

# V&V Reference Report

## L2 ASCDS Version : 10.0.1

Observation 14924 - L2 Version 2  
Chandra X-Ray Center

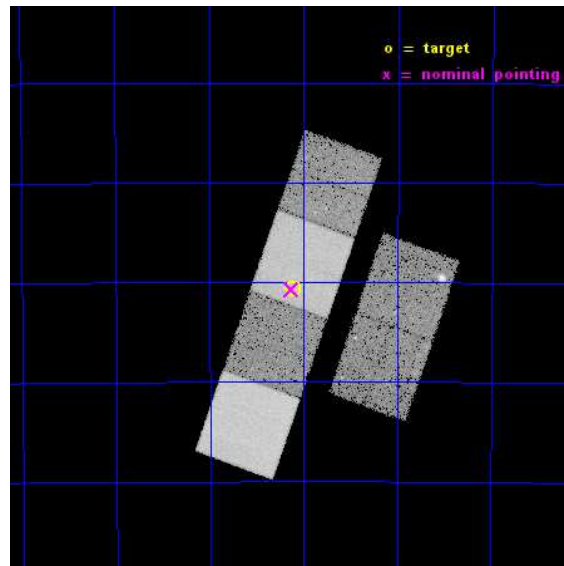
L2 Processing Date : Dec 6 2014

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# 1 Front

seq_num	601054	Sequence number
obs_id	14924	Observation id
title	Ring galaxies as the cradle of ULXs	Proposal title
observer	Dr Anna Wolter	Principal investigator
object	AM 1854-490	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	284.528333	Observer's specified target RA [deg]
dec_targ	-49.011389	Observer's specified target Dec [deg]
ra_nom	284.5328400247	Nominal RA [deg]
dec_nom	-49.012057547748	Nominal Dec [deg]
roll_nom	289.58029699186	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27964.169232249	Sum of GTIs [s]
livetime	27610.070083429	Livetime [s]
ontime2	27964.210272253	Sum of GTIs [s]
ontime3	27960.805141866	Sum of GTIs [s]
ontime5	27964.128192246	Sum of GTIs [s]
ontime6	27964.087152243	Sum of GTIs [s]
ontime7	27964.169232249	Sum of GTIs [s]
ontime8	27964.005072236	Sum of GTIs [s]
l2events	231977	Number of level 2 events

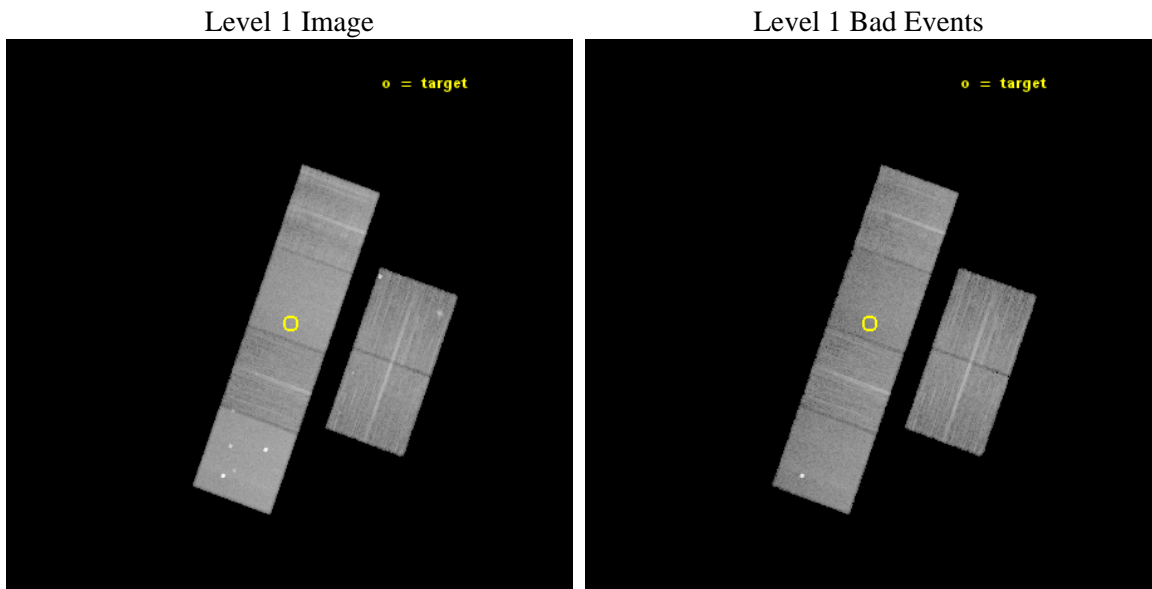




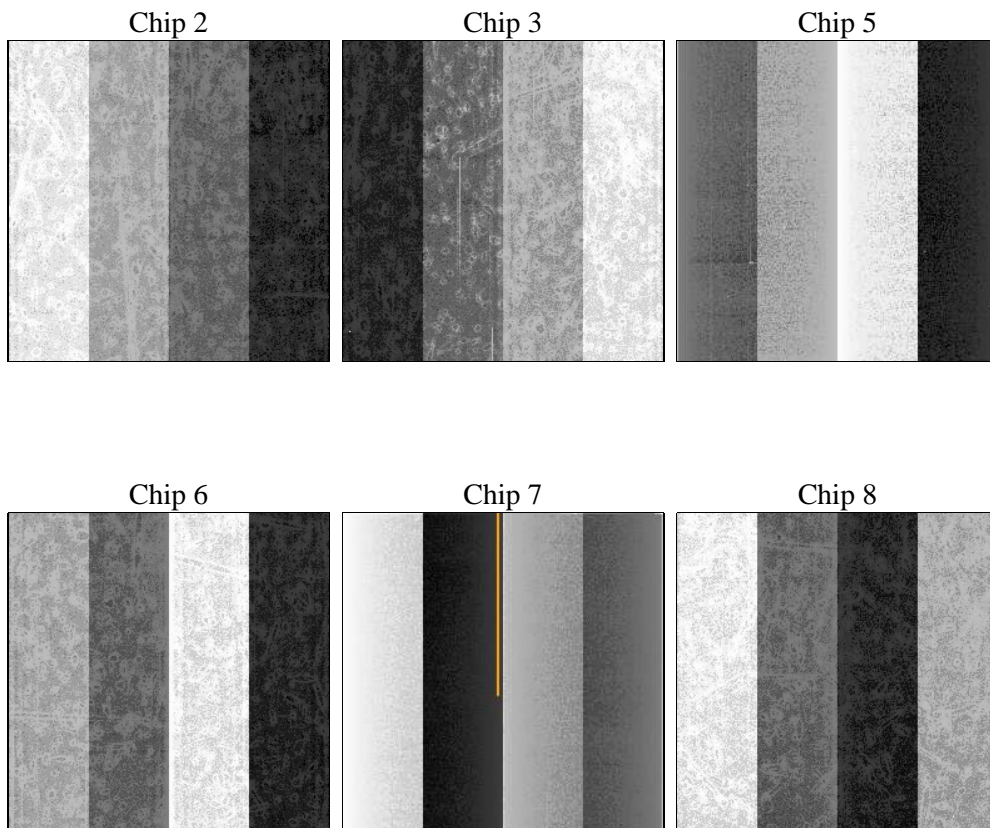
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	27964.169232249	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	27964.210272253	Sum of GTIs [s]
date	2014-12-06T10:00:47	Date and time of file creation	ontime3	27960.805141866	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	27964.128192246	Sum of GTIs [s]
			ontime6	27964.087152243	Sum of GTIs [s]
			ontime7	27964.169232249	Sum of GTIs [s]
			ontime8	27964.005072236	Sum of GTIs [s]
			l1events	945673	Number of level 1 events

