

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 1229 - L2 Version 2  
Chandra X-Ray Center

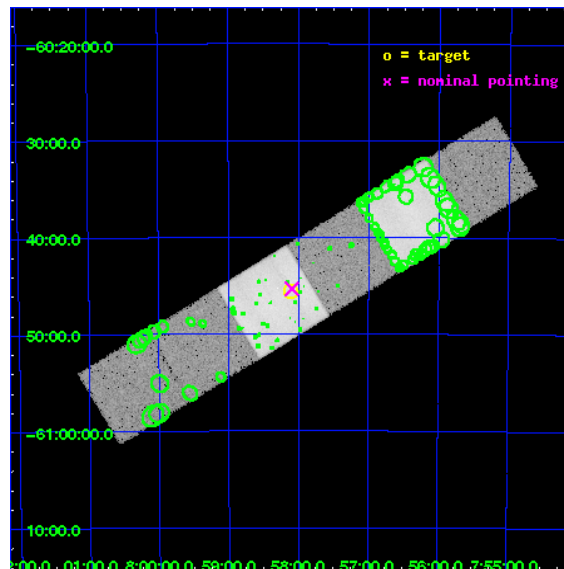
L2 Processing Date : Dec 16 2009

## 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

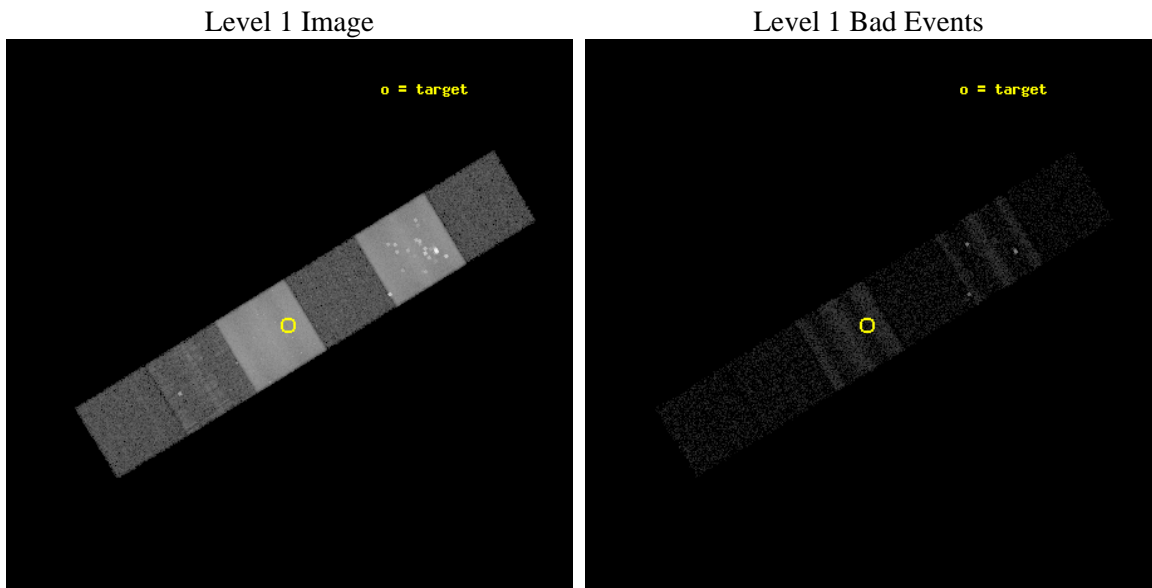
seq_num	280179	Sequence number
obs_id	1229	Observation id
title	CALIBRATION OBSERVATION NGC 2516 FOR BORESIGHTING AND PLATE SCALE	&#160
observer	Dr. CXC Calibration	Principal investigator
object	NGC 2516	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	119.529583	Observer's specified target RA
dec_targ	-60.76	Observer's specified target Dec
ra_nom	119.52347942495	Nominal RA
dec_nom	-60.755574985628	Nominal Dec
roll_nom	148.57442111204	Nominal Roll
revision	2	Processing version of data
ontime	9753.6000090837	Sum of GTIs [s]
livetime	9630.0940528559	Livetime [s]
ontime4	9753.6000090837	Sum of GTIs [s]
ontime5	9753.6000090837	Sum of GTIs [s]
ontime6	9753.6000090837	Sum of GTIs [s]
ontime7	9753.6000090837	Sum of GTIs [s]
ontime8	9753.6000090837	Sum of GTIs [s]
ontime9	9753.6000090837	Sum of GTIs [s]
l2events	453925	Number of level 2 events



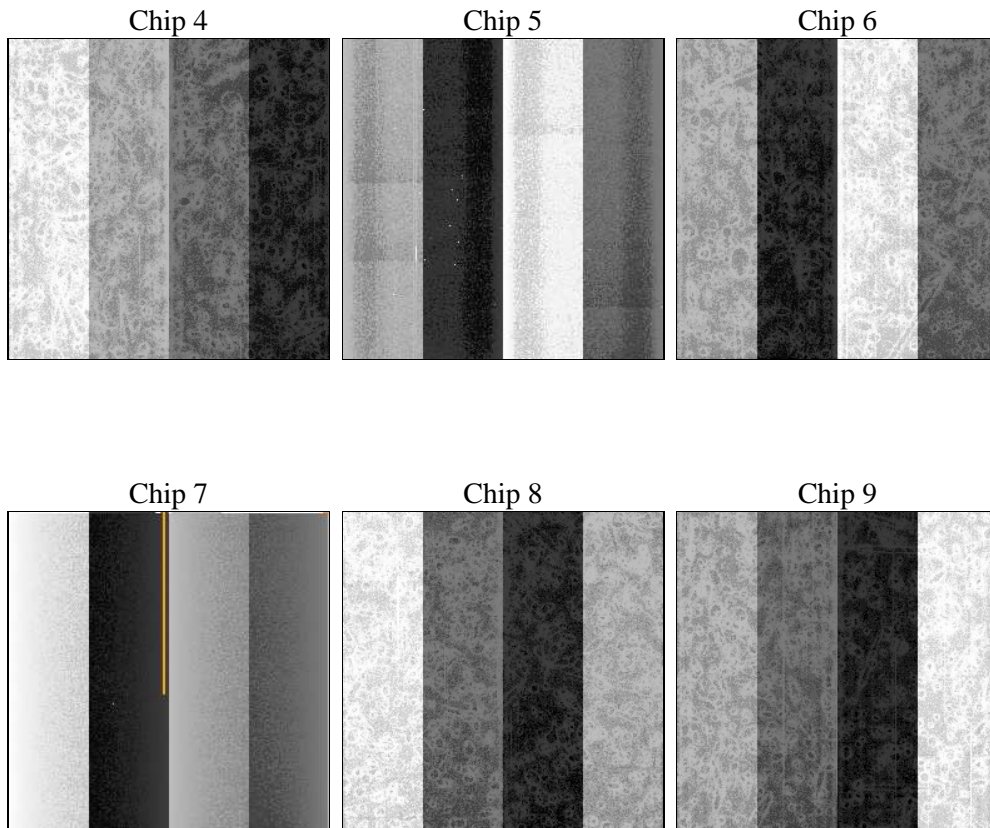
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	9753.6000090837	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime4	9753.6000090837	Sum of GTIs [s]
date	2009-12-16T06:00:31	Date and time of file creation	ontime5	9753.6000090837	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	9753.6000090837	Sum of GTIs [s]
			ontime7	9753.6000090837	Sum of GTIs [s]
			ontime8	9753.6000090837	Sum of GTIs [s]
			ontime9	9753.6000090837	Sum of GTIs [s]
			l1events	556535	Number of level 1 events

