

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 6395 - L2 Version 2  
Chandra X-Ray Center

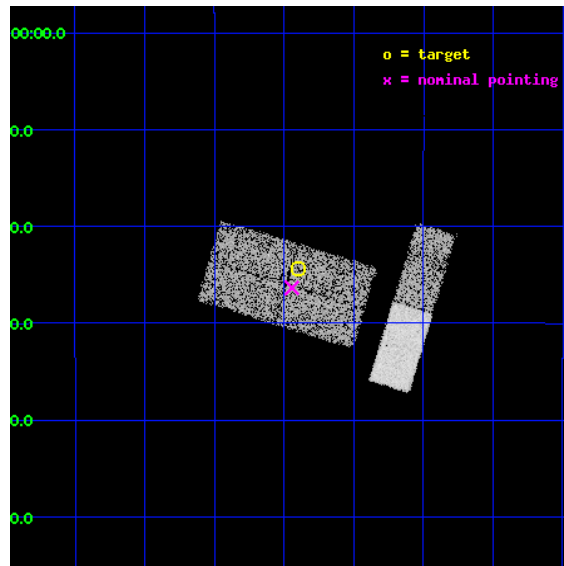
L2 Processing Date : Mar 28 2012

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# 1 Front

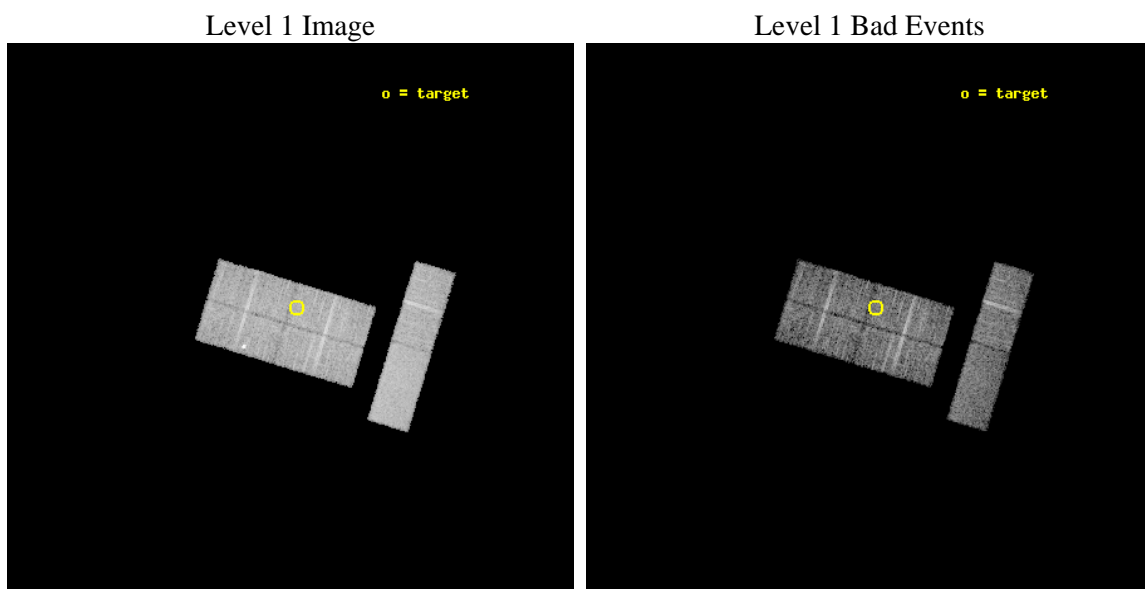
seq_num	100062	Sequence number
obs_id	6395	Observation id
title	Search for charge exchange induced X-ray emission in the Venusian exosphere	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Venus	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	321.723916	Observer's specified target RA [deg]
dec_targ	-13.406625	Observer's specified target Dec [deg]
ra_nom	321.73593572036	Nominal RA [deg]
dec_nom	-13.439193065737	Nominal Dec [deg]
roll_nom	106.98117546727	Nominal Roll [deg]
revision	2	Processing version of data
ontime	6345.0000420213	Sum of GTIs [s]
livetime	6203.5588991213	Livetime [s]
ontime0	6345.0000420213	Sum of GTIs [s]
ontime1	6345.0000420213	Sum of GTIs [s]
ontime2	6345.0000420213	Sum of GTIs [s]
ontime3	6345.0000420213	Sum of GTIs [s]
ontime6	6345.0000420213	Sum of GTIs [s]
ontime7	6345.0000420213	Sum of GTIs [s]
l2events	30982	Number of level 2 events



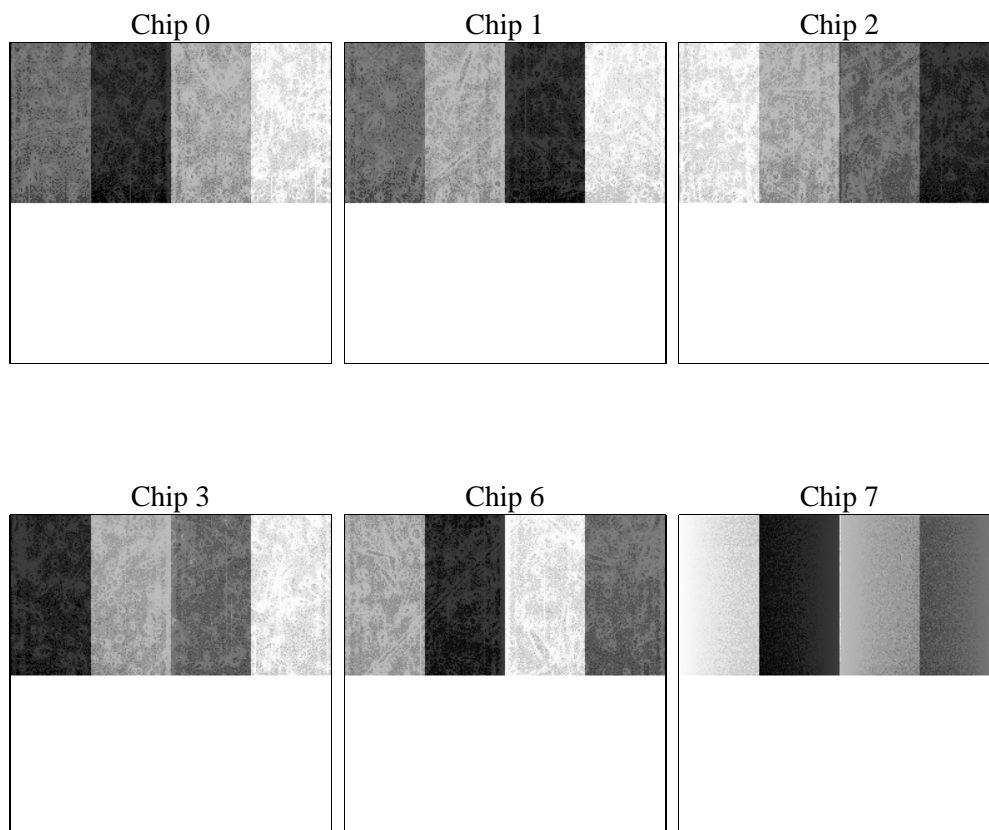
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6199.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	6345.0000420213	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	6345.0000420213	Sum of GTIs [s]
date	2012-03-28T21:23:17	Date and time of file creation	ontime1	6345.0000420213	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	6345.0000420213	Sum of GTIs [s]
			ontime3	6345.0000420213	Sum of GTIs [s]
			ontime6	6345.0000420213	Sum of GTIs [s]
			ontime7	6345.0000420213	Sum of GTIs [s]
			l1events	208844	Number of level 1 events

