

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15497 - L2 Version 2  
Chandra X-Ray Center

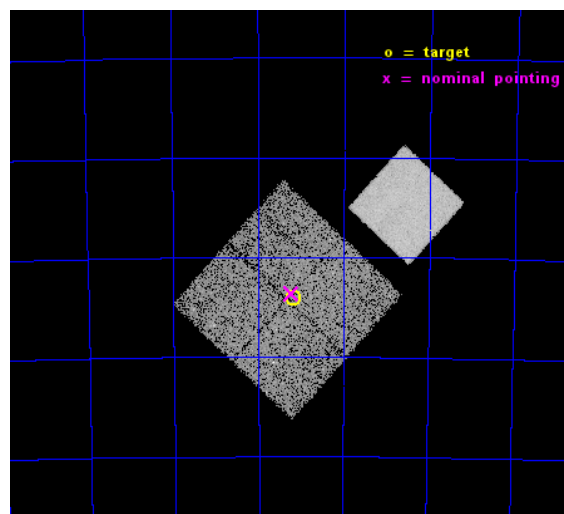
L2 Processing Date : Dec 6 2014

## 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

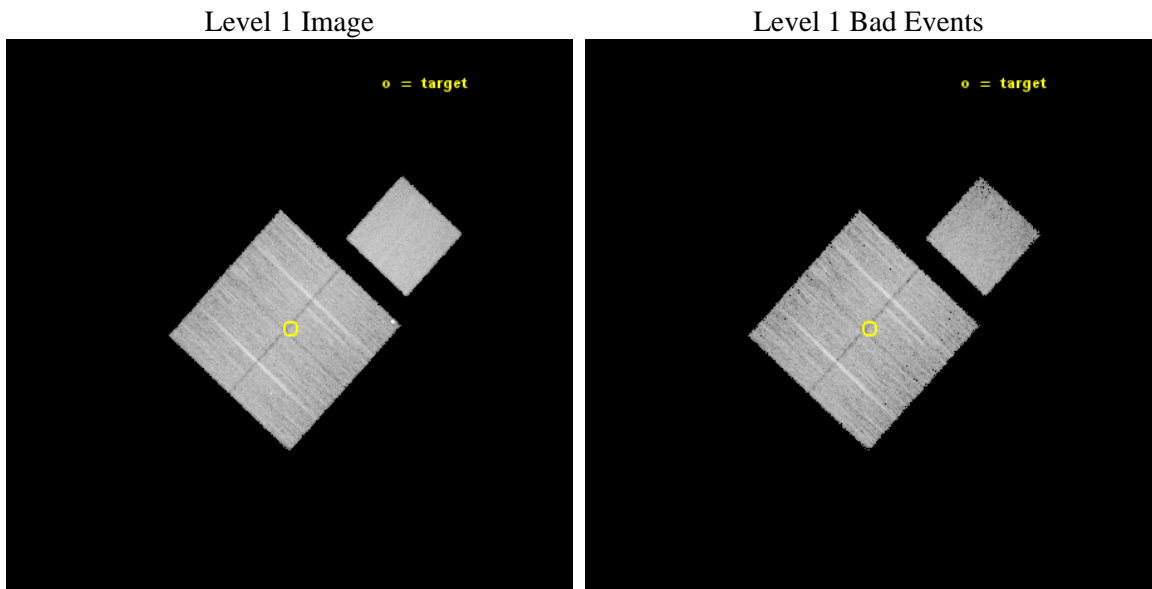
seq_num	401497	Sequence number
obs_id	15497	Observation id
title	The Small Magellanic Cloud - A Case Study of X-ray Populations at Low Metallicity	Proposal title
observer	Dr Andreas Zezas	Principal investigator
object	SMC Deep Field 01	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	17.792083	Observer's specified target RA [deg]
dec_targ	-72.734306	Observer's specified target Dec [deg]
ra_nom	17.805662751368	Nominal RA [deg]
dec_nom	-72.727305183123	Nominal Dec [deg]
roll_nom	42.721644130383	Nominal Roll [deg]
revision	2	Processing version of data
ontime	18069.900138974	Sum of GTIs [s]
livetime	17833.803590792	Livetime [s]
ontime0	18069.900138974	Sum of GTIs [s]
ontime1	18069.900138974	Sum of GTIs [s]
ontime2	18069.900138974	Sum of GTIs [s]
ontime3	18069.900138974	Sum of GTIs [s]
ontime7	18069.900138974	Sum of GTIs [s]
l2events	73904	Number of level 2 events



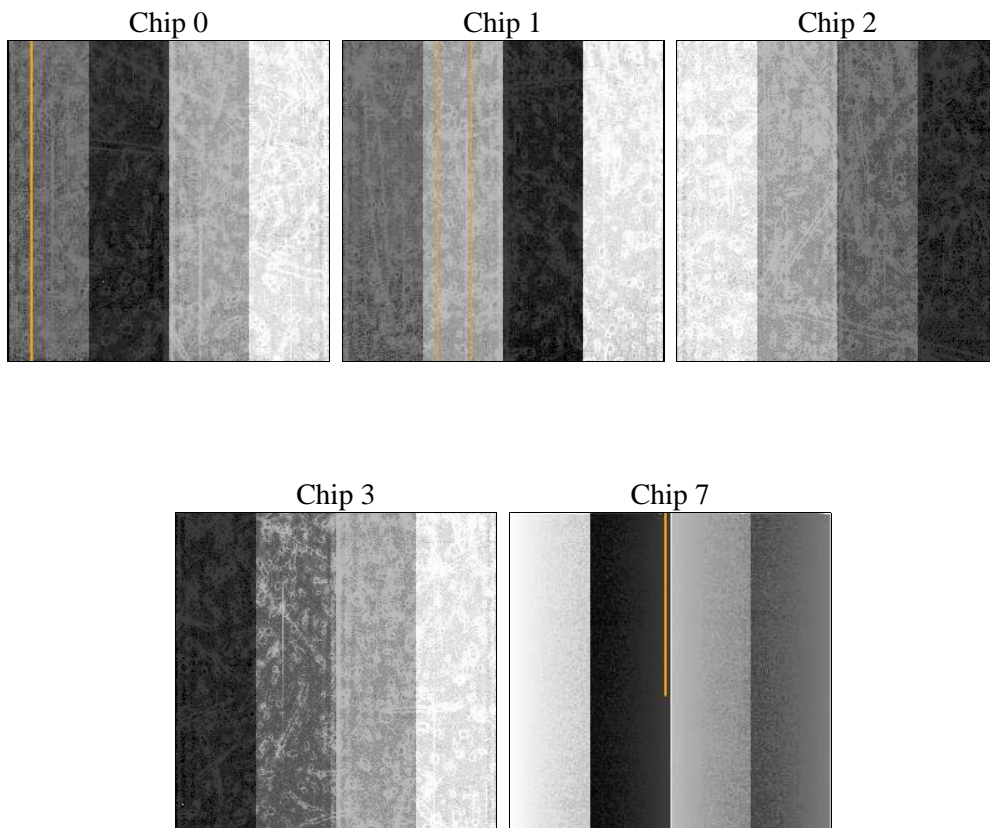
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	18069.900138974	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	18069.900138974	Sum of GTIs [s]
date	2014-12-06T08:41:28	Date and time of file creation	ontime1	18069.900138974	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	18069.900138974	Sum of GTIs [s]
			ontime3	18069.900138974	Sum of GTIs [s]
			ontime7	18069.900138974	Sum of GTIs [s]
			l1events	392870	Number of level 1 events