### 2.1.4 Events

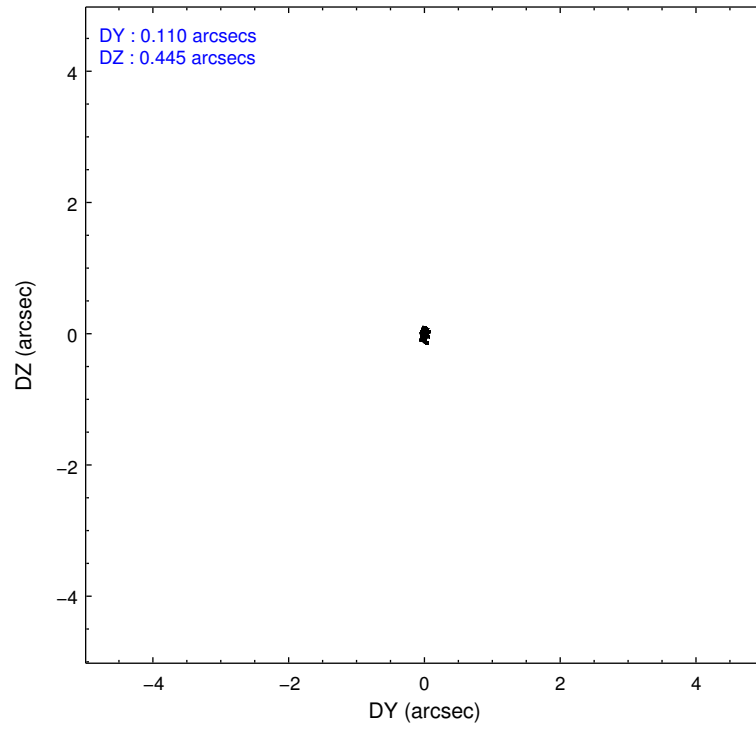
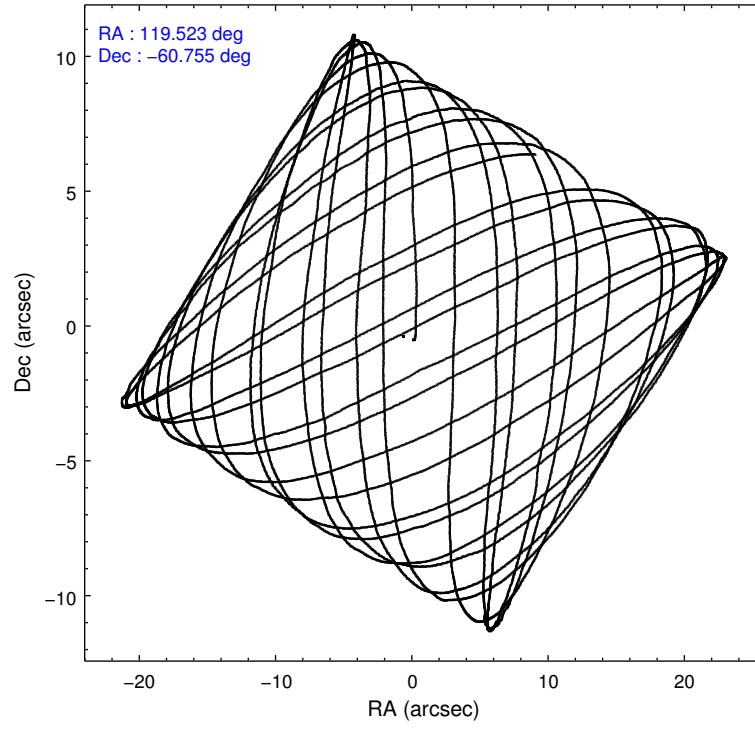
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	22561	235218	28189	210604	35129	24834
rejected events	4822	9843	5919	12413	6369	5946
rejected %	21%	4%	20%	5%	18%	23%

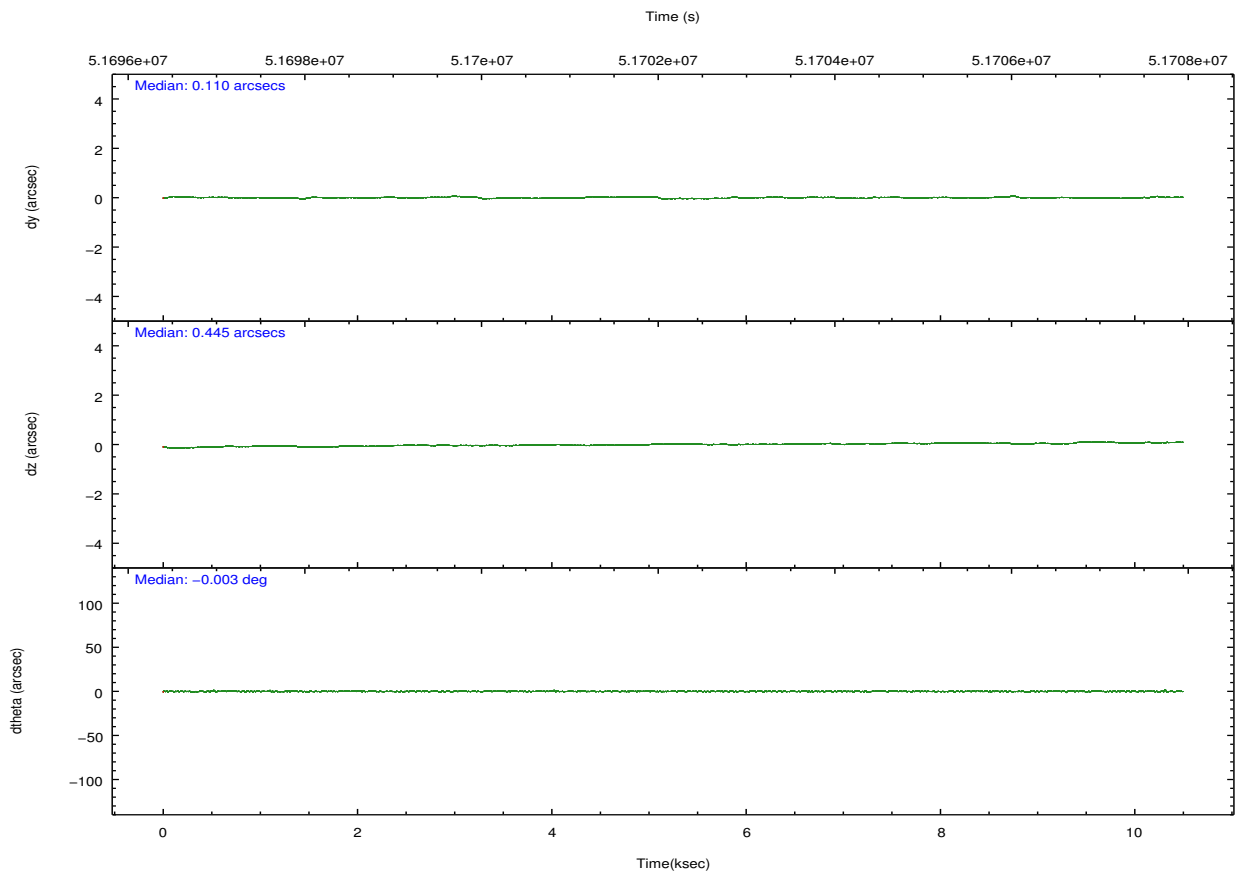
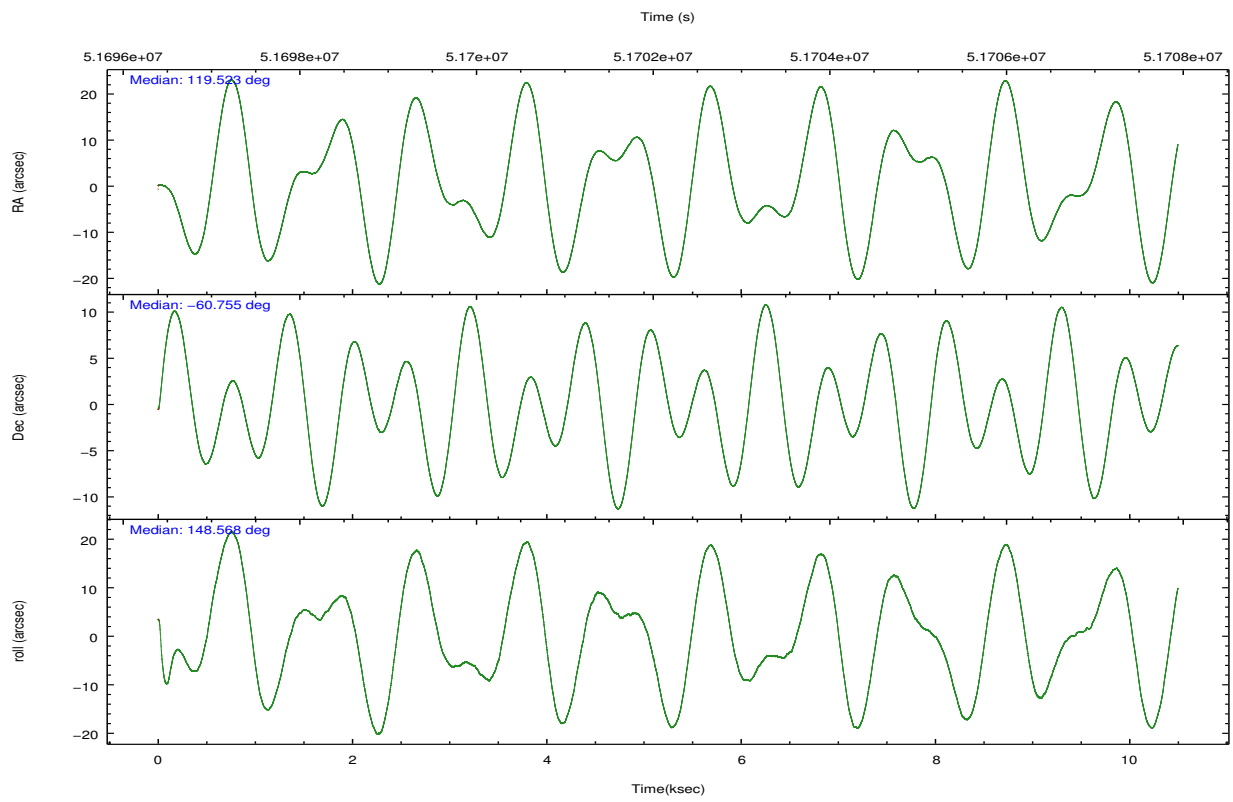
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	5974	49899	8164	17092	9846	6112
	26%	21%	28%	8%	28%	24%
grade 1 events	59	662	49	69	80	51
	0%	0%	0%	0%	0%	0%
grade 2 events	4036	36441	4994	26652	6602	4120
	17%	15%	17%	12%	18%	16%
grade 3 events	1221	16142	1328	14945	2059	1374
	5%	6%	4%	7%	5%	5%
grade 4 events	1131	14451	1248	13141	1846	1238
	5%	6%	4%	6%	5%	4%
grade 5 events	4760	9116	5854	12312	6278	5883
	21%	3%	20%	5%	17%	23%
grade 6 events	5380	108507	6552	126393	8418	6056
	23%	46%	23%	60%	23%	24%
grade 7 events	0	0	0	0	0	0
	0%	0%	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-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	119.580094	119.5234794249455	Subarray requested	NONE	NONE
Pointing Dec	-60.756762	-60.75557498562777	Alternating exposures requested	N	N
Pointing Roll	148.467187	148.5744211120407	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.865731118321573			
SIM defocus (mm)	0	-0.1814636570216768			
SIM translation stage pos (mm)	-190.132523	-190.1199515274594			
SIM translation stage offset (mm)	0	-0.012571055548392			
Observation start time	51697416.184000	51696742.757323			
Observation start date	1999-08-22T08:22:32	1999-08-22T08:12:22			
Observation end time	51707416.184000	51707819.420221			
Observation end date	1999-08-22T11:09:12	1999-08-22T11:16:59			
Read mode	TIMED	TIMED			

