

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16278 - L2 Version 1  
Chandra X-Ray Center

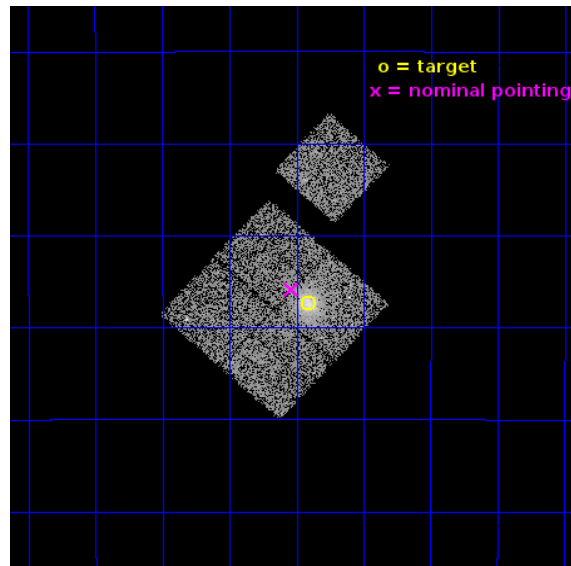
L2 Processing Date : Sep 18 2014

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# 1 Front

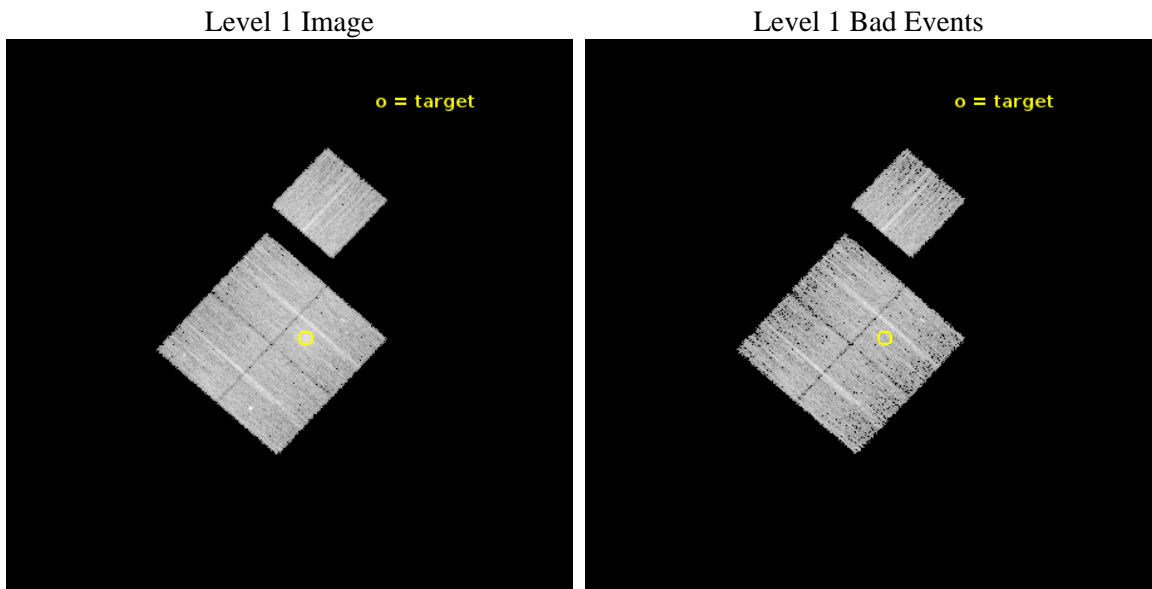
seq_num	801420	Sequence number
obs_id	16278	Observation id
title	Chandra observations of the Planck ESZ Cluster Sample	Proposal tit
observer	Dr. Stephen Murray	Principal investigator
object	G106.73-83.22	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	10.853333	Observer's specified target RA [deg]
dec_targ	-20.621667	Observer's specified target Dec [deg]
ra_nom	10.884471896281	Nominal RA [deg]
dec_nom	-20.597636832059	Nominal Dec [deg]
roll_nom	42.195239119541	Nominal Roll [deg]
revision	1	Processing version of data
ontime	8880.1240621805	Sum of GTIs [s]
livetime	8764.0987038559	Livetime [s]
ontime0	8883.1420025826	Sum of GTIs [s]
ontime1	8883.1830425858	Sum of GTIs [s]
ontime2	8883.2240825891	Sum of GTIs [s]
ontime3	8880.1240621805	Sum of GTIs [s]
ontime6	8883.1009625793	Sum of GTIs [s]
l2events	26130	Number of level 2 events



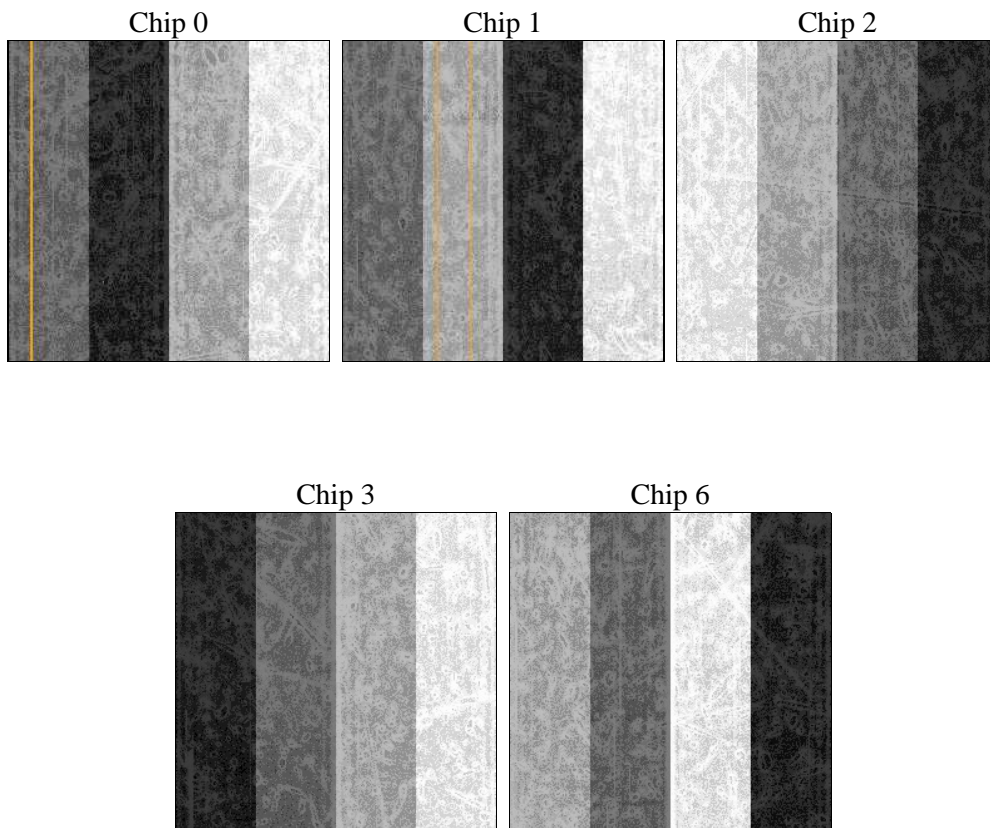
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8800.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	8880.1240621805	Sum of GTIs [s]
caldsver	4.6.3	&#160	ontime0	8883.1420025826	Sum of GTIs [s]
date	2014-09-18T11:55:46	Date and time of file creation	ontime1	8883.1830425858	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	8883.2240825891	Sum of GTIs [s]
			ontime3	8880.1240621805	Sum of GTIs [s]
			ontime6	8883.1009625793	Sum of GTIs [s]
			l1events	219938	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	40782	42255	44332	46700	45869
rejected events	35526	36198	39225	37891	40642
rejected %	87%	85%	88%	81%	88%

