

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15592 - L2 Version 2  
Chandra X-Ray Center

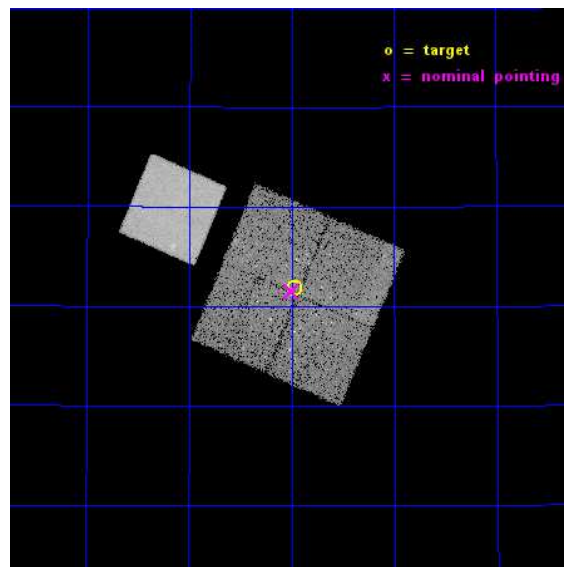
L2 Processing Date : Nov 29 2014

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# 1 Front

seq_num	200801	Sequence number
obs_id	15592	Observation id
title	Star formation in the NGC7000/IC5070 complex	Proposal title
observer	Dr. Francesco Damiani	Principal investigator
object	NGC7000 Pointing 1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	312.743333	Observer's specified target RA [deg]
dec_targ	44.364778	Observer's specified target Dec [deg]
ra_nom	312.75068947092	Nominal RA [deg]
dec_nom	44.358630087479	Nominal Dec [deg]
roll_nom	293.20355859662	Nominal Roll [deg]
revision	2	Processing version of data
ontime	21067.600162029	Sum of GTIs [s]
livetime	20792.336456171	Livetime [s]
ontime0	21067.600162029	Sum of GTIs [s]
ontime1	21067.600162029	Sum of GTIs [s]
ontime2	21067.600162029	Sum of GTIs [s]
ontime3	21067.600162029	Sum of GTIs [s]
ontime7	21067.600162029	Sum of GTIs [s]
l2events	111540	Number of level 2 events

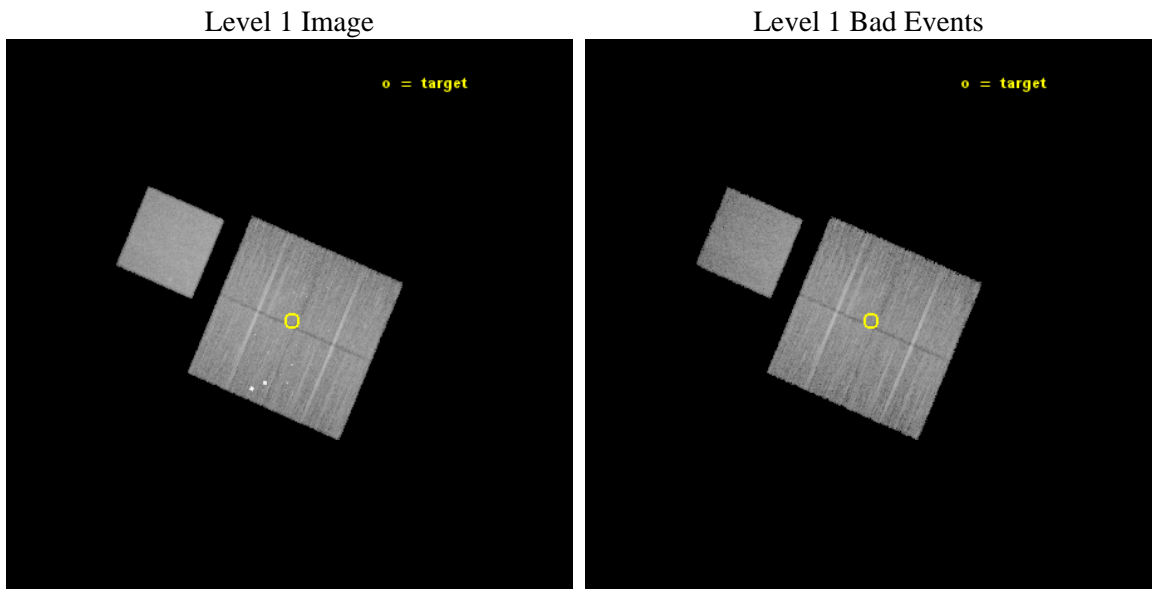




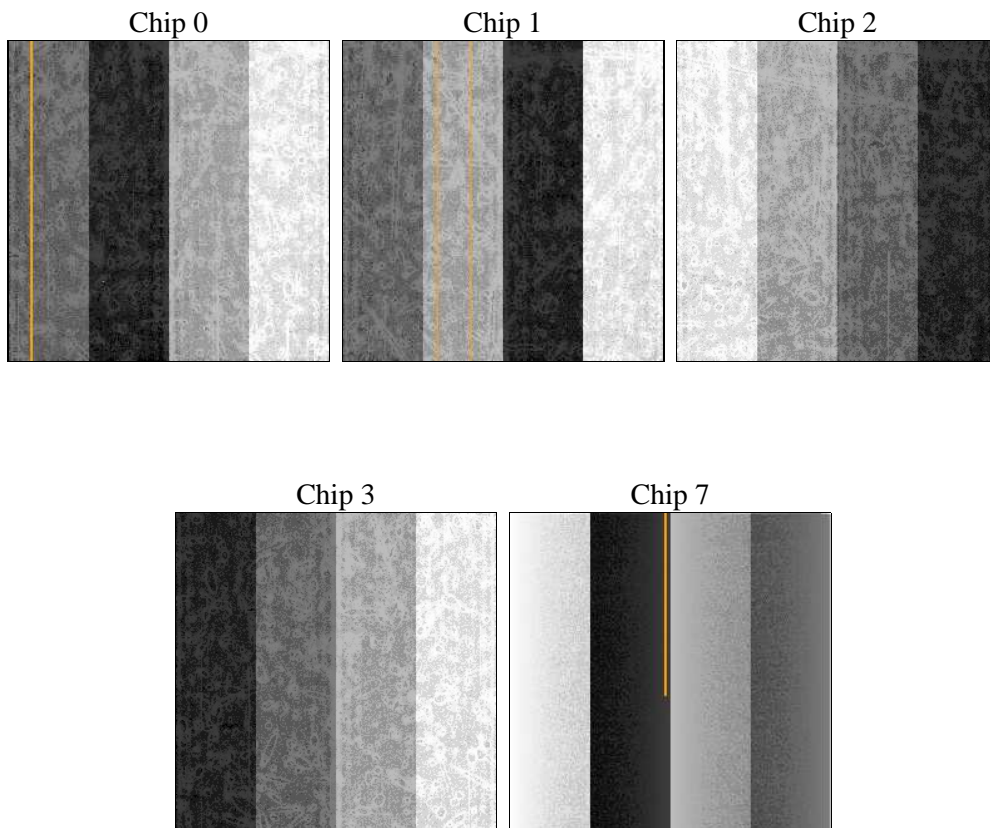
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	21000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	21067.600162029	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	21067.600162029	Sum of GTIs [s]
date	2014-11-30T01:41:19	Date and time of file creation	ontime1	21067.600162029	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	21067.600162029	Sum of GTIs [s]
			ontime3	21067.600162029	Sum of GTIs [s]
			ontime7	21067.600162029	Sum of GTIs [s]
			l1events	588603	Number of level 1 events

