

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 210 - L2 Version 2

Chandra X-Ray Center

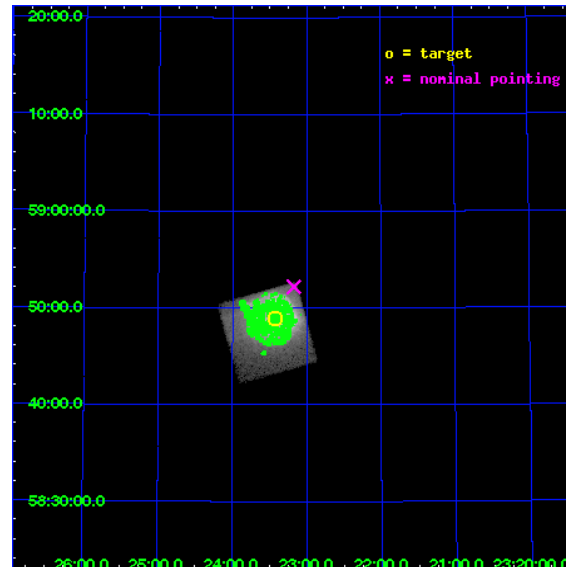
L2 Processing Date : Dec 17 2009

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# 1 Front

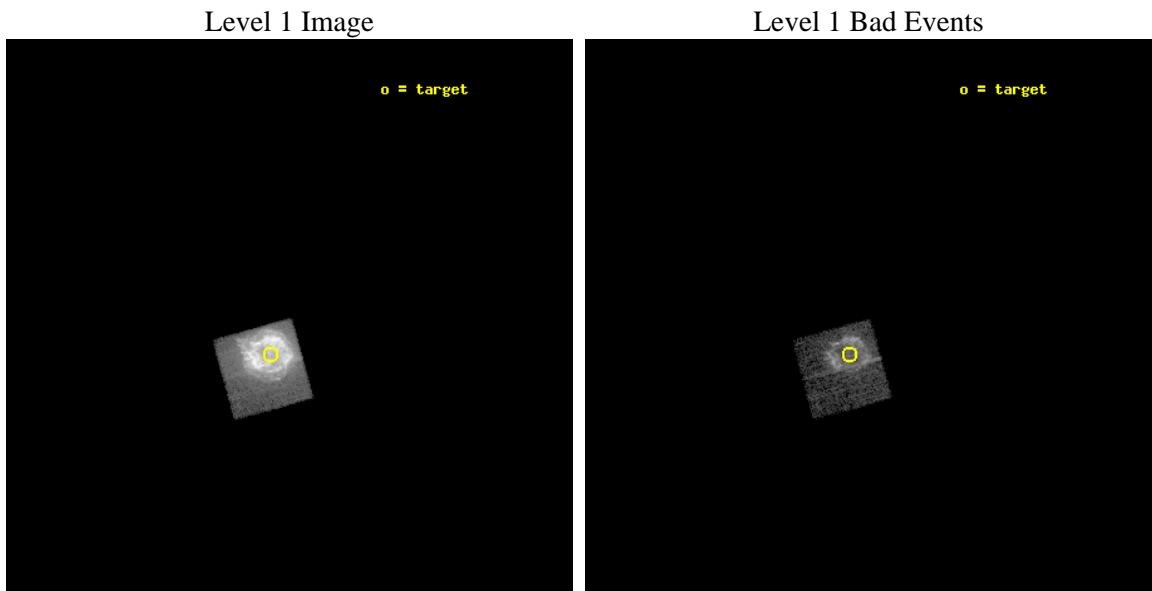
seq_num	590078	Sequence number
obs_id	210	Observation id
title	ACIS CHIP RESPONSE TO CAS A, JAN. 99	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	CAS A [Chip I3, T=100, Offsets=-2,2,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	350.8575	Observer's specified target RA
dec_targ	58.814833	Observer's specified target Dec
ra_nom	350.79323550918	Nominal RA
dec_nom	58.869926001049	Nominal Dec
roll_nom	164.51319415565	Nominal Roll
revision	2	Processing version of data
ontime	3673.7523500621	Sum of GTIs [s]
livetime	3627.2330857376	Livetime [s]
ontime0	5030.4000046849	Sum of GTIs [s]
ontime1	5030.4000046849	Sum of GTIs [s]
ontime2	5030.4000046849	Sum of GTIs [s]
ontime3	3673.7523500621	Sum of GTIs [s]
ontime6	5030.4000046849	Sum of GTIs [s]
ontime7	5030.4000046849	Sum of GTIs [s]
l2events	839633	Number of level 2 events



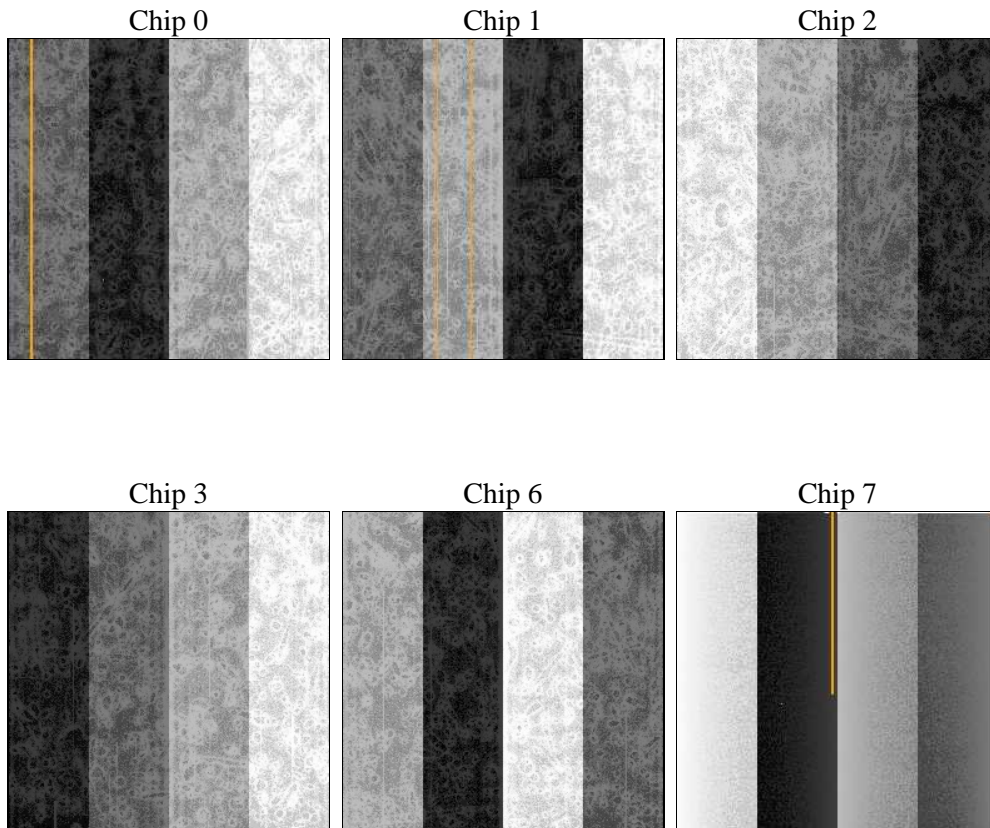
## 2 OBI

### 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	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	3673.7523500621	Sum of GTIs [s]
caldsver	4.1.4	&#160	ontime0	5030.4000046849	Sum of GTIs [s]
date	2009-12-17T10:10:59	Date and time of file creation	ontime1	5030.4000046849	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	5030.4000046849	Sum of GTIs [s]
			ontime3	3673.7523500621	Sum of GTIs [s]
			ontime6	5030.4000046849	Sum of GTIs [s]
			ontime7	5030.4000046849	Sum of GTIs [s]
			l1events	914475	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	0	0	0	914475	0	0
rejected events	0	0	0	69111	0	0
rejected %	0%	0%	0%	7%	0%	0%