### 2.1.4 Events

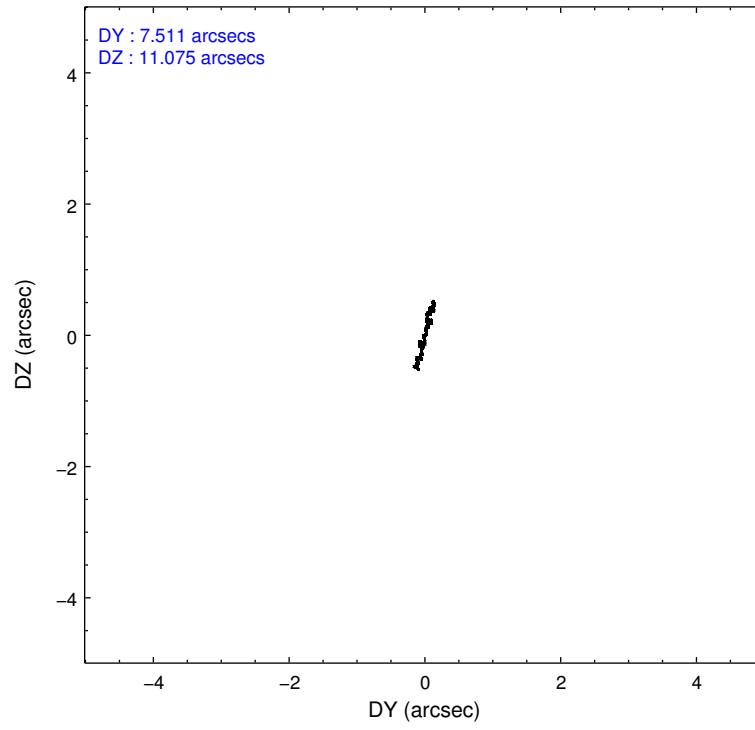
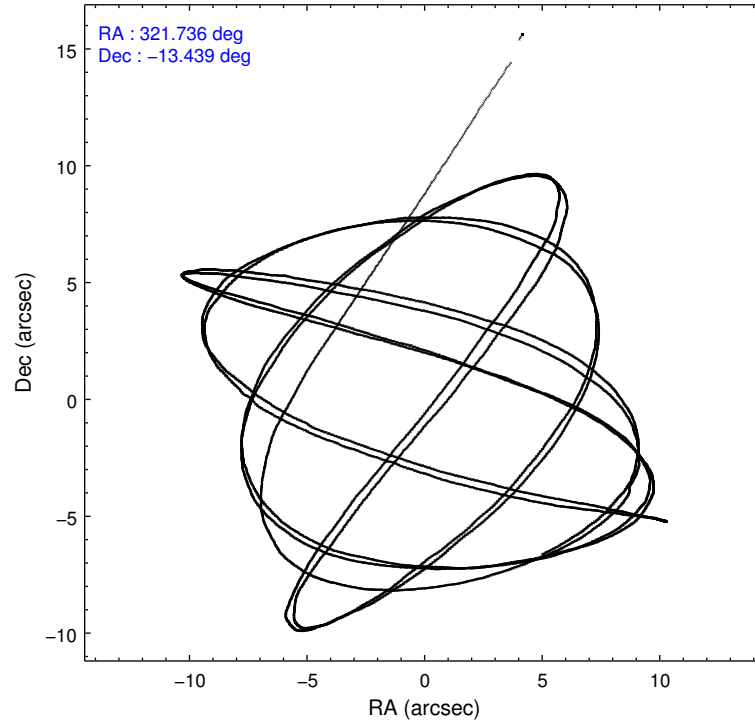
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	30568	31840	34579	33690	35665	42502	grade 0 events	1567	2707	1697	1619	1491	1616
rejected events	27119	27161	31057	30103	32007	26170		5%	8%	4%	4%	4%	3%
rejected %	88%	85%	89%	89%	89%	61%	grade 1 events	21	10	19	15	14	46
								0%	0%	0%	0%	0%	0%
							grade 2 events	724	782	698	696	812	3544
								2%	2%	2%	2%	2%	8%
							grade 3 events	451	398	443	468	439	1701
								1%	1%	1%	1%	1%	4%
							grade 4 events	373	437	448	445	437	1705
								1%	1%	1%	1%	1%	4%
							grade 5 events	1272	1331	1243	1500	1530	4120
								4%	4%	3%	4%	4%	9%
							grade 6 events	599	713	547	665	781	9041
								1%	2%	1%	1%	2%	21%
							grade 7 events	25561	25462	29484	28282	30161	20729
								83%	79%	85%	83%	84%	48%

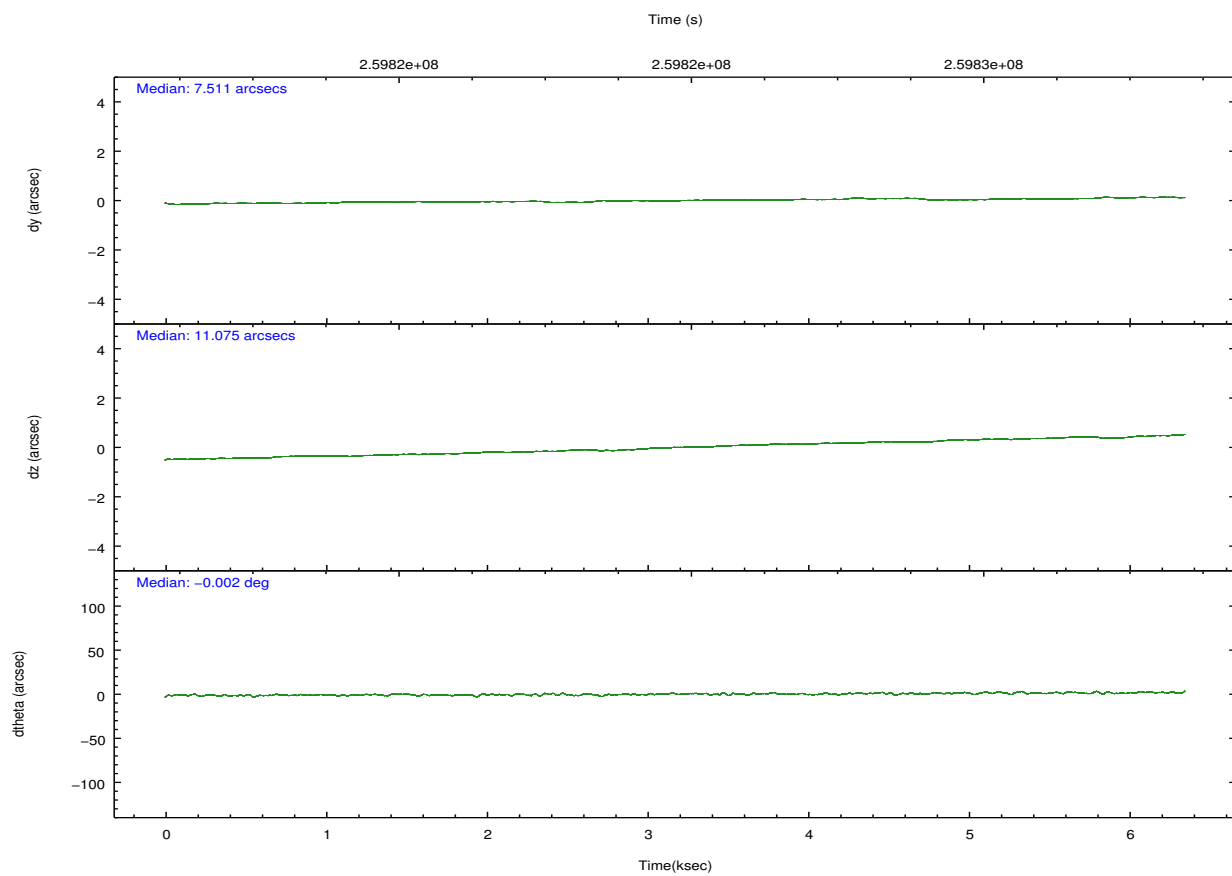
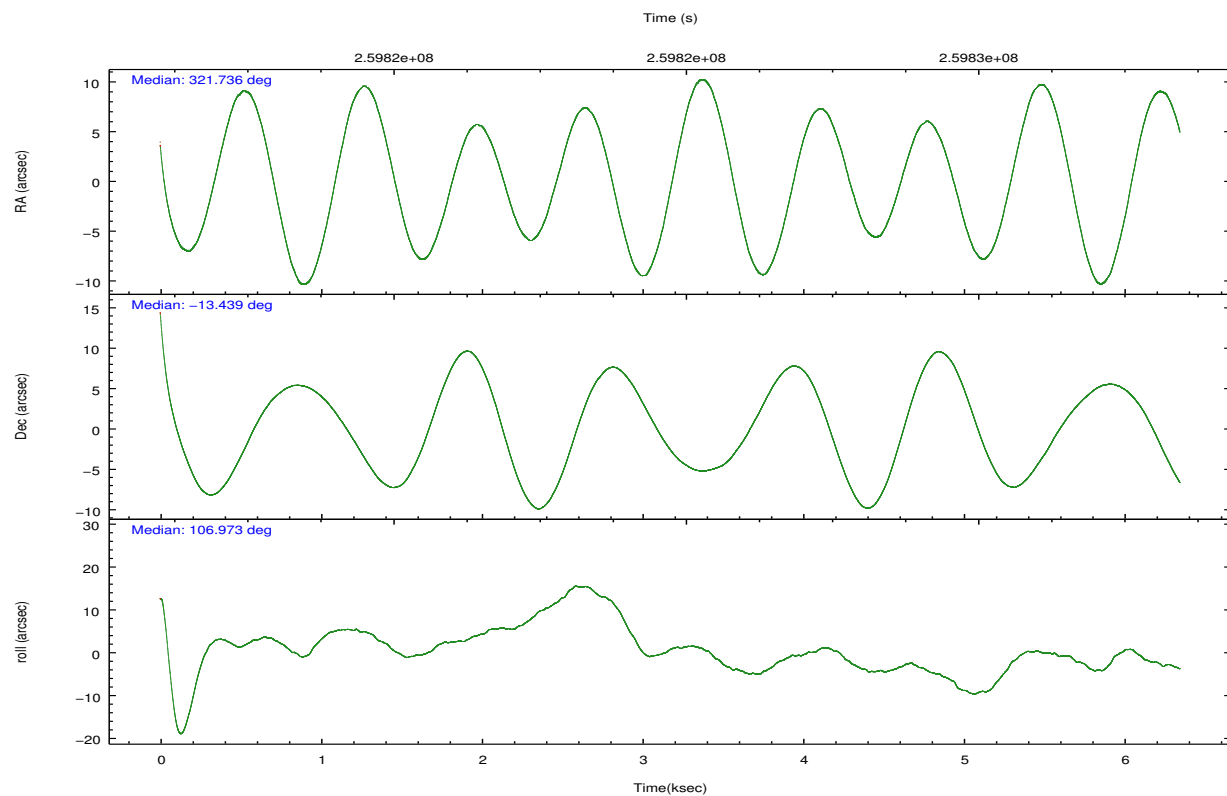


