

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3609 - L2 Version 5  
Chandra X-Ray Center

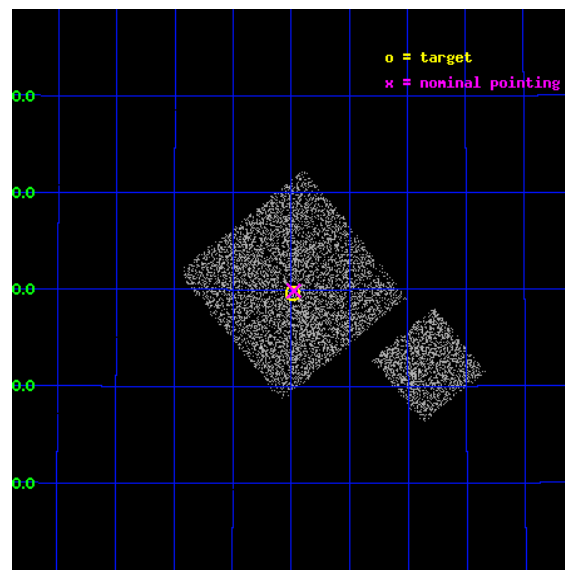
L2 Processing Date : Jan 4 2013

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# 1 Front

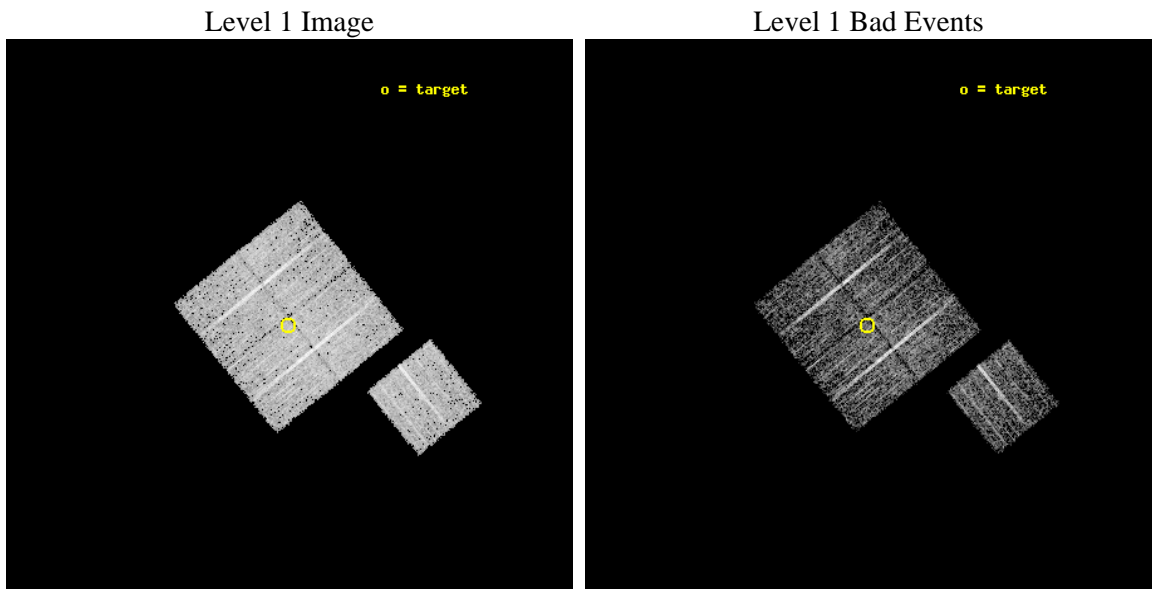
seq_num	900209	Sequence number
obs_id	3609	Observation id
title	CHANDRA LARGE SCALE SURVEY OF THE NOAO BOOTES DEEP FIELD	Proposal
observer	Dr. Stephen Murray	Principal investigator
object	NOAO FIELD F47	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	218.246914	Observer's specified target RA [deg]
dec_targ	35.493858	Observer's specified target Dec [deg]
ra_nom	218.24418639422	Nominal RA [deg]
dec_nom	35.497878647975	Nominal Dec [deg]
roll_nom	141.01009963621	Nominal Roll [deg]
revision	5	Processing version of data
ontime	5042.4533385038	Sum of GTIs [s]
livetime	4976.5699734361	Livetime [s]
ontime0	5043.6999902725	Sum of GTIs [s]
ontime1	5043.6999902725	Sum of GTIs [s]
ontime2	5043.6999902725	Sum of GTIs [s]
ontime3	5042.4533385038	Sum of GTIs [s]
ontime6	5043.6999902725	Sum of GTIs [s]
l2events	10010	Number of level 2 events



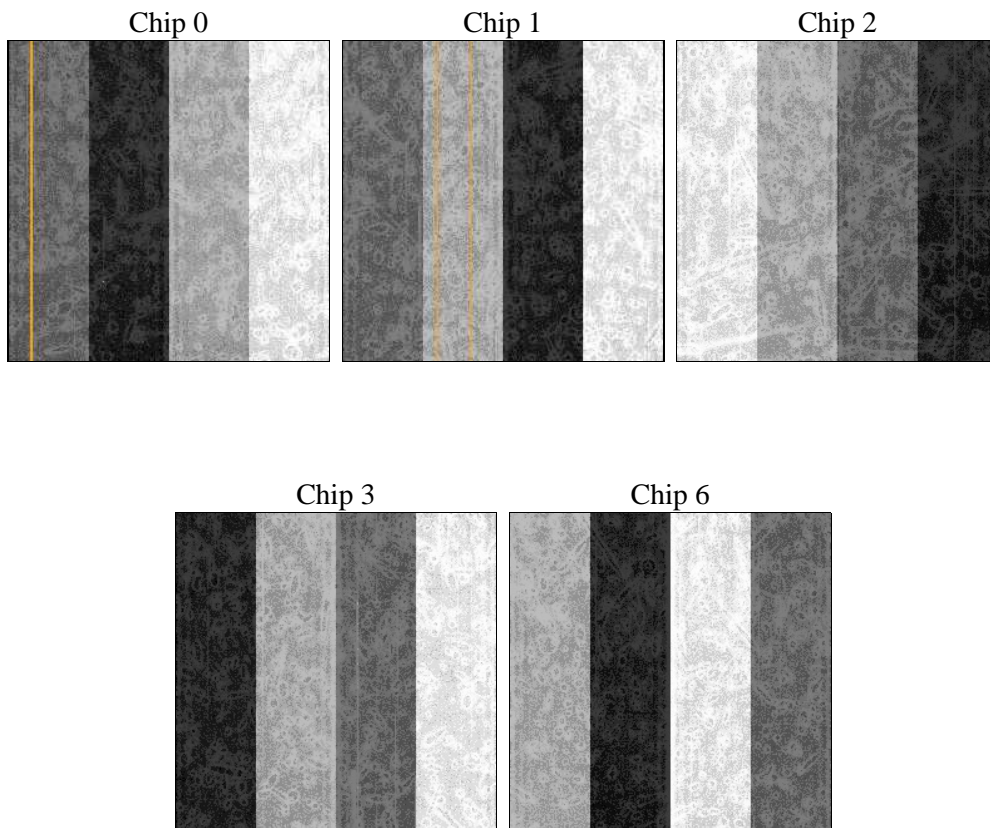
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	4900.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	5042.4533385038	Sum of GTIs [s]
caldsver	4.5.5	&#160	ontime0	5043.6999902725	Sum of GTIs [s]
date	2013-01-04T19:37:08	Date and time of file creation	ontime1	5043.6999902725	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	5043.6999902725	Sum of GTIs [s]
			ontime3	5042.4533385038	Sum of GTIs [s]
			ontime6	5043.6999902725	Sum of GTIs [s]
			l1events	126299	Number of level 1 events

