

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15133 - L2 Version 3  
Chandra X-Ray Center

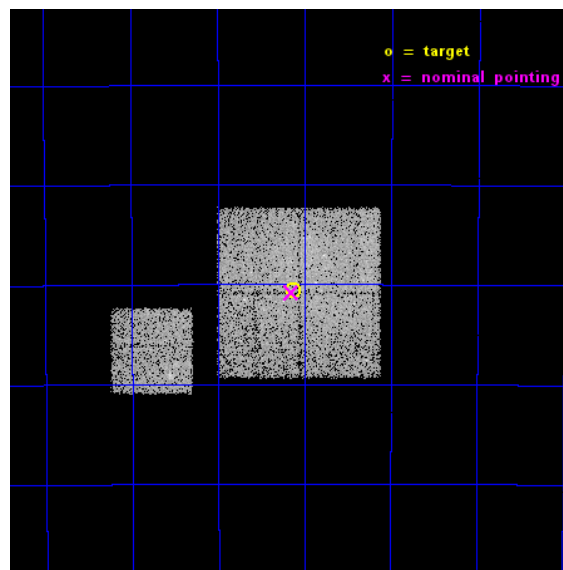
L2 Processing Date : Nov 29 2014

## 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	801262	Sequence number
obs_id	15133	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G345.40-39.34	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	313.034167	Observer's specified target RA [deg]
dec_targ	-52.842444	Observer's specified target Dec [deg]
ra_nom	313.03821582293	Nominal RA [deg]
dec_nom	-52.846822609184	Nominal Dec [deg]
roll_nom	269.90799332146	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14768.359123349	Sum of GTIs [s]
livetime	14575.399639095	Livetime [s]
ontime0	14768.359103203	Sum of GTIs [s]
ontime1	14771.500113606	Sum of GTIs [s]
ontime2	14771.500113606	Sum of GTIs [s]
ontime3	14768.359123349	Sum of GTIs [s]
ontime6	14768.359143257	Sum of GTIs [s]
l2events	46464	Number of level 2 events

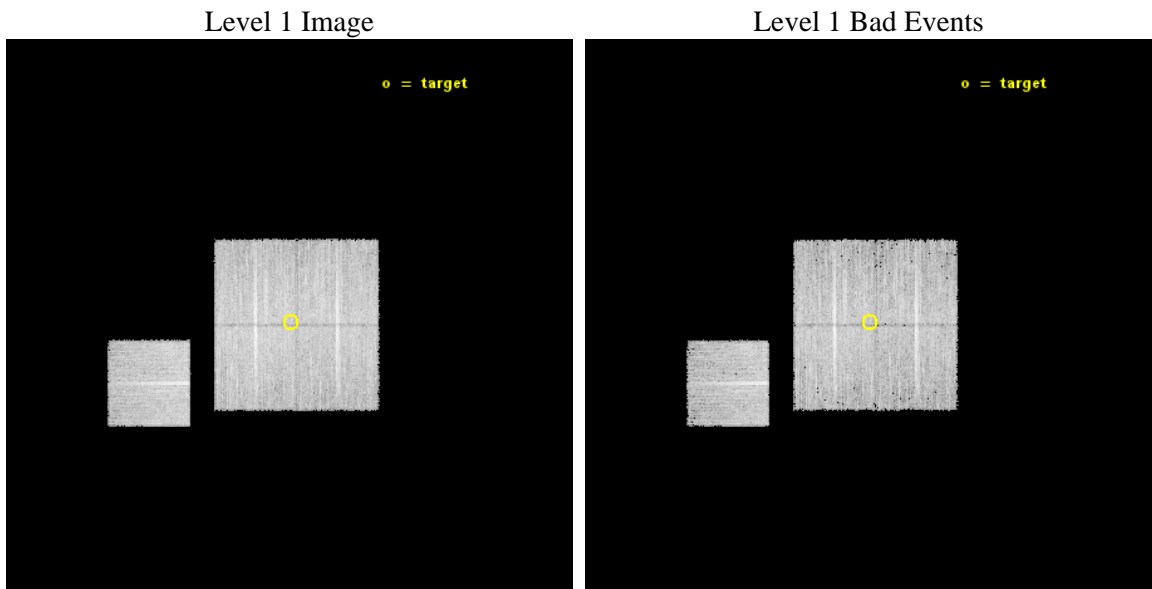




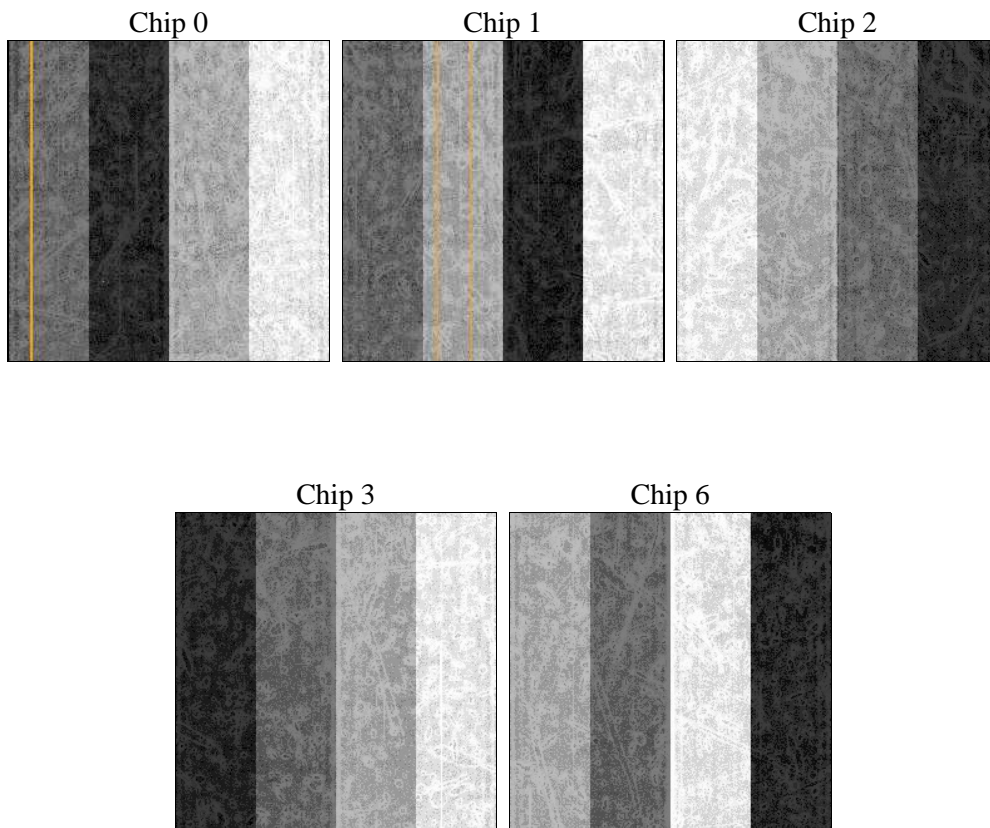
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	14768.359123349	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	14768.359103203	Sum of GTIs [s]
date	2014-11-29T20:33:35	Date and time of file creation	ontime1	14771.500113606	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	14771.500113606	Sum of GTIs [s]
			ontime3	14768.359123349	Sum of GTIs [s]
			ontime6	14768.359143257	Sum of GTIs [s]
			l1events	370845	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	68616	74234	77668	75572	74755
rejected events	57957	60888	67682	65144	65523
rejected %	84%	82%	87%	86%	87%

