

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 212 - L2 Version 3

Chandra X-Ray Center

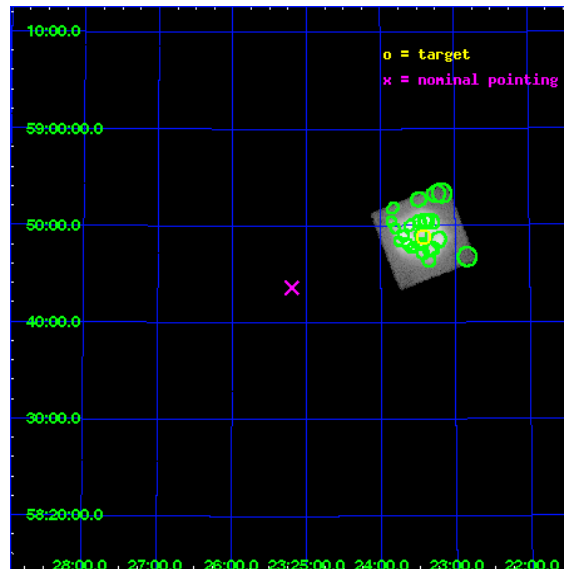
L2 Processing Date : Dec 16 2009

## 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>3</b>	<b>Point Sources</b>	<b>17</b>
<b>A</b>	<b>Summary</b>	<b>18</b>
A.1	Status . . . . .	18
A.2	Comments . . . . .	18

# 1 Front

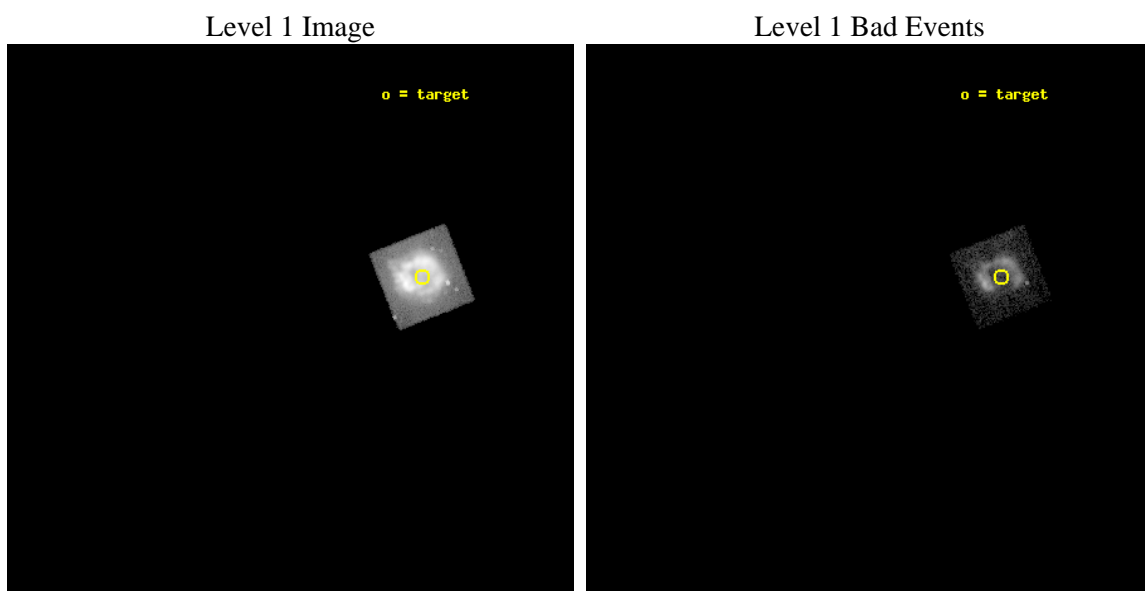
seq_num	590080	Sequence number
obs_id	212	Observation id
title	ACIS CHIP RESPONSE TO CAS A, JAN. 99	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	CAS A [Chip S1, T=100, Offsets=15,0,0 Eff Area]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	350.8575	Observer's specified target RA
dec_targ	58.814833	Observer's specified target Dec
ra_nom	351.29908357169	Nominal RA
dec_nom	58.726989126812	Nominal Dec
roll_nom	158.46930812936	Nominal Roll
revision	3	Processing version of data
ontime	2021.5567152873	Sum of GTIs [s]
livetime	1995.958546923	Livetime [s]
ontime4	1988.9547858089	Sum of GTIs [s]
ontime5	2021.5567152873	Sum of GTIs [s]
ontime6	2488.2539281845	Sum of GTIs [s]
ontime7	2848.0000026524	Sum of GTIs [s]
ontime8	2420.1940229759	Sum of GTIs [s]
ontime9	2371.5798893124	Sum of GTIs [s]
l2events	489281	Number of level 2 events



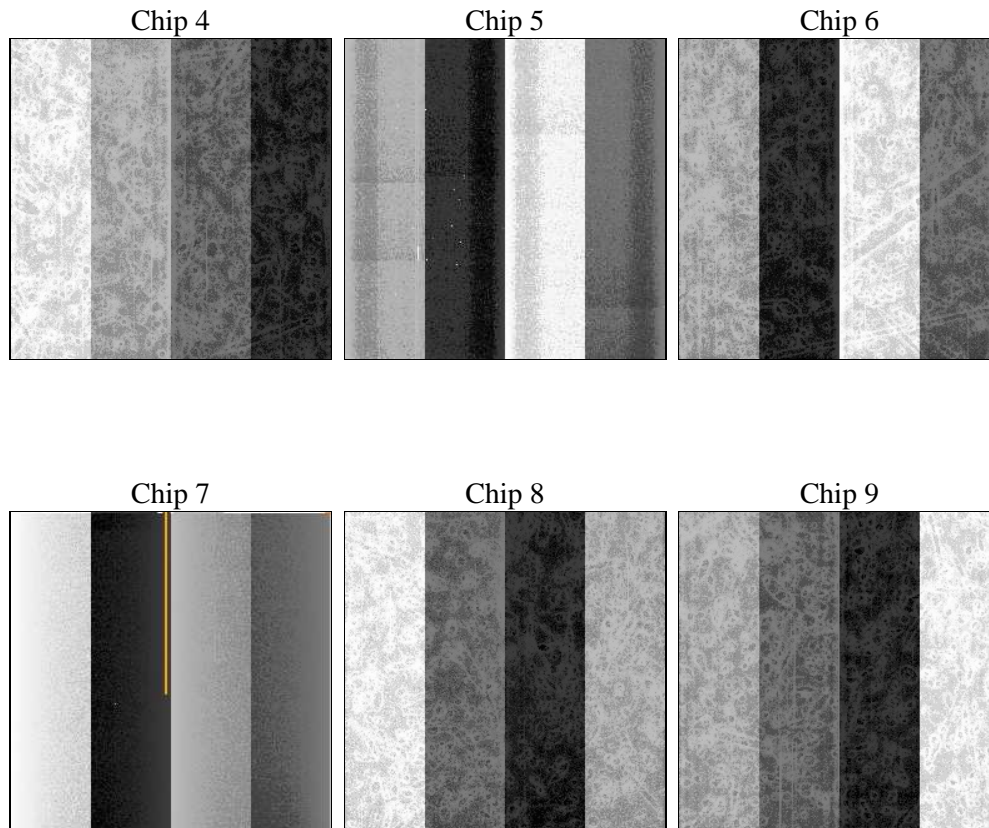
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	2500.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	2021.5567152873	Sum of GTIs [s]
caldsver	4.1.4	&#160	ontime4	1988.9547858089	Sum of GTIs [s]
date	2009-12-16T05:22:00	Date and time of file creation	ontime5	2021.5567152873	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	2488.2539281845	Sum of GTIs [s]
			ontime7	2848.0000026524	Sum of GTIs [s]
			ontime8	2420.1940229759	Sum of GTIs [s]
			ontime9	2371.5798893124	Sum of GTIs [s]
			l1events	540131	Number of level 1 events

