

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12286 - L2 Version 2  
Chandra X-Ray Center

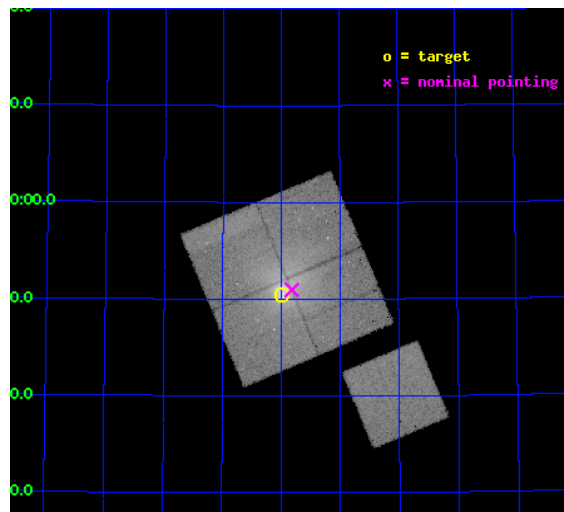
L2 Processing Date : Feb 1 2012

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# 1 Front

seq_num	801005	Sequence number
obs_id	12286	Observation id
title	Abell 665: Determining the Connection Between Cluster Dynamics and Radio Halos	Proposal title
observer	Dr. Craig Sarazin	Principal investigator
object	Abell 665	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	127.746875	Observer's specified target RA [deg]
dec_targ	65.840556	Observer's specified target Dec [deg]
ra_nom	127.7049634295	Nominal RA [deg]
dec_nom	65.849724689595	Nominal Dec [deg]
roll_nom	157.19098537777	Nominal Roll [deg]
revision	2	Processing version of data
ontime	47721.318366408	Sum of GTIs [s]
livetime	47097.804210028	Livetime [s]
ontime0	47718.177295864	Sum of GTIs [s]
ontime1	47724.459346652	Sum of GTIs [s]
ontime2	47715.036315799	Sum of GTIs [s]
ontime3	47721.318366408	Sum of GTIs [s]
ontime6	47715.036315799	Sum of GTIs [s]
l2events	239218	Number of level 2 events

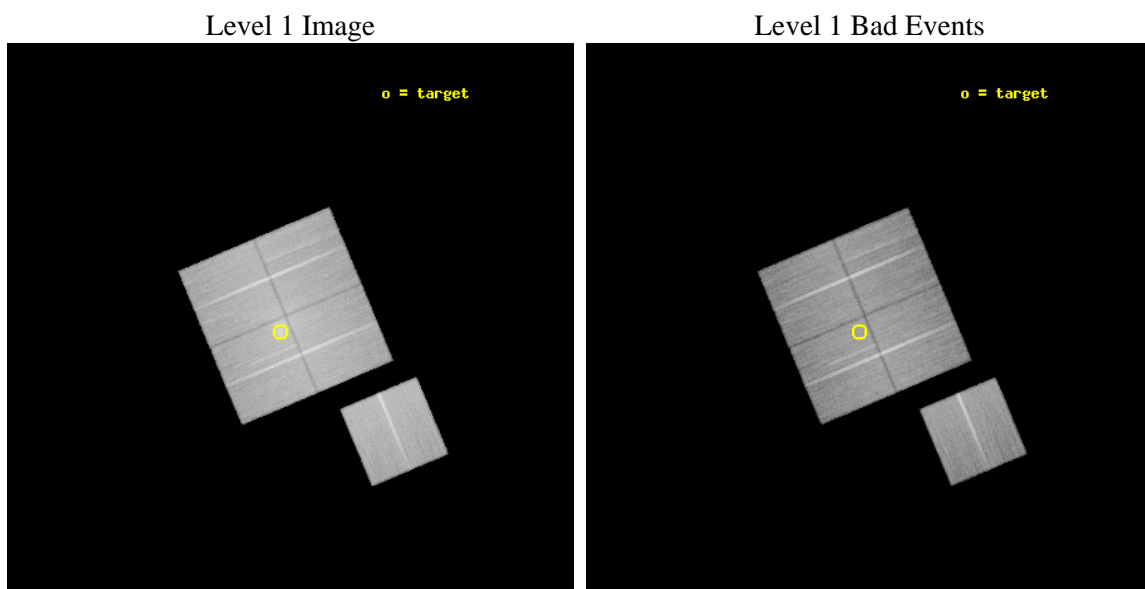




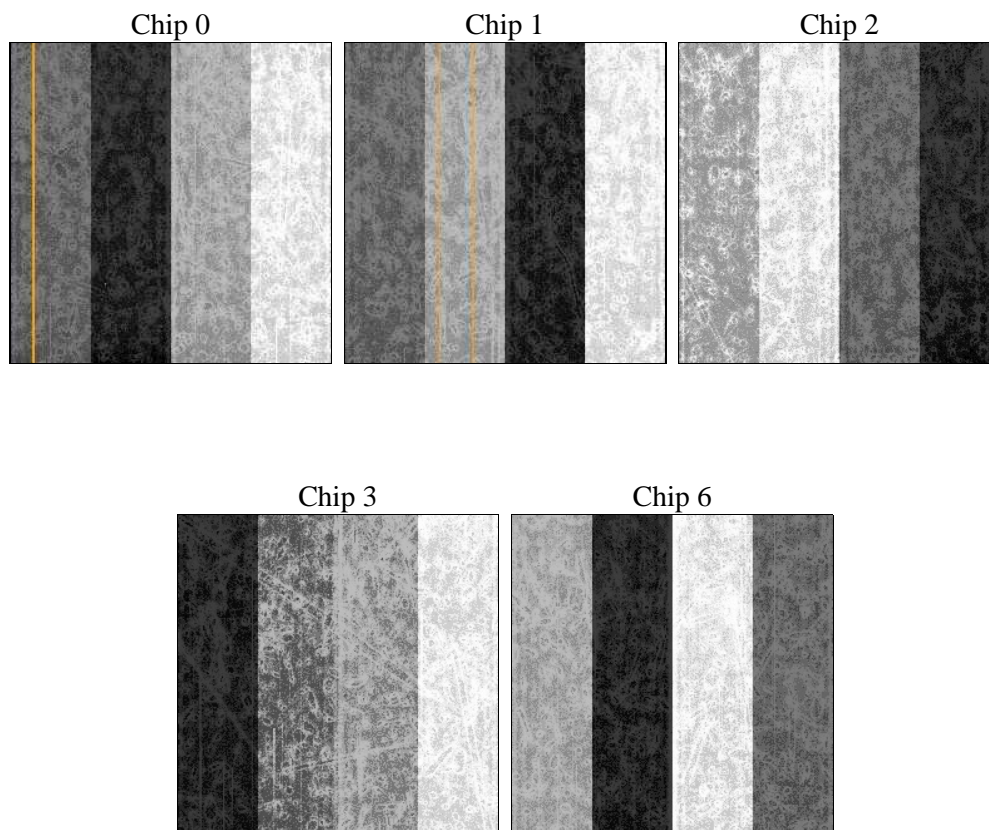
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	47673.181000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	47721.318366408	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	47718.177295864	Sum of GTIs [s]
date	2012-02-01T11:05:48	Date and time of file creation	ontime1	47724.459346652	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	47715.036315799	Sum of GTIs [s]
			ontime3	47721.318366408	Sum of GTIs [s]
			ontime6	47715.036315799	Sum of GTIs [s]
			l1events	1732758	Number of level 1 events

