

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 7309 - L2 Version 3  
Chandra X-Ray Center

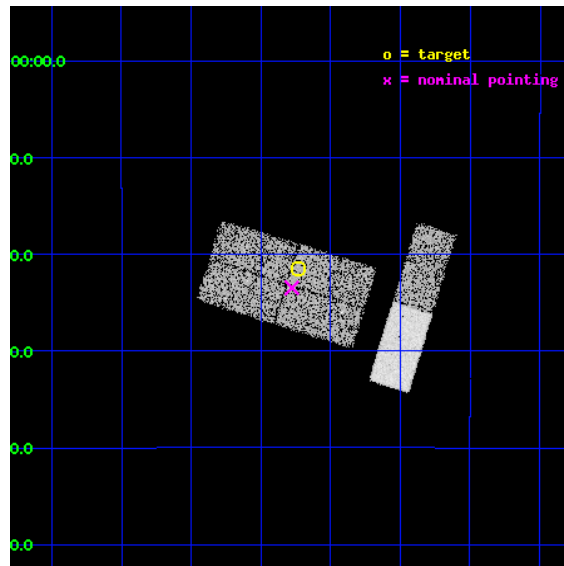
L2 Processing Date : Apr 20 2012

## 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 2 . . . . .	9
2.4.2	Slot 3 . . . . .	10
2.4.3	Slot 4 . . . . .	11
2.4.4	Slot 5 . . . . .	12
2.4.5	Slot 6 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
<b>A</b>	<b>Summary</b>	<b>16</b>
A.1	Status . . . . .	16
A.2	Comments . . . . .	16

# 1 Front

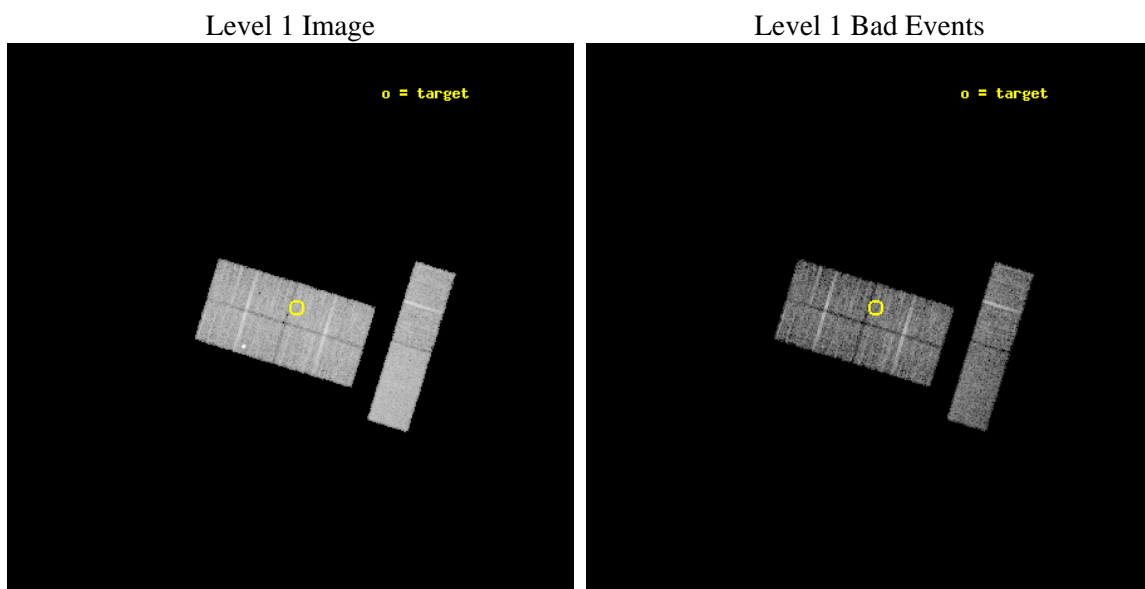
seq_num	100062	Sequence number
obs_id	7309	Observation id
title	Search for charge exchange induced X-ray emission in the Venusian exosphere	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	322.057513	Observer's specified target RA [deg]
dec_targ	-13.358855	Observer's specified target Dec [deg]
ra_nom	322.06956845417	Nominal RA [deg]
dec_nom	-13.391305315112	Nominal Dec [deg]
roll_nom	107.09714208372	Nominal Roll [deg]
revision	3	Processing version of data
ontime	6393.6000423431	Sum of GTIs [s]
liveltime	6251.0755204763	Livetime [s]
ontime0	6391.7590521574	Sum of GTIs [s]
ontime1	6393.6000423431	Sum of GTIs [s]
ontime2	6393.6000423431	Sum of GTIs [s]
ontime3	6393.6000423431	Sum of GTIs [s]
ontime6	6393.6000423431	Sum of GTIs [s]
ontime7	6393.6000423431	Sum of GTIs [s]
l2events	30907	Number of level 2 events



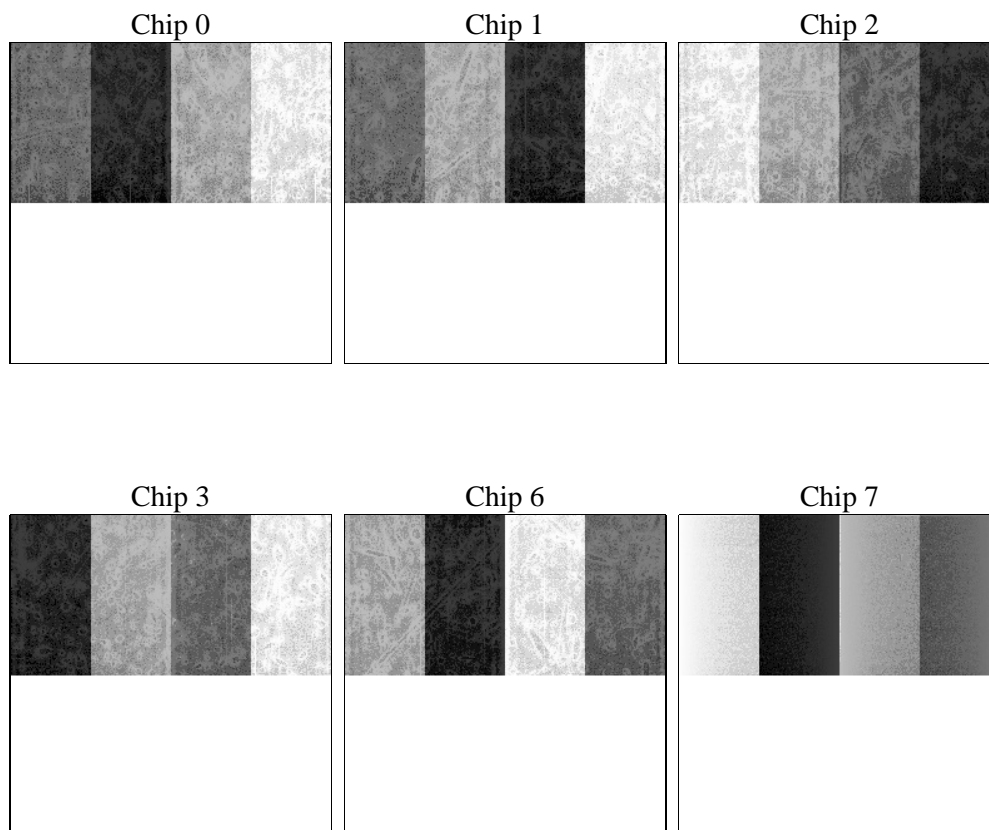
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	6393.6000423431	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	6391.7590521574	Sum of GTIs [s]
date	2012-04-20T16:24:58	Date and time of file creation	ontime1	6393.6000423431	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	6393.6000423431	Sum of GTIs [s]
			ontime3	6393.6000423431	Sum of GTIs [s]
			ontime6	6393.6000423431	Sum of GTIs [s]
			ontime7	6393.6000423431	Sum of GTIs [s]
			l1events	204201	Number of level 1 events

