

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15359 - L2 Version 2  
Chandra X-Ray Center

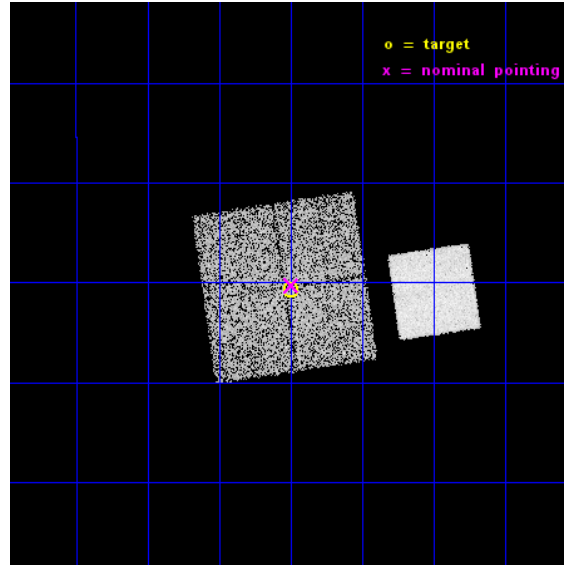
L2 Processing Date : Dec 10 2014

## 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

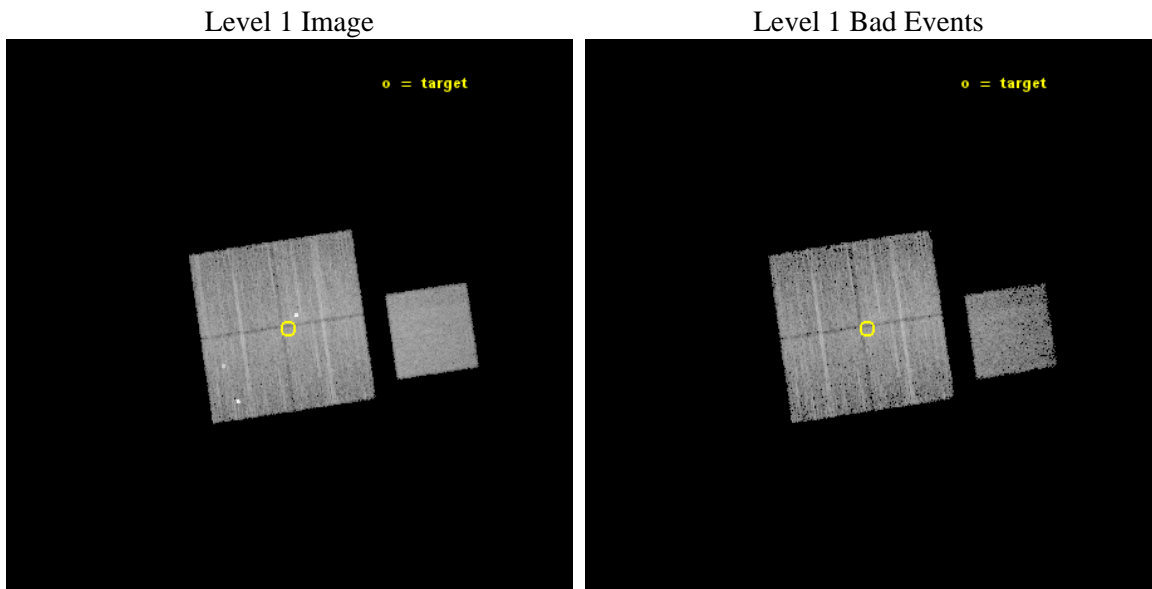
seq_num	502024	Sequence number
obs_id	15359	Observation id
title	Snap-shot survey of galactic gamma-ray sources	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	HESS J1848-018	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	282.0	Observer's specified target RA [deg]
dec_targ	-1.679167	Observer's specified target Dec [deg]
ra_nom	281.99879835303	Nominal RA [deg]
dec_nom	-1.6712127941816	Nominal Dec [deg]
roll_nom	81.531344132303	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10068.800077438	Sum of GTIs [s]
livetime	9937.2437918838	Livetime [s]
ontime0	10068.800077438	Sum of GTIs [s]
ontime1	10062.518066764	Sum of GTIs [s]
ontime2	10068.800077438	Sum of GTIs [s]
ontime3	10068.800077438	Sum of GTIs [s]
ontime7	10068.800077438	Sum of GTIs [s]
l2events	51504	Number of level 2 events



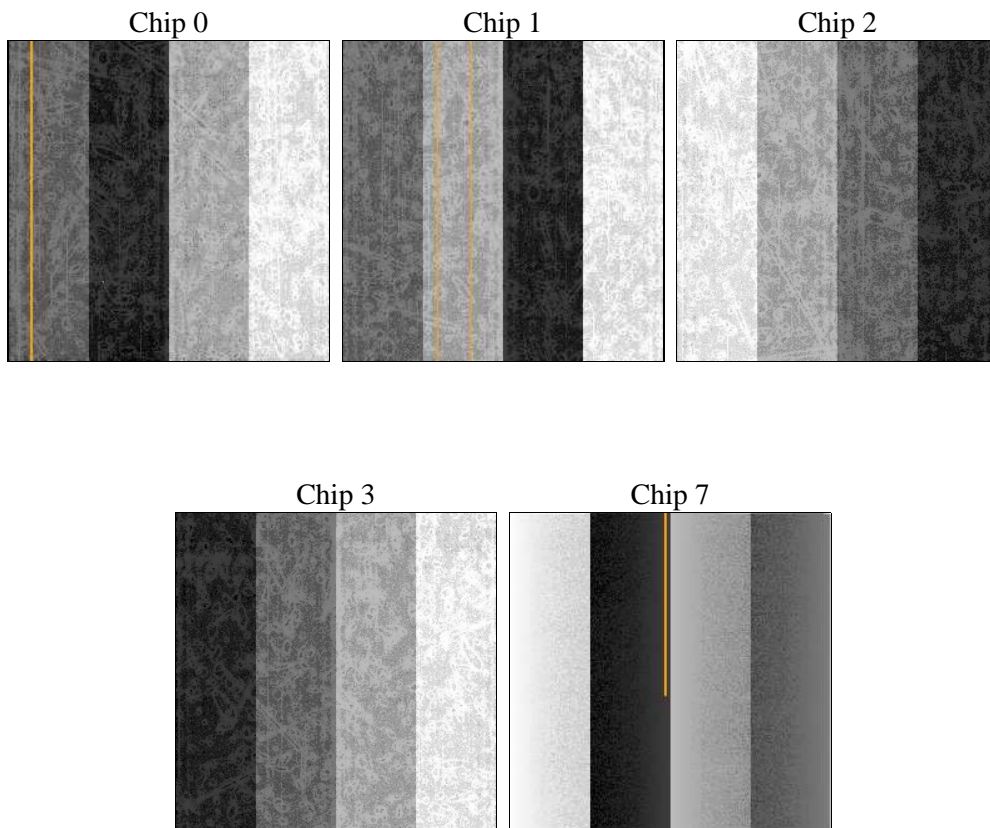
## 2 OBI

### 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	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	10068.800077438	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10068.800077438	Sum of GTIs [s]
date	2014-12-10T14:07:57	Date and time of file creation	ontime1	10062.518066764	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10068.800077438	Sum of GTIs [s]
			ontime3	10068.800077438	Sum of GTIs [s]
			ontime7	10068.800077438	Sum of GTIs [s]
			l1events	293476	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	51710	57668	65571	59556	58971
rejected events	43090	46438	53671	52991	29928
rejected %	83%	80%	81%	88%	50%

