

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11807 - L2 Version 3  
Chandra X-Ray Center

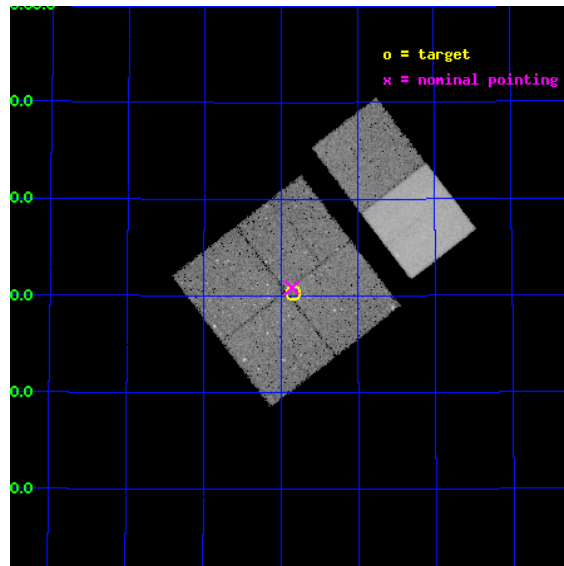
L2 Processing Date : Jun 25 2012

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# 1 Front

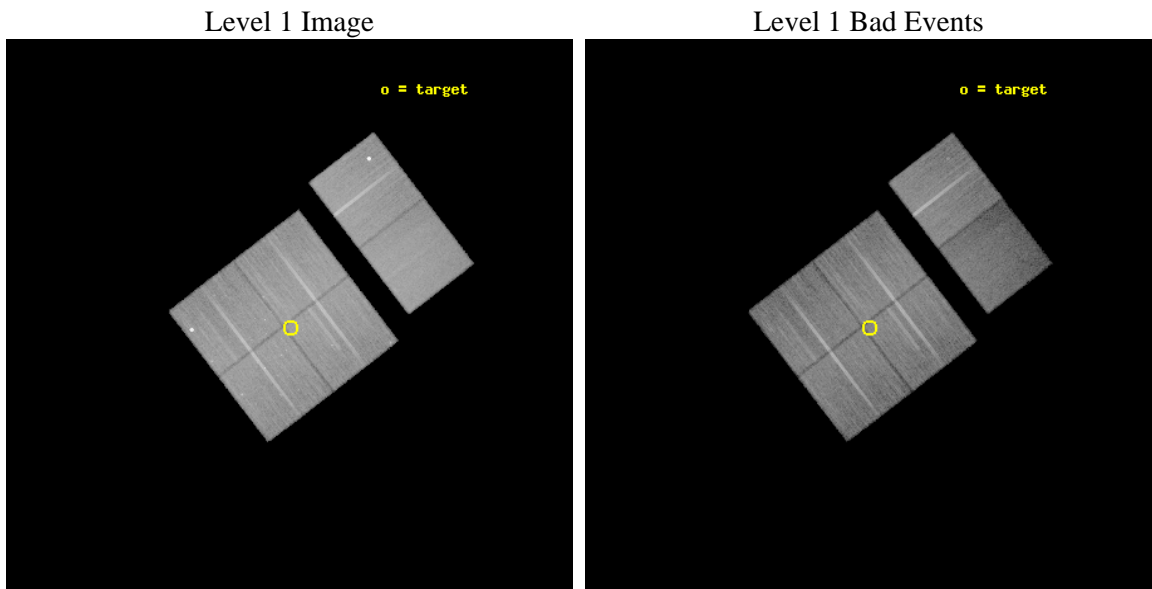
seq_num	200655	Sequence number
obs_id	11807	Observation id
title	IC1396 HII region as a testbed of triggered star formation: BRC36 (GTO portion)	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	IC1396_BRC36	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	324.209583	Observer's specified target RA [deg]
dec_targ	57.506667	Observer's specified target Dec [deg]
ra_nom	324.21480575428	Nominal RA [deg]
dec_nom	57.514244541365	Nominal Dec [deg]
roll_nom	52.409244998082	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30134.3998878	Sum of GTIs [s]
livetime	29752.819971664	Livetime [s]
ontime0	30131.158927441	Sum of GTIs [s]
ontime1	30134.3998878	Sum of GTIs [s]
ontime2	30131.159036934	Sum of GTIs [s]
ontime3	30134.3998878	Sum of GTIs [s]
ontime6	30127.917907357	Sum of GTIs [s]
ontime7	30134.3998878	Sum of GTIs [s]
l2events	209367	Number of level 2 events



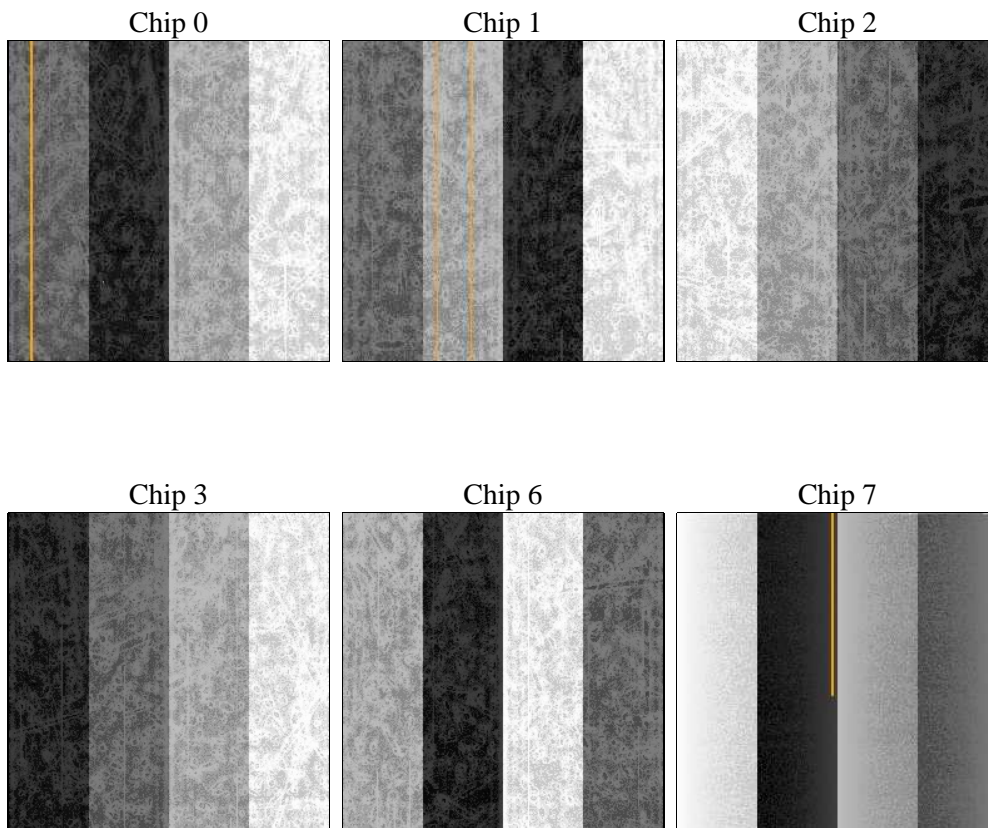
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30134.3998878	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime0	30131.158927441	Sum of GTIs [s]
date	2012-06-25T21:10:04	Date and time of file creation	ontime1	30134.3998878	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	30131.159036934	Sum of GTIs [s]
			ontime3	30134.3998878	Sum of GTIs [s]
			ontime6	30127.917907357	Sum of GTIs [s]
			ontime7	30134.3998878	Sum of GTIs [s]
			l1events	1339127	Number of level 1 events

