

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1776 - L2 Version 5  
Chandra X-Ray Center

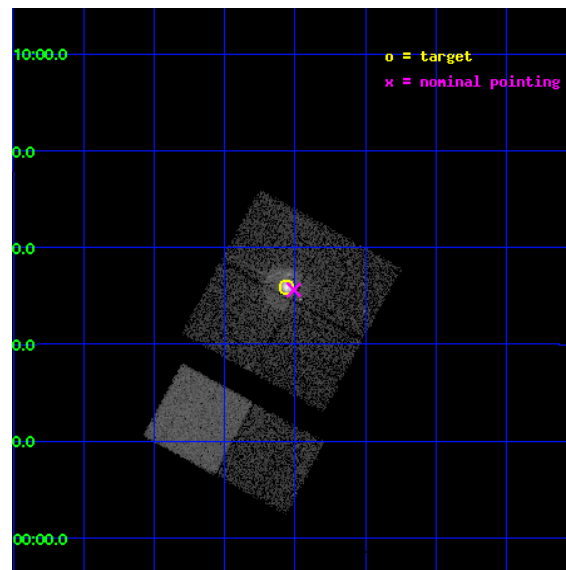
L2 Processing Date : Aug 30 2012

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# 1 Front

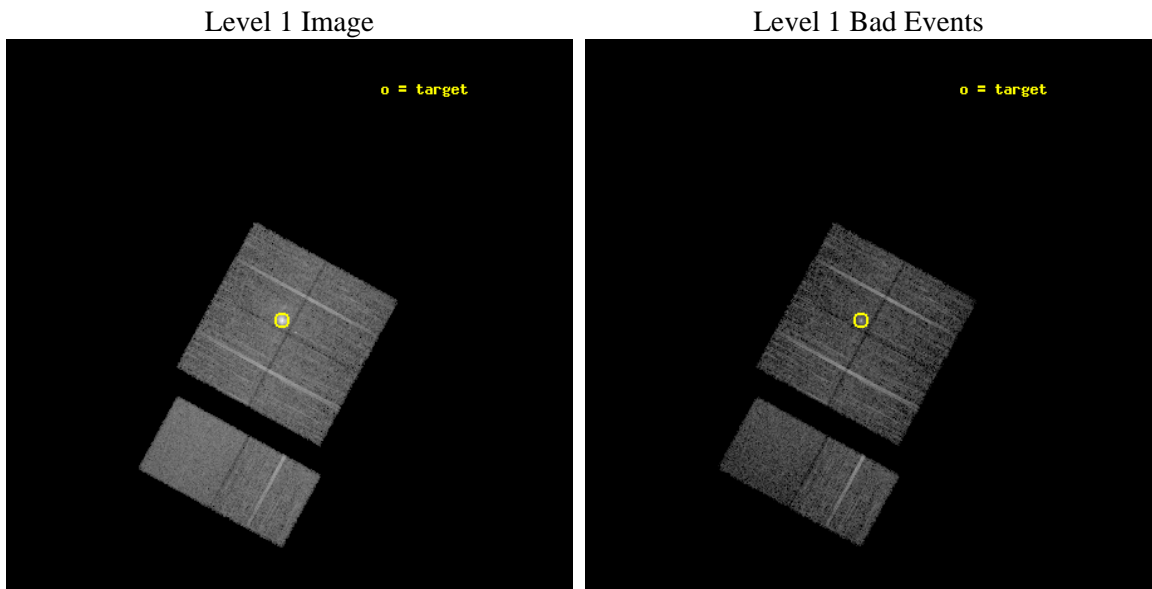
seq_num	590202	Sequence number
obs_id	1776	Observation id
title	HRC RESPONSE TO CONTINUUM SOURCE.	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	G21.5-0.9 [Chip I1, T=110, Offsets=-0,0,-1]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.389583	Observer's specified target RA [deg]
dec_targ	-10.568528	Observer's specified target Dec [deg]
ra_nom	278.37708540157	Nominal RA [deg]
dec_nom	-10.572999239343	Nominal Dec [deg]
roll_nom	208.57965731678	Nominal Roll [deg]
revision	5	Processing version of data
ontime	7318.4000068009	Sum of GTIs [s]
livetime	7225.7300193033	Livetime [s]
ontime0	7318.4000068009	Sum of GTIs [s]
ontime1	7318.4000068009	Sum of GTIs [s]
ontime2	7318.4000068009	Sum of GTIs [s]
ontime3	7318.4000068009	Sum of GTIs [s]
ontime6	7315.1590066403	Sum of GTIs [s]
ontime7	7318.4000068009	Sum of GTIs [s]
l2events	64105	Number of level 2 events



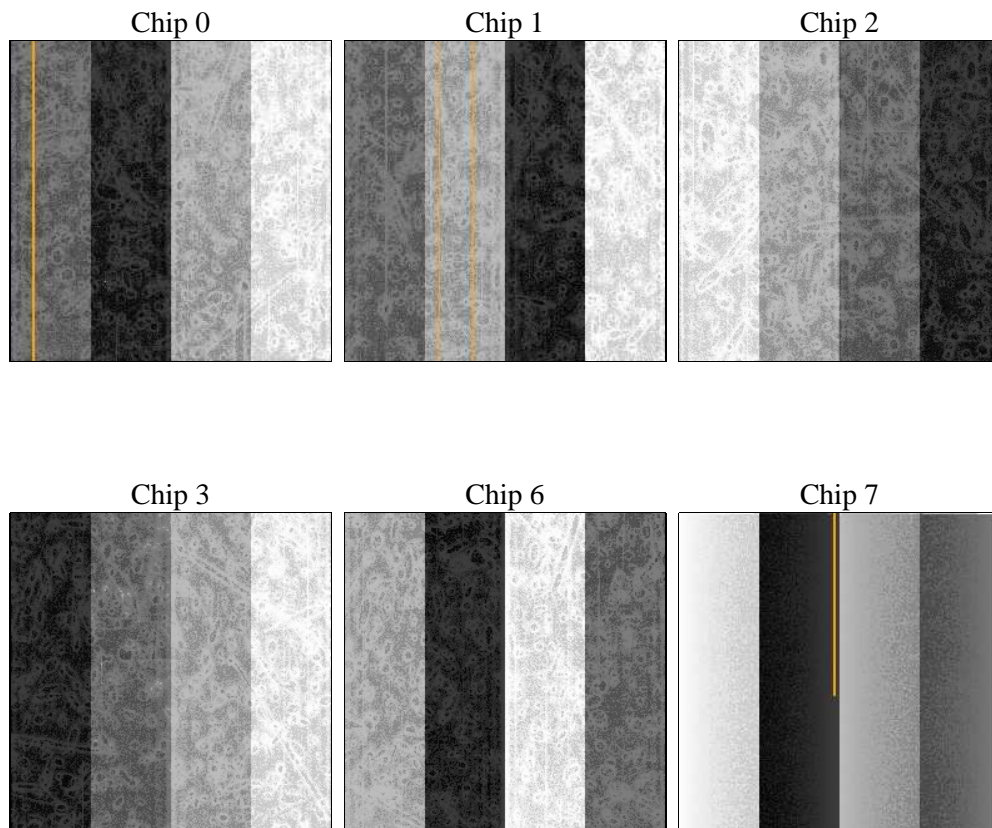
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7560.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	7318.4000068009	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime0	7318.4000068009	Sum of GTIs [s]
date	2012-08-30T03:41:01	Date and time of file creation	ontime1	7318.4000068009	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	7318.4000068009	Sum of GTIs [s]
			ontime3	7318.4000068009	Sum of GTIs [s]
			ontime6	7315.1590066403	Sum of GTIs [s]
			ontime7	7318.4000068009	Sum of GTIs [s]
			l1events	329465	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	46187	67439	51721	53459	54029	56630	grade 0 events	1715	7149	1198	1584	989	1230
rejected events	40086	41437	46587	47305	48759	35312		3%	10%	2%	2%	1%	2%
rejected %	86%	61%	90%	88%	90%	62%	grade 1 events	10	47	6	9	7	26
								0%	0%	0%	0%	0%	0%
							grade 2 events	2303	14219	2076	2580	2177	4651
								4%	21%	4%	4%	4%	8%
							grade 3 events	411	705	326	322	320	1252
								0%	1%	0%	0%	0%	2%
							grade 4 events	376	696	314	315	306	1163
								0%	1%	0%	0%	0%	2%
							grade 5 events	915	1364	994	1045	1220	3366
								1%	2%	1%	1%	2%	5%
							grade 6 events	1302	3256	1223	1359	1480	13032
								2%	4%	2%	2%	2%	23%
							grade 7 events	39155	40003	45584	46245	47530	31910
								84%	59%	88%	86%	87%	56%