### 2.1.4 Events

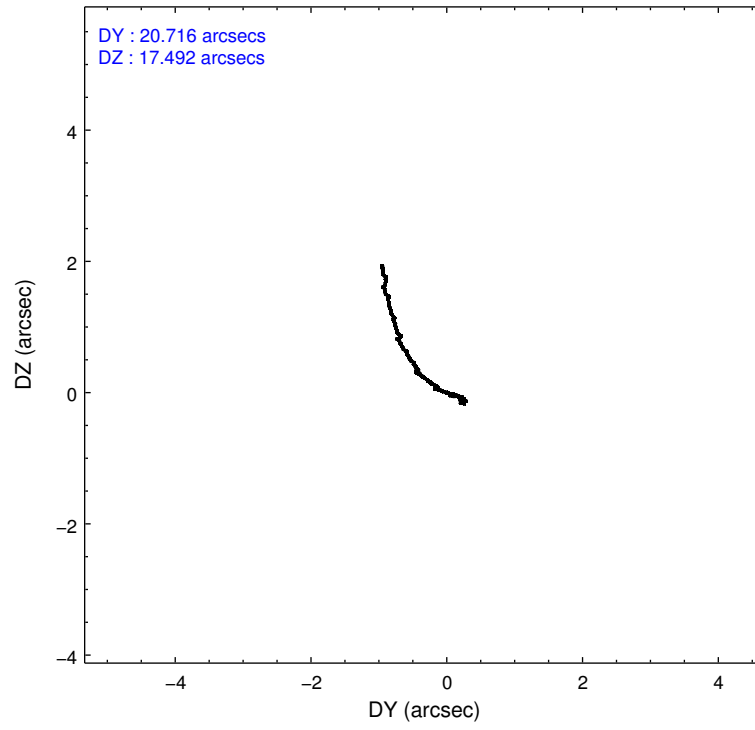
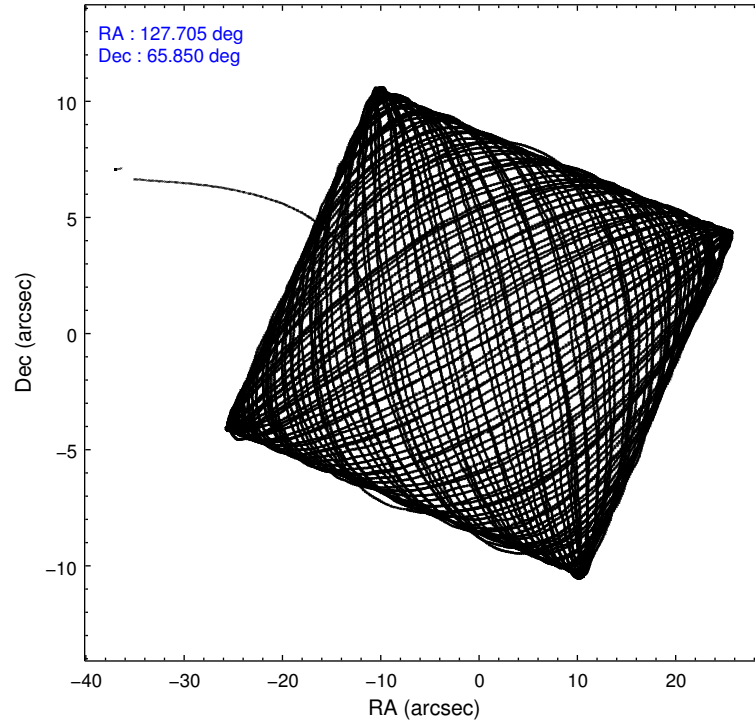
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	326694	335462	357041	368504	345057
rejected events	276113	278375	302401	299337	303087
rejected %	84%	82%	84%	81%	87%

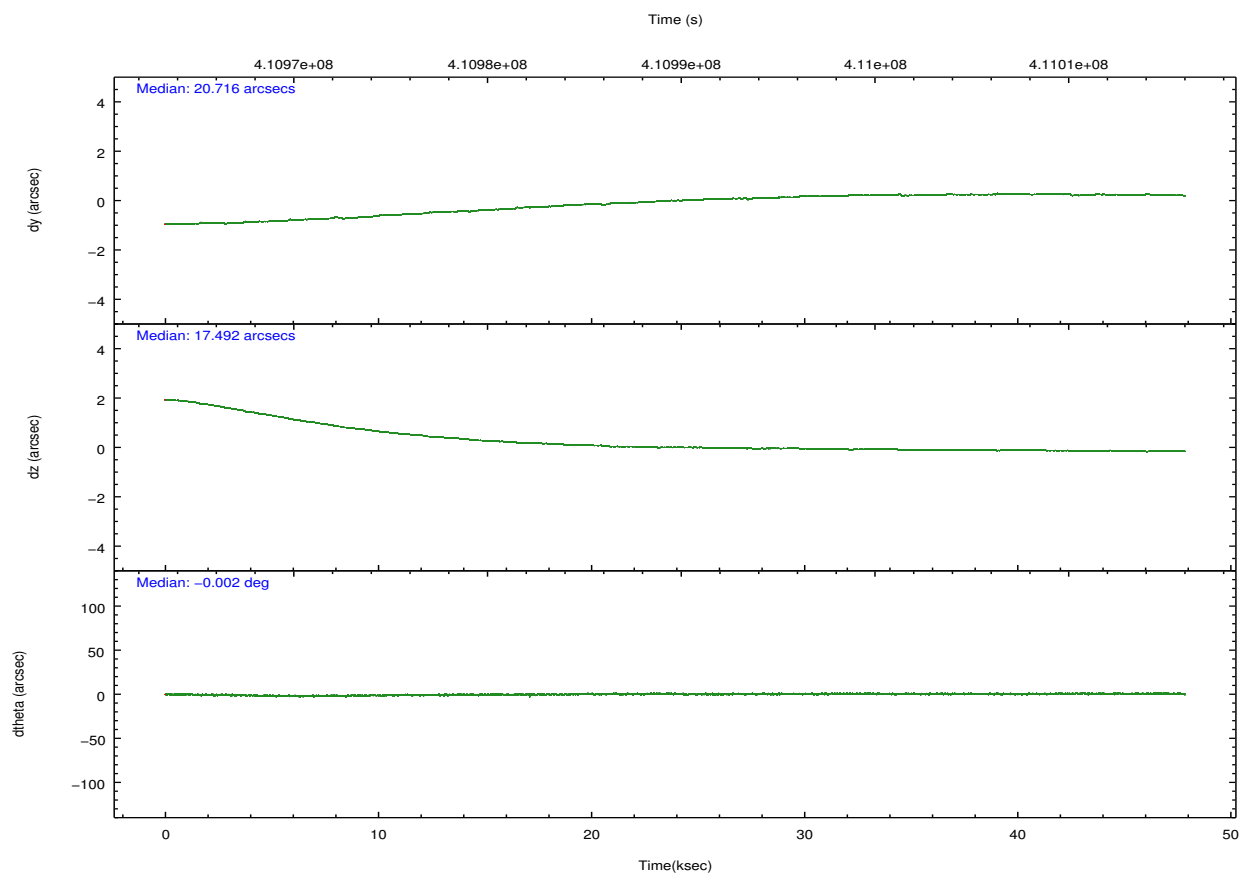
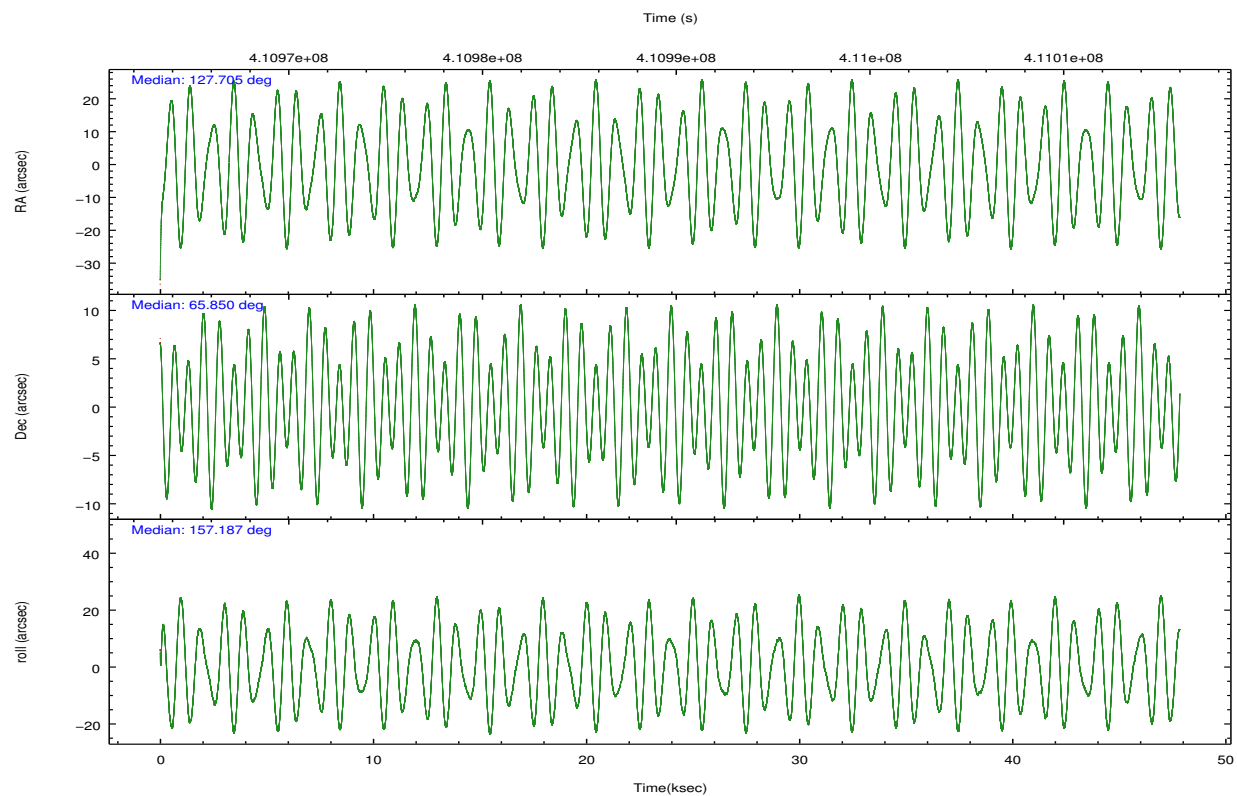
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	23026	26947	27169	39294	15857
	7%	8%	7%	10%	4%
grade 1 events	226	245	268	362	183
	0%	0%	0%	0%	0%
grade 2 events	10775	11449	10810	11426	8903
	3%	3%	3%	3%	2%
grade 3 events	4528	4851	4467	5060	4168
	1%	1%	1%	1%	1%
grade 4 events	4290	4708	4484	4884	4265
	1%	1%	1%	1%	1%
grade 5 events	14427	15218	13522	16167	15691
	4%	4%	3%	4%	4%
grade 6 events	7972	9143	7721	8516	8789
	2%	2%	2%	2%	2%
grade 7 events	261450	262901	288600	282795	287201
	80%	78%	80%	76%	83%

