

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17205 - L2 Version 1  
Chandra X-Ray Center

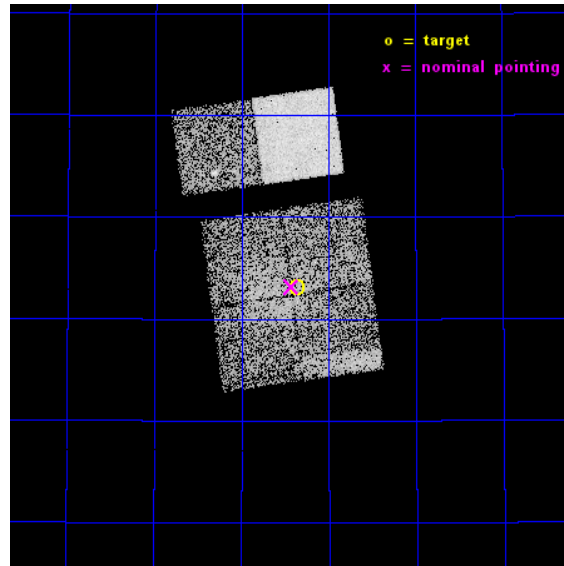
L2 Processing Date : Mar 17 2015

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# 1 Front

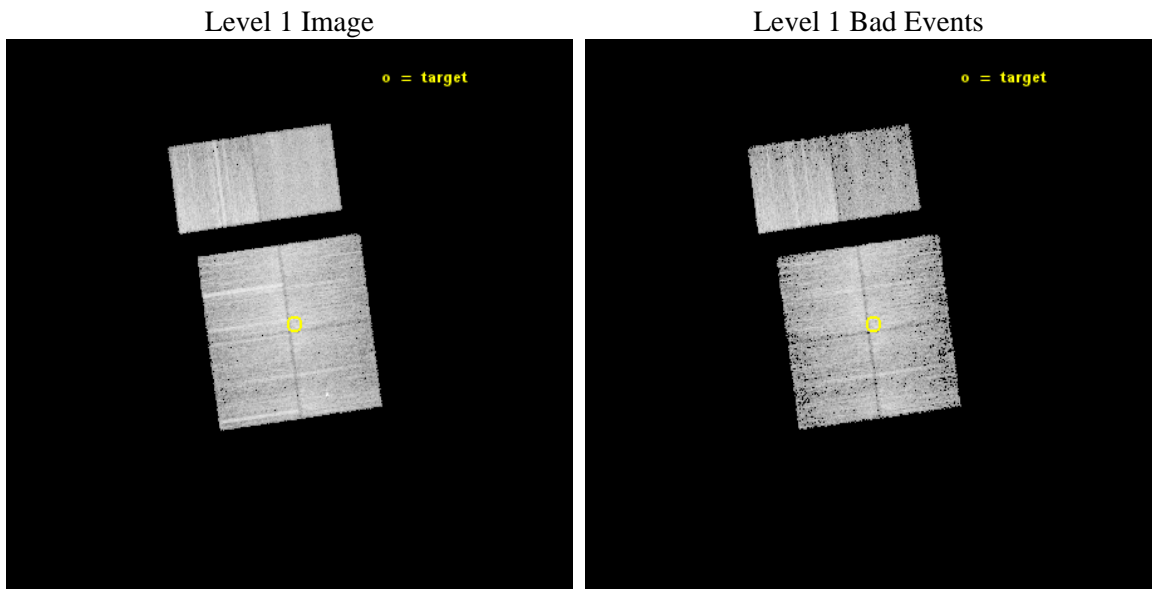
seq_num	801485	Sequence number
obs_id	17205	Observation id
title	Exciting Shock Physics in Faint Galaxy Cluster Outskirts	Proposal
observer	Dr Reinout van Weeren	Principal investigator
object	ZwCl 0008.8+5215 EAST	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	2.84075	Observer's specified target RA [deg]
dec_targ	52.551028	Observer's specified target Dec [deg]
ra_nom	2.8570219577516	Nominal RA [deg]
dec_nom	52.552975462849	Nominal Dec [deg]
roll_nom	352.10585431779	Nominal Roll [deg]
revision	1	Processing version of data
ontime	6447.5603878498	Sum of GTIs [s]
livetime	6365.9174959641	Livetime [s]
ontime0	6447.4372678995	Sum of GTIs [s]
ontime1	6447.4783078432	Sum of GTIs [s]
ontime2	6447.5193479061	Sum of GTIs [s]
ontime3	6447.5603878498	Sum of GTIs [s]
ontime6	6447.6424678564	Sum of GTIs [s]
ontime7	6447.6014279127	Sum of GTIs [s]
l2events	49881	Number of level 2 events



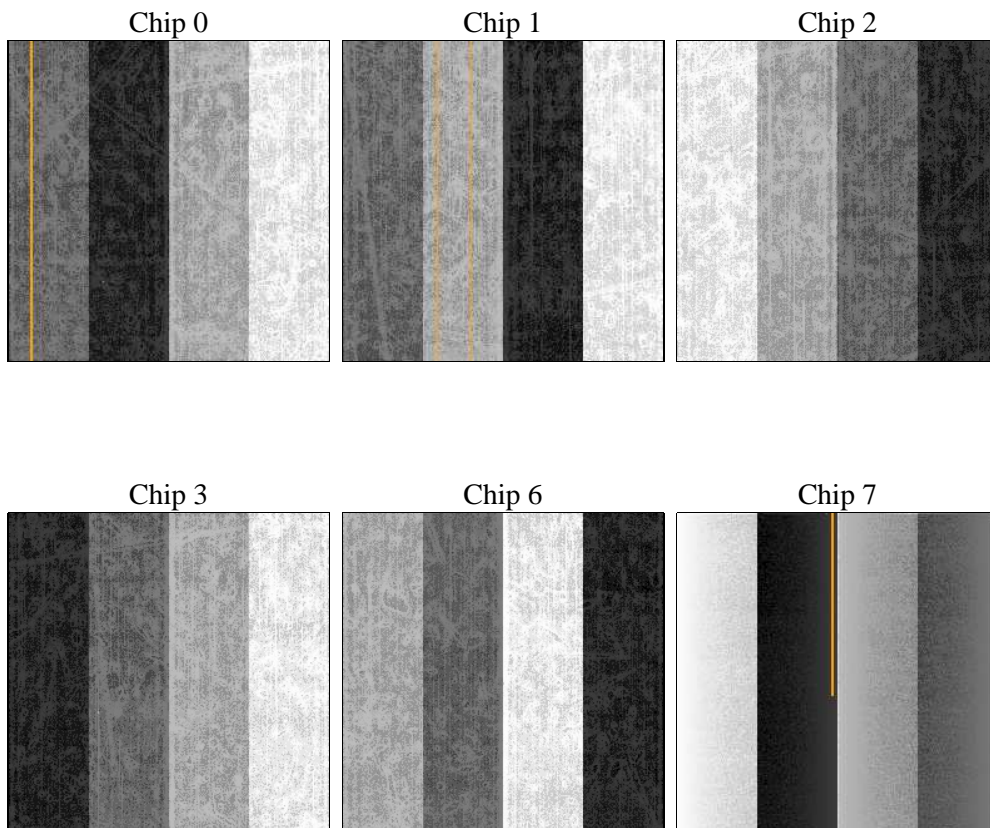
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	6500.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	6447.5603878498	Sum of GTIs [s]
caldsver	4.6.7	&#160	ontime0	6447.4372678995	Sum of GTIs [s]
date	2015-03-17T16:10:03	Date and time of file creation	ontime1	6447.4783078432	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	6447.5193479061	Sum of GTIs [s]
			ontime3	6447.5603878498	Sum of GTIs [s]
			ontime6	6447.6424678564	Sum of GTIs [s]
			ontime7	6447.6014279127	Sum of GTIs [s]
			l1events	345524	Number of level 1 events