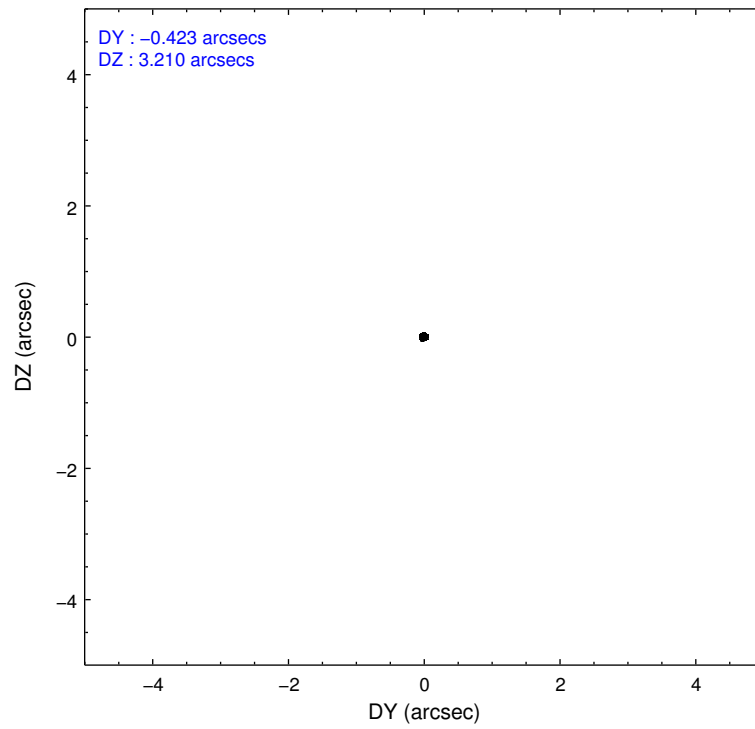
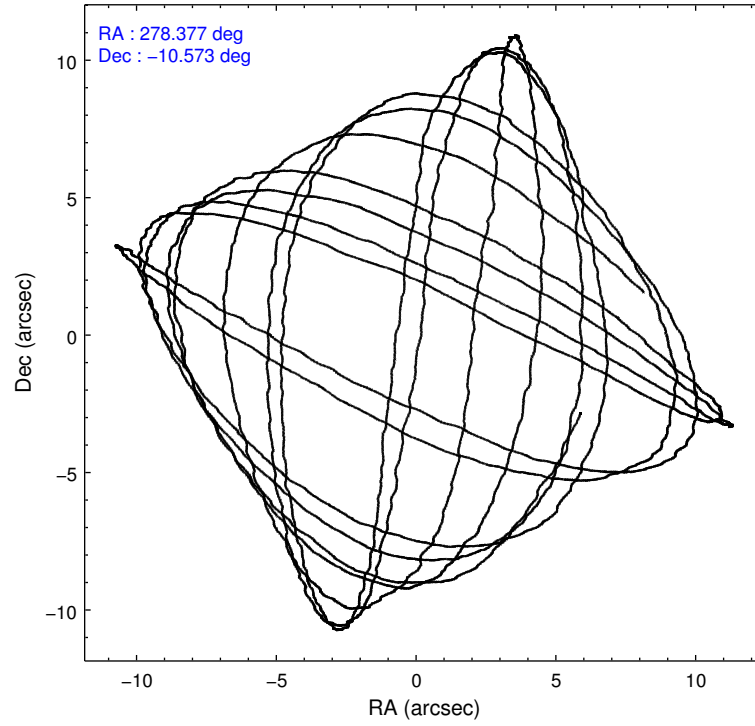