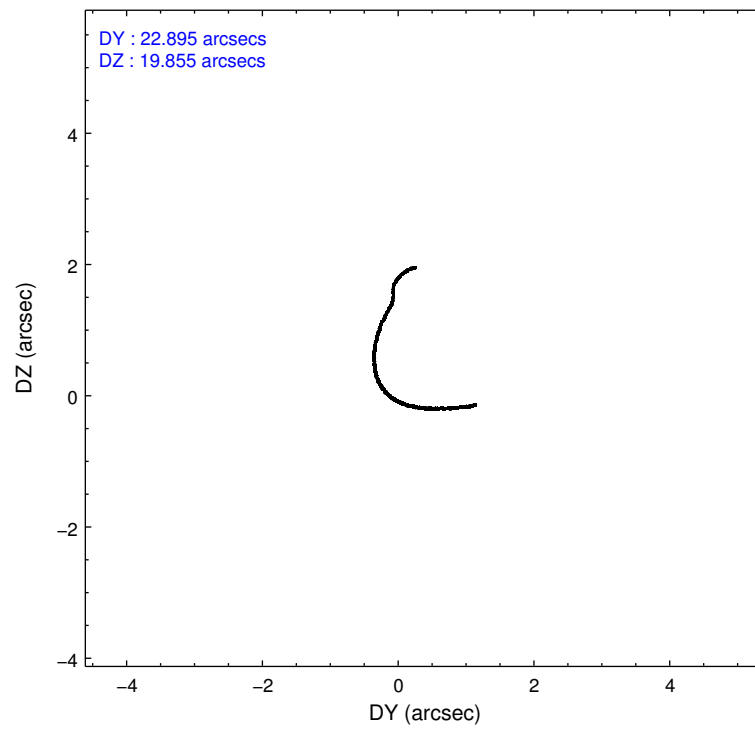
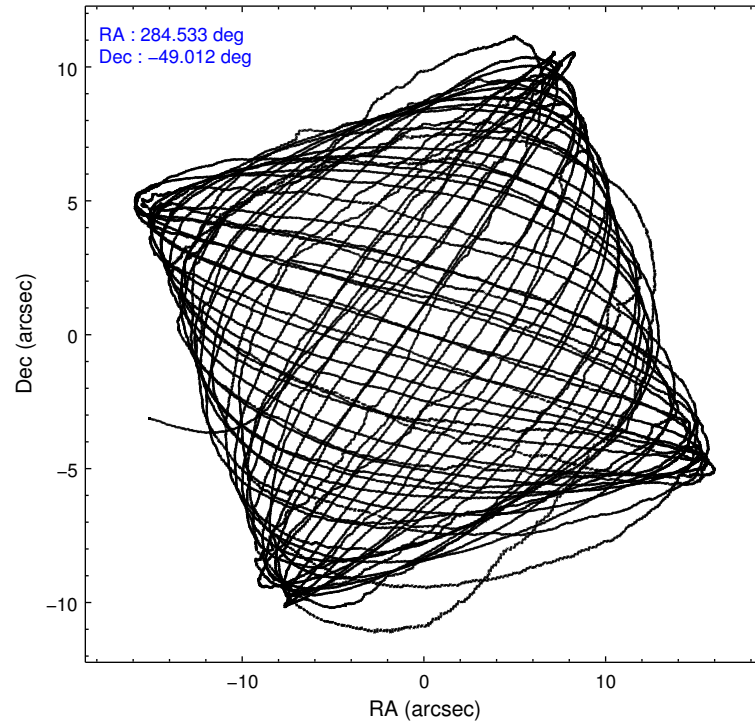
### 2.1.4 Events