## 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	127.771599	127.7049634295003	CCD I2 on	Y	Y
[deg] Pointing Dec	65.853260	65.84972468959464	CCD I3 on	Y	Y
[deg] Pointing Roll	156.921500	157.1909853777678	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	-232.092463	-232.1014741176067	CCD S3 on	N	N
[mm] SIM translation stage offset	-1.5	-1.49097888532296	CCD S4 on	N	N
[s] Observation start time (MET)	410965931.184000	410964856.17319	CCD S5 on	N	N
Observation start date	2011-01-09T13:11:05	2011-01-09T12:54:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411013605.184000	411013841.43822	On-chip summing requested	N	N
Observation end date	2011-01-10T02:25:39	2011-01-10T02:30:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



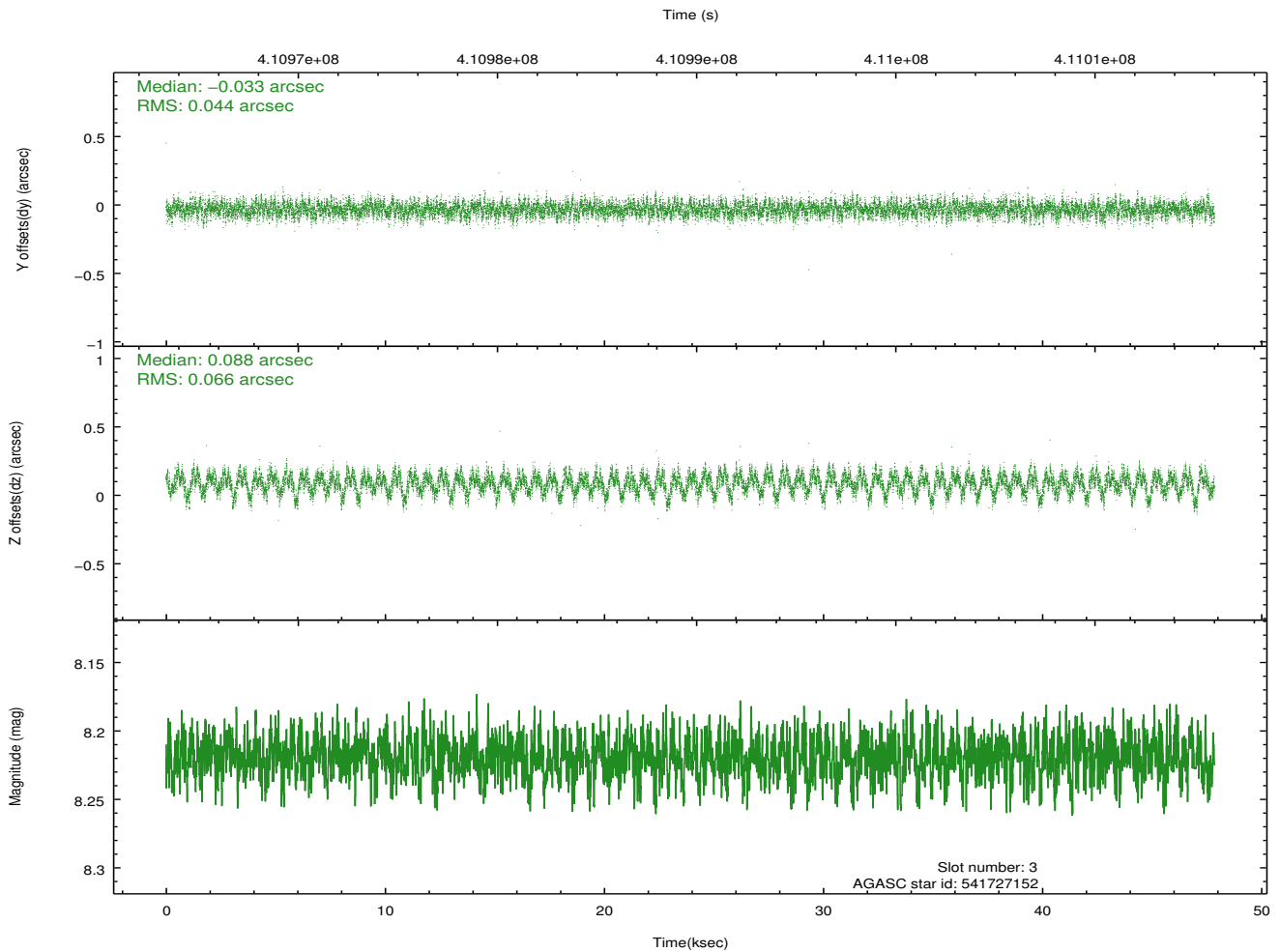
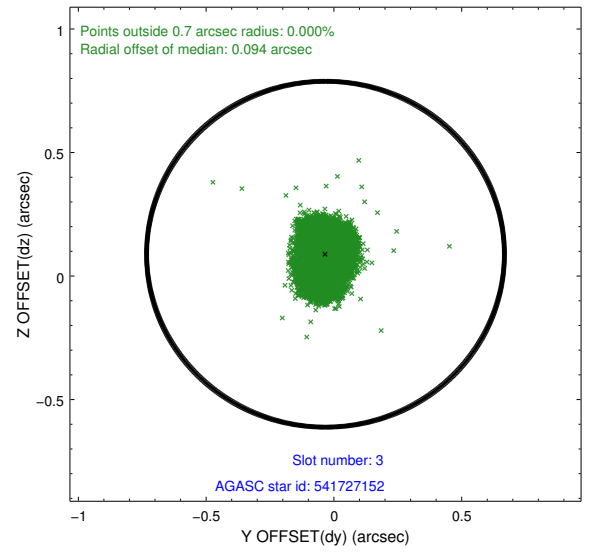
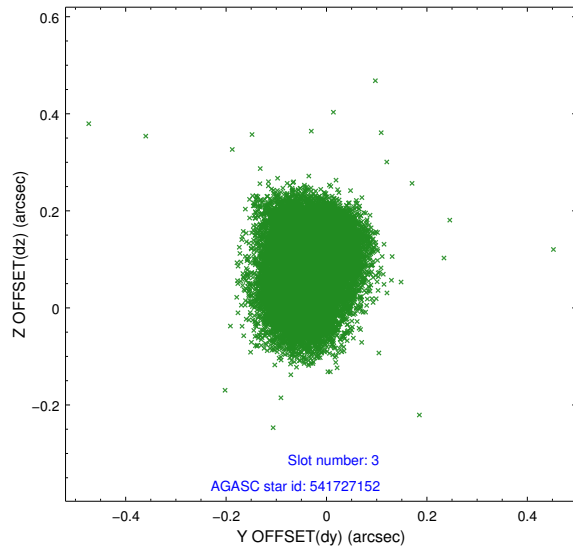