### 2.1.4 Events

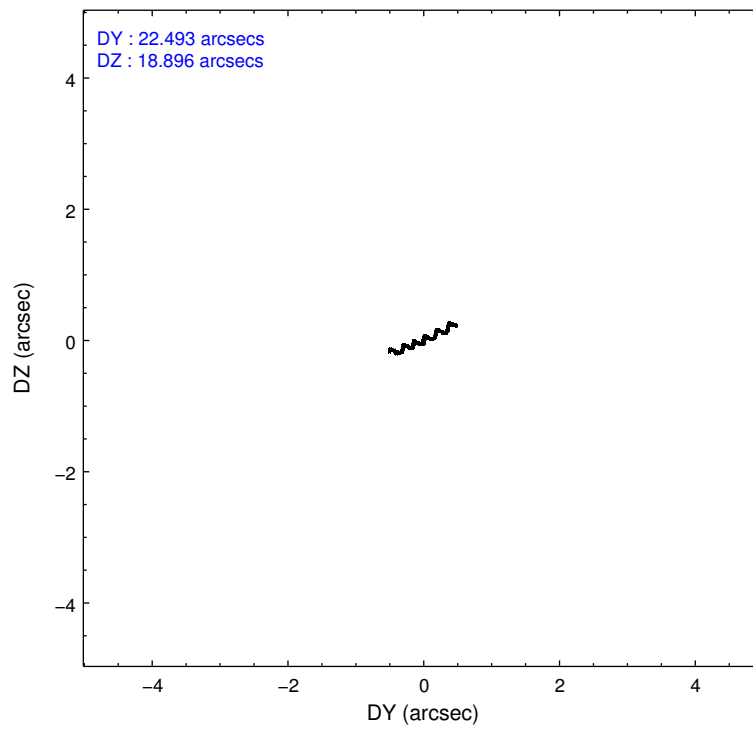
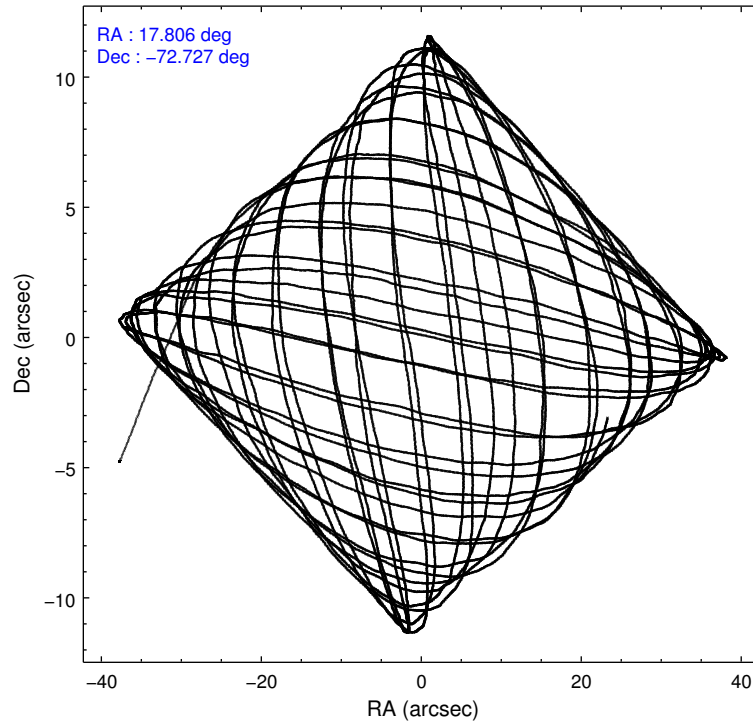
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	71692	73653	78333	74853	94339
rejected events	62314	63938	69156	64970	49632
rejected %	86%	86%	88%	86%	52%

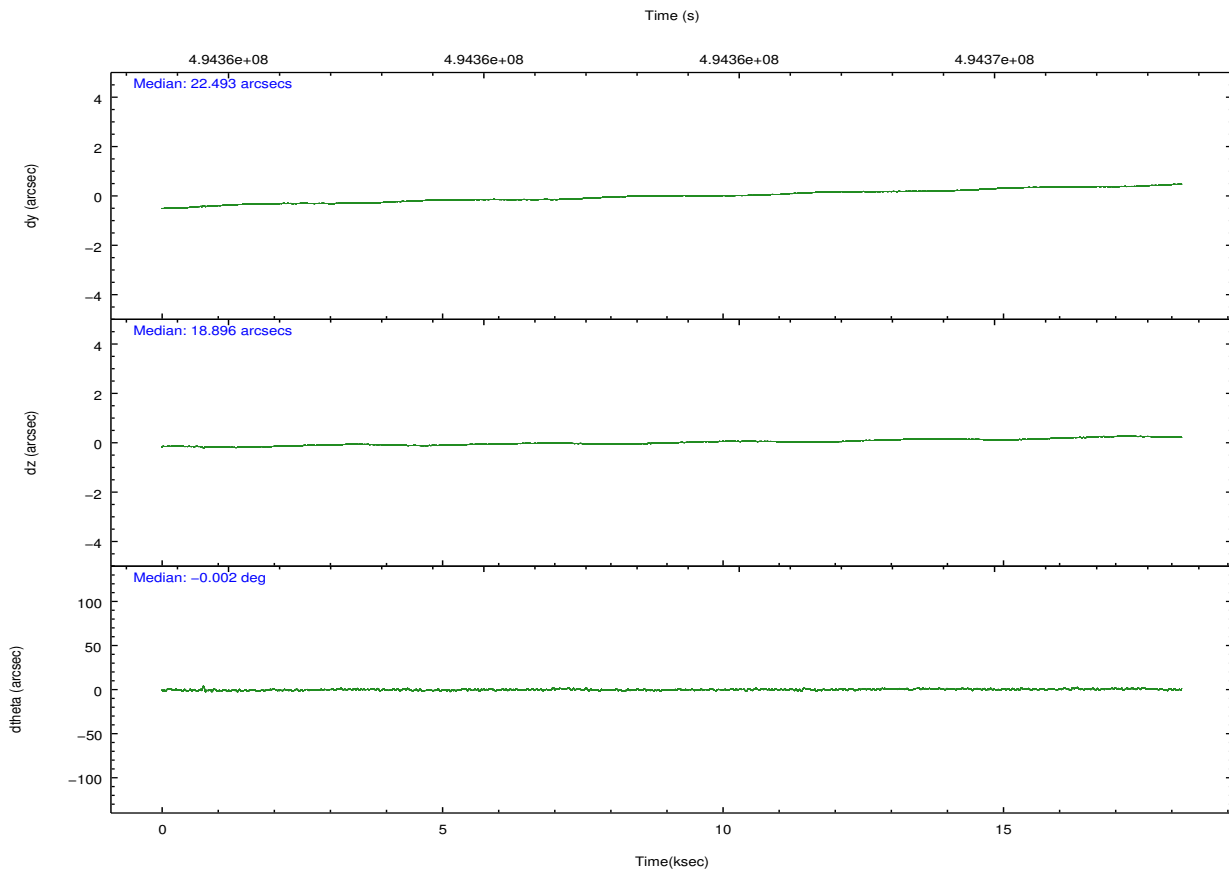
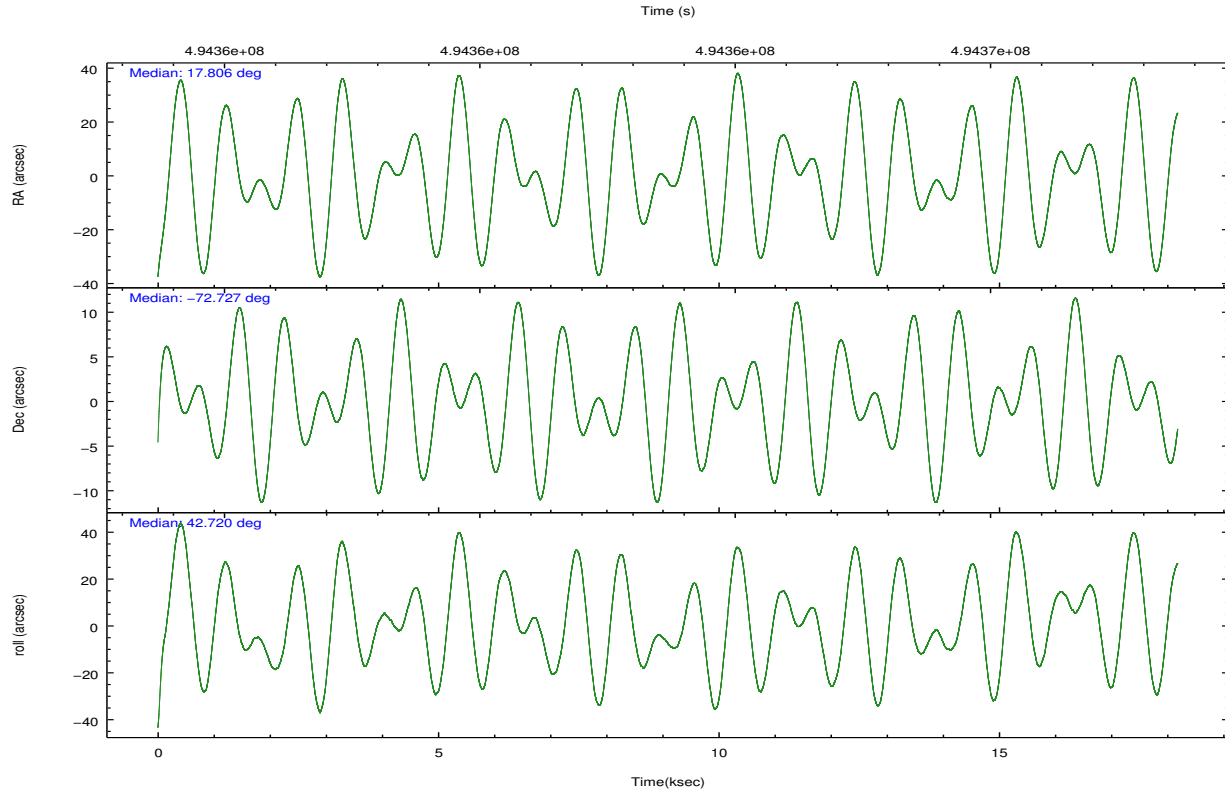
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	3293	3289	3441	4192	4375
	4%	4%	4%	5%	4%
grade 1 events	60	38	45	61	140
	0%	0%	0%	0%	0%
grade 2 events	2369	2223	2256	2079	9630
	3%	3%	2%	2%	10%
grade 3 events	993	1047	891	918	4066
	1%	1%	1%	1%	4%
grade 4 events	917	1023	938	915	3886
	1%	1%	1%	1%	4%
grade 5 events	3123	3376	2919	3600	9989
	4%	4%	3%	4%	10%
grade 6 events	1810	2135	1652	1781	22756
	2%	2%	2%	2%	24%
grade 7 events	59127	60522	66191	61307	39497
	82%	82%	84%	81%	41%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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
[deg] Pointing RA	17.778492	17.80566275136817	Subarray requested	NONE	NONE
[deg] Pointing Dec	-72.753593	-72.72730518312305	Alternating exposures requested	N	N
[deg] Pointing Roll	42.487026	42.7216441303826	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	494354768.184000	494353712.97792			
Observation start date	2013-08-31T16:45:01	2013-08-31T16:28:32			
[s] Observation end time (MET)	494372768.184000	494373540.0665			
Observation end date	2013-08-31T21:45:01	2013-08-31T21:59:00			
Read mode	TIMED	TIMED			