### 2.1.4 Events

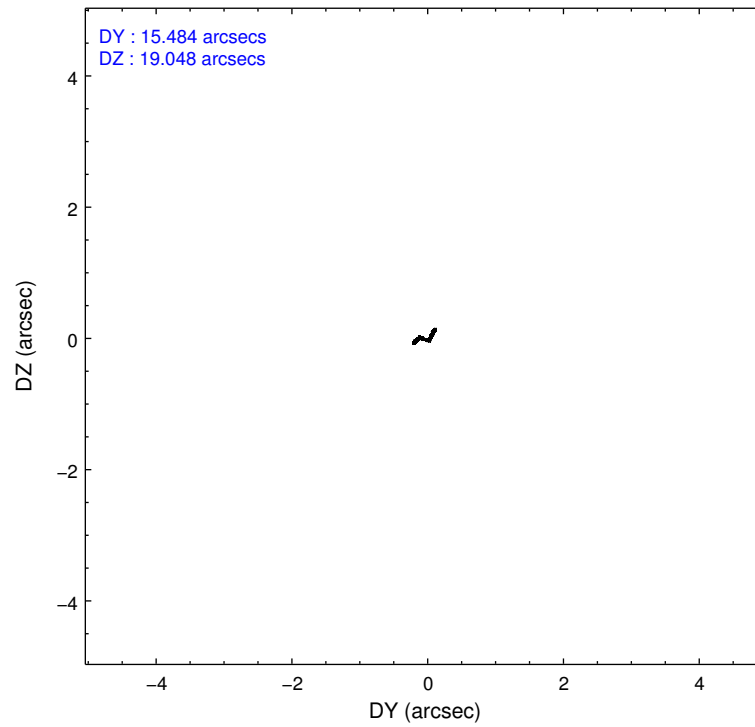
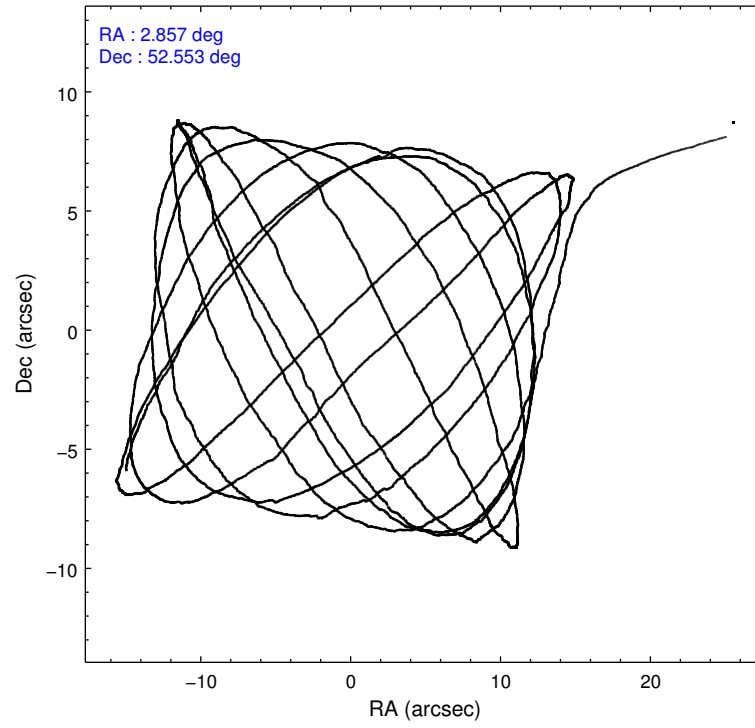
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	47838	48199	69646	56246	67503	56092	grade 0 events	5631	3102	7149	2392	4802	2779
rejected events	37473	41022	56019	51004	58394	30177		11%	6%	10%	4%	7%	4%
rejected %	78%	85%	80%	90%	86%	53%	grade 1 events	65	27	87	19	58	205
								0%	0%	0%	0%	0%	0%
							grade 2 events	3138	2099	3513	1325	2671	7600
								6%	4%	5%	2%	3%	13%
							grade 3 events	418	427	396	408	383	2274
								0%	0%	0%	0%	0%	4%
							grade 4 events	411	425	1442	416	421	2356
								0%	0%	2%	0%	0%	4%
							grade 5 events	1328	1407	1351	1502	1538	5027
								2%	2%	1%	2%	2%	8%
							grade 6 events	775	1130	1143	705	836	10937
								1%	2%	1%	1%	1%	19%
							grade 7 events	36072	39582	54565	49479	56794	24914
								75%	82%	78%	87%	84%	44%

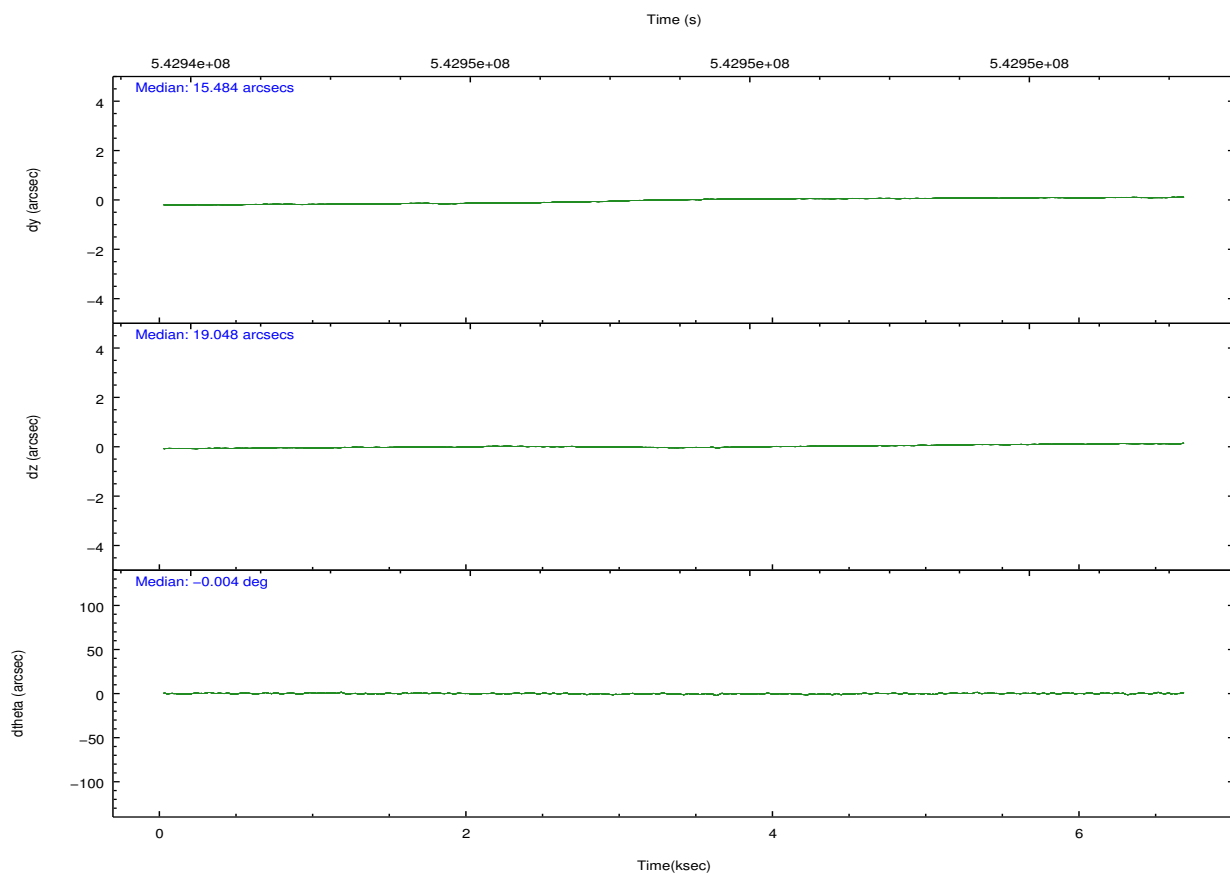
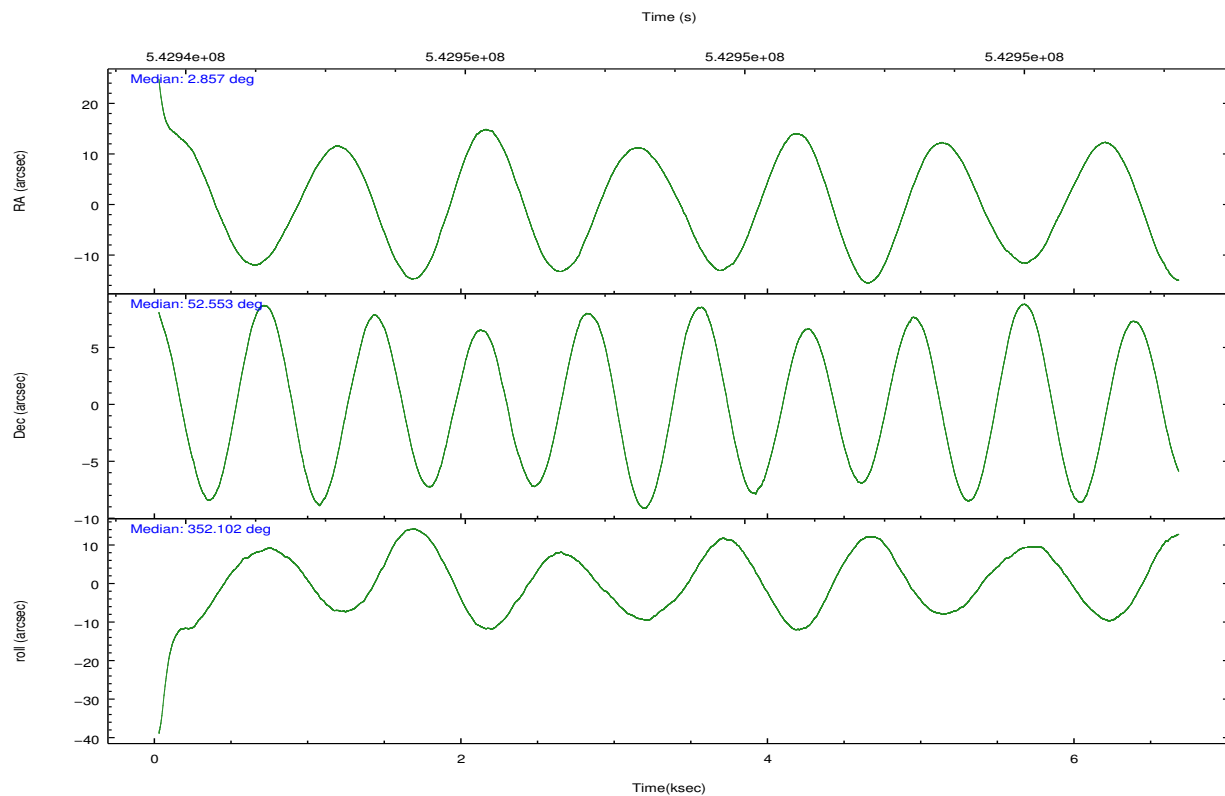


