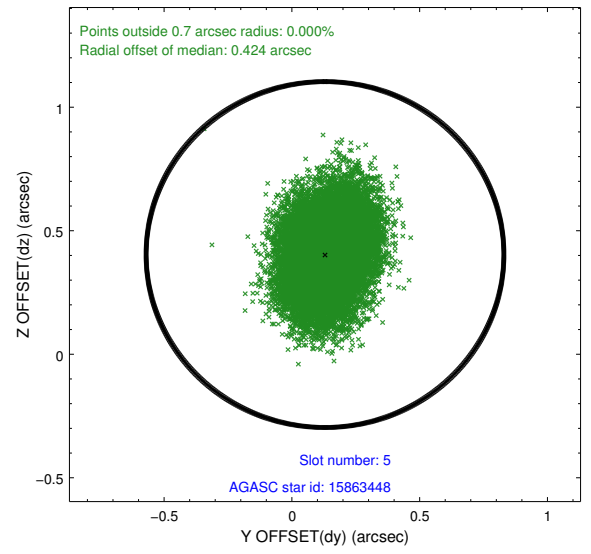
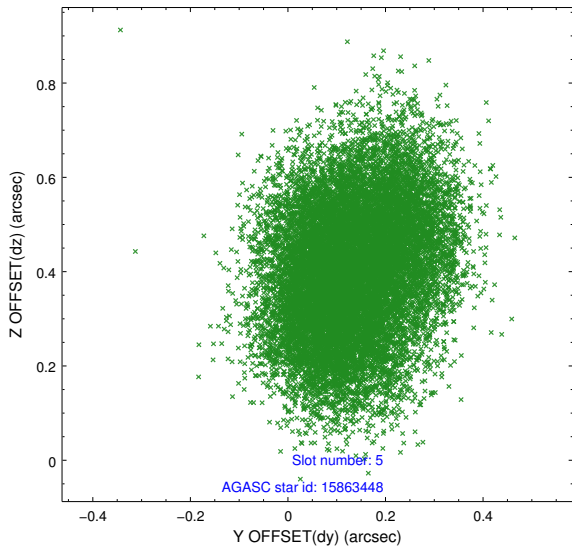
## 2.4.2 Slot 4



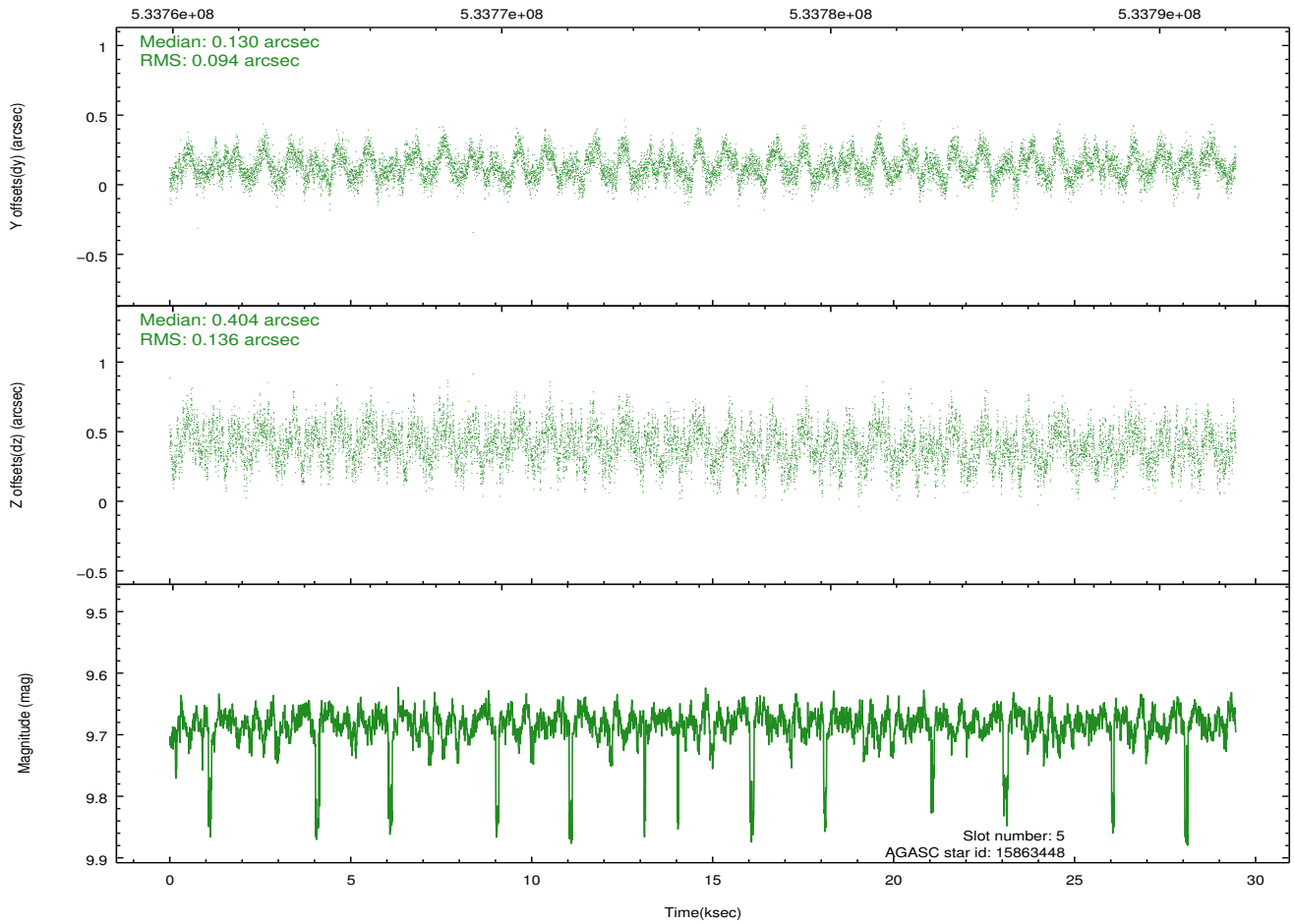
