

# V&V Reference Report

## L2 ASCDS Version : 8.5.1

Observation 15052 - L2 Version 2  
Chandra X-Ray Center

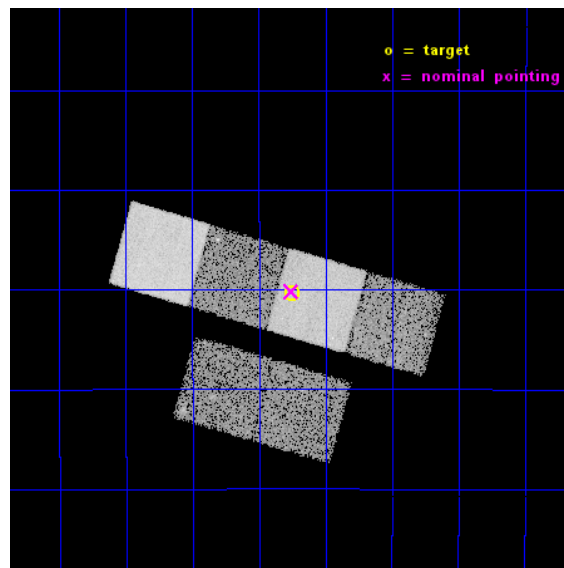
L2 Processing Date : Nov 30 2014

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# 1 Front

seq_num	702859	Sequence number
obs_id	15052	Observation id
title	C-GOALS: The Chandra-RBGS Survey of a Complete Sample of Major-Merger LIRGs	Proposal title
observer	Professor David Sanders	Principal investigator
object	IRAS F06076-2139	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	92.437917	Observer's specified target RA [deg]
dec_targ	-21.672778	Observer's specified target Dec [deg]
ra_nom	92.438854782081	Nominal RA [deg]
dec_nom	-21.669898787879	Nominal Dec [deg]
roll_nom	15.931427966127	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14969.596468925	Sum of GTIs [s]
livetime	14780.042424827	Livetime [s]
ontime2	14966.358944058	Sum of GTIs [s]
ontime3	14969.473348916	Sum of GTIs [s]
ontime5	14969.555428922	Sum of GTIs [s]
ontime6	14969.514388919	Sum of GTIs [s]
ontime7	14969.596468925	Sum of GTIs [s]
ontime8	14969.432308912	Sum of GTIs [s]
l2events	135725	Number of level 2 events

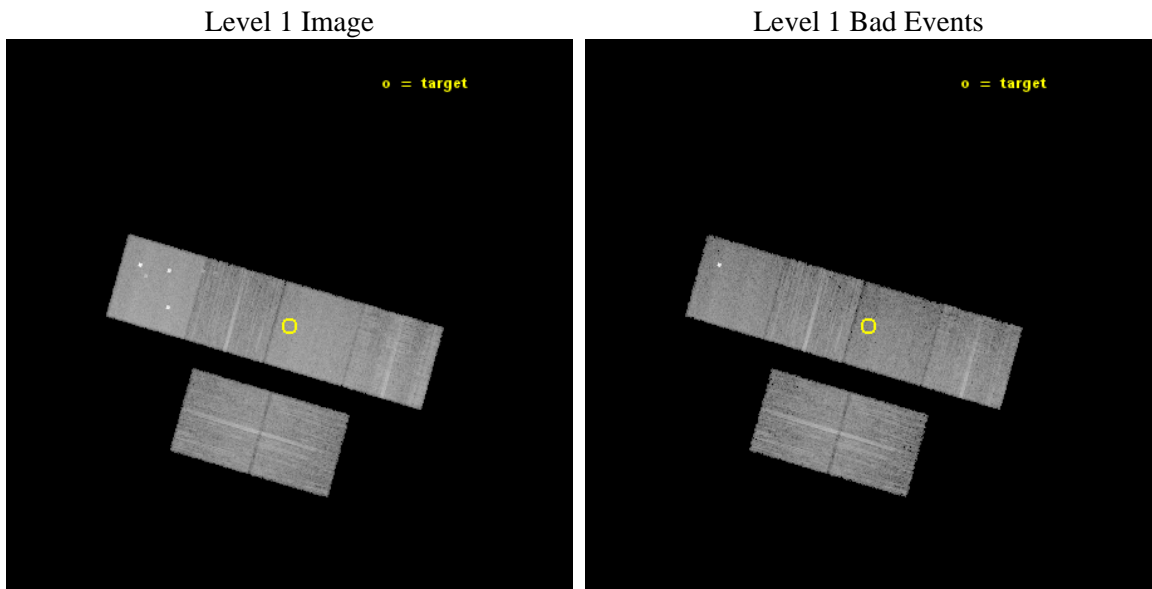




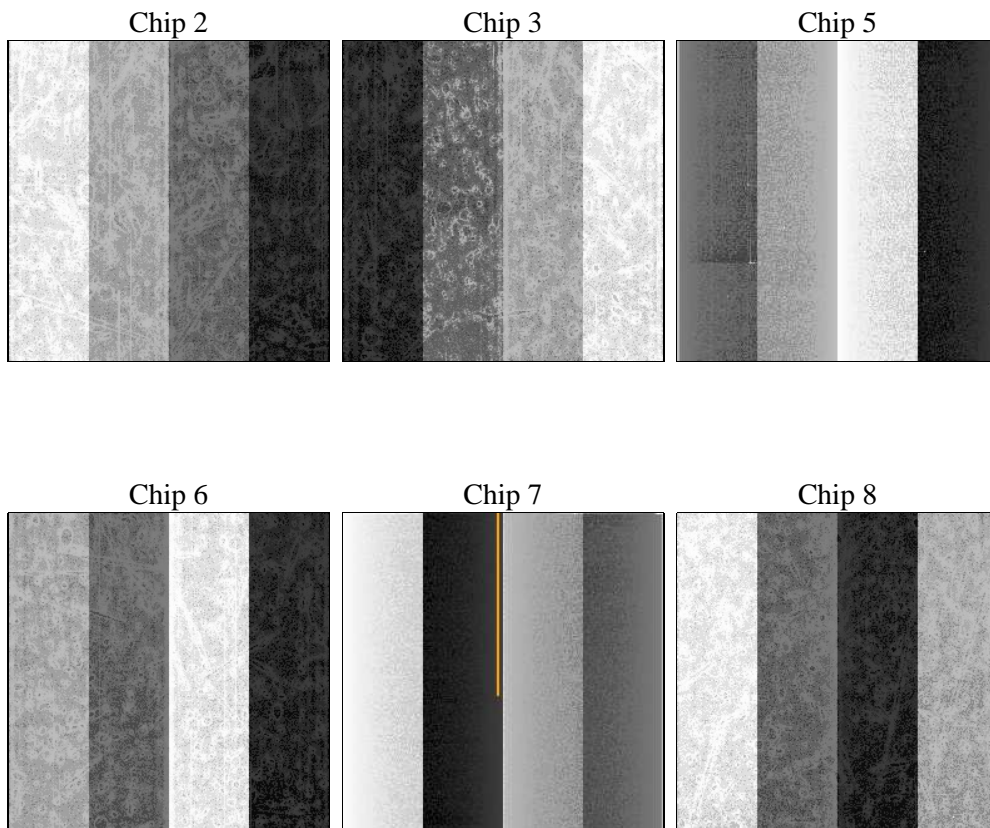
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	14969.596468925	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	14966.358944058	Sum of GTIs [s]
date	2014-11-30T05:21:12	Date and time of file creation	ontime3	14969.473348916	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	14969.555428922	Sum of GTIs [s]
			ontime6	14969.514388919	Sum of GTIs [s]
			ontime7	14969.596468925	Sum of GTIs [s]
			ontime8	14969.432308912	Sum of GTIs [s]
			l1events	582445	Number of level 1 events