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	0	540131	0	0	0	0
rejected events	0	36835	0	0	0	0
rejected %	0%	6%	0%	0%	0%	0%

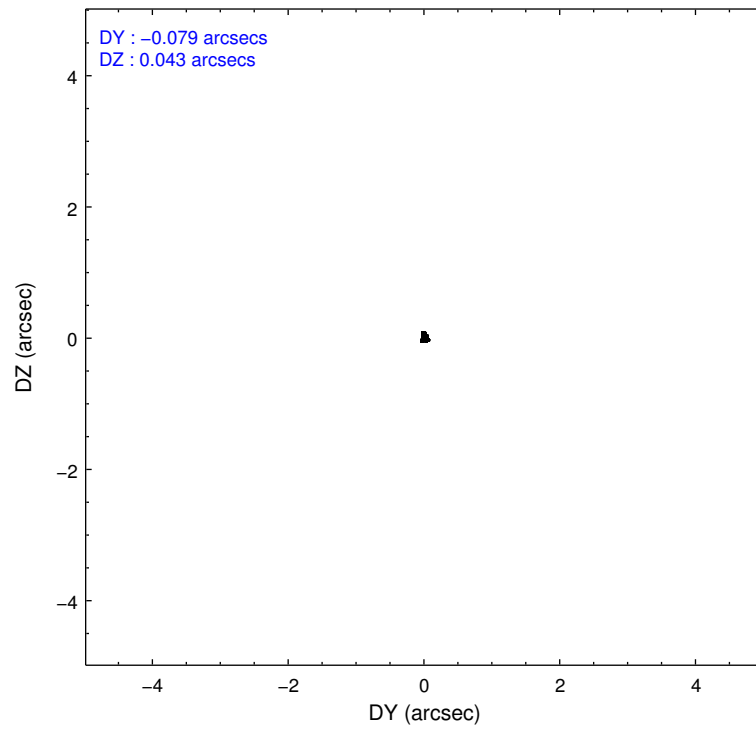
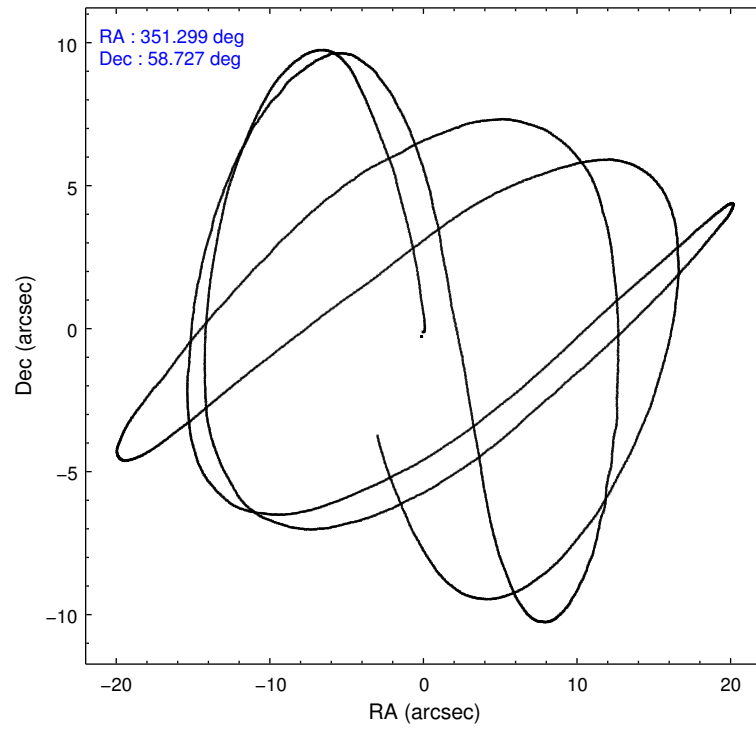
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	0	133598	0	0	0	0
	0%	24%	0%	0%	0%	0%
grade 1 events	0	1275	0	0	0	0
	0%	0%	0%	0%	0%	0%
grade 2 events	0	103947	0	0	0	0
	0%	19%	0%	0%	0%	0%
grade 3 events	0	80667	0	0	0	0
	0%	14%	0%	0%	0%	0%
grade 4 events	0	72584	0	0	0	0
	0%	13%	0%	0%	0%	0%
grade 5 events	0	8367	0	0	0	0
	0%	1%	0%	0%	0%	0%
grade 6 events	0	114158	0	0	0	0
	0%	21%	0%	0%	0%	0%
grade 7 events	0	25535	0	0	0	0
	0%	4%	0%	0%	0%	0%

