

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15115 - L2 Version 2  
Chandra X-Ray Center

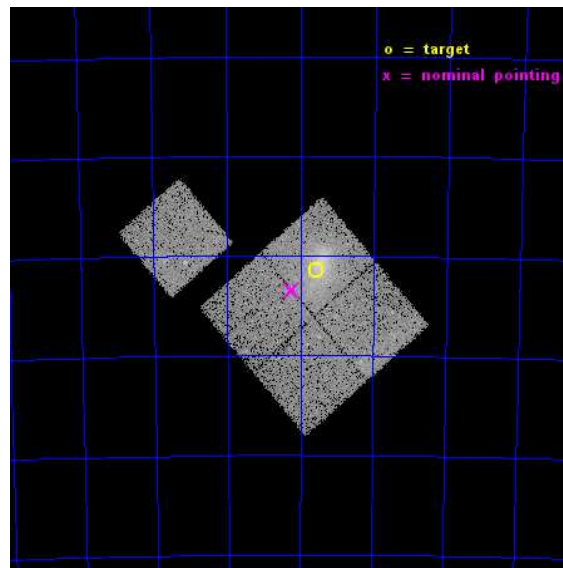
L2 Processing Date : Dec 9 2014

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# 1 Front

seq_num	801244	Sequence number
obs_id	15115	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G286.58-31.25	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	82.894583	Observer's specified target RA [deg]
dec_targ	-75.190667	Observer's specified target Dec [deg]
ra_nom	83.061281453611	Nominal RA [deg]
dec_nom	-75.224621448708	Nominal Dec [deg]
roll_nom	319.15470343369	Nominal Roll [deg]
revision	2	Processing version of data
ontime	22451.855516374	Sum of GTIs [s]
livetime	22158.505495237	Livetime [s]
ontime0	22458.014337063	Sum of GTIs [s]
ontime1	22458.055377066	Sum of GTIs [s]
ontime2	22458.096417069	Sum of GTIs [s]
ontime3	22451.855516374	Sum of GTIs [s]
ontime6	22457.97329706	Sum of GTIs [s]
l2events	64011	Number of level 2 events

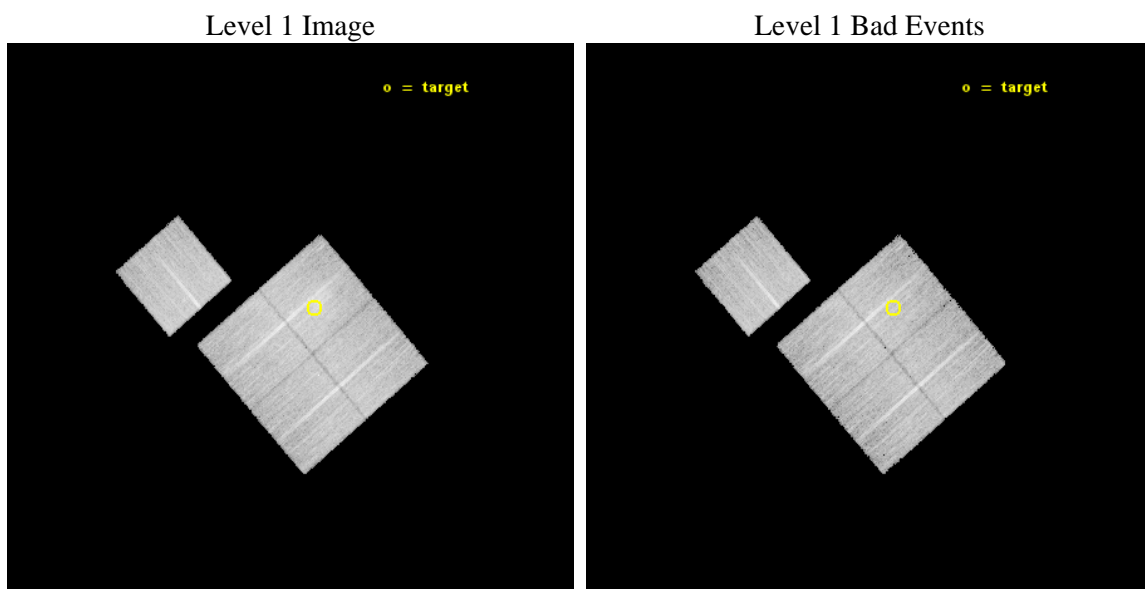




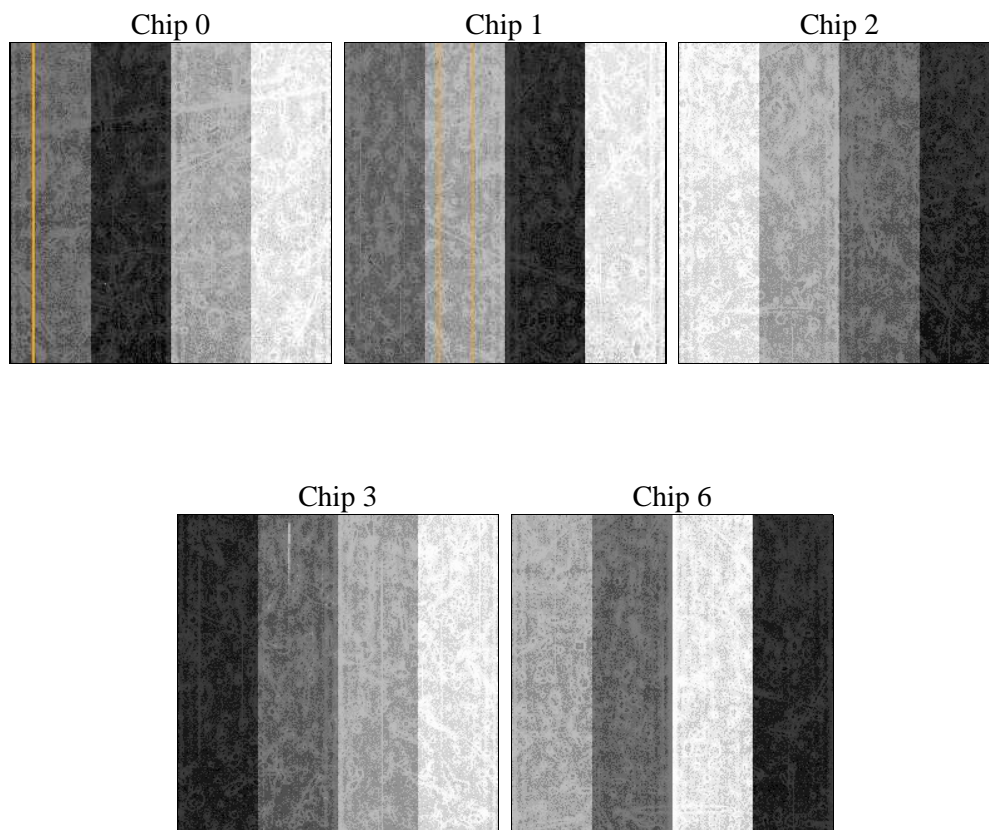
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22373.058000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	22451.855516374	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	22458.014337063	Sum of GTIs [s]
date	2014-12-10T02:29:56	Date and time of file creation	ontime1	22458.055377066	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	22458.096417069	Sum of GTIs [s]
			ontime3	22451.855516374	Sum of GTIs [s]
			ontime6	22457.97329706	Sum of GTIs [s]
			l1events	519882	Number of level 1 events

