

# V&V Reference Report

## L2 ASCDS Version : 8.3.2.1

Observation 1302 - L2 Version 3  
Chandra X-Ray Center

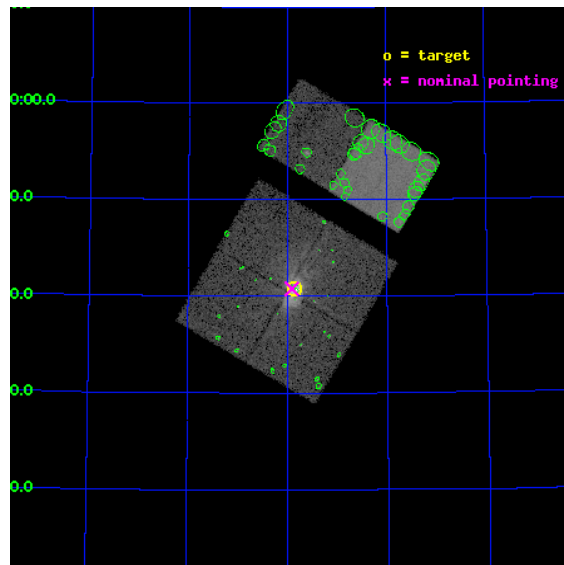
L2 Processing Date : Sep 28 2010

## 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

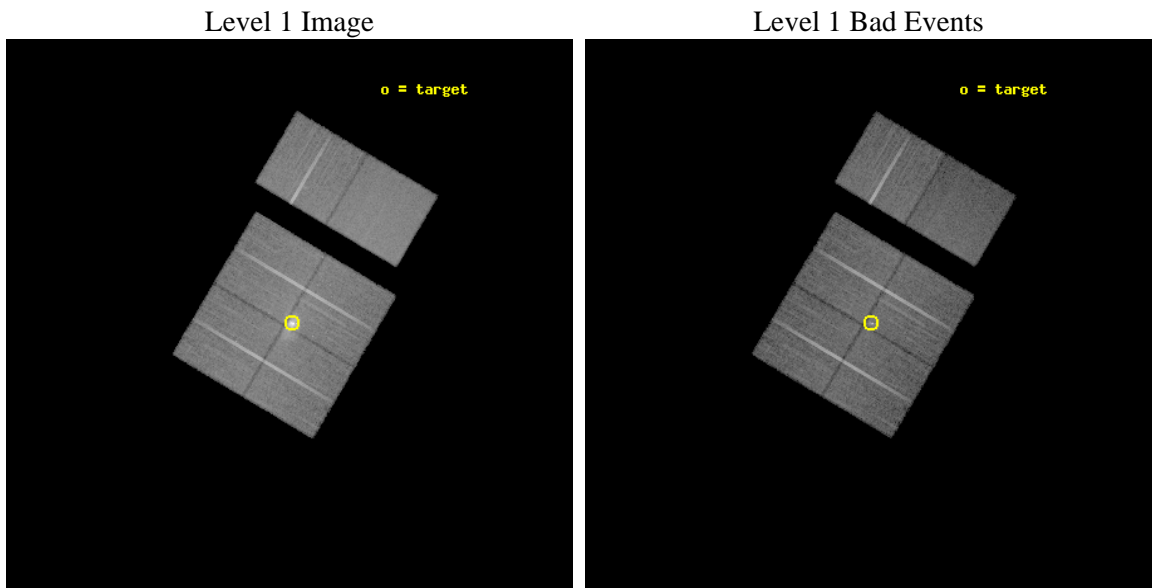
seq_num	700033	Sequence number
obs_id	1302	Observation id
title	ACIS IMAGING OF THE STARBURST GALAXY M82	Proposal title
observer	Dr Steve Murray	Principal investigator
object	M82	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.962917	Observer's specified target RA
dec_targ	69.679167	Observer's specified target Dec
ra_nom	148.97863192883	Nominal RA
dec_nom	69.679798245735	Nominal Dec
roll_nom	30.62900003526	Nominal Roll
revision	3	Processing version of data
ontime	15714.198632851	Sum of GTIs [s]
livetime	15515.215987808	Livetime [s]
ontime0	15720.80365327	Sum of GTIs [s]
ontime1	15717.521692984	Sum of GTIs [s]
ontime2	15717.480642982	Sum of GTIs [s]
ontime3	15714.198632851	Sum of GTIs [s]
ontime6	15717.398533054	Sum of GTIs [s]
ontime7	15720.844693273	Sum of GTIs [s]
l2events	169409	Number of level 2 events



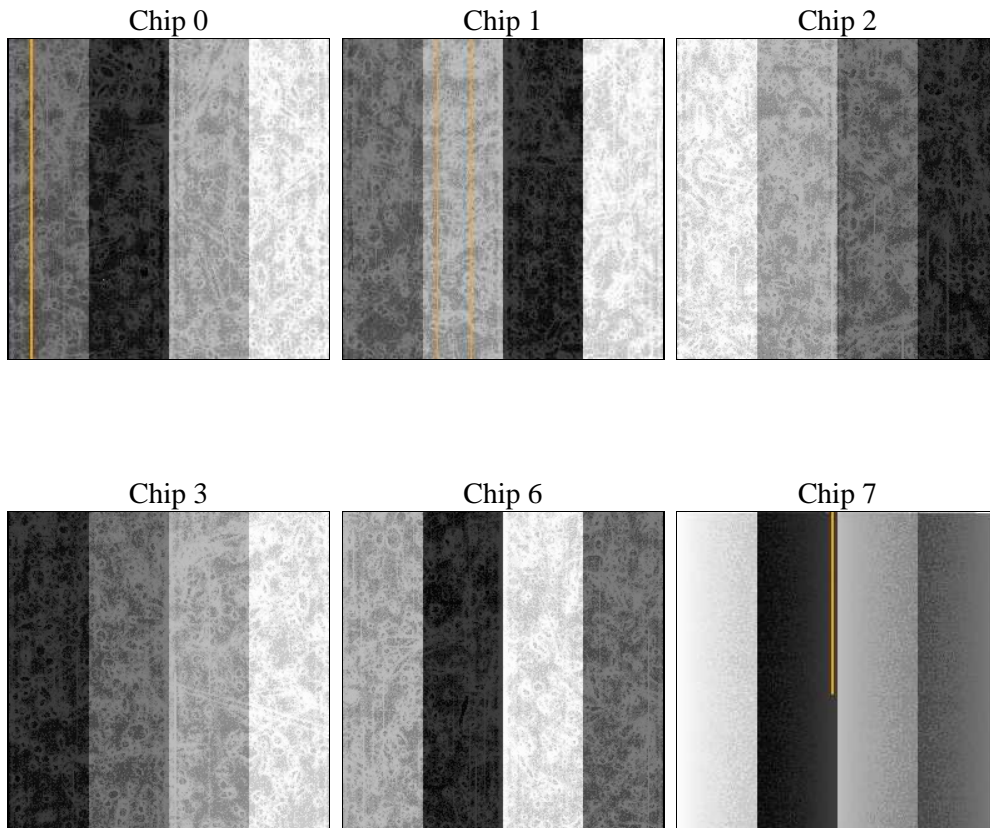
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16000.000000	Scheduled observation exposure time
ascdsver	8.3.2.1	ASCDS version number	ontime	15714.198632851	Sum of GTIs [s]
caldbver	4.3.1	&#160	ontime0	15720.80365327	Sum of GTIs [s]
date	2010-09-28T08:10:43	Date and time of file creation	ontime1	15717.521692984	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	15717.480642982	Sum of GTIs [s]
			ontime3	15714.198632851	Sum of GTIs [s]
			ontime6	15717.398533054	Sum of GTIs [s]
			ontime7	15720.844693273	Sum of GTIs [s]
			l1events	932580	Number of level 1 events