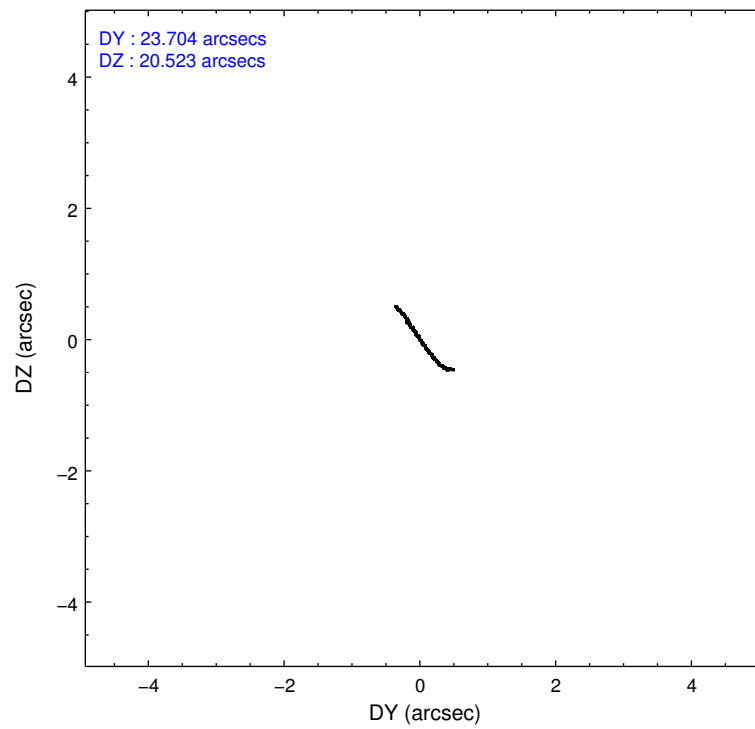
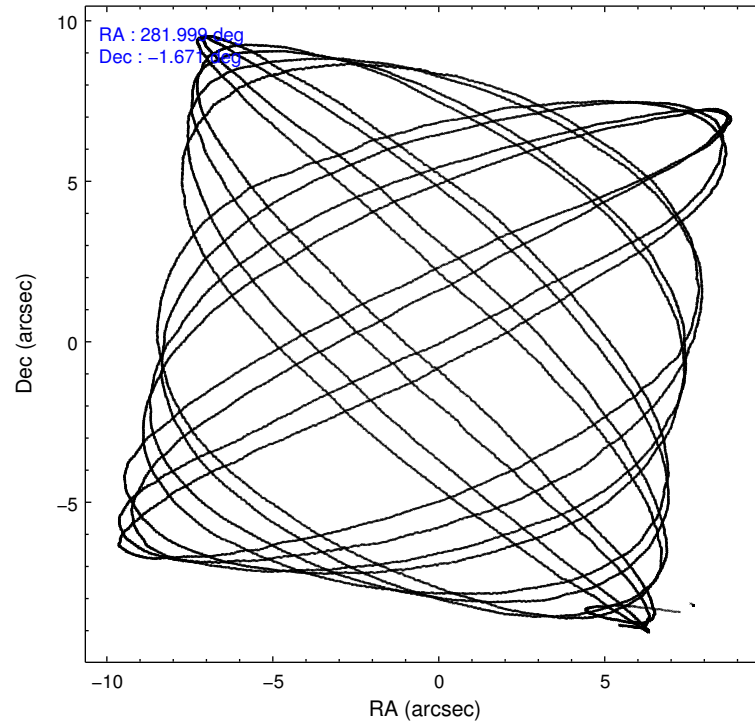
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	3695	3607	6792	2707	3120
	7%	6%	10%	4%	5%
grade 1 events	38	33	68	21	130
	0%	0%	0%	0%	0%
grade 2 events	2416	4912	2384	1541	6918
	4%	8%	3%	2%	11%
grade 3 events	655	611	572	586	2474
	1%	1%	0%	0%	4%
grade 4 events	603	725	804	598	2462
	1%	1%	1%	1%	4%
grade 5 events	1783	1918	1756	2045	5587
	3%	3%	2%	3%	9%
grade 6 events	1252	1381	1351	1134	14082
	2%	2%	2%	1%	23%
grade 7 events	41268	44481	51844	50924	24198
	79%	77%	79%	85%	41%

