

# V&V Reference Report

## L2 ASCDS Version : 10.5.4

Observation 17847 - L2 Version 1  
Chandra X-Ray Center

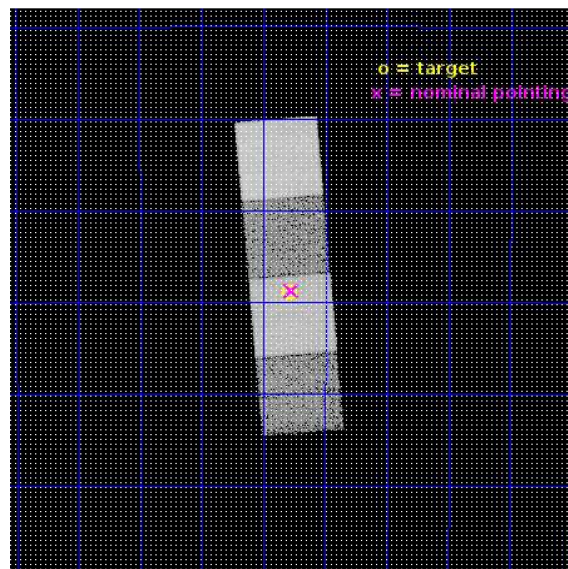
L2 Processing Date : May 12 2017

## 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	401779	Sequence number
obs_id	17847	Observation id
title	The Black Hole Population in Galactic Globular Clusters	Proposal t
observer	Prof Laura Chomiuk	Principal investigator
object	Terzan 1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	263.947125	Observer's specified target RA [deg]
dec_targ	-30.481472	Observer's specified target Dec [deg]
ra_nom	263.94364681941	Nominal RA [deg]
dec_nom	-30.479047338075	Nominal Dec [deg]
roll_nom	85.154858877712	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15059.03236866	Sum of GTIs [s]
livetime	14862.275024465	Livetime [s]
ontime5	15058.991328716	Sum of GTIs [s]
ontime6	15055.80919826	Sum of GTIs [s]
ontime7	15059.03236866	Sum of GTIs [s]
ontime8	15055.768067718	Sum of GTIs [s]
l2events	160364	Number of level 2 events

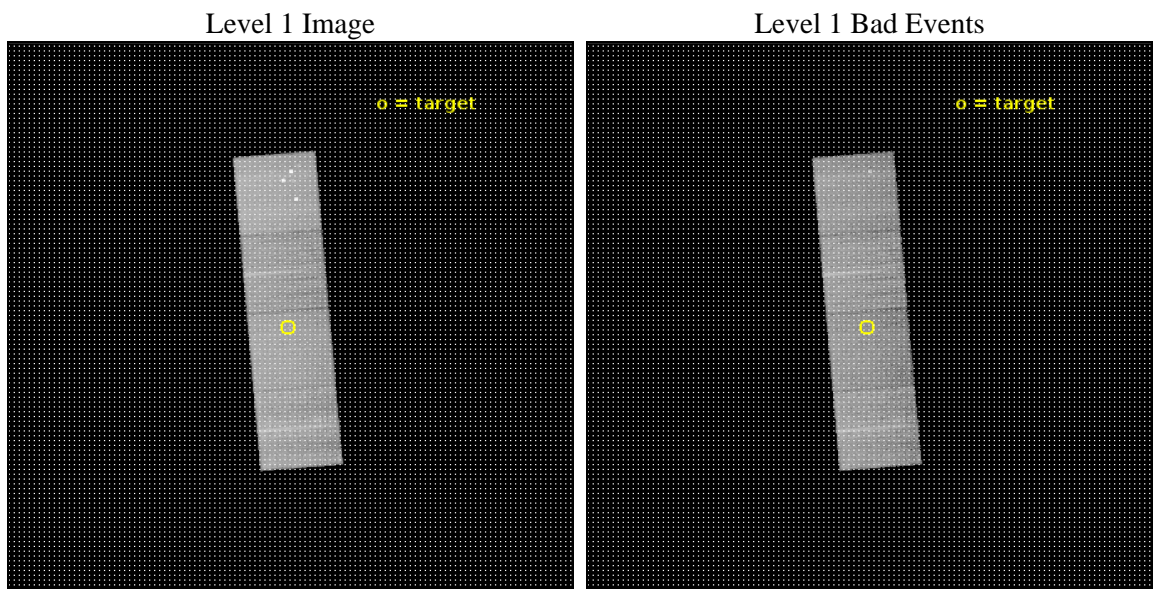




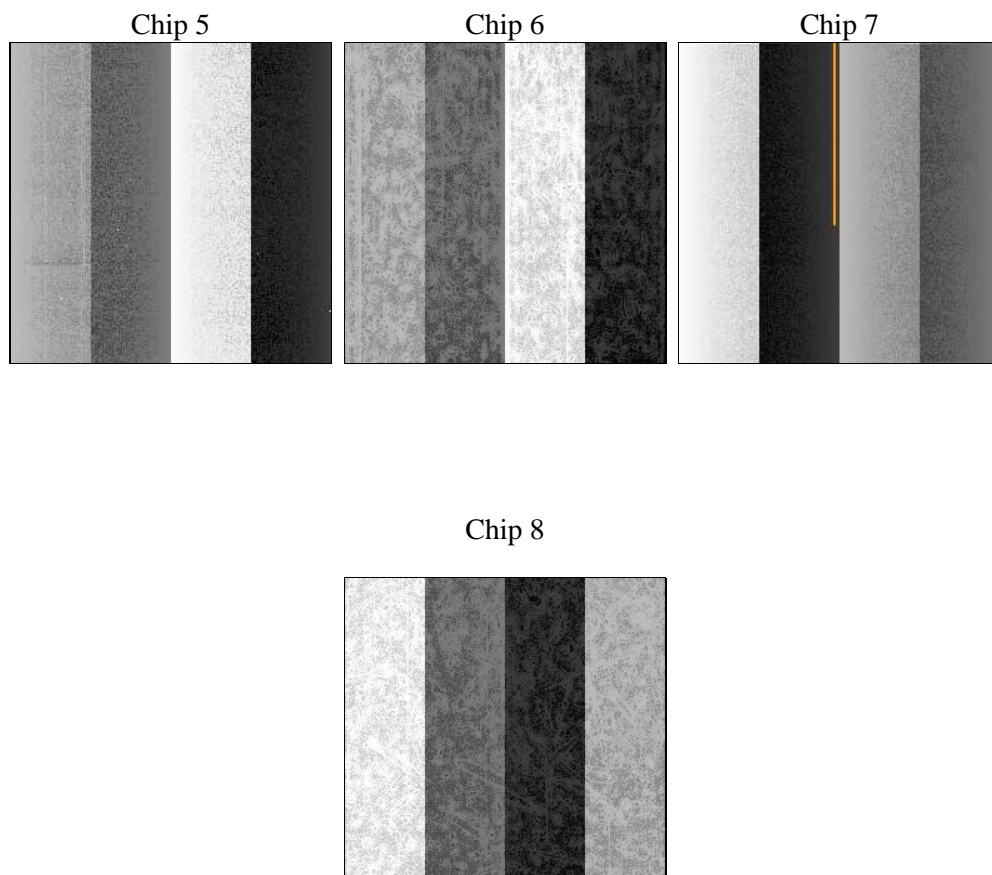
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.4	Processing system revision	ontime	15059.03236866	Sum of GTIs [s]
caldsver	4.7.4	&#160	ontime5	15058.991328716	Sum of GTIs [s]
date	2017-05-12T06:07:08	Date and time of file creation	ontime6	15055.80919826	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	15059.03236866	Sum of GTIs [s]
			ontime8	15055.768067718	Sum of GTIs [s]
			l1events	582681	Number of level 1 events

