

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12099 - L2 Version 2  
Chandra X-Ray Center

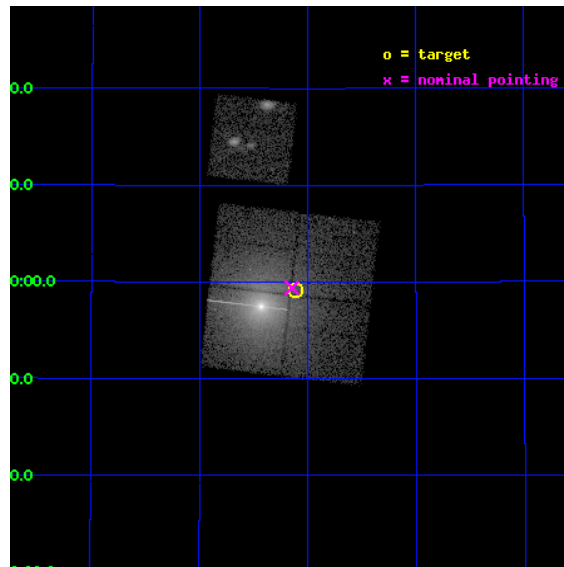
L2 Processing Date : Jun 20 2012

## 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

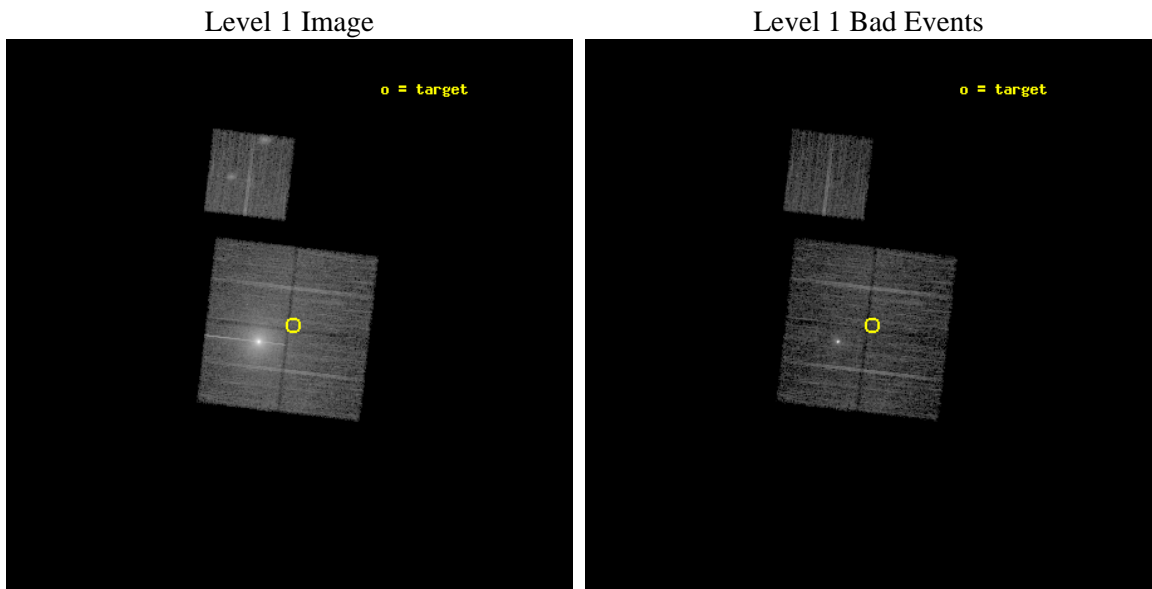
seq_num	200571	Sequence number
obs_id	12099	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.026986	Observer's specified target RA [deg]
dec_targ	40.986751	Observer's specified target Dec [deg]
ra_nom	308.03680366279	Nominal RA [deg]
dec_nom	40.990040218069	Nominal Dec [deg]
roll_nom	6.7022602584676	Nominal Roll [deg]
revision	2	Processing version of data
ontime	6047.103821516	Sum of GTIs [s]
livetime	5968.0939582749	Livetime [s]
ontime0	6046.9807015061	Sum of GTIs [s]
ontime1	6037.5989398956	Sum of GTIs [s]
ontime2	6047.0627815127	Sum of GTIs [s]
ontime3	6047.103821516	Sum of GTIs [s]
ontime6	6043.7987011671	Sum of GTIs [s]
l2events	151033	Number of level 2 events



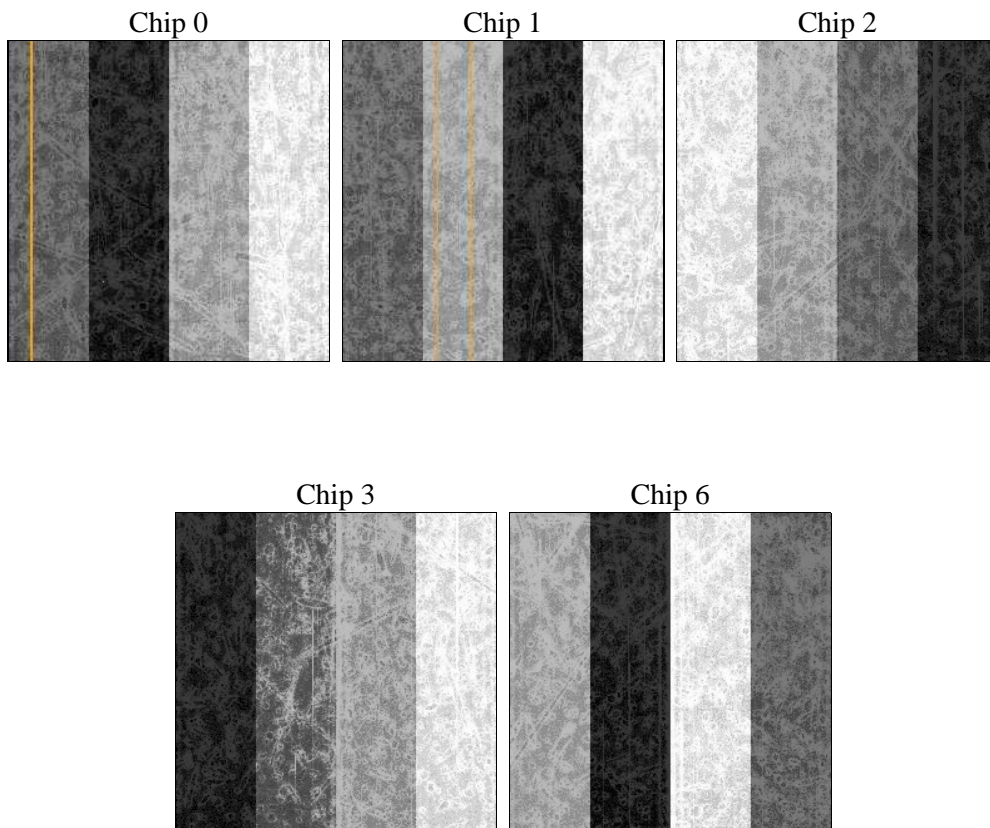
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	6047.103821516	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime0	6046.9807015061	Sum of GTIs [s]
date	2012-06-21T01:08:08	Date and time of file creation	ontime1	6037.5989398956	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	6047.0627815127	Sum of GTIs [s]
			ontime3	6047.103821516	Sum of GTIs [s]
			ontime6	6043.7987011671	Sum of GTIs [s]
			l1events	370859	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	154947	51315	62416	51753	50428
rejected events	46050	38342	41101	42171	41012
rejected %	29%	74%	65%	81%	81%

