

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13993 - L2 Version 2  
Chandra X-Ray Center

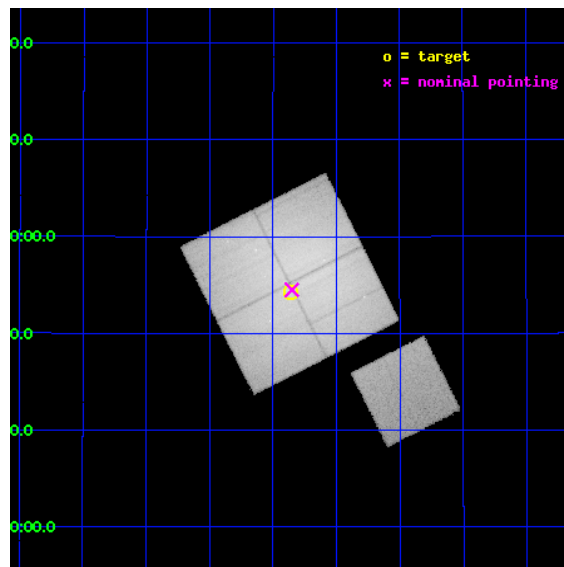
L2 Processing Date : Mar 23 2012

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# 1 Front

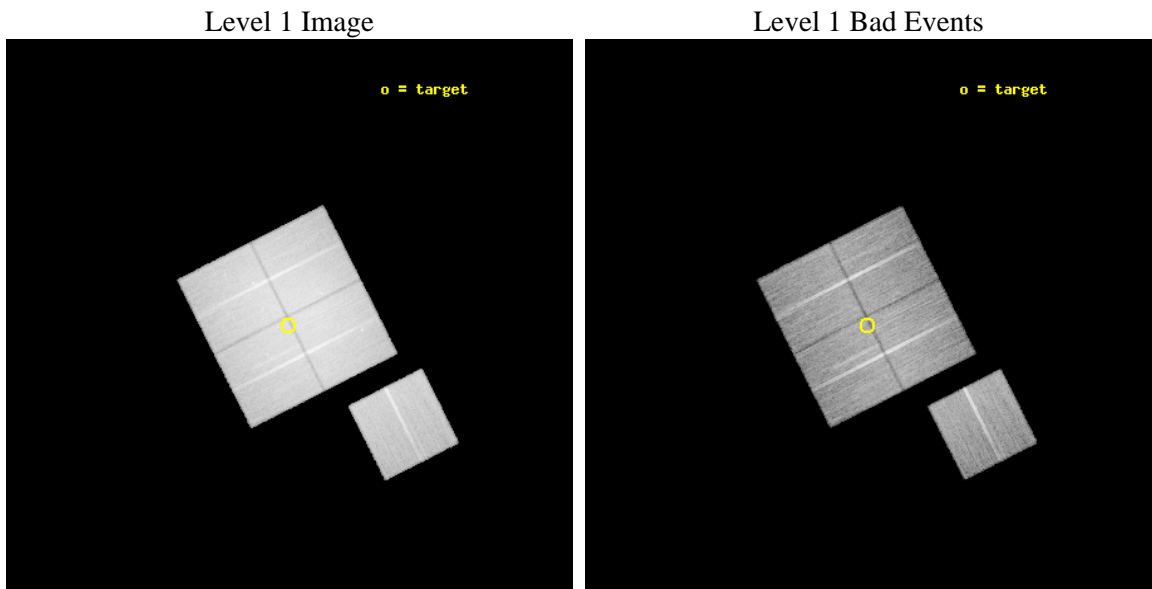
seq_num	801173	Sequence number
obs_id	13993	Observation id
title	Examining incredible structure in the core of the Coma cluster	Pro
observer	Dr Jeremy Sanders	Principal investigator
object	Coma cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.96635	Observer's specified target RA [deg]
dec_targ	27.904932	Observer's specified target Dec [deg]
ra_nom	194.96282587694	Nominal RA [deg]
dec_nom	27.90845645094	Nominal Dec [deg]
roll_nom	153.21033444582	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40079.574936569	Sum of GTIs [s]
livetime	39555.905783869	Livetime [s]
ontime0	40079.451806605	Sum of GTIs [s]
ontime1	40082.633886874	Sum of GTIs [s]
ontime2	40082.674926877	Sum of GTIs [s]
ontime3	40079.574936569	Sum of GTIs [s]
ontime6	40073.128725827	Sum of GTIs [s]
l2events	753005	Number of level 2 events



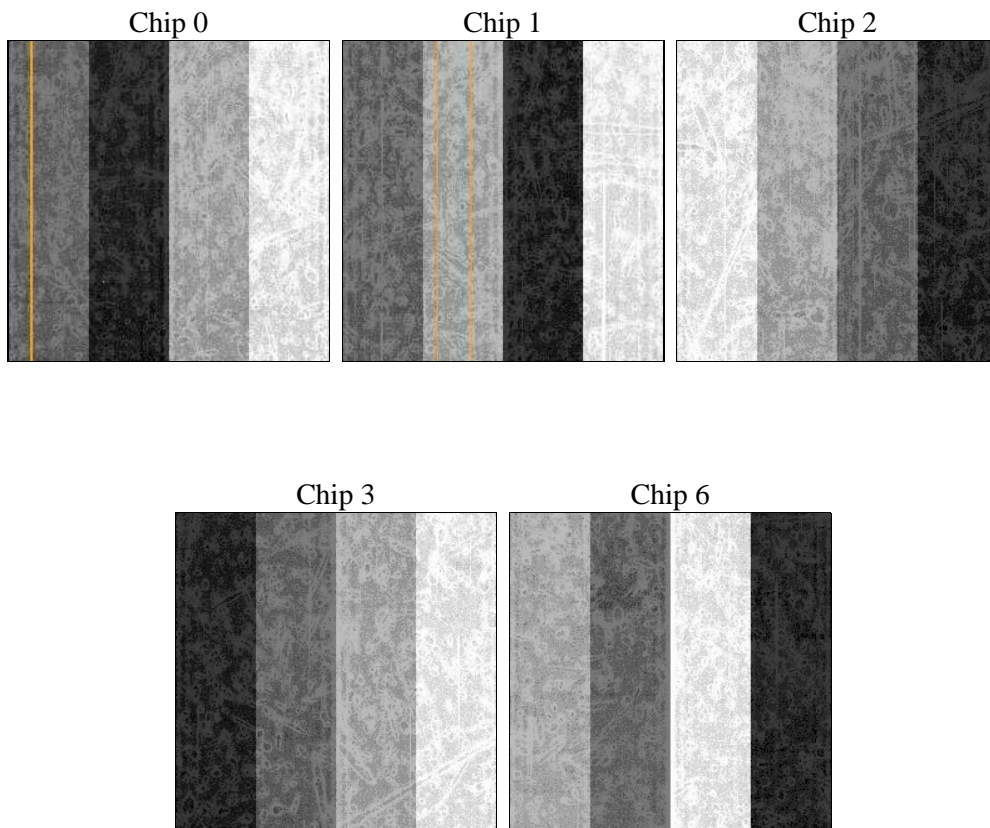
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	40079.574936569	Sum of GTIs [s]
caldbver	4.4.8	&#160	ontime0	40079.451806605	Sum of GTIs [s]
date	2012-03-23T20:30:05	Date and time of file creation	ontime1	40082.633886874	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	40082.674926877	Sum of GTIs [s]
			ontime3	40079.574936569	Sum of GTIs [s]
			ontime6	40073.128725827	Sum of GTIs [s]
			l1events	1769087	Number of level 1 events