### 2.1.4 Events

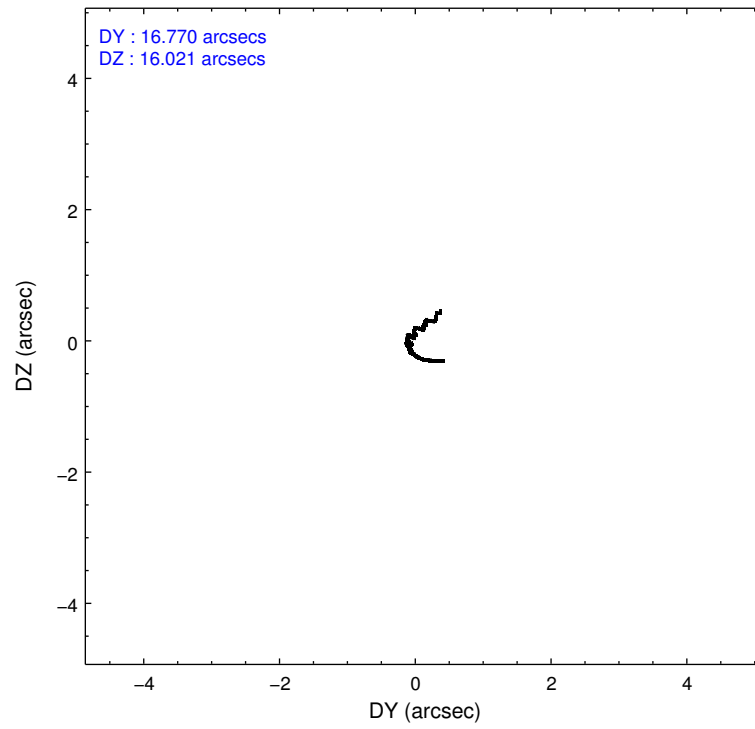
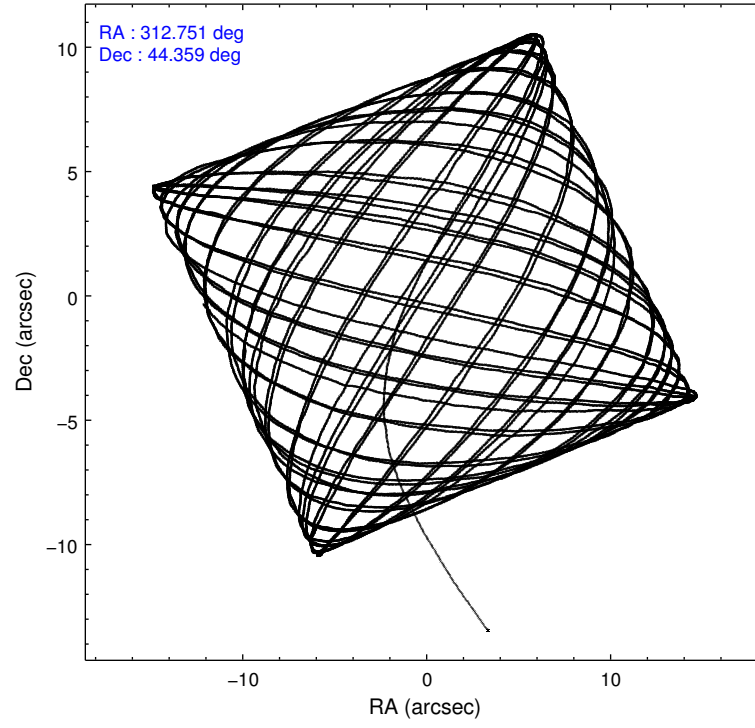
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	103493	104460	122401	109141	149108
rejected events	88923	89517	95983	95896	83408
rejected %	85%	85%	78%	87%	55%

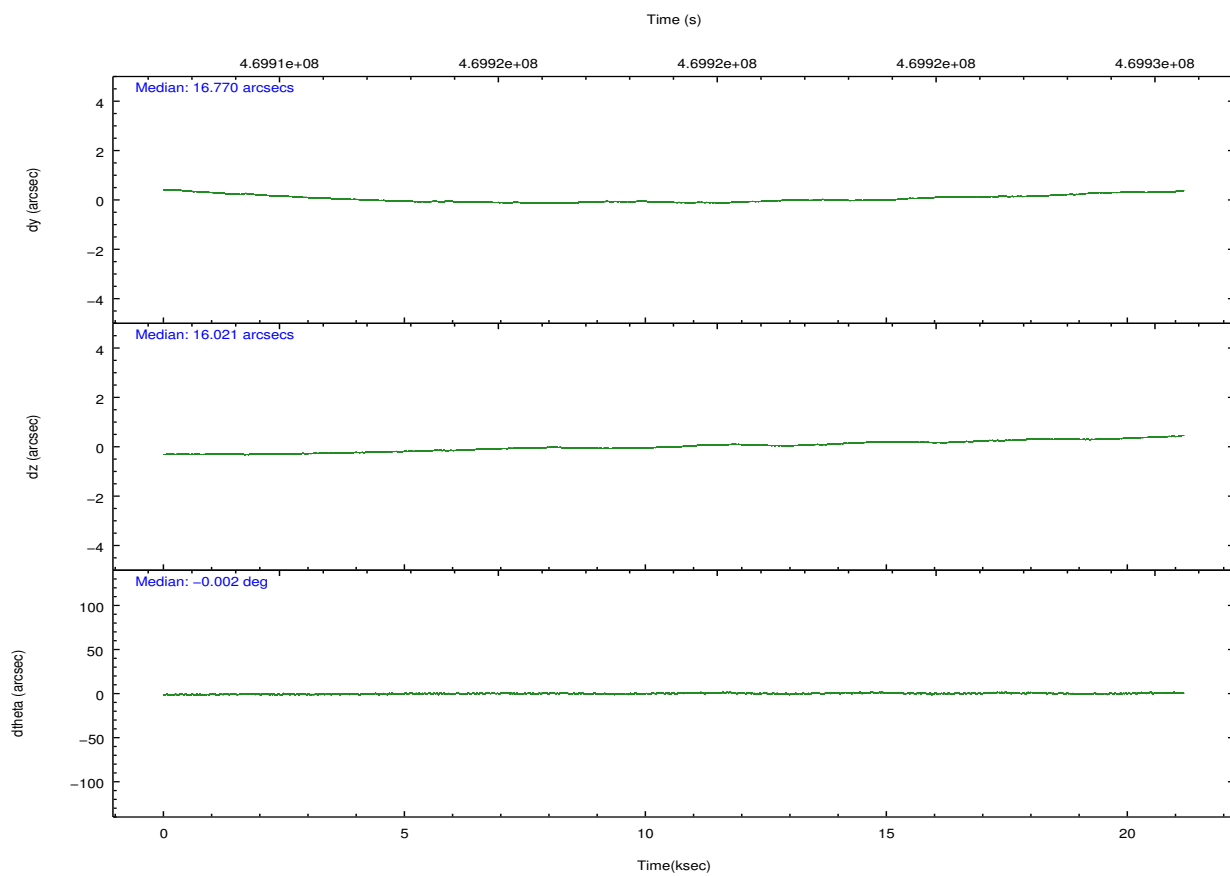
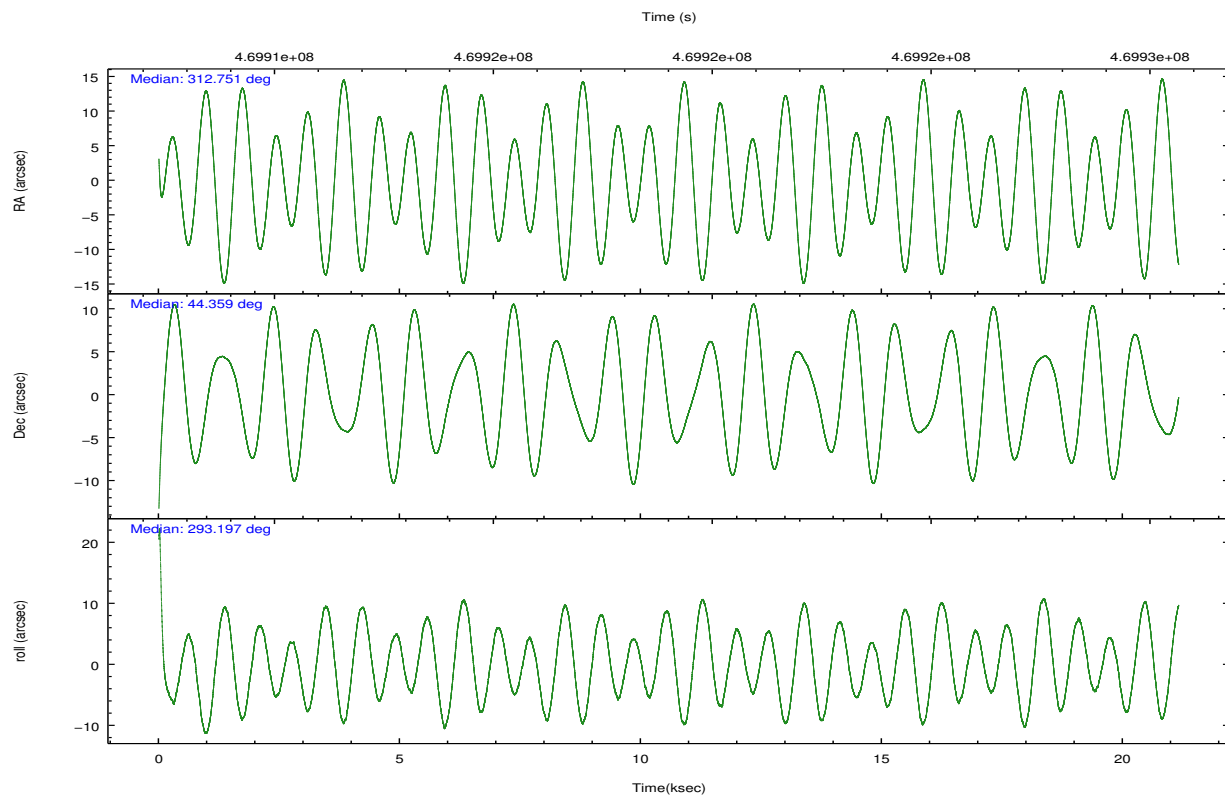
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	5831	5485	11696	5052	5911
	5%	5%	9%	4%	3%
grade 1 events	70	59	79	74	188
	0%	0%	0%	0%	0%
grade 2 events	3393	3479	9645	2798	13562
	3%	3%	7%	2%	9%
grade 3 events	1385	1431	1289	1389	5514
	1%	1%	1%	1%	3%
grade 4 events	1306	1481	1282	1426	5542
	1%	1%	1%	1%	3%
grade 5 events	5060	5336	4892	5691	15156
	4%	5%	3%	5%	10%
grade 6 events	2657	3071	2509	2583	35180
	2%	2%	2%	2%	23%
grade 7 events	83791	84118	91009	90128	68055
	80%	80%	74%	82%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	312.719774	312.7506894709248	CCD I2 on	Y	Y
[deg] Pointing Dec	44.375003	44.35863008747884	CCD I3 on	Y	Y
[deg] Pointing Roll	293.016474	293.2035585966179	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	N	N
[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)	469908587.184000	469907547.75404	CCD S5 on	N	N
Observation start date	2012-11-21T18:08:40	2012-11-21T17:52:27	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	469929587.184000	469930383.73027	On-chip summing requested	N	N
Observation end date	2012-11-21T23:58:40	2012-11-22T00:13:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