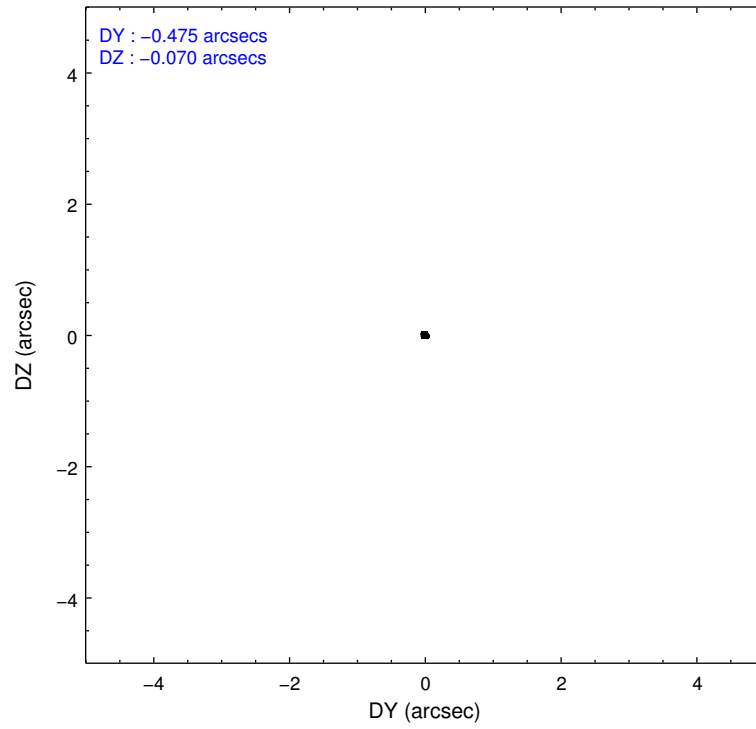
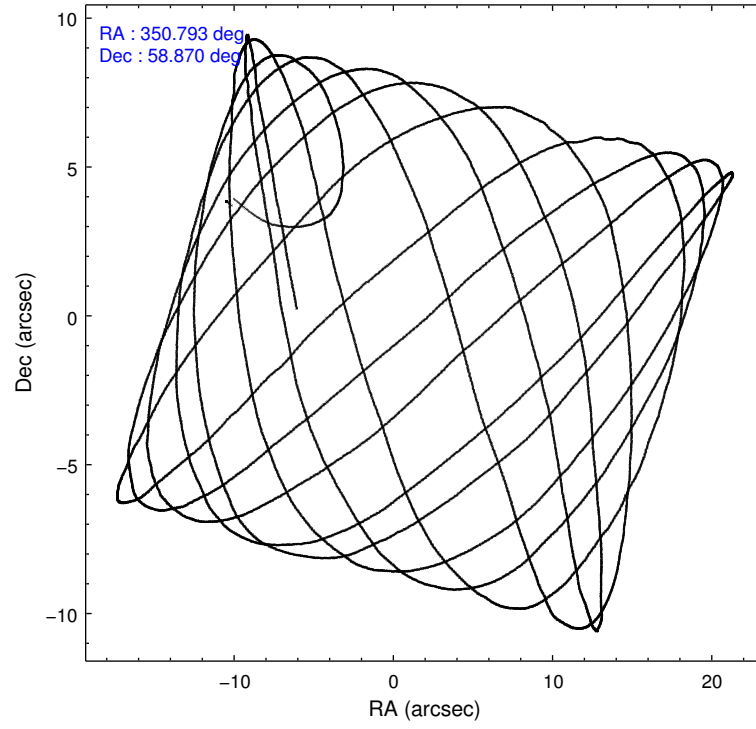
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	0	0	0	663009	0	0
	0%	0%	0%	72%	0%	0%
grade 1 events	0	0	0	11177	0	0
	0%	0%	0%	1%	0%	0%
grade 2 events	0	0	0	102458	0	0
	0%	0%	0%	11%	0%	0%
grade 3 events	0	0	0	29046	0	0
	0%	0%	0%	3%	0%	0%
grade 4 events	0	0	0	29163	0	0
	0%	0%	0%	3%	0%	0%
grade 5 events	0	0	0	7357	0	0
	0%	0%	0%	0%	0%	0%
grade 6 events	0	0	0	22424	0	0
	0%	0%	0%	2%	0%	0%
grade 7 events	0	0	0	49841	0	0
	0%	0%	0%	5%	0%	0%