### 2.1.4 Events

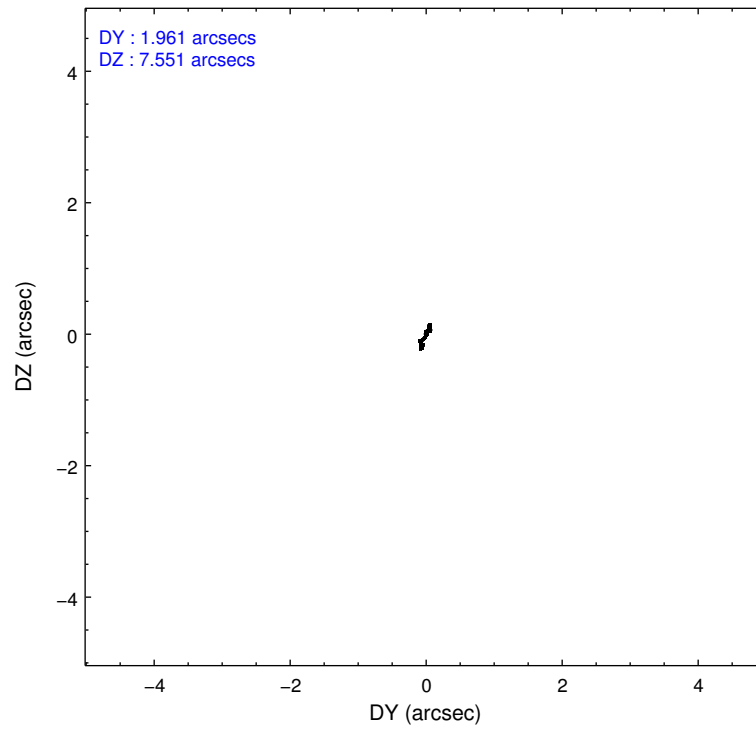
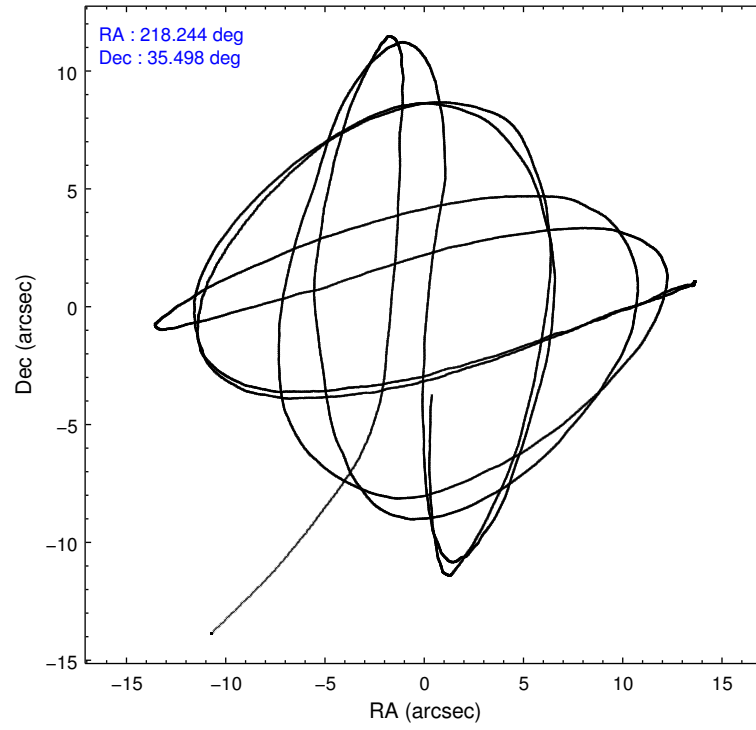
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	24362	22980	27241	27128	24588
rejected events	21848	20491	24836	24745	22052
rejected %	89%	89%	91%	91%	89%