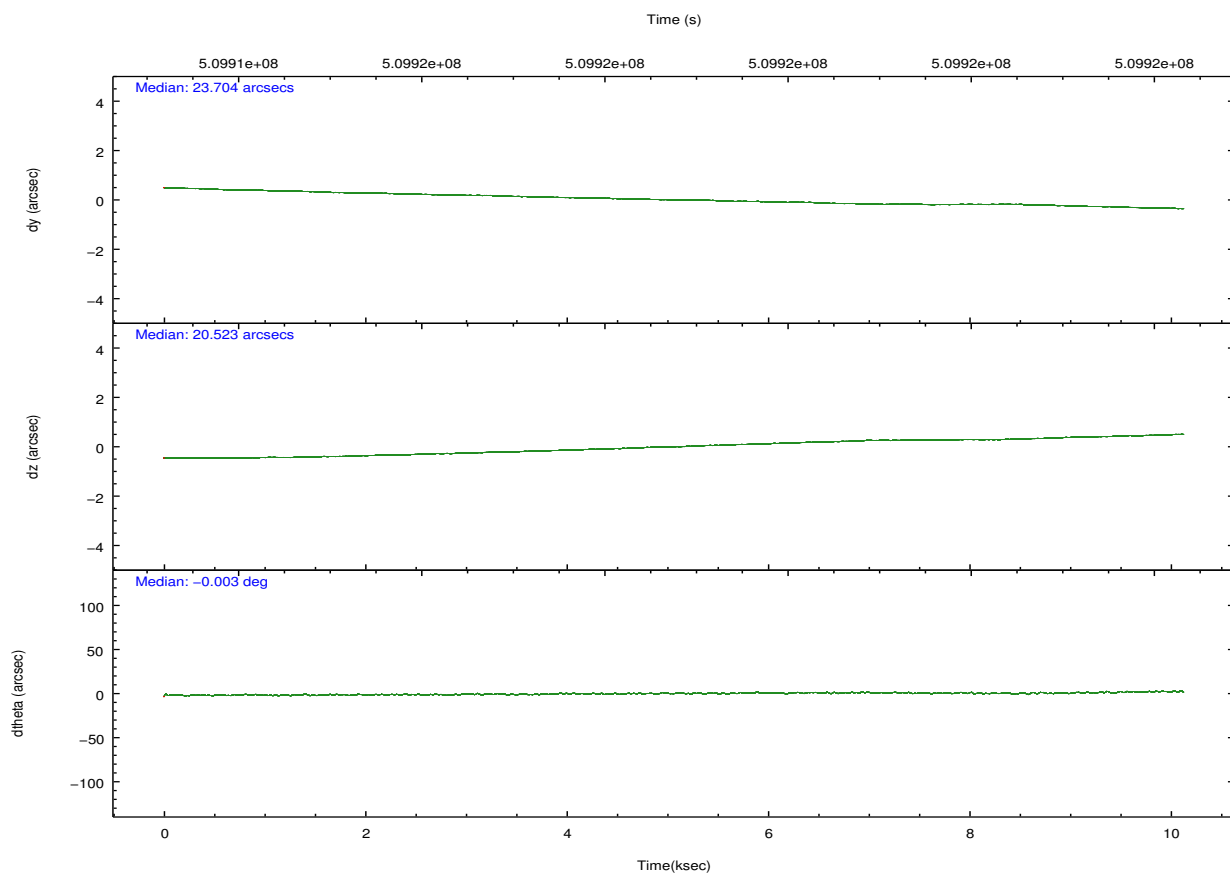
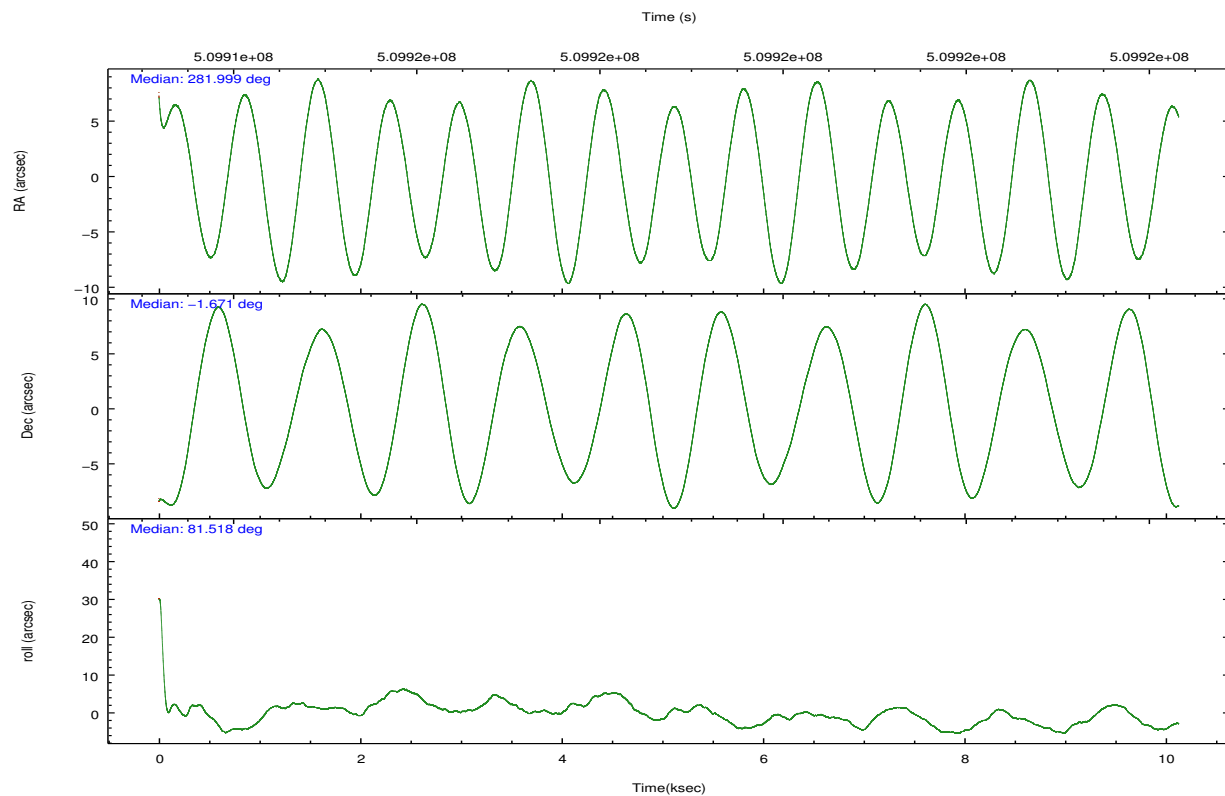


## 2.2 Compared Parameters

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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	282.008958	281.99879835303	CCD I2 on	Y	Y
[deg] Pointing Dec	-1.696717	-1.671212794181587	CCD I3 on	Y	Y
[deg] Pointing Roll	81.322921	81.53134413230327	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	509913818.184000	509912600.881	CCD S5 on	N	N
Observation start date	2014-02-27T18:42:31	2014-02-27T18:23:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	509923818.184000	509924793.25668	On-chip summing requested	N	N
Observation end date	2014-02-27T21:29:11	2014-02-27T21:46:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