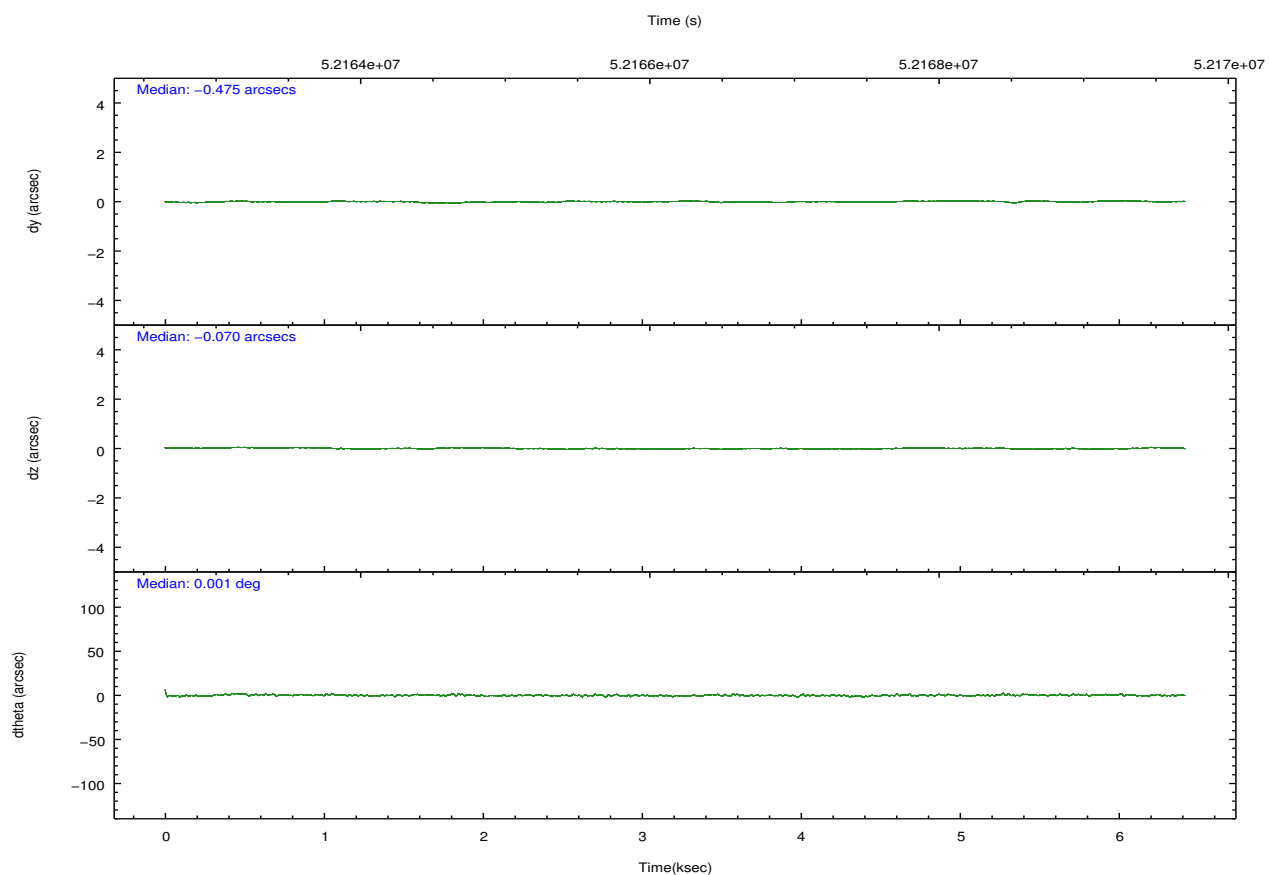
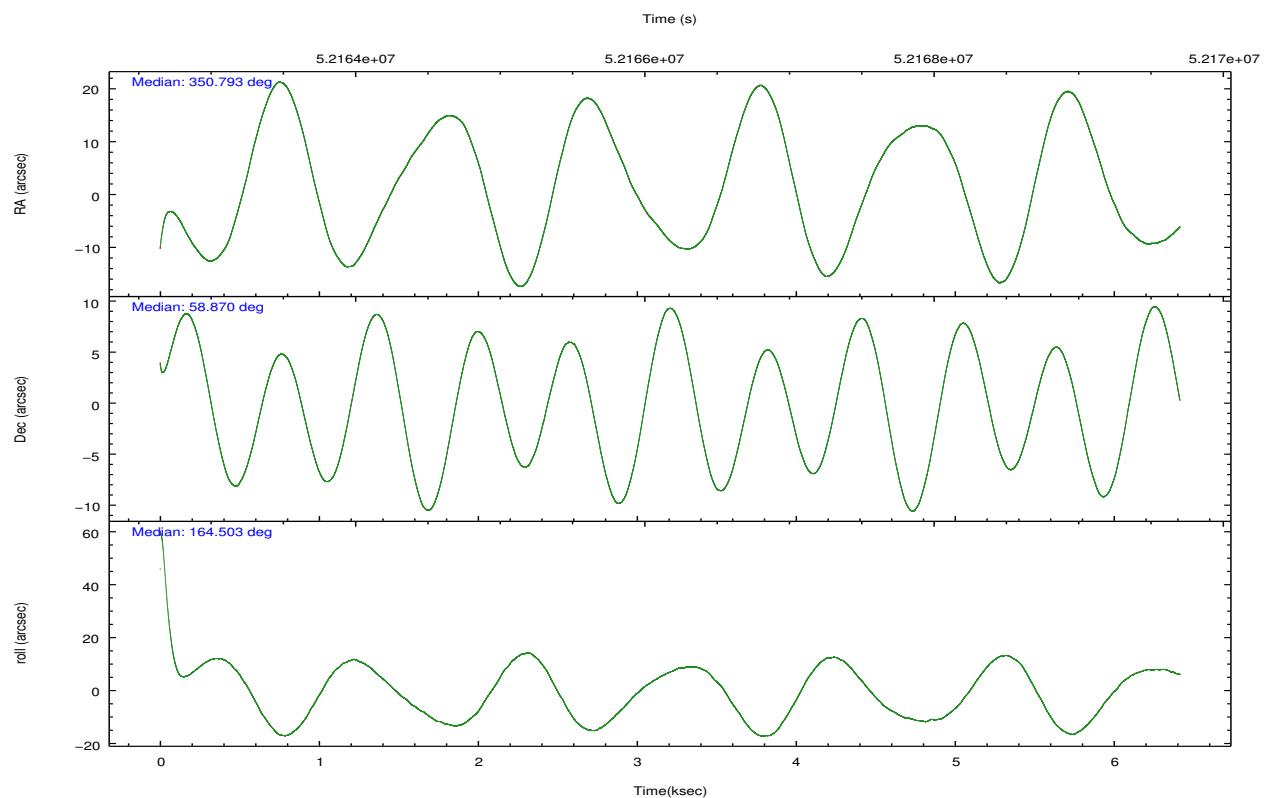


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-3	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	Y
Observation mode	POINTING	POINTING	CCD I1 on	N	Y
Pointing RA	350.846035	350.7932355091781	CCD I2 on	N	Y
Pointing Dec	58.876082	58.869926001049	CCD I3 on	Y	Y
Pointing Roll	164.259199	164.5131941556491	CCD S0 on	N	N
Window start time	49852864.184000	49852864.184000	CCD S1 on	N	N
Window stop time	55036864.184000	55036864.184000	CCD S2 on	N	Y
SIM focus pos (mm)	-0.782348	-0.7809083437167272	CCD S3 on	N	Y
SIM defocus (mm)	0	0.001439871863259334	CCD S4 on	N	N
SIM translation stage pos (mm)	-233.592463	-233.5874344608287	CCD S5 on	N	N
SIM translation stage offset (mm)	0	-0.005018542100998502	Number of optional ACIS chips dropped	0	0
Observation start time	52163381.184000	52161443.43654	On-chip summing requested	N	N
Observation start date	1999-08-27T17:48:37	1999-08-27T17:17:23	Subarray requested	NONE	NONE
Observation end time	52169381.184000	52169515.82433	Alternating exposures requested	N	N
Observation end date	1999-08-27T19:28:37	1999-08-27T19:31:55	Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