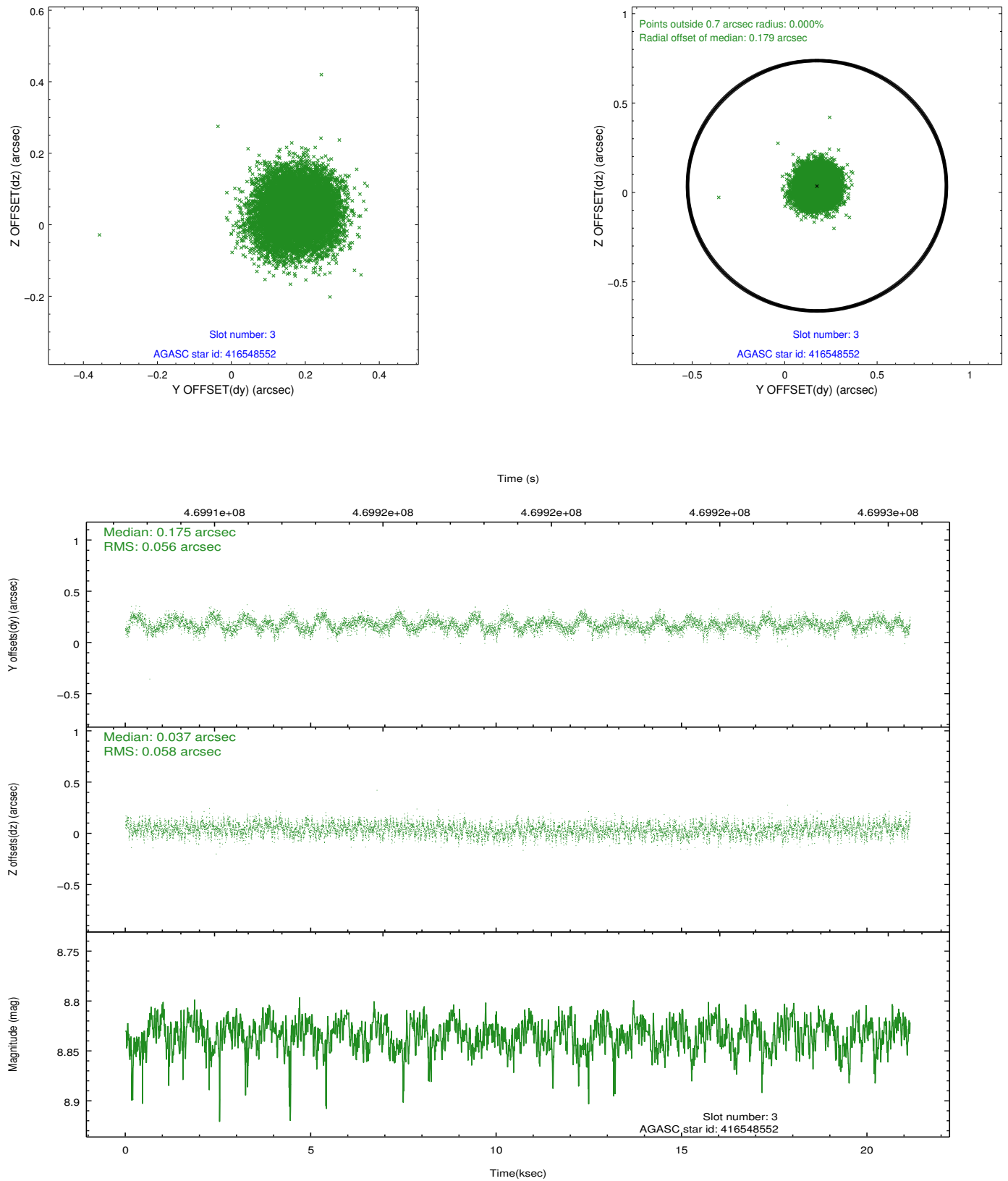


### Slot Statistics

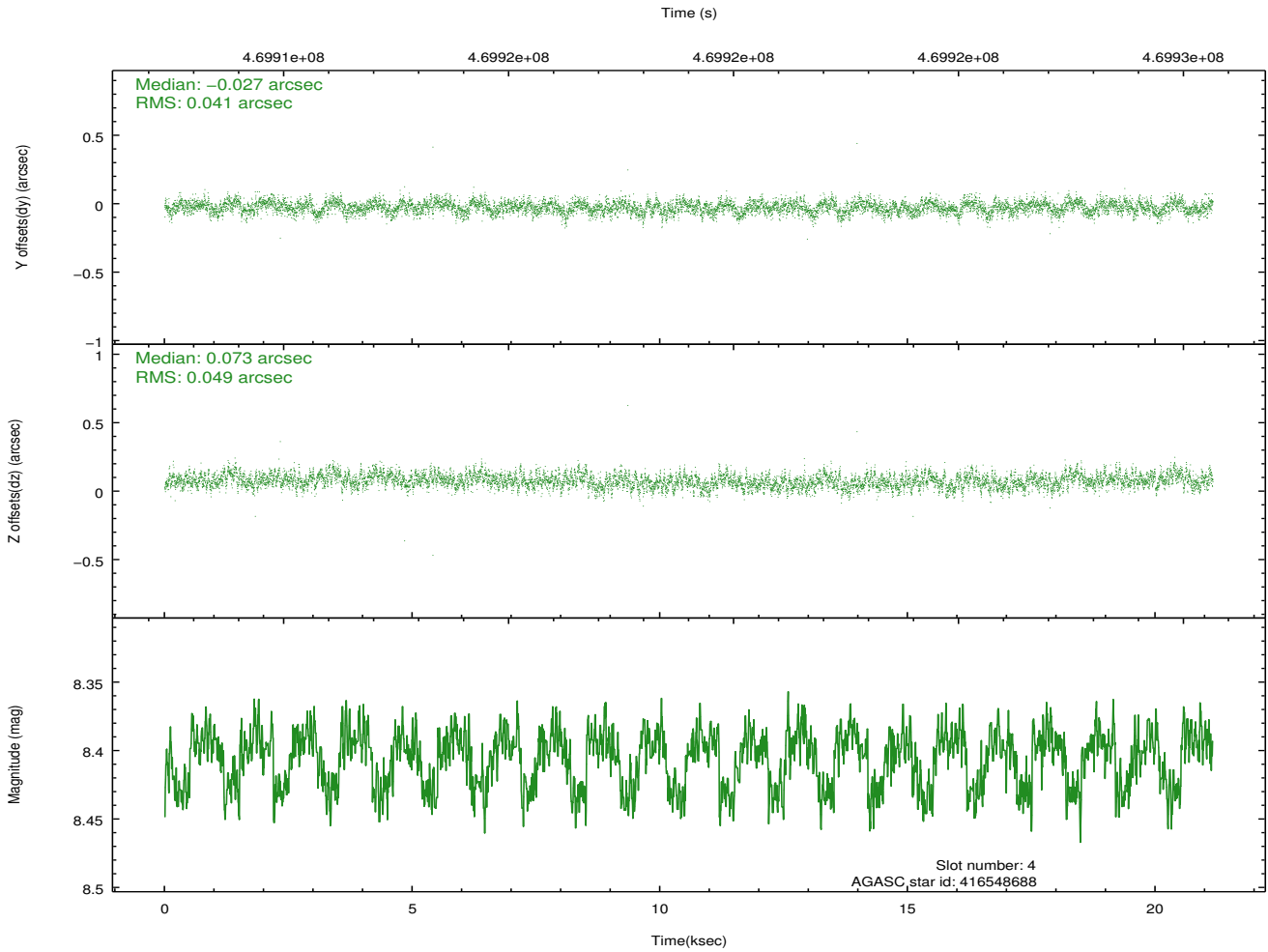
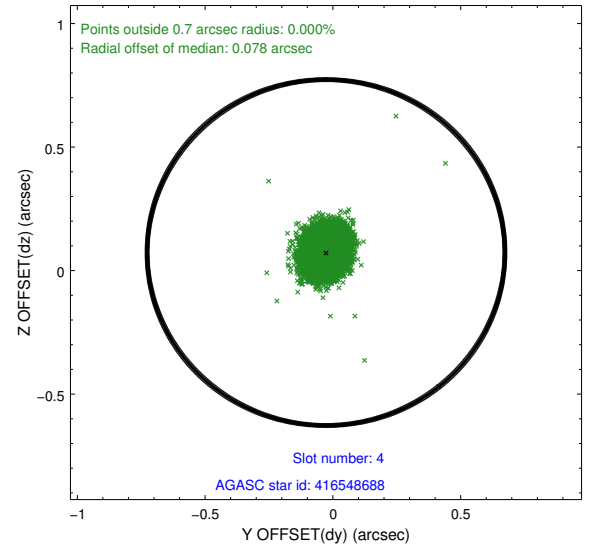
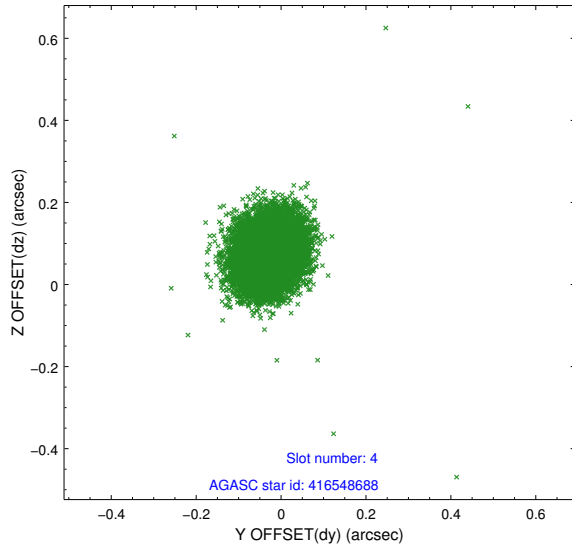
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.17	5161	0.077	-0.057	0.016	0.024	0.000000	0.000000	922.66	-839.72
1	FID		ACIS-I-5	7.16	5161	-0.267	0.059	0.011	0.017	0.000000	0.000000	-1825.70	1057.80
2	FID		ACIS-I-6	7.17	5161	0.099	0.072	0.011	0.018	0.000000	0.000000	388.04	1702.51
3	GUIDE	used	416548552	8.83	10317	0.175	0.037	0.088	0.135	312.162429	44.313259	-360.66	-1405.91
4	GUIDE	used	416548688	8.40	10317	-0.027	0.073	0.067	0.110	312.067937	44.076630	323.74	-1968.94
5	GUIDE	used	416680816	7.20	10323	-0.057	0.178	0.075	0.115	313.473557	44.386409	712.41	1804.62
6	GUIDE	used	416689360	7.95	10322	-0.002	-0.293	0.059	0.093	313.138741	43.952709	1821.66	406.31
7	GUIDE	used	468634672	8.47	10320	-0.087	0.002	0.064	0.107	312.834449	45.045859	-2108.63	1212.84

