

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11664 - L2 Version 3  
Chandra X-Ray Center

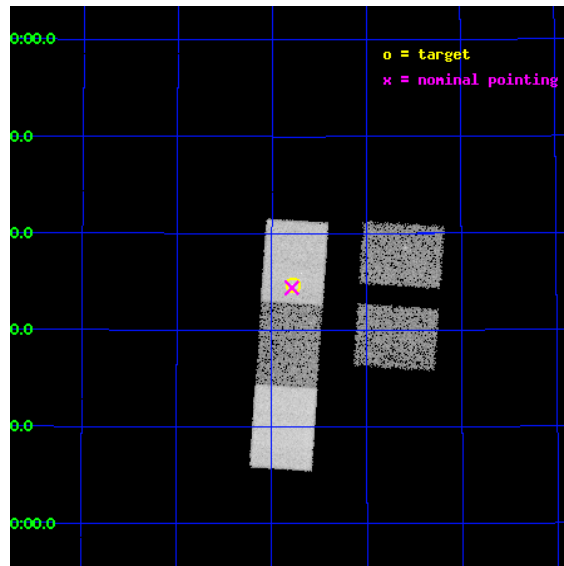
L2 Processing Date : Jul 2 2012

## 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>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

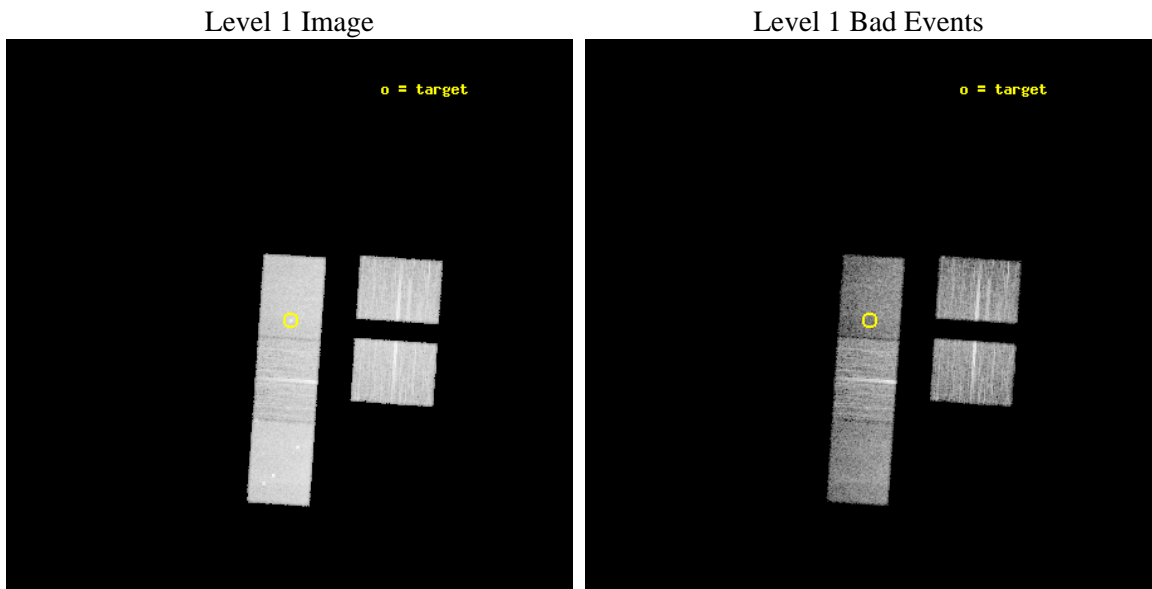
seq_num	702250	Sequence number
obs_id	11664	Observation id
title	Chandra deciphers the Optically 'Dull' X-ray Bright Galaxies at z~0.	Proposal title
observer	Dr. Anca Constantin	Principal investigator
object	SDSS J120046.28+483437.6	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	180.192917	Observer's specified target RA [deg]
dec_targ	48.577111	Observer's specified target Dec [deg]
ra_nom	180.19714581824	Nominal RA [deg]
dec_nom	48.573119031044	Nominal Dec [deg]
roll_nom	273.90904112994	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14231.999858618	Sum of GTIs [s]
livetime	13992.72427354	Livetime [s]
ontime2	14231.999858618	Sum of GTIs [s]
ontime3	14231.999858618	Sum of GTIs [s]
ontime5	14231.999858618	Sum of GTIs [s]
ontime6	14231.999858618	Sum of GTIs [s]
ontime7	14231.999858618	Sum of GTIs [s]
l2events	111947	Number of level 2 events



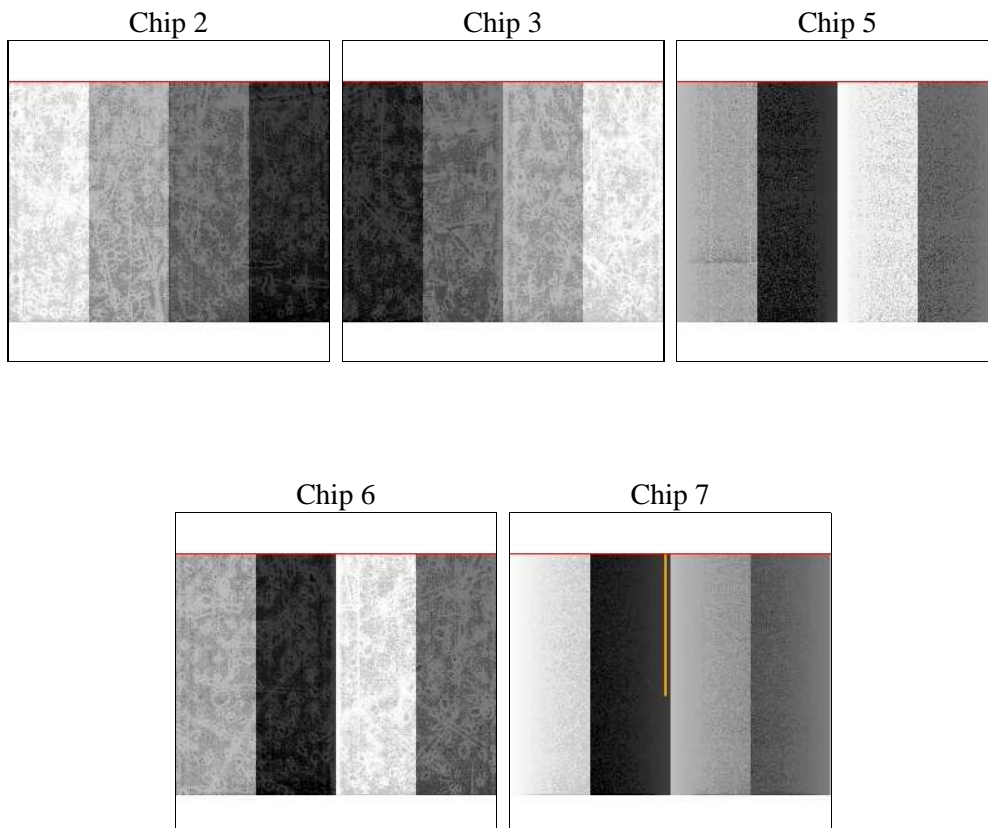
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	14231.999858618	Sum of GTIs [s]
caldbver	4.5.0	&#160	ontime2	14231.999858618	Sum of GTIs [s]
date	2012-07-02T13:06:18	Date and time of file creation	ontime3	14231.999858618	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	14231.999858618	Sum of GTIs [s]
			ontime6	14231.999858618	Sum of GTIs [s]
			ontime7	14231.999858618	Sum of GTIs [s]
			l1events	419052	Number of level 1 events

