

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8075 - L2 Version 3  
Chandra X-Ray Center

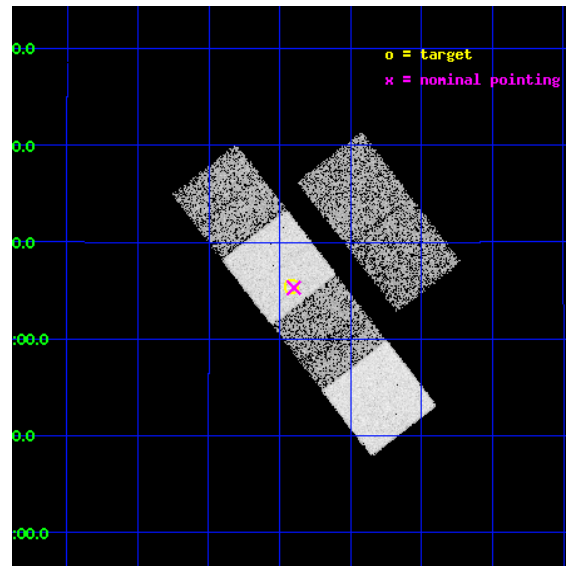
L2 Processing Date : Apr 23 2012

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# 1 Front

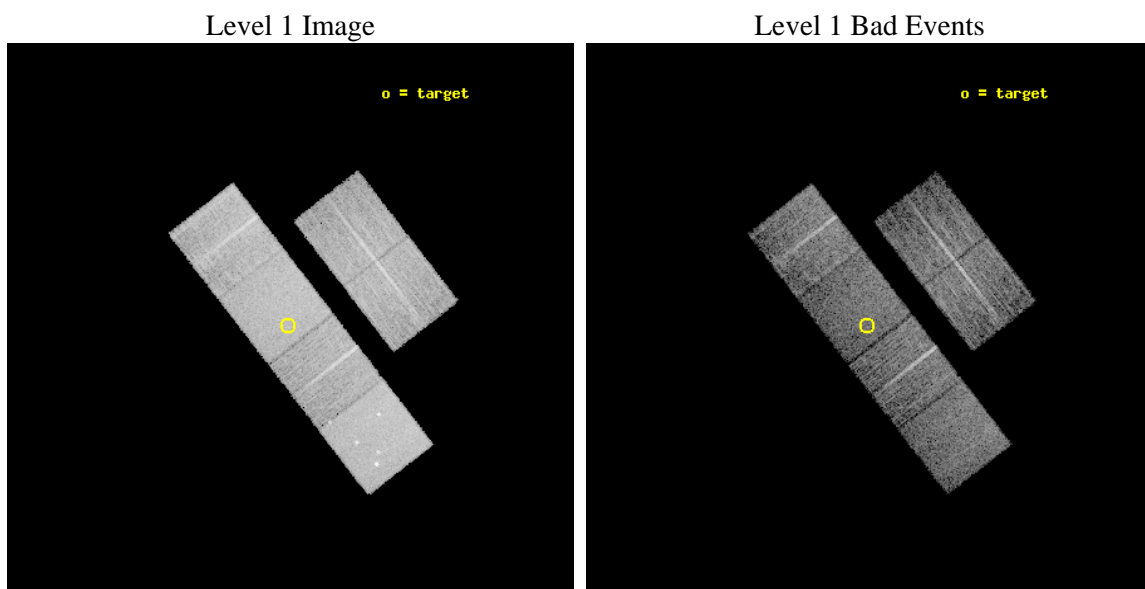
seq_num	900616	Sequence number
obs_id	8075	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1049	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.97875	Observer's specified target RA [deg]
dec_targ	8.090333	Observer's specified target Dec [deg]
ra_nom	186.97493806011	Nominal RA [deg]
dec_nom	8.0880095616836	Nominal Dec [deg]
roll_nom	232.21904652929	Nominal Roll [deg]
revision	3	Processing version of data
ontime	5577.5999792814	Sum of GTIs [s]
livetime	5506.9730499163	Livetime [s]
ontime2	5577.5999792814	Sum of GTIs [s]
ontime3	5577.5999792814	Sum of GTIs [s]
ontime5	5577.5999792814	Sum of GTIs [s]
ontime6	5577.5999792814	Sum of GTIs [s]
ontime7	5577.5999792814	Sum of GTIs [s]
ontime8	5577.5999792814	Sum of GTIs [s]
l2events	87186	Number of level 2 events



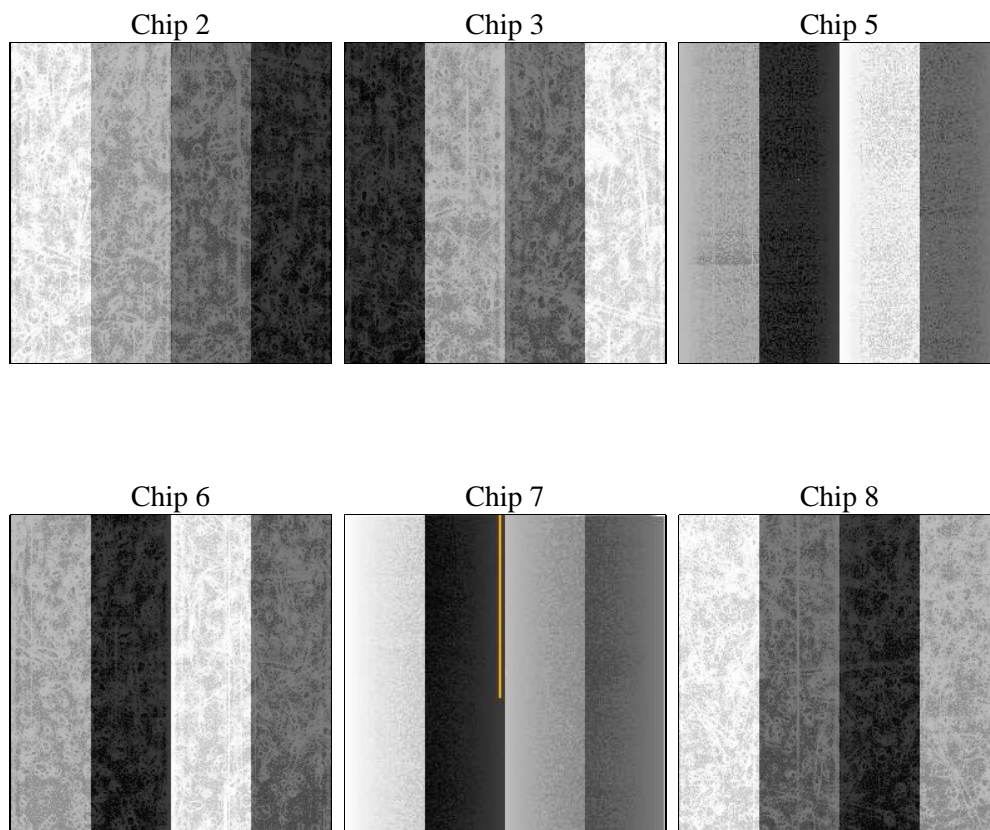
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5577.5999792814	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5577.5999792814	Sum of GTIs [s]
date	2012-04-23T21:31:15	Date and time of file creation	ontime3	5577.5999792814	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	5577.5999792814	Sum of GTIs [s]
			ontime6	5577.5999792814	Sum of GTIs [s]
			ontime7	5577.5999792814	Sum of GTIs [s]
			ontime8	5577.5999792814	Sum of GTIs [s]
			l1events	404020	Number of level 1 events