## 2.4 Star Slots

### 2.4.1 Slot 3

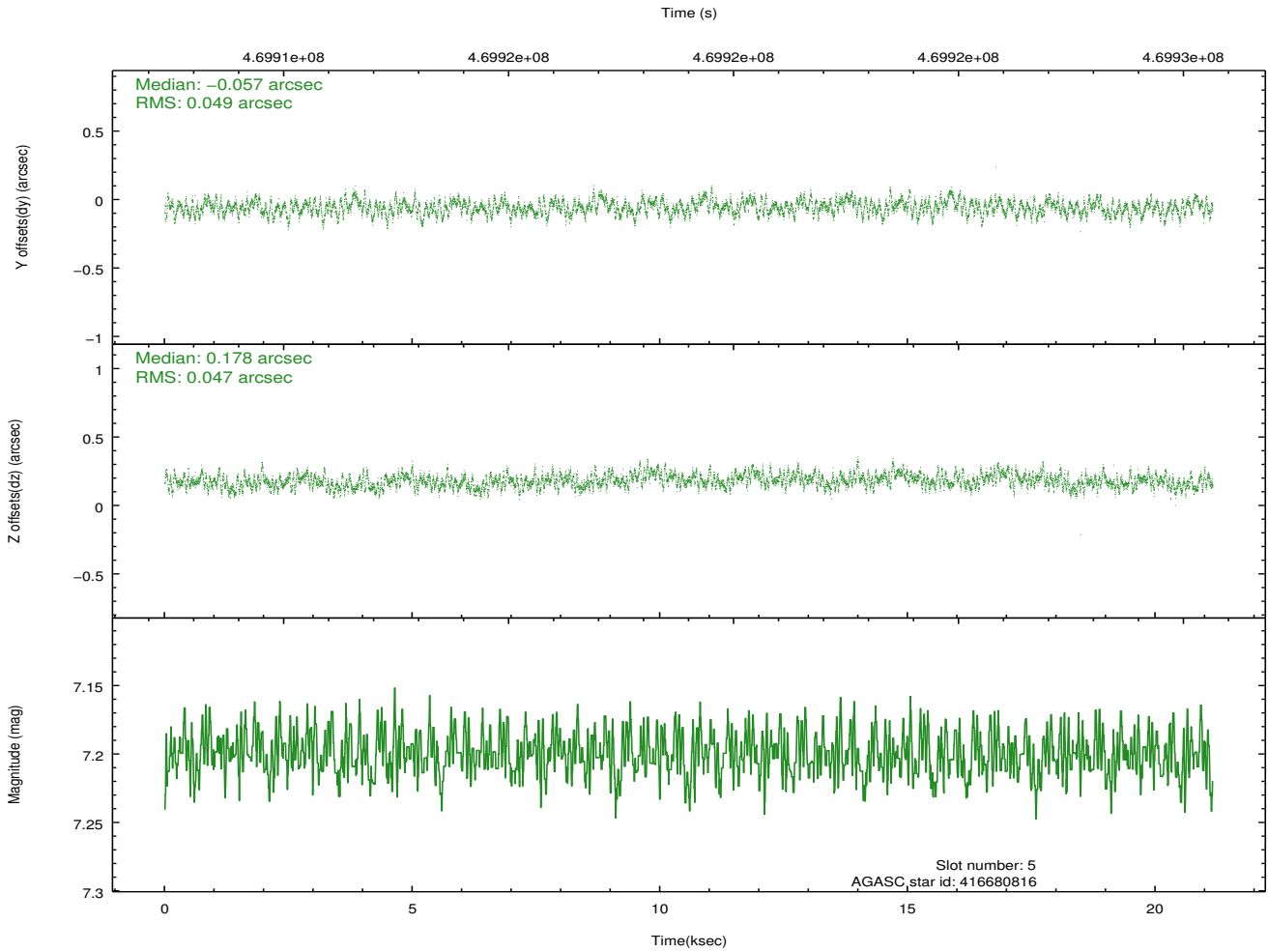
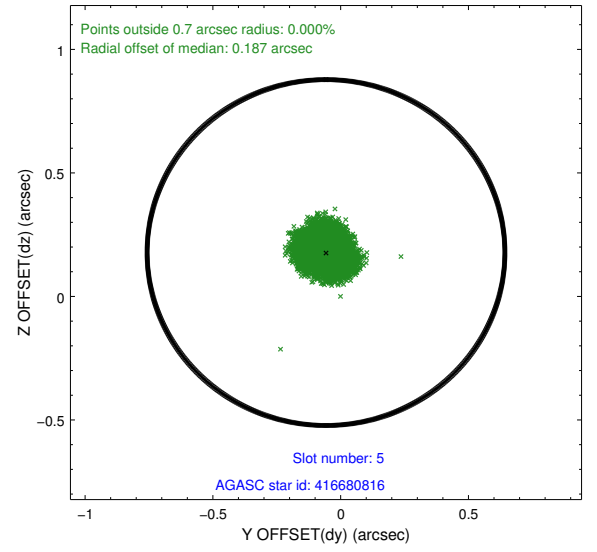
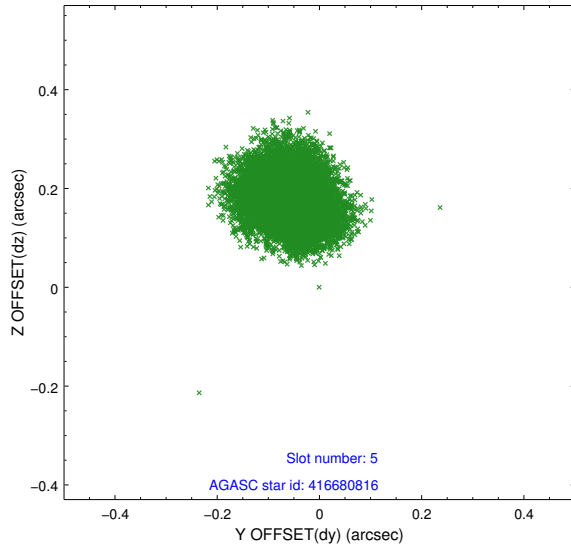