Time (s)



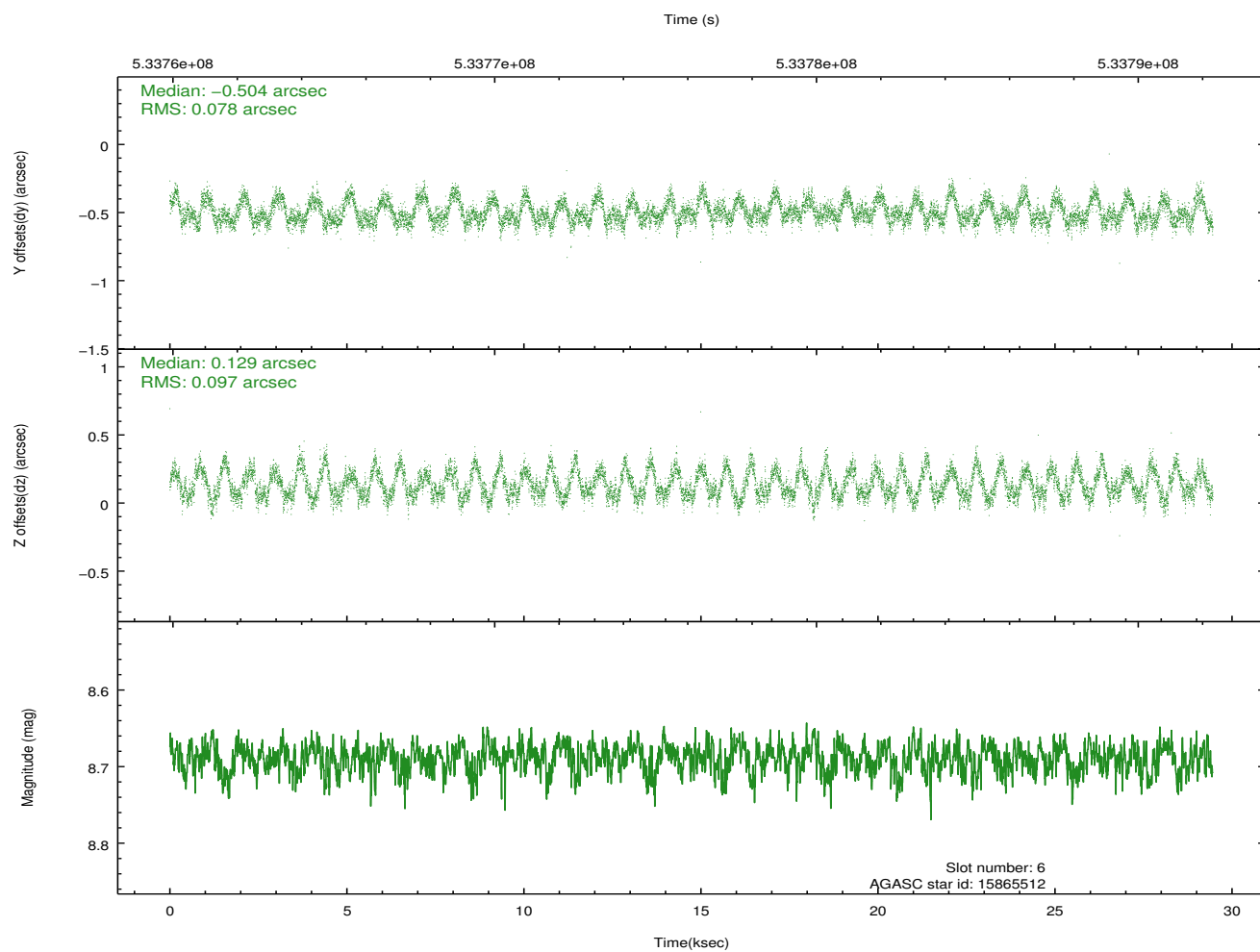
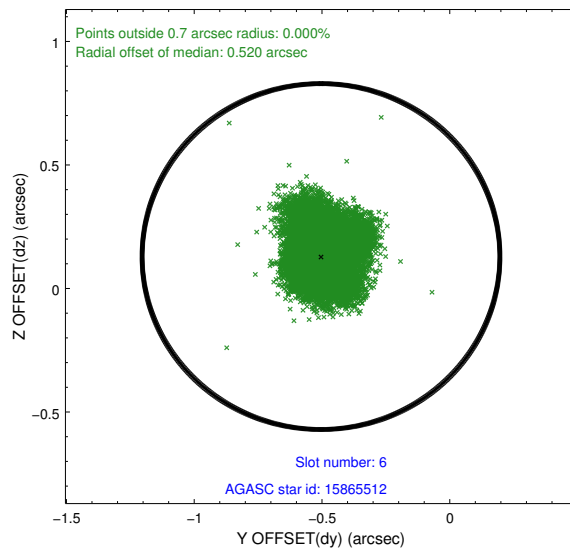