## 2.2 Compared Parameters

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	321.756595	321.735935720361	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-13.457793	-13.43919306573678	Subarray start row	513	513
[deg] Pointing Roll	106.777234	106.9811754672687	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)	259820863.184000	259819847.02014			
Observation start date	2006-03-27T04:26:38	2006-03-27T04:10:47			
[s] Observation end time (MET)	259827062.184000	259827195.75798			
Observation end date	2006-03-27T06:09:57	2006-03-27T06:13:15			
Read mode	TIMED	TIMED			

## 2.3 Aspect



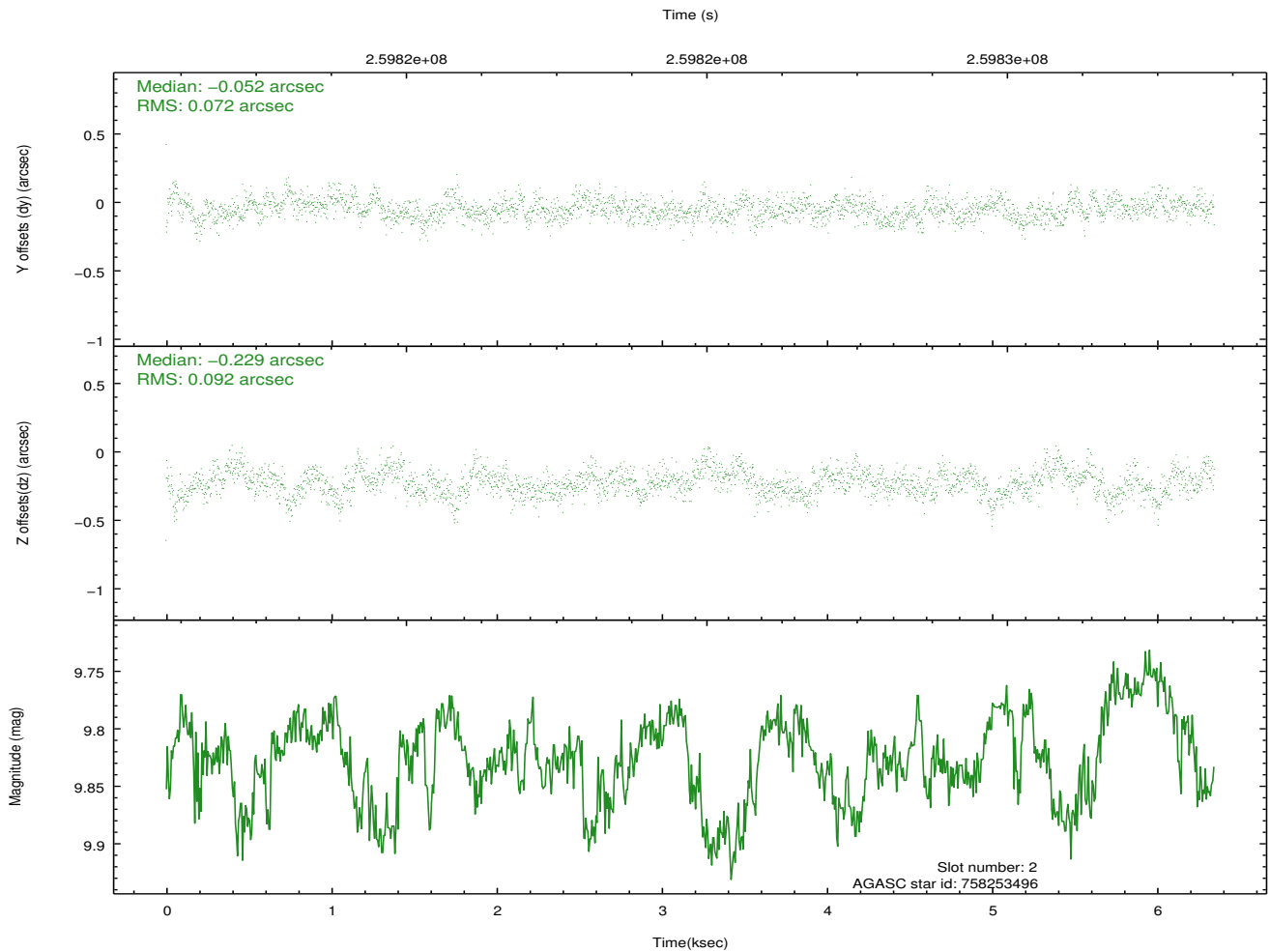
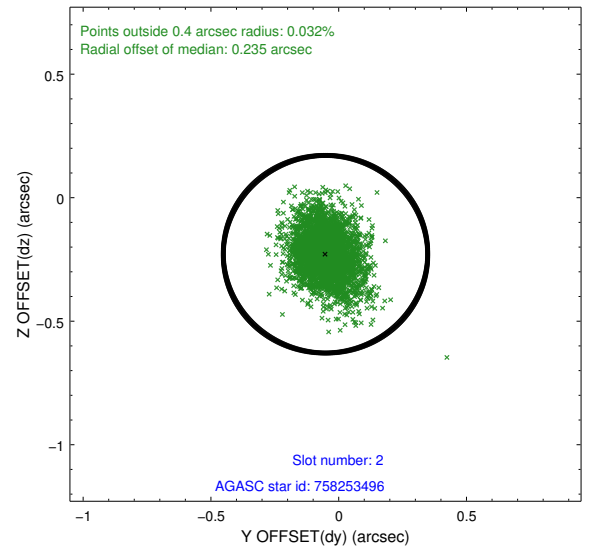
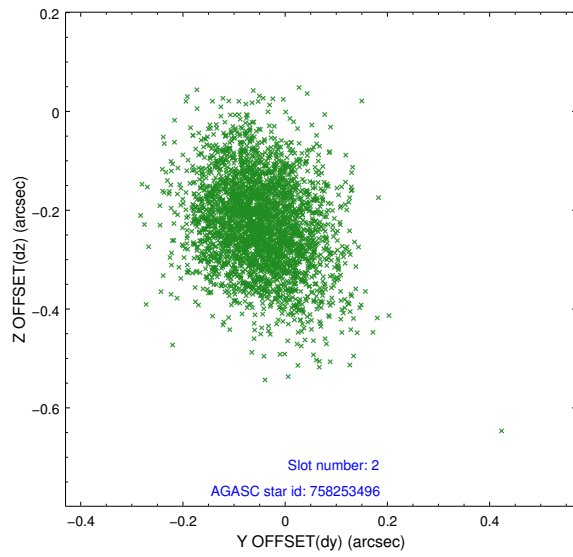