## 2.3 Aspect



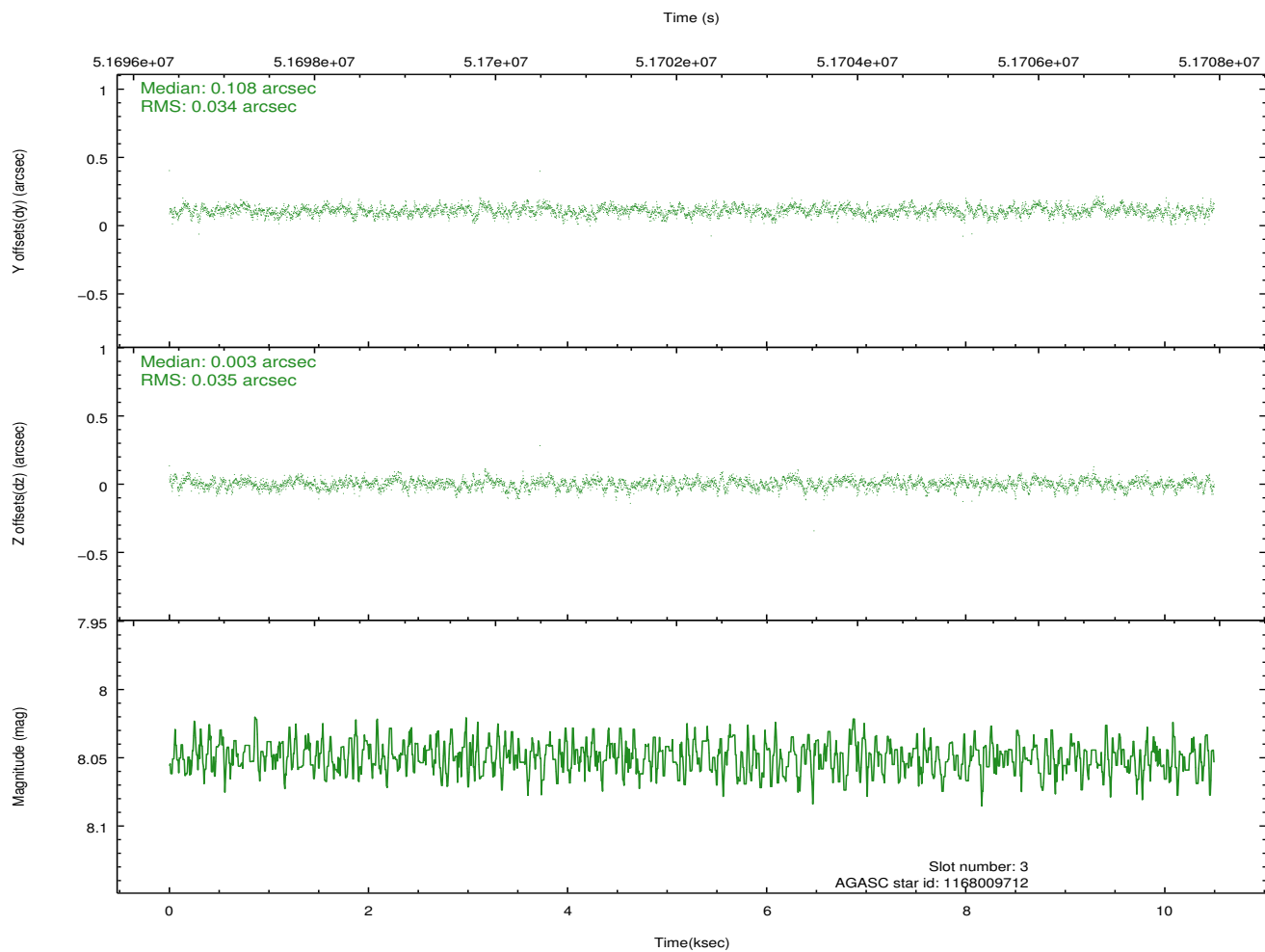
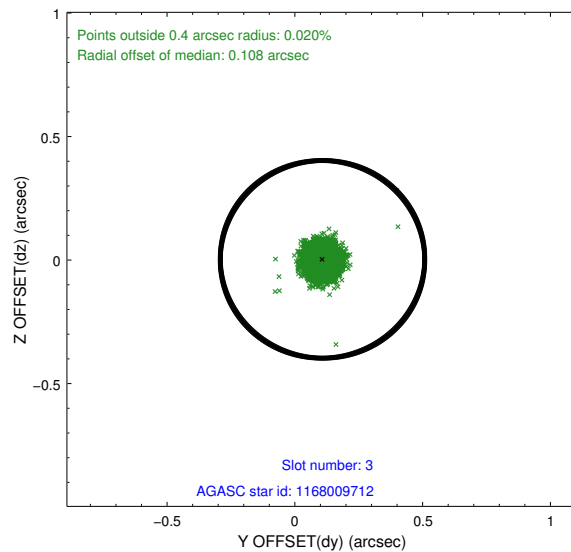
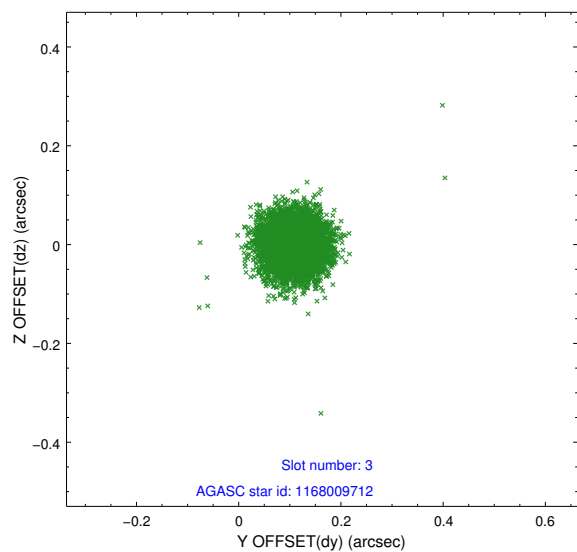