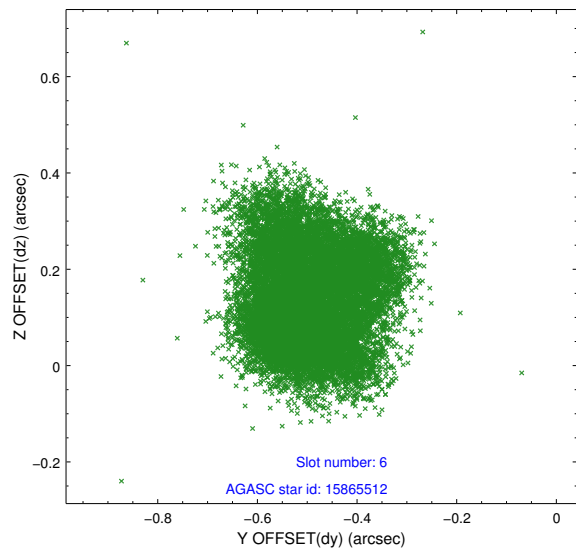
### 2.4.3 Slot 5



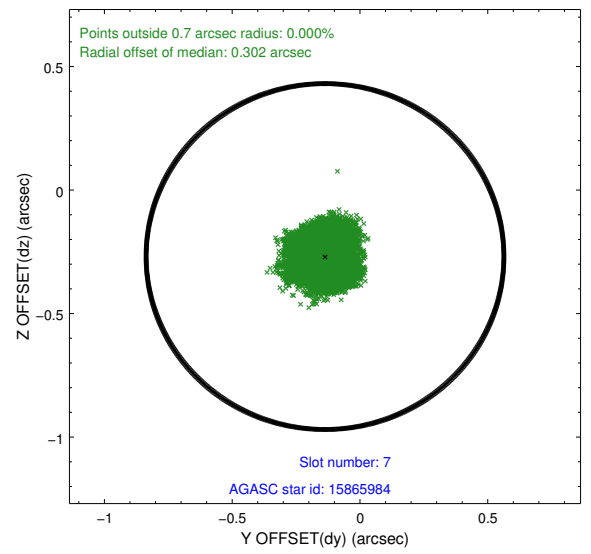
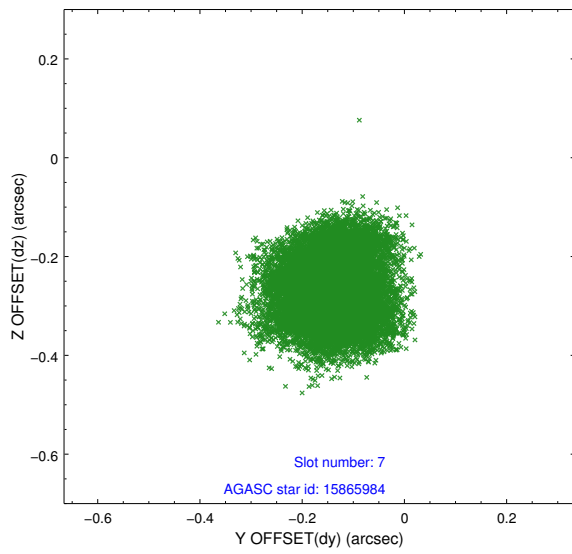