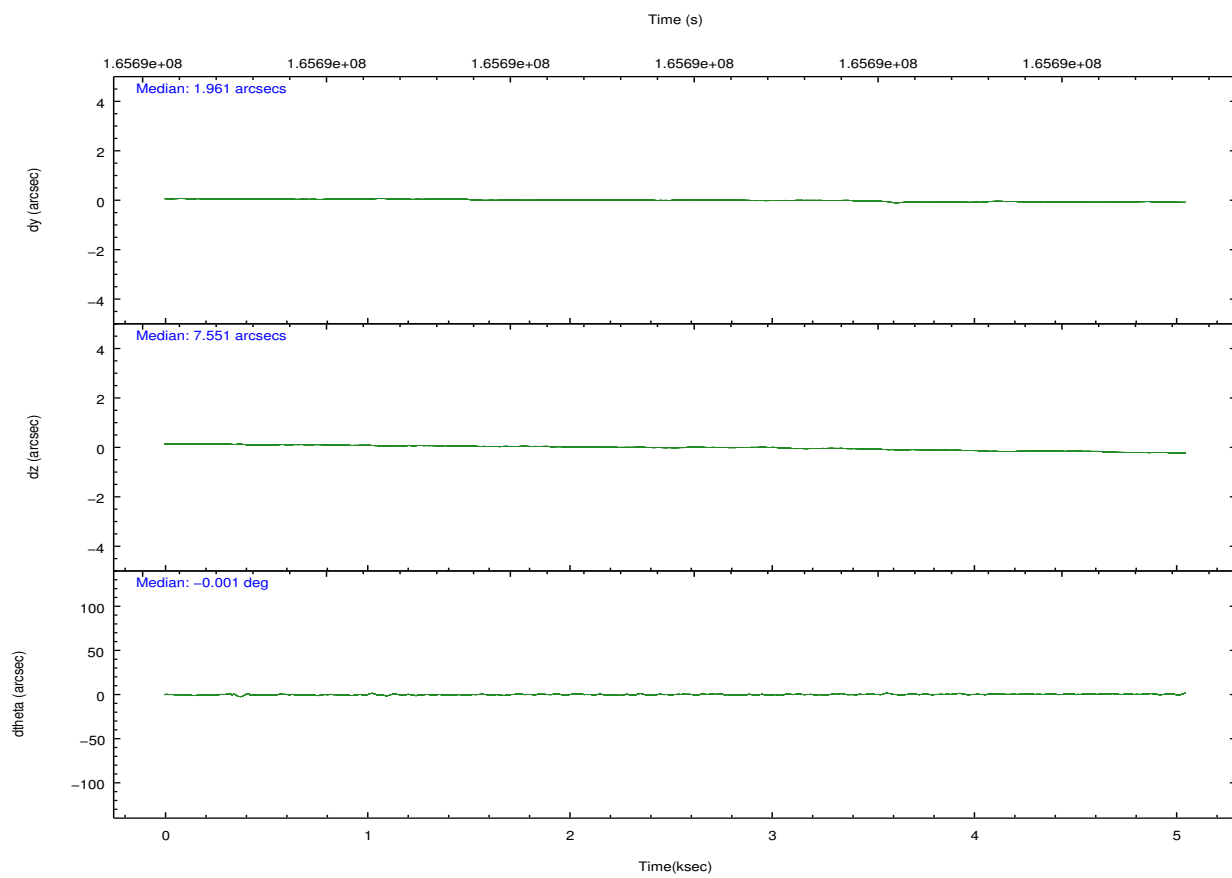
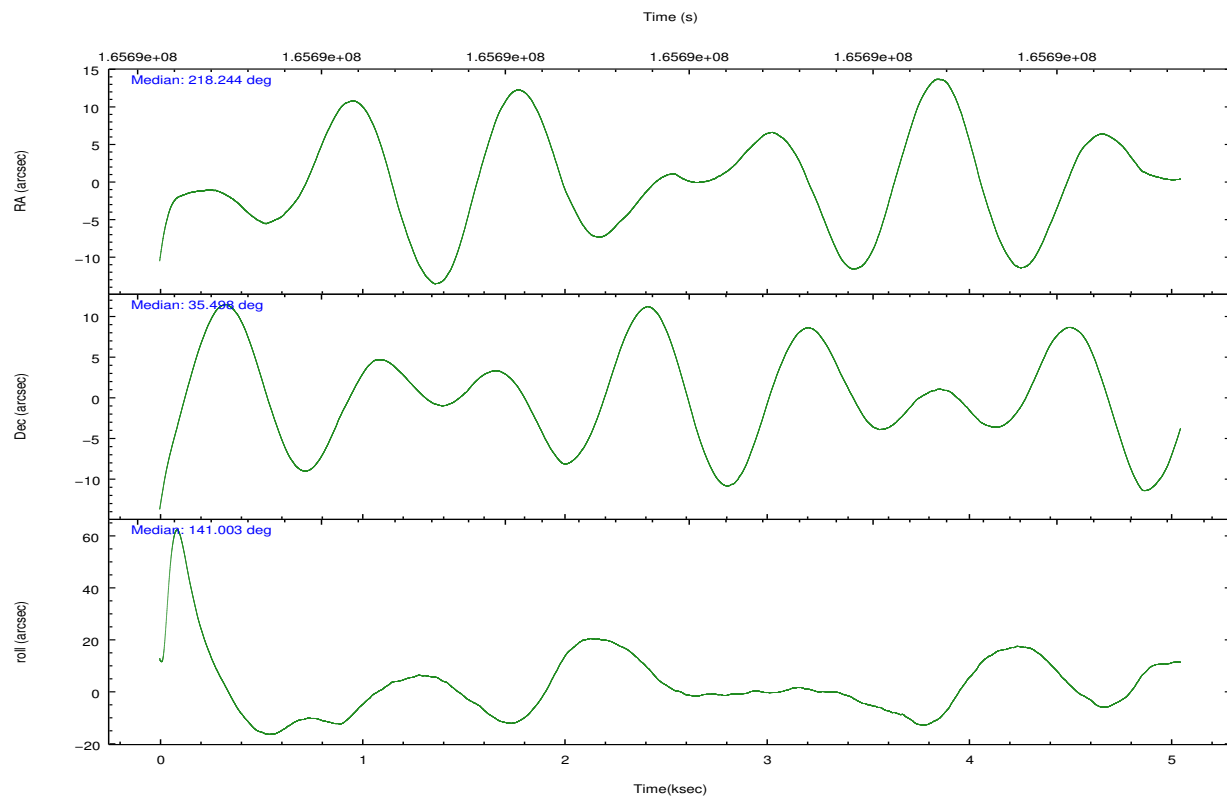
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	891	904	932	914	979
	3%	3%	3%	3%	3%
grade 1 events	15	10	14	19	9
	0%	0%	0%	0%	0%
grade 2 events	661	538	589	540	545
	2%	2%	2%	1%	2%
grade 3 events	291	317	263	308	320
	1%	1%	0%	1%	1%
grade 4 events	291	284	259	262	290
	1%	1%	0%	0%	1%
grade 5 events	766	817	702	861	923
	3%	3%	2%	3%	3%
grade 6 events	462	552	447	461	510
	1%	2%	1%	1%	2%
grade 7 events	20985	19558	24035	23763	21012
	86%	85%	88%	87%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	218.277476	218.2441863942231	Subarray requested	NONE	NONE
[deg] Pointing Dec	35.493772	35.49787864797538	Alternating exposures requested	N	N
[deg] Pointing Roll	140.782256	141.0100996362054	[s] Primary exposure time	0.000000	3.1
[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)	165689520.184000	165688451.7375			
Observation start date	2003-04-02T16:50:56	2003-04-02T16:34:11			
[s] Observation end time (MET)	165694420.184000	165694612.50026			
Observation end date	2003-04-02T18:12:36	2003-04-02T18:16:52			
Read mode	TIMED	TIMED			

