

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10970 - L2 Version 2  
Chandra X-Ray Center

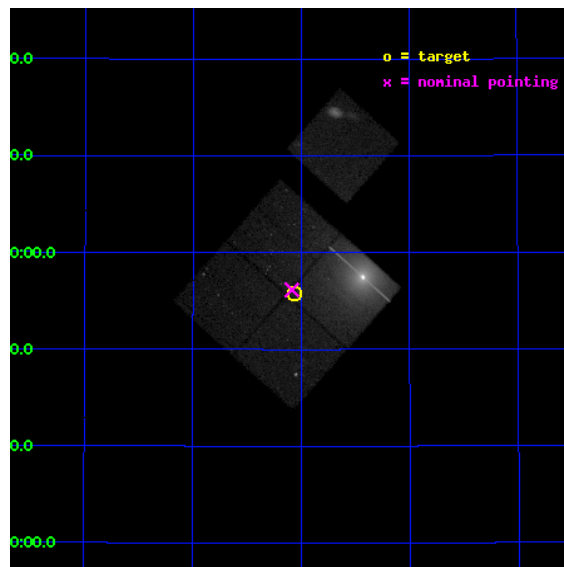
L2 Processing Date : Jun 22 2012

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# 1 Front

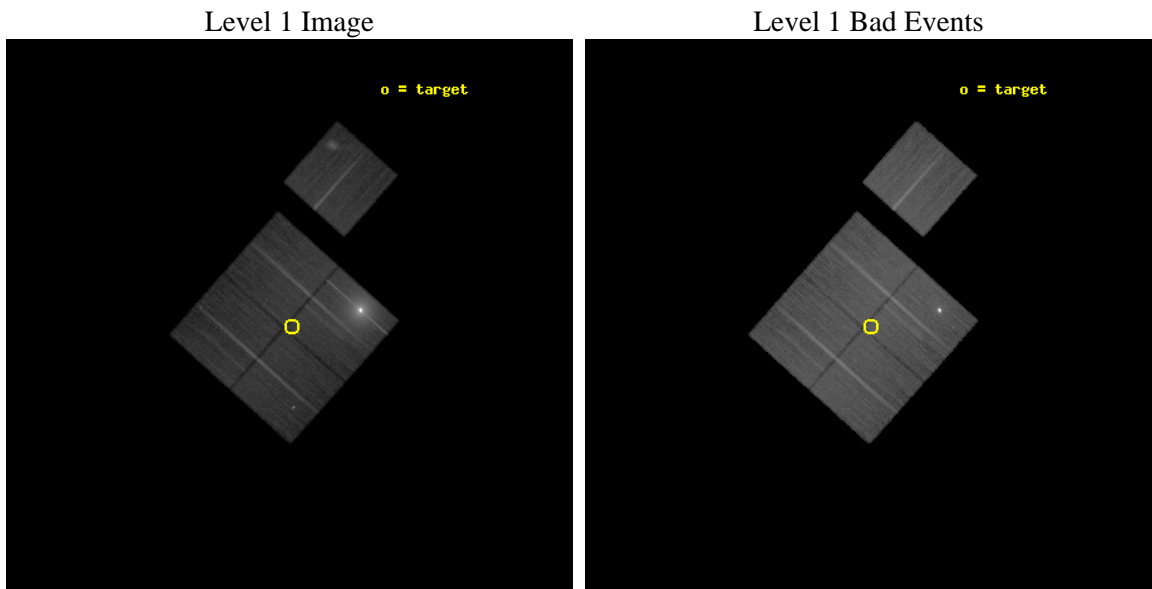
seq_num	200602	Sequence number
obs_id	10970	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.266025	Observer's specified target RA [deg]
dec_targ	40.929109	Observer's specified target Dec [deg]
ra_nom	308.27152868857	Nominal RA [deg]
dec_nom	40.936041804736	Nominal Dec [deg]
roll_nom	41.705075533467	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29893.177289248	Sum of GTIs [s]
livetime	29502.600920927	Livetime [s]
ontime0	29899.459269643	Sum of GTIs [s]
ontime1	29893.177448511	Sum of GTIs [s]
ontime2	29893.17741859	Sum of GTIs [s]
ontime3	29893.177289248	Sum of GTIs [s]
ontime6	29896.318289459	Sum of GTIs [s]
l2events	583907	Number of level 2 events



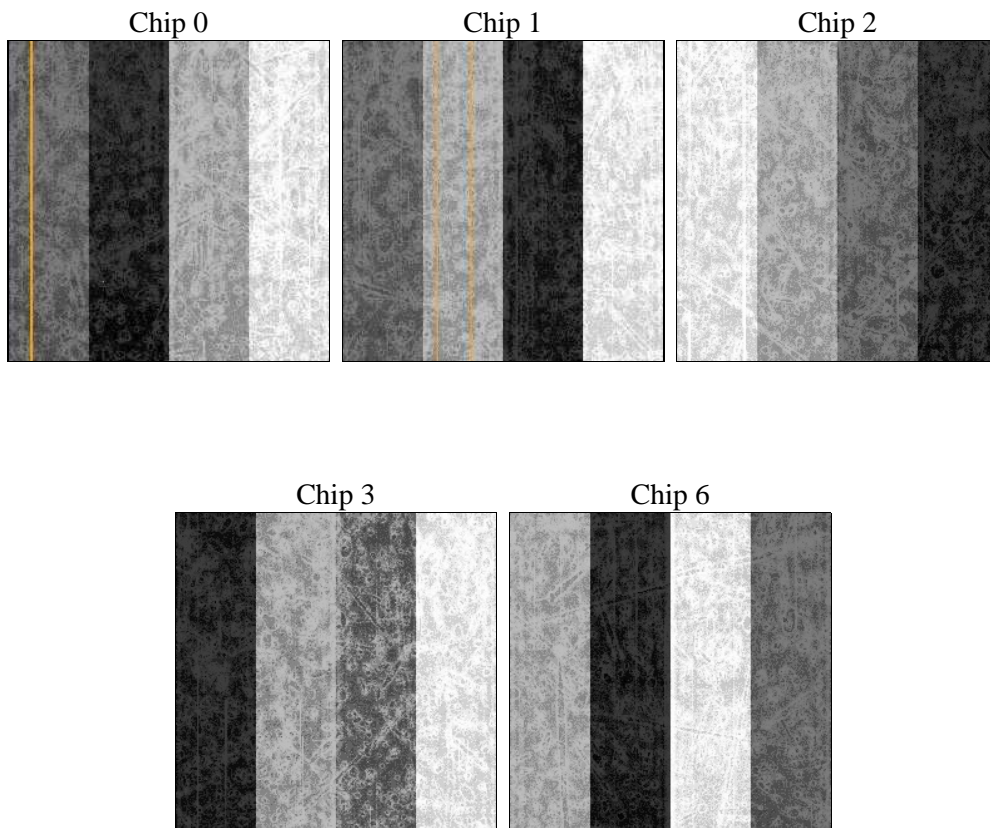
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29817.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	29893.177289248	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime0	29899.459269643	Sum of GTIs [s]
date	2012-06-22T06:09:18	Date and time of file creation	ontime1	29893.177448511	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	29893.17741859	Sum of GTIs [s]
			ontime3	29893.177289248	Sum of GTIs [s]
			ontime6	29896.318289459	Sum of GTIs [s]
			l1events	1736998	Number of level 1 events