### 2.1.4 Events

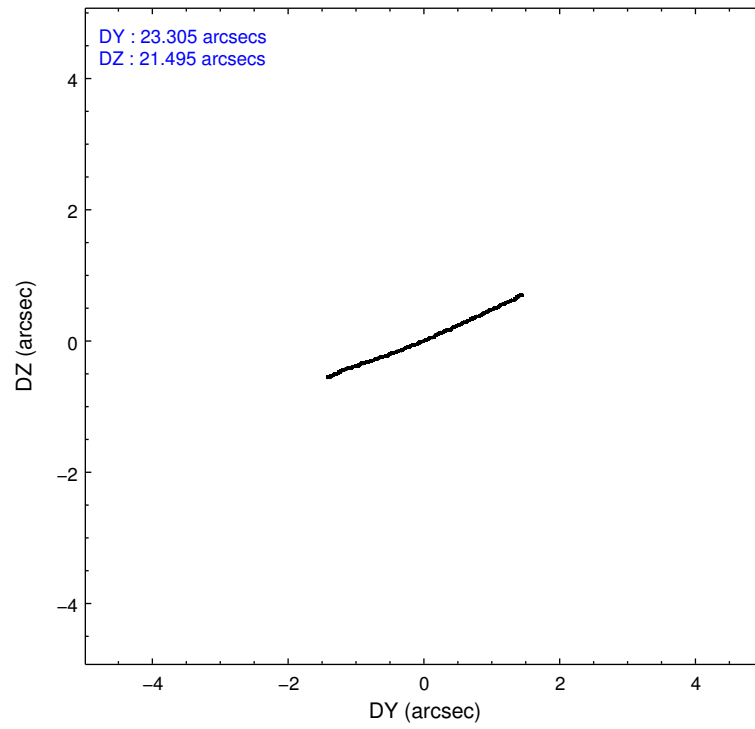
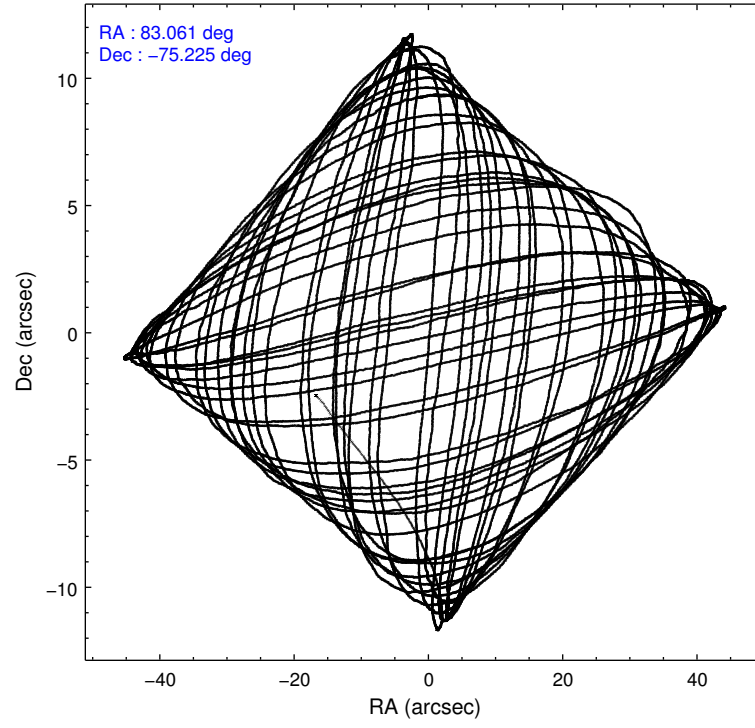
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	96751	100572	104427	112010	106122
rejected events	83806	86263	91629	90823	93132
rejected %	86%	85%	87%	81%	87%

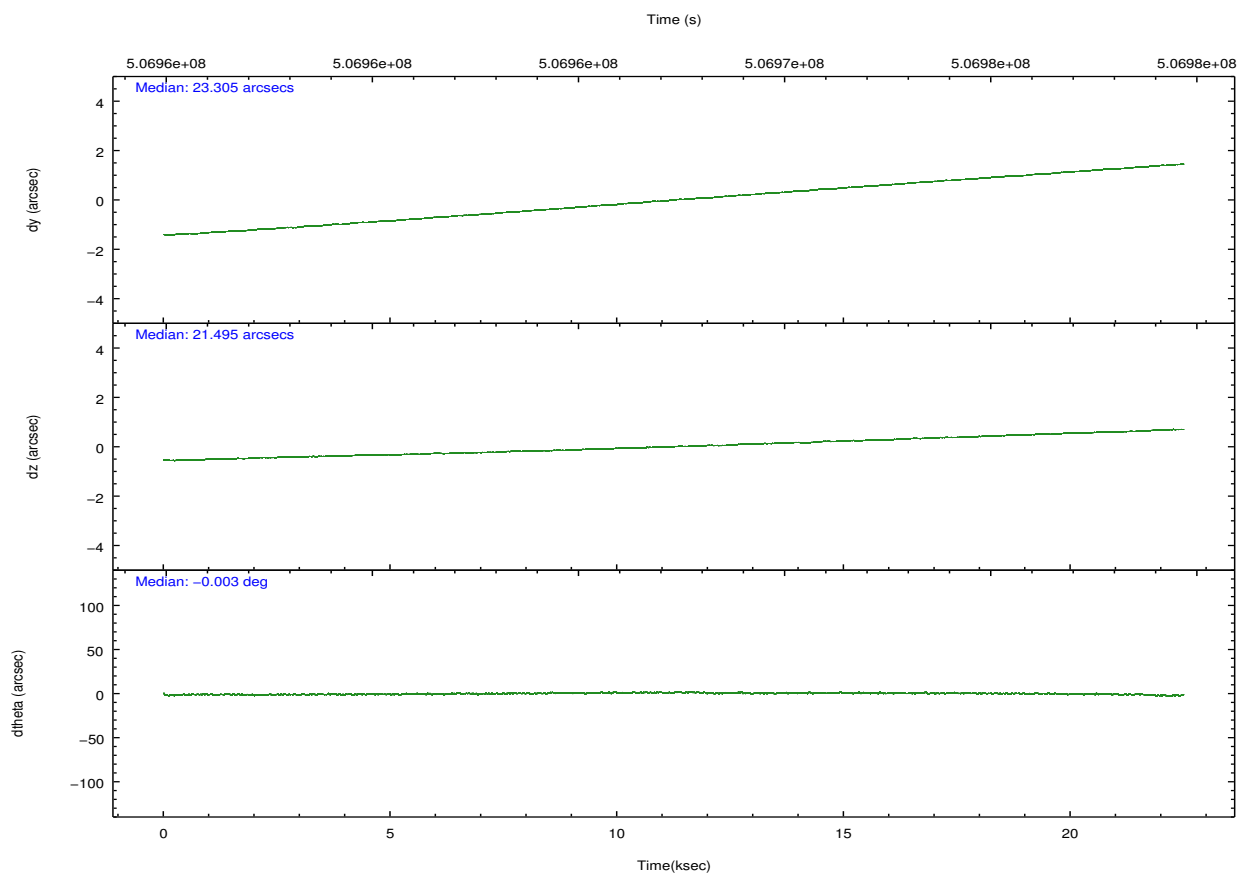
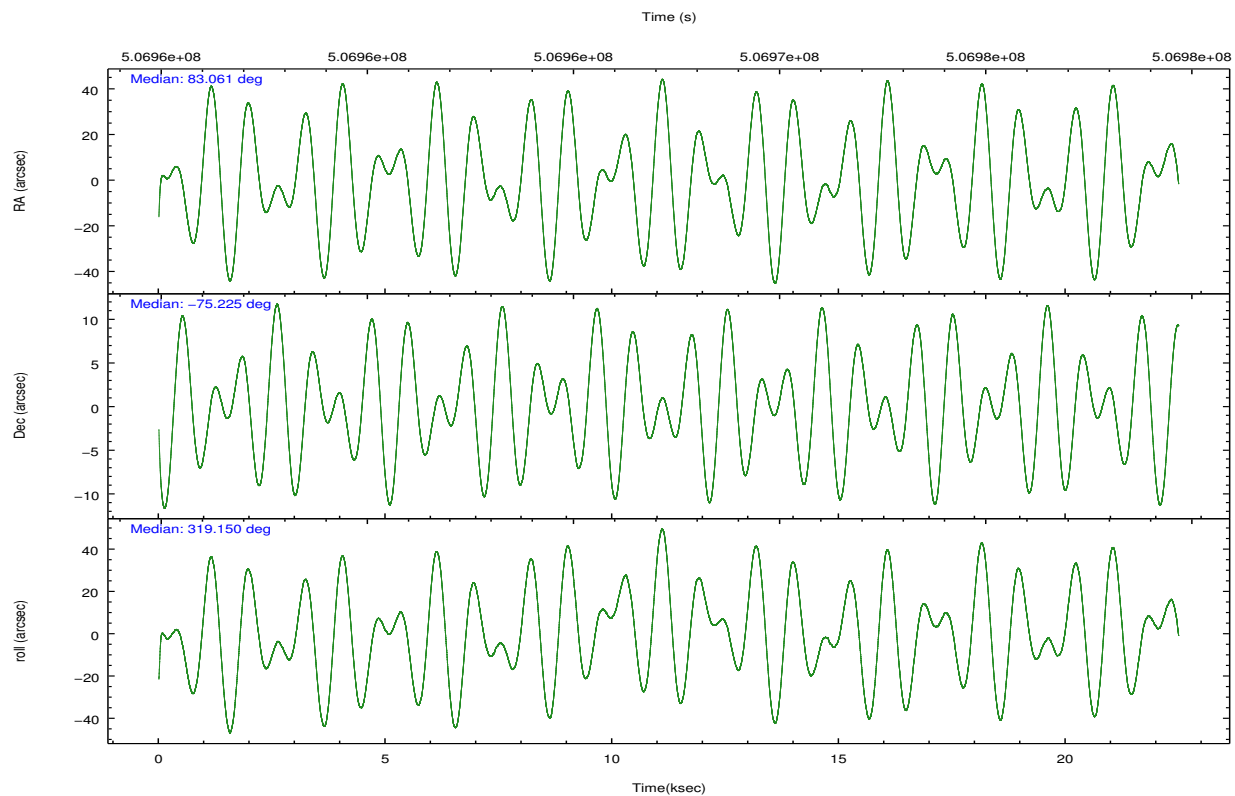
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4413	5072	4685	11407	4450
	4%	5%	4%	10%	4%
grade 1 events	48	48	50	89	51
	0%	0%	0%	0%	0%
grade 2 events	3312	3591	3196	3771	2924
	3%	3%	3%	3%	2%
grade 3 events	1354	1389	1219	1633	1353
	1%	1%	1%	1%	1%
grade 4 events	1250	1326	1248	1555	1296
	1%	1%	1%	1%	1%
grade 5 events	4954	5503	4821	5838	5708
	5%	5%	4%	5%	5%
grade 6 events	2616	2934	2451	2824	2968
	2%	2%	2%	2%	2%
grade 7 events	78804	80709	86757	84893	87372
	81%	80%	83%	75%	82%