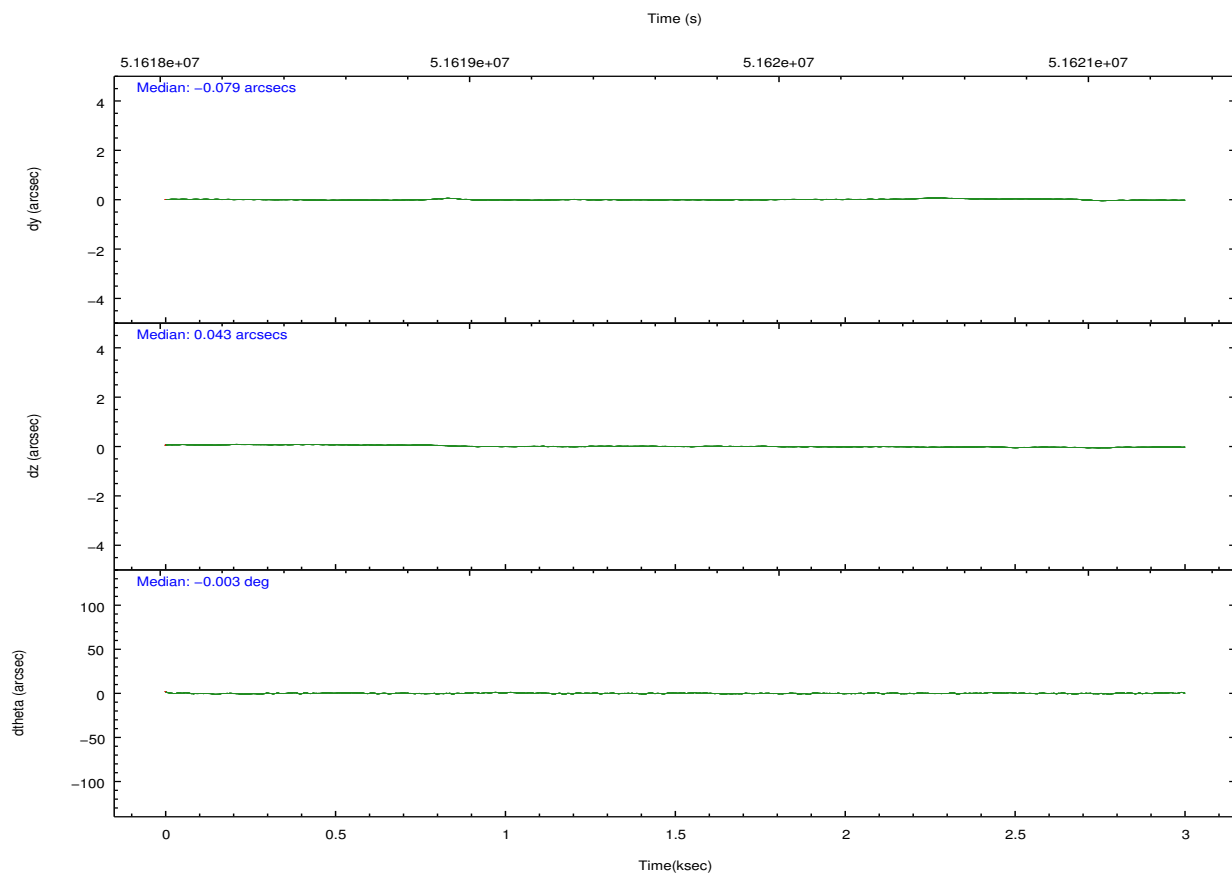
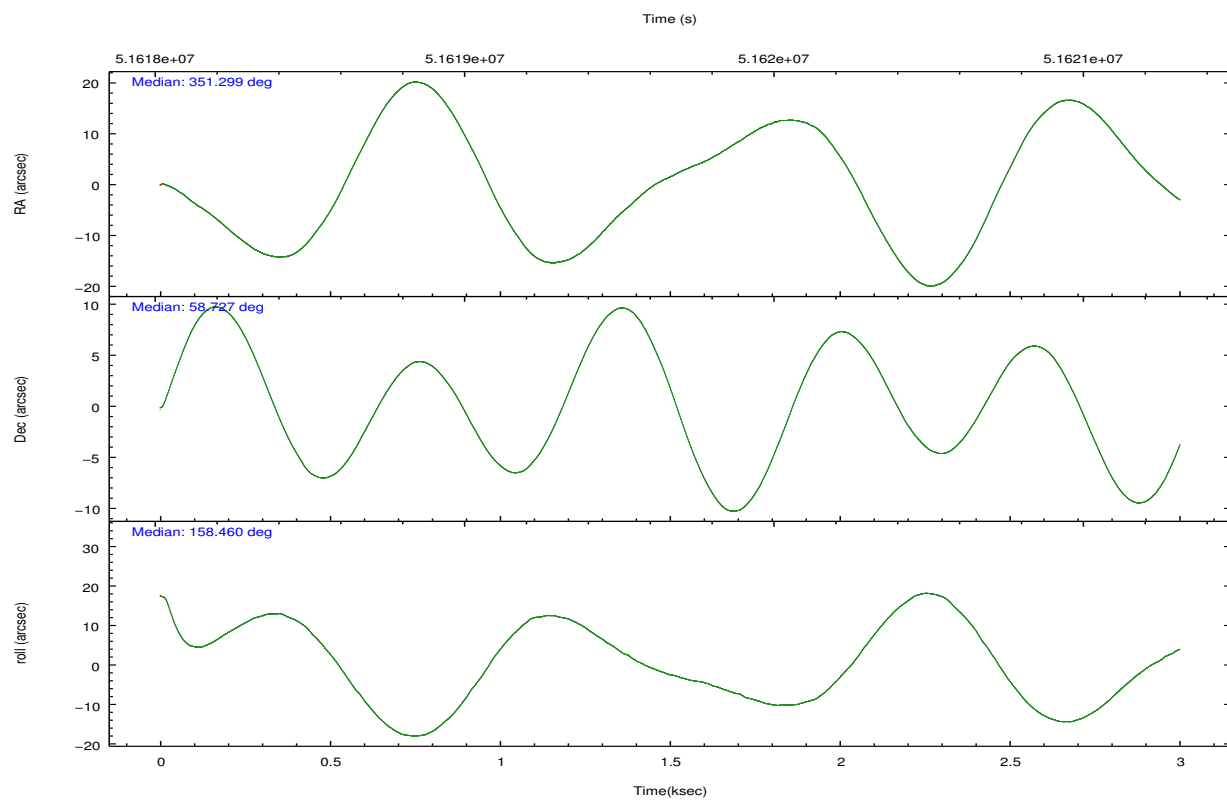


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-5	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
Pointing RA	351.351881	351.2990835716943	CCD I2 on	N	N
Pointing Dec	58.730615	58.72698912681236	CCD I3 on	N	N
Pointing Roll	158.267479	158.4693081293642	CCD S0 on	N	Y
Window start time	49852864.184000	49852864.184000	CCD S1 on	Y	Y
Window stop time	55036864.184000	55036864.184000	CCD S2 on	N	Y
SIM focus pos (mm)	-0.684267	-0.865731118321573	CCD S3 on	N	Y
SIM defocus (mm)	0	-0.1814636570216768	CCD S4 on	N	Y
SIM translation stage pos (mm)	-190.132523	-190.1199515274594	CCD S5 on	N	Y
SIM translation stage offset (mm)	0	-0.012571055548392	Number of optional ACIS chips dropped	0	0
Observation start time	51618664.184000	51617989.954488	On-chip summing requested	N	N
Observation start date	1999-08-21T10:30:00	1999-08-21T10:19:49	Subarray requested	NONE	NONE
Observation end time	51621164.184000	51621290.454607	Alternating exposures requested	N	N
Observation end date	1999-08-21T11:11:40	1999-08-21T11:14:50	Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