## 2.2 Compared Parameters

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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	2.814944	2.857021957751584	CCD I2 on	Y	Y
[deg] Pointing Dec	52.542483	52.552975462849	CCD I3 on	Y	Y
[deg] Pointing Roll	351.930610	352.105854317795	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	542944311.184000	542942939.68931	CCD S5 on	N	N
Observation start date	2015-03-17T01:50:44	2015-03-17T01:28:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	542950811.184000	542951215.02727	On-chip summing requested	N	N
Observation end date	2015-03-17T03:39:04	2015-03-17T03:46:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



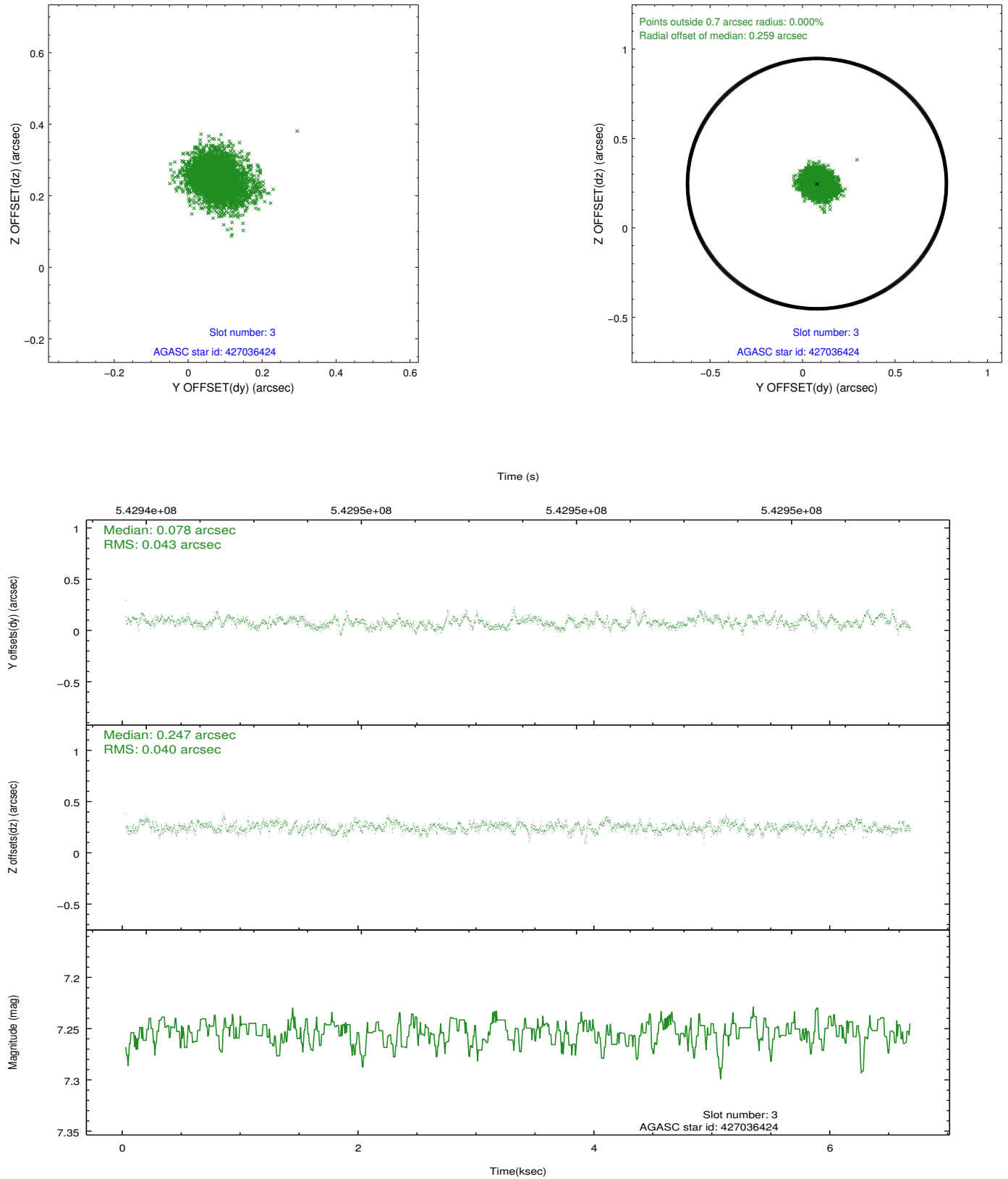


### Slot Statistics

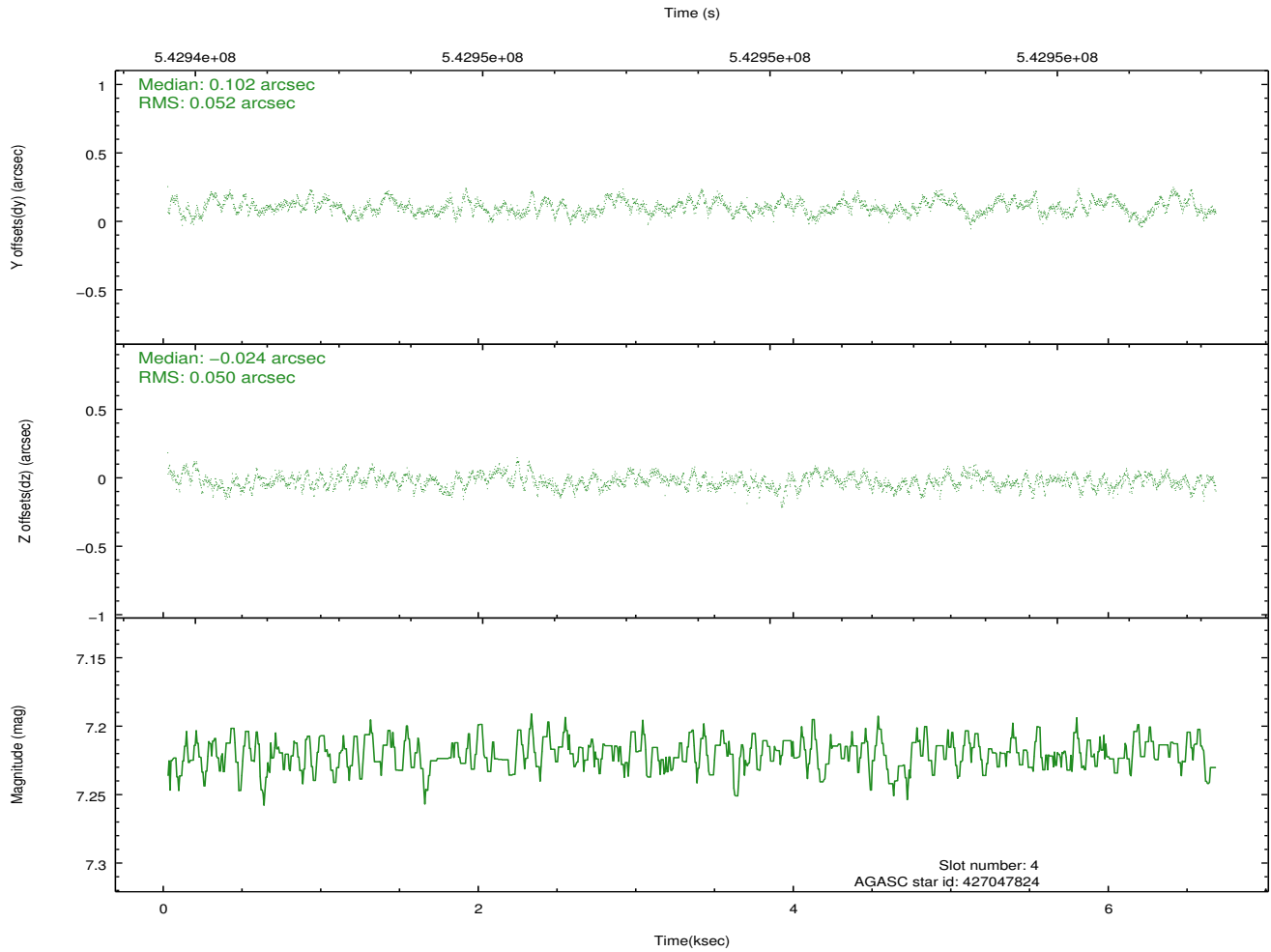
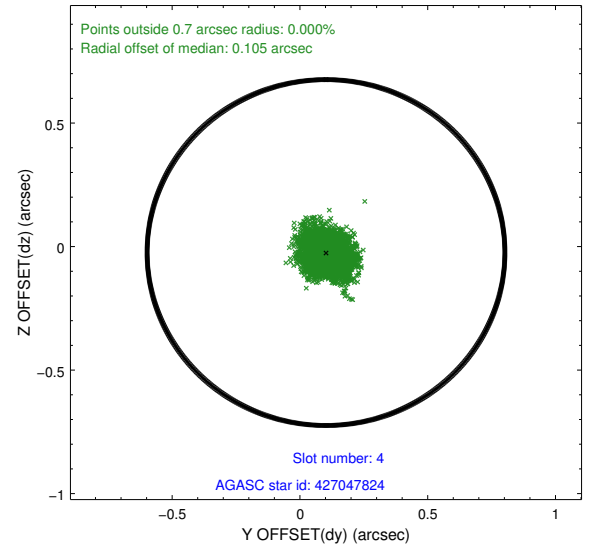
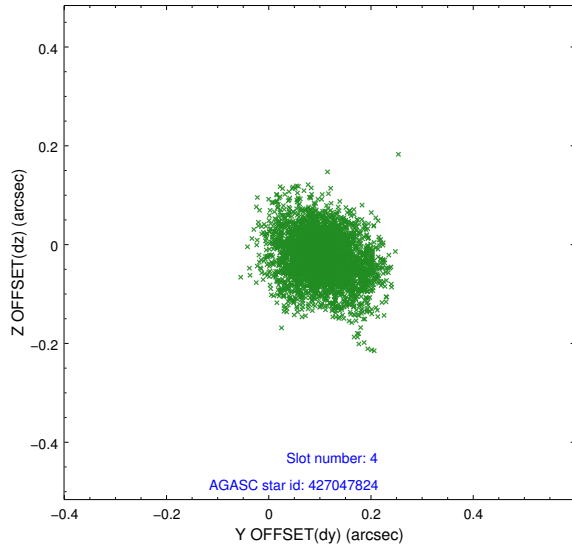
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	1623	0.045	0.036	0.006	0.011	0.000000	0.000000	924.06	-842.71
1	FID		ACIS-I-5	7.08	1623	-0.259	0.047	0.006	0.011	0.000000	0.000000	-1823.92	1054.27
2	FID		ACIS-I-6	7.08	1623	0.124	-0.013	0.007	0.012	0.000000	0.000000	388.66	1699.77
3	GUIDE	used	427036424	7.25	3247	0.078	0.247	0.062	0.100	2.620815	51.912344	-108.32	-2305.81
4	GUIDE	used	427047824	7.22	3247	0.102	-0.024	0.077	0.122	2.434338	52.028309	-574.66	-1949.50
5	GUIDE	used	478817384	8.24	3247	-0.334	-0.115	0.075	0.118	3.580009	52.860975	1483.61	1377.01
6	GUIDE	used	478818512	8.15	3246	0.049	-0.165	0.105	0.166	3.766666	52.639607	2007.93	652.25
7	GUIDE	used	478686592	8.77	3244	0.096	0.059	0.093	0.165	1.932115	53.105725	-2174.82	1751.74