### Slot Statistics

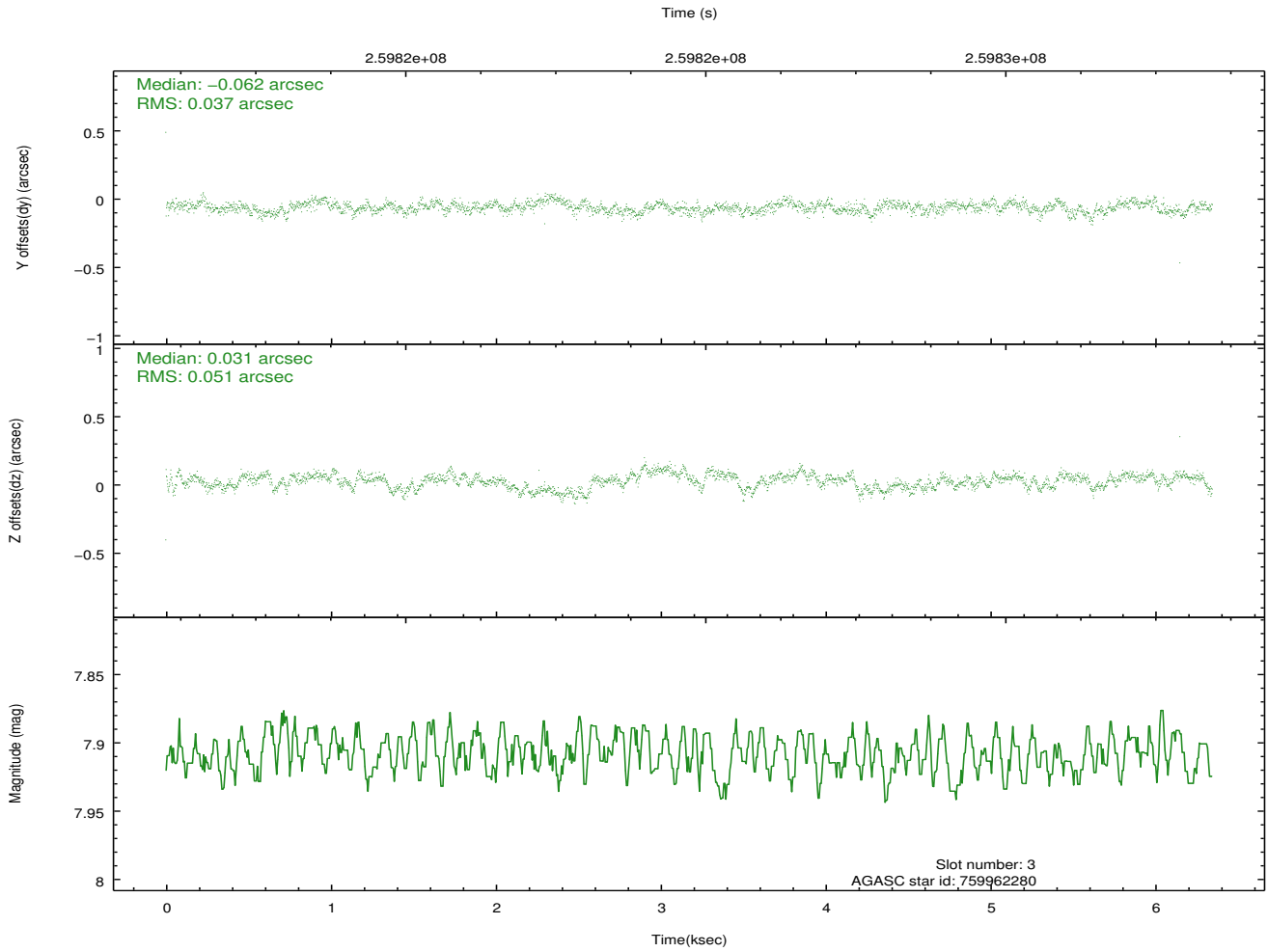
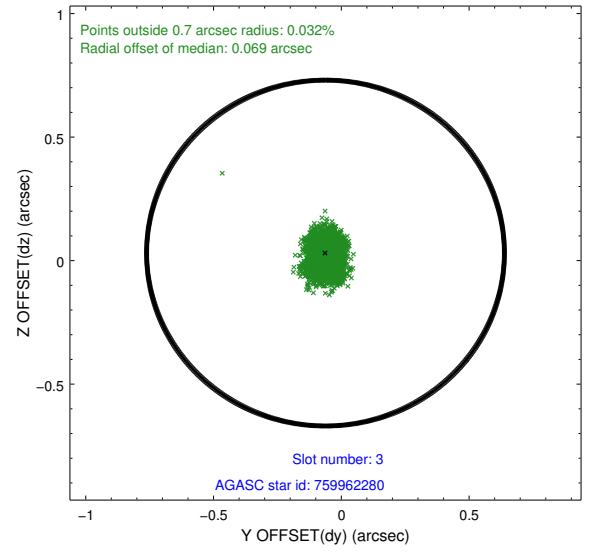
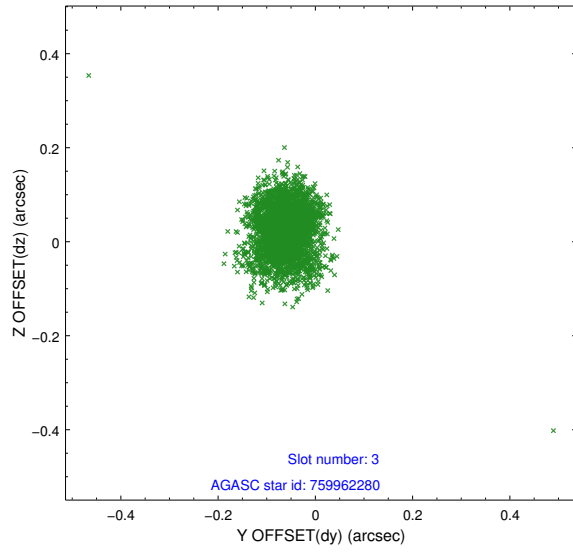
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.15	1549	0.019	-0.070	0.007	0.014	0.000000	0.000000	-762.00	-840.99
1	FID	ACIS-I-5	7.23	1549	-0.083	0.118	0.007	0.014	0.000000	0.000000	-1816.60	1062.59
2	GUIDE	758253496	9.82	3090	-0.052	-0.229	0.121	0.206	321.358592	-13.614283	-138.27	1496.04
3	GUIDE	759962280	7.91	3097	-0.062	0.031	0.064	0.110	322.001957	-13.698366	-1077.30	-570.72
4	GUIDE	759962368	9.11	3096	0.116	0.038	0.101	0.170	322.267195	-13.797795	-1688.69	-1355.40
5	GUIDE	759962544	9.40	3095	0.153	0.056	0.100	0.158	322.119077	-13.952845	-2072.64	-698.31
6	GUIDE	759962960	8.44	3094	-0.154	0.111	0.094	0.236	321.922663	-13.562736	-529.97	-447.30
7	BAD	758255832	8.35	116	-0.232	-0.193	0.115	0.561	321.303380	-13.493524	322.12	1548.05