## 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	82.955287	83.06128145361134	CCD I2 on	Y	Y
[deg] Pointing Dec	-75.219513	-75.22462144870826	CCD I3 on	Y	Y
[deg] Pointing Roll	318.843537	319.1547034336928	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	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	506956196.184000	506954714.65576	CCD S5 on	N	N
Observation start date	2014-01-24T13:08:49	2014-01-24T12:45:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	506978569.184000	506978804.20709	On-chip summing requested	N	N
Observation end date	2014-01-24T19:21:42	2014-01-24T19:26:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



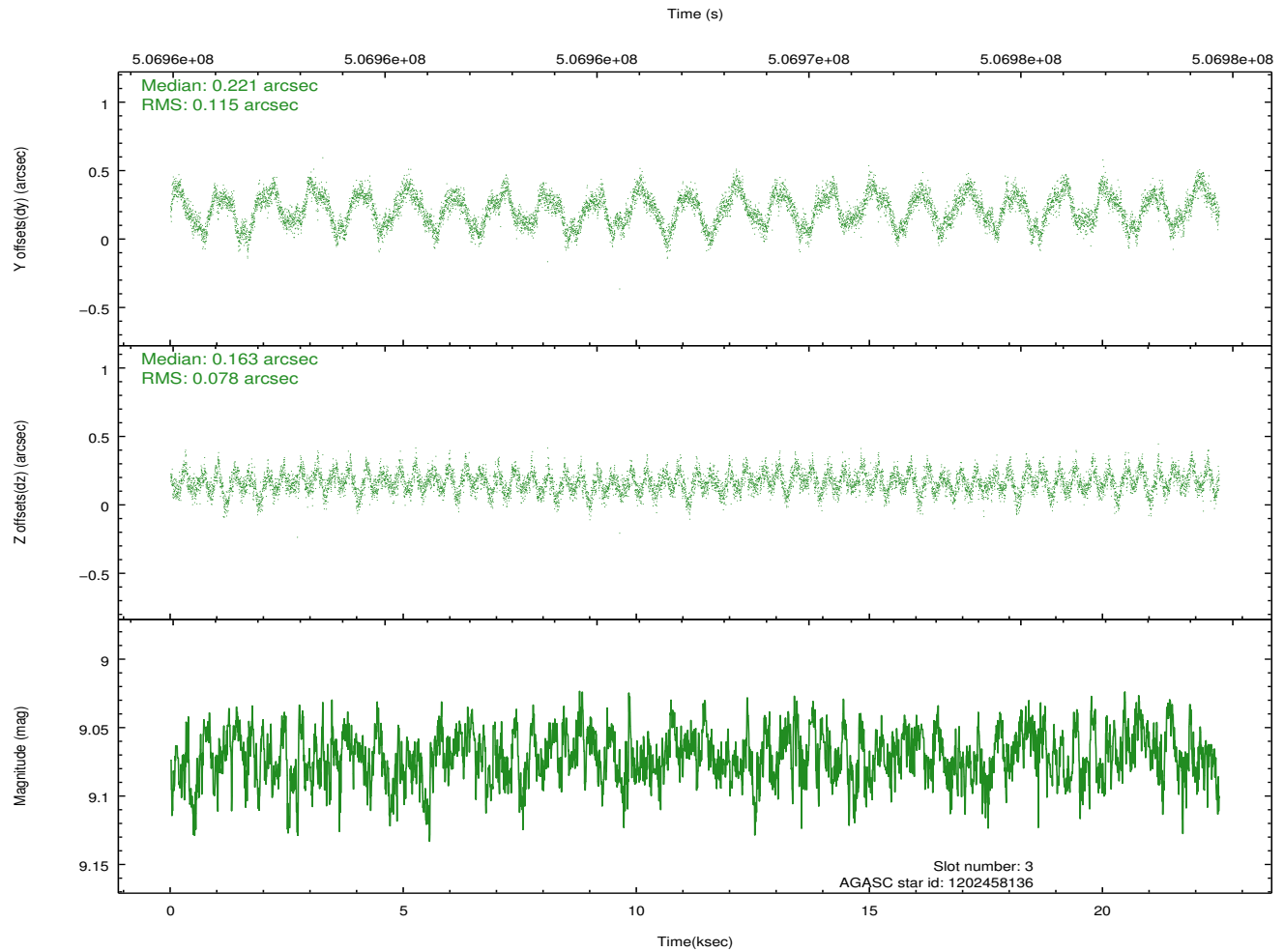
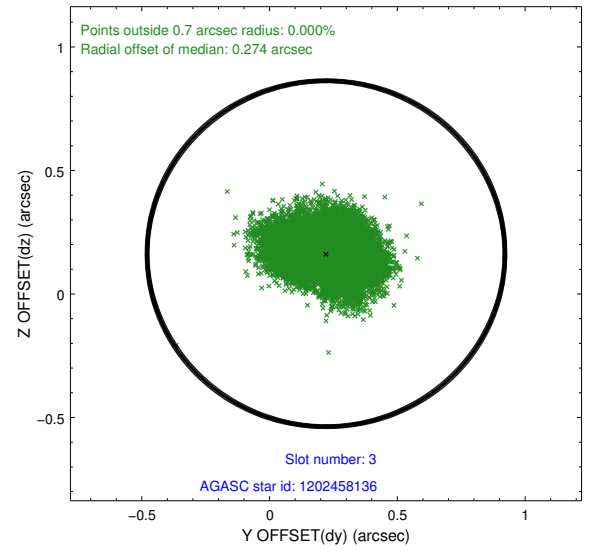
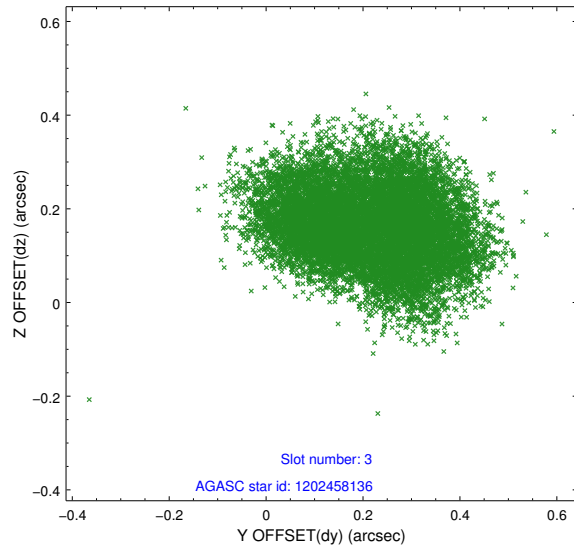