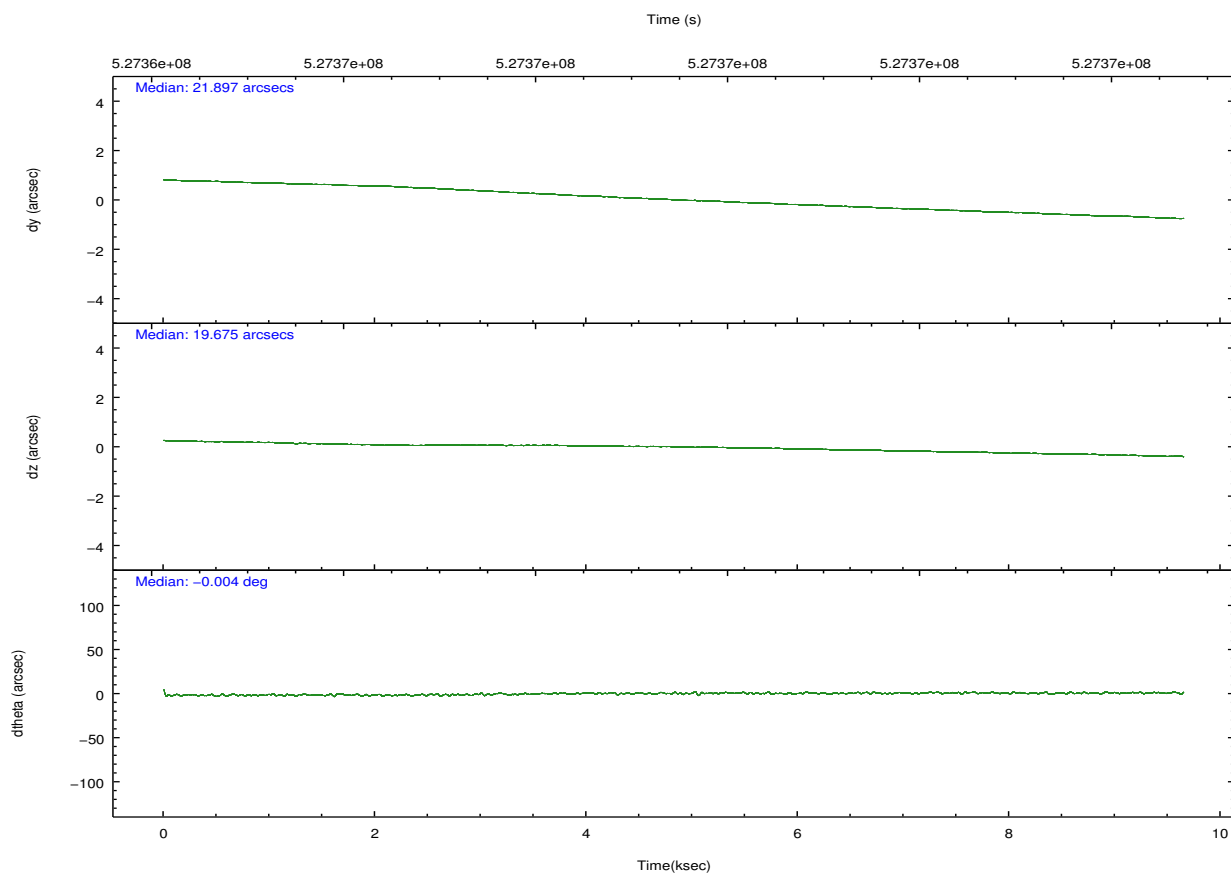
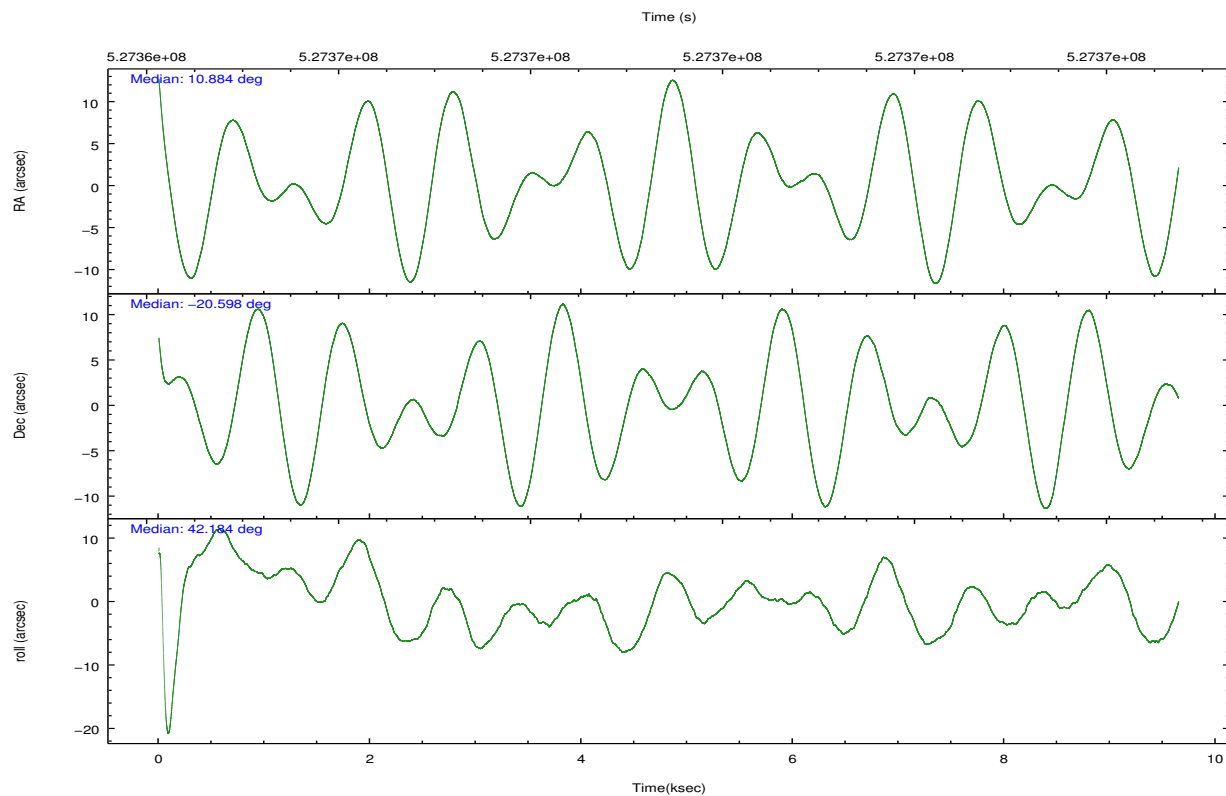
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	1832	2298	1906	5031	1688
	4%	5%	4%	10%	3%
grade 1 events	20	20	27	40	16
	0%	0%	0%	0%	0%
grade 2 events	1241	1310	1187	1403	1227
	3%	3%	2%	3%	2%
grade 3 events	558	532	492	611	548
	1%	1%	1%	1%	1%
grade 4 events	531	578	538	623	520
	1%	1%	1%	1%	1%
grade 5 events	2025	2194	2104	2335	2175
	4%	5%	4%	5%	4%
grade 6 events	1101	1342	989	1150	1247
	2%	3%	2%	2%	2%
grade 7 events	33474	33981	37089	35507	38448
	82%	80%	83%	76%	83%



## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	10.875648	10.88447189628057	CCD I2 on	Y	Y
[deg] Pointing Dec	-20.623944	-20.59763683205911	CCD I3 on	Y	Y
[deg] Pointing Roll	41.983396	42.19523911954116	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-227.592463	-227.5933067819097	CCD S3 on	N	N
[mm] SIM translation stage offset	-6	-5.999146221020027	CCD S4 on	N	N
[s] Observation start time (MET)	527365466.184000	527363879.25846	CCD S5 on	N	N
Observation start date	2014-09-17T18:23:19	2014-09-17T17:57:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	527374266.184000	527375055.34658	On-chip summing requested	N	N
Observation end date	2014-09-17T20:49:59	2014-09-17T21:04:15	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

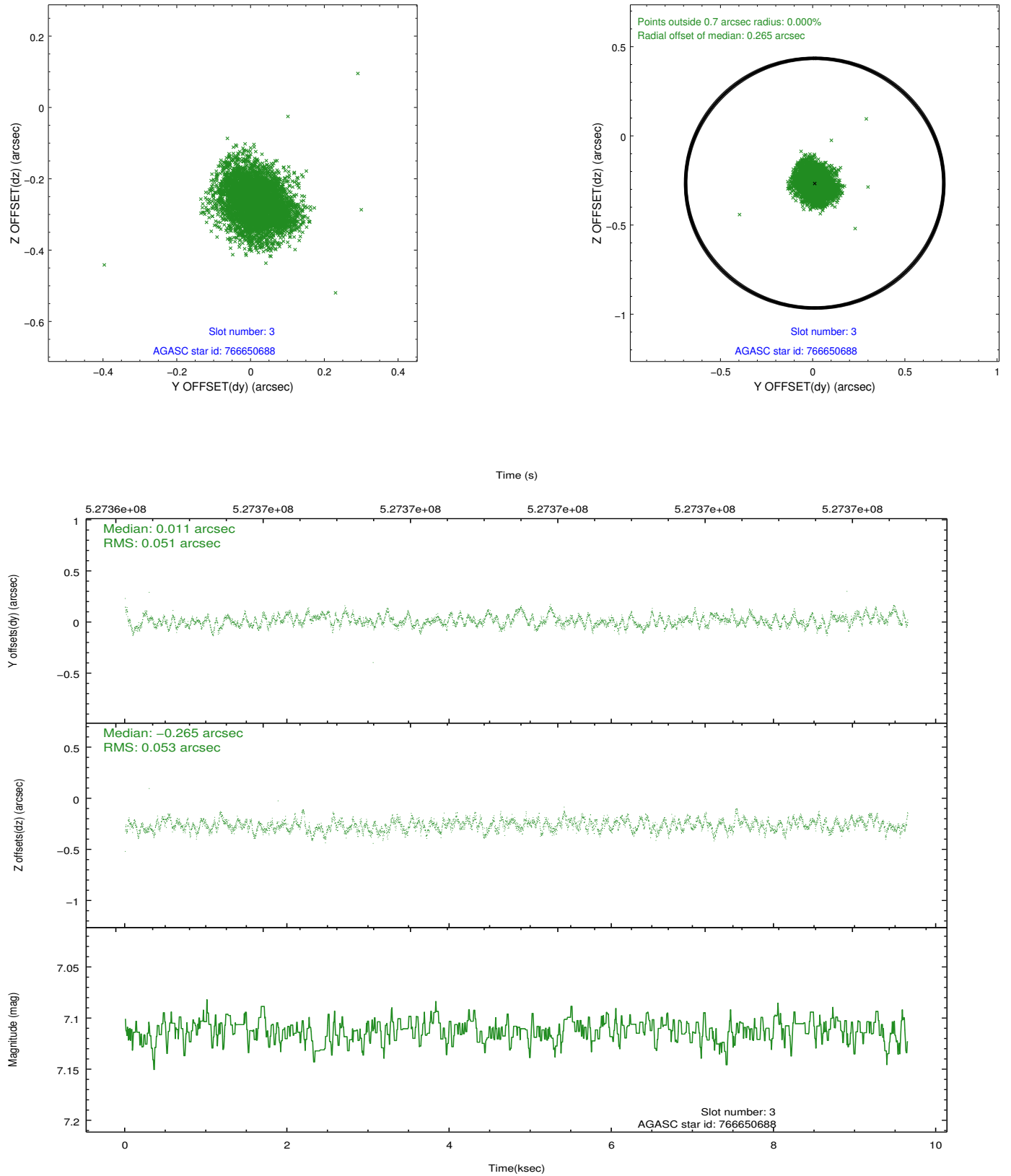


Slot Statistics

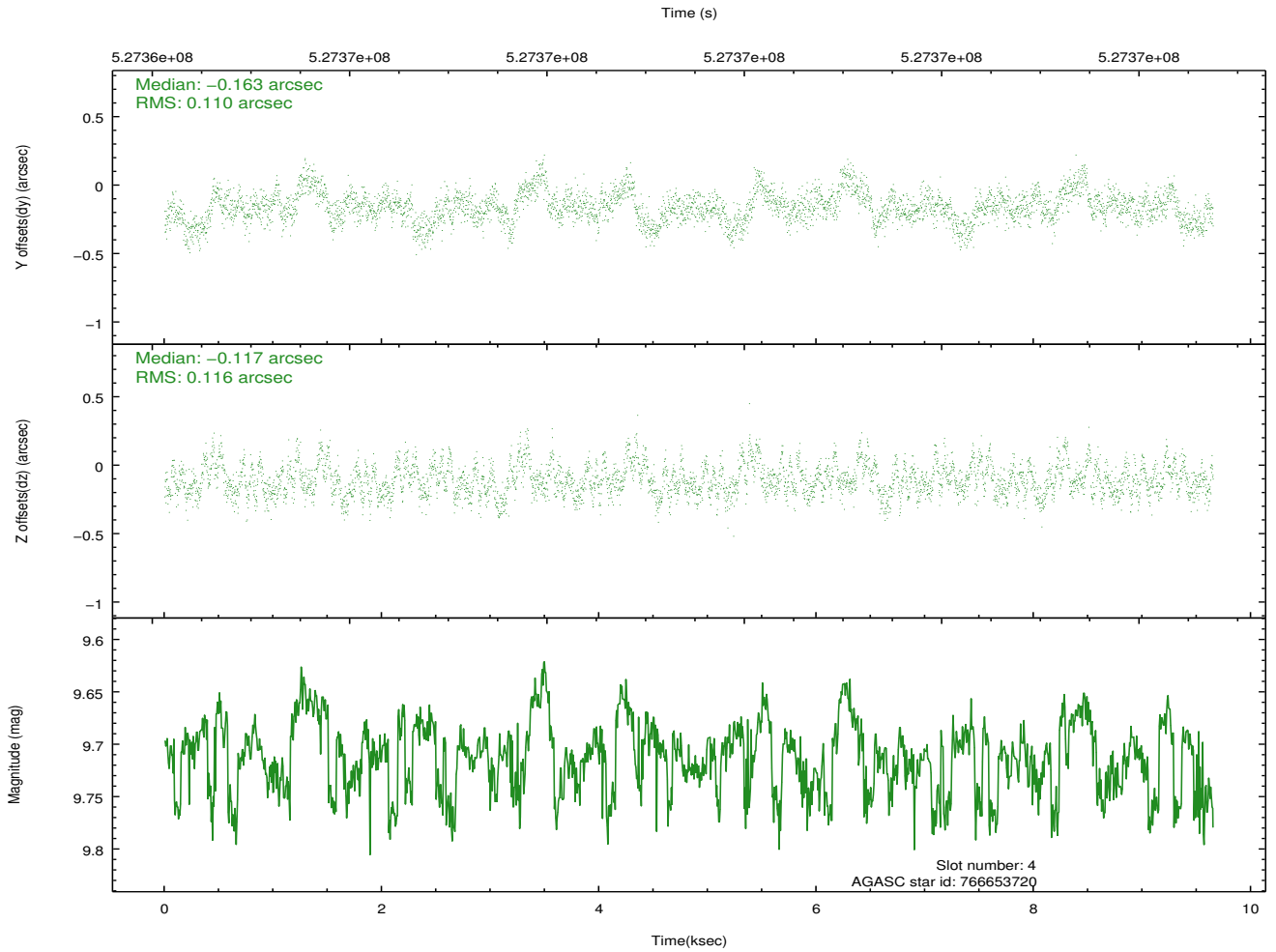
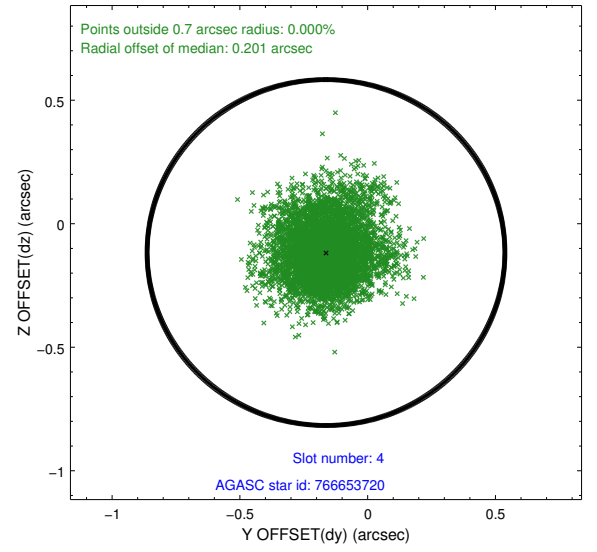
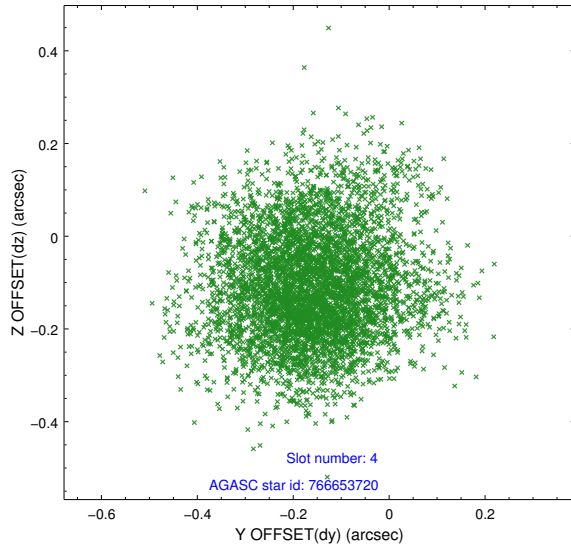
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.11	2354	-0.204	-0.098	0.012	0.021	0.000000	0.000000	-777.43	-972.17
1	FID	ACIS-I-4	7.09	2353	0.344	0.136	0.018	0.031	0.000000	0.000000	2136.82	933.97
2	FID	ACIS-I-5	7.17	2353	-0.240	0.031	0.016	0.027	0.000000	0.000000	-1830.33	931.44
3	GUIDE	766650688	7.11	4706	0.011	-0.265	0.078	0.126	10.374072	-20.299617	-479.27	1998.29
4	GUIDE	766653720	9.71	4702	-0.163	-0.117	0.170	0.281	10.975219	-20.399784	789.90	375.14
5	GUIDE	766654496	9.37	4689	-0.250	0.042	0.159	0.264	11.545095	-20.663870	1576.21	-1617.77
6	GUIDE	766653208	9.44	4705	0.465	-0.077	0.150	0.231	10.947629	-21.070490	-893.87	-1357.52
7	GUIDE	766653384	9.63	4704	-0.087	0.412	0.149	0.246	10.985393	-21.081265	-827.53	-1470.79