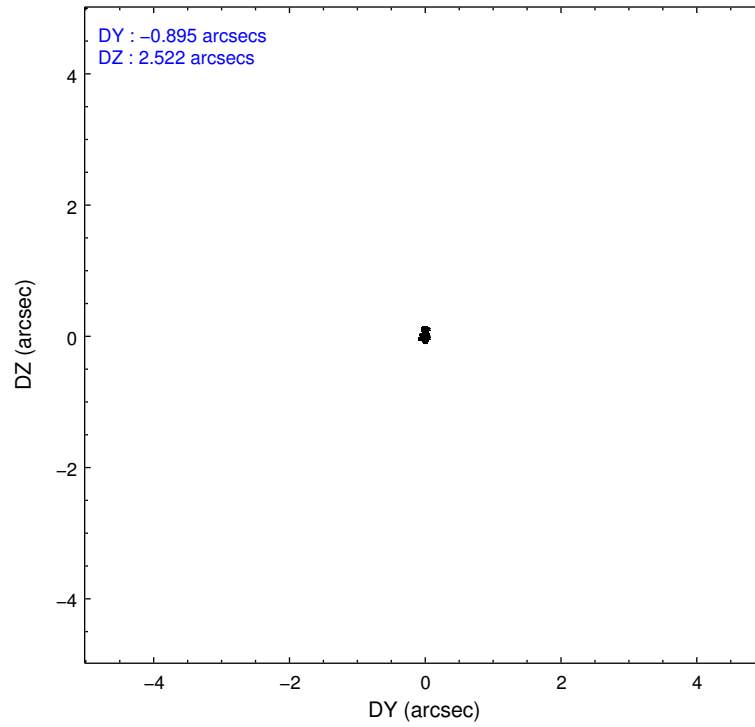
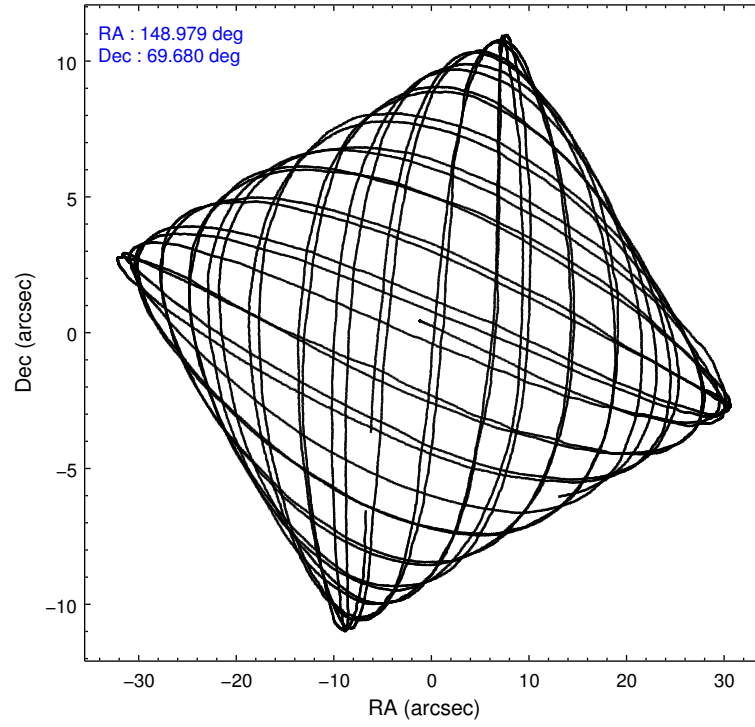
### 2.1.4 Events

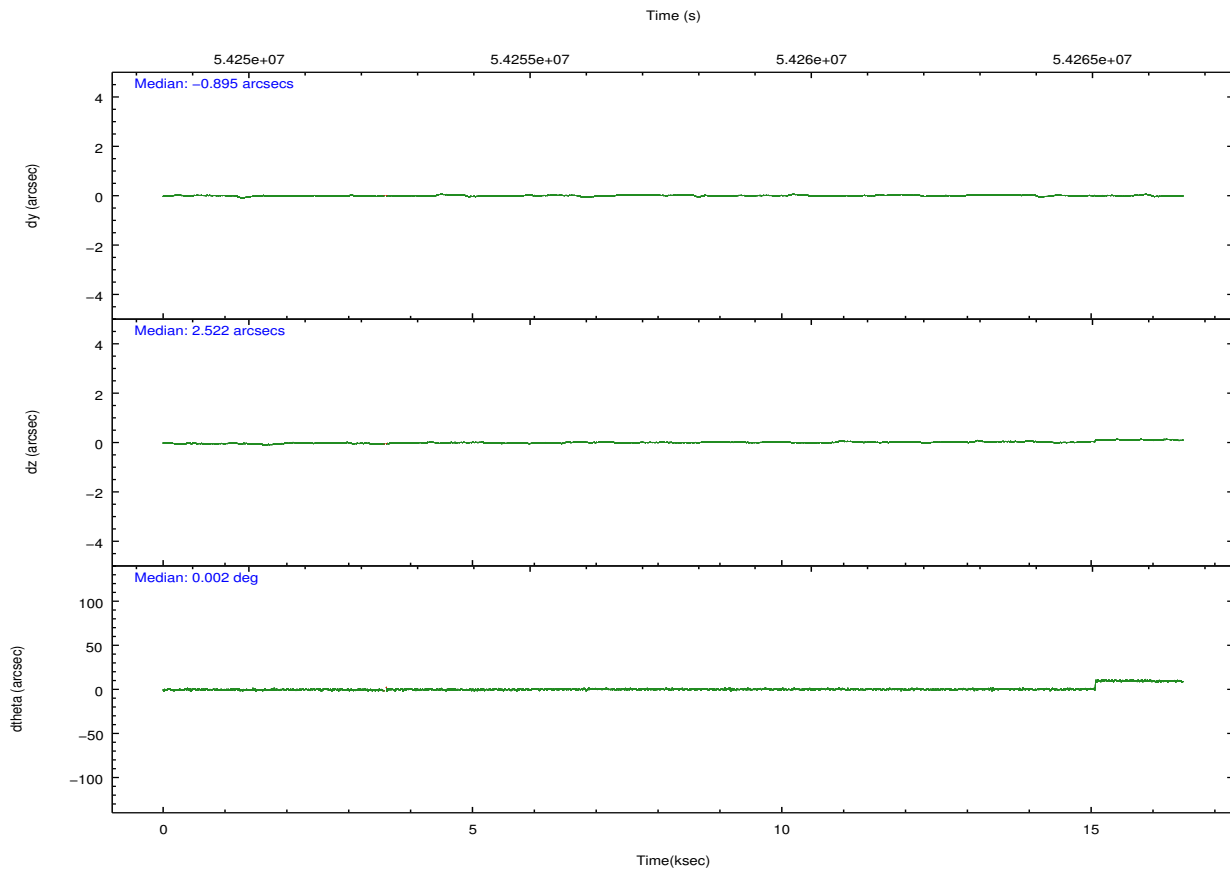
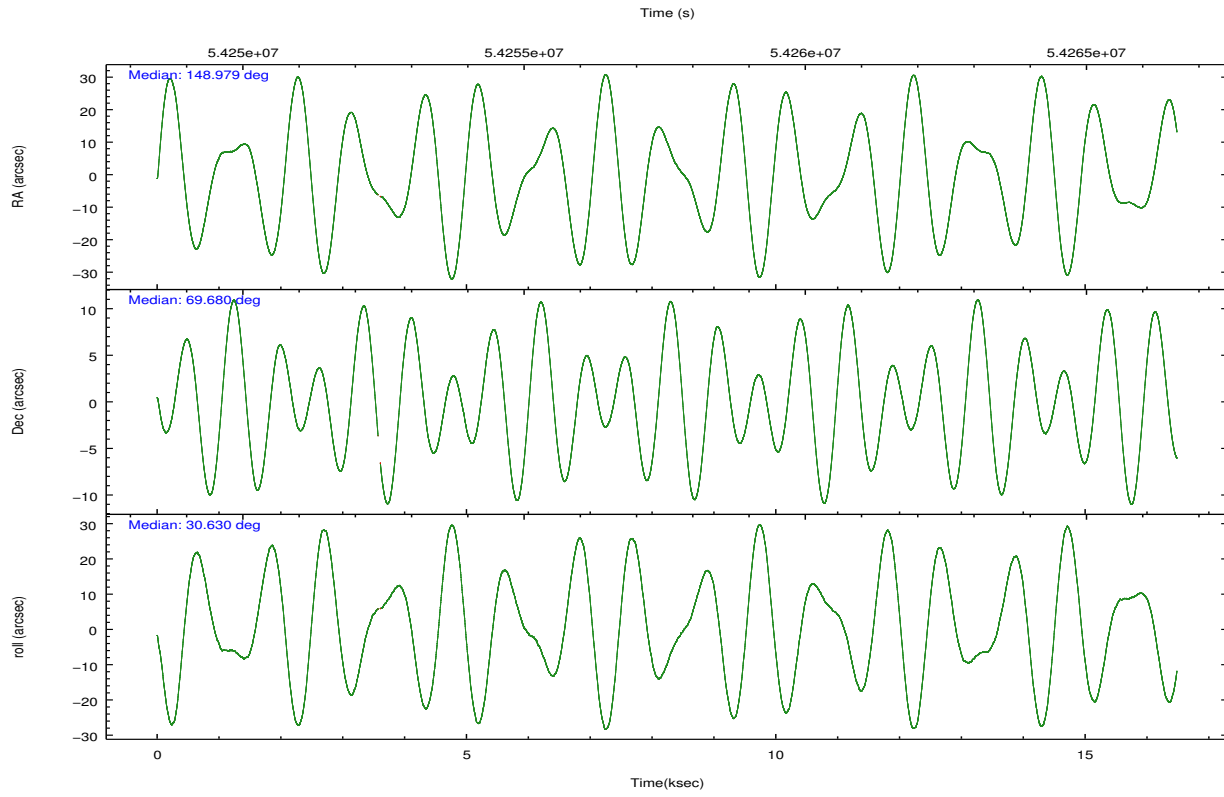
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	142364	144583	156140	178274	149538	161681	grade 0 events	4422	8395	5536	19078	3057	5077
rejected events	127012	123141	139153	133725	135319	95888		3%	5%	3%	10%	2%	3%
rejected %	89%	85%	89%	75%	90%	59%	grade 1 events	32	32	35	92	31	106
								0%	0%	0%	0%	0%	0%
							grade 2 events	5606	6705	6285	18176	5612	14004
								3%	4%	4%	10%	3%	8%
							grade 3 events	1073	1388	923	1272	923	4087
								0%	0%	0%	0%	0%	2%
							grade 4 events	1028	1265	918	1236	908	3626
								0%	0%	0%	0%	0%	2%
							grade 5 events	2813	2922	2450	3064	2866	9303
								1%	2%	1%	1%	1%	5%
							grade 6 events	3262	3737	3369	4923	3764	39186
								2%	2%	2%	2%	2%	24%
							grade 7 events	124128	120139	136624	130433	132377	86292
								87%	83%	87%	73%	88%	53%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	148.937780	148.9786319288273	Subarray requested	NONE	NONE
Pointing Dec	69.655866	69.67979824573507	Alternating exposures requested	N	N
Pointing Roll	30.458621	30.62900003525981	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	54249784.184000	54249117.89899			
Observation start date	1999-09-20T21:22:00	1999-09-20T21:11:57			
Observation end time	54265784.184000	54266802.737124			
Observation end date	1999-09-21T01:48:40	1999-09-21T02:06:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