### 2.1.4 Events

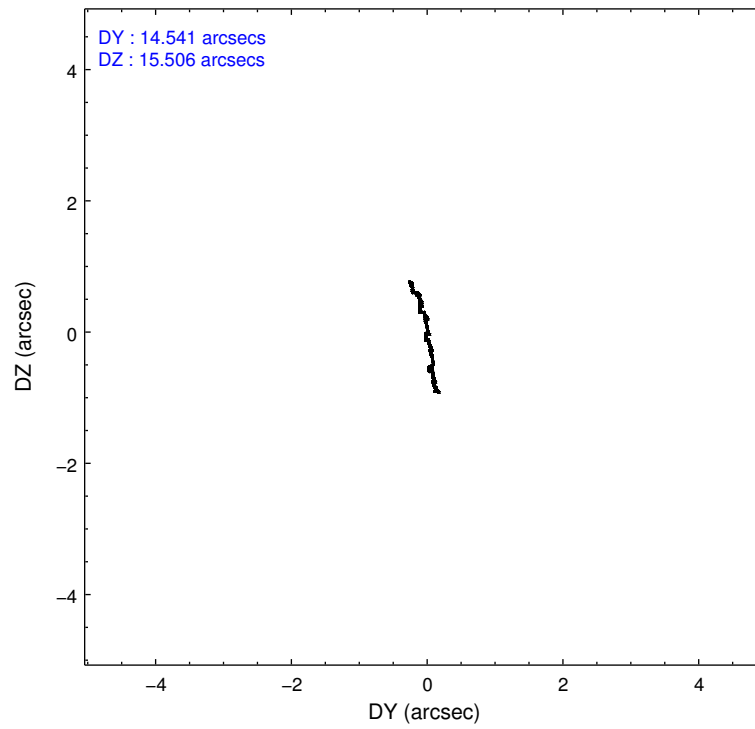
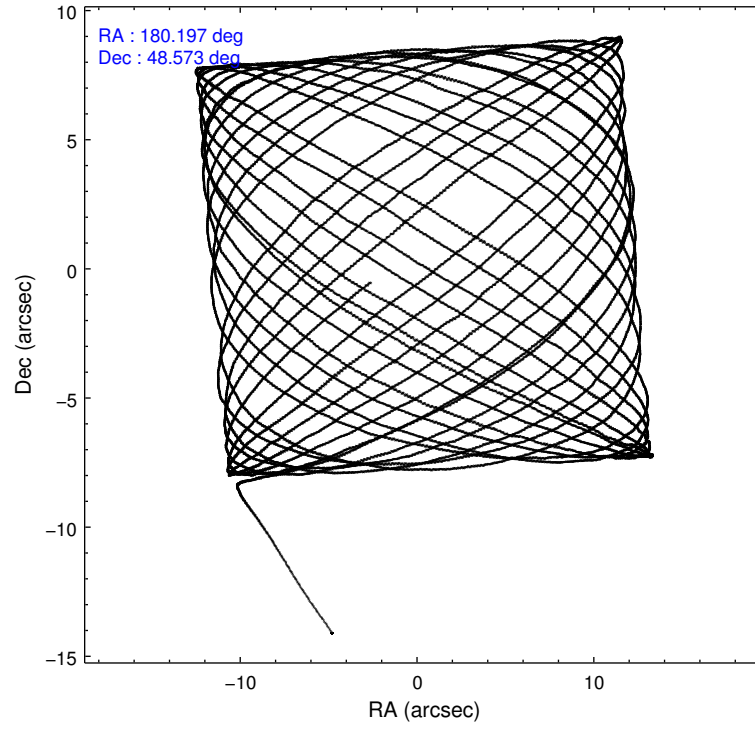
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	80665	74784	103865	77514	82224
rejected events	72635	67028	49627	69075	41135
rejected %	90%	89%	47%	89%	50%

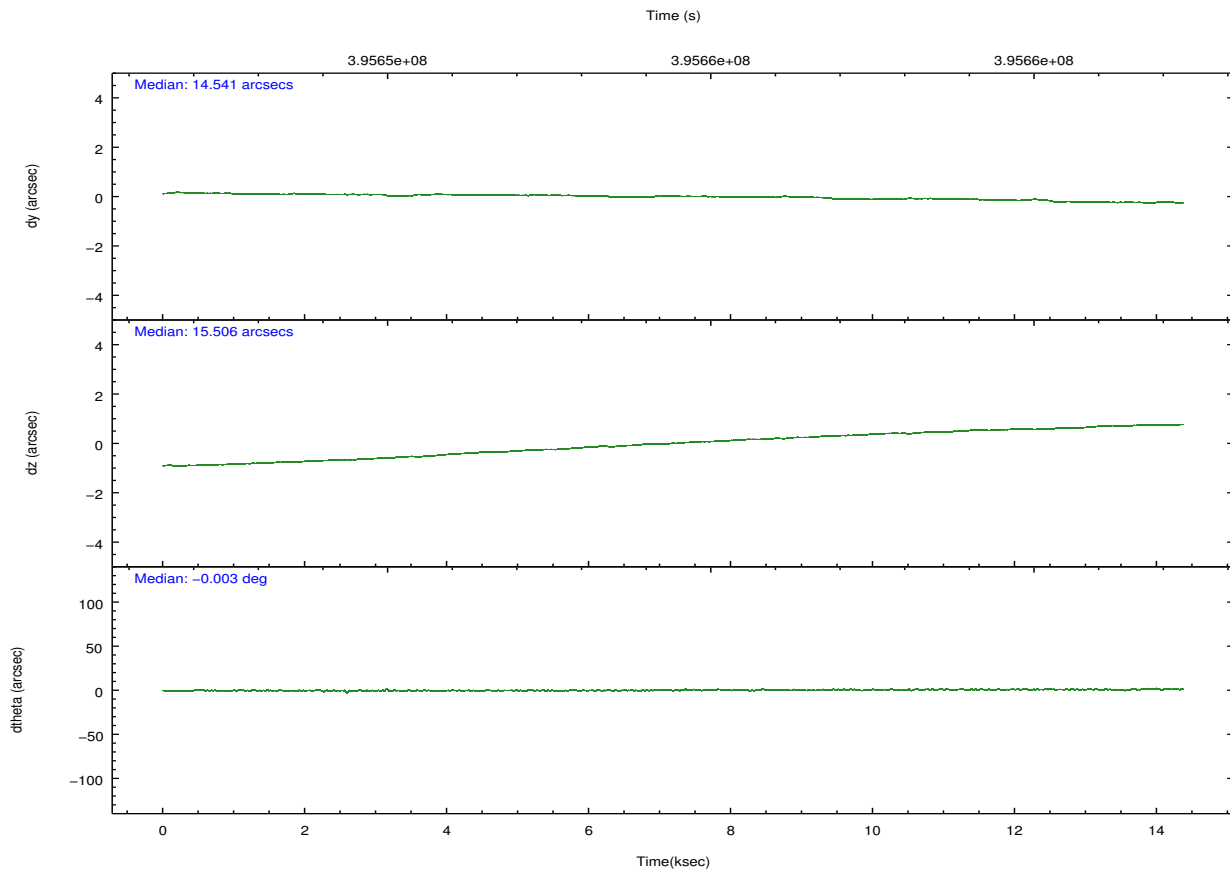
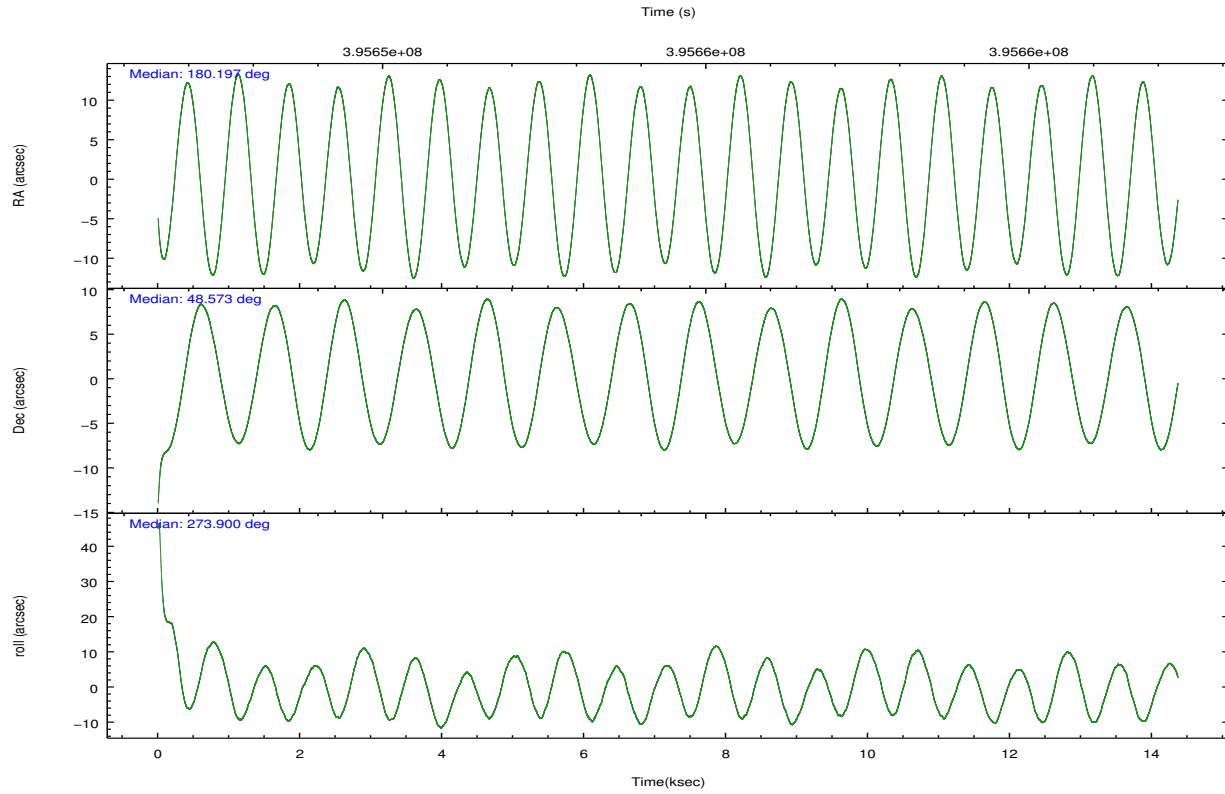
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	2894	2855	5219	2989	4647
	3%	3%	5%	3%	5%
grade 1 events	45	40	242	31	137
	0%	0%	0%	0%	0%
grade 2 events	1965	1576	16750	1808	8722
	2%	2%	16%	2%	10%
grade 3 events	964	952	2486	965	4052
	1%	1%	2%	1%	4%
grade 4 events	875	862	2352	970	3952
	1%	1%	2%	1%	4%
grade 5 events	2331	2857	8581	2950	8535
	2%	3%	8%	3%	10%
grade 6 events	1333	1513	27434	1710	19720
	1%	2%	26%	2%	23%
grade 7 events	70258	64129	40801	66091	32459
	87%	85%	39%	85%	39%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	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
[deg] Pointing RA	180.173650	180.1971458182413	CCD I2 on	O2	Y
[deg] Pointing Dec	48.595646	48.57311903104387	CCD I3 on	O3	Y
[deg] Pointing Roll	273.770008	273.9090411299389	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O4	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	N	N
[s] Observation start time (MET)	395647406.184000	395646215.52334	CCD S5 on	N	N
Observation start date	2010-07-16T06:02:20	2010-07-16T05:43:35	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	395661606.184000	395663093.6867	On-chip summing requested	N	N
Observation end date	2010-07-16T09:59:00	2010-07-16T10:24:53	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	128	128
			Subarray row count	768	768
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.4

