

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 17704 - L2 Version 1  
Chandra X-Ray Center

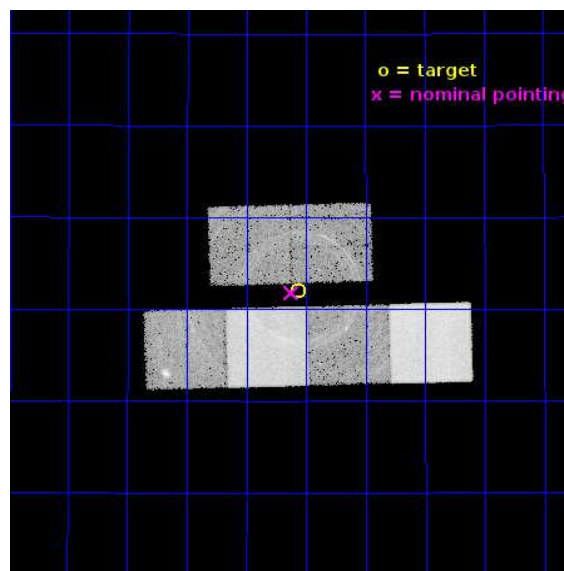
L2 Processing Date : Jul 27 2015

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# 1 Front

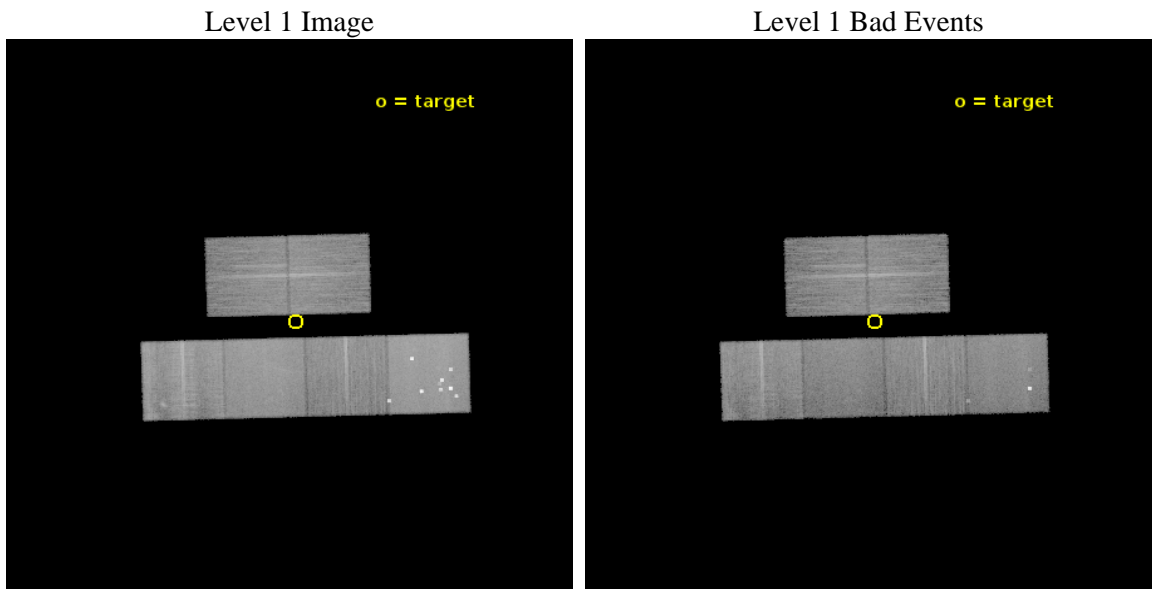
seq_num	401698	Sequence number
obs_id	17704	Observation id
title	Light Echoes from V404 Cyg	Proposal title
observer	Sebastian Heinz	Principal investigator
object	V404 Cyg	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	306.015833	Observer's specified target RA [deg]
dec_targ	33.867278	Observer's specified target Dec [deg]
ra_nom	306.03070277901	Nominal RA [deg]
dec_nom	33.86347914874	Nominal Dec [deg]
roll_nom	178.43532875624	Nominal Roll [deg]
revision	1	Processing version of data
ontime	28752.000428438	Sum of GTIs [s]
livetime	28387.925286637	Livetime [s]
ontime2	28752.000428438	Sum of GTIs [s]
ontime3	28752.000428438	Sum of GTIs [s]
ontime5	28752.000428438	Sum of GTIs [s]
ontime6	28752.000428438	Sum of GTIs [s]
ontime7	28752.000428438	Sum of GTIs [s]
ontime8	28742.277346611	Sum of GTIs [s]
l2events	278748	Number of level 2 events



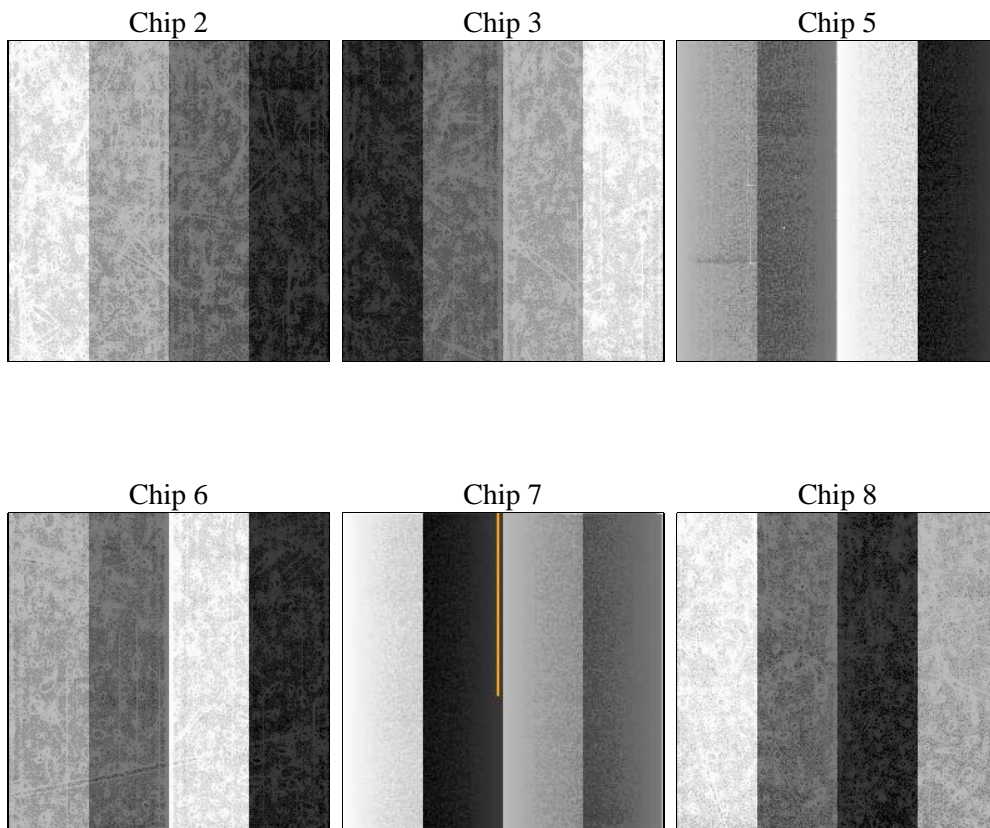
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.1	Processing system revision	ontime	28752.000428438	Sum of GTIs [s]
caldbver	4.6.8	&#160	ontime2	28752.000428438	Sum of GTIs [s]
date	2015-07-27T11:24:32	Date and time of file creation	ontime3	28752.000428438	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	28752.000428438	Sum of GTIs [s]
			ontime6	28752.000428438	Sum of GTIs [s]
			ontime7	28752.000428438	Sum of GTIs [s]
			ontime8	28742.277346611	Sum of GTIs [s]
			l1events	1181224	Number of level 1 events