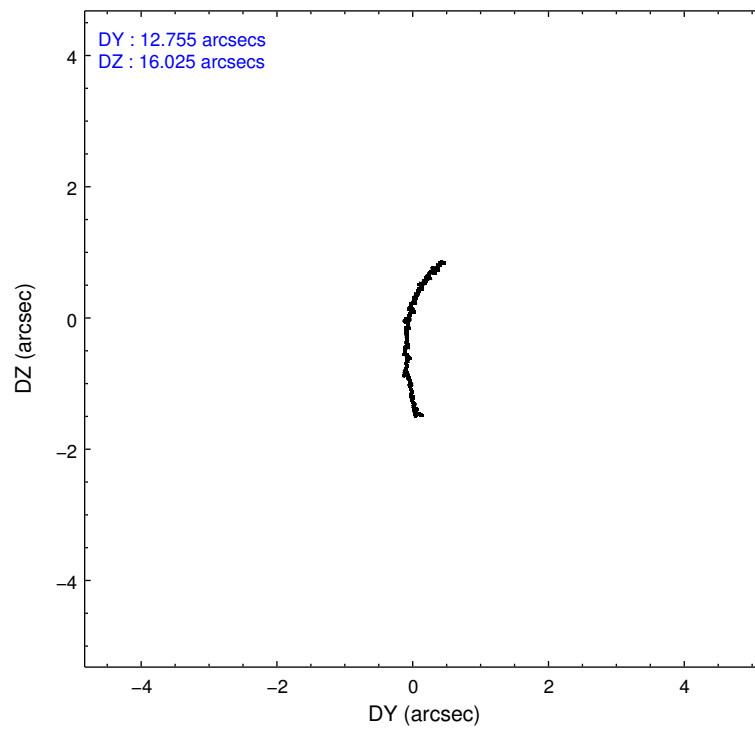
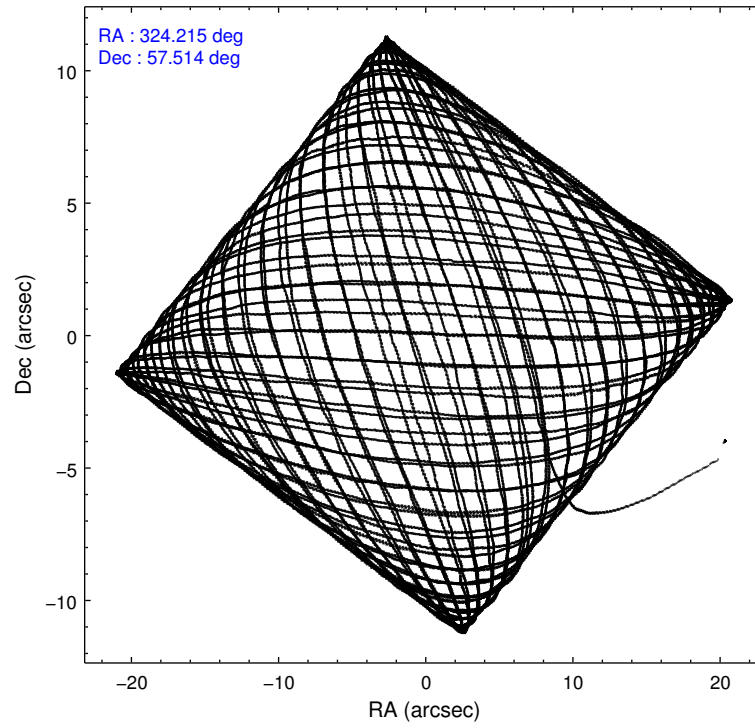
### 2.1.4 Events

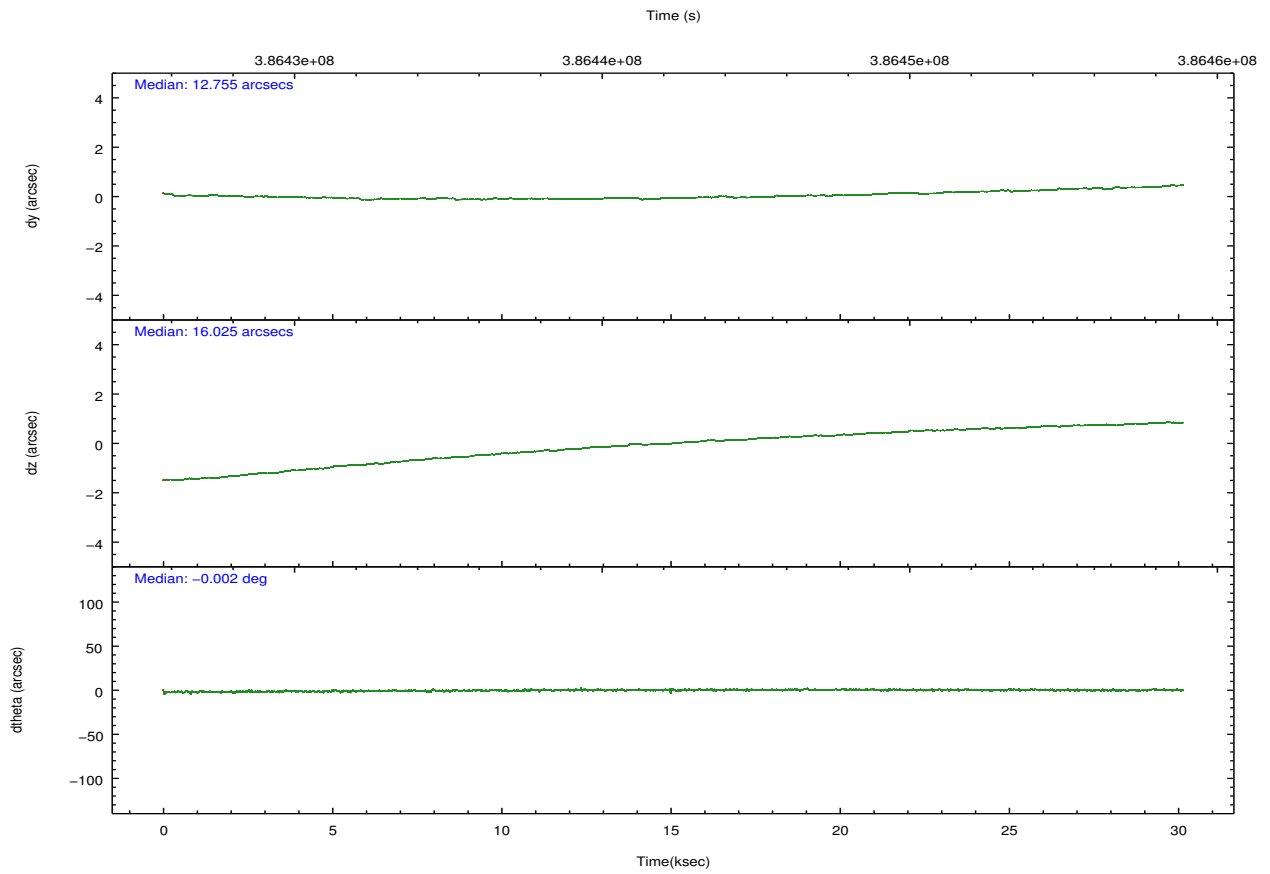
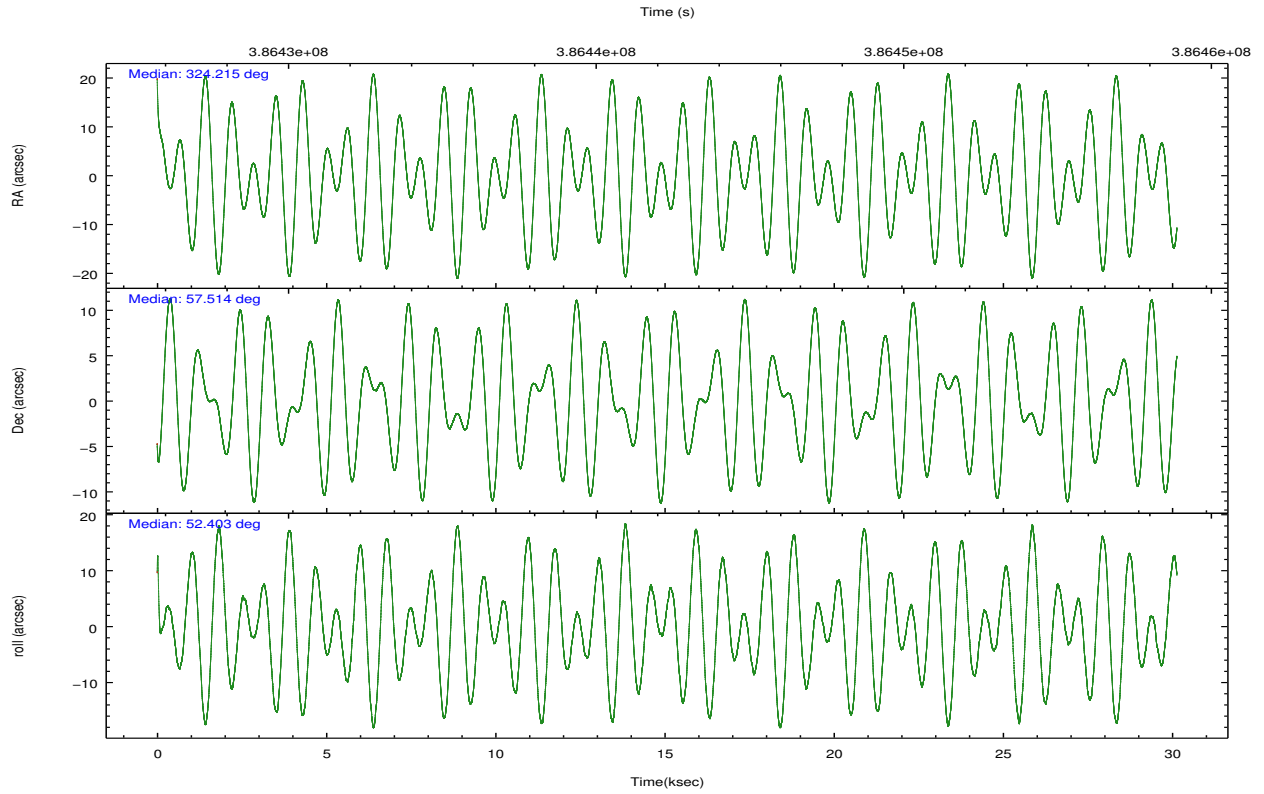
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	212622	206526	233068	218752	242519	225640	grade 0 events	18268	10482	9397	8997	8766	10839
rejected events	178996	179988	208967	195812	209526	116053		8%	5%	4%	4%	3%	4%
rejected %	84%	87%	89%	89%	86%	51%	grade 1 events	169	128	144	147	125	366
								0%	0%	0%	0%	0%	0%
							grade 2 events	6085	5842	5872	5052	14463	23957
								2%	2%	2%	2%	5%	10%
							grade 3 events	2644	2797	2395	2455	2581	10095
								1%	1%	1%	1%	1%	4%
							grade 4 events	2392	2688	2573	2437	2378	10074
								1%	1%	1%	1%	0%	4%
							grade 5 events	7302	8013	7065	8376	8589	23926
								3%	3%	3%	3%	3%	10%
							grade 6 events	4418	4856	4028	4152	5000	55271
								2%	2%	1%	1%	2%	24%
							grade 7 events	171344	171720	201594	187136	200617	91112
								80%	83%	86%	85%	82%	40%