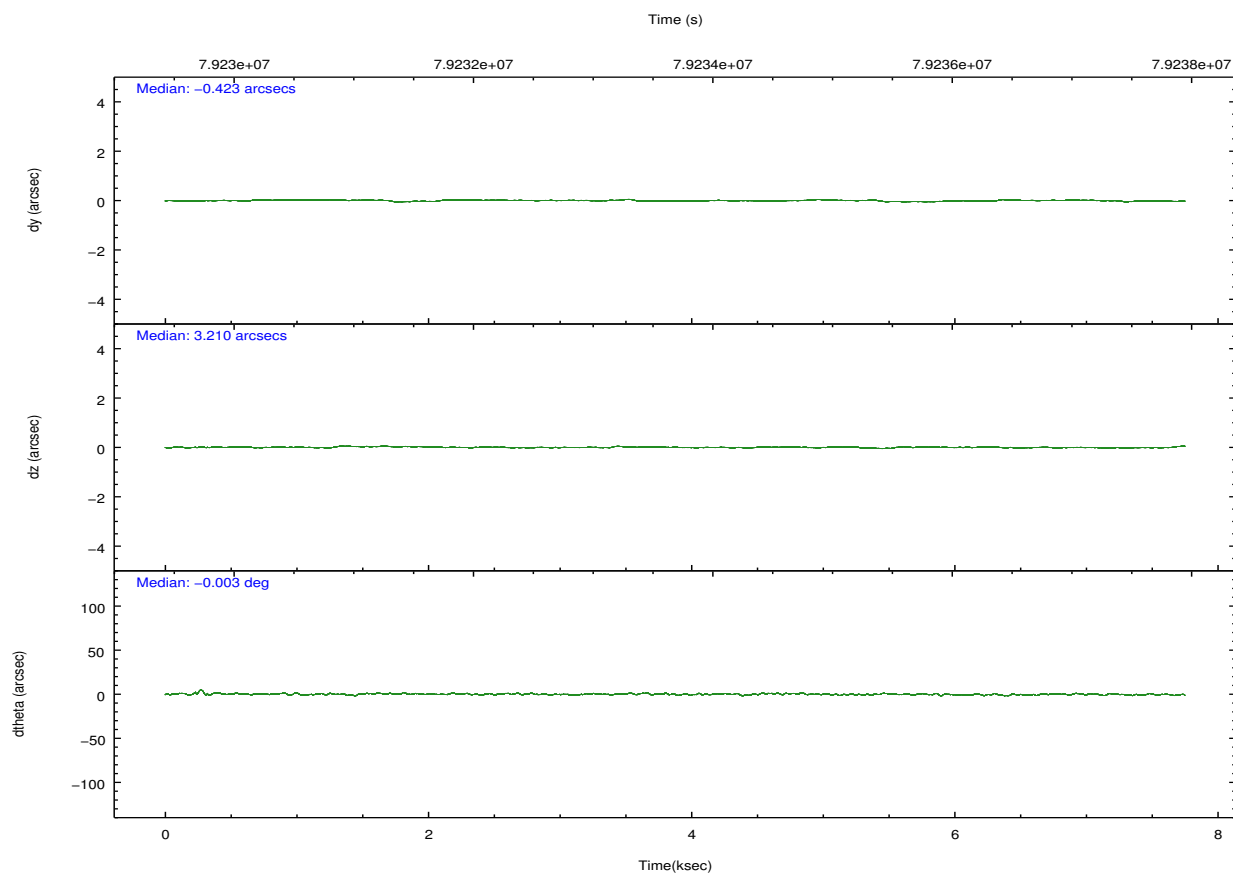
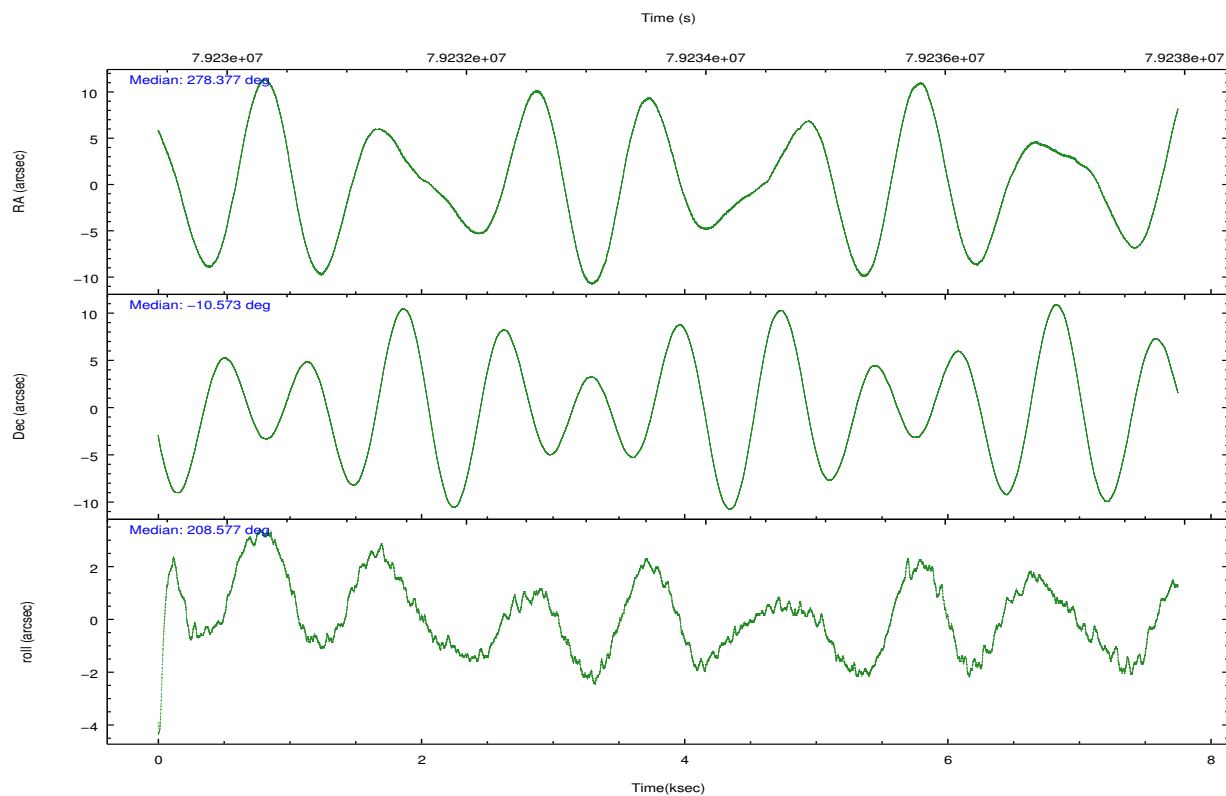
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	278.391853	278.3770854015665
[deg] Pointing Dec	-10.549515	-10.57299923934336
[deg] Pointing Roll	208.373667	208.5796573167816
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-238.277263	-238.2741181829365
[mm] SIM translation stage offset	4.6848	4.681665180006831
[s] Observation start time (MET)	79229996.184000	79229619.880706
Observation start date	2000-07-06T00:18:52	2000-07-06T00:13:39
[s] Observation end time (MET)	79237556.184000	79237693.293503
Observation end date	2000-07-06T02:24:52	2000-07-06T02:28:13
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