### 2.1.4 Events

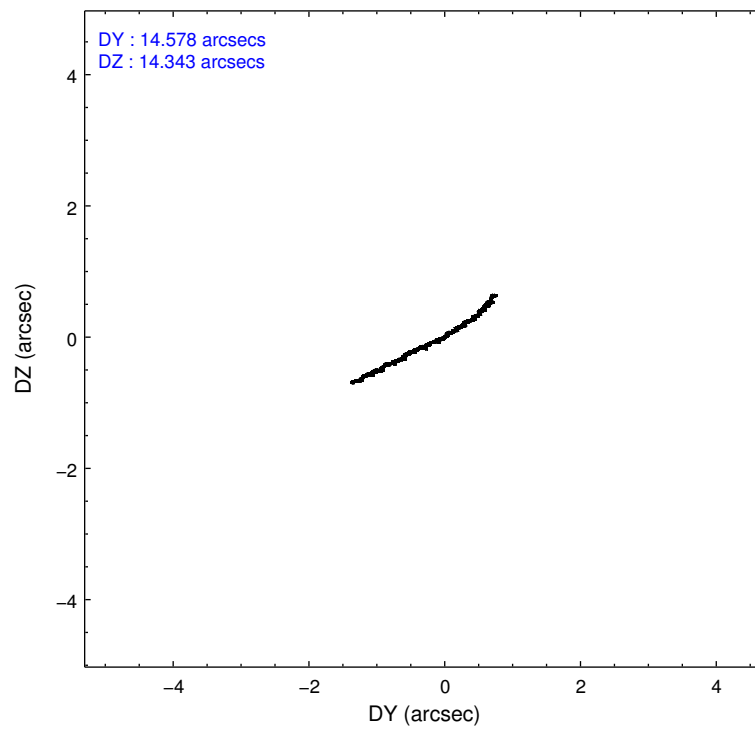
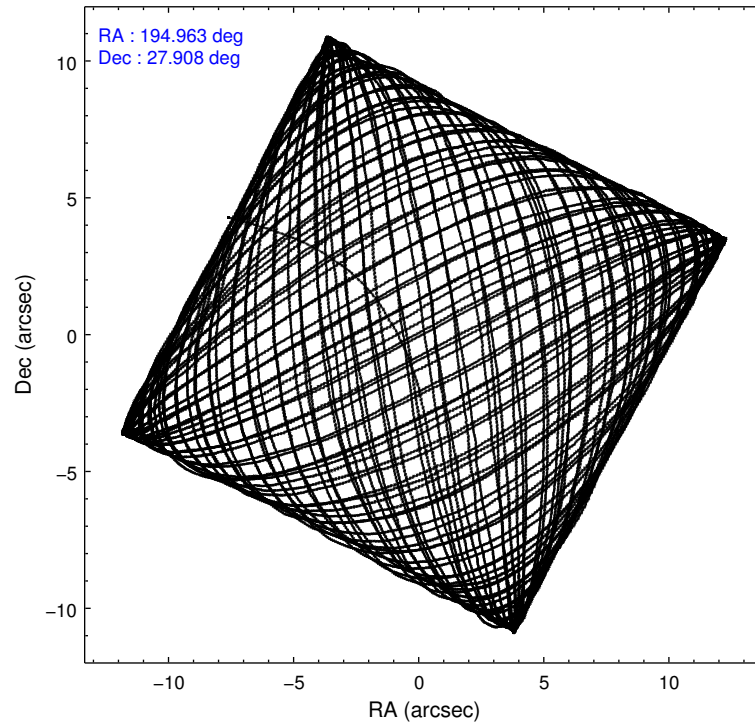
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	381908	366791	415315	353530	251543
rejected events	178252	184838	202736	194477	195385
rejected %	46%	50%	48%	55%	77%