## 2.3 Aspect





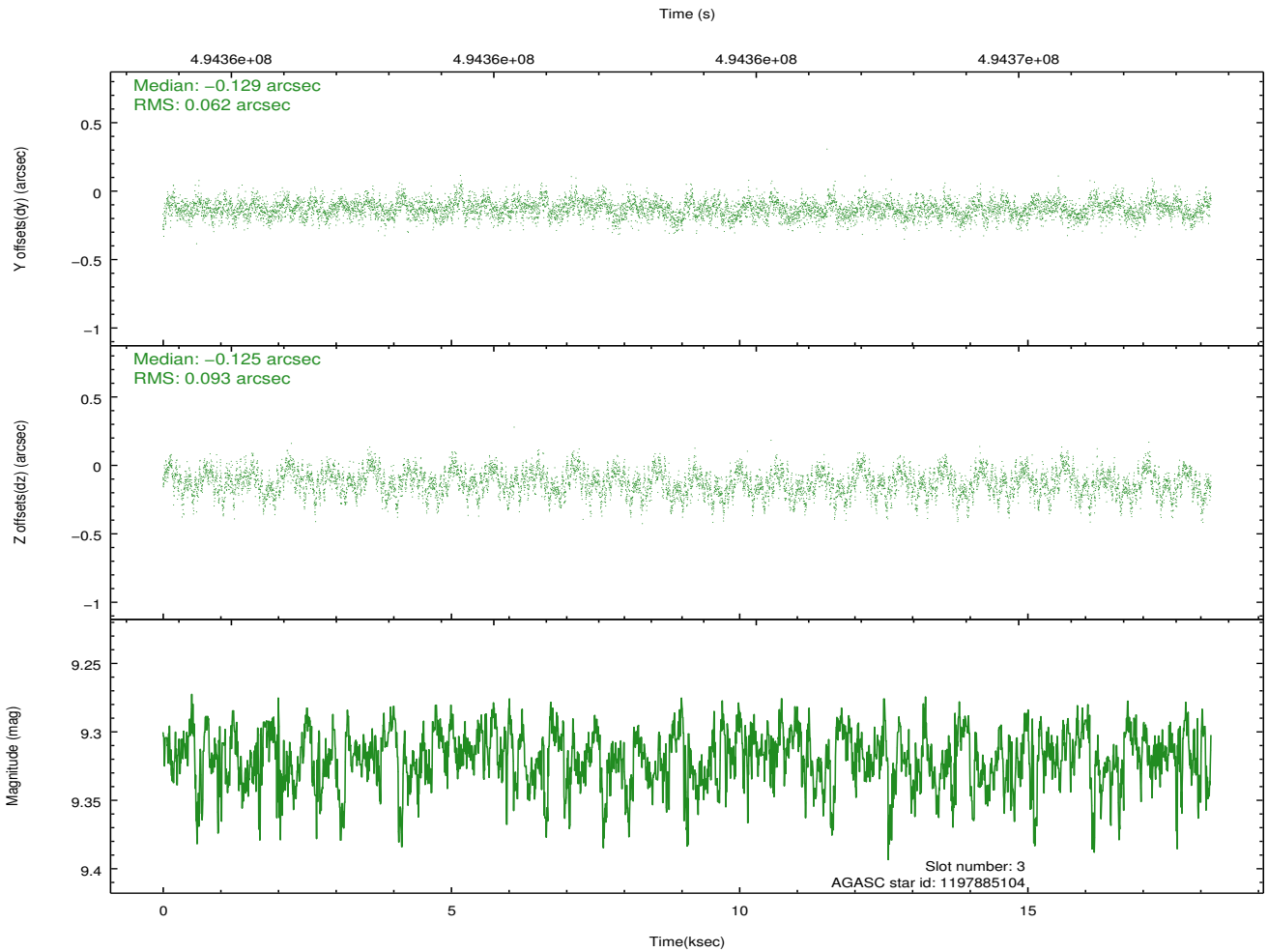
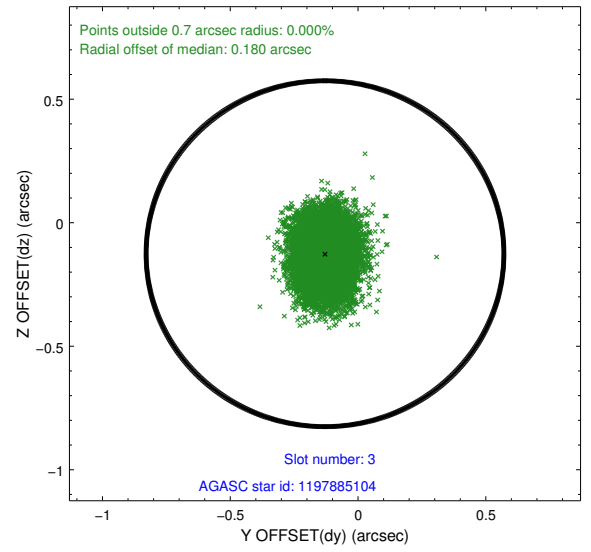
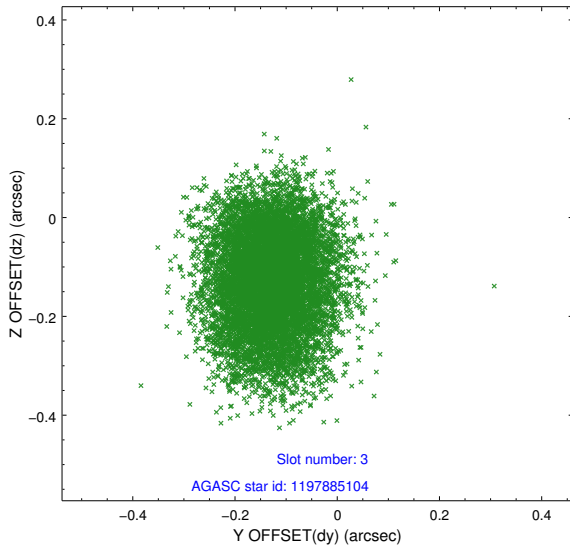
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.09	4435	-0.124	0.002	0.008	0.013	0.000000	0.000000	916.64	-842.61
1	FID		ACIS-I-4	7.03	4435	0.149	0.097	0.008	0.013	0.000000	0.000000	2137.08	1057.18
2	FID		ACIS-I-6	7.09	4435	-0.122	-0.034	0.009	0.015	0.000000	0.000000	382.83	1699.49
3	GUIDE	used	1197885104	9.32	8783	-0.129	-0.125	0.120	0.195	17.845067	-72.189368	1424.99	1448.03
4	GUIDE	used	1198189696	7.36	8865	-0.120	-0.162	0.082	0.139	15.223750	-72.697522	-1919.35	1952.66
5	GUIDE	used	1198282744	9.00	8841	0.206	0.197	0.090	0.145	17.028326	-73.013356	-1216.65	-160.16
6	GUIDE	used	1198283128	7.96	8858	-0.139	-0.270	0.060	0.098	17.272580	-72.642428	-132.06	660.19
7	GUIDE	used	1198273408	9.29	8825	0.173	0.364	0.132	0.215	17.532323	-73.621495	-2294.38	-2135.40