## 2.3 Aspect



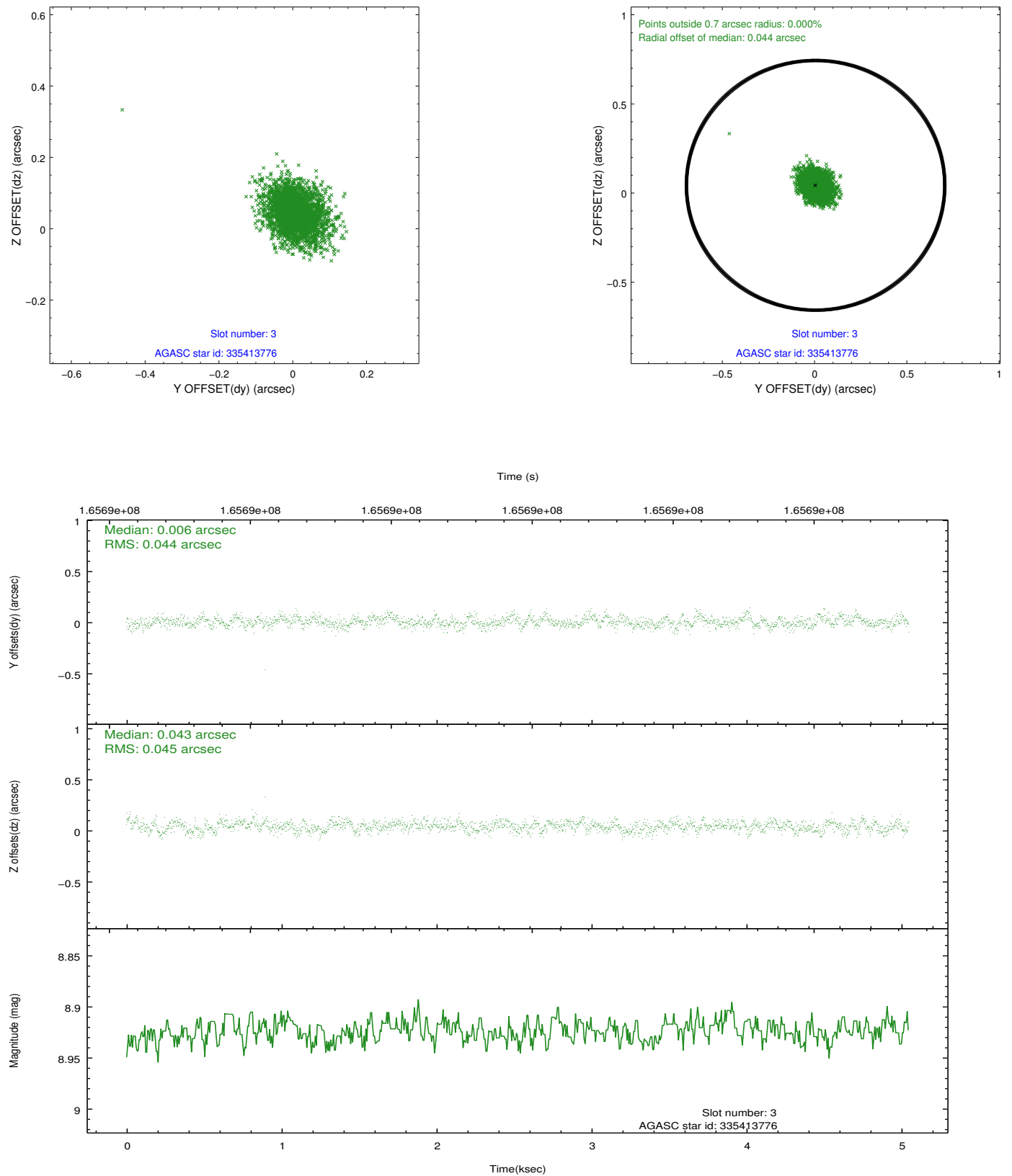


### Slot Statistics

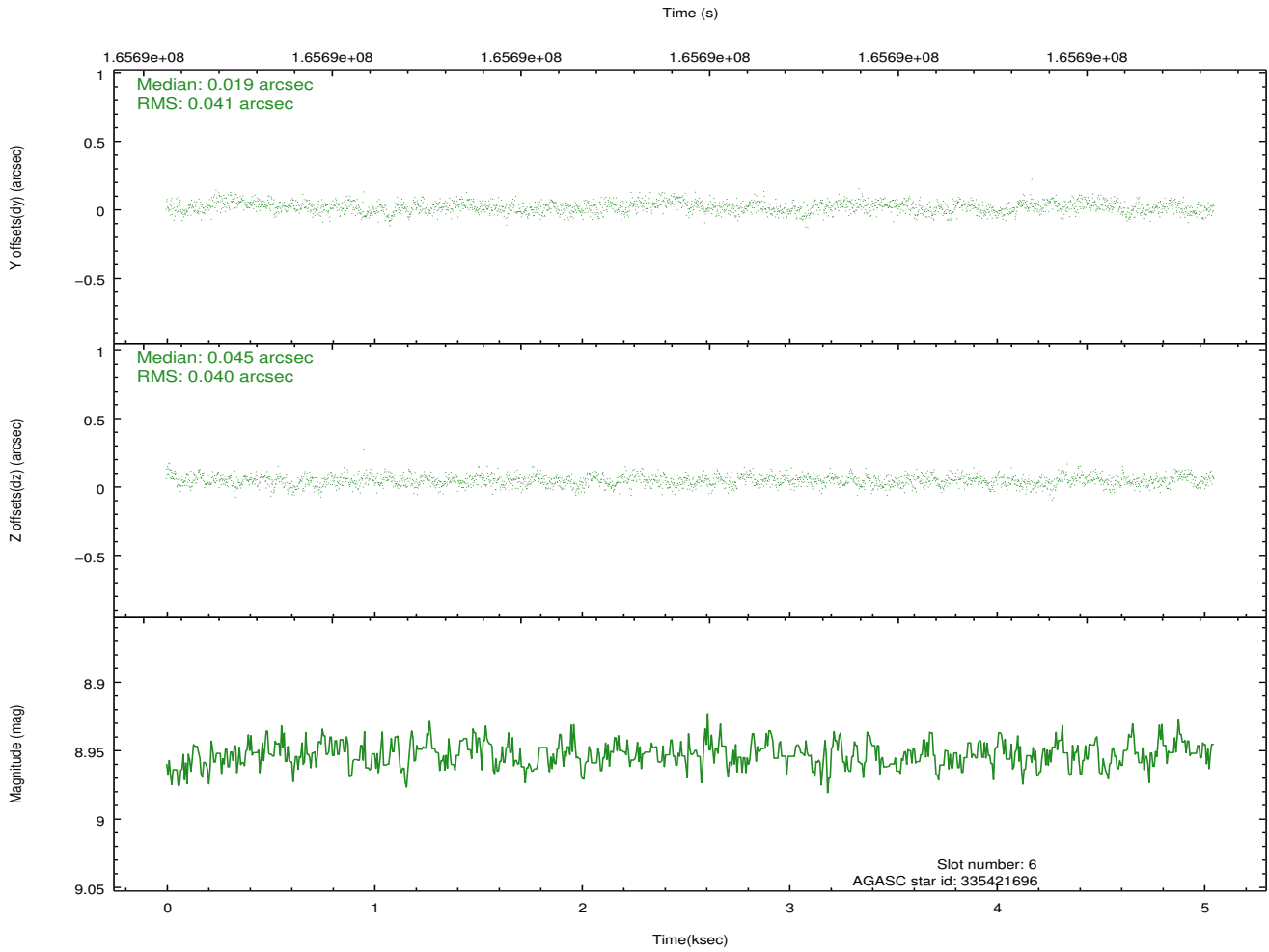
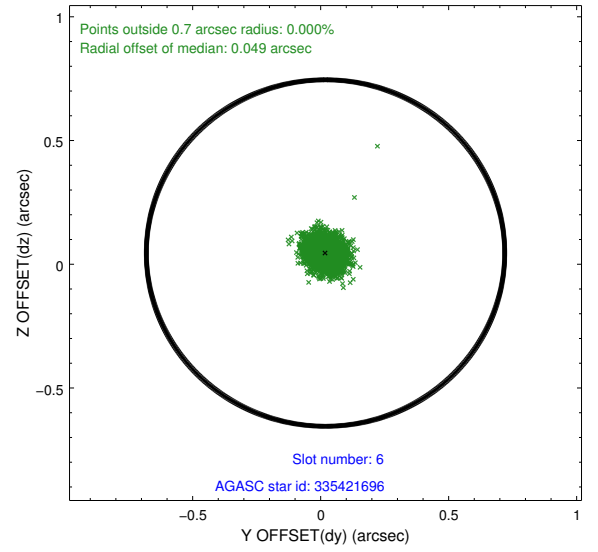
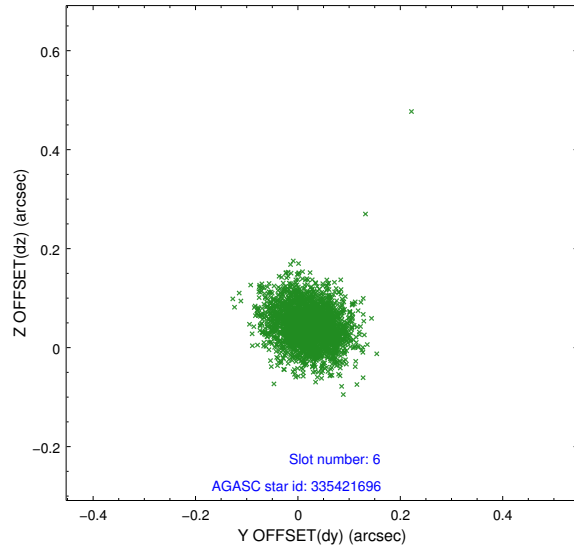
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	1232	-0.009	0.041	0.008	0.015	0.000000	0.000000	937.84	-830.92
1	FID	ACIS-I-5	7.23	1232	-0.055	0.046	0.006	0.011	0.000000	0.000000	-1809.60	1066.03
2	FID	ACIS-I-6	7.26	1232	-0.027	-0.016	0.008	0.013	0.000000	0.000000	402.11	1711.80
3	GUIDE	335413776	8.92	2464	0.006	0.043	0.066	0.109	218.421411	36.051962	946.89	-1822.13
4	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	335421696	8.95	2464	0.019	0.045	0.061	0.098	218.045699	35.772449	1159.90	-350.77
7	GUIDE	335422272	9.48	2463	-0.025	-0.088	0.079	0.126	217.586135	35.522660	1640.29	1194.14