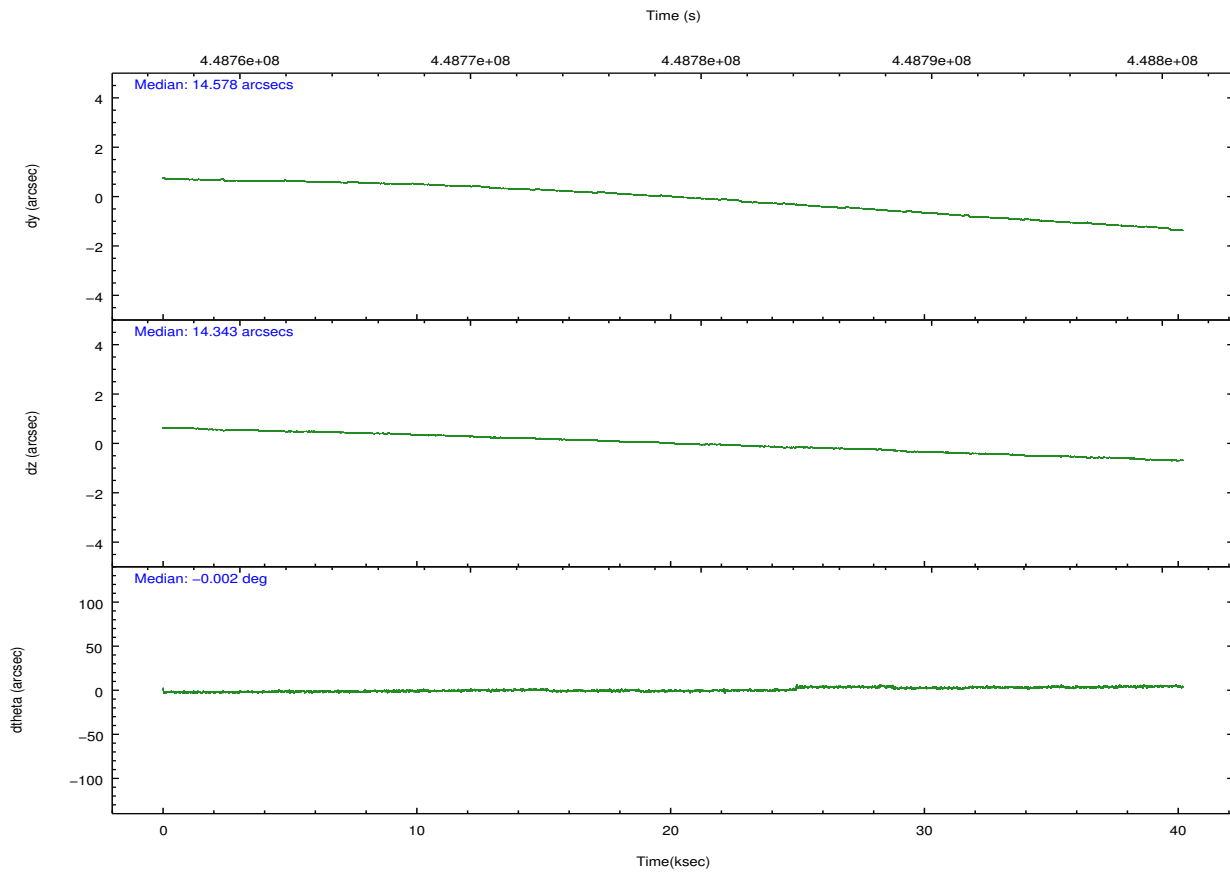
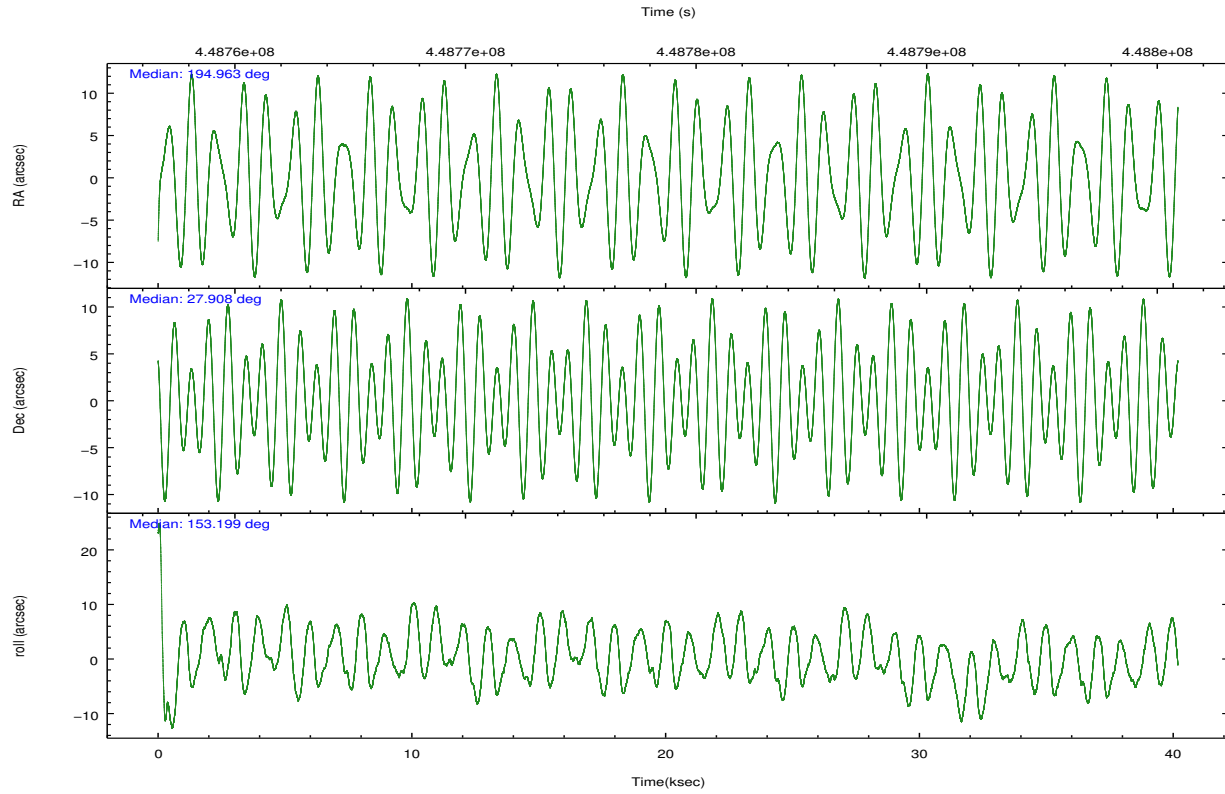
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	151183	132248	160250	117387	33158
	39%	36%	38%	33%	13%
grade 1 events	669	561	788	582	184
	0%	0%	0%	0%	0%
grade 2 events	25160	23645	24880	18979	8784
	6%	6%	5%	5%	3%
grade 3 events	8471	7686	8681	6997	3719
	2%	2%	2%	1%	1%
grade 4 events	8248	7745	8578	6823	3623
	2%	2%	2%	1%	1%
grade 5 events	11004	11139	10478	11486	10842
	2%	3%	2%	3%	4%
grade 6 events	10605	10639	10210	8884	6880
	2%	2%	2%	2%	2%
grade 7 events	166568	173128	191450	182392	184353
	43%	47%	46%	51%	73%

## 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	194.993896	194.9628258769443	CCD I2 on	Y	Y
[deg] Pointing Dec	27.910114	27.90845645094024	CCD I3 on	Y	Y
[deg] Pointing Roll	152.987102	153.2103344458226	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	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	448758875.184000	448757909.82855	CCD S5 on	N	N
Observation start date	2012-03-21T23:13:29	2012-03-21T22:58:29	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	448798875.184000	448799591.45576	On-chip summing requested	N	N
Observation end date	2012-03-22T10:20:09	2012-03-22T10:33:11	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