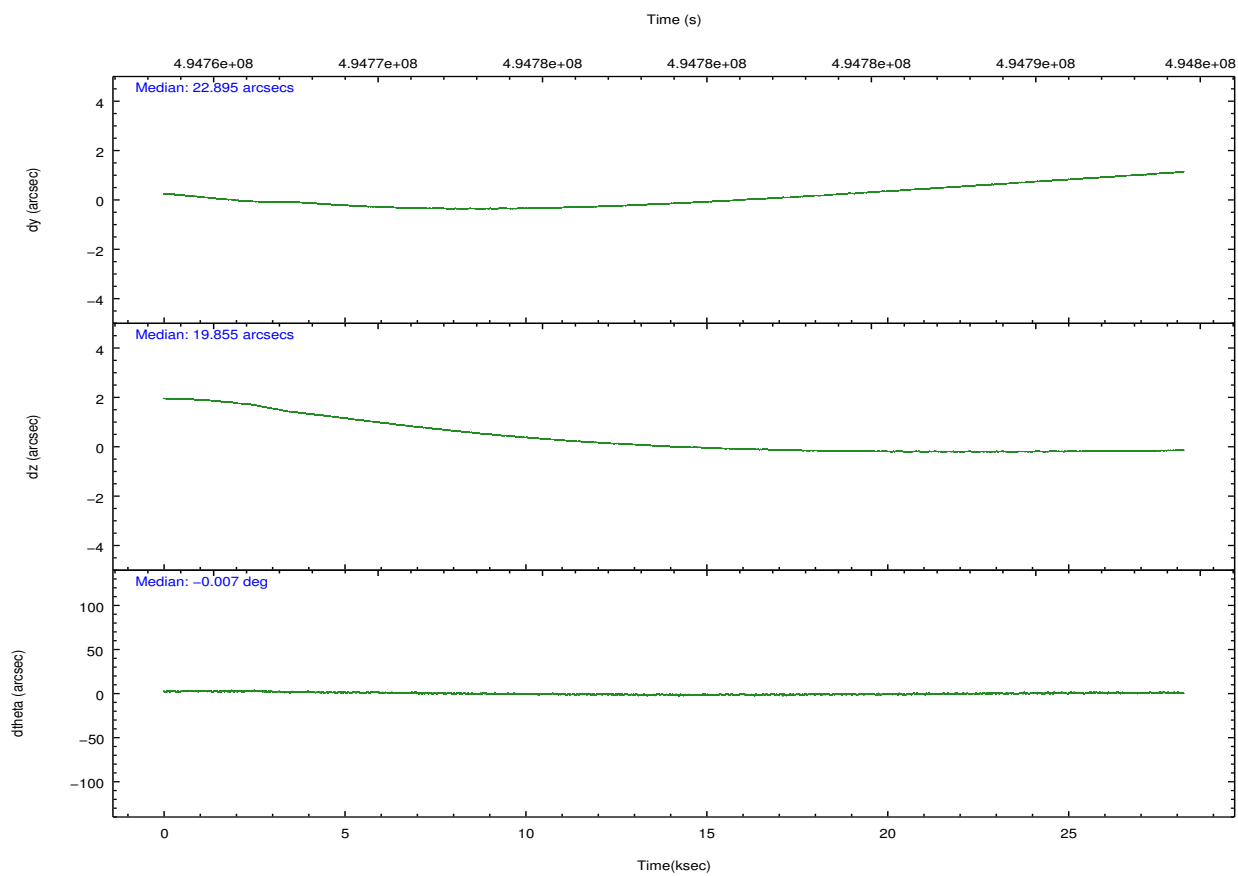
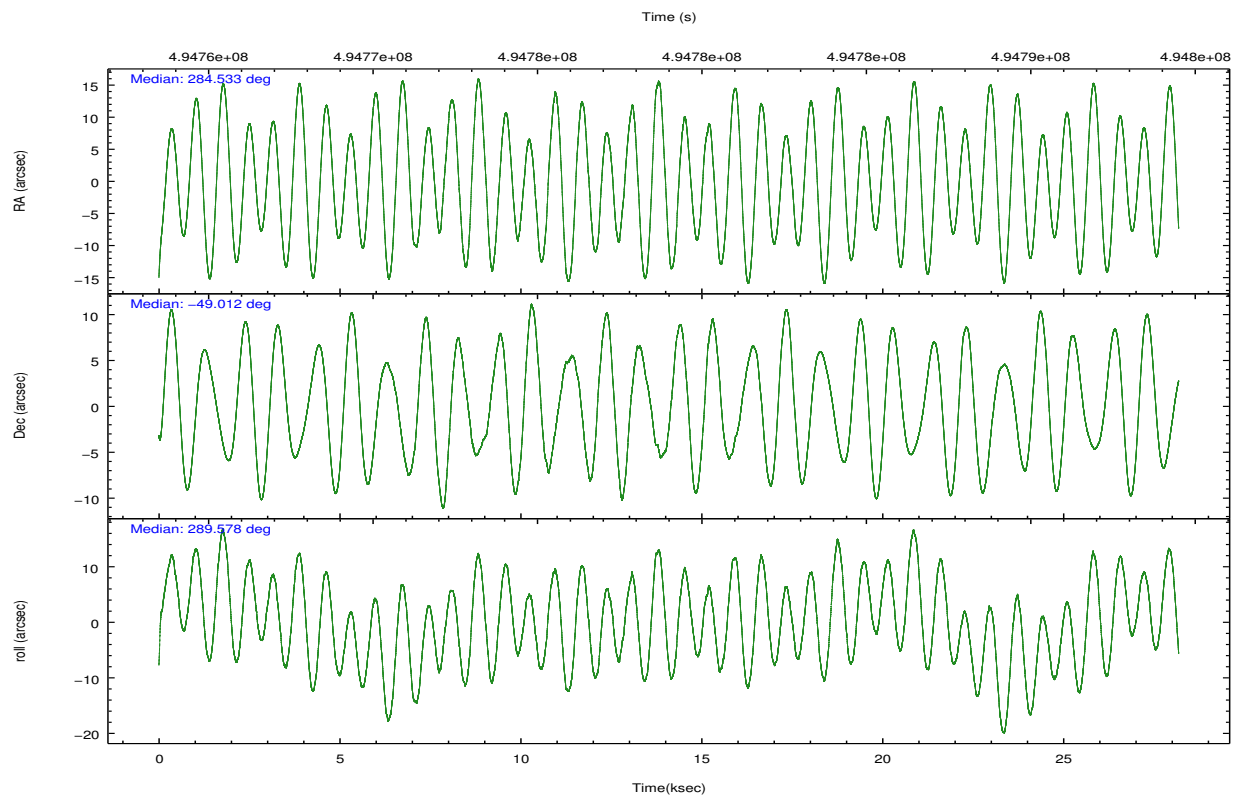
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	125558	124030	227533	126330	176082	166140	grade 0 events	5996	8653	17816	5867	7407	13643
rejected events	109895	106116	114423	110010	97880	120699		4%	6%	7%	4%	4%	8%
rejected %	87%	85%	50%	87%	55%	72%	grade 1 events	73	85	418	73	204	142
								0%	0%	0%	0%	0%	0%
							grade 2 events	3660	3265	33297	3623	15931	11091
								2%	2%	14%	2%	9%	6%
							grade 3 events	1520	1524	3667	1671	6805	4659
								1%	1%	1%	1%	3%	2%
							grade 4 events	1581	1499	3519	1573	6722	4314
								1%	1%	1%	1%	3%	2%
							grade 5 events	5761	6853	16558	6710	18156	9550
								4%	5%	7%	5%	10%	5%
							grade 6 events	2906	2979	54837	3590	41357	11741
								2%	2%	24%	2%	23%	7%
							grade 7 events	104061	99172	97421	103223	79500	111000
								82%	79%	42%	81%	45%	66%

## 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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	284.500741	284.5328400246966	CCD I2 on	O1	Y
[deg] Pointing Dec	-48.994625	-49.01205754774849	CCD I3 on	O2	Y
[deg] Pointing Roll	289.399449	289.580296991862	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O5	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O4	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O3	Y
[s] Observation start time (MET)	494765073.184000	494763899.03779	CCD S5 on	N	N
Observation start date	2013-09-05T10:43:26	2013-09-05T10:24:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	494793073.184000	494793693.22692	On-chip summing requested	N	N
Observation end date	2013-09-05T18:30:06	2013-09-05T18:41:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