## 2.3 Aspect



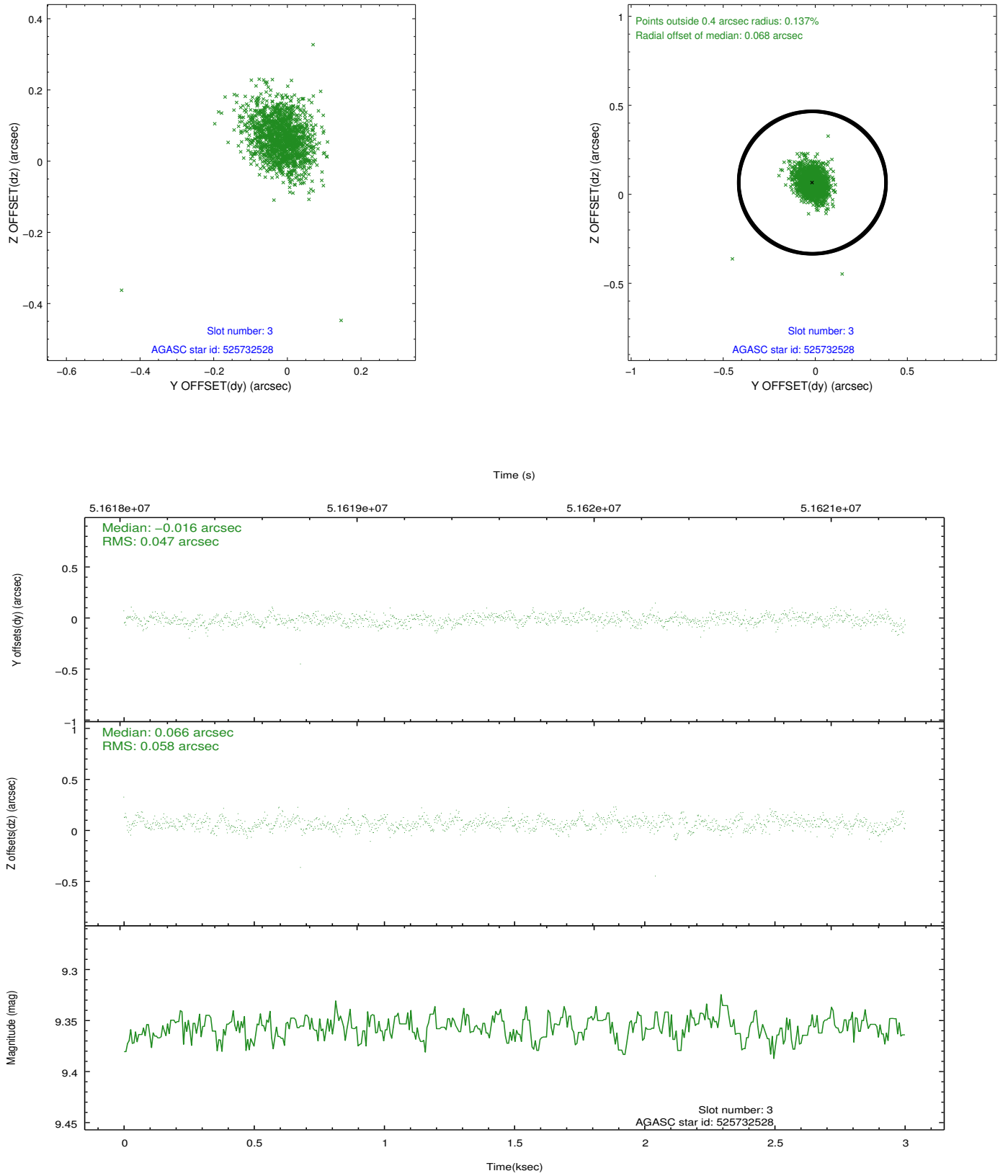


Slot Statistics

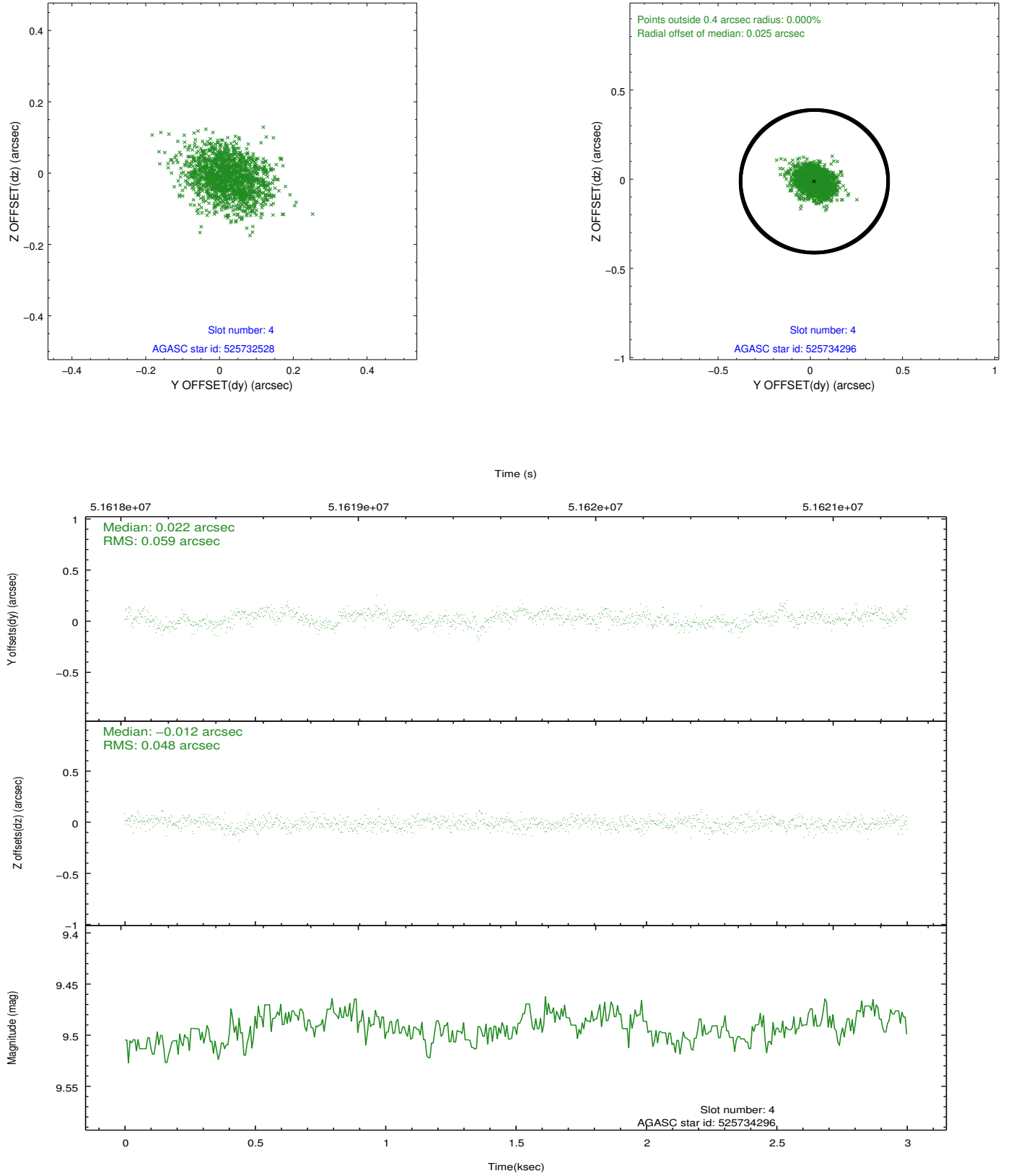
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-3	7.35	1465	-0.042	0.035	0.011	0.018	0.000000	0.000000	60.63	-1850.44
1	FID	ACIS-S-4	7.22	1465	0.143	0.007	0.008	0.014	0.000000	0.000000	2161.02	185.89
2	FID	ACIS-S-5	7.25	1465	-0.128	-0.032	0.008	0.013	0.000000	0.000000	-1804.14	180.83
3	GUIDE	525732528	9.36	1462	-0.016	0.066	0.075	0.125	351.607241	59.298932	321.36	-2075.46
4	GUIDE	525734296	9.49	1464	0.022	-0.012	0.081	0.130	351.276372	58.418153	-285.03	1095.63
5	GUIDE	525207384	9.74	1463	0.089	-0.096	0.115	0.185	351.880308	58.083642	-1796.49	1787.45
6	GUIDE	525732896	9.63	1464	-0.051	0.187	0.094	0.148	351.456486	59.410070	726.03	-2342.20
7	GUIDE	525731640	9.88	1462	-0.040	-0.141	0.097	0.163	350.518982	58.216636	784.78	2292.44