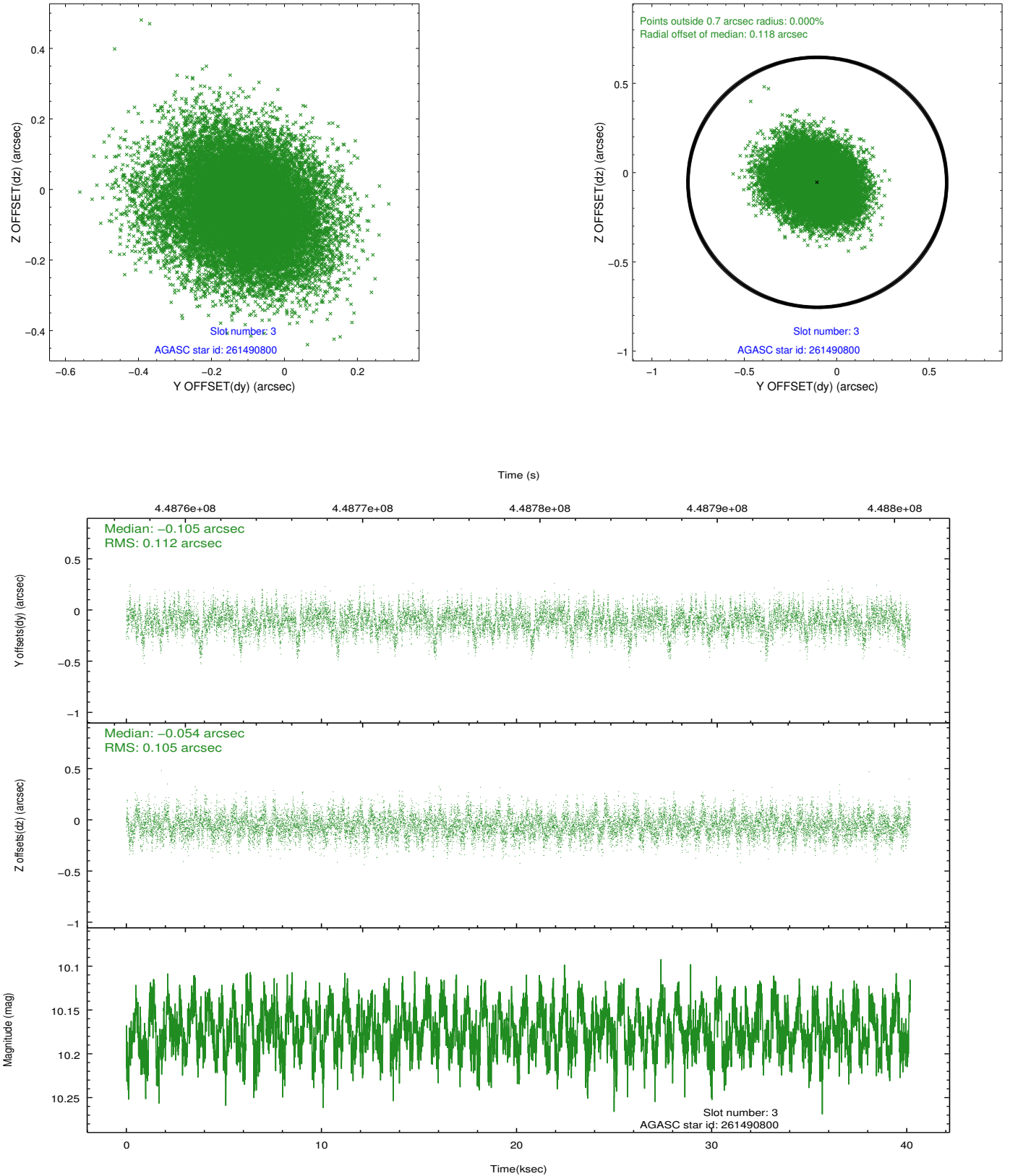


### Slot Statistics

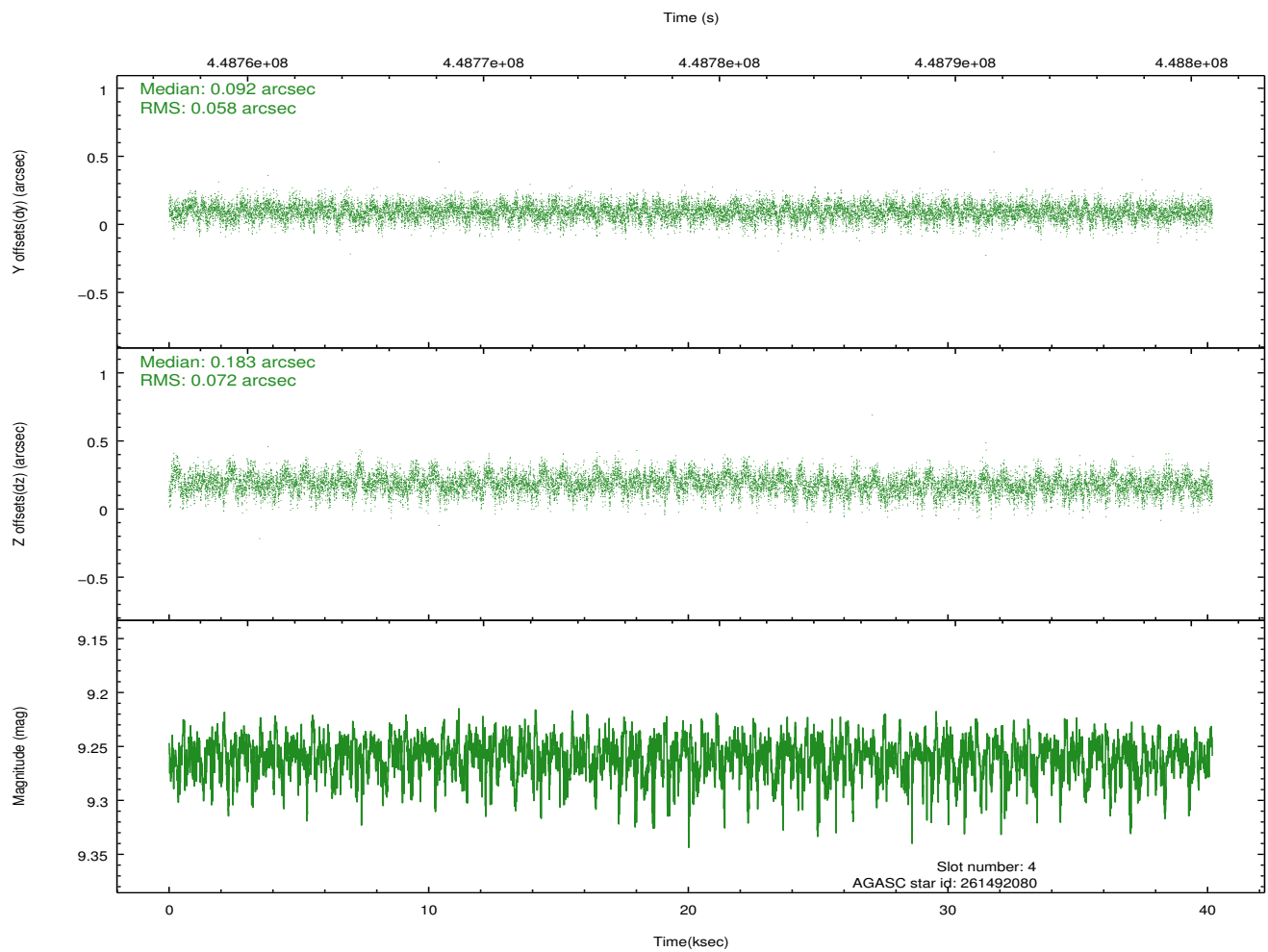
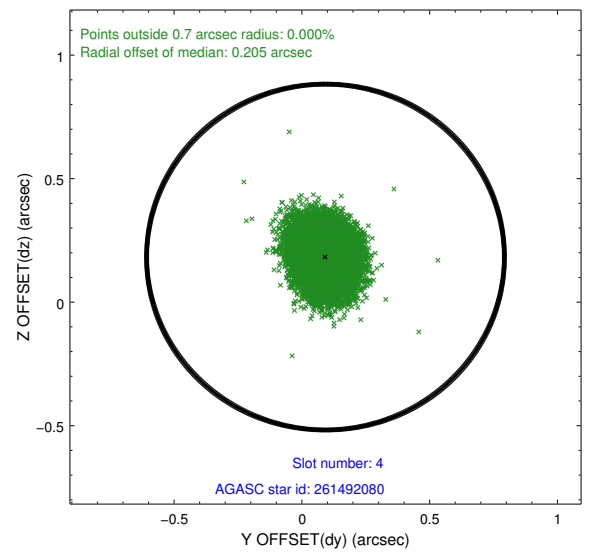
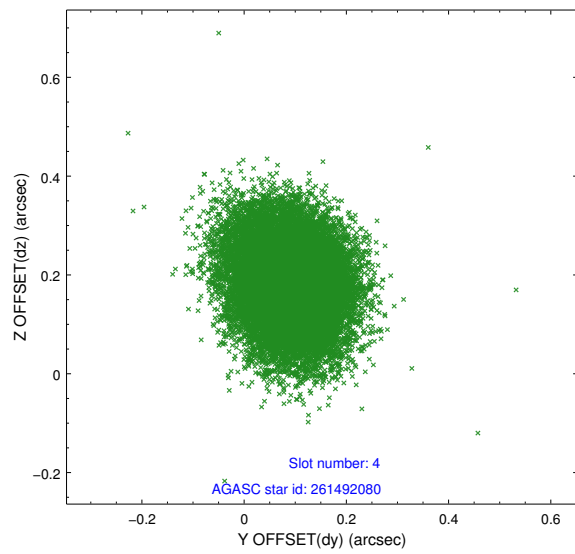
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.02	9800	-0.103	-0.067	0.014	0.023	0.000000	0.000000	-769.27	-844.34
1	FID	ACIS-I-4	7.02	9800	0.233	0.079	0.025	0.035	0.000000	0.000000	2145.14	1061.94
2	FID	ACIS-I-5	7.10	9801	-0.229	0.056	0.023	0.035	0.000000	0.000000	-1823.19	1059.82
3	GUIDE	261490800	10.17	19571	-0.105	-0.054	0.163	0.269	195.029641	27.224508	-1222.90	2146.68
4	GUIDE	261492080	9.26	19582	0.092	0.183	0.098	0.162	194.976344	28.631585	1229.81	-2288.26
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	261502496	7.36	19602	-0.194	0.063	0.079	0.129	194.887297	28.065668	556.25	-345.19
7	GUIDE	261505232	9.74	19477	0.211	-0.194	0.111	0.182	194.216553	27.802521	2032.16	1463.36