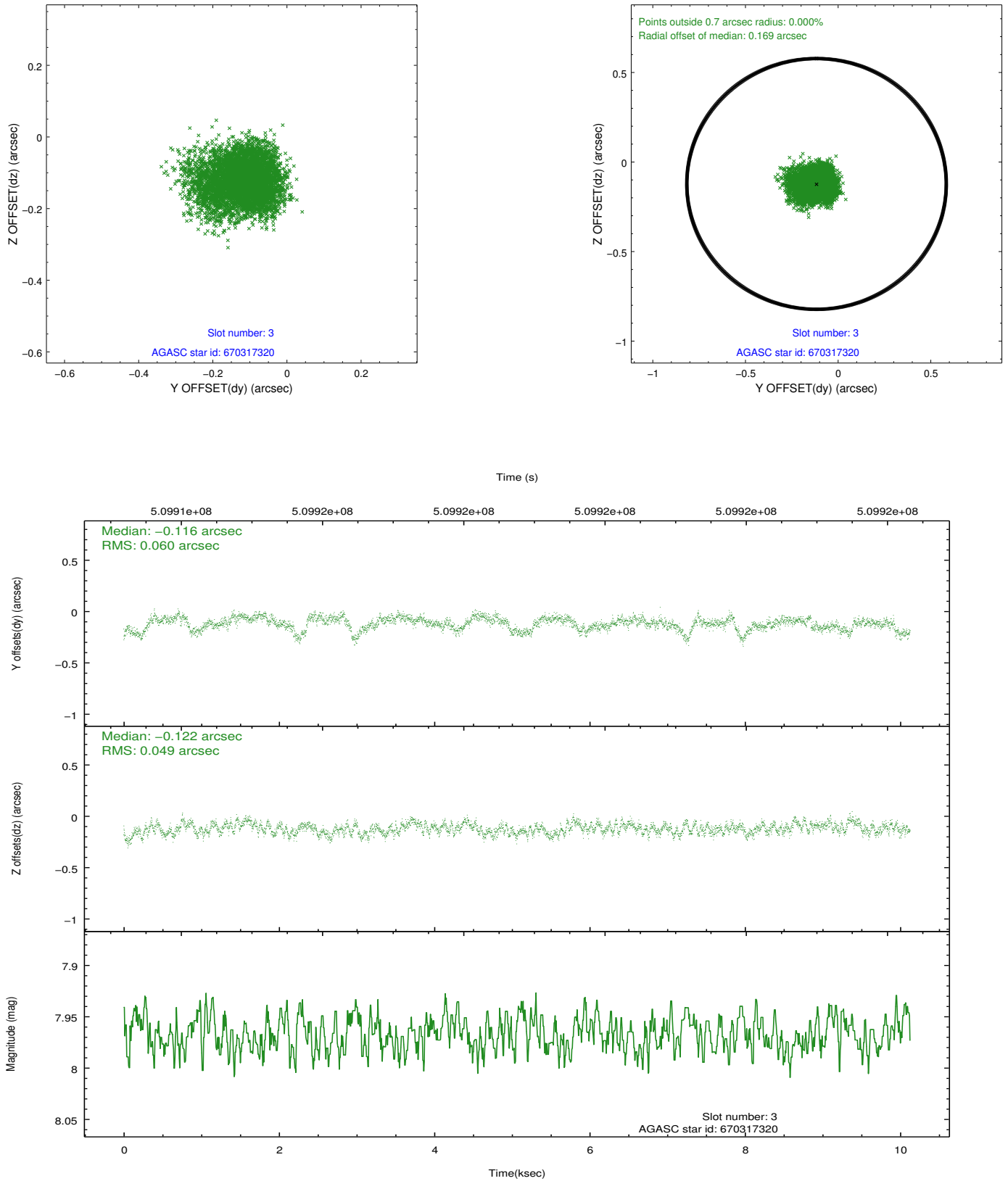


### Slot Statistics

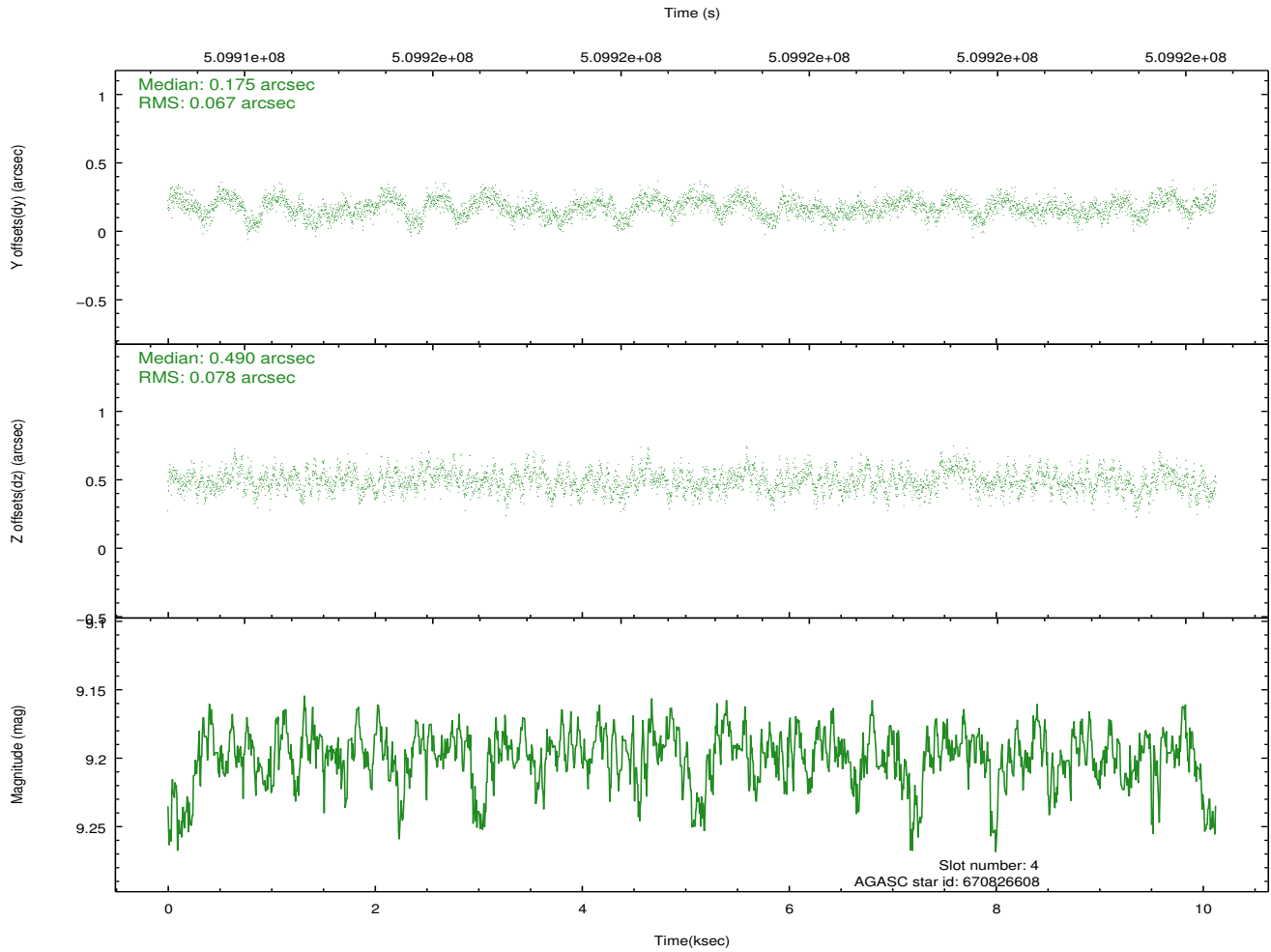
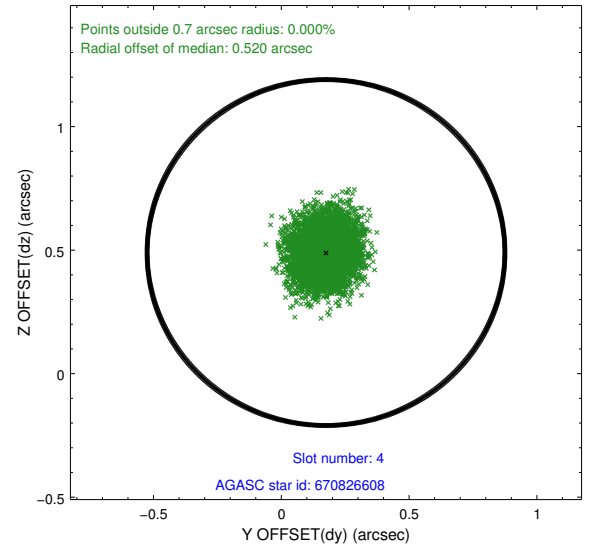
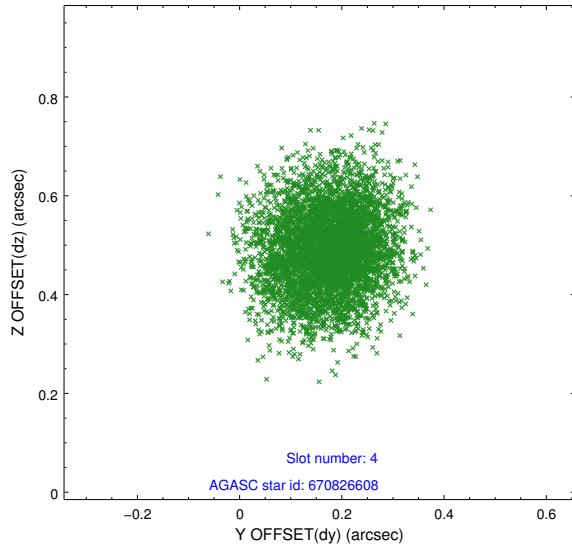
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.18	2471	0.069	-0.042	0.017	0.033	0.000000	0.000000	915.57	-844.27
1	FID		ACIS-I-5	7.17	2470	-0.304	0.044	0.011	0.018	0.000000	0.000000	-1832.67	1052.98
2	FID		ACIS-I-6	7.18	2471	0.143	0.068	0.014	0.022	0.000000	0.000000	380.56	1698.14
3	GUIDE	used	670317320	7.97	4941	-0.116	-0.122	0.083	0.134	281.764311	-1.843342	-654.60	790.79
4	GUIDE	used	670826608	9.20	4936	0.175	0.490	0.111	0.177	282.595495	-2.141533	-1264.10	-2326.74
5	GUIDE	used	670827280	9.39	4936	0.068	-0.295	0.122	0.208	281.434708	-1.976010	-1307.48	1890.59
6	GUIDE	used	670827080	9.85	4926	0.238	-0.054	0.174	0.283	281.524319	-2.036517	-1472.62	1539.59
7	GUIDE	used	670829768	7.55	4939	-0.353	-0.012	0.066	0.103	281.927934	-2.010470	-1160.87	118.30