## 2.4 Star Slots

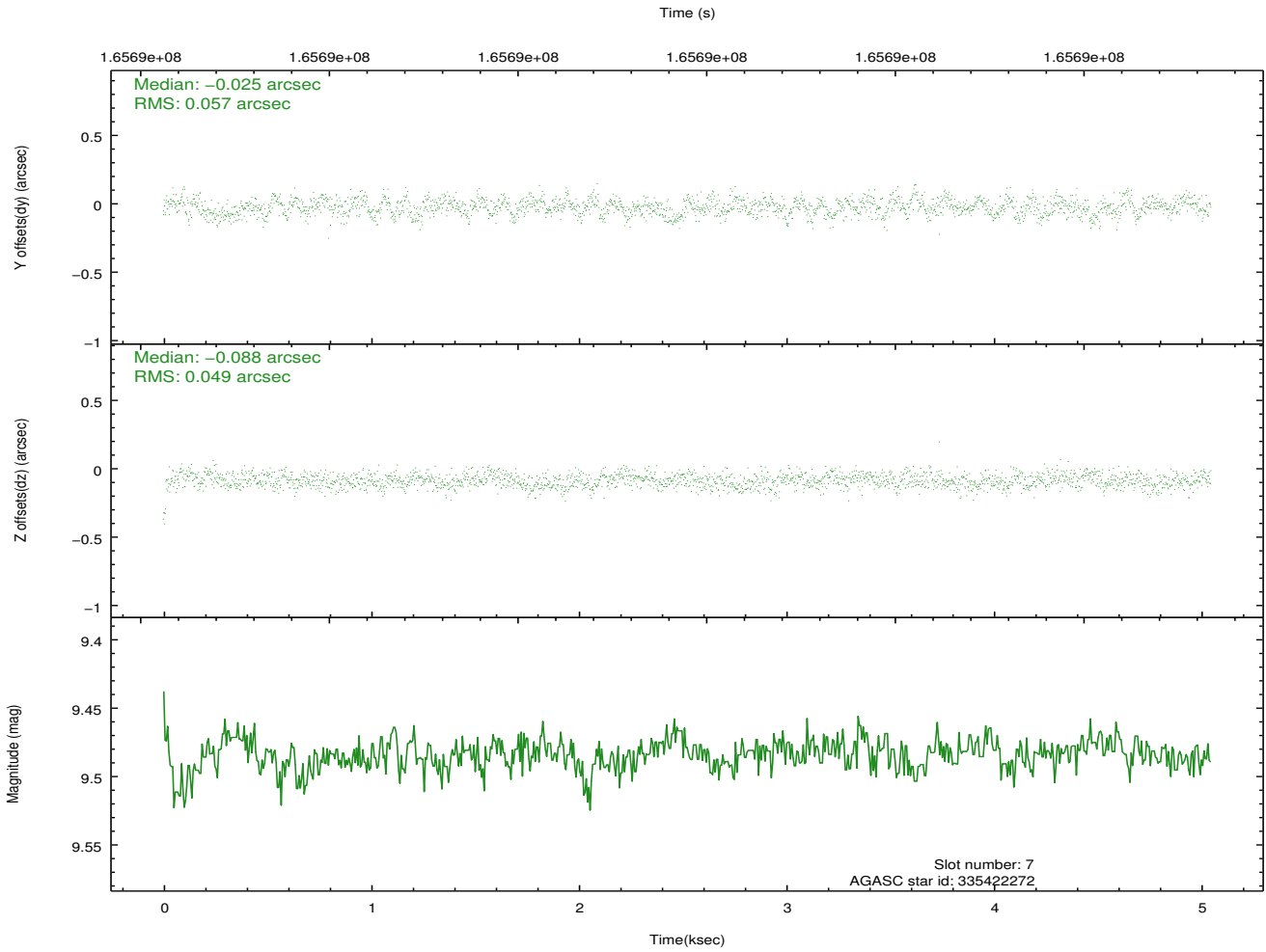
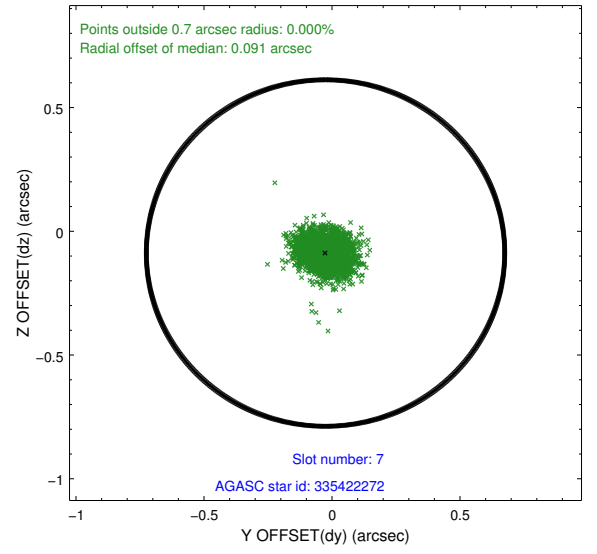
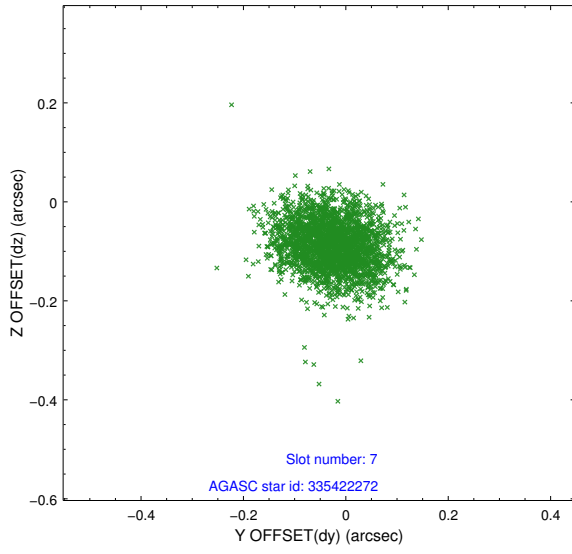
### 2.4.1 Slot 3