### 2.1.4 Events

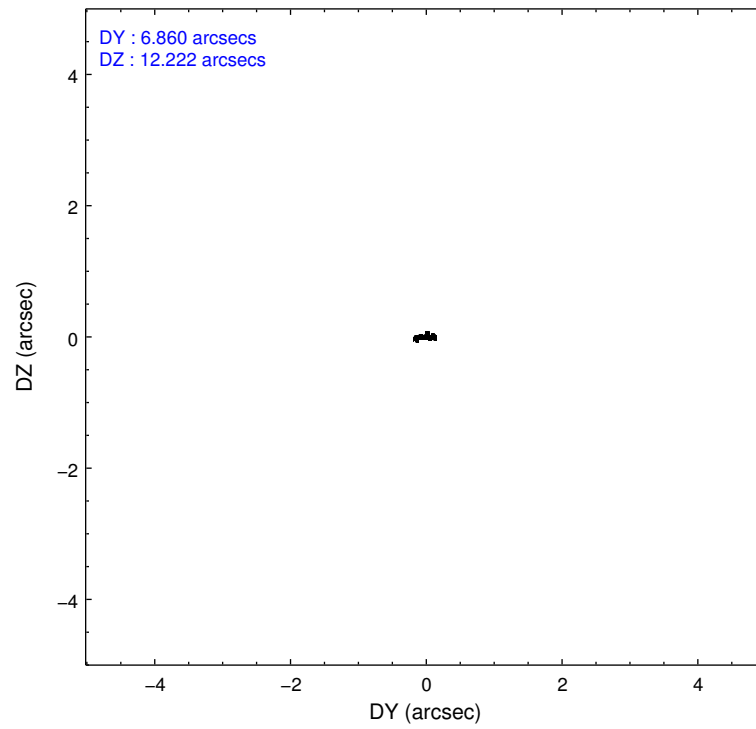
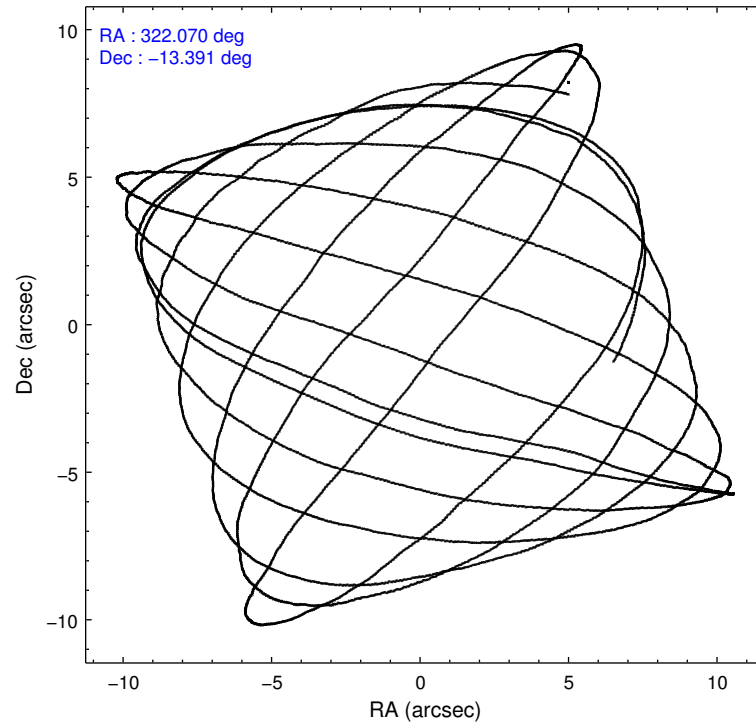
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	29721	32450	34354	32485	33932	41259	grade 0 events	1577	2812	1704	1539	1288	1539
rejected events	26138	27434	30643	28972	30417	25222		5%	8%	4%	4%	3%	3%
rejected %	87%	84%	89%	89%	89%	61%	grade 1 events	27	12	15	14	17	44
								0%	0%	0%	0%	0%	0%
							grade 2 events	787	871	752	678	773	3386
								2%	2%	2%	2%	2%	8%
							grade 3 events	408	435	387	402	439	1699
								1%	1%	1%	1%	1%	4%
							grade 4 events	412	458	435	400	419	1562
								1%	1%	1%	1%	1%	3%
							grade 5 events	1281	1296	1235	1435	1504	4043
								4%	3%	3%	4%	4%	9%
							grade 6 events	567	681	615	662	780	8683
								1%	2%	1%	2%	2%	21%
							grade 7 events	24662	25885	29211	27355	28712	20303
								82%	79%	85%	84%	84%	49%