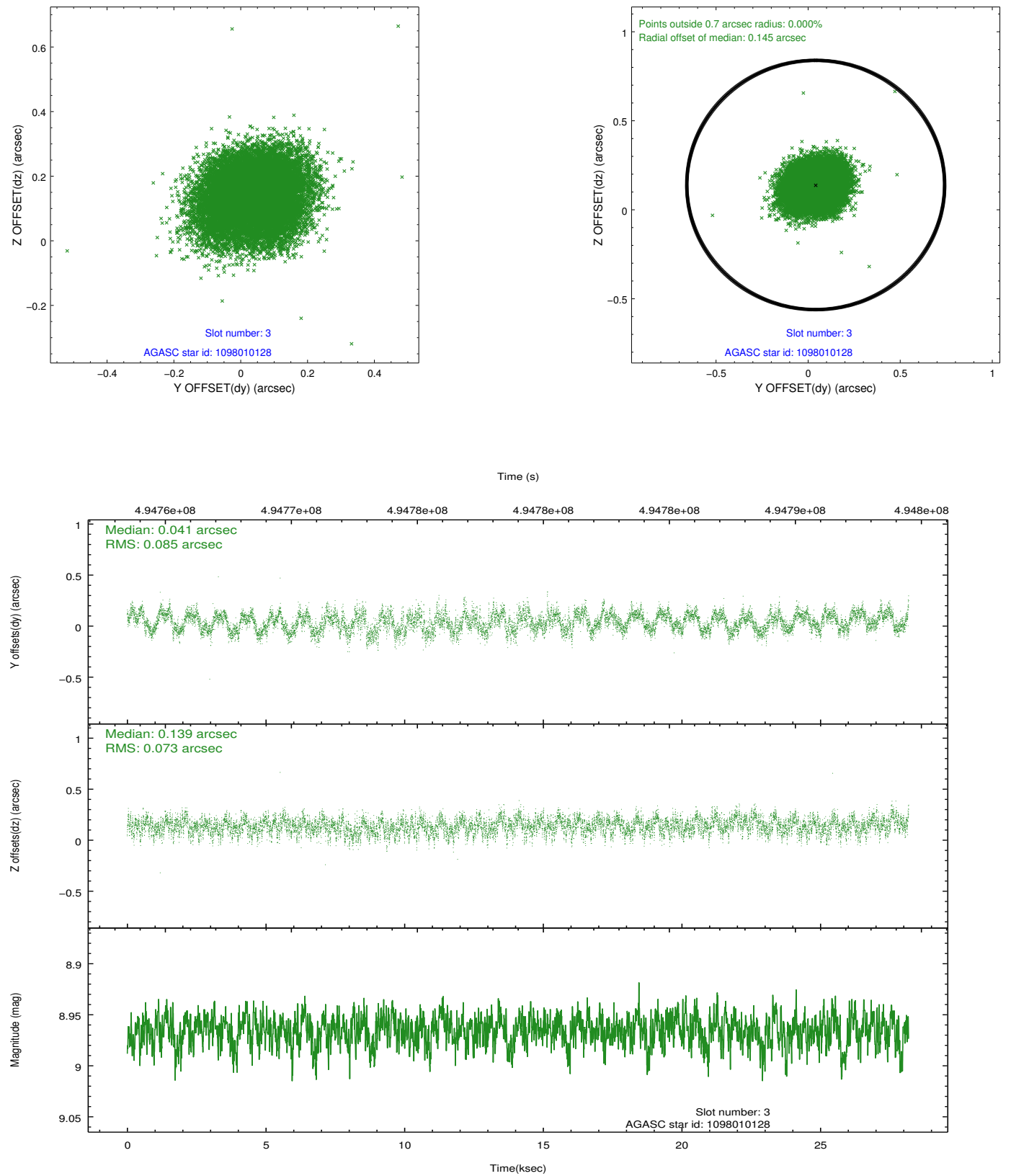


### Slot Statistics

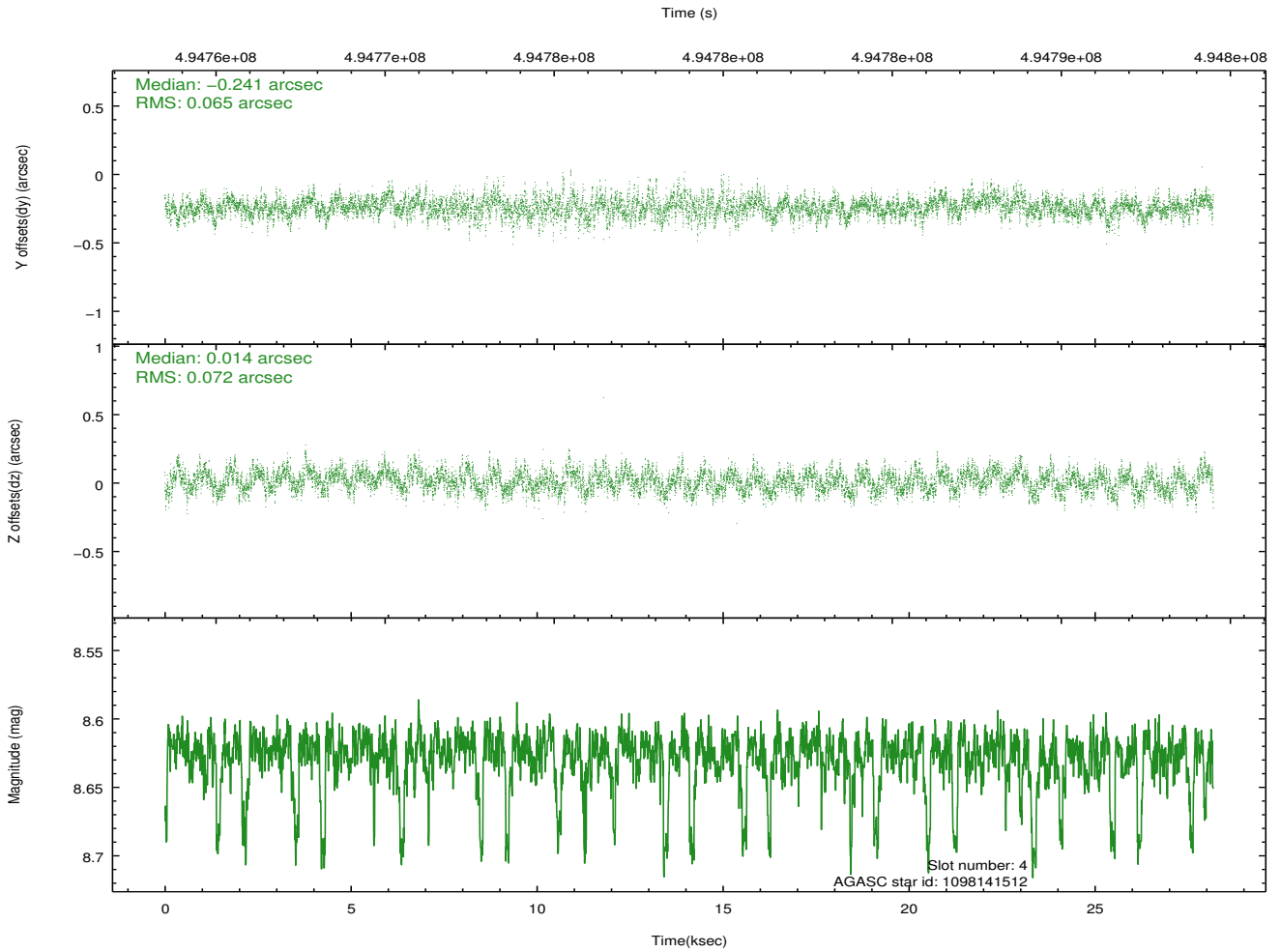
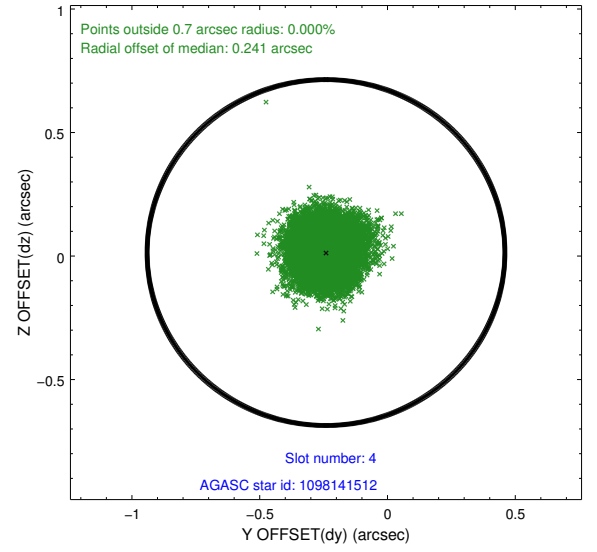
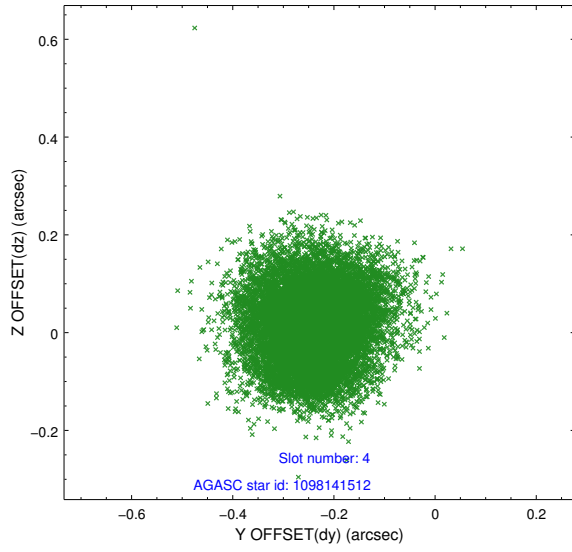
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.01	6874	0.074	-0.036	0.044	0.073	0.000000	0.000000	919.93	-1737.40
1	FID		ACIS-S-5	7.05	6873	-0.187	0.036	0.018	0.028	0.000000	0.000000	-1829.32	160.09
2	FID		ACIS-S-6	7.15	6874	0.082	0.017	0.038	0.051	0.000000	0.000000	385.35	804.19
3	GUIDE	used	1098010128	8.97	13738	0.041	0.139	0.120	0.186	283.791647	-48.706348	-1530.00	-1246.74
4	GUIDE	used	1098141512	8.63	13743	-0.241	0.014	0.103	0.166	285.039949	-48.581542	-971.79	1703.65
5	GUIDE	used	1098650200	6.67	13749	-0.087	-0.001	0.096	0.156	284.133472	-48.992255	-293.45	-816.24
6	GUIDE	used	1098661896	9.09	13734	0.298	0.066	0.098	0.163	284.557426	-49.511404	1799.64	-492.83
7	GUIDE	used	1098662984	8.88	13741	-0.009	-0.207	0.108	0.193	284.816872	-49.503058	1974.61	88.90