## 2.4 Star Slots

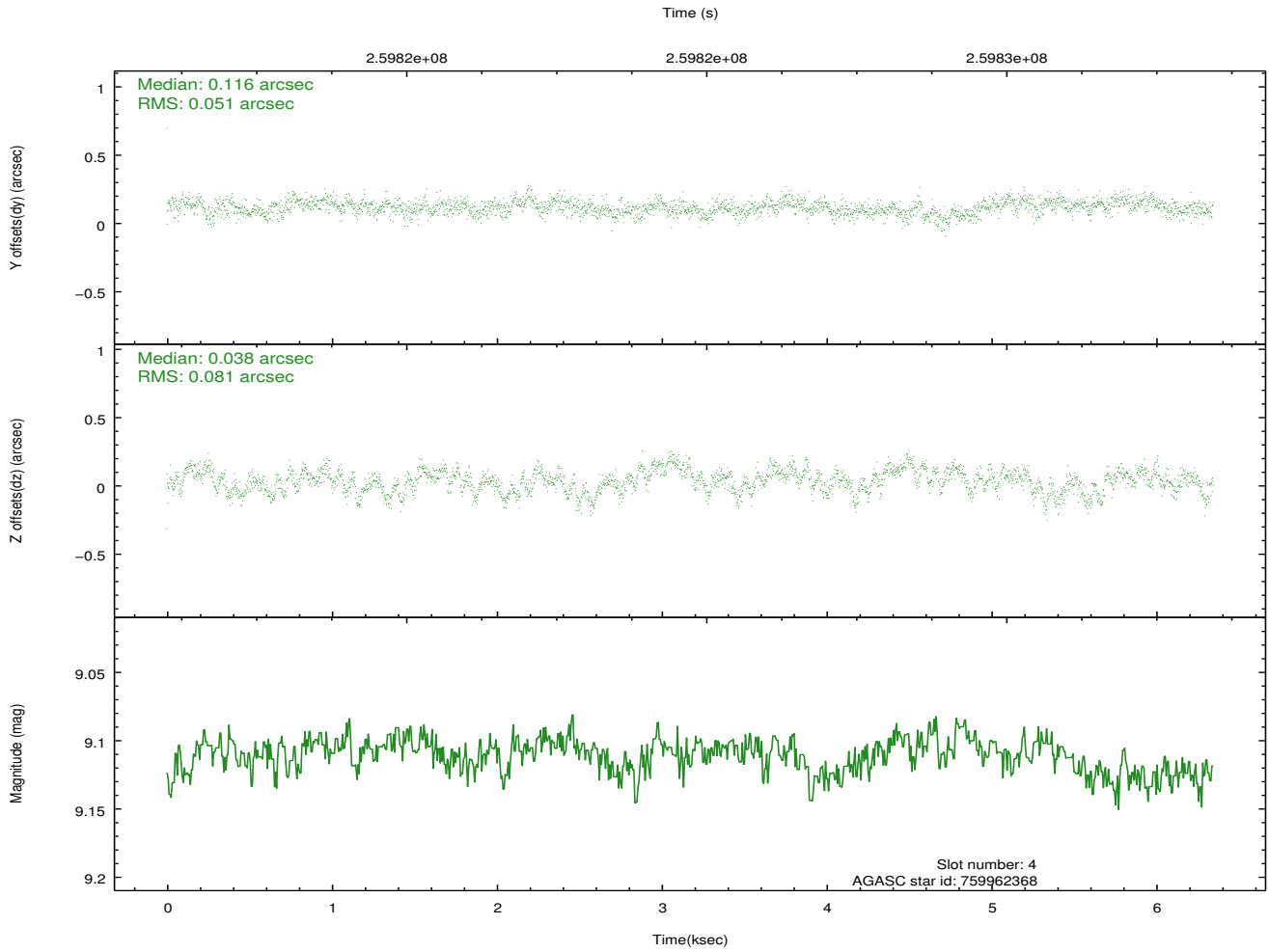
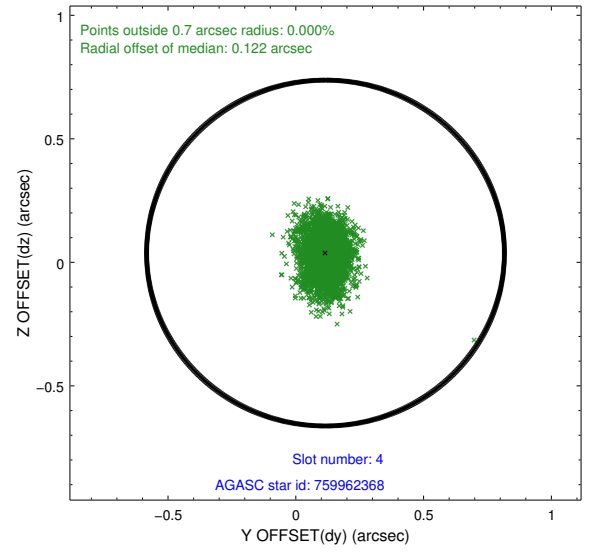
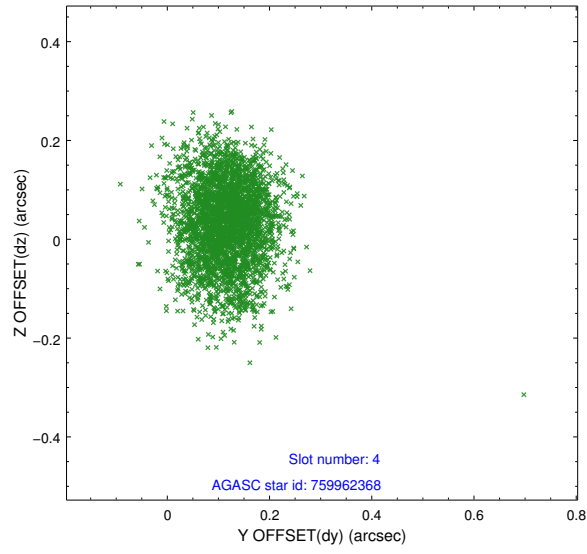
### 2.4.1 Slot 2



