

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10956 - L2 Version 2  
Chandra X-Ray Center

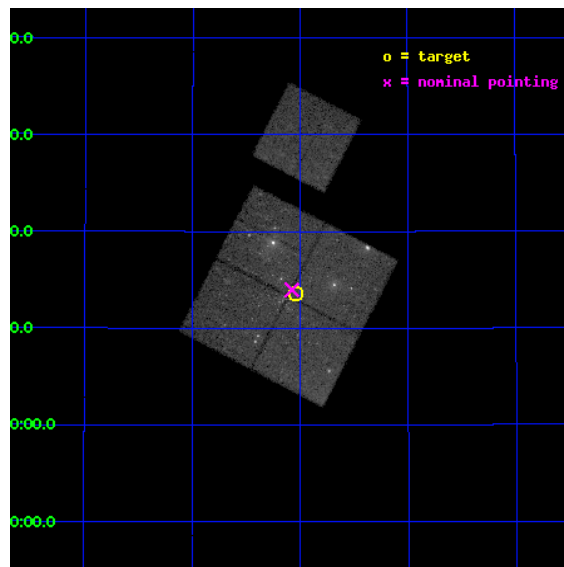
L2 Processing Date : Jun 21 2012

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# 1 Front

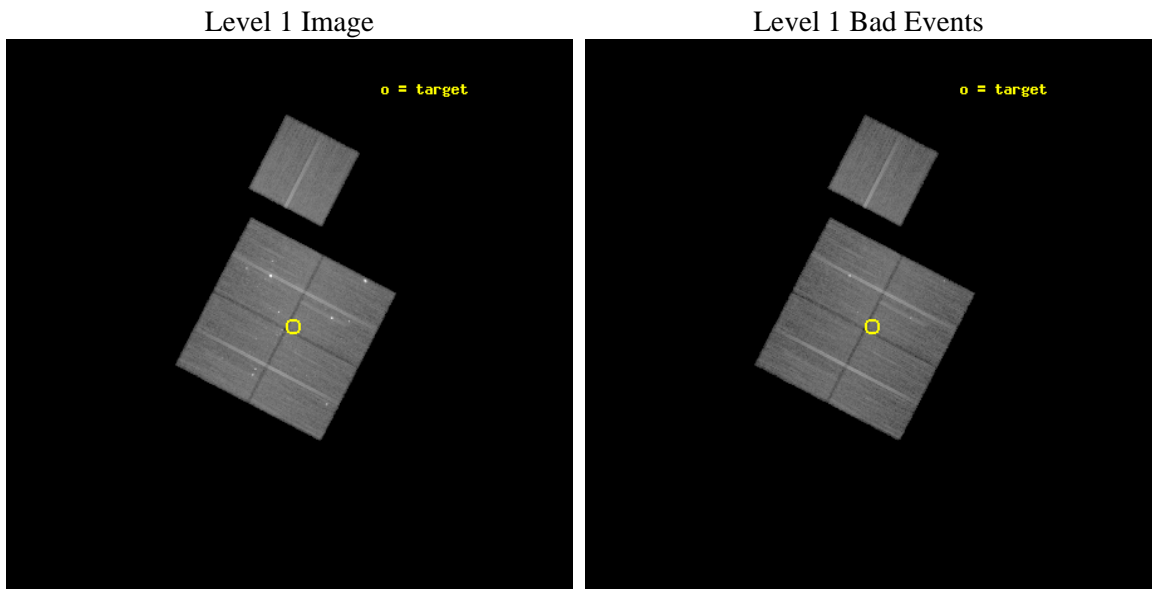
seq_num	200588	Sequence number
obs_id	10956	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.261626	Observer's specified target RA [deg]
dec_targ	41.227233	Observer's specified target Dec [deg]
ra_nom	308.26925129005	Nominal RA [deg]
dec_nom	41.232913791376	Nominal Dec [deg]
roll_nom	27.403657827744	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28045.625271022	Sum of GTIs [s]
livetime	27679.188529967	Livetime [s]
ontime0	28048.643111408	Sum of GTIs [s]
ontime1	28048.684151411	Sum of GTIs [s]
ontime2	28048.725191414	Sum of GTIs [s]
ontime3	28045.625271022	Sum of GTIs [s]
ontime6	28048.602071404	Sum of GTIs [s]
l2events	175042	Number of level 2 events



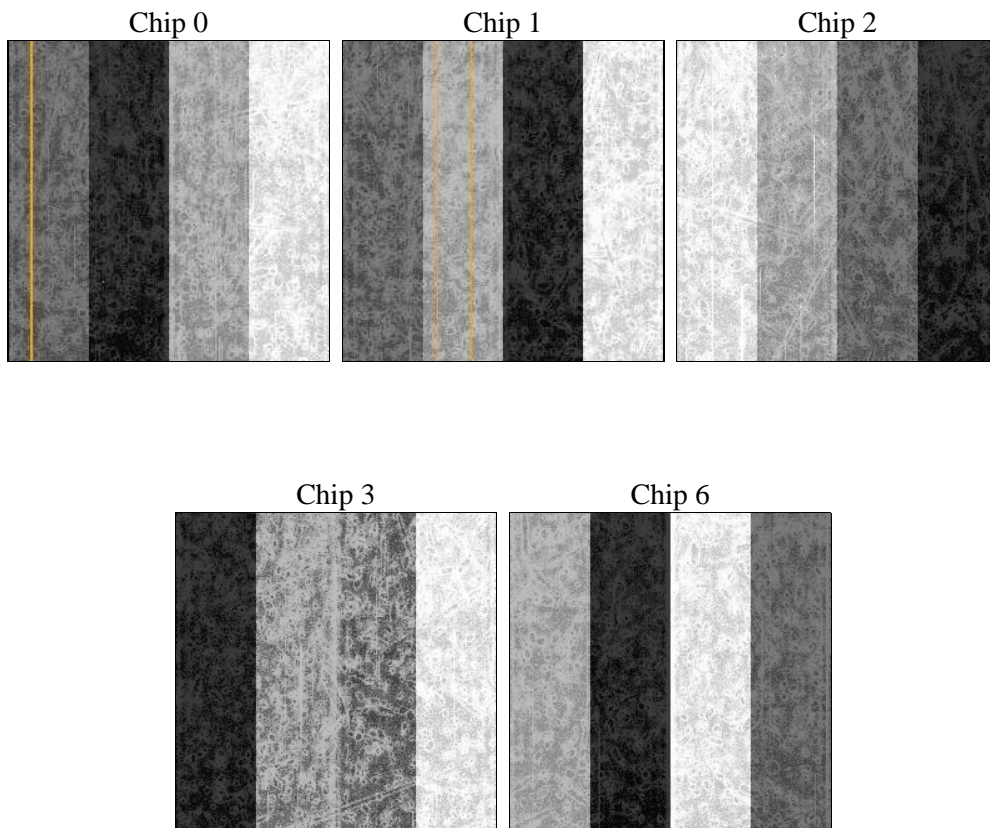
## 2 OBI

### 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	8.4.5	Processing system revision	ontime	28045.625271022	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime0	28048.643111408	Sum of GTIs [s]
date	2012-06-21T15:15:30	Date and time of file creation	ontime1	28048.684151411	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	28048.725191414	Sum of GTIs [s]
			ontime3	28045.625271022	Sum of GTIs [s]
			ontime6	28048.602071404	Sum of GTIs [s]
			l1events	1149278	Number of level 1 events

### 2.1.4 Events

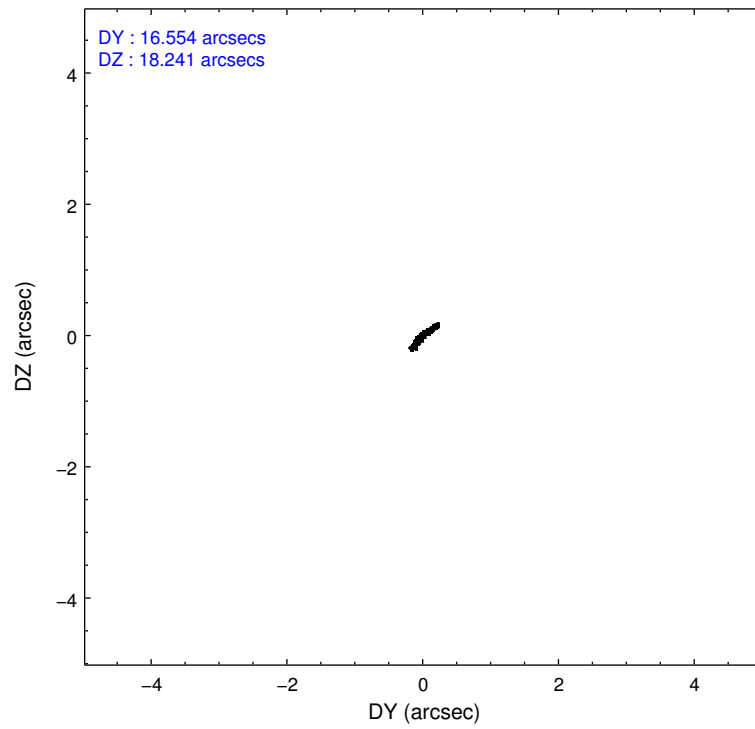
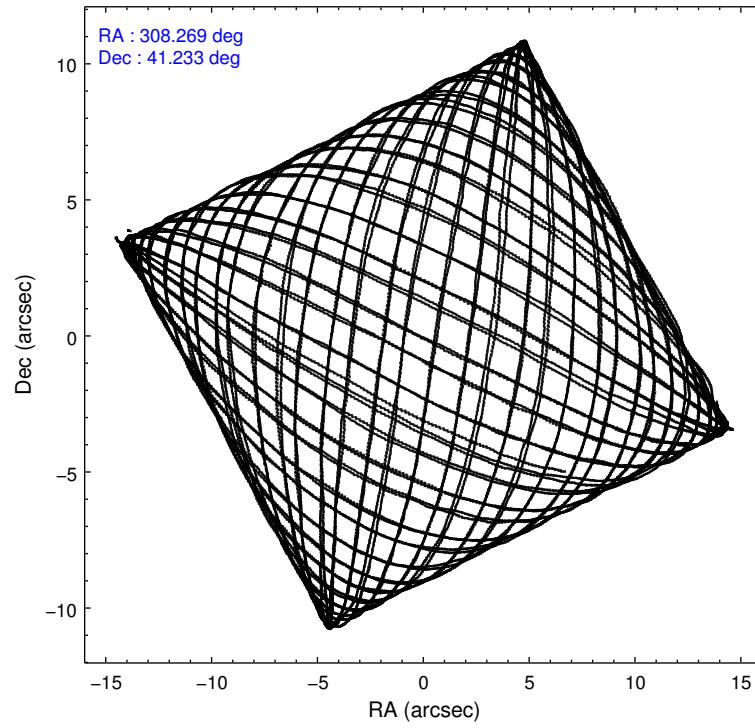
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	208279	219701	263818	235170	222310
rejected events	175343	181298	205595	188978	195520
rejected %	84%	82%	77%	80%	87%

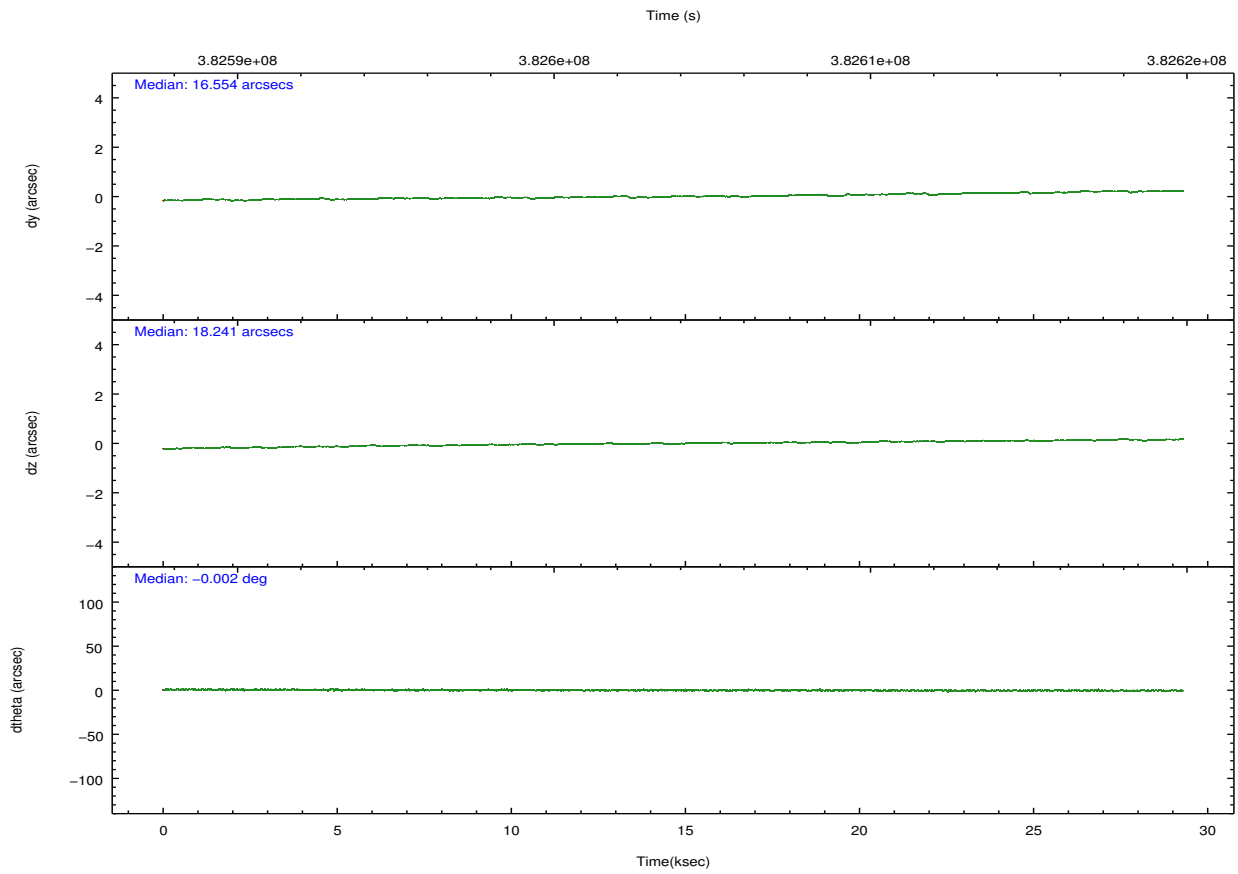
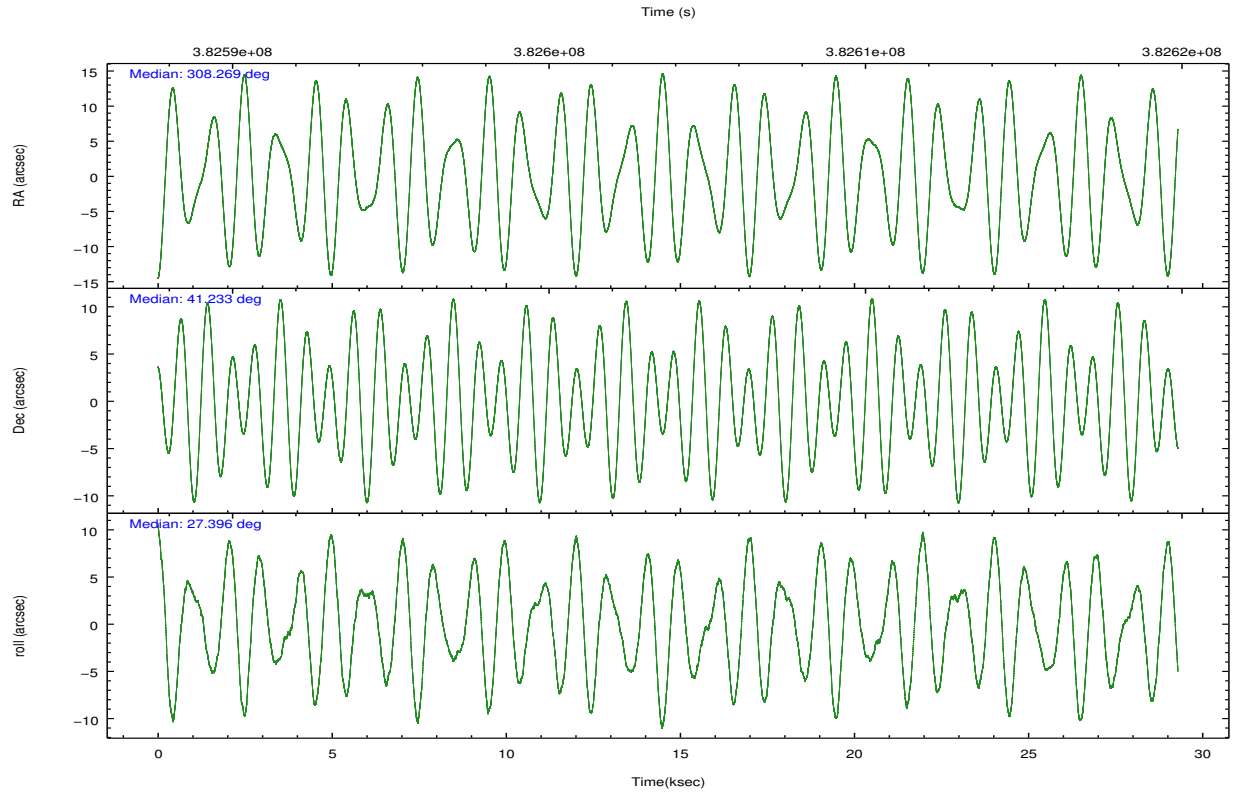
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	16054	19174	36312	27616	11624
	7%	8%	13%	11%	5%
grade 1 events	179	153	1458	459	112
	0%	0%	0%	0%	0%
grade 2 events	6713	7396	9862	7475	5375
	3%	3%	3%	3%	2%
grade 3 events	2840	3213	3616	3232	2449
	1%	1%	1%	1%	1%
grade 4 events	2681	3171	3600	3180	2558
	1%	1%	1%	1%	1%
grade 5 events	7207	7769	7495	8095	7711
	3%	3%	2%	3%	3%
grade 6 events	4654	5454	4847	4693	4787
	2%	2%	1%	1%	2%
grade 7 events	167951	173371	196628	180420	187694
	80%	78%	74%	76%	84%

## 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	308.249697	308.2692512900452	CCD I2 on	Y	Y
[deg] Pointing Dec	41.209694	41.23291379137618	CCD I3 on	Y	Y
[deg] Pointing Roll	27.207853	27.40365782774359	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)	382590410.184000	382588928.45902	CCD S5 on	N	N
Observation start date	2010-02-15T03:05:44	2010-02-15T02:42:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	382618410.184000	382619391.46057	On-chip summing requested	N	N
Observation end date	2010-02-15T10:52:24	2010-02-15T11:09:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



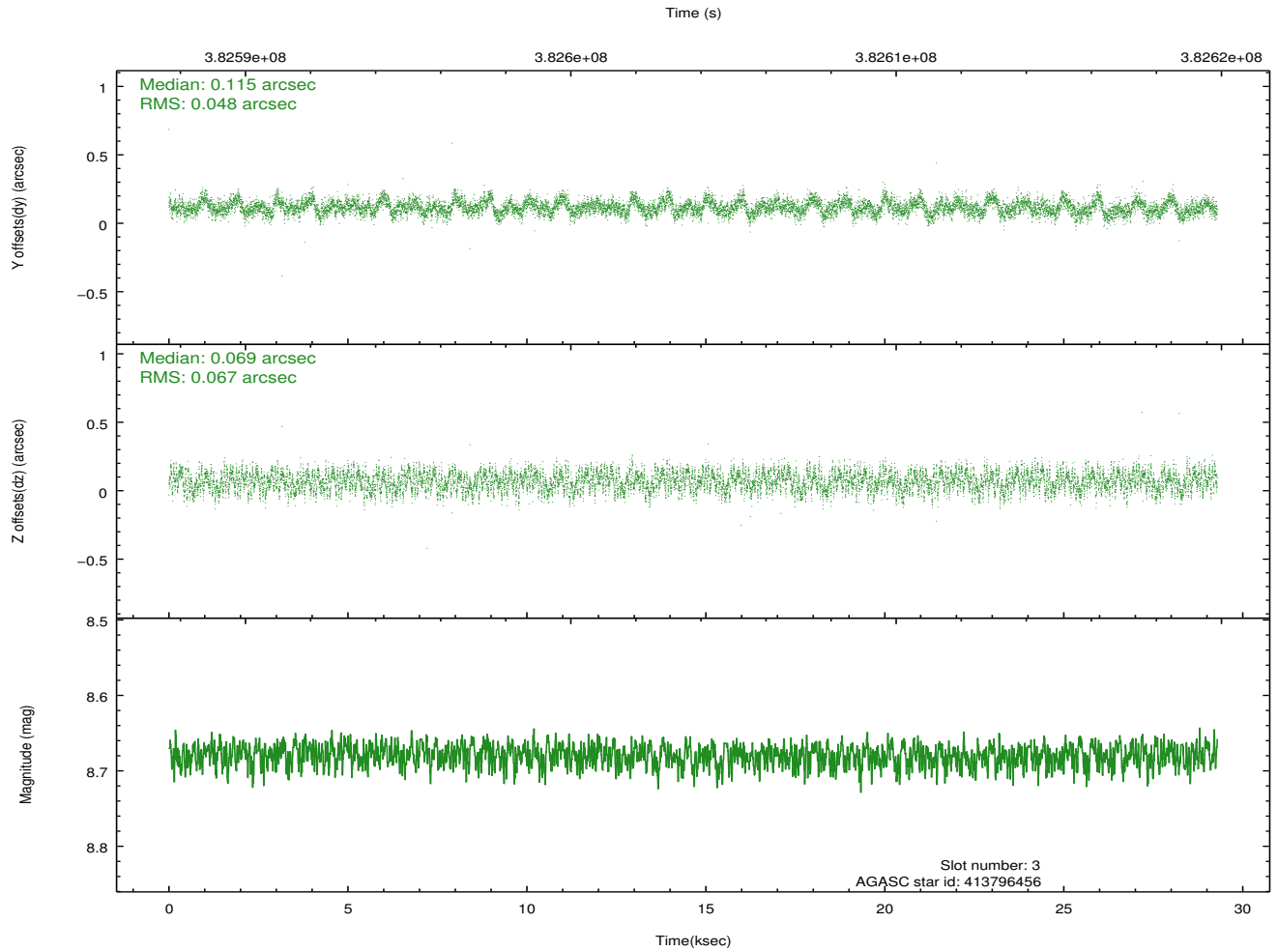
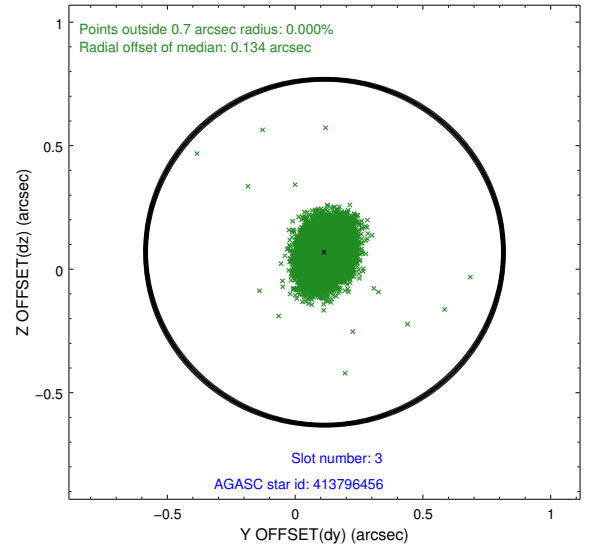
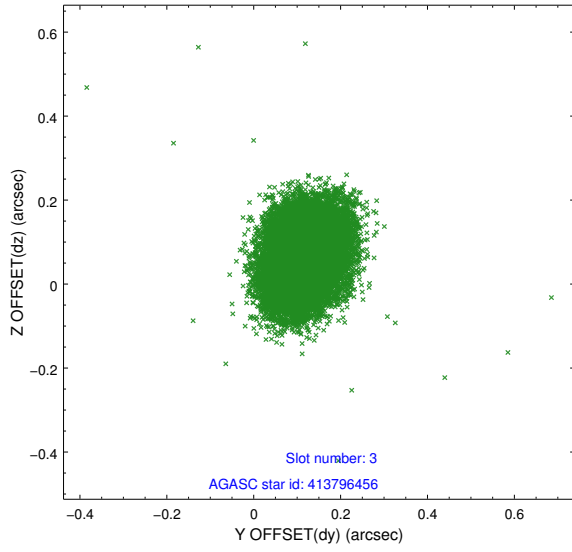


### Slot Statistics

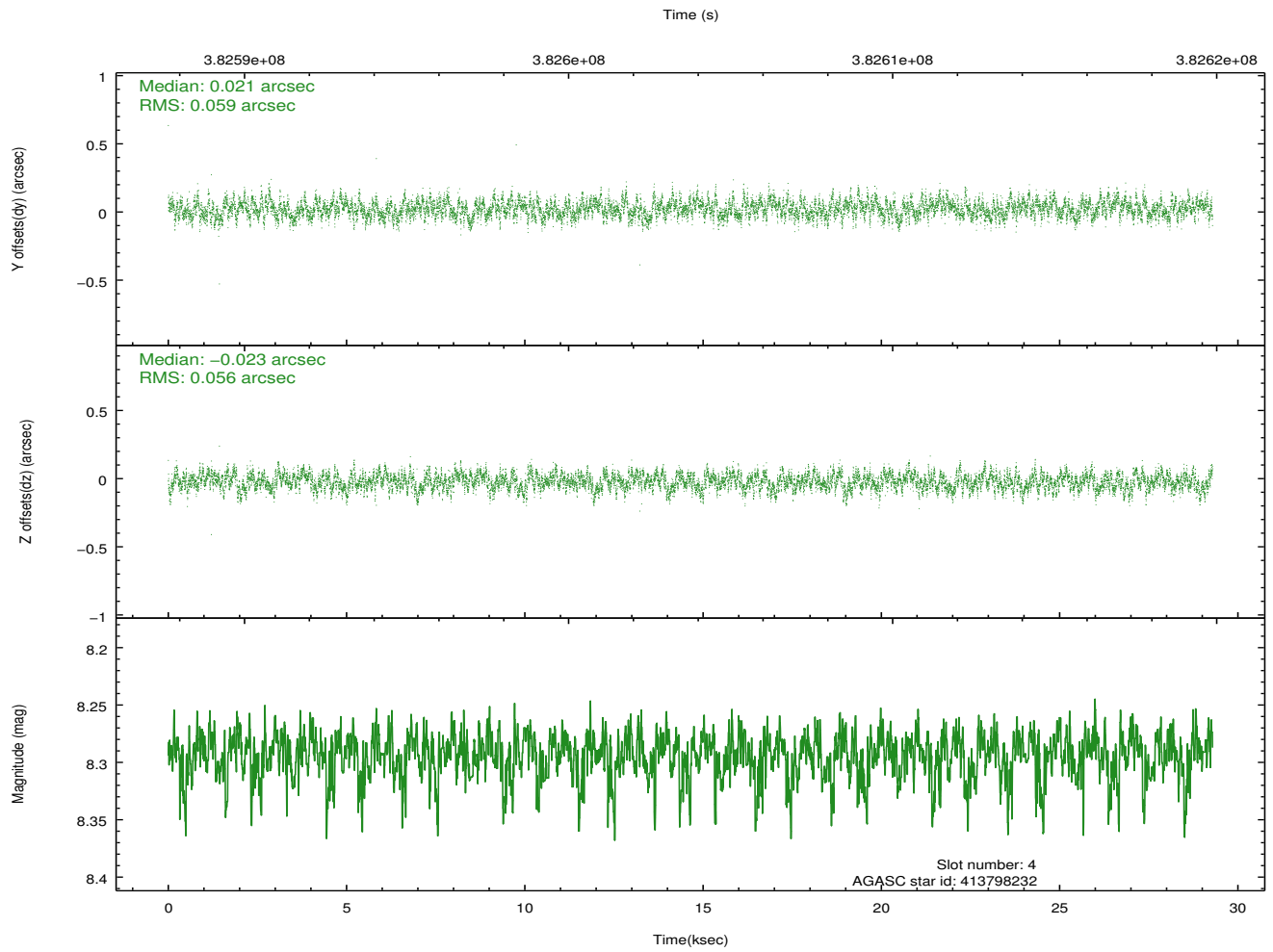
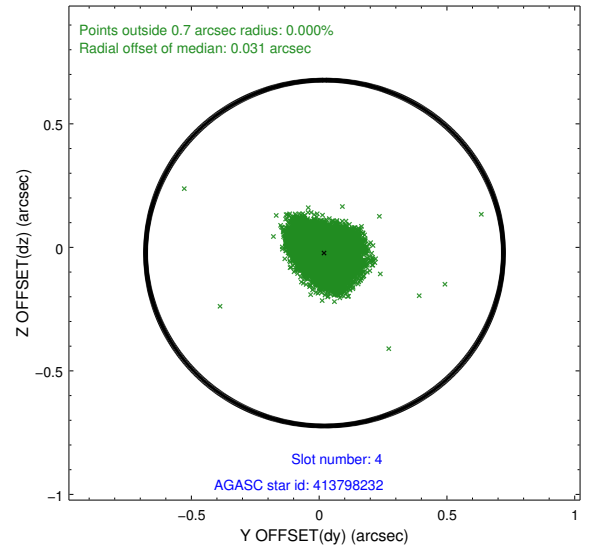
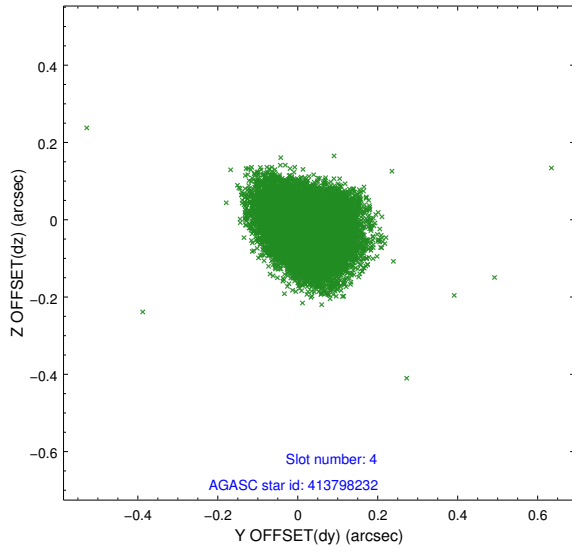
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.98	7144	0.020	0.032	0.006	0.011	0.000000	0.000000	922.87	-841.88
1	FID	ACIS-I-5	6.98	7144	-0.178	0.041	0.006	0.011	0.000000	0.000000	-1825.40	1055.57
2	FID	ACIS-I-6	7.00	7143	0.066	-0.003	0.007	0.011	0.000000	0.000000	388.37	1700.12
3	GUIDE	413796456	8.68	14280	0.115	0.069	0.089	0.138	308.312084	40.613132	-829.60	-1987.81
4	GUIDE	413798232	8.29	14285	0.021	-0.023	0.086	0.138	309.116117	41.044272	1825.52	-1594.80
5	GUIDE	414324232	8.31	14282	0.071	-0.039	0.066	0.105	308.637806	41.996627	2220.08	2047.13
6	GUIDE	414326136	7.36	14286	-0.203	-0.171	0.068	0.106	308.256176	41.473642	450.47	837.49
7	GUIDE	413803744	8.84	14273	-0.012	0.163	0.084	0.137	308.586342	40.704904	-12.16	-2034.20

## 2.4 Star Slots

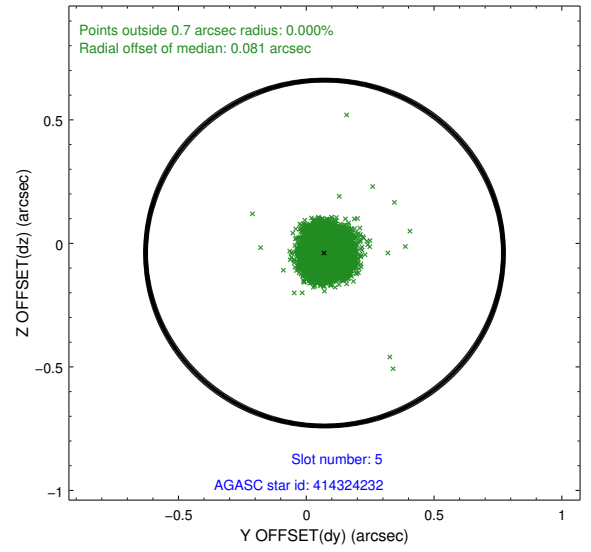
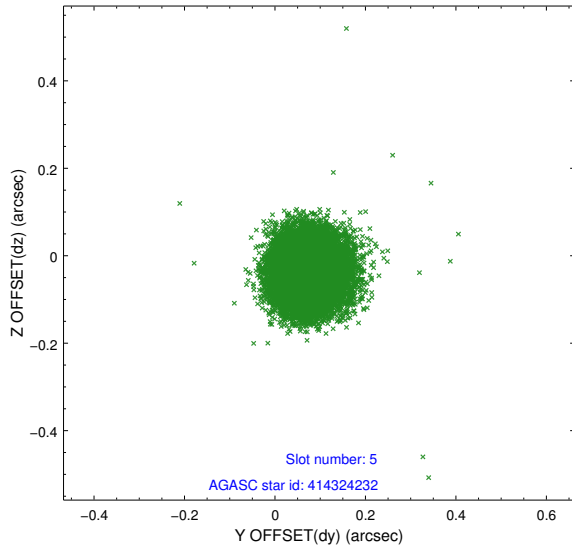
### 2.4.1 Slot 3



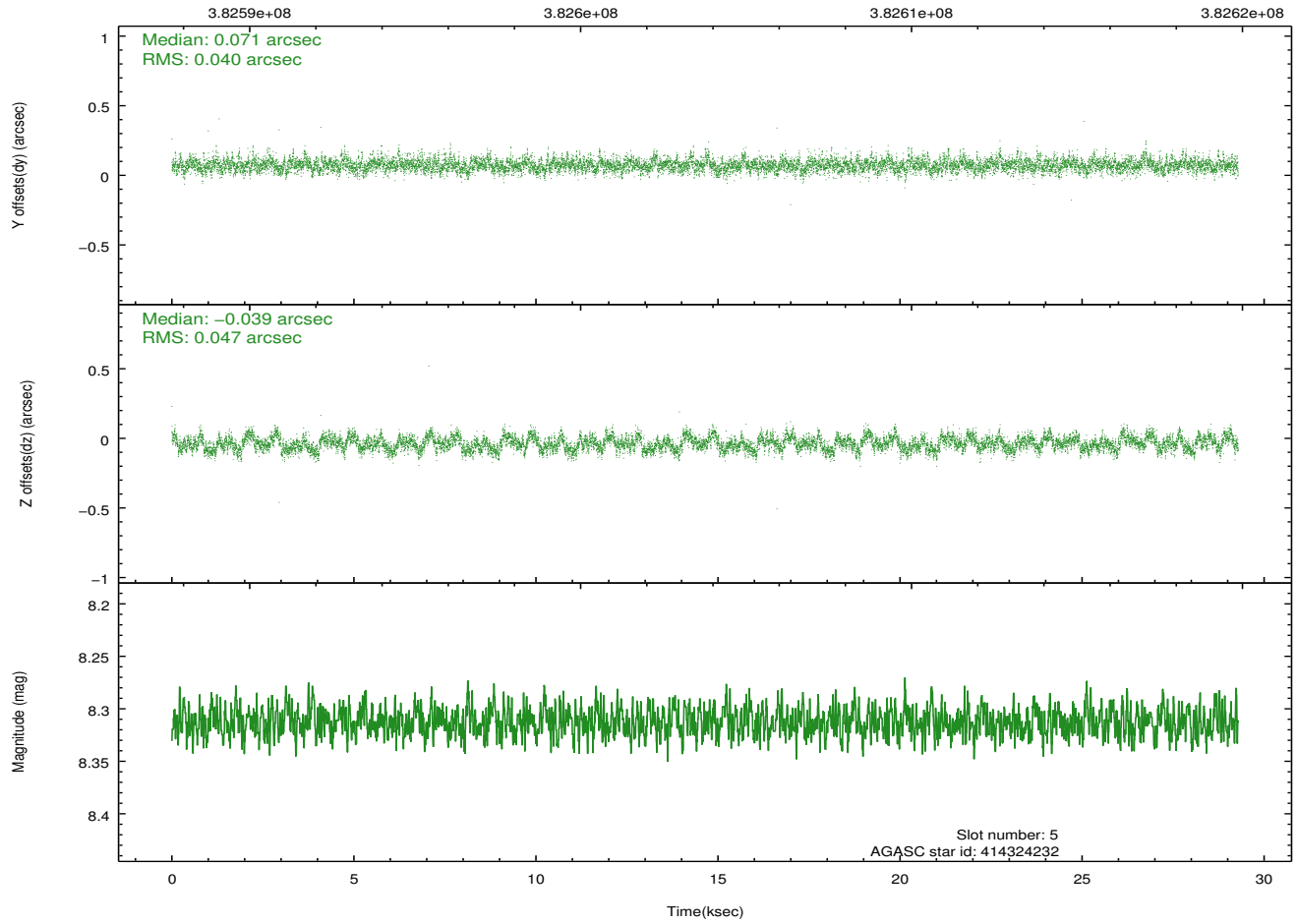
### 2.4.2 Slot 4



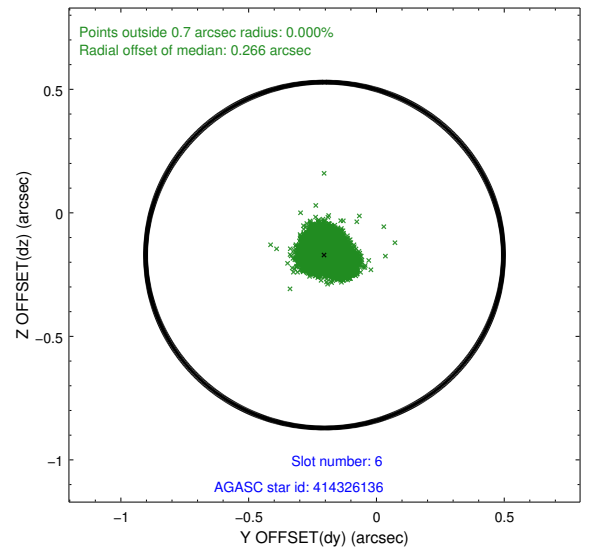
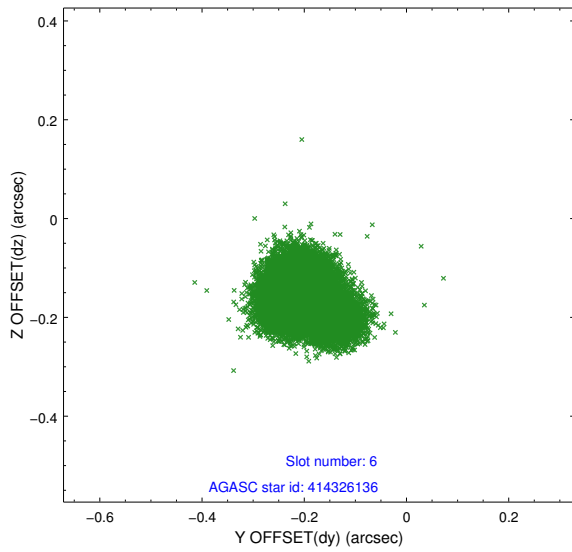
### 2.4.3 Slot 5



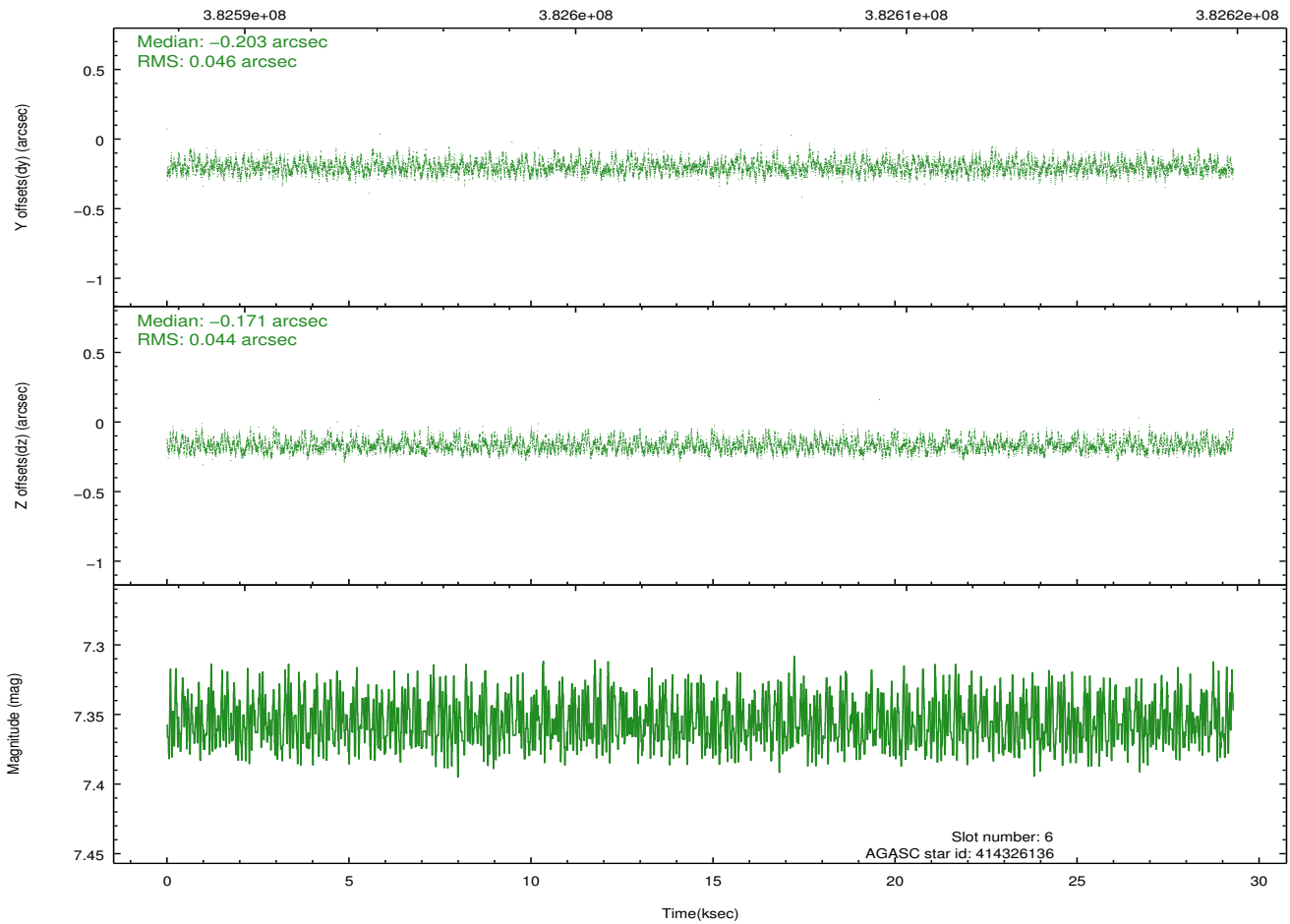
Time (s)



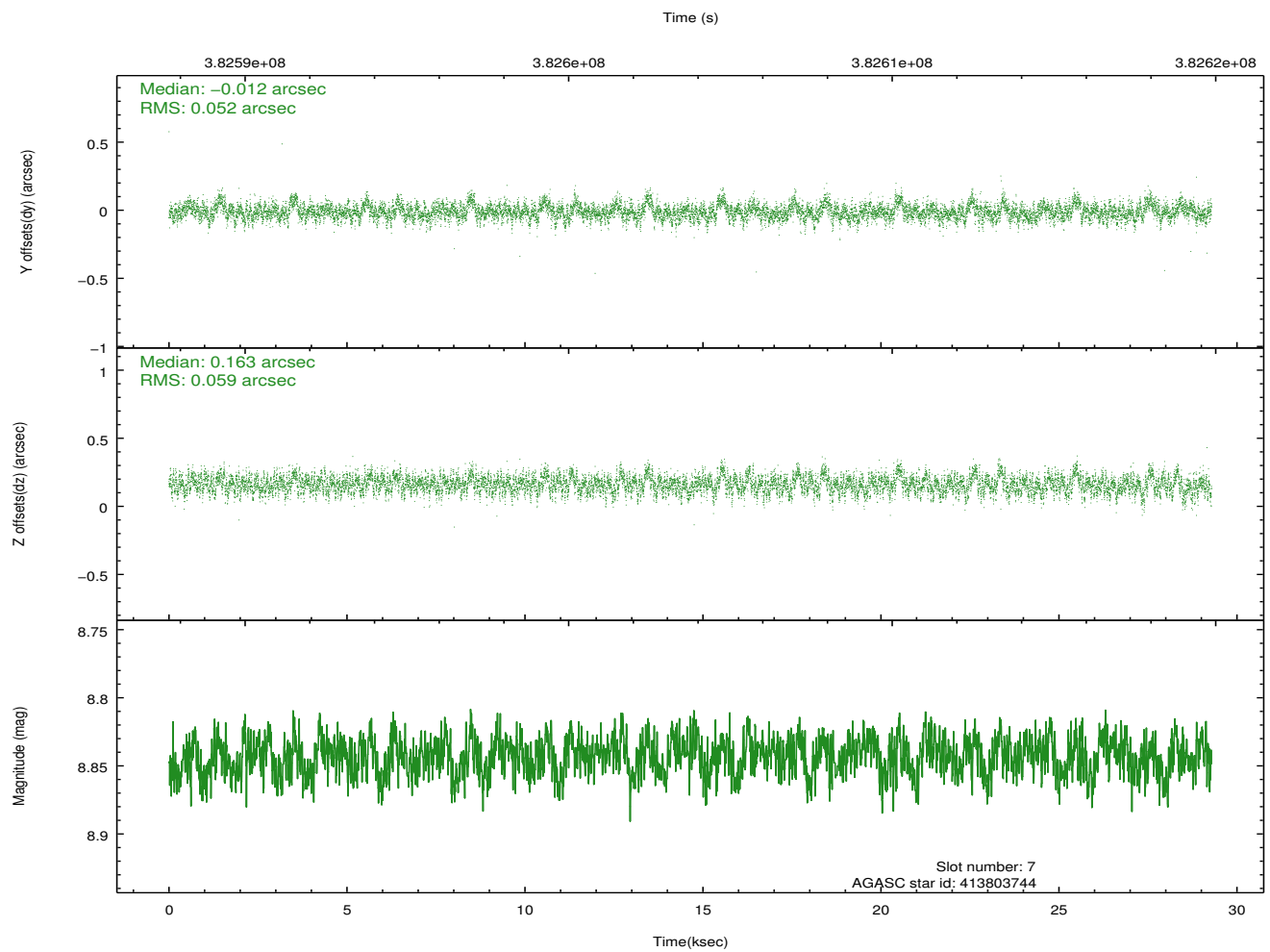
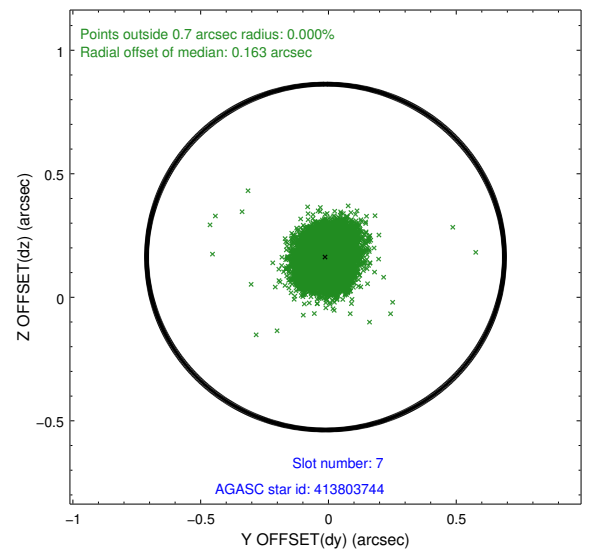
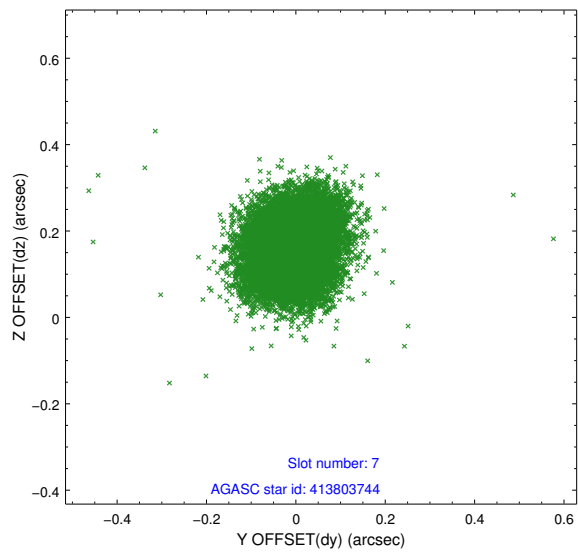
## 2.4.4 Slot 6



Time (s)

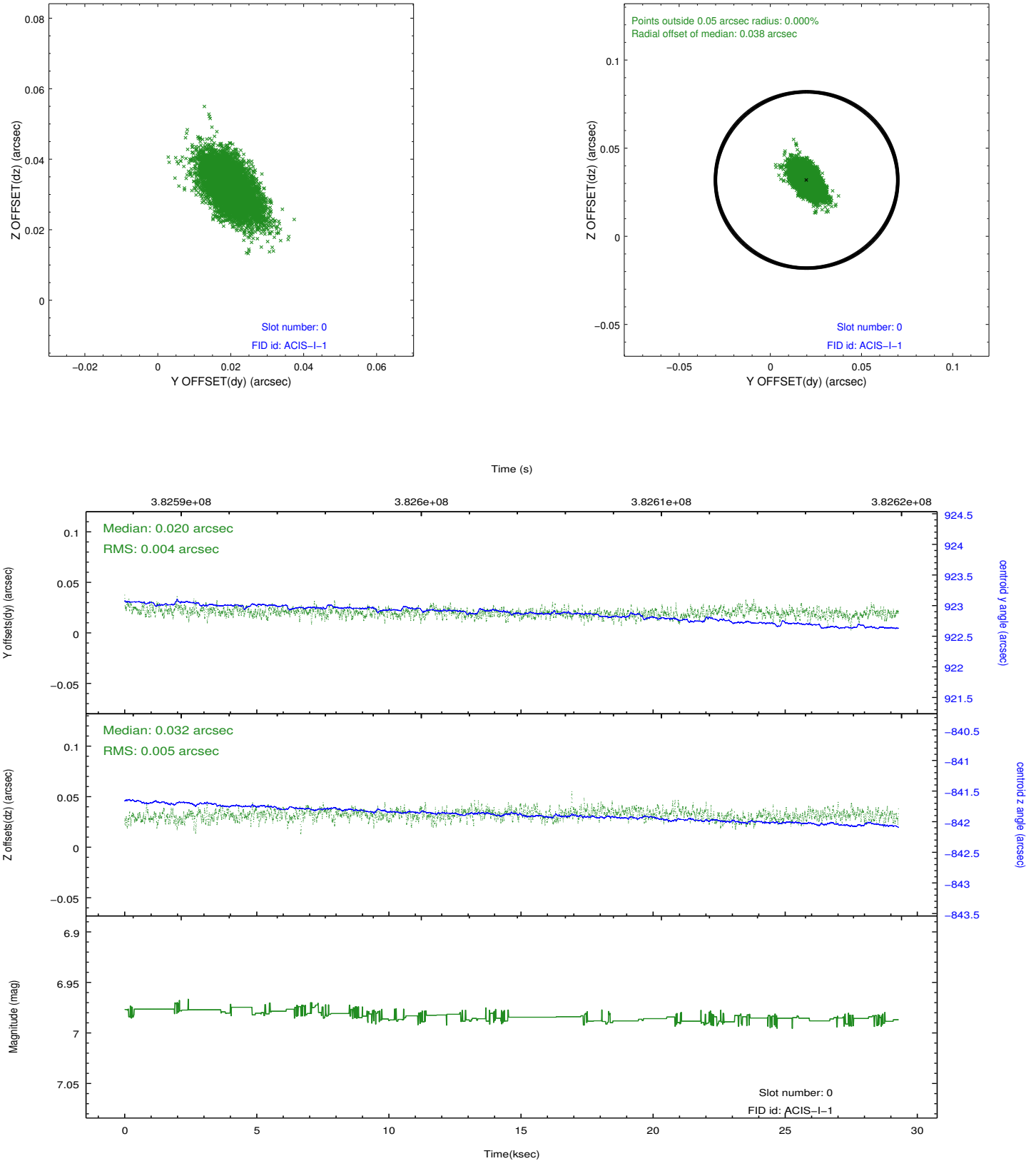


## 2.4.5 Slot 7

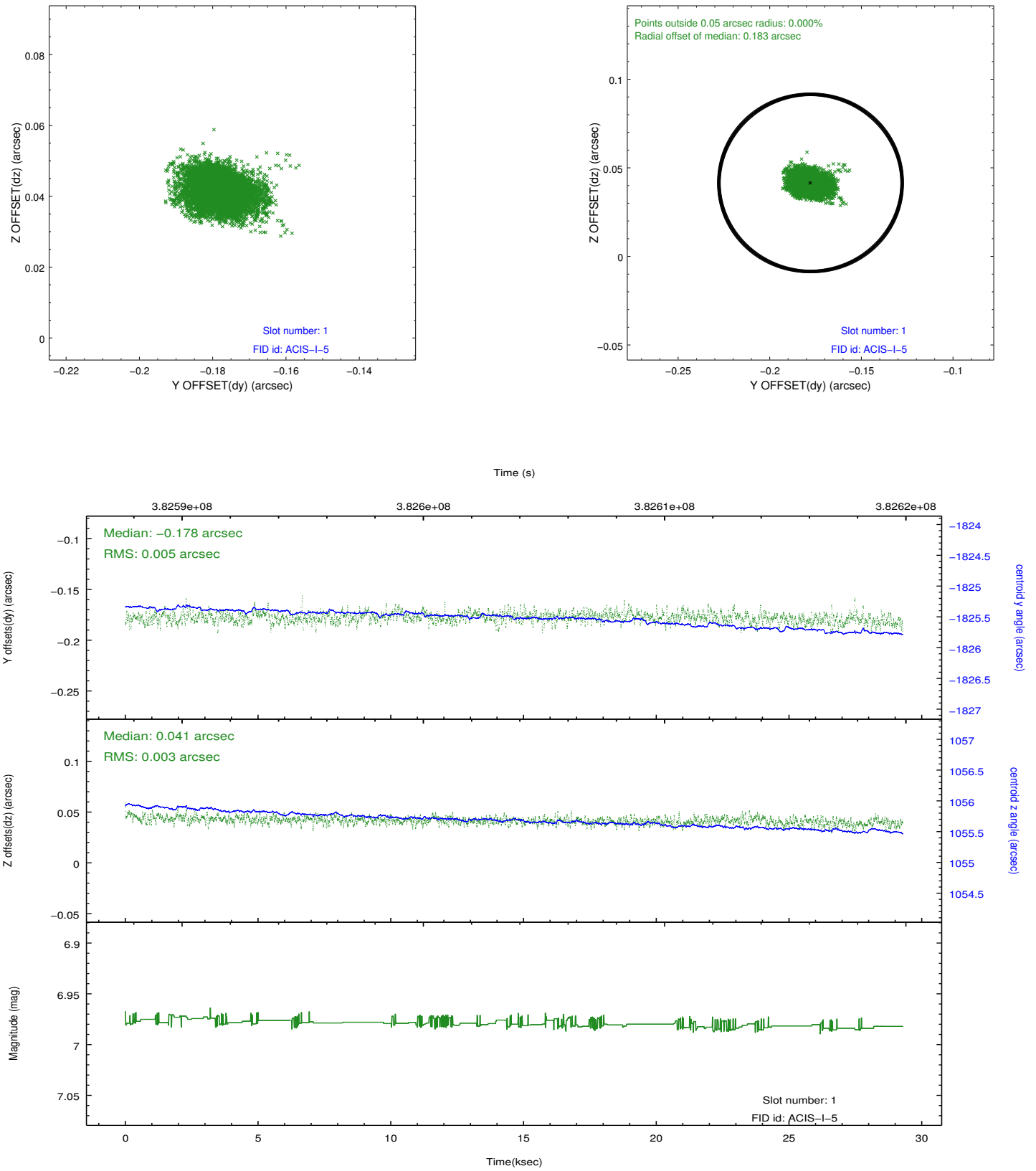


## 2.5 FID Slots

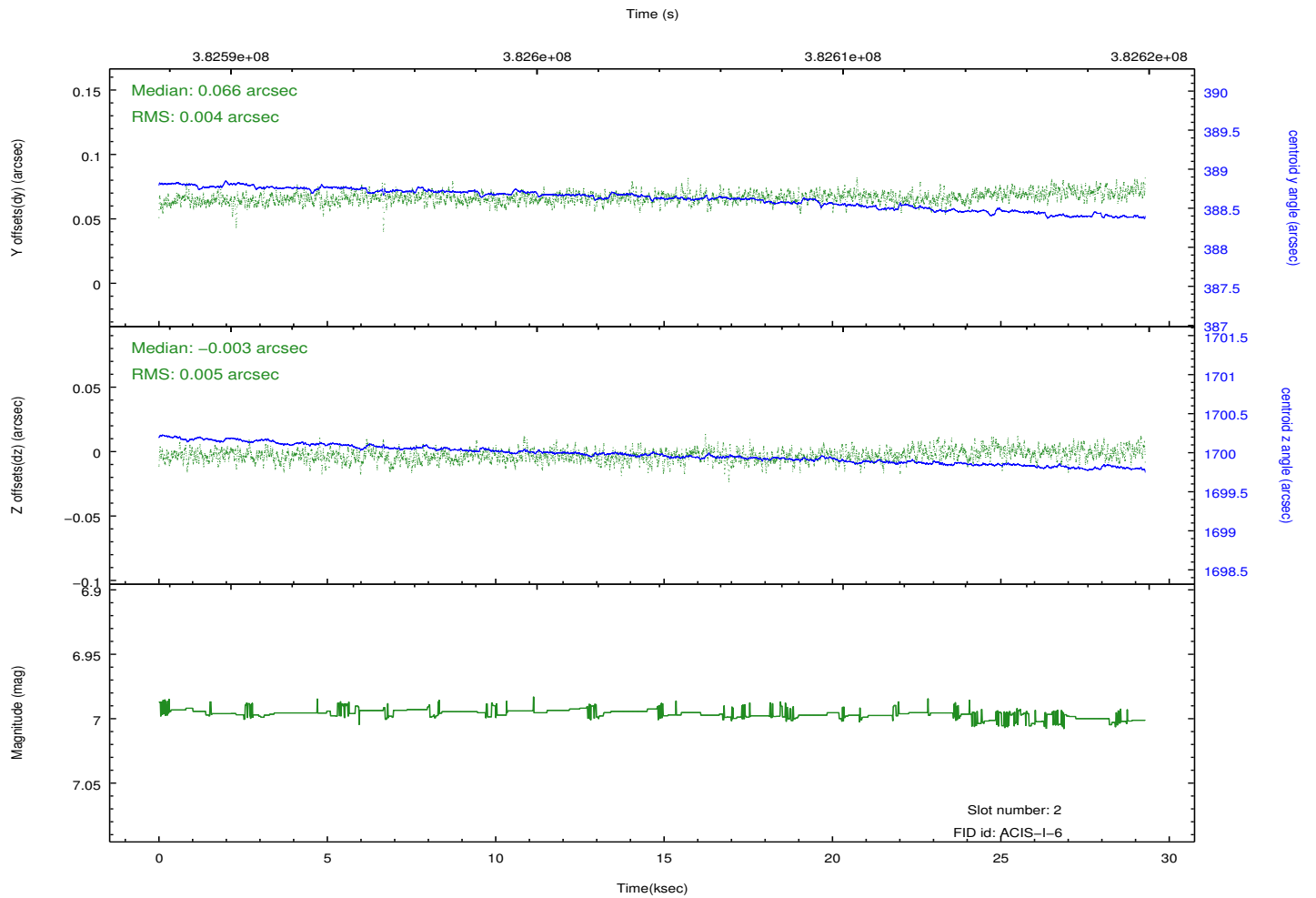
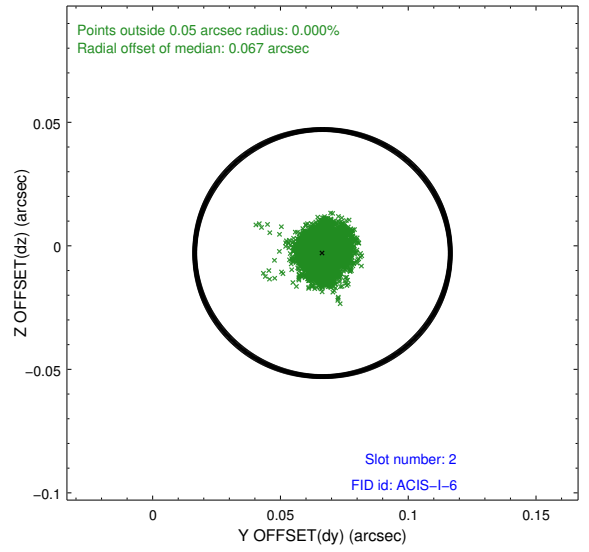
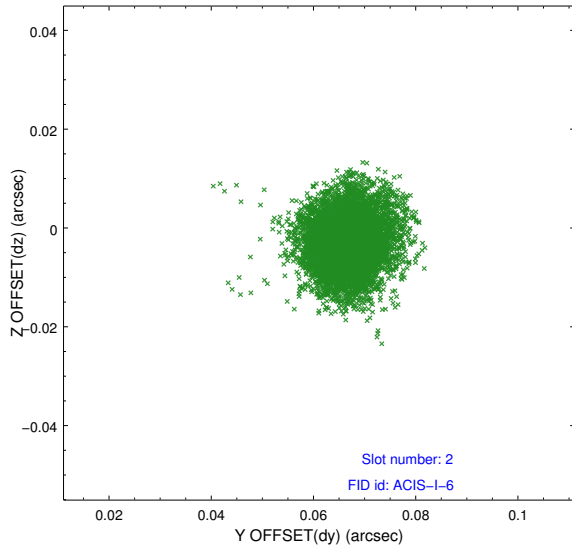
### 2.5.1 Slot 0



## 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)	2012.06.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.045625269651

### A.2 Comments