

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3153 - L2 Version 4  
Chandra X-Ray Center

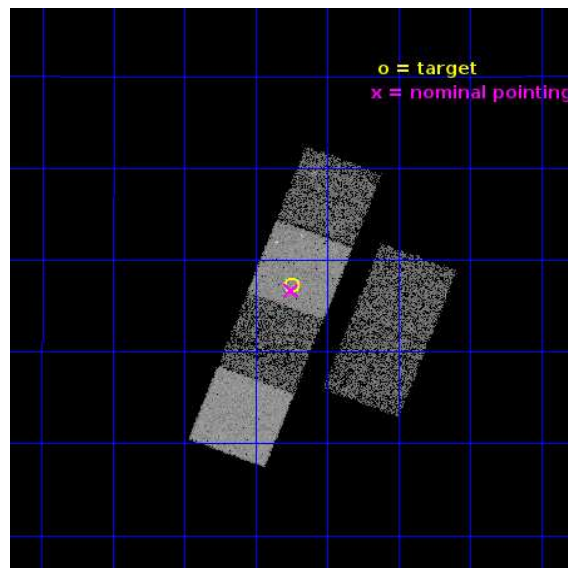
L2 Processing Date : Jul 6 2015

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# 1 Front

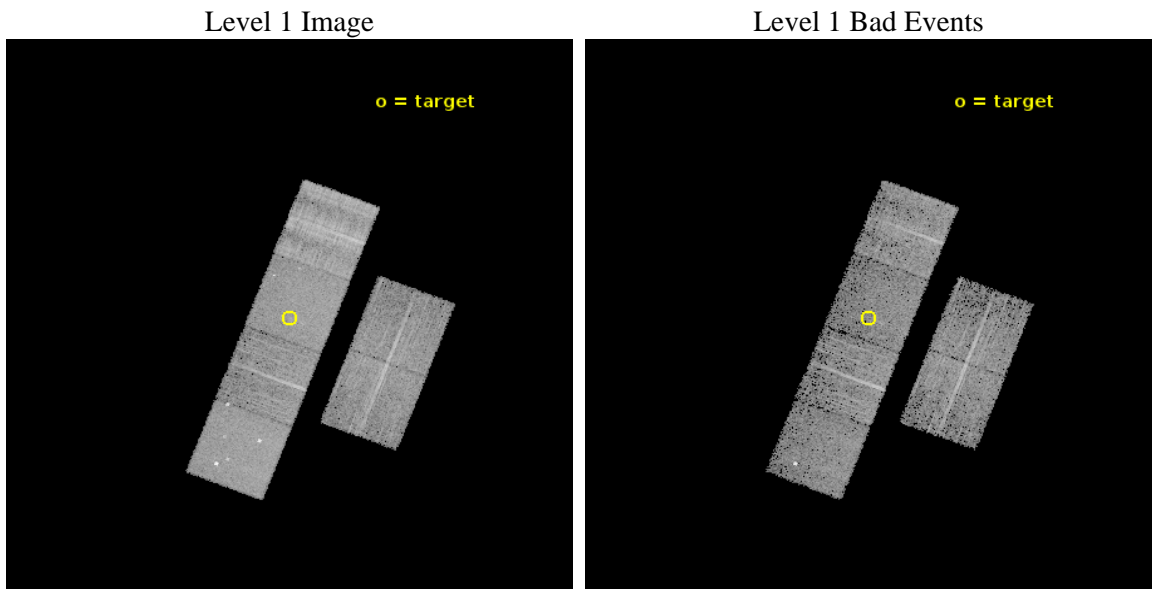
seq_num	700592	Sequence number
obs_id	3153	Observation id
title	A CHANDRA SURVEY OF THE MOST LUMINOUS QUASARS AT $Z > 4$	Proposal ti
observer	Professor Gordon Garmire	Principal investigator
object	PSS0209+0517	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	32.43625	Observer's specified target RA [deg]
dec_targ	5.287222	Observer's specified target Dec [deg]
ra_nom	32.438078510408	Nominal RA [deg]
dec_nom	5.2776092668453	Nominal Dec [deg]
roll_nom	291.01187094293	Nominal Roll [deg]
revision	4	Processing version of data
ontime	5849.4687156826	Sum of GTIs [s]
livetime	5775.3992206775	Livetime [s]
ontime2	5849.4687156826	Sum of GTIs [s]
ontime3	5849.4687156826	Sum of GTIs [s]
ontime5	5849.4687156826	Sum of GTIs [s]
ontime6	5849.4687156826	Sum of GTIs [s]
ontime7	5849.4687156826	Sum of GTIs [s]
ontime8	5849.4687156826	Sum of GTIs [s]
l2events	64508	Number of level 2 events



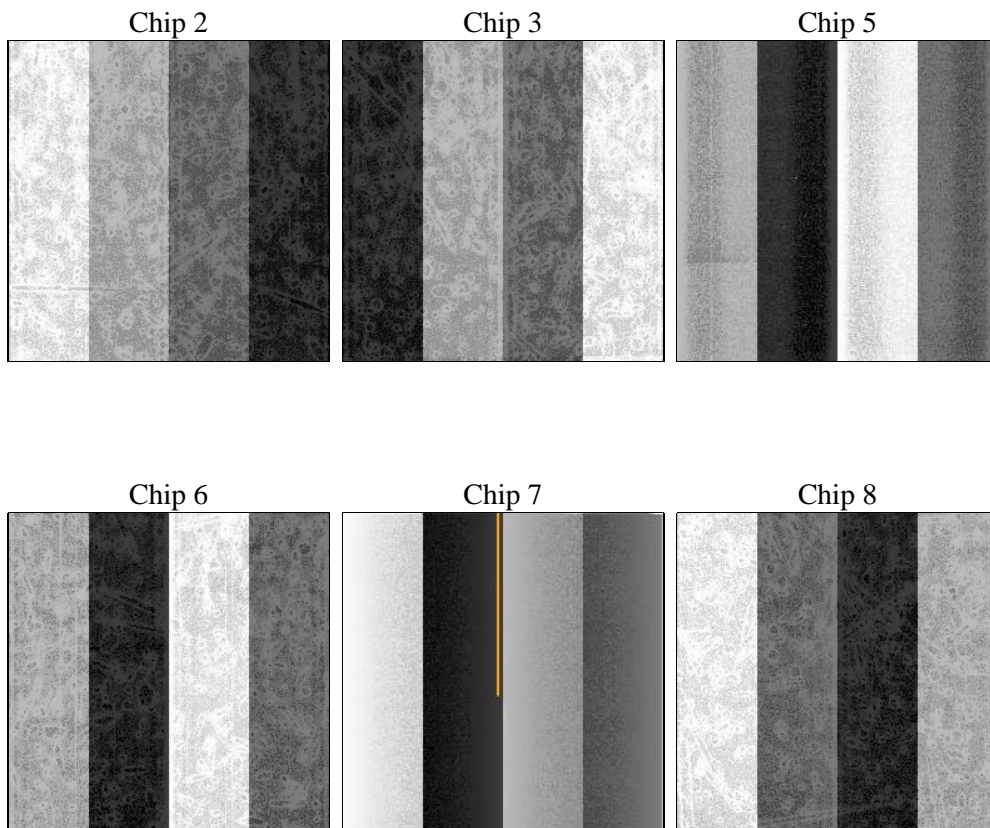
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5700.000000	[s] Scheduled observation exposure time
ascdsver	10.4	Processing system revision	ontime	5849.4687156826	Sum of GTIs [s]
caldsver	4.6.7	&#160	ontime2	5849.4687156826	Sum of GTIs [s]
date	2015-07-06T21:11:31	Date and time of file creation	ontime3	5849.4687156826	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	5849.4687156826	Sum of GTIs [s]
			ontime6	5849.4687156826	Sum of GTIs [s]
			ontime7	5849.4687156826	Sum of GTIs [s]
			ontime8	5849.4687156826	Sum of GTIs [s]
			l1events	321074	Number of level 1 events