### 2.1.4 Events

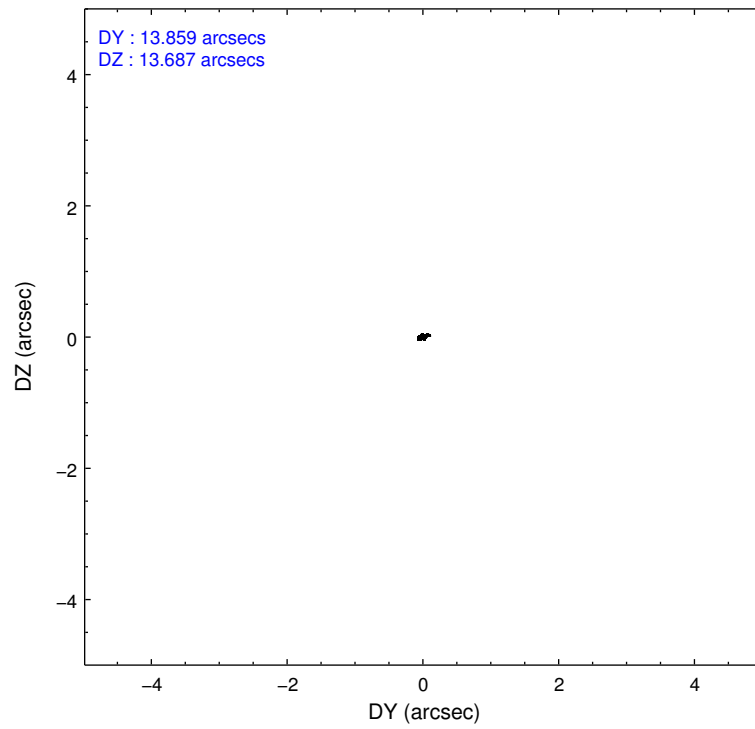
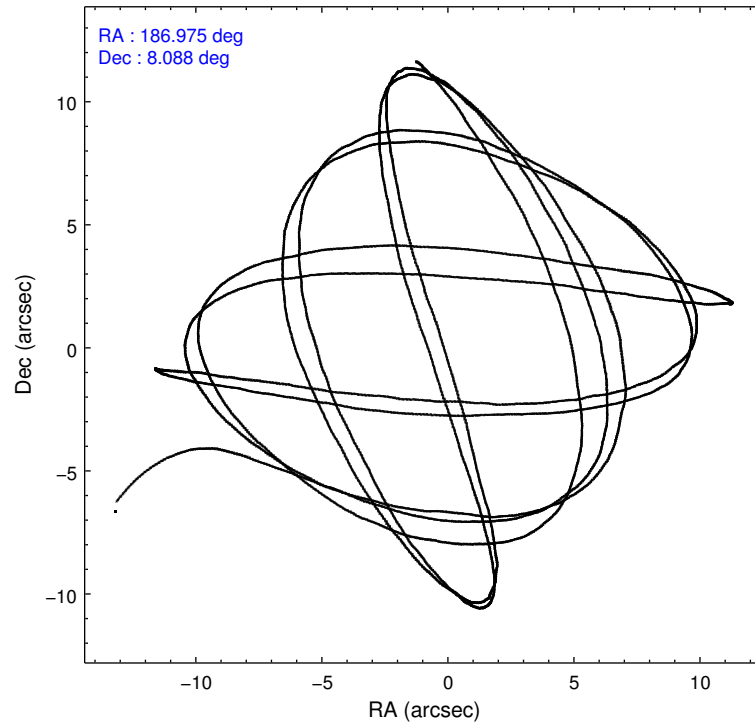
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	58925	53521	87093	56115	76646	71720	grade 0 events	2864	2927	4723	2733	2971	5176
rejected events	52842	47355	49135	49742	46147	56388		4%	5%	5%	4%	3%	7%
rejected %	89%	88%	56%	88%	60%	78%	grade 1 events	45	46	171	33	75	47
								0%	0%	0%	0%	0%	0%
							grade 2 events	1389	1331	11850	1440	6489	3768
								2%	2%	13%	2%	8%	5%
							grade 3 events	586	626	1506	661	2877	1594
								0%	1%	1%	1%	3%	2%
							grade 4 events	582	616	1540	616	2762	1488
								0%	1%	1%	1%	3%	2%
							grade 5 events	2269	2523	6292	2628	7301	3484
								3%	4%	7%	4%	9%	4%
							grade 6 events	1073	1087	20948	1344	17370	4312
								1%	2%	24%	2%	22%	6%
							grade 7 events	50117	44365	40063	46660	36801	51851
								85%	82%	46%	83%	48%	72%

