

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13606 - L2 Version 2  
Chandra X-Ray Center

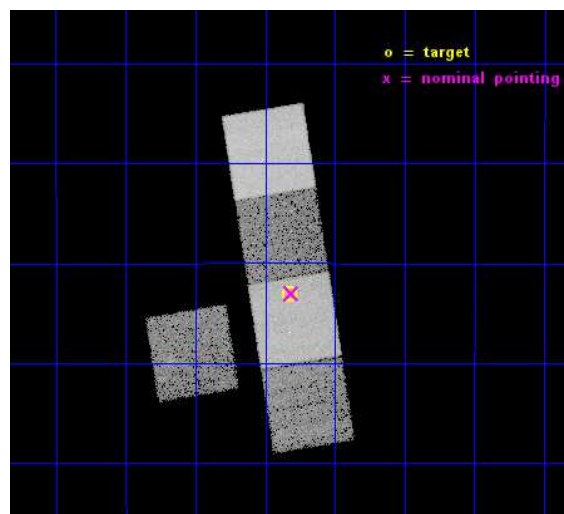
L2 Processing Date : Nov 29 2014

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# 1 Front

seq_num	200761	Sequence number
obs_id	13606	Observation id
title	Are Convective Dynamos Super-Saturated at High Rotation Velocities?	&#160
observer	Prof. Edo Berger	Principal investigator
object	2MUCD 10980	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	170.455417	Observer's specified target RA [deg]
dec_targ	-13.219	Observer's specified target Dec [deg]
ra_nom	170.4531131368	Nominal RA [deg]
dec_nom	-13.216991321978	Nominal Dec [deg]
roll_nom	80.830798760975	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20065.818393588	Sum of GTIs [s]
livetime	19803.643704035	Livetime [s]
ontime3	20065.695273578	Sum of GTIs [s]
ontime5	20065.777353585	Sum of GTIs [s]
ontime6	20062.595353246	Sum of GTIs [s]
ontime7	20065.818393588	Sum of GTIs [s]
ontime8	20065.654233575	Sum of GTIs [s]
l2events	175695	Number of level 2 events

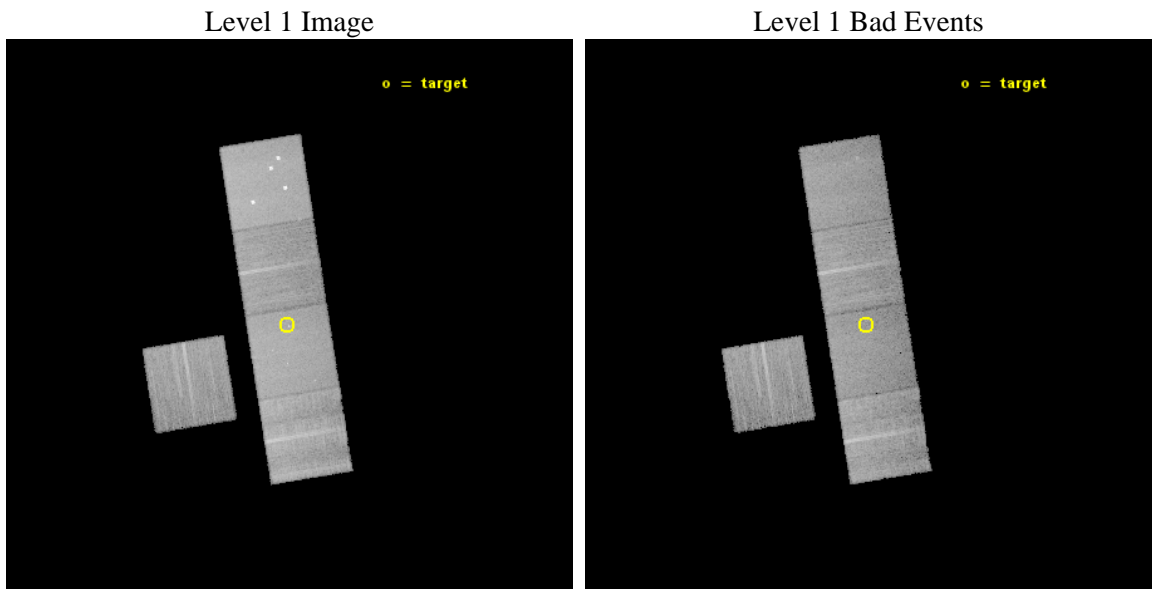




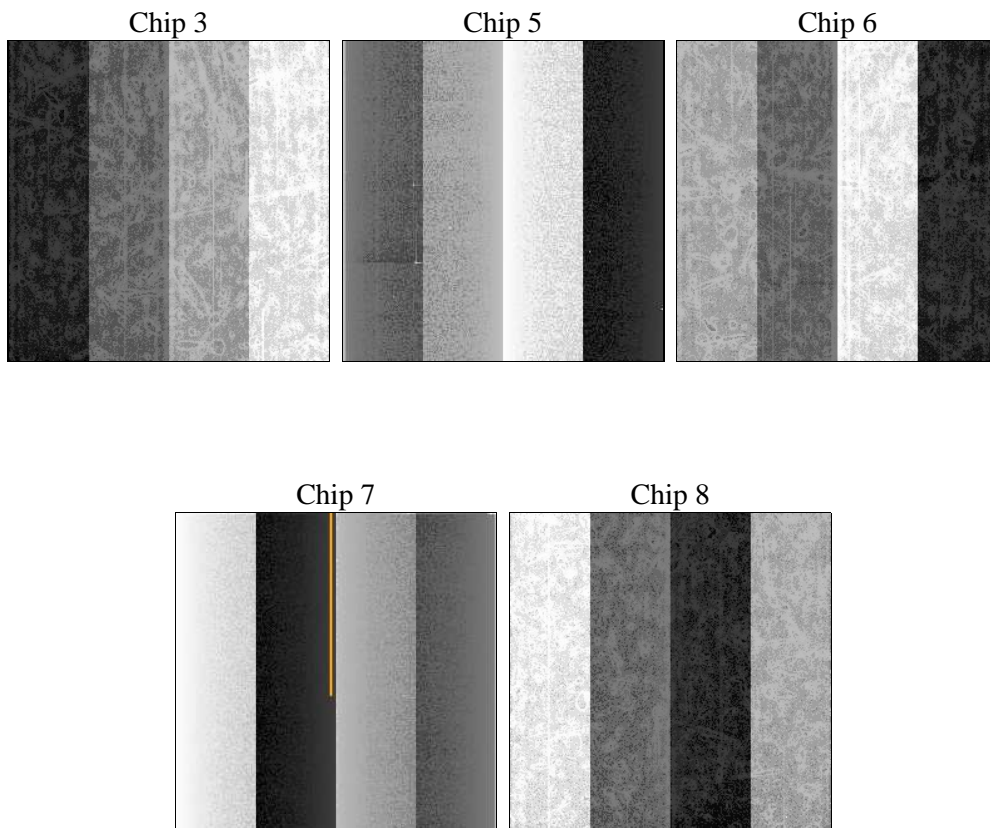
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20065.818393588	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime3	20065.695273578	Sum of GTIs [s]
date	2014-11-29T04:08:17	Date and time of file creation	ontime5	20065.777353585	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	20062.595353246	Sum of GTIs [s]
			ontime7	20065.818393588	Sum of GTIs [s]
			ontime8	20065.654233575	Sum of GTIs [s]
			l1events	679857	Number of level 1 events

