

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15183 - L2 Version 2  
Chandra X-Ray Center

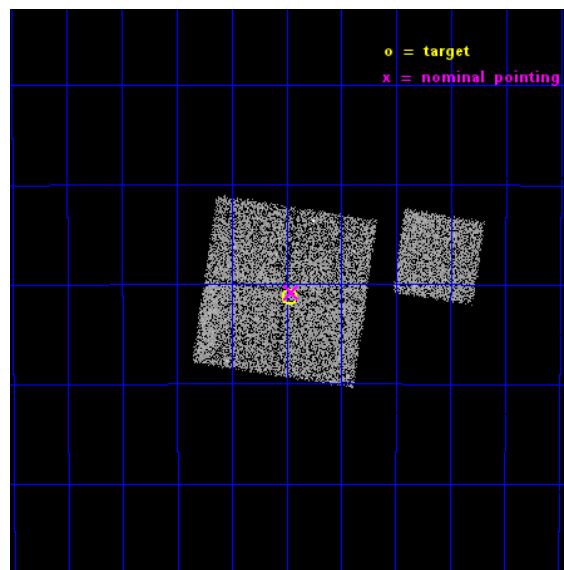
L2 Processing Date : Nov 30 2014

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# 1 Front

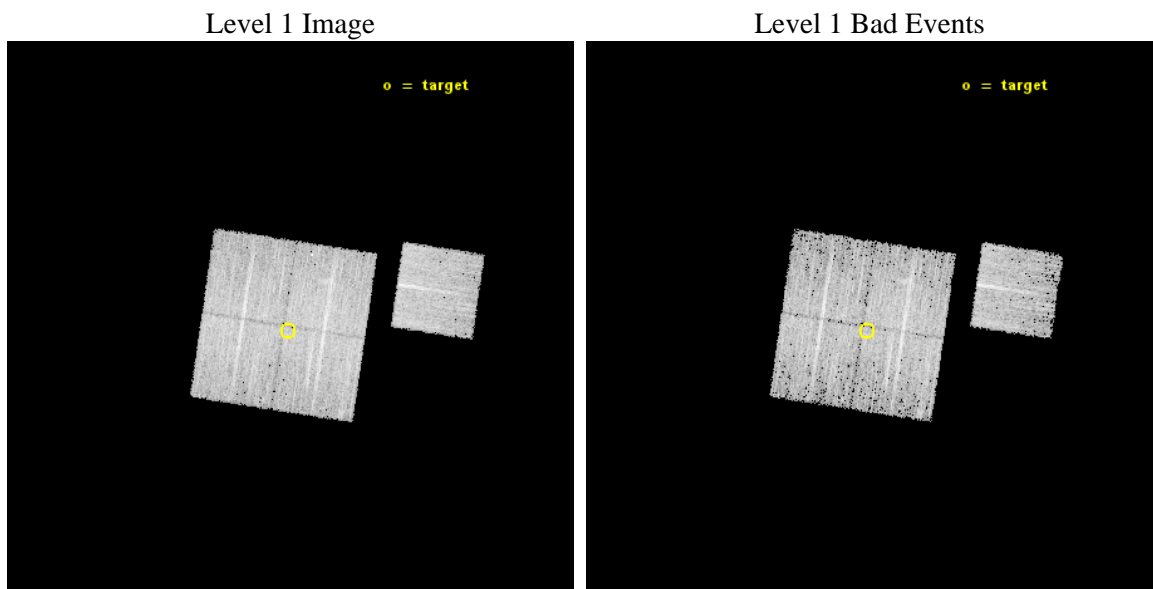
seq_num	801308	Sequence number
obs_id	15183	Observation id
title	Joint Chandra and Suzaku exploration of the outskirts of the nearby, X-ray bright Centaurus cluster	Proposal title
observer	Mr Stephen Walker	Principal investigator
object	Centaurus Cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	191.493333	Observer's specified target RA [deg]
dec_targ	-40.187861	Observer's specified target Dec [deg]
ra_nom	191.48867140557	Nominal RA [deg]
dec_nom	-40.180625811294	Nominal Dec [deg]
roll_nom	98.612598334153	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9773.2027323842	Sum of GTIs [s]
livetime	9645.5086437584	Livetime [s]
ontime0	9773.0796123743	Sum of GTIs [s]
ontime1	9773.1206523776	Sum of GTIs [s]
ontime2	9773.1616923809	Sum of GTIs [s]
ontime3	9773.2027323842	Sum of GTIs [s]
ontime6	9773.038572371	Sum of GTIs [s]
l2events	25209	Number of level 2 events



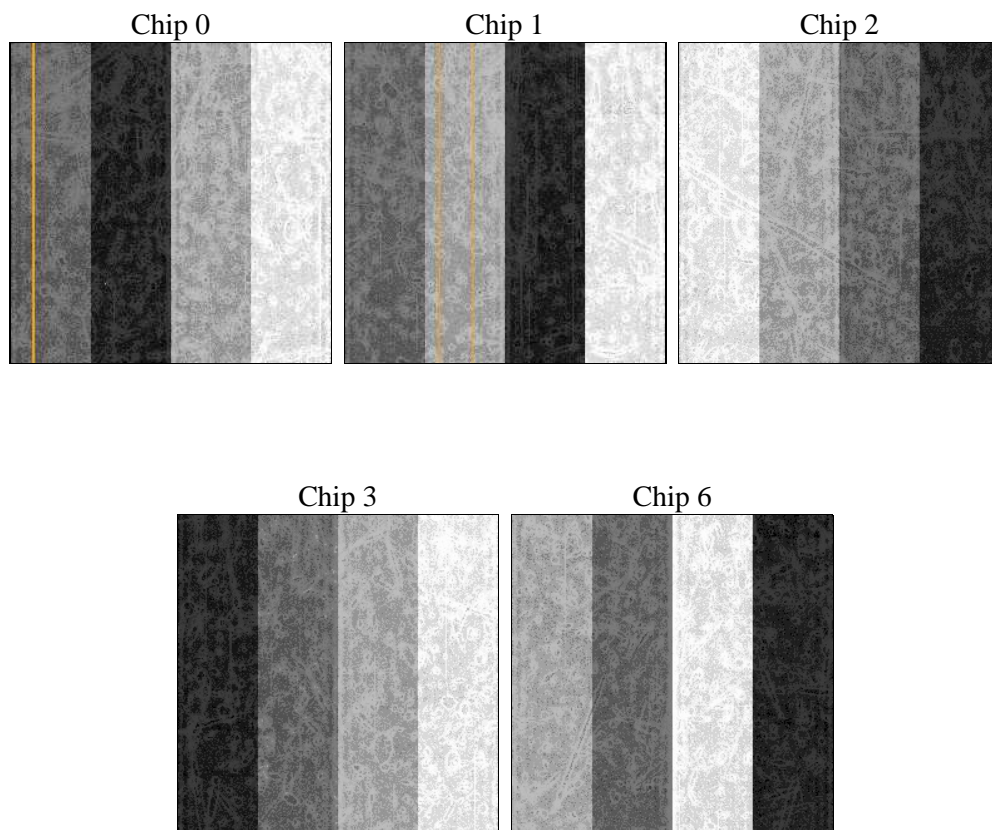
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	9773.2027323842	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	9773.0796123743	Sum of GTIs [s]
date	2014-11-30T00:30:58	Date and time of file creation	ontime1	9773.1206523776	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	9773.1616923809	Sum of GTIs [s]
			ontime3	9773.2027323842	Sum of GTIs [s]
			ontime6	9773.038572371	Sum of GTIs [s]
			l1events	233264	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	43915	45890	50202	47026	46231
rejected events	37921	39384	44275	41638	40256
rejected %	86%	85%	88%	88%	87%