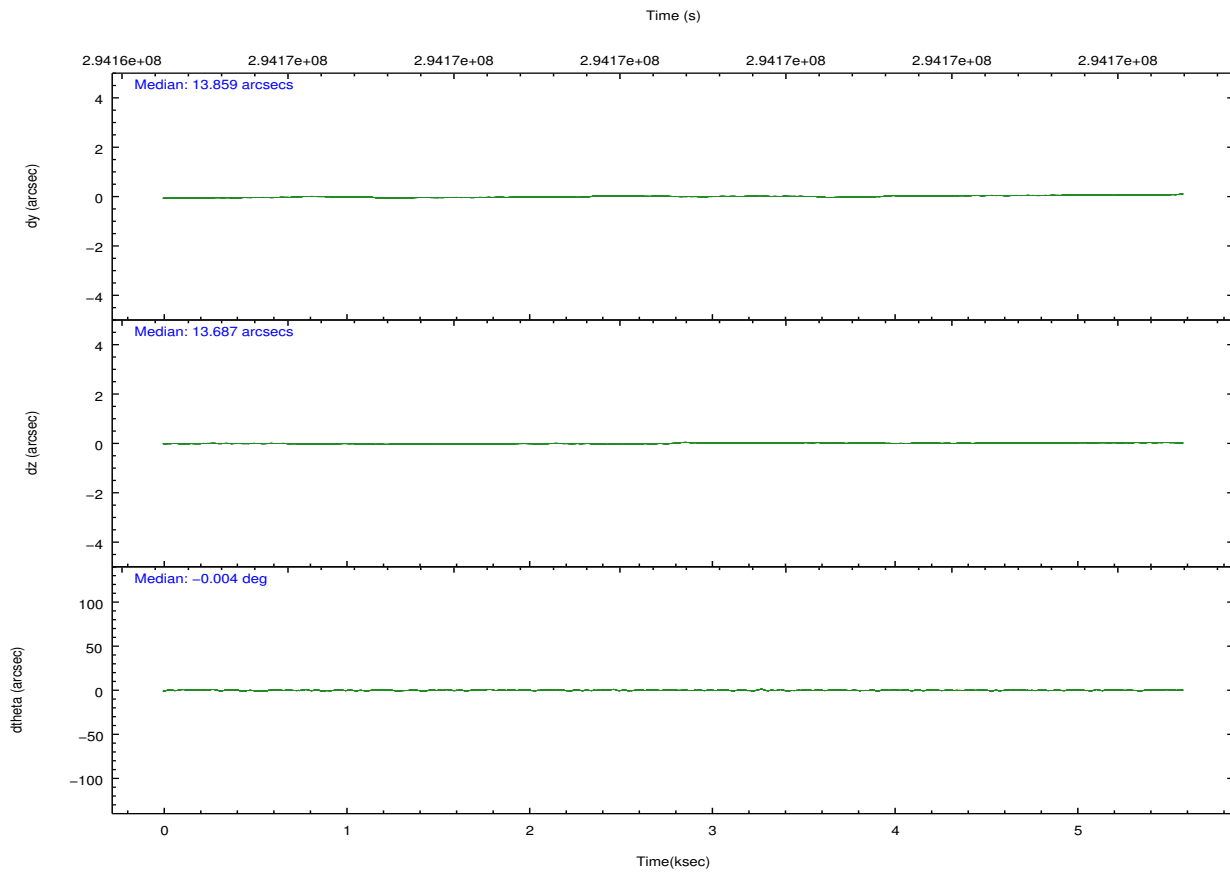
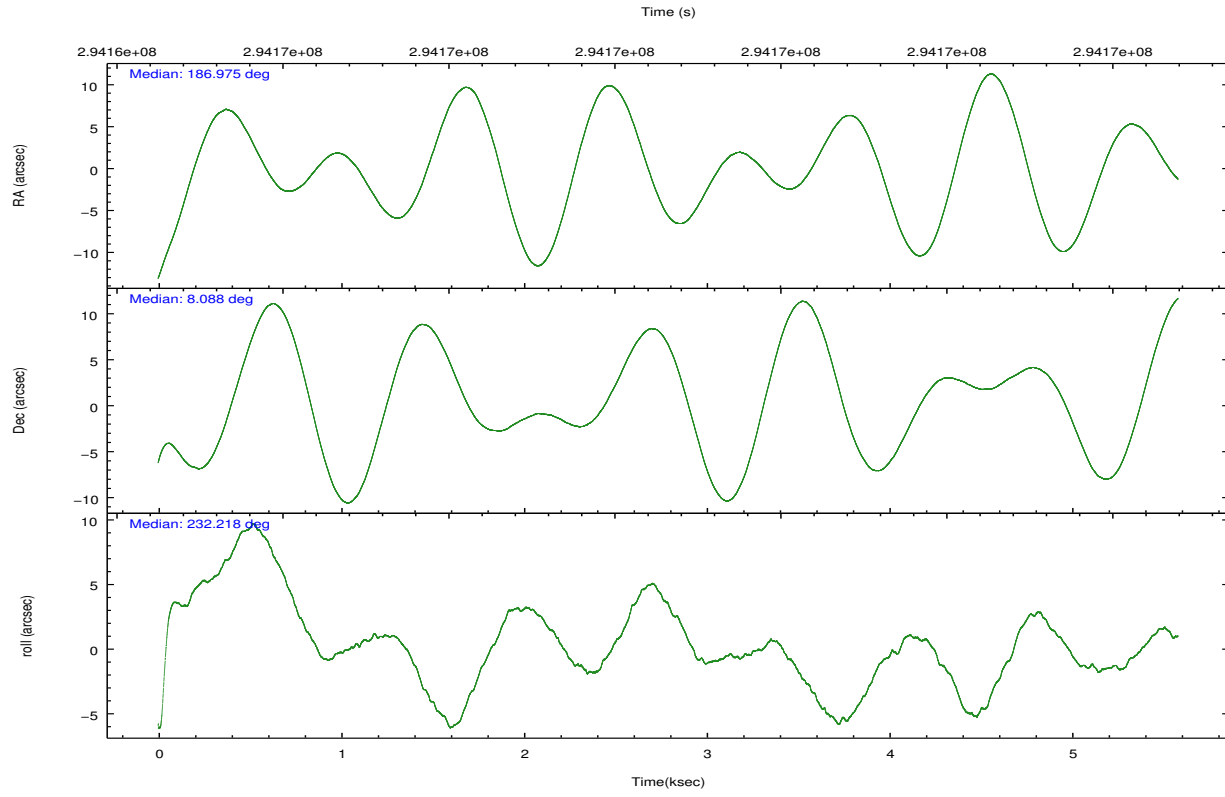


## 2.2 Compared Parameters

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	186.978277	186.9749380601107	Subarray requested	NONE	NONE
[deg] Pointing Dec	8.115214	8.088009561683602	Alternating exposures requested	N	N
[deg] Pointing Roll	232.061973	232.2190465292905	[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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	294165711.184000	294164451.88839			
Observation start date	2007-04-28T16:40:46	2007-04-28T16:20:51			
[s] Observation end time (MET)	294171111.184000	294171245.07621			
Observation end date	2007-04-28T18:10:46	2007-04-28T18:14:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect



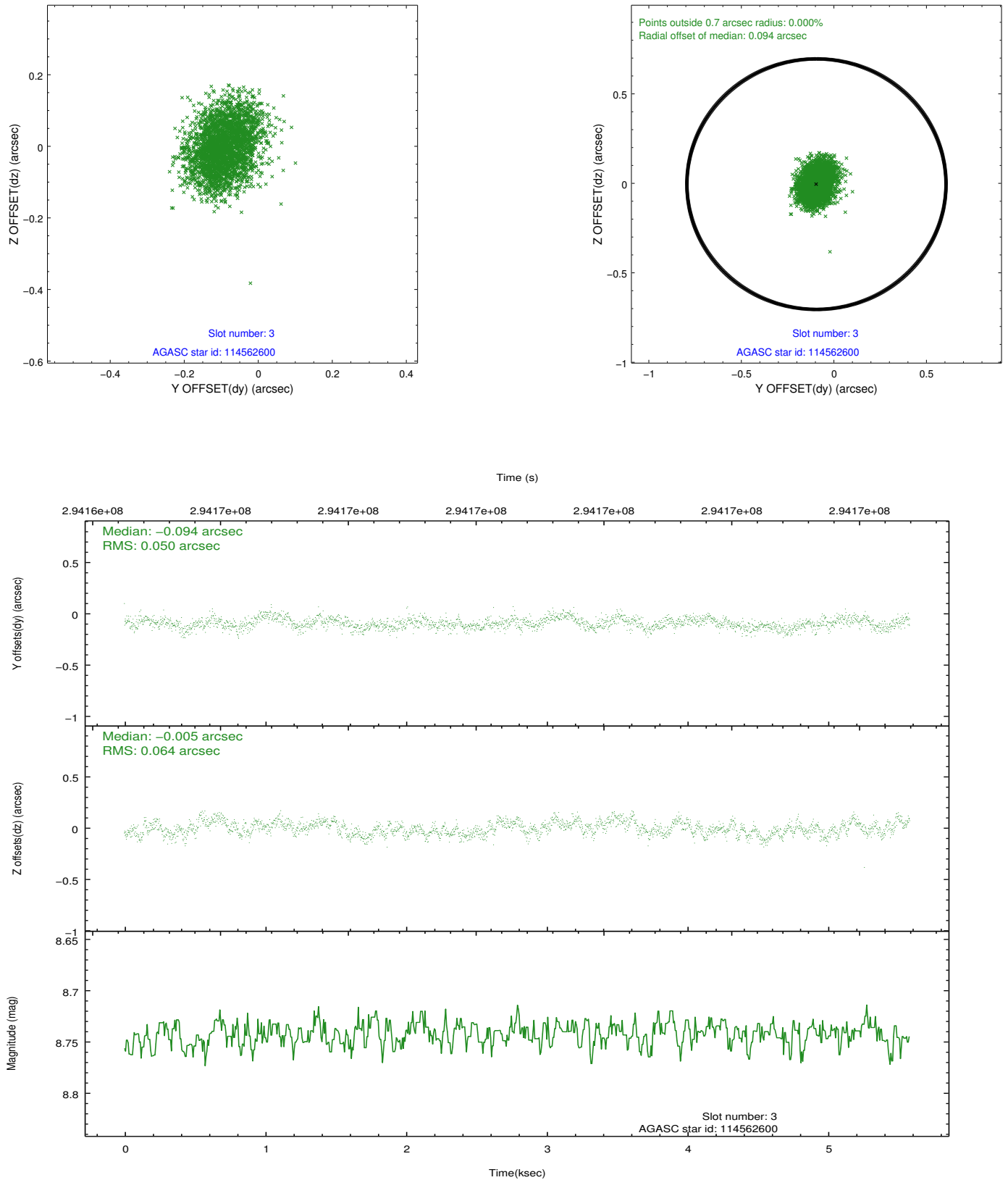


### Slot Statistics

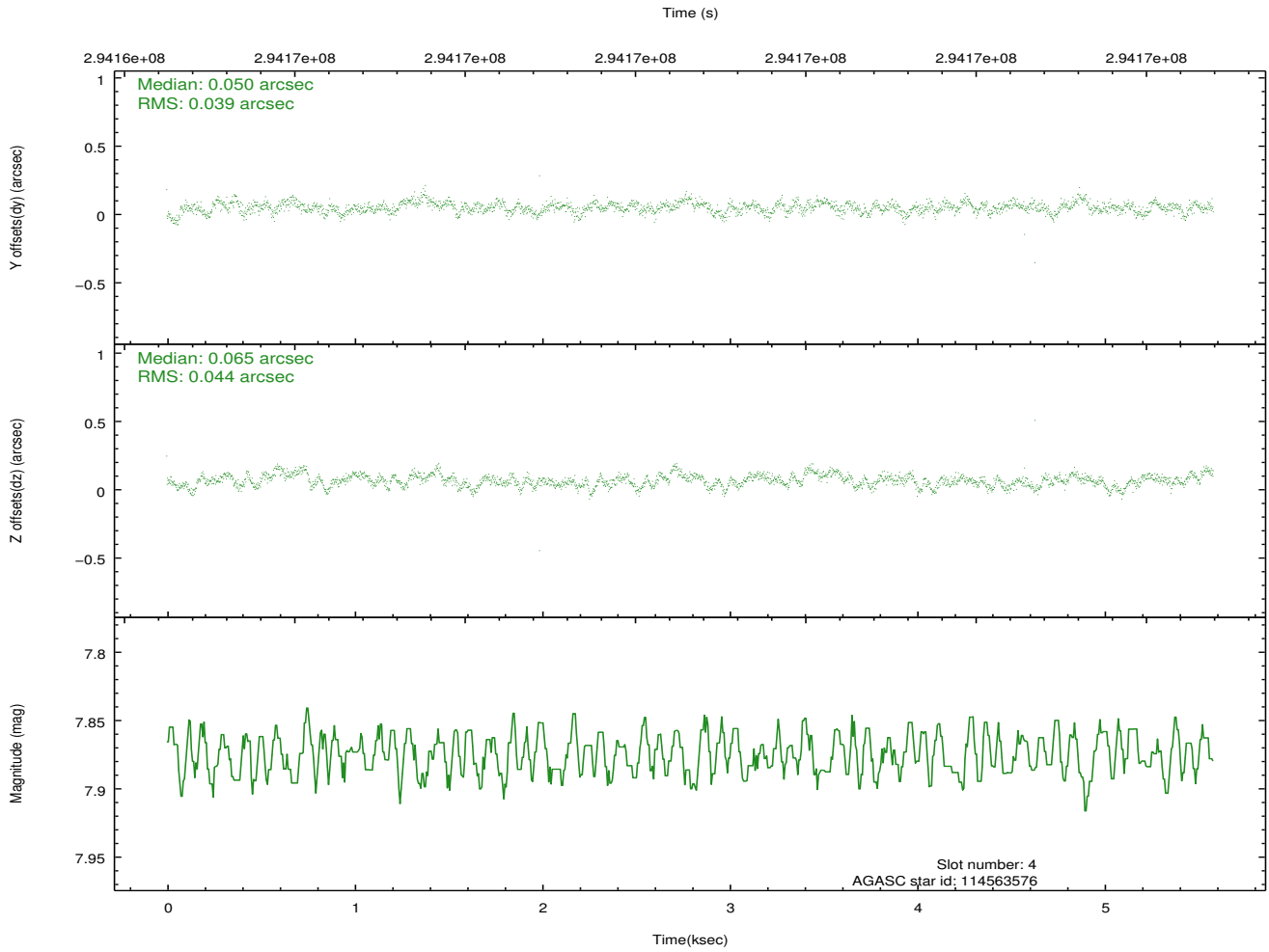
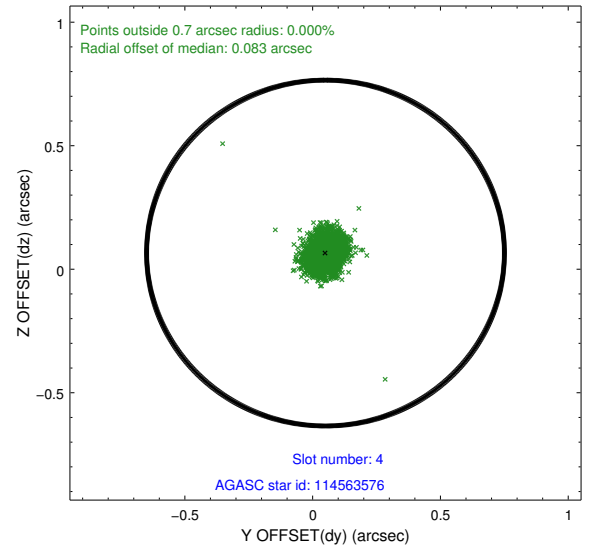
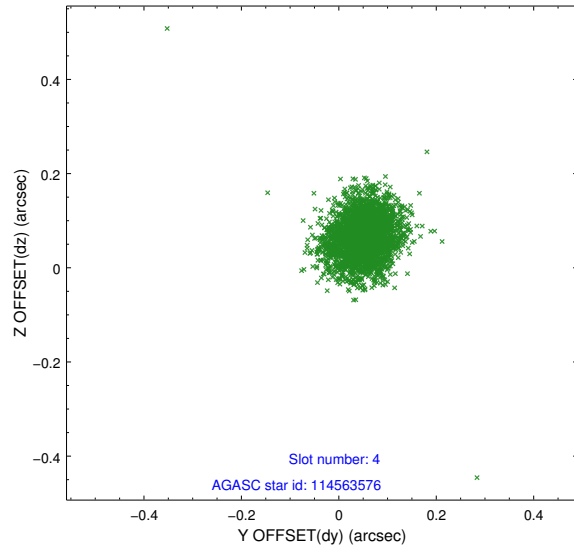
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1362	-0.048	-0.061	0.007	0.013	0.000000	0.000000	-766.86	-1735.04
1	FID	ACIS-S-4	7.19	1362	0.186	0.040	0.006	0.013	0.000000	0.000000	2146.17	172.42
2	FID	ACIS-S-5	7.22	1362	-0.169	0.030	0.007	0.013	0.000000	0.000000	-1818.43	167.32
3	GUIDE	114562600	8.74	2722	-0.094	-0.005	0.086	0.138	186.973653	8.898661	-2214.20	-1747.42
4	GUIDE	114563576	7.87	2724	0.050	0.065	0.061	0.100	186.867039	8.012388	535.58	-86.16
5	GUIDE	114563648	9.78	2721	0.121	-0.091	0.149	0.247	187.009208	7.938475	434.47	477.83
6	GUIDE	114565080	10.18	2718	0.094	0.127	0.198	0.318	186.537681	7.759404	1976.31	-452.27
7	GUIDE	114565400	6.31	2723	-0.172	-0.103	0.062	0.097	186.925333	8.610343	-1289.17	-1244.77