## 2.4.2 Slot 4

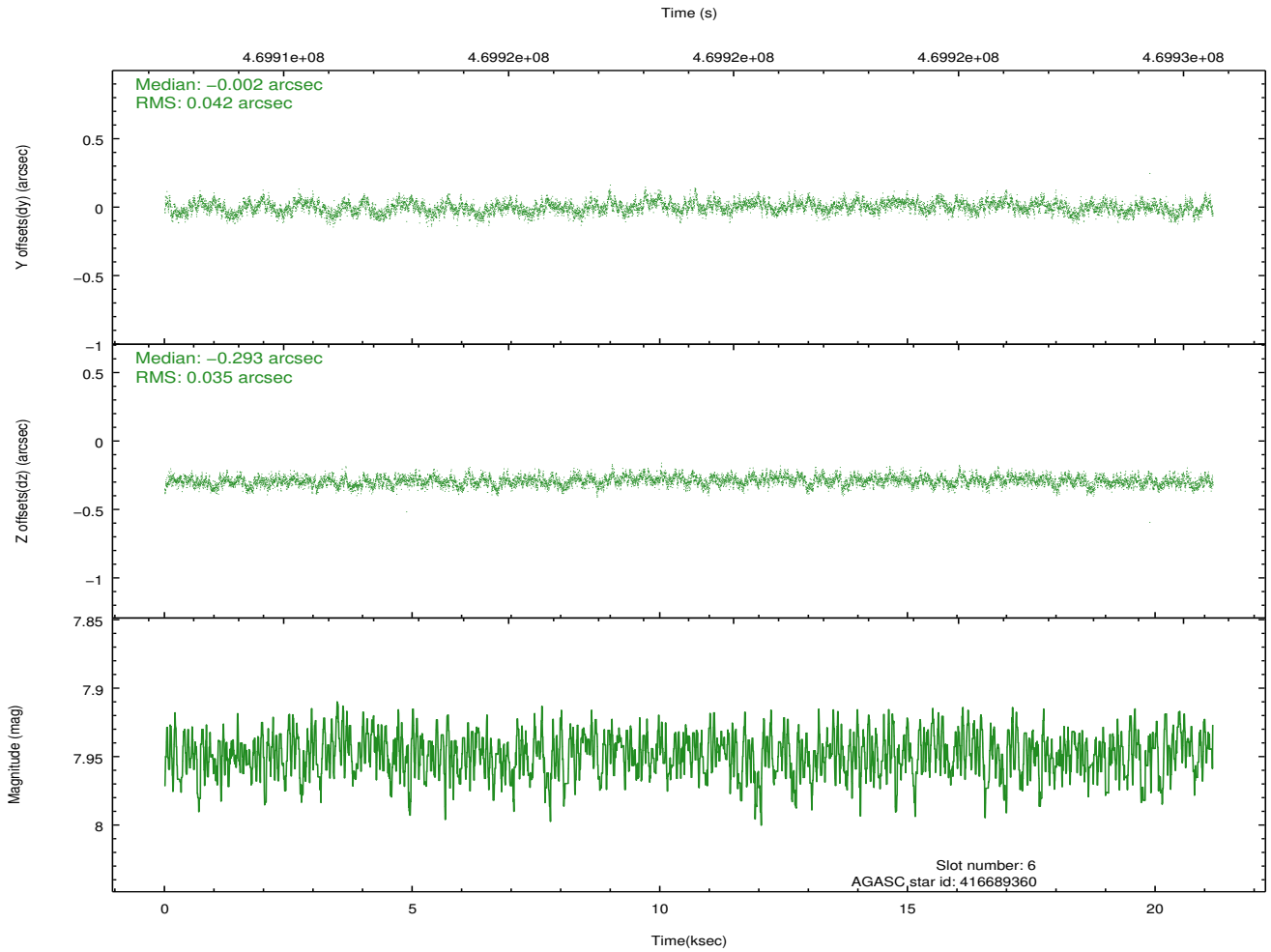
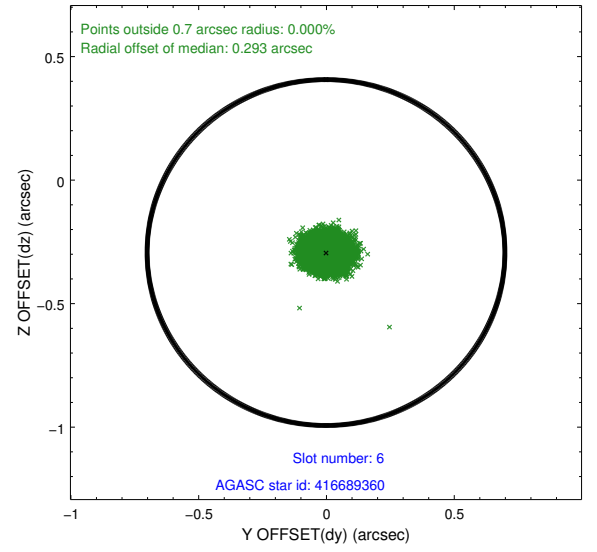
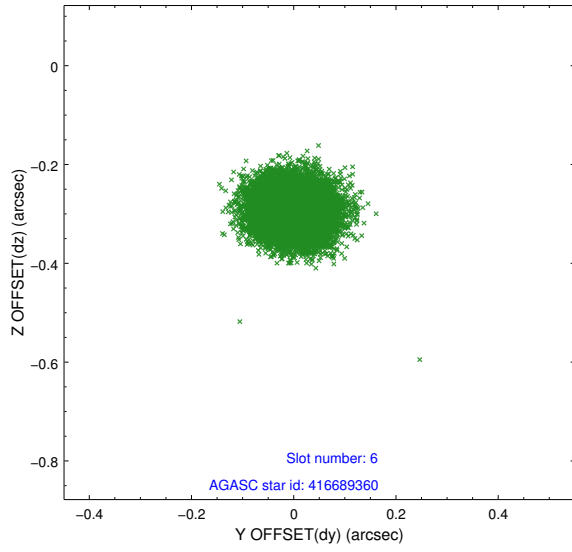