### 2.1.4 Events

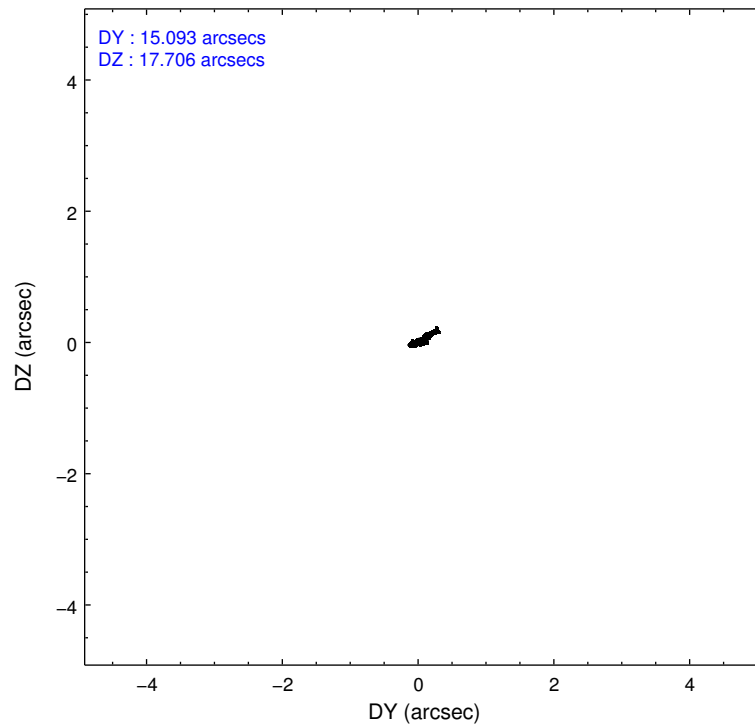
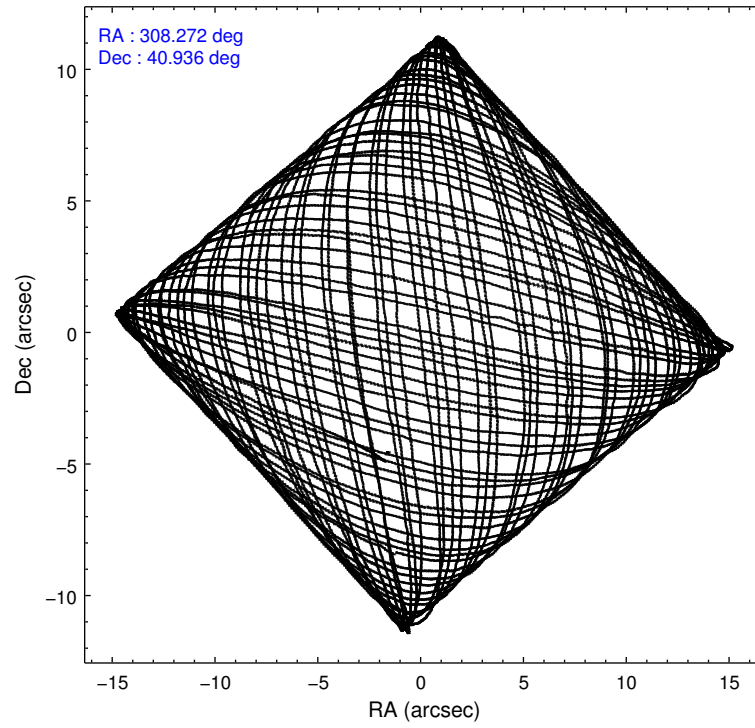
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	216611	224776	261299	790138	244174
rejected events	186826	187495	220954	322741	204842
rejected %	86%	83%	84%	40%	83%

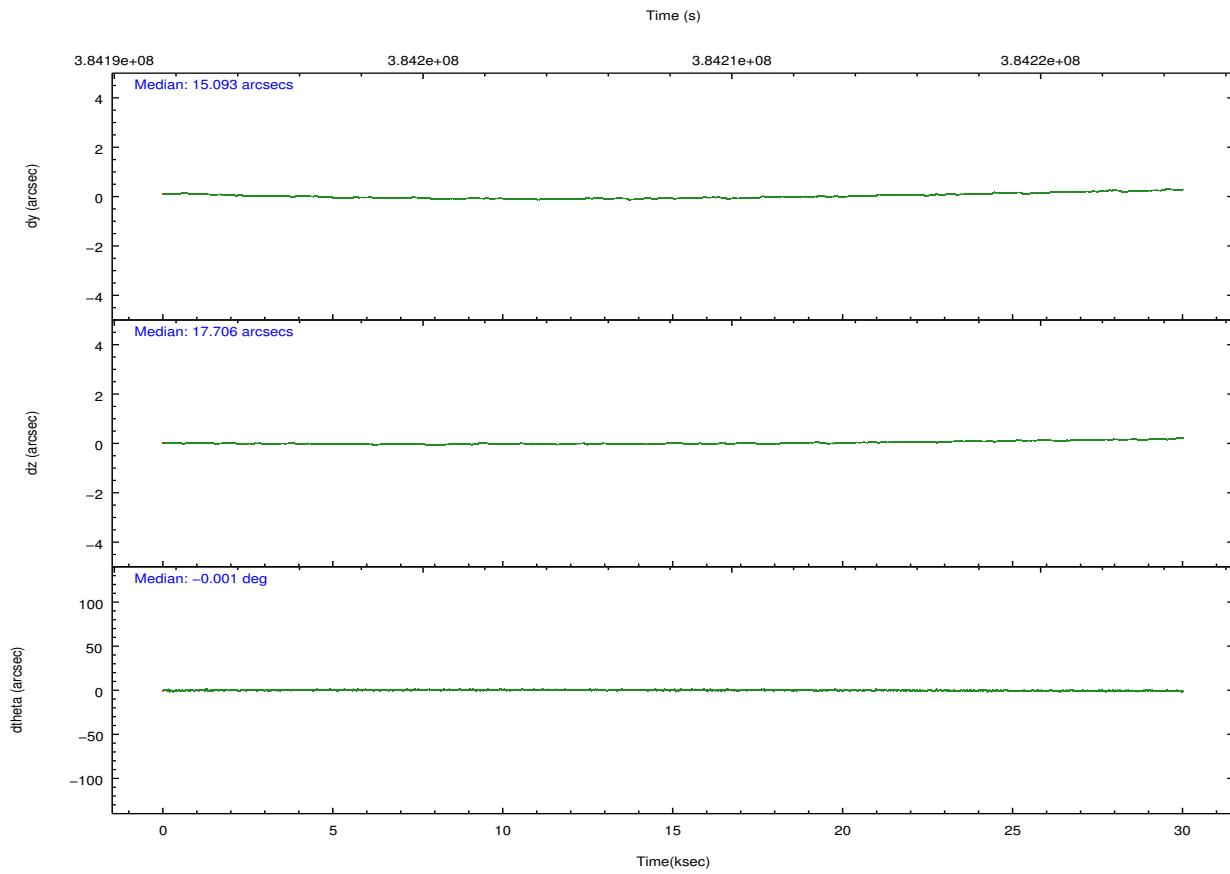
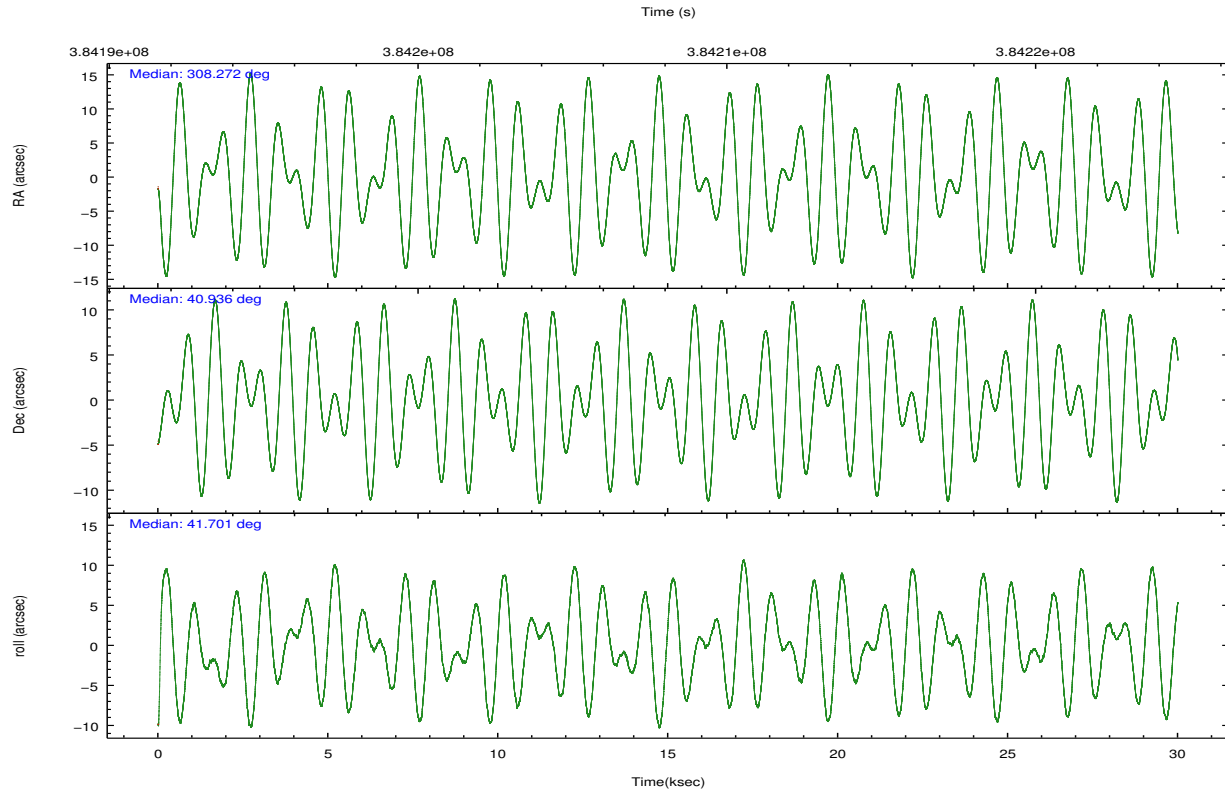
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	13205	18081	21348	270425	20564
	6%	8%	8%	34%	8%
grade 1 events	163	146	260	27432	178
	0%	0%	0%	3%	0%
grade 2 events	6578	7171	7705	76963	7220
	3%	3%	2%	9%	2%
grade 3 events	2784	3160	3108	30242	3086
	1%	1%	1%	3%	1%
grade 4 events	2644	3249	3181	29896	3168
	1%	1%	1%	3%	1%
grade 5 events	7617	8177	7224	35568	8151
	3%	3%	2%	4%	3%
grade 6 events	4581	5629	5012	59978	5296
	2%	2%	1%	7%	2%
grade 7 events	179039	179163	213461	259634	196511
	82%	79%	81%	32%	80%