## 2.4 Star Slots

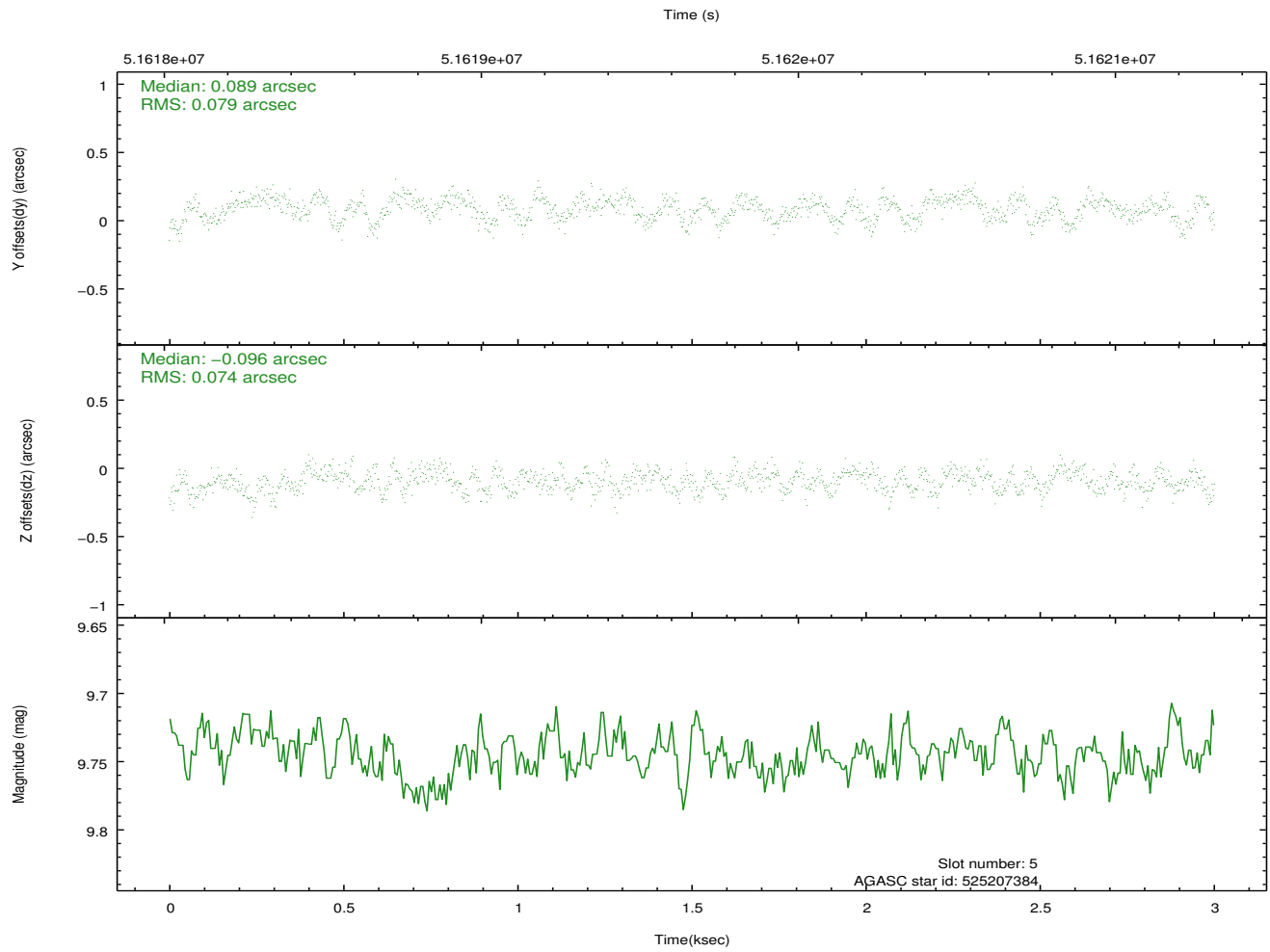
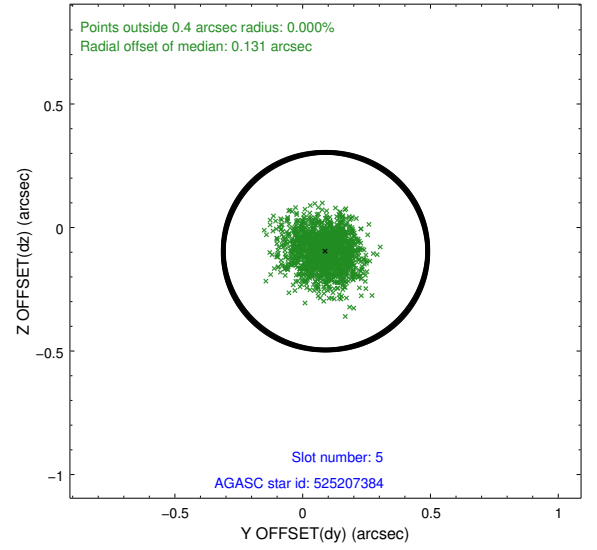
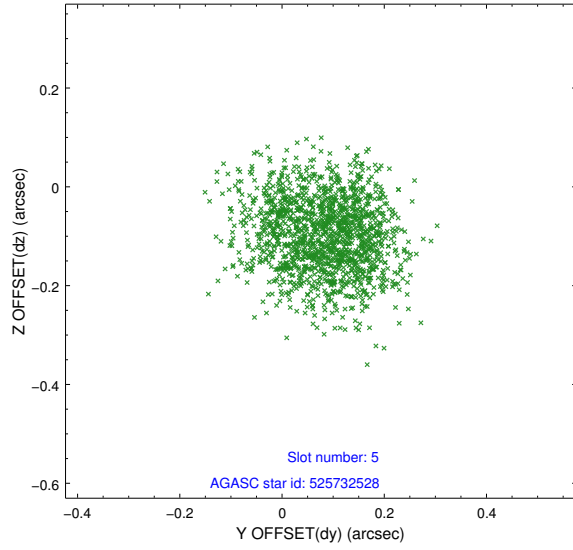
### 2.4.1 Slot 3