### Slot Statistics

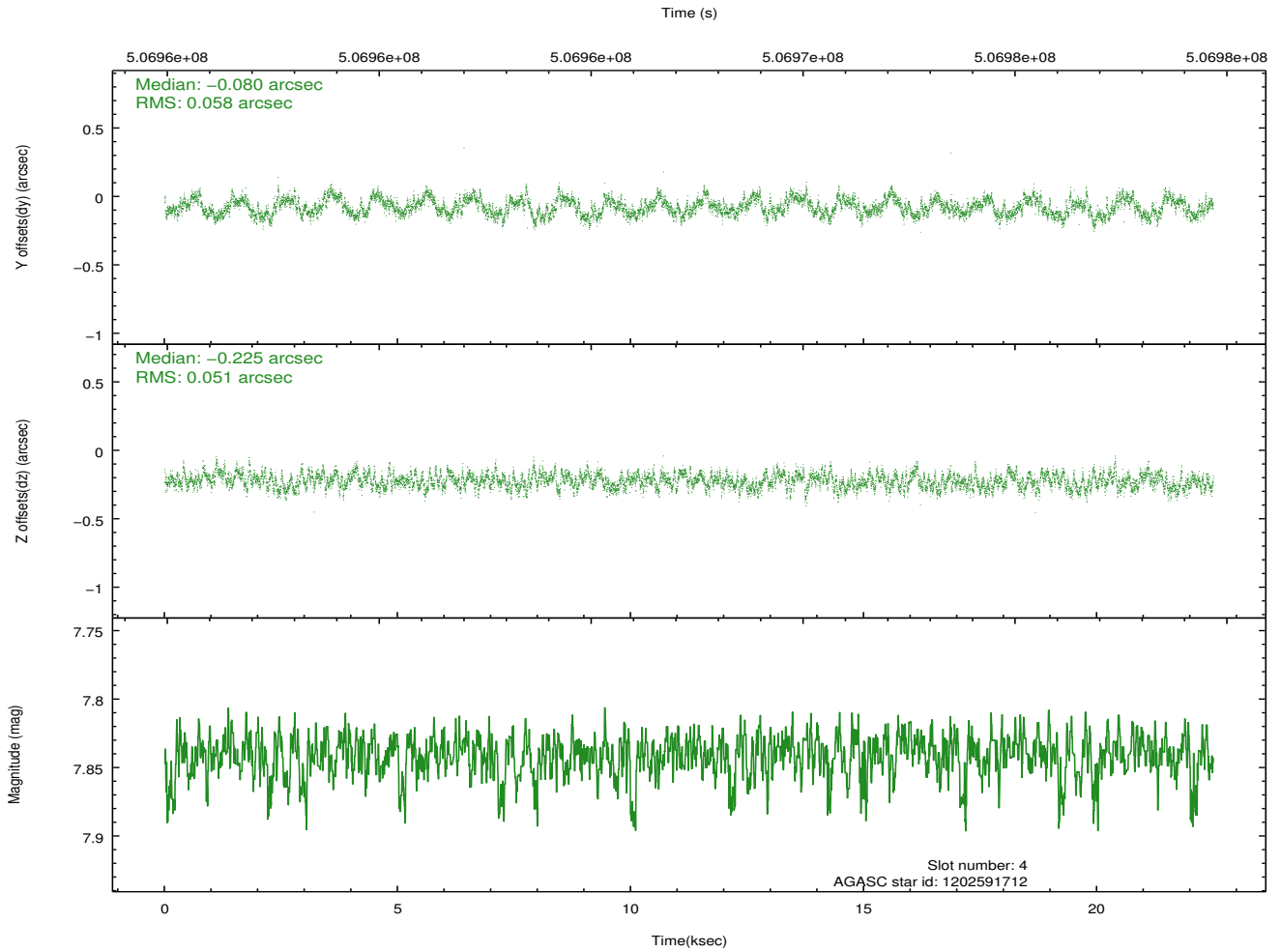
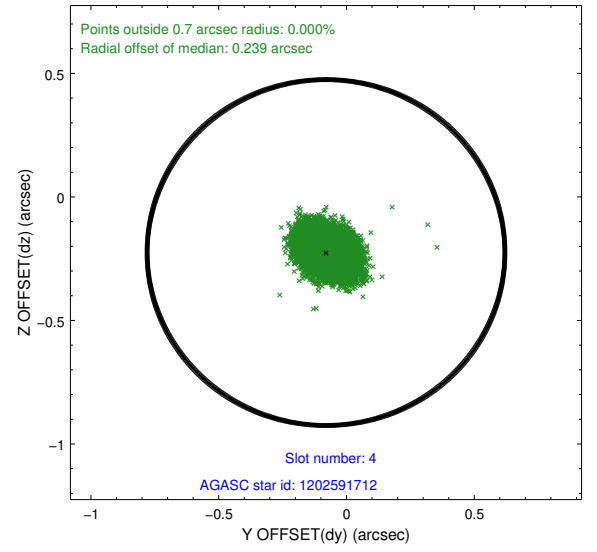
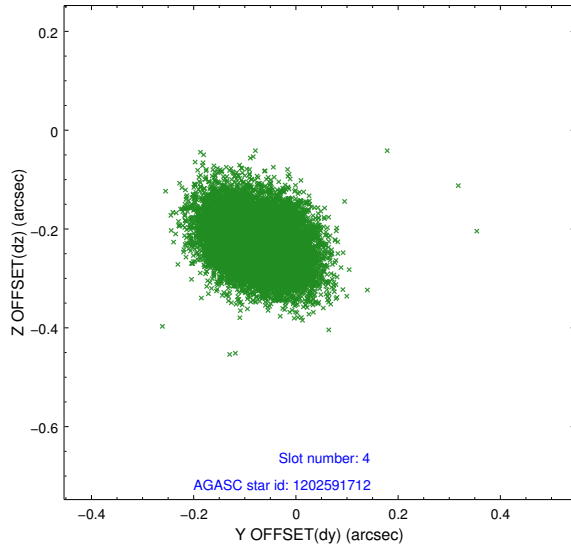
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.07	5486	0.143	-0.101	0.015	0.028	0.000000	0.000000	915.94	-1004.46
1	FID		ACIS-I-5	7.06	5486	-0.356	0.101	0.023	0.043	0.000000	0.000000	-1832.59	893.09
2	FID		ACIS-I-6	7.07	5486	0.119	0.070	0.027	0.041	0.000000	0.000000	381.27	1537.76
3	GUIDE	used	1202458136	9.07	10964	0.221	0.163	0.151	0.230	81.788935	-74.755435	-1923.16	523.49
4	GUIDE	used	1202591712	7.84	10969	-0.080	-0.225	0.083	0.130	84.169216	-74.715955	-318.51	2114.31
5	GUIDE	used	1229195560	9.39	10965	-0.063	-0.134	0.110	0.173	83.841378	-75.356362	935.48	155.57
6	GUIDE	used	1229203496	8.96	10968	0.286	0.557	0.117	0.185	81.094765	-75.620580	-284.24	-2200.43
7	GUIDE	used	1229203112	7.28	10970	-0.356	-0.357	0.064	0.101	85.671120	-75.250511	1983.91	1510.61