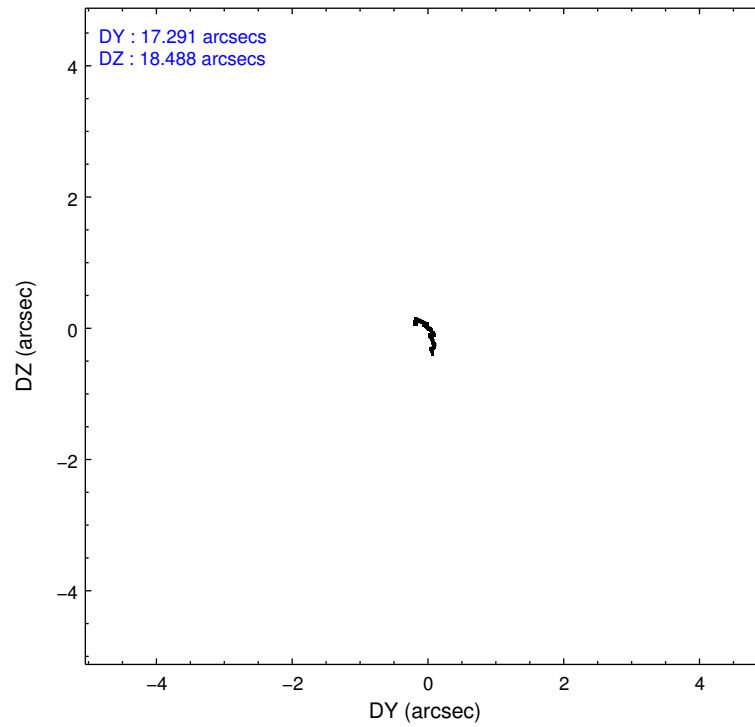
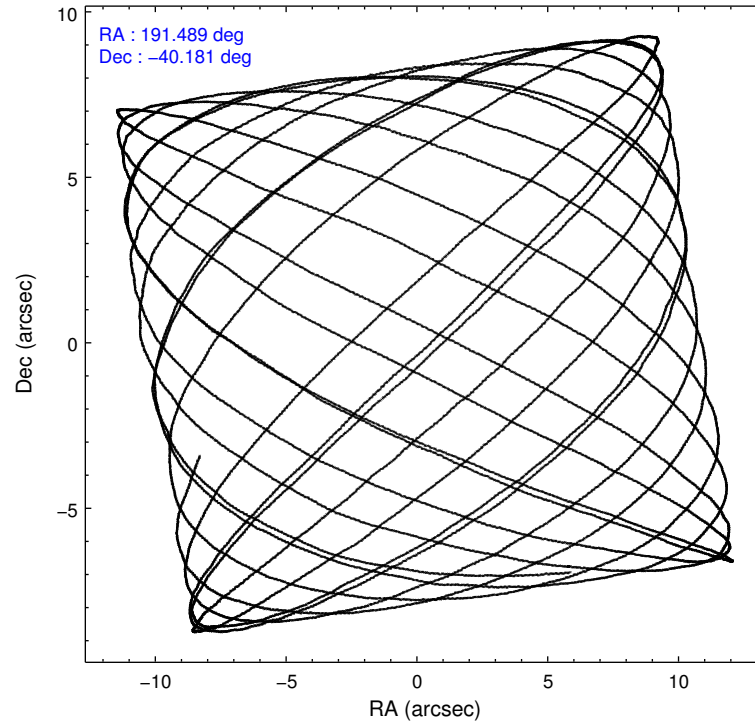
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2088	2338	2206	1932	2090
	4%	5%	4%	4%	4%
grade 1 events	30	24	25	18	25
	0%	0%	0%	0%	0%
grade 2 events	1573	1583	1438	1223	1356
	3%	3%	2%	2%	2%
grade 3 events	570	599	574	559	626
	1%	1%	1%	1%	1%
grade 4 events	524	609	587	554	558
	1%	1%	1%	1%	1%
grade 5 events	2388	2427	2183	2579	2448
	5%	5%	4%	5%	5%
grade 6 events	1241	1379	1127	1124	1356
	2%	3%	2%	2%	2%
grade 7 events	35501	36931	42062	39037	37772
	80%	80%	83%	83%	81%

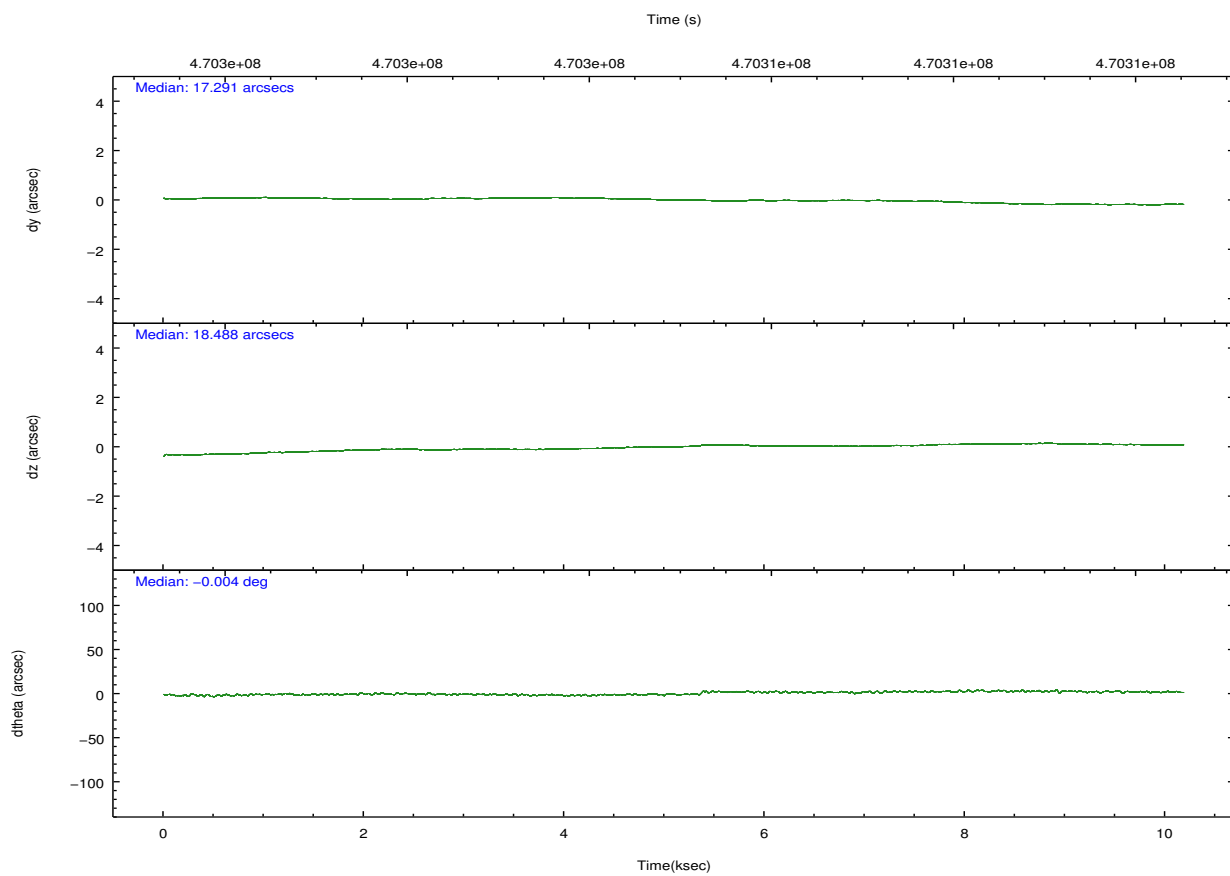
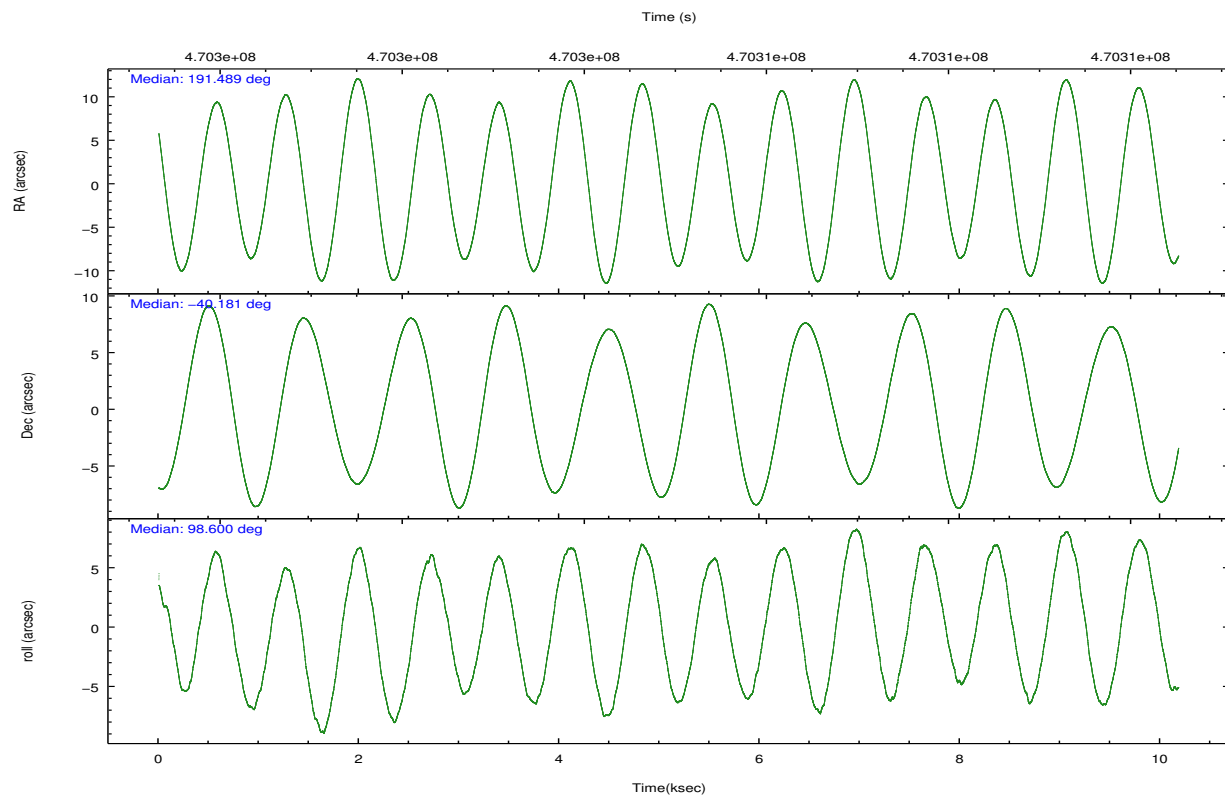