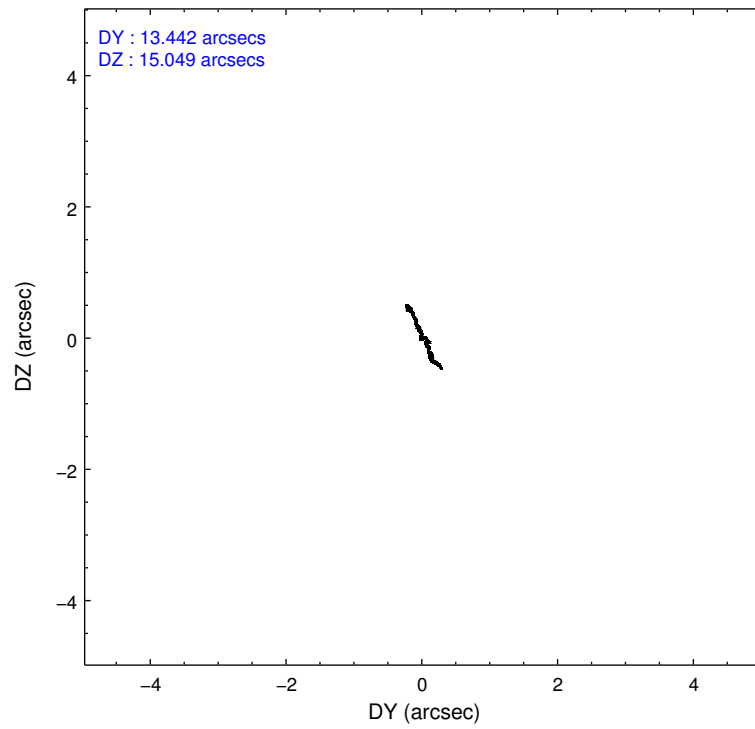
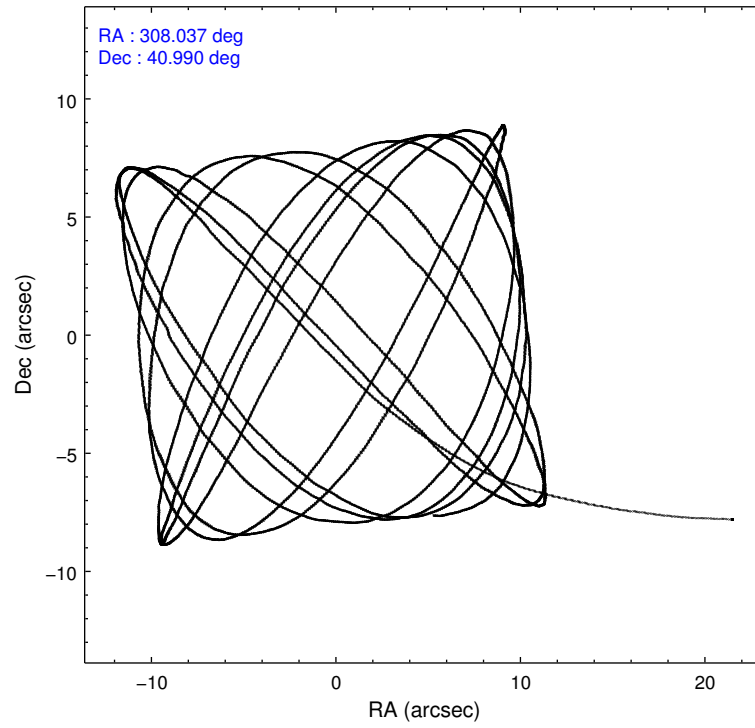
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	72371	7658	14282	5461	5535
	46%	14%	22%	10%	10%
grade 1 events	1296	47	114	55	54
	0%	0%	0%	0%	0%
grade 2 events	15890	2195	3133	1632	1550
	10%	4%	5%	3%	3%
grade 3 events	5712	880	1189	685	664
	3%	1%	1%	1%	1%
grade 4 events	5688	909	1153	703	652
	3%	1%	1%	1%	1%
grade 5 events	2959	1609	1511	1729	1673
	1%	3%	2%	3%	3%
grade 6 events	9429	1360	1582	1112	1025
	6%	2%	2%	2%	2%
grade 7 events	41602	36657	39452	40376	39275
	26%	71%	63%	78%	77%