## 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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	308.260255	308.2715286885727	CCD I2 on	Y	Y
[deg] Pointing Dec	40.909895	40.9360418047362	CCD I3 on	Y	Y
[deg] Pointing Roll	41.503777	41.70507553346698	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	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	384193284.184000	384192336.04032	CCD S5 on	N	N
Observation start date	2010-03-05T16:20:18	2010-03-05T16:05:36	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	384223101.184000	384224037.24193	On-chip summing requested	N	N
Observation end date	2010-03-06T00:37:15	2010-03-06T00:53:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



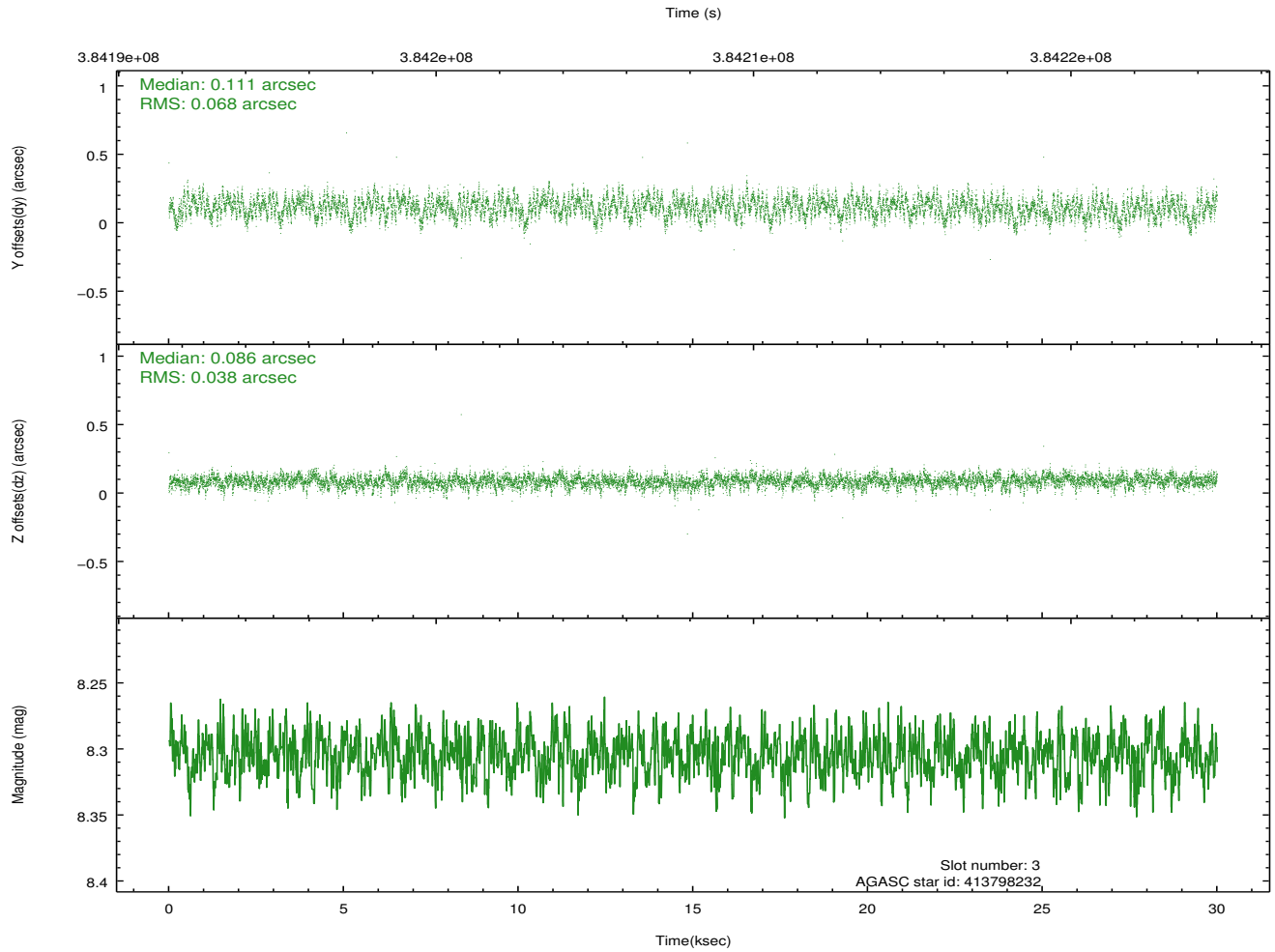
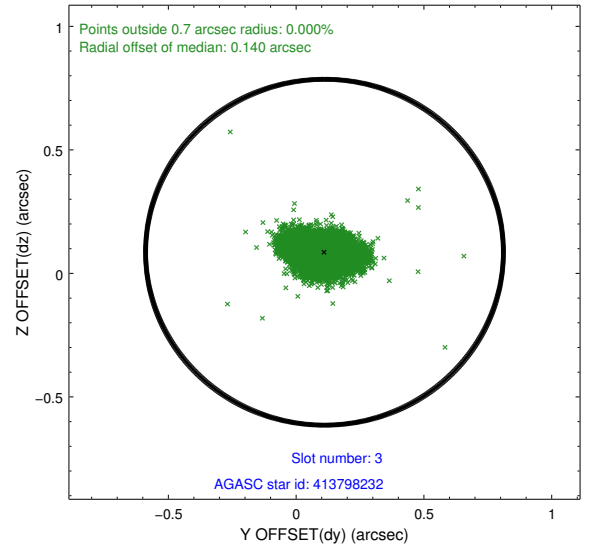
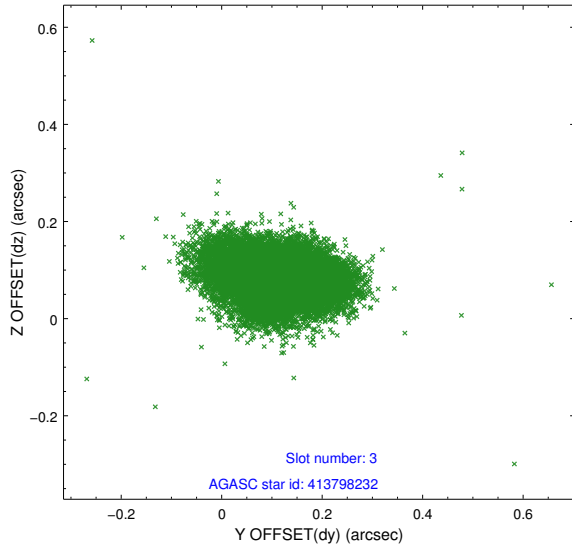