## 2.4 Star Slots

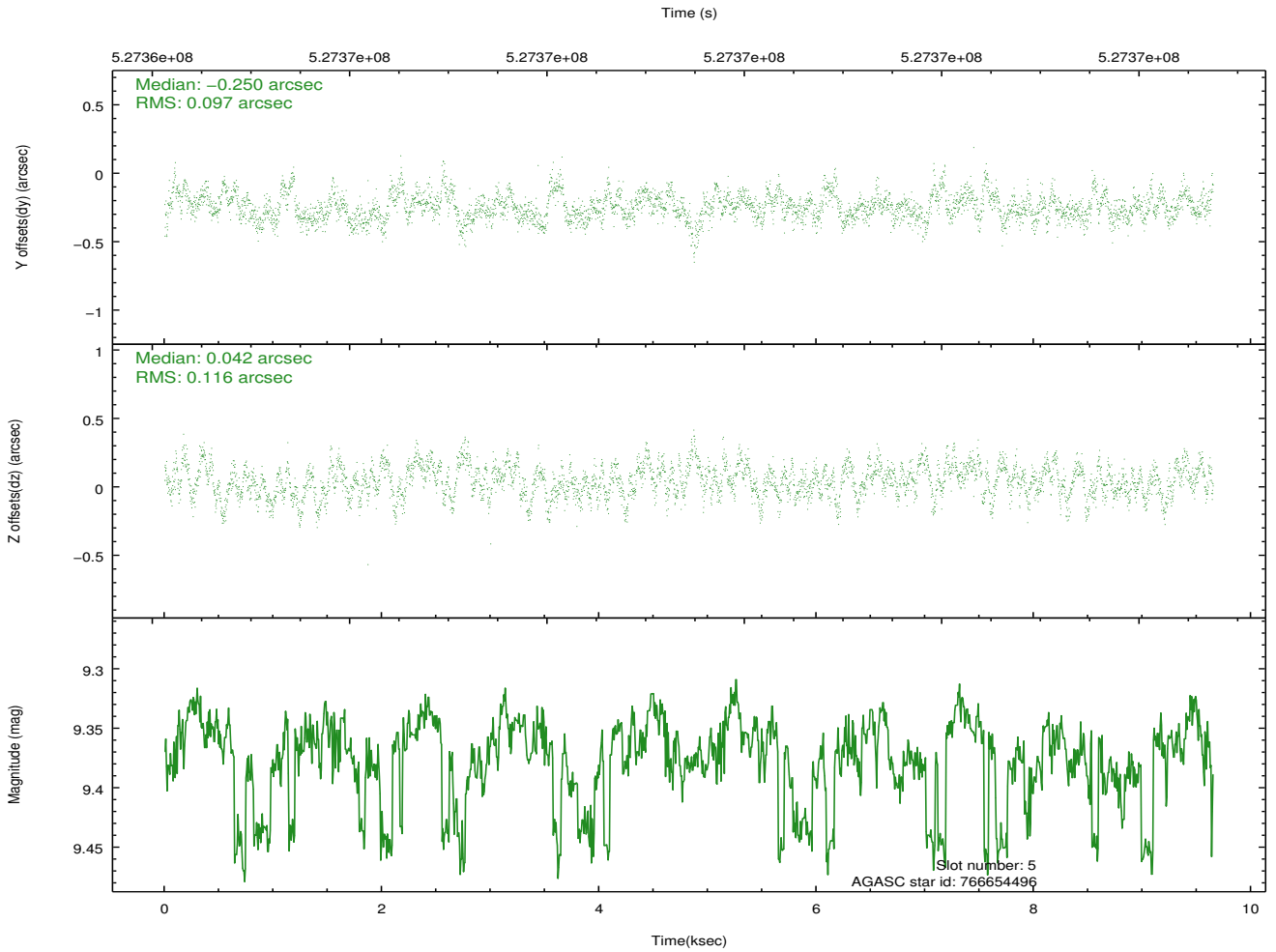
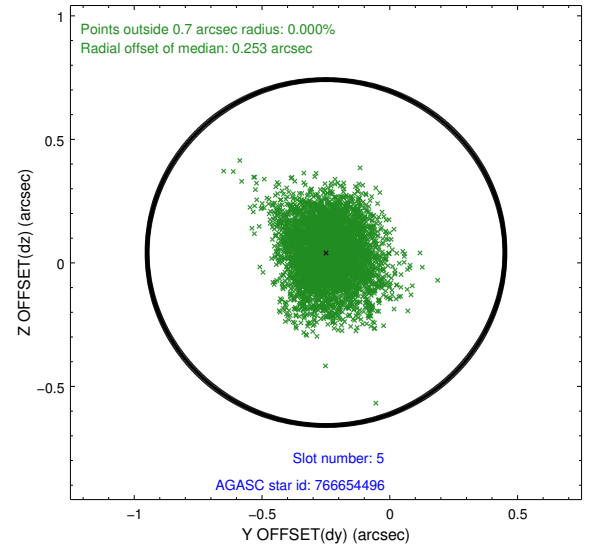
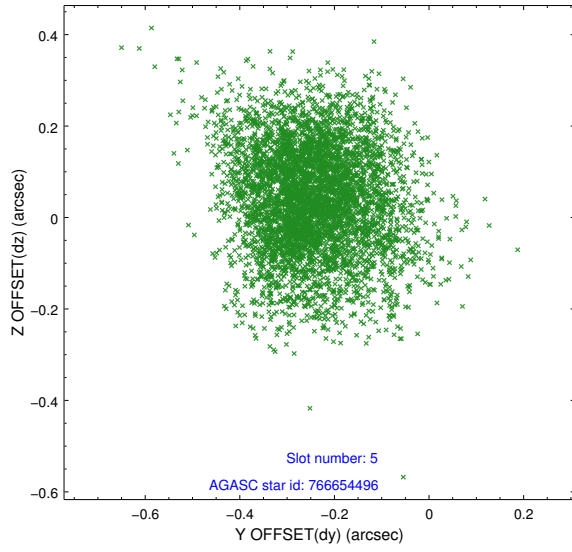