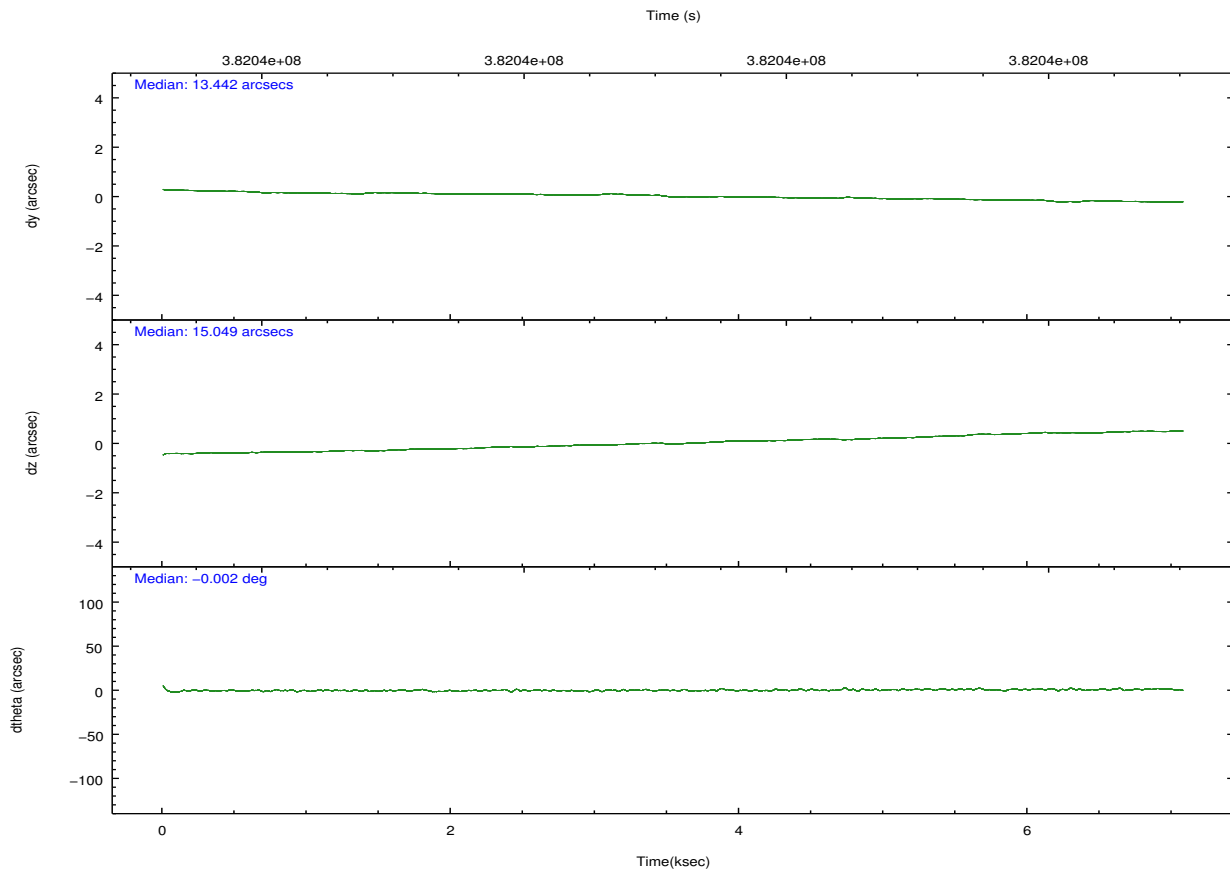
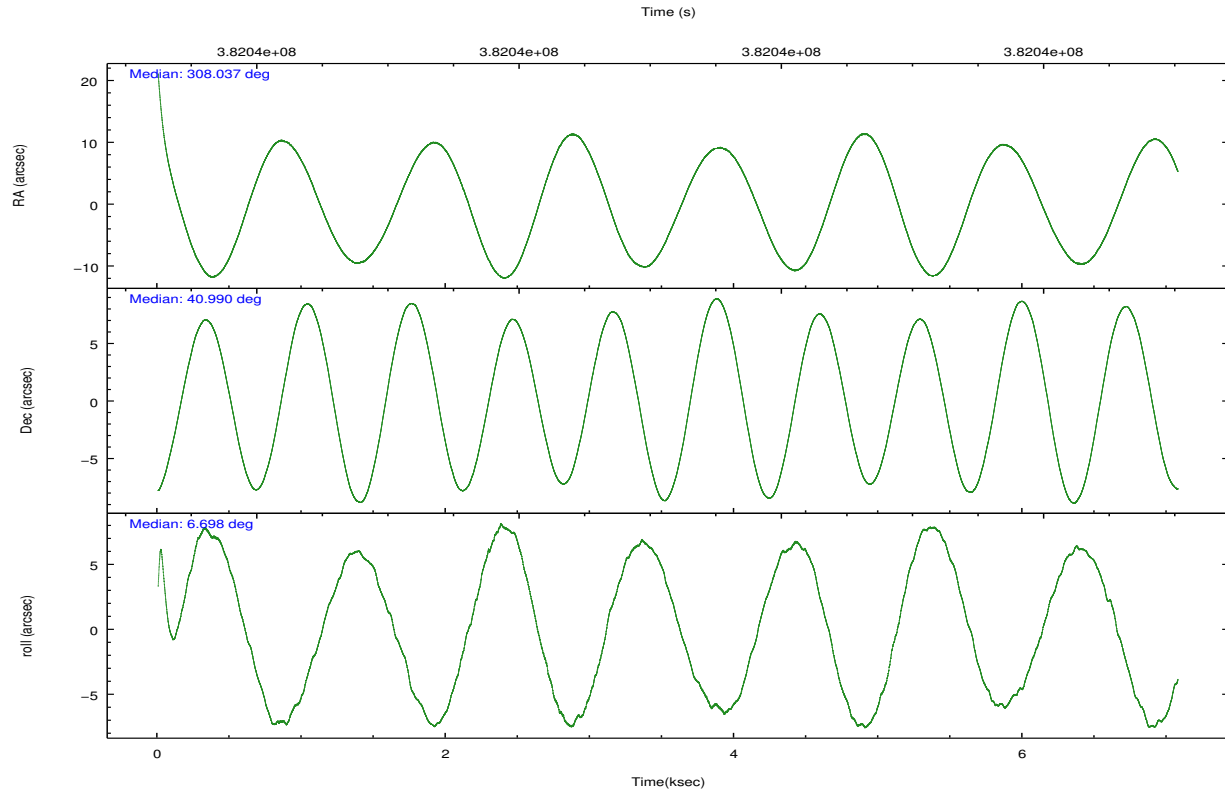


## 2.2 Compared Parameters

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	308.007658	308.0368036627896	CCD I2 on	Y	Y
[deg] Pointing Dec	40.973512	40.9900402180694	CCD I3 on	Y	Y
[deg] Pointing Roll	6.512669	6.702260258467646	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	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	382038684.184000	382036490.33102	CCD S5 on	N	N
Observation start date	2010-02-08T17:50:18	2010-02-08T17:14:50	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	382044684.184000	382045696.88149	On-chip summing requested	N	N
Observation end date	2010-02-08T19:30:18	2010-02-08T19:48:16	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