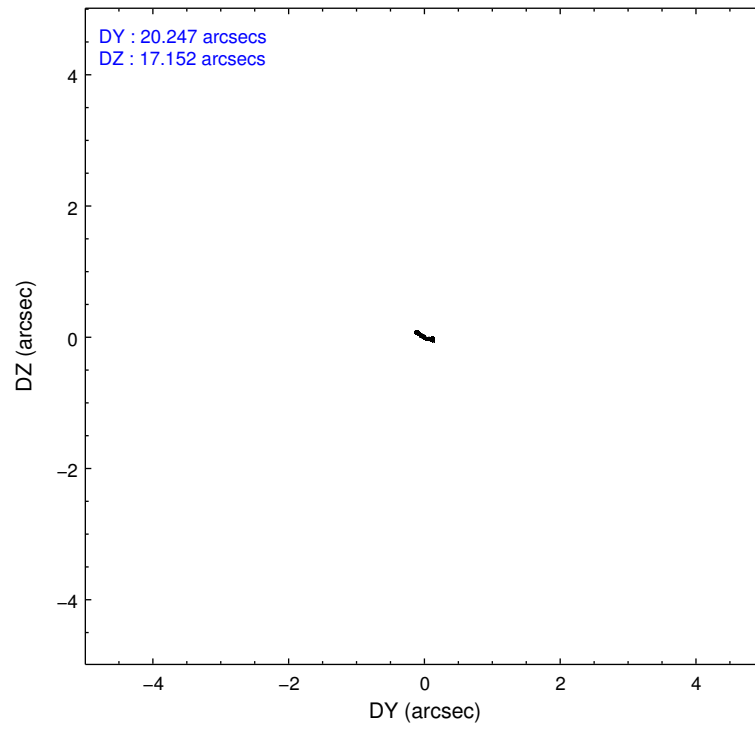
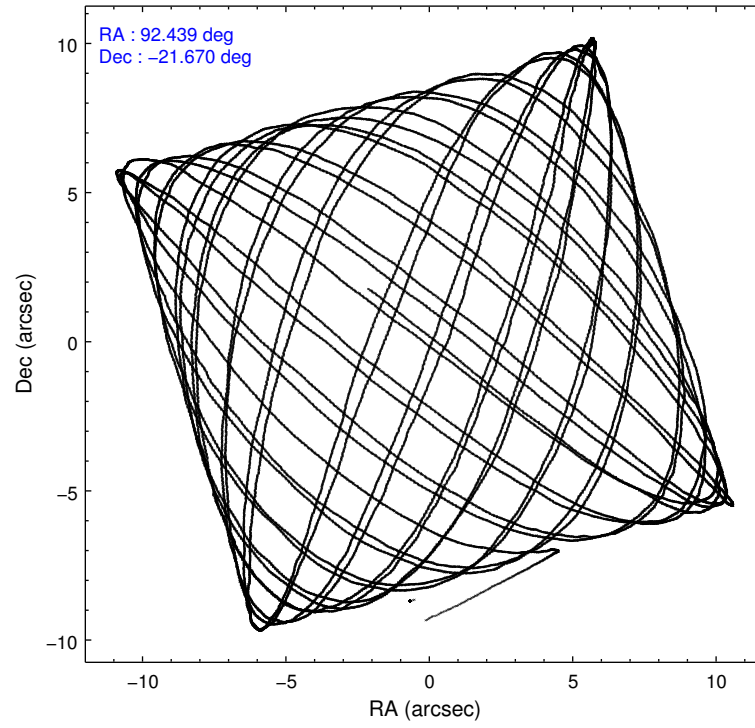
### 2.1.4 Events

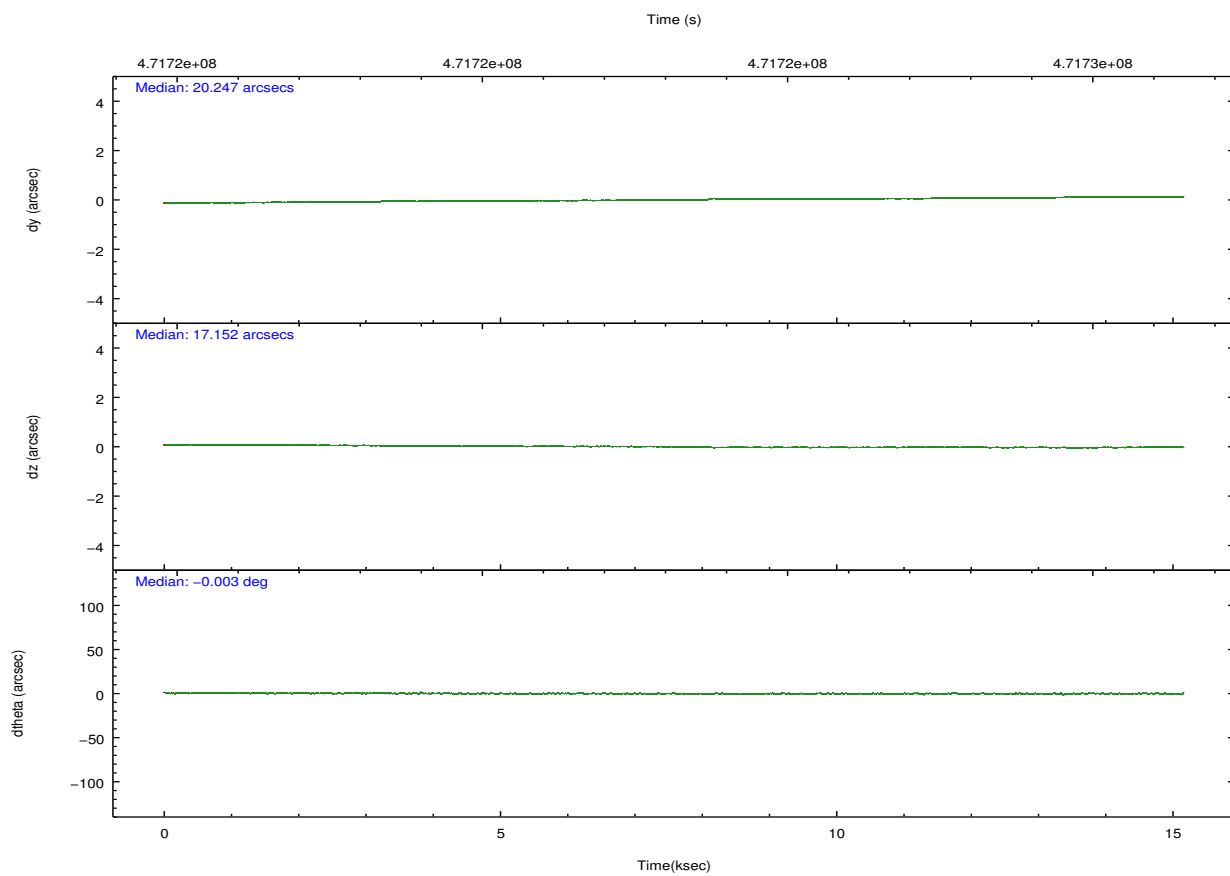
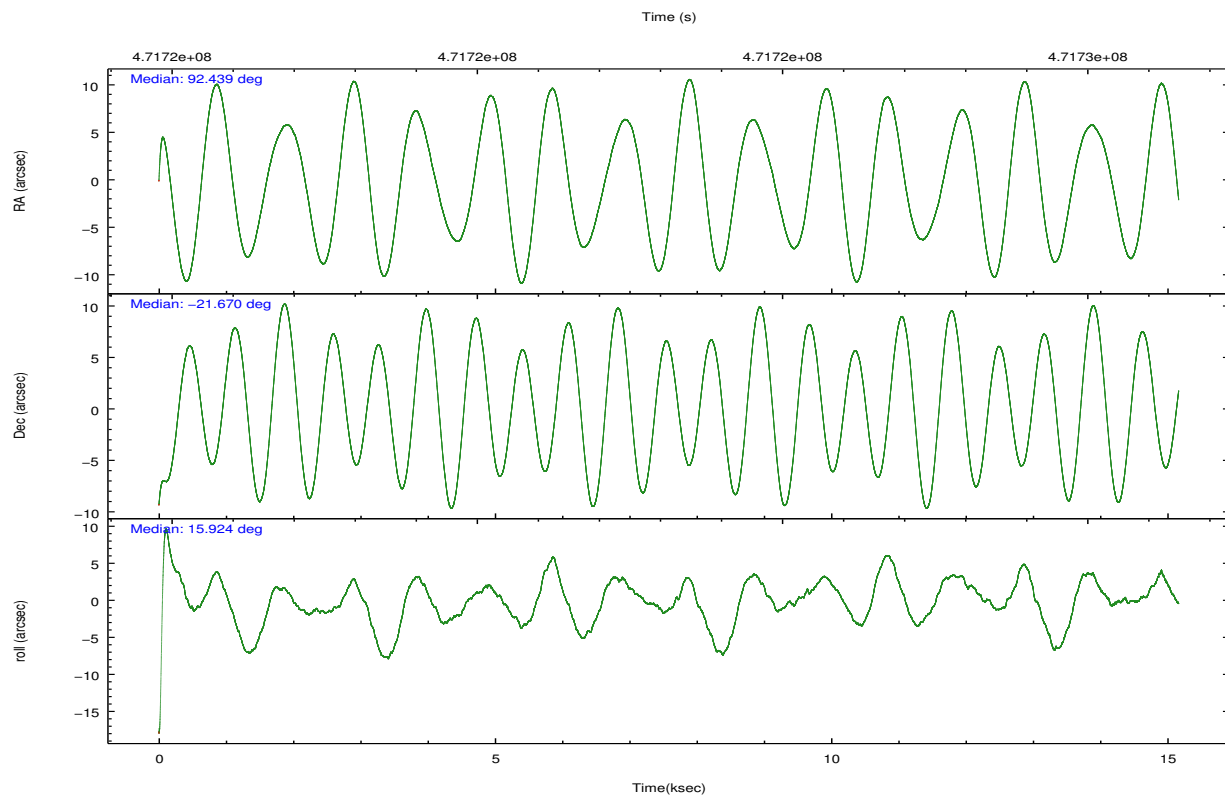
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	78400	74419	138185	80365	105827	105249	grade 0 events	3283	2903	11217	3169	4140	7868
rejected events	69154	66153	70318	70970	59610	76889		4%	3%	8%	3%	3%	7%
rejected %	88%	88%	50%	88%	56%	73%	grade 1 events	52	45	215	40	145	70
								0%	0%	0%	0%	0%	0%
							grade 2 events	2322	1796	18784	2138	9388	6664
								2%	2%	13%	2%	8%	6%
							grade 3 events	913	914	2486	981	3953	3001
								1%	1%	1%	1%	3%	2%
							grade 4 events	934	925	1994	949	3884	2882
								1%	1%	1%	1%	3%	2%
							grade 5 events	3427	3962	11727	4054	10881	5735
								4%	5%	8%	5%	10%	5%
							grade 6 events	1795	1730	33407	2158	24861	7946
								2%	2%	24%	2%	23%	7%
							grade 7 events	65674	62144	58355	66876	48575	71083
								83%	83%	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-235678	ACIS-235678	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	92.418673	92.43885478208067	CCD I2 on	O2	Y
[deg] Pointing Dec	-21.689778	-21.66989878787856	CCD I3 on	Y	Y
[deg] Pointing Roll	15.767372	15.93142796612707	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	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)	471715710.184000	471714567.50127	CCD S5 on	N	N
Observation start date	2012-12-12T16:07:23	2012-12-12T15:49:27	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	471730710.184000	471731636.82719	On-chip summing requested	N	N
Observation end date	2012-12-12T20:17:23	2012-12-12T20:33:56	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