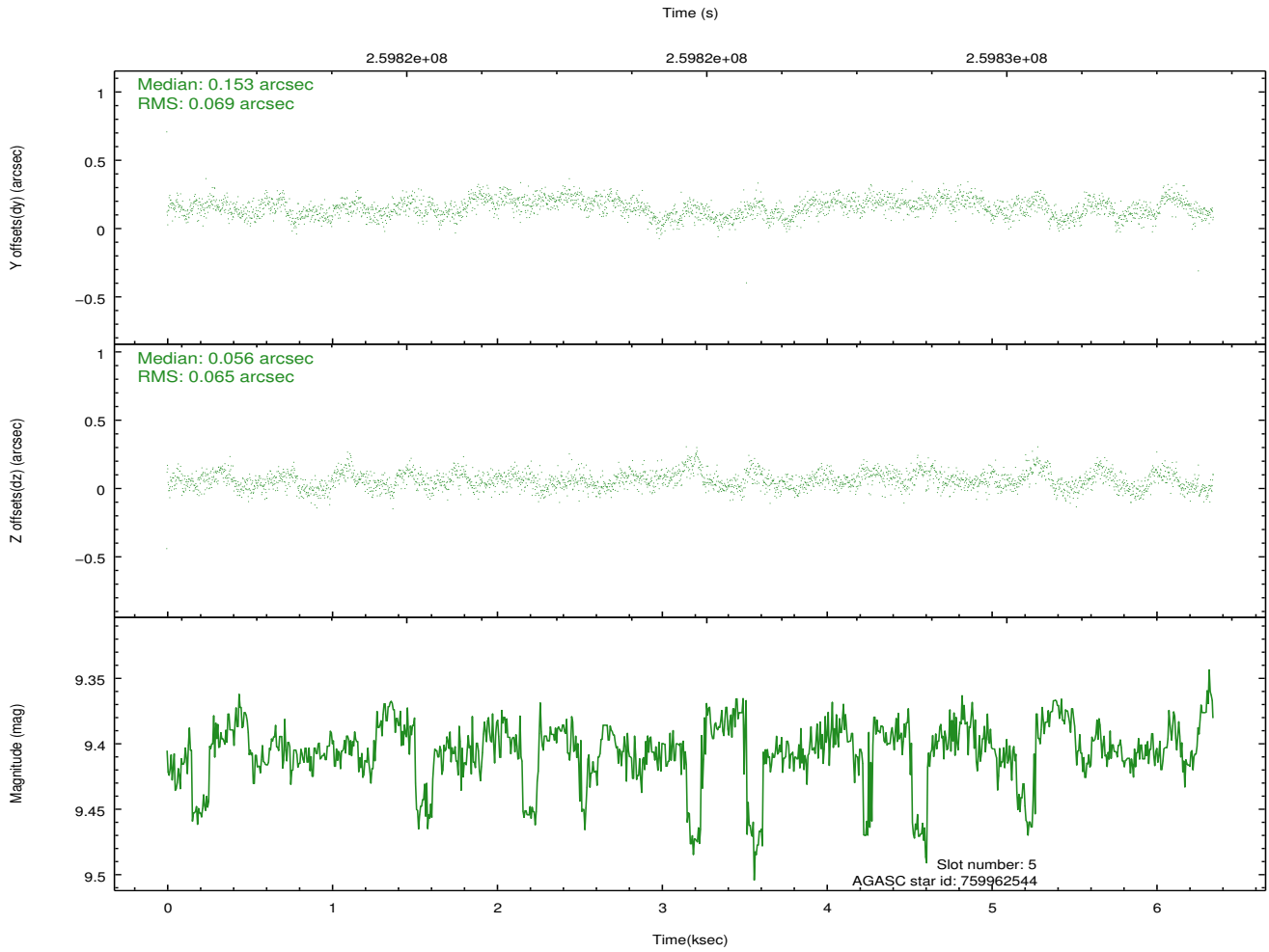
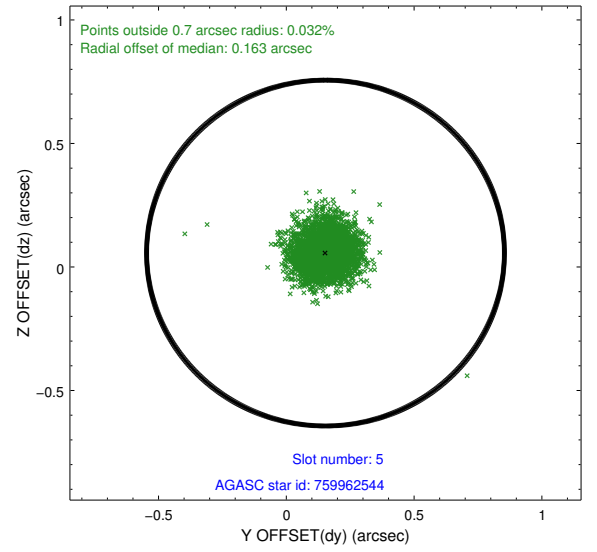
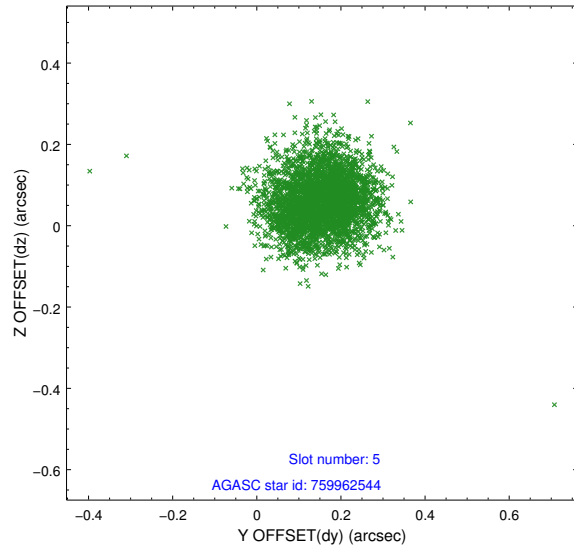
## 2.4.2 Slot 3



### 2.4.3 Slot 4

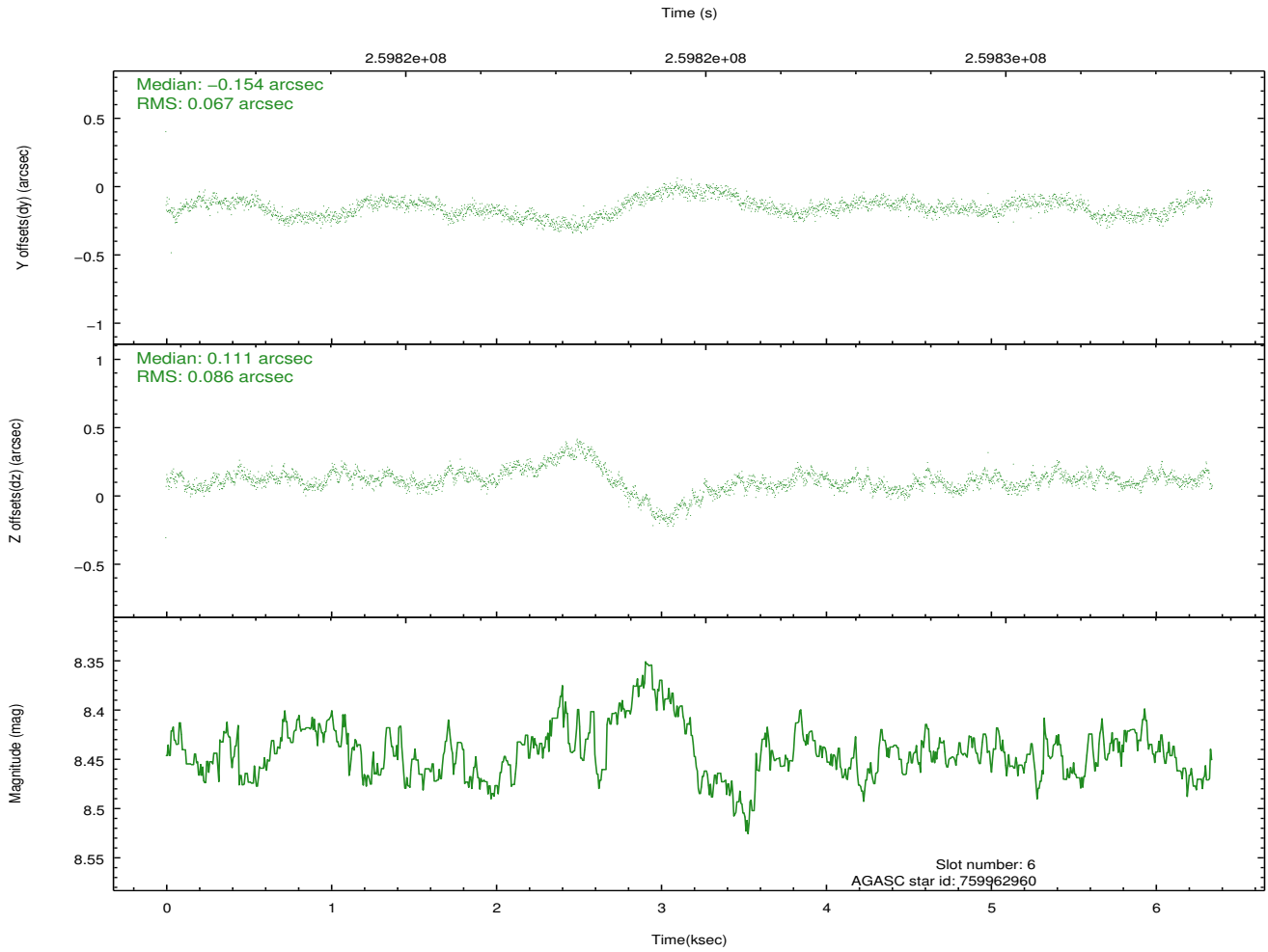
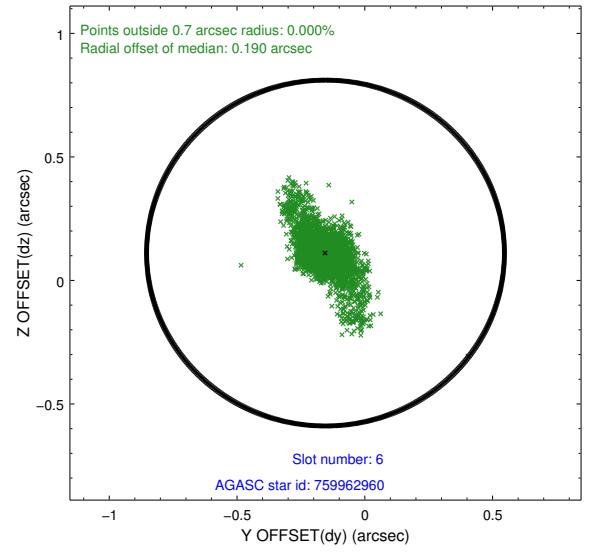
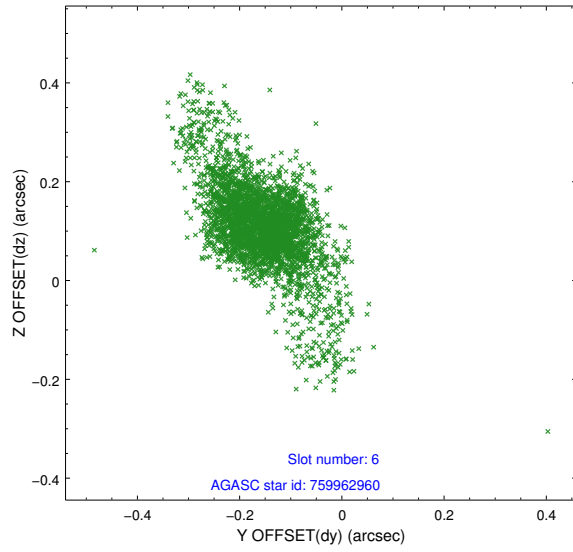