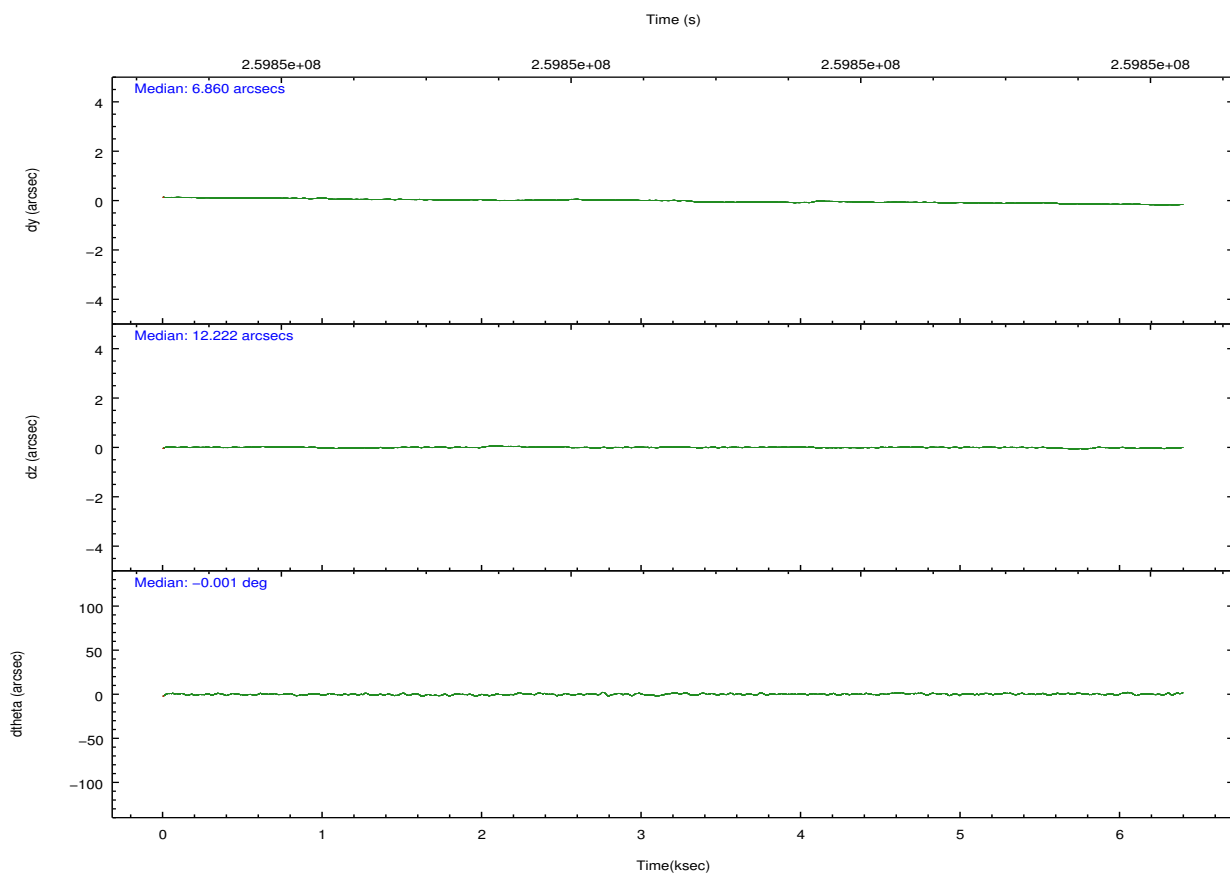
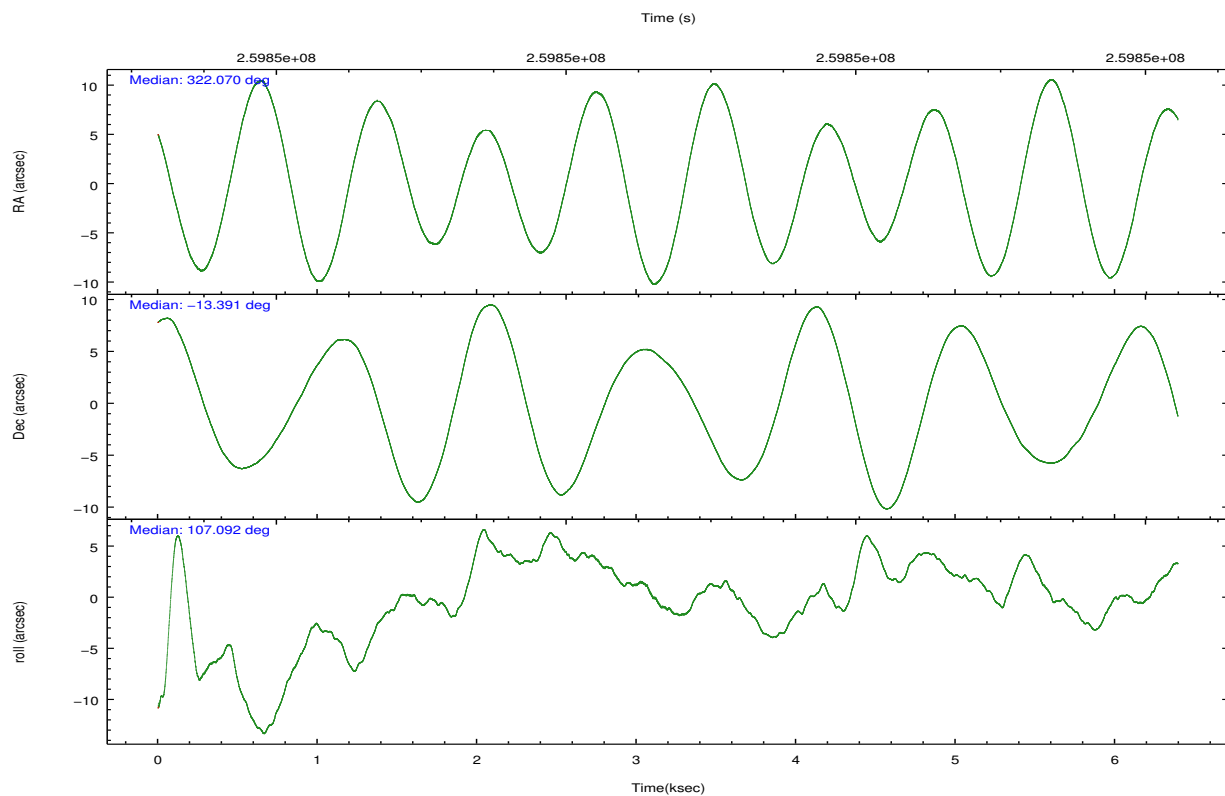


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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
[deg] Pointing RA	322.090297	322.0695684541684	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-13.409962	-13.39130531511183	Subarray start row	513	513
[deg] Pointing Roll	106.893271	107.0971420837161	Subarray row count	512	512
[s] Window start time (MET)	258076865.184000	258076865.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	261705665.184000	261705665.184000	[s] Primary exposure time	0.000000	1.8
[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)	259847702.184000	259847326.24642			
Observation start date	2006-03-27T11:53:57	2006-03-27T11:48:46			
[s] Observation end time (MET)	259853902.184000	259854036.40923			
Observation end date	2006-03-27T13:37:17	2006-03-27T13:40:36			
Read mode	TIMED	TIMED			