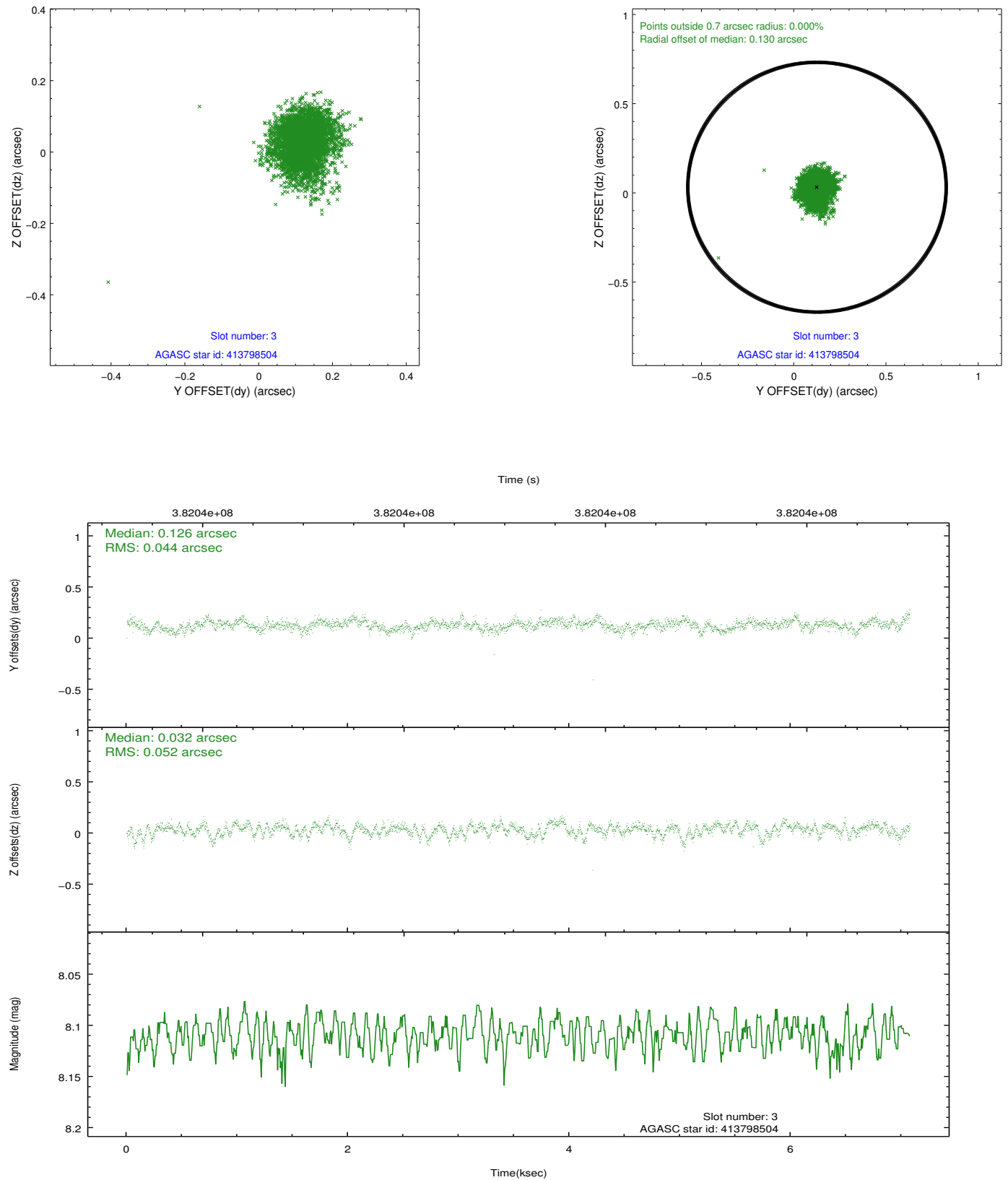


### Slot Statistics

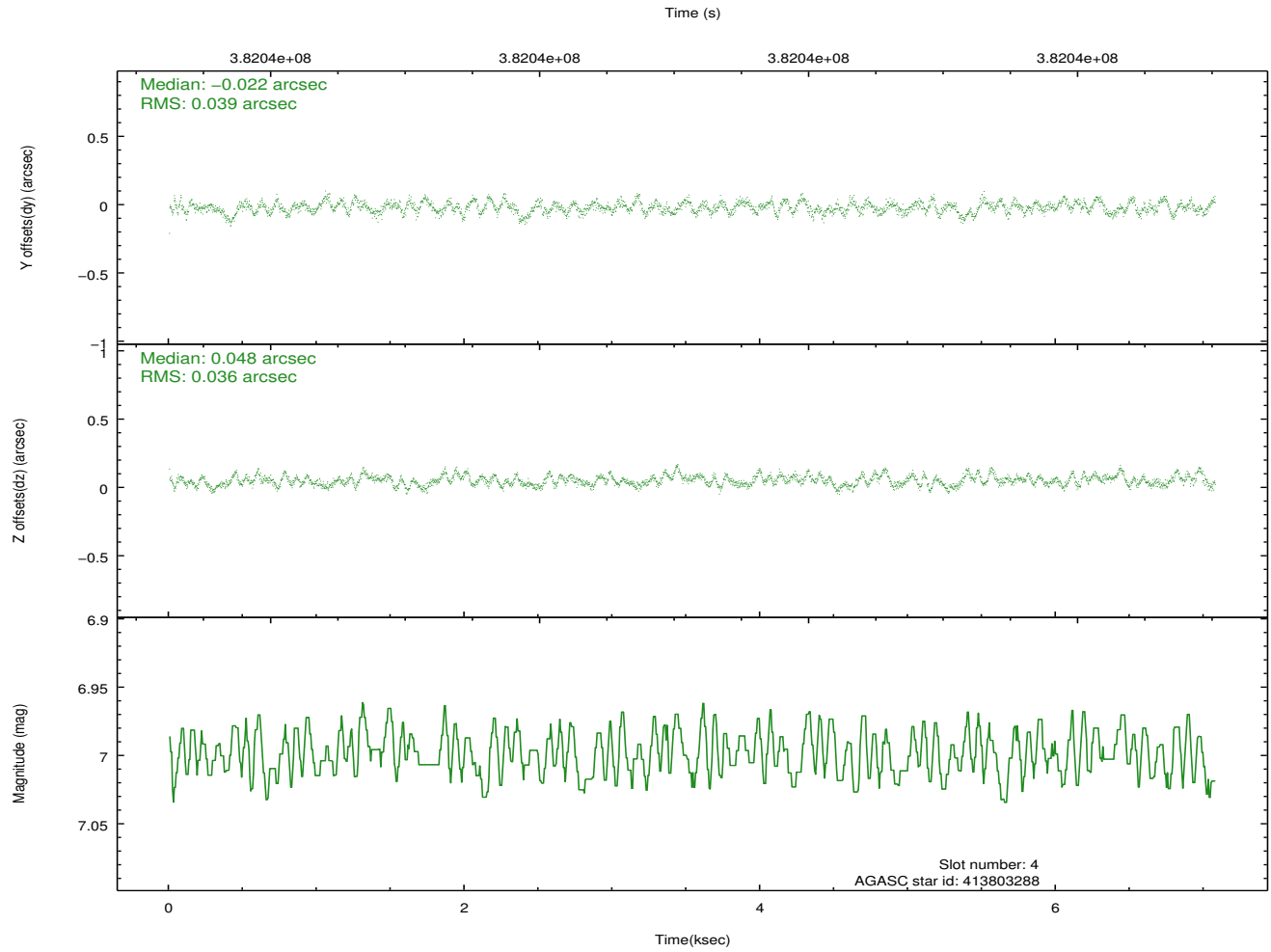
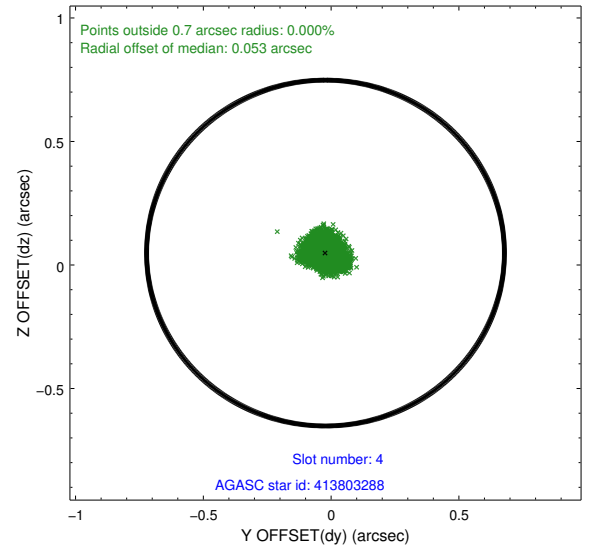
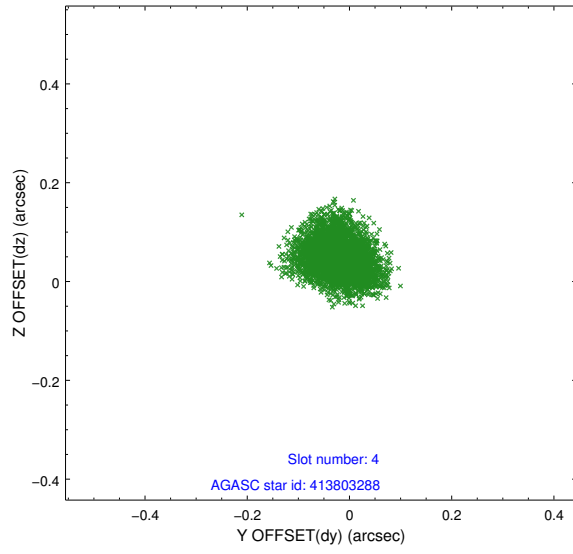
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.04	1726	0.005	0.055	0.018	0.027	0.000000	0.000000	926.05	-838.62
1	FID	ACIS-I-2	6.95	1726	-0.115	-0.071	0.017	0.026	0.000000	0.000000	-767.71	-845.58
2	FID	ACIS-I-6	7.04	1726	0.019	0.083	0.013	0.020	0.000000	0.000000	391.34	1702.81
3	GUIDE	413798504	8.11	3449	0.126	0.032	0.072	0.116	307.761525	40.426565	-892.99	-1878.82
4	GUIDE	413803288	7.00	3451	-0.022	0.048	0.057	0.091	307.629978	40.506899	-1217.42	-1550.02
5	GUIDE	413805792	7.34	3451	-0.004	0.101	0.071	0.109	307.778748	40.858024	-666.36	-341.48
6	GUIDE	414326136	7.36	3452	-0.078	-0.139	0.064	0.101	308.256176	41.473642	870.30	1714.03
7	GUIDE	414328464	9.17	3451	-0.027	-0.039	0.090	0.146	308.778827	41.333671	2219.54	1061.70