### Slot Statistics

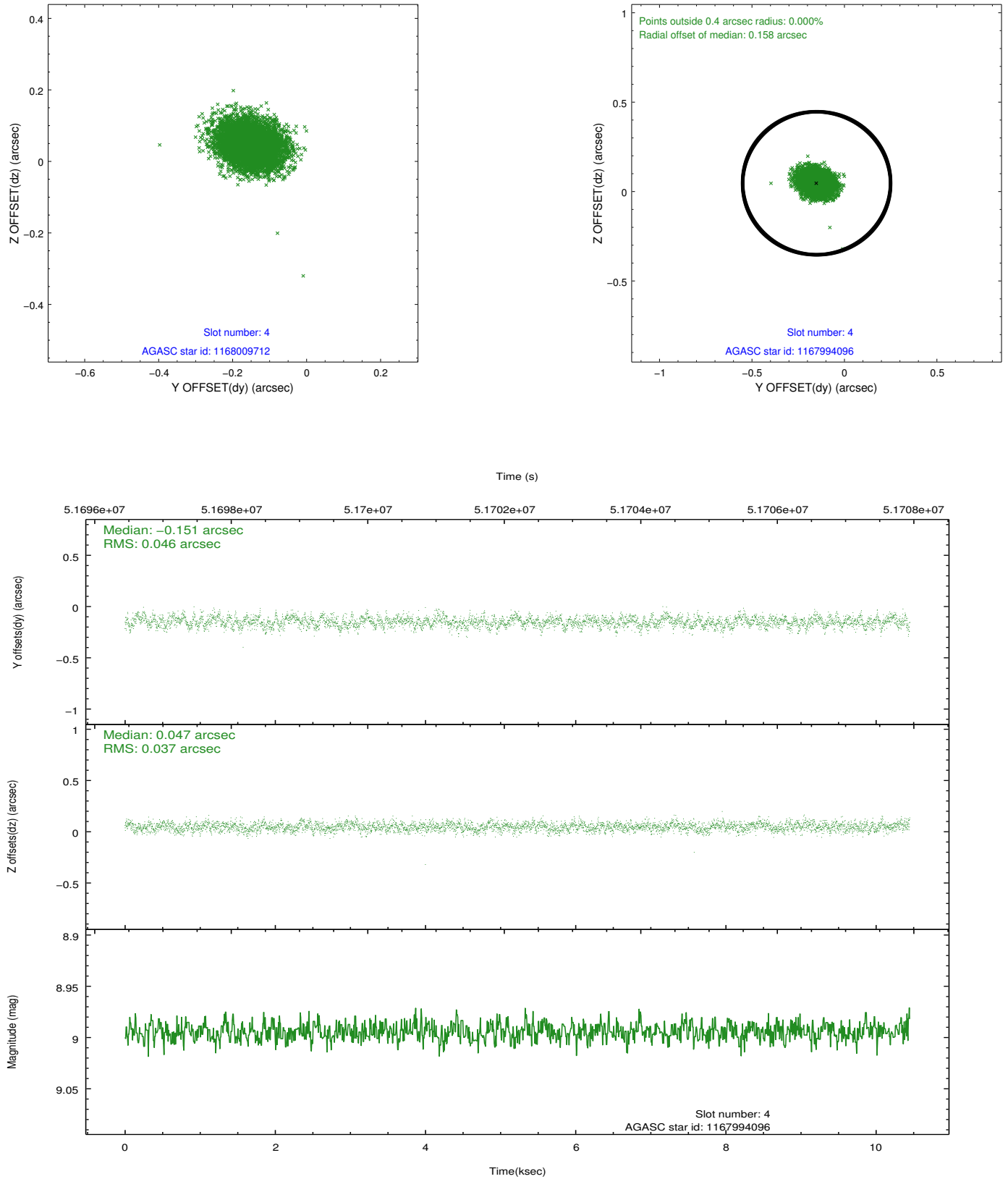
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	5120	-0.032	-0.016	0.006	0.011	0.000000	0.000000	-752.72	-1721.81
1	FID	ACIS-S-4	7.22	5120	0.130	0.020	0.006	0.010	0.000000	0.000000	2160.62	186.45
2	FID	ACIS-S-5	7.25	5120	-0.129	0.005	0.006	0.011	0.000000	0.000000	-1805.38	180.37
3	GUIDE	1168009712	8.05	5118	0.108	0.003	0.051	0.082	119.512143	-60.614801	369.22	-372.13
4	GUIDE	1167994096	8.99	5093	-0.151	0.047	0.062	0.101	118.437093	-60.572614	2059.98	508.02
5	GUIDE	1169708032	9.09	5115	-0.031	-0.187	0.081	0.129	121.148638	-60.486116	-1878.55	-2256.64
6	GUIDE	1167993512	8.75	5116	0.047	-0.047	0.056	0.089	118.780061	-60.545451	1599.61	99.91
7	GUIDE	1168007992	9.74	5111	0.018	0.186	0.118	0.185	119.985345	-61.468910	-1936.27	1823.21