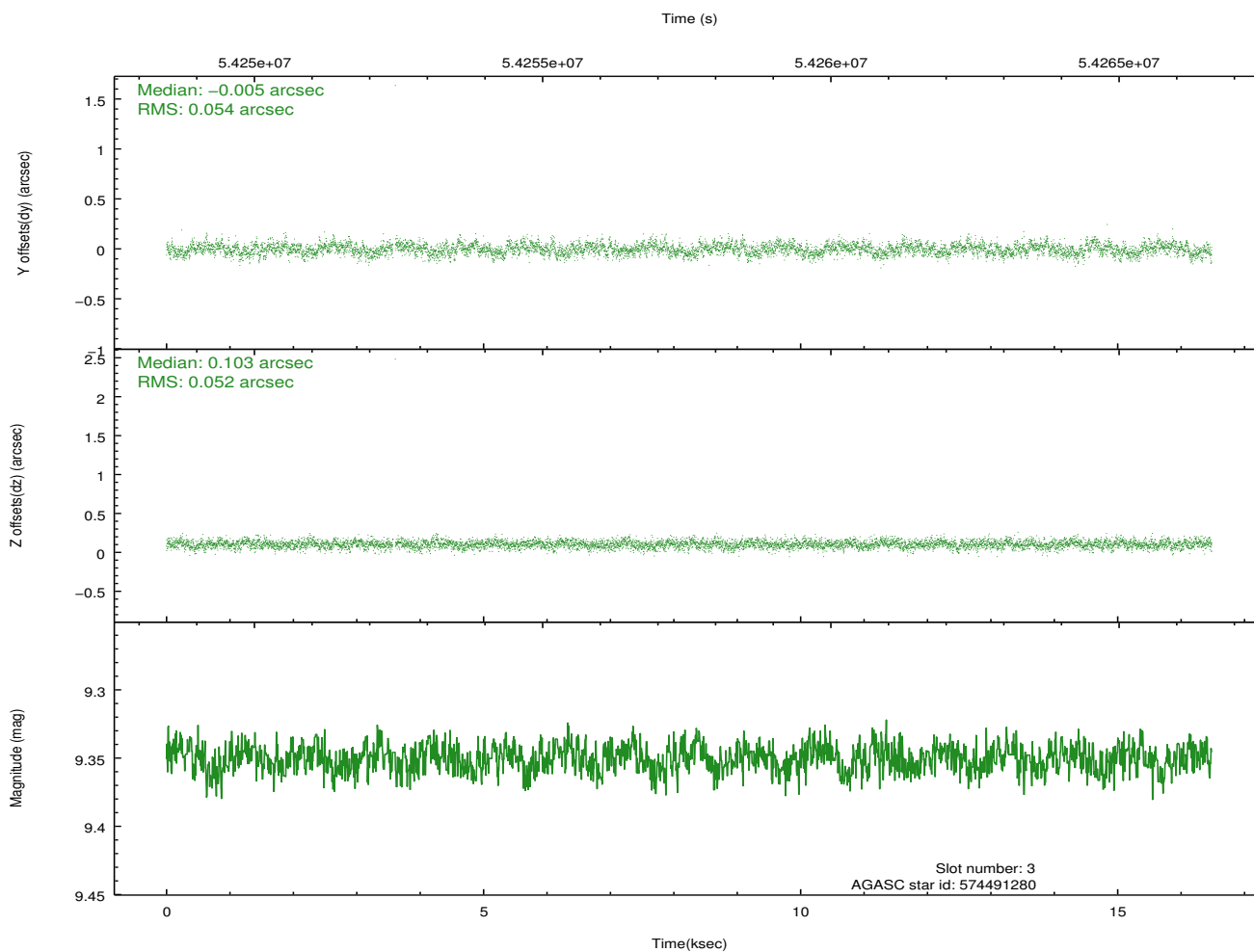
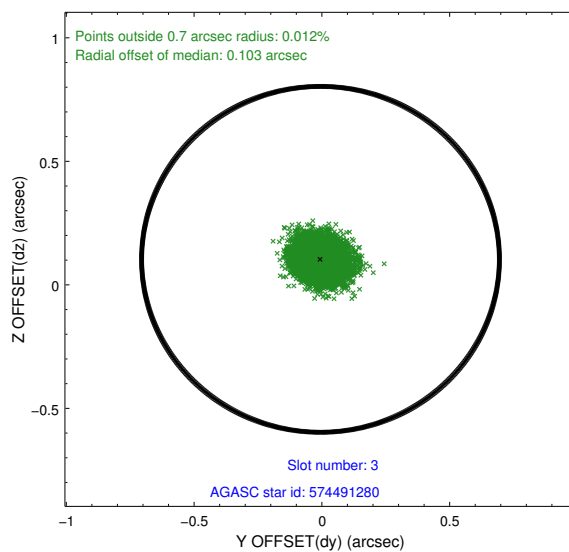
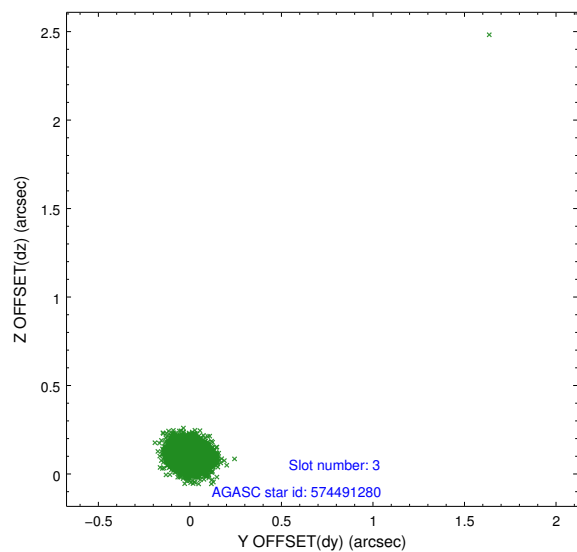