### Slot Statistics

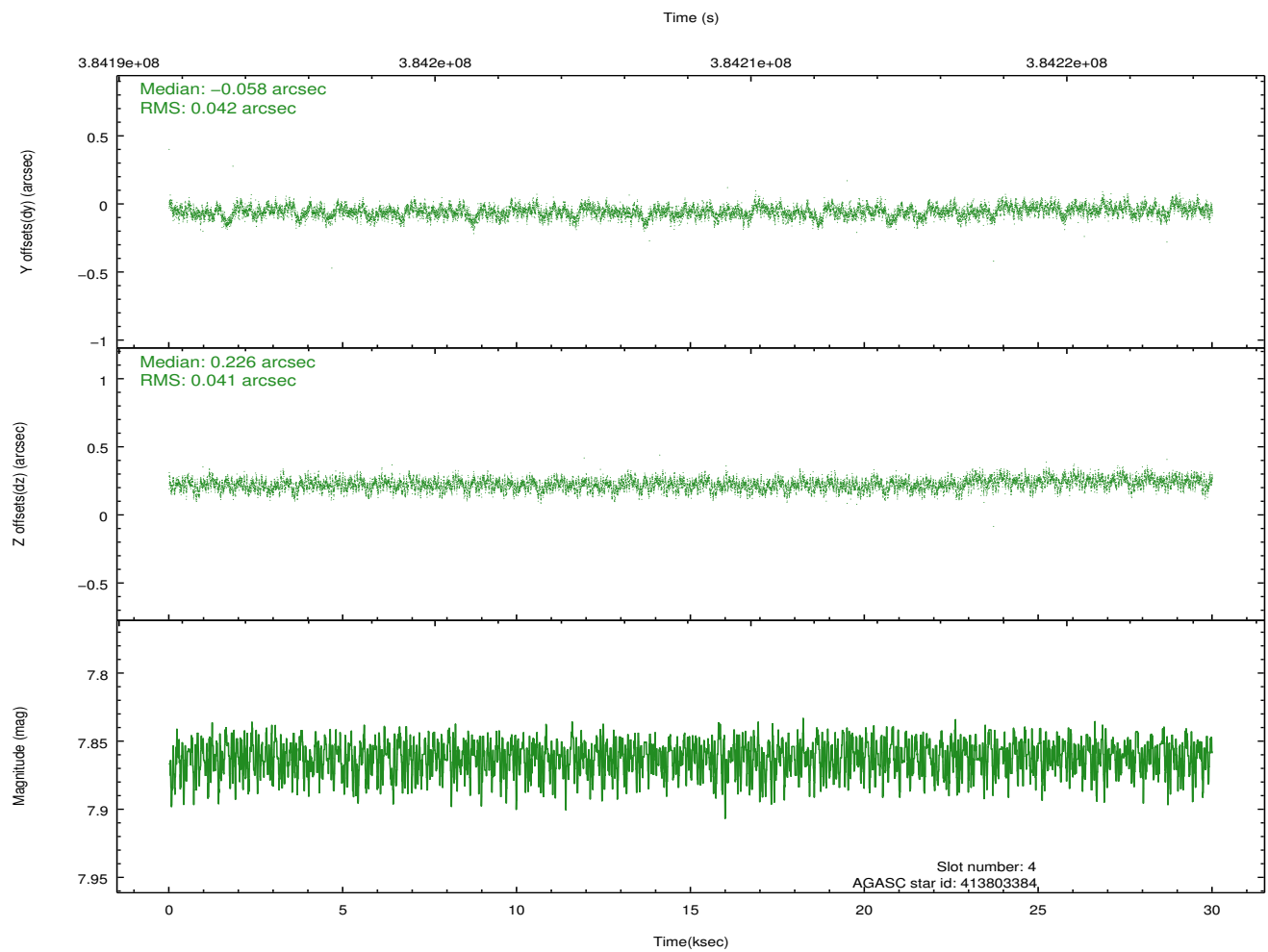
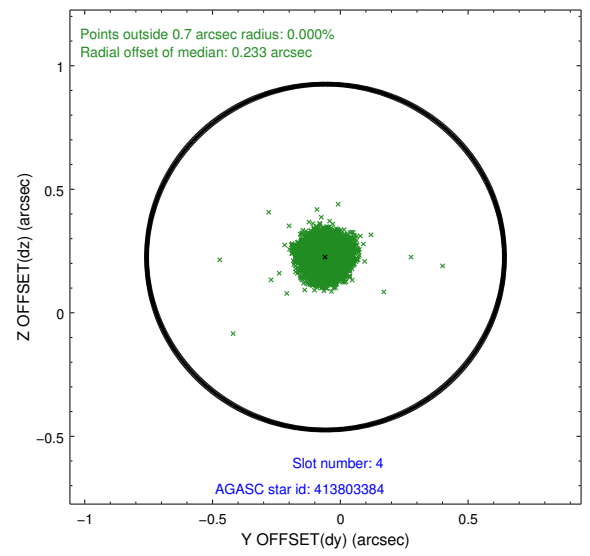
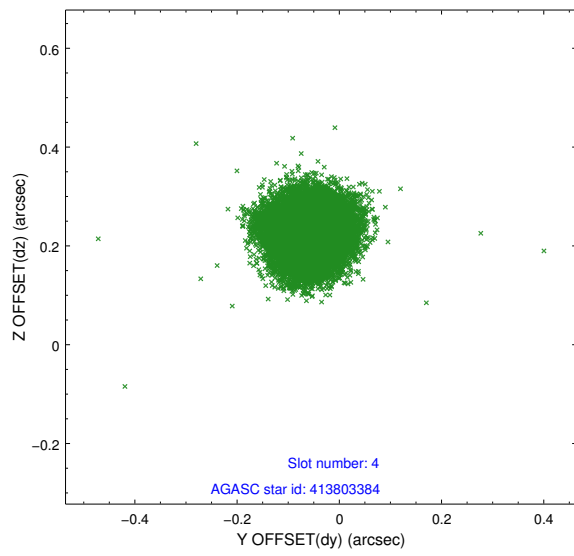
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.99	7317	0.052	0.005	0.010	0.027	0.000000	0.000000	924.38	-841.41
1	FID	ACIS-I-5	6.99	7316	-0.206	0.063	0.009	0.022	0.000000	0.000000	-1823.92	1056.13
2	FID	ACIS-I-6	7.00	7318	0.063	0.002	0.008	0.014	0.000000	0.000000	389.88	1700.63
3	GUIDE	413798232	8.30	14628	0.111	0.086	0.082	0.137	309.116117	41.044272	2068.42	-1168.84
4	GUIDE	413803384	7.86	14627	-0.058	0.226	0.063	0.098	308.178547	40.075249	-2159.43	-2100.93
5	GUIDE	414326136	7.34	14630	-0.154	-0.117	0.061	0.098	308.256176	41.473642	1336.68	1527.38
6	GUIDE	413674208	8.35	14630	0.103	-0.032	0.083	0.141	307.139504	40.901877	-2289.91	2013.99
7	GUIDE	413803288	6.98	14634	-0.002	-0.160	0.057	0.088	307.629978	40.506899	-2249.38	61.37