## 2.4 Star Slots

### 2.4.1 Slot 3

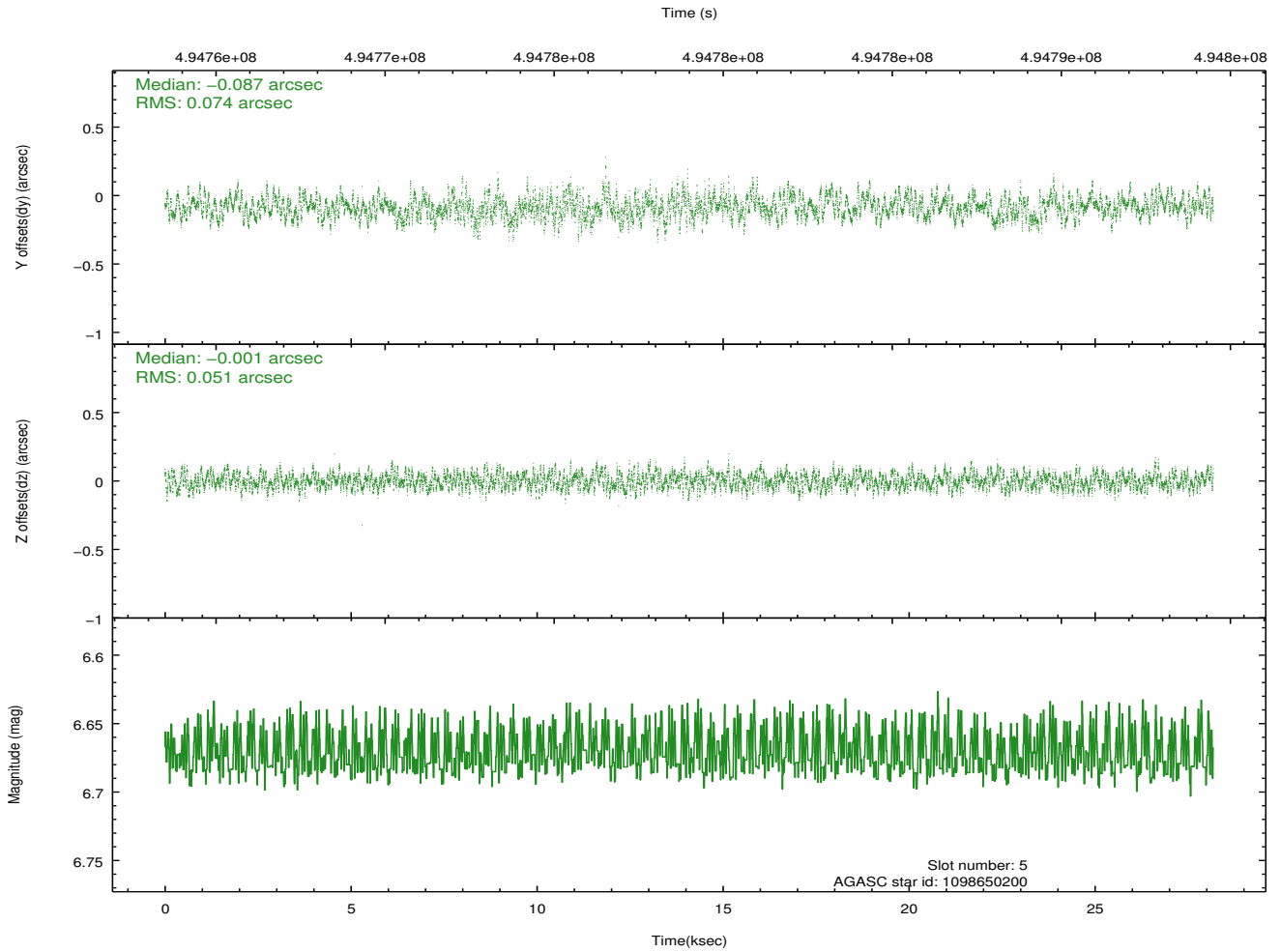
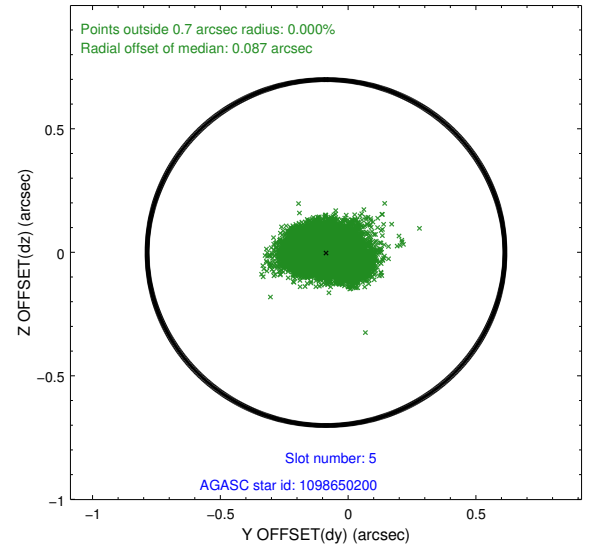
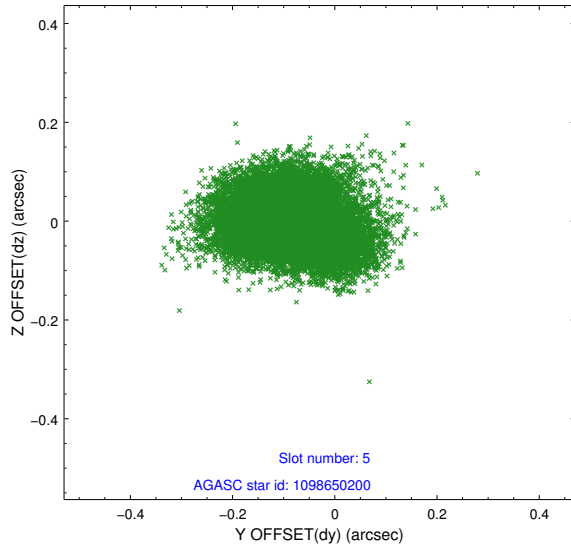