### 2.1.4 Events

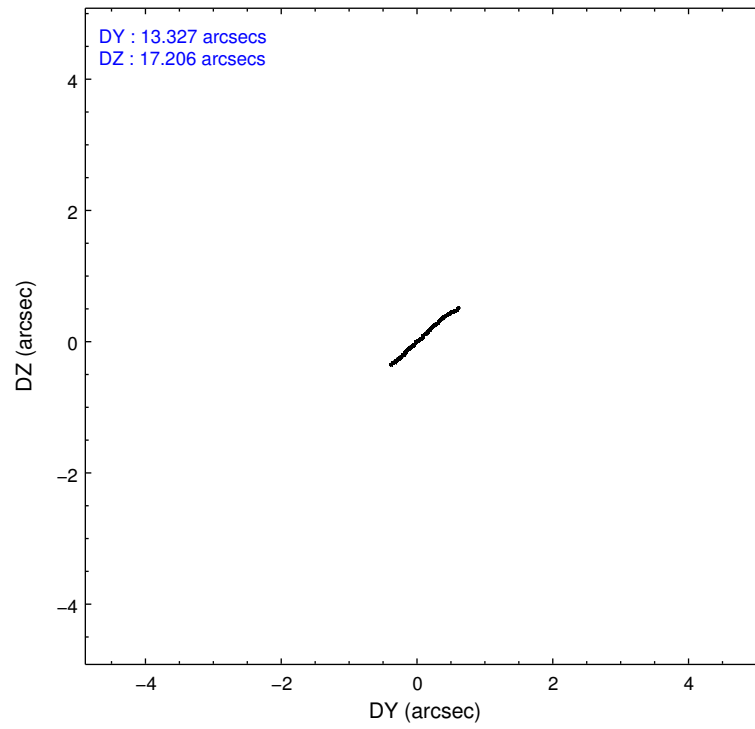
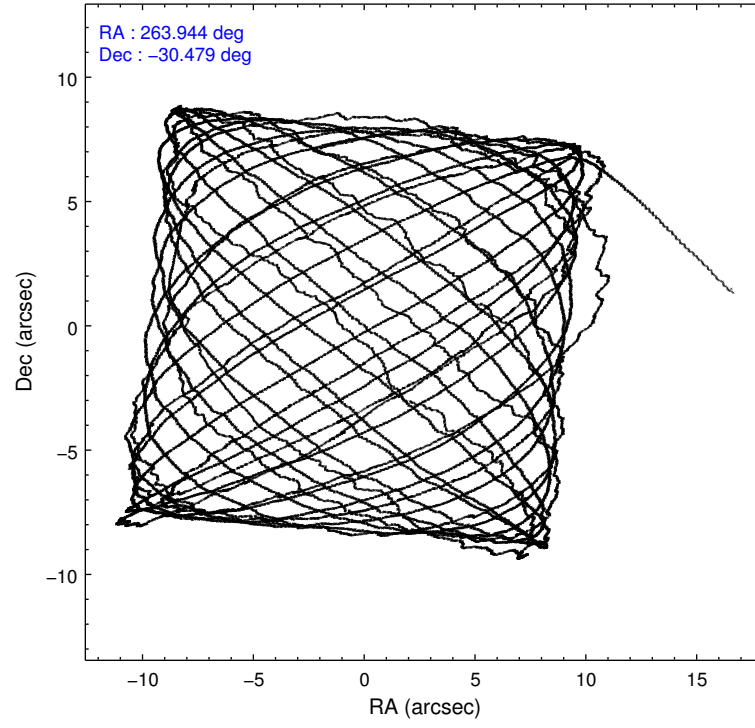
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	185085	115482	139696	142418
rejected events	91338	101976	79195	107404
rejected %	49%	88%	56%	75%

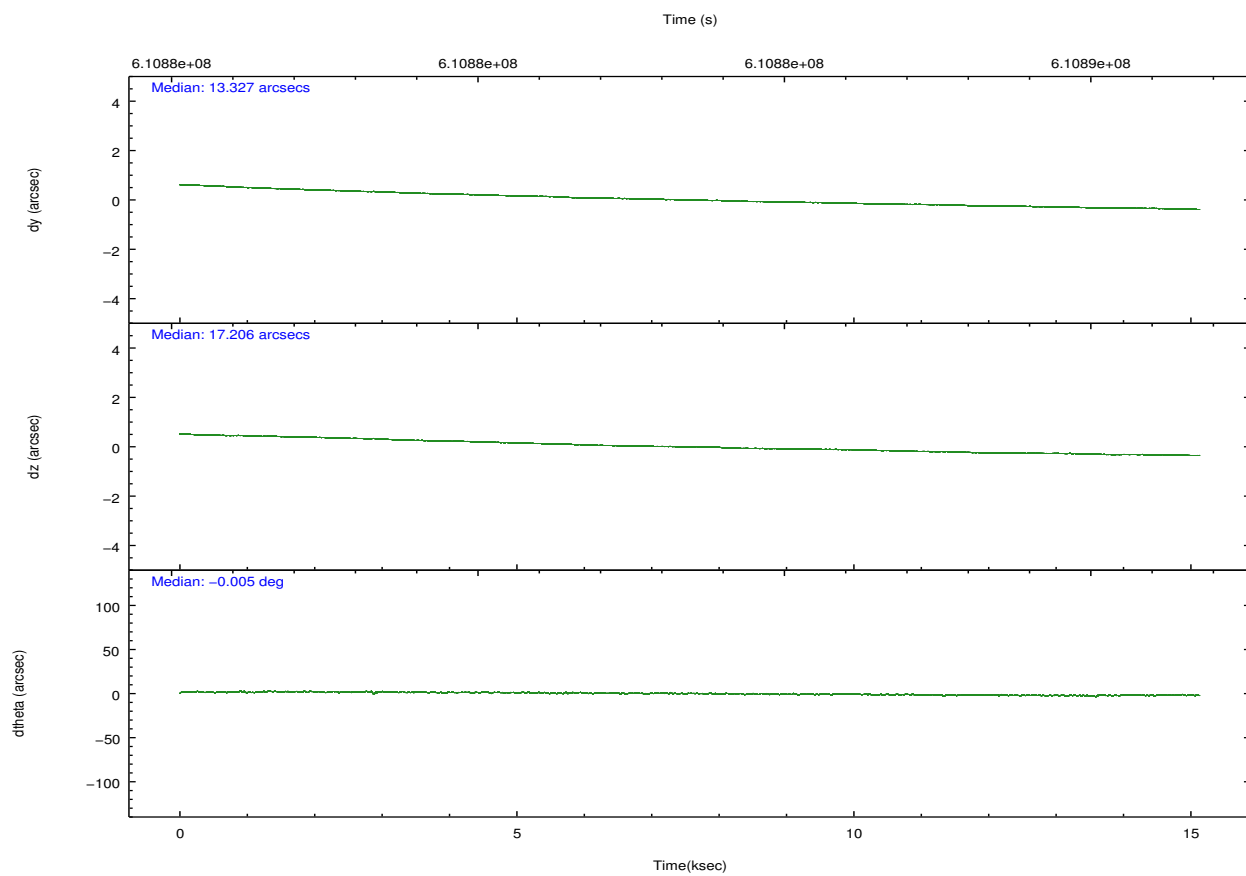
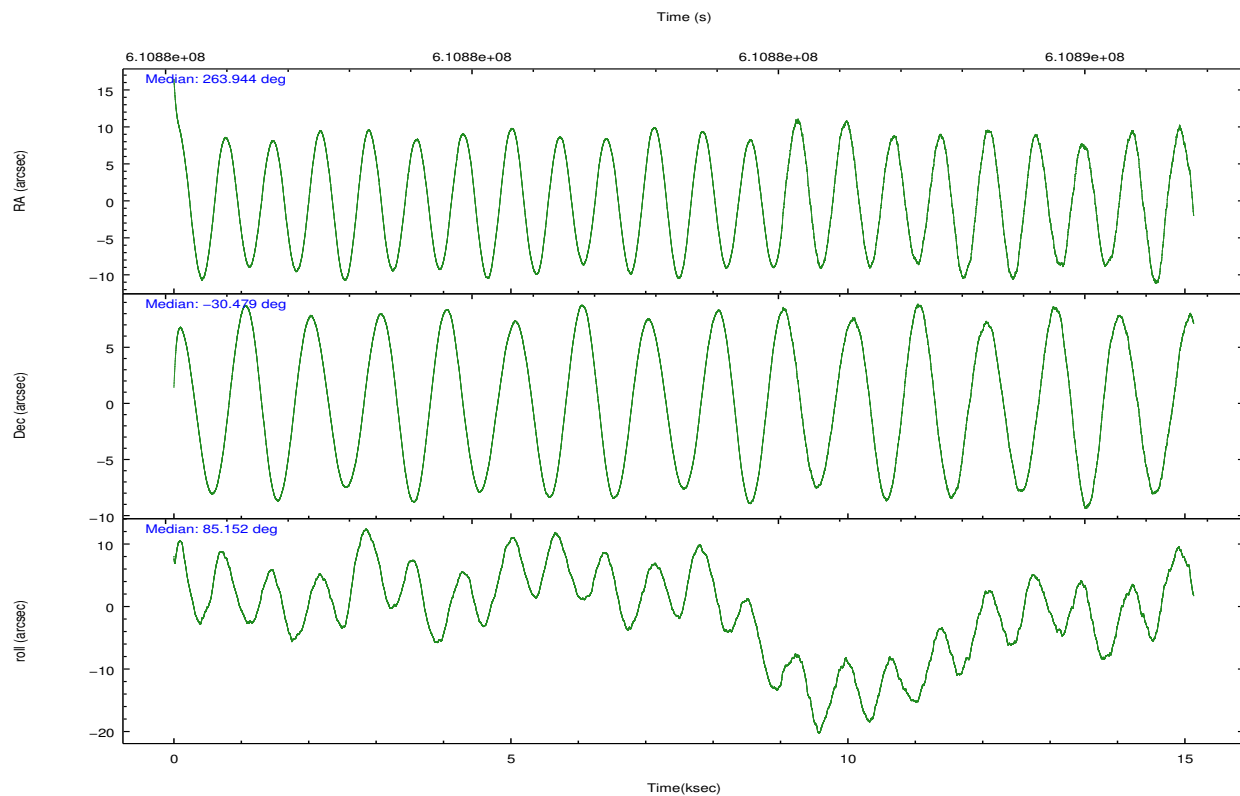
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	14741	4591	4877	9857
	7%	3%	3%	6%
grade 1 events	727	39	178	92
	0%	0%	0%	0%
grade 2 events	28078	3441	13188	8806
	15%	2%	9%	6%
grade 3 events	2464	1119	4449	3339
	1%	0%	3%	2%
grade 4 events	2362	1131	4474	3013
	1%	0%	3%	2%
grade 5 events	10772	4683	12816	7288
	5%	4%	9%	5%
grade 6 events	46146	3232	33536	10020
	24%	2%	24%	7%
grade 7 events	79795	97246	66178	100003
	43%	84%	47%	70%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	263.957538	263.9436468194119	CCD I2 on	O1	N
[deg] Pointing Dec	-30.503739	-30.47904733807461	CCD I3 on	O2	N
[deg] Pointing Roll	85.005286	85.15485887771172	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O4	Y
[s] Observation start time (MET)	610876002.184000	610874783.9288599	CCD S5 on	N	N
Observation start date	2017-05-11T07:45:33	2017-05-11T07:26:23	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	610891002.184000	610892081.82986	On-chip summing requested	N	N
Observation end date	2017-05-11T11:55:33	2017-05-11T12:14:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