## 2.4 Star Slots

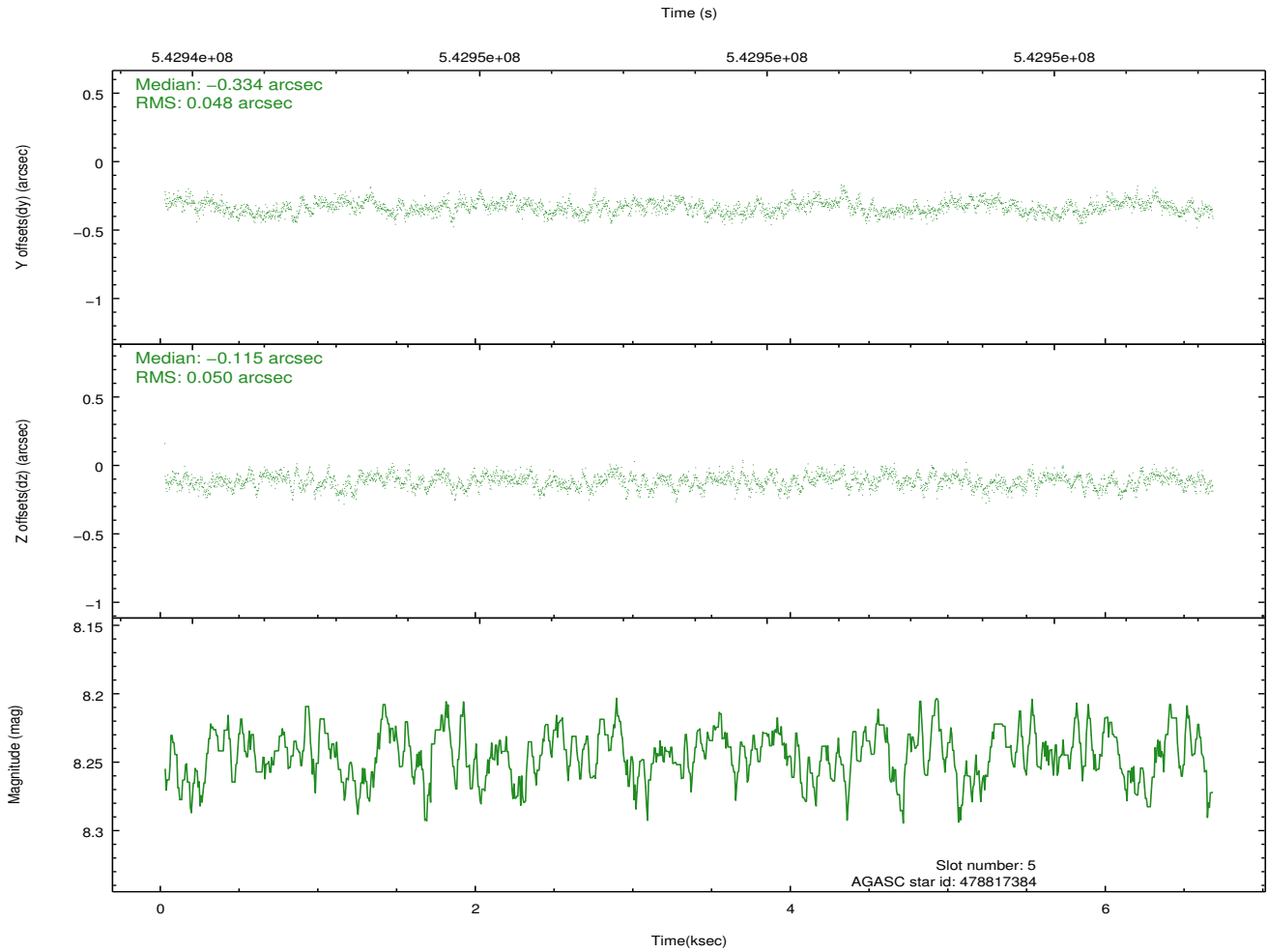
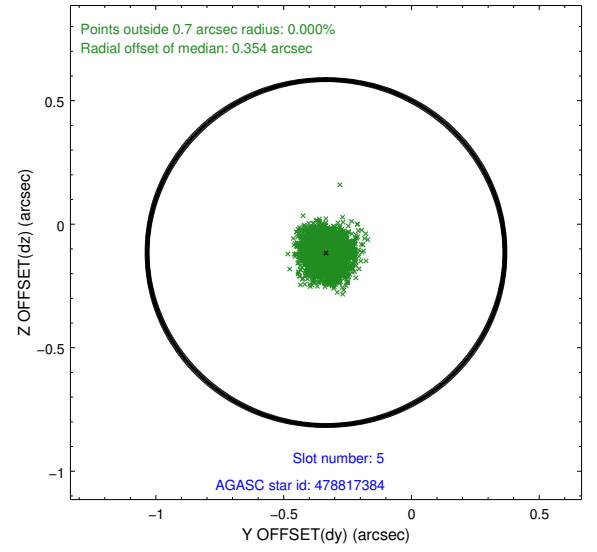
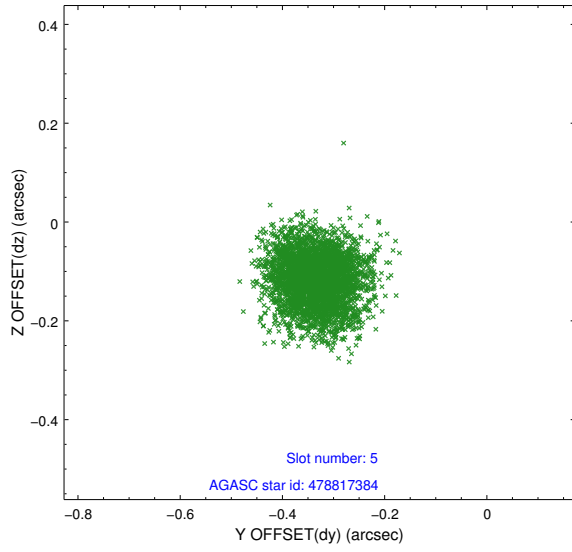
### 2.4.1 Slot 3