Time (s)



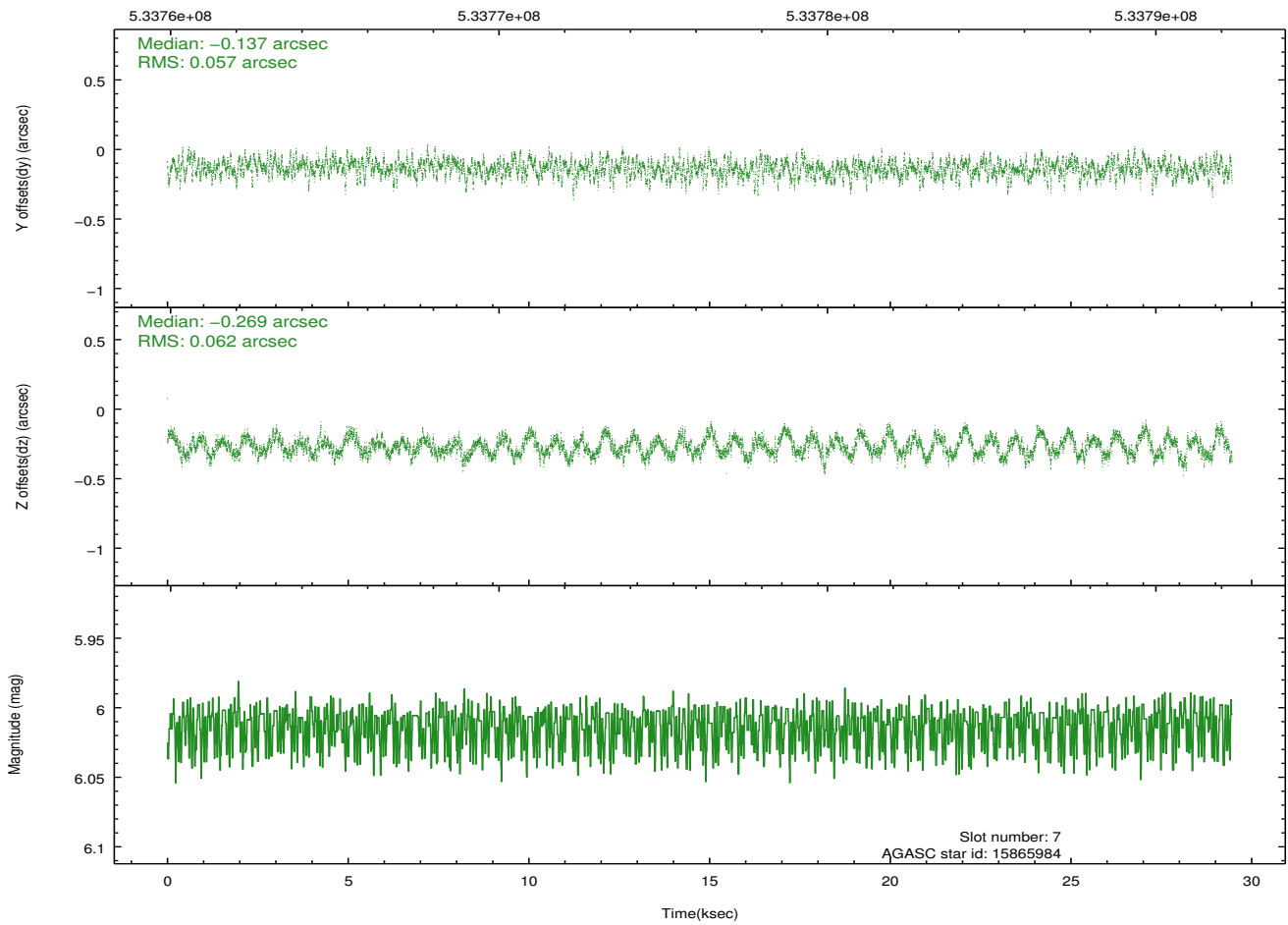
## 2.4.4 Slot 6



## 2.4.5 Slot 7