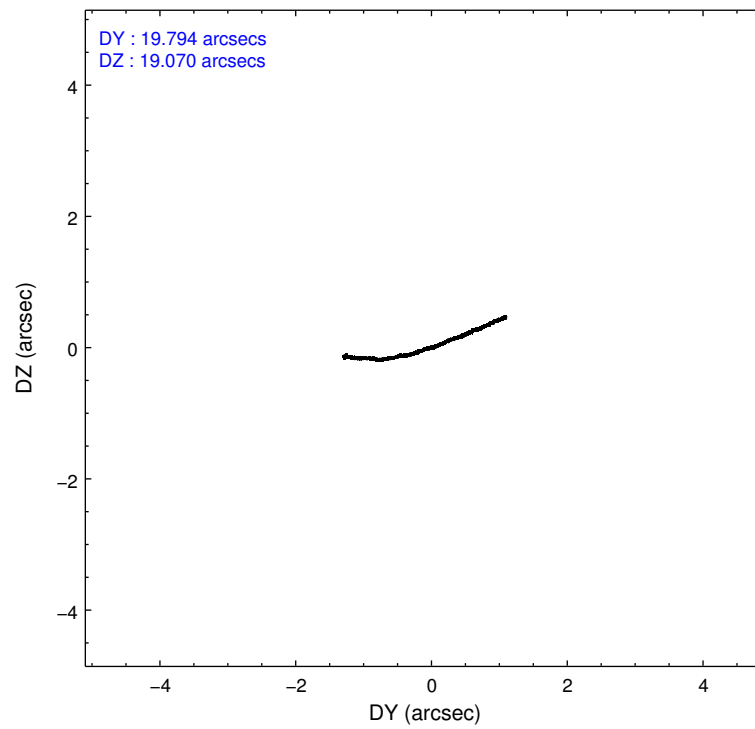
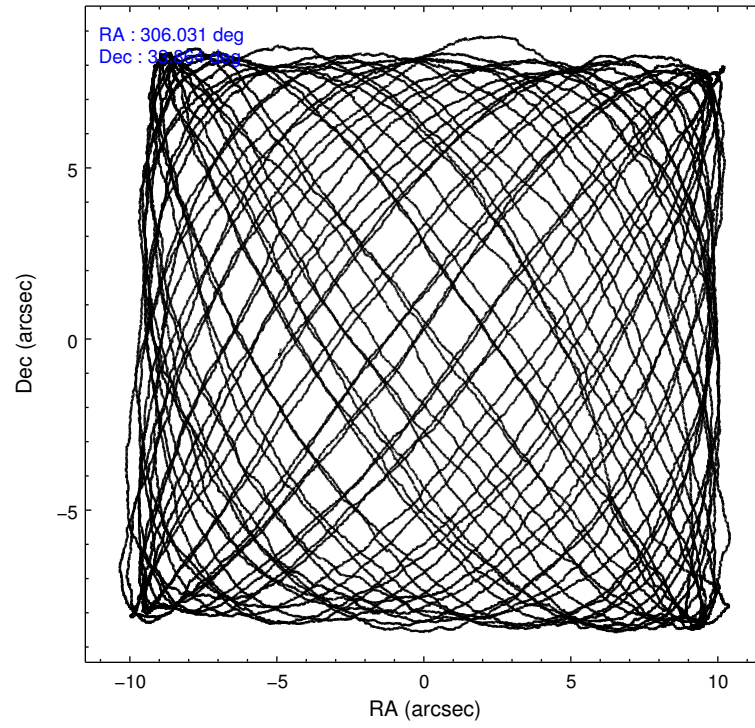
### 2.1.4 Events

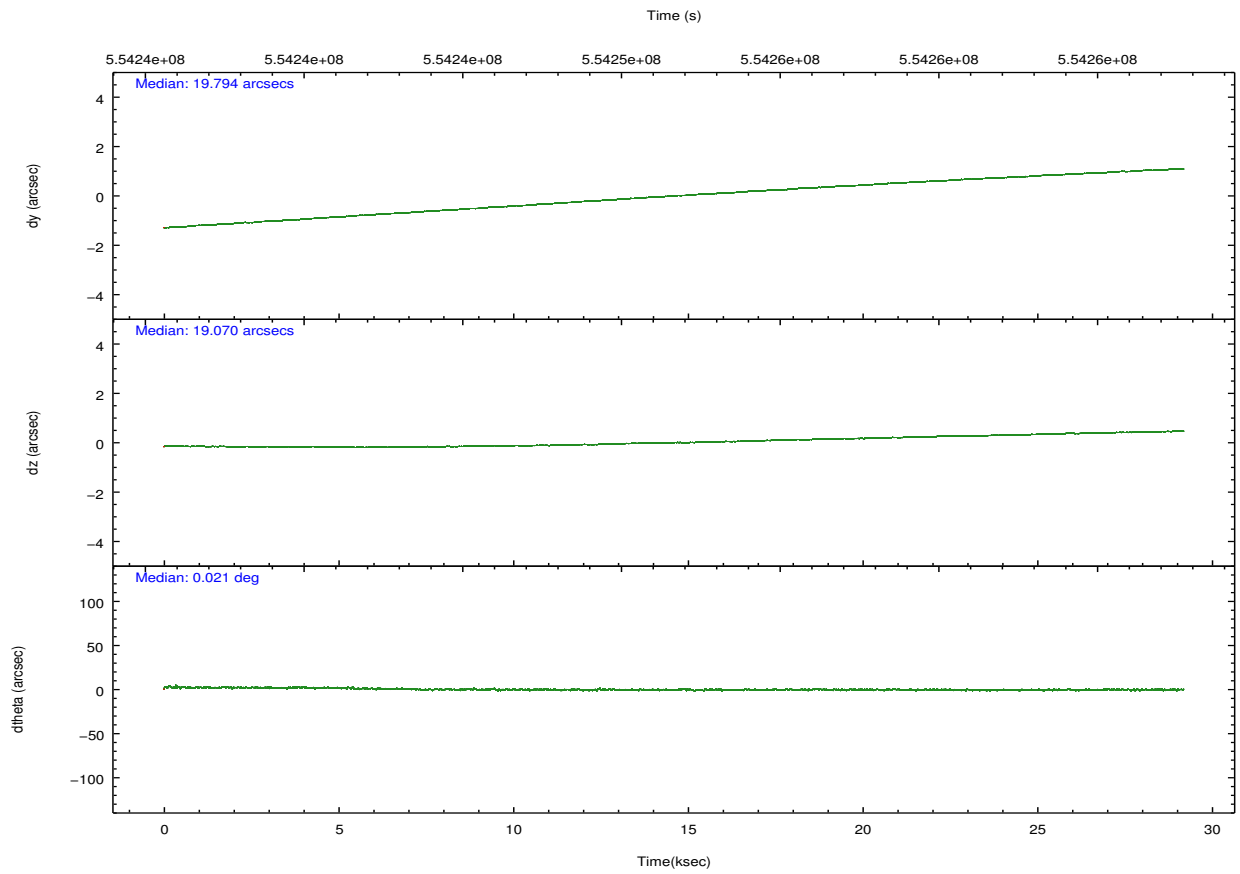
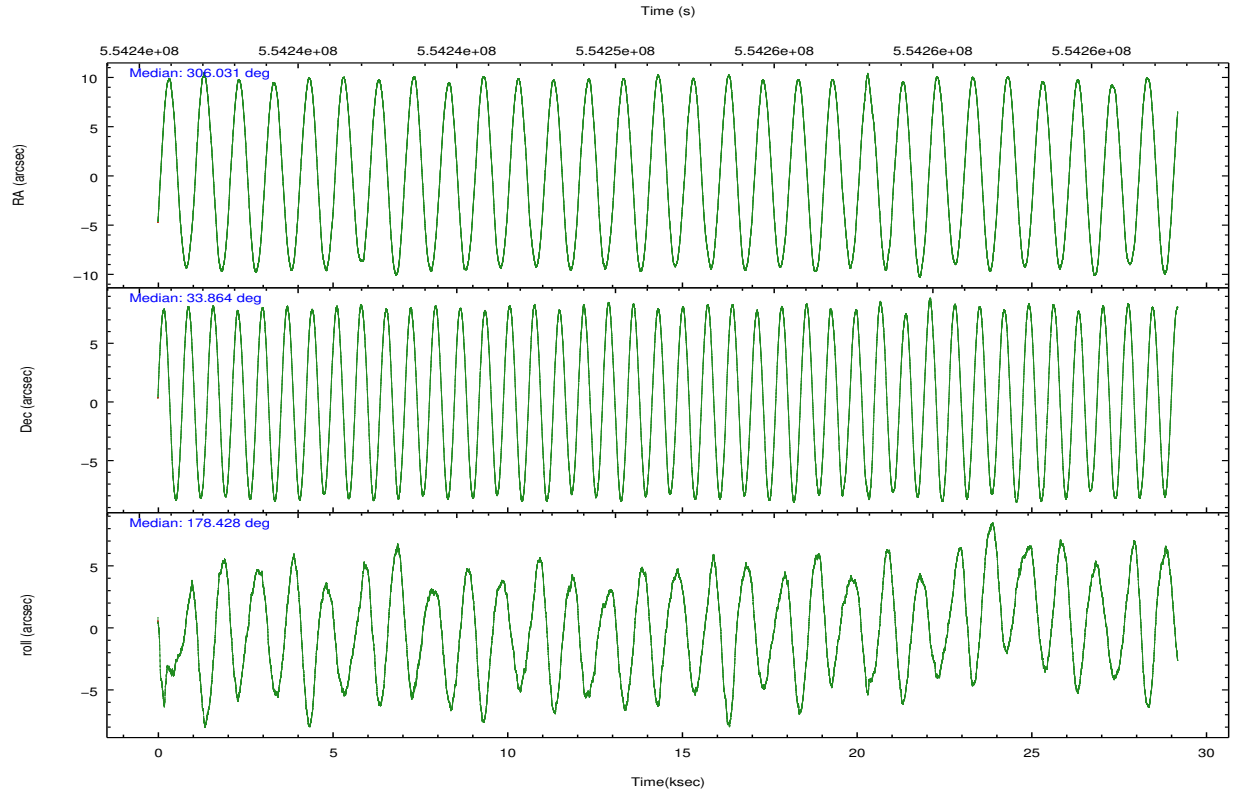
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	160048	147668	298902	158831	207284	208491	grade 0 events	8531	7638	39312	9472	8395	18291
rejected events	140045	129141	138098	136635	116157	151922		5%	5%	13%	5%	4%	8%
rejected %	87%	87%	46%	86%	56%	72%	grade 1 events	100	84	555	100	227	173
								0%	0%	0%	0%	0%	0%
							grade 2 events	4518	3772	44483	4468	19274	12949
								2%	2%	14%	2%	9%	6%
							grade 3 events	1710	1774	5658	1896	7555	5526
								1%	1%	1%	1%	3%	2%
							grade 4 events	1805	1842	5512	1889	7241	5239
								1%	1%	1%	1%	3%	2%
							grade 5 events	6553	7675	17799	7634	20479	11071
								4%	5%	5%	4%	9%	5%
							grade 6 events	3443	3507	65888	4473	48680	14568
								2%	2%	22%	2%	23%	6%
							grade 7 events	133388	121376	119695	128899	95433	140674
								83%	82%	40%	81%	46%	67%