### 2.1.4 Events

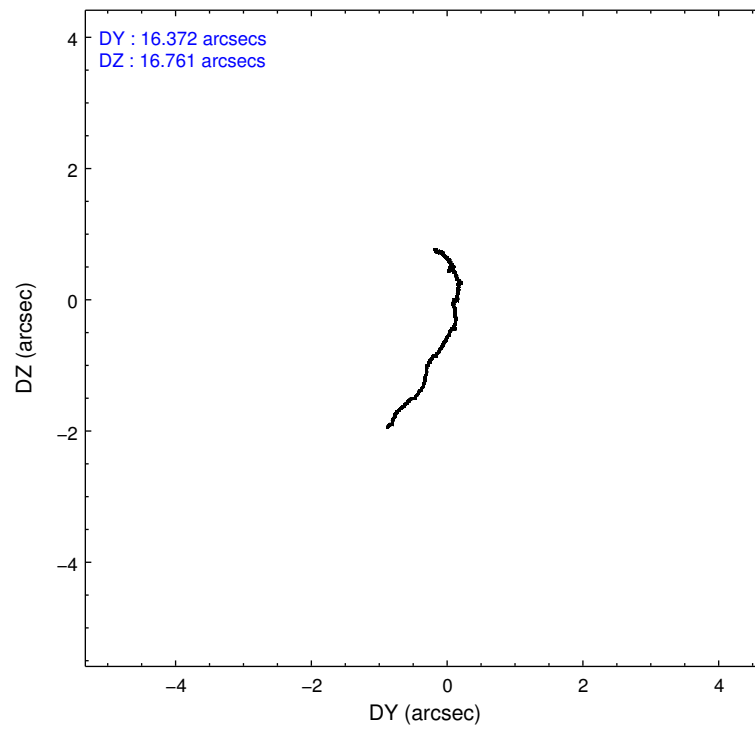
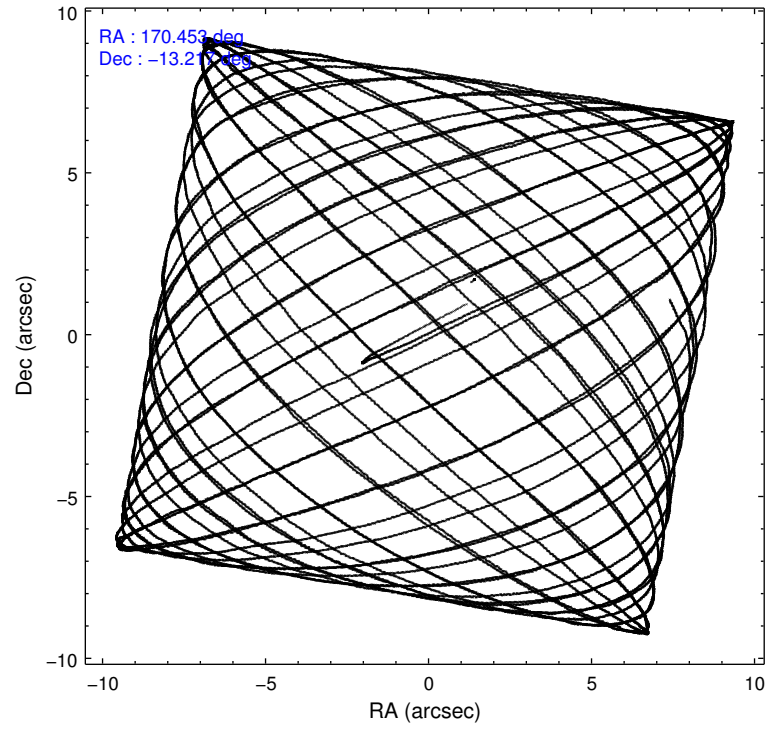
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	101716	183762	108853	142820	142706
rejected events	89799	90887	96065	80650	104869
rejected %	88%	49%	88%	56%	73%

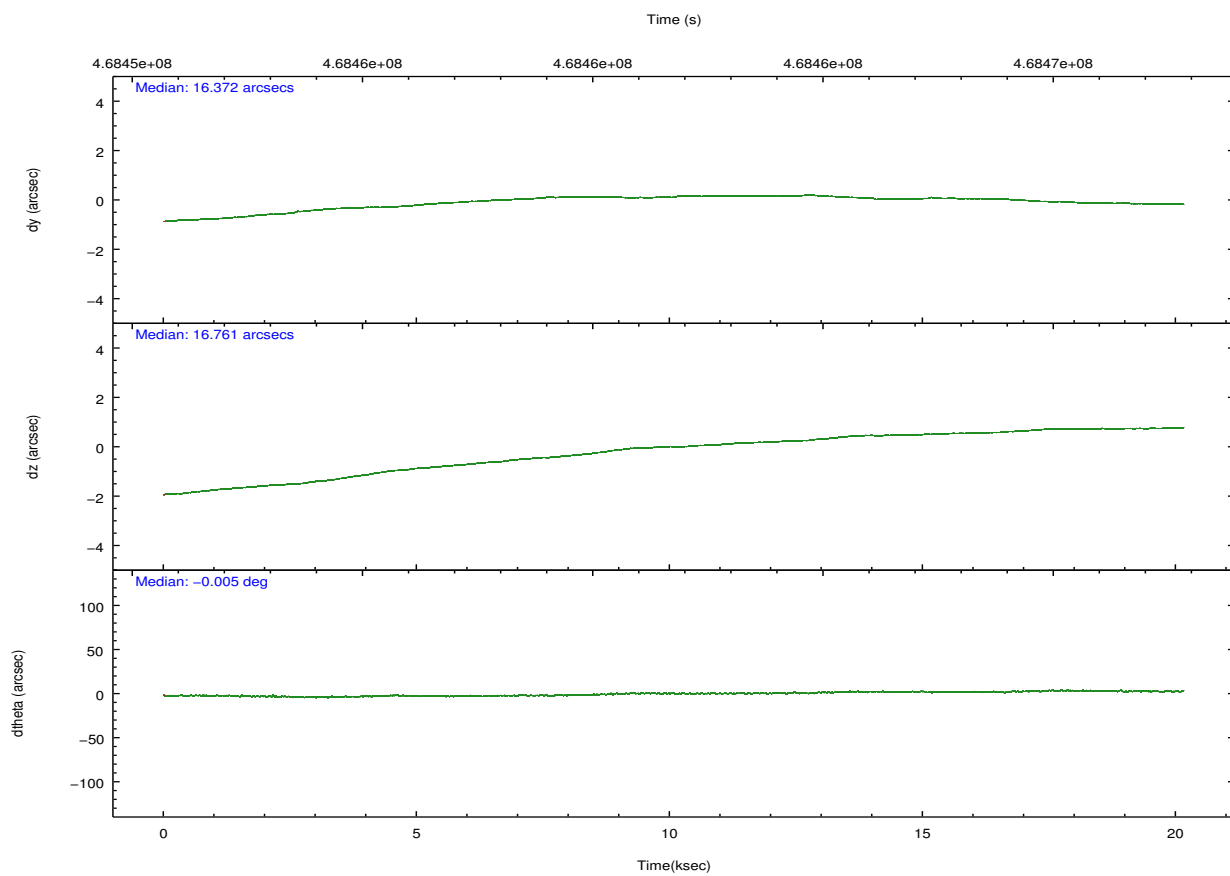
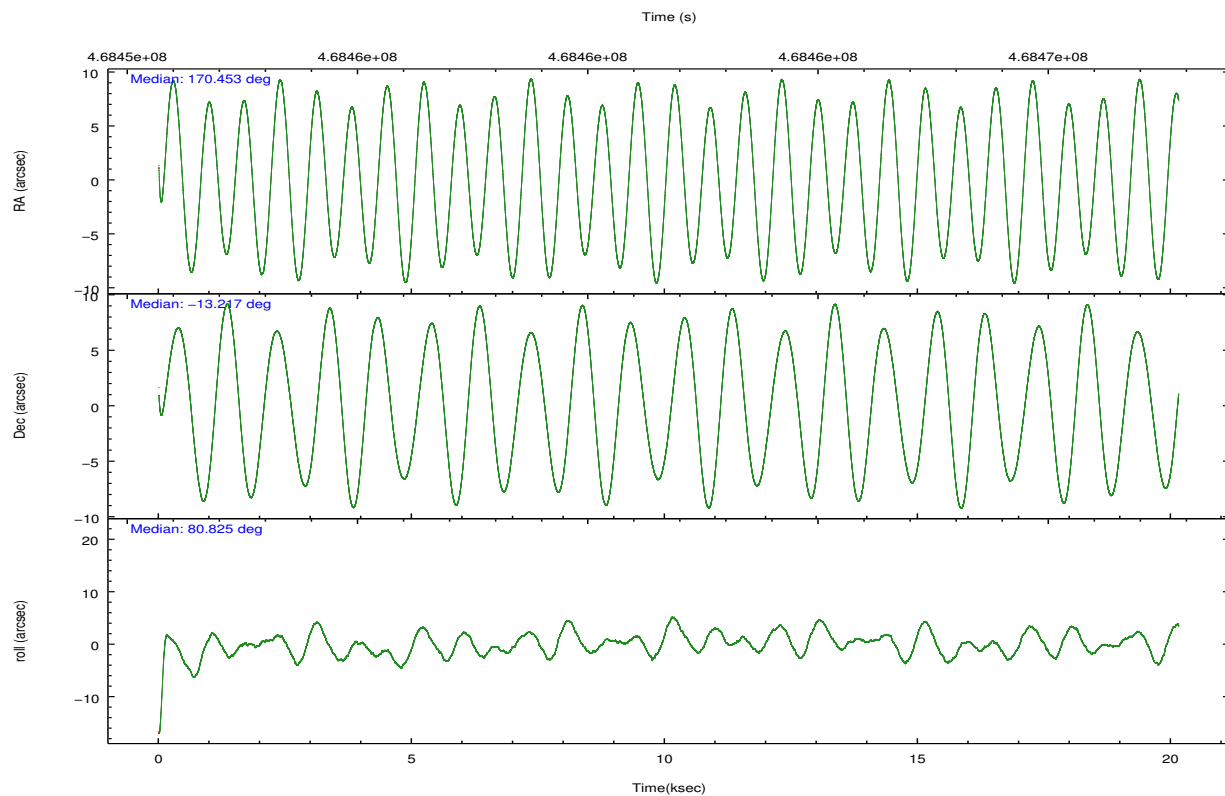
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	4225	15873	4338	5544	11224
	4%	8%	3%	3%	7%
grade 1 events	59	482	57	176	105
	0%	0%	0%	0%	0%
grade 2 events	2591	25775	2918	12761	8689
	2%	14%	2%	8%	6%
grade 3 events	1290	2976	1315	5400	3967
	1%	1%	1%	3%	2%
grade 4 events	1265	2892	1298	5276	3762
	1%	1%	1%	3%	2%
grade 5 events	5376	12977	5478	14872	7865
	5%	7%	5%	10%	5%
grade 6 events	2550	45380	2922	33208	10197
	2%	24%	2%	23%	7%
grade 7 events	84360	77407	90527	65583	96897
	82%	42%	83%	45%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	170.463442	170.4531131368039	CCD I2 on	N	N
[deg] Pointing Dec	-13.242410	-13.21699132197752	CCD I3 on	O1	Y
[deg] Pointing Roll	80.676546	80.830798760975	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	468451844.184000	468450592.17572	CCD S5 on	N	N
Observation start date	2012-11-04T21:29:37	2012-11-04T21:09:52	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	468471844.184000	468472863.88941	On-chip summing requested	N	N
Observation end date	2012-11-05T03:02:57	2012-11-05T03:21:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