### Slot Statistics

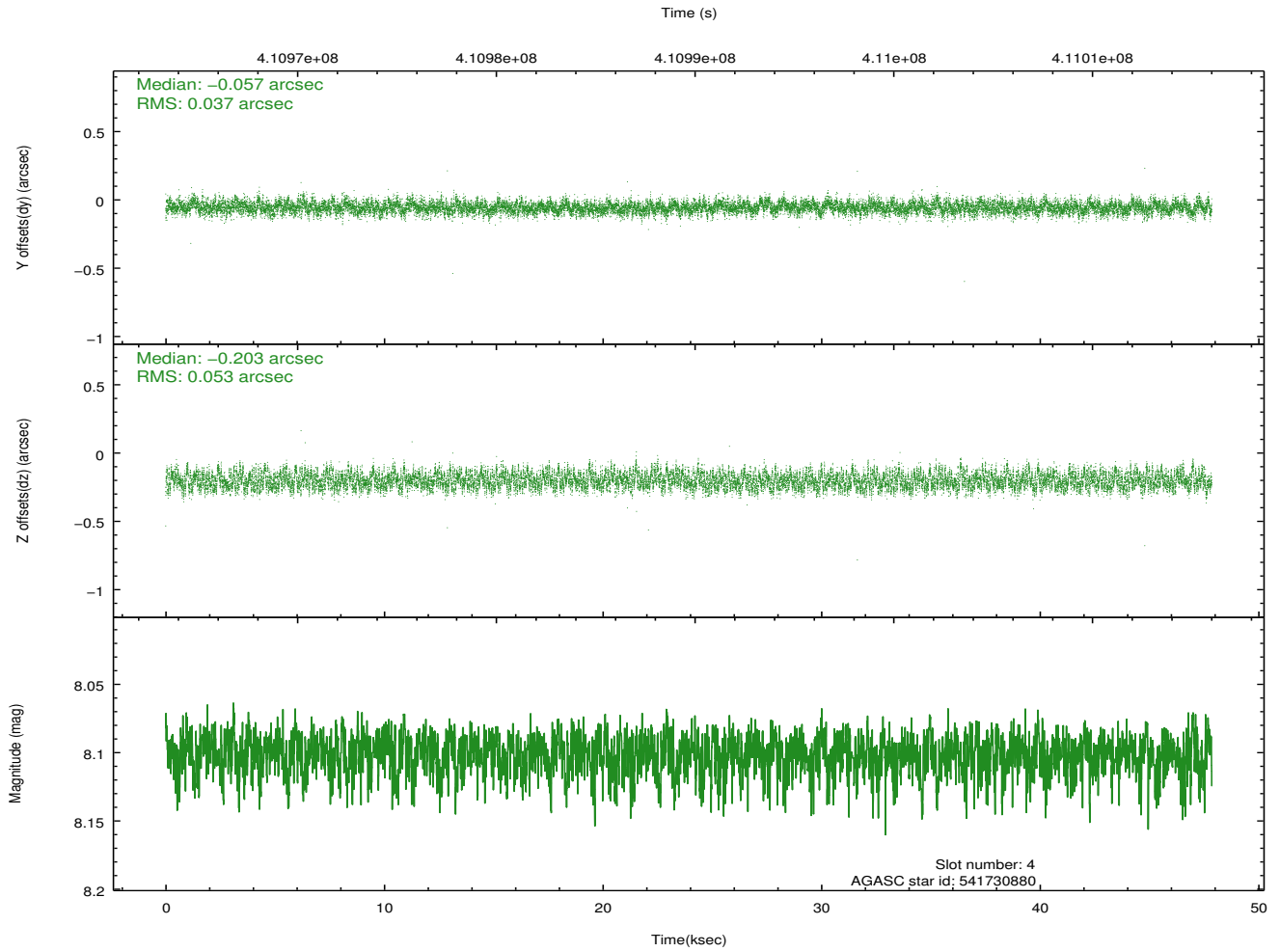
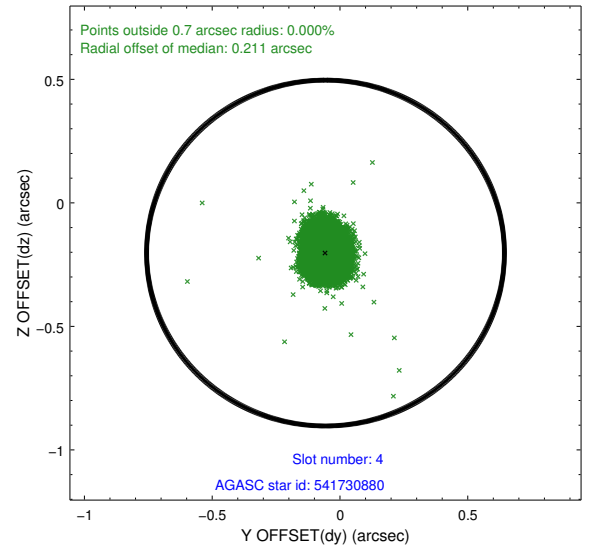
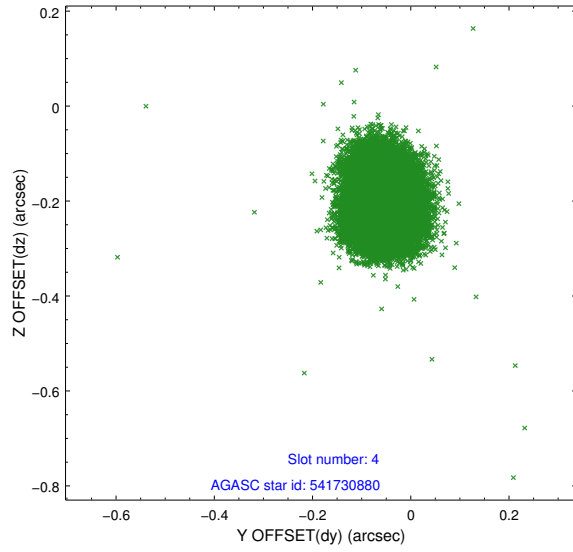
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	11673	0.040	0.038	0.010	0.028	0.000000	0.000000	918.77	-871.93
1	FID	ACIS-I-5	7.05	11673	-0.222	0.054	0.012	0.018	0.000000	0.000000	-1829.62	1025.55
2	FID	ACIS-I-6	7.07	11673	0.089	-0.021	0.013	0.039	0.000000	0.000000	384.36	1669.99
3	GUIDE	541727152	8.22	23331	-0.033	0.088	0.084	0.137	127.263195	66.213821	1189.36	-907.27
4	GUIDE	541730880	8.10	23338	-0.057	-0.203	0.069	0.110	127.501712	65.260390	-462.90	2122.10
5	GUIDE	541731472	7.81	23338	-0.064	-0.169	0.076	0.125	125.964692	65.500308	1998.47	2190.75
6	GUIDE	541728480	8.42	23336	0.017	-0.046	0.073	0.122	125.879819	65.741108	2432.32	1429.73
7	GUIDE	541728064	8.92	23218	0.132	0.339	0.105	0.172	128.919170	66.393334	-753.26	-2450.34