### Slot Statistics

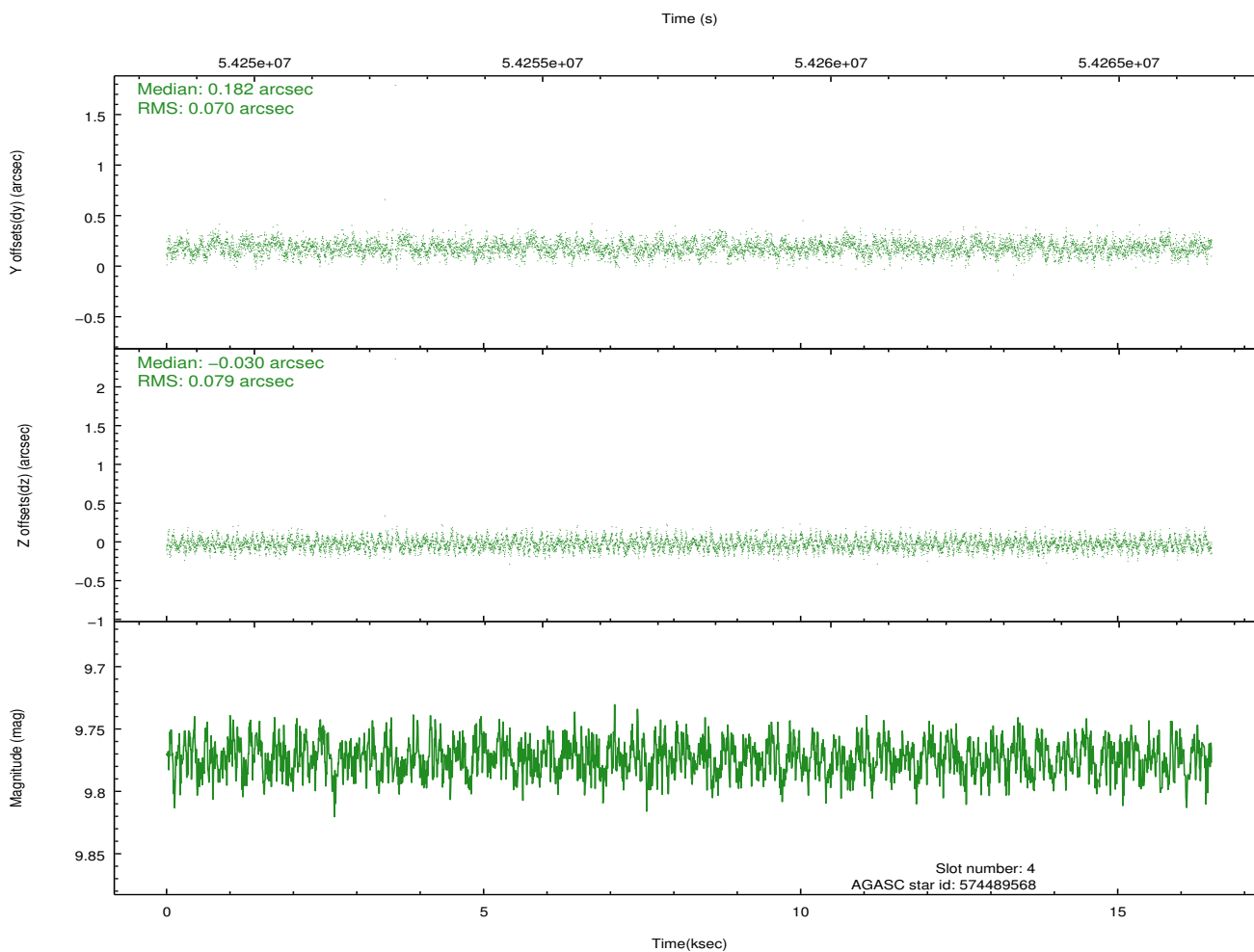
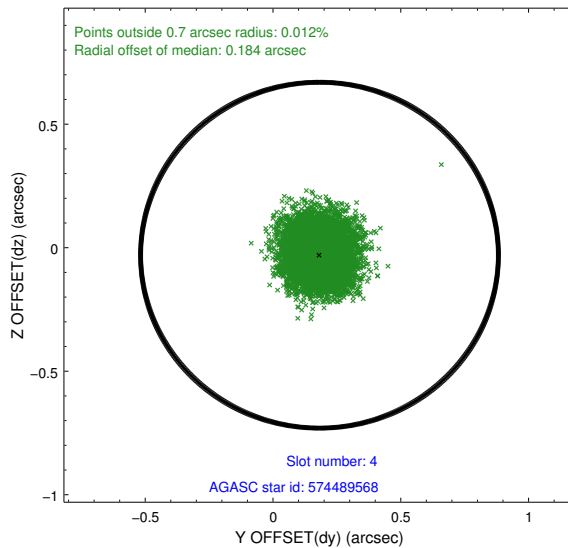
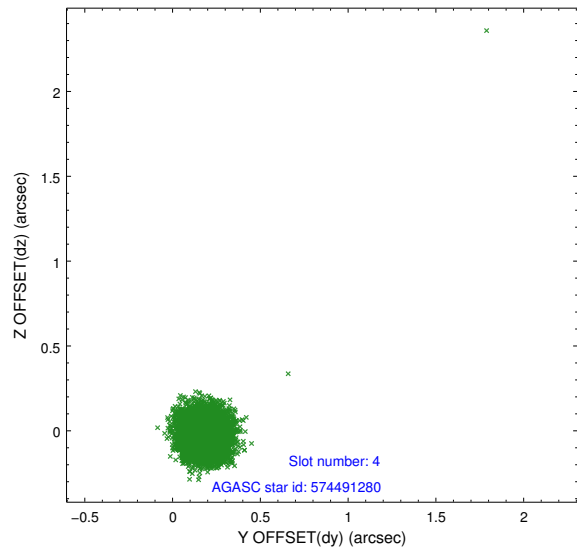
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.20	8024	-0.059	0.019	0.010	0.057	0.000000	0.000000	-753.49	-832.09
1	FID	ACIS-I-4	7.22	8025	0.128	0.035	0.007	0.031	0.000000	0.000000	2160.86	1073.87
2	FID	ACIS-I-5	7.23	8025	-0.169	0.015	0.010	0.047	0.000000	0.000000	-1807.23	1072.03
3	GUIDE	574491280	9.35	8019	-0.005	0.103	0.072	0.117	148.611567	69.450135	-730.16	-427.76
4	GUIDE	574489568	9.77	8020	0.182	-0.030	0.107	0.172	147.223974	69.438157	-2249.41	449.50
5	GUIDE	574490960	9.74	8021	0.030	-0.020	0.090	0.150	148.185918	69.658768	-802.98	491.62
6	GUIDE	574886464	9.82	8023	-0.101	-0.002	0.105	0.165	149.898674	70.203982	2014.64	1115.67
7	GUIDE	574886288	9.84	8017	-0.106	-0.054	0.105	0.170	149.952718	70.139627	1958.20	881.60