## 2.2 Compared Parameters

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	191.511292	191.4886714055696	CCD I2 on	Y	Y
[deg] Pointing Dec	-40.202011	-40.18062581129387	CCD I3 on	Y	Y
[deg] Pointing Roll	98.418516	98.61259833415255	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	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	470300031.184000	470299654.86263	CCD S5 on	N	N
Observation start date	2012-11-26T06:52:44	2012-11-26T06:47:34	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470310031.184000	470311296.30076	On-chip summing requested	N	N
Observation end date	2012-11-26T09:39:24	2012-11-26T10:01:36	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



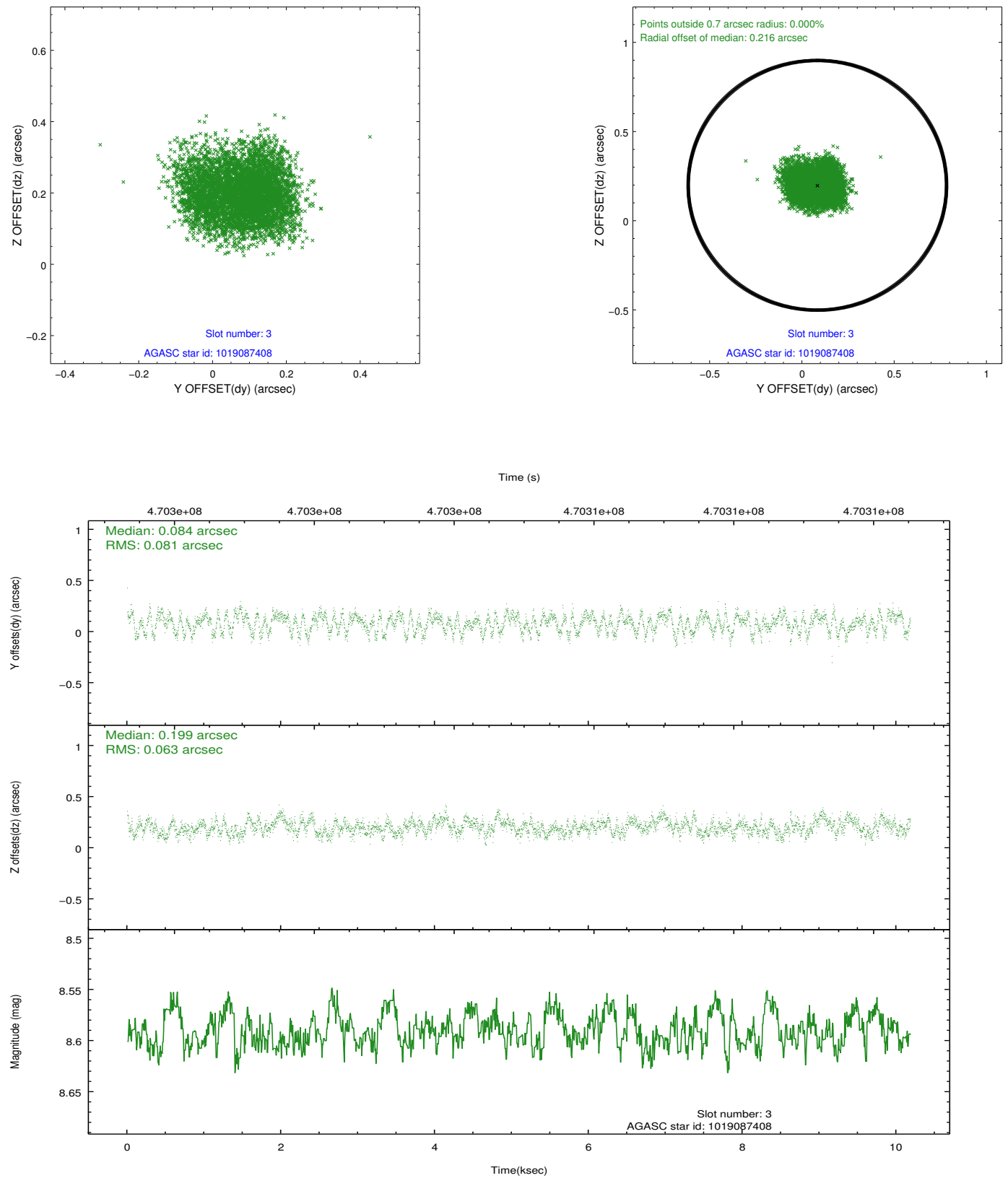


### Slot Statistics

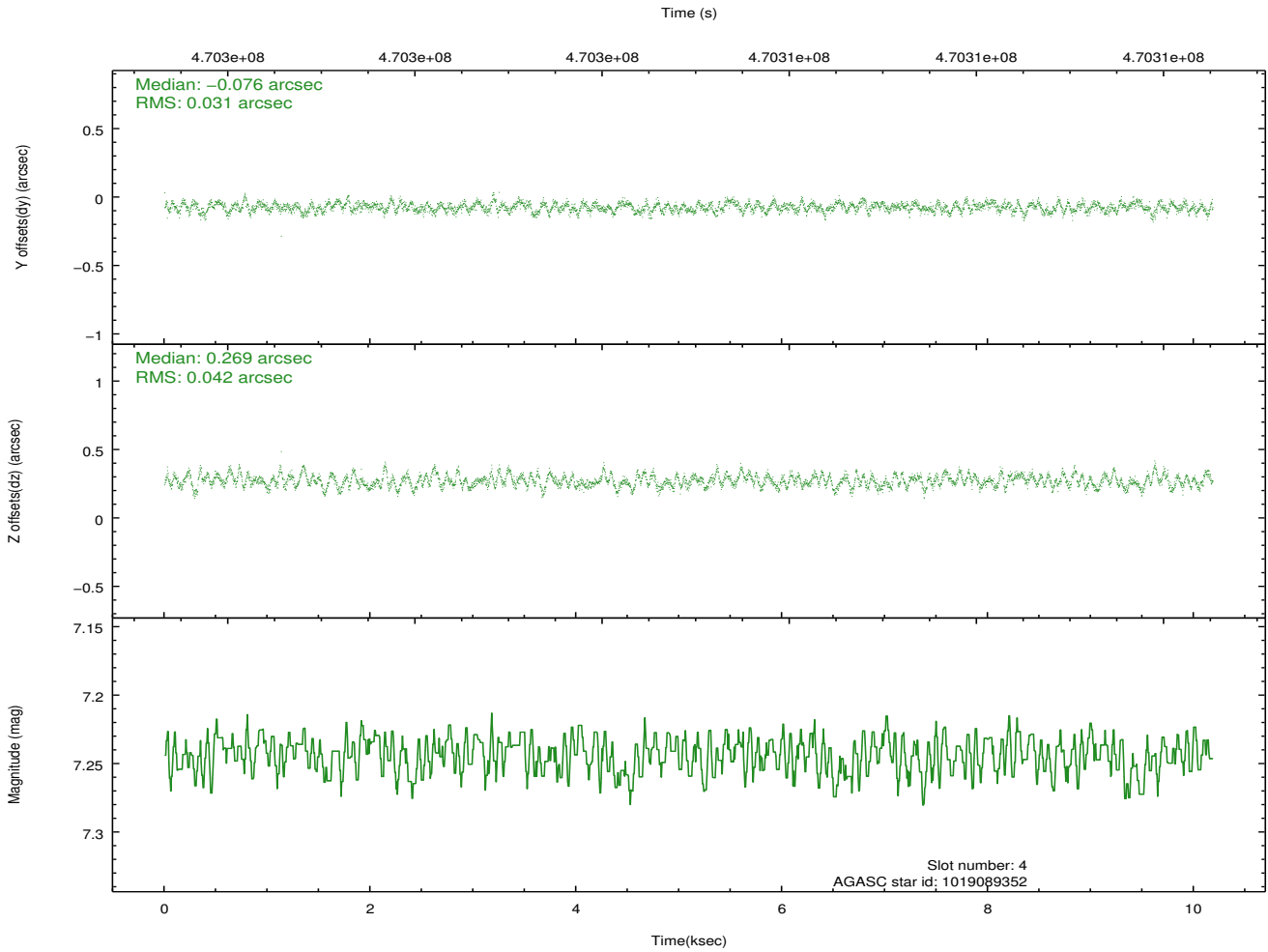
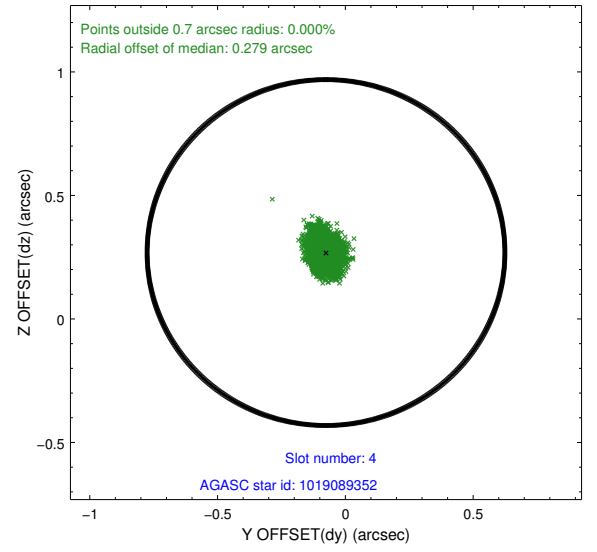
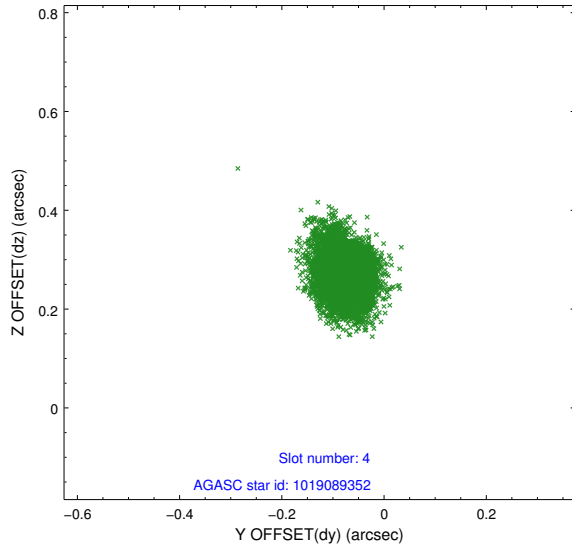
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	6.96	2484	-0.098	-0.073	0.017	0.027	0.000000	0.000000	-772.12	-848.60
1	FID		ACIS-I-4	6.98	2484	0.246	0.079	0.011	0.015	0.000000	0.000000	2141.98	1057.55
2	FID		ACIS-I-5	7.03	2484	-0.249	0.064	0.011	0.018	0.000000	0.000000	-1825.49	1055.86
3	GUIDE	used	1019087408	8.59	4967	0.084	0.199	0.113	0.169	192.291847	-39.717138	1401.97	-2391.95
4	GUIDE	used	1019089352	7.24	4968	-0.076	0.269	0.056	0.090	191.830631	-40.127246	136.80	-908.97
5	GUIDE	used	1019099112	7.57	4968	0.121	0.205	0.069	0.105	191.717552	-40.300293	-433.56	-508.27
6	GUIDE	used	1019101328	6.78	4967	-0.098	-0.257	0.087	0.135	190.859432	-40.177847	341.64	1761.22
7	GUIDE	used	1019084936	8.45	4948	-0.038	-0.430	0.069	0.112	190.582410	-39.936294	1307.58	2398.73