## 2.4 Star Slots

### 2.4.1 Slot 3

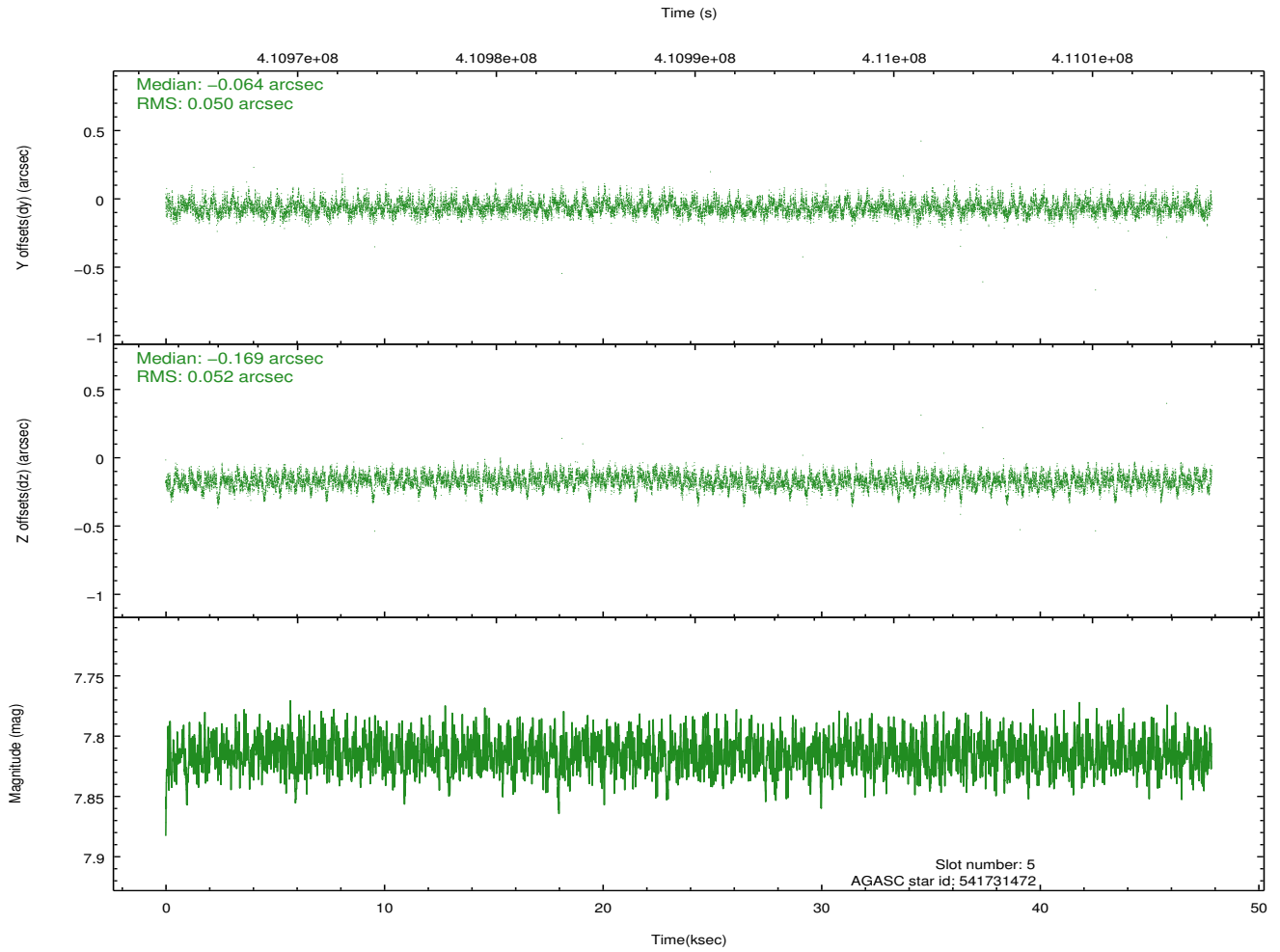
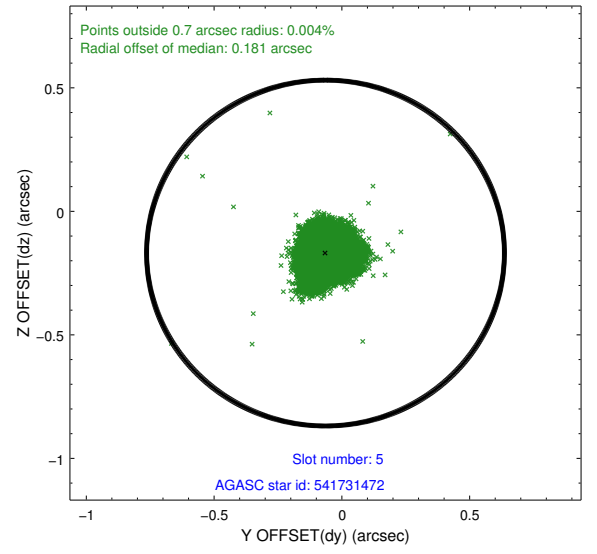
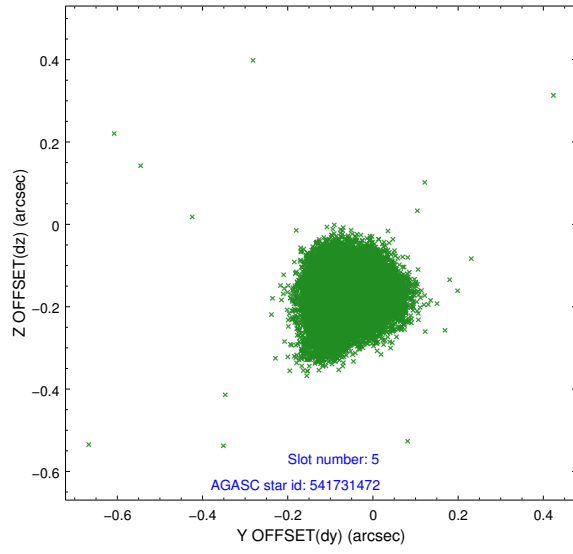