### 2.4.1 Slot 3



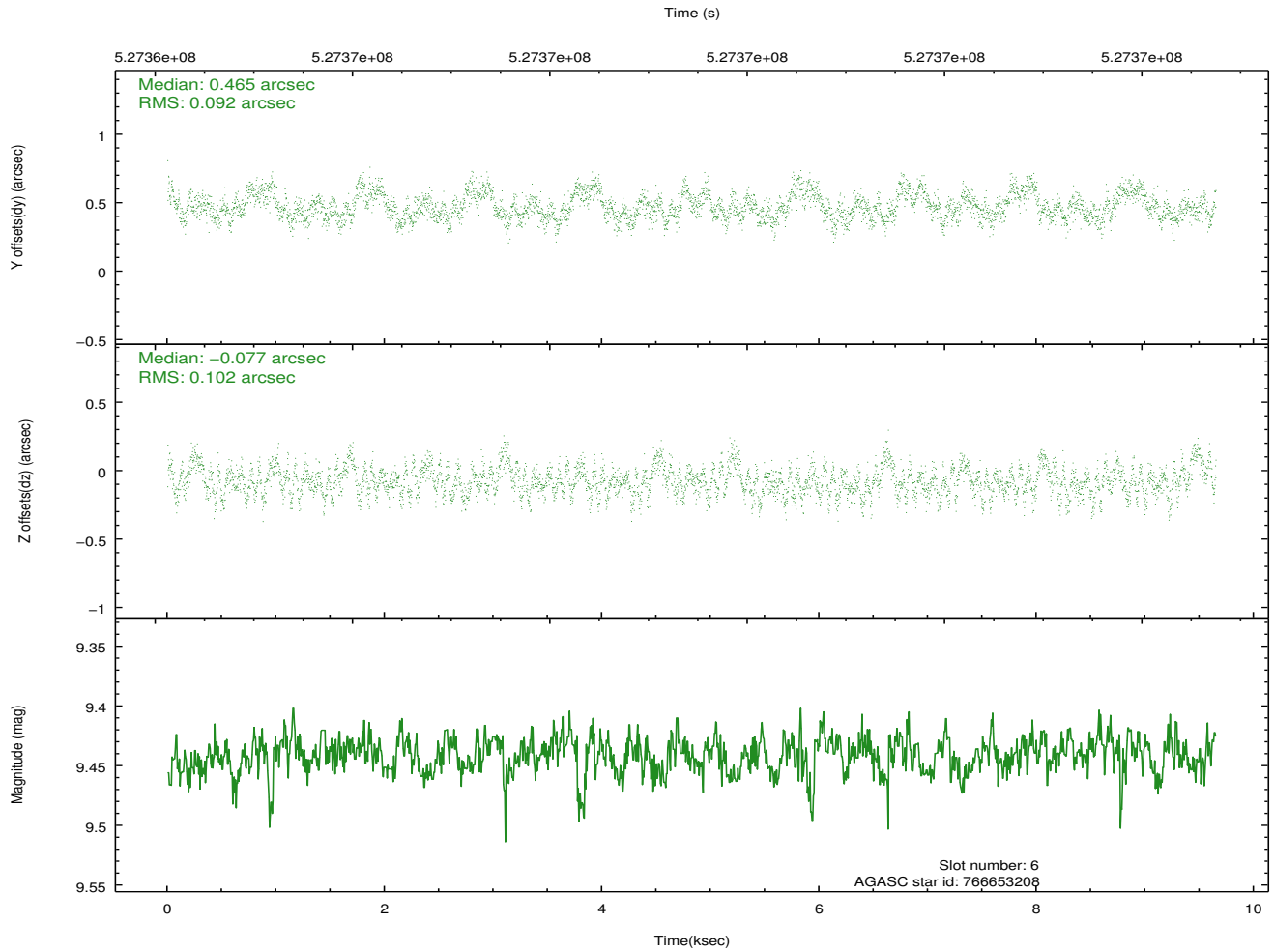
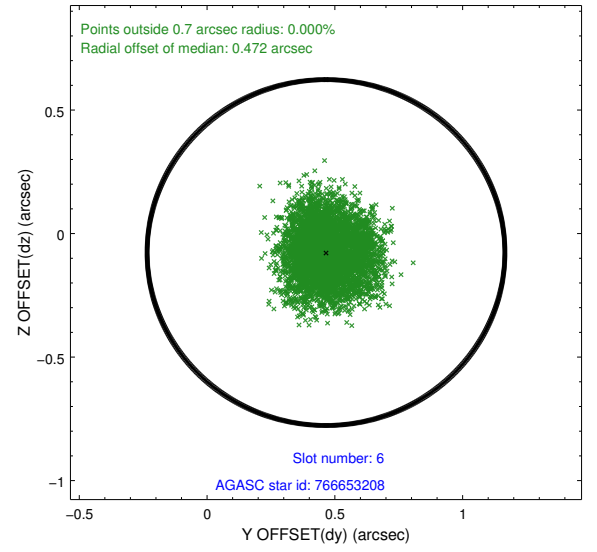
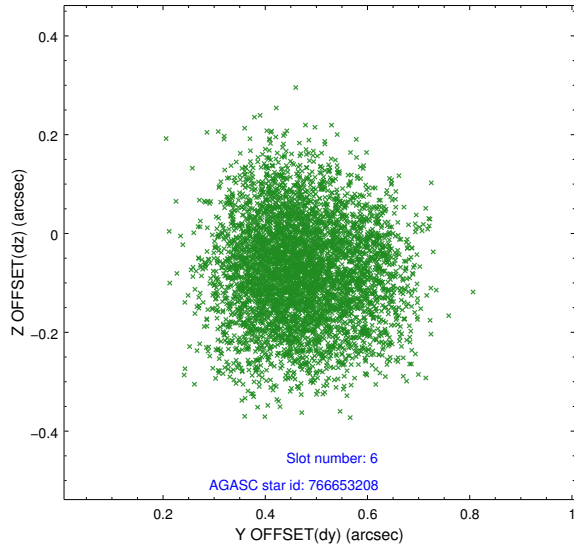
## 2.4.2 Slot 4