## 2.4 Star Slots

### 2.4.1 Slot 3

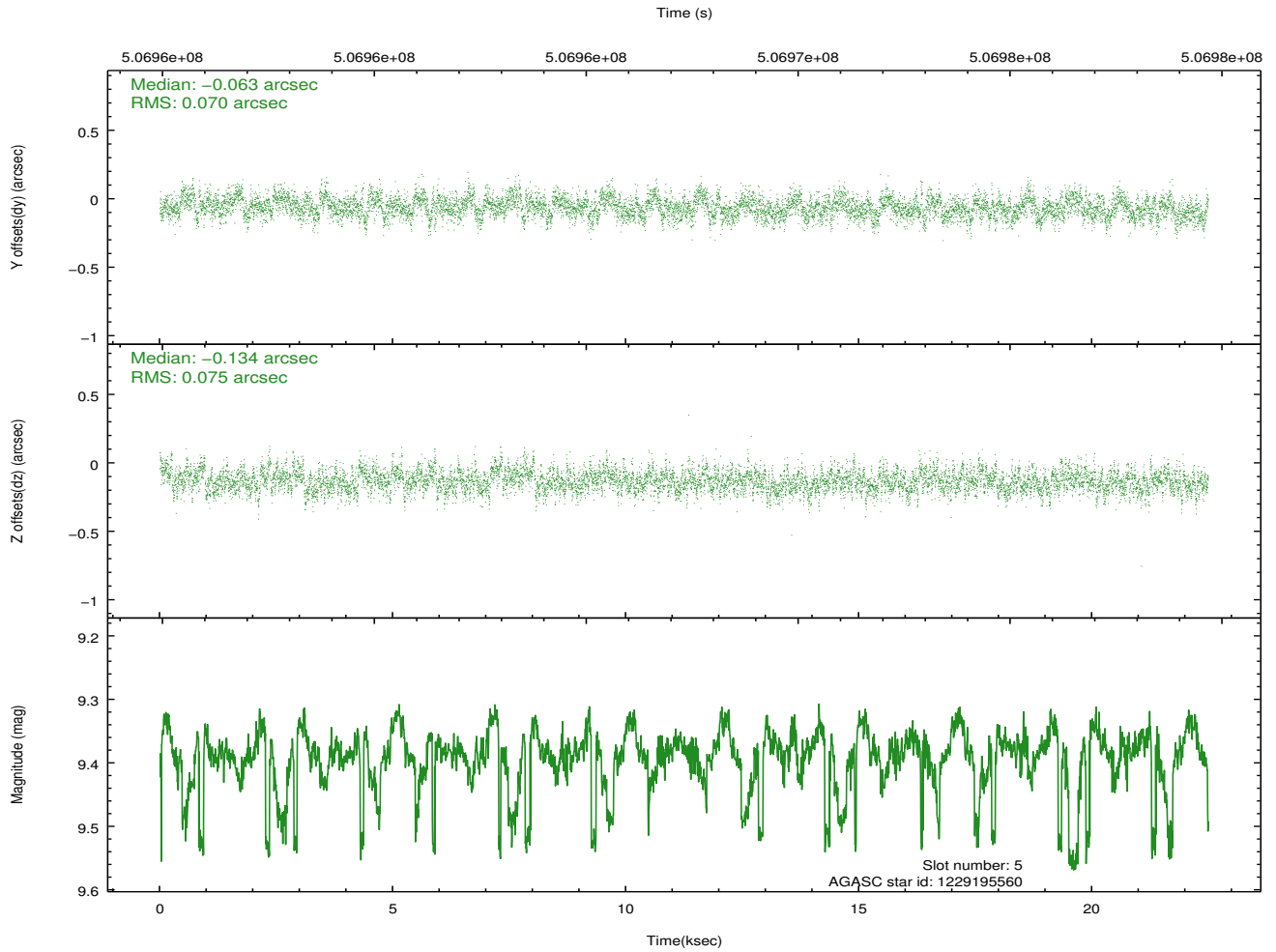
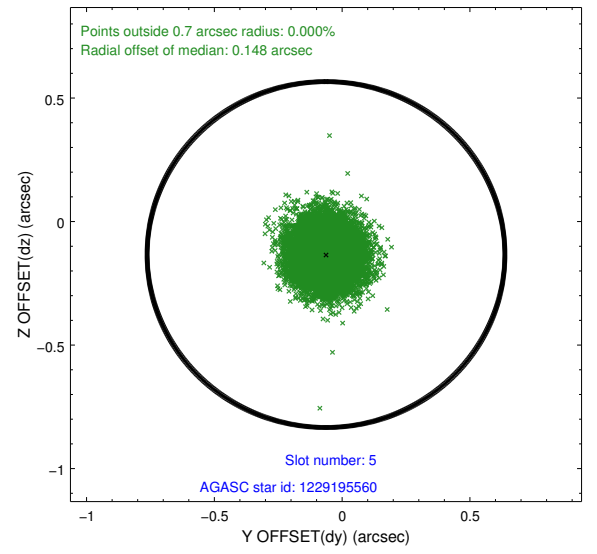
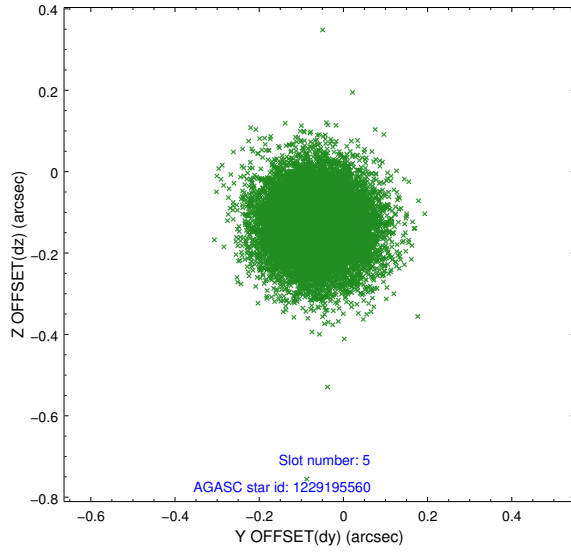