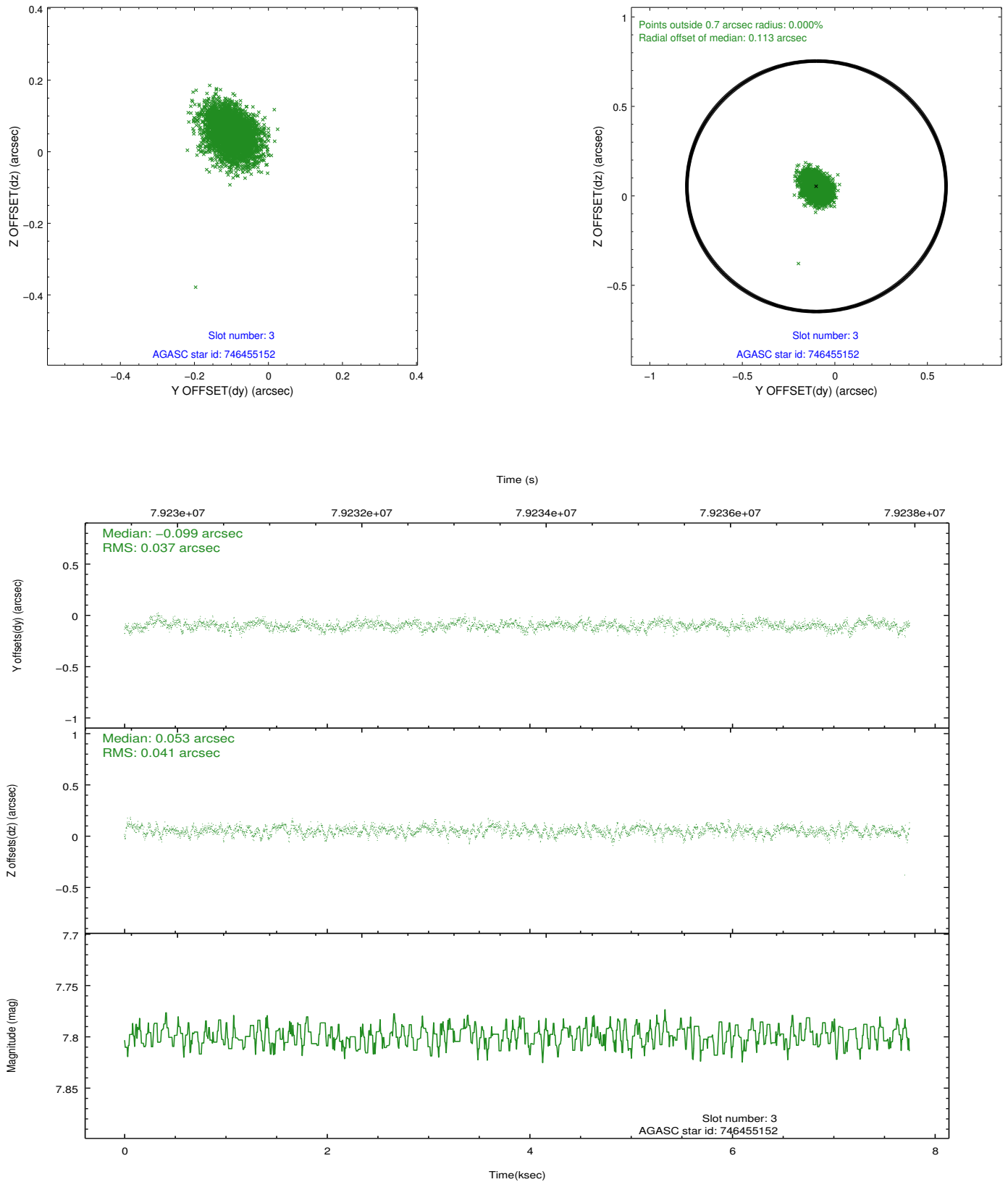


### Slot Statistics

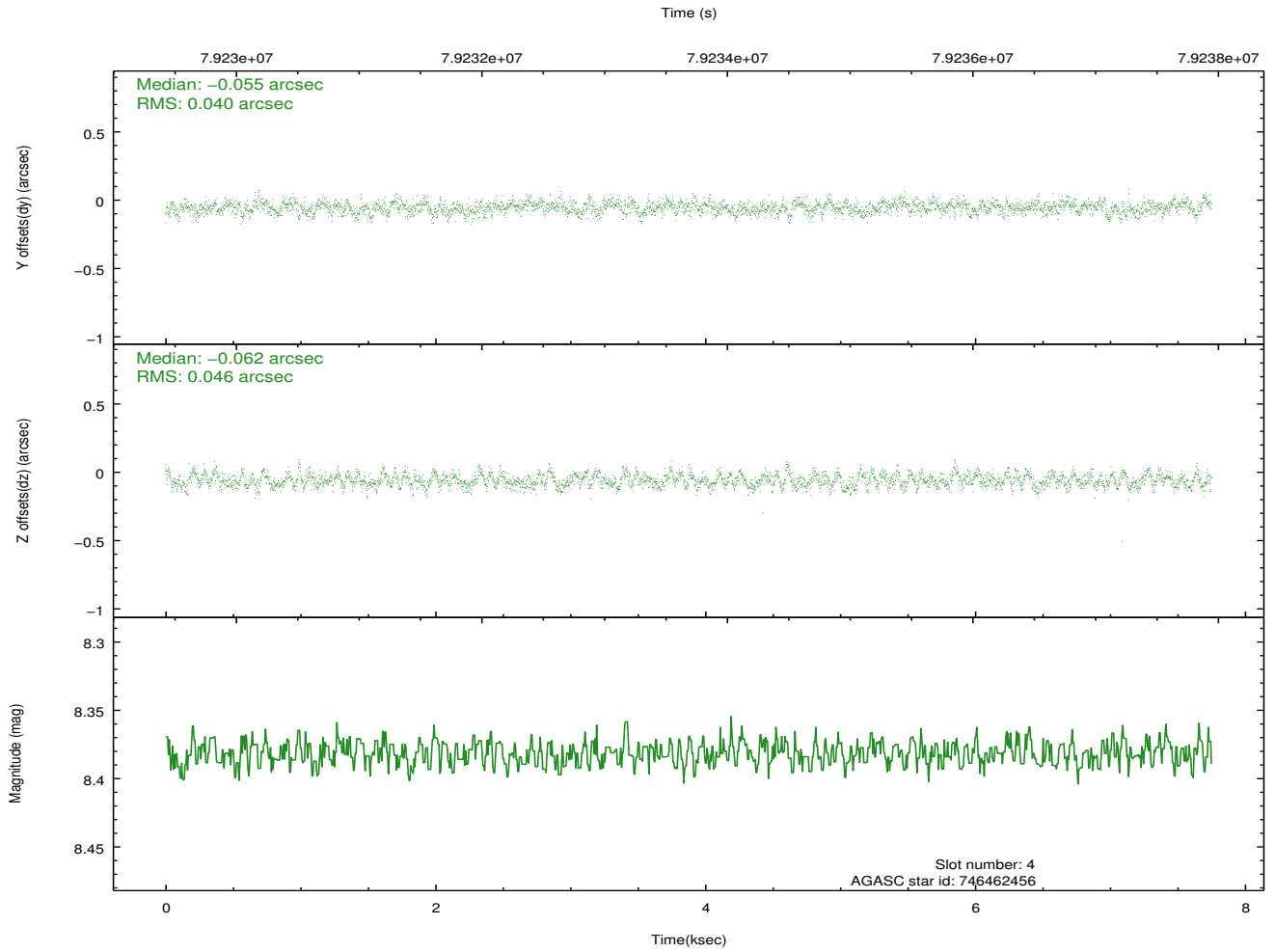
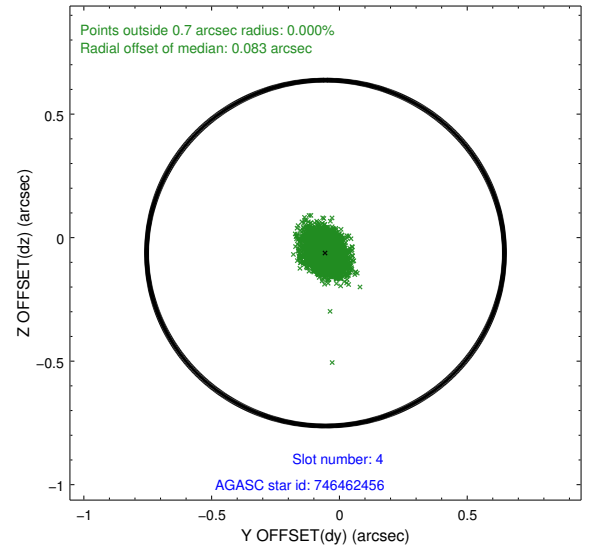
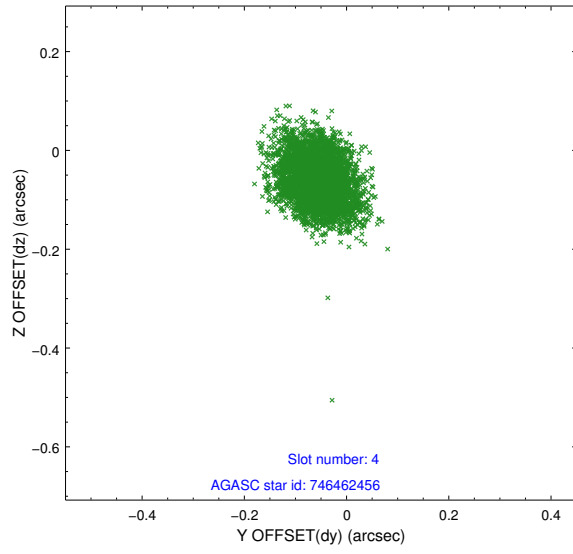
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.16	1890	-0.063	-0.071	0.009	0.015	0.000000	0.000000	-753.57	-737.30
1	FID	ACIS-I-4	7.20	1889	-0.010	0.060	0.006	0.011	0.000000	0.000000	2160.20	1168.77
2	FID	ACIS-I-5	7.23	1891	-0.028	0.080	0.009	0.014	0.000000	0.000000	-1806.70	1168.00
3	GUIDE	746455152	7.80	3781	-0.099	0.053	0.057	0.095	278.447893	-9.976732	-1154.75	-1719.06
4	GUIDE	746462456	8.38	3782	-0.055	-0.062	0.065	0.104	278.652171	-10.530173	-843.94	377.26
5	GUIDE	746455112	8.93	3780	0.230	-0.128	0.068	0.114	278.266531	-10.703234	653.05	277.16
6	GUIDE	746460328	9.81	3781	-0.001	0.032	0.090	0.148	278.603974	-9.898096	-1775.98	-1704.83
7	GUIDE	746995400	9.49	3777	-0.074	0.105	0.090	0.151	278.078957	-11.289885	2238.27	1821.36