### 2.4.3 Slot 5

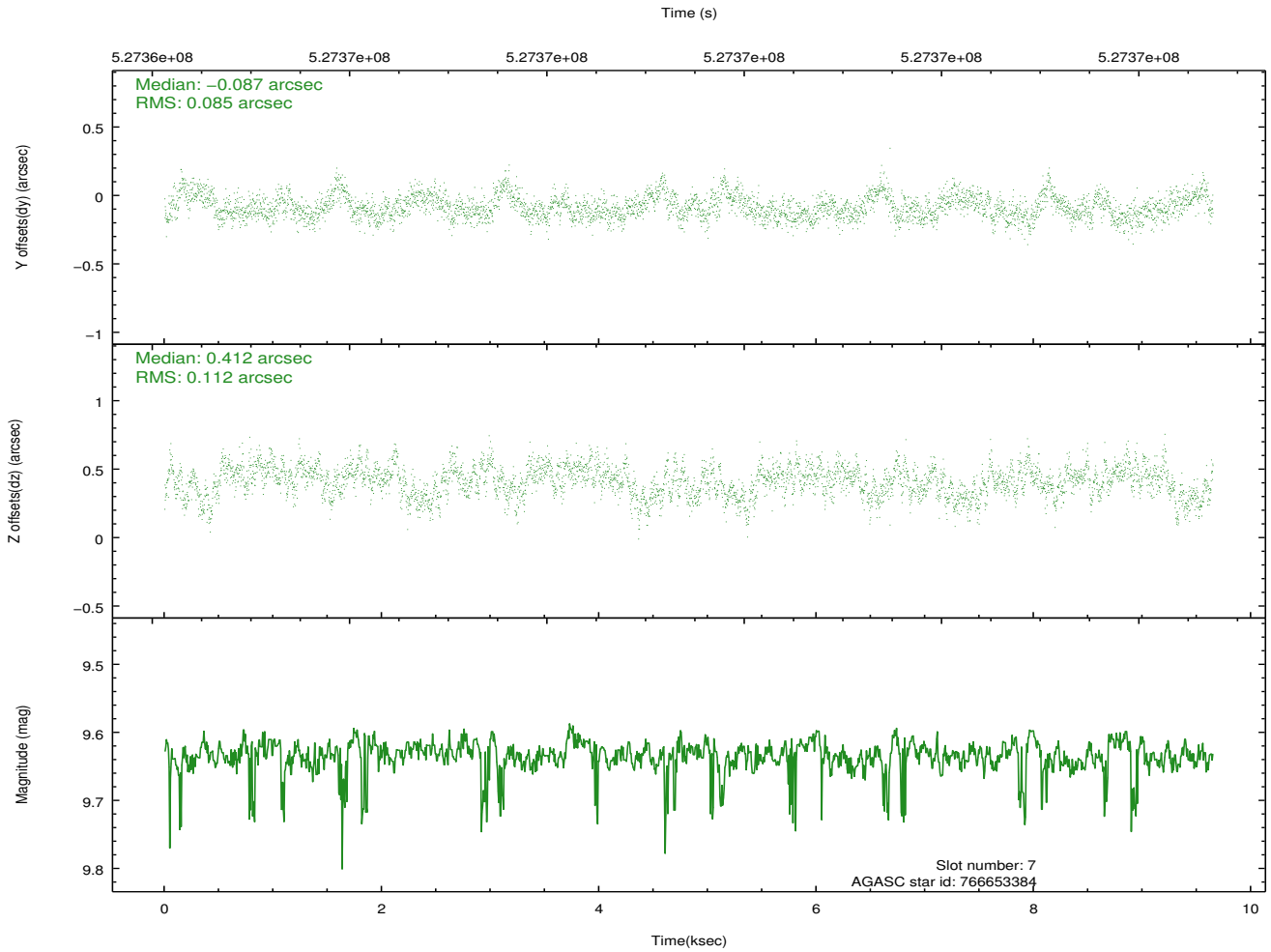
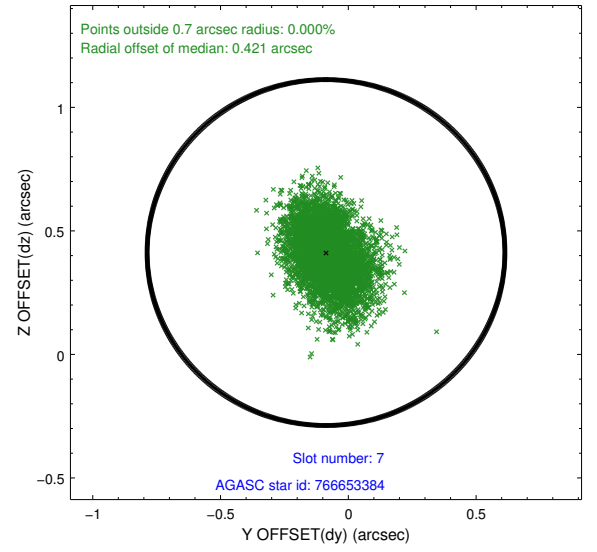
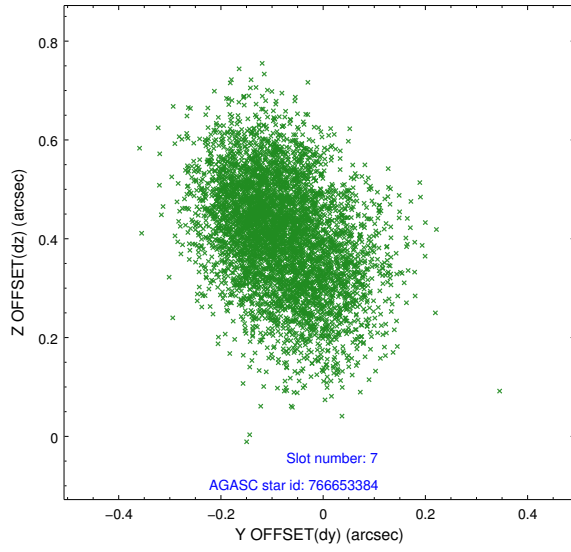