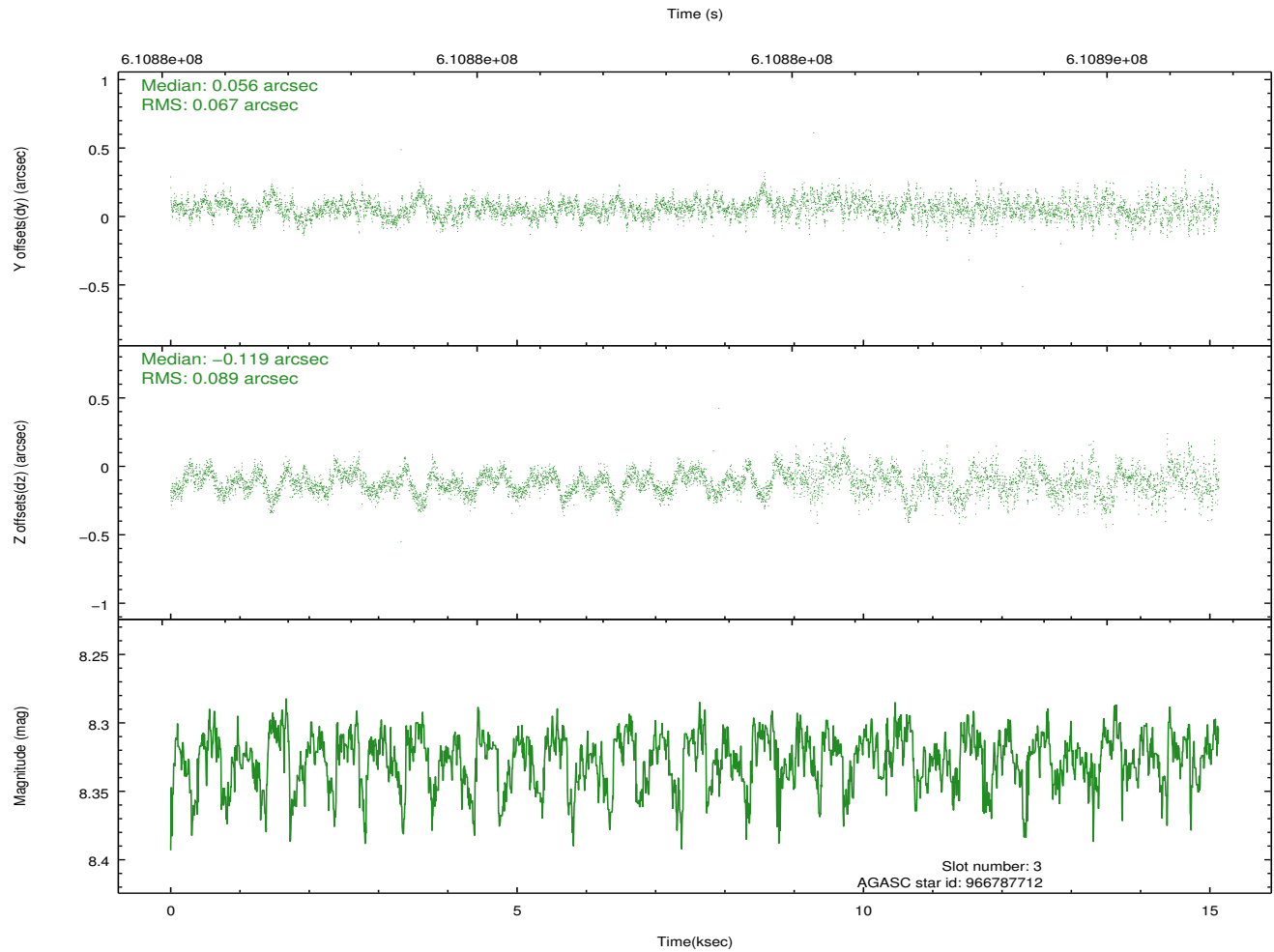
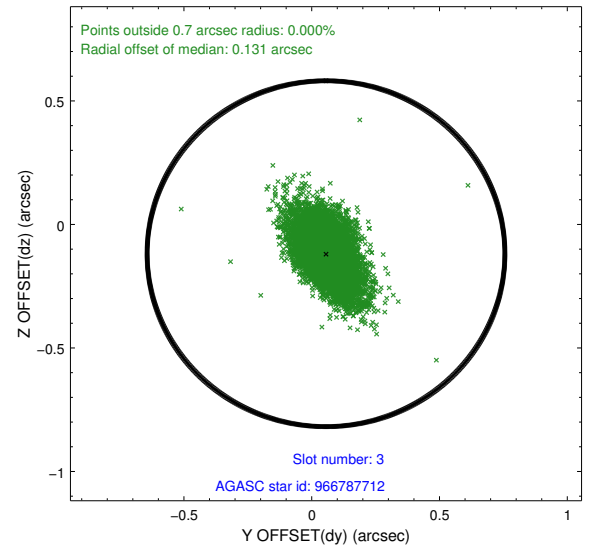
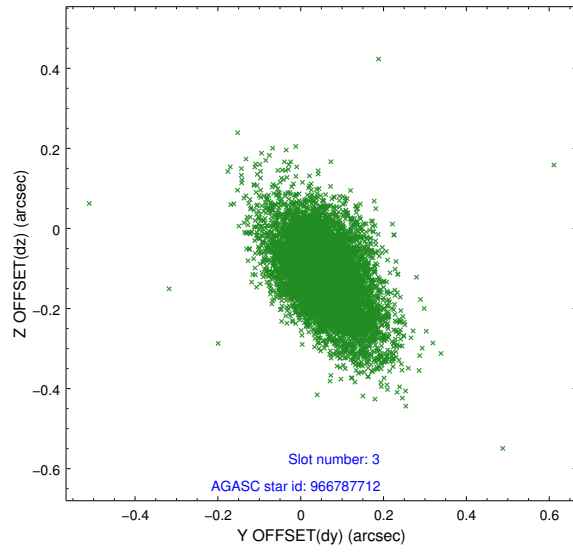