## 2.3 Aspect



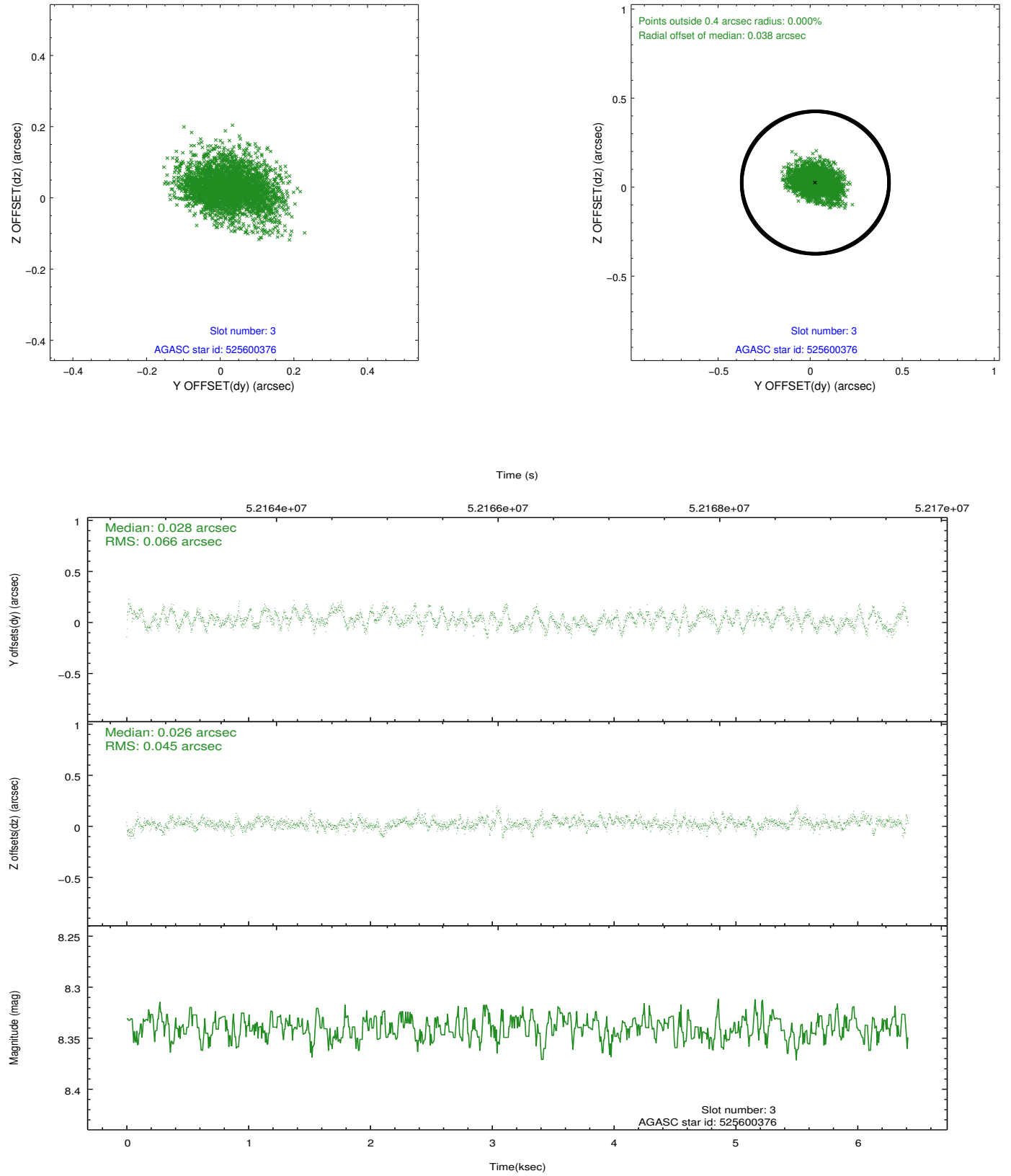


Slot Statistics

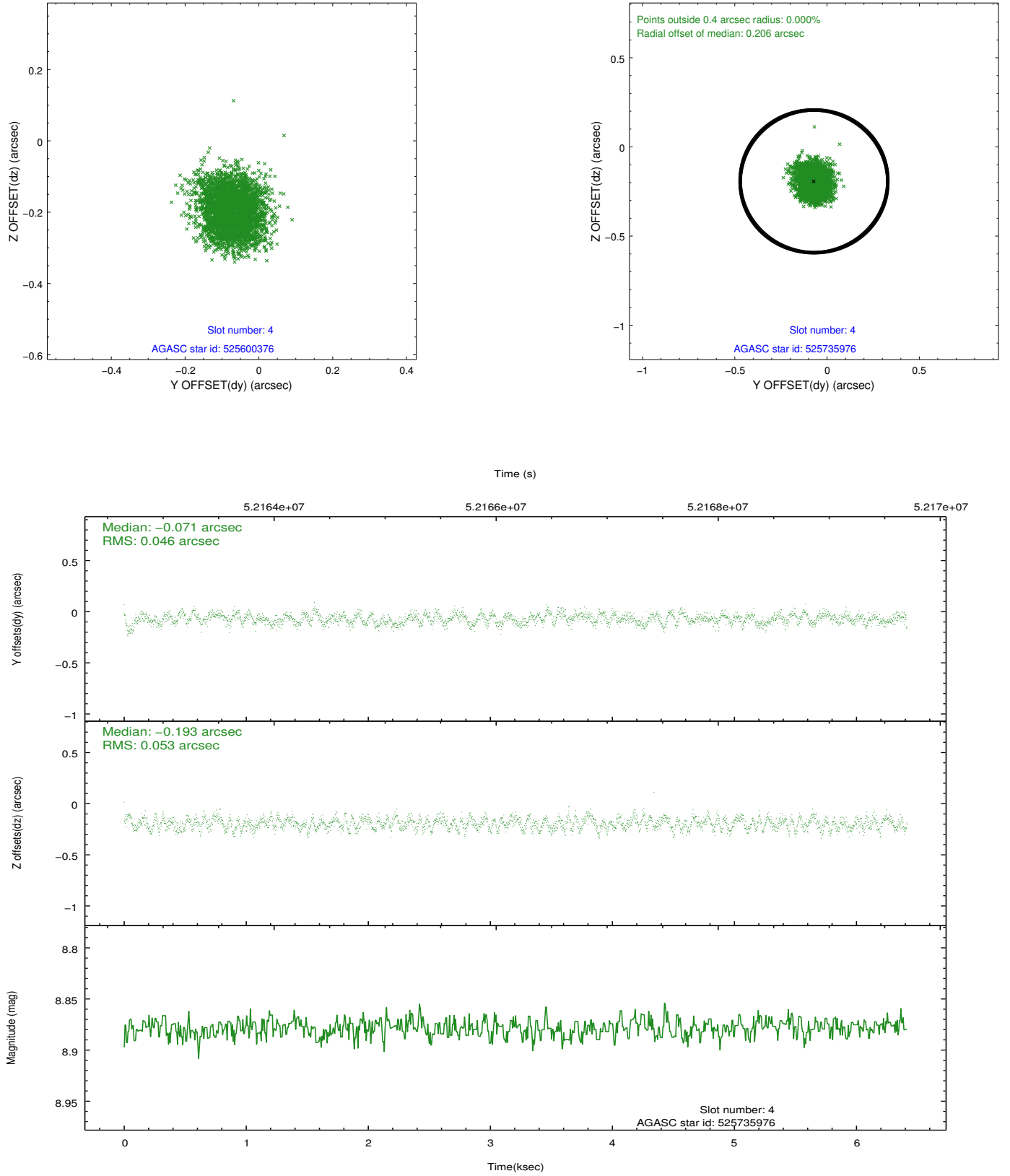
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.21	3129	-0.032	0.053	0.010	0.017	0.000000	0.000000	-753.88	-829.41
1	FID	ACIS-I-4	7.23	3128	0.138	0.013	0.007	0.014	0.000000	0.000000	2160.28	1076.39
2	FID	ACIS-I-5	7.23	3130	-0.206	0.003	0.008	0.015	0.000000	0.000000	-1807.29	1074.87
3	GUIDE	525600376	8.34	3129	0.028	0.026	0.084	0.139	349.956653	59.633357	2300.97	-2194.06
4	GUIDE	525735976	8.88	3128	-0.071	-0.193	0.076	0.119	350.142956	58.277622	698.73	2428.08
5	GUIDE	525731480	9.51	3126	0.027	0.059	0.078	0.126	351.647209	58.687294	-1624.37	240.30
6	GUIDE	525737208	9.37	3130	-0.005	0.101	0.077	0.125	351.154109	59.407897	-23.63	-1996.09
7	GUIDE	525734296	9.50	3128	0.024	0.008	0.085	0.137	351.276372	58.418153	-1227.59	1364.13