## 2.4 Star Slots

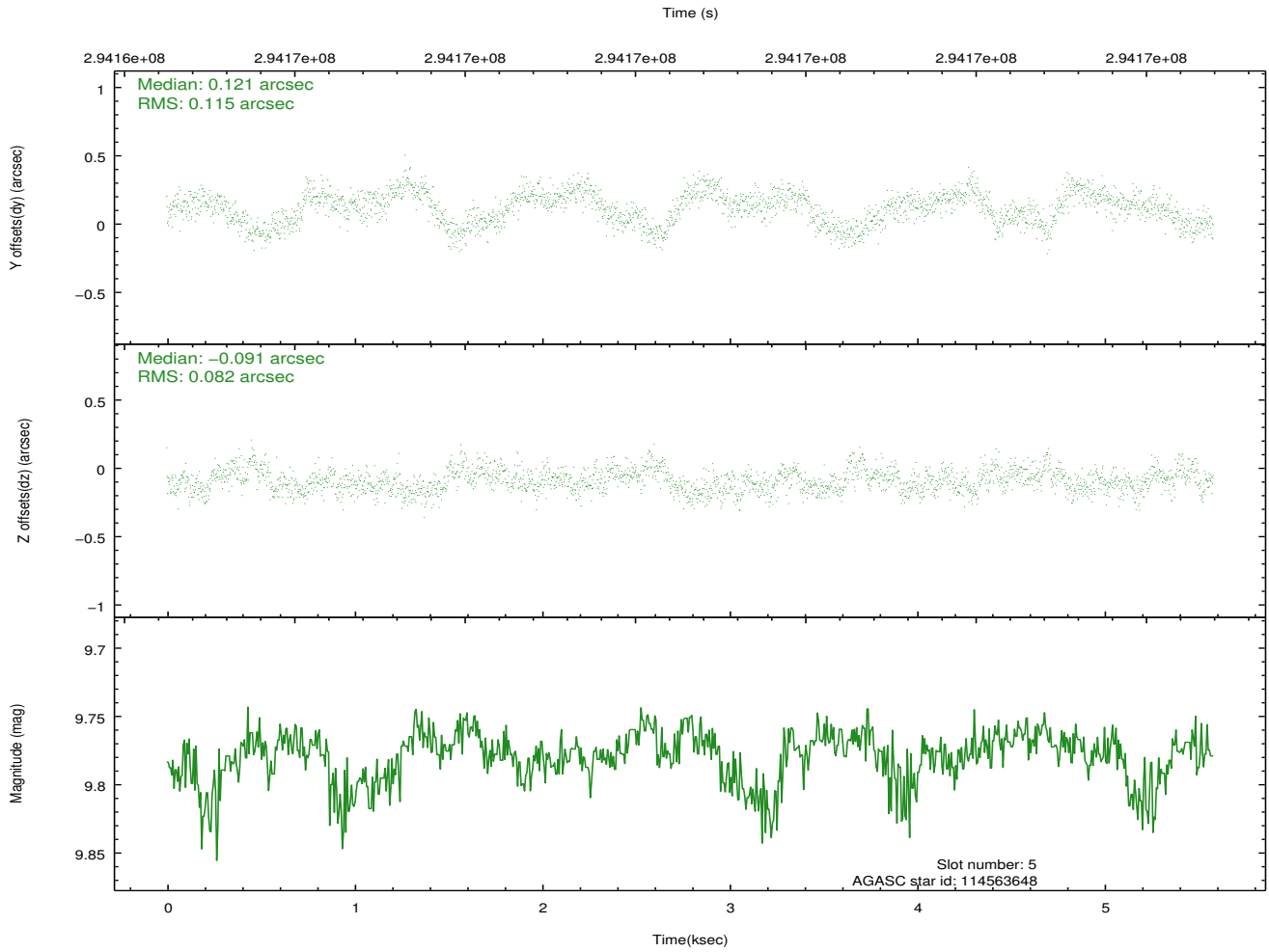
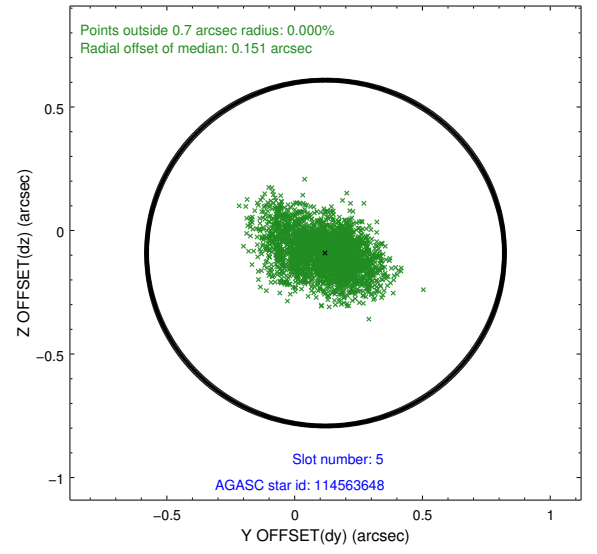
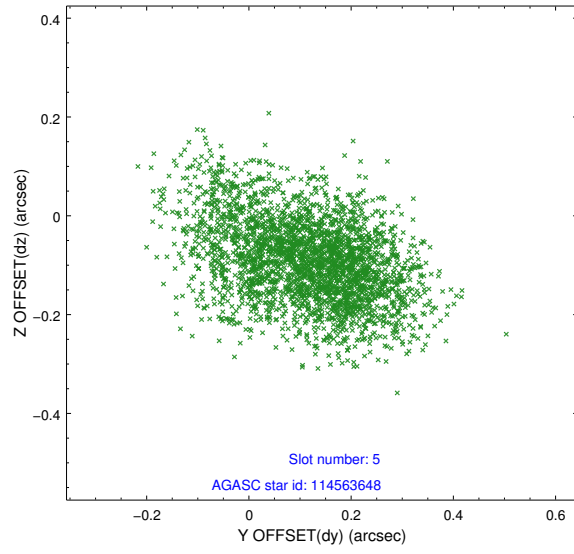
### 2.4.1 Slot 3