## 2.4 Star Slots

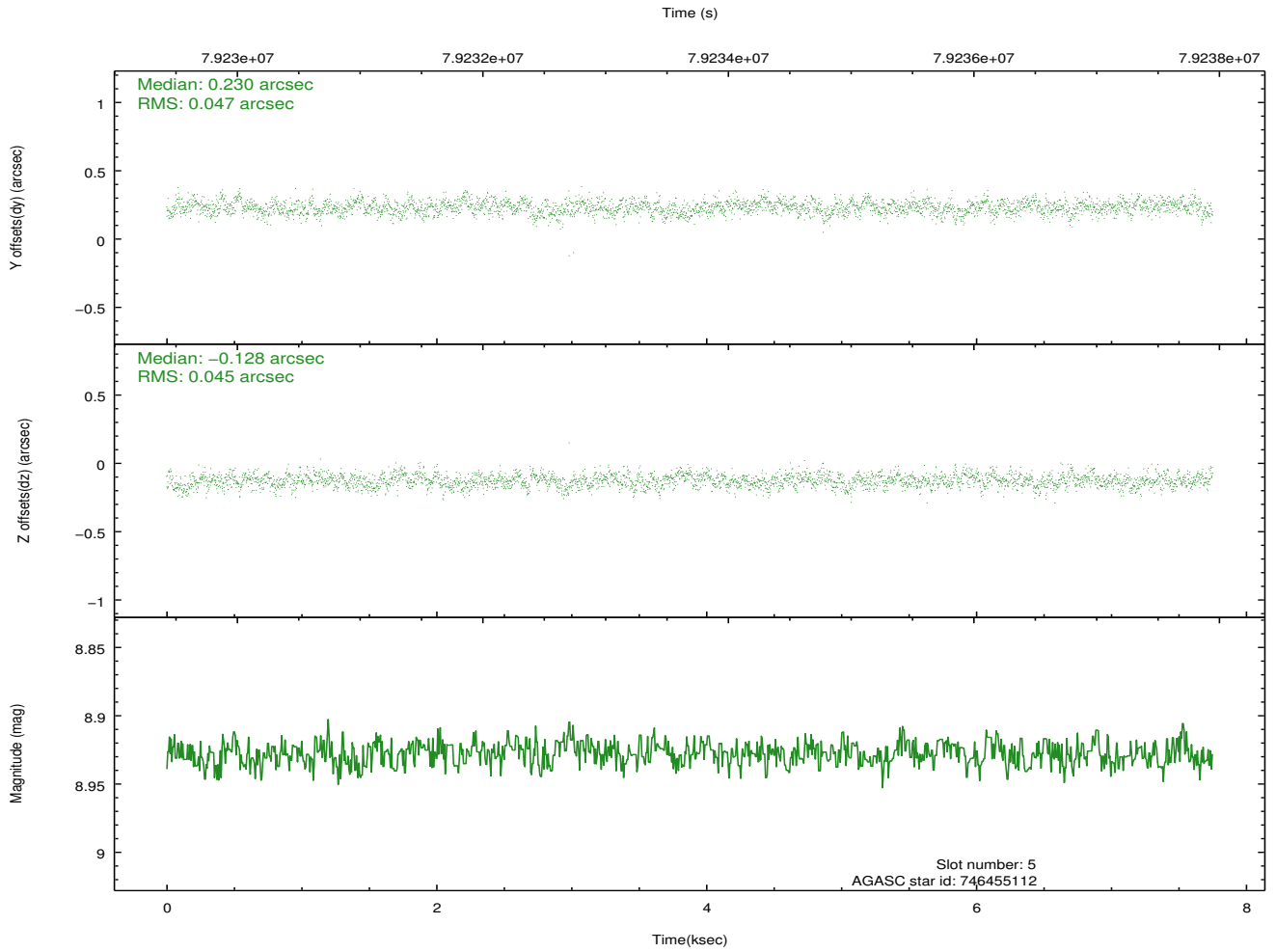
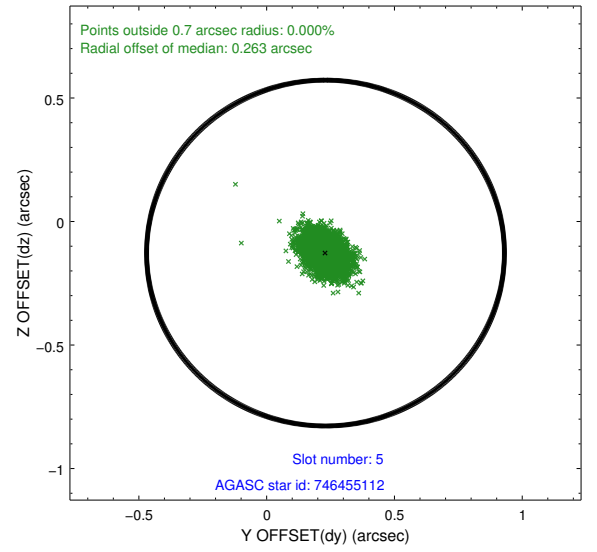
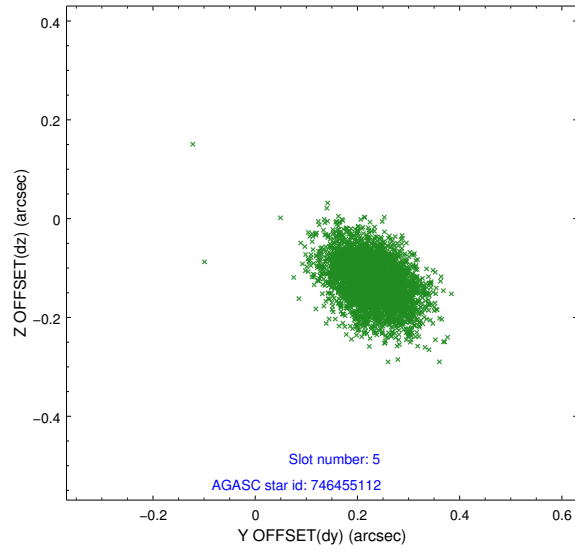
### 2.4.1 Slot 3