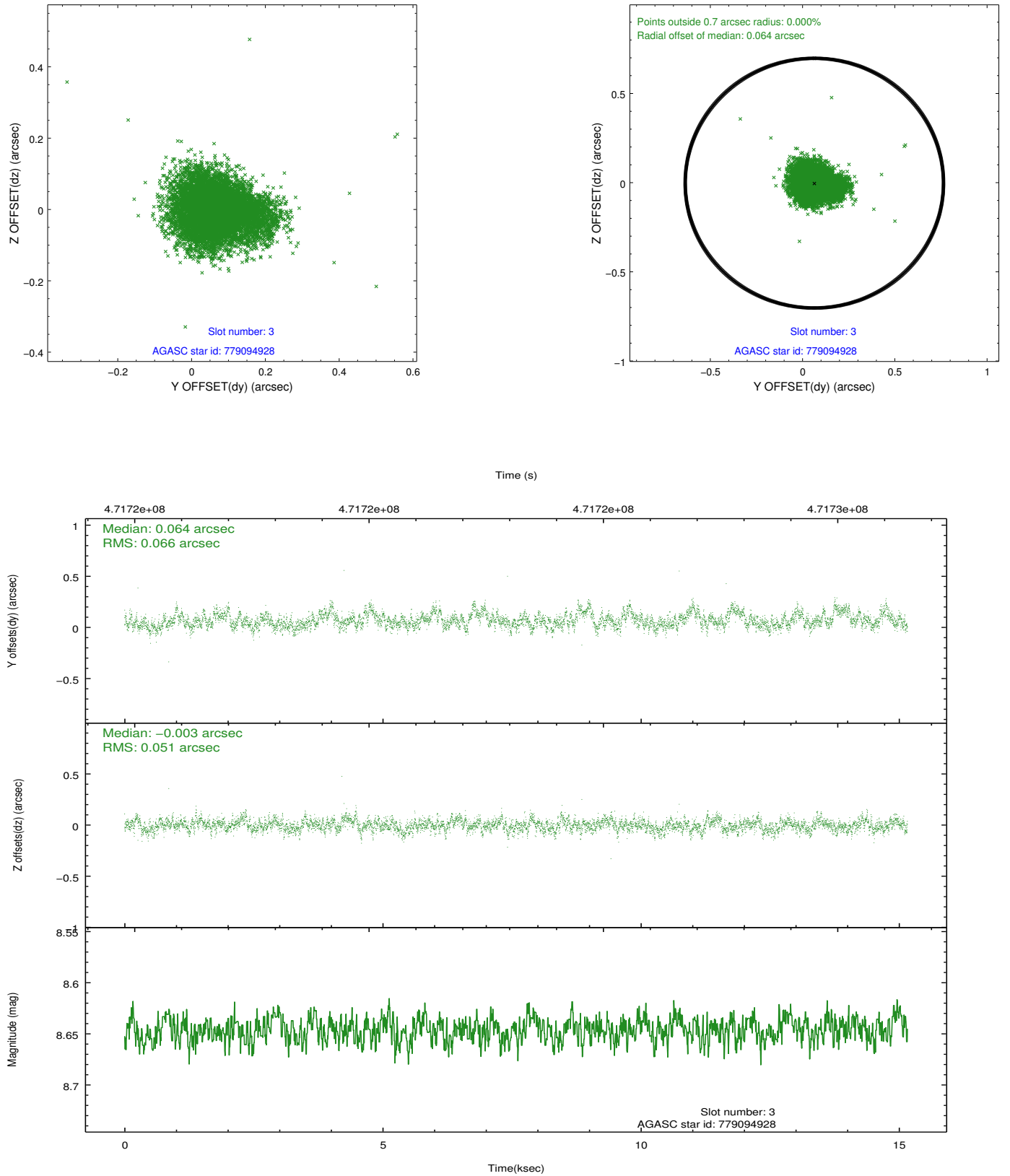


### Slot Statistics

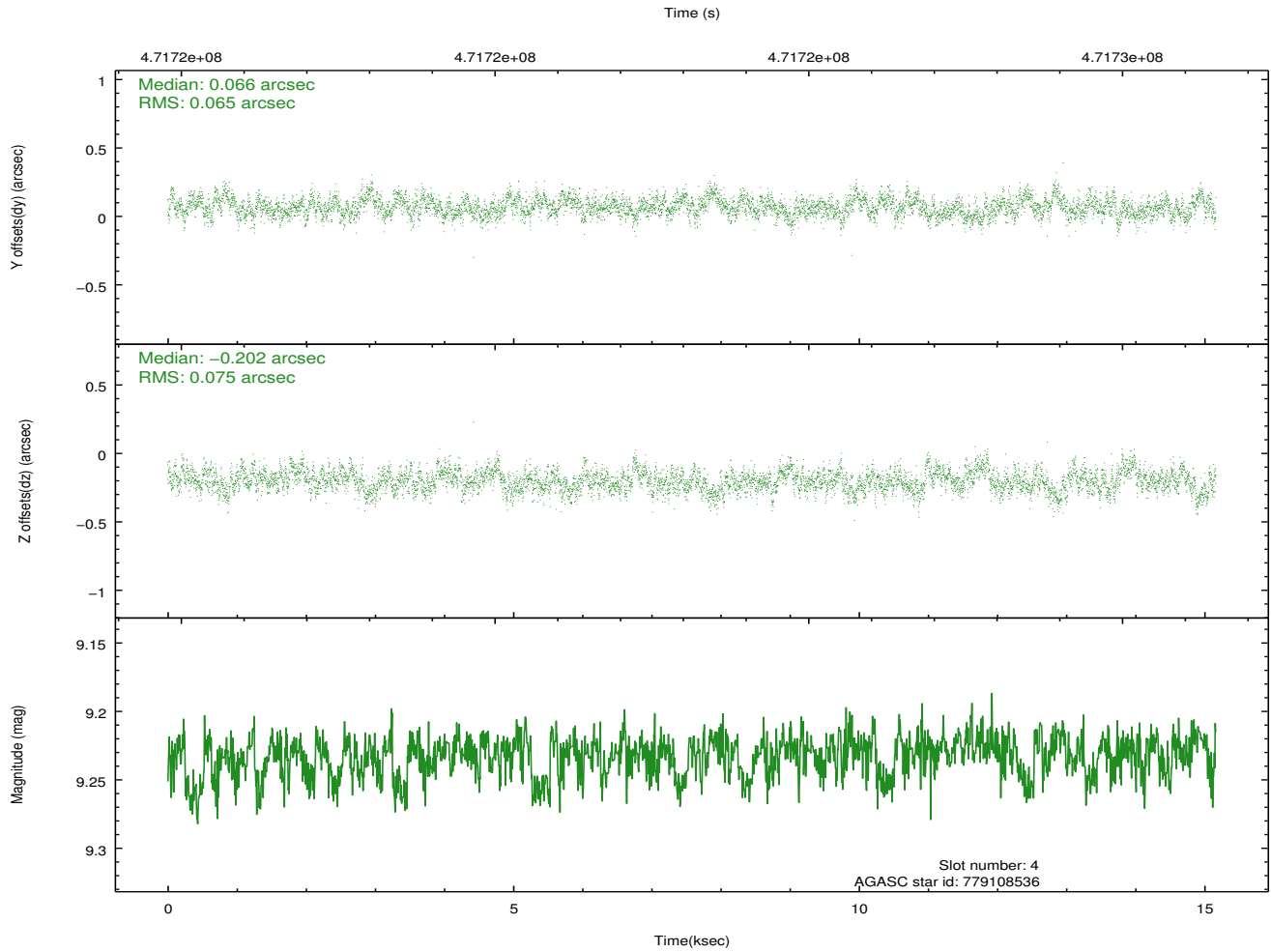
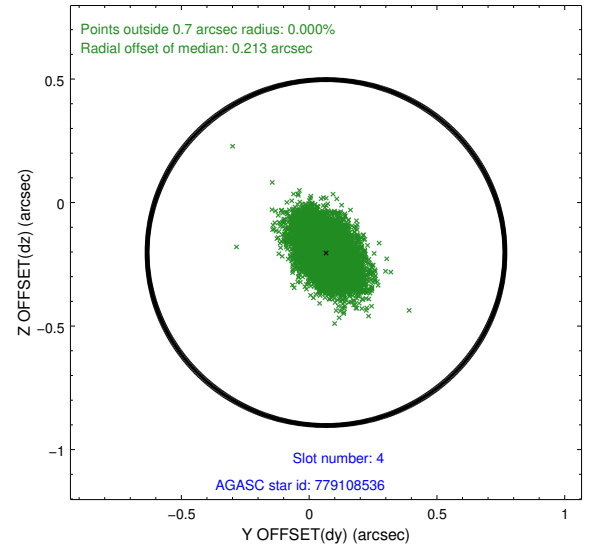
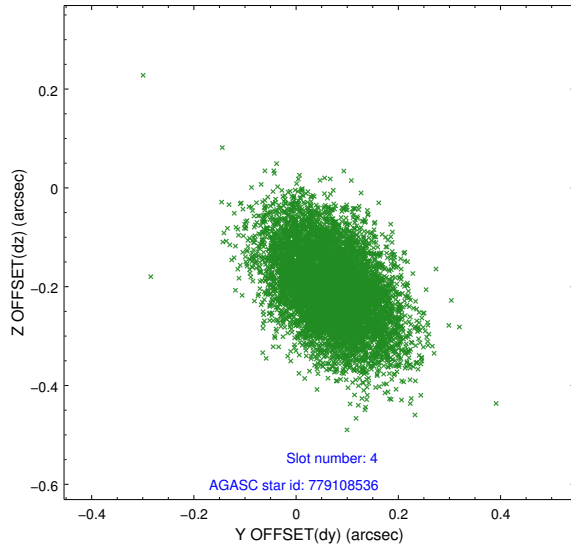
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	3699	-0.124	-0.042	0.008	0.014	0.000000	0.000000	-773.52	-1738.57
1	FID		ACIS-S-4	7.05	3699	0.278	0.071	0.007	0.013	0.000000	0.000000	2140.06	169.66
2	FID		ACIS-S-5	7.08	3699	-0.185	-0.021	0.009	0.019	0.000000	0.000000	-1826.01	163.66
3	GUIDE	used	779094928	8.65	7397	0.064	-0.003	0.088	0.145	91.813038	-21.529838	-1796.08	1101.36
4	GUIDE	used	779108536	9.23	7393	0.066	-0.202	0.104	0.175	91.750219	-21.233246	-1713.55	2186.68
5	GUIDE	used	779241600	9.17	7358	0.193	0.180	0.128	0.196	92.404857	-22.310942	-651.19	-2138.71
6	GUIDE	used	779242656	8.69	7391	-0.168	0.043	0.072	0.119	93.018203	-22.022805	1599.10	-1700.94
7	GUIDE	used	779229968	9.32	7383	-0.156	-0.019	0.114	0.186	93.175437	-21.750235	2374.94	-902.62