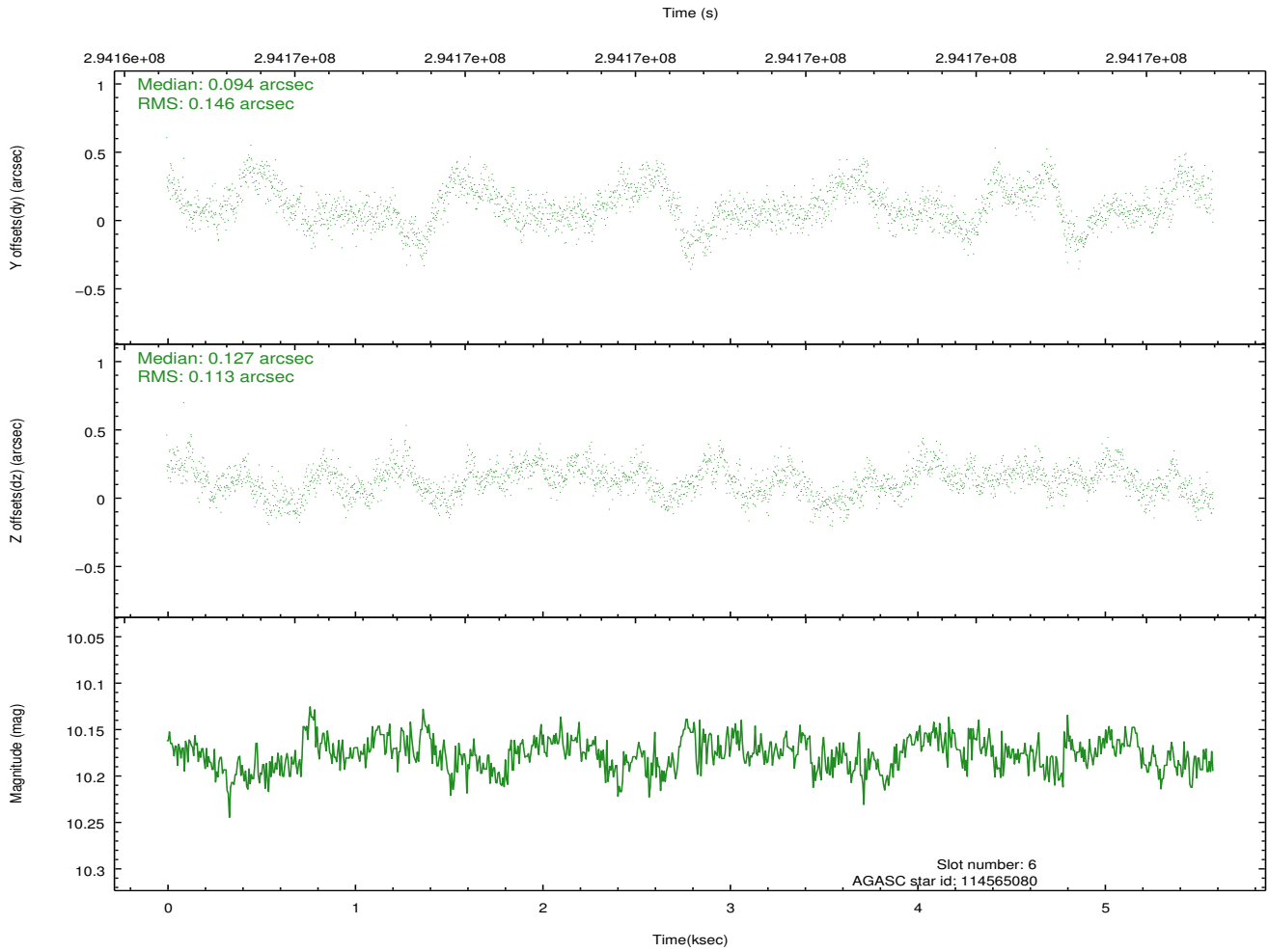
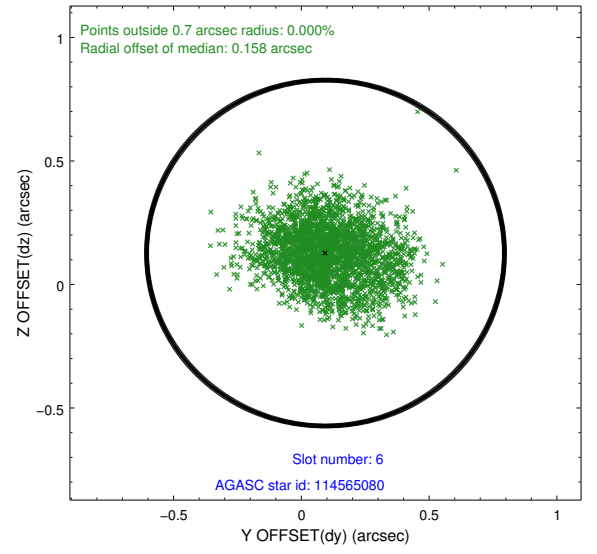
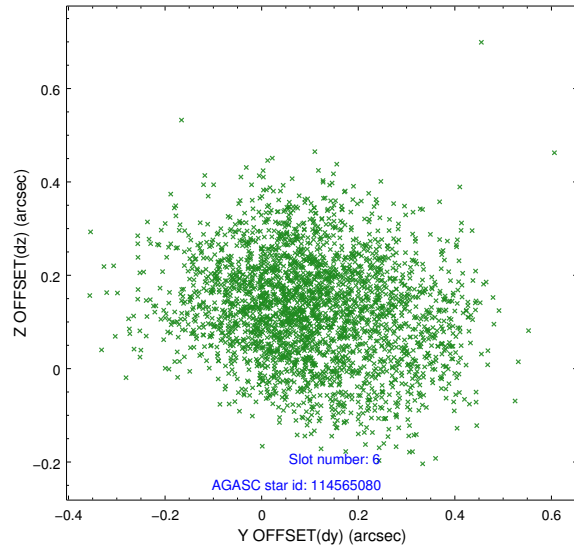
## 2.4.2 Slot 4