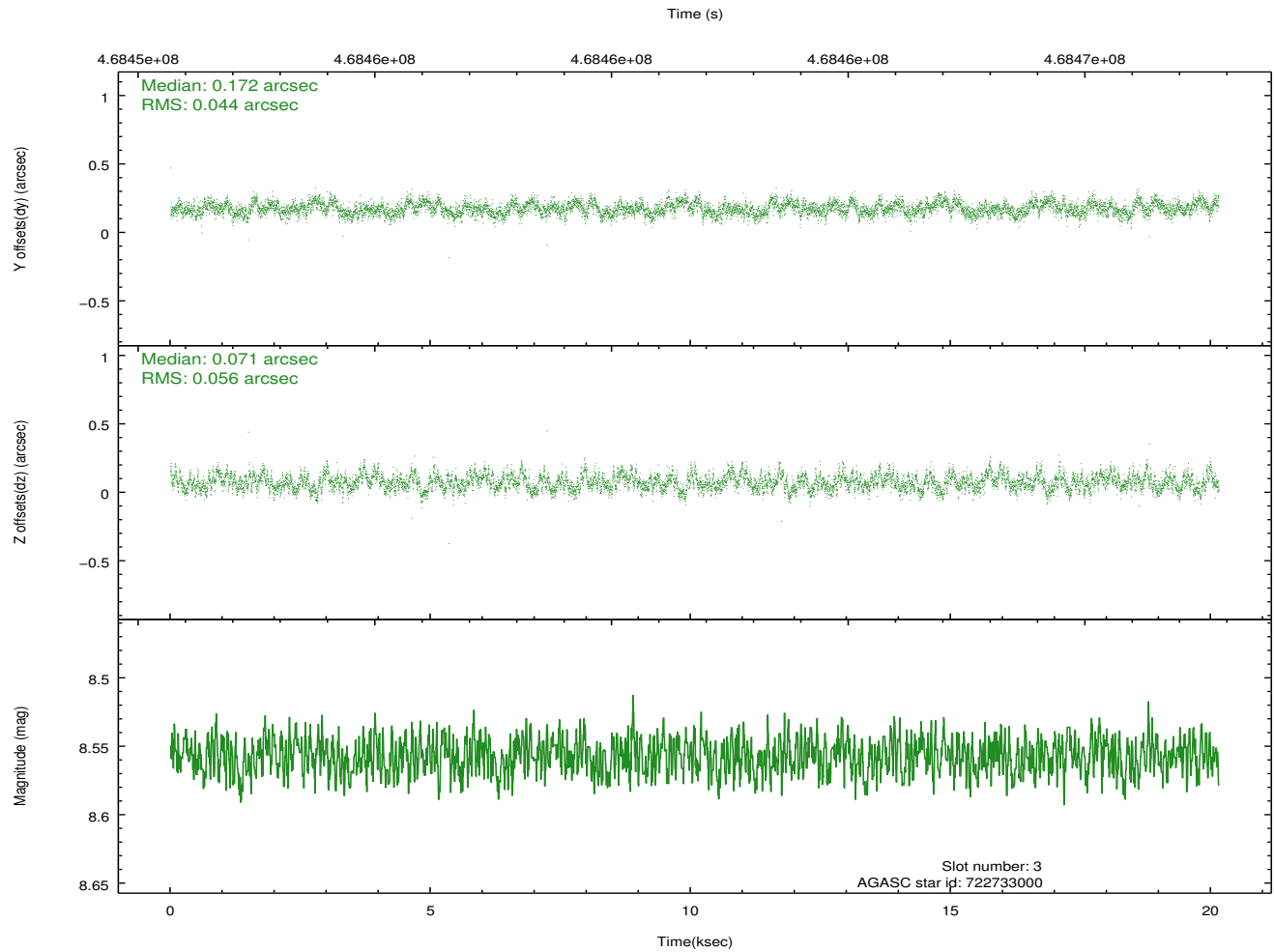
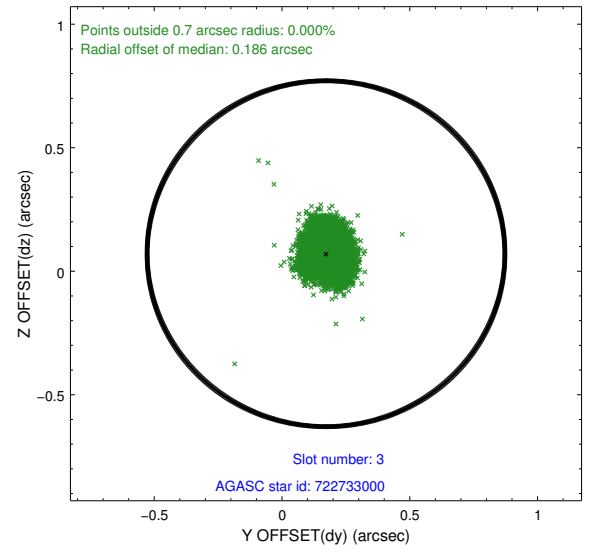
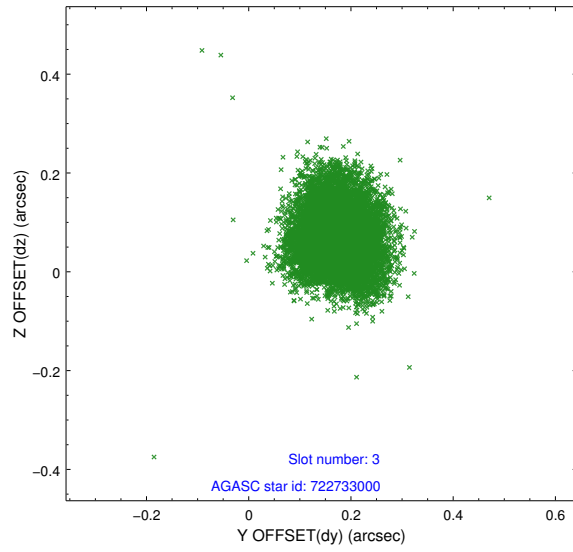