### Slot Statistics

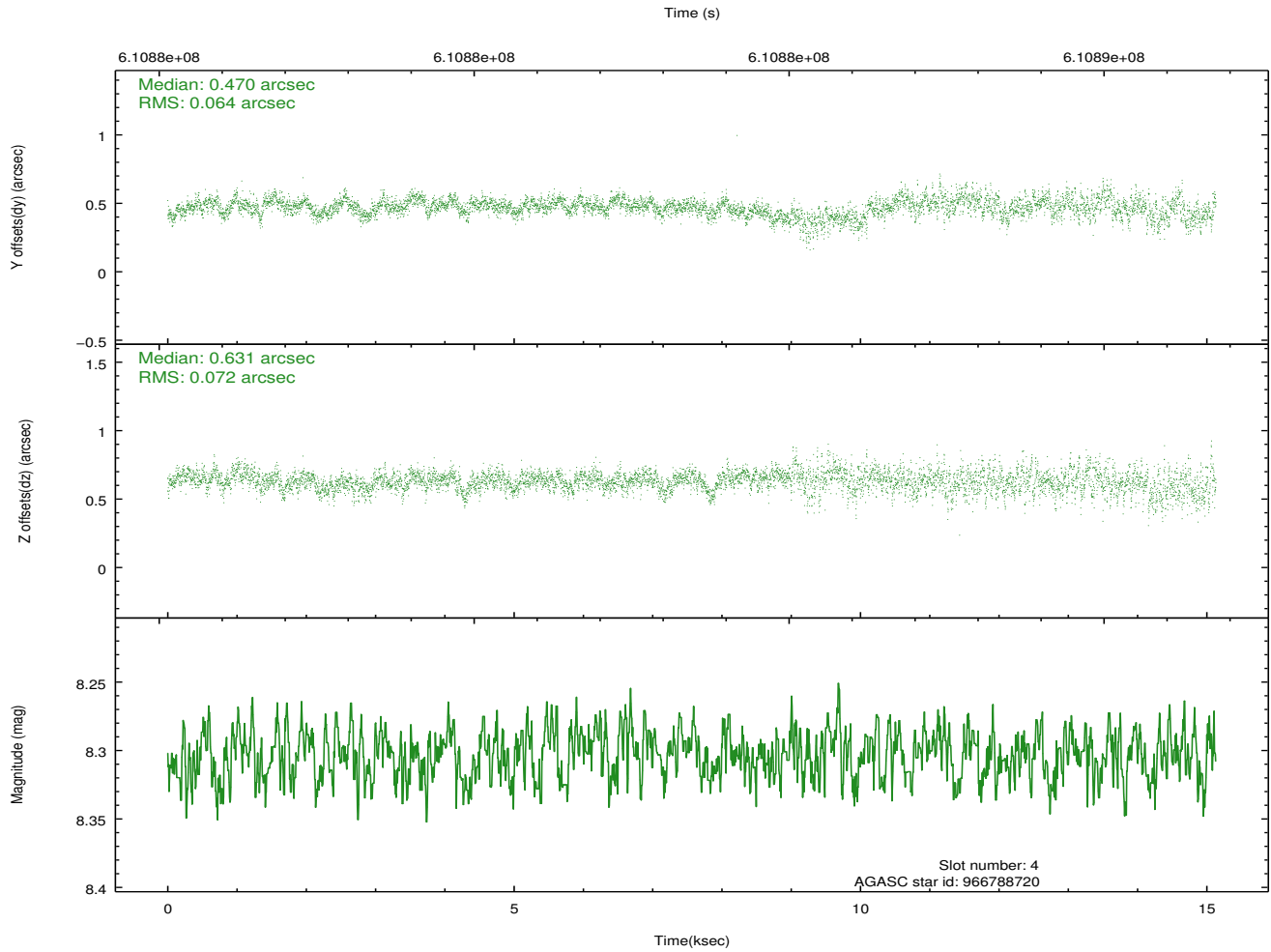
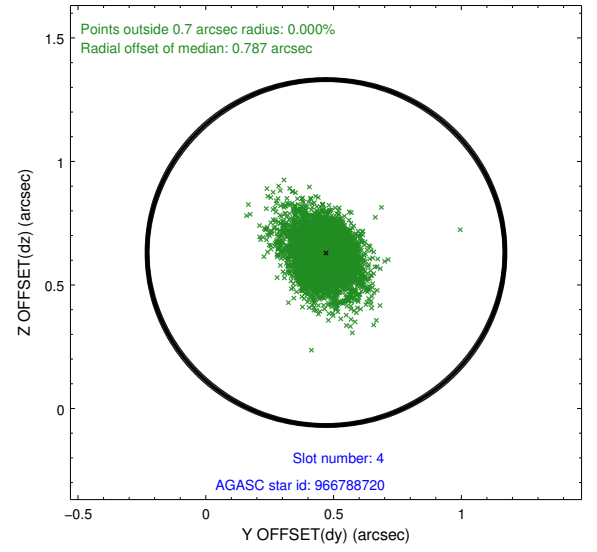
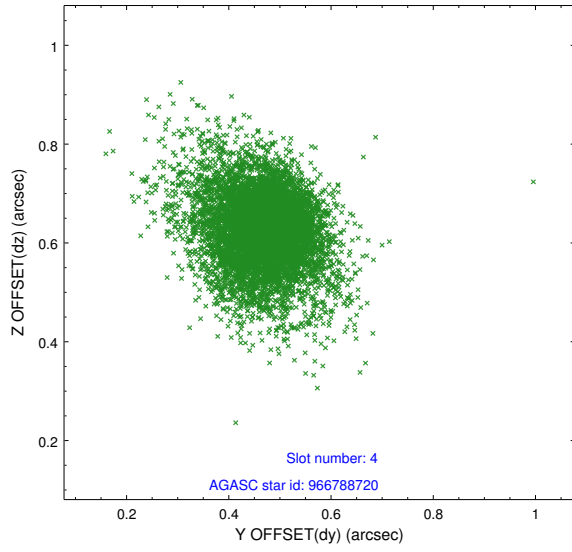
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.14	3690	-0.148	-0.135	0.019	0.032	0.000000	0.000000	-766.42	-1738.76
1	FID		ACIS-S-4	7.26	3689	0.485	0.107	0.022	0.036	0.000000	0.000000	2147.34	169.69
2	FID		ACIS-S-5	7.26	3690	-0.368	0.036	0.015	0.024	0.000000	0.000000	-1819.12	163.58
3	GUIDE	used	966787712	8.32	7376	0.056	-0.119	0.112	0.204	263.530944	-31.066254	-2134.35	1134.13
4	GUIDE	used	966788720	8.30	7379	0.470	0.631	0.095	0.181	264.555693	-31.018346	-1689.45	-1999.15
5	GUIDE	used	966791064	7.74	7380	-0.201	-0.234	0.085	0.169	263.920275	-30.338943	580.55	166.89
6	GUIDE	used	966794640	9.30	7376	-0.298	-0.204	0.175	0.296	263.854004	-30.029028	1674.05	470.57
7	GUIDE	used	966787448	8.51	7376	-0.022	-0.077	0.111	0.203	263.341993	-31.095036	-2290.85	1704.88