## 2.4 Star Slots

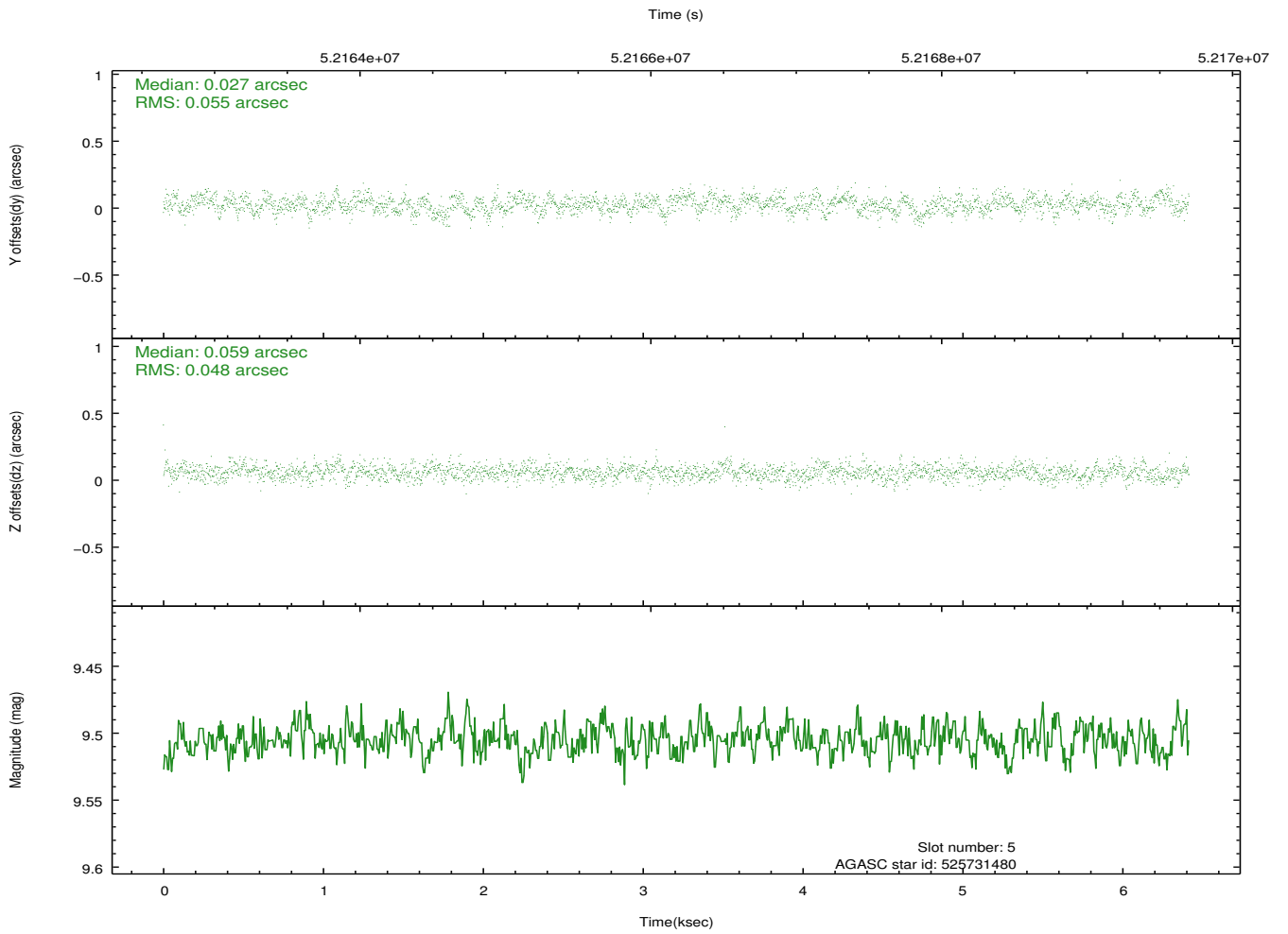
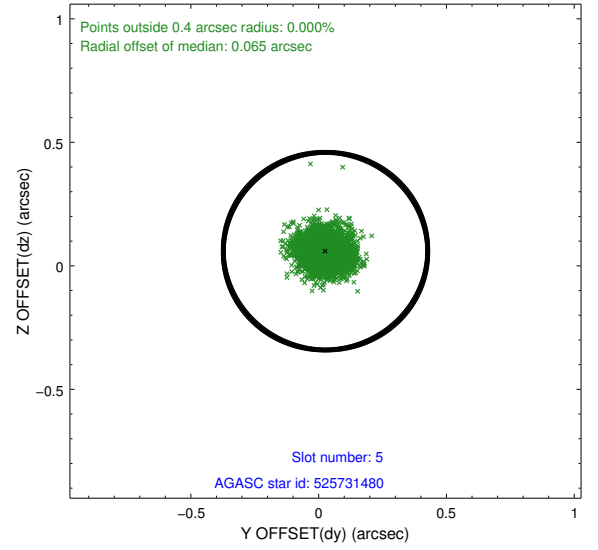
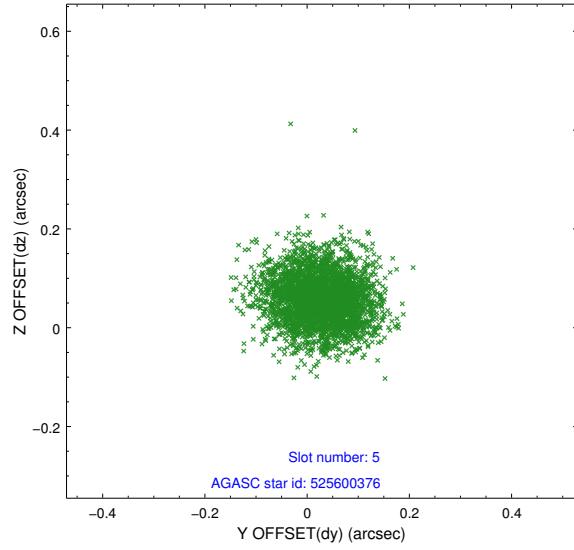
### 2.4.1 Slot 3