## 2.3 Aspect



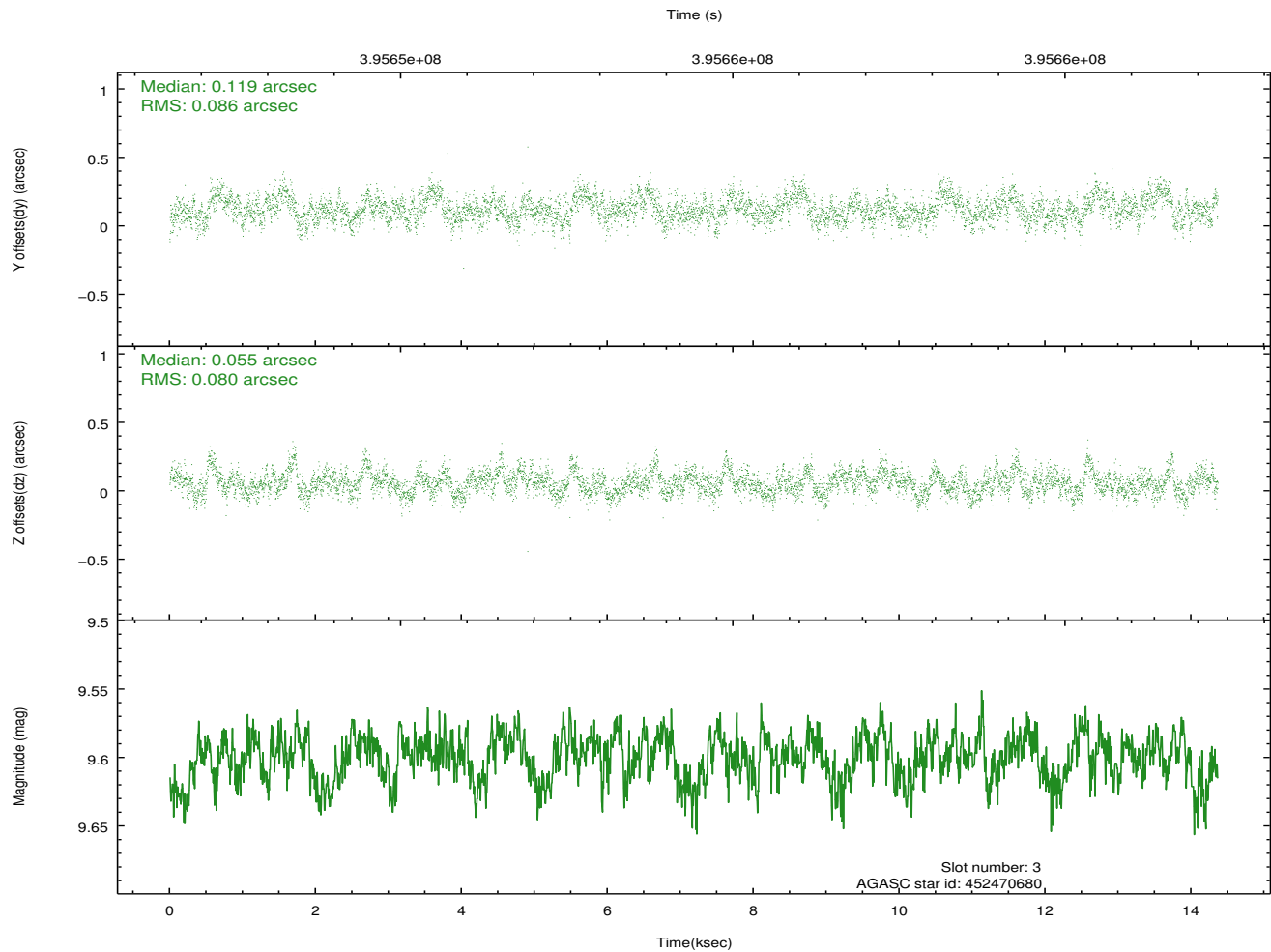
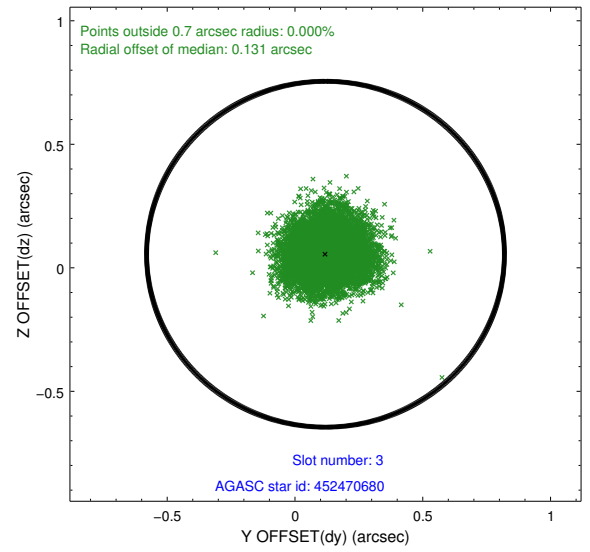
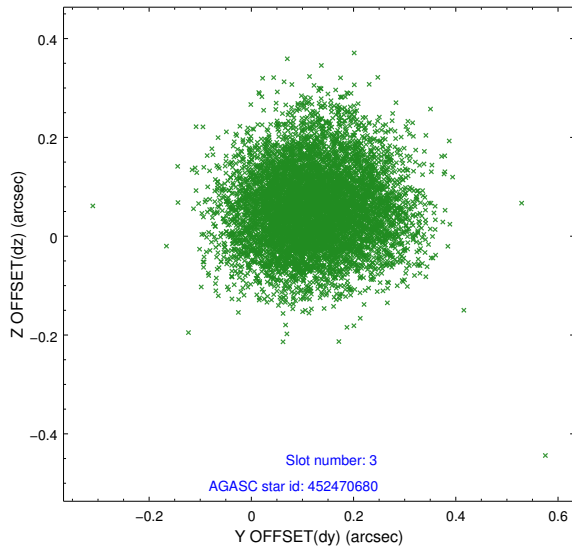