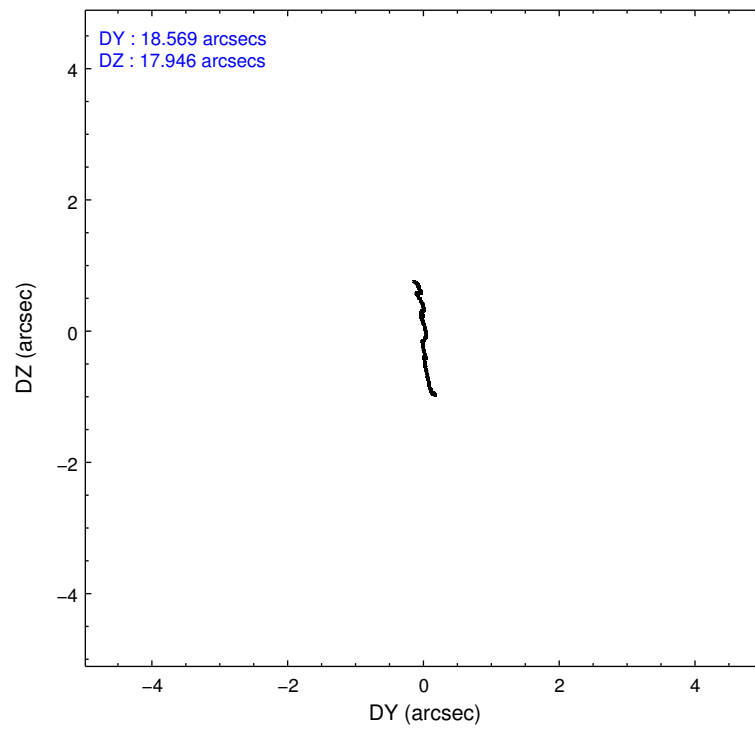
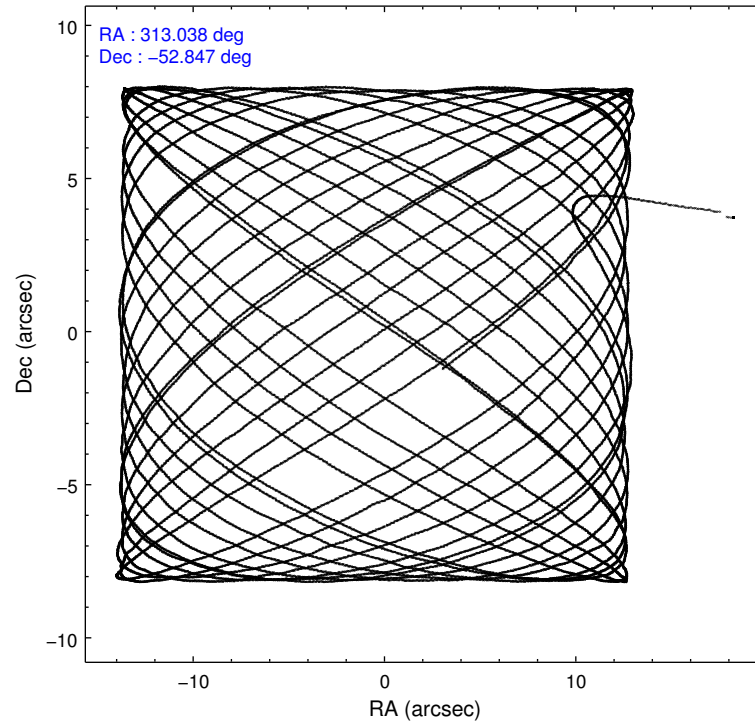
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4530	6342	4322	4660	3430
	6%	8%	5%	6%	4%
grade 1 events	35	53	44	65	34
	0%	0%	0%	0%	0%
grade 2 events	2359	2735	2188	2059	2027
	3%	3%	2%	2%	2%
grade 3 events	941	1048	888	945	909
	1%	1%	1%	1%	1%
grade 4 events	943	1056	909	975	910
	1%	1%	1%	1%	1%
grade 5 events	3385	3782	3275	3965	3854
	4%	5%	4%	5%	5%
grade 6 events	1890	2167	1688	1792	1961
	2%	2%	2%	2%	2%
grade 7 events	54533	57051	64354	61111	61630
	79%	76%	82%	80%	82%

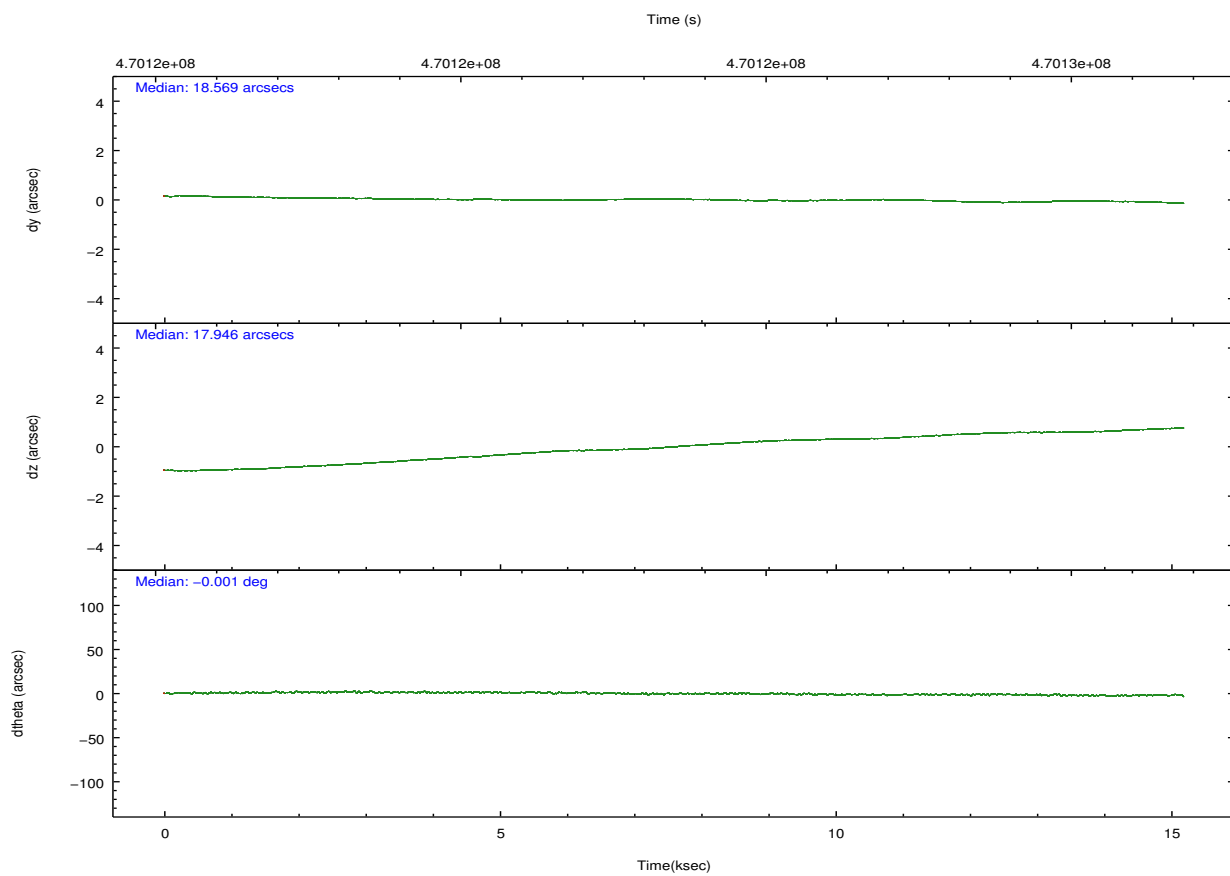
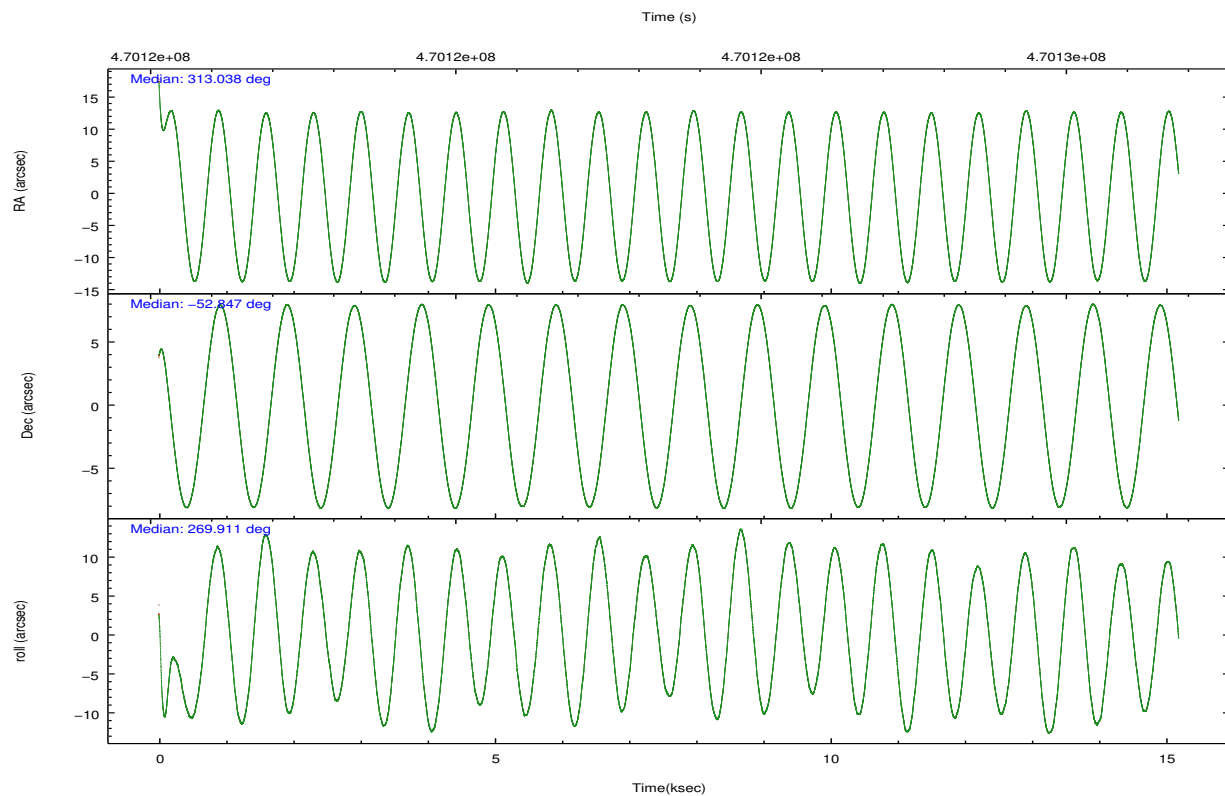
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	313.015294	313.0382158229299
[deg] Pointing Dec	-52.823049	-52.84682260918361
[deg] Pointing Roll	269.681033	269.907993321458
[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)	470116080.184000	470114940.1152
Observation start date	2012-11-24T03:46:53	2012-11-24T03:29:00
[s] Observation end time (MET)	470131080.184000	470132042.75362
Observation end date	2012-11-24T07:56:53	2012-11-24T08:14:02
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