### 2.1.4 Events

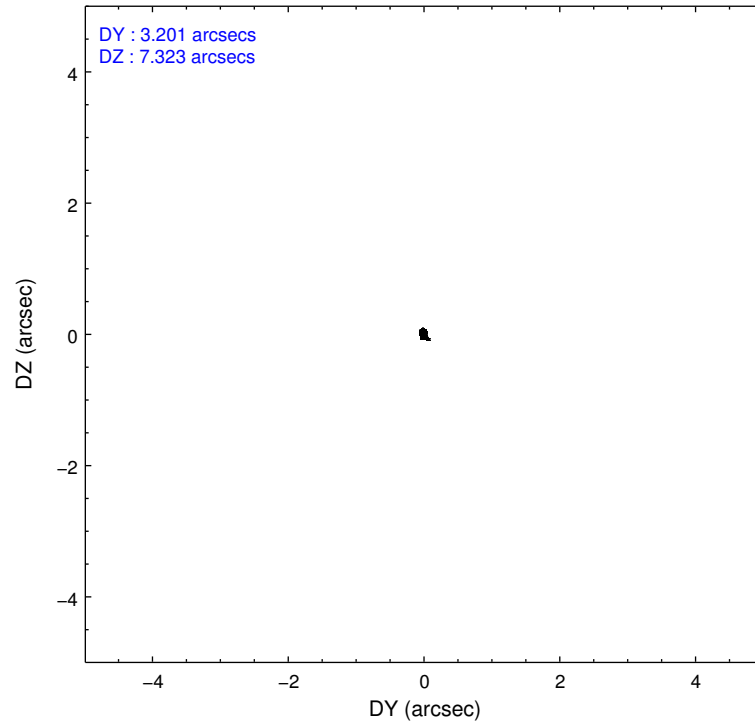
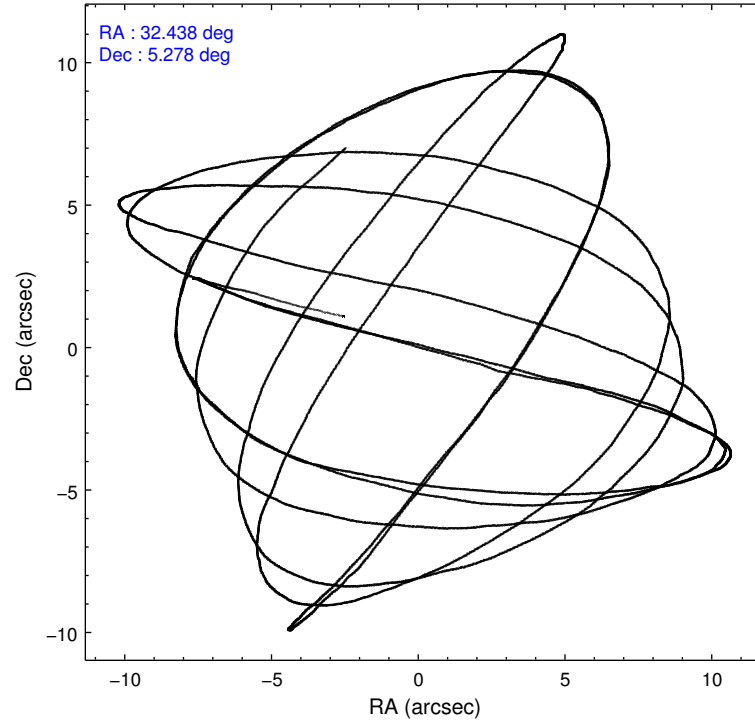
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	44988	41822	61623	44456	53100	75085	grade 0 events	2725	2418	4109	2546	2377	9368
rejected events	39157	36379	34524	38700	31576	45656		6%	5%	6%	5%	4%	12%
rejected %	87%	86%	56%	87%	59%	60%	grade 1 events	26	13	114	26	52	79
								0%	0%	0%	0%	0%	0%
							grade 2 events	1496	1338	8475	1460	4726	5036
								3%	3%	13%	3%	8%	6%
							grade 3 events	423	425	1510	457	2104	4921
								0%	1%	2%	1%	3%	6%
							grade 4 events	502	448	1417	455	2089	4471
								1%	1%	2%	1%	3%	5%
							grade 5 events	1359	1496	5103	1648	4904	2347
								3%	3%	8%	3%	9%	3%
							grade 6 events	1140	1198	13690	1217	11755	7516
								2%	2%	22%	2%	22%	10%
							grade 7 events	37317	34486	27205	36647	25093	41347
								82%	82%	44%	82%	47%	55%

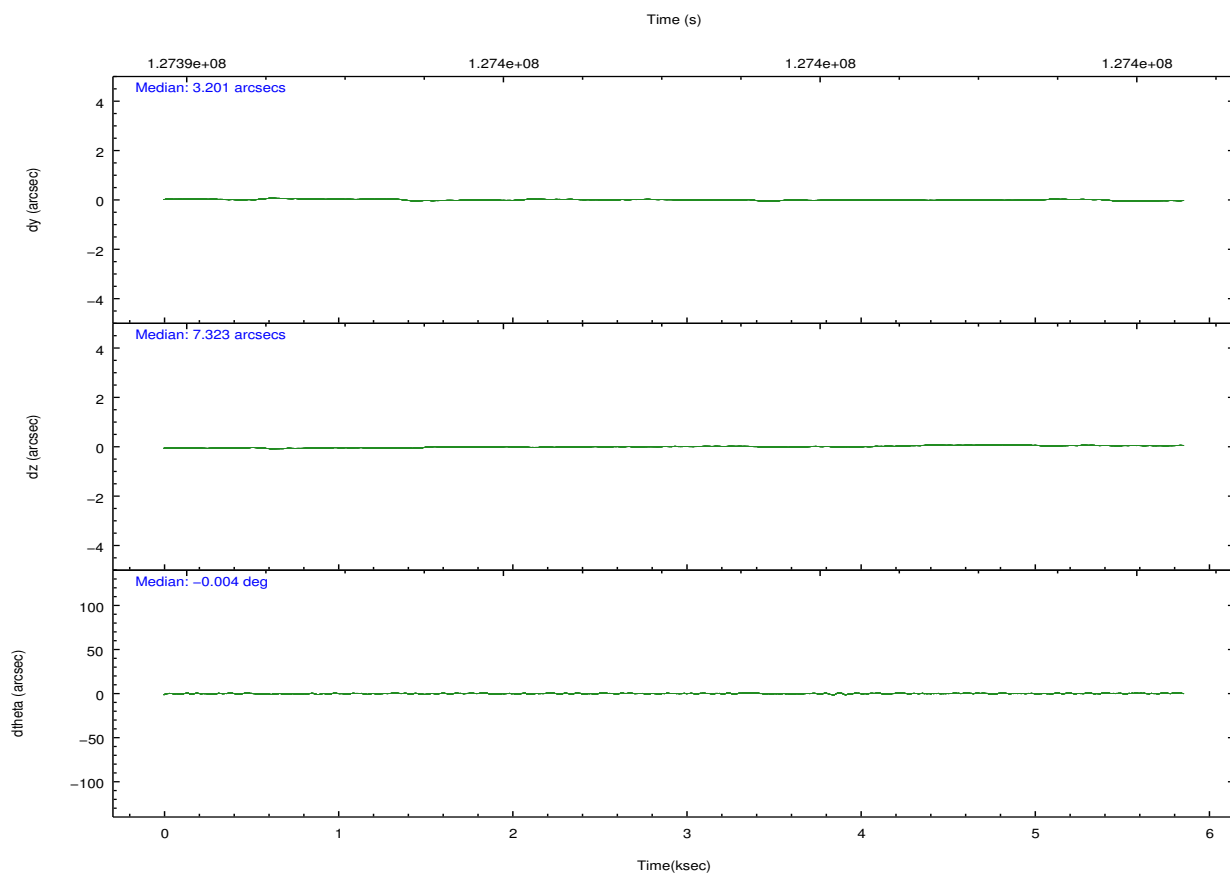
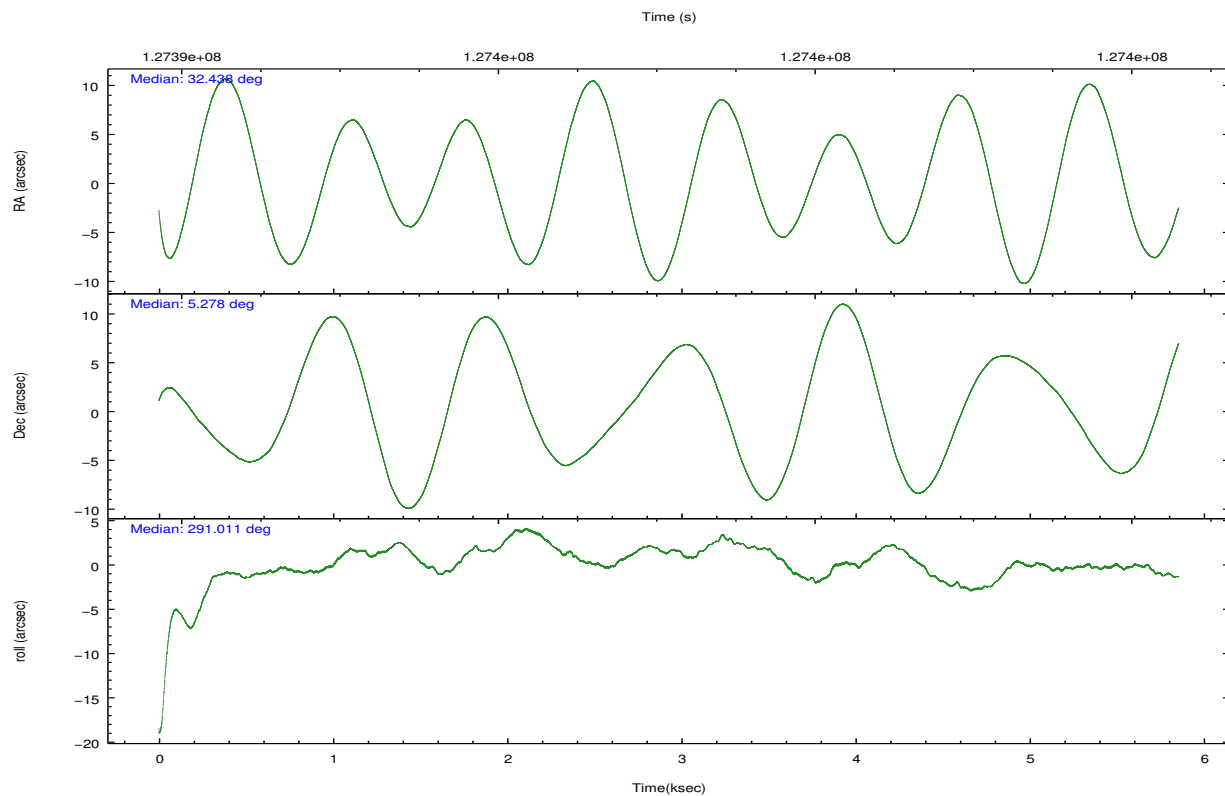