## 2.4 Star Slots

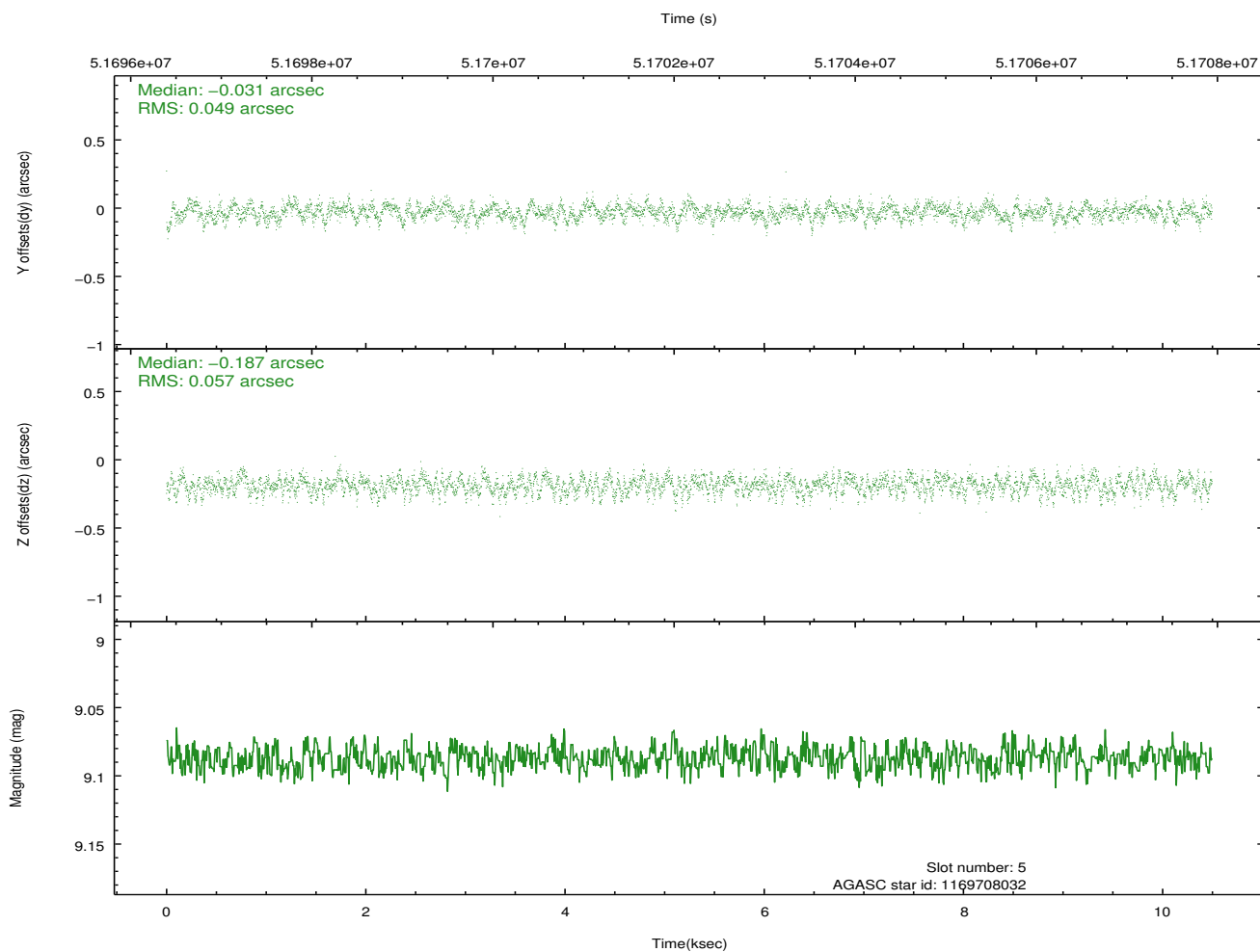
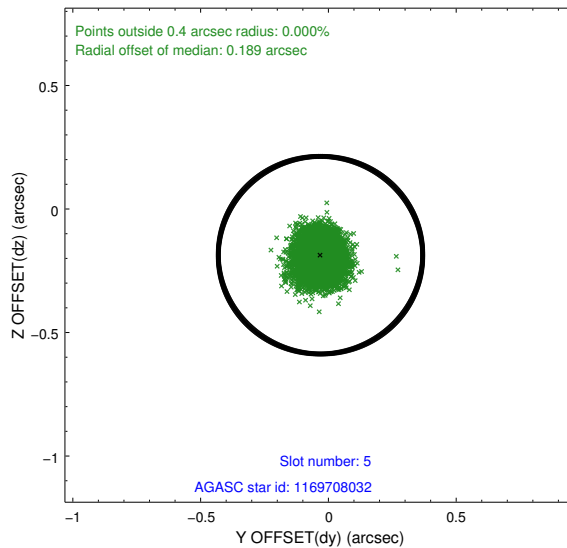
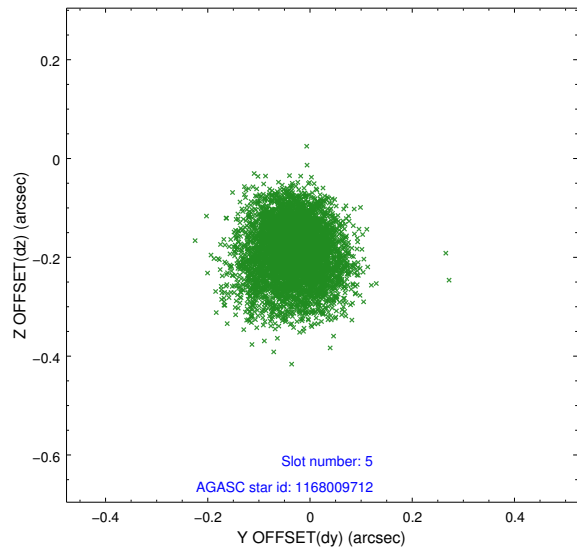
### 2.4.1 Slot 3



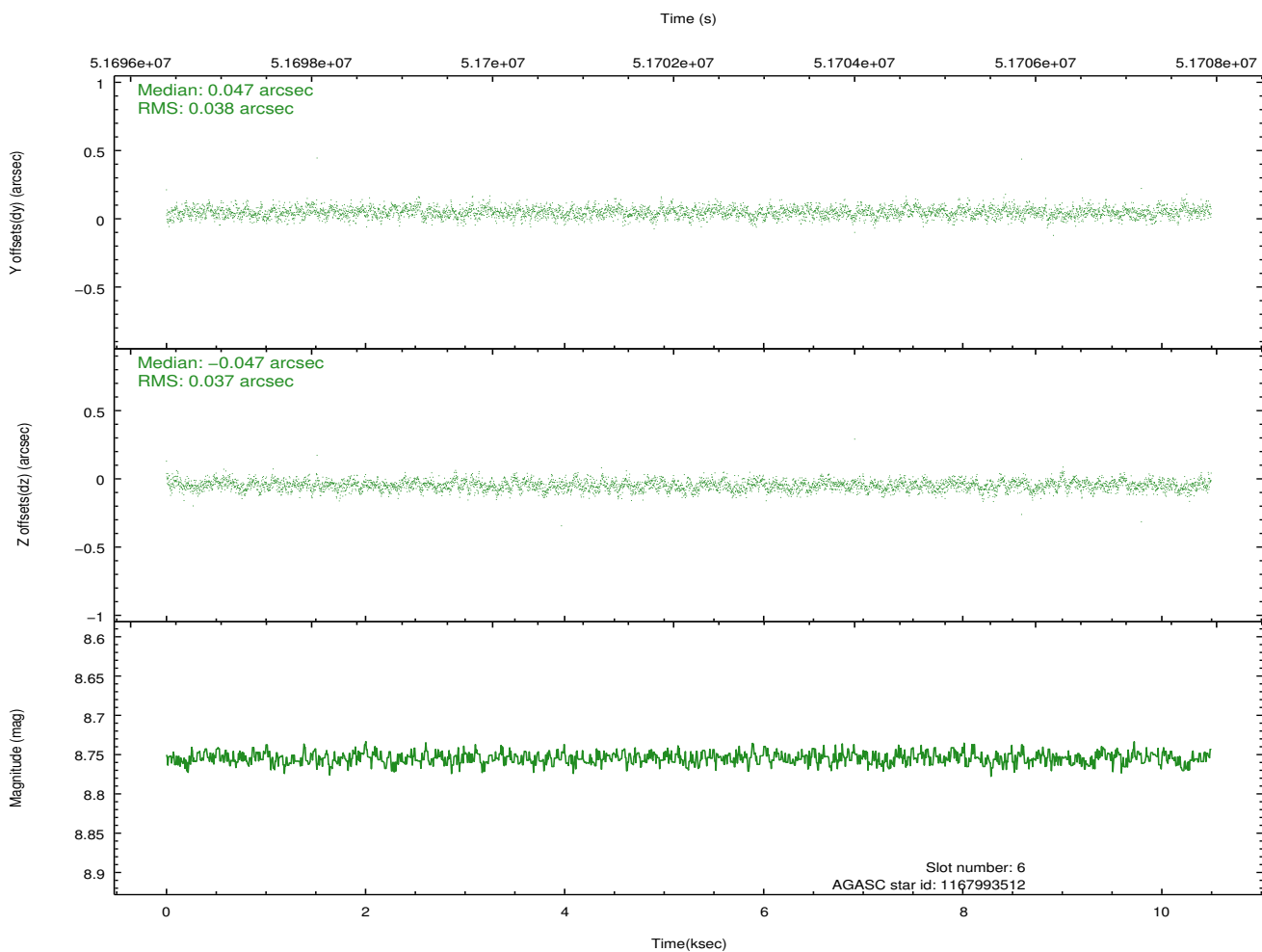
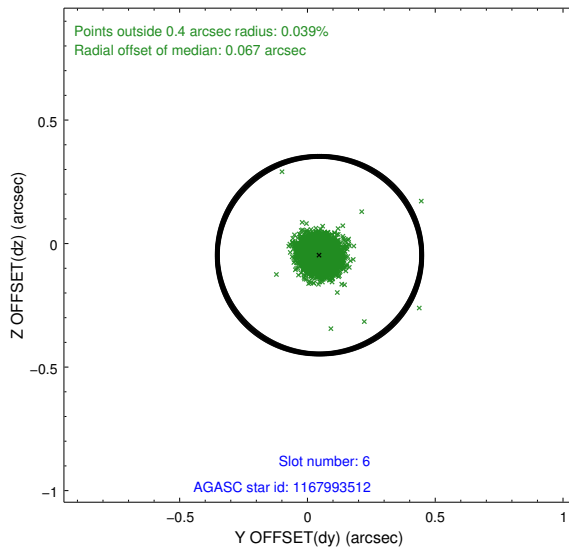
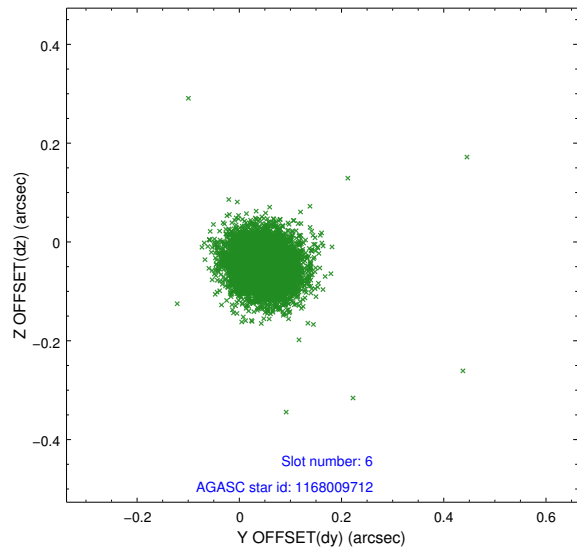
## 2.4.2 Slot 4