### Slot Statistics

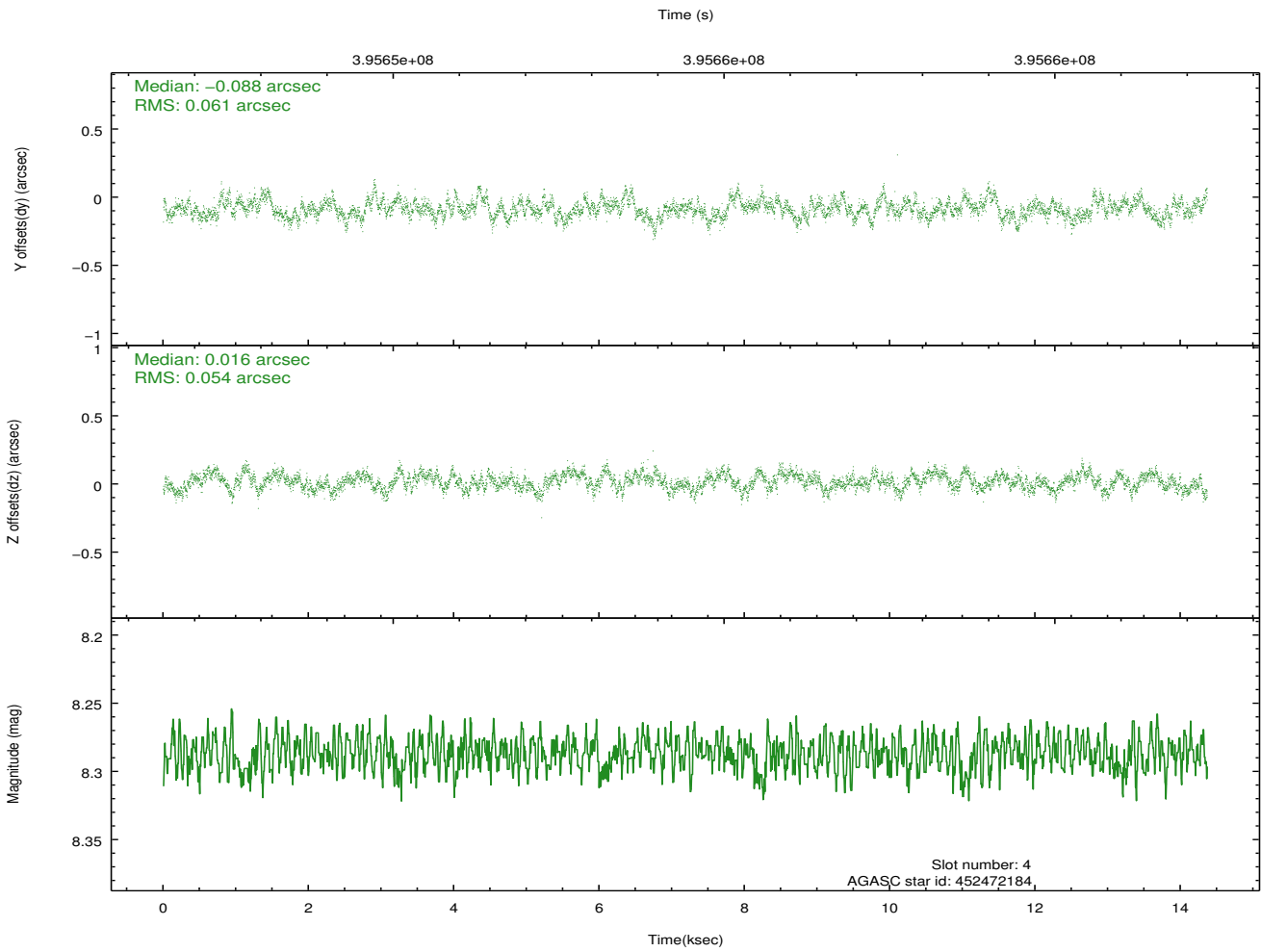
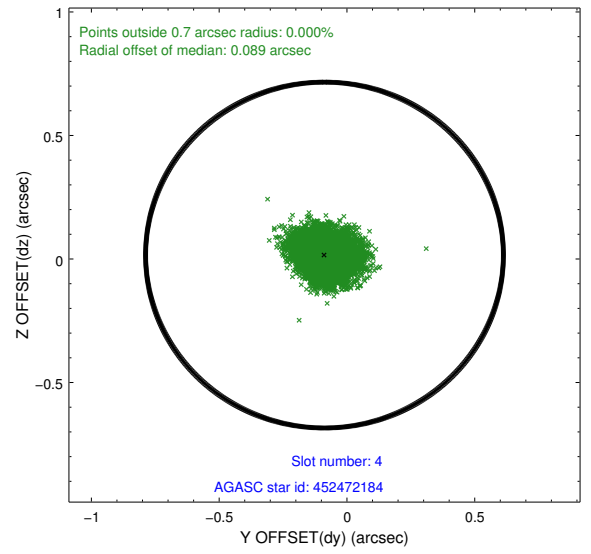
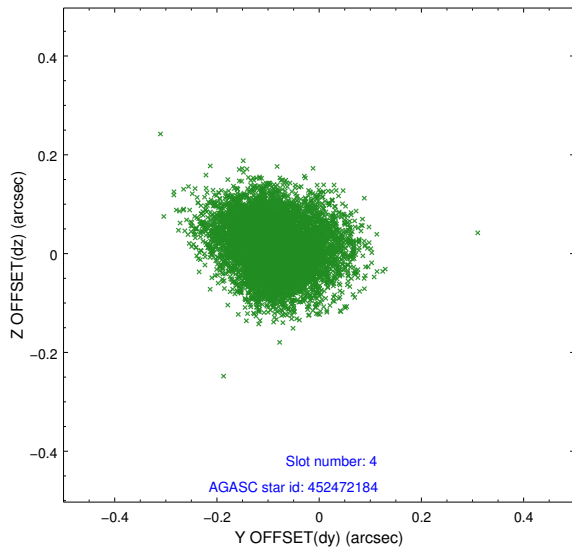
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	3504	-0.143	-0.101	0.009	0.017	0.000000	0.000000	-767.66	-1736.89
1	FID	ACIS-S-4	7.05	3503	0.150	0.075	0.009	0.015	0.000000	0.000000	2145.81	171.36
2	FID	ACIS-S-6	7.20	3504	-0.035	0.033	0.007	0.013	0.000000	0.000000	394.90	809.12
3	GUIDE	452470680	9.60	7004	0.119	0.055	0.126	0.200	179.798599	48.009750	2043.83	-1039.50
4	GUIDE	452472184	8.29	7005	-0.088	0.016	0.087	0.139	179.500347	48.203455	1297.40	-1706.59
5	GUIDE	452857680	9.56	6988	0.009	0.038	0.124	0.197	180.852886	48.076267	1966.33	1508.22
6	GUIDE	452860520	9.83	6990	-0.073	-0.224	0.134	0.217	180.370267	48.460337	516.68	436.81
7	GUIDE	453128632	9.88	6978	0.022	0.120	0.172	0.276	180.016299	48.884364	-1061.71	-303.12