## 2.3 Aspect



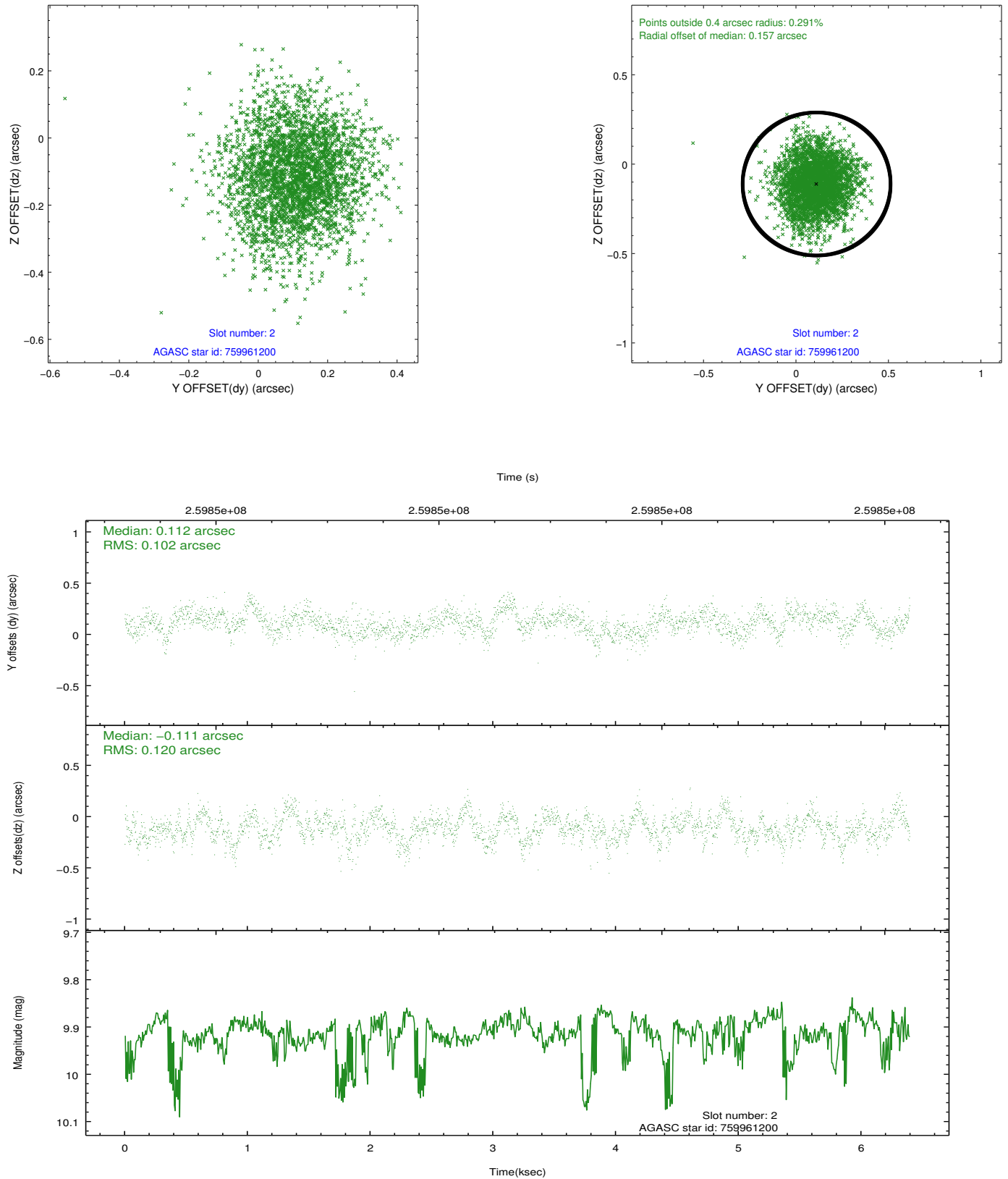


### Slot Statistics

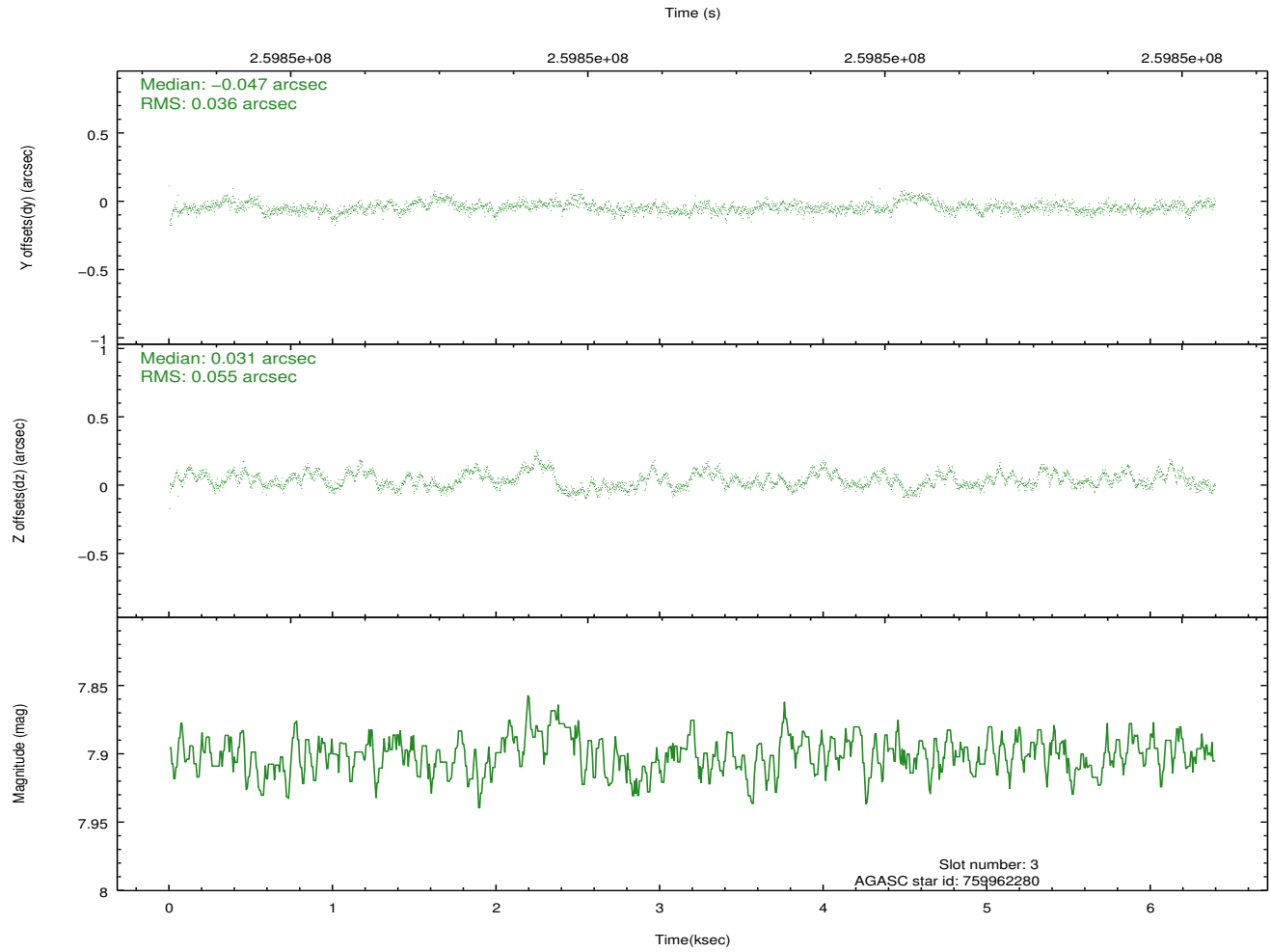
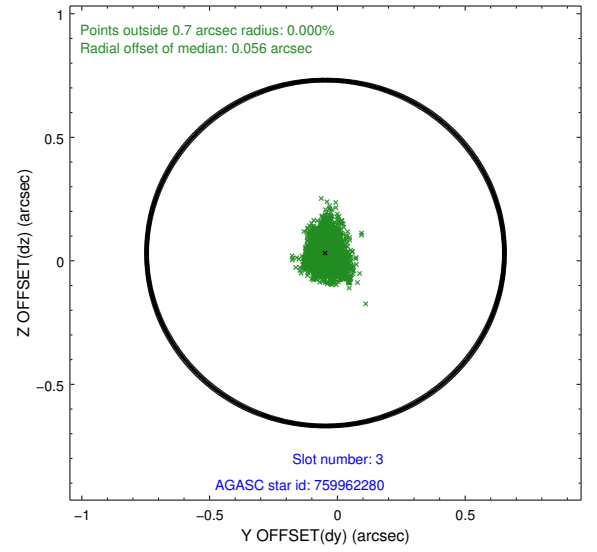
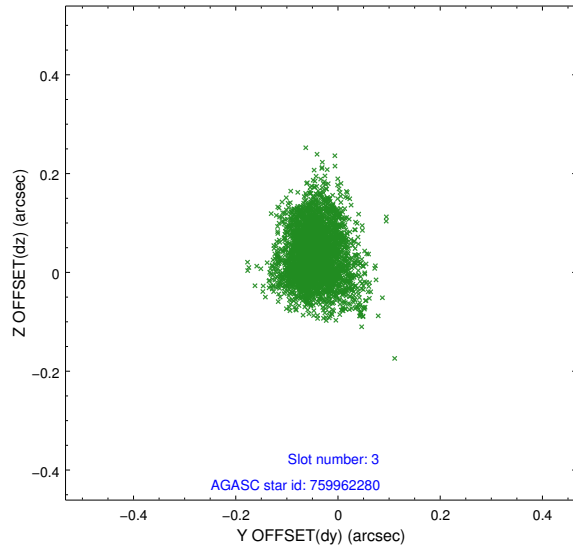
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.14	1559	0.024	-0.079	0.007	0.014	0.000000	0.000000	-761.33	-842.17
1	FID	ACIS-I-5	7.23	1560	-0.088	0.127	0.007	0.014	0.000000	0.000000	-1815.91	1061.44
2	GUIDE	759961200	9.91	3093	0.112	-0.111	0.168	0.267	321.872560	-14.109246	-2188.40	1458.90
3	GUIDE	759962280	7.90	3120	-0.047	0.031	0.069	0.116	322.001957	-13.698366	-905.04	598.13
4	GUIDE	759962544	9.37	3112	0.100	0.046	0.104	0.169	322.119077	-13.952845	-1899.62	471.87
5	GUIDE	759962960	8.42	3112	-0.175	0.139	0.134	0.186	321.922663	-13.562736	-356.95	721.56
6	GUIDE	758253320	9.65	3115	0.021	-0.095	0.125	0.208	321.577816	-13.572361	-40.43	1886.67
7	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