## 2.4 Star Slots

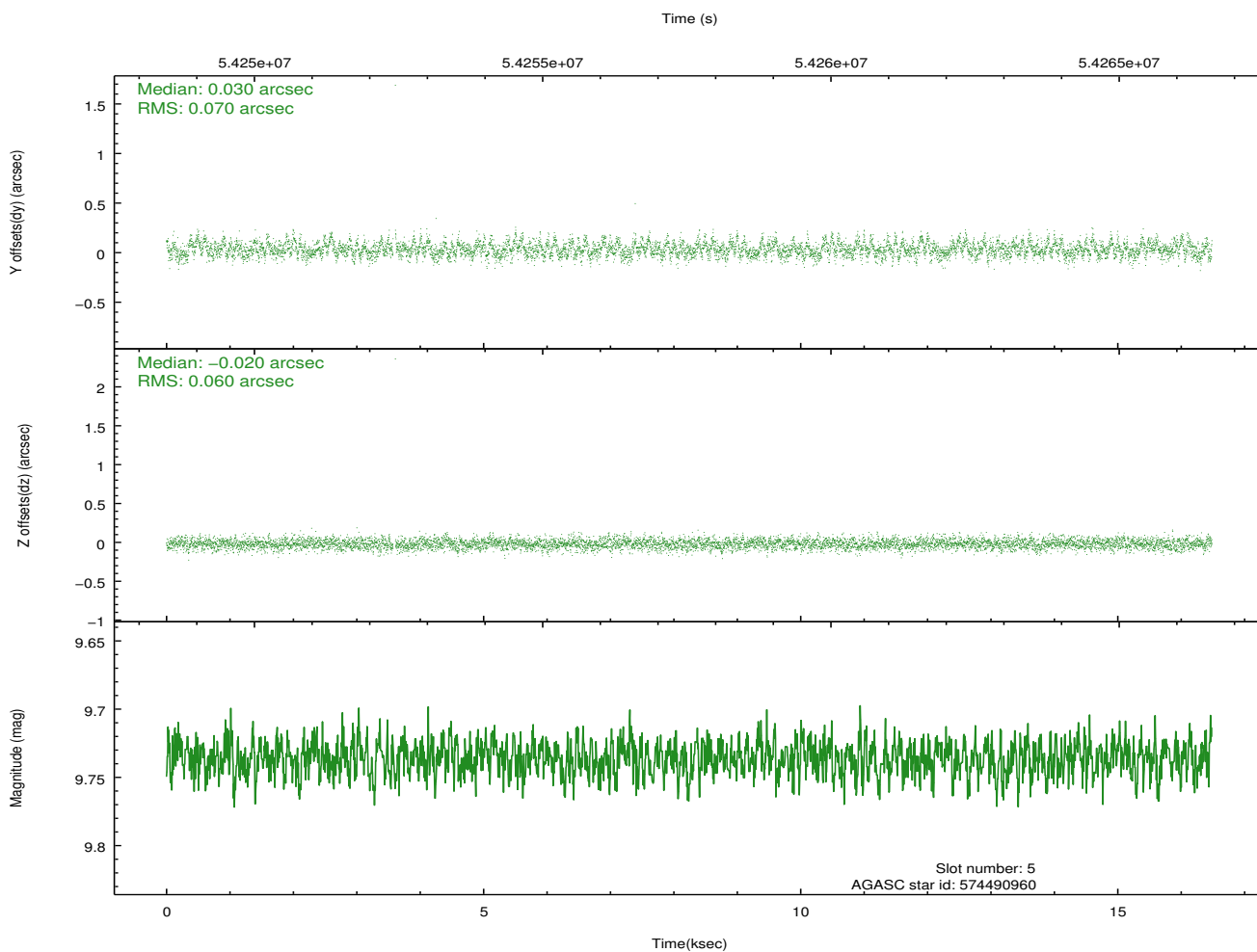
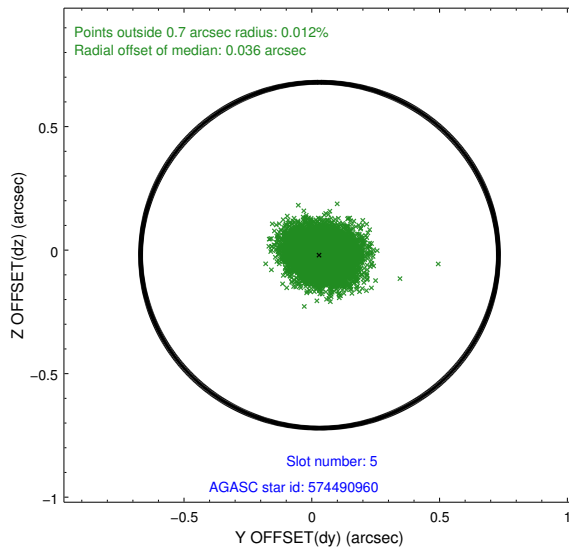
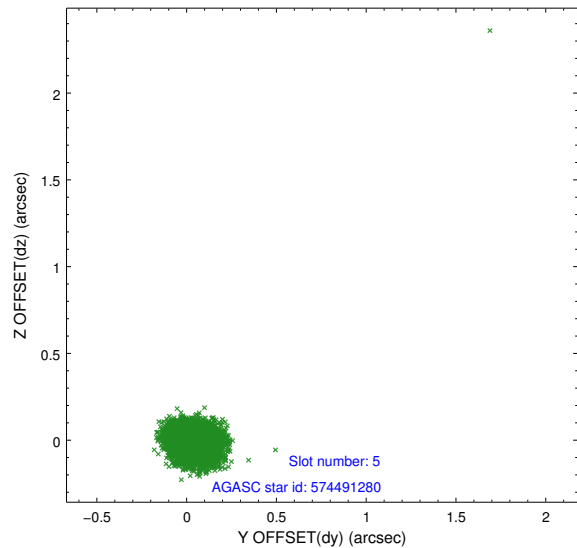
### 2.4.1 Slot 3