## 2.4 Star Slots

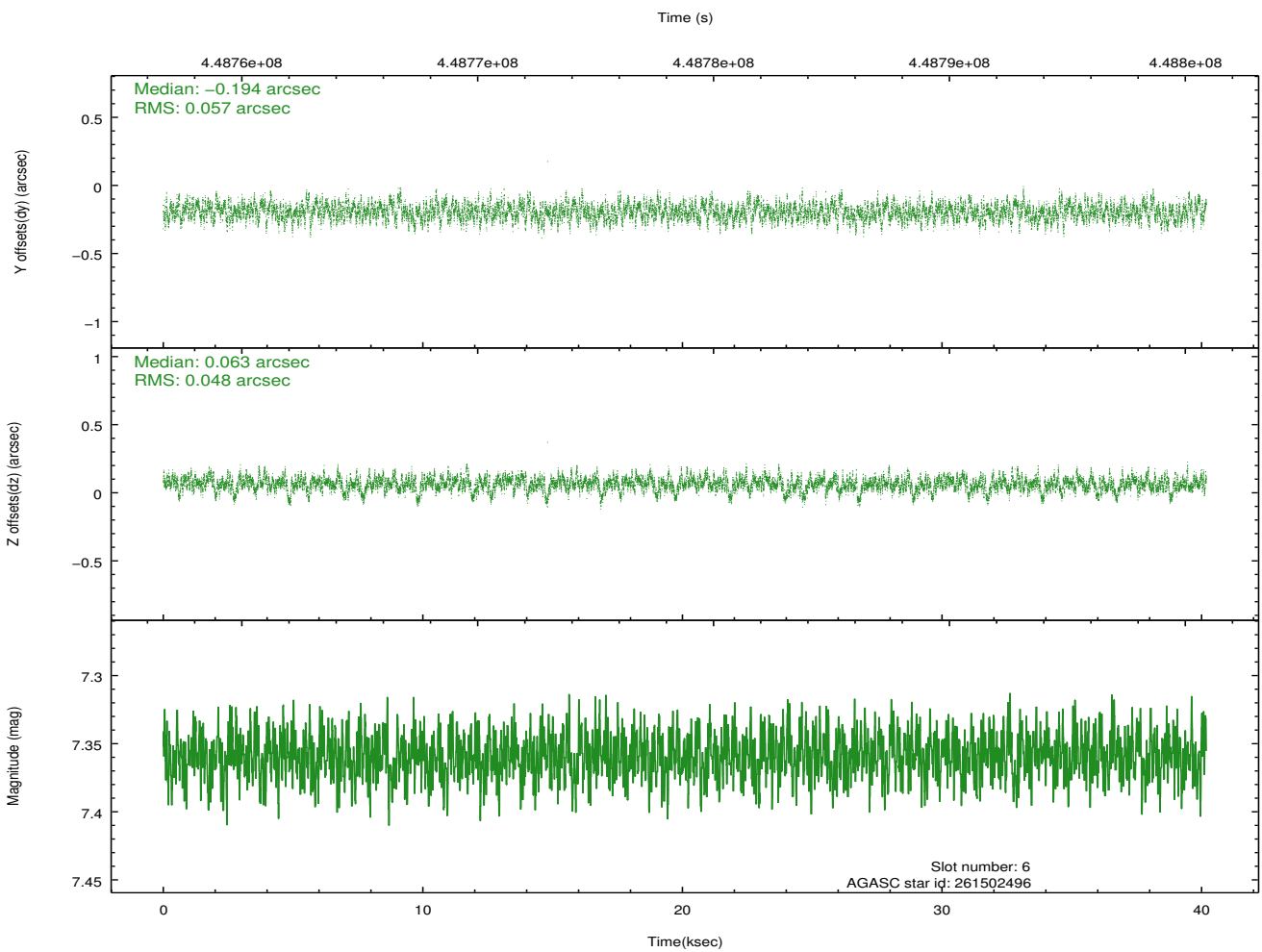
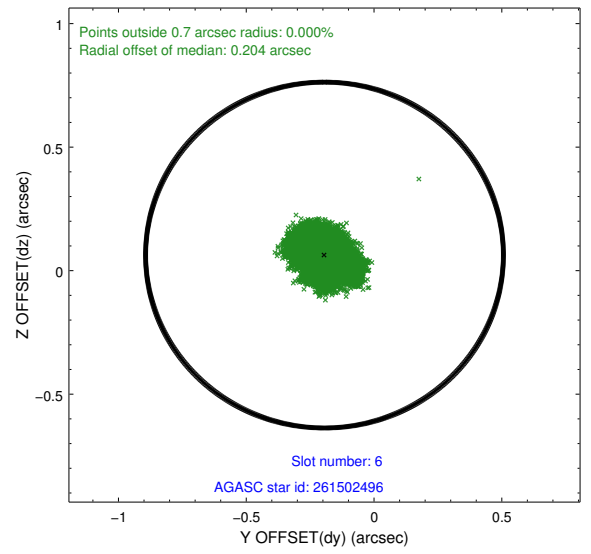
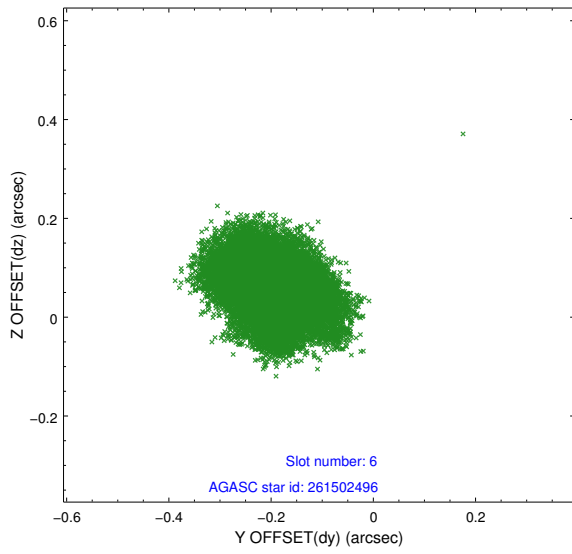
### 2.4.1 Slot 3