## 2.4 Star Slots

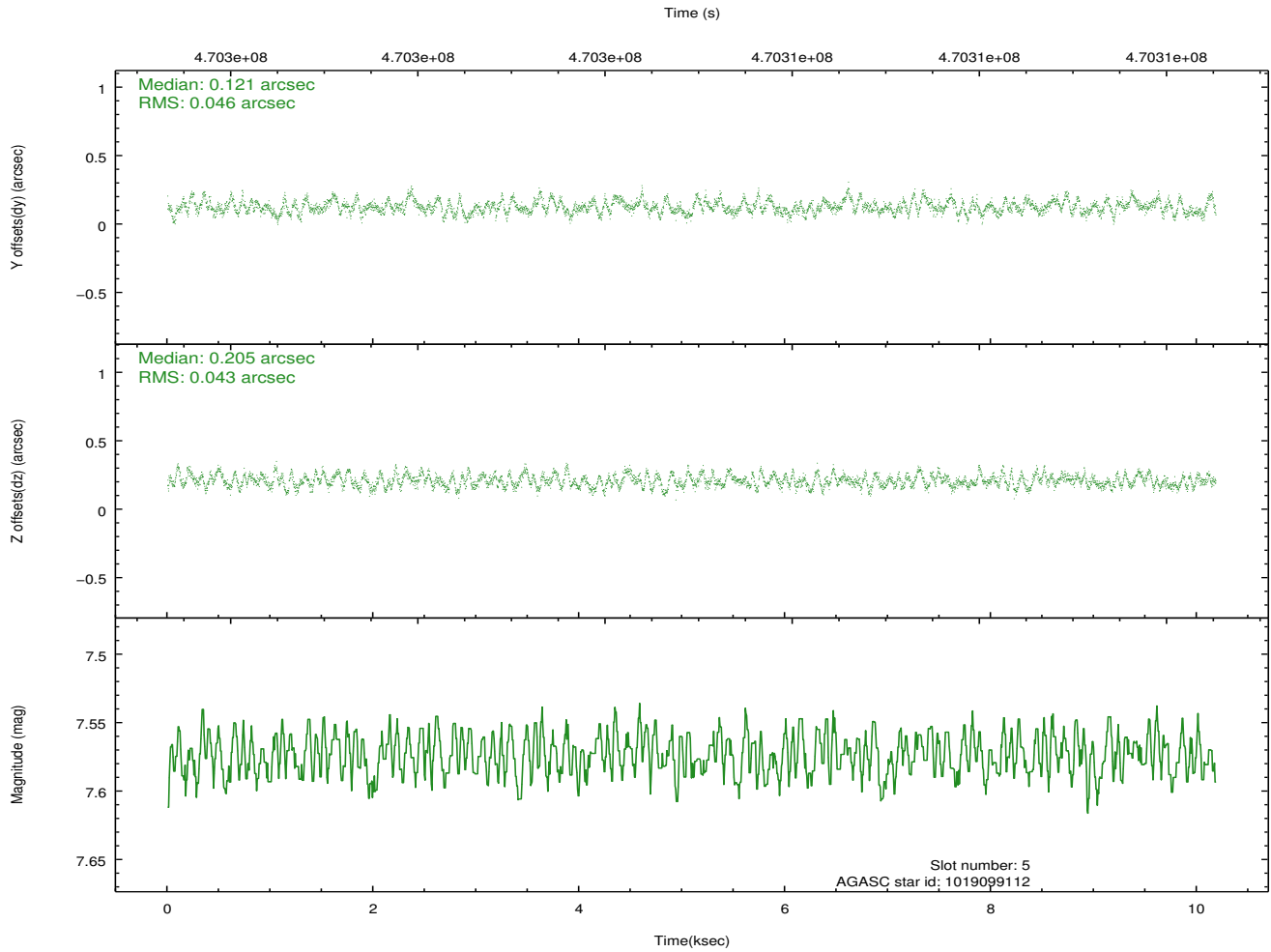
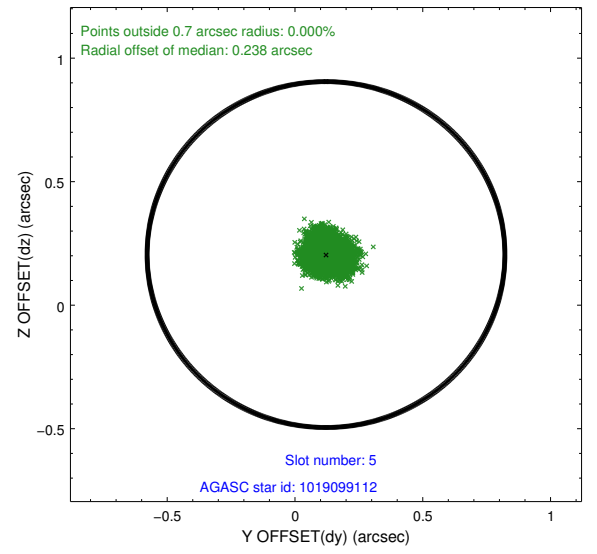
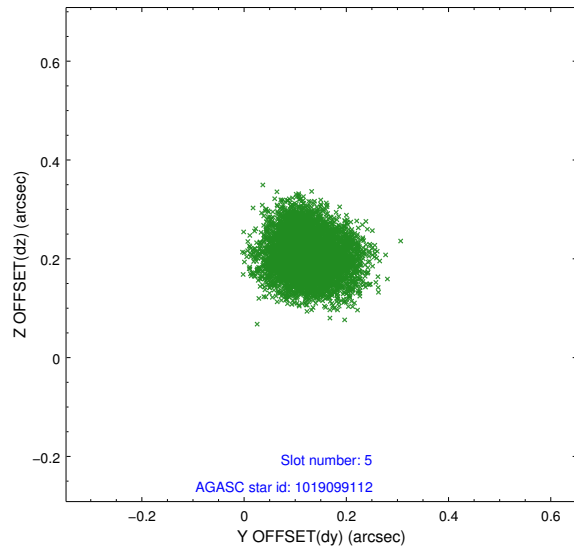