## 2.4.2 Slot 4

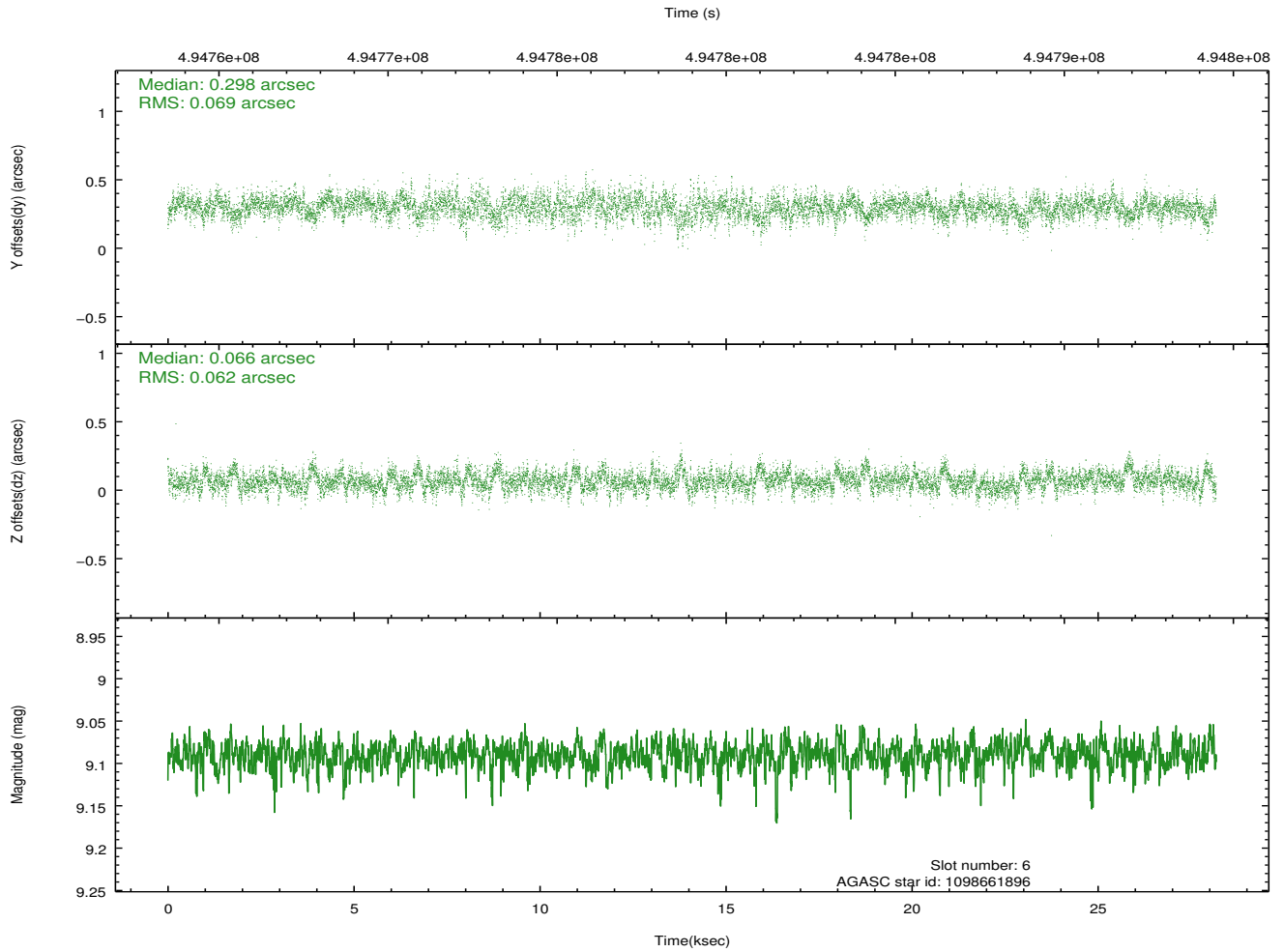
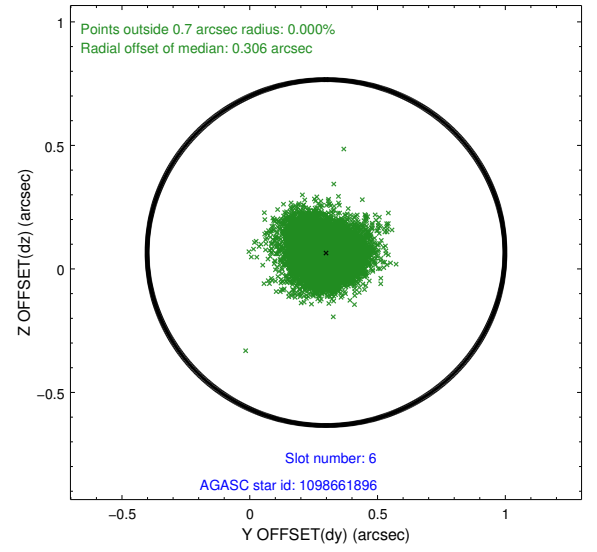
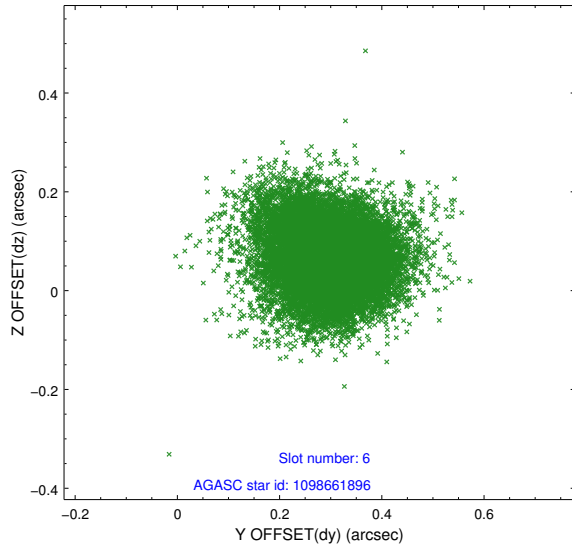