### Slot Statistics

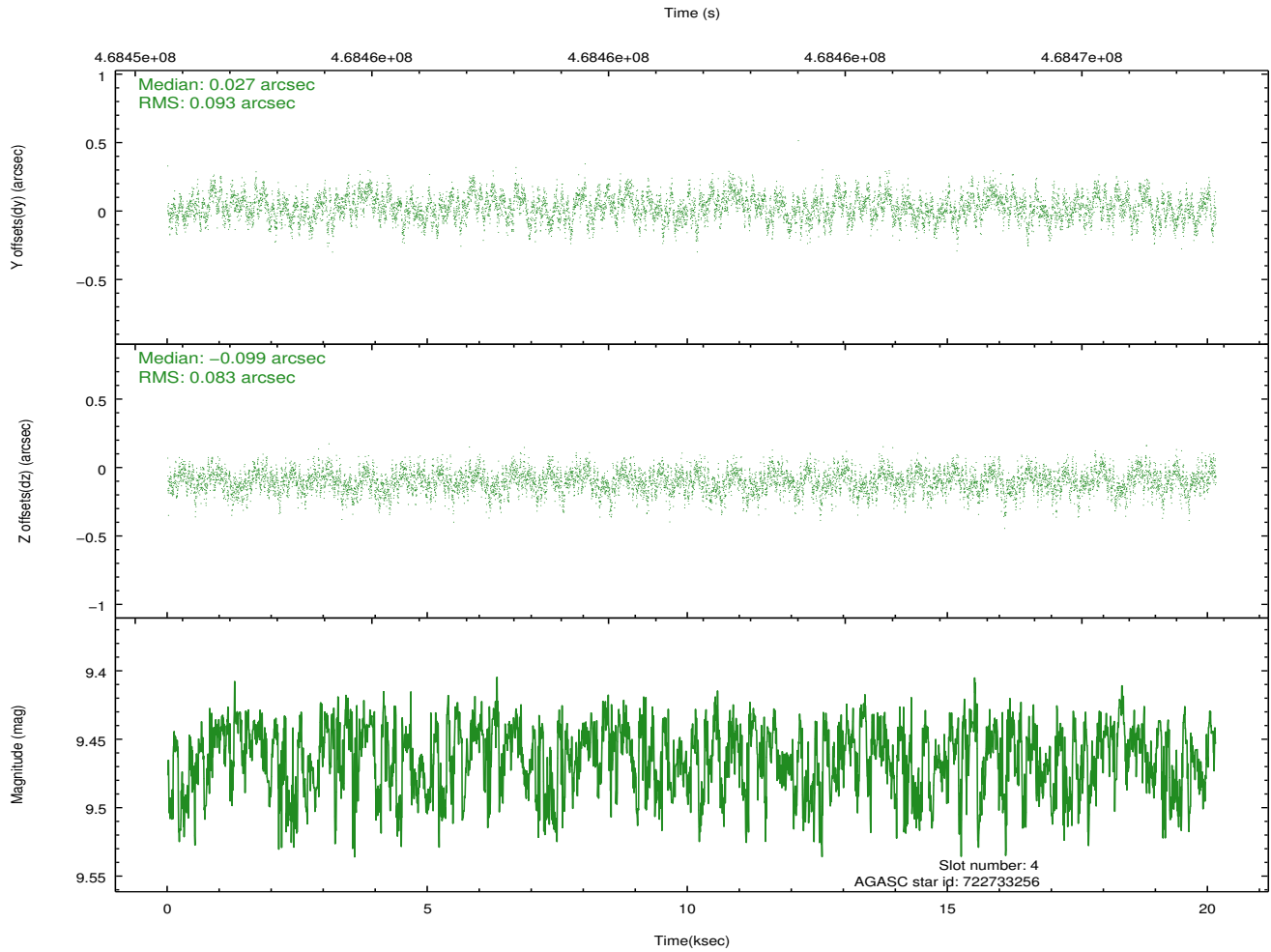
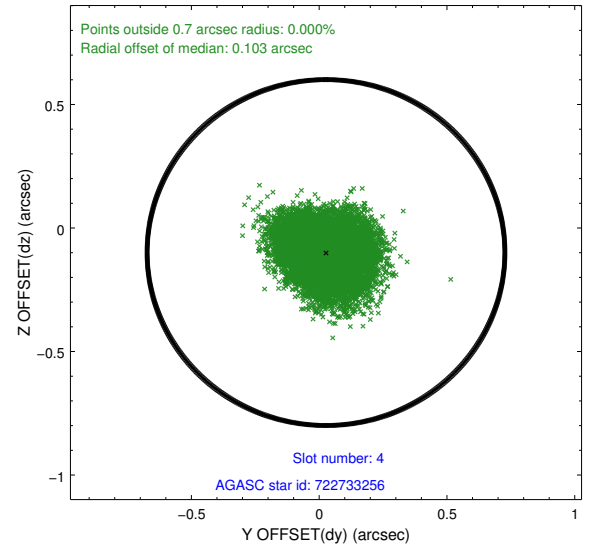
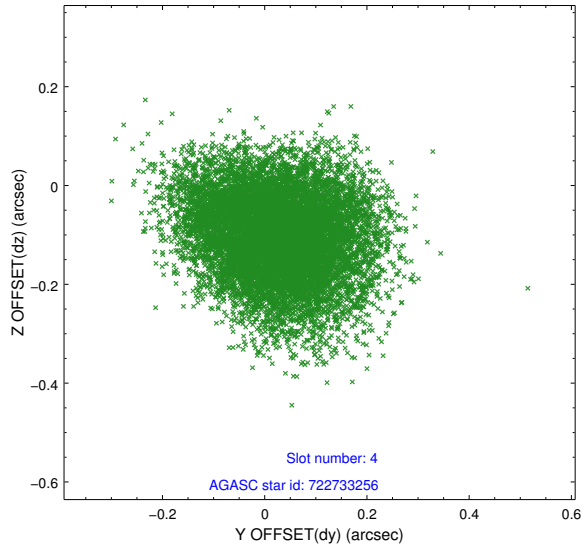
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.03	4915	0.060	-0.063	0.025	0.066	0.000000	0.000000	926.82	-1733.58
1	FID		ACIS-S-4	7.04	4916	0.135	0.020	0.022	0.037	0.000000	0.000000	2144.41	170.47
2	FID		ACIS-S-5	7.07	4916	-0.219	0.057	0.013	0.039	0.000000	0.000000	-1822.09	164.28
3	GUIDE	used	722733000	8.56	9830	0.172	0.071	0.075	0.123	171.009107	-13.374346	-160.39	-1962.24
4	GUIDE	used	722733256	9.46	9812	0.027	-0.099	0.134	0.212	171.062644	-12.905969	1533.29	-1878.96
5	GUIDE	used	722734368	7.86	9830	-0.157	0.327	0.085	0.131	170.493779	-13.210781	129.91	-86.04
6	GUIDE	used	722735896	9.02	9818	0.165	0.110	0.096	0.152	170.951661	-13.576223	-910.05	-1880.60
7	GUIDE	used	722731408	9.02	9816	-0.209	-0.415	0.074	0.120	170.135206	-12.674302	1830.59	1469.09