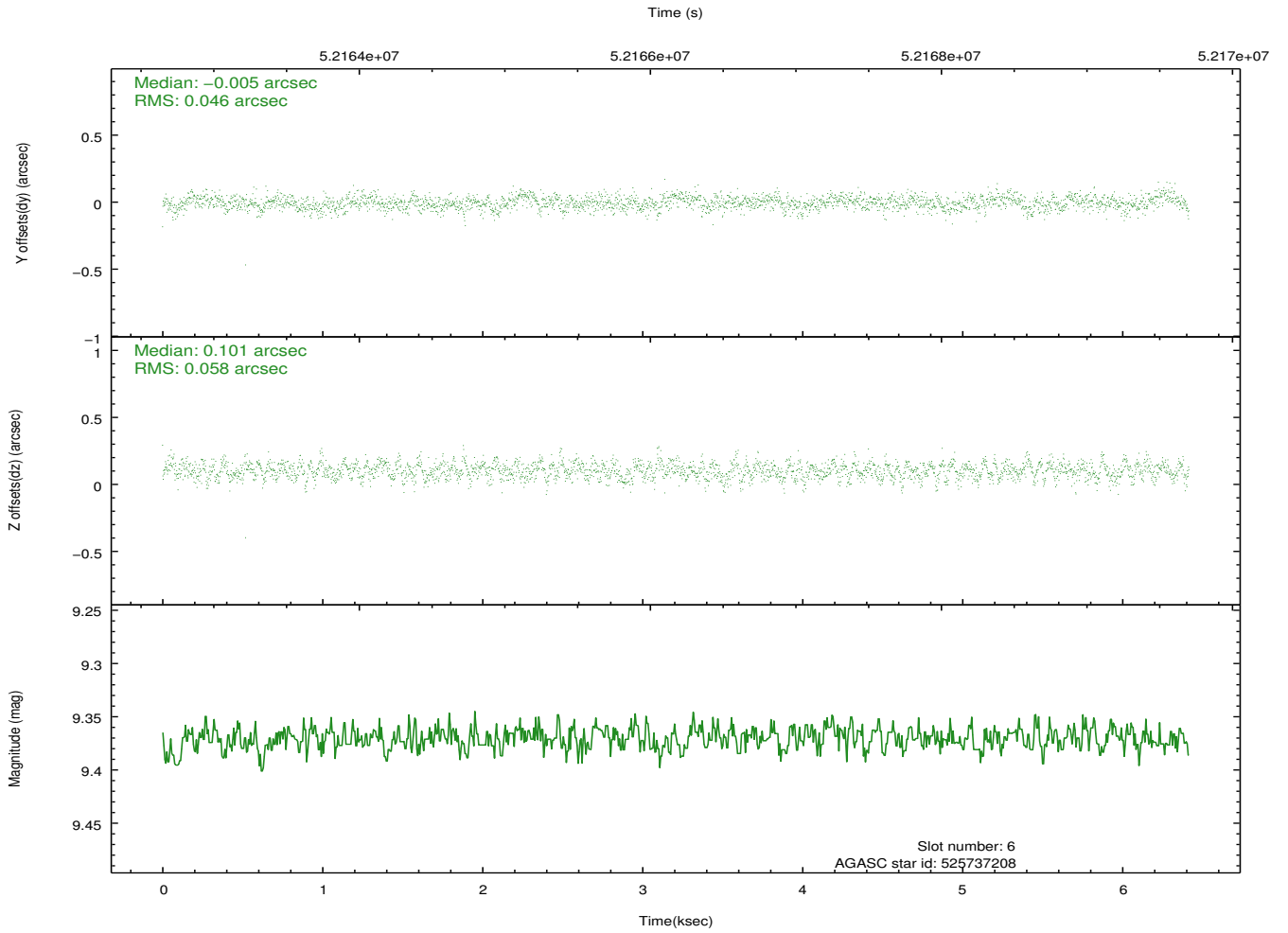
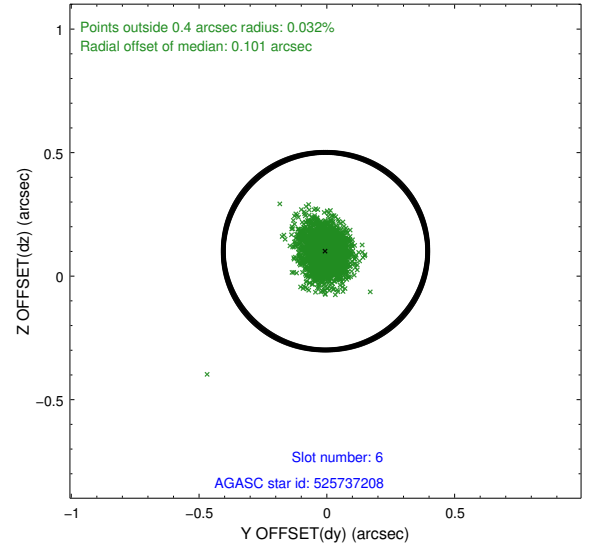
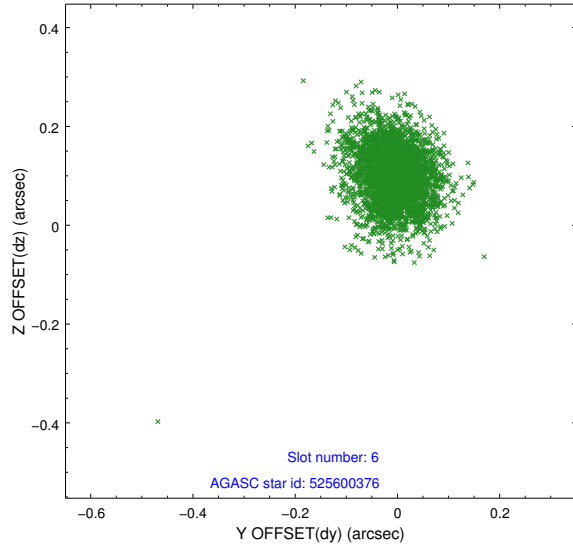