## 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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	306.059558	306.030702779009	CCD I2 on	Y	Y
[deg] Pointing Dec	33.876851	33.86347914874028	CCD I3 on	Y	Y
[deg] Pointing Roll	178.262618	178.4353287562389	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.09952569084879603	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-207.682523	-207.6799295935544	CCD S3 on	Y	Y
[mm] SIM translation stage offset	17.55	-25.91252340937524	CCD S4 on	Y	Y
[s] Observation start time (MET)	554237230.184000	554236854.64807	CCD S5 on	N	N
Observation start date	2015-07-25T18:46:02	2015-07-25T18:40:54	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	554266230.184000	554266364.39973	On-chip summing requested	N	N
Observation end date	2015-07-26T02:49:22	2015-07-26T02:52:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





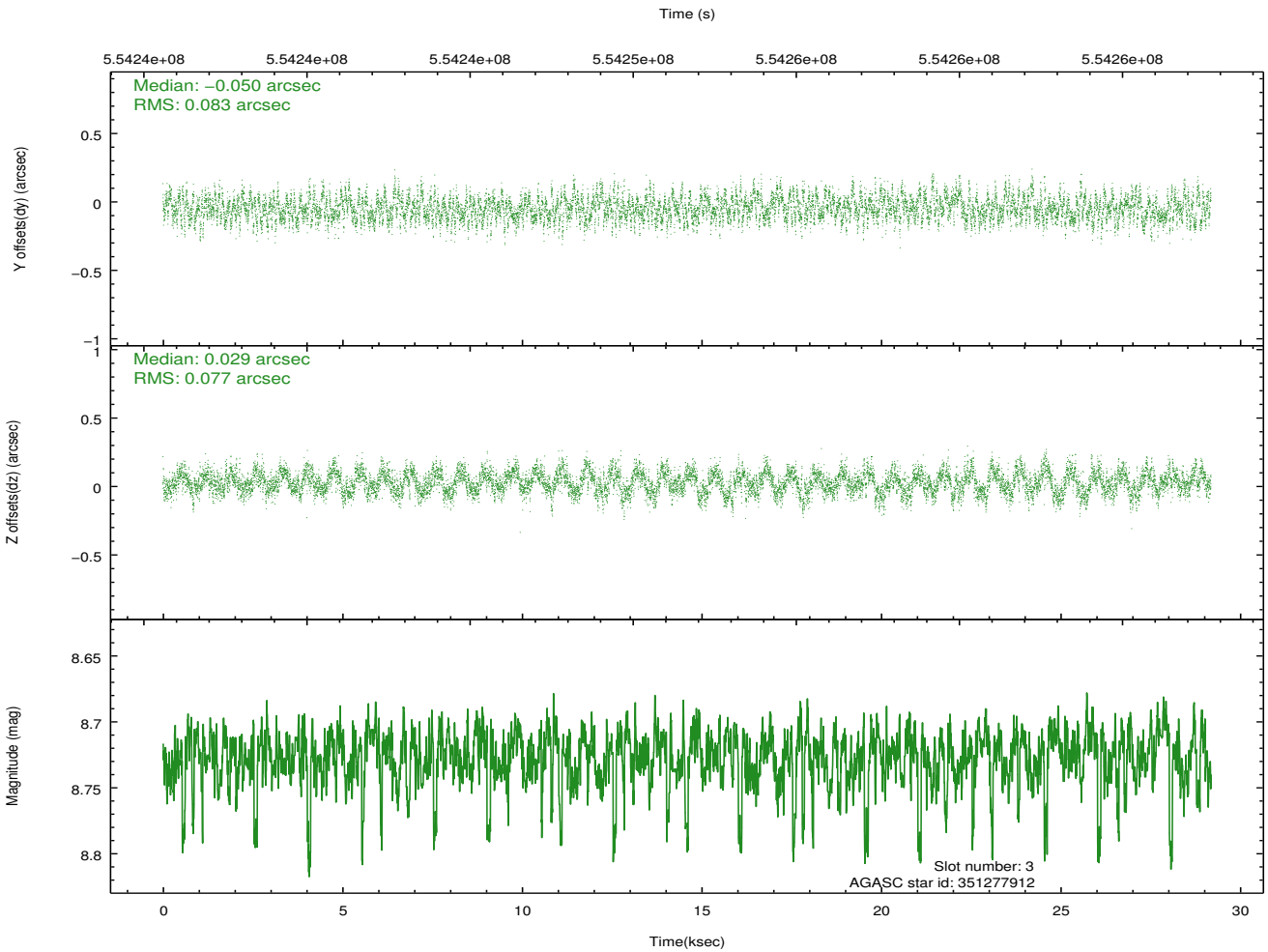
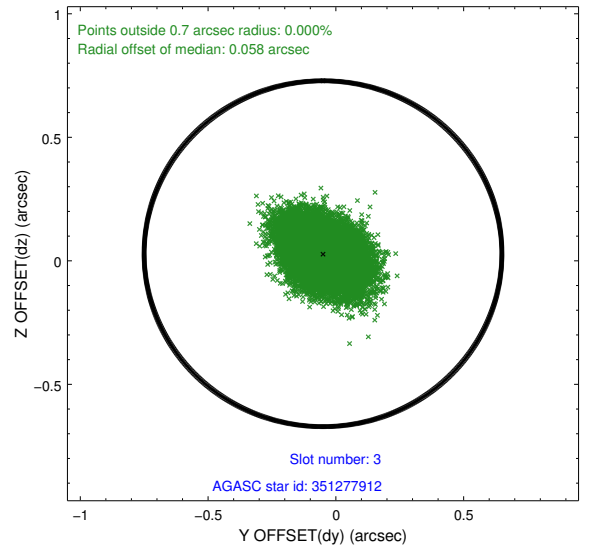
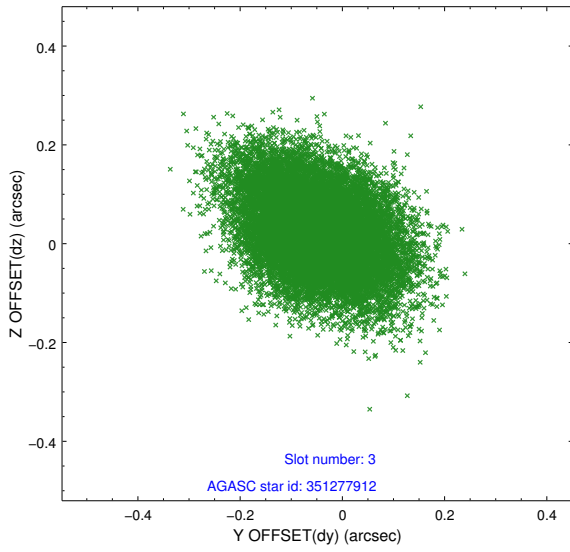
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.11	7119	-0.339	-0.302	0.015	0.021	0.000000	0.000000	-774.30	-1379.14
1	FID		ACIS-I-4	7.17	7120	0.178	0.243	0.020	0.037	0.000000	0.000000	2139.60	528.49
2	FID		ACIS-I-5	7.15	7119	0.130	0.069	0.033	0.048	0.000000	0.000000	-1827.21	522.80
3	GUIDE	used	351277912	8.73	14229	-0.050	0.029	0.121	0.195	305.316013	34.433041	2268.50	-1941.87
4	GUIDE	used	351283304	8.79	14232	-0.118	-0.057	0.118	0.184	305.363456	34.187296	2106.80	-1060.90
5	GUIDE	used	352981624	8.59	14228	0.220	-0.033	0.108	0.172	306.081516	34.222239	-26.59	-1244.60
6	GUIDE	used	352985512	8.88	14230	0.130	-0.003	0.098	0.160	306.411799	34.272698	-1003.33	-1457.88
7	GUIDE	used	351279832	8.65	14237	-0.178	0.057	0.128	0.219	305.274374	34.407915	2389.84	-1848.67