## 2.4 Star Slots

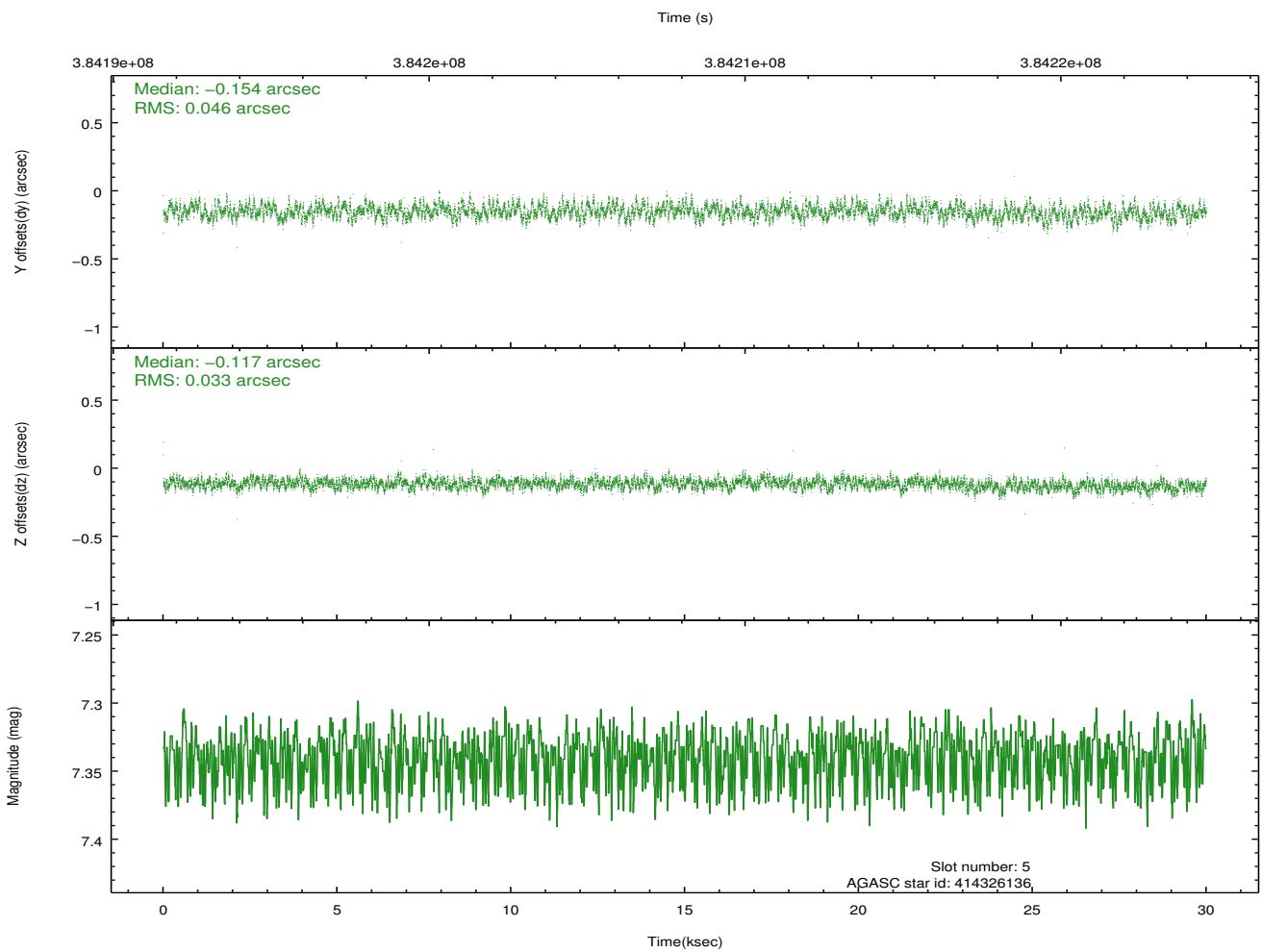
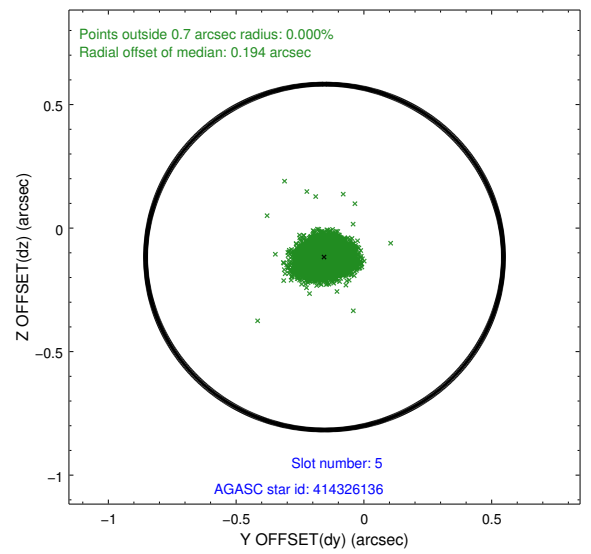
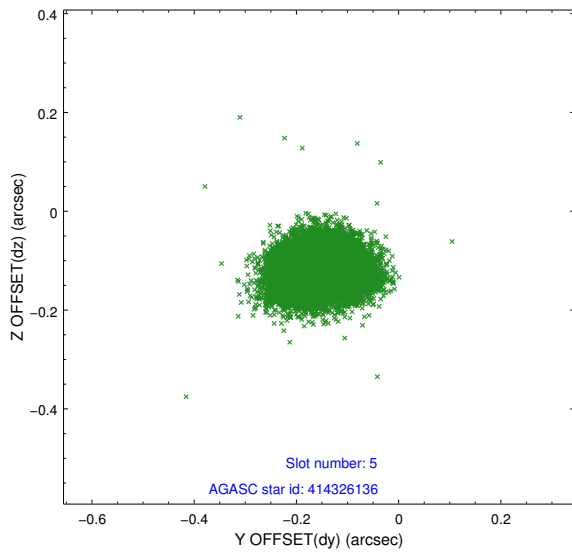
### 2.4.1 Slot 3



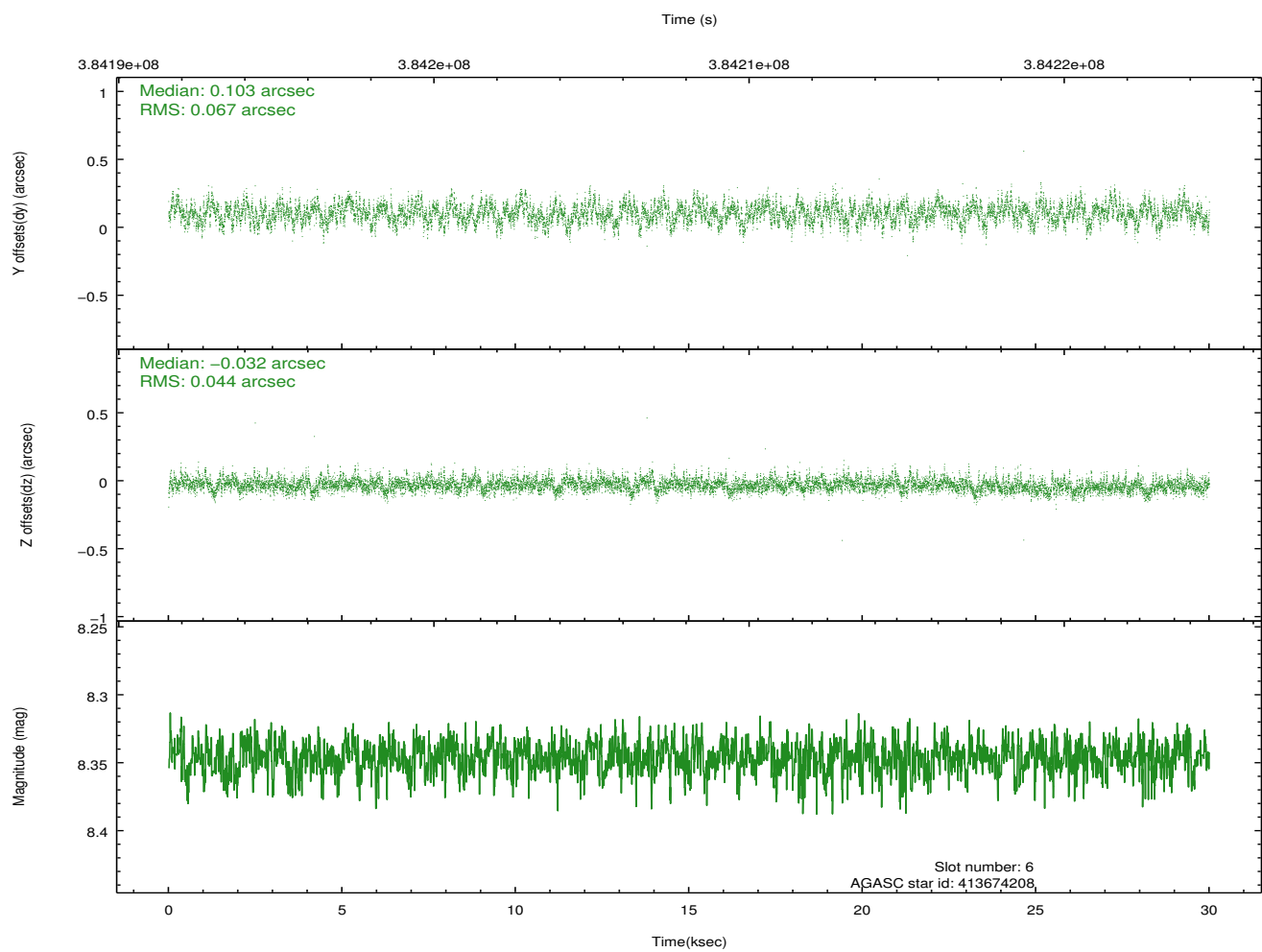
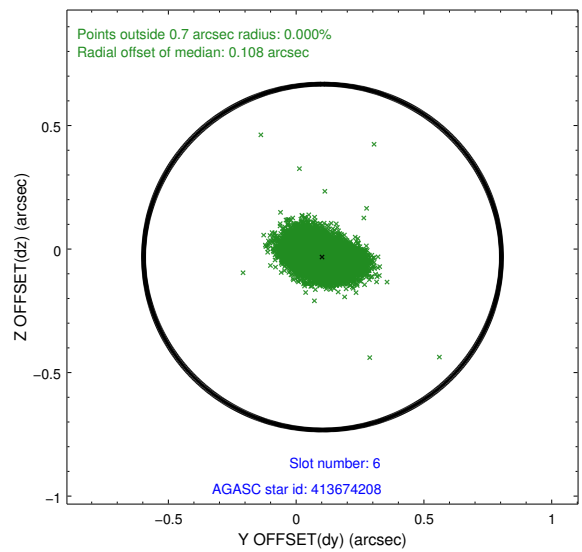
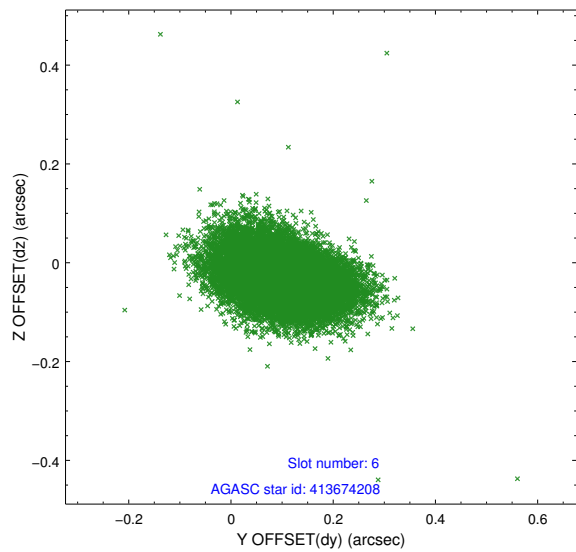
## 2.4.2 Slot 4