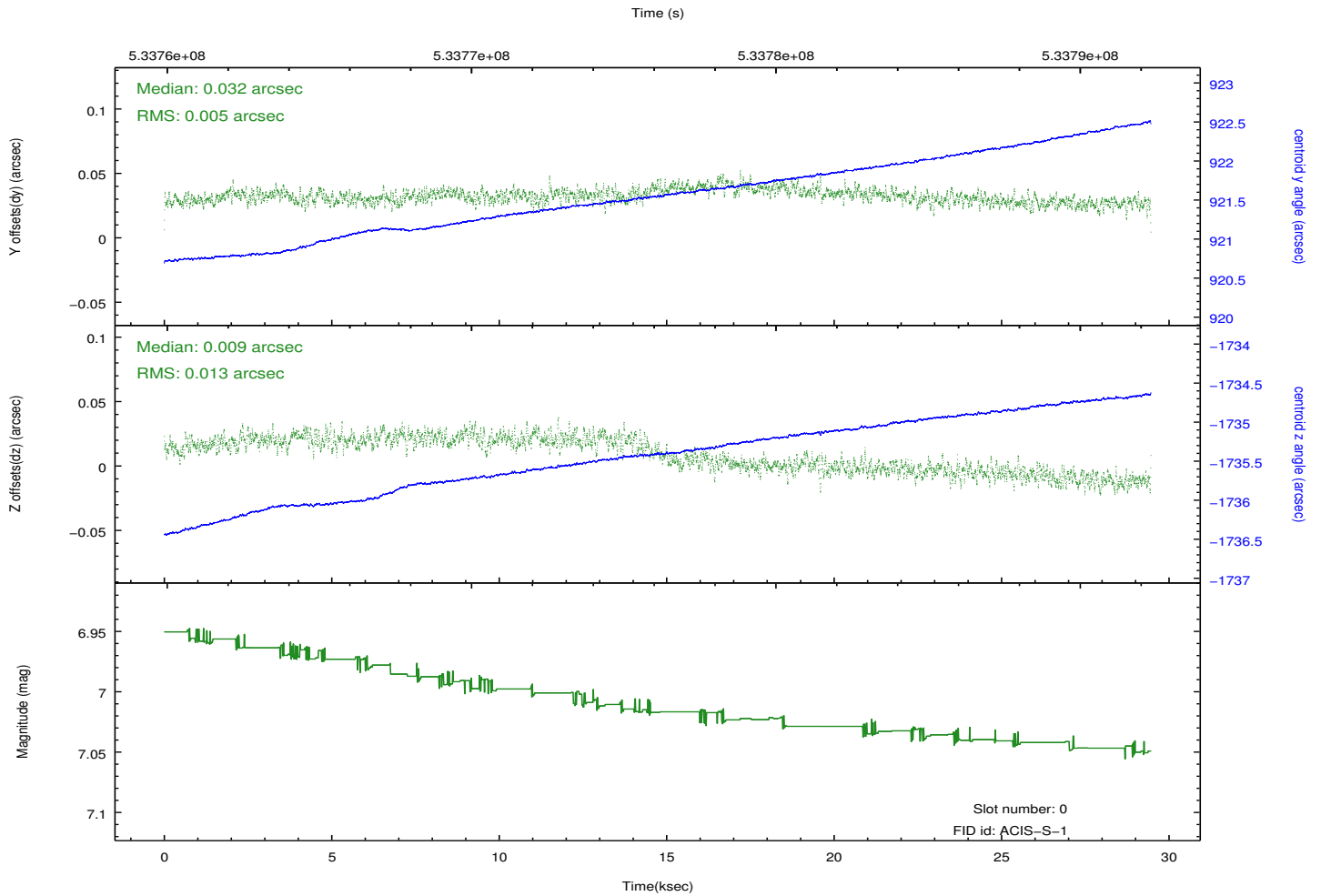
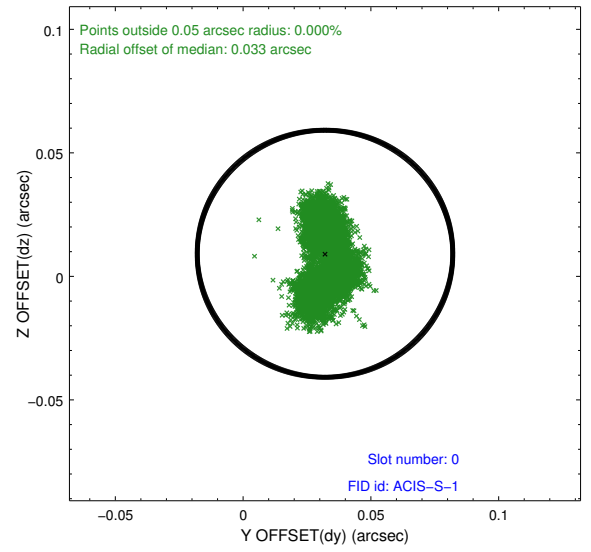
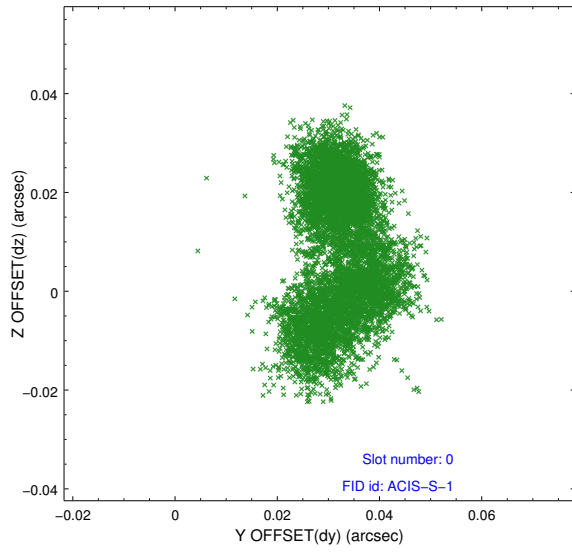


Time (s)