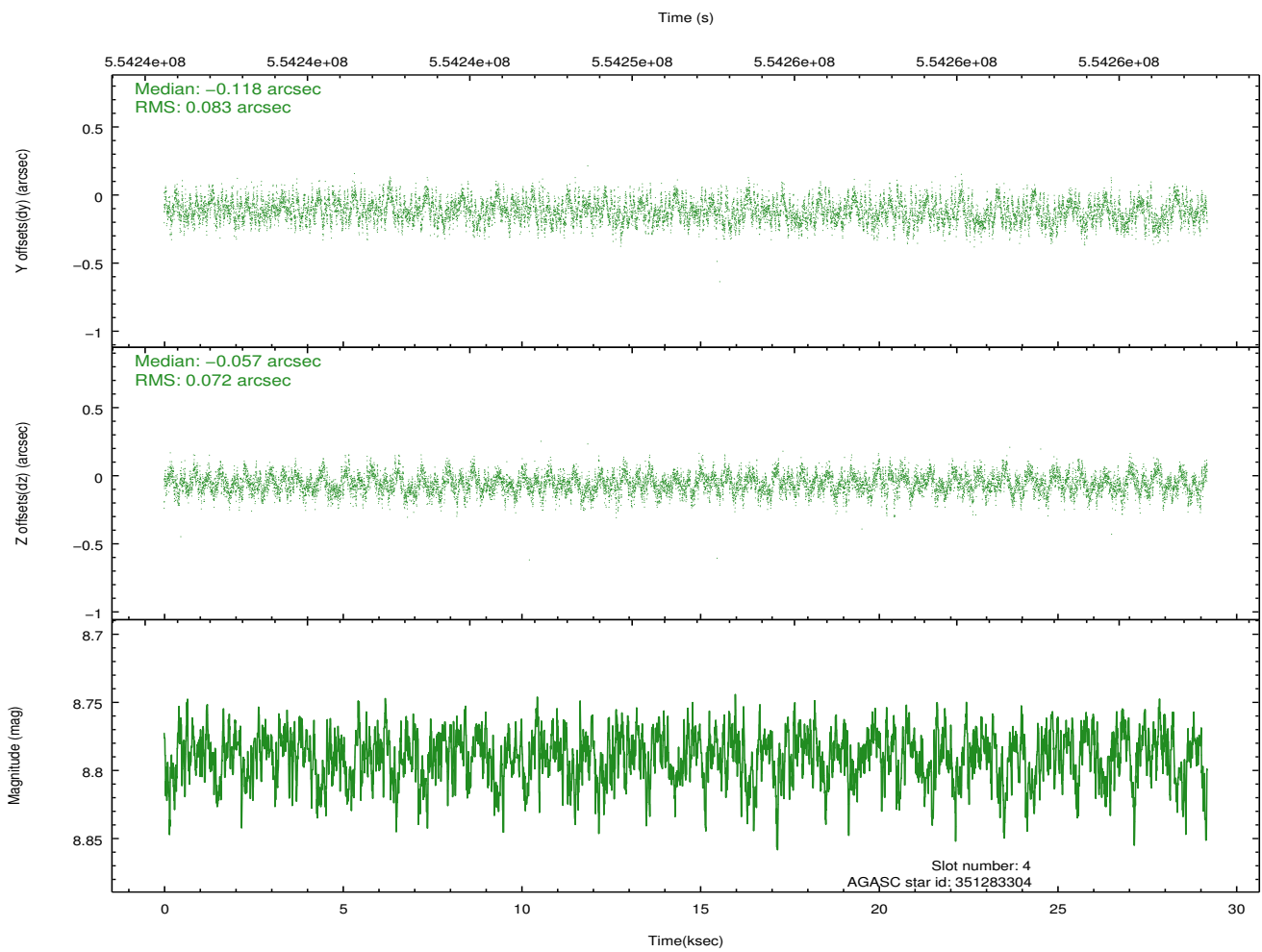
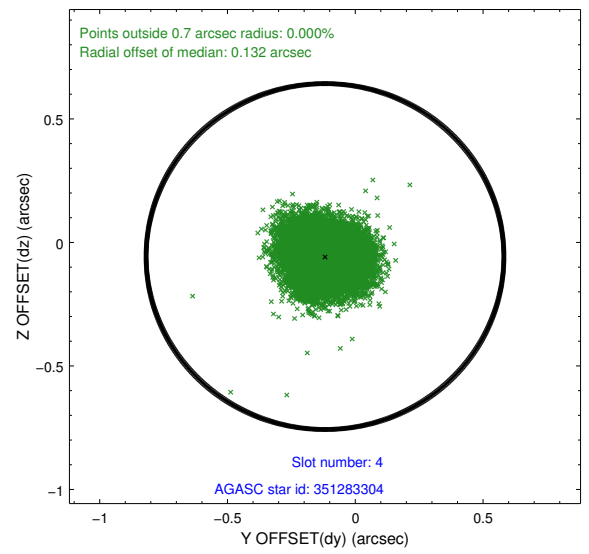
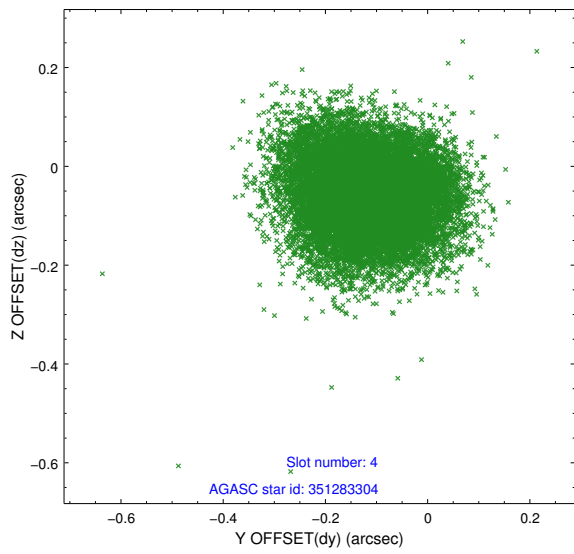
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## 2.4 Star Slots