## 2.4 Star Slots

### 2.4.1 Slot 3

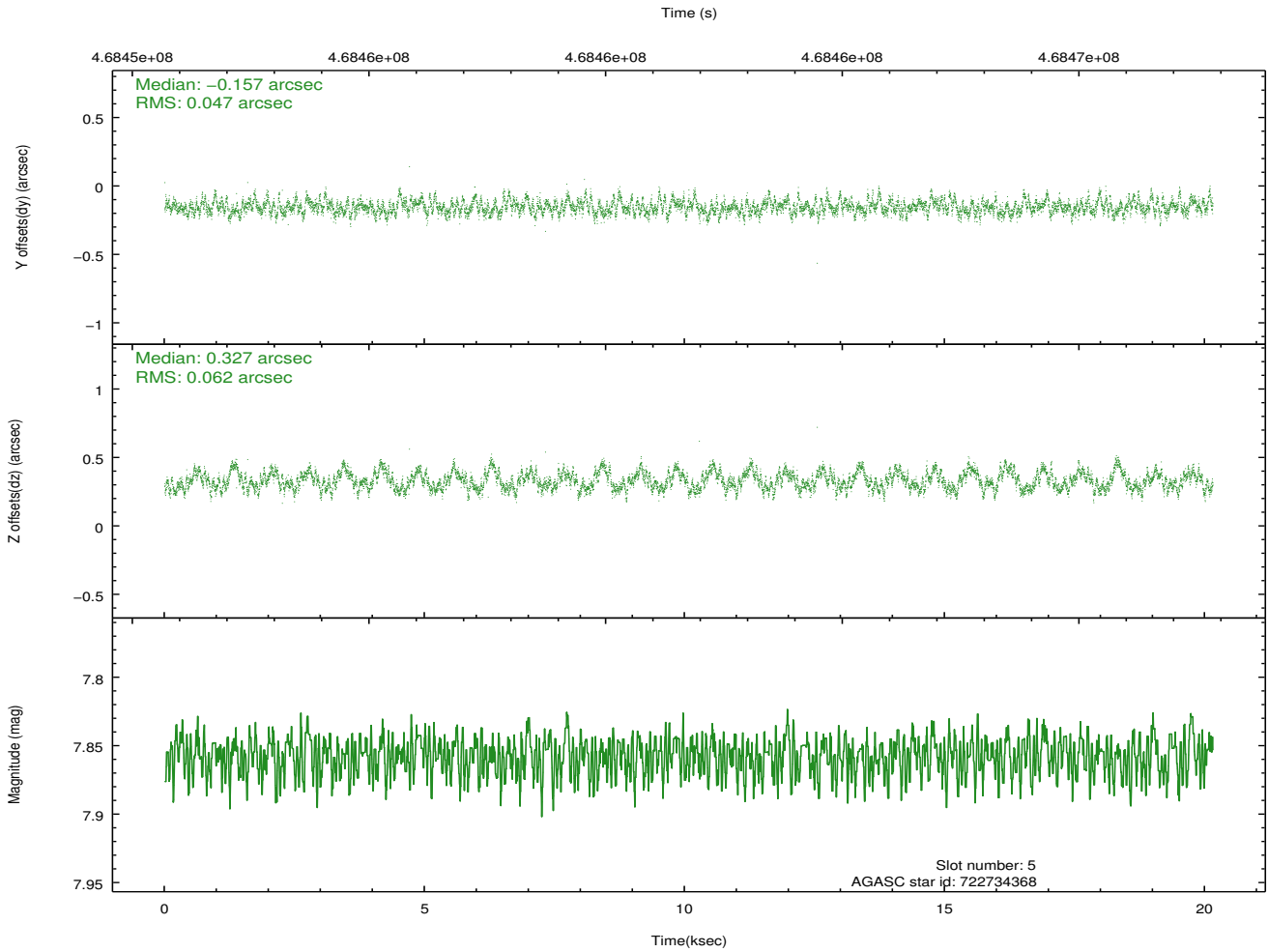
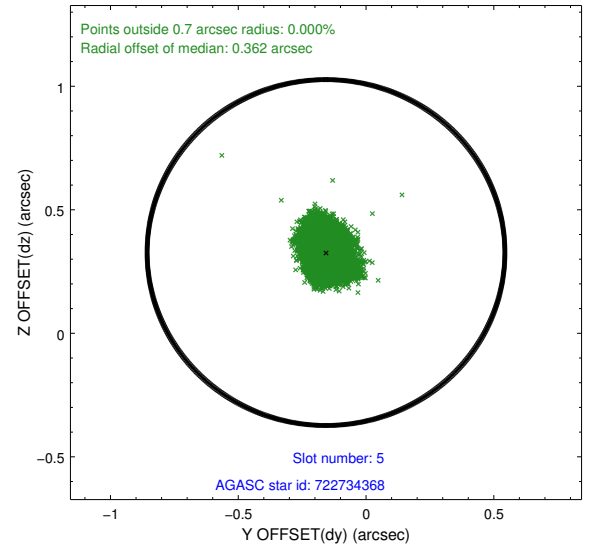
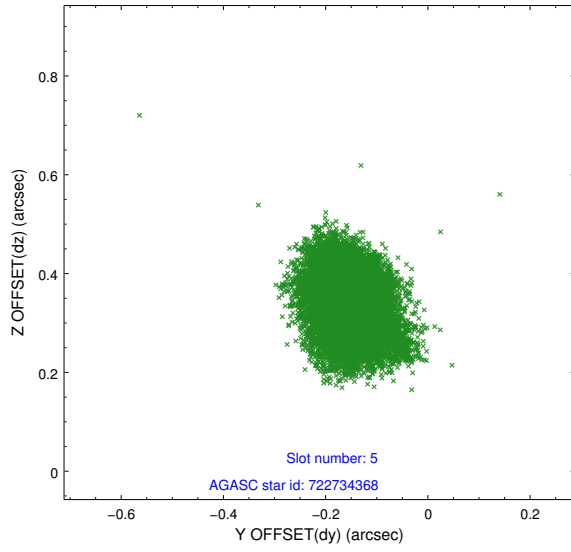