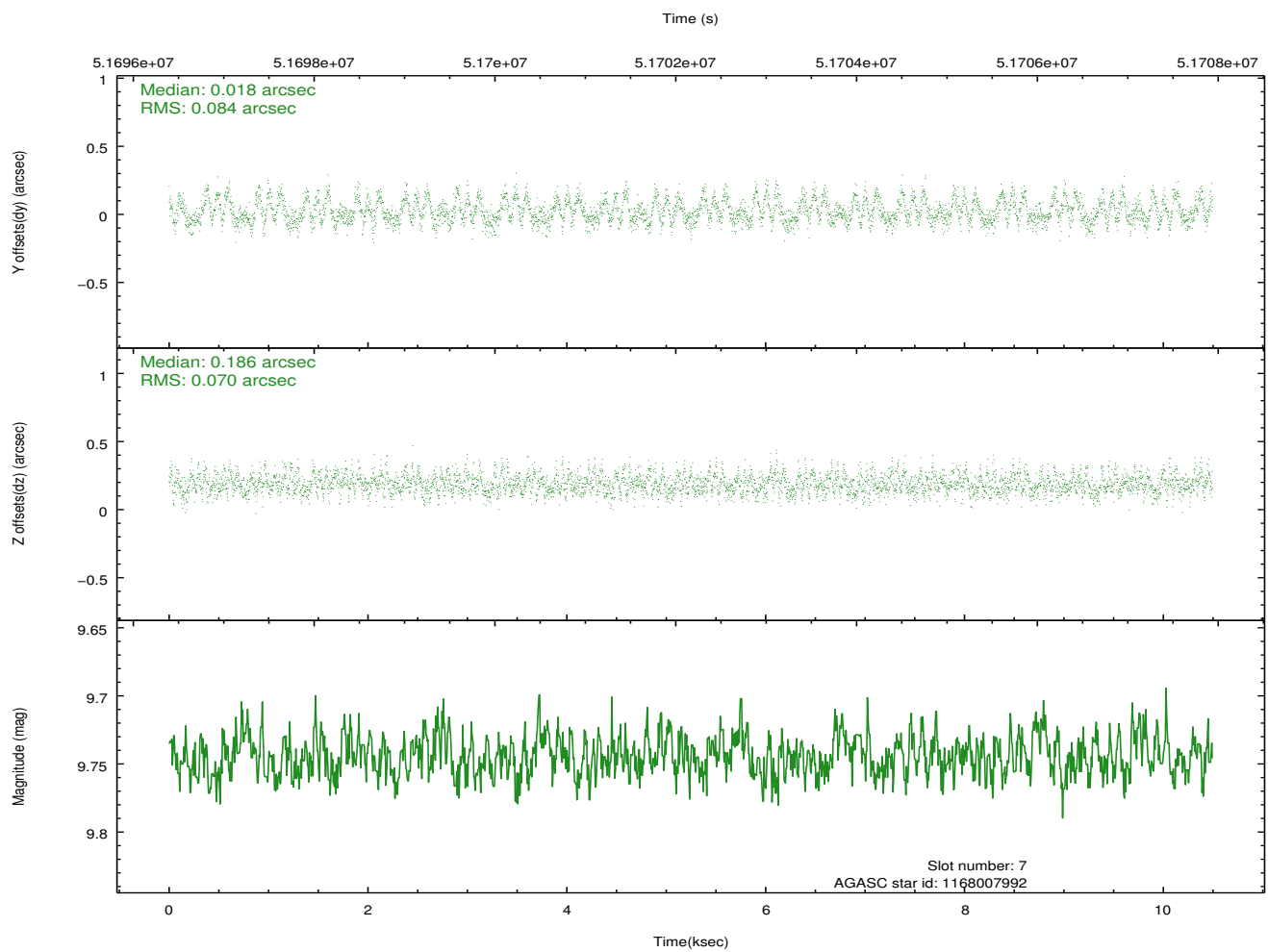
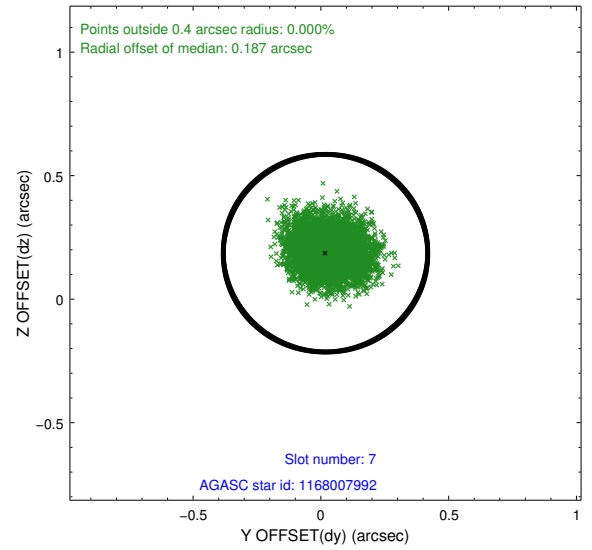
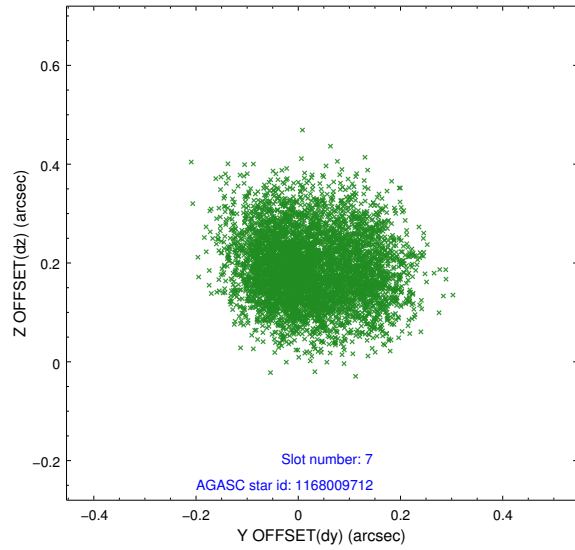
### 2.4.3 Slot 5