## 2.4.2 Slot 4

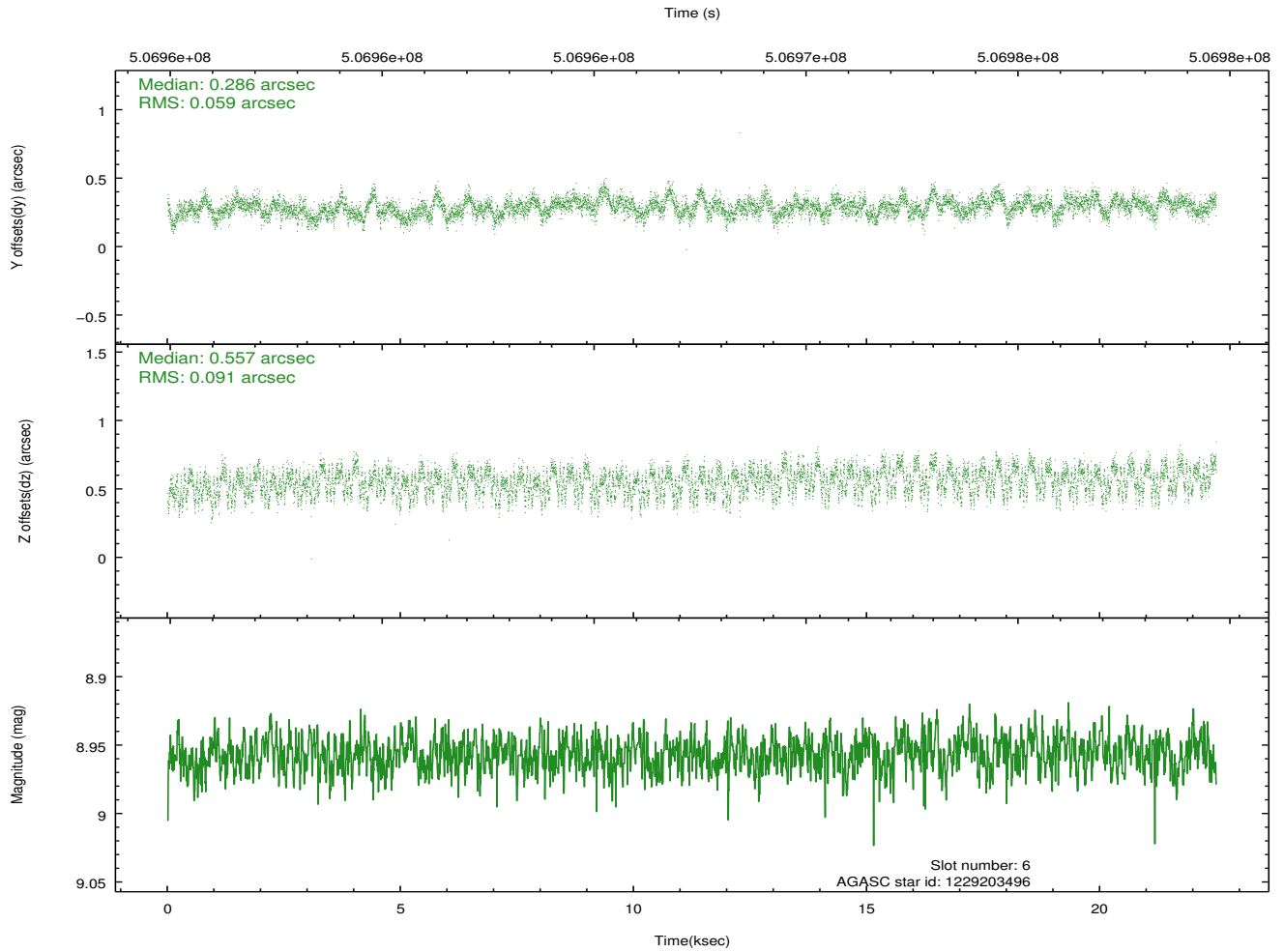
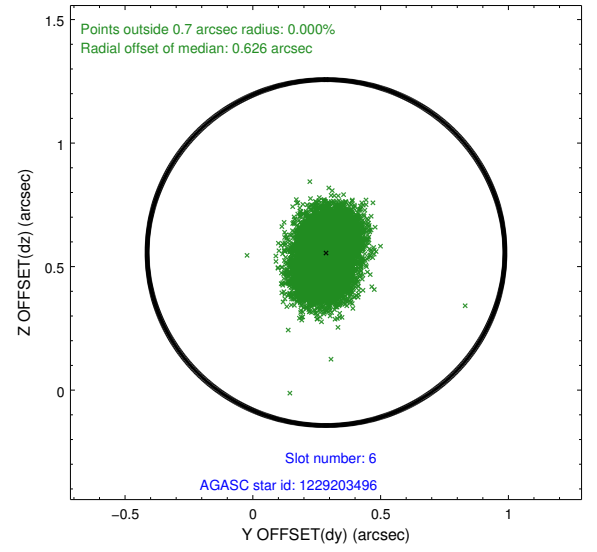
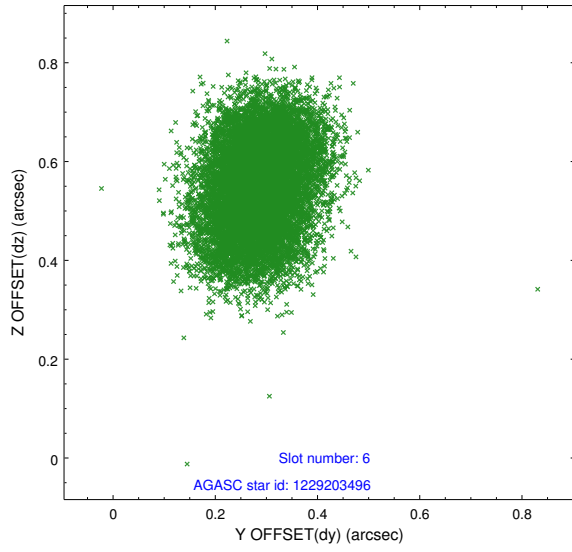




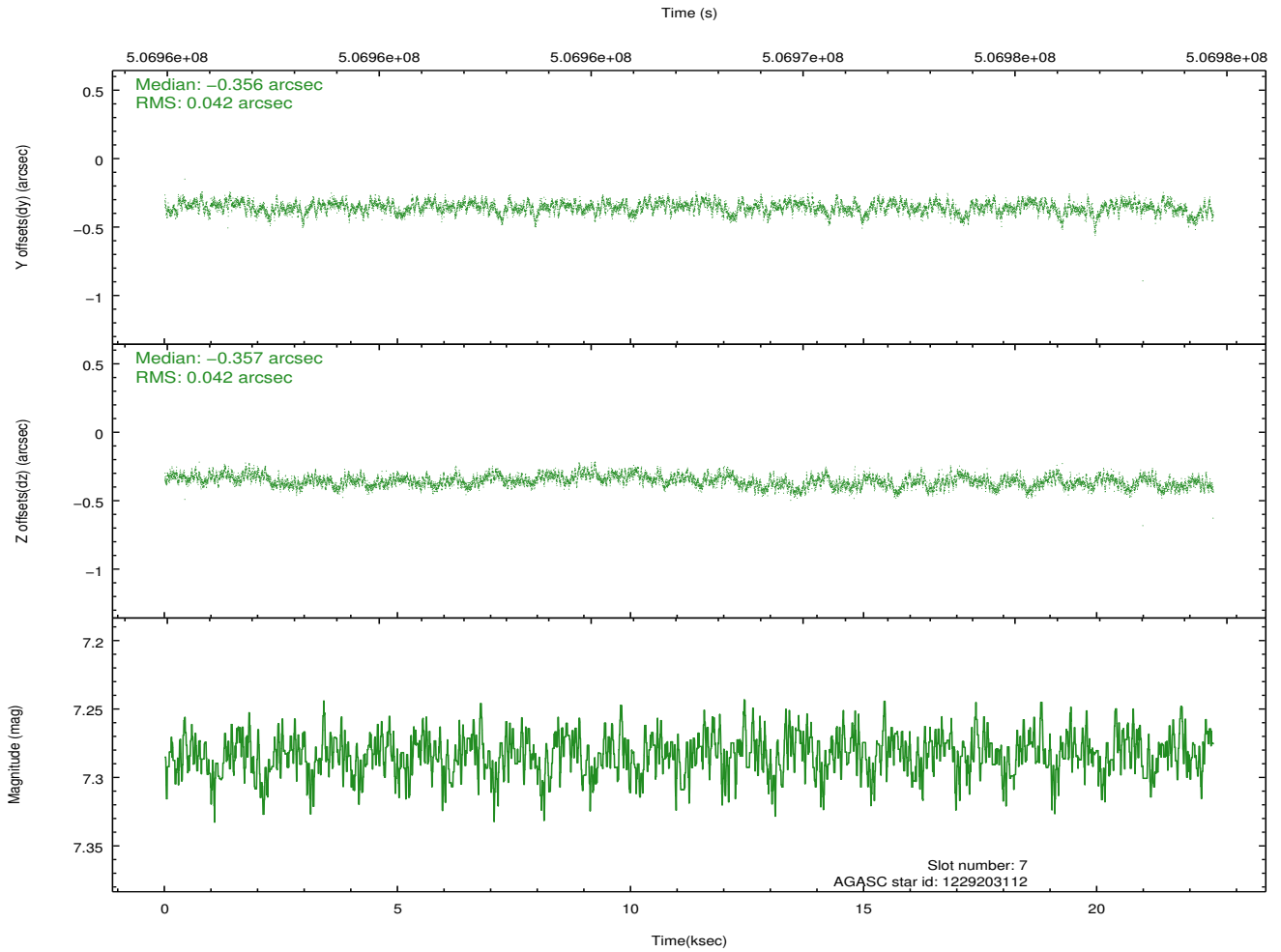
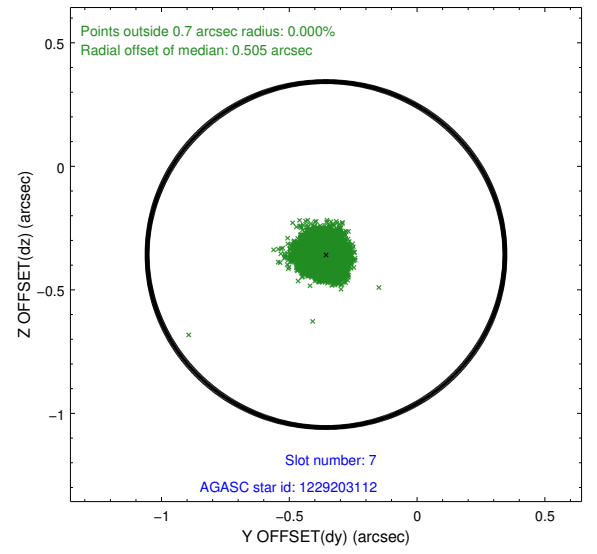
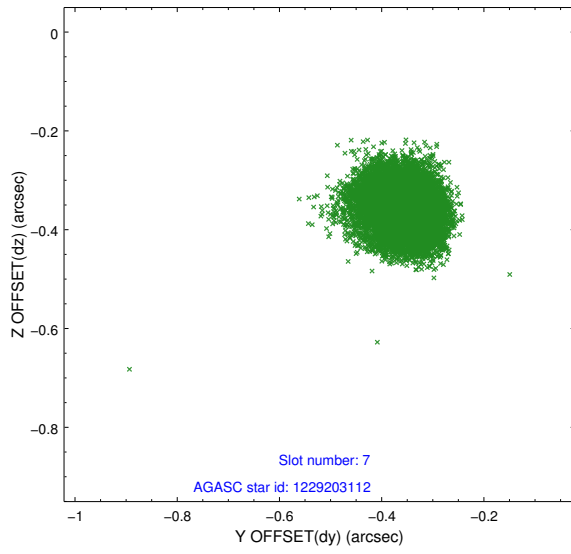
### 2.4.3 Slot 5