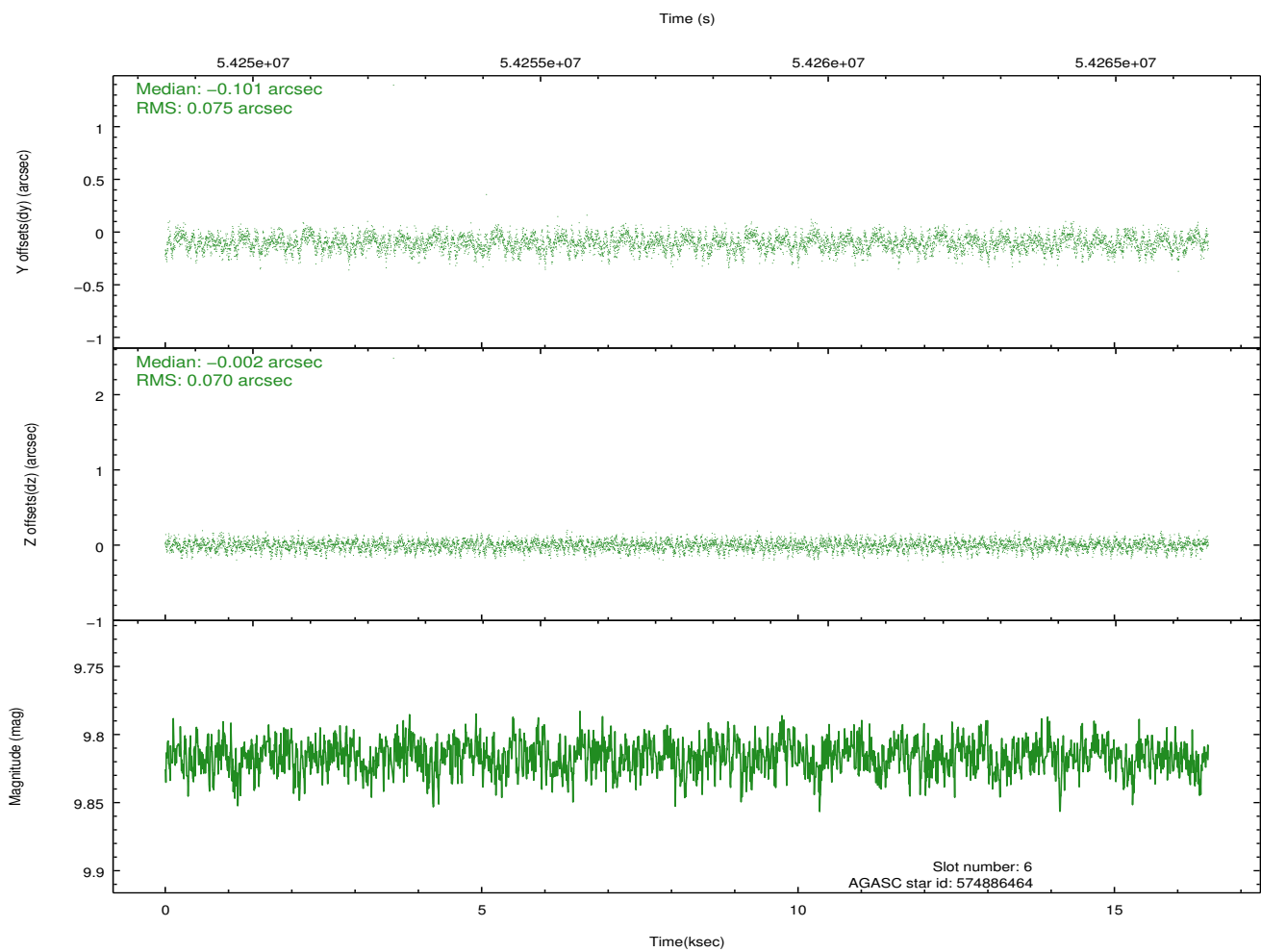
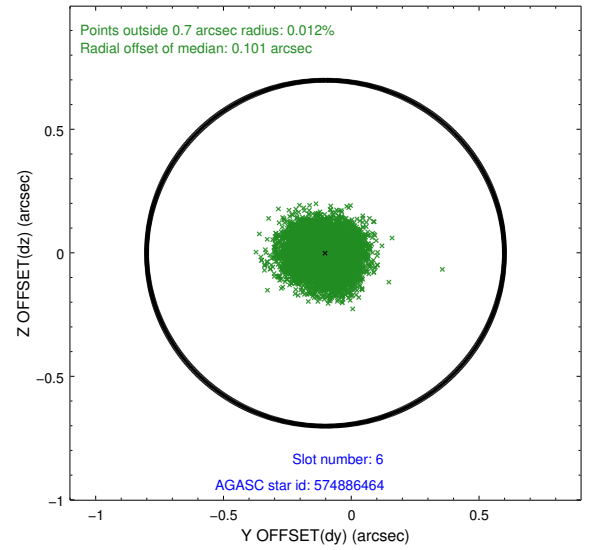
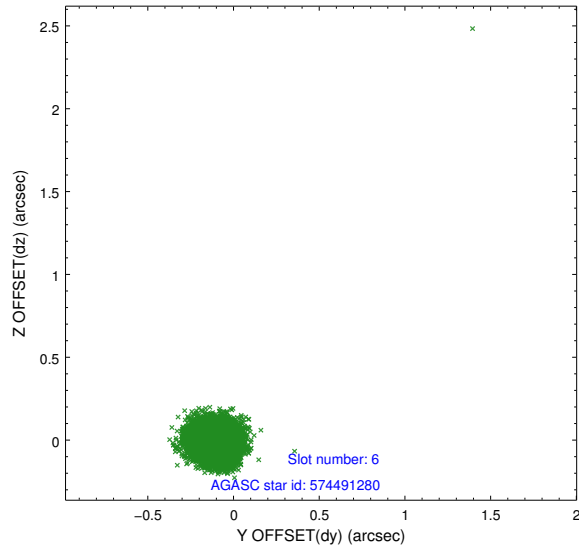
## 2.4.2 Slot 4



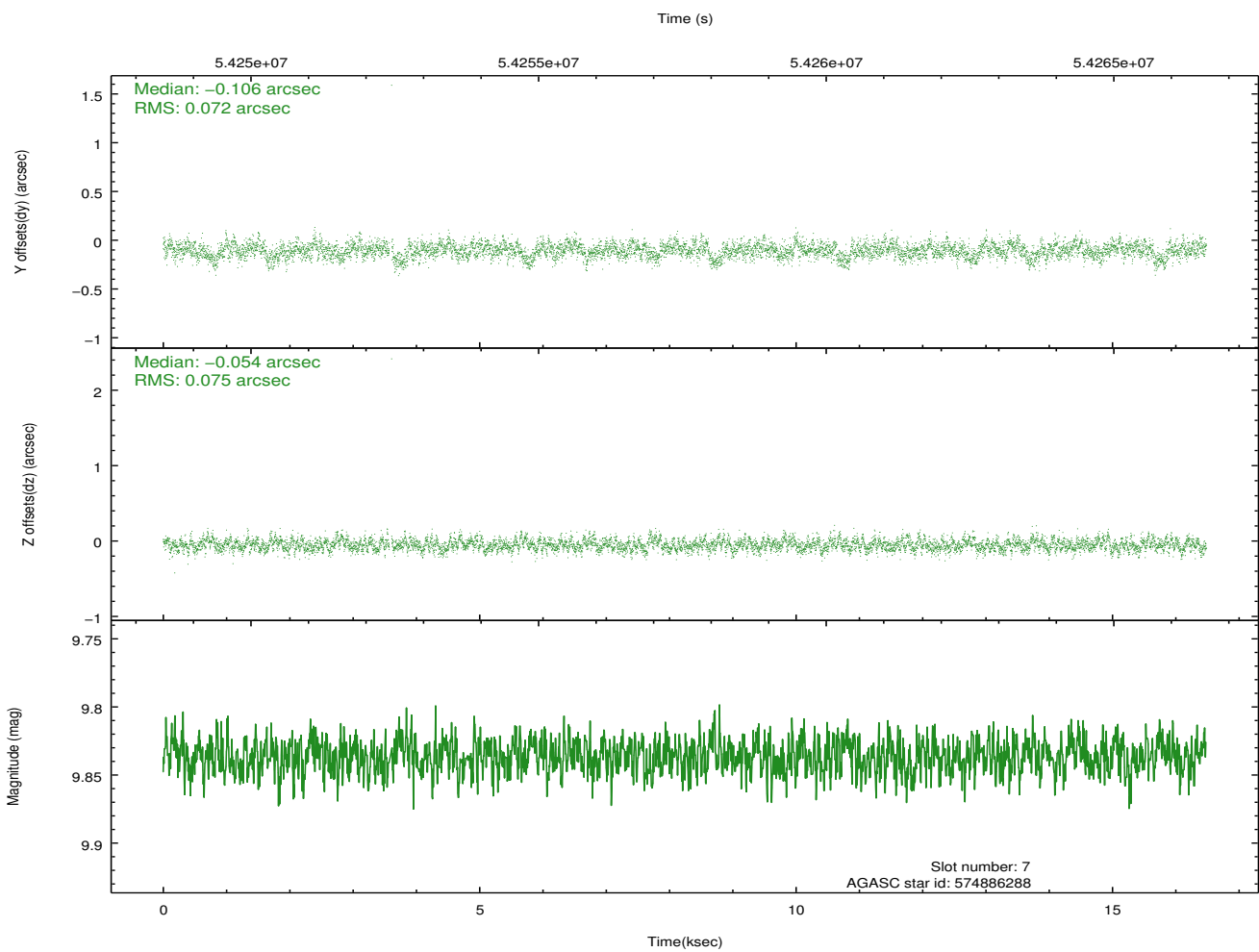
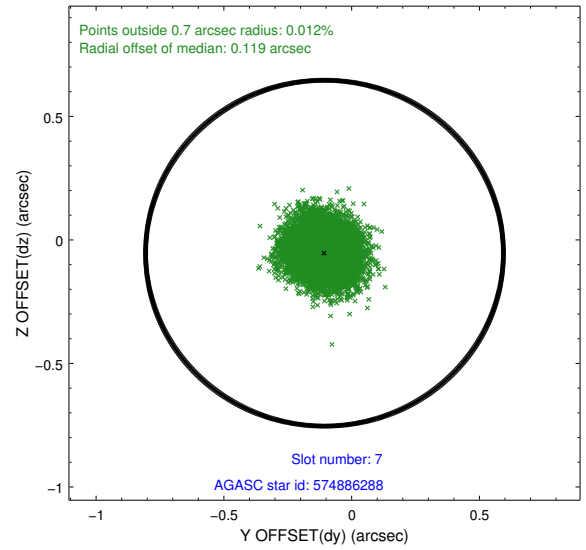
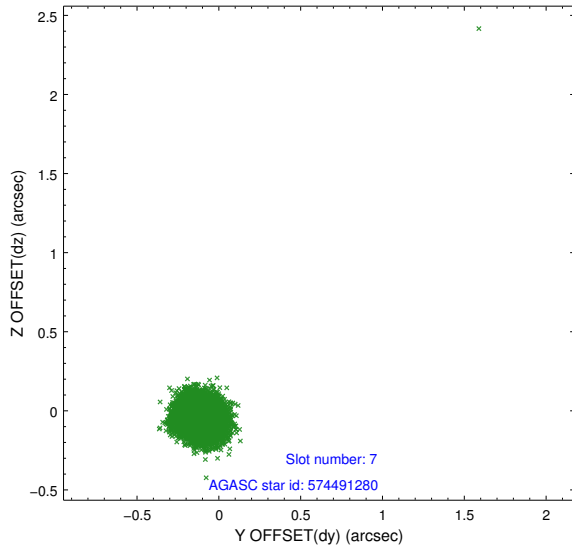
## 2.4.3 Slot 5