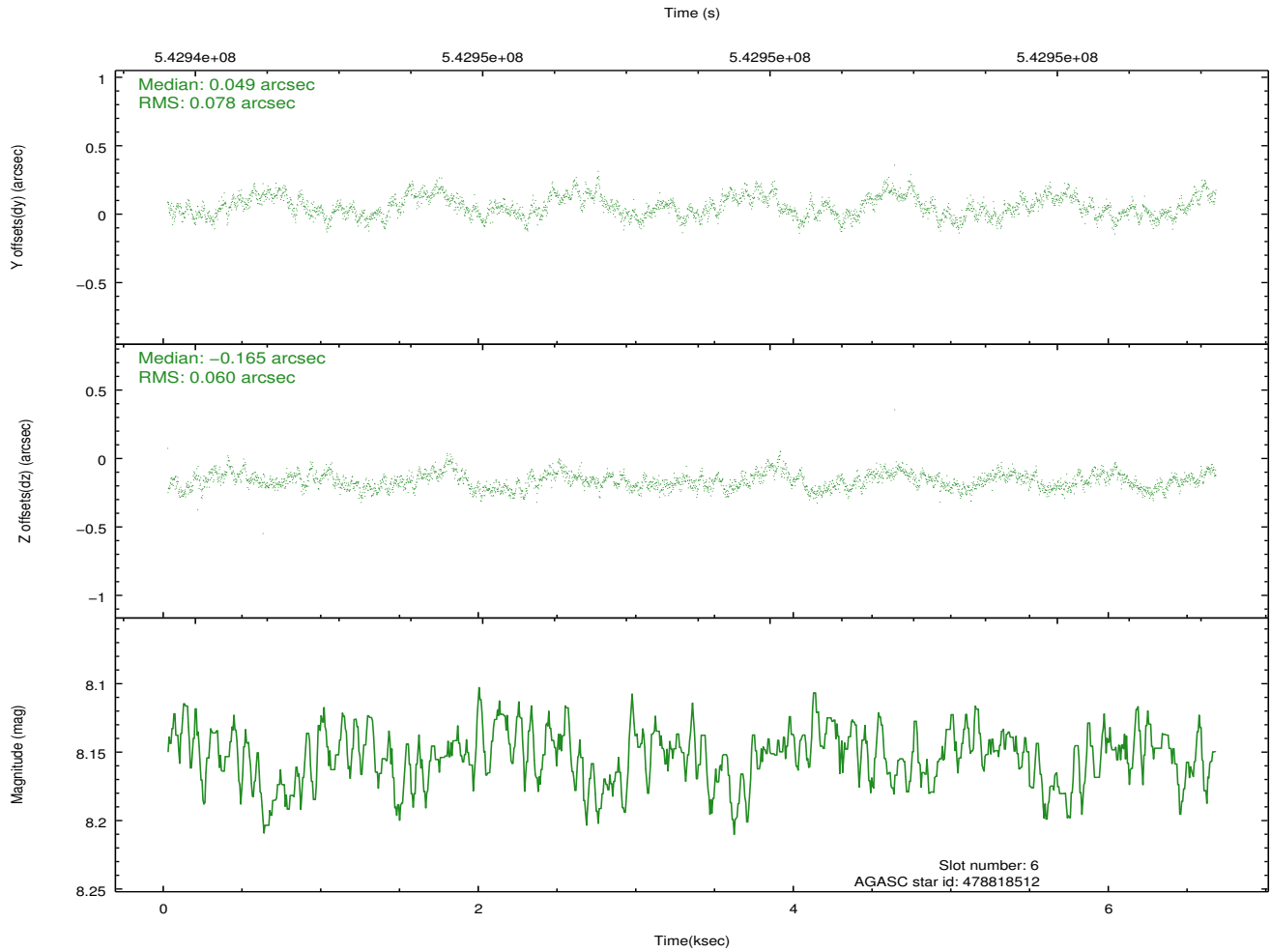
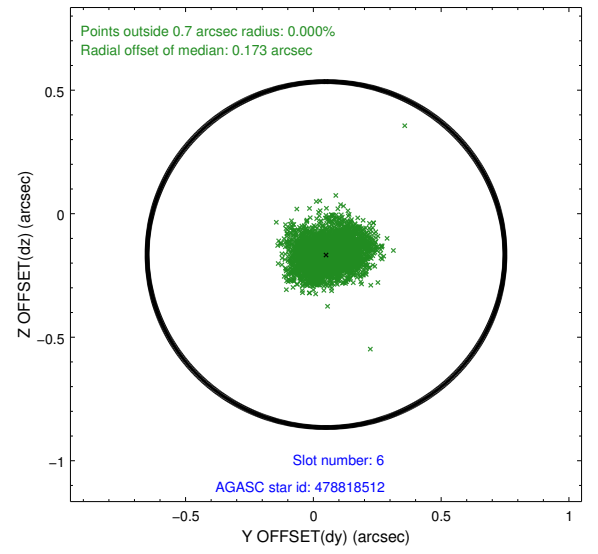
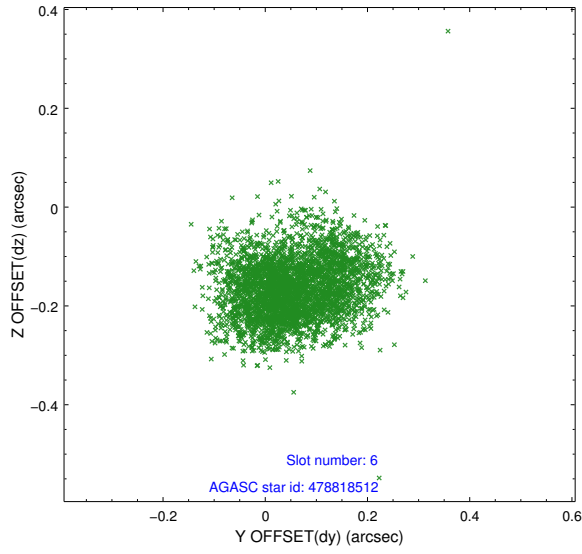