### 2.4.3 Slot 5

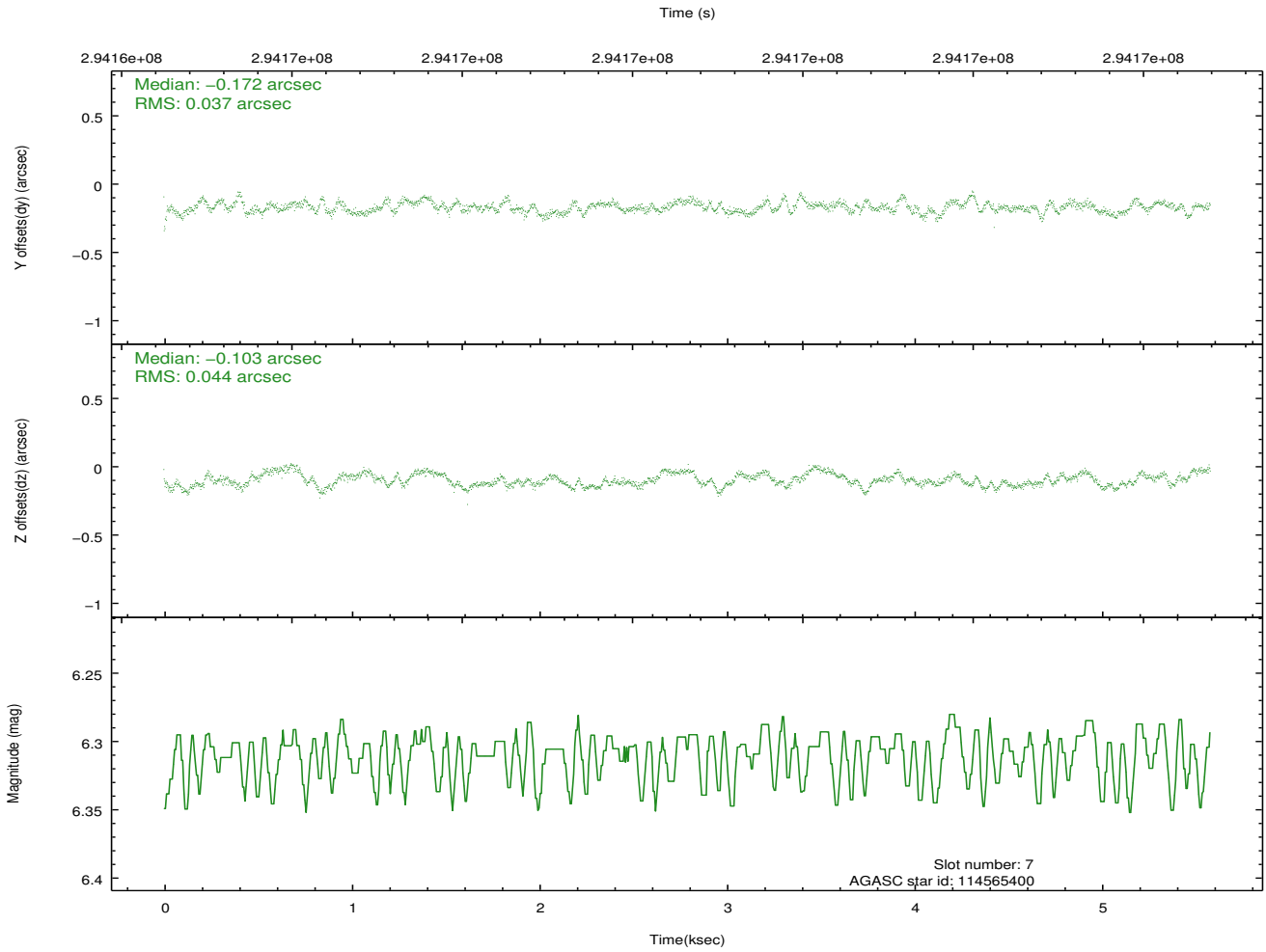
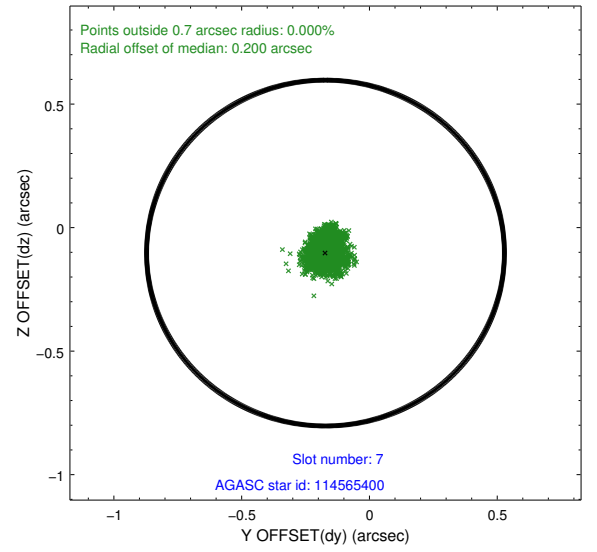
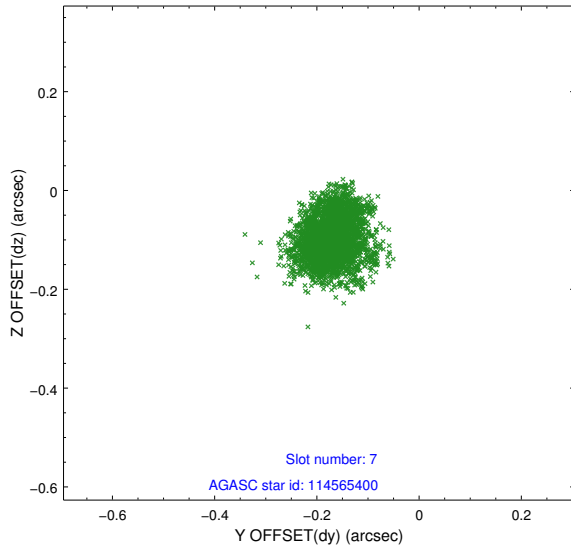