## 2.4.2 Slot 4

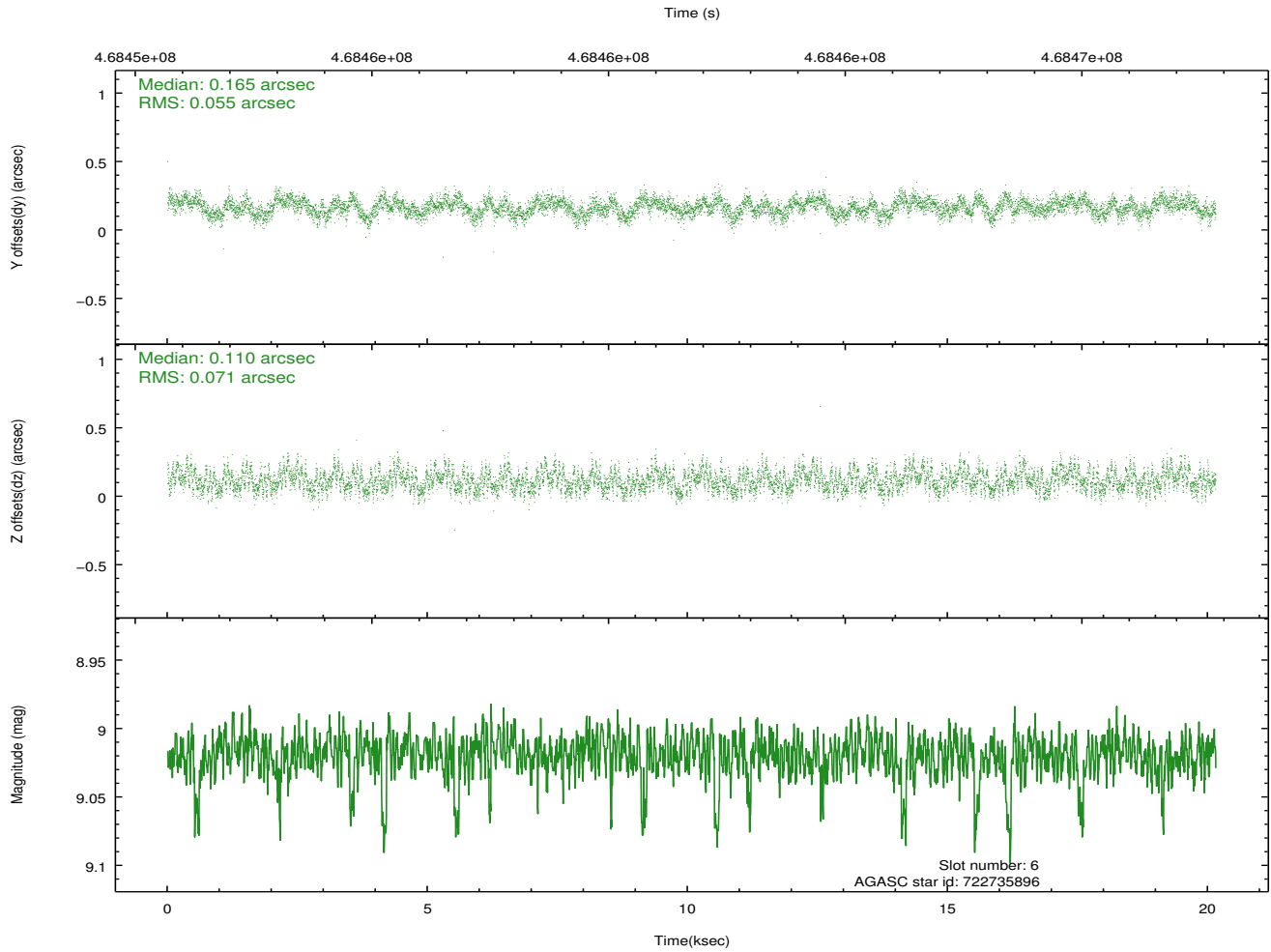
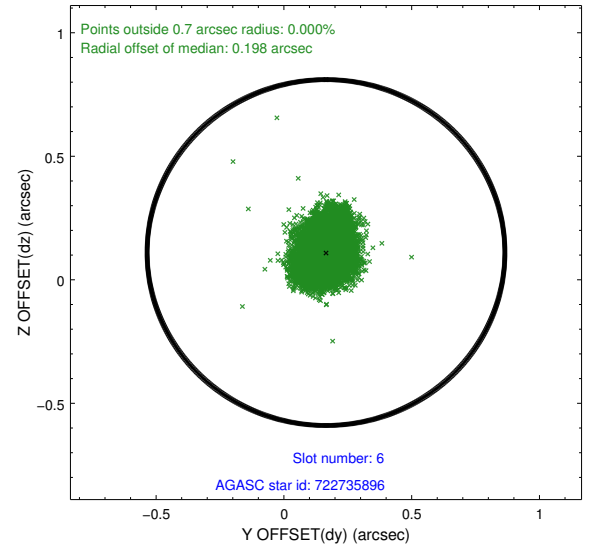
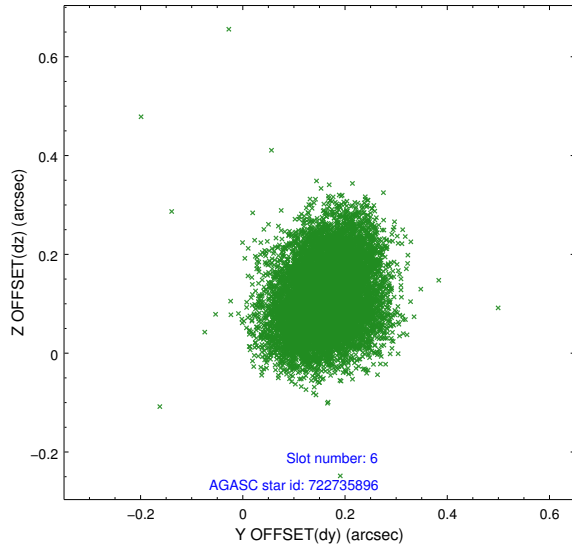




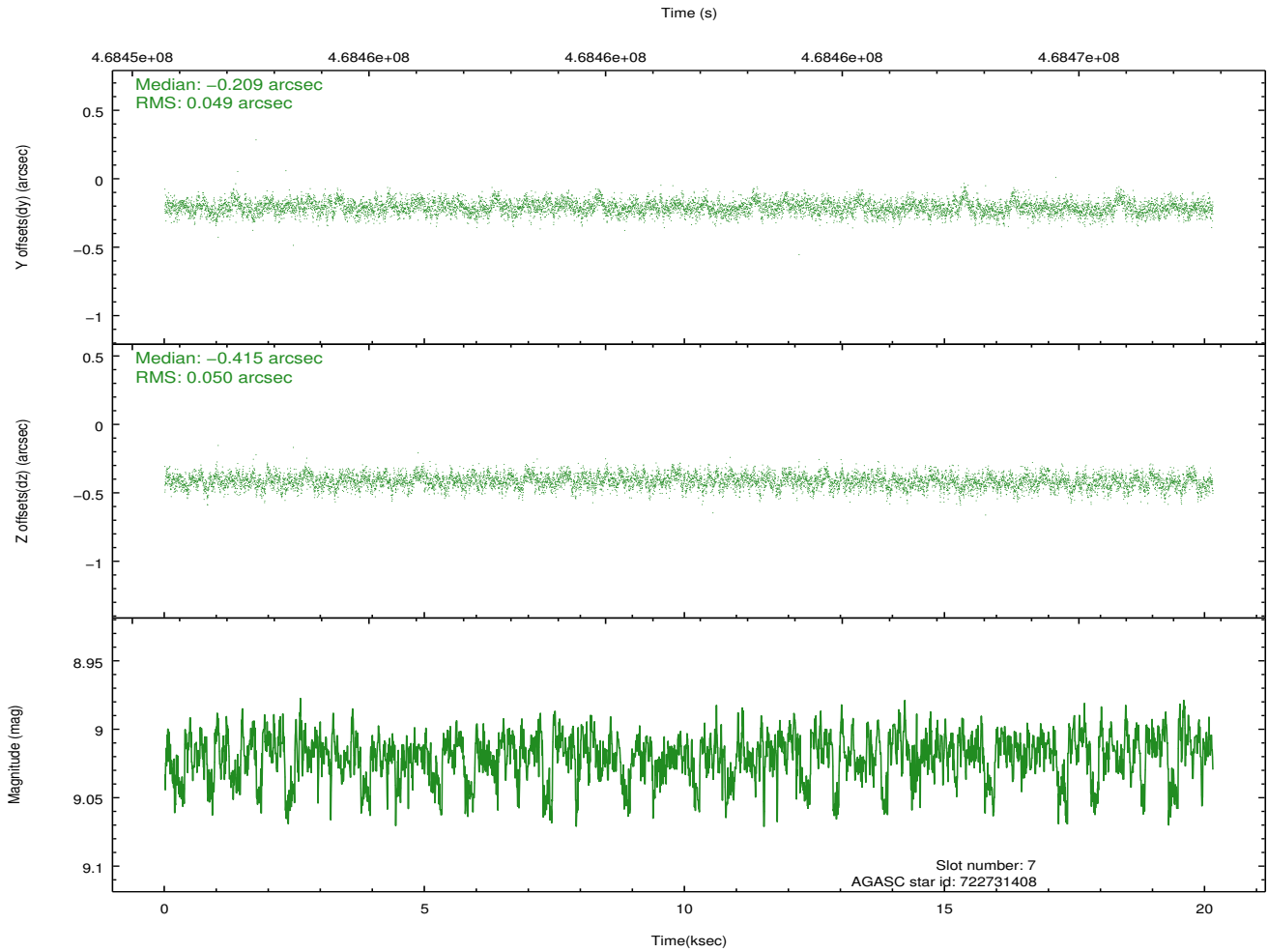
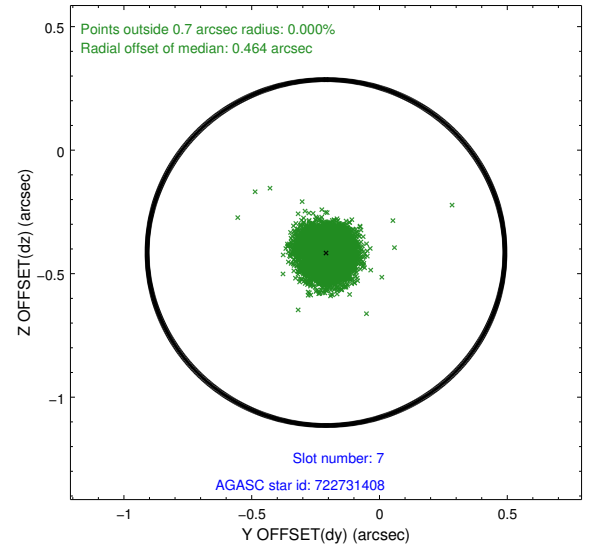
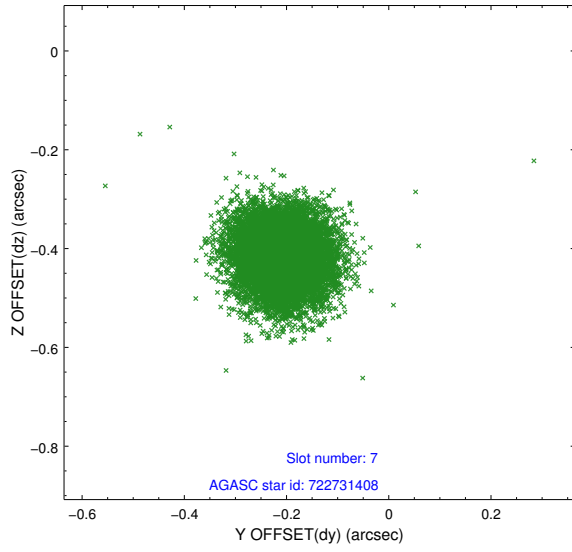
### 2.4.3 Slot 5