## 2.4.2 Slot 4

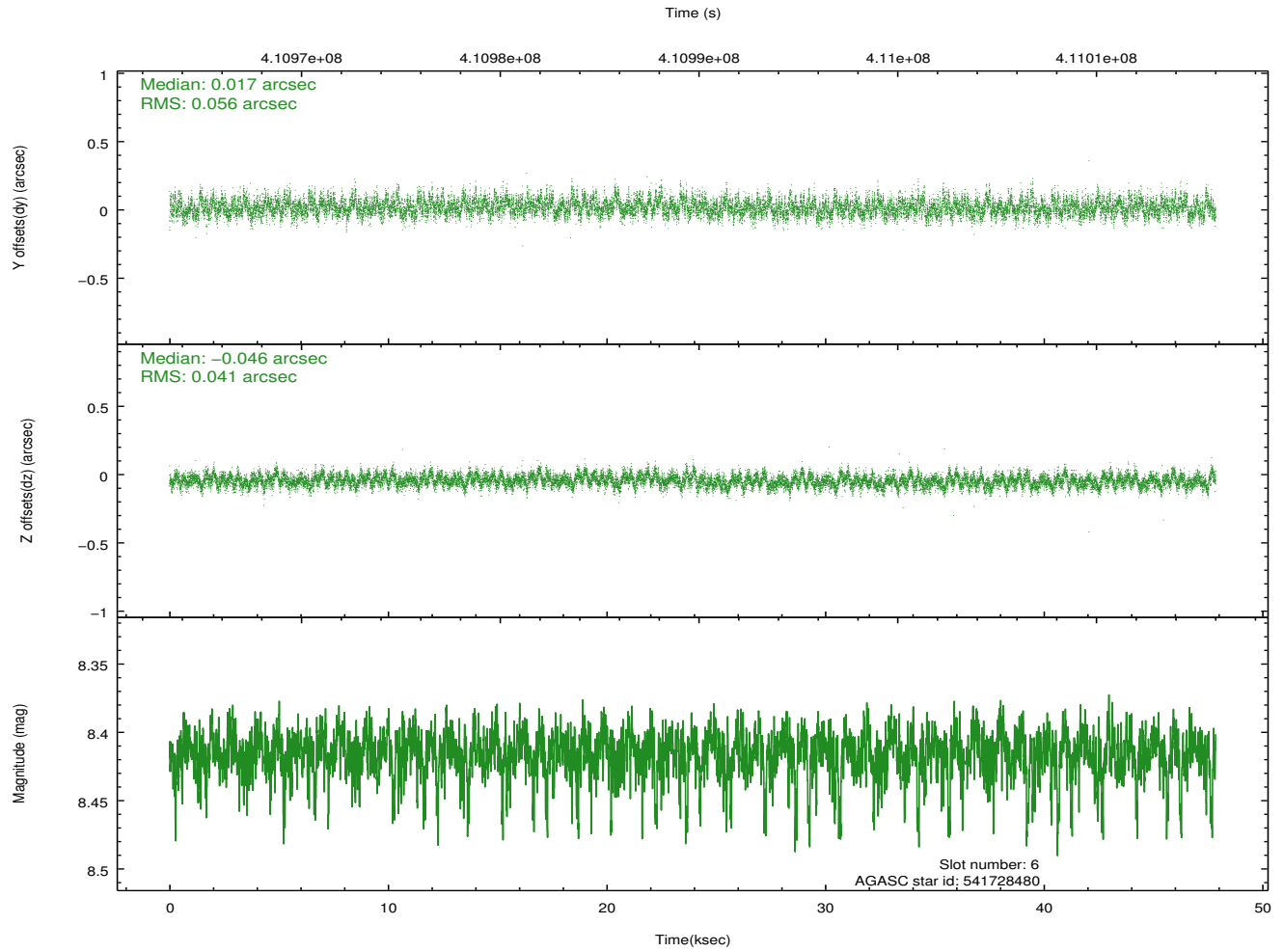
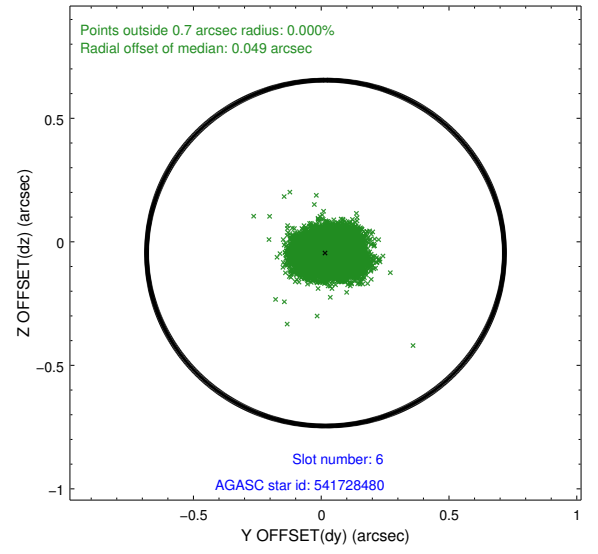
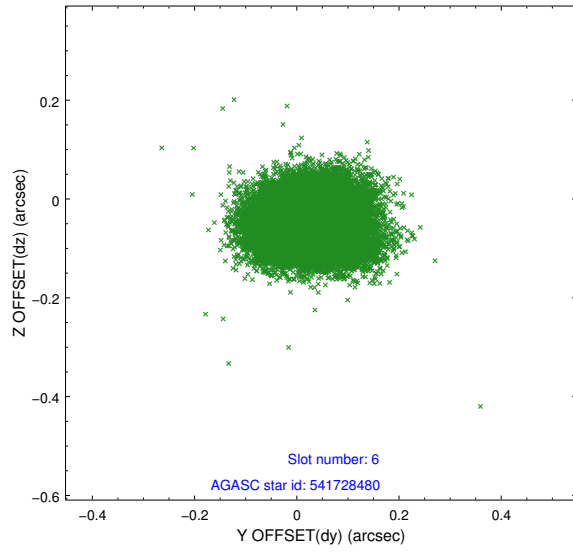




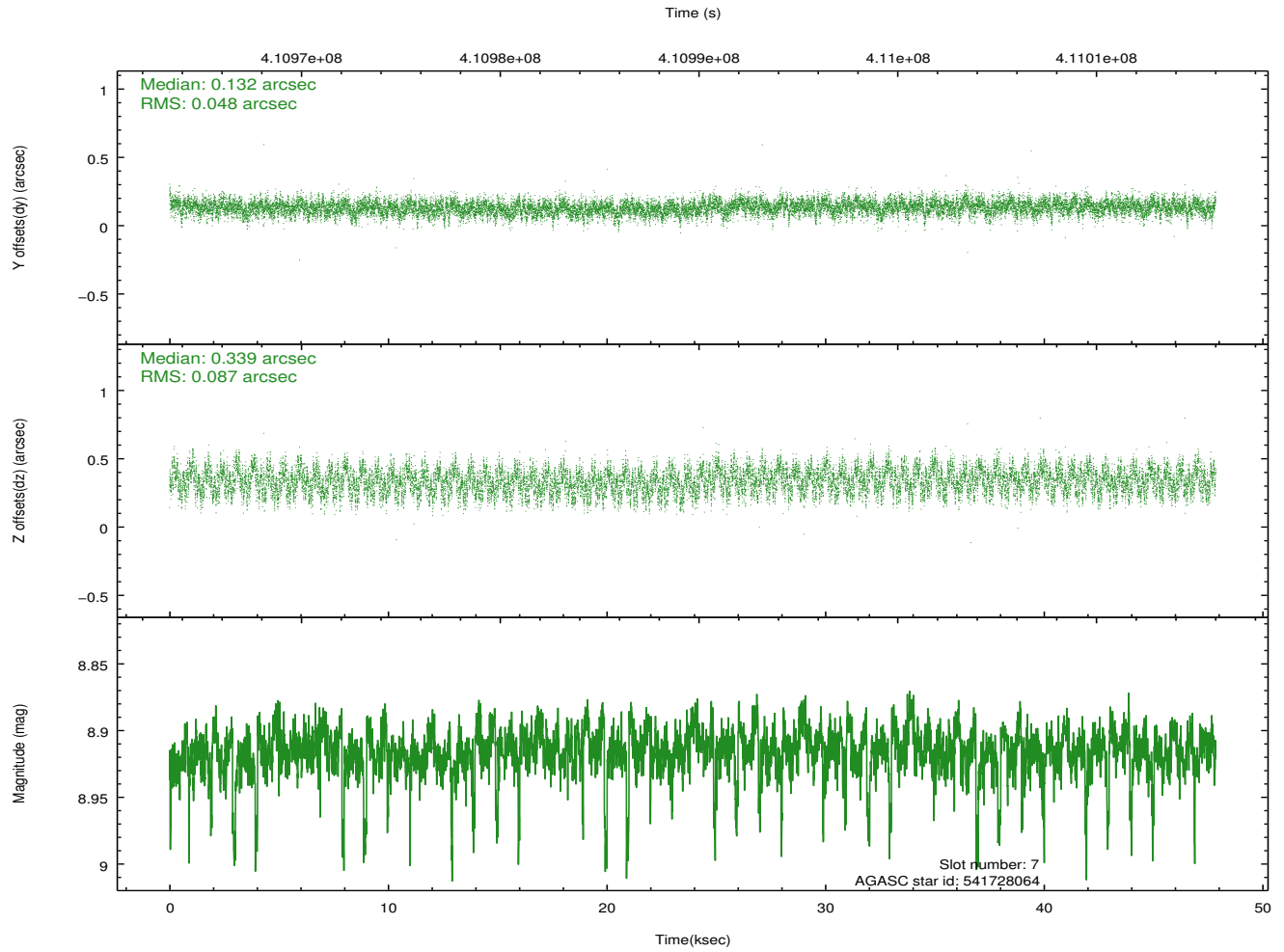
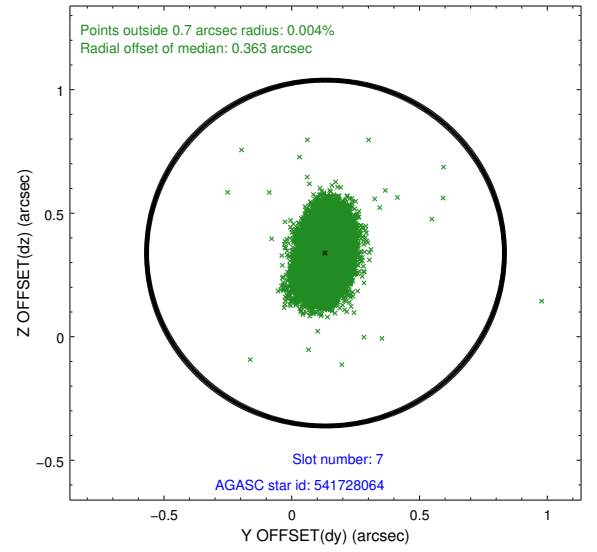
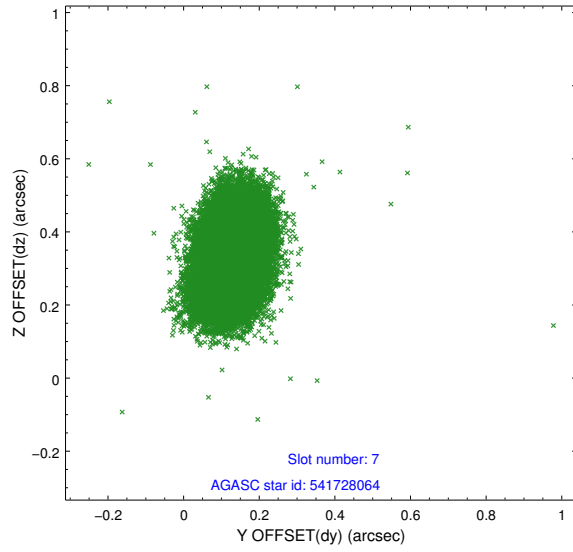
### 2.4.3 Slot 5