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	32.416602	32.43807851040788	Subarray requested	NONE	NONE
[deg] Pointing Dec	5.294568	5.277609266845296	Alternating exposures requested	N	N
[deg] Pointing Roll	290.857249	291.0118709429274	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	127394303.184000	127393028.99608			
Observation start date	2002-01-14T11:17:19	2002-01-14T10:57:08			
[s] Observation end time (MET)	127400003.184000	127400735.97139			
Observation end date	2002-01-14T12:52:19	2002-01-14T13:05:35			
Read mode	TIMED	TIMED			

## 2.3 Aspect



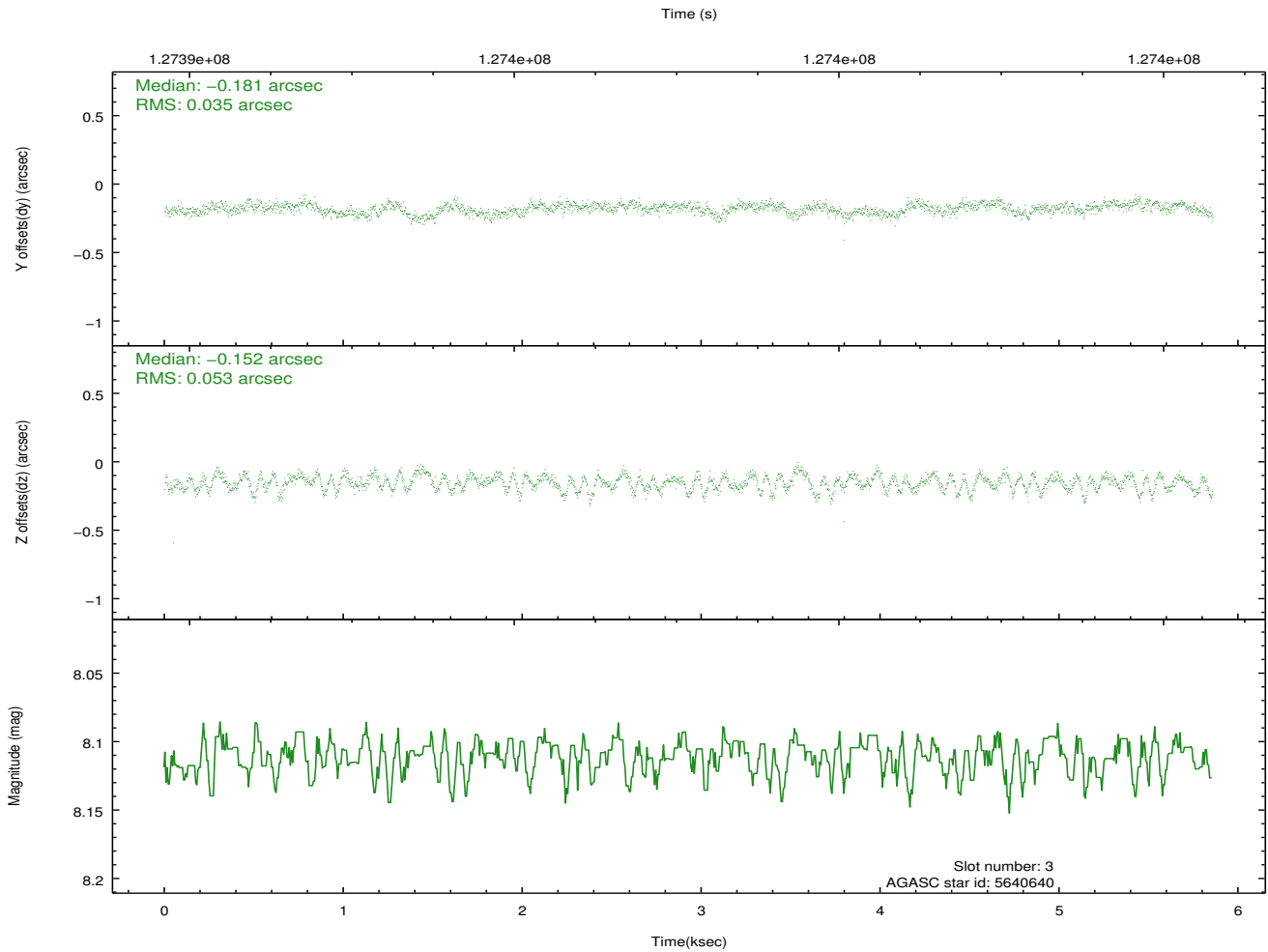
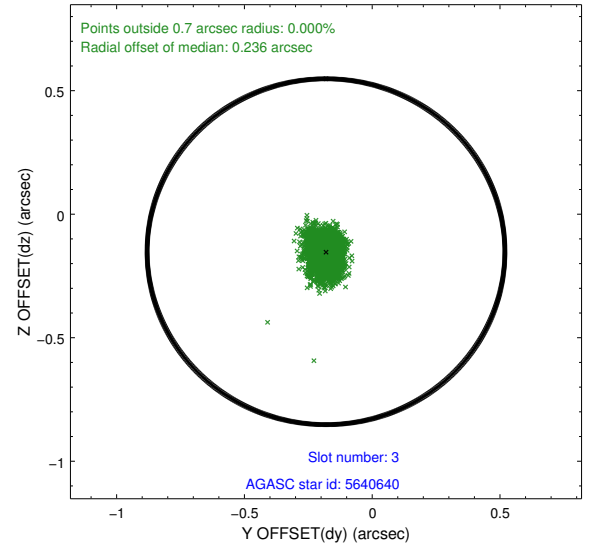
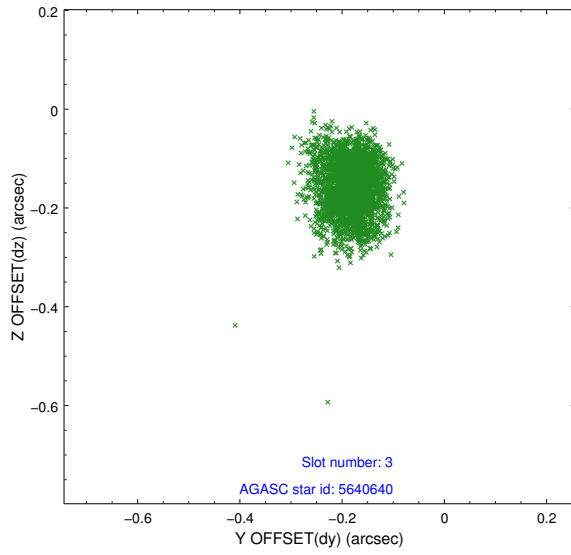