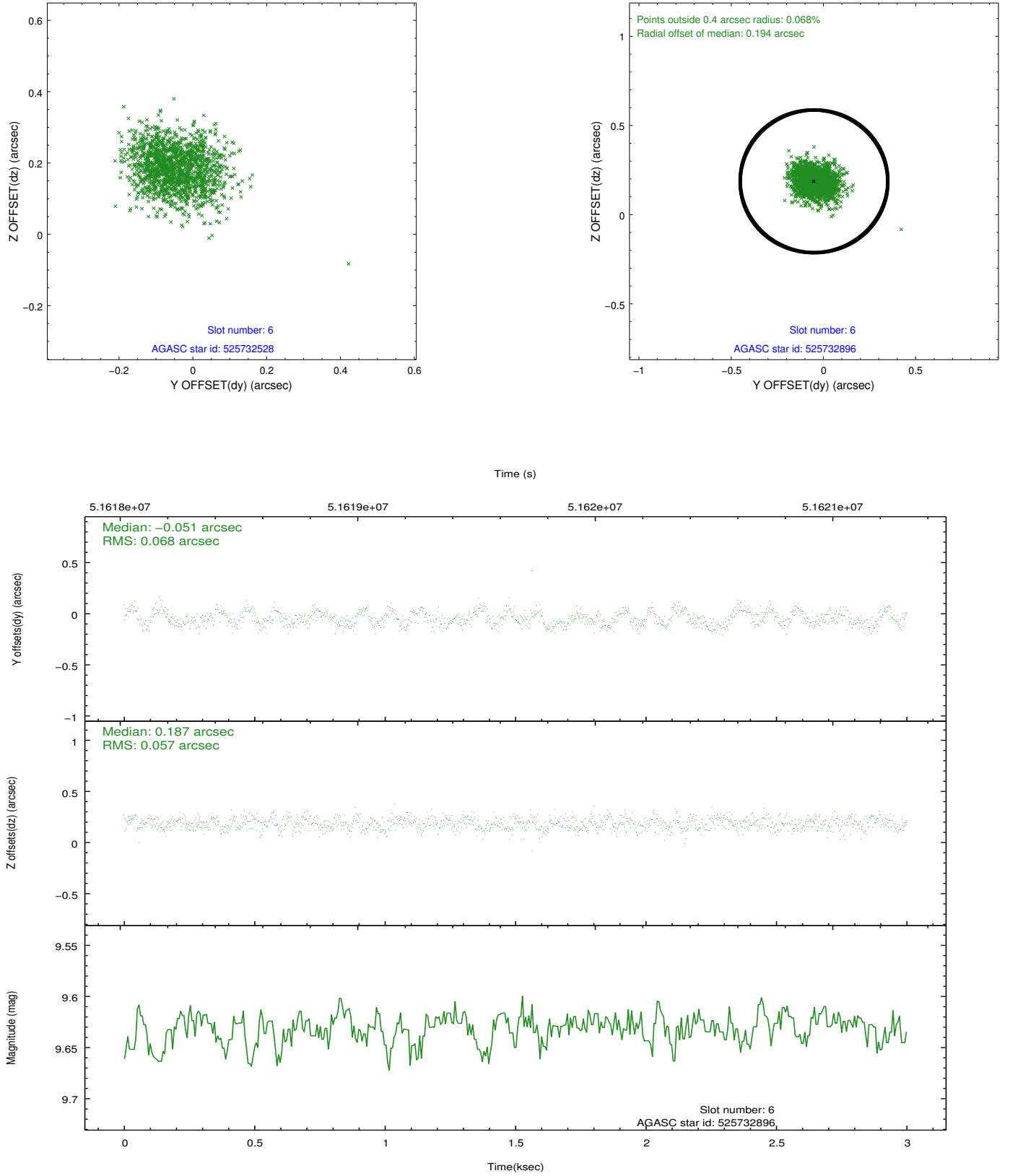
## 2.4.2 Slot 4



### 2.4.3 Slot 5

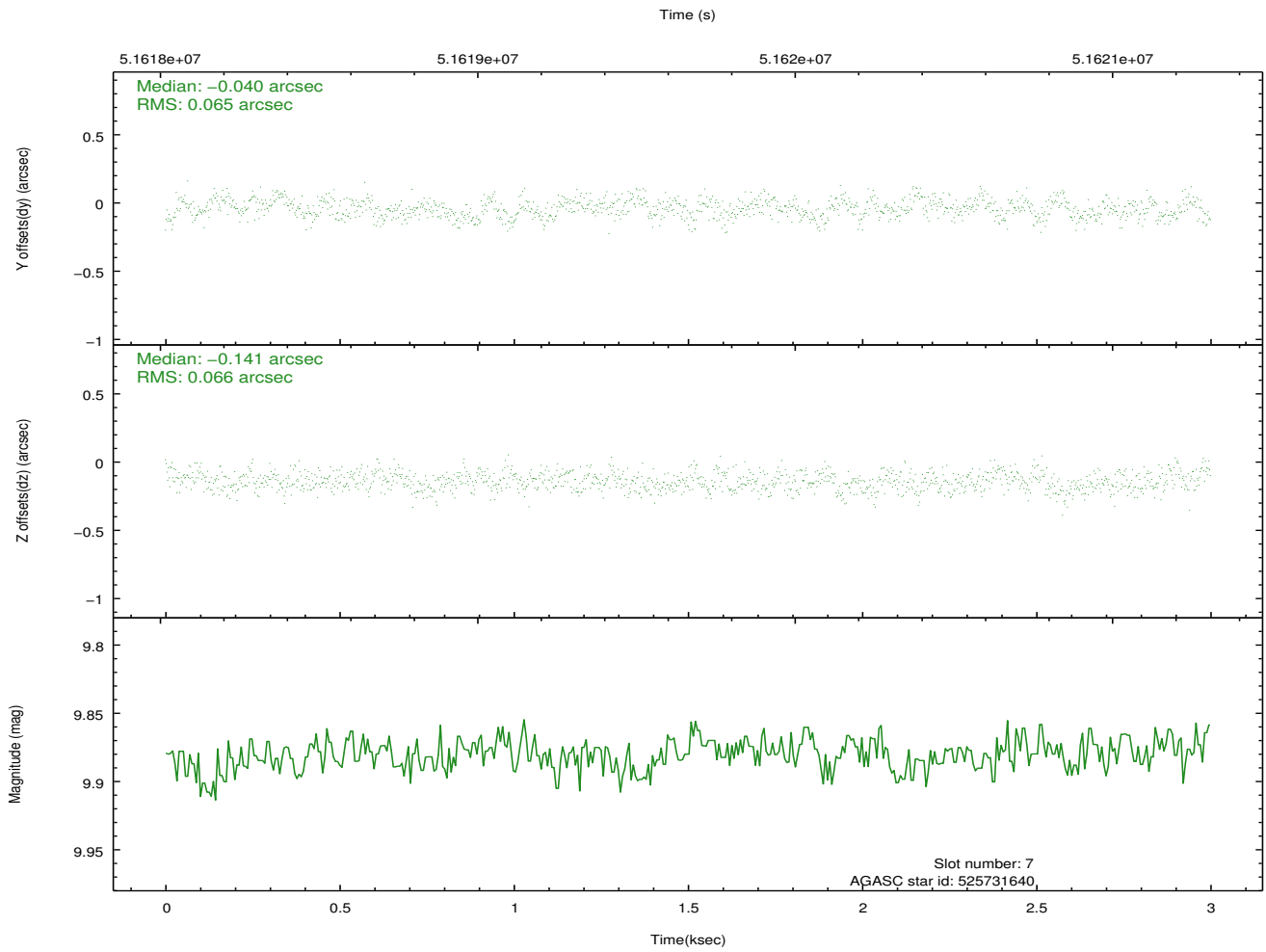
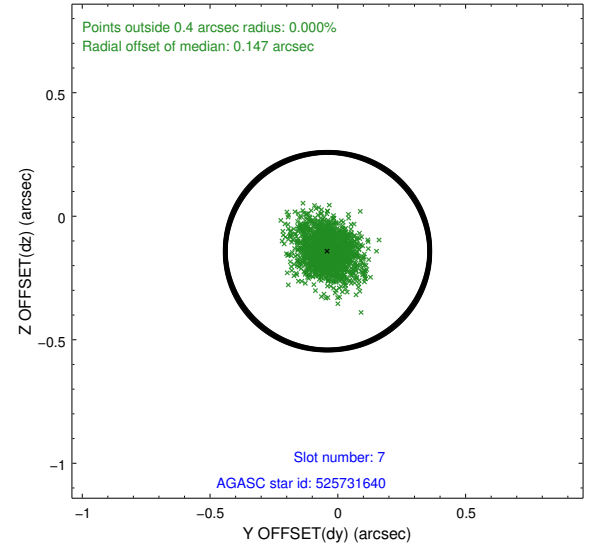
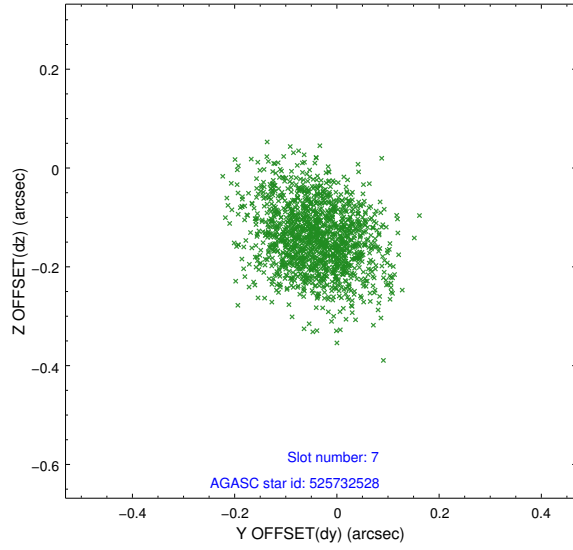