## 2.4.4 Slot 5

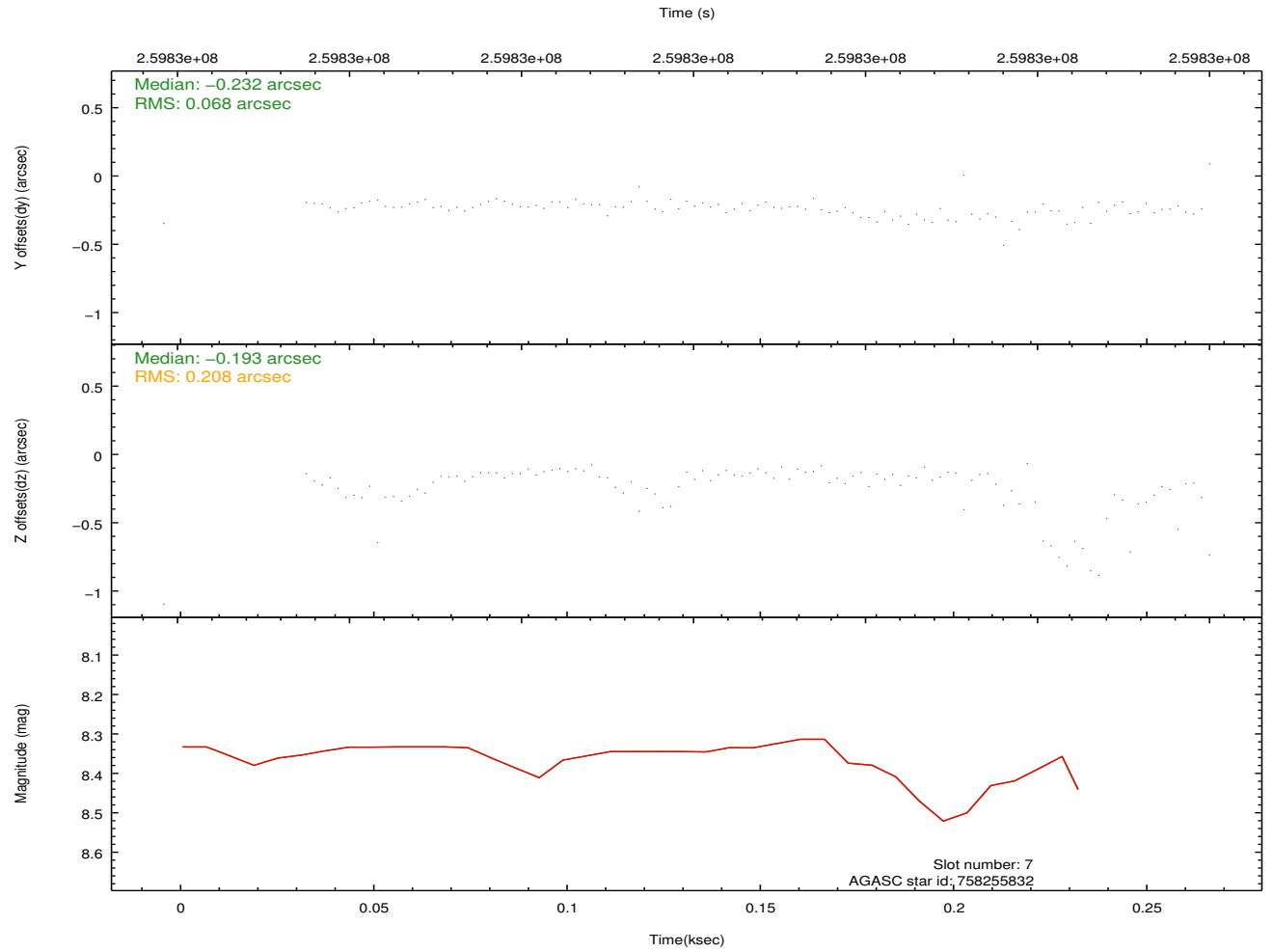
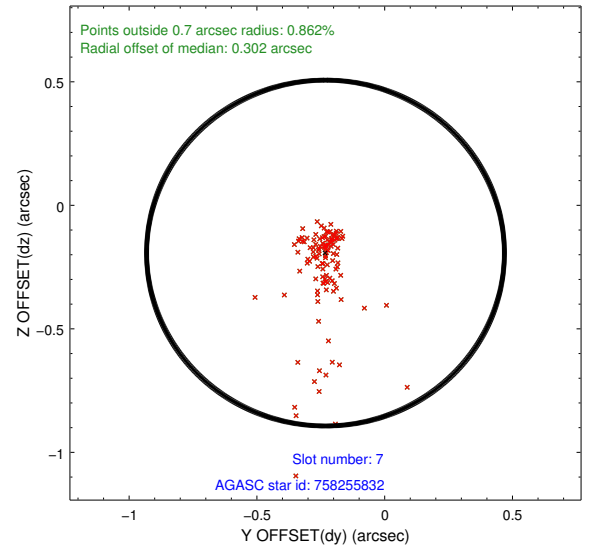
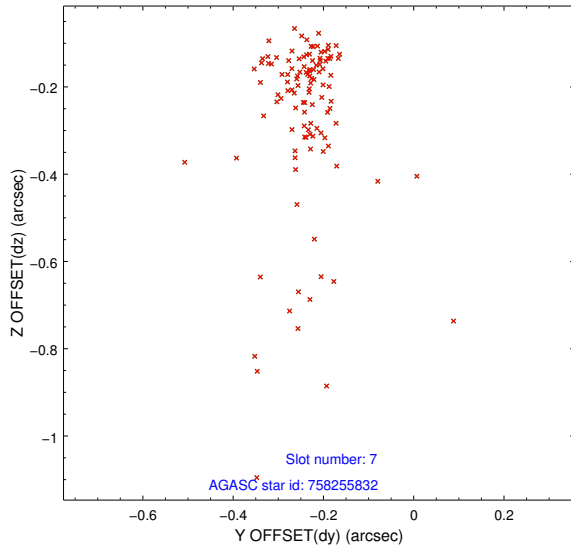