### Slot Statistics

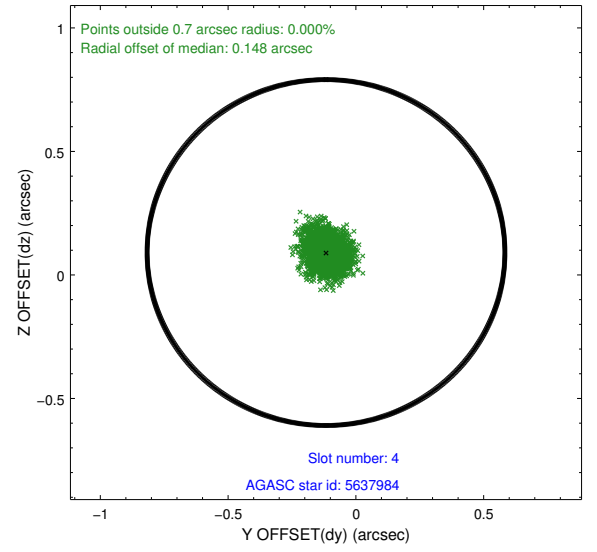
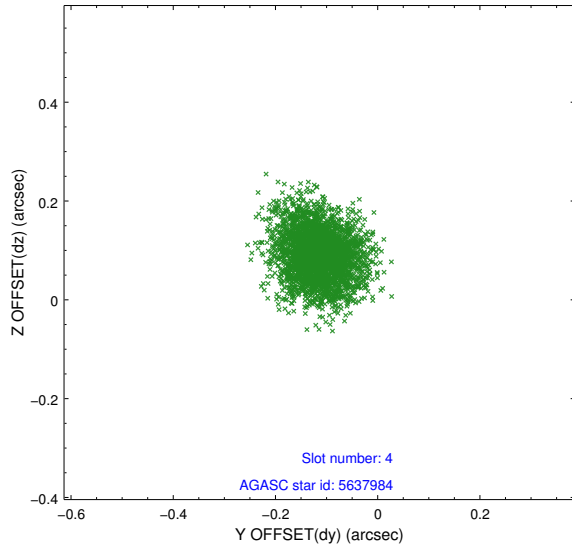
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.11	1429	-0.010	0.003	0.006	0.011	0.000000	0.000000	-755.86	-1728.49
1	FID		ACIS-S-4	7.20	1429	-0.022	0.004	0.006	0.010	0.000000	0.000000	2156.95	178.94
2	FID		ACIS-S-5	7.24	1429	0.001	0.002	0.006	0.011	0.000000	0.000000	-1807.38	173.77
3	GUIDE	used	5640640	8.11	2857	-0.181	-0.152	0.066	0.110	31.912872	5.626312	-1759.34	-1261.39
4	GUIDE	used	5637984	8.96	2858	-0.117	0.091	0.069	0.112	32.447738	5.931084	-2102.20	919.60
5	GUIDE	used	5773424	9.18	2857	0.121	0.050	0.086	0.135	32.733185	5.084933	1108.60	792.39
6	GUIDE	used	5637968	9.33	2853	0.018	-0.088	0.089	0.139	32.248313	5.104036	426.60	-808.13
7	GUIDE	used	5382072	9.57	2854	0.159	0.103	0.111	0.180	32.893349	4.763661	2394.98	917.73