## 2.4.4 Slot 6



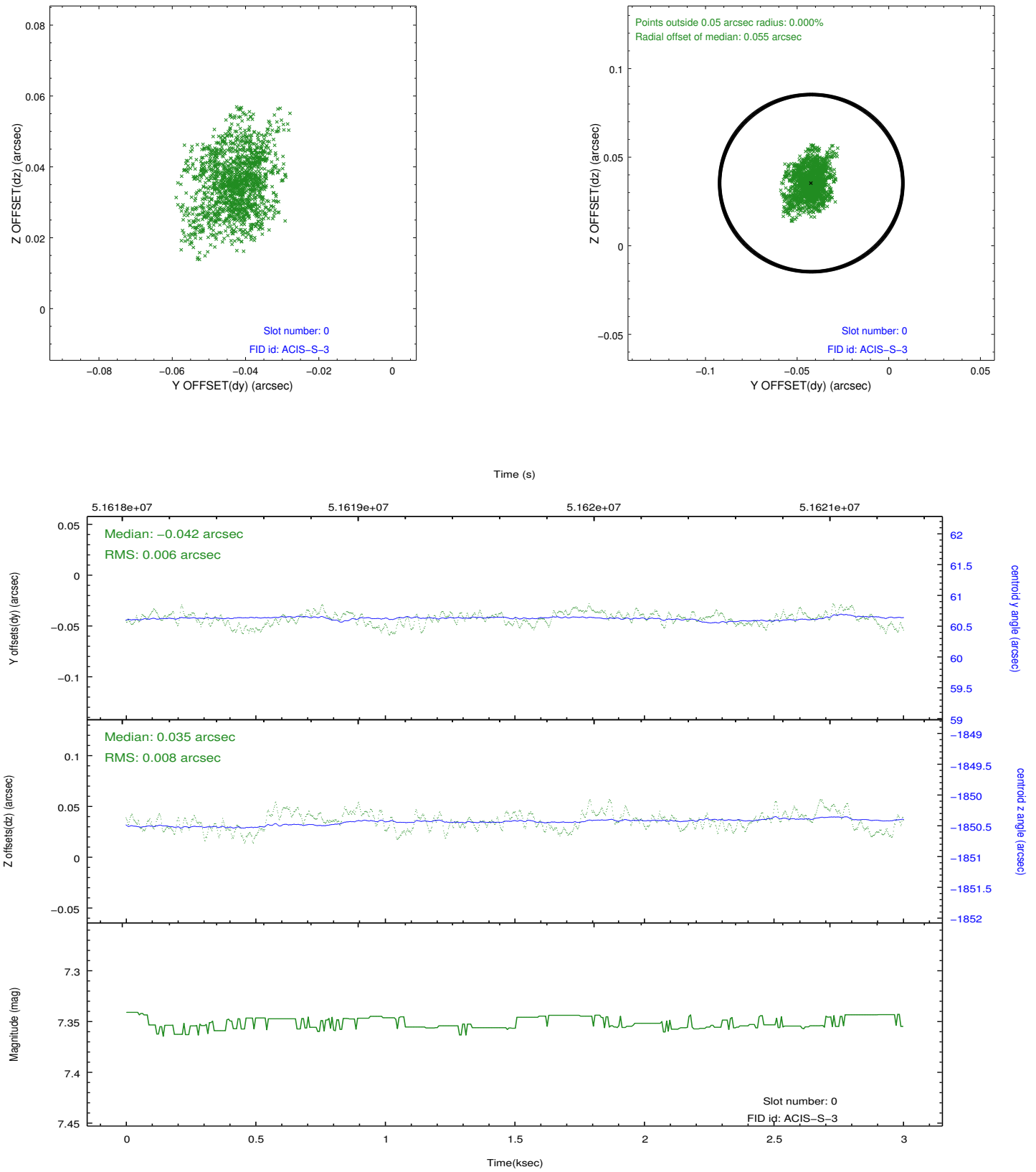


## 2.4.5 Slot 7

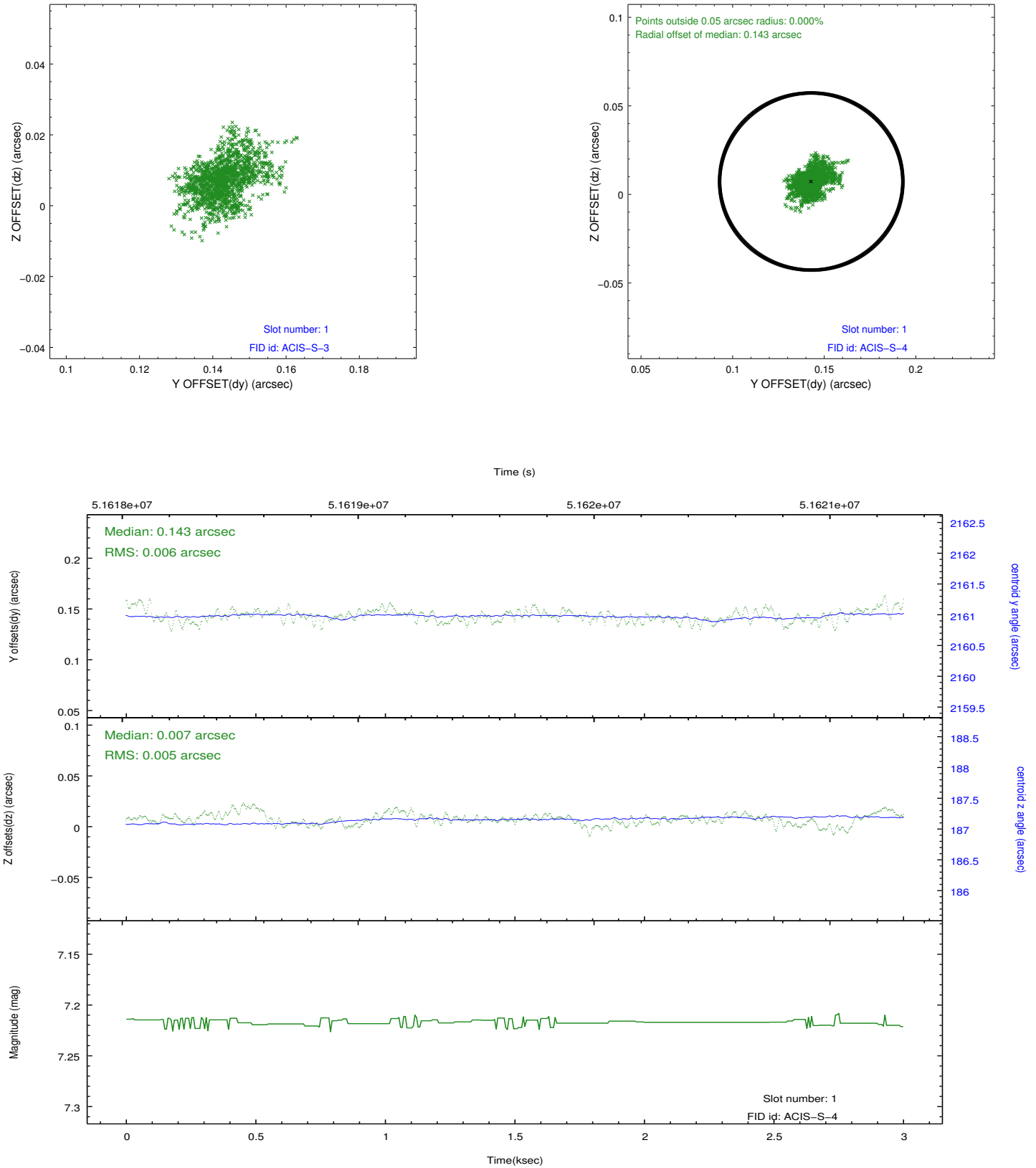


## 2.5 FID Slots

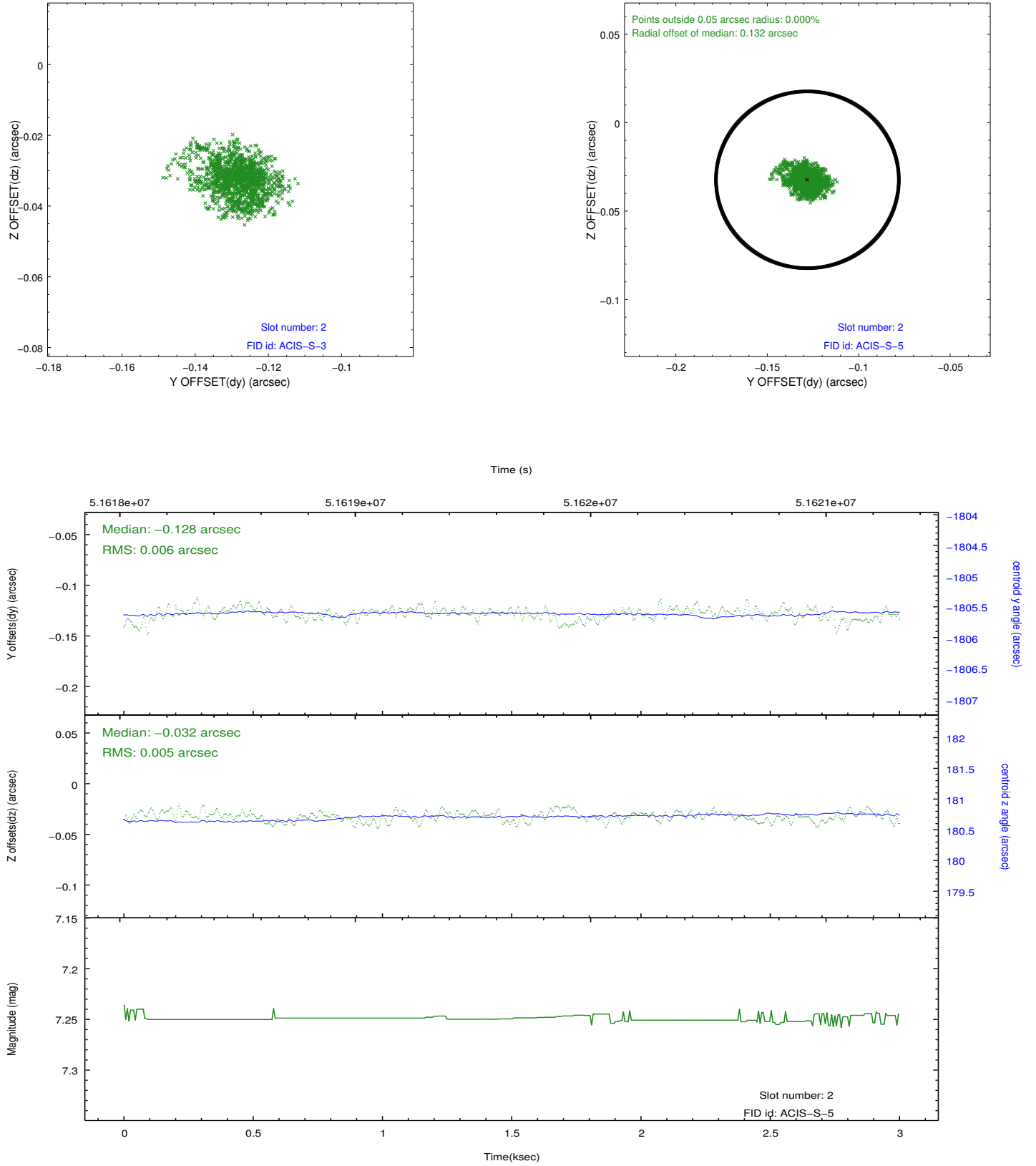
### 2.5.1 Slot 0



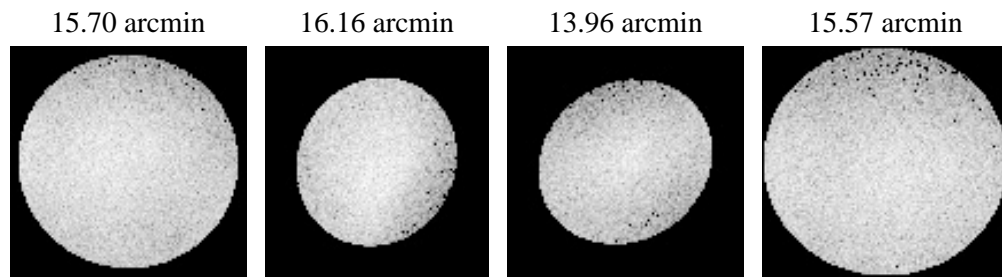
## 2.5.2 Slot 1



### 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	2.035

## A.2 Comments

Off-axis ACIS effective area measurement using Cas A on chip S1.

Only chip S1 has data.

===

Charge time for this ObsId remains at previous value of 2.035 ksec, although with the current processing the charge time would have been 2.021 ksec.

==

Pileup throughout most of observation.

=====

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.