## 2.4 Star Slots

### 2.4.1 Slot 3

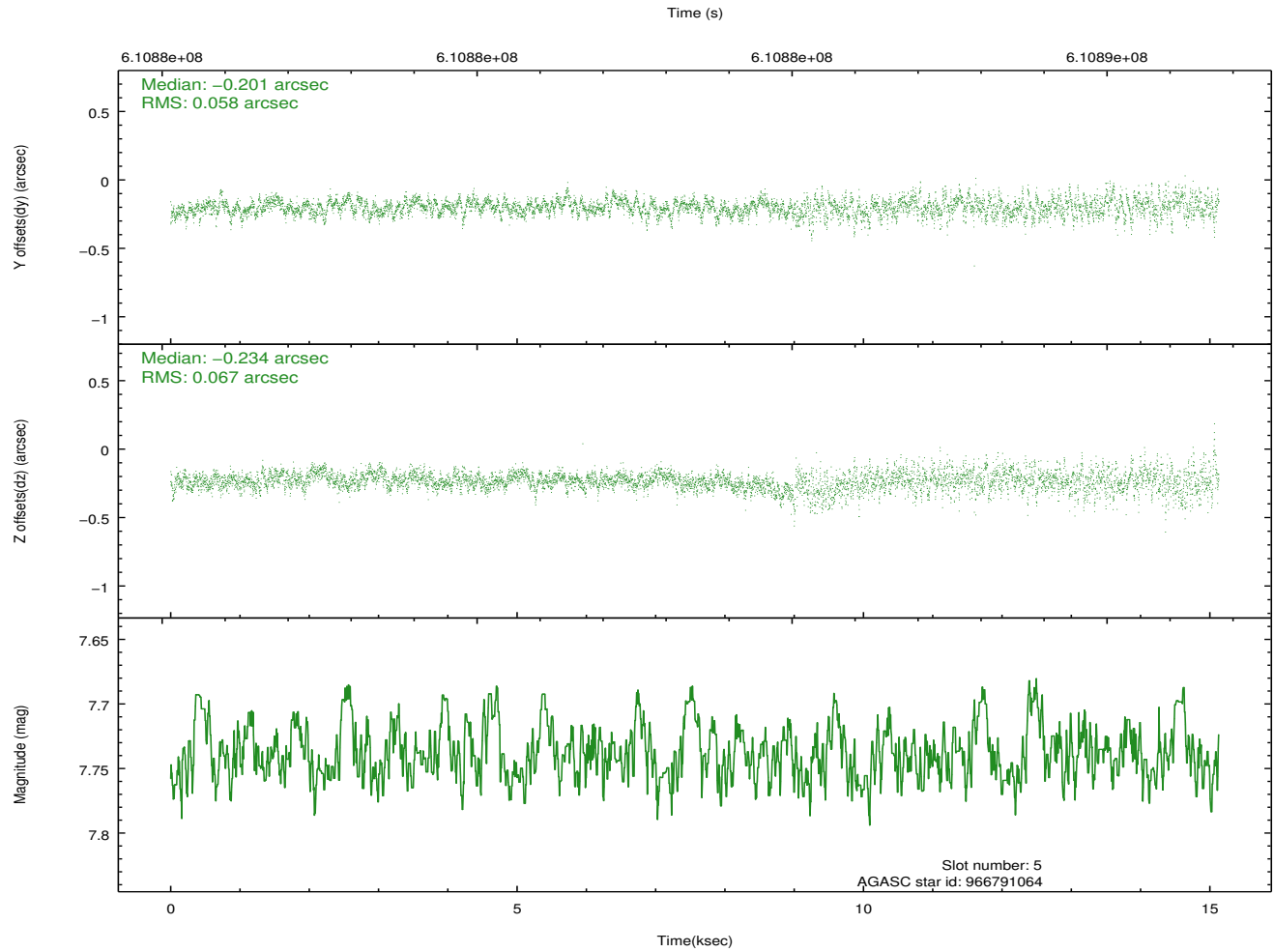
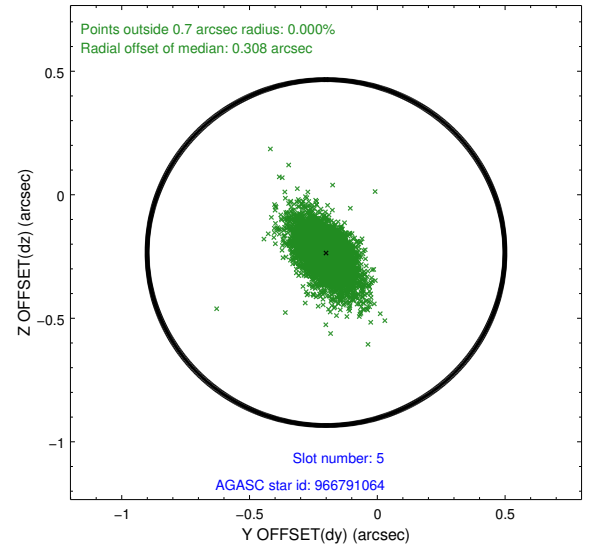
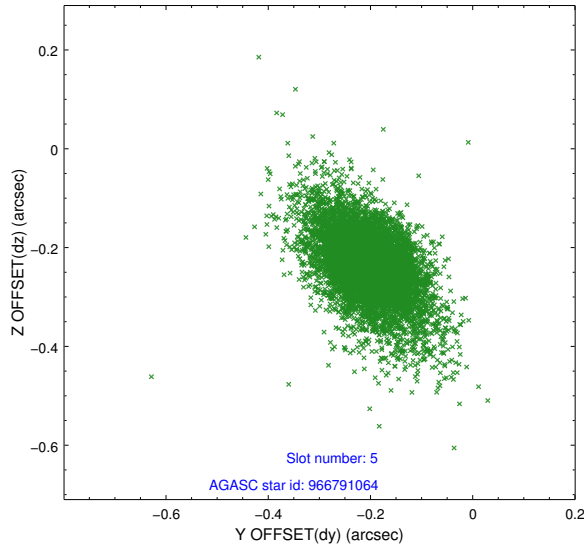