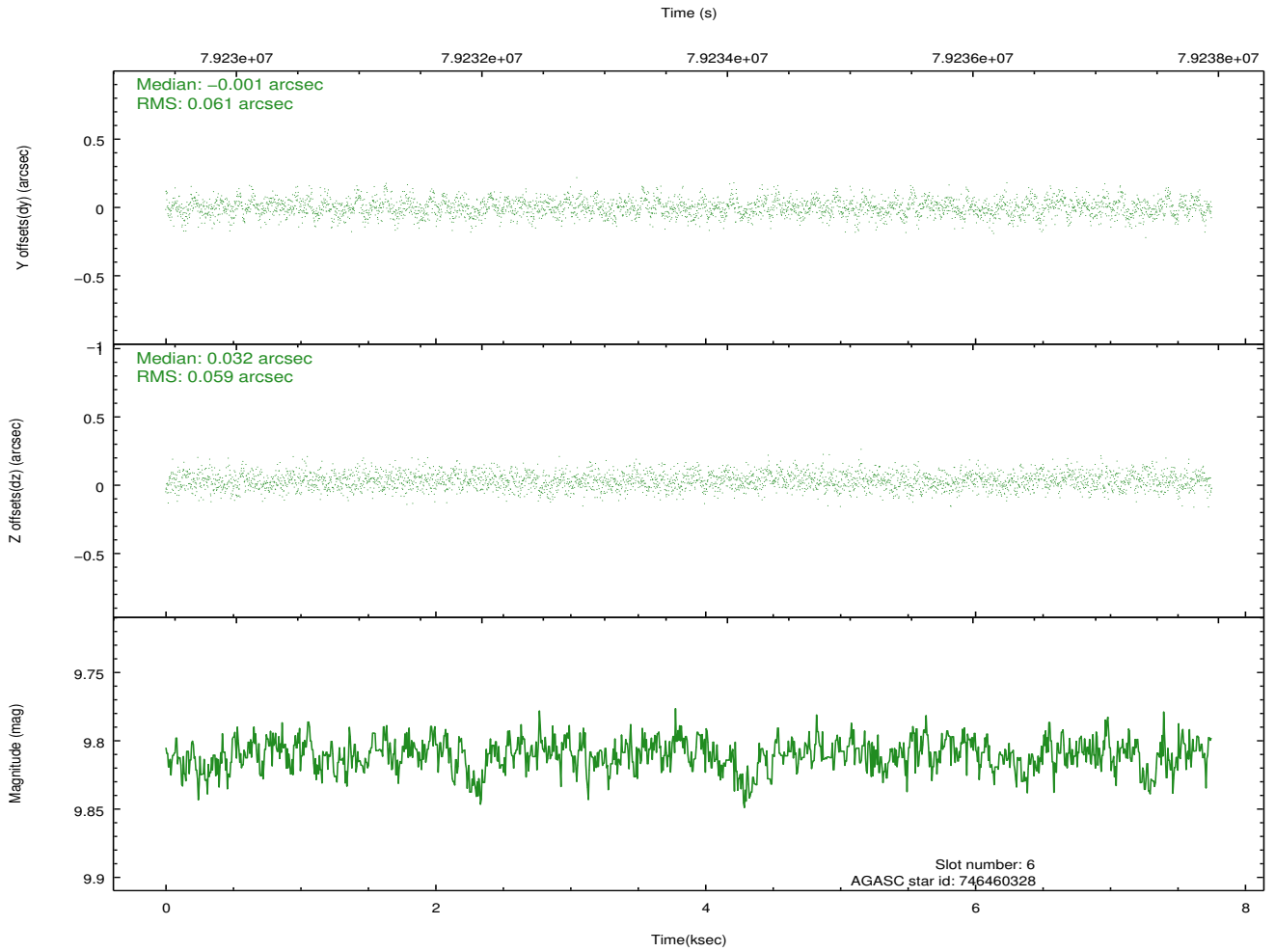
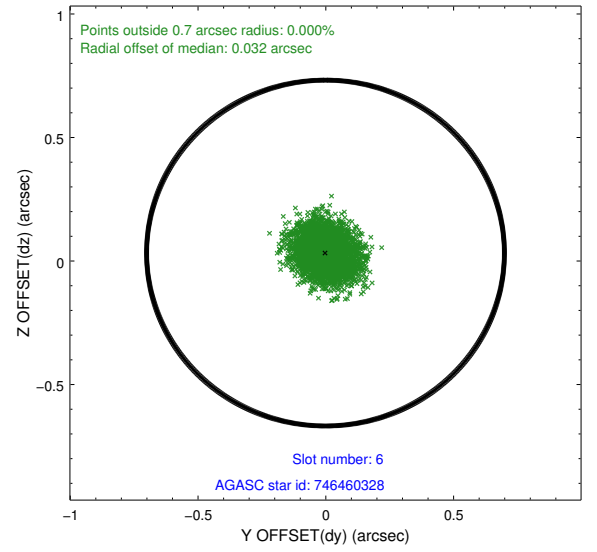
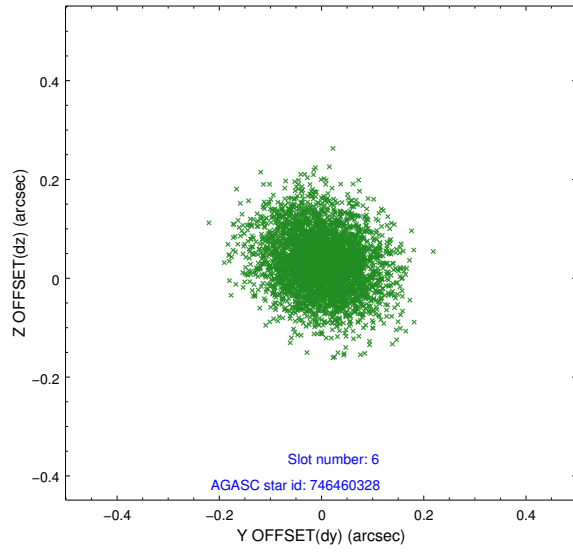
## 2.4.2 Slot 4



### 2.4.3 Slot 5

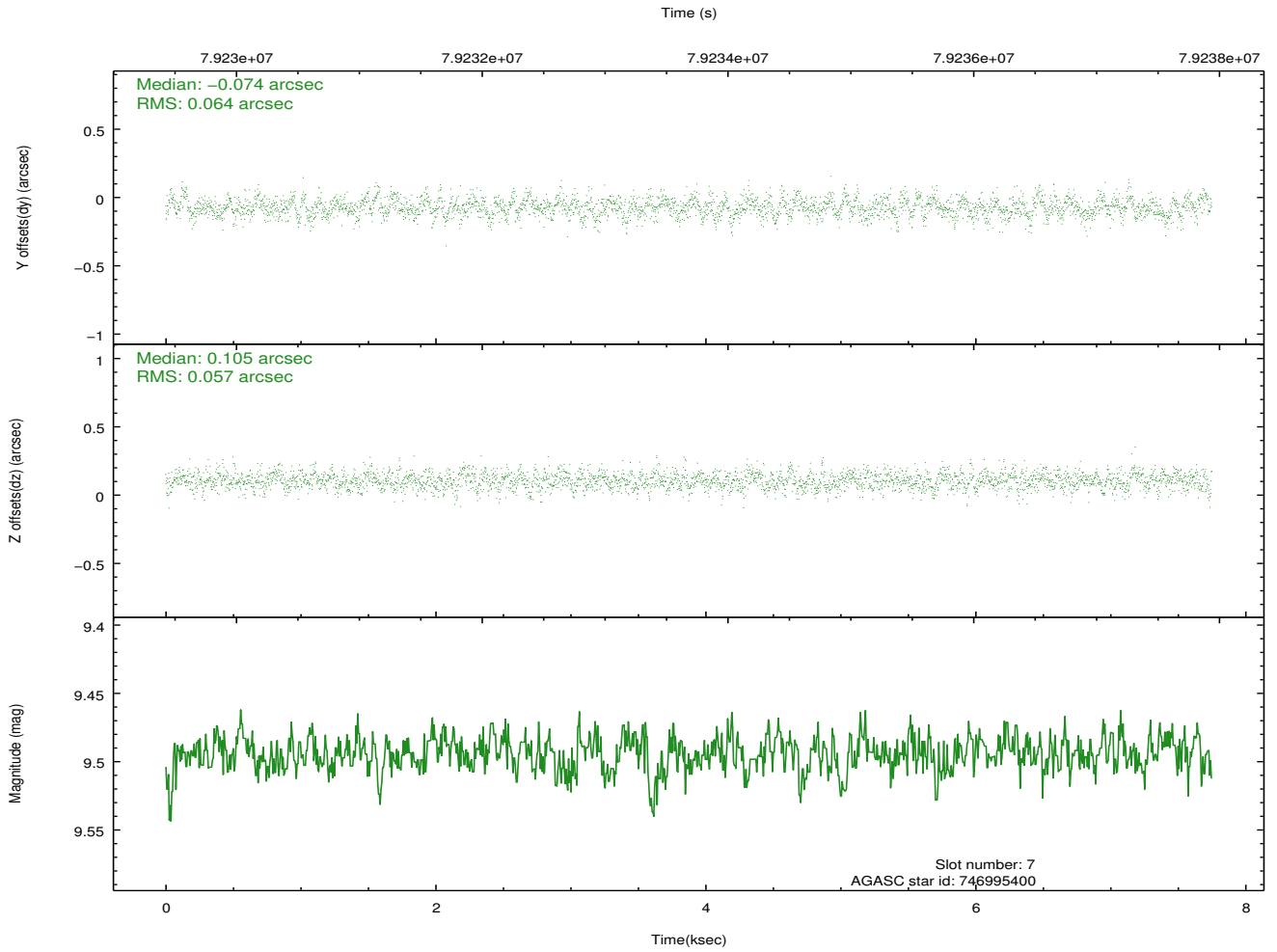
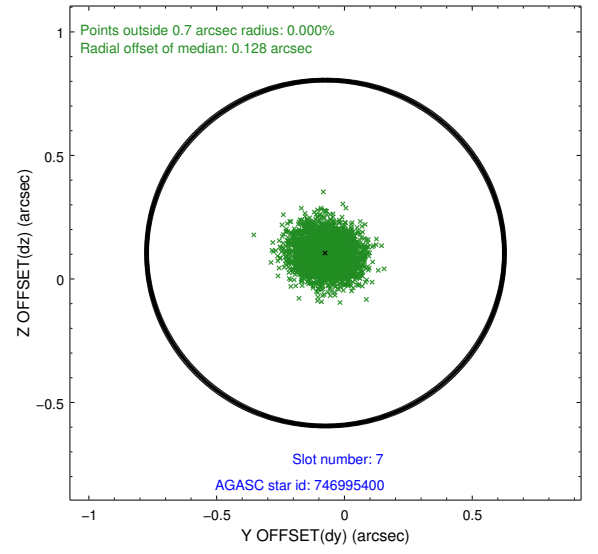
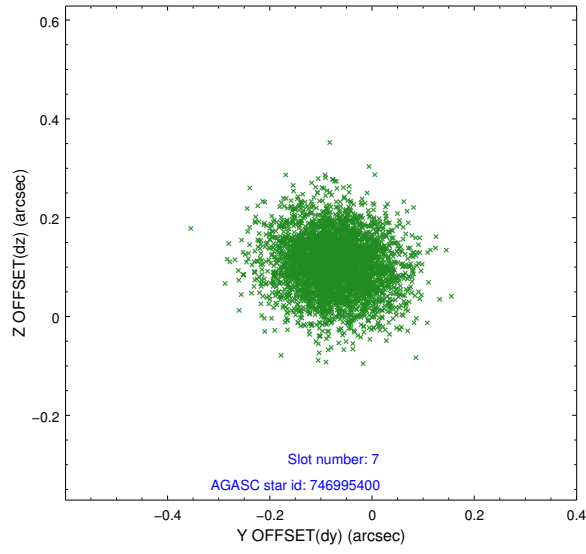