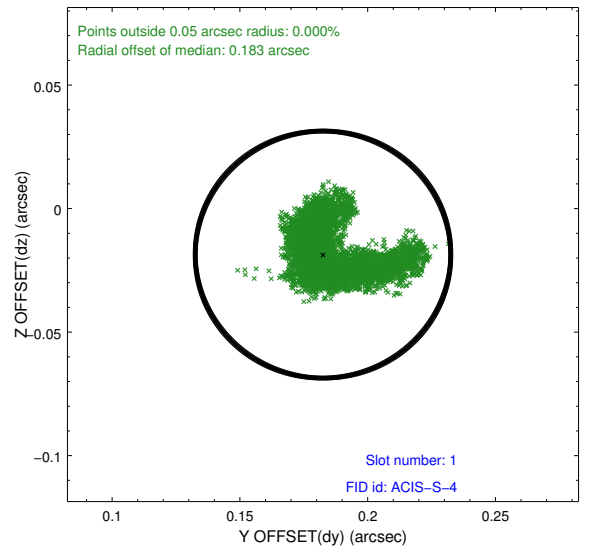
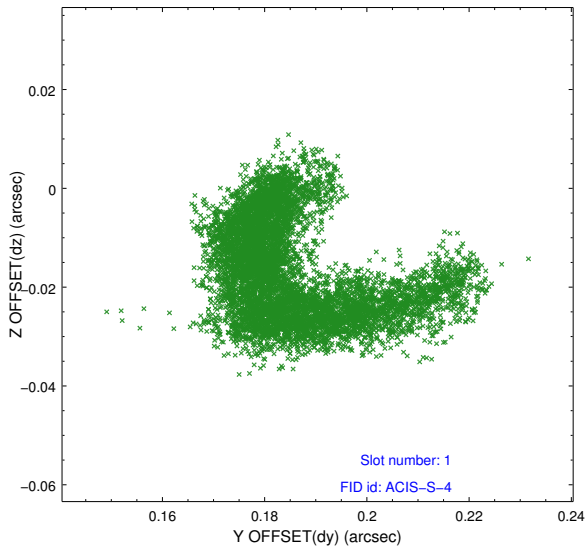


## 2.5 FID Slots

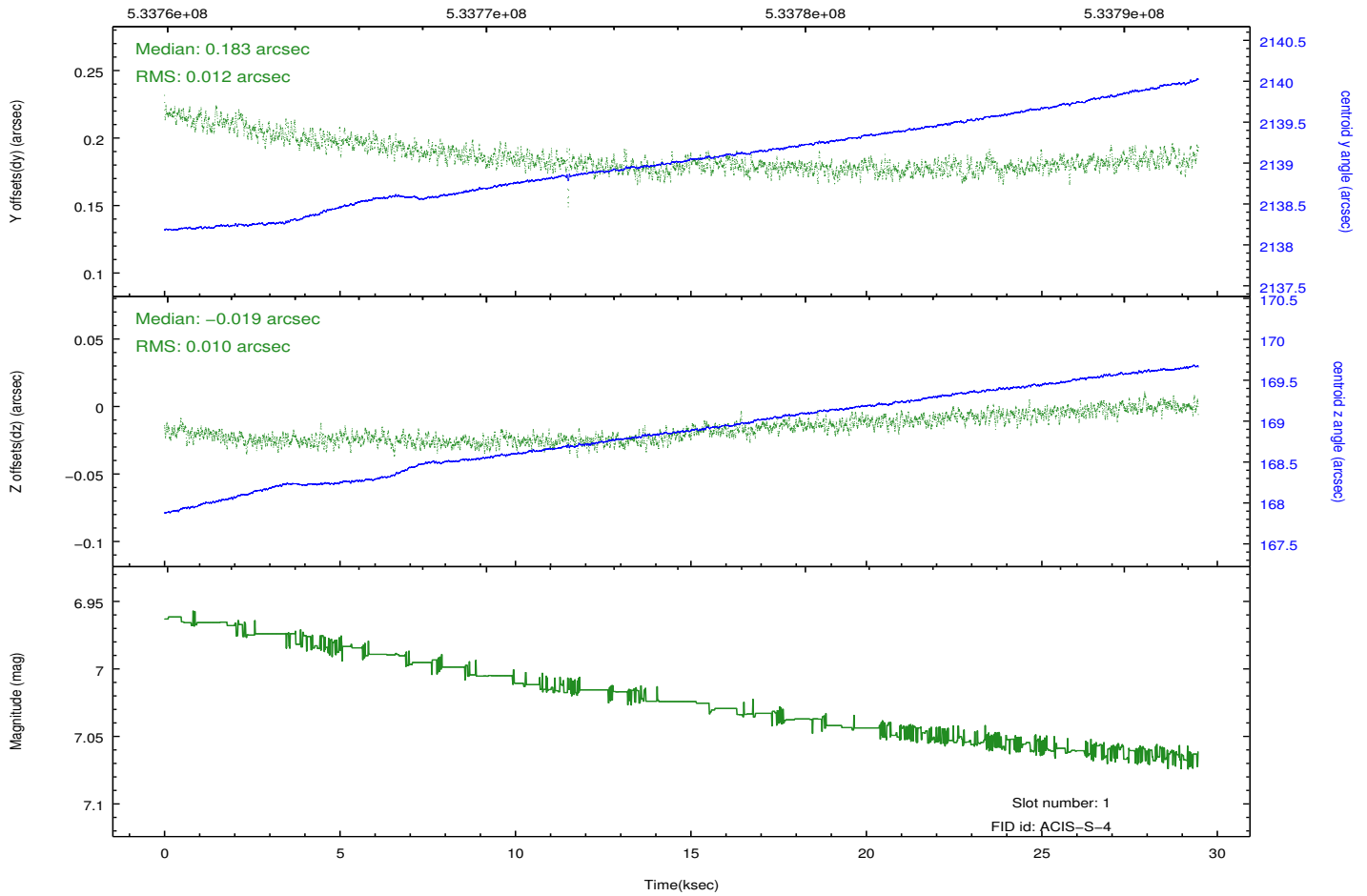