## 2.4 Star Slots

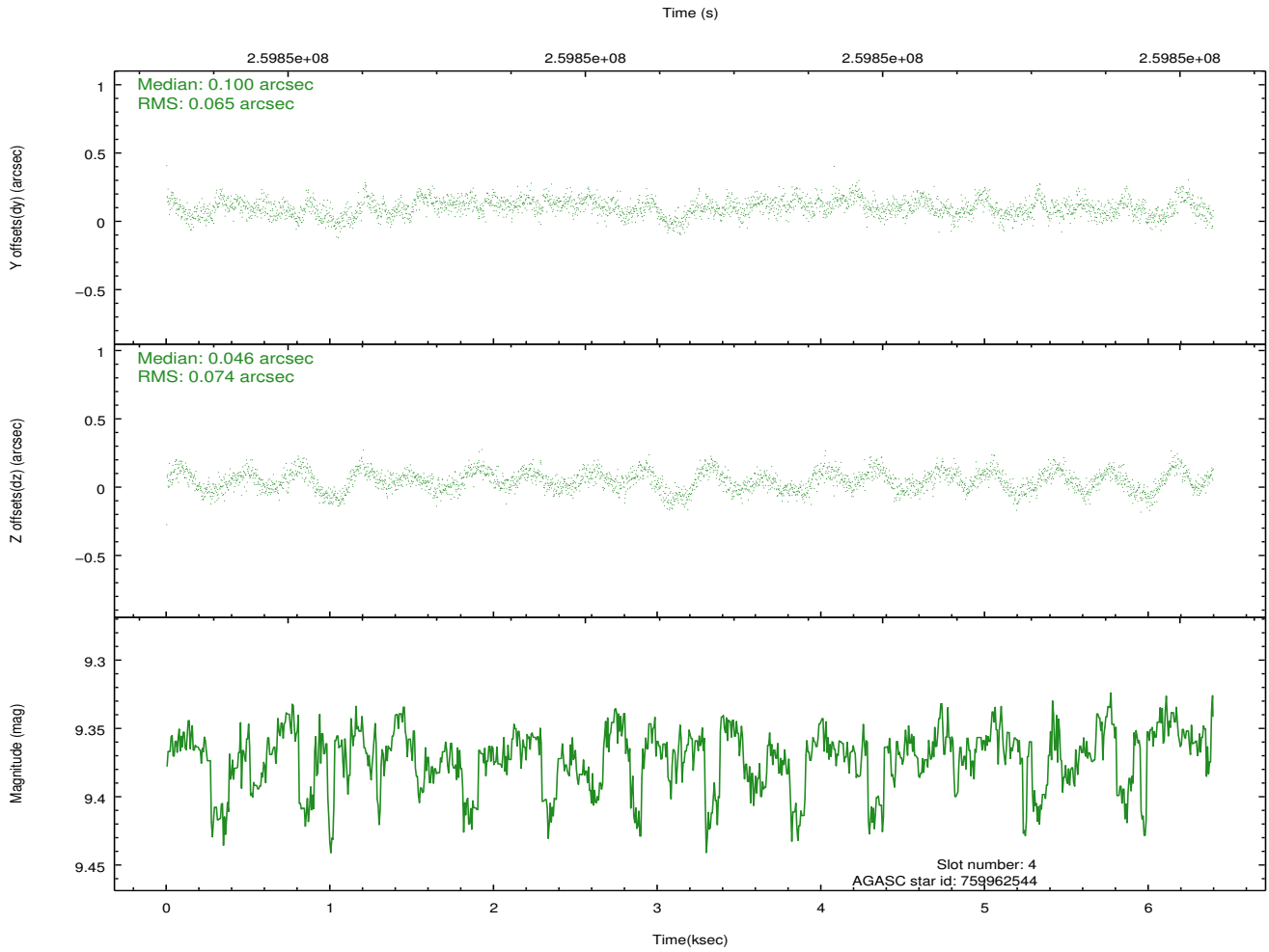
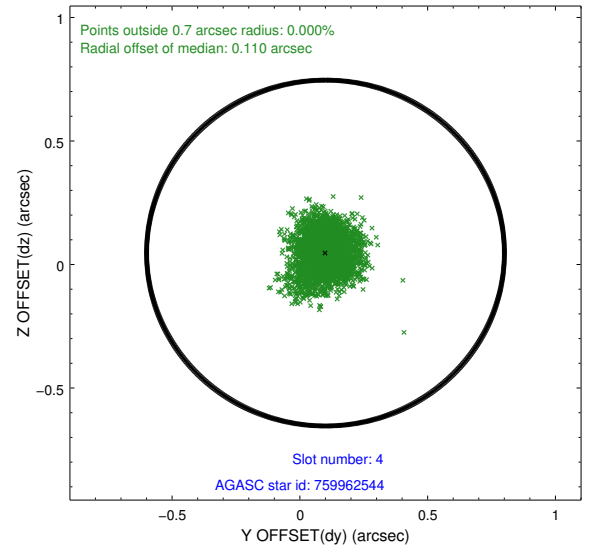
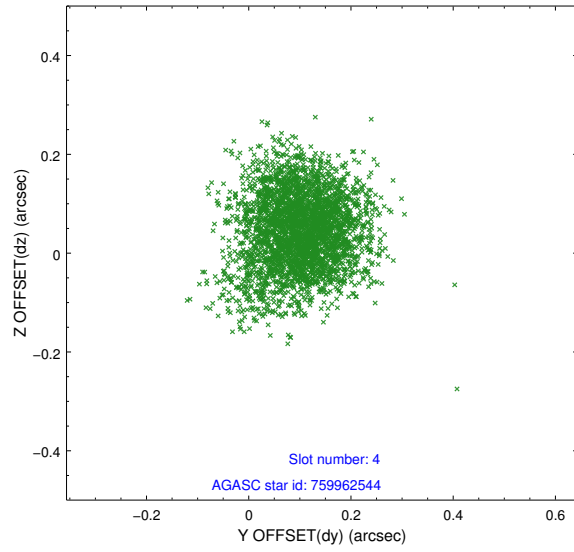
### 2.4.1 Slot 2