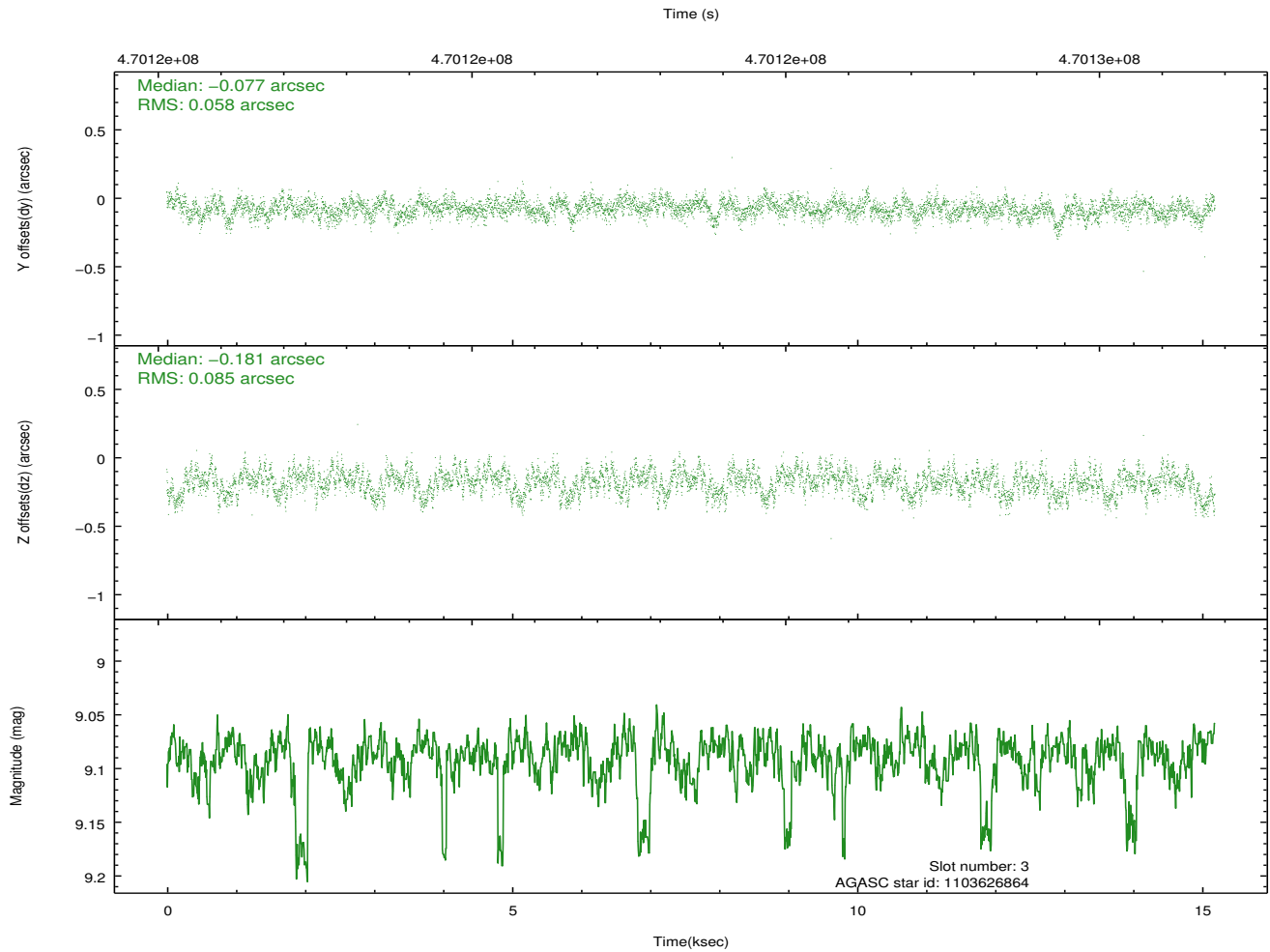
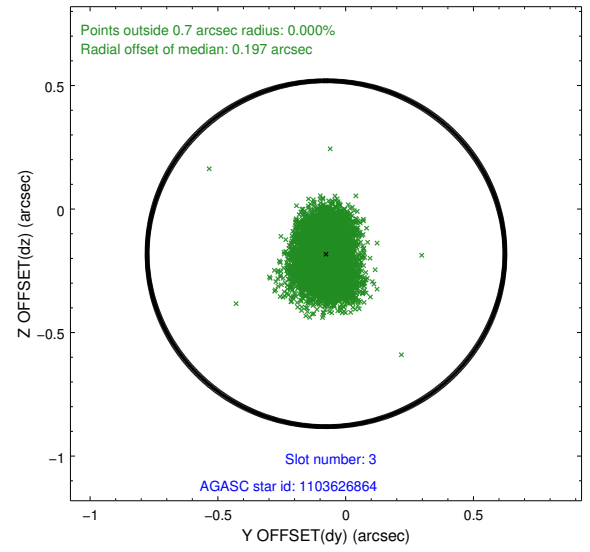
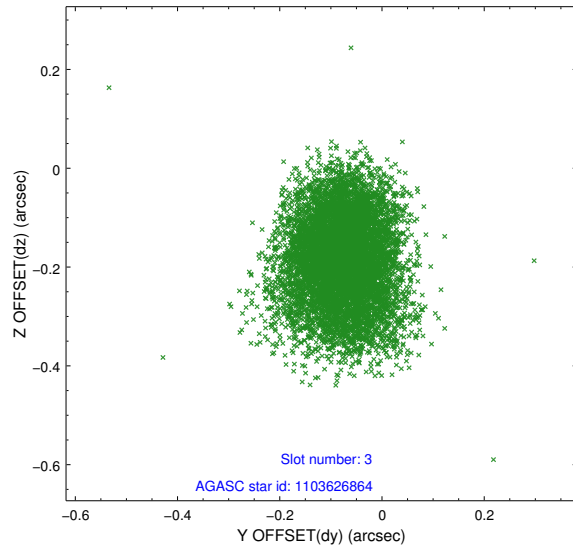