## 2.4.2 Slot 4



### 2.4.3 Slot 5

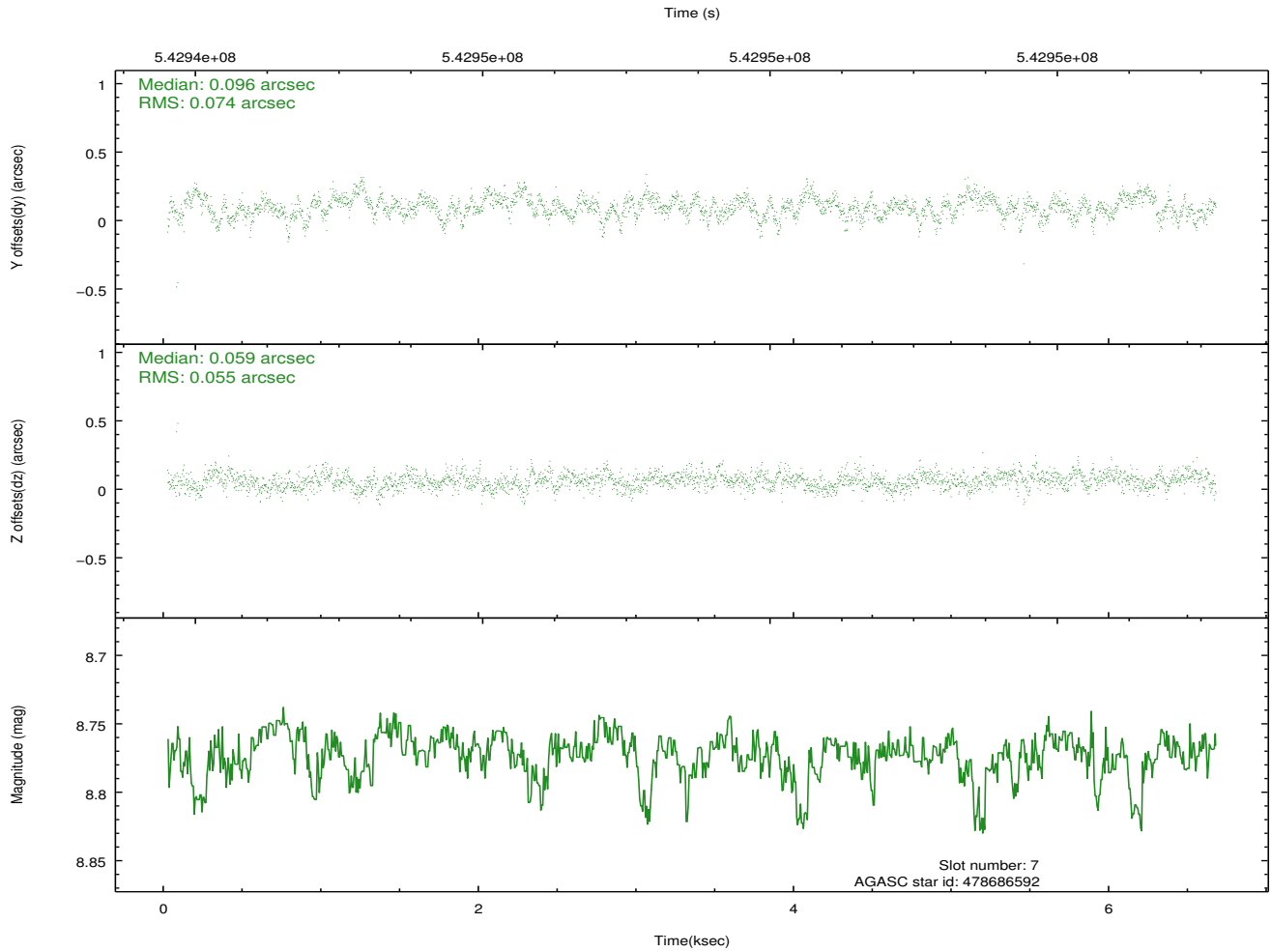
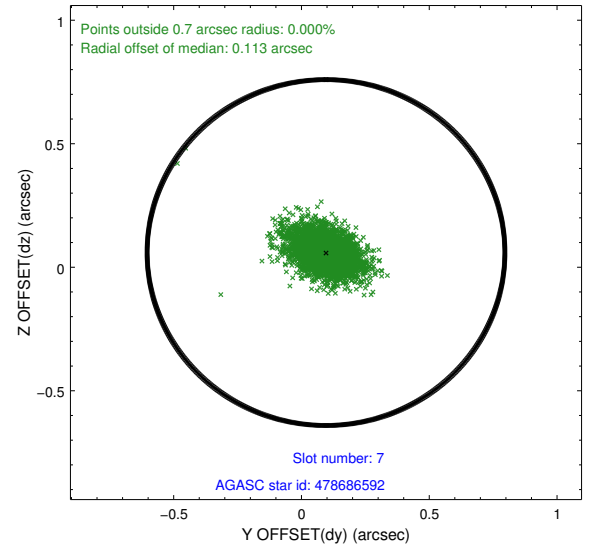
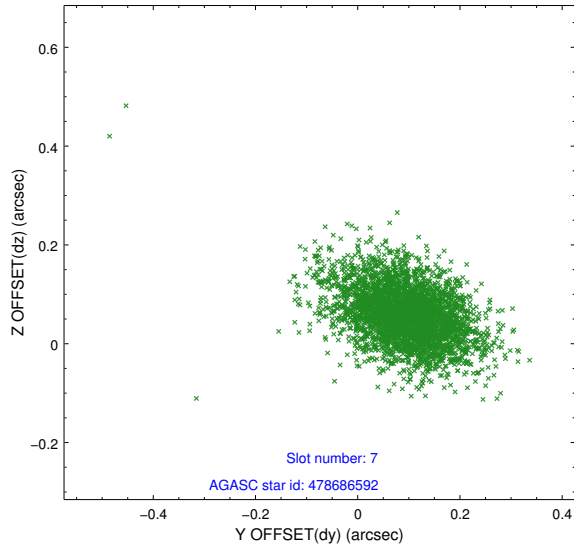