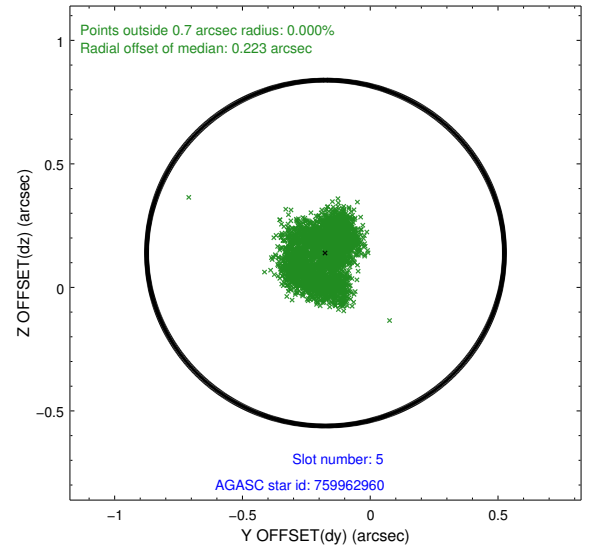
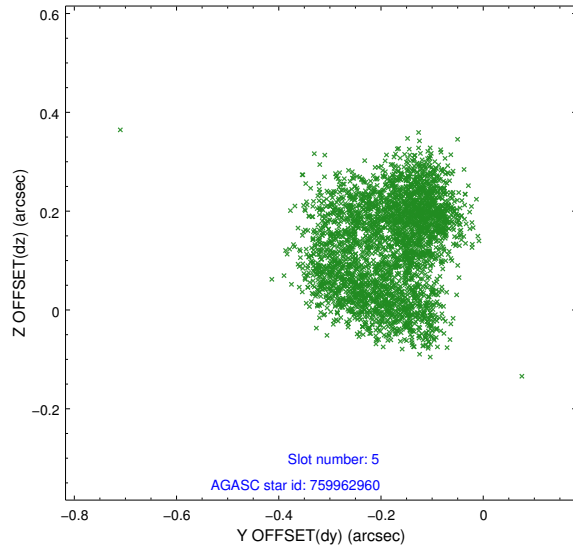
## 2.4.2 Slot 3