## 2.4 Star Slots

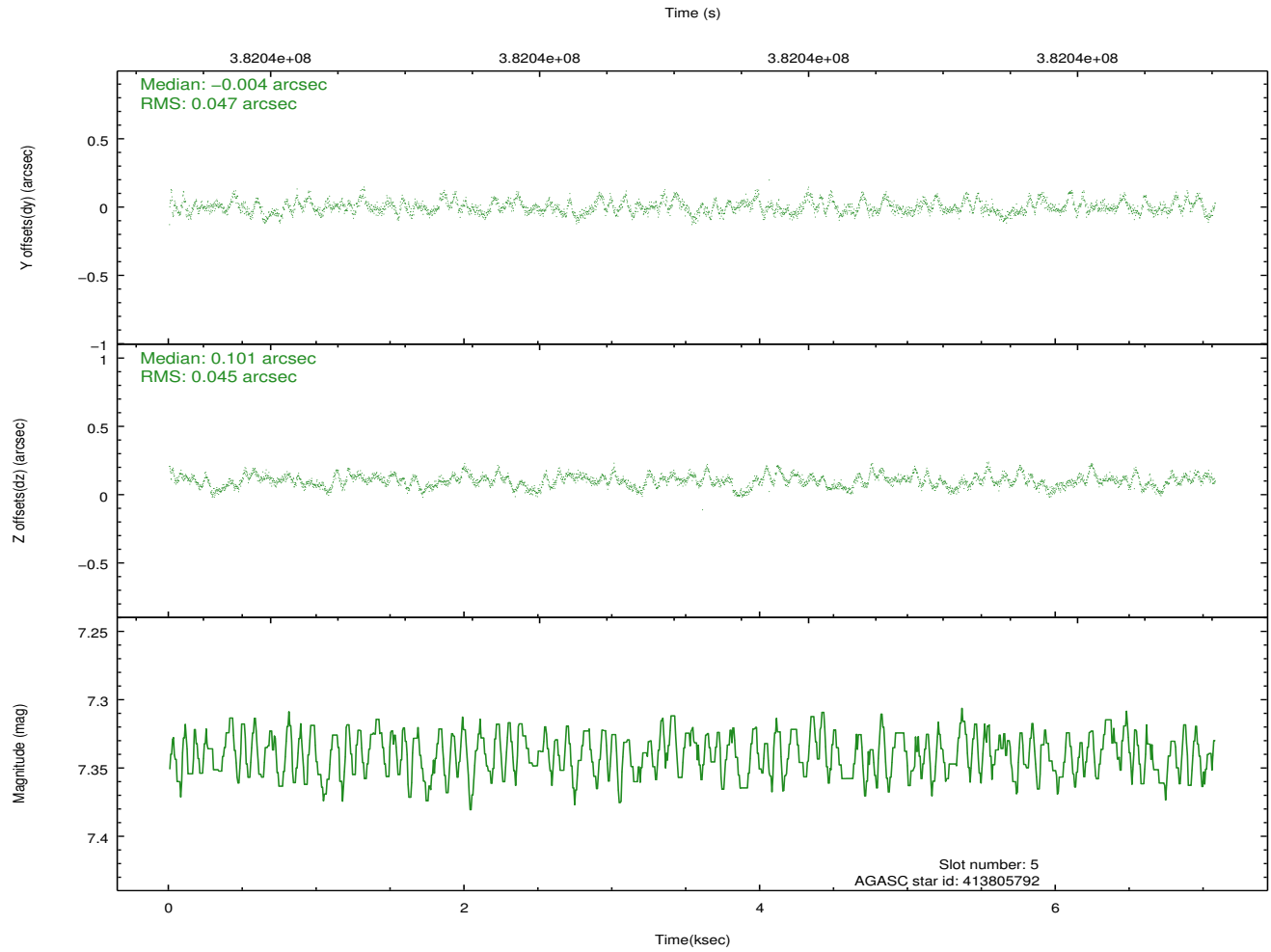
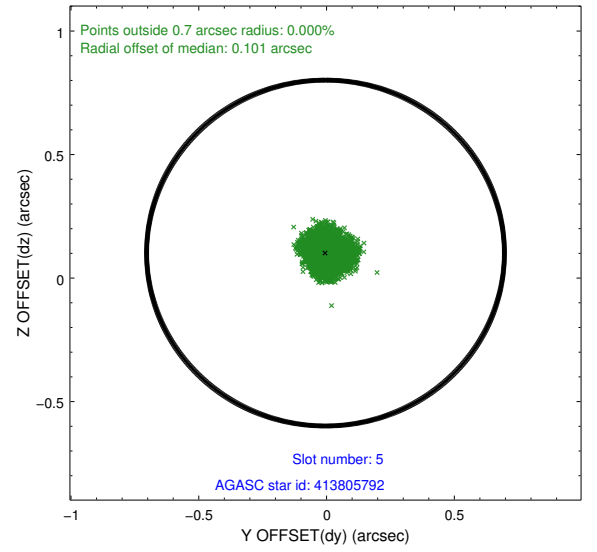
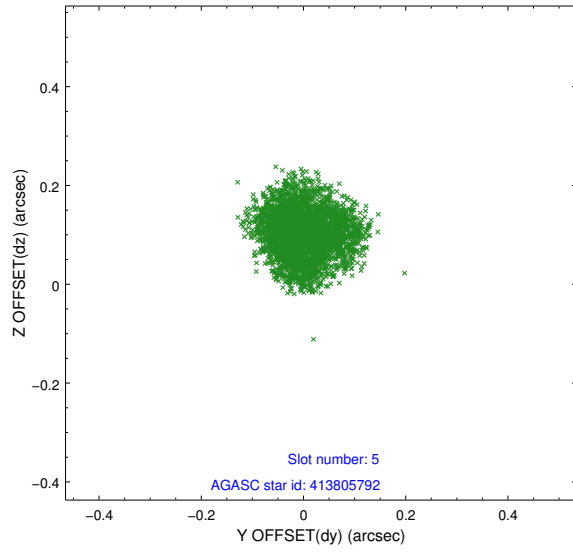
### 2.4.1 Slot 3