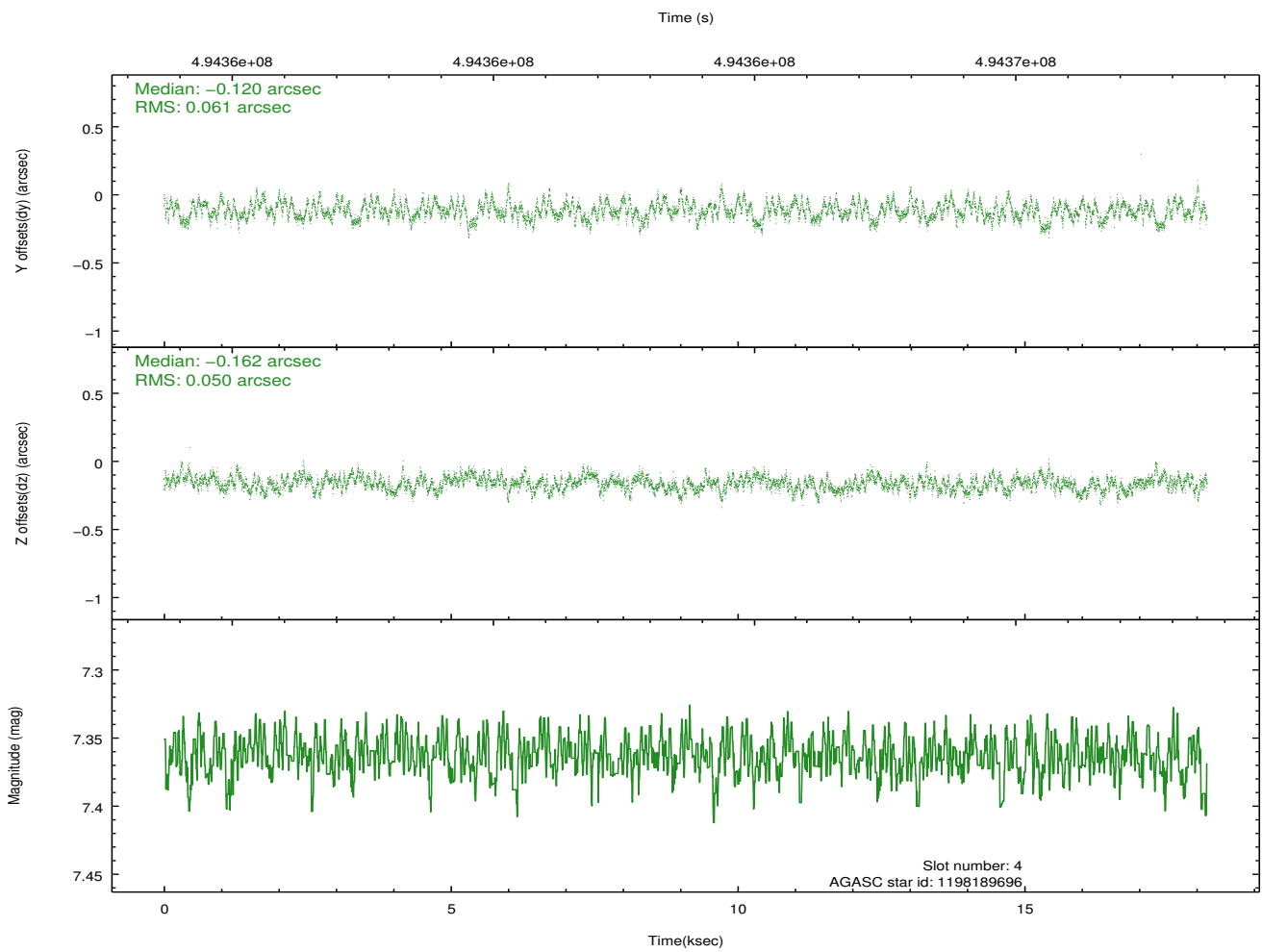
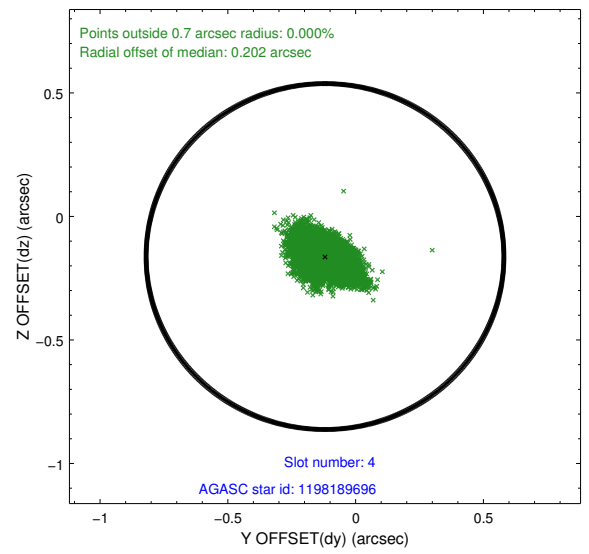
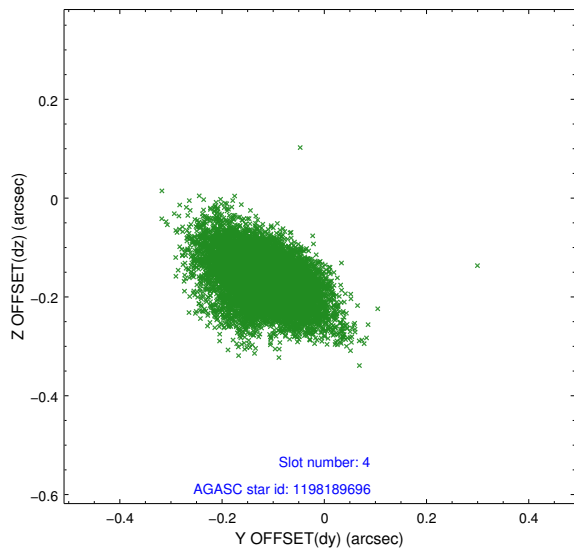
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## 2.4 Star Slots