## 2.4 Star Slots

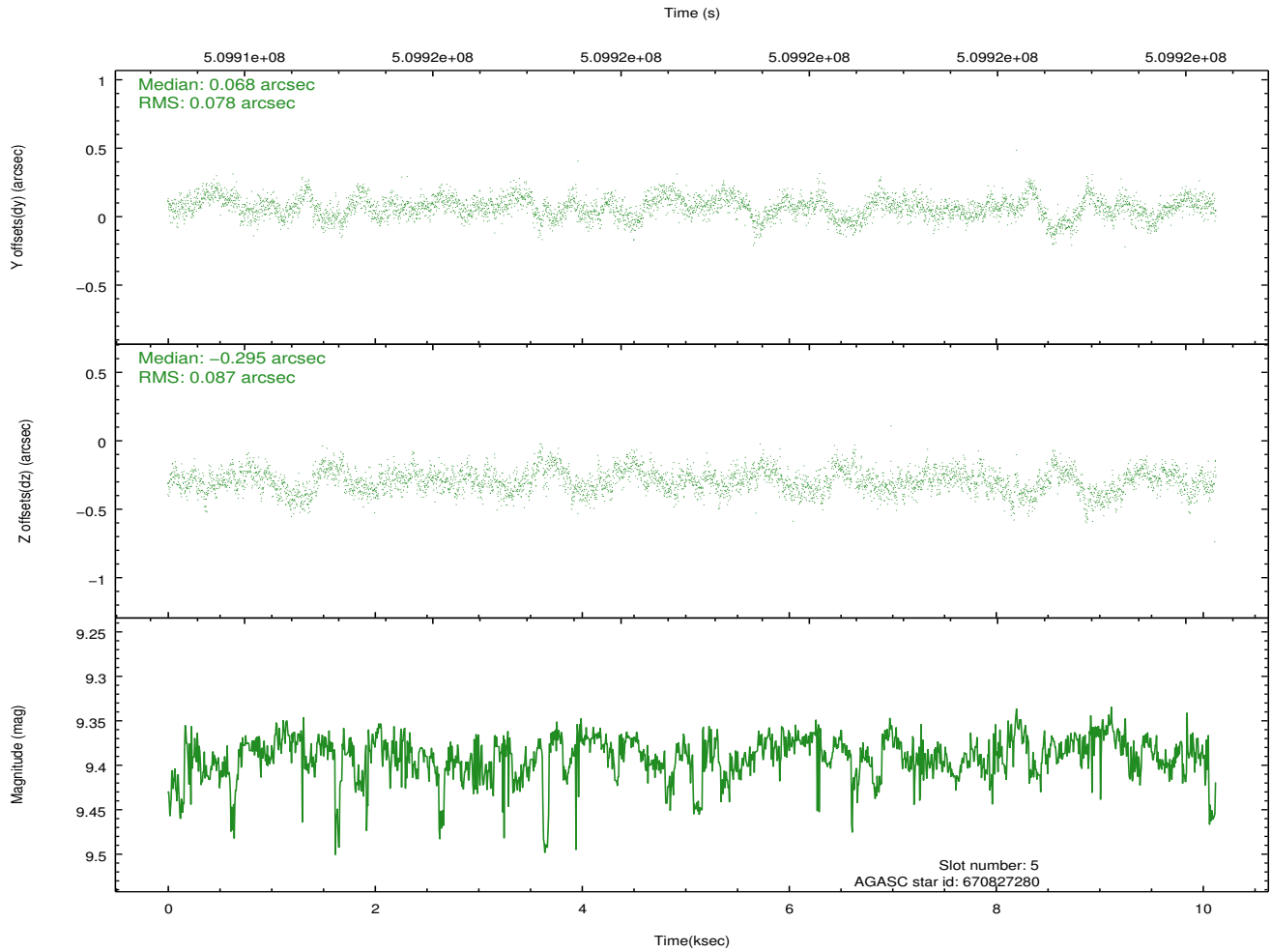
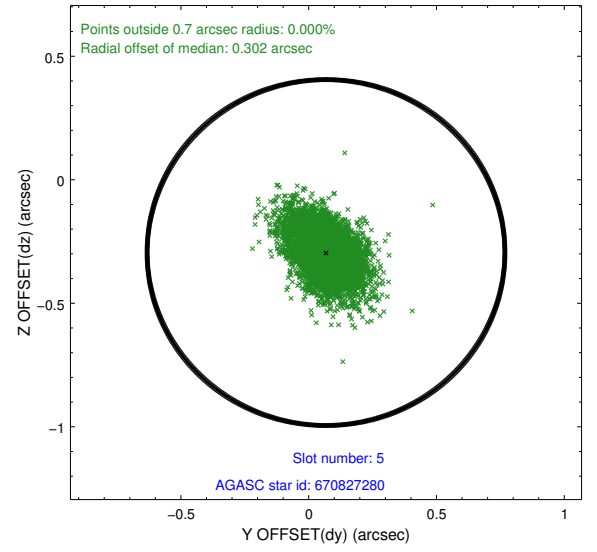
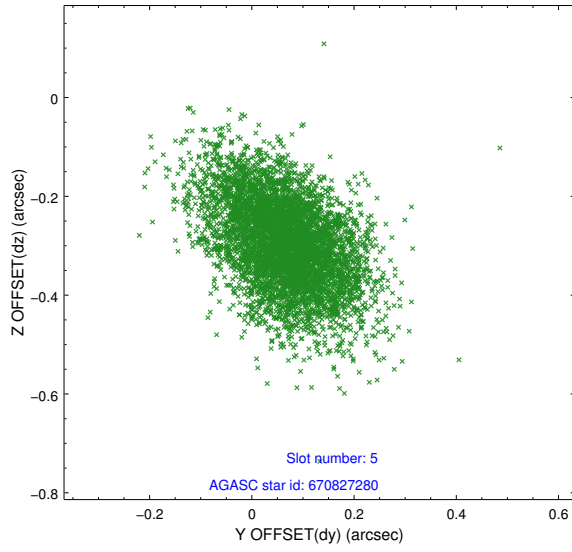
### 2.4.1 Slot 3