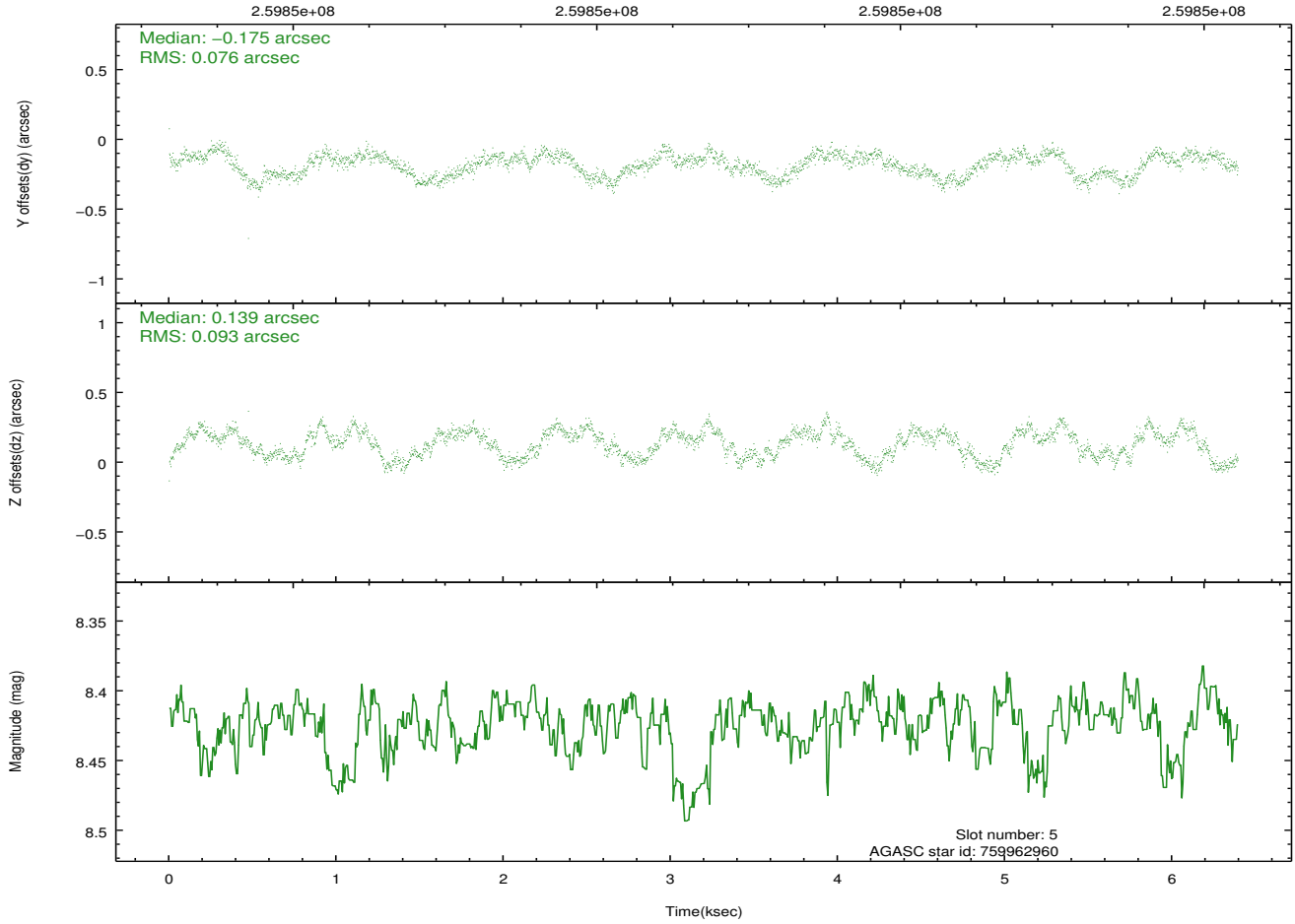
### 2.4.3 Slot 4



## 2.4.4 Slot 5

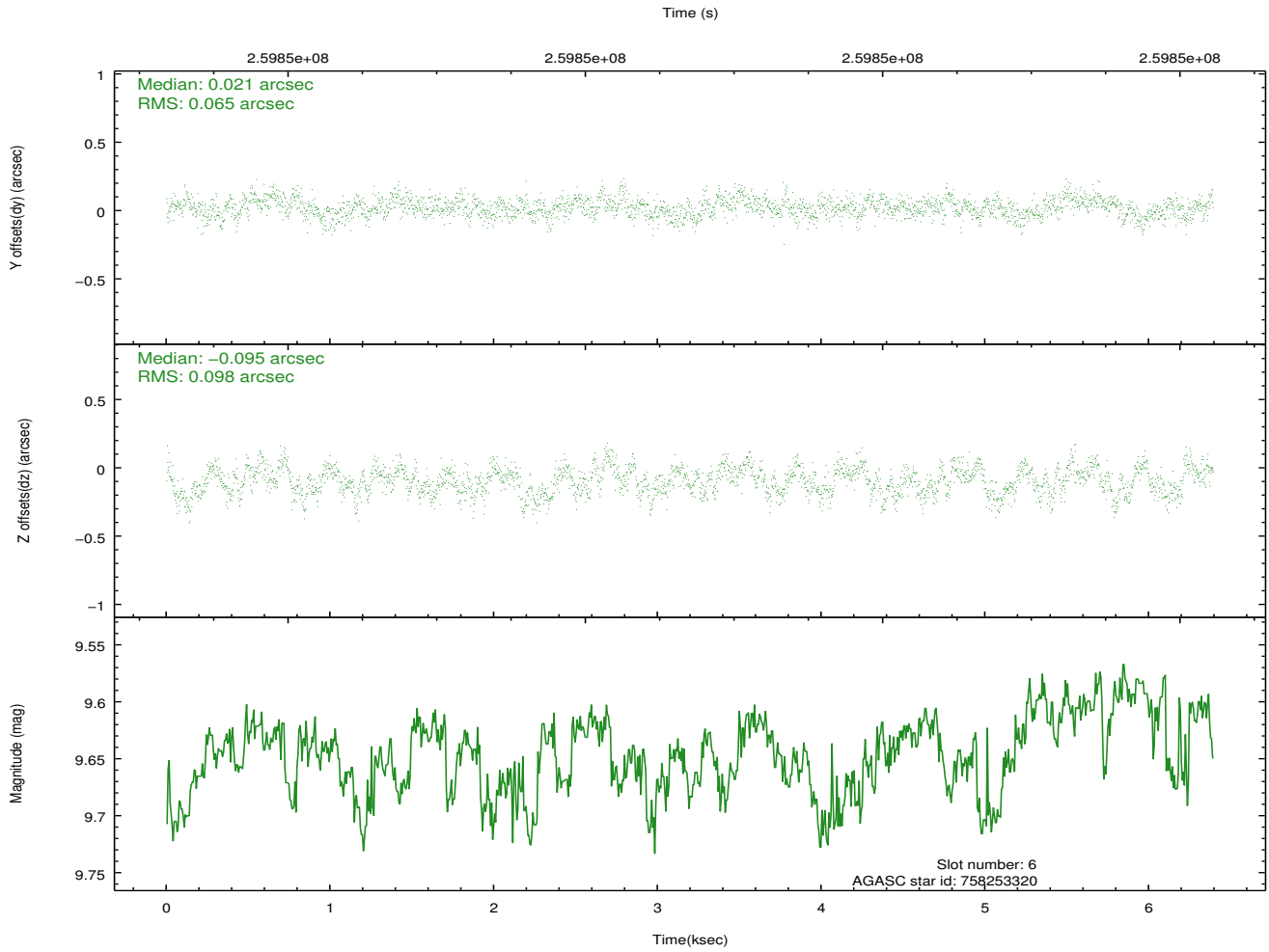
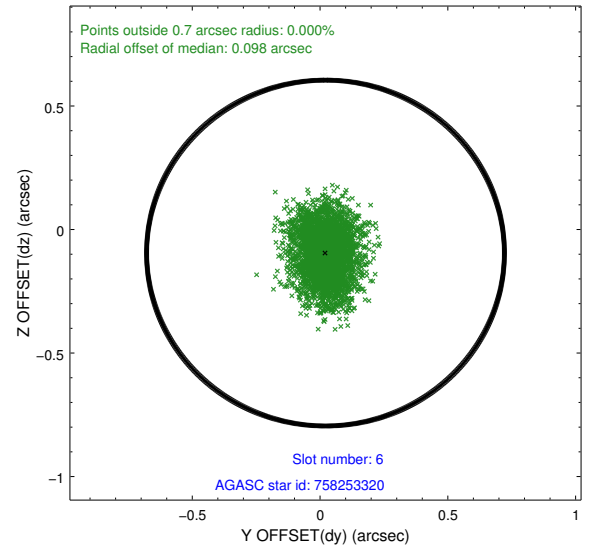
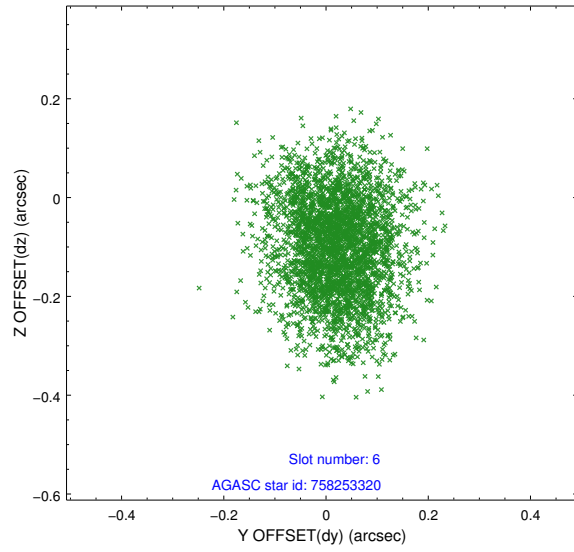


Time (s)