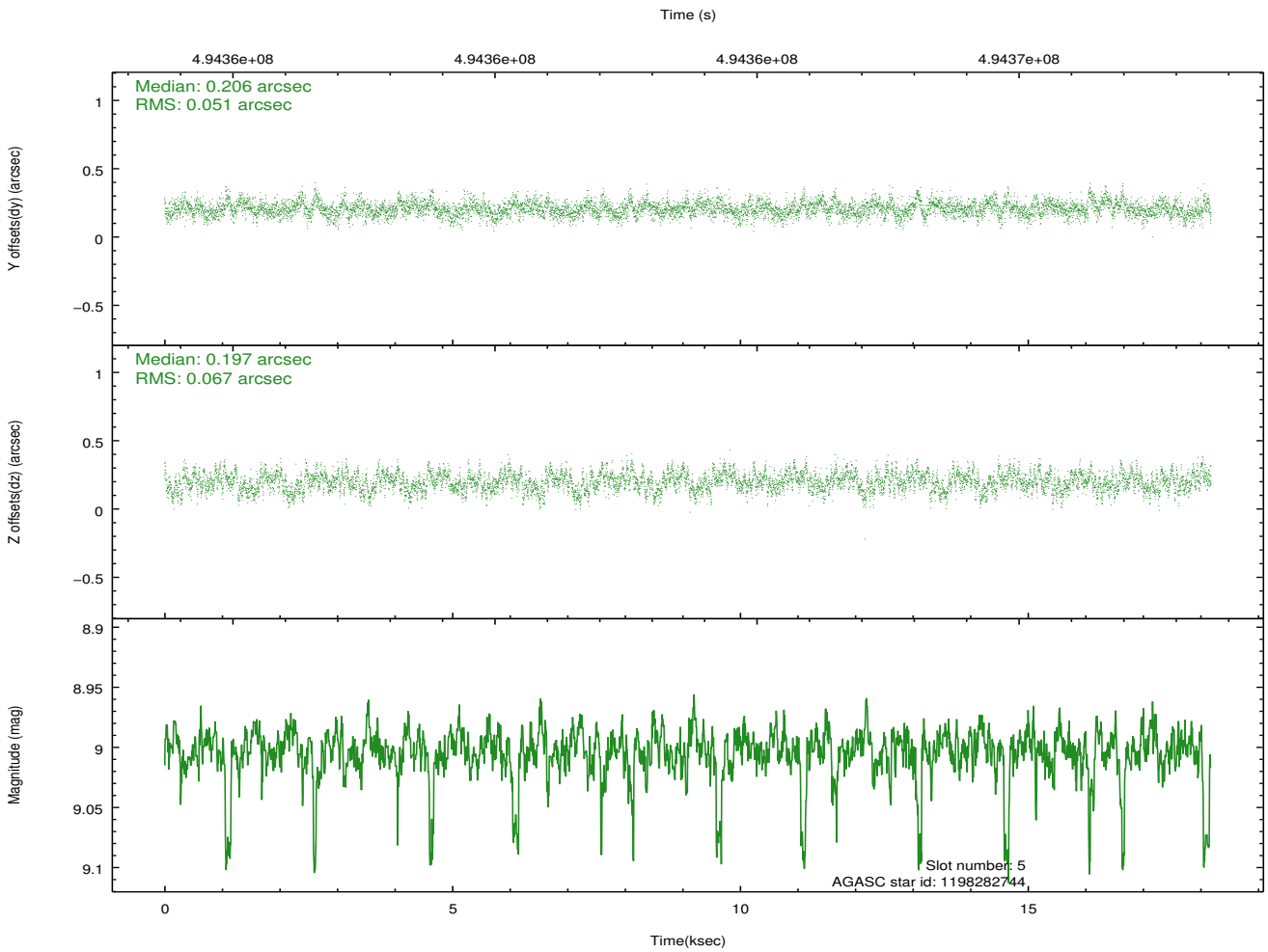
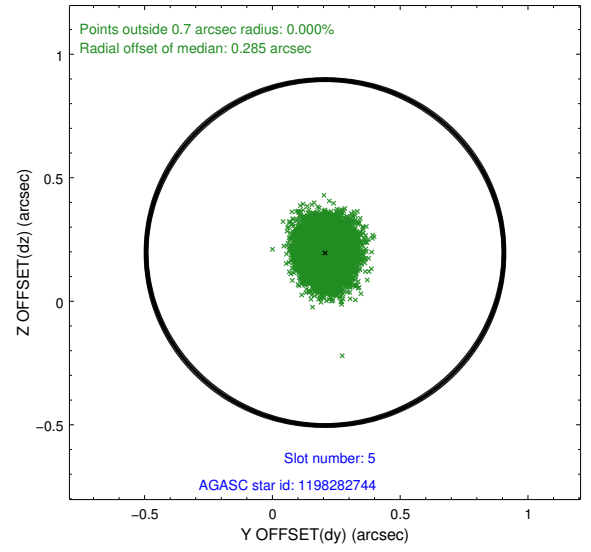
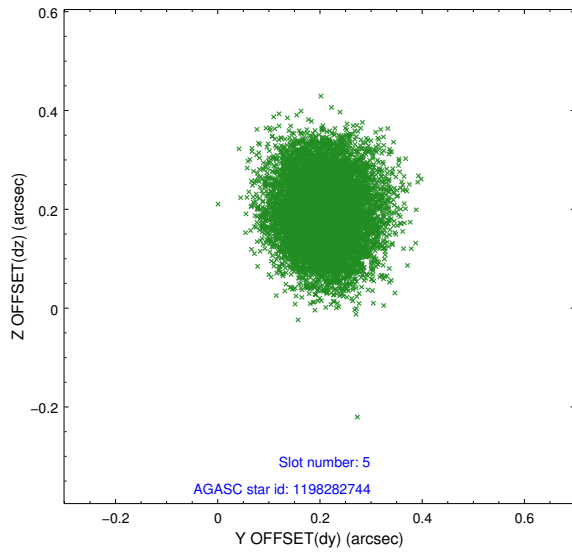
### 2.4.1 Slot 3



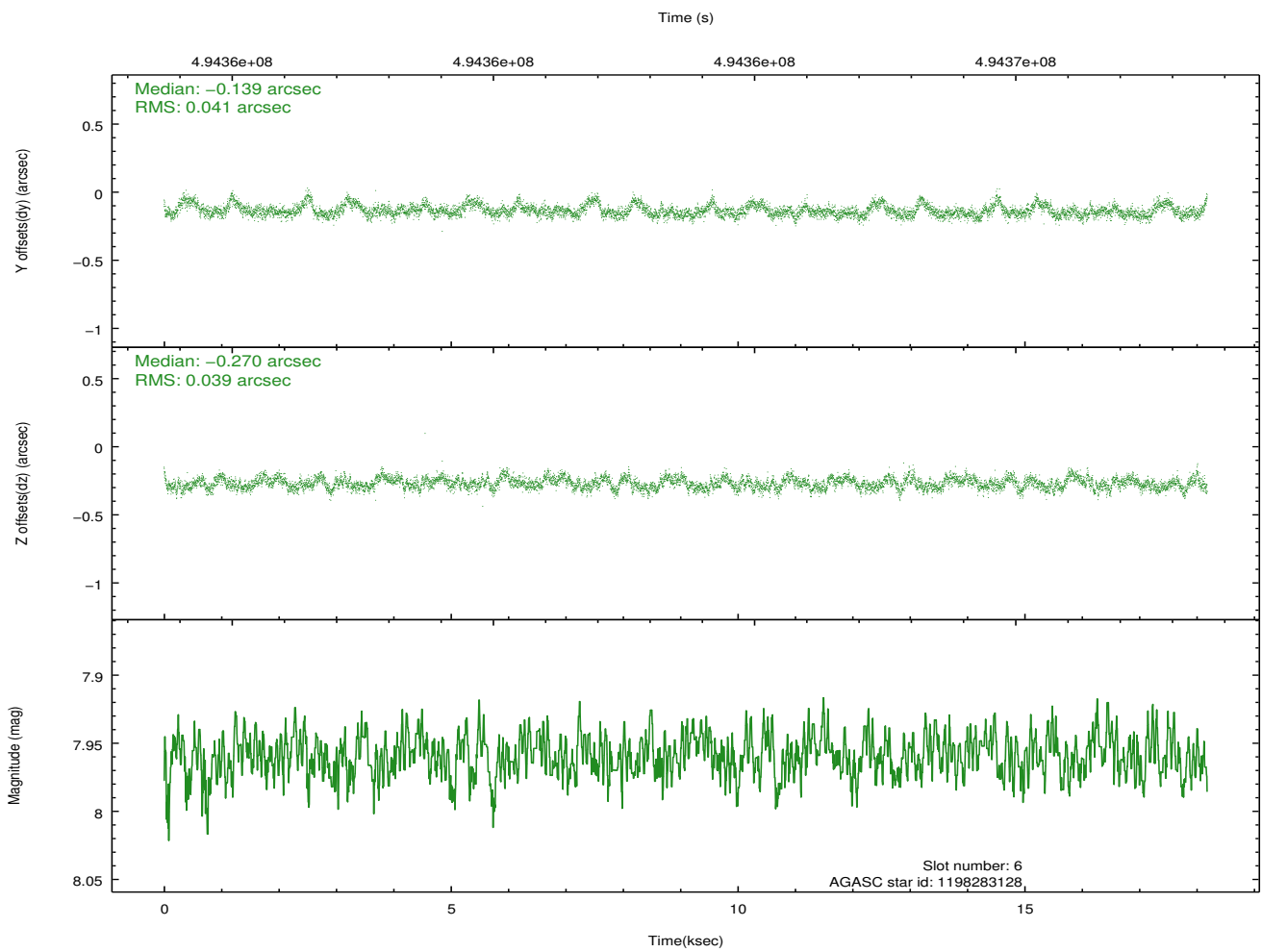
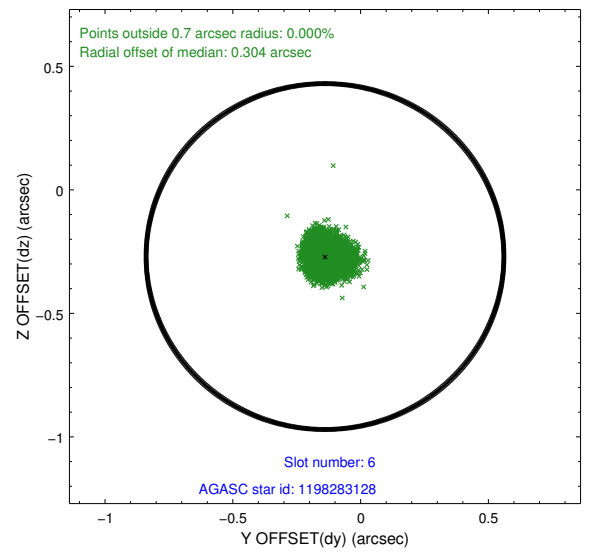
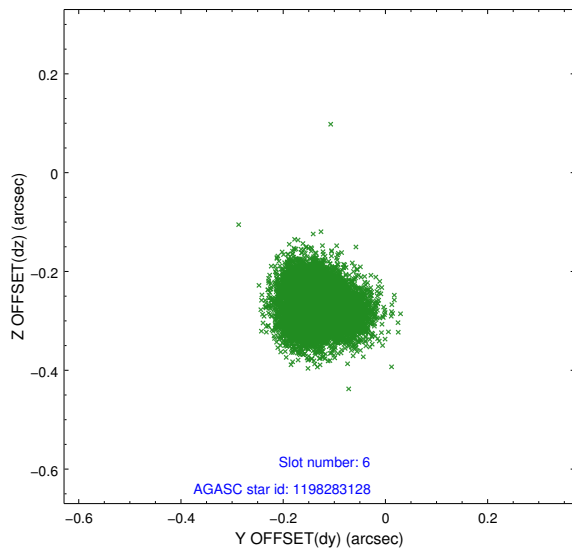
## 2.4.2 Slot 4