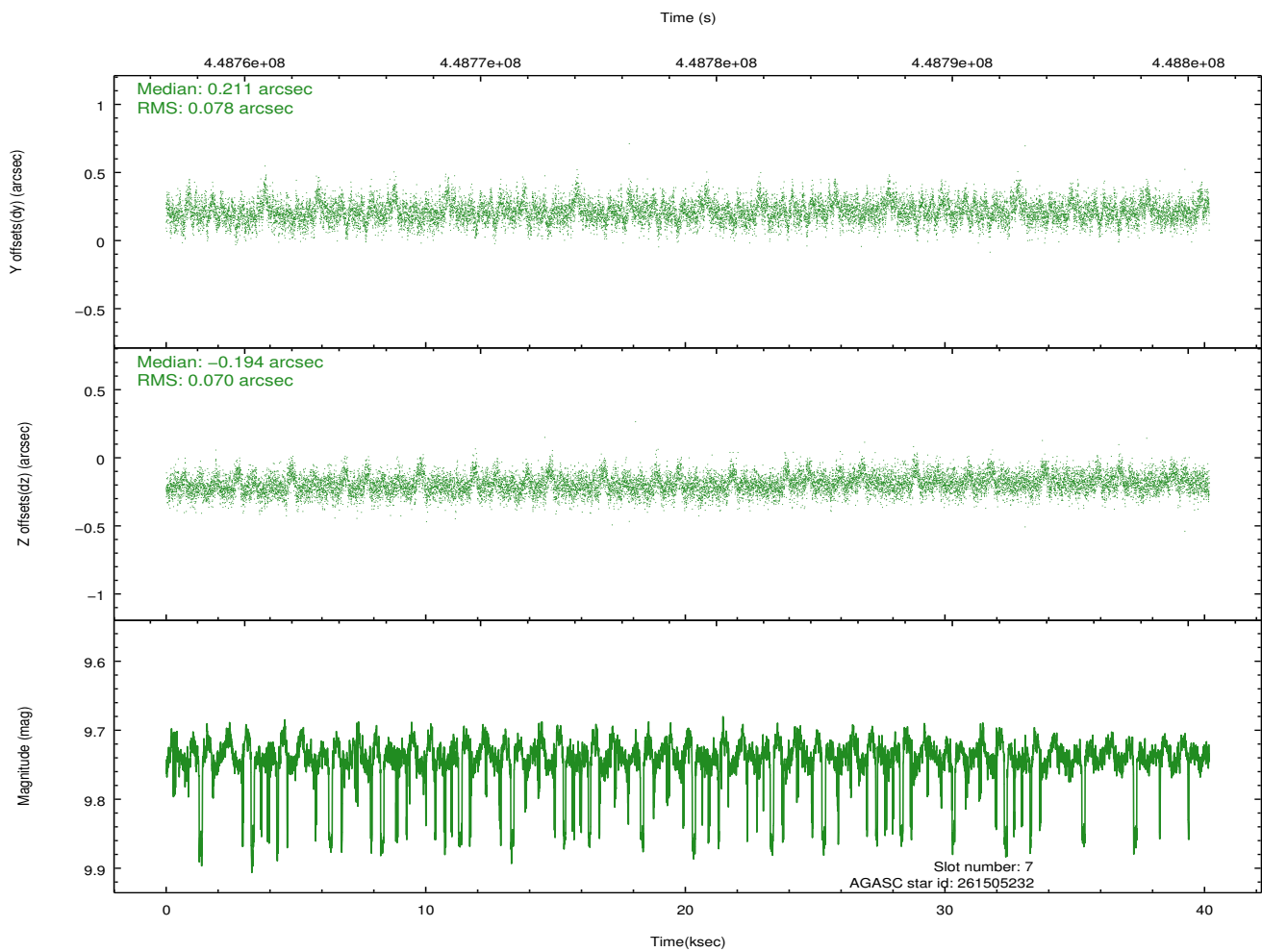
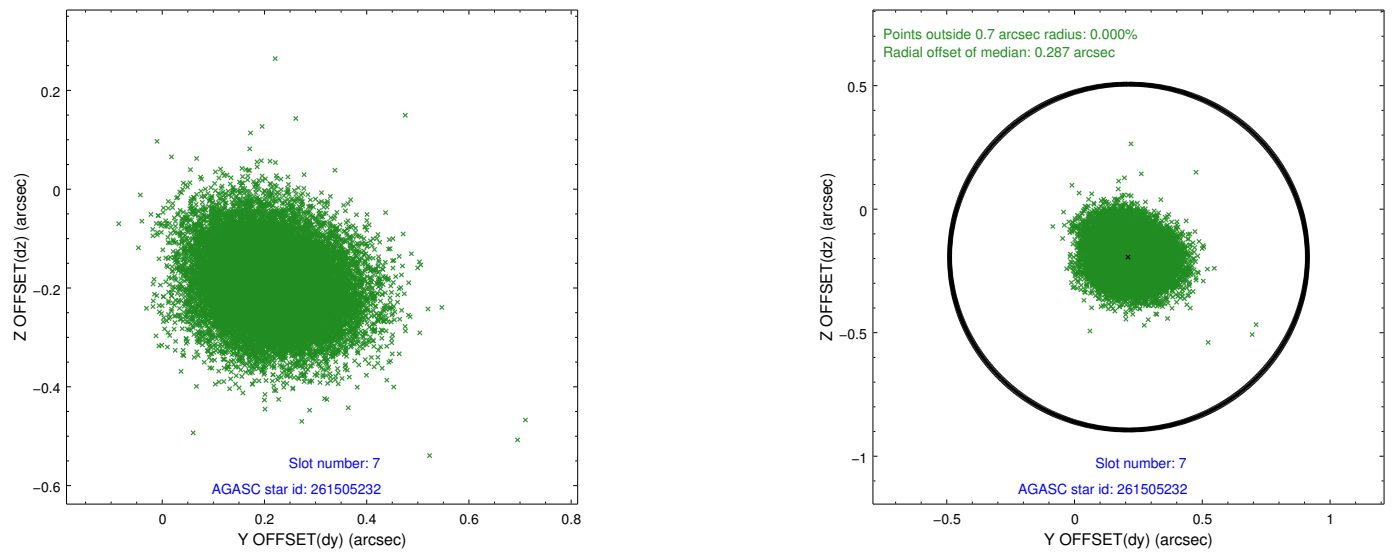
## 2.4.2 Slot 4