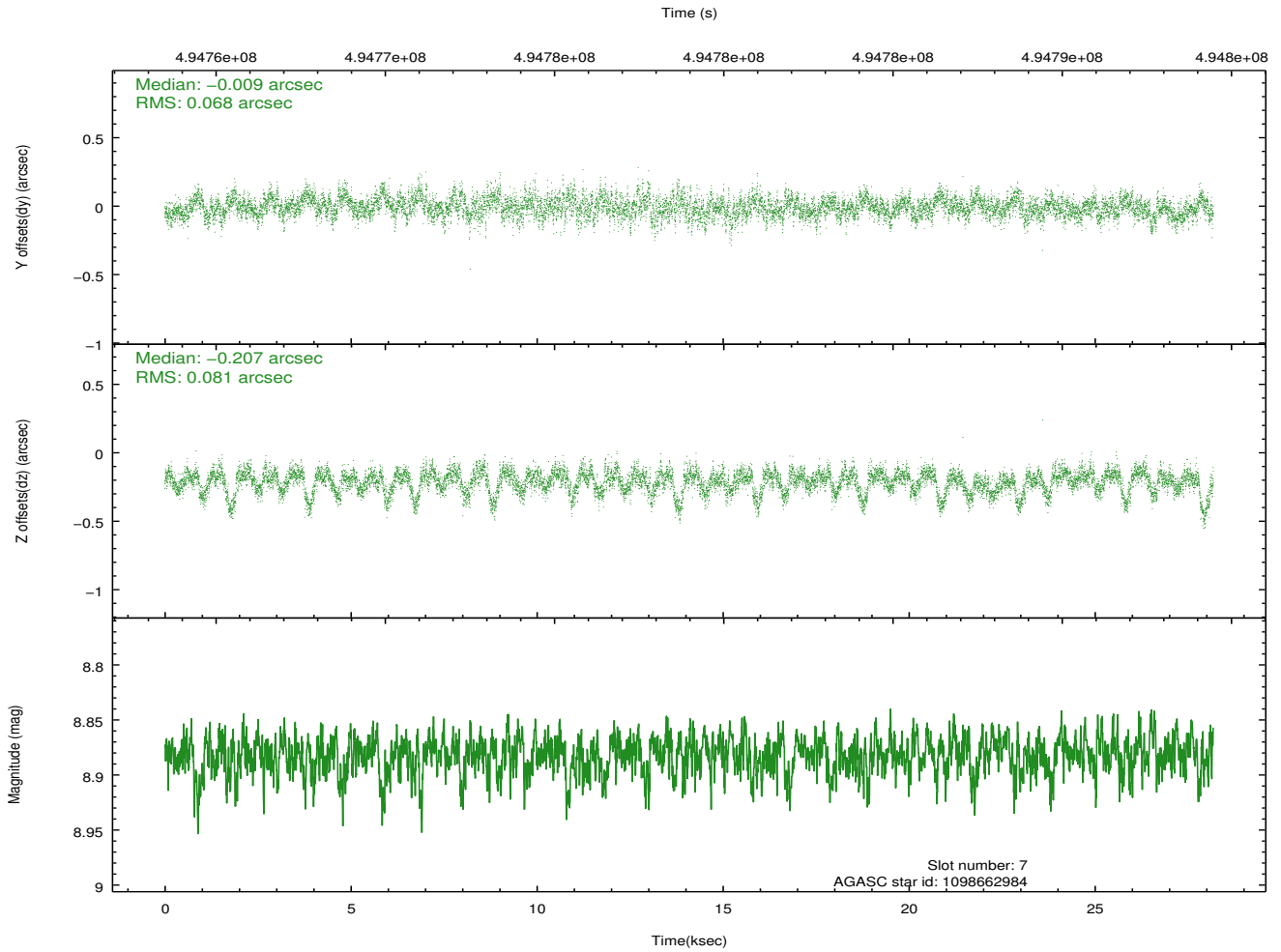
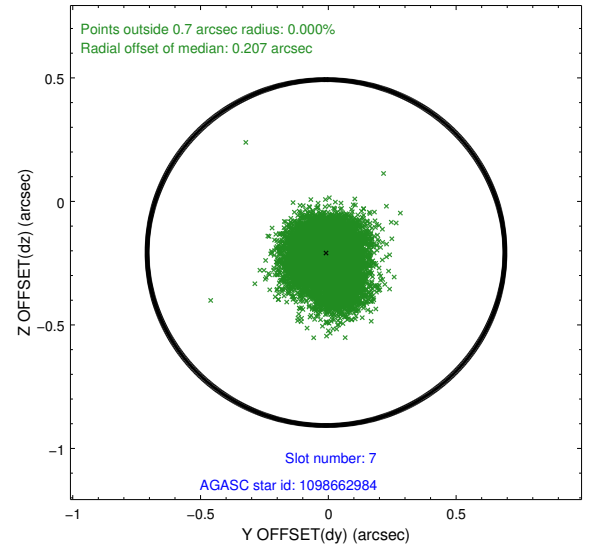
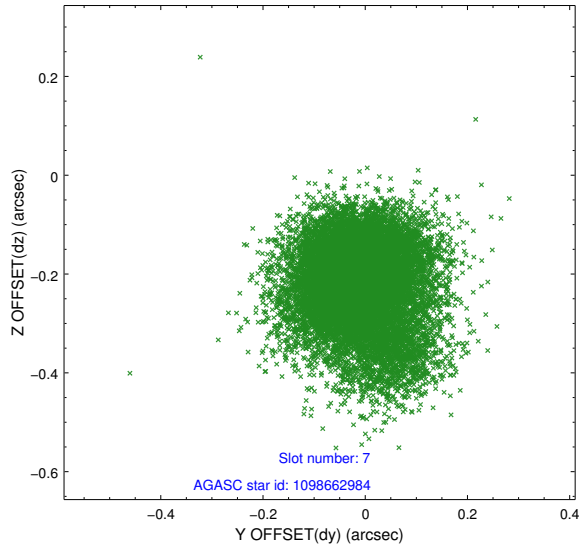
### 2.4.3 Slot 5