## 2.4.2 Slot 4

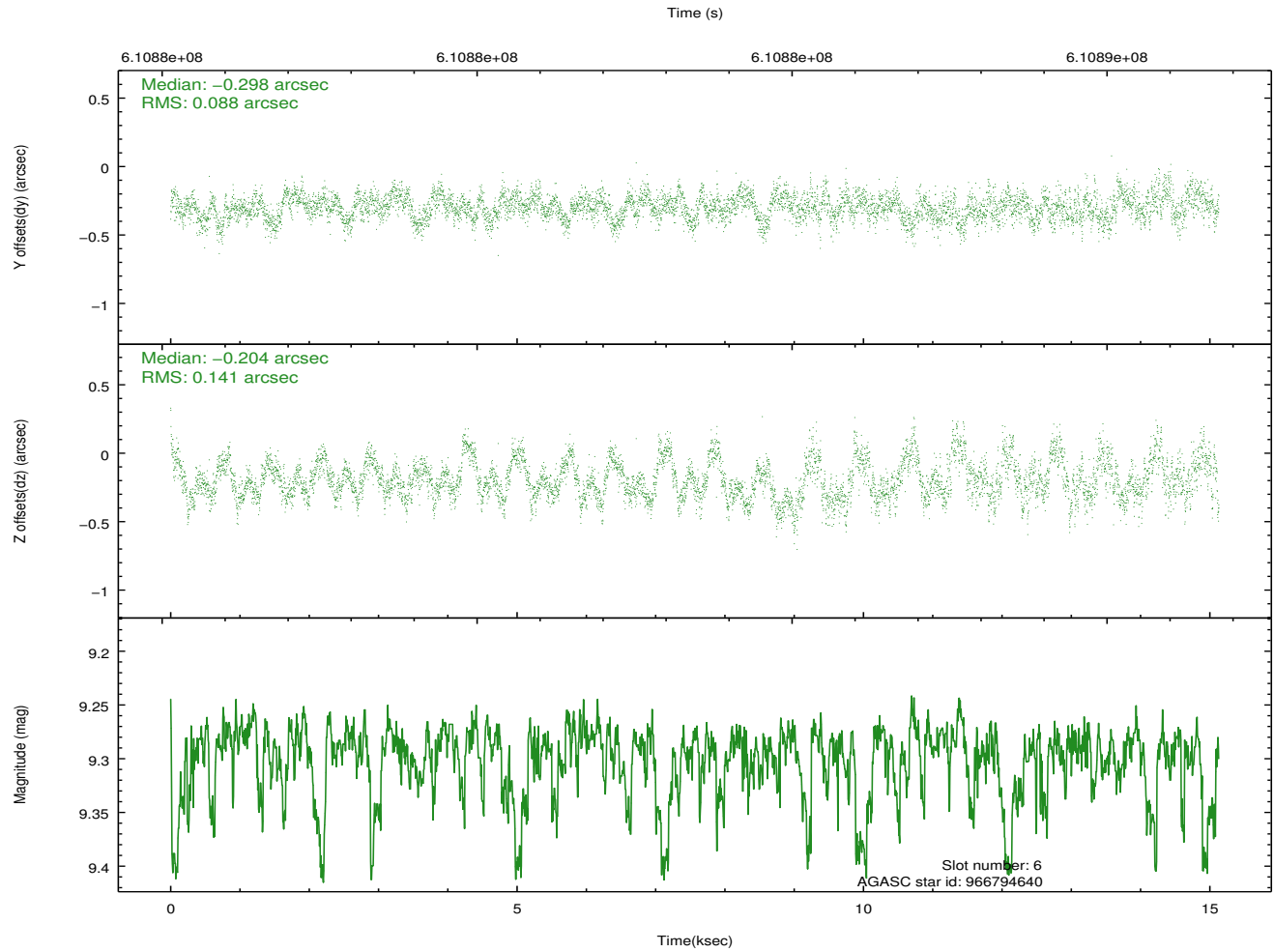
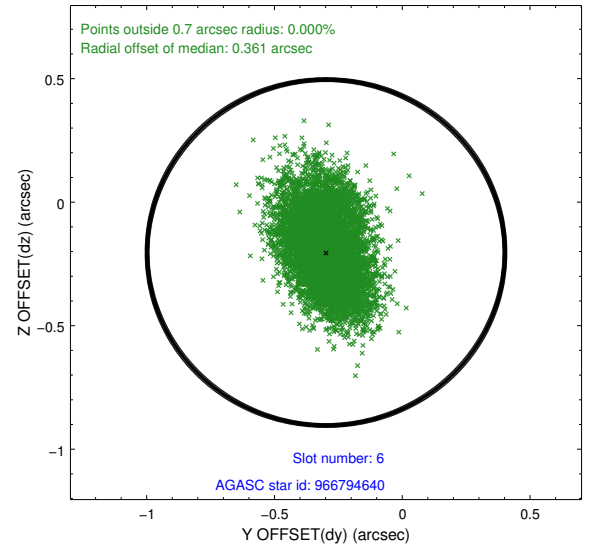
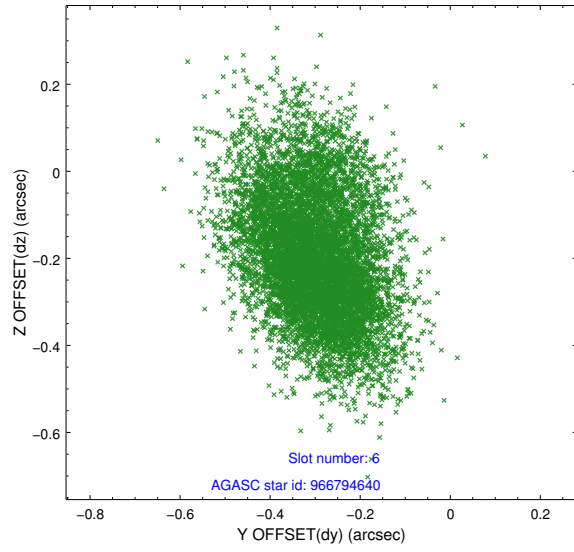




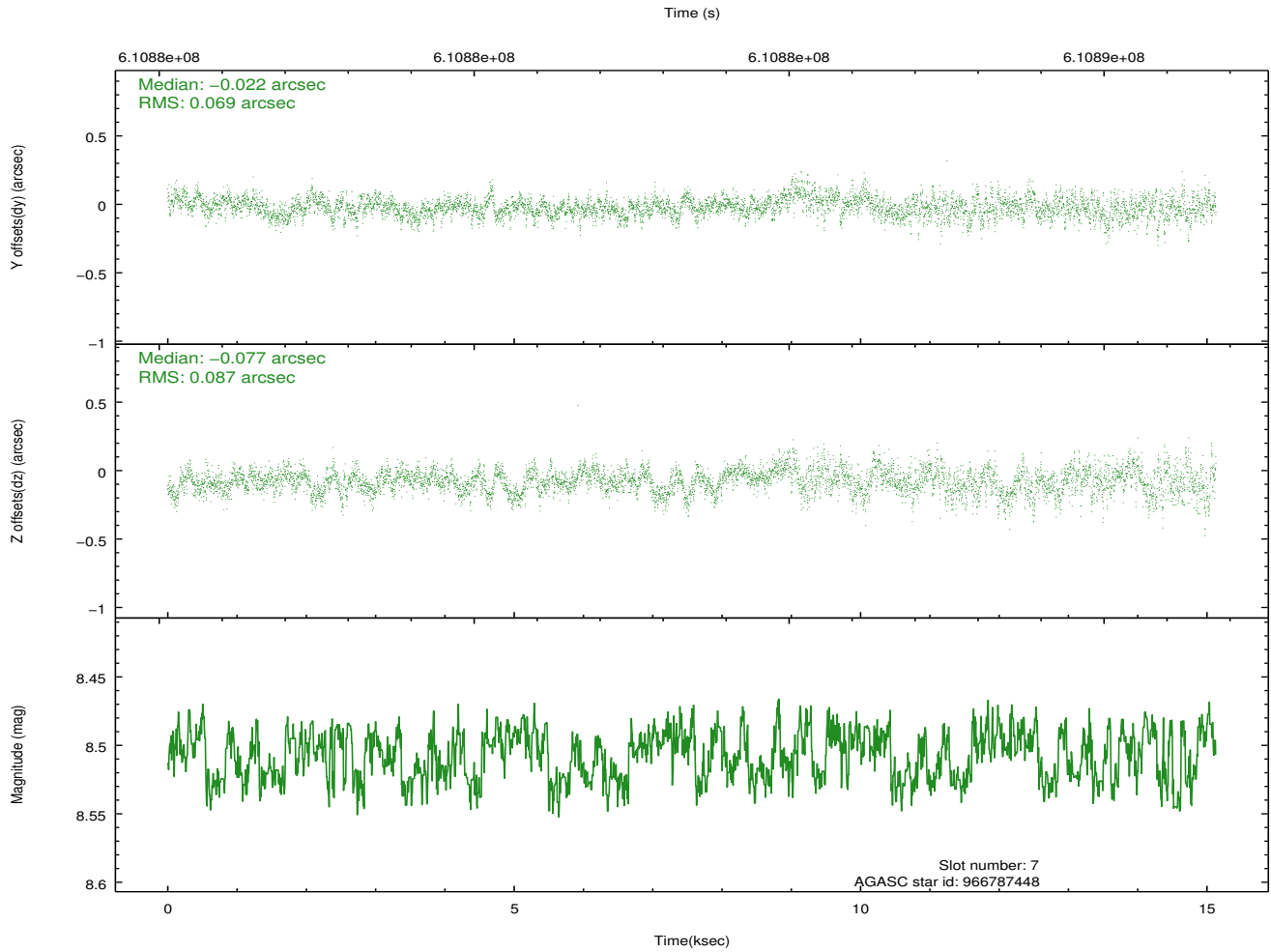
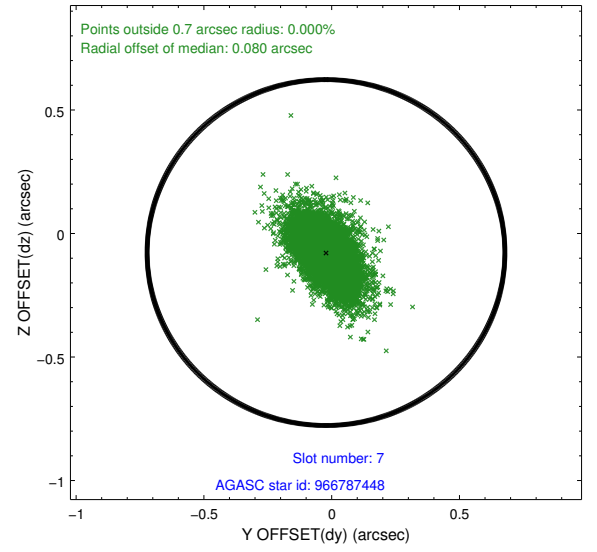
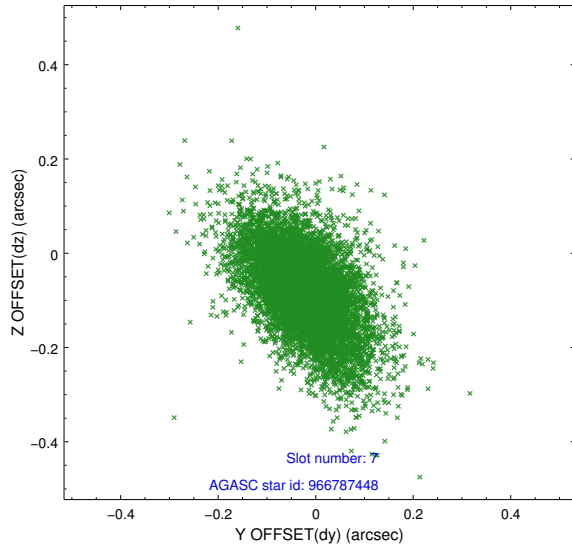
### 2.4.3 Slot 5