## 2.4 Star Slots

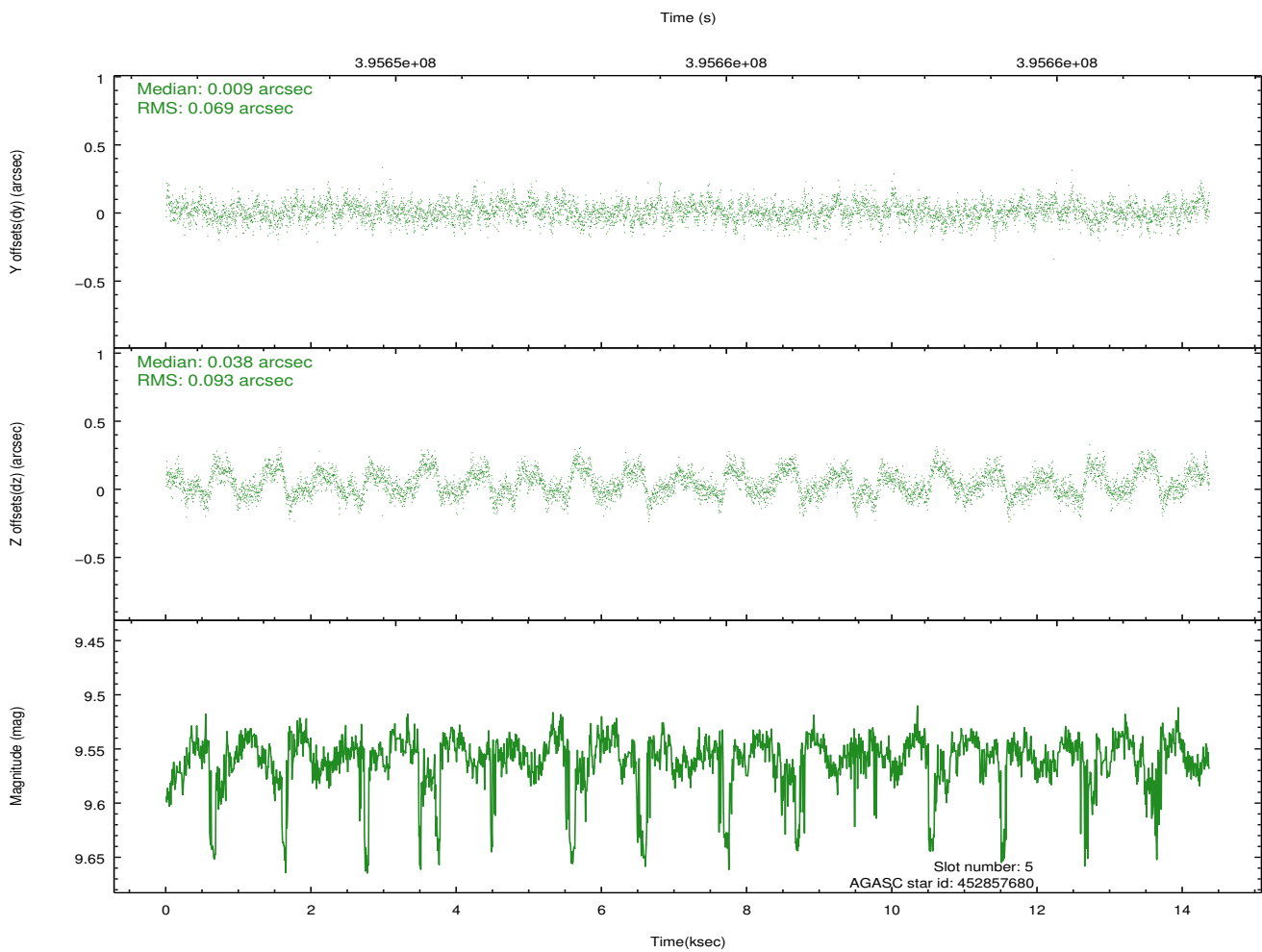
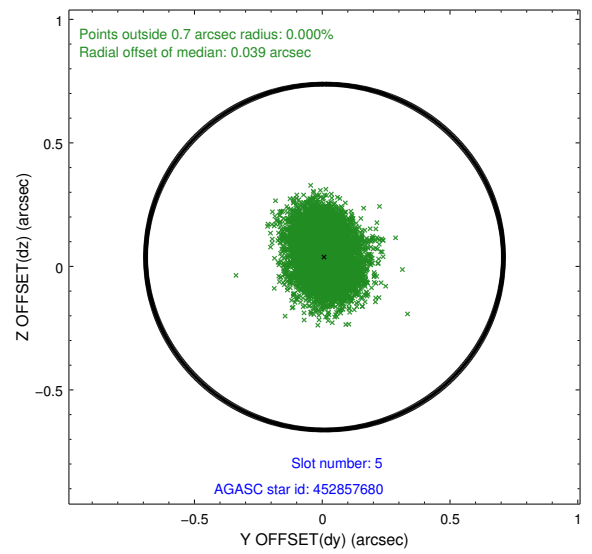
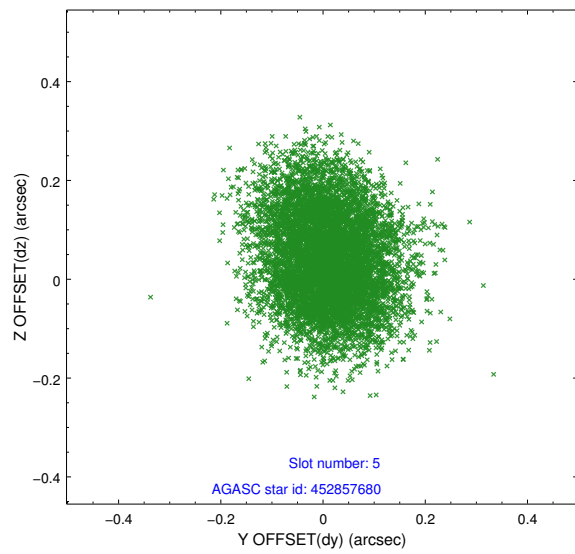
### 2.4.1 Slot 3