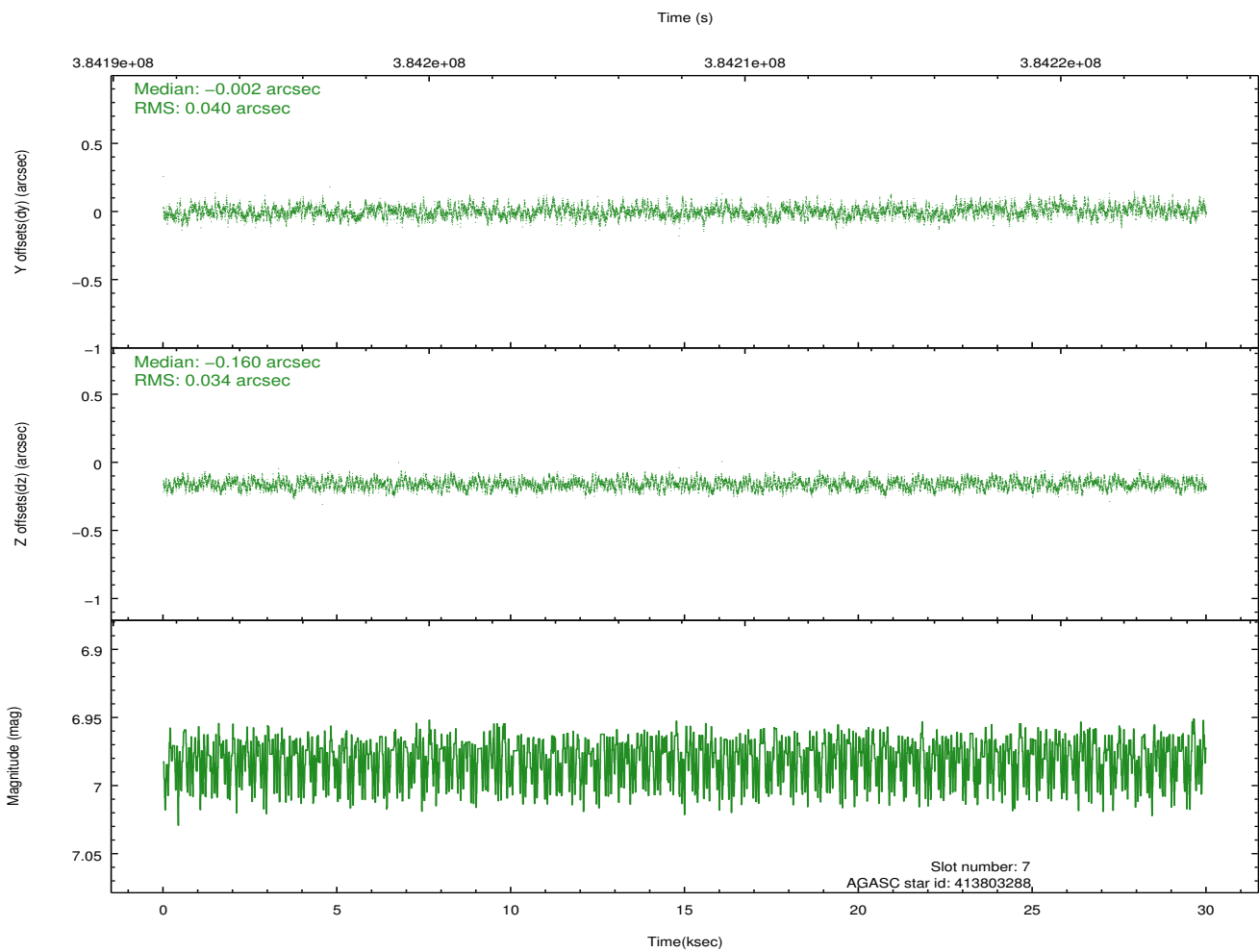
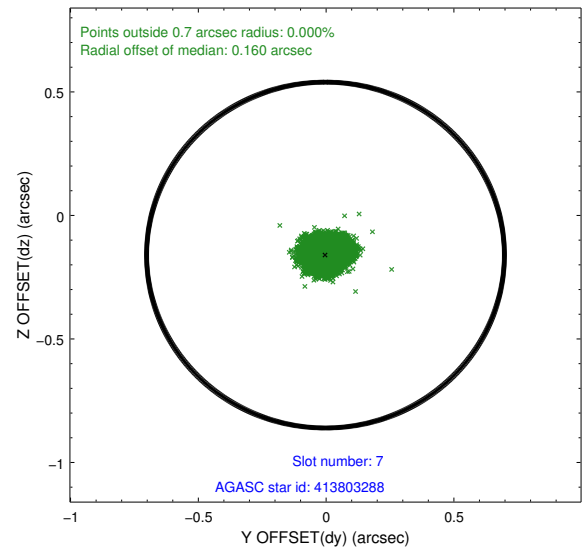
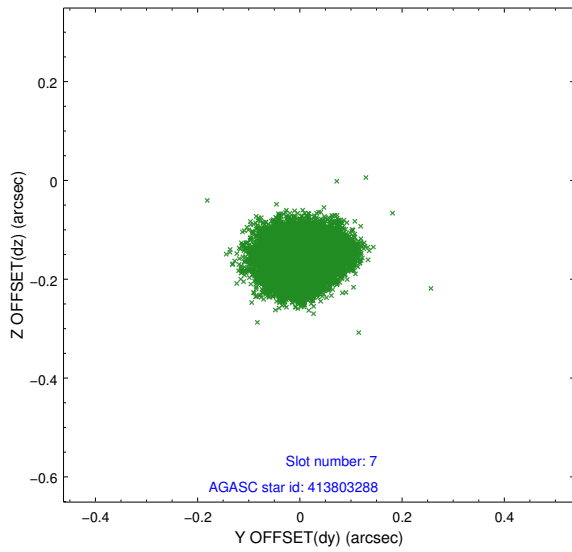
### 2.4.3 Slot 5