### 2.4.1 Slot 3



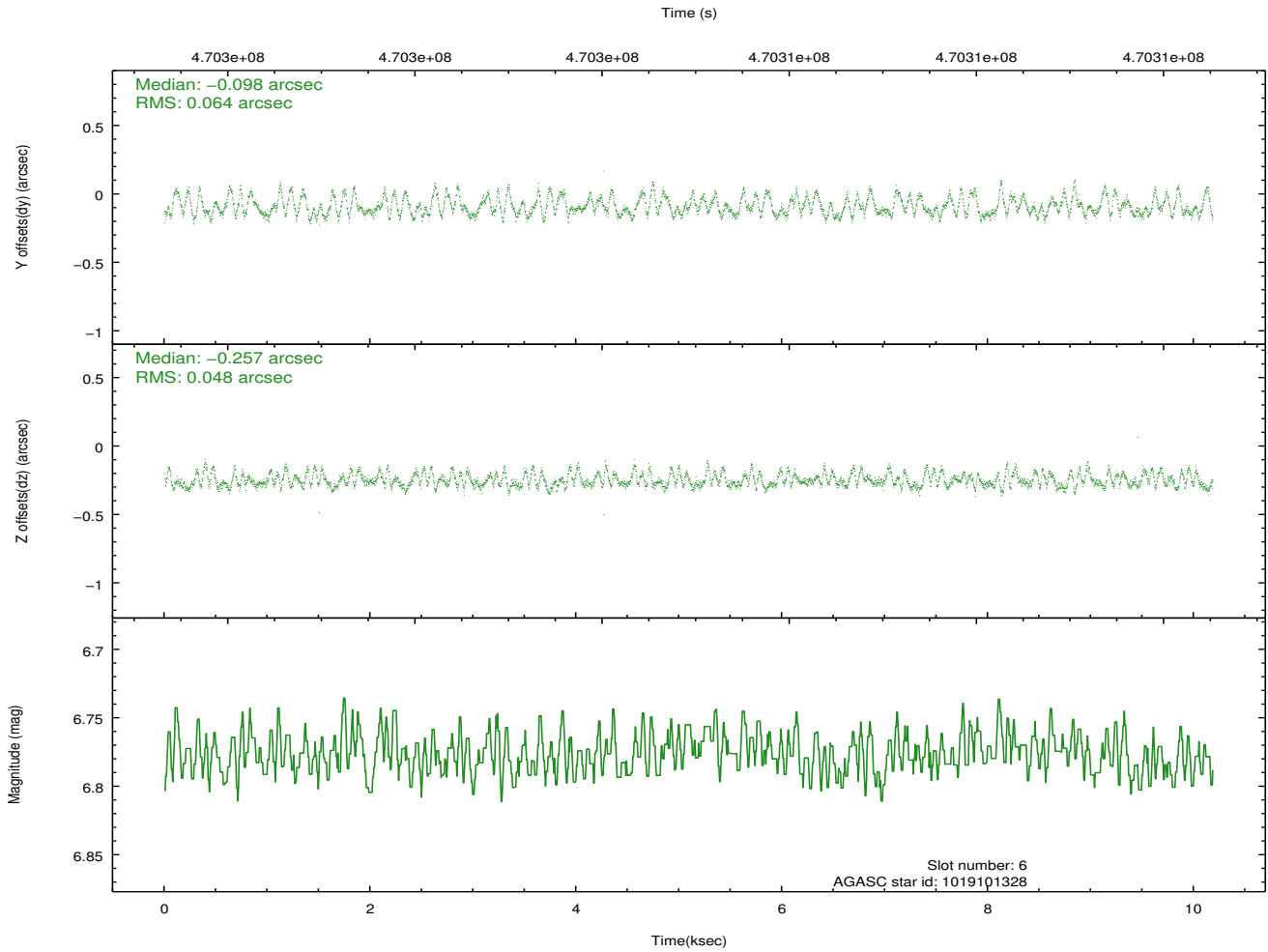
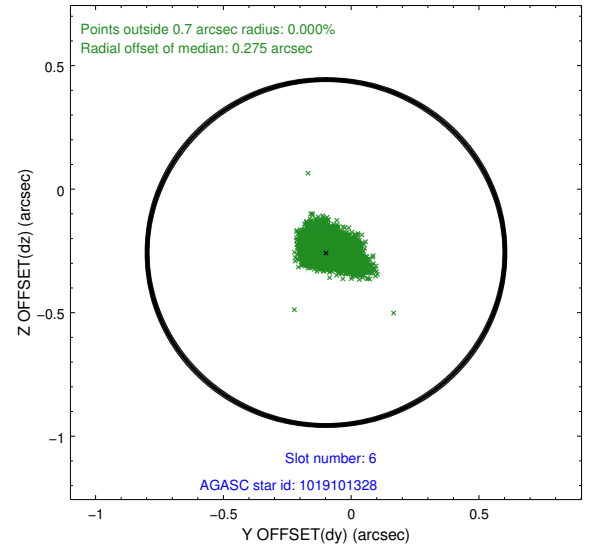
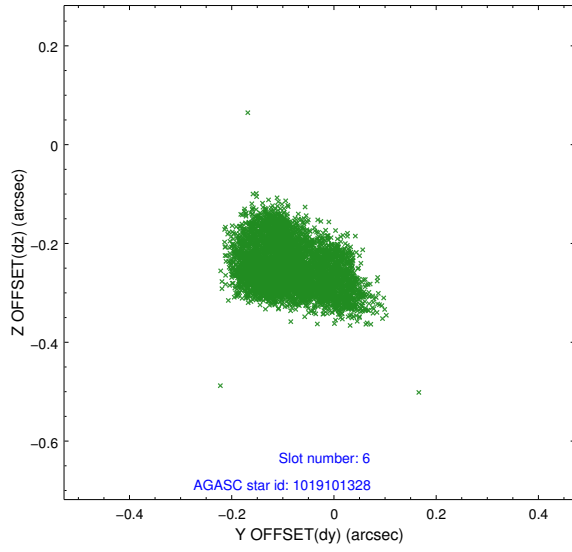
## 2.4.2 Slot 4