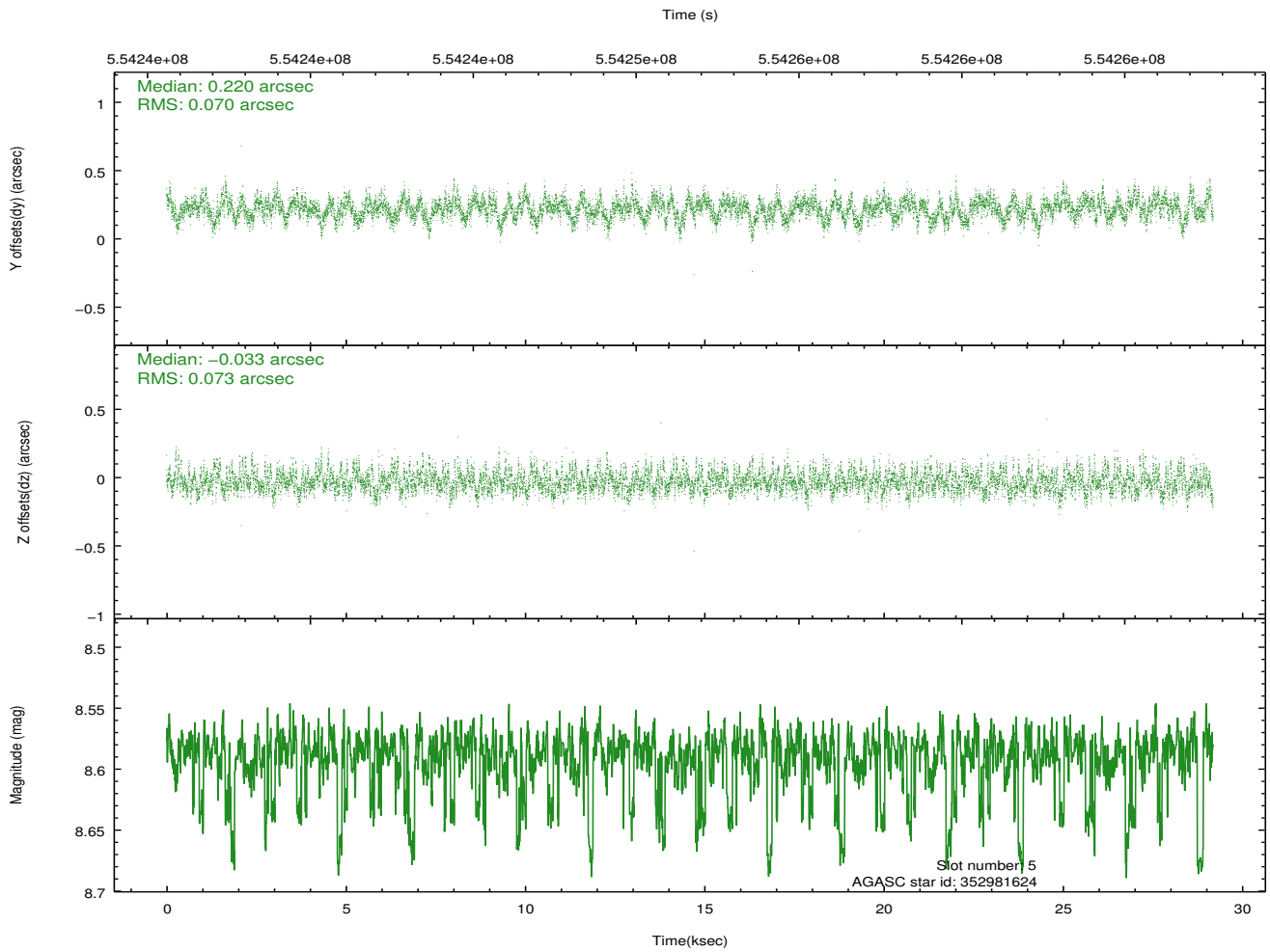
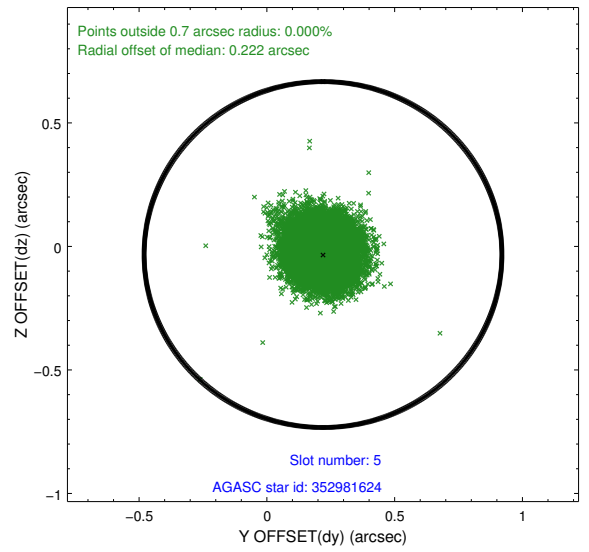
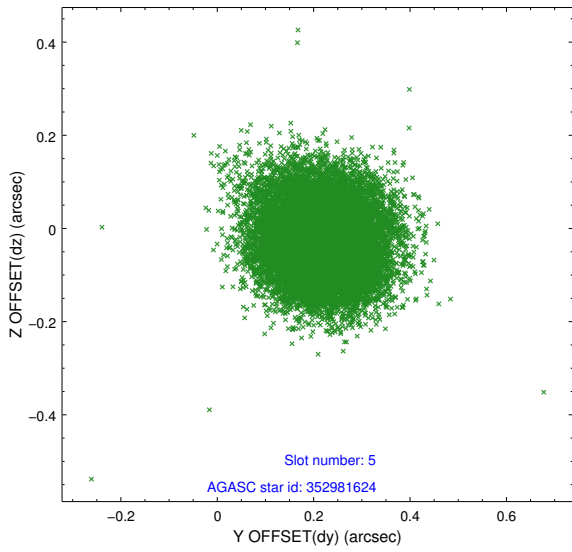
### 2.4.1 Slot 3



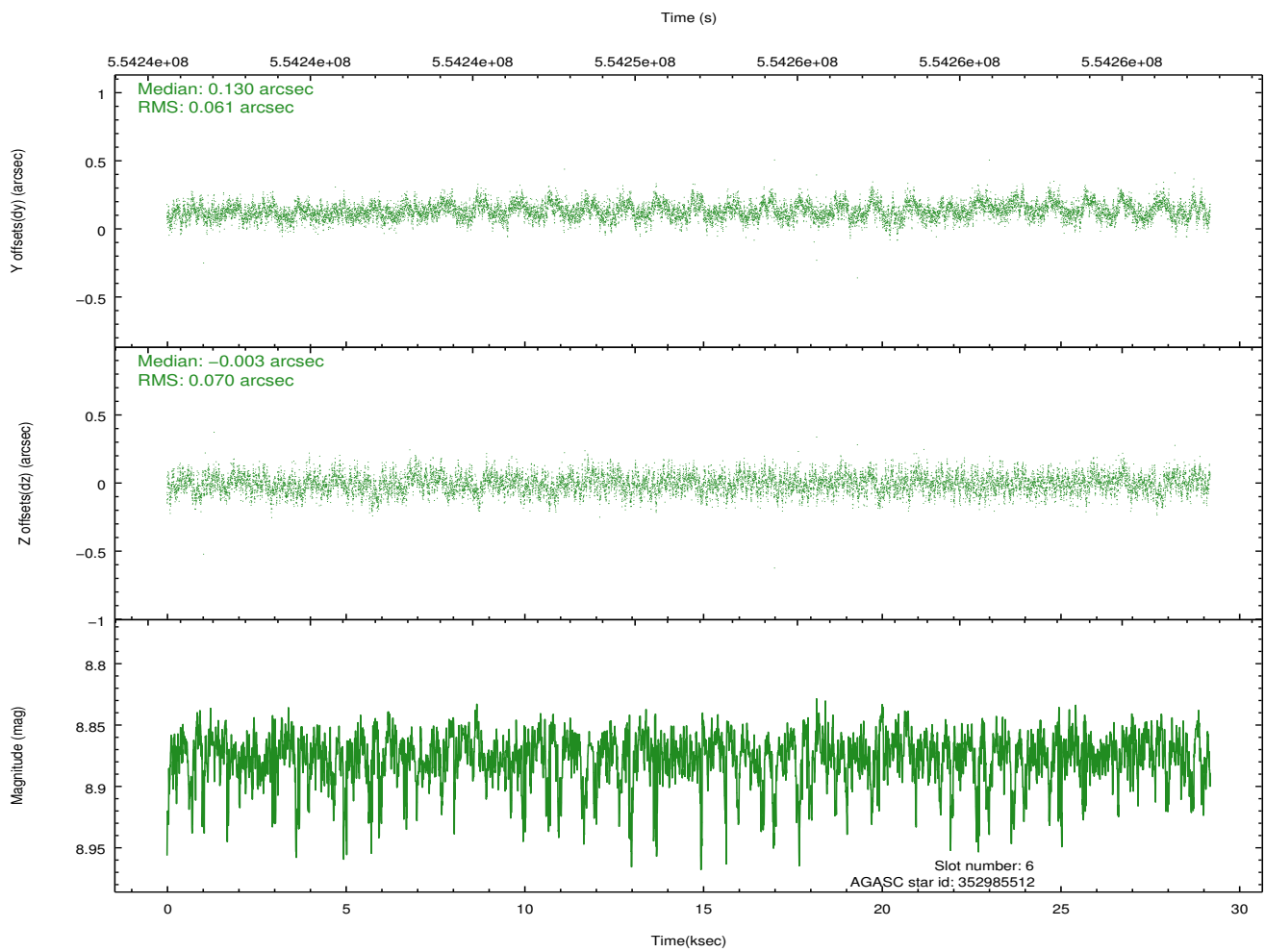
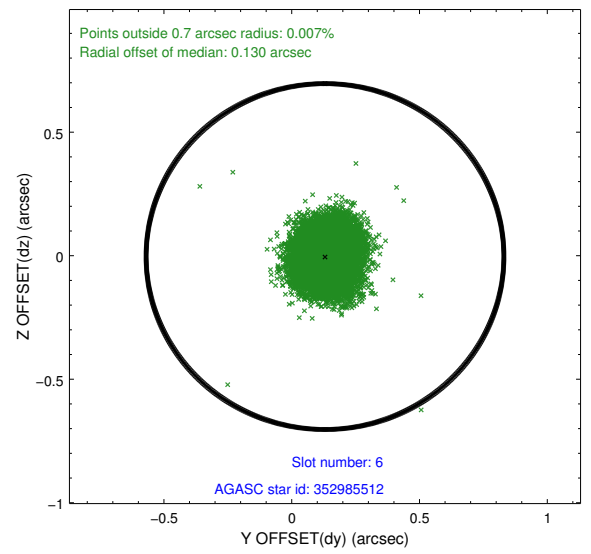
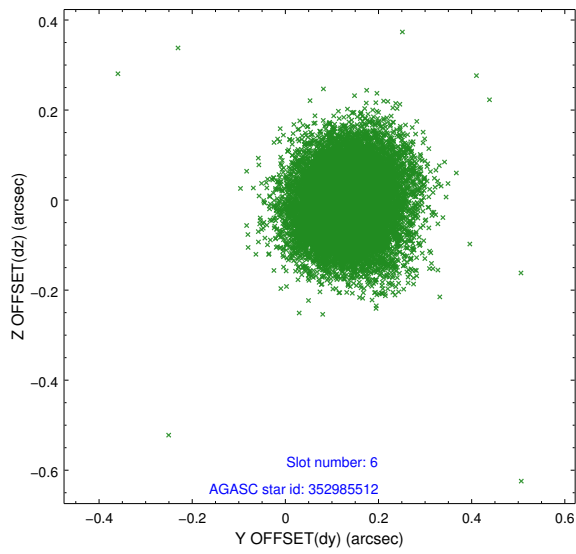
## 2.4.2 Slot 4