## 2.4 Star Slots

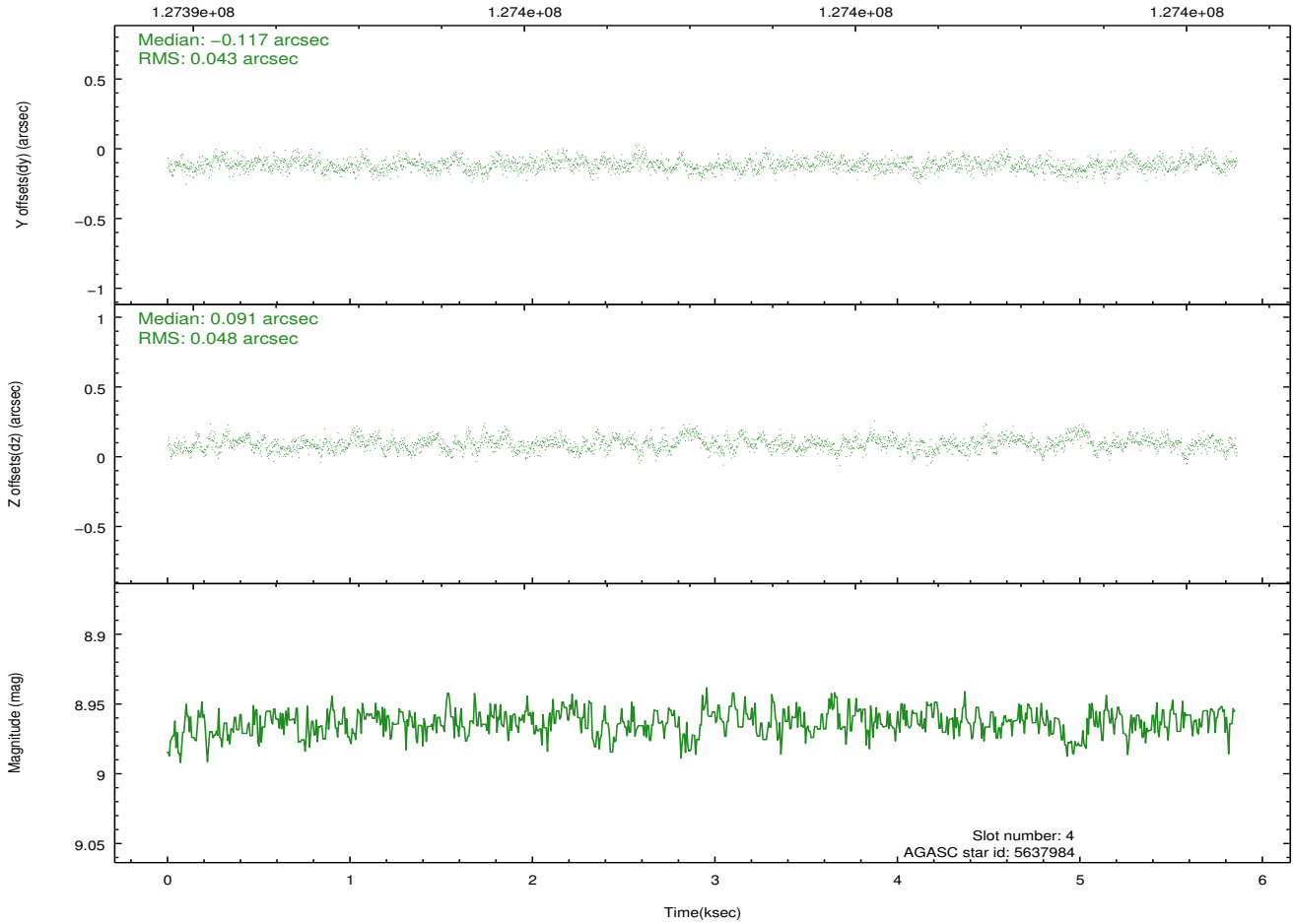
### 2.4.1 Slot 3



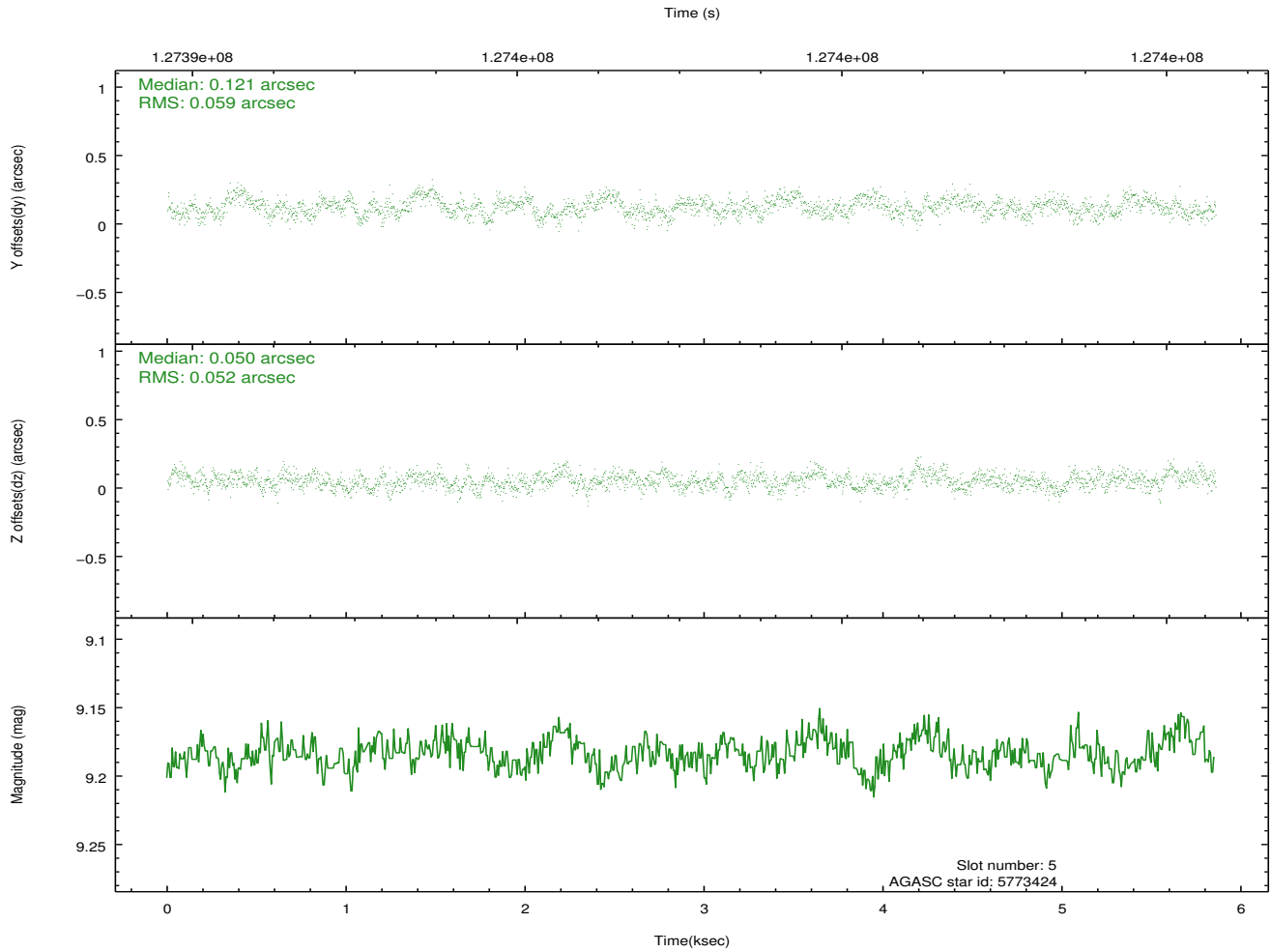
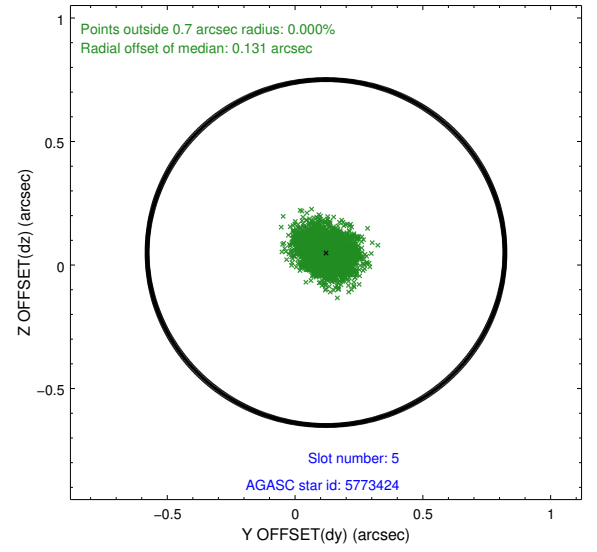
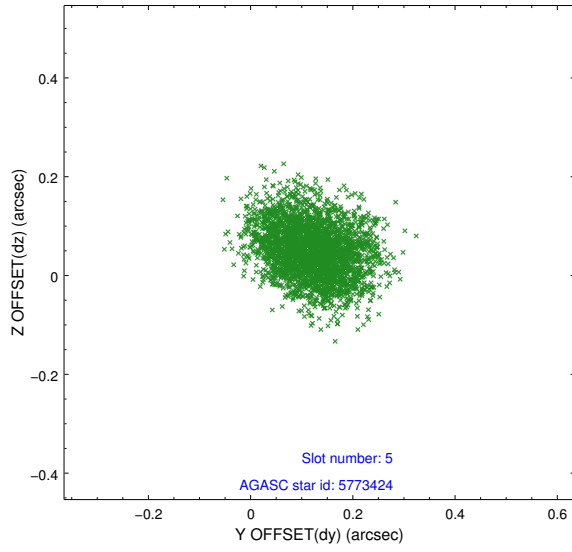
## 2.4.2 Slot 4