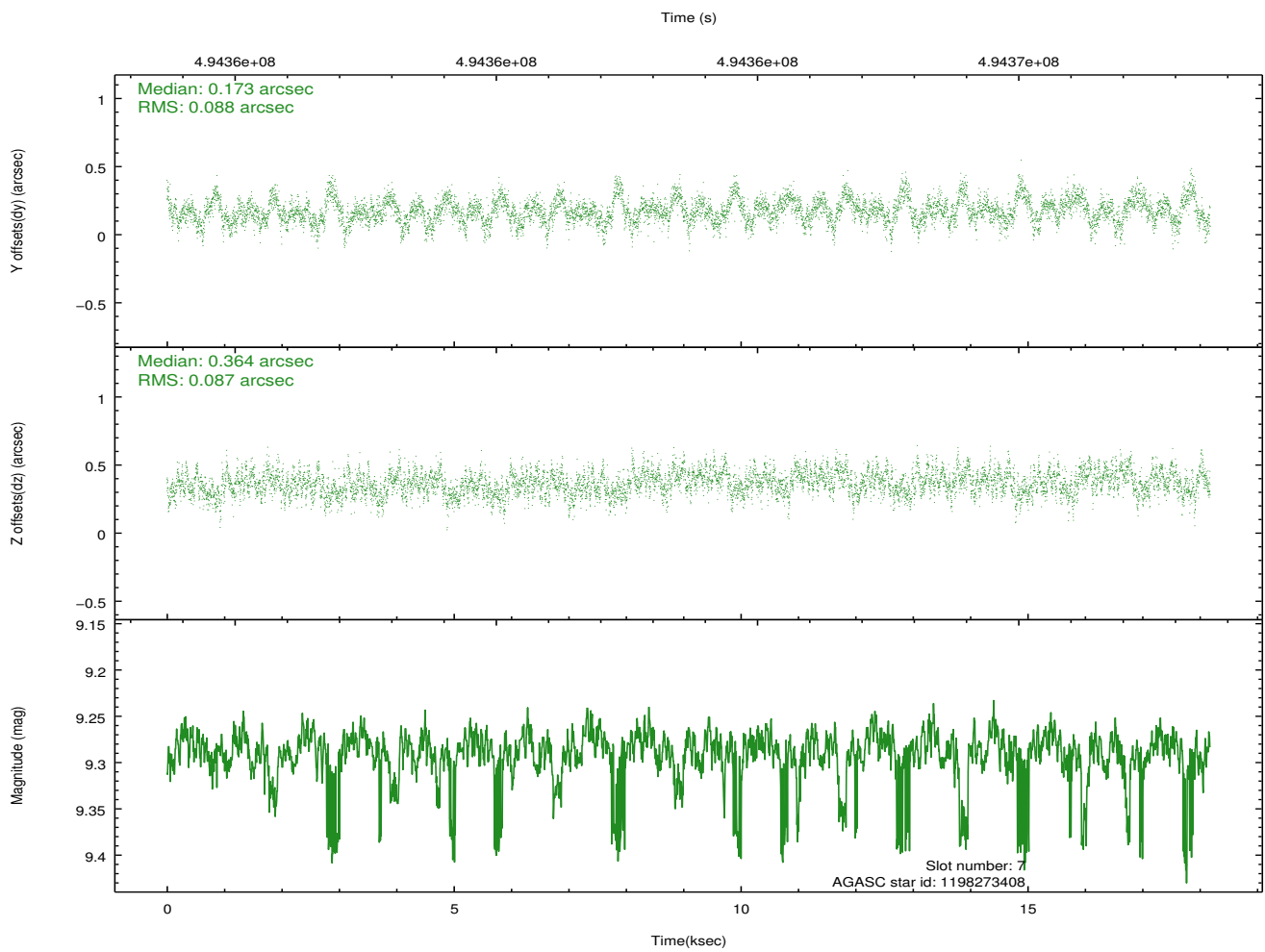
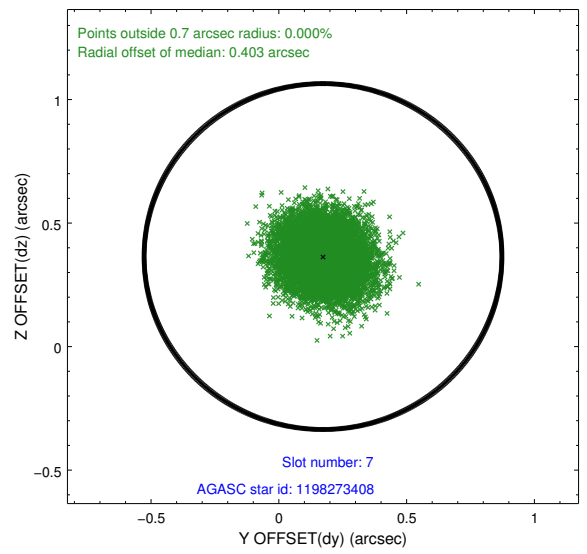
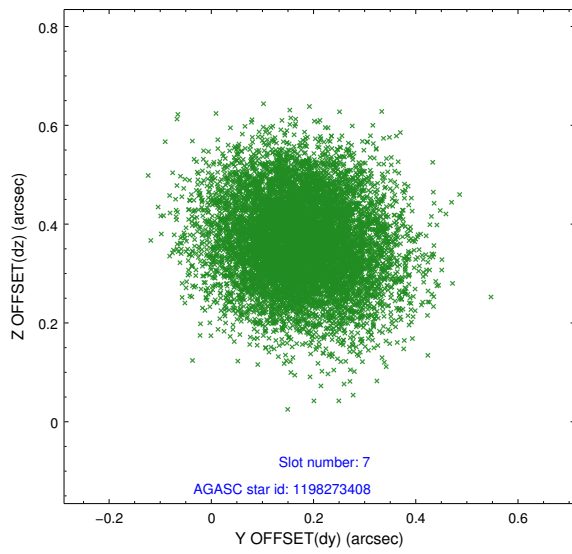
### 2.4.3 Slot 5