## 2.4.4 Slot 6

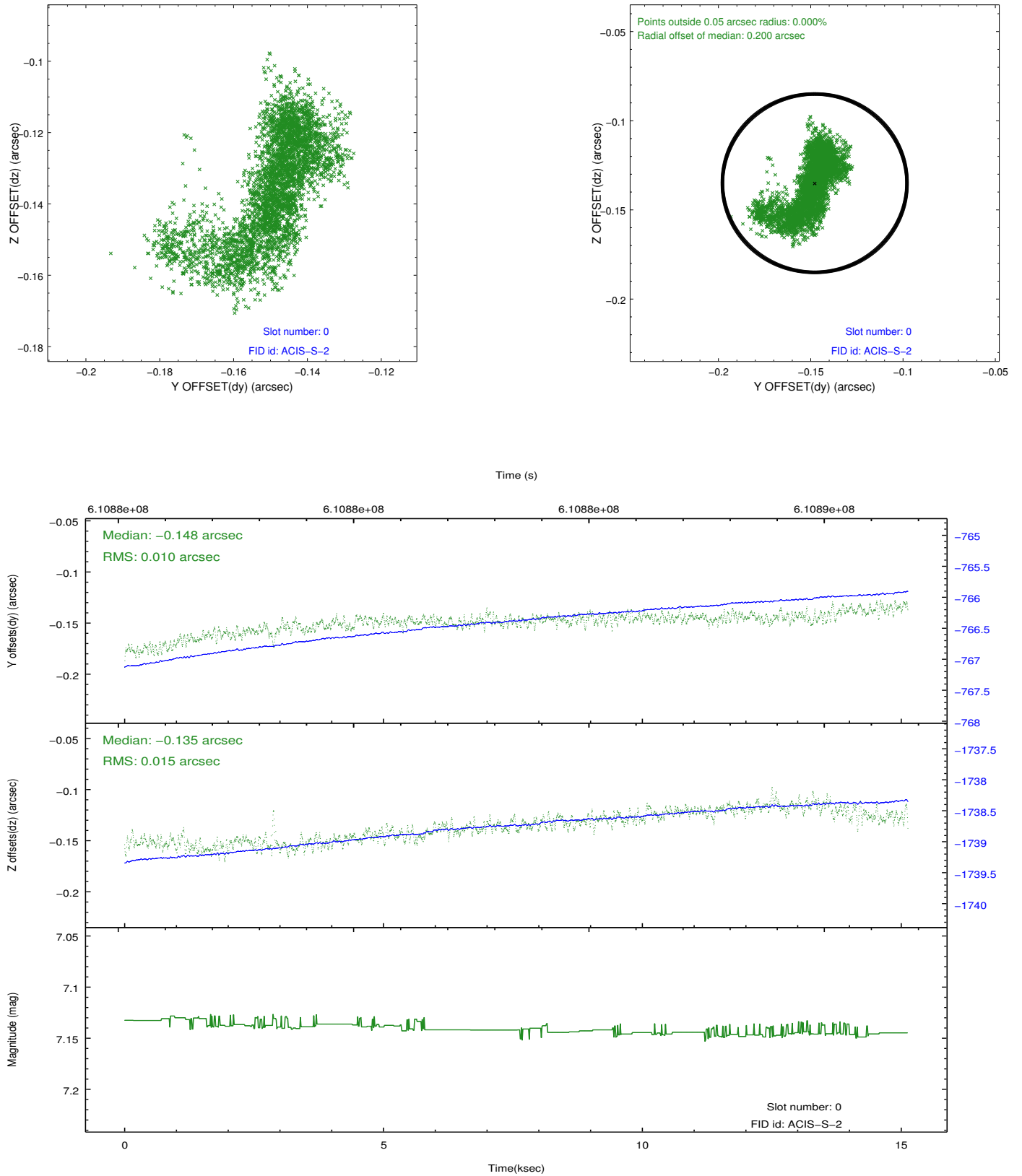


## 2.4.5 Slot 7

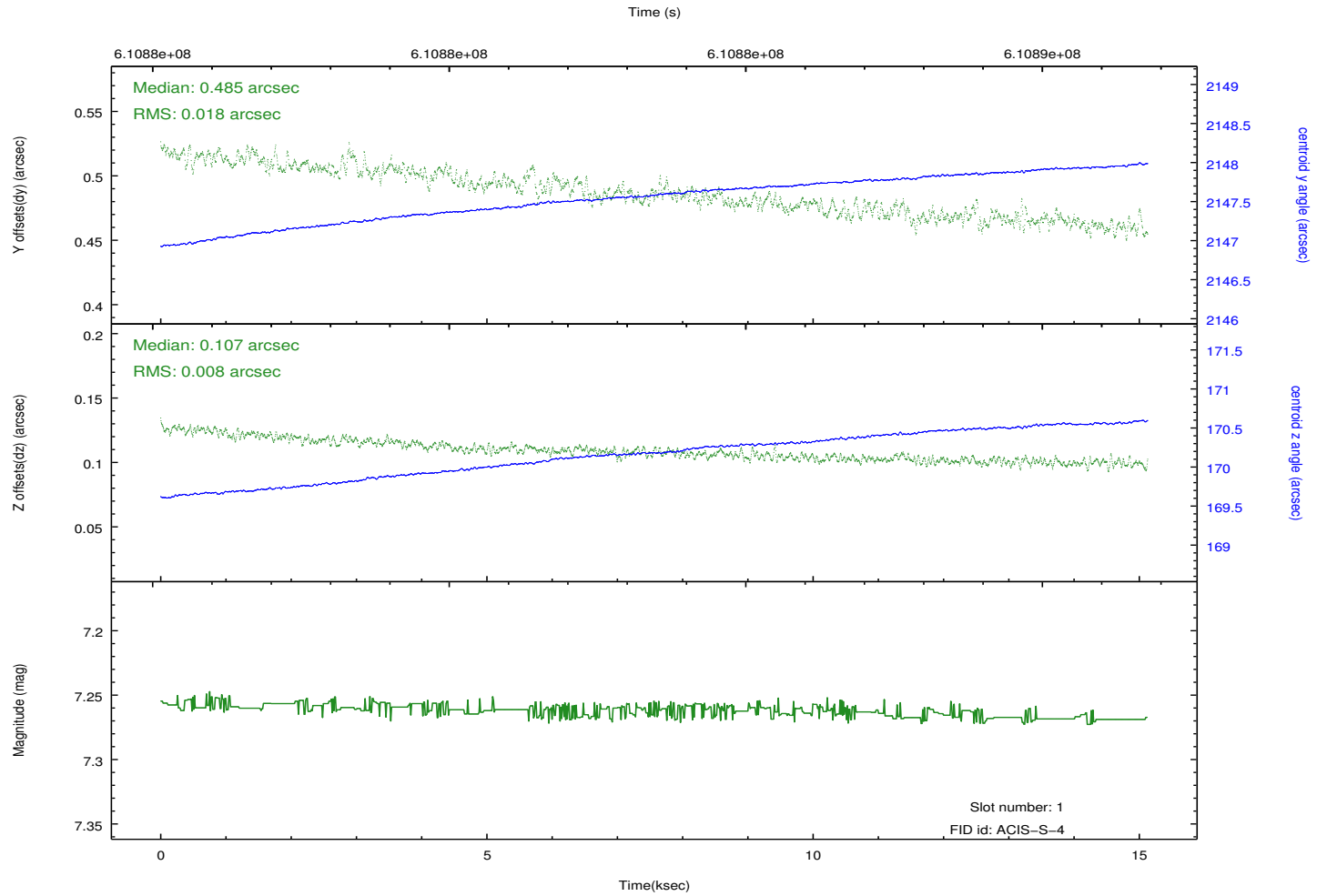
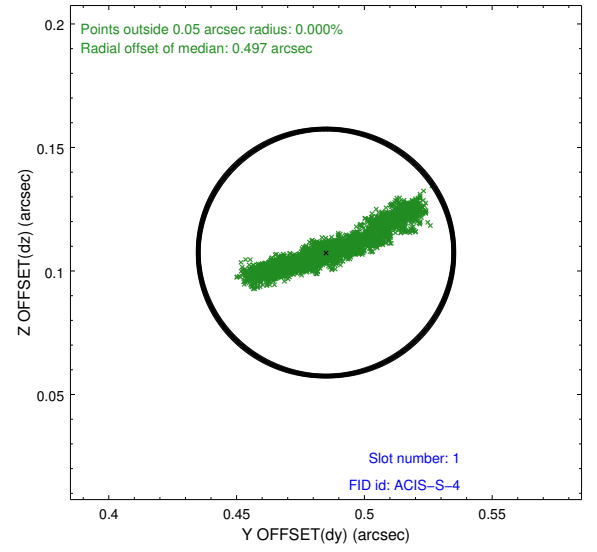
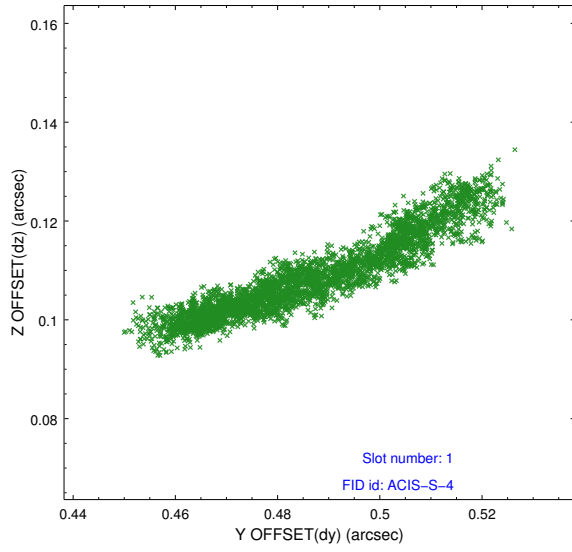