## 2.4 Star Slots

### 2.4.1 Slot 3

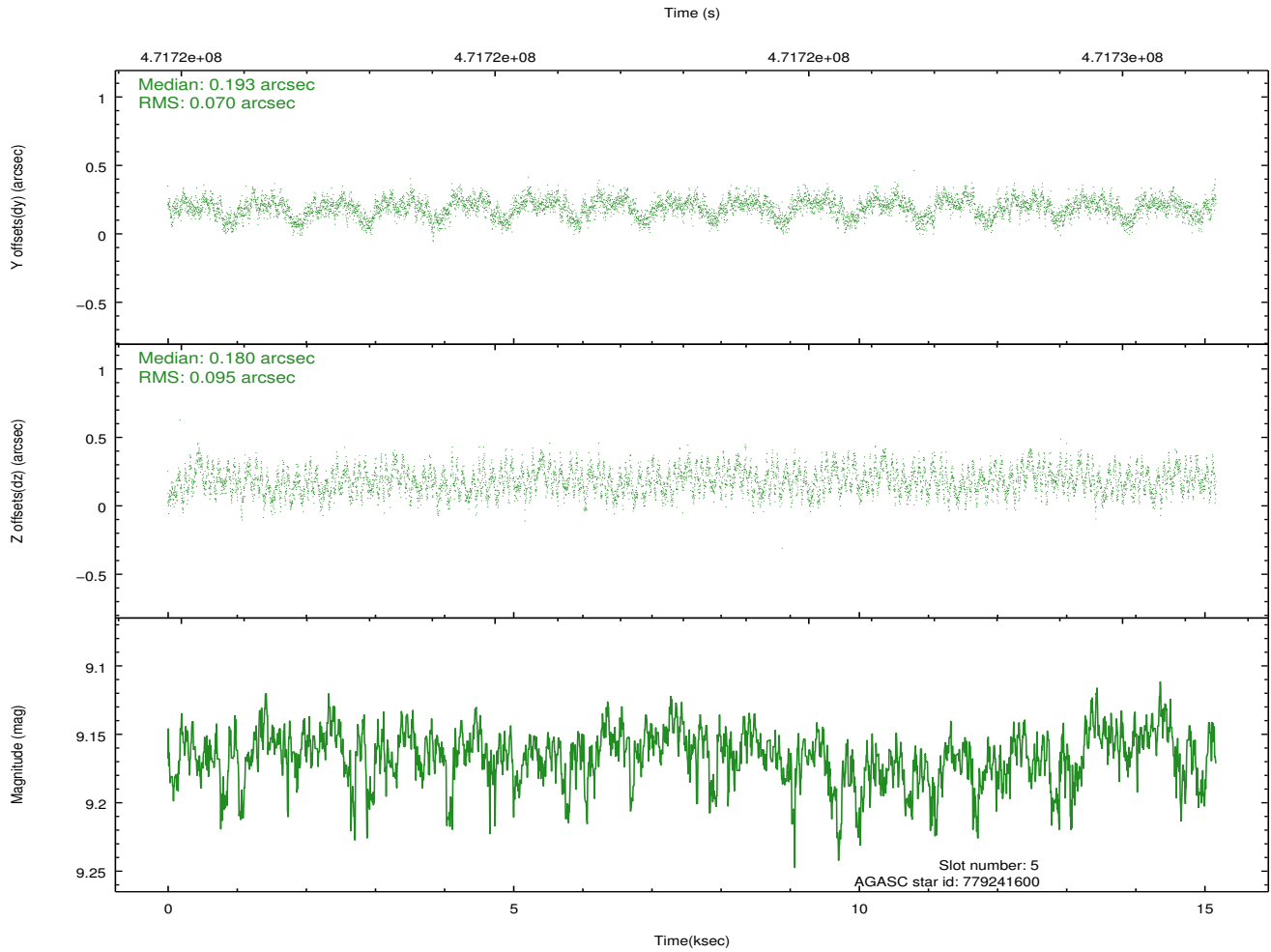
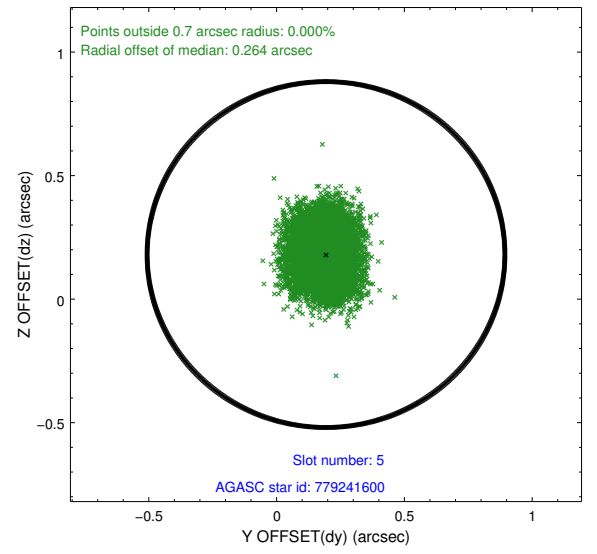
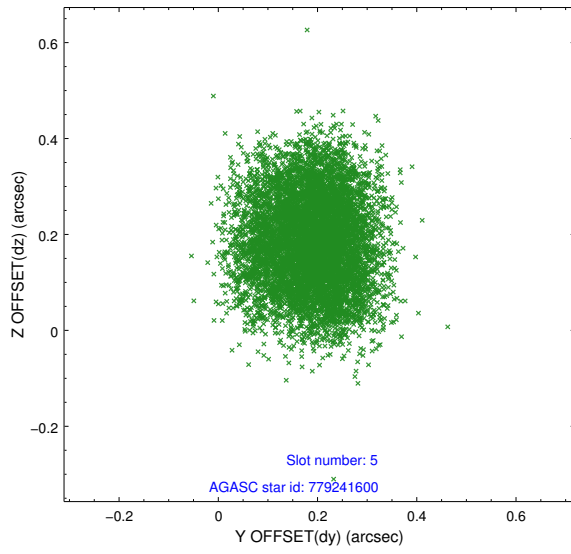