## 2.4.2 Slot 4



### 2.4.3 Slot 5

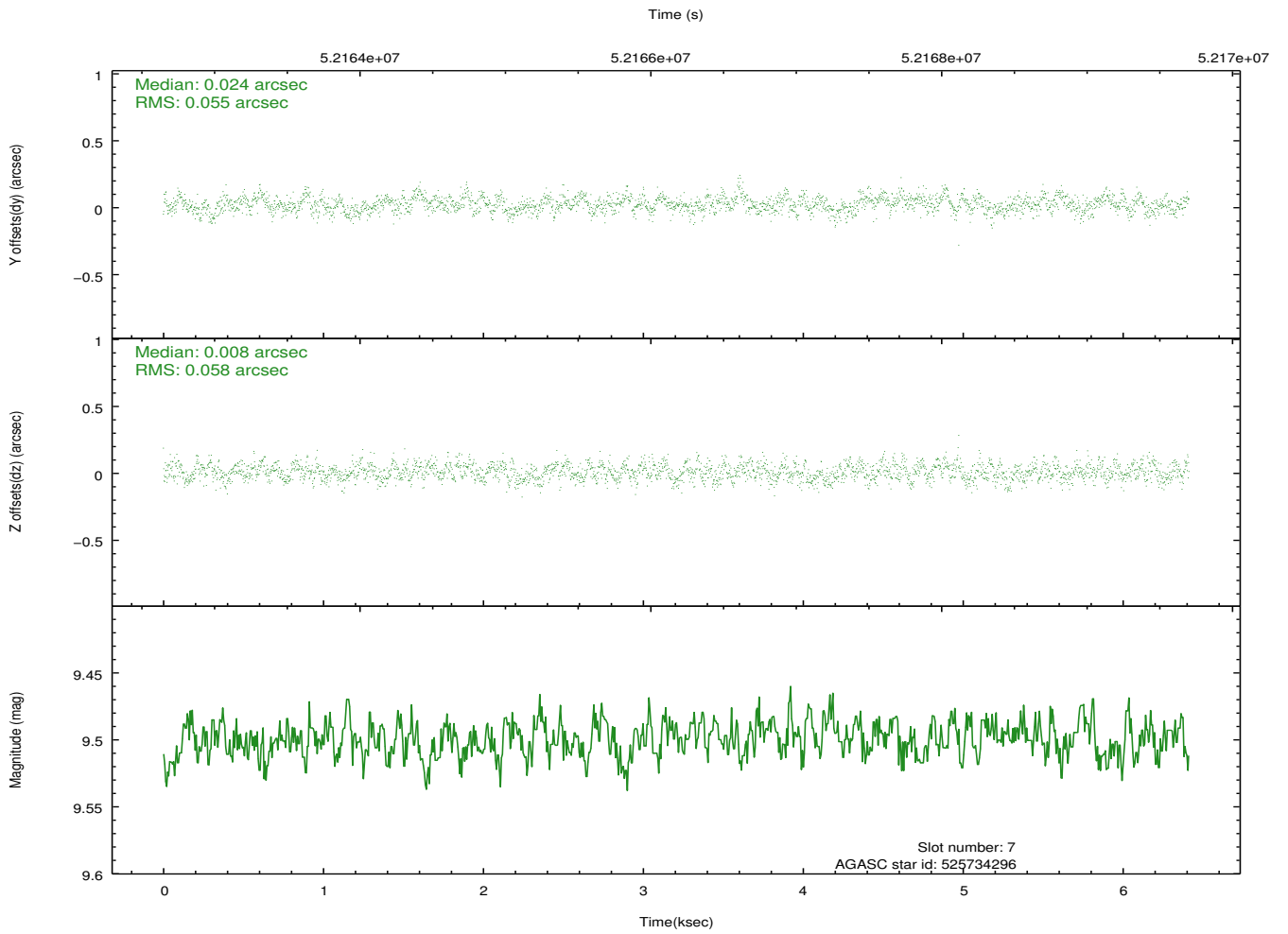
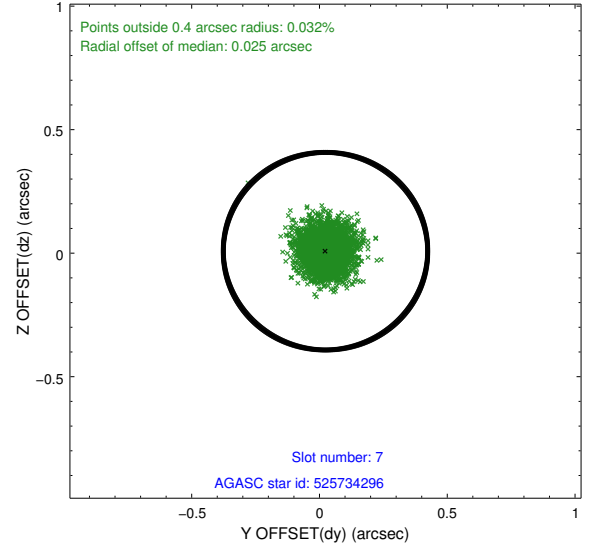
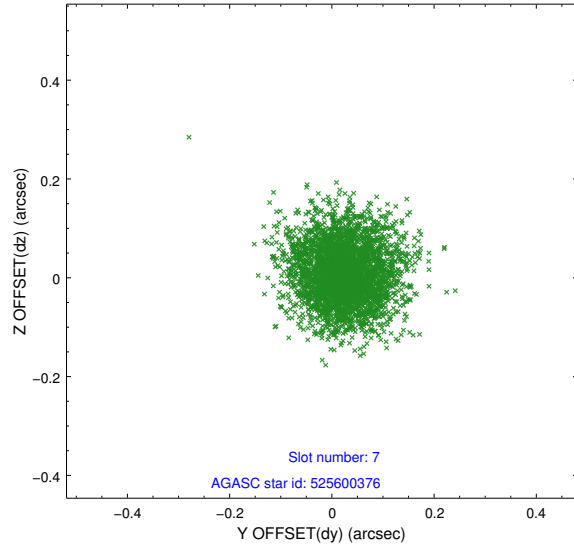