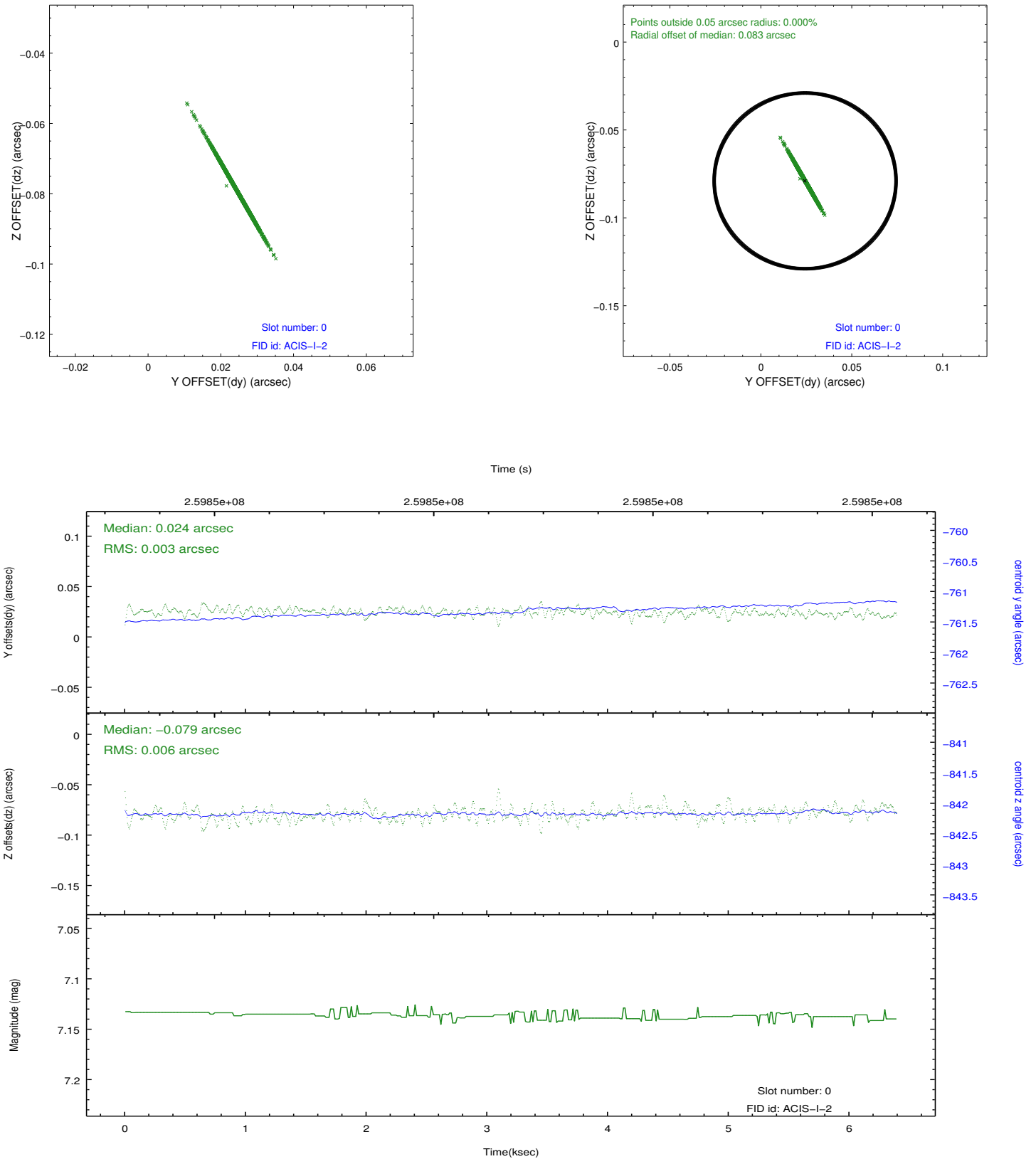


## 2.4.5 Slot 6

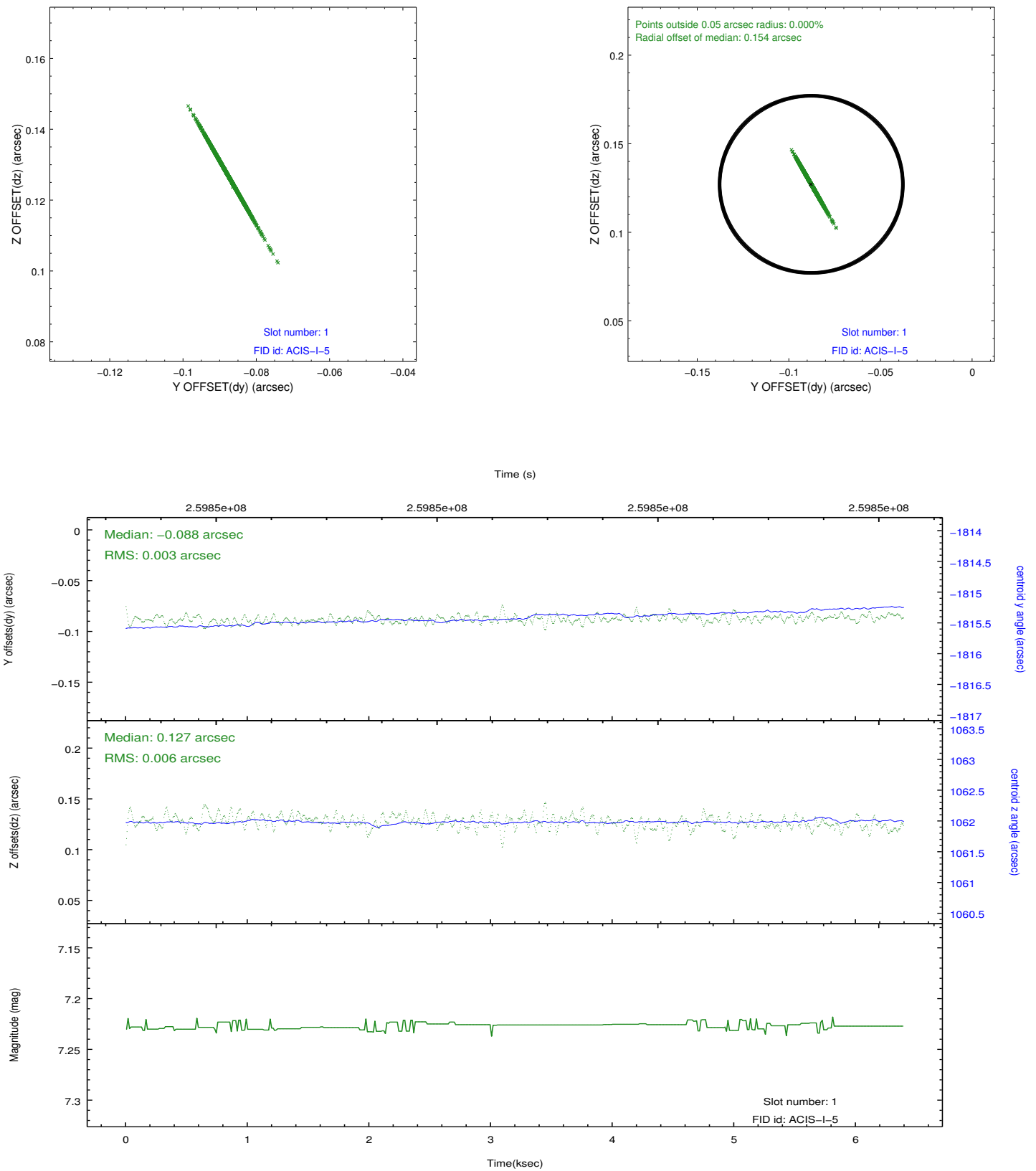


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.04.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.39360004

## A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.

Window preference met.