### 2.4.3 Slot 5

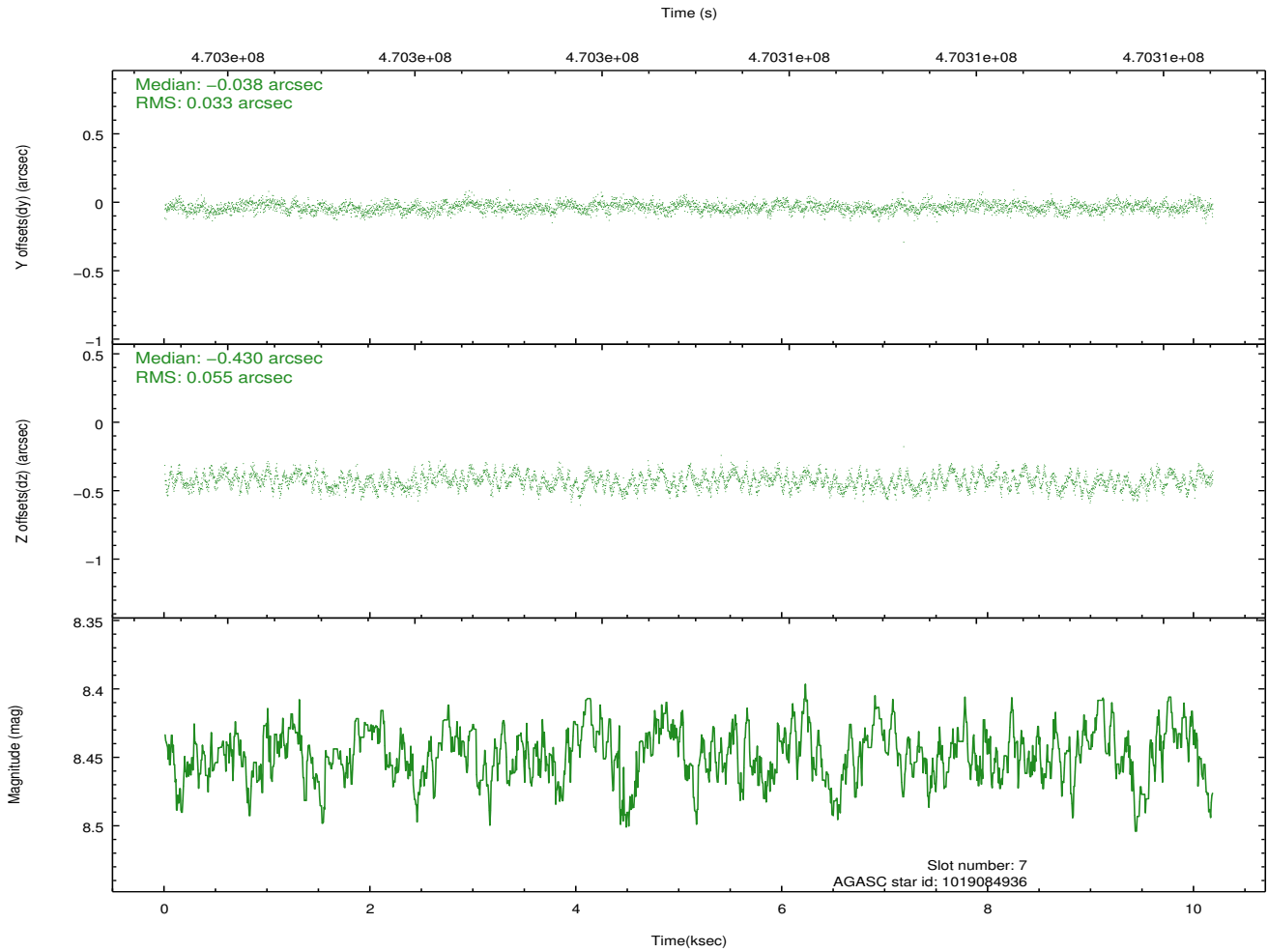
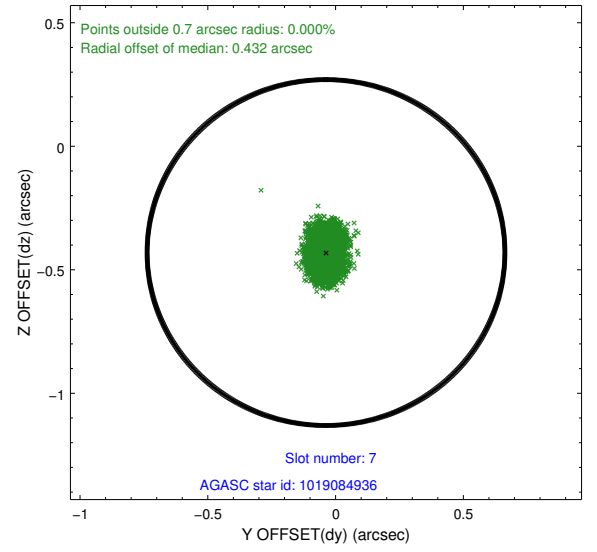
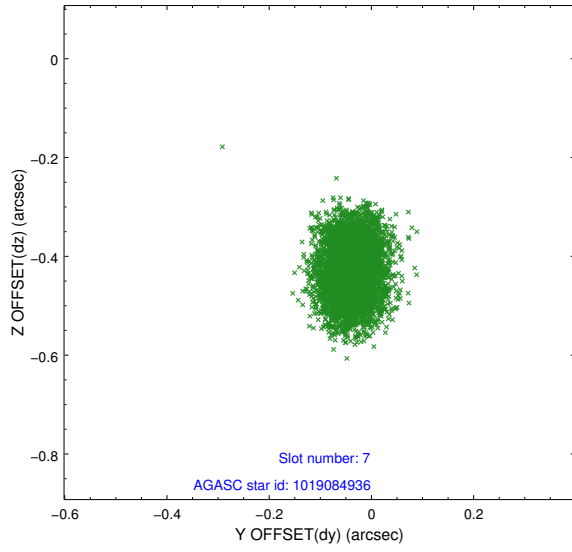