## 2.4.4 Slot 6



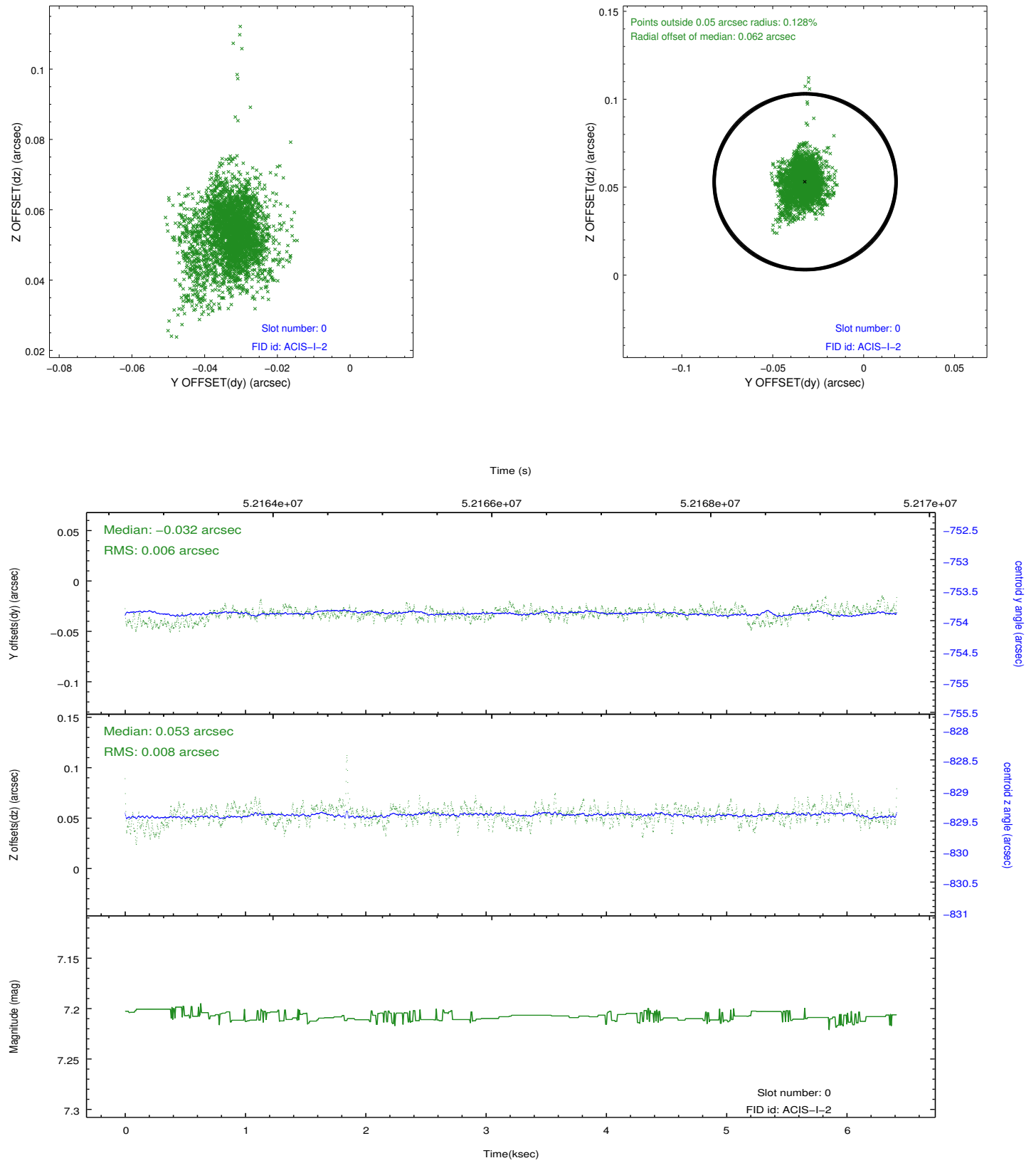


## 2.4.5 Slot 7

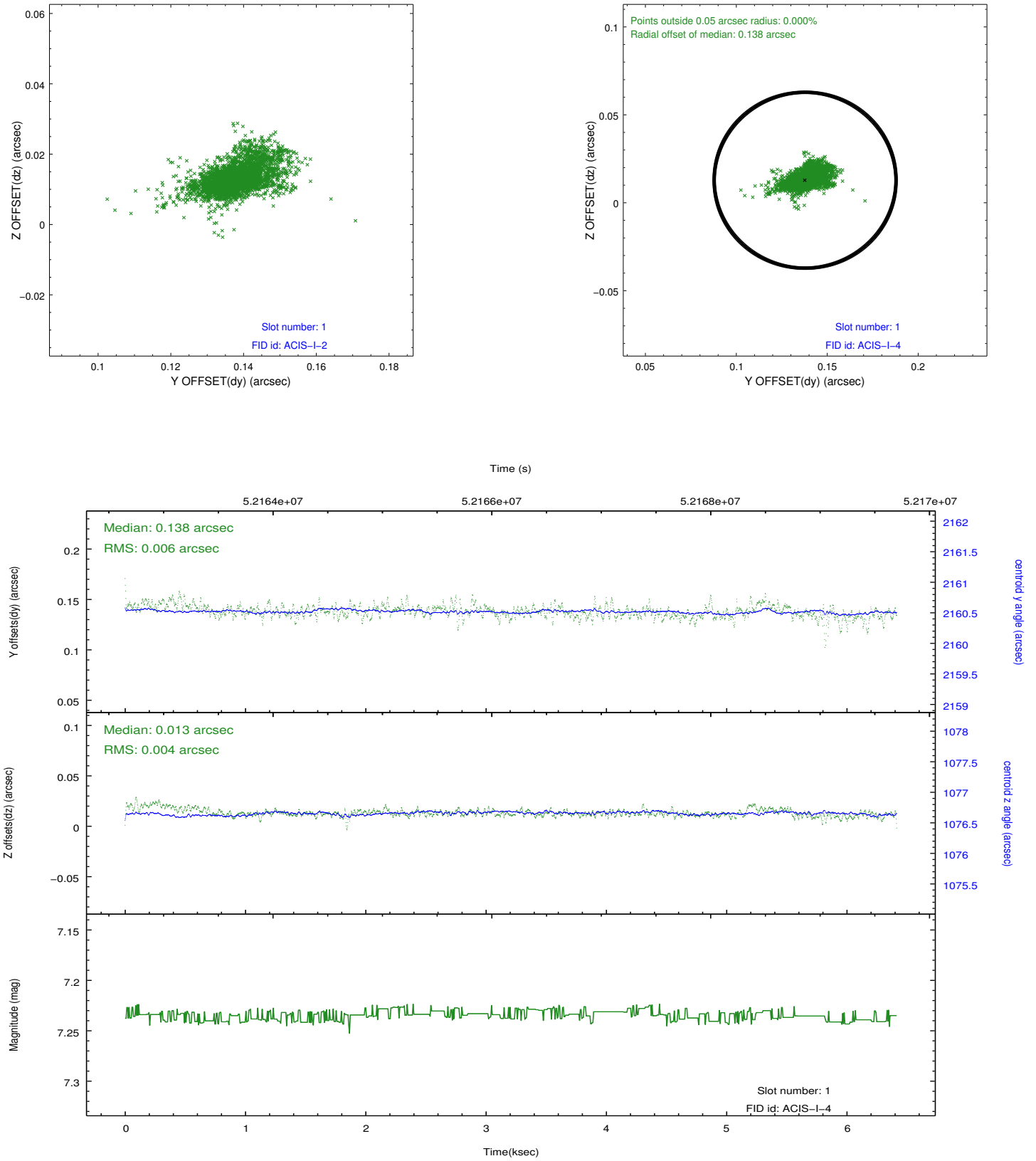


## 2.5 FID Slots

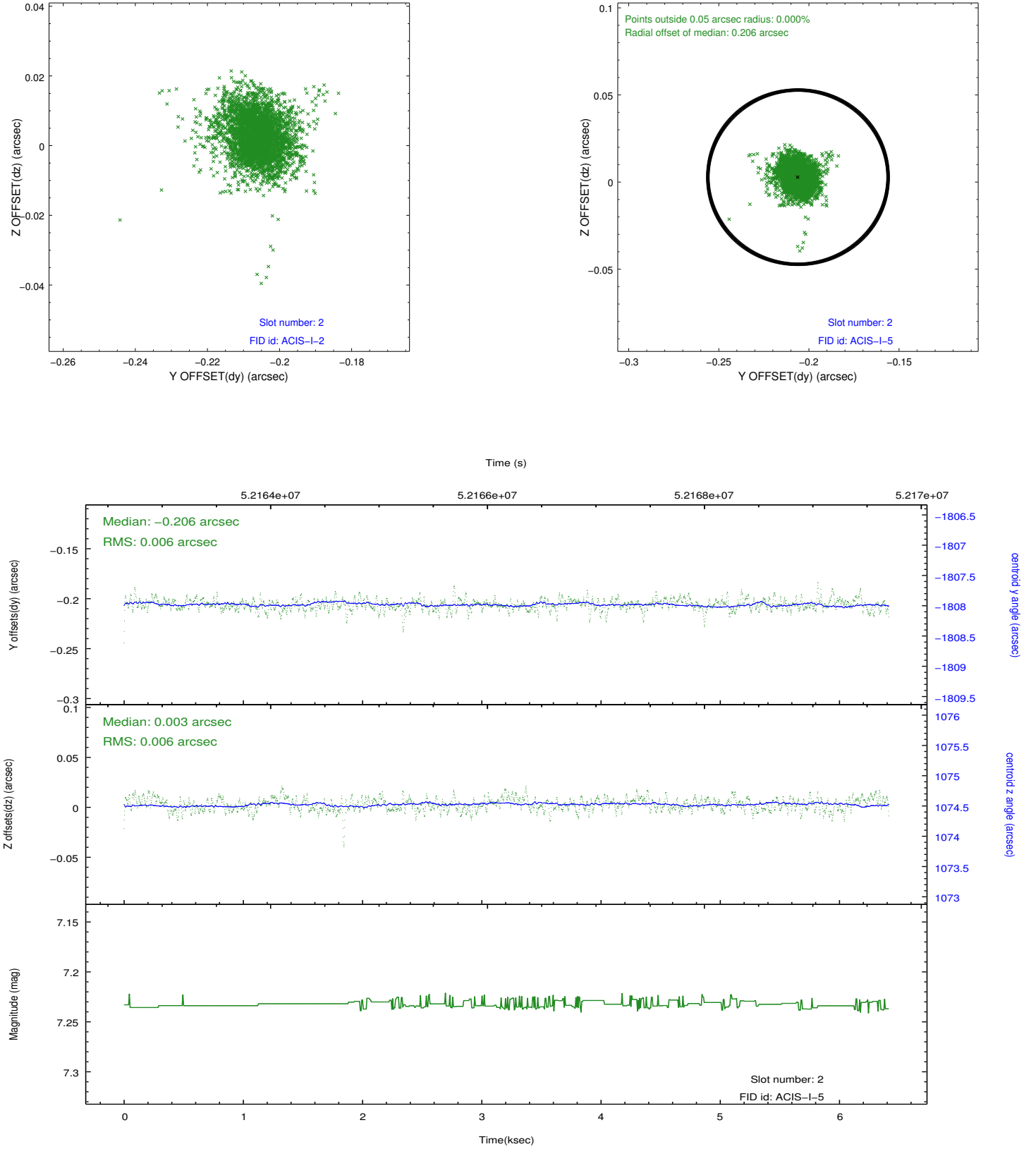
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources

# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.04.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.614

## A.2 Comments

Off-axis ACIS effective area measurement using Cas A on chip I3. Only I3 chip contains data.

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Charge time for this ObsId remains at original value of 3.614 ksec, although with the current processing the charge time would have been 3.674 ksec.

=====

Pileup throughout most of observation.

Window constraint met.

=====

The focal plane temperature is approximately -100 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T\_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.

=====