## 2.4.2 Slot 4

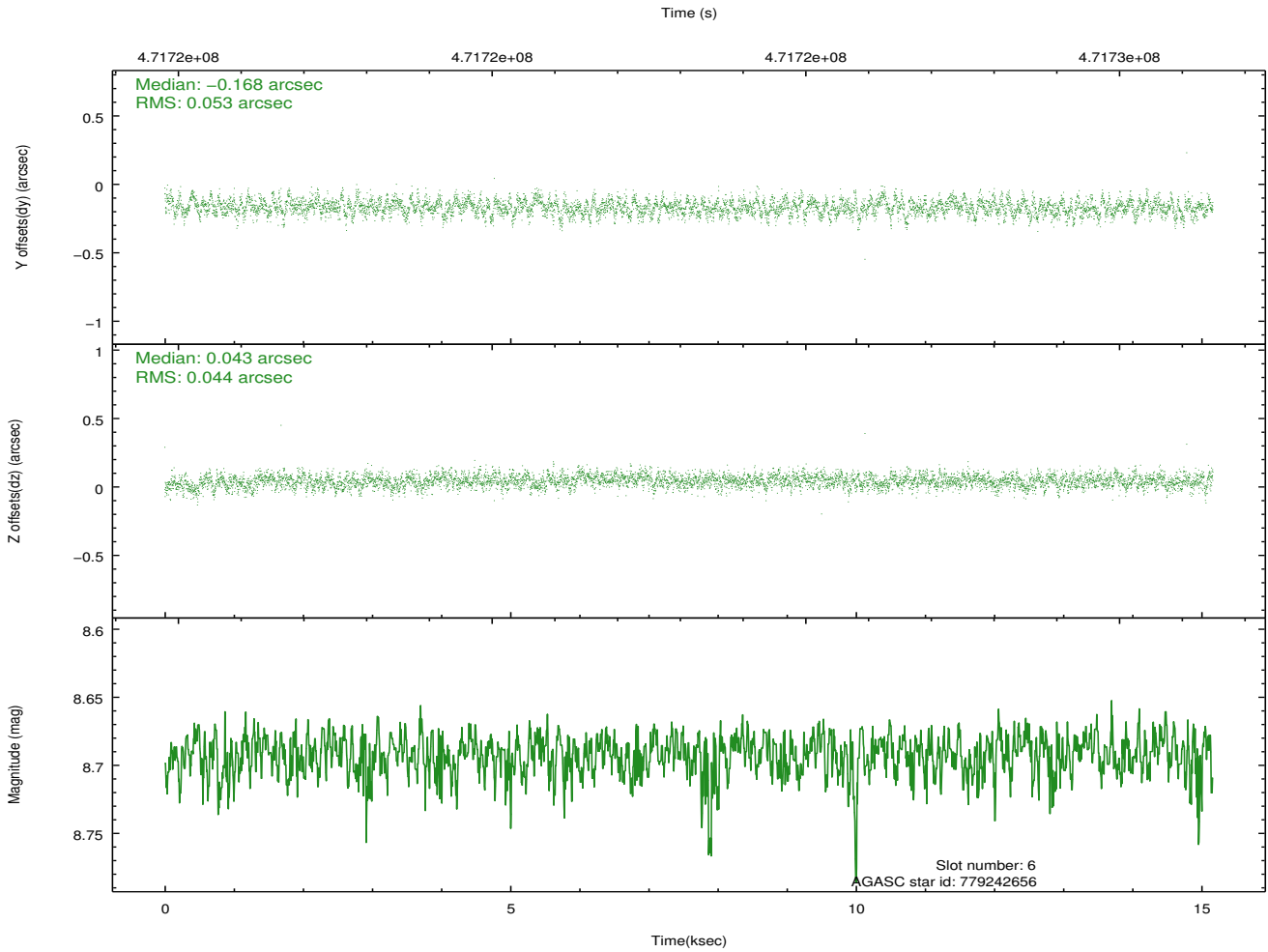
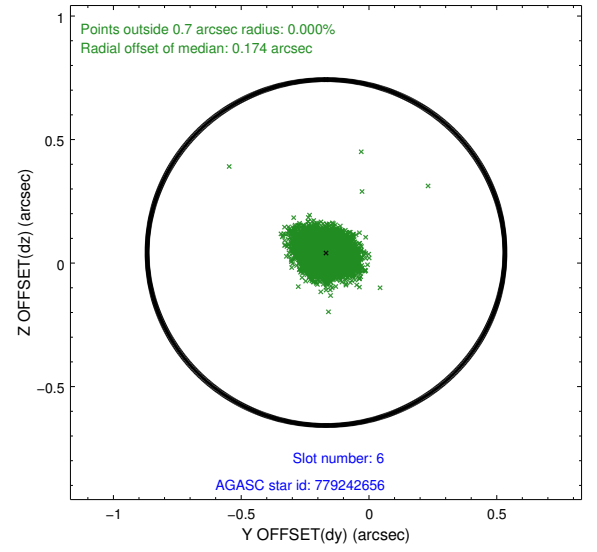
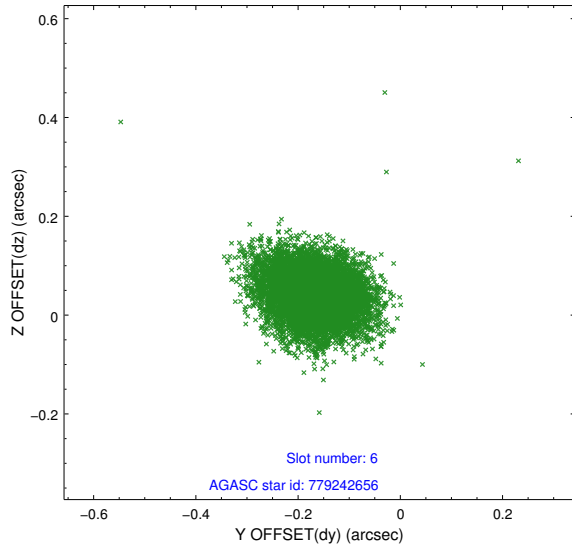




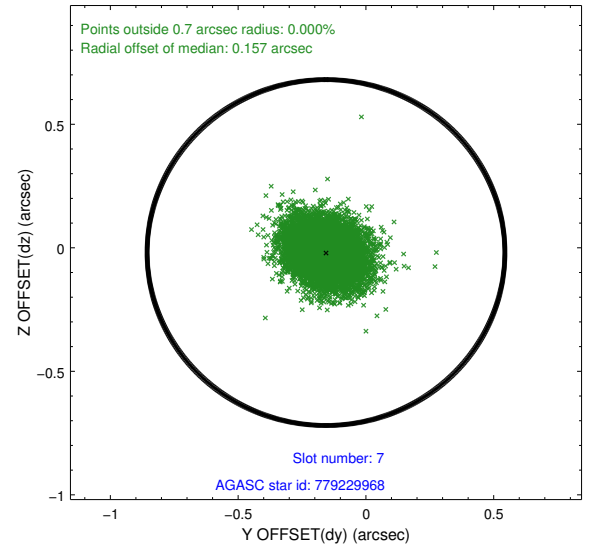
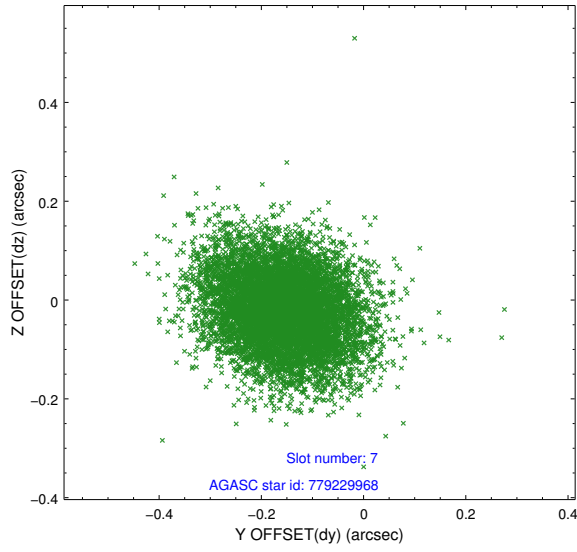
### 2.4.3 Slot 5