## 2.4.4 Slot 6



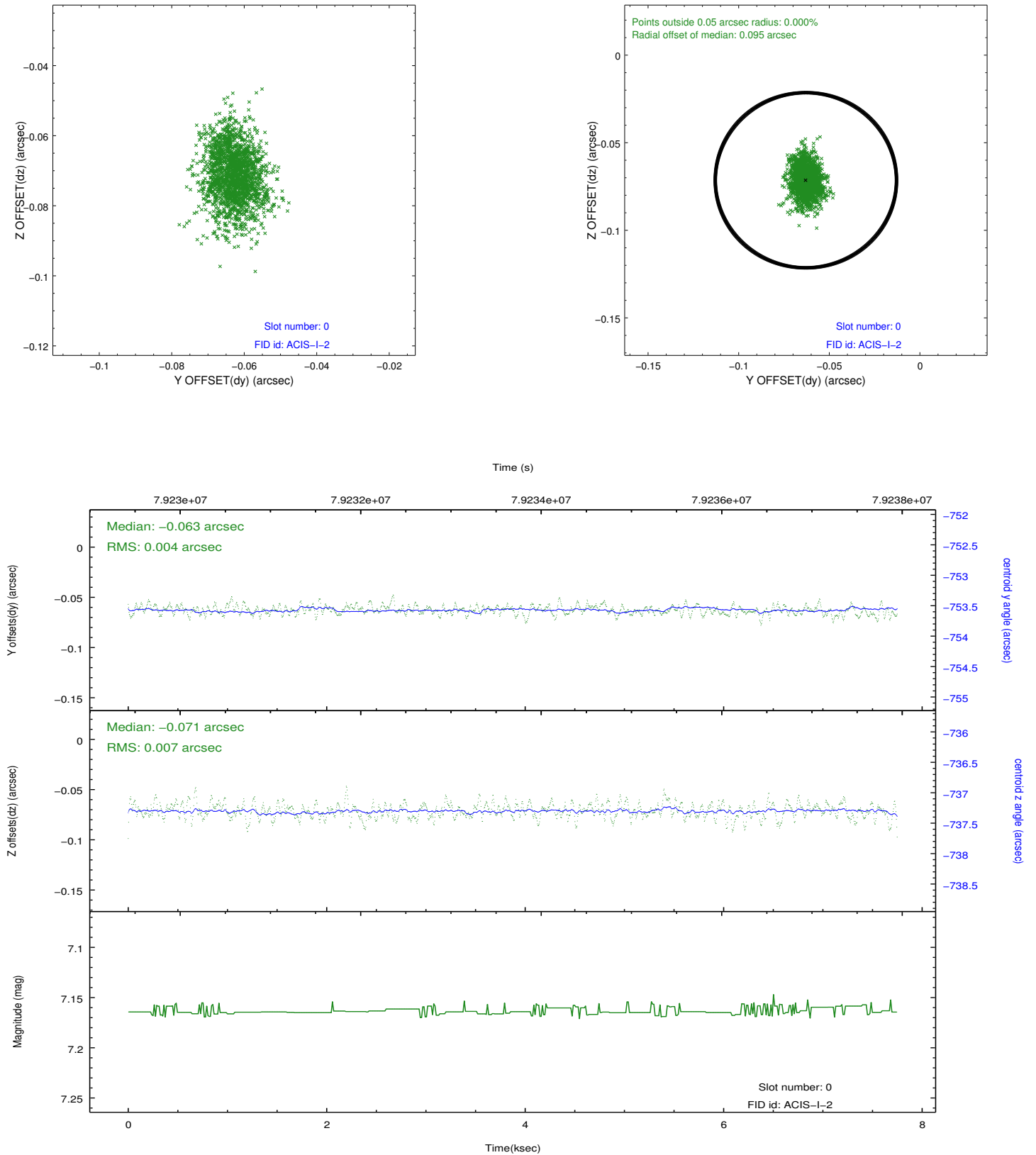


## 2.4.5 Slot 7

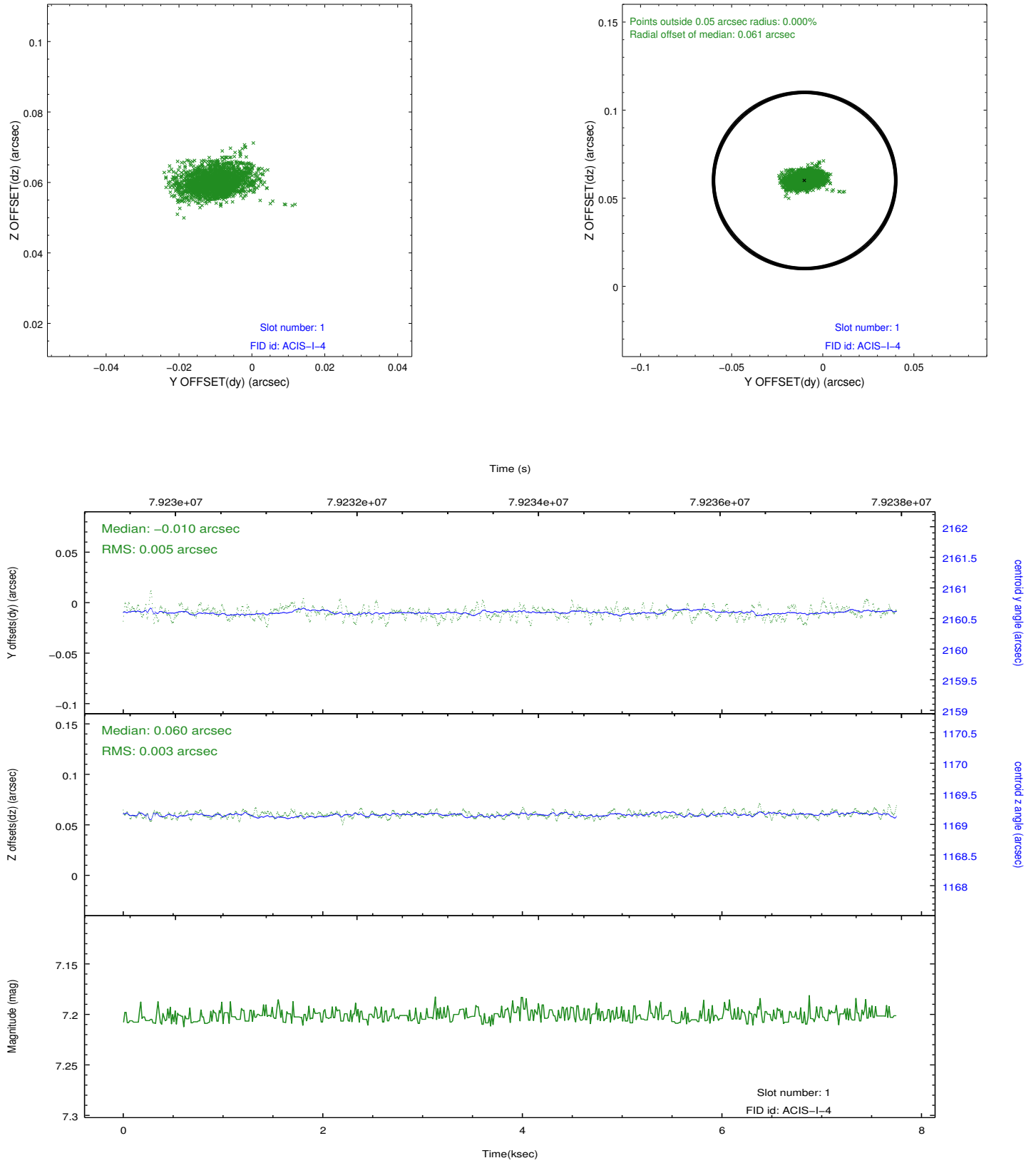


## 2.5 FID Slots

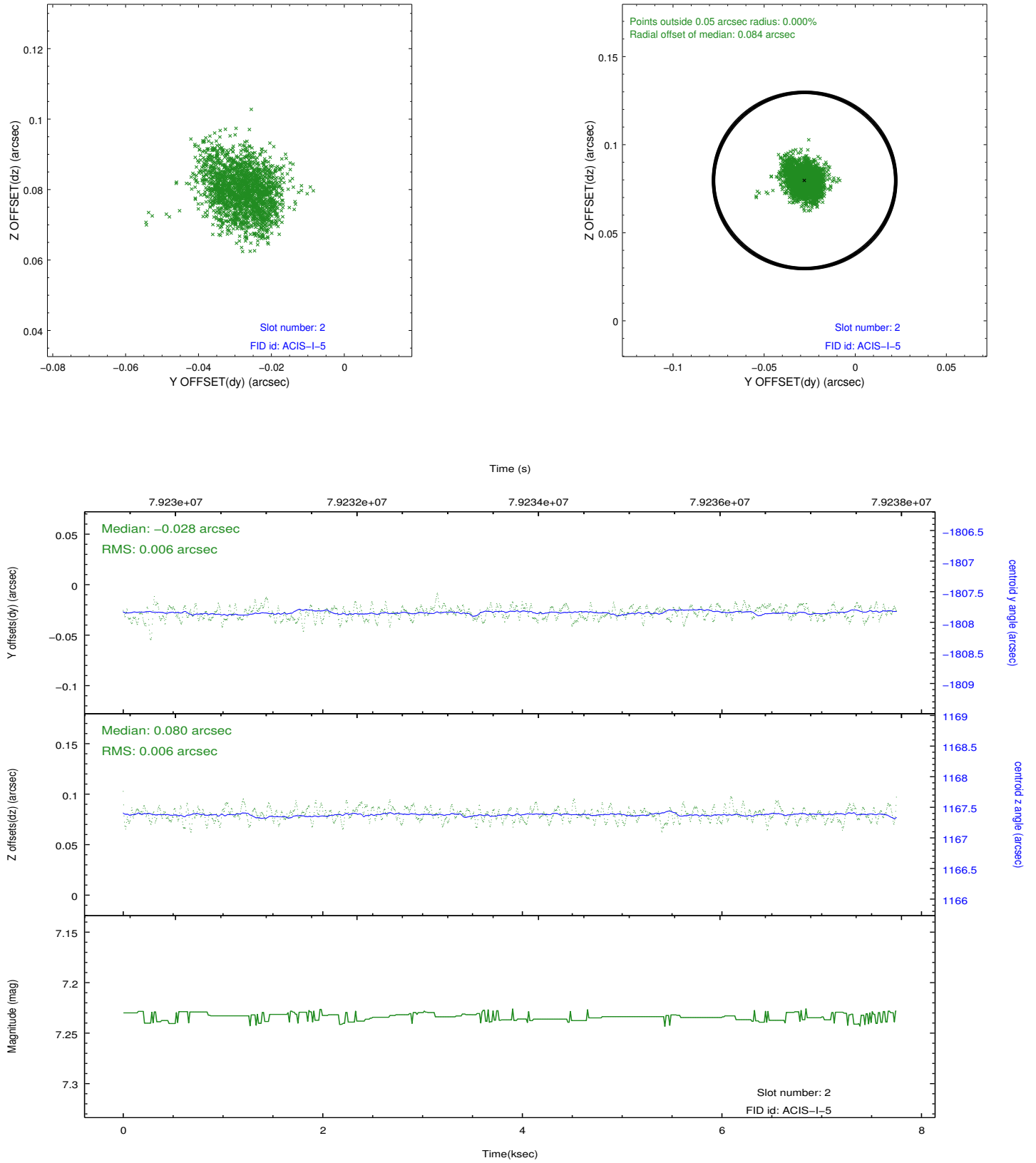
### 2.5.1 Slot 0



## 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)	2012.09.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.324

## A.2 Comments

The focal-plane temperature was set to a temperature of about -109.2 C during this observation and others in the interval from September 17, 1999 to January 29, 2000. The current reprocessing of the data applies no charge-transfer inefficiency (CTI) adjustment to the data because the ACIS CTI adjustment has not been calibrated at this temperature. The CTI adjustment is calibrated for data taken from January 30, 2000 to the present, when the focal-plane temperature is set to -119.7 C. However, if the observation includes one or both back-illuminated CCDs ACIS-S1 and ACIS-S3, then a time-dependent gain adjustment is applied to the data for these CCDs. The ACIS spectral response calibration is less accurate at temperatures of about -109.2 C than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (i.e. fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response (e.g. those interested in imaging or timing analyses) should not notice an effect.