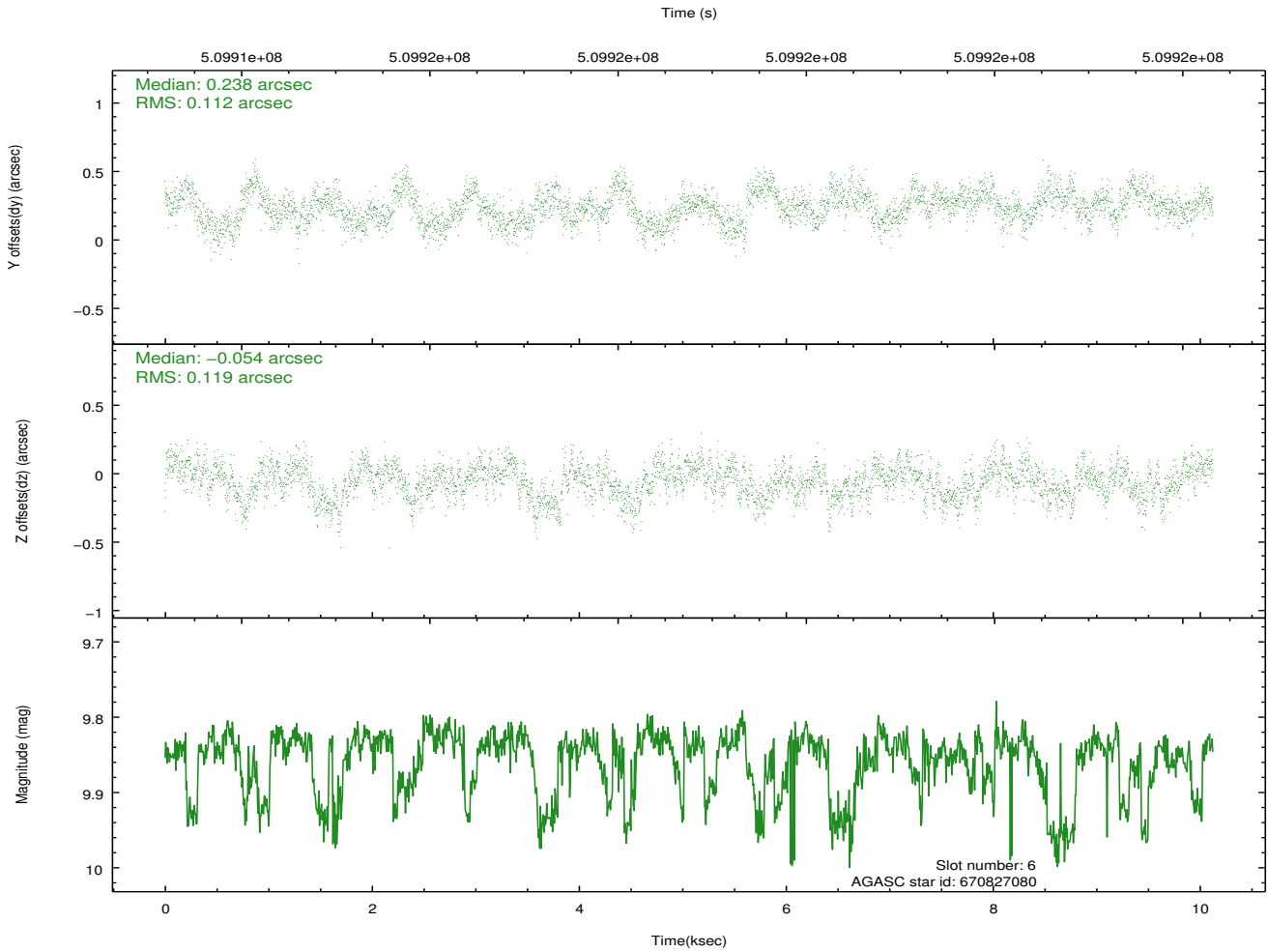
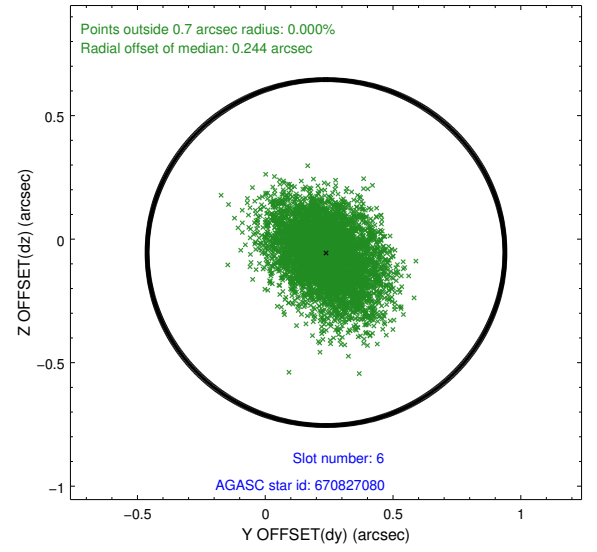
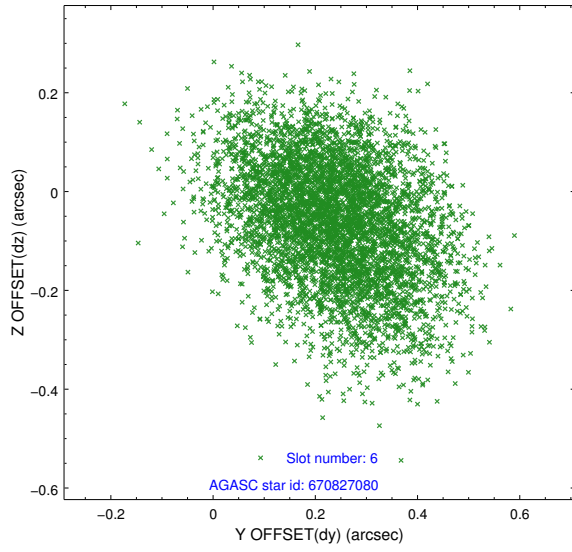
## 2.4.2 Slot 4