### Slot Statistics

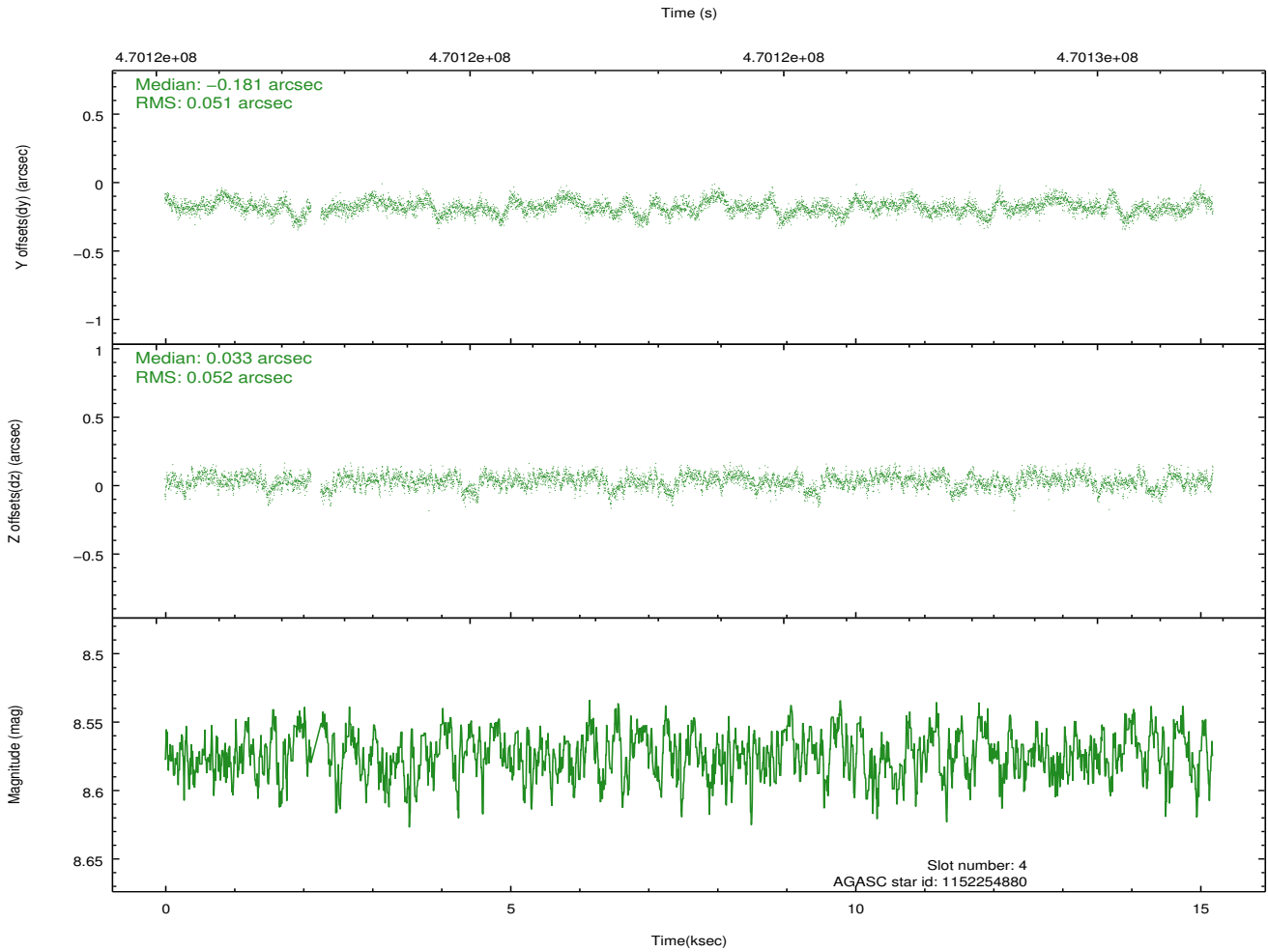
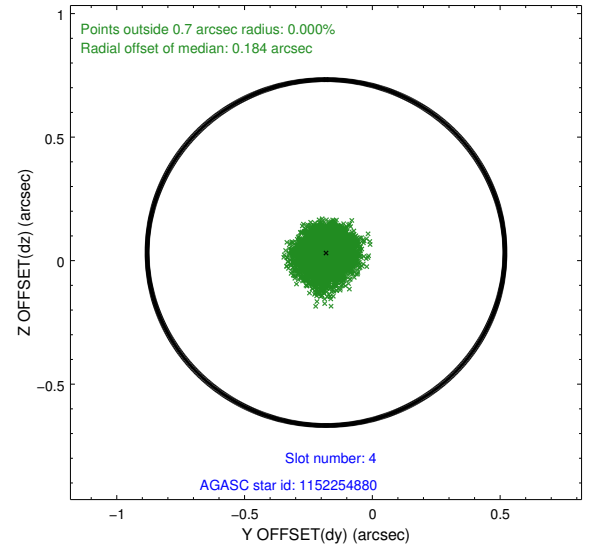
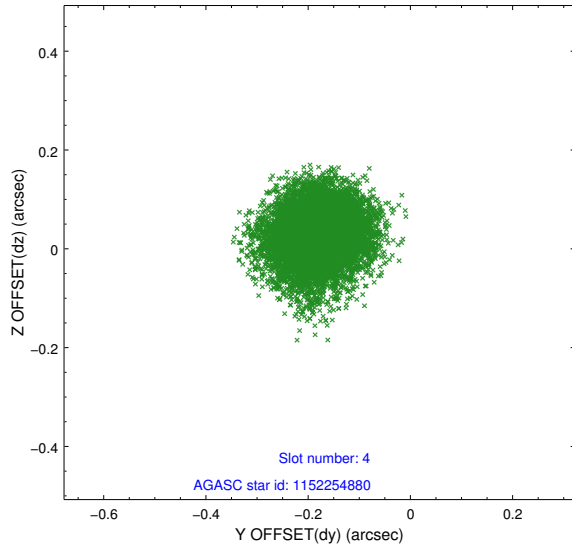
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.03	3704	0.012	-0.055	0.015	0.031	0.000000	0.000000	-773.40	-847.97
1	FID		ACIS-I-5	7.12	3705	-0.230	0.060	0.011	0.018	0.000000	0.000000	-1827.83	1055.87
2	FID		ACIS-I-6	7.13	3705	0.124	0.064	0.009	0.018	0.000000	0.000000	386.16	1700.67
3	GUIDE	used	1103626864	9.09	7389	-0.077	-0.181	0.109	0.179	312.495552	-52.332634	-1754.44	-1153.16
4	GUIDE	used	1152254880	8.57	7341	-0.181	0.033	0.078	0.123	313.184921	-52.768346	-198.46	368.17
5	GUIDE	used	1152387392	9.26	7390	0.325	-0.044	0.126	0.190	313.612538	-52.816826	-23.41	1299.20
6	GUIDE	used	1152388416	8.64	7407	-0.014	0.094	0.093	0.148	313.642144	-52.523740	-1078.66	1367.24
7	GUIDE	used	1152262400	7.86	7405	-0.045	0.108	0.072	0.115	313.173441	-53.273407	1620.75	350.07