### 2.4.3 Slot 6

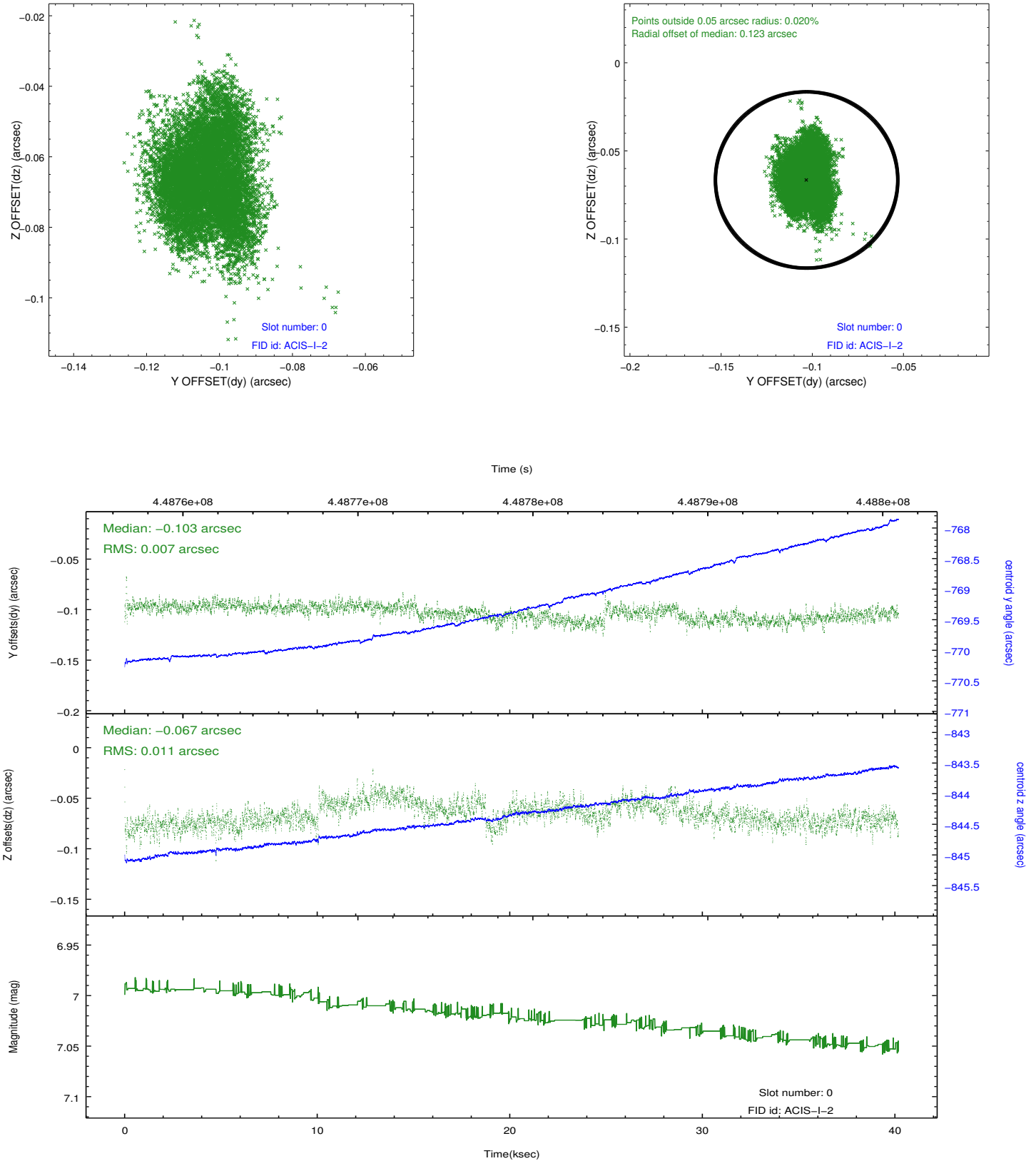


## 2.4.4 Slot 7

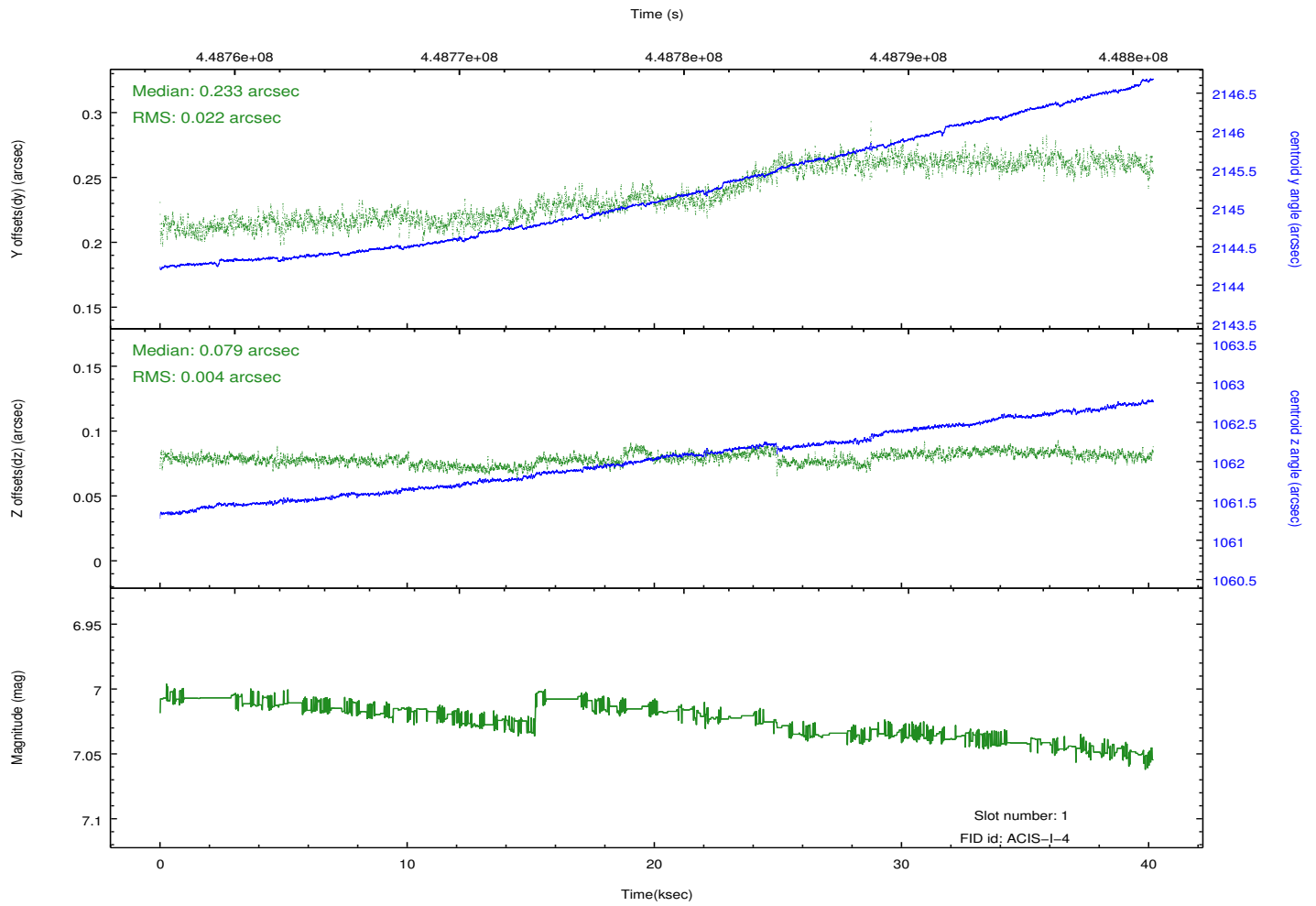
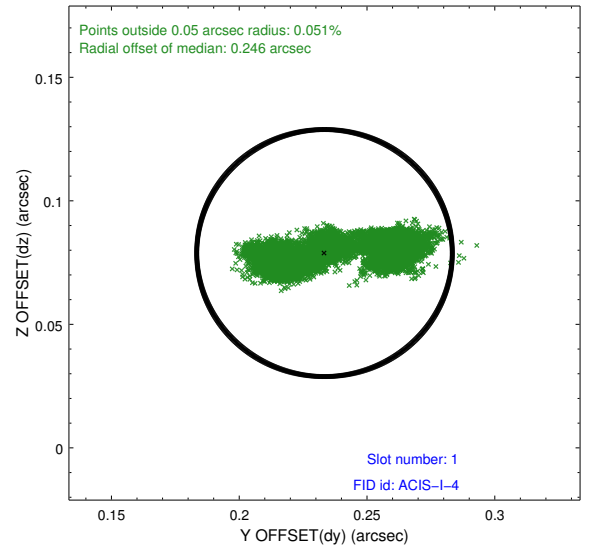
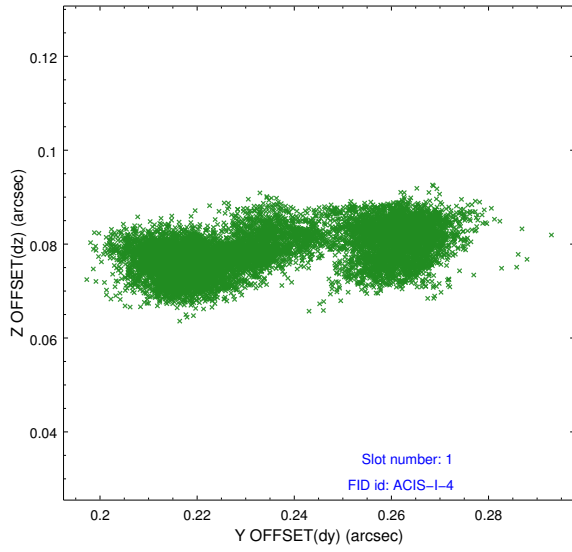