## 2.4.4 Slot 6



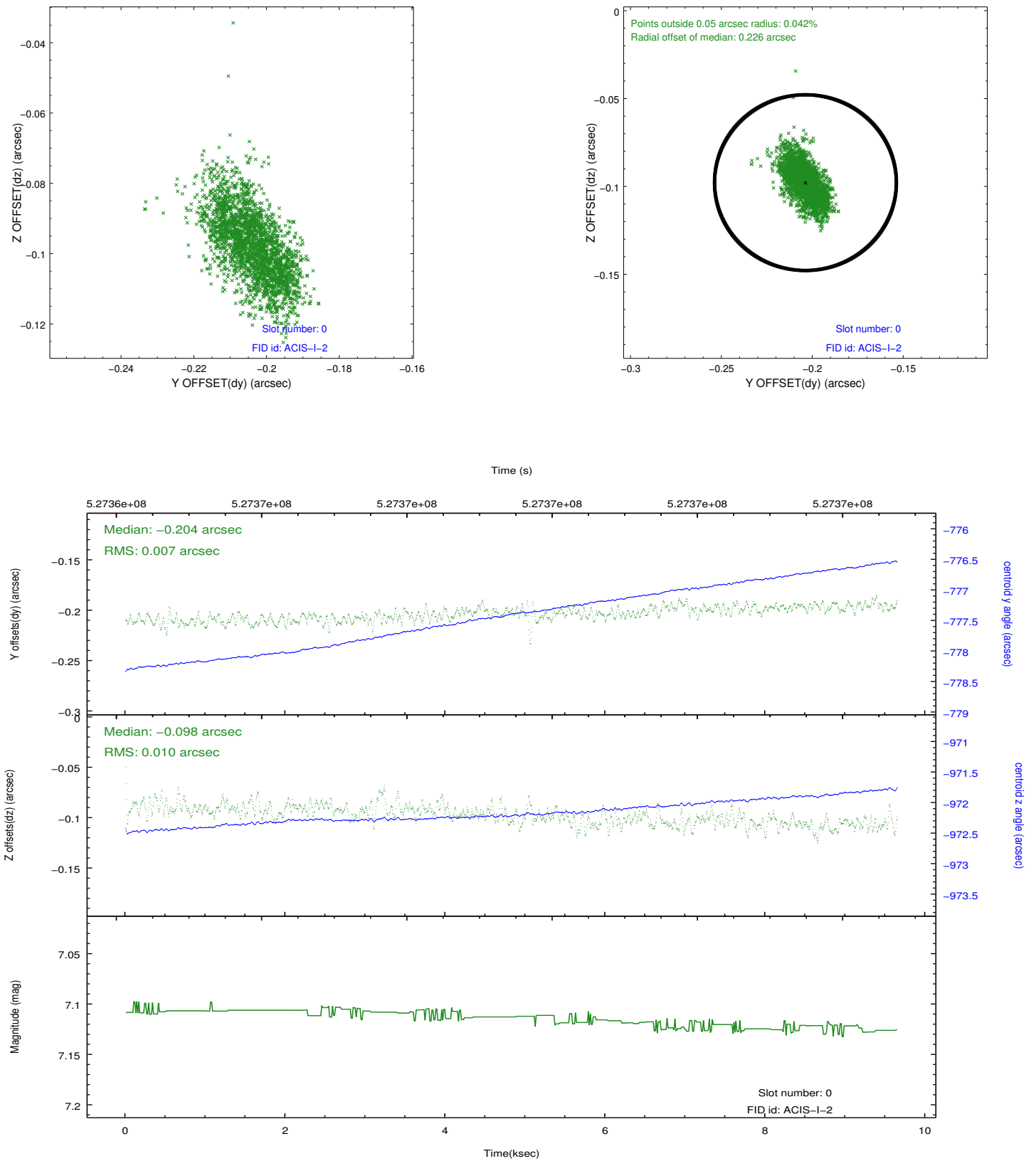


## 2.4.5 Slot 7

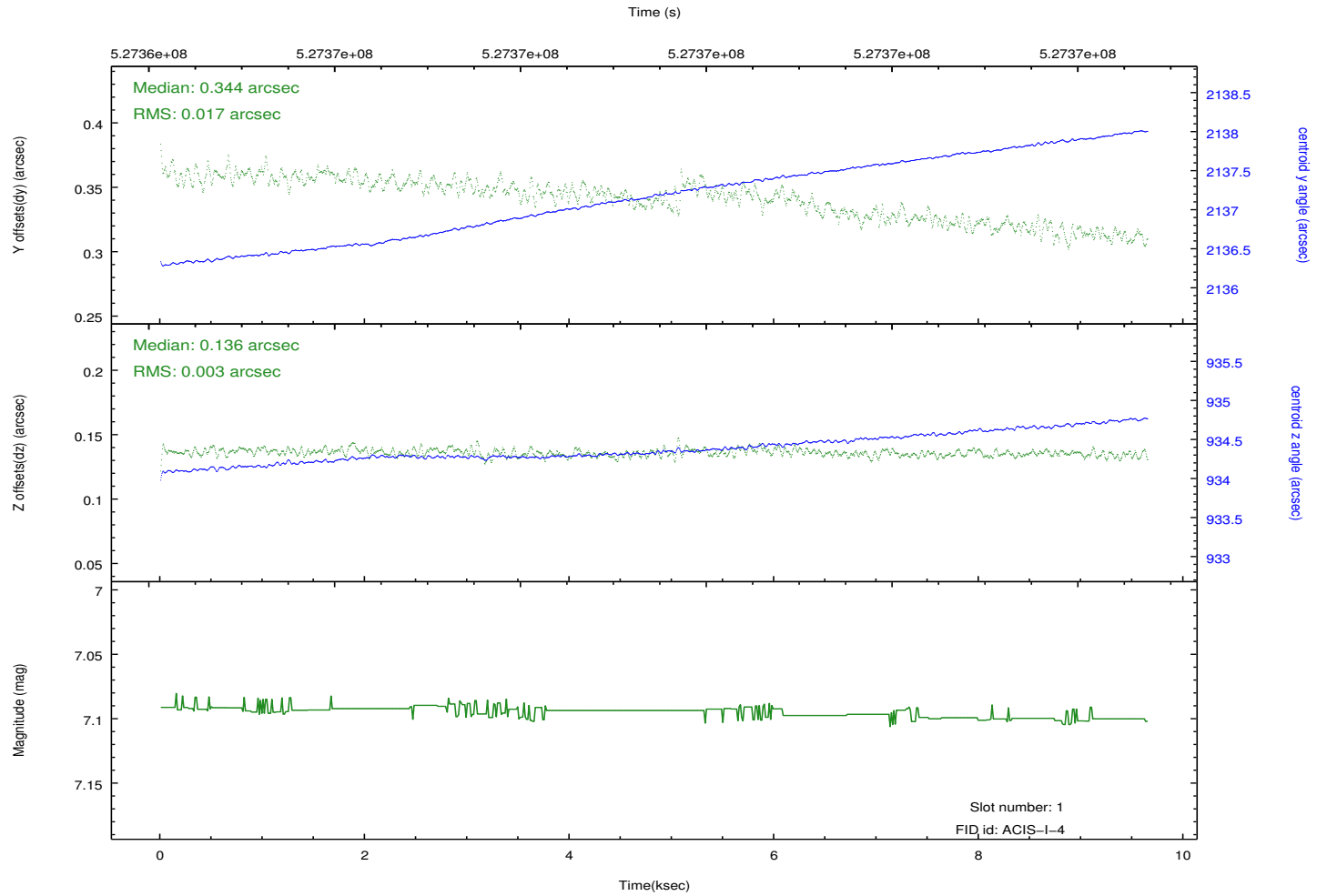
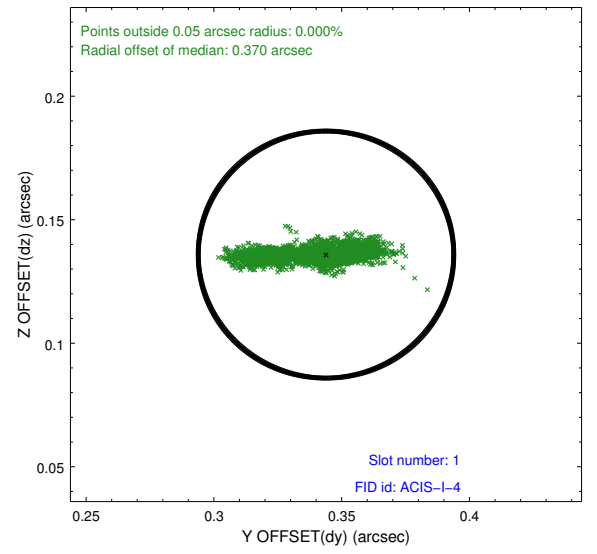
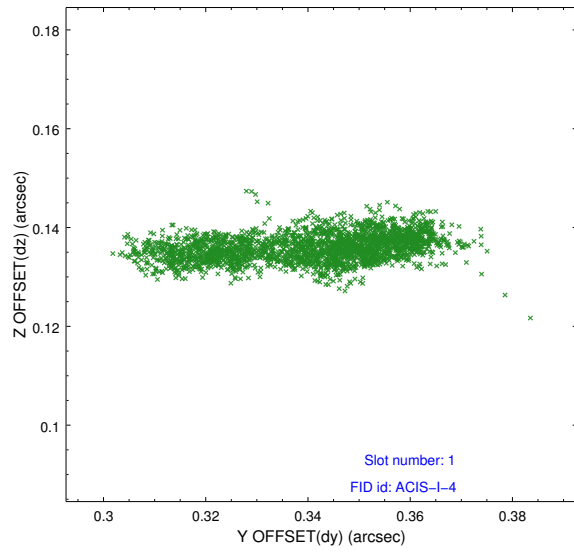


## 2.5 FID Slots

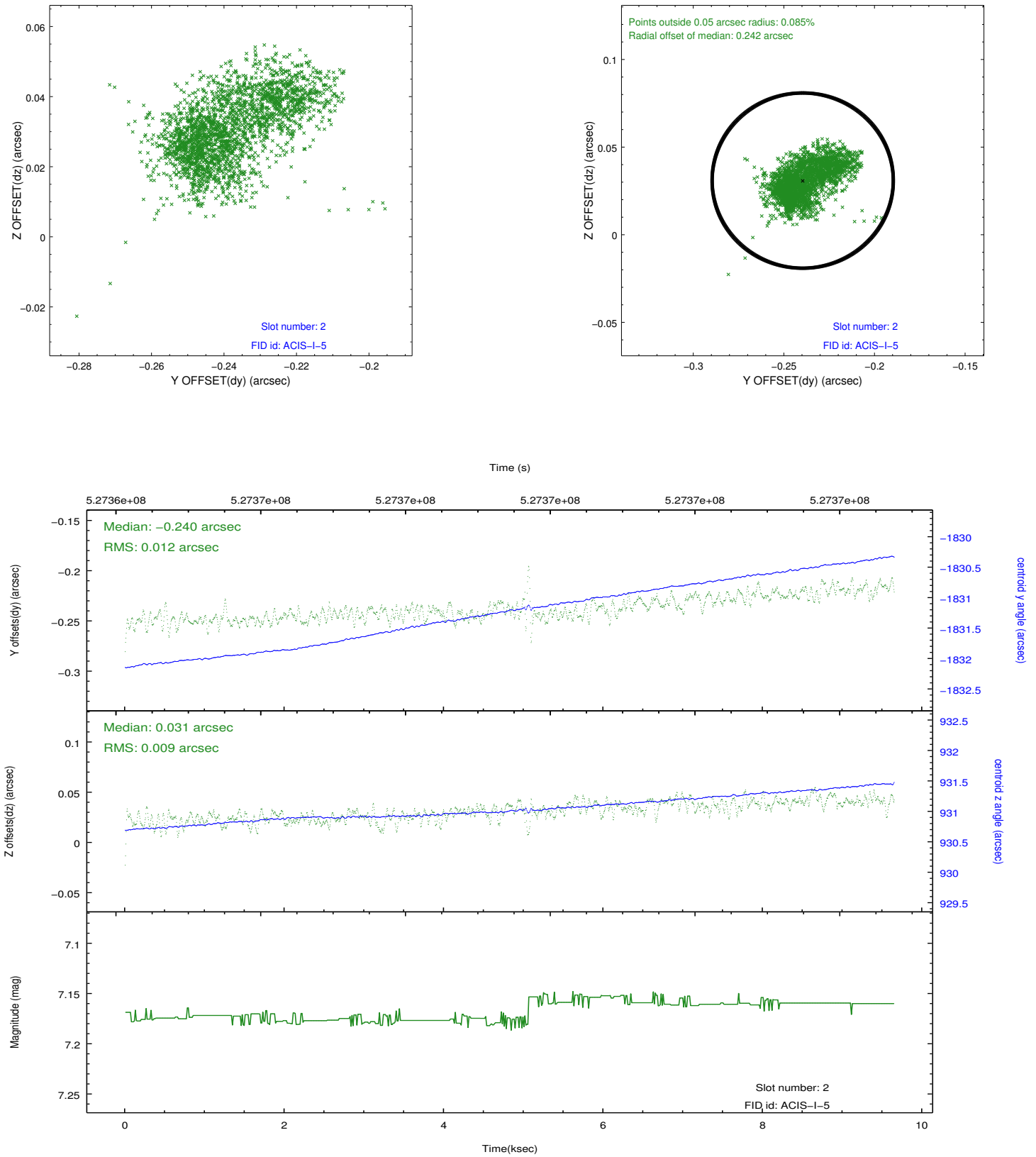
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## **A Summary**

### **A.1 Status**

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.09.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.8801240621805

### **A.2 Comments**