## 2.4 Star Slots

### 2.4.1 Slot 3

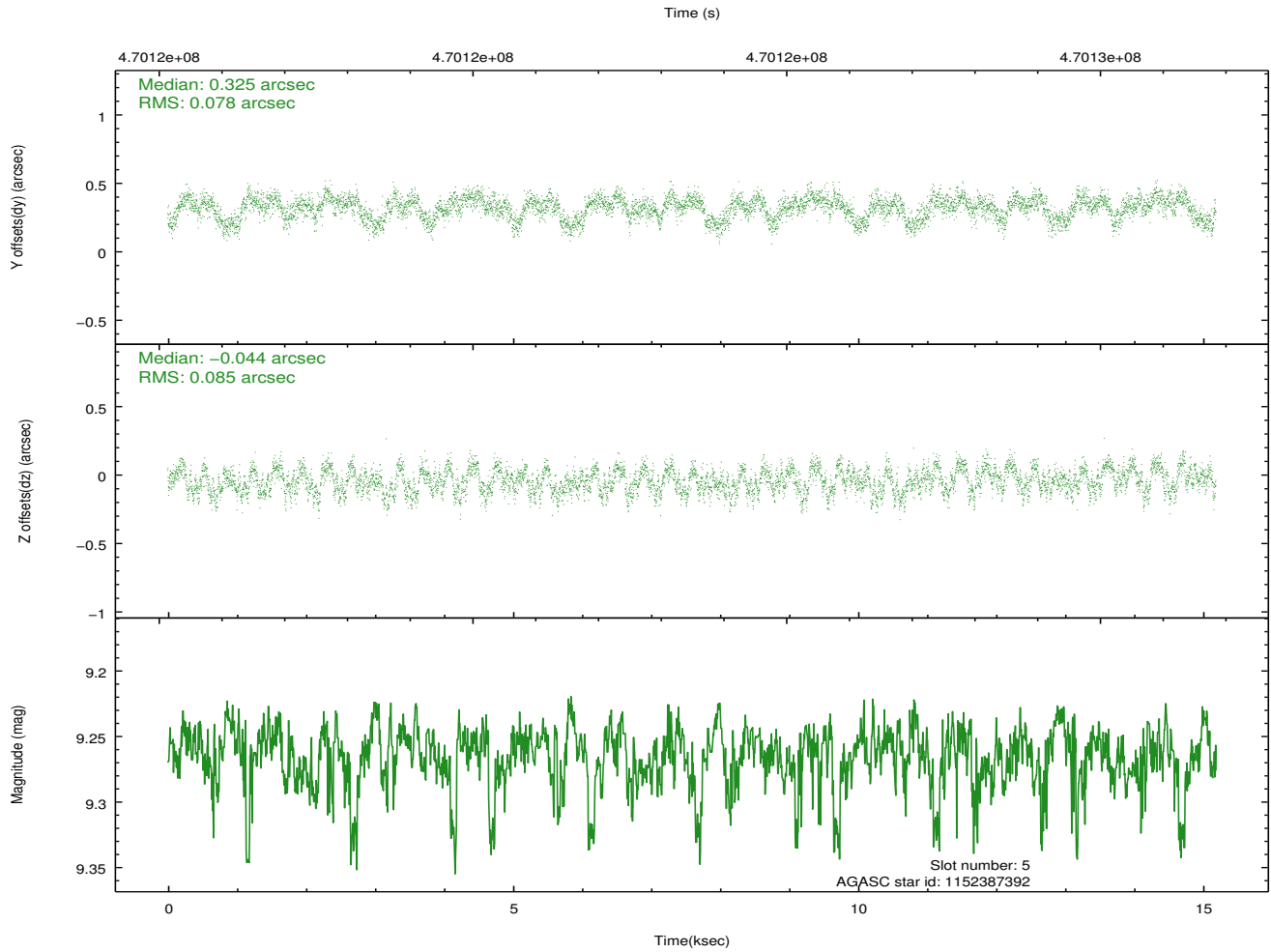
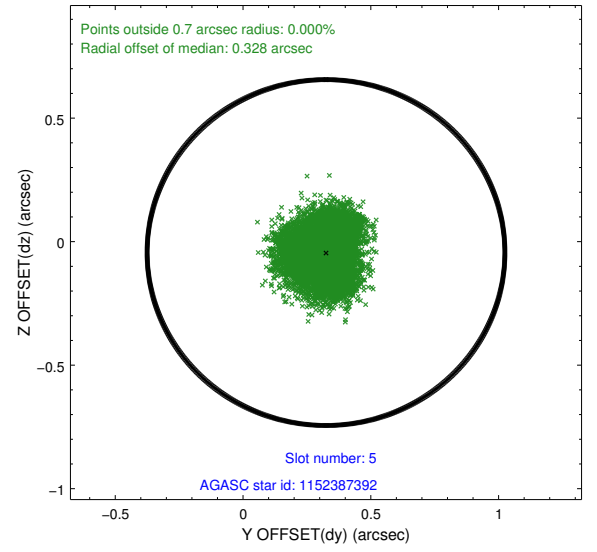
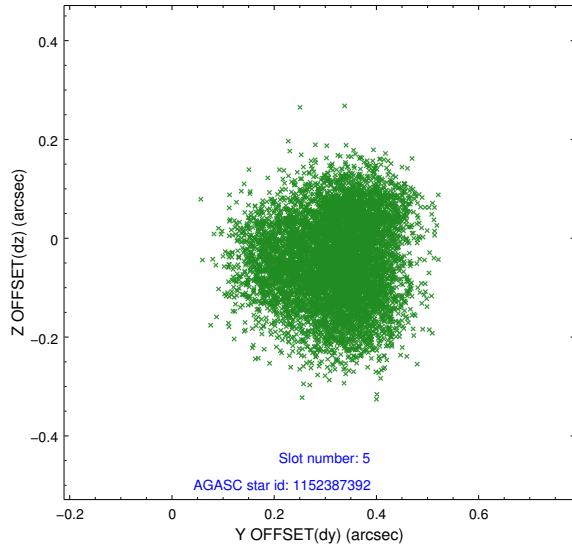


## 2.4.2 Slot 4

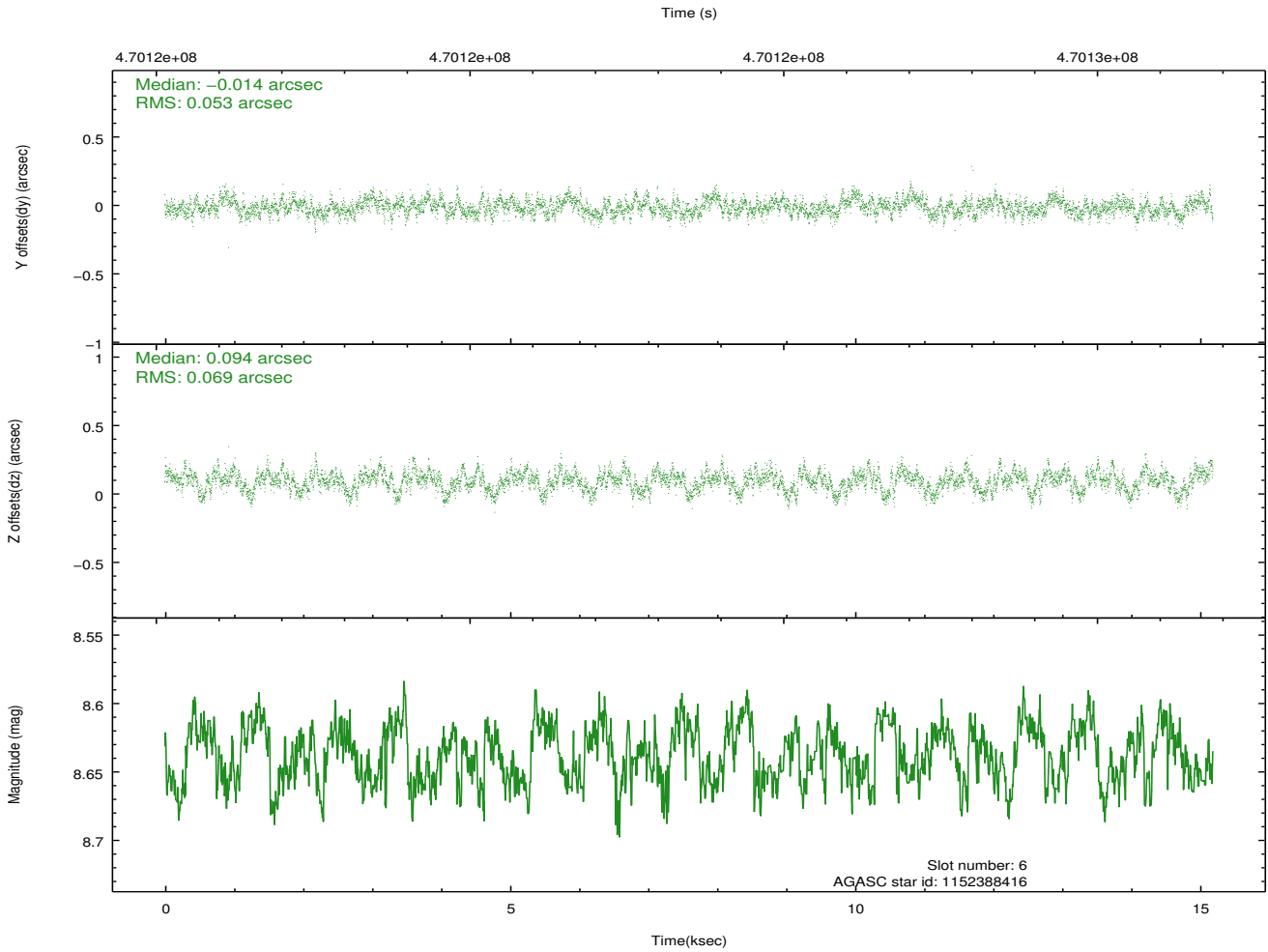
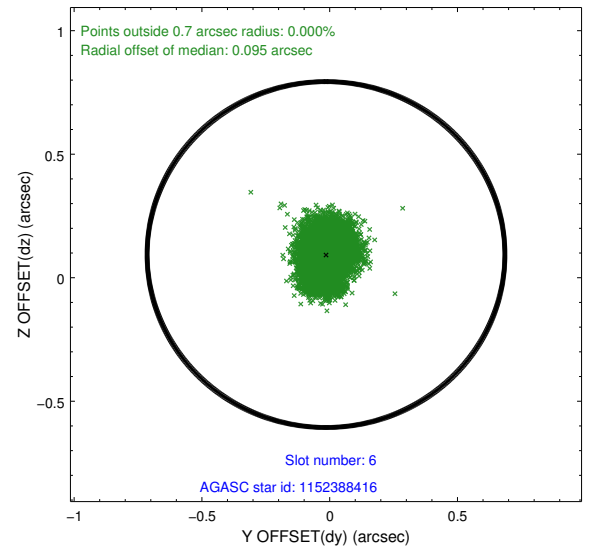
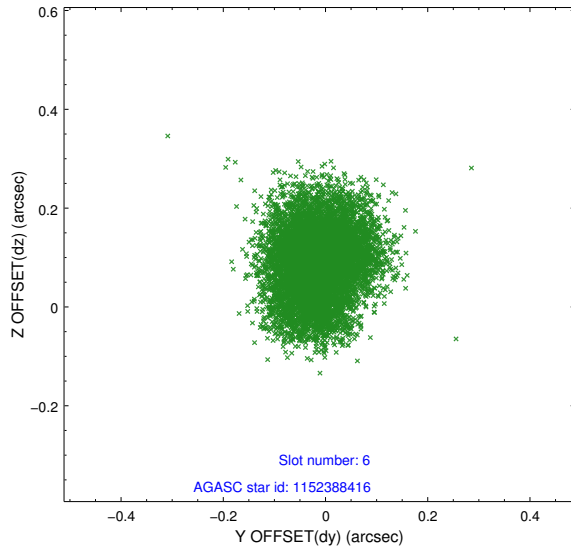