## 2.4.4 Slot 6



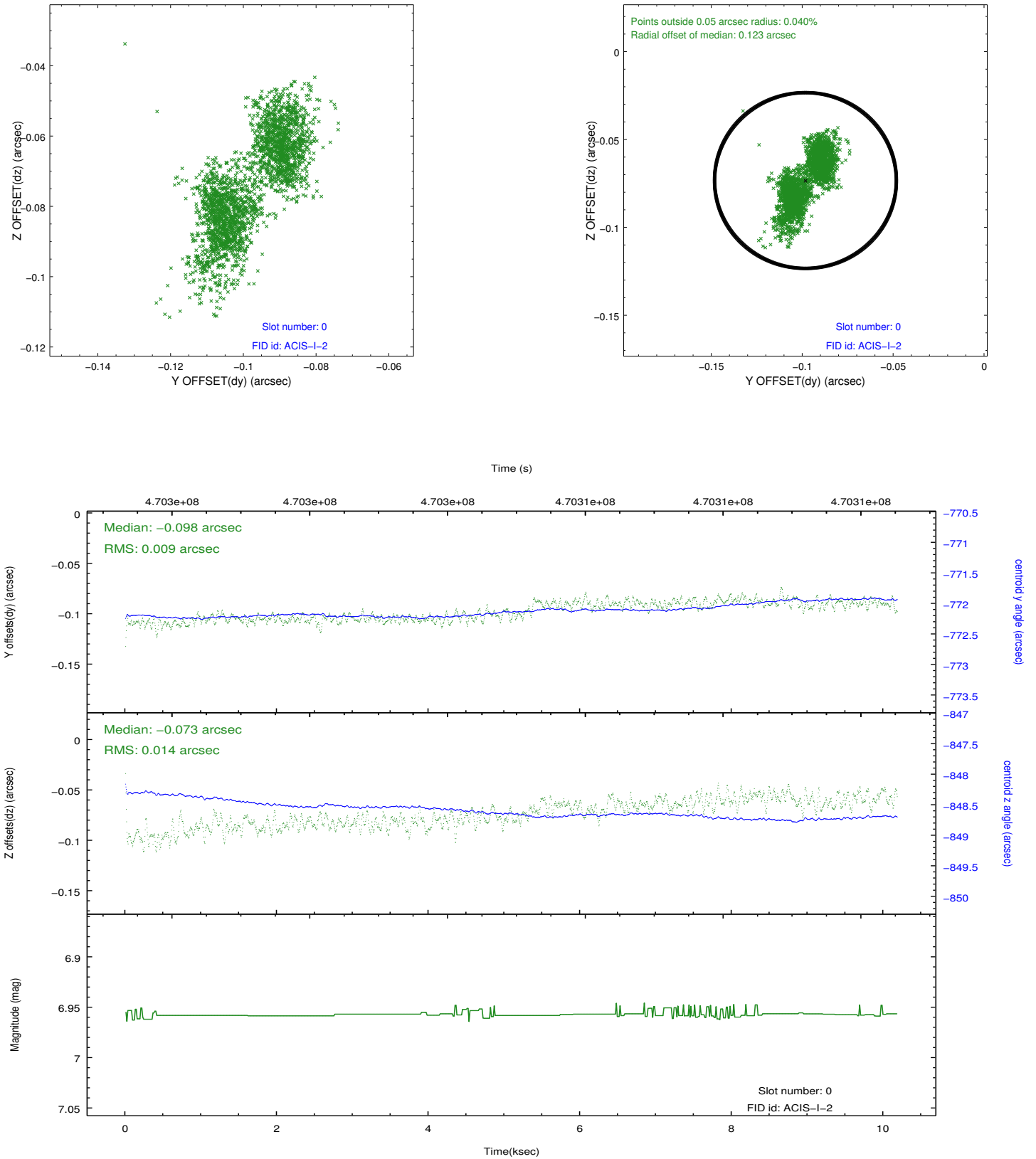


## 2.4.5 Slot 7

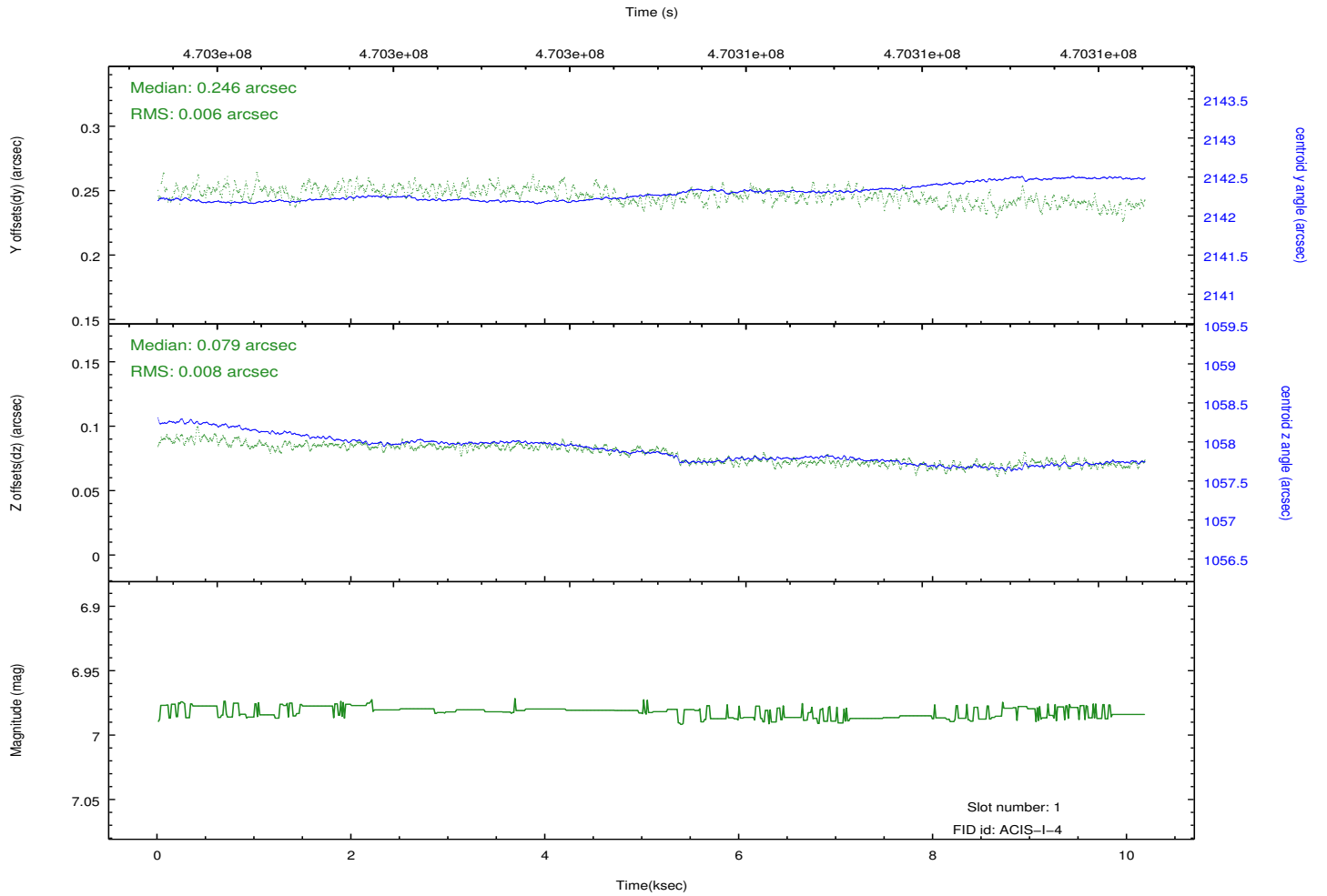
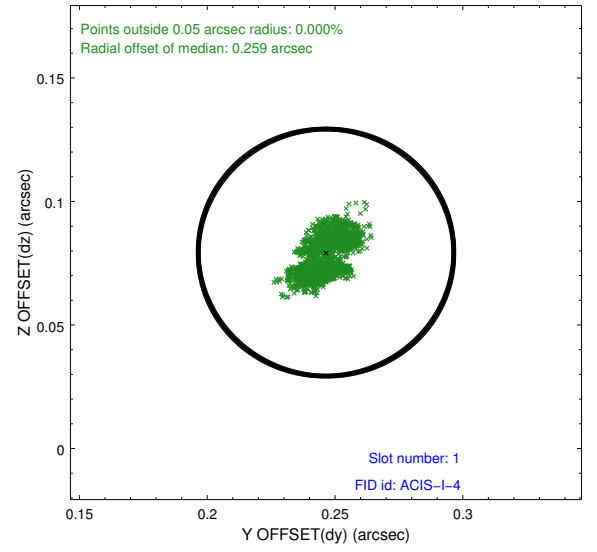
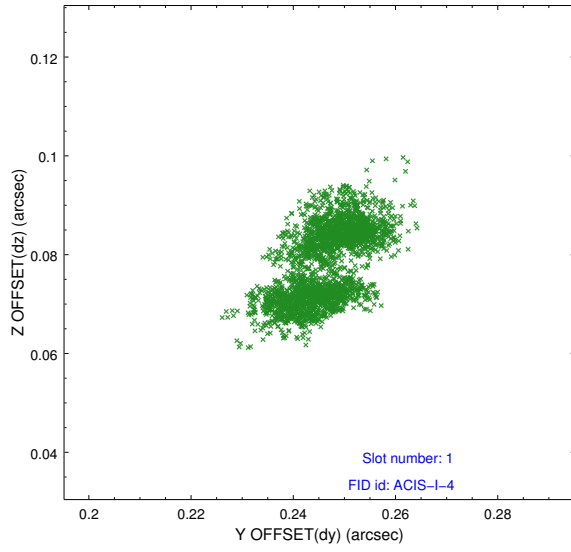