## 2.4.4 Slot 6

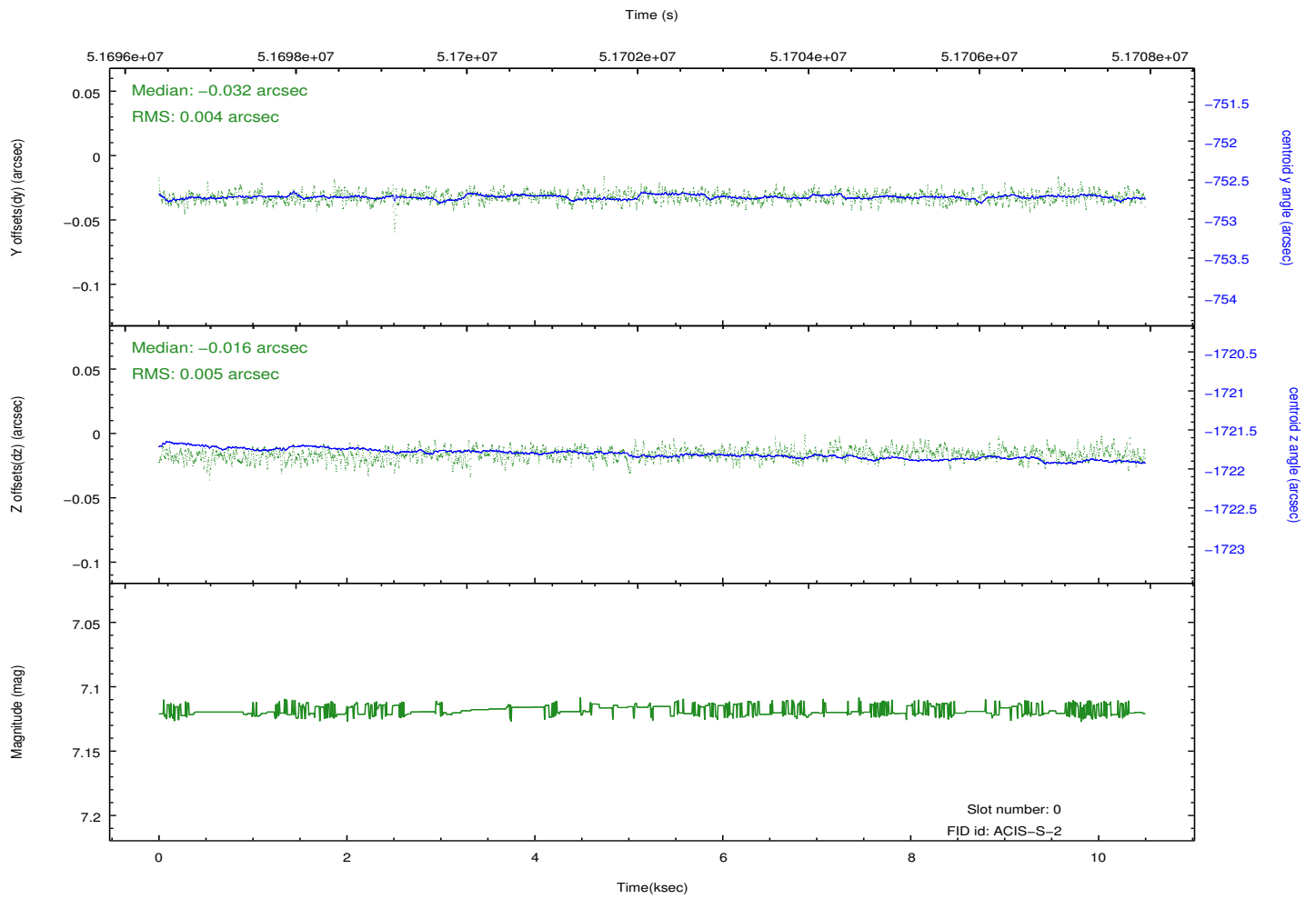
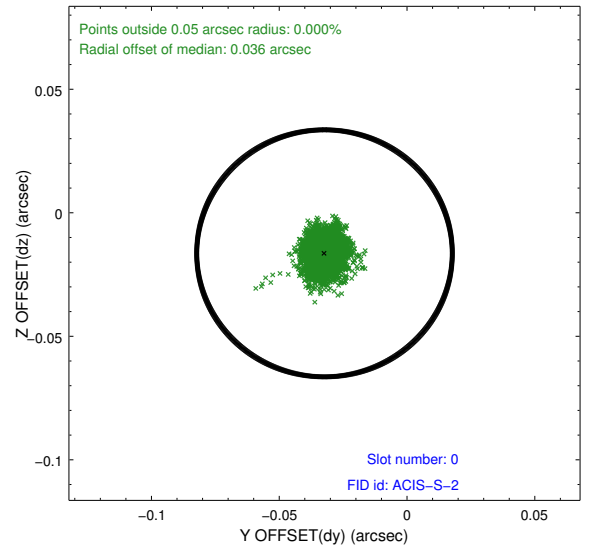
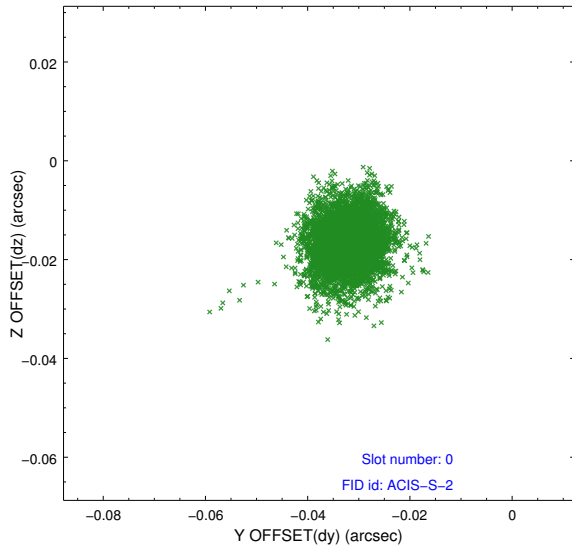