## 2.4.2 Slot 6

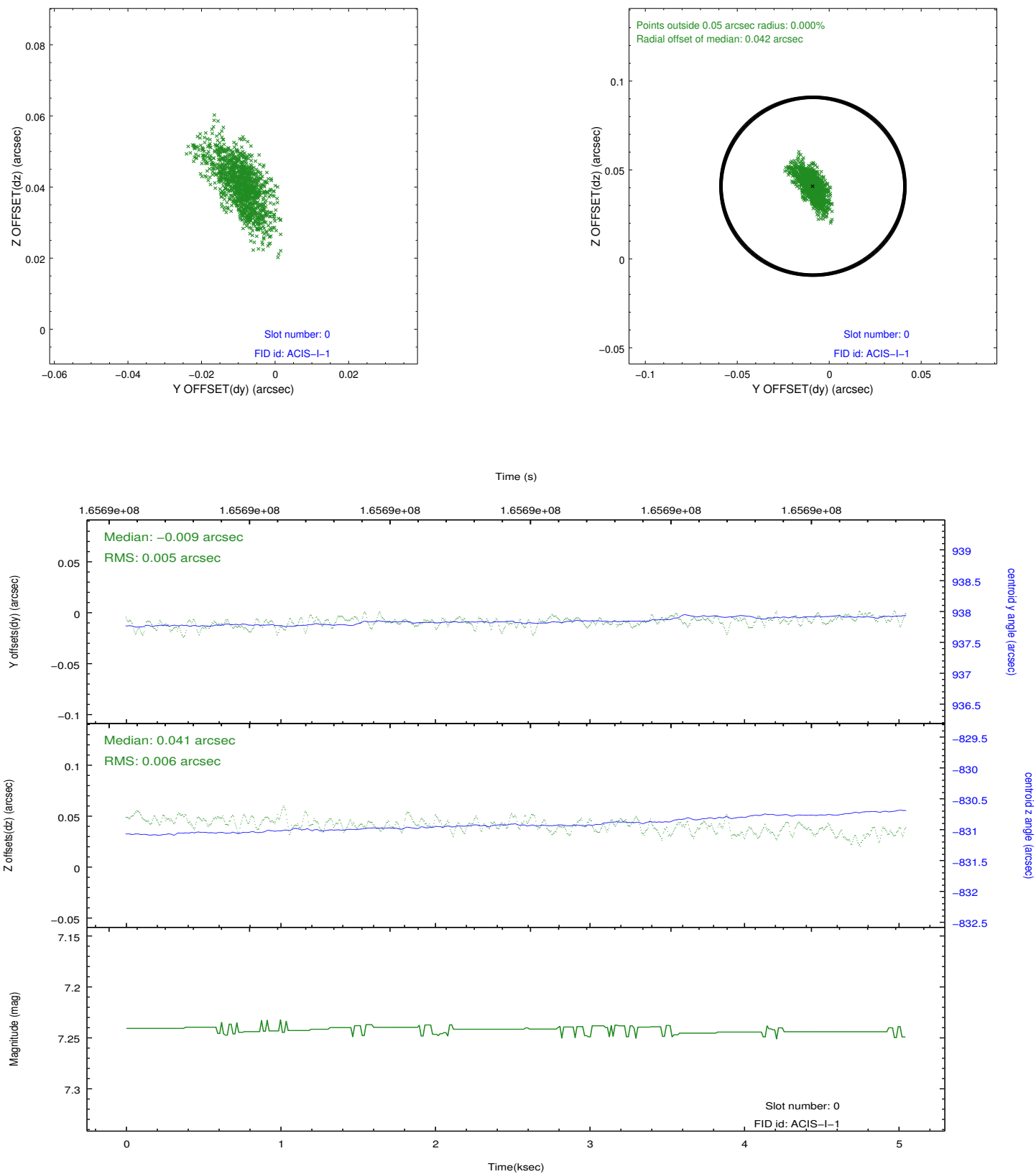


### 2.4.3 Slot 7

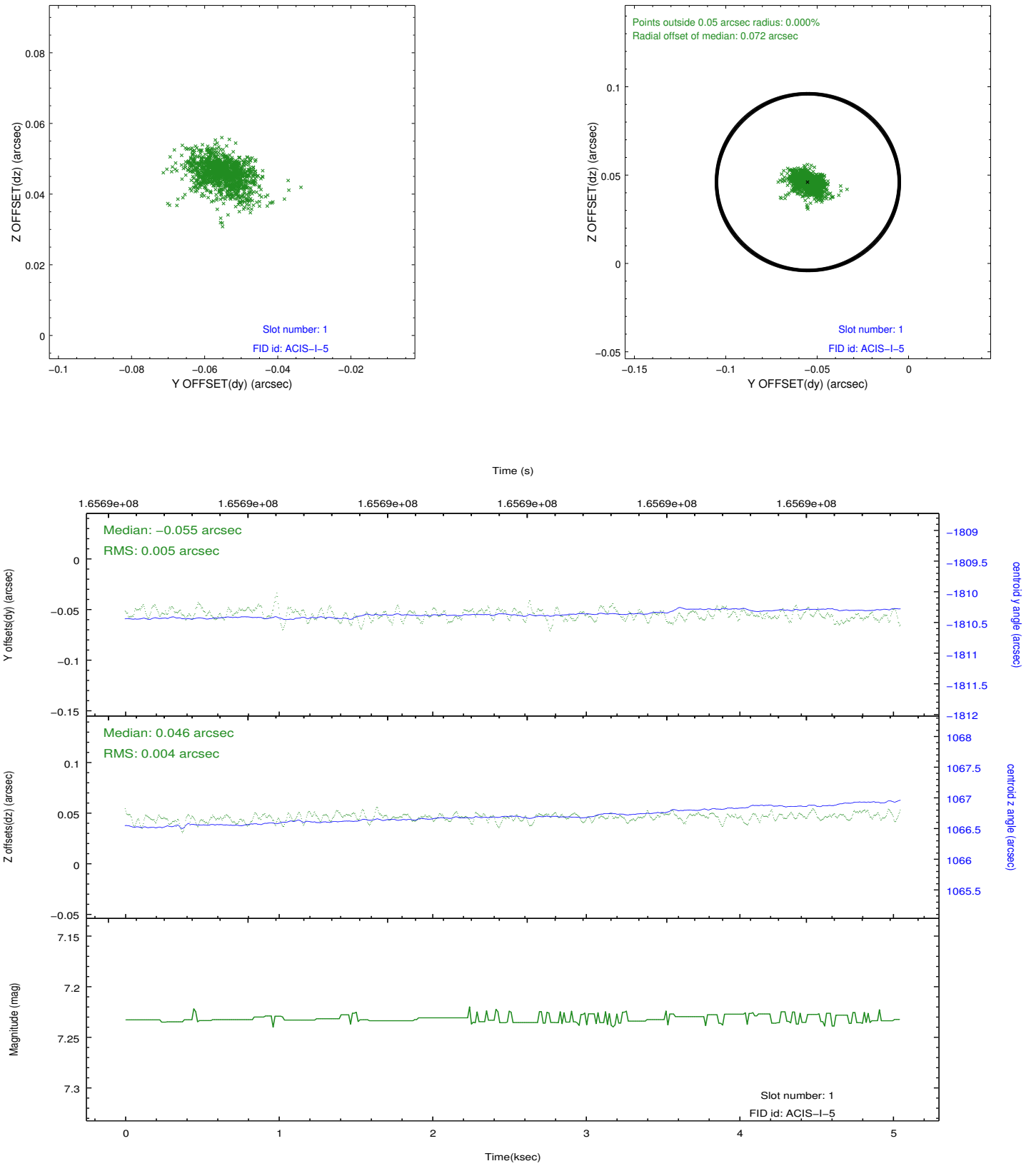


## 2.5 FID Slots

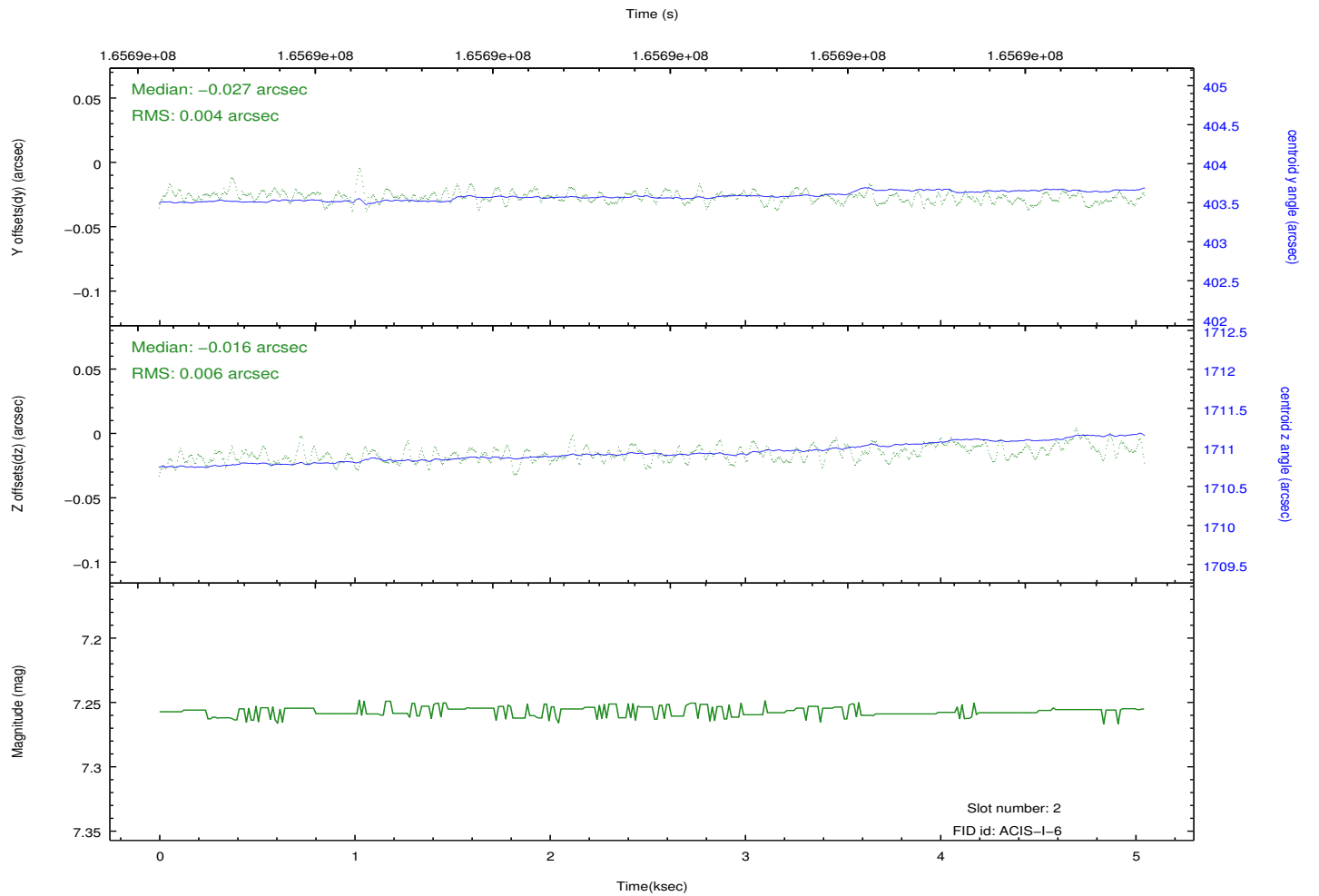
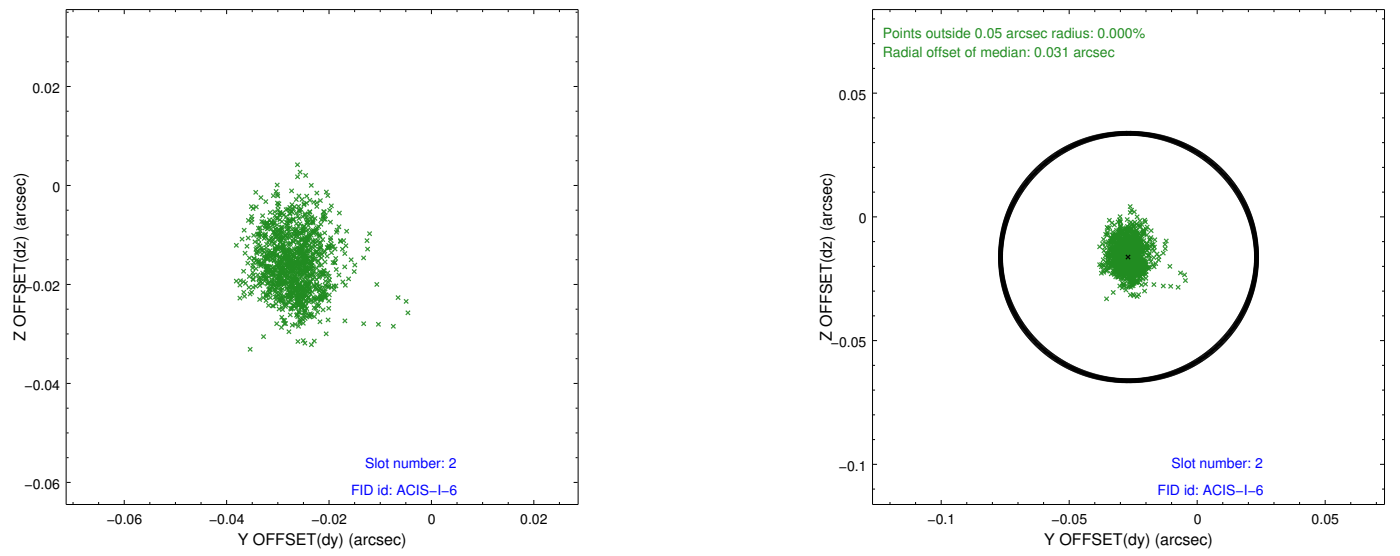
### 2.5.1 Slot 0



## 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)	2013.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.043

## A.2 Comments

The guide stars in slots 4 and 5 were removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of these stars from the solution.