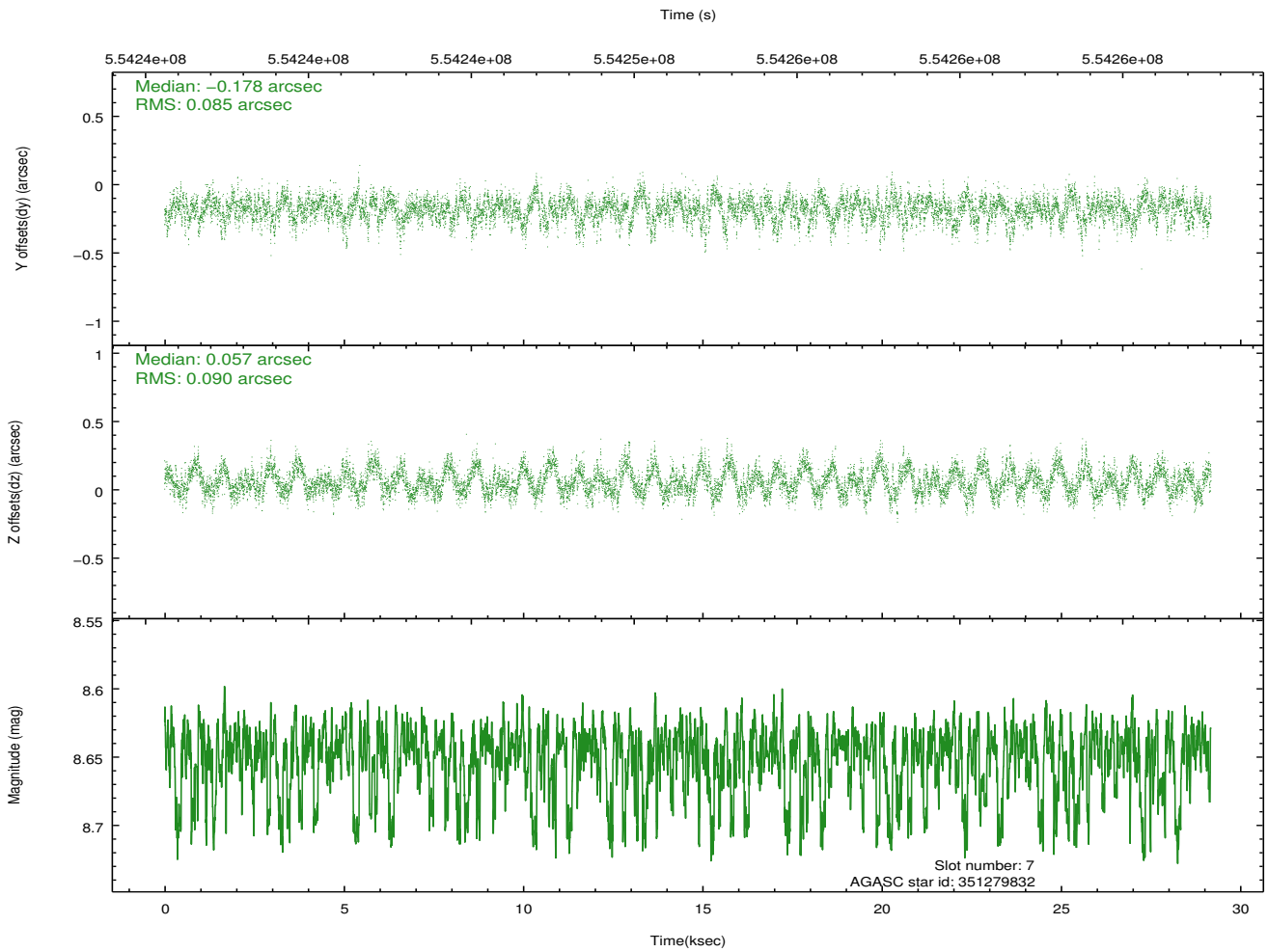
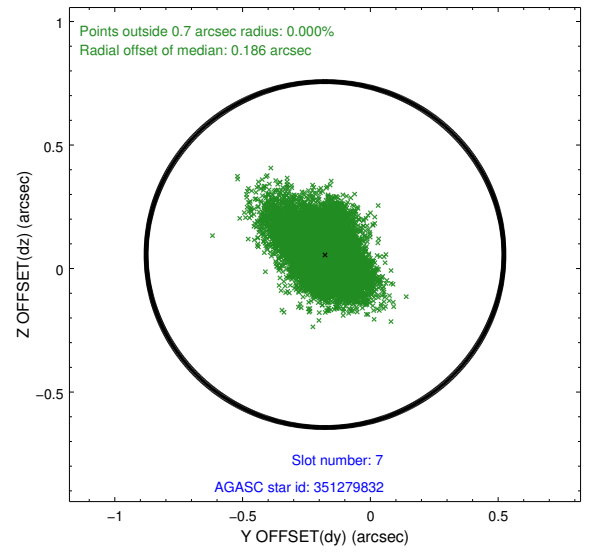
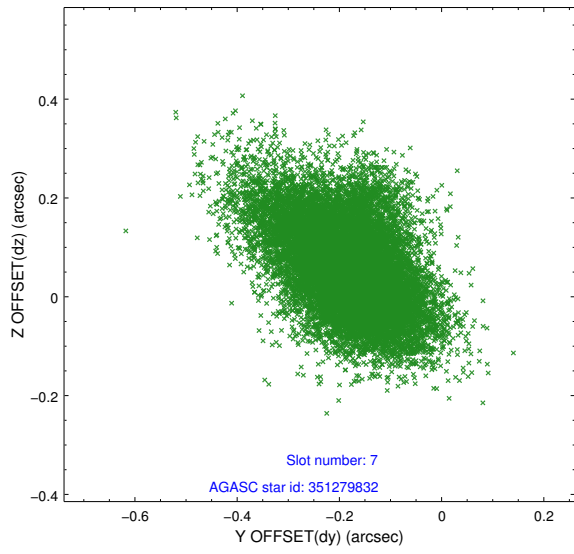
### 2.4.3 Slot 5