## 2.5 FID Slots

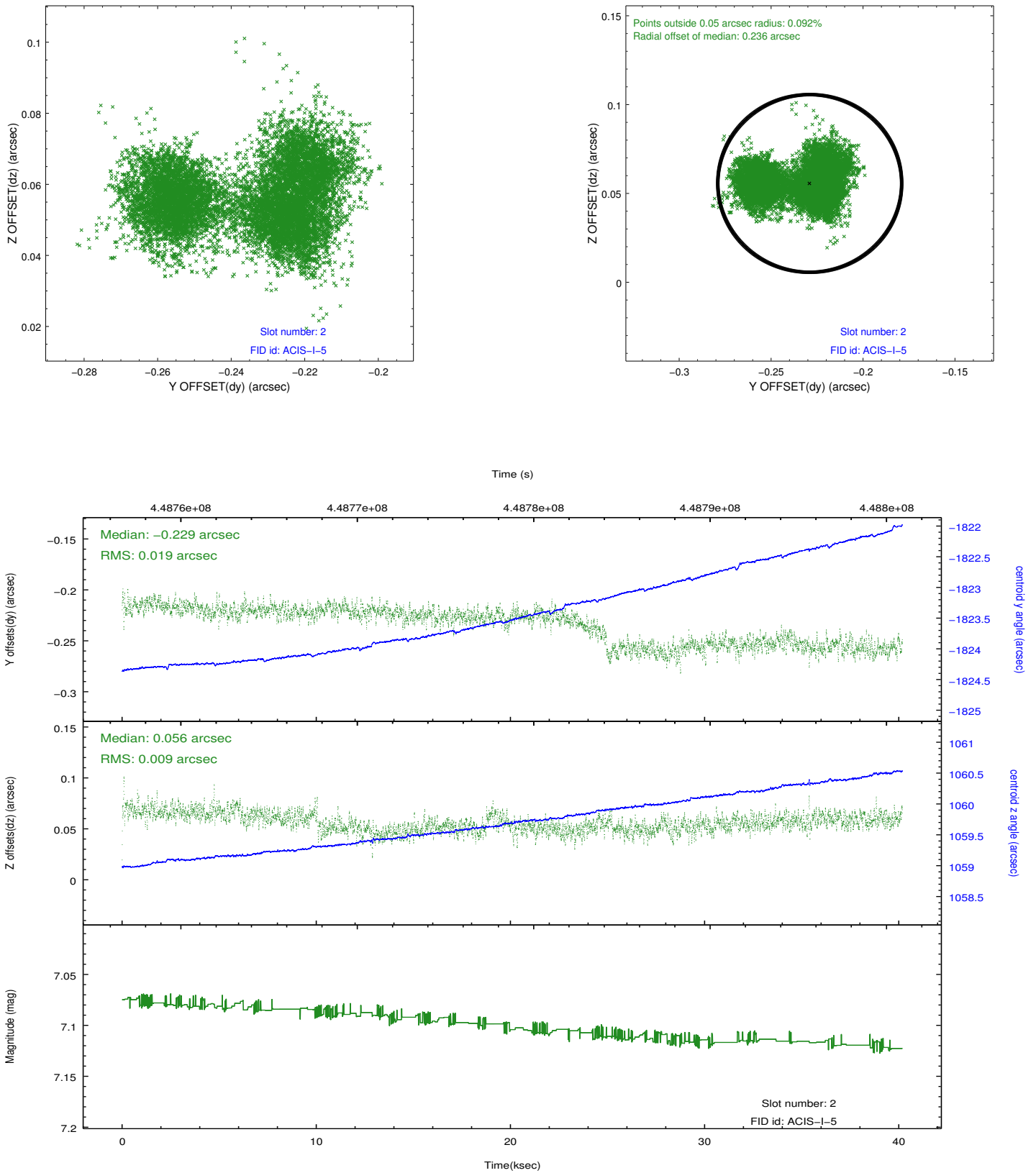
### 2.5.1 Slot 0



## 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)	2012.03.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.079574936569

## A.2 Comments

The guide star in slot 5 was removed from the aspect solution due to poor positional data. The aspect solution is improved by the removal of this guide star from the solution.