## 2.4.4 Slot 6

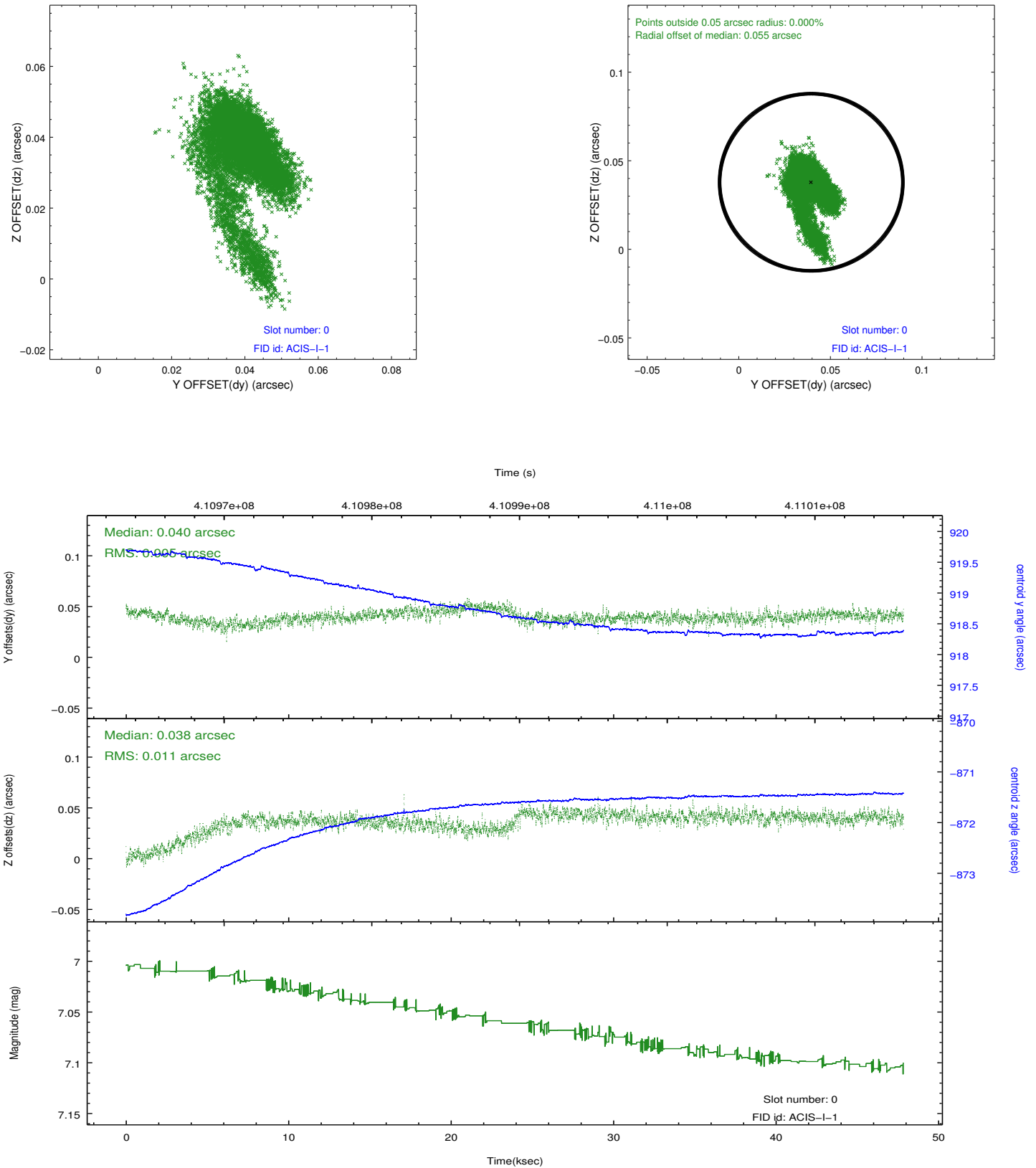


## 2.4.5 Slot 7

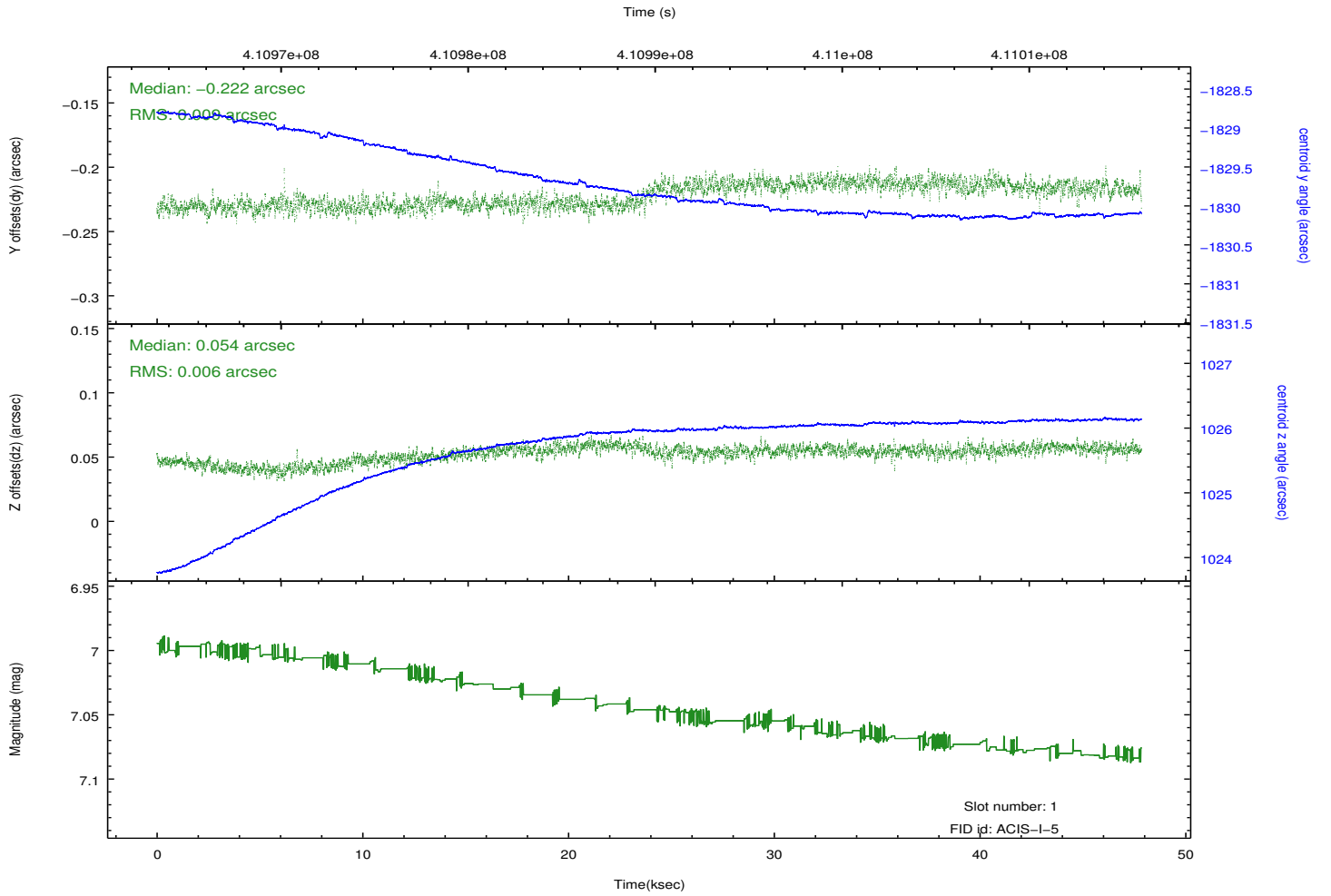
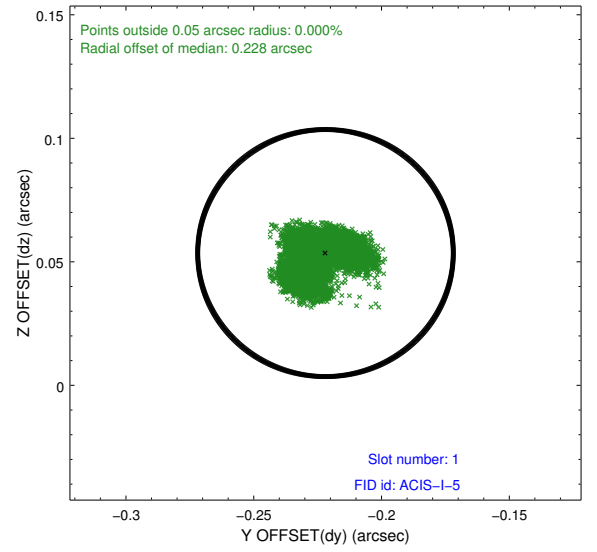
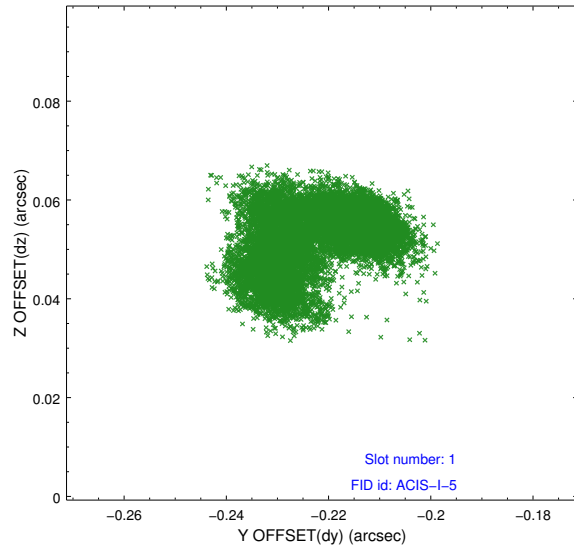


## 2.5 FID Slots

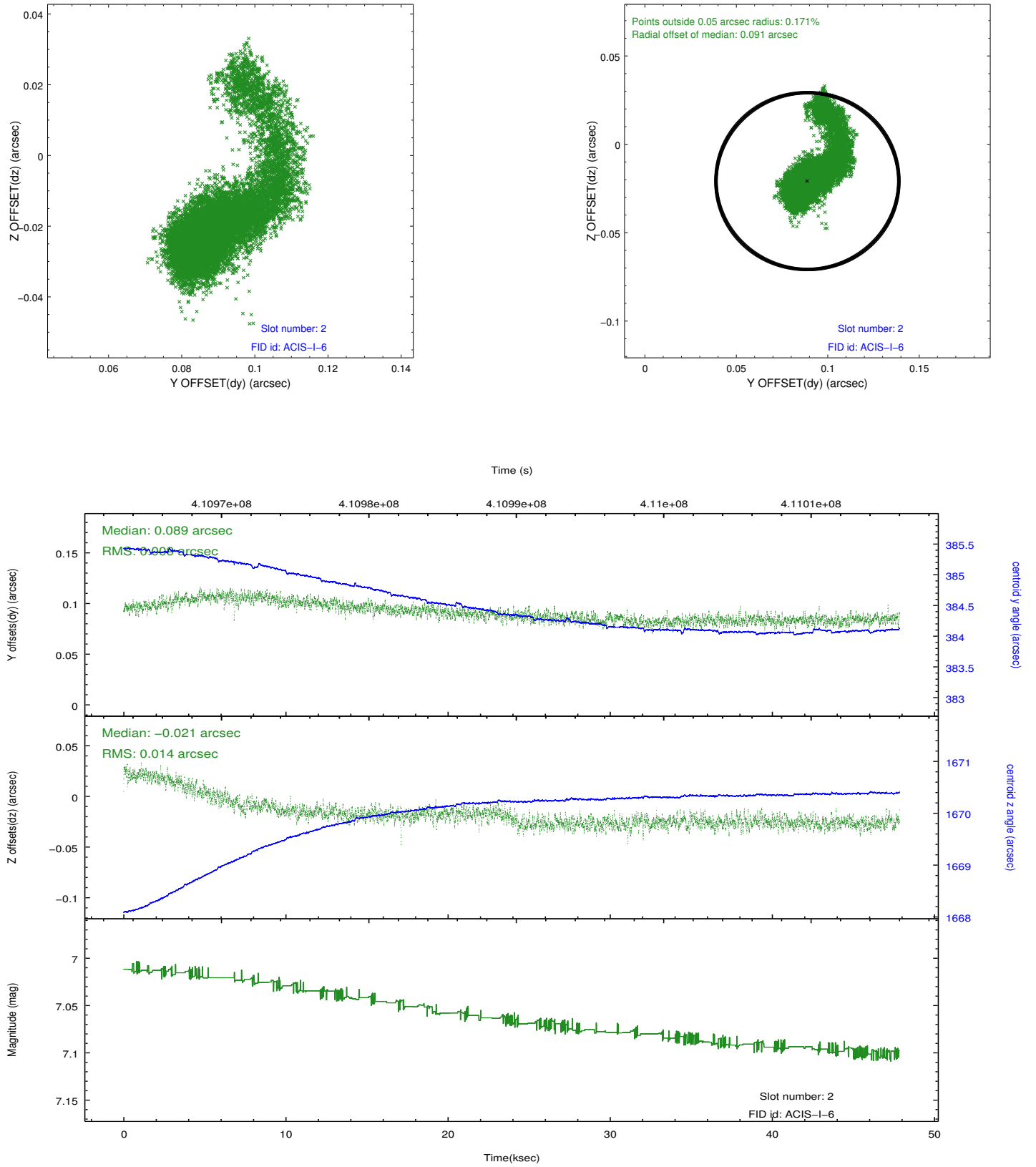
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	John Houck
V&V Date (YYYY-MM-DD)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	47.721318366349

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.