## 2.4.4 Slot 6



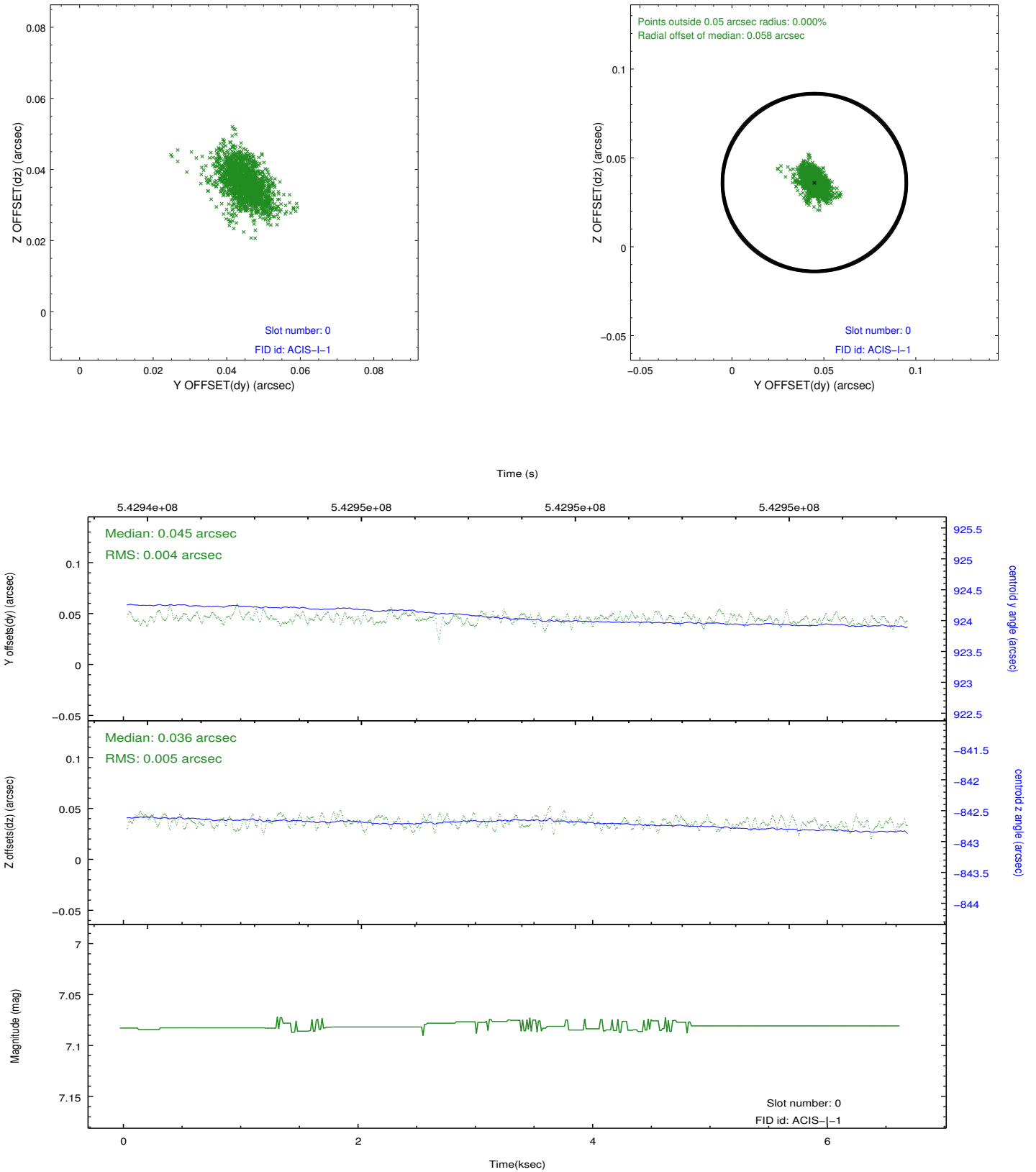


## 2.4.5 Slot 7

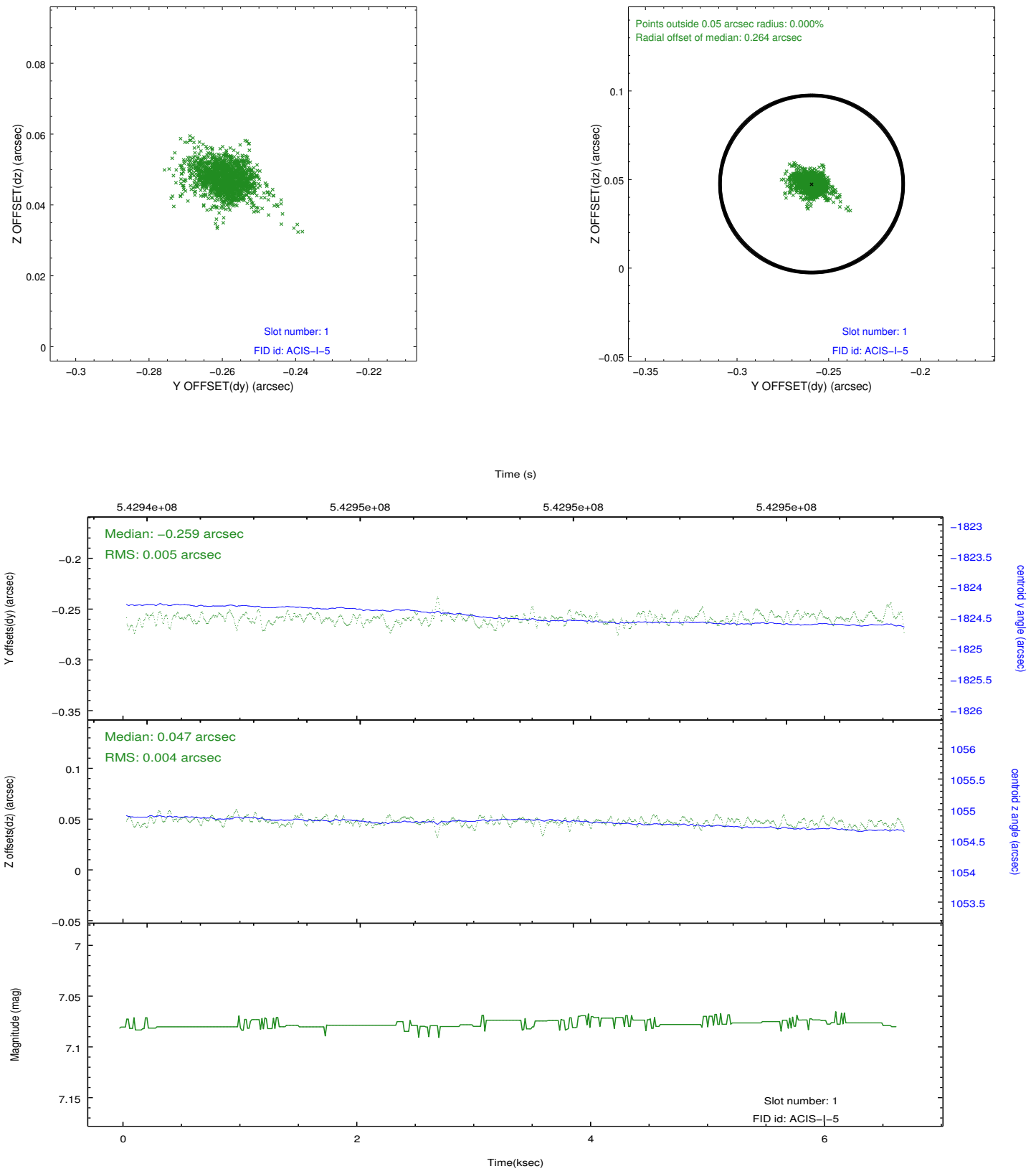


## 2.5 FID Slots

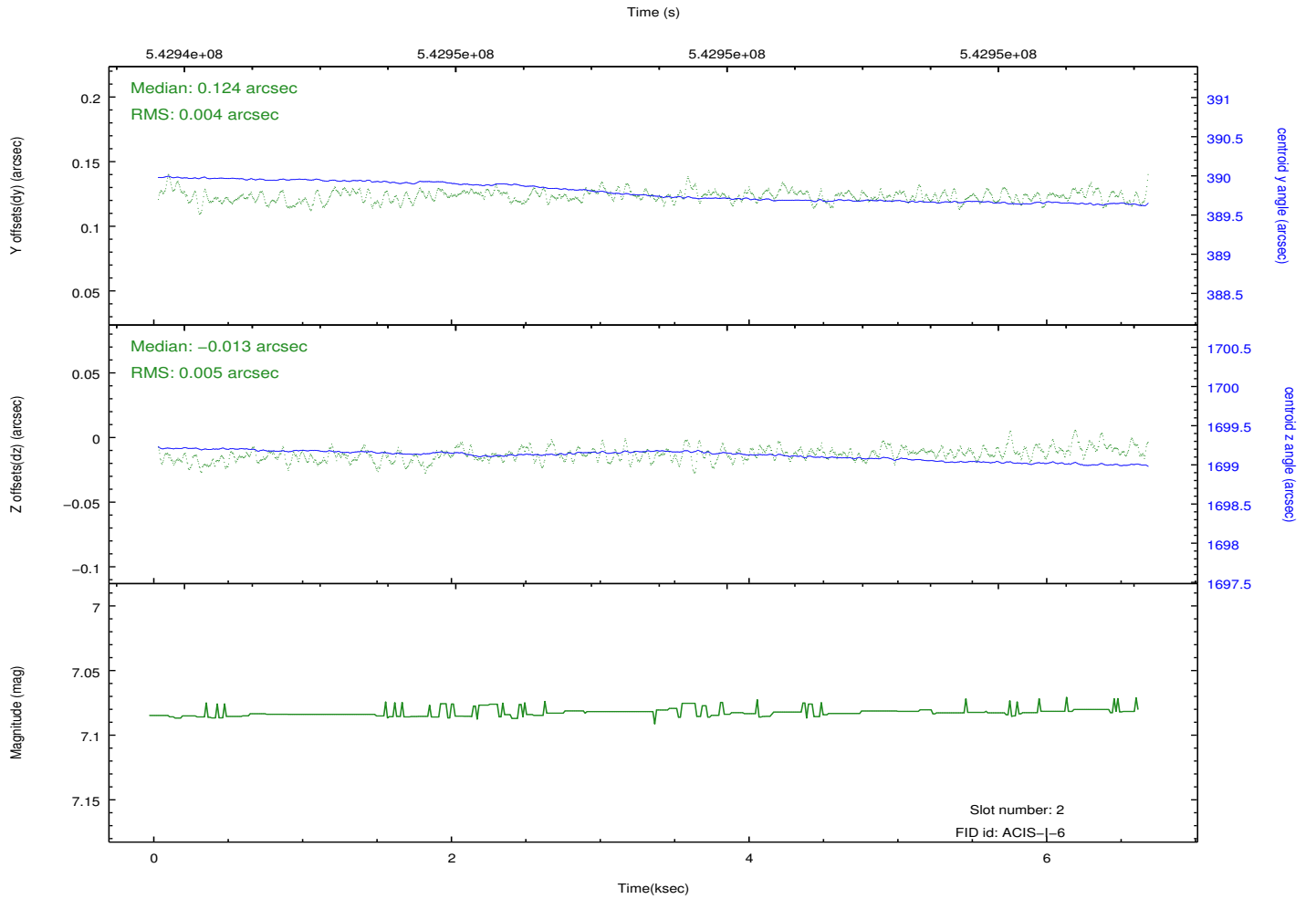
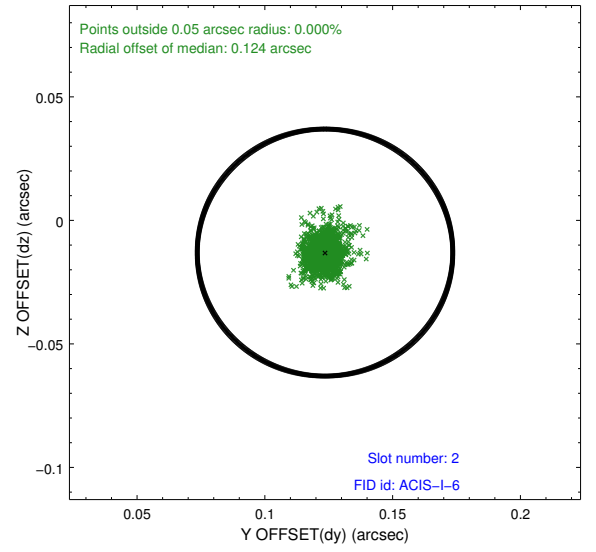
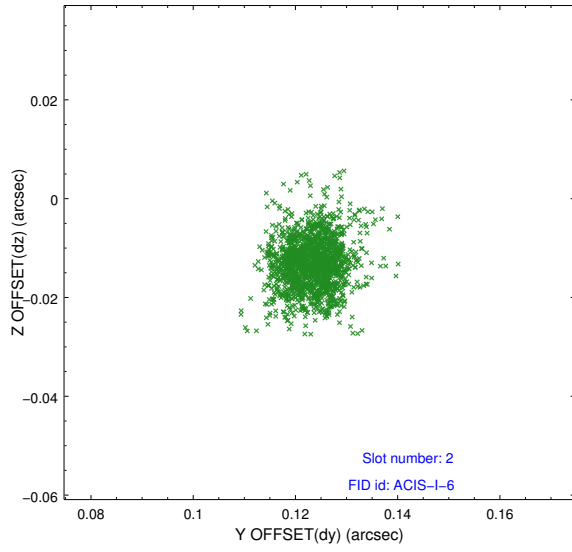
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2015.03.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.4475603878498

## A.2 Comments

Note: Node 3 of CCD 1 is high and shows as a bright band in the field image. This is a normal occurrence and is not a problem. See 'Miscellaneous' Item #5 in the ACIS data caveats at [http://cxc.harvard.edu/ciao/caveats/acis\\_caveats\\_20111212.html](http://cxc.harvard.edu/ciao/caveats/acis_caveats_20111212.html) (the high events all have ENERGY >8000 eV).