### 2.4.3 Slot 5

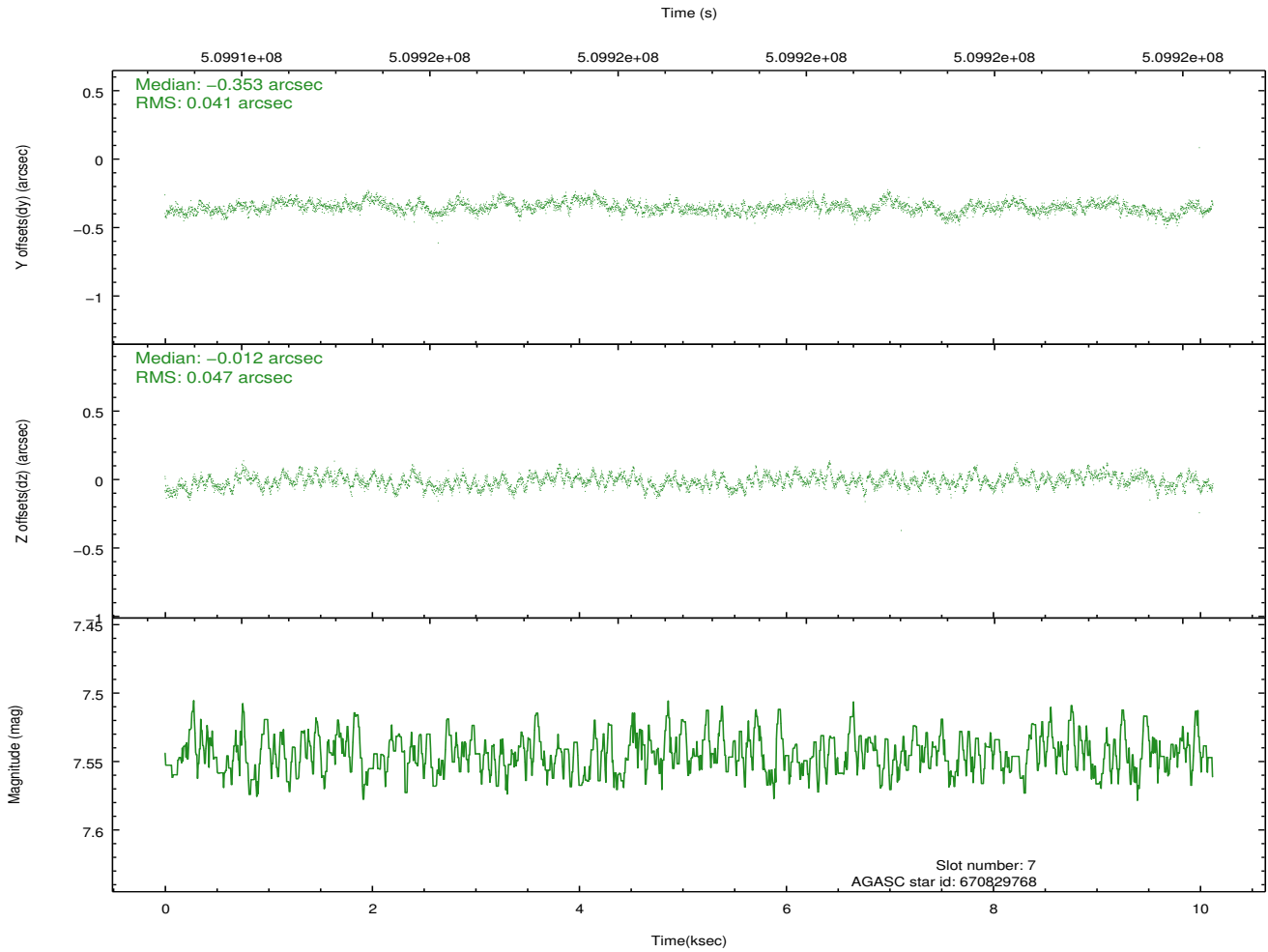
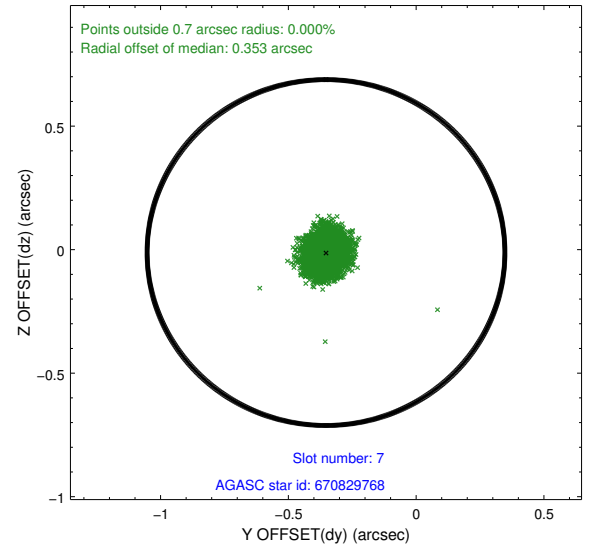
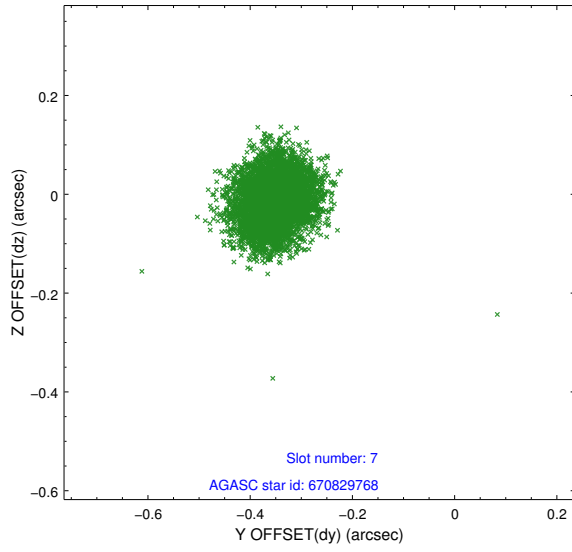