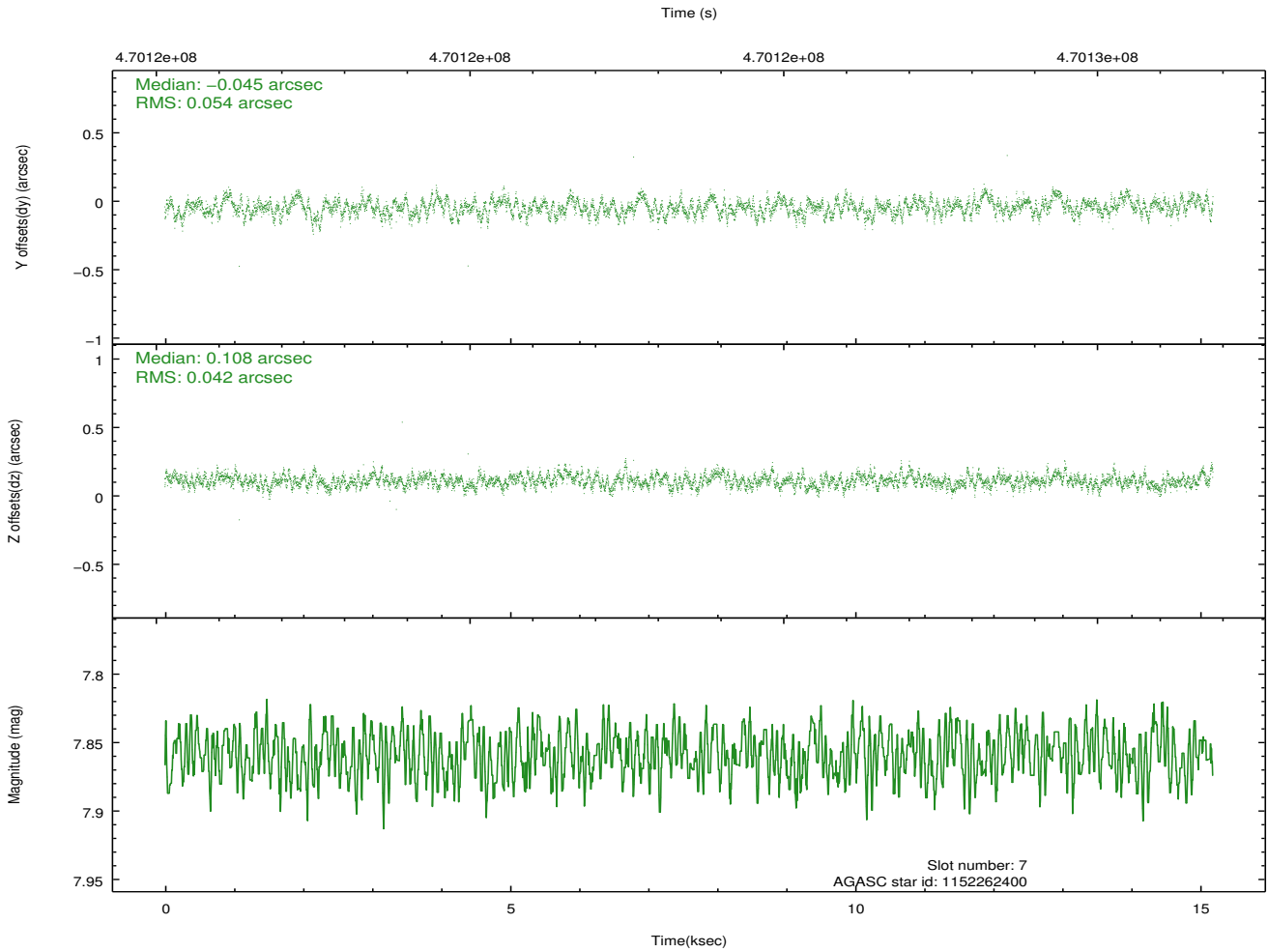
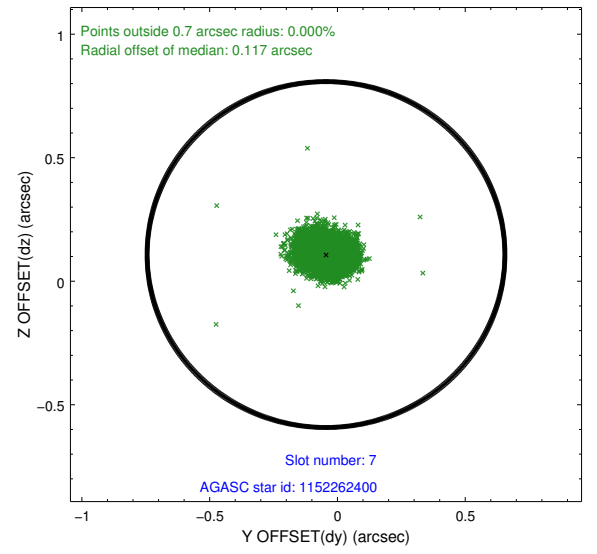
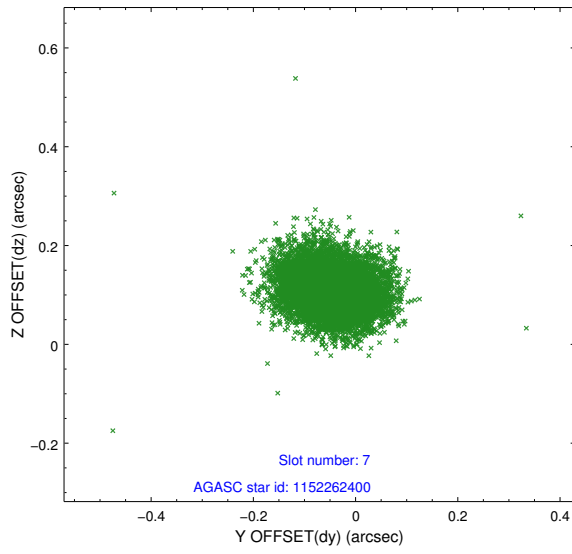
### 2.4.3 Slot 5