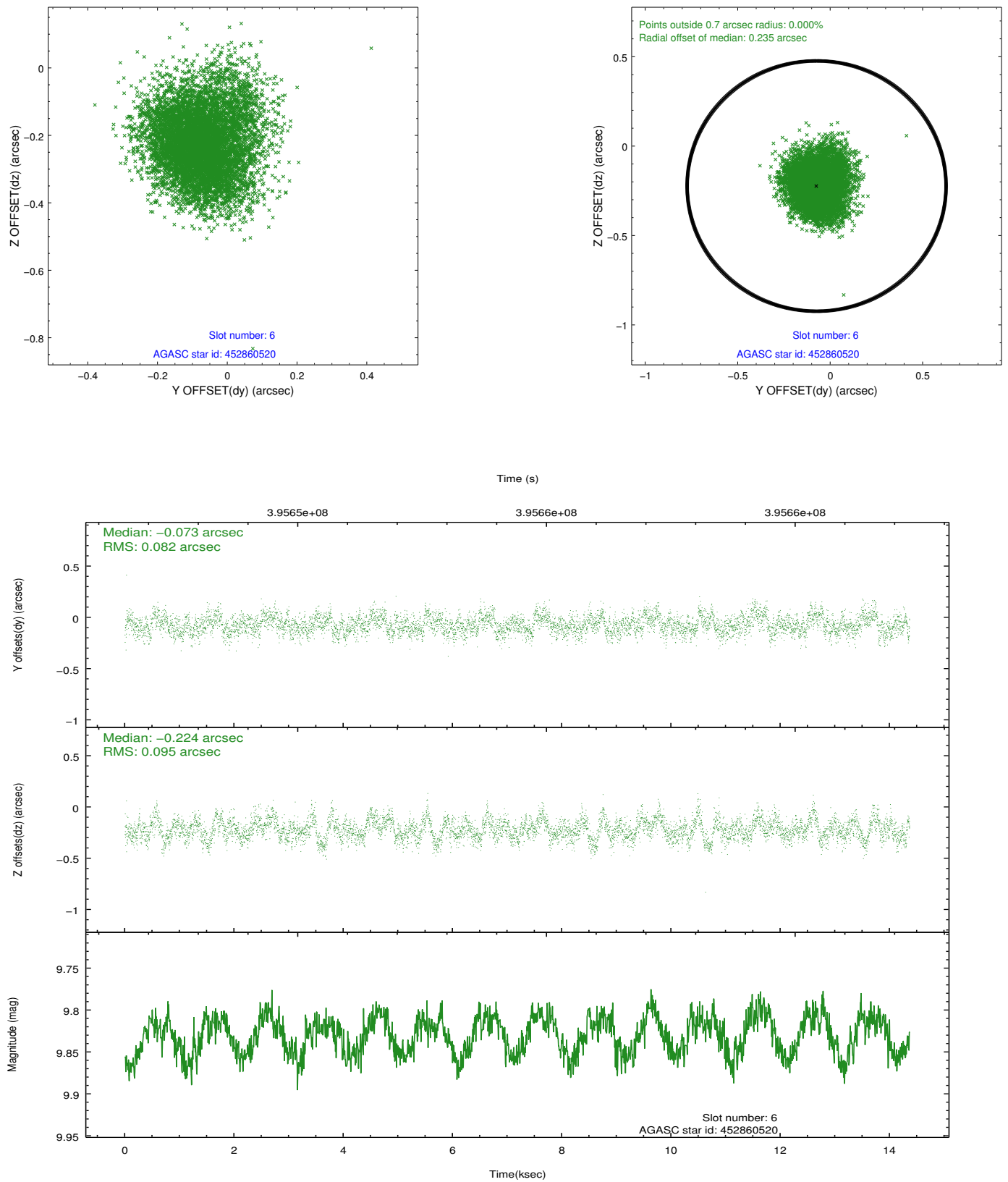
## 2.4.2 Slot 4



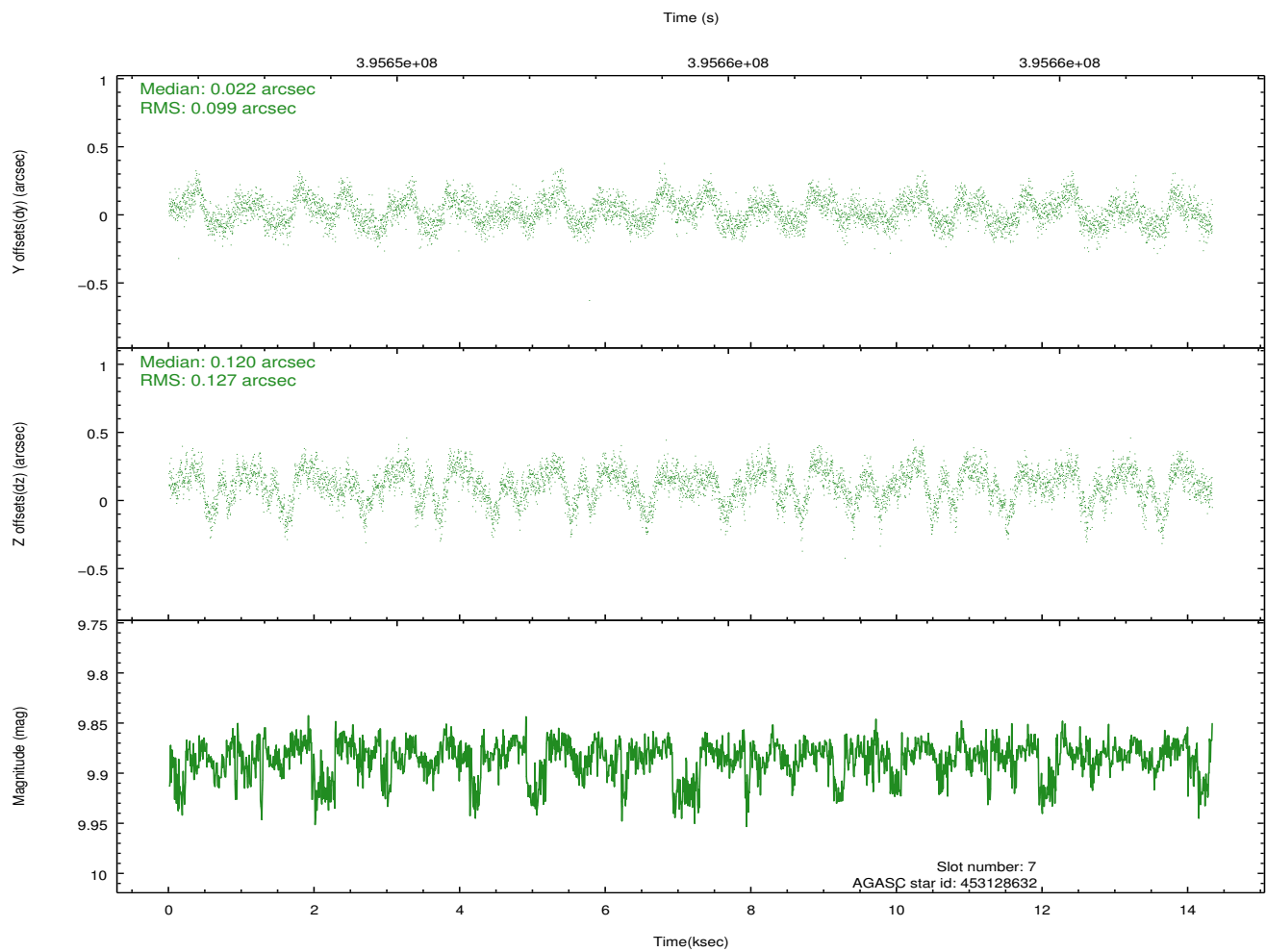
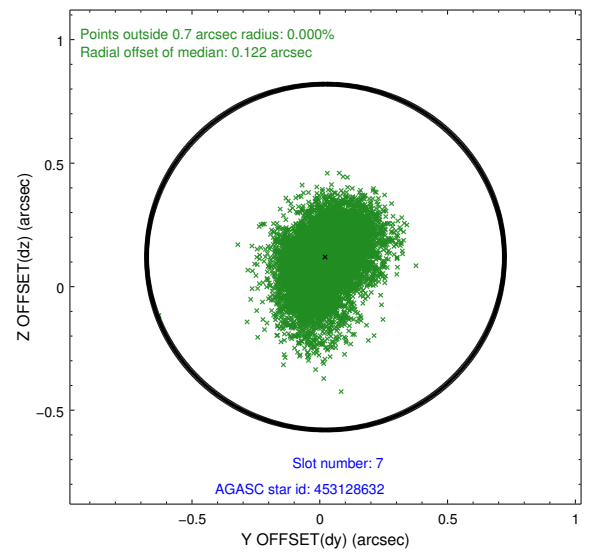
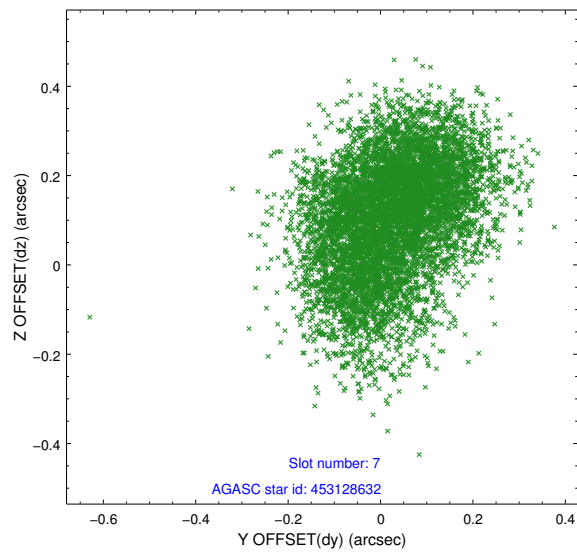
### 2.4.3 Slot 5