## 2.4.4 Slot 6

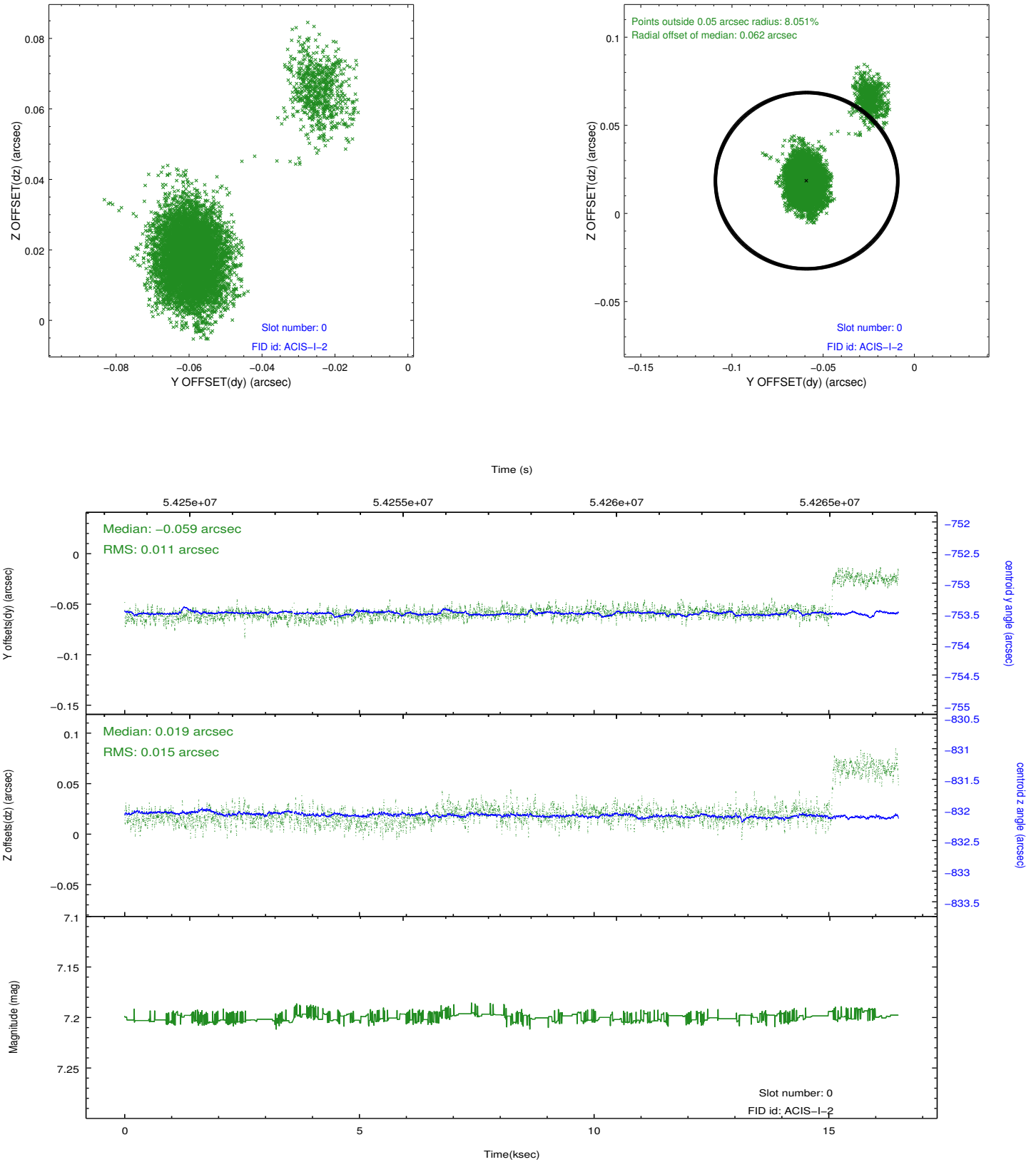


## 2.4.5 Slot 7

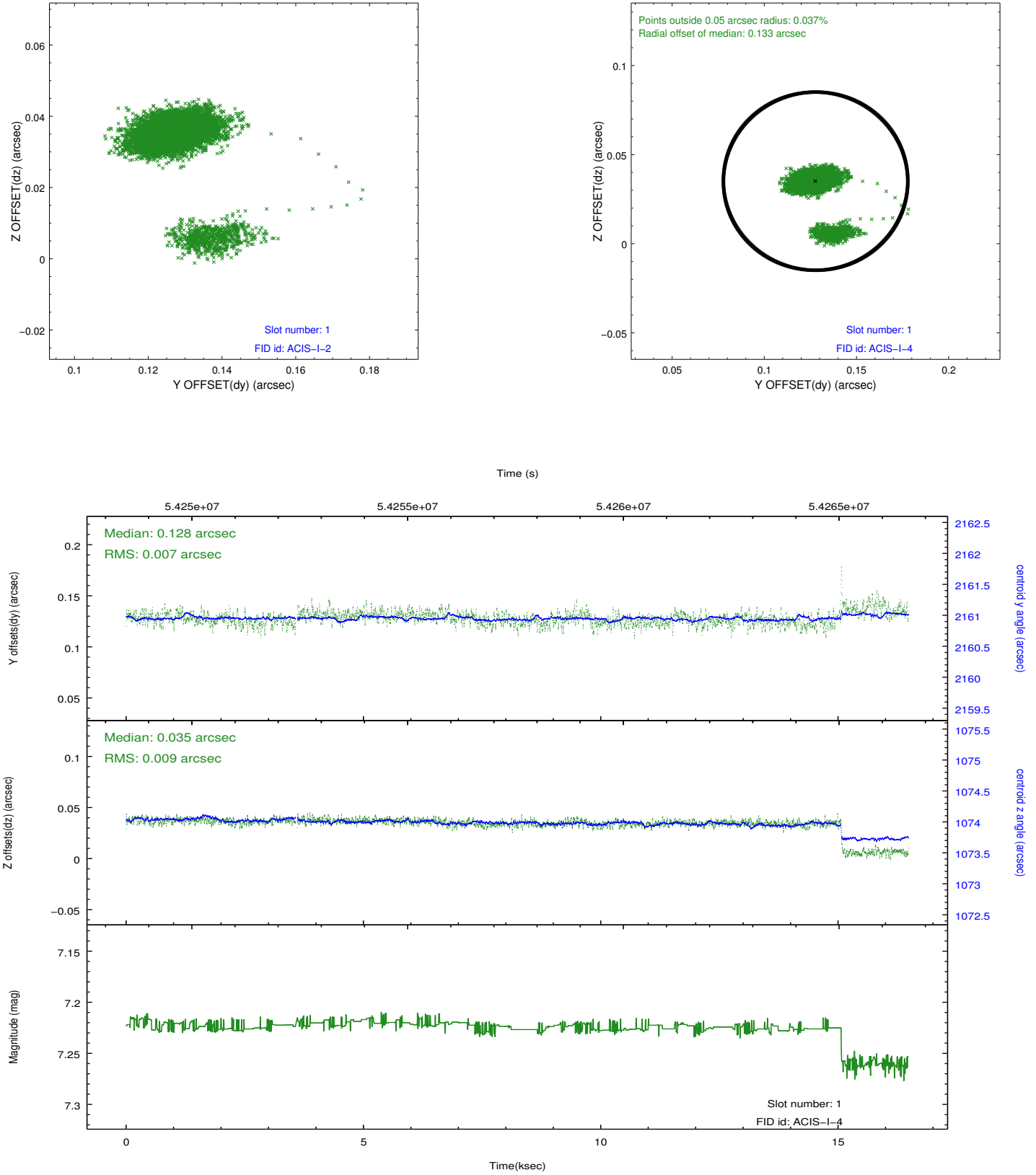


## 2.5 FID Slots

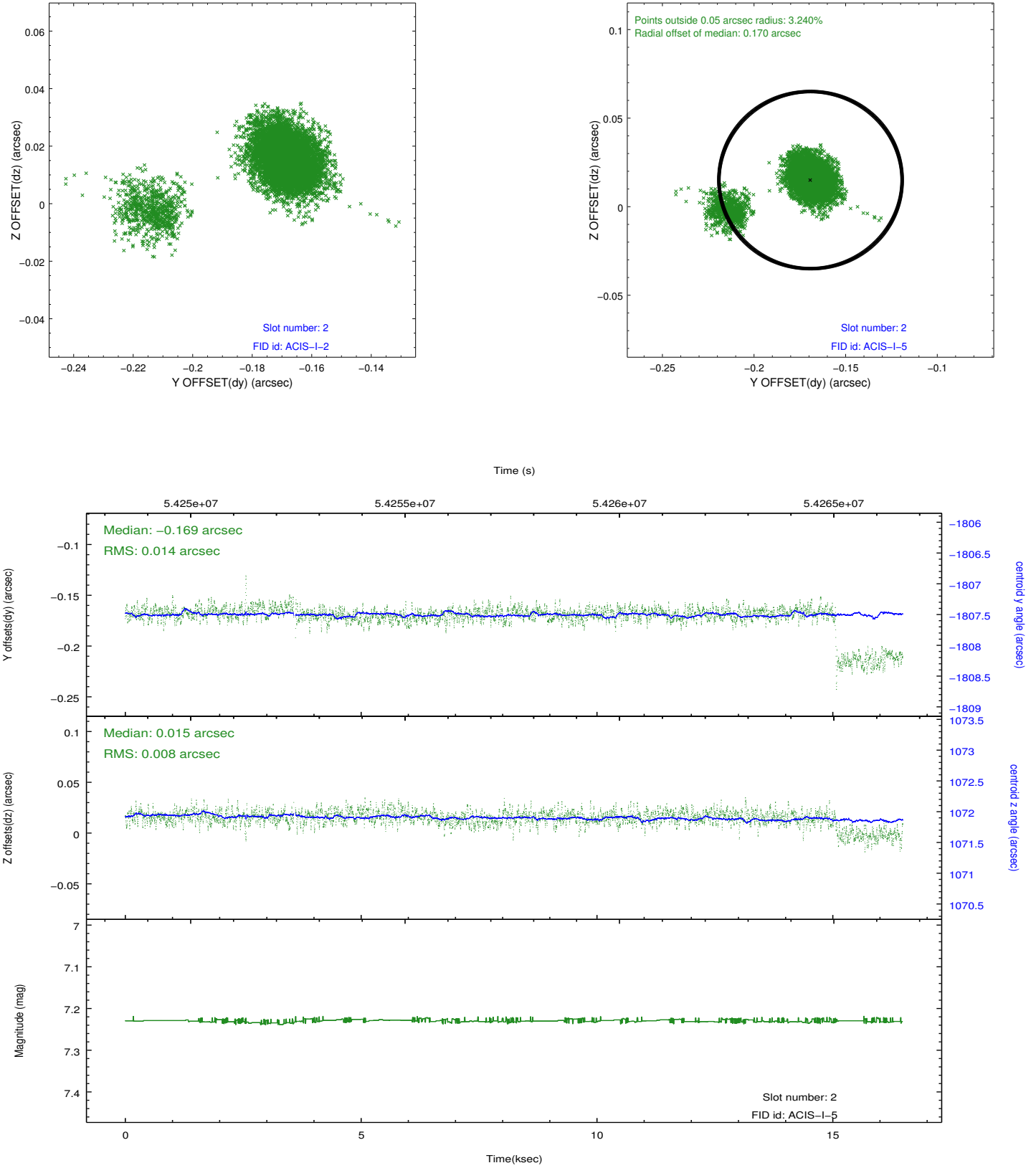
### 2.5.1 Slot 0



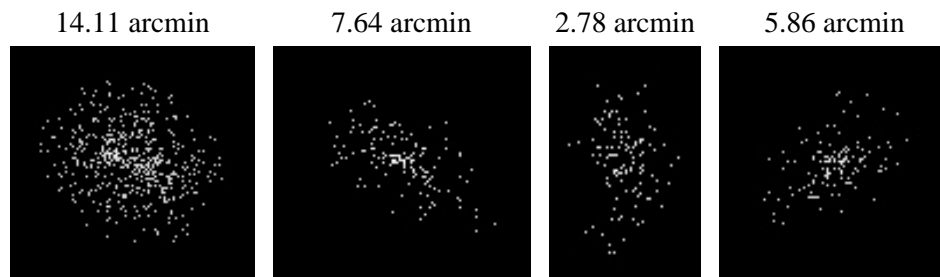
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2010.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.708

## A.2 Comments

The ACIS focal plane temperature is warmer than -118.7 C degrees during the interval 54250018.70 - 54265775.50 (MET s) of this observation. This temperature is the upper limit of the verified ACIS calibration for the front-illuminated chips. The focal plane temperature is warmer than -116.7 C during the interval 54250018.70 - 54265775.50 (MET s) of this observation. This temperature is the upper limit of the verified ACIS calibration for the back-illuminated chips. 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 (e.g., 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.