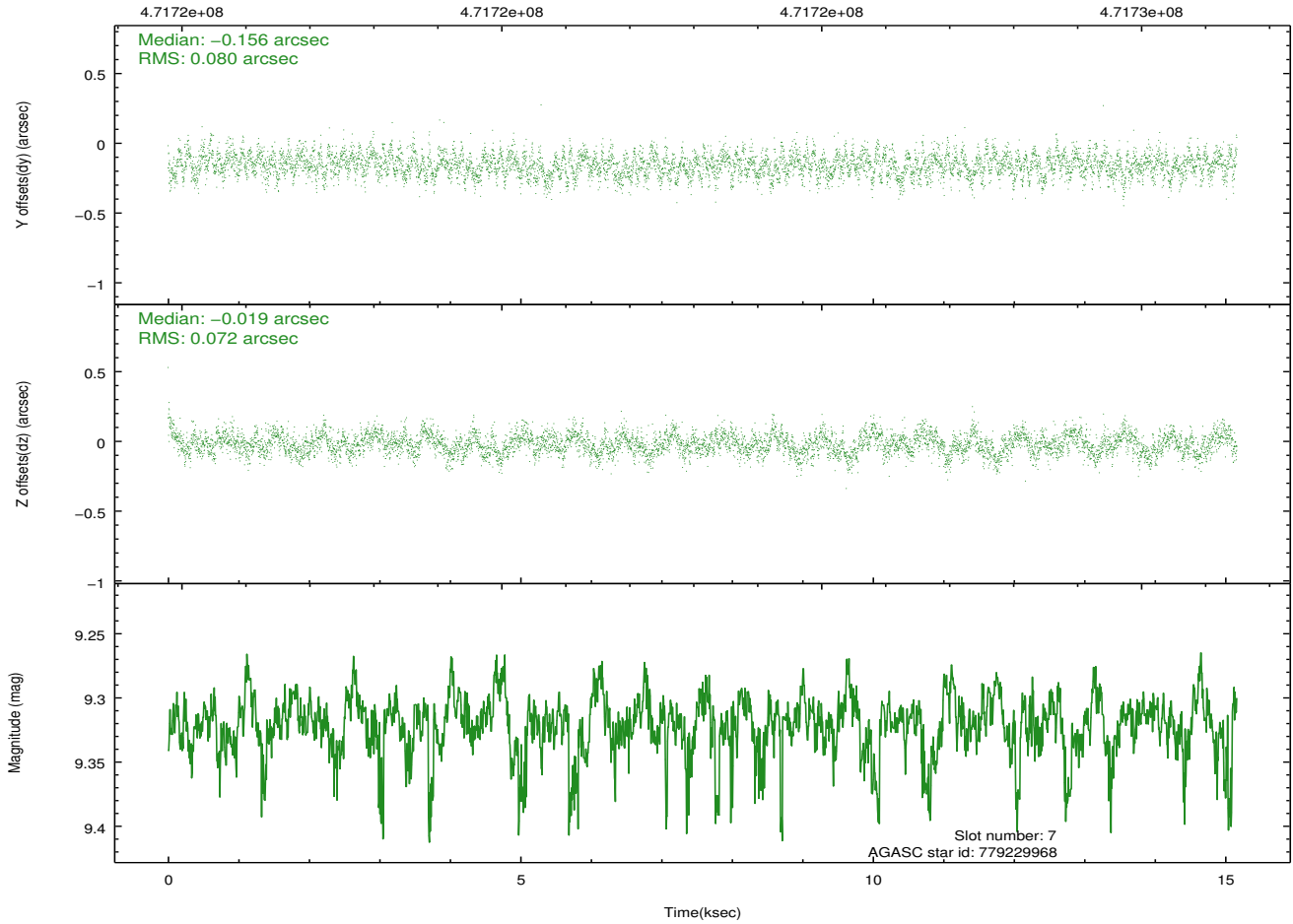
## 2.4.4 Slot 6



## 2.4.5 Slot 7

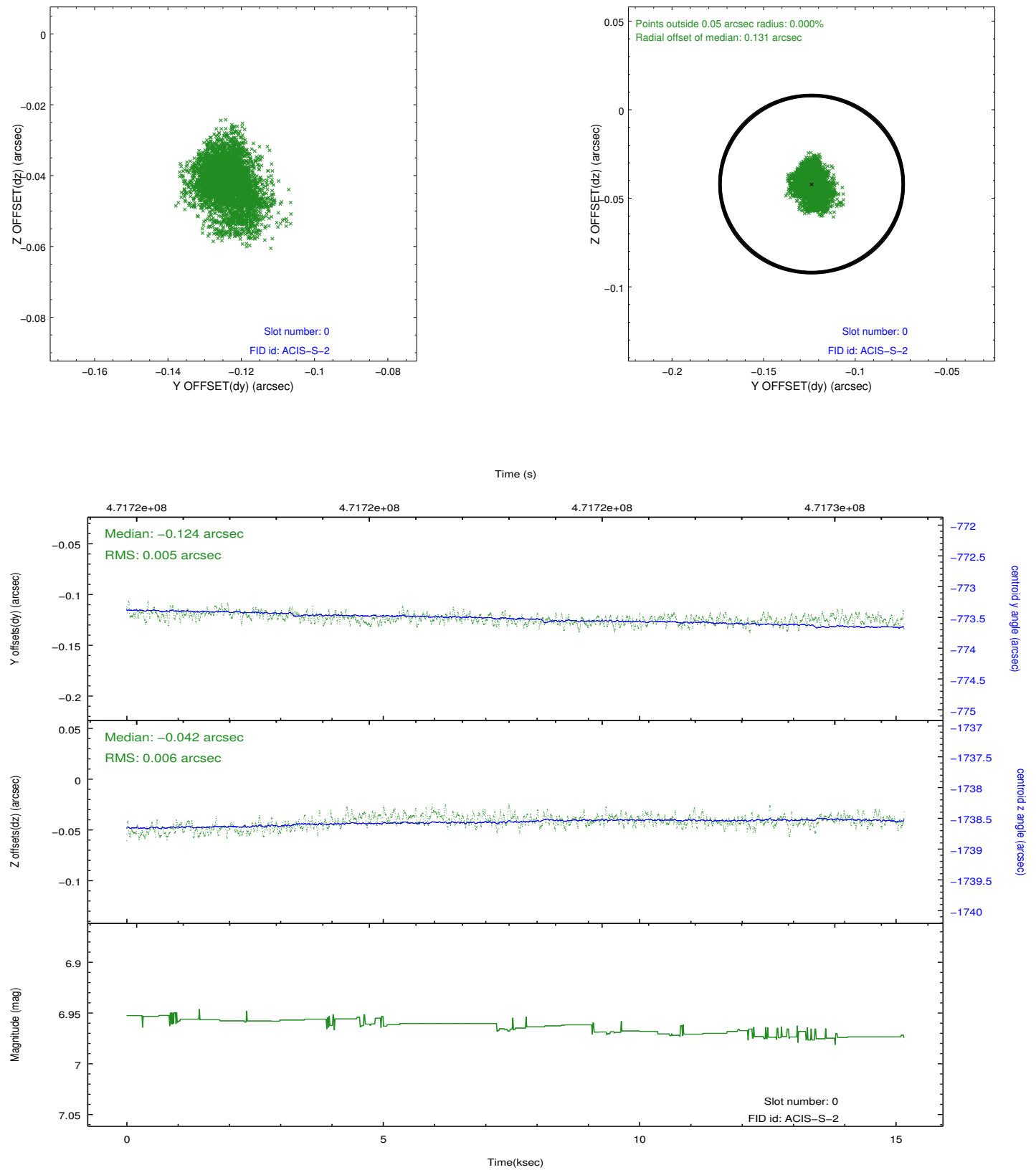


Time (s)