## 2.4.5 Slot 6

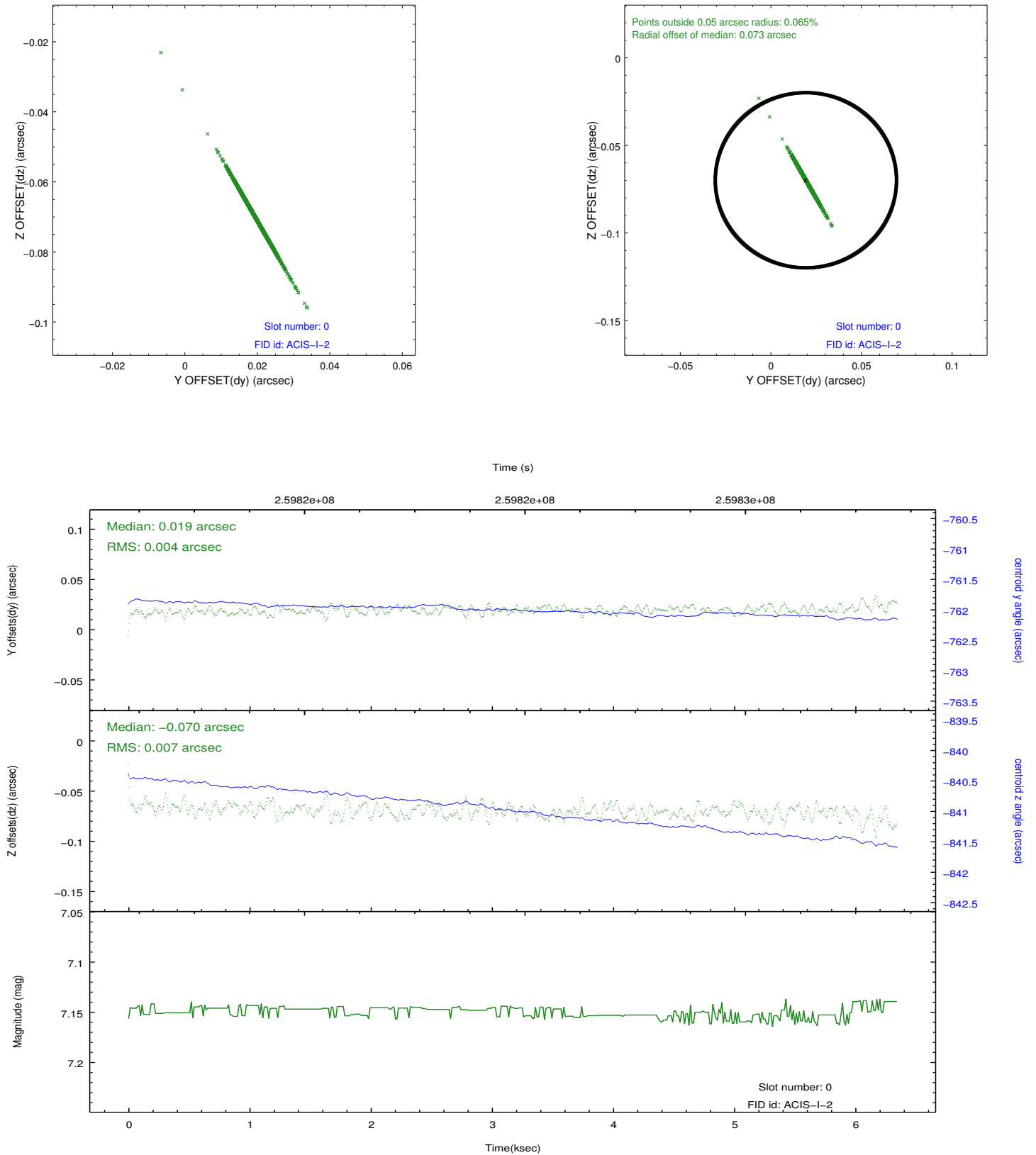


## 2.4.6 Slot 7

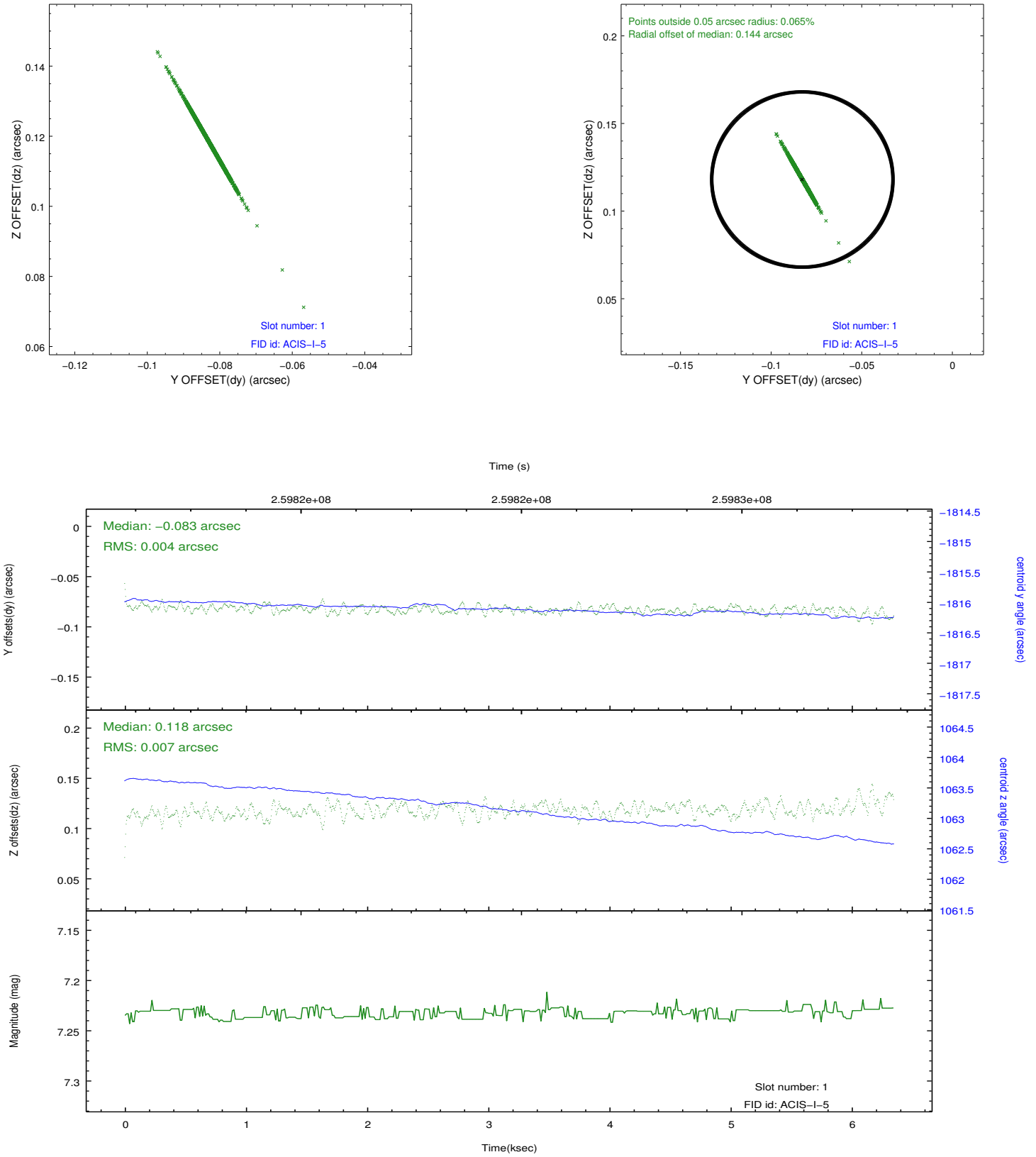


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.34500004

## A.2 Comments

Venus is a moving target. In order to analyze the data, the user will need to run sso\_freeze in CIAO or similar software to reposition the events in the reference frame of Venus.

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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 guide star from the solution.