## 2.4.4 Slot 6

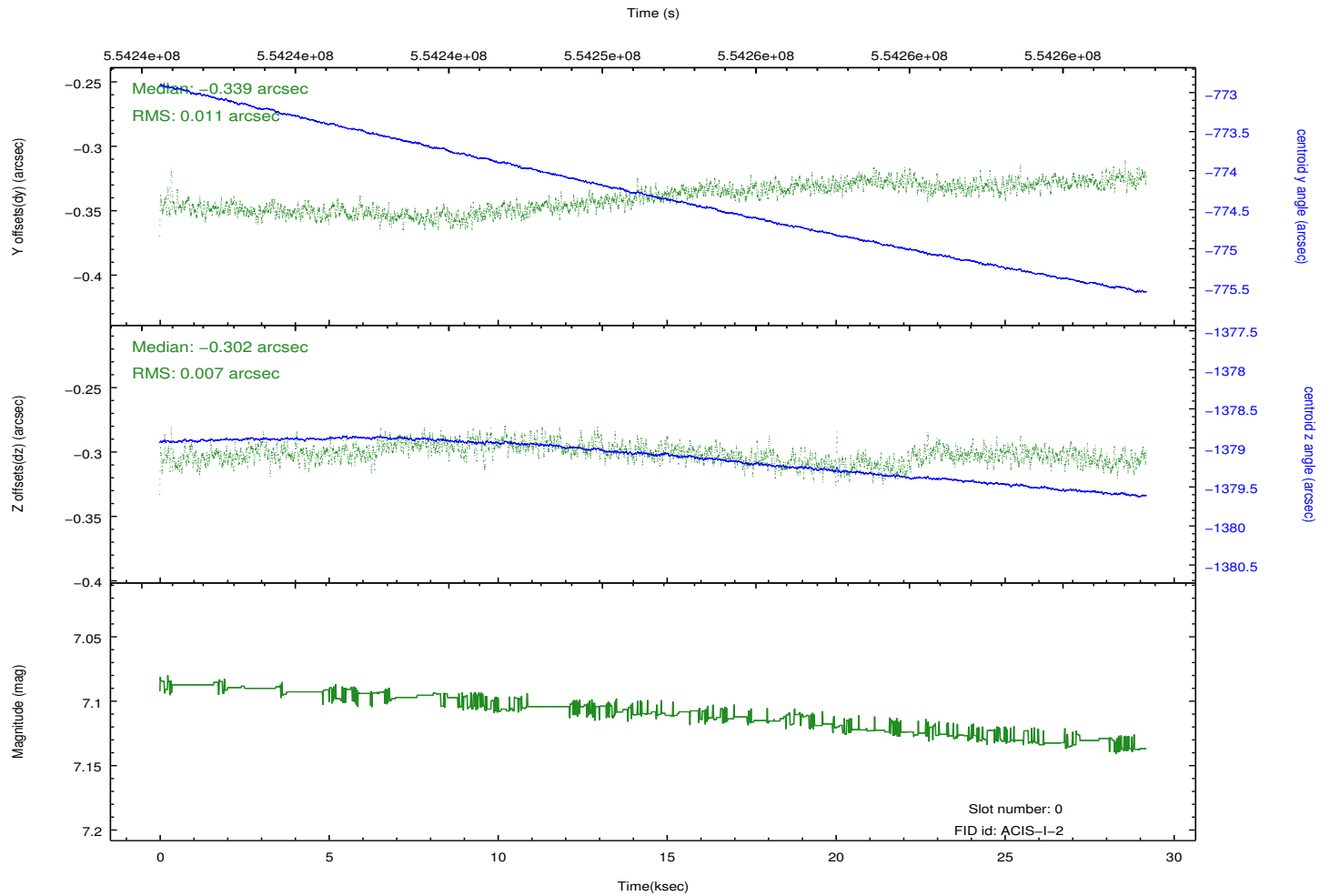
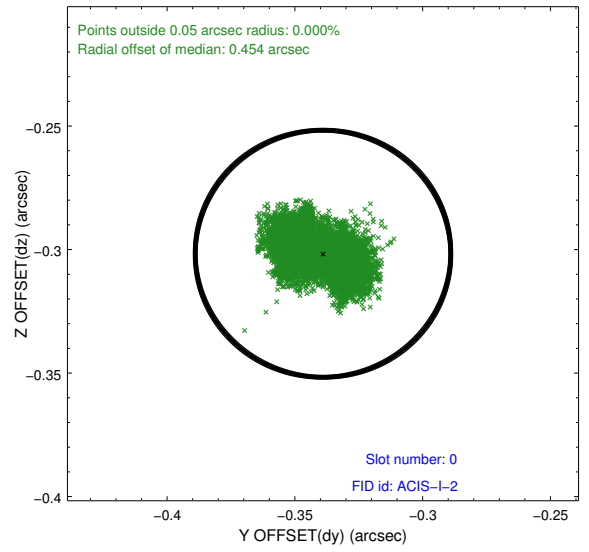
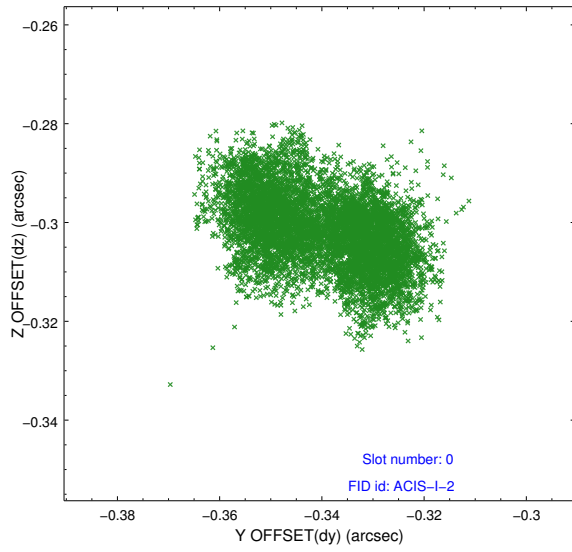


## 2.4.5 Slot 7

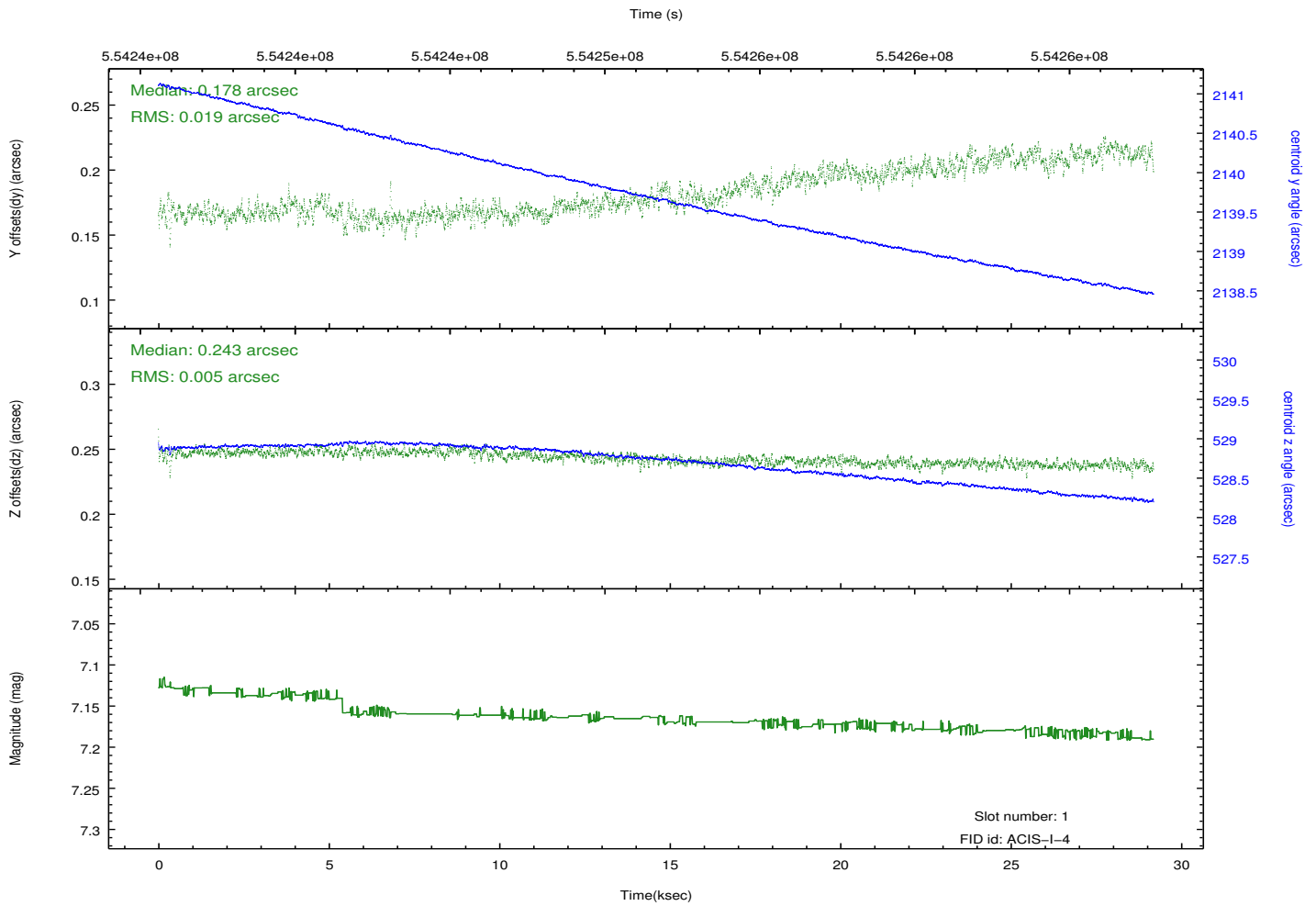
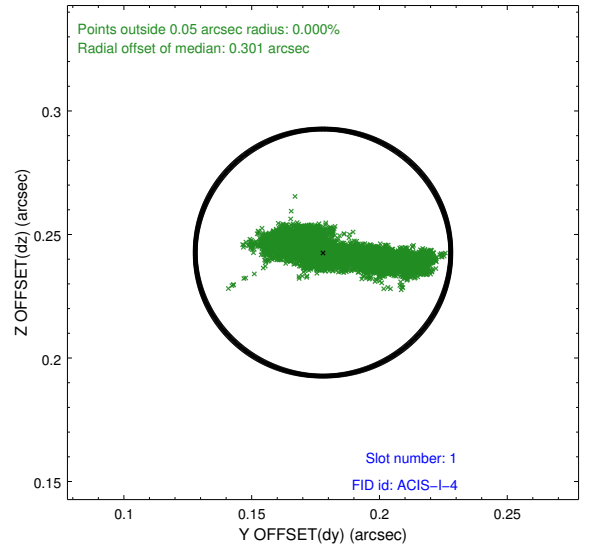
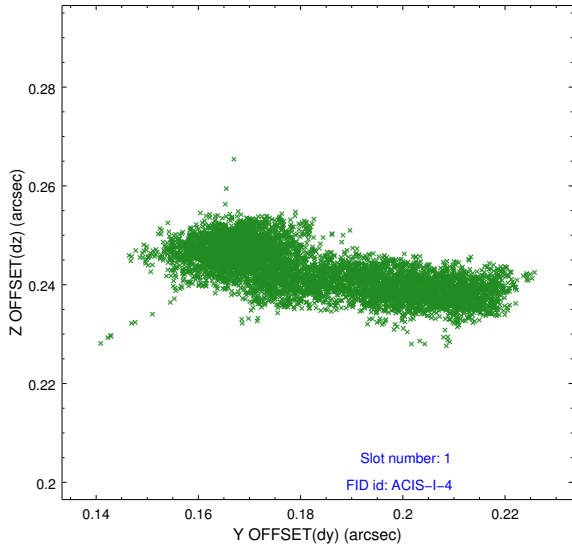