## 2.4.4 Slot 6

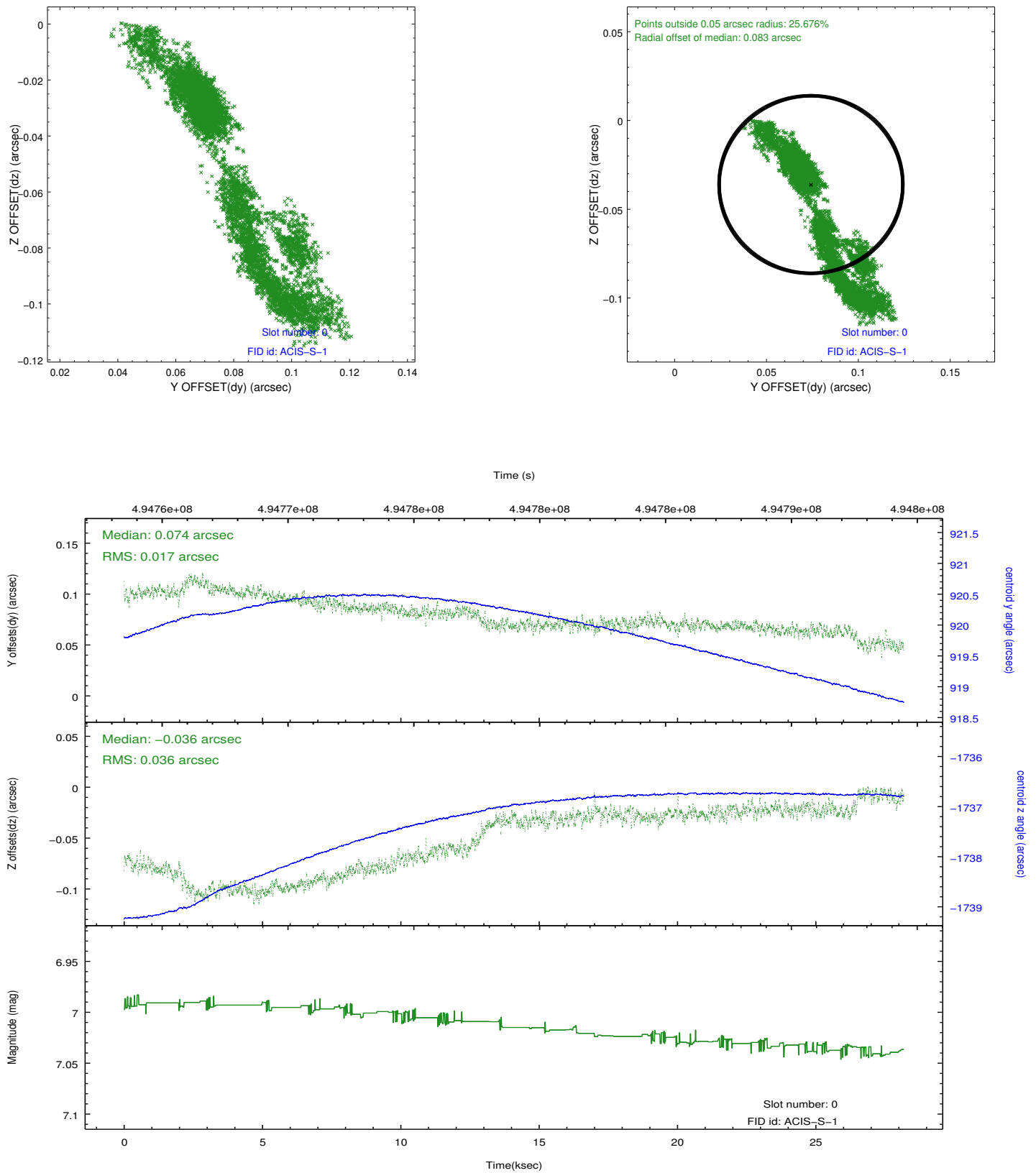


## 2.4.5 Slot 7

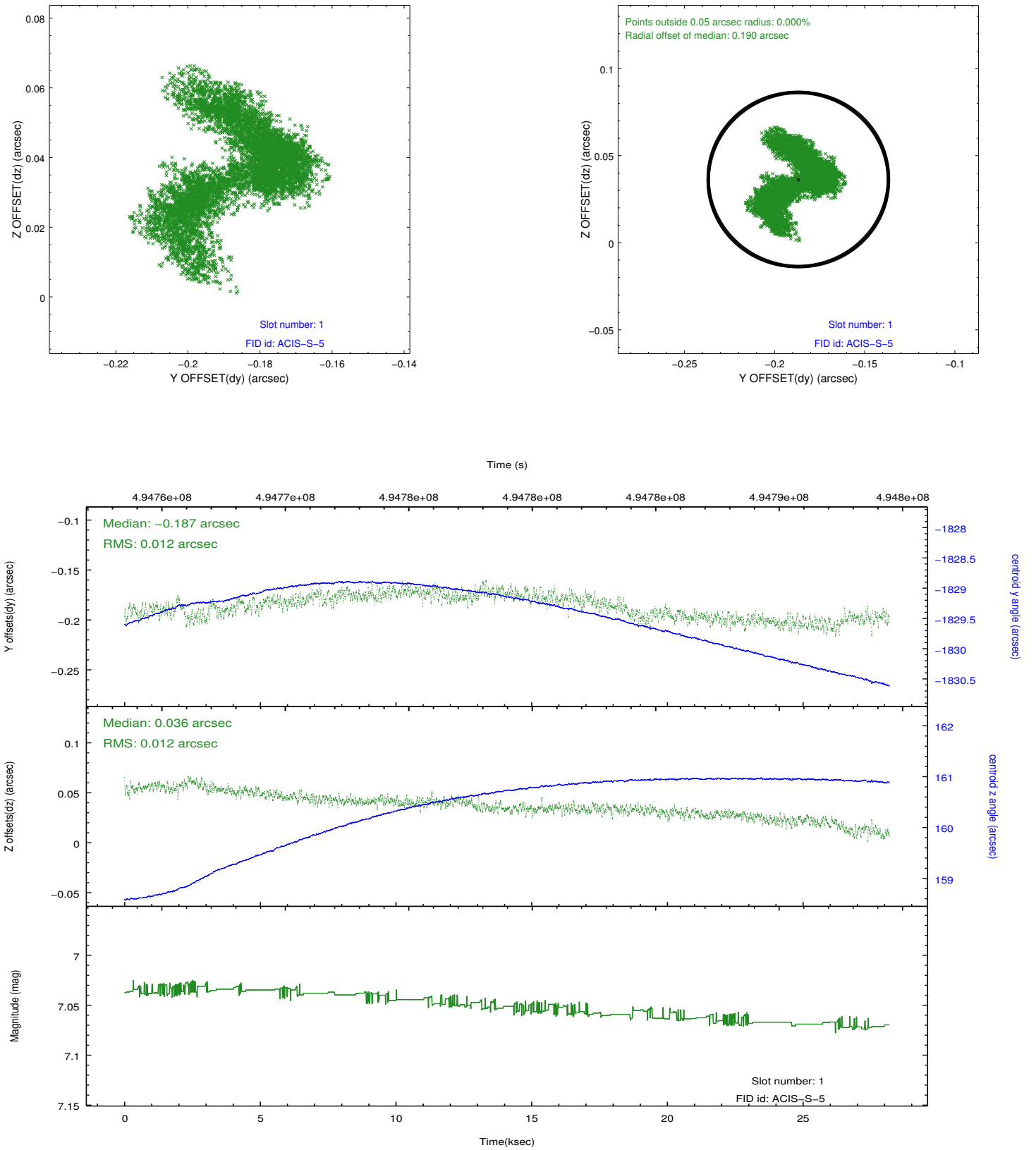


## 2.5 FID Slots

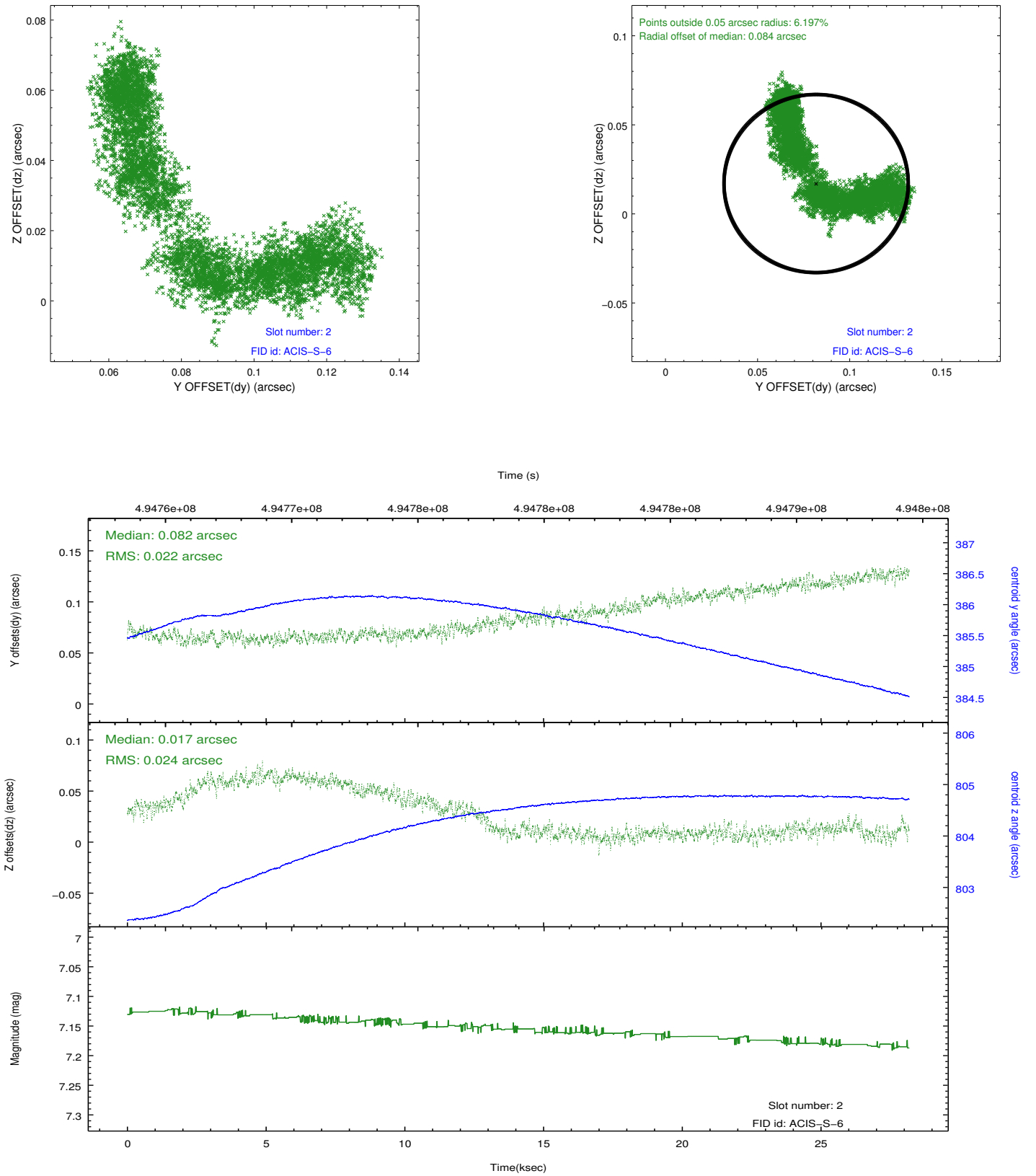
### 2.5.1 Slot 0



## 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)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.964169232249

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.