## 2.4.4 Slot 6

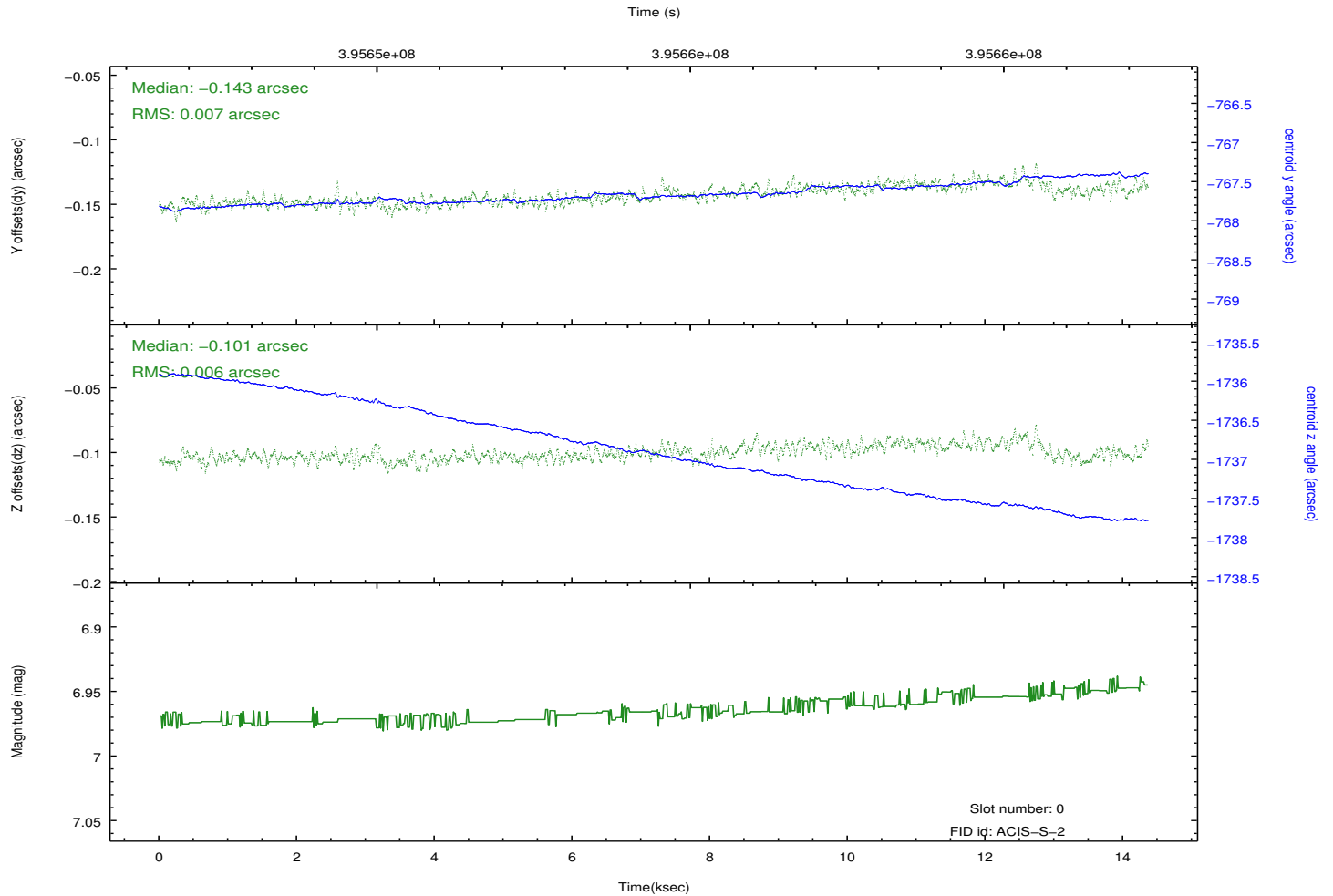
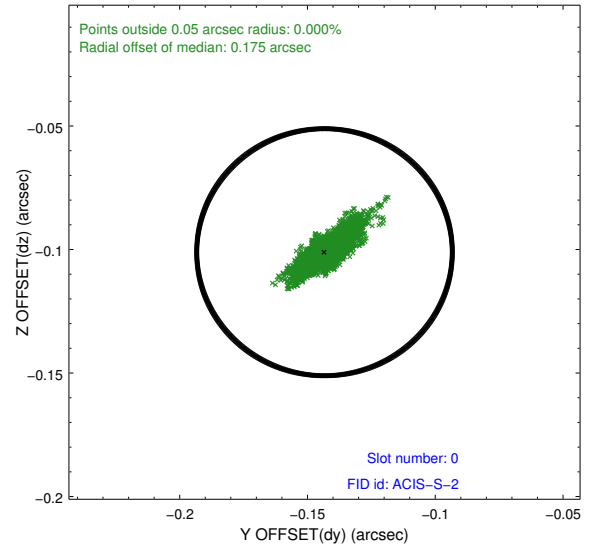
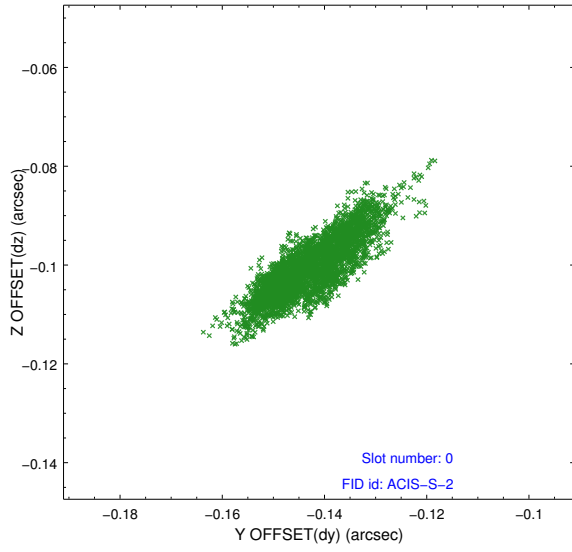


## 2.4.5 Slot 7

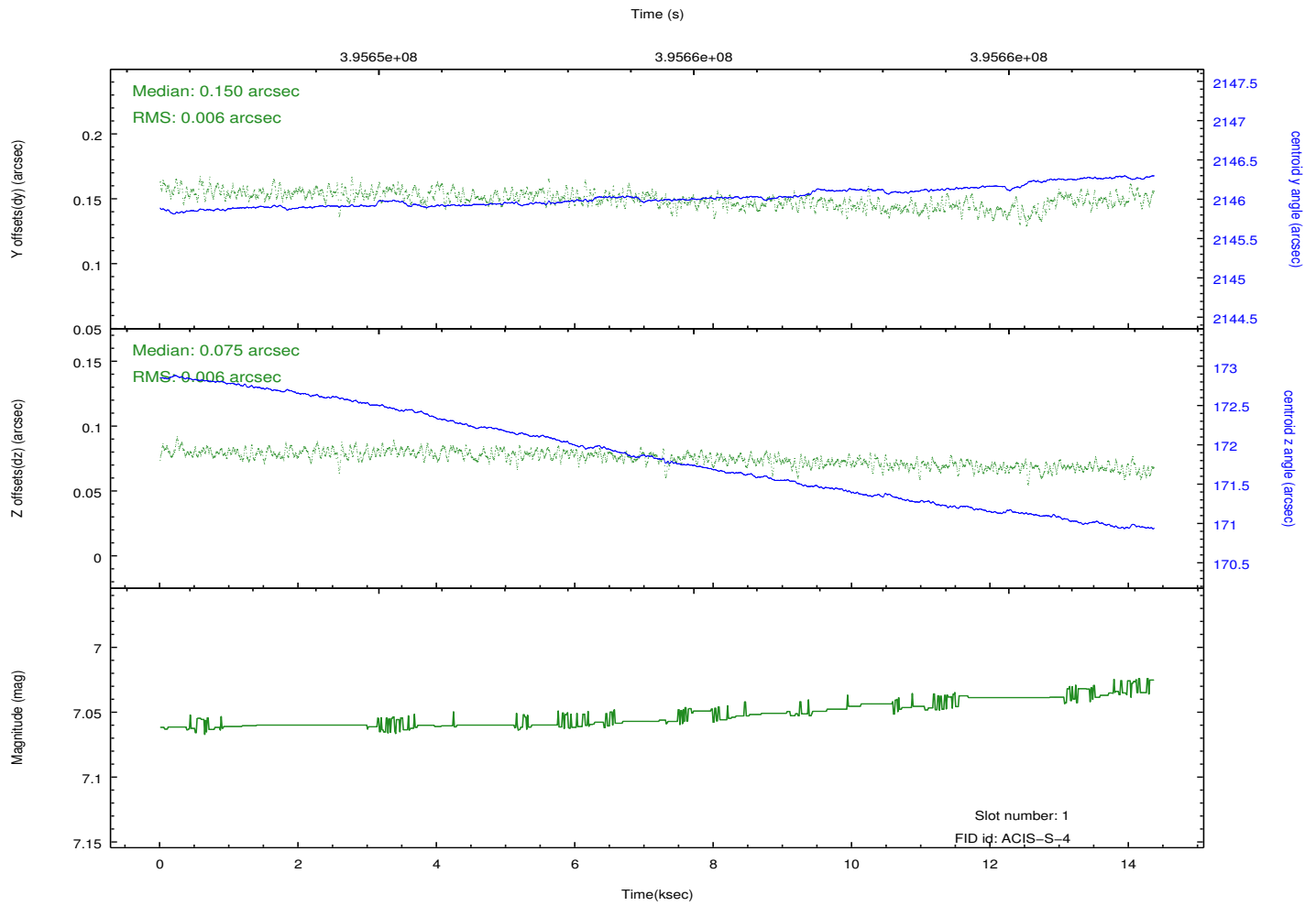
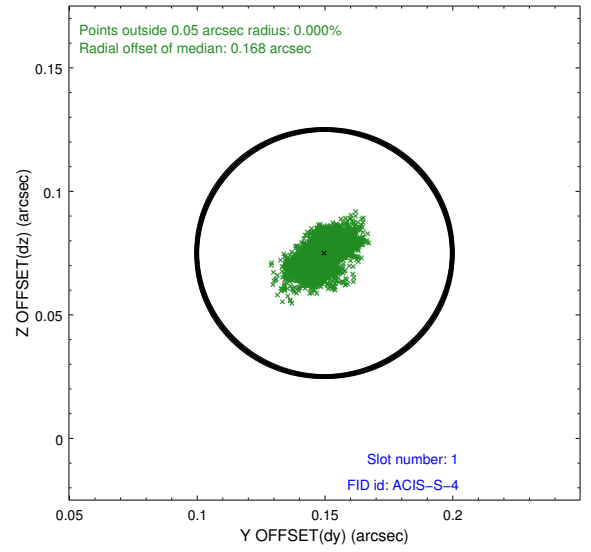
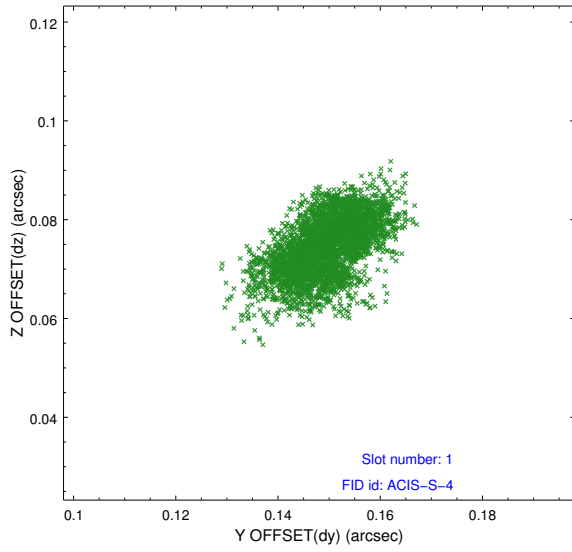