## 2.4.4 Slot 6

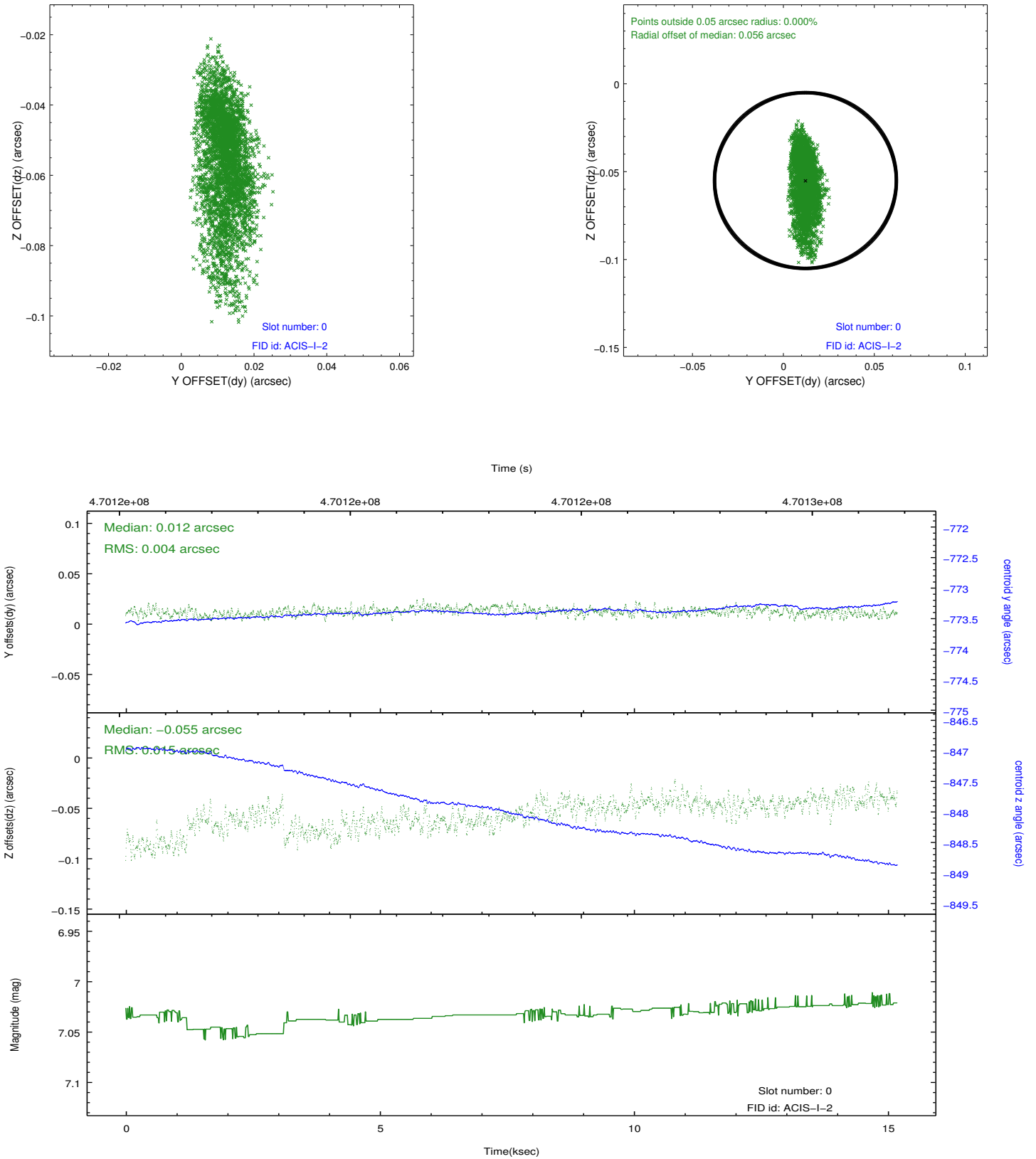


## 2.4.5 Slot 7

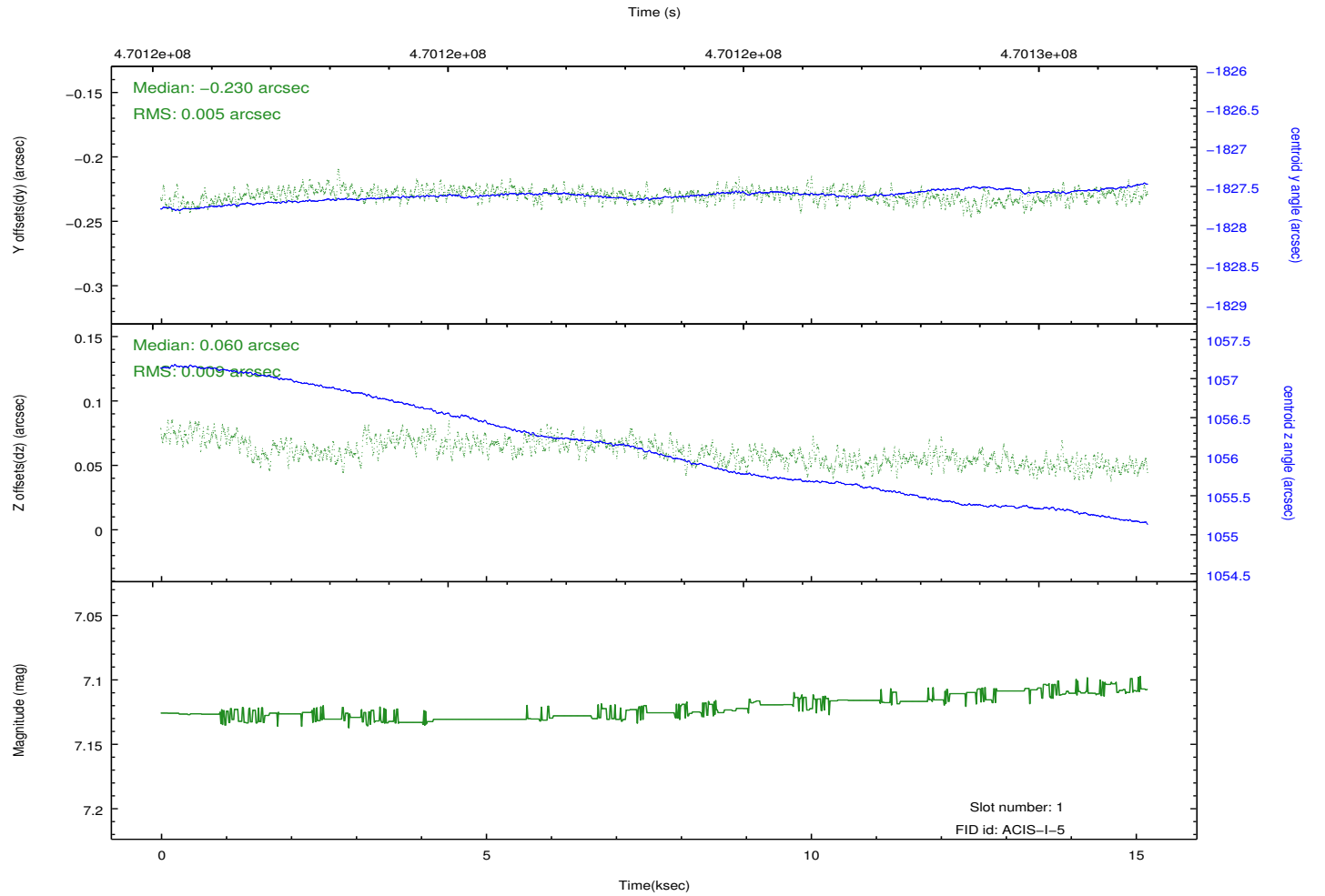
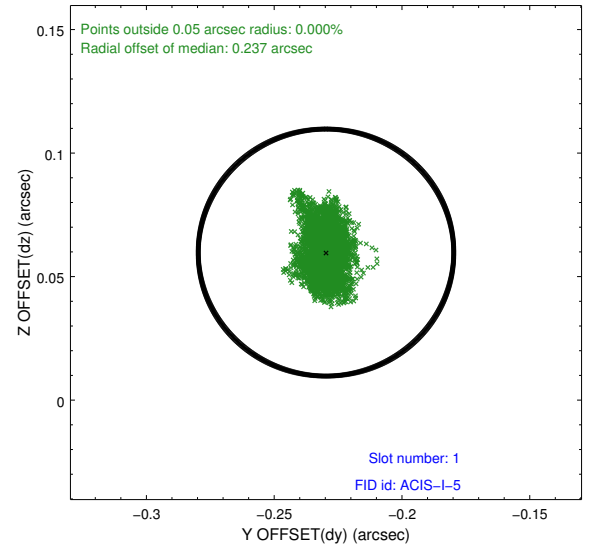
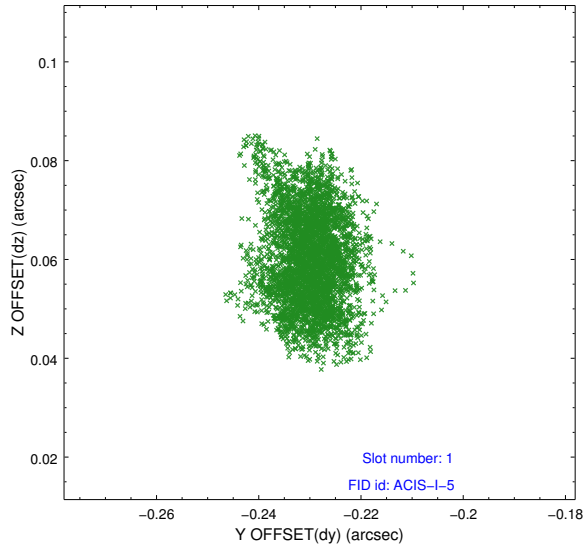