## 2.4.4 Slot 6



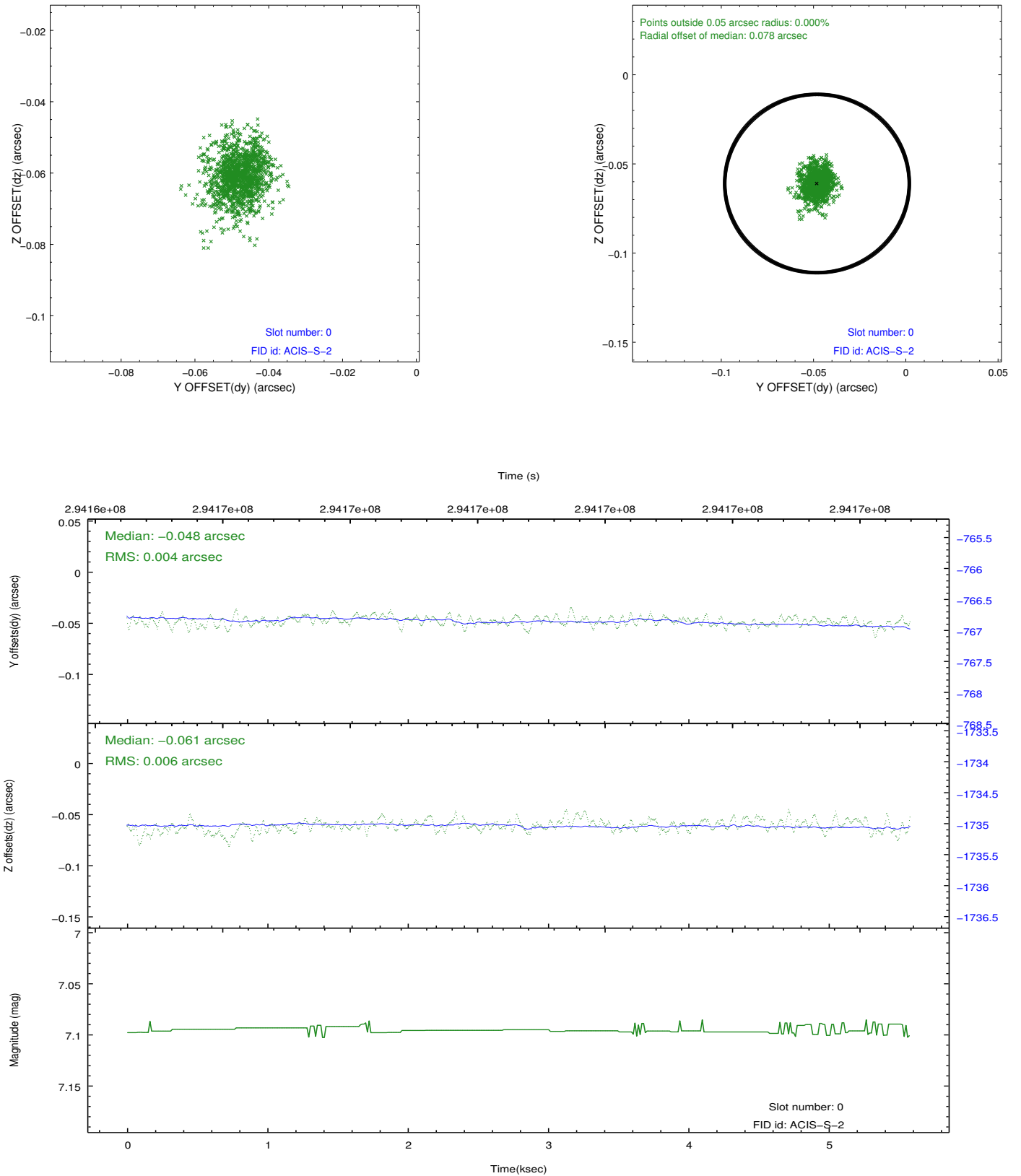


## 2.4.5 Slot 7

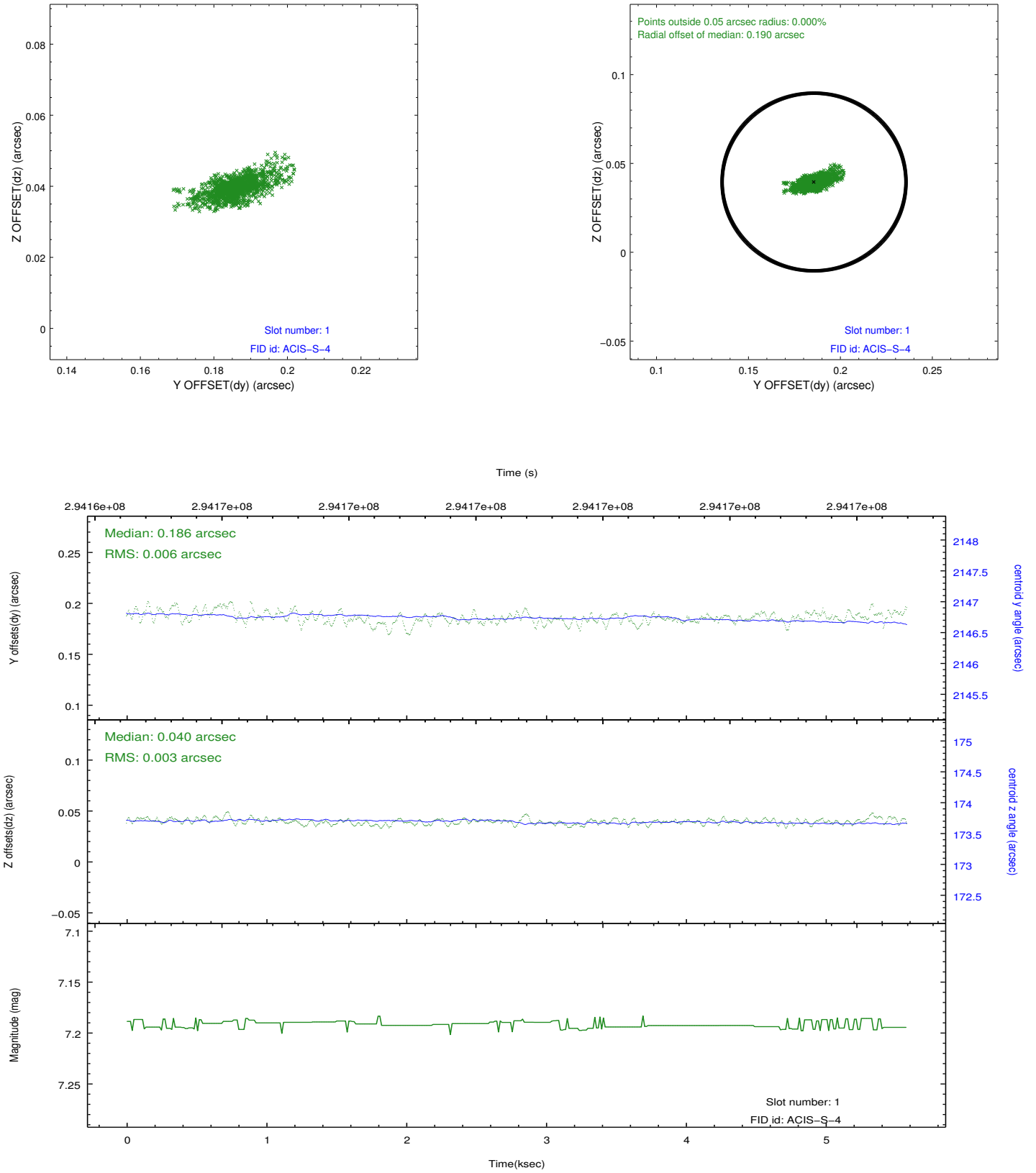


## 2.5 FID Slots

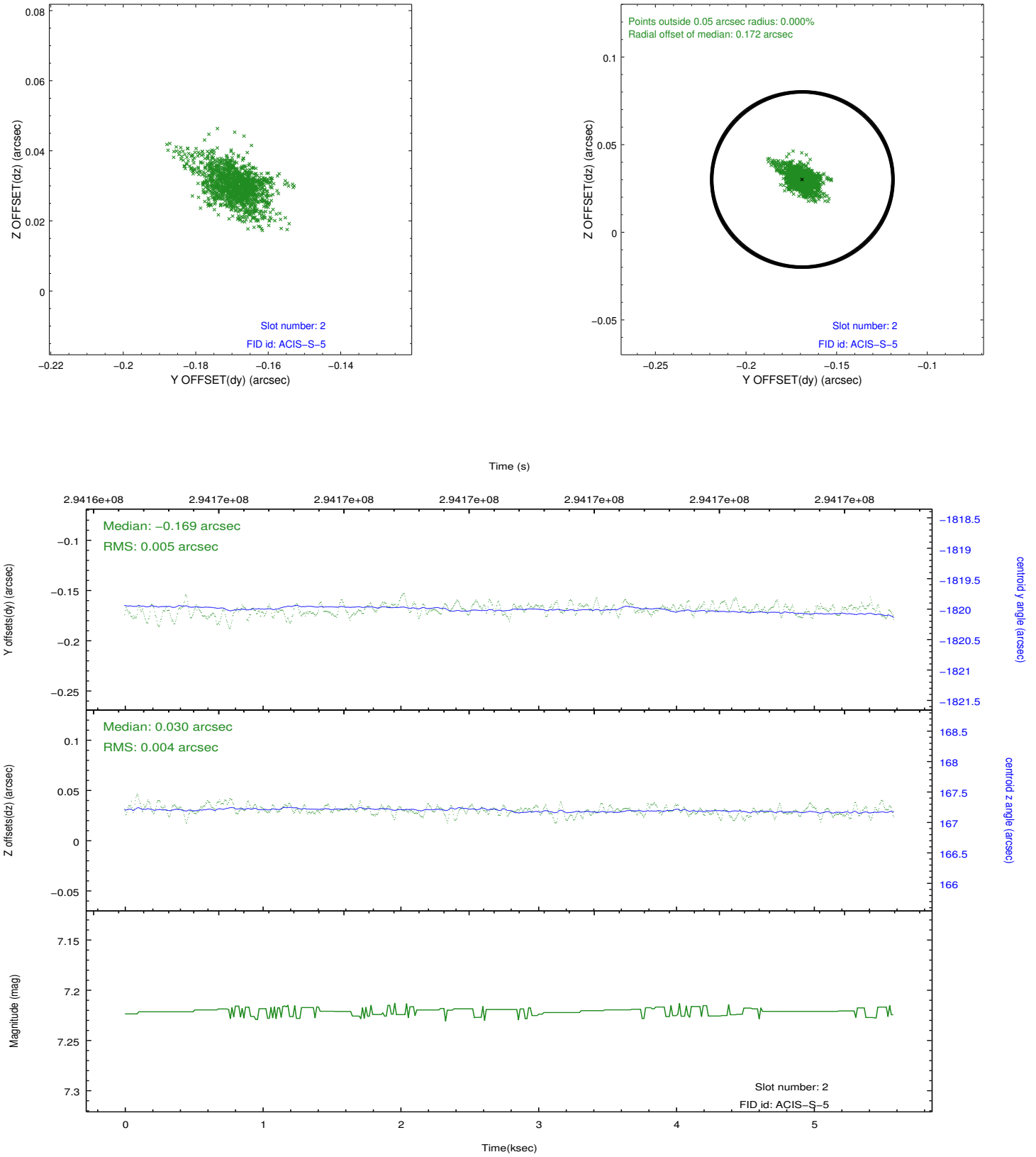
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.57759997

### A.2 Comments

Joint proposal with Spitzer.