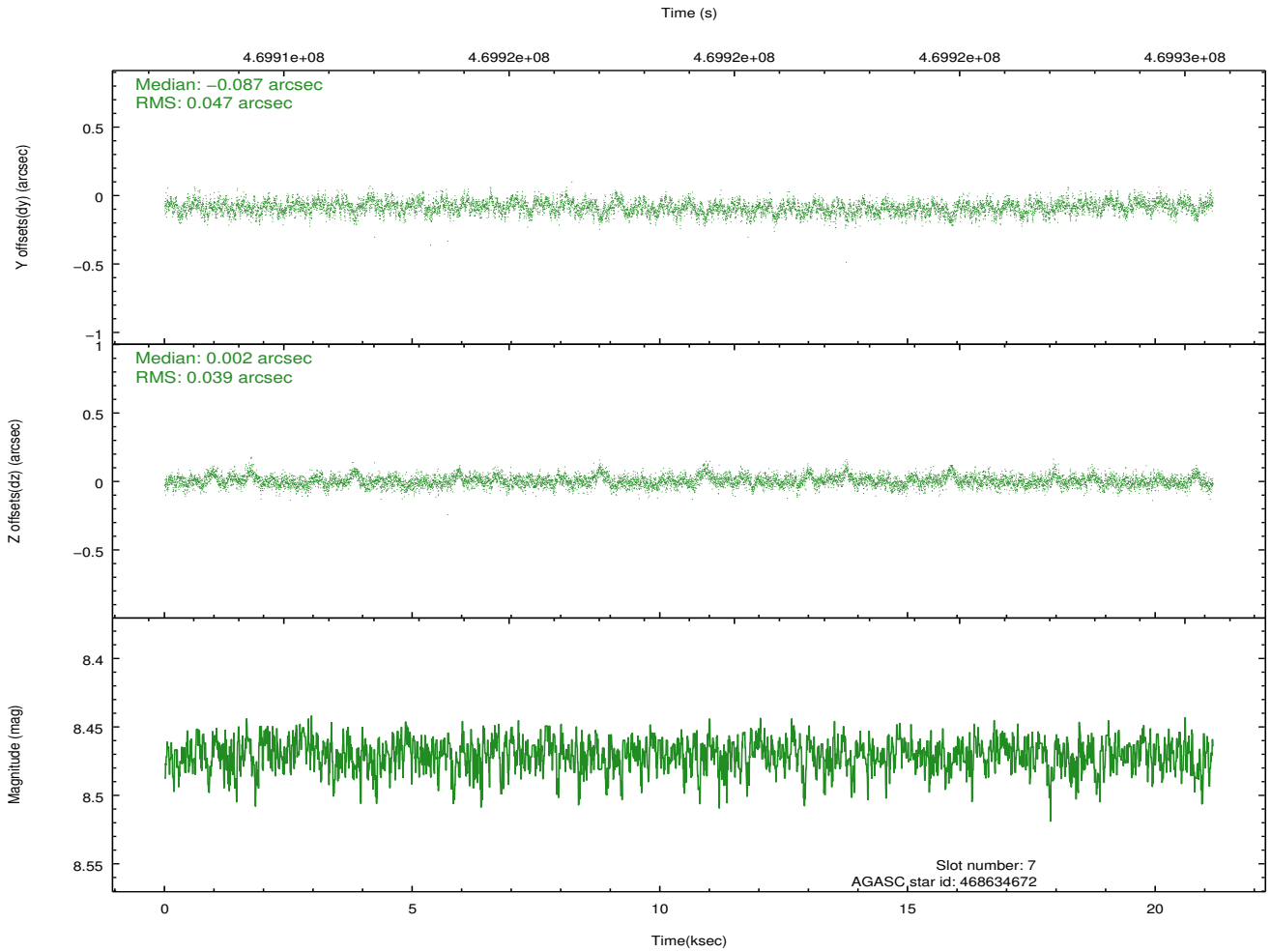
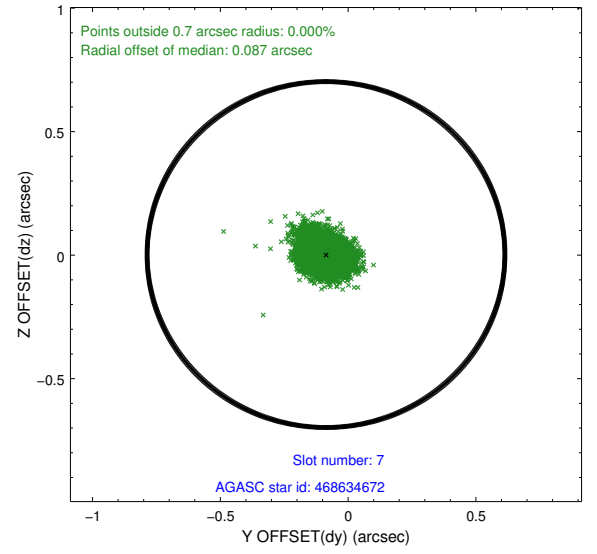
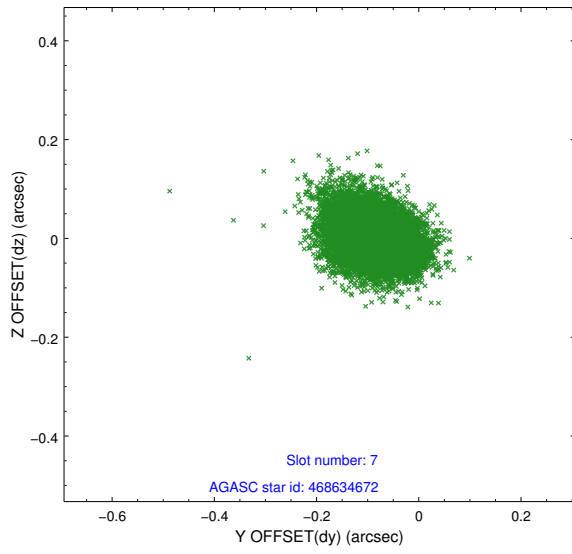
### 2.4.3 Slot 5