## 2.5 FID Slots

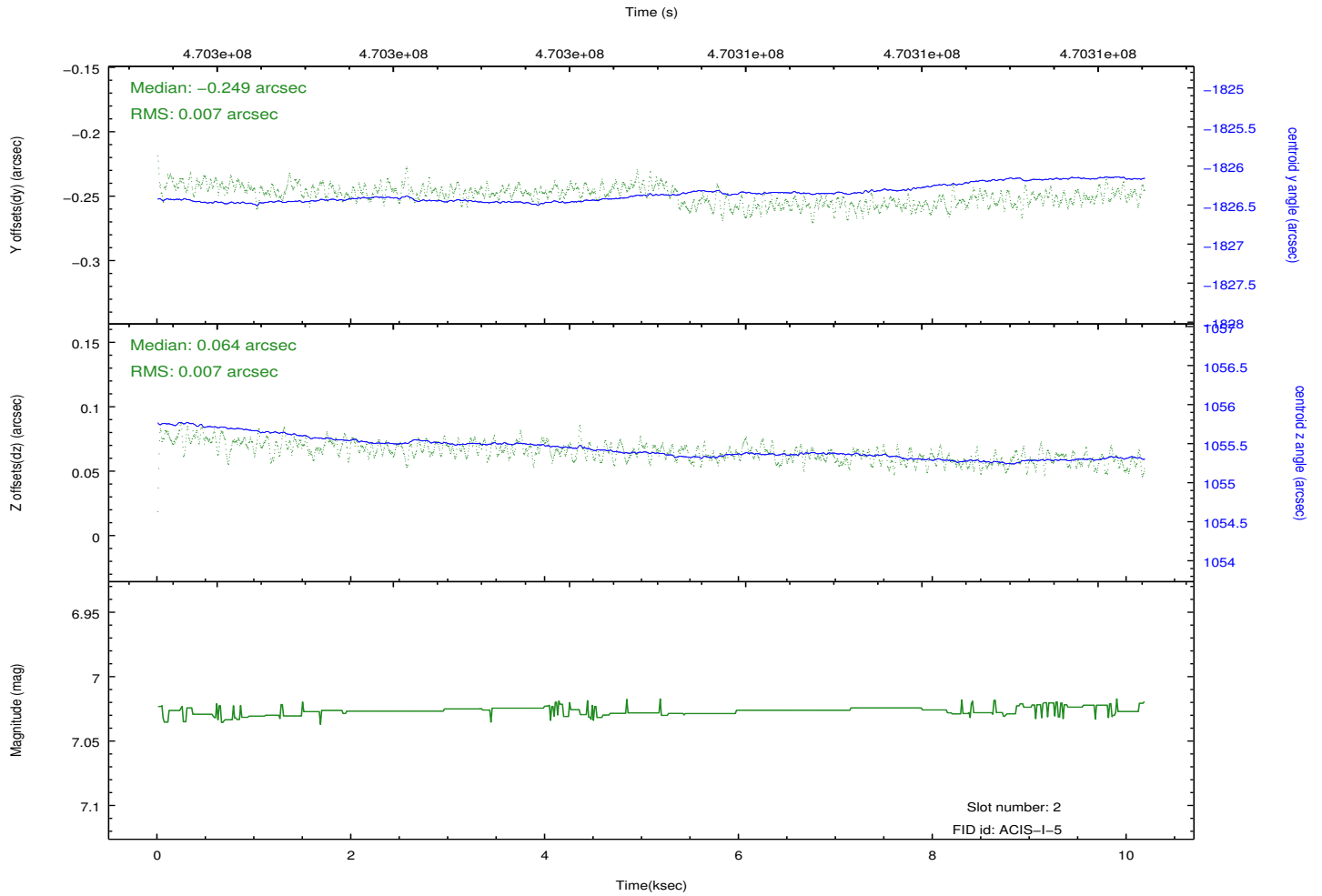
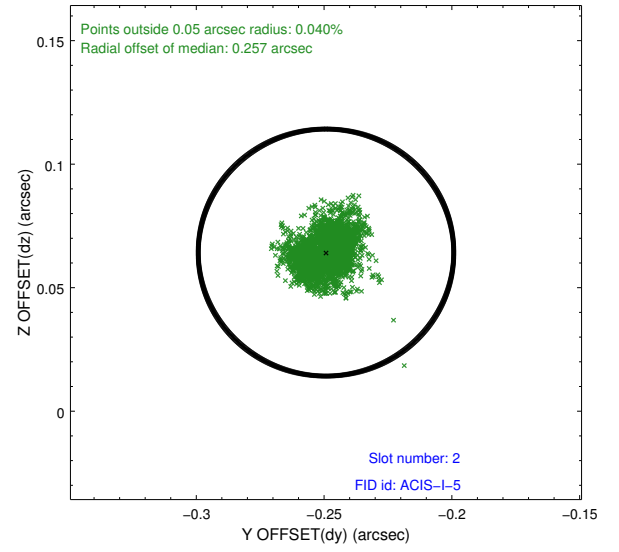
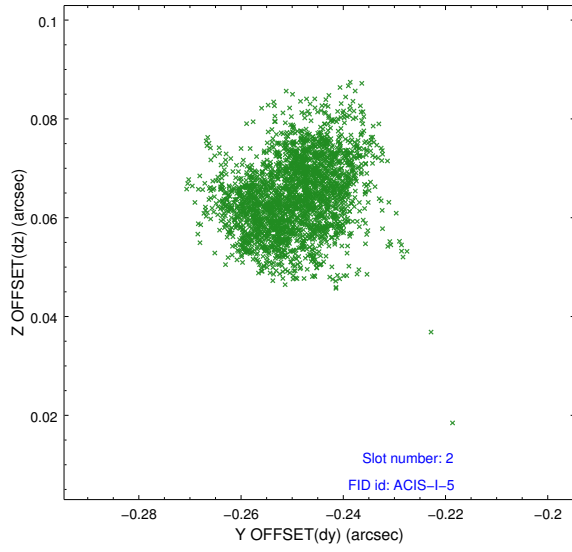
### 2.5.1 Slot 0



## 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	9.7732027323842

## 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.