## 2.5 FID Slots

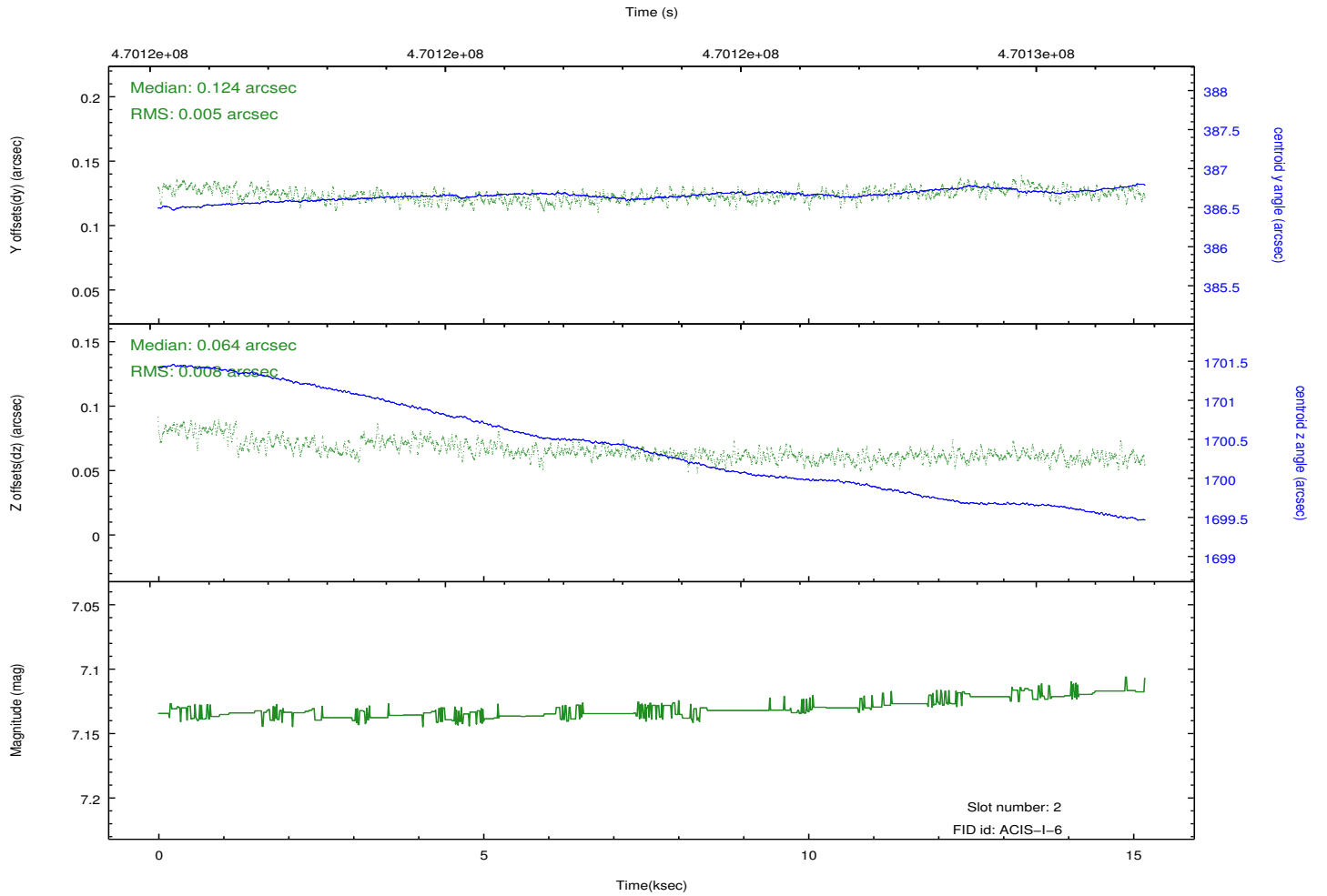
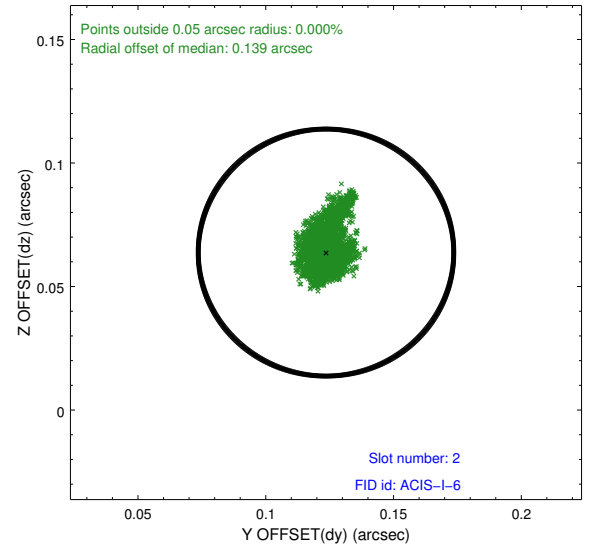
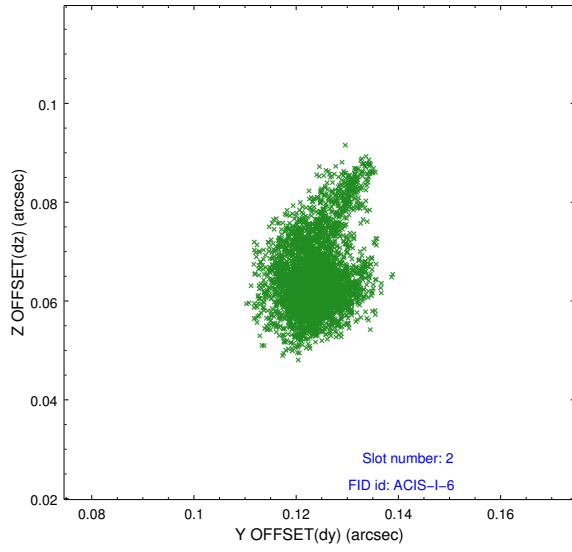
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.768359123349

## 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.