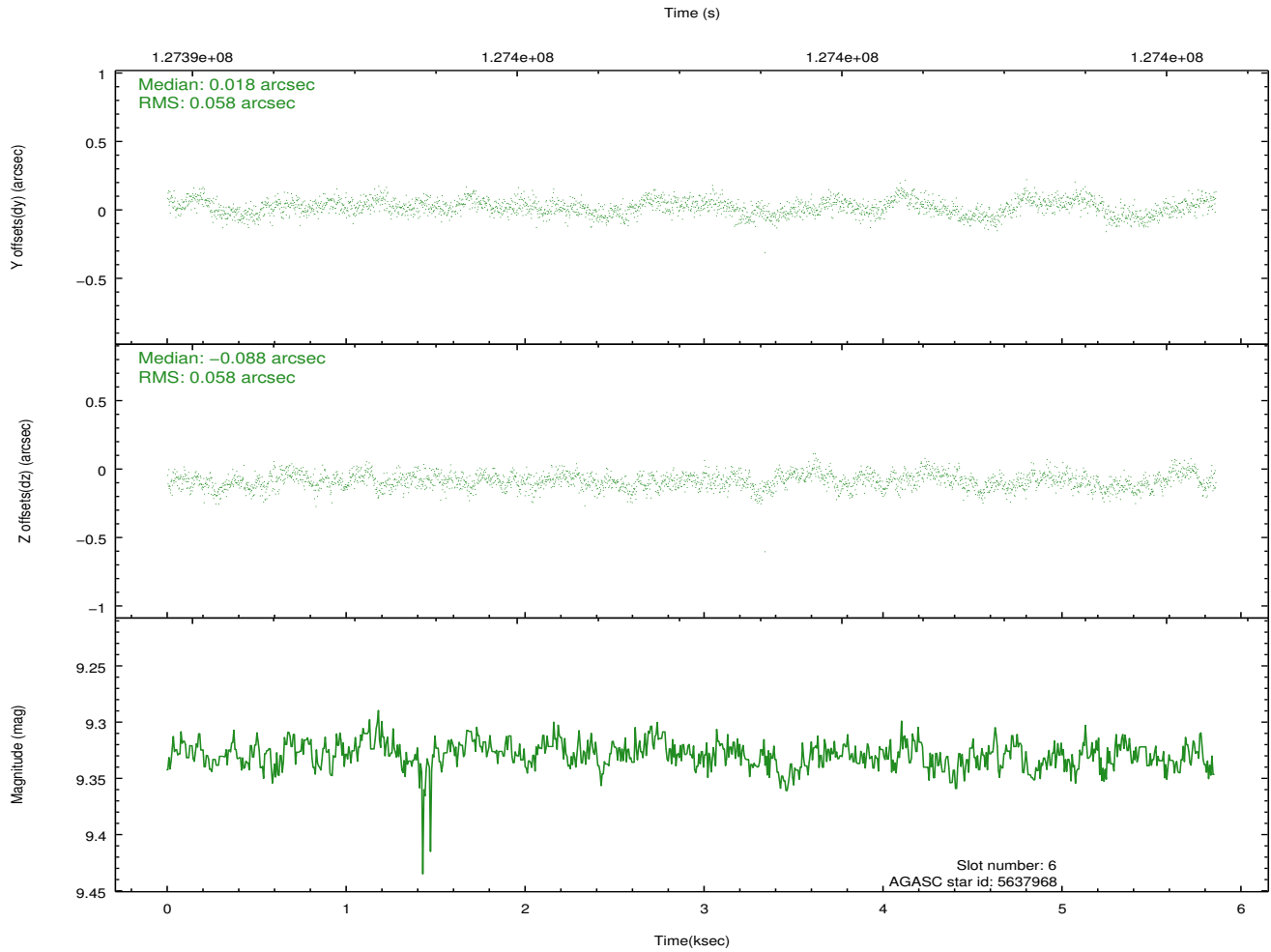
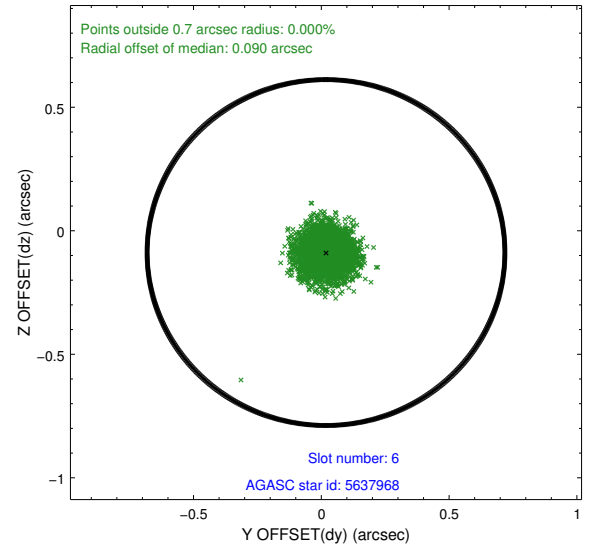
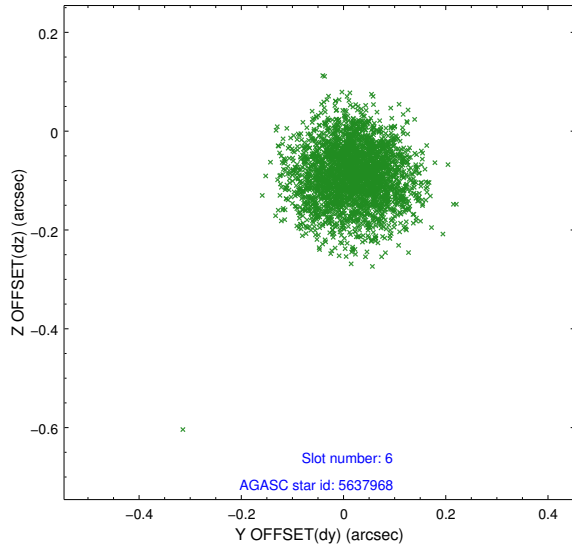
Time (s)



### 2.4.3 Slot 5

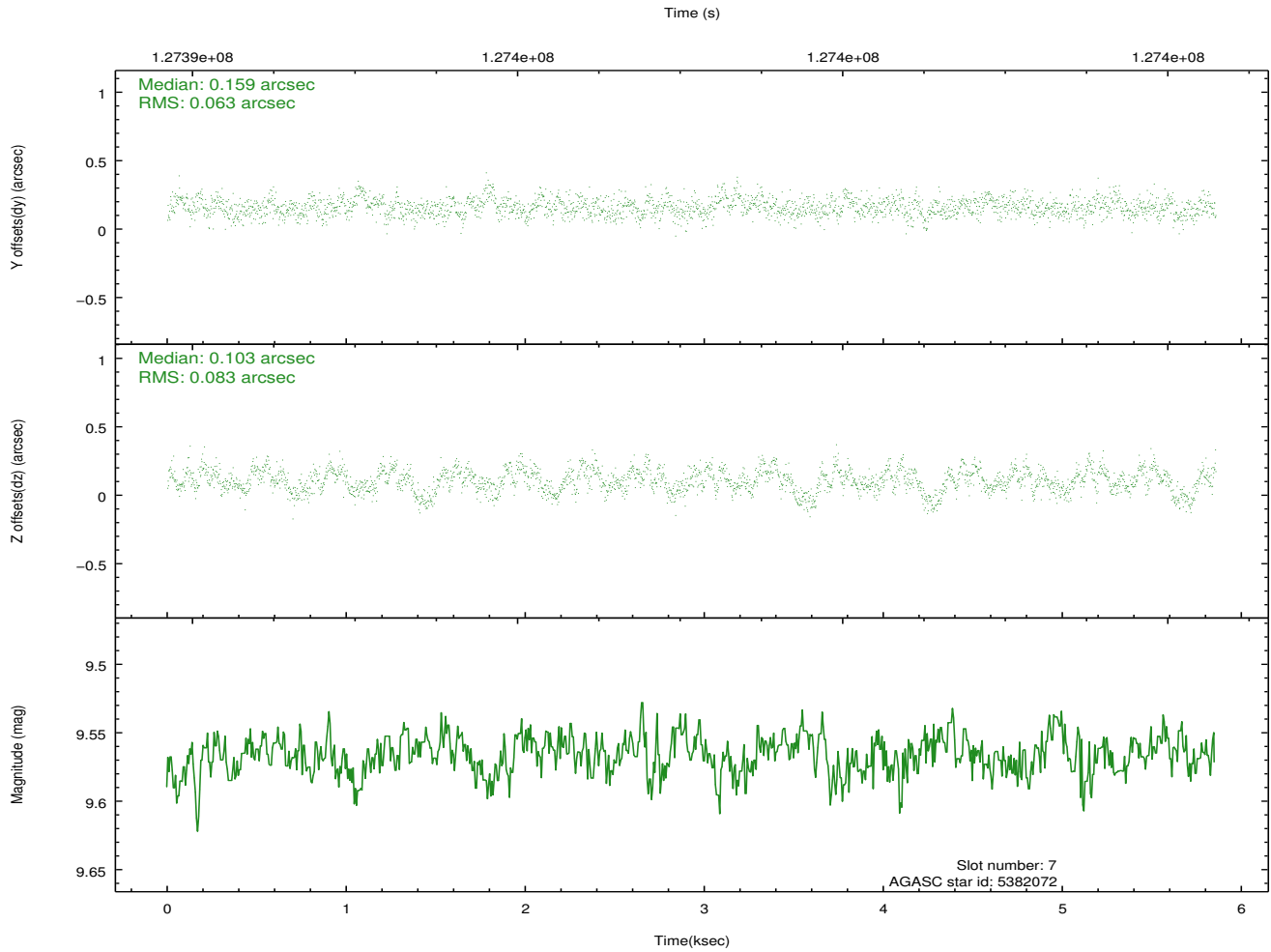
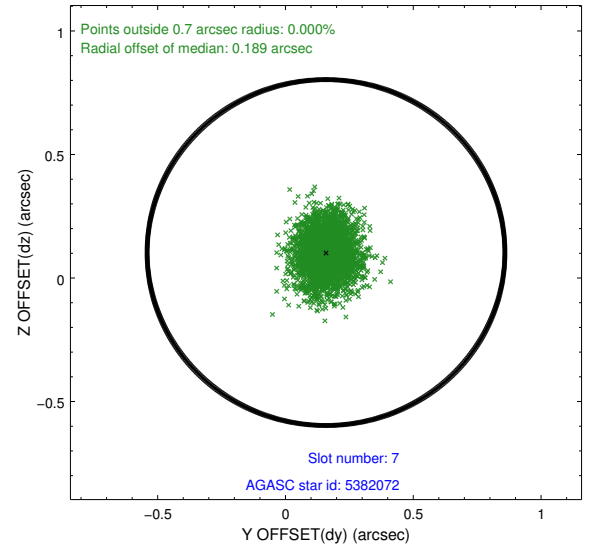
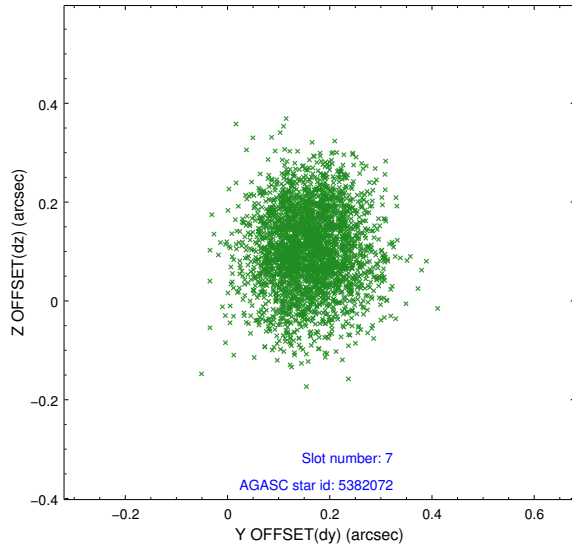