## 2.4.4 Slot 6



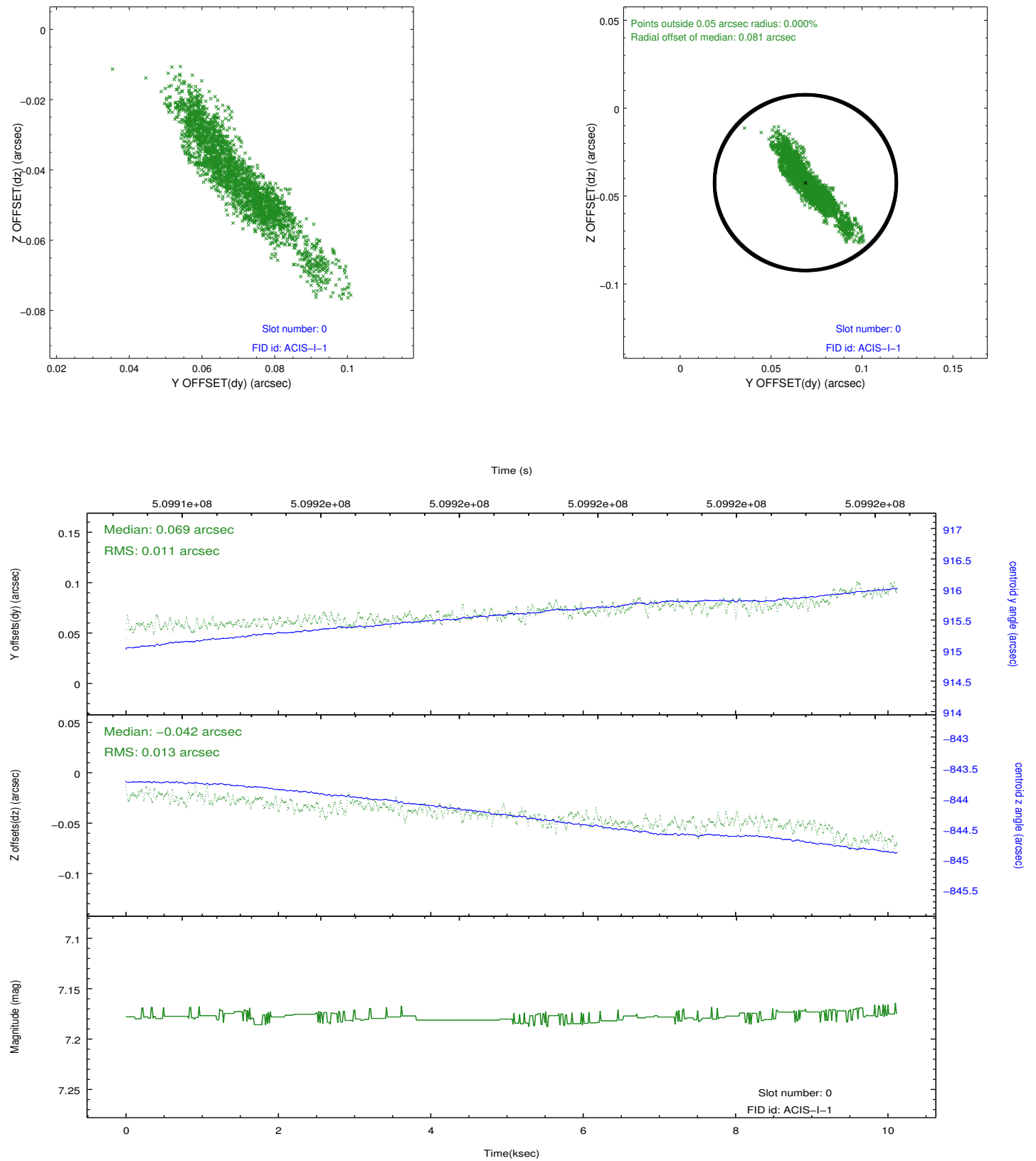


## 2.4.5 Slot 7

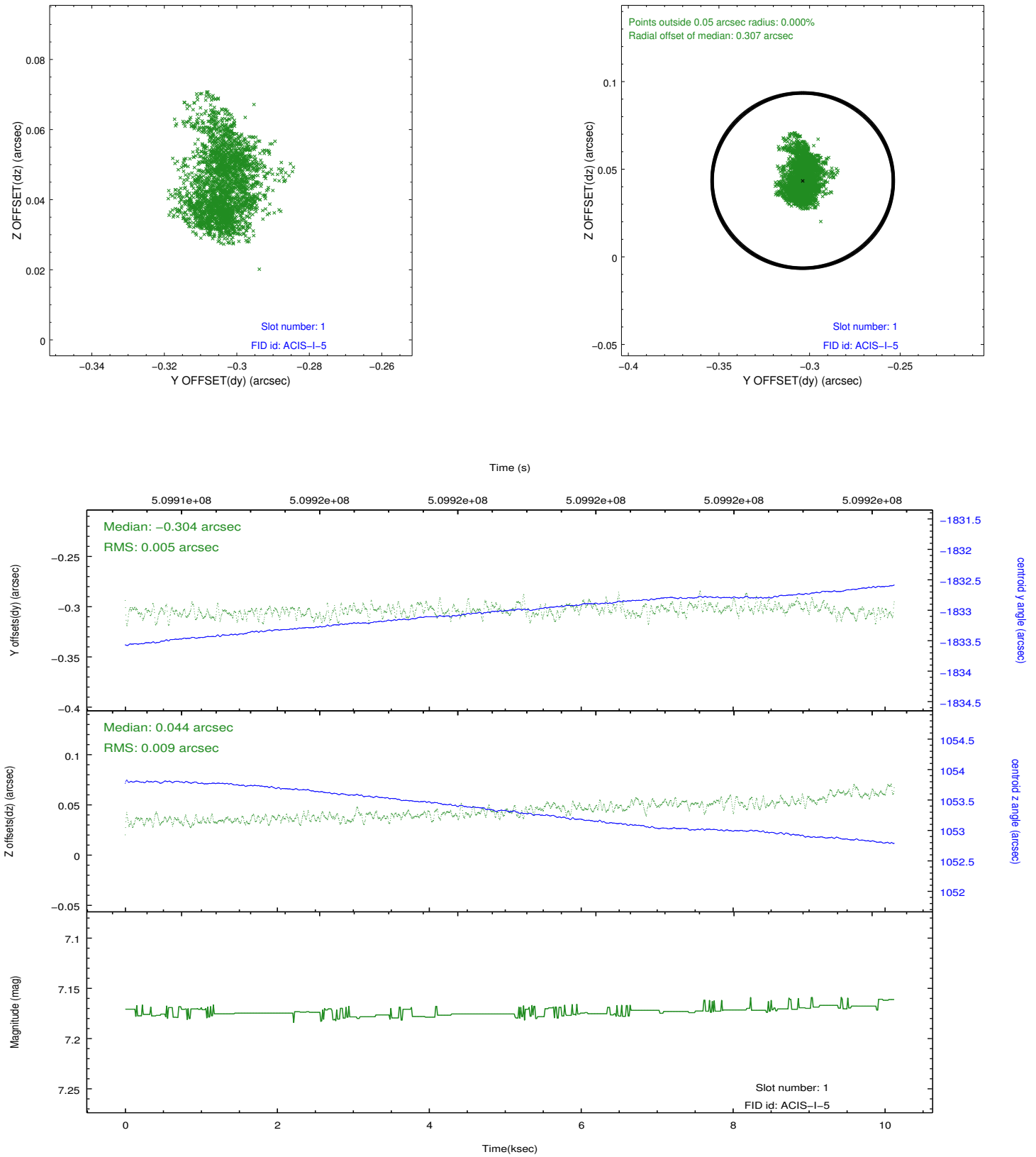


## 2.5 FID Slots

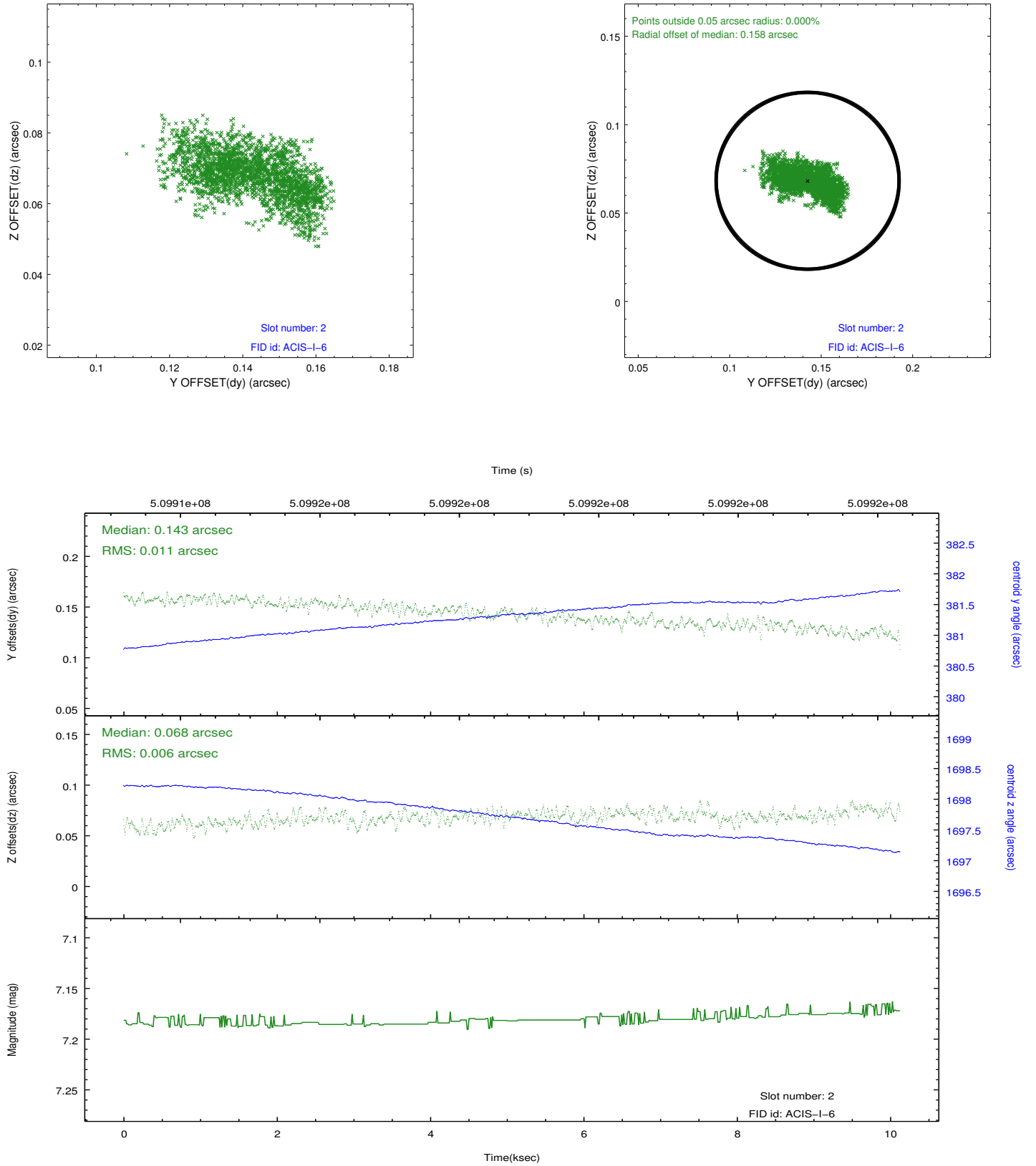
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.068800077438

## 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.