## 2.4.4 Slot 6

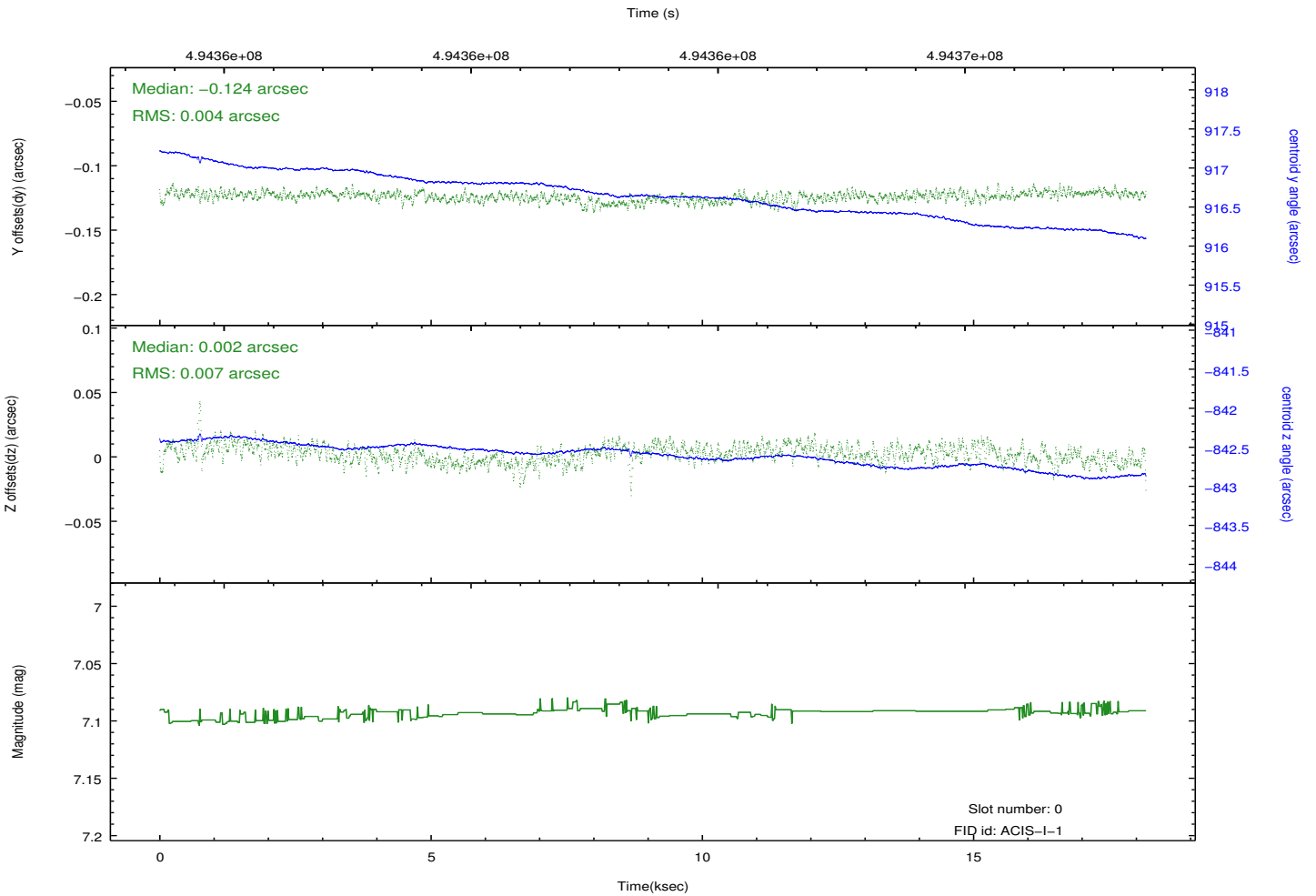
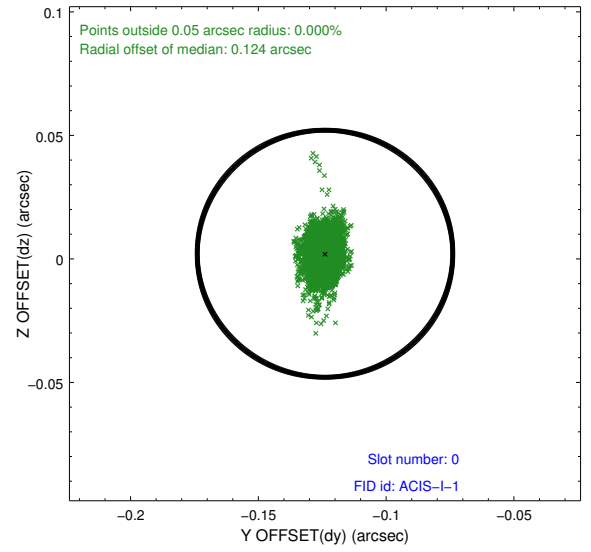
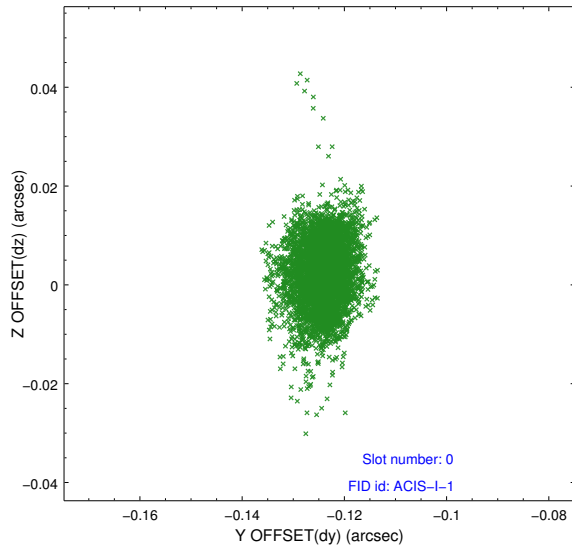


## 2.4.5 Slot 7

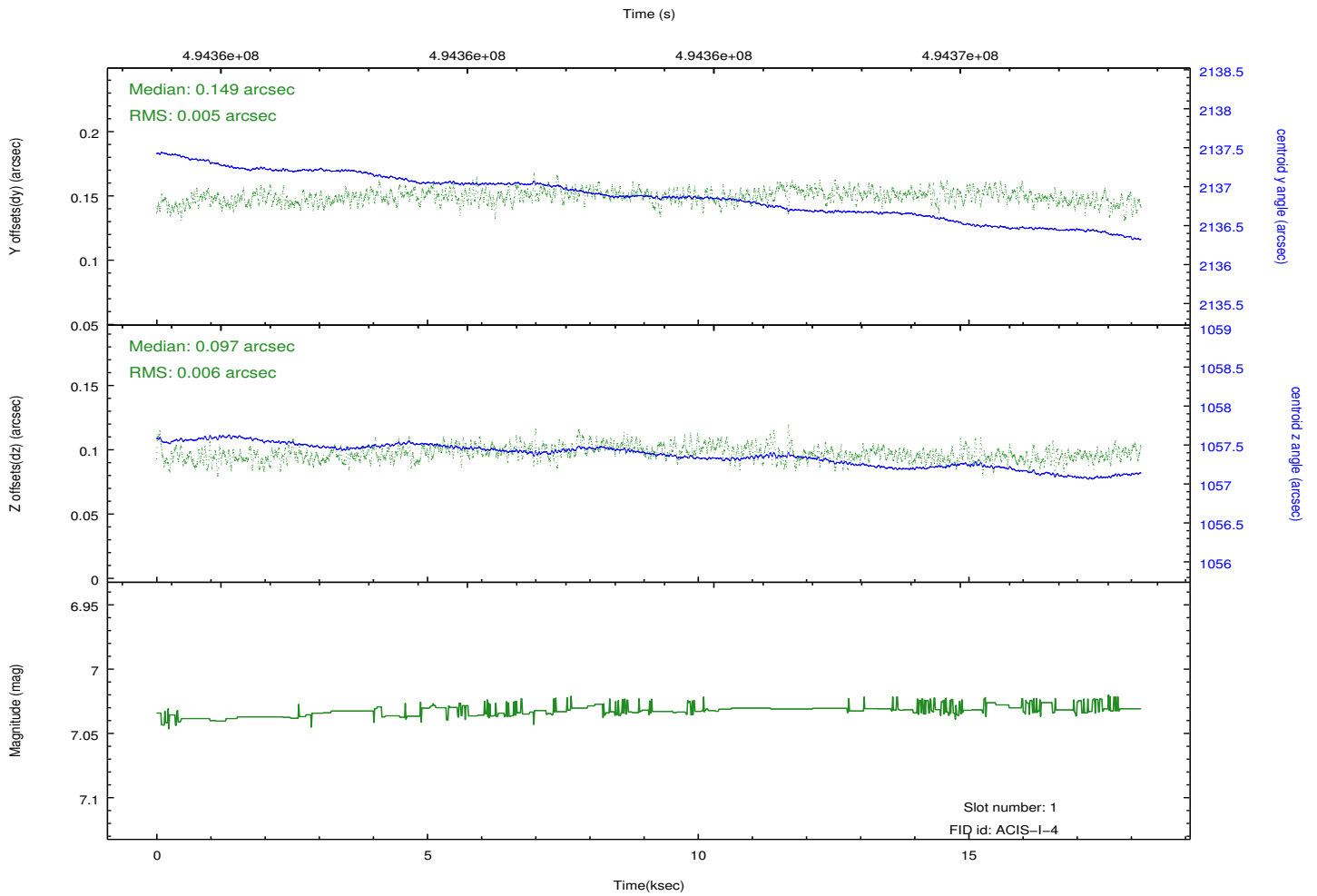
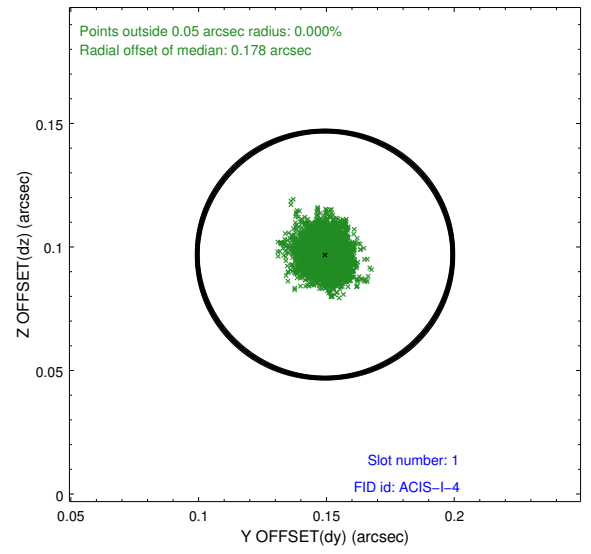
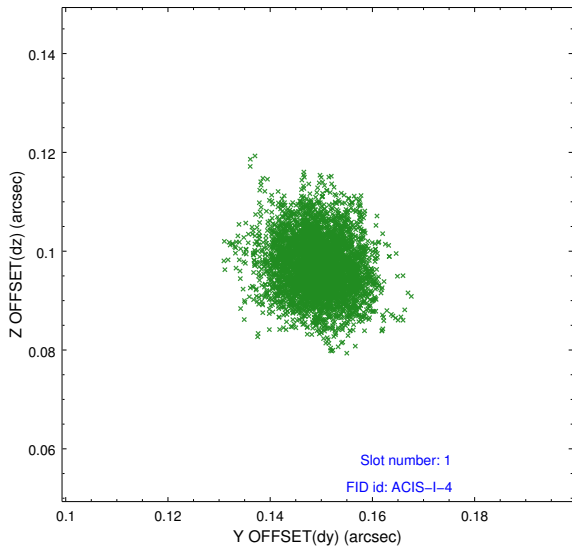