## 2.4.5 Slot 7

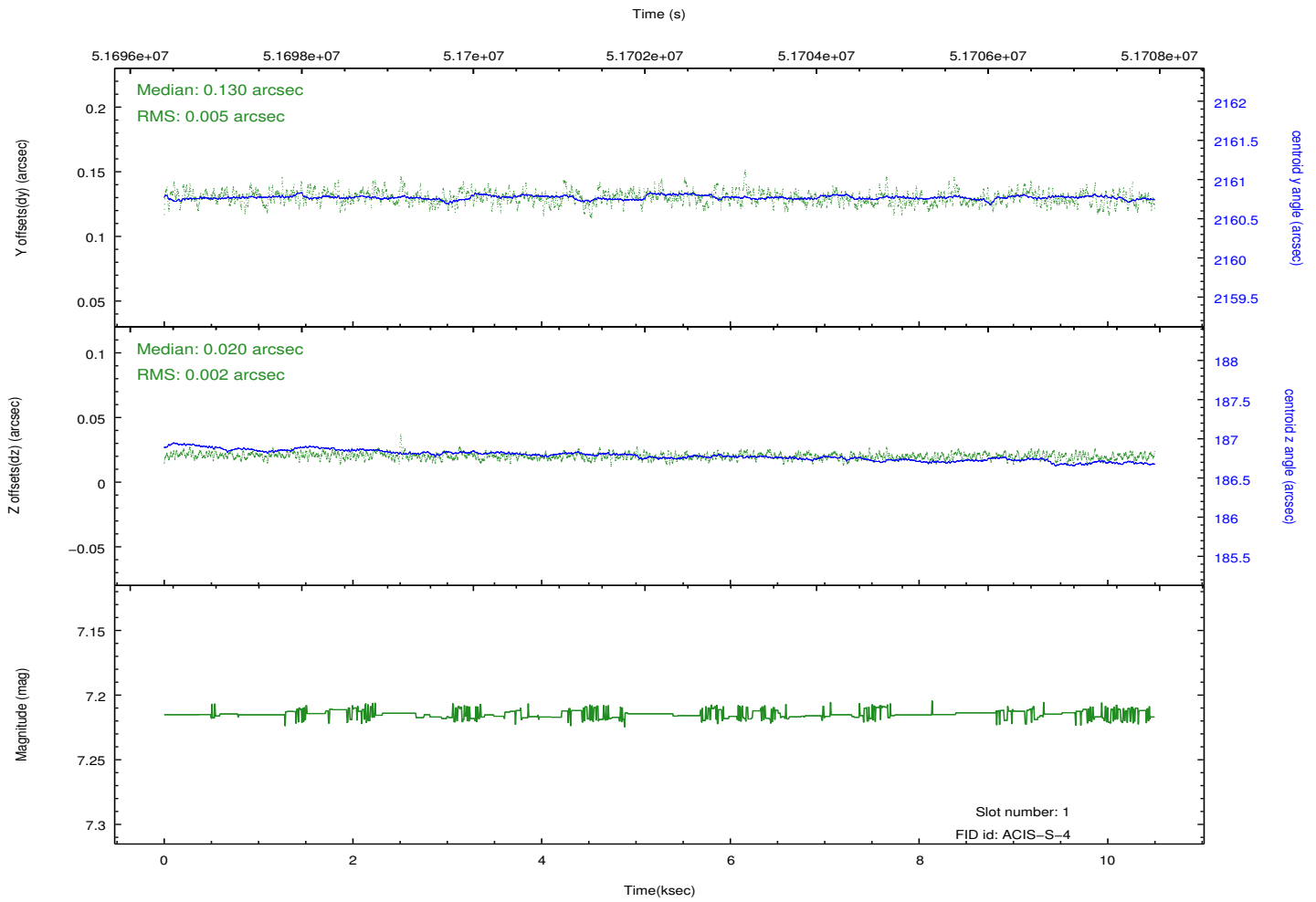
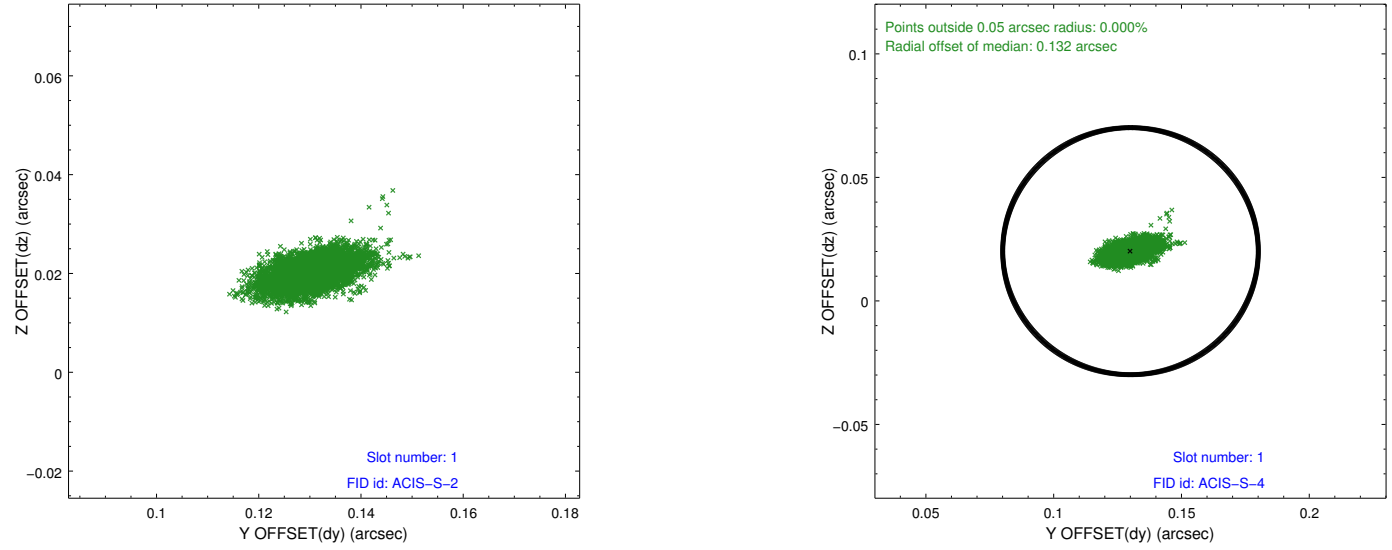


## 2.5 FID Slots

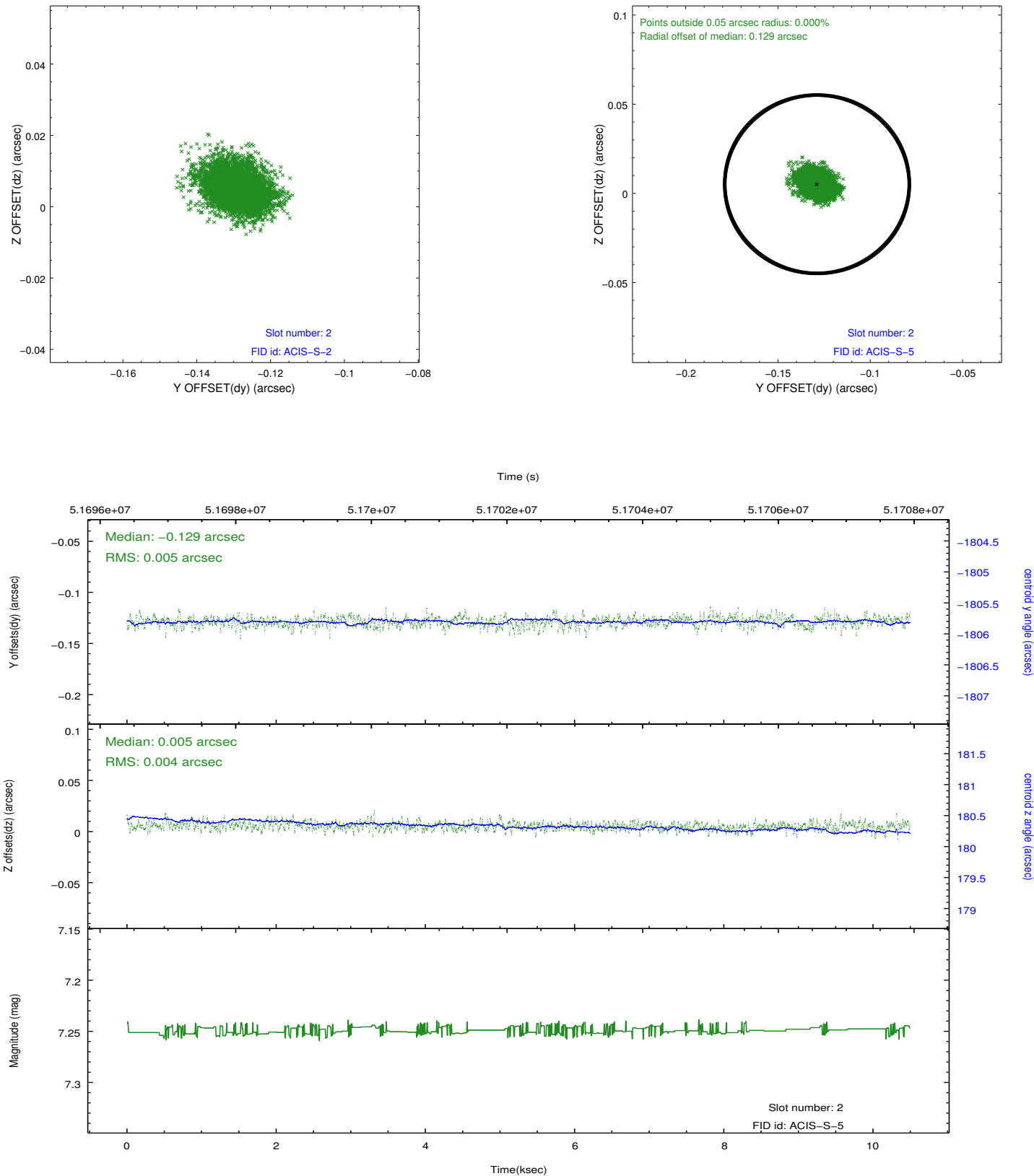
### 2.5.1 Slot 0



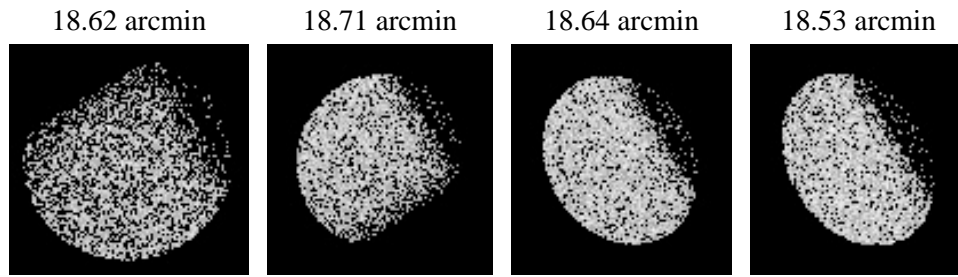
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.07.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.756

## A.2 Comments

A high radiation environment existed during most of this observation, resulting in somewhat enhanced count rates.

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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.