## 2.5 FID Slots

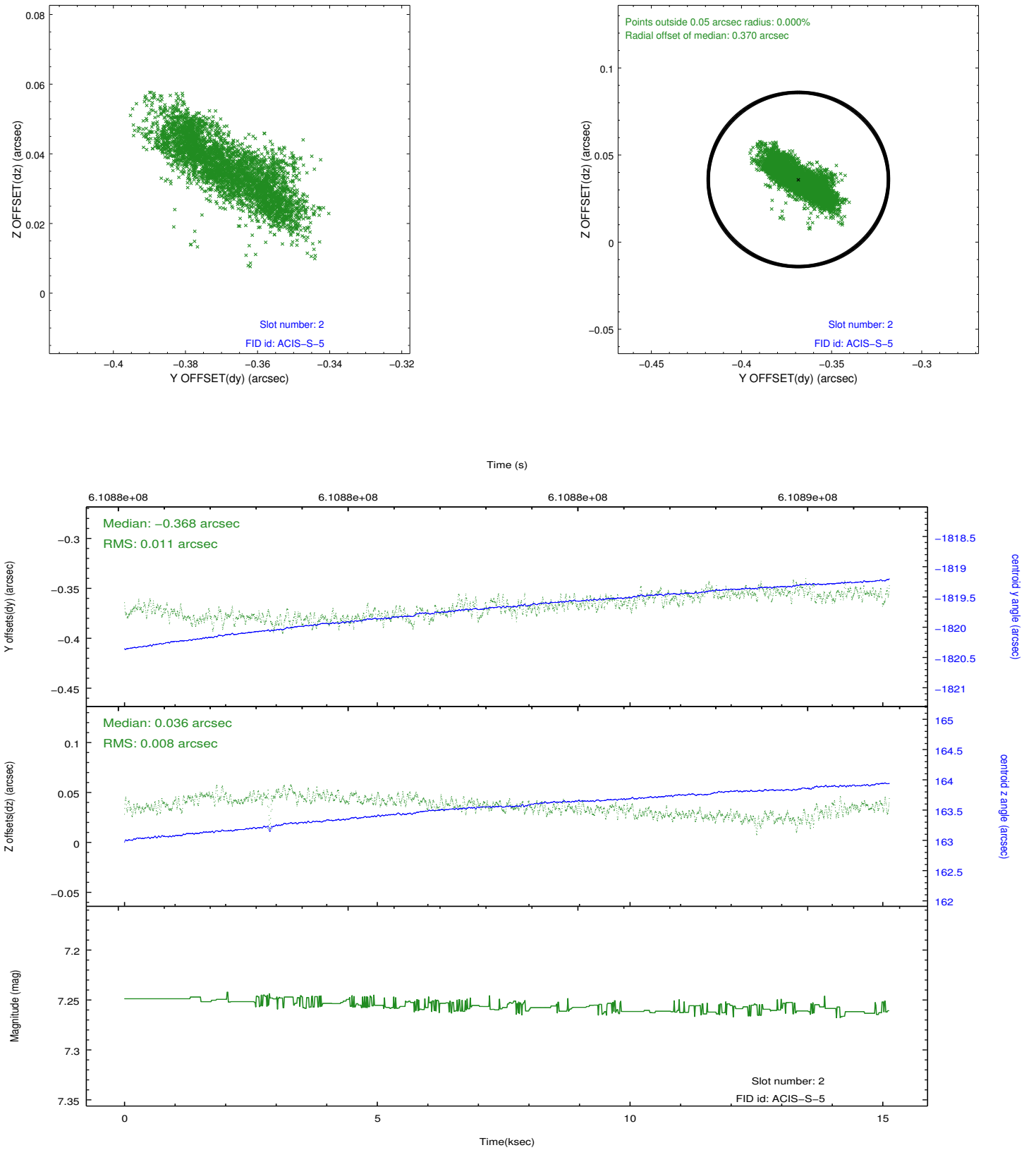
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.05.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.05903236866

### A.2 Comments