## 2.5 FID Slots

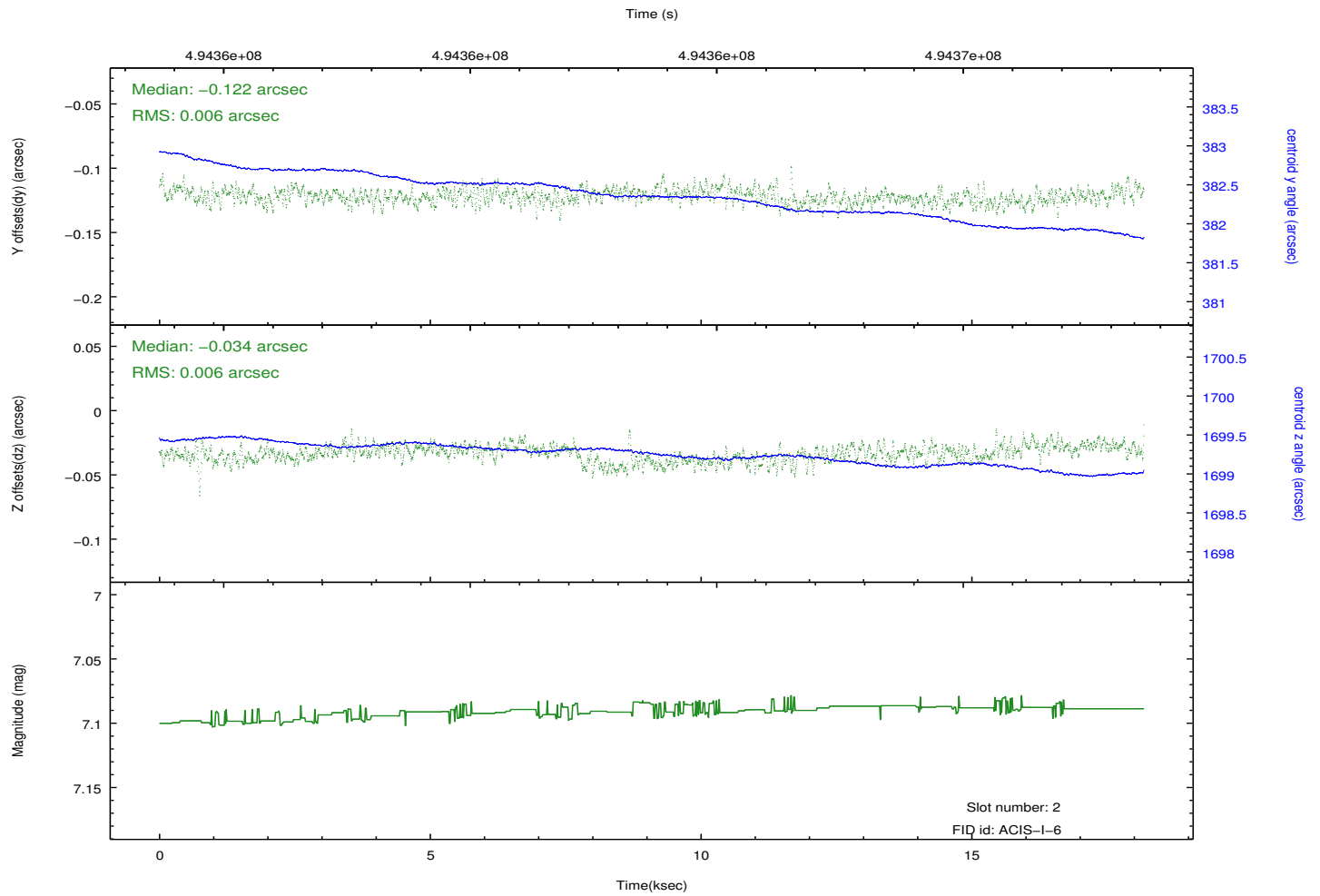
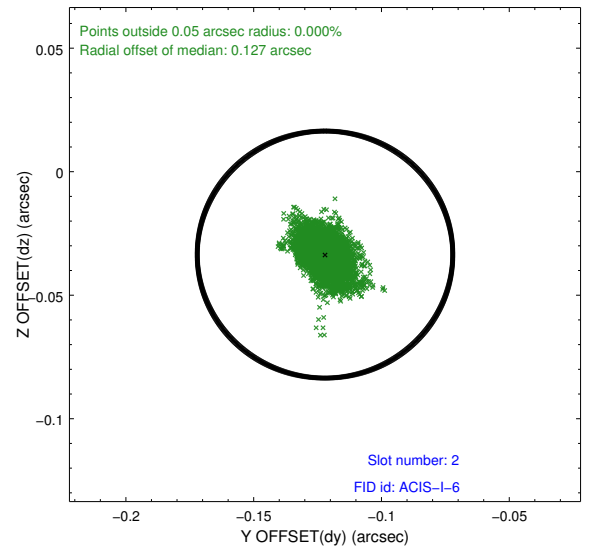
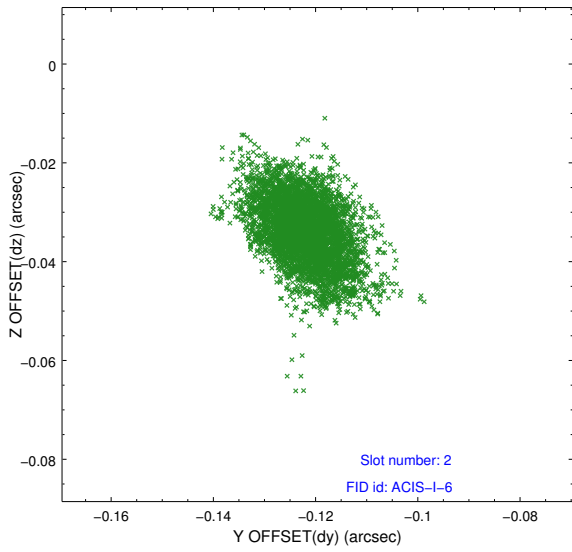
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.069900138974

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.