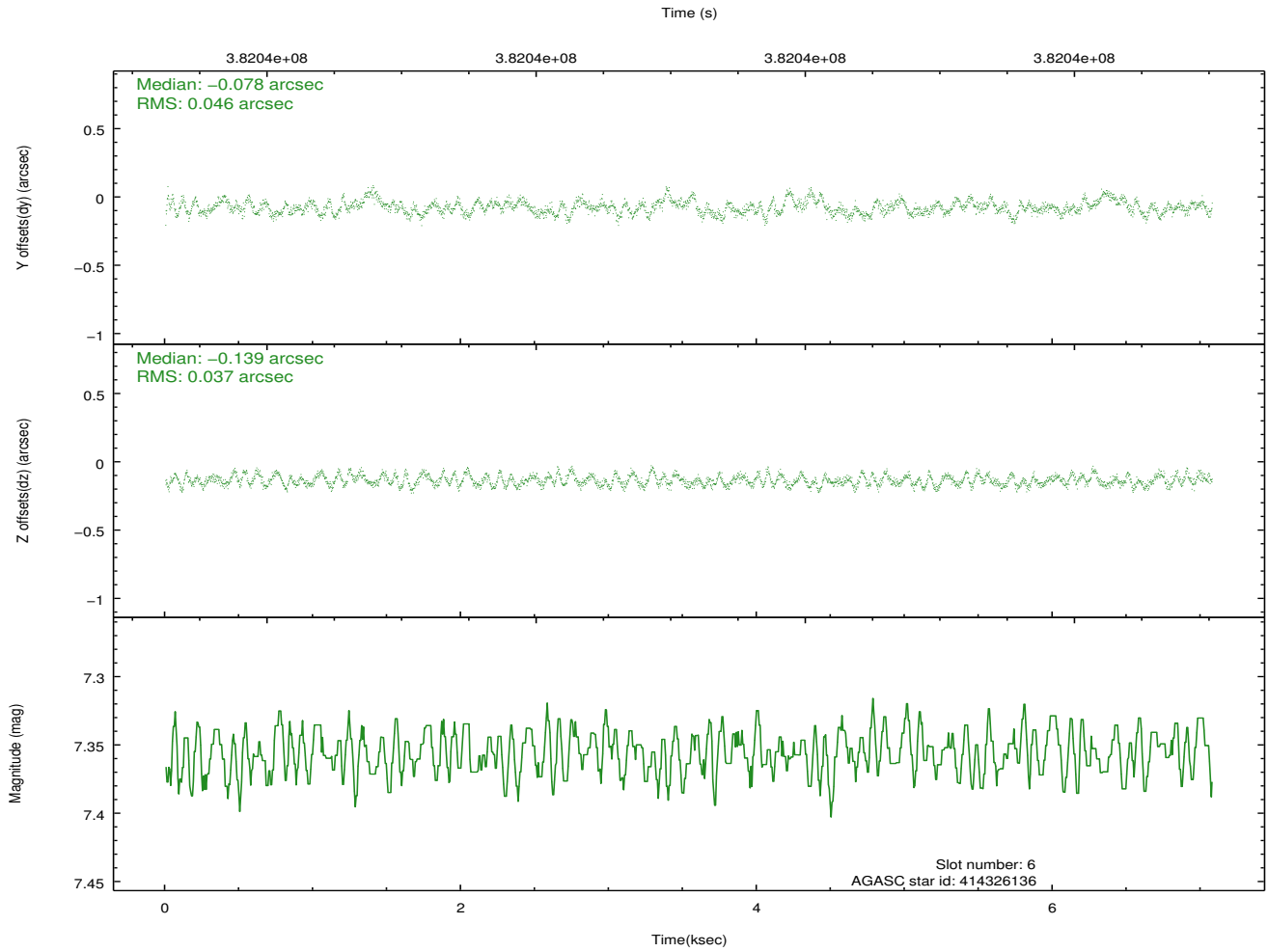
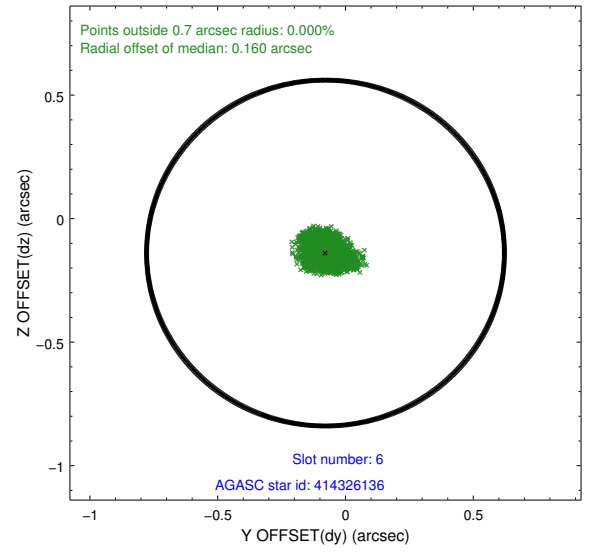
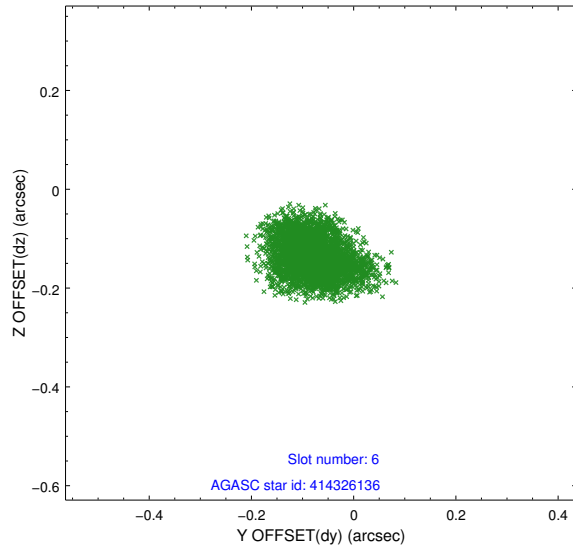
## 2.4.2 Slot 4



### 2.4.3 Slot 5

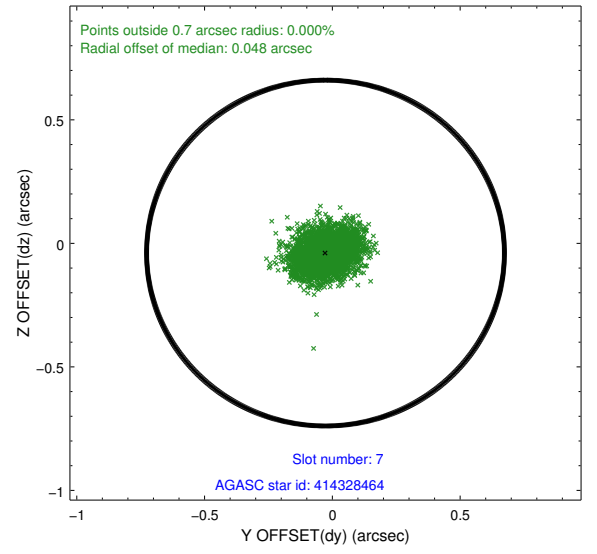
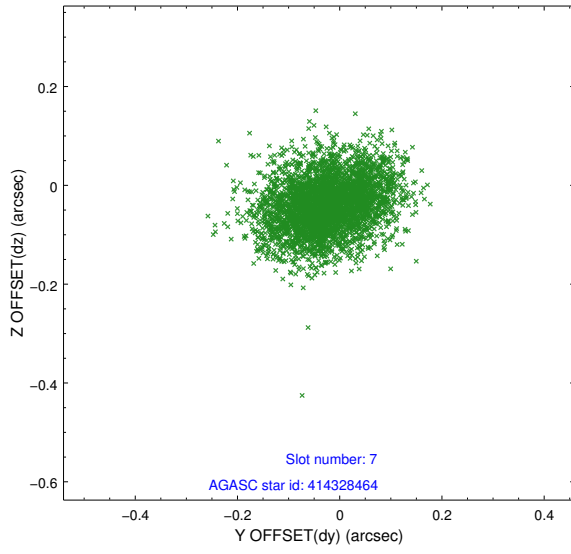