## 2.5 FID Slots

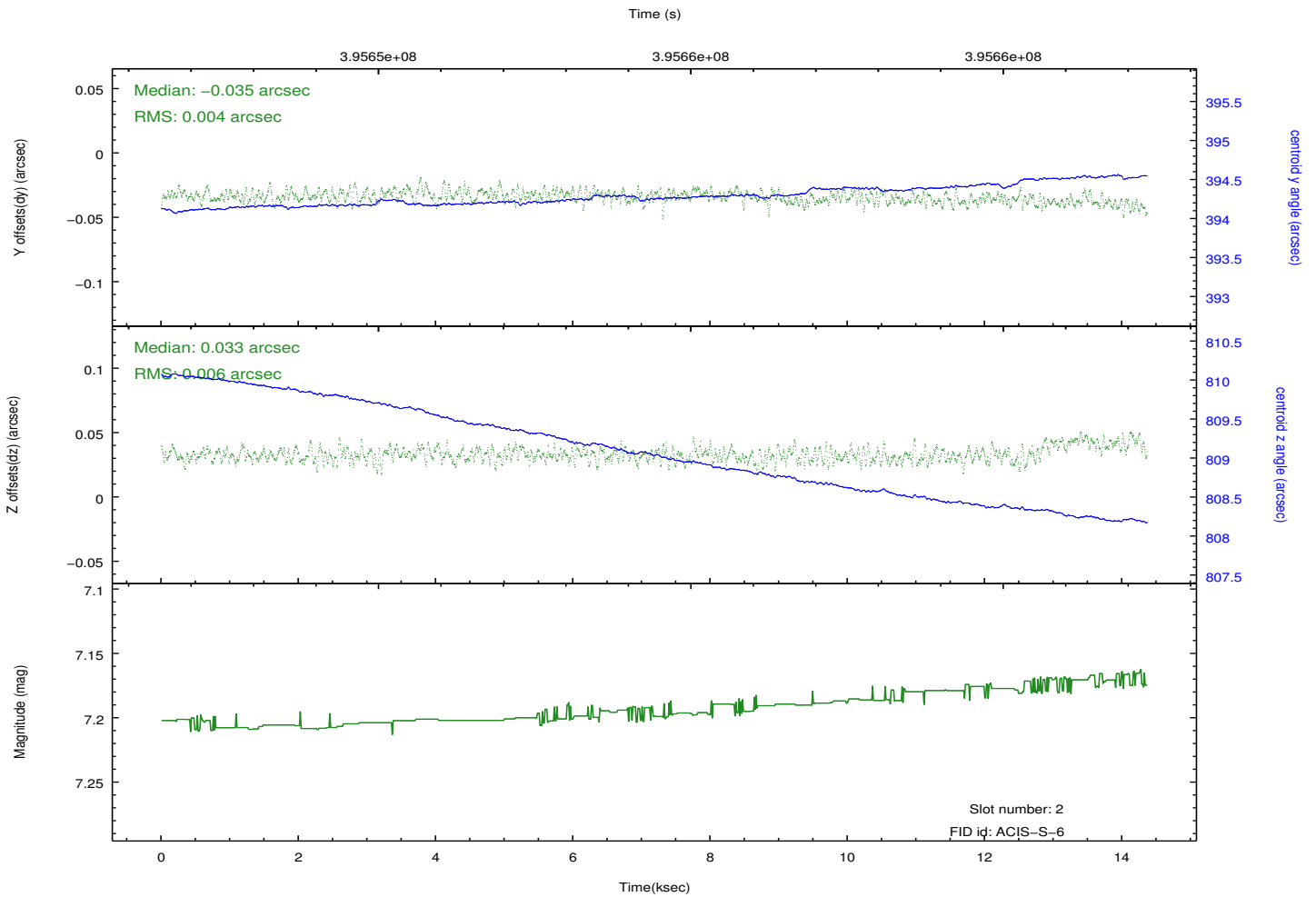
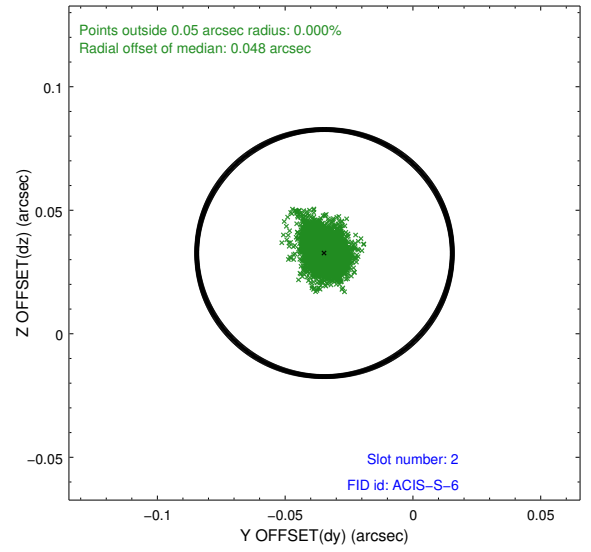
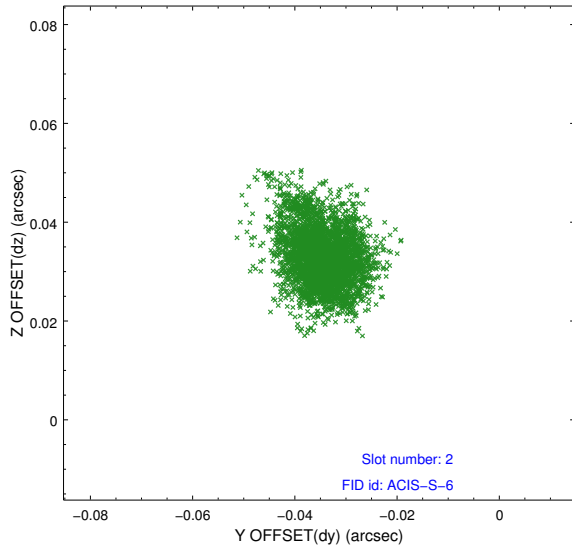
### 2.5.1 Slot 0



## 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)	2012.07.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.231999858618

## A.2 Comments

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(179.87479,48.68059), (179.86840,48.68029), (179.87500,48.62046), (179.88093,48.62484)