### 2.5.1 Slot 0



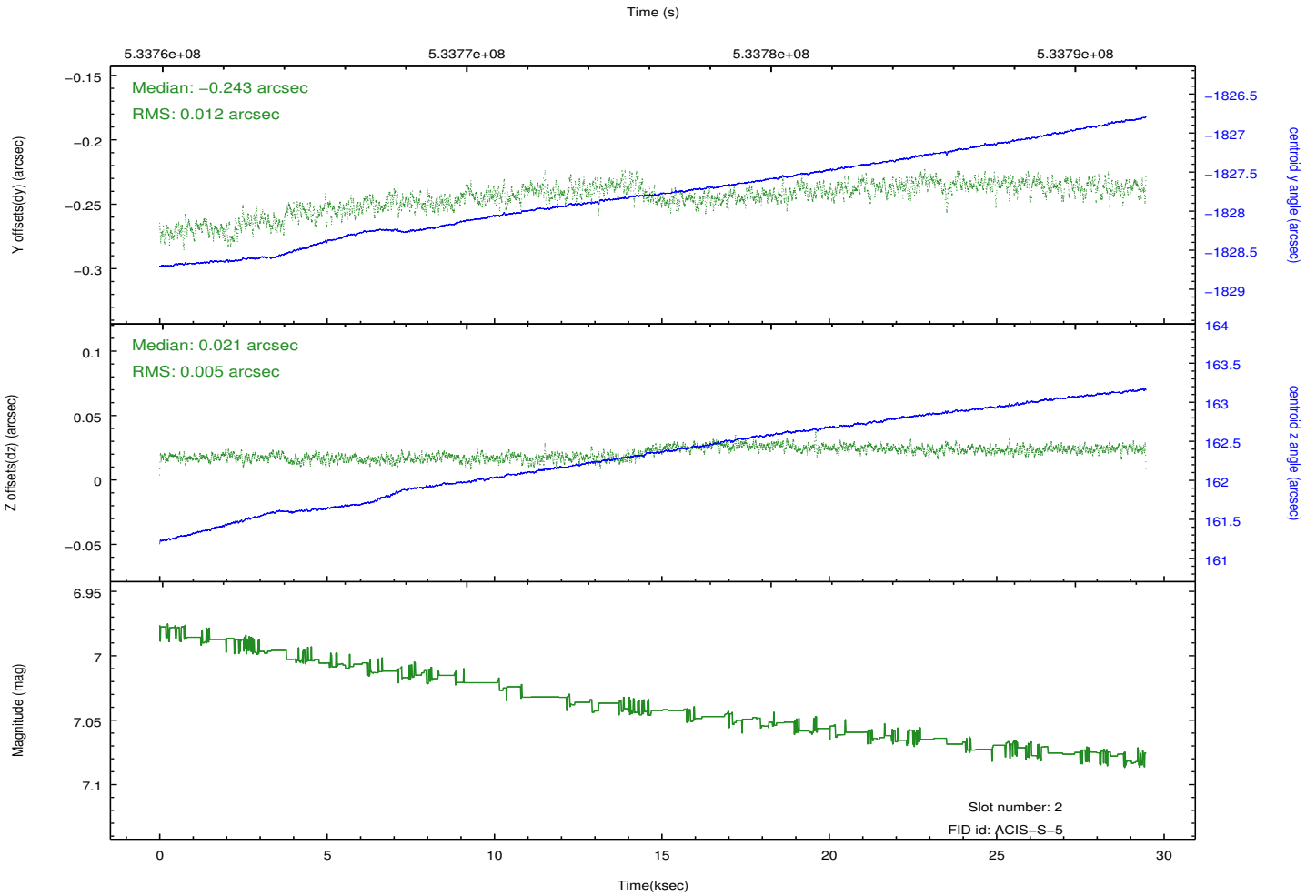
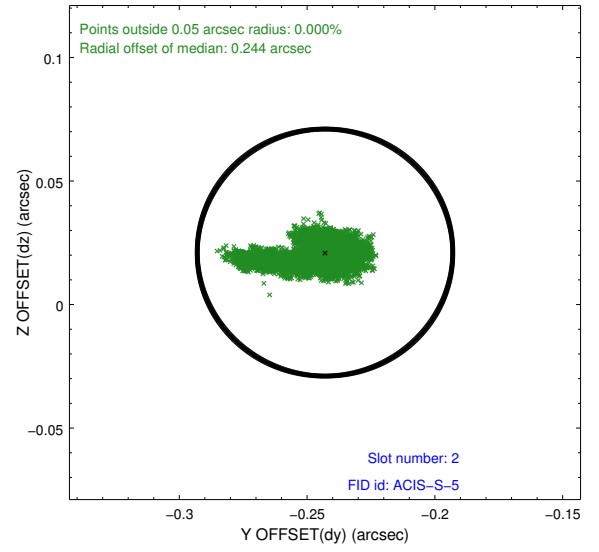
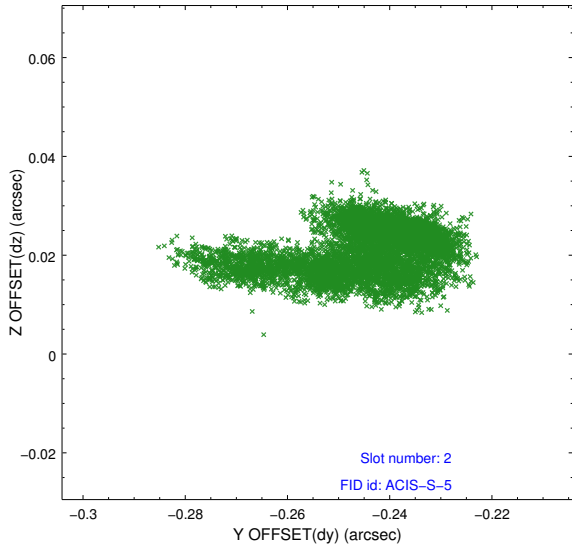
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.183162852228

## A.2 Comments