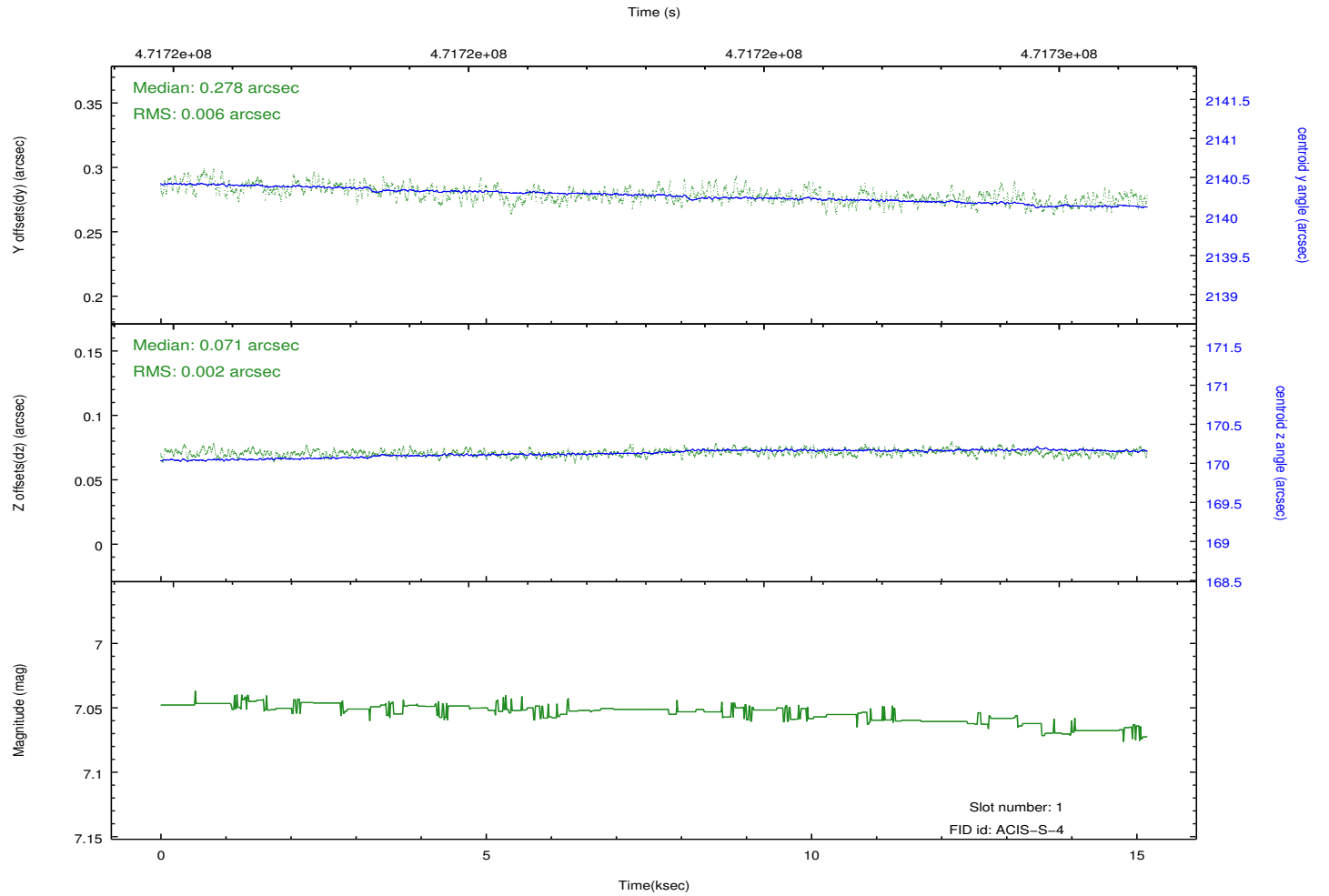
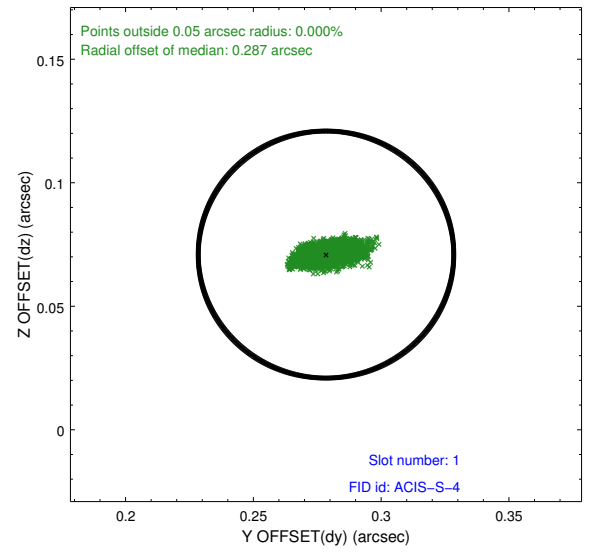
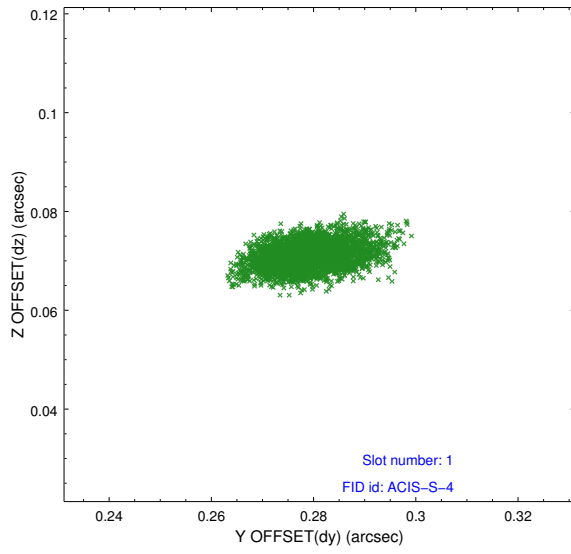


## 2.5 FID Slots

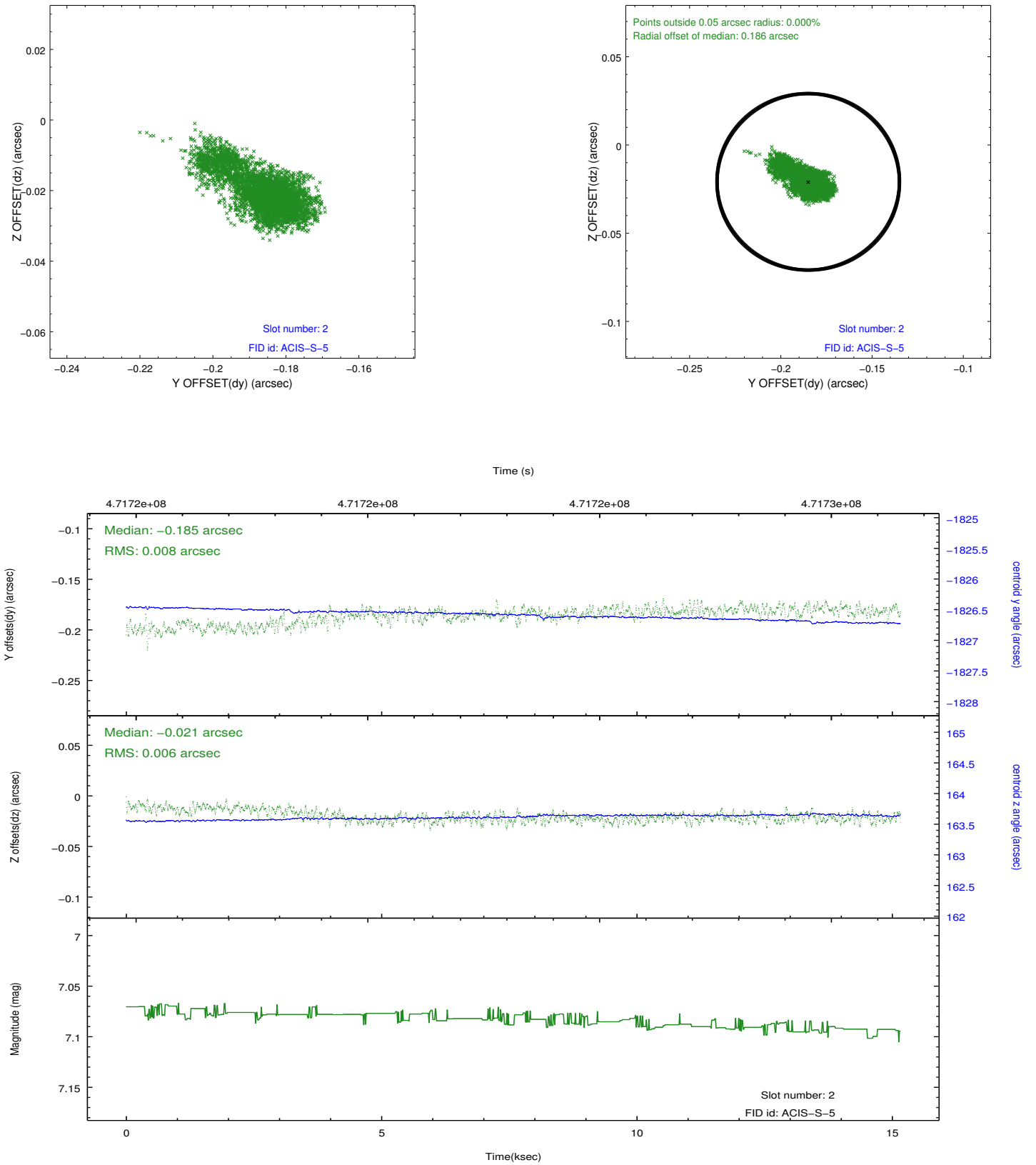
### 2.5.1 Slot 0



## 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	14.969596468925

## 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.