## 2.4.4 Slot 6

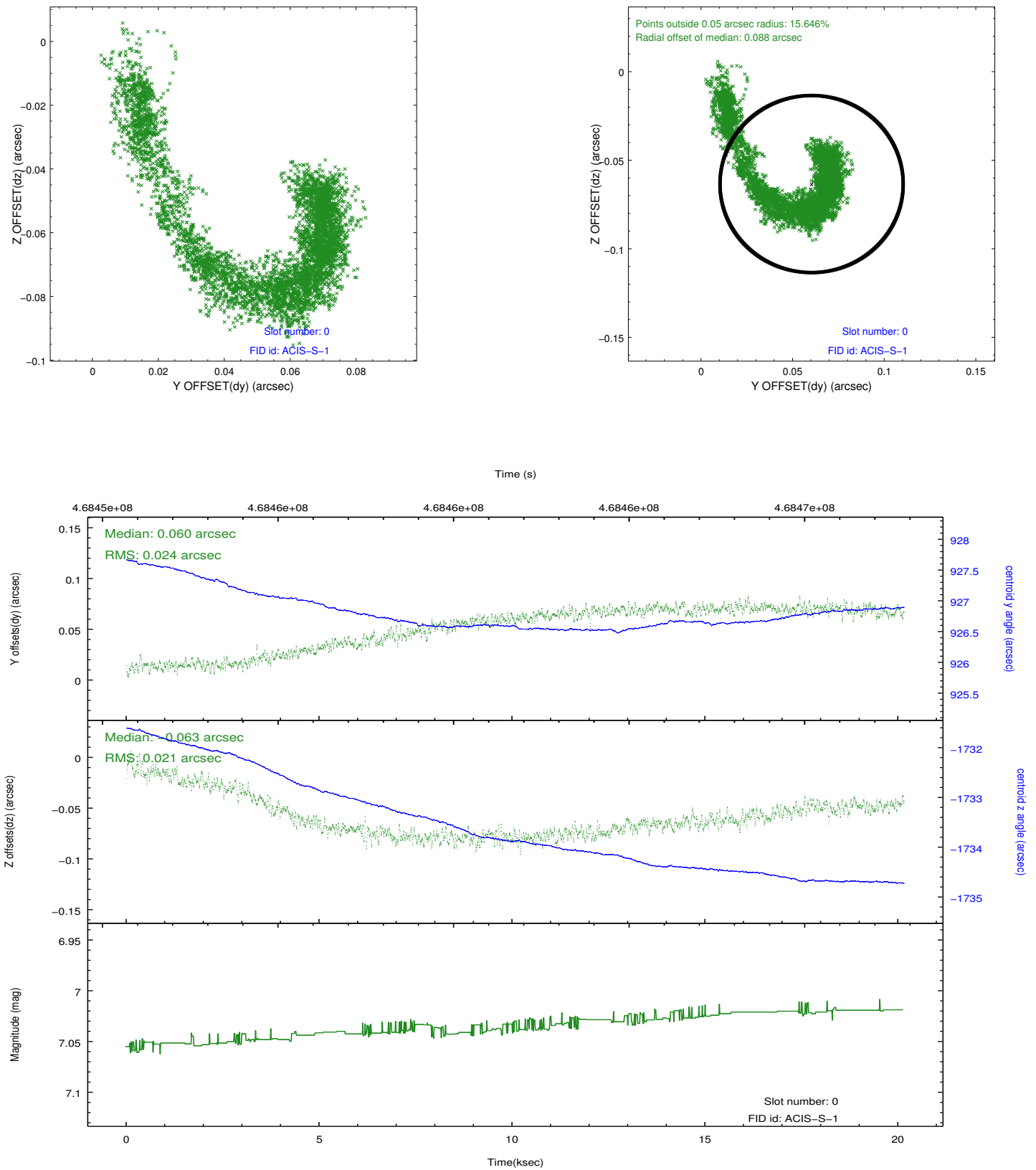


## 2.4.5 Slot 7

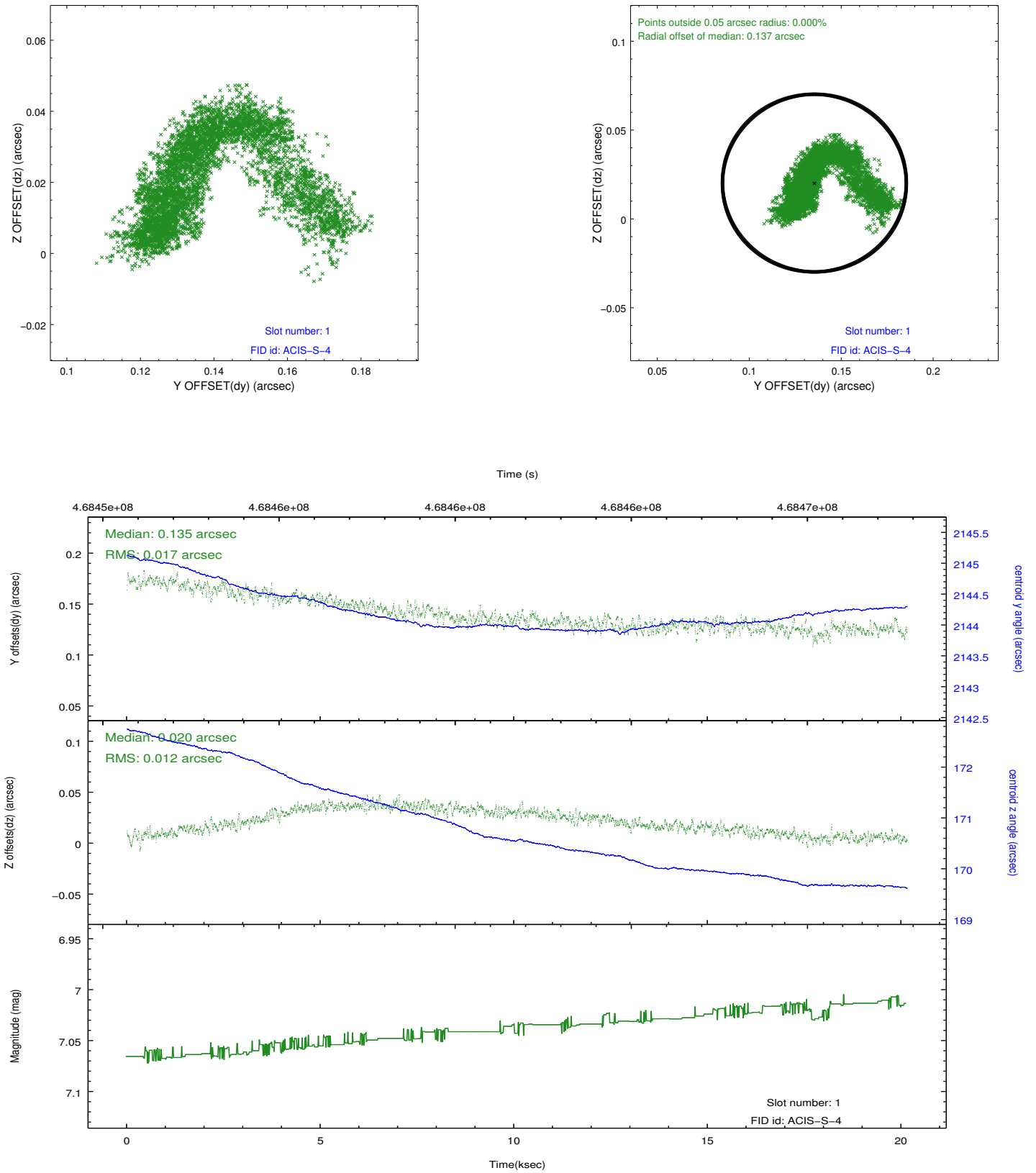


## 2.5 FID Slots

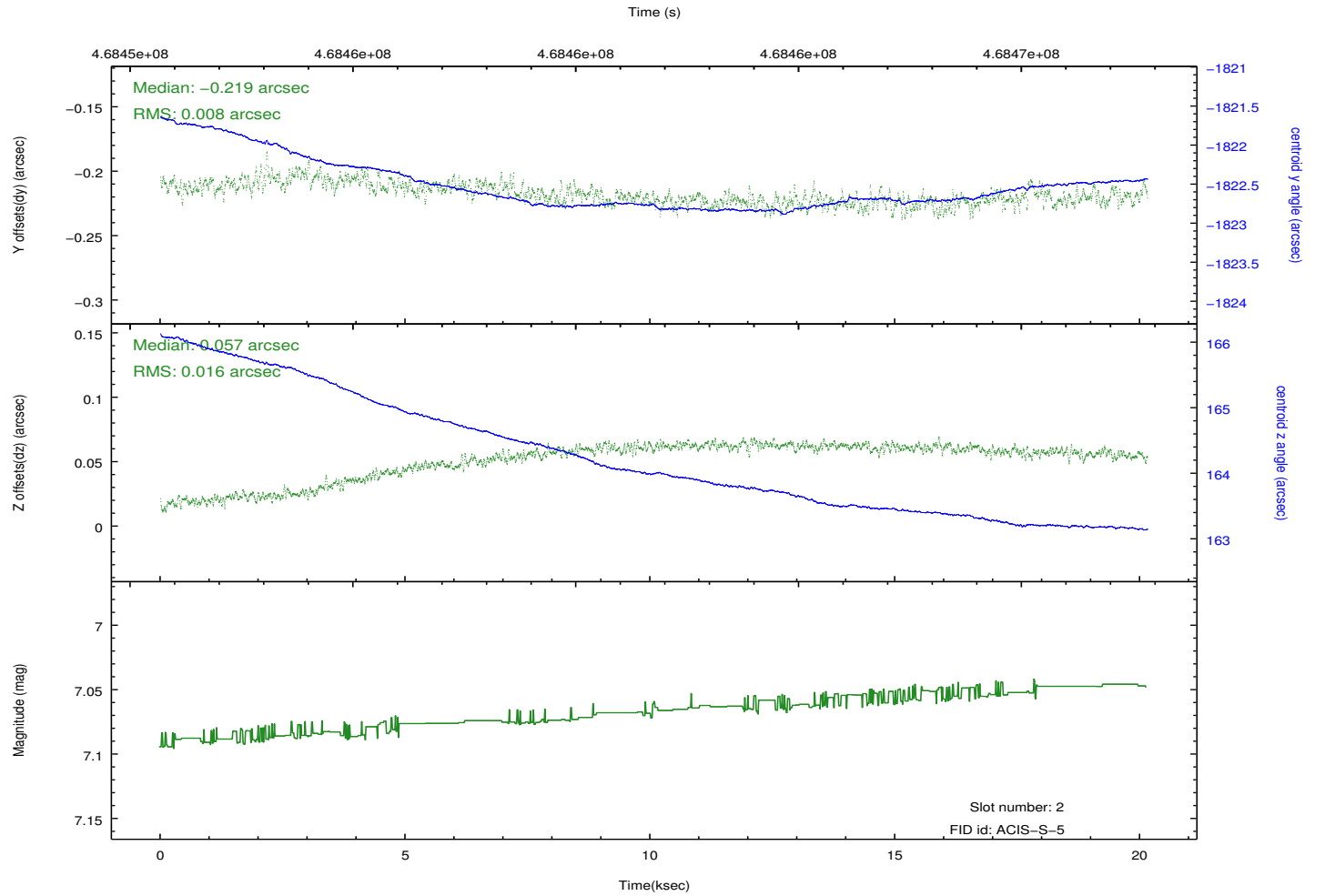
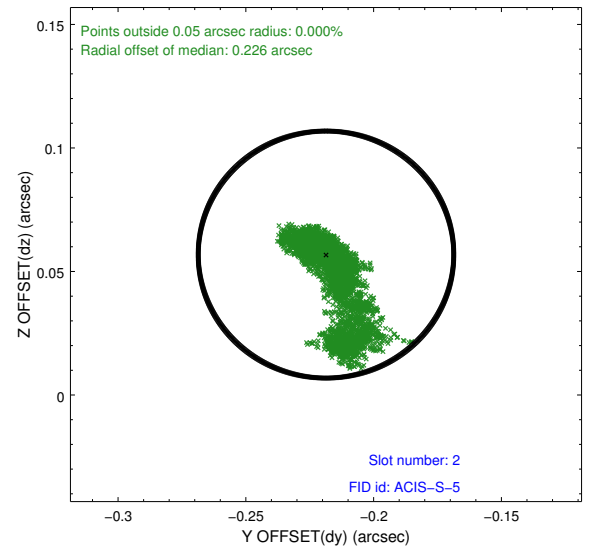
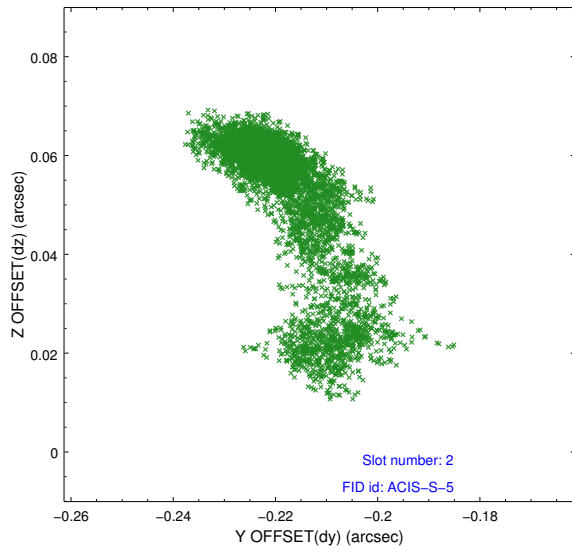
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.065818393588

## A.2 Comments

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.