## 2.4.4 Slot 6

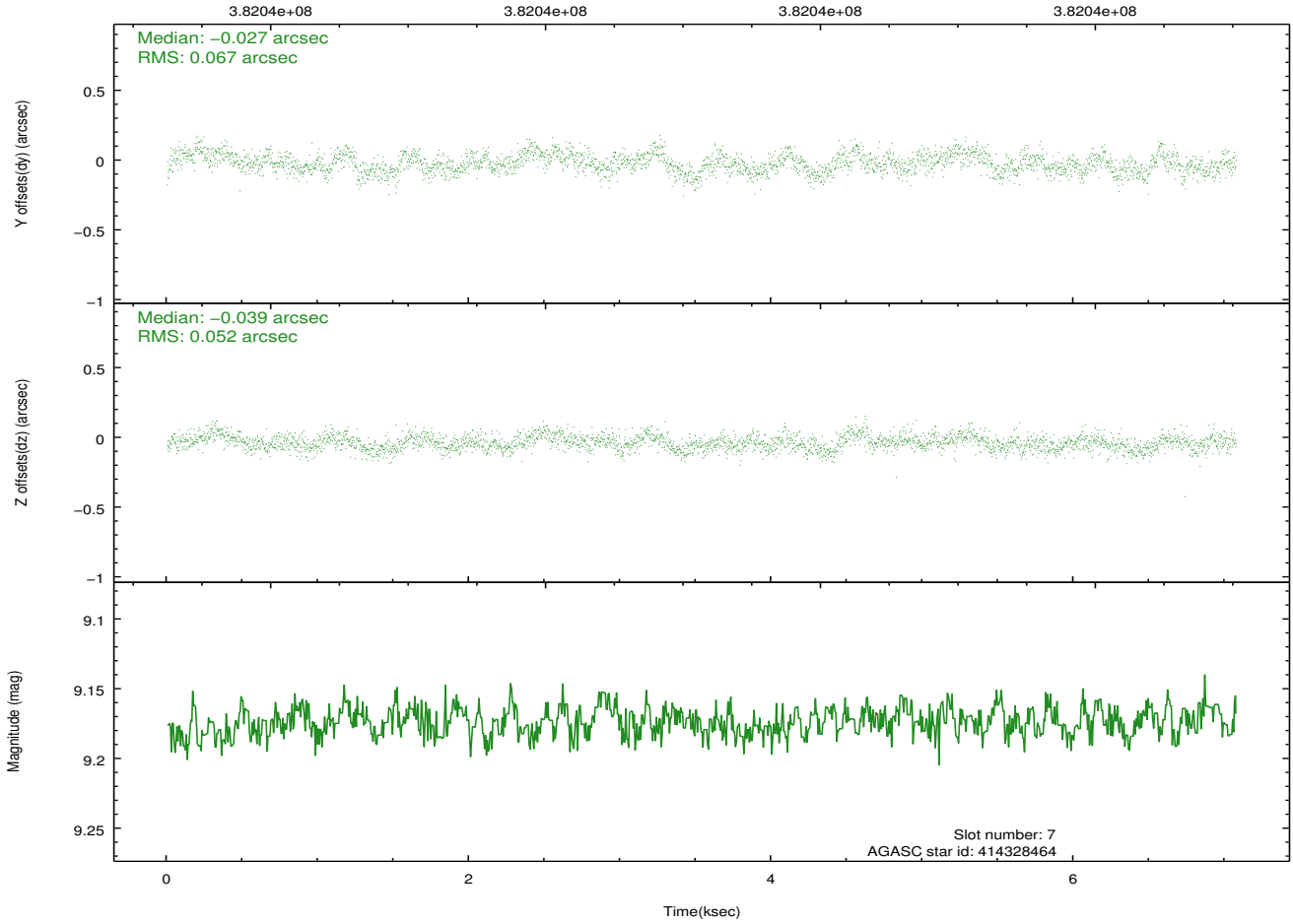




## 2.4.5 Slot 7

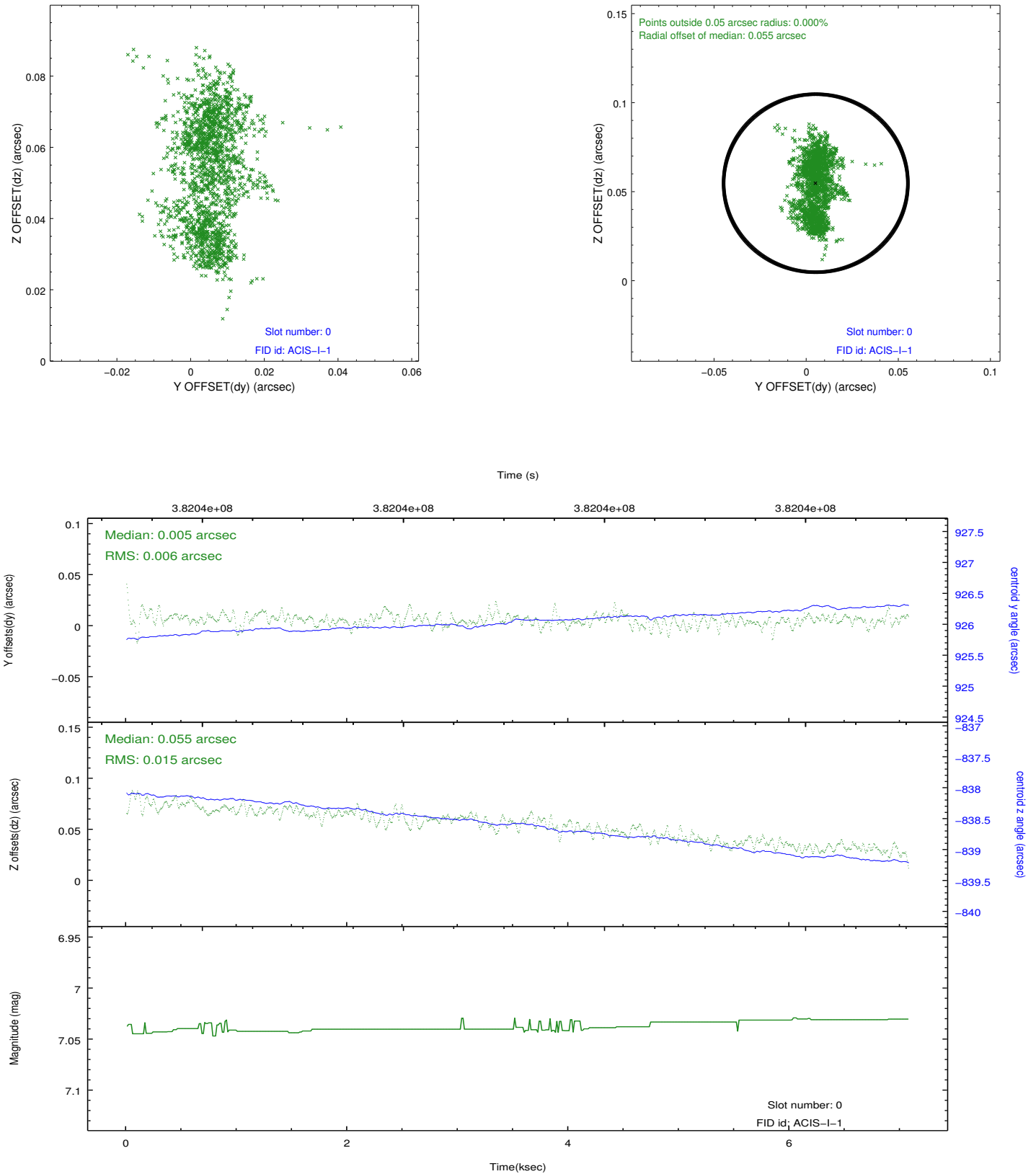


Time (s)