## 2.4.4 Slot 6

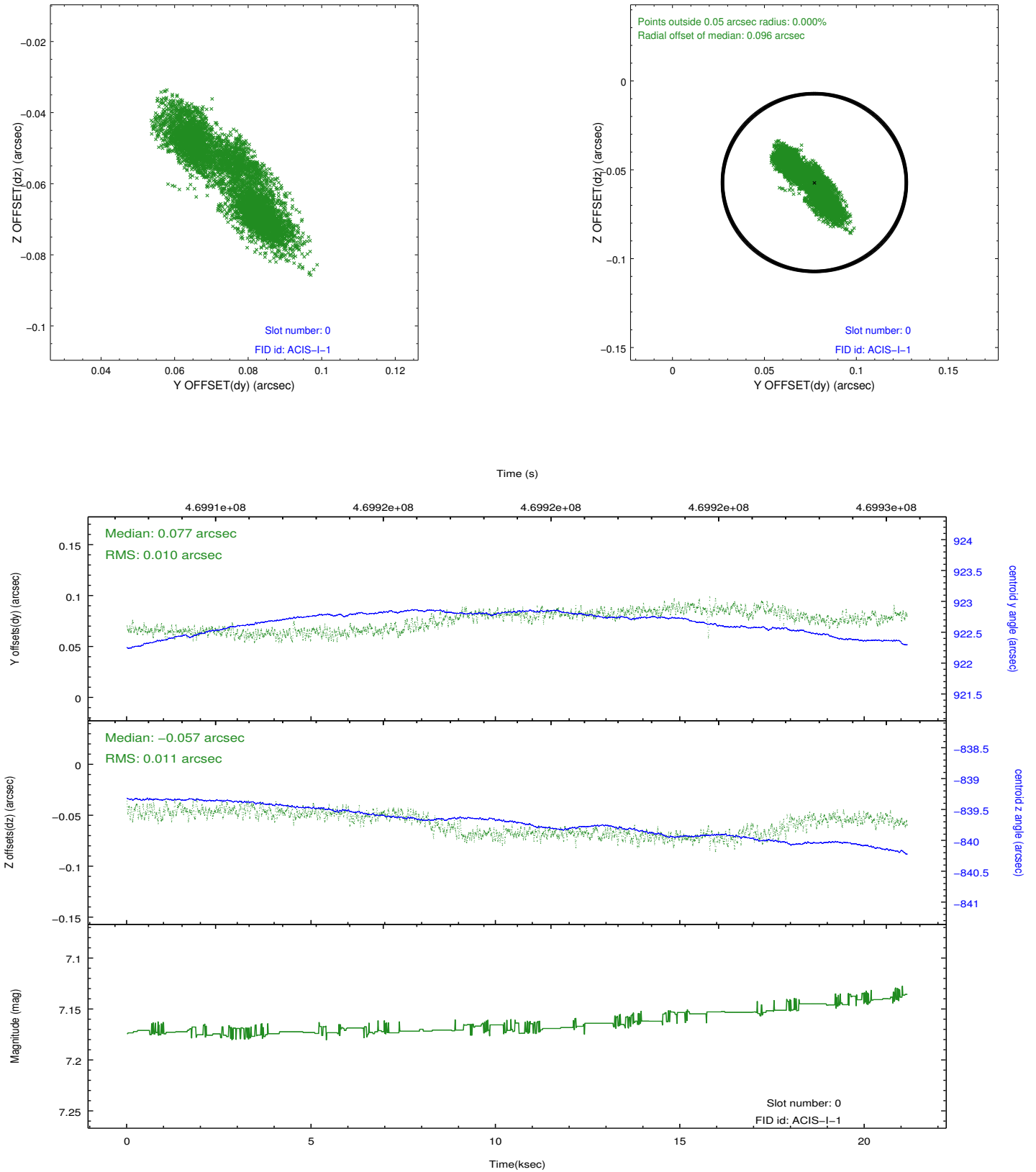


## 2.4.5 Slot 7

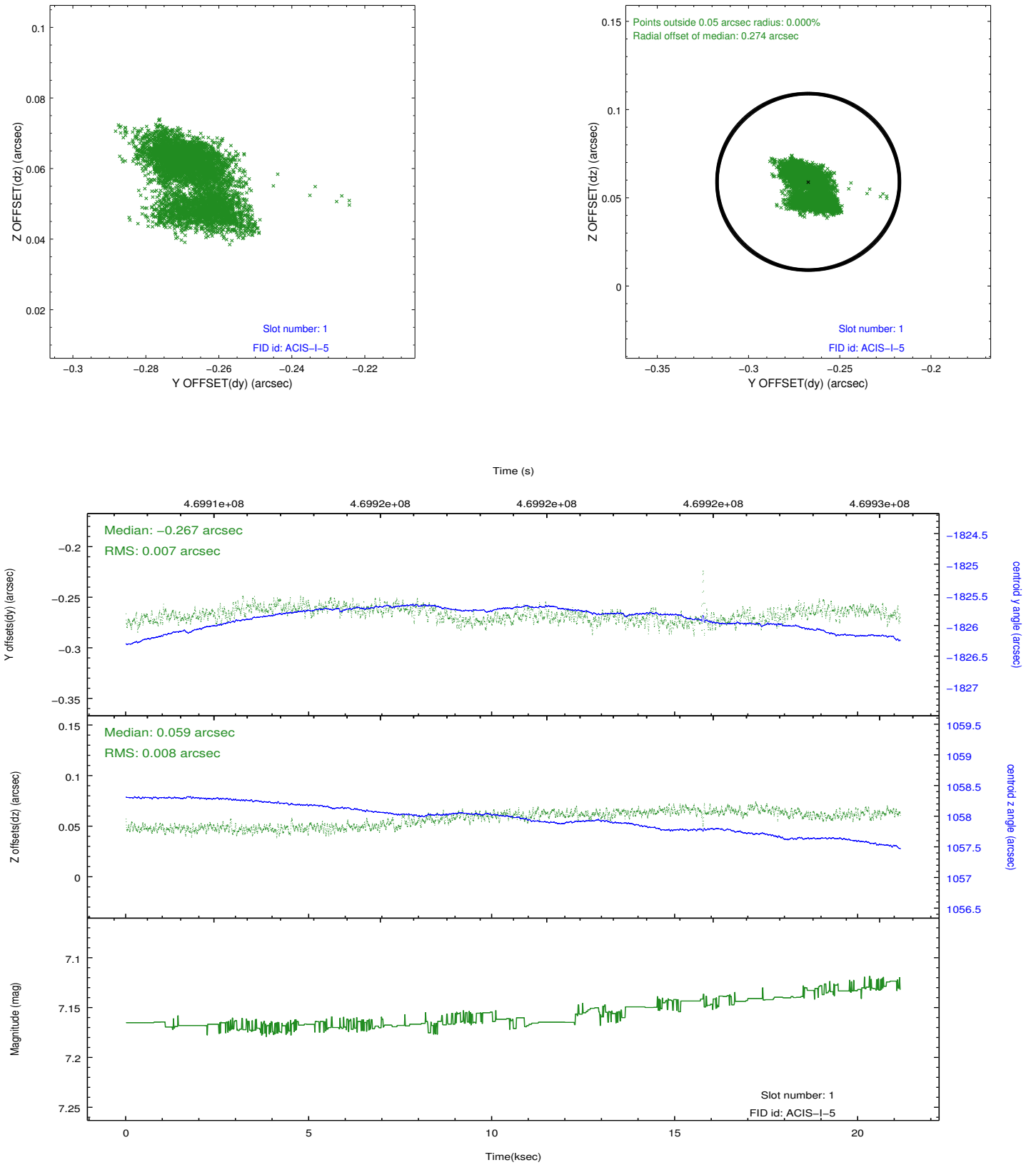


## 2.5 FID Slots

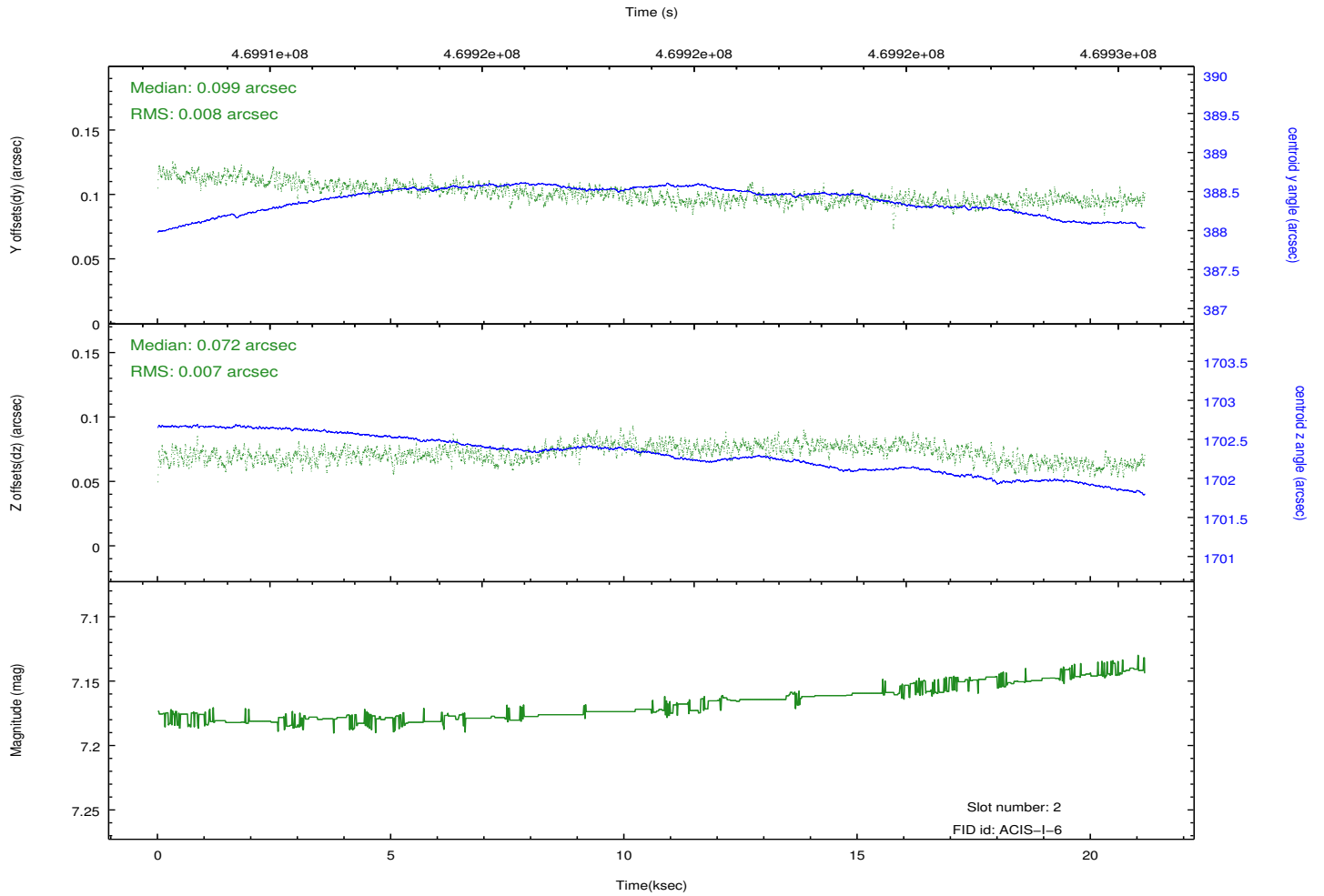
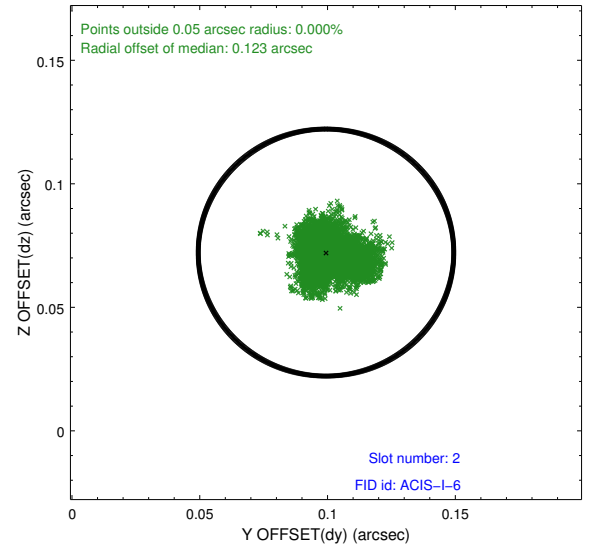
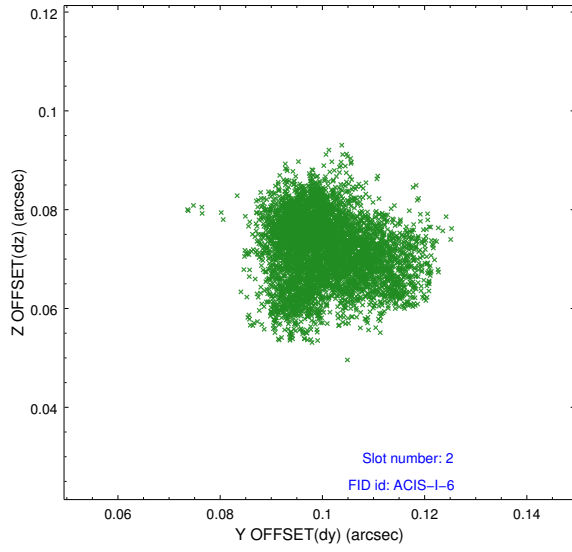
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	21.067600162029

## A.2 Comments

Joint proposal with XMM.

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.