## 2.4.4 Slot 6

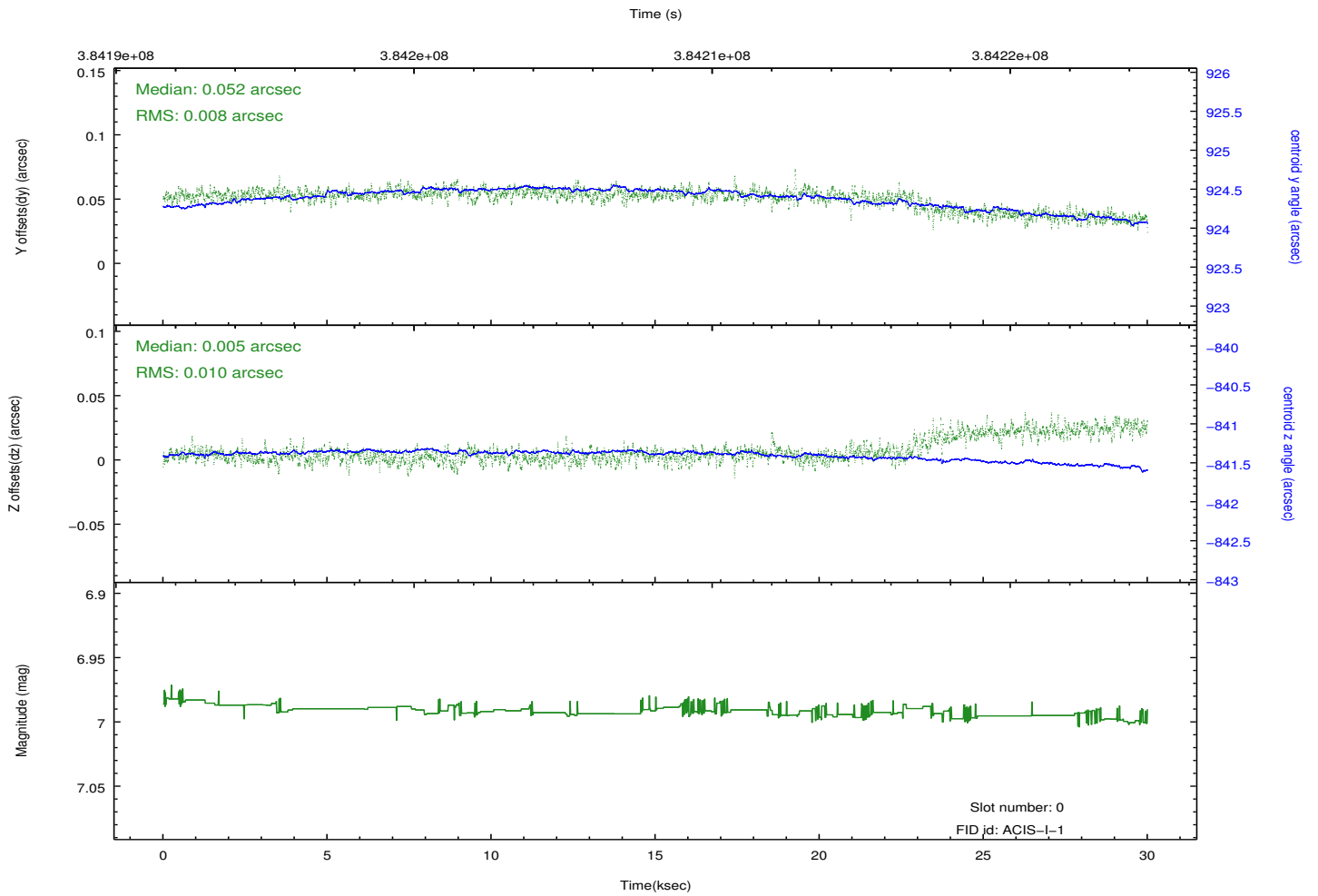
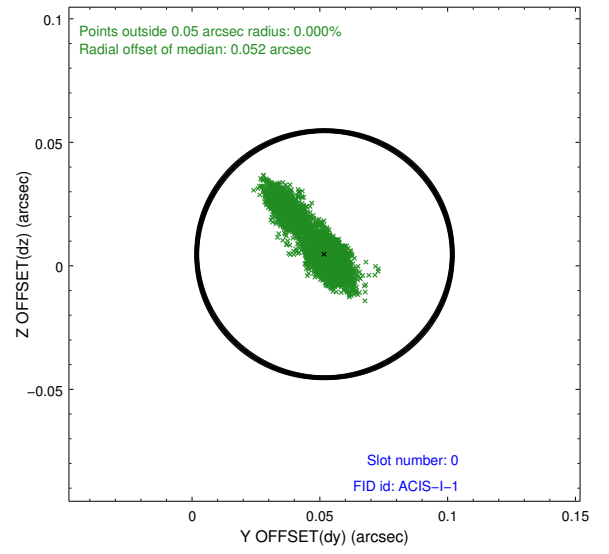
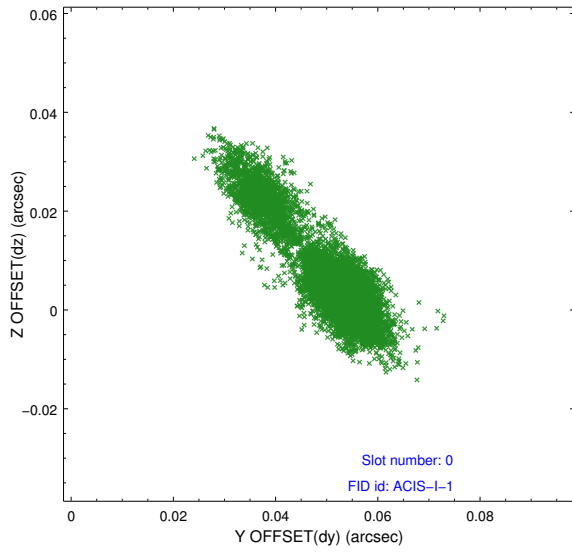


## 2.4.5 Slot 7

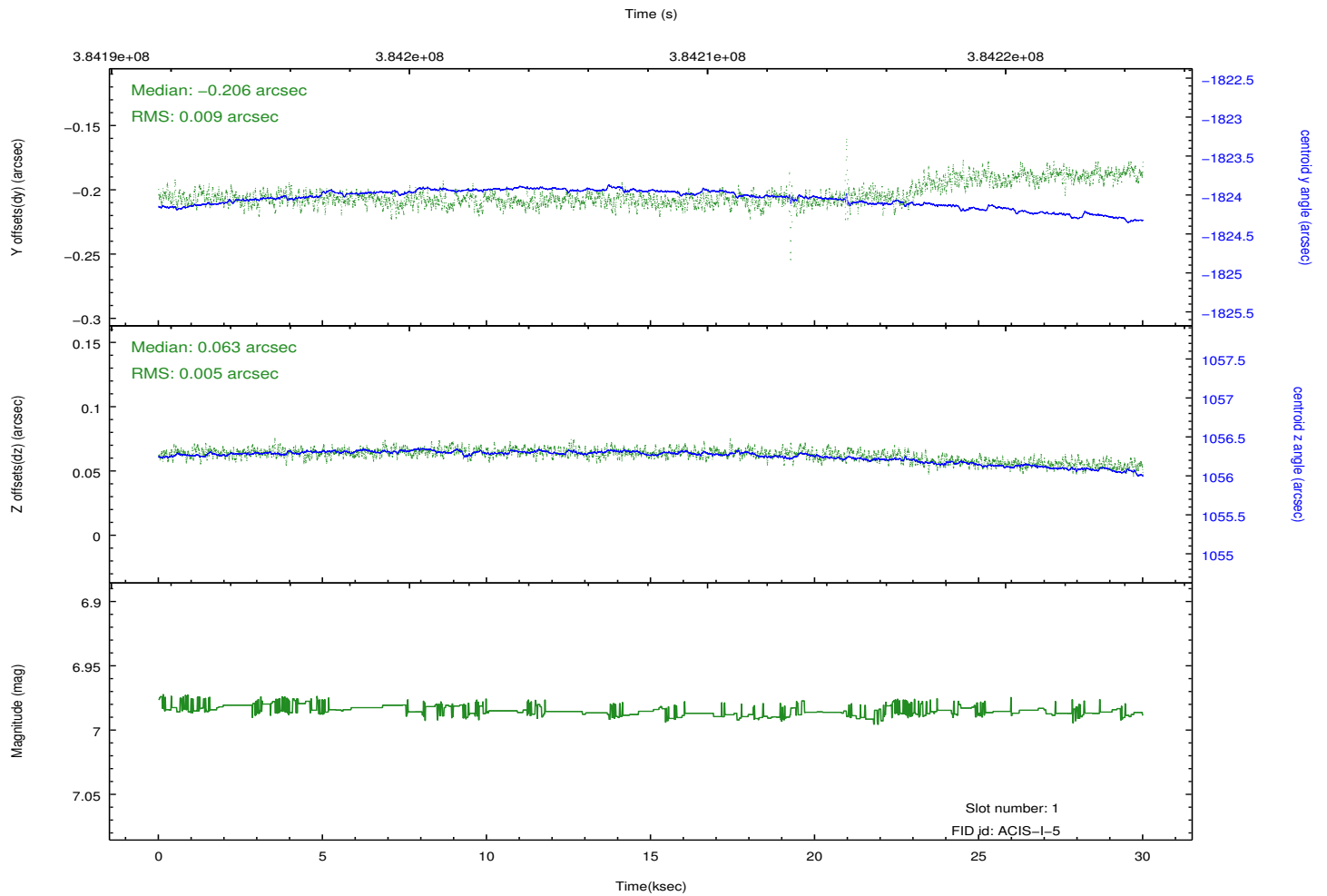
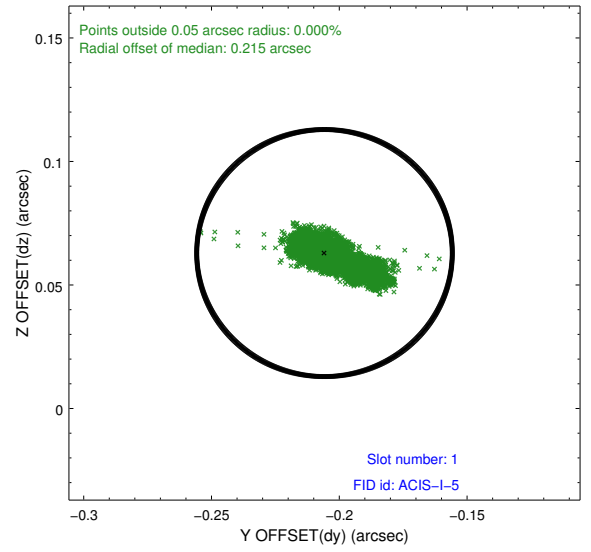
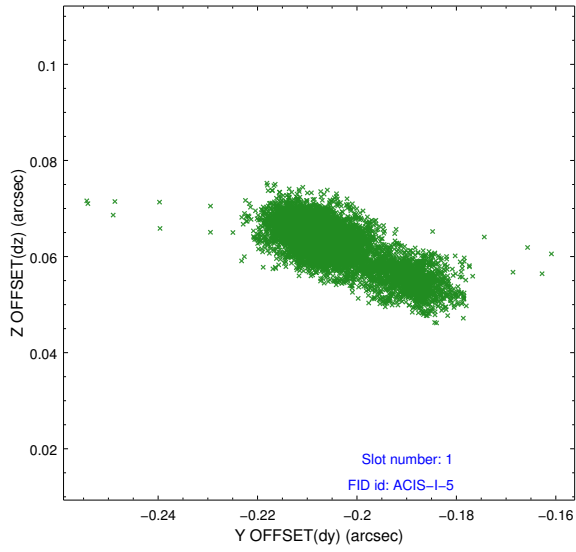