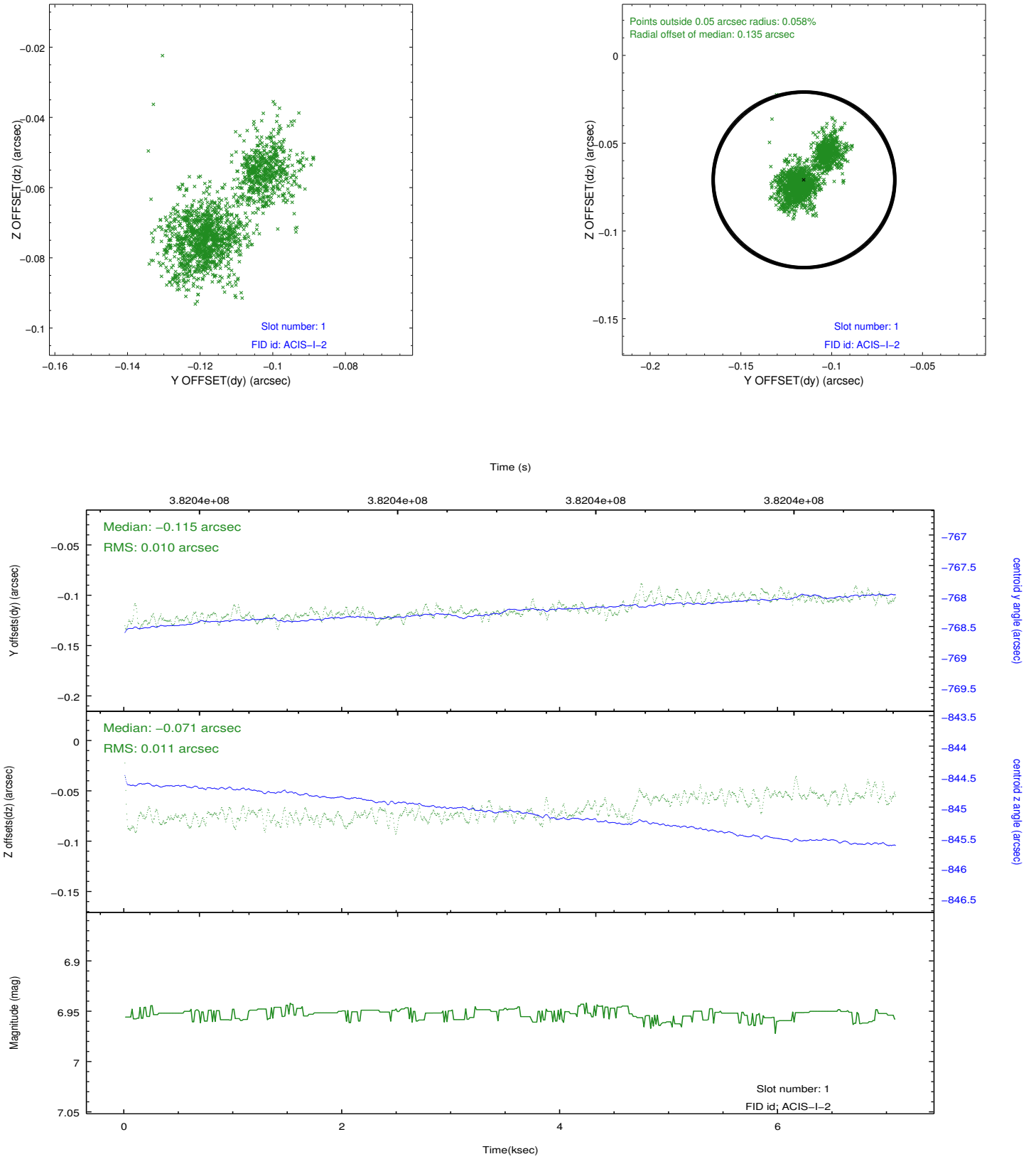


## 2.5 FID Slots

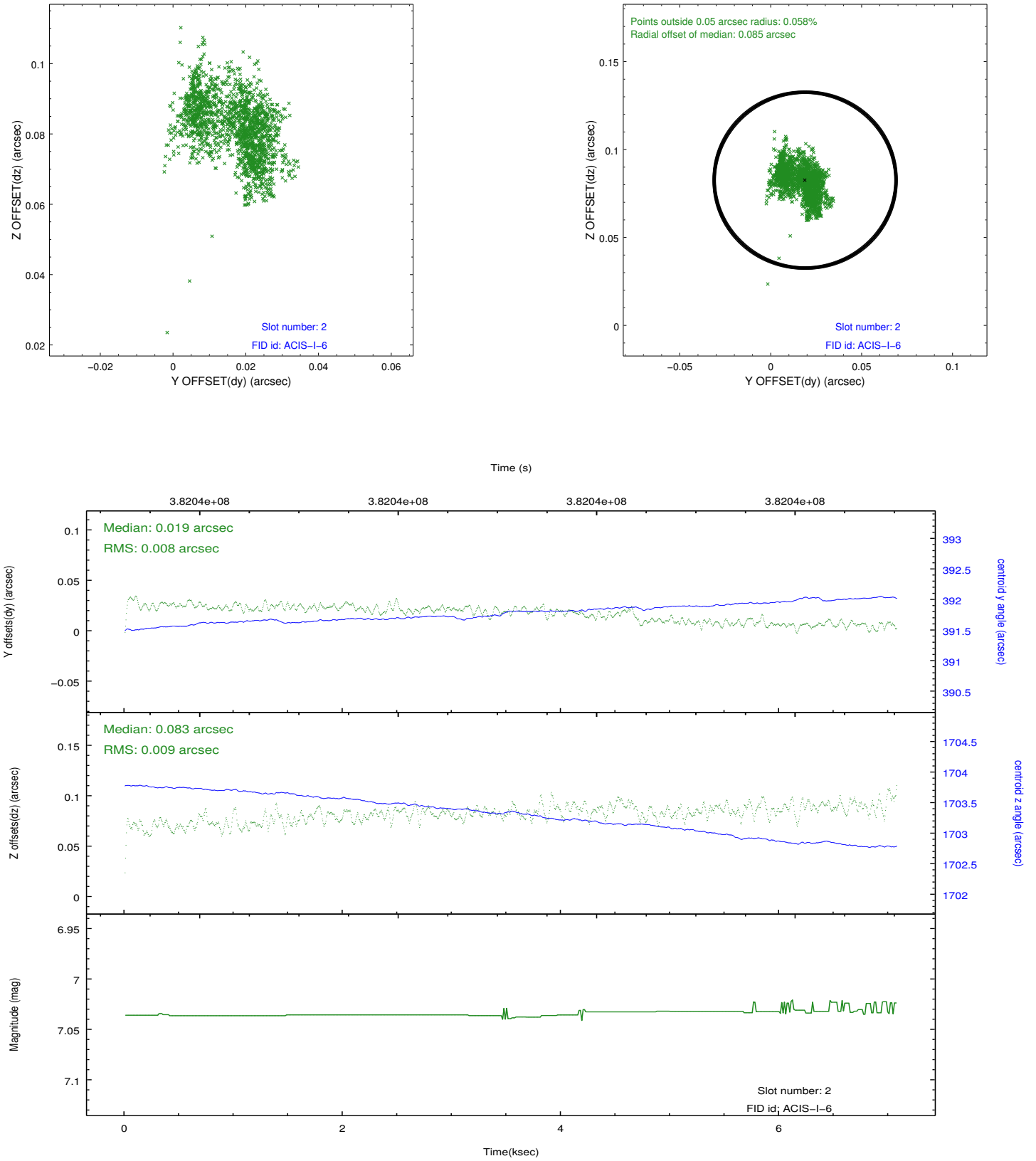
### 2.5.1 Slot 0



## 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)	2012.06.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.0471038288474

### A.2 Comments

Roll preference met.