## 2.4.4 Slot 6

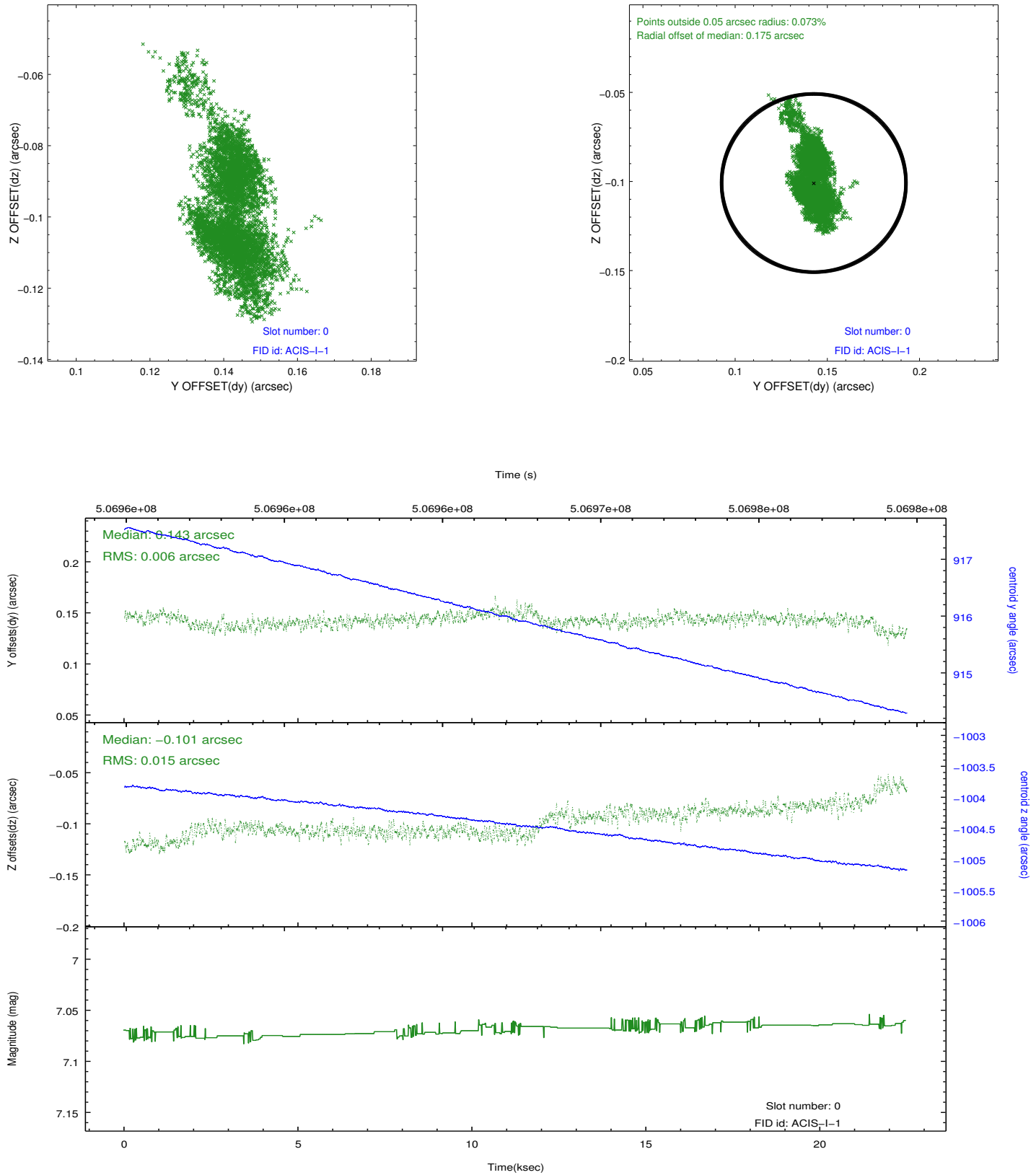


## 2.4.5 Slot 7

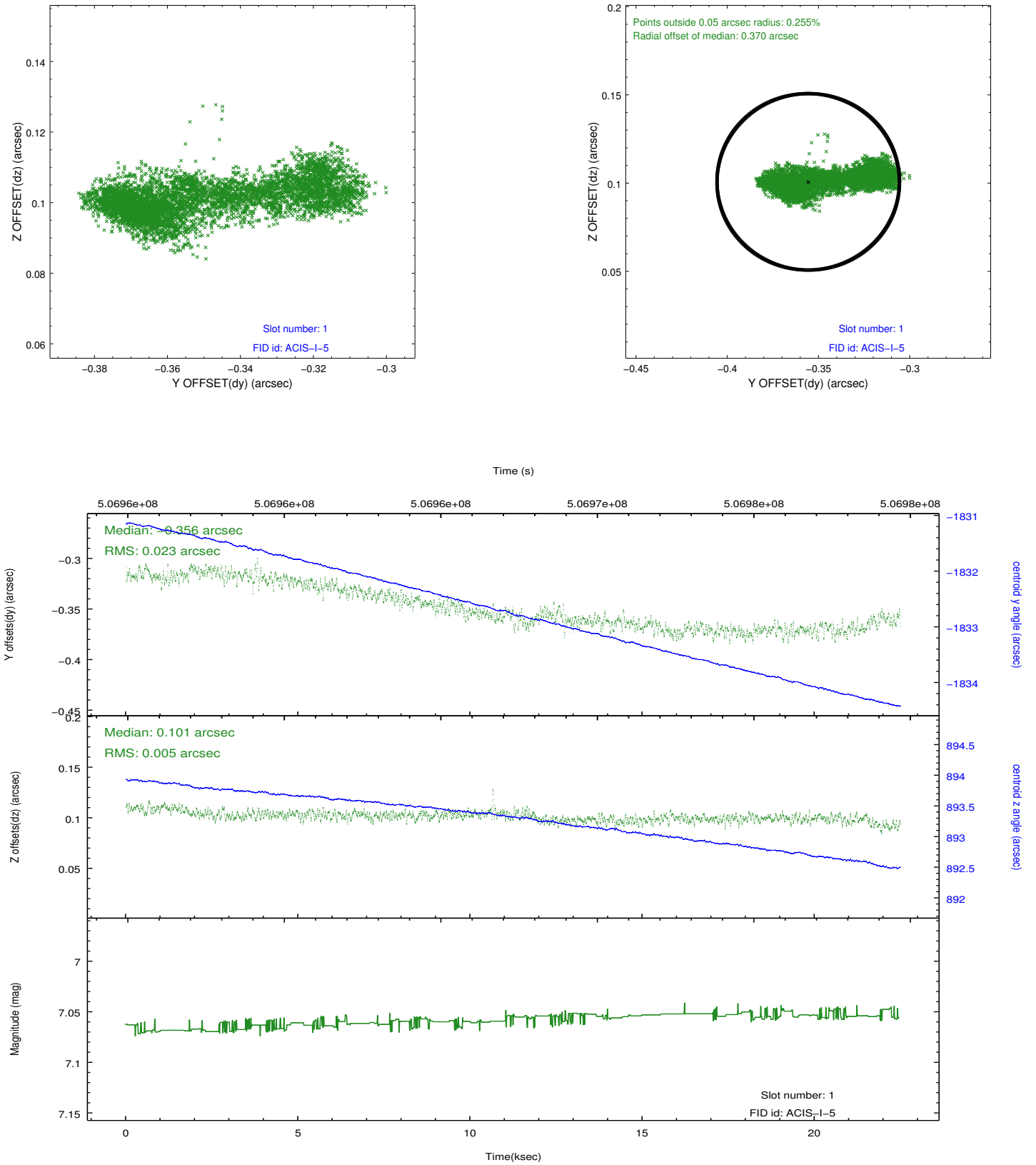


## 2.5 FID Slots

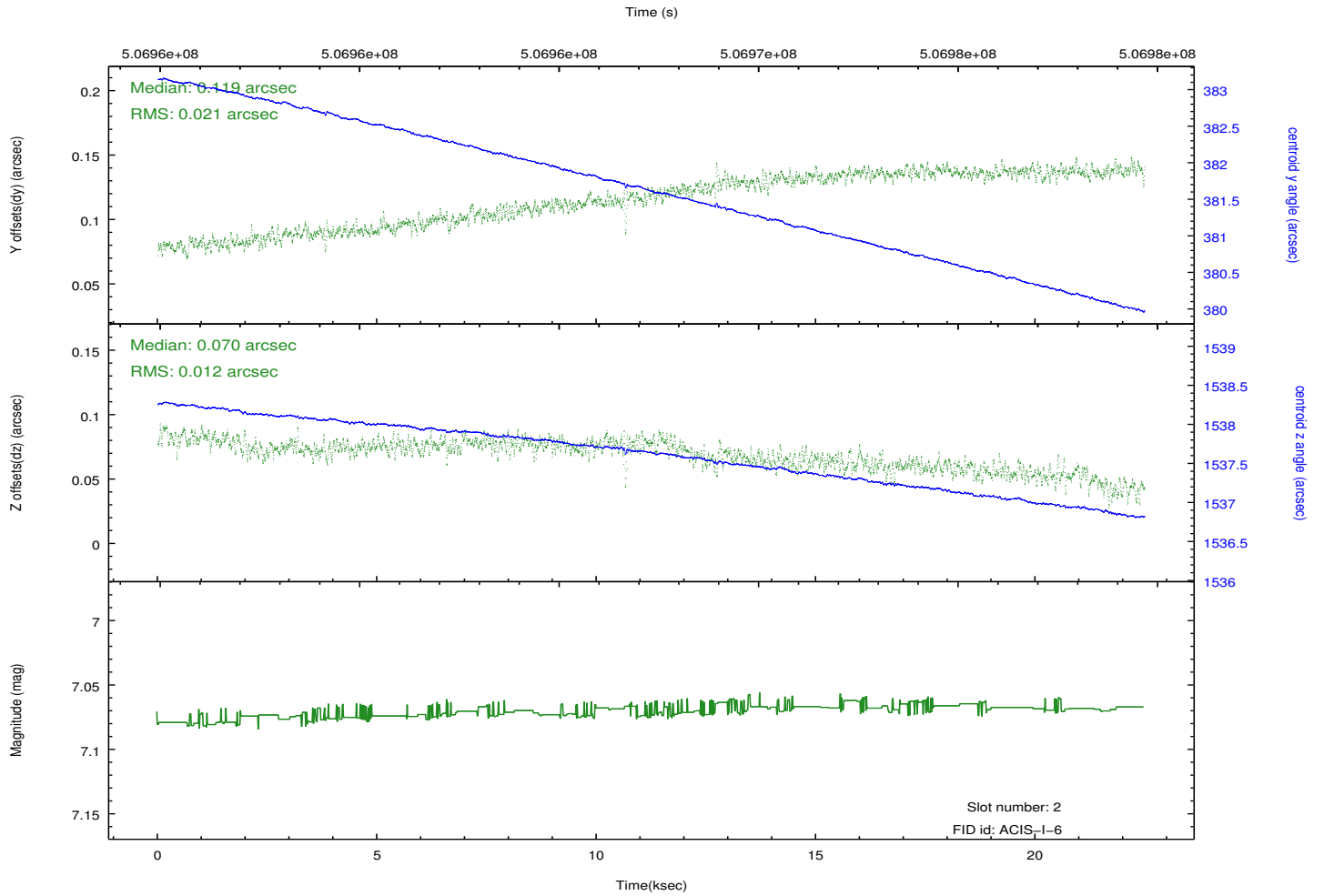