## 2.5 FID Slots

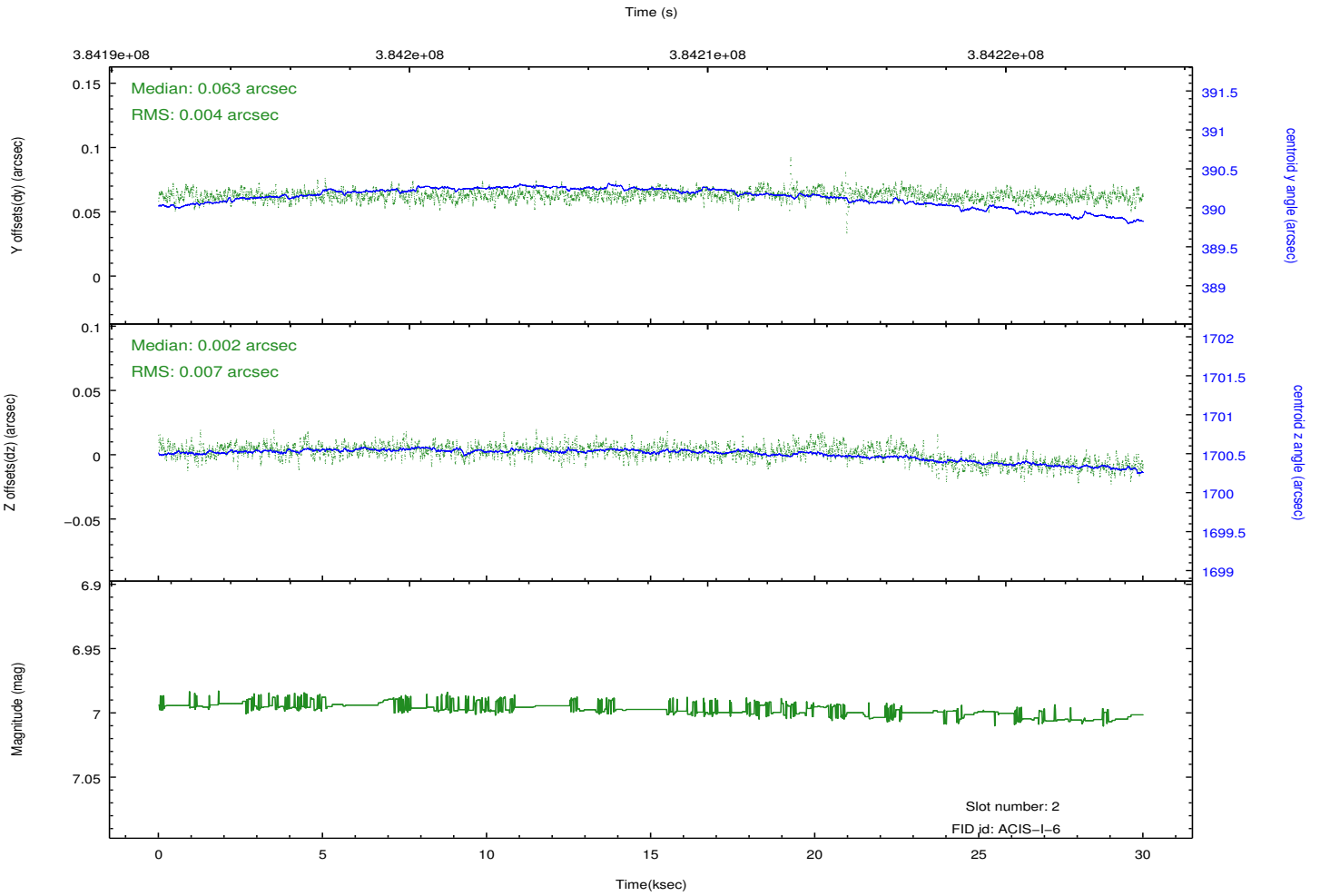
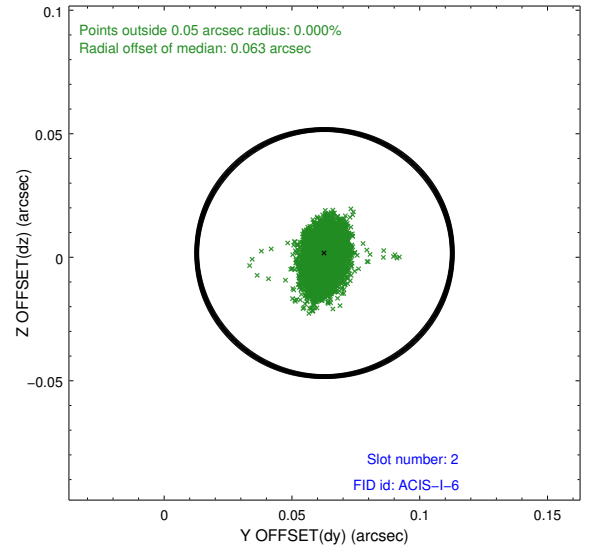
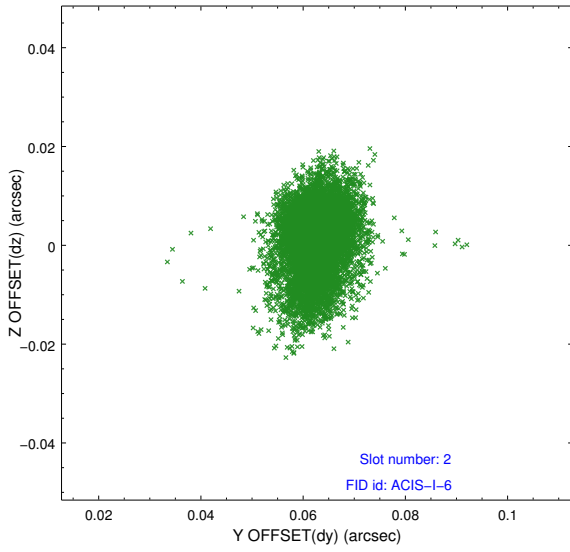
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.06.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.893177289188

## A.2 Comments