## 2.5 FID Slots

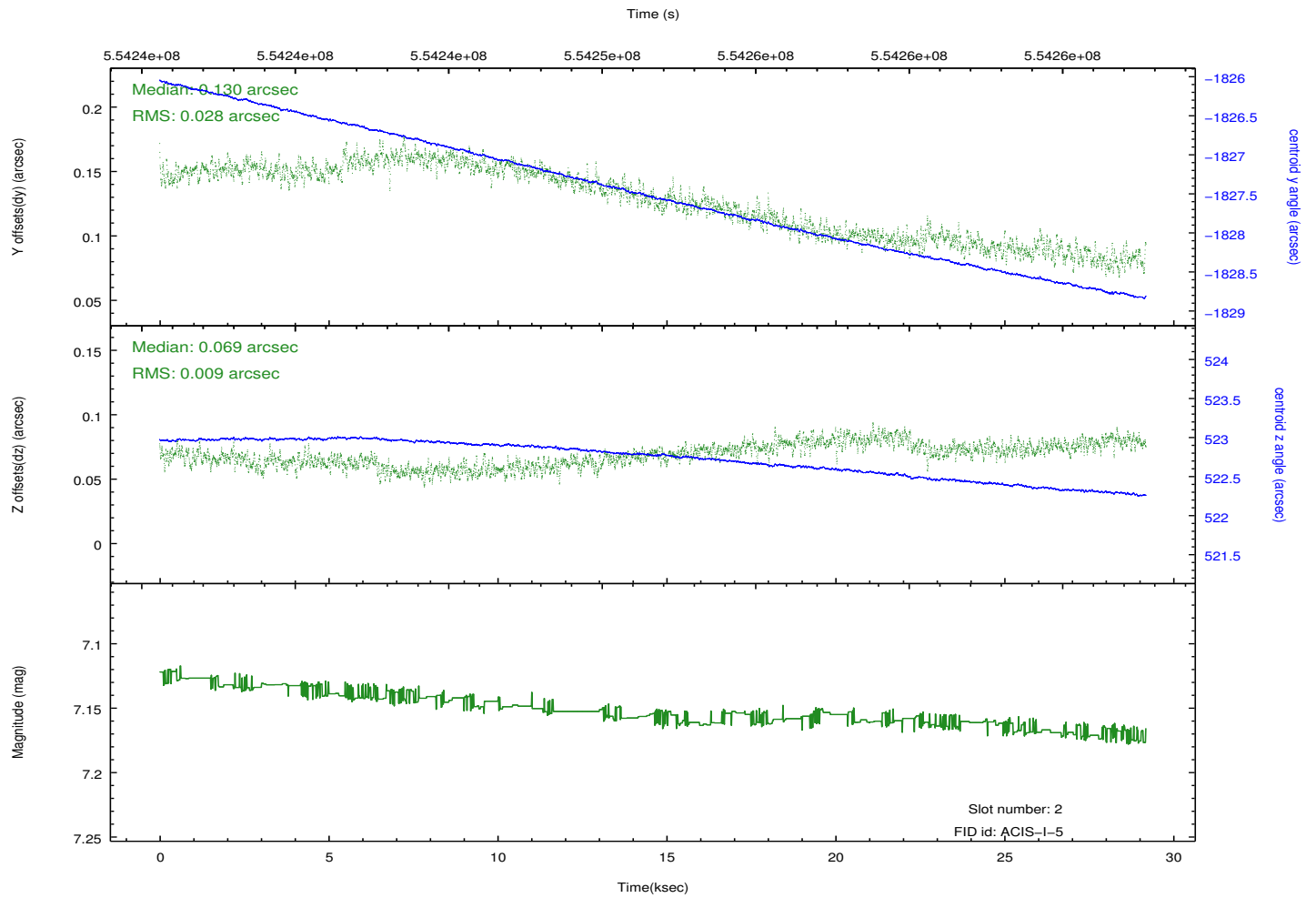
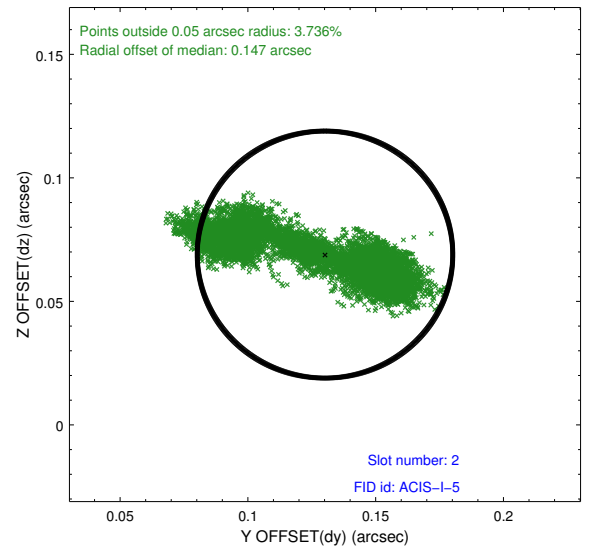
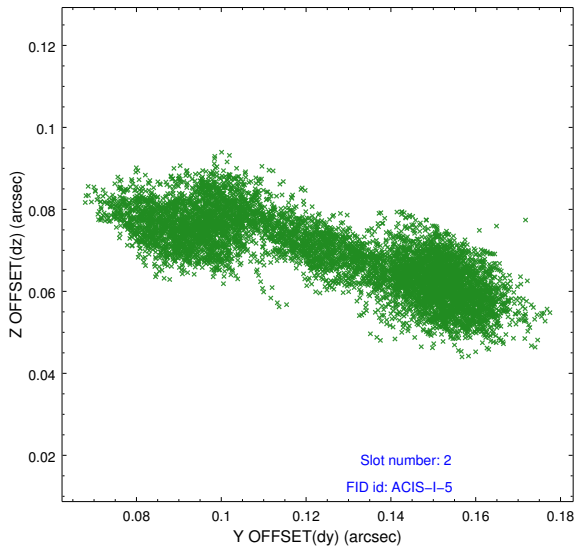
### 2.5.1 Slot 0



## 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)	2015.07.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.752000428438

## A.2 Comments

This observation has a very large SIM offset per PI request. Observations with large SIM offsets can have additional uncorrected aspect offsets up to 0.5 arcsec. See:

<http://cxc.cfa.harvard.edu/cal/ASPECT/celmon/>

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Absolute SIM position is correct for this observation.