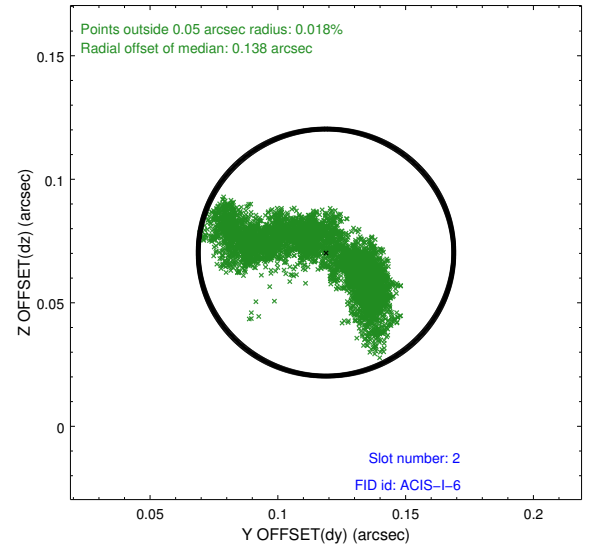
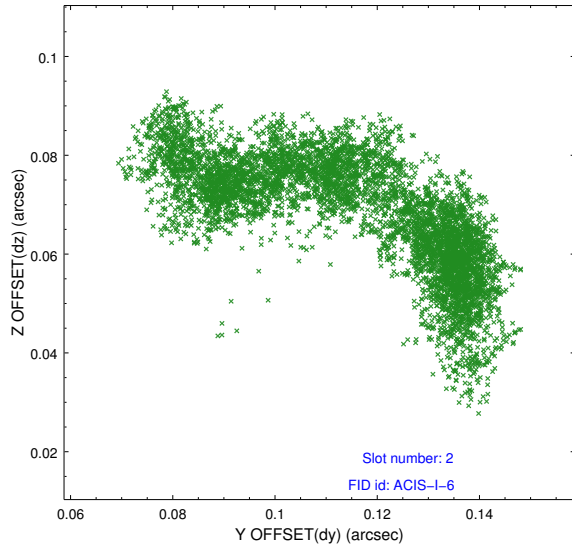
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	22.451855516374

## 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.