## 2.4.4 Slot 6



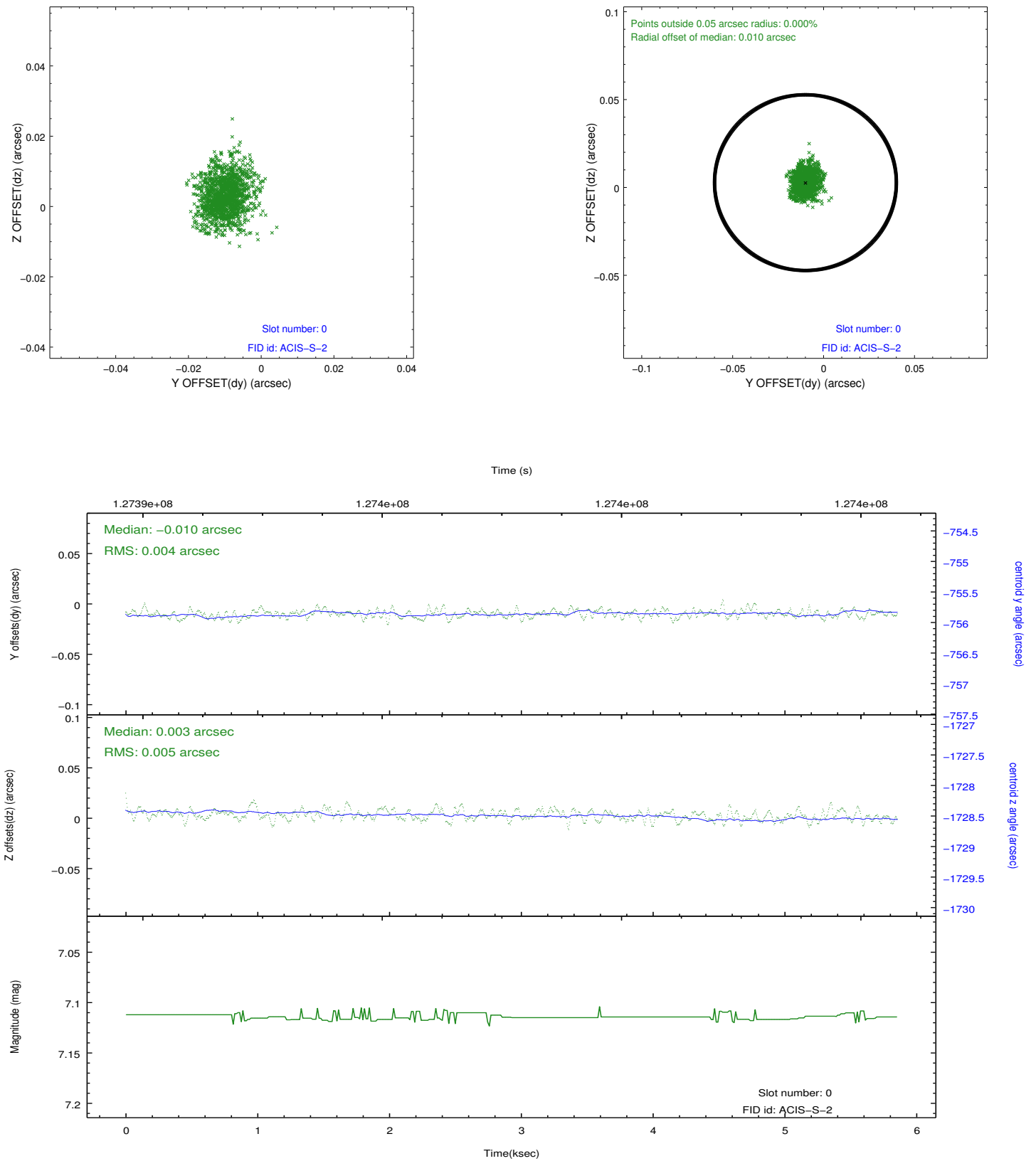


## 2.4.5 Slot 7

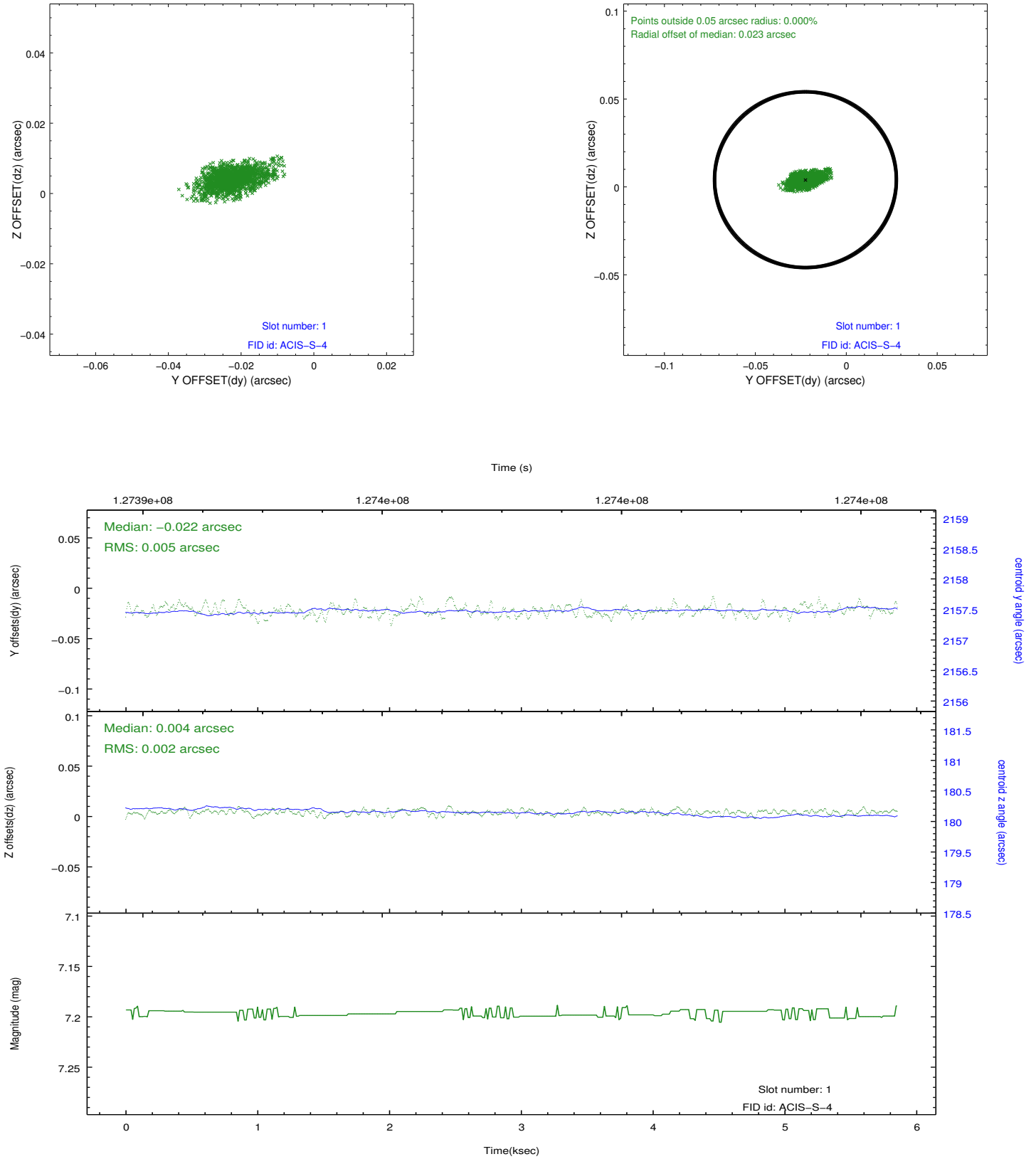


## 2.5 FID Slots

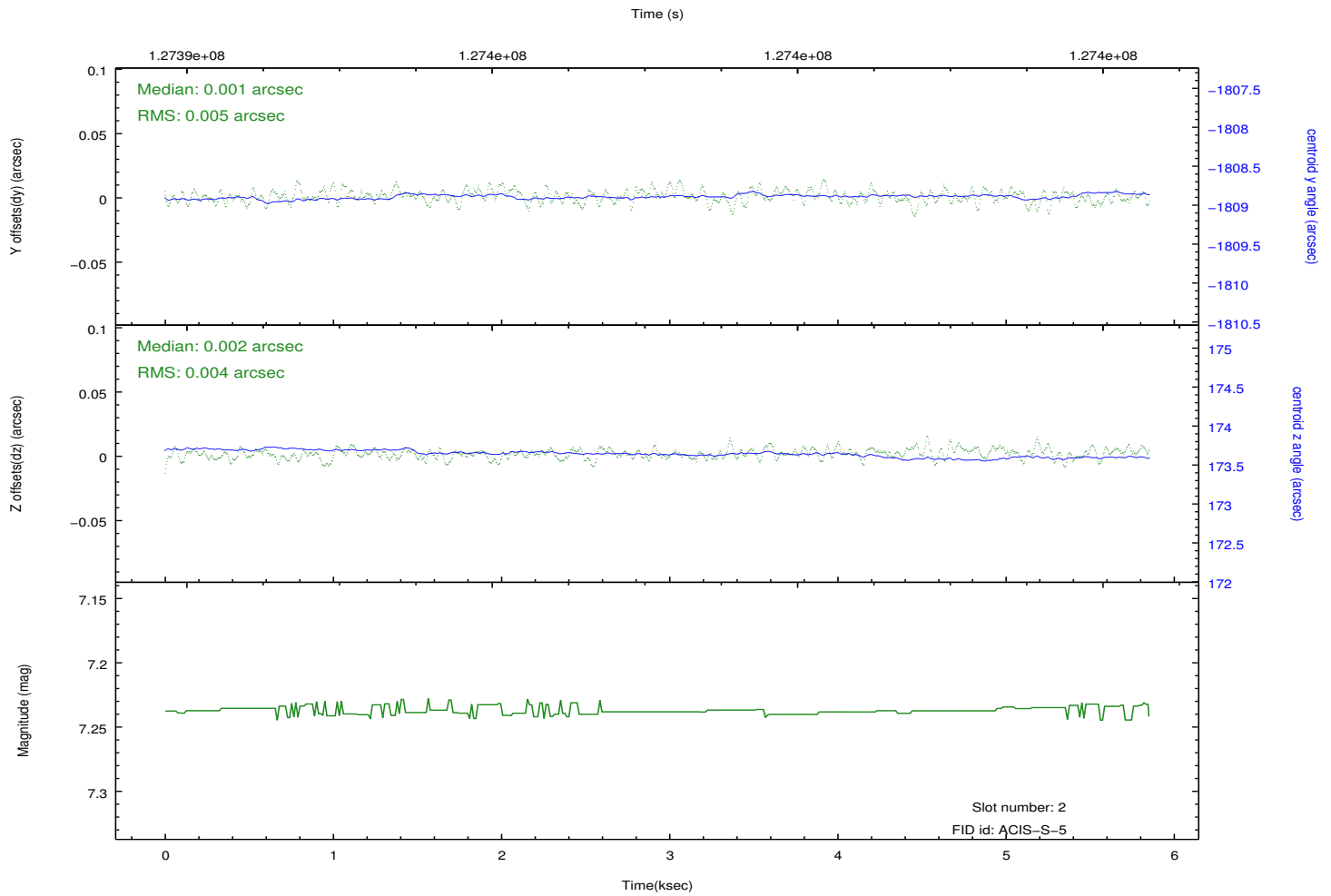
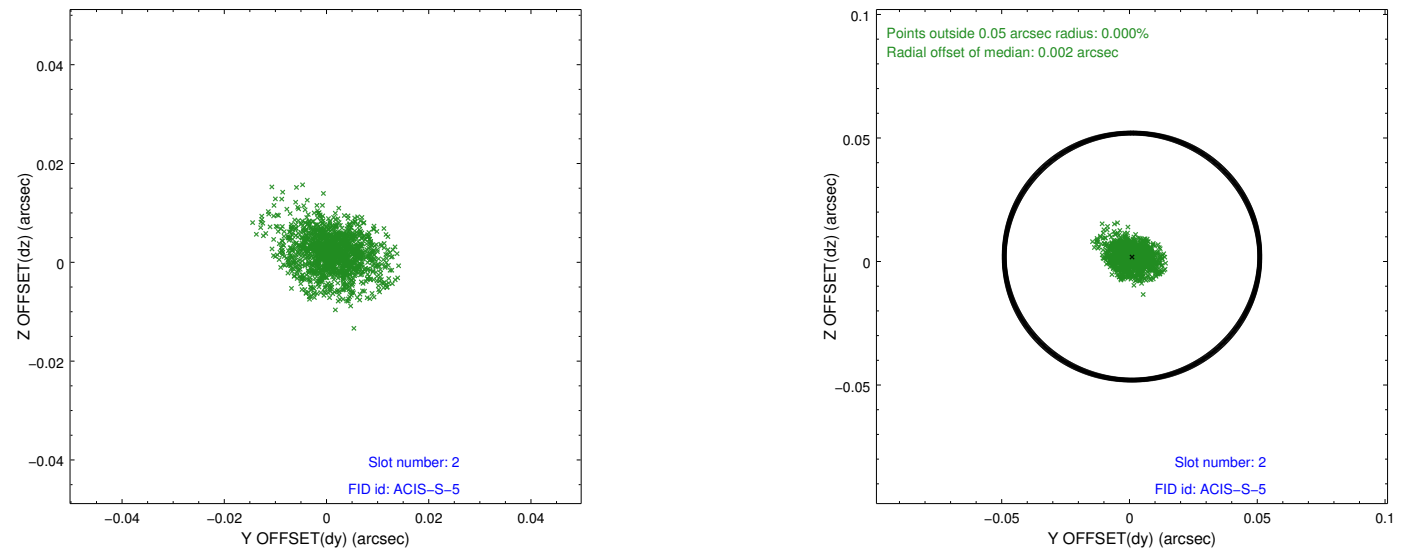
### 2.5.1 Slot 0



## 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)	2015.07.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.849

## A.2 Comments

Because an aspect solution is determined in a finite time interval, a small number of events registered within the delta time before the first aspect solution do not have proper sky coordinates. We apply a manual workaround to exclude those events with incorrect sky positions until the complete s/w resolution is obtained.

==

The bias map for CCD\_ID = 3 was incomplete because of a data gap in telemetry. The bias map for chip 3 was reconstructed using scaled data from a comparable bias for another observation to fill the data gap. The region affected is bounded by the sky coordinates:

(32.28096,5.36326),(32.15012,5.31352),(32.15076,5.31186),(32.28160,5.36160)