## 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	324.208239	324.2148057542809	CCD I2 on	Y	Y
[deg] Pointing Dec	57.486978	57.51424454136492	CCD I3 on	Y	Y
[deg] Pointing Roll	52.206087	52.40924499808153	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)	386427361.184000	386426173.49122	CCD S5 on	N	N
Observation start date	2010-03-31T12:54:55	2010-03-31T12:36:13	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	386457361.184000	386458757.21787	On-chip summing requested	N	N
Observation end date	2010-03-31T21:14:55	2010-03-31T21:39:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



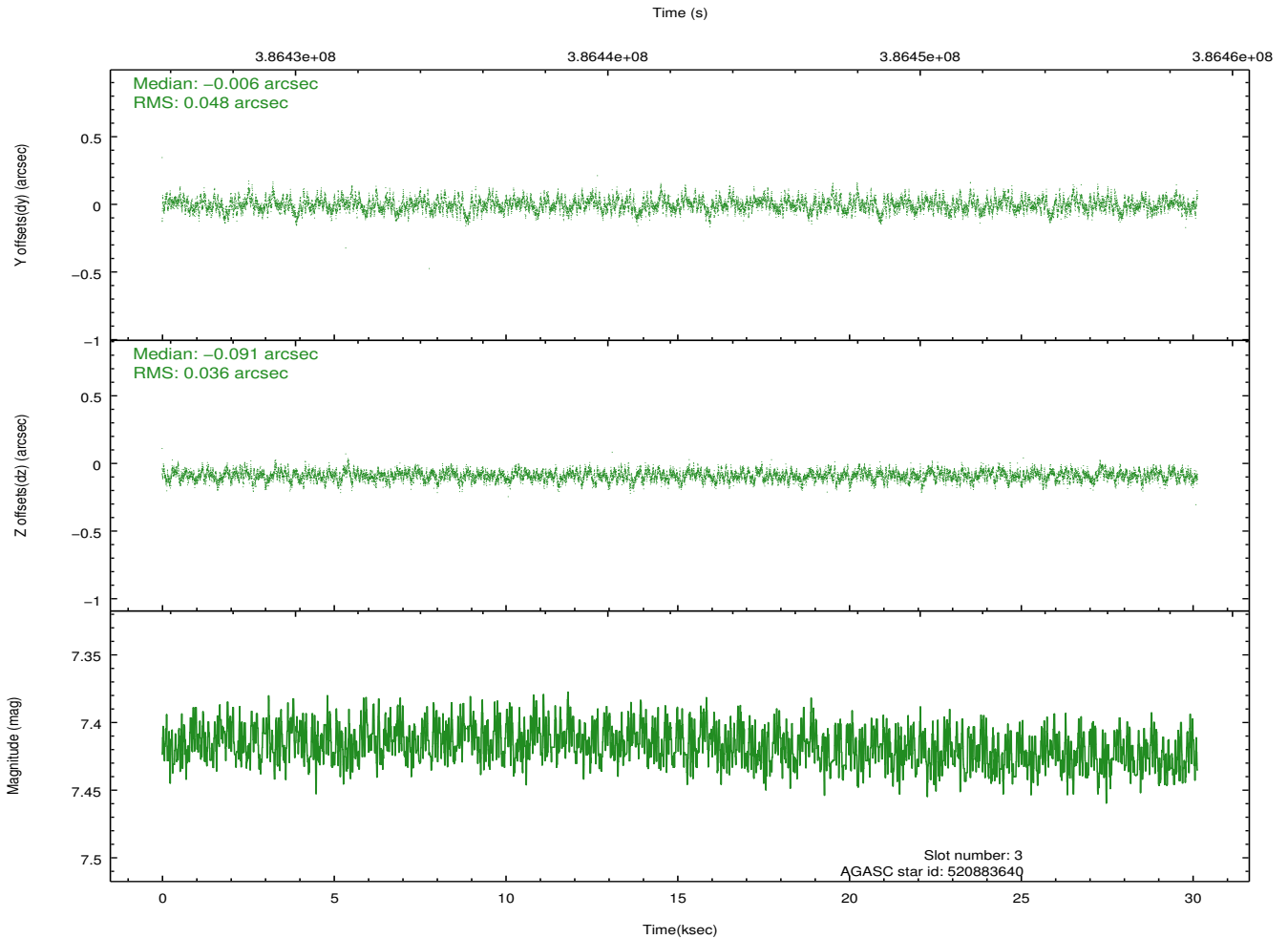
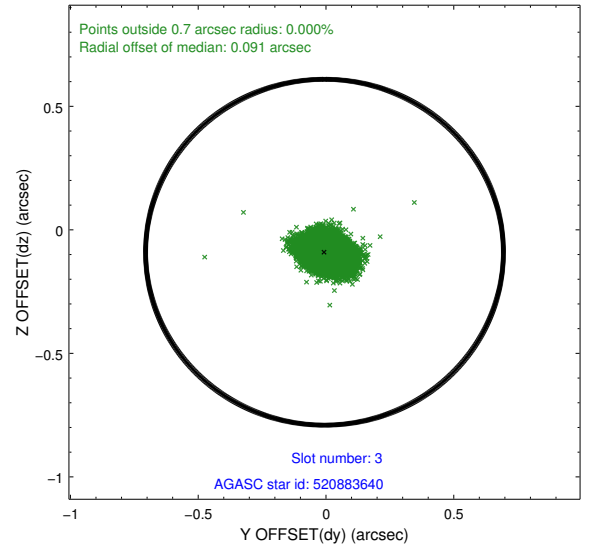
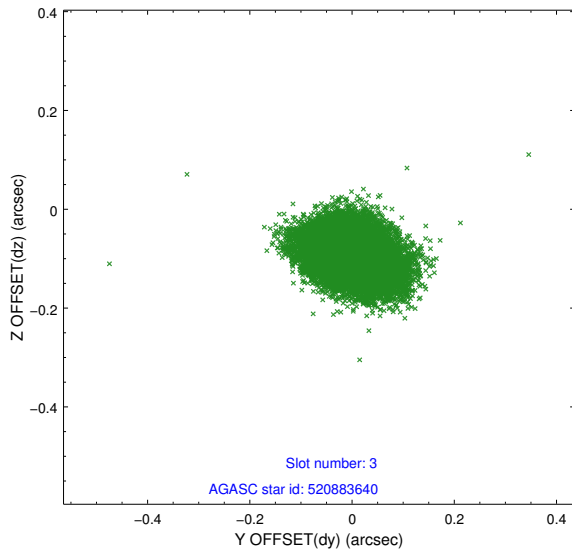


### Slot Statistics

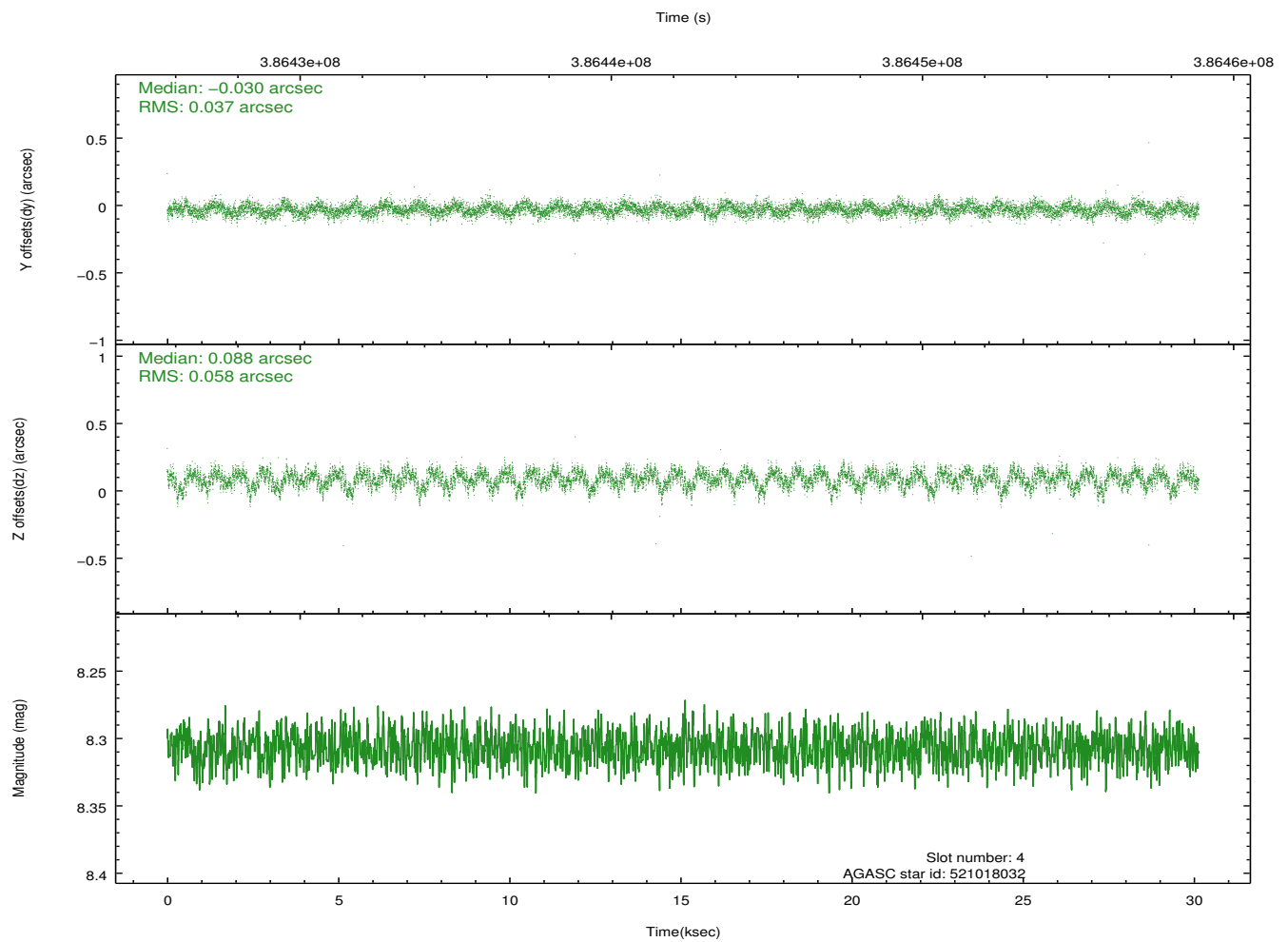
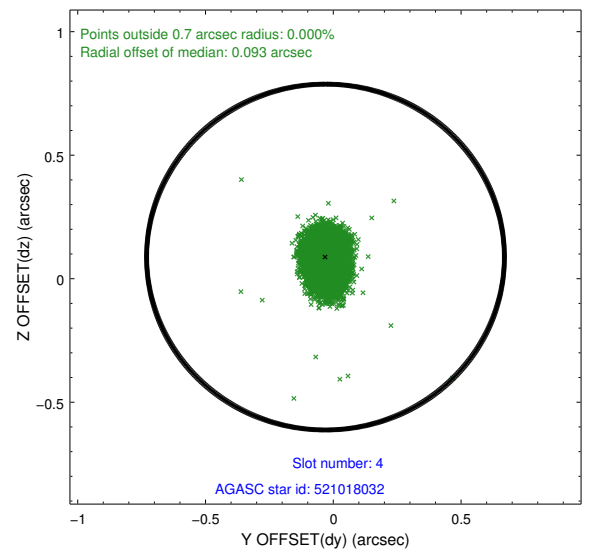
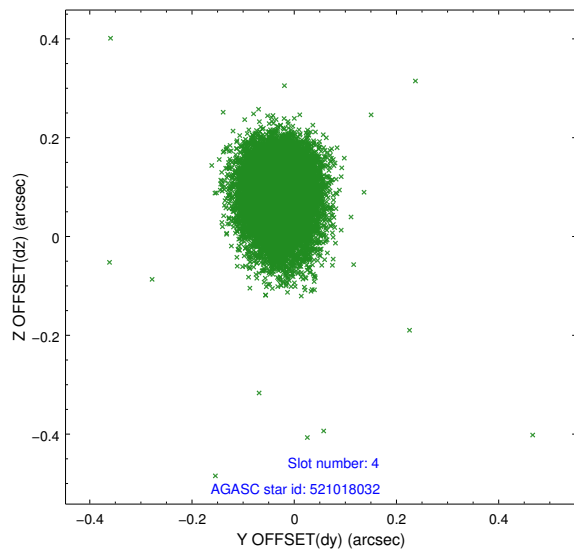
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.02	7352	-0.012	-0.071	0.040	0.082	0.000000	0.000000	926.71	-839.59
1	FID	ACIS-I-4	6.94	7350	0.173	0.078	0.027	0.056	0.000000	0.000000	2146.97	1060.31
2	FID	ACIS-I-5	7.01	7352	-0.260	0.064	0.017	0.033	0.000000	0.000000	-1821.46	1058.22
3	GUIDE	520883640	7.42	14698	-0.006	-0.091	0.063	0.105	322.910028	57.502591	-1475.48	2033.19
4	GUIDE	521018032	8.31	14702	-0.030	0.088	0.072	0.119	324.637664	57.165729	-398.01	-1369.10
5	GUIDE	521020112	7.79	14700	0.015	0.076	0.063	0.098	324.609515	56.973735	-975.48	-1752.98
6	GUIDE	521545688	8.61	14699	-0.040	-0.017	0.062	0.101	324.248507	58.140166	1904.95	1380.92
7	GUIDE	520882280	7.91	14694	0.058	-0.057	0.065	0.105	323.124310	57.538342	-1124.39	1778.84

## 2.4 Star Slots

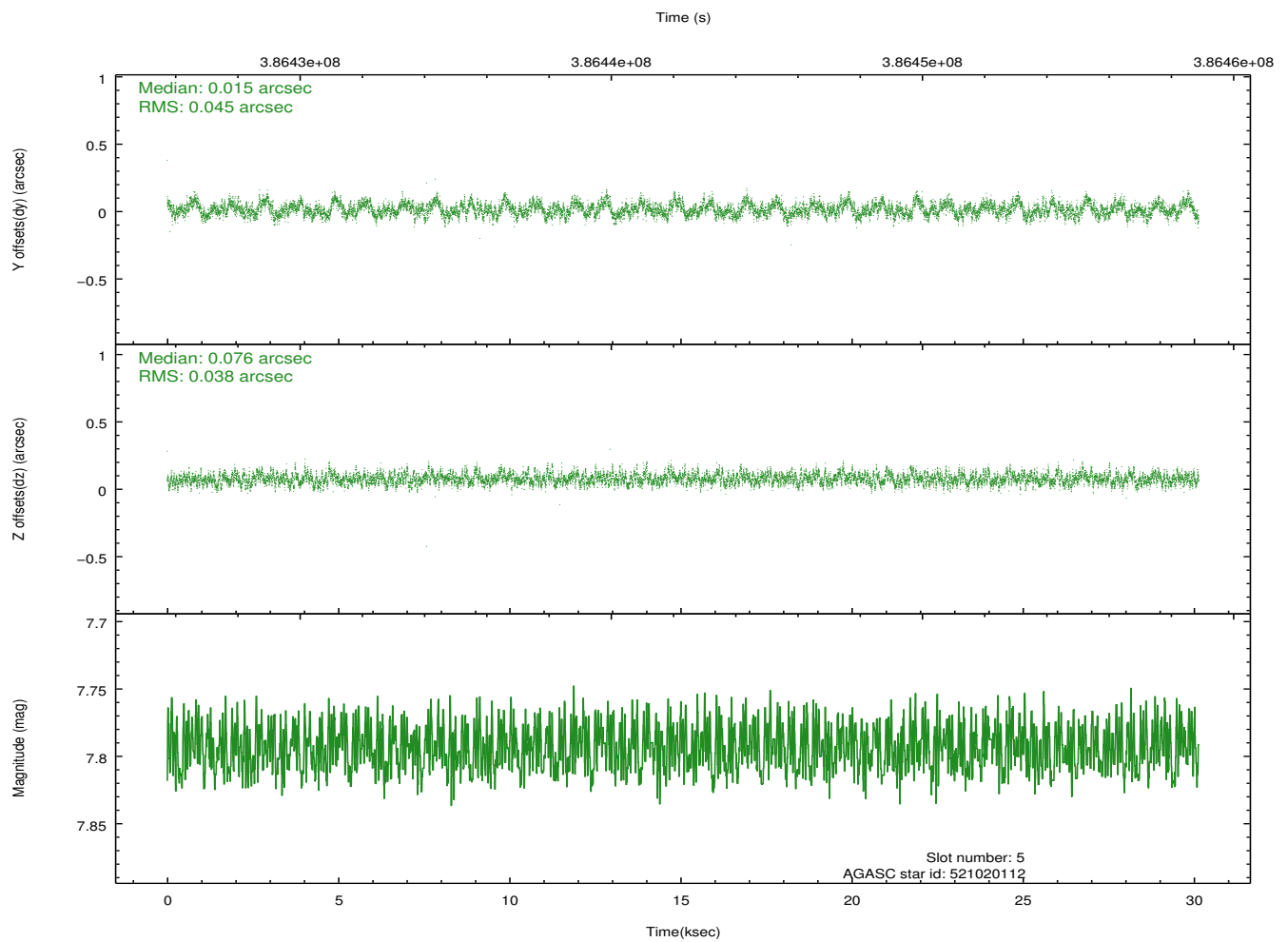
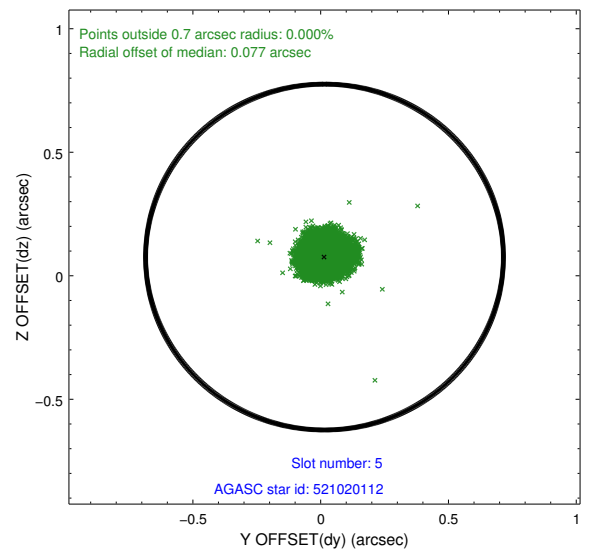
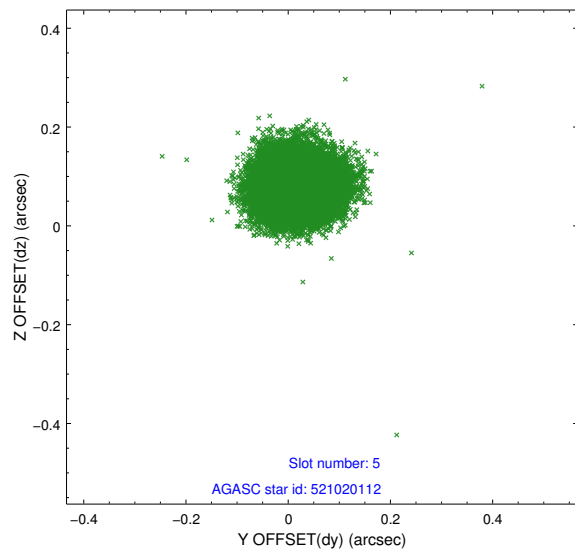
### 2.4.1 Slot 3



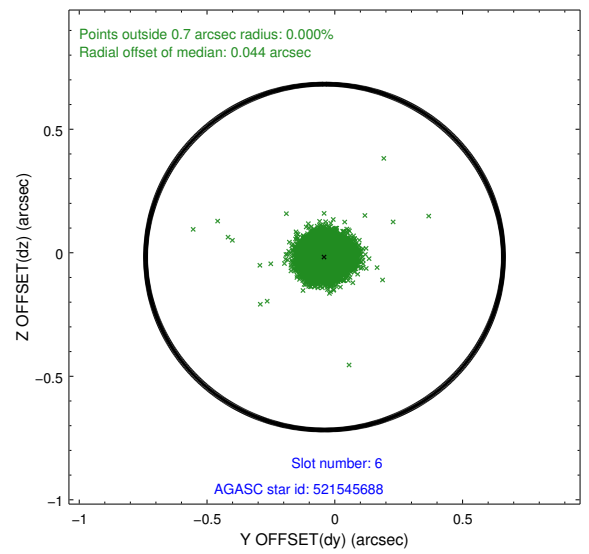
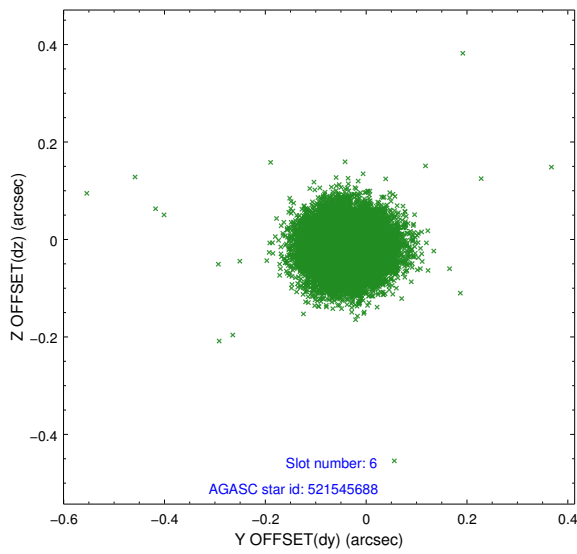
## 2.4.2 Slot 4



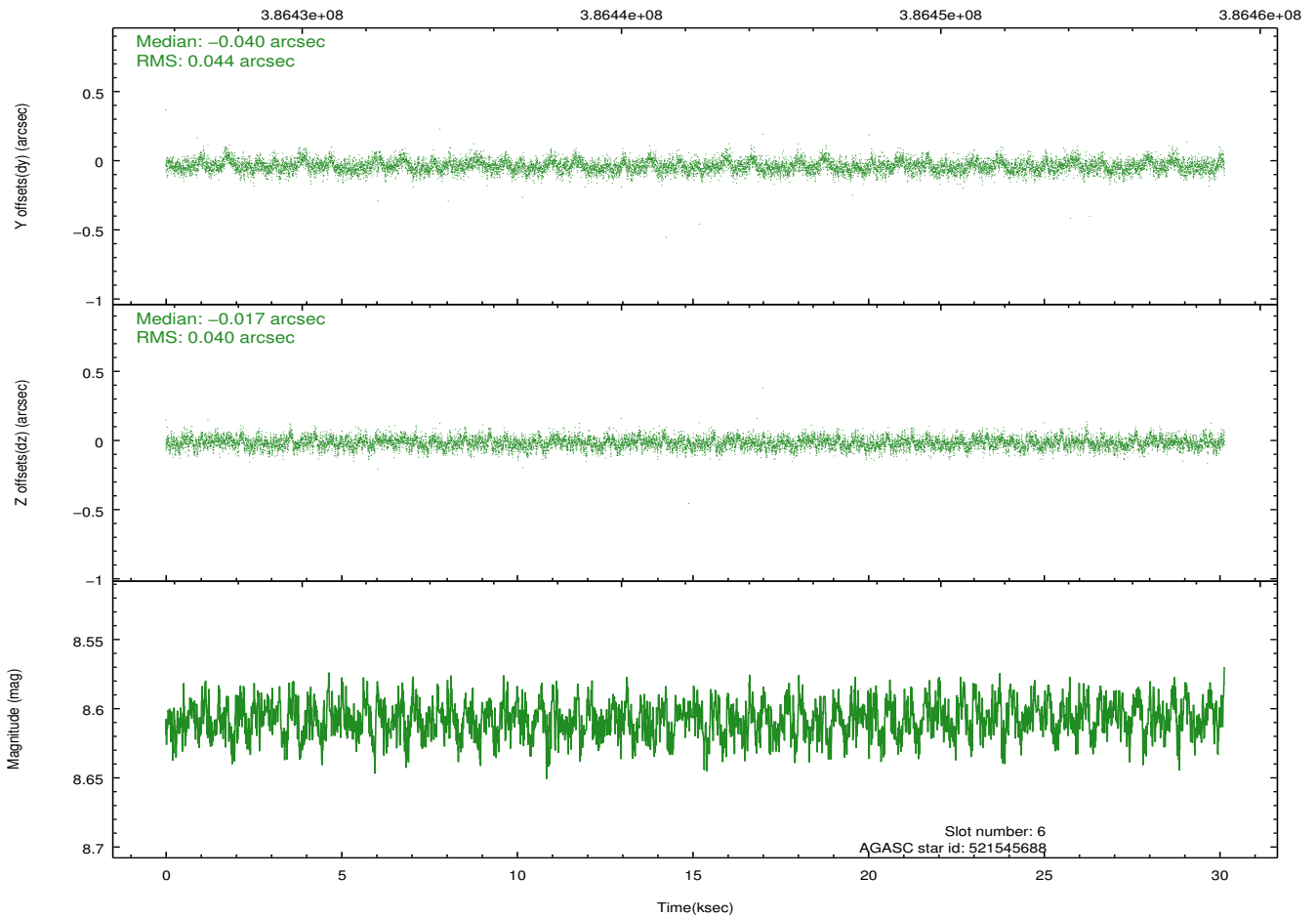
### 2.4.3 Slot 5



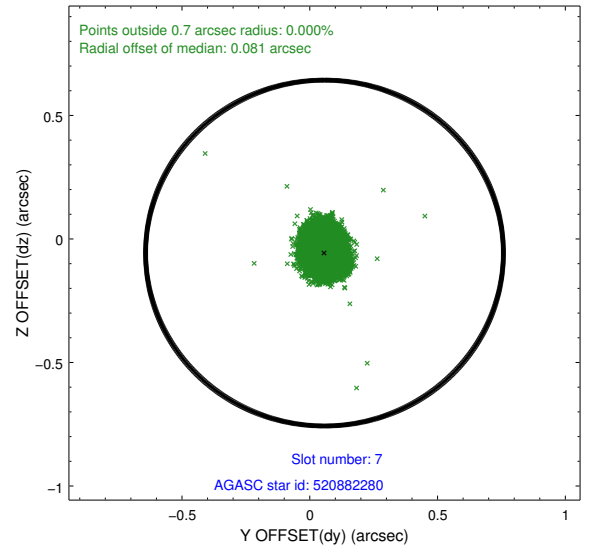
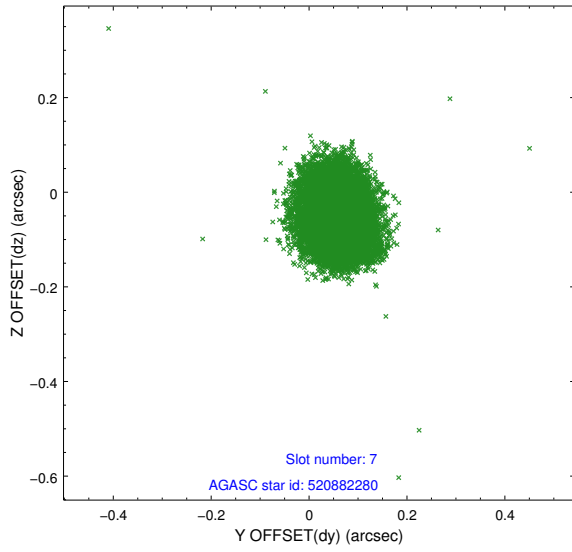
## 2.4.4 Slot 6



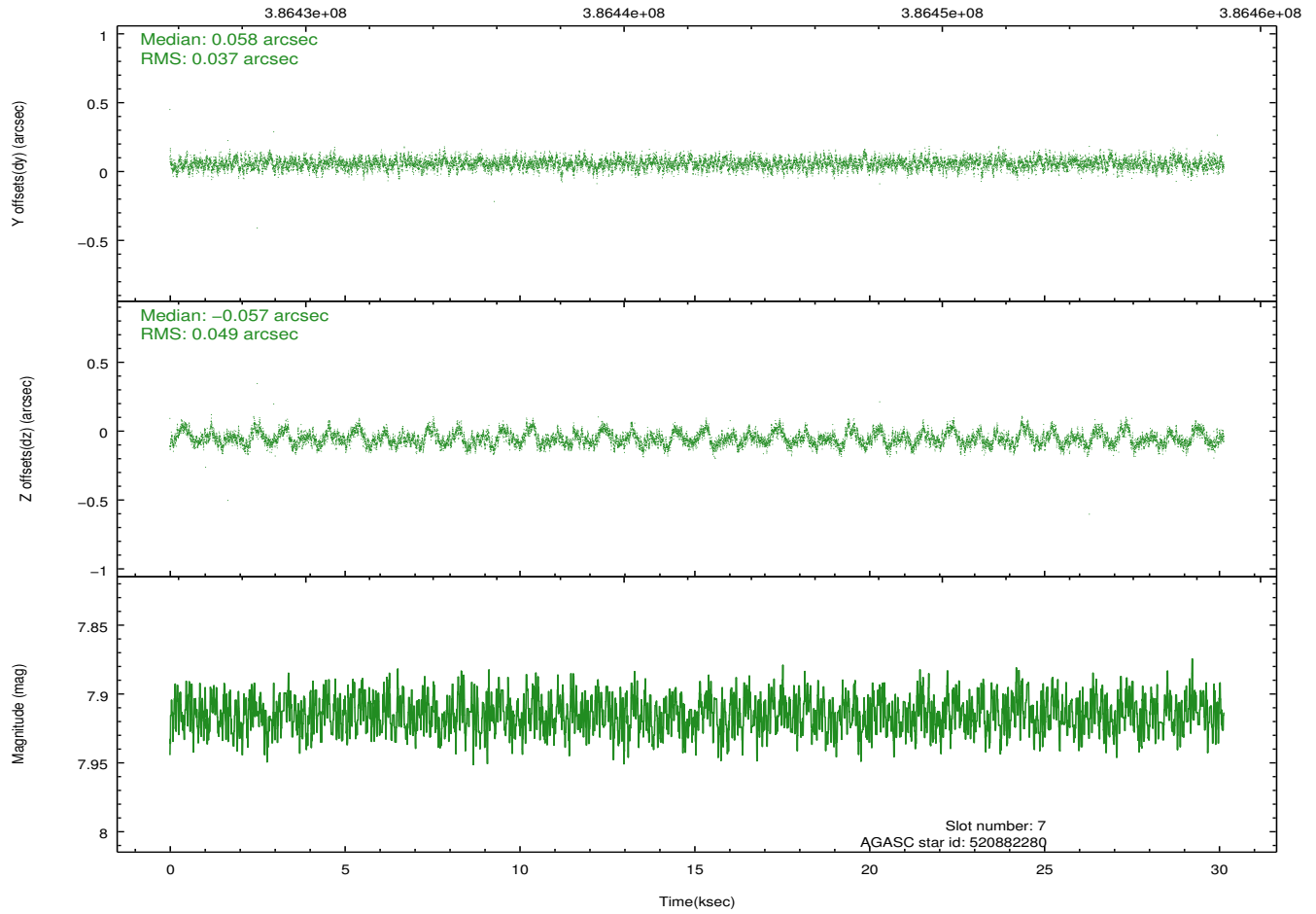
Time (s)



## 2.4.5 Slot 7

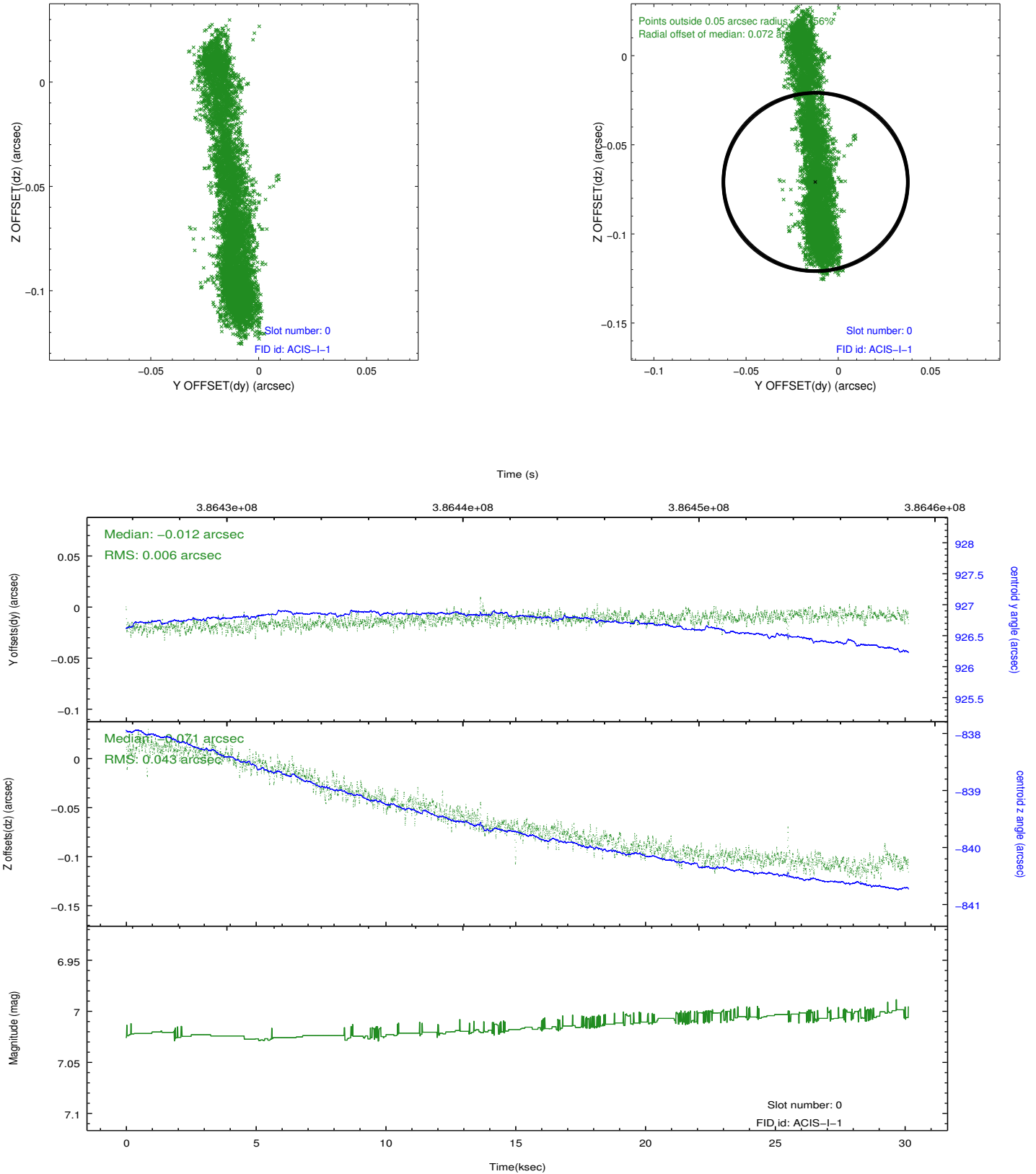


Time (s)

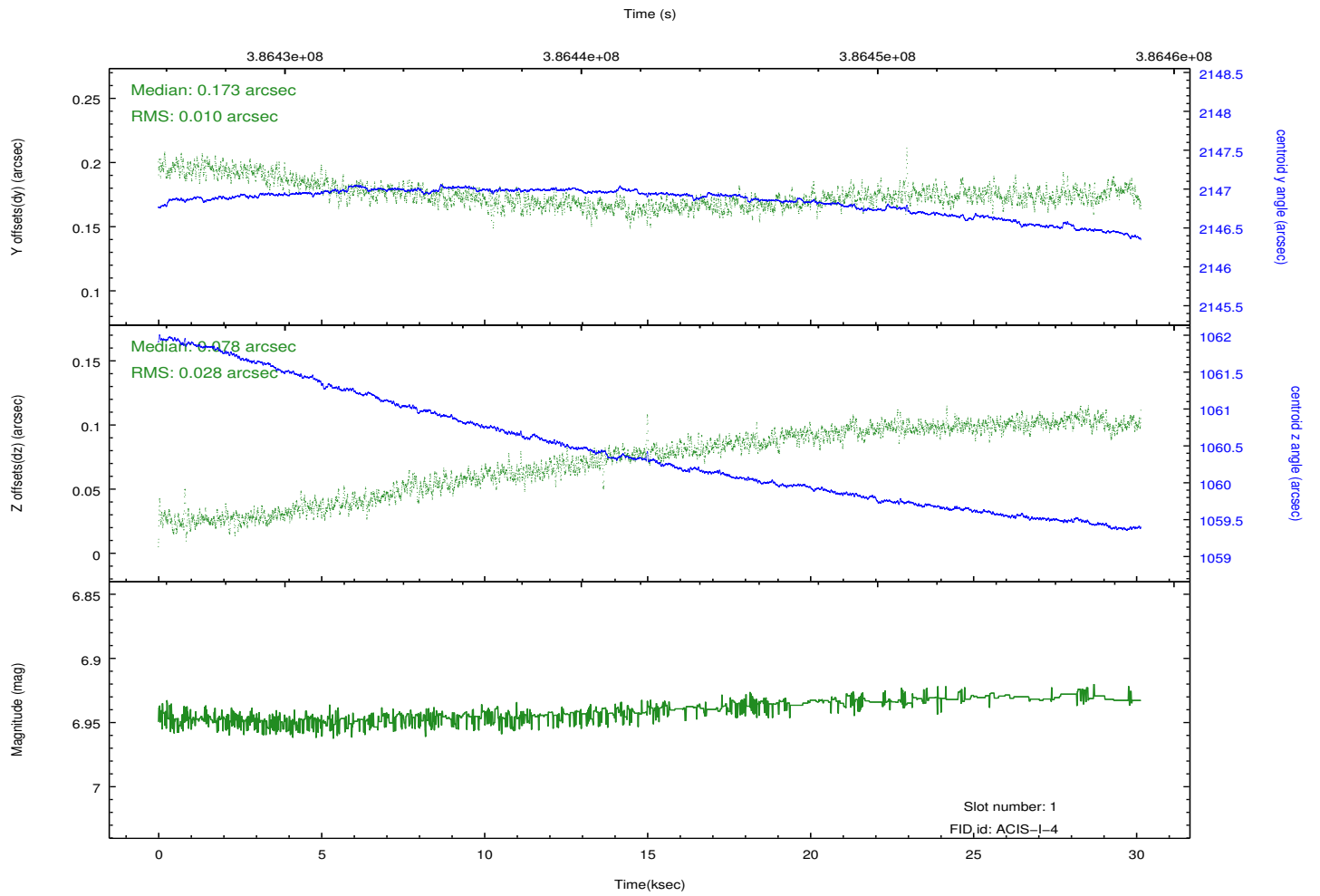
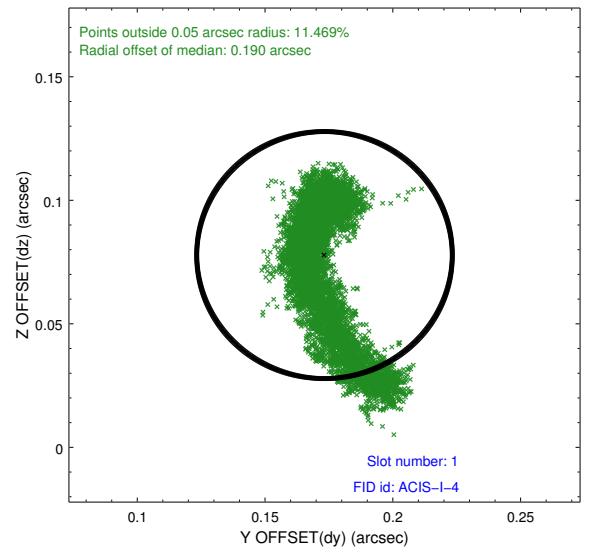
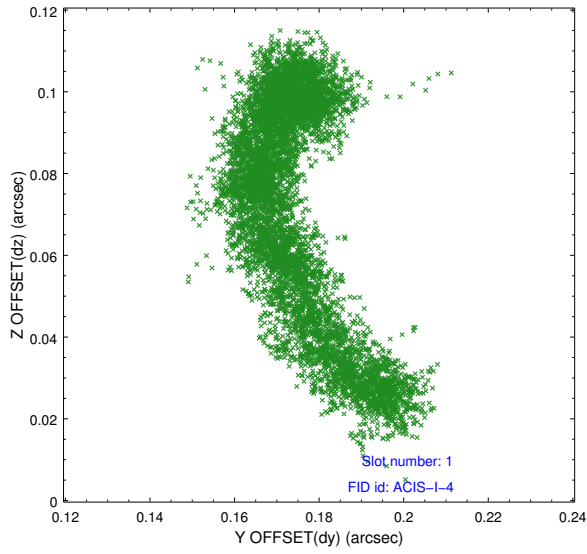


## 2.5 FID Slots

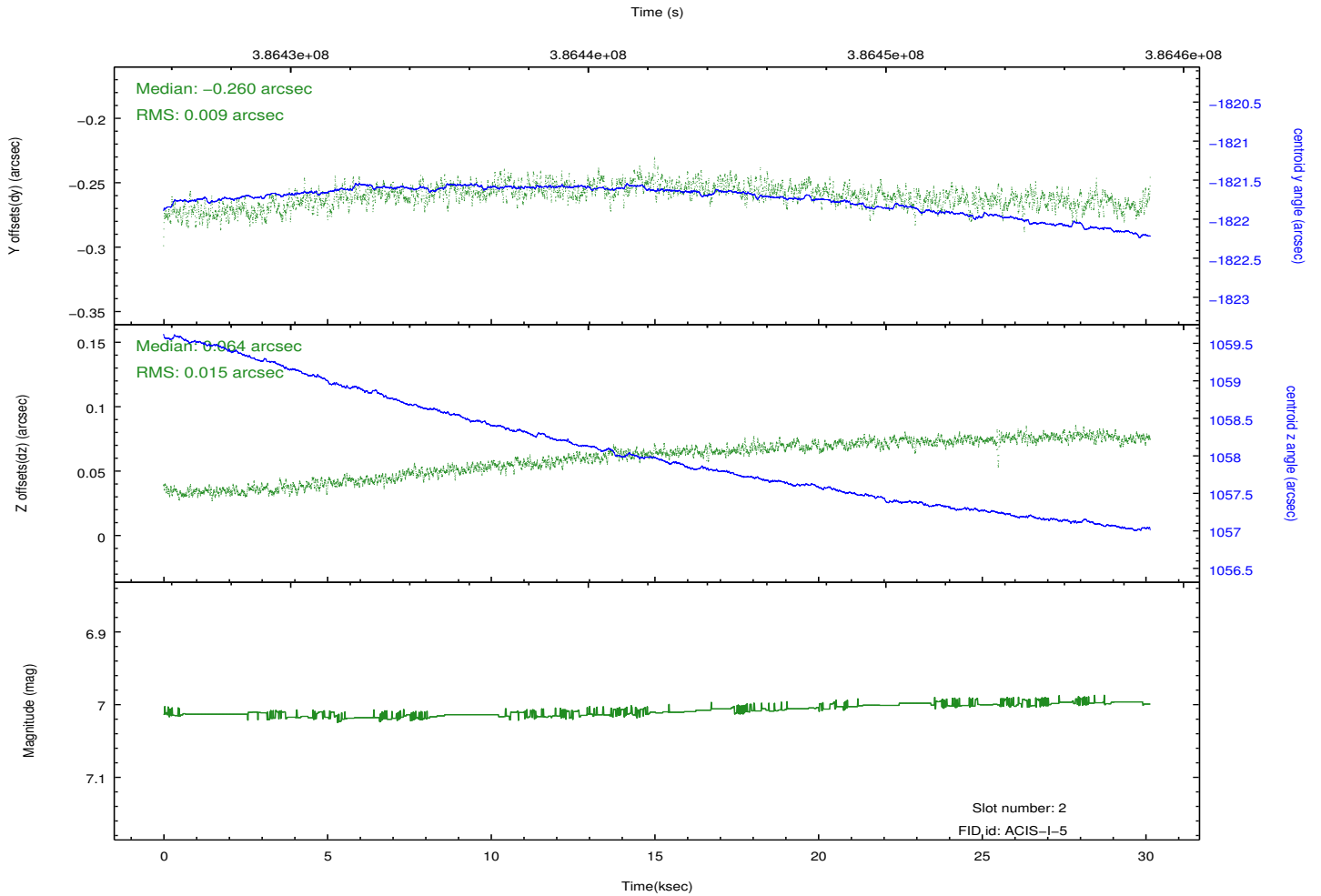
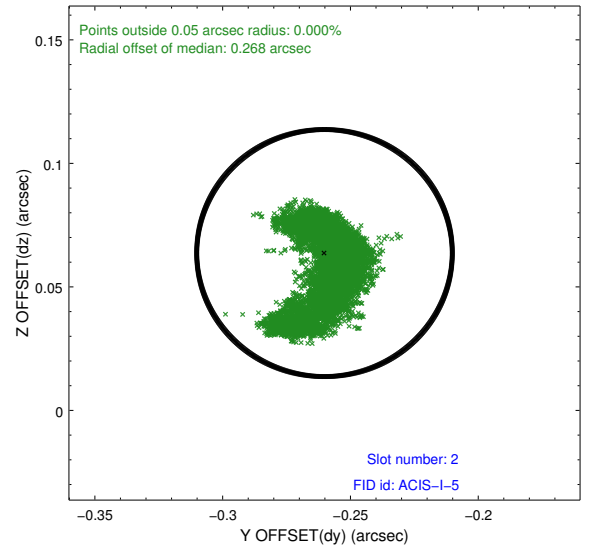
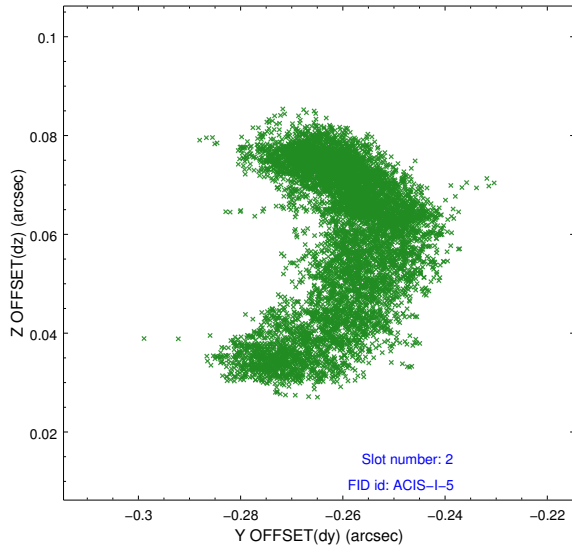
### 2.5.1 Slot 0



## 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)	2012.07.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.1343998878

## A.2 Comments

A spatial region of the original bias map for CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:

(323.99559, 57.80983), (323.99232, 